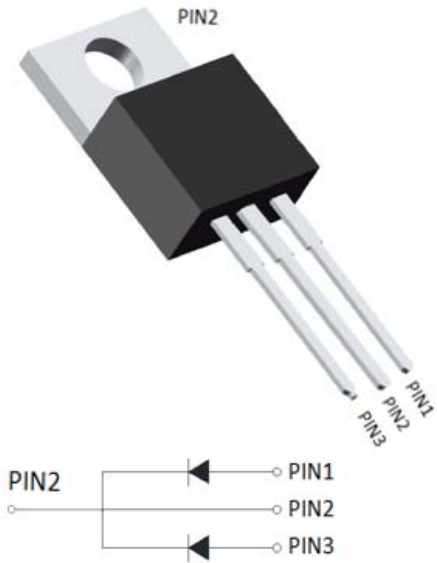


Schottky Diodes



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_j=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBRL3080CT
Device marking code			MBRL3080CT
Repetitive Peak Reverse Voltage	VRRM	V	80
Average Rectified Output Current @60Hz sine wave, R-load, T _c (FIG.1)	I _O	A	30
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _j =25°C	I _{FSM}	A	200
Current Squared Time @1ms≤t<8.3ms T _j =25°C,	I ² t	A ² s	167
Typical Junction Capacitance @ 1MHz and Applied Reverse Voltage of 4.0 V.D.C	C _j	pF	490
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	MBRL3080CT
Maximum instantaneous forward voltage drop per diode	VFM1	V	I _{FM} =15.0A T _j =25°C	0.79
	VFM2		I _{FM} =15.0A T _j =125°C	0.66
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	V _{RM} =V _{RRM} T _j =25°C	0.01
	I _{RRM2}		V _{RM} =V _{RRM} T _j =100°C	1



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

PARAMETER		SYMBOL	UNIT	MBRL3080CT
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	$^{\circ}\text{C/W}$	2.0

■ Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBRL3080CT	Approximate 1.9	50	1000	5000	Tube

■ Characteristics (Typical)

