



# MBR3040CT thru MBR3060CT

## 30.0A Schottky Barrier Rectifiers

Rectifier Reverse Voltage 45 to 60V

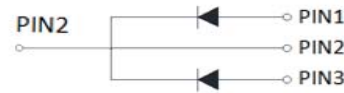
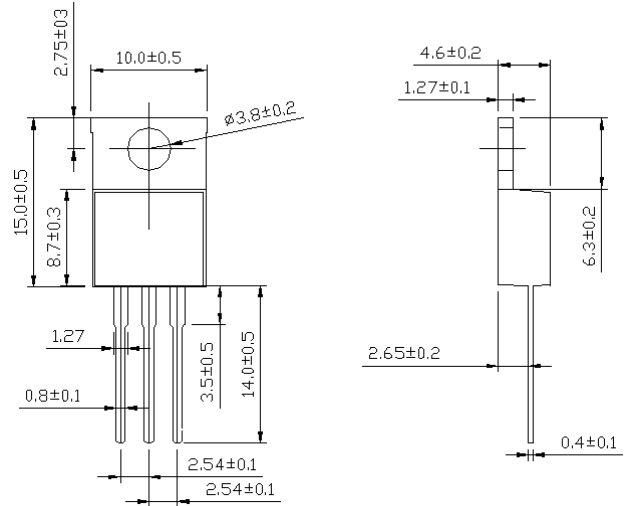
### TO-220

#### Features

- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 260 °C max. 8 s, per JESD 22-B106

#### Mechanical Data

- **Package:** TO-220AB  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked



Dimensions in millimeters ( 1mm =0.0394" )

#### ■Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBR3040CT	MBR3060CT
Device marking code			MBR3040CT	MBR3060CT
Repetitive Peak Reverse Voltage	VRRM	V	40	60
Average Rectified Output Current @60Hz sine wave, R-load, T <sub>a</sub> =25°C	I <sub>O</sub>	A	30	
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T <sub>a</sub> =25°C	I <sub>FSM</sub>	A	180	
Current Squared Time @1ms≤t<8.3ms T <sub>j</sub> =25°C,	I <sup>2</sup> t	A <sup>2</sup> s	134	
Storage Temperature	T <sub>stg</sub>	°C	-55 ~ +175	
Junction Temperature	T <sub>j</sub>	°C	-55 ~ +150	

#### ■Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR3040CT	MBR3060CT
Maximum instantaneous forward voltage drop per diode	V <sub>FM</sub>	V	I <sub>FM</sub> =15.0A	0.65	0.78
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	mA	V <sub>RM</sub> =VRRM T <sub>a</sub> =25°C	0.3	0.2
	I <sub>RRM2</sub>		V <sub>RM</sub> =VRRM T <sub>a</sub> =125°C	20	
Thermal Resistance	R <sub>θJ-C</sub>	°C/W	Between junction and case	2.0	

