Radial Leaded Aluminum Electrolytic Capacitors

REH Series



FEATURES

- High temperature, high ripple current capability, low impedance
- Endurance: 2000 - 5000 hours at 125°C
- RoHS Compliance and Halogen-free

LEAD-FREE
LEAD-FREE COMPATIBLE COMPONENT

RoHS COMPLIANT

APPLICATIONS

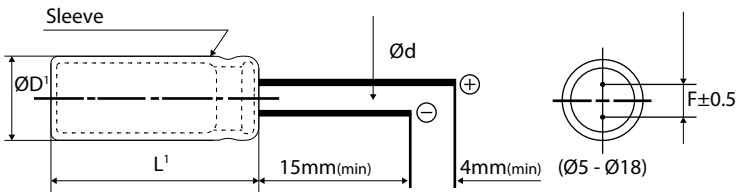
- Power supplies, general industrial, filtering

HOW TO ORDER

R	EH	0812	471	M	016	K	-
Product Type	**Series Type**	**Case Size**	**Capacitance Code**	**Tolerance**	**Rated DC Voltage**	**Packaging**	**Lead Type**
Radial Aluminum		See table below	µF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)	M = ±20%	010 = 10Vdc 016 = 16Vdc 025 = 25Vdc 035 = 35Vdc 050 = 50Vdc 063 = 63Vdc 080 = 80Vdc 100 = 100Vdc 160 = 160Vdc 200 = 200Vdc 250 = 250Vdc 350 = 350Vdc 400 = 400Vdc 450 = 450Vdc	K = Ammo Pack B = Bulk Pack	" " empty = Standard long lead "C"= Lead cut only "F"= Lead cut and form "L"= Lead cut and bend (Left) "R"= Lead cut and bend (Right)

CASE DIMENSIONS millimeters (inches)

Code	D'+0.50(0.020)	L'+2.00(0.079)	d±0.05(0.002)	F±0.50(0.020)	Typical Weight (g)	Code	D'+0.50(0.020)	L'+2.00(0.079)	d±0.05(0.002)	F±0.50(0.020)	Typical Weight (g)
0511	5.00 (0.197)	11.00 (0.433)	0.50 (0.020)	2.00 (0.079)	0.40	1218	12.50 (0.492)	18.00 (0.709)	0.60 (0.024)	5.00 (0.197)	4.20
0512	5.00 (0.197)	12.00 (0.472)	0.50 (0.020)	2.00 (0.079)	0.48	1220	12.50 (0.492)	20.00 (0.787)	0.60 (0.024)	5.00 (0.197)	4.33
0611	6.30 (0.248)	11.00 (0.433)	0.50 (0.020)	2.50 (0.098)	0.60	1222	12.50 (0.492)	22.00 (0.866)	0.60 (0.024)	5.00 (0.197)	5.21
0612	6.30 (0.248)	12.00 (0.472)	0.50 (0.020)	2.50 (0.098)	0.70	1225	12.50 (0.492)	25.00 (0.984)	0.60 (0.024)	5.00 (0.197)	5.32
0811	8.00 (0.315)	11.00 (0.433)	0.60 (0.024)	3.50 (0.138)	0.95	1235	12.50 (0.492)	35.00 (1.378)	0.60 (0.024)	5.00 (0.197)	7.21
0812	8.00 (0.315)	12.00 (0.472)	0.60 (0.024)	3.50 (0.138)	1.05	1320	13.00 (0.512)	20.00 (0.787)	0.60 (0.024)	5.00 (0.197)	4.90
0816	8.00 (0.315)	16.00 (0.630)	0.60 (0.024)	3.50 (0.138)	1.50	1325	13.00 (0.512)	25.00 (0.984)	0.60 (0.024)	5.00 (0.197)	5.21
0820	8.00 (0.315)	20.00 (0.787)	0.60 (0.024)	3.50 (0.138)	1.71	1618	16.00 (0.630)	18.00 (0.709)	0.80 (0.031)	7.50 (0.295)	6.78
1011	10.00 (0.394)	11.00 (0.433)	0.60 (0.024)	5.00 (0.197)	1.47	1620	16.00 (0.630)	20.00 (0.787)	0.80 (0.031)	7.50 (0.295)	6.91
1012	10.00 (0.394)	12.00 (0.472)	0.60 (0.024)	5.00 (0.197)	1.55	1625	16.00 (0.630)	25.00 (0.984)	0.80 (0.031)	7.50 (0.295)	8.57
1013	10.00 (0.394)	13.00 (0.512)	0.60 (0.024)	5.00 (0.197)	1.60	1630	16.00 (0.630)	30.00 (1.181)	0.80 (0.031)	7.50 (0.295)	9.88
1014	10.00 (0.394)	14.00 (0.551)	0.60 (0.024)	5.00 (0.197)	2.02	1635	16.00 (0.630)	35.00 (1.378)	0.80 (0.031)	7.50 (0.295)	10.20
1016	10.00 (0.394)	16.00 (0.630)	0.60 (0.024)	5.00 (0.197)	2.12	1820	18.00 (0.709)	20.00 (0.787)	0.80 (0.031)	7.50 (0.295)	9.50
1018	10.00 (0.394)	18.00 (0.709)	0.60 (0.024)	5.00 (0.197)	2.60	1825	18.00 (0.709)	25.00 (0.984)	0.80 (0.031)	7.50 (0.295)	18.25
1020	10.00 (0.394)	20.00 (0.787)	0.60 (0.024)	5.00 (0.197)	2.60	1830	18.00 (0.709)	30.00 (1.181)	0.80 (0.031)	7.50 (0.295)	13.49
1025	10.00 (0.394)	25.00 (0.984)	0.60 (0.024)	5.00 (0.197)	3.11	1835	18.00 (0.709)	35.00 (1.378)	0.80 (0.031)	7.50 (0.295)	13.50
1216	12.50 (0.492)	16.00 (0.630)	0.60 (0.024)	5.00 (0.197)	3.60	1840	18.00 (0.709)	40.00 (1.575)	0.80 (0.031)	7.50 (0.295)	16.00



