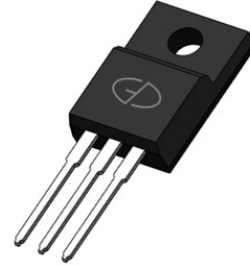


## 40A,100V Schottky Barrier Rectifier

### Features

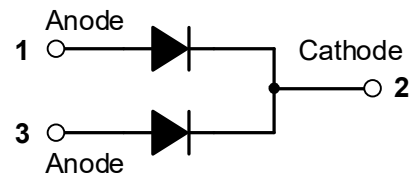
- Low forward voltage, low power loss
- Low leakage current
- High surge current
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21



ITO-220AB

### 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 (TA=25°C unless otherwise noted)

Parameter	Symbol	MBRF40100CT	Unit
Maximum repetitive peak reverse voltage	VRRM	100	V
Maximum RMS voltage	VRMS	70	V
Maximum DC blocking voltage	VDC	100	V
Maximum average forward	IF(AV)	40	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	IFSM	200	A
Operating junction temperature range	TJ	-55 to +150	°C
Storage temperature range	TSTG	-55 to +150	°C

<b>Electrical Specifications</b> ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)					
Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward drop voltage <sup>(Note1)</sup>	V <sub>F</sub>	I <sub>F</sub> =20A, T <sub>J</sub> =25°C	0.71	0.76	V
		I <sub>F</sub> =20A, T <sub>J</sub> =125°C	-	0.69	
		I <sub>F</sub> =40A, T <sub>J</sub> =25°C	-	-	
		I <sub>F</sub> =40A, T <sub>J</sub> =125°C	-	-	
Reverse leakage current @V <sub>R</sub> <sup>(Note2)</sup>	I <sub>R</sub>	T <sub>J</sub> =25°C	-	100	uA
		T <sub>J</sub> =100°C	-	10	mA

<b>Thermal-Mechanical Specifications</b> ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	4.0	°C /W
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	62.5	°C /W

Note:

