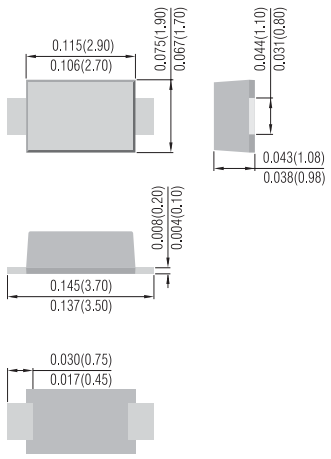
MBR1020VL

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

SOD-123FL Unit: inch (mm)



MECHANICAL DATA

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

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 Conitions, Halfwave, Single Phase, 60Hz)	I_{FSM}	45	A
Voltage Rate of Change (Rated V_R)	dv/dt	1000	V/μs
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-55 to + 125	°C

THERMAL CHARACTERISTICS

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

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

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

ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	T_J=25°C	T_J=85°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 = 300μs, Duty Cycle < 2%

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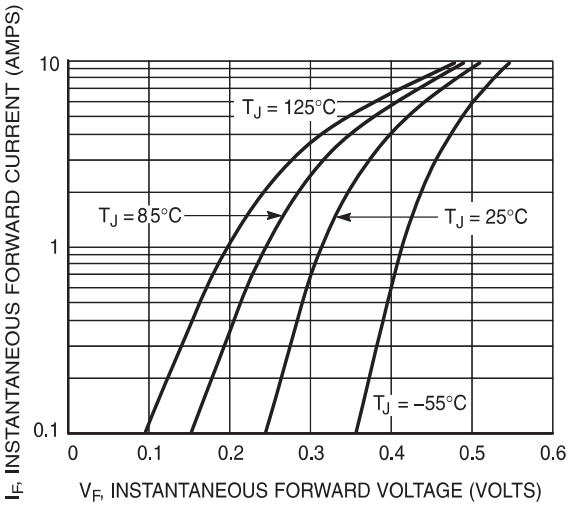


Figure 1. Typical Forward Voltage

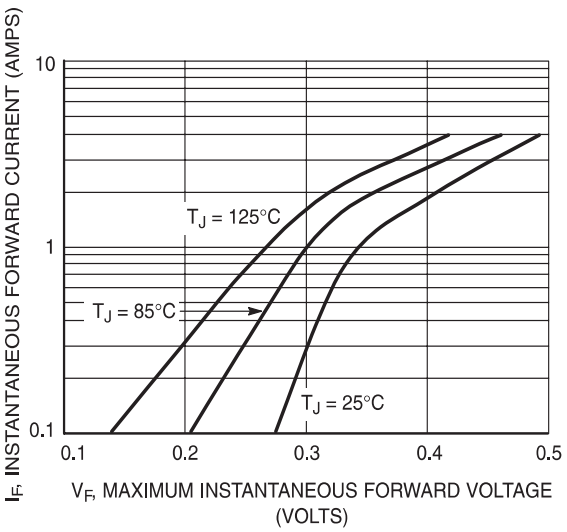


Figure 2. Maximum Forward Voltage

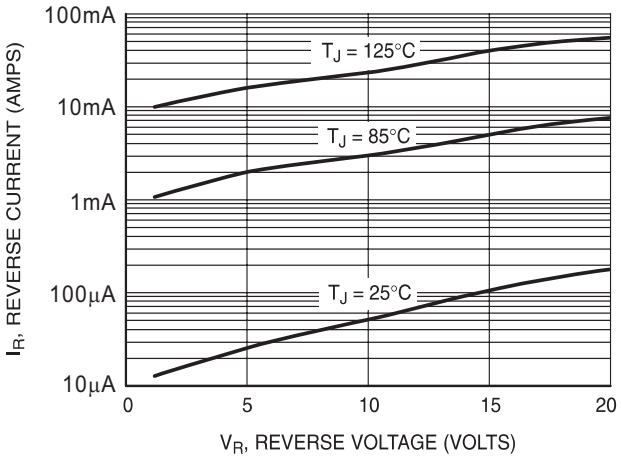


Figure 3. Typical Reverse Current

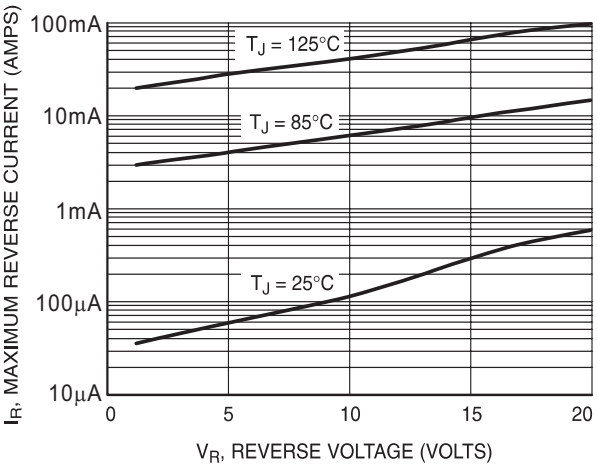


Figure 4. Maximum Reverse Current

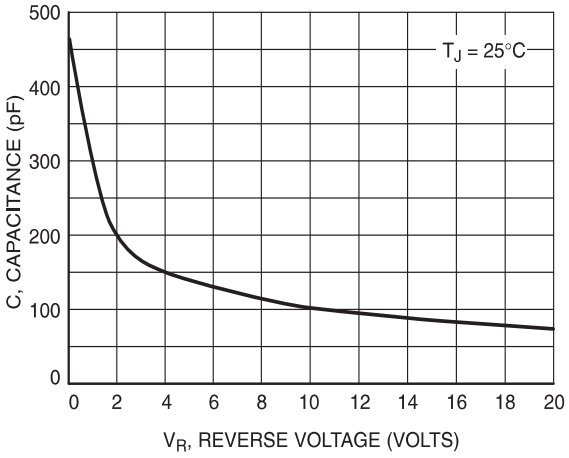
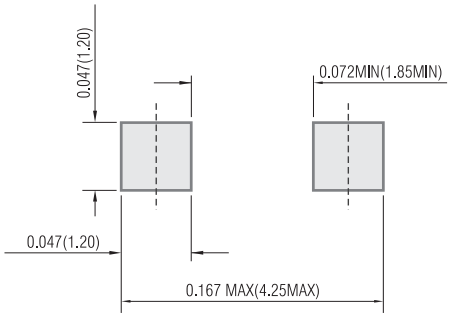


Figure 7. Capacitance

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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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