

1A, 50V - 1000V Surface Mount Fast Recovery Rectifiers

FEATURES

- Glass passivated chip junction
- Ideal for automated placement
- Fast switching for high efficiency
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

MECHANICAL DATA

Case: SOD-123FL

Molding compound, UL flammability classification rating 94V-0

Moisture sensitivity level: level 1, per J-STD-020

Terminal: Matte tin plated leads, solderable per JESD22-B102

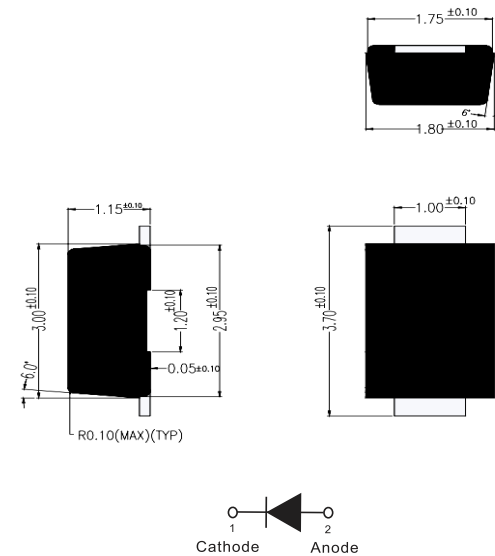
Meet JESD 201 class 2 whisker test

Polarity: Indicated by cathode band

Weight: 0.01 g (approximately)

SOD-123FL

Unit : inch(mm)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	RS 1000 FL	RS 1001 FL	RS 1002 FL	RS 1004 FL	RS 1006 FL	RS 1008 FL	RS 1010 FL	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	I _{F(AV)}	1							A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	30							A
Maximum instantaneous forward voltage (Note 1) @ 1 A	V _F	1.3							V
Maximum reverse current @ rated V _R T _J =25°C T _J =125°C	I _R	5 50							μA
Maximum reverse recovery time (Note 2)	t _{rr}	150			250	500		ns	
Typical junction capacitance (Note 3)	C _J	10							pF
Typical thermal resistance	R _{θJC} R _{θJA}	32 105							°C/W
Operating junction temperature range	T _J	- 55 to +150							°C
Storage temperature range	T _{STG}	- 55 to +150							°C

