



GENERAL PURPOSE RECTIFIER

6A05 THRU 6A10

VOLTAGE RANGE
CURRENT

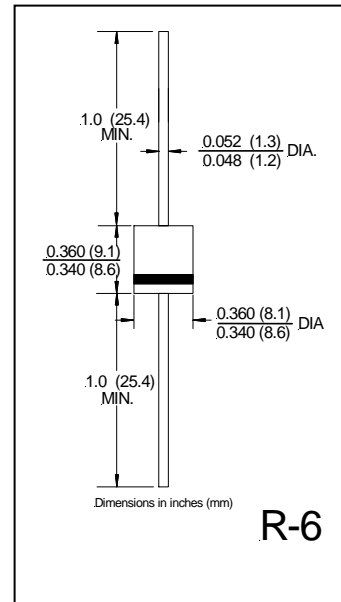
50 to 1000 Volts
6.0 Ampere

FEATURES

- Low reverse leakage
- Low forward voltage
- High forward surge current capacity
- High temperature soldering guaranteed:
260 /10 seconds, 0.375" (9.5mm) lead length

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 gram



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	UNIT
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 @ 6.0A	V_F	0.95							Volts
Maximum DC Reverse Current at Rated $T_A = 25^\circ\text{C}$	I_R	10.0							μA
DC Blocking Voltage per element $T_A = 100^\circ\text{C}$		1.0							mA
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							mA
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	150							pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	10							$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	(-65 to +175)							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	(-65 to +175)							$^\circ\text{C}$

Notes:

1. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted with 1.1" x 1.1" (30mm x 30mm) copper pads



RATINGS AND CHARACTERISTIC CURVES 6A05 THRU 6A10

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

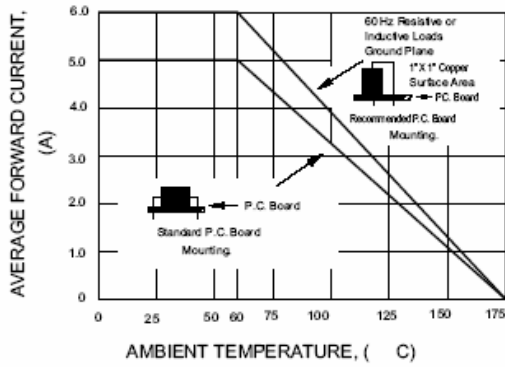


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

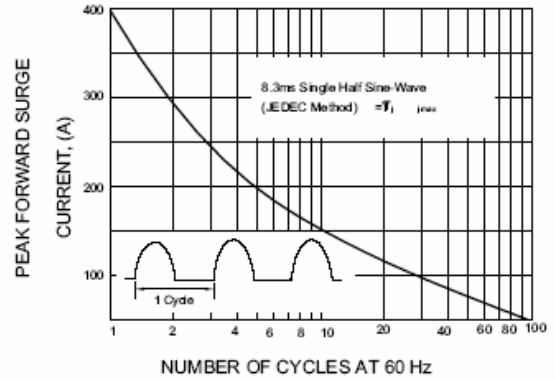


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

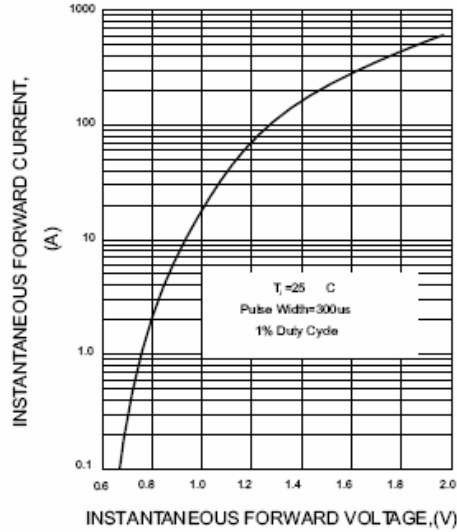


FIG.4-TYPICAL REVERSE CHARACTERISTICS

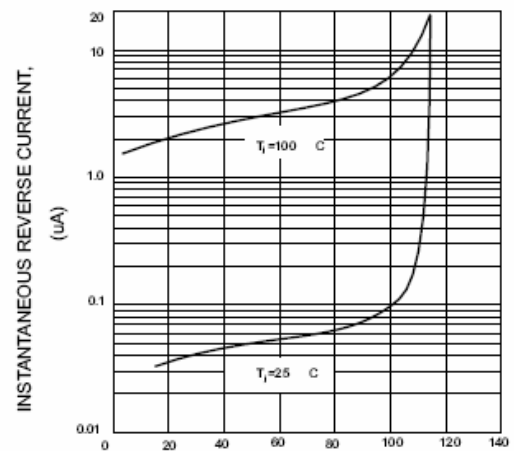


FIG.5-TYPICAL JUNCTION CAPACITANCE

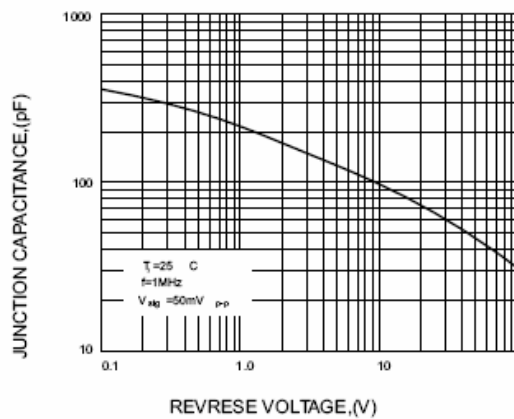


FIG.6-TYPICAL THERMAL RESISTANCE VS LEAD LENGTH

