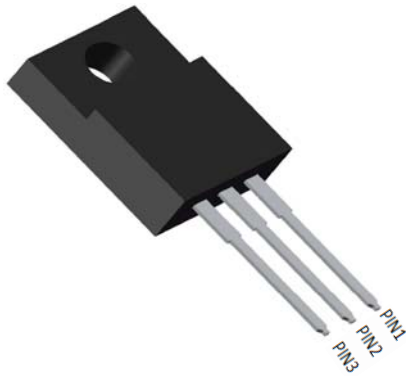




Schottky Diodes



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	MBR20 20FCT	MBR20 35FCT	MBR20 40FCT	MBR20 45FCT	MBR20 50FCT	MBR20 60FCT	MBR20 65FCT
Device marking code			MBR20 20FCT	MBR20 35FCT	MBR20 40FCT	MBR20 45FCT	MBR20 50FCT	MBR20 60FCT	MBR20 65FCT
Repetitive Peak Reverse Voltage	VRRM	V	20	35	40	45	50	60	65
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	150						
Current Squared Time @1ms≤t≤8.3ms, T _j =25°C	I ² t	A ² s	94						
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	MBR20 20FCT	MBR20 35FCT	MBR20 40FCT	MBR20 45FCT	MBR20 50FCT	MBR20 60FCT	MBR20 65FCT
Maximum instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =10.0A	0.65				0.75		
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	V _{RM} =V _R RM T _a =25°C	0.2						
	I _{RRM2}		V _{RM} =V _R RM T _a =100°C	20						

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

Note2:Pulse test:pulse width 40mS



MBR2020FCT THRU MBR2065FCT

■ Thermal Characteristics ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MBR20 20FCT	MBR20 35FCT	MBR20 40FCT	MBR20 45FCT	MBR20 50FCT	MBR20 60FCT	MBR20 65FCT
Thermal Resistance	Between junction and case	$R_{\theta\text{J-C}}$	$^{\circ}\text{C/W}$	4.0						

■ Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBR2020FCT THRU MBR2065FCT	Approximate 1.6	50	1000	5000	Tube

■ Characteristics (Typical)

