

■ **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°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBRBL2045CT
Device marking code			MBRBL2045CT
Repetitive Peak Reverse Voltage	V _{RRM}	V	45
Average Rectified Output Current @60Hz sine wave, R-load, T _a (FIG 1)	I _o	A	20
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _a =25°C	I _{FSM}	A	180
Current Squared Time @1ms≤t≤8.3ms T _j =25°C, rating of per diode	I ² t	A ² s	134
Storage Temperature	T _{stg}	°C	-55 ~ +150
Junction Temperature	T _j	°C	-55 ~ +150

■ **ELECTRICAL CHARACTERISTICS** (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBRBL2045CT
Maximum instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =10.0A	0.55
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	V _{RM} =V _{RRM} T _a =25°C	0.2
	I _{RRM2}		V _{RM} =V _{RRM} T _a =100°C	50

■ **THERMAL CHARACTERISTICS** (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBRBL2045CT
Thermal Resistance Between junction and case	R _{θj-c}	°C/W	2.0

■ **PACKAGING INFORMATION**

PREFERRED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBRBL2045CT	Approximate 1.43	50	2000	8000	Tube
MBRBL2045CT	Approximate 1.43	1000	2000	10000	Reel

■ **CHARACTERISTICS (TYPICAL)**

FIG1: I_o -T_c Curve

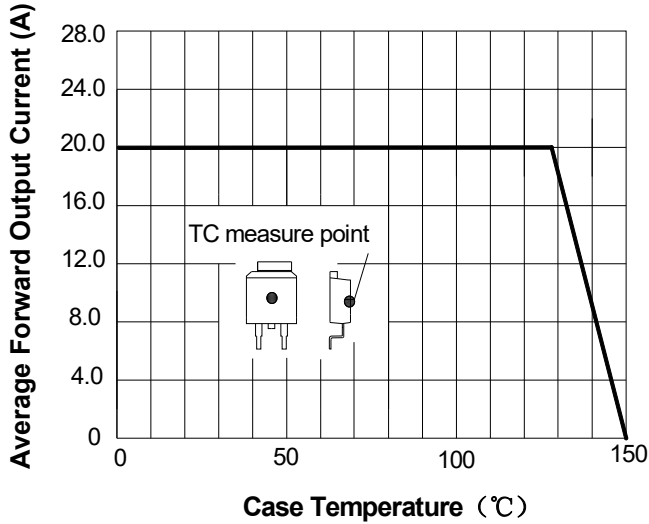


FIG2: Surge Forward Current Capability

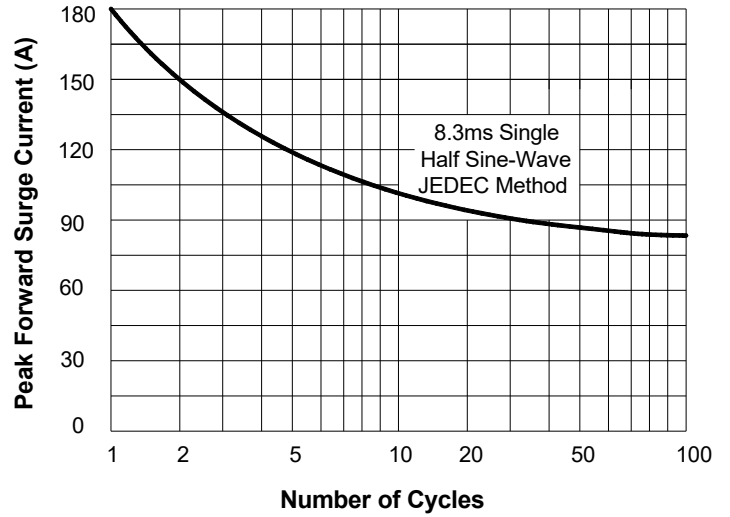


FIG3: Forward Voltage

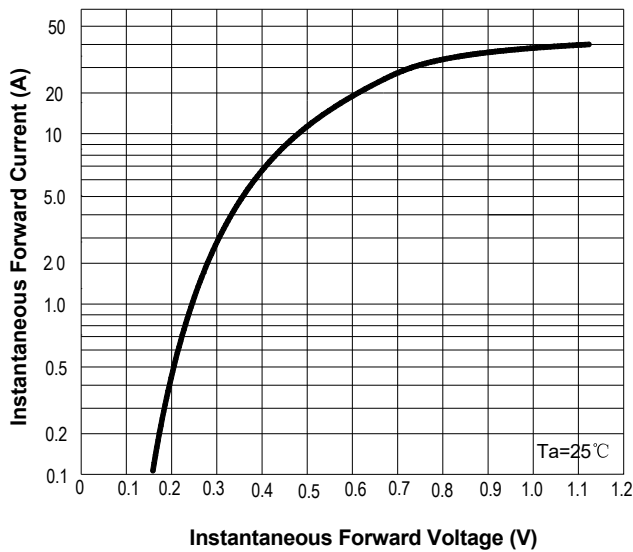
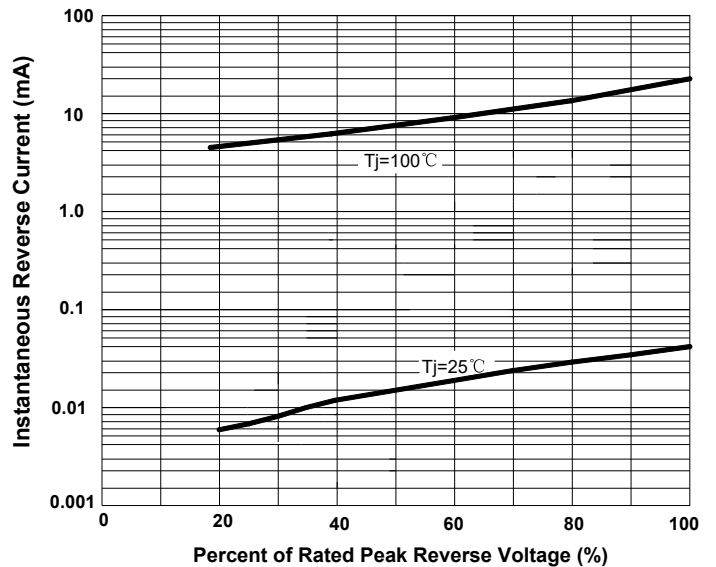
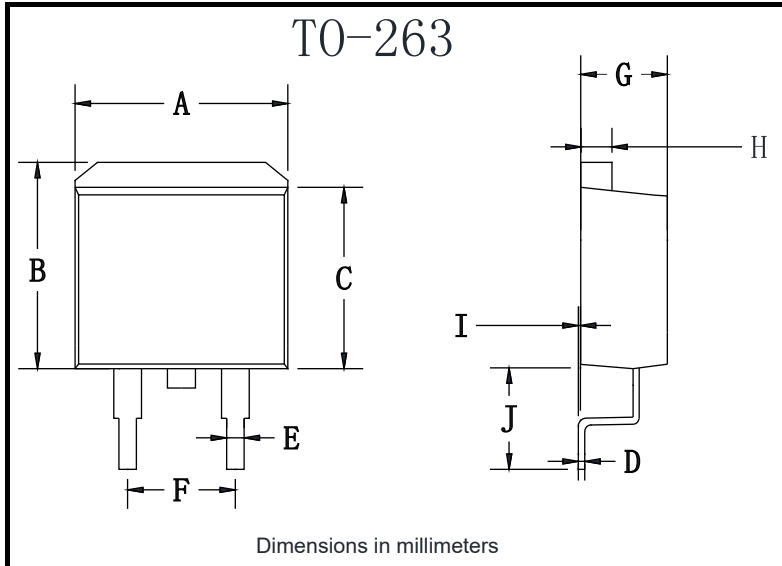


FIG4: Typical Reverse Characteristics



■ **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