



DATA SHEET

SEMICONDUCTOR

MBR1020CT~MBR10200CT

10A SCHOTTKY BARRIER RECTIFIER

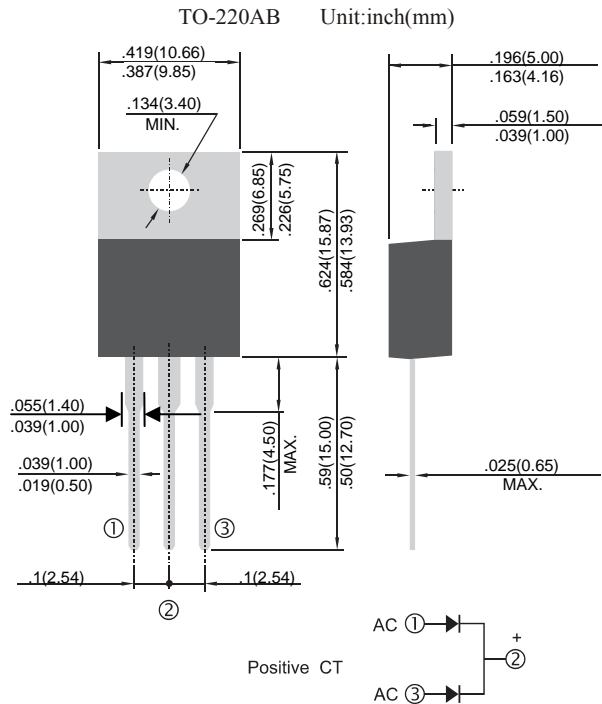


FEATURES

- Schottky Barrier Chip
- Guard Ring for Transient Protection
- High Current Capability, Low Forward
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability
- Classification 94V-O
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

MECHANICAL DATA

- Case: TO-220 Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-750, Method 2026
- Polarity: As Marked on Body
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



Maximum Ratings and Electrical Characteristics @TA=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristic | Symbol | MBR | MBR | MBR | MBR | MBR | MBR | MBR | MBR | MBR | Units |
|---|----------|-------------|--------|--------|--------|--------|--------|---------|---------|---------|-------|
| | | 1020CT | 1030CT | 1040CT | 1050CT | 1060CT | 1080CT | 10100CT | 10150CT | 10200CT | |
| Peak Repetitive Reverse Voltage | VRRM | | | | | | | | | | Volts |
| Working Peak Reverse Voltage | VRWM | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | Volts |
| DC Blocking Voltage | VR | | | | | | | | | | Volts |
| RMS Reverse Voltage | VR(RMS) | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | 140 | Volts |
| Average Rectified Output Current @TC = 95°C | IF | 10 | | | | | | | | | Amp |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | IFSM | 150 | | | | | | | 120 | | Amps |
| Forward Voltage @IF = 5.0A | VF | 0.55 | | 0.75 | | 0.85 | | 0.90 | 0.99 | | Volts |
| Peak Reverse Current @TA = 25°C At Rated DC Blocking Voltage @TA = 100°C | IRM | 0.1 | | | | | | | 0.025 | | mA |
| | | 50 | | | | | | | 7 | | |
| Typical Thermal Resistance | RθJC | 3 | | | | | | | | | °C/W |
| | RθJA | 60 | | | | | | | | | |
| Typical Junction Capacitance (Note 1) | Cj | 170 | | | | | | | | | pF |
| Operating and Storage Temperature Range | Tj, TSTG | -55 to +150 | | | | | | | | | |

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

DEVICE CHARACTERISTICS

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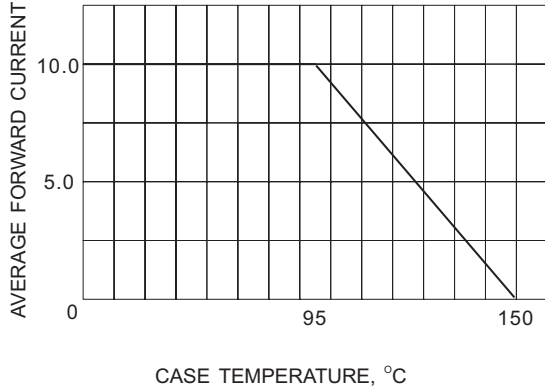


