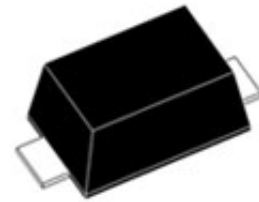


Surface Mount Fast Recovery Rectifier

Reverse Voltage 50 to 1000 Volts Forward Current 1 Ampere

FEATURES

- Glass passivated junction chip
- 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
- AEC-Q101 qualified (Automotive grade with suffix "Q".)
- Expsemi electronics



MECHANICAL DATA

- Cases: Molded plastic
- Solderable per MIL-STD-750,
Method 2026
- Polarity: Indicated by cathode band
- Weight :0.0007 ounce, 0.02 grams
- Mounting Position : Any

Absolute Maximum Ratings and 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%.

Catalog Number	SYMBOLS	SOD1F1 F1A	SOD1F2 F1B	SOD1F3 F1D	SOD1F4 F1G	SOD1F5 F1J	SOD1F6 F1K	SOD1F7 F1M	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current at T _A =65°C (NOTE 1)	I _(AV)	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) T _L =25°C	I _{FSM}	25.0							Amps
Maximum instantaneous forward voltage at 1.0A	V _F	1.3							Volts
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =125°C	I _R	10.0 50.0							μA
Maximum reverse recovery time (NOTE 2)	trr	150				250	500		ns
Typical junction capacitance (NOTE 3)	C _J	4							pF
Typical thermal resistance (NOTE 4)	R _{θJA}	180							K/W
Operating junction and storage temperature range	T _J ,T _{STG}	-50 to +150							°C

Note: 1.Averaged over any 20ms period.
2.Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.
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.

FIG.1 --TYPICAL FORWARD CHARACTERISTIC

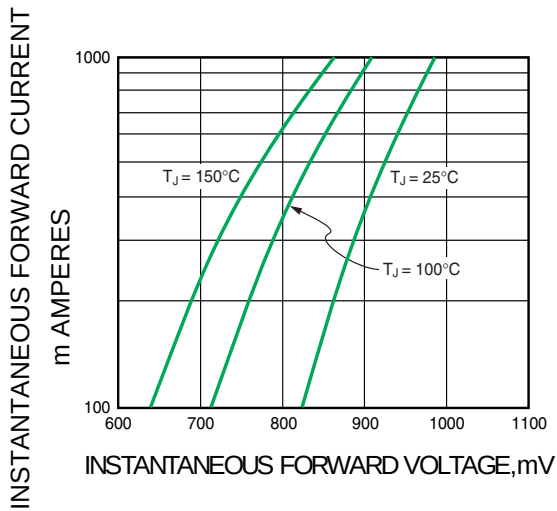


FIG.2 -- TYPICAL JUNCTION CAPACITANCE

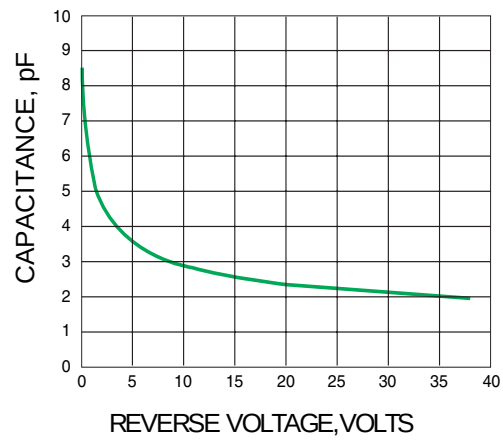


FIG.3 -- TYPICAL INSTANTANEOUS

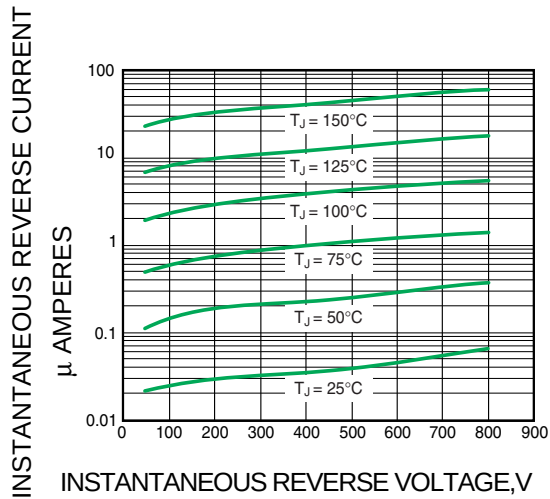
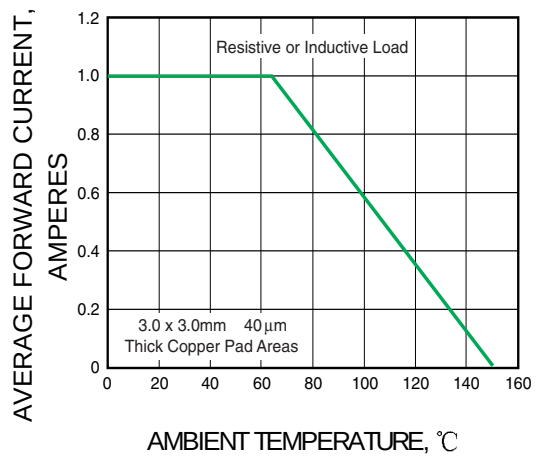
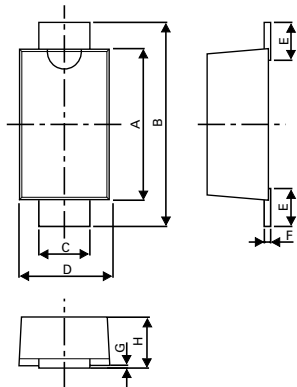


FIG.4 -- FORWARD DERATING CURVE

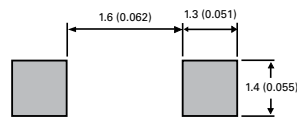


Dimensions

SOD-123FL Package



Mounting Pad Layout



Dimensions	Millimeters		Inches	
	Min	Max	Min	Max
A	2.50	3.20	0.0984	0.1259
B	3.40	3.90	0.1339	0.1535
C	0.70	1.35	0.0275	0.0531
D	1.50	2.00	0.0591	0.0787
E	0.35	0.90	0.0138	0.0354
F	0.05	0.26	0.0020	0.0102
G	0.00	0.10	0.000	0.0039
H	0.70	1.35	0.0275	0.0531