*If different rubber seal is needed, please contact your sales representative.
*For ammo packing lead shape please refer to "Lead forming taping specification for ammo pack".
*If different lead shape is needed, please refer to "Termination type".

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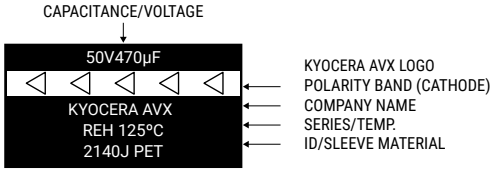
Radial Leaded Aluminum Electrolytic Capacitors
REH Series

TECHNICAL SPECIFICATIONS

Category Temperature Range:	-40°C to +125°C	
Capacitance Range:	At 25°C,120Hz	1.0µF - 4700µF
Capacitance Tolerance:	At 25°C,120Hz	±20%
Dissipation Factor (%)	Measurement Frequency: 120Hz at 25°C	Please see the ratings and part number reference table below
Leakage Current	After 2 minutes at rated working voltage at 25°C*	(10-100V) I≤0.01CV or 3µA, whichever is greater
		(CV≤1000 and 160-450V) I≤0.03CV+15µA
		(CV>1000 and 160-450V) I≤0.02CV+25µA

* Note: In the case of an anomalous reading, re-measure the leakage current after following voltage treatment:
Voltage treatment: DC rated voltage to be applied to the capacitors for 120 minutes at 125°C.

MARKING



CAPACITANCE AND RATED VOLTAGE RANGE (FIGURES DENOTES CASE SIZE)

Capacitance		Rated Voltage DC (V_R)													
µF	**Code**	**10V**	**16V**	**25V**	**35V**	**50V**	**63V**	**80V**	**100V**	**160V**	**200V**	**250V**	**350V**	**400V**	**450V**
1.0	1R0					0511									
2.2	2R2					0511 0811									
3.3	3R3					0511 0811									
4.7	4R7					0511 0811		0511	0511 0811						
10	100					0511 0811		0511	0611 0811	0816 1011	0816 1012	0816 1012	1012 1014	1014 1016	1018 1216
22	220					0512 0811		0611	0612 0812	1012 1014	1014 1016	1018	1018	1018 1218	1320
33	330					0611 0811	0612 0811	0612 0812	0812 1013				1220 1222		
47	470			0511	0611	0611 0811	0812 1013		0816 1016	1018 1216	1218	1220	1225 1618	1620 1625	1825 1630
56	560				0512										
68	680			0512	0612			0812							
82	820									1220	1620	1235 1625	1820 1825	1825	1835
100	101	0511	0511	0611	0612 0811	0812 1013	0812 1016	0816	1016 1220	1225 1618	1625	1630 1825	1630 1825	1830	1840
150	151				0612			1016							
220	221		0611	0812	0812 1013	0816 1013	1016 1220	1020	1320 1625						
330	331	0612 0811	0812	0812 1013	0816 1013 1016	1016 1220	1220 1225	1220	1625 1630						
470	471	0812 1013	0812 1013	0816 1013	0820 1016 1020	1020 1225	1325 1625	1620	1830						
680	681	0812 1013			1220	1220 1620									
1000	102	1016 1020	1020	1020 1220	1220 1225	1225 1630	1630								
1200	122				1220										
1500	152				1225										
1800	182				1225										
2200	222	1225	1025 1225	1630	1635	1840									
3300	332	1625	1630	1635	1835										
4700	472	1630	1635												

