

Varistors for Surge Protection



AMCV-SS1206

Request Samples



Check Inventory



3.2 x 1.6 x 2.0 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

- 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

Electrical Specifications

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Volts/Amps		Rated Single Pulse Transient		
Test Condition	<30μA		@1mA DC	8/20μs		Energy 10/1000μs	Peak Current 8/20μs	Nominal Current 8/20μs
	DC	AC RMS						
Units	Volts	Volts	Volts	Volts	Amps	Joules	Amps	Amps
Symbol	VDC	VAC	VB	VC	IC	ET	IP	IN
AMCV-SS1206-090-501	9	6.4	14.0 [12.0-16.0]	30	5	0.5	500	300
AMCV-SS1206-140-151	14	10	19.0 [16.0-22.0]	40	5	0.2	150	100
AMCV-SS1206-140-251	14	10	19.0 [16.0-22.0]	40	5	0.3	250	150
AMCV-SS1206-180-251	18	12.7	25.0 [22.0-28.0]	45	5	0.3	250	150
AMCV-SS1206-180-501	18	12.7	25.0 [22.0-28.0]	45	5	0.5	500	300
AMCV-SS1206-300-201	30	21.3	42.0 [37.0-46.0]	70	5	0.4	200	120
AMCV-SS1206-300-501	30	21.3	42.0 [37.0-46.0]	70	5	0.8	500	300
AMCV-SS1206-380-201	38	30	50.0 [46.0-54.0]	80	5	0.4	200	120
AMCV-SS1206-380-501	38	30	50.0 [46.0-54.0]	80	5	1	500	300
AMCV-SS1206-420-151	42	32	53.0 [48.0-58.0]	100	5	0.4	150	100
AMCV-SS1206-420-181	42	32	53.0 [48.0-58.0]	100	5	0.4	180	120
AMCV-SS1206-480-151	48	34.1	60.0 [54.0-67.0]	110	5	0.4	150	100
AMCV-SS1206-480-501	48	34.1	60.0 [54.0-67.0]	110	5	1.2	500	300
AMCV-SS1206-560-101	56	40	68.0 [61.0-75.0]	125	5	0.4	100	70
AMCV-SS1206-560-151	56	40	68.0 [61.0-75.0]	125	5	0.4	150	100
AMCV-SS1206-560-181	56	40	68.0 [61.0-75.0]	125	5	1	180	120
AMCV-SS1206-560-501	56	40	68.0 [61.0-75.0]	125	5	1.2	500	300
AMCV-SS1206-600-151	60	46	76.0 [69.0-83.0]	130	5	0.4	150	100
AMCV-SS1206-600-501	60	46	76.0 [69.0-83.0]	130	5	1.2	500	300
AMCV-SS1206-650-151	65	50	82.0 [73.0-91.0]	135	5	0.6	150	100



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Electrical Specifications Continued

Part Number	Max. Working Voltage		Varistor Voltage	Max. Clamping Volts/Amps		Rated Single Pulse Transient		
Test Condition	<20μA		@1mA DC	8/20μs		Energy 10/1000μs	Peak Current 8/20μs	Nominal Current 8/20μs
	DC	AC RMS						
Units	Volts	Volts	Volts	Volts	Amps	Joules	Amps	Amps
Symbol	VDC	VAC	VB	VC	IC	ET	IP	IN
AMCV-SS1206-650-181	65	50	82.0 [73.0-91.0]	135	5	0.6	180	120
AMCV-SS1206-650-201	65	50	82.0 [73.0-91.0]	135	5	0.6	200	140
AMCV-SS1206-650-501	65	50	82.0 [73.0-91.0]	135	5	1.2	500	300
AMCV-SS1206-850-151	85	60	100.0 [90.0-110.0]	165	5	0.6	150	100
AMCV-SS1206-850-401	85	60	100.0 [90.0-110.0]	165	5	1.2	400	250
AMCV-SS1206-101-151	100	75	120.0 [108.0-132.0]	200	5	0.6	150	100
AMCV-SS1206-101-401	100	75	120.0 [108.0-132.0]	200	5	1.2	400	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 (VB)	Measuring current: 1mA DC, Duration: 0.2 to 2 sec
Capacitance (C)	Measure source: 1.0 VRMS, Test frequency: 1kHz.
Clamping Voltage (Vc)	Measuring source: 8/20us waveform

