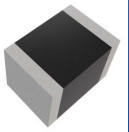


Varistors for High Voltage



AMCV-SH1812

Request Samples



Check Inventory



4.6 x 3.5 x 3.5 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)
- Green, meet RoHS requirements.

Applications

- AC Mains surge protection for 120V/ 230V
- AC-DC Switch Mode Power Supplies (SMPS)
- Commercial and industrial LED lighting
- Home and Commercial appliances
- Industrial Control panels for AC distribution
- Uninterruptible Power Supplies (UPS).
- Level 1 and Level 2 EV Charging equipment
- Solar Inverters /Grid connected equipment

Electrical Specifications

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Volts/Amps		Rated Single Pulse Transient	
Test Condition	<40 μ A		@1mA DC	8/20 μ s		Energy 10/1000 μ s	Peak Current 8/20 μ s
	DC	AC RMS					
Units	Volts	Volts	Volts	Volts	Amps	Joules	Amps
Symbol	VDC	VAC	VB	VC	IC	E _T	I _P
AMCV-SH1812-151-801	200	150	240[216-264]	360	5.0	6.4	800
AMCV-SH1812-171-801	225	175	270[243-297]	410	5.0	7.2	800
AMCV-SH1812-191-601	250	195	300[270-330]	450	5.0	7.2	600
AMCV-SH1812-231-601	300	230	360[324-396]	540	5.0	6.4	600
AMCV-SH1812-251-401	320	250	390[351-429]	590	5.0	6.4	400
AMCV-SH1812-271-401	350	275	430[387-473]	650	5.0	6.4	400
AMCV-SH1812-301-401	385	300	470[423-517]	710	5.0	7.2	400
AMCV-SH1812-321-251	410	320	510[459-561]	880	5.0	5.0	250

Operating Temperature: -55°C to +125°C

Storage: Temperature 10°C to +50°C, RH<60%, Max. Humidity <85% RH

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

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

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

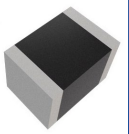


12117 Bee Caves Rd, Bldg-3, Suite 200
Bee Cave, TX 78738
Phone: 512-371-6159 Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISION Preliminary
Release : 9/9/2026

ABRACON IS
ISO9001-2015
CERTIFIED

Varistors for High Voltage



AMCV-SH1812

Request Samples

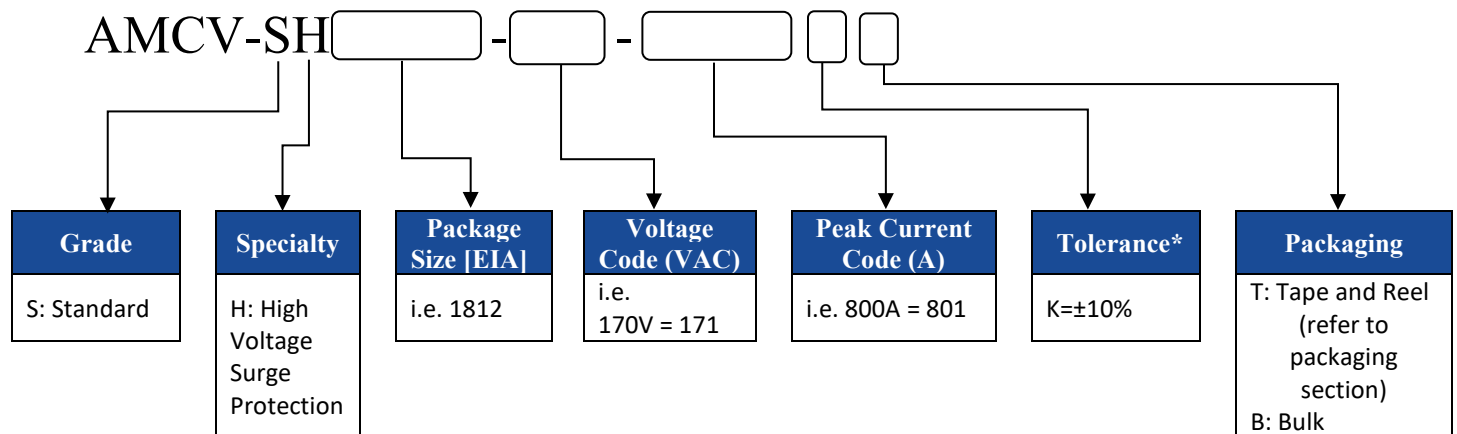


Check Inventory



4.6 x 3.5 x 3.5 mm
RoHS/RoHS II Compliant
MSL Level = 1

Part Number Identification

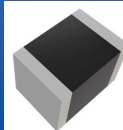


*Tolerance refers to varistor voltage.

