



**FEATURES**

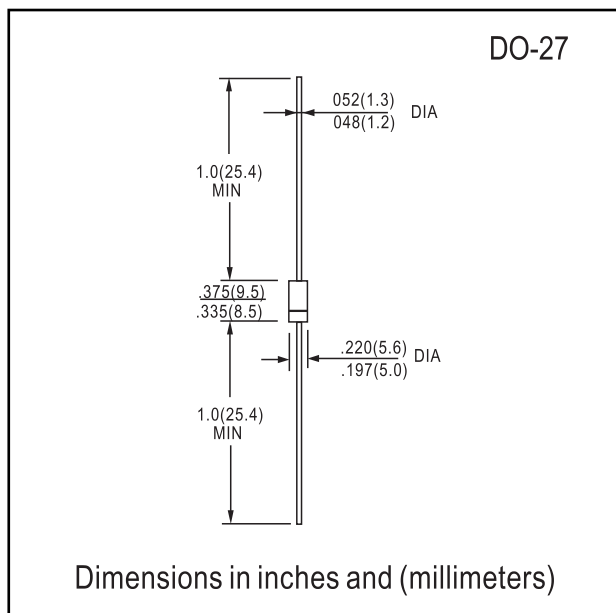
- Low forward voltage drop
- Low leakage current,  $I_R$  less than 0.1  $\mu A$
- High forward surge capability
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

**MECHANICAL DATA**

**Case:** DO-201AD, molded epoxy body  
Molding compound meets UL 94 V-0 flammability rating  
Base P/N-E3 - RoHS compliant, commercial grade

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102  
E3 suffix meets JESD 201 class 1A whisker test

**Polarity:** Color band denotes cathode end



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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

	SYMBOLS	P300A	P300B	P300D	P300G	P300J	P300K	P300M	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current, 0.375" (9.5mm) lead length at $T_A = 55^\circ C$	$I_{(AV)}$	3.0							Amps
Peak Forward Surge Current 8.3ms single half sine - wave superimposed on rated load (JEDEC method )	$I_{FSM}$	200							Amps
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	1.0							Volts
Maximum DC Reverse Current at rated DC blocking voltage	$I_R$	$T_A = 25^\circ C$							$\mu A$
		$T_A = 150^\circ C$							
Maximum Full Load Reverse Current, full cycle average 0.375" (9.5mm) lead length at $T_L = 105^\circ C$	$I_{R(AV)}$	500							$\mu A$
Typical Junction Capacitance (Note 1)	$C_J$	40							pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}$	30							$^\circ C/W$
Operating and Storage Temperature Range	$T_J$	(-65 to +175)							$^\circ C$
Storage Temperature Range	$T_{STG}$	(-65 to +175)							$^\circ C$

**NOTES:**

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2. Thermal Resistance from Junction to Ambient at 0.375" (9.5mm) lead length, P.C. board mounted with 0.8" X 0.8" (20 X 20mm) copper heatsink.



