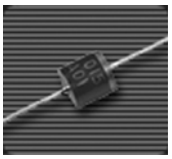
General Purpose Plastic Rectifiers

PRODUCT SUMMARY

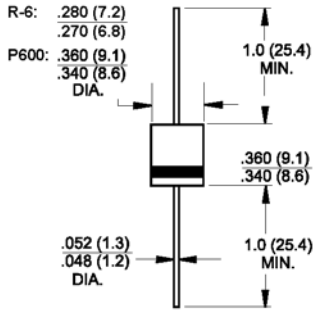
Reverse Voltage 50 to 1000 Volts
Forward Current 6.0 Amperes



R-6 or P600

FEATURES

Low forward voltage drop
High current capability
High reliability
High surge current capability
T_J is 150°C (Max.) and T_{STG} is 175°C (Max.) with PI glue



Dimensions in inches and (millimeters)

MECANICAL DATA

Cases: Molded plastic R-6
Epoxy: UL 94V-O rate flame retardant
Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
Polarity: Color band denotes cathode end
High temperature soldering guaranteed:
250°C/10 seconds .375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
Weight: 0.074 ounce, 2.1 grams

Pb-free; RoHS-compliant

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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	Symbols	6A05	6A1	6A2	6A4	6A6	6A8	6A10	Units
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 @T_A=60°C	$I_{(AV)}$	6.0							Amps
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	400.0							Amps
Maximum instantaneous forward voltage @ 6.0A	V_F	0.95							Volts
Maximum DC reverse current @T_A=25°C at rated DC blocking voltage @T_A=100°C	I_R	10.0 400							uA
Maximum full load reverse current full cycle average, .375" (9.5mm) lead length @T_A=75°C	$I_{R(AV)}$	50							uA
Typical junction capacitance (Note 1)	C_J	100							pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	10.0							°C/W
Operating junction temperature range	T_J	-55 to +125							°C
Storage temperature range	T_{STG}	-55 to +150							°C

Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.
2. Thermal Resistance from Junction to Ambient .375" (9.5mm) Lead Length

RATINGS AND CHARACTERISTIC CURVES

(T_A=25°C unless otherwise noted)

FIG.1- MAXIMUM OUTPUT CURRENT VS AMBIENT TEMPERATURE

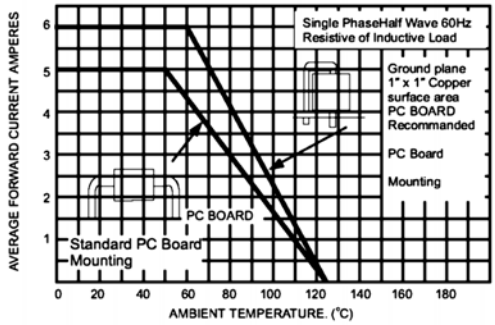


FIG.2- TYPICAL FORWARD CHARACTERISTICS

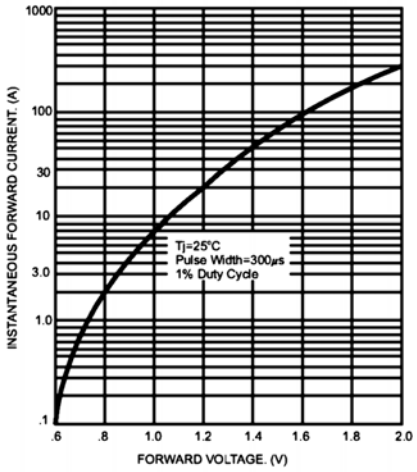


FIG.3- TYPICAL REVERSE CHARACTERISTICS

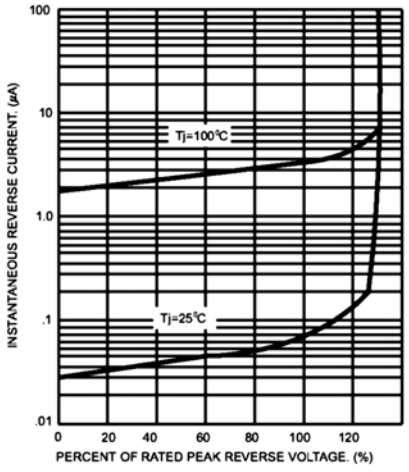


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

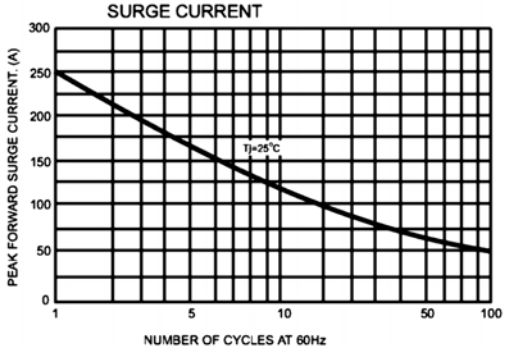
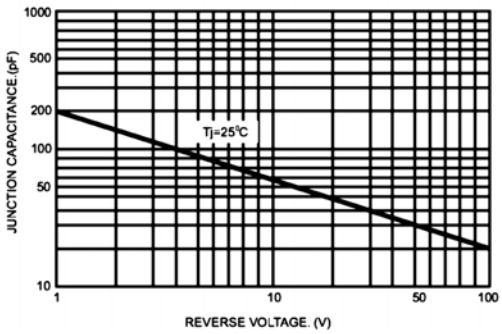


FIG.5- TYPICAL JUNCTION CAPACITANCE



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