

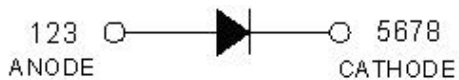
MBR8100DJF SCHOTTKY RECTIFIER



Features

- Designed as Bypass Diodes for Solar Panels
- for High Thermal Reliability
- High Forward Surge Capability
- Ultra Low Forward Voltage Drop
- Excellent High Temperature Stability
- Terminals finish: 100% Pure Tin
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Maximum Ratings (limiting values, at 25 °C unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V_{RRM}	-	100	V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_c=157^{\circ}C$, rectangular wave form	8	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse, $T_c = 25^{\circ}C$	75	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 8 A, Pulse, $T_J = 25^{\circ}C$	0.78	0.90	V
	V_{F2}	@ 8 A, Pulse, $T_J = 125^{\circ}C$	0.64	0.76	V
Reverse Current*	I_{R1}	@ $V_R = \text{rated } V_R, T_c = 25^{\circ}C$	0.2	2	uA
	I_{R2}	@ $V_R = \text{rated } V_R, T_c = 60^{\circ}C$	2	10	uA
	I_{R3}	@ $V_R = \text{rated } V_R, T_c = 125^{\circ}C$	90	300	uA
Junction Capacitance	C_T	@ $V_R = 5V, T_c = 25^{\circ}C, f_{SIG} = 1MHz$	248	300	pF

* Pulse width < 300 μs , duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +175	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-55 to +150	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Case	$R_{\theta\text{JC}}$	DC operation	2.5	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	0.095	g

