SuperTVS – 200W Transient Voltage Suppressor

1. Features

- Glass passivated chip
- 200 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- Low leakage
- Very fast response time
- Uni and Bidirectional unit
- IEC 61000-4-2(ESD)±30KV(air)
  ±30KV(contact)

2. Mechanical Data

- Case: Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- RoHS Compliant
- Whisker test is conducted based on JEDEC JESD201A per its table 4a and 4c
- Moisture Sensitivity: Level 1 per J-STD-020
- IEC-61000-4-2 ESD 30kV (Air), 30kV (Contact)
- ESD protection of data lines in accordance with IEC 61000-4-2
- EFT protection of data lines in accordance with IEC 61000-4-4

3. Marking Information

BI- directional	UNI-directional	Marking
		XXXX= Product type marking code (See Electrical Characteristics Table)
		

4. Maximum Ratings and Characteristics

Ratings at 25° ambient temperature unless otherwise specified

Rating	Symbol	Value	Units
Peak pulse power dissipation at 10/1000us waveform (Note1)	P_{PP}	200	W
Peak pulse current of at 10/1000us waveform (Note1)	I_{PP}	22.7	A
Power dissipation on infinite heatsink at TL = 75 °C	P_D	0.4	W
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) (Note2)	I_{FSM}	20	A
Maximum instantaneous forward voltage at 10 A for unidirectional only	V_F	3.5	V
Operating junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	℃

Notes：

1. Non-repetitive current pulse, per Fig.5 and derated above TA=25℃ per Fig.1.
2. 8.3ms single half sine-wave, or equivalent square wave, duty cycle=4 pulses per minutes maximum.

Part Number	Part Number	Marking		Reverse Stand off Voltage VR	Breakdown Voltage VBR (Volts) @ IT		Test Current IT	Maximum Clamping Voltage VC @ Ipp	Maximum Peak Pulse Current Ipp	Maximum Reverse Leakage IR @ VR
UNI	BI	UNI	BI	(V)	MIN	MAX	(mA)	(V)	(A)	(μA)
SMF3.3A	SMF3.3CA	FD	KD	3.3	4.22	6.58	10	8.8	22.7	500

