



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±0.02ounce,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}	25.0	A
Steady state power dissipation at T _A =50°C (Fig.5)	P _{M(AV)}	0.4	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 TA=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 _r	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
Unidirectional	UNI	V _{RWM} (V)	V _{BR} (V)	I _r (mA)	V _c (V)	I _{PP} (A)	I _R (μA)
SMF3.3A	KC	3.3	5.2-6.0	10	8.0	25.0	400



Ratings and Characteristic Curves ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Figure 1 – Pulse Derating Curve

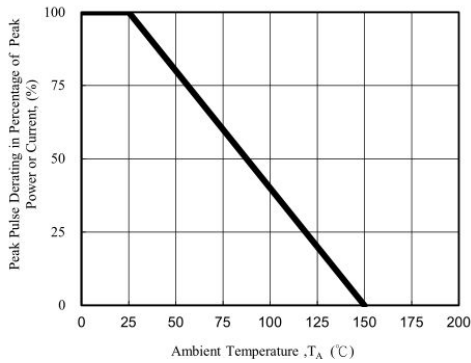


Figure 2 - Maximum Non-Repetitive Surge Current

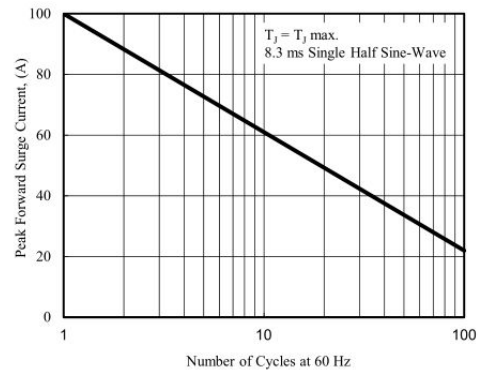


Figure 3 - Pulse Waveform

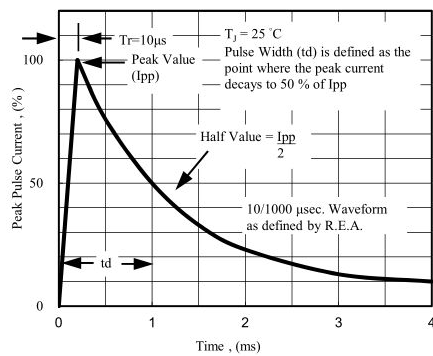


Figure 4 - Typical Junction Capacitance

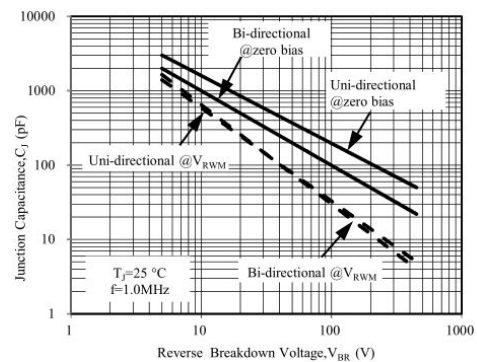


Figure 5 - Steady State Power Derating Curve

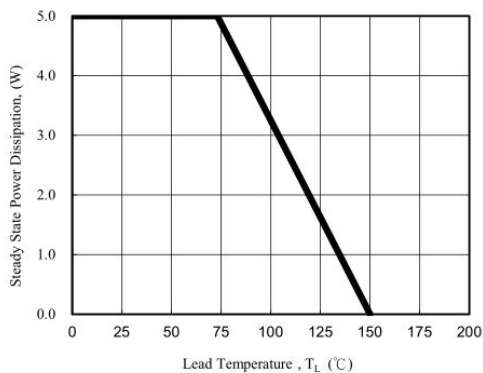
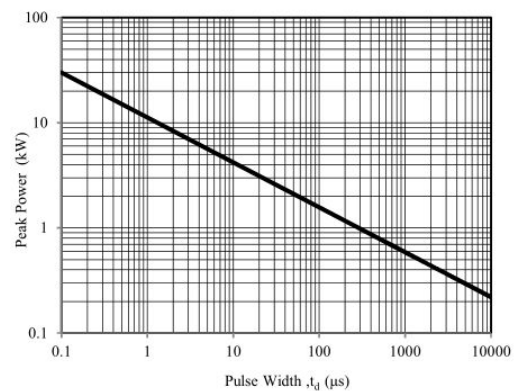
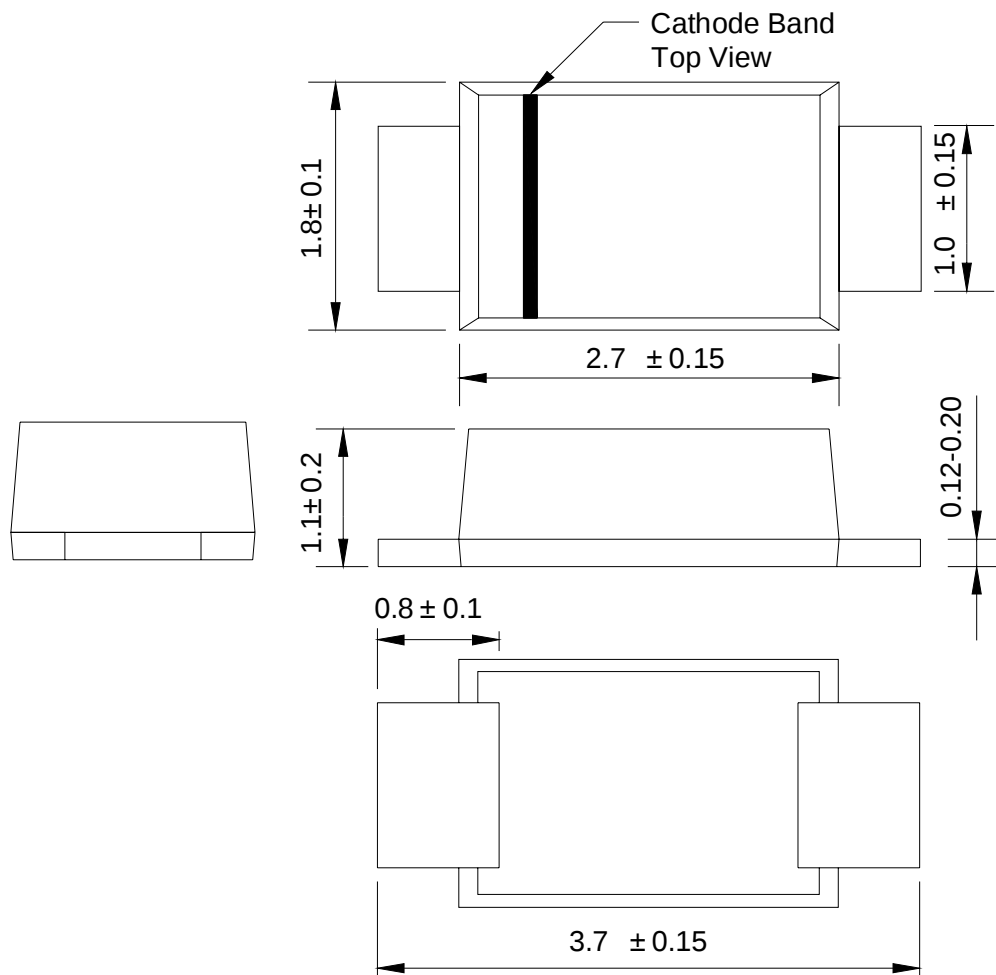


Figure 6 - Peak Pulse Power Rating Curve





Package Outline Dimensions
SOD-123FL(SMF)





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