Features

http//:www.xihangsemi.com

- Low profile package
- Built-in strain relief
- Excellent clamping capability
- Glassed passivated junction
- Low inductance
- Typical IR less than 1uA above 10V
- Repetition rate (duty cycle):0.01%
- Fast response time: typically less than 1.0ps from 0V to V(BR) for unidirectional types
- High temperature soldering: 260℃/10s at terminals
- Plastic package has Underwriters Laboratory Flammability 94V-0
- For surface mounted applications in order to optimize board space.
- Pb-free plated

Top View

Simplified outline SOD-123FL and symbol

Mechanical Data

- Case: JEDEC SOD-123F molded plastic over passivated chip
- Terminals: Solder plated, solderable per MIL-STD-750 Method 2026
- Polarity: For uni-directional types the band by laser denotes the cathode, which is positive with respect to the anode under normal TVS operation

Device for Bipolar Application

- For Bidirectional use C or CA Suffix for types PMF5.0 thru types PMF170 (e.g. PMF5.0C , PMF170CA)
- Electrical characteristics apply in both directions

Maximum Ratings and Characteristics

Ratings at 25℃， ambient temperature unless otherwise specified

Rating	Symbol	Value	Units
Peak Pulse Power Dissipation on 10/1000us waveform (Note1,2, FIG.1)	P_{PPM}	200	W
Peak Pulse Current on 10/1000us waveform (Note1, FIG.3)	I_{PPM}	SEE TABLE1	A
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load, (JEDEC Method) (Note2,3)	I_{FSM}	20	A
Operating Junction and Storage Temperature Range	T_J/ T_{STG}	-55 to +150	℃

Notes:

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

Characteristics Curves (Ta=25℃, unless otherwise noted)