5. Ratings and Characteristic Curves (TA =25˚C unless otherwise noted)

Figure 1. Pulse Derating Curve

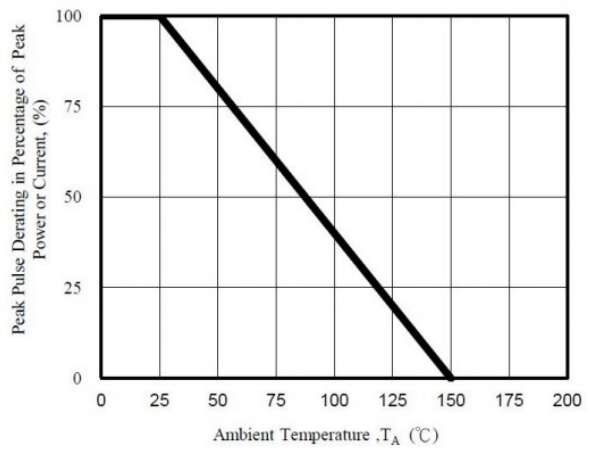


Figure 2 Maxmum Non-Repetitive Surge Current

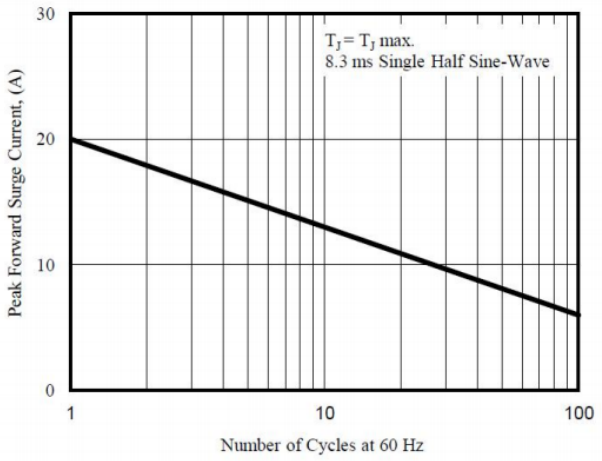


Figure 3 Steady State Power Derating Curve

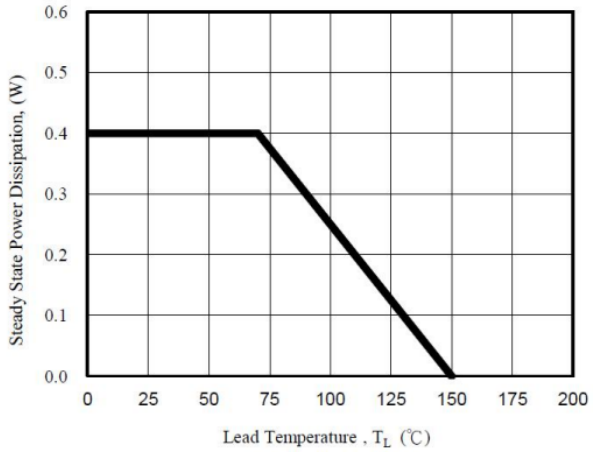


Figure 4 Peak Pulse Power Rating Curve

