nichicon

UZG

3.95mmLmax. Chip Type,
Wide Temperature Range

For SMD Smaller

- Chip type with 3.95mmLmax height. Operating over wide temperature range of −40 to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UZT
Smaller
UZG

■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +105°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	1 to 100μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01 CV or 3 (μA) , whichever is greater.

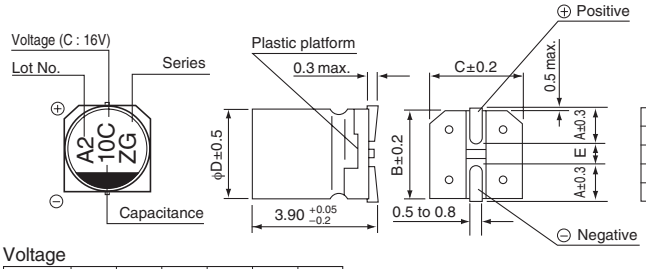
Tangent of loss angle (tan δ)	Rated voltage (V)	6.3	10	16	25	35	50	120Hz 20°C
	tan δ (max.)	0.38	0.32	0.20	0.16	0.14	0.14	

Stability at Low Temperature	Rated voltage (V)		6.3	10	16	25	35	50	120Hz
	Impedance ratio ZT / Z20 (max.)	Z(−25°C) / Z(+20°C)	6	5	3	3	3	3	
		Z(−40°C) / Z(+20°C)	10	10	6	6	4	4	

Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C.	Capacitance change: Within ±30% of the initial capacitance value tan δ: 300% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.	
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.	Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.	

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type



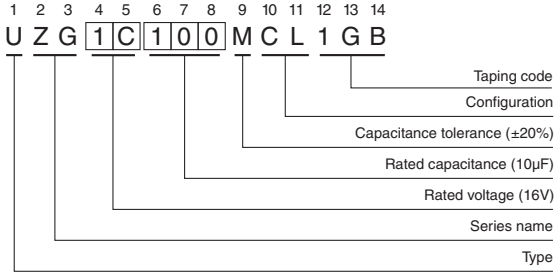
(mm)

φD	4	5	6.3
A	1.8	2.1	2.4
B	4.3	5.3	6.6
C	4.3	5.3	6.6
E	1.0	1.3	2.2

Voltage

V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H

Type numbering system (Example : 16V 10μF)



● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

● Dimension table in next page.

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UZG

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
6.3 (0J)	22	4×3.9	0.38	3	19	UZG0J220MCL1GB
	33	5×3.9	0.38	3	26	UZG0J330MCL1GB
	47	5×3.9	0.38	3	32	UZG0J470MCL1GB
	100	6.3×3.9	0.38	6.3	52	UZG0J101MCL1GB
10 (1A)	22	5×3.9	0.32	3	24	UZG1A220MCL1GB
	33	5×3.9	0.32	3.3	30	UZG1A330MCL1GB
	47	6.3×3.9	0.32	4.7	40	UZG1A470MCL1GB
16 (1C)	10	4×3.9	0.20	3	16	UZG1C100MCL1GB
	22	5×3.9	0.20	3.52	26	UZG1C220MCL1GB
	33	6.3×3.9	0.20	5.28	35	UZG1C330MCL1GB
	47	6.3×3.9	0.20	7.52	44	UZG1C470MCL1GB
25 (1E)	4.7	4×3.9	0.16	3	11	UZG1E4R7MCL1GB
	10	5×3.9	0.16	3	20	UZG1E100MCL1GB
	22	6.3×3.9	0.16	5.5	33	UZG1E220MCL1GB
	33	6.3×3.9	0.16	8.25	42	UZG1E330MCL1GB
35 (1V)	4.7	4×3.9	0.14	3	13	UZG1V4R7MCL1GB
	10	5×3.9	0.14	3.5	22	UZG1V100MCL1GB
	22	6.3×3.9	0.14	7.7	36	UZG1V220MCL1GB
50 (1H)	1	4×3.9	0.14	3	5.4	UZG1H010MCL1GB
	2.2	4×3.9	0.14	3	9.6	UZG1H2R2MCL1GB
	3.3	4×3.9	0.14	3	12	UZG1H3R3MCL1GB
	4.7	5×3.9	0.14	3	16	UZG1H4R7MCL1GB
	10	6.3×3.9	0.14	5	26	UZG1H100MCL1GB

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UZT

4.5mmL Chip Type, Wide Temperature Range

For SMD Smaller

UWT
Smaller
UZT
Smaller
UZG

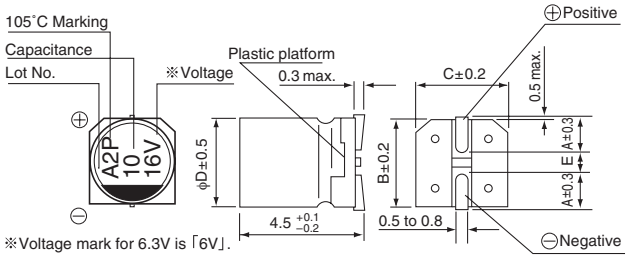
- Chip type with 4.5mm height, operating over wide temperature range of −40 to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +105°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	1 to 100μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3 (μA) , whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 tan δ (max.): 0.38 / 0.32 / 0.20 / 0.16 / 0.14 / 0.14
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 Impedance ratio ZT / Z20 (max.) Z(−25°C) / Z(+20°C): 6 / 5 / 3 / 3 / 3 / 3 Impedance ratio ZT / Z20 (max.) Z(−40°C) / Z(+20°C): 10 / 10 / 6 / 6 / 4 / 4
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C. Capacitance change: Within ±25% of the initial capacitance value (16V or less); Within ±20% of the initial capacitance value (25V or more) tan δ: 300% or less than initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type



(mm)

φD	4	5	6.3
A	1.8	2.1	2.4
B	4.3	5.3	6.6
C	4.3	5.3	6.6
E	1.0	1.3	2.2

※Voltage mark for 6.3V is「6V」.

Type numbering system (Example : 16V 10μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	Z	T	1	C	1	0	0	M	C	L	1	G	B

- Taping code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (10μF)
- Rated voltage (16V)
- Series name
- Type

●Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

●Dimension table in next page.

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UZT

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
6.3 (0J)	22	4×4.5	0.38	3	19	UZT0J220MCL1GB
	33	5×4.5	0.38	3	26	UZT0J330MCL1GB
	47	5×4.5	0.38	3	32	UZT0J470MCL1GB
	100	6.3×4.5	0.38	6.3	52	UZT0J101MCL1GB
10 (1A)	22	5×4.5	0.32	3	24	UZT1A220MCL1GB
	33	5×4.5	0.32	3.3	30	UZT1A330MCL1GB
	47	6.3×4.5	0.32	4.7	40	UZT1A470MCL1GB
16 (1C)	10	4×4.5	0.20	3	16	UZT1C100MCL1GB
	22	5×4.5	0.20	3.52	26	UZT1C220MCL1GB
	33	6.3×4.5	0.20	5.28	35	UZT1C330MCL1GB
	47	6.3×4.5	0.20	7.52	44	UZT1C470MCL1GB
25 (1E)	4.7	4×4.5	0.16	3	11	UZT1E4R7MCL1GB
	10	5×4.5	0.16	3	20	UZT1E100MCL1GB
	22	6.3×4.5	0.16	5.5	33	UZT1E220MCL1GB
	33	6.3×4.5	0.16	8.25	42	UZT1E330MCL1GB
35 (1V)	4.7	4×4.5	0.14	3	13	UZT1V4R7MCL1GB
	10	5×4.5	0.14	3.5	22	UZT1V100MCL1GB
	22	6.3×4.5	0.14	7.7	36	UZT1V220MCL1GB
50 (1H)	1	4×4.5	0.14	3	5.4	UZT1H010MCL1GB
	2.2	4×4.5	0.14	3	9.6	UZT1H2R2MCL1GB
	3.3	4×4.5	0.14	3	12	UZT1H3R3MCL1GB
	4.7	5×4.5	0.14	3	16	UZT1H4R7MCL1GB
	10	6.3×4.5	0.14	5	26	UZT1H100MCL1GB

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.
- Please select UUX, UUJ series if high C/V products are required.

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ALUMINUM ELECTROLYTIC CAPACITORS

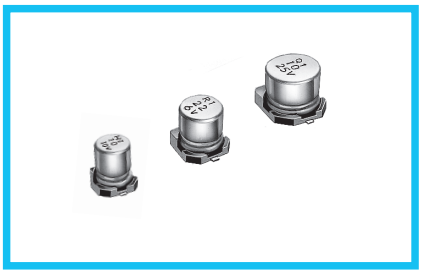
nichicon

UWP

5.5mmL Chip Type, Bi-Polarized

For SMD Bi-polarized

- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

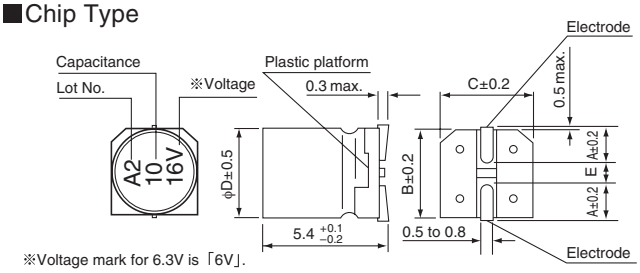


■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +85°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	0.1 to 47μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.05CV or 10 (μA) ,whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 tan δ (max.): 0.24 / 0.20 / 0.17 / 0.17 / 0.15 / 0.15
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 Impedance ratio ZT / Z20 (max.) Z(−25°C) / Z(+20°C): 4 / 3 / 2 / 2 / 2 / 2 Z(−40°C) / Z(+20°C): 8 / 6 / 4 / 4 / 3 / 3
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 85°C with the polarity inverted every 250 hours. Capacitance change: Within ±20% of the initial capacitance value tan δ: 200% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 85°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type



※Voltage mark for 6.3V is「6V」.

(mm)

φD	4	5	6.3
A	1.8	2.1	2.4
B	4.3	5.3	6.6
C	4.3	5.3	6.6
E	1.0	1.3	2.2

Type numbering system (Example : 16V 10μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	W	P	1	C	1	0	0	M	C	L	1	G	B

- 14: Taping code
- 11–13: Configuration
- 9: Capacitance tolerance (±20%)
- 6–8: Rated capacitance (10μF)
- 4–5: Rated voltage (16V)
- 3: Series name
- 1–2: Type

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

●Dimension table in next page.

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UWP

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Rated Ripple (mArms) (85℃/120Hz)	Part Number
6.3 (0J)	22	5×5.4	0.24	10	28	UWP0J220MCL1GB
	33	6.3×5.4	0.24	10.395	37	UWP0J330MCL1GB
	47	6.3×5.4	0.24	14.805	45	UWP0J470MCL1GB
10 (1A)	10	4×5.4	0.20	10	17	UWP1A100MCL1GB
	22	6.3×5.4	0.20	11	33	UWP1A220MCL1GB
	33	6.3×5.4	0.20	16.5	41	UWP1A330MCL1GB
16 (1C)	4.7	4×5.4	0.17	10	12	UWP1C4R7MCL1GB
	10	5×5.4	0.17	10	23	UWP1C100MCL1GB
	22	6.3×5.4	0.17	17.6	37	UWP1C220MCL1GB
	33	6.3×5.4	0.17	26.4	49	UWP1C330MCL1GB
25 (1E)	3.3	5×5.4	0.17	10	12	UWP1E3R3MCL1GB
	4.7	5×5.4	0.17	10	16	UWP1E4R7MCL1GB
	10	6.3×5.4	0.17	12.5	27	UWP1E100MCL1GB
35 (1V)	2.2	4×5.4	0.15	10	8.4	UWP1V2R2MCL1GB
	3.3	5×5.4	0.15	10	16	UWP1V3R3MCL1GB
	4.7	5×5.4	0.15	10	18	UWP1V4R7MCL1GB
	10	6.3×5.4	0.15	17.5	29	UWP1V100MCL1GB
50 (1H)	0.1	4×5.4	0.15	10	1.0	UWP1H0R1MCL1GB
	0.22	4×5.4	0.15	10	2.0	UWP1HR22MCL1GB
	0.33	4×5.4	0.15	10	2.8	UWP1HR33MCL1GB
	0.47	4×5.4	0.15	10	4.0	UWP1HR47MCL1GB
	1	4×5.4	0.15	10	8.4	UWP1H010MCL1GB
	2.2	5×5.4	0.15	10	13	UWP1H2R2MCL1GB
	3.3	5×5.4	0.15	10	17	UWP1H3R3MCL1GB
	4.7	6.3×5.4	0.15	11.75	20	UWP1H4R7MCL1GB

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.
- Please select UUN if high C/V products are required.

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ALUMINUM ELECTROLYTIC CAPACITORS

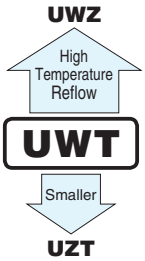
nichicon

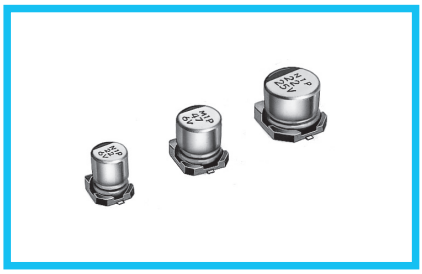
UWT

Chip Type, Wide Temperature Range

For SMD Smaller

- Chip type operating over wide temperature range of to −55 to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.





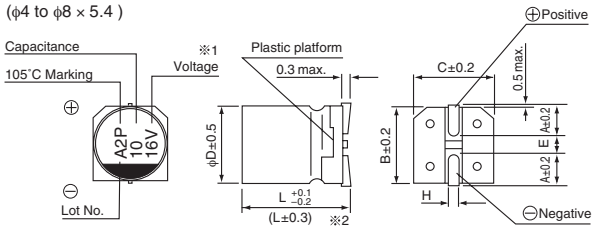
■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	4 to 50V
Rated Capacitance Range	1 to 1500μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3 (μA) , whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 4 / 6.3 / 10 / 16 / 25 / 35 / 50 tan δ (max.): 0.40 / 0.30 / 0.24 / 0.20 / 0.16 / 0.14 / 0.14
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 4 / 6.3 / 10 / 16 / 25 / 35 / 50 Impedance ratio ZT / Z20 (max.) Z(−25°C) / Z(+20°C): 7 / 4 / 3 / 2 / 2 / 2 / 2 Impedance ratio ZT / Z20 (max.) Z(−40°C) / Z(+20°C): 15 / 8 / 8 / 4 / 4 / 3 / 3
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C. Capacitance change: Within ±25% of the initial capacitance value for capacitors of 16V or less. Within ±20% of the initial capacitance value for capacitors of 25V or more. tan δ: 200% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

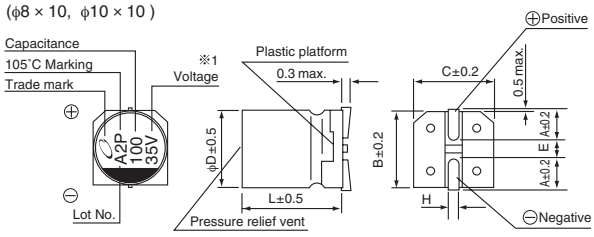
■Chip Type

(φ4 to φ8 × 5.4)



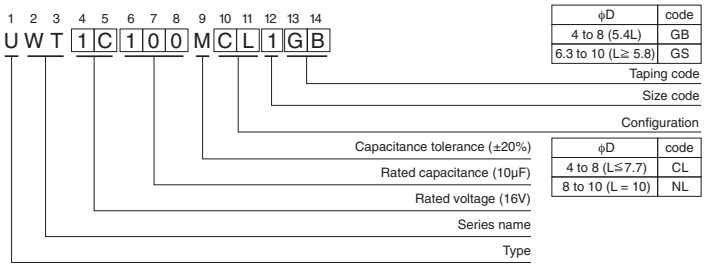
※2 Apply to φ6.3 × 5.8, φ6.3 × 7.7

(φ8 × 10, φ10 × 10)



※1. Voltage mark for 6.3V is 「6V」.

Type numbering system (Example : 16V 10μF)



φD	code
4 to 8 (5.4L)	GB
6.3 to 10 (L≧5.8)	GS

φD	code
4 to 8 (L≦7.7)	CL
8 to 10 (L = 10)	NL

(mm)

φD × L	4 × 5.4	5 × 5.4	6.3 × 5.4	6.3 × 5.8	6.3 × 7.7	8 × 10	10 × 10
A	1.8	2.1	2.4	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	2.2	3.1	4.5
L	5.4	5.4	5.4	5.8	7.7	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

● Dimension table in next page.

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UWT

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
4 (0G)	22	4×5.4	0.40	3	22	UWT0G220MCL1GB
	33	5×5.4	0.40	3	30	UWT0G330MCL1GB
	47	5×5.4	0.40	3	36	UWT0G470MCL1GB
	100	6.3×5.4	0.40	4	60	UWT0G101MCL1GB
	150	6.3×5.8	0.40	6	86	UWT0G151MCL1GS
	220	6.3×5.8	0.40	8.8	91	UWT0G221MCL6GS
	330	6.3×7.7	0.40	13.2	105	UWT0G331MCL1GS
	470	8×10	0.40	18.8	210	UWT0G471MNL1GS
	680	8×10	0.40	27.2	210	UWT0G681MNL1GS
	1000	8×10	0.40	40	230	UWT0G102MNL1GS
	1500	10×10	0.40	60	310	UWT0G152MNL1GS
6.3 (0J)	22	4×5.4	0.30	3	22	UWT0J220MCL1GB
	33	5×5.4	0.30	3	30	UWT0J330MCL1GB
	47	5×5.4	0.30	3	36	UWT0J470MCL1GB
	100	6.3×5.4	0.30	6.3	60	UWT0J101MCL1GB
	150	6.3×5.8	0.30	9.45	86	UWT0J151MCL1GS
	220	6.3×5.8	0.30	13.86	91	UWT0J221MCL6GS
	330	6.3×7.7	0.30	20.79	105	UWT0J331MCL1GS
	470	8×10	0.30	29.61	210	UWT0J471MNL1GS
	680	8×10	0.30	42.84	210	UWT0J681MNL1GS
	1000	8×10	0.30	63	230	UWT0J102MNL1GS
	1500	10×10	0.30	94.5	310	UWT0J152MNL1GS
10 (1A)	22	5×5.4	0.24	3	27	UWT1A220MCL1GB
	33	5×5.4	0.24	3.3	35	UWT1A330MCL1GB
	47	6.3×5.4	0.24	4.7	46	UWT1A470MCL1GB
	100	6.3×5.4	0.24	10	60	UWT1A101MCL1GB
	150	6.3×5.8	0.24	15	86	UWT1A151MCL1GS
	220	6.3×7.7	0.24	22	105	UWT1A221MCL1GS
	330	8×10	0.24	33	195	UWT1A331MNL1GS
	470	8×10	0.24	47	210	UWT1A471MNL1GS
	680	10×10	0.24	68	310	UWT1A681MNL1GS
	1000	10×10	0.24	100	310	UWT1A102MNL1GS
16 (1C)	10	4×5.4	0.20	3	18	UWT1C100MCL1GB
	22	5×5.4	0.20	3.52	30	UWT1C220MCL1GB
	33	6.3×5.4	0.20	5.28	40	UWT1C330MCL1GB
	47	6.3×5.4	0.20	7.52	50	UWT1C470MCL1GB
	100	6.3×5.4	0.20	16	60	UWT1C101MCL1GB
	150	6.3×7.7	0.20	24	95	UWT1C151MCL1GS
	220	6.3×7.7	0.20	35.2	105	UWT1C221MCL1GS
	330	8×10	0.20	52.8	195	UWT1C331MNL1GS
	470	8×10	0.20	75.2	230	UWT1C471MNL1GS
	680	10×10	0.20	108.8	310	UWT1C681MNL1GS

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UWT

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
25 (1E)	4.7	4×5.4	0.16	3	13	UWT1E4R7MCL1GB
	10	5×5.4	0.16	3	23	UWT1E100MCL1GB
	22	6.3×5.4	0.16	5.5	38	UWT1E220MCL1GB
	33	6.3×5.4	0.16	8.25	48	UWT1E330MCL1GB
	47	6.3×5.8	0.16	11.75	59	UWT1E470MCL6GS
	100	6.3×7.7	0.16	25	91	UWT1E101MCL1GS
	150	8×10	0.16	37.5	140	UWT1E151MNL1GS
	220	8×10	0.16	55	155	UWT1E221MNL1GS
	330	8×10	0.16	82.5	190	UWT1E331MNL1GS
	470	10×10	0.16	117.5	300	UWT1E471MNL1GS
35 (1V)	4.7	4×5.4	0.14	3	15	UWT1V4R7MCL1GB
	10	5×5.4	0.14	3.5	25	UWT1V100MCL1GB
	22	6.3×5.4	0.14	7.7	42	UWT1V220MCL1GB
	33	6.3×5.8	0.14	11.55	52	UWT1V330MCL6GS
	47	6.3×5.8	0.14	16.45	63	UWT1V470MCL1GS
	100	6.3×7.7	0.14	35	84	UWT1V101MCL1GS
	150	8×10	0.14	52.5	155	UWT1V151MNL1GS
	220	8×10	0.14	77	190	UWT1V221MNL1GS
	330	10×10	0.14	115.5	300	UWT1V331MNL1GS
50 (1H)	1	4×5.4	0.14	3	6.2	UWT1H010MCL1GB
	2.2	4×5.4	0.14	3	11	UWT1H2R2MCL1GB
	3.3	4×5.4	0.14	3	14	UWT1H3R3MCL1GB
	4.7	5×5.4	0.14	3	19	UWT1H4R7MCL1GB
	10	6.3×5.4	0.14	5	30	UWT1H100MCL1GB
	22	6.3×5.8	0.14	11	45	UWT1H220MCL6GS
	33	6.3×7.7	0.14	16.5	60	UWT1H330MCL1GS
	47	6.3×7.7	0.14	23.5	63	UWT1H470MCL1GS
	100	8×10	0.14	50	140	UWT1H101MNL1GS
	150	10×10	0.14	75	180	UWT1H151MNL1GS
	220	10×10	0.14	110	220	UWT1H221MNL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.
- Please select UUX, UUJ series if high C/V products are required.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UWZ

Chip Type, Wide Temperature Range
High Temperature (260°C) Reflow

For SMD

- Corresponding with 260°C peak reflow soldering
  Recomended reflow condition : 260°C peak 5 sec 230°C over 60 sec 2 times
  (φ8 × 6.2, φ10 × 10 : 1 time)
- Chip type operating over wide temperature range of to −55 to +105°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UWZ

High Temperature Reflow

UWT

■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	1 to 1500μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3 (μA) , whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C
Stability at Low Temperature	Measurement frequency : 120Hz
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C.
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.
Marking	Black print on the case top.

Tangent of loss angle (tan δ):

Rated voltage (V)	6.3	10	16	25	35	50
tan δ (max.)	0.30	0.24	0.20	0.16	0.14	0.14

Stability at Low Temperature:

Rated voltage (V)		6.3	10	16	25	35	50
Impedance ratio ZT / Z20 (max.)	Z(−25°C) / Z(+20°C)	4	3	2	2	2	2
	Z(−40°C) / Z(+20°C)	8	8	4	4	3	3

Endurance:

Capacitance change	Within ±25% of the initial capacitance value for capacitors of 16V or less. Within ±20% of the initial capacitance value for capacitors of 25V or more.
tan δ	200% or less than the initial specified value
Leakage current	Less than or equal to the initial specified value

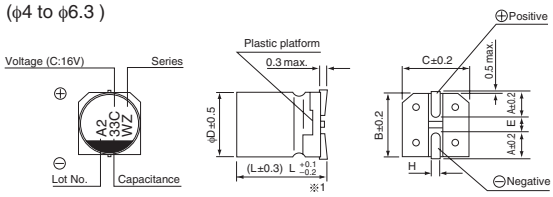
Resistance to soldering heat:

Capacitance change	Within ±10% of the initial capacitance value
tan δ	Less than or equal to the initial specified value
Leakage current	Less than or equal to the initial specified value

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

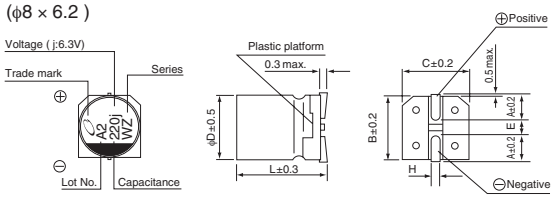
■Chip Type

(φ4 to φ6.3)

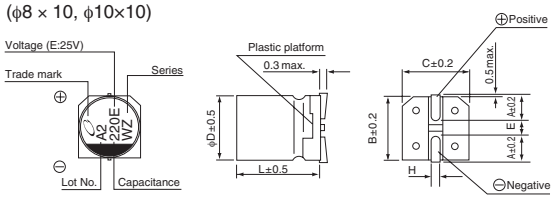


※1 Apply to φ6.3 × 5.8, φ6.3 × 7.7

(φ8 × 6.2)



(φ8 × 10, φ10×10)



●Dimension table in next page.

Type numbering system (Example : 6.3V 33μF)

1 2 3 4 5 6 7 8 9 10 11 12 13 14
U W Z 0 J 3 3 0 M C L 1 G B

φD	code
4 to 6.3 (5.4L)	GB
6.3 to 10 (L≧5.8L)	GS

- Taping code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (33μF)
- Rated voltage (6.3V)
- Series name
- Type

(mm)

φD × L	4 × 5.4	5 × 5.4	6.3 × 5.4	6.3 × 5.8	6.3 × 7.7	8 × 6.2	8 × 10	10 × 10
A	1.8	2.1	2.4	2.4	2.4	3.3	2.9	3.2
B	4.3	5.3	6.6	6.6	6.6	8.3	8.3	10.3
C	4.3	5.3	6.6	6.6	6.6	8.3	8.3	10.3
E	1.0	1.3	2.2	2.2	2.2	2.3	3.1	4.5
L	5.4	5.4	5.4	5.8	7.7	6.2	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

Voltage

V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

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■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
6.3 (0J)	22	4×5.4	0.30	3	22	UWZ0J220MCL1GB
	33	5×5.4	0.30	3	30	UWZ0J330MCL1GB
	47	5×5.4	0.30	3	36	UWZ0J470MCL1GB
	100	6.3×5.4	0.30	6.3	60	UWZ0J101MCL1GB
	150	6.3×5.8	0.30	9.45	86	UWZ0J151MCL1GS
	220	8×6.2	0.30	13.86	102	UWZ0J221MCL1GS
	330	6.3×7.7	0.30	20.79	105	UWZ0J331MCL1GS
	470	8×10	0.30	29.61	210	UWZ0J471MCL1GS
	680	8×10	0.30	42.84	210	UWZ0J681MCL1GS
	1000	10×10	0.30	63	230	UWZ0J102MCL1GS
	1500	10×10	0.30	94.5	310	UWZ0J152MCL1GS
10 (1A)	22	5×5.4	0.24	3	27	UWZ1A220MCL1GB
	33	5×5.4	0.24	3.3	35	UWZ1A330MCL1GB
	47	6.3×5.4	0.24	4.7	46	UWZ1A470MCL1GB
	100	6.3×5.4	0.24	10	60	UWZ1A101MCL1GB
	150	6.3×5.8	0.24	15	86	UWZ1A151MCL1GS
	220	6.3×7.7	0.24	22	105	UWZ1A221MCL1GS
	330	8×10	0.24	33	195	UWZ1A331MCL1GS
	470	8×10	0.24	47	210	UWZ1A471MCL1GS
	680	10×10	0.24	68	310	UWZ1A681MCL1GS
	1000	10×10	0.24	100	310	UWZ1A102MCL1GS
16 (1C)	10	4×5.4	0.20	3	18	UWZ1C100MCL1GB
	22	5×5.4	0.20	3.52	30	UWZ1C220MCL1GB
	33	6.3×5.4	0.20	5.28	40	UWZ1C330MCL1GB
	47	6.3×5.4	0.20	7.52	50	UWZ1C470MCL1GB
	100	6.3×5.4	0.20	16	60	UWZ1C101MCL1GB
	150	6.3×7.7	0.20	24	95	UWZ1C151MCL1GS
	220	6.3×7.7	0.20	35.2	105	UWZ1C221MCL1GS
	330	8×10	0.20	52.8	195	UWZ1C331MCL1GS
	470	8×10	0.20	75.2	210	UWZ1C471MCL1GS
	680	10×10	0.20	108.8	310	UWZ1C681MCL1GS
25 (1E)	4.7	4×5.4	0.16	3	13	UWZ1E4R7MCL1GB
	10	5×5.4	0.16	3	23	UWZ1E100MCL1GB
	22	6.3×5.4	0.16	5.5	38	UWZ1E220MCL1GB
	33	6.3×5.4	0.16	8.25	48	UWZ1E330MCL1GB
	47	8×6.2	0.16	11.75	66	UWZ1E470MCL1GS
	100	6.3×7.7	0.16	25	91	UWZ1E101MCL1GS
	150	8×10	0.16	37.5	140	UWZ1E151MCL1GS
	220	8×10	0.16	55	155	UWZ1E221MCL1GS
	330	10×10	0.16	82.5	190	UWZ1E331MCL1GS
	470	10×10	0.16	117.5	300	UWZ1E471MCL1GS

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UWZ

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
35 (1V)	4.7	4×5.4	0.14	3	15	UWZ1V4R7MCL1GB
	10	5×5.4	0.14	3.5	25	UWZ1V100MCL1GB
	22	6.3×5.4	0.14	7.7	42	UWZ1V220MCL1GB
	33	8×6.2	0.14	11.55	59	UWZ1V330MCL1GS
	47	6.3×5.8	0.14	16.45	63	UWZ1V470MCL1GS
	100	6.3×7.7	0.14	35	84	UWZ1V101MCL1GS
	150	8×10	0.14	52.5	155	UWZ1V151MCL1GS
	220	10×10	0.14	77	190	UWZ1V221MCL1GS
	330	10×10	0.14	115.5	300	UWZ1V331MCL1GS
50 (1H)	1	4×5.4	0.14	3	6.3	UWZ1H010MCL1GB
	2.2	4×5.4	0.14	3	11	UWZ1H2R2MCL1GB
	3.3	4×5.4	0.14	3	14	UWZ1H3R3MCL1GB
	4.7	5×5.4	0.14	3	19	UWZ1H4R7MCL1GB
	10	6.3×5.4	0.14	5	30	UWZ1H100MCL1GB
	22	8×6.2	0.14	11	51	UWZ1H220MCL1GS
	33	6.3×7.7	0.14	16.5	60	UWZ1H330MCL1GS
	47	6.3×7.7	0.14	23.5	63	UWZ1H470MCL1GS
	100	8×10	0.14	50	140	UWZ1H101MCL1GS
	150	10×10	0.14	75	180	UWZ1H151MCL1GS
	220	10×10	0.14	110	220	UWZ1H221MCL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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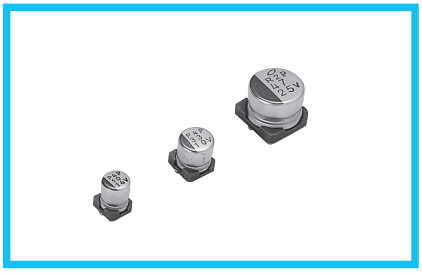
ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UWG

Chip Type, Low Impedance

For SMD Low Impedance



- Chip type, operating over wide temperature range of to −55 to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UUD ← Low Impedance → UWG

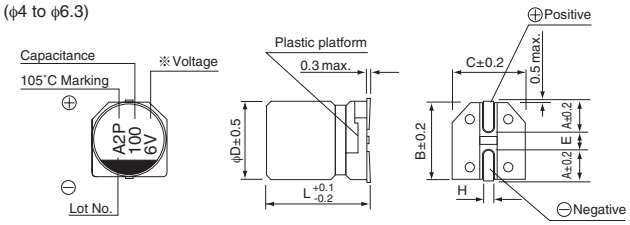
■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	1 to 1500μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 tan δ (max.): 0.26 / 0.19 / 0.16 / 0.14 / 0.12 / 0.12
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 Impedance ratio ZT / Z20 (max.) Z(−25°C) / Z(+20°C): 2 / 2 / 2 / 2 / 2 / 2 Z(−55°C) / Z(+20°C): 4 / 4 / 3 / 3 / 3 / 3
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C. Capacitance change: Within ±20% of the initial capacitance value tan δ: 200% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

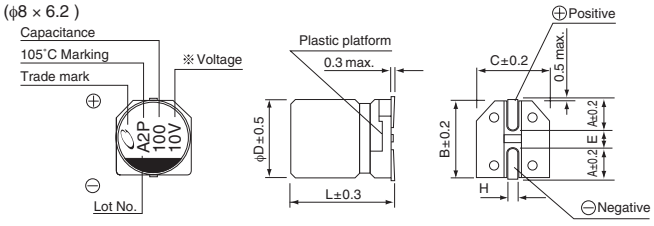
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

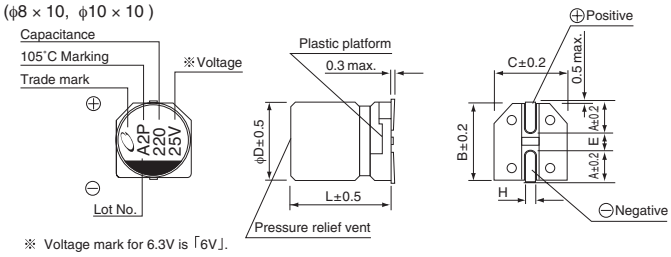
(φ4 to φ6.3)



(φ8 × 6.2)



(φ8 × 10, φ10 × 10)



※ Voltage mark for 6.3V is 「6V」.

