



**THE DATASHEET OF  
SS1040L\_R1\_00001**





# SS1040L

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

**VOLTAGE** 40 Volt    **CURRENT** 1 A

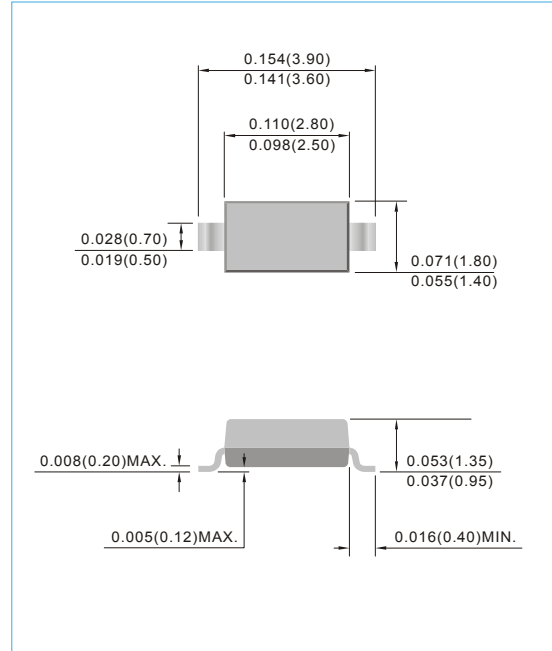
**SOD-123**    Unit : inch(mm)

### FEATURES

- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case : SOD-123, Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0003 ounces, 0.0103 grams
- Polarity : Color band cathode
- Marking : 40L



### MAXIMUM RATINGS@TA=25°C UNLESS OTHERWISE SPECIFIED

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	40	V
RMS Reverse Voltage	$V_R(RMS)$	28	V
Average Rectified Output Current	$I_o$	1	A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	25	A
Power Dissipation (Note 1)	$P_D$	450	mW
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	222	°C/W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to + 125	°C

Notes : 1. FR-4 Board = 70 x 60 x 1mm.



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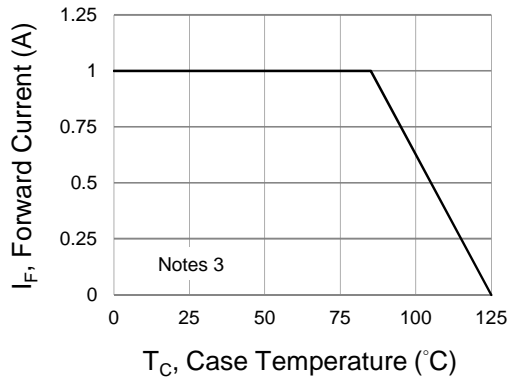
## ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ unless otherwise noted )

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	$I_R=1\text{mA}$	40	-	-	V
Forward Voltage	$V_F$	$I_F=0.1\text{A}$ $I_F=1\text{A}$ $I_F=3\text{A}$	-	-	0.32 0.45 0.75	V
Reverse Leakage Current (Note 2)	$I_R$	$V_R=40\text{V}, T_A=25^{\circ}\text{C}$	-	-	220	$\mu\text{A}$
		$V_R=40\text{V}, T_A=100^{\circ}\text{C}$	-	8.5	-	$\text{mA}$
		$V_R=4\text{V}, T_A=25^{\circ}\text{C}$	-	10	50	$\mu\text{A}$
		$V_R=4\text{V}, T_A=100^{\circ}\text{C}$	-	1	-	$\text{mA}$
		$V_R=6\text{V}, T_A=25^{\circ}\text{C}$ $V_R=6\text{V}, T_A=100^{\circ}\text{C}$	-	15 1.5	75 -	$\mu\text{A}$ $\text{mA}$
Total Capacitance	$C_T$	$V_R=4\text{V}, f=1\text{MHz}$	-	50	-	pF

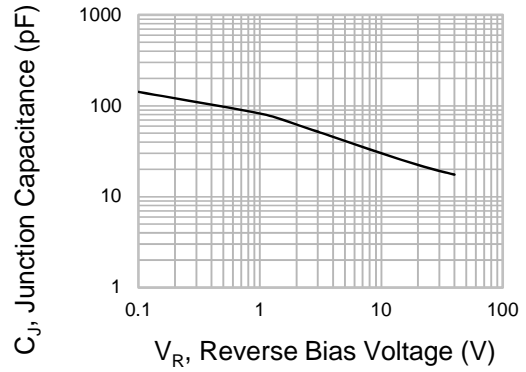
Notes : 2. Short duration pulse test used to minimize self-heating effect.  
3. Mounted on metal core PCB.



