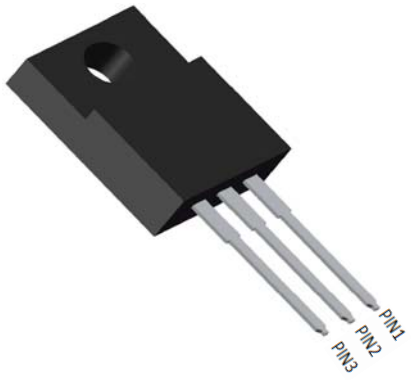
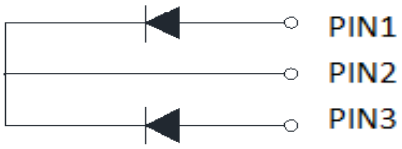
# Schottky Diodes




## Features

- High frequency operation
- Low forward voltage drop
- 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
- Halogen Free

## 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 (Tj=25℃ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | MBRL2060FCT |
|---|---|---|---|
| Device marking code | | | MBRL2060FCT |
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | V | 60 |
| Average Rectified Output Current @60Hz sine wave, R-load, Tc(FIG.1) | $I_O$ | A | 20 |
| Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Tj=25℃ | $I_{FSM}$ | A | 150 |
| Surge(Non-repetitive)Forward Current @1ms，square wave, 1 time, Tj=25℃ | | | 300 |
| Current Squared Time @1ms≤t≤8.3ms Tj=25℃ | $I^2t$ | $A^2s$ | 94 |
| Typical junction capacitance @ 1MHz and Applied Reverse Voltage of 4.0 V.D.C. | Cj | pF | 850 |
| Storage Temperature | $T_{stg}$ | ℃ | -55 ~ +150 |
| Junction Temperature | Tj | ℃ | -55 ~ +150 |
| Dielectric strength @ terminals to case, AC 1 minute | Vdis | KV | 2.0 |
| Mounting torque @recommend torque：5kg·cm | Tor | kg·cm | 8 |

## ■Electrical Characteristics（Tj=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | Min | Typ | Max |
|---|---|---|---|---|---|---|
| Peak Forward Voltage | $V_{FM}$ | V | $I_{FM}$=10.0A Tj=25℃ | 0.5 | 0.57 | 0.60 |
| | | | $I_{FM}$=10.0A Tj=125℃ | - | 0.54 | 0.58 |
| Maximum DC reverse current at rated DC blocking voltage per diode | $I_{RRM1}$ | uA | $V_{RM}$=$V_{RRM}$ Tj=25℃ | - | - | 100 |
| | $I_{RRM2}$ | mA | $V_{RM}$=$V_{RRM}$ Tj=125℃ | - | - | 20 |

Note1:Pulse test:300uS pulse widh,1% duty cycle

Note2:Pulse test:pulse widh 40mS

## ■Thermal Characteristics （Tj=25℃ Unless otherwise specified）

| PARAMETER | | SYMBOL | UNIT | MBRL2060FCT |
|---|---|---|---|---|
| Thermal Resistance | Between junction and ambient | $R_{\theta J-A}$ | ℃/W | 50.0 |
| | Between junction and case | $R_{\theta J-C}$ | ℃/W | 4.0 |

## ■Ordering Information (Example)

| PREFERED P/N | UNIT WEIGHT(g) | MINIIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---|---|---|---|---|---|
| MBRL2060FCT | Approximate 1.6 | 50 | 1000 | 5000 | Tube |