Released ratings

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RATINGS & PART NUMBER REFERENCE

Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DF Max. (%)	100kHz RMS Current (mA) / 125°C	MSL
10 Volt						
REH0511101M010*	0511	100	10	24	80	1
REH0612331M010*	0612	330	10	24	180	1
REH0811331M010*	0811	330	10	24	360	1
REH0812471M010*	0812	470	10	24	360	1
REH1013471M010*	1013	470	10	24	620	1
REH0812681M010*	0812	680	10	24	400	1
REH1013681M010*	1013	680	10	24	620	1
REH1016102M010*	1016	1000	10	24	660	1
REH1020102M010*	1020	1000	10	24	960	1
REH1225222M010*	1225	2200	10	24	1430	1
REH1625332M010B	1625	3300	10	24	1900	1
REH1630472M010B	1630	4700	10	24	2300	1
16 Volt						
REH0511101M016*	0511	100	16	20	90	1
REH0611221M016*	0611	220	16	20	125	1
REH0812331M016*	0812	330	16	20	360	1
REH0812471M016*	0812	470	16	20	360	1
REH1013471M016*	1013	470	16	20	620	1
REH1020102M016*	1020	1000	16	20	960	1
REH1025222M016*	1025	2200	16	20	980	1
REH1225222M016*	1225	2200	16	20	1430	1
REH1630332M016B	1630	3300	16	20	2300	1
REH1635472M016B	1635	4700	16	20	2550	1
25 Volt						
REH0511470M025*	0511	47	25	18	60	1
REH0512680M025*	0512	68	25	18	90	1
REH0611101M025*	0611	100	25	18	145	1
REH0812221M025*	0812	220	25	18	360	1
REH0812331M025*	0812	330	25	18	360	1
REH1013331M025*	1013	330	25	18	620	1
REH0816471M025*	0816	470	25	18	610	1
REH1013471M025*	1013	470	25	18	640	1
REH1020102M025*	1020	1000	25	18	960	1
REH1220102M025*	1220	1000	25	18	1100	1
REH1630222M025B	1630	2200	25	18	2300	1
REH1635332M025B	1635	3300	25	18	2550	1
35 Volt						
REH0611470M035*	0611	47	35	16	110	1
REH0512560M035*	0512	56	35	16	70	1
REH0612680M035*	0612	68	35	16	130	1
REH0612101M035*	0612	100	35	16	210	1
REH0811101M035*	0811	100	35	16	360	1
REH0612151M035	0612	150	35	16	210	1
REH0812221M035*	0812	220	35	16	375	1
REH1013221M035*	1013	220	35	16	620	1
REH0816331M035*	0816	330	35	16	550	1
REH1013331M035*	1013	330	35	16	620	1
REH1016331M035*	1016	330	35	16	800	1
REH0820471M035*	0820	470	35	16	620	1
REH1016471M035*	1016	470	35	16	705	1
REH1020471M035*	1020	470	35	16	960	1
REH1220681M035*	1220	680	35	16	990	1
REH1220102M035*	1220	1000	35	16	1180	1
REH1225102M035*	1225	1000	35	16	1430	1
REH1220122M035*	1220	1200	35	16	1200	1
REH1225152M035*	1225	1500	35	16	1430	1
REH1225182M035*	1225	1800	35	16	1700	1
REH1635222M035B	1635	2200	35	16	2550	1
REH1835332M035B	1835	3300	35	16	2800	1
50 Volt						
REH05111R0M050*	0511	1.0	50	14	26	1
REH05112R2M050*	0511	2.2	50	14	35	1

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Radial Leaded Aluminum Electrolytic Capacitors