Part Marking

No Marking

Varistors for High Voltage



AMCV-SH1812

Request Samples

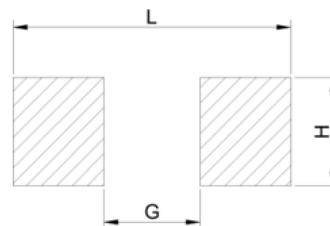
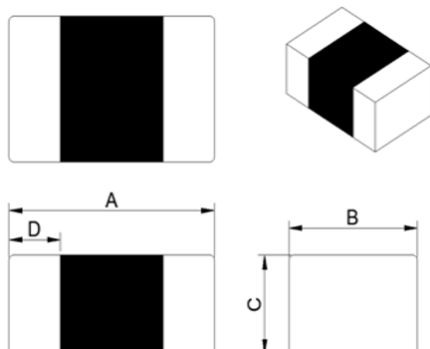


Check Inventory



4.6 x 3.5 x 3.5 mm
RoHS/RoHS II Compliant
MSL Level = 1

Mechanical Specifications

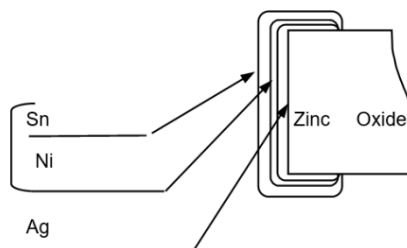
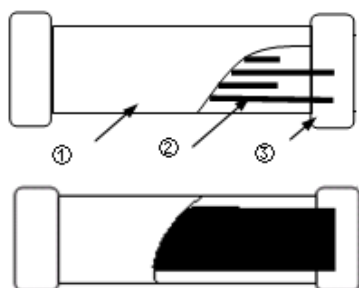


Recommended PCB Layout

Series	A	B	C	D	L (ref)	G (ref)	H (ref)
AMCV-SH1812	4.5+0.6/-0.2	3.2+0.5/-0.2	3.6	0.40 – 0.90	5.8 - 7.0	2.8 – 3.2	3.3 – 3.9

