# SBT1545LSS

## ULTRA LOW VF SCHOTTKY RECTIFIER

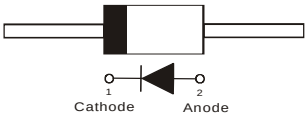
**VOLTAGE** 45 Volt **CURRENT** 15 Ampere

### FEATURES

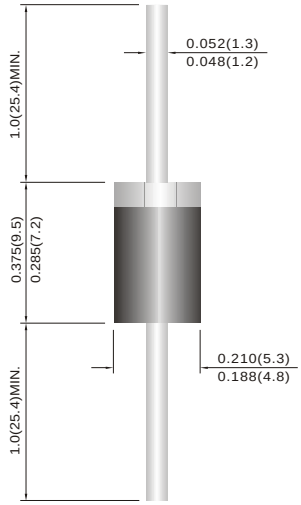
- Ultra low forward voltage drop, low power loss
- High efficiency operation
- Lead free in compliance with EU RoHS 2011/65/EU directive

### MECHANICAL DATA

- Case : Molded plastic, DO-201AD
- Terminals : Axial leads,solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Approx weight : 0.0402 ounces, 1.142 grams




**DO-201AD** Unit : inch(mm)




### MAXIMUM RATINGS($T_A$=25°C unless otherwise noted)

| PARAMETER | SYMBOL | VALUE | UNIT |
|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 45 | V |
| Maximum rms voltage | $V_{RMS}$ | 32 | V |
| Maximum dc blocking voltage | $V_R$ | 45 | V |
| Maximum average forward rectified current | $I_{F(AV)}$ | 15 | A |
| Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$ | 275 | A |
| Typical thermal resistance (Note 1) | $R_{\Theta JA}$<br>$R_{\Theta JL}$ | 30<br>15 | °C/W |
| Operating junction temperature range | $T_J$ | -55 to + 150 | °C |
| Storage temperature range | $T_{STG}$ | -55 to + 150 | °C |

### ELECTRICAL CHARACTERISTICS($T_A$=25°C unless otherwise noted)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|
| Breakdown voltage | $V_{BR}$ | $I_R$=0.5mA | 45 | - | - | V |
| Instantaneous forward voltage | $V_F$ | $I_F$=5A<br>$I_F$=10A $T_J$=25°C<br>$I_F$=15A | -<br>-<br>- | 0.35<br>0.39<br>0.42 | -<br>-<br>0.46 | V |
| | | $I_F$=5A<br>$I_F$=10A $T_J$=125°C | -<br>- | 0.24<br>0.3 | -<br>- | V |
| Reverse current | $I_R$ | $V_R$=36V | - | 70 | - | μA |
| | | $V_R$=45V $T_J$=25°C<br>$T_J$=125°C | -<br>- | -<br>50 | 310<br>- | μA<br>mA |

Note : 1.The testing condition of the thermal resistance (junction to ambient and junction to lead) is based on 0.375"(9.5mm) lead length between two 10x10cm copper pad heatsinks.

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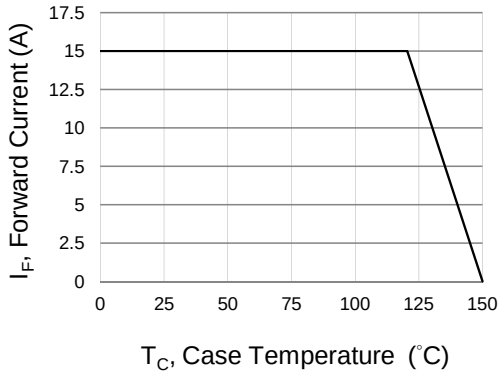



**Fig.1 Forward Current Derating Curve**

