

HIGH VOLTAGE POWER SCHOTTKY RECTIFIER MBR20200C

General Description

High voltage dual Schottky rectifier suited for switch mode power supplies and other power converters. This device is intended for use in medium voltage operation, and particularly, in high frequency circuits where low switching losses and low noise are required.

The MBR20200C is available in TO-220-3, TO-220-3 (2) and TO-220F-3 packages.

Features

- Low Forward Voltage: 0.9V @ 25°C
- High Surge Capacity
- 150°C Operating Junction Temperature
- 20A Total (10A Per Diode Leg)
- Guard-ring for Stress Protection
- Pb-free Package

Main Product Characteristics

$I_{F(AV)}$	2×10A
V_{RRM}	200V
T_J	150°C
$V_{F(max)}$	0.9V

Mechanical Characteristics

- Case: Epoxy, Molded
- Epoxy Meets UL 94V-0 @ 0.125in.
- Weight (Approximately): 1.9 Grams
- Finish: All External Surfaces Corrosion Resistant and Terminal
- Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Maximum for 10 Seconds

Applications

- Power Supply Output Rectification
- Power Management
- Instrumentation

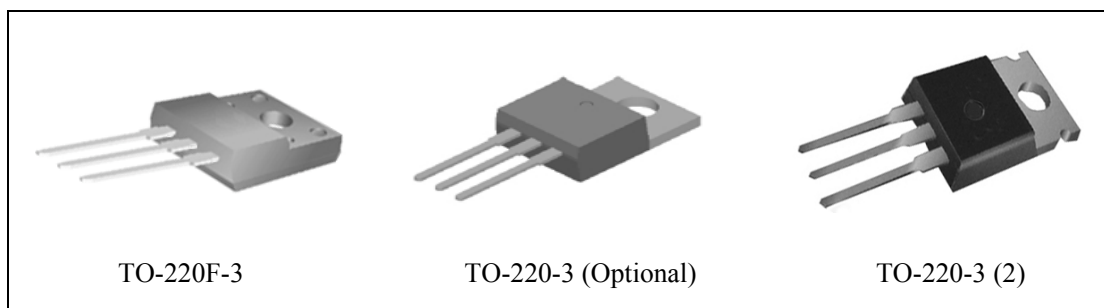


Figure 1. Package Types of MBR20200C

HIGH VOLTAGE POWER SCHOTTKY RECTIFIER MBR20200C

Pin Configuration

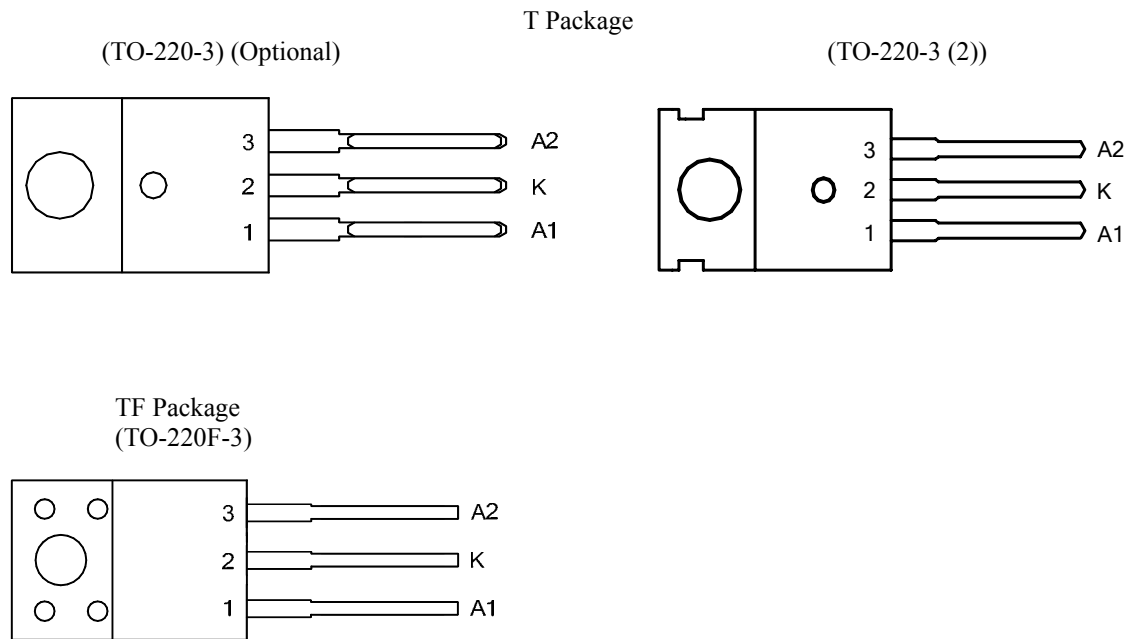


Figure 2. Pin Configuration of MBR20200C (Top View)

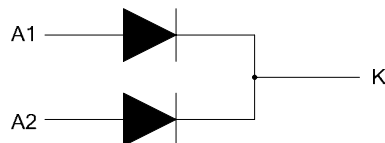


Figure 3. Internal Structure of MBR20200C

**HIGH VOLTAGE POWER SCHOTTKY RECTIFIER MBR20200C****Recommended Operating Conditions**

Parameter	Symbol	Condition	Value		Unit
Maximum Thermal Resistance	θ_{JC}	Junction to Case	TO-220-3/ TO-220-3 (2)	2.0	°C/W
			TO-220F-3	2.5	
	θ_{JA}	Junction Ambient to	TO-220-3/ TO-220-3 (2)	60	
			TO-220F-3	60	

Electrical Characteristics

Parameter	Symbol	Conditions	Value	Units
Maximum Instantaneous Forward Voltage Drop (Note 3)	V_F	$I_F=10A, T_C=25^\circ C$	0.9	V
Maximum Instantaneous Reverse Current (Note 3)	I_R	Rated DC Voltage, $T_C=125^\circ C$	6.0	mA
		Rated DC Voltage, $T_C=25^\circ C$	0.05	

Note 3: Pulse Test: Pulse Width=300 μ s, Duty Cycle \leq 2.0%.

