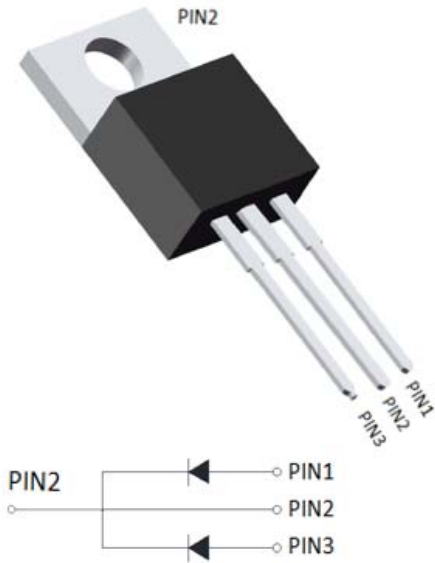


Schottky Diodes



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, 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	MBR40150CT		
Device marking code			MBR40150CT		
Repetitive Peak Reverse Voltage	V _{RRM}	V	150		
Average Rectified Output Current @60Hz sine wave, R-load, T _c =107°C	I _o	A	40		
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _a =25°C	I _{FSM}	A	300		
Surge(Non-repetitive)Forward Current @1ms, square wave, 1 time, T _a =25°C			600		
Current Squared Time @1ms≤t≤8.3ms T _j =25°C,	I ² t	A ² s	373		
Typical junction capacitance	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C.		C _j	pF	410
Storage Temperature	T _{stg}	°C	-55 ~ +175		
Junction Temperature	T _j	°C	-55 ~ +175		

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Peak Forward Voltage	V _{FM}	V	I _{FM} =20.0A T _a =25°C	0.5	0.815	0.85
			I _{FM} =20.0A T _a =125°C	-	0.68	0.72
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	mA	V _{RM} =V _{RRM} T _j =25°C	-	-	0.1
	I _{RRM2}		V _{RM} =V _{RRM} T _j =125°C	-	-	20

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

Note2:Pulse test:pulse width 40mS



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

PARAMETER		SYMBOL	UNIT	MBR40150CT
Thermal Resistance	Between junction and ambient	R _{θJ-A}	°C/W	50.0
	Between junction and case	R _{θJ-C}	°C/W	2.0

■ Characteristics (Typical)

