

# MBR1060CT MBRB1060CT MBR1060CT-1



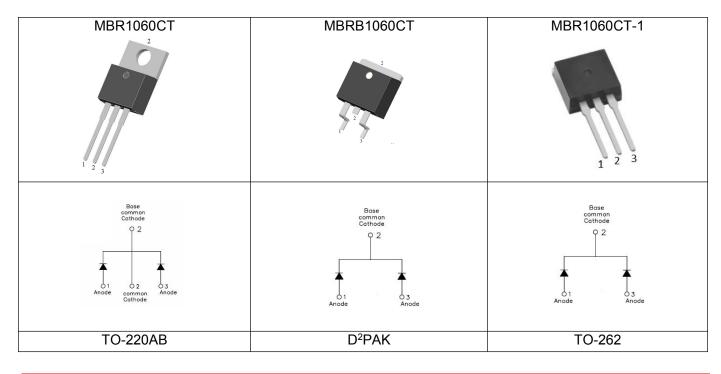
# MBR1060CT/MBRB1060CT/MBR1060CT-1 SCHOTTKY RECTIFIER

## Features

- 150 °C T<sub>J</sub> operation
- Center tap configuration
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

# Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection



# Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	-	60	V
Average Rectified Forward Current	IF (AV)	50% duty cycle @Tc=105°C, rectangular wave form	5(Per Leg) 10(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I <sub>FSM</sub>	8.3ms, Half Sine pulse	125	A

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# **Electrical Characteristics:**

Characteristics	Symbol	Condition	Тур.	Max.	Units
Forward Voltage Drop	V <sub>F1</sub>	@ 5A, Pulse, T <sub>J</sub> = 25 °C	0.65	0.70	V
(Per Leg)*	V <sub>F2</sub>	@ 5A, Pulse, T <sub>J</sub> = 125 °C	0.60	0.65	V
Reverse Current (Per Leg)*	I <sub>R1</sub>	@V <sub>R</sub> = rated V <sub>R</sub> T <sub>J</sub> = 25 °C	0.01	1.0	mA
	I <sub>R2</sub>	$@V_R = rated V_R$ T <sub>J</sub> = 125 °C	3	15	mA
Junction Capacitance(Per Leg)	Ст	@V <sub>R</sub> = 5V, T <sub>C</sub> = 25 °C f <sub>SIG</sub> = 1MHz	170	220	pF
Typical Series Inductance (Per Leg)	Ls	Measured lead to lead 5 mm from package body	8.0	-	nH
Voltage Rate of Change	dv/dt	-	-	10,000	V/μs

\* Pulse width < 300  $\mu s, \ duty \ cycle < 2\%$ 

# **Thermal-Mechanical Specifications:**

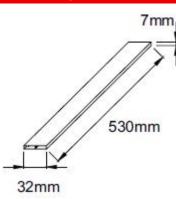
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	TJ	-	-55 to +150	°C
Storage Temperature	T <sub>stg</sub>	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case(Per Leg)	R <sub>0JC</sub>	DC operation	2.0	°C/W
Typical Thermal Resistance, Case to Heat Sink	R <sub>0CS</sub>	Mounting surface, smooth and greased	1.0	°C/W
Case Style	TO-220AB D <sup>2</sup> PAK TO-262			

## **Tube Specification**

Device	Package	Weight	Shipping
MBR1060CT	TO-220AB	1.8g	50pcs / tube
MBRB1060CT	D <sup>2</sup> PAK	1.85g	800pcs / reel
MBR1060CT-1	TO-262	1.85g	50pcs / tube

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

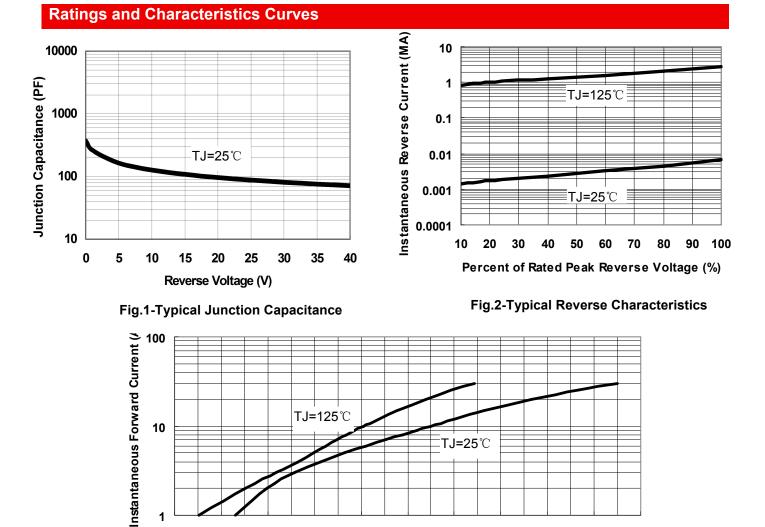
# Tube Specification(TO-220AB/TO-262)