REH Series

Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DF Max. (%)	100kHz RMS Current (mA) / 125°C	MSL
REH08112R2M050*	0811	2.2	50	14	50	1
REH05113R3M050*	0511	3.3	50	14	40	1
REH08113R3M050*	0811	3.3	50	14	70	1
REH05114R7M050*	0511	4.7	50	14	42	1
REH08114R7M050*	0811	4.7	50	14	100	1
REH0511100M050*	0511	10	50	14	90	1
REH0811100M050*	0811	10	50	14	200	1
REH0512220M050*	0512	22	50	14	110	1
REH0811220M050*	0811	22	50	14	260	1
REH0611330M050*	0611	33	50	14	150	1
REH0811330M050*	0811	33	50	14	300	1
REH0611470M050*	0611	47	50	14	180	1
REH0811470M050*	0811	47	50	14	300	1
REH0812101M050*	0812	100	50	14	340	1
REH1013101M050*	1013	100	50	14	520	1
REH0816221M050*	0816	220	50	14	520	1
REH1013221M050*	1013	220	50	14	520	1
REH1016331M050*	1016	330	50	14	530	1
REH1220331M050*	1220	330	50	14	1000	1
REH1020471M050*	1020	470	50	14	950	1
REH1225471M050*	1225	470	50	14	1200	1
REH1220681M050*	1220	680	50	14	1060	1
REH1620681M050B	1620	680	50	14	1250	1
REH1225102M050*	1225	1000	50	14	1500	1
REH1630102M050B	1630	1000	50	14	2180	1
REH1840222M050B	1840	2200	50	14	2800	1
63 Volt						
REH0612330M063*	0612	33	63	12	150	1
REH0811330M063*	0811	33	63	12	250	1
REH0812470M063*	0812	47	63	12	250	1
REH1013470M063*	1013	47	63	12	400	1
REH0812101M063*	0812	100	63	12	340	1
REH1016101M063*	1016	100	63	12	450	1
REH1016221M063*	1016	220	63	12	450	1
REH1220221M063*	1220	220	63	12	820	1
REH1220331M063*	1220	330	63	12	850	1
REH1225331M063*	1225	330	63	12	1000	1
REH1325471M063B	1325	470	63	12	1000	1
REH1625471M063B	1625	470	63	12	1500	1
REH1630102M063B	1630	1000	63	12	1850	1
80 Volt						
REH05114R7M080*	0511	4.7	80	12	26	1
REH0511100M080*	0511	10	80	12	68	1
REH0611220M080*	0611	22	80	12	105	1
REH0612330M080*	0612	33	80	12	105	1
REH0812330M080*	0812	33	80	12	250	1
REH0812680M080*	0812	68	80	12	250	1
REH0816101M080*	0816	100	80	12	400	1
REH1016151M080*	1016	150	80	12	450	1
REH1020221M080*	1020	220	80	12	750	1
REH1220331M080*	1220	330	80	12	850	1
REH1620471M080B*	1620	470	80	12	1200	1
100 Volt						
REH05114R7M100*	0511	4.7	100	10	40	1
REH08114R7M100*	0811	4.7	100	10	100	1
REH0611100M100*	0611	10	100	10	130	1
REH0811100M100*	0811	10	100	10	200	1
REH0612220M100*	0612	22	100	10	150	1
REH0812220M100*	0812	22	100	10	220	1
REH0812330M100*	0812	33	100	10	220	1
REH1013330M100*	1013	33	100	10	260	1
REH0816470M100*	0816	47	100	10	240	1
REH1016470M100*	1016	47	100	10	330	1
REH1016101M100*	1016	100	100	10	350	1
REH1220101M100*	1220	100	100	10	670	1

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REH Series

Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DF Max. (%)	100kHz RMS Current (mA) / 125°C	MSL
REH1320221M100B	1320	220	100	10	720	1
REH1625221M100B	1625	220	100	10	1100	1
REH1625331M100B	1625	330	100	10	1300	1
REH1630331M100B	1630	330	100	10	1300	1
REH1830471M100B	1830	470	100	10	1600	1

REH0612151M035 has endurance 2000h
* Used to denote packing type: "K" for Ammo Pack or "B" for Bulk Pack.
DF = When nominal capacitance exceeds 1000µF, add 0.02 to the value above for each 1000µF increase
All technical data relates to an ambient temperature of +25C. Capacitance and DF are measured at 120Hz, 0.5RMS with DC bias of 2.2 volts. DCL is measured at rated voltage after 2 minutes.

Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DF Max. (%)	120Hz RMS Current (mA) / 125°C	MSL
160 Volt						
REH0816100M160*	0816	10	160	16	58	1
REH1011100M160*	1011	10	160	16	60	1
REH1012220M160*	1012	22	160	16	110	1
REH1014220M160*	1014	22	160	16	120	1
REH1018470M160*	1018	47	160	16	155	1
REH1216470M160*	1216	47	160	16	160	1
REH1220820M160*	1220	82	160	16	210	1
REH1225101M160*	1225	100	160	16	285	1
REH1618101M160B	1618	100	160	16	292	1
200 Volt						
REH0816100M200*	0816	10	200	16	82	1
REH1012100M200*	1012	10	200	16	90	1
REH1014220M200*	1014	22	200	16	115	1
REH1016220M200*	1016	22	200	16	120	1
REH1218470M200*	1218	47	200	16	165	1
REH1620820M200B	1620	82	200	16	240	1
REH1625101M200B	1625	100	200	16	310	1
250 Volt						
REH0816100M250*	0816	10	250	16	80	1
REH1012100M250*	1012	10	250	16	85	1
REH1018220M250*	1018	22	250	16	125	1
REH1220470M250*	1220	47	250	16	175	1
REH1235820M250B	1235	82	250	16	260	1
REH1625820M250B	1625	82	250	16	275	1
REH1630101M250B	1630	100	250	16	325	1
REH1825101M250B	1825	100	250	16	350	1
350 Volt						
REH1012100M350*	1012	10	350	24	80	1
REH1014100M350*	1014	10	350	24	85	1
REH1018220M350*	1018	22	350	24	125	1
REH1220330M350*	1220	33	350	24	145	1
REH1222330M350*	1222	33	350	24	160	1
REH1225470M350*	1225	47	350	24	175	1
REH1618470M350B	1618	47	350	24	185	1
REH1820820M350B	1820	82	350	24	260	1
REH1825820M350B	1825	82	350	24	275	1
REH1630101M350B	1630	100	350	24	325	1
REH1825101M350B	1825	100	350	24	350	1
400 Volt						
REH1014100M400*	1014	10	400	24	80	1
REH1016100M400*	1016	10	400	24	85	1
REH1018220M400*	1018	22	400	24	125	1
REH1218220M400*	1218	22	400	24	130	1
REH1620470M400B	1620	47	400	24	200	1
REH1625470M400B	1625	47	400	24	210	1
REH1825820M400B	1825	82	400	24	325	1
REH1830101M400B	1830	100	400	24	395	1
450 Volt						
REH1018100M450*	1018	10	450	24	85	1

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REH Series

Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DF Max. (%)	120Hz RMS Current (mA) / 125°C	MSL
REH1216100M450*	1216	10	450	24	90	1
REH1320220M450B	1320	22	450	24	135	1
REH1825470M450B	1825	47	450	24	215	1
REH1630470M450B	1630	47	450	24	225	1
REH1835820M450B	1835	82	450	24	355	1
REH1840101M450B	1840	100	450	24	415	1

* Used to denote packing type: "K" for Ammo Pack or "B" for Bulk Pack.
DF = When nominal capacitance exceeds 1000µF, add 0.02 to the value above for each 1000µF increase
All technical data relates to an ambient temperature of +25C. Capacitance and DF are measured at 120Hz, 0.5RMS with DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

RATED RIPPLE CURRENT MULTIPLIERS (FREQUENCY CORRECTION FACTOR FOR RIPPLE CURRENT)

10 to 100 Vdc					
Freq.(Hz) / Cap.(µF)	50/60	120	1K	10K	100K
C < 10	0.35	0.42	0.60	0.80	1.00
10 ≤ C < 47	0.45	0.55	0.75	0.90	1.00
47 ≤ C < 470	0.60	0.70	0.85	0.95	1.00
470 ≤ C < 2200	0.65	0.75	0.90	0.98	1.00
C ≥ 2200	0.75	0.80	0.95	1.00	1.00

160 to 400 Vdc				
Freq.(Hz) / Cap.(µF)	120	1K	10K	100K
<100	0.15	0.30	0.45	0.65
≥100	0.25	0.35	0.50	0.70

