

MBR1020VL

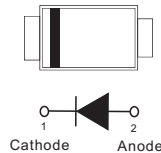
SURFACE MOUNT SCHOTTKY POWER RECTIFIER

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

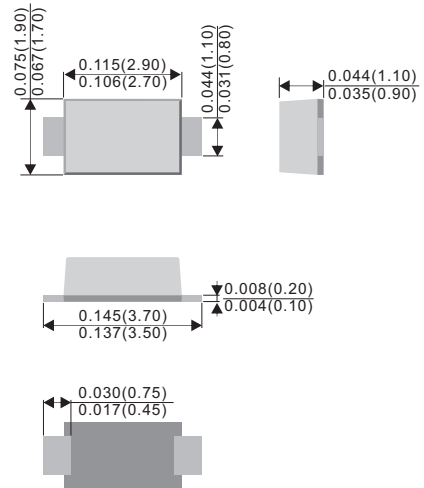
MECHANICAL DATA

- Case: SOD-123FL, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00061 ounces, 0.0173 grams
- 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
Typical thermal Resistance-Junction-to-Ambient (Note1)	$R_{\theta JA}$	200	$^{\circ}$ C/W
Typical thermal Resistance-Junction-to-Lead (Note2)	$R_{\theta JL}$	70	

1. Mounted with minimum recommended pad size, PC Board FR4
2. Mounted on a FR4 PCB, single-sided copper, with 10cm*10cm copper pad area

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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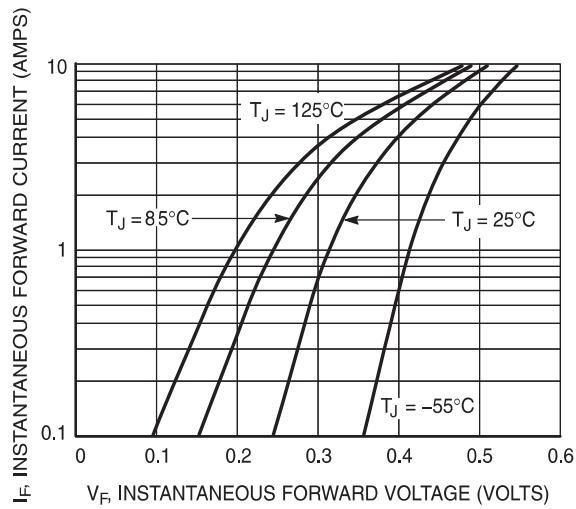


