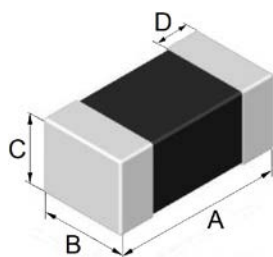


SMD Transient Voltage Suppressors

TVSM0604SHUL-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 SHU L 271 - 600 A □

A B C D E F G H

A: Series

Multilayer Varistor

B: Dimension

C: Category Code

High Performance Surge Protection with Safety Certification

D: Product Grade

L =Lighting Grade

E: Voltage Code

271=Breakdown Voltage 270V

F: Characteristic Code

600=Peak Current 60A

G: Characteristic Unit Code

A=Amp

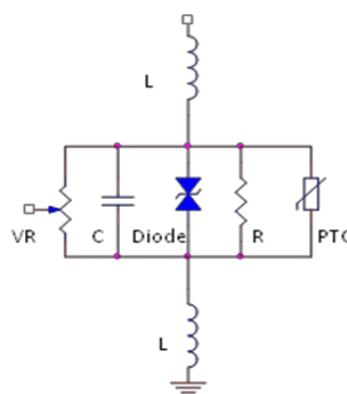
H: Inner Code

3. Features

1. RoHS compliant
2. SMD type body size 0604
3. Meet IEC61000-4-5 and UL1449 standards
4. Bidirectional and symmetrical V/I characteristics
5. Large withstanding surge current capability
6. Operating temperature range : -40~+125°C
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. Technology Data

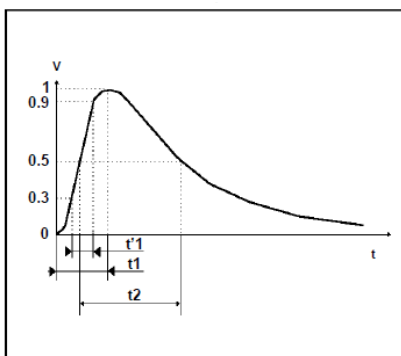
TAI-TECH Part Number	Maximum allowable continuous AC voltage @ 50-60Hz V_{RMS} (V)	Maximum allowable continuous DC voltage V_{DC} (V)	Breakdown voltage V_B (V)	Maximum allowable clamping voltage V_C (V)	Maximum peak current (8/20 μ s) (1 time) I_{Peak} (A)	Maximum peak current (8/20 μ s) (15 time) I_{Peak} (A)	Typical capacitance value measured at 1kHz C (pF)
TVSM0604SHUL271-600A	175	225	270($\pm 10\%$)	450	60	50	40
TVSM0604SHUL431-300A	275	350	430($\pm 10\%$)	705	30	20	15

Notes:

1. The breakdown voltage was measured at 1mA.
2. The clamping voltage was measured at 8/20 μ s standard current, 0604(1A).
3. The capacitance value only for customer reference, it's not formal specification.

4-1. Reference Data			
ITEM	Symbol	Unit	Value
Response time	T_{RISE}	ns	< 1
Non-linear coefficient	α		>15
Leakage current at $V_B \times 80\%$ (at initial state)	I_{VB}	μ A	< 50
Leakage current at $V_B \times 80\%$ (after surge test)	I_{VBA}	μ A	< 200
Operation ambient temperature	T_{OPT}	$^{\circ}$ C	-40~+125
Storage temperature range	T_{STG}	$^{\circ}$ C	-40~+150
4-2. Other Data			
Body		Nano special ceramic	
End termination		Ag/Ni/Sn	
Packaging		Reel	
Complies with standards		IEC61000-4-5 UL 1449, File No. E334409-VZCA2	
Complies with RoHs standard		Yes	
Lead content		< 1000 ppm	
Marking		None	

5. Surge Wave Form



IEC61000-4-5 Standards

SEVERITY LEVEL	t1 ($\approx 1.67t'1$)	t2
1	10 μ s	1000 μ s
2	8 μ s	20 μ s

8/20 μ s waveform current