

# AMCV-1812H-750-T Datasheet

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DiGi Electronics Part Number	AMCV-1812H-750-T-DG
Manufacturer	<a href="#">Abracon LLC</a>
Manufacturer Product Number	AMCV-1812H-750-T
Description	VARISTOR 94V 600A 1812
Detailed Description	94 V 600 A Varistor 1 Circuit Surface Mount, MLCV 1 812 (4532 Metric)

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## Purchase and inquiry

Manufacturer Product Number:

AMCV-1812H-750-T

Series:

-

Maximum AC Volts:

55 V

Varistor Voltage (Min):

85 V

Varistor Voltage (Max):

103 V

Energy:

4J

Capacitance @ Frequency:

400 pF @ 1 kHz

Mounting Type:

Surface Mount, MLCV

Manufacturer:

Abracon LLC

Product Status:

Active

Maximum DC Volts:

75 V

Varistor Voltage (Typ):

94 V

Current - Surge:

600 A

Number of Circuits:

1

Operating Temperature:

-55°C ~ 85°C (TA)

Package / Case:

1812 (4532 Metric)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8533.40.4000

Moisture Sensitivity Level (MSL):

1 (Unlimited)

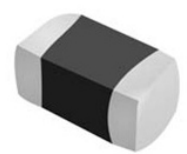
ECCN:

EAR99

# SMD Multilayer Chip Varistor

## AMCV-1812H

**RoHS**  
Compliant



4.5 x 3.2 x 2.5mm

### 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
	DC	AC RMS		8/20μs	ESD	Energy 10/1000μs	Peak Current 8/20μs	
Test Condition	<20μA		@1mA DC	8/20μs	ESD	Energy 10/1000μs	Peak Current 8/20μs	@1V <sub>rms</sub> , 1kHz
Units	Volts	Volts						
Symbol	V <sub>WDC</sub>	V <sub>WAC</sub>	V <sub>B</sub>	V <sub>C</sub>	I <sub>C</sub>	E <sub>T</sub>	I <sub>P</sub>	C <sub>P</sub>
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:

- Ambient Temperature: 20±15°C
- Relative Humidity: 65±20%
- Air Pressure: 86 kPa to 106 kPa

Items	Test Methods and Remarks
Varistor Voltage at 1mA DC (V <sub>B</sub> )	Measuring current: 1mA DC Duration: 0.2 to 2 sec
Capacitance (C)	Measure source: 1.0 V <sub>RMS</sub> Test frequency: 1kHz.
Clamping Voltage (V <sub>C</sub> )	Measuring source: 8/20us waveform

# SMD Multilayer Chip Varistor



4.5 x 3.2 x 2.5mm

AMCV-1812H

**RoHS**  
Compliant

## OPTIONS AND PART IDENTIFICATION:

AMCV-1812H--

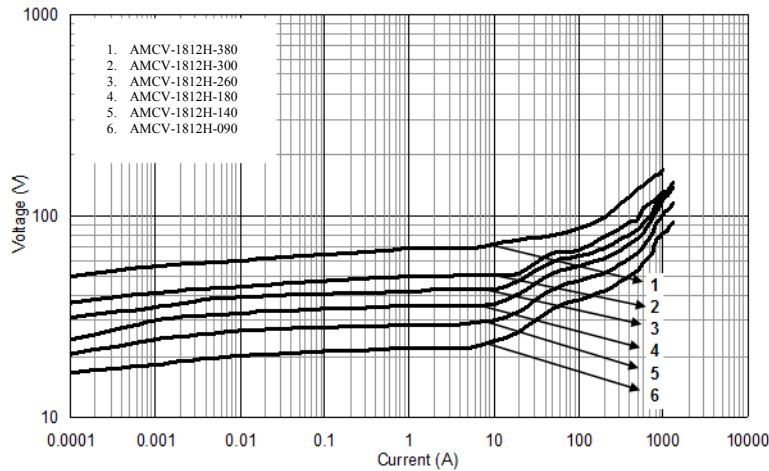
**Voltage Code**

Please refer to the table above

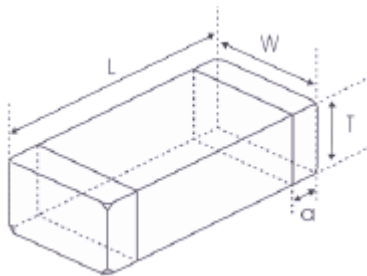
**Packaging**

T: Tape and Reel  
(2kpcs / reel)

