

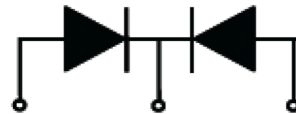
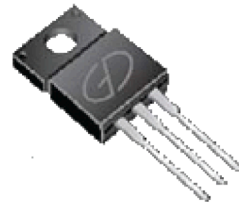


# Surge Components, Inc.

## Product Specification

Surge Type  
**MBRF30100CT**

Construction : Schottky Barrier Rectifier  
Application : For General Purpose  
(Manufacturer) :  
Surge Components, Inc.  
Prepared on Sep. 17<sup>th</sup>, 2008  
Prepared: R & D Department  
Approval: QRA Department



1. Anode 2. Cathode 3. Anode

**SCHOTTKY BARRIER RECTIFIER**  
**30 AMPERES**  
**100 VOLTS**

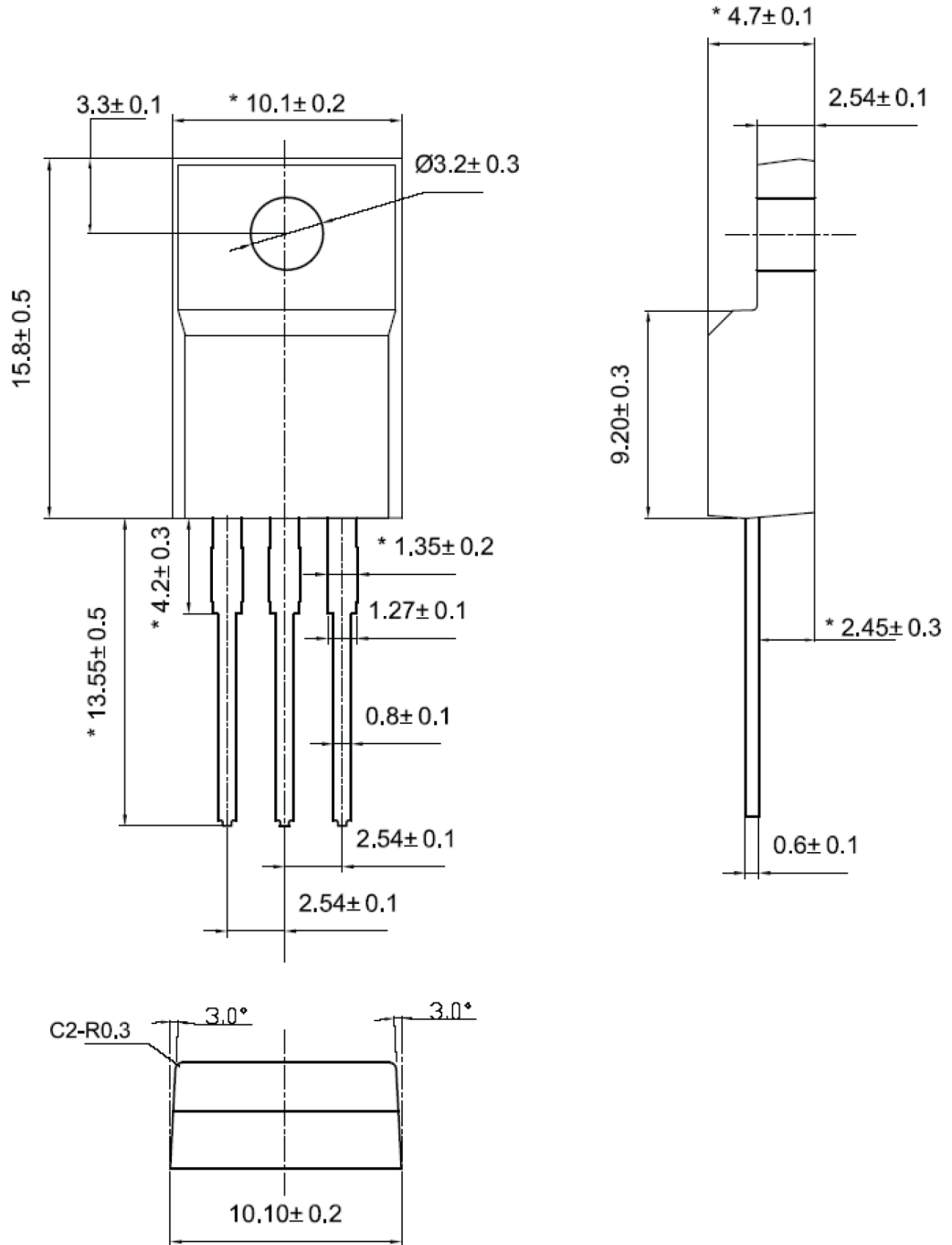
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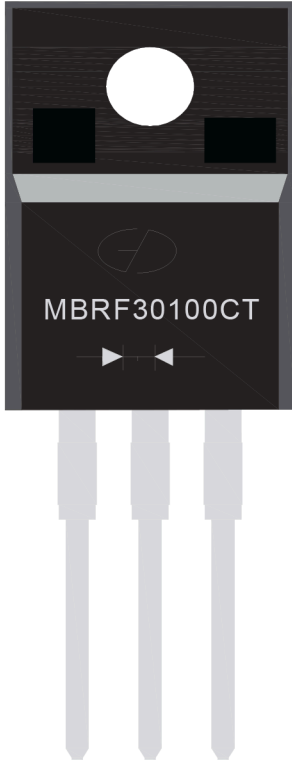
1. Package Outline (TO220F-AB)

