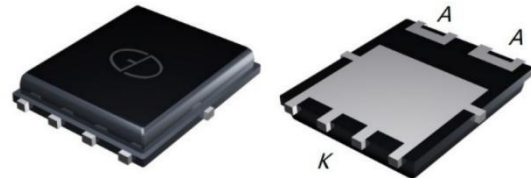


10A,100V Schottky Barrier Rectifier

Features

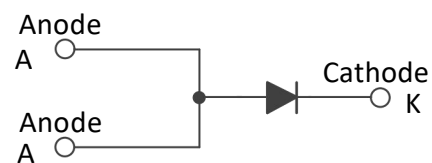
- Low leakage current
- Low forward voltage, low power loss
- High surge current
- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Halogen-free according to IEC 61249-2-21



PDFN56

Applications

- SMPS
- Adapter
- Server Power



Mechanical Data

- Case: Epoxy, Molded
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 3000 units per reel

Maximum Ratings & Electrical Characteristics (TA=25°C unless otherwise noted)

Parameter	Symbol	MBRP10100	Unit
Maximum repetitive peak reverse voltage	VRRM	100	V
Maximum RMS voltage	VRMS	70	V
Maximum DC blocking voltage	VDC	100	V
Maximum average forward	IF(AV)	10	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	IFSM	180	A
Operating junction temperature range	TJ	-55 to +150	°C
Storage temperature range	TSTG	-55 to +150	°C

Electrical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Typ	Max	Unit
Forward drop voltage (Note1)	V _F	I _F =10A, T _J =25°C	0.76	0.85	V
		I _F =10A, T _J =125°C	0.62	-	
Reverse leakage current @V _R (Note2)	I _R	T _J =25°C	-	10	uA
		T _J =100°C	-	2.5	mA

Thermal-Mechanical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Case	R _{θJC}	3	°C /W
Thermal Resistance, Junction to Ambient	R _{θJA}	50	°C /W

Note:

