

# MBR1040VL

## SURFACE MOUNT LOW FORWARD DROP SCHOTTKY BARRIER

**VOLTAGE** 40 Volt **CURRENT** 1 Ampere

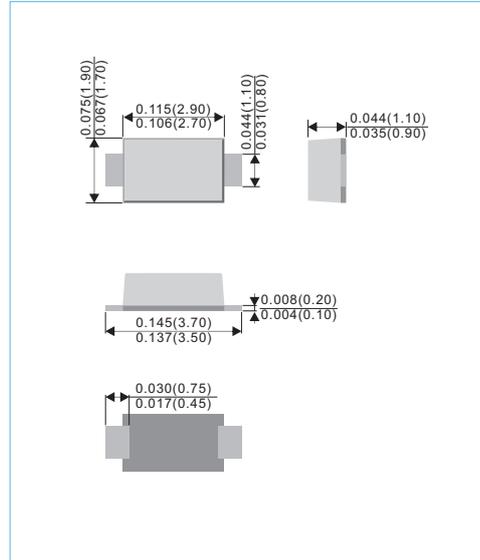
**SOD-123FL** Unit : inch(mm)

### FEATURES

- Fast switching speed
- Surface mount package ideally suited for automatic insertion
- Electrical identical standard JEDEC.
- High conductor
- 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 : RU
- Polarity : Color band cathode



### ABSOLUTE RATINGS

PARAMETER	Symbol	Value	Units
Reverse Voltage	$V_R$	40	V
Peak Reverse Voltage	$V_{RRM}$	40	V
Average Rectified Current	$I_O$	1.0	A
Non-repetitive Peak Forward Surge Current at $t=8.3ms$	$I_{FSM}$	40	A

### THERMAL CHARACTERISTICS

PARAMETER	Symbol	Value	Units
Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	125	$^{\circ}C/W$
Junction Temperature	$T_J$	125	$^{\circ}C$
Storage Temperature at Temp= $25^{\circ}C$	$T_{STG}$	-55 to 125	$^{\circ}C$

Note.1 Mounted with minimum recommended pad size, PC Board FR4.

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## ELECTRICAL CHARACTERISTICS

PARAMETER	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=500 \mu A$	40	--	--	V
Reverse Current	$I_R$	$V_R=40 V$	--	--	450	$\mu A$
Forward Voltage	$V_F$	$I_F=0.5A$ $I_F=1.0A$	--	--	0.34 0.36	V
Diode Capacitance	$C_T$	$V_R=4V, f=1.0MHz$	--	--	150	pF

