



MBR1020LL

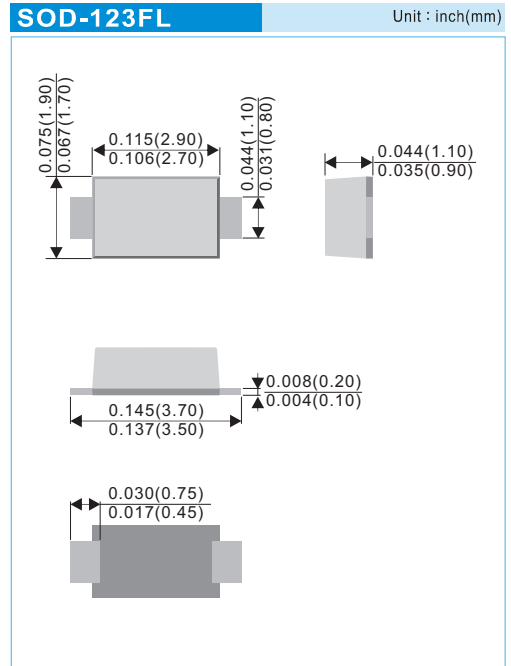
SURFACE MOUNT SCHOTTKY POWER RECTIFIER

FEATURES

- Guardring for stress protection
- Optimized for very low forward voltage
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case: SOD-123FL, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0006 ounces, 0.017 grams
- Marking code : RC



MAXIMUM RATINGS

RATING	SYMBOL	VALUE	UNITS
Peak Repetitive Reverse Voltage	V_{RRM}	20	V
Average Rectified Forward Current (At Rated $V_R, T_L=115^\circ\text{C}$)	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 $V_R, T_J=25^\circ\text{C}$)	dv/dt	10,000	V/ μs
Storage Temperature	T_{STG}	-55 to + 150	$^\circ\text{C}$
Operating Junction Temperature	T_J	-55 to + 125	$^\circ\text{C}$

THERMAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	VALUE	UNITS
Thermal Resistance-Junction-to-Lead(Note1)	$R_{\theta JL}$	26	$^\circ\text{C}/\text{W}$
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%

