



# MBR1020LL

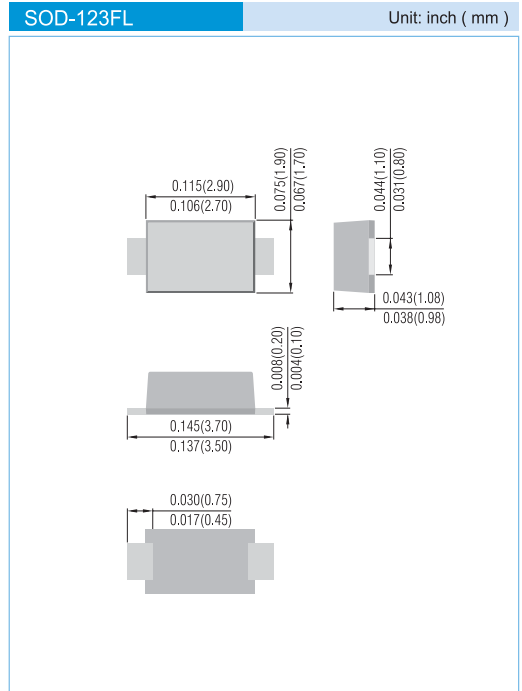
## SURFACE MOUNT SCHOTTKY POWER RECTIFIER

### 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



## MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNITS
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	20	V
Average Rectified Forward Current (At Rated V <sub>R</sub> , T <sub>L</sub> =115°C)	I <sub>O</sub>	1.0	A
Non-Repetitive Peak Surge Current (Non-Repetitive peak current, halfwave, single phase, 60Hz)	I <sub>FSM</sub>	50	A
Voltage Rate of Change (Rated V <sub>R</sub> , T <sub>J</sub> =25°C)	dv/dt	10,000	V/μs
Storage Temperature	T <sub>STG</sub>	-55 to + 150	°C
Operating Junction Temperature	T <sub>J</sub>	-55 to + 125	°C

## THERMAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	VALUE	UNITS
Thermal Resistance-Junction-to-Lead(Note1)	R <sub>θJL</sub>	26	°C/W
Thermal Resistance-Junction-to-Lead(Note2)	R <sub>θJL</sub>	21	
Thermal Resistance-Junction-to-Ambient(Note1)	R <sub>θJA</sub>	325	
Thermal Resistance-Junction-to-Ambient(Note2)	R <sub>θJA</sub>	82	

1. Mounted with minimum recommended pad size, PC Board FR4
2. Mounted with 1 in. copper pad (Cu area 700mm<sup>2</sup>)



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## ELECTRICAL CHARACTERISTICS

