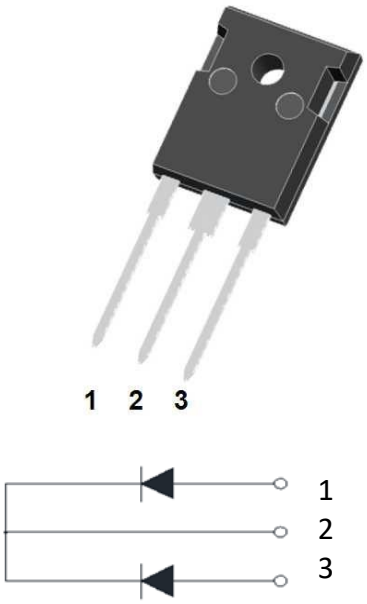
Schottky Barrier Rectifiers



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, RoHS-compliant
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity**: As marked

■Maximum Ratings (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBR30100PT	MBR30150PT	MBR30200PT
Device marking code			MBR30100PT	MBR30150PT	MBR30200PT
Repetitive peak reverse voltage	V_{RRM}	V	100	150	200
Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% duty cycle, Tc (FIG 1)	I_{FAV}	A	30		
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Ta=25℃	I_{FSM}	A	250		
Current Squared Time @1ms≤t≤8.3ms Tj=25℃	I^2t	A^2s	260		
Storage temperature	T_{STG}	℃	-55 ~+175		
Junction temperature	T_J	℃	-55 ~+175		

■Electrical Characteristics (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MBR30100PT	MBR30150PT	MBR30200PT
Maximum instantaneous forward voltage drop per diode	V_F	V	I_F=20A, T_J=25℃	0.8	0.85	0.9
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM}	mA	$V_{RM}=V_{RRM}$ Ta=25℃	0.1		
			$V_{RM}=V_{RRM}$ Ta=125℃	20		

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

Note2:Pulse test:pulse widh 40mS

■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	MBR30100PT	MBR30150PT	MBR30200PT
Typical Thermal Resistance(Per leg)	$R_{\theta J-C}$	℃/W	1.0		

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBR30100PT THUR MBR30200PT	Approximate 6.0	30	330	1980	Tube

■ Characteristics(Typical)

