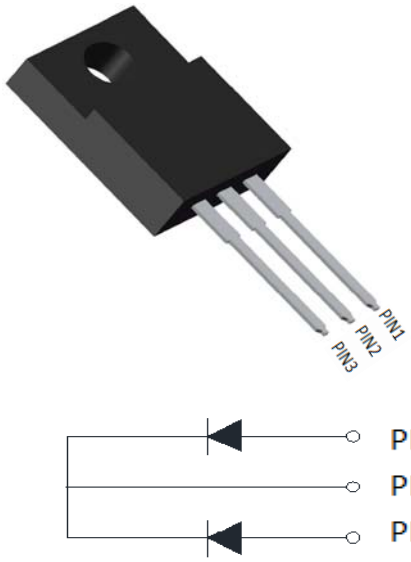
Schottky Diodes



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 (Tj=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBRL40100FCT
Device marking code			MBRL40100FCT
Repetitive Peak Reverse Voltage	V_{RRM}	V	100
Average Rectified Output Current @60Hz sine wave, R-load, Tc(FIG.1)	I_O	A	40
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Tj=25℃	I_{FSM}	A	320
Surge(Non-repetitive)Forward Current @1ms，square wave, 1 time, Tj=25℃			640
Current Squared Time @1ms≤t≤8.3ms Tj=25℃	I^2t	A^2s	425
Typical junction capacitance @ 1MHz and Applied Reverse Voltage of 4.0 V.D.C.	Cj	pF	1120
Storage Temperature	T_{stg}	℃	-55 ~ +150
Junction Temperature	Tj	℃	-55 ~ +150
Dielectric strength @ terminals to case, AC 1 minute	Vdis	KV	2.0
Mounting torque @recommend torque：5kg·cm	Tor	kg·cm	8

■Electrical Characteristics（Tj=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Peak Forward Voltage	V_{FM}	V	I_{FM}=20.0A Tj=25℃	0.5	0.65	0.71
			I_{FM}=20.0A Tj=125℃	-	0.61	0.65
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	V_{RM}=V_{RRM} Tj=25℃	-	-	100
	I_{RRM2}	mA	V_{RM}=V_{RRM} Tj=125℃	-	-	100

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

Note2:Pulse test:pulse widh 40mS

■Thermal Characteristics （Tj=25℃ Unless otherwise specified）

PARAMETER		SYMBOL	UNIT	MBRL40100FCT
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
MBRL40100FCT	Approximate 1.6	50	1000	5000	Tube

■Characteristics (Typical)

