

10A Axial Silicon Rectifier

PRODUCT SUMMARY

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

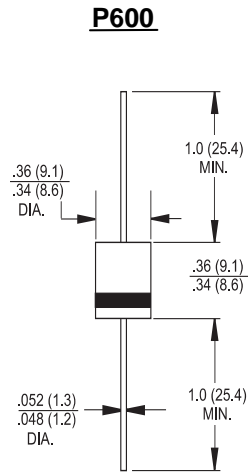
FEATURES

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							μA μA
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

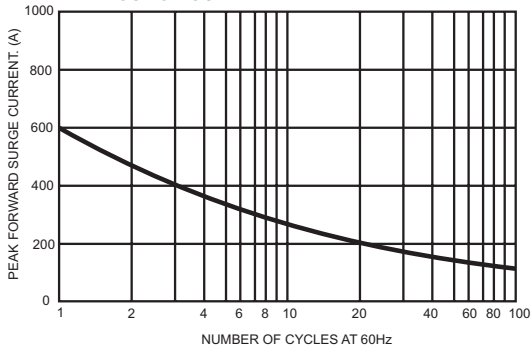


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

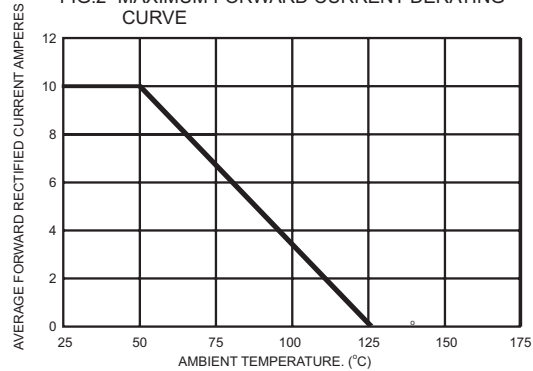


FIG.3- TYPICAL JUNCTION CAPACITANCE

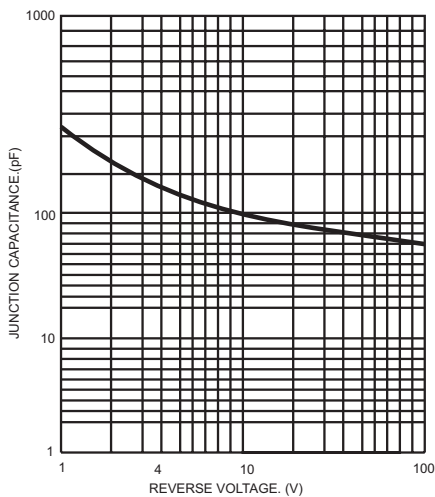
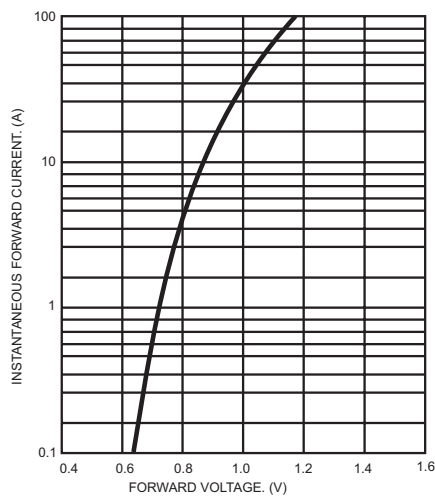


FIG.4- TYPICAL FORWARD CHARACTERISTICS



Information furnished by Silicon Standard Corporation is believed to be accurate and reliable. However, Silicon Standard Corporation makes no guarantee or warranty, express or implied, as to the reliability, accuracy, timeliness or completeness of such information and assumes no responsibility for its use, or for infringement of any patent or other intellectual property rights of third parties that may result from its use. Silicon Standard reserves the right to make changes as it deems necessary to any products described herein for any reason, including without limitation enhancement in reliability, functionality or design. No license is granted, whether expressly or by implication, in relation to the use of any products described herein or to the use of any information provided herein, under any patent or other intellectual property rights of Silicon Standard Corporation or any third parties.