

MBR1020VL

SURFACE MOUNT SCHOTTKY POWER RECTIFIER

FEATURES

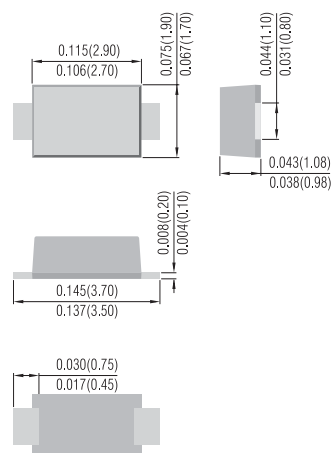
- Guardring for stress protection
- Optimized for very low forward voltage
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: SOD-123FL, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0168 gram
- Marking code : RL

SOD-123FL

Unit: inch (mm)



MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNITS
Peak Repetitive Reverse Voltage	V_{RRM}	20	V
Average Rectified Forward Current (See Figure 1)	$I_{F(AV)}$	1.0	A
Non-Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions, Halfwave, Single Phase, 60Hz)	I_{FSM}	45	A
Voltage Rate of Change (Rated V_R)	dv/dt	1000	V/ μ s
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to + 125	$^{\circ}$ C

THERMAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	VALUE	UNITS
Thermal Resistance-Junction-to-Lead(Note1)	$R_{\theta JL}$	26	$^{\circ}$ C/W
Thermal Resistance-Junction-to-Lead(Note2)	$R_{\theta JL}$	21	
Thermal Resistance-Junction-to-Ambient(Note1)	$R_{\theta JA}$	325	
Thermal Resistance-Junction-to-Ambient(Note2)	$R_{\theta JA}$	82	

1.Mounted with minmum recommended pad size, PC Board FR4

2.Mounted with 1 in.copper pad (Cu area 700mm²)

ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	$T_J=25^{\circ}$ C	$T_J=85^{\circ}$ C	UNITS
Maximum Instantaneous Forward Voltage (Note3) $I_F=0.1A$ $I_F=0.5A$ $I_F=1.0A$	V_F	0.275 0.315 0.340	0.205 0.270 0.300	V
Maximum Instantaneous Reverse Current (Note3) (Rated DC Voltage)	I_R	0.60	15	mA

3.Pulse Test : Pulse Width = 300 μ s, Duty Cycle < 2%

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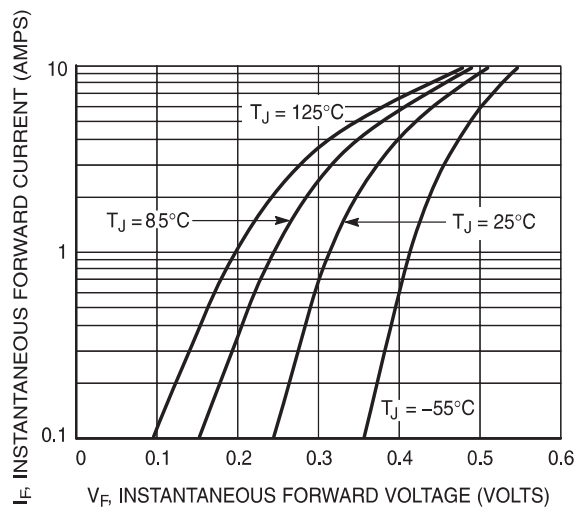


