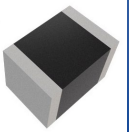


Varistors for High Voltage



AMCV-SH01210

Request Samples



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3.2 x 2.5 x 2.6 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	<40μA		@1mA DC	8/20μs		Energy 10/1000μs	Peak Current 8/20μs
	DC	AC RMS					
Units	Volts	Volts	Volts	Volts	Amps	Joules	Amps
Symbol	VDC	VAC	VB	VC	IC	E _T	I _P
AMCV-SH1210-151-601	200	150	240[216-264]	360	5.0	1.8	600
AMCV-SH1210-151-401	200	150	240[216-264]	360	5.0	1.8	400
AMCV-SH1210-171-601	225	175	270[243-297]	410	5.0	2.0	600
AMCV-SH1210-171-401	225	175	270[243-297]	410	5.0	2.0	400
AMCV-SH1210-191-401	250	195	300[270-330]	450	5.0	2.0	400
AMCV-SH1210-231-401	300	230	360[324-396]	540	5.0	1.8	400
AMCV-SH1210-251-201	320	250	390[351-429]	590	5.0	1.8	200
AMCV-SH1210-271-201	350	275	430[387-473]	650	5.0	1.8	200
AMCV-SH1210-301-201	385	300	470[423-517]	710	5.0	2.0	200
AMCV-SH1210-321-151	410	320	510[459-561]	880	5.0	2.0	150

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

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

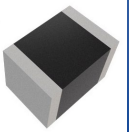


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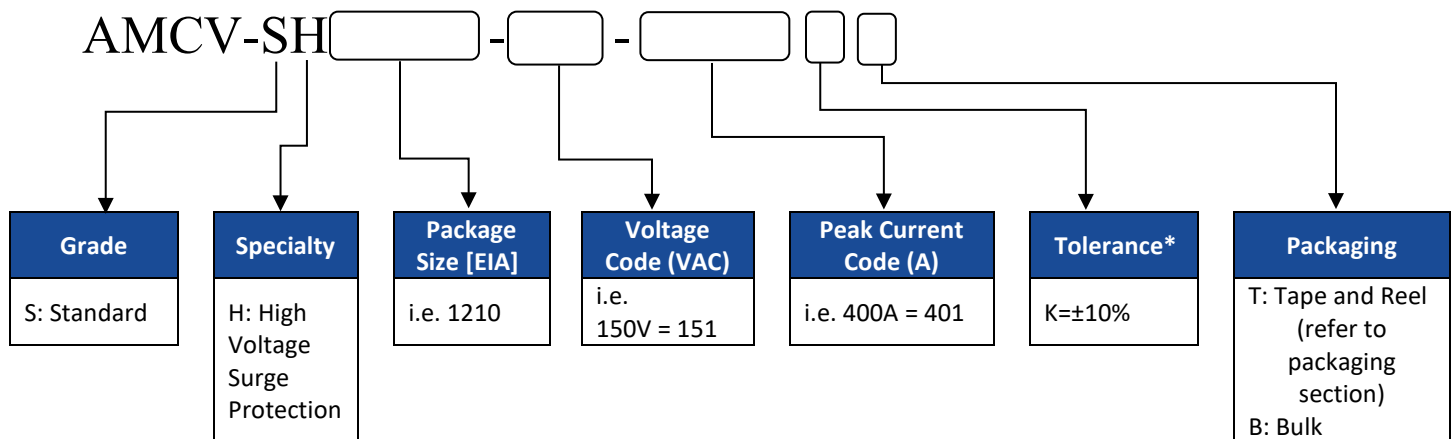
3.2 x 2.5 x 2.6 mm
RoHS/RoHS II Compliant
MSL Level = 1

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: $20 \pm 15^\circ\text{C}$
- Relative Humidity: $65 \pm 20\%$
- Air Pressure: 86 kPa to 106 kPa

Part Number Identification



*Tolerance refers to varistor voltage.

