

THERMAL CHARACTERISTICS

Rating	Symbol	Value	Unit
Thermal Resistance – Junction-to-Case	$R_{\theta JC}$	6	$^{\circ}\text{C/W}$
Thermal Resistance – Junction-to-Ambient (Note 1)	$R_{\theta JA}$	80	$^{\circ}\text{C/W}$

ELECTRICAL CHARACTERISTICS

Maximum Instantaneous Forward Voltage Drop (Note 2) ($i_F = 3$ Amps, $T_J = 25^{\circ}\text{C}$) ($i_F = 3$ Amps, $T_J = 125^{\circ}\text{C}$)	V_F	0.95 0.75	Volts
Maximum Instantaneous Reverse Current (Note 2) ($T_J = 25^{\circ}\text{C}$, Rated dc Voltage) ($T_J = 125^{\circ}\text{C}$, Rated dc Voltage)	i_R	5 500	μA
Maximum Reverse Recovery Time ($I_F = 1$ Amp, $di/dt = 50$ Amps/ μs , $V_R = 30$ V, $T_J = 25^{\circ}\text{C}$) ($I_F = 0.5$ Amp, $i_R = 1$ Amp, $I_{REC} = 0.25$ A, $V_R = 30$ V, $T_J = 25^{\circ}\text{C}$)	t_{rr}	35 25	ns

- Rating applies when surface mounted on the minimum pad sizes recommended.
- Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$.

