



SS1040L

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE 40 Volt **CURRENT** 1 A

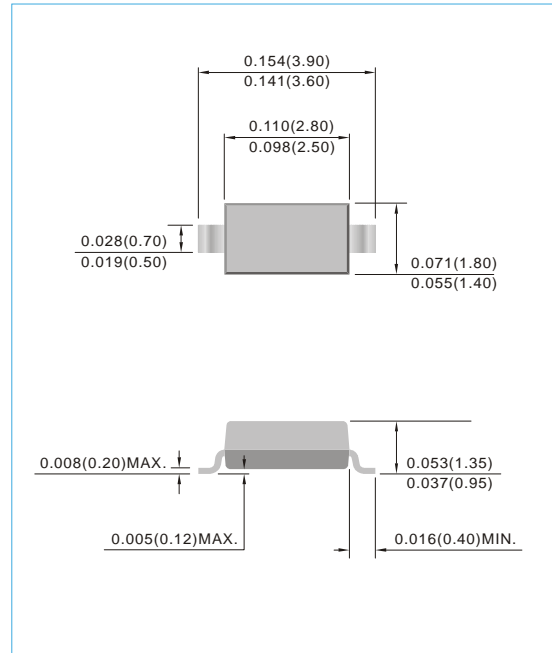
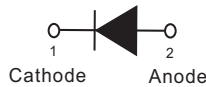
SOD-123 Unit : inch(mm)

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

MECHANICAL DATA

- Case : SOD-123, Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- 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.



SS1040L

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 | μA |
| | | $V_R=40\text{V}, T_A=100^{\circ}\text{C}$ | - | 8.5 | - | mA |
| | | $V_R=4\text{V}, T_A=25^{\circ}\text{C}$ | - | 10 | 50 | μA |
| | | $V_R=4\text{V}, T_A=100^{\circ}\text{C}$ | - | 1 | - | 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 - | μA 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.