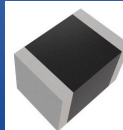
Dimensions:
mm

Materials



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

Varistors for High Voltage



AMCV-SH1812

Request Samples

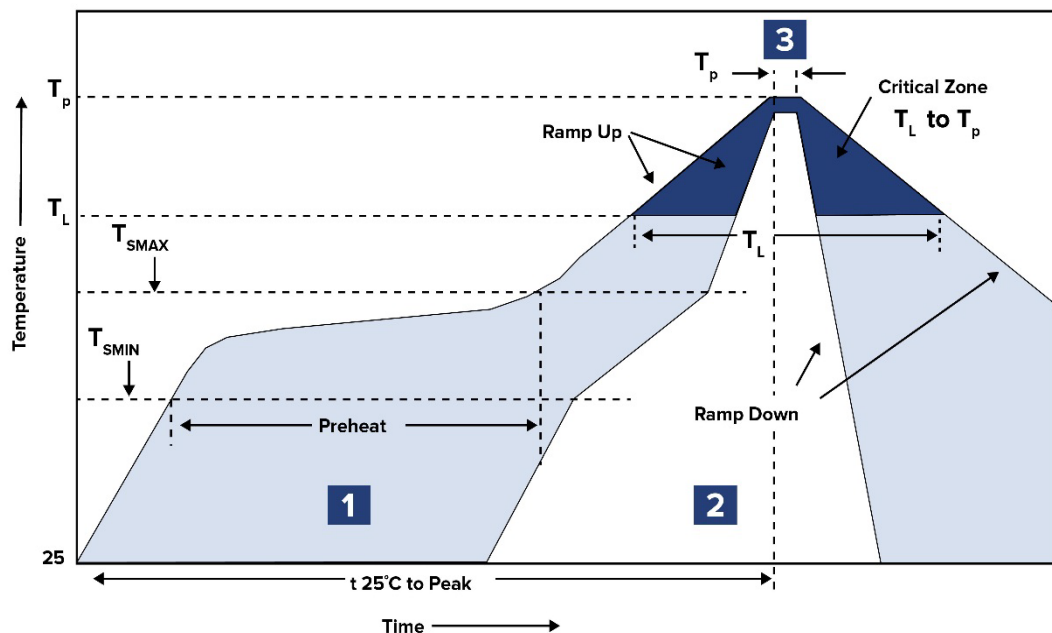


Check Inventory



4.6 x 3.5 x 3.5 mm
RoHS/RoHS II Compliant
MSL Level = 1

Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ $150^\circ C \sim 200^\circ C$	60 ~ 120 sec.
2	Reflow	T_L $\geq 217^\circ C$	60 ~ 90 sec.
3	Peak heat	T_p $260^\circ C \text{ Max.}$	10 sec. MAX

Ref Paste: Sn/3.0Ag/0.5Cu (Lead-Free)

Max ramp up rate: $3^\circ C/Sec$

Max ramp down rate: $6^\circ C/Sec$

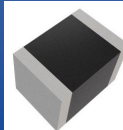


12117 Bee Caves Rd, Bldg-3, Suite 200
Bee Cave, TX 78738
Phone: 512-371-6159 Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISION Preliminary
Release : 9/9/2026

ABRACON IS
ISO9001-2015
CERTIFIED

Varistors for High Voltage



AMCV-SH1812

Request Samples



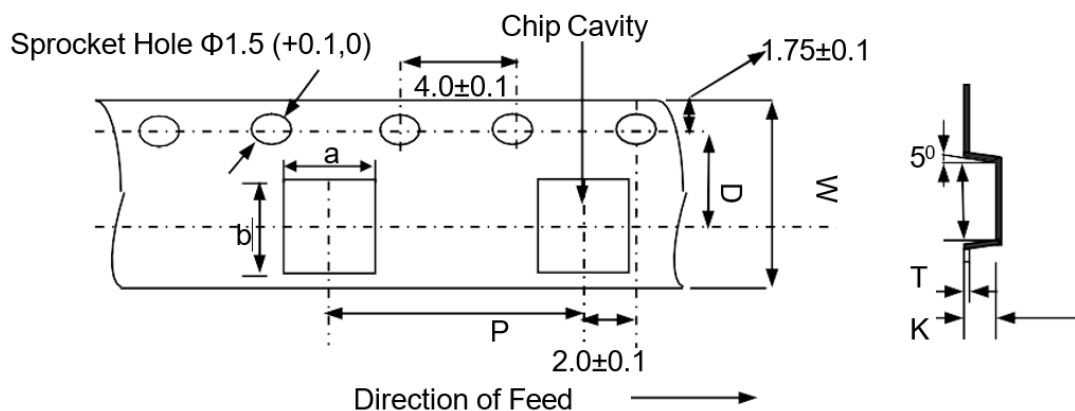
Check Inventory



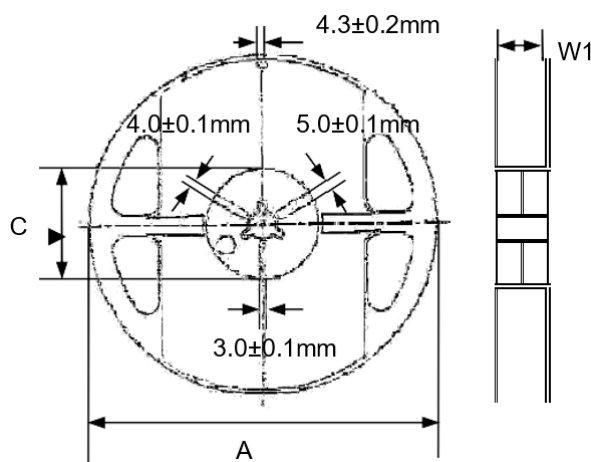
4.6 x 3.5 x 3.5 mm
RoHS/RoHS II Compliant
MSL Level = 1

Packaging

Tape & Reel: 2K pcs/reel



a	b	P	D	W	K	T
3.80	5.20	8.0	5.5	12.0	3.8	0.033



A	C	W1
330	100	12.4+1.5/-0.0

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.



12117 Bee Caves Rd, Bldg-3, Suite 200
Bee Cave, TX 78738
Phone: 512-371-6159 Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISION Preliminary
Release : 9/9/2026

ABRACON IS
ISO9001-2015
CERTIFIED