Fig.1 Peak Pulse Power Rating Curve

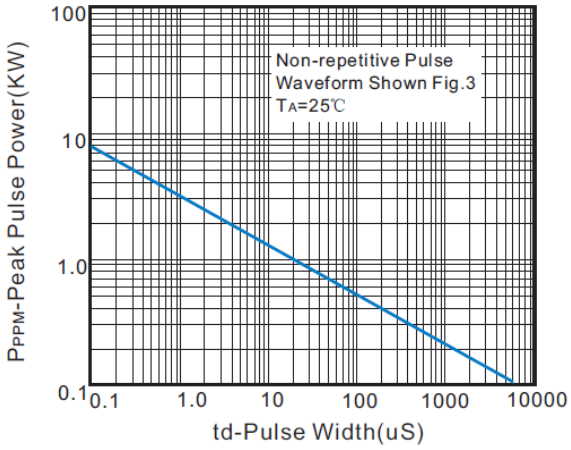


Fig.2 Pulse Derating Curve

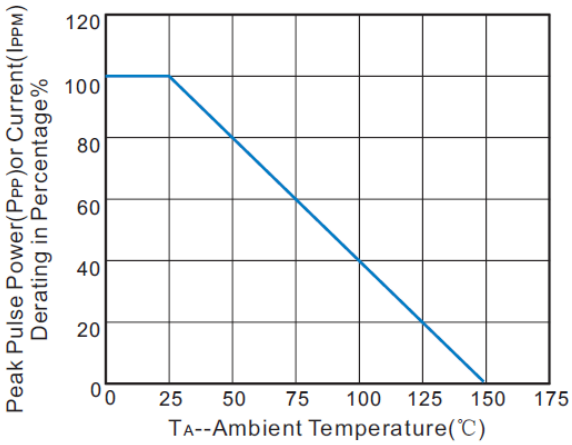


Fig.3 Pulse Waveform

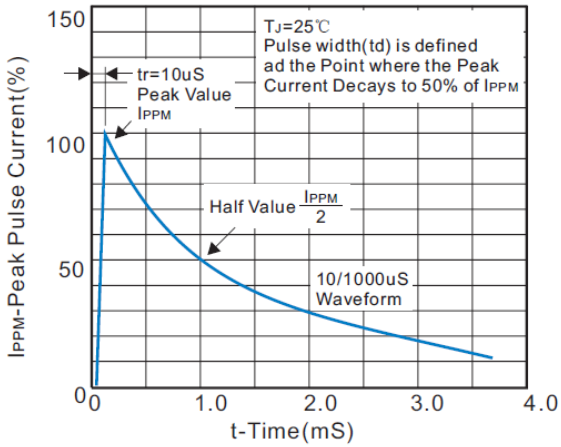


Fig.4 Type Junction Capacitance

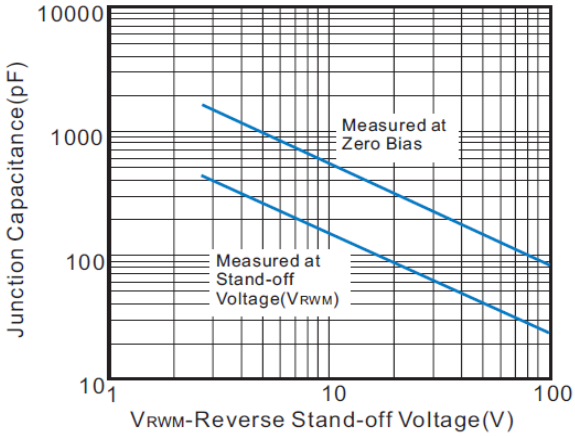
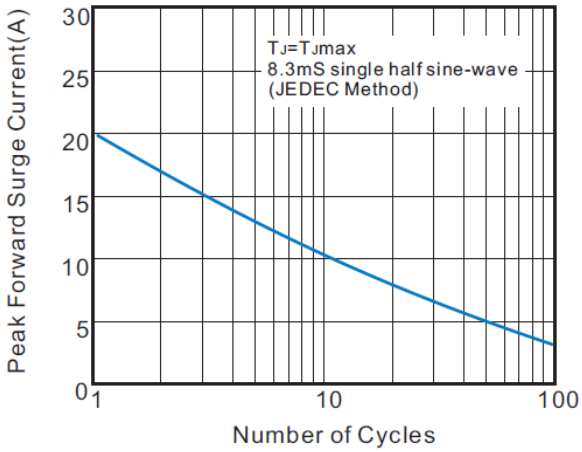
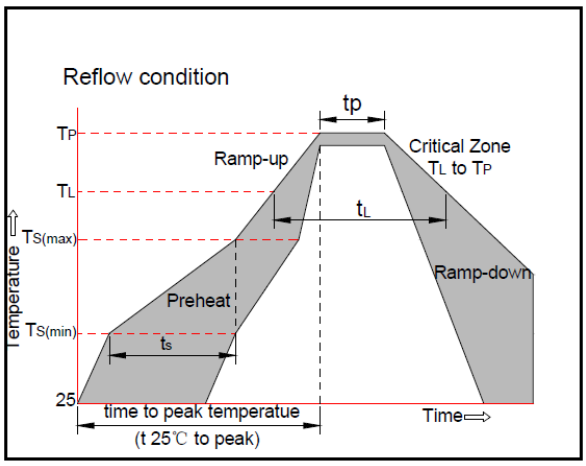