QUALIFICATION TABLE

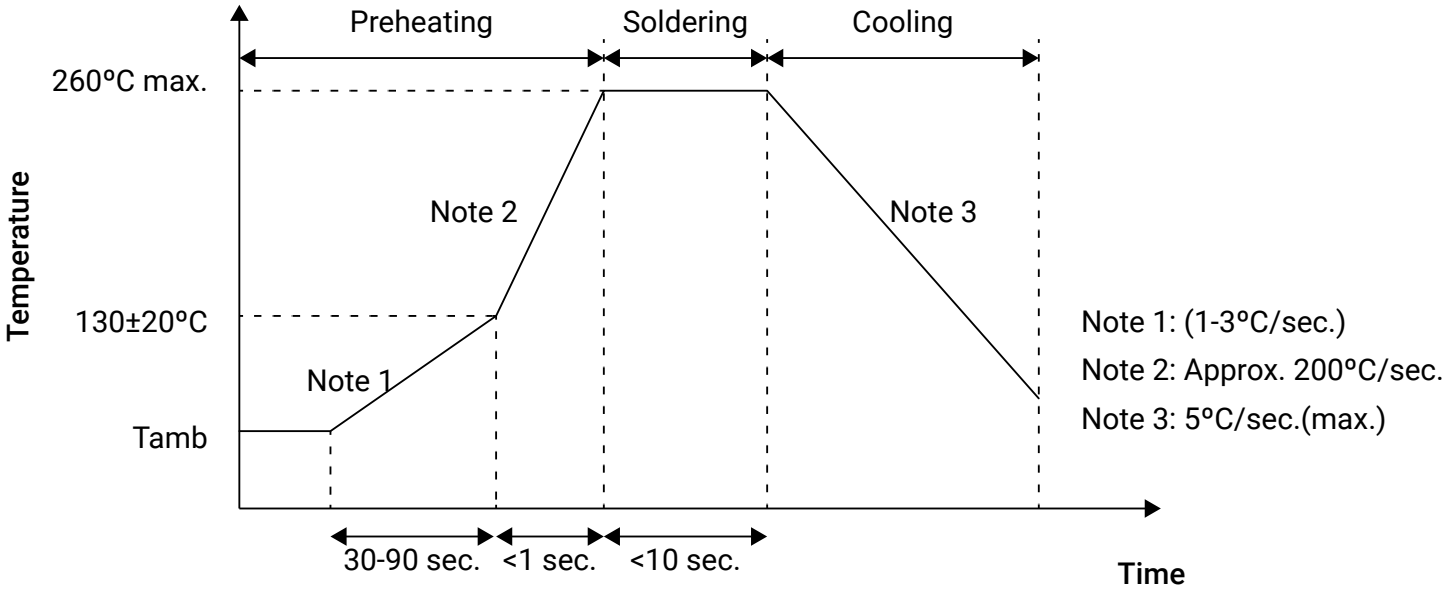
Test	Condition	Characteristics						
Low Temperature Characteristics (Max. Impedance Ratio)	At 120Hz	Rated Voltage (V)	10	16	25-100	160-250	350-400	450
		Z(-25°C)/Z(+20°C)	3	2	2	3	6	6
		Z(-40°C)/Z(+20°C)	6	4	3	8	10	15
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after DC voltage plus rated ripple current is applied for a specified period of time at 125°C.	Visual Examination	no visible damage					
		ΔC/C	≦ ±30% of the initial limit					
		DF	≦ 300% of the initial specified limit					
		DCL	≦ the initial specified limit					
		Voltage: 10V-100V				Voltage: 160V-450V		
		Diameter (mm)	Load life (hours)			2000 hours		
		ØD≤6.3	2000					
		ØD=8	3000					
		ØD=10	4000					
		ØD≥12.5	5000					
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after leaving them under no load at 105°C for 1000 hours.		Voltage: 10V-100V			Voltage: 160V-450V		
		Visual Examination	no visible damage			no visible damage		
		ΔC/C	≦ ±30% of the initial limit			≦ ±20% of the initial limit		
		DF:	≦ 300% of the initial specified limit			≦ 200% of the initial specified limit		
		DCL:	≦ 500 % of the initial specified limit			≦ 200 % of the initial specified limit		

SOLDERING

1. When soldering with a soldering iron:
   - Soldering conditions (temperature and time) should be within the limits prescribed in the catalogs or the product specifications.
   - If the terminal spacing of a capacitor does not fit the terminal hole spacing of the PC board, reform the terminals in a manner to minimize a mechanical stress into the body of the capacitor.
   - Remove the capacitors from the PC board, after the solder is completely melted, reworking by using a soldering iron minimizes the mechanical stress to the capacitors.
   - Do not touch the capacitor body with the hot tip of the soldering iron.
2. Flow Soldering:
   - Do not dip the body of a capacitor into the solder bath, only dip the terminals in. The soldering must be done on the reverse side of PC board.
   - Do not apply flux to any part of capacitors other than their terminals.
   - Make sure the capacitors do not come into contact with any other components while soldering.
   - Soldering conditions (preheat, solder temperature and dipping time) should be within the limits prescribed in the picture below.

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STORAGE

1. It is recommended to keep capacitors between the ambient temperatures of 5°C to 35°C (if between 35°C to 85°C, it should be less than three months) and the relative humidity of 75% or below.
2. Confirm that the environment does not have any of the following conditions:
   - Damp conditions such as water, saltwater spray, oil spray or fumes. High humidity or humidity condensation situations.
   - In an atmosphere filled with toxic gasses (such as hydrogen sulfide, sulfurous acid, nitrous acid, chlorine, ammonia, etc.).
   - Being exposed to direct sunlight, ozone, ultraviolet ray, or radiation.
   - Being exposed to acidic or alkaline solutions.
   - Under severe conditions where vibration and / or mechanical shock exceed the applicable ranges of the specification.
3. Shelf life

Years		
0-1	1-2	>2
Ok	Ok	Performance check

- Years from manufacturing date code.
- KYOCERA AVX does not guarantee or assume responsibility for product behavior after 3 years of storage.
- Ageing procedure should be performed as follows:
  - Connect the capacitor in series to a 1kΩ resistor, and apply half rated voltage for 2 hours.
  - After half rated voltage for 2 hours applied, increase and apply rated voltage for another 2 hours.

