

MUR2010FCT THRU MUR2060FCT

Ultra-Fast Recovery Rectifier Diodes

Features

- Ultra-fast recovery time for high efficiency
- Glass passivated chip junction
- Low leakage current
- High forward surge capability
- Solder dip maximum peak of 275 °C /7s, per JESD 22-B106

Typical Application

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer ,computer and telecommunication.

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: Color Band denotes cathode end



Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER | Symbol | Unit | Conditions | MUR-FCT | | | | |
|-------------------------------------|-----------|------------------|---|------------|------|------|------|------|
| | | | | 2010 | 2015 | 2020 | 2040 | 2060 |
| Repetitive Peak Reverse Voltage | V_{RRM} | V | | 100 | 150 | 200 | 400 | 600 |
| Average Forward Current | I_O | A | 60HZ Half-sine wave, Resistance load, Tc(Fig.1) | 20 | | | | |
| Surge(Nonrepetitive)Forward Current | I_{FSM} | A | 60HZ sine wave, 1 cycle, Ta=25°C | 125 | | | | |
| Current Squared Time | $I^2 t$ | A ² s | 1ms≤t<8.3ms Tj=25°C, Rating of per diode | 65 | | | | |
| Storage Temperature | T_{stg} | °C | | -55 ~ +150 | | | | |
| Junction Temperature | T_j | °C | | -55 ~ +150 | | | | |

Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER | Symbol | Unit | Conditions | MUR-FCT | | | | |
|-------------------------------|------------|------------|------------------------------------|----------|------|------|------|------|
| | | | | 2010 | 2015 | 2020 | 2040 | 2060 |
| Peak Forward Voltage | VFM | V | $I_{FM}=10.0A$ | 0.975 | | | 1.35 | 1.7 |
| Peak Reverse Current | I_{RRM1} | μA | $V_{RM}=V_{RRM}$ | Ta=25°C | | | | |
| | I_{RRM2} | | | Ta=125°C | | | | |
| Maximum reverse recovery time | T_{rr} | ns | $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$ | 35 | | | | |
| Thermal Resistance | $R_{θJ-C}$ | $R_{θJ-C}$ | Between junction and case | 2.0 | | | | |



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■ Characteristics (Typical)