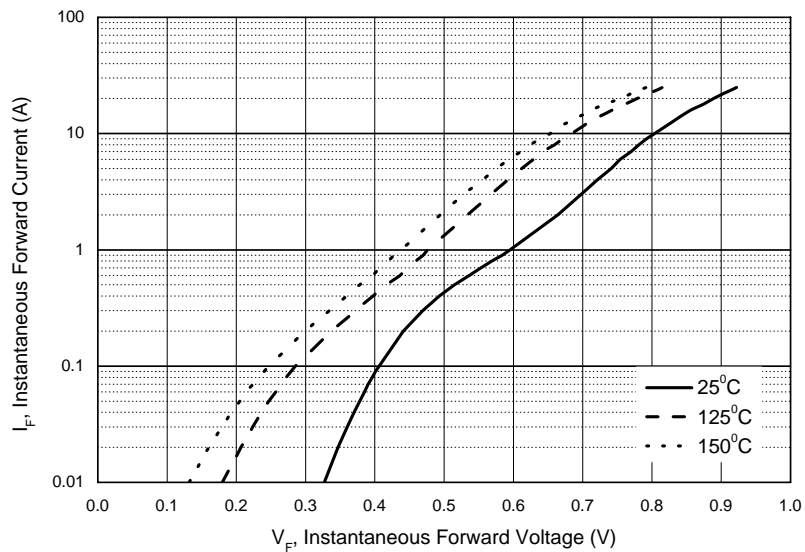
Typical Performance Characteristics


Figure 4. Typical Forward Voltage Per Diode

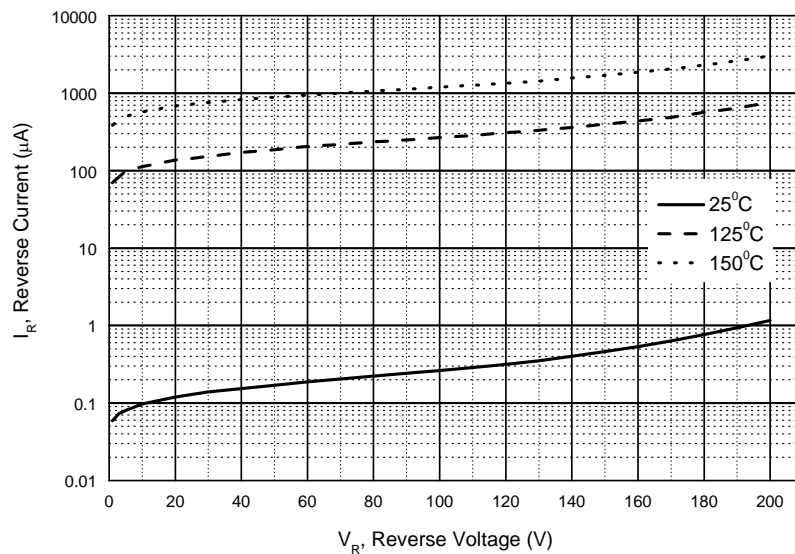


Figure 5. Typical Reverse Current Per Diode

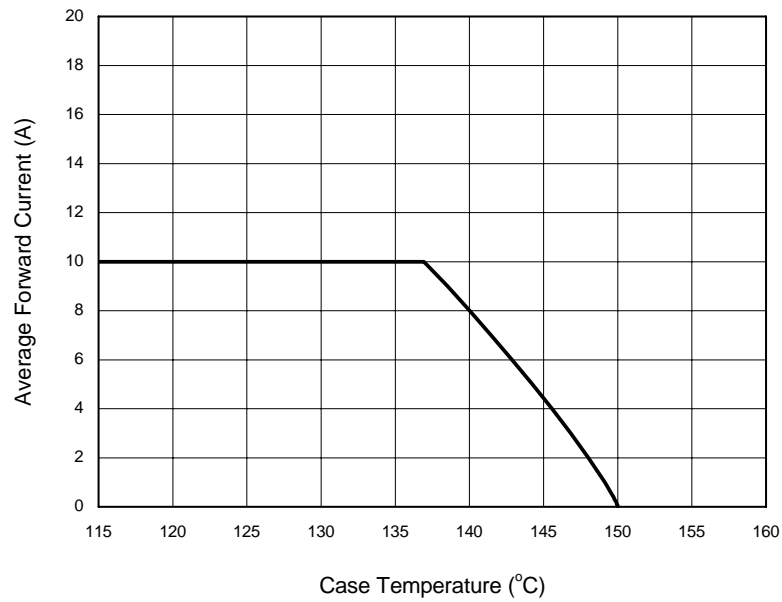
Typical Performance Characteristics (Continued)

Figure 6. Average Forward Current vs. Case Temperature (Square, per Diode)