Figure 1. Typical Forward Voltage

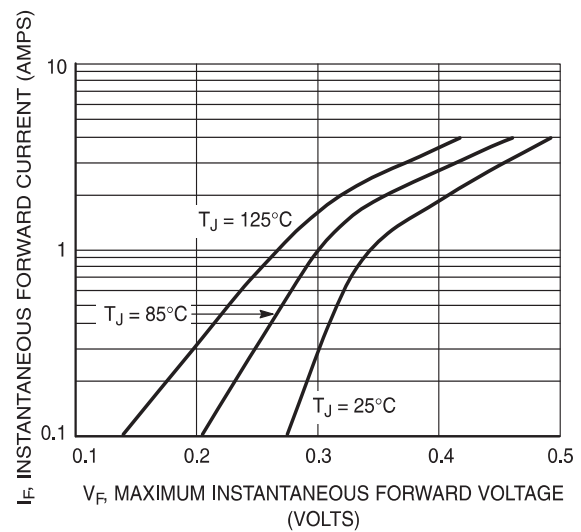


Figure 2. Maximum Forward Voltage

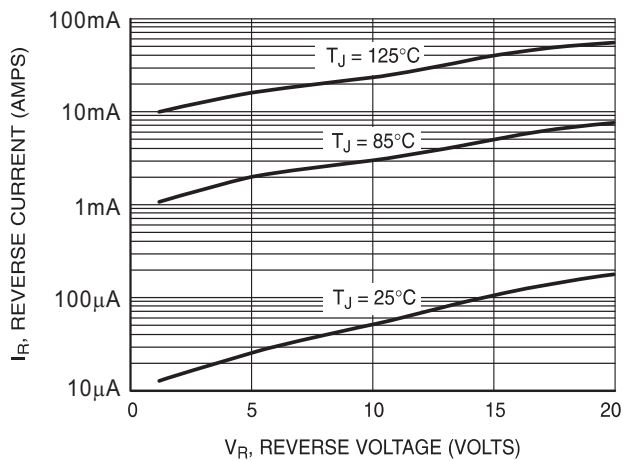


Figure 3. Typical Reverse Current

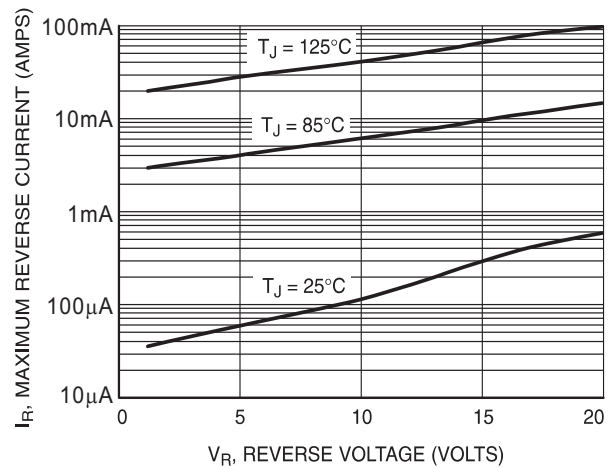


Figure 4. Maximum Reverse Current

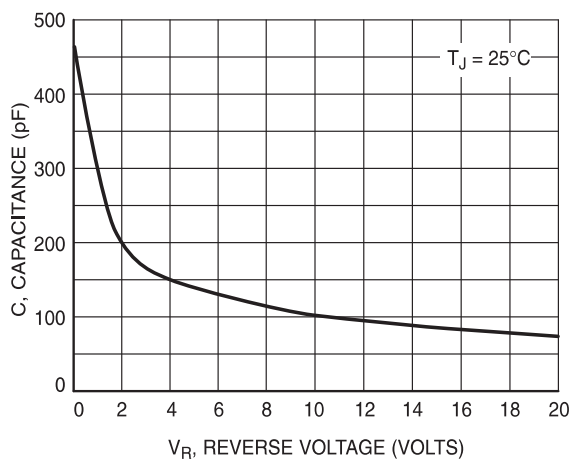


Figure 5. Capacitance

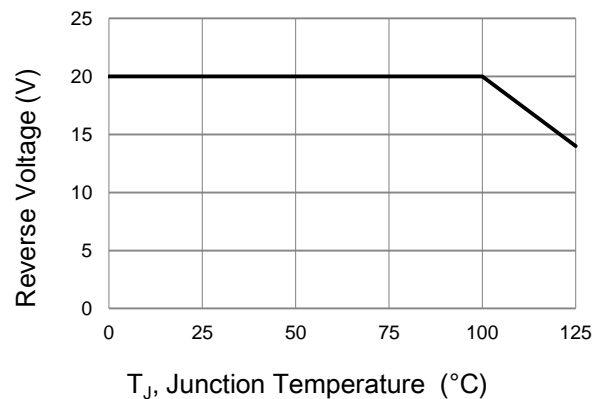


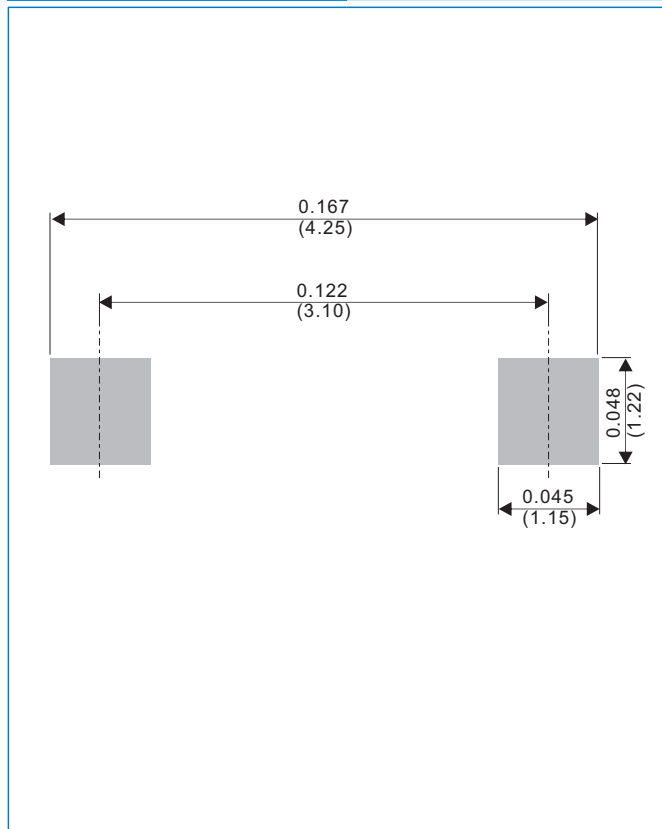
Fig.* Operating Temperature Derating Curve

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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

MBR1020VL_R1_00001

MBR1020VL_R2_00001

For example :

RB500V-40_R2_00001

Part No.

Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

Packing Code XX				Version Code XXXXXX		
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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