### RATING AND CHARACTERISTIC CURVES

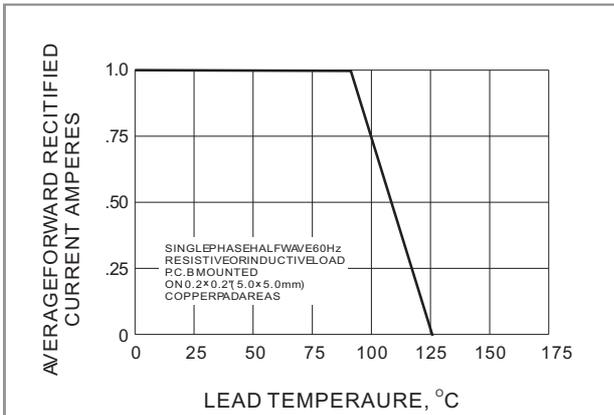


Fig.1- FORWARD CURRENT DERATING CURVE

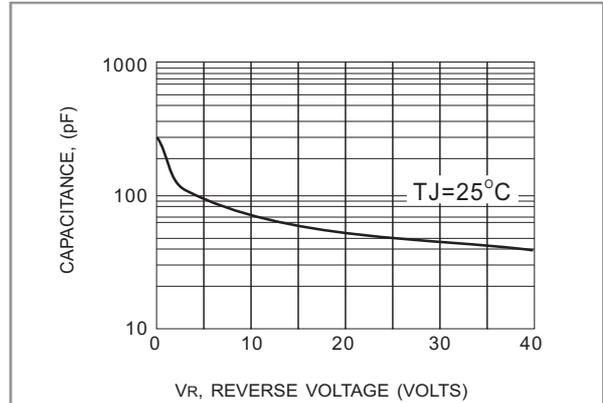


Fig.2- TYPICAL JUNCTION CHARACTERISTIC

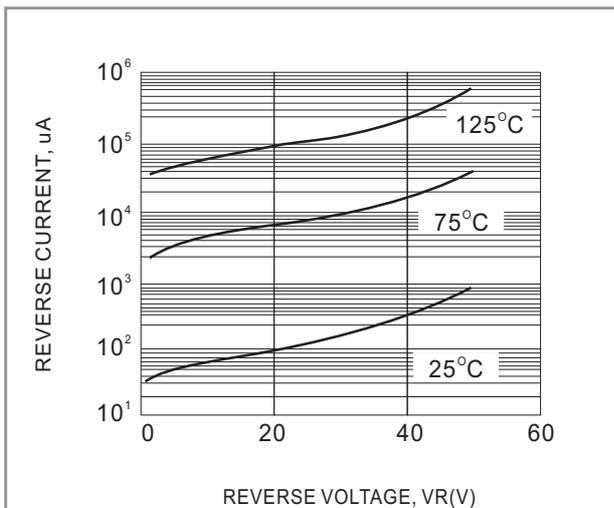


Fig.3- TYPICAL REVERSE CHARACTERISTIC

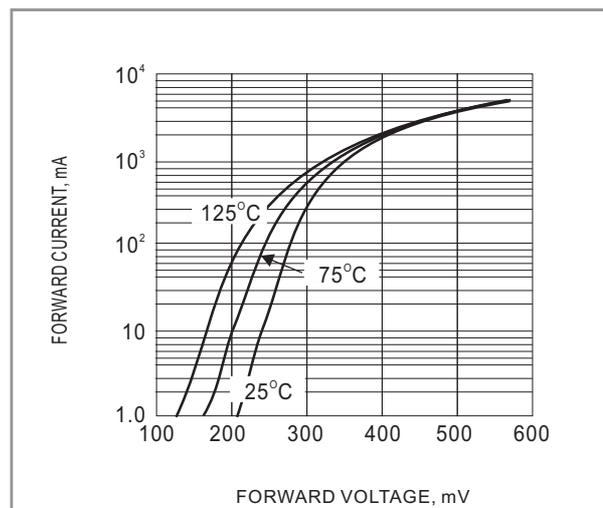
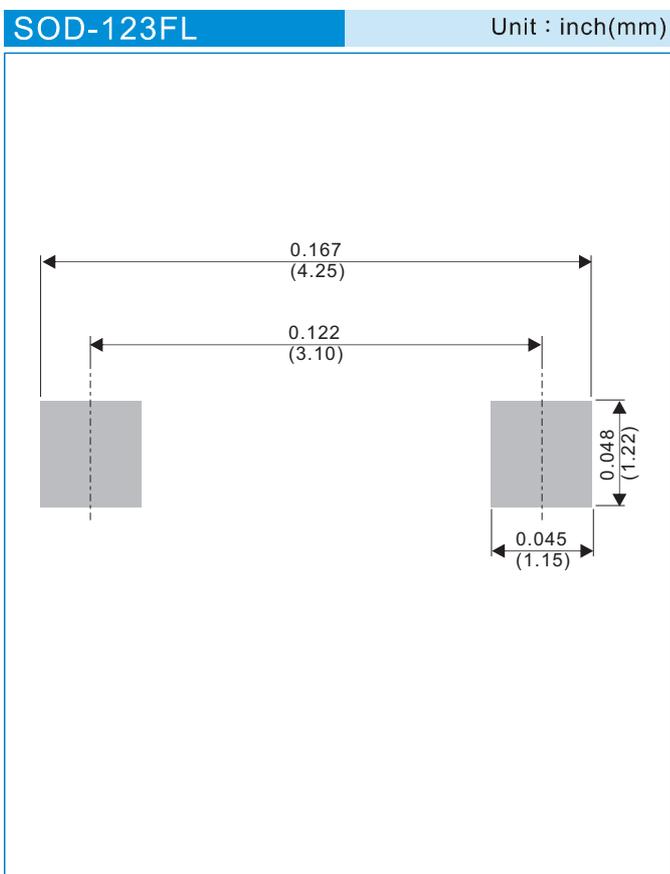


Fig.4- TYPICAL FORWARD CHARACTERISTIC

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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

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