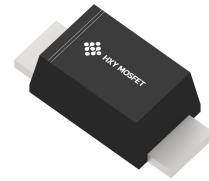




Features

- 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±0.007ounce, 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.)

Maximum 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°C (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 _{θJL}	38	°C/W
Typical thermal resistance junction to ambient	R _{θJA}	180	°C/W

Notes: 1. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C 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 ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Peak Pulse Power Rating Curve

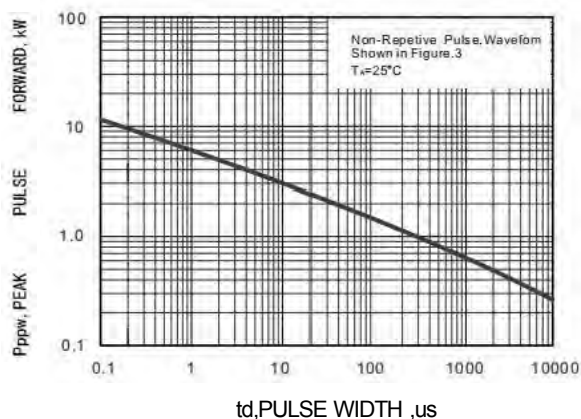


Fig.2 Forward Current Derating Curve

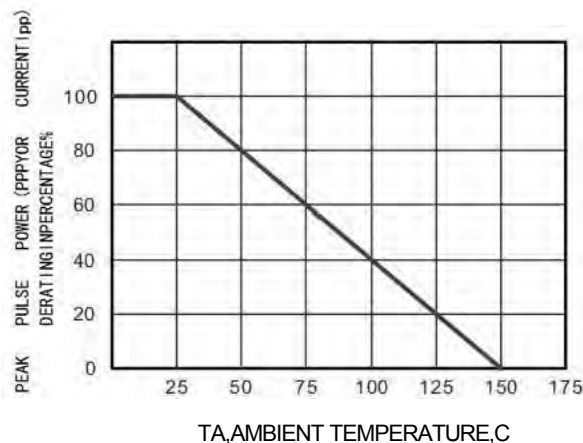


Fig.3 Pulse Waveform

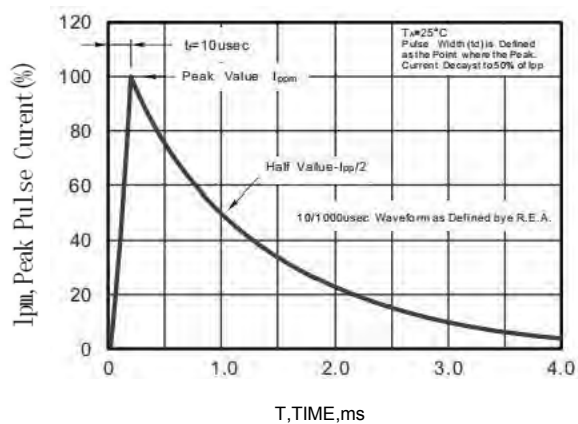
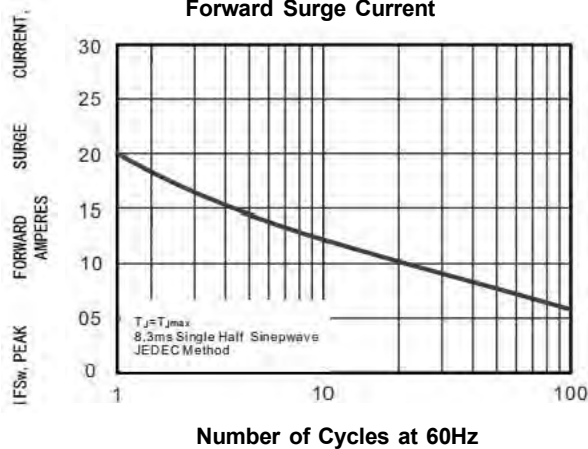
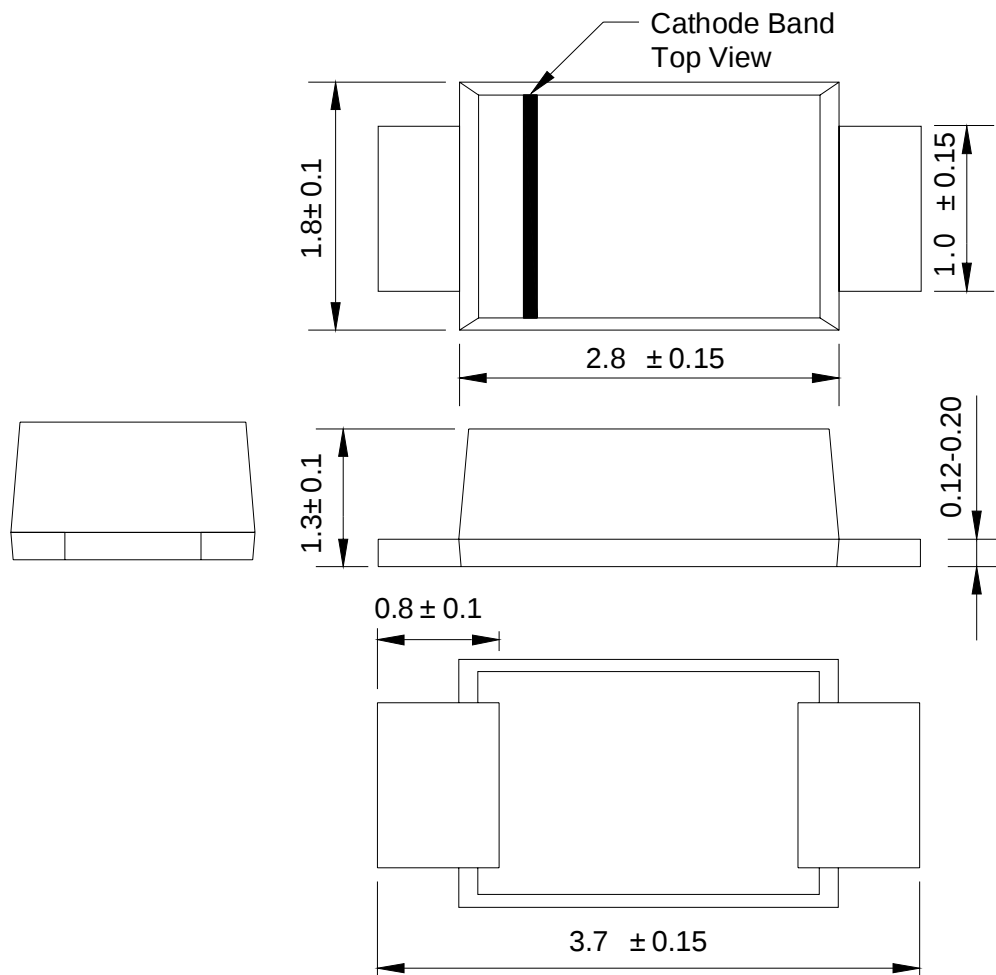


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current





Package Outline Dimensions
SOD-123FL(SMF)





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