SMD Multilayer Chip Varistor

AMCV-1812H

4.5 x 3.2 x 2.5mm

RoHS Compliant

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 ~ +85˚C

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	@1V_{rms}, 1kHz
	DC	AC RMS						
Units	Volts	Volts	Volts	Volts	Amps	Joules	Amps	pF
Symbol	V_{WDC}	V_{WAC}	V_B	V_C	I_C	E_T	I_P	C_P
AMCV-1812H-5R5	5.5	4.0	12.0 [10.0-14.0]	18	5.0	1.0	800	5500
AMCV-1812H-090	9	6.4	14.0 [12.0-16.0]	20	5.0	1.2	800	4800
AMCV-1812H-120	12	8.5	16.0 [13.0-19.0]	25	5.0	1.5	800	4200
AMCV-1812H-140	14	10.0	19.0 [16.0-22.0]	30	5.0	1.9	800	3800
AMCV-1812H-180	18	12.7	25.0 [22.0-28.0]	40	5.0	2.3	800	3200
AMCV-1812H-220	22	15.6	30.0 [26.0-34.0]	45	5.0	2.5	800	2400
AMCV-1812H-260	26	18.4	35.0 [31.0-38.0]	58	5.0	3.0	800	2000
AMCV-1812H-300	30	21.3	42.0 [37.0-46.0]	65	5.0	3.7	800	1500
AMCV-1812H-380	38	30.0	50.0 [46.0-54.0]	75	5.0	4.2	800	1100
AMCV-1812H-480	48	34.1	60.0 [54.0-67.0]	100	5.0	4.0	600	900
AMCV-1812H-560	56	40.0	68.0 [61.0-75.0]	120	5.0	4.3	600	800
AMCV-1812H-600	60	46.0	76.0 [69.0-83.0]	130	5.0	4.3	600	600
AMCV-1812H-650	65	50.0	82.0 [73.0-91.0]	140	5.0	4.0	600	500
AMCV-1812H-750	75	55.0	94.0 [85.0-103.0]	160	5.0	4.0	600	400
AMCV-1812H-850	85	60.0	100.0 [90.0-110.0]	170	5.0	4.0	600	300
AMCV-1812H-101	100	75.0	120.0 [108.0-132.0]	200	5.0	4.0	600	200

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: 1.0 V_{RMS} Test frequency: 1kHz.
Clamping Voltage (V_C)	Measuring source: 8/20us waveform

ABRACON LLC
The Power of Linking Together

5101 Hidden Creek Lane Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sale please visit:
www.abracon.com

REVISED: 09.01.2017

ABRACON IS ISO9001-2008 CERTIFIED

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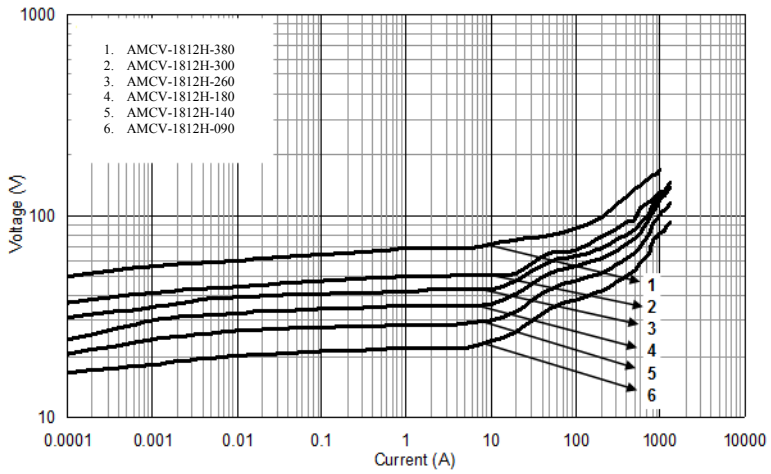
4.5 x 3.2 x 2.5mm

OPTIONS AND PART IDENTIFICATION:

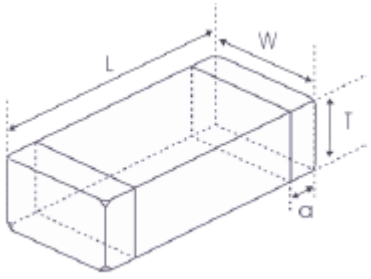
AMCV-1812H-□□□-□

Voltage Code	Packaging
Please refer to the table above	T: Tape and Reel (4kpcs / reel)

V/I CHARACTERISTICS

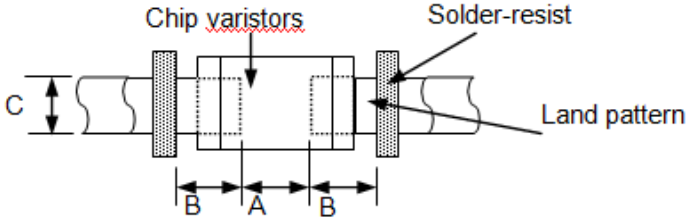


OUTLINE DIMENSION:



L	W	T	a
4.5±0.40	3.2±0.30	2.5Max.	0.25~1.0

Recommended Land Pattern



A	B	C
2.8~3.0	1.5~1.8	3.3~3.6

Dimension: mm

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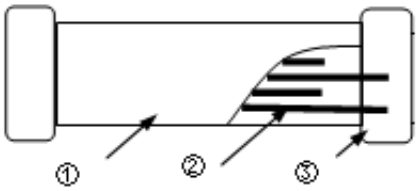
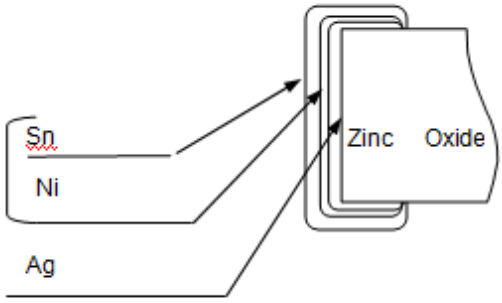
Materials

Side View

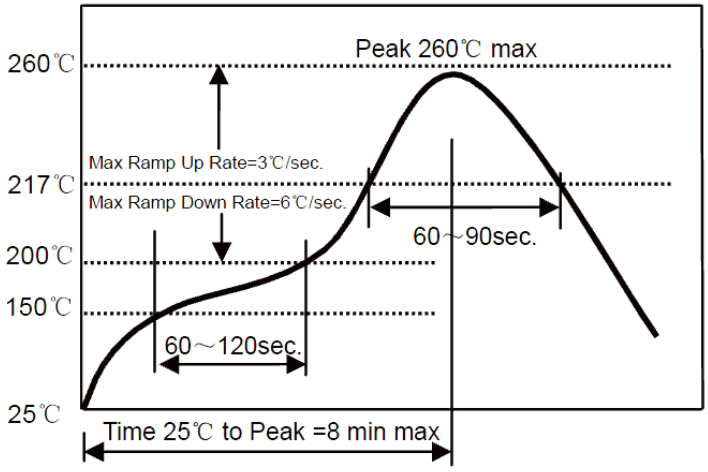


Top View

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



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.

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