



## SILICON RECTIFIERS

### 6A05 THRU 6A100

6.0 AMPS. Silicon Rectifiers

#### Features

Low forward voltage drop  
High current capability  
High reliability  
High surge current capability

#### Mechanical Data

Cases: R-6 Molded Plastic  
Epoxy: UL 94V-0 rate flame retardant  
Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed  
Polarity: Color band denotes cathode end  
High temperature soldering guaranteed: 250 °C / 10 seconds / .375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension  
Weight: 1.65 grams

#### Maximum Ratings and Electrical Characteristics

Rating at 25 °C Ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

Type Number	6A05	6A10	6A20	6A40	6A60	6A80	6A100	Units
Maximum Recurrent peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 0.375" (9.5mm) Lead length @T <sub>A</sub> =60	6.0							A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	250							A
Maximum Instantaneous Forward Voltage @6.0A	0.95							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	10 (@T <sub>A</sub> =25 °C) 400 (@T <sub>A</sub> =100 °C)							μA μA
Maximum Full Load Reverse Current, Full Cycle Average .375" (9.5mm) Lead Length @T <sub>A</sub> =75	50							μA
Typical Junction Capacitance (Note 1)	100							pF
Typical Thermal Resistance R <sub>JA</sub> (Note 2)	10							/W
Operating Temperature Range T <sub>J</sub>	-65 to +125							
Storage Temperature Range T <sub>STG</sub>	-65 to +150							

**Notes:** 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

2. Thermal Resistance from Junction to Ambient .375" (9.5mm) Lead Length.



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## RATINGS AND CHARACTERISTIC CURVES (6A05 THRU 6A100)

FIG. 1-MAXIMUM OUTPUT CURRENT VS AMBIENT TEMPERATURE

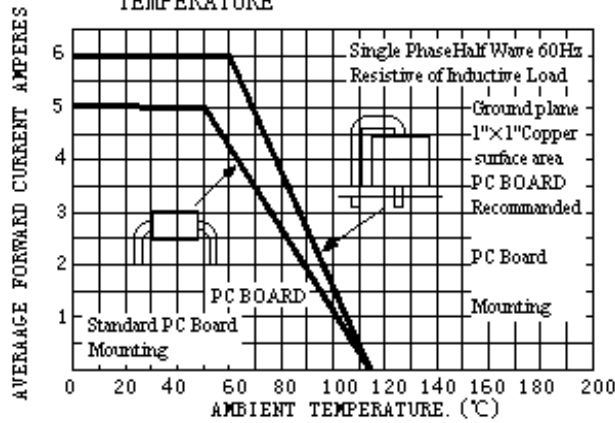


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

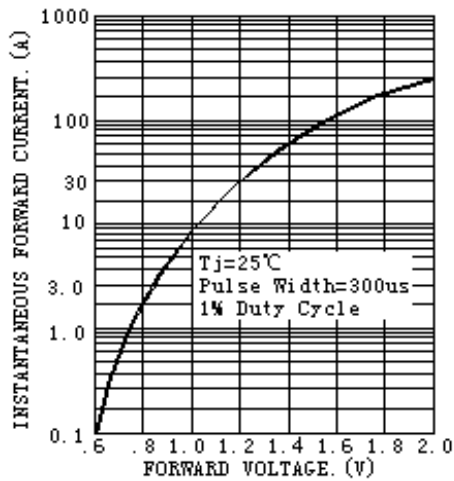


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

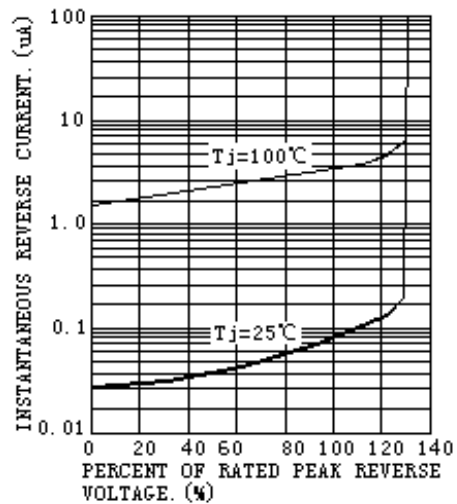


FIG. 4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

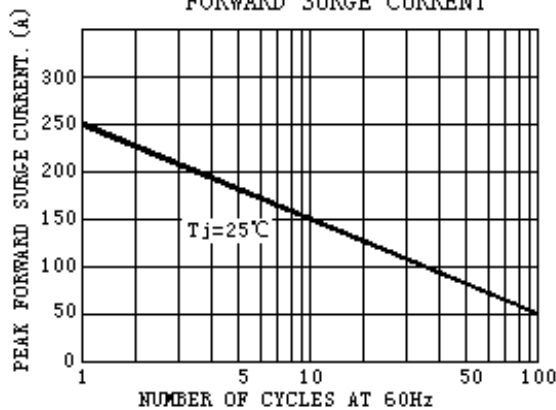


FIG. 5-TYPICAL JUNCTION CAPACITANCE

