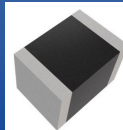


Varistors for Surge Protection



AMCV-SS0603

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Check Inventory



1.6 x 0.8 x 1.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Features

- MLV (multi-layer varistor) construction for fast response.
- 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

- DC Power rail protection.
- Protection for industrial sensors and I/O.
- Relay and solenoid inductive coil surge suppression.
- Low power DC motor drives.
- Communication equipment like wired ethernet interfaces and wireless RF power modules.
- Battery powered and energy storage systems.
- Embedded microcontroller I/O protection.

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	E _T	I _P	I _N
AMCV-SS0603-090-101	9	6.4	14.0[11.0 – 16.0]	30	1.0	0.10	100	60
AMCV-SS0603-140-300	14	10.0	19.0[16.0 – 22.0]	40	1.0	0.05	30	20
AMCV-SS0603-180-101	18	12.7	25.0[22.0 – 28.0]	45	1.0	0.10	100	60
AMCV-SS0603-180-121	18	12.7	25.0[22.0 – 28.0]	45	1.0	0.10	120	70
AMCV-SS0603-220-300	22	15.6	30.0[26.0 – 34.0]	50	1.0	0.05	30	20
AMCV-SS0603-300-300	30	21.3	42.0[37.0 – 46.0]	70	1.0	0.05	30	20
AMCV-SS0603-300-101	30	21.3	42.0[37.0 – 46.0]	70	1.0	0.10	100	60
AMCV-SS0603-380-300	38	30.0	50.0[46.0 – 54.0]	80	1.0	0.05	30	20
AMCV-SS0603-380-800	38	30.0	50.0[46.0 – 54.0]	80	1.0	0.08	80	50
AMCV-SS0603-480-600	48	34.1	60.0[54.0 – 67.0]	110	1.0	0.08	60	40
AMCV-SS0603-560-300	56	40.0	68.0[61.0 – 75.0]	125	1.0	0.05	30	20
AMCV-SS0603-600-300	60	46.0	76.0[69.0 – 83.0]	130	1.0	0.05	30	20
AMCV-SS0603-650-300	65	50.0	82.0[73.0 – 91.0]	135	1.0	0.05	30	20
AMCV-SS0603-850-200	85	60.0	100[90.0 – 110.0]	165	1.0	0.03	20	12
AMCV-SS0603-101-200	100	75.0	120[108.0 – 132.0]	200	1.0	0.03	20	12

