

10A Axial Silicon Rectifier

PRODUCT SUMMARY

Voltage range 50 to 1000 Volts
 Axial package
 Rated 10.0 Amps at $T_A=50^\circ\text{C}$

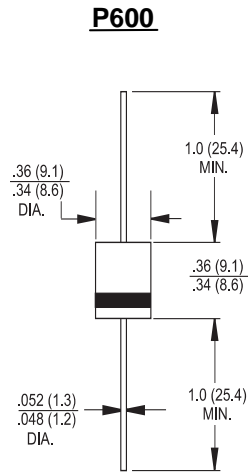
FEATURES

Low forward voltage drop
 Low reverse leakage current
 High current capability
 High surge-current capability

MECHANICAL DATA

Case: molded plastic
 Epoxy: UL 94V-O rated flame retardant
 Lead: axial leads, matte-Sn plated, solderable
 per MIL-STD-202, Method 208 guaranteed
 Polarity: color band denotes cathode end
 High temperature soldering guaranteed:
 260°C for 10 seconds with 0.375" (9.5mm)
 lead lengths
 Weight: 2.1 grams

 **Pb-free, RoHS compliant.**



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Parameter	Symbol	10A 05	10A1	10A2	10A4	10A6	10A8	10A 10	Units
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current with 0.375" (9.5mm) lead lengths at $T_A = 50^\circ\text{C}$	$I_{(AV)}$	10.0							A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	600							A
Maximum instantaneous forward voltage at 10.0A	V_F	1.0							V
Maximum DC reverse current at $T_J=25^\circ\text{C}$ at rated DC blocking voltage at $T_J=100^\circ\text{C}$	I_R	10 100							 uA
Typical junction capacitance (Note 1)	C_j	150							pF
Typical thermal resistance (Note 2)	$R\theta_{JA}$	10							$^\circ\text{C}/\text{W}$
Operating temperature range	T_J	-65 to +125							$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +150							$^\circ\text{C}$

Notes: 1. Measured at 1 MHz with applied reverse voltage of 4.0 V D.C.

2. Thermal resistance from junction to ambient

RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

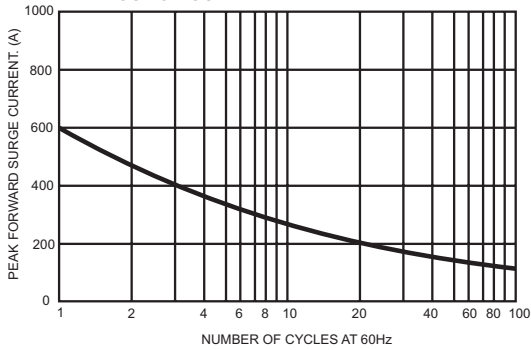


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

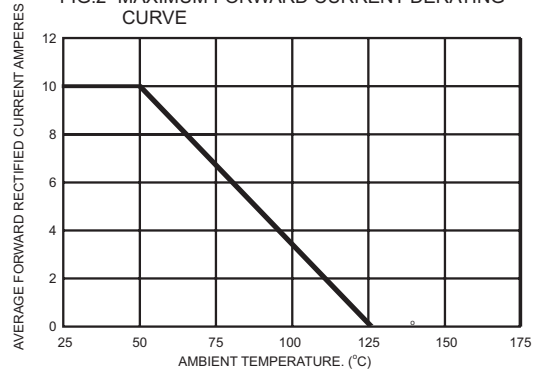


FIG.3- TYPICAL JUNCTION CAPACITANCE

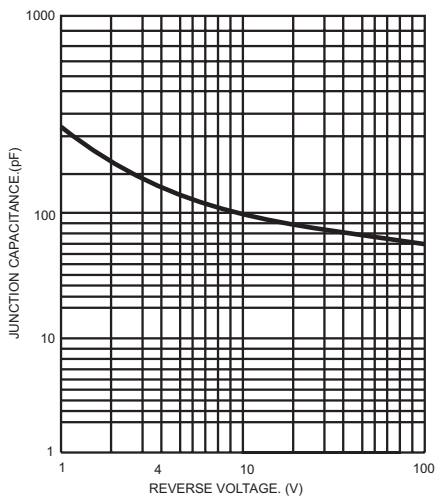
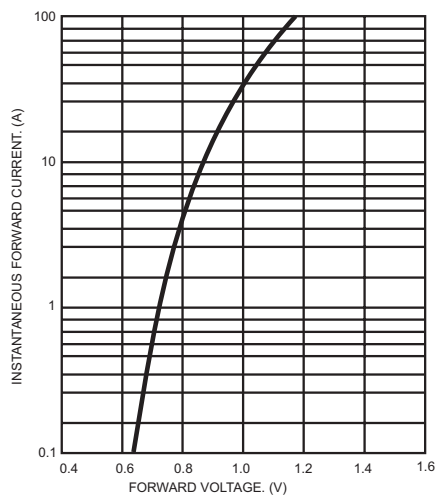


FIG.4- TYPICAL FORWARD CHARACTERISTICS



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