# **MBR1060CT** MBRB1060CT **MBR1060CT-1**

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# **Marking Diagram**

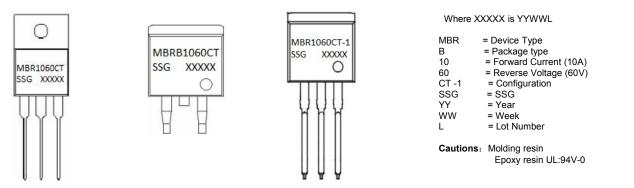
1

0.3

0.4

0.5

0.6



0.7

0.8

Forward Voltage Drop (V) Fig.3-Typical Instantaneous Forward Voltage Characteristics

0.9

1

1.1

1.2

1.3

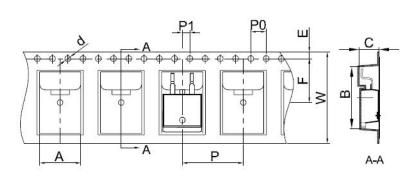
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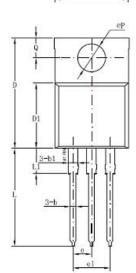
# Carrier Tape Specification D<sup>2</sup>PAK

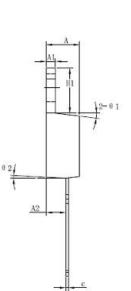


Symbol	Millimet	Millimeters		
Symbol	Min.	Max.		
А	10.70	10.90		
В	16.03	16.23		
С	5.11	5.31		
d	1.45	1.65		
E	1.65	1.85		
F	11.40	11.60		
P0	3.90	4.10		
Р	15.90	16.10		
P1	1.90	2.10		
W	23.90	24.30		

# **Mechanical Dimensions TO-220AB**







Symbol	Millimeters			
	Min.	Typical	Max.	
Α	4.42	4.57	4.72	
A1	1.17	1.27	1.37	
A2	2.52	2.69	2.89	
b	0.71	0.81	0.96	
b1	1.17	1.27	1.37	
C	0.31	0.38	0.61	
D	14.94	15.24	15.54	
D1	8.85	9.00	9.15	
E	10.01	10.16	10.31	
е		2.54		
e1	4.98	5.06	5.18	
H1	6.04	6.24	6.44	
L	12.7	13.56	13.80	
L1	3.56	3.5	3.96	
ΦΡ	3.74	3.84	4.04	
Q	2.54	2.74	2.94	
Θ1		7°		
Θ2		3°		
Θ3		<b>4</b> °		

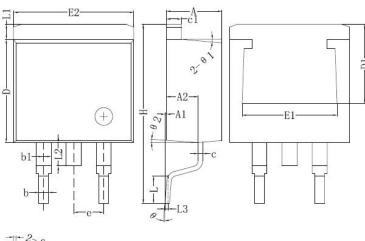


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**Millimeters** 

# Mechanical Dimensions D<sup>2</sup>PAK

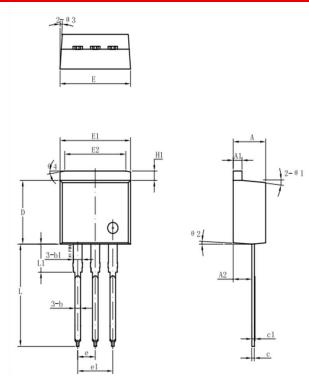


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	Min.	Typical	Max.
Α	4.47	4.70	4.85
A1	0	0.10	0.25
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1	1.17	1.27	1.37
С	0.31	0.38	0.61
c1	1.17	1.27	1.37
D	8.50	8.70	8.90
D1	6.40		
E	10.01	10.16	10.31
E1	7.6		
E2	9.98	10.08	10.31
е		2.54	
Н	14.6	15.1	15.6
L	2.00	2.30	2.74
L1	1.12	1.27	1.42
L2	1.30		2.20
L3		0.25BSC	
е	0	-	8°
e1		5°	
e2		4°	
e3		4°	

Symbol

# 

## **Mechanical Dimensions TO-262**



Symbol	Millimeters			
	Min.	Typical	Max.	
Α	4.55	4.70	4.85	
A1	0	0.10	0.25	
A2	2.59	2.69	2.89	
b	0.71	0.81	0.96	
b1		1.27		
С	0.36	0.38	0.61	
c1	1.17	1.27	1.37	
D	8.55	8.70	8.85	
D1	6.40			
E	10.01	10.16	10.31	
E1	7.6			
E2	9.98	10.08	10.18	
е		2.54		
Н	14.6	15.1	15.6	
L	2.00	2.30	2.70	
L1	1.17	1.27	1.40	
L2			2.20	
L3		0.25BSC		
е	0	-	<b>8°</b>	
e1		5°		
e2		4°		
e3		4°		

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