

Product Specification

Type

MBRB20150CT

Construction : : Schottky Barrier Rectifier

Application : For General Purpose

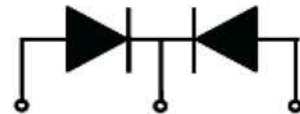
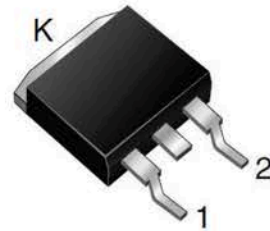
(Manufacturer) :

Surge Components, Inc.

Prepared on May. 10th, 2011

Prepared: R & D Department

Approva: QRA Department



1. Anode 2.Cathode 3. Anode

SCHOTTKY BARRIER RECTIFIER

20 AMPERES

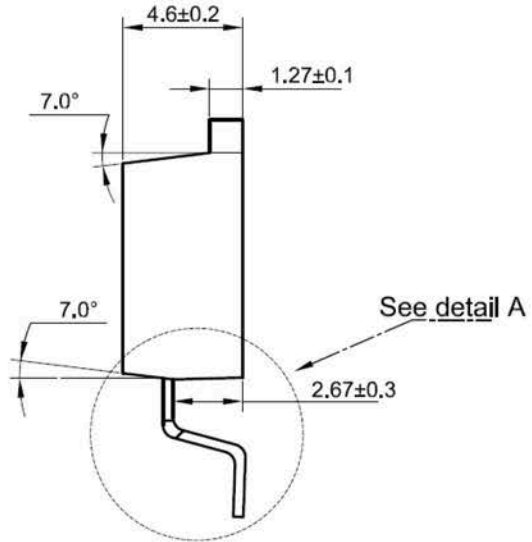
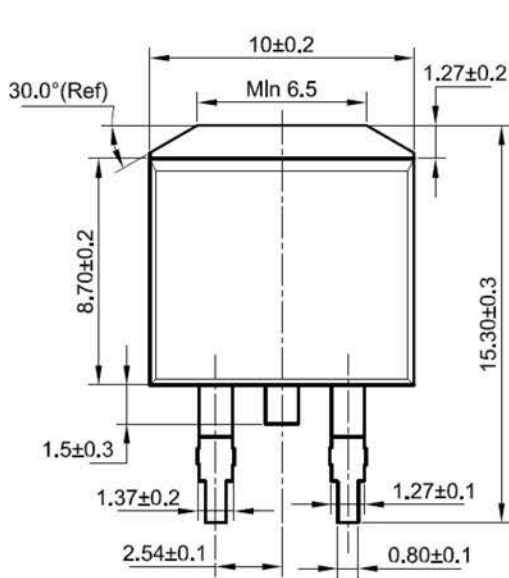
150 VOLTS

CONTENTS

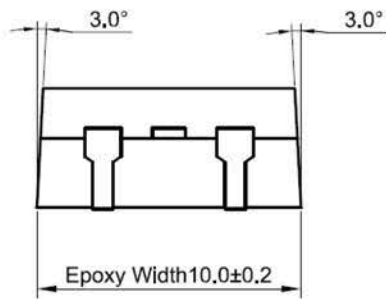
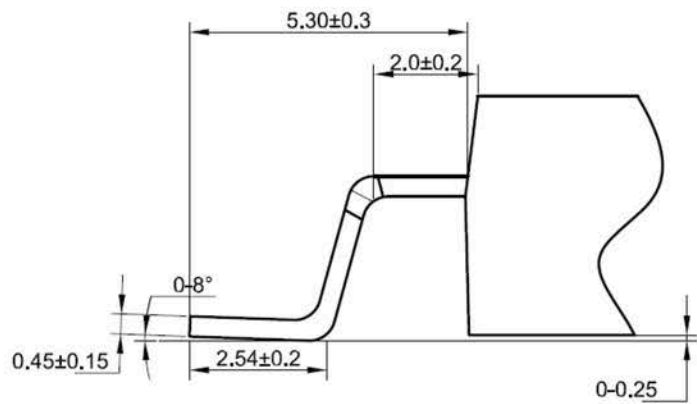
1. Package Outline
2. Marking
3. Features& Mechanical Characteristics
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5. Rating and characteristic Curves
6. Packing Specification PACKAGING SPECIFICATION
7. Description of Box Label

