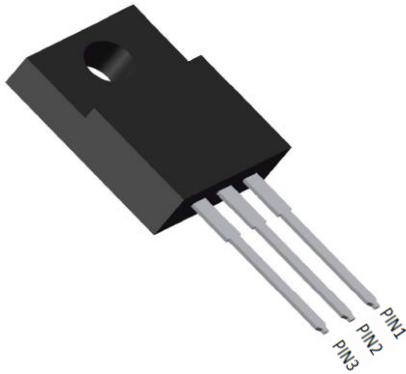


## Schottky Diodes



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

PARAMETER	SYMBOL	UNIT	MBRL20100FCT
Device marking code			MBRL20100FCT
Repetitive Peak Reverse Voltage	VRRM	V	100
Average Rectified Output Current @60Hz sine wave, R-load, $T_a=25^\circ\text{C}$	IO	A	20
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, $T_a=25^\circ\text{C}$	IFSM	A	150
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$ $T_j=25^\circ\text{C}$	$I^2t$	$\text{A}^2\text{s}$	94
Storage Temperature	$T_{\text{stg}}$	$^\circ\text{C}$	-55 ~ +150
Junction Temperature	$T_j$	$^\circ\text{C}$	-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBRL20100FCT
Maximum instantaneous forward voltage drop per diode	VFM	V	$I_{\text{FM}}=10.0\text{A}$	0.72
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>RRM1</sub>	mA	$V_{\text{RM}}=V_{\text{RRM}}$ $T_a=25^\circ\text{C}$	0.1
	I <sub>RRM2</sub>		$V_{\text{RM}}=V_{\text{RRM}}$ $T_a=100^\circ\text{C}$	20



# MBRL20100FCT

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

PARAMETER		SYMBOL	UNIT	MBRL20100FCT
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^\circ\text{C/W}$	4.0

