6A05 - 6A10

6.0A SILICON RECTIFIER

Description

- High Surge Current Capability
- Low Leakage and Forward Voltage Drop
- **Lead Free Finish, RoHS Compliant (Notes 1 & 2)**

Mechanical Data

- Case: R-6
- Case Material: Molded Plastic.
  UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish—Tin. Axial Leads, Solderable per MIL-STD-202, Method 208 e3
- Polarity: Color Band Indicates Cathode
- Approximate Weight: 2.1 grams

Ordering Information (Note 3)

Part Number	Case	Packaging
6A05-T	R-6	500/Tape & Reel, 13-inch
6A1-T	R-6	500/Tape & Reel, 13-inch
6A2-T	R-6	500/Tape & Reel, 13-inch
6A4-T	R-6	500/Tape & Reel, 13-inch
6A6-T	R-6	500/Tape & Reel, 13-inch
6A8-T	R-6	500/Tape & Reel, 13-inch
6A10-T	R-6	500/Tape & Reel, 13-inch

Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. For packaging details, go to our website at https://www.diodes.com/design/support/packaging/diodes-packaging/.

Marking Information

B. Marking on the semiconductor :

Maximum Ratings and Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Ratings at +25°C ambient temperature unless otherwise specified.
Single phase, halfwave, 60Hz, resistive or inductive load.

Characteristic	Symbol	6A05	6A1	6A2	6A4	6A6	6A8	6A10	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 9.5mm Lead Length @ T_A = +75°C (See Figure 1)	$I_{(AV)}$	6.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	400							A
Maximum Instantaneous Forward Voltage at 6.0A DC	V_{FM}	0.90							V
Maximum DC Reverse Current @ T_A = +25°C at Rated Blocking Voltage @ T_A = +100°C	I_{RM}	10 100							μA
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

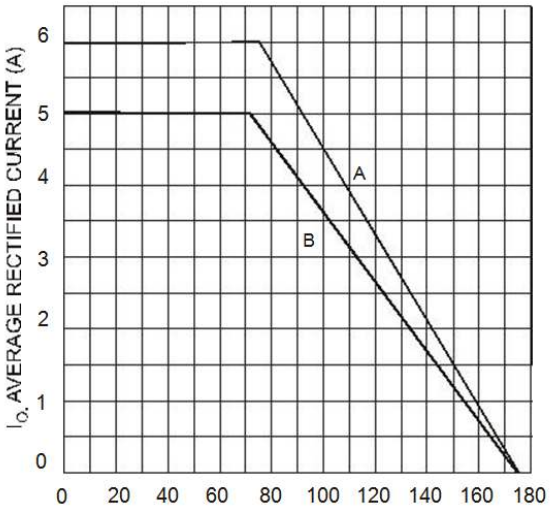
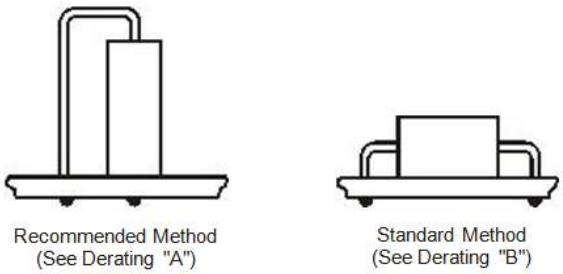


Fig. 1 Output Current Derating Curve



Ground Plane: 25mm² equivalent copper surface area

Printed Circuit Board Mounting Method

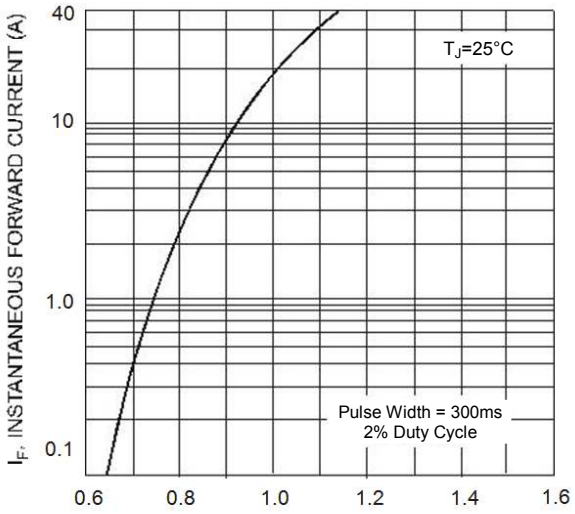


Fig. 2 Typical Forward Characteristics

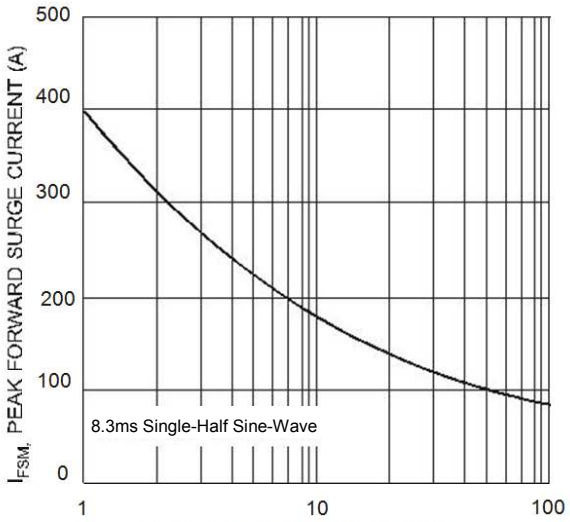


Fig. 3 Maximum Non-Repetitive Peak Forward Surge Current

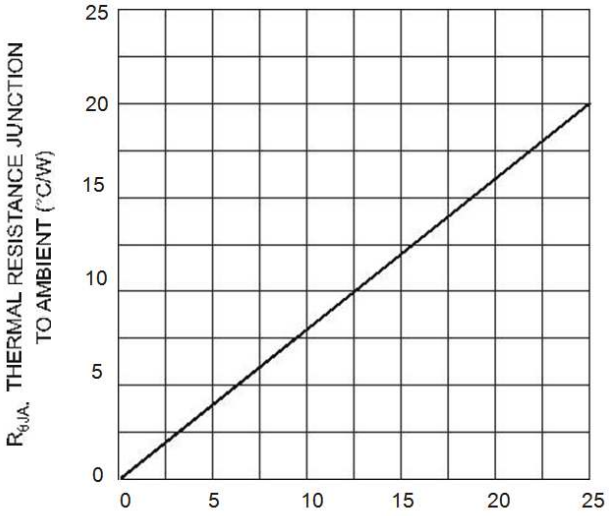
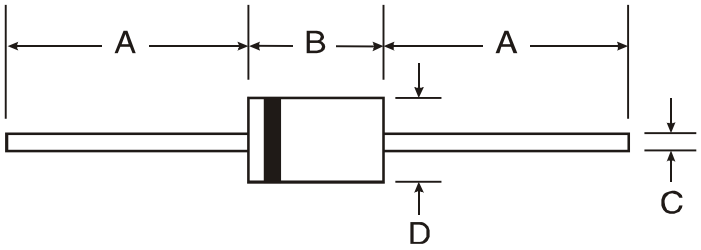


Fig. 4 Typical Thermal Resistance (Using Standard Mounting Method "B")

Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

R-6



R-6		
Dim	**Min**	**Max**
A	25.40	-
B	8.60	9.10
C	1.20	1.30
D	8.60	9.10
All Dimensions in mm		

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