SMD Multilayer Chip Varistor

AMCV-0805

RoHS Compliant



1.0 x 0.5 x 0.5 mm

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

STANDARD SPECIFICATIONS:

Operating Temperature: -55˚C ~ +125℃

Storage Temperature: -10˚C ~ +40˚C and RH 70% (Max.)

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
ACMV-0805-5R5-C180	5.5	4.0	10.0-14.0	18	23	0.005	3	18
ACMV-0805-180-C101	18.0	12.7	22.0-28.0	40	48	0.05	20	100
ACMV-0805-260-C800	26.0	18.4	31.0-38.0	58	70	0.05	20	80
ACMV-0805-300-C500	30.0	21.3	37.0-46.0	65	78	0.05	15	50

*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.

Test Conditions

Unless otherwise specified, the standard atmospheric conditions for measurement/test as:
a. Ambient Temperature: 20±15˚C
b. Relative Humidity: 65±20%
c. Air Pressure: 86 kPa to 106 kPa

Items	Test Methods and Remarks
Varistor Voltage at 1mA DC (V_B)	Measuring current: 1mA DC Duration: 0.2 to 2 sec
Capacitance (C)	Measure source: 0.5 V_{RMS} Test frequency: 1MHz.
Leakage Current (I_L)	Measuring voltage: Maximum DC working voltage
Clamping Voltage (V_C)	Measuring source: 8/20us waveform, ESD waveform

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tel 949-546-8000 | fax 949-546-8001 | www.abracon.com

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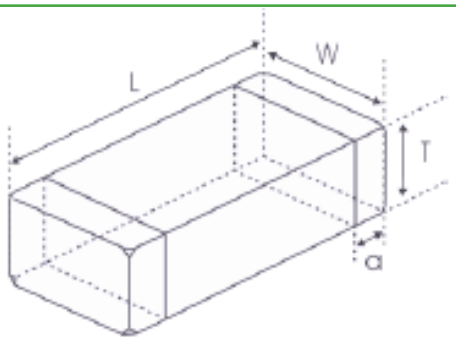
1.0 x 0.5 x 0.5 mm

OPTIONS AND PART IDENTIFICATION:

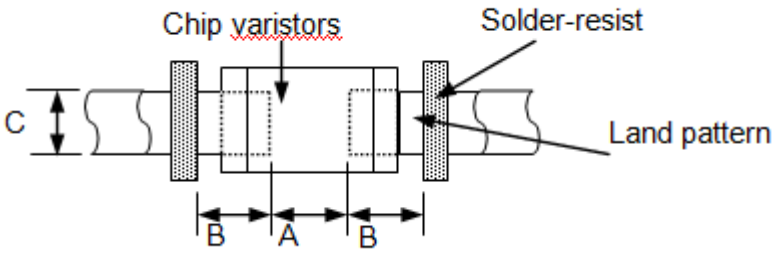
AMCV-0805-□□□ - C□□□ - □

Voltage Code	Capacitance Code	Tolerance	Packaging
Please refer to the table above	Please refer to the table above	N=±30%	T: Tape and Reel (4kpcs / reel)

OUTLINE DIMENSION:



