



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

6A05G
THRU
6A10G

TECHNICAL SPECIFICATIONS OF GENERAL PURPOSE SILICON RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

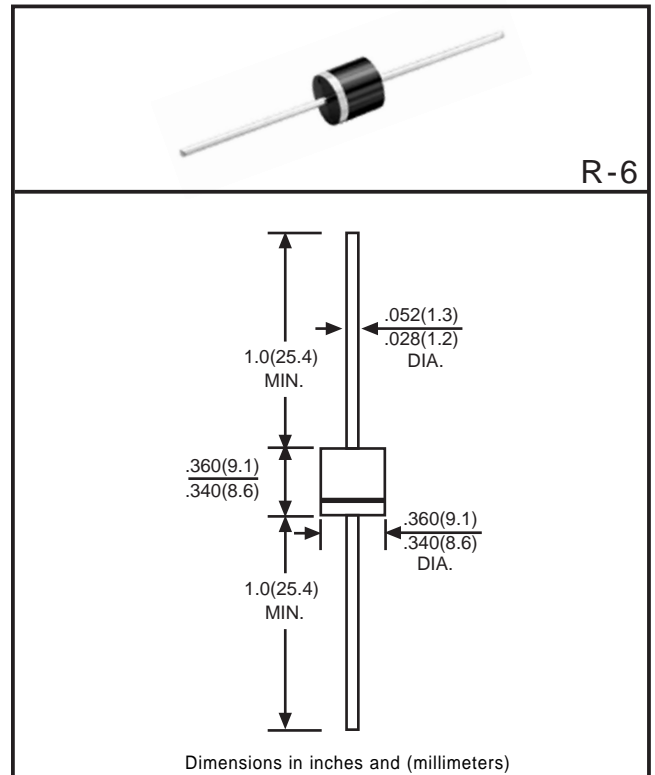
CURRENT - 6.0 Amperes

FEATURES

- * Low cost
- * Low leakage
- * Low forward voltage drop
- * High current capability
- * High surge current capability
- * Glass passivated junction

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rated flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 2.08 gram approx.



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%.

| | SYMBOL | 6A05G | 6A1G | 6A2G | 6A4G | 6A6G | 6A8G | 6A10G | UNITS |
|---|---------------------|-------------|------|------|------|------|------|-------|---------------|
| Maximum Recurrent 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 at $T_A = 60^\circ C$ | I_o | 6.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 250 | | | | | | | Amps |
| Maximum Instantaneous Forward Voltage at 6.0A DC | V_F | 1.1 | | | | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @ $T_A=25^\circ C$ | 10 | | | | | | | μA_{mps} |
| | @ $T_A=100^\circ C$ | 500 | | | | | | | |
| Maximum Full Load Reverse Current Average, Full Cycle .375"(9.5mm) lead length at $T_L = 75^\circ C$ | I_R | 50 | | | | | | | |
| Typical Junction Capacitance (Note 1) | C_J | 150 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | $R_{\theta JA}$ | 10 | | | | | | | $^\circ C/W$ |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | | | | | | | $^\circ C$ |

Note 1: Measured at 1 MHz and applied reverse voltage of 4.0 volts.

Note 2: Typical thermal resistance from junction to ambient.

RATING AND CHARACTERISTIC CURVES (6A05G THRU 6A10G)