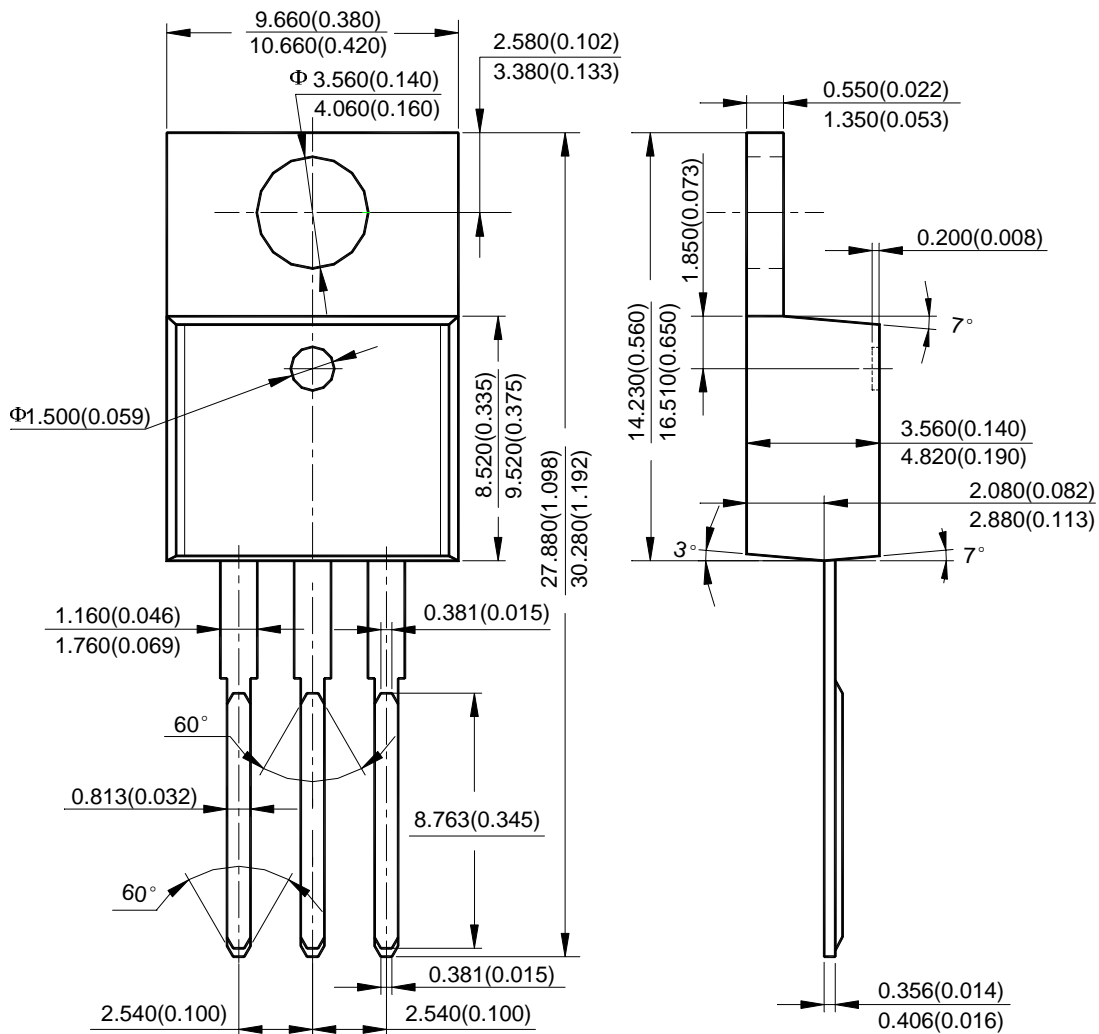
HIGH VOLTAGE POWER SCHOTTKY RECTIFIER

MBR20200C

Mechanical Dimensions

TO-220-3
(Optional)

Unit: mm(inch)





