SMF6.5(C)A-T13

Transient Voltage Suppressor

Features

- For surface mounted applications in order to optimize board space.
- Low profile package.
- Glass passivated junction.
- Low inductance.
- Plastic package has Underwriters Laboratory Flammability.



SOD-123FL
(SMF)

Mechanical Data

- Case': JEDEC SOD-123FL/SMF molded plastic body
- Terminals: Solderable per MIL-STD-750, Method 2026A
- Polarity: Polarity symbol marking on body
- Mounting Position: Any
- Weight: 0.00∈7ounce,0.02grams
- Marking: Date Code and Marking Code See Page 2

Applications

- I/O interface
- AC/DC power supply
- Low frequency signal transmission line (RS232,RS485,etc.)

Maxmim Ratings (Ta=25°C unless otherwise noted)

Peak pulse power dissipation at 10/1000μs waveform (Note1, Note2, Fig.1)	P_{PPM}	200	W
Peak pulse current	I_{PP}	21.7	A
Steady state power dissipation at T_A=50℃ (Fig.5)	$P_{M(AV)}$	1.0	W
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load, (JEDEC Method) (Note3, Fig.6)	I_{FSM}	30	A
Operating junction and Storage Temperature Range.	T_J,T_{STG}	-65 to +150	°C
Typical thermal resistance junction to lead	$R_{\theta JL}$	38	°C/W
Typical thermal resistance junction to ambient	$R_{\theta JA}$	180	°C/W

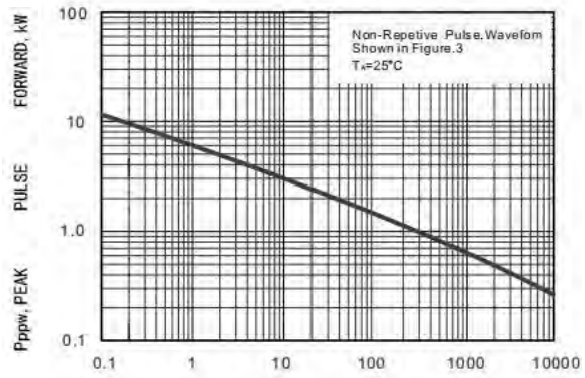
Notes:1. Non-repetitive current pulse, per Fig.3 and derated above TA=25℃ per Fig.2.
2. Mounted on 5.0mm×5.0mm (0.03mm thick) copper pads to each terminal.
3. 8.3ms single half sine-wave, or equivalent square wave, duty cycle=4 pulses per minutes maximum.

Electrical Characteristics (Ta=25°C)

Part Number		Device Marking Code		Reverse Stand- Off Voltage	Breakdown Voltage @I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RWM}
Unidirectional	Bidirectional	UNI	BI	V_{RWM}(V)	V_{BR}(V)	I_T(mA)	V_C(V)	I_{PP}(A)	I_R(μA)
SMF6.5A-T13	SMF6.5CA-T13	AK	NK	6.5	7.22-7.98	10	11.2	21.7	250

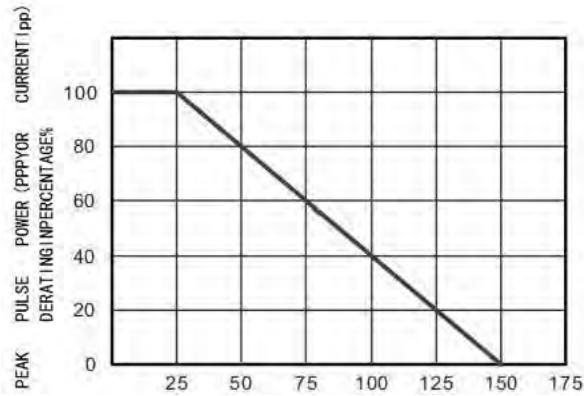
Ratings and Characteristic Curves (T_A=25°C unless otherwise noted)