Fig.1- FORWARD CURRENT DERATING CURVE

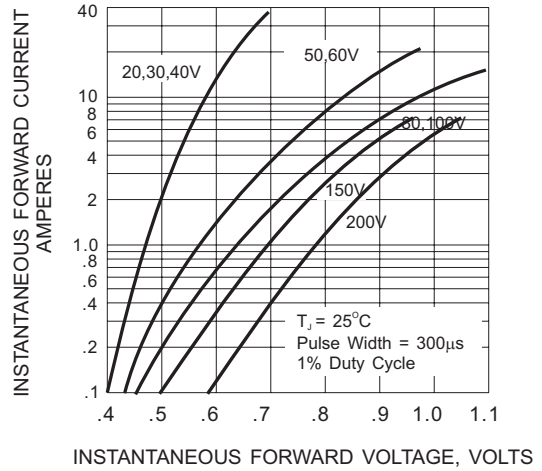


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

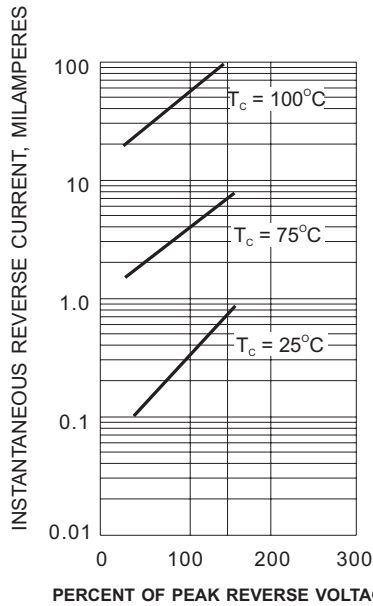


Fig.3- TYPICAL REVERSE CHARACTERISTIC

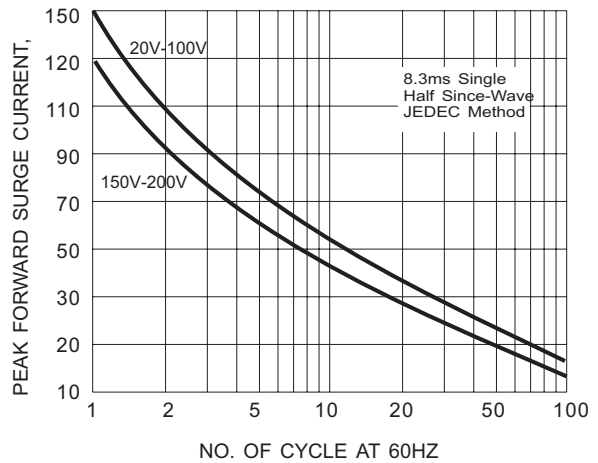


Fig.4- MAXIMUM NON-REPETITIVE SURGE CURRENT

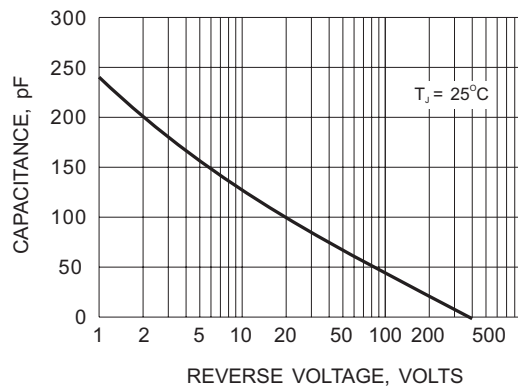
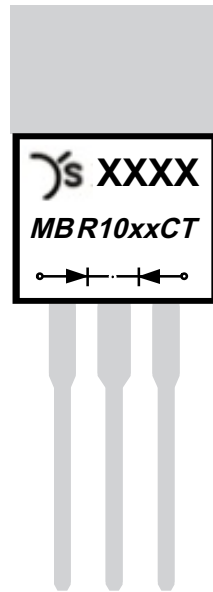


Fig.5- TYPICAL JUNCTION CAPACITANCE



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Marking Information



Line 1: YS Logo and Date code

The first half of Line 1: YS logo



The second half of Line 1:

YYWW: Year,

YYWW: Week.

Line 2 : Device name and Package type

MBR: Schottky Barrier Rectifier

10xx: 10 Ampere Series product.

10xx: The peak reverse Voltage of product.

Line 3 : Device Structure symbol



TO/ITO220 包装规范

| Packing 包装 | Dimension 尺寸 | Qty 数量 | Picture 图示 |
|------------------|--------------------|-------------|---|
| Bag/Tube 袋/管装 | 527mm*33mm*7mm | 50 PCS |  |
| Inner box 内盒 | 555mm*140mm*55mm | 2000 PCS |  <p>标签贴盒盖正面中心处</p> |
| Carton 外箱 | 575mm*285mm *155mm | 8000 PCS |  <p>外箱两侧贴标签位置</p> |