



# SK54BL

## LOW VF SCHOTTKY RECTIFIER

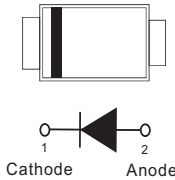
**VOLTAGE** 40 Volt **CURRENT** 5 Ampere

### FEATURES

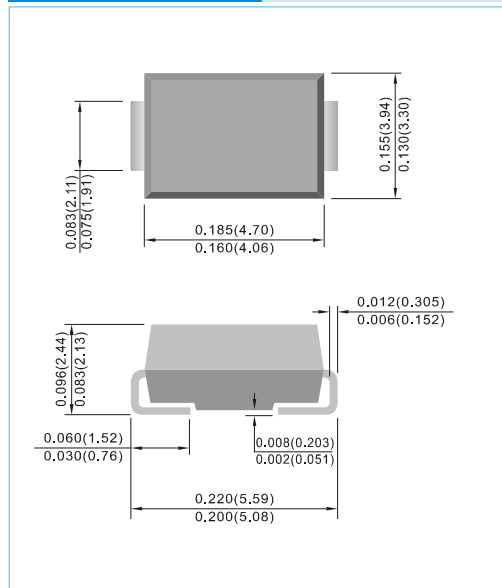
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: JEDEC DO-214AA molded plastic
- Terminals: Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.0032 ounces, 0.092 grams



**SMB / DO-214AA** Unit : inch(mm)



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

| PARAMETER   | SYMBOL                             | VALUE        | UNIT               |
|---|------------------------------------|--------------|--------------------|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$                          | 40           | V                  |
| Maximum rms voltage   | $V_{RMS}$                          | 28           | V                  |
| Maximum dc blocking voltage   | $V_R$                              | 40           | V                  |
| Maximum average forward rectified current   | $I_{F(AV)}$                        | 5            | A                  |
| Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$                          | 100          | A                  |
| Typical thermal resistance (Note 1)   | $R_{\theta JA}$<br>$R_{\theta JL}$ | 40<br>10     | $^\circ\text{C/W}$ |
| Operating junction temperature range  | $T_J$                              | -55 to + 150 | $^\circ\text{C}$   |
| Storage temperature range   | $T_{STG}$                          | -55 to + 150 | $^\circ\text{C}$   |

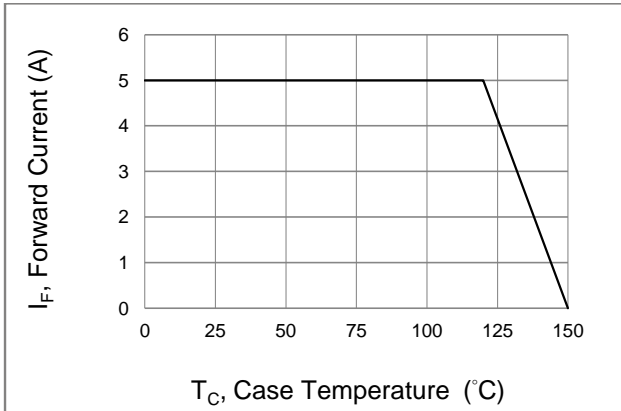
### ELECTRICAL CHARACTERISTICS( $T_A=25^\circ\text{C}$ unless otherwise noted)

| PARAMETER                     | SYMBOL   | TEST CONDITIONS         | MIN. | TYP. | MAX. | UNIT          |
|-------------------------------|----------|-------------------------|------|------|------|---------------|
| Breakdown voltage             | $V_{BR}$ | $I_R=1\text{mA}$        | 40   | -    | -    | V             |
| Instantaneous forward voltage | $V_F$    | $I_F=1\text{A}$         | -    | 0.34 | -    | V             |
|                               |          | $I_F=3\text{A}$         | -    | 0.40 | -    | V             |
|                               |          | $I_F=5\text{A}$         | -    | 0.44 | 0.46 | V             |
|                               |          | $T_J=125^\circ\text{C}$ | -    | 0.21 | -    | V             |
| Reverse current               | $I_R$    | $V_R=32\text{V}$        | -    | 21   | -    | $\mu\text{A}$ |
|                               |          | $T_J=25^\circ\text{C}$  | -    | -    | 100  | $\mu\text{A}$ |
|                               |          | $T_J=125^\circ\text{C}$ | -    | 25   | -    | $\text{mA}$   |

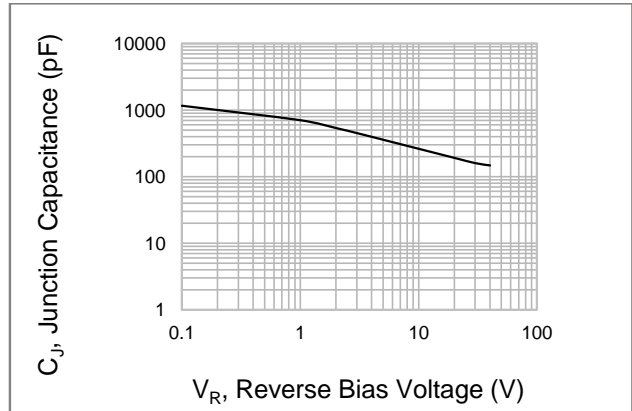
Note : 1. Mounted on  $48\text{cm}^2$  FR-4 PCB.



