

■ **FEATURES**

- High frequency operation
- Low forward voltage drop
- 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	MBRBL30100CT
Device marking code			MBRBL30100CT
Repetitive Peak Reverse Voltage	VRRM	V	100
Average Rectified Output Current @60Hz sine wave, R-load, $T_a=25^\circ\text{C}$	I_O	A	30
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, $T_a=25^\circ\text{C}$	IFSM	A	200
Current Squared Time @1ms≤t<8.3ms $T_j=25^\circ\text{C}$	I^2t	A ² s	167
Storage Temperature	Tstg	°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	MBRBL30100CT
Maximum instantaneous forward voltage drop per diode	VFM	V	$I_{FM}=15.0A$	0.72
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	$V_{RM}=V_{RRM}$ $T_a=25$	0.1
	I _{RRM2}		$V_{RM}=V_{RRM}$ $T_a=100$	20

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

PARAMETER	SYMBOL	UNIT	MBRBL30100CT	
Thermal Resistance	Between junction and ambient	$R_{\theta J-A}$	$^{\circ}\text{C}/W$	50.0
	Between junction and case	$R_{\theta J-C}$	$^{\circ}\text{C}/W$	4.0

■ **PACKAGING INFORMATION**

PREFERRED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBRBL30100CT	Approximate 1.43	50	2000	8000	Tube
MBRBL30100CT	Approximate 1.43	1000	2000	10000	Reel