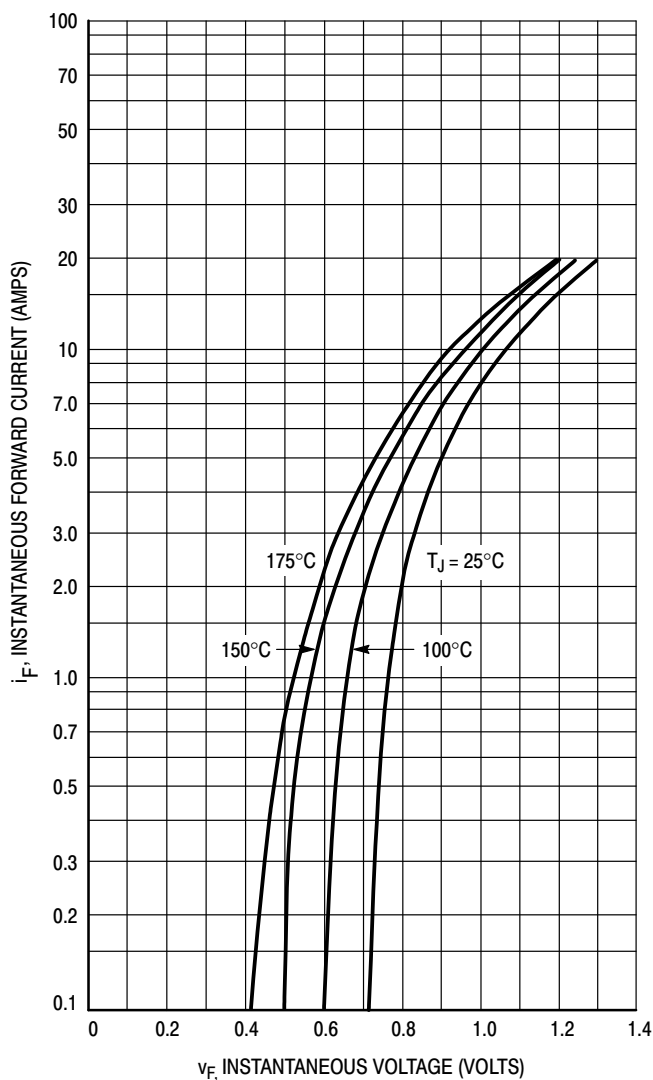


Figure 1. Typical Forward Voltage

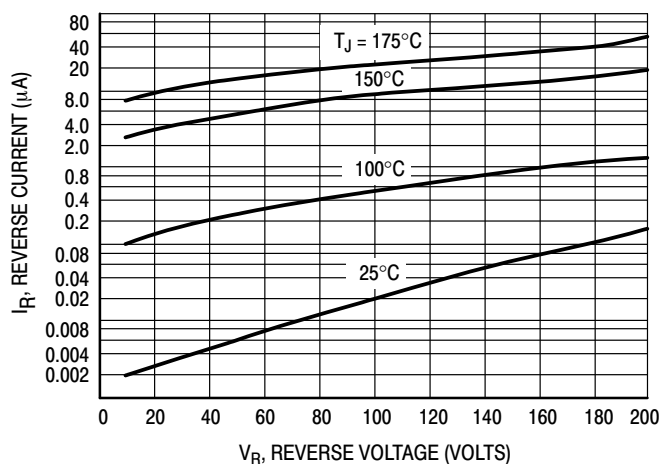


Figure 2. Typical Reverse Current*

* The curves shown are typical for the highest voltage device in the voltage grouping. Typical reverse current for lower voltage selections can be estimated from these curves if V_R is sufficiently below rated V_R .

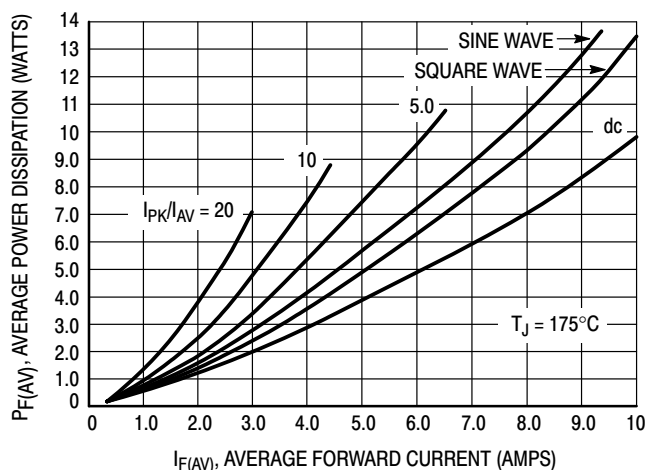


Figure 3. Average Power Dissipation

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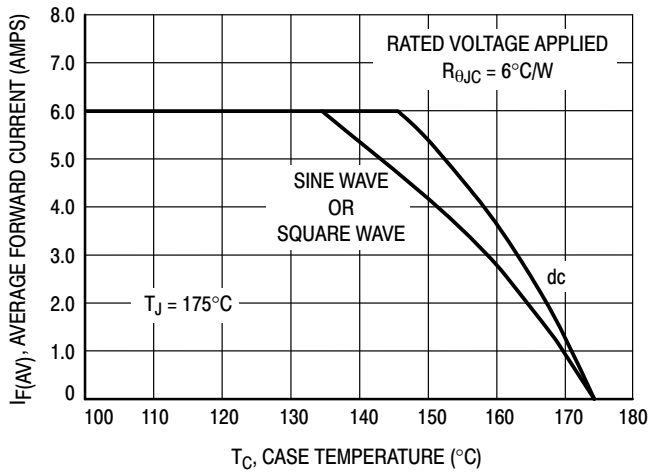


