

### 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 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

### 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

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

PARAMETER	SYMBOL	UNIT	MBR20100CT	MBR20150CT	MBR20200CT
Device marking code			MBR20100CT	MBR20150CT	MBR20200CT
Repetitive Peak Reverse Voltage	VRRM	V	100	150	200
Average Rectified Output Current @60Hz sine wave, R-load, T <sub>a</sub> =25°C	I <sub>O</sub>	A	20		
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T <sub>a</sub> =25°C	IFSM	A	150		
Current Squared Time @1ms≤t<8.3ms T <sub>j</sub> =25°C,	I <sup>2</sup> t	A <sup>2</sup> s	94		
Storage Temperature	T <sub>stg</sub>	°C	-55 ~ +175		
Junction Temperature	T <sub>j</sub>	°C	-55 ~ +175		

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR20100CT	MBR20150CT	MBR20200CT
Maximum instantaneous forward voltage drop per diode	V <sub>FM</sub>	V	I <sub>FM</sub> =10.0A	0.8	0.85	0.9
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	mA	VRM=VRRM T <sub>a</sub> =25°C	0.1		
	I <sub>RRM2</sub>		VRM=VRRM T <sub>a</sub> =125°C	20		

## ■ Thermal Characteristics ( $T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MBR20100CT	MBR20150CT	MBR20200CT
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}\text{C/W}$	2.0		

