

Schottky Diodes



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:** 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°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBR1020FCT	MBR1035FCT	MBR1045FCT	MBR1050FCT	MBR1060FCT
Device marking code			MBR1020FCT	MBR1035FCT	MBR1045FCT	MBR1050FCT	MBR1060FCT
Repetitive Peak Reverse Voltage	VRRM	V	20	35	45	50	60
Average Rectified Output Current @60Hz sine wave, R-load, T _a =25°C	I _O	A	10				
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _a =25°C	IFSM	A	100				
Current Squared Time @1ms≤t<8.3ms T _j =25°C,	I ² t	A ² s	41				
Storage Temperature	T _{stg}	°C	-55 ~ +150				
Junction Temperature	T _j	°C	-55 ~ +125			-55 ~ +150	

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR1020FCT	MBR1035FCT	MBR1045FCT	MBR1050FCT	MBR1060FCT
Maximum instantaneous forward voltage drop per diode	V _{FM}	V	IFM=5.0A	0.55			0.75	
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	VRM=VRRM T _a =25°C	0.2				
	I _{RRM2}		VRM=VRRM T _a =100°C	20				

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS



MBR1020FCT THRU MBR1060FCT

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MBR1020FCT	MBR1035FCT	MBR1040FCT	MBR1050FCT	MBR1060FCT
Thermal Resistance	Between junction and case	R _{θJ-C}	°C/W	4.0				

■ Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBR1020FCT THRU MBR1060FCT	Approximate 1.6	50	1000	5000	Tube

■ Characteristics (Typical)

