



MBR20100CT

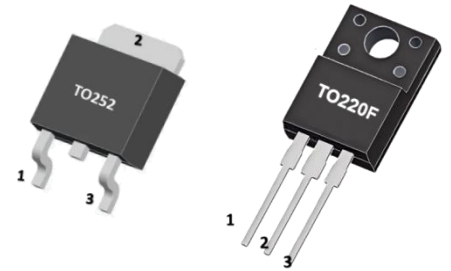
SCHOTTKY BARRIER RECTIFIER

DESCRIPTION

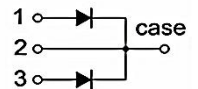
The MBR20100CT meet the ROHS and Green Product requirement with full function reliability approved.

FEATURE

- *Schottky Barrier Chip
- *Guard Ring Die Construction for Transient Protection
- *Low Power Loss,High Efficiency
- *High Surge Capability
- *High Current Capability and Low Forward Voltage Drop
- *For Use in Low Voltage, High Frequency Inverters,Free Wheeling, and Polarity Protection Applications



- 1. ANODE
- 2. CATHODE
- 3. ANODE



MARKING



: HY LOGO

MBR20100CT=Device Code

XXXX=Date Code

Solid Dot=Green molding compound

ABSOLUTE MAXIMUM RATINGS(TA=25°C, unless otherwise specified.)

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|------------|------|
| VRRM | Peak repetitive reverse voltage | 100 | V |
| VRWM | Working peak reverse voltage | 100 | V |
| VR | DC blocking voltage | 100 | V |
| VR(RMS) | RMS reverse voltage | 70 | V |
| IO | Average rectified output current | 20 (10*2) | A |
| IFSM | Non-Repetitive peak forward surge current(8.3ms half sine wave) | 150*2 | A |
| Tj | Junction temperature | 175 | °C |
| Tstg | Storage temperature | -55 ~ +150 | °C |
| Cj (Ctot) | Typical total capacitance VR=5V,f=1MHz | 500 | pF |
| RθJA | Thermal Resistance fromJunction to Ambient | TO-252 | 100 |
| | | TO-220F | 58 |
| RθJC | Thermal Resistance From Junction To Case | TO-252 | 5 |
| | | TO-220F | 3 |

Notes: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.



