

AVLC 18S 02 003

Multilayer Chip Varistor



Overview

ESD Varistor is a component which acts as a non-conductor on the circuit in normal circumstances. When over-voltage is loaded, it becomes a conductor which diverts over-current from circuits to ground at critical voltage level.

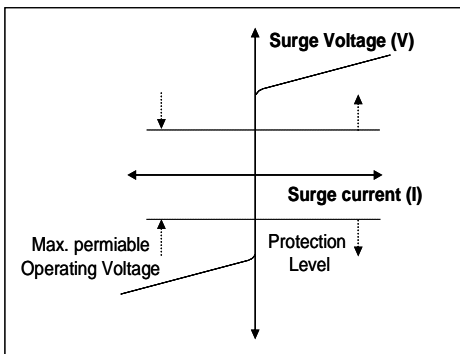


Fig 1 V-I Characteristic Curve

Features

- Meets IEC 61000-4-2 (ESD)
- Level 4 & IEC 61000-4-4 (EFT), Level 4 requirements
- ESD Protection > 25 KV
- Low capacitance for high frequency data line protection
- Fast response time < 1ns
- Available in tape and reel for automatic pick and place

Applications

- Mobile Phone & PDA
- Cellular Phone
- PCMCIA / Compact Flash Card
- RS-232 & RS-423 Data Lines
- USB Data Lines
- MCM Boards
- LCD Module

Model Description

AVLC	18	S	02	003
(1)	(2)	(3)	(4)	(5)

- (1) Series name : "AVLC" – Low capacitance type varistor
- (2) Maximum continuous working voltage (Vdc) : "18"- 18V
- (3) Breakdown voltage tolerance : "S" - special order
- (4) Chip size : 02means 04**02** (1.0 x 0.5 mm)
- (5) Capacitance : 003 means 3.0pF,

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Electrical characteristics

Part No.	Vdc ⁽¹⁾	Varistor voltage (Vn) @1mA DC	Leakage Current (IL) @Vdc	Cp (@ 1kHz, V _{rms} =0.5V)	Clamping Voltage (VC)	Peak Current (I _{max})	Transient Energy	Insulation Resistance (IR) @3.6V
	(V)	(V)	(μ A)	(pF)	(V)	(A)	(J)	(M Ω)
AVLC 18S 02 003	18 max	125 (90~160)	Max. 20	3 max ⁽²⁾	300	1	0.005	> 10

(1) Maximum continuous DC working voltage

(2) Cp measuring frequency of AVLC 18S 02 003 is 1 MHz

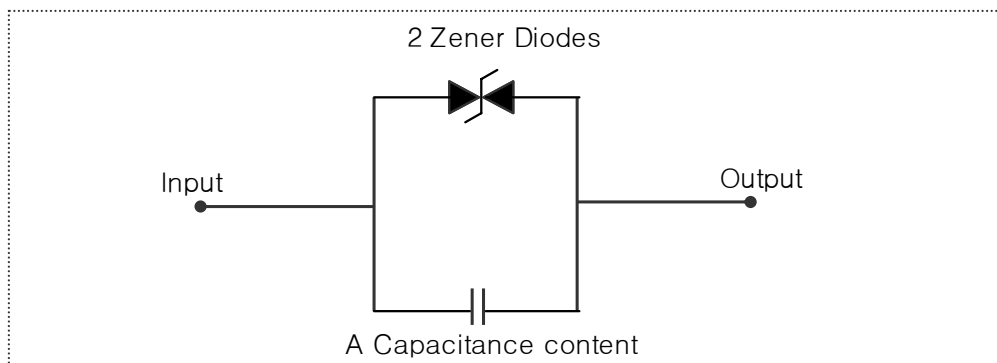
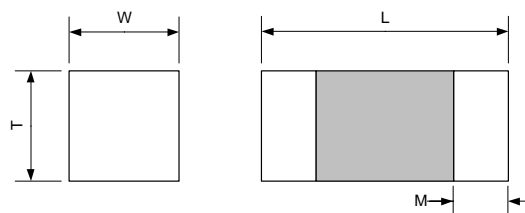