FIG1: Forward Current Derating Curve

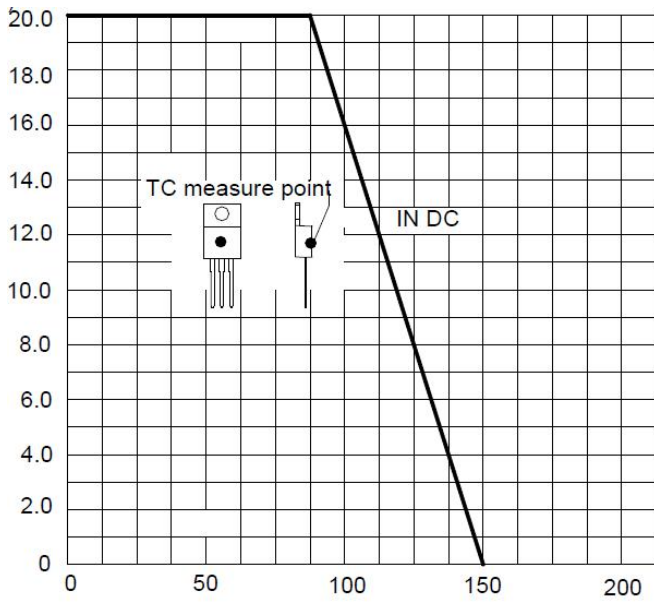


FIG2: Surge Forward Current Capability

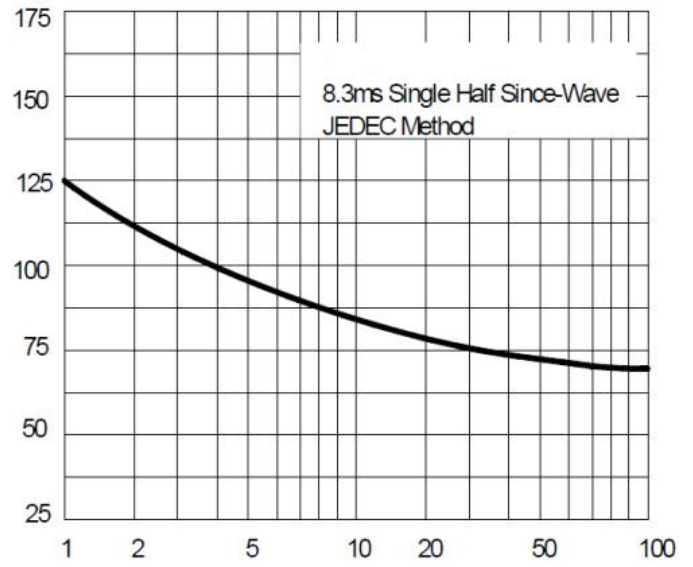


FIG3: Instantaneous Forward Voltage

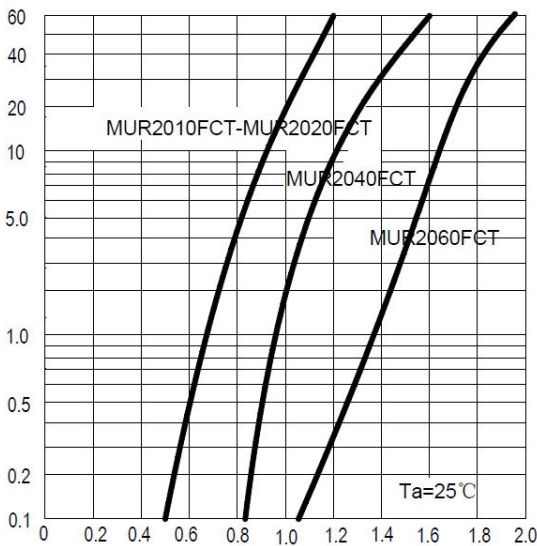


FIG4: Typical Reverse Characteristics

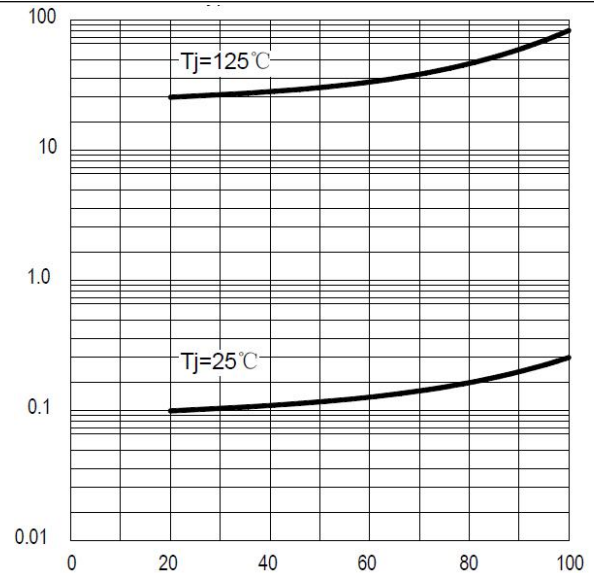
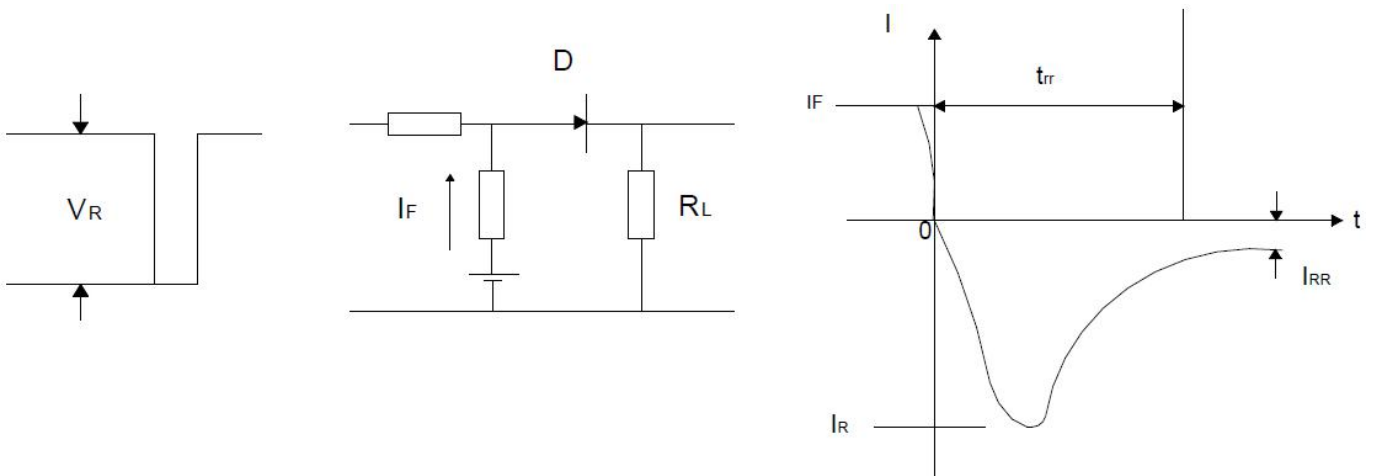