1. Pulse test with PW=0.3ms, duty cycle=2%
2. Pulse test with PW=30ms

## Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

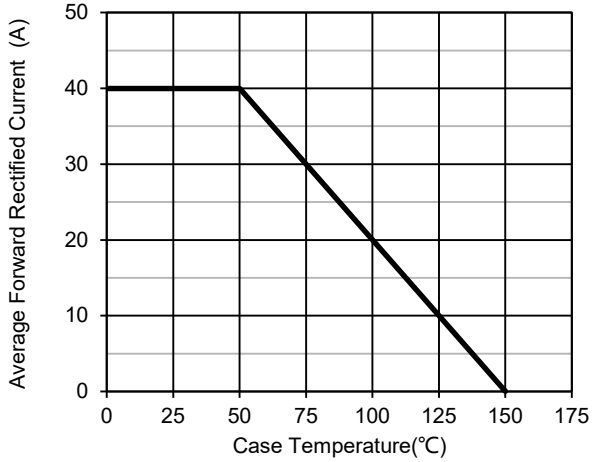


Fig.1 – Forward Current Derating Curve

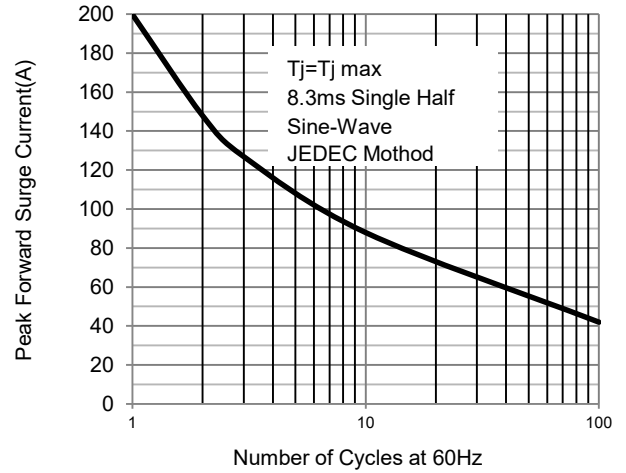


Fig.2 – Maximum Non-Repetitive Surge Current

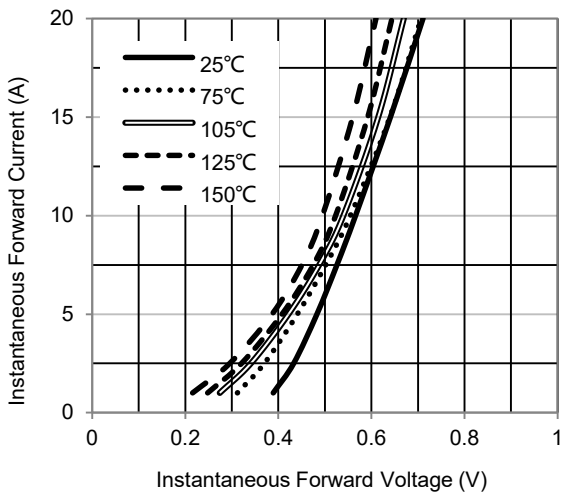


Fig.3 – Typical Forward Voltage Characteristics

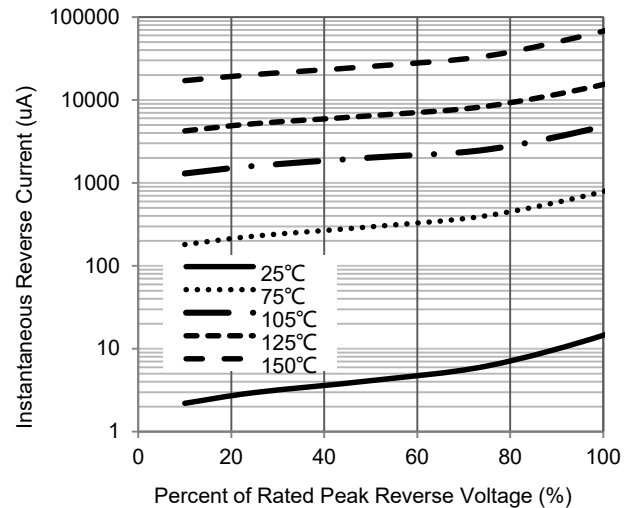


Fig.4 – Typical Reverse Current Characteristics

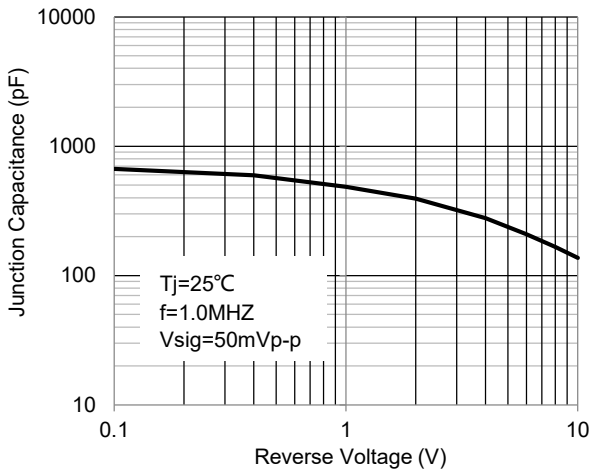
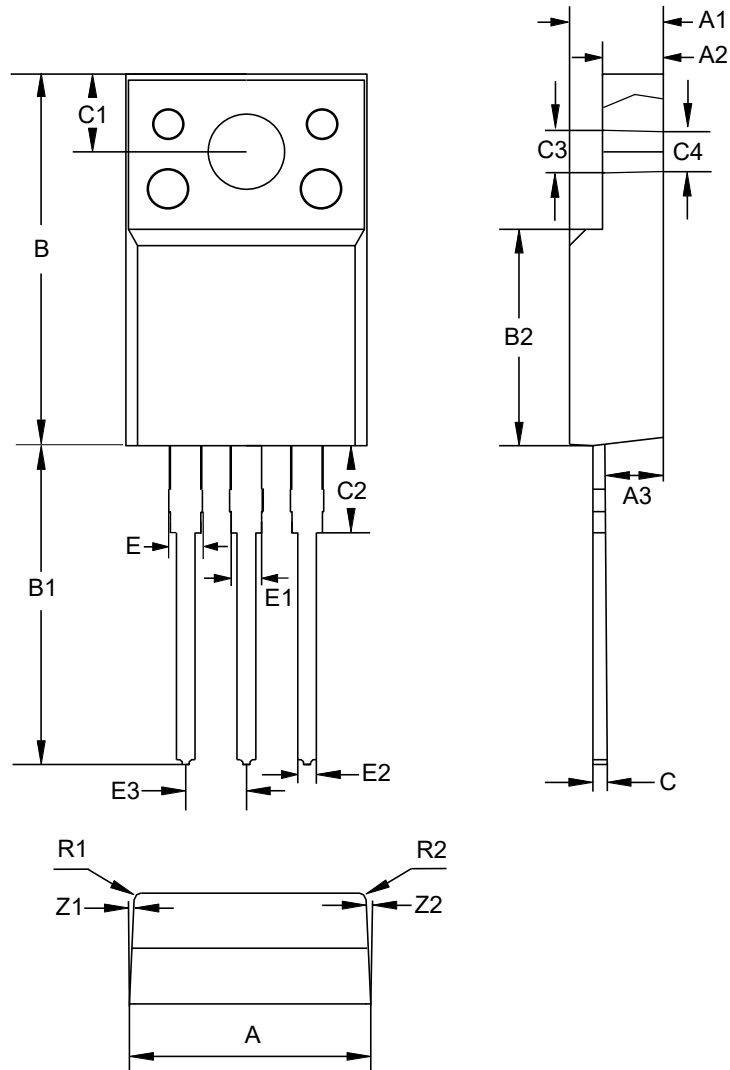


Fig.5 – Typical Junction Capacitance

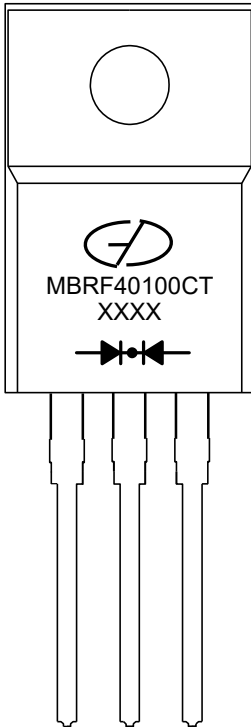
## Package Outline Dimensions (Unit: millimeters)

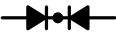
### ITO-220AB



ITO-220AB							
	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: MBRF40100CT
3. Date Code: XXXX
4. Polarity : 

## Revision History

Document Version	Date of release	Description of changes
Rev.A	2014.11.15	Released Datasheet
Rev.B	2021.01.21	Modify document format
Rev.C	2022.04.29	Modify ratings and characteristics curves

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