

■ **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	MBRBL10100CT
Device marking code			MBRBL10100CT
Repetitive Peak Reverse Voltage	$V_{RRM}$	V	100
Average Rectified Output Current @60Hz sine wave, R-load, $T_c=114^\circ\text{C}$	$I_o$	A	10
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, $T_a=25^\circ\text{C}$	$I_{FSM}$	A	100
Current Squared Time @1ms≤t≤8.3ms $T_j=25^\circ\text{C}$	$I^2t$	A <sup>2</sup> s	41
Storage Temperature	$T_{stg}$	°C	-55 ~ +150
Junction Temperature	$T_j$	°C	-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBRBL10100CT
Maximum instantaneous forward voltage drop per diode	$V_{FM}$	V	$I_{FM}=5.0\text{A}$	0.72
Maximum DC reverse current at rated DC blocking voltage per diode	$I_{RRM1}$	mA	$V_{RM}=V_{RRM}$ $T_a=25^\circ\text{C}$	0.1
	$I_{RRM2}$		$V_{RM}=V_{RRM}$ $T_a=100^\circ\text{C}$	20

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

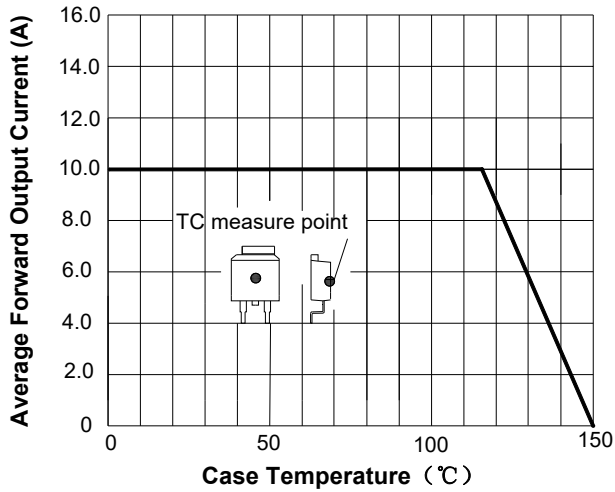
PARAMETER	SYMBOL	UNIT	MBRBL10100CT
Thermal Resistance Between junction and case	$R_{\theta-j-c}$	°C/W	2.0

■ **PACKAGING INFORMATION**

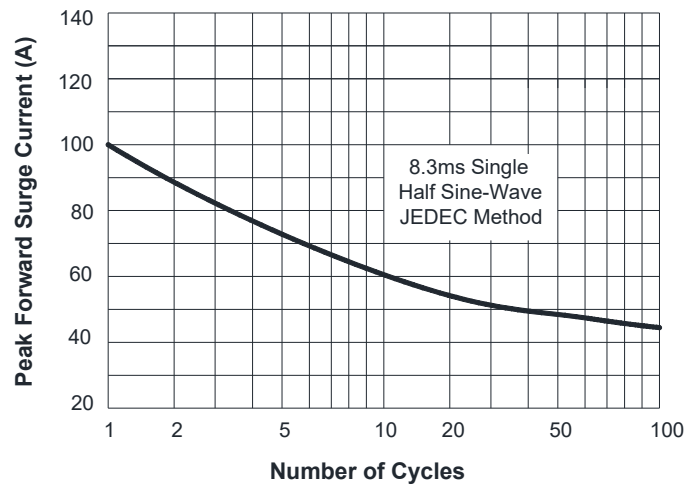
PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBRBL10100CT	Approximate 1.9	50	1000	5000	Tube

■ **CHARACTERISTICS (TYPICAL)**

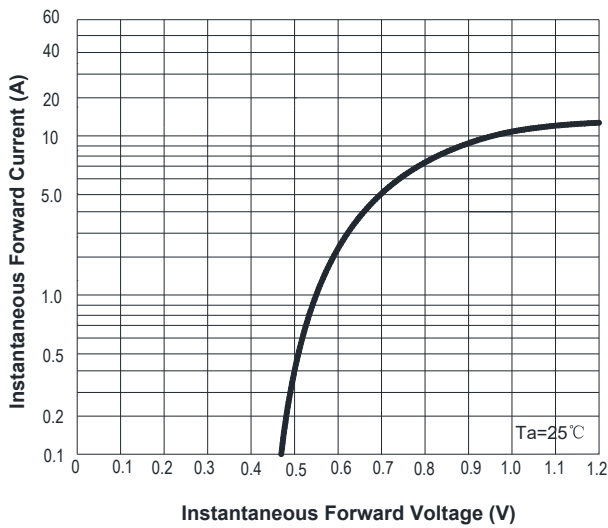
**FIG1: I<sub>o</sub> -T<sub>c</sub> Curve**



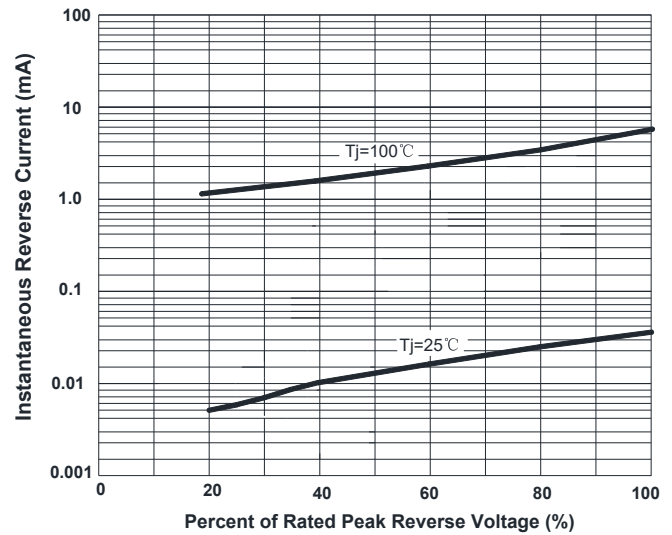
**FIG2: Surge Forward Current Capability**



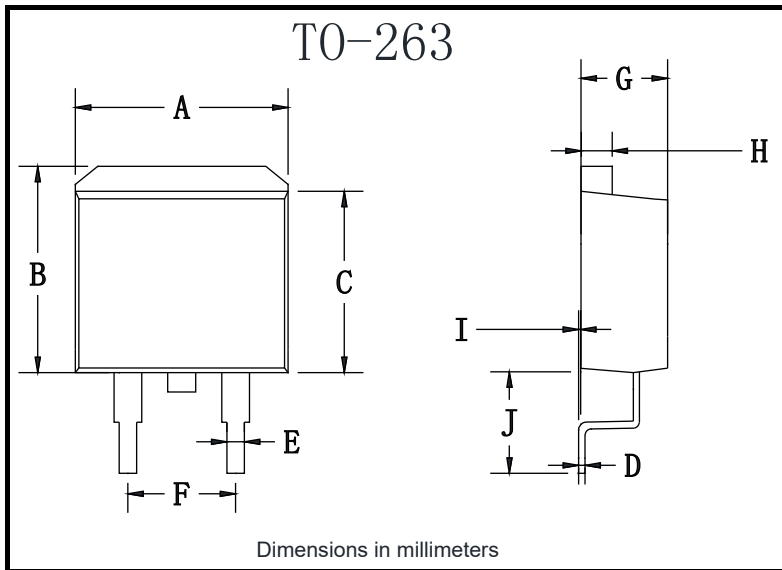
**FIG3: Forward Voltage**



**FIG4: Typical 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