

■ **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:** ITO-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	MBR20300FCT
Device marking code			MBR20300FCT
Repetitive Peak Reverse Voltage	VRRM	V	300
Average Rectified Output Current @60Hz sine wave, R-load, $T_a=25^\circ\text{C}$	I_O	A	20
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, $T_a=25^\circ\text{C}$	I_{FSM}	A	200
Current Squared Time @1ms<8.3ms $T_j=25^\circ\text{C}$	I^2t	A^2s	167
Storage Temperature	T_{stg}	$^\circ\text{C}$	-55 ~ +150
Junction Temperature	T_j	$^\circ\text{C}$	-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR20300FCT
Maximum instantaneous forward voltage drop per diode	VFM	V	$I_{FM}=10.0\text{A}$	0.975
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	$V_{RM}=V_{RRM}$ $T_a=25^\circ\text{C}$	0.05
	I _{RRM2}		$V_{RM}=V_{RRM}$ $T_a=100^\circ\text{C}$	10

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

PARAMETER	SYMBOL	UNIT	MBR20300FCT	
Thermal Resistance	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
MBR20300FCT	Approximate 1.6	50	1000	5000	Tube

■ **CHARACTERISTICS (TYPICAL)**

FIG1: I_o -T_c Curve

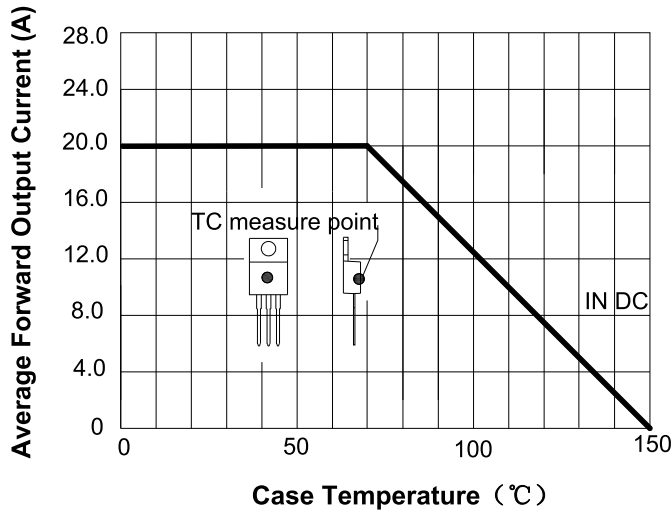


FIG2: Surge Forward Current Capability

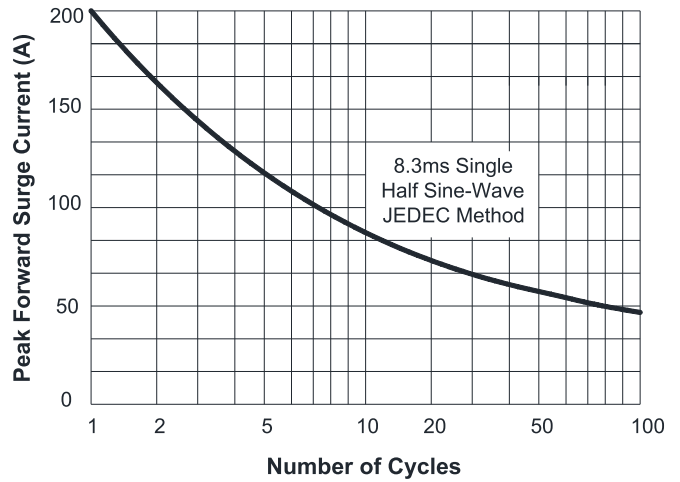


FIG3: Forward Voltage

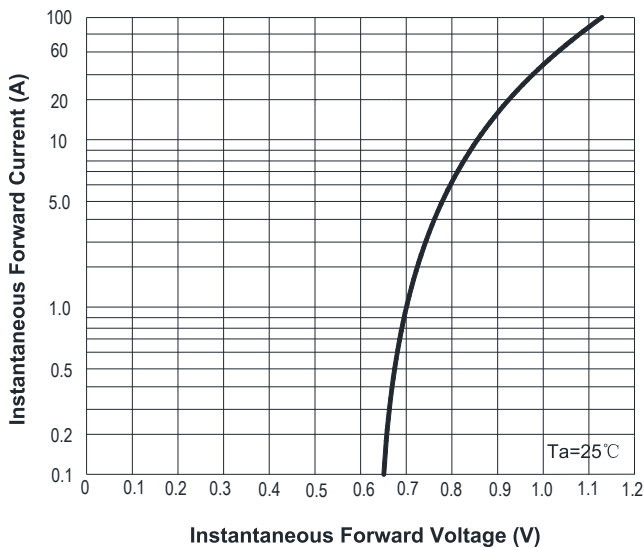
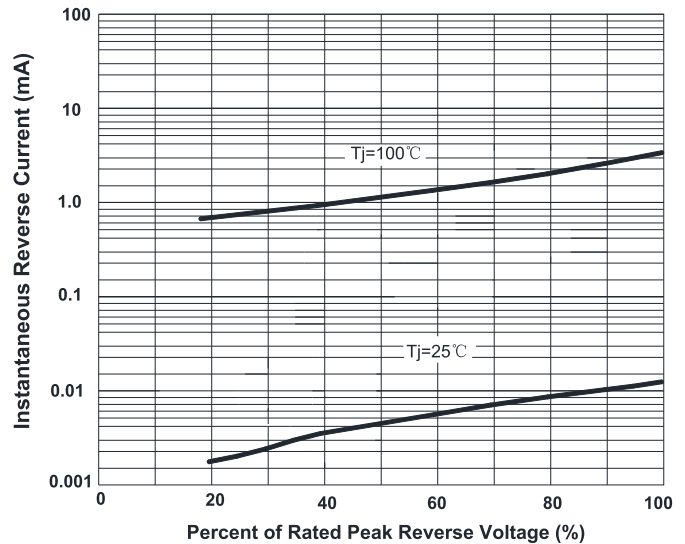
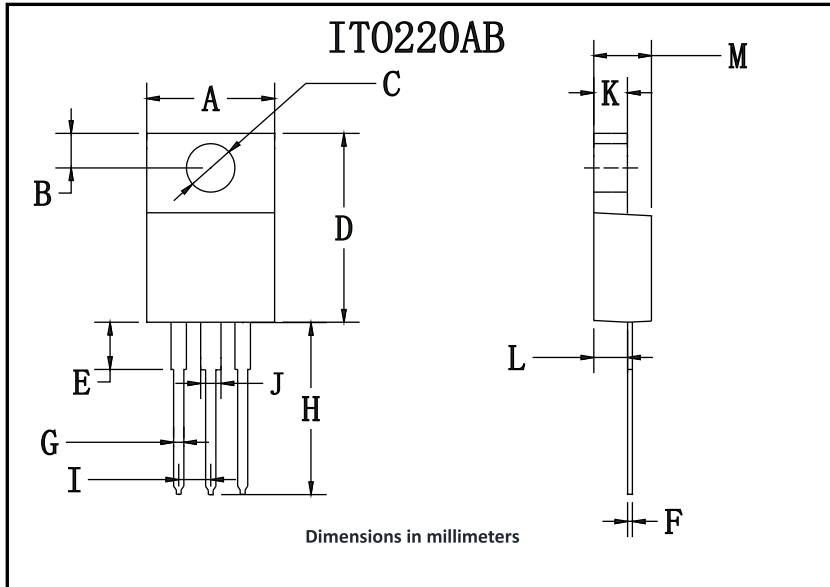


FIG4: Typical Reverse Characteristics



■ **OUTLINE DIMENSIONS**



ITO-220AB		
Dim	Min	Max
A	9.7	10.7
B	2.15	3.25
C	2.6	3.8
D	14.4	15.9
E	3.1	4.5
F	0.4	0.8
G	0.4	0.8
H	12.7	14.2
I	1.80	2.95
J	1.4	1.8
K	2.1	3.56
L	2.1	3.2
M	3.9	5.1