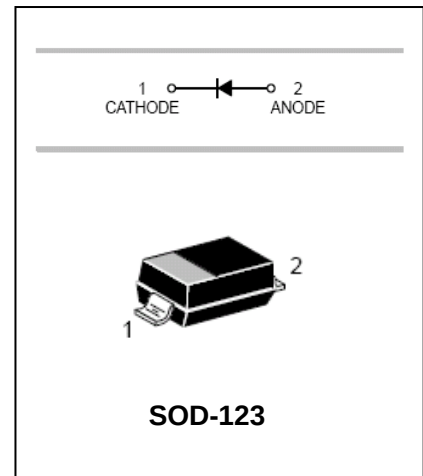


Schottky Power Rectifier

MBR140

FEATURES

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



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	

Schottky Power Rectifier

MBR140

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

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

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

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

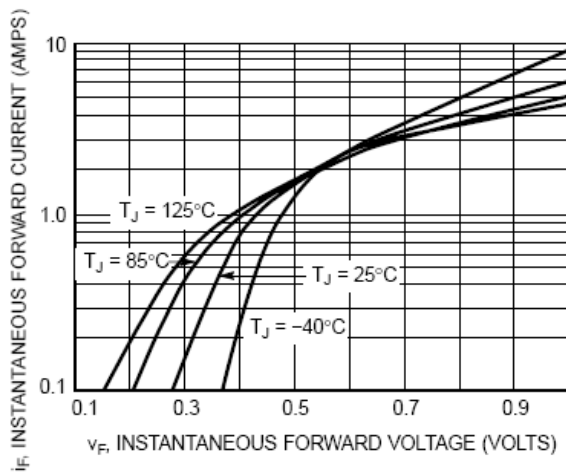


Figure 1. Typical Forward Voltage

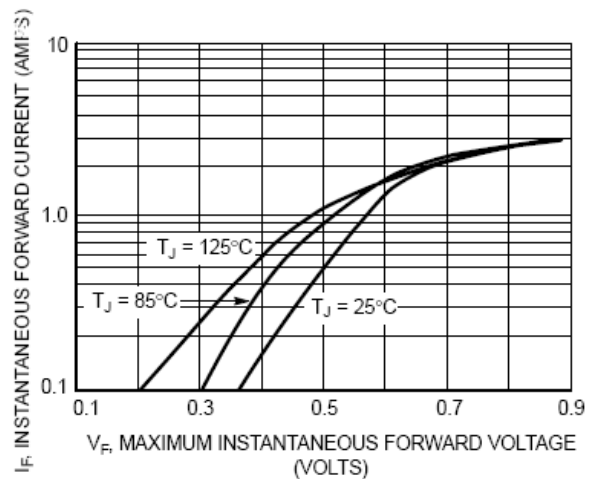


Figure 2. Maximum Forward Voltage