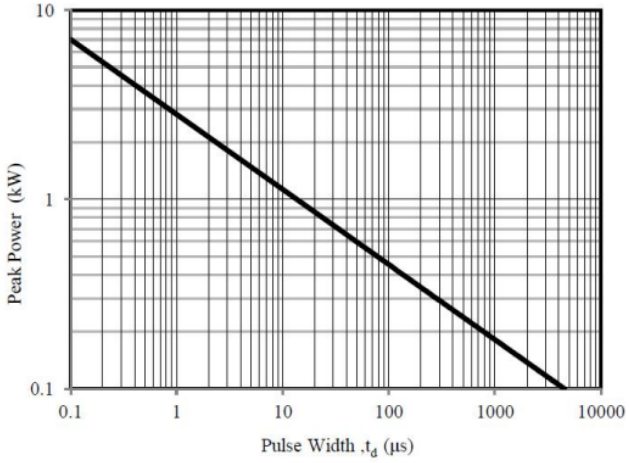


Figure 5 Pulse Waveform

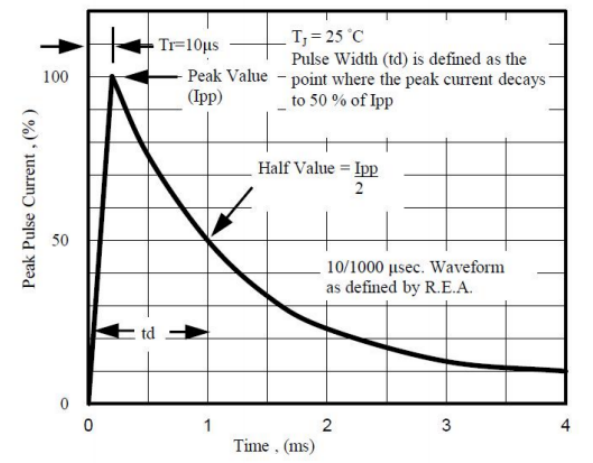
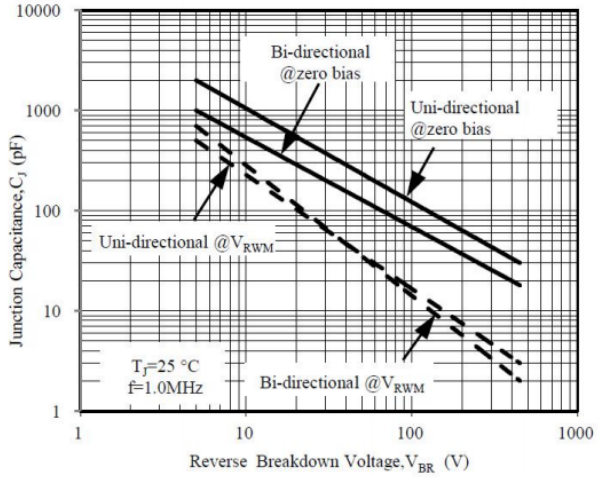
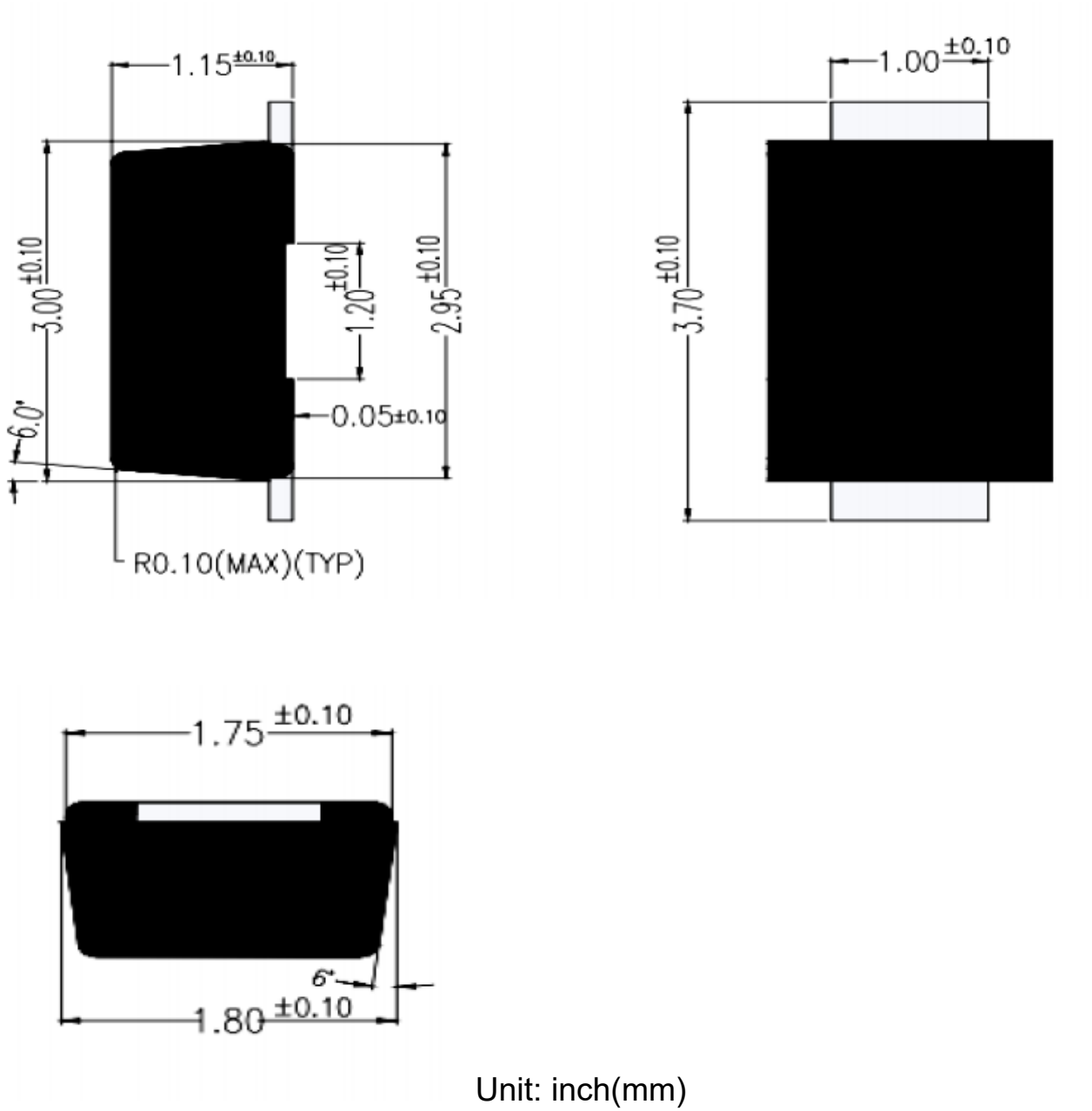


Figure 6 Typical Junction Capacitance



6. Dimension (SOD-123FL)



Unit: inch(mm)

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