



# SBT30100VDC

## ULTRA LOW VF SCHOTTKY RECTIFIER

**VOLTAGE** 100 Volt **CURRENT** 30 Ampere

### FEATURES

- ULTRA low forward voltage drop, low power losses
- High efficiency operation
- Lead free in comply with EU RoHS 2011/65/EU directives

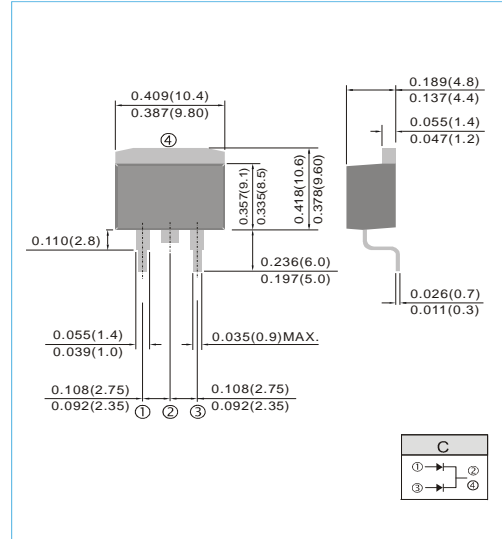
### MECHANICAL DATA

Case : TO-263/D<sup>2</sup>PAK, Plastic

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

Weight : 0.0514 ounces, 1.46 grams.

**TO-263 / D<sup>2</sup>PAK** 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>   | 100          | V    |
| Maximum rms voltage   | V <sub>RMS</sub>   | 70           | V    |
| Maximum dc blocking voltage   | V <sub>R</sub>     | 100          | V    |
| Maximum average forward rectified current   | I <sub>F(AV)</sub> | 30<br>15     | A    |
| Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load | I <sub>FSM</sub>   | 200          | A    |
| Typical thermal resistance  | R <sub>θJC</sub>   | 3.5          | °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   |

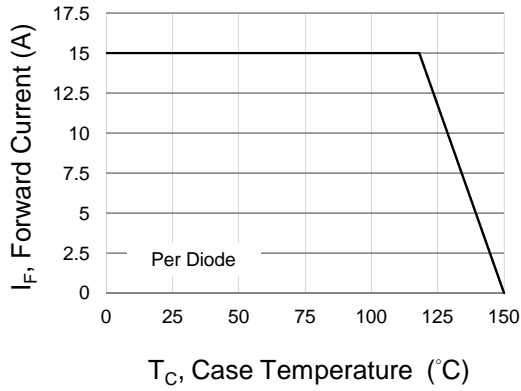
NOTE : 1.Mounted on infinite heatsink.

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

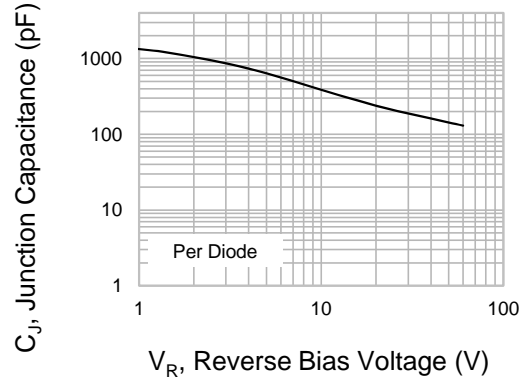
| PARAMETER                               | SYMBOL          | TEST CONDITIONS       | MIN.                  | TYP. | MAX. | UNIT |    |
|---|-----------------|-----------------------|-----------------------|------|------|------|----|
| Breakdown voltage per diode             | V <sub>BR</sub> | I <sub>R</sub> =0.5mA | 100                   | -    | -    | V    |    |
| Instantaneous forward voltage per diode | V <sub>F</sub>  | I <sub>F</sub> =3A    | -                     | 0.45 | -    | V    |    |
|   |                 | I <sub>F</sub> =5A    | -                     | 0.49 | -    | V    |    |
|   |                 | I <sub>F</sub> =15A   | -                     | 0.67 | 0.72 | V    |    |
|   |                 | I <sub>F</sub> =3A    | -                     | 0.36 | -    | V    |    |
| Reverse current per diode               | I <sub>R</sub>  | I <sub>F</sub> =5A    | -                     | 0.44 | -    | V    |    |
|   |                 | V <sub>R</sub> =70V   | -                     | 5    | -    | μA   |    |
|   |                 | V <sub>R</sub> =100V  | T <sub>J</sub> =25°C  | -    | -    | 100  | μA |
|   |                 | V <sub>R</sub> =100V  | T <sub>J</sub> =125°C | -    | 8.5  | -    | mA |



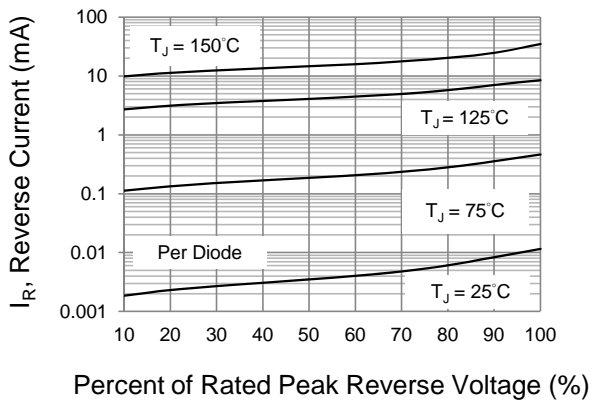
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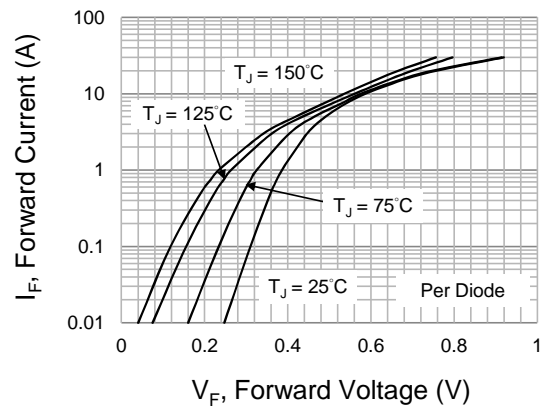
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**



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## Part No\_packing code\_Version

SBT30100VDC\_T0\_00001

SBT30100VDC\_T0\_10001

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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