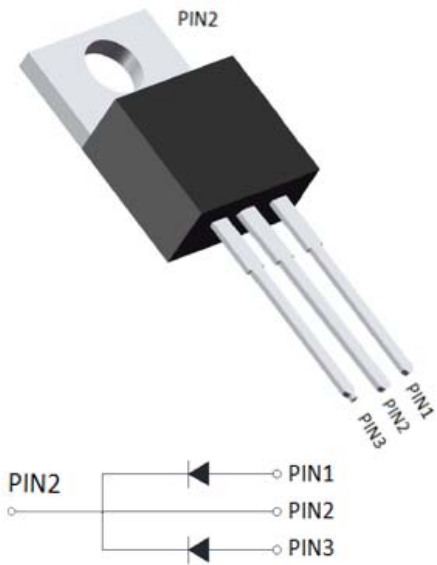


Schottky Diodes



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:** TO-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°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBR1045CTS
Device marking code			MBR1045CTS
Repetitive Peak Reverse Voltage	VRRM	V	45
Average Rectified Output Current @60Hz sine wave, R-load, T _c =137°C	I _O	A	10
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _a =25°C	I _{FSM}	A	100
Current Squared Time @1ms≤t≤8.3ms T _j =25°C,	I ² t	A ² s	41
Storage Temperature	T _{stg}	°C	-55 ~ +150
Junction Temperature	T _j	°C	-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR1045CTS
Maximum instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =5.0A	0.65
Maximum DC reverse current at rated DC blocking voltage per diode	I _{R1}	mA	V _{RM} =V _{R1} T _a =25°C	0.2
	I _{R2}		V _{RM} =V _{R2} T _a =100°C	20

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

Note2:Pulse test:pulse width 40mS



MBR1045CTS

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

PARAMETER		SYMBOL	UNIT	MBR1045CTS
Thermal Resistance	Between junction and case	R _{θJ-C}	°C/W	2.0

■ Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBR1045CTS	Approximate 1.9	50	1000	5000	Tube

■ Characteristics (Typical)

