

SURFACE MOUNT RECTIFIERS

SOD1F1--SOD1F10

FEATURES

- Glass passivated devicens
- Ideal for surface mounted applications
- Low leakage current
- Metallurgically bonded construction
- High temperature soldering: 250°C/10 seconds at terminals



MECHANICAL DATA

- Case: JEDEC SOD-123FL, molded plastic over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026

Maximum Ratings (@TA = 25°C unless otherwise specified)

Characteristic	Symbol	SOD1F1	SOD1F2	SOD1F4	SOD1F6	SOD1F8	SOD1F10	UNITS
Device marking code		FB	FD	FG	FJ	FK	FM	
Maximum recurrent peak reverse voltage	V_{RRM}	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	100	200	400	600	800	1000	V
Maximum average forward rectified current $T_A=65^\circ\text{C}$ (NOTE1)	$I_{(AV)}$	1.0						A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load $T_L=25^\circ\text{C}$	I_{FSM}	30						A

Thermal Characteristics

Characteristic	Symbol	SOD1F1	SOD1F2	SOD1F4	SOD1F6	SOD1F8	SOD1F10	UNITS
Reverse recovery time (NOTE 3)	C_J	5~8						p F
Typical thermal resistance(NOTE4)	$R_{\theta JA}$	180						K/W
Operating temperature range	T_J T_{STG}	- 55 --- + 150						°C

Electrical Characteristics (@TA = 25°C unless otherwise specified)

Characteristic	Symbol	SOD1F1	SOD1F2	SOD1F4	SOD1F6	SOD1F8	SOD1F10	UNITS
Maximum instantaneous forward voltage at 1.0A(NOTE2)	V_F	1.3						V
Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$	I_R	5.0 50						μ A
Maximum reverse recovery time (NOTE5)	t_{rr}	150			250	500		ns

NOTES: 1. Averaged over any 20 ms period.

2. Pulse test: 300 μ s pulse width, 1% duty cycle.

3. Measured at 1.0MHz and applied average voltage of 4.0V DC.

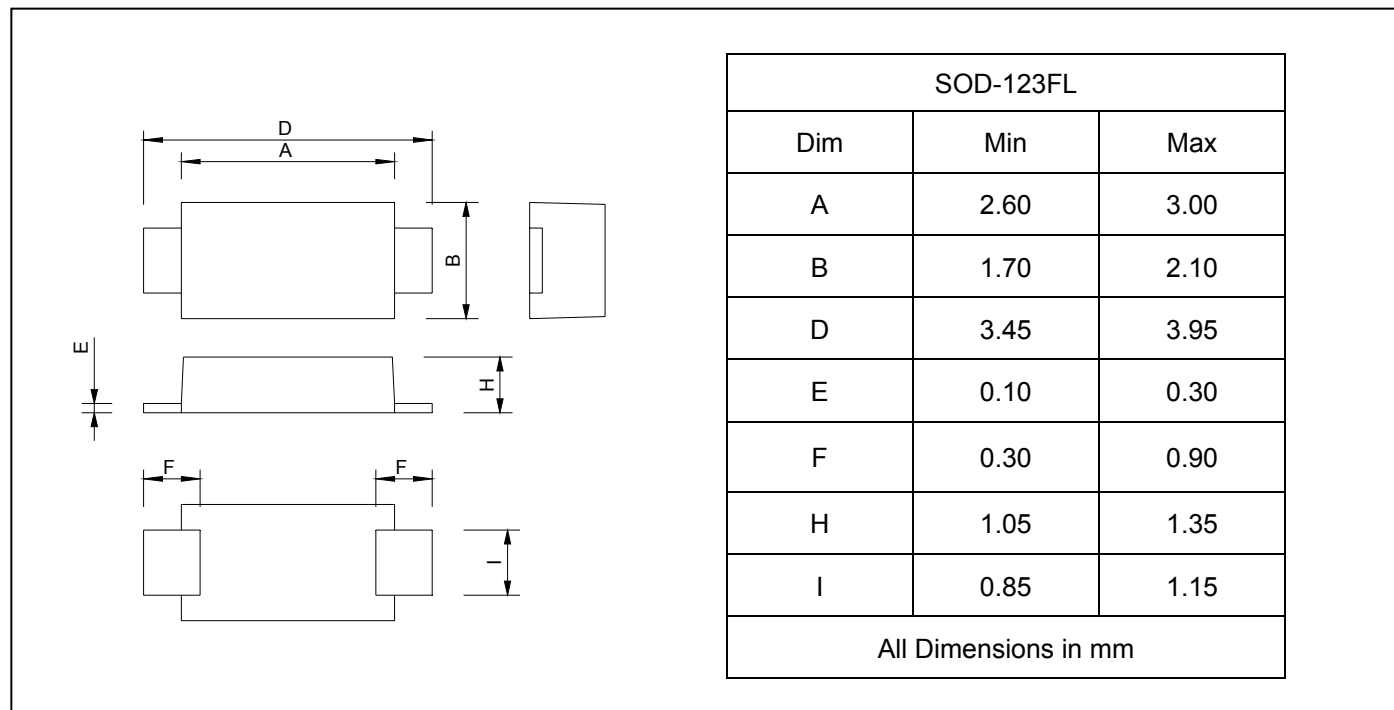
4. Thermal resistance junction to ambient, 6.0 mm² copper pads to each terminal.

