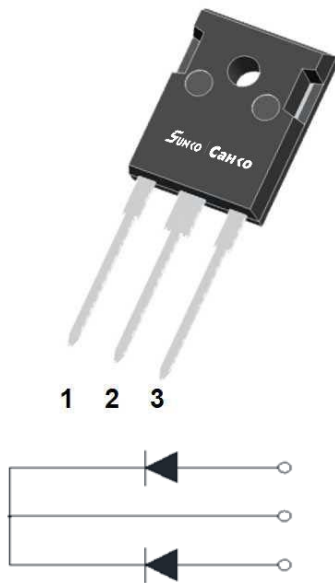


Schottky Diodes



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-247AB
Molding compound meets UL 94 V-0 flammability rating, -compliant, halogen-free
- **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	MBR30150PT
Device marking code			MBR30150PT
Repetitive Peak Reverse Voltage	V _{RRM}	V	150
Average Rectified Output Current @60Hz sine wave, R-load, T _c =150°C	I _O	A	30
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _a =25°C	I _{FSM}	A	250
Current Squared Time @1ms≤t≤8.3ms T _j =25°C	I ² t	A ² s	260
Storage Temperature	T _{stg}	°C	-55 ~ +175
Junction Temperature	T _j	°C	-55 ~ +175

■Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Peak Forward Voltage	V _{FM}	V	I _{FM} =15.0A T _j =25°C	0.5	0.81	0.85
			I _{FM} =15.0A T _j =125°C	-	0.67	0.72
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
Junction capacitance	C _j	pF	1MHz and Applied Reverse Voltage of 4.0 V.D.C	150	310	550

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	MBR30150PT
Thermal Resistance	Between junction and ambient	R _{θJ-A}	°C/W	50.0
	Between junction and case	R _{θJ-C}	°C/W	1.0

■ Characteristics (Typical)

