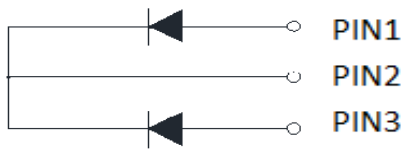
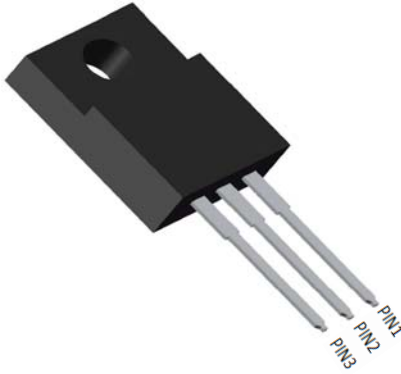


Ultra-Fast Recovery Rectifier Diodes



Features

- High frequency operation
- High surge forward current capability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

Mechanical Data

- **Package:** ITO-220AB
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

■ Maximum Ratings ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | MUR1040FCT | MUR1060FCT |
|---|--------|------------------|------------|------------|
| Device marking code | | | MUR1040FCT | MUR1060FCT |
| Repetitive Peak Reverse Voltage | VRRM | V | 400 | 600 |
| Average Rectified Output Current @60Hz half sine-wave, R-load, T_c (FIG.1) | I_o | A | 10 | |
| Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, $T_a=25^\circ\text{C}$ | IFSM | A | 75 | |
| Current Squared Time @1ms≤t≤8.3ms $T_j=25^\circ\text{C}$, Rating of per diode | I^2t | A ² s | 23 | |
| Storage Temperature | Tstg | °C | -55 ~ +150 | |
| Junction Temperature | T_j | °C | -55 ~ +150 | |

■ Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | MUR1040FCT | MUR1060FCT |
|---|-------------------|------|--|------------|------------|
| Maximum instantaneous forward voltage drop per diode | VFM | V | IFM=5.0A | 1.3 | 1.5 |
| Maximum DC reverse current at rated DC blocking voltage per diode | I _{RRM1} | uA | V _{RM} =V _{RRM} $T_a=25^\circ\text{C}$ | 10 | |
| | I _{RRM2} | | V _{RM} =V _{RRM} $T_a=125^\circ\text{C}$ | 500 | |
| Reverse Recovery Time | T _{rr} | ns | I _F =0.5A I _{RM} =1A I _{RR} =0.25A | 50 | |

■ Thermal Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | MUR1040FCT | MUR1060FCT |
|---|------------------------|------|------------|------------|
| Thermal Resistance Between junction and case | $R_{\theta\text{-JC}}$ | °C/W | 2.5 | |



MUR1040FCT THUR MUR1060FCT

Ordering Information (Example)

| PREFERED P/N | | UNIT WEIGHT(g) | MINIIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------|------------|------------------|-----------------------|-------------------------|----------------------------|---------------|
| MUR1040FCT | MUR1060FCT | Approximate 1.46 | 50 | 1000 | 5000 | Tube |

Characteristics (Typical)