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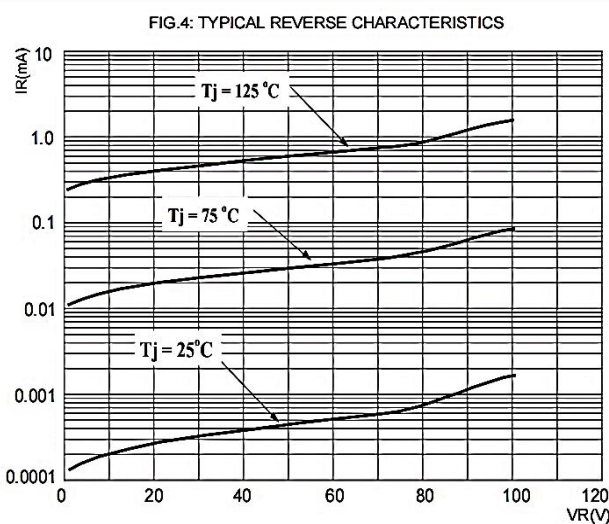
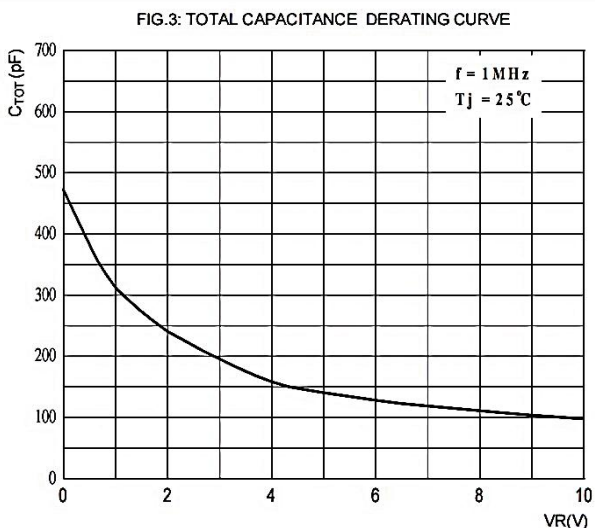
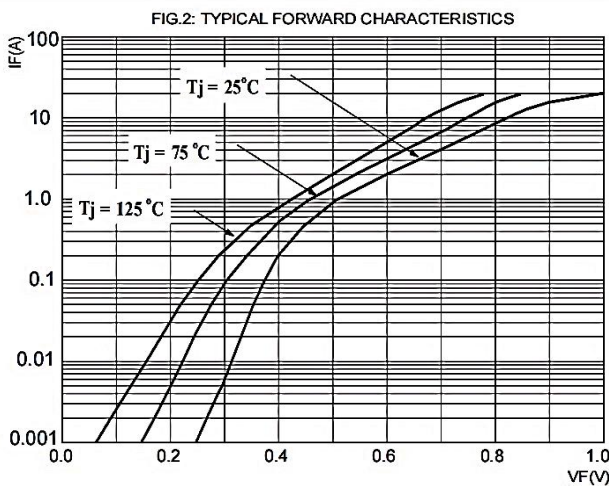
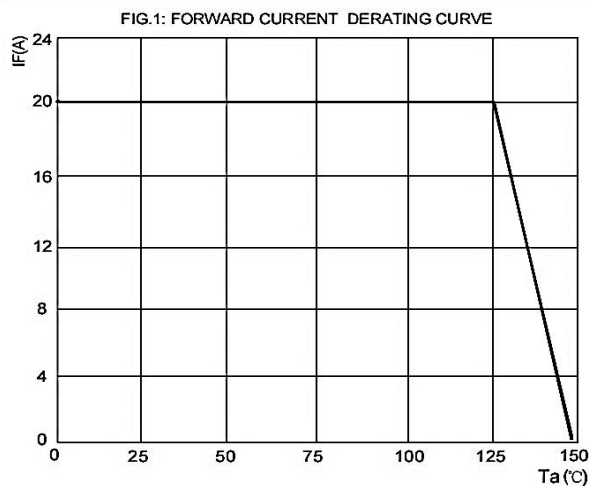
SCHOTTKY BARRIER RECTIFIER

ELECTRICAL CHARACTERISTICS (TA=25°C, unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|-----------------|------------|-----------------|---------------------|------|------|---------|
| Reverse voltage | $V_{(BR)}$ | $I_R=0.1mA$ | 100 | | | V |
| Reverse current | I_R | $V_R=100V$ | $T_j = 25^\circ C$ | 1 | 5 | μA |
| | | | $T_j = 125^\circ C$ | 5.0 | | mA |
| Forward voltage | V_F | $I_F=5A$ | $T_j = 25^\circ C$ | 0.72 | | V |
| | | | $T_j = 125^\circ C$ | 0.60 | | V |
| | | $I_F=10A$ | $T_j = 25^\circ C$ | 0.82 | 0.85 | V |
| | | | $T_j = 125^\circ C$ | 0.68 | | V |

