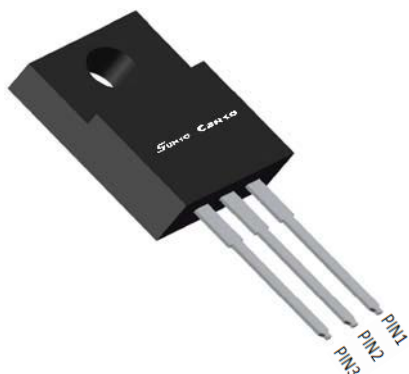


Schottky Diodes



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, -
- **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	MBR20100FCT	MBR20150FCT	MBR20200FCT
Device marking code			MBR20100FCT	MBR20150FCT	MBR20200FCT
Repetitive Peak Reverse Voltage	V _{RRM}	V	100	150	200
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 ~ +175		
Junction Temperature	T _j	°C	-55 ~ +175		

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR20100FCT	MBR20150FCT	MBR20200FCT
Maximum instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =10.0A	0.8	0.85	0.9
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	V _{RM} =V _{RRM} T _a =25°C	0.1		
	I _{RRM2}		V _{RM} =V _{RRM} T _a =125°C	20		

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

Note2:Pulse test:pulse width 40mS

MBR20100FCT THRU MBR20200FCT-B1-W5038HF

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

PARAMETER		SYMBOL	UNIT	MBR20100FCT	MBR20150FCT	MBR20200FCT
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
MBR20100FCT THRU MBR20200FCT	Approximate 1.6	50	1000	5000	Tube

■ Characteristics (Typical)

