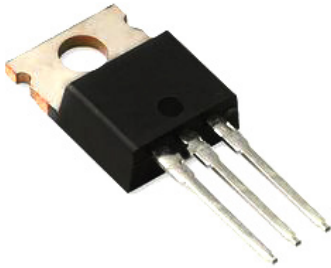


Ultra Fast Rectifier



Features:

- High surge capacity
- Low power loss, high efficiency
- Glass passivated chip junctions
- 150°C operation junction temperature
- Low stored charge majority carrier conduction
- Low forward voltage, high current capability
- High-switching speed 35 nanosecond recovery time
- Plastic material used carries underwriters laboratory

Maximum Ratings:

| Characteristic | Symbol | MURF1660C | Units |
|--|---------------------------------|-------------|------------------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 600 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 420 | |
| Average Rectifier Forward Current Total Device (Rated V_R), $T_c = 55^\circ\text{C}$ | $I_{F(AV)}$ | 8 16 | A |
| Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz, $T_c = 125^\circ\text{C}$) | I_{FM} | 16 | |
| Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase 60HZ) | I_{FSM} | 125 | |
| Operating and Storage Junction Temperature Range | T_J, T_{stg} | -65 to +150 | $^\circ\text{C}$ |

Electrical Characteristics:

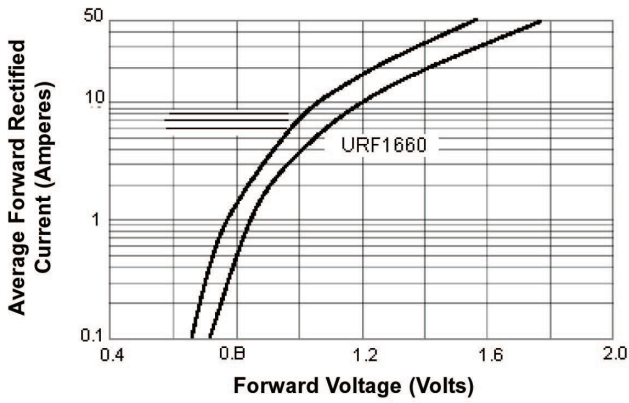
| Characteristic | Symbol | MURF1660C | Units |
|--|----------|-------------|---------------|
| Maximum Instantaneous Forward Voltage ($I_F = 8$ Amperes $T_c = 25^\circ\text{C}$) ($I_F = 8$ Amperes $T_c = 125^\circ\text{C}$) | V_F | 1.5 1.34 | V |
| Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_c = 25^\circ\text{C}$) (Rated DC Voltage, $T_c = 125^\circ\text{C}$) | I_R | 10 200 | μA |
| Reverse Recovery Time ($I_F = 0.5\text{A}$, $I_R = 1$, $I_{RR} = 0.25\text{A}$) | T_{RR} | 50 | ns |
| Typical Junction Capacitance (Reverse Voltage of 4 Volts and $f = 1\text{MHz}$) | C_P | 70 | pF |