FIG1: I_o - T_c Curve

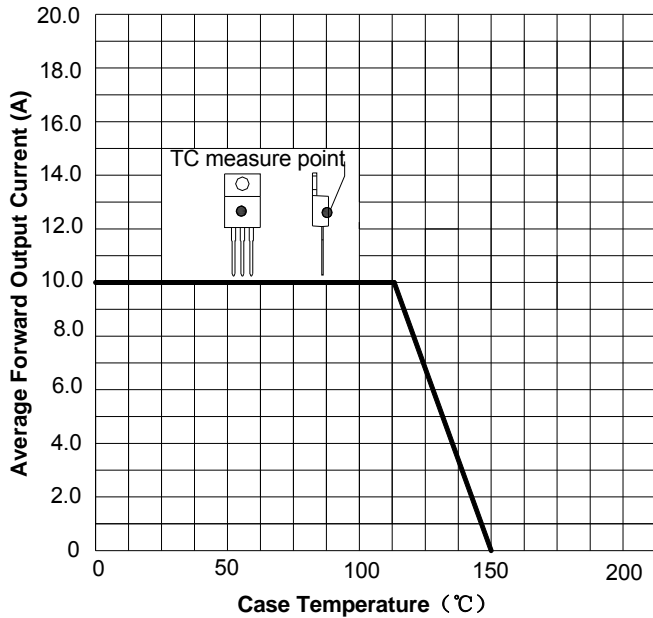


FIG2: Surge Forward Current Capability

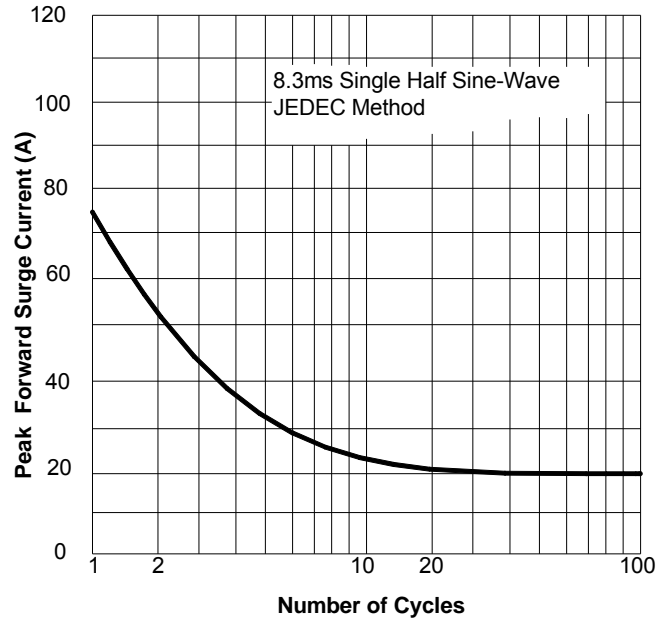


FIG3: Forward Voltage

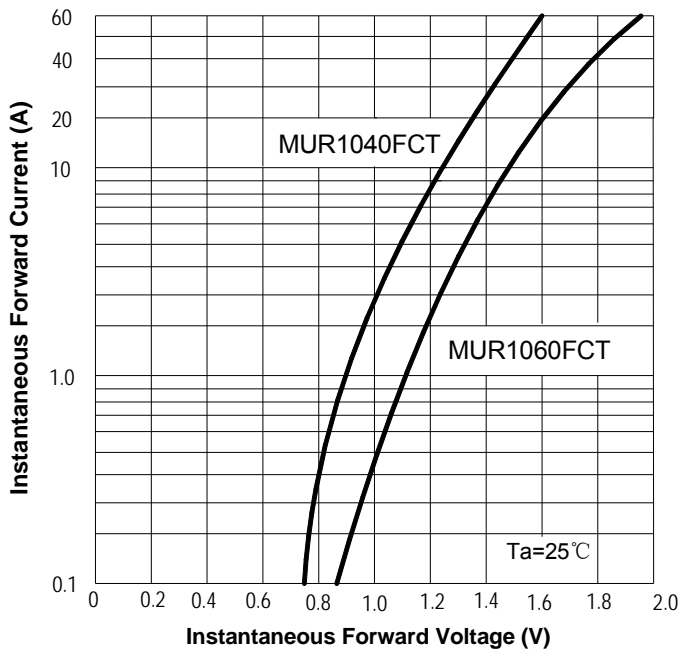


FIG4: Typical Reverse Characteristics

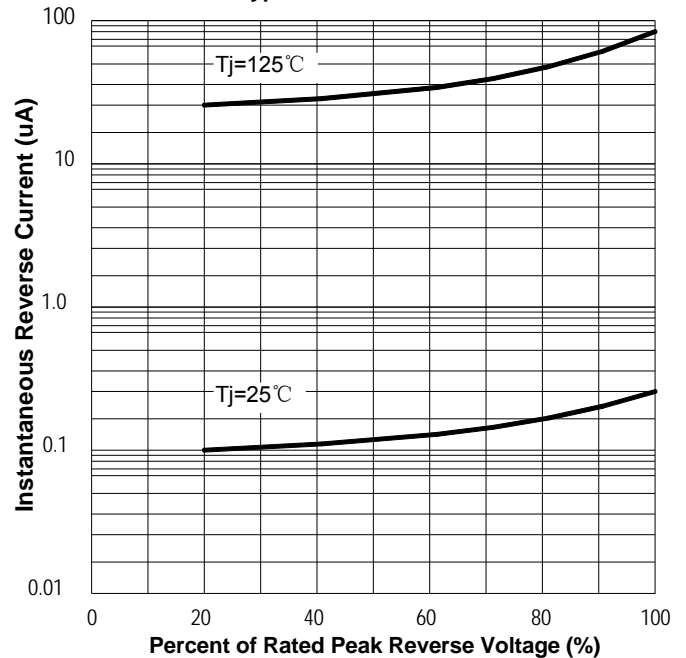
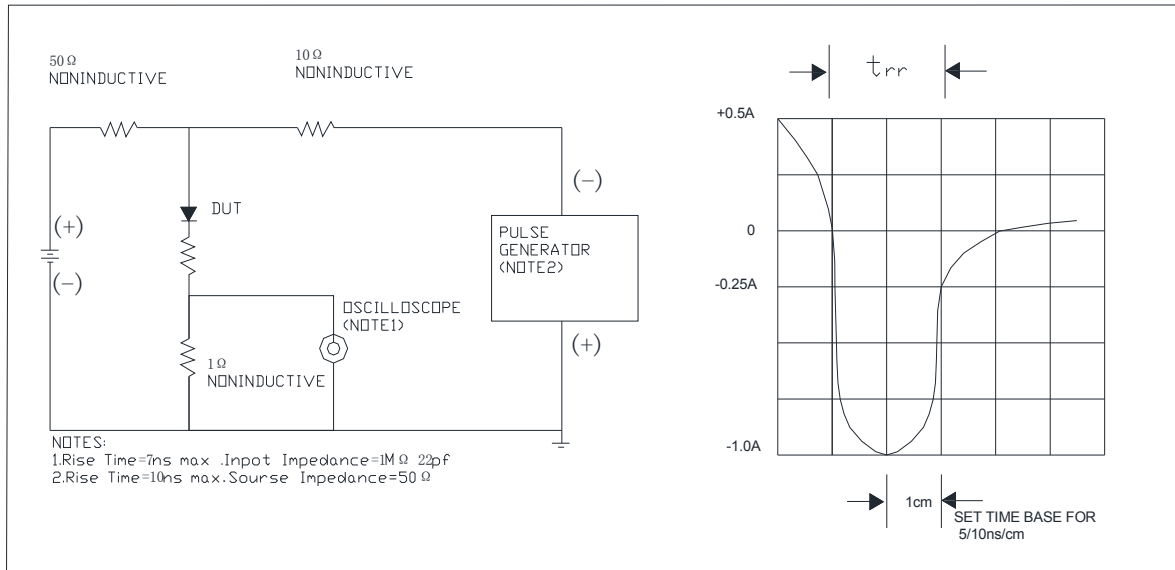
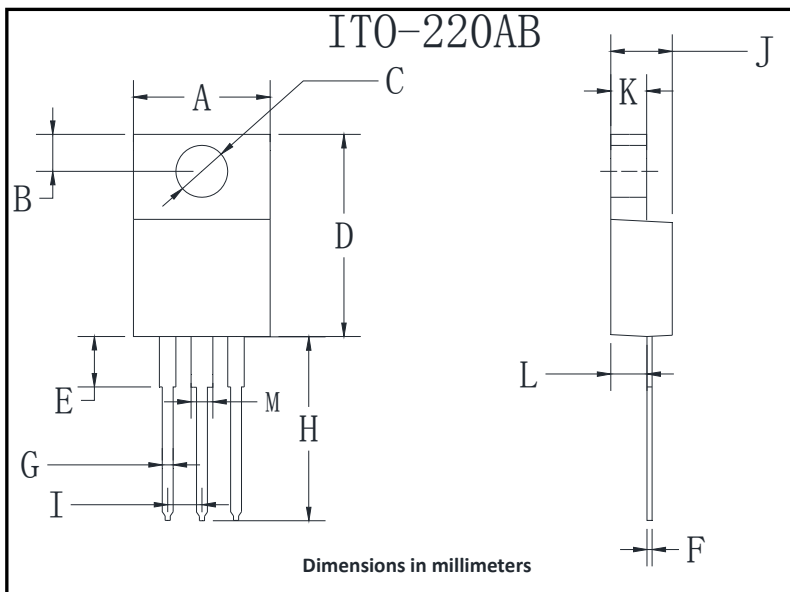


FIG.5 Diagram of circuit and Testing wave form of reverse recovery time



Outline Dimensions



| ITO-220AB | | |
|-----------|------|------|
| Dim | Min | Max |
| A | 9.7 | 10.7 |
| B | 2.15 | 3.25 |
| C | 2.6 | 3.8 |
| D | 14.4 | 15.9 |
| E | 3.1 | 4.5 |
| F | 0.4 | 0.8 |
| G | 0.4 | 0.8 |
| H | 12.7 | 14.2 |
| I | 1.80 | 2.95 |
| J | 3.9 | 5.1 |
| K | 2.1 | 3.56 |
| L | 2.1 | 3.2 |
| M | 1.4 | 1.8 |



MUR1040FCT THUR MUR1060FCT

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