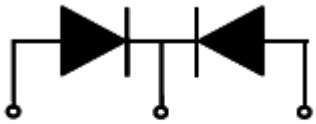
# Product Specification

GOODARK Type

**MBRF20150CT**



1. Anode 2.Cathode 3. Anode

Construction : : Schottky Barrier Rectifier

Application : For General Purpose

（Manufacturer）:

Suzhou Goodark Electronics Co.,Ltd

Prepared on Sep. 17th, 2008

Prepared: R & D Department

Approval：QRA Department

**SCHOTTKY BARRIER**

**RECTIFIER**

**20 AMPERES**

**150 VOLTS**

**CONTENTS**



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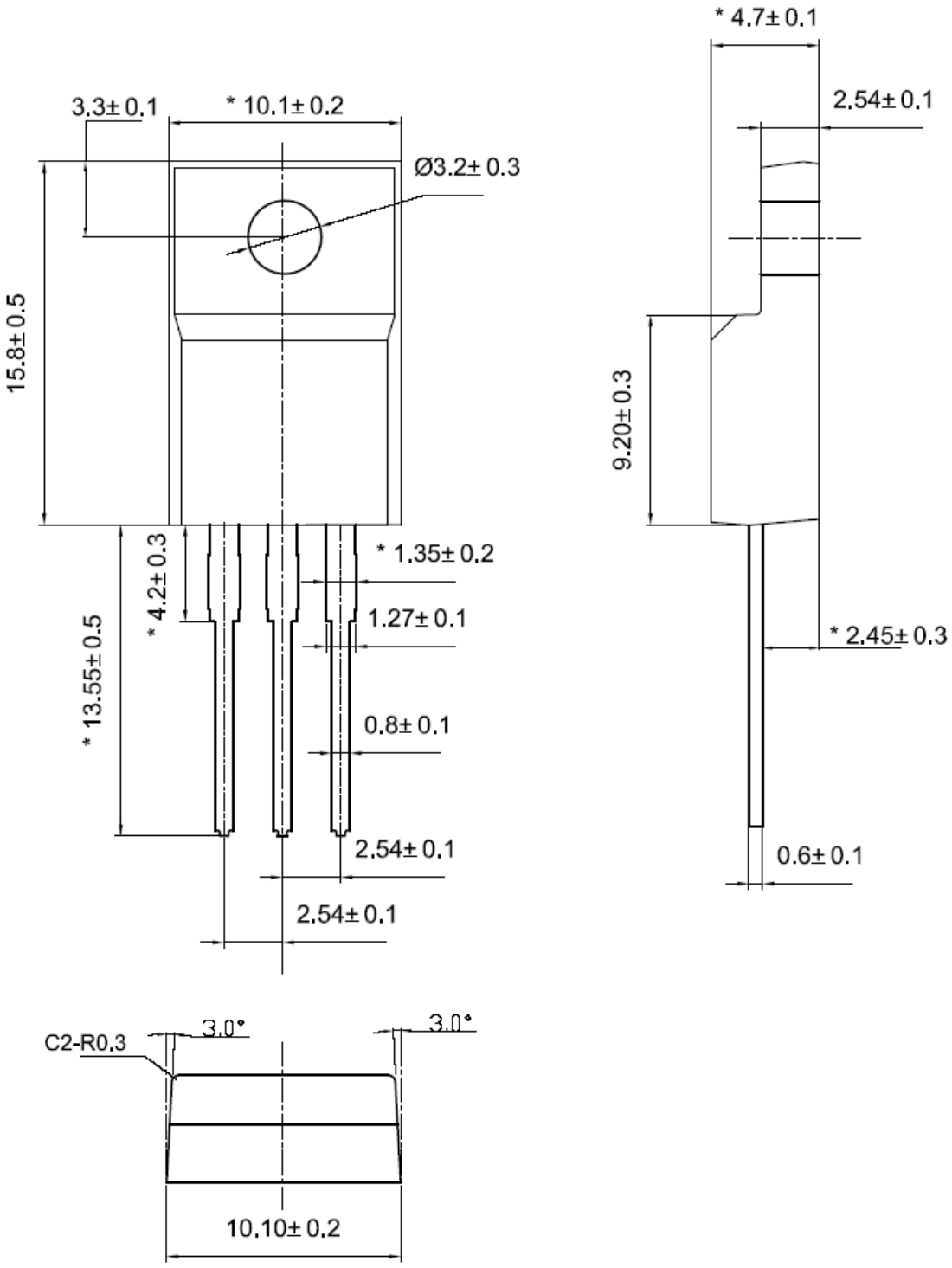
## 1. Package Outline (TO220F)

