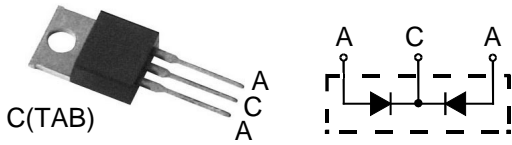


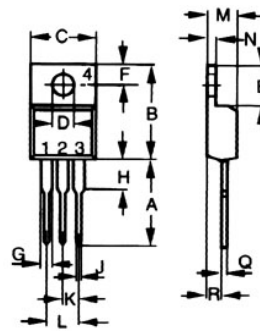
# MBR2050CT thru MBR2060CT

Wide Temperature Range and High  $T_{jm}$  Schottky Barrier Rectifiers



A=Anode, C=Cathode, TAB=Cathode

Dimensions TO-220AB



Dim.	Inches		Millimeter	
	Min.	Max.	Min.	Max.
A	0.500	0.550	12.70	13.97
B	0.580	0.630	14.73	16.00
C	0.390	0.420	9.91	10.66
D	0.139	0.161	3.54	4.08
E	0.230	0.270	5.85	6.85
F	0.100	0.125	2.54	3.18
G	0.045	0.065	1.15	1.65
H	0.110	0.230	2.79	5.84
J	0.025	0.040	0.64	1.01
K	0.100	BSC	2.54	BSC
M	0.170	0.190	4.32	4.82
N	0.045	0.055	1.14	1.39
Q	0.014	0.022	0.35	0.56
R	0.090	0.110	2.29	2.79

	$V_{RRM}$	$V_{RMS}$	$V_{DC}$
	V	V	V
<b>MBR2050CT</b>	50	35	50
<b>MBR2060CT</b>	60	42	60

Symbol	Characteristics	Maximum Ratings	Unit
$I_{(AV)}$	Maximum Average Forward Rectified Current @ $T_c=125^\circ\text{C}$	20	A
$I_{FSM}$	Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	150	A
$dv/dt$	Voltage Rate Of Change (Rated $V_R$ )	10000	V/us
$V_F$	Maximum Forward Voltage (Note 1)	$I_F=10\text{A}$ @ $T_J=25^\circ\text{C}$ 0.80 $I_F=10\text{A}$ @ $T_J=125^\circ\text{C}$ 0.70 $I_F=20\text{A}$ @ $T_J=25^\circ\text{C}$ 0.95 $I_F=20\text{A}$ @ $T_J=125^\circ\text{C}$ 0.85	V
$I_R$	Maximum DC Reverse Current At Rated DC Blocking Voltage	@ $T_J=25^\circ\text{C}$ 0.1 @ $T_J=125^\circ\text{C}$ 15	mA
$R_{\theta JC}$	Typical Thermal Resistance (Note 2)	2.0	$^\circ\text{C}/\text{W}$
$C_J$	Typical Junction Capacitance Per Element (Note 3)	400	pF
$T_J$	Operating Temperature Range	-55 to +150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature Range	-55 to +175	$^\circ\text{C}$

NOTES: 1. 300us Pulse Width, Duty Cycle 2%.  
2. Thermal Resistance Junction To Case.  
3. Measured At 1.0MHz And Applied Reverse Voltage Of 4.0V DC.

## FEATURES

- \* Metal of silicon rectifier, majority carrier conducton
- \* Guard ring for transient protection
- \* Low power loss, high efficiency
- \* High current capability, low  $V_F$
- \* High surge capacity
- \* For use in low voltage, high frequency inverters, free whelling, and polarity protection applications

## MECHANICAL DATA

- \* Case: TO-220AB molded plastic
- \* Polarity: As marked on the body
- \* Weight: 0.08 ounces, 2.24 grams
- \* Mounting position: Any

**Sirectifier**®

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FIG.1 - FORWARD CURRENT DERATING CURVE

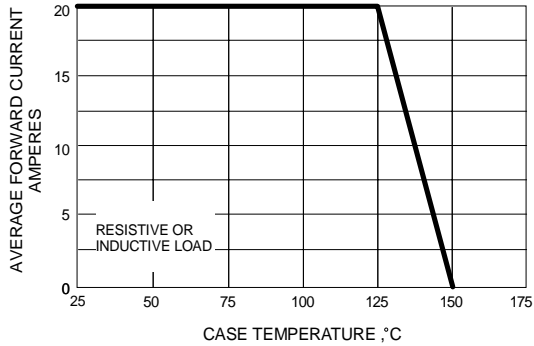


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

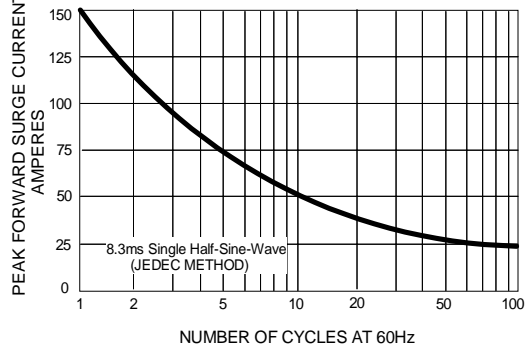


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

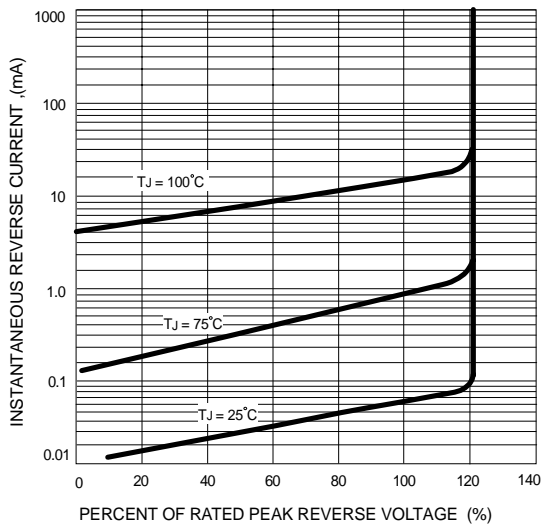


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

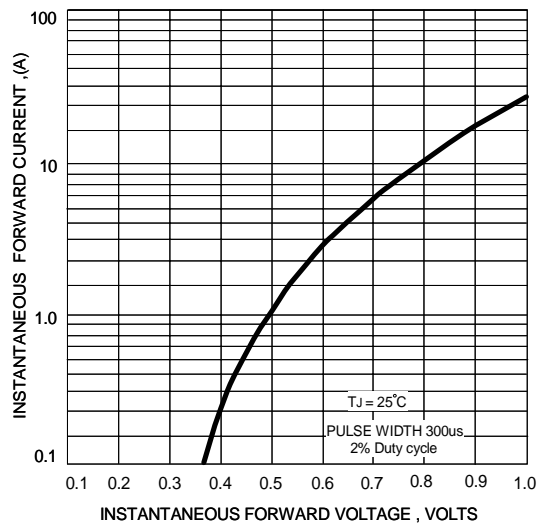


FIG.5 - TYPICAL JUNCTION CAPACITANCE

