

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
- 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°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBR20100CTS	MBR20150CTS	MBR20200CTS
Device marking code			MBR20100CTS	MBR20150CTS	MBR20200CTS
Repetitive Peak Reverse Voltage	VRRM	V	100	150	200
Average Rectified Output Current @60Hz sine wave, R-load, T _a =25°C	I _O	A	20		
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _a =25°C	I _{FSM}	A	130		
Current Squared Time @1ms≤t<8.3ms T _j =25°C,	I ² t	A ² s	70		
Storage Temperature	T _{stg}	°C	-55 ~ +175		
Junction Temperature	T _j	°C	-55 ~ +175		

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR20100CTS	MBR20150CTS	MBR20200CTS
Maximum instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =10.0A	0.85	0.9	0.95
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	V _{RM} =V _{VRRM} T _a =25°C	0.1		
	I _{RRM2}		V _{RM} =V _{VRRM} T _a =125°C	20		

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

PARAMETER	SYMBOL	UNIT	MBR20100CTS	MBR20150CTS	MBR20200CTS
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
MBR20100CTS THRU MBR20200CTS	Approximate 1.9	50	1000	5000	Tube

■ CHARACTERISTICS (TYPICAL)

FIG1: I_o -T_c Curve

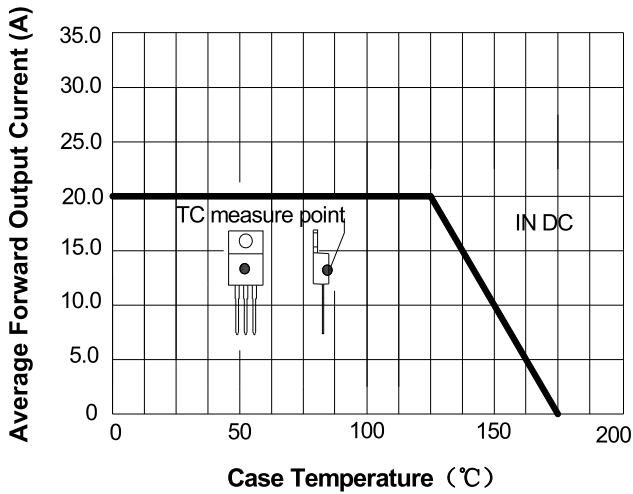


FIG2: Surge Forward Current Capability

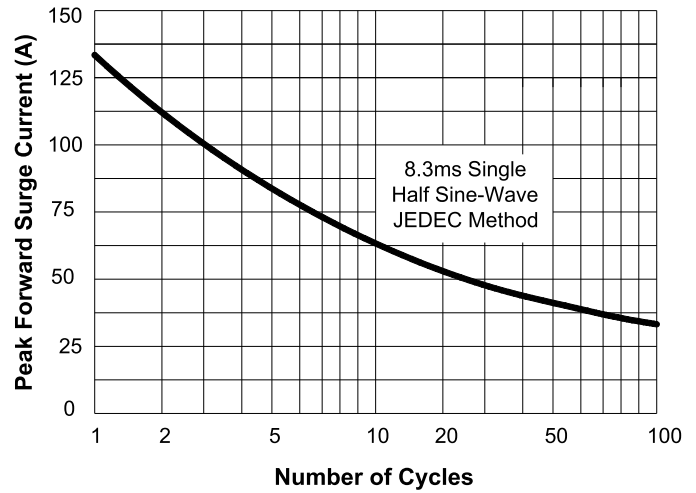


FIG3: Forward Voltage

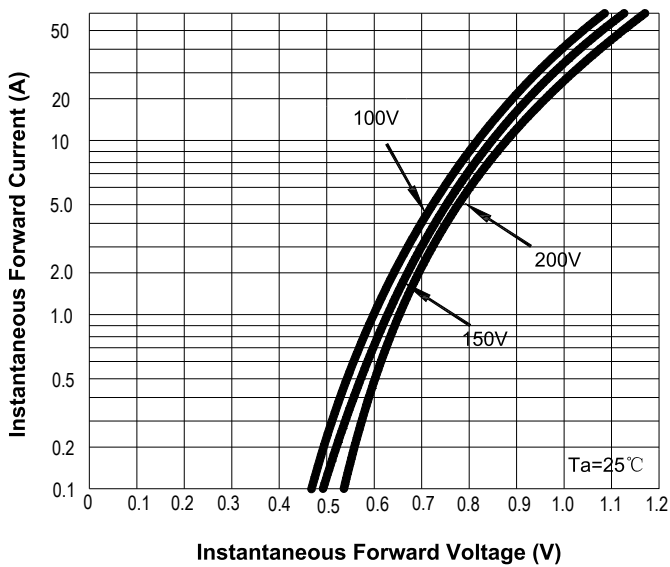
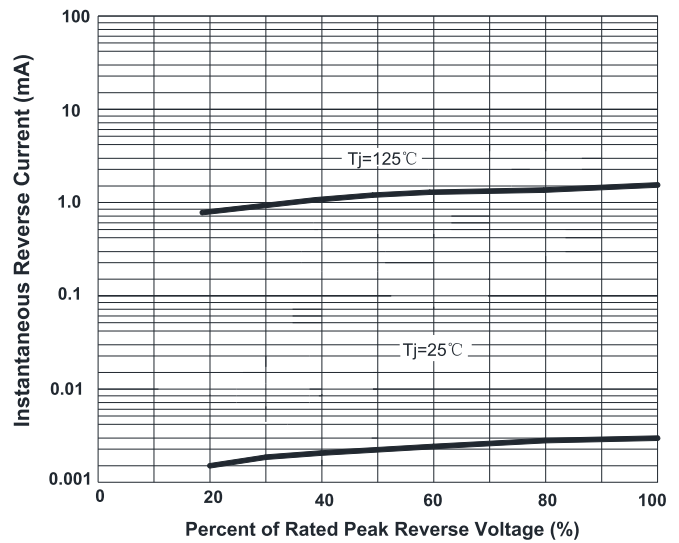
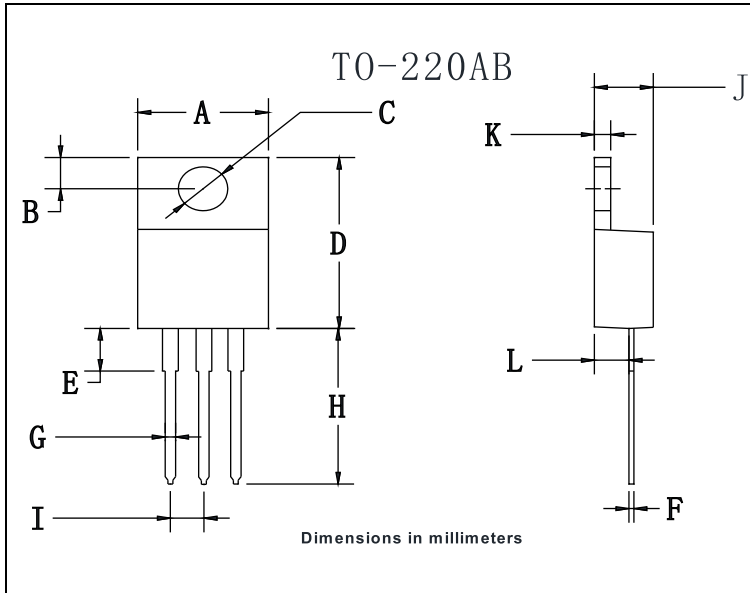


FIG4: Instantaneous Reverse Characteristics



■ **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