MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	V
Average Rectified Forward Current (Rated V_R, T_L = 90°C)	$I_{F(AV)}$	0.5	A
Non−Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	I_{FSM}	5.5	A
Storage Temperature Range	T_{stg}	−65 to +150	°C
Operating Junction Temperature	T_J	−65 to +125	°C
Voltage Rate of Change (Rated V_R)	dv/dt	1000	V/μs
ESD Ratings: Machine Model = C Human Body Model = 3B		> 400 > 8000	V

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

THERMAL CHARACTERISTICS

Rating	Symbol	Value	Unit
Thermal Resistance; Junction−to−Ambient (Note 1)	$R_{\theta JA}$	206	°C/W
Thermal Resistance; Junction−to−Lead	$R_{\theta JL}$	150	°C/W

ELECTRICAL CHARACTERISTICS

Maximum Instantaneous Forward Voltage (Note 2)	v_F	T_J = 25°C	T_J = 100°C	V
(i_F = 0.1 Amps) (i_F = 0.5 Amps)		0.300 0.385	0.220 0.330	
Maximum Instantaneous Reverse Current (Note 2)	I_R	T_J = 25°C	T_J = 100°C	mA
(V_R = 10 V) (Rated DC Voltage = 20 V)		75 μA 250 μA	5 mA 8 mA	

1. 1 inch square pad size (1 x 0.5 inch for each lead) on FR4 board.
2. Pulse Test: Pulse Width = 300 μs, Duty Cycle ≤ 2%.