1. Pulse test with PW=0.3ms, duty cycle=2%
2. Pulse test with PW=30ms

Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

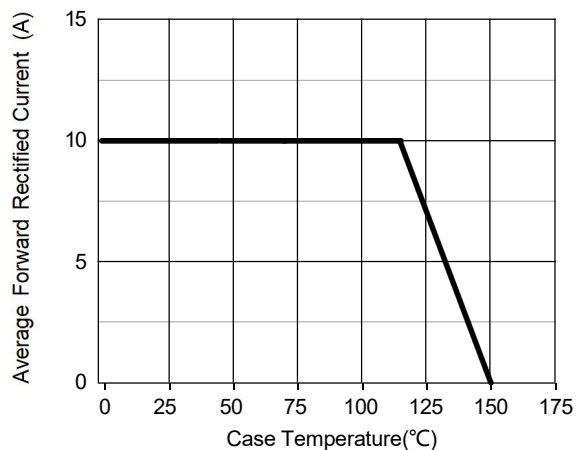


Fig.1 – Forward Current Derating Curve

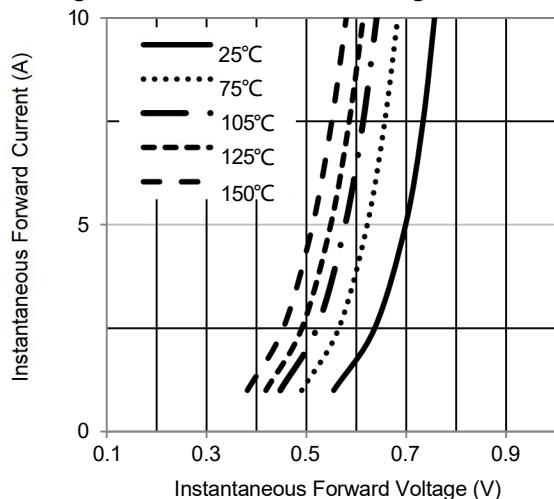


Fig.3 – Typical Forward Voltage Characteristics

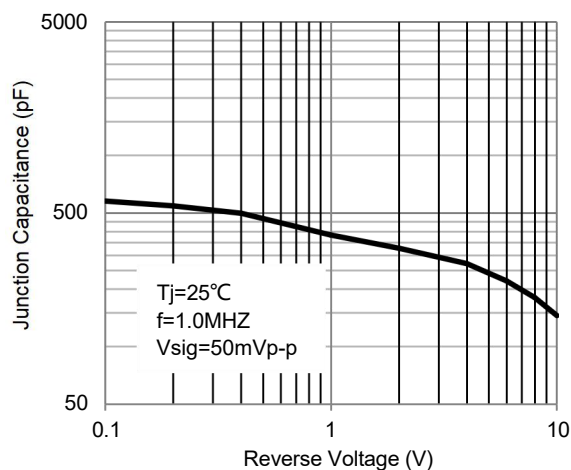


Fig.5 – Typical Junction Capacitance

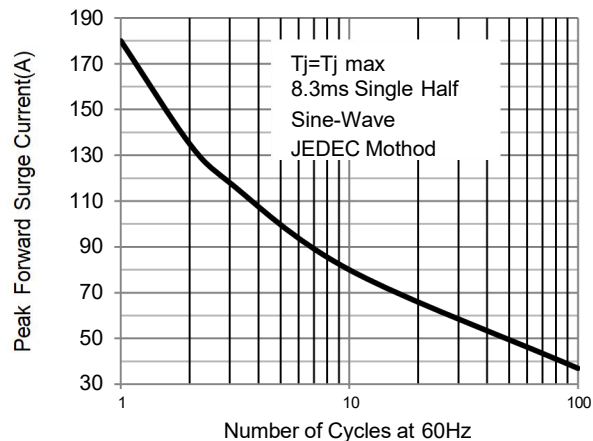


Fig.2 – Maximum Non-Repetitive Surge Current

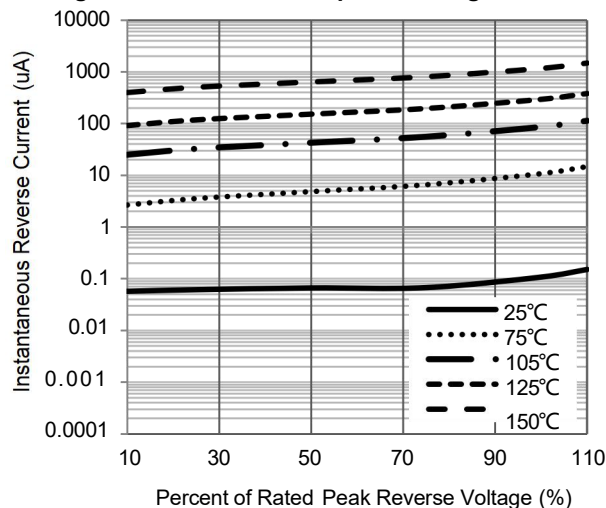
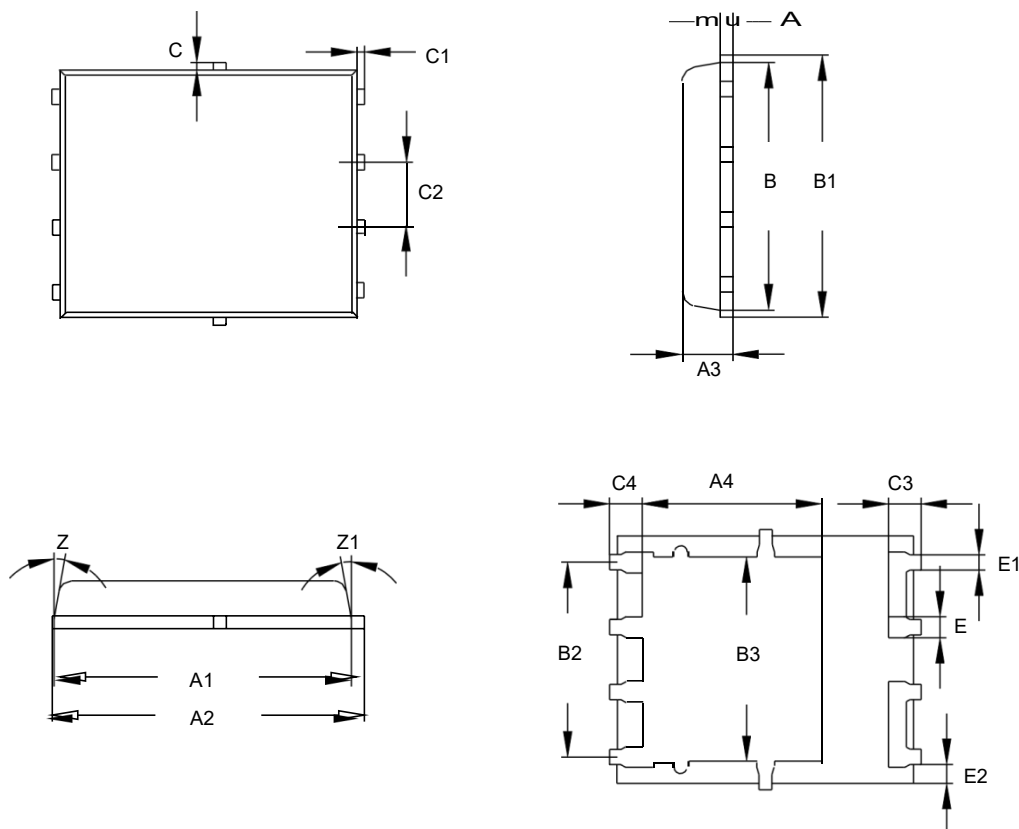


Fig.4 – Typical Reverse Current Characteristics

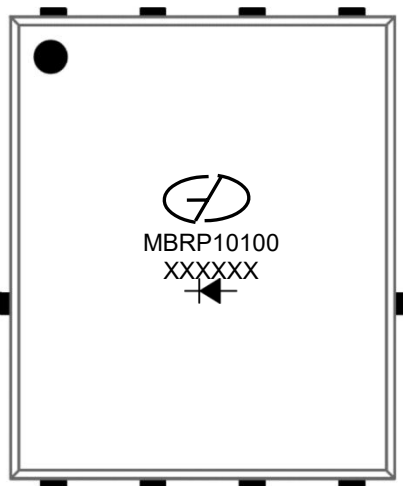
Package Outline Dimensions (Unit: millimeters)

PDFN56



PDFN56							
	Min.	Nom.	Max.		Min.	Nom.	Max.
A	0.15	0.25	0.35	C1	0.05	0.15	0.25
A1	5.6	5.8	6.0	C2	1.17	1.27	1.37
A2	5.9	6.1	6.3	C3	0.53	0.63	0.73
A3	0.9	1	1.1	C4		0.63	
A4		3.5		E	0.31	0.41	0.51
B	4.7	4.9	5.1	E1	0.2	0.3	0.4
B1	5	5.2	5.4	E2	0.25	0.35	0.45
B2	3.71	3.81	3.91	Z	8°	10°	12°
B3		4		Z1	8°	10°	12°
C	0.05	0.15	0.25				

Marking Outline



1. Logo Mark: 
2. Part Name: MBRP10100
3. Date Code: XXXXXX
4. Polarity : 

Revision History

Document Version	Date of release	Description of changes
Rev.A	2025.10.12	Released Datasheet

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