*Pulse test: pulse width $\leq 300\mu s$, duty cycles $\leq 2.0\%$

TYPICAL CHARACTERISTICS

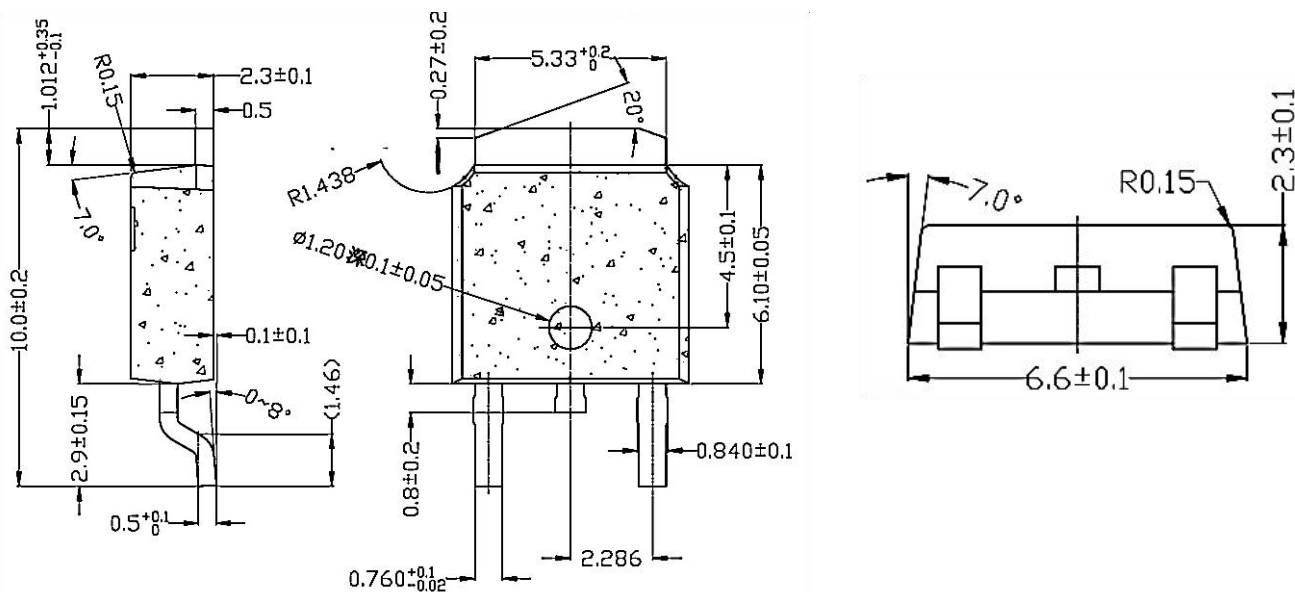




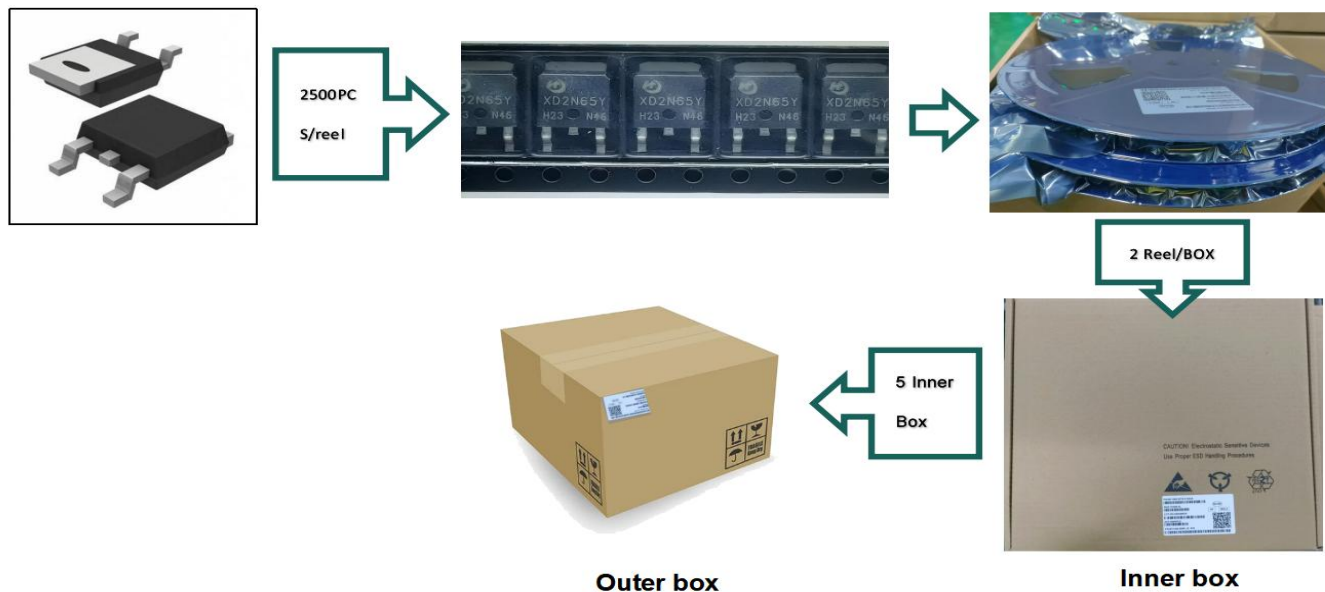
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SCHOTTKY BARRIER RECTIFIER

