

GENERAL PURPOSE SILICON RECTIFIER

6A05S TO 6A10S

R-6S

PLASTIC PACKAGE



Polarity : Colour band denotes cathode end

FEATURES

- 1). The Plastic Package Carries Underwriters Laboratory Flammability Classification 94V-0.
- 2). Low Reverse Leakage Current
- 3). High Forward Surge Current Capability
- 4). High Temperature Soldering Guaranteed :
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs (2.3Kg) tension
- 5). Weight : 1.65 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at $T_A=25^\circ\text{C}$ Ambient Temperature unless otherwise specified.)

Single Phase, Half Wave, 60Hz, Resistive or Inductive Load. For Capacitive Load, Derate Current by 20%.

CHARACTERISTICS		SYMBOL	6A05S	6A1S	6A2S	6A4S	6A6S	6A8S	6A10S	UNIT
Maximum Repetitive 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 0.375"(9.5mm) Lead Length at $T_A=60^{\circ}\text{C}$		$I_{(AV)}$	6.0							A
Peak Forward Surge Current 8.3ms Single Half Sine -Wave Superimposed on Rated Load		I_{FSM}	250							A
Maximum Instantaneous Forward Voltage at 6.0A		V_F	0.95							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A=25^{\circ}\text{C}$	I_{R1}	10							μA
	$T_A=100^{\circ}\text{C}$	I_{R2}	400							μA
Typical Junction Capacitance (Note 1)		C_j	150							pF
Typical Thermal Resistance (Note 2)		$R_{\theta J-A}$	10							$^{\circ}\text{C/W}$
Operating Junction and Storage Temperature Range		T_j, T_{stg}	-65 to +150							$^{\circ}\text{C}$

Note 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

Note 2. Thermal Resistance from Junction to Ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

