

# **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

#### **Typical Applications**

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

#### **Mechanical Data**

• Package: TO-252

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             | MBR1060CD          |
|--|------------------|------------------|--------------------|
| Device marking code  |                  |                  | MBR1060CD          |
| Repetitive Peak Reverse Voltage  | VRRM             | V                | 60                 |
| Average Rectified Output Current @60Hz sine wave, R-load, Ta=25℃                           | lo               | Α                | 10                 |
| Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, $T_a$ =25 $^{\circ}$ C | IFSM             | Α                | 120                |
| Current Squared Time @1ms≤t<8.3ms<br>Tj=25℃,   | l <sup>2</sup> t | A <sup>2</sup> s | 60                 |
| Storage Temperature  | T <sub>stg</sub> | $^{\circ}$       | -55 ~ <b>+</b> 150 |
| Junction Temperature   | Tj               | ${\mathbb C}$    | -55 ~ <b>+</b> 150 |

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

| PARAMETER   | SYMBOL | UNIT | TEST<br>CONDITIONS                | MBR1060CD |
|---|--------|------|-----------------------------------|-----------|
| Maximum instantaneous forward voltage drop per diode                    | VFM    | V    | IFM=5.0A                          | 0.72      |
| Maximum DC reverse current<br>at rated DC blocking voltage per<br>diode | IRRM1  |      | VRM=VRRM<br>T <sub>a</sub> =25°C  | 0.2       |
|   | IRRM2  | mA   | VRM=VRRM<br>T <sub>a</sub> =125°C | 50        |



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| PARAMETER          |                           | SYMBOL UNIT       |      | MBR1060CD |  |
|--------------------|---------------------------|-------------------|------|-----------|--|
| Thermal Resistance | Between junction and case | R <sub>θJ-C</sub> | °CMV | 5.0       |  |

**■Ordering Information** (Example)

| PREFERED P/N | UNIT WEIGHT(g)   | MINIIMUM<br>PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------|------------------|--------------------------|-------------------------|----------------------------|---------------|
| MBR1060CD    | Approximate 0.32 | 2500                     | 2500                    | 25000                      | Reel          |

### **■Characteristics** (Typical)

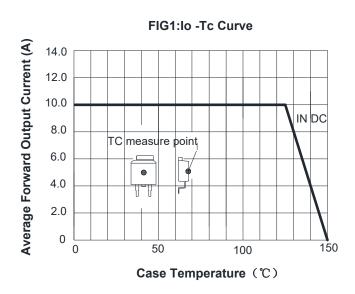


FIG2:Surge Forward Current Capability

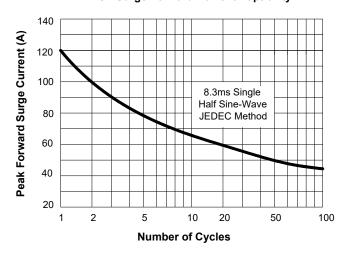


FIG3: Forward Voltage

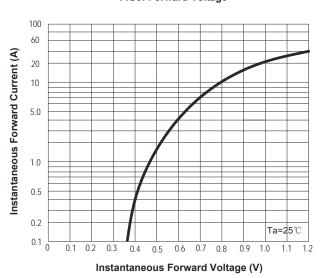
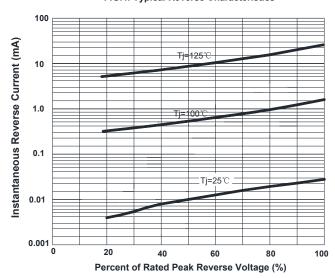
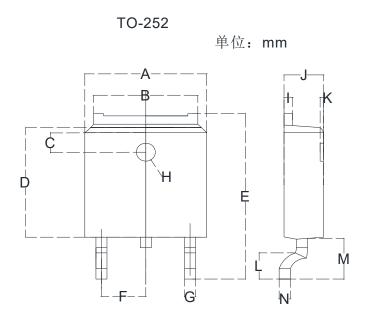


FIG.4: Typical Reverse Characteristics





# **■**Outline Dimensions



| TO-252 |        |        |  |  |
|--------|--------|--------|--|--|
| Dim    | Min    | Max    |  |  |
| Α      | 6.500  | 6.700  |  |  |
| В      | 5.100  | 5.460  |  |  |
| С      | 1.400  | 1.800  |  |  |
| D      | 6.000  | 6.200  |  |  |
| Е      | 10.000 | 10.400 |  |  |
| F      | 2.166  | 2.366  |  |  |
| G      | 0.660  | 0.860  |  |  |
| Н      | Ф1.050 | Ф1.350 |  |  |
| I      | 0.460  | 0.580  |  |  |
| J      | 2.200  | 2.400  |  |  |
| K      | 0      | 0.300  |  |  |
| L      | 0.890  | 2.290  |  |  |
| М      | 2.730  | 3.080  |  |  |
| N      | 0.430  | 0.580  |  |  |



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