TO - 252 Package Outline Dimensions



TO - 252 Packing Information



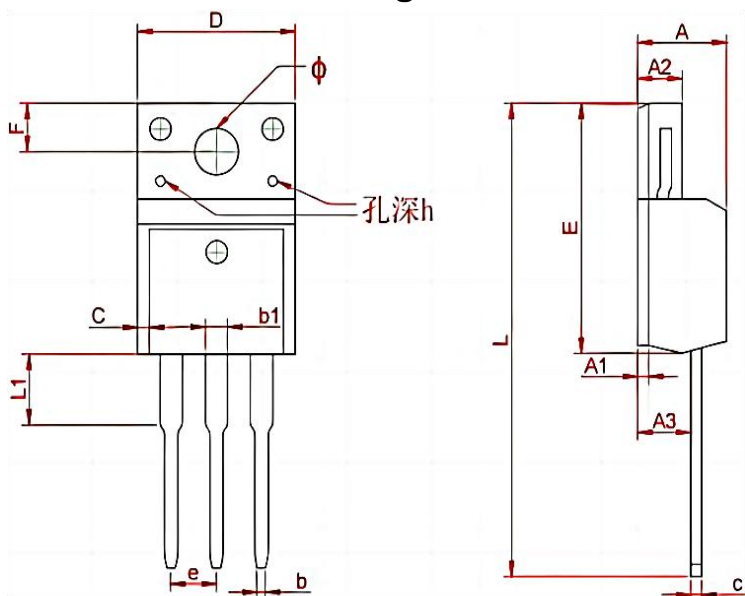
| Package version | Reel dimensions Φ×H (mm) | Per Reel (pcs) | Reels per box | Inner box dimensions L×W×H(mm) | Outer box (pcs) | Outer box dimensions L×W×H (mm) |
|-----------------|-----------------------------|----------------|---------------|-----------------------------------|-----------------|------------------------------------|
| T0-252 | Φ 330*20 | 2500 | 2 | 360*340*50 | 25000 | 375*375*280 |



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SCHOTTKY BARRIER RECTIFIER

TO - 220F Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|--------|----------------------|-------|
| | Min. | Max | Min | Max |
| A | 4.300 | 4.750 | 0.169 | 0.185 |
| A1 | 1.830 REF | | 0.072 REF | |
| A2 | 2.300 | 2.850 | 0.090 | 0.112 |
| A3 | 2.500 | 2.900 | 0.098 | 0.114 |
| b | 0.400 | 0.420 | 0.016 | 0.016 |
| b1 | 1.220 | 1.280 | 0.048 | 0.050 |
| C | 0.690 | 0.720 | 0.027 | 0.028 |
| c | 0.490 | 0.510 | 0.019 | 0.020 |
| D | 9.960 | 10.200 | 0.392 | 0.400 |
| E | 15.000 | 15.950 | 0.588 | 0.625 |
| e | 2.574 TYP | | 0.101 TYP | |
| F | 3.470 REF | | 0.136 REF | |
| y | 3.200 REF | | 0.125 REF | |
| h | 0.000 | 0.300 | 0.000 | 0.012 |
| L | 28.780 | 28.900 | 1.128 | 1.133 |
| L1 | 2.990 | 3.100 | 0.117 | 0.122 |

TO - 220F Packing Information



50PCS



20 Tube



Outer Box

5 Inner Box



Inner Box

| Package version | Tube dimensions LxWxH (mm) | Per Tube (pcs) | Tube per box | Inner box dimensions LxWxH (mm) | PCS/ Inner box | Outer box dimensions LxWxH(mm) | PCS/ Outer box |
|-----------------|----------------------------|----------------|--------------|---------------------------------|----------------|--------------------------------|----------------|
| TO-220F | 530*32*7 | 50 | 20 | 580*155*50 | 1000 | 602*277*188 | 5000 |