UNIT:mm



Lead Frame Material : Copper      Plating: Pure Tin Plating

## 2.MARKING



1. Part Name : MBRF30100CT

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	MBRF30100CT	UNIT
Maximum repetitive peak reverse voltage			VRRM	100	V
Working peak reverse voltage			VRWM	100	V
Maximum DC blocking voltage			VDC	100	V
Maximum average forward rectified current at Tc=105°C total device per diode			IF(AV)	30 15	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode			IFSM	250	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
Isolation voltage (TO220F Only) from terminal to heatsink t = 1 sec			VAC	1500	V
Maximum instantaneous forward voltage per leg	IF=15A IF=15A	TC=25°C TC=125°C	VF	0.85 0.75	V
Maximum reverse current per leg at working peak Reverse voltage	TJ=25°C TJ=100°C		IR	500 7	uA mA

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

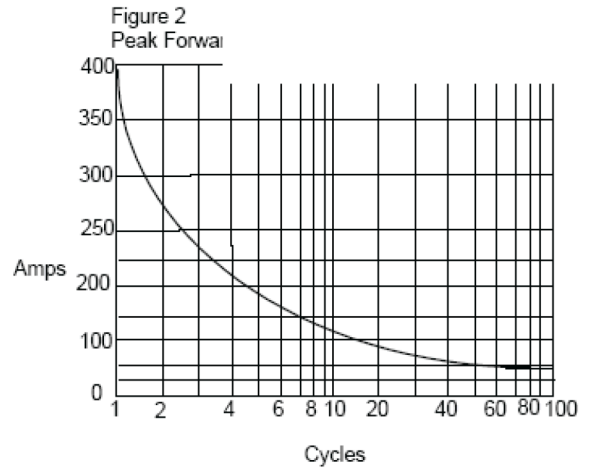
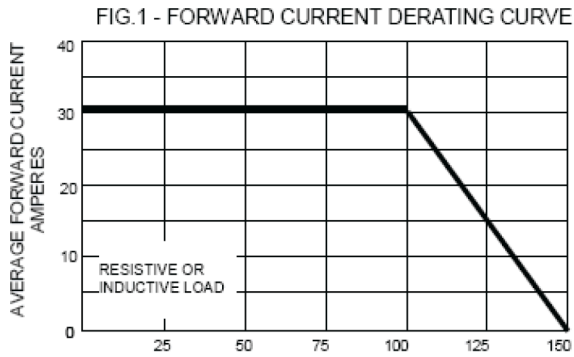
Symbol	Parameter	Max	Unit
RθJC	Thermal Resistance, Junction to Case per Leg	4.0	°C /W
RθJA	Thermal Resistance, Junction to Ambient per Leg	62.5	°C /W

