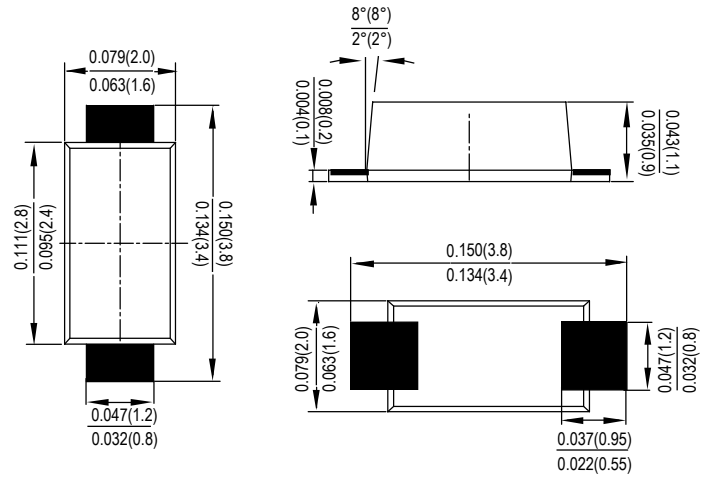


### FEATURES

- Fast switching device ( $t_{rr} < 4.0\text{ns}$ )
- Surface Mount Device Type
- Moisture sensitivity level 1
- Matte Tin (Sn) lead finish with Nickel (Ni) underplate

### SOD-123FL



Dimensions in inches and (millimeters)

### MECHANICAL DATA

- Case: Flat lead SOD-123FL small outline plastic package
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed: 260°C/10s
- Polarity: Indicated by cathode band

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	$P_D$	400	mW
Reverse Voltage	$V_R$	100	V
Repetitive Peak Reverse Voltage	$V_{RRM}$	75	V
Repetitive Peak Forward Current	$I_{FRM}$	300	mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$	$I_{FSM}$	2	A
Forward Current	$I_F$	150	mA
Thermal Resistance (Junction to Ambient) (Note 1)	$R_{\theta JA}$	450	$^\circ\text{C/W}$
Junction and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	$^\circ\text{C}$

PARAMETER	SYMBOL	MIN	MAX	UNIT	
Reverse Voltage	$V_R$	$I_R = 100\mu\text{A}$	100	-	V
		$I_R = 5\mu\text{A}$	75	-	
Forward Voltage	$V_F$	1N4448W, 1N914BW $I_F = 5.0\text{mA}$	0.62	0.72	V
		1N4148W $I_F = 10.0\text{mA}$	-	1.0	
		1N4448W, 1N914BW $I_F = 100.0\text{mA}$	-	1.0	
Reverse Leakage Current	$I_R$	$V_R = 20\text{V}$	-	25	nA
		$V_R = 75\text{V}$	-	5.0	$\mu\text{A}$
Junction Capacitance	$C_J$	-	4.0	pF	
Reverse Recovery Time	$t_{rr}$	-	4.0	ns	

Notes 1: Test Condition : 8.3ms Single half Sine-Wave Superimposed on Rated Load

Notes 2: Reverse Recovery Test Conditions :  $I_F = 10\text{mA}$ ,  $I_R = 60\text{mA}$ ,  $R_L = 100\Omega$ ,  $I_{RR} = 1\text{mA}$

