Surge Components Inc.

Product Specification

Surge Type

MBRF2060CTG





1. Anode 2.Cathode 3. Anode

Construction : : Schottky Barrier Rectifier

Application : For General Purpose

（Manufacturer）:
Surge Components Inc.

Prepared on Sep. 17th, 2008

Prepared: R & D Department

Approval: QRA Department

SCHOTTKY BARRIER
RECTIFIER
20 AMPERES
60 VOLTS

CONTENTS

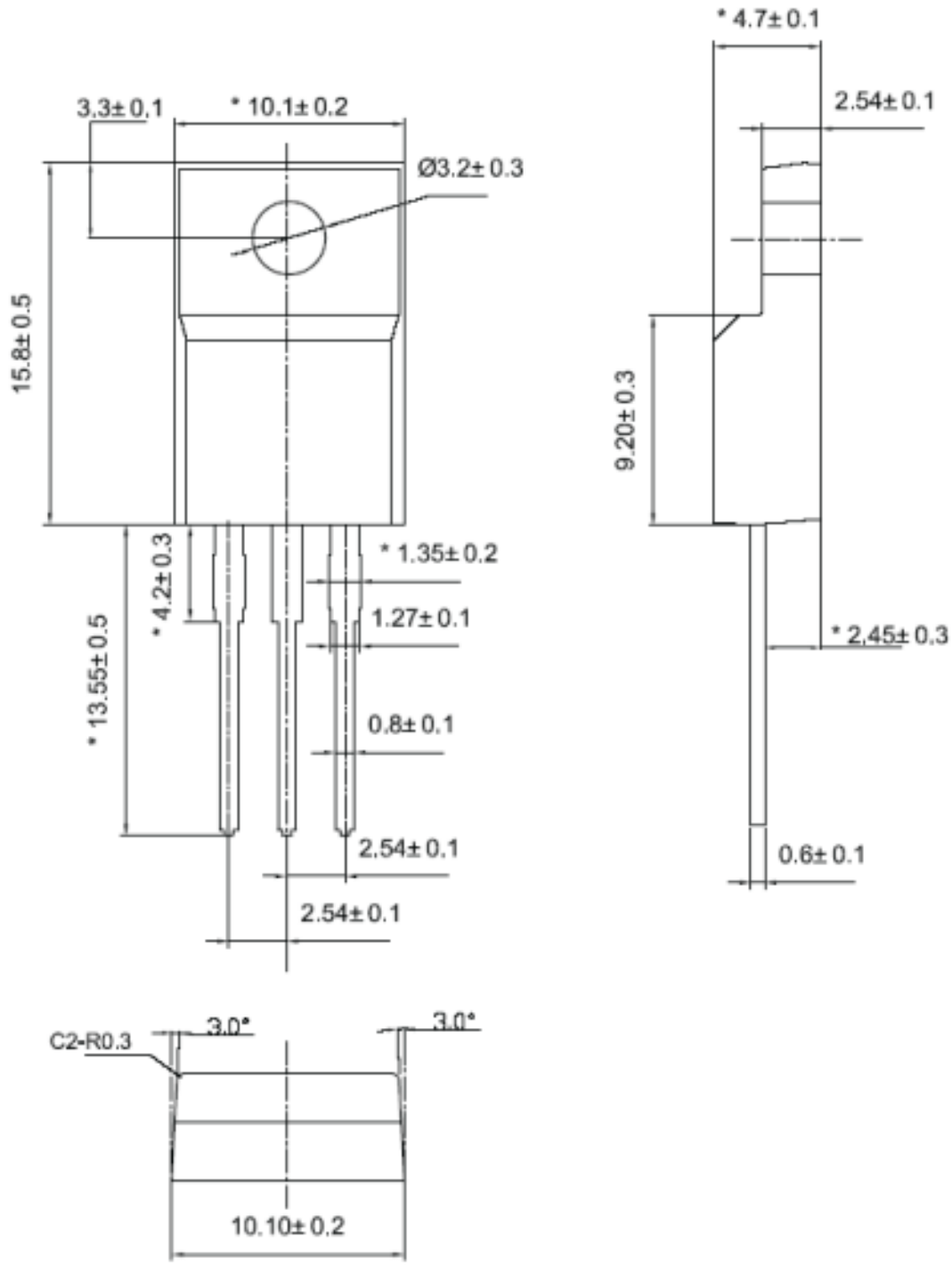
1. Package Outline
2. Marking
3. Features& Mechanical Characteristics
4. Maximum Ratings and Electrical Characteristics
5. Rating and characteristic Curves
6. Packing Specification PACKAGING SPECIFICATION
7. Description of Box Label

HALOGEN FREE

Pb Pb-free Plating

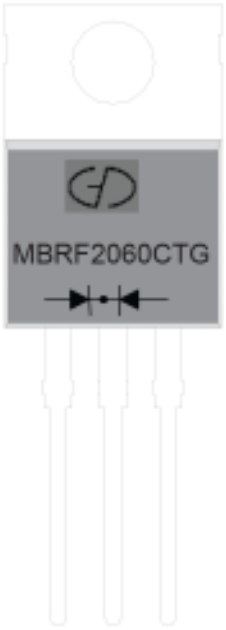
1. Package Outline (TO220F)

