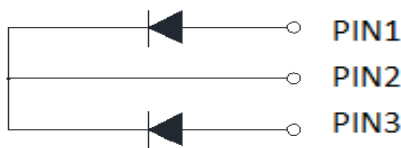
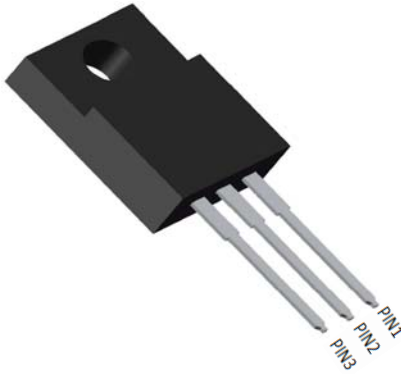


Ultra-Fast Recovery Diodes 8A*2 FRED Pt



Features

- Adopt FRED chip
- Low forward Voltage drop
- Fast reverse recovery time
- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

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_j=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | MUR1640FCT |
|---|------------------|------------------|------------|
| Device marking code | | | MUR1640FCT |
| Repetitive Peak Reverse Voltage | VRRM | V | 400 |
| Average Rectified Output Current @60Hz sine wave, R-load, T _c (FIG.1) | I _O | A | 16 |
| Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _j =25°C | I _{FSM} | A | 100 |
| Current Squared Time @1ms≤t≤8.3ms T _j =25°C, | I ² t | A ² s | 41 |
| Storage Temperature | T _{stg} | °C | -55 ~ +150 |
| Junction Temperature | T _j | °C | -55 ~ +150 |
| Junction capacitance @4V,1MHz | C _j | pF | 40 |
| Mounting torque @recommend torque: 5kg□cm | Tor | kg□cm | 8 |



MUR1640FCT

■Electrical Characteristics

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | Min | Typ | Max |
|---|------------|------|--|-----|-------|------|
| Instantaneous forward voltage drop per diode | V_{FM} | V | $I_{FM}=8.0A @ T_j=25^{\circ}C$ | - | 1.15 | 1.30 |
| | | | $I_{FM}=8.0A @ T_j=150^{\circ}C$ | - | 0.9 | 1.0 |
| DC reverse current at rated DC blocking voltage per diode | I_{RRM1} | uA | $V_{RM}=V_{RRM}$ $T_j=25^{\circ}C$ | - | - | 5 |
| | I_{RRM2} | | $V_{RM}=V_{RRM}$ $T_j=150^{\circ}C$ | - | 30 | 100 |
| Reverse Recovery Time | T_{rr} | ns | $I_F=0.5A$ $I_{RM}=1A$ $I_{RR}=0.25A$ $T_j=25^{\circ}C$ | - | 25 | 35 |
| | | | $T_j=25^{\circ}C$ | - | 33.3 | - |
| | | | $T_j=125^{\circ}C$ | - | 54.5 | - |
| Peak recovery current | I_{RRM} | A | $T_j=25^{\circ}C$ | - | 3.39 | - |
| | | | $T_j=125^{\circ}C$ | | | |
| Reverse recovery charge | Q_{rr} | nC | $T_j=25^{\circ}C$ | - | 56.17 | - |
| | | | $T_j=125^{\circ}C$ | - | 180 | - |

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

| PARAMETER | | SYMBOL | UNIT | MUR1640FCT |
|--------------------|---------------------------|------------------|---------------|------------|
| Thermal Resistance | Between junction and case | $R_{\theta J-C}$ | $^{\circ}C/W$ | 4.0 |
| Thermal Resistance | Between junction and Air | $R_{\theta J-A}$ | $^{\circ}C/W$ | 50 |

■Ordering Information (Example)

| PREFERRED P/N | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|-----------------|----------------------|-------------------------|----------------------------|---------------|
| MUR1640FCT | Approximate 1.6 | 50 | 1000 | 5000 | Tube |

■Characteristics (Typical)

