



# SK54BL

## LOW VF SCHOTTKY RECTIFIER

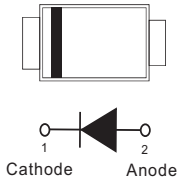
**VOLTAGE** 40 Volt **CURRENT** 5 Ampere

### FEATURES

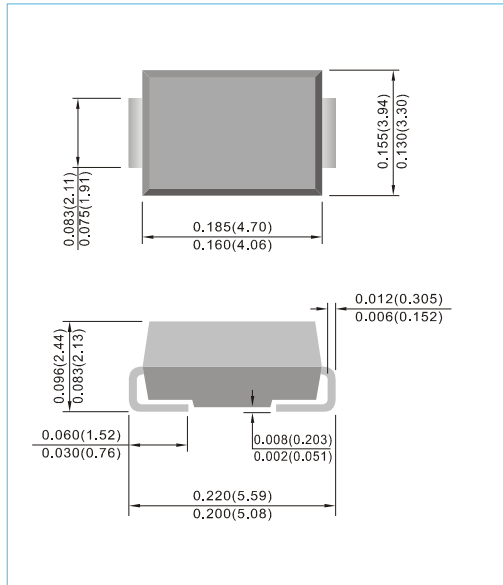
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### 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 ounce, 0.092 gram



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



### MAXIMUM RATINGS(T<sub>A</sub>=25°C unless otherwise noted)

| PARAMETER   | SYMBOL                               | VALUE        | UNIT |
|---|--------------------------------------|--------------|------|
| Maximum repetitive peak reverse voltage   | V <sub>RRM</sub>                     | 40           | V    |
| Maximum rms voltage   | V <sub>RMS</sub>                     | 28           | V    |
| Maximum dc blocking voltage   | V <sub>R</sub>                       | 40           | V    |
| Maximum average forward rectified current   | I <sub>F(AV)</sub>                   | 5            | A    |
| Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load | I <sub>FSM</sub>                     | 100          | A    |
| Typical thermal resistance <span style="float: right;">(Note 1)</span>              | R <sub>θJA</sub><br>R <sub>θJL</sub> | 40<br>10     | °C/W |
| Operating junction temperature range  | T <sub>J</sub>                       | -55 to + 150 | °C   |
| Storage temperature range   | T <sub>STG</sub>                     | -55 to + 150 | °C   |

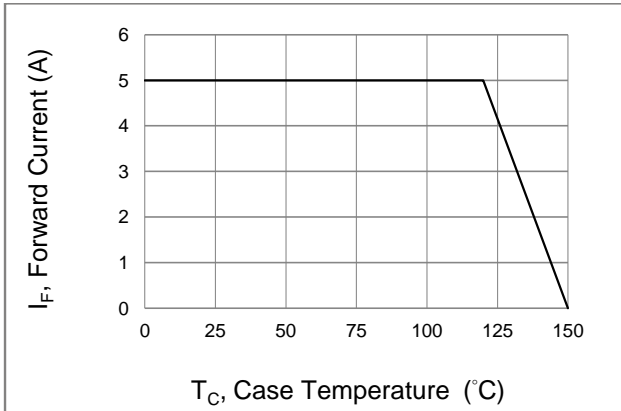
### ELECTRICAL CHARACTERISTICS(T<sub>A</sub>=25°C unless otherwise noted)

| PARAMETER                     | SYMBOL          | TEST CONDITIONS       | MIN.                  | TYP. | MAX. | UNIT |
|-------------------------------|-----------------|-----------------------|-----------------------|------|------|------|
| Breakdown voltage             | V <sub>BR</sub> | I <sub>R</sub> =1mA   | 40                    | -    | -    | V    |
| Instantaneous forward voltage | V <sub>F</sub>  | I <sub>F</sub> =1A    | -                     | 0.34 | -    | V    |
|                               |                 | I <sub>F</sub> =3A    | -                     | 0.40 | -    | V    |
|                               |                 | I <sub>F</sub> =5A    | -                     | 0.44 | 0.46 | V    |
|                               |                 | T <sub>J</sub> =25°C  | -                     | -    | -    | -    |
| Reverse current               | I <sub>R</sub>  | I <sub>F</sub> =1A    | -                     | 0.21 | -    | μA   |
|                               |                 | I <sub>F</sub> =3A    | -                     | 0.30 | -    | μA   |
|                               |                 | I <sub>F</sub> =5A    | -                     | 0.36 | -    | μA   |
|                               |                 | T <sub>J</sub> =125°C | -                     | -    | -    | mA   |
| Reverse current               | I <sub>R</sub>  | V <sub>R</sub> =32V   | -                     | 21   | -    | μA   |
|                               |                 | V <sub>R</sub> =40V   | T <sub>J</sub> =25°C  | -    | -    | 100  |
|                               |                 |                       | T <sub>J</sub> =125°C | -    | 25   | mA   |

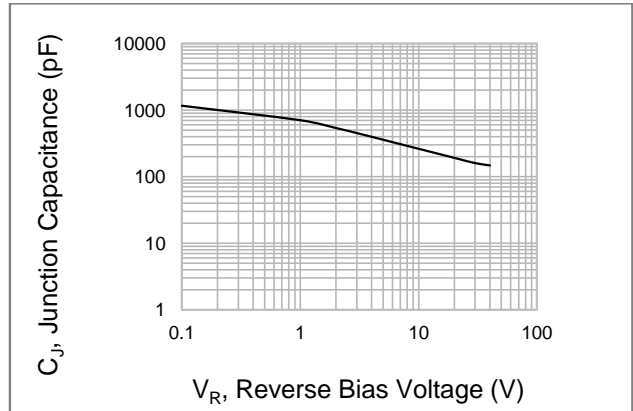
Note : 1. Mounted on 48cm<sup>2</sup> FR-4 PCB.



