



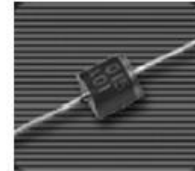
SYNSEMI SEMICONDUCTOR

6A05 thru 6A10

6.0 Amps. General Purpose Plastic Rectifiers
Voltage Range 50 to 1000 Volts Forward Current 6.0 Amperes

Features

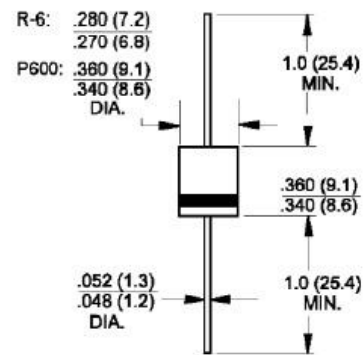
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ High reliability
- ◆ High surge current capability



R-6 or P600

Mechanical 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



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%

Dimensions in inches and (millimeters)

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 .375" (9.5mm) lead length @ $T_A = 60^\circ\text{C}$	$I_{(AV)}$	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 @ $T_A = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_A = 100^\circ\text{C}$	I_R	10.0 400							μA
Maximum full load reverse current full cycle average, .375" (9.5mm) lead length @ $T_A = 75^\circ\text{C}$	$I_{R(AV)}$	50							μA
Typical junction capacitance (Note 1)	C_J	100							pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	10.0							$^\circ\text{C/W}$
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 and Applied Reverse Voltage of 4.0 V.D.C.
2. Thermal Resistance from Junction to Ambient .375" (9.5mm) Lead Length

6A05 thru 6A10

RATINGS AND CHARACTERISTIC CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG.1- MAXIMUM OUTPUT CURRENT VS AMBIENT TEMPERATURE

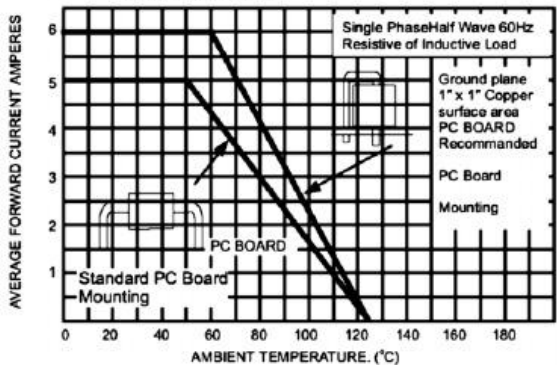


FIG.2- TYPICAL FORWARD CHARACTERISTICS

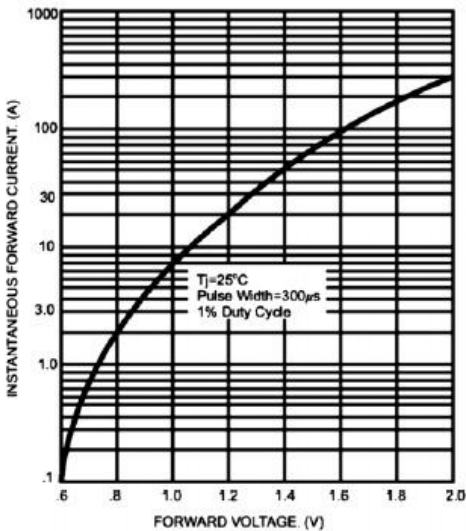


FIG.3- TYPICAL REVERSE CHARACTERISTICS

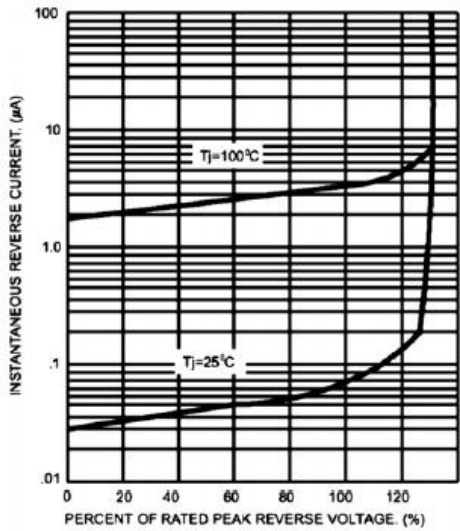


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

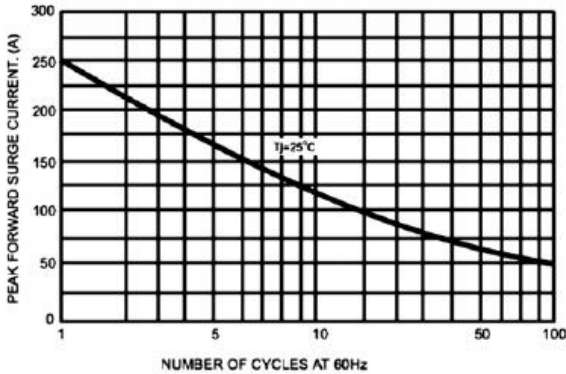


FIG.5- TYPICAL JUNCTION CAPACITANCE