Fig.2 Equivalent Circuit

Appearance



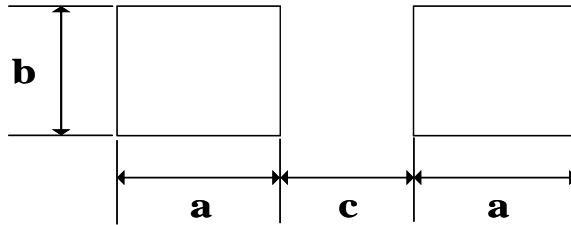
Symbol	L	W	T	M
Size (mm)	1.0 ± 0.10	0.5 ± 0.10	Max. 0.6	0.2 ± 0.10

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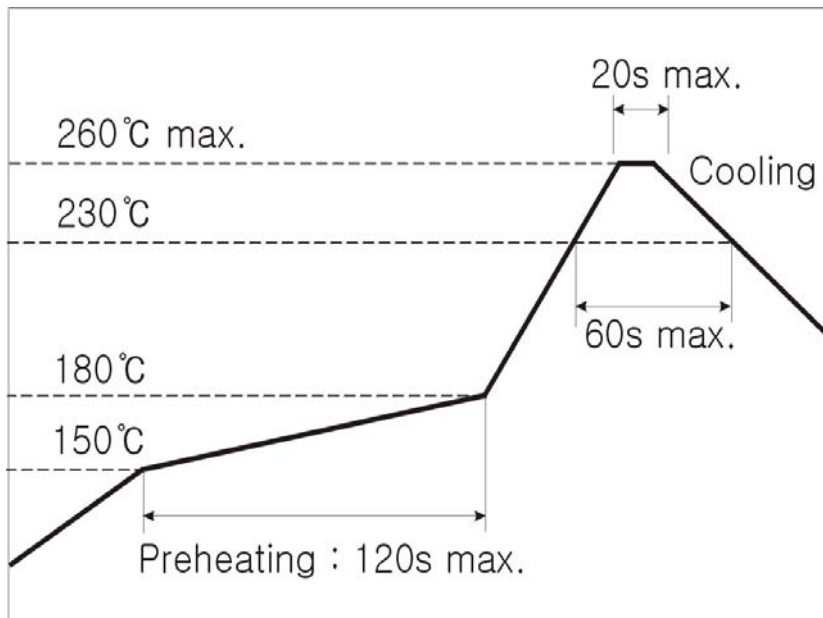
Recommended Land pattern (Typical Dimensions)



Symbol	a	b	c
Size (mm)	0.61	0.51	0.51

Recommended Soldering Profile

- Pb Free Solder Paste : Sn / Ag / Cu (96.5 / 3.0 / 0.5)

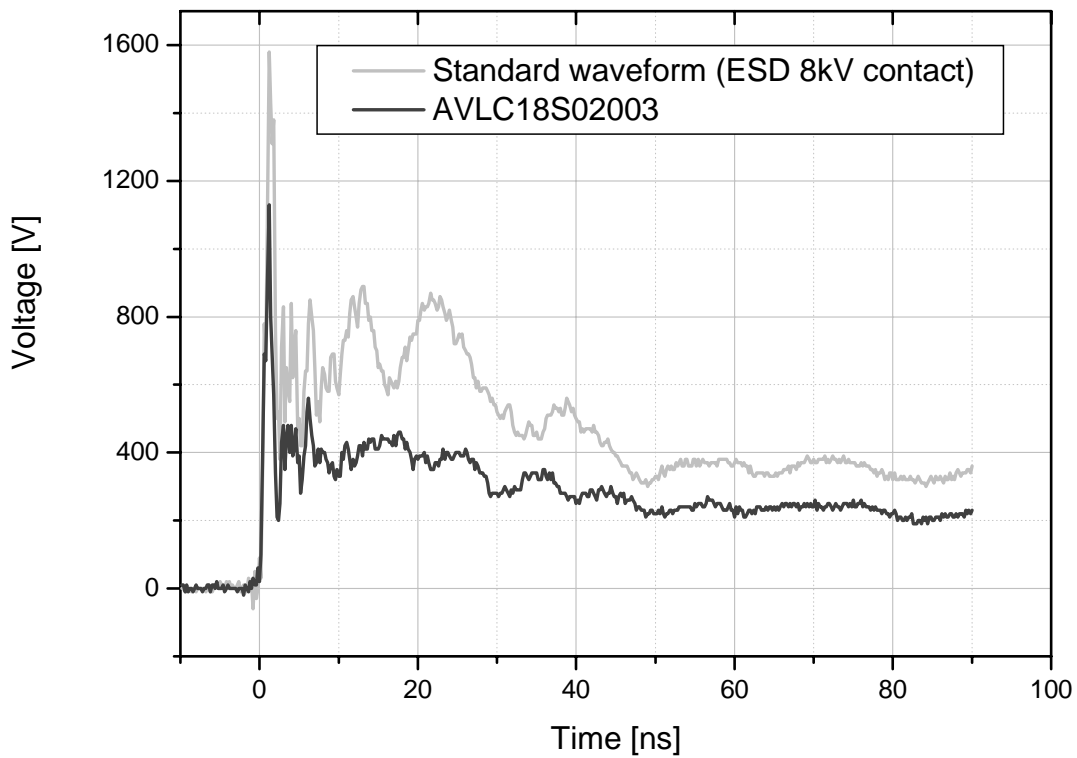
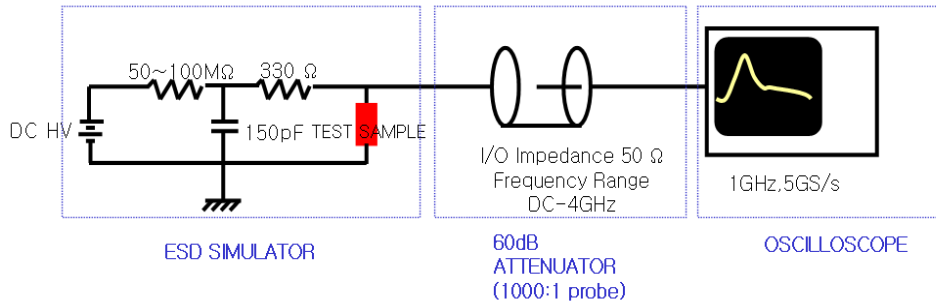


