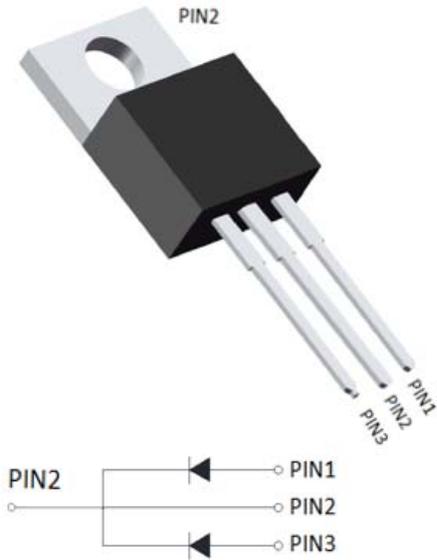


## Schottky Diodes



### Features

- High frequency operation
- Low forward voltage drop
- 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 ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBR1080CT	MBR10100CT	MBR10120CT	MBR10150CT	MBR10200CT
Device marking code			MBR1080CT	MBR10100CT	MBR10120CT	MBR10150CT	MBR10200CT
Repetitive Peak Reverse Voltage	VRRM	V	80	100	120	150	200
Average Rectified Output Current @60Hz sine wave, R-load, $T_a=25^\circ\text{C}$	IO	A	10				
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, $T_a=25^\circ\text{C}$	IFSM	A	100				
Current Squared Time @1ms $\leq$ t $\leq$ 8.3ms $T_j=25^\circ\text{C}$	I <sup>2</sup> t	A <sup>2</sup> s	41				
Storage Temperature	Tstg	°C	-55 ~ +150				
Junction Temperature	Tj	°C	-55 ~ +150				

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR1080CT	MBR10100CT	MBR10120CT	MBR10150CT	MBR10200CT
Maximum instantaneous forward voltage drop per diode	VFM	V	IFM=5.0A	0.85		0.9		0.95
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	mA	VRM=VRRM $T_a=25^\circ\text{C}$	0.1				
	I <sub>RRM2</sub>		VRM=VRRM $T_a=100^\circ\text{C}$	20				

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

Note2:Pulse test:pulse width 40mS



# MBR1080CT THRU MBR10200CT

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

PARAMETER		SYMBOL	UNIT	MBR1080CT	MBR10100CT	MBR10120CT	MBR10150CT	MBR10200CT
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
MBR1080CT THRU MBR10200CT	Approximate 1.9	50	1000	5000	Tube

