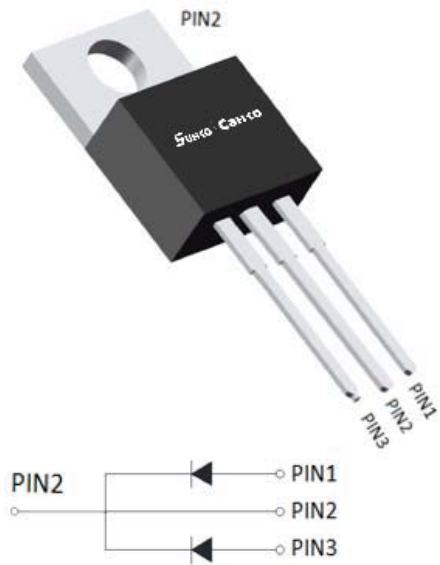


Schottky Diodes



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:** TO-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 (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBRL3045CT
Device marking code			MBRL3045CT
Repetitive Peak Reverse Voltage	V_{RRM}	V	45
Average Rectified Output Current @60Hz sine wave, R-load, Tc (FIG 1)	I_O	A	30
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Ta=25°C	I_{FSM}	A	250
Current Squared Time @1ms≤t≤8.3ms Tj=25°C, rating of per diode	I^2t	A ² s	259
Storage Temperature	Tstg	°C	-55 ~ +150
Junction Temperature	Tj	°C	-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBRL3045CT
Maximum instantaneous forward voltage drop per diode	V_{FM}	V	$I_{FM}=15.0A$	0.55
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	mA	$V_{RM}=V_{RRM}$ Ta=25°C	0.2
	I_{RRM2}		$V_{RM}=V_{RRM}$ Ta=100°C	50

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

Note2:Pulse test:pulse width 40mS

MBRL3045CT-B1-W5094HF

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

PARAMETER		SYMBOL	UNIT	MBRL3045CT
Thermal Resistance	Between junction and case	R _{θJ-C}	°C/W	2.0

■ Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBRL3045CT	Approximate 1.9	50	1000	5000	Tube

■ Characteristics (Typical)

