



## 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 <sub>PPM</sub>	200	W
Peak pulse current	I <sub>PP</sub>	7.7	A
Steady state power dissipation at T <sub>A</sub> =50°C (Fig.5)	P <sub>M(AV)</sub>	1.0	W
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load, (JEDEC Method) (Note3, Fig.6)	I <sub>FSM</sub>	30	A
Operating junction and Storage Temperature Range.	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C
Typical thermal resistance junction to lead	R <sub>θJL</sub>	38	°C/W
Typical thermal resistance junction to ambient	R <sub>θJA</sub>	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 <sub>T</sub>	Test Current	Maximum Clamping Voltage @I <sub>PP</sub>	Peak Pulse Current	Reverse Leakage @V <sub>RWM</sub>
Unidirectional	Bidirectional	UNI	BI	V <sub>RWM</sub> (V)	V <sub>BR</sub> (V)	I <sub>T</sub> (mA)	V <sub>C</sub> (V)	I <sub>PP</sub> (A)	I <sub>R</sub> (μA)
HSMF16AT13	HSMF16CAT13	BP	OP	16.0	17.8-19.7	1	26	7.7	1



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

Fig.1 Peak Pulse Power Rating Curve

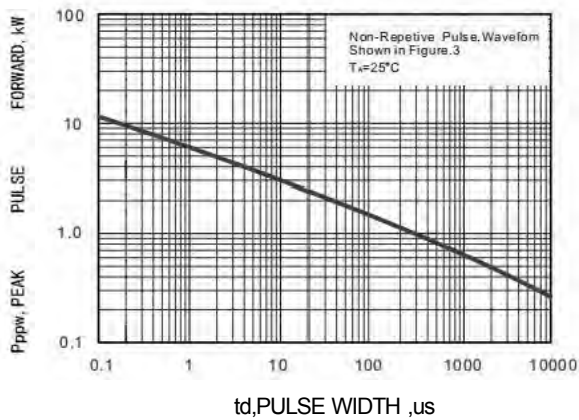


Fig.2 Forward Current Derating Curve

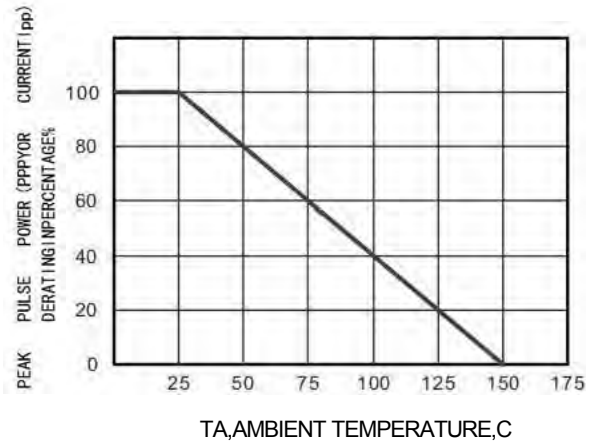


Fig.3 Pulse Waveform

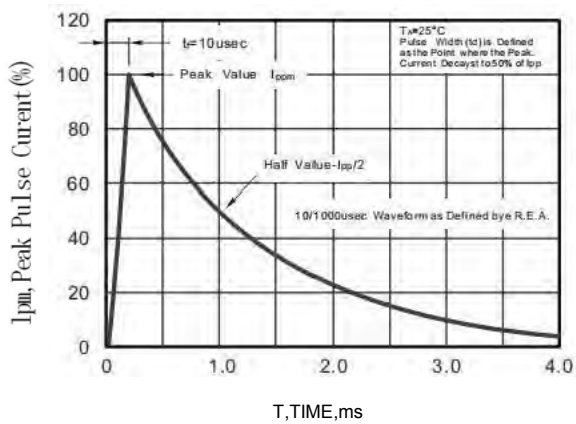
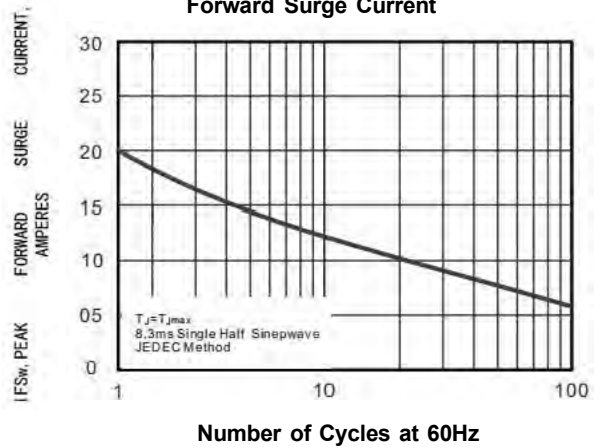
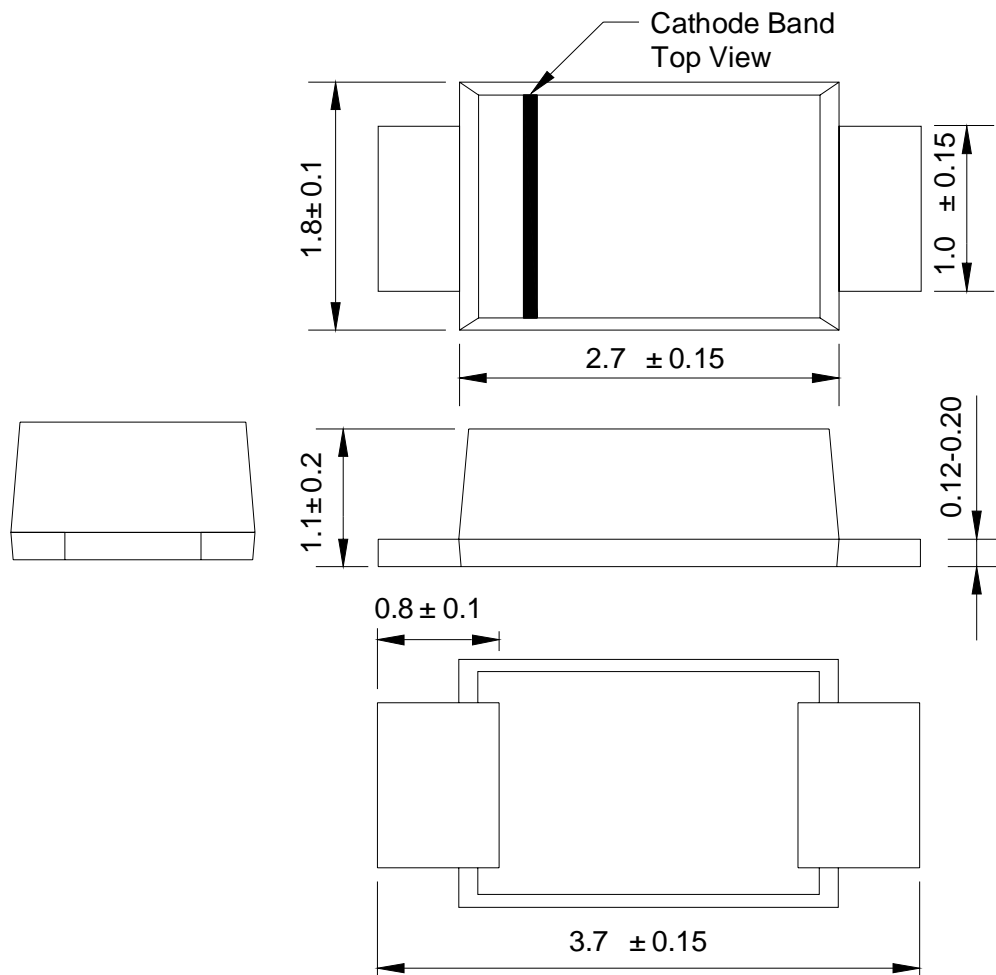


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current





**Package Outline Dimensions**  
**SOD-123FL(SMF)**





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