

Product Specification

GO: Surge Type

MBR1045CT

Construction : Schottky Barrier Rectifier

Application : For General Purpose

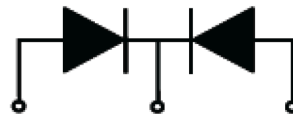
(Manufacturer) :

Surge Components, Inc. © 2008

Prepared on Sep. 17th, 2008

Prepared: R & D Department

Approval: QRA Department



1. Anode 2.Cathode 3. Anode

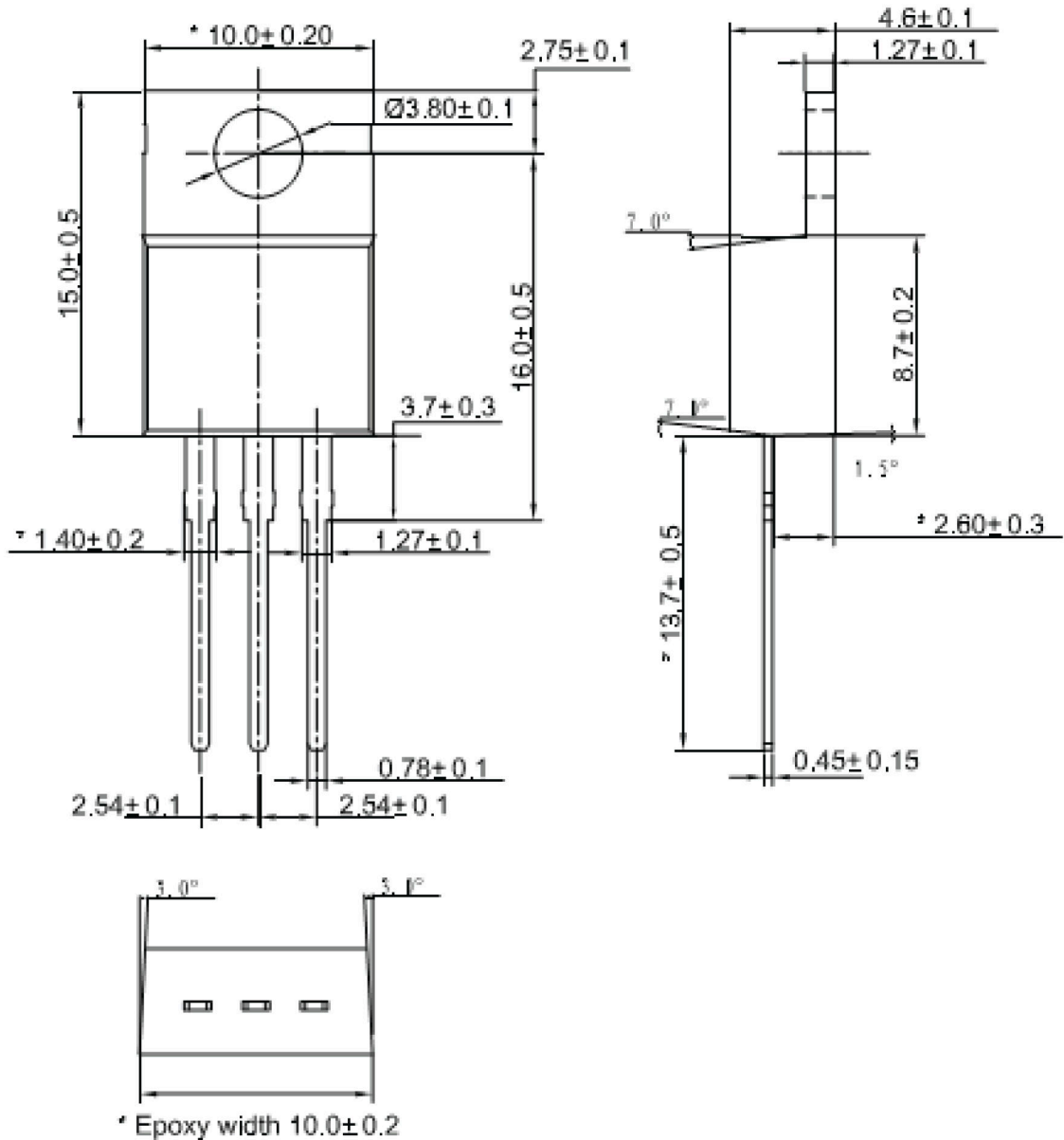
**SCHOTTKY BARRIER
RECTIFIER
10 AMPERES
45VOLTS**

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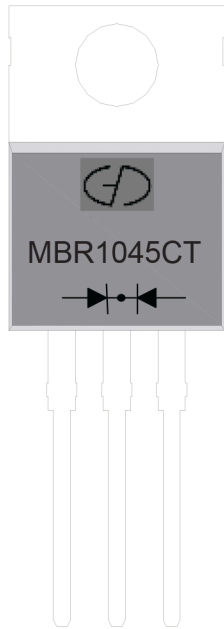
1. Package Outline (TO220-AB)