FIG1: I_o - T_c Curve

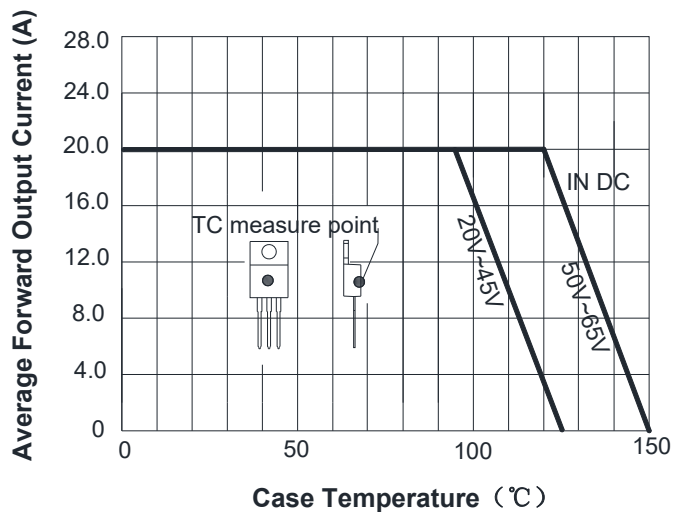


FIG2: Surge Forward Current Capability

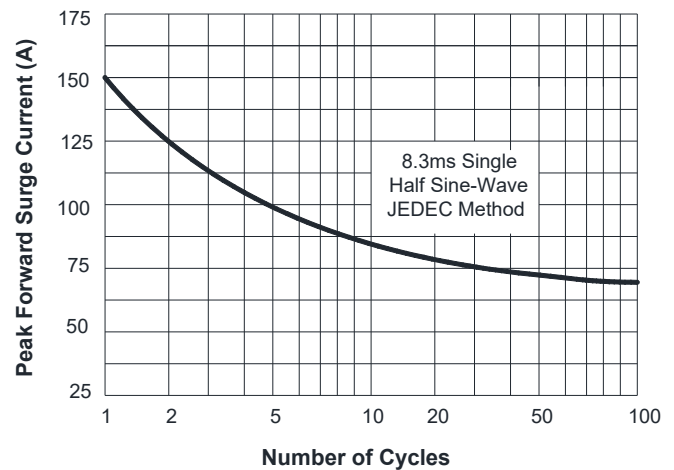


FIG3: Forward Voltage

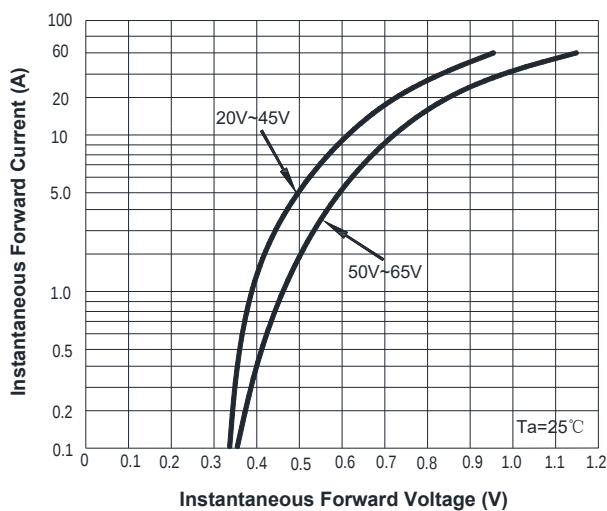
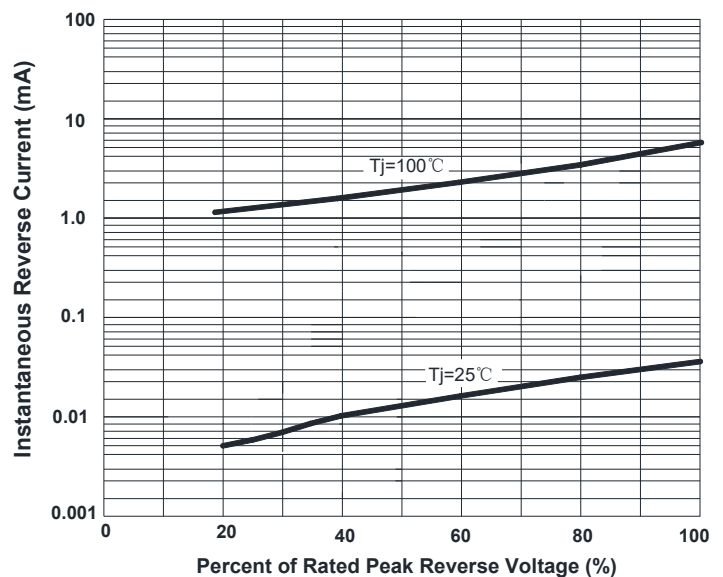


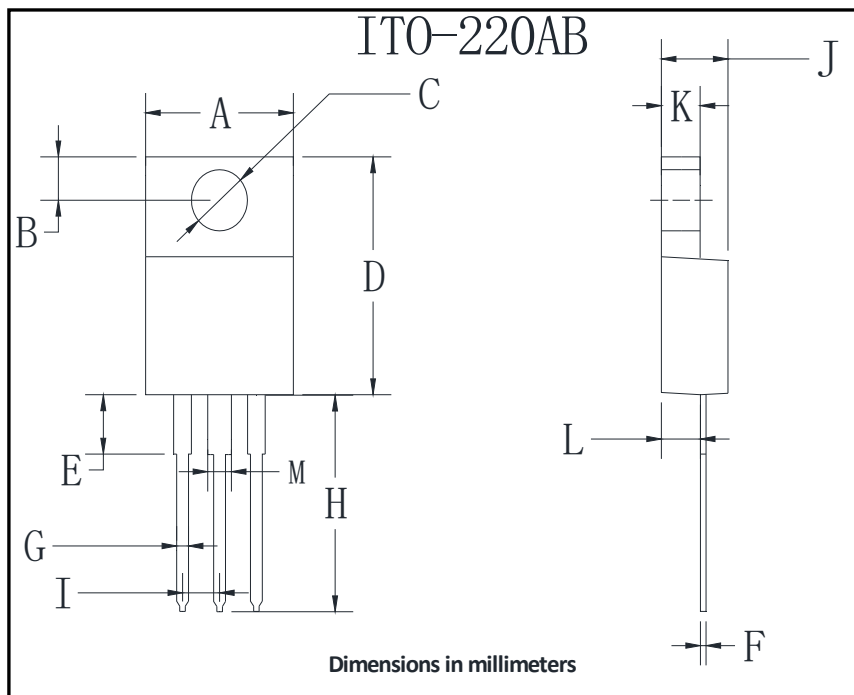
FIG4: Typical Reverse Characteristics





MBR2020FCT THRU MBR2065FCT

■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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