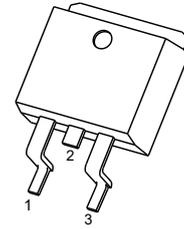


30A,45V Schottky Barrier Rectifier

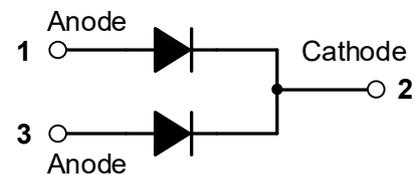
Features

- 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
- AEC-Q 101 qualified (Automotive grade with suffix " Q ")
- Expsemi electronics


TO-263

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 (T_A=25°C unless otherwise noted)

Parameter	Symbol	MBRB1545CTQ	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)}	30	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	275	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 =15A, T _J =25°C	0.5	0.55	V
		I _F =15A, T _J =125°C	-	0.48	
		I _F =30A, T _J =25°C	-	-	
		I _F =30A, T _J =125°C	-	-	
Reverse leakage current @V _R (Note2)	I _R	T _J =25°C	40	100	uA
		T _J =100°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 _{θJC}	2.0	°C/W
Thermal Resistance, Junction to Ambient	R _{θJA}	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)

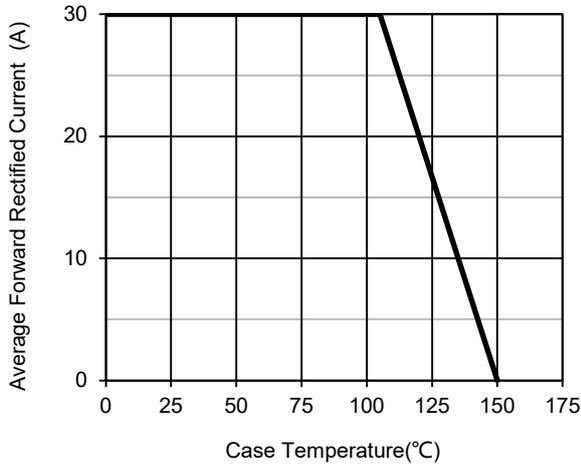


Fig.1 – Forward Current Derating Curve

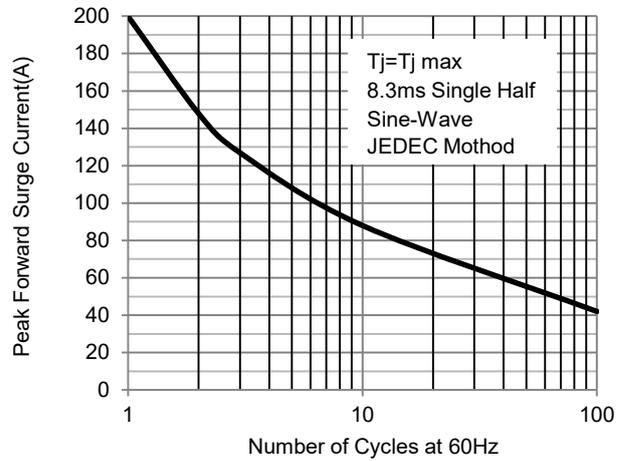


Fig.2 – Maximum Non-Repetitive Surge Current

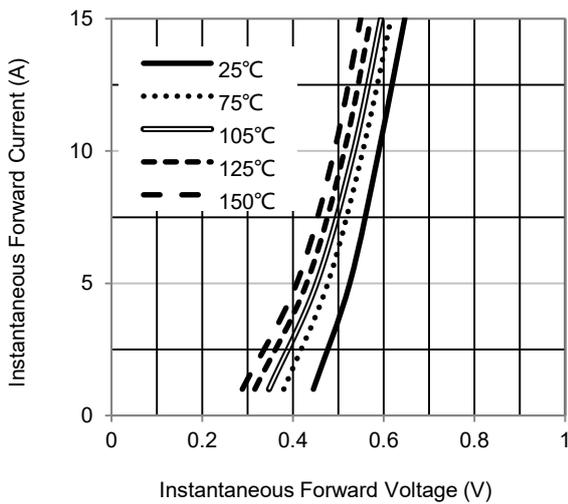


Fig.3 – Typical Forward Voltage Characteristics

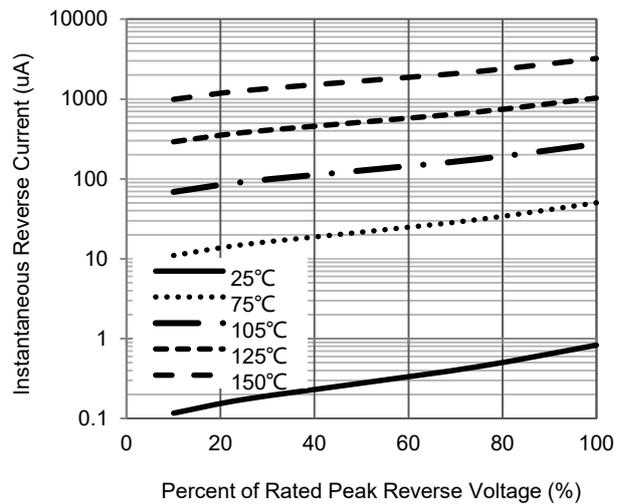


Fig.4 – Typical Reverse Current Characteristics

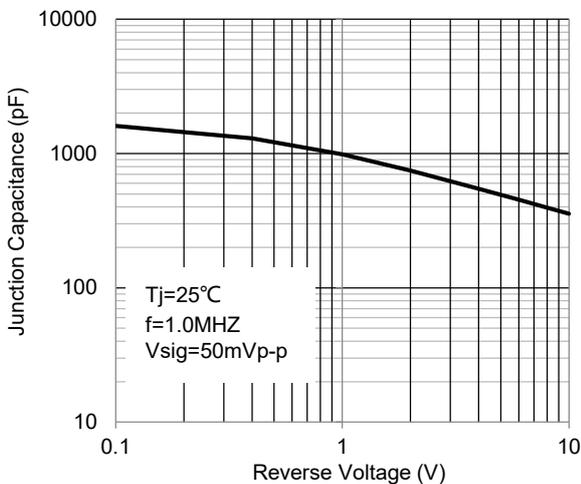
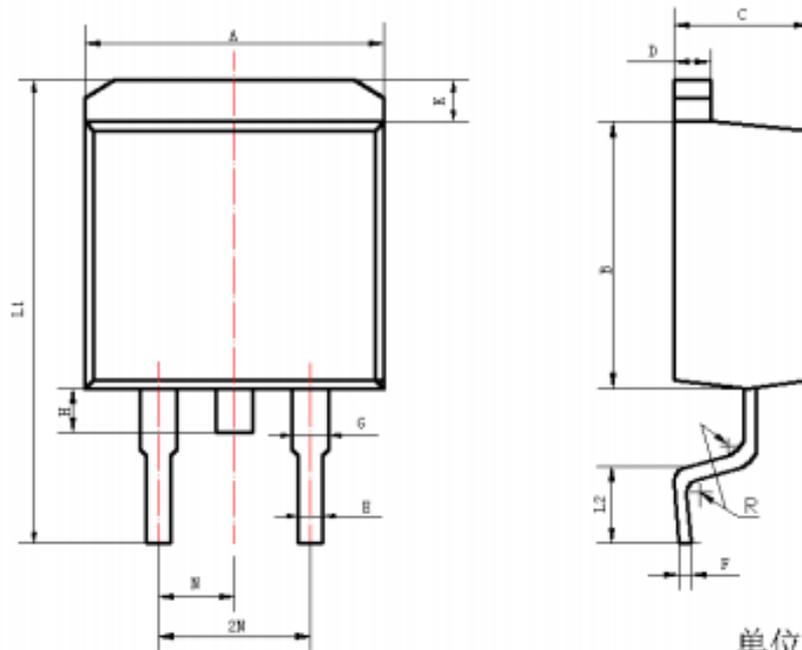


Fig.5 – Typical Junction Capacitance

Package Outline Dimensions (Unit: millimeters)

T0-263 外形图



单位: mm

项目	规范(mm)	
	Min	Max
A	9.90	10.30
B	8.40	8.80
C	4.50	4.90
D	1.17	1.37
E	0.71	0.91
F	0.28	0.48
G	1.07	1.47
H	1.30	1.80
K	0.97	1.37
L1	15.50	16.30
L2	3.20	3.80
R	0.4	
N	2.39	2.69