FIG1: I_o -T_c Curve

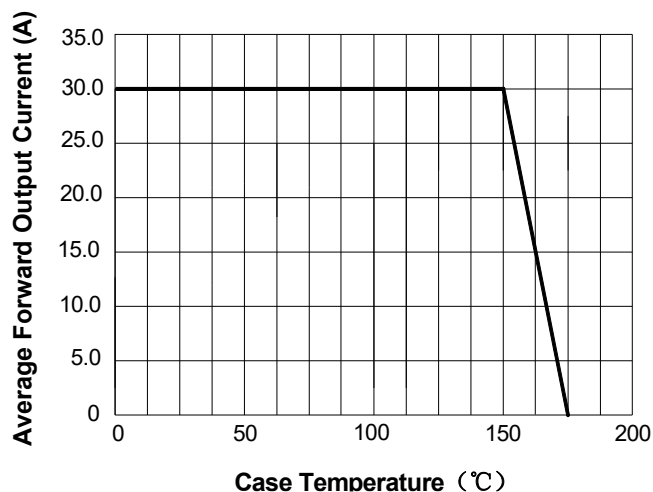


FIG2: Surge Forward Current Capability

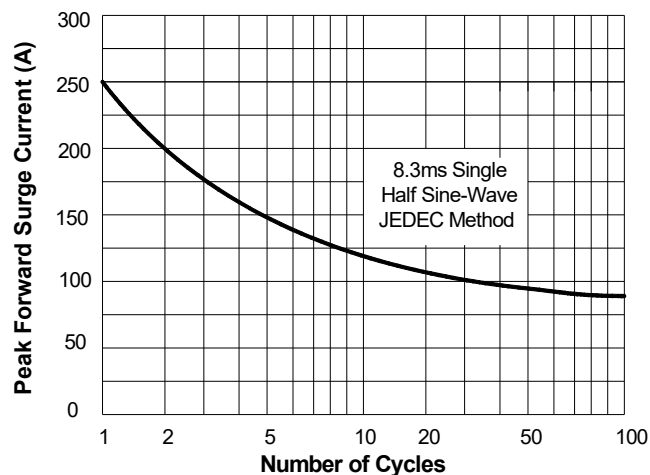


FIG3: Forward Voltage

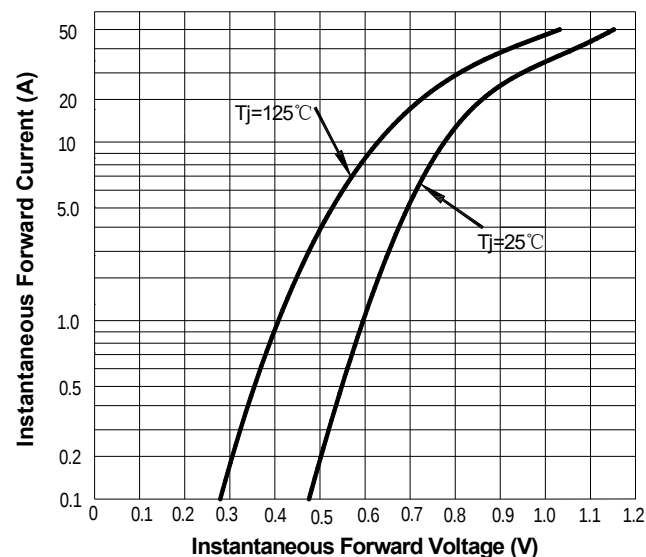
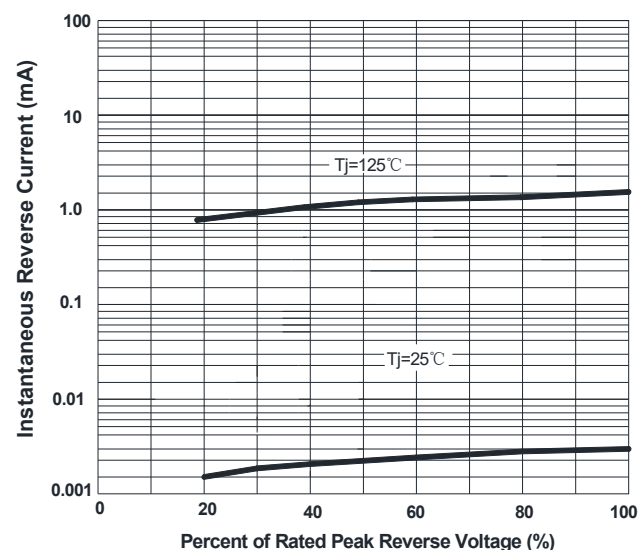
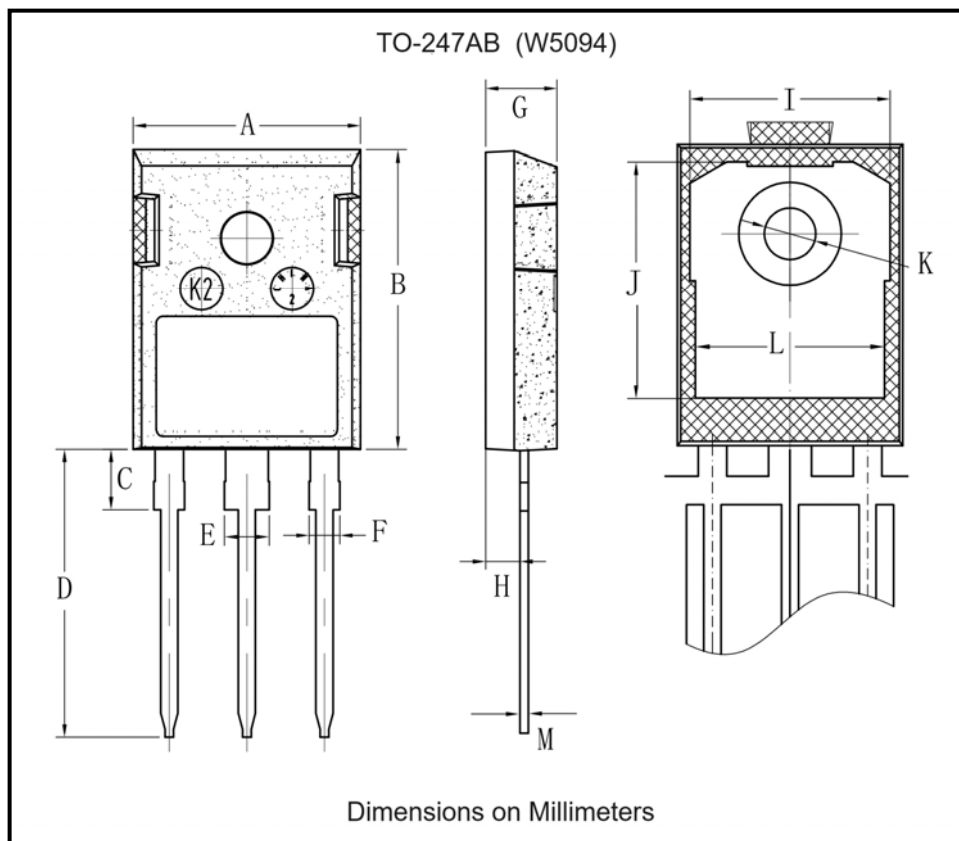


FIG4: Instantaneous Reverse Characteristics



■ Outline Dimensions



TO-247AB		
Dim	Min	Max
A	15.72	16.12
B	20.70	21.10
C	4.02	4.42
D	19.90	20.30
E	3.00	3.30
F	2.00	2.30
G	4.80	5.20
H	2.30	2.50
I	TYP 14.02	
J	TYP 16.55	
K	3.50	3.70
L	TYP 13.26	
M	0.58	0.62

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