

# MBR1020CT THRU MBR10200CT

AXIAL SCHOTTKY BARRIER RECTIFIER

## TO-220CB Axial Schottky Barrier Rectifier

### Features

- Low forward voltage drop
- High forward surge current capability
- High reliability
- High current capability

**Reverse Voltage**  
20-200 V  
**Forward Current**  
10 Ampere

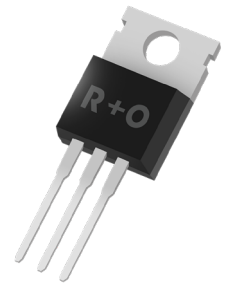
### Applications

For use in low voltage high frequency inverters, free wheeling, DC/DC converters, and polarity protection applications.

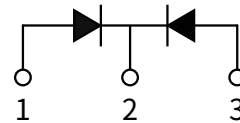
### Mechanical Data

- Case: TO-220CB  
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

TO-220CB



### Function Diagram



### Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBR 1020CT	MBR 1045CT	MBR 1060CT	MBR 1080CT	MBR 10100CT	MBR 10150CT	MBR 10200CT
Device marking code			MBR 1020CT	MBR 1045CT	MBR 1060CT	MBR 1080CT	MBR 10100CT	MBR 10150CT	MBR 10200CT
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	V	20	45	60	80	100	150	200
Maximum RMS Voltage	V <sub>RMS</sub>	V	14	32	42	56	70	105	140
Maximum DC blocking Voltage	V <sub>DC</sub>	V	20	45	60	80	100	150	200
Maximum Average Forward Rectified Current @60Hz sinewave, Resistance load, TL (Fig.1)	I <sub>F(AV)</sub>	A	10						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I <sub>FSM</sub>	A	150						
Storage temperature	T <sub>stg</sub>	°C	-55 ~ +150						
Junction temperature	T <sub>j</sub>	°C	-55 ~ +150						
Typical Thermal Resistance	R <sub>θJC</sub>	°C/W	2.5						
	R <sub>θJA</sub>	°C/W	65						

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## ● Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	MBR 1020CT	MBR 1045CT	MBR 1060CT	MBR 1080CT	MBR 10100CT	MBR 10150CT	MBR 10200CT
Maximum instantaneous forward voltage	$I_f=5A$	$V_F$	V	0.60		0.75		0.85		0.92
Maximum DC reverse current at rated DC blocking voltage	$V_R=V_{DC}, T_A=25^\circ C$	$I_{R1}$	mA	0.1			0.02			
	$V_R=V_{DC}, T_A=125^\circ C$	$I_{R2}$		5.0			2.0			

## ● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

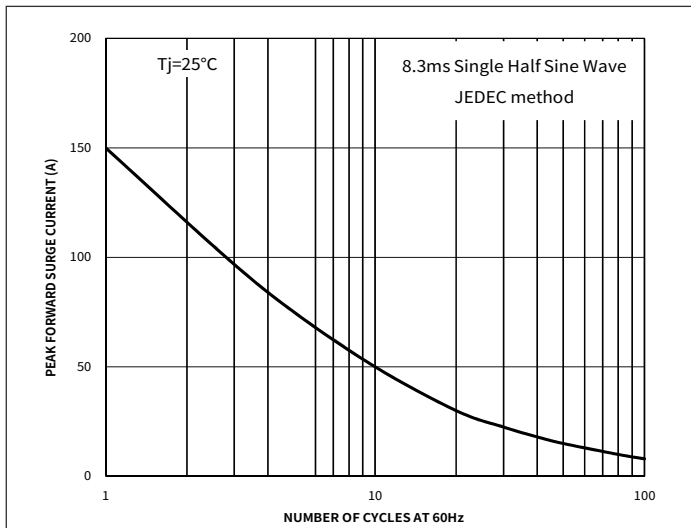


Fig.1 Maximum Non-Repetitive Peak Forward Surge Current

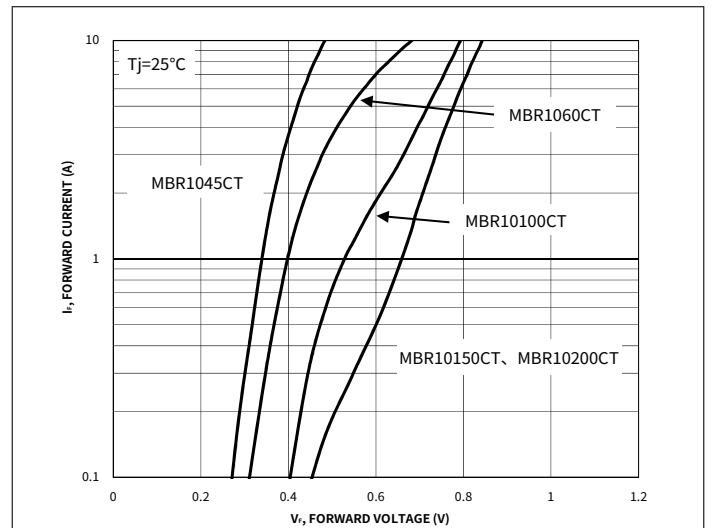


Fig.2 Typical Forward Voltage

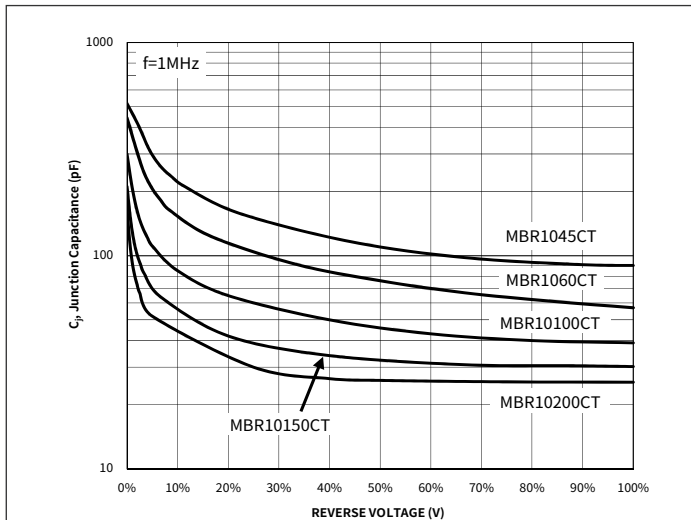


Fig.3 Typical Junction Capacitance

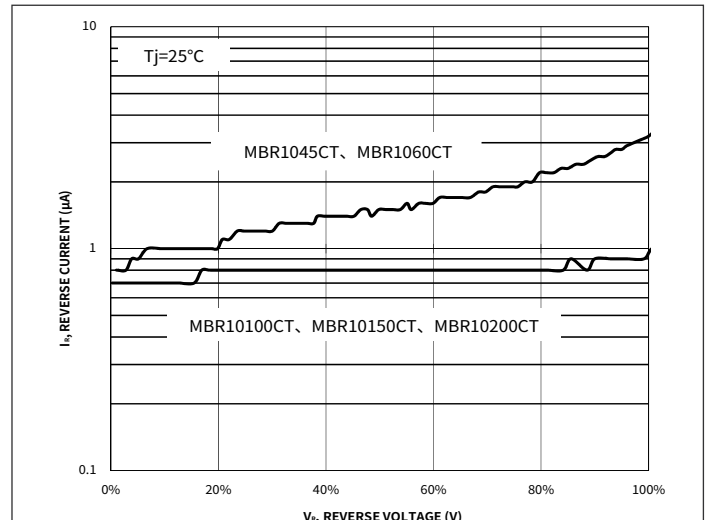


Fig.4 Typical Reverse Characteristics

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## ● Ordering Information

PACKAGE	UNIT WEIGHT(g)	TUBE(pcs)	BOX(pcs)
TO-220CB	2.04	50	1000

## ● Package Outline Dimensions (TO-220CB)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.60	4.80	0.181	0.189
A1	1.25	1.35	0.049	0.053
A2	2.30	2.50	0.091	0.098
b	0.75	0.85	0.030	0.033
b1	1.25	1.42	0.049	0.056
c	0.45	0.55	0.018	0.022
D	14.60	15.20	0.575	0.598
D1	8.56	8.76	0.337	0.345
E	10.05	10.25	0.396	0.404
E1	7.78	7.98	0.306	0.314
E2	9.58	9.78	0.377	0.385
E3	7.05	7.25	0.278	0.285
e	2.45	2.65	0.096	0.104
e1	5.08REF		0.200REF	
H	6.14	6.34	0.242	0.250
H1	2.20	2.40	0.087	0.094
H2	9.04	1.14	0.356	0.045
L	13.50	14.10	0.531	0.555
L1	2.45	2.65	0.096	0.104
ΦP	3.63	3.75	0.143	0.148
Q	2.70	2.90	0.106	0.114
θ1	2°	7°	2°	7°