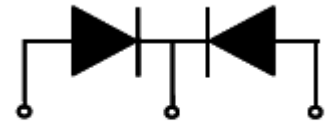




## Product Specification

GOODARK Type  
**MBRL20100CT**

Construction : Schottky Barrier Rectifier  
Application : For General Purpose  
(Manufacturer) :  
Suzhou Goodark Electronics Co.,Ltd  
Prepared on Sep. 17<sup>th</sup>, 2008  
Prepared: R & D Department  
Approval: QRA Department



1. Anode 2. Cathode 3. Anode

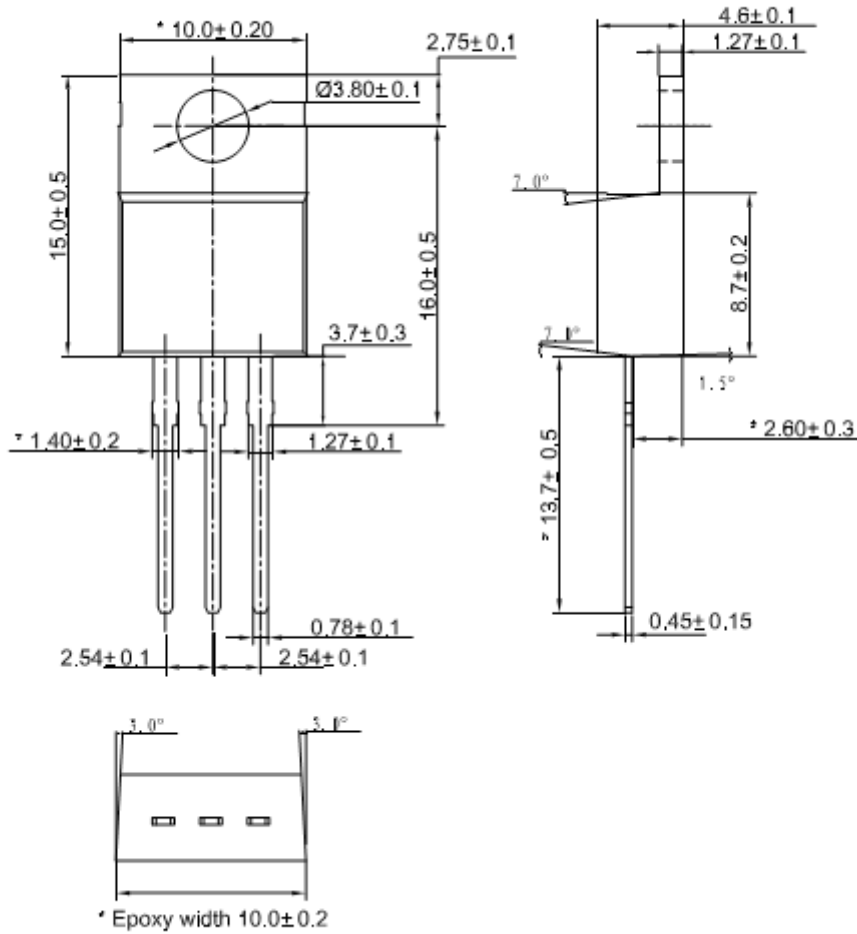
**SCHOTTKY BARRIER RECTIFIER**  
**20 AMPERES**  
**100 VOLTS**

### CONTENTS

1. Package Outline
2. Marking
3. Features& Mechanical Characteristics
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5. Rating and characteristic Curves
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7. Description of Box Label

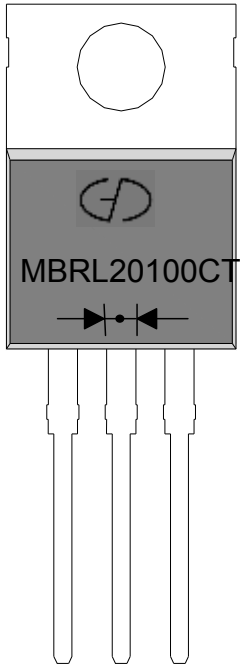
### 1. Package Outline (TO220-AB)

UNIT:mm



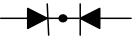
Lead Frame Material : Copper    Plating: Pure Tin Plating

## 2.MARKING



1. Part Name : MBRL20100CT

2. Logo Mark: 

3. Polarity: 



### 3.Features& Mechanical Characteristics

#### Features

- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive center tap
- Metal of silicon rectifier, majority carrier conduction
- Low forward voltage, high efficiency
- Guarding for over voltage protection
- For use in low voltage, high frequency inverters,
- Free wheeling, and polarity protection applications

#### Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 1.9grams (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max.for10 sec
- Shipped 50 units per plastic tube

### 4.Maximum Ratings and Electrical Characteristics

| MAXIMUM RATINGS and ELECTRICAL CHARACTERISTICS(TC=25°C unless otherwise moted)              |                  |                     |        |              |          |
|---|------------------|---------------------|--------|--------------|----------|
| PARAMETER   | TEST CONDITIONS  |                     | SYMBOL | MBRL20100CT  | UNIT     |
| Maximum repetitive peak reverse voltage   |                  |                     | VRRM   | 100          | V        |
| Working peak reverse voltage  |                  |                     | VRWM   | 100          | V        |
| Maximum DC blocking voltage   |                  |                     | VDC    | 100          | V        |
| Maximum average forward rectified current at Tc=105°C total device per diode                |                  |                     | IF(AV) | 20<br>10     | A        |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode |                  |                     | IFSM   | 150          | A        |
| Peak repetitive reverse current per leg at tp=2.0us , 1KHz                                  |                  |                     | IRRM   | 0.5          | A        |
| Voltage rate of change (rated VR)   |                  |                     | DV/dt  | 10000        | V/us     |
| Operating junction temperature range  |                  |                     | TJ     | -55 to+150   | °C       |
| Storage temperature range   |                  |                     | TSTG   | -55 to+150   | °C       |
| Maximum instantaneous forward voltage per leg   | IF=10A<br>IF=10A | TC=25°C<br>TC=125°C | VF     | 0.83<br>0.73 | V        |
| Maximum reverse current per leg at working peak Reverse voltage                             |                  |                     | IR     | 100<br>6     | uA<br>mA |