# Rating and Characteristic Curves ( $T_A=25^{\circ}\text{C}$ Unless otherwise noted )

## MBR3040CT thru MBR3060CT

FIG1:  $I_o$  -  $T_c$  Curve

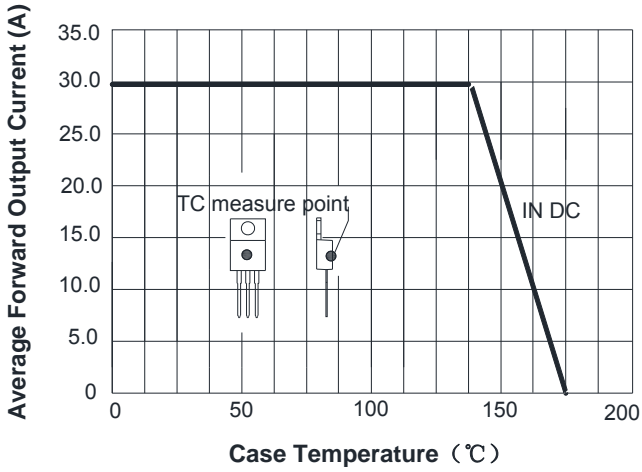


FIG2: Surge Forward Current Capability

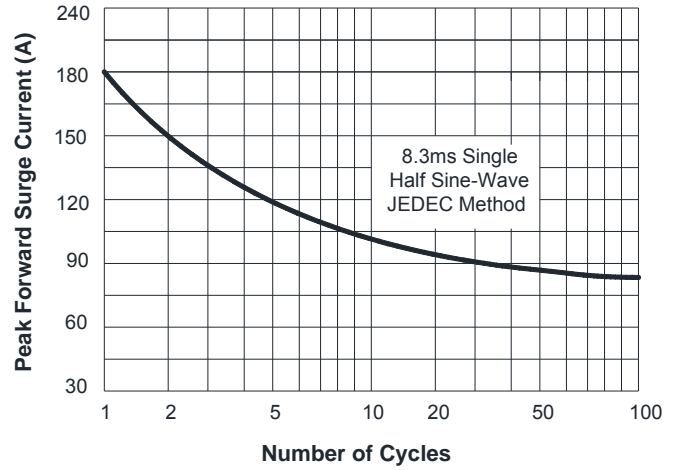


FIG3: Forward Voltage

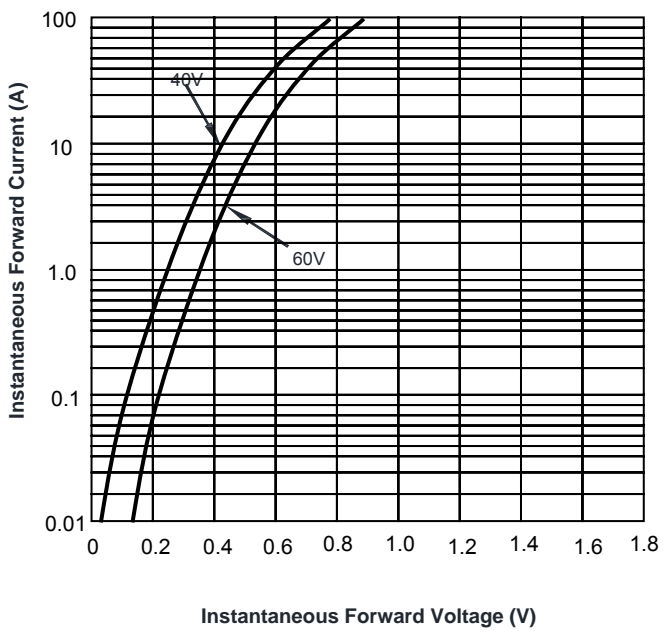
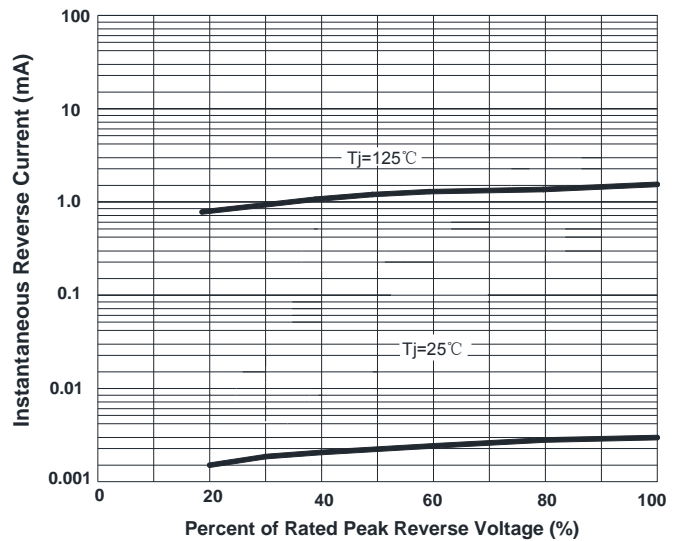


FIG4: Instantaneous Reverse Characteristics



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