1. Package Outline (TO263)

UNIT:mm

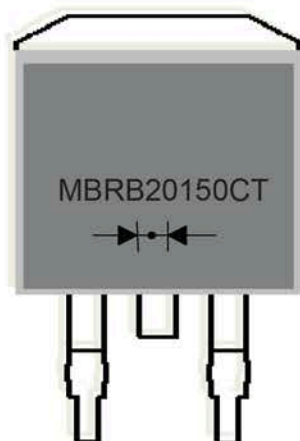


Detail A



Lead Frame Material : Copper Plating: Pure Tin Plating

2.MARKING



1. Part Name : MBRB20150CT

2. Logo Mark:

3. Polarity: 

3.Features& Mechanical Characteristics

Features

- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- For surface mounted application
- 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: 1.4grams (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 or tape reel packing 800/reel

4.Maximum Ratings and Electrical Characteristics

MAXIMUM RATINGS and ELECTRICAL CHARACTERISTICS(TC=25°C unless otherwise moted)					
PARAMETER	TEST CONDITIONS		SYMBOL	MBRB20150CT	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)	20 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	1.0	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 IF=10A	Tc=25°C Tc=125°C	VF	0.92 0.75	V
Maximum reverse current per leg at working peak Reverse voltage			IR	0.2 6	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

Note:

1. Pulse test:300us pulse width, duty cycle=2%

5. Rating and Characteristic Curves

($T_c=25^\circ\text{C}$ Unless otherwise noted)

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

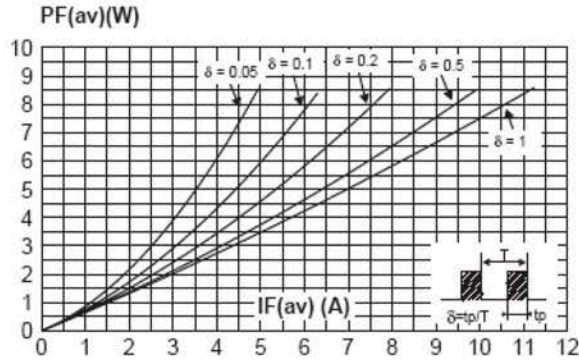


Fig. 2: Average forward current versus ambient temperature ($\delta = 0.5$, per diode).

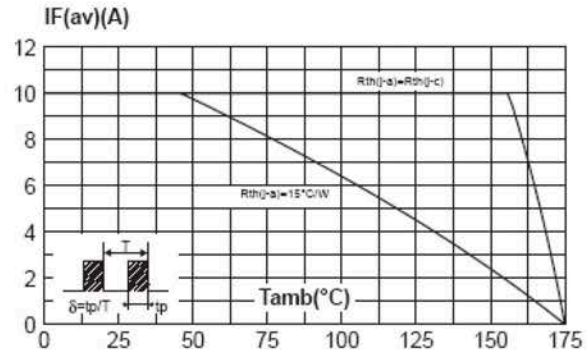


Fig. 3: Non repetitive surge peak forward current versus overload duration (maximum values, per diode).

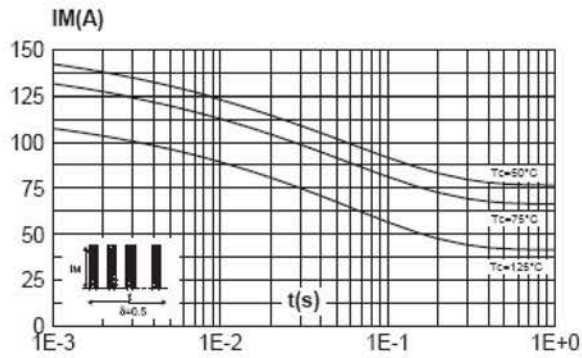


Fig. 4: Relative variation of thermal impedance junction to case versus pulse duration (per diode).

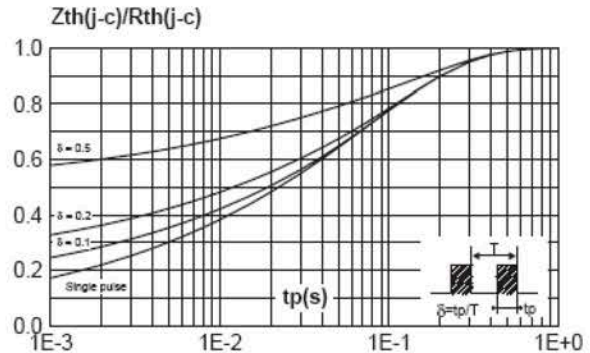


Fig. 5: Reverse leakage current versus reverse voltage applied (typical values, per diode).

