

Features

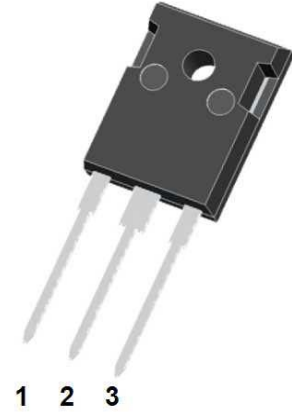
- High frequency operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

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 (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBR60200CT
Device marking code			MBR60200CT
Repetitive peak reverse voltage	VRRM	V	200
Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% duty cycle, T _c (FIG 1)	IFAV	A	60
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, T _a =25°C	IFSM	A	500
Current Squared Time @1ms≤t≤8.3ms T _j =25°C	I ² t	A ² s	1037
Type Junction capacitance@1MHZ and Applied Reverse Voltage of 4.0 V.D.C.	C _j	pF	770
Storage temperature	TSTG	°C	-55 ~+175
Junction temperature	T _J	°C	-55 ~+175

■Electrical Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V _F	V	I _{FM} =30.0A T _j =25°C	-	0.90	0.95
			I _{FM} =30.0A T _j =125°C	-	0.77	0.85
DC reverse current at rated DC blocking voltage per diode,@ V _{RM} =VRRM	I _{RRM}	mA	V _{RM} =VRRM T _j =25°C	-	-	0.05
			V _{RM} =VRRM T _j =125°C	-	-	13

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

Note2:Pulse test:pulse width 40mS

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

PARAMETER		SYMBOL	UNIT	MBR60200CT
Thermal Resistance	Between junction and ambient	$R_{\theta JA}$	$^{\circ}\text{C/W}$	50.0
	Between junction and case	$R_{\theta JC}$	$^{\circ}\text{C/W}$	1.0

■ Characteristics(Typical)

