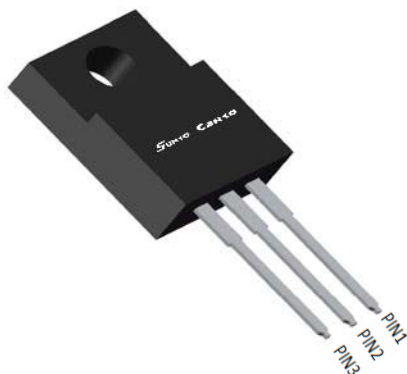


Schottky Diodes



Features

- 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
- 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, -
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

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

| PARAMETER | SYMBOL | UNIT | MBR3045FCT |
|---|------------------|------------------|------------|
| Device marking code | | | MBR3045FCT |
| Repetitive Peak Reverse Voltage | VRRM | V | 45 |
| Average Rectified Output Current @60Hz sine wave, R-load, Ta=25°C | IO | A | 30 |
| Surge(Non-repetitive)Forward Current @60Hz half sine-wave,1 cycle, Ta=25°C | IFSM | A | 250 |
| Current Squared Time @1ms≤t<8.3ms Tj=25°C, | I ² t | A ² s | 262 |
| Storage Temperature | Tstg | °C | -55 ~ +150 |
| Junction Temperature | Tj | °C | -55 ~ +150 |

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

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | MBR3045FCT |
|---|-------------------|------|----------------------|------------|
| Maximum instantaneous forward voltage drop per diode | VFM | V | IFM=15.0A | 0.6 |
| Maximum DC reverse current at rated DC blocking voltage per diode | I _{RRM1} | mA | VRM=VRRM Ta=25°C | 0.2 |
| | I _{RRM2} | | VRM=VRRM Ta=100°C | 100 |

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

Note2:Pulse test:pulse width 40mS

MBR3045FCT

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | | SYMBOL | UNIT | MBR3045FCT |
|--------------------|---------------------------|-------------------|------|------------|
| Thermal Resistance | Between junction and case | R _{θJ-C} | °C/W | 4.0 |

■ Ordering Information (Example)

| PREFERRED P/N | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|-----------------|----------------------|-------------------------|----------------------------|---------------|
| MBR3045FCT | Approximate 1.6 | 50 | 1000 | 5000 | Tube |

■ Characteristics (Typical)