Type numbering system (Example : 10V 100μF)

1 2 3 4 5 6 7 8 9 10 11 12 13 14

U W G 1 A 1 0 1 M C L 1 G S

- Type
- Series name
- Rated voltage (10V)
- Rated capacitance (100μF)
- Capacitance tolerance (±20%)
- Configuration

φD	code
4 to 6.3	CL
8 (6.2L)	CL
8 (10L) • 10	NL

- Taping code

φD	code
4 to 6.3	GB
8 • 10	GS

(mm)

φD × L	4 × 5.4	5 × 5.4	6.3 × 5.4	8 × 6.2	8 × 10	10 × 10
A	1.8	2.1	2.4	3.3	2.9	3.2
B	4.3	5.3	6.6	8.3	8.3	10.3
C	4.3	5.3	6.6	8.3	8.3	10.3
E	1.0	1.3	2.2	2.3	3.1	4.5
L	5.4	5.4	5.4	6.2	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

- Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

●Dimension table in next page.

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UWG

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance (Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
6.3 (0J)	22	4×5.4	0.26	3	3.00	60	UWG0J220MCL1GB
	47	5×5.4	0.26	3	1.80	95	UWG0J470MCL1GB
	68	6.3×5.4	0.26	4.284	1.00	140	UWG0J680MCL1GB
	100	6.3×5.4	0.26	6.3	1.00	140	UWG0J101MCL1GB
	220	8×6.2	0.26	13.86	0.40	230	UWG0J221MCL1GS
	330	8×10	0.26	20.79	0.30	450	UWG0J331MNL1GS
	1000	10×10	0.26	63	0.15	670	UWG0J102MNL1GS
	1500	10×10	0.26	94.5	0.15	670	UWG0J152MNL1GS
10 (1A)	33	5×5.4	0.19	3.3	1.80	95	UWG1A330MCL1GB
	100	8×6.2	0.19	10	0.40	230	UWG1A101MCL1GS
	150	8×6.2	0.19	15	0.40	230	UWG1A151MCL1GS
	220	8×10	0.19	22	0.30	450	UWG1A221MNL1GS
	470	10×10	0.19	47	0.15	670	UWG1A471MNL1GS
	1000	10×10	0.19	100	0.15	670	UWG1A102MNL1GS
16 (1C)	10	4×5.4	0.16	3	3.00	60	UWG1C100MCL1GB
	22	5×5.4	0.16	3.52	1.80	95	UWG1C220MCL1GB
	47	6.3×5.4	0.16	7.52	1.00	140	UWG1C470MCL1GB
	68	8×6.2	0.16	10.88	0.40	230	UWG1C680MCL1GS
	100	8×6.2	0.16	16	0.40	230	UWG1C101MCL1GS
	220	10×10	0.16	35.2	0.15	670	UWG1C221MNL1GS
	330	10×10	0.16	52.8	0.15	670	UWG1C331MNL1GS
	470	10×10	0.16	75.2	0.15	670	UWG1C471MNL1GS
	680	10×10	0.16	108.8	0.15	670	UWG1C681MNL1GS
25 (1E)	6.8	4×5.4	0.14	3	3.00	60	UWG1E6R8MCL1GB
	22	6.3×5.4	0.14	5.5	1.00	140	UWG1E220MCL1GB
	33	6.3×5.4	0.14	8.25	1.00	140	UWG1E330MCL1GB
	47	8×6.2	0.14	11.75	0.40	230	UWG1E470MCL1GS
	68	8×10	0.14	17	0.30	450	UWG1E680MNL1GS
	100	8×10	0.14	25	0.30	450	UWG1E101MNL1GS
	220	10×10	0.14	55	0.15	670	UWG1E221MNL1GS
	330	10×10	0.14	82.5	0.15	670	UWG1E331MNL1GS
	470	10×10	0.14	117.5	0.15	670	UWG1E471MNL1GS
35 (1V)	1	4×5.4	0.12	3	3.00	60	UWG1V010MCL1GB
	2.2	4×5.4	0.12	3	3.00	60	UWG1V2R2MCL1GB
	3.3	4×5.4	0.12	3	3.00	60	UWG1V3R3MCL1GB
	4.7	4×5.4	0.12	3	3.00	60	UWG1V4R7MCL1GB
	6.8	5×5.4	0.12	3	1.80	95	UWG1V6R8MCL1GB
	10	5×5.4	0.12	3.5	1.80	95	UWG1V100MCL1GB
	22	6.3×5.4	0.12	7.7	1.00	140	UWG1V220MCL1GB
	33	8×6.2	0.12	11.55	0.40	230	UWG1V330MCL1GS
	47	8×6.2	0.12	16.45	0.40	230	UWG1V470MCL1GS
	100	10×10	0.12	35	0.15	670	UWG1V101MNL1GS
	220	10×10	0.12	77	0.15	670	UWG1V221MNL1GS
	330	10×10	0.12	115.5	0.15	670	UWG1V331MNL1GS
50 (1H)	1	4×5.4	0.12	3	5.00	30	UWG1H010MCL1GB
	2.2	4×5.4	0.12	3	5.00	30	UWG1H2R2MCL1GB
	3.3	4×5.4	0.12	3	5.00	30	UWG1H3R3MCL1GB
	4.7	5×5.4	0.12	3	3.00	50	UWG1H4R7MCL1GB
	10	6.3×5.4	0.12	5	2.00	70	UWG1H100MCL1GB
	22	8×6.2	0.12	11	0.70	120	UWG1H220MCL1GS
	33	8×10	0.12	16.5	0.60	300	UWG1H330MNL1GS
	47	10×10	0.12	23.5	0.30	500	UWG1H470MNL1GS
	100	10×10	0.12	50	0.30	500	UWG1H101MNL1GS
	220	10×10	0.12	110	0.30	500	UWG1H221MNL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.
- Please select UUJ if high C/V products are required.

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ALUMINUM ELECTROLYTIC CAPACITORS

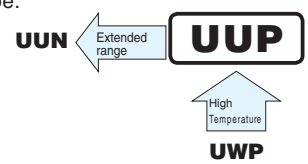
nichicon

UUP

6mmL Chip Type, Bi-Polarized

For SMD Bi-polarized

- Chip type, bi-polarized withstanding high temperature range up to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	0.1 to 47μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.05 CV or 10 (μA), whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C

Rated voltage (V)	6.3	10	16	25	35	50
tan δ (max.)	0.24	0.20	0.17	0.17	0.15	0.15

Stability at Low Temperature — Measurement frequency : 120Hz

Rated voltage (V)		6.3	10	16	25	35	50
Impedance ratio ZT / Z20 (max.)	Z(−25°C) / Z(+20°C)	4	3	2	2	2	2
	Z(−40°C) / Z(+20°C)	8	6	4	4	3	3

Endurance — The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C with the polarity every 250 hours.

Capacitance change	Within ±20% of the initial capacitance value
tan δ	200% or less than the initial specified value
Leakage current	Less than or equal to the initial specified value

Shelf Life — After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.

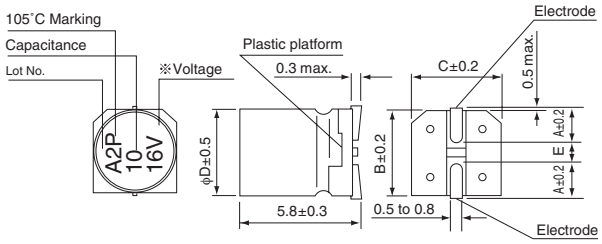
Resistance to soldering heat — The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.

Capacitance change	Within ±10% of the initial capacitance value
tan δ	Less than or equal to the initial specified value
Leakage current	Less than or equal to the initial specified value

Marking — Black print on the case top.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type



(mm)

φD	4	5	6.3
A	1.8	2.1	2.4
B	4.3	5.3	6.6
C	4.3	5.3	6.6
E	1.0	1.3	2.2

※Voltage mark for 6.3V is「6V」

Type numbering system (Example : 16V 10μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	U	P	1	C	1	0	0	M	C	L	1	G	S

- 14: Taping code
- 11–13: Configuration
- 9: Capacitance tolerance (±20%)
- 6–8: Rated capacitance (10μF)
- 4–5: Rated voltage (16V)
- 2–3: Series name
- 1: Type

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

● Dimension table in next page.

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UUP

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
6.3 (0J)	22	5×5.8	0.24	10	28	UUP0J220MCL1GS
	33	6.3×5.8	0.24	10.395	37	UUP0J330MCL1GS
	47	6.3×5.8	0.24	14.805	45	UUP0J470MCL1GS
10 (1A)	10	4×5.8	0.20	10	17	UUP1A100MCL1GS
	22	6.3×5.8	0.20	11	33	UUP1A220MCL1GS
	33	6.3×5.8	0.20	16.5	41	UUP1A330MCL1GS
16 (1C)	4.7	4×5.8	0.17	10	12	UUP1C4R7MCL1GS
	10	5×5.8	0.17	10	23	UUP1C100MCL1GS
	22	6.3×5.8	0.17	17.6	37	UUP1C220MCL1GS
	33	6.3×5.8	0.17	26.4	49	UUP1C330MCL1GS
25 (1E)	3.3	5×5.8	0.17	10	12	UUP1E3R3MCL1GS
	4.7	5×5.8	0.17	10	16	UUP1E4R7MCL1GS
	10	6.3×5.8	0.17	12.5	27	UUP1E100MCL1GS
35 (1V)	2.2	4×5.8	0.15	10	8.4	UUP1V2R2MCL1GS
	3.3	5×5.8	0.15	10	16	UUP1V3R3MCL1GS
	4.7	5×5.8	0.15	10	18	UUP1V4R7MCL1GS
	10	6.3×5.8	0.15	17.5	29	UUP1V100MCL1GS
50 (1H)	0.1	4×5.8	0.15	10	1.0	UUP1H0R1MCL1GS
	0.22	4×5.8	0.15	10	2.0	UUP1HR22MCL1GS
	0.33	4×5.8	0.15	10	2.8	UUP1HR33MCL1GS
	0.47	4×5.8	0.15	10	4.0	UUP1HR47MCL1GS
	1	4×5.8	0.15	10	8.4	UUP1H010MCL1GS
	2.2	5×5.8	0.15	10	13	UUP1H2R2MCL1GS
	3.3	5×5.8	0.15	10	17	UUP1H3R3MCL1GS
	4.7	6.3×5.8	0.15	11.75	20	UUP1H4R7MCL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.
- Please select UUN if high C/V products are required.

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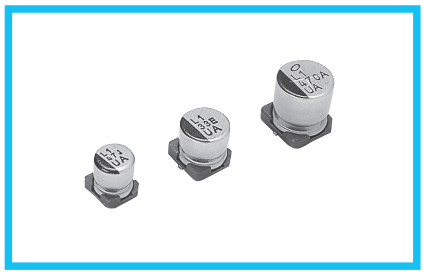
ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UUA

6mmL Chip Type, Long Life Assurance

For SMD Long Life



- Chip type with load life of 3000 to 5000 hours at +105°C.
- Designed for surface mounting on high density PC board.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UUL Long Life → UUA

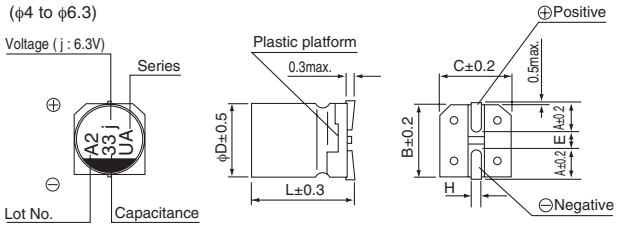
■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	1 to 1000μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01 CV or 3 (μA) , whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 tan δ (max.): 0.28 / 0.24 / 0.20 / 0.16 / 0.13 / 0.12
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 Impedance ratio ZT / Z20 (max.) Z(−25°C) / Z(+20°C): 4 / 3 / 2 / 2 / 2 / 2 Impedance ratio ZT / Z20 (max.) Z(−55°C) / Z(+20°C): 10 / 7 / 5 / 3 / 3 / 3
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 5000 hours (3000 hours for φD = 4, 5 and 6.3) at 105°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 300% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

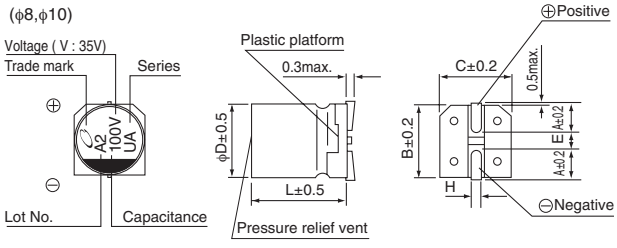
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

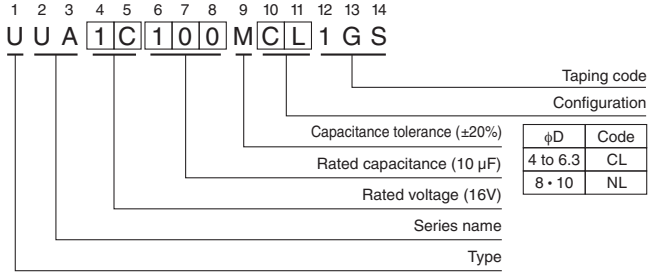
(φ4 to φ6.3)



(φ8,φ10)



Type numbering system (Example : 16V 10μF)



φD	Code
4 to 6.3	CL
8・10	NL

(mm)

φD × L	4 × 5.8	5 × 5.8	6.3 × 5.8	6.3 × 7.7	8 × 10	10 × 10
A	1.8	2.1	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	3.1	4.5
L	5.8	5.8	5.8	7.7	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

Voltage

V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

●Dimension table in next page.

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UUA

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
6.3 (0J)	22	4×5.8	0.28	3	22	UUA0J220MCL1GS
	33	5×5.8	0.28	3	35	UUA0J330MCL1GS
	47	5×5.8	0.28	3	38	UUA0J470MCL1GS
	100	6.3×5.8	0.28	6.3	69	UUA0J101MCL1GS
	220	6.3×7.7	0.28	13.86	120	UUA0J221MCL1GS
	330	8×10	0.28	20.79	290	UUA0J331MNL1GS
	470	10×10	0.28	29.61	320	UUA0J471MNL1GS
	1000	10×10	0.28	63	410	UUA0J102MNL1GS
10 (1A)	22	5×5.8	0.24	3	30	UUA1A220MCL1GS
	33	5×5.8	0.24	3.3	35	UUA1A330MCL1GS
	47	6.3×5.8	0.24	4.7	50	UUA1A470MCL1GS
	100	6.3×7.7	0.24	10	81	UUA1A101MCL1GS
	220	8×10	0.24	22	141	UUA1A221MNL1GS
	330	10×10	0.24	33	290	UUA1A331MNL1GS
	470	10×10	0.24	47	320	UUA1A471MNL1GS
16 (1C)	10	4×5.8	0.20	3	18	UUA1C100MCL1GS
	22	5×5.8	0.20	3.52	30	UUA1C220MCL1GS
	33	6.3×5.8	0.20	5.28	48	UUA1C330MCL1GS
	47	6.3×5.8	0.20	7.52	50	UUA1C470MCL1GS
	100	6.3×7.7	0.20	16	81	UUA1C101MCL1GS
	220	10×10	0.20	35.2	216	UUA1C221MNL1GS
	330	10×10	0.20	52.8	290	UUA1C331MNL1GS
	470	10×10	0.20	75.2	320	UUA1C471MNL1GS
25 (1E)	10	5×5.8	0.16	3	27	UUA1E100MCL1GS
	22	6.3×5.8	0.16	5.5	44	UUA1E220MCL1GS
	33	6.3×5.8	0.16	8.25	50	UUA1E330MCL1GS
	47	6.3×7.7	0.16	11.75	63	UUA1E470MCL1GS
	100	8×10	0.16	25	116	UUA1E101MNL1GS
	220	10×10	0.16	55	320	UUA1E221MNL1GS
	330	10×10	0.16	82.5	450	UUA1E331MNL1GS
35 (1V)	4.7	4×5.8	0.13	3	16	UUA1V4R7MCL1GS
	10	5×5.8	0.13	3.5	27	UUA1V100MCL1GS
	22	6.3×5.8	0.13	7.7	44	UUA1V220MCL1GS
	33	6.3×7.7	0.13	11.55	57	UUA1V330MCL1GS
	47	8×10	0.13	16.45	92	UUA1V470MNL1GS
	100	10×10	0.13	35	151	UUA1V101MNL1GS
	220	10×10	0.13	77	375	UUA1V221MNL1GS
50 (1H)	1	4×5.8	0.12	3	8	UUA1H010MCL1GS
	2.2	4×5.8	0.12	3	12	UUA1H2R2MCL1GS
	3.3	4×5.8	0.12	3	17	UUA1H3R3MCL1GS
	4.7	5×5.8	0.12	3	22	UUA1H4R7MCL1GS
	10	6.3×5.8	0.12	5	32	UUA1H100MCL1GS
	22	6.3×7.7	0.12	11	58	UUA1H220MCL1GS
	33	8×10	0.12	16.5	140	UUA1H330MNL1GS
	47	8×10	0.12	23.5	170	UUA1H470MNL1GS
	100	10×10	0.12	50	310	UUA1H101MNL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UUL

Chip Type, Long Life Assurance

For SMD Long Life

- Chip type with load life of 5000 hours at +105°C.
- Designed for surface mounting on high density PC board.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UCB ← Long Life → **UUL** ← Long Life → UUA

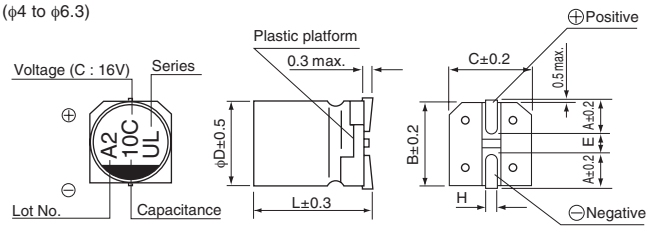
■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +105°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	1 to 1000μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01 CV or 3 (μA) , whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 tan δ (max.): 0.32 / 0.24 / 0.20 / 0.16 / 0.13 / 0.12
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 Impedance ratio ZT / Z20 (max.) Z(−25°C) / Z(+20°C): 4 / 3 / 2 / 2 / 2 / 2 Impedance ratio ZT / Z20 (max.) Z(−40°C) / Z(+20°C): 10 / 7 / 5 / 3 / 3 / 3
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 5000 hours at 105°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 300% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

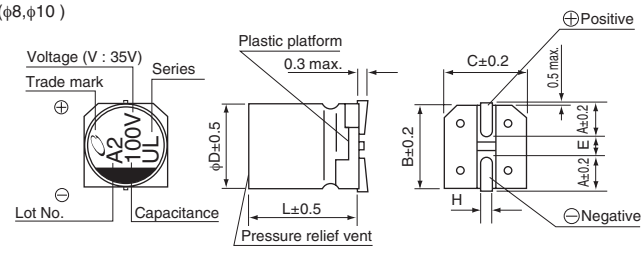
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

(φ4 to φ6.3)



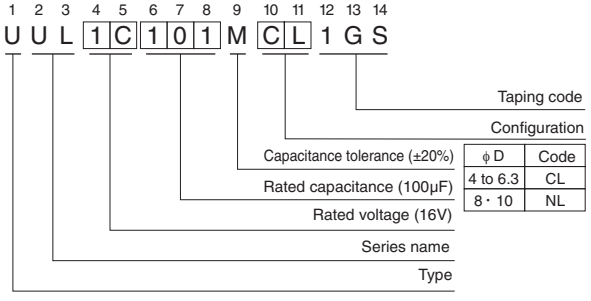
(φ8,φ10)



Voltage

V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H

Type numbering system (Example : 16V 100μF)



φD	Code
4 to 6.3	CL
8・10	NL

(mm)

φD × L	4 × 5.8	5 × 5.8	6.3 × 5.8	6.3 × 7.7	8 × 10	10 × 10
A	1.8	2.1	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	3.1	4.5
L	5.8	5.8	5.8	7.7	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

●Dimension table in next page.

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UUL

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
6.3 (0J)	33	5×5.8	0.32	3	35	UUL0J330MCL1GS
	47	5×5.8	0.32	3	36	UUL0J470MCL1GS
	100	6.3×5.8	0.32	6.3	60	UUL0J101MCL1GS
	220	6.3×7.7	0.32	13.86	101	UUL0J221MCL1GS
	330	8×10	0.32	20.79	160	UUL0J331MNL1GS
	470	10×10	0.32	29.61	254	UUL0J471MNL1GS
	1000	10×10	0.32	63	313	UUL0J102MNL1GS
10 (1A)	22	5×5.8	0.24	3	30	UUL1A220MCL1GS
	33	5×5.8	0.24	3.3	35	UUL1A330MCL1GS
	47	6.3×5.8	0.24	4.7	50	UUL1A470MCL1GS
	100	6.3×7.7	0.24	10	81	UUL1A101MCL1GS
	220	8×10	0.24	22	141	UUL1A221MNL1GS
	330	10×10	0.24	33	238	UUL1A331MNL1GS
	470	10×10	0.24	47	254	UUL1A471MNL1GS
16 (1C)	10	4×5.8	0.20	3	18	UUL1C100MCL1GS
	22	5×5.8	0.20	3.52	30	UUL1C220MCL1GS
	33	6.3×5.8	0.20	5.28	48	UUL1C330MCL1GS
	47	6.3×5.8	0.20	7.52	50	UUL1C470MCL1GS
	100	6.3×7.7	0.20	16	81	UUL1C101MCL1GS
	220	10×10	0.20	35.2	216	UUL1C221MNL1GS
	330	10×10	0.20	52.8	238	UUL1C331MNL1GS
	470	10×10	0.20	75.2	254	UUL1C471MNL1GS
25 (1E)	10	5×5.8	0.16	3	25	UUL1E100MCL1GS
	22	6.3×5.8	0.16	5.5	42	UUL1E220MCL1GS
	33	6.3×5.8	0.16	8.25	48	UUL1E330MCL1GS
	47	6.3×7.7	0.16	11.75	63	UUL1E470MCL1GS
	100	8×10	0.16	25	116	UUL1E101MNL1GS
	220	10×10	0.16	55	216	UUL1E221MNL1GS
	330	10×10	0.16	82.5	238	UUL1E331MNL1GS
35 (1V)	4.7	4×5.8	0.13	3	15	UUL1V4R7MCL1GS
	10	5×5.8	0.13	3.5	25	UUL1V100MCL1GS
	22	6.3×5.8	0.13	7.7	42	UUL1V220MCL1GS
	33	6.3×7.7	0.13	11.55	57	UUL1V330MCL1GS
	47	8×10	0.13	16.45	92	UUL1V470MNL1GS
	100	10×10	0.13	35	151	UUL1V101MNL1GS
	220	10×10	0.13	77	216	UUL1V221MNL1GS
50 (1H)	1	4×5.8	0.12	3	6.2	UUL1H010MCL1GS
	2.2	4×5.8	0.12	3	11	UUL1H2R2MCL1GS
	3.3	4×5.8	0.12	3	14	UUL1H3R3MCL1GS
	4.7	5×5.8	0.12	3	19	UUL1H4R7MCL1GS
	10	6.3×5.8	0.12	5	30	UUL1H100MCL1GS
	22	6.3×7.7	0.12	11	49	UUL1H220MCL1GS
	33	8×10	0.12	16.5	77	UUL1H330MNL1GS
	47	8×10	0.12	23.5	92	UUL1H470MNL1GS
	100	10×10	0.12	50	151	UUL1H101MNL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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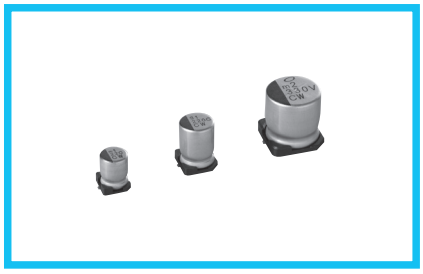
ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UCW

Chip Type, Low Impedance, Long Life Assurance

For SMD | Low Impedance | Long Life



- Chip type with load life of 7000 hours at +105°C.
  Low impedance temperature range up to +105°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UCW ← Low Impedance UCB

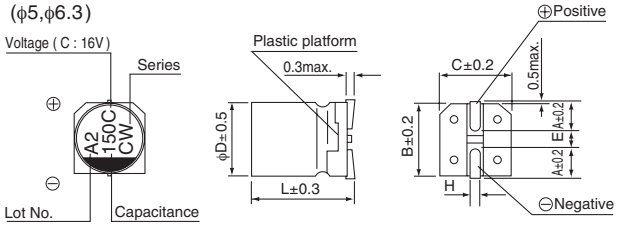
■Specifications

Item	Performance Characteristics
Category Temperature Range	−25 to +105°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	10 to 470μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01 CV or 3 (μA) , whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 tan δ (max.): 0.32 / 0.28 / 0.26 / 0.16 / 0.14 / 0.14
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 Impedance ratio ZT / Z20 (max.) Z(−25°C) / Z(+20°C): 4 / 3 / 2 / 2 / 2 / 2
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 7000 hours at 105°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 300% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

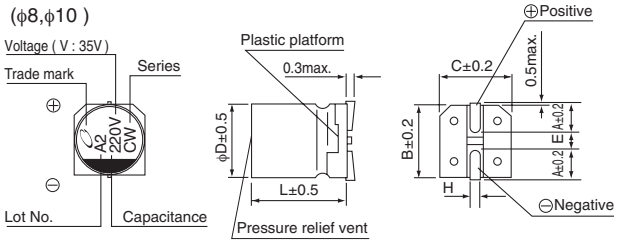
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

(φ5,φ6.3)



(φ8,φ10)



Type numbering system (Example : 10V 150μF)

1 2 3 4 5 6 7 8 9 10 11 12 13 14

U C W 1 A 1 5 1 M C L 1 G S

- Taping code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (150μF)
- Rated voltage (10V)
- Series name
- Type

φD	Code
5・6.3	CL
8・10	NL

(mm)

φD × L	5 × 7	6.3 × 7	6.3 × 8.7	8 × 10	10 × 10
A	2.1	2.4	2.4	2.9	3.2
B	5.3	6.6	6.6	8.3	10.3
C	5.3	6.6	6.6	8.3	10.3
E	1.3	2.2	2.2	3.1	4.5
L	7.0	7.0	8.7	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

Voltage

V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

●Dimension table in next page.

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UCW

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance (Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
6.3 (0J)	47	5×7	0.32	3	2.20	95	UCW0J470MCL1GS
	100	6.3×7	0.32	6.3	1.10	140	UCW0J101MCL1GS
	220	6.3×8.7	0.32	13.86	1.00	230	UCW0J221MCL1GS
	330	6.3×8.7	0.32	20.79	1.00	230	UCW0J331MCL1GS
	470	8×10	0.32	29.61	0.22	600	UCW0J471MNL1GS
10 (1A)	33	5×7	0.28	3.3	2.20	95	UCW1A330MCL1GS
	150	6.3×7	0.28	15	1.10	140	UCW1A151MCL1GS
16 (1C)	22	5×7	0.26	3.52	2.20	95	UCW1C220MCL1GS
	47	6.3×7	0.26	7.52	1.10	140	UCW1C470MCL1GS
	100	6.3×7	0.26	16	1.10	140	UCW1C101MCL1GS
	150	6.3×8.7	0.26	24	1.00	230	UCW1C151MCL1GS
	220	6.3×8.7	0.26	35.2	1.00	230	UCW1C221MCL1GS
	330	8×10	0.26	52.8	0.22	600	UCW1C331MNL1GS
	470	8×10	0.26	75.2	0.22	600	UCW1C471MNL1GS
25 (1E)	22	5×7	0.16	5.5	2.20	95	UCW1E220MCL1GS
	33	6.3×7	0.16	8.25	1.10	140	UCW1E330MCL1GS
	47	6.3×7	0.16	11.75	1.10	140	UCW1E470MCL1GS
	100	6.3×8.7	0.16	25	1.00	230	UCW1E101MCL1GS
	220	8×10	0.16	55	0.22	600	UCW1E221MNL1GS
	330	8×10	0.16	82.5	0.22	600	UCW1E331MNL1GS
	470	10×10	0.16	117.5	0.16	850	UCW1E471MNL1GS
35 (1V)	10	5×7	0.14	3.5	2.20	95	UCW1V100MCL1GS
	22	5×7	0.14	7.7	2.20	95	UCW1V220MCL1GS
	33	6.3×8.7	0.14	11.55	1.00	230	UCW1V330MCL1GS
	47	6.3×8.7	0.14	16.45	1.00	230	UCW1V470MCL1GS
	220	8×10	0.14	77	0.22	600	UCW1V221MNL1GS
	330	10×10	0.14	115.5	0.16	850	UCW1V331MNL1GS
50 (1H)	47	8×10	0.14	23.5	0.53	350	UCW1H470MNL1GS
	100	8×10	0.14	50	0.53	350	UCW1H101MNL1GS
	220	10×10	0.14	110	0.35	670	UCW1H221MNL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UCD

Chip Type, Low Impedance

For SMD Low Impedance

- Chip type, low impedance temperature range up to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UCL ← Low Impedance | **UCD** | Low Impedance → UUD

Specifications

Item	Performance Characteristics
Category Temperature Range	– 55 to +105°C
Rated Voltage Range	6.3 to 100V
Rated Capacitance Range	1 to 3300μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01 CV or 3 (μA), whichever is greater.

Tangent of loss angle (tan δ)

Rated voltage (V)	6.3	10	16	25	35	50	63	80	100
tan δ (max.)	0.26	0.19	0.16	0.14	0.12	0.10	0.08	0.08	0.07

Measurement frequency: 120Hz at 20°C

For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. (φ12.5 to φ18)

Stability at Low Temperature

Rated voltage (V)		6.3	10	16	25	35	50	63	80	100
Impedance ratio (max.)	Z(—25°C) / Z(+20°C)	2	2	2	2	2	2	2	2	2
	Z(—40°C) / Z(+20°C)	3	3	3	3	3	3	3	3	3
	Z(—55°C) / Z(+20°C)	4	4	4	3	3	3	3	3	3

Measurement frequency: 120Hz

Endurance

The specifications listed below shall be met when the capacitors are restored to 20°C after the rated voltage is applied at 105°C for the conditions listed at right.

Rated Voltage \ Size (mm)	~7.7L	10L	φ10×13.5L	13.5L~
6.3~ 50V	2000hrs.	5000hrs.	5000hrs.	5000hrs.
63 ~100V	2000hrs.	2000hrs.	—	5000hrs.

Capacitance Change	Within ± 30% of the initial capacitance value
tan δ	200% or less than the initial specified value 300% or less than the initial specified value for 63V or more
Leakage current	Less than or equal to the initial specified value

Shelf Life

After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.

Resistance to soldering heat

The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.

Capacitance Change	Within ± 10% of the initial capacitance value
tan δ	Less than or equal to the initial specified value
Leakage current	Less than or equal to the initial specified value

Marking

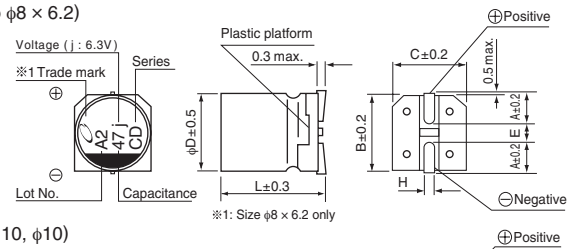
Black print on the case top.