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

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

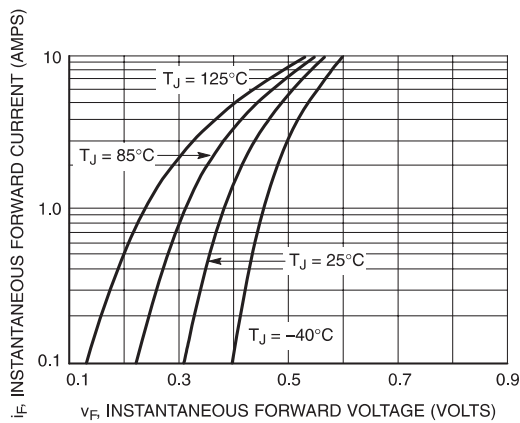


Figure 1. Typical Forward Voltage

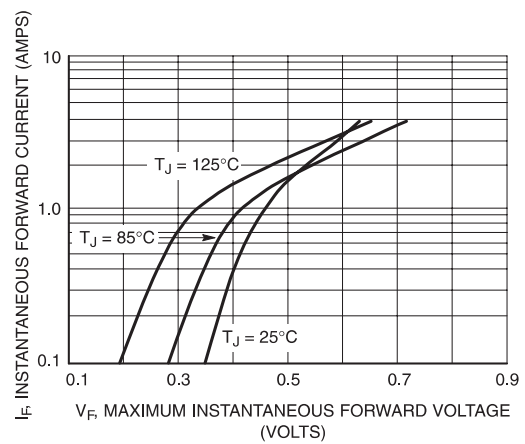


Figure 2. Maximum Forward Voltage

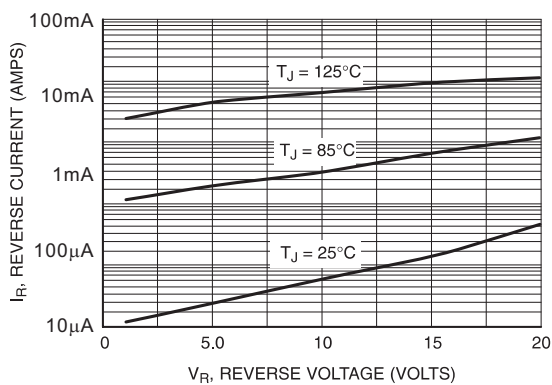


Figure 3. Typical Reverse Current

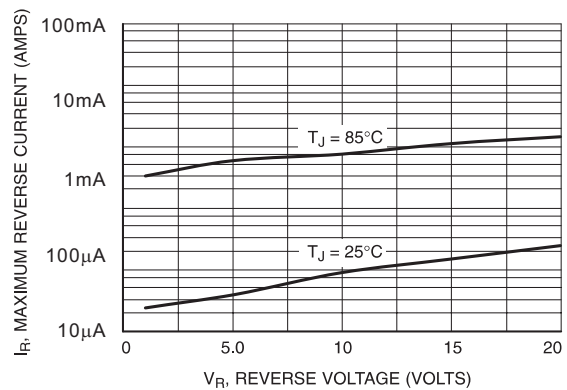


Figure 4. Maximum Reverse Current

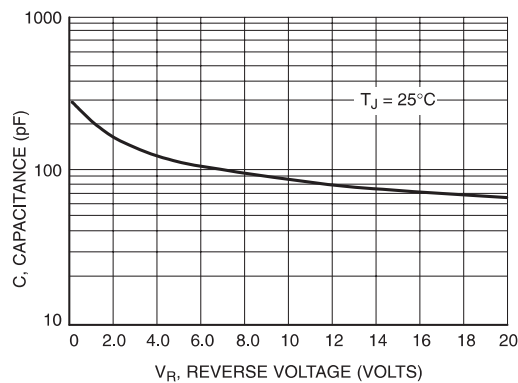
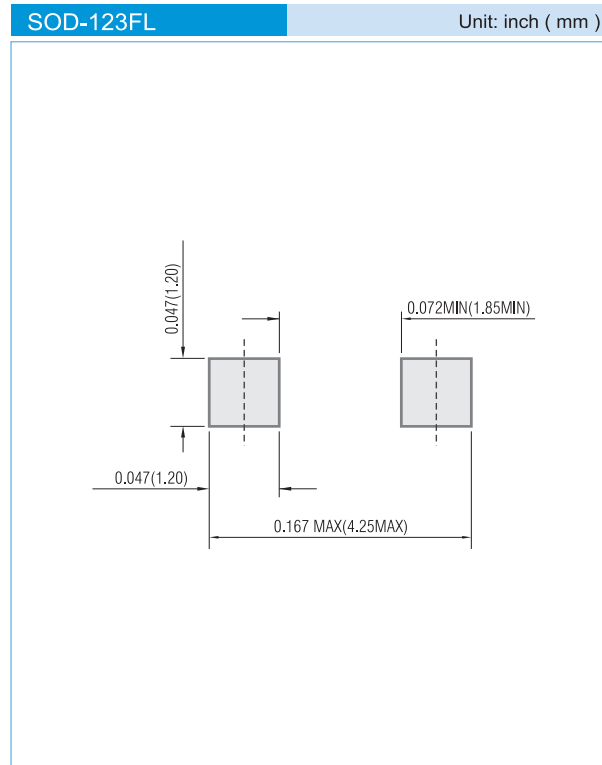


Figure 5. Capacitance



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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

## LEGAL STATEMENT

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