5. Measured with $I_F=0.5A$, $I_R=1A$, $I_{rr}=0.25A$.

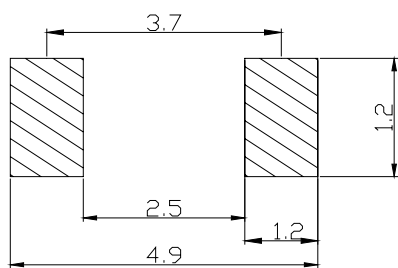
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PACKAGE OUTLINE DIMENSIONS



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
SOD1F1--SOD1F10	SOD-123FL	10000/Tape&Reel

SURFACE MOUNT RECTIFIERS

SOD1F1--SOD1F10

FIG.1 –TYPICAL FORWARD CHARACTERISTIC

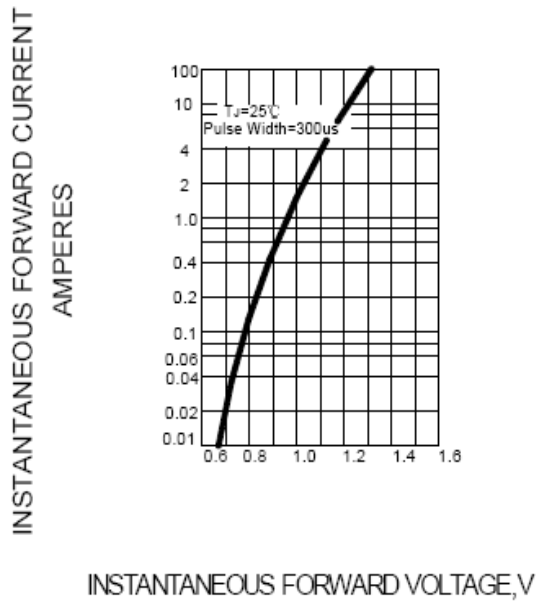


FIG.2 – TYPICAL JUNCTION CAPACITANCE

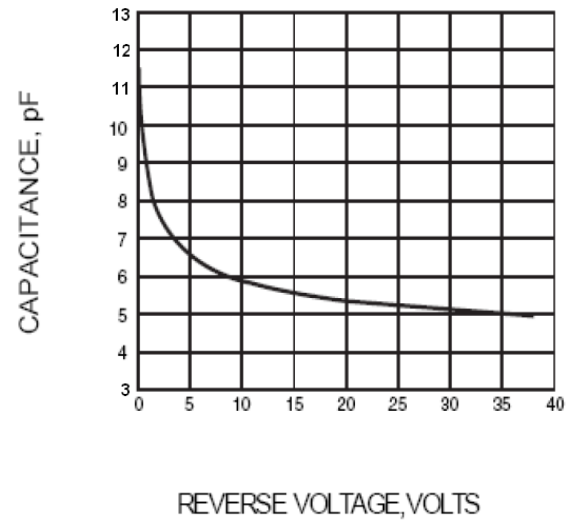


FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS

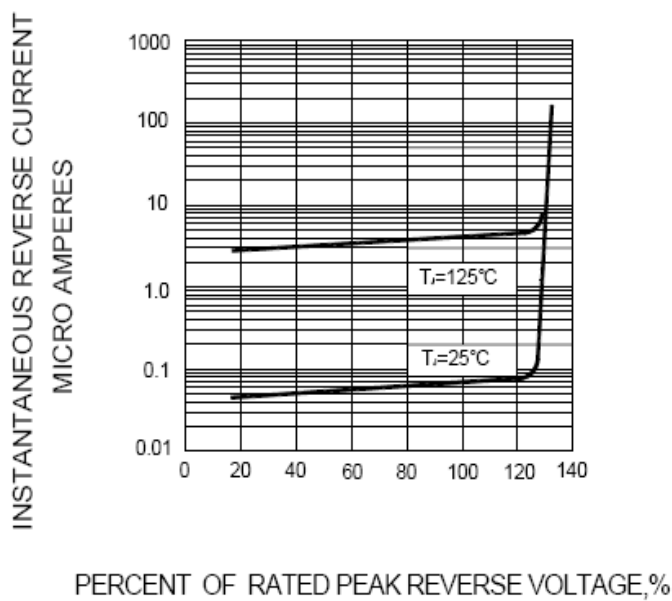


FIG.4 – FORWARD DERATING CURVE

