45V Trench Schottky Rectifier

Lead Free Package and Finish

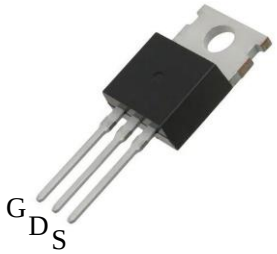
V_{RRM}	IF	V_F
45V	2×15A	0.51V

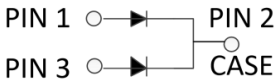
General Features

- Trench Schottky technology
- Lower forward voltage
- Lower power loss,high efficiency
- Softest, fast switching capability
- High surge capability

Applications

- high frequency rectifier of switching mode power supplies
- freewheeling diodes
- DC/DC converters





TO-220

Package No to Scale

Ordering Information

Part Number	Package	Brand
MBR30G45CT	TO-220	

Maximum ratings and electrical characteristics (TA = 25 °C unless otherwise noted)

Parameter	Symbol	Test Condition		Min.	Typ.	Max.	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	I_R =250μA		47	57	-	V
Maximum Average Forward Rectified Current	I_F	-		-	-	15	A
Peak Forward Surge Current	I_{FSM}	1/2 60hz		-	-	200	A
Maximum reverse current per diode at working peak reverse voltage	I_R	T_A=25℃	V_R =45V	-	5	20	uA
		T_A=125℃		-	5	20	mA
Static Forward Voltage	V_F	T_A=25℃	I_F=1A	-	0.37	0.45	V
			I_F=10A	-	0.48	0.53	V
			I_F=15A	-	0.51	0.58	V
		T_A=125℃	I_F=1A	-	0.24	0.30	V
			I_F=10A	-	0.39	0.45	V
			I_F=15A	-	0.45	0.52	V
Typical junction capacitance	C_j	VR=4V,f=1MHz		1300			pF
Typical Thermal Resistance	$R_{\theta JC}$	TO-220		2			°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55℃ to 150℃ Max					°C

Caution: Stresses greater than those listed in the "Absolute Maximum Ratings" may cause permanent damage to the device.

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RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)

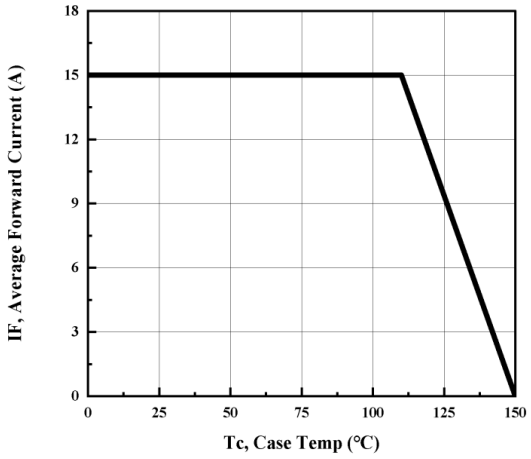

Fig. 1: Forward Current Derating Curve

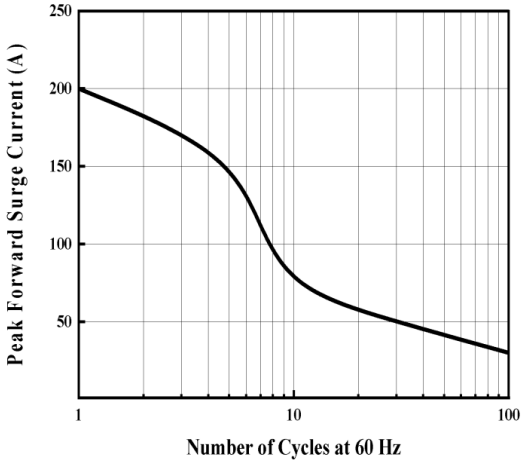

Fig. 2: Maximum Repetitive Surge Current

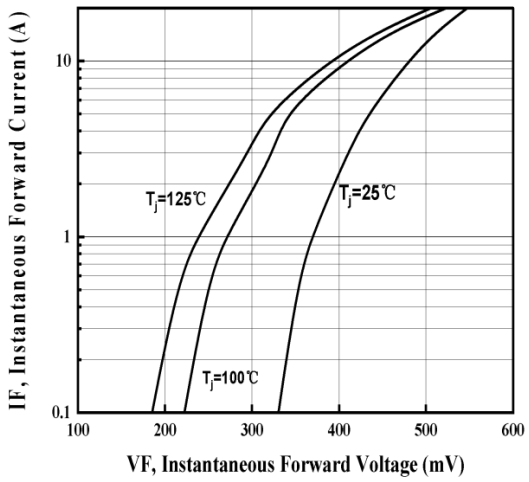

Fig. 3: Typical Forward Voltage

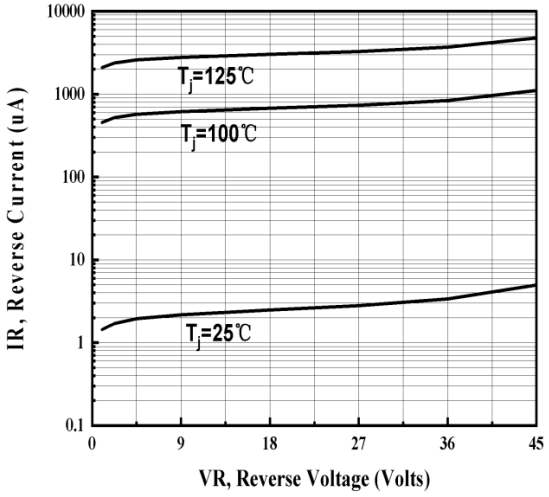

Fig. 4: Typical Reverse Current

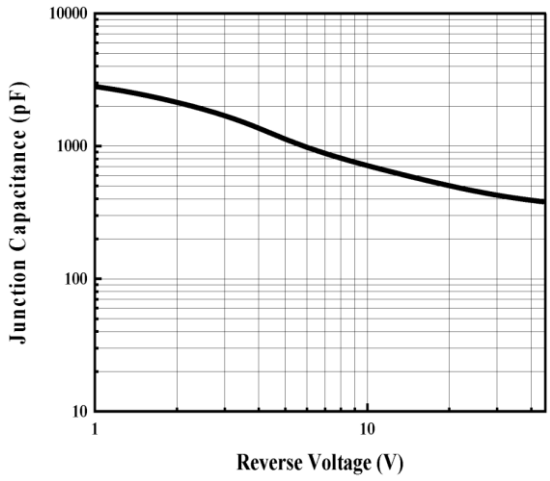

Fig. 5: Typical Junction Capacitance

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   b. support or sustain life,
   c. whose failure to perform when properly used in accordance with instructions for used provided in the labeling, can be reasonably expected to result in significant injury to the user.
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