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

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

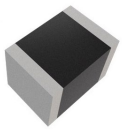


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1.6 x 0.8 x 1.0 mm

RoHS/RoHS II Compliant

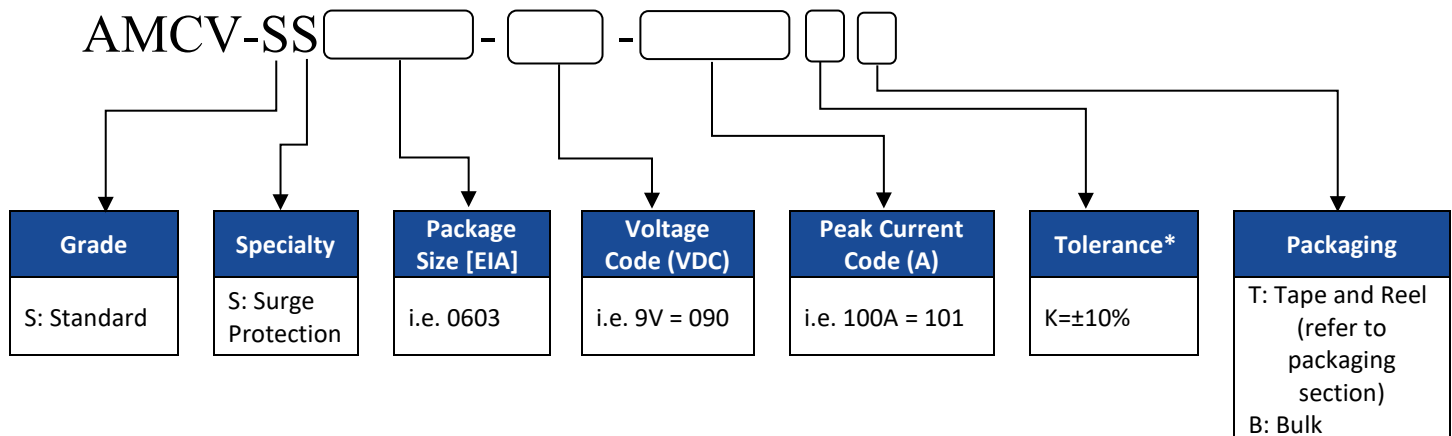
MSL Level = 1

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:

- a. Ambient Temperature: $20 \pm 15^\circ\text{C}$
- b. Relative Humidity: $65 \pm 20\%$
- c. Air Pressure: 86 kPa to 106 kPa

Part Number Identification



* Tolerance refers to varistor voltage.

Part Marking

No Marking

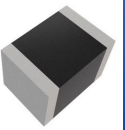


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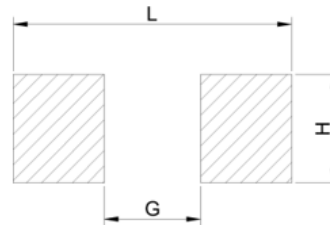
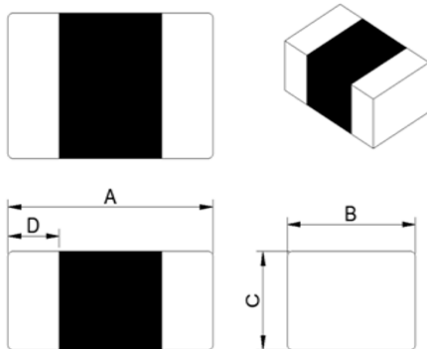


Check Inventory



1.6 x 0.8 x 1.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Mechanical Specifications

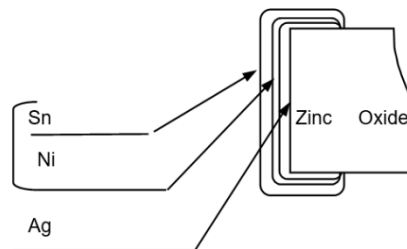
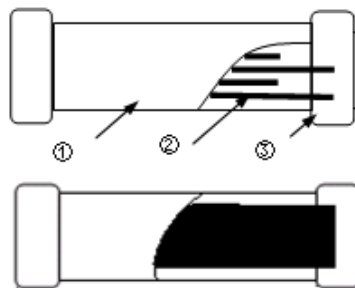


Recommended PCB Layout

Series	A	B	C	D	L (ref)	G (ref)	H (ref)
AMCV-SS0603	1.6±0.15	0.8±0.15	1.0 Max.	0.10 - 0.50	1.8 – 2.4	0.60 - 0.80	0.60 - 0.80

