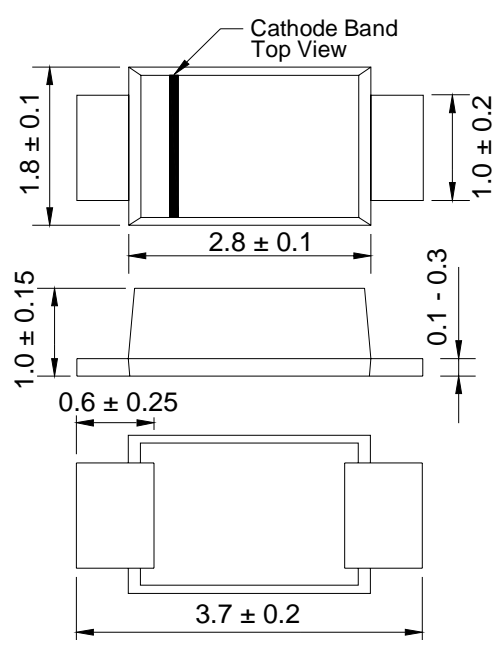


FR101W THRU FR107W

Voltage Range 50 to 1000 Volts
1.0 AMP. Fast Recovery Surface Mount Rectifiers

<p style="text-align: center;">SOD-123FL</p>  <p style="text-align: center;">Dimensions in millimeters</p>	<p>Features</p> <ul style="list-style-type: none"> ✧ For surface mounted application ✧ Glass passivated junction chip ✧ Built-in strain relief, ideal for automated placement ✧ Plastic material used carries Underwriters Laboratory Classification 94V-O ✧ Fast switching for high efficiency ✧ High temperature soldering: 260°C/ 10 seconds at terminals <p style="text-align: center;">MECHANICAL DATA</p> <p>Case: JEDEC SOD-123FL molded plastic body over passivated chip</p> <p>Terminals: Solder plated, solderable per MIL-STD-750, Method 2026</p> <p>Polarity: Color band denotes cathode end</p> <p>Mounting Position: Any</p> <p>Weight: 0.0018 ounce, 0.064 grams</p>
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Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	FR101W	FR102W	FR103W	FR104W	FR105W	FR106W	FR107W	Units
Maximum Recurrent 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 See Fig. 1 @ $T_L=90^\circ\text{C}$	$I_{(AV)}$	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.3							V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	I_R	5 50							uA uA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	150			250	500		nS	
Typical Junction Capacitance (Note 2)	C_j	10							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	105.0 32.0							$^\circ\text{C/W}$ $^\circ\text{C/W}$
Operating Temperature Range	T_J	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150							$^\circ\text{C}$

Notes: 1. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
2. Measured at 1 MHz and Applied $V_R=4.0$ Volts

RATINGS AND CHARACTERISTIC CURVES (FR101W THRU FR107W)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

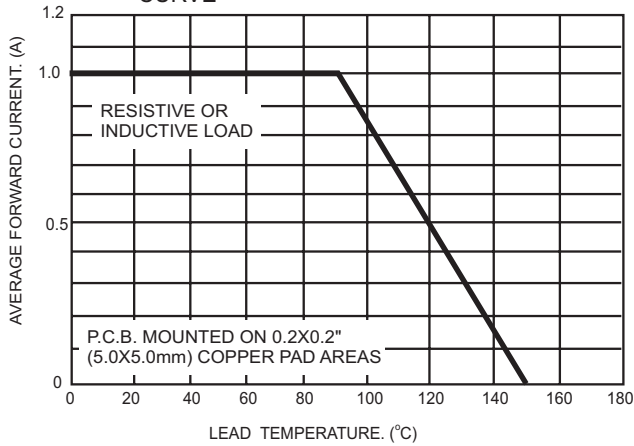


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

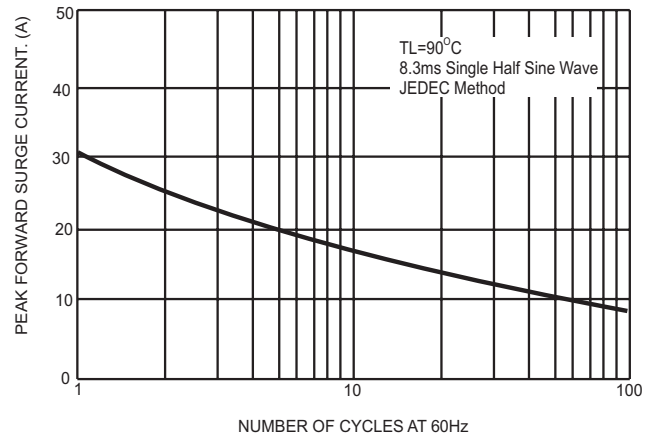


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

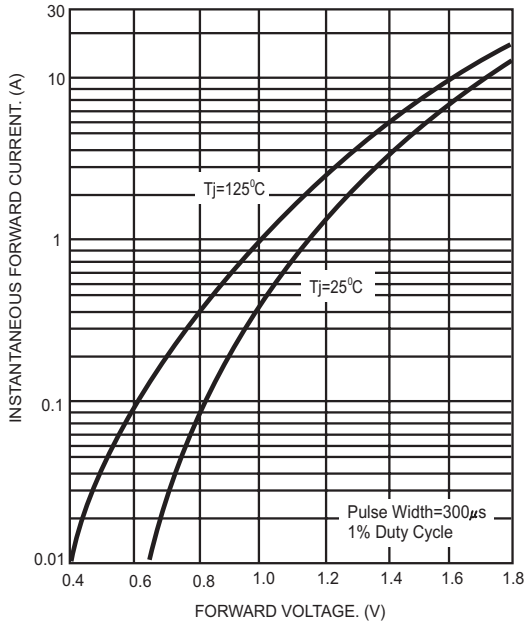


FIG.4- TYPICAL REVERSE CHARACTERISTICS

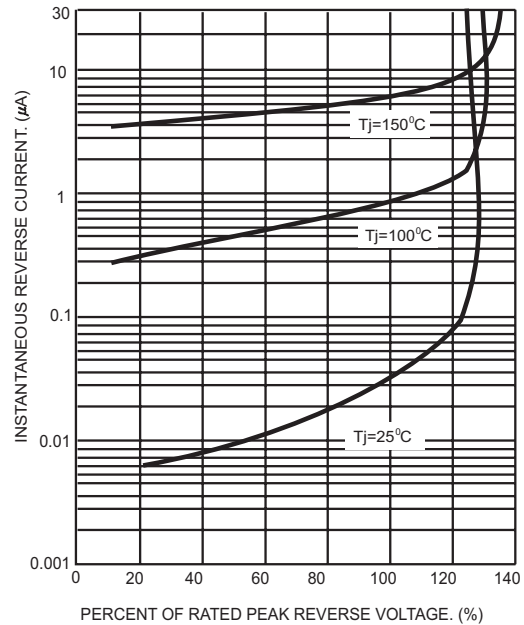


FIG.5- TYPICAL JUNCTION CAPACITANCE