FIG. 1
TYPICAL FORWARD CURRENT
DERATING CURVE

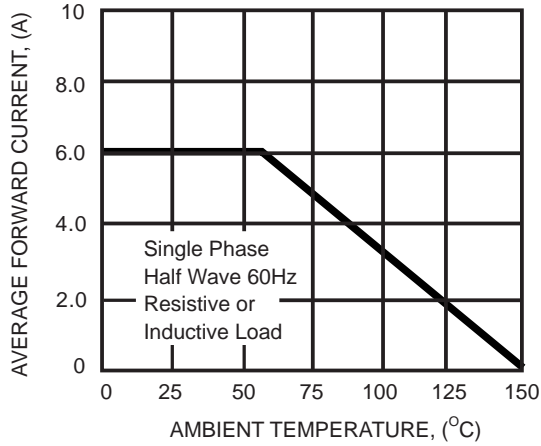


FIG. 2
MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT

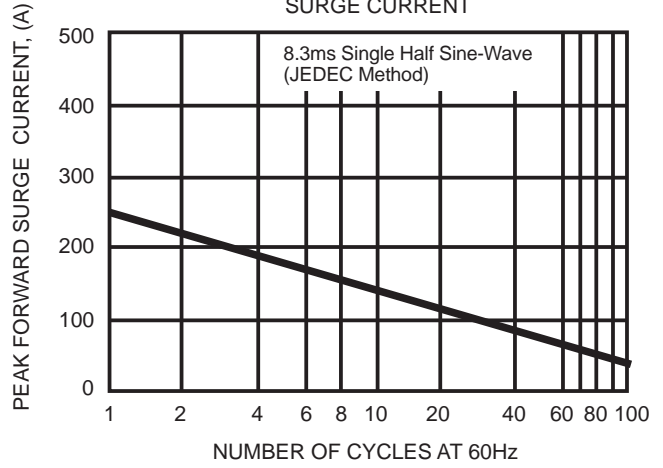


FIG. 3
TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

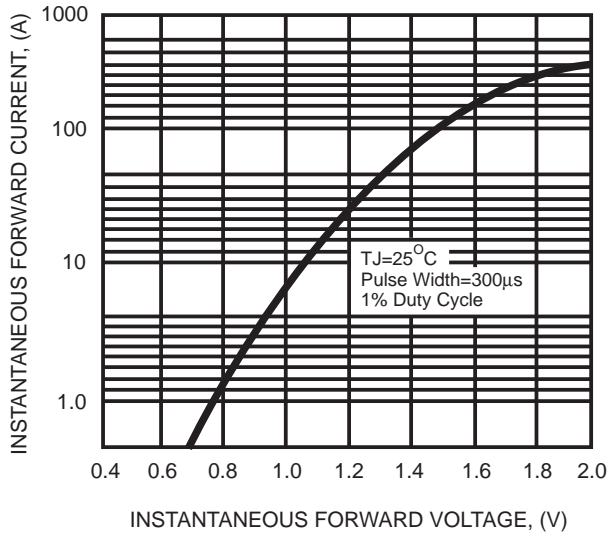


FIG. 4
TYPICAL REVERSE CHARACTERISTICS

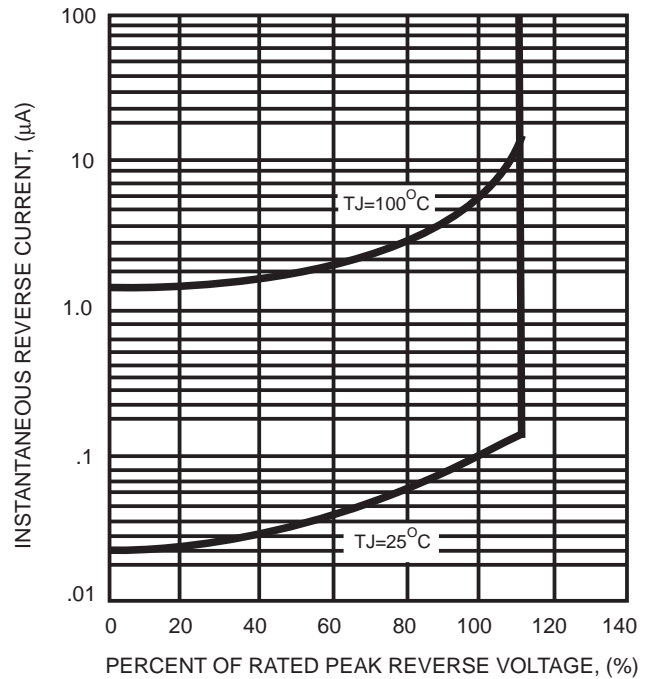
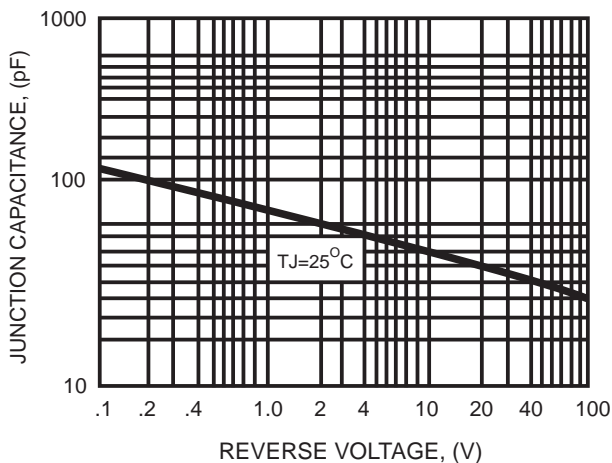


FIG. 5
TYPICAL JUNCTION CAPACITANCE



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