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

30332 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8001 | www.abracon.com

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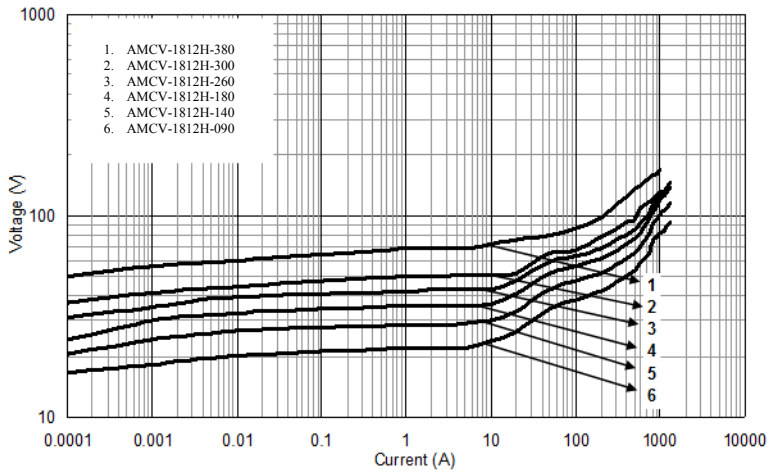
4.5 x 3.2 x 2.5mm

OPTIONS AND PART IDENTIFICATION:

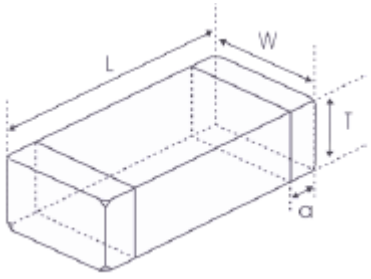
AMCV-1812H-□-□

Voltage Code	Packaging
Please refer to the table above	T: Tape and Reel (2kpcs / reel)

V/I CHARACTERISTICS

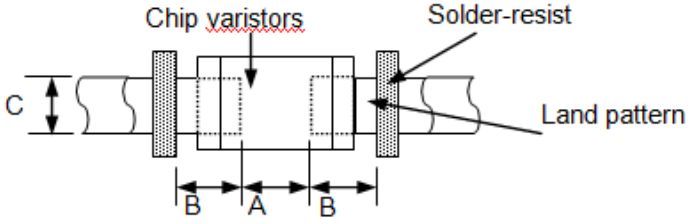


OUTLINE DIMENSION:



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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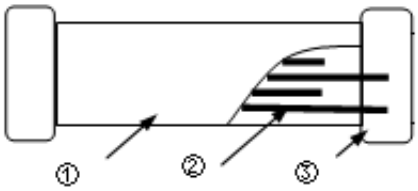
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Materials

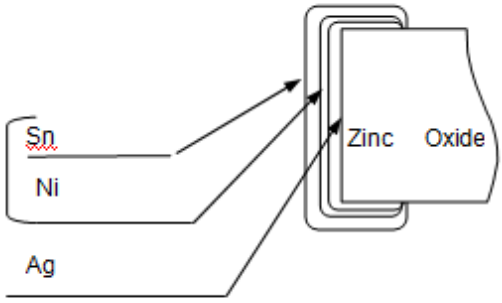
Side View



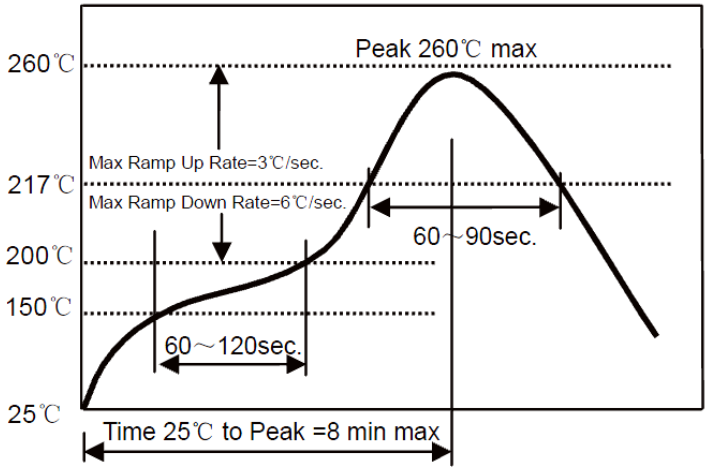
Top View



	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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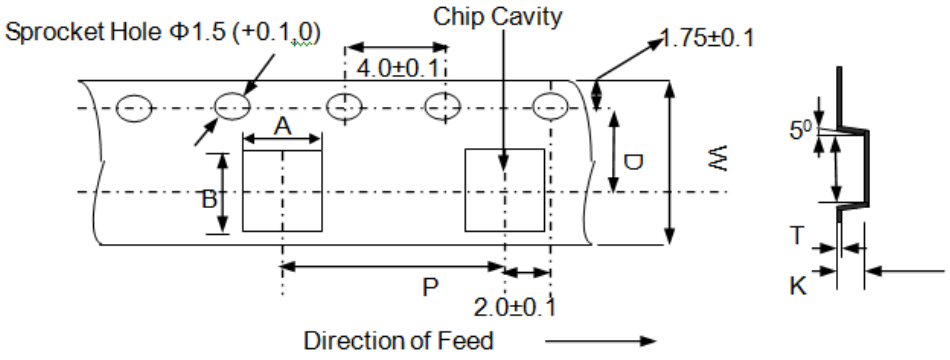
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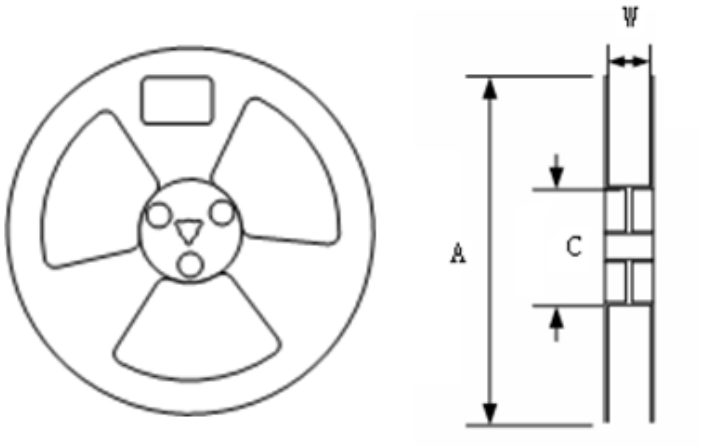
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TAPE & REEL:

T: 2,000pcs / reel



W	A	B	D	P	K max	T max
12.0	3.50	4.80	5.50	8.0	2.7	0.33



A	W	C
330	12.5	100

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 **1.3**. The parts that are stored more than 6 months shall be checked solderability before use.

Dimension: mm

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Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001
Адрес: 105318, г.Москва, ул.Щербаковская д.3, офис 1107

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Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:
moschip.ru
moschip.ru_4
moschip.ru_6
moschip.ru_9