

MBR3020PT THRU MBR30200PT

AXIAL SCHOTTKY BARRIER RECTIFIER

TO-247 Axial Schottky Barrier Rectifier

Features

- Low forward voltage drop
- High forward surge current capability
- High reliability
- High current capability

Applications

For use in low voltage high frequency inverters, free wheeling,DC/DC converters, and polarity protection applications.

Mechanical Data

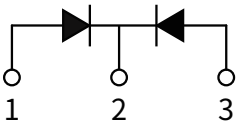
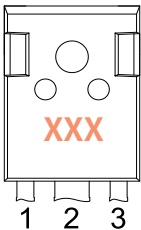
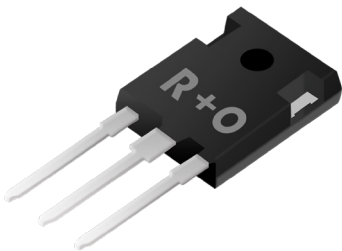
- Case: TO-247
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026

Function Diagram

Reverse Voltage
20-200 V

Forward Current
30 Ampere

TO-247



Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBR 3020PT	MBR 3040PT	MBR 3060PT	MBR 3080PT	MBR 30100PT	MBR 30150PT	MBR 30200PT
Device marking code			MBR 3020PT	MBR 3040PT	MBR 3060PT	MBR 3080PT	MBR 30100PT	MBR 30150PT	MBR 30200PT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	20	40	60	80	100	150	200
Maximum RMS Voltage	V_{RMS}	V	14	28	42	56	70	105	140
Maximum DC blocking Voltage	V_{DC}	V	20	40	60	80	100	150	200
Maximum Average Forward Rectified Current @60Hz sinewave, Resistance load,TL (Fig.1)	$I_{F(AV)}$	A	30						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	250						
Storage temperature	T_{stg}	°C	-55 ~ +150						
Junction temperature	T_j	°C	-55 ~ +150						
Typical Thermal Resistance	$R_{\theta JC}$	°C /W	1.4						

