

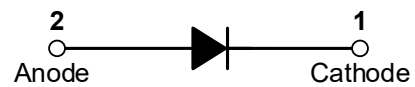
5A,45V Schottky Barrier Rectifier

Features

- Low forward voltage, low power loss
- Low leakage current
- High surge current
- Plastic package has underwriters Laboratory
Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21



ITO-220AC



Applications

- SMPS
- Adapter
- Server Power

Mechanical Data

- Case: Epoxy, Molded
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 50 units per plastic tube

Maximum Ratings & Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	MBRF545	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	45	V
Maximum RMS voltage	V _{RMS}	32	V
Maximum DC blocking voltage	V _{DC}	45	V
Maximum average forward	I _{F(AV)}	5	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diodes	I _{FSM}	120	A
Operating junction temperature range	T _J	-55 to +150	°C
Storage temperature range	T _{STG}	-55 to +150	°C

Electrical Specifications ($T_A=25^{\circ}\text{C}$ unless otherwise noted)					
Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward drop voltage ^(Note1)	V_F	$I_F=5\text{A}, T_J=25^{\circ}\text{C}$	0.54	0.58	V
		$I_F=5\text{A}, T_J=125^{\circ}\text{C}$	-	0.51	
Reverse leakage current @ V_R ^(Note2)	I_R	$T_J=25^{\circ}\text{C}$	-	100	μA
		$T_J=100^{\circ}\text{C}$	-	10	mA

Thermal-Mechanical Specifications ($T_A=25^{\circ}\text{C}$ unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	5.0	$^{\circ}\text{C}/\text{W}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	62.5	$^{\circ}\text{C}/\text{W}$

Note:

