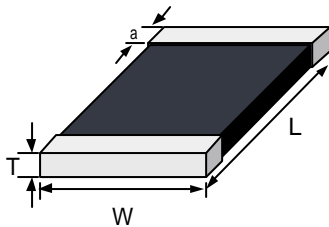


Automotive Series

Multilayer Ceramic Automotive Transient Voltage Suppressor Standard Capacity



Dimensions



Features

- Thin layer, high precise techniques
- Leadless, Surface chip form
- Variety of energy ratings available
- No temperature derating up to 125°C ambient
- High surge current capacity
- Stable protection level, mini. Leakage current
- Inherent bidirectional clamping
- Available with Nickel/Tin end termination
- No plastic or epoxy coating assures better than 94v-0 flammability rating

Applications

- Absorption of switching surge from various kinds of relay, trumpet, motors and electro-magnetic valves.
- Electrostatic discharge and spike noise suppression.
- Protect the electronic systems such as antilock brake systems, direct ignition systems, engine control, airbag control systems, wiper motor control and semiconductors of automobile.

Specifications

- Packaging**
Tape and Reel
T 7 inch reel (Note)
- 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)
- Response Time**
1-5ns
- Temperature coefficient (αV) of clamping voltage (V_c) @ specified test current**
<0.01%/°C
- Power dissipation**
1.0W max.
- Standards**
MIL-STD-750

Type	Maximum Ratings (125°C)				Specifications (25°C)				
	max. cont. working voltage	Jump start voltage max. (5minutes)	load dump energy (10 pulses)	max. clamping voltage at spec. current (8/20 μ s)	nominal varistor voltage at 10mA (DC) test current		typ. capacitance		typ. inductance
	$V_{M(DC)}$ (V)	V_{JUMP} (V)	W_{LD} (J)	V_C (V@A)	$V_{N(DC)min.}$ (V)	$V_{N(DC)max.}$ (V)	$C_{typ.}$ (pF)	$C_{typ.}$ (pF)	$L_{typ.}$ (nH)
JA0805ML180A	18	24.5	1.0	40 @ 1.5	23.0	32.0	760	650	1.5
JA1206ML180A	18	24.5	1.5	40 @ 1.5	23.0	32.0	1070	900	1.8
JA1210ML180A	18	24.5	3.0	40 @ 1.5	23.0	32.0	3215	2700	1.8
JA1812ML180A	18	24.5	6.0	40 @ 5	23.0	32.0	5300	4500	2.5
JA2220ML180A	18	24.5	25.0	40 @ 10	23.0	32.0	1320	1100	3.0
JA2220ML380A	38	50.0	30.0	77 @ 10	48.5	56.0	4720	4000	3.0