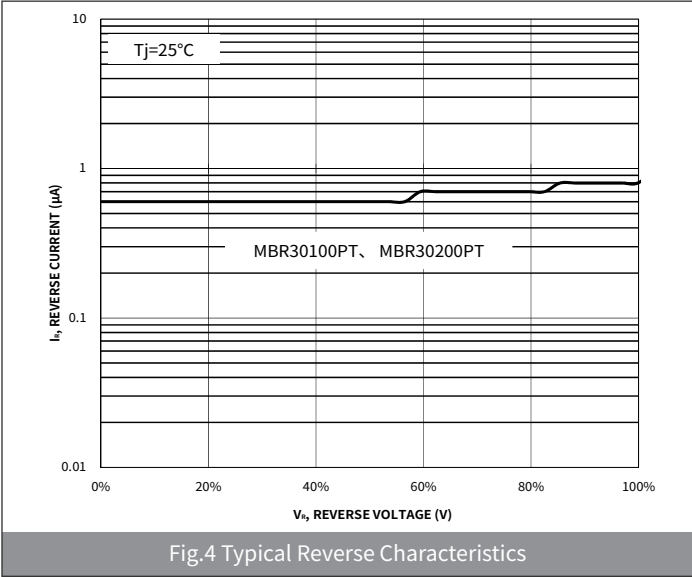
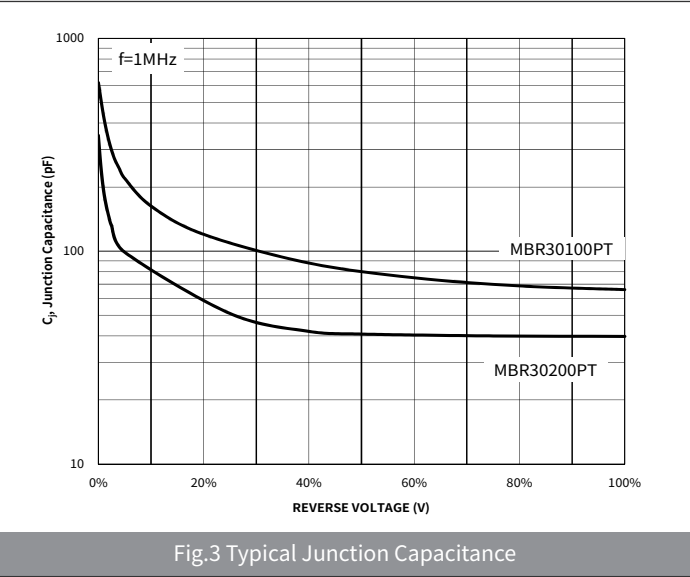
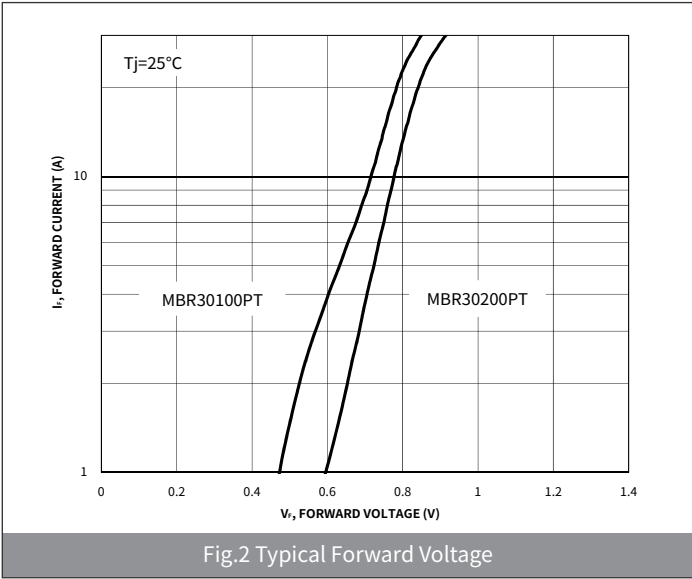
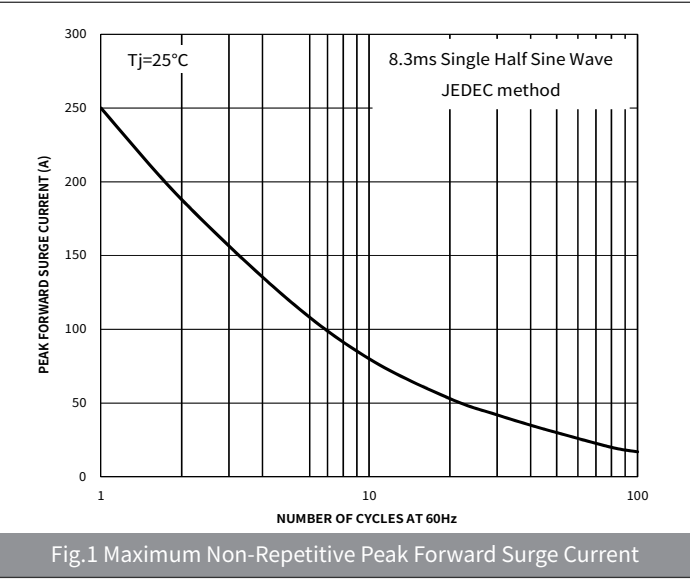
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● **Electrical Characteristics** (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	MBR 3020PT	MBR 3040PT	MBR 3060PT	MBR 3080PT	MBR 30100PT	MBR 30150PT	MBR 30200PT
Maximum instantaneous forward voltage	$I_F=15A$	V_F	V	0.55	0.70	0.85	0.92			
Maximum DC reverse current at rated DC blocking voltage	$V_R=V_{DC}, T_A=25^{\circ}C$	I_{R1}	mA	0.1			0.02			
	$V_R=V_{DC}, T_A=100^{\circ}C$	I_{R2}		5.0			2.0			

● **Ratings And Characteristics Curves** (Ta=25°C Unless otherwise specified)



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● Ordering Information

PACKAGE	UNIT WEIGHT(g)	TUBE(pcs)	BOX(pcs)	CARTON(pcs)
TO-247	6.217	30	600	2400

● Package Outline Dimensions (TO-247)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.80	5.30	0.189	0.209
A1	2.31	2.51	0.091	0.099
A2	1.90	2.10	0.075	0.083
b	1.15	1.25	0.045	0.049
b1	1.90	2.41	0.075	0.095
b2	2.85	3.38	0.112	0.133
c	0.55	0.65	0.022	0.026
D	20.90	21.10	0.823	0.831
D1	16.35	16.75	0.644	0.659
D2	1.05	1.35	0.041	0.053
E	15.20	16.20	0.598	0.638
E1	13.10	13.40	0.516	0.528
E2	3.68	5.20	0.145	0.205
E3	2.40	2.60	0.094	0.102
e	5.40	5.48	0.213	0.216
L	19.50	20.50	0.768	0.807
L1	-	4.50	-	0.177
ΦP	3.70	3.90	0.146	0.154
ΦP1	3.50	3.70	0.138	0.146
ΦP2	7.00	7.40	0.276	0.291
ΦP3	2.40	2.60	0.094	0.102
Q	5.65	6.35	0.222	0.250
S	6.05	6.25	0.238	0.246
T	9.80	10.20	0.386	0.402
U	6.00	6.40	0.236	0.252
θ1	5°	9°	5°	9°
θ2	1°	5°	1°	5°
θ3	13°	17°	13°	17°