

1N5400 thru 1N5408

MAXIMUM RATINGS

Rating	Symbol	1N5400	1N5401	1N5402	1N5404	1N5406	1N5407	1N5408	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
Non-repetitive Peak Reverse Voltage	V_{RSM}	100	200	300	525	800	1000	1200	V
Average Rectified Forward Current (Single Phase Resistive Load, 1/2 in. Leads, $T_L = 105^\circ\text{C}$)	I_O	3.0							A
Non-repetitive Peak Surge Current (Surge Applied at Rated Load Conditions)	I_{FSM}	200 (one cycle)							A
Operating and Storage Junction Temperature Range	T_J T_{stg}	– 65 to +170 – 65 to +175							$^\circ\text{C}$

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS

Characteristic	Symbol	Typ	Unit
Thermal Resistance, Junction-to-Ambient (PC Board Mount, 1/2 in. Leads)	$R_{\theta JA}$	53	$^\circ\text{C}/\text{W}$

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Typ	Max	Unit
Forward Voltage ($I_F = 3.0$ Amp, $T_A = 25^\circ\text{C}$)	V_F	–	–	1.0	V
Reverse Current (Rated DC Voltage) $T_A = 25^\circ\text{C}$ $T_A = 150^\circ\text{C}$	I_R	– –	– –	10 100	μA

Ratings at 25°C ambient temperature unless otherwise specified.
60 Hz resistive or inductive loads.
For capacitive load, derate current by 20%.

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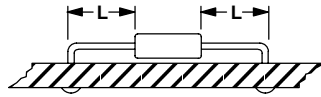
NOTE 1 — AMBIENT MOUNTING DATA

Data shown for thermal resistance junction-to-ambient ($R_{\theta JA}$) for the mountings shown is to be used as typical guideline values for preliminary engineering or in case the tie point temperature cannot be measured.

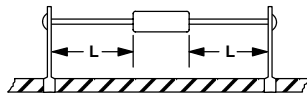
TYPICAL VALUES FOR $R_{\theta JA}$ IN STILL AIR

Mounting Method	Lead Length, L (IN)				$R_{\theta JA}$
	1/8	1/4	1/2	3/4	
1	50	51	53	55	$^{\circ}\text{C/W}$
2	58	59	61	63	$^{\circ}\text{C/W}$
3	28				$^{\circ}\text{C/W}$

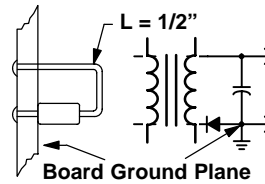
MOUNTING METHOD 1
P.C. Board Where Available
Copper Surface area is small



MOUNTING METHOD 2
Vector Push-In Terminals T-28



MOUNTING METHOD 3
P.C. Board with
1-1/2" x 1-1/2" Copper Surface



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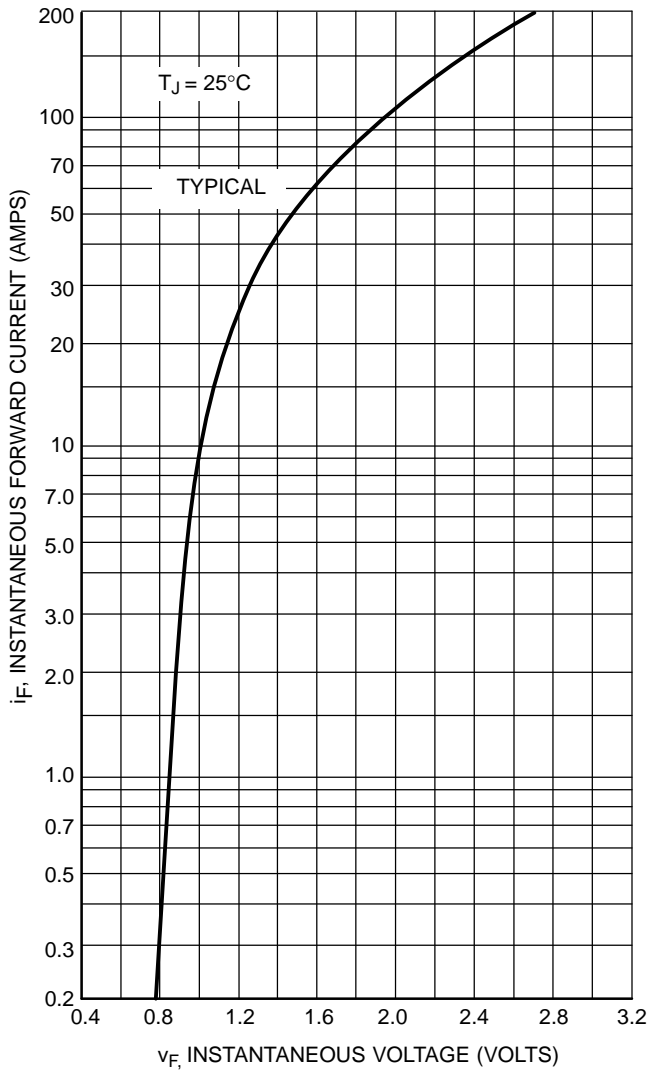


