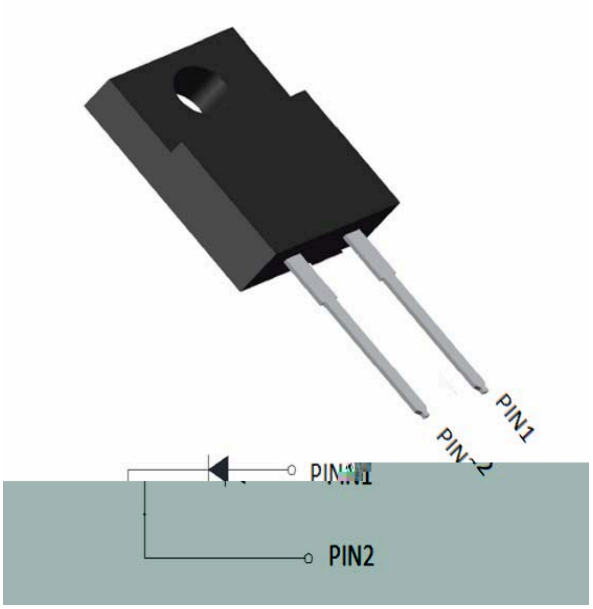
Schottky Diodes



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-220AC
  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 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	MBR1020F	MBR1035F	MBR1040F	MBR1050F	MBR1060F
Device marking code			MBR1020F	MBR1035F	MBR1040F	MBR1050F	MBR1060F
Repetitive Peak Reverse Voltage	V_{RRM}	V	20	35	40	50	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	I_{FSM}	A	150				
Current Squared Time @1ms≤t<8.3ms Tj=25	I^2t	A^2s	94				
Storage Temperature	T_{stg}		-55 ~ +150				
Junction Temperature	T_j		-55 ~ +125			-55 ~ +150	

■Electrical Characteristics T_a=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR1020F	MBR1035F	MBR1040F	MBR1050F	MBR1060F
Maximum instantaneous forward voltage drop per diode	V_{FM}	V	I_{FM}=10.0A	0.55			0.75	
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	mA	V_{RM}=VRRM T_a=25	0.2				
	I_{RRM2}		V_{RM}=VRRM T_a=100	50				

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

Note2:Pulse test:pulse widh 40mS

■Thermal Characteristics T_a=25 Unless otherwise specified

PARAMETER		SYMBOL	UNIT	MBR1020F	MBR1035F	MBR1040F	MBR1050F	MBR1060F
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	/W	4.0				

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBR1020F THRU MBR1060F	Approximate 1.5	50	1000	5000	Tube

■Characteristics (Typical)

