

■ **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
- Solder dip 275 °C max. 7 s, per JESD 22-B106

■ **TYPICAL APPLICATIONS**

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

■ **MECHANICAL DATA**

- Package : TO-220AB
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	MBRL1060CT
Device marking code			MBRL1060CT
Repetitive Peak Reverse Voltage	VRRM	V	60
Average Rectified Output Current @60Hz sine wave, R-load, $T_a=25$	IO	A	10
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, $T_a=25$	IFSM	A	100
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$ $T_j=25$	I^2t	A^2s	41
Storage Temperature	T_{stg}		-55 ~ +150
Junction Temperature	T_j		-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBRL1060CT
Maximum instantaneous forward voltage drop per diode	VFM	V	$I_{\text{FM}}=5.0\text{A}$	0.6
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	$V_{\text{RM}}=V_{\text{RRM}}$ $T_a=25$	0.2
	I _{RRM2}		$V_{\text{RM}}=V_{\text{RRM}}$ $T_a=100$	20

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

PARAMETER	SYMBOL	UNIT	MBRL1060CT
Thermal Resistance Between junction and case	$R_{\theta\text{J-C}}$	M	2.0

■ **PACKAGING INFORMATION**

PREFERRED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE (pcs)	INNER BOX QUANTITY (pcs)	OUTER CARTON QUANTITY (pcs)	DELIVERY MODE
MBRL1060CT	Approximate 1.9	50	1000	5000	Tube

