

Surface mount transient voltage suppressor power 170 watts

Stand-Off Voltage: 440 V

FEATURES

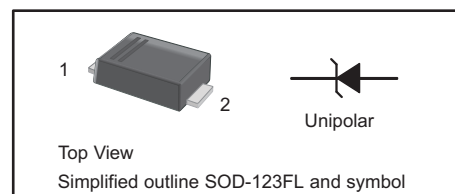
- For surface mounted applications in order to optimize board space.
- Low profile package
- Glass passivated junction
- Excellent clamping capability
- Low incremental surge resistance

MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight:15mg/0.00048oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Maximum Ratings and Electrical characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on TA=25°C (Note 1,2,5, Fig1)	P_{PPM}	170	W
Peak Forward Surge Current (Note 3)	I_{FSM}	20	A
Peak Pulse Current on 10/1000 us waveform (Note 1 Fig 2)	I_{PPM}	see Table1	A
Steady State Power Dissipation (Note 4)	$P_{M(AV)}$	1	W
Typical Thermal Resistance(Note 6)	$R_{\theta JA}$	105	°C/W
Operating Junction and Storage Range	T_j, T_{stg}	-55 to +150	°C

NOTES

1. Non-repetitive current pulse per Fig 3 and derated above $T_a=25^\circ\text{C}$ per Fig 2
2. Mounted on 5mm^2 copper pads to each terminal
3. 8.3ms single half sinewave, or equivalent square wave duty cycle=4 pulses per minutes maximum
4. lead temperature at $T_l=75^\circ\text{C}$
5. Peak pulse powe. waveform is $t_p=10/1000\text{us}$
6. P.C.B. mounted with 0.2" X 0.2" (5 X 5 mm) copper pad areas.



Characteristics at Ta = 25°C

Table 1

Type	Marking	V _{RWM}	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current
			V _{BR} @ I _T					
			Min	Max	I _T	I _R @ V _{RWM}	V _C @ I _{PP}	I _{PP}
UNI	UNI	V	V	V	mA	μA	V	A
SMF1.7J440A	E44	440	492	543	1	1	713	0.25

Fig.1 Peak Pulse Power Rating Curve

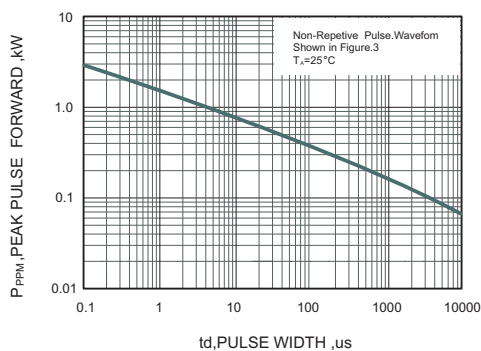


Fig.2 Forward Current Derating Curve

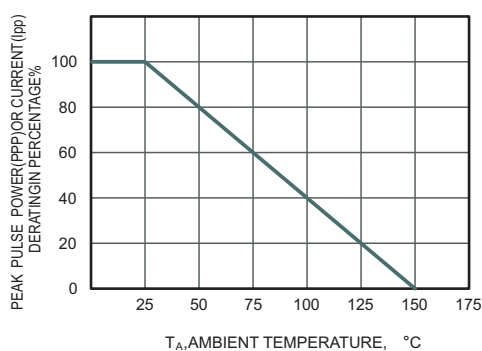


Fig.3 Pulse Waveform

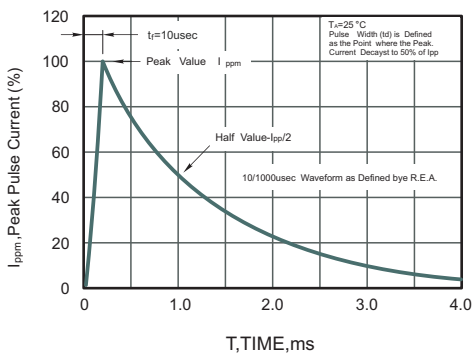
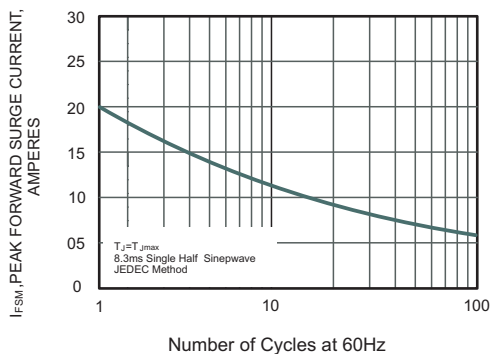