Chip Type

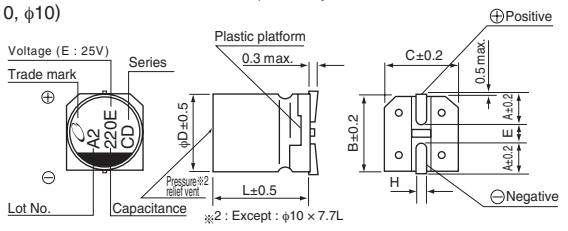
※ φ6.3×5.8L or less, φ8×6.2L, φ10×7.7L, φ10×13.5L :
The vibration structure-resistant product can't support.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

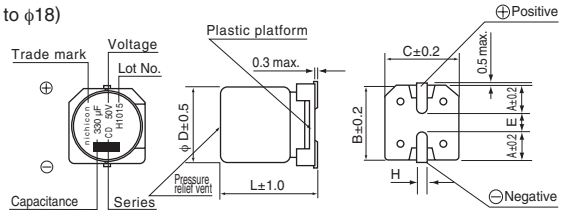
(φ4 to φ8 × 6.2)



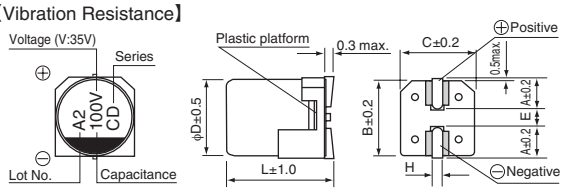
(φ8 × 10, φ10)



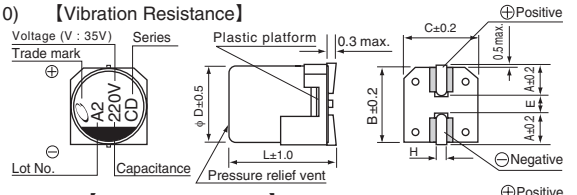
(φ12.5 to φ18)



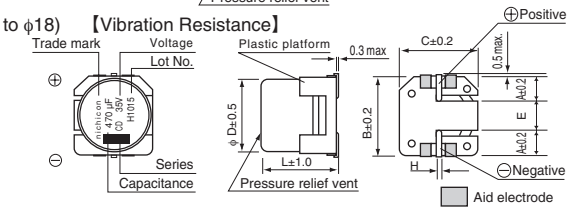
(φ6.3)【Vibration Resistance】



(φ 8 , φ10) 【Vibration Resistance】



(φ12.5 to φ18) 【Vibration Resistance】



Standard (mm)

φD×L	4 x 5.8	5 x 5.8	6.3 x 5.8	6.3 x 7.7	8 x 6.2	8 x 10	10 x 7.7	10 x 10	10 x 13.5	12.5 x 13.5	16 x 16.5	18 x 16.5
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2	3.2	3.2	5.15	5.65	6.65
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	10.3	13.6	17.1	19.1
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	10.3	13.6	17.1	19.1
E	1.0	1.3	2.2	2.2	2.3	3.1	4.5	4.5	4.5	(3.3)	(5.8)	(5.8)
L	5.8	5.8	5.8	7.7	6.2	10	7.7	10	13.5	13.5	16.5	16.5
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

Vibration Resistance (mm)

φD×L	6.3X7.7	8X10	10X10	φ12.5	φ16	φ18
A	2.4	2.9	3.2	4.8	5.4	6.4
B	6.6	8.3	10.3	13.6	17.1	19.1
C	6.6	8.3	10.3	13.6	17.1	19.1
E	2.2	3.1	4.5	(4.0)	(6.3)	(6.3)
L	7.7	10	10	13.5	16.5	16.5
H	0.5 to 0.8	1.1 to 1.5	1.1 to 1.5	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

Voltage

V	6.3	10	16	25	35	50	63	80	100
Code	j	A	C	E	V	H	J	K	2A

● Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

Type numbering system (Example : 16V 100μF)

1 2 3 4 5 6 7 8 9 10 11 12 13 14

U C D 1 C 1 0 1 M C L 1 G S

- Taping code

Size	Code
φ4 to 10	GS
φ12.5 to 18	MS

- Size code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (100μF)
- Rated voltage (16V)
- Series name
- Type

※ Configuration

Configuration	Code
Standard	CL(φ6.3 or less・φ8(6.2L)・φ10(7.7L)) NL(φ8(10L)・φ10(10L,13.5L)・NJ(φ12.5 or more)
Vibration Resistance	CS(φ6.3(7.7L)) NS(φ8(10L)・φ10(10L)・φ12.5 or more)

● Dimension table in next page.

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■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance (Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
6.3 (0J)	22	4×5.8	0.26	3	1.35	90	UCD0J220MCL1GS
	27	4×5.8	0.26	3	1.35	90	UCD0J270MCL1GS
	33	5×5.8	0.26	3	0.70	160	UCD0J330MCL1GS
	47	4×5.8	0.26	3	1.35	90	UCD0J470MCL6GS
	47	5×5.8	0.26	3	0.70	160	UCD0J470MCL1GS
	56	5×5.8	0.26	3.528	0.70	160	UCD0J560MCL1GS
	68	6.3×5.8	0.26	4.284	0.36	240	UCD0J680MCL1GS
	100	5×5.8	0.26	6.3	0.70	160	UCD0J101MCL6GS
	100	6.3×5.8	0.26	6.3	0.36	240	UCD0J101MCL1GS
	150	6.3×5.8	0.26	9.45	0.36	240	UCD0J151MCL1GS
	220	6.3×5.8	0.26	13.86	0.36	240	UCD0J221MCL1GS
	330	6.3×7.7	0.26	20.79	0.32	290	UCD0J331M□□1GS
	330	8×6.2	0.26	20.79	0.26	300	UCD0J331MCL6GS
	470	8×10	0.26	29.61	0.16	600	UCD0J471M□□1GS
	470	10×7.7	0.26	29.61	0.18	600	UCD0J471MCL6GS
	680	8×10	0.26	42.84	0.16	600	UCD0J681M□□1GS
	680	10×7.7	0.26	42.84	0.18	600	UCD0J681MCL6GS
	1000	8×10	0.26	63	0.16	600	UCD0J102M□□1GS
	1500	10×10	0.26	94.5	0.080	850	UCD0J152M□□1GS
	2200	10×13.5	0.26	138.6	0.080	950	UCD0J222MNL1GS
	3300	12.5×13.5	0.30	207.9	0.080	1100	UCD0J332M□□1MS
10 (1A)	22	4×5.8	0.19	3	1.35	90	UCD1A220MCL1GS
	27	5×5.8	0.19	3	0.70	160	UCD1A270MCL1GS
	33	4×5.8	0.19	3.3	1.35	90	UCD1A330MCL6GS
	33	5×5.8	0.19	3.3	0.70	160	UCD1A330MCL1GS
	47	6.3×5.8	0.19	4.7	0.36	240	UCD1A470MCL1GS
	56	6.3×5.8	0.19	5.6	0.36	240	UCD1A560MCL1GS
	68	6.3×5.8	0.19	6.8	0.36	240	UCD1A680MCL1GS
	100	6.3×5.8	0.19	10	0.36	240	UCD1A101MCL1GS
	150	6.3×5.8	0.19	15	0.36	240	UCD1A151MCL1GS
	220	6.3×7.7	0.19	22	0.32	290	UCD1A221M□□1GS
	220	8×6.2	0.19	22	0.26	300	UCD1A221MCL6GS
	330	8×10	0.19	33	0.16	600	UCD1A331M□□1GS
	330	10×7.7	0.19	33	0.18	600	UCD1A331MCL6GS
	470	8×10	0.19	47	0.16	600	UCD1A471M□□1GS
	470	10×7.7	0.19	47	0.18	600	UCD1A471MCL6GS
	680	10×10	0.19	68	0.080	850	UCD1A681M□□1GS
	1000	10×10	0.19	100	0.080	850	UCD1A102M□□1GS
	1500	10×13.5	0.19	150	0.080	950	UCD1A152MNL1GS
	2200	12.5×13.5	0.21	220	0.080	1100	UCD1A222M□□1MS
16 (1C)	10	4×5.8	0.16	3	1.35	90	UCD1C100MCL1GS
	15	4×5.8	0.16	3	1.35	90	UCD1C150MCL1GS
	22	4×5.8	0.16	3.52	1.35	90	UCD1C220MCL6GS
	22	5×5.8	0.16	3.52	0.70	160	UCD1C220MCL1GS
	27	5×5.8	0.16	4.32	0.70	160	UCD1C270MCL1GS
	33	6.3×5.8	0.16	5.28	0.36	240	UCD1C330MCL1GS
	47	5×5.8	0.16	7.52	0.70	160	UCD1C470MCL6GS
	47	6.3×5.8	0.16	7.52	0.36	240	UCD1C470MCL1GS
	56	6.3×5.8	0.16	8.96	0.36	240	UCD1C560MCL1GS
	68	6.3×5.8	0.16	10.88	0.36	240	UCD1C680MCL1GS
	100	6.3×5.8	0.16	16	0.36	240	UCD1C101MCL1GS

□□ : Enter the appropriate configuration code.

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■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance (Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
16 (1C)	150	6.3×7.7	0.16	24	0.32	290	UCD1C151M□□1GS
	220	6.3×7.7	0.16	35.2	0.32	290	UCD1C221M□□1GS
	220	8×6.2	0.16	35.2	0.26	300	UCD1C221MCL6GS
	330	8×10	0.16	52.8	0.16	600	UCD1C331M□□1GS
	330	10×7.7	0.16	52.8	0.18	600	UCD1C331MCL6GS
	470	8×10	0.16	75.2	0.16	600	UCD1C471M□□1GS
	470	10×7.7	0.16	75.2	0.18	600	UCD1C471MCL6GS
	680	10×10	0.16	108.8	0.080	850	UCD1C681M□□1GS
	1000	10×13.5	0.16	160	0.080	950	UCD1C102MNL1GS
	1500	12.5×13.5	0.16	240	0.080	1100	UCD1C152M□□1MS
25 (1E)	10	4×5.8	0.14	3	1.35	90	UCD1E100MCL1GS
	15	5×5.8	0.14	3.75	0.70	160	UCD1E150MCL1GS
	22	5×5.8	0.14	5.5	0.70	160	UCD1E220MCL1GS
	27	6.3×5.8	0.14	6.75	0.36	240	UCD1E270MCL1GS
	33	5×5.8	0.14	8.25	0.70	160	UCD1E330MCL6GS
	33	6.3×5.8	0.14	8.25	0.36	240	UCD1E330MCL1GS
	47	6.3×5.8	0.14	11.75	0.36	240	UCD1E470MCL1GS
	56	6.3×5.8	0.14	14	0.36	240	UCD1E560MCL1GS
	68	6.3×5.8	0.14	17	0.36	240	UCD1E680MCL1GS
	100	6.3×7.7	0.14	25	0.32	290	UCD1E101M□□1GS
	100	8×6.2	0.14	25	0.26	300	UCD1E101MCL6GS
	150	8×10	0.14	37.5	0.16	600	UCD1E151M□□1GS
	150	10×7.7	0.14	37.5	0.18	600	UCD1E151MCL6GS
	220	8×10	0.14	55	0.16	600	UCD1E221M□□1GS
	220	10×7.7	0.14	55	0.18	600	UCD1E221MCL6GS
	330	8×10	0.14	82.5	0.16	600	UCD1E331M□□1GS
	470	10×10	0.14	117.5	0.080	850	UCD1E471M□□1GS
	680	10×13.5	0.14	170	0.080	950	UCD1E681MNL1GS
	1000	12.5×13.5	0.14	250	0.080	1100	UCD1E102M□□1MS
	2200	16×16.5	0.16	550	0.035	1800	UCD1E222M□□1MS
35 (1V)	4.7	4×5.8	0.12	3	1.35	90	UCD1V4R7MCL1GS
	10	4×5.8	0.12	3.5	1.35	90	UCD1V100MCL6GS
	10	5×5.8	0.12	3.5	0.70	160	UCD1V100MCL1GS
	22	5×5.8	0.12	7.7	0.70	160	UCD1V220MCL1GS
	33	6.3×5.8	0.12	11.55	0.36	240	UCD1V330MCL1GS
	47	6.3×5.8	0.12	16.45	0.36	240	UCD1V470MCL1GS
	68	6.3×7.7	0.12	23.8	0.32	290	UCD1V680M□□1GS
	100	6.3×7.7	0.12	35	0.32	290	UCD1V101M□□6GS
	100	8×10	0.12	35	0.16	600	UCD1V101M□□1GS
	150	8×10	0.12	52.5	0.16	600	UCD1V151M□□1GS
	150	10×7.7	0.12	52.5	0.18	600	UCD1V151MCL6GS
	220	8×10	0.12	77	0.16	600	UCD1V221M□□1GS
	220	10×7.7	0.12	77	0.18	600	UCD1V221MCL6GS
	330	10×10	0.12	115.5	0.080	850	UCD1V331M□□1GS
	470	10×13.5	0.12	164.5	0.080	950	UCD1V471MNL6GS
	470	12.5×13.5	0.12	164.5	0.080	1100	UCD1V471M□□1MS
	680	12.5×13.5	0.12	238	0.080	1100	UCD1V681M□□1MS
	1000	16×16.5	0.12	350	0.035	1800	UCD1V102M□□1MS
50 (1H)	1	4×5.8	0.10	3	2.70	60	UCD1H010MCL1GS
	2.2	4×5.8	0.10	3	2.70	60	UCD1H2R2MCL1GS
	3.3	4×5.8	0.10	3	2.70	60	UCD1H3R3MCL1GS

□□ : Enter the appropriate configuration code.

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■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance (Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
50 (1H)	4.7	4×5.8	0.10	3	2.70	60	UCD1H4R7MCL1GS
	10	5×5.8	0.10	5	1.50	90	UCD1H100MCL6GS
	10	6.3×5.8	0.10	5	0.86	170	UCD1H100MCL1GS
	22	6.3×5.8	0.10	11	0.86	170	UCD1H220MCL1GS
	33	6.3×7.7	0.10	16.5	0.66	195	UCD1H330M□□1GS
	33	8×6.2	0.10	16.5	0.63	200	UCD1H330MCL6GS
	47	6.3×7.7	0.10	23.5	0.66	195	UCD1H470M□□1GS
	47	8×6.2	0.10	23.5	0.63	200	UCD1H470MCL6GS
	100	8×10	0.10	50	0.32	350	UCD1H101M□□1GS
	100	10×7.7	0.10	50	0.36	330	UCD1H101MCL6GS
	150	10×10	0.10	75	0.16	700	UCD1H151M□□1GS
	220	10×10	0.10	110	0.16	700	UCD1H221M□□1GS
	330	10×13.5	0.10	165	0.14	800	UCD1H331MNL6GS
	330	12.5×13.5	0.10	165	0.12	900	UCD1H331M□□1MS
	390	12.5×13.5	0.10	195	0.12	900	UCD1H391M□□1MS
	470	16×16.5	0.10	235	0.073	1610	UCD1H471M□□1MS
	680	16×16.5	0.10	340	0.073	1610	UCD1H681M□□1MS
63 (1J)	4.7	5×5.8	0.08	3	3.00	50	UCD1J4R7MCL1GS
	10	6.3×5.8	0.08	6.3	1.50	80	UCD1J100MCL1GS
	22	6.3×7.7	0.08	13.86	1.20	120	UCD1J220M□□1GS
	22	8×6.2	0.08	13.86	1.20	120	UCD1J220MCL6GS
	33	8×10	0.08	20.79	0.65	250	UCD1J330M□□1GS
	47	8×10	0.08	29.61	0.65	250	UCD1J470M□□1GS
	68	10×10	0.08	42.84	0.35	400	UCD1J680M□□1GS
	100	10×10	0.08	63	0.35	400	UCD1J101M□□1GS
	150	12.5×13.5	0.08	94.5	0.16	800	UCD1J151M□□1MS
	220	12.5×13.5	0.08	138.6	0.16	800	UCD1J221M□□1MS
	470	16×16.5	0.08	296.1	0.082	1410	UCD1J471M□□1MS
	680	18×16.5	0.08	428.4	0.080	1690	UCD1J681M□□1MS
80 (1K)	3.3	5×5.8	0.08	3	5.00	25	UCD1K3R3MCL1GS
	4.7	6.3×5.8	0.08	3.76	3.00	40	UCD1K4R7MCL1GS
	10	6.3×7.7	0.08	8	2.40	60	UCD1K100M□□1GS
	10	8×6.2	0.08	8	2.40	60	UCD1K100MCL6GS
	22	8×10	0.08	17.6	1.30	130	UCD1K220M□□1GS
	33	8×10	0.08	26.4	1.30	130	UCD1K330M□□1GS
	47	10×10	0.08	37.6	0.70	200	UCD1K470M□□1GS
	68	12.5×13.5	0.08	54.4	0.32	500	UCD1K680M□□1MS
	100	12.5×13.5	0.08	80	0.32	500	UCD1K101M□□1MS
	150	12.5×13.5	0.08	120	0.32	500	UCD1K151M□□1MS
	330	16×16.5	0.08	264	0.17	793	UCD1K331M□□1MS
	470	18×16.5	0.08	376	0.15	917	UCD1K471M□□1MS
100 (2A)	22	8×10	0.07	22	1.30	130	UCD2A220M□□1GS
	33	10×10	0.07	33	0.70	200	UCD2A330M□□1GS
	47	12.5×13.5	0.07	47	0.32	500	UCD2A470M□□1MS
	68	12.5×13.5	0.07	68	0.32	500	UCD2A680M□□1MS
	100	16×16.5	0.07	100	0.17	793	UCD2A101M□□1MS
	150	16×16.5	0.07	150	0.17	793	UCD2A151M□□1MS
	220	18×16.5	0.07	220	0.15	917	UCD2A221M□□1MS
	330	18×16.5	0.07	330	0.15	917	UCD2A331M□□1MS

□□ : Enter the appropriate configuration code.

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

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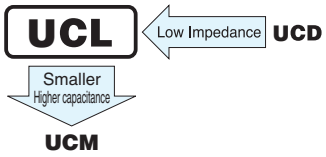
Chip Type, Low Impedance

For SMD Low Impedance

- Chip type, low impedance, temperature range up to +105°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



Specifications

Item	Performance Characteristics
Category Temperature Range	– 55 to +105°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	10 to 2200μF
Capacitance Tolerance	± 20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltages at 20°C, leakage current is not more than 0.01 CV or 3 (μA), whichever is greater.

Tangent of loss angle (tan δ) — Measurement frequency : 120Hz at 20°C

Rated voltage (V)	6.3	10	16	25	35	50
tan δ (max.)	0.26	0.19	0.16	0.14	0.12	0.10

Stability at Low Temperature — Measurement frequency : 120Hz

Rated voltage (V)		6.3	10	16	25	35	50
Impedance ratio ZT / Z20 (max.)	Z(—25°C) / Z(+20°C)	2	2	2	2	2	2
	Z(—40°C) / Z(+20°C)	3	3	3	3	3	3
	Z(—55°C) / Z(+20°C)	4	4	4	3	3	3

Endurance — The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 105°C.

Capacitance Change	Within ± 30% of the initial capacitance value
tan δ	200% or less than the initial specified value
Leakage current	Less than or equal to the initial specified value

Shelf Life — After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.

Resistance to soldering heat — The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C .

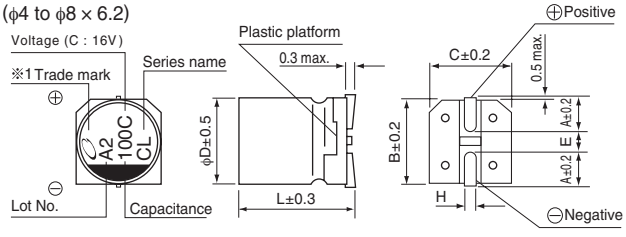
Capacitance Change	Within ± 10% of the initial capacitance value
tan δ	Less than or equal to the initial specified value
Leakage current	Less than or equal to the initial specified value

Marking — Black print on the case top.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

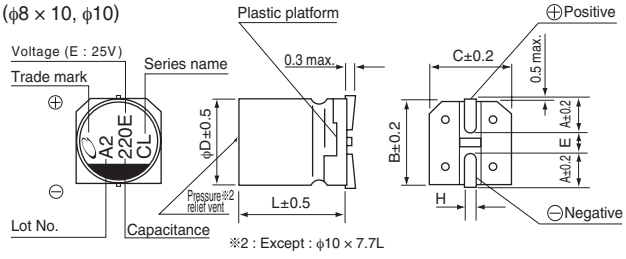
Chip Type

(φ4 to φ8 × 6.2)



※1: Size φ8 × 6.2 only

(φ8 × 10, φ10)



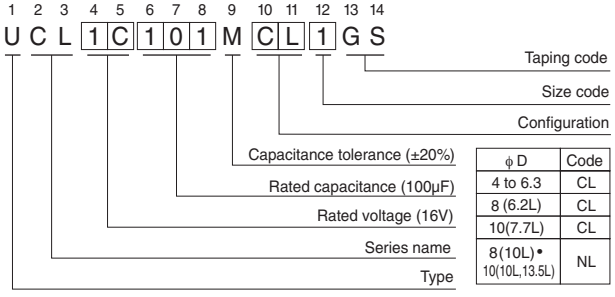
※2 : Except : φ10 × 7.7L

Voltage

V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H

● Dimension table in next page.

Type numbering system (Example : 16V 100μF)



φD	Code
4 to 6.3	CL
8 (6.2L)	CL
10(7.7L)	CL
8(10L)• 10(10L,13.5L)	NL

(mm)

φD × L	4 × 5.8	5 × 5.8	6.3 × 5.8	6.3 × 7.7	8 × 6.2	8 × 10	10 × 7.7	10 × 10	10 × 13.5
A	1.8	2.1	2.4	2.4	3.3	2.9	3.2	3.2	3.2
B	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	10.3
C	4.3	5.3	6.6	6.6	8.3	8.3	10.3	10.3	10.3
E	1.0	1.3	2.2	2.2	2.3	3.1	4.5	4.5	4.5
L	5.8	5.8	5.8	7.7	6.2	10	7.7	10	13.5
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1

● Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

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■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance(Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
6.3 (0J)	22	4×5.8	0.26	3	0.85	160	UCL0J220MCL1GS
	47	4×5.8	0.26	3	0.85	160	UCL0J470MCL6GS
	47	5×5.8	0.26	3	0.36	240	UCL0J470MCL1GS
	100	5×5.8	0.26	6.3	0.36	240	UCL0J101MCL6GS
	100	6.3×5.8	0.26	6.3	0.26	300	UCL0J101MCL1GS
	220	6.3×5.8	0.26	13.86	0.26	300	UCL0J221MCL1GS
	330	6.3×7.7	0.26	20.79	0.16	600	UCL0J331MCL1GS
	330	8×6.2	0.26	20.79	0.18	500	UCL0J331MCL6GS
	470	8×10	0.26	29.61	0.08	850	UCL0J471MNL1GS
	470	10×7.7	0.26	29.61	0.10	850	UCL0J471MCL6GS
	1000	8×10	0.26	63	0.08	850	UCL0J102MNL1GS
	1500	10×10	0.26	94.5	0.06	1190	UCL0J152MNL1GS
	1800	10×10	0.26	113.4	0.08	850	UCL0J182MNL1GS
	2200	10×13.5	0.26	138.6	0.06	1190	UCL0J222MNL1GS
10 (1A)	22	4×5.8	0.19	3	0.85	160	UCL1A220MCL1GS
	33	4×5.8	0.19	3.3	0.85	160	UCL1A330MCL6GS
	33	5×5.8	0.19	3.3	0.36	240	UCL1A330MCL1GS
	47	6.3×5.8	0.19	4.7	0.26	300	UCL1A470MCL1GS
	100	6.3×5.8	0.19	10	0.26	300	UCL1A101MCL1GS
	150	6.3×5.8	0.19	15	0.26	300	UCL1A151MCL1GS
	220	6.3×7.7	0.19	22	0.16	600	UCL1A221MCL1GS
	220	8×6.2	0.19	22	0.18	500	UCL1A221MCL6GS
	330	8×10	0.19	33	0.08	850	UCL1A331MNL1GS
	330	10×7.7	0.19	33	0.10	850	UCL1A331MCL6GS
	470	8×10	0.19	47	0.08	850	UCL1A471MNL1GS
	470	10×7.7	0.19	47	0.10	850	UCL1A471MCL6GS
	680	8×10	0.19	68	0.08	850	UCL1A681MNL1GS
	1000	10×10	0.19	100	0.06	1190	UCL1A102MNL1GS
	1200	10×10	0.19	120	0.08	850	UCL1A122MNL1GS
	1500	10×13.5	0.19	150	0.06	1190	UCL1A152MNL1GS
16 (1C)	10	4×5.8	0.16	3	0.85	160	UCL1C100MCL1GS
	22	4×5.8	0.16	3.52	0.85	160	UCL1C220MCL6GS
	22	5×5.8	0.16	3.52	0.36	240	UCL1C220MCL1GS
	47	5×5.8	0.16	7.52	0.36	240	UCL1C470MCL6GS
	47	6.3×5.8	0.16	7.52	0.26	300	UCL1C470MCL1GS
	68	6.3×5.8	0.16	10.88	0.26	300	UCL1C680MCL1GS
	100	6.3×5.8	0.16	16	0.26	300	UCL1C101MCL1GS
	100	6.3×7.7	0.16	16	0.16	600	UCL1C101MCL6GS
	150	6.3×7.7	0.16	24	0.16	600	UCL1C151MCL1GS
	220	6.3×7.7	0.16	35.2	0.16	600	UCL1C221MCL1GS
	220	8×6.2	0.16	35.2	0.18	500	UCL1C221MCL6GS
	330	8×10	0.16	52.8	0.08	850	UCL1C331MNL1GS
	330	10×7.7	0.16	52.8	0.10	850	UCL1C331MCL6GS
	470	8×10	0.16	75.2	0.08	850	UCL1C471MNL1GS
	470	10×7.7	0.16	75.2	0.10	850	UCL1C471MCL6GS
	680	10×10	0.16	108.8	0.06	1190	UCL1C681MNL1GS
	820	10×10	0.16	131.2	0.08	850	UCL1C821MNL1GS
	1000	10×13.5	0.16	160	0.06	1190	UCL1C102MNL1GS

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■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance(Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
25 (1E)	10	4×5.8	0.14	3	0.85	160	UCL1E100MCL1GS
	22	5×5.8	0.14	5.5	0.36	240	UCL1E220MCL1GS
	33	5×5.8	0.14	8.25	0.36	240	UCL1E330MCL6GS
	33	6.3×5.8	0.14	8.25	0.26	300	UCL1E330MCL1GS
	47	6.3×5.8	0.14	11.75	0.26	300	UCL1E470MCL1GS
	68	6.3×5.8	0.14	17	0.26	300	UCL1E680MCL1GS
	100	6.3×7.7	0.14	25	0.16	600	UCL1E101MCL1GS
	100	8×6.2	0.14	25	0.18	500	UCL1E101MCL6GS
	150	8×10	0.14	37.5	0.08	850	UCL1E151MNL1GS
	150	10×7.7	0.14	37.5	0.10	850	UCL1E151MCL6GS
	220	8×10	0.14	55	0.08	850	UCL1E221MNL1GS
	220	10×7.7	0.14	55	0.10	850	UCL1E221MCL6GS
	330	8×10	0.14	82.5	0.08	850	UCL1E331MNL1GS
	470	10×10	0.14	117.5	0.06	1190	UCL1E471MNL1GS
	560	10×10	0.14	140	0.08	850	UCL1E561MNL1GS
	680	10×13.5	0.14	170	0.06	1190	UCL1E681MNL1GS
35 (1V)	10	4×5.8	0.12	3.5	0.85	160	UCL1V100MCL6GS
	10	5×5.8	0.12	3.5	0.36	240	UCL1V100MCL1GS
	22	5×5.8	0.12	7.7	0.36	240	UCL1V220MCL1GS
	33	6.3×5.8	0.12	11.55	0.26	300	UCL1V330MCL1GS
	47	6.3×5.8	0.12	16.45	0.26	300	UCL1V470MCL1GS
	68	6.3×7.7	0.12	23.8	0.16	600	UCL1V680MCL1GS
	100	6.3×7.7	0.12	35	0.16	600	UCL1V101MCL6GS
	100	8×10	0.12	35	0.08	850	UCL1V101MNL1GS
	150	8×10	0.12	52.5	0.08	850	UCL1V151MNL1GS
	150	10×7.7	0.12	52.5	0.10	850	UCL1V151MCL6GS
	220	8×10	0.12	77	0.08	850	UCL1V221MNL1GS
	220	10×7.7	0.12	77	0.10	850	UCL1V221MCL6GS
	330	10×10	0.12	115.5	0.06	1190	UCL1V331MNL1GS
	390	10×10	0.12	136.5	0.08	850	UCL1V391MNL1GS
	470	10×13.5	0.12	164.5	0.06	1190	UCL1V471MNL1GS
50 (1H)	100	8×10	0.10	50	0.18	670	UCL1H101MNL1GS
	220	10×10	0.10	110	0.12	900	UCL1H221MNL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

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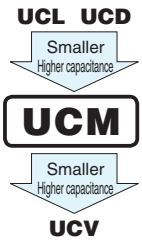
Chip Type, Low Impedance

For SMD Low Impedance

- Chip type, low impedance temperature range up to +105°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



■Specifications

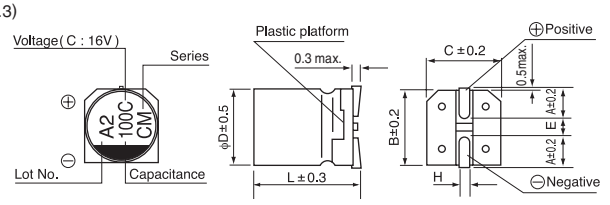
Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	6.3 to 100V
Rated Capacitance Range	10 to 5100μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01 CV(μA) .
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 / 63 / 80 / 100 tan δ (max.): 0.26 / 0.19 / 0.16 / 0.14 / 0.12 / 0.10 / 0.08 / 0.08 / 0.07 For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.(φ12.5 to φ18)
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 / 63 / 80 / 100 Impedance ratio ZT / Z20 (max.): Z(−25°C) / Z(+20°C): 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 Z(−40°C) / Z(+20°C): 3 / 3 / 3 / 3 / 3 / 3 / 3 / 3 / 3 Z(−55°C) / Z(+20°C): 4 / 4 / 4 / 3 / 3 / 3 / 3 / 3 / 3
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 5000 hours (2000 hours for φD ≦ 10) at 105°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 200% or less than the initial specified value (For 63V or more : 300% or less than the initial specified value) Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

■Chip Type

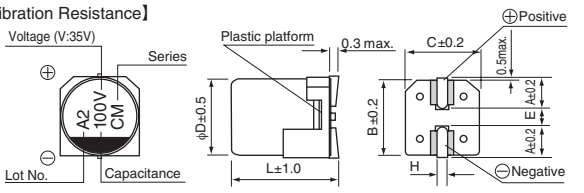
※ φ6.3×5.8L or less,φ12.5×21L : The vibration structure-resistant product can't support.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

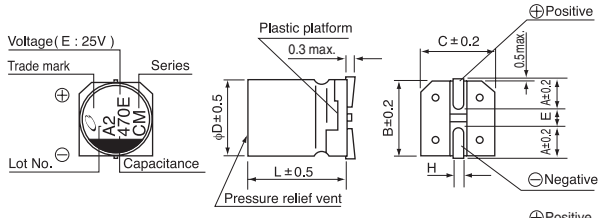
(φ4 to φ6.3)



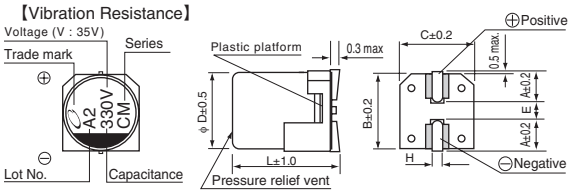
(φ6.3)【Vibration Resistance】



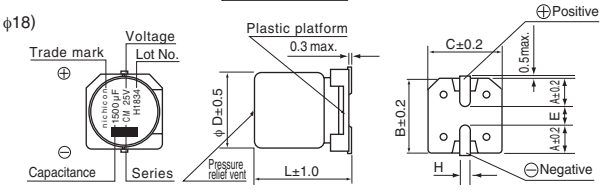
(φ8 , φ10)



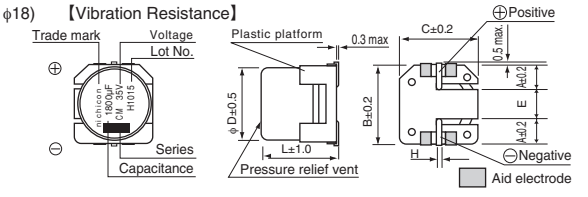
(φ8 , φ10) 【Vibration Resistance】



(φ12.5 to φ18)



(φ12.5 to φ18) 【Vibration Resistance】



Standard (mm)

φD×L	4 × 5.8	5 × 5.8	6.3 × 5.8	6.3 × 7.7	8 × 10	10 × 10	φ12	φ16	φ18
A	1.8	2.1	2.4	2.4	2.9	3.2	5.15	5.65	6.65
B	4.3	5.3	6.6	6.6	8.3	10.3	13.6	17.1	19.1
C	4.3	5.3	6.6	6.6	8.3	10.3	13.6	17.1	19.1
E	1	1.3	2.2	2.2	3.1	4.5	(3.3)	(5.8)	(5.8)
L	5.8	5.8	5.8	7.7	10	10	13.5,21	16.5,21.5	16.5,21.5
H	0.5 to 0.8	0.5 to 0.8	0.5 to 5.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

Vibration Resistance (mm)

φDXL	6.3X7.7	8X10	10X10	φ12.5	φ16	φ18
A	2.4	2.9	3.2	4.8	5.4	6.4
B	6.6	8.3	10.3	13.6	17.1	19.1
C	6.6	8.3	10.3	13.6	17.1	19.1
E	2.2	3.1	4.5	(4.0)	(6.3)	(6.3)
L	7.7	10	10	13.5	16.5, 21.5	16.5, 21.5
H	0.5 to 0.8	1.1 to 1.5	1.1 to 1.5	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

Voltage

v	6.3	10	16	25	35	50	63	80	100
Code	j	A	C	E	V	H	J	K	2A

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

● Dimension table in next page.

