

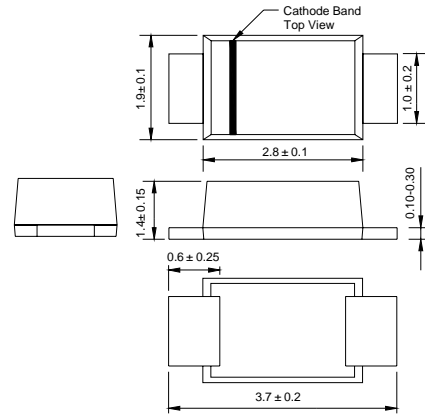
SOD1F1-SOD1F10

Surface Mount Rectifiers

REVERSE VOLTAGE: 100 - 1000 V
CURRENT: 1.0 A



SOD - 123FL



Dimensions in millimeters

Features

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

Mechanical Data

- Case: JEDEC SOD-123FL, molded plastic over passivated chip
- Polarity: Color band denotes cathode end
- Weight: 0.003 ounces, 0.01 gram
- Mounting position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

ABSOLUTE RATINGS

Device marking code		SOD1F1	SOD1F2	SOD1F4	SOD1F6	SOD1F8	SOD1F10	UNITS
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 $T_A=65$ (NOTE 1)	$I_{(AV)}$	1.0						A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load $T_L=25$	I_{FSM}	25						A
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	180						K/W
Maximum reverse recovery time (NOTE 3)	t_{rr}	150			250	500		ns
Operating temperature range	T_j	- 55 --- + 150						
Storage temperature range	T_{STG}	- 55 --- + 150						

NOTES: 1. Averaged over any 20 ms period.

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

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



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ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Min	Typ.	Max.	Unit
Maximum instantaneous (NOTE 4) forward voltage at 1.0A	V_F	-	-	1.3	V
Maximum DC reverse current @ $T_A=25$ at rated DC blockjng voltage @ $T_A=125$	I_R	- -	- -	5.0 50	μA
Typical junction capacitance (NOTE 5)	C_j	-	4	-	pF

NOTES: 4.Pulse test:300 μs pulse width,1% duty cycle.

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

Ratings AND Characteristic Curves

FIG.1 – TYPICAL FORWARD CHARACTERISTIC

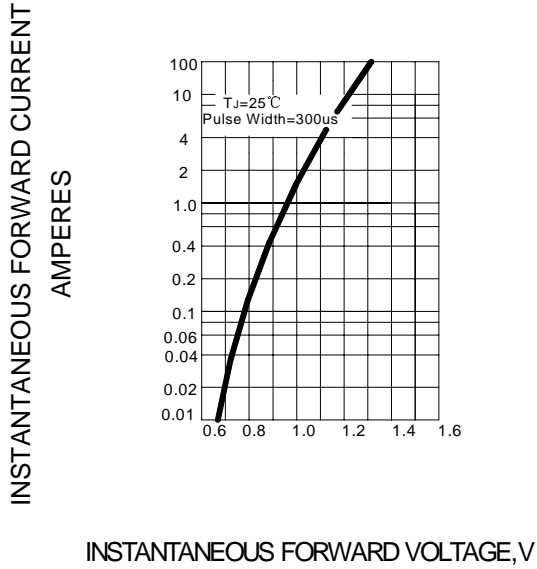


FIG.2 – TYPICAL JUNCTION CAPACITANCE

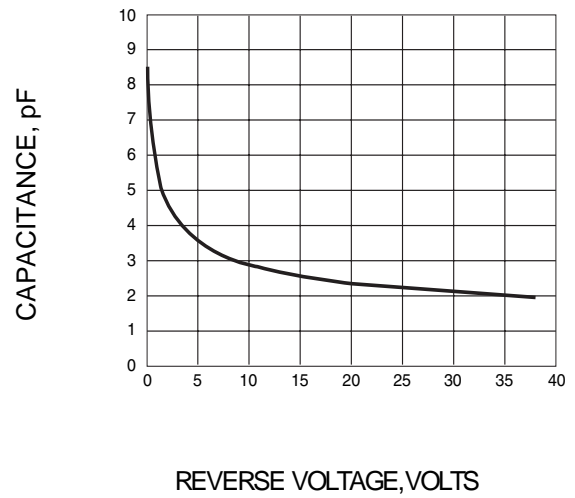


FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS

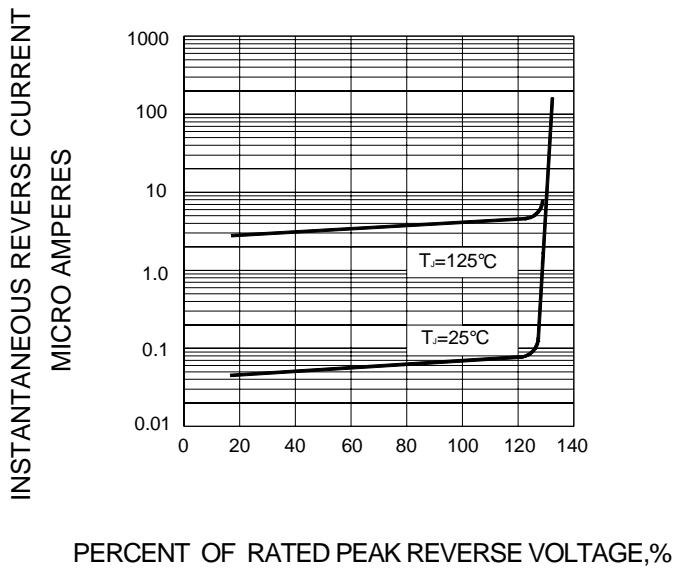


FIG.4 – FORWARD DERATING CURVE