## ■ Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBRL20100FCT	Approximate 1.6	50	1000	5000	Tube

## ■ Characteristics (Typical)

FIG1:  $I_o - T_c$  Curve

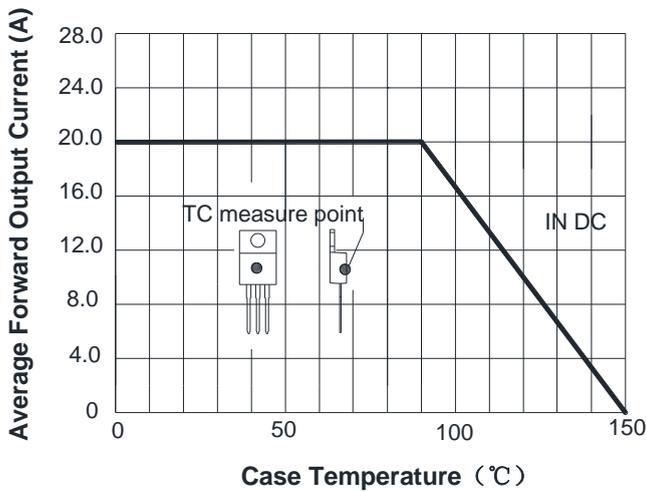


FIG2: Surge Forward Current Capability

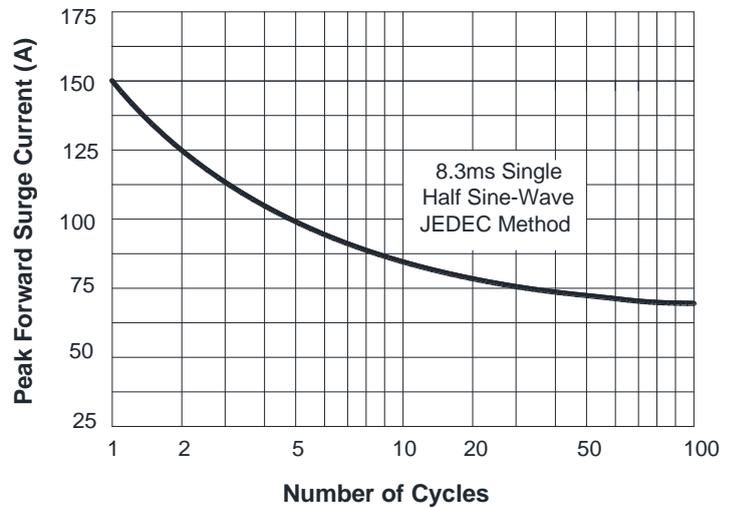


FIG3: Forward Voltage

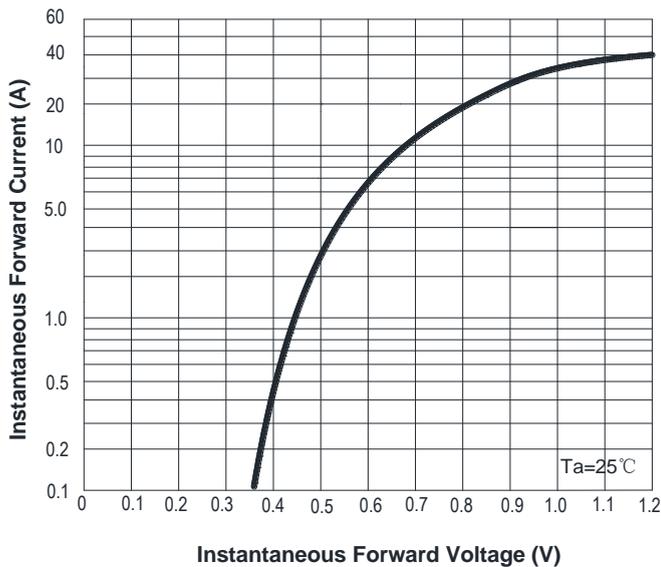
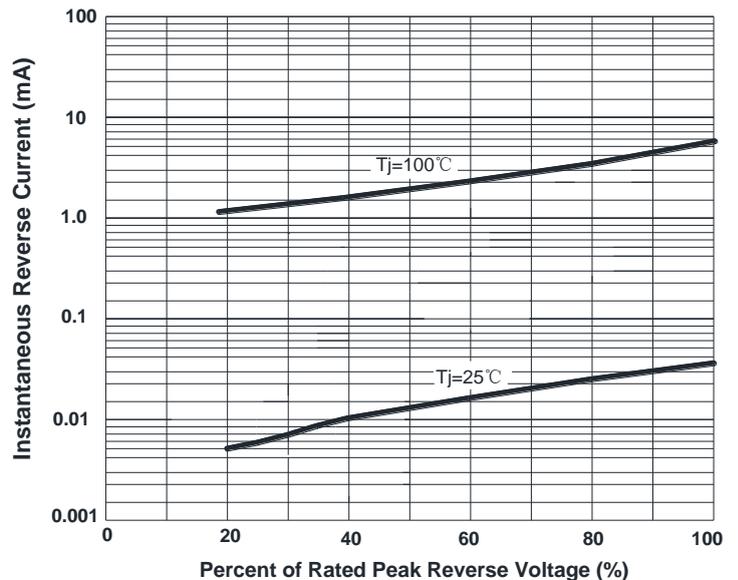
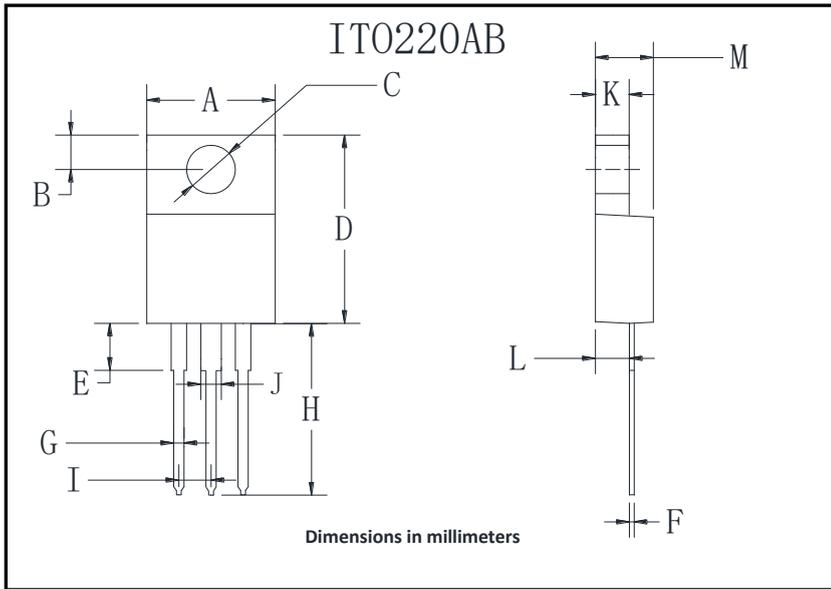


FIG4: Typical Reverse Characteristics



## ■Outline Dimensions



ITO-220AB		
Dim	Min	Max
A	9.7	10.7
B	2.15	3.25
C	2.6	3.8
D	14.4	15.9
E	3.1	4.5
F	0.4	0.8
G	0.4	0.8
H	12.7	14.2
I	1.80	2.95
J	1.4	1.8
K	2.1	3.56
L	2.1	3.2
M	3.9	5.1

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