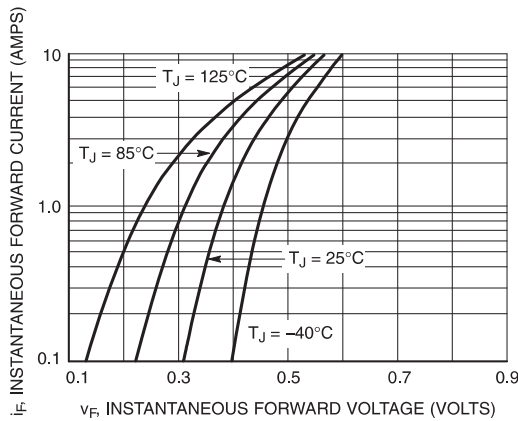


Figure 1. Typical Forward Voltage

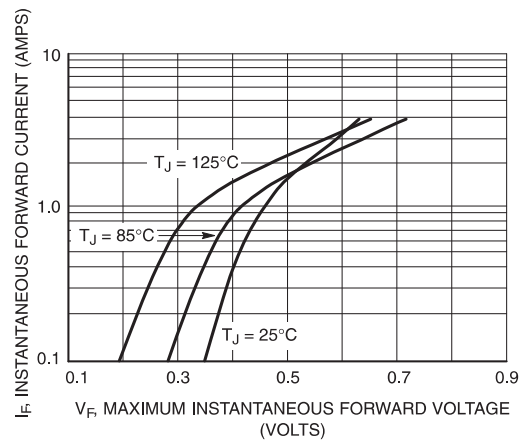


Figure 2. Maximum Forward Voltage

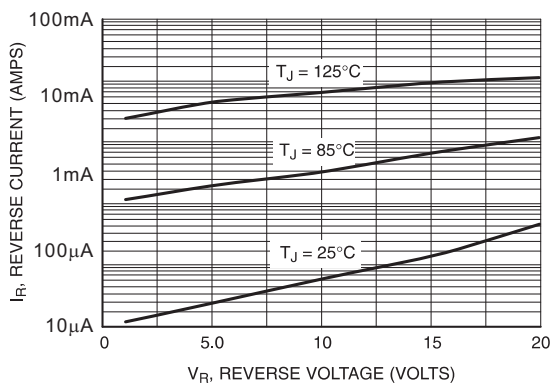


Figure 3. Typical Reverse Current

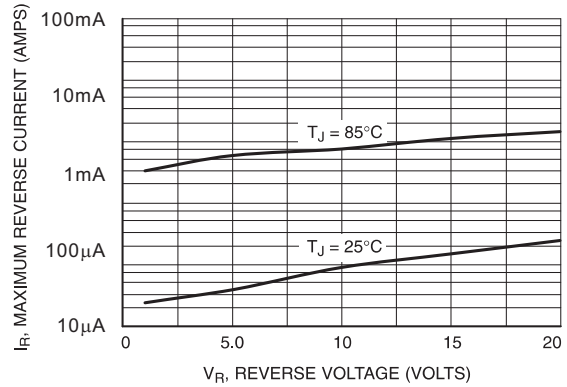


Figure 4. Maximum Reverse Current

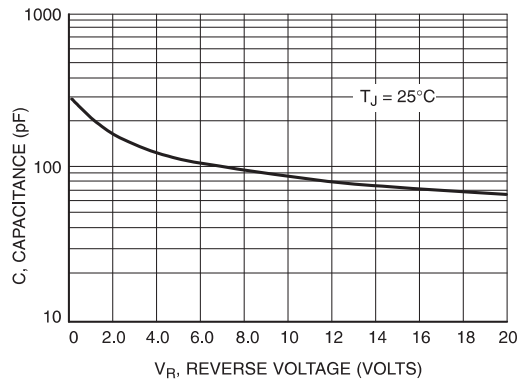


Figure 5. Capacitance

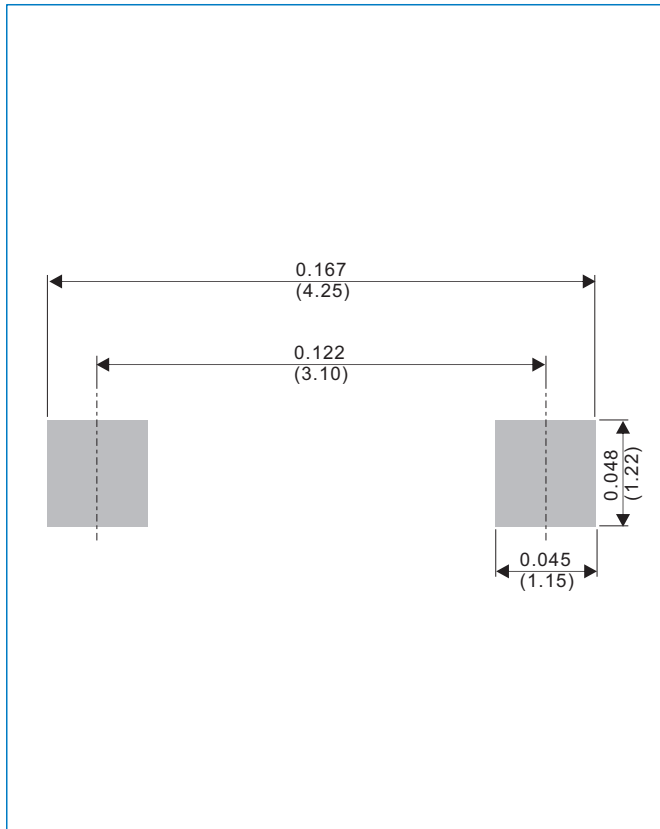


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MOUNTING PAD LAYOUT

SOD-123FL

Unit : inch(mm)



ORDER INFORMATION

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



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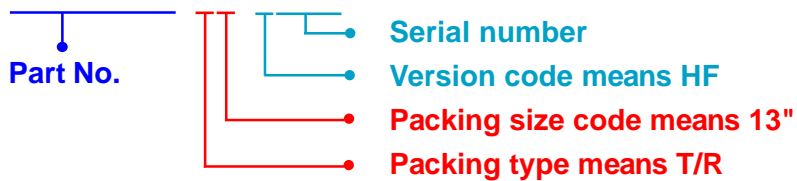
Part No_packing code_Version

MBR1020LL_R1_00001

MBR1020LL_R2_00001

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd -5 th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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