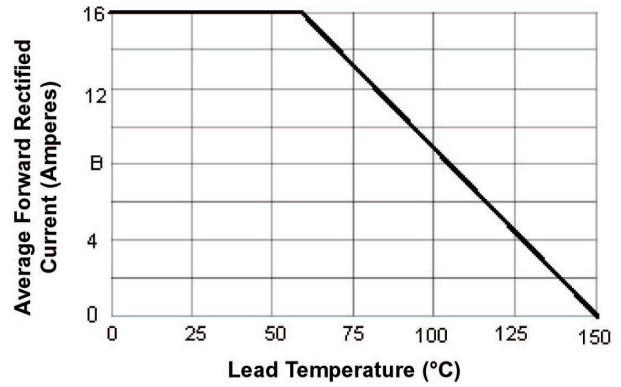
Ultra Fast Rectifier



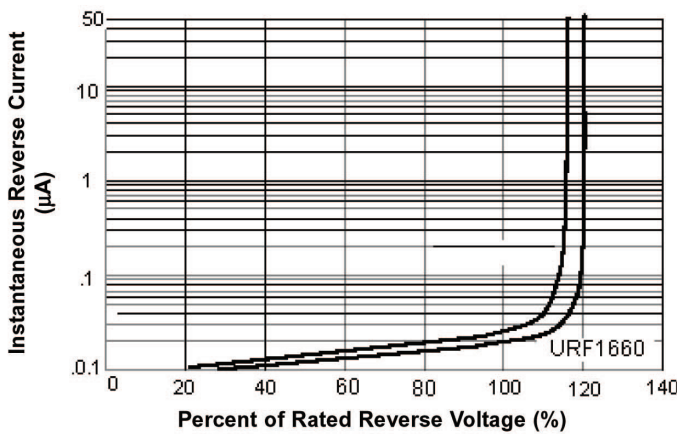
Typical Forward Characteristics



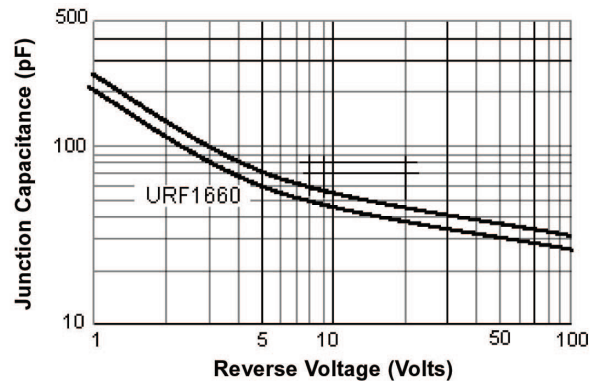
Forward Current Derating Curve



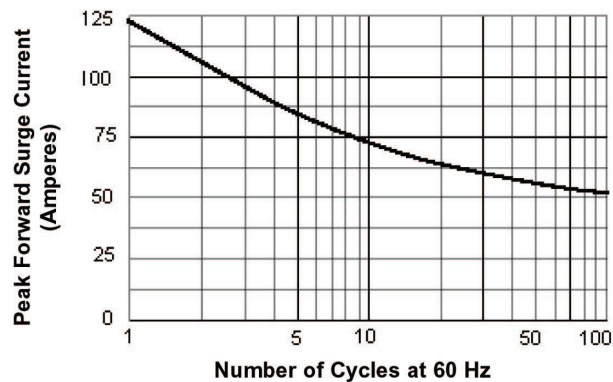
Typical Reverse Characteristics



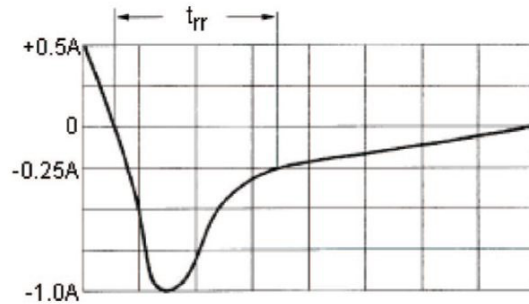
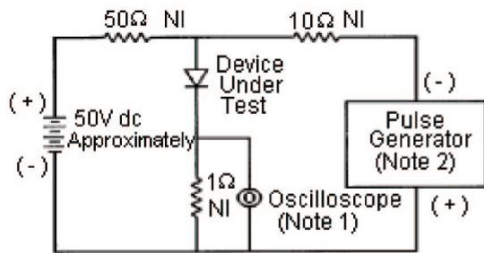
Typical Junction Capacitance



Peak Forward Surge Current



Ultra Fast Rectifier



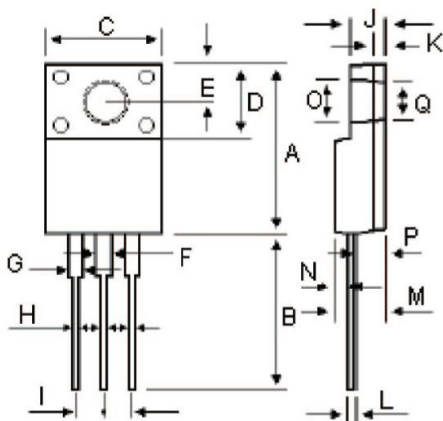
Set time base for 10/20 ns/cm

Reverse Recovery Time Characteristic and Test Circuit Diagram

Notes:

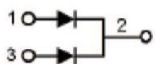
1. Rise Time = 7ns max. input Impedance = 1MΩ, 22pF
2. Rise Time = 10ns max. input Impedance = 50Ω

**16 Amperes
200 Volts
ITO-220AB**



| DIM | MILLIMETERS | |
|-----|-------------|-------|
| | MIN | MAX |
| A | 15.05 | 15.15 |
| B | 13.35 | 13.45 |
| C | 10.00 | 10.10 |
| D | 6.55 | 6.65 |
| E | 2.65 | 2.75 |
| F | 1.55 | 1.65 |
| G | 1.15 | 1.25 |
| H | 0.55 | 0.65 |
| I | 2.50 | 2.60 |
| J | 3.00 | 3.20 |
| K | 1.10 | 1.20 |
| L | 0.55 | 0.65 |
| M | 4.40 | 4.60 |
| N | 1.15 | 1.25 |
| P | 2.65 | 2.75 |
| O | 3.35 | 3.45 |
| Q | 3.15 | 3.25 |

Dimensions : Millimetres



Common Cathode

Part Number Table

| Description | Part Number |
|--------------------------------------|-------------|
| Diode, Dual REC, 16A, 600V, TO-220AB | MURF1660CT |

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