Type numbering system (Example : 25V 1500μF)

1 2 3 4 5 6 7 8 9 10 11 12 13 14

U C M 1 E 1 5 2 M N J 1 M S

- Taping code
- Size code
- Configuration※
- Capacitance tolerance (±20%)
- Rated capacitance (1500μF)
- Rated voltage (25V)
- Series name
- Type

φ D	Code
4 to 10	GS
12.5 to 18	MS

※ Configuration

Configuration	Code
Standard	CL(φ6.3 or less) NL(φ8・φ10) NJ(φ12.5 or more)
Vibration Resistance	CS(φ6.3(7.7L)) NS(φ8(10L)・φ10(10L)・φ12.5 or more)

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■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance(Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
6.3 (0J)	100	4×5.8	0.26	6.3	1.00	160	UCM0J101MCL1GS
	220	5×5.8	0.26	13.86	0.36	240	UCM0J221MCL1GS
	330	6.3×5.8	0.26	20.79	0.26	300	UCM0J331MCL1GS
	470	6.3×7.7	0.26	29.61	0.16	600	UCM0J471M□□1GS
	680	6.3×7.7	0.26	42.84	0.16	600	UCM0J681M□□1GS
	1500	8×10	0.26	94.5	0.080	850	UCM0J152M□□1GS
	2200	10×10	0.26	138.6	0.060	1190	UCM0J222M□□1GS
10 (1A)	68	4×5.8	0.19	6.8	1.00	160	UCM1A680MCL1GS
	150	5×5.8	0.19	15	0.36	240	UCM1A151MCL1GS
	220	6.3×5.8	0.19	22	0.26	300	UCM1A221MCL1GS
	330	6.3×7.7	0.19	33	0.16	600	UCM1A331M□□1GS
	470	6.3×7.7	0.19	47	0.16	600	UCM1A471M□□1GS
	1000	8×10	0.19	100	0.080	850	UCM1A102M□□1GS
	1500	10×10	0.19	150	0.060	1190	UCM1A152M□□1GS
16 (1C)	47	4×5.8	0.16	7.52	1.00	160	UCM1C470MCL1GS
	68	5×5.8	0.16	10.88	0.36	240	UCM1C680MCL1GS
	100	5×5.8	0.16	16	0.36	240	UCM1C101MCL1GS
	150	6.3×5.8	0.16	24	0.26	300	UCM1C151MCL1GS
	220	6.3×5.8	0.16	35.2	0.26	300	UCM1C221MCL1GS
	330	6.3×7.7	0.16	52.8	0.16	600	UCM1C331M□□1GS
	680	8×10	0.16	108.8	0.080	850	UCM1C681M□□1GS
	1000	10×10	0.16	160	0.060	1190	UCM1C102M□□1GS
25 (1E)	22	4×5.8	0.14	5.5	1.00	160	UCM1E220MCL1GS
	33	4×5.8	0.14	8.25	1.00	160	UCM1E330MCL1GS
	47	5×5.8	0.14	11.75	0.36	240	UCM1E470MCL1GS
	68	5×5.8	0.14	17	0.36	240	UCM1E680MCL1GS
	100	6.3×5.8	0.14	25	0.26	300	UCM1E101MCL1GS
	150	6.3×7.7	0.14	37.5	0.16	600	UCM1E151M□□1GS
	220	6.3×7.7	0.14	55	0.16	600	UCM1E221M□□1GS
	470	8×10	0.14	117.5	0.080	850	UCM1E471M□□1GS
	820	10×10	0.14	205	0.060	1190	UCM1E821M□□1GS
	1500	12.5×13.5	0.14	375	0.058	1420	UCM1E152M□□1MS
	2400	12.5×21	0.16	600	0.046	2080	UCM1E242MNJ1MS
	2700	16×16.5	0.16	675	0.047	1910	UCM1E272M□□1MS
	3600	18×16.5	0.18	900	0.045	2060	UCM1E362M□□1MS
	3900	16×21.5	0.18	975	0.034	2540	UCM1E392M□□1MS
	5100	18×21.5	0.22	1275	0.032	2640	UCM1E512M□□1MS
35 (1V)	22	4×5.8	0.12	7.7	1.00	160	UCM1V220MCL1GS
	33	5×5.8	0.12	11.55	0.36	240	UCM1V330MCL1GS
	47	5×5.8	0.12	16.45	0.36	240	UCM1V470MCL1GS
	68	6.3×5.8	0.12	23.8	0.26	300	UCM1V680MCL1GS
	100	6.3×5.8	0.12	35	0.26	300	UCM1V101MCL1GS
	150	6.3×7.7	0.12	52.5	0.16	600	UCM1V151M□□1GS
	330	8×10	0.12	115.5	0.080	850	UCM1V331M□□1GS
	560	10×10	0.12	196	0.060	1190	UCM1V561M□□1GS
	910	12.5×13.5	0.12	318.5	0.058	1420	UCM1V911M□□1MS
	1600	12.5×21	0.12	560	0.046	2080	UCM1V162MNJ1MS
	1800	16×16.5	0.12	630	0.047	1910	UCM1V182M□□1MS
	2200	18×16.5	0.14	770	0.045	2060	UCM1V222M□□1MS
	2700	16×21.5	0.14	945	0.034	2540	UCM1V272M□□1MS
	3600	18×21.5	0.16	1260	0.032	2640	UCM1V362M□□1MS

□□ : Enter the appropriate configuration code.

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■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance (Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
50 (1H)	10	4×5.8	0.10	5	2.30	85	UCM1H100MCL6GS
	10	5×5.8	0.10	5	0.88	165	UCM1H100MCL1GS
	22	5×5.8	0.10	11	0.88	165	UCM1H220MCL1GS
	47	6.3×5.8	0.10	23.5	0.68	195	UCM1H470MCL1GS
	100	6.3×7.7	0.10	50	0.34	350	UCM1H101M□□1GS
	220	8×10	0.10	110	0.18	670	UCM1H221M□□1GS
	330	10×10	0.10	165	0.12	900	UCM1H331M□□1GS
	470	12.5×13.5	0.10	235	0.12	1340	UCM1H471M□□1MS
	750	12.5×21	0.10	375	0.080	1970	UCM1H751MNJ1MS
	820	16×16.5	0.10	410	0.080	1820	UCM1H821M□□1MS
	1100	18×16.5	0.10	550	0.078	1980	UCM1H112M□□1MS
	1200	16×21.5	0.10	600	0.050	2440	UCM1H122M□□1MS
	1600	18×21.5	0.10	800	0.050	2550	UCM1H162M□□1MS
63 (1J)	47	6.3×7.7	0.08	29.61	0.80	190	UCM1J470M□□1GS
	100	8×10	0.08	63	0.40	300	UCM1J101M□□1GS
	220	10×10	0.08	138.6	0.25	500	UCM1J221M□□1GS
	360	12.5×13.5	0.08	226.8	0.14	1250	UCM1J361M□□1MS
	560	12.5×21	0.08	352.8	0.086	1850	UCM1J561MNJ1MS
	620	16×16.5	0.08	390.6	0.082	1740	UCM1J621M□□1MS
	820	18×16.5	0.08	516.6	0.080	1880	UCM1J821M□□1MS
	910	16×21.5	0.08	573.3	0.055	2330	UCM1J911M□□1MS
	1200	18×21.5	0.08	756	0.054	2430	UCM1J122M□□1MS
80 (1K)	33	6.3×7.7	0.08	26.4	0.80	190	UCM1K330M□□1GS
	68	8×10	0.08	54.4	0.40	300	UCM1K680M□□1GS
	100	10×10	0.08	80	0.25	500	UCM1K101M□□1GS
	220	12.5×13.5	0.08	176	0.18	1050	UCM1K221M□□1MS
	360	12.5×21	0.08	288	0.11	1580	UCM1K361MNJ1MS
	390	16×16.5	0.08	312	0.10	1500	UCM1K391M□□1MS
	510	18×16.5	0.08	408	0.098	1670	UCM1K511M□□1MS
	560	16×21.5	0.08	448	0.066	2040	UCM1K561M□□1MS
	750	18×21.5	0.08	600	0.063	2140	UCM1K751M□□1MS
100 (2A)	130	12.5×13.5	0.07	130	0.18	1050	UCM2A131M□□1MS
	220	12.5×21	0.07	220	0.11	1580	UCM2A221MNJ1MS
	240	16×16.5	0.07	240	0.10	1500	UCM2A241M□□1MS
	330	18×16.5	0.07	330	0.098	1670	UCM2A331M□□1MS
	390	16×21.5	0.07	390	0.066	2040	UCM2A391M□□1MS
	510	18×21.5	0.07	510	0.063	2140	UCM2A511M□□1MS

□□ : Enter the appropriate configuration code.

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

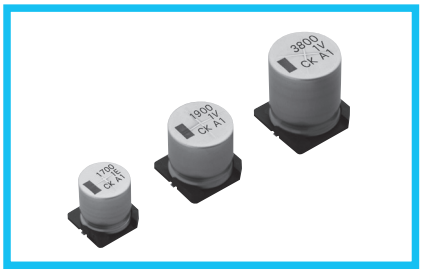
UCK

Chip Type, Low Impedance.

For SMD Low Impedance

NEW

- Chip type, low impedance temperature range up to +105°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



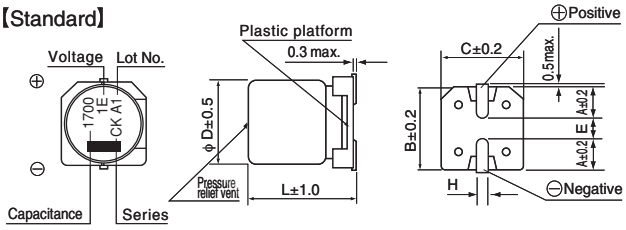
■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	25 to 35V
Rated Capacitance Range	1100 to 5900μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01 CV or 3 (μA), whichever is greater.
Tangent of loss angle (tan δ)	Rated voltage (V): 25, 35 tan δ (max.): 0.14, 0.12 Measurement frequency : 120Hz at 20°C For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.
Stability at Low Temperature	Rated voltage (V): 25, 35 Impedance ratio ZT / Z20 (max.): Z(−25°C) / Z(+20°C): 2, 2; Z(−40°C) / Z(+20°C): 3, 3; Z(−55°C) / Z(+20°C): 3, 3 Measurement frequency : 120Hz
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 5000 hours at 105°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 200% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

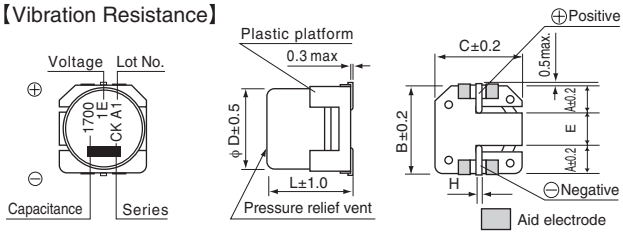
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type ※ φ12.5×21L : The vibration structure-resistant product can't support.

【Standard】



【Vibration Resistance】



Type numbering system (Example : 25V 1700μF)

1 2 3 4 5 6 7 8 9 10 11 12 13 14

U C K 1 E 1 7 2 M N J 1 M S

- Taping code
- Size code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (1700μF)
- Rated voltage (25V)
- Series name
- Type

Configuration	Code
Standard	NJ
Vibration Resistance	NS

Standard (mm)

φDXL	12.5×13.5	12.5×21	16×16.5	16×21.5	18×16.5	18×21.5
A	5.15	5.15	5.65	5.65	6.65	6.65
B	13.6	13.6	17.1	17.1	19.1	19.1
C	13.6	13.6	17.1	17.1	19.1	19.1
E	(3.3)	(3.3)	(5.8)	(5.8)	(5.8)	(5.8)
L	13.5	21	16.5	21.5	16.5	21.5
H	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

Vibration Resistance (mm)

φDXL	12.5	16	18
A	4.8	5.4	6.4
B	13.6	17.1	19.1
C	13.6	17.1	19.1
E	(4.0)	(6.3)	(6.3)
L	13.5	16.5, 21.5	16.5, 21.5
H	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

● Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

● Dimension table in next page.

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UCK

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance (Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
25 (1E)	1700	12.5×13.5	0.14	425	0.060	1420	UCK1E172M□□1MS
	2600	12.5×21	0.16	650	0.046	2080	UCK1E262M□□1MS
	2900	16×16.5	0.16	725	0.047	1910	UCK1E292M□□1MS
	3800	18×16.5	0.18	950	0.045	2060	UCK1E382M□□1MS
	4500	16×21.5	0.20	1125	0.034	2540	UCK1E452M□□1MS
	5900	18×21.5	0.22	1475	0.032	2640	UCK1E592M□□1MS
35 (1V)	1100	12.5×13.5	0.12	385	0.060	1420	UCK1V112M□□1MS
	1700	12.5×21	0.12	595	0.046	2080	UCK1V172M□□1MS
	1900	16×16.5	0.12	665	0.047	1910	UCK1V192M□□1MS
	2400	18×16.5	0.14	840	0.045	2060	UCK1V242M□□1MS
	2900	16×21.5	0.14	1015	0.034	2540	UCK1V292M□□1MS
	3800	18×21.5	0.16	1330	0.032	2640	UCK1V382M□□1MS

□□ : Enter the appropriate configuration code.

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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nichicon

UCV

Chip Type, Low Impedance.

For SMD Low Impedance

- Chip type, low impedance temperature range up to +105°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UCM
Smaller
Higher capacitance
UCV

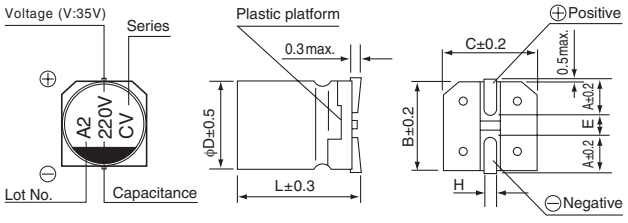
■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	16 to 35V
Rated Capacitance Range	220 to 1500μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV (μA).
Tangent of loss angle (tan δ)	Rated voltage (V): 16, 25, 35 tan δ (max.): 0.16, 0.14, 0.12 Measurement frequency : 120Hz at 20°C
Stability at Low Temperature	Rated voltage (V): 16, 25, 35 Impedance ratio ZT / Z20 (max.): Z(−25°C) / Z(+20°C): 2, 2, 2; Z(−40°C) / Z(+20°C): 3, 3, 3; Z(−55°C) / Z(+20°C): 4, 3, 3 Measurement frequency : 120Hz
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 105°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 200% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

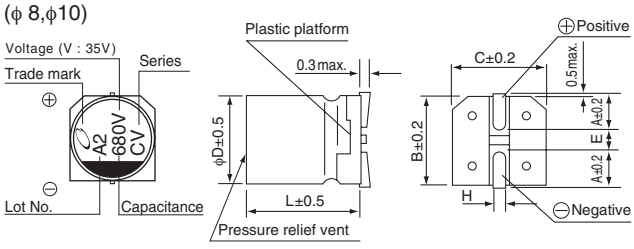
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

(φ 6.3)



(φ 8,φ10)



Type numbering system (Example : 35V 220μF)

1 2 3 4 5 6 7 8 9 10 11 12 13 14
U C V 1 V 2 2 1 M C L 1 G S

- Taping code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (220μF)
- Rated voltage (35V)
- Series name
- Type

φD	Code
6.3	CL
8•10	NL

Voltage

V	16	25	35
Code	C	E	V

Standard (mm)

φDXL	6.3×7.7	8×10	10×10
A	2.4	2.9	3.2
B	6.6	8.3	10.3
C	6.6	8.3	10.3
E	2.2	3.1	4.5
L	7.7	10	10
H	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

● Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

● Dimension table in next page.

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UCV

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance (Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
16 (1C)	470	6.3×7.7	0.16	75.2	0.16	600	UCV1C471MCL1GS
	820	8×10	0.16	131.2	0.08	850	UCV1C821MNL1GS
	1500	10×10	0.16	240	0.06	1190	UCV1C152MNL1GS
25 (1E)	330	6.3×7.7	0.14	82.5	0.16	600	UCV1E331MCL1GS
	560	8×10	0.14	140	0.08	850	UCV1E561MNL1GS
	1000	10×10	0.14	250	0.06	1190	UCV1E102MNL1GS
35 (1V)	220	6.3×7.7	0.12	77	0.16	600	UCV1V221MCL1GS
	470	8×10	0.12	164.5	0.08	850	UCV1V471MNL1GS
	680	10×10	0.12	238	0.06	1190	UCV1V681MNL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

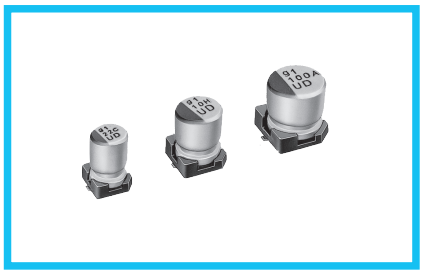
nichicon

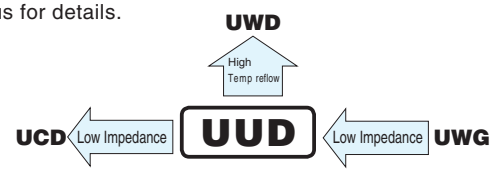
UUD

Chip Type, Low Impedance

For SMD Low Impedance

- Chip type, low impedance temperature range up to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.





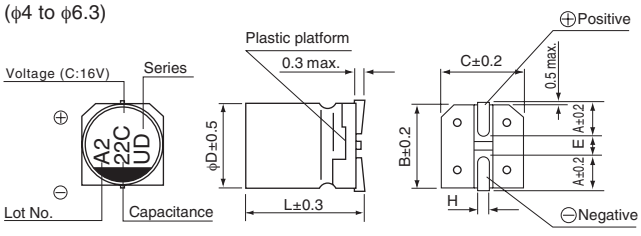
■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	1 to 1500μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01 CV or 3 (μA), whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 tan δ (max.): 0.26 (0.28) / 0.20 (0.24) / 0.16 (0.20) / 0.14 (0.16) / 0.12 (0.14) / 0.12 (0.14) ( ) is φ8 over
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 Impedance ratio ZT / Z20 (max.) Z(−25°C) / Z(+20°C): 3 / 2 / 2 / 2 / 2 / 2 Impedance ratio ZT / Z20 (max.) Z(−55°C) / Z(+20°C): 5 / 4 / 4 / 3 / 3 / 3
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 5000 hours (2000 hours for φD = 4, 5 and 6.3) at 105°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 200% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

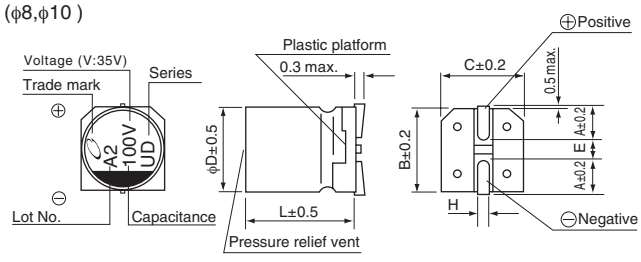
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

(φ4 to φ6.3)



(φ8,φ10)

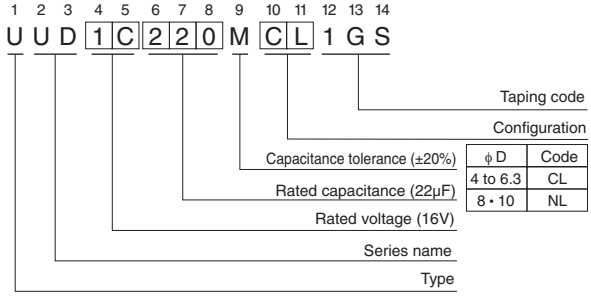


Voltage

V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H

●Dimension table in next page.

Type numbering system (Example : 16V 22μF)



φD	Code
4 to 6.3	CL
8・10	NL

(mm)

φD × L	4 × 5.8	5 × 5.8	6.3 × 5.8	6.3 × 7.7	8 × 10	10 × 10
A	1.8	2.1	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	3.1	4.5
L	5.8	5.8	5.8	7.7	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

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■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance(Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
6.3 (0J)	27	4×5.8	0.26	3	1.80	80	UUD0J270MCL1GS
	33	5×5.8	0.26	3	0.76	150	UUD0J330MCL1GS
	47	5×5.8	0.26	3	0.76	150	UUD0J470MCL1GS
	56	5×5.8	0.26	3.528	0.76	150	UUD0J560MCL1GS
	68	6.3×5.8	0.26	4.284	0.44	230	UUD0J680MCL1GS
	100	6.3×5.8	0.26	6.3	0.44	230	UUD0J101MCL1GS
	150	6.3×5.8	0.26	9.45	0.44	230	UUD0J151MCL1GS
	220	6.3×5.8	0.26	13.86	0.44	230	UUD0J221MCL1GS
	330	6.3×7.7	0.26	20.79	0.34	280	UUD0J331MCL1GS
	470	8×10	0.28	29.61	0.17	450	UUD0J471MNL1GS
	680	8×10	0.28	42.84	0.17	450	UUD0J681MNL1GS
	1000	8×10	0.28	63	0.17	450	UUD0J102MNL1GS
	1500	10×10	0.28	94.5	0.09	670	UUD0J152MNL1GS
10 (1A)	22	4×5.8	0.20	3	1.80	80	UUD1A220MCL1GS
	27	5×5.8	0.20	3	0.76	150	UUD1A270MCL1GS
	33	5×5.8	0.20	3.3	0.76	150	UUD1A330MCL1GS
	47	6.3×5.8	0.20	4.7	0.44	230	UUD1A470MCL1GS
	56	6.3×5.8	0.20	5.6	0.44	230	UUD1A560MCL1GS
	68	6.3×5.8	0.20	6.8	0.44	230	UUD1A680MCL1GS
	100	6.3×5.8	0.20	10	0.44	230	UUD1A101MCL1GS
	150	6.3×5.8	0.20	15	0.44	230	UUD1A151MCL1GS
	220	6.3×7.7	0.20	22	0.34	280	UUD1A221MCL1GS
	330	8×10	0.24	33	0.17	450	UUD1A331MNL1GS
	470	8×10	0.24	47	0.17	450	UUD1A471MNL1GS
	680	10×10	0.24	68	0.09	670	UUD1A681MNL1GS
	1000	10×10	0.24	100	0.09	670	UUD1A102MNL1GS
16 (1C)	15	4×5.8	0.16	3	1.80	80	UUD1C150MCL1GS
	22	5×5.8	0.16	3.52	0.76	150	UUD1C220MCL1GS
	27	5×5.8	0.16	4.32	0.76	150	UUD1C270MCL1GS
	33	6.3×5.8	0.16	5.28	0.44	230	UUD1C330MCL1GS
	47	6.3×5.8	0.16	7.52	0.44	230	UUD1C470MCL1GS
	56	6.3×5.8	0.16	8.96	0.44	230	UUD1C560MCL1GS
	68	6.3×5.8	0.16	10.88	0.44	230	UUD1C680MCL1GS
	100	6.3×5.8	0.16	16	0.44	230	UUD1C101MCL1GS
	150	6.3×7.7	0.16	24	0.34	280	UUD1C151MCL1GS
	220	6.3×7.7	0.16	35.2	0.34	280	UUD1C221MCL1GS
	330	8×10	0.20	52.8	0.17	450	UUD1C331MNL1GS
	470	8×10	0.20	75.2	0.17	450	UUD1C471MNL1GS
	680	10×10	0.20	108.8	0.09	670	UUD1C681MNL1GS

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UUD

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance(Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
25 (1E)	10	4×5.8	0.14	3	1.80	80	UUD1E100MCL1GS
	15	5×5.8	0.14	3.75	0.76	150	UUD1E150MCL1GS
	22	5×5.8	0.14	5.5	0.76	150	UUD1E220MCL1GS
	27	6.3×5.8	0.14	6.75	0.44	230	UUD1E270MCL1GS
	33	6.3×5.8	0.14	8.25	0.44	230	UUD1E330MCL1GS
	47	6.3×5.8	0.14	11.75	0.44	230	UUD1E470MCL1GS
	56	6.3×5.8	0.14	14	0.44	230	UUD1E560MCL1GS
	68	6.3×5.8	0.14	17	0.44	230	UUD1E680MCL1GS
	100	6.3×7.7	0.14	25	0.34	280	UUD1E101MCL1GS
	150	8×10	0.16	37.5	0.17	450	UUD1E151MNL1GS
	220	8×10	0.16	55	0.17	450	UUD1E221MNL1GS
	330	8×10	0.16	82.5	0.17	450	UUD1E331MNL1GS
	470	10×10	0.16	117.5	0.09	670	UUD1E471MNL1GS
35 (1V)	4.7	4×5.8	0.12	3	1.80	80	UUD1V4R7MCL1GS
	10	5×5.8	0.12	3.5	0.76	150	UUD1V100MCL1GS
	15	5×5.8	0.12	5.25	0.76	150	UUD1V150MCL1GS
	22	5×5.8	0.12	7.7	0.76	150	UUD1V220MCL1GS
	27	6.3×5.8	0.12	9.45	0.44	230	UUD1V270MCL1GS
	33	6.3×5.8	0.12	11.55	0.44	230	UUD1V330MCL1GS
	47	6.3×5.8	0.12	16.45	0.44	230	UUD1V470MCL1GS
	56	6.3×7.7	0.12	19.6	0.34	280	UUD1V560MCL1GS
	68	6.3×7.7	0.12	23.8	0.34	280	UUD1V680MCL1GS
	100	8×10	0.14	35	0.17	450	UUD1V101MNL1GS
	150	8×10	0.14	52.5	0.17	450	UUD1V151MNL1GS
	220	8×10	0.14	77	0.17	450	UUD1V221MNL1GS
	330	10×10	0.14	115.5	0.09	670	UUD1V331MNL1GS
50 (1H)	1	4×5.8	0.12	3	5.00	30	UUD1H010MCL1GS
	2.2	4×5.8	0.12	3	5.00	30	UUD1H2R2MCL1GS
	3.3	4×5.8	0.12	3	5.00	30	UUD1H3R3MCL1GS
	4.7	5×5.8	0.12	3	1.52	85	UUD1H4R7MCL1GS
	10	6.3×5.8	0.12	5	0.88	165	UUD1H100MCL1GS
	15	6.3×5.8	0.12	7.5	0.88	165	UUD1H150MCL1GS
	22	6.3×5.8	0.12	11	0.88	165	UUD1H220MCL1GS
	27	6.3×7.7	0.12	13.5	0.68	185	UUD1H270MCL1GS
	33	6.3×7.7	0.12	16.5	0.68	185	UUD1H330MCL1GS
	47	6.3×7.7	0.12	23.5	0.68	185	UUD1H470MCL1GS
	56	8×10	0.14	28	0.34	300	UUD1H560MNL1GS
	68	8×10	0.14	34	0.34	300	UUD1H680MNL1GS
	100	8×10	0.14	50	0.34	300	UUD1H101MNL1GS
	150	10×10	0.14	75	0.18	670	UUD1H151MNL1GS
	220	10×10	0.14	110	0.18	670	UUD1H221MNL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UWD

Chip Type, Low Impedance
High Temperature (260°C) Reflow

For SMD Low Impedance

- Corresponding with 260°C peak reflow soldering
  Recomended reflow condition : 260°C peak 5 sec. 230°C over 60 sec.
  2 times (φ10 × 10 : 1 time)
- Chip type, low impedance temperature range up to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UWD

High Temperature Reflow

UUD

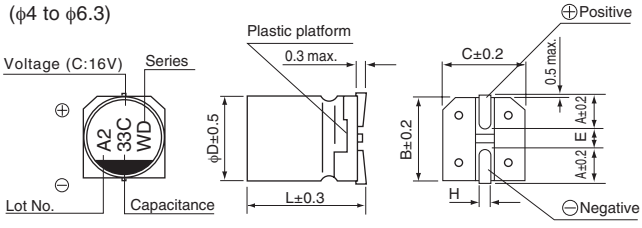
■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	1 to 1500μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01 CV or 3 (μA), whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 tan δ (max.): 0.26 (0.28) / 0.20 (0.24) / 0.16 (0.20) / 0.14 (0.16) / 0.12 (0.14) / 0.12 (0.14) ( ) is φ8 over
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 6.3 / 10 / 16 / 25 / 35 / 50 Impedance ratio ZT / Z20 (max.): Z(−25°C) / Z(+20°C): 3 / 2 / 2 / 2 / 2 / 2 Z(−55°C) / Z(+20°C): 5 / 4 / 4 / 3 / 3 / 3
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 5000 hours (2000 hours for φD = 4, 5 and 6.3) at 105°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 200% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

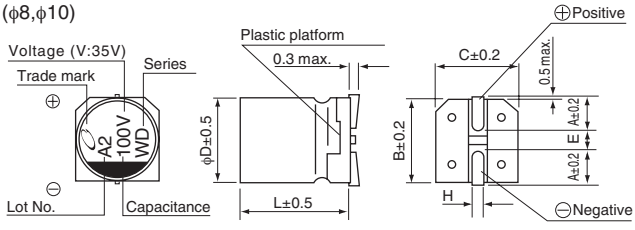
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

(φ4 to φ6.3)



(φ8,φ10)



Type numbering system (Example : 16V 22μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	W	D	1	C	2	2	0	M	C	L	1	G	S

- Taping code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (22μF)
- Rated voltage (16V)
- Series name
- Type

(mm)

φD × L	4 × 5.8	5 × 5.8	6.3 × 5.8	6.3 × 7.7	8 × 10	10 × 10
A	1.8	2.1	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	3.1	4.5
L	5.8	5.8	5.8	7.7	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

Voltage

V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

● Dimension table in next page.