FIG1:Io -Tc Curve

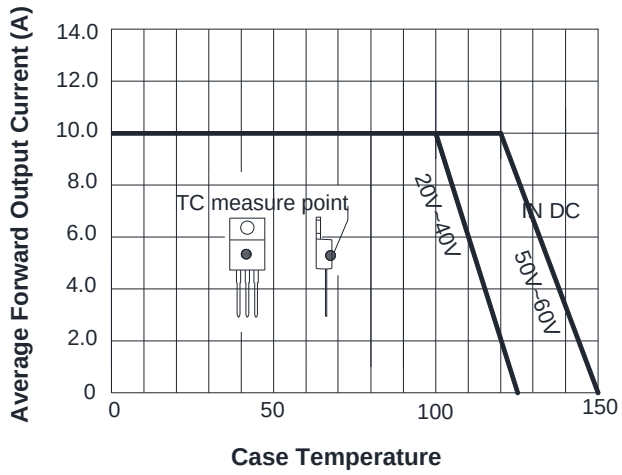


FIG2:Surge Forward Current Capability

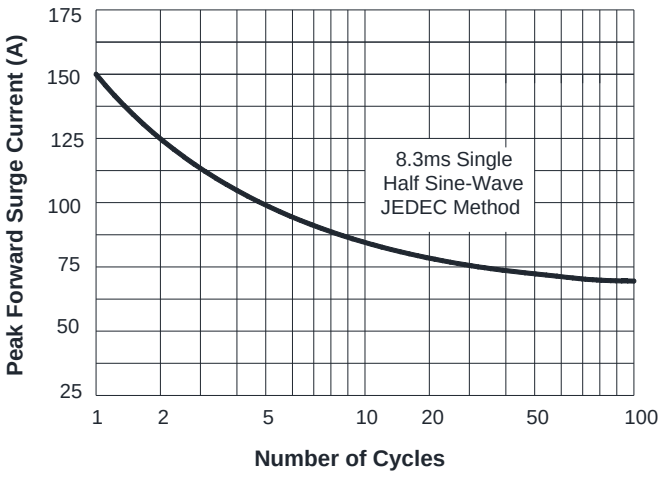


FIG3: Forward Voltage

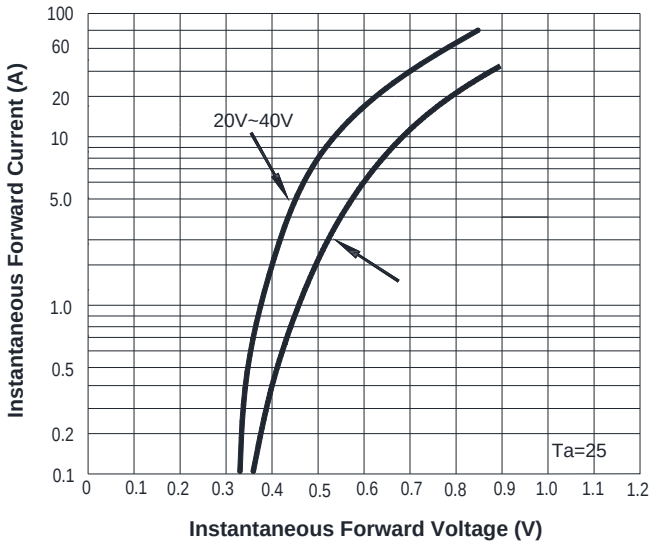
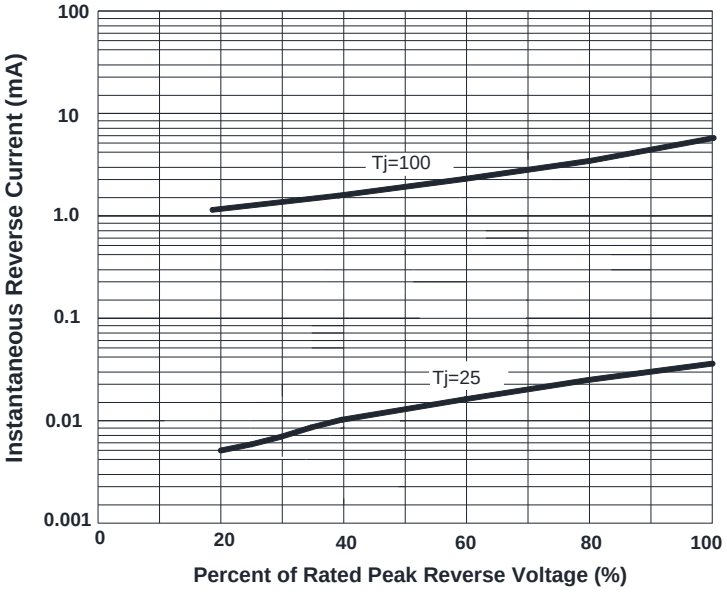
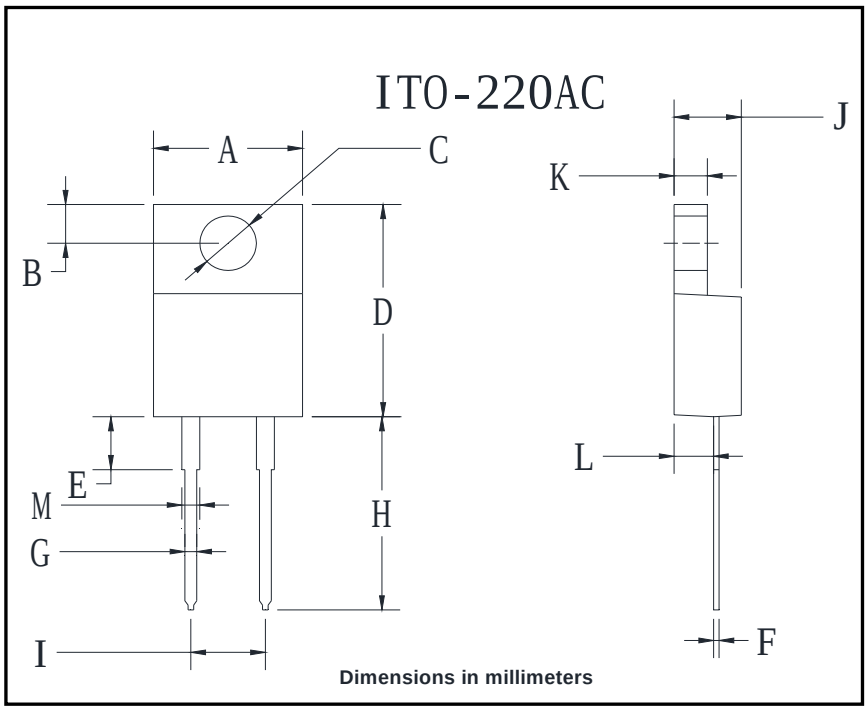


FIG.4: Typical Reverse Characteristics



■Outline Dimensions



ITO-220AC		
Dim	Min	Max
A	9.8	10.2
B	2.25	2.75
C	2.95	3.45
D	14.75	15.25
E	3.5	4.1
F	0.45	0.75
G	0.45	0.75
H	13.35	14.15
I	4.97	5.23
J	4.3	4.8
K	2.5	2.74
L	2.58	2.82
M	1.03	1.43

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