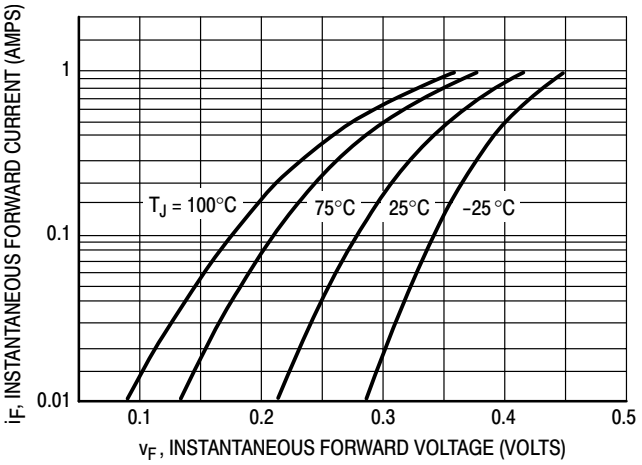


Figure 1. Typical Forward Voltage

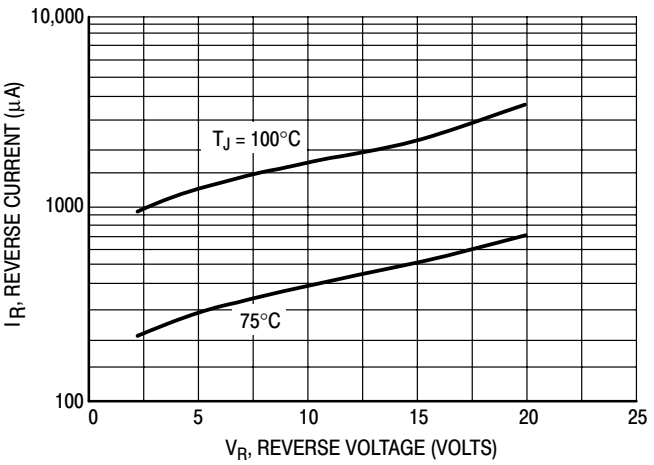


Figure 2. Typical Reverse Current

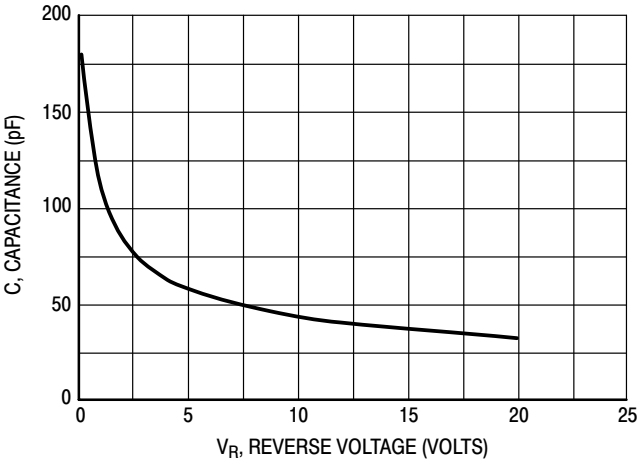


Figure 3. Typical Capacitance

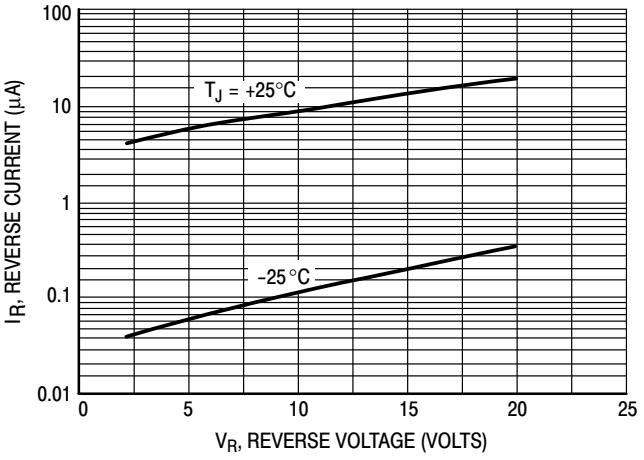


Figure 4. Typical Reverse Current

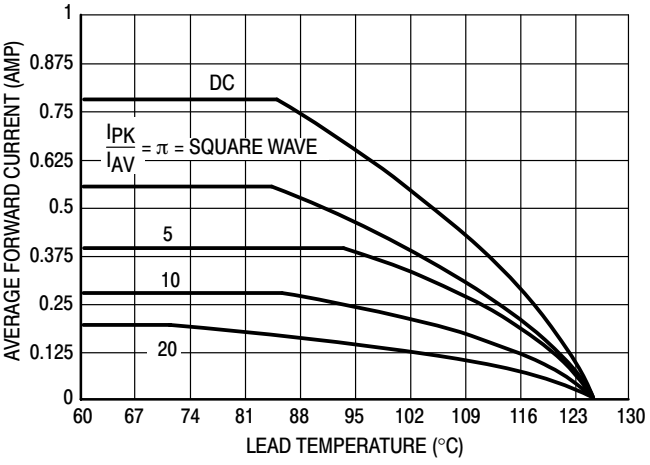


Figure 5. Current Derating (Lead)

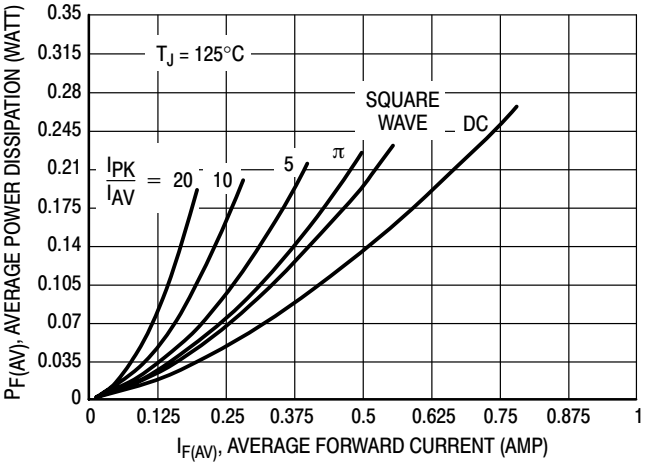
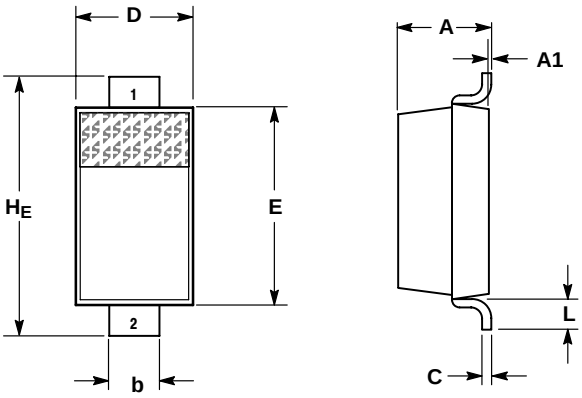


Figure 6. Power Dissipation

PACKAGE DIMENSIONS

SOD−123
CASE 425−04
ISSUE E

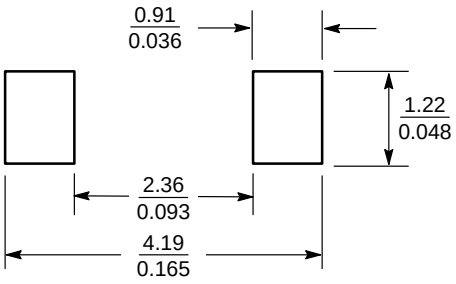


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.94	1.17	1.35	0.037	0.046	0.053
A1	0.00	0.05	0.10	0.000	0.002	0.004
b	0.51	0.61	0.71	0.020	0.024	0.028
c	---	---	0.15	---	---	0.006
D	1.40	1.60	1.80	0.055	0.063	0.071
E	2.54	2.69	2.84	0.100	0.106	0.112
H_E	3.56	3.68	3.86	0.140	0.145	0.152
L	0.25	---	---	0.010	---	---

STYLE 1:
PIN 1. CATHODE
2. ANODE

SOLDERING FOOTPRINT*



SCALE 10:1 $\left(\frac{\text{mm}}{\text{inches}}\right)$

*For additional information on our Pb−Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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