FIG5: Diagram of circuit and Testing wave form of reverse recovery time

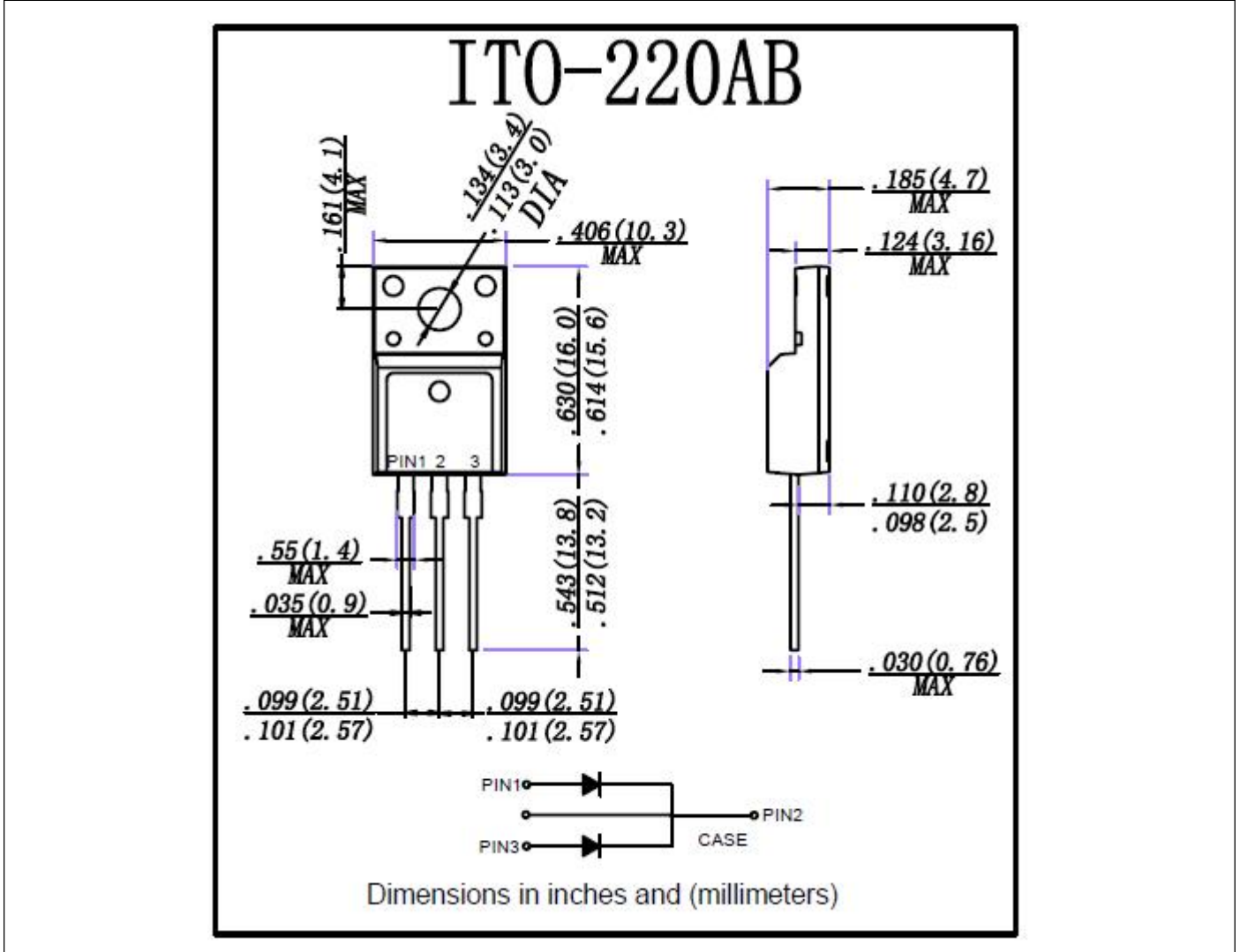


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Ordering Information (Example)

| PREFERED | PACKAGE CODE | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|-----------------------|--------------|----------------------|-------------------------|----------------------------|---------------|
| MUR2010FCT~MUR2060FCT | ITO-220AB | 50 | 1000 | 5000 | Tube |

Outline Dimensions



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