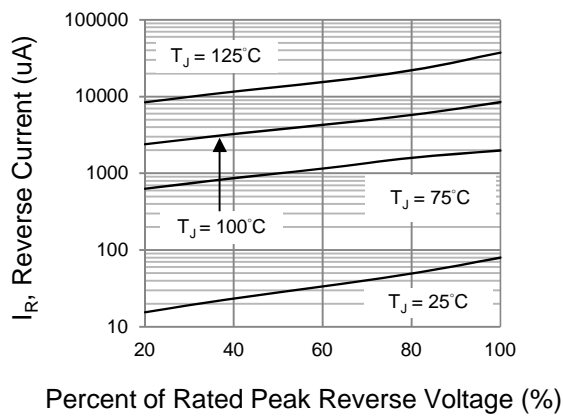
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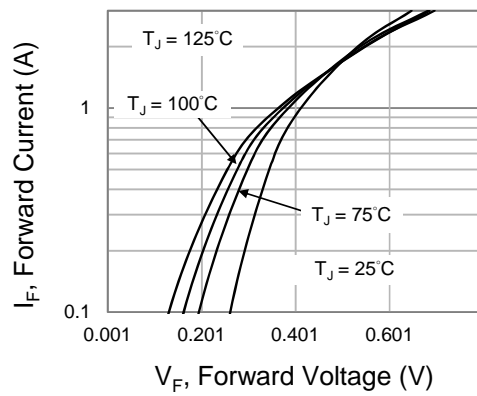
**Fig.1 Forward Current Derating Curve**



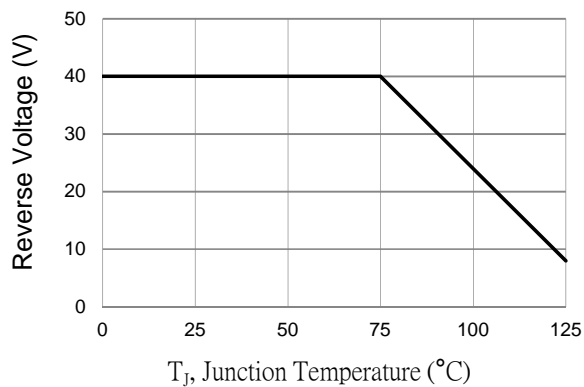
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**

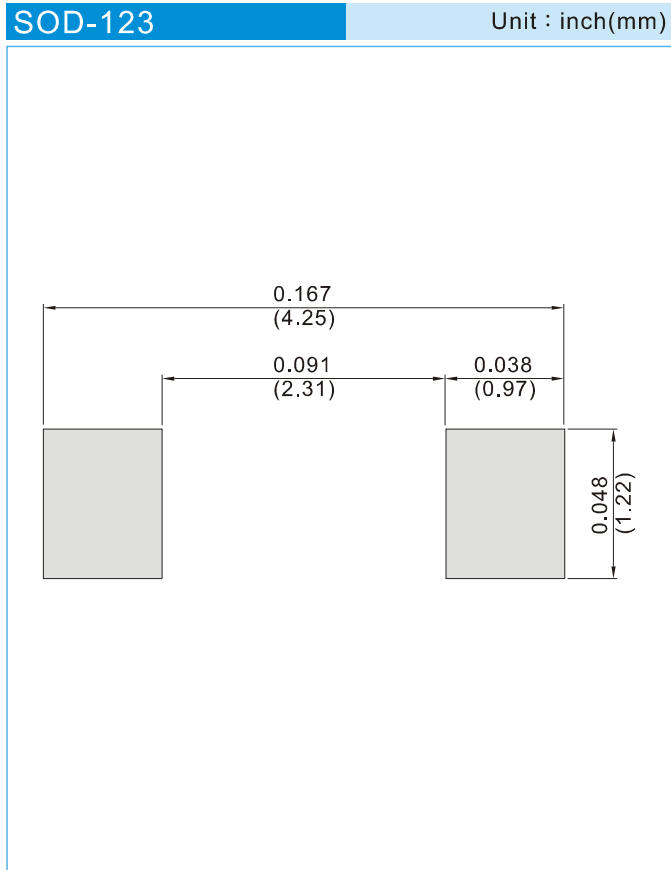


**Fig.5 Operating Temperature Derating Curve**



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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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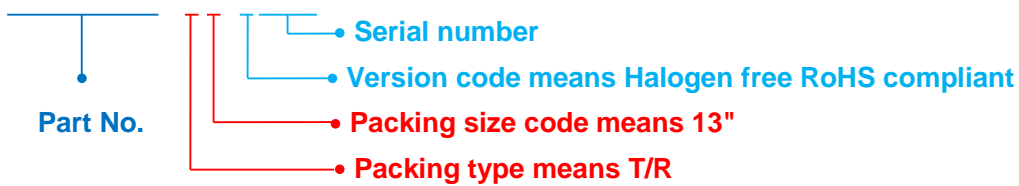
## Part No.\_packing code\_Version

SS1040L\_R1\_00001

SS1040L\_R2\_00001

For example :

RB500V-40\_R2\_00001



Packing Code <b>XX</b>				Version Code <b>X</b>		Serial number <b>XXXX</b>
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HSF Level	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	A	N/A	0	Halogen free RoHS compliant	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS compliant	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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