

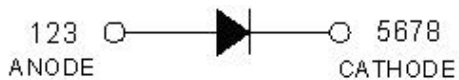
MBR30100DJF SCHOTTKY RECTIFIER



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:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	100	V
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C=90^\circ\text{C}$, rectangular wave form	30	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse, $T_C = 25^\circ\text{C}$	200	A

Electrical Characteristics:

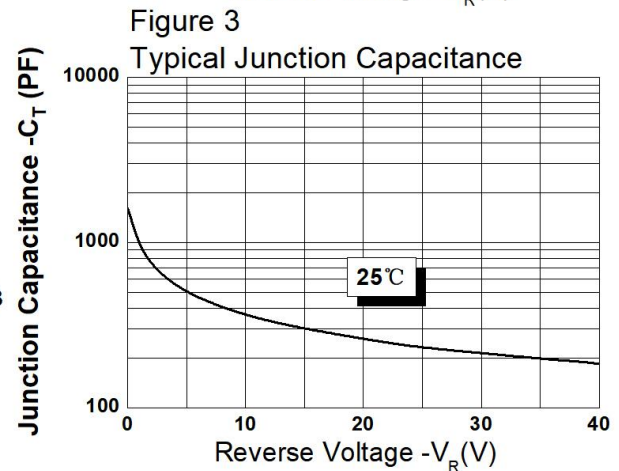
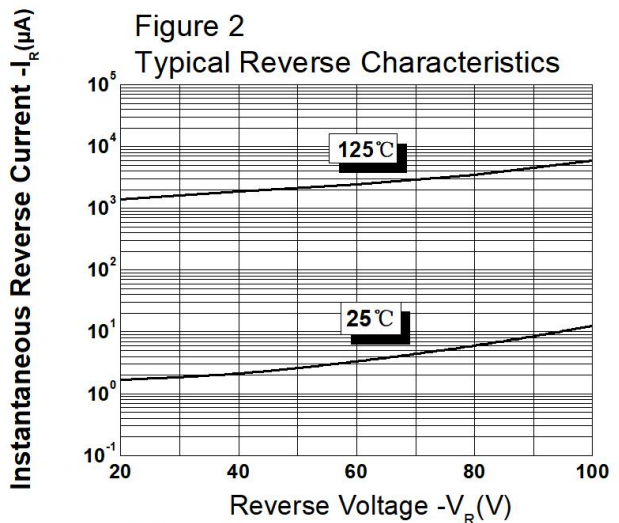
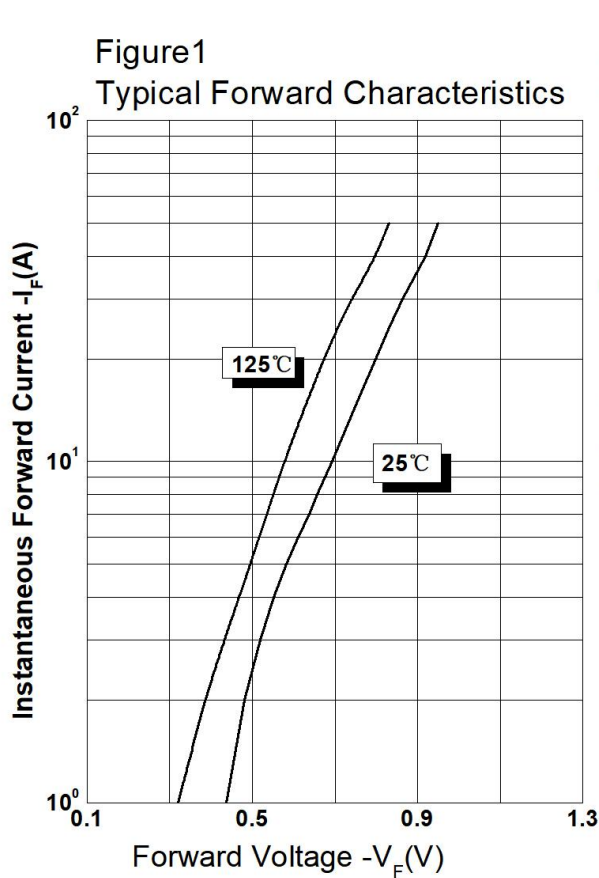
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 15 A, Pulse, $T_J = 25^\circ\text{C}$	0.75	0.82	V
		@ 30 A, Pulse, $T_J = 25^\circ\text{C}$	0.86	0.96	V
	V_{F2}	@ 15 A, Pulse, $T_J = 125^\circ\text{C}$	0.63	0.66	V
		@ 30 A, Pulse, $T_J = 125^\circ\text{C}$	0.74	0.78	V
Reverse Current*	I_{R1}	@ V_R = rated V_R $T_C = 25^\circ\text{C}$	12	100	μA
Reverse Current*	I_{R2}	@ V_R = rated V_R $T_C = 125^\circ\text{C}$	6	40	mA
Junction Capacitance	C_T	@ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	506	600	pF

