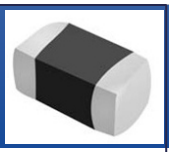
SMD Multilayer Chip Varistor



AMCV-0402 Series

Request Samples | Check Inventory

1.0 x 0.5 x 0.5 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- SMD type, small size suitable for high density mounting.
- Excellent clamping ratio and strong capability of voltage surge suppression
- Excellent solderability (Ni, Sn plating)

Applications

- Transient voltage protection and voltage surge suppression for LED lighting.
- Suitable for LCD-TV, STB, Switch, Router, PLC, Security System, smart meters, mobile phones.
- Suppressing Induced / switching over-voltage caused by lightning and power.
- Protecting DC-DC Module, I/O ports, IC driver

Electrical Specifications

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Voltage		Rated Single Pulse Transient		Typical Capacitance
Test Condition	<20μA		@1mA DC	8/20μs	ESD	Energy 10/1000μs	Peak Current 8/20μs	@0.5V_{rms}, 1MHz
	DC	AC RMS						
Units	Volts	Volts	Volts	Volts	Volts	Joules	Amps	pF
Symbol	V_{WDC}	V_{WAC}	V_B	V_C*1	V_C*2	E_T	I_P	C
AMCV-0402-5R5-C180	5.5	4.0	10.0-14.0	18	23	0.005	3	18
AMCV-0402-5R5-C300	5.5	4.0	10.0-14.0	18	23	0.005	5	30
AMCV-0402-5R5-C500	5.5	4.0	10.0-14.0	18	23	0.01	10	50
AMCV-0402-5R5-C800	5.5	4.0	10.0-14.0	18	23	0.02	10	80
AMCV-0402-5R5-C101	5.5	4.0	10.0-14.0	18	23	0.05	20	100
AMCV-0402-090-C180	9.0	6.4	11.0-16.0	20	26	0.005	3	18
AMCV-0402-090-C300	9.0	6.4	11.0-16.0	20	26	0.005	5	30
AMCV-0402-090-C500	9.0	6.4	11.0-16.0	20	26	0.01	10	50
AMCV-0402-090-C800	9.0	6.4	11.0-16.0	20	26	0.02	15	80
AMCV-0402-090-C101	9.0	6.4	11.0-16.0	20	26	0.05	20	100
AMCV-0402-140-C180	14.0	10.0	16.0-22.0	30	39	0.005	3	18
AMCV-0402-140-C300	14.0	10.0	16.0-22.0	30	39	0.01	5	30
AMCV-0402-140-C500	14.0	10.0	16.0-22.0	30	39	0.02	10	50
AMCV-0402-140-C800	14.0	10.0	16.0-22.0	30	39	0.03	15	80
AMCV-0402-180-C150	18.0	12.7	22.0-28.0	40	48	0.005	2	15
AMCV-0402-180-C180	18.0	12.7	22.0-28.0	40	48	0.01	5	18
AMCV-0402-180-C300	18.0	12.7	22.0-28.0	40	48	0.02	10	30
AMCV-0402-180-C500	18.0	12.7	22.0-28.0	40	48	0.02	10	50
AMCV-0402-260-C180	26.0	18.4	31.0-38.0	58	70	0.02	5	18
AMCV-0402-260-C300	26.0	18.4	31.0-38.0	58	70	0.03	10	30

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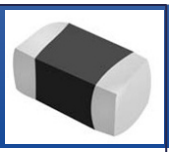
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SMD Multilayer Chip Varistor



AMCV-0402 Series

Request Samples Check Inventory

1.0 x 0.5 x 0.5 mm
RoHS/RoHS II Compliant
MSL Level = 1

***1**: Vc, Maximum peak voltage across the varistor measured at a specified pulse current and waveform.

Energy Rating	Pulse & Waveform
0.00- 0.05 Joule	1A, 8/20μs
0.10 Joule	2A, 8/20μs
0.20-0.50 Joule	5A, 8/20μs

***2**: Vc, Maximum peak voltage across the varistor measured at 30ns after initiation of pulse on IEC61000-4-2 30A/8KV.

Unless otherwise specified, the standard atmospheric conditions for measurement/test as:

a. Ambient Temperature: 20±15℃

b. Relative Humidity: 65±20%

c. Air Pressure: 86 kPa to 106 kPa

Operating Temperature: -55˚C ~ +125˚C.

Storage Condition: -10˚C ~ +40˚C (with packaging) and R.H. 70 % max.

AMCV-0402 Series is RoHS Compliant and Pb free.