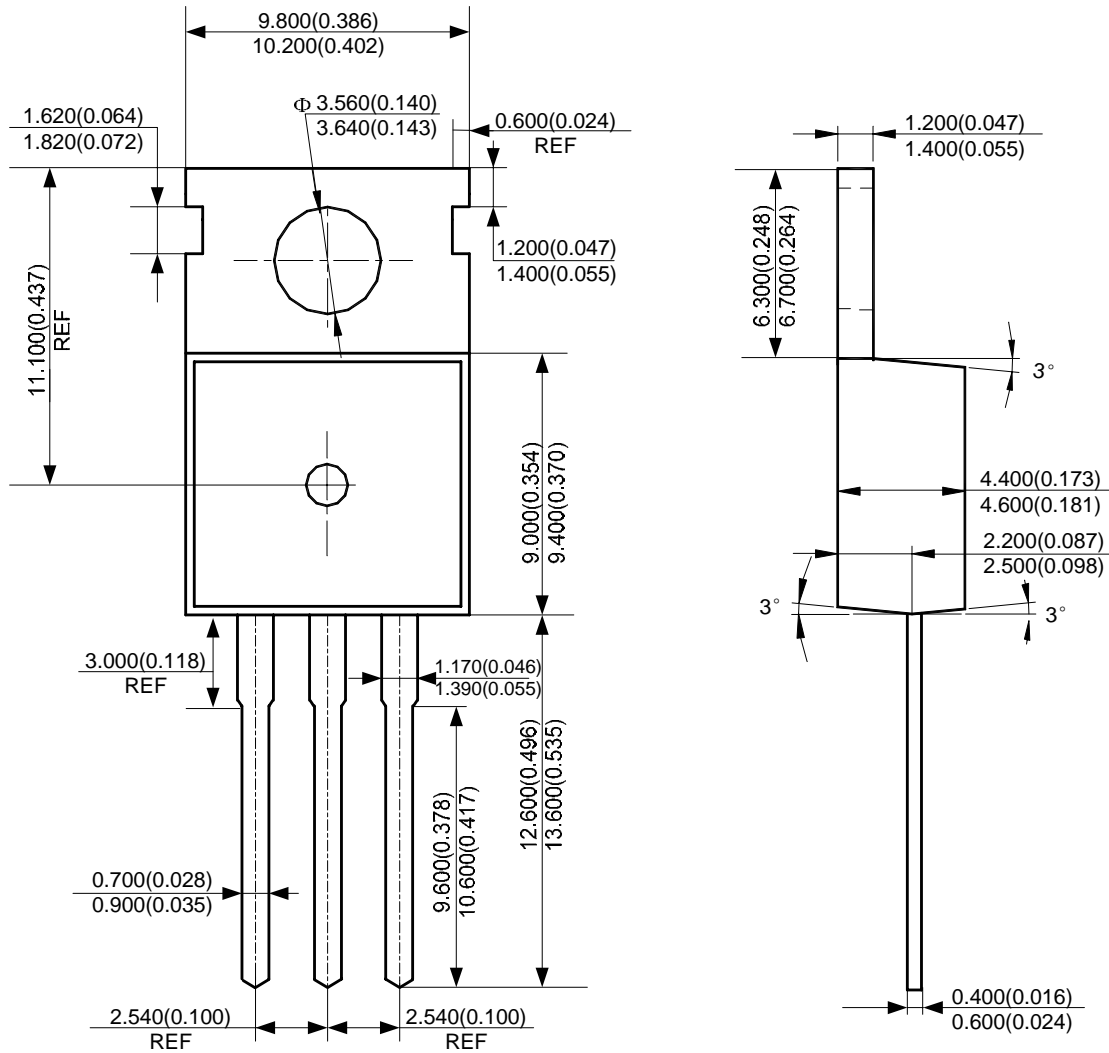
HIGH VOLTAGE POWER SCHOTTKY RECTIFIER

MBR20200C

Mechanical Dimensions (Continued)

TO-220-3 (2)

Unit: mm(inch)



