



TAYCHIPST

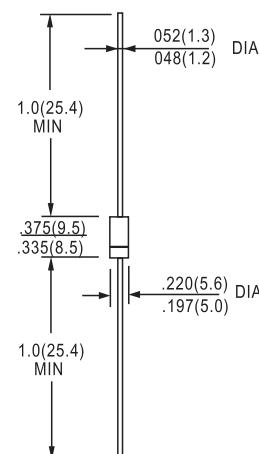
General Purpose Plastic Rectifier

P300A THRU P300M

50V-1000V 3.0A

FEATURES

- Low forward voltage drop
- Low leakage current, I_R less than $0.1 \mu A$
- High forward surge capability
- Solder dip $275^\circ C$ 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 bodyMolding 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

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at $25^\circ C$ 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 $T_A = 25^\circ C$ DC blocking voltage $T_A = 150^\circ C$	I_R	10						μA	
		500							
Maximum Full Load Reverse Current, full cycle average 0.375" (9.5mm) lead length at $T_L = 105^\circ C$	$I_{R(AV)}$	500						μA	
Typical Junction Capacitance (Note 1)	C_J	40						pF	
Typical Thermal Resistance (Note2)	R_{QJA}	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.



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RATINGS AND CHARACTERISTIC CURVES P300A THRU P300M

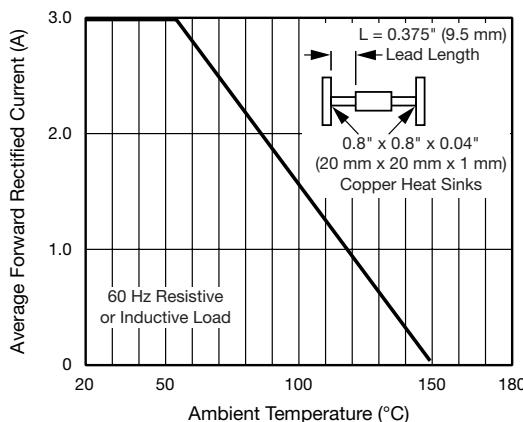


Fig. 1 - Forward Current Derating Curve

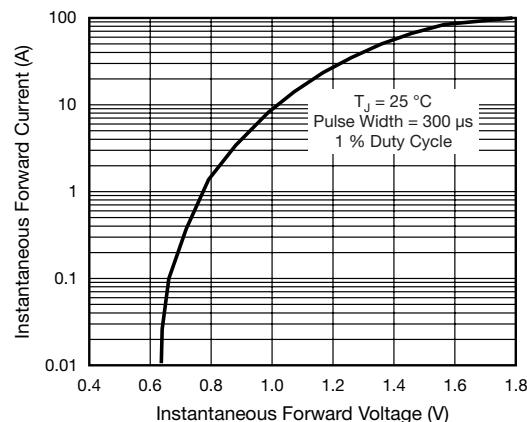


Fig. 3 - Typical Instantaneous Forward Characteristics

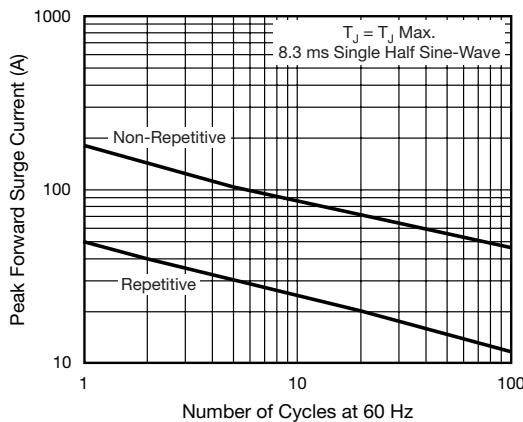


Fig. 2 - Maximum Peak Forward Surge Current

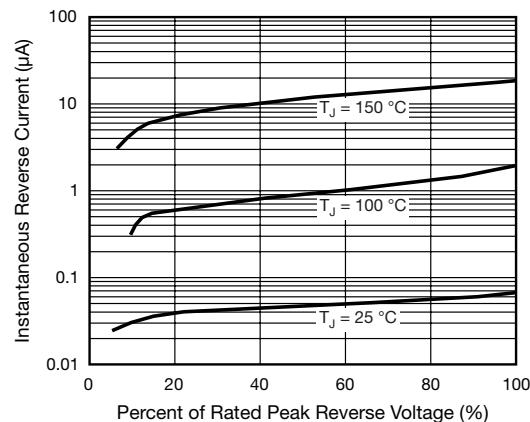


Fig. 4 - Typical Reverse Characteristics

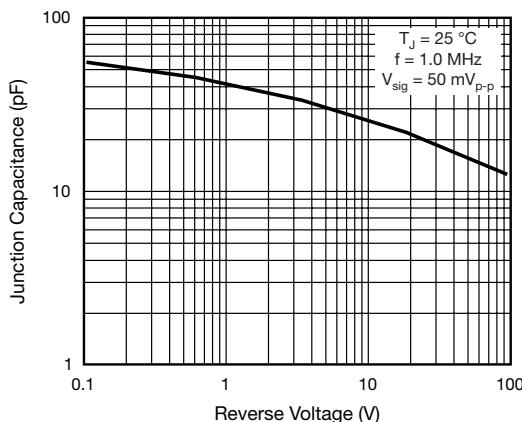


Fig. 5 - Typical Junction Capacitance Per Leg

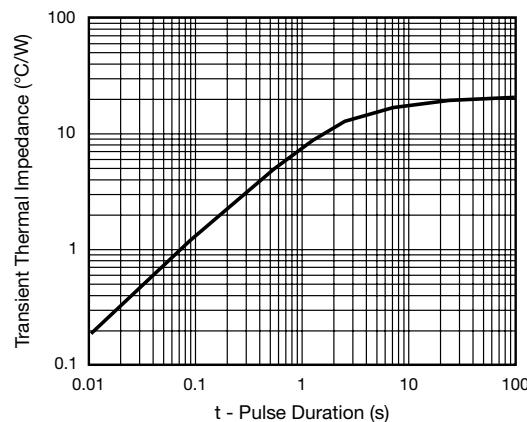


Fig. 6 - Typical Transient Thermal Impedance