SS1040L

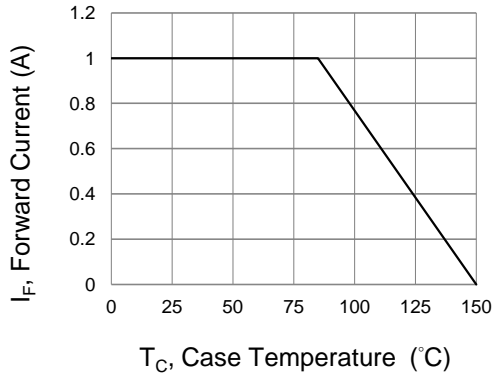


Fig.1 Forward Current Derating Curve

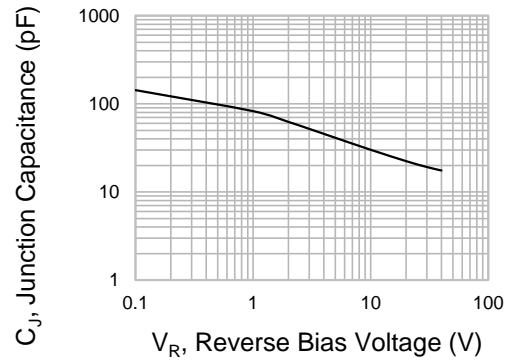


Fig.2 Typical Junction Capacitance

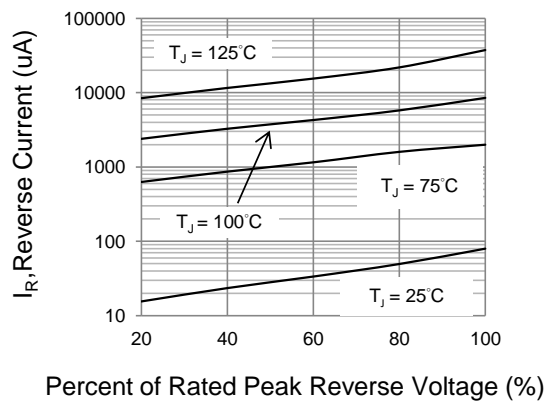


Fig.3 Typical Reverse Characteristics

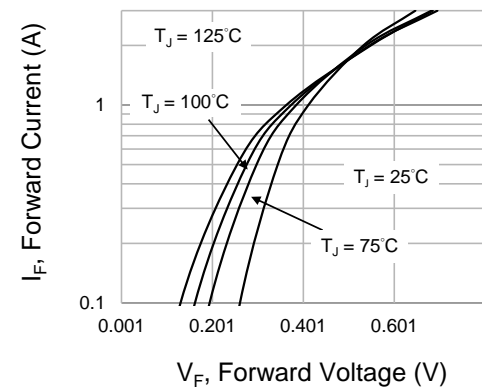


Fig.4 Typical Forward Characteristics

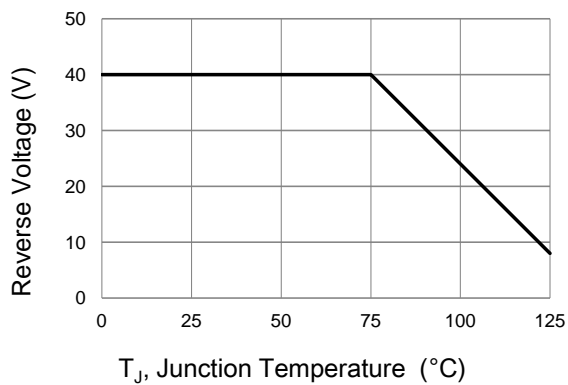
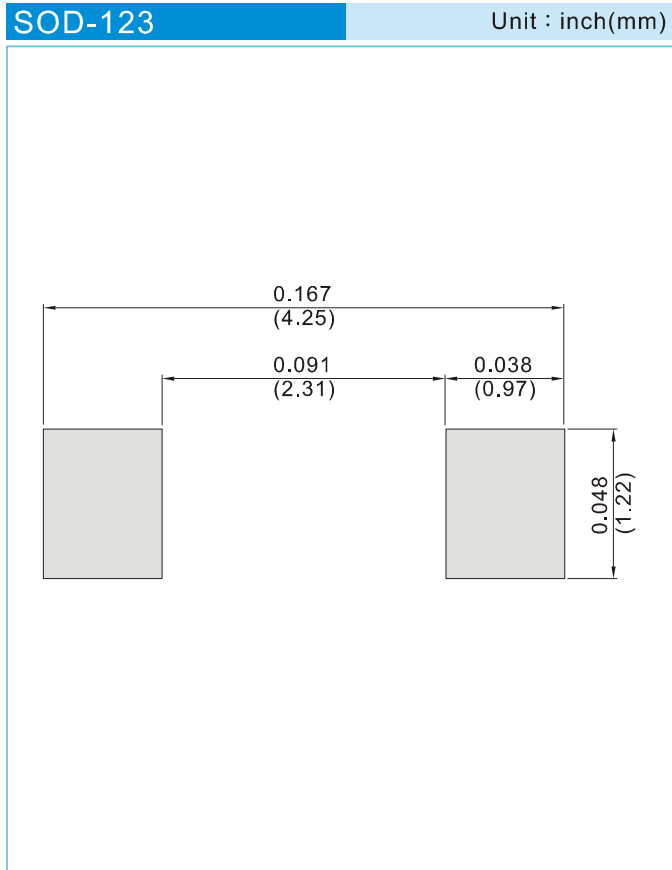


Fig.5 Operating Temperature Derating Curve



SS1040L

MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
T/R - 10K per 13" plastic Reel
T/R - 3K per 7" plastic Reel



SS1040L

Part No_packing code_Version

SS1040L_R1_00001

SS1040L_R2_00001

For example :

RB500V-40_R2_00001



| Packing Code XX | | | | Version Code XXXXX | | |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| 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 | | | |



SS1040L

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.