Part Marking

No Marking

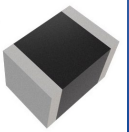


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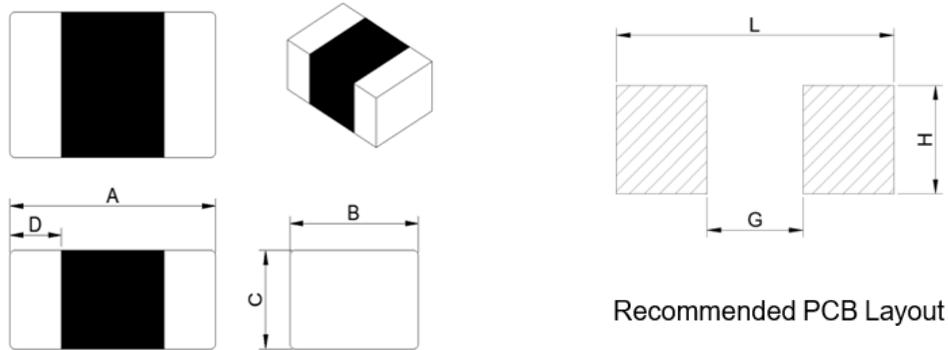


Check Inventory



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RoHS/RoHS II Compliant
MSL Level = 1

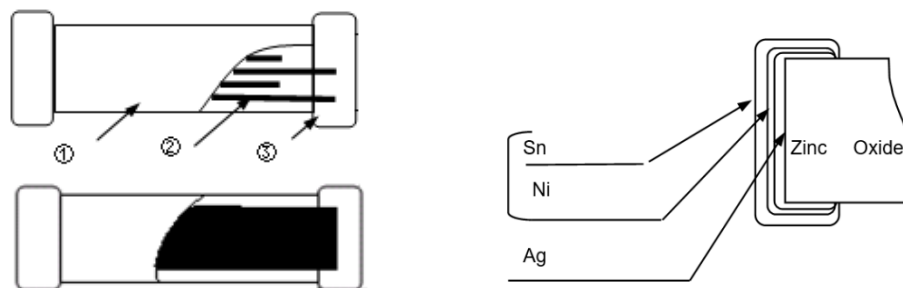
Mechanical Specifications



Series	A	B	C	D	L (ref)	G (ref)	H (ref)
AMCV-SH1210	3.2+0.6/-0.2	2.5+0.4/-0.2	2.6	0.25 – 0.75	4.3 - 5.7	1.9 – 2.5	2.6 – 3.0

Dimensions: mm

Materials



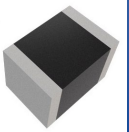
	Part Name	Material
1	Base Material	ZnO
2	Internal Conductor	Ag-Pd
3	Terminal Electrode	Ag (Inner layer) Ni-Sn (Outer layer)



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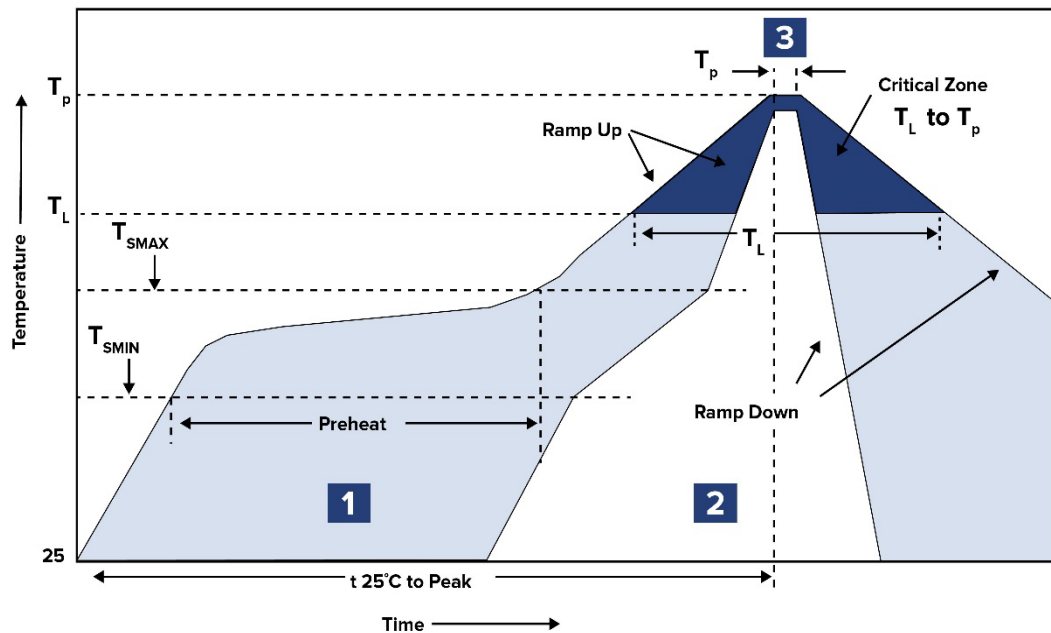


