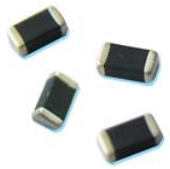
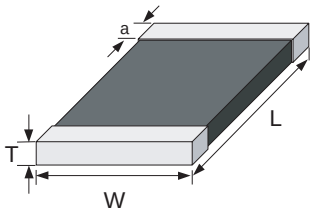
ESD Series SMD

This product is not recommended for new designs. Please refer to Littelfuse series MLE.



Dimensions



Multilayer Ceramic Transient Voltage Suppressors for ESD Protection

Features

Thin layer, high precise techniques
Lead free
Bi-directional clamping
Ultra low capacity
Available with Nickel/Tin end termination

Applications

Circuit board and ESD, EFT
Protection of:

- USB ports
- Keyboards
- Cellular Phones
- IEEE ports
- PDA/Handheld
- Sensors

WebLinks

Further infos see:
www.wickmann.com

Further technical infos see technical varistor file:
www.wickmann.com/download/techvaristor.pdf

Specifications

Packaging
Tape and Reel
T 7 inch reel 0402 (10.000 pcs.)
0603 (4.000 pcs.)
0805-1206 (3.000 pcs.)

Material
Body: Ceramic (ZnO)
Terminals: Ni/Sn plated (code "P")
Ag/Pt/Pd non plated
(code "N" on request)

Operating Temperature
-55 to +125°C

Solderability
acc. to IEC 60068-2-58
235°C, 2s

Soldering Heat Resistance
260°C, 10 sec. (IEC 60068-2-58)
280°C, 5 sec. (IEC 60068-2-58)

Temperature coefficient (αV) of clamping voltage (Vc) @ specified test current
<0.01%/°C

Standards
IEC 61000-4-2
MIL-STD-883C

Maximum Ratings (125°C)							Specifications (25°C)			
Type	Packaging	max. cont. working voltage $V_{M(DC)}$ (V)	max. non-repetitive surge current (8/20 µs) I_{TM} (A)	max. non-repetitive surge energy (10/1000 µs) W_{TM} (J)	max. ESD clamping voltage 8kV contact V_c (note 2)	max. clamping voltage at spec. current (8/20 µs) V_c (V) / V_c (V)	nominal voltage at 1mA (DC) test current $V_{N(DC)min.}$ (V)	$V_{N(DC)max.}$ (V)	typ. capacitance at 1MHz 1MHz $C_{typ.}$ (pF)	typ. inductance $L_{typ.}$ (nH)
WE0402ML180L		18,0	15	0,03	120	50 / 1A	22	28	30	1,0
WE0402ML180A		18,0	15	0,03	120	50 / 1A	22	28	40	1,0
WE0603ML180L		18,0	20	0,05	120	50 / 1A	22	28	40	1,0
WE0603ML180A		18,0	20	0,05	120	50 / 2A	22	28	100	1,0
WE0805ML180L		18,0	30	0,10	100	50 / 2A	22	28	100	1,0
WE0805ML180A		18,0	30	0,10	100	50 / 5A	22	28	500	1,0
WE1206ML180L		18,0	30	0,10	80	50 / 5A	22	28	500	1,0
WE1206ML180A		18,0	30	0,10	80	50 / 10A	22	28	800	1,0

Maximum Leakage $V_{M(DC)}$								
	WE0402ML180L	WE0402ML180A	WE0603ML180L	WE0603ML180A	WE0805ML180L	WE0805ML180A	WE1206ML180L	WE1206ML180A
	µA	µA	µA	µA	µA	µA	µA	µA
3.5V	0.08	0.08	0.08	0.08	0.15	0.15	0.3	0.3
5.5V	0.2	0.2	0.2	0.2	0.3	0.3	0.8	0.8
15V	1.5	1.5	3.0	3.0	3.0	3.0	3.0	3.0
18V	6.0	6.0	15.0	15.0	15.0	15.0	15.0	15.0

Note 1: For applications of 18$V_{M(DC)}$ or less higher voltages. Please contact WICKMANN for availibity.
Note 2: Maximum ESD clamping voltage tested with IEC 61000-4-2 Human Body Model discharge test circuit and direct discharge to device terminals
Note 3: Capacitance may be customized, please contact WICKMANN for availibility.