1. Pulse test with $PW=0.3\text{ms}$, duty cycle=2%
2. Pulse test with $PW=30\text{ms}$

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

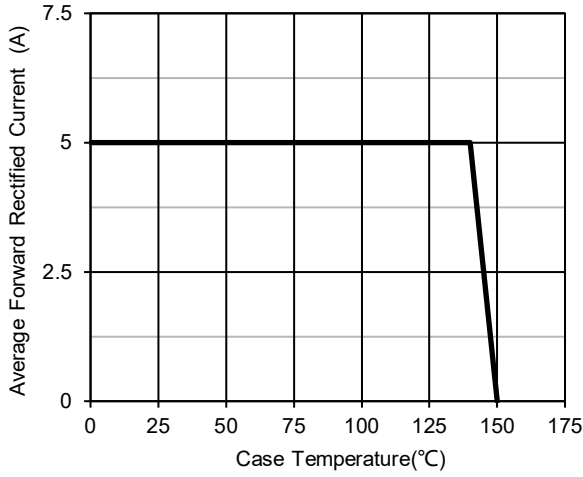


Fig.1 – Forward Current Derating Curve

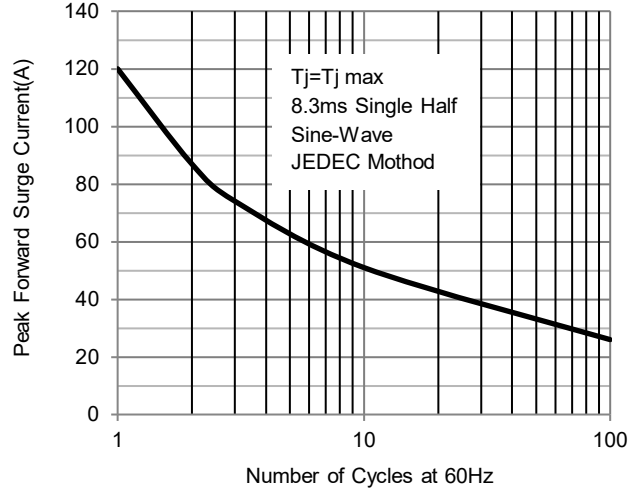


Fig.2 – Maximum Non-Repetitive Surge Current

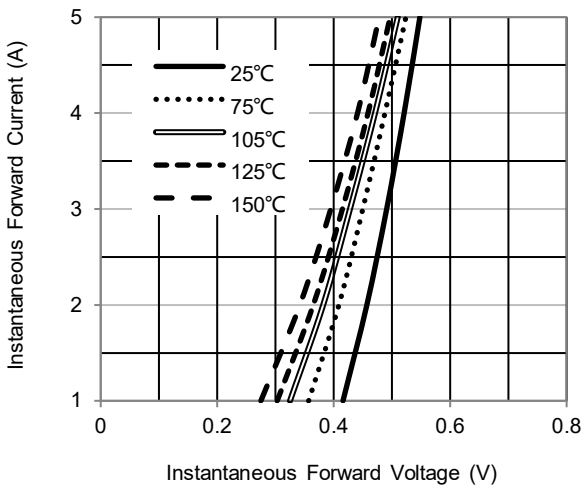


Fig.3 – Typical Forward Voltage Characteristics

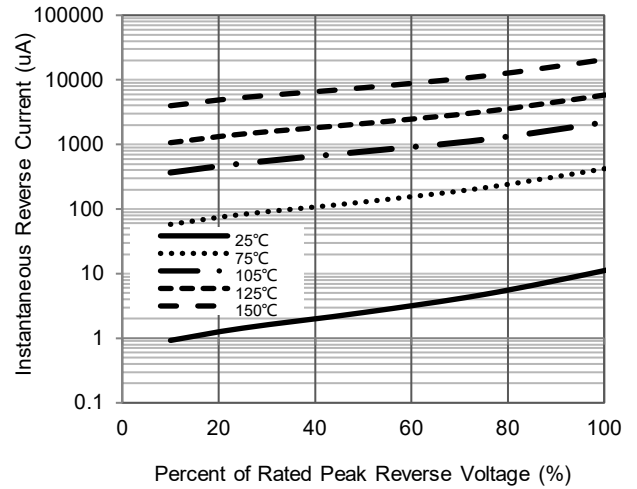


Fig.4 – Typical Reverse Current Characteristics

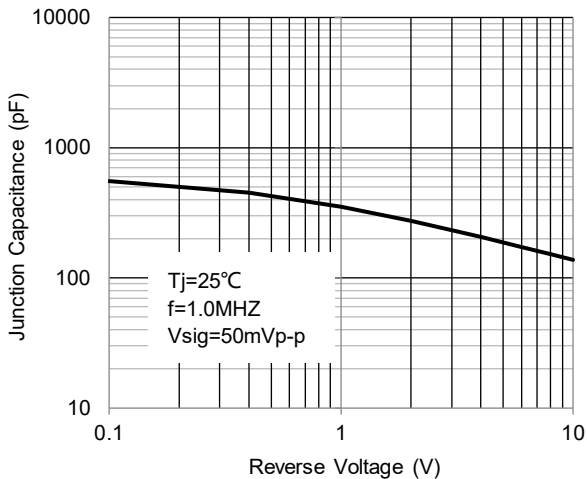
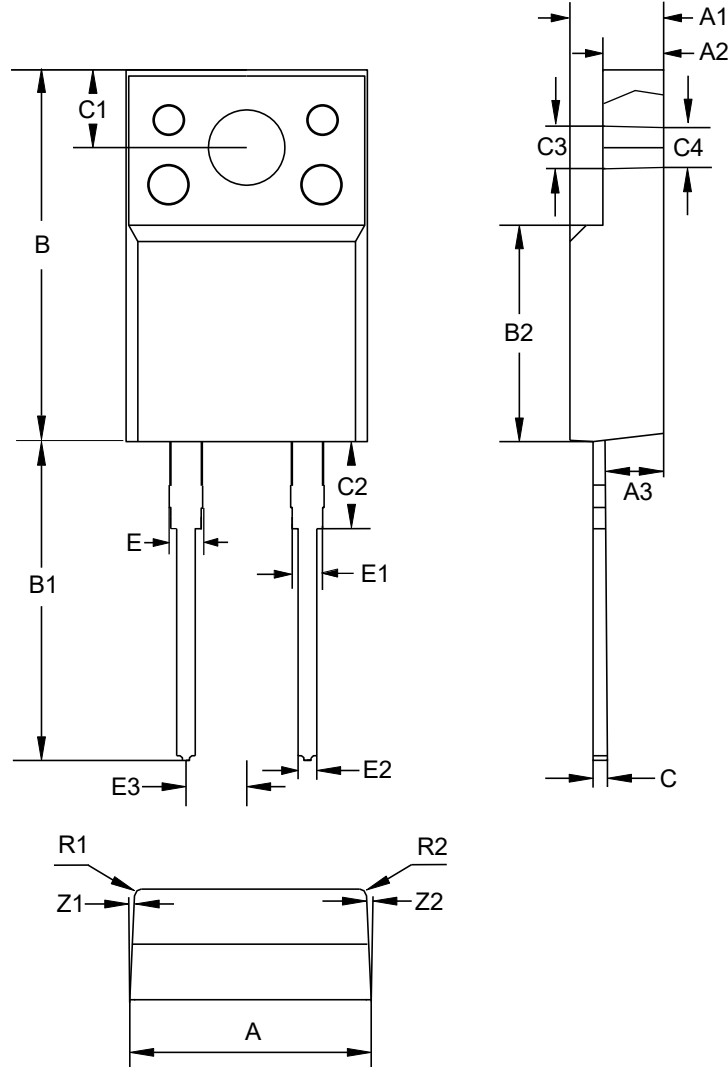


Fig.5 – Typical Junction Capacitance

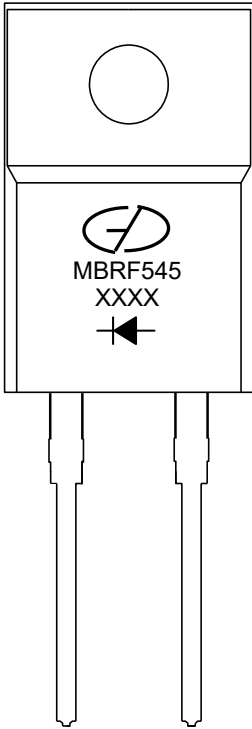
Package Outline Dimensions (Unit: millimeters)



ITO-220AC



ITO-220AC							
	Min.	Nom.	Max.		Min.	Nom.	Max.
A	9.9	10.1	10.3	C3	3.0	3.2	3.4
A1	4.6	4.7	4.8	C4	3.0		
A2	2.44	2.54	2.64	E	1.15	1.35	1.55
A3	2.25	2.45	2.65	E1	1.17	1.27	1.37
B	15.5	15.8	16.1	E2	0.7	0.8	0.9
B1	13.25	13.55	13.85	E3	2.44	2.54	2.64
B2	9.0	9.2	9.4	R1		0.3	
C	0.5	0.6	0.7	R2		0.3	
C1	3.1	3.3	3.5	Z1		3°	
C2	3.0	3.3	3.6	Z2		3°	

Marking Outline



1. Logo Mark: 
2. Part Name: MBRF545
3. Date Code: XXXX
4. Polarity : 

Revision History

Document Version	Date of release	Description of changes
Rev.A	2015.12.15	Released Datasheet
Rev.B	2021.01.22	Modify document format
Rev.C	2022.04.29	Modify ratings and characteristics curves

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