

■ **FEATURES**

- High frequency operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

■ **TYPICAL APPLICATIONS**

Typical applications are in switching power supplies, converters, freewheeling diodes, and reverse battery protection.

■ **MECHANICAL DATA**

- **Package:** TO-263
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

■ **MAXIMUM RATINGS** ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBRB10100CT	MBRB10150CT	MBRB10200CT
Device marking code			MBRB10100CT	MBRB10150CT	MBRB10200CT
Repetitive Peak Reverse Voltage	VRRM	V	100	150	200
Average Rectified Output Current @60Hz sine wave, R-load, $T_a=25^\circ\text{C}$	IO	A		10	
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, $T_a=25^\circ\text{C}$	IFSM	A		120	
Current Squared Time @1msst<8.3ms $T_j=25^\circ\text{C}$	I^2t	A ² s		60	
Storage Temperature	Tstg	°C		-55 ~ +175	
Junction Temperature	Tj	°C		-55 ~ +175	

■ **ELECTRICAL CHARACTERISTICS** ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBRB10100CT	MBRB10150CT	MBRB10200CT
Maximum instantaneous forward voltage drop per diode	VFM	V	IFM=5.0A	0.8	0.85	0.9
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	VRM=VRRM $T_a=25^\circ\text{C}$	0.1		
	I _{RRM2}		VRM=VRRM $T_a=125^\circ\text{C}$	20		

■ **THERMAL CHARACTERISTICS** ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBRB10100CT	MBRB10150CT	MBRB10200CT
Thermal Resistance Between junction and case	R _{θJ-C}	°C/W	2.0		

■ **PACKAGING INFORMATION**

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBRB10100CT THRU MBRB10200CT	Approximate 1.43	50	2000	8000	Tube
MBRB10100CT THRU MBRB10200CT	Approximate 1.43	1000	2000	10000	Reel

