

SuperDiode – 1A, 50~1000V Surface Mount Fast Recovery Rectifier



1. Features

- Glass passivated device
- Low reverse leakage
- Metallurgically bonded construction
- High temperature soldering guaranteed:
260 °C/10 seconds,0.375”(9.5mm) lead length,5 lbs. (2.3kg) tension

2. Mechanical Data

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

3. Marking and Circuit

Marking	Circuit
	

4. Specification

Absolute Maximum Rating & Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

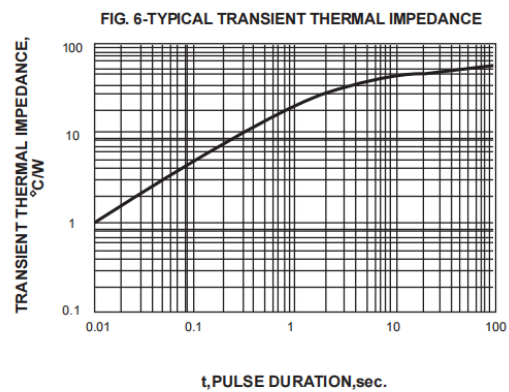
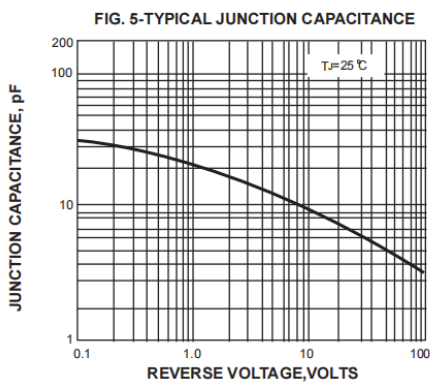
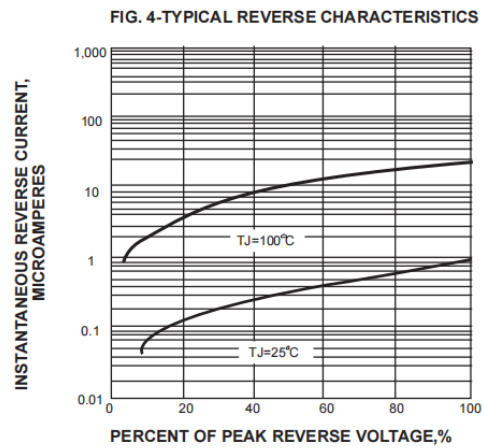
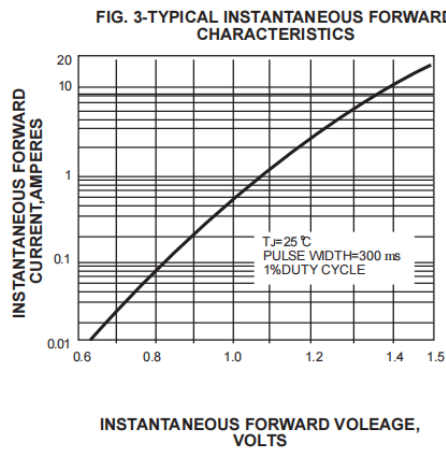
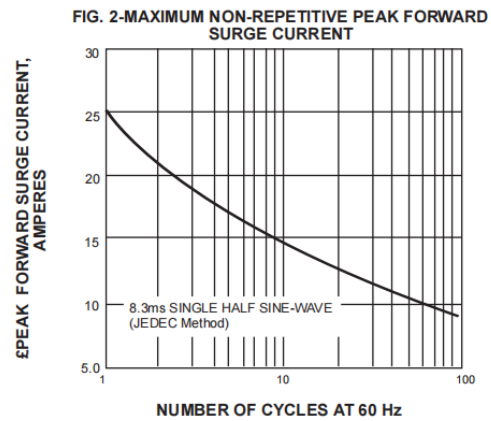
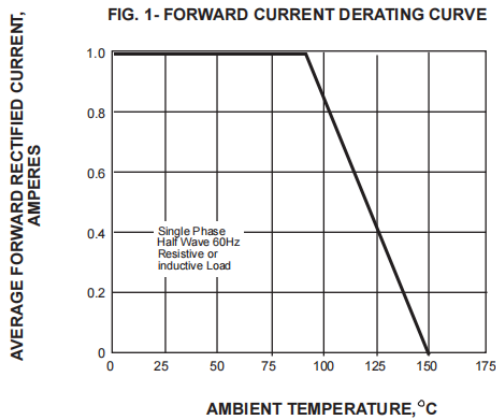
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameters	Symbols	F1	F2	F3	F4	F5	F6	F7	Unit
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 TA=65°C (NOTE 1)	$I_{(AV)}$	1							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	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	5.0							uA
		50.0							
Typical junction capacitance (NOTE 3)	C_J	15							pF
Maximum reverse recovery time (NOTE 2)	T_{RR}	150				250	500		°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

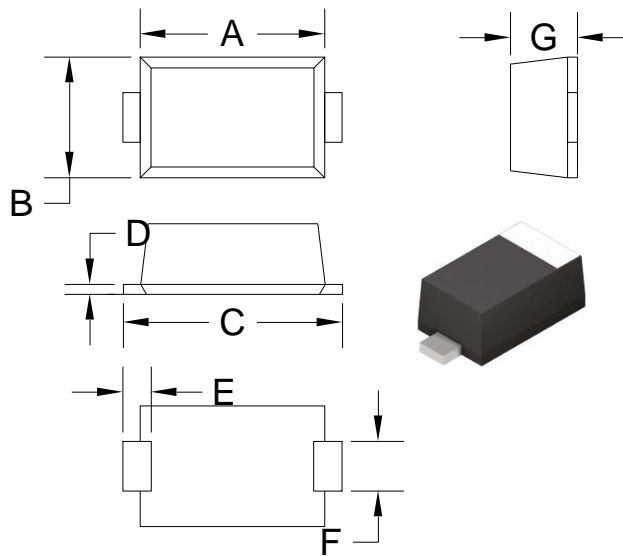
Note:

1. Averaged over any 20ms period.
2. Measured with $I_F=0.5A$, $I_R=1A$, $I_{rr}=0.25A$.
3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

5. Typical Characteristic

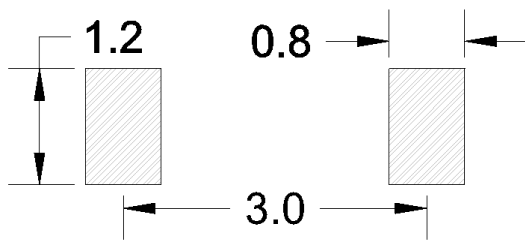


6. Dimension and Patterns (SOD-123FL)



Units: mm

Symbol	Min.	Max.
A	2.50	2.70
B	1.70	1.90
C	3.50	3.70
D	0.10	0.20
E	0.50	0.70
F	0.90	1.10
G	0.88	1.08



Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference only
4. Unit: mm

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