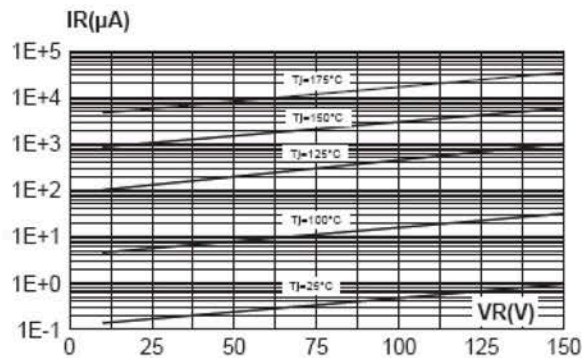
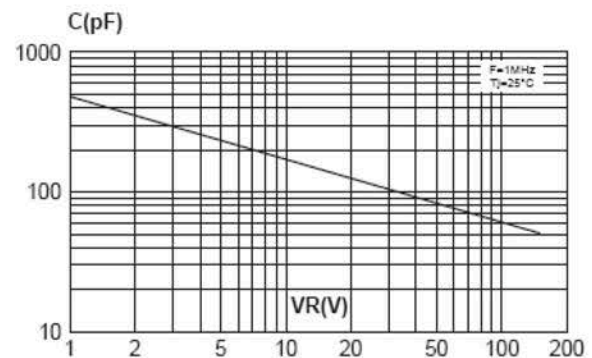


Fig. 6: Junction capacitance versus reverse voltage applied (typical values, per diode).



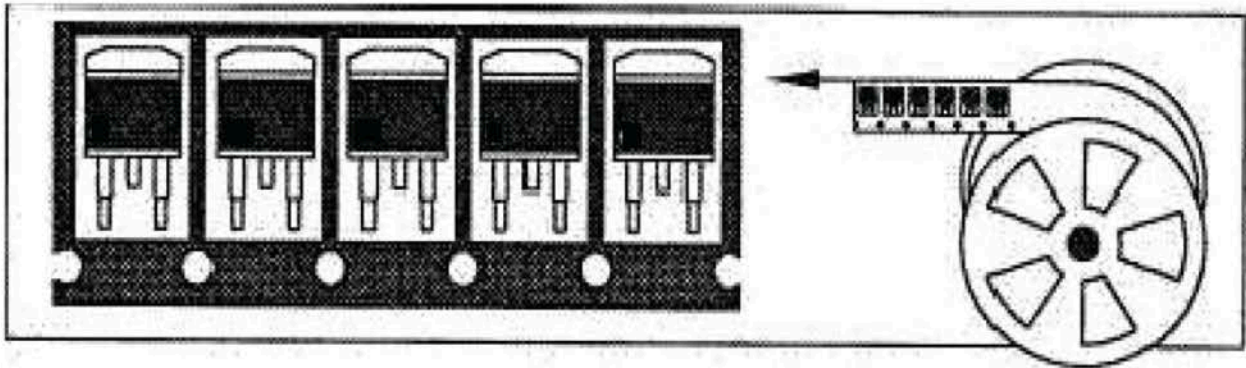
6. Packing Specification

6.1 Tube packing

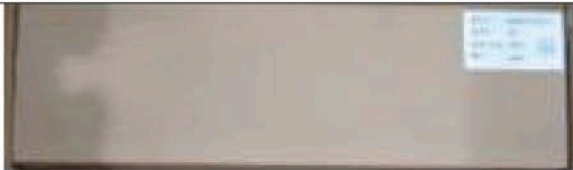
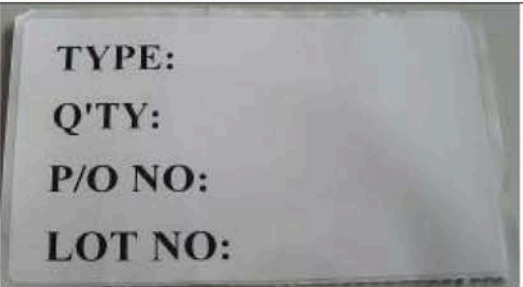

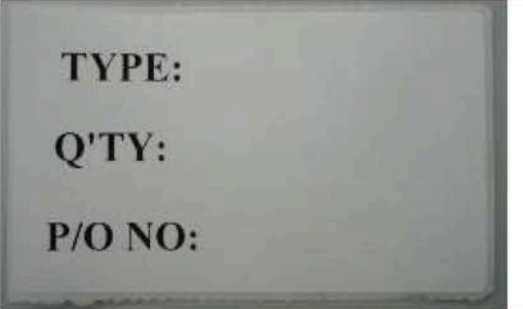


6.2 Tape&reel packing

Packing size:800 /reel(13' reel)



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>