Figure 1. Typical Forward Voltage

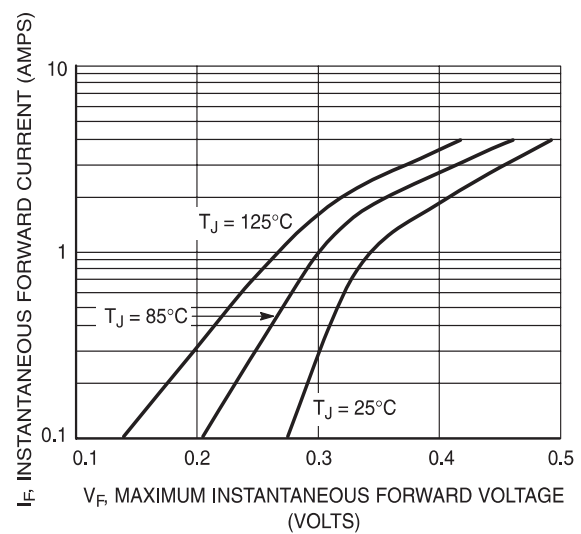


Figure 2. Maximum Forward Voltage

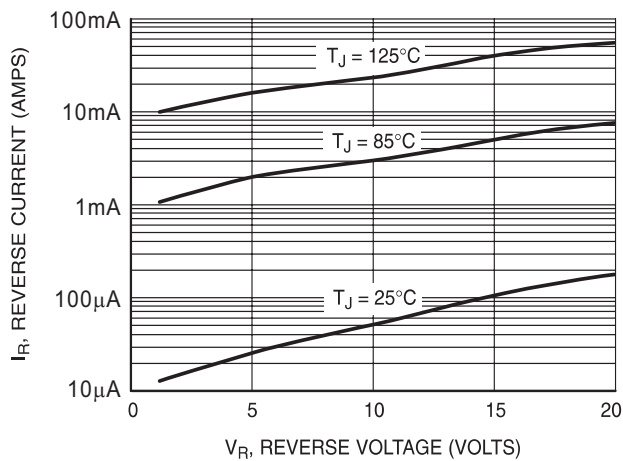


Figure 3. Typical Reverse Current

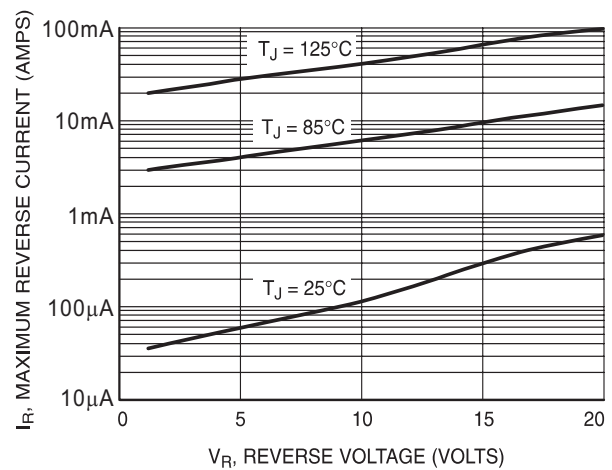


Figure 4. Maximum Reverse Current

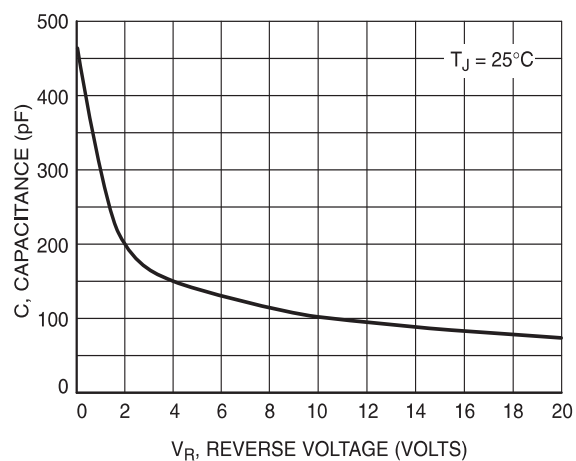


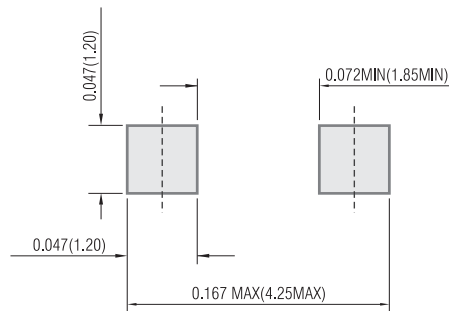
Figure 7. Capacitance

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MOUNTING PAD LAYOUT

SOD-123FL

Unit: inch (mm)



ORDER INFORMATION

- Packing information
 - T/R - 10K per 13" plastic Reel
 - T/R - 3K per 7" plastic Reel

LEGAL STATEMENT

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