

# ***8AX SERIES***

## **GENERAL PURPOSE PLASTIC SILICON RECTIFIER**

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# 8A05 THRU 8A10

## GENERAL PURPOSE PLASTIC SILICON RECTIFIER

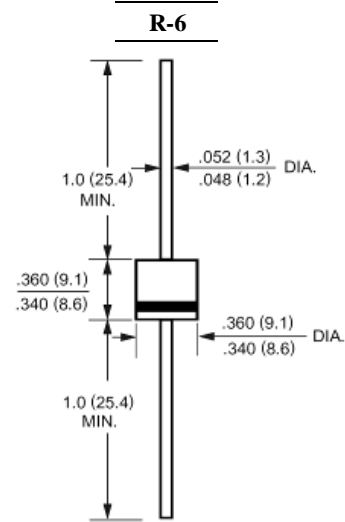
**REVERSE VOLTAGE:** 50 to 1000 VOLTS  
**FORWARD CURRENT:** 8.0 AMPERE

### FEATURES

- High surge current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Void-free Plastic in a R-6 package.
- High current operation 6.0 ampere at  $T_A=60^\circ\text{C}$
- Exceeds environmental standards of MIL-S-19500/228

### MECHANICAL DATA

Case: Molded plastic, R-6  
 Epoxy: UL 94V-O rate flame retardant  
 Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed  
 Polarity: Color band denotes cathode end  
 Mounting position: Any  
 Weight: 0.07ounce, 2.1gram



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.  
 Single phase, half wave,  $60\text{Hz}$ , resistive or inductive load.  
 For capacitive load, derate current by 20%.

	Symbols	8A05	8A1	8A2	8A4	8A6	8A8	8A10	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 $T_A=60^\circ\text{C}$	$I_{(AV)}$	8.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	400							Amp
Maximum Forward Voltage at 6.0A DC and $25^\circ\text{C}$	$V_F$	1.1							Volts
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$	$I_R$	10.0 100							uAmp
Typical Junction Capacitance (Note 1)	$C_J$	120							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	10							$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_J$	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150							$^\circ\text{C}$

### NOTES:

- 1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2- Thermal Resistance From Junction to Ambient 0.375"(9.5mm) lead length P.C.B. Mounted with 1.1x1.1" (30x30mm)copper pads.

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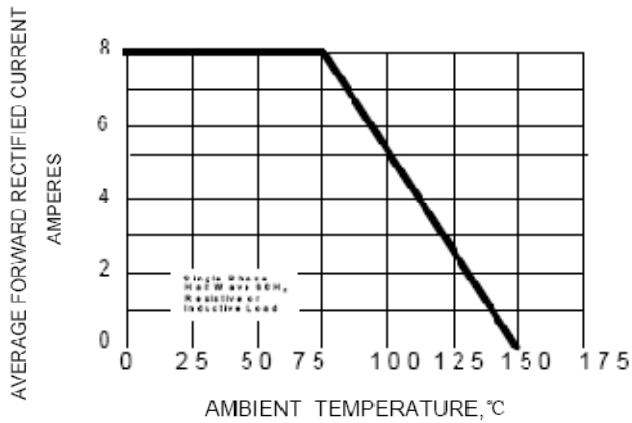
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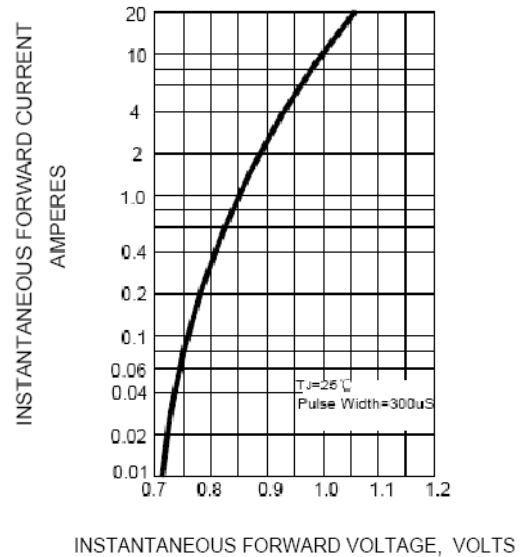
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HORNBY ELECTRONIC

### RATINGS AND CHARACTERISTIC CURVES

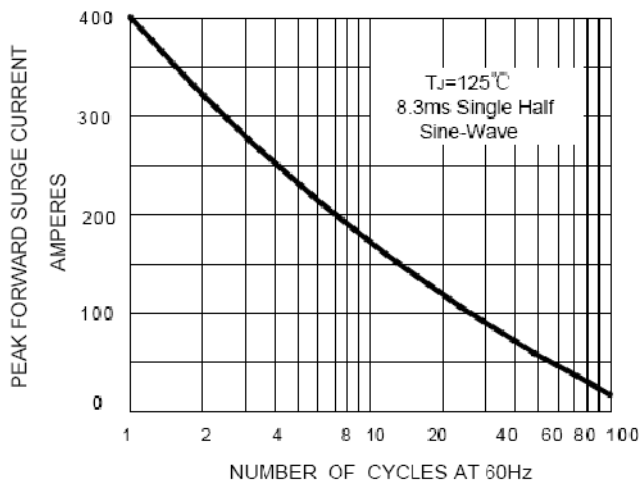
**FIG.1 – FORWARD DERATING CURVE**



**FIG.2 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.3 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**

