

MBR1020LL

SURFACE MOUNT SCHOTTKY POWER RECTIFIER

FEATURES

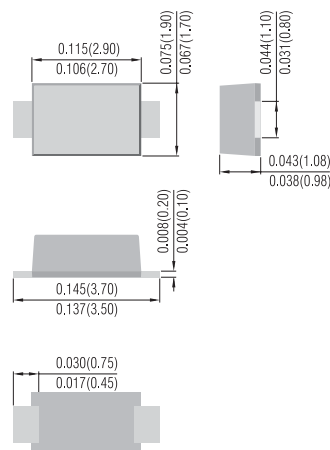
- Guardring for stress protection
- Optimized for very low forward voltage
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

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

SOD-123FL

Unit: inch (mm)



MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNITS
Peak Repetitive Reverse Voltage	V_{RRM}	20	V
Average Rectified Forward Current (At Rated V_R , $T_L=115^{\circ}C$)	I_o	1.0	A
Non-Repetitive Peak Surge Current (Non-Repetitive peak current, halfwave, single phase, 60Hz)	I_{FSM}	50	A
Voltage Rate of Change (Rated V_R , $T_J=25^{\circ}C$)	dv/dt	10,000	V/ μs
Storage Temperature	T_{STG}	-55 to + 150	$^{\circ}C$
Operating Junction Temperature	T_J	-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 minimum recommended pad size, PC Board FR4
2. Mounted with 1 in. copper pad (Cu area 700mm²)

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ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	T _J =25°C	T _J =85°C	UNITS
Maximum Instantaneous Forward Voltage (Note3), See Figure 2 I _F =0.1A I _F =1.0A I _F =3.0A	V _F	0.340 0.450 0.650	0.260 0.415 0.670	V
Maximum Instantaneous Reverse Current (Note3), See Figure 4 (V _R =20V) (V _R =10V)	I _R	0.40 0.10	25 18	mA

3. Pulse Test : Pulse Width ≤ 250μs, Duty Cycle ≤ 2%

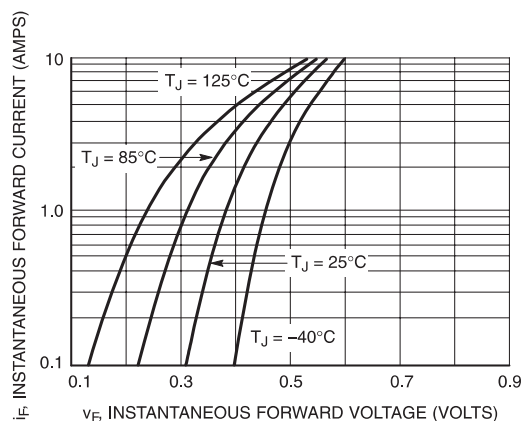


Figure 1. Typical Forward Voltage

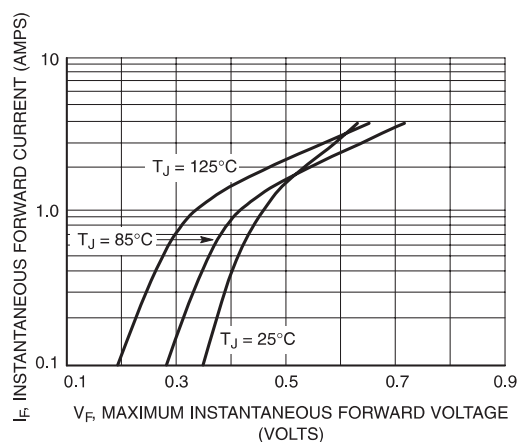


Figure 2. Maximum Forward Voltage

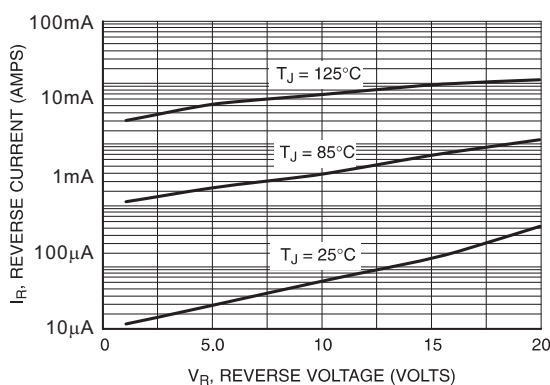


Figure 3. Typical Reverse Current

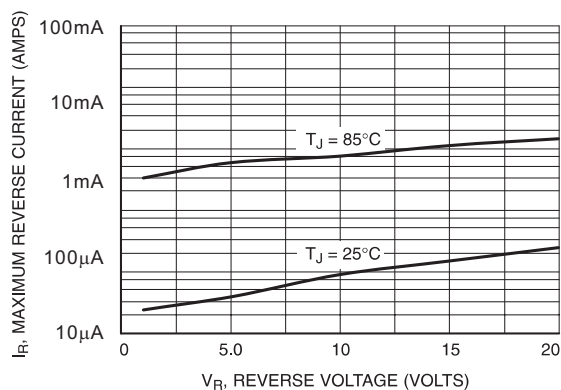


Figure 4. Maximum Reverse Current

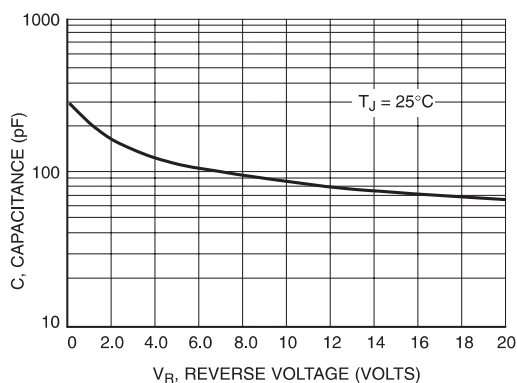


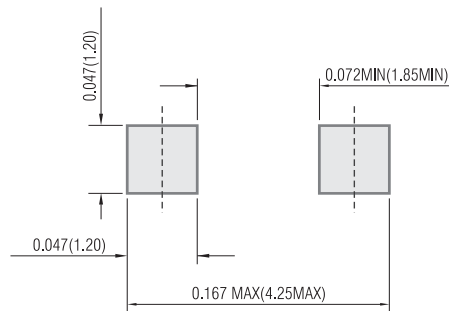
Figure 5. Capacitance

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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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