Recommended Land Pattern

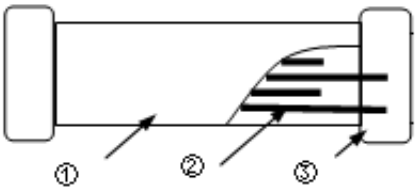


L	W	T	a
2.0±0.2	1.25±0.2	0.85±0.2	0.5±0.3

A	B	C
0.80～1.20	0.80～1.20	0.90～1.60

Materials

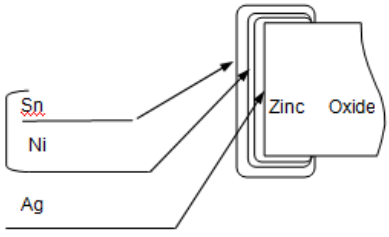
Side View



Top View



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



Dimension: mm

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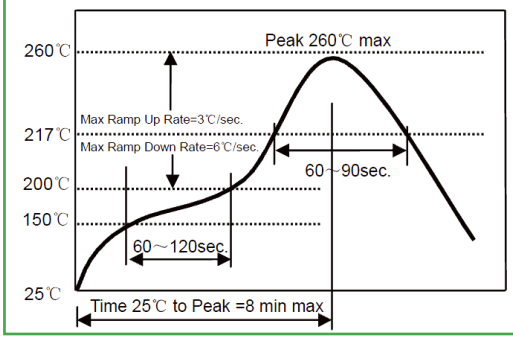
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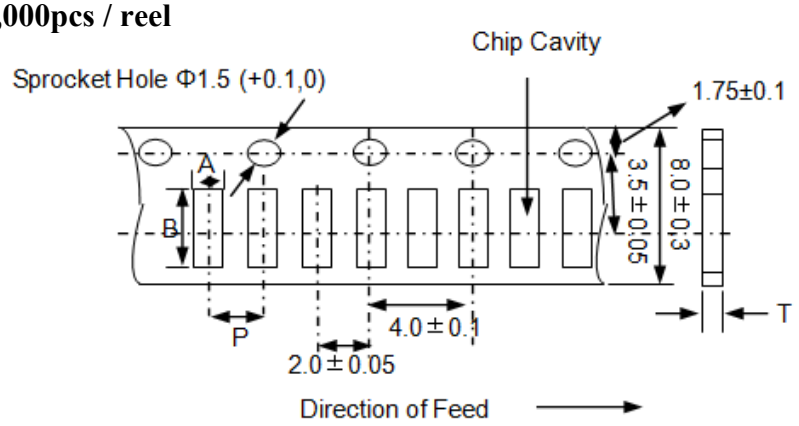
REFLOW PROFILE:



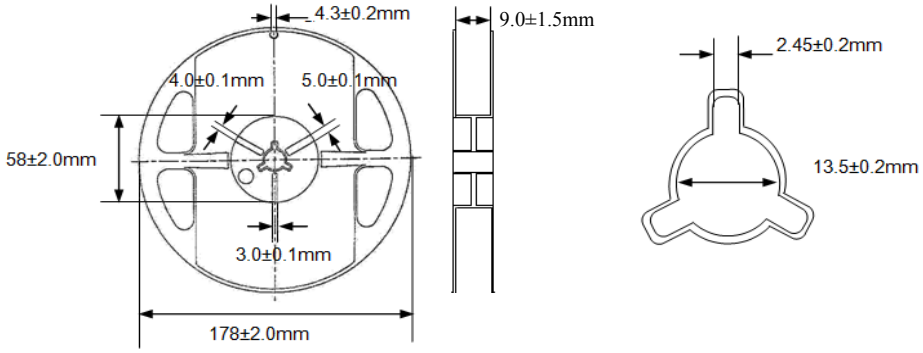
Preheat Condition	150 to 200 ˚C; 60 to 120 sec.
Allowed time above 217 ˚C	60 to 90 sec.
Max temperature	260 ˚C
Max time at max temperature	10 sec.
Solder paste	Sn/3.0Ag/0.5Cu
Allowed Reflow time	2x max.

TAPE & REEL:

T: 4,000pcs / reel



A	B	P	T (max)
1.5±0.2	2.3±0.2	4.0±0.1	1.1



Storage Conditions

a. The solderability of the external electrode may be deteriorated if packages are stored where they are exposed to high humidity Package must be stored at 40°Cor less and 70% RH or less.

b. The solderability of the external electrode may be deteriorated if packages are stored where they are exposed to dust of harmful gas (e.g. HCI, sulfurous gas of H_2S).

c. Packaging material may be deformed if package are stored where they are exposed to heat of direct sunlight.

d. Solderability shall be guaranteed for 6 months from the date of delivery on condition that they are stored at the environment specified in **a**.The parts that are stored more than 6 months shall be checked solderability before use.

Dimension: mm

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