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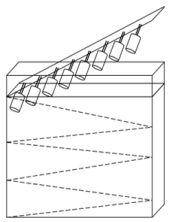
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PACKING

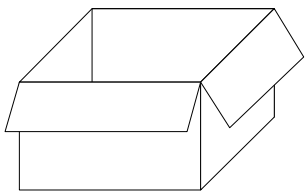
Size Code	Bulk Pack					Ammo Pack				
	Bags	Inner Box (LxWxH) 290*216*158		Carton (LxWxH) 455*310*350		Inner Box		Carton		
	Quantity	Bags Number	Quantity / pcs	Inner Box Number	Quantity / pcs	Quantity	Inner Box Size (LxWxH)	Inner Box Quantity	Carton Size (LxWxH)	Whole Pieces
0511	1000	12	12,000	4	48,000	2000	320x230x50	10	485x345x275	20,000
0512	1000	12	12,000	4	48,000	2000	320x230x50	10	485x345x275	20,000
0611	1000	8	8000	4	32,000	2000	340x290x48	10	600x354x265	20,000
0612	500	10	5000	4	20,000	2000	340x290x48	10	600x354x265	20,000
0811	500	10	5000	4	20,000	950	320x230x50	6	485x345x275	5700
0812	500	10	5000	4	20,000	950	320x230x50	6	485x345x275	5700
0816	300	10	3000	4	12,000	950	320x230x55	6	485x345x300	5700
0820	300	10	3000	4	12,000	950	320x230x55	6	485x345x300	5700
1011	250	10	2500	4	10,000	600	320x230x50	10	485x345x275	6000
1012	250	10	2500	4	10,000	600	320x230x50	6	485x345x275	3600
1013	250	10	2500	4	10,000	600	320x230x50	6	485x345x275	3600
1014	200	10	2000	4	8000	600	320x230x50	10	485x345x275	6000
1016	250	10	2500	4	10,000	600	320x230x55	6	485x345x300	3600
1018	200	10	2000	4	8000	600	320x230x55	10	485x345x300	6000
1020	200	10	2000	4	8000	600	320x230x55	6	485x345x300	3600
1025	150	10	1500	4	6000	600	320x230x68	8	485x345x300	4800
1216	100	14	1400	4	5600	500	320x290x60	5	330x300x350	2500
1218	100	12	1200	4	4800	500	320x290x60	5	330x300x350	2500
1220	100	12	1200	4	4800	500	320x290x60	5	330x300x350	2500
1222	100	12	1200	4	4800	500	320x290x60	5	330x300x350	2500
1225	100	10	1000	4	4000	500	320x290x60	5	330x300x350	2500
1320	100	12	1200	4	4800	-	-	-	-	-
1325	100	10	1000	4	4000	-	-	-	-	-
1618	100	8	800	4	3200	-	-	-	-	-
1620	100	5	500	4	2000	-	-	-	-	-
1820	100	5	500	4	2000	-	-	-	-	-

Size Code	Bulk Pack				
	Inner Box		Carton		
	Quantity	Inner Box Size (LxWxH)	Inner Box Quantity	Carton Size (LxWxH)	Whole Pieces
1235	440	340x235x50	5	365x260x315	2200
1625	250	340x235x50	5	365x260x290	1250
1630	250	340x235x50	5	365x260x290	1250
1635	220	340x235x50	5	365x260x290	1100
1825	250	340x235x50	5	365x260x290	1250
1830	230	340x235x50	5	365x260x290	1150
1835	200	340x235x50	5	365x260x290	1000
1840	180	340x235x50	5	365x260x290	900

AMMO PACKING



BULK PACKING



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LEAD FORMING TAPING SPECIFICATIONS FOR AMMO PACK

Case Diameter	5mm	6.3mm	8mm	10mm	12.5mm
Figure #	Fig. 1	Fig. 1	Fig. 1	Fig. 2	Fig. 2

Fig.1

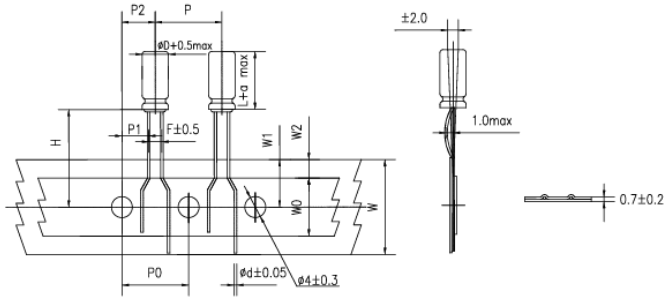
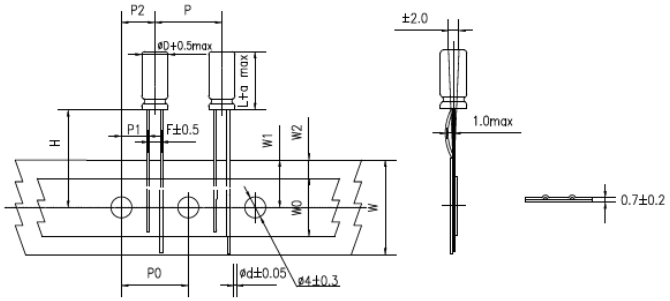