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



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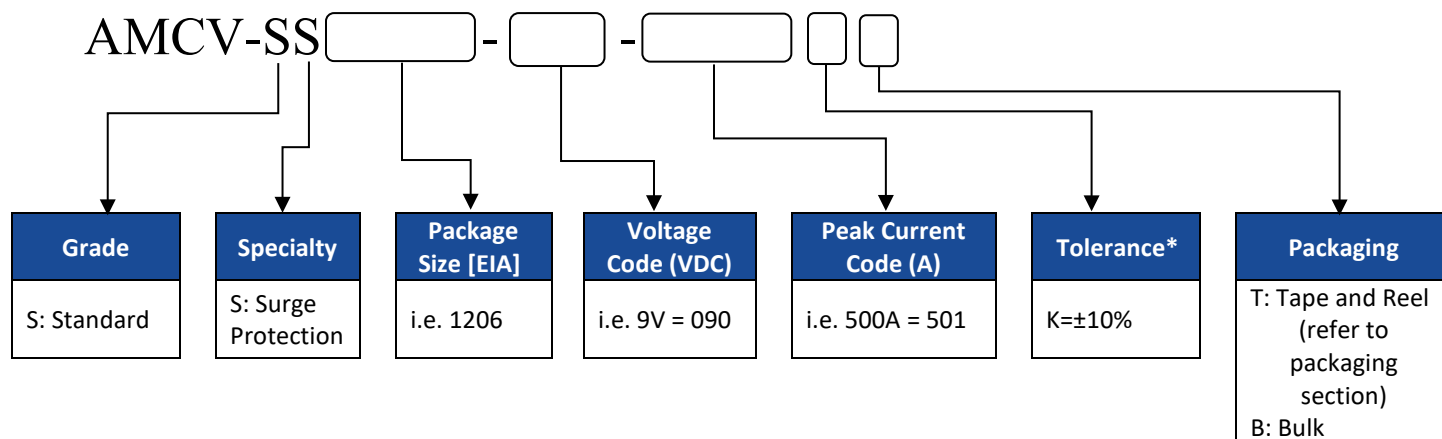


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Part Number Identification

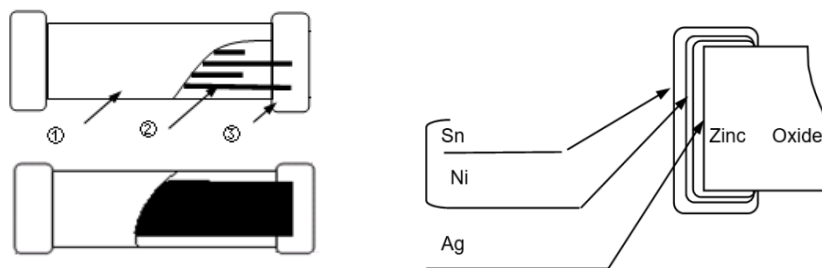


* Tolerance refers to varistor voltage.

Part Marking

No Marking

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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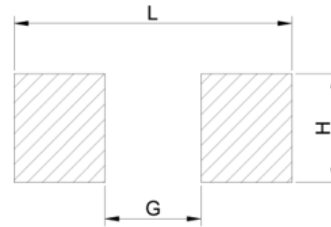
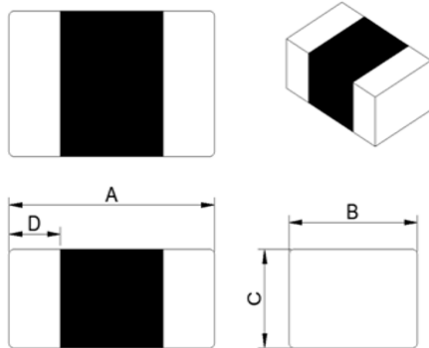


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Mechanical Specifications



Recommended PCB Layout

Series	A	B	C	D	L (ref)	G (ref)	H (ref)
AMCV-SS1206	3.2±0.2	1.6±0.2	2.0 Max.	0.25~0.75	3.8 - 5.5	1.80 - 2.50	1.20 - 2.00

Dimensions: mm

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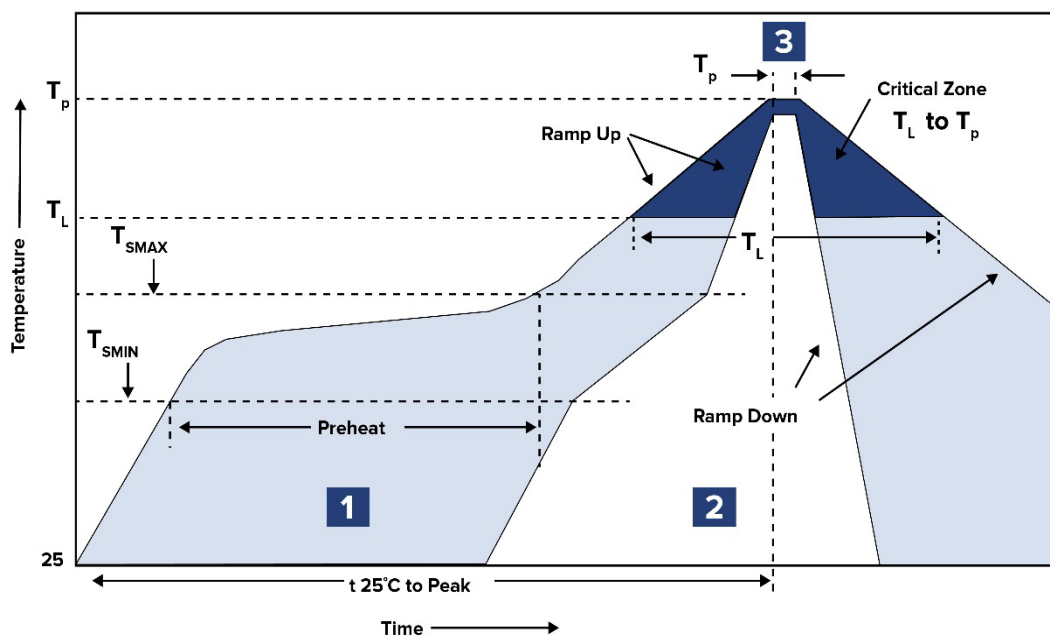