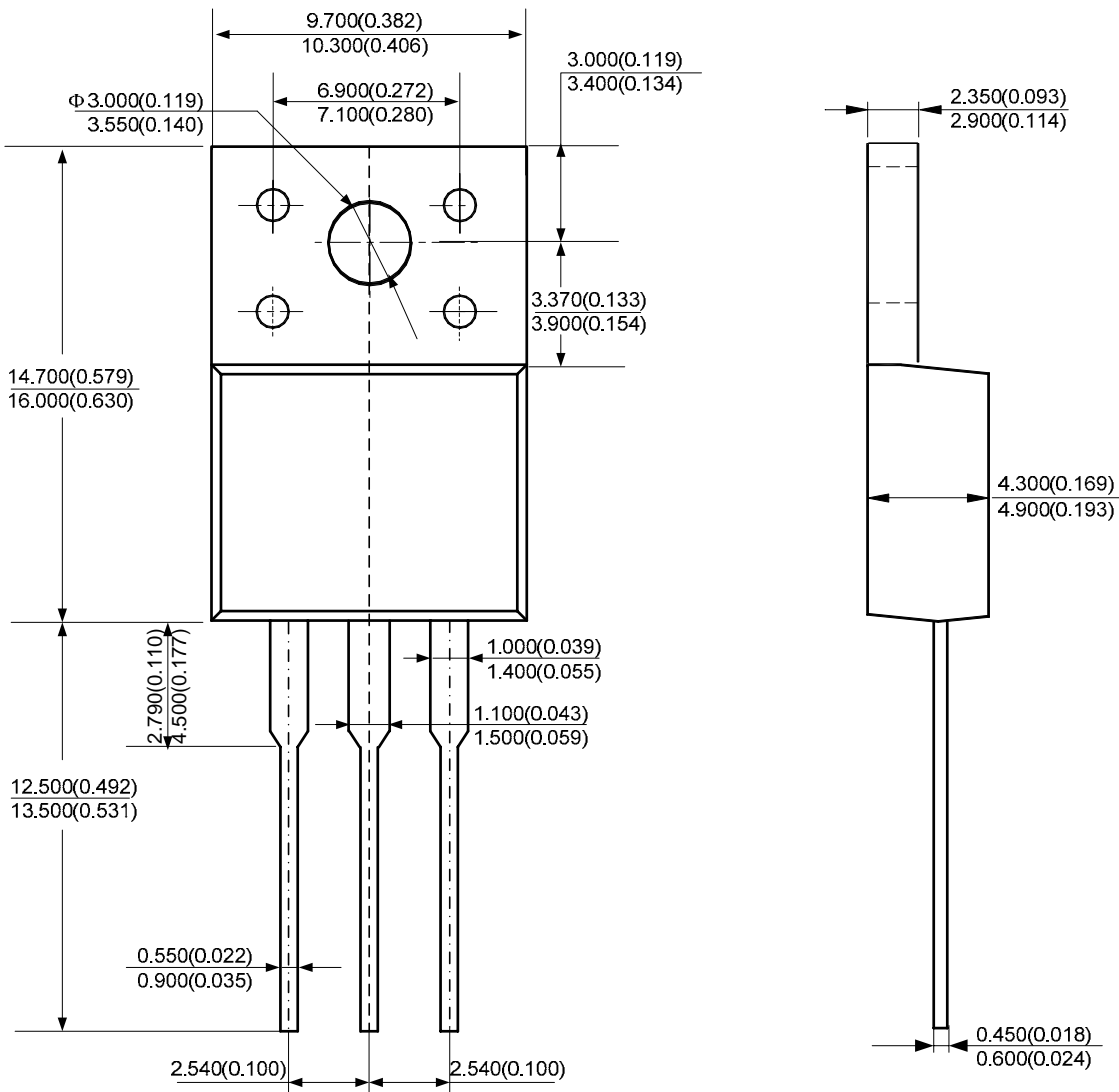
HIGH VOLTAGE POWER SCHOTTKY RECTIFIER

MBR20200C

Mechanical Dimensions (Continued)

TO-220F-3

Unit: mm(inch)





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MAIN SITE

- Headquarters
BCD Semiconductor Manufacturing Limited
No. 1600, Zi Xing Road, Shanghai Zizhu Science-based Industrial Park, 200241, China
Tel: +86-21-24162266, Fax: +86-21-24162277

- Wafer Fab
Shanghai SIM-BCD Semiconductor Manufacturing Co., Ltd.
800 Yi Shan Road, Shanghai 200233, China
Tel: +86-21-6485 1491, Fax: +86-21-5450 0008

REGIONAL SALES OFFICE

Shenzhen Office
Shanghai SIM-BCD Semiconductor Manufacturing Co., Ltd., Shenzhen Office
Unit A Room 1203, Skyworth Bldg., Gaoxin Ave.1.S., Nanshan District, Shenzhen, China
Tel: +86-755-8826 7951
Fax: +86-755-8826 7865

Taiwan Office
BCD Semiconductor (Taiwan) Company Limited
4F, 298-1, Rui Guang Road, Nei-Hu District, Taipei, Taiwan
Tel: +886-2-2656 2808
Fax: +886-2-2656 2806

USA Office
BCD Semiconductor Corp.
30920 Huntwood Ave. Hayward, CA 94544, USA
Tel: +1-510-324-2988
Fax: +1-510-324-2788