## ■ Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBR20100CT THRU MBR20200CT	Approximate 1.9	50	1000	5000	Tube

## ■ Characteristics (Typical)

FIG1:  $I_o - T_c$  Curve

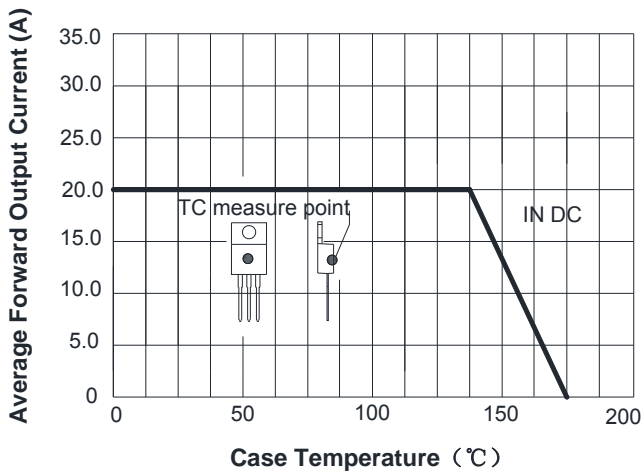


FIG2: Surge Forward Current Capability

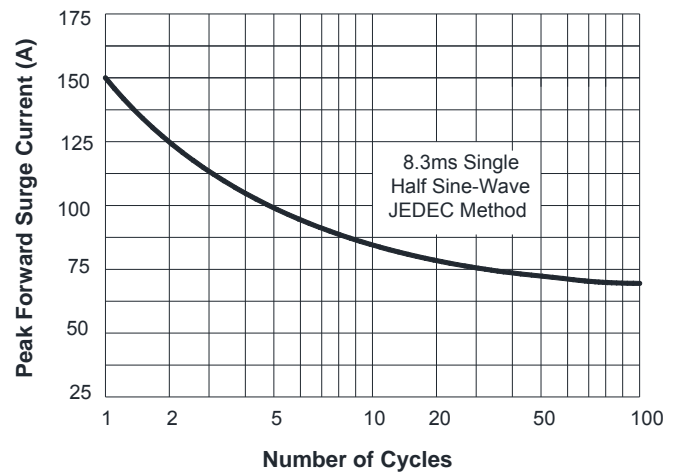


FIG3: Forward Voltage

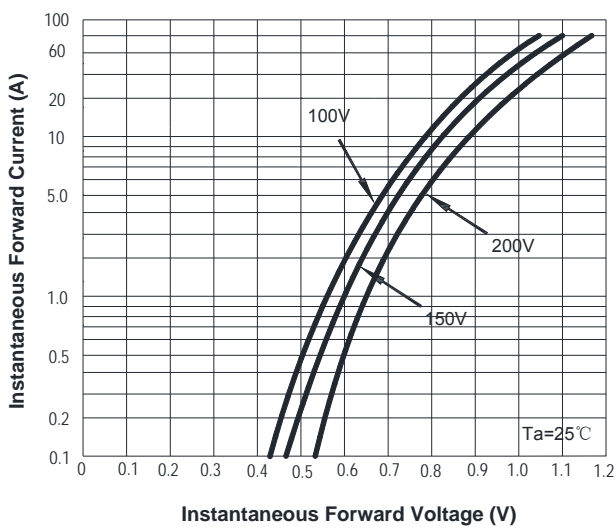
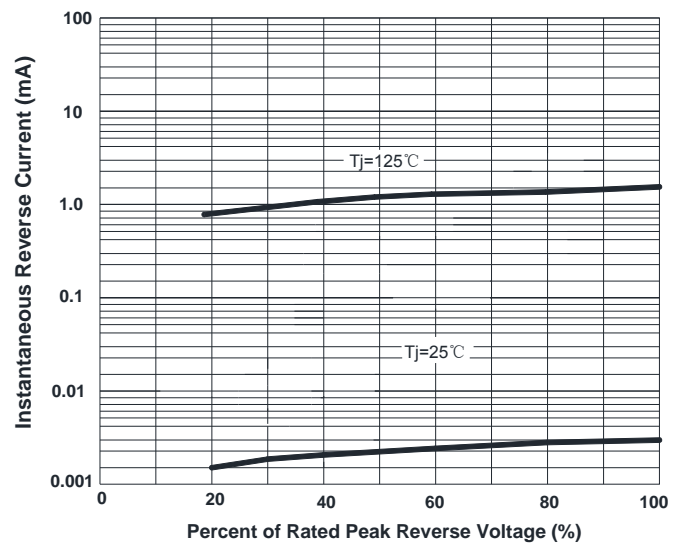
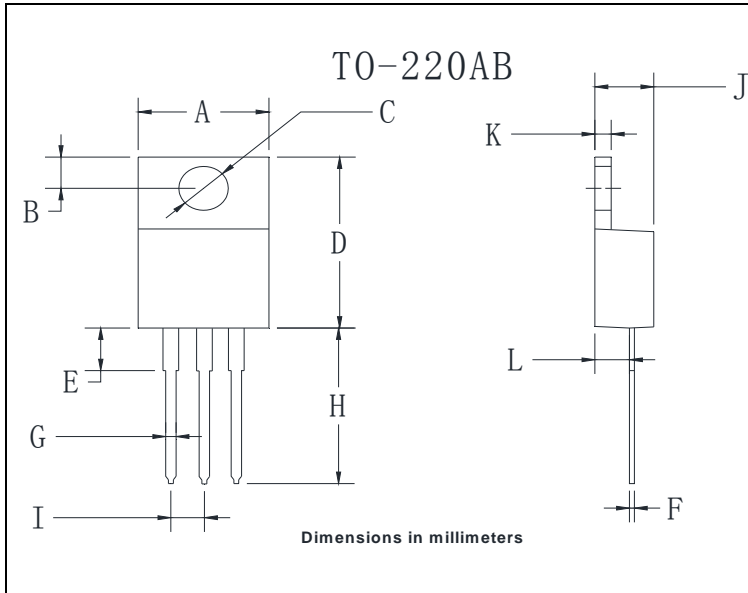


FIG.4: Instantaneous Reverse Characteristics



■ Outline Dimensions



TO-220AB		
Dim	Min	Max
A	9.5	10.9
B	2.22	3.27
C	3.34	4.31
D	14.5	15.5
E	3.16	4.46
F	0.28	0.64
G	0.68	0.94
H	13.06	14.62
I	2.01	3.07
J	4.04	5.1
K	1.14	1.4
L	2.14	3.19