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Reflow Profile



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

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

Max ramp up rate:3°C/Sec

Max ramp down rate:6°C/Sec

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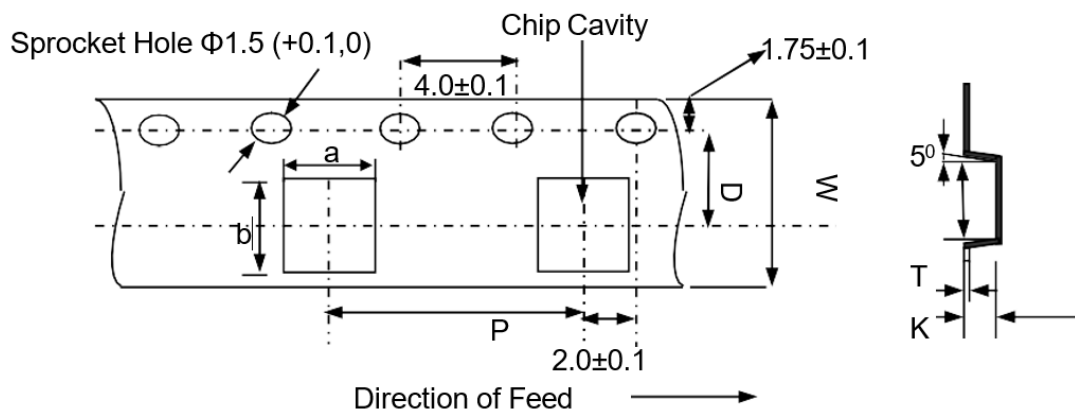
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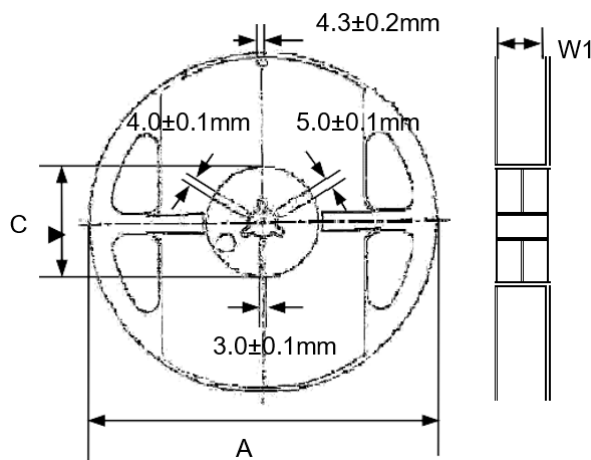
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Packaging

Tape & Reel: Refer to table on next page to determine pieces/reel



a	b	P	D	W	K	T
2.1±0.1	3.9±0.1	4.0±0.1	3.5±0.05	8.0±0.3	2.20	0.30



A	C	W1
178±2.0	58±2.0	8.4+1.5/-0.0

Dimensions: mm



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Pieces per Reel

Part Number	Reel Type	Quantity
AMCV-SS1206-090-501	Embossed Tape	3K
AMCV-SS1206-140-151	Embossed Tape	3K
AMCV-SS1206-140-251	Embossed Tape	3K
AMCV-SS1206-180-251	Embossed Tape	3K
AMCV-SS1206-180-501	Embossed Tape	2K
AMCV-SS1206-300-201	Embossed Tape	3K
AMCV-SS1206-300-501	Embossed Tape	2K
AMCV-SS1206-380-201	Embossed Tape	3K
AMCV-SS1206-380-501	Embossed Tape	2K
AMCV-SS1206-420-151	Embossed Tape	3K
AMCV-SS1206-420-181	Embossed Tape	3K
AMCV-SS1206-480-151	Embossed Tape	3K
AMCV-SS1206-480-501	Embossed Tape	2K
AMCV-SS1206-560-101	Embossed Tape	3K
AMCV-SS1206-560-151	Embossed Tape	3K
AMCV-SS1206-560-181	Embossed Tape	3K
AMCV-SS1206-560-501	Embossed Tape	2K
AMCV-SS1206-600-151	Embossed Tape	3K
AMCV-SS1206-600-501	Embossed Tape	2K
AMCV-SS1206-650-151	Embossed Tape	3K
AMCV-SS1206-650-181	Embossed Tape	3K
AMCV-SS1206-650-201	Embossed Tape	3K
AMCV-SS1206-650-501	Embossed Tape	2K
AMCV-SS1206-850-151	Embossed Tape	3K
AMCV-SS1206-850-401	Embossed Tape	2K
AMCV-SS1206-101-151	Embossed Tape	2K
AMCV-SS1206-101-401	Embossed Tape	2K

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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