FIG1: $I_o - T_c$ Curve

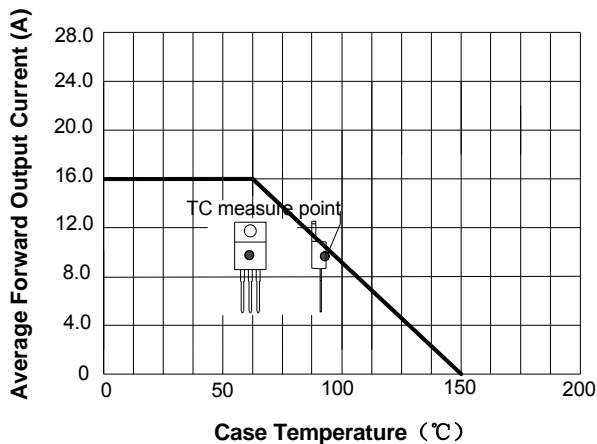


FIG2: Surge Forward Current Capability

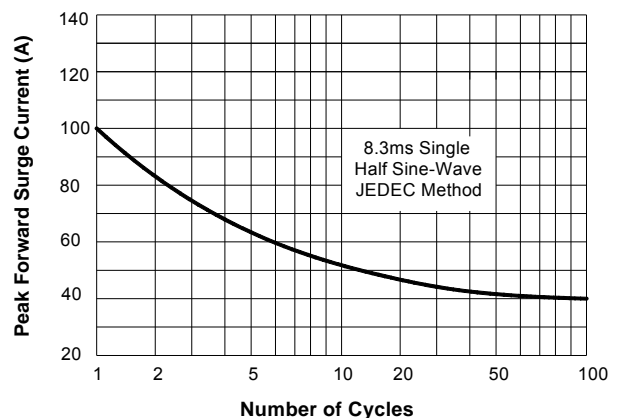


FIG3: Forward Voltage

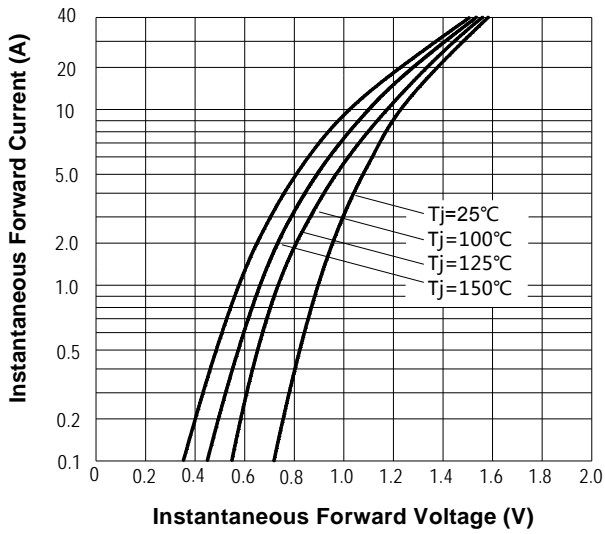


FIG.4: Instantaneous Reverse Characteristics

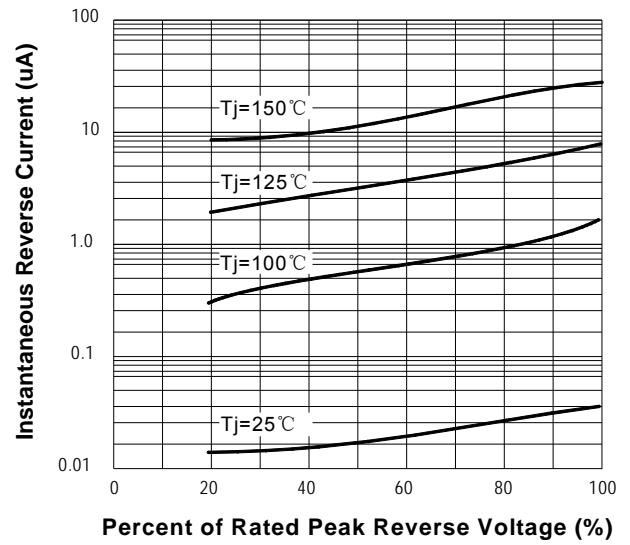
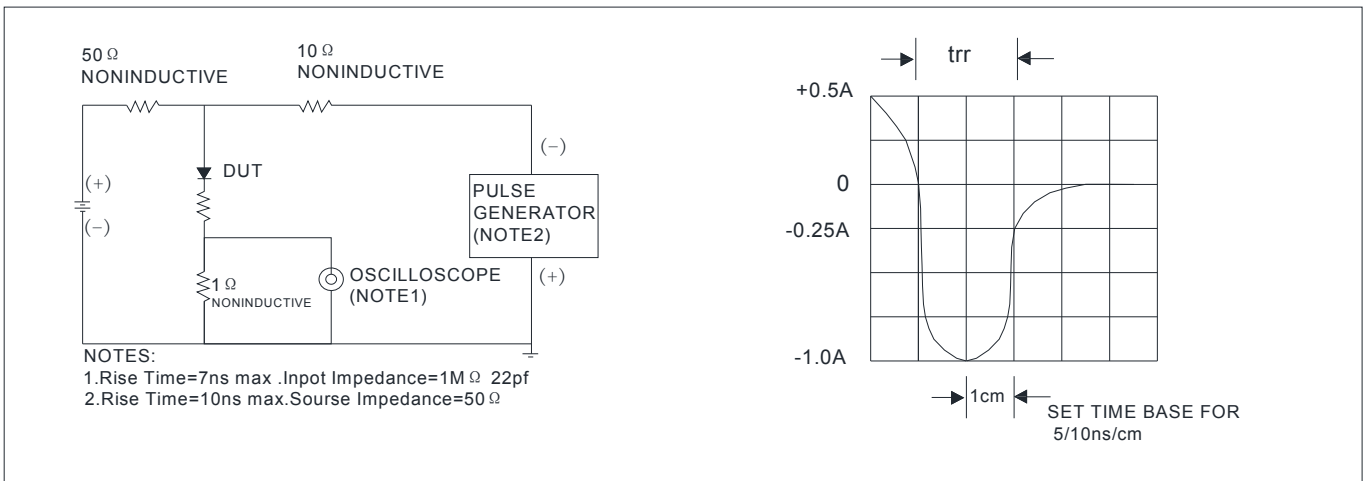


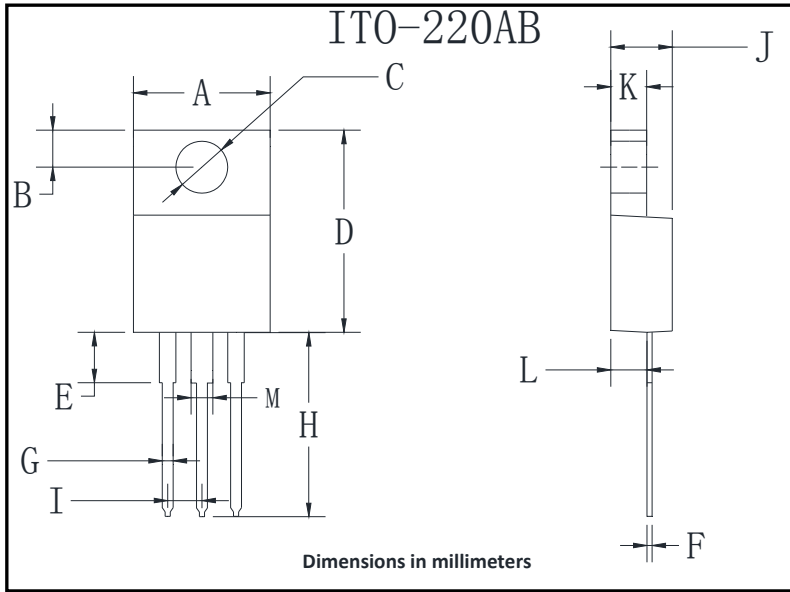
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time





MUR1640FCT

■Outline Dimensions



| ITO-220AB | | |
|-----------|-------|-------|
| Dim | Min | Max |
| A | 9.8 | 10.2 |
| B | 2.25 | 2.75 |
| C | 2.95 | 3.45 |
| D | 14.75 | 15.25 |
| E | 3.05 | 3.95 |
| F | 0.45 | 0.75 |
| G | 0.45 | 0.75 |
| H | 13.4 | 14.2 |
| I | 2.35 | 2.75 |
| J | 4.3 | 4.8 |
| K | 2.58 | 2.82 |
| L | 2.58 | 2.82 |
| M | 1.47 | 1.77 |

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