

SOD1F1 THRU SOD1F7

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

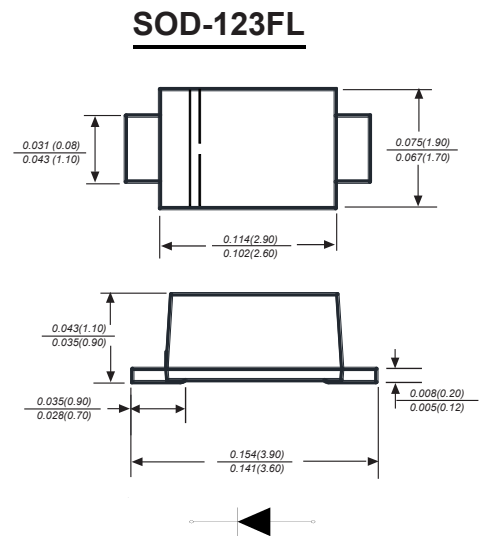
SURFACE MOUNT FAST RECOVERY RECTIFIER

Features

- ◆ Glass passivated device
- ◆ Ideal for surface mounted applications
- ◆ Low reverse leakage
- ◆ Metallurgically bonded construction
- ◆ High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

Mechanical Data

Case : JEDEC UOD-123FL molded plastic body
 Terminals : Solderable per MIL-STD-750, Method 2026A
 Polarity : Polarity symbol marking on body
 Mounting Position : Any
 Weight : 0.0067 ounce, 0.02 grams



Dimensions in inches and (millimeters)

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 current derate by 20%.

Parameter	SYMBOLS	SOD1F1	SOD1F2	SOD1F3	SOD1F4	SOD1F5	SOD1F6	SOD1F7	UNITS
Marking Code		F1	F2	F3	F4	F5	F6	F7	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at TL (see fig.1)	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	25							A
Maximum instantaneous forward voltage at 1.0A	V_F	1.3							V
Maximum DC reverse current TA=25°C at rated DC blocking voltage TA=125°C	I_R	5 50							uA
Typical junction capacitance (NOTE 1)	C_J	4							pF
Maximum Reverse Recovery Time	t_{rr}	150				250	500		ns
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	180.0							°C/W
Operating junction temperature range	T_J	-55 to +125							°C
Storage temperature range	T_{STG}	-55 to +150							°C

- Note:**
1. Averaged over any 20ms period.
 2. Measured with $I_F=0.5A$, $I_R=1A$, $I_{rr}=0.25A$.
 3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 4. Thermal resistance junction to ambient, 6.0 mm² copper pads to each terminal.

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Typical Characteristics

Fig.1 Forward Current Derating Curve

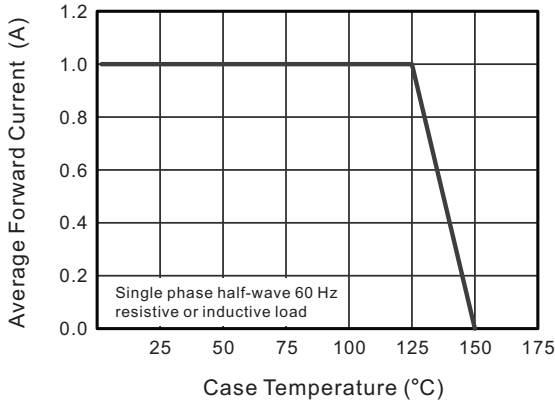


Fig.2 Typical Reverse Characteristics

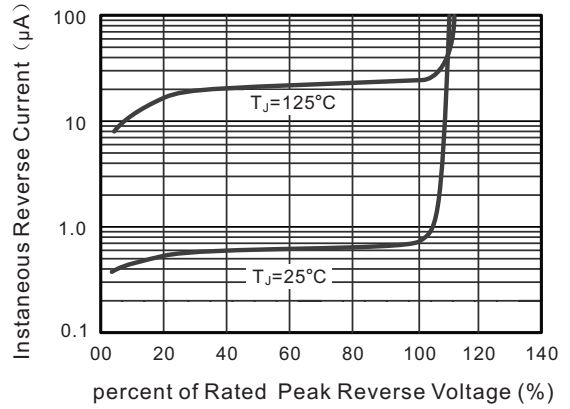


Fig.3 Typical Instantaneous Forward Characteristics

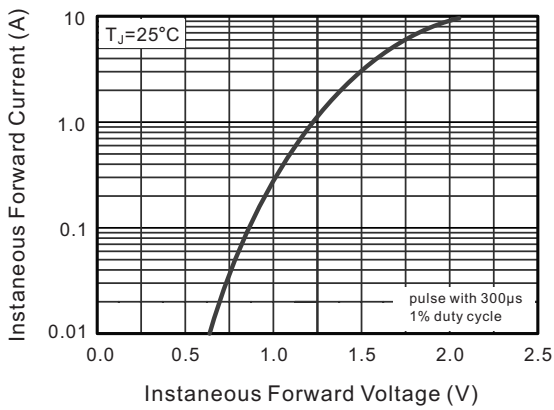


Fig.4 Typical Junction Capacitance

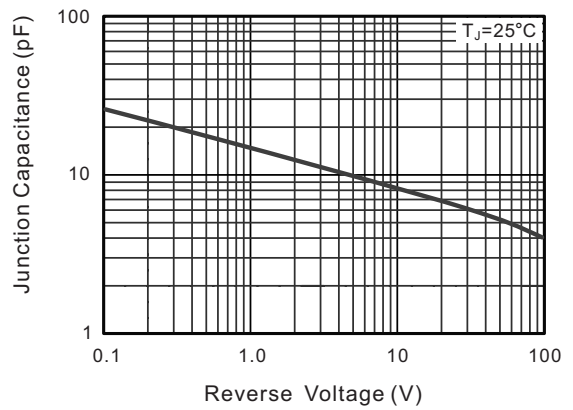
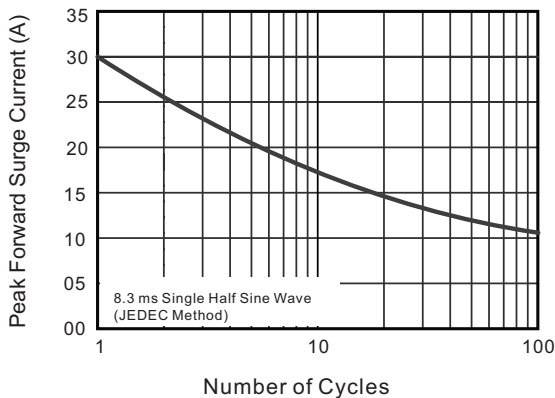


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



The curve above is for reference only.