Note 1: Pulse test with PW=300μs, 1% duty cycle

Note 2: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTICS CURVES

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

FIG.1 FORWARD CURRENT DERATING CURVE

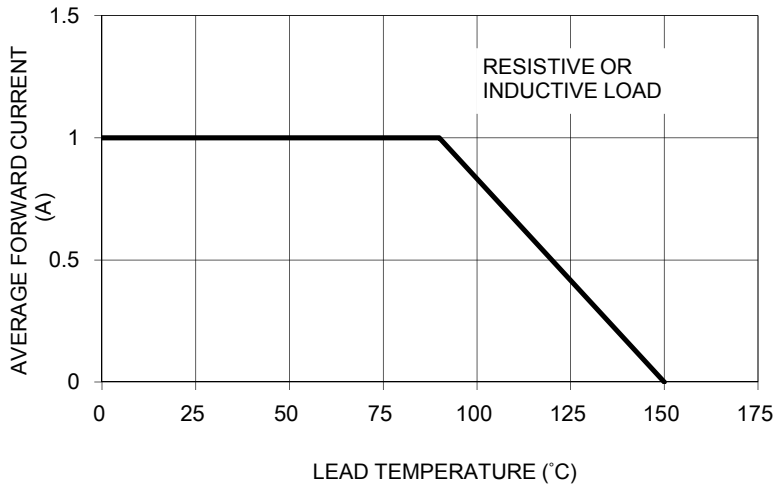


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

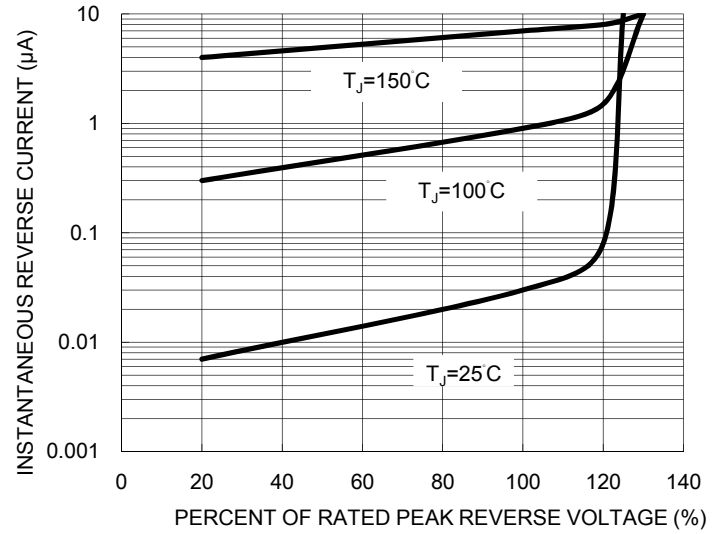


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

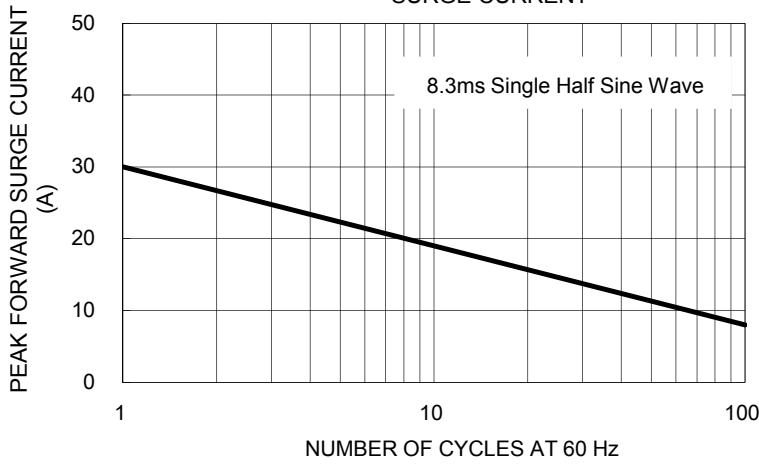


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

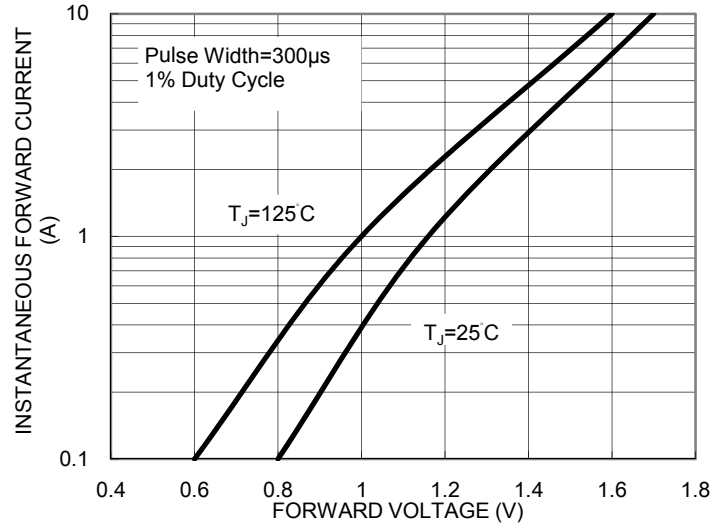


FIG. 5 TYPICAL JUNCTION CAPACITANCE

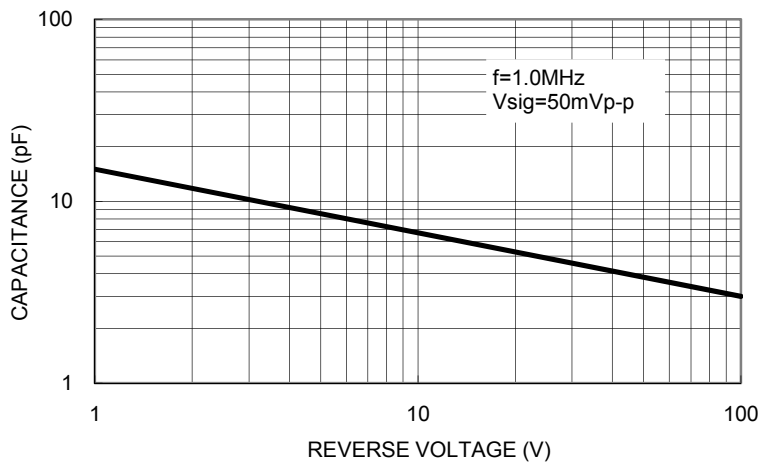


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