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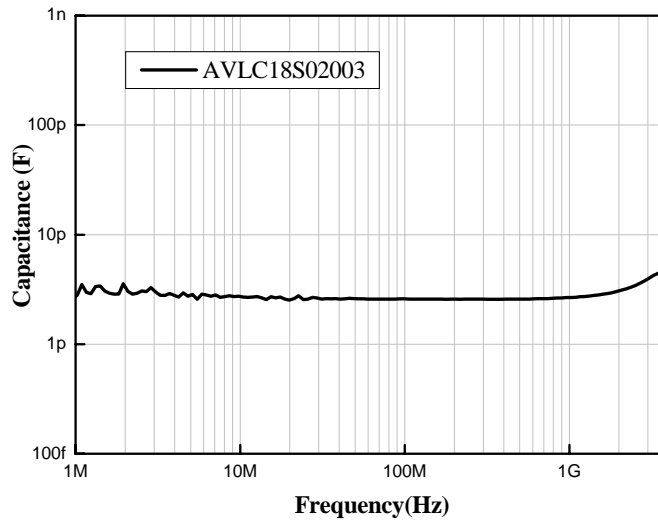


ESD Absorption Characteristics (Typical data)

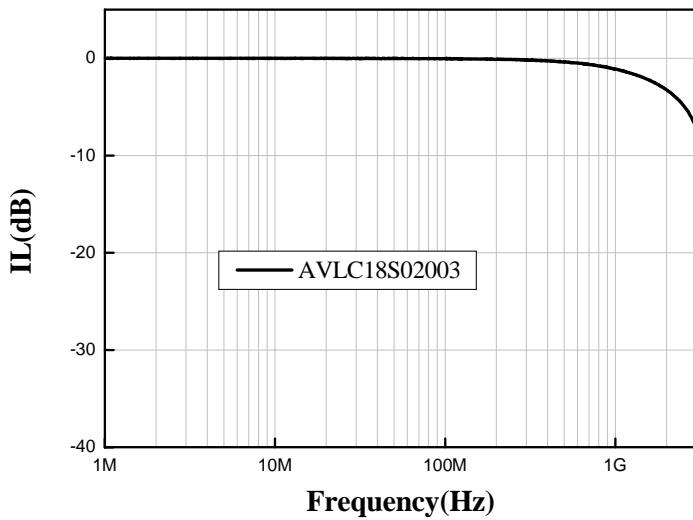
- Test setup



Capacitance vs Frequency Characteristics



Transmission Characteristics



Impedance vs Frequency Characteristics

