

Product Specification

Surge Type

MBRF10150CT

Construction : Schottky Barrier Rectifier

Application : For General Purpose

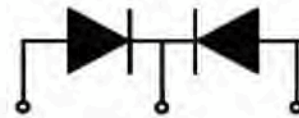
(Manufacturer) :

Surge Components, Inc.

Prepared on Sep. 17th, 2008

Prepared: R & D Department

Approval: QRA Department



1 Anode 2.Cathode 3. Anode

SCHOTTKY BARRIER RECTIFIER

10 AMPERES

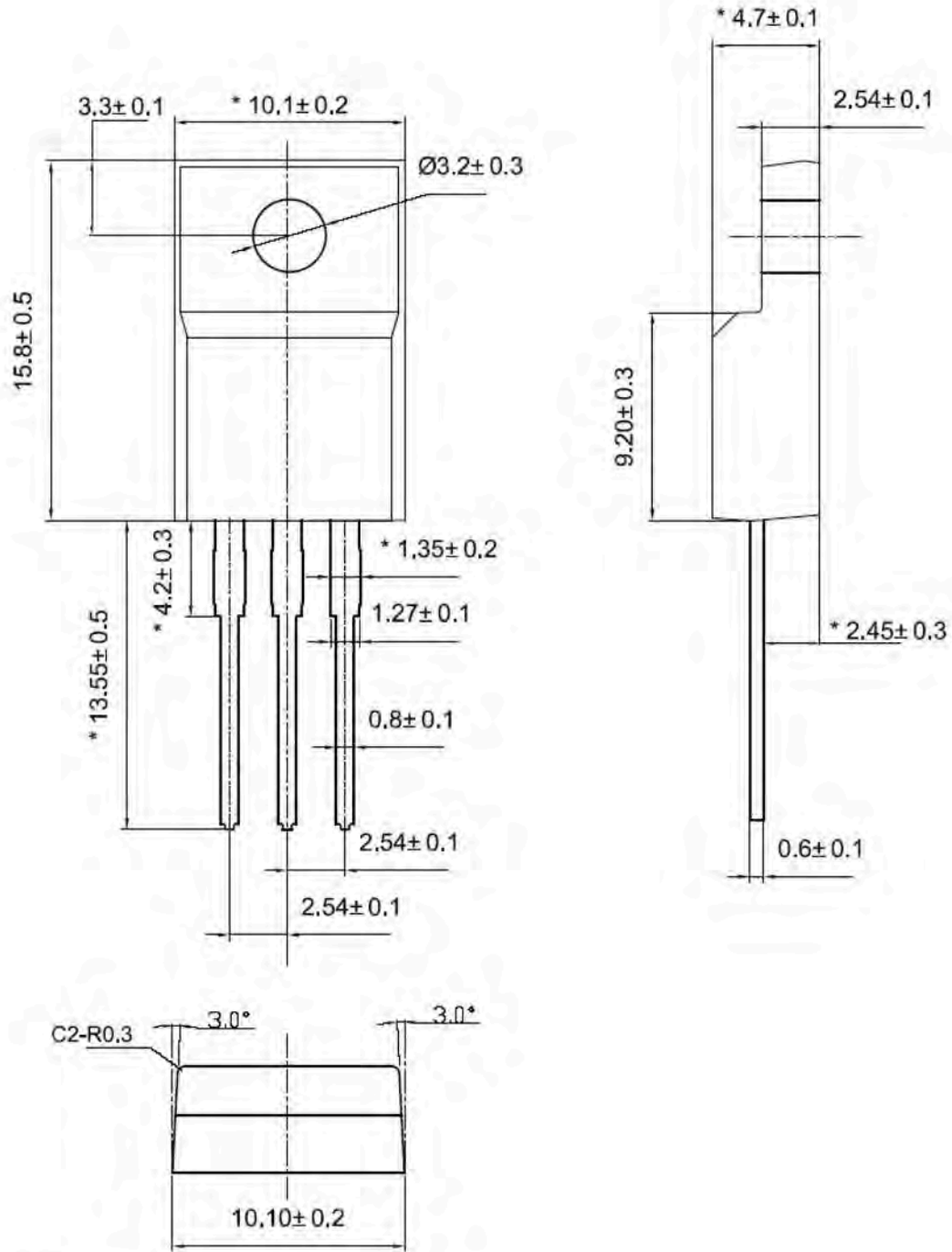
150 VOLTS

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1. Package Outline (TO220F)