FIG1: I_o -T_c Curve

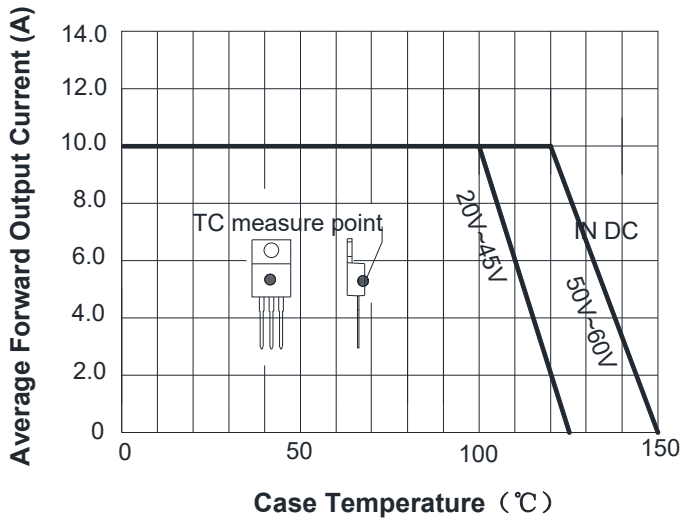


FIG2: Surge Forward Current Capability

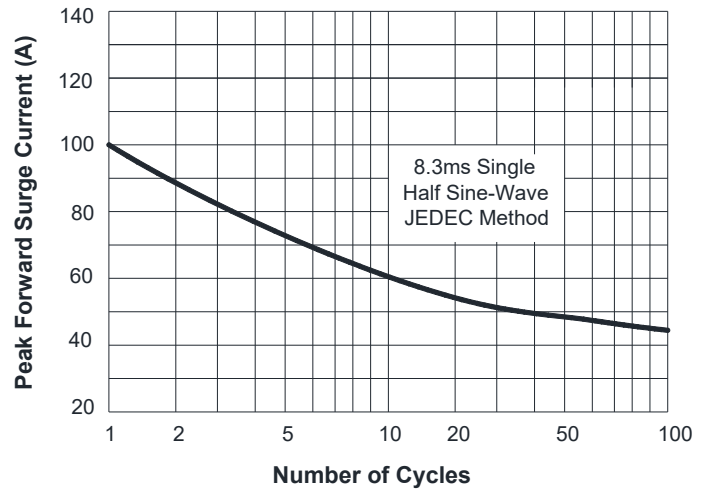


FIG3: Forward Voltage

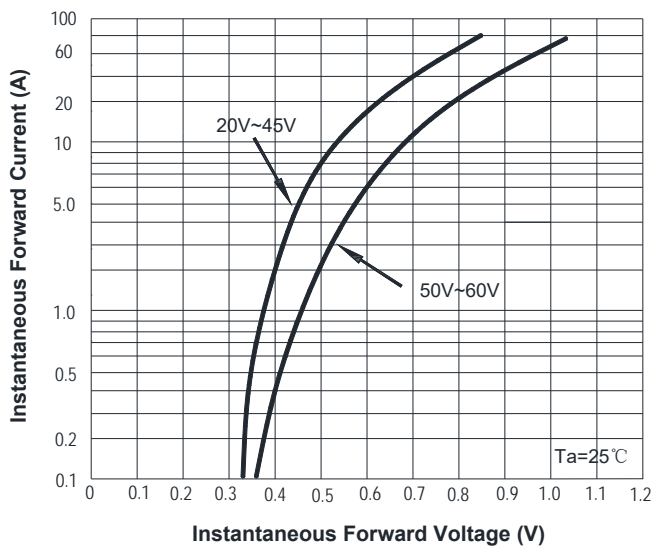
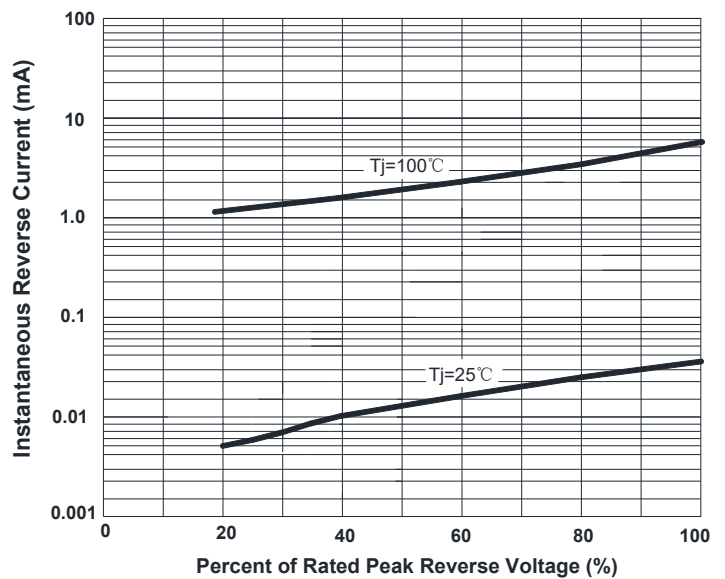


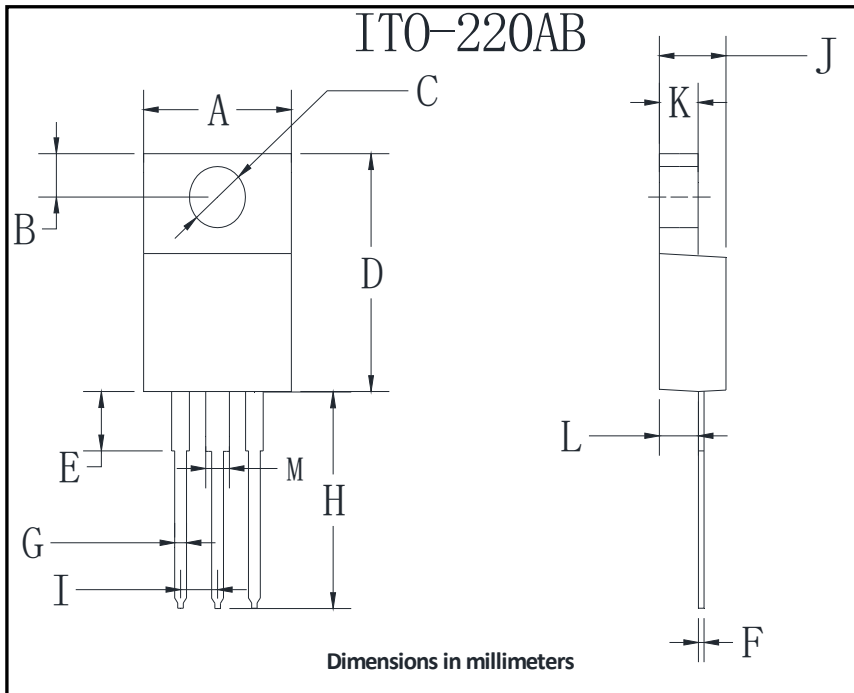
FIG4: Typical Reverse Characteristics





MBR1020FCT THRU MBR1060FCT

■Outline Dimensions



ITO-220AB		
Dim	Min	Max
A	9.8	10.2
B	2.25	2.75
C	2.95	3.45
D	14.75	15.25
E	3.05	3.95
F	0.45	0.75
G	0.45	0.75
H	13.4	14.2
I	2.35	2.75
J	4.3	4.8
K	2.58	2.82
L	2.58	2.82
M	1.47	1.77

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