Items	Test Methods and Remarks
Varistor Voltage at 1mA DC (VB)	Measuring current: 1mA DC Duration: 0.2 to 2 sec
Capacitance (C)	Measure source: 0.5 VRMS Test frequency: 1MHz.
Leakage Current (IL)	Measuring voltage: Maximum DC working voltage
Clamping Voltage (VC)	Measuring source: 8/20us waveform

Part Identification

AMCV- 0402 - [ ] - C [ ] [ ] - [ ]

Voltage Code	Capacitance Code	Tolerance	Packaging
Please refer to the table above	Please refer to the table above	N=±30% Y=+100, -50% G=+0%, -60%	T: Tape and Reel (10kpcs / reel) Blank: Bulk

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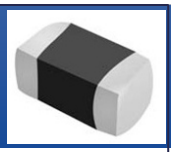
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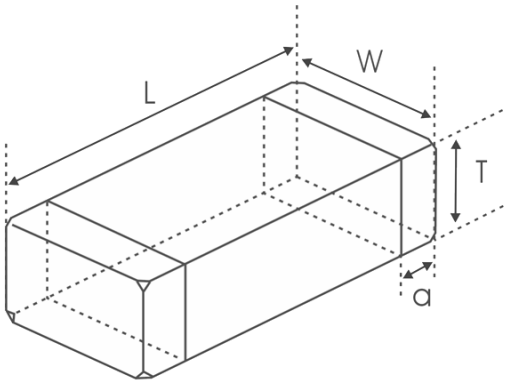


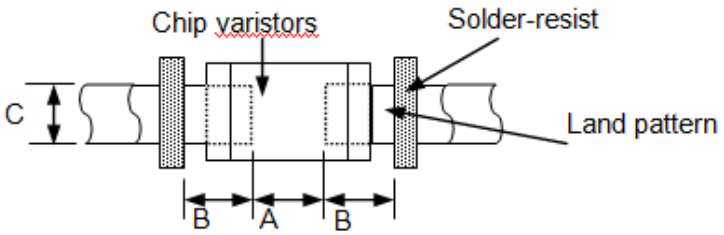
AMCV-0402 Series

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1.0 x 0.5 x 0.5 mm
RoHS/RoHS II Compliant
MSL Level = 1

Mechanical Specifications

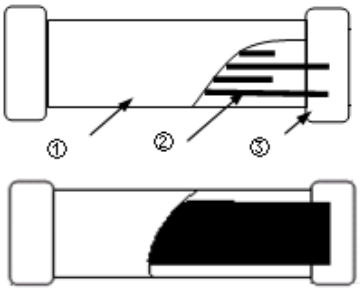


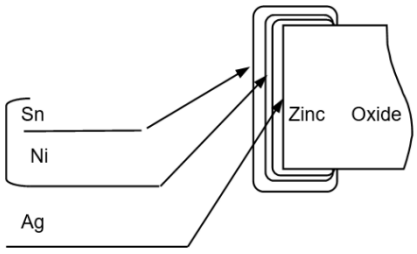


Series	L	W	T	a	A	B	C
AMCV-0402	1.0±0.15	0.5±0.15	0.5±0.15	0.25±0.1	0.45～0.55	0.40～0.50	0.45～0.55

Dimensions: mm

Materials





	Part Name	Material
1	Base Material	ZnO
2	Internal Conductor	Ag-Pd
3	Terminal Electrode	Ag (Inner layer) Ni-Sn (Outer layer)

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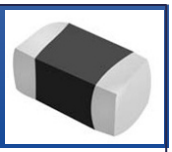
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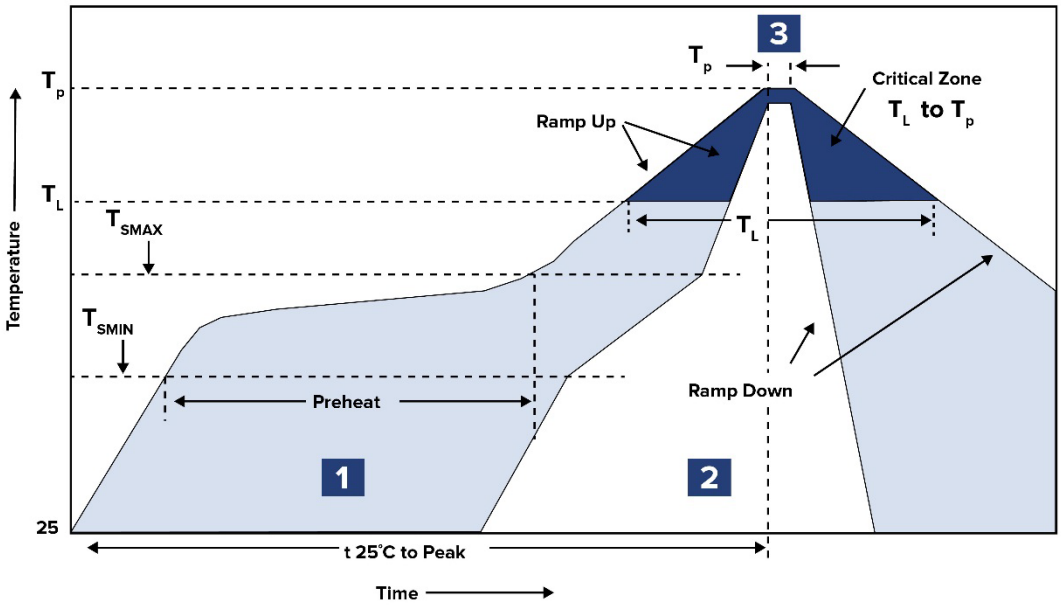