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■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance(Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
6.3 (0J)	27	4×5.8	0.26	3	1.80	80	UWD0J270MCL1GS
	33	5×5.8	0.26	3	0.76	150	UWD0J330MCL1GS
	47	5×5.8	0.26	3	0.76	150	UWD0J470MCL1GS
	56	5×5.8	0.26	3.528	0.76	150	UWD0J560MCL1GS
	68	6.3×5.8	0.26	4.284	0.44	230	UWD0J680MCL1GS
	100	6.3×5.8	0.26	6.3	0.44	230	UWD0J101MCL1GS
	150	6.3×5.8	0.26	9.45	0.44	230	UWD0J151MCL1GS
	220	6.3×5.8	0.26	13.86	0.44	230	UWD0J221MCL1GS
	330	6.3×7.7	0.26	20.79	0.34	280	UWD0J331MCL1GS
	470	8×10	0.28	29.61	0.17	450	UWD0J471MCL1GS
	680	8×10	0.28	42.84	0.17	450	UWD0J681MCL1GS
	1000	10×10	0.28	63	0.09	670	UWD0J102MCL1GS
	1500	10×10	0.28	94.5	0.09	670	UWD0J152MCL1GS
10 (1A)	22	4×5.8	0.20	3	1.80	80	UWD1A220MCL1GS
	27	5×5.8	0.20	3	0.76	150	UWD1A270MCL1GS
	33	5×5.8	0.20	3.3	0.76	150	UWD1A330MCL1GS
	47	6.3×5.8	0.20	4.7	0.44	230	UWD1A470MCL1GS
	56	6.3×5.8	0.20	5.6	0.44	230	UWD1A560MCL1GS
	68	6.3×5.8	0.20	6.8	0.44	230	UWD1A680MCL1GS
	100	6.3×5.8	0.20	10	0.44	230	UWD1A101MCL1GS
	150	6.3×5.8	0.20	15	0.44	230	UWD1A151MCL1GS
	220	6.3×7.7	0.20	22	0.34	280	UWD1A221MCL1GS
	330	8×10	0.24	33	0.17	450	UWD1A331MCL1GS
	470	8×10	0.24	47	0.17	450	UWD1A471MCL1GS
	680	10×10	0.24	68	0.09	670	UWD1A681MCL1GS
	1000	10×10	0.24	100	0.09	670	UWD1A102MCL1GS
16 (1C)	15	4×5.8	0.16	3	1.80	80	UWD1C150MCL1GS
	22	5×5.8	0.16	3.52	0.76	150	UWD1C220MCL1GS
	27	5×5.8	0.16	4.32	0.76	150	UWD1C270MCL1GS
	33	6.3×5.8	0.16	5.28	0.44	230	UWD1C330MCL1GS
	47	6.3×5.8	0.16	7.52	0.44	230	UWD1C470MCL1GS
	56	6.3×5.8	0.16	8.96	0.44	230	UWD1C560MCL1GS
	68	6.3×5.8	0.16	10.88	0.44	230	UWD1C680MCL1GS
	100	6.3×5.8	0.16	16	0.44	230	UWD1C101MCL1GS
	150	6.3×7.7	0.16	24	0.34	280	UWD1C151MCL1GS
	220	6.3×7.7	0.16	35.2	0.34	280	UWD1C221MCL1GS
	330	8×10	0.20	52.8	0.17	450	UWD1C331MCL1GS
	470	8×10	0.20	75.2	0.17	450	UWD1C471MCL1GS
	680	10×10	0.20	108.8	0.09	670	UWD1C681MCL1GS

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■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Impedance (Ω) max. (20℃/100kHz)	Rated Ripple (mArms) (105℃/100kHz)	Part Number
25 (1E)	10	4×5.8	0.14	3	1.80	80	UWD1E100MCL1GS
	15	5×5.8	0.14	3.75	0.76	150	UWD1E150MCL1GS
	22	5×5.8	0.14	5.5	0.76	150	UWD1E220MCL1GS
	27	6.3×5.8	0.14	6.75	0.44	230	UWD1E270MCL1GS
	33	6.3×5.8	0.14	8.25	0.44	230	UWD1E330MCL1GS
	47	6.3×5.8	0.14	11.75	0.44	230	UWD1E470MCL1GS
	56	6.3×5.8	0.14	14	0.44	230	UWD1E560MCL1GS
	68	6.3×5.8	0.14	17	0.44	230	UWD1E680MCL1GS
	100	6.3×7.7	0.14	25	0.34	280	UWD1E101MCL1GS
	150	8×10	0.16	37.5	0.17	450	UWD1E151MCL1GS
	220	8×10	0.16	55	0.17	450	UWD1E221MCL1GS
	330	10×10	0.16	82.5	0.09	670	UWD1E331MCL1GS
	470	10×10	0.16	117.5	0.09	670	UWD1E471MCL1GS
35 (1V)	4.7	4×5.8	0.12	3	1.80	80	UWD1V4R7MCL1GS
	10	5×5.8	0.12	3.5	0.76	150	UWD1V100MCL1GS
	15	5×5.8	0.12	5.25	0.76	150	UWD1V150MCL1GS
	22	5×5.8	0.12	7.7	0.76	150	UWD1V220MCL1GS
	27	6.3×5.8	0.12	9.45	0.44	230	UWD1V270MCL1GS
	33	6.3×5.8	0.12	11.55	0.44	230	UWD1V330MCL1GS
	47	6.3×5.8	0.12	16.45	0.44	230	UWD1V470MCL1GS
	56	6.3×7.7	0.12	19.6	0.34	280	UWD1V560MCL1GS
	68	6.3×7.7	0.12	23.8	0.34	280	UWD1V680MCL1GS
	100	8×10	0.14	35	0.17	450	UWD1V101MCL1GS
	150	8×10	0.14	52.5	0.17	450	UWD1V151MCL1GS
	220	10×10	0.14	77	0.09	670	UWD1V221MCL1GS
	330	10×10	0.14	115.5	0.09	670	UWD1V331MCL1GS
50 (1H)	1	4×5.8	0.12	3	5.00	30	UWD1H010MCL1GS
	2.2	4×5.8	0.12	3	5.00	30	UWD1H2R2MCL1GS
	3.3	4×5.8	0.12	3	5.00	30	UWD1H3R3MCL1GS
	4.7	5×5.8	0.12	3	1.52	85	UWD1H4R7MCL1GS
	10	6.3×5.8	0.12	5	0.88	165	UWD1H100MCL1GS
	15	6.3×5.8	0.12	7.5	0.88	165	UWD1H150MCL1GS
	22	6.3×5.8	0.12	11	0.88	165	UWD1H220MCL1GS
	27	6.3×7.7	0.12	13.5	0.68	185	UWD1H270MCL1GS
	33	6.3×7.7	0.12	16.5	0.68	185	UWD1H330MCL1GS
	47	6.3×7.7	0.12	23.5	0.68	185	UWD1H470MCL1GS
	56	8×10	0.14	28	0.34	300	UWD1H560MCL1GS
	68	8×10	0.14	34	0.34	300	UWD1H680MCL1GS
	100	8×10	0.14	50	0.34	300	UWD1H101MCL1GS
	150	10×10	0.14	75	0.18	670	UWD1H151MCL1GS
	220	10×10	0.14	110	0.18	670	UWD1H221MCL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

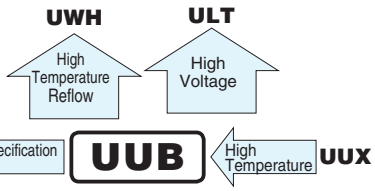
nichicon

UUB

Chip Type, High Reliability

For SMD Long Life

- Chip type, high temperature range, for +125°C use.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +125°C
Rated Voltage Range	10 to 400V
Rated Capacitance Range	1 to 330μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	Rated voltage (V): 10 to 50 — Leakage Current: After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV (μA). Rated voltage (V): 160 to 400 — Leakage Current: I = 0.04CV+100 (μA) max.(1 minute's at 20°C)
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C
Stability at Low Temperature	Measurement frequency : 120Hz
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours (1000 hours for φ8 × 6.2) at 125°C.
Shelf Life	After storing the capacitors under no load at 125°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.
Marking	Black print on the case top.

Tangent of loss angle (tan δ):

Rated voltage (V)	10	16	25	35	50	160	200	250	400
tan δ (max.)	0.32	0.24	0.21	0.18	0.18	0.30	0.30	0.30	0.30

Stability at Low Temperature:

Rated voltage (V)		10	16	25	35	50	160	200	250	400
Impedance ratio ZT / Z20 (max.)	Z(−40°C) / Z(+20°C)	12	8	6	4	4	8	8	8	12

Endurance:

Capacitance change	Within ±30% of the initial capacitance value
tan δ	300% or less than the intial specified value
Leakage current	Less than or equal to the initial specified value

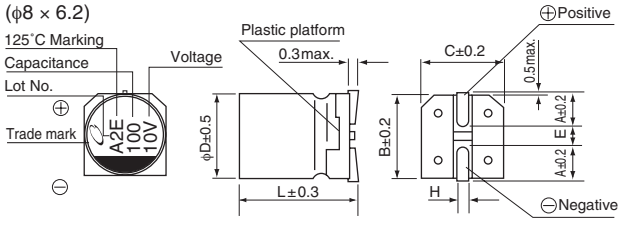
Resistance to soldering heat:

Capacitance change	Within ±10% of the initial capacitance value
tan δ	Less than or equal to the initial specified value
Leakage current	Less than or equal to the initial specified value

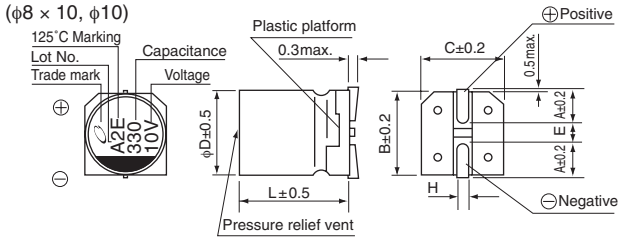
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

(φ8 × 6.2)



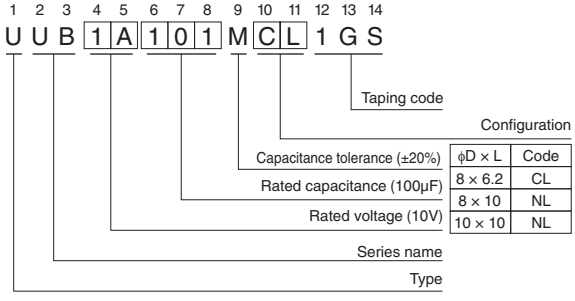
(φ8 × 10, φ10)



(mm)

φD × L	8 × 6.2	8 × 10	10 × 10
A	3.3	2.9	3.2
B	8.3	8.3	10.3
C	8.3	8.3	10.3
E	2.3	3.1	4.5
L	6.2	10	10
H	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

Type numbering system (Example : 10V 100μF)



φD × L	Code
8 × 6.2	CL
8 × 10	NL
10 × 10	NL

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

● Dimension table in next page.

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■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (125℃/120Hz)	Part Number
10 (1A)	100	8×6.2	0.32	30	58	UUB1A101MCL1GS
	220	8×10	0.32	66	90	UUB1A221MNL1GS
	330	10×10	0.32	99	112	UUB1A331MNL1GS
16 (1C)	100	8×10	0.24	48	66	UUB1C101MNL1GS
	220	10×10	0.24	105.6	102	UUB1C221MNL1GS
25 (1E)	47	8×6.2	0.21	35.25	48	UUB1E470MCL1GS
	100	8×10	0.21	75	74	UUB1E101MNL1GS
	220	10×10	0.21	165	116	UUB1E221MNL1GS
35 (1V)	33	8×6.2	0.18	34.65	44	UUB1V330MCL1GS
	47	8×10	0.18	49.35	52	UUB1V470MNL1GS
	100	10×10	0.18	105	80	UUB1V101MNL1GS
50 (1H)	10	8×6.2	0.18	15	24	UUB1H100MCL1GS
	22	8×6.2	0.18	33	38	UUB1H220MCL1GS
	33	8×10	0.18	49.5	46	UUB1H330MNL1GS
	47	10×10	0.18	70.5	58	UUB1H470MNL1GS
160 (2C)	6.8	8×10	0.30	143.52	42	UUB2C6R8MNL1GS
	10	10×10	0.30	164	59	UUB2C100MNL1GS
200 (2D)	4.7	8×10	0.30	137.6	36	UUB2D4R7MNL1GS
	6.8	10×10	0.30	154.4	59	UUB2D6R8MNL1GS
	10	10×10	0.30	180	59	UUB2D100MNL1GS
250 (2E)	3.3	8×10	0.30	133	28	UUB2E3R3MNL1GS
	4.7	10×10	0.30	147	59	UUB2E4R7MNL1GS
400 (2G)	1	8×10	0.30	116	26	UUB2G010MNL1GS
	1.8	8×10	0.30	128.8	27	UUB2G1R8MNL1GS
	2.2	10×10	0.30	135.2	36	UUB2G2R2MNL1GS
	3.3	10×10	0.30	152.8	38	UUB2G3R3MNL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UWH

Chip Type, High Reliability
High Temperature (260°C) Reflow

For SMD Long Life

- Corresponding with 260°C peak reflow soldering
  Recomended reflow condition : 260°C peak 5 sec. 230°C over 60 sec. 2 times
  (φ8 × 6.2, φ10 × 10 : 1 time)
- Chip type high temperature range, for +125°C use.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UWH

High Temperature Reflow

UUB

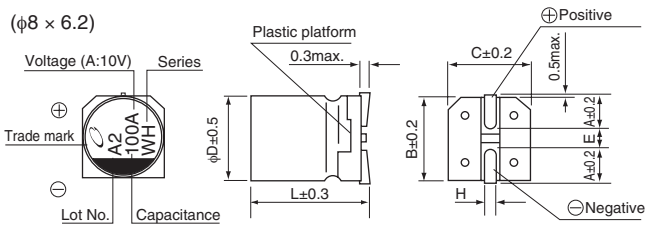
■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +125°C
Rated Voltage Range	10 to 50V
Rated Capacitance Range	10 to 330μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV or 4(μA) , whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 10, 16, 25, 35, 50 tan δ (max.): 0.32, 0.24, 0.21, 0.18, 0.18
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 10, 16, 25, 35, 50 Impedance ratio ZT / Z20 (max.) Z(−40°C) / Z(+20°C): 12, 8, 6, 4, 4
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 125°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 300% or less than the intial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 125°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

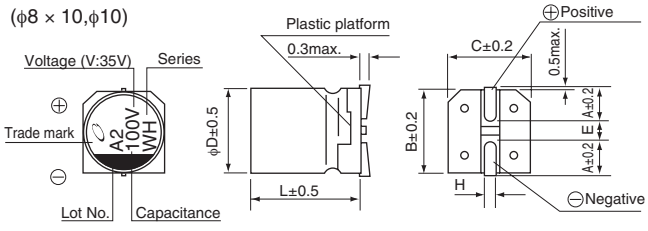
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

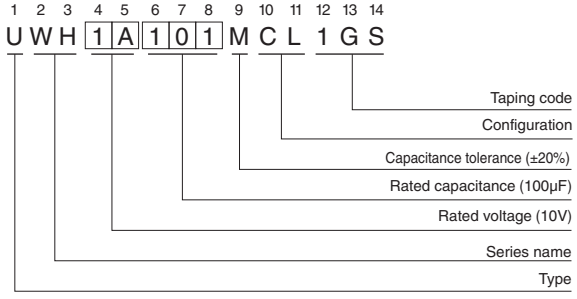
(φ8 × 6.2)



(φ8 × 10,φ10)



Type numbering system (Example : 10V 100μF)



(mm)

φD × L	8 × 6.2	8 × 10	10 × 10
A	3.3	2.9	3.2
B	8.3	8.3	10.3
C	8.3	8.3	10.3
E	2.3	3.1	4.5
L	6.2	10	10
H	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

Voltage

V	10	16	25	35	50
Code	A	C	E	V	H

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

●Dimension table in next page.

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UWH

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (125℃/120Hz)	Part Number
10 (1A)	100	8×6.2	0.32	30	58	UWH1A101MCL1GS
	220	8×10	0.32	66	90	UWH1A221MCL1GS
	330	10×10	0.32	99	112	UWH1A331MCL1GS
16 (1C)	100	8×10	0.24	48	66	UWH1C101MCL1GS
	220	10×10	0.24	105.6	102	UWH1C221MCL1GS
25 (1E)	47	8×6.2	0.21	35.25	48	UWH1E470MCL1GS
	100	8×10	0.21	75	74	UWH1E101MCL1GS
	220	10×10	0.21	165	116	UWH1E221MCL1GS
35 (1V)	33	8×6.2	0.18	34.65	44	UWH1V330MCL1GS
	47	8×10	0.18	49.35	52	UWH1V470MCL1GS
	100	10×10	0.18	105	80	UWH1V101MCL1GS
50 (1H)	10	8×6.2	0.18	15	24	UWH1H100MCL1GS
	22	8×6.2	0.18	33	38	UWH1H220MCL1GS
	33	8×10	0.18	49.5	46	UWH1H330MCL1GS
	47	10×10	0.18	70.5	58	UWH1H470MCL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

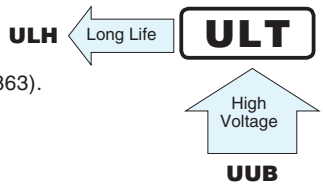
nichicon

ULT

Chip Type, High Voltage.
High Temperature Range.

For SMD Long Life

- Chip type, high voltage and high temperature range.
- Load life of 2000 hours at +125°C.
- Applicable to automatic mounting machine using carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



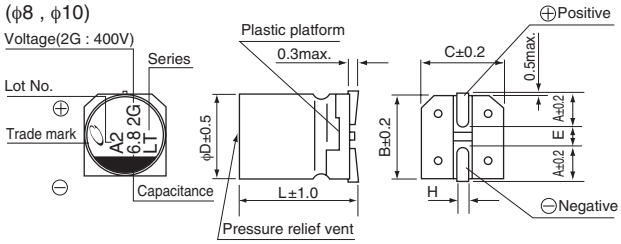
■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +125°C
Rated Voltage Range	160 to 500V
Rated Capacitance Range	1.8 to 33μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	Rated voltage (V): 160~450 — 0.04CV+100(μA)max.(1 minute's at 20°C); 500 — 0.04CV+200(μA)max.(1 minute's at 20°C)
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 160, 200, 250, 400, 450, 500 tan δ (max.): 0.20, 0.20, 0.25, 0.25, 0.30, 0.30
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 160, 200, 250, 400, 450, 500 Impedance ratio ZT / Z20 (max.) Z(−40°C) / Z(+20°C): 6, 6, 10, 10, 15, 15
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 125°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 300% or less than the intial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 125°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the characteristic requirements listed at right when they are removed from the plate. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

(φ8 , φ10)



(mm)

φD×L	8×10	10×10	10×13.5
A	2.9	3.2	3.2
B	8.3	10.3	10.3
C	8.3	10.3	10.3
E	3.1	4.5	4.5
L	10	10	13.5
H	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1

Voltage

V	160	200	250	400	450	500
Code	2C	2D	2E	2G	2W	2H

Type numbering system (Example : 400V 6.8μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	L	T	2	G	6	R	8	M	N	L	1	G	S

- Taping code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (6.8μF)
- Rated voltage (400V)
- Series name
- Type

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

● Dimension table in next page.

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ULT

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (125℃/120Hz)	Part Number
160 (2C)	15	8×10	0.20	196	45	ULT2C150MNL1GS
	22	10×10	0.20	240.8	60	ULT2C220MNL1GS
	33	10×13.5	0.20	311.2	65	ULT2C330MNL1GS
200 (2D)	12	8×10	0.20	196	45	ULT2D120MNL1GS
	18	10×10	0.20	244	60	ULT2D180MNL1GS
	27	10×13.5	0.20	316	65	ULT2D270MNL1GS
250 (2E)	8.2	8×10	0.25	182	30	ULT2E8R2MNL1GS
	15	10×10	0.25	250	45	ULT2E150MNL1GS
	18	10×13.5	0.25	280	50	ULT2E180MNL1GS
400 (2G)	3.9	8×10	0.25	162.4	30	ULT2G3R9MNL1GS
	6.8	10×10	0.25	208.8	45	ULT2G6R8MNL1GS
	10	10×13.5	0.25	260	50	ULT2G100MNL1GS
450 (2W)	3.3	8×10	0.30	159.4	20	ULT2W3R3MNL1GS
	5.6	10×10	0.30	200.8	35	ULT2W5R6MNL1GS
	7.5	10×13.5	0.30	235	40	ULT2W7R5MNL1GS
500 (2H)	1.8	8×10	0.30	236	20	ULT2H1R8MNL1GS
	3.3	10×10	0.30	266	35	ULT2H3R3MNL1GS
	4.7	10×13.5	0.30	294	40	ULT2H4R7MNL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

ULH

Chip Type, High Voltage.
High Reliability.

For SMD Long Life

- Chip type, High voltage and High Reliability.
- Load life of 4000 hours at +125°C.
- Applicable to automatic mounting machine using carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

ULH → Long Life → ULT

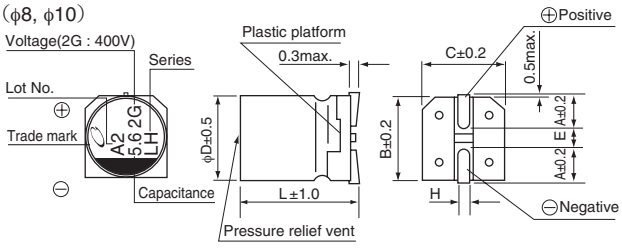
■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +125°C
Rated Voltage Range	160 to 450V
Rated Capacitance Range	2.2 to 27μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.04CV+100 (μA).
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 160, 200, 250, 400, 450 tan δ (max.): 0.20, 0.20, 0.25, 0.25, 0.30
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 160, 200, 250, 400, 450 Impedance ratio ZT / Z20 (max.) Z(−40°C) / Z(+20°C): 6, 6, 10, 10, 15
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 4000 hours at 125°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 300% or less than the intial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 125°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the characteristic requirements listed at right when they are removed from the plate. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

(φ8, φ10)



(mm)

φD×L	8×10	10×10	10×13.5
A	2.9	3.2	3.2
B	8.3	10.3	10.3
C	8.3	10.3	10.3
E	3.1	4.5	4.5
L	10	10	13.5
H	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1

Voltage

V	160	200	250	400	450
Code	2C	2D	2E	2G	2W

Type numbering system (Example : 400V 5.6μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	L	H	2	G	5	R	6	M	N	L	1	G	S

- Taping code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (5.6μF)
- Rated voltage (400V)
- Series name
- Type

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

● Dimension table in next page.

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ULH

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (125℃/120Hz)	Part Number
160 (2C)	12	8×10	0.20	176.8	45	ULH2C120MNL1GS
	18	10×10	0.20	215.2	60	ULH2C180MNL1GS
	27	10×13.5	0.20	272.8	65	ULH2C270MNL1GS
200 (2D)	10	8×10	0.20	180	45	ULH2D100MNL1GS
	15	10×10	0.20	220	60	ULH2D150MNL1GS
	22	10×13.5	0.20	276	65	ULH2D220MNL1GS
250 (2E)	7.5	8×10	0.25	175	30	ULH2E7R5MNL1GS
	12	10×10	0.25	220	45	ULH2E120MNL1GS
	15	10×13.5	0.25	250	50	ULH2E150MNL1GS
400 (2G)	3.3	8×10	0.25	152.8	30	ULH2G3R3MNL1GS
	5.6	10×10	0.25	189.6	45	ULH2G5R6MNL1GS
	7.5	10×13.5	0.25	220	50	ULH2G7R5MNL1GS
450 (2W)	2.2	8×10	0.30	139.6	20	ULH2W2R2MNL1GS
	3.9	10×10	0.30	170.2	35	ULH2W3R9MNL1GS
	5.6	10×13.5	0.30	200.8	40	ULH2W5R6MNL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UCJ

Chip Type, High Reliability.
Low temperature ESR specification.

For SMD Long Life

- Chip type, high temperature range, for +125°C use.
- Added ESR specification after the test at −40°C (φ6.3 sizes provide only for the first stage.)
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UCZ ← Low ESR Long Life | **UCJ** | Added ESR specification at −40°C → UUB

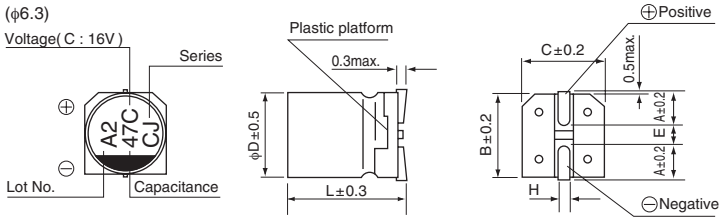
■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +125°C
Rated Voltage Range	10 to 50V
Rated Capacitance Range	10 to 470μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV or 4(μA) , whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 10, 16, 25, 35, 50 tan δ (max.): 0.32, 0.24, 0.21, 0.18, 0.18
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 10, 16, 25, 35, 50 Impedance ratio ZT / Z20 (max.) Z(−40°C) / Z(+20°C): 12, 8, 6, 4, 4
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 125°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 300% or less than the intial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 125°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

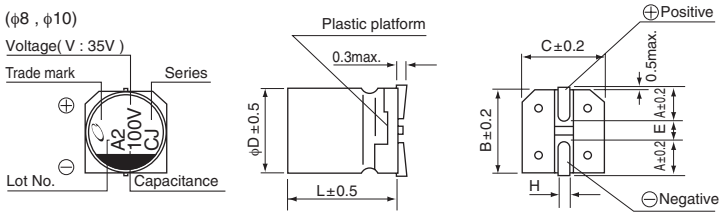
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

(φ6.3)



(φ8 , φ10)



Type numbering system (Example : 10V 100μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	C	J	1	A	1	0	1	M	C	L	1	G	S

- Taping code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (100μF)
- Rated voltage (10V)
- Series name
- Type

(mm)

φD×L	6.3×8.7	8×10	10×10
A	2.4	2.9	3.2
B	6.6	8.3	10.3
C	6.6	8.3	10.3
E	2.2	3.1	4.5
L	8.7	10	10
H	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

Voltage

V	10	16	25	35	50
Code	A	C	E	V	H

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

● Dimension table in next page.

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UCJ

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	ESR (Ω) max. (−40℃/100kHz) Initial	ESR (Ω) max. (−40℃/100kHz) after endurance test	Rated Ripple (mArms) (125℃/100kHz)	Part Number
10 (1A)	100	6.3×8.7	0.32	30	14	—	95	UCJ1A101MCL1GS
	220	8×10	0.32	66	2.0	6.0	250	UCJ1A221MCL1GS
	330	10×10	0.32	99	1.5	4.5	400	UCJ1A331MCL1GS
	470	10×10	0.32	141	1.5	4.5	400	UCJ1A471MCL1GS
16 (1C)	47	6.3×8.7	0.24	22.56	14	—	95	UCJ1C470MCL1GS
	100	8×10	0.24	48	2.0	6.0	250	UCJ1C101MCL1GS
	220	10×10	0.24	105.6	1.5	4.5	400	UCJ1C221MCL1GS
	330	10×10	0.24	158.4	1.5	4.5	400	UCJ1C331MCL1GS
25 (1E)	22	6.3×8.7	0.21	16.5	14	—	95	UCJ1E220MCL1GS
	33	6.3×8.7	0.21	24.75	14	—	95	UCJ1E330MCL1GS
	47	6.3×8.7	0.21	35.25	14	—	95	UCJ1E470MCL1GS
	100	8×10	0.21	75	2.0	6.0	250	UCJ1E101MCL1GS
	220	10×10	0.21	165	1.5	4.5	400	UCJ1E221MCL1GS
	330	10×10	0.21	247.5	1.5	4.5	400	UCJ1E331MCL1GS
35 (1V)	10	6.3×8.7	0.18	10.5	14	—	95	UCJ1V100MCL1GS
	22	6.3×8.7	0.18	23.1	14	—	95	UCJ1V220MCL1GS
	33	6.3×8.7	0.18	34.65	14	—	95	UCJ1V330MCL1GS
	47	6.3×8.7	0.18	49.35	14	—	95	UCJ1V470MCL1GS
	100	10×10	0.18	105	1.5	4.5	400	UCJ1V101MCL1GS
	220	10×10	0.18	231	1.5	4.5	400	UCJ1V221MCL1GS
50 (1H)	10	6.3×8.7	0.18	15	14	—	95	UCJ1H100MCL1GS
	22	6.3×8.7	0.18	33	14	—	95	UCJ1H220MCL1GS
	33	8×10	0.18	49.5	2.0	6.0	200	UCJ1H330MCL1GS
	47	10×10	0.18	70.5	1.5	4.5	330	UCJ1H470MCL1GS
	100	10×10	0.18	150	1.5	4.5	330	UCJ1H101MCL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

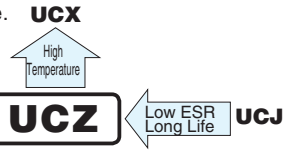
nichicon

UCZ

Chip Type, High Reliability.
Low temperature ESR specification.

For SMD Long Life

- Chip type, high temperature range, for +125°C use.
- Added ESR specification after the test at -40°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



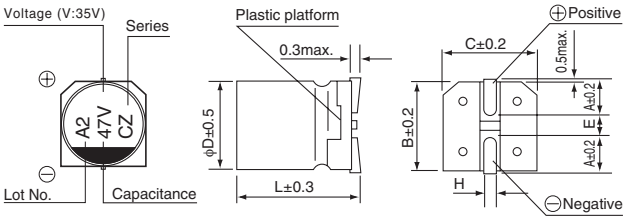
■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +125°C
Rated Voltage Range	10 to 100V
Rated Capacitance Range	10 to 3300μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV (μA).
Tangent of loss angle (tan δ)	Rated voltage (V): 10, 16, 25, 35, 50, 63, 80, 100 tan δ (max.): 0.30, 0.23, 0.18, 0.16, 0.16, 0.12, 0.12, 0.10 Measurement frequency : 120Hz at 20°C For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. (φ12.5 to φ18)
Stability at Low Temperature	Rated voltage (V): 10, 16, 25, 35, 50, 63, 80, 100 Impedance ratio (max.) Z(−40°C) / Z(+20°C): 12, 8, 6, 4, 4, 3, 3, 3 Measurement frequency : 120Hz
Endurance	After continuous application of rated voltage at 125°C and then restoring down to 20°C, the readings of measurements shall meet below. Case size: φ6.3 × 5.8L, φ6.3 × 7.7L, φ8 to φ12.5, φ16,18 × 16.5L, φ16,18 × 21.5L Endurance time: 1000hrs., 2000hrs., 3000hrs., 3500hrs., 4000hrs. Capacitance change: Within ±30% of the initial capacitance value tan δ: 300% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 125°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

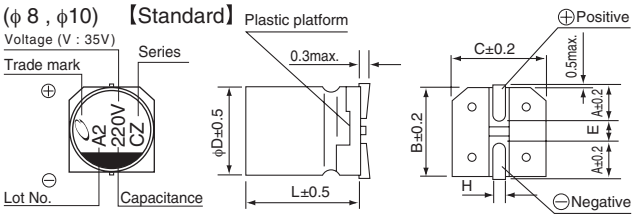
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

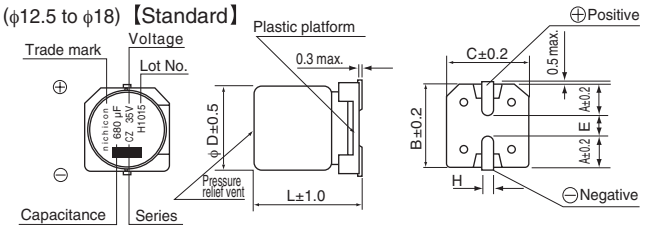
(φ 6.3)【Standard】※ φ6.3 × 5.8L : The vibration structure-resistant product can't support.
φ6.3 × 7.7L : The vibration structure-resistant product is available.



(φ 8 , φ10)【Standard】



(φ12.5 to φ18)【Standard】



Standard (mm)

⌀DXL	6.3X5.8	6.3X7.7	8X10	10X10	12.5X13.5	16X16.5, 21.5	18X16.5, 21.5
A	2.4	2.4	2.9	3.2	5.15	5.65	6.65
B	6.6	6.6	8.3	10.3	13.6	17.1	19.1
C	6.6	6.6	8.3	10.3	13.6	17.1	19.1
E	2.2	2.2	3.1	4.5	(3.3)	(5.8)	(5.8)
L	5.8	7.7	10	10	13.5	16.5, 21.5	16.5, 21.5
H	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

Vibration Resistance (mm)

⌀DXL	8X10	10X10	φ12.5	φ16	φ18
A	2.9	3.2	4.8	5.4	6.4
B	8.3	10.3	13.6	17.1	19.1
C	8.3	10.3	13.6	17.1	19.1
E	3.1	4.5	(4.0)	(6.3)	(6.3)
L	10	10	13.5	16.5, 21.5	16.5, 21.5
H	1.1 to 1.5	1.1 to 1.5	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

●Dimension table in next page.

