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SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

1N4001W-1N4007W

Product specification


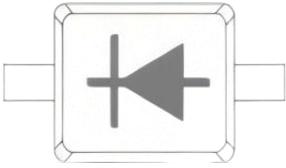
FEATURES

- Ideal for surface mount applications
- Easy pick and place
- Built-in strain relief
- High surge current capability

MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Solder plated, solderable per MIL-STD-202F, method 208 guranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any

Reference News

PACKAGE OUTLINE	Circuit	PINNING	
		PIN	DESCRIPTION
 <p>SOD-123FL</p>		1	Cathode
		2	Anode

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

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

Parameter	SYMBOLS	1N4001W A1	1N4002W A2	1N4003W A3	1N4004W A4	1N4005W A5	1N4006W A6	1N4007W A7	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 1.0 A	V_F	1.0							Volts	
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_A=25^\circ C$							10.0	μA
		$T_A=125^\circ C$							50.0	
Typical junction capacitance (NOTE 2)	J	4							pF	
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	180							K/W	
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +150							$^\circ C$	

Note: 1. Averaged over any 20ms period.

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

ELECTRICAL CHARACTERISTICS CURVE

FIG.1-TYPICAL FORWARD CHARACTERISTICS

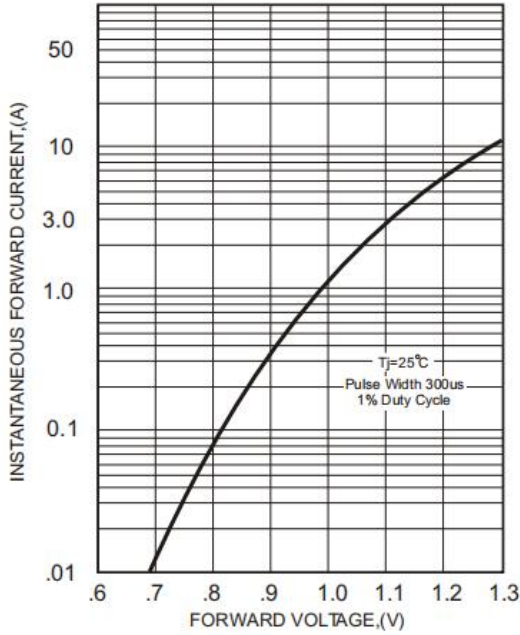


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

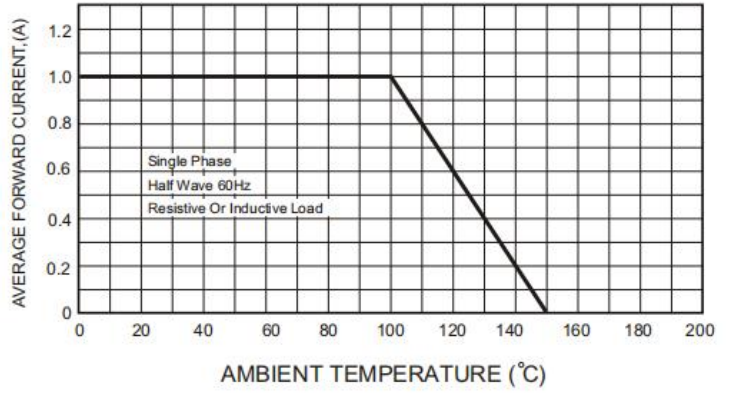


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

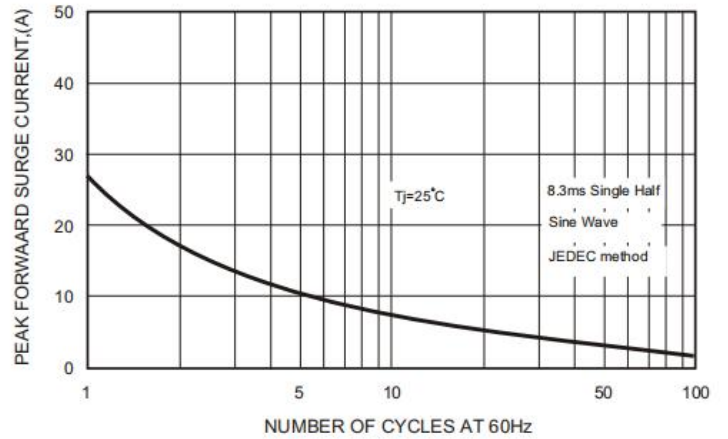


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

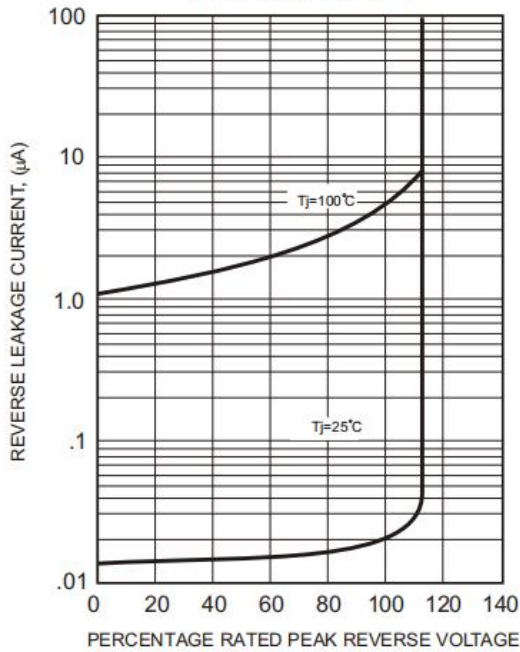
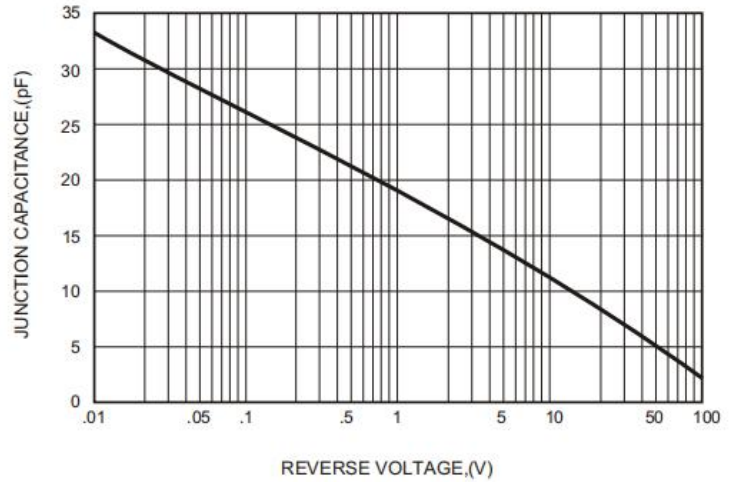
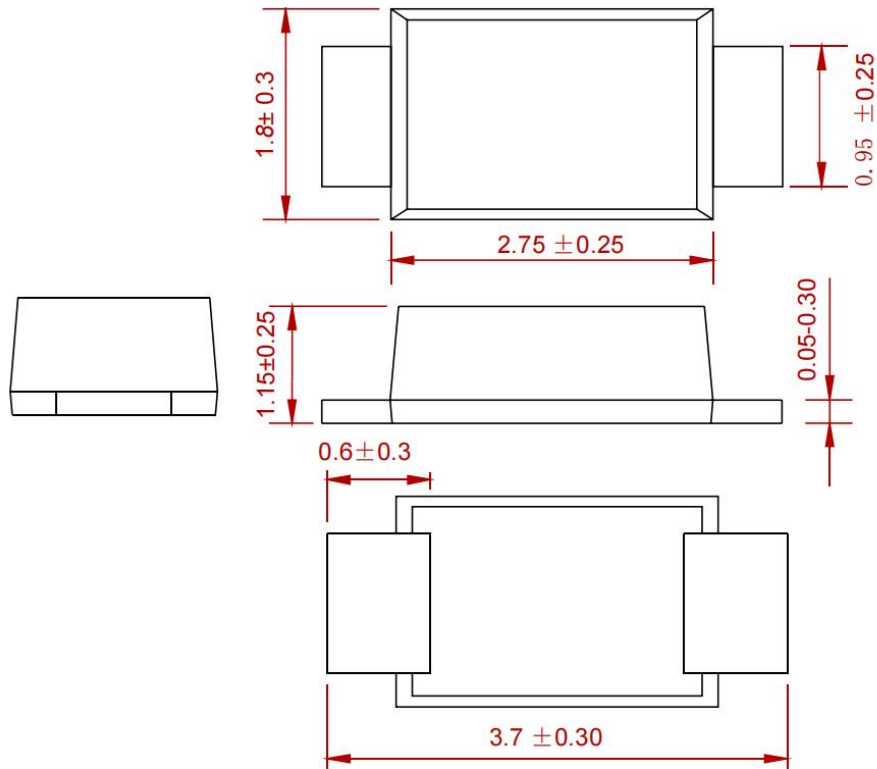


FIG.5-TYPICAL JUNCTION CAPACITANCE

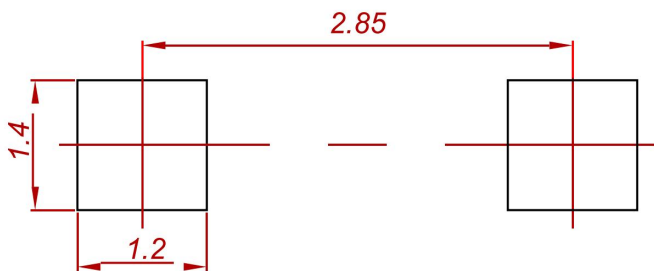


PACKAGE MECHANICAL DATA



Dimensions in millimeters

Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
1N4001W-1N4007W	SOD-123FL	3000

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