FIG1: I_o -T_c Curve

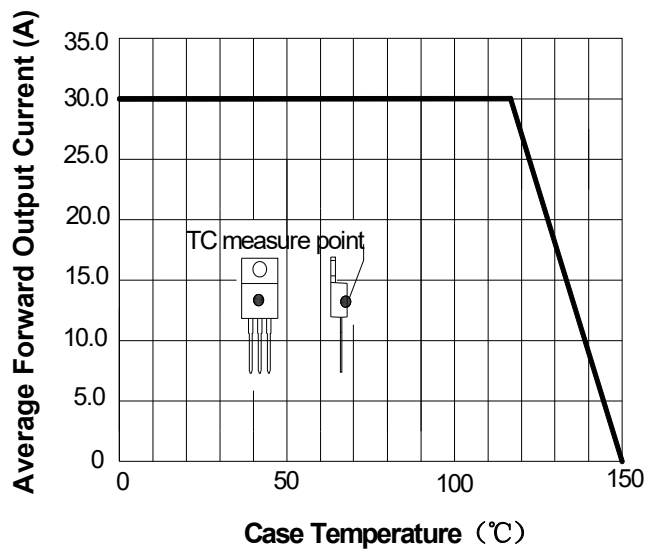


FIG2: Surge Forward Current Capability

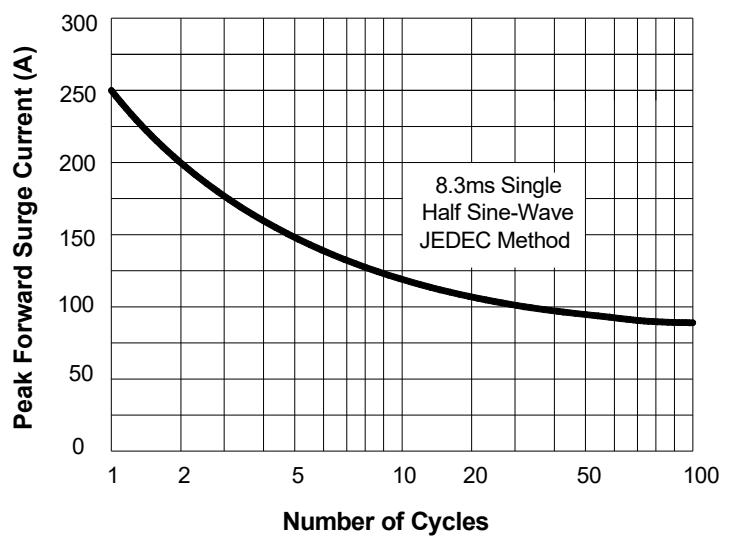


FIG3: Forward Voltage

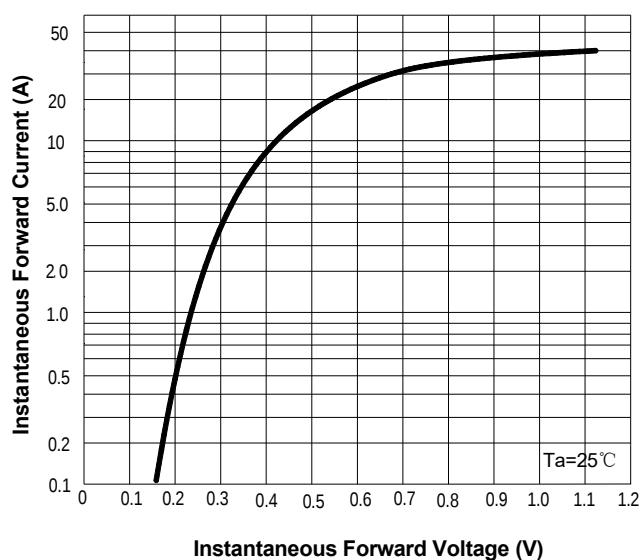
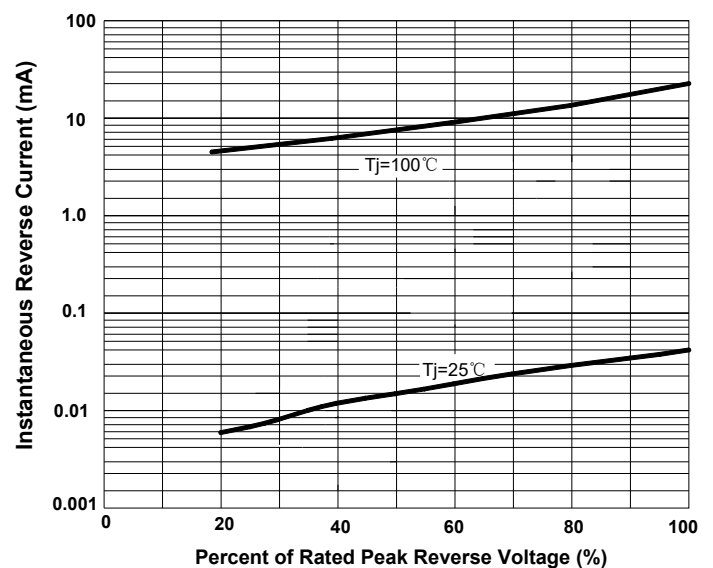
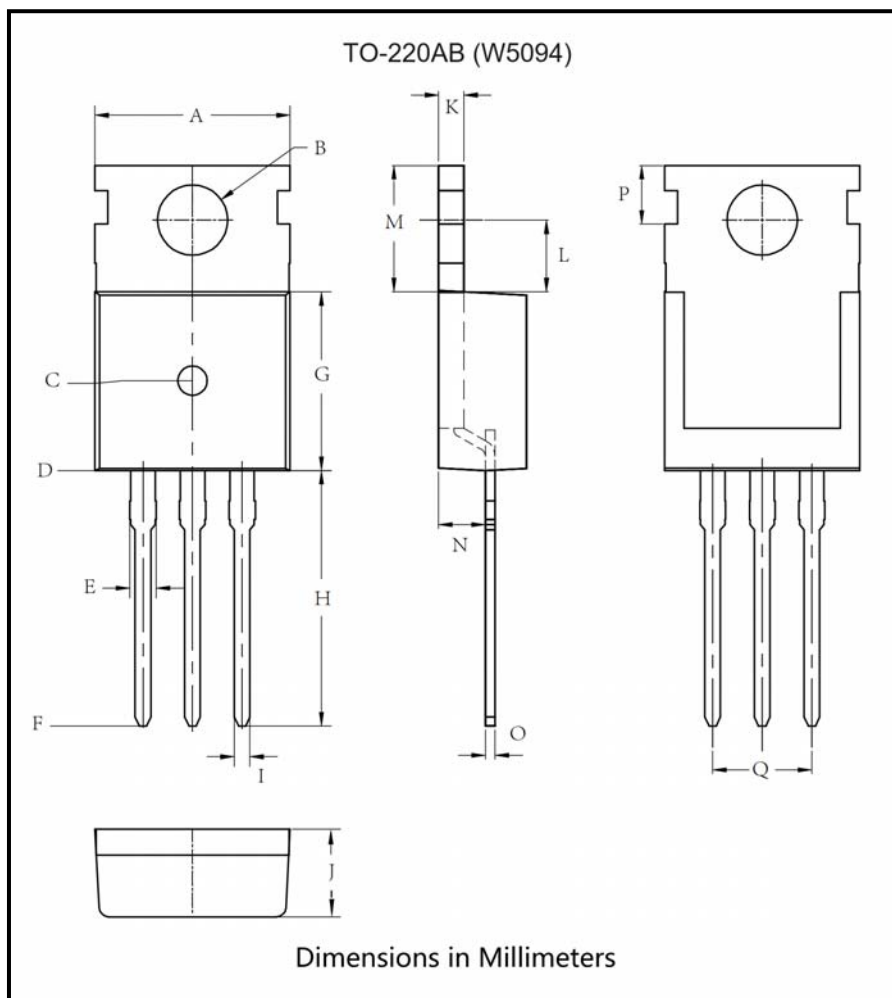


FIG.4: Typical Reverse Characteristics



■ Outline Dimensions



TO-220AB		
Dim	Min	Max
A	9.9	10.1
B	TYP 3.6	
C	8.06	8.46
D	12.67	13.07
E	1.28	1.42
F	25.7	26.3
G	9	9.4
H	12.93	13.33
I	TYP 0.8	
J	4.3	4.7
K	1.285	1.315
L	3.47	3.87
M	6.27	6.67
N	2.2	2.6
O	0.485	0.515
P	2.8	3.2
Q	TYP 5.08	

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