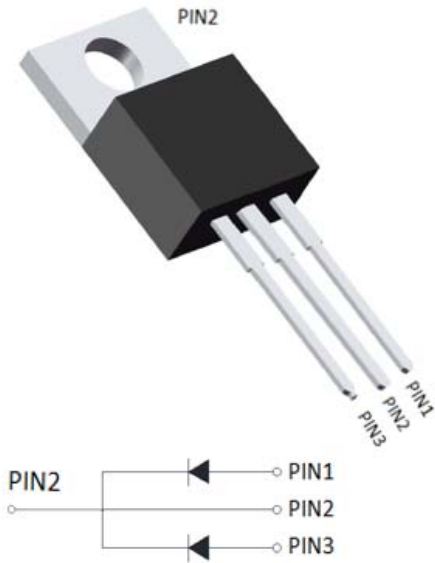


Schottky Diodes



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

Typical Applications

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

Mechanical Data

- **Package:** TO-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°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | MBRU40100CT |
|---|------------------|------------------|-------------|
| Device marking code | | | MBRU40100CT |
| Repetitive Peak Reverse Voltage | V _{RRM} | V | 100 |
| Average Rectified Output Current @60Hz sine wave, R-load, T _c =95°C | I _O | A | 40 |
| Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _a =25°C | I _{FSM} | A | 300 |
| Current Squared Time @1ms≤t≤8.3ms T _j =25°C | I ² t | A ² s | 373 |
| Storage Temperature | T _{stg} | °C | -55 ~ +150 |
| Junction Temperature | T _j | °C | -55 ~ +150 |

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

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | MBRU40100CT |
|---|-------------------|------|--|-------------|
| Maximum instantaneous forward voltage drop per diode | V _{FM} | V | I _{FM} =20.0A | 0.71 |
| Maximum DC reverse current at rated DC blocking voltage per diode | I _{RRM1} | mA | V _{RM} =V _{RRM} T _a =25°C | 0.1 |
| | I _{RRM2} | | V _{RM} =V _{RRM} T _a =100°C | 100 |

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

Note2:Pulse test:pulse width 40mS



MBRU40100CT

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

| PARAMETER | | SYMBOL | UNIT | MBRU40100CT |
|--------------------|---------------------------|-------------------|------|-------------|
| Thermal Resistance | Between junction and case | R _{θJ-C} | °C/W | 2.0 |

■ Ordering Information (Example)

| PREFERED P/N | UNIT WEIGHT(g) | MINIIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------|-----------------|-----------------------|-------------------------|----------------------------|---------------|
| MBRU40100CT | Approximate 1.9 | 50 | 1000 | 5000 | Tube |

■ Characteristics (Typical)