FIG1: I_o -T_c Curve

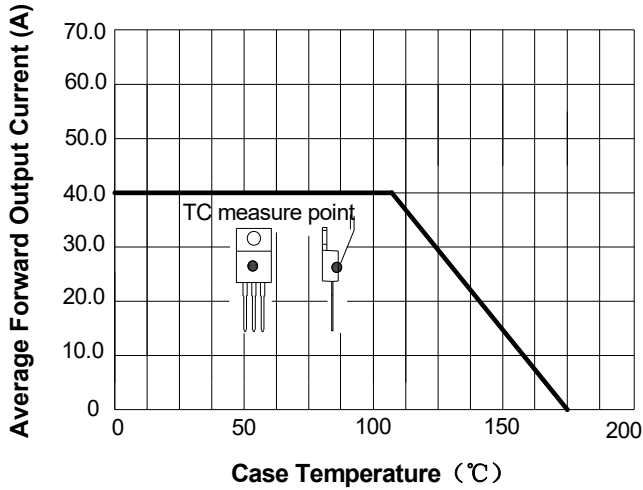


FIG2: Surge Forward Current Capability

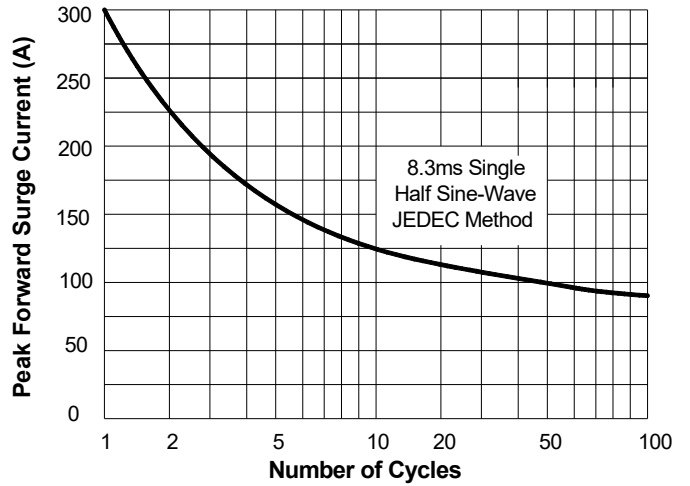


FIG3: Forward Voltage

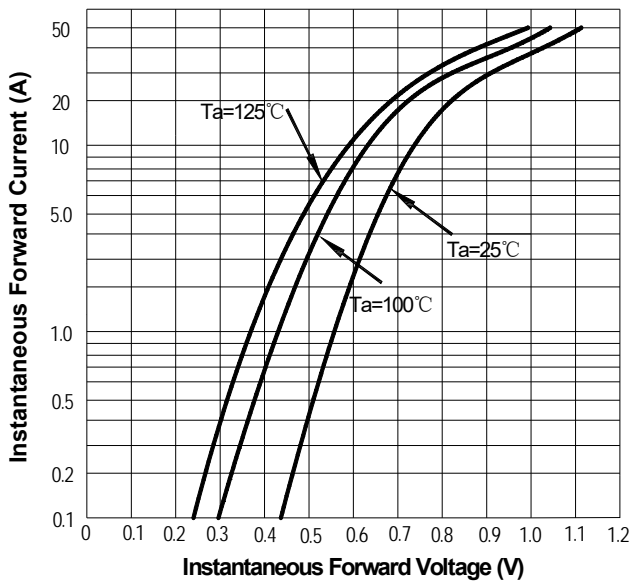


FIG4: Instantaneous Reverse Characteristics

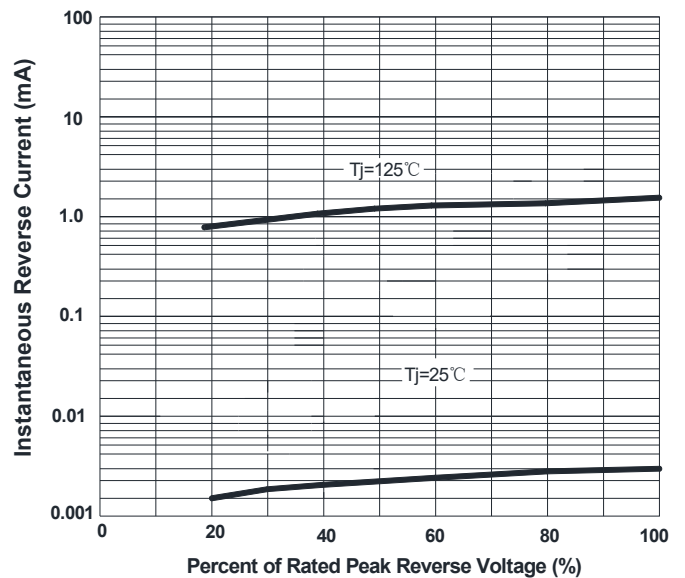
