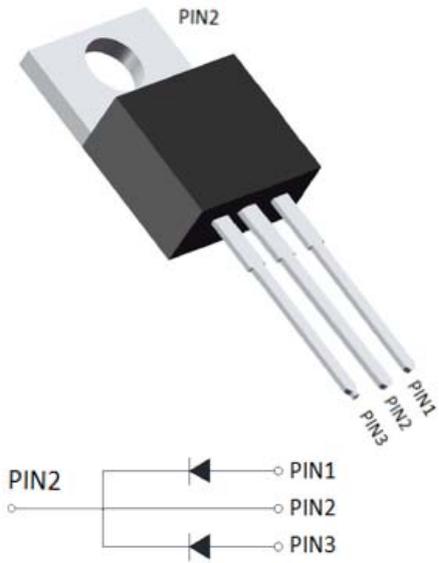


## Schottky Diodes



### 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	MBR20100CTS	MBR20150CTS	MBR20200CTS
Device marking code			MBR20100CTS	MBR20150CTS	MBR20200CTS
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	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	I <sub>FSM</sub>	A	130		
Current Squared Time @1ms≤t<8.3ms T <sub>j</sub> =25°C,	I <sup>2</sup> t	A <sup>2</sup> s	70		
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	MBR20100CTS	MBR20150CTS	MBR20200CTS
Maximum instantaneous forward voltage drop per diode	V <sub>FM</sub>	V	I <sub>FM</sub> =10.0A	0.85	0.9	0.95
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	mA	V <sub>RM</sub> =V <sub>RRM</sub> T <sub>a</sub> =25°C	0.1		
	I <sub>RRM2</sub>		V <sub>RM</sub> =V <sub>RRM</sub> T <sub>a</sub> =125°C	20		

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS



# MBR20100CTS THRU MBR20200CTS

## ■ Thermal Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MBR20100CTS	MBR20150CTS	MBR20200CTS
Thermal Resistance	Between junction and case	R $\theta_{j-c}$	°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
MBR20100CTS THRU MBR20200CTS	Approximate 1.9	50	1000	5000	Tube

