



# MBR1040VL

## SURFACE MOUNT LOW FORWARD DROP SCHOTTKY BARRIER

**VOLTAGE** 40 Volt **CURRENT** 1 Amper

**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 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

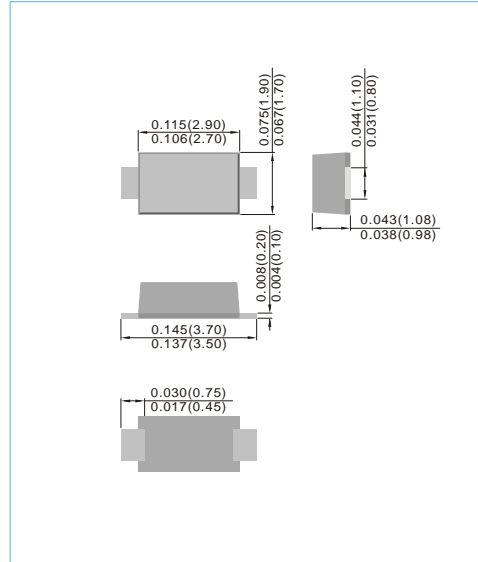
Case : SOD-123FL, Plastic

Terminals : Solderable per MIL-STD-750, Method 2026

Approx. Weight : 0.0006 ounce, 0.017 gram

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

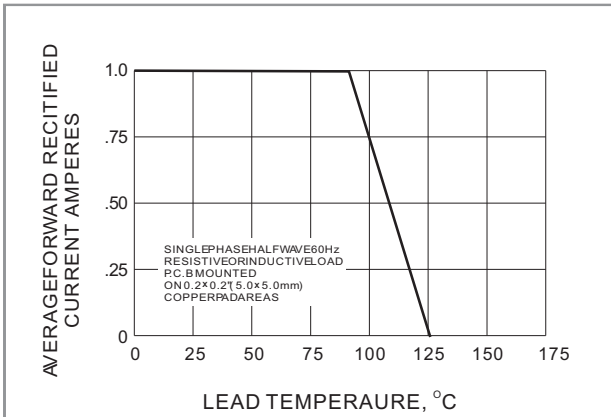


Fig.1- FORWARD CURRENT DERATING CURVE

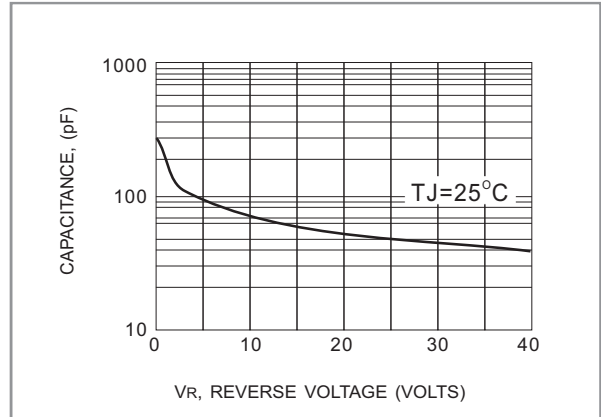


Fig.2- TYPICAL JUNCTION CHARACTERISTIC