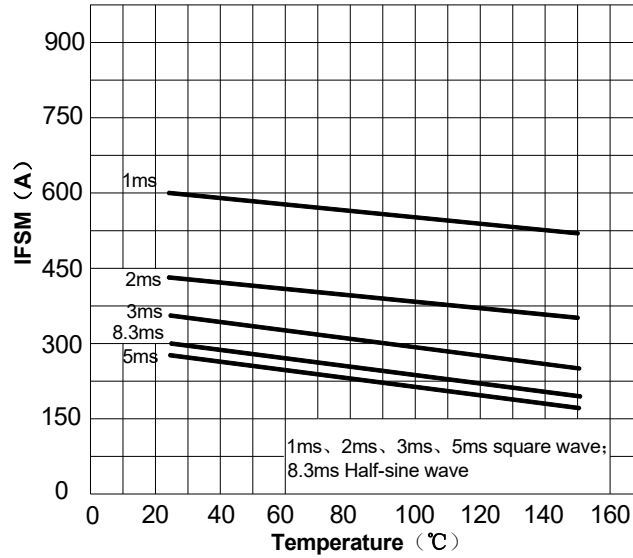
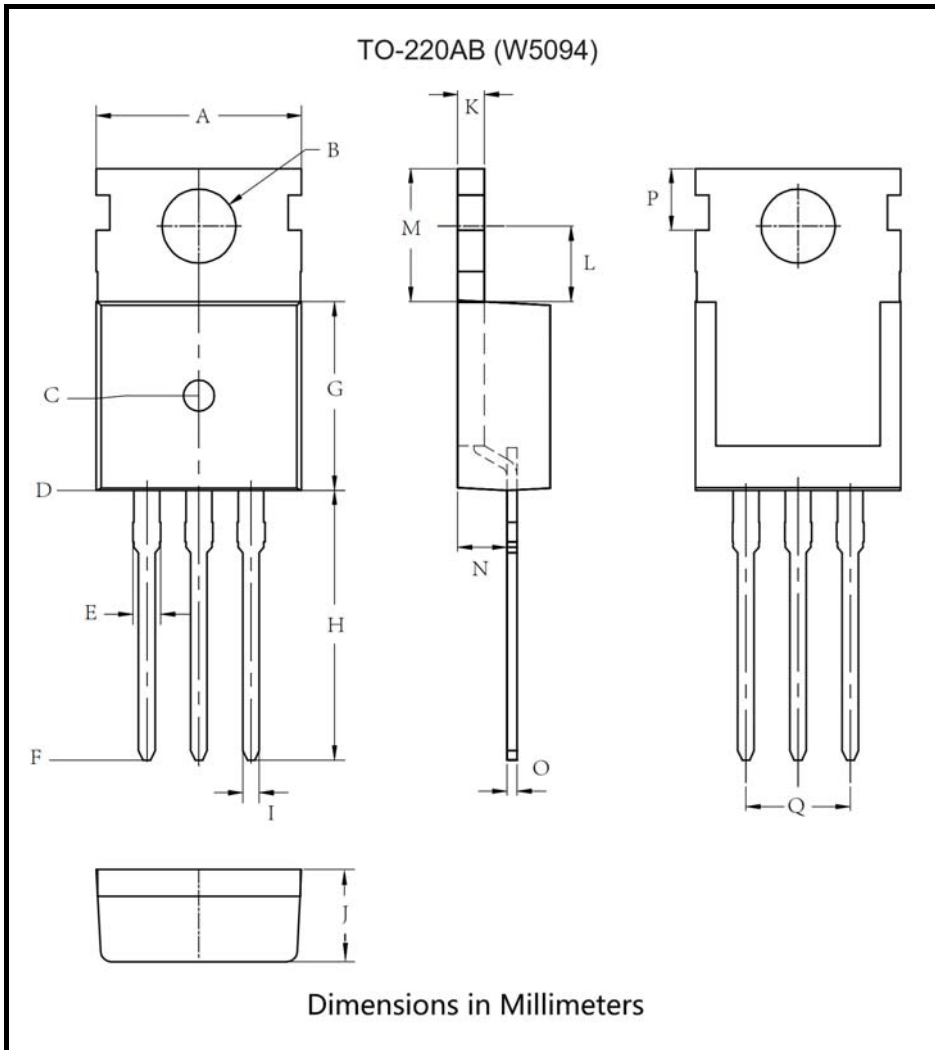


FIG.5: Maximum Non-Repetitive Peak Forward



Outline Dimensions



TO-220AB (W5094)		
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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