■ **CHARACTERISTICS (TYPICAL)**

FIG1: I_o -Tc Curve

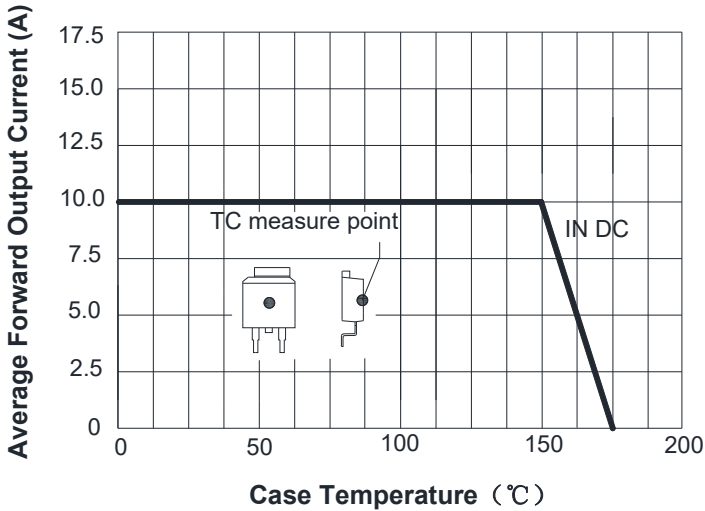


FIG2: Surge Forward Current Capability

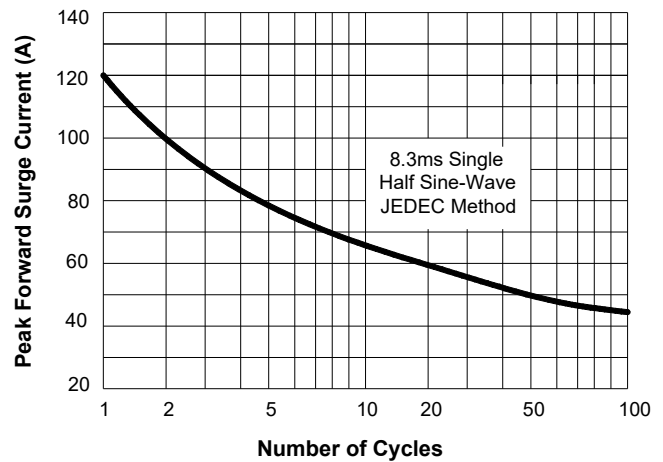


FIG3: Forward Voltage

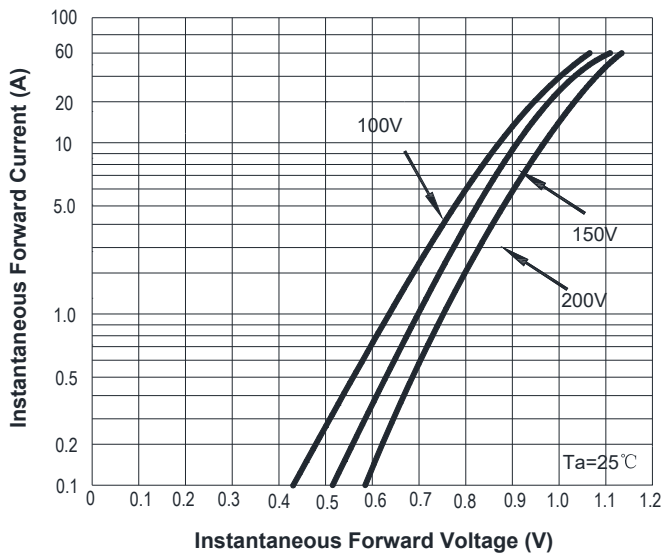
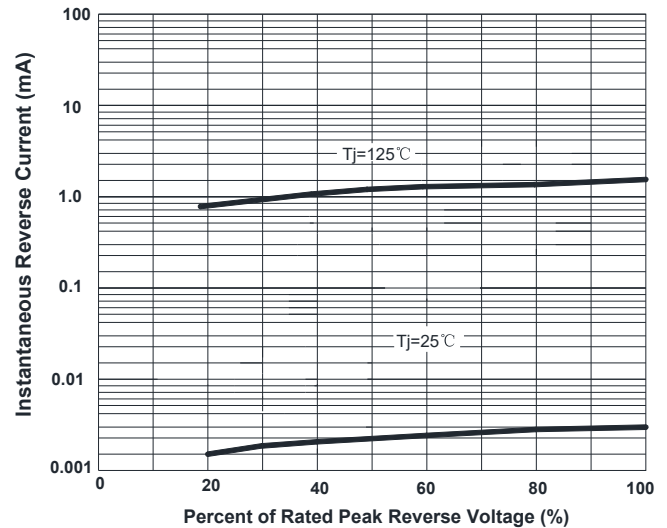
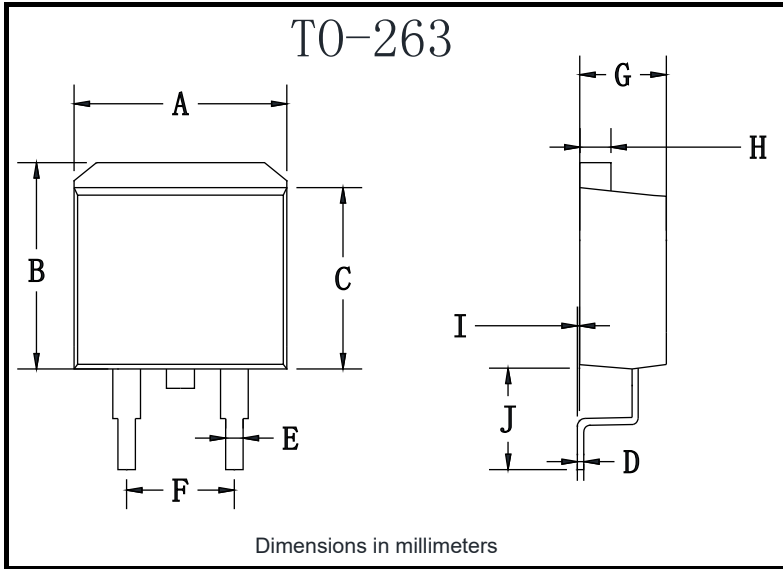


FIG4: Instantaneous Reverse Characteristics



■ **OUTLINE DIMENSIONS**



TO-263		
Dim	Min	Max
A	9.5	11.5
B	9.7	10.5
C	8.4	9.0
D	0.28	0.64
E	0.68	0.94
F	4.55	5.6
G	4.04	5.10
H	1.14	1.4
I	0	0.2
J	4.9	6.05