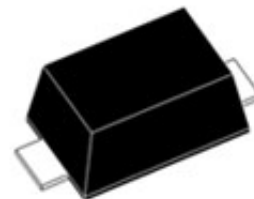


Surface Mount Fast Recovery Rectifier Reverse Reverse Voltage 50 to 1000 Volts Forward Current 1 Ampere

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
- AEC-Q101 qualified (Automotive grade with suffix "Q".)
- Expsemi electronics



MECHANICAL DATA

- Case: JEDEC SOD-123FL molded plastic body over passivated chip
- Terminals : Solderable per MIL-STD-750, Method 2026
- Mounting Position : Any
- Polarity: Color band denotes cathode end



Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

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%.

Catalog Number	SYMBOLS	RSS1A	RSS1B	RSS1D	RSS1G	RSS1J	RSS1K	RSS1M	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}	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	V _F	1.5							Volts
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =125°C	I _R	5.0 50.0							μA
Maximum reverse recovery time (NOTE 2)	t _{rr}	150				250	500		ns
Typical junction capacitance (NOTE 3)	C _J	4							pF
Typical thermal resistance (NOTE 4)	R _{θJL} R _{θJA}	30 75							°C/W
Operating junction and storage temperature range	T _J ,T _{STG}	-55 to +150							°C

Note: 1. Averaged over any 20ms period.
2. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $t_{rr}=0.25\text{A}$.
3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
4. 8mm (0.013mm thick) land areas.

RATINGS AND CHARACTERISTIC CURVES

FIG.1 –TYPICAL FORWARD CHARACTERISTIC

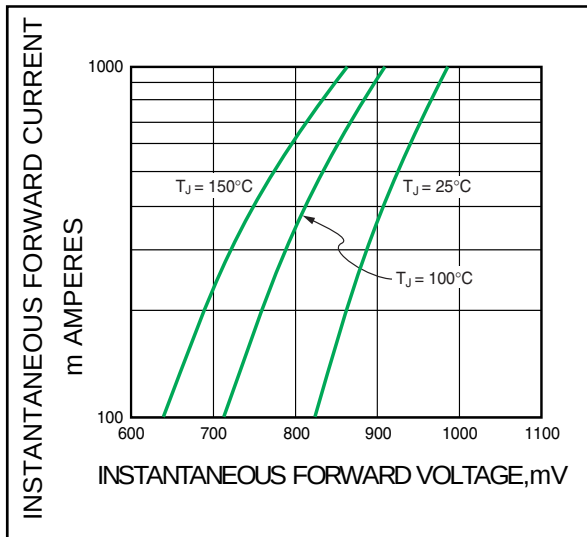


FIG.2 – TYPICAL JUNCTION CAPACITANCE

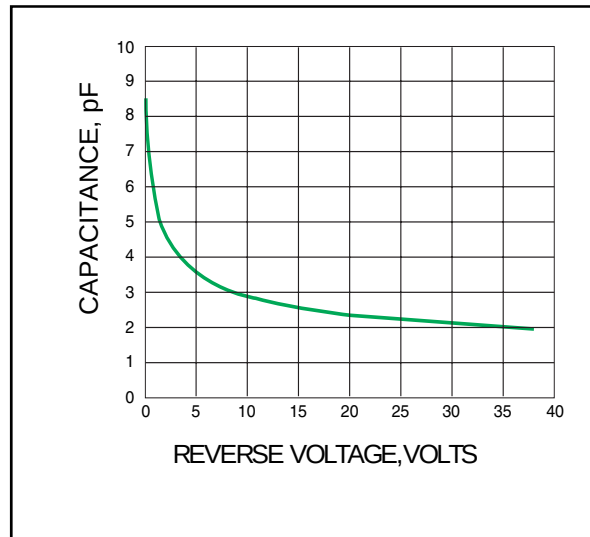


FIG.3 – TYPICAL INSTANTANEOUS

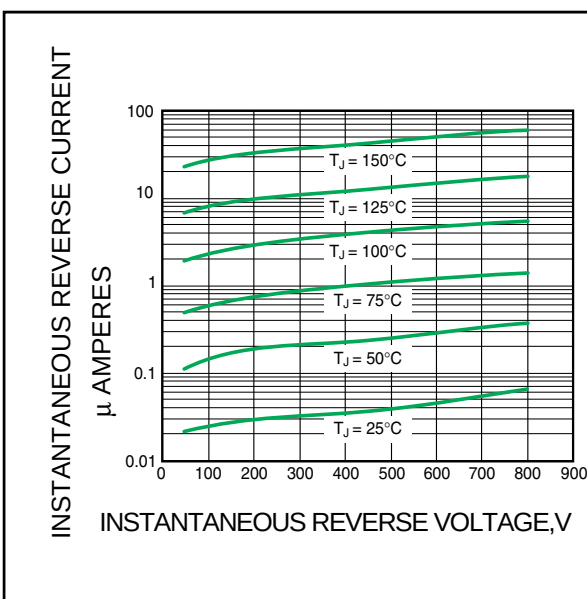
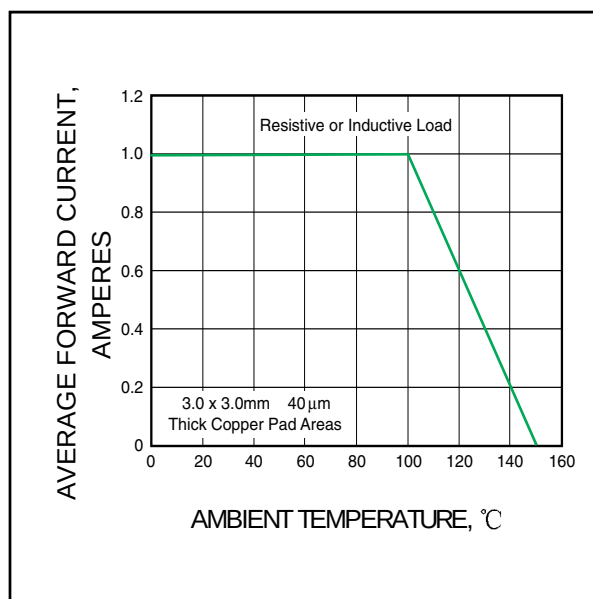
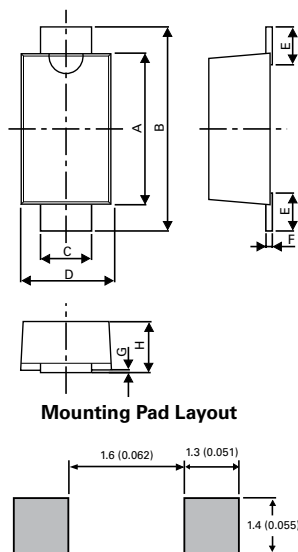


FIG.4 – FORWARD DERATING CURVE



SOD-123FL Outline Dimensions



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

Packaging Options

Part number	Component Package	Quantity	Packaging Option	Packaging Specification
RSS1X	SOD-123FL	3000	Tape & Reel – 8mm tape/7" reel	EIA RS-481

Tape and Reel Specification