#### Thermal Characteristics Ta=25°C unless otherwise noted

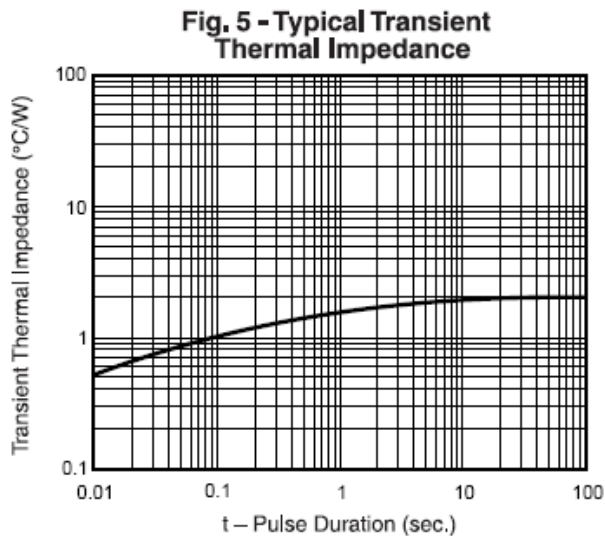
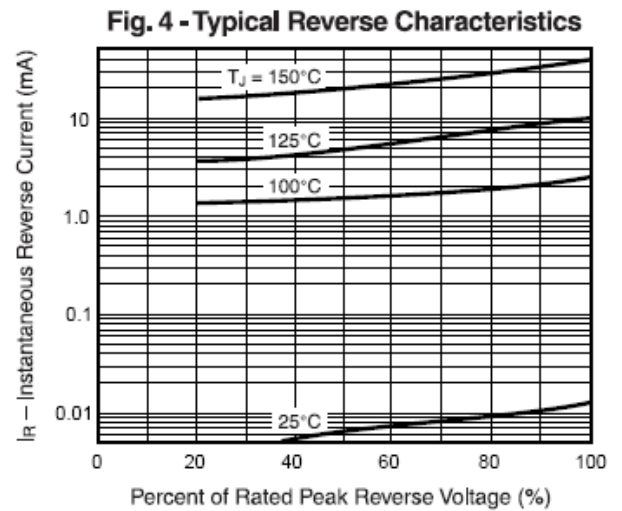
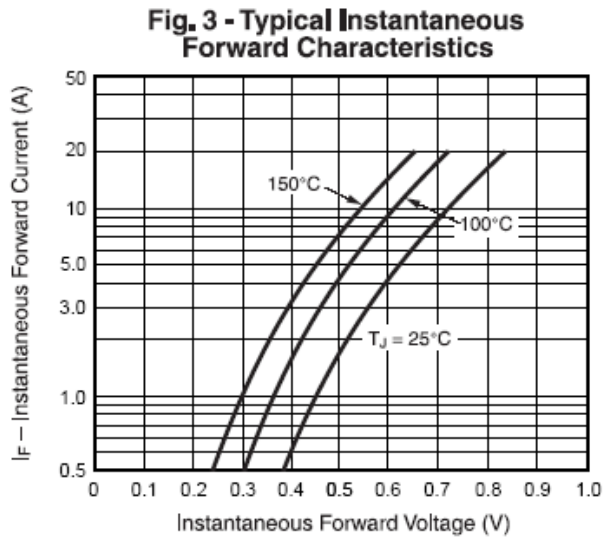
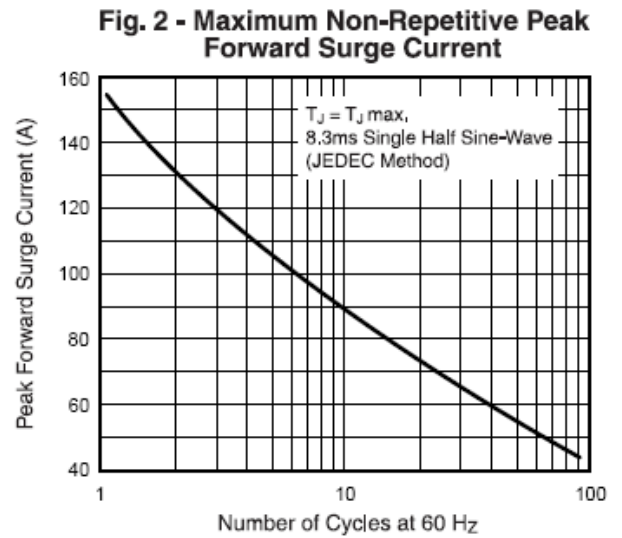
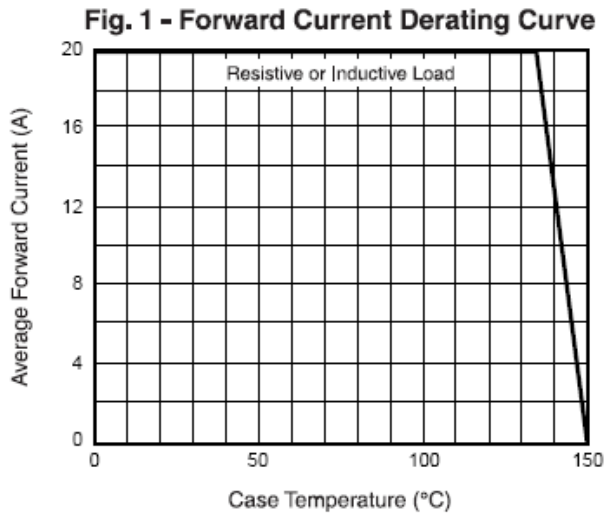
| Symbol | Parameter                                       | Max  | Unit  |
|--------|---|------|-------|
| RθJC   | Thermal Resistance, Junction to Case per Leg    | 2.0  | °C /W |
| RθJA   | Thermal Resistance, Junction to Ambient per Leg | 62.5 | °C /W |

#### Note:




1. Screw mounting with 4-40 screw, where washer diameteris≤4.9mm(0.19 ")
2. Pulse test:300us pulse width,1% duty cycle

## 5. Rating and Characteristic Curves



(TA = 25 °C unless otherwise noted)



## 6. Packing Specification

|  |  |
|--|--|
|   |  |
| <p>1 ) Tube : 50units</p>  | <p>2 ) Inner Box: 20 tube(1000units)</p>   |
|  |  |
| <p>3 ) Outer Box: 10 inner box (10,000units)</p>                                   |  |

## 7. DESCRIPTION of BOX LABEL

|   |   |
|---|---|
|  | <p>TYPE:<br/>       Q'TY:<br/>       P/O NO:<br/>       LOT NO:</p> |
| <p>1) Inner Box Label</p>   | <p>2) Inner Box Label</p>   |
|  | <p>TYPE:<br/>       Q'TY:<br/>       P/O NO:</p>                    |
| <p>3) Outer Box Label</p>   | <p>4) Outer Box Label</p>   |