Type numbering system (Example : 35V 47μF)

1 2 3 4 5 6 7 8 9 10 11 12 13 14
U C Z 1 V 4 7 0 M C L 1 G S

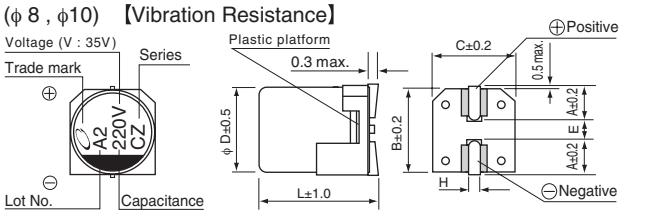
- Taping code
- Size code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (47μF)
- Rated voltage (35V)
- Series name
- Type

Size	Code
φ4 to 10	GS
φ12.5 to 18	MS

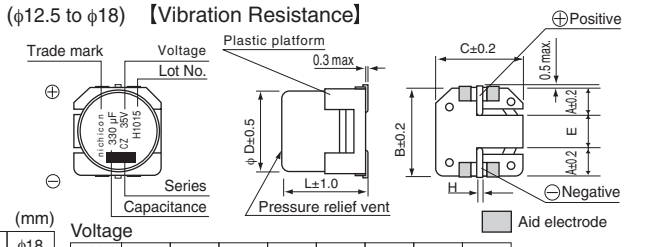
※Configuration

Configuration	Code
Standard	CL (φ10 or less) NJ (φ12.5 or more)
Vibration Resistance	CS(φ10 or less) NS(φ12.5 or more)

(φ 8 , φ10)【Vibration Resistance】



(φ12.5 to φ18)【Vibration Resistance】



Voltage

V	10	16	25	35	50	63	80	100
Code	A	C	E	V	H	J	K	2A

● Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

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■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	ESR(Ω)max. (20℃/−40℃/100kHz) Initial 20℃	Initial −40℃	after endurance test −40℃ ※	Rated Ripple (mArms) (125℃/100kHz)	Part Number
10 (1A)	220	8×10	0.30	22	0.20	3.00	4.5	270	UCZ1A221M□□1GS
	330	8×10	0.30	33	0.20	3.00	4.5	270	UCZ1A331M□□6GS
	330	10×10	0.30	33	0.15	2.00	3.5	500	UCZ1A331M□□1GS
	470	10×10	0.30	47	0.15	2.00	3.5	500	UCZ1A471M□□1GS
16 (1C)	47	6.3×5.8	0.23	7.52	1.60	24.00	—	69	UCZ1C470MCL1GS
	100	6.3×7.7	0.23	16	0.45	5.00	40	197	UCZ1C101M□□6GS
	100	8×10	0.23	16	0.20	3.00	4.5	270	UCZ1C101M□□1GS
	220	8×10	0.23	35.2	0.20	3.00	4.5	270	UCZ1C221M□□1GS
	330	10×10	0.23	52.8	0.15	2.00	3.5	500	UCZ1C331M□□1GS
	470	10×10	0.23	75.2	0.15	2.00	3.5	500	UCZ1C471M□□1GS
25 (1E)	33	6.3×5.8	0.18	8.25	1.60	24.00	—	69	UCZ1E330MCL1GS
	100	6.3×7.7	0.18	25	0.45	5.00	40	197	UCZ1E101M□□6GS
	100	8×10	0.18	25	0.20	3.00	4.5	270	UCZ1E101M□□1GS
	220	8×10	0.18	55	0.20	3.00	4.5	270	UCZ1E221M□□6GS
	220	10×10	0.18	55	0.15	2.00	3.5	500	UCZ1E221M□□1GS
	330	10×10	0.18	82.5	0.15	2.00	3.5	500	UCZ1E331M□□1GS
	820	12.5×13.5	0.18	205	0.060	0.40	3	1700	UCZ1E821M□□1MS
	1000	12.5×13.5	0.18	250	0.060	0.40	3	1700	UCZ1E102M□□1MS
	1200	16×16.5	0.18	300	0.047	0.28	1.4	1700	UCZ1E122M□□1MS
	1600	16×16.5	0.18	400	0.047	0.28	1.4	2400	UCZ1E162M□□1MS
	2200	18×16.5	0.20	550	0.045	0.23	1.3	2600	UCZ1E222M□□1MS
	2700	16×21.5	0.20	675	0.034	0.20	0.6	3000	UCZ1E272M□□1MS
	3300	18×21.5	0.22	825	0.032	0.16	0.5	3250	UCZ1E332M□□1MS
35 (1V)	10	6.3×5.8	0.16	3.5	1.60	24.00	—	69	UCZ1V100MCL1GS
	22	6.3×5.8	0.16	7.7	1.60	24.00	—	69	UCZ1V220MCL1GS
	33	6.3×7.7	0.16	11.55	0.45	5.00	40	197	UCZ1V330M□□1GS
	47	6.3×7.7	0.16	16.45	0.45	5.00	40	197	UCZ1V470M□□6GS
	47	8×10	0.16	16.45	0.20	3.00	4.5	270	UCZ1V470M□□1GS
	68	8×10	0.16	23.8	0.20	3.00	4.5	270	UCZ1V680M□□1GS
	100	8×10	0.16	35	0.20	3.00	4.5	270	UCZ1V101M□□1GS
	220	10×10	0.16	77	0.15	2.00	3.5	500	UCZ1V221M□□1GS
	470	12.5×13.5	0.16	164.5	0.060	0.40	3.0	1700	UCZ1V471M□□1MS
	560	12.5×13.5	0.16	196	0.060	0.40	3.0	1700	UCZ1V561M□□1MS
	680	12.5×13.5	0.16	238	0.060	0.40	3.0	1700	UCZ1V681M□□1MS
	820	16×16.5	0.16	287	0.047	0.28	1.4	2400	UCZ1V821M□□1MS
	1000	16×16.5	0.16	350	0.047	0.28	1.4	2400	UCZ1V102M□□1MS
	1200	18×16.5	0.16	420	0.045	0.28	1.4	2600	UCZ1V122M□□1MS
	1400	18×16.5	0.16	490	0.045	0.28	1.4	2600	UCZ1V142M□□1MS
	1600	16×21.5	0.16	560	0.034	0.20	0.6	3000	UCZ1V162M□□1MS
	2200	18×21.5	0.18	770	0.032	0.16	0.5	3250	UCZ1V222M□□1MS
50 (1H)	10	6.3×5.8	0.16	5	2.80	42.00	—	51	UCZ1H100MCL1GS
	22	6.3×7.7	0.16	11	0.50	5.00	40	197	UCZ1H220M□□1GS
	33	6.3×7.7	0.16	16.5	0.50	5.00	40	197	UCZ1H330M□□6GS
	33	8×10	0.16	16.5	0.25	3.50	6	270	UCZ1H330M□□1GS
	47	6.3×7.7	0.16	23.5	0.50	5.00	40	197	UCZ1H470M□□6GS
	47	8×10	0.16	23.5	0.25	3.50	6	270	UCZ1H470M□□1GS
	100	10×10	0.16	50	0.20	2.50	4.5	500	UCZ1H101M□□1GS
	390	12.5×13.5	0.16	195	0.10	0.44	4.0	1300	UCZ1H391M□□1MS
	470	16×16.5	0.16	235	0.080	0.34	2.6	2000	UCZ1H471M□□1MS
	560	16×16.5	0.16	280	0.080	0.34	2.6	2000	UCZ1H561M□□1MS
	680	18×16.5	0.16	340	0.078	0.32	2.6	2100	UCZ1H681M□□1MS
	820	18×16.5	0.16	410	0.078	0.32	2.6	2100	UCZ1H821M□□1MS
	1000	16×21.5	0.16	500	0.040	0.22	1.5	2800	UCZ1H102M□□1MS
	1200	18×21.5	0.16	600	0.038	0.20	1.5	2900	UCZ1H122M□□1MS

□□ : Enter the appropriate configuration code.

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■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	ESR(Ω)max. (20℃/−40℃/100kHz) Initial 20℃	Initial −40℃	after endurance test −40℃ ※	Rated Ripple (mArms) (125℃/100kHz)	Part Number
63 (1J)	10	6.3×7.7	0.12	6.3	2.00	100.00	—	60	UCZ1J100M□□1GS
	22	8×10	0.12	13.86	0.70	35.00	—	100	UCZ1J220M□□1GS
	33	8×10	0.12	20.79	0.70	35.00	—	100	UCZ1J330M□□6GS
	33	10×10	0.12	20.79	0.50	25.00	—	170	UCZ1J330M□□1GS
	47	8×10	0.12	29.61	0.70	35.00	—	100	UCZ1J470M□□6GS
	47	10×10	0.12	29.61	0.50	25.00	—	170	UCZ1J470M□□1GS
	150	12.5×13.5	0.12	94.5	0.20	1.30	14	1000	UCZ1J151M□□1MS
	180	12.5×13.5	0.12	113.4	0.20	1.30	14	1000	UCZ1J181M□□1MS
	220	12.5×13.5	0.12	138.6	0.20	1.30	14	1000	UCZ1J221M□□1MS
	390	16×16.5	0.12	245.7	0.13	0.90	4.8	1900	UCZ1J391M□□1MS
	470	18×16.5	0.12	296.1	0.11	0.82	3.9	2000	UCZ1J471M□□1MS
	560	16×21.5	0.12	352.8	0.070	0.46	2.0	2500	UCZ1J561M□□1MS
	750	18×21.5	0.12	472.5	0.068	0.44	1.8	2600	UCZ1J751M□□1MS
80 (1K)	10	8×10	0.12	8	0.75	50.00	—	70	UCZ1K100M□□1GS
	22	8×10	0.12	17.6	0.75	50.00	—	70	UCZ1K220M□□6GS
	22	10×10	0.12	17.6	0.55	35.00	—	115	UCZ1K220M□□1GS
	33	8×10	0.12	26.4	0.75	50.00	—	70	UCZ1K330M□□6GS
	33	10×10	0.12	26.4	0.55	35.00	—	115	UCZ1K330M□□1GS
	47	10×10	0.12	37.6	0.55	35.00	—	115	UCZ1K470M□□1GS
	150	12.5×13.5	0.12	120	0.28	1.90	14	700	UCZ1K151M□□1MS
	270	16×16.5	0.12	216	0.19	1.40	4.8	1000	UCZ1K271M□□1MS
	330	18×16.5	0.12	264	0.17	1.10	3.9	1100	UCZ1K331M□□1MS
	390	16×21.5	0.12	312	0.12	0.80	2.6	1600	UCZ1K391M□□1MS
	520	18×21.5	0.12	416	0.11	0.70	2.4	1700	UCZ1K521M□□1MS
100 (2A)	10	8×10	0.10	10	0.75	50.00	—	70	UCZ2A100M□□1GS
	22	8×10	0.10	22	0.75	50.00	—	70	UCZ2A220M□□6GS
	22	10×10	0.10	22	0.55	35.00	—	115	UCZ2A220M□□1GS
	33	10×10	0.10	33	0.55	35.00	—	115	UCZ2A330M□□1GS
	82	12.5×13.5	0.10	82	0.28	1.90	22	700	UCZ2A820M□□1MS
	150	16×16.5	0.10	150	0.19	1.40	4.8	1000	UCZ2A151M□□1MS
	180	18×16.5	0.10	180	0.17	1.10	3.9	1100	UCZ2A181M□□1MS
	220	16×21.5	0.10	220	0.12	0.80	2.6	1600	UCZ2A221M□□1MS
	300	18×21.5	0.10	300	0.11	0.70	2.4	1700	UCZ2A301M□□1MS

□□ : Enter the appropriate configuration code.

※ Guaranteed time of ESR after endurance test

Size	Guaranteed time	
φ6.3 × 5.8L	–	
φ6.3 x 7.7L, φ8 x 10L φ10 x 10L	10 to 50V	2000hrs.
	63 to 100V	–
φ12.5	2000hrs.	
φ16,18 × 16.5L	2000hrs.	
φ16,18 × 21.5L	3000hrs.	

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

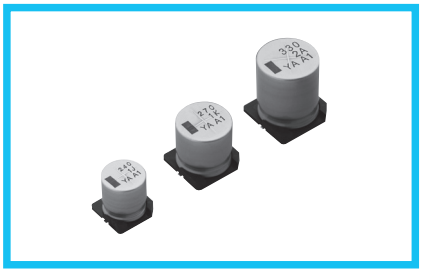
UYA

Chip Type, Long Life Assurance

For SMD

- Chip type, Extended load life of 5000hours at +125°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UYA ← Long Life Higher Capacitance UCZ



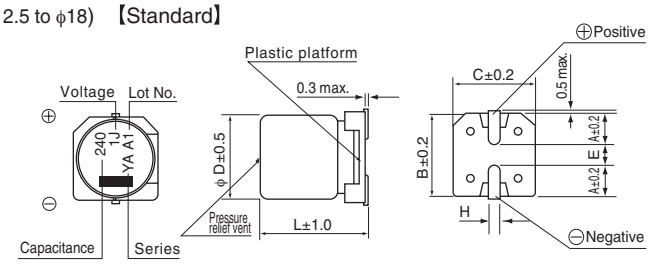
■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +125°C
Rated Voltage Range	63 to 100V
Rated Capacitance Range	90 to 880μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3(μA),whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 63 / 80 / 100 tan δ (max.): 0.12 / 0.12 / 0.1
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 63 / 80 / 100 Impedance ratio (max.) Z(−40°C) / Z(+20°C): 3 / 3 / 3
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 5000 hours at 125°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 300% or less than the intial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 125°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

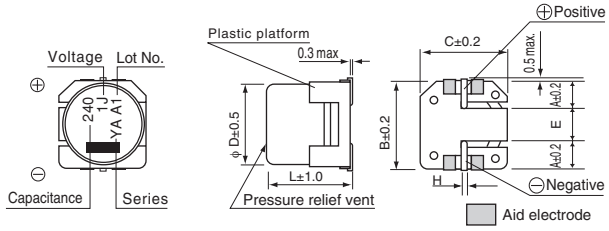
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

(φ12.5 to φ18) 【Standard】



(φ12.5 to φ18) 【Vibration Resistance】



Type numbering system (Example : 63V 240μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	Y	A	1	J	2	4	1	M	N	J	1	M	S

- 14: Taping code
- 13: Size code
- 12: Configuration
- 11: Capacitance tolerance (±20%)
- 10: Rated capacitance (240μF)
- 9: Rated voltage (63V)
- 8: Series name
- 7: Type

Configuration	Code
Standard	NJ
Vibration Resistance	NS

Standard (mm)

φD×L	12.5×13.5	16×16.5	16×21.5	18×16.5	18×21.5
A	5.15	5.65	5.65	6.65	6.65
B	13.6	17.1	17.1	19.1	19.1
C	13.6	17.1	17.1	19.1	19.1
E	(3.3)	(5.8)	(5.8)	(5.8)	(5.8)
L	13.5	16.5	21.5	16.5	21.5
H	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

Vibration Resistance (mm)

φD×L	φ12.5	φ16	φ18
A	4.8	5.4	6.4
B	13.6	17.1	19.1
C	13.6	17.1	19.1
E	(4.0)	(6.3)	(6.3)
L	13.5	16.5,21.5	16.5,21.5
H	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

- Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

●Dimension table in next page.

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UYA

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Rated Ripple (mArms) (125℃/100kHz)	Part Number
63 (1J)	240	12.5×13.5	0.12	151.2	650	UYA1J241M□□1MS
	430	16×16.5	0.12	270.9	930	UYA1J431M□□1MS
	560	18×16.5	0.12	352.8	1000	UYA1J561M□□1MS
	660	16×21.5	0.12	415.8	1500	UYA1J661M□□1MS
	880	18×21.5	0.12	554.4	1600	UYA1J881M□□1MS
80 (1K)	160	12.5×13.5	0.12	128	650	UYA1K161M□□1MS
	270	16×16.5	0.12	216	930	UYA1K271M□□1MS
	360	18×16.5	0.12	288	1000	UYA1K361M□□1MS
	430	16×21.5	0.12	344	1500	UYA1K431M□□1MS
	560	18×21.5	0.12	448	1600	UYA1K561M□□1MS
100 (2A)	90	12.5×13.5	0.10	90	650	UYA2A900M□□1MS
	160	16×16.5	0.10	160	930	UYA2A161M□□1MS
	200	18×16.5	0.10	200	1000	UYA2A201M□□1MS
	240	16×21.5	0.10	240	1500	UYA2A241M□□1MS
	330	18×21.5	0.10	330	1600	UYA2A331M□□1MS

□□ : Enter the appropriate configuration code.

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UCH

Chip Type, High Reliability.
Low temperature ESR specification.

For SMD Long Life

- Added ESR specification after the test at -40°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UCH ← Low ESR UCZ

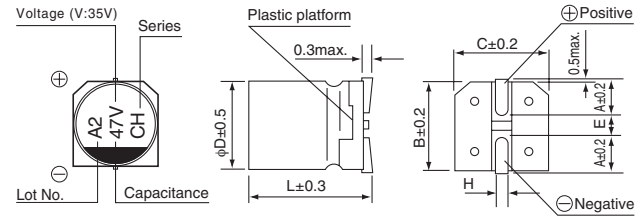
■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +125°C
Rated Voltage Range	25 to 63V
Rated Capacitance Range	33 to 560μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV (μA).
Tangent of loss angle (tan δ)	Rated voltage (V): 25, 35, 50, 63 tan δ (max.): 0.18, 0.16, 0.16, 0.14 Measurement frequency : 120Hz at 20°C
Stability at Low Temperature	Rated voltage (V): 25, 35, 50, 63 Impedance ratio ZT / Z20 (max.) Z(−40°C) / Z(+20°C): 3, 3, 3, 3 Measurement frequency : 120Hz
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 125°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 300% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 125°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

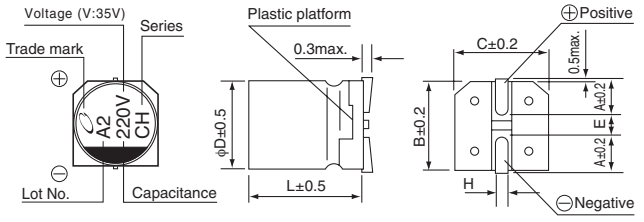
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

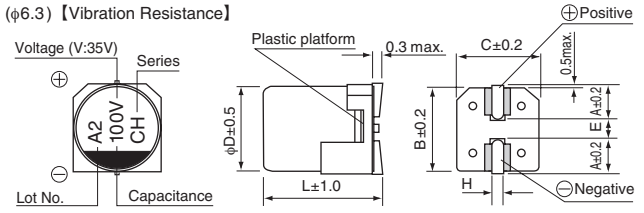
(φ6.3)【Standard】



(φ8, φ10)【Standard】



(φ6.3)【Vibration Resistance】



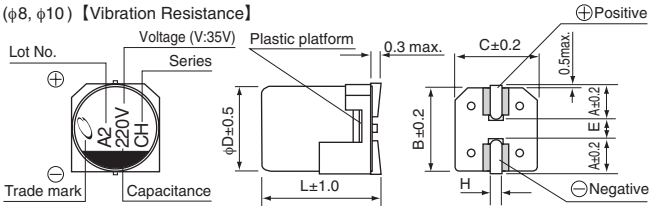
Type numbering system (Example : 35V 47μF)

1 2 3 4 5 6 7 8 9 10 11 12 13 14
U C H 1 V 4 7 0 M C L 1 G S

- Taping code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (47μF)
- Rated voltage (35V)
- Series name
- Type

Size	Code
Standard	L
Vibration Resistance	S

(φ8, φ10)【Vibration Resistance】



Aid electrode

Voltage

V	25	35	50	63
Code	E	V	H	J

Standard (mm)

φD×L	6.3×7.7	8×10	10×10
A	2.4	2.9	3.2
B	6.6	8.3	10.3
C	6.6	8.3	10.3
E	2.2	3.1	4.5
L	7.7	10	10
H	0.5 to 0.8	0.8 to 1.1	0.8 to 11

Vibration Resistance (mm)

φD×L	6.3×7.7	8×10	10×10
A	2.4	2.9	3.2
B	6.6	8.3	10.3
C	6.6	8.3	10.3
E	2.2	3.1	4.5
L	7.7	10	10
H	0.5 to 0.8	1.1 to 1.5	1.1 to 1.5

● Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

●Dimension table in next page.

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UCH

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	ESR (Ω) max.			Rated Ripple (mArms) (125℃/100kHz)	Part Number
					Initial 20℃ 100kHz	Initial −40℃ 100kHz	after endurance test 2000hours −40℃ 400kHz		
25 (1E)	150	6.3×7.7	0.18	37.5	0.30	3.0	6.0	197	UCH1E151MC□1GS
	330	8×10	0.18	82.5	0.20	2.0	4.5	270	UCH1E331MC□1GS
	560	10×10	0.18	140	0.15	1.5	3.5	500	UCH1E561MC□1GS
35 (1V)	47	6.3×7.7	0.16	16.45	0.30	3.0	6.0	197	UCH1V470MC□1GS
	100	6.3×7.7	0.16	35	0.30	3.0	6.0	197	UCH1V101MC□1GS
	220	8×10	0.16	77	0.20	2.0	4.5	270	UCH1V221MC□1GS
	330	10×10	0.16	115.5	0.15	1.5	3.5	500	UCH1V331MC□1GS
50 (1H)	47	6.3×7.7	0.16	23.5	0.80	8.0	—	150	UCH1H470MC□1GS
	100	8×10	0.16	50	0.40	6.0	—	250	UCH1H101MC□1GS
	220	10×10	0.16	110	0.25	3.0	—	400	UCH1H221MC□1GS
63 (1J)	33	6.3×7.7	0.14	20.79	0.80	8.0	—	150	UCH1J330MC□1GS
	68	8×10	0.14	42.84	0.40	6.0	—	250	UCH1J680MC□1GS
	100	10×10	0.14	63	0.25	3.0	—	400	UCH1J101MC□1GS

□ : Enter the appropriate configuration code.

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UCX

Chip Type, High Reliability
Low temperature ESR specification

For SMD Low Impedance

UCX

High Temperature

UCZ

- Chip type, high temperature range, for +135°C use.
- Added ESR specification after the test at -40°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

Value marked with an ※ in the dimension table are scheduled to be discontinued and are not recommended for new designs.

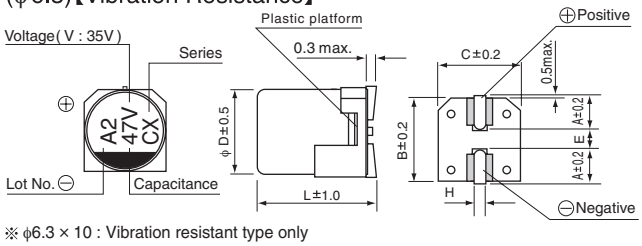
■Specifications

Item	Performance Characteristics
Category Temperature Range	–40 to +135°C
Rated Voltage Range	10 to 50V
Rated Capacitance Range	47 to 3300μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV (μA).
Tangent of loss angle (tan δ)	Rated voltage (V): 10, 16, 25, 35, 50 tan δ (max.): 0.30, 0.23, 0.18, 0.16, 0.16 Measurement frequency : 120Hz at 20°C For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. (φ12.5 to φ18)
Stability at Low Temperature	Rated voltage (V): 10, 16, 25, 35, 50 Impedance ratio (max.) Z(–40°C) / Z(+20°C): 12, 8, 6, 4, 4 Measurement frequency : 120Hz
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 135°C. Capacitance Change: Within ± 30% of the initial capacitance value tan δ: 300% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 135°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors shall be kept on the hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance Change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

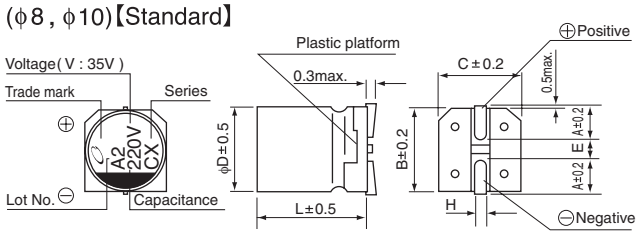
■Chip Type ※ Not recommended.

(φ6.3)【Vibration Resistance】

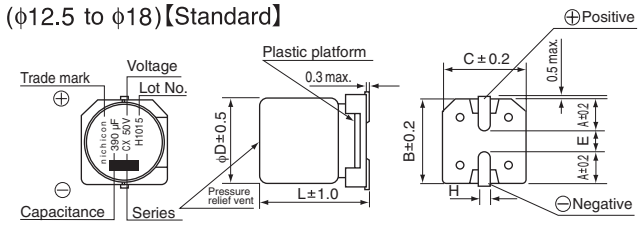


※ φ6.3 × 10 : Vibration resistant type only

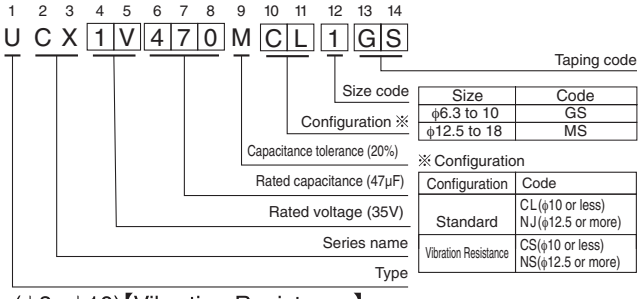
(φ8, φ10)【Standard】



(φ12.5 to φ18)【Standard】



Type numbering system (Example : 35V 47μF)

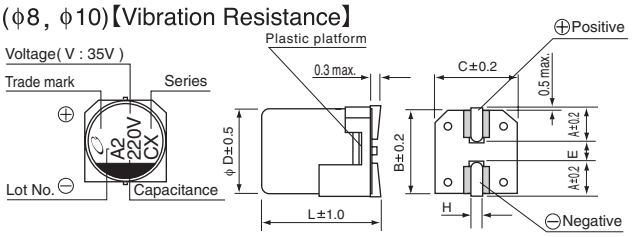


Size	Code
φ6.3 to 10	GS
φ12.5 to 18	MS

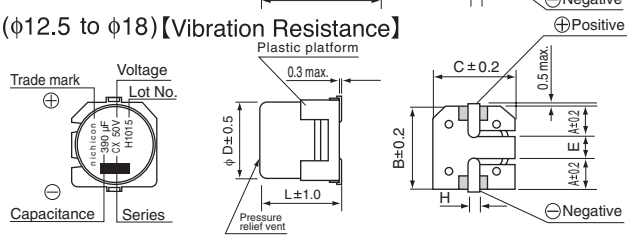
※Configuration

Configuration	Code
Standard	CL(φ10 or less) NJ(φ12.5 or more)
Vibration Resistance	CS(φ10 or less) NS(φ12.5 or more)

(φ8, φ10)【Vibration Resistance】



(φ12.5 to φ18)【Vibration Resistance】



Standard (mm)

φDXL	8X10	10X10	12.5X13.5	16X16.5, 21.5	18X16.5, 21.5
A	2.9	3.2	5.15	5.65	6.65
B	8.3	10.3	13.6	17.1	19.1
C	8.3	10.3	13.6	17.1	19.1
E	3.1	4.5	(3.3)	(5.8)	(5.8)
L	10	10	13.5	16.5, 21.5	16.5, 21.5
H	0.8 to 1.1	0.8 to 1.1	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

Vibration Resistance (mm)

φDXL	6.3X10	8X10	10X10	12.5X13.5	16X16.5, 21.5	18X16.5, 21.5
A	2.4	2.9	3.2	4.8	5.4	6.4
B	6.6	8.3	10.3	13.6	17.1	19.1
C	6.6	8.3	10.3	13.6	17.1	19.1
E	2.2	3.1	4.5	(4.0)	(6.3)	(6.3)
L	10	10	10	13.5	16.5, 21.5	16.5, 21.5
H	0.5 to 0.8	1.1 to 1.5	1.1 to 1.5	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

Voltage

V	10	16	25	35	50
Code	A	C	E	V	H

Aid electrode

●Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
Coefficient	0.35	0.50	0.64	0.83	1.00

●Dimension table in next page.

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UCX

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	ESR (Ω) max. (20℃/−40℃/100kHz) Initial 20℃	Initial −40℃	after endurance test 1000hours −40℃	Rated Ripple (mArms) (135℃/100kHz)	Part Number
10 (1A)	220	8×10	0.30	22	0.20	3.00	12	270	UCX1A221M□□1GS
	330	8×10	0.30	33	0.20	3.00	12	270	UCX1A331M□□6GS
	330	10×10	0.30	33	0.15	2.00	10	500	UCX1A331M□□1GS
	470	10×10	0.30	47	0.15	2.00	10	500	UCX1A471M□□1GS
16 (1C)	100	6.3×10	0.23	16	0.25	4.00	15	197	※UCX1C101MCS6GS
	100	8×10	0.23	16	0.20	3.00	12	270	UCX1C101M□□1GS
	220	8×10	0.23	35.2	0.20	3.00	12	270	UCX1C221M□□1GS
	330	10×10	0.23	52.8	0.15	2.00	10	500	UCX1C331M□□1GS
	470	10×10	0.23	75.2	0.15	2.00	10	500	UCX1C471M□□1GS
25 (1E)	100	8×10	0.18	25	0.20	3.00	12	270	UCX1E101M□□1GS
	220	10×10	0.18	55	0.15	2.00	10	500	UCX1E221M□□1GS
	330	10×10	0.18	82.5	0.15	2.00	10	500	UCX1E331M□□1GS
	820	12.5×13.5	0.18	205	0.070	1.00	5.0	750	UCX1E821M□□1MS
	1000	12.5×13.5	0.18	250	0.070	1.00	5.0	750	UCX1E102M□□1MS
	1200	16×16.5	0.18	300	0.050	0.50	2.5	1200	UCX1E122M□□1MS
	1500	16×16.5	0.18	375	0.050	0.50	2.5	1200	UCX1E152M□□1MS
	1800	16×16.5	0.18	450	0.050	0.50	2.5	1200	UCX1E182M□□1MS
	2200	18×16.5	0.20	550	0.050	0.50	2.5	1400	UCX1E222M□□1MS
	2700	16×21.5	0.20	675	0.040	0.32	1.6	1900	UCX1E272M□□1MS
	3300	18×21.5	0.22	825	0.035	0.28	1.4	2200	UCX1E332M□□1MS
35 (1V)	47	6.3×10	0.16	16.45	0.25	4.00	15	197	※UCX1V470MCS6GS
	47	8×10	0.16	16.45	0.20	3.00	12	270	UCX1V470M□□1GS
	68	8×10	0.16	23.8	0.20	3.00	12	270	UCX1V680M□□1GS
	100	6.3×10	0.16	35	0.25	4.00	15	197	※UCX1V101MCS6GS
	100	8×10	0.16	35	0.20	3.00	12	270	UCX1V101M□□1GS
	220	10×10	0.16	77	0.15	2.00	10	500	UCX1V221M□□1GS
	470	12.5×13.5	0.16	164.5	0.070	1.00	5.0	750	UCX1V471M□□1MS
	560	12.5×13.5	0.16	196	0.070	1.00	5.0	750	UCX1V561M□□1MS
	680	12.5×13.5	0.16	238	0.070	1.00	5.0	750	UCX1V681M□□1MS
	820	16×16.5	0.16	287	0.050	0.50	2.5	1200	UCX1V821M□□1MS
	1000	16×16.5	0.16	350	0.050	0.50	2.5	1200	UCX1V102M□□1MS
	1200	18×16.5	0.16	420	0.050	0.50	2.5	1400	UCX1V122M□□1MS
	1500	16×21.5	0.16	525	0.040	0.32	1.6	1900	UCX1V152M□□6MS
	1500	18×16.5	0.16	525	0.050	0.50	2.5	1400	UCX1V152M□□1MS
	1800	18×21.5	0.16	630	0.035	0.28	1.4	2200	UCX1V182M□□1MS
	2200	18×21.5	0.18	770	0.035	0.28	1.4	2200	UCX1V222M□□1MS
50 (1H)	47	8×10	0.16	23.5	0.25	3.50	15	270	UCX1H470M□□1GS
	100	10×10	0.16	50	0.20	2.50	12	500	UCX1H101M□□1GS
	390	12.5×13.5	0.16	195	0.090	1.30	6.5	750	UCX1H391M□□1MS
	470	16×16.5	0.16	235	0.070	0.70	3.5	1000	UCX1H471M□□1MS
	560	16×16.5	0.16	280	0.070	0.70	3.5	1000	UCX1H561M□□1MS
	680	18×16.5	0.16	340	0.070	0.70	3.5	1200	UCX1H681M□□1MS
	820	18×16.5	0.16	410	0.070	0.70	3.5	1200	UCX1H821M□□1MS
	1000	16×21.5	0.16	500	0.050	0.40	2.0	1600	UCX1H102M□□1MS
	1200	18×21.5	0.16	600	0.040	0.32	1.6	1900	UCX1H122M□□1MS

□□ : Enter the appropriate configuration code.

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

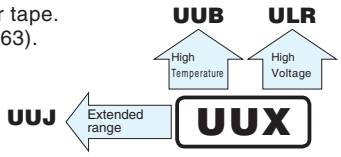
nichicon

UUX

Chip Type, Wide Temperature Range

For SMD

- Chip type, operating over wide temperature range of to -55 to +105°C.
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C (6.3 to 100V), −40 to +105°C (160 to 400V)
Rated Voltage Range	6.3 to 400V
Rated Capacitance Range	1 to 1000μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	Rated voltage (V): 6.3 to 100 — Leakage Current: After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV (μA). Rated voltage (V): 160 to 400 — Leakage Current: I = 0.04CV+100 (μA) max.(1 minute's at 20°C)
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C

Rated voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250	400
tan δ (max.)	0.22	0.19	0.16	0.14	0.12	0.10	0.10	0.08	0.20	0.20	0.20	0.25

Stability at Low Temperature — Measurement frequency: 120Hz

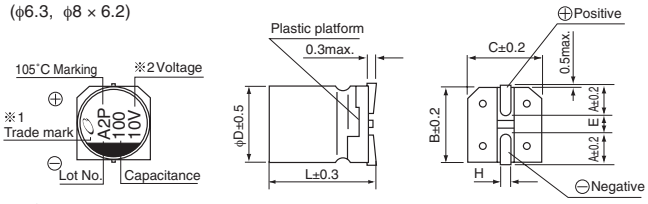
Rated voltage (V)		6.3	10	16	25	35	50	63	100	160	200	250	400
Impedance ratio ZT / Z20 (max.)	Z(−55°C) / Z(+20°C)	4	4	3	3	3	2	3	4	—	—	—	—
	Z(−40°C) / Z(+20°C)	—	—	—	—	—	—	—	—	6	6	6	10

Item	Performance Characteristics
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours (160 to 400V : 3000hours) at 105°C. Capacitance change: Within ±20% of the initial capacitance value tan δ: 200% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

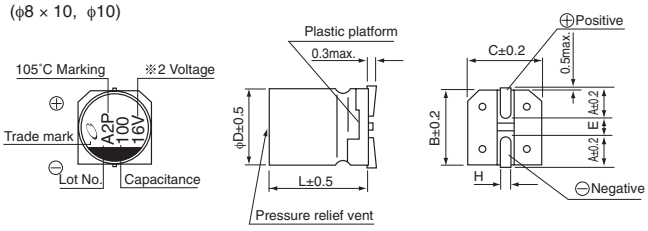
■Chip Type

(φ6.3, φ8 × 6.2)

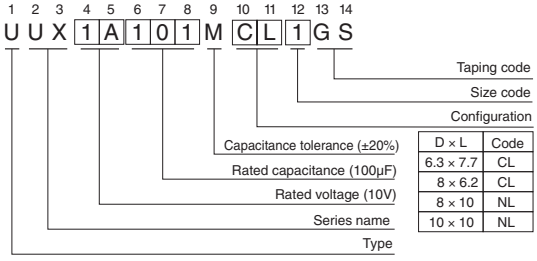


※1 Size φ8×6.2 only
※2 Voltage mark for 6.3V is「6V」.

(φ8 × 10, φ10)



Type numbering system (Example : 10V 100μF)



D × L	Code
6.3 × 7.7	CL
8 × 6.2	CL
8 × 10	NL
10 × 10	NL

(mm)

φD × L	6.3 × 7.7	8 × 6.2	8 × 10	10 × 10
A	2.4	3.3	2.9	3.2
B	6.6	8.3	8.3	10.3
C	6.6	8.3	8.3	10.3
E	2.2	2.3	3.1	4.5
L	7.7	6.2	10	10
H	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

● Frequency coefficient of rated ripple current

Cap.(μF) \ Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
1 to 47	0.80	1.00	1.15	1.40	1.67
100 to 1000	0.85	1.00	1.08	1.20	1.30

● Dimension table in next page.

