



# 6A05S THRU 6A100S

## GENERAL PURPOSE SILICON RECTIFIER

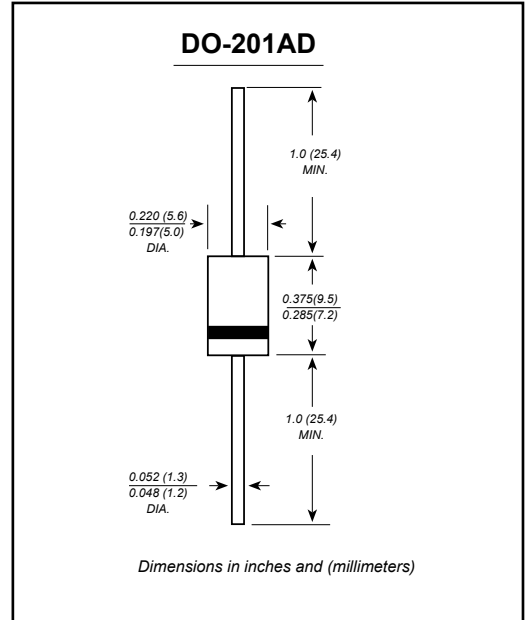
Reverse Voltage - 50 to 1000 Volts    Forward Current - 6.0 Ampere

### FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC DO-201AD molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.04 ounce, 1.10 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Characteristic  | SYMBOLS         | 6A05S       | 6A10S | 6A20S | 6A40S | 6A60S | 6A80S | 6A100S | UNITS              |
|---|-----------------|-------------|-------|-------|-------|-------|-------|--------|--------------------|
| 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<br>0.375" (9.5mm) lead length at $T_A=60^\circ\text{C}$         | $I_{(AV)}$      | 6.0         |       |       |       |       |       |        | A                  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)    | $I_{FSM}$       | 250         |       |       |       |       |       |        | A                  |
| Maximum instantaneous forward voltage at 6.0A   | $V_F$           | 1.0         |       |       |       |       |       |        | V                  |
| Maximum DC reverse current $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage $T_A=100^\circ\text{C}$ | $I_R$           | 10.0<br>400 |       |       |       |       |       |        | $\mu\text{A}$      |
| Typical junction capacitance (NOTE 1)   | $C_J$           | 100         |       |       |       |       |       |        | pF                 |
| Typical thermal resistance (NOTE 2)   | $R_{\theta JA}$ | 10.0        |       |       |       |       |       |        | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range  | $T_J, T_{STG}$  | -65 to +150 |       |       |       |       |       |        | $^\circ\text{C}$   |

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



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## RATINGS AND CHARACTERISTIC CURVES

FIG.1-MAXIMUM OUTPUT CURRENT VS AMBIENT TEMPERATURE

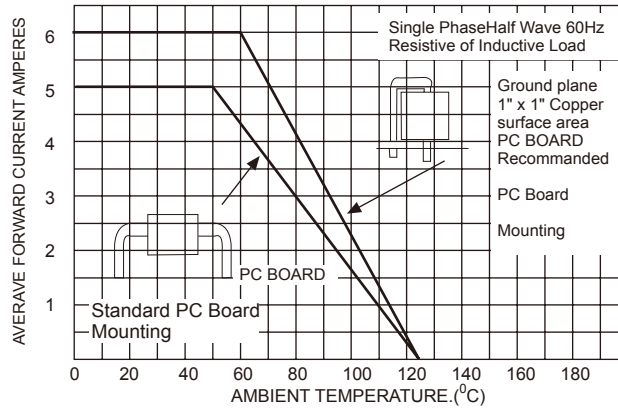


FIG.2-TYPICAL FORWARD CHARACTERISTICS

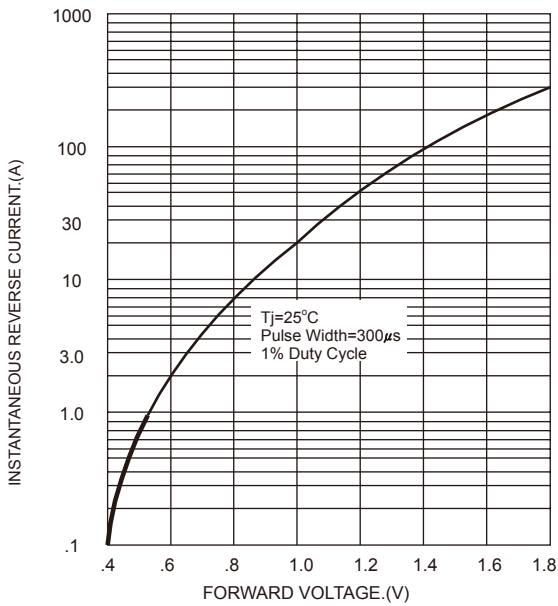


FIG.3-TYPICAL REVERSE CHARACTERISTICS

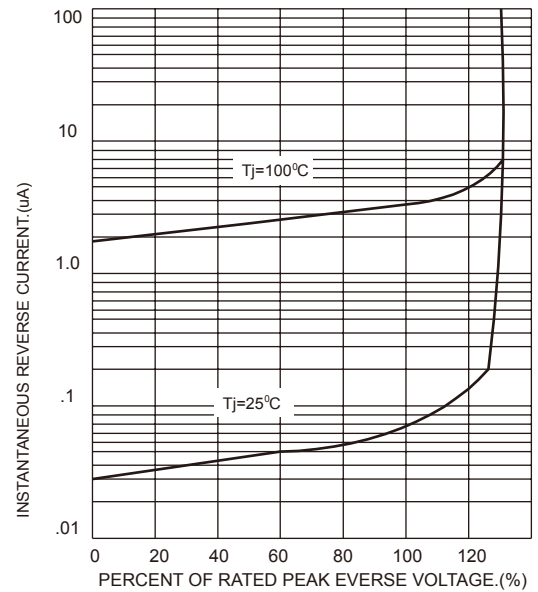


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

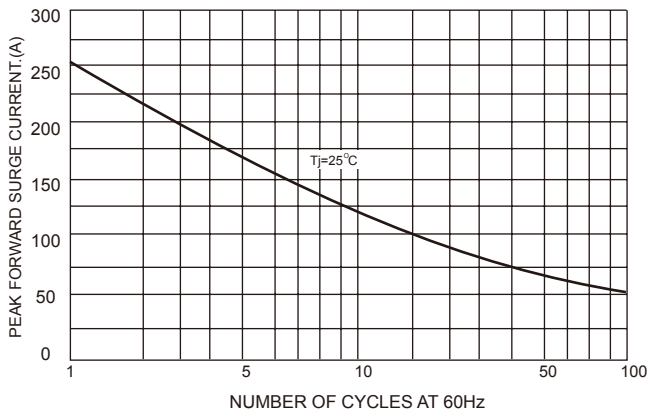


FIG.5-TYPICAL JUNCTION CAPACITANCE