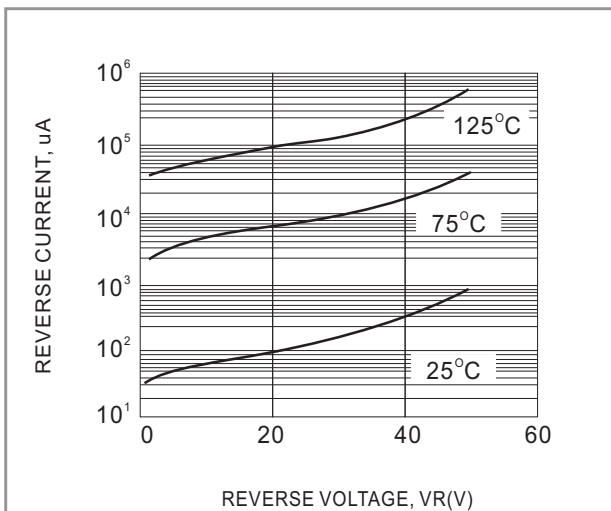


Fig.3- TYPICAL REVERSE CHARACTERISTIC

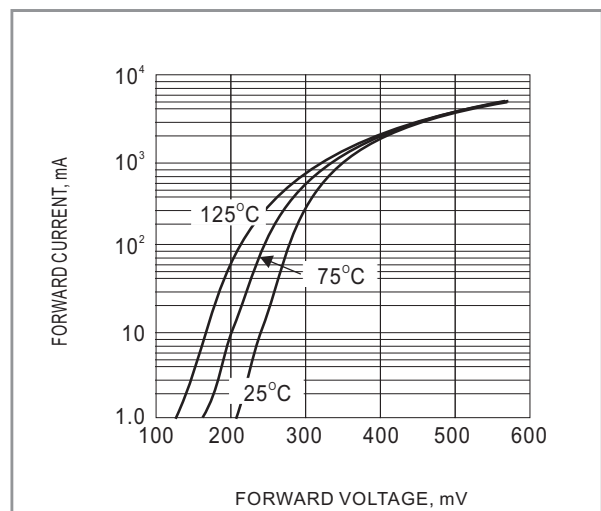
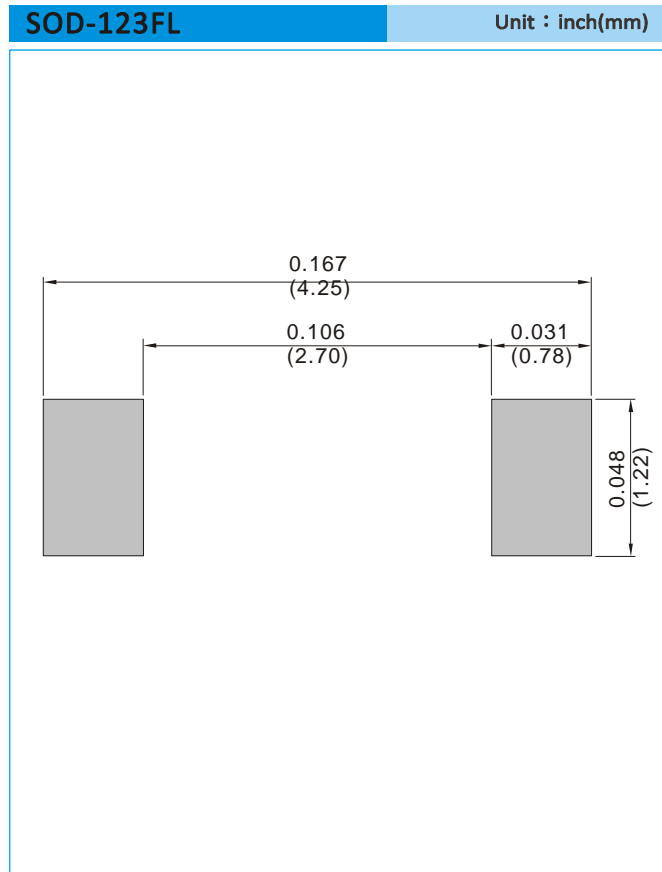


Fig.4- TYPICAL FORWARD CHARACTERISTIC



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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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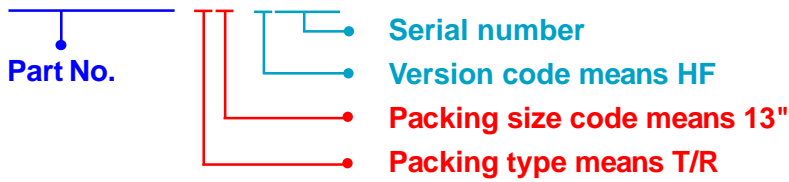
## Part No\_packing code\_Version

MBR1040VL\_R1\_00001

MBR1040VL\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> 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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