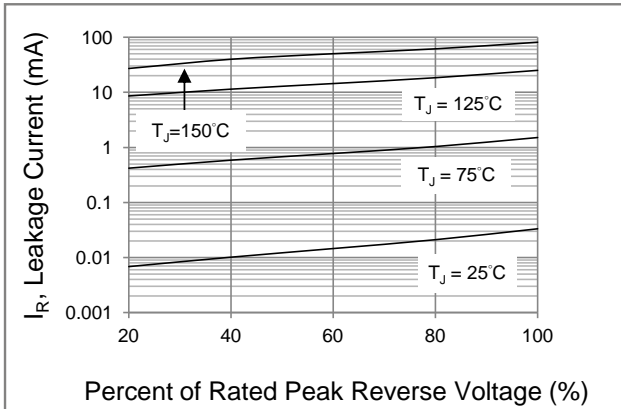
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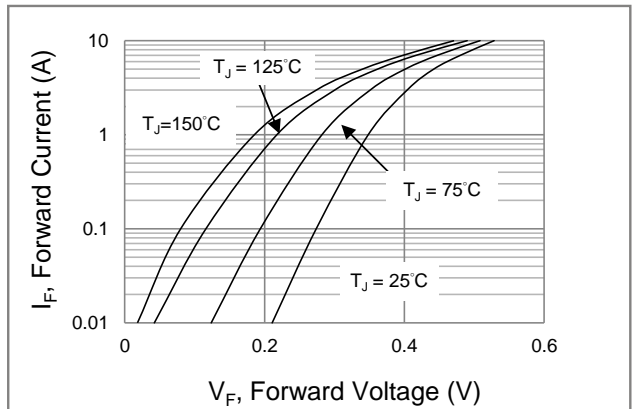
**Fig.1 Forward Current Derating Curve**



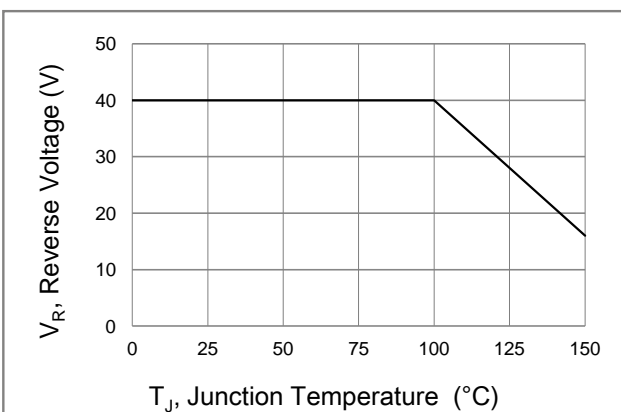
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**



**Fig.5 Operating Temperature Derating Curve**

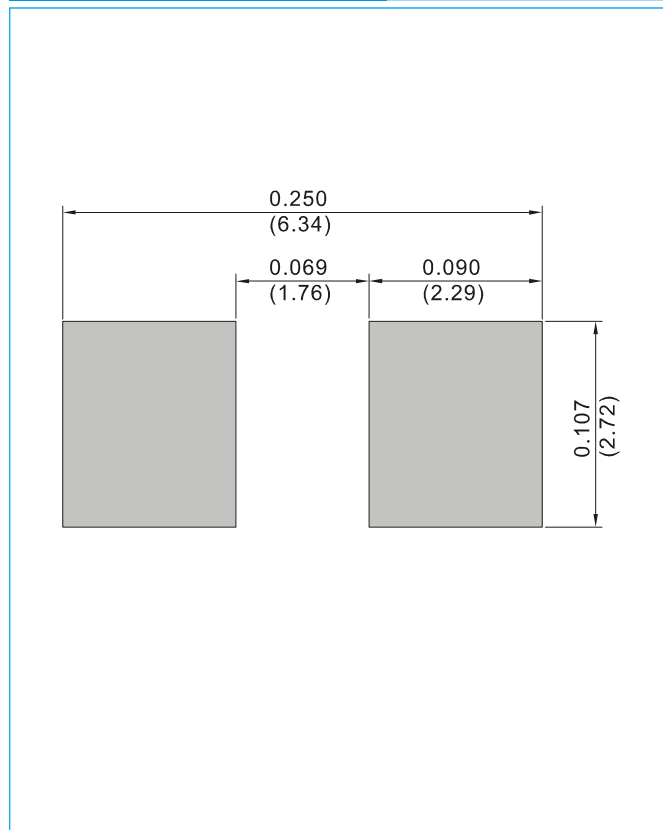


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## MOUNTING PAD LAYOUT

SMB / DO-214AA

Unit : inch(mm)



## ORDER INFORMATION

- Packing information
  - T/R - 3K per 13" plastic Reel
  - T/R - 0.5K per 7" plastic Reel



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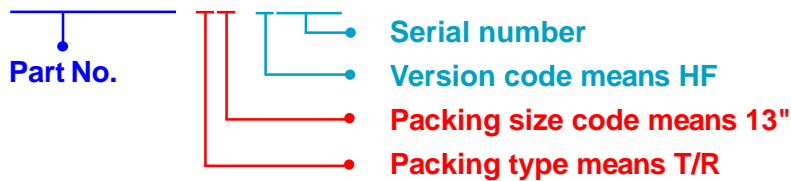
## Part No\_packing code\_Version

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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