FIG1:Io -Tc Curve

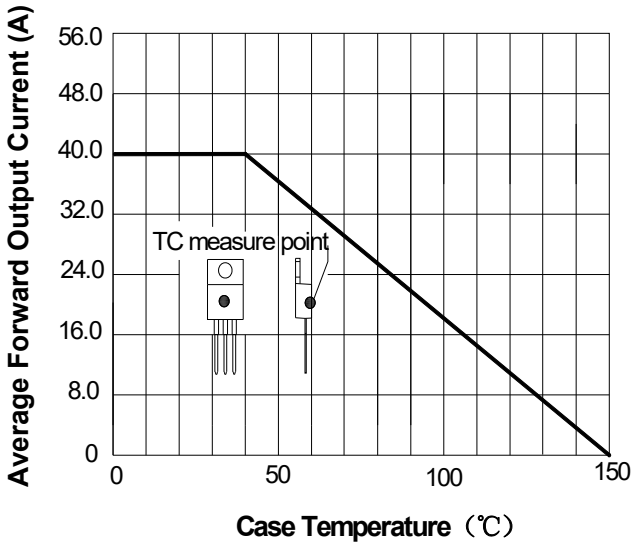


FIG2:Surge Forward Current Capability

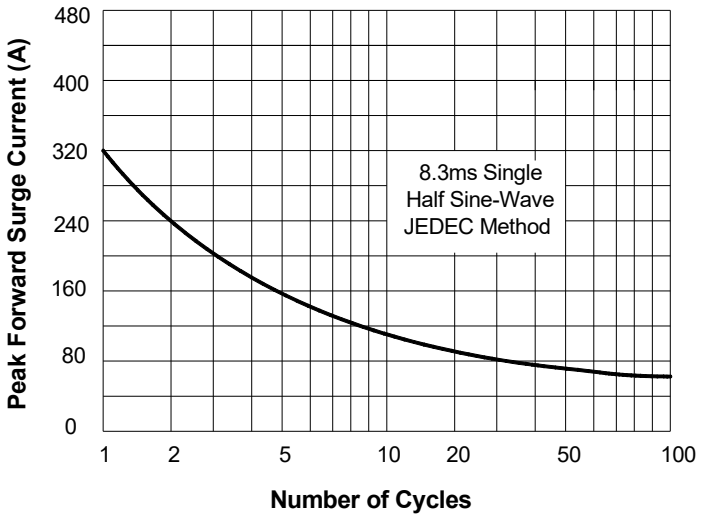


FIG3: Forward Voltage

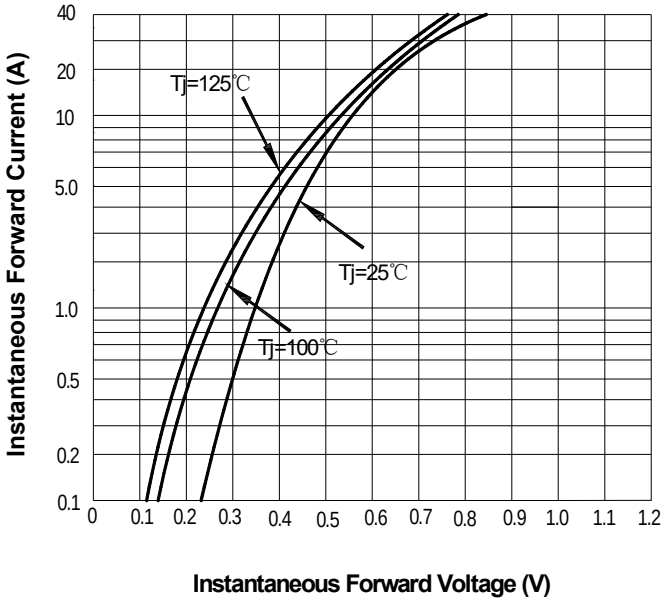
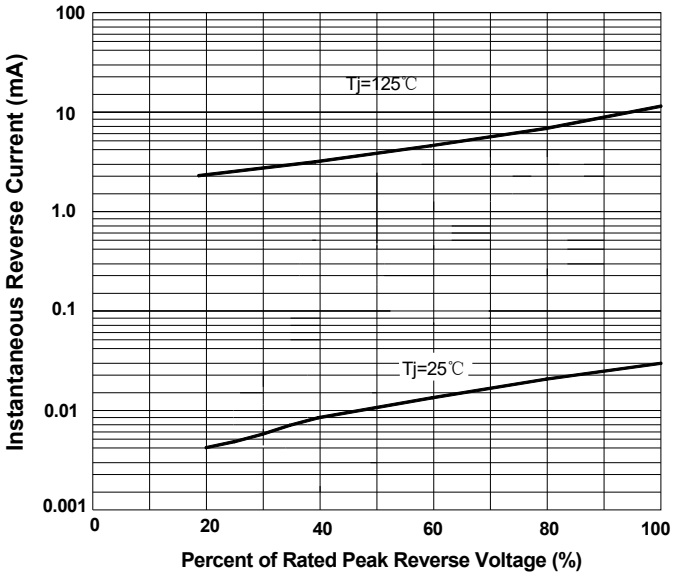
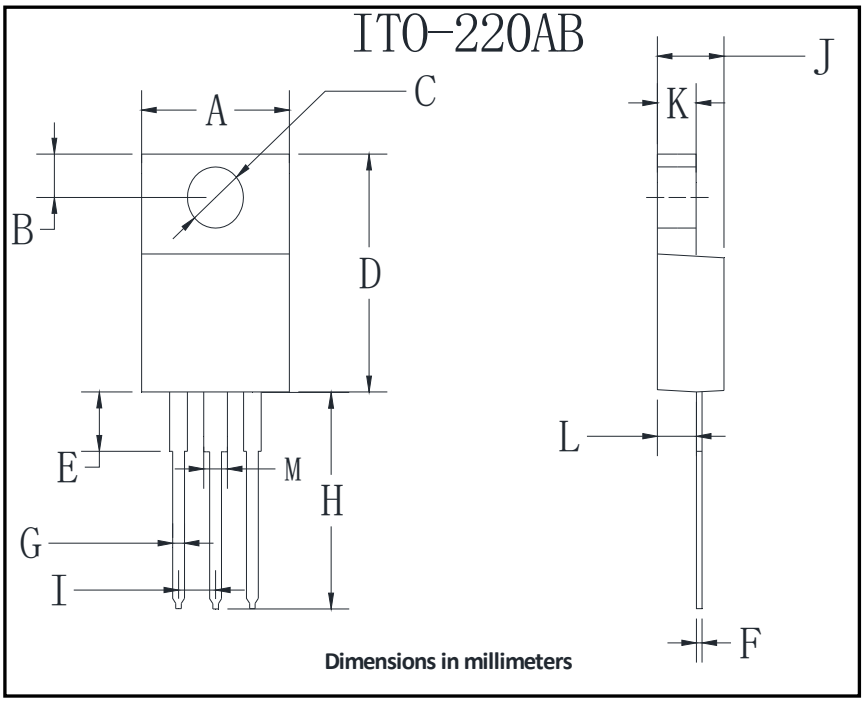


FIG.4: Typical Reverse Characteristics



■Outline Dimensions



ITO-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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