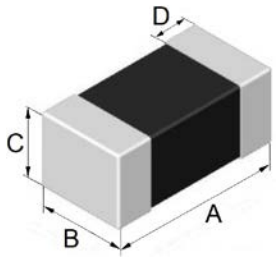
SMD Transient Voltage Suppressors TVSM0604SHRL-Series

1. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)
0604	1.60±0.15	1.05±0.10	1.15 max.	0.25±0.10

2. Part Numbering

TVSM 0604 SHR L 271 - 252 V □

A B C D E F G H

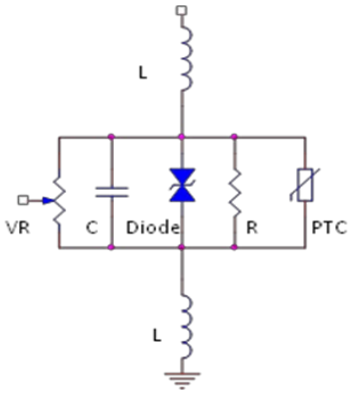
A: Series Multilayer Varistor
B: Dimension
C: Category Code High Performance Surge Protection with Ring Wave Surge Protection
D: Product Grade L =Lighting Grade
E: Voltage Code 271=Breakdown Voltage 270V
F: Characteristic Code 252=Ring Wave Voltage 2.5KV
G: Characteristic Unit Code V=Voltage
H: Inner Code

3. Features

1. RoHS compliant
2. SMD type body size 0604
3. Meet IEC61000-4-12 / UL1449 standards
4. Bidirectional and symmetrical V/I characteristics
5. Large withstanding ring wave voltage capability.
6. Operating temperature range : -40~+125℃
8. 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**

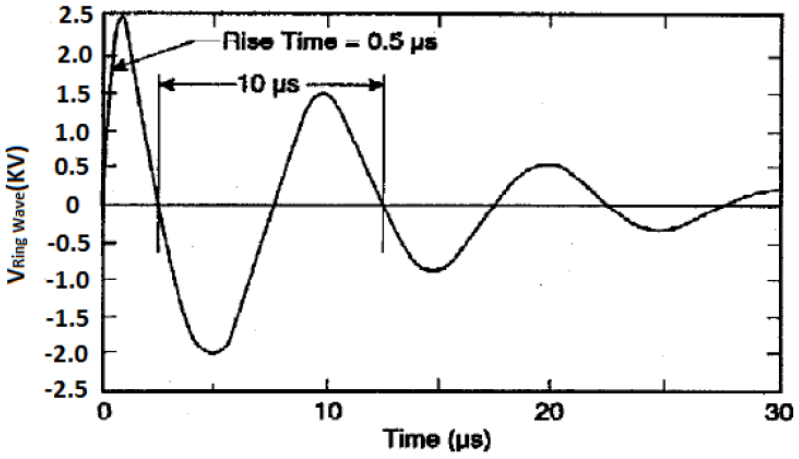


4. Technology Data

TAI-TECH Part Number	Maximum allowable continuous AC voltage @ 50-60Hz V_{RMS} (V)	Maximum allowable continuous DC voltage V_{DC} (V)	Breakdown voltage V_B (V)	Maximum allowable clamping voltage V_C (V)	Maximum ring wave voltage (@30Ω) $V_{Ring\ wave}$ (KV)
TVSM0604SHRL271-252V	175	225	270(±10%)	450	2.5

Notes:
1. The breakdown voltage was measured at 1mA.
2. The clamping voltage was measured at 8/20μs standard current, 0604(1A).

4-1. Reference Data			
ITEM	Symbol	Unit	Value
Typical capacitance value measured at 1KHz	C	pF	20
Response time	T_{RISE}	ns	< 1
Non-linear coefficient	α		>15
Leakage current at V_B x 80% (at initial state)	I_{VB}	μA	< 50
Leakage current at V_B x 80% (after surge test)	I_{VBA}	μA	< 200
Operation ambient temperature	T_{OPT}	℃	-40~+125
Storage temperature range	T_{STG}	℃	-40~+150
4-2. Other Data			
Body			Nano special ceramic
End termination			Ag/Ni/Sn
Packaging			Reel
Complies with standards			IEC61000-4-12, UL 1449, File No. E334409-VZCA2
Complies with RoHs standard			Yes
Lead content			< 1000 ppm
Marking			None

Notes:
1. The capacitance value only for customer reference, it's not formal specification.

5. Ring Wave Waveform