Figure 1. Forward Voltage

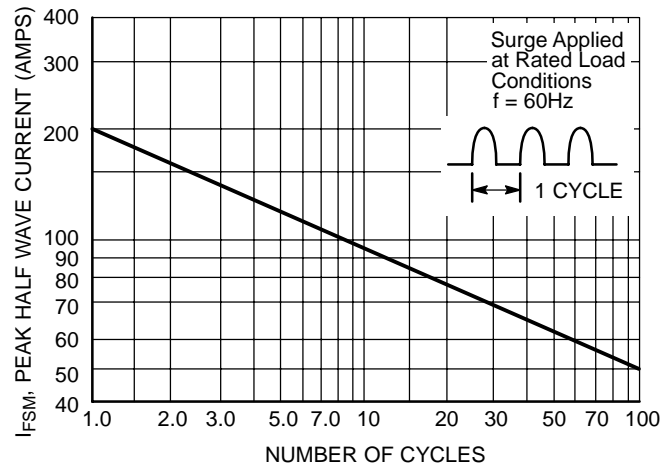


Figure 2. Maximum Nonrepetitive Surge Current

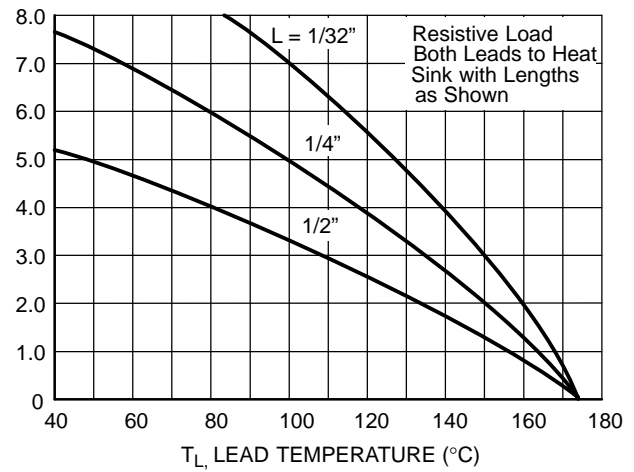


Figure 3. Current Derating Various Lead Lengths

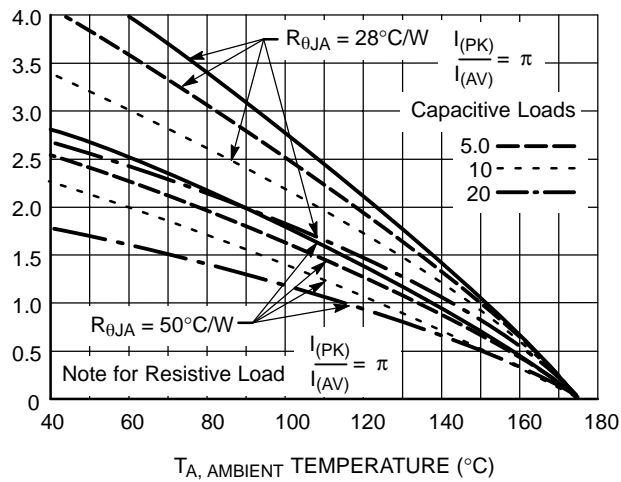


Figure 4. Current Derating PC Board Mounting

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ORDERING INFORMATION

Device	Package	Shipping†
1N5400	Axial Lead*	500 Units/Box
1N5400G	Axial Lead*	500 Units/Box
1N5400RL	Axial Lead*	1200/Tape & Reel
1N5400RLG	Axial Lead*	1200/Tape & Reel
1N5401	Axial Lead*	500 Units/Box
1N5401G	Axial Lead*	500 Units/Box
1N5401RL	Axial Lead*	1200/Tape & Reel
1N5401RLG	Axial Lead*	1200/Tape & Reel
1N5402	Axial Lead*	500 Units/Box
1N5402G	Axial Lead*	500 Units/Box
1N5402RL	Axial Lead*	1200/Tape & Reel
1N5402RLG	Axial Lead*	1200/Tape & Reel
1N5404	Axial Lead*	500 Units/Box
1N5404G	Axial Lead*	500 Units/Box
1N5404RL	Axial Lead*	1200/Tape & Reel
1N5404RLG	Axial Lead*	1200/Tape & Reel
1N5406	Axial Lead*	500 Units/Box
1N5406G	Axial Lead*	500 Units/Box
1N5406RL	Axial Lead*	1200/Tape & Reel
1N5406RLG	Axial Lead*	1200/Tape & Reel
1N5407	Axial Lead*	500 Units/Box
1N5407G	Axial Lead*	500 Units/Box
1N5407RL	Axial Lead*	1200/Tape & Reel
1N5407RLG	Axial Lead*	1200/Tape & Reel
1N5408	Axial Lead*	500 Units/Box
1N5408G	Axial Lead*	500 Units/Box
1N5408RL	Axial Lead*	1200/Tape & Reel
1N5408RLG	Axial Lead*	1200/Tape & Reel

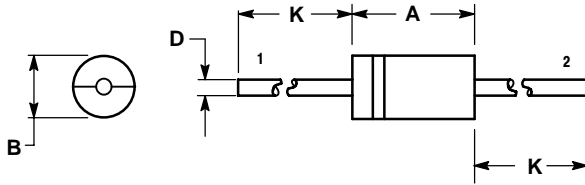
†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

*This package is inherently Pb-Free.

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PACKAGE DIMENSIONS

AXIAL LEAD CASE 267-05 ISSUE G



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

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.287	0.374	7.30	9.50
B	0.189	0.209	4.80	5.30
D	0.047	0.051	1.20	1.30
K	1.000	---	25.40	---

STYLE 1:
PIN 1. CATHODE (POLARITY BAND)
2. ANODE

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