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UUX

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
6.3 (0J)	220	8×10	0.22	41.58	161	UUX0J221MNL1GS
	220	6.3×7.7	0.22	41.58	121	UUX0J221MCL6GS
	330	8×10	0.22	62.37	288	UUX0J331MNL1GS
	470	10×10	0.22	88.83	340	UUX0J471MNL1GS
	470	8×10	0.22	88.83	316	UUX0J471MNL6GS
	680	10×10	0.22	128.52	408	UUX0J681MNL1GS
	1000	10×10	0.22	189	495	UUX0J102MNL1GS
10 (1A)	100	8×6.2	0.19	30	90	UUX1A101MCL1GS
	220	8×10	0.19	66	173	UUX1A221MNL1GS
	330	10×10	0.19	99	318	UUX1A331MNL1GS
	330	8×10	0.19	99	296	UUX1A331MNL6GS
	470	10×10	0.19	141	351	UUX1A471MNL1GS
	470	8×10	0.19	141	326	UUX1A471MNL6GS
	680	10×10	0.19	204	392	UUX1A681MNL1GS
16 (1C)	100	8×10	0.16	48	148	UUX1C101MNL1GS
	100	6.3×7.7	0.16	48	111	UUX1C101MCL6GS
	220	10×10	0.16	105.6	330	UUX1C221MNL1GS
	220	8×10	0.16	105.6	307	UUX1C221MNL6GS
	330	10×10	0.16	158.4	441	UUX1C331MNL1GS
	330	8×10	0.16	158.4	410	UUX1C331MNL6GS
	470	10×10	0.16	225.6	489	UUX1C471MNL1GS
25 (1E)	47	8×6.2	0.14	35.25	79	UUX1E470MCL1GS
	47	6.3×7.7	0.14	35.25	78	UUX1E470MCL6GS
	100	8×10	0.14	75	181	UUX1E101MNL1GS
	220	10×10	0.14	165	351	UUX1E221MNL1GS
	220	8×10	0.14	165	283	UUX1E221MNL6GS
	330	10×10	0.14	247.5	372	UUX1E331MNL1GS
35 (1V)	33	8×6.2	0.12	34.65	76	UUX1V330MCL1GS
	33	6.3×7.7	0.12	34.65	75	UUX1V330MCL6GS
	47	8×10	0.12	49.35	124	UUX1V470MNL1GS
	100	10×10	0.12	105	304	UUX1V101MNL1GS
	100	8×10	0.12	105	283	UUX1V101MNL6GS
	220	10×10	0.12	231	450	UUX1V221MNL1GS
50 (1H)	22	8×6.2	0.10	33	67	UUX1H220MCL1GS
	22	6.3×7.7	0.10	33	64	UUX1H220MCL6GS
	33	8×10	0.10	49.5	133	UUX1H330MNL1GS
	47	10×10	0.10	70.5	180	UUX1H470MNL1GS
	47	8×10	0.10	70.5	167	UUX1H470MNL6GS
	100	10×10	0.10	150	310	UUX1H101MNL1GS
63 (1J)	10	8×6.2	0.10	18.9	51	UUX1J100MCL1GS
	22	8×10	0.10	41.58	108	UUX1J220MNL1GS
	33	10×10	0.10	62.37	185	UUX1J330MNL1GS
	33	8×10	0.10	62.37	179	UUX1J330MNL6GS
	47	10×10	0.10	88.83	220	UUX1J470MNL1GS
	100	10×10	0.10	189	320	UUX1J101MNL1GS

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UUX

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
100 (2A)	4.7	8×6.2	0.08	14.1	42	UUX2A4R7MCL1GS
	10	8×10	0.08	30	75	UUX2A100MNL1GS
	22	10×10	0.08	66	150	UUX2A220MNL1GS
	22	8×10	0.08	66	121	UUX2A220MNL6GS
	33	10×10	0.08	99	180	UUX2A330MNL1GS
	47	10×10	0.08	141	230	UUX2A470MNL1GS
160 (2C)	10	8×10	0.20	164	57	UUX2C100MNL1GS
	18	10×10	0.20	215.2	64	UUX2C180MNL1GS
200 (2D)	3.3	8×10	0.20	126.4	31	UUX2D3R3MNL1GS
	3.9	8×10	0.20	131.2	34	UUX2D3R9MNL1GS
	4.7	8×10	0.20	137.6	37	UUX2D4R7MNL1GS
	6.8	8×10	0.20	154.4	44	UUX2D6R8MNL1GS
	10	10×10	0.20	180	64	UUX2D100MNL1GS
250 (2E)	3.3	8×10	0.20	133	31	UUX2E3R3MNL1GS
	3.9	8×10	0.20	139	34	UUX2E3R9MNL1GS
	4.7	8×10	0.20	147	37	UUX2E4R7MNL1GS
	6.8	8×10	0.20	168	44	UUX2E6R8MNL1GS
	10	10×10	0.20	200	64	UUX2E100MNL1GS
400 (2G)	1	8×10	0.25	116	25	UUX2G010MNL1GS
	1.8	8×10	0.25	128.8	26	UUX2G1R8MNL1GS
	2.2	8×10	0.25	135.2	27	UUX2G2R2MNL1GS
	3.3	10×10	0.25	152.8	38	UUX2G3R3MNL1GS
	3.9	10×10	0.25	162.4	39	UUX2G3R9MNL1GS
	4.7	10×10	0.25	175.2	40	UUX2G4R7MNL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.
- Please select UUJ if high C/V products are required.

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ALUMINUM ELECTROLYTIC CAPACITORS

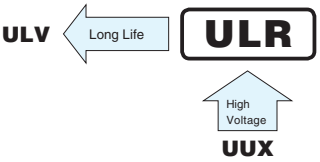
nichicon

ULR

Chip Type, High Voltage.

For SMD

- Chip Type, high Voltage.
- Applicable to automatic mounting machine using carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



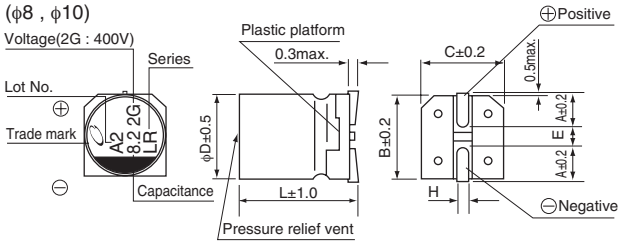
■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +105°C
Rated Voltage Range	160 to 500V
Rated Capacitance Range	2.7 to 39μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.04CV +100(μA).
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 160, 200, 250, 400, 450, 500 tan δ (max.): 0.20, 0.20, 0.25, 0.25, 0.30, 0.30
Stability at Low Temperature	Measurement frequency: 120Hz Rated voltage (V): 160, 200, 250, 400, 450, 500 Impedance ratio ZT / Z20 (max.) Z(−40°C) / Z(+20°C): 6, 6, 10, 10, 15, 15
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 3000 hours at 105°C. Capacitance change: Within ±20% of the initial capacitance value tan δ: 200% or less than the intial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the characteristic requirements listed at right when they are removed from the plate. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

(φ8 , φ10)



(mm)

φD×L	8×10	10×10	10×13.5
A	2.9	3.2	3.2
B	8.3	10.3	10.3
C	8.3	10.3	10.3
E	3.1	4.5	4.5
L	10	10	13.5
H	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1

Voltage

V	160	200	250	400	450	500
Code	2C	2D	2E	2G	2W	2H

Type numbering system (Example : 400V 8.2μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	L	R	2	G	8	R	2	M	N	L	1	G	S

- 14: Taping code
- 11–13: Configuration
- 9: Capacitance tolerance (±20%)
- 6–8: Rated capacitance (8.2μF)
- 4–5: Rated voltage (400V)
- 3: Series name
- 1: Type

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.80	1.00	1.25	1.40	1.60

● Dimension table in next page.

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ULR

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
160 (2C)	15	8×10	0.20	196	50	ULR2C150MNL1GS
	27	10×10	0.20	272.8	65	ULR2C270MNL1GS
	39	10×13.5	0.20	349.6	70	ULR2C390MNL1GS
200 (2D)	12	8×10	0.20	196	50	ULR2D120MNL1GS
	22	10×10	0.20	276	65	ULR2D220MNL1GS
	33	10×13.5	0.20	364	70	ULR2D330MNL1GS
250 (2E)	10	8×10	0.25	200	35	ULR2E100MNL1GS
	15	10×10	0.25	250	50	ULR2E150MNL1GS
	22	10×13.5	0.25	320	55	ULR2E220MNL1GS
400 (2G)	4.7	8×10	0.25	175.2	35	ULR2G4R7MNL1GS
	8.2	10×10	0.25	231.2	50	ULR2G8R2MNL1GS
	12	10×13.5	0.25	292	55	ULR2G120MNL1GS
450 (2W)	3.9	8×10	0.30	170.2	25	ULR2W3R9MNL1GS
	6.8	10×10	0.30	222.4	40	ULR2W6R8MNL1GS
	10	10×13.5	0.30	280	45	ULR2W100MNL1GS
500 (2H)	2.7	8×10	0.30	154	20	ULR2H2R7MNL1GS
	3.9	10×10	0.30	178	35	ULR2H3R9MNL1GS
	5.6	10×13.5	0.30	212	40	ULR2H5R6MNL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

ULV

Chip Type, High Voltage.
Long Life.

For SMD Long Life

- Chip Type, high voltage and long life.
- Load life of 10000 hours at +105°C
- Applicable to automatic mounting machine using carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

ULV → Long Life → ULR

■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +105°C
Rated Voltage Range	160 to 500V
Rated Capacitance Range	1.8 to 33μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	Rated voltage (V): 160 to 450 — 0.04CV+100(μA)max.(1 minute's at 20°C); 500 — 0.04CV+200(μA)max.(1 minute's at 20°C)
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C
Stability at Low Temperature	Measurement frequency: 120Hz
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 10000 hours at 105°C.
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the characteristic requirements listed at right when they are removed from the plate.
Marking	Black print on the case top.

Tangent of loss angle (tan δ):

Rated voltage (V)	160	200	250	400	450	500
tan δ (max.)	0.20	0.20	0.25	0.25	0.30	0.30

Stability at Low Temperature:

Rated voltage (V)		160	200	250	400	450	500
Impedance ratio ZT / Z20 (max.)	Z(−40°C) / Z(+20°C)	6	6	10	10	15	15

Endurance:

Capacitance change	Within ±30% of the initial capacitance value
tan δ	300% or less than the intial specified value
Leakage current	Less than or equal to the initial specified value

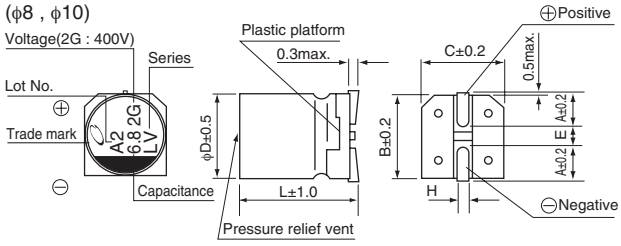
Resistance to soldering heat:

Capacitance change	Within ±10% of the initial capacitance value
tan δ	Less than or equal to the initial specified value
Leakage current	Less than or equal to the initial specified value

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

(φ8 , φ10)



(mm)

φD×L	8×10	10×10	10×13.5
A	2.9	3.2	3.2
B	8.3	10.3	10.3
C	8.3	10.3	10.3
E	3.1	4.5	4.5
L	10	10	13.5
H	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1

Voltage

V	160	200	250	400	450	500
Code	2C	2D	2E	2G	2W	2H

Type numbering system (Example : 400V 6.8μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	L	V	2	G	6	R	8	M	N	L	1	G	S

- Taping code
- Configuration
- Capacitance tolerance (±20%)
- Rated capacitance (6.8μF)
- Rated voltage (400V)
- Series name
- Type

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.80	1.00	1.25	1.40	1.60

● Dimension table in next page.

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ULV

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
160 (2C)	15	8×10	0.20	196	50	ULV2C150MNL1GS
	22	10×10	0.20	240.8	65	ULV2C220MNL1GS
	33	10×13.5	0.20	311.2	70	ULV2C330MNL1GS
200 (2D)	12	8×10	0.20	196	50	ULV2D120MNL1GS
	18	10×10	0.20	244	65	ULV2D180MNL1GS
	27	10×13.5	0.20	316	70	ULV2D270MNL1GS
250 (2E)	8.2	8×10	0.25	182	35	ULV2E8R2MNL1GS
	15	10×10	0.25	250	50	ULV2E150MNL1GS
	18	10×13.5	0.25	280	55	ULV2E180MNL1GS
400 (2G)	3.9	8×10	0.25	162.4	35	ULV2G3R9MNL1GS
	6.8	10×10	0.25	208.8	50	ULV2G6R8MNL1GS
	10	10×13.5	0.25	260	55	ULV2G100MNL1GS
450 (2W)	3.3	8×10	0.30	159.4	25	ULV2W3R3MNL1GS
	5.6	10×10	0.30	200.8	40	ULV2W5R6MNL1GS
	7.5	10×13.5	0.30	235	45	ULV2W7R5MNL1GS
500 (2H)	1.8	8×10	0.30	236	25	ULV2H1R8MNL1GS
	3.3	10×10	0.30	266	40	ULV2H3R3MNL1GS
	4.7	10×13.5	0.30	294	45	ULV2H4R7MNL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UUG

Chip Type, Higher Capacitance Range

For SMD

- Chip Type, higher capacitance in larger case sizes (ϕ12.5, ϕ16, ϕ18)
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

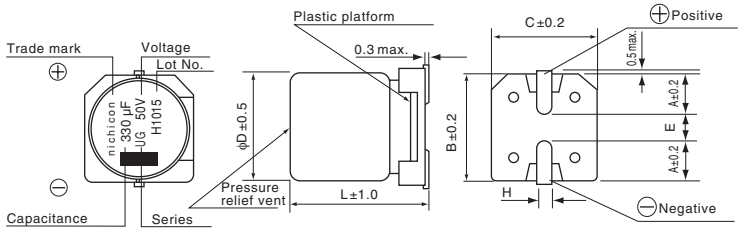
UUJ
Wide Temperature
UUG

■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +85°C
Rated Voltage Range	10 to 100V
Rated Capacitance Range	68 to 10000μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV(μA).
Tangent of loss angle (tan δ)	Rated voltage (V): 10, 16, 25, 35, 50, 63, 100 tan δ (max.): 0.24, 0.20, 0.16, 0.14, 0.12, 0.10, 0.08 Measurement frequency : 120Hz at 20°C For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. (ϕ12.5 to ϕ18)
Stability at Low Temperature	Rated voltage (V): 10, 16, 25, 35, 50, 63, 100 Impedance ratio (max.) Z(−25°C) / Z(+20°C): 4, 3, 2, 2, 2, 2, 2 Impedance ratio (max.) Z(−40°C) / Z(+20°C): 10, 8, 5, 4, 3, 3, 3 Measurement frequency: 120Hz
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 85°C. Capacitance change: Within ±20% of the initial capacitance value tan δ: 200% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 85°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Marking	Black print on the case top.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type



(mm)

ϕD	12.5×13.5	12.5×16	12.5×21	16×16.5	16×21.5	18×16.5	18×21.5
A	5.15	5.15	5.15	5.65	5.65	6.65	6.65
B	13.6	13.6	13.6	17.1	17.1	19.1	19.1
C	13.6	13.6	13.6	17.1	17.1	19.1	19.1
E	(3.3)	(3.3)	(3.3)	(5.8)	(5.8)	(5.8)	(5.8)
L	13.5	16.0	21.0	16.5	21.5	16.5	21.5
H	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

Please contact us for the dimensions for NQ.

Type numbering system (Example : 50V 330μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	U	G	1	H	3	3	1	M	N	J	1	M	S

- Package code
- Size code
- Configuration
- Capacitance Tolerance (±20%)
- Rated capacitance (330μF)
- Rated voltage (50V)
- Series name
- Type

※ There are also some products that can be manufactured as vibration resistant products.

● Frequency coefficient of rated ripple current

Cap.(μF) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
68	0.75	1.00	1.35	1.57	2.00
100 to 470	0.80	1.00	1.23	1.34	1.50
1000 to 10000	0.85	1.00	1.10	1.13	1.15

● Dimension table in next page.

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UUG

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (85℃/120Hz)	Part Number
10 (1A)	1000	12.5×13.5	0.24	300	620	UUG1A102MNJ1MS
	2200	12.5×16	0.26	660	960	UUG1A222MNJ1MS
	3300	16×16.5	0.28	990	1300	UUG1A332MNJ1MS
	4700	18×16.5	0.30	1410	1500	UUG1A472MNJ1MS
	4700	16×21.5	0.30	1410	1500	UUG1A472MNJ6MS
	6800	18×21.5	0.34	2040	1850	UUG1A682MNJ1MS
	10000	18×21.5	0.42	3000	2200	UUG1A103MNJ6MS
16 (1C)	1000	12.5×13.5	0.20	480	710	UUG1C102MNJ1MS
	2200	16×16.5	0.22	1056	1150	UUG1C222MNJ1MS
	2200	12.5×21	0.22	1056	1150	UUG1C222MNJ6MS
	3300	18×16.5	0.24	1584	1450	UUG1C332MNJ1MS
	3300	16×21.5	0.24	1584	1450	UUG1C332MNJ6MS
	4700	18×21.5	0.26	2256	1750	UUG1C472MNJ1MS
25 (1E)	470	12.5×13.5	0.16	352.5	550	UUG1E471MNJ1MS
	1000	12.5×16	0.16	750	820	UUG1E102MNJ1MS
	2200	18×16.5	0.18	1650	1350	UUG1E222MNJ1MS
	2200	16×21.5	0.18	1650	1350	UUG1E222MNJ6MS
	3300	18×21.5	0.20	2475	1700	UUG1E332MNJ1MS
35 (1V)	470	12.5×13.5	0.14	493.5	580	UUG1V471MNJ1MS
	1000	16×16.5	0.14	1050	1000	UUG1V102MNJ1MS
	1000	12.5×21	0.14	1050	1000	UUG1V102MNJ6MS
	2200	18×21.5	0.16	2310	1550	UUG1V222MNJ1MS
50 (1H)	220	12.5×13.5	0.12	330	450	UUG1H221MNJ1MS
	330	12.5×13.5	0.12	495	520	UUG1H331MNJ1MS
	470	16×16.5	0.12	705	740	UUG1H471MNJ1MS
	470	12.5×21	0.12	705	740	UUG1H471MNJ6MS
	1000	18×21.5	0.12	1500	1150	UUG1H102MNJ1MS
63 (1J)	100	12.5×13.5	0.10	189	370	UUG1J101MNJ1MS
	220	12.5×16	0.10	415.8	580	UUG1J221MNJ1MS
	330	16×16.5	0.10	623.7	680	UUG1J331MNJ1MS
	330	12.5×21	0.10	623.7	680	UUG1J331MNJ6MS
	470	18×16.5	0.10	888.3	850	UUG1J471MNJ1MS
	470	16×21.5	0.10	888.3	850	UUG1J471MNJ6MS
100 (2A)	68	12.5×13.5	0.08	204	350	UUG2A680MNJ1MS
	100	12.5×16	0.08	300	440	UUG2A101MNJ1MS
	220	18×16.5	0.08	660	665	UUG2A221MNJ1MS
	220	16×21.5	0.08	660	665	UUG2A221MNJ6MS
	330	18×21.5	0.08	990	825	UUG2A331MNJ1MS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UUJ

Chip Type, Higher Capacitance Range

For SMD Long Life

- Chip Type, higher capacitance in larger case sizes (ϕ12.5, ϕ16, ϕ18)
- Designed for surface mounting on high density PC board.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UUJ → Bi-Polarized → UUN

■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C (10 to 100V), −40 to +105°C (160 to 450V)
Rated Voltage Range	10 to 450V
Rated Capacitance Range	3.3 to 6800μF
Capacitance Tolerance	±20% at 120Hz, 20°C

Leakage Current ※

Rated voltage (V)	10 to 100	160 to 450
—	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV (μA).	I = 0.04CV+100 (μA) max. (1 minute's at 20°C)

Tangent of loss angle (tan δ)

Measurement frequency : 120Hz at 20°C

Rated voltage (V)	10	16	25	35	50	63	100	160 to 250	400・450
tan δ (max.)	0.22	0.18	0.16	0.14	0.12	0.10	0.08	0.15	0.20

For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. (ϕ12.5 to ϕ18)

Stability at Low Temperature

Measurement frequency: 120Hz

Rated voltage (V)		10	16	25	35	50	63	100	160 to 250	400・450
Impedance ratio (max.)	Z(−25°C) / Z(+20°C)	4	3	2	2	2	2	2	3	6
	Z(−40°C) / Z(+20°C)	8	6	4	3	3	3	3	6	10

Endurance

The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 5000 hours at 105°C.

Capacitance change	Within ±20% of the initial capacitance value
tan δ	200% or less than the initial specified value
Leakage current	Less than or equal to the initial specified value

Shelf Life

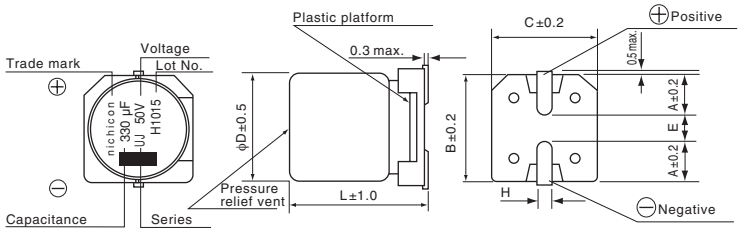
After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.

Marking

Black print on the case top.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type



(mm)

ϕD	12.5×13.5	12.5×16	12.5×21	16×16.5	16×21.5	18×16.5	18×21.5
A	5.15	5.15	5.15	5.65	5.65	6.65	6.65
B	13.6	13.6	13.6	17.1	17.1	19.1	19.1
C	13.6	13.6	13.6	17.1	17.1	19.1	19.1
E	(3.3)	(3.3)	(3.3)	(5.8)	(5.8)	(5.8)	(5.8)
L	13.5	16.0	21.0	16.5	21.5	16.5	21.5
H	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

Type numbering system (Example : 50V 330μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	U	J	1	H	3	3	1	M	N	J	1	M	S

- Taping code
- Size code
- Configuration
- Capacitance Tolerance (±20%)
- Rated capacitance (330μF)
- Rated voltage (50V)
- Series name
- Type

※ There are also some products that can be manufactured as vibration resistant products.

● Frequency coefficient of rated ripple current

V	Cap.(μF) \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz or more
10 to 100	47 to 68	0.75	1.00	1.35	1.57	2.00
	100 to 470	0.80	1.00	1.23	1.34	1.50
	1000 to 6800	0.85	1.00	1.10	1.13	1.15
160 to 450	3.3 to 100	0.80	1.00	1.25	1.40	1.60

● Dimension table in next page.

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UUJ

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
10 (1A)	1000	12.5×16	0.22	300	500	UUJ1A102MNJ1MS
	2200	16×16.5	0.24	660	810	UUJ1A222MNJ1MS
	2200	12.5×21	0.24	660	810	UUJ1A222MNJ6MS
	3300	18×16.5	0.26	990	1000	UUJ1A332MNJ1MS
	3300	16×21.5	0.26	990	1000	UUJ1A332MNJ6MS
	4700	18×21.5	0.28	1410	1200	UUJ1A472MNJ1MS
	6800	18×21.5	0.32	2040	1450	UUJ1A682MNJ6MS
16 (1C)	470	12.5×13.5	0.18	225.6	360	UUJ1C471MNJ1MS
	1000	16×16.5	0.18	480	630	UUJ1C102MNJ1MS
	1000	12.5×21	0.18	480	630	UUJ1C102MNJ6MS
	2200	18×16.5	0.20	1056	930	UUJ1C222MNJ1MS
	2200	16×21.5	0.20	1056	930	UUJ1C222MNJ6MS
	3300	18×21.5	0.22	1584	1150	UUJ1C332MNJ1MS
25 (1E)	330	12.5×13.5	0.16	247.5	320	UUJ1E331MNJ1MS
	470	12.5×16	0.16	352.5	400	UUJ1E471MNJ1MS
	1000	18×16.5	0.16	750	700	UUJ1E102MNJ1MS
	1000	16×21.5	0.16	750	700	UUJ1E102MNJ6MS
	2200	18×21.5	0.18	1650	1050	UUJ1E222MNJ1MS
35 (1V)	220	12.5×13.5	0.14	231	280	UUJ1V221MNJ1MS
	330	12.5×16	0.14	346.5	360	UUJ1V331MNJ1MS
	470	16×16.5	0.14	493.5	490	UUJ1V471MNJ1MS
	470	12.5×21	0.14	493.5	490	UUJ1V471MNJ6MS
	1000	18×16.5	0.14	1050	750	UUJ1V102MNJ1MS
	1000	16×21.5	0.14	1050	750	UUJ1V102MNJ6MS
	2200	18×21.5	0.16	2310	1150	UUJ1V222MNJ6MS
50 (1H)	220	12.5×16	0.12	330	320	UUJ1H221MNJ1MS
	330	16×16.5	0.12	495	440	UUJ1H331MNJ1MS
	330	12.5×21	0.12	495	440	UUJ1H331MNJ6MS
	470	18×16.5	0.12	705	550	UUJ1H471MNJ1MS
	470	16×21.5	0.12	705	550	UUJ1H471MNJ6MS
	1000	18×21.5	0.12	1500	820	UUJ1H102MNJ1MS
63 (1J)	68	12.5×13.5	0.10	128.52	175	UUJ1J680MNJ1MS
	100	12.5×16	0.10	189	225	UUJ1J101MNJ1MS
	220	16×16.5	0.10	415.8	385	UUJ1J221MNJ1MS
	220	12.5×21	0.10	415.8	385	UUJ1J221MNJ6MS
	330	18×16.5	0.10	623.7	490	UUJ1J331MNJ1MS
	330	16×21.5	0.10	623.7	490	UUJ1J331MNJ6MS
	470	18×21.5	0.10	888.3	590	UUJ1J471MNJ1MS

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UUJ

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
100 (2A)	47	12.5×13.5	0.08	141	160	UUJ2A470MNJ1MS
	68	12.5×16	0.08	204	205	UUJ2A680MNJ1MS
	100	16×16.5	0.08	300	285	UUJ2A101MNJ1MS
	100	12.5×21	0.08	300	285	UUJ2A101MNJ6MS
	220	18×16.5	0.08	660	440	UUJ2A221MNJ1MS
	220	16×21.5	0.08	660	440	UUJ2A221MNJ6MS
	330	18×21.5	0.08	990	500	UUJ2A331MNJ6MS
160 (2C)	33	12.5×13.5	0.15	311.2	95	UUJ2C330MNJ1MS
	47	16×16.5	0.15	400.8	260	UUJ2C470MNJ1MS
	47	12.5×21	0.15	400.8	260	UUJ2C470MNJ6MS
	68	18×16.5	0.15	535.2	320	UUJ2C680MNJ1MS
	68	16×21.5	0.15	535.2	320	UUJ2C680MNJ6MS
	100	16×21.5	0.15	740	380	UUJ2C101MNJ1MS
200 (2D)	10	12.5×13.5	0.15	180	80	UUJ2D100MNJ1MS
	22	12.5×16	0.15	276	105	UUJ2D220MNJ1MS
	33	16×16.5	0.15	364	220	UUJ2D330MNJ1MS
	33	12.5×21	0.15	364	220	UUJ2D330MNJ6MS
	47	18×16.5	0.15	476	270	UUJ2D470MNJ1MS
	47	16×21.5	0.15	476	270	UUJ2D470MNJ6MS
	68	18×21.5	0.15	644	330	UUJ2D680MNJ1MS
	100	18×21.5	0.15	900	410	UUJ2D101MNJ6MS
250 (2E)	4.7	12.5×13.5	0.15	147	65	UUJ2E4R7MNJ1MS
	10	12.5×16	0.15	200	105	UUJ2E100MNJ1MS
	22	16×16.5	0.15	320	180	UUJ2E220MNJ1MS
	22	12.5×21	0.15	320	180	UUJ2E220MNJ6MS
	33	18×16.5	0.15	430	230	UUJ2E330MNJ1MS
	33	16×21.5	0.15	430	230	UUJ2E330MNJ6MS
	47	18×21.5	0.15	570	280	UUJ2E470MNJ1MS
	68	18×21.5	0.15	780	340	UUJ2E680MNJ6MS
400 (2G)	4.7	12.5×16	0.20	175.2	50	UUJ2G4R7MNJ1MS
	10	16×16.5	0.20	260	85	UUJ2G100MNJ1MS
	22	18×21.5	0.20	452	130	UUJ2G220MNJ1MS
	33	18×21.5	0.20	628	160	UUJ2G330MNJ6MS
450 (2W)	3.3	12.5×13.5	0.20	159.4	40	UUJ2W3R3MNJ1MS
	4.7	12.5×16	0.20	184.6	50	UUJ2W4R7MNJ1MS
	10	16×16.5	0.20	280	85	UUJ2W100MNJ1MS
	22	18×21.5	0.20	496	130	UUJ2W220MNJ1MS
	33	18×21.5	0.20	694	160	UUJ2W330MNJ6MS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UUN

Chip Type, Bi-Polarized,
Higher Capacitance Range

For SMD Bi-polarized

- Chip Type, higher capacitance in larger case sizes (ϕ12.5, ϕ16, ϕ18)
- Designed for surface mounting on high density PC board.
- Bi-polarized series for operations over wide temperature range of −55 to +105°C.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

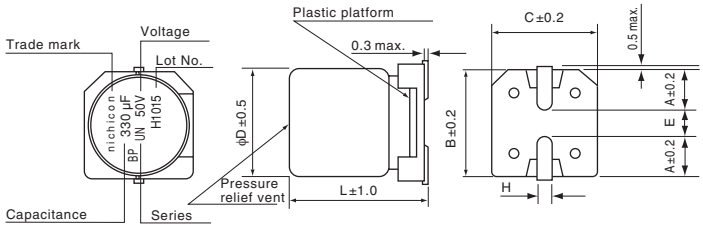
UUN ← Bi-polarized UUJ

■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	16 to 100V
Rated Capacitance Range	22 to 1000μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current ※	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV(μA).
Tangent of loss angle (tan δ)	Rated voltage (V): 16, 25, 35, 50, 63, 100 tan δ (max.): 0.18, 0.16, 0.14, 0.12, 0.10, 0.09 Measurement frequency : 120Hz at 20°C For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.
Stability at Low Temperature	Rated voltage (V): 16, 25, 35, 50, 63, 100 Impedance ratio (max.) Z(−25°C) / Z(+20°C): 3, 2, 2, 2, 2, 2 Impedance ratio (max.) Z(−40°C) / Z(+20°C): 6, 4, 3, 3, 3, 3 Measurement frequency: 120Hz
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 105°C with the polarity inverted every 250 hours. Capacitance change: Within ±20% of the initial capacitance value tan δ: 200% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Marking	Black print on the case top.

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

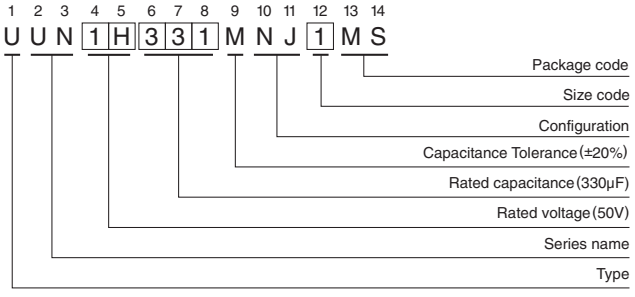
■Chip Type



(mm)

ϕD	12.5×13.5	12.5×16	16×16.5	16×21.5	18×16.5	18×21.5
A	5.15	5.15	5.65	5.65	6.65	6.65
B	13.6	13.6	17.1	17.1	19.1	19.1
C	13.6	13.6	17.1	17.1	19.1	19.1
E	(3.3)	(3.3)	(5.8)	(5.8)	(5.8)	(5.8)
L	13.5	16.0	16.5	21.5	16.5	21.5
H	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

Type numbering system (Example : 50V 330μF)



※ There are also some products that can be manufactured as vibration resistant products.

● Frequency coefficient of rated ripple current

Cap.(μF) \ Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
22 to 47	0.75	1.00	1.35	1.57	2.00
100 to 470	0.80	1.00	1.23	1.34	1.50
1000	0.85	1.00	1.10	1.13	1.15

● Dimension table in next page.

