

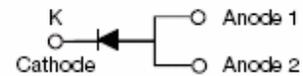
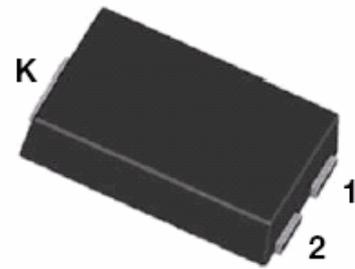
MBR1045S SCHOTTKY RECTIFIER

Applications:

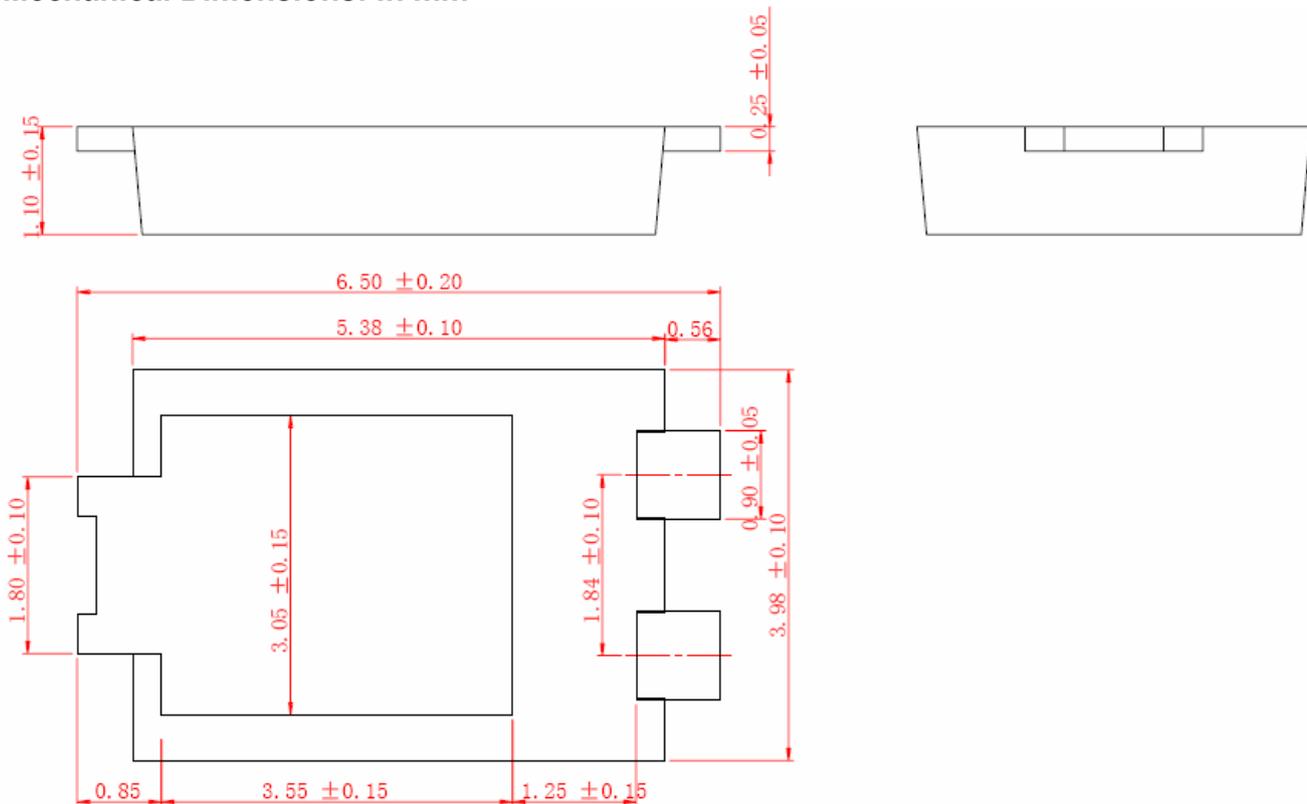
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Center tap configuration

Features:

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



Mechanical Dimensions: In mm



TO-277B



Technical Data
Data Sheet N0144, Rev. A

Marking Diagram:



Where XXXXX is YYWWL

- 10 = Forward Current (10)
- 45 = Reverse Voltage (45V)
- S = Device Type
- YY = Year
- WW = Week
- L = Lot Number

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

Ordering Information:

Device	Package	Shipping
MBR1045S	TO-277B (Pb-Free)	5000pcs/ reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	45	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C=80^\circ\text{C}$, rectangular wave form	10	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	275	A



Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop	V_{F1}	@ 10A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.5	V
	V_{F2}	@ 10A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.45	V
Reverse Current	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$	1.0	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 100\text{ }^\circ\text{C}$	15	mA

* Pulse Width < 300 μ s, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	6.0	$^\circ\text{C/W}$
Approximate Weight	wt	-	0.08	g
Case Style	TO-277B			

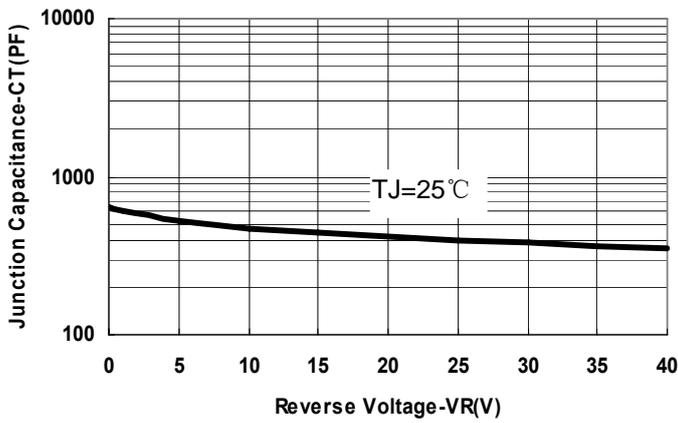


Fig.1-Typical Junction Capacitance

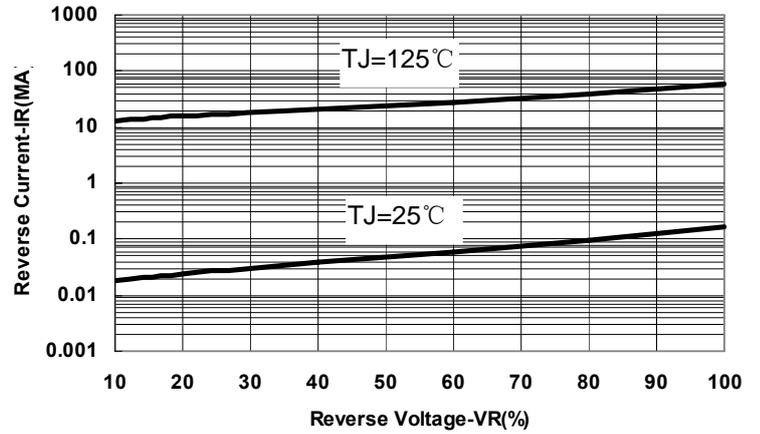


Fig.2-Typical Reverse Characteristics

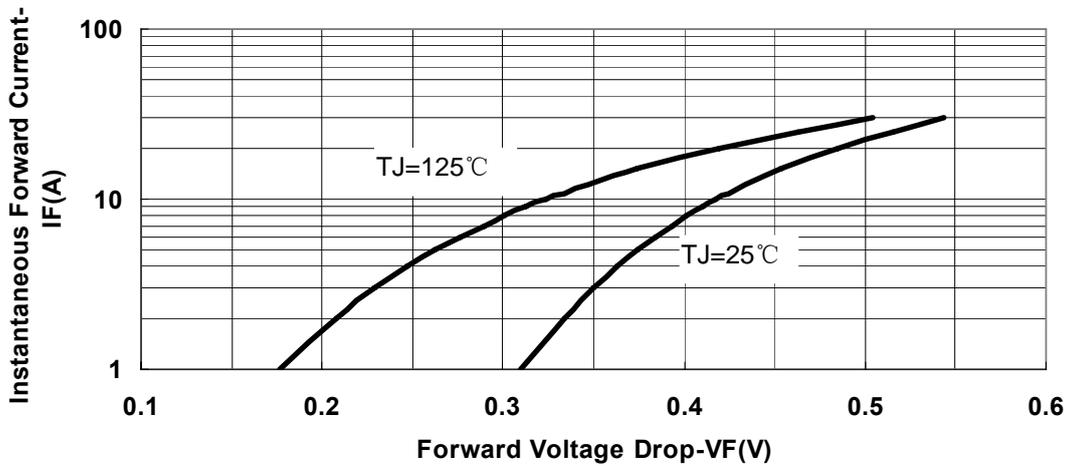


Fig.3-Typical Instantaneous Forward Voltage Characteristics

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