FIG1:I_o -T_c Curve

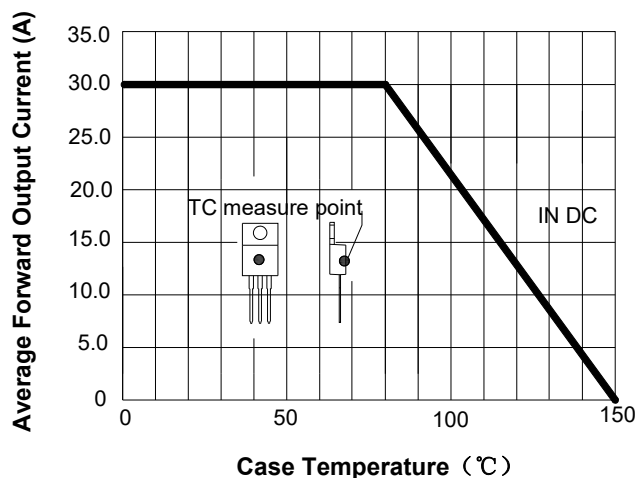


FIG2: Surge Forward Current Capability

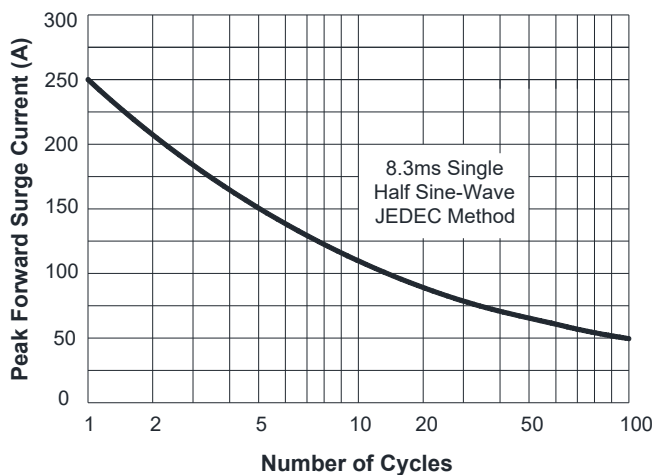


FIG3: Forward Voltage

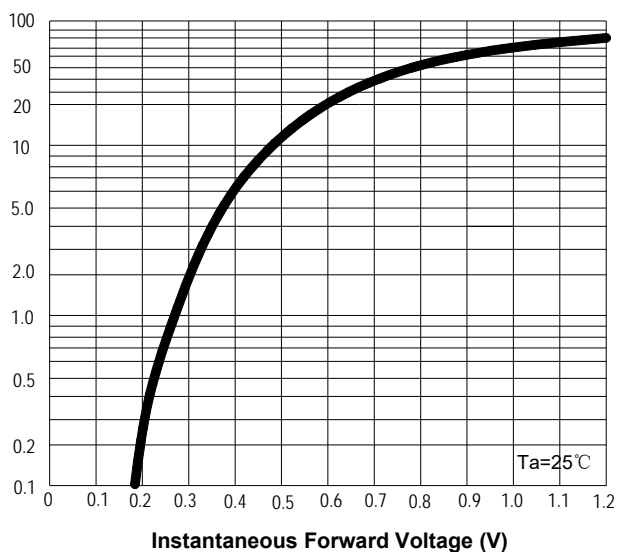
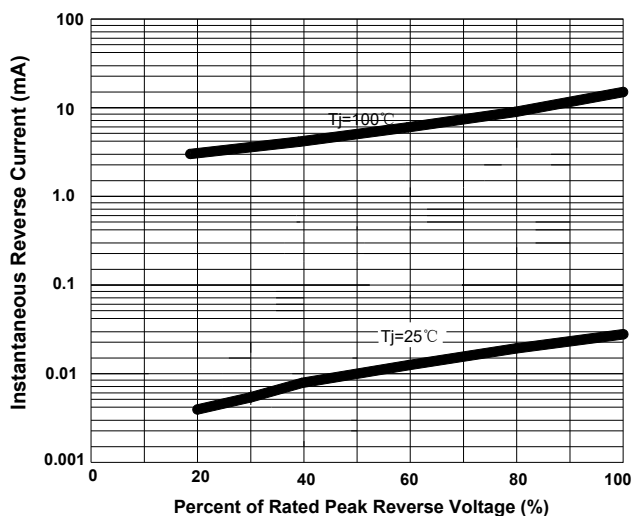
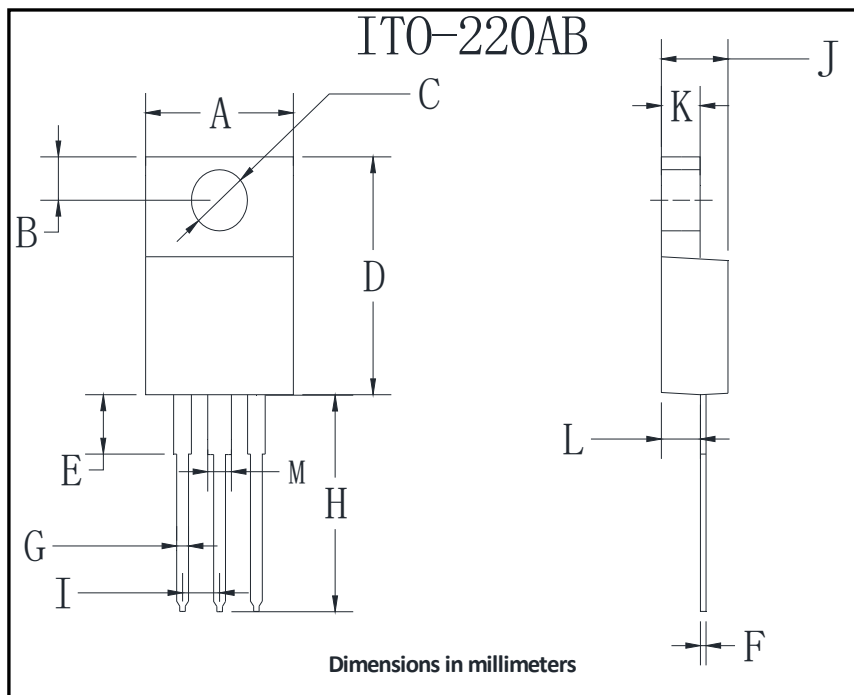


FIG4: Typical Reverse Characteristics



■ 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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