



## GENERAL PURPOSE SILICON RECTIFIER

P300A THRU P300M

VOLTAGE RANGE  
CURRENT

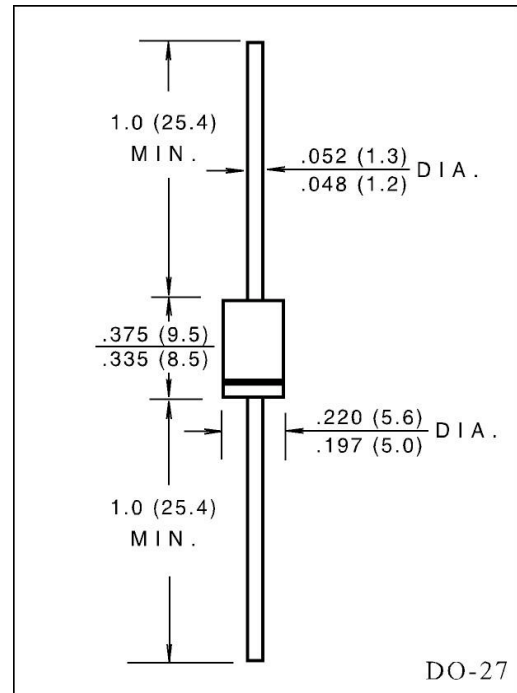
50 to 1000 Volts  
3.0 Ampere

### FEATURES

- Low cost construction.
- Low forward voltage drop
- Low reverse leakage
- High forward surge current capability.
- High temperature soldering guaranteed:  
260°C/10 seconds, 0.375" (9.5mm) lead length  
at 5 lbs (2.3kg) tension.

### MECHANICAL DATA

- Case: transfer molded plastic
- Epoxy: UL94V - 0 rate flame retardant.
- Polarity: Color band denotes cathode end.
- Lead: Plated axial lead, solderable per MIL - STD - 202E  
method 208C
- Mounting position: Any
- Weight: 0.042 ounce, 1.19grams



### 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 $T_A = 55^\circ\text{C}$	$I_{(AV)}$	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	$I_R$	$T_A = 25^\circ\text{C}$							$\mu\text{A}$
		$T_A = 150^\circ\text{C}$							
Maximum Full Load Reverse Current, full cycle average 0.375" (9.5mm) lead length at $T_L = 105^\circ\text{C}$	$I_{R(AV)}$	500							$\mu\text{A}$
Typical Junction Capacitance (Note 1)	$C_J$	40							pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}$	30							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J$	(-65 to +175)							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	(-65 to +175)							$^\circ\text{C}$

### 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-TYPICAL FORWARD CURRENT DERATING CURVE

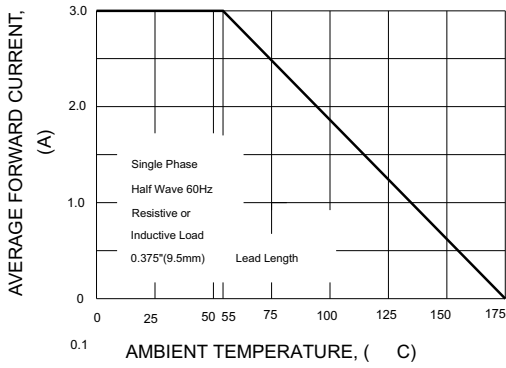


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

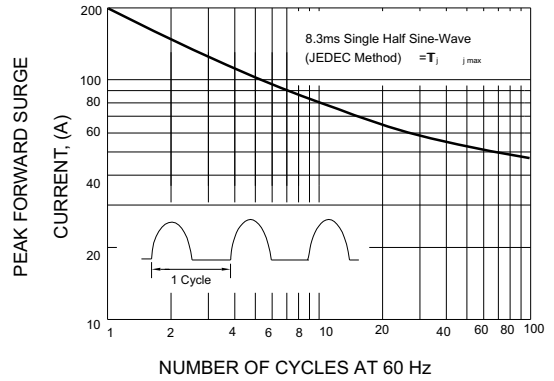


FIG.3-TYPICAL INSTANTANEOUS

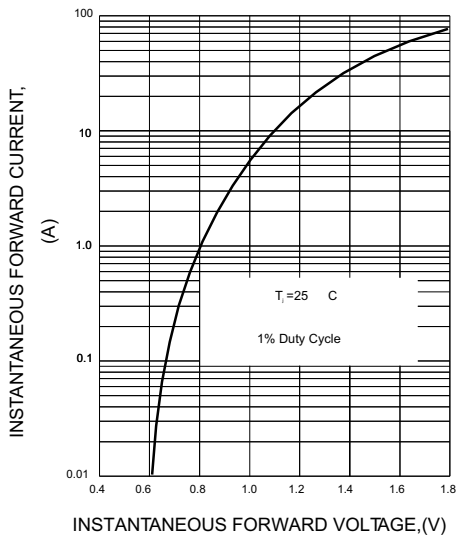


FIG.4-TYPICAL REVERSE CHARACTERISTICS

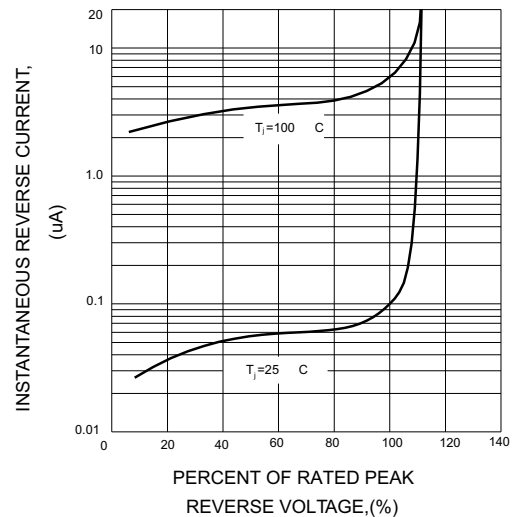


FIG.5-TYPICAL JUNCTION CAPACITANCE