Ratings and Characteristics Curves

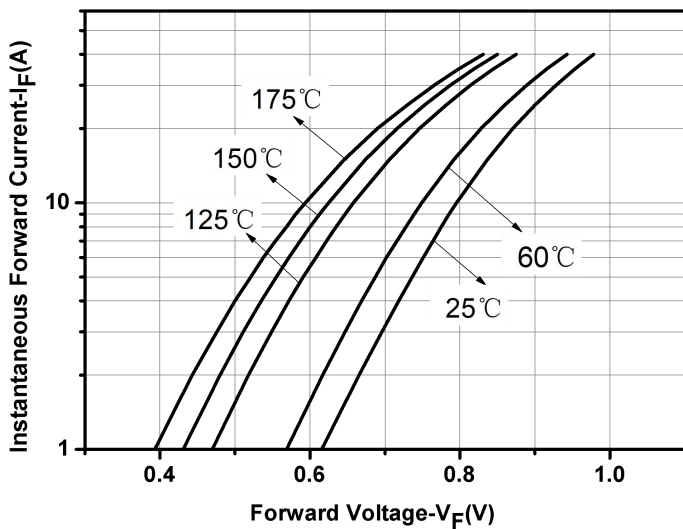


Fig.1-Typical Forward Voltage Characteristics

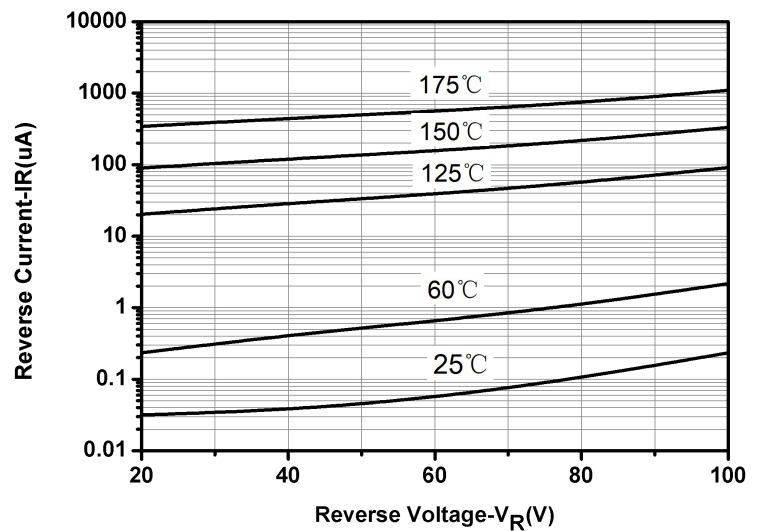


Fig.2-Typical Reverse Characteristics

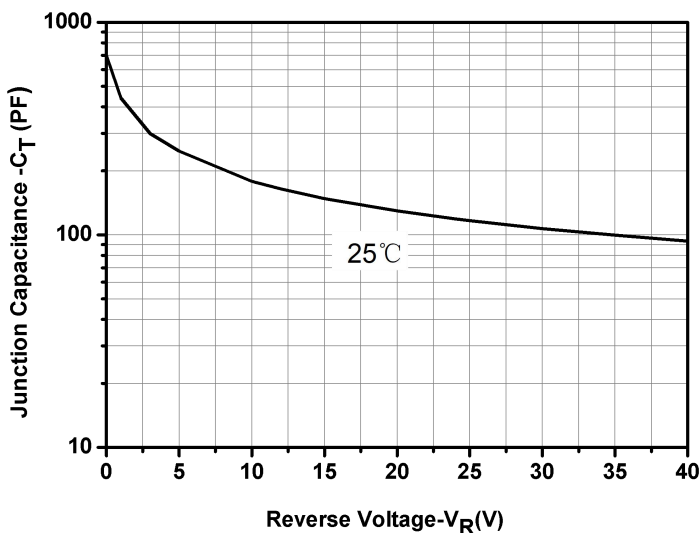
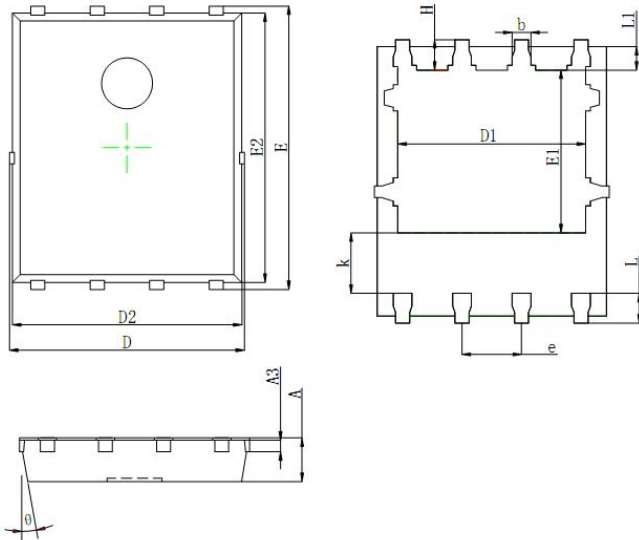
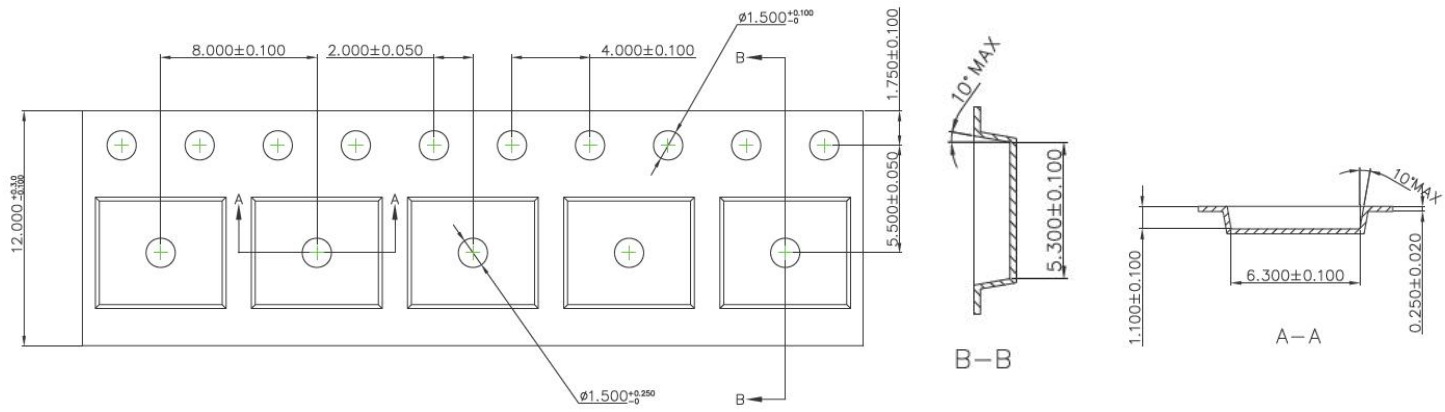


Fig.3-Capacitance vs. Reverse Voltage

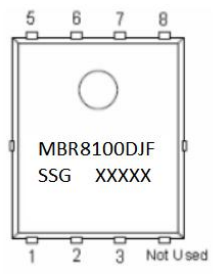
Mechanical Dimensions PDFNWB5×6-8L


SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.000	0.035	0.039
A3	0.254 REF.		0.010 REF.	
D	4.944	5.096	0.195	0.201
E	5.974	6.126	0.235	0.241
D1	3.910	4.110	0.154	0.162
E1	3.375	3.575	0.133	0.141
D2	4.824	4.976	0.190	0.196
E2	5.674	5.826	0.223	0.229
k	1.190	1.390	0.047	0.055
b	0.350	0.450	0.014	0.018
e	1.270 TYP.		0.050 TYP.	
L	0.559	0.711	0.022	0.028
L1	0.424	0.576	0.017	0.023
H	0.574	0.726	0.023	0.029
Θ	10°	12°	10°	12°

Carrier Tape Specification PDFNWB5×6-8L(mm)

Ordering Information

Device	Package	Shipping
MBR8100DJF	PDFNWB5×6-8L (Pb-Free)	3000 pcs / reel
MBR8100DJFTR	PDFNWB5×6-8L (Pb-Free)	3000 pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram


Where XXXXX is YYWWL

MBR = Device Type
 8 = Forward Current (8A)
 100 = Reverse Voltage (100V)
 DJF = Package type
 SSG = SSG
 YY = Year
 WW = Week
 L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

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