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

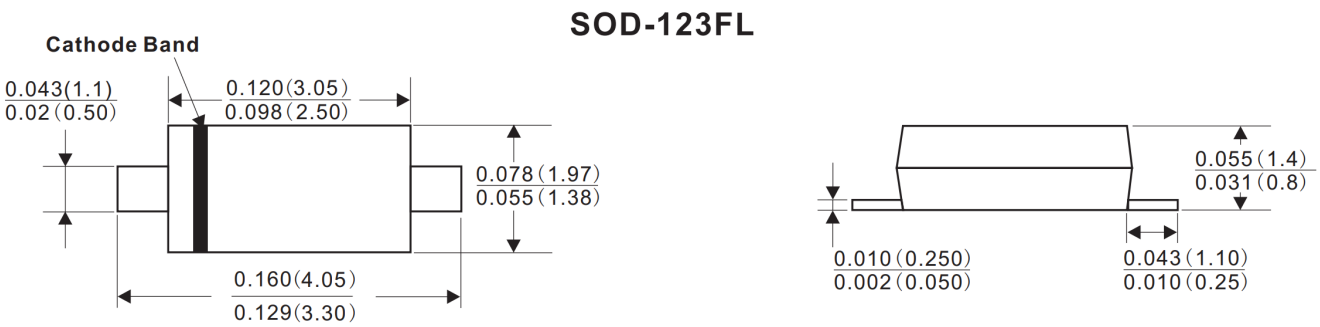


Recommended Soldering Conditions

Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min($T_{S(min)}$)	+150℃
	-Temperature Min($T_{S(man)}$)	+200℃
	-Time(Min to Max)(ts)	60-180 secs.
Average ramp up rate (Liquidus Temp(T_L) to peak)		3℃/sec.Max
$T_{S(max)}$ to T_L-Ramp-up-Rate		3℃/sec.Max
Reflow	-Temperature(T_L)(Liquidus)	+ 217℃
	- Temperature(t_L)	60-150 secs
Peak Temp(T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		20-40 secs.
Ramp-down Rate		6℃/sec.Max
Time 25℃ to Peak Temp (T_p)		8 min.Max
Do not exceed		260℃



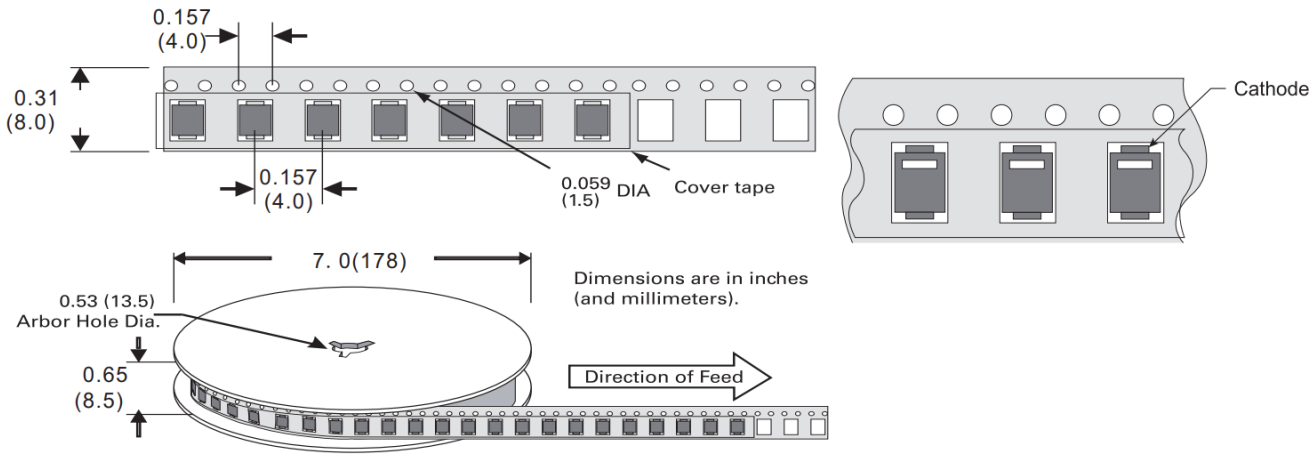
Package Outline Dimensions(SOD-123FL)



Dimensions in inches and(millimeters)

Tape and Reel Specification

Symbol	Ea Per Reel	REEL DIA(mm)	Industry Standard
SMF***	3000	3000	EIA RS-481



NOTICE

XIHANG's products are not authorized for use as components in any life support device or systems.

XIHANG reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. XIHANG does not assume any liability arising out of the application or use of any product described herein.