



Schottky Power Rectifier

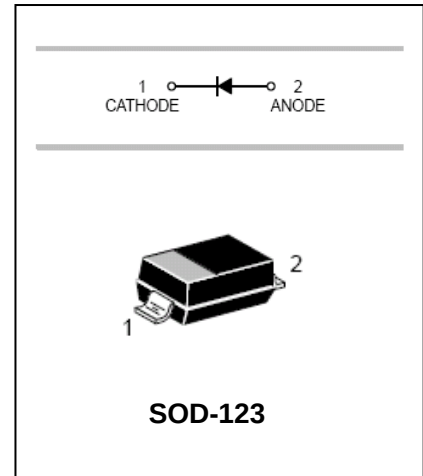
MBR140

FEATURES

- Guarding for stress protection.
- Low forward voltage.
- 125°C Operating junction temperature.
- Epoxy meets UL 94v-0 @0.125 in.



Lead-free



APPLICATIONS

- Low voltage high frequency rectification.
- Free wheeling and polarity protection diodes in surface mount application.

ORDERING INFORMATION

Type No.	Marking	Package Code
MBR140	L4F	SOD-123

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
Working Peak Reverse Voltage	V_{RWM}		
DC Reverse Voltage	V_R		
Average Rectified Forward Current (At Rated V_R , $T_L = 112^\circ\text{C}$)	I_O	1.0	A
Non-Repetitive Peak Surge Current (Non-Repetitive peak surge current, halfwave, single phase, 60 Hz)	I_{FSM}	15	A
Storage Temperature	T_{stg}	-55 to +150	°C
Operating Junction Temperature	T_j	-55 to +125	°C
Voltage Rate of Change (Rated V_R , $T_j = 25^\circ\text{C}$)	dv/dt	10, 000	v/ μs
THERMAL CHARACTERISTICS			
Thermal Resistance, Junction-to-Lead	R_{tjl}	26	°C/W
Thermal Resistance, Junction-to-Lead	R_{tjl}	21	
Thermal Resistance, Junction-to-Ambient	R_{tja}	325	
Thermal Resistance, Junction-to-Ambient	R_{tja}	82	

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Rating	Symbol	Value	Unit
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Maximum Instantaneous Forward Voltage ($I_F = 0.1$ A) ($I_F = 1.0$ A) ($I_F = 3.0$ A)	V_F	0.36 0.55 0.85	v
Maximum Instantaneous Reverse Current ($V_R = 40$ V) ($V_R = 20$ V)	I_R	0.5 0.15	mA

NOTE: Pulse Test: Pulse Width $\leq 250 \mu s$, Duty Cycle $\leq 2\%$.

