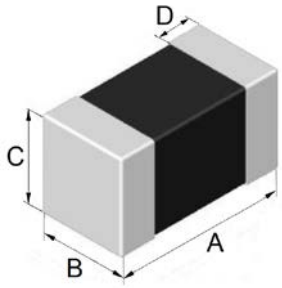
SMD Transient Voltage Suppressors TVSM1206SHUL-Series

1. Dimension



Series	A(mm)	B(mm)	C(mm)	D(mm)
1206	3.20+0.60/-0.20	1.60+0.40/-0.20	1.90 max.	0.50±0.20

2. Part Numbering

TVSM 1206 SHU L 241 - 351 A □

A B C D E F G H

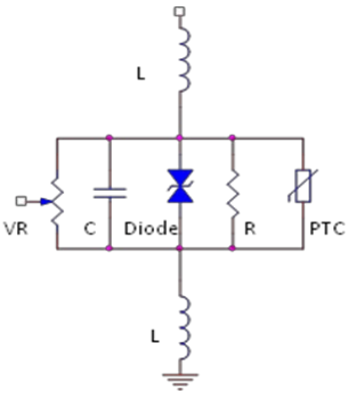
A: Series — Multilayer Varistor
B: Dimension
C: Category Code — High Performance Surge Protection with Safety Certification
D: Product Grade — L =Lighting Grade
E: Voltage Code — 241=Breakdown Voltage 240V
F: Characteristic Code — 351=Peak Current 350A
G: Characteristic Unit Code — A＝Amp
H: Inner Code

3. Features

1. RoHS compliant
2. SMD type body size 1206
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℃
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

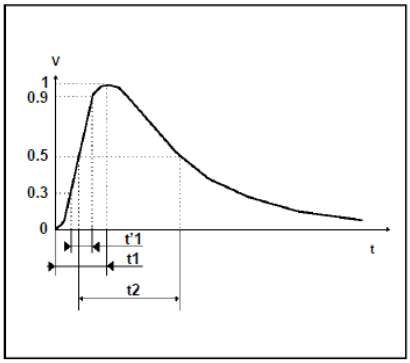
TAI-TECH Part Number	Maximum allowable continuous AC voltage @ 50-60Hz V_{RMS} (V)	Maximum allowable continuous DC voltage V_{DC} (V)	Breakdown voltage V_B (V)	Maximum allowable clamping voltage V_C (V)	Maximum peak current (8/20μs) (1 time) I_{Peak} (A)	Maximum peak current (8/20μs) (15 time) I_{Peak} (A)	Typical capacitance value measured at 1kHz C (pF)
TVSM1206SHUL241-351A	150	200	240(±10%)	395	350	200	180
TVSM1206SHUL431-201A	275	350	430(±10%)	705	200	100	60

Notes:

1. The breakdown voltage was measured at 1mA.
2. The clamping voltage was measured at 8/20μs standard current, 1206(1A).
3. The peak current was tested at 8/20μs waveform.
4. 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 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			IEC61000-4-5 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 (=1.67t'1)	t2
1	10μs	1000μs
2	8μs	20μs

8/20μs waveform current