## ■Characteristics (Typical)

**FIG1:Io -Tc Curve**

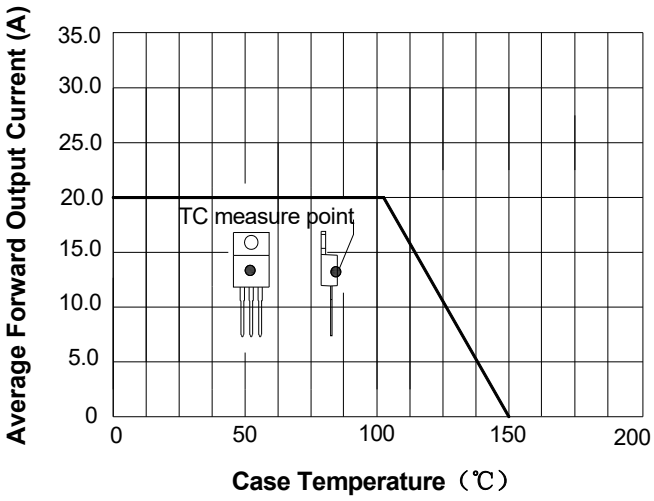



**FIG2:Surge Forward Current Capability**

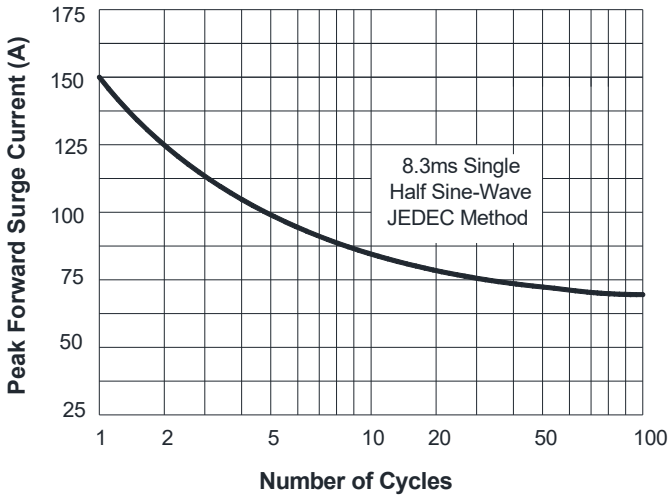


FIG3: Forward Voltage

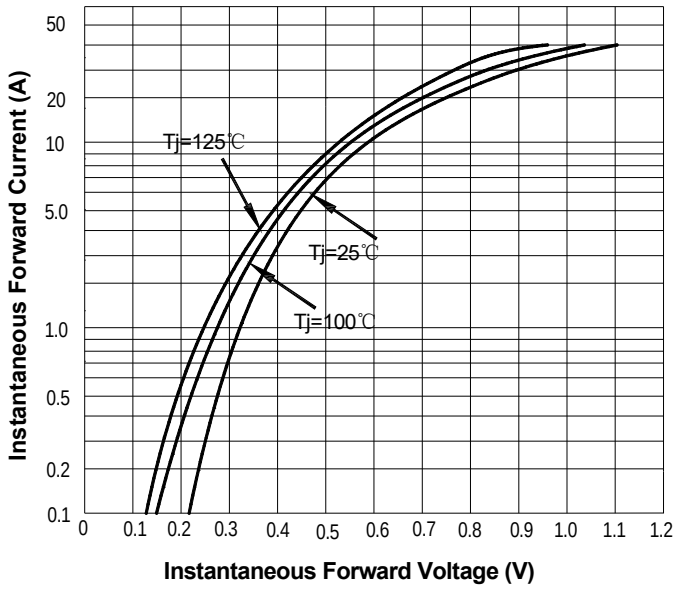
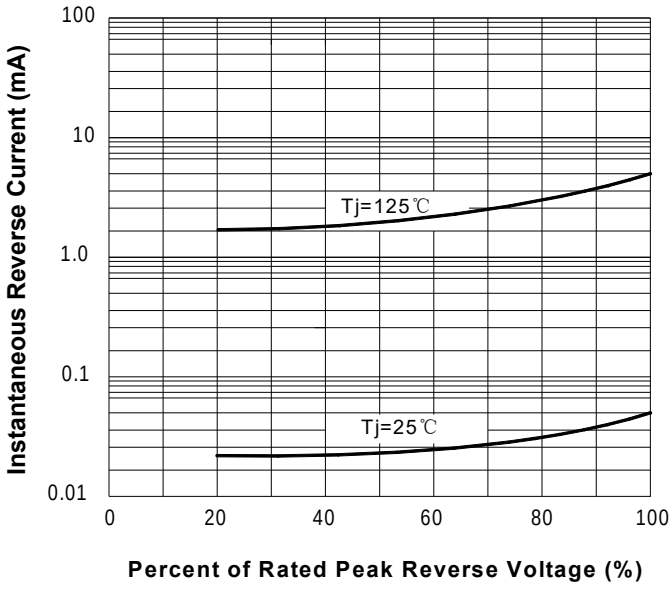
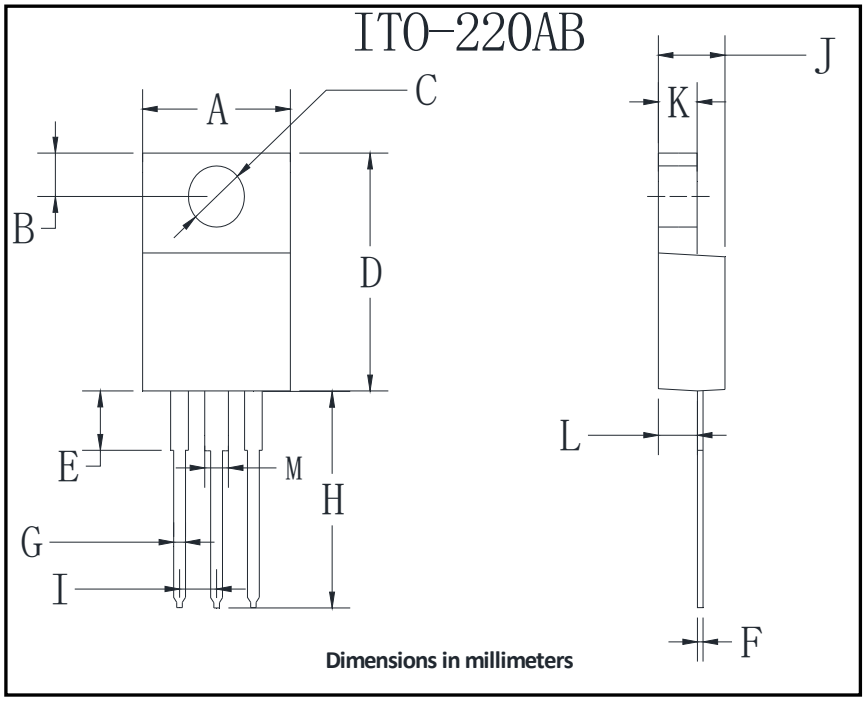



FIG.4: Typical Reverse Characteristics




## ■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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