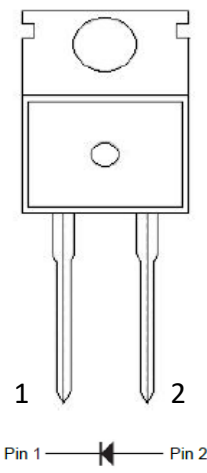


| HYPERFAST RECOVERY RECTIFIERS | | REVERSE VOLTAGE 600 Volts FORWARD CURRENT 10 Amperes | |
|--|----------------|---|------|
| <p>FEATURES</p> <ul style="list-style-type: none"> • Low forward voltage drop • Excellent high temperature stability • Fast switching capability • Low reverse current • High Current Capability and Low Forward Voltage Drop <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case: TO-220AC • Polarity: Cathode Band | | <p>TO-220AC</p>  <p>1 2</p> <p>Pin 1 ← Cathode Band → Pin 2</p> <p>Dimensions in inches and (millimeters)</p> | |
| <p>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, derate current by 20%</p> | | | |
| Characteristics | Symbol | UF10S06ST | Unit |
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 600 | V |
| Maximum RMS Reverse Voltage | V_{RMS} | 420 | V |
| Maximum DC blocking voltage | V_{DC} | 600 | V |
| Maximum Instantaneous Forward Voltage at 10A | V_F | 2.3 | V |
| Maximum DC Reverse Current @TA=25°C at Rated DC Blocking Voltage @TA=125°C | I_R | 2 100 | μA |
| Maximum Average Forward Rectified Current | I_F | 10 | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 110 | A |
| Maximum Reverse Recovery Time ($I_F=0.5A, I_R=1A, I_{rr}=0.25A$) | T_{rr} | 25 | nS |
| Typical Junction Capacitance | C_J | 45 | pF |
| Typical Thermal Resistance Junction to Case | $R_{θJC}$ | 3 | °C/W |
| Junction and Storage Temperature Range | T_J, T_{STG} | -55 to +150 | °C |

Rating and Characteristic Curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

