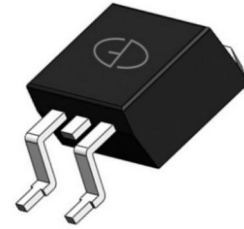


30A,45V Schottky Barrier Rectifier

Features

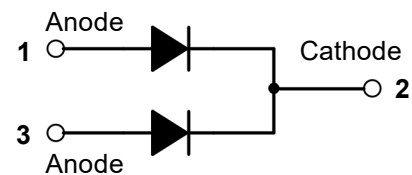
- Low forward voltage, low power loss
- Low leakage current
- High surge current
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21



TO-263AB(D²PAK)

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 or tape reel packing 800/reel

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

Parameter	Symbol	MBRB3045CT	Unit
Maximum repetitive peak reverse voltage	VRRM	45	V
Maximum RMS voltage	VRMS	32	V
Maximum DC blocking voltage	VDC	45	V
Maximum average forward	IF(AV)	30	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
Power dissipation, on infinite heat sink at TL=75°C	Pd	25	W

Electrical Specifications (TA=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward drop voltage (Note1)	VF	IF=15A, TJ =25°C	0.65	0.71	V
		IF=15A, TJ =125°C	-	0.64	
		IF=30A, TJ =25°C	-	-	
		IF=30A, TJ =125°C	-	-	
Reverse leakage current @VR (Note2)	IR	TJ =25°C	-	200	uA
		TJ =100°C	-	15	mA

Thermal-Mechanical Specifications (TA=25°C unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Case	RθJC	2.0	°C/W
Thermal Resistance, Junction to Ambient	RθJA	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)