Fig.1 Peak Pulse Power Rating Curve



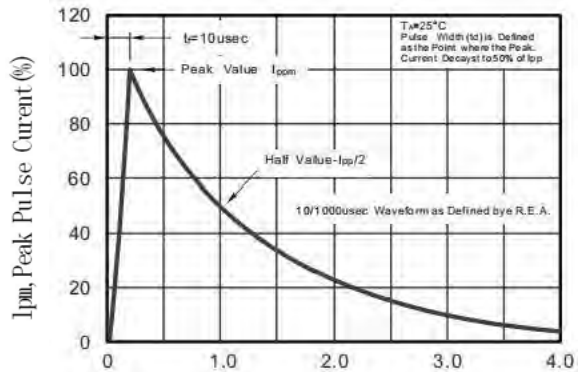
td,PULSE WIDTH ,us

Fig.2 Forward Current Derating Curve



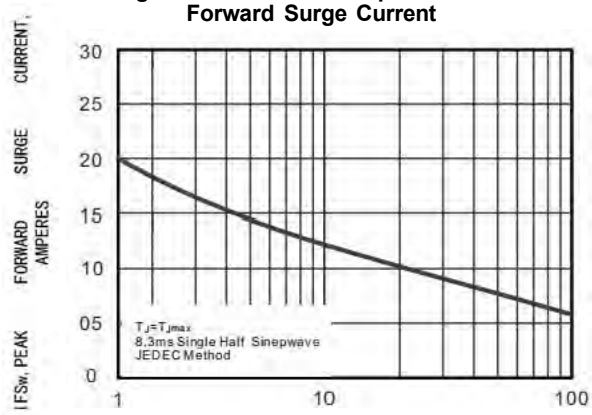
TA,AMBIENT TEMPERATURE,C

Fig.3 Pulse Waveform



T,TIME,ms

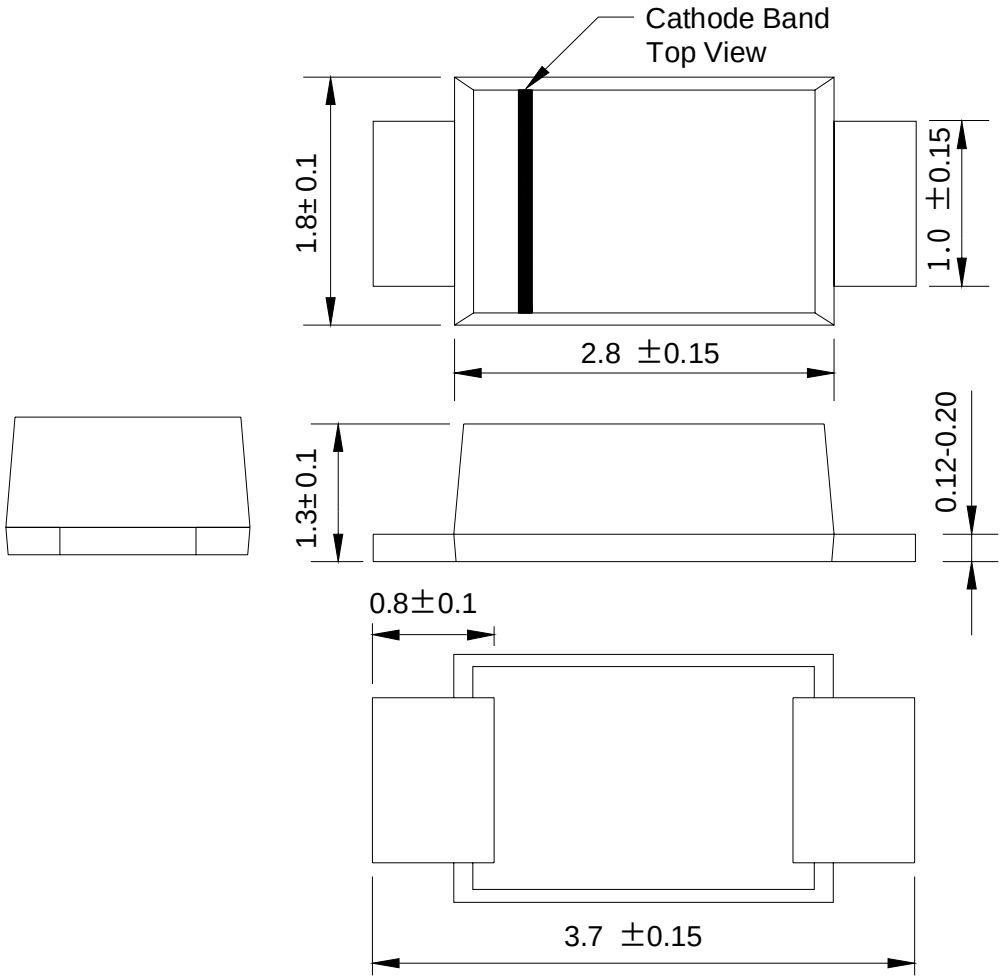
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



Number of Cycles at 60Hz

Package Outline Dimensions

SOD-123FL(SMF)



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