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

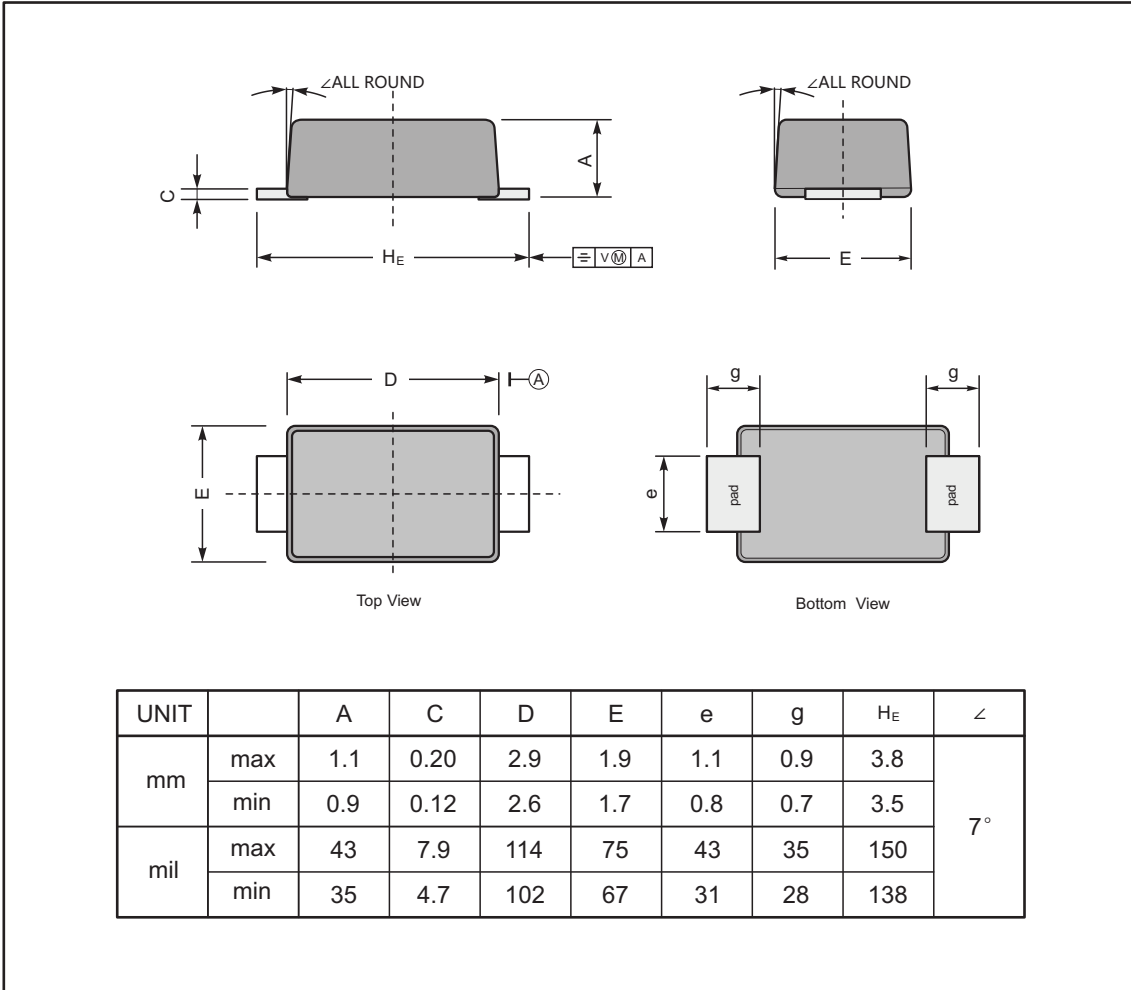




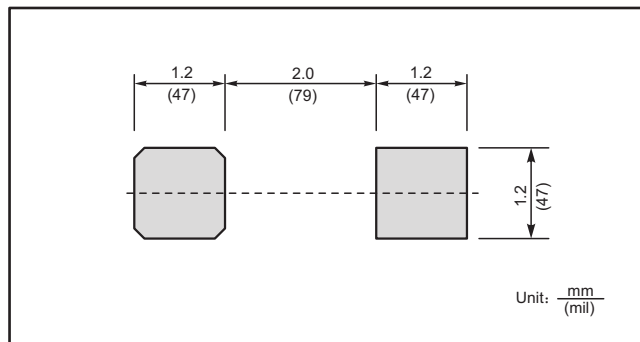
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123FL



The recommended mounting pad size





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