



# MBR1045CT

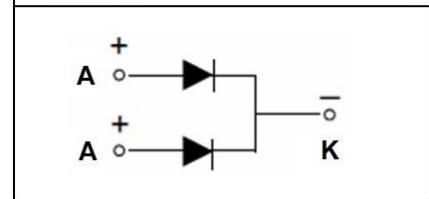
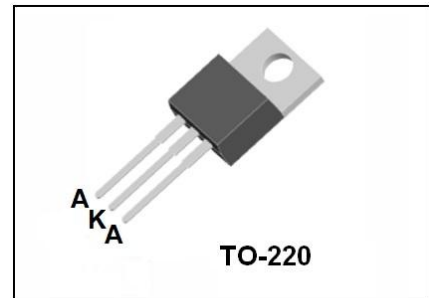
## Dual High Voltage Schottky Rectifier

### ●Features:

- Common Cathode Structure
- Low Power Loss and High Efficiency
- Low Forward Voltage Drop
- High Surge Capability

### ●Application:

- High Frequency Switch
- Free Wheeling, and Polarity Protection Applications



### Absolute Maximum Ratings (Tc=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V <sub>RRM</sub>	Maximum Repetitive Reverse Voltage	45	V
V <sub>R</sub>	Maximum DC Reverse Voltage	45	V
I <sub>F(AV)</sub>	Average Rectified Forward Current, Tc=120°C	5(Per Leg) 10(Per Device)	A
I <sub>FSM</sub>	Peak Forward Surge Current, 8.3ms Half Sine wave	125	A
T <sub>j</sub>	Operating Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-55 to +150	°C

### Thermal Characteristics (Tc=25°C unless otherwise noted)

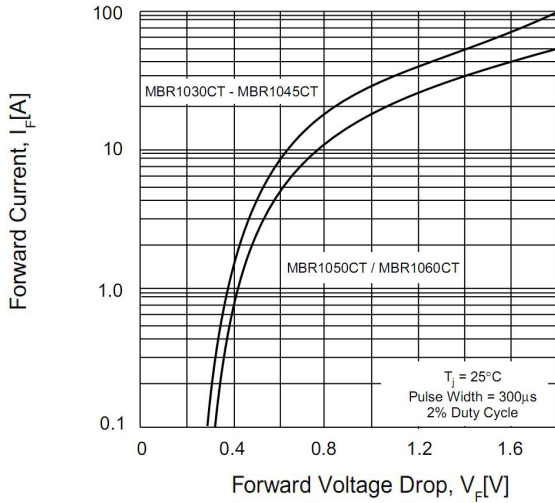
Symbol	Parameter	Max	Unit
R <sub>θJC</sub>	Thermal Resistance, Junction to Case Per Leg	2.5	°C /W
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient Per Leg	105	°C /W

### Electrical Characteristics (Tc=25°C unless otherwise noted)

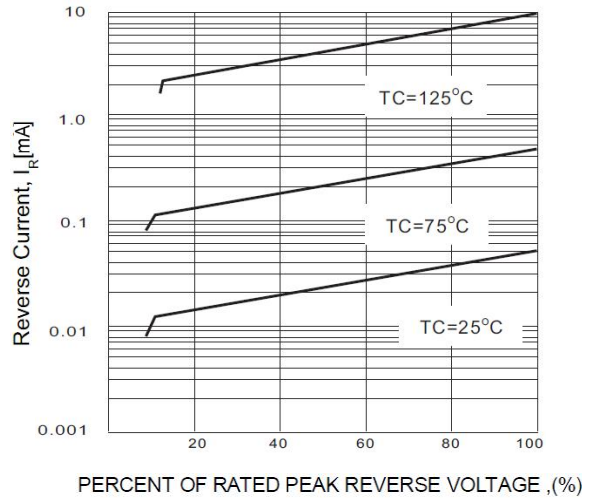
Symbol	Parameter	Test Conditions	Min	Max	Unit
V <sub>RRM</sub>	Maximum Repetitive Reverse Voltage	I <sub>R</sub> =100μA	45		V
I <sub>R</sub>	Reverse Current	V <sub>R</sub> =45V T <sub>C</sub> =25°C V <sub>R</sub> =45V T <sub>C</sub> =125°C		0.1 50	mA
V <sub>F</sub>	Forward Voltage	I <sub>F</sub> =5A T <sub>C</sub> =25°C I <sub>F</sub> =5A T <sub>C</sub> =125°C I <sub>F</sub> =10A T <sub>C</sub> =25°C I <sub>F</sub> =10A T <sub>C</sub> =125°C		0.63 0.58 0.73 0.68	V

### Typical Performance Characteristics

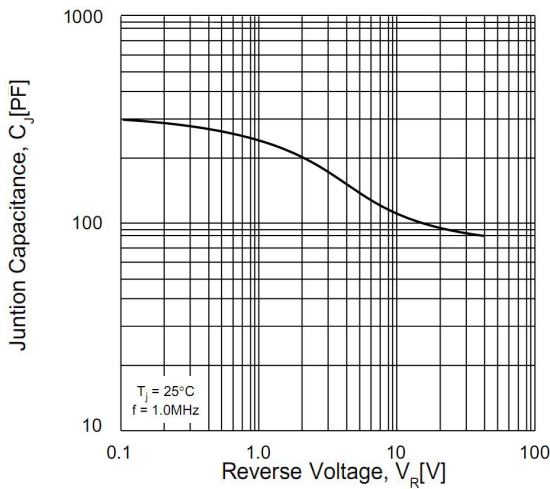
**Figure 1. Forward Current Characteristics**



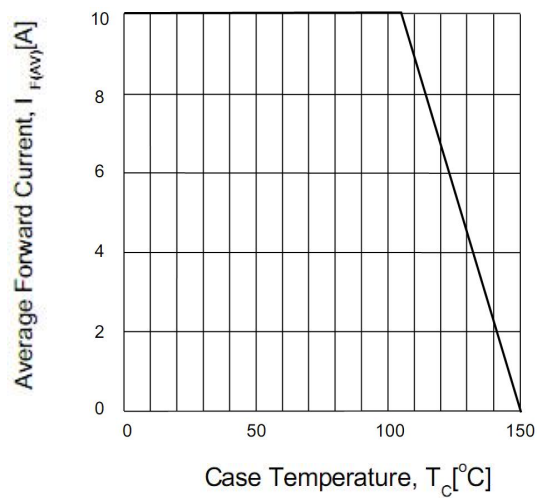
**Figure 2. Reverse Leakage Current**



**Figure 3. Junction Capacitance**



**Figure 4. Power Derating**



**TO-220 MECHANICAL DATA**

UNIT: mm

SYMBOL	min	nom	max	SYMBOL	min	nom	max
A	4.00		4.80	E	9.70		10.70
B	1.15		1.45	e		2.54	
B1	0.90		1.40	F	1.10		1.40
b1	0.65		0.95	L	12.50		14.50
c	0.30		0.50	L1	2.90	3.40	3.90
D	14.40		16.40	Q	2.50		3.10
D1	5.90		6.90	Q1	2.00		3.00
				$\phi P$	3.60		4.00