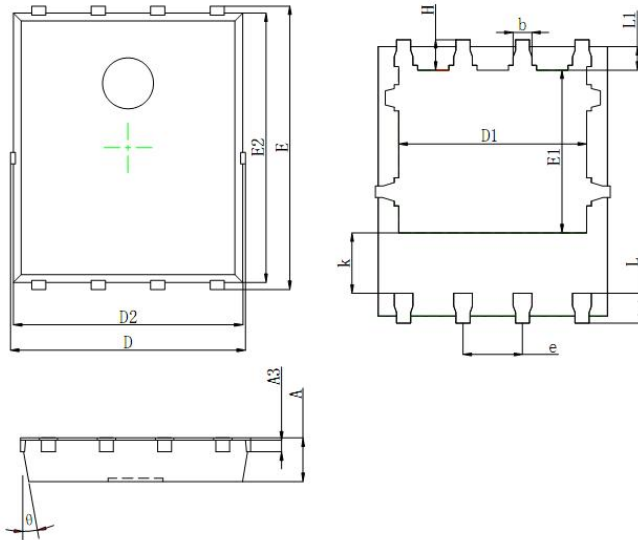
* Pulse width < 300 μs , duty cycle < 2%

Thermal-Mechanical Specifications:

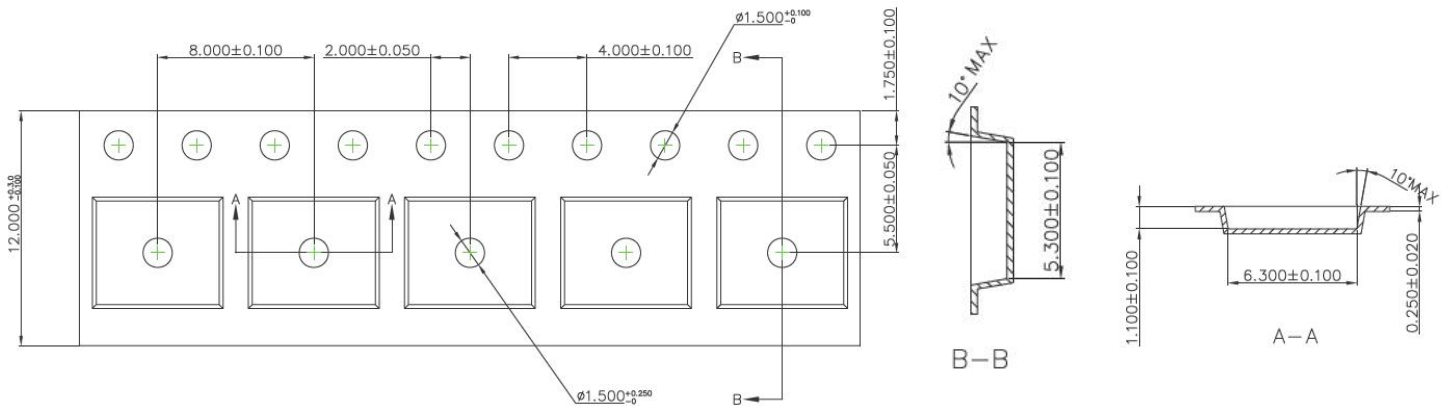
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +175	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-55 to +150	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	DC operation	2.5	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	0.095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

Ratings and Characteristics Curves



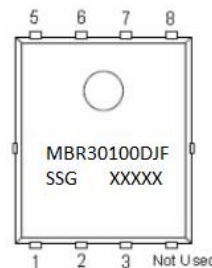
Mechanical Dimensions PDFNWB5×6-8L


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
MBR30100DJF	PDFNWB5×6-8L (Pb-Free)	3000 pcs / reel
MBR30100DJFTR	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
- 30 = Forward Current (30A)
- 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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