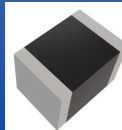
Dimensions: mm

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 Surge Protection



AMCV-SS0603

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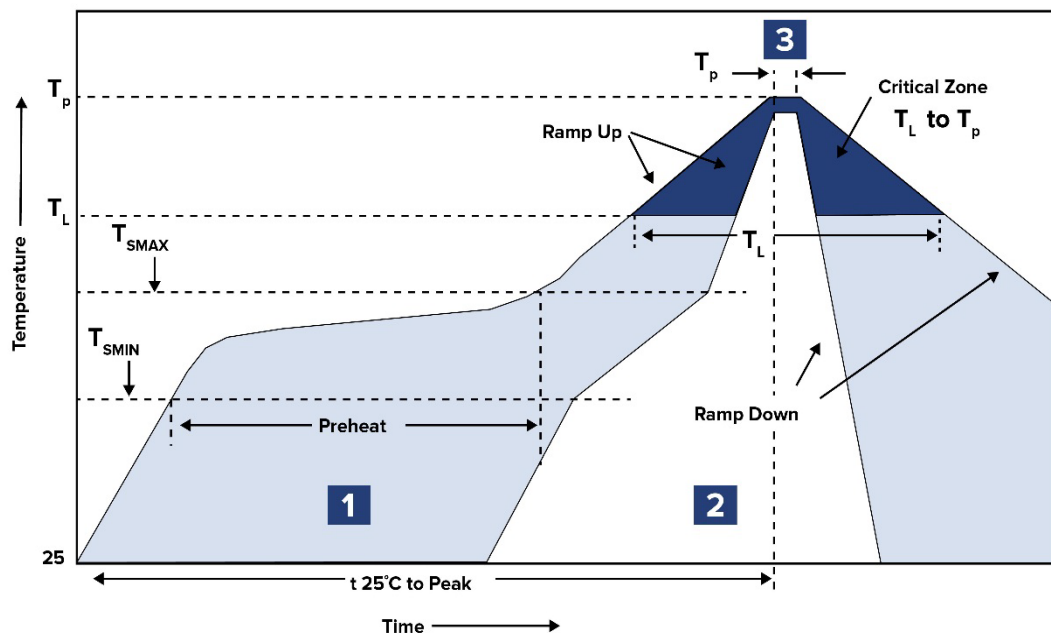


Check Inventory



1.6 x 0.8 x 1.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T_L $\geq 217^\circ\text{C}$	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

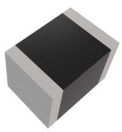


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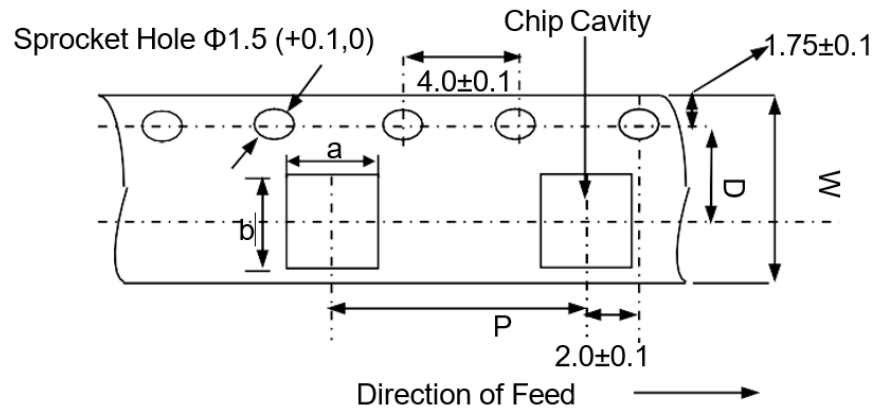
Check Inventory



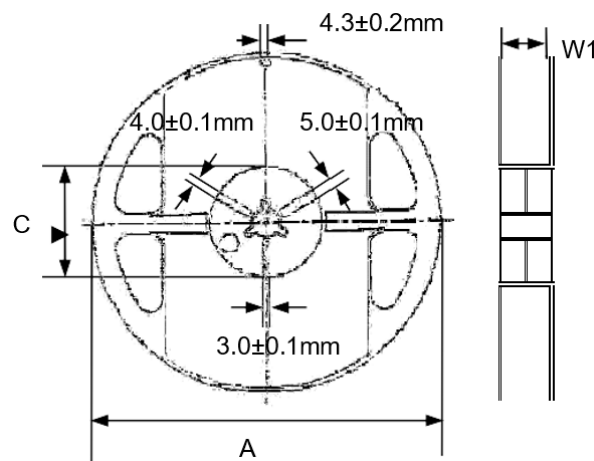
1.6 x 0.8 x 1.0 mm
RoHS/RoHS II Compliant
MSL Level = 1

Packaging

Tape & Reel: 4K pcs/reel



a	b	P	D	W
1.0±0.2	1.8±0.2	4.0±0.1	3.5±0.05	8.0±0.3



A	C	W1
178±2.0	58±2.0	8.4+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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