UNIT:mm



Lead Frame Material : Copper Plating: Pure Tin Plating

2.MARKING



1. Part Name : MBR2060CTG(TO220)
   MBRF2060CTG(TO22OF)
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	MBRF2060CTG	UNIT
Maximum repetitive peak reverse voltage			V_{RRM}	60	V
Working peak reverse voltage			V_{RWM}	60	V
Maximum DC blocking voltage			V_{DC}	60	V
Maximum average forward rectified current at Tc=135°C total device per diode			$I_{F(AV)}$	20 10	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode			I_{FSM}	150	A
Peak repetitive reverse current per leg at tp=2.0us，1KHz			I_{RRM}	1	A
Voltage rate of change（rated VR）			DV/dt	10000	V/us
Operating junction temperature range			T_J	—55 to +150	°C
Storage temperature range			T_{STG}	—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=10A IF=10A	Tc=25°C Tc=125℃	VF	0.80 0.70	V
Maximum reverse current per leg at working peak Reverse voltage		Tc=25°C Tc=100°C	IR	0.2 15	mA

Thermal Characteristics Ta=25°C unless otherwise noted

Symbol	Parameter	Max	Unit
$R_{\theta JC}$	Thermal Resistance，Junction to Case per Leg	4.0	°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

(TA = 25 °C unless otherwise noted)

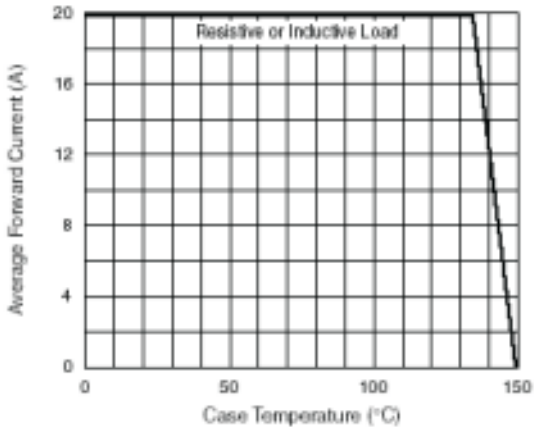


Figure 1. Forward Derating Curve (Total)

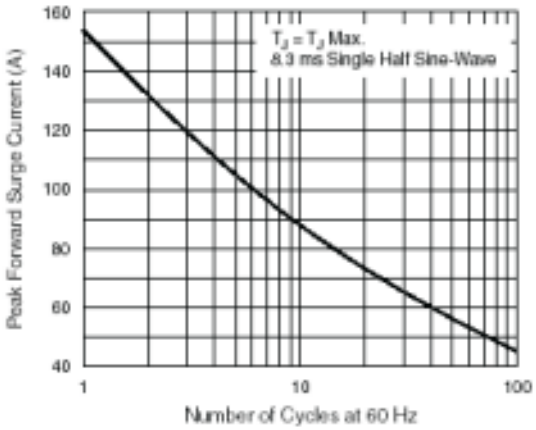


Figure 2. Maximum Non-Repetitive Peak Forward Surge

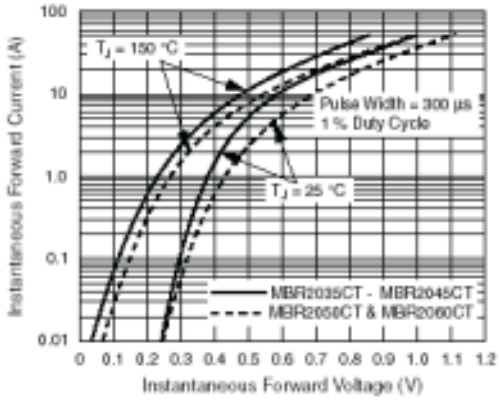


Figure 3. Typical Instantaneous Forward Characteristics Per Diode

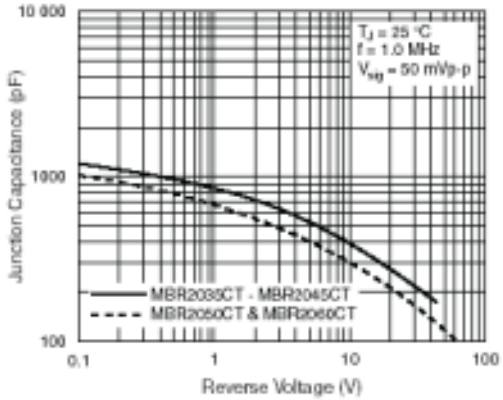


Figure 5. Typical Junction Capacitance Per Diode

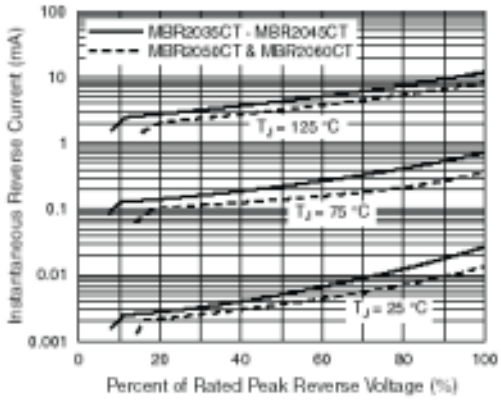


Figure 4. Typical Reverse Characteristics Per Diode

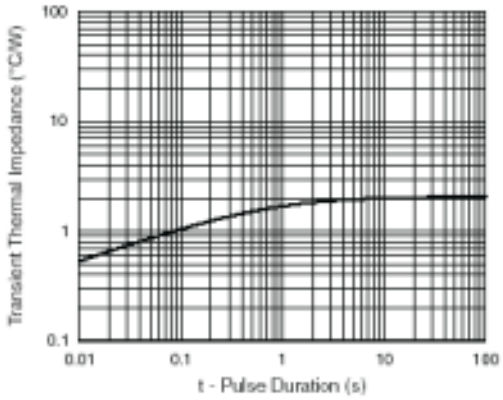


Figure 6. Typical Transient Thermal Impedance Per Diode

HALOGEN FREE

Pb-free Plating