Figure 4. Current Derating, Case

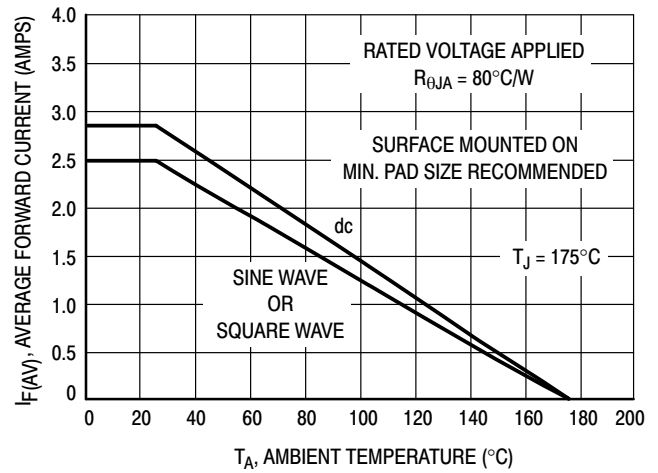


Figure 5. Current Derating, Ambient

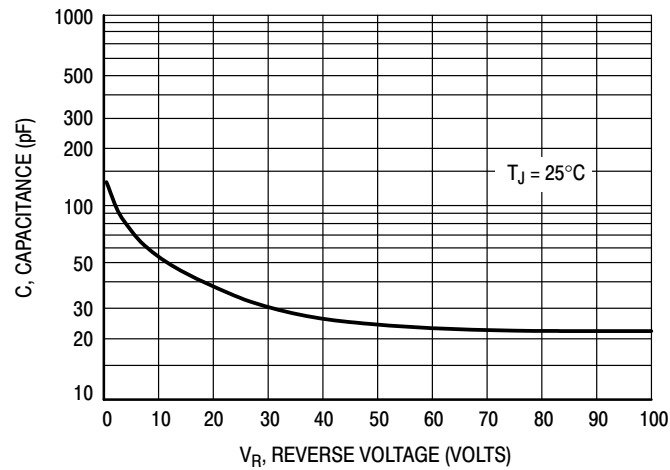
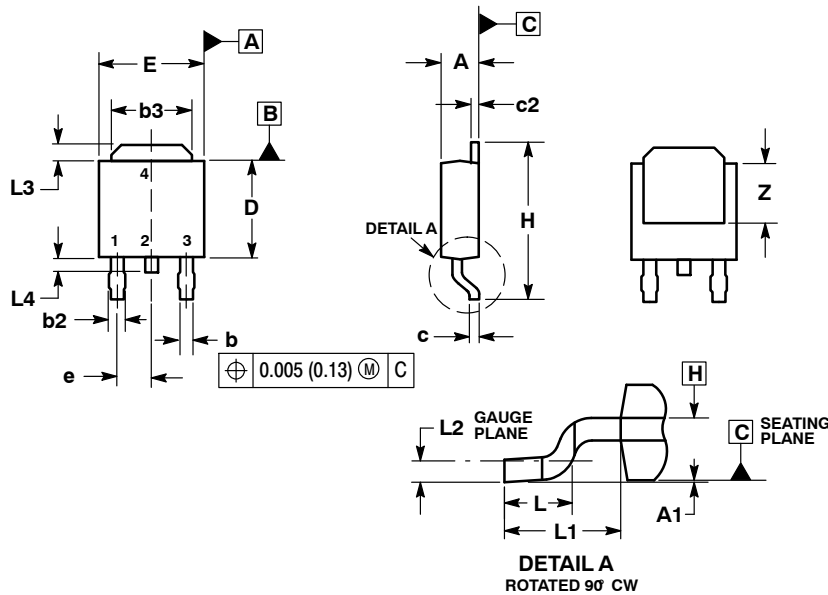


Figure 6. Typical Capacitance

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PACKAGE DIMENSIONS

DPAK (SINGLE GAUGE) CASE 369C-01 ISSUE D

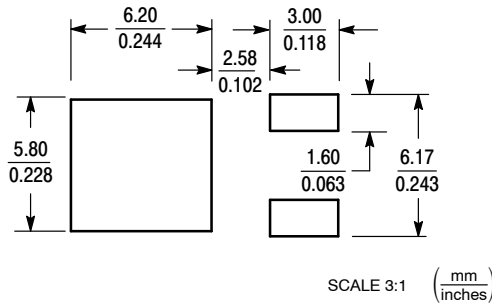


NOTES:


1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: INCHES.
3. THERMAL PAD CONTOUR OPTIONAL WITHIN DIMENSIONS b3, L3 and Z.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR BURRS. MOLD FLASH, PROTRUSIONS, OR GATE BURRS SHALL NOT EXCEED 0.006 INCHES PER SIDE.
5. DIMENSIONS D AND E ARE DETERMINED AT THE OUTERMOST EXTREMES OF THE PLASTIC BODY.
6. DATUMS A AND B ARE DETERMINED AT DATUM PLANE H.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.086	0.094	2.18	2.38
A1	0.000	0.005	0.00	0.13
b	0.025	0.035	0.63	0.89
b2	0.030	0.045	0.76	1.14
b3	0.180	0.215	4.57	5.46
c	0.018	0.024	0.46	0.61
c2	0.018	0.024	0.46	0.61
D	0.235	0.245	5.97	6.22
E	0.250	0.265	6.35	6.73
e	0.090	BSC	2.29	BSC
H	0.370	0.410	9.40	10.41
L	0.055	0.070	1.40	1.78
L1	0.108	REF	2.74	REF
L2	0.020	BSC	0.51	BSC
L3	0.035	0.050	0.89	1.27
L4	---	0.040	---	1.01
Z	0.155	---	3.93	---

SOLDERING FOOTPRINT*



*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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