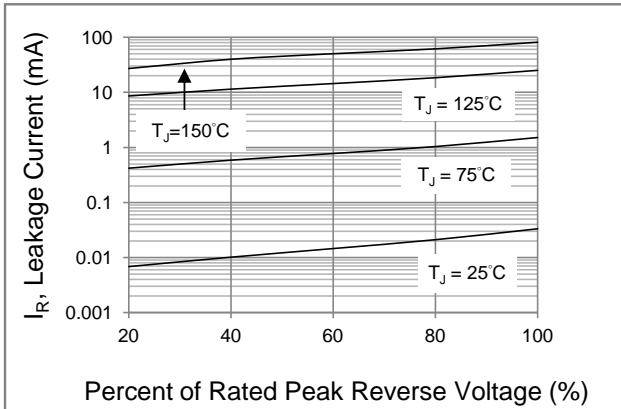
# SK54BL



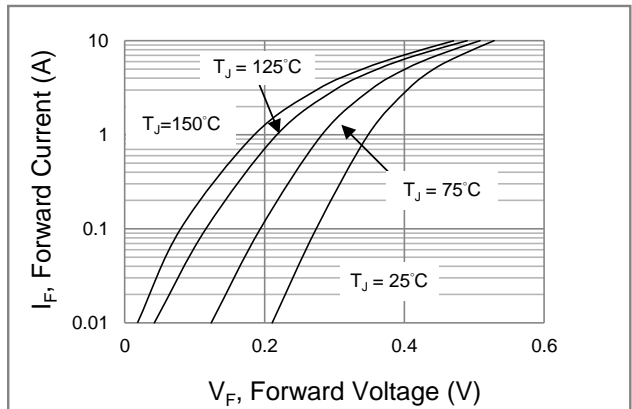
**Fig.1 Forward Current Derating Curve**



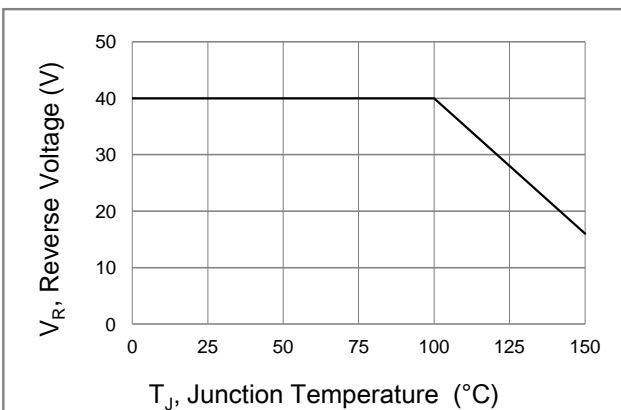
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**



**Fig.5 Operating Temperature Derating Curve**

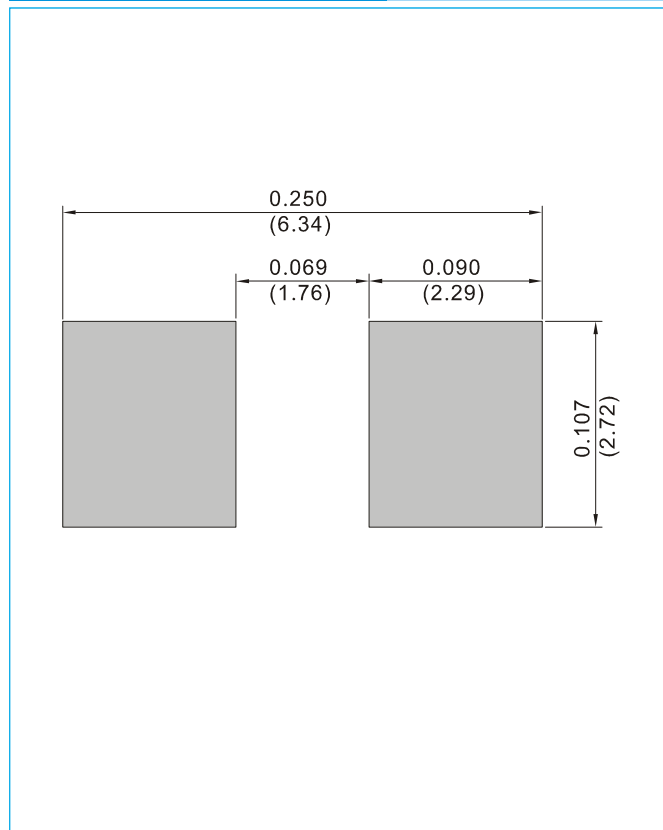


# SK54BL

## MOUNTING PAD LAYOUT

SMB / DO-214AA

Unit : inch(mm)



## ORDER INFORMATION

- Packing information
  - T/R - 3K per 13" plastic Reel
  - T/R - 0.8K per 7" plastic Reel



# SK54BL

## Part No\_packing code\_Version

SK54BL\_R1\_00001

SK54BL\_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)        | <b>A</b>             | N/A                              | <b>0</b>             | <b>HF</b>                 | <b>0</b>             | serial number                         |
| Tape and Reel (T/R)                  | <b>R</b>             | 7"                               | <b>1</b>             | <b>RoHS</b>               | <b>1</b>             | serial number                         |
| Bulk Packing (B/P)                   | <b>B</b>             | 13"                              | <b>2</b>             |                           |                      |                                       |
| Tube Packing (T/P)                   | <b>T</b>             | 26mm                             | <b>X</b>             |                           |                      |                                       |
| Tape and Reel (Right Oriented) (TRR) | <b>S</b>             | 52mm                             | <b>Y</b>             |                           |                      |                                       |
| Tape and Reel (Left Oriented) (TRL)  | <b>L</b>             | PANASERT T/B CATHODE UP (PBCU)   | <b>U</b>             |                           |                      |                                       |
| FORMING                              | <b>F</b>             | PANASERT T/B CATHODE DOWN (PBCD) | <b>D</b>             |                           |                      |                                       |



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