### RATINGS AND CHARACTERISTICS CURVES

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

Fig.1 Typical Forward Characteristics

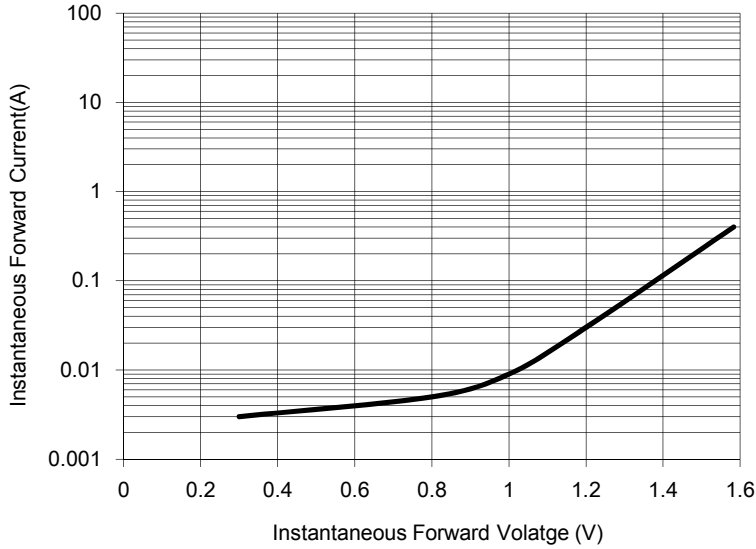


Fig. 2 Reverse Current vs Reverse Voltage

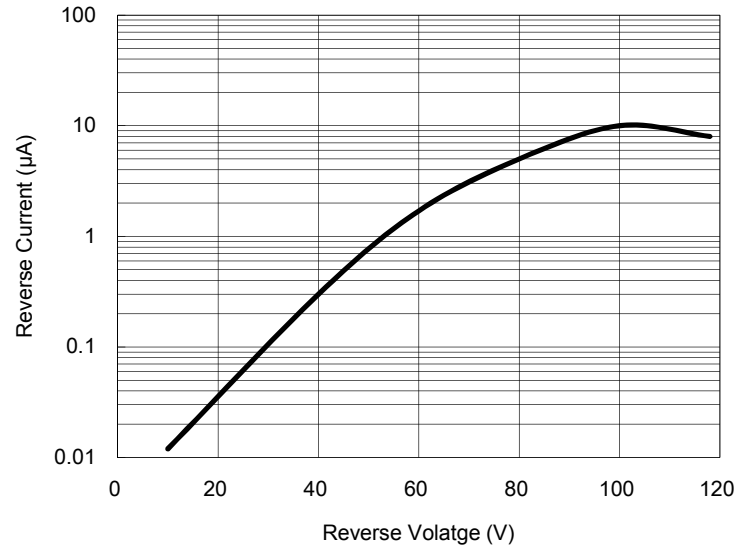


Fig. 3 Admissible Power Dissipation

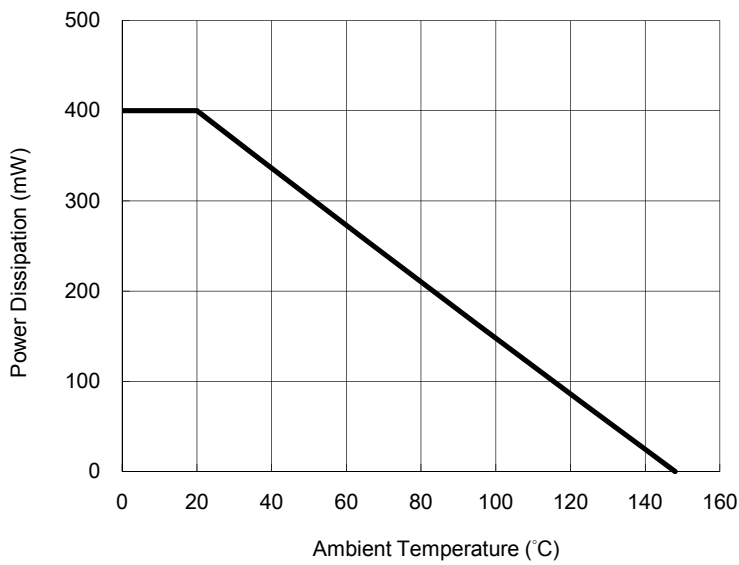


Fig. 4 Typical Junction Capacitance

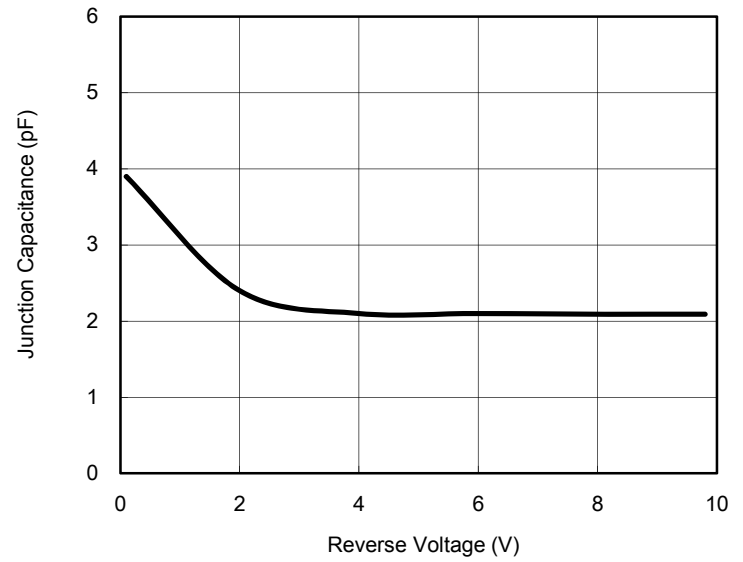
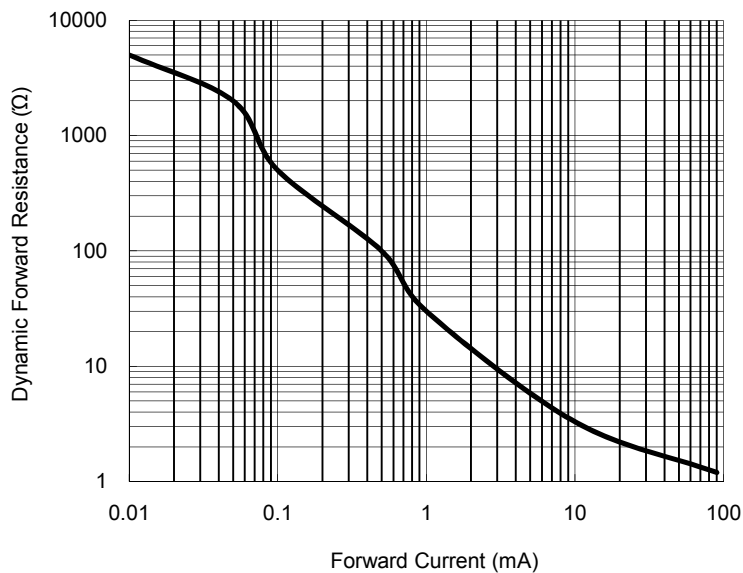


Fig. 5 Forward Resistance vs. Forward Current



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