Order Information

Qty.	Order-Number	Type		Terminal Code	Packaging
		WE0402ML180	*L*	*P*	*T*

Specifications are subject to change without notice

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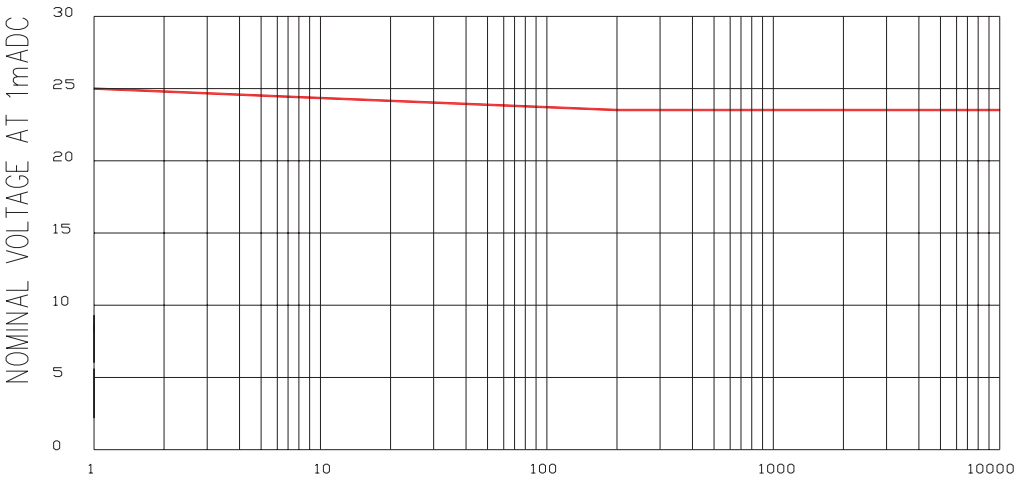
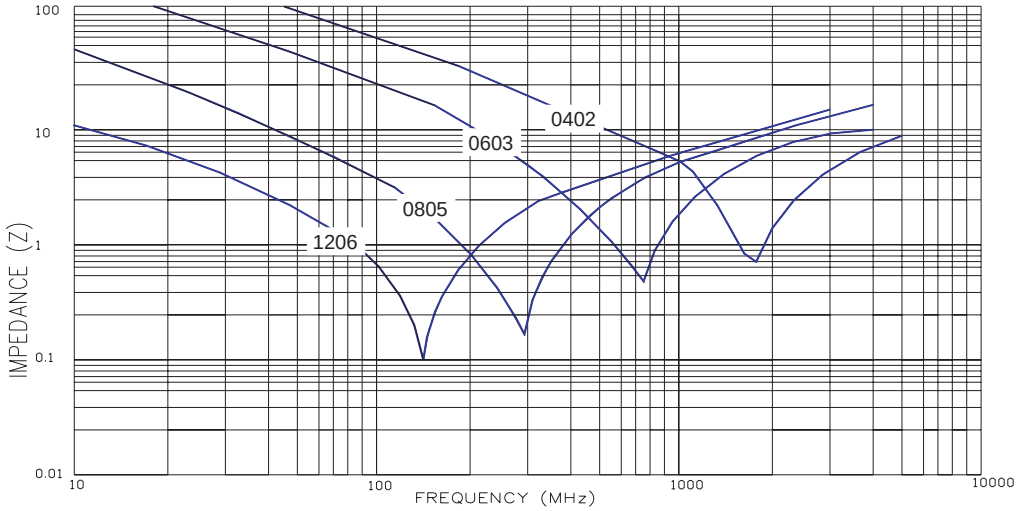
ESD Series SMD



NOMINAL VOLTAGE STABILITY TO MULTIPLE ESD IMPULSES
(8KV CONTACT DISCHARGES PER IEC 61000–4–2)



IMPEDANCE (Z) vs FREQUENCY
TYPICAL CHARACTERISTIC

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