FIG1: $I_o - T_c$ Curve

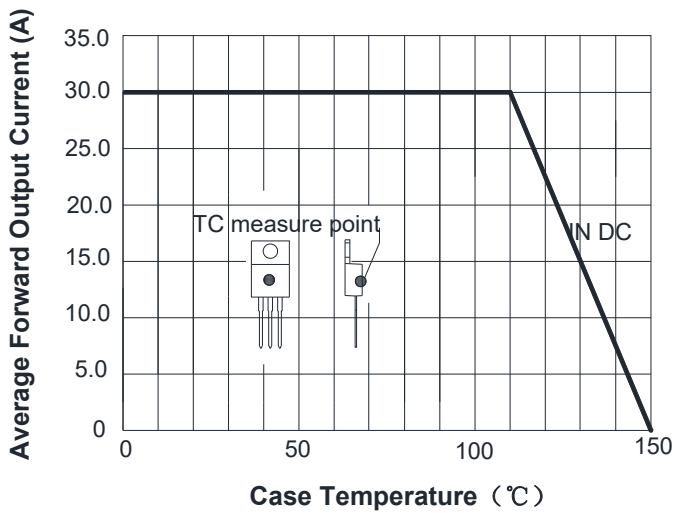


FIG2: Surge Forward Current Capability

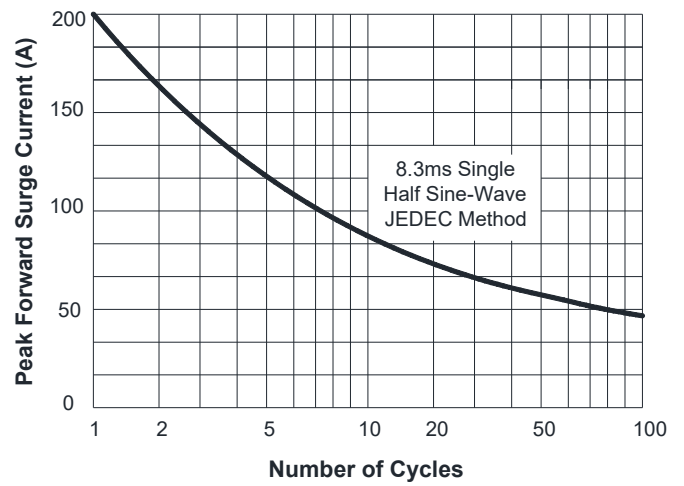


FIG3: Forward Voltage

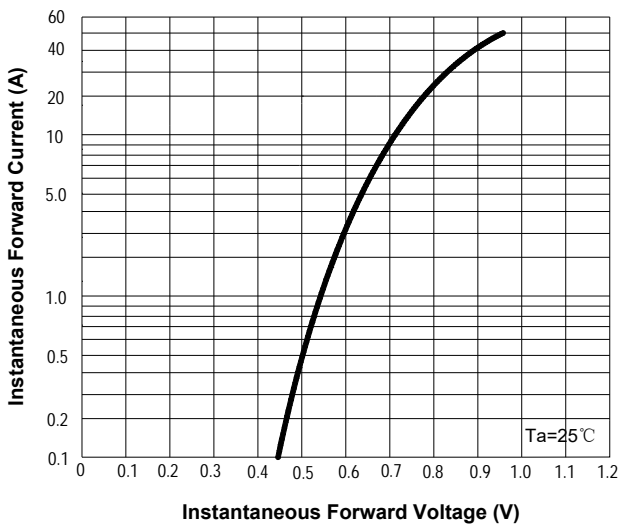
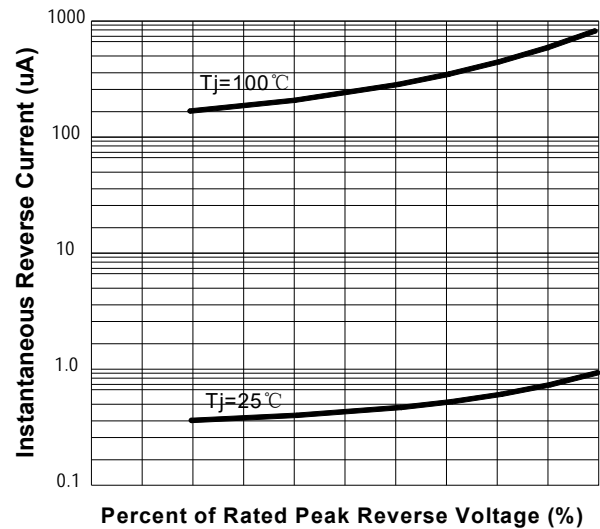


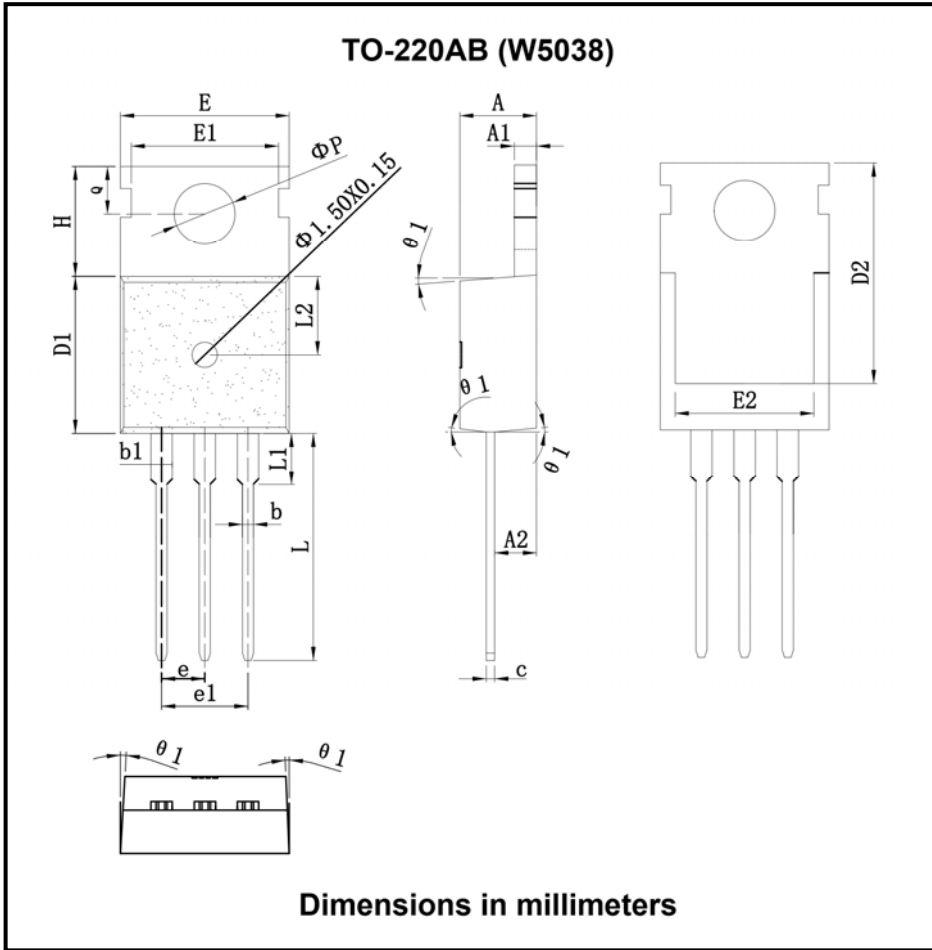
FIG.4: Instantaneous Reverse Characteristics





MBRL3080CT-B1-W5038HF

■Outline Dimensions



TO-220AB (W5038)		
Dim	Min	Max
A	4.40	4.60
A1	1.25	1.35
A2	2.30	2.50
b	0.75	0.85
b1	1.25	1.42
C	0.45	0.55
D1	9.10	9.30
D2	12.90	13.30
E	9.80	10.15
E1	8.55	8.85
E2	7.80	8.20
e	2.50	2.58
e1	5.08 REF	
H	6.40	6.60
L	13.00	13.18
L1		3.40
L2	4.55	4.75
ΦP	3.60	3.75
Q	2.70	2.90
$\theta 1$	2°	7°



MBRL3080CT-B1-W5038HF

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