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UUN

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
16 (1C)	330	12.5×13.5	0.18	158.4	310	UUN1C331MNJ1MS
	470	16×16.5	0.18	225.6	420	UUN1C471MNJ1MS
	1000	18×16.5	0.18	480	670	UUN1C102MNJ1MS
	1000	16×21.5	0.18	480	670	UUN1C102MNJ6MS
25 (1E)	220	12.5×13.5	0.16	165	270	UUN1E221MNJ1MS
	330	16×16.5	0.16	247.5	370	UUN1E331MNJ1MS
	470	16×16.5	0.16	352.5	490	UUN1E471MNJ1MS
	1000	18×21.5	0.16	750	780	UUN1E102MNJ1MS
35 (1V)	100	12.5×13.5	0.14	105	180	UUN1V101MNJ1MS
	220	16×16.5	0.14	231	330	UUN1V221MNJ1MS
	330	18×16.5	0.14	346.5	450	UUN1V331MNJ1MS
	330	16×21.5	0.14	346.5	450	UUN1V331MNJ6MS
	470	18×21.5	0.14	493.5	590	UUN1V471MNJ1MS
50 (1H)	47	12.5×13.5	0.12	70.5	130	UUN1H470MNJ1MS
	100	12.5×16	0.12	150	230	UUN1H101MNJ1MS
	220	18×16.5	0.12	330	400	UUN1H221MNJ1MS
	220	16×21.5	0.12	330	400	UUN1H221MNJ6MS
	330	18×21.5	0.12	495	540	UUN1H331MNJ1MS
	470	18×21.5	0.12	705	640	UUN1H471MNJ6MS
63 (1J)	47	12.5×13.5	0.10	88.83	140	UUN1J470MNJ1MS
	100	16×16.5	0.10	189	270	UUN1J101MNJ1MS
	220	18×21.5	0.10	415.8	440	UUN1J221MNJ1MS
	330	18×21.5	0.10	623.7	590	UUN1J331MNJ6MS
100 (2A)	22	12.5×13.5	0.09	66	100	UUN2A220MNJ1MS
	33	12.5×16	0.09	99	150	UUN2A330MNJ1MS
	47	16×16.5	0.09	141	180	UUN2A470MNJ1MS
	100	18×21.5	0.09	300	310	UUN2A101MNJ1MS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UUE

Chip Type, Vibration Resistance

For SMD

Long Life

- Chip type with load life of 5000 hours at 125°C.
- Suited for automobile electronics where heavy duty services are indispensable.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

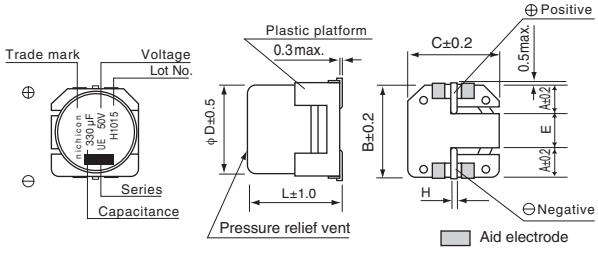
UUB → Vibration Resistance → UUE → High Temperature → UBC

■Specifications

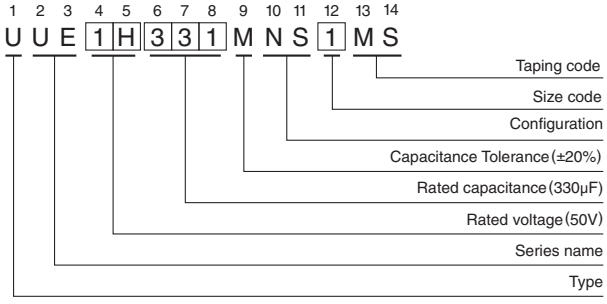
Item	Performance Characteristics					
Category Temperature Range	−55 to +125°C					
Rated Voltage Range	16 to 50V					
Rated Capacitance Range	33 to 2200μF					
Capacitance Tolerance	±20% at 120Hz, 20°C					
Leakage Current ※	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV (μA).					
Tangent of loss angle (tan δ)	For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF.					
	Rated voltage (V)	16	25	35	50	120Hz 20°C
	tan δ (max.)	0.18	0.16	0.14	0.12	
Stability at Low Temperature	Rated voltage (V)	16	25	35	50	120Hz
	Impedance ratio Z(−40°C) / Z(+20°C) (max.)	6	4	3	3	
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 5000 hours at 125°C.	Capacitance change: Within ±30% of the initial capacitance value tan δ: 300% or less than the initial specified value Leakage current: Less than or equal to the initial specified value				
Shelf Life	After storing the capacitors under no load at 125°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.					
Marking	Black print on the case top.					

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type



Type numbering system (Example : 50V 330μF)



(mm)

φD	12.5	16	18
A	4.8	5.4	6.4
B	13.6	17.1	19.1
C	13.6	17.1	19.1
E	(4.0)	(6.3)	(6.3)
L	13.5,16	16.5,21.5	16.5,21.5
H	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

- Frequency coefficient of rated ripple current

φD	Cap.(μF) \ Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
φ12.5 to φ18	100 to 680	0.53	0.67	0.82	0.89	1.00
	1000 to 2200	0.74	0.87	0.96	0.98	1.00

●Dimension table in next page.

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UUE

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (125℃/100kHz)	Part Number
16 (1C)	330	12.5×13.5	0.18	158.4	750	UUE1C331MNS1MS
	470	12.5×13.5	0.18	225.6	750	UUE1C471MNS1MS
	680	16×16.5	0.18	326.4	1000	UUE1C681MNS1MS
	1000	18×16.5	0.18	480	1200	UUE1C102MNS1MS
	2200	18×16.5	0.20	1056	1200	UUE1C222MNS1MS
25 (1E)	330	12.5×13.5	0.16	247.5	750	UUE1E331MNS1MS
	470	16×16.5	0.16	352.5	1000	UUE1E471MNS1MS
	680	18×16.5	0.16	510	1200	UUE1E681MNS1MS
	680	16×21.5	0.16	510	1200	UUE1E681MNS6MS
	1000	18×21.5	0.16	750	1550	UUE1E102MNS1MS
35 (1V)	220	12.5×13.5	0.14	231	550	UUE1V221MNS1MS
	330	16×16.5	0.14	346.5	1000	UUE1V331MNS1MS
	470	16×16.5	0.14	493.5	1000	UUE1V471MNS1MS
	680	18×16.5	0.14	714	1200	UUE1V681MNS1MS
	1000	18×21.5	0.14	1050	1400	UUE1V102MNS6MS
50 (1H)	100	12.5×13.5	0.12	150	500	UUE1H101MNS1MS
	220	16×16.5	0.12	330	850	UUE1H221MNS1MS
	330	16×16.5	0.12	495	850	UUE1H331MNS1MS
	470	18×16.5	0.12	705	950	UUE1H471MNS1MS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

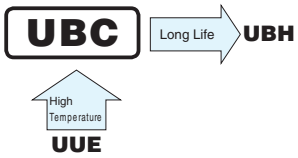
nichicon

UBC

Chip Type, High Temperature Range, Vibration Resistance

For SMD Long Life

- Highly dependable reliability withstanding load life of 1000 hours at +150°C.
- Suited for automobile electronics where heavy duty services are indispensable.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.



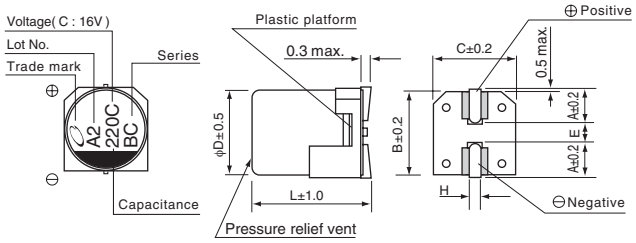
■Specifications

Item	Performance Characteristics						
Category Temperature Range	−40 to +150°C (φ8 to 10), −55 to +150°C (φ12.5 to 18)						
Rated Voltage Range	16 to 50V						
Rated Capacitance Range	33 to 2200μF						
Capacitance Tolerance	±20% at 120Hz, 20°C						
Leakage Current ※	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03CV(μA).						
Tangent of loss angle (tan δ)	Rated voltage (V)		16	25	35	50	120Hz 20°C
	tan δ (max.)	φ8,φ10	0.20	0.16	0.14	0.14	
		φ12.5 to φ18	0.18	0.16	0.14	0.12	
	For capacitance of more than 1000μF, add 0.02 for every increase of 1000μF. (φ12.5 to φ18)						
Stability at Low Temperature	Rated voltage (V)		16	25	35	50	120Hz
	Impedance ratio Z(−40°C) / Z(+20°C) (max.)	φ8,φ10	8	6	4	4	
		φ12.5 to φ18	6	4	4	4	
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 150°C.						
	Capacitance change	Within ±30% of the initial capacitance value					
	tan δ	300% or less than the initial specified value					
	Leakage current	Less than or equal to the initial specified value					
Shelf Life	After storing the capacitors under no load at 150°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.						
Marking	Black print on the case top.						

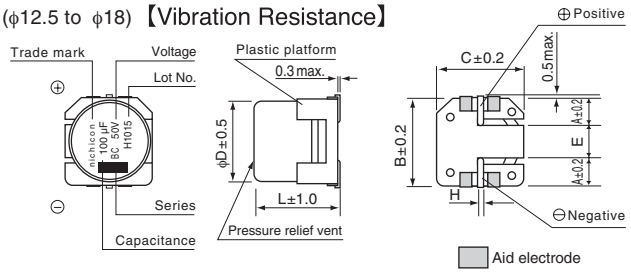
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

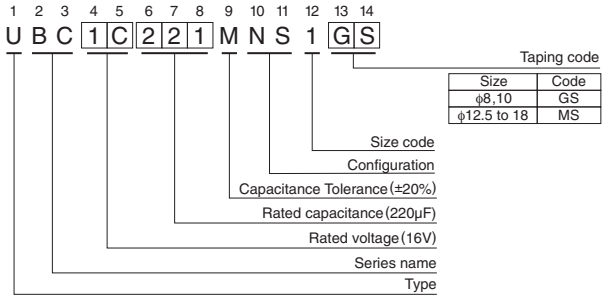
(φ8 , φ10) 【Vibration Resistance】



(φ12.5 to φ18) 【Vibration Resistance】



Type numbering system (Example : 16V 220μF)



Size	Code
φ8,10	GS
φ12.5 to 18	MS

(mm)

φD	8	10	12.5	16	18
A	2.9	3.2	4.8	5.4	6.4
B	8.3	10.3	13.6	17.1	19.1
C	8.3	10.3	13.6	17.1	19.1
E	3.1	4.5	(4.0)	(6.3)	(6.3)
L	10	10	13.5	16.5,21.5	21.5
H	1.1 to 1.5	1.1 to 1.5	1.0 to 1.4	1.0 to 1.4	1.0 to 1.4

●Frequency coefficient of rated ripple current

Frequency	120 Hz	300 Hz	1 kHz	10kHz or more
Coefficient	0.67	0.79	0.91	1.00

●Dimension table in next page.

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UBC

■ Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (150℃/100kHz)	Part Number
16 (1C)	100	8×10	0.20	48	110	UBC1C101MNS1GS
	220	10×10	0.20	105.6	150	UBC1C221MNS1GS
	470	12.5×13.5	0.18	225.6	750	UBC1C471MNS1MS
	680	12.5×13.5	0.18	326.4	800	UBC1C681MNS1MS
	1000	16×16.5	0.18	480	850	UBC1C102MNS1MS
	2200	18×21.5	0.20	1056	1350	UBC1C222MNS1MS
25 (1E)	100	8×10	0.16	75	110	UBC1E101MNS1GS
	220	10×10	0.16	165	150	UBC1E221MNS1GS
	330	12.5×13.5	0.16	247.5	650	UBC1E331MNS1MS
	470	12.5×13.5	0.16	352.5	700	UBC1E471MNS1MS
	680	16×16.5	0.16	510	800	UBC1E681MNS1MS
	1000	16×21.5	0.16	750	1000	UBC1E102MNS1MS
35 (1V)	47	8×10	0.14	49.35	80	UBC1V470MNS1GS
	100	10×10	0.14	105	120	UBC1V101MNS1GS
	220	12.5×13.5	0.14	231	550	UBC1V221MNS1MS
	330	12.5×13.5	0.14	346.5	650	UBC1V331MNS1MS
	470	16×16.5	0.14	493.5	750	UBC1V471MNS1MS
	680	16×21.5	0.14	714	950	UBC1V681MNS1MS
	1000	18×21.5	0.14	1050	1150	UBC1V102MNS1MS
50 (1H)	33	8×10	0.14	49.5	70	UBC1H330MNS1GS
	47	10×10	0.14	70.5	100	UBC1H470MNS1GS
	100	12.5×13.5	0.12	150	420	UBC1H101MNS1MS
	220	16×16.5	0.12	330	550	UBC1H221MNS1MS
	330	16×21.5	0.12	495	650	UBC1H331MNS1MS
	470	16×21.5	0.12	705	850	UBC1H471MNS1MS
	680	18×21.5	0.12	1020	1100	UBC1H681MNS1MS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

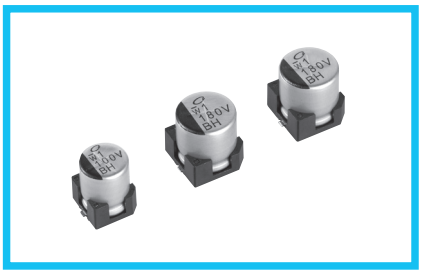
UBH

Chip Type, High Temperature Range,
Vibration Resistance
Low temperature ESR specification

For SMD Long Life

- Highly dependable reliability withstanding load life of 1500 to 2000 hours at +150°C, Low temperature ESR.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

UBH ← Long Life — UBC



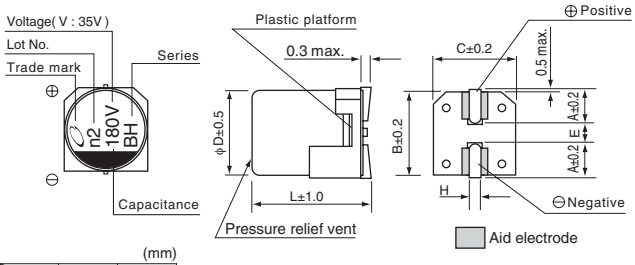
■Specifications

Item	Performance Characteristics			
Category Temperature Range	−40 to +150°C			
Rated Voltage Range	25 to 35V			
Rated Capacitance Range	100 to 270μF			
Capacitance Tolerance	±20% at 120Hz, 20°C			
Leakage Current ※	After 2 minute's application of rated voltage at 20°C, leakage current is not more than 0.01CV .			
Tangent of loss angle (tan δ)	Rated voltage (V)	25	35	120Hz at 20°C
	tan δ (max.)	0.16	0.14	
Stability at Low Temperature	Rated voltage (V)	25	35	120Hz
	Impedance ratio ZT/Z20 (max.) Z−(40˚C) / Z(+20˚C)	6	4	
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 150°C (φ8 = 1500 hours) .	Capacitance change: Within ±40% of the initial capacitance value tan δ: 400% or less than the initial specified value Leakage current: Less than or equal to the initial specified value		
Shelf Life	After storing the capacitors under no load at 150°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.			
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.	Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value		
Marking	Black print on the case top.			

※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

(φ8 , φ10) 【Vibration Resistance】



(mm)

φDXL	8×10	10×10
A	2.9	3.2
B	8.3	10.3
C	8.3	10.3
E	3.1	4.5
L	10	10
H	1.1 to 1.5	1.1 to 1.5

Type numbering system (Example : 35V 180μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
U	B	H	1	V	1	8	1	M	N	S	1	G	S

- Taping code
- Size code
- Configuration
- Capacitance Tolerance (±20%)
- Rated capacitance (180μF)
- Rated voltage (35V)
- Series name
- Type

Voltage

V	25	35
Code	E	V

●Frequency coefficient of rated ripple current

Frequency	120 Hz	300 Hz	1 kHz	10kHz or more
Coefficient	0.67	0.79	0.91	1.00

■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20˚C after 2 minutes)	ESR (Ω) max. Initial 20˚C 100kHz	ESR (Ω) max. Initial −40˚C 100kHz	Rated Ripple (mArms) (150˚C/100kHz)	Part Number
25 (1E)	150	8×10	0.16	37.5	0.26	4.5	80	UBH1E151MNS1GS
	270	10×10	0.16	67.5	0.15	2.0	120	UBH1E271MNS1GS
35 (1V)	100	8×10	0.14	35.0	0.26	4.5	80	UBH1V101MNS1GS
	180	10×10	0.14	63.0	0.15	2.0	120	UBH1V181MNS1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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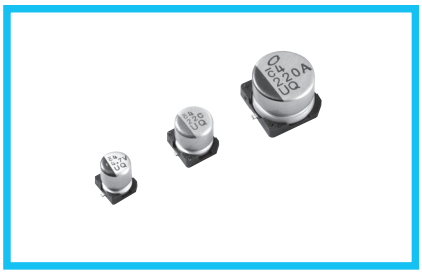
ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

UUQ

Chip Type, For Audio Equipment
Wide Temperature Range

For SMD For Audio Use



- Chip type acoustic series within the wide temperature range.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +105°C
Rated Voltage Range	6.3 to 50V
Rated Capacitance Range	1 to 1000μF
Capacitance Tolerance	±20% (120Hz, 20°C)
Leakage Current ※	After 1 minute's application of rated voltage at 20°C, leakage current is not more than 0.03 CV or 4 (μA) , whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C
Stability at Low Temperature	Measurement frequency : 120Hz
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 105°C.
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C.
Marking	Black print on the case top.

Tangent of loss angle (tan δ):

Rated voltage (V)	6.3	10	16	25	35	50
tan δ (max.)	0.30	0.26	0.22	0.16	0.13	0.12

Stability at Low Temperature:

Rated voltage (V)		6.3	10	16	25	35	50
Impedance ratio (max.)	Z(−25°C) / Z(+20°C)	4	3	2	2	2	2
	Z(−40°C) / Z(+20°C)	8	5	4	3	3	3

Endurance:

Capacitance change	Within ±20% of the initial capacitance value
tan δ	200% or less than the initial specified value
Leakage current	Less than or equal to the initial specified value

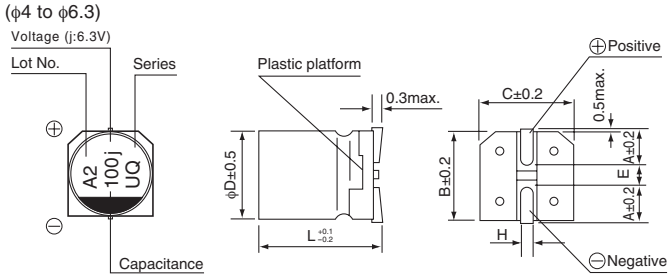
Resistance to soldering heat:

Capacitance change	Within ±10% of the initial capacitance value
tan δ	Less than or equal to the initial specified value
Leakage current	Less than or equal to the initial specified value

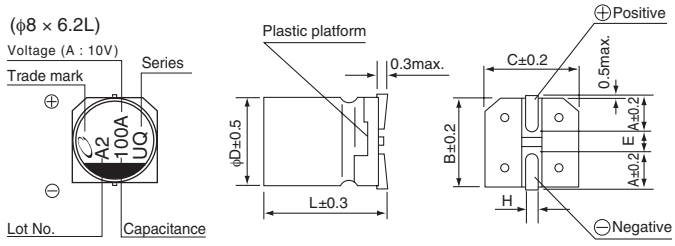
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

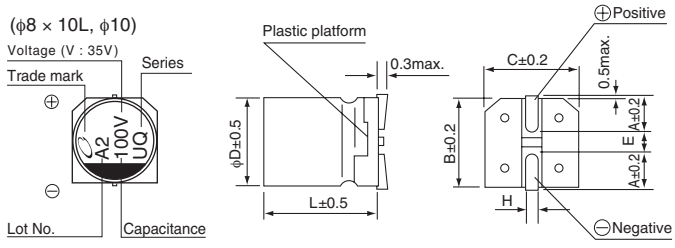
(φ4 to φ6.3)



(φ8 × 6.2L)

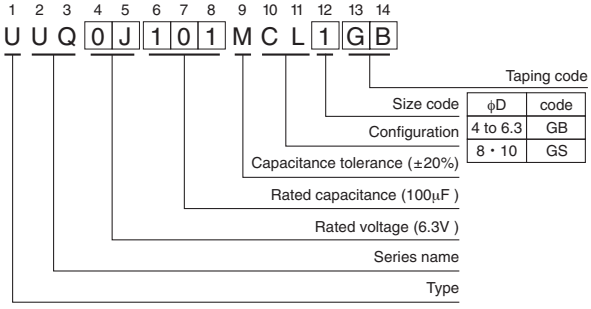


(φ8 × 10L, φ10)



● Dimension table in next page.

Type numbering system (Example : 6.3V 100μF)



φD	code
4 to 6.3	GB
8・10	GS

(mm)

φD × L	4 × 5.4	5 × 5.4	6.3 × 5.4	8 × 6.2	8 × 10	10 × 10
A	1.8	2.1	2.4	3.3	2.9	3.2
B	4.3	5.3	6.6	8.3	8.3	10.3
C	4.3	5.3	6.6	8.3	8.3	10.3
E	1.0	1.3	2.2	2.3	3.1	4.5
L	5.4	5.4	5.4	6.2	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

Voltage

V	6.3	10	16	25	35	50
Code	j	A	C	E	V	H

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

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■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
6.3 (0J)	22	4×5.4	0.30	4.158	22	UUQ0J220MCL1GB
	33	5×5.4	0.30	6.237	30	UUQ0J330MCL1GB
	47	5×5.4	0.30	8.883	36	UUQ0J470MCL1GB
	100	6.3×5.4	0.30	18.9	60	UUQ0J101MCL1GB
	220	8×6.2	0.30	41.58	102	UUQ0J221MCL1GS
	220	8×10	0.30	41.58	210	UUQ0J221MCL6GS
	330	8×6.2	0.30	62.37	102	UUQ0J331MCL1GS
	330	8×10	0.30	62.37	210	UUQ0J331MCL6GS
	470	8×10	0.30	88.83	210	UUQ0J471MCL1GS
	470	10×10	0.30	88.83	310	UUQ0J471MCL6GS
	1000	10×10	0.30	189	310	UUQ0J102MCL1GS
10 (1A)	10	4×5.4	0.26	4	22	UUQ1A100MCL1GB
	22	5×5.4	0.26	6.6	27	UUQ1A220MCL1GB
	33	5×5.4	0.26	9.9	35	UUQ1A330MCL1GB
	47	6.3×5.4	0.26	14.1	46	UUQ1A470MCL1GB
	100	6.3×5.4	0.26	30	60	UUQ1A101MCL1GB
	100	8×6.2	0.26	30	90	UUQ1A101MCL6GS
	220	8×6.2	0.26	66	102	UUQ1A221MCL1GS
	220	8×10	0.26	66	210	UUQ1A221MCL6GS
	330	8×10	0.26	99	210	UUQ1A331MCL1GS
	330	10×10	0.26	99	310	UUQ1A331MCL6GS
	470	8×10	0.26	141	210	UUQ1A471MCL1GS
	470	10×10	0.26	141	310	UUQ1A471MCL6GS
16 (1C)	10	4×5.4	0.22	4.8	18	UUQ1C100MCL1GB
	22	5×5.4	0.22	10.56	30	UUQ1C220MCL1GB
	33	6.3×5.4	0.22	15.84	40	UUQ1C330MCL1GB
	47	6.3×5.4	0.22	22.56	50	UUQ1C470MCL1GB
	100	8×6.2	0.22	48	102	UUQ1C101MCL1GS
	100	8×10	0.22	48	210	UUQ1C101MCL6GS
	220	8×10	0.22	105.6	210	UUQ1C221MCL1GS
	220	10×10	0.22	105.6	310	UUQ1C221MCL6GS
	330	8×10	0.22	158.4	210	UUQ1C331MCL1GS
	330	10×10	0.22	158.4	310	UUQ1C331MCL6GS
	470	8×10	0.22	225.6	210	UUQ1C471MCL1GS
	470	10×10	0.22	225.6	310	UUQ1C471MCL6GS
25 (1E)	4.7	4×5.4	0.16	4	13	UUQ1E4R7MCL1GB
	10	5×5.4	0.16	7.5	23	UUQ1E100MCL1GB
	22	6.3×5.4	0.16	16.5	38	UUQ1E220MCL1GB
	33	6.3×5.4	0.16	24.75	48	UUQ1E330MCL1GB
	47	8×6.2	0.16	35.25	66	UUQ1E470MCL1GS
	100	8×10	0.16	75	155	UUQ1E101MCL1GS
	220	10×10	0.16	165	300	UUQ1E221MCL1GS

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■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L (mm)	tan δ	Leakage Current (μA) (at 20℃ after 1 minute)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
35 (1V)	4.7	4×5.4	0.13	4.935	15	UUQ1V4R7MCL1GB
	10	5×5.4	0.13	10.5	25	UUQ1V100MCL1GB
	22	6.3×5.4	0.13	23.1	42	UUQ1V220MCL1GB
	33	8×6.2	0.13	34.65	59	UUQ1V330MCL1GS
	47	8×10	0.13	49.35	155	UUQ1V470MCL1GS
	100	10×10	0.13	105	300	UUQ1V101MCL1GS
	220	10×10	0.13	231	300	UUQ1V221MCL1GS
50 (1H)	1	4×5.4	0.12	4	6.2	UUQ1H010MCL1GB
	2.2	4×5.4	0.12	4	11	UUQ1H2R2MCL1GB
	3.3	4×5.4	0.12	4.95	14	UUQ1H3R3MCL1GB
	4.7	5×5.4	0.12	7.05	19	UUQ1H4R7MCL1GB
	10	6.3×5.4	0.12	15	30	UUQ1H100MCL1GB
	22	8×6.2	0.12	33	51	UUQ1H220MCL1GS
	33	8×10	0.12	49.5	140	UUQ1H330MCL1GS
	47	8×10	0.12	70.5	180	UUQ1H470MCL1GS
	100	10×10	0.12	150	220	UUQ1H101MCL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

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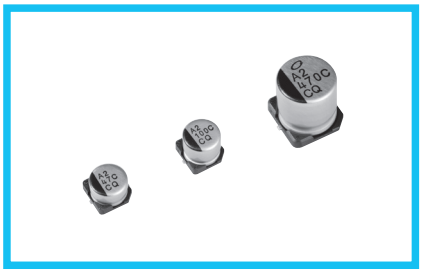
Chip Type, For Audio Equipment
Wide Temperature Range

For SMD For Audio Use



- Chip type acoustic series within the wide temperature range.
- Applicable to automatic mounting machine fed with carrier tape.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 Qualified. Please contact us for details.

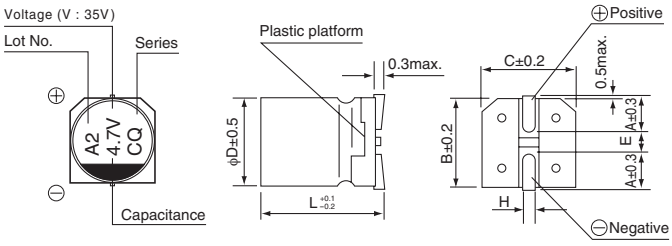
■Specifications

Item	Performance Characteristics
Category Temperature Range	−55 to +105°C
Rated Voltage Range	10 to 35V
Rated Capacitance Range	4.7 to 680μF
Capacitance Tolerance	±20% (120Hz, 20°C)
Leakage Current ※	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3 (μA), whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 10, 16, 25, 35 tan δ (max.): 0.26, 0.22, 0.16, 0.13
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 10, 16, 25, 35 Impedance ratio (max.) Z(−25°C) / Z(+20°C): 3, 2, 2, 2 Impedance ratio (max.) Z(−40°C) / Z(+20°C): 5, 4, 3, 3
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours (1000 hours for 4.5L) at 105°C. Capacitance change: Within ±30% of the initial capacitance value tan δ: 300% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C. The capacitors shall meet the characteristic requirements listed at right when they are removed from the plate and restored to 20°C. Capacitance change: Within ±10% of the initial capacitance value tan δ: Less than or equal to the initial specified value Leakage current: Less than or equal to the initial specified value
Marking	Black print on the case top.

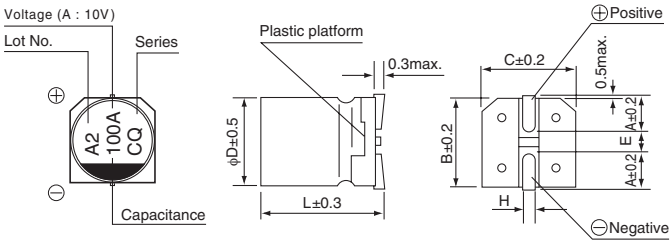
※ I : Leakage Current (μA), C : Rated Capacitance (μF), V : Rated Voltage (V)

■Chip Type

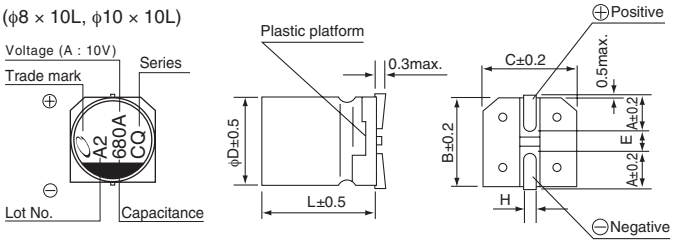
(φ4 × 4.5L, φ5 × 4.5L, φ6.3 × 4.5L)



(φ6.3 × 5.8L, φ6.3 × 7.7L)

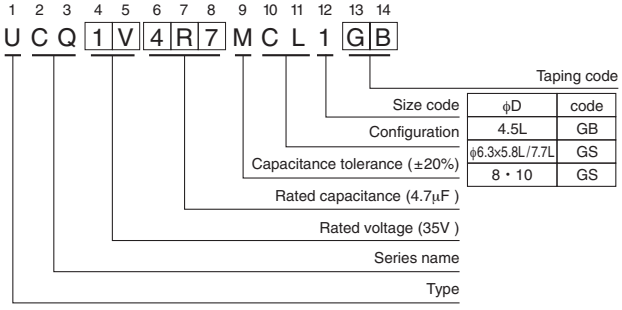


(φ8 × 10L, φ10 × 10L)



● Dimension table in next page.

Type numbering system (Example : 35V 4.7μF)



φD	code
4.5L	GB
φ6.3x5.8L/7.7L	GS
8・10	GS

(mm)

φD × L	4 × 4.5	5 × 4.5	6.3 × 4.5	6.3 × 5.8	6.3 × 7.7	8 × 10	10 × 10
A	1.8	2.1	2.4	2.4	2.4	2.9	3.2
B	4.3	5.3	6.6	6.6	6.6	8.3	10.3
C	4.3	5.3	6.6	6.6	6.6	8.3	10.3
E	1.0	1.3	2.2	2.2	2.2	3.1	4.5
L	4.5	4.5	4.5	5.8	7.7	10	10
H	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.5 to 0.8	0.8 to 1.1	0.8 to 1.1

Rated voltage

V	10	16	25	35
Code	A	C	E	V

● Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

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■Dimensions

Rated Voltage (V) (code)	Rated Capacitance (μF)	Case Size φD×L(mm)	tan δ	Leakage Current (μA) (at 20℃ after 2 minutes)	Rated Ripple (mArms) (105℃/120Hz)	Part Number
10 (1A)	22	5×4.5	0.26	3	30	UCQ1A220MCL1GB
	33	5×4.5	0.26	3.3	30	UCQ1A330MCL1GB
	47	6.3×4.5	0.26	4.7	40	UCQ1A470MCL1GB
	100	6.3×5.8	0.26	10	100	UCQ1A101MCL1GS
	220	6.3×7.7	0.26	22	120	UCQ1A221MCL1GS
	330	8×10	0.26	33	250	UCQ1A331MCL1GS
	470	8×10	0.26	47	250	UCQ1A471MCL1GS
	680	10×10	0.26	68	400	UCQ1A681MCL1GS
16 (1C)	10	4×4.5	0.22	3	15	UCQ1C100MCL1GB
	22	5×4.5	0.22	3.52	30	UCQ1C220MCL1GB
	33	6.3×4.5	0.22	5.28	40	UCQ1C330MCL1GB
	47	6.3×4.5	0.22	7.52	40	UCQ1C470MCL1GB
	100	6.3×5.8	0.22	16	100	UCQ1C101MCL1GS
	220	8×10	0.22	35.2	250	UCQ1C221MCL1GS
	330	8×10	0.22	52.8	250	UCQ1C331MCL1GS
	470	10×10	0.22	75.2	400	UCQ1C471MCL1GS
25 (1E)	4.7	4×4.5	0.16	3	15	UCQ1E4R7MCL1GB
	10	5×4.5	0.16	3	30	UCQ1E100MCL1GB
	22	6.3×4.5	0.16	5.5	40	UCQ1E220MCL1GB
	33	6.3×4.5	0.16	8.25	40	UCQ1E330MCL1GB
	47	6.3×5.8	0.16	11.75	100	UCQ1E470MCL1GS
	100	6.3×7.7	0.16	25	120	UCQ1E101MCL1GS
	220	8×10	0.16	55	250	UCQ1E221MCL1GS
	330	10×10	0.16	82.5	400	UCQ1E331MCL1GS
	470	10×10	0.16	117.5	400	UCQ1E471MCL1GS
35 (1V)	4.7	4×4.5	0.13	3	15	UCQ1V4R7MCL1GB
	10	5×4.5	0.13	3.5	30	UCQ1V100MCL1GB
	22	6.3×4.5	0.13	7.7	40	UCQ1V220MCL1GB
	33	6.3×5.8	0.13	11.55	100	UCQ1V330MCL1GS
	47	6.3×7.7	0.13	16.45	120	UCQ1V470MCL1GS
	100	8×10	0.13	35	250	UCQ1V101MCL1GS
	220	10×10	0.13	77	400	UCQ1V221MCL1GS
	330	10×10	0.13	115.5	400	UCQ1V331MCL1GS

- For taping specifications, recommended land size/soldering by reflow and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.

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