■ **CHARACTERISTICS (TYPICAL)**

FIG1:Io -Tc Curve

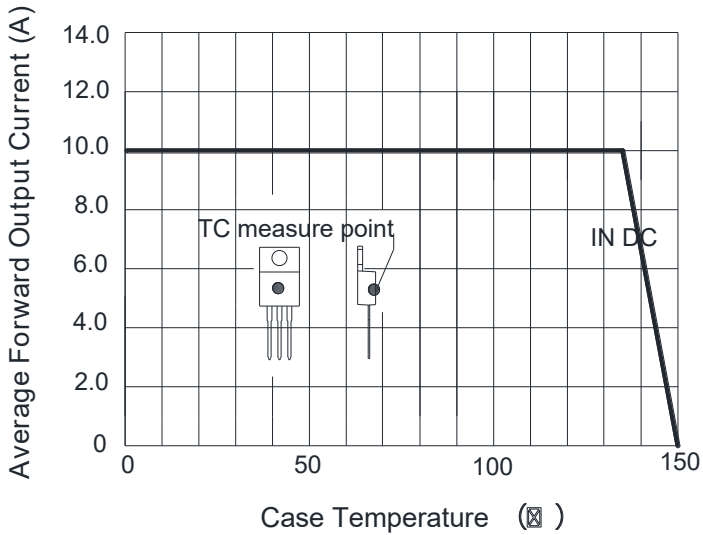


FIG2: Surge Forward Current Capability

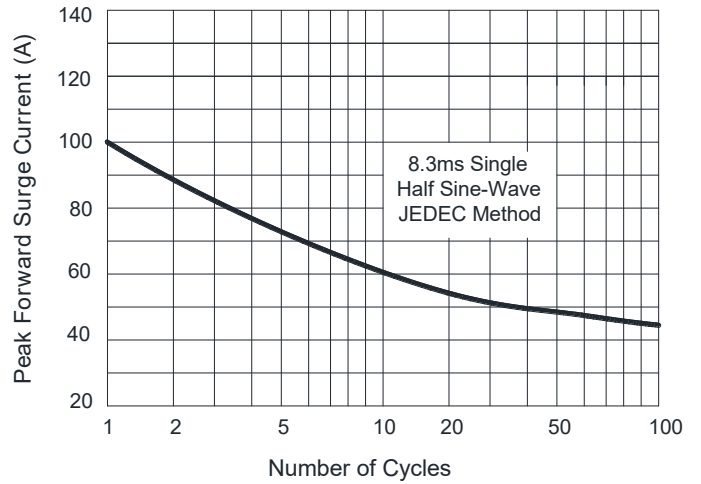


FIG3: Forward Voltage

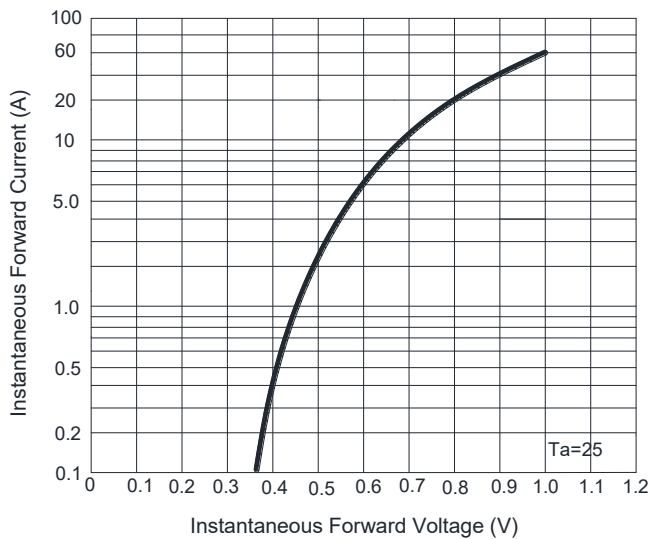
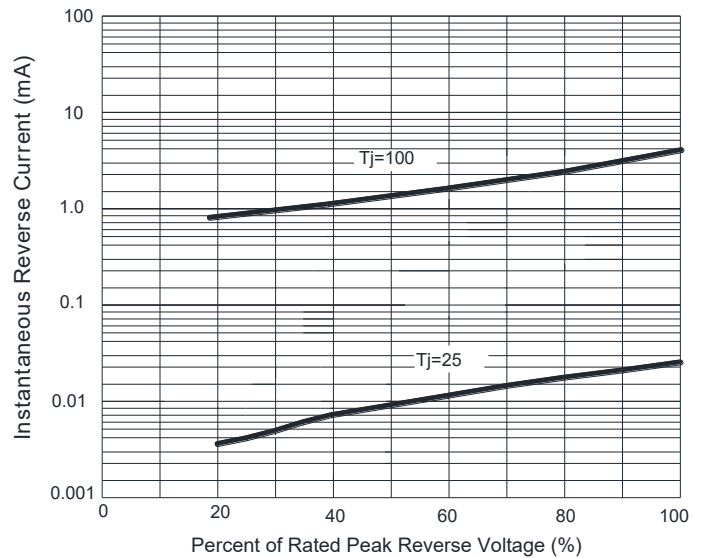
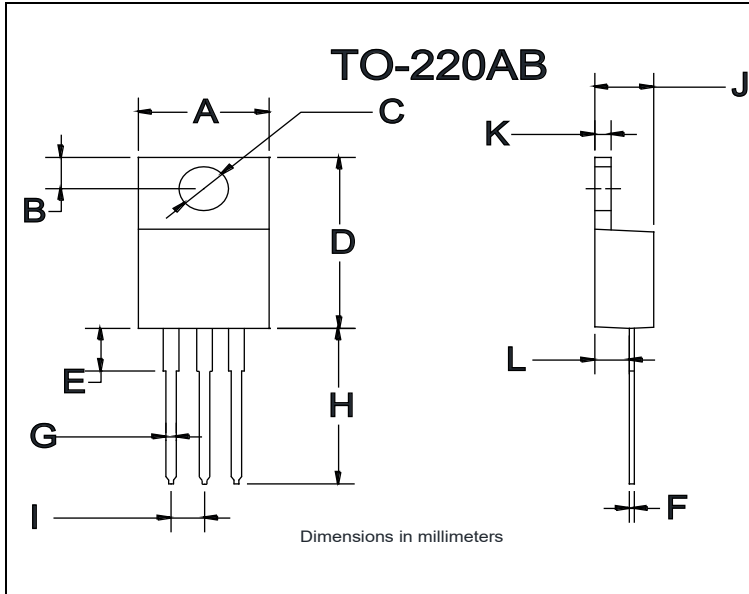


FIG4: Typical Reverse Characteristics



■ **OUTLINE DIMENSIONS**



TO-220AB		
Dim	Min	Max
A	9.5	10.9
B	2.22	3.27
C	3.34	4.31
D	14.5	15.5
E	3.16	4.46
F	0.28	0.64
G	0.68	0.94
H	13.06	14.62
I	2.01	3.07
J	4.04	5.1
K	1.14	1.4
L	2.14	3.19