## ■ Characteristics (Typical)

FIG1: I<sub>o</sub> -T<sub>c</sub> Curve

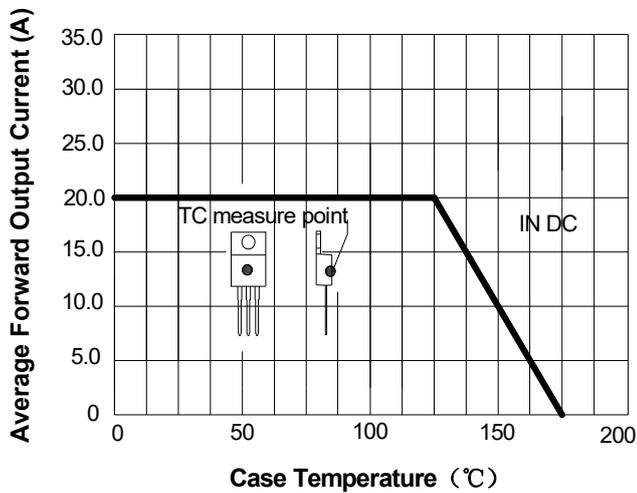


FIG2: Surge Forward Current Capability

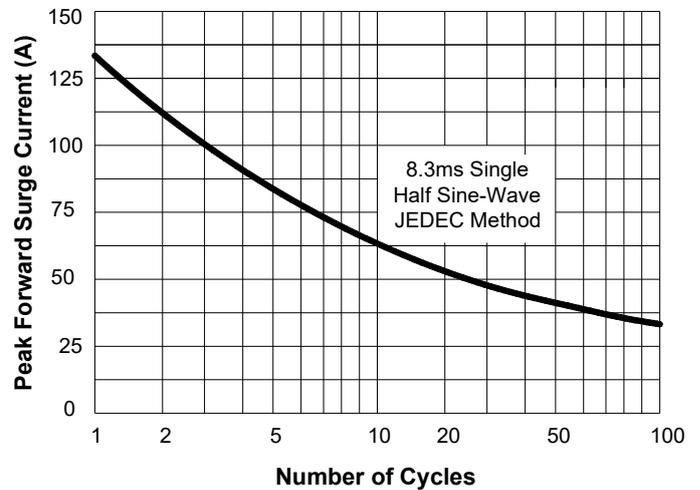


FIG3: Forward Voltage

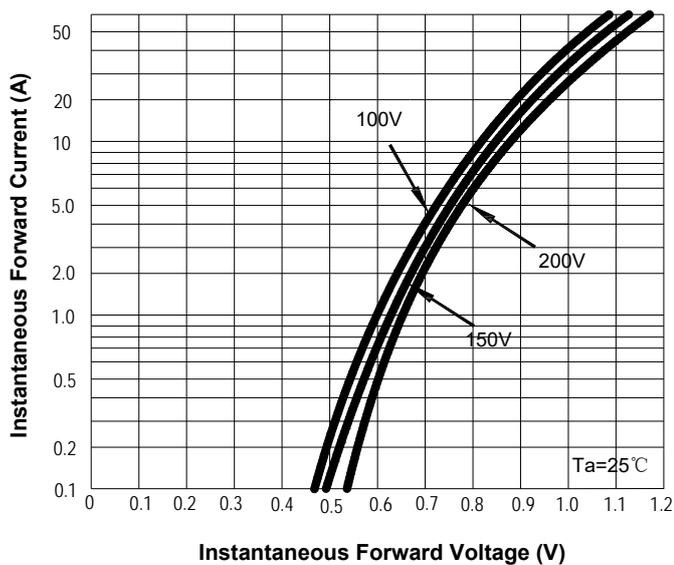
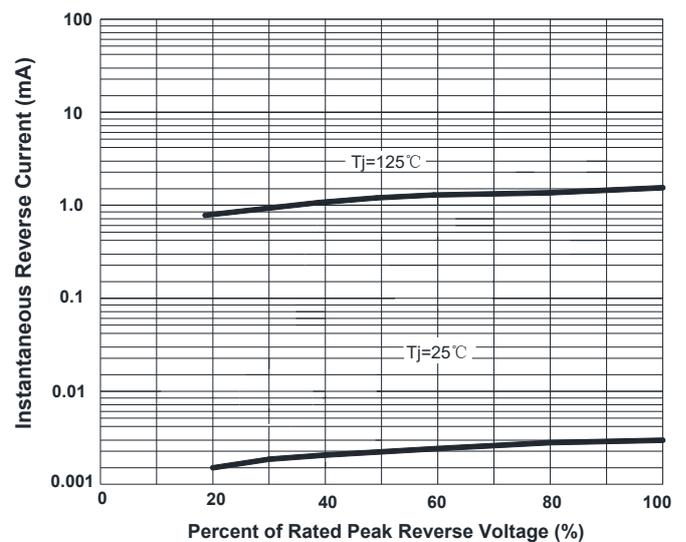


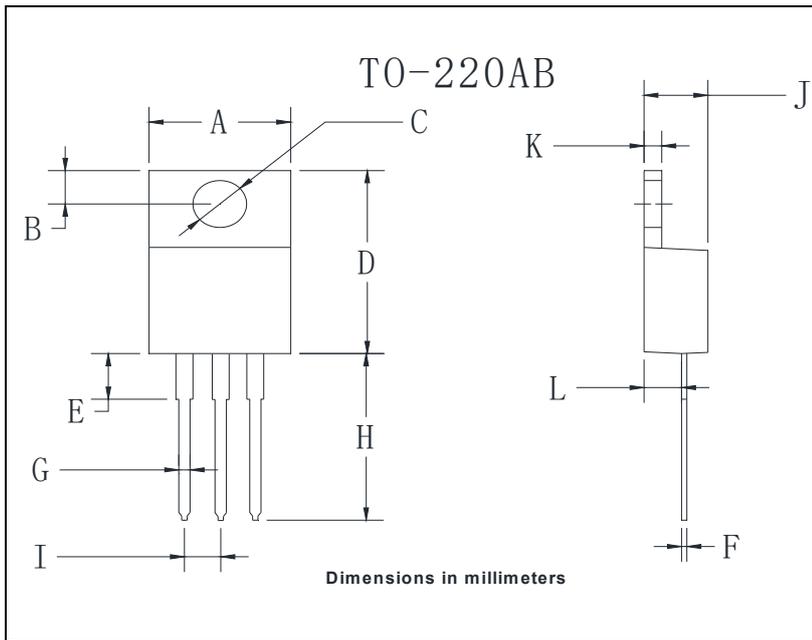
FIG4: Instantaneous Reverse Characteristics





# MBR20100CTS THRU MBR20200CTS

## ■Outline Dimensions



TO-220AB		
Dim	Min	Max
A	9.95	10.35
B	2.55	2.95
C	3.8	4.0
D	14.95	15.25
E	3.75	4.25
F	0.26	0.5
G	0.68	0.94
H	13.4	13.9
I	2.35	2.65
J	4.38	4.78
K	1.14	1.4
L	2.37	2.79



## MBR20100CTS THRU MBR20200CTS

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