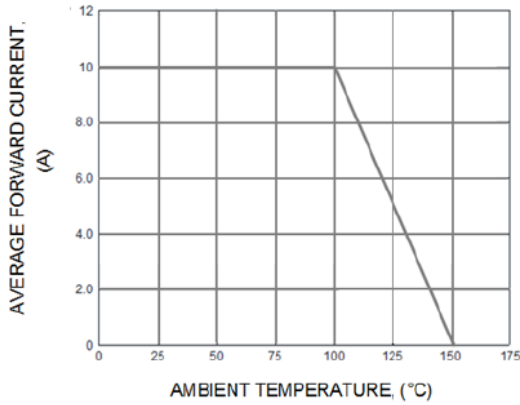


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

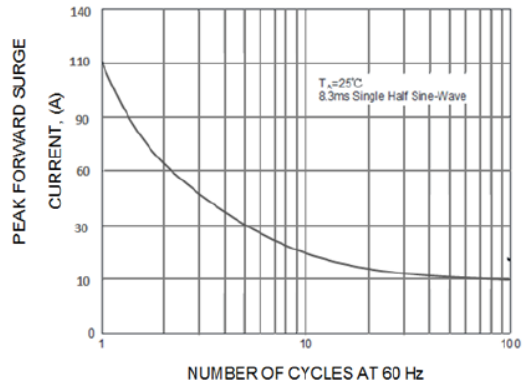


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

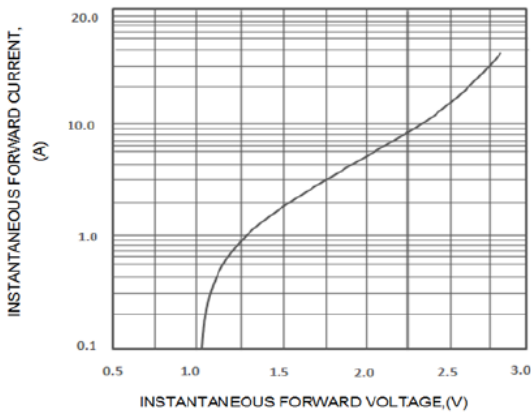


FIG.4-TYPICAL REVERSE CHARACTERISTICS

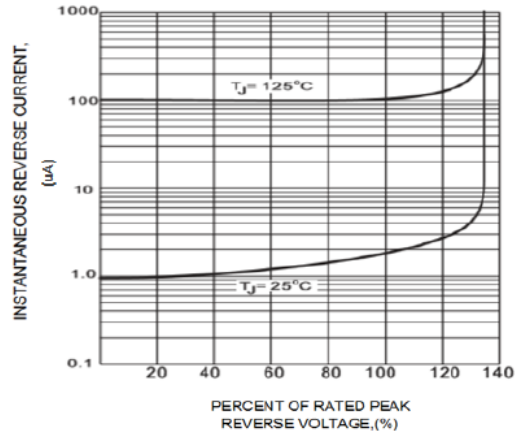


FIG.5-TYPICAL JUNCTION CAPACITANCE

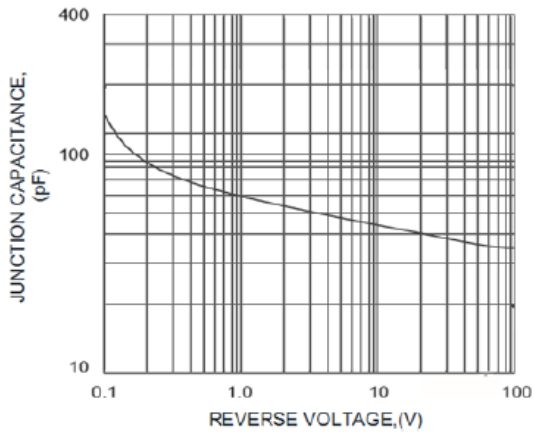
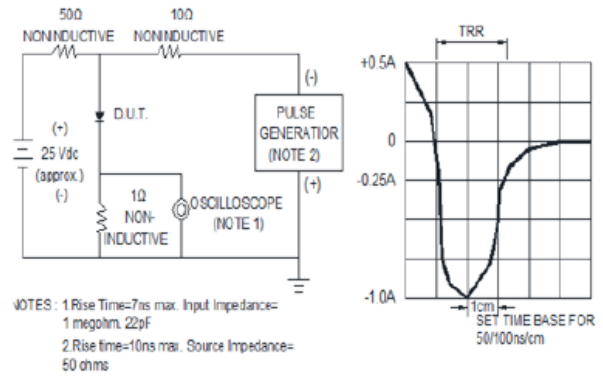
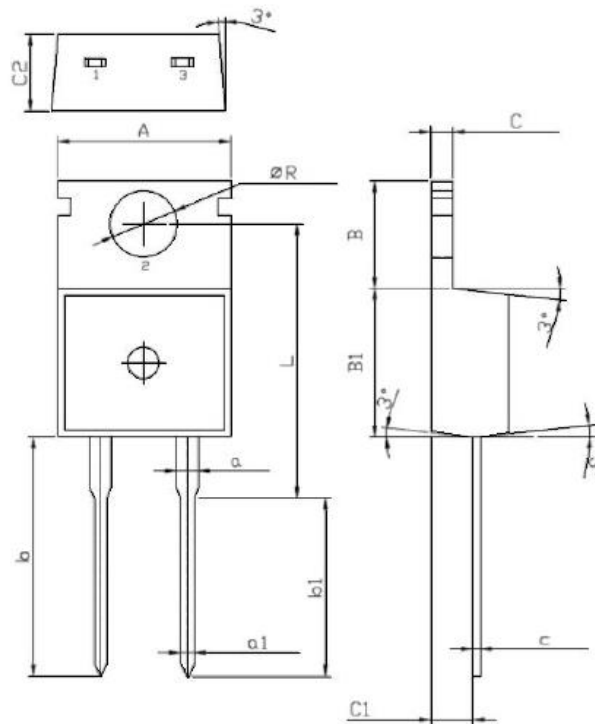


FIG.6-TEST CIRCUIT DIAGRAM AND FORWARD SURGE CURRENT



PACKAGE DIMENSION

TO-220AC (unit: mm)



| Symbol | Dimensions In Millimeters | | Symbol | Dimensions In Millimeters | |
|--------|---------------------------|------|--------|---------------------------|-----|
| | Min | Max | | Min | Max |
| A | 9.8 | 10.2 | B | 6.3 | 6.7 |
| R | 3.56 | 3.64 | B1 | 9.0 | 9.4 |
| L | 15.7 | 16.1 | C1 | 2.2 | 2.6 |
| b | 12.6 | 13.6 | C | 1.2 | 1.4 |
| b1 | 9.6 | 10.6 | c | 0.4 | 0.6 |
| a | 1.22 | 1.32 | C2 | 4.3 | 4.7 |
| a1 | 0.7 | 0.9 | | | |