



10A05 thru 10A10

General Purpose Plastic Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 10.0 Amperes

Features

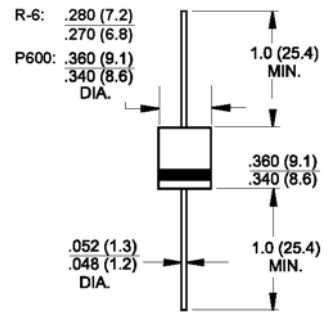
- ◆ Low cost
- ◆ Diffused junction
- ◆ Low forward voltage drop
- ◆ Low reverse leakage current
- ◆ High current capability
- ◆ The plastic material carries UL recognition 94V-0
- ◆ T_J is 150°C (Max.) and T_{STG} is 175°C (Max.) with PI glue



R-6 or P600

Mechanical Data

- ◆ Case : JEDEC R-6 molded plastic
- ◆ Polarity : Color band denotes cathode
- ◆ Weight : 0.074 ounce, 2.1 grams
- ◆ Mounting position : Any



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| Parameter | Symbols | 10A05 | 10A1 | 10A2 | 10A4 | 10A6 | 10A8 | 10A10 | Units |
|---------------------------------------------------------------------------------------------------------------------|-----------------|-------------|------|------|------|------|------|-------|--------------------|
| Maximum repetitive 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 @ $T_A=50^\circ\text{C}$ | $I_{F(AV)}$ | 10.0 | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 600.0 | | | | | | | Amps |
| Maximum forward Voltage at 10A DC | V_F | 1.0 | | | | | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage @ $T_J=25^\circ\text{C}$ @ $T_J=100^\circ\text{C}$ | I_R | 10.0 100 | | | | | | | μA |
| Typical junction capacitance (Note 1) | C_J | 150 | | | | | | | pF |
| Typical thermal resistance (Note 2) | $R_{\theta JA}$ | 10.0 | | | | | | | $^\circ\text{C/W}$ |
| Operating junction temperature range | T_J | -55 to +125 | | | | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

- Notes:**
1. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.
 2. Thermal Resistance Junction to Ambient

RATINGS AND CHARACTERISTIC CURVES

($T_a = 25^\circ\text{C}$ unless otherwise noted)

FIG. 1 - FORWARD CURRENT DERATING CURVE

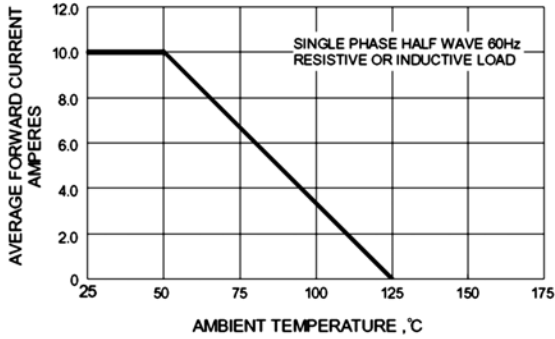


FIG. 2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

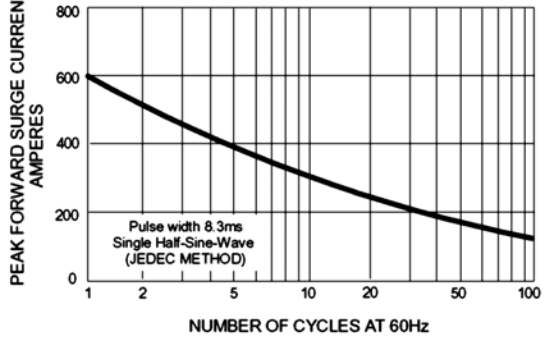


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

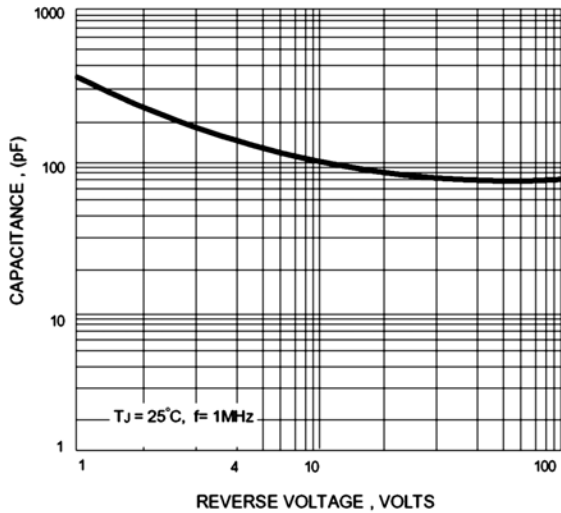


FIG. 4 - TYPICAL FORWARD CHARACTERISTICS