## V/I CHARACTERISTICS

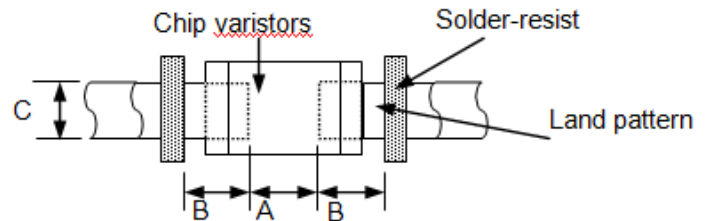


## OUTLINE DIMENSION:



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**

# SMD Multilayer Chip Varistor

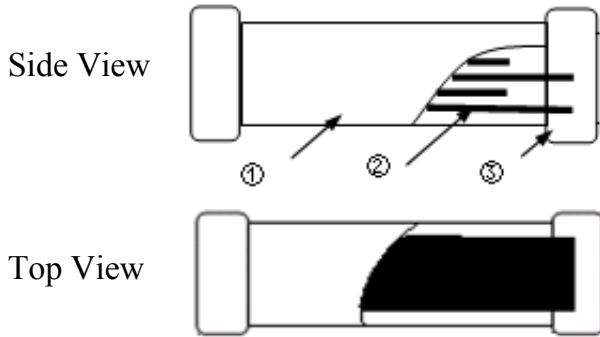


4.5 x 3.2 x 2.5mm

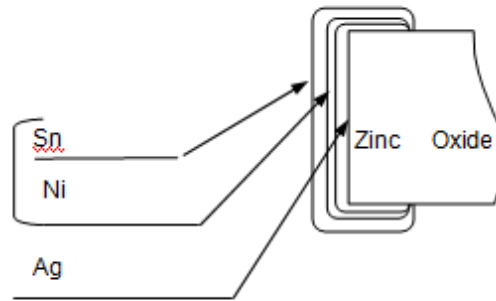
**AMCV-1812H**

**RoHS**  
Compliant

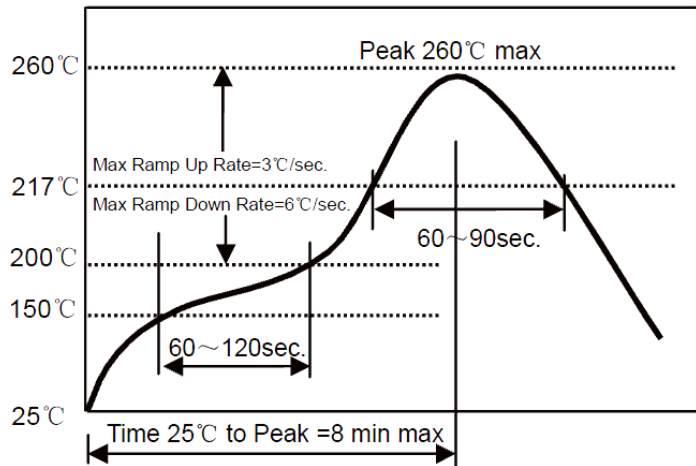
## Materials



	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.

# SMD Multilayer Chip Varistor



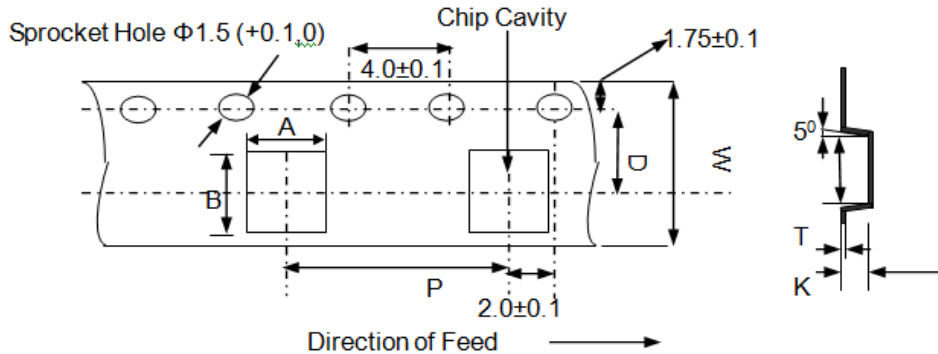
4.5 x 3.2 x 2.5mm

AMCV-1812H

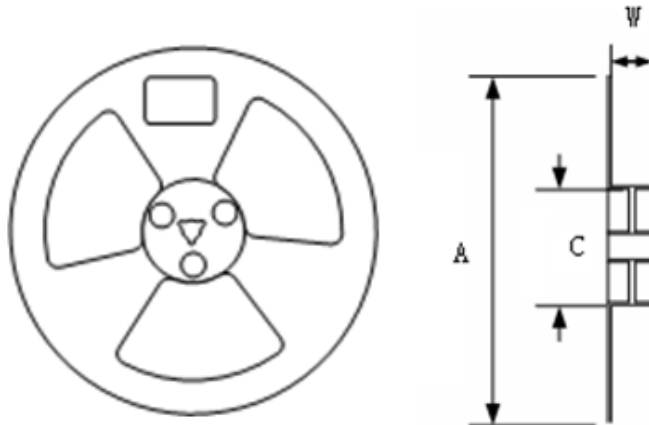
RoHS  
Compliant

## 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

- 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°C or less and 70% RH or less.
- The solderability of the external electrode may be deteriorated if packages are stored where they are exposed to dust or harmful gas (e.g. HCl, sulfurous gas of H<sub>2</sub>S).
- Packaging material may be deformed if package are stored where they are exposed to heat of direct sunlight.
- 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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