FIG1: I_o -T_c Curve

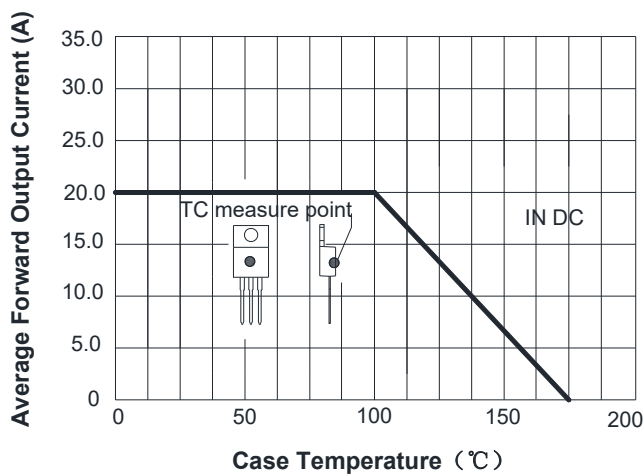


FIG2: Surge Forward Current Capability

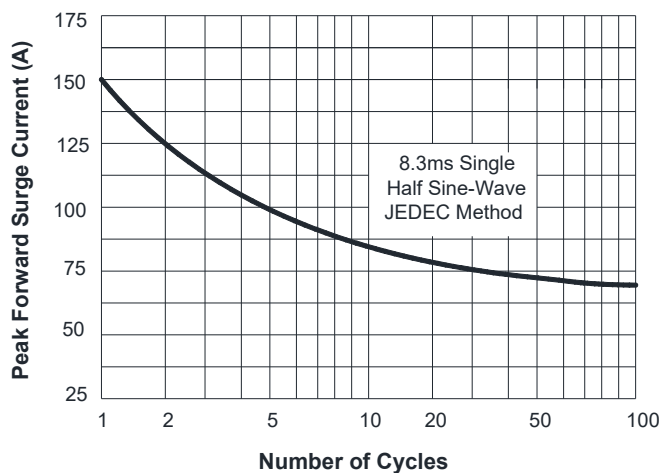


FIG3: Forward Voltage

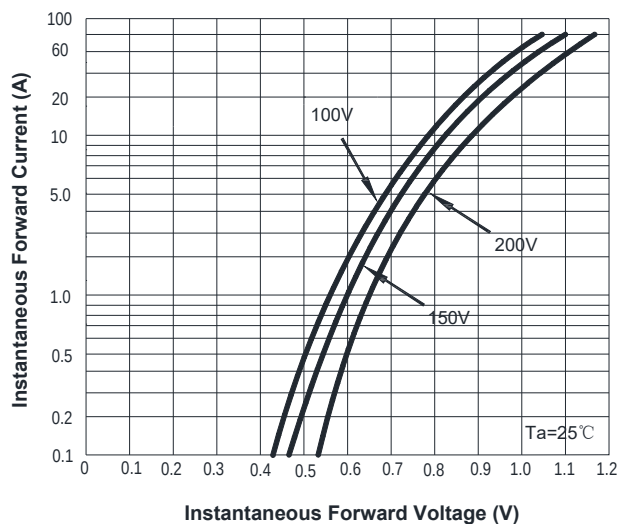
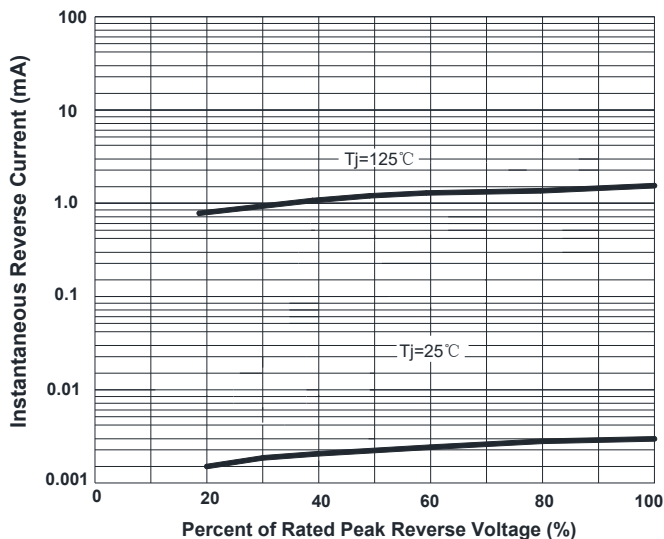
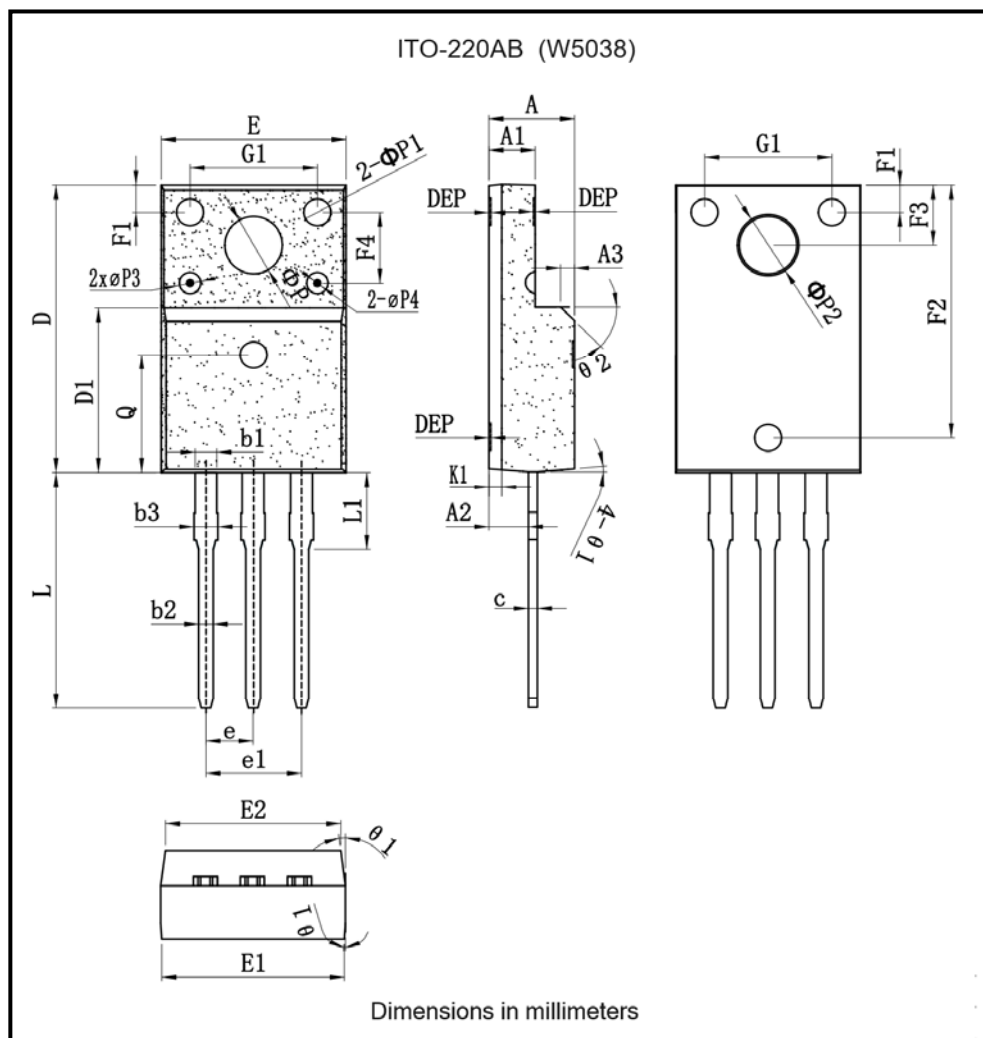


FIG4: Instantaneous Reverse Characteristics



■ Outline Dimensions



ITO-220AB (W5038)		
Dim	Min	Max
A	4.50	4.90
A1	2.34	2.74
A2	2.66	2.86
A3	1.0 REF	
b1	1.18	1.24
b2	0.75	0.85
b3	1.22	1.38
C	0.45	0.55
D	15.67	16.07
D1	9.04	9.20
e	2.50	2.58
e1	5.08 REF	
E	10.00	10.30
E1	9.94	10.20
E2	9.40	9.60
F1	1.40	1.60
F2	13.80	14.00
F3	3.20	3.40
F4	3.70	4.10
G1	6.90	7.10
K1	0.65	0.75
L	12.78	13.18
L1	3.40	3.60
Q	6.50 REF	
ΦP	3.08	3.28
ΦP1	1.45	1.65
ΦP2	3.30	3.50
ΦP3	0.95	1.35
ΦP4	0.25	0.35
θ1	3°	7°
θ2	42°	48°
DEP	0.05	0.15

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