■ **CHARACTERISTICS (TYPICAL)**

FIG1: I_{FO} -Tc Curve

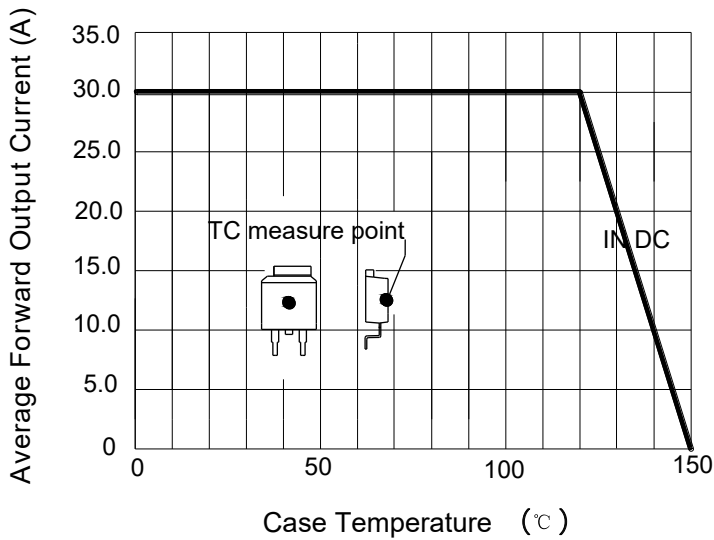


FIG2: Surge Forward Current Capability

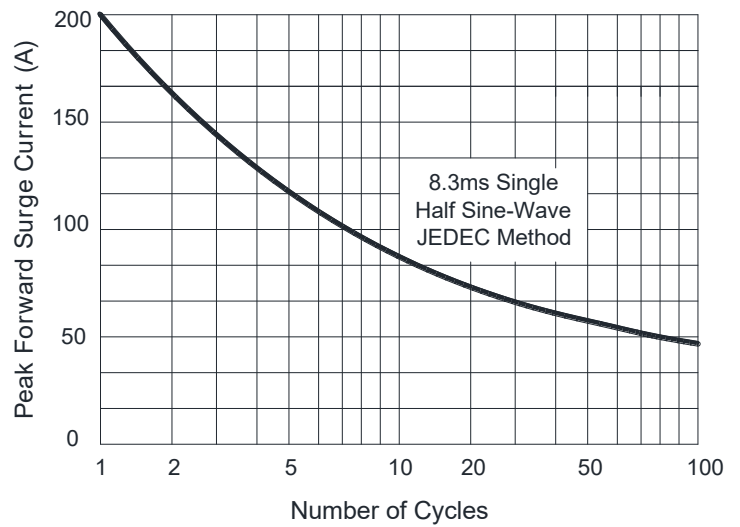


FIG3: Forward Voltage

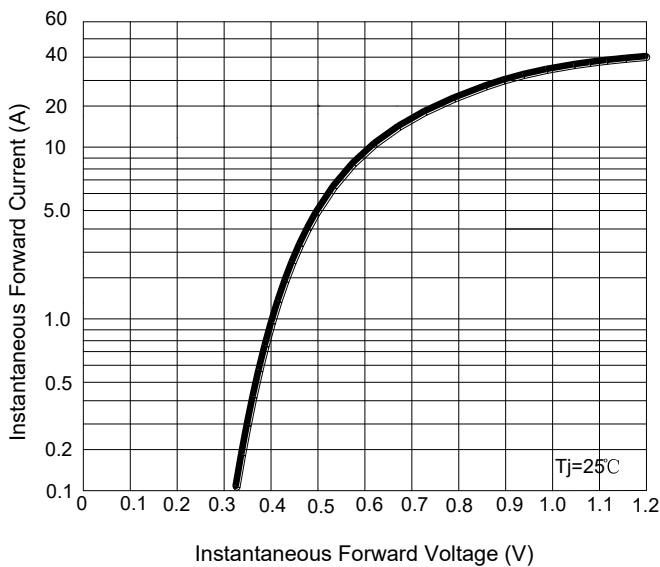
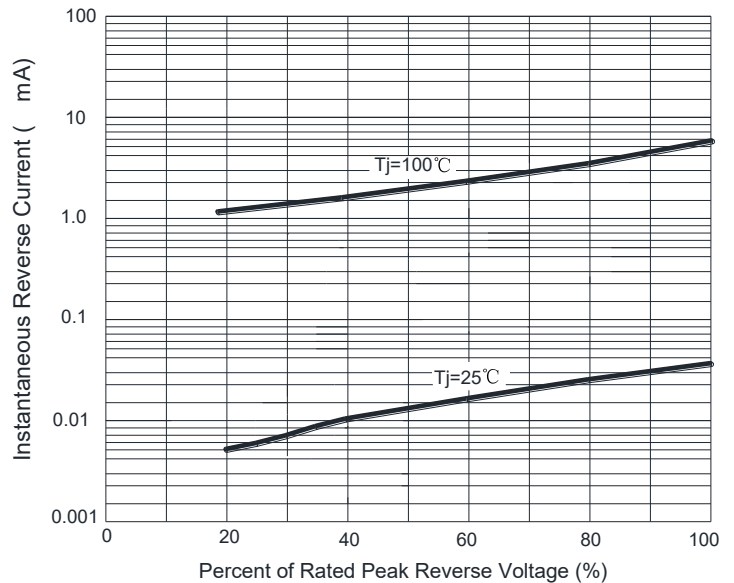
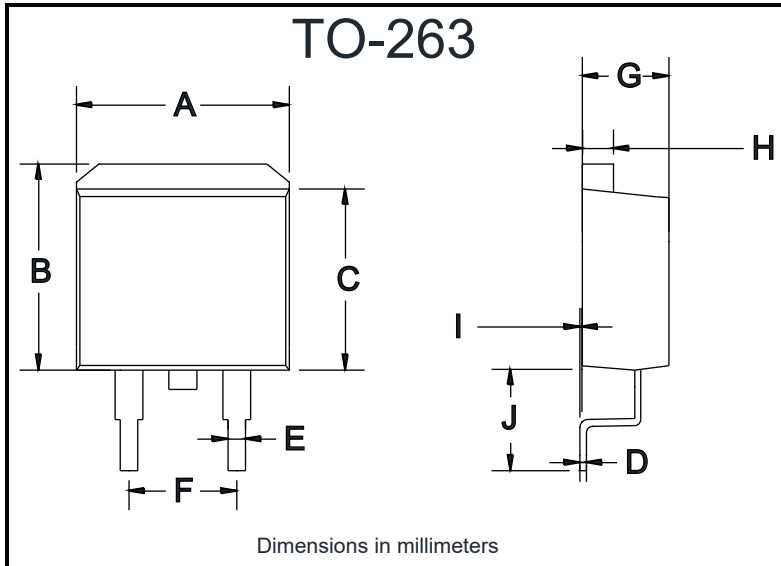


FIG4: Typical Reverse Characteristics



■ **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