FIG1: I_o -T_c Curve

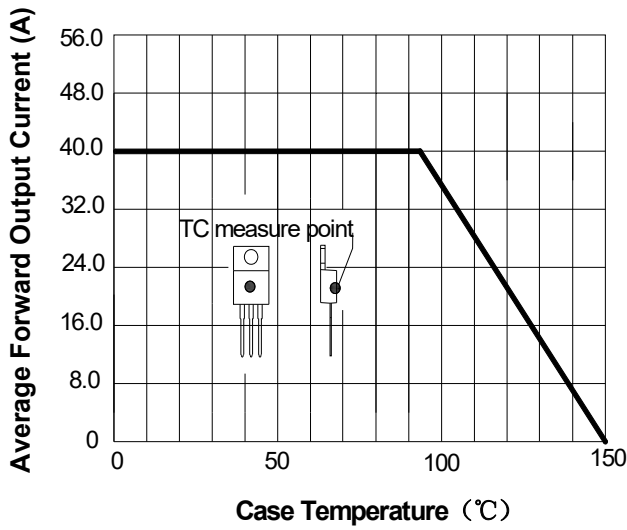


FIG2: Surge Forward Current Capability

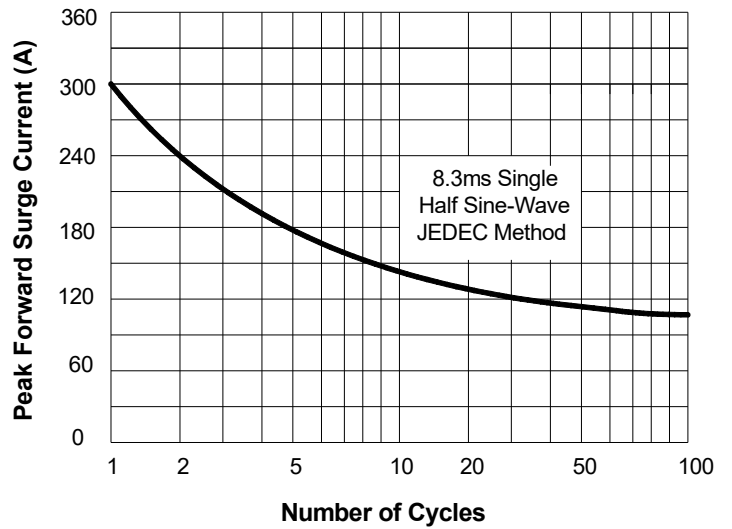


FIG3: Forward Voltage

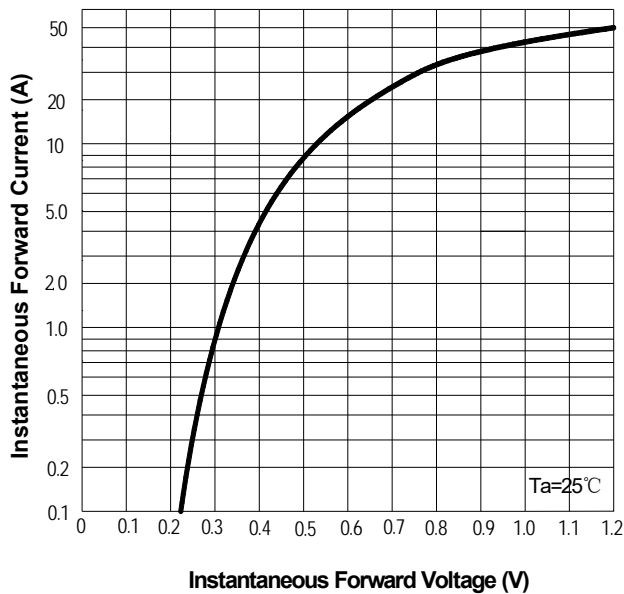
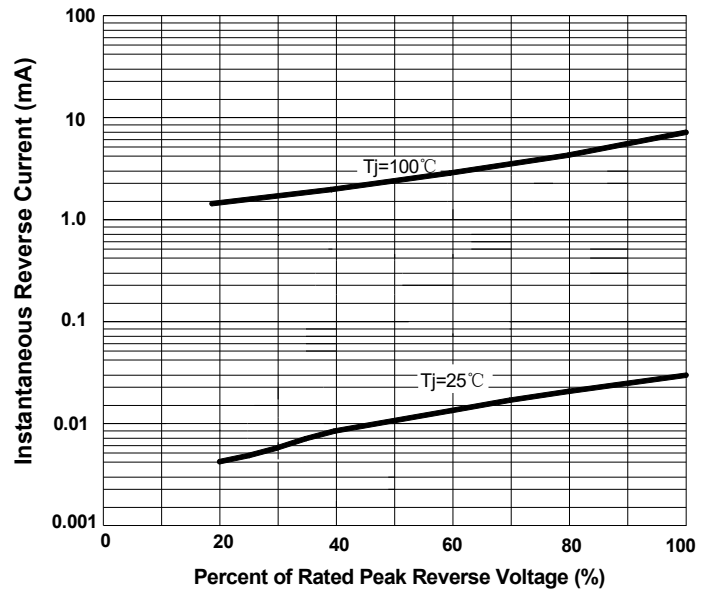


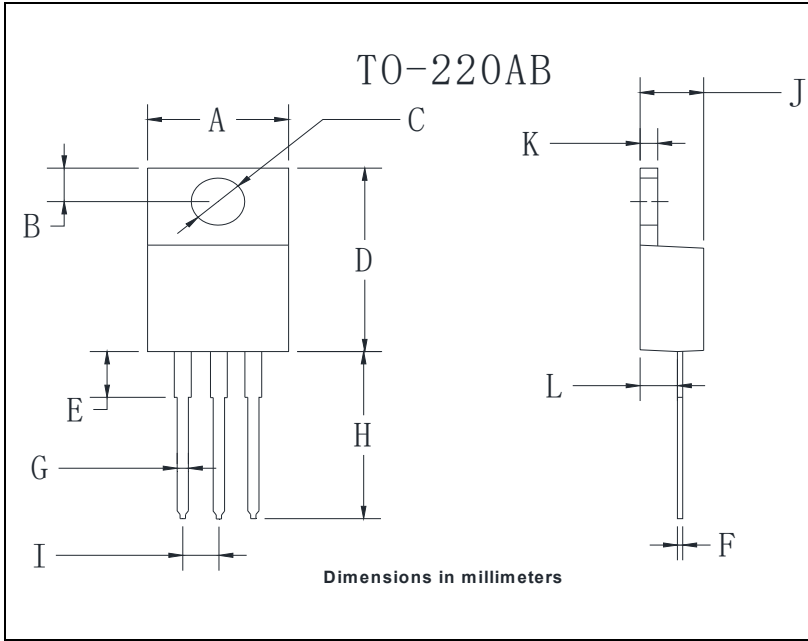
FIG.4: Typical Reverse Characteristics





MBRU40100CT

■Outline Dimensions



| TO-220AB | | |
|----------|-------|-------|
| Dim | Min | Max |
| A | 9.95 | 10.35 |
| B | 2.55 | 2.95 |
| C | 3.8 | 4.0 |
| D | 14.95 | 15.25 |
| E | 3.75 | 4.25 |
| F | 0.26 | 0.5 |
| G | 0.68 | 0.94 |
| H | 13.4 | 13.9 |
| I | 2.35 | 2.65 |
| J | 4.38 | 4.78 |
| K | 1.14 | 1.4 |
| L | 2.37 | 2.79 |



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