

TO-247 Axial Schottky Barrier Rectifier

Features

- Low power loss,high efficiency
- Guard ring die construction for transient protection
- High current capability and low forward voltage drop
- Metal silicon junction,majority carrier conduction

Reverse Voltage
 100 V
Forward Current
 40 Ampere

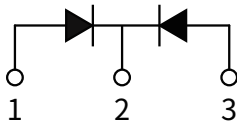
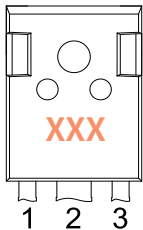
Applications

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



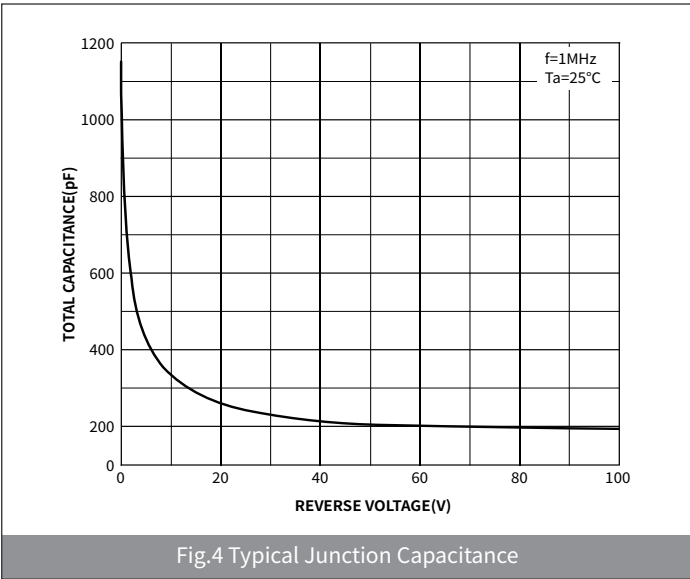
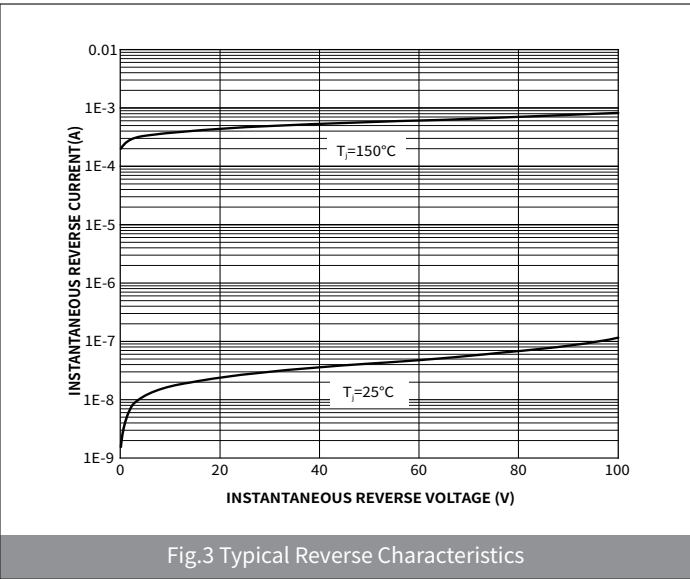
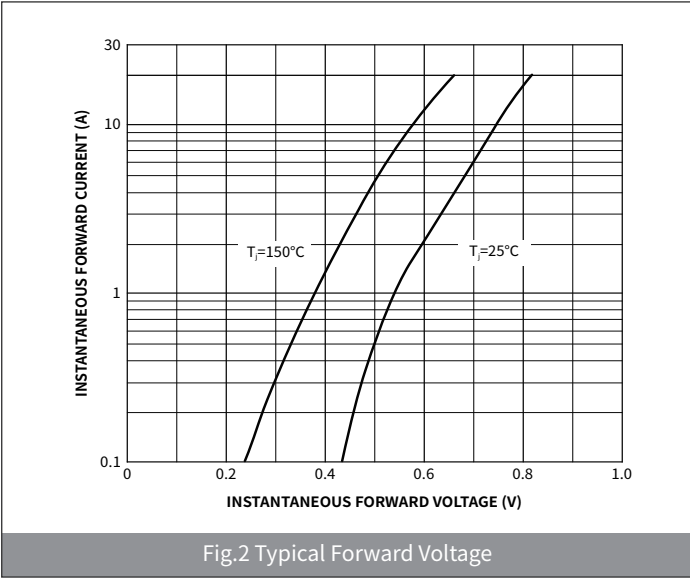
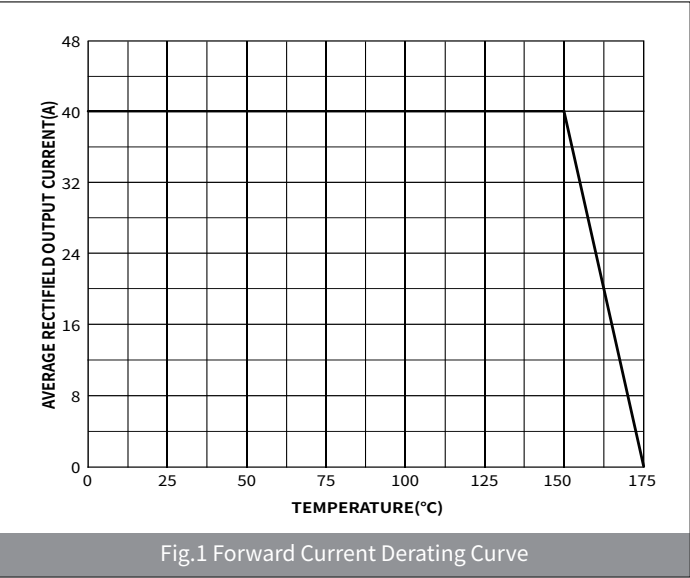
Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MBR40100PT
Device marking code			MBR40100PT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	100
Maximum RMS Voltage	V_{RMS}	V	70
Maximum DC blocking Voltage	V_{DC}	V	100
Average Rectified Output Current @Per leg	$I_{F(AV)}$	A	20
Average Rectified Output Current @Total device		A	40
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	300
Storage temperature	T_{stg}	°C	-55 ~ +150
Junction temperature	T_j	°C	-55 ~ +150
Typical Thermal Resistance	$R_{\theta JC}$	°C /W	1.5

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	MIN	TYP	MAX
Maximum instantaneous forward voltage	$I_F=10A, T_J=25^{\circ}C$	V_F	V	-	0.72	-
	$I_F=10A, T_J=150^{\circ}C$			-	0.58	-
	$I_F=20A, T_J=25^{\circ}C$			-	0.80	0.85
	$I_F=20A, T_J=150^{\circ}C$			-	0.66	-
Maximum DC reverse currentat rated DC blocking voltage	$V_R=V_{DC}, T_J=25^{\circ}C$	I_{R1}	uA	-	0.13	1.0
	$V_R=V_{DC}, T_J=150^{\circ}C$	I_{R2}	mA	-	0.80	-

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



● **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°