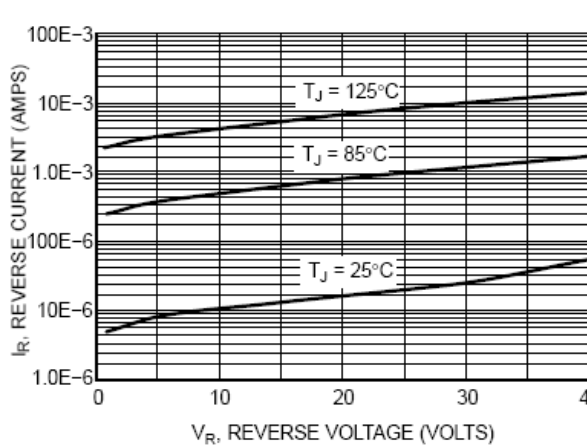


Figure 3. Typical Reverse Current

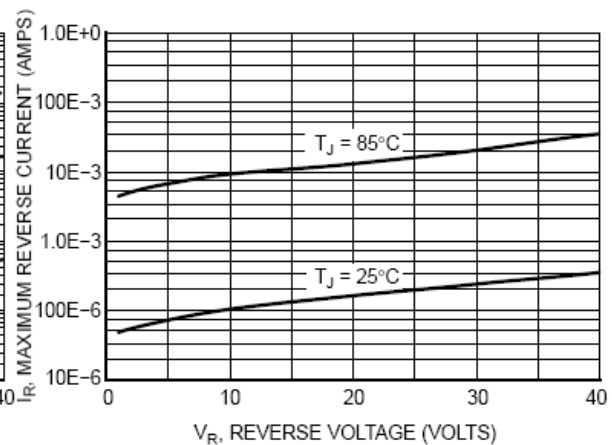


Figure 4. Maximum Reverse Current

Schottky Power Rectifier

MBR140

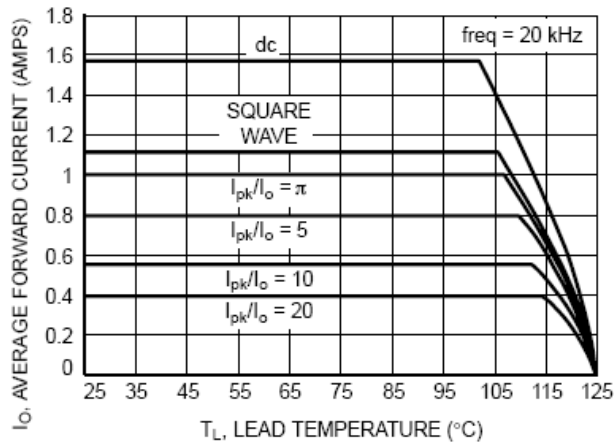


Figure 5. Current Derating

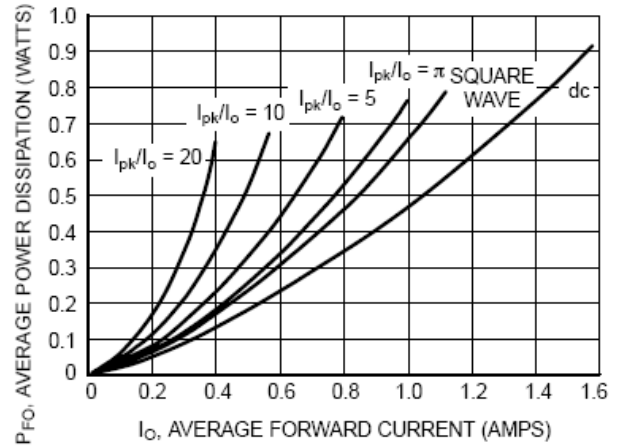
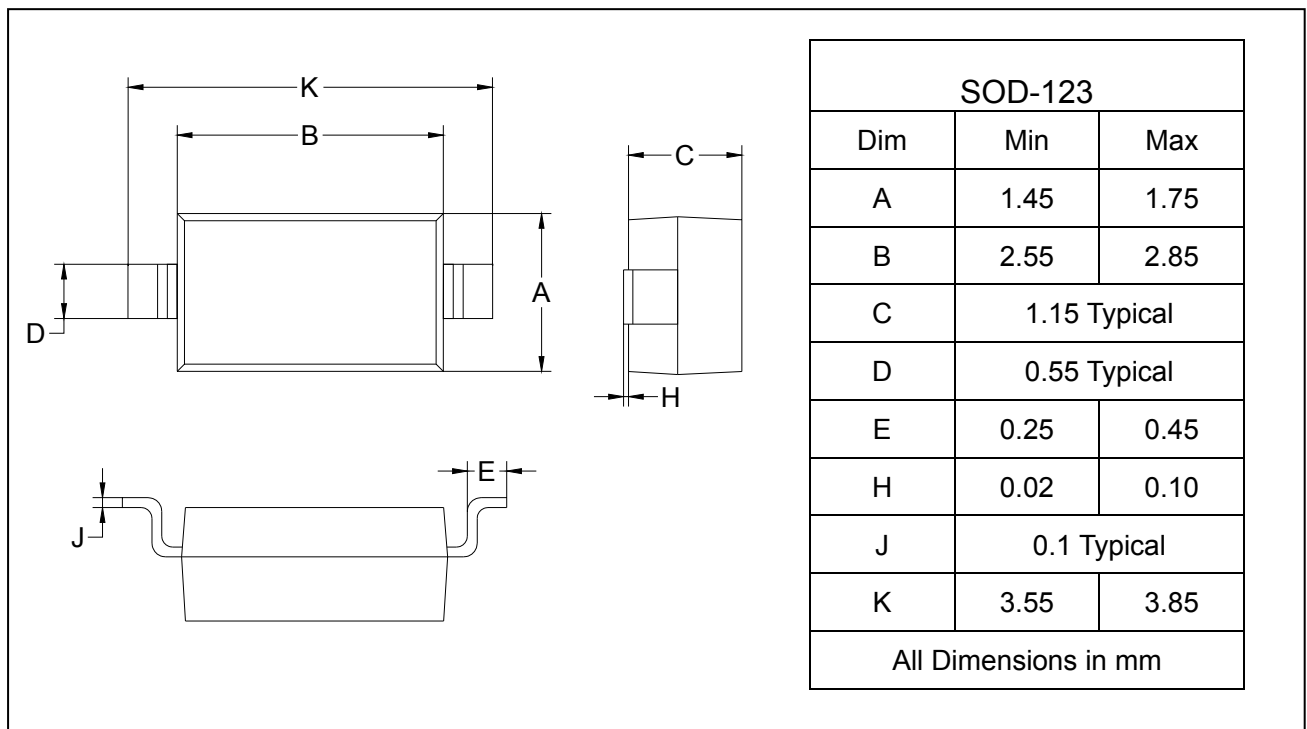


Figure 6. Forward Power Dissipation

PACKAGE OUTLINE

Plastic surface mounted package

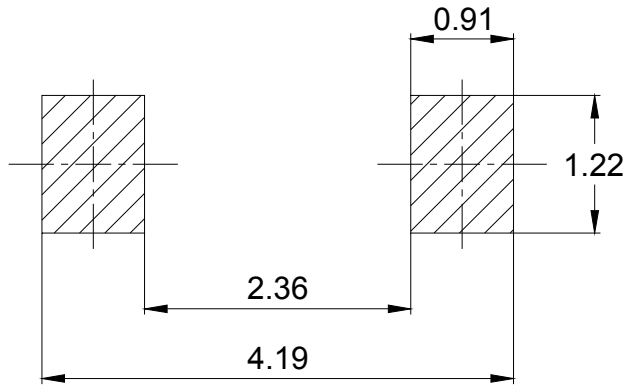
SOD-123



Schottky Power Rectifier

MBR140

SOLDERING FOOTPRINT



Unit: mm

PACKAGE INFORMATION

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