FIG1: I_o -T_c Curve

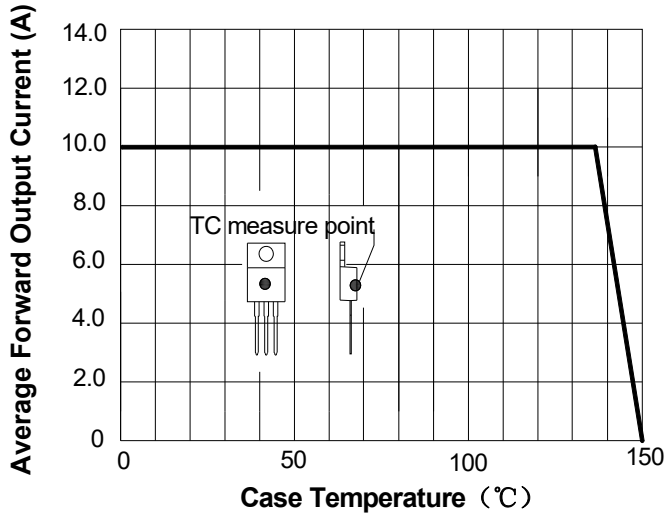


FIG2: Surge Forward Current Capability

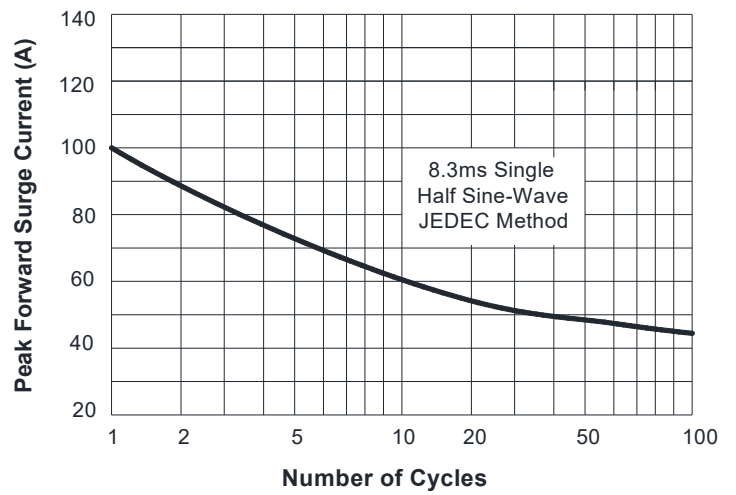


FIG3: Forward Voltage

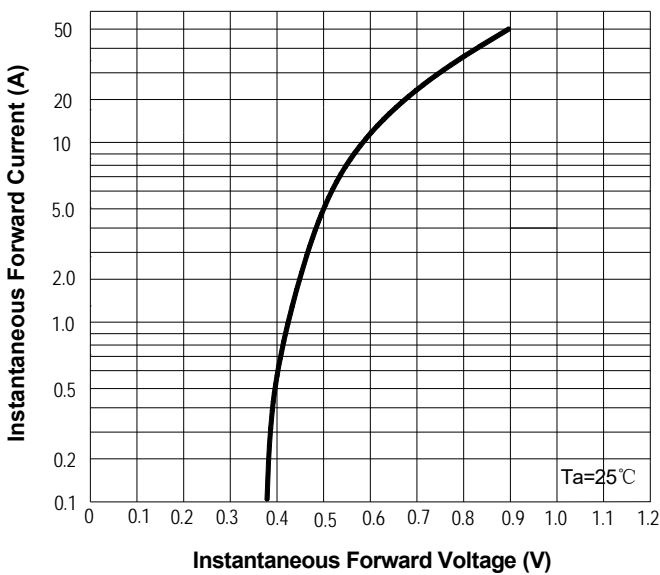
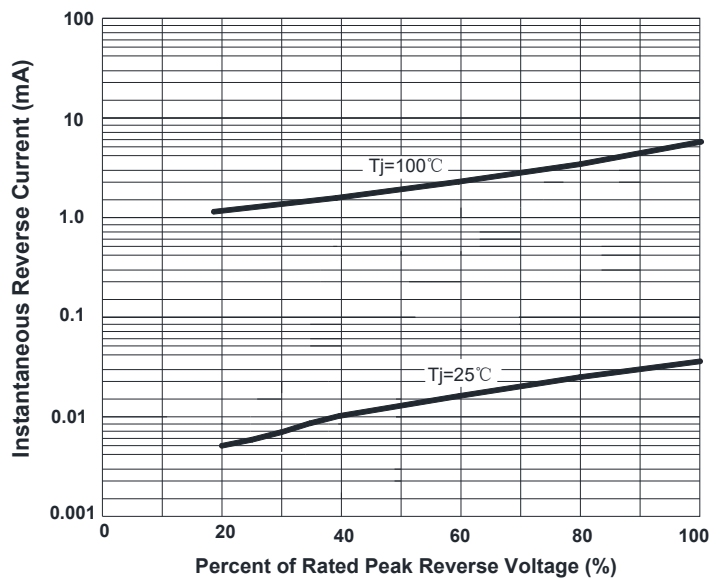


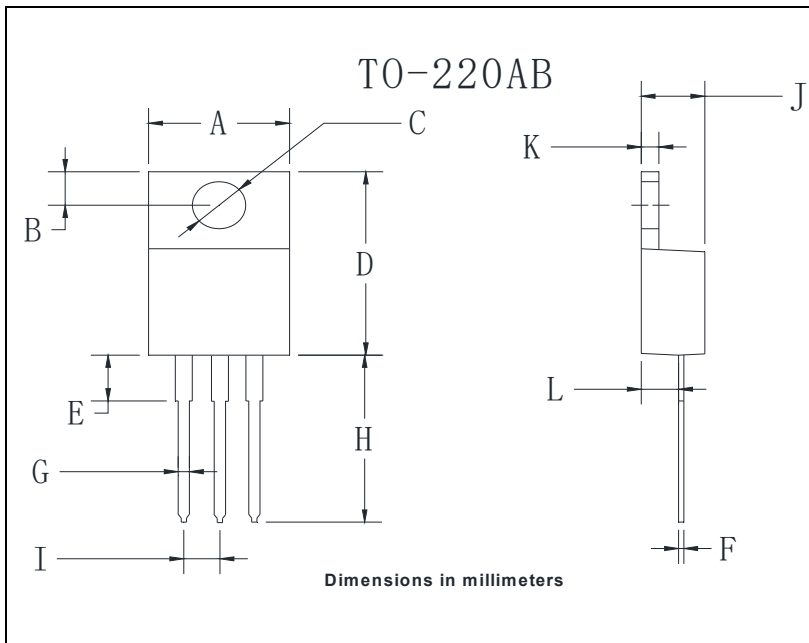
FIG4: Typical Reverse Characteristics





MBR1045CTS

■Outline Dimensions



TO-220AB		
Dim	Min	Max
A	9.95	10.35
B	2.55	2.95
C	3.8	4.0
D	14.95	15.25
E	3.75	4.25
F	0.26	0.5
G	0.68	0.94
H	13.4	13.9
I	2.35	2.65
J	4.38	4.78
K	1.14	1.4
L	2.37	2.79

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