FIG1:Io -Tc Curve

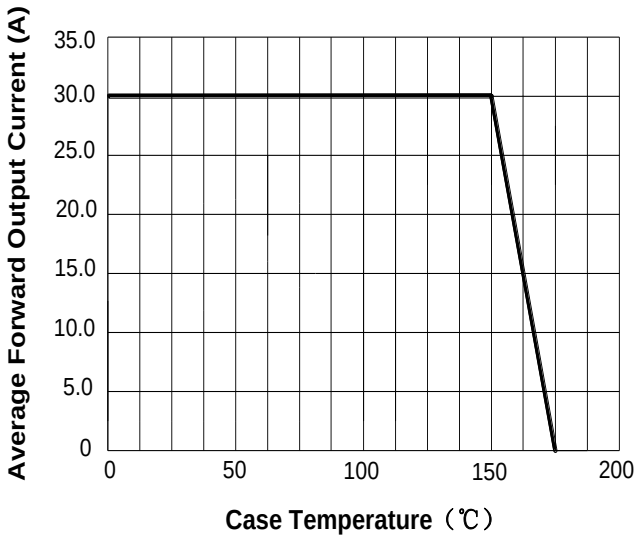


FIG2:Surge Forward Current Capability

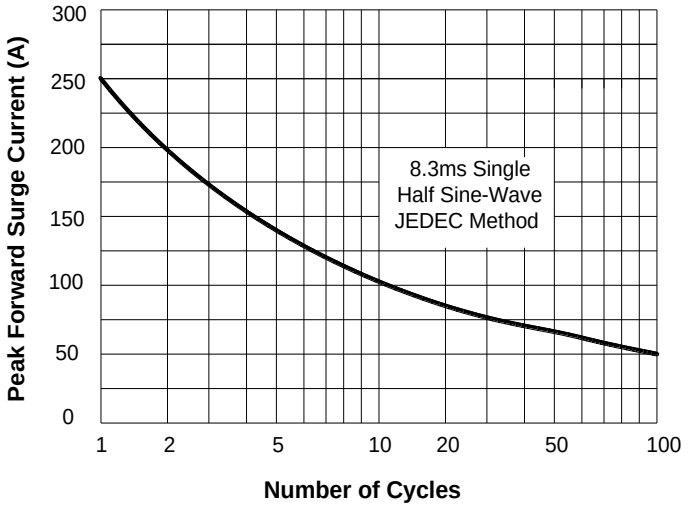


FIG3: Forward Voltage

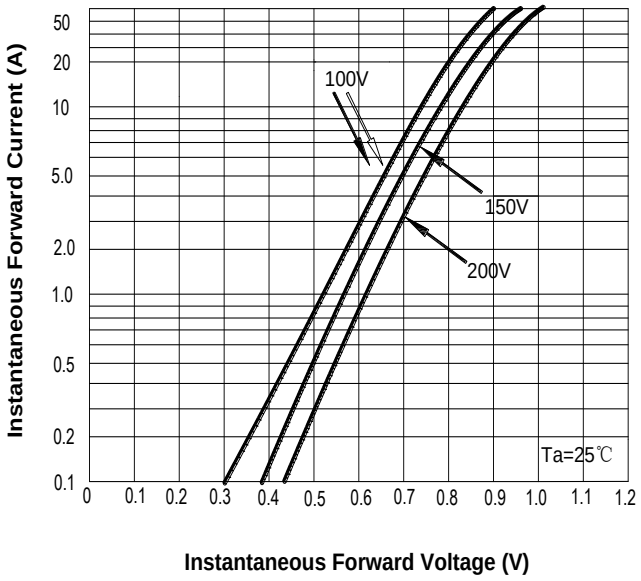
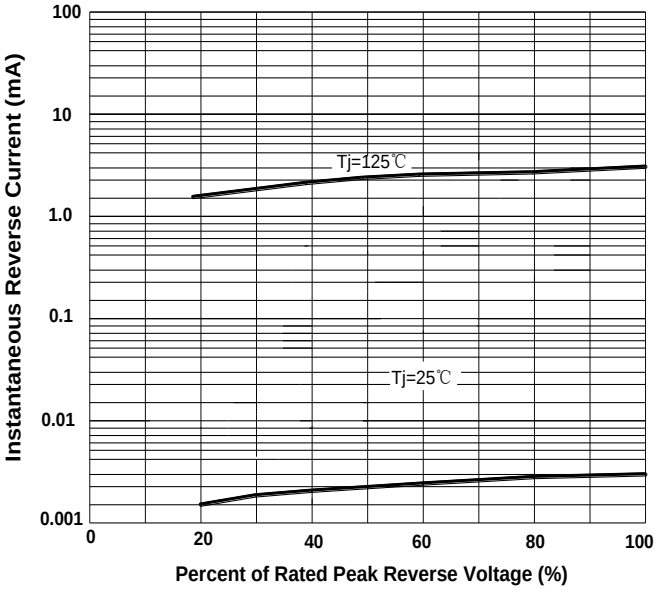
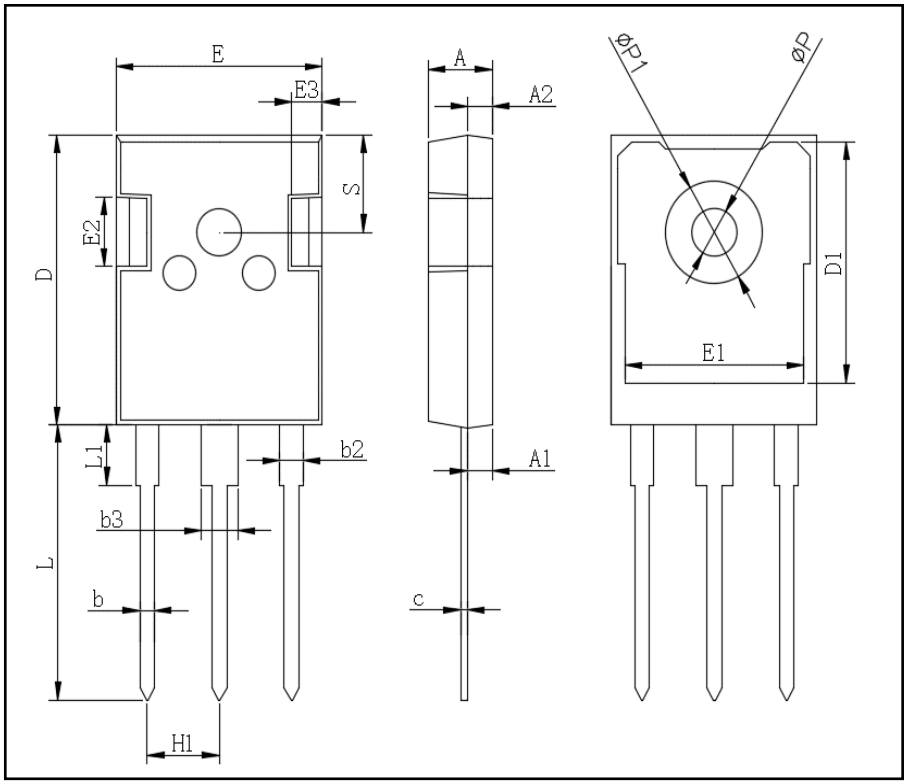


FIG.4: Instantaneous Reverse Characteristics



■ Outline Dimensions



TO-247AB		
Dim	Min	Max
A	4.80	5.20
A1	2.21	2.61
A2	1.85	2.15
b	1.0	1.4
b2	1.91	2.21
C	0.5	0.7
D	20.70	21.30
D1	16.25	16.85
E	15.50	16.10
E1	13.0	13.6
E2	4.80	5.20
E3	2.30	2.70
L	19.62	20.22
L1	-	4.30
ΦP	3.40	3.80
ΦP1		7.30
S	6.15TYP	
H1	5.44TYP	
b3	2.80	3.20

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