

## **Excellent Integrated System Limited**

Stocking Distributor

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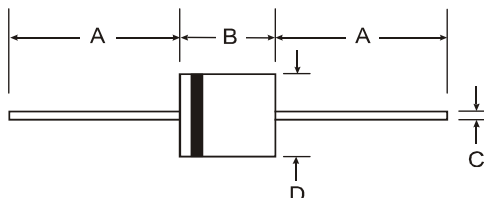
[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

**Features**

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

**Mechanical Data**

- Case: R-6
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish — Tin. Axial Leads, Solderable per MIL-STD-202, Method 208 @3
- Polarity: Color Band Indicates Cathode
- Ordering Information: See Page 3
- Approximate Weight: 2.1 grams



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		

**Maximum Ratings and Electrical Characteristics** @T<sub>A</sub> = 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 <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 9.5mm lead length @ T <sub>A</sub> = 75°C (See Fig. 1)	I <sub>(AV)</sub>	6.0							A
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	400							A
Maximum Instantaneous Forward Voltage at 6.0A DC	V <sub>FM</sub>	0.90							V
Maximum DC Reverse Current @ T <sub>A</sub> = 25°C	I <sub>RM</sub>	10							μA
at Rated Blocking Voltage @ T <sub>A</sub> = 100°C		100							
Operating and Storage Temperature Range	T <sub>i</sub> , T <sub>STG</sub>	-65 to +175							°C

Notes: 1. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, see EU Directive Annex Notes 5 and 7.

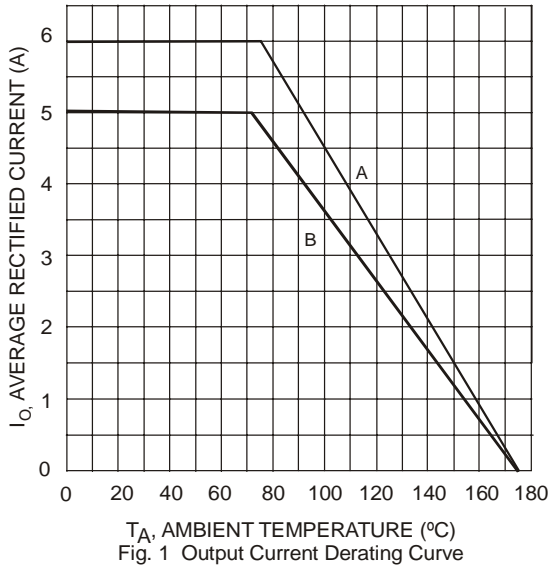
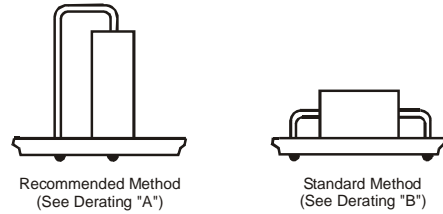


Fig. 1 Output Current Derating Curve



Recommended Method (See Derating "A")  
Standard Method (See Derating "B")  
Ground Plane: 25mm<sup>2</sup> equivalent copper surface area  
Printed Circuit Board Mounting Method

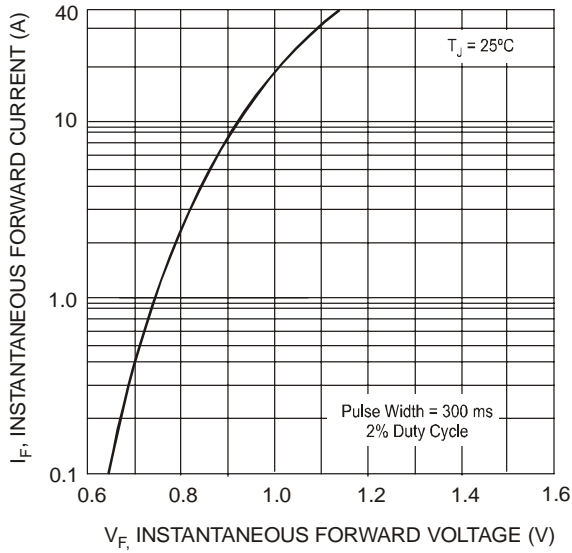


Fig. 2 Typical Forward Characteristics

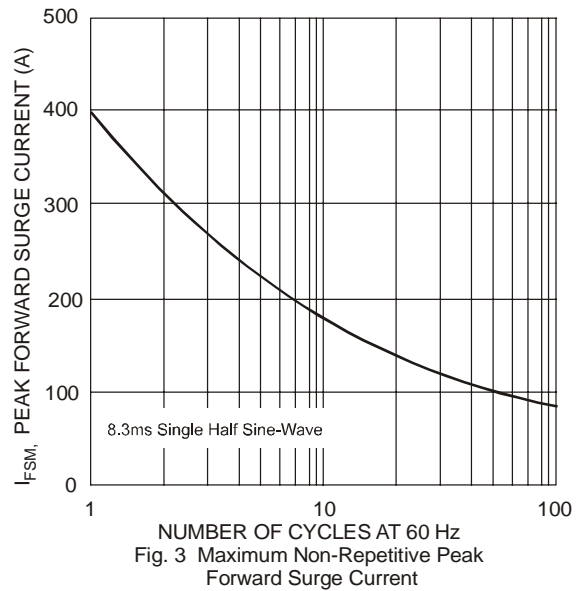


Fig. 3 Maximum Non-Repetitive Peak Forward Surge Current

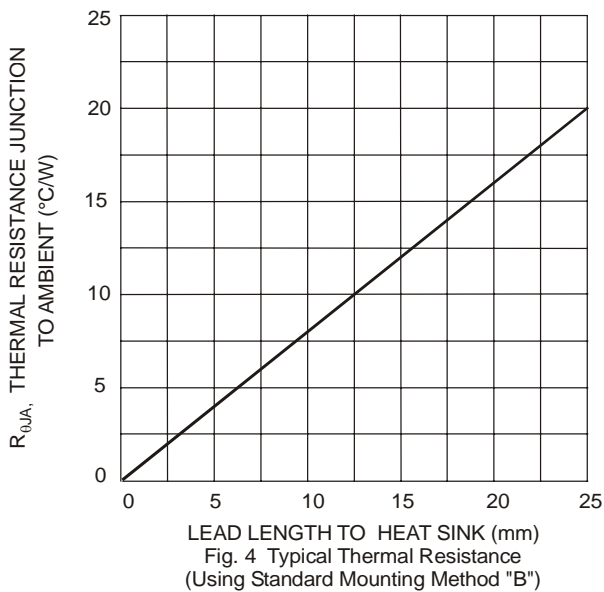


Fig. 4 Typical Thermal Resistance (Using Standard Mounting Method "B")



**Ordering Information** (Note 2)

Device	Packaging	Shipping
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: 2. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02008.pdf>.

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