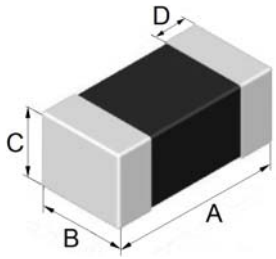
SMD Transient Voltage Suppressors TVSM0805LCXV-Series

1. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)
0805	2.00±0.20	1.25±0.15	1.20 max.	0.40±0.20

2. Part Numbering

TVSM	0805	LCX	V	330	-	0R3	J	□
A	B	C	D	E		F	G	H

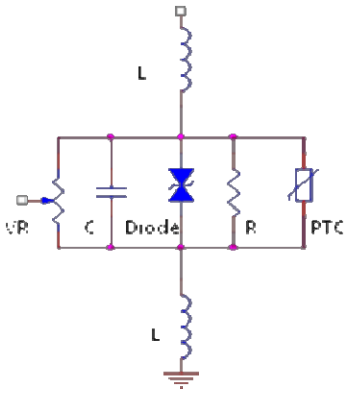
A: Series — Multilayer Varistor
B: Dimension
C: Category Code — Load Dump Protection
D: Product Grade — Vehicle Grade
E: Voltage Code — 330=Breakdown Voltage 33V
F: Characteristic Code — 0R3=Maximum Energy Absorption 0.3J
G: Characteristic Unit Code — J=Joule
H: Inner Code

3. Features

1. RoHS compliant
2. SMD type
3. Meet IEC61000-4-5 surge 100A (@8/20μs)
4. Qualified based on AEC-Q200
5. Bidirectional and symmetrical V/I characteristics
6. Operating temperature range : -55~+125℃
7. Multi-Layers construction provides higher power dissipation

Equivalent Circuit

L	**Body Inductance**
C	**Device Capacitance**
VR	**Voltage Variable Resistor**
R	**Insulation Resistor**
Diode	**Voltage Clamped**
PTC	**for Low Leakage Current**



4. Rating and Characteristics

TAI-TECH Part Number	Continuous Operating Voltage (Max.)	breakdown Voltage (V)	Clamping Voltage (V) (Max.)	Peak Current (A)	Maximum energy absorption (J)	Response Time (nsec)	Leakage Current	Typical Capacitance Value @1K (pF)
TVSM0805LCXV330-0R3J	20 V_{AC} 26 V_{DC}	31.3~36.3	54	100	0.3	1	50μA (at initial state) 200μA (after surge test)	220

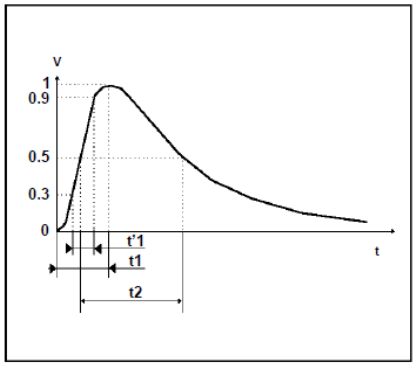
Notes :

1. The breakdown voltage was measured at 1mA.
2. The clamping voltage was measured at 8/20μs standard current, 0805(1A).
3. The peak current was tested at 8/20μs waveform.
4. The leakage current was tested at 80% breakdown voltage.
5. The capacitance value only for customer reference, it's not formal specification.

4-1. Reference Data

Parameter	Value
Operation ambient temperature	-55~125℃
Storage temperature range	-55~150℃
Body	Nano Special Ceramic
End termination	Ag/Ni/Sn
Packaging	Reel
Complies with standard	IEC61000-4-5
Complies with RoHs standard	Yes
Lead content	< 1000 ppm
Marking	None

5. Surge Wave Form



8/20μs waveform current

IEC61000-4-5 Standards

SEVERITY LEVEL	t1 (=1.67t'1)	t2
1	8μs	20μs