



Surge Components Inc.

Product Specification

Surge Type
MBRB1040CT

Construction : Schottky Barrier Rectifier

Application : For General Purpose

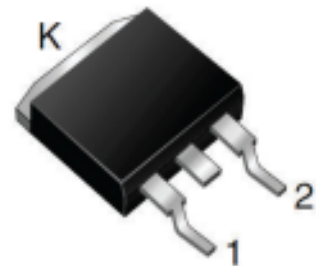
(Manufacturer) :

Surge Components Inc.

Prepared on May. 10th, 2011

Prepared: R & D Department

Approval: QRA Department



SCHOTTKY BARRIER RECTIFIER
10 AMPERES
40 VOLTS

CONTENTS

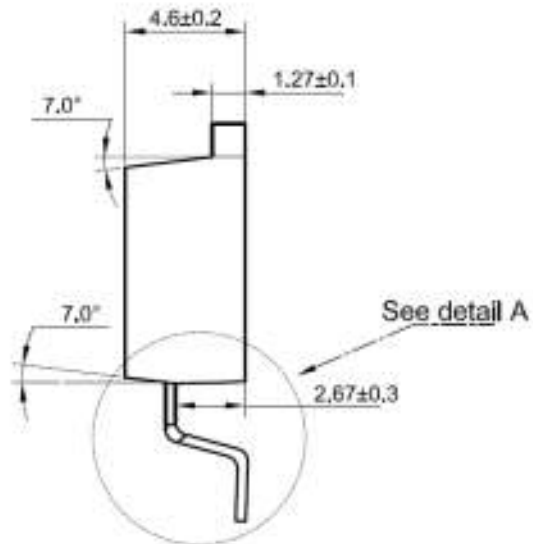
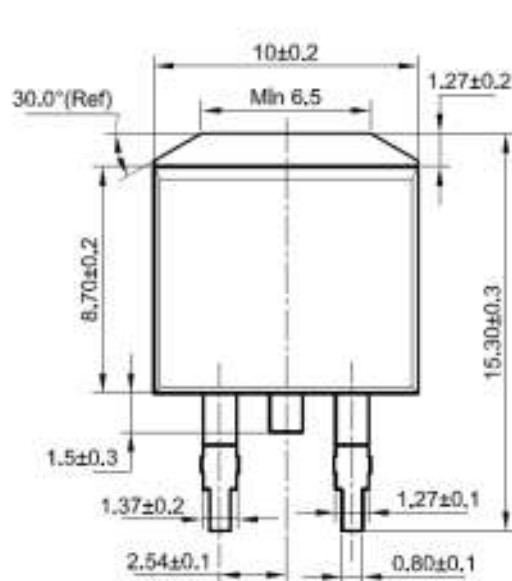
1. Package Outline
2. Marking
3. Features & Mechanical Characteristics
4. Maximum Ratings and Electrical Characteristics
5. Rating and characteristic Curves
6. Packing Specification PACKAGING SPECIFICATION
7. Description of Box Label



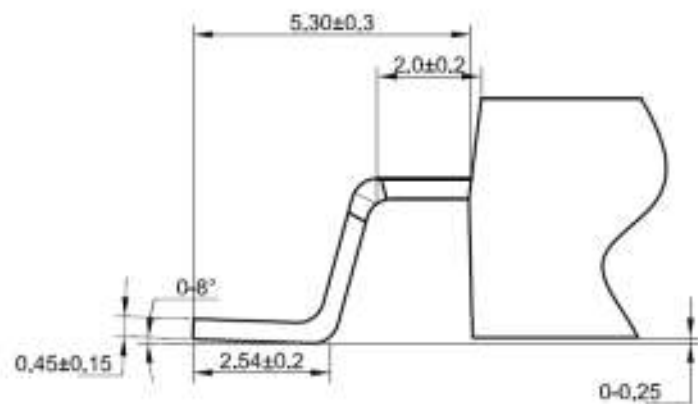
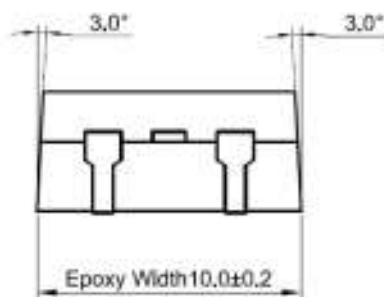
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1. Package Outline (TO263)

UNIT:mm



Detail A



Lead Frame Material : Copper Plating: Pure Tin Plating

2. MARKING



1. Part Name : MBRB1040CT

2. Logo Mark: 

3. Polarity: 



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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	MBRB1040CT	UNIT
Maximum repetitive peak reverse voltage			VRRM	40	V
Working peak reverse voltage			VRWM	40	V
Maximum DC blocking voltage			VDC	40	V
Maximum average forward rectified current at Tc=105°C total device per diode			IF(AV)	10 5.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode			IFSM	125	A
Peak repetitive reverse current per leg at tp=2.0us , 1KHz			IRRM	0.5	A
Isolation voltage (TO220F-AB only) from terminal to heatsink t = 1 min			VAC	1500	V
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=5.0A IF=5.0A	Tc=25°C Tc=125°C	VF	0.70 0.57	V
Maximum reverse current per leg at working peak Reverse voltage	Tj=25°C Ti=100°C		IR	100 10.0	uA 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%