TYPICAL CHARACTERISTICS @ $T_a = 25^\circ\text{C}$ unless otherwise specified

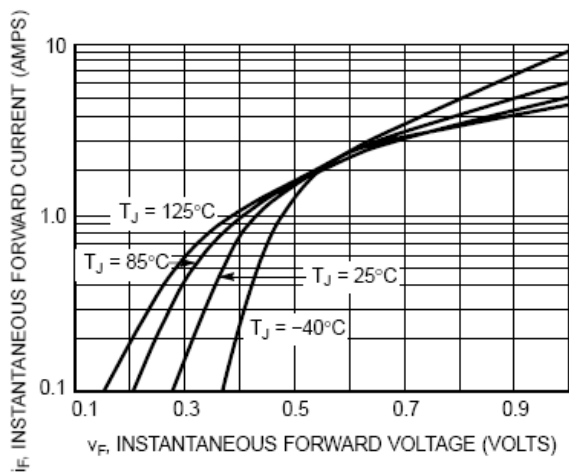


Figure 1. Typical Forward Voltage

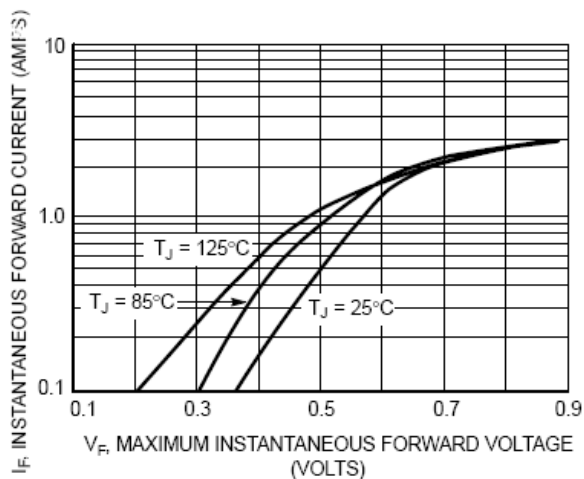


Figure 2. Maximum Forward Voltage

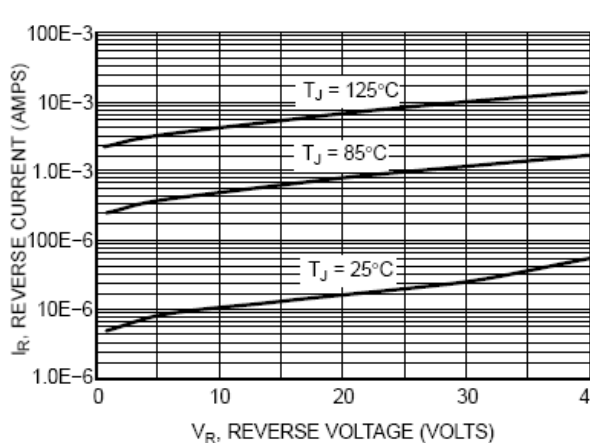


Figure 3. Typical Reverse Current

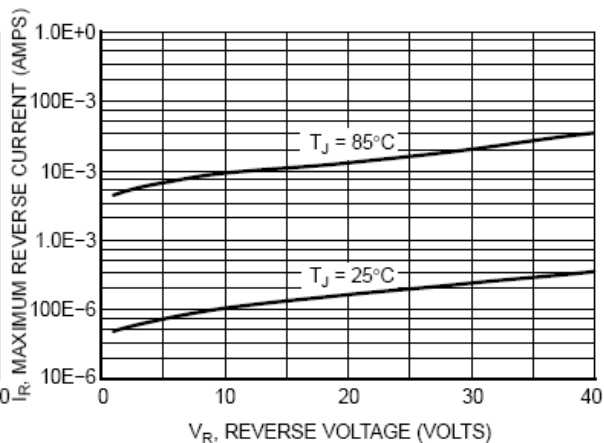
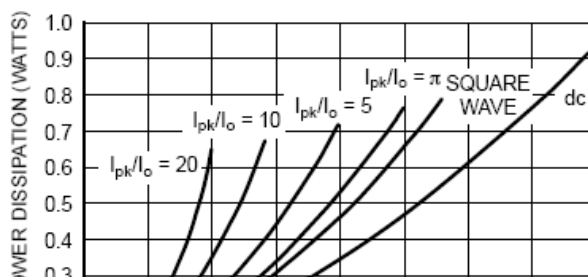
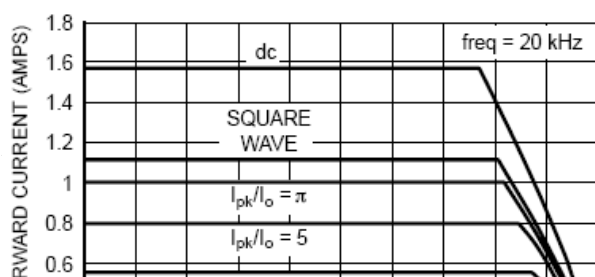


Figure 4. Maximum Reverse Current





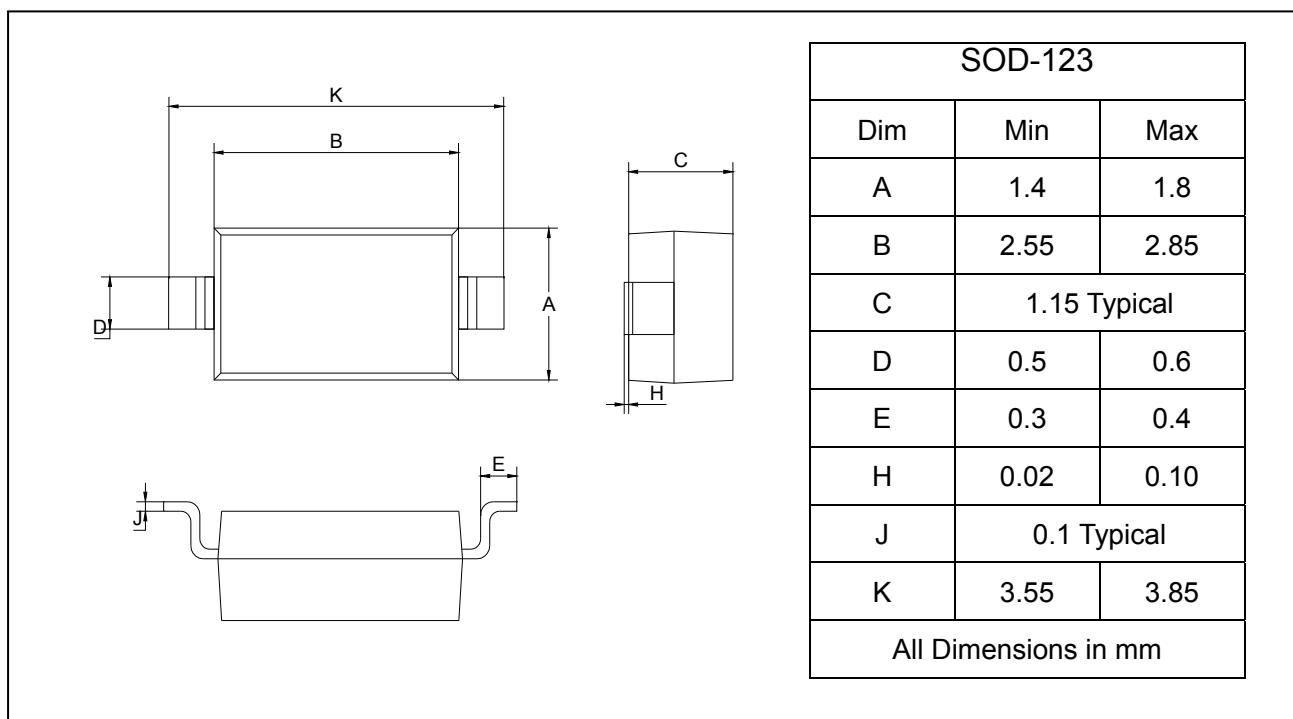
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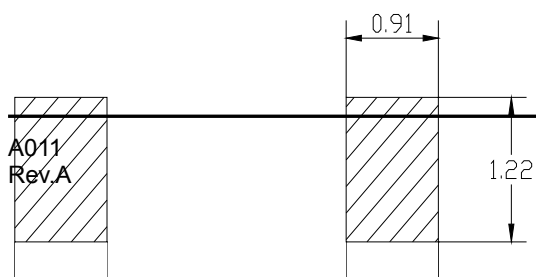
PACKAGE OUTLINE

Plastic surface mounted package

SOD-123



SOLDERING FOOTPRINT





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MBR140

Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
MBR140	SOD-123	3000/Tape&Reel