UNIT:mm



Lead Frame Material : Copper Plating: Pure Tin Plating

2.MARKING



1. Part Name : MBR1045CT
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	MBR1045CT	UNIT
Maximum repetitive peak reverse voltage			VRRM	45	V
Working peak reverse voltage			VRWM	45	V
Maximum DC blocking voltage			VDC	45	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 sec			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	0.56 0.47	V
Maximum reverse current per leg at working peak Reverse voltage	Tj=25°C Tj=100°C		IR	200 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
RθJA	Thermal Resistance, Junction to Ambient per Leg	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

Rating and Characteristic Curves

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

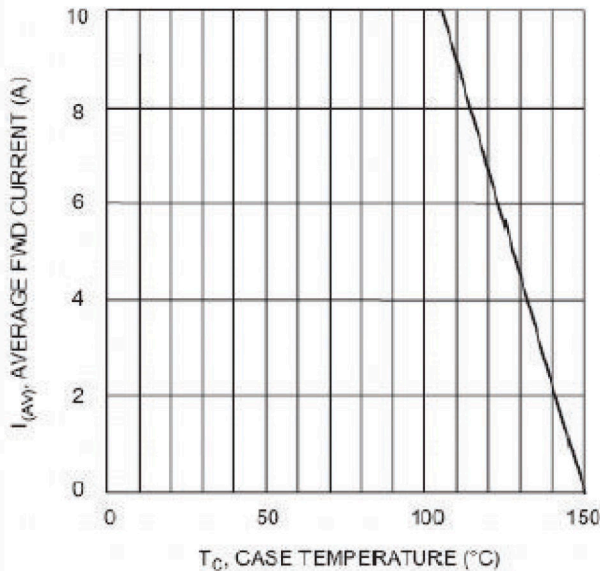


Fig. 1 Forward Current Derating Curve

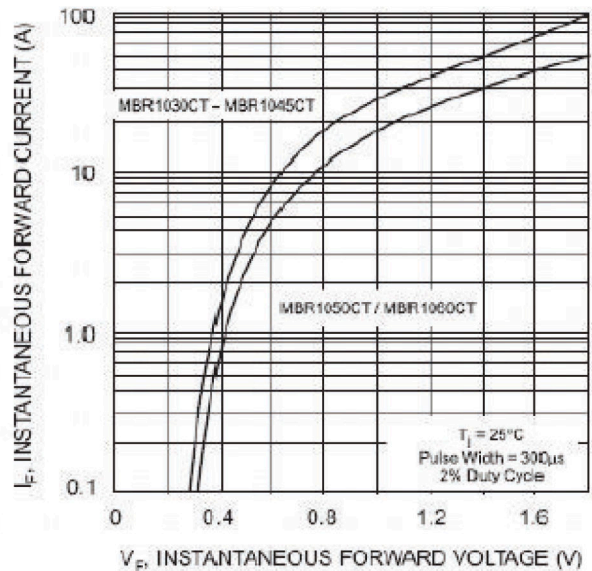


Fig. 2 Typical Forward Characteristics

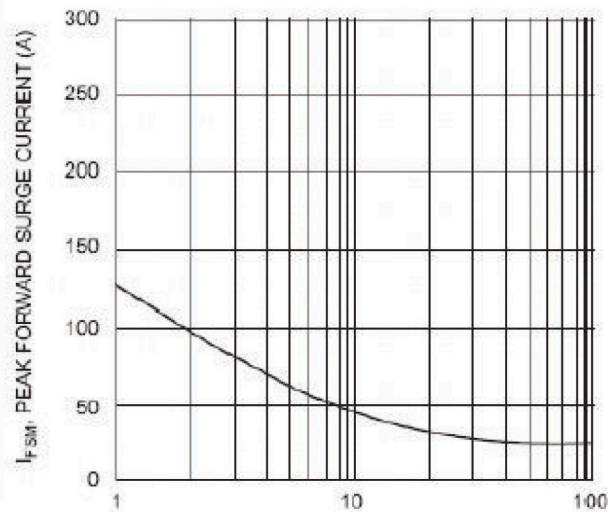


Fig. 3 Max Non-Replicative Surge Current

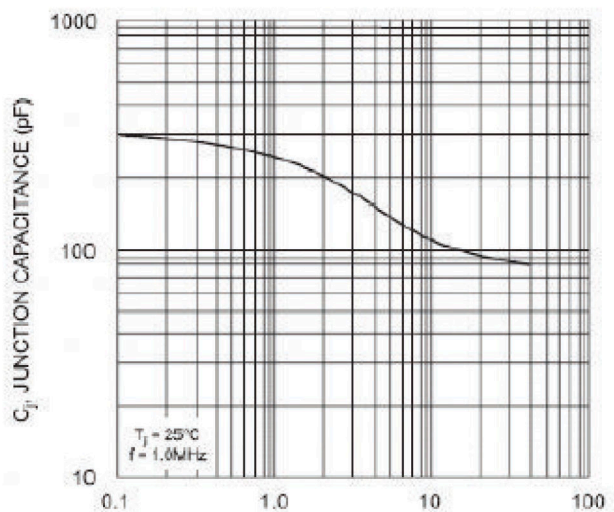


Fig. 4 Typical Junction Capacitance