#### Note:

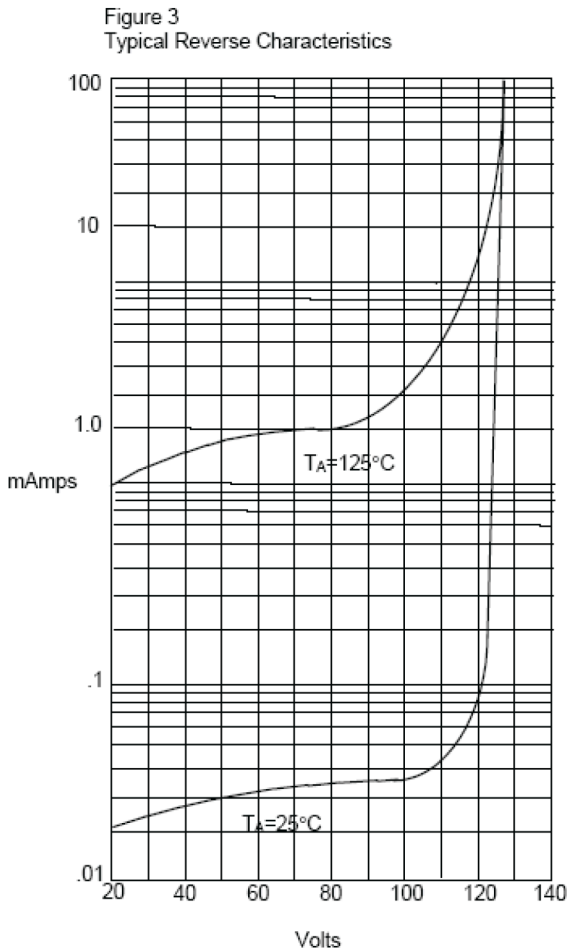
1. Screw mounting with 4-40 screw, where washer diameteris≤4.9mm(0.19 " )
2. Pulse test:300us pulse width,1% duty cycle



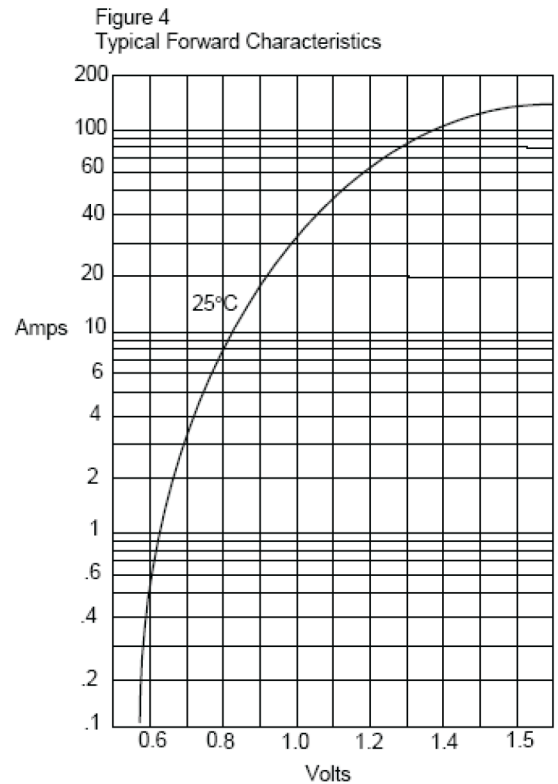
5. Rating and Characteristic Curves



Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles



Instantaneous Reverse Leakage Current - MicroAmperes versus Percent Of Rated Peak Reverse Voltage - Volts



Instantaneous Forward Current - Amperes versus Instantaneous Forward Voltage - Volts