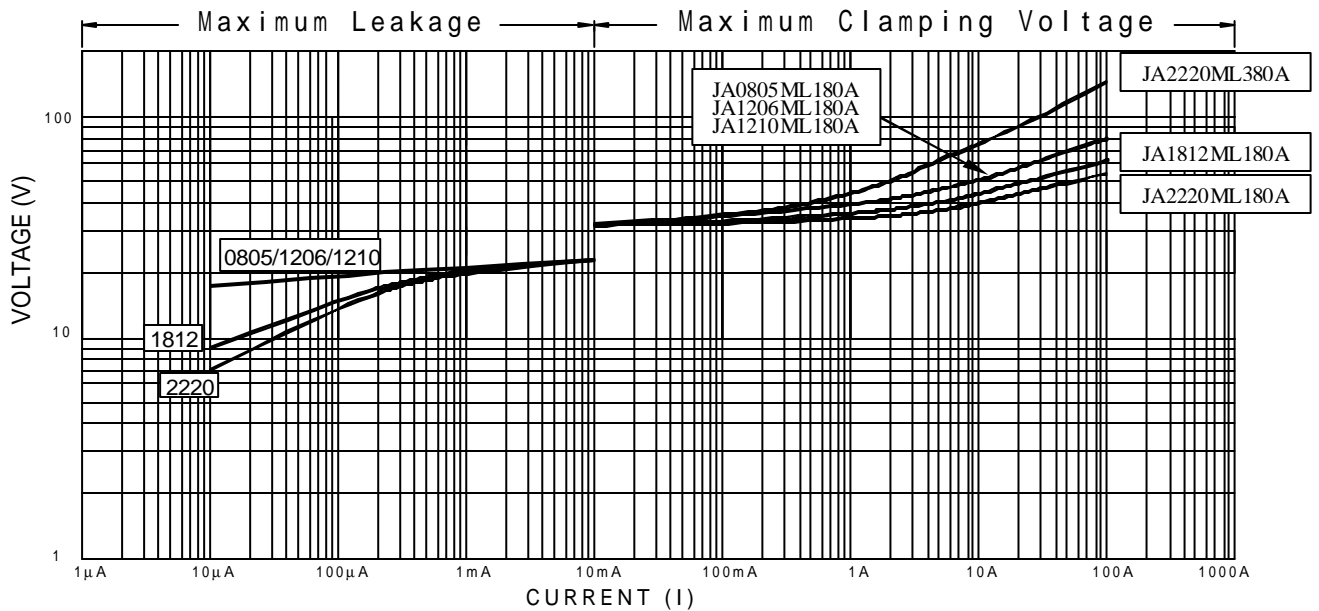
Order Information

Qty.	Order-Number	Type	Terminal Code	Packaging
		JA0805ML180	A	P
			P	T

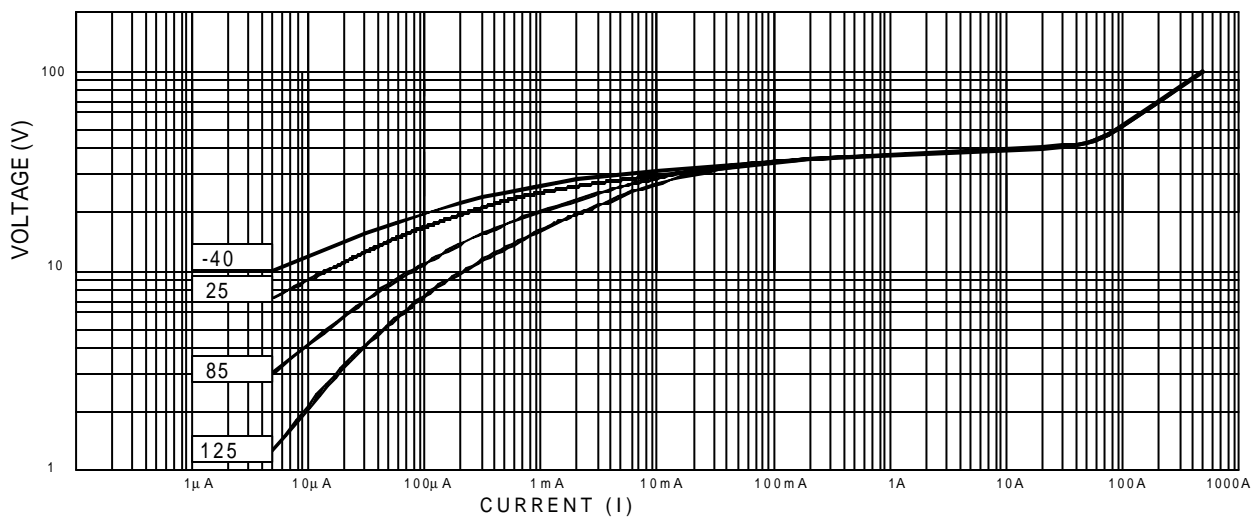
Specifications are subject to change without notice

Automotive Series

V/I Characteristics Curves



Maximum Leakage Current/Clamping Voltage Curve for Automotive Series at 25



Typical V-I Characteristics of The JA2220ML180A at -40 , 25 , 85 and 125