



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	VRRM	V	20	35	40	50	60
Average Rectified Output Current @60Hz sine wave, R-load, T _a =25	I _O	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 T _j =25	I ² t	A ² s	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} =V _{RRM} T _a =25	0.2				
	I _{RRM2}		V _{RM} =V _{RRM} T _a =100	50				

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

Note2:Pulse test:pulse width 40mS

1 / 4 and moisture resistance

- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7 s, per JESD 22-B106



MBR1020F THRU MBR1060F

■ Thermal Characteristics $T_a=25$ Unless otherwise specified

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

■ Ordering Information (Example)

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

■ Characteristics (Typical)

FIG1: I_o - T_c Curve

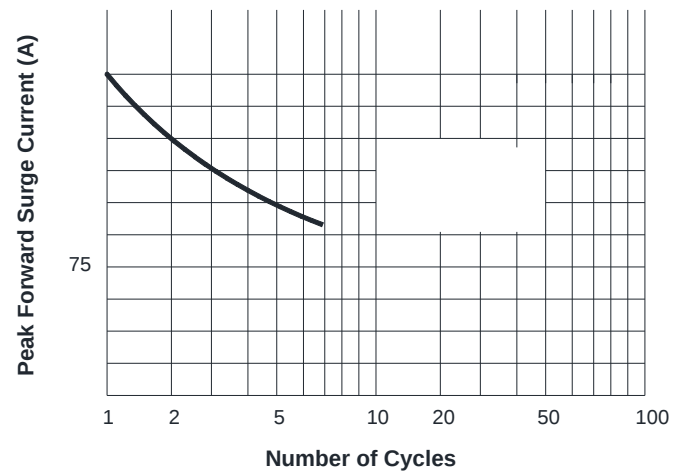
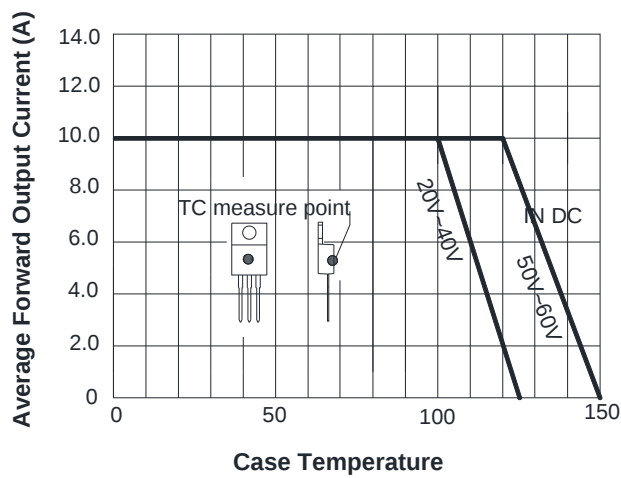
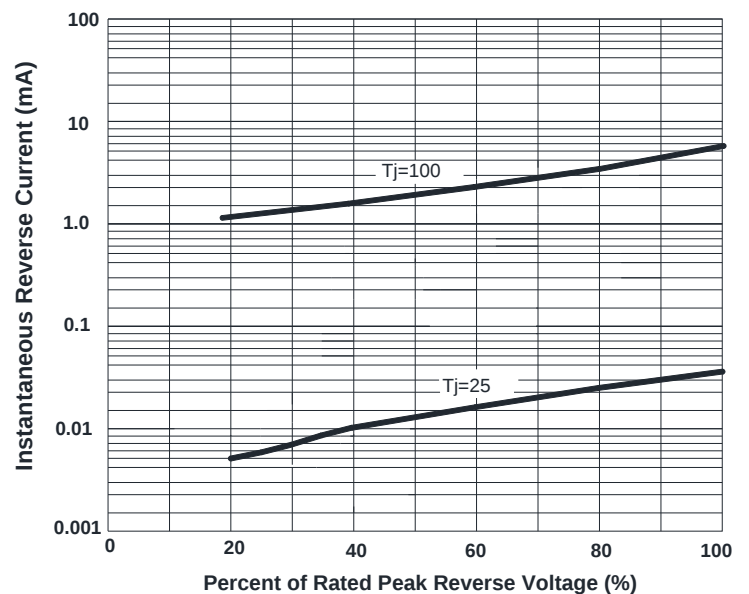


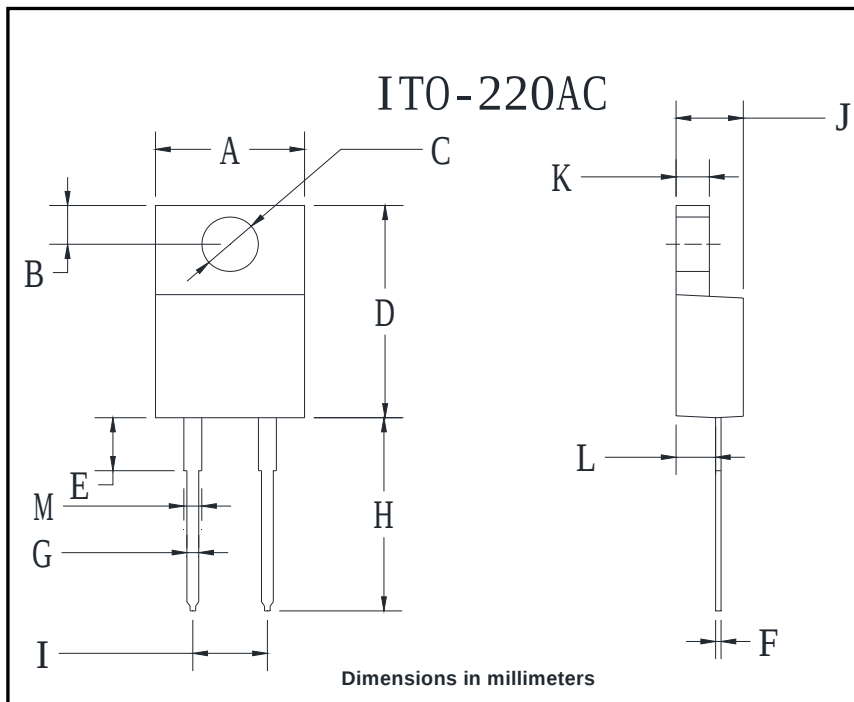
FIG.4: Typical Reverse Characteristics





MBR1020F THRU MBR1060F

■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