AMCV-0402 Series

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1.0 x 0.5 x 0.5 mm
RoHS/RoHS II Compliant
MSL Level = 1

Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	T_{SMIN} ~ T_{SMAX} 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T_L ≥217°C	60 ~ 90 sec.
3	Peak heat	T_P 260°C Max.	10 sec. MAX

Ref. Solder paste: Sn/3.0Ag/0.5Cu
Ramp up rate: 3°C/s Max.
Ramp down rate: 6°C/s Max.

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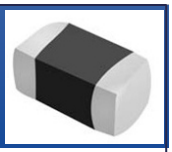
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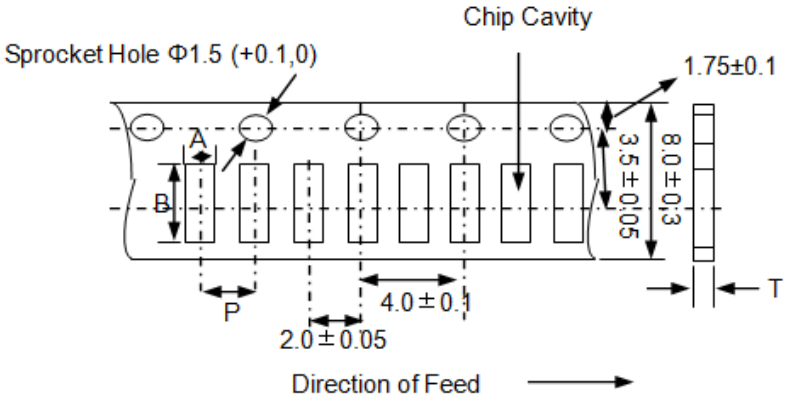
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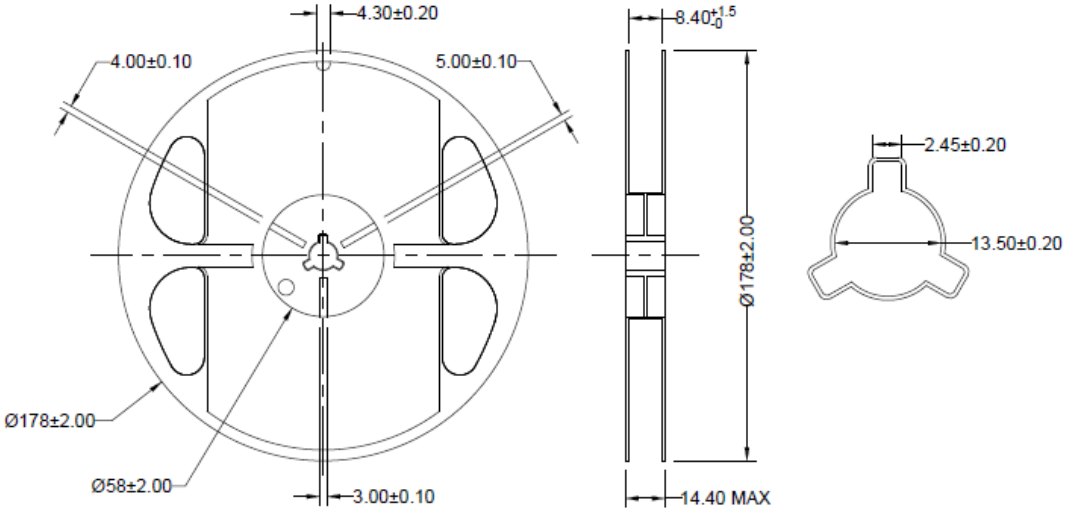
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RoHS/RoHS II Compliant
MSL Level = 1

Packaging

Tape & Reel : 10,000 pcs/reel



A	B	P	T (max)
0.65±0.1	1.15±0.1	2.0±0.05	0.8



Dimensions: mm

ATTENTION: Abracon LLC's products are Commercial-Off-The-Shelf (COTS, which are designed, intended and validated for use in commercial, industrial and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.

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