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5. Rating and Characteristic Curves

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

Rating and Characteristic Curves

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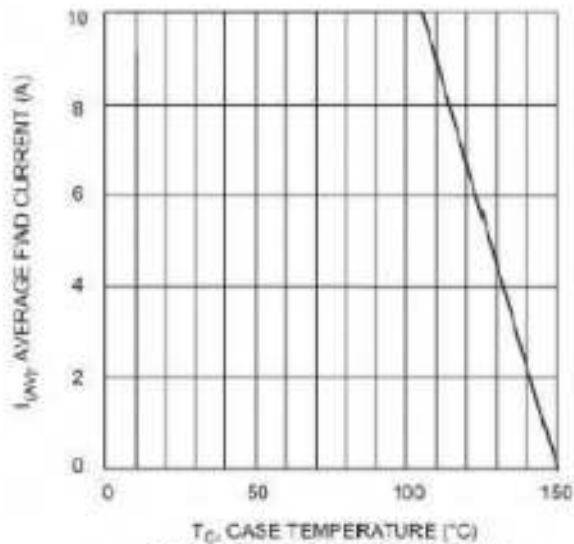


Fig. 1 Forward Current Derating Curve

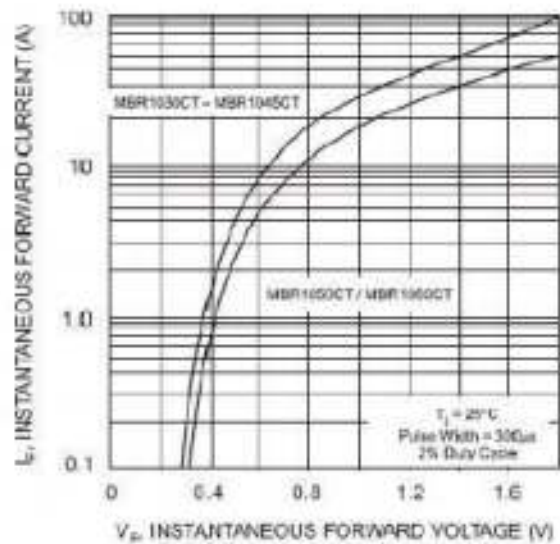


Fig. 2 Typical Forward Characteristics

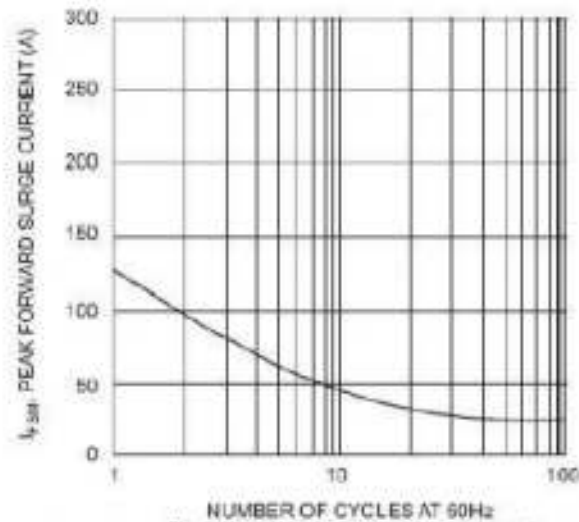


Fig. 3 Max Non-Repetitive Surge Current

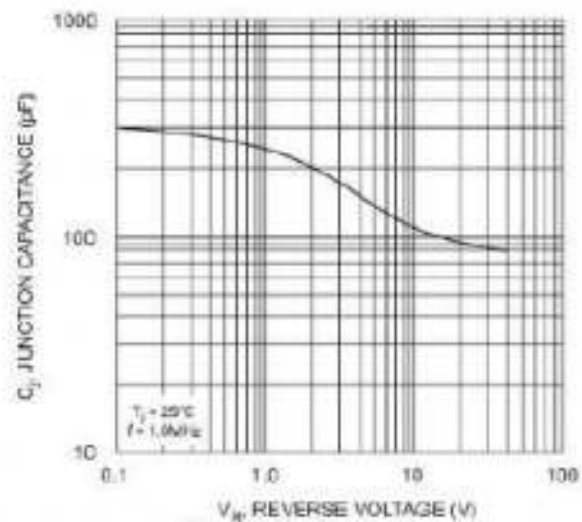


Fig. 4 Typical Junction Capacitance