

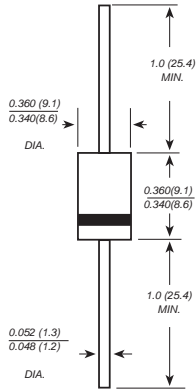


6A05 THRU 6A10

GENERAL PURPOSE SILICON RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 6.0 Amperes

R-6



Dimensions in inches and (millimeters)

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: R-6 molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.072 ounce, 2.05 grams

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 current derate by 20%.

MDD Catalog Number	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 $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	10.0 400							μA
Typical junction capacitance (NOTE 1)	C_J	150							pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	10.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-50 to +150							$^\circ\text{C}$

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

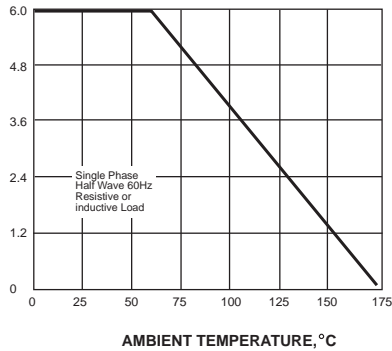
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

MDD ELECTRONIC

RATINGS AND CHARACTERISTIC CURVES 6A05 THRU 6A10

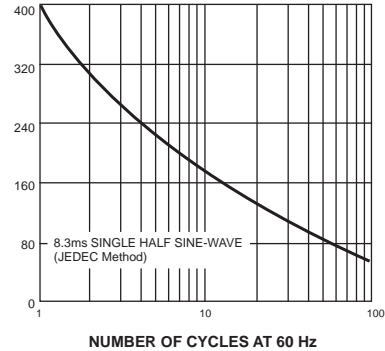
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



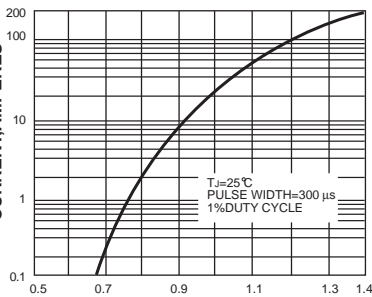
PEAK FORWARD SURGE CURRENT,
AMPERES

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



INSTANTANEOUS FORWARD CURRENT, AMPERES

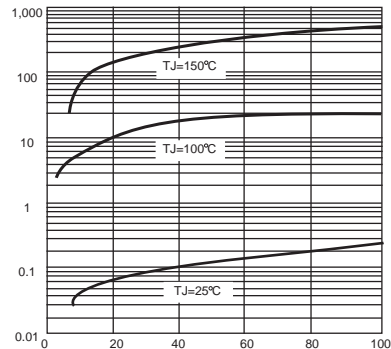
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE,
VOLTS

INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

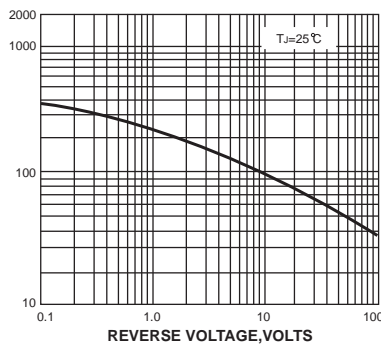
FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PERCENT OF PEAK REVERSE VOLTAGE, %

JUNCTION CAPACITANCE, pF

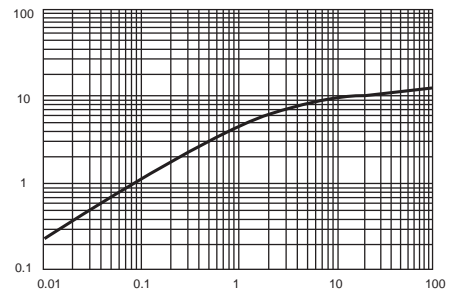
FIG. 5-TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



t, PULSE DURATION, sec.