FIG1: I_o - T_c Curve

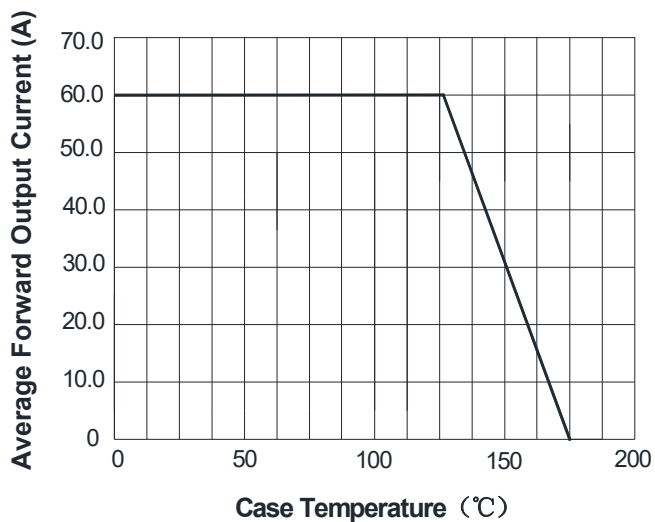


FIG2: Surge Forward Current Capability

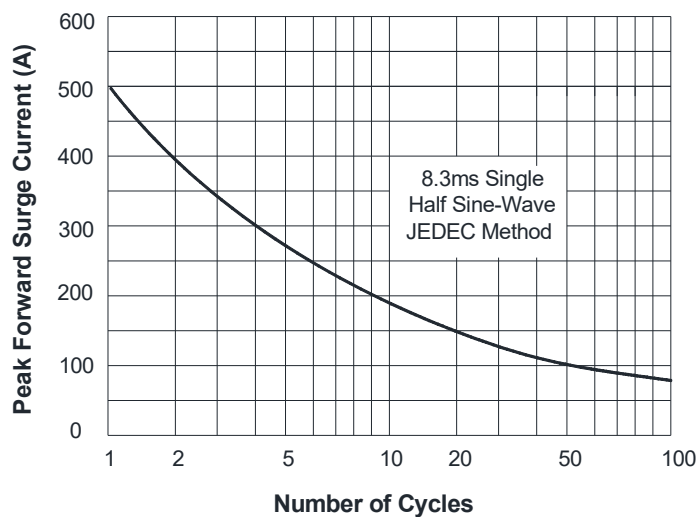


FIG3: Forward Voltage

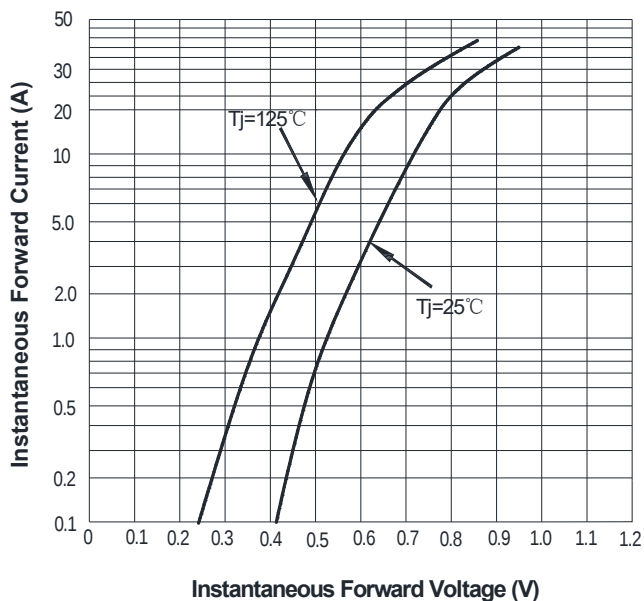
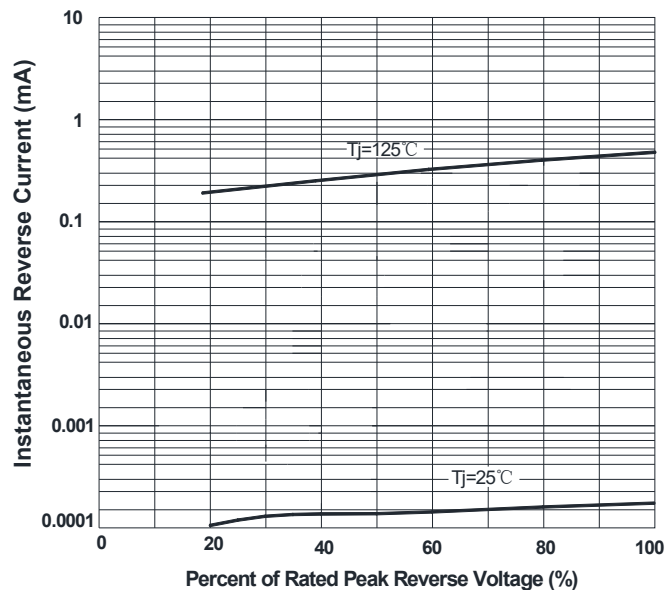
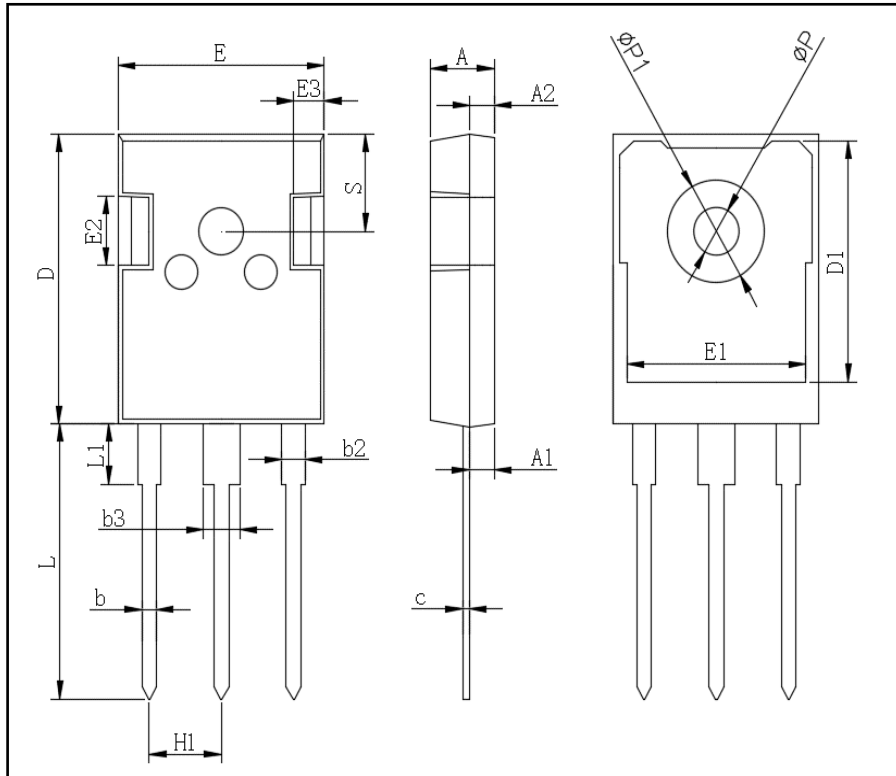


FIG4: Instantaneous Reverse Characteristics



■ Outline Dimensions



TO-247AB		
Dim	Min	Max
A	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