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MSL Level = 1

Reflow Profile



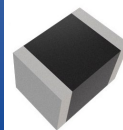
Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ $150^\circ C \sim 200^\circ C$	60 ~ 120 sec.
2	Reflow	T_L $\geq 217^\circ C$	60 ~ 90 sec.
3	Peak heat	T_p $260^\circ C \text{ Max.}$	10 sec. MAX

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

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

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

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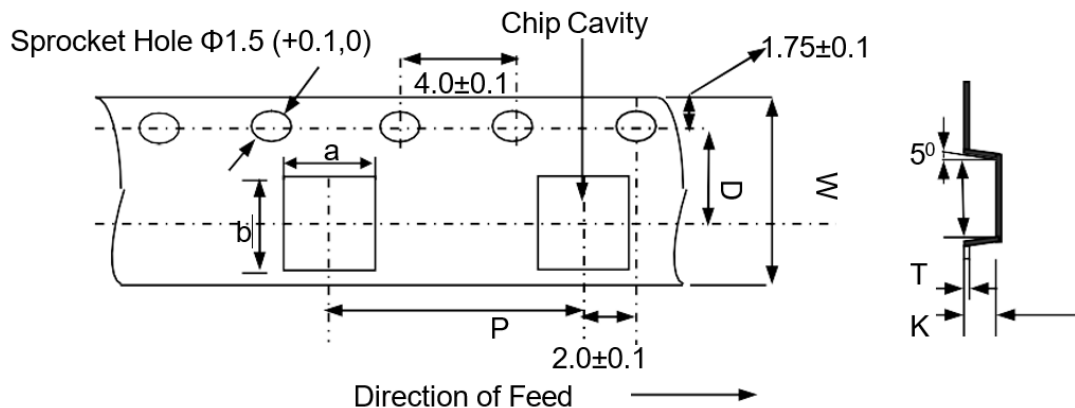
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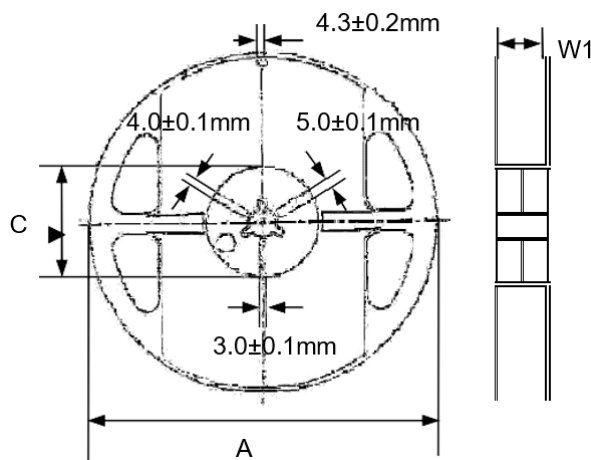
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RoHS/RoHS II Compliant
MSL Level = 1

Packaging

Tape & Reel: 1.5K pcs/reel



a	b	P	D	W	K	T
2.85	3.50	8.0	5.50	12.0	2.85	0.35



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.



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