CHARACTERISTICS CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

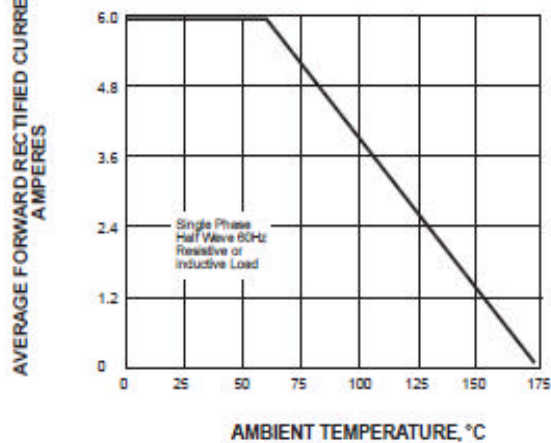


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

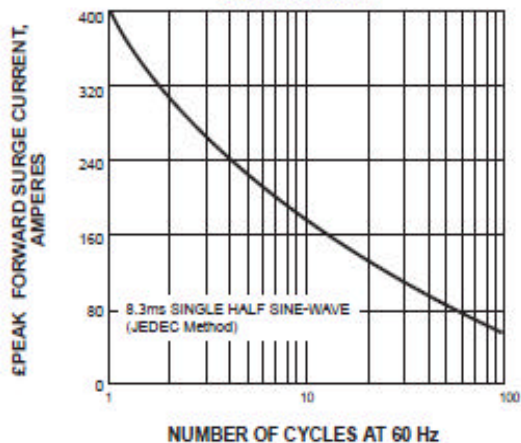


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

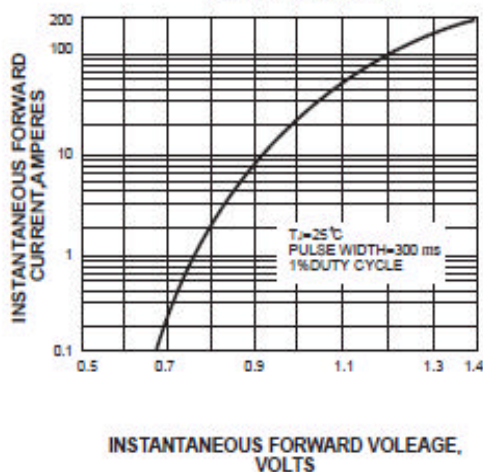


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

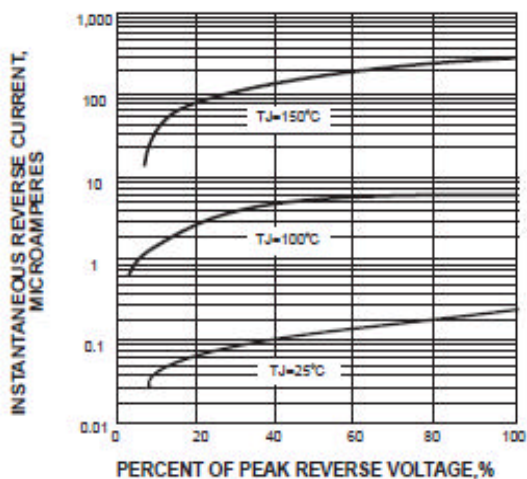


FIG. 5-TYPICAL JUNCTION CAPACITANCE

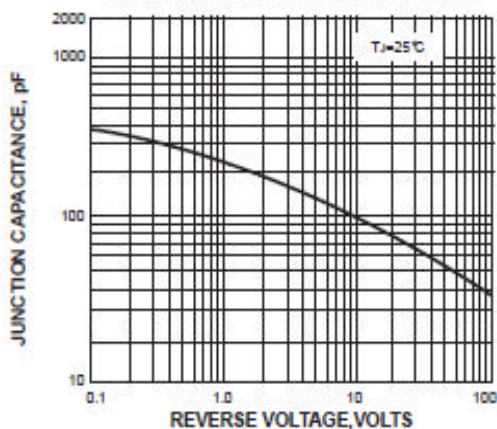
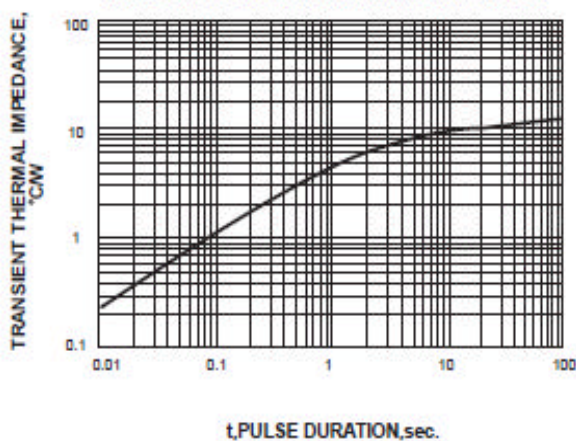
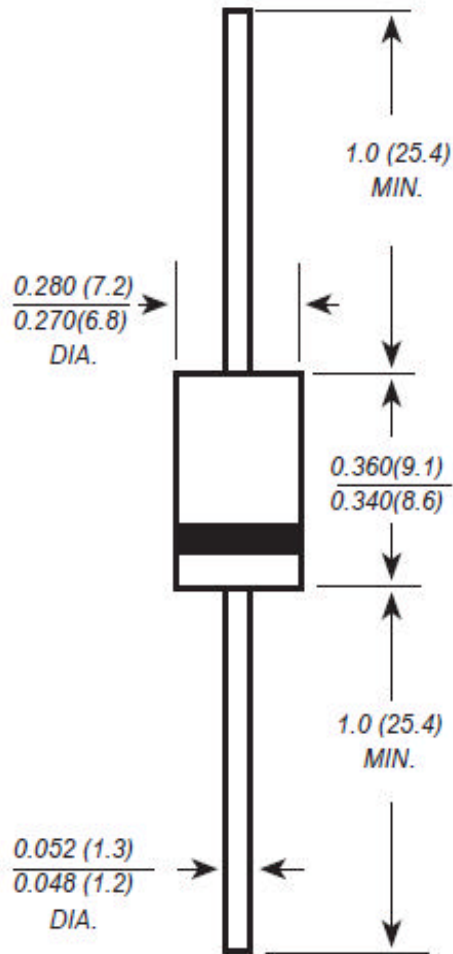


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



R-6S PACKAGE OUTLINE AND DIMENSION



Dimensions in inches and (millimeters)



Continental Device India Pvt. Limited

An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company



Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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