**UNIT:mm**




Lead Frame Material : Copper  Plating: Pure Tin Plating

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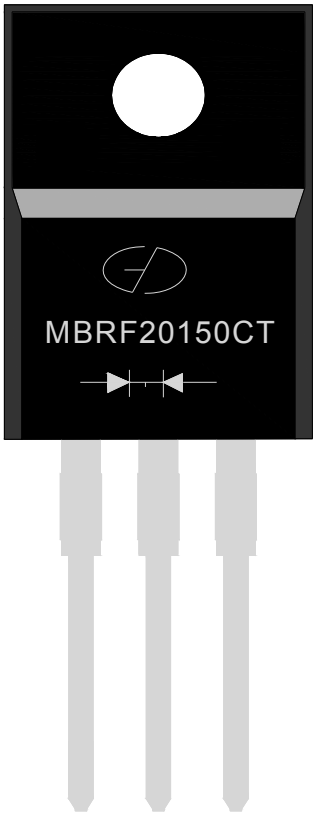
## 2.MARKING




1. Part Name : MBRF20150CT
2. Logo Mark:
3. Polarity：



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## 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** | **MBRF20150CT** | **UNIT** |
| Maximum repetitive peak reverse voltage | | | $V_{RRM}$ | 150 | V |
| Working peak reverse voltage | | | $V_{RWM}$ | 150 | V |
| Maximum DC blocking voltage | | | $V_{DC}$ | 150 | V |
| Maximum average forward rectified current at Tc=105°C total device per diode | | | $I_{F(AV)}$ | 20<br>10 | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode | | | $I_{FSM}$ | 150 | A |
| Peak repetitive reverse current per leg at tp=2.0us ，1KHz | | | $I_{RRM}$ | 1.0 | A |
| Voltage rate of change（rated VR） | | | DV/dt | 10000 | V/us |
| Operating junction temperature range | | | $T_J$ | —55 to +150 | °C |
| Storage temperature range | | | $T_{STG}$ | —55 to +150 | °C |
| Isolation voltage (ITO-220AB only) from terminal to heatsink t = 1 sec | | | VAC | 1500 | V |
| Maximum instantaneous forward voltage per leg | IF=10A<br>IF=10A | Tc=25°C<br>Tc=125℃ | VF | 0.92<br>0.75 | V |
| Maximum reverse current per leg at working peak Reverse voltage | | Tc=25°C<br>Tc=100°C | IR | 0.2<br>6 | mA |

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

| **Symbol** | **Parameter** | **Max** | **Unit** |
|---|---|---|---|
| $R_{\theta JC}$ | Thermal Resistance，Junction to Case per Leg | 4.0 | °C /W |
| $R_{\theta JA}$ | 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

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## 5. Rating and Characteristic Curves

(TA = 25 °C unless otherwise noted)