**RATINGS AND CHARACTERISTIC CURVES P300A THRU P300M**

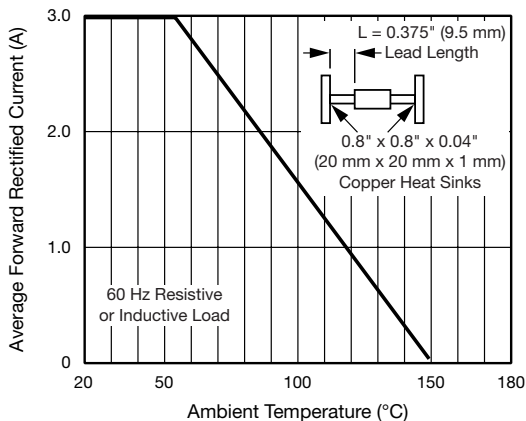


Fig. 1 - Forward Current Derating Curve

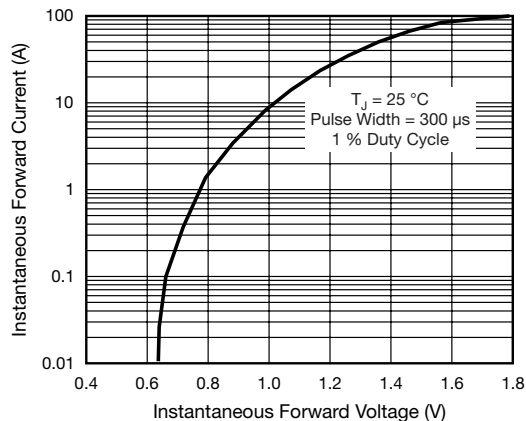


Fig. 3 - Typical Instantaneous Forward Characteristics

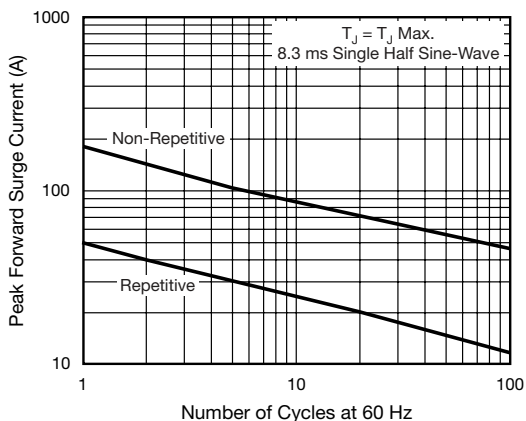


Fig. 2 - Maximum Peak Forward Surge Current

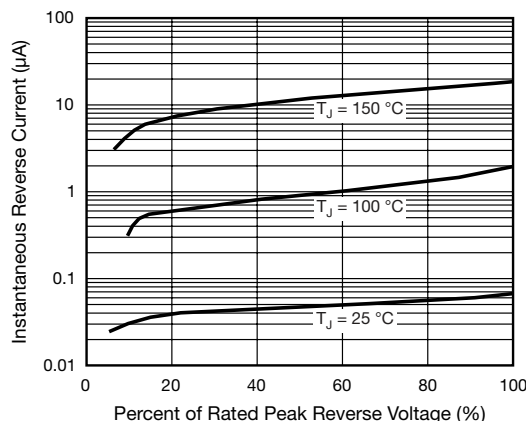


Fig. 4 - Typical Reverse Characteristics

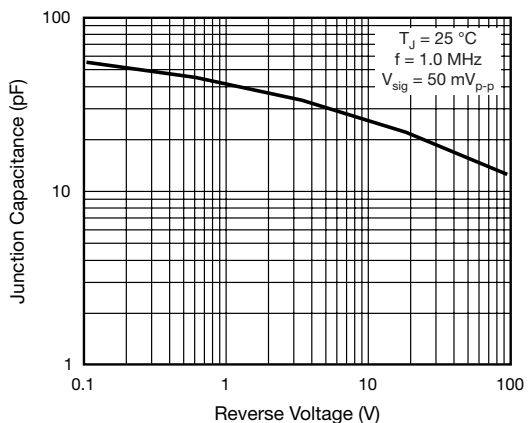


Fig. 5 - Typical Junction Capacitance Per Leg

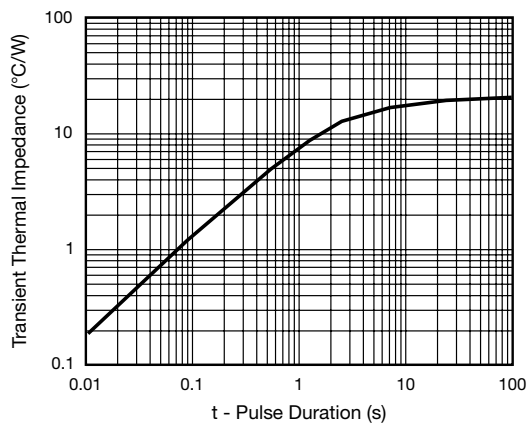


Fig. 6 - Typical Transient Thermal Impedance