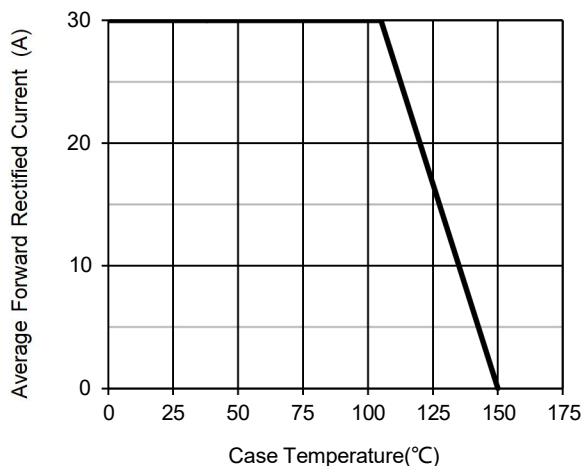


Fig.1 – Forward Current Derating Curve

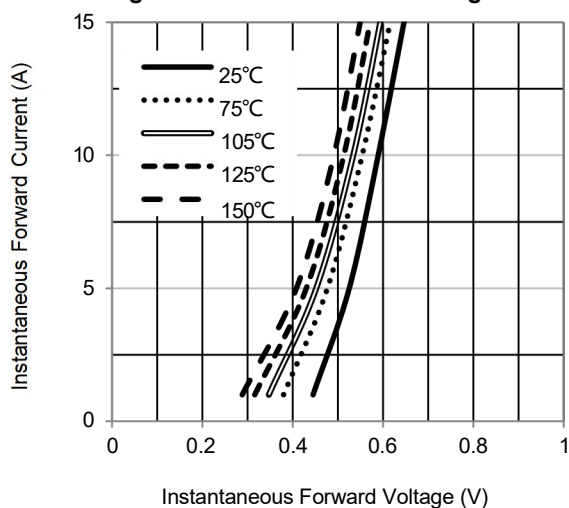


Fig.3 – Typical Forward Voltage Characteristics

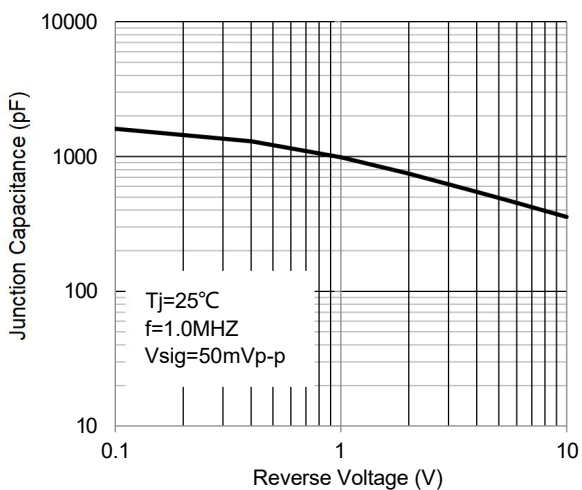


Fig.5 – Typical Junction Capacitance

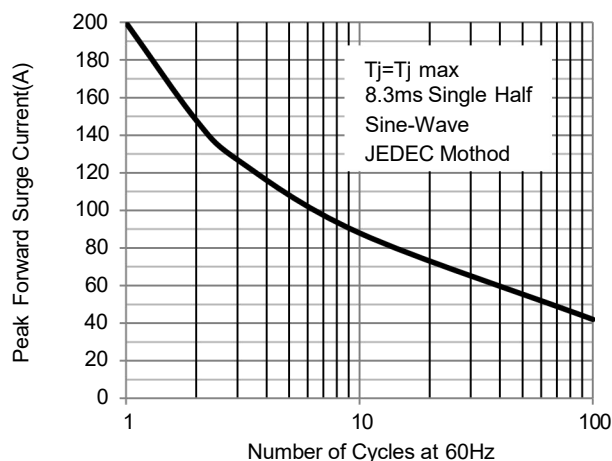


Fig.2 – Maximum Non-Repetitive Surge Current

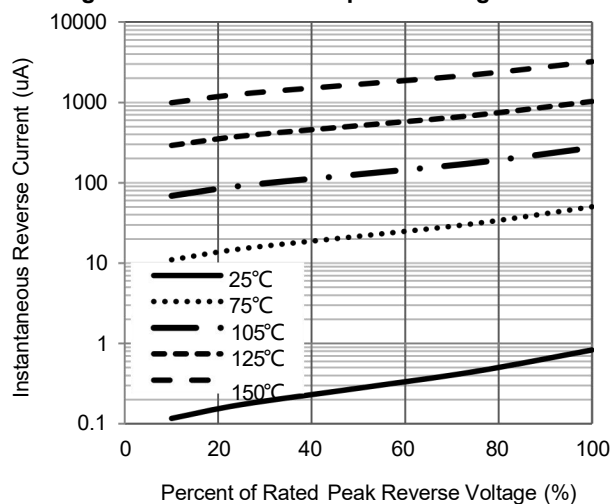
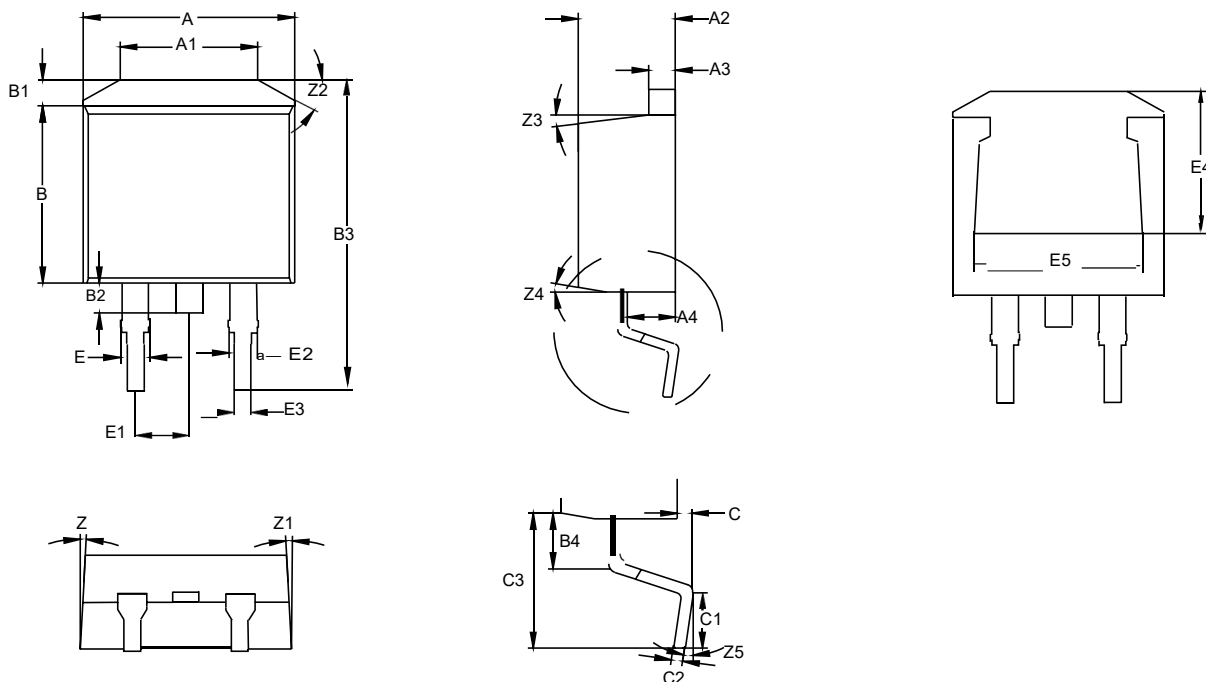


Fig.4 – Typical Reverse Current Characteristics

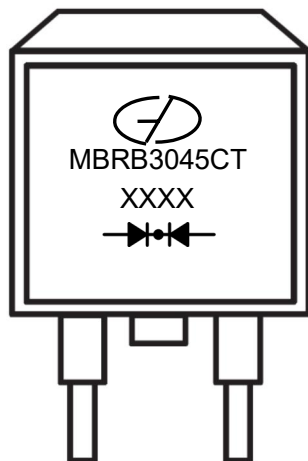
Package Outline Dimensions (Unit: millimeters)

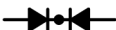
TO-263AB



TO-263AB							
	Min.	Nom.	Max.		Min.	Nom.	Max.
A	9.8	10	10.2	C3	5	5.3	5.6
A1	6.5			E	1.17	1.37	1.57
A2	4.4	4.6	4.8	E1	2.44	2.54	2.64
A3	1.17	1.27	1.37	E2	1.17	1.27	1.37
A4	2.37	2.67	2.97	E3	0.7	0.8	0.9
B	8.5	8.7	8.9	E4	6.47	6.67	6.87
B1	1.07	1.27	1.47	E5	8.3	8.5	8.7
B2	1.2	1.5	1.8	Z		3°	
B3	15	15.3	15.6	Z1		3°	
B4	1.8	2	2.2	Z2		30°	
C	0		0.25	Z3		7°	
C1	2.34	2.54	2.74	Z4		7°	
C2	0.3	0.4	0.5	Z5	-4°		4°

Marking Outline



1. Logo Mark: 
2. Part Name: MBRB3045CT
3. Date Code: XXXX
4. Polarity : 

Revision History

Document Version	Date of release	Description of changes
Rev.A	2013.12.15	Released Datasheet
Rev.B	2021.01.20	Modify document format
Rev.C	2022.04.29	Modify ratings and characteristics curves
Rev.D	2025.08.20	Add Maximum Ratings item (Pd)

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