**Fig. 1:** Average forward power dissipation versus average forward current (per diode).

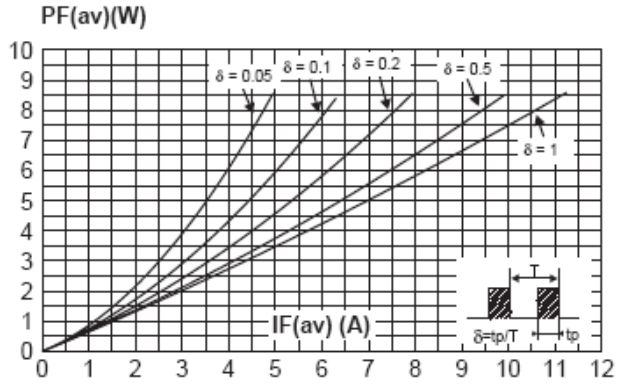



**Fig. 2:** Average forward current versus ambient temperature (δ = 0.5, per diode).

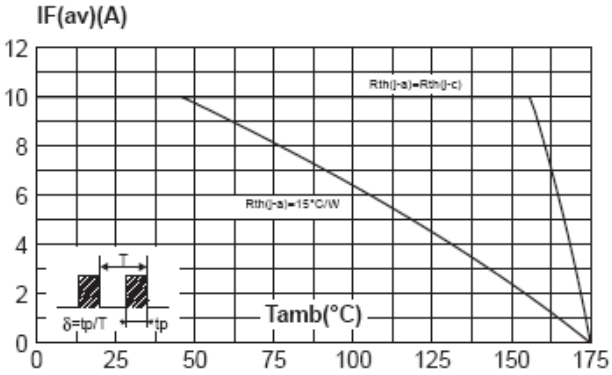



**Fig. 3:** Non repetitive surge peak forward current versus overload duration (maximum values, per diode).

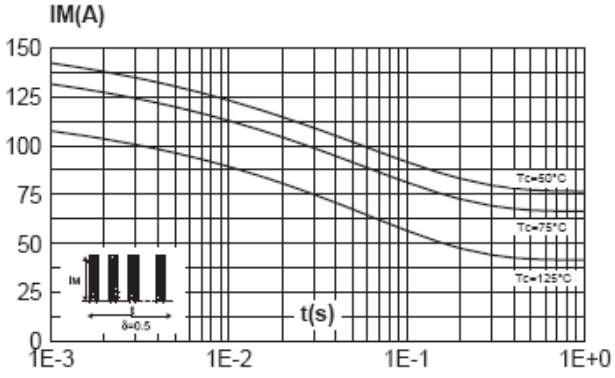



**Fig. 4:** Relative variation of thermal impedance junction to case versus pulse duration (per diode).

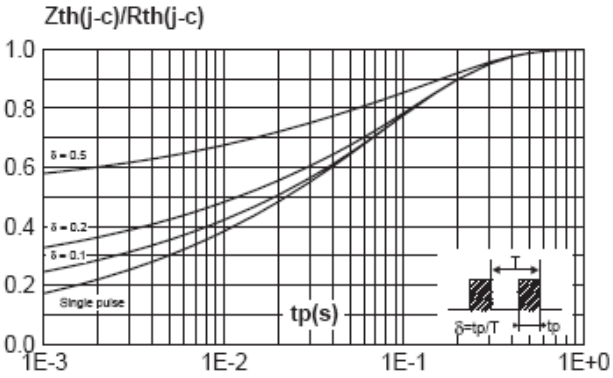



**Fig. 5:** Reverse leakage current versus reverse voltage applied (typical values, per diode).

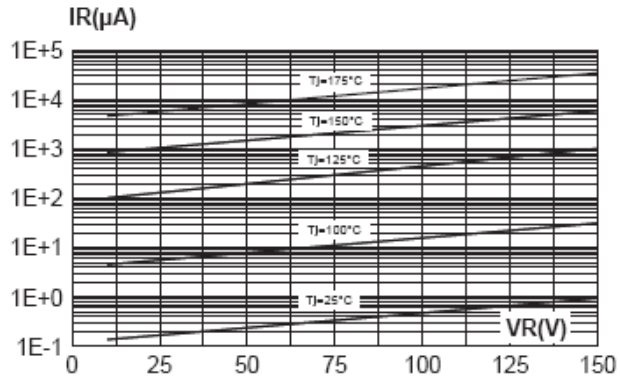
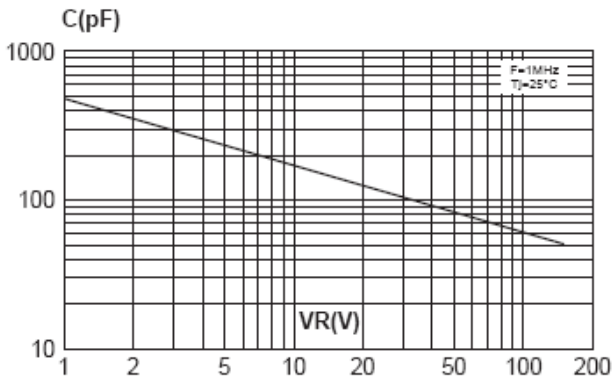



**Fig. 6:** Junction capacitance versus reverse voltage applied (typical values, per diode).

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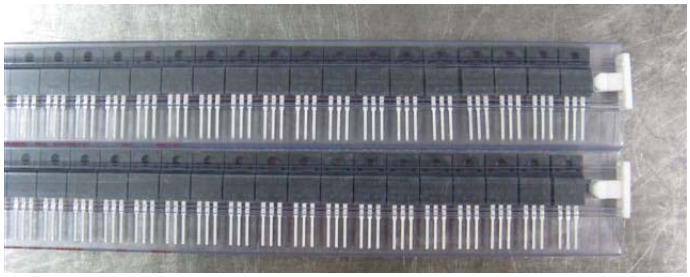
## 6. Packing Specification



1 ）Tube : 50units

2）Inner Box: 20 tube(1000units)

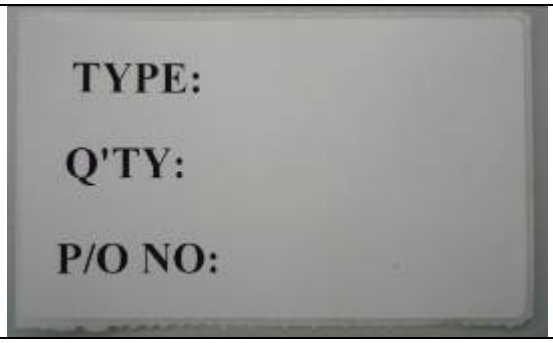
3） Outer Box: 10 inner box (10,000units)

## 7. DESCRIPTION of BOX LABEL

1） Inner Box Label


2）Inner Box Label


3）Outer Box Label




4）Outer Box Label

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