



GENERAL PURPOSE SILICON RECTIFIER

6A05
THRU
6A10

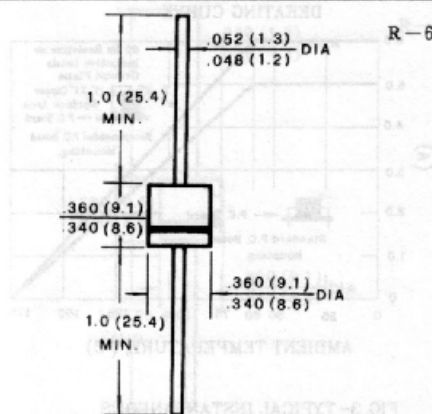
FEATURES

- Low cost construction
- Low forward voltage drop
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed;
260°C/10 seconds/.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, 0.07 ounce, 2.0 grams

VOLTAGE RANGE 50 to 1000 Volts
CURRENT 6.0 Amperes



Dimensions in inches and (millimeters)

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	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 at $T_A=60^{\circ}\text{C}$	$I_{(AV)}$	6.0							Amps	
Peak Forward Surge Current 8.3ms single half sine—wave superimposed on rated load (JEDEC Method)	I_{FSM}	400							Amps	
Maximum Instantaneous Forward Voltage at 6.0A	V_F	0.95							Volts	
Maximum DC Reverse Current at rated DC blocking voltage	$T_A=25^{\circ}\text{C}$	I_R	10							μAmps
	$T_A=100^{\circ}\text{C}$		1.0							mAmps
Maximum Full Load Reverse Current, full Cycle average 0.375" (9.5mm) lead length at $T_L=105^{\circ}\text{C}$	$I_{R(AV)}$	1.0							mAmps	
Typical Junction Capacitance (NOTE 1)	C_J	150							pF	
Typical Thermal Resistance (NOTE 2)	$R_{\theta JA}$	10							$^{\circ}\text{C/W}$	
Operating and Storage Temperature Range	T_J, 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 .375" (9.5mm) lead length, P. C. board mounted with 1.1" x 1.1" (30x30mm) copper heatsink.

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RATINGS AND CHARACTERISTIC CURVES 6A05 THRU 6A10

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

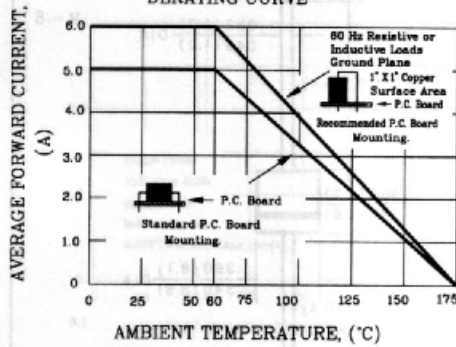


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

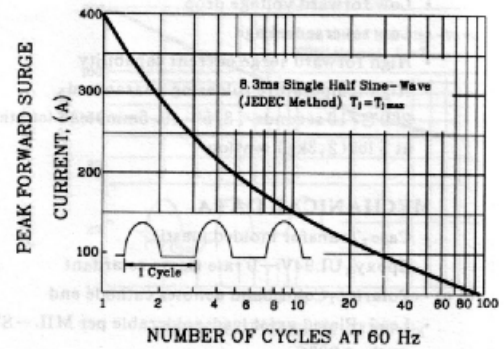


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

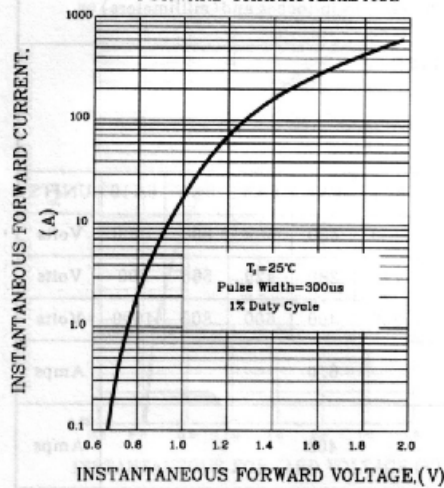


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

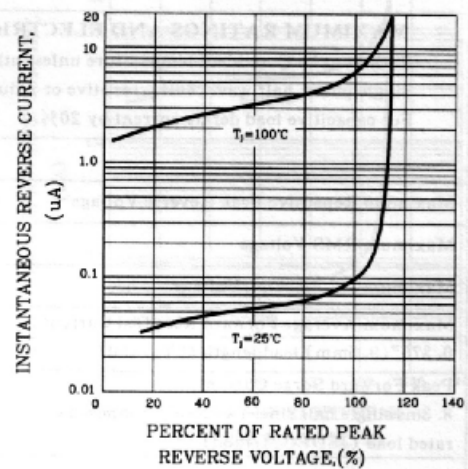


FIG. 5-TYPICAL JUNCTION CAPACITANCE

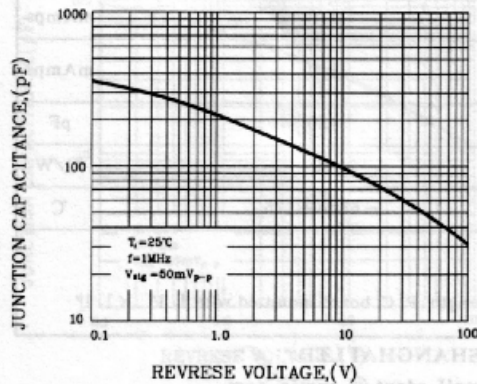


FIG. 6-TYPICAL THERMAL RESISTANCE VS LEAD LENGTH