## ■ Characteristics (Typical)

FIG1:  $I_o$  - $T_c$  Curve

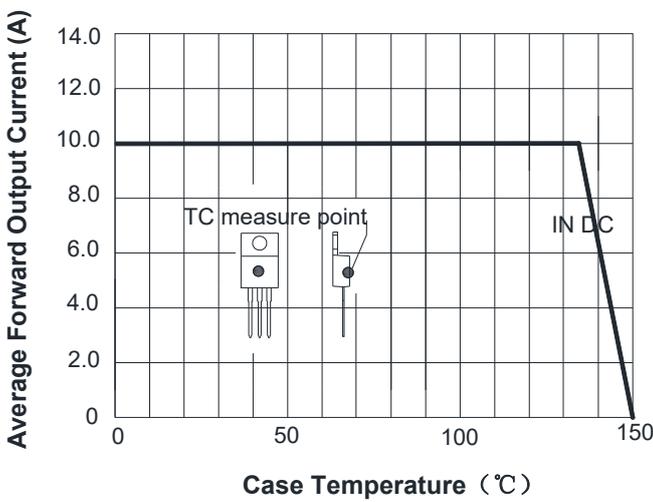


FIG2: Surge Forward Current Capability

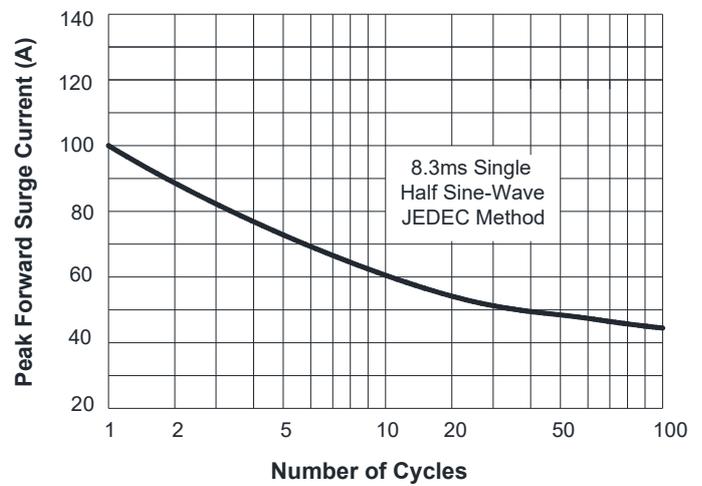


FIG3: Forward Voltage

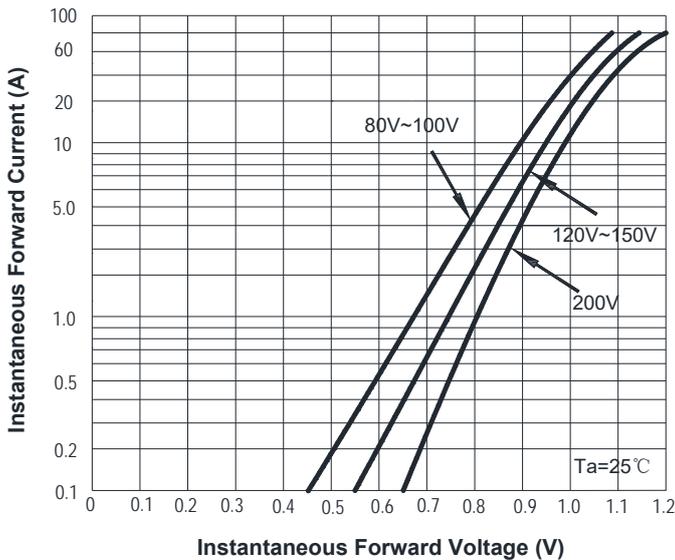
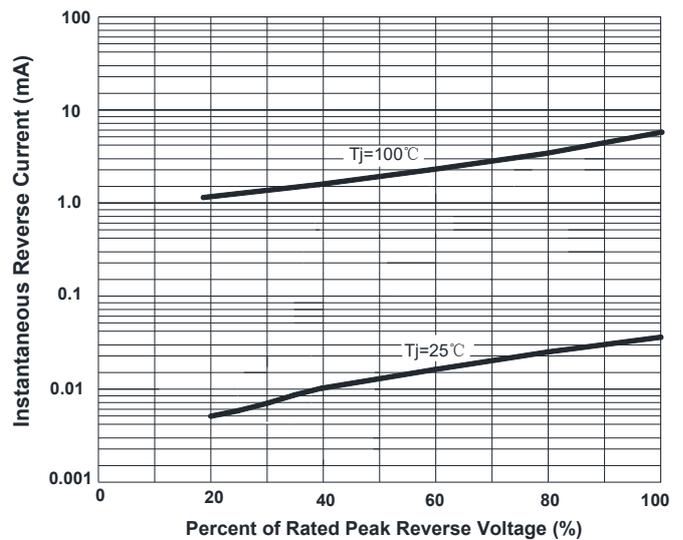


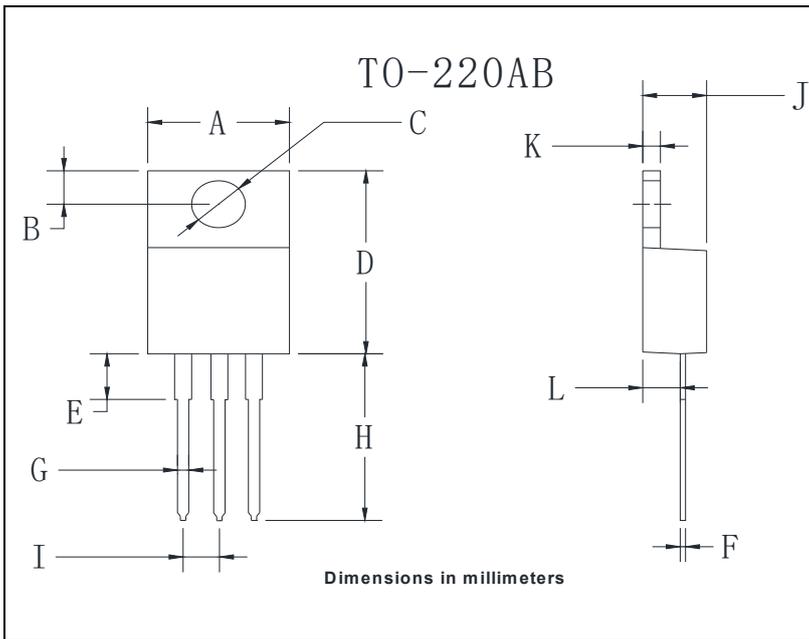
FIG4: Typical Reverse Characteristics





# MBR1080CT THRU MBR10200CT

## ■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

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