UNIT:mm



Lead Frame Material : Copper Plating: Pure Tin Plating

2.MARKING



1. Part Name : MBRF10150CT
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 | MBRF10150CT | UNIT |
| Maximum repetitive peak reverse voltage | | | VRRM | 150 | V |
| Working peak reverse voltage | | | VRWM | 150 | V |
| Maximum DC blocking voltage | | | VDC | 150 | V |
| Maximum average forward rectified current at Tc=105°C total device per diode | | | IF(AV) | 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 |
| Isolation voltage (ITO-220AB only) from terminal to heatsink t = 1 sec | | | VAC | 1500 | V |
| Maximum instantaneous forward voltage per leg | IF=5A IF=5A | Tc=25°C Tc=125°C | VF | 0.92 0.82 | V |
| Maximum reverse current per leg at working peak Reverse voltage | Tc=25°C Tc=100°C | | IR | 0.25 15 | mA |

Thermal Characteristics Ta=25°C unless otherwise noted

| Symbol | Parameter | Max | Unit |
|--------|--|------|------|
| RθJC | Thermal Resistance, Junction to Case per Leg | 4.0 | °C/W |
| RθJA | Thermal Resistance, Junction to Ambient per legs | 62.5 | °C/W |

Note:

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

5. Rating and Characteristic Curves

(TA = 25 °C unless otherwise noted)

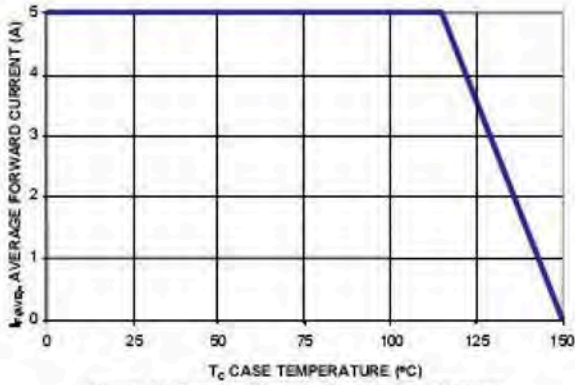


Figure 1: Current Derating Curve, Per Element

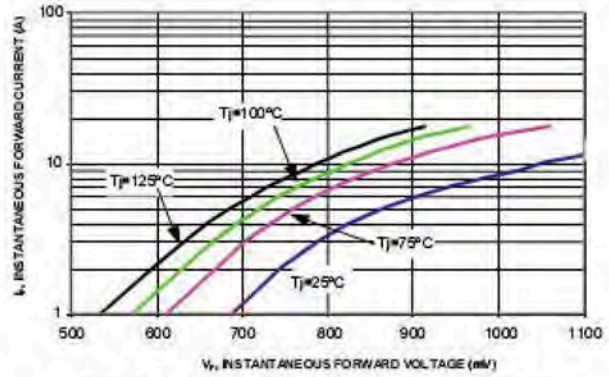


Figure 2: Typical Forward Characteristics, Per Element

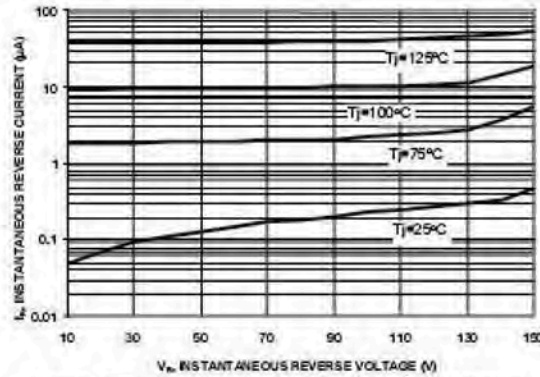


Figure 3: Typical Reverse Characteristics, Per Element

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