Fig.2



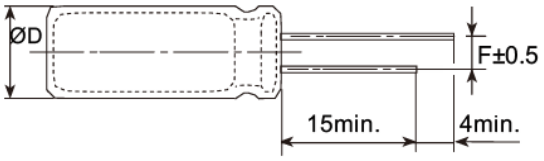
Items	Symbol	Case Size						Tolerance
		0511 0512	0611 0612	0811 0812	0816 0820	1011 1012 1013 1014 1016 1018 1020 1025	1216 1218 1220 1222 1225	
Lead Wire Diameter	d	0.50	0.50	0.50	0.50/0.60	0.60	0.60	±0.05
Pitch of Body	P	12.70	12.70	12.70	12.70	12.70	15.00	±1.00
Feed Hole Pitch	P0	12.70	12.70	12.70	12.70	12.70	15.00	±0.20
Distance from Hole Center to Lead	P1	5.35	5.10	4.60	4.60	3.85	5.00	±0.70
Distance from Feed Hole Center to Body Center	P2	6.35	6.35	6.35	6.35	6.35	7.50	±1.00
Lead-to-lead distance	F	2.00	2.50	3.50	3.50	5.00	5.00	±0.50
Height of Body from Tape Center	H	18.50	18.50	18.50	18.50	18.50	18.50	±0.75
Base Tape Width	W	18.00	18.00	18.00	18.00	18.00	18.00	±0.50
Adhesive Tape Width	W0	6.00	8.00	8.00	8.00	11.00	11.00	min
Hole Position	W1	9.00	9.00	9.00	9.00	9.00	9.00	+0.75-0.50
Hole Down Tape Position	W2	1.50	1.50	1.50	1.50	1.50	1.50	max

*All dimensions in mm

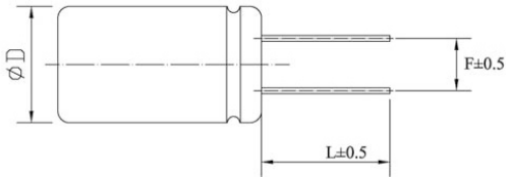
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TERMINATION TYPE

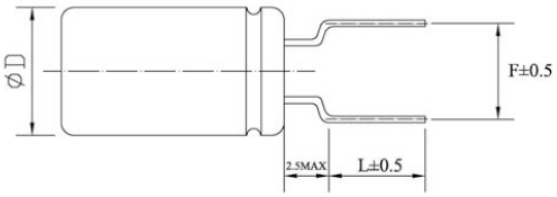
Letter " ": Empty = Standard Long lead.



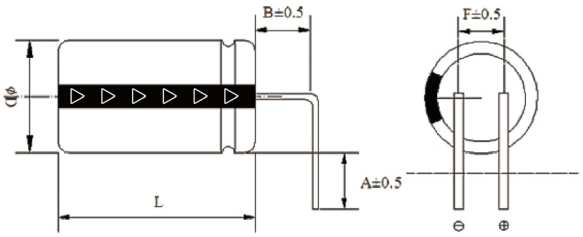
Letter "C": Lead cut only.



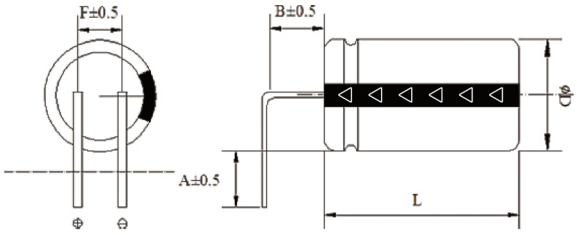
Letter "F": Lead cut and form.



Letter "R": Lead cut and bend (Right).



Letter "L": Lead cut and bend (Left).



Letter	Termination Type	Dø	4ø	5ø	6.3ø	8ø	10ø	12.5ø	13ø	16ø	18ø
	Standard long lead	F	1.50	2.00	2.50	3.50	5.00	5.00	5.00	7.50	7.50
C	Lead cut only	F	1.50	2.00	2.50	3.50	5.00	5.00	5.00	7.50	7.50
		L	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30
F	Lead cut and form	F	5.00	5.00	5.00	5.00					
		L	3.50	3.50	3.50	3.50					
R / L	Lead cut and bend	F					5.00	5.00	5.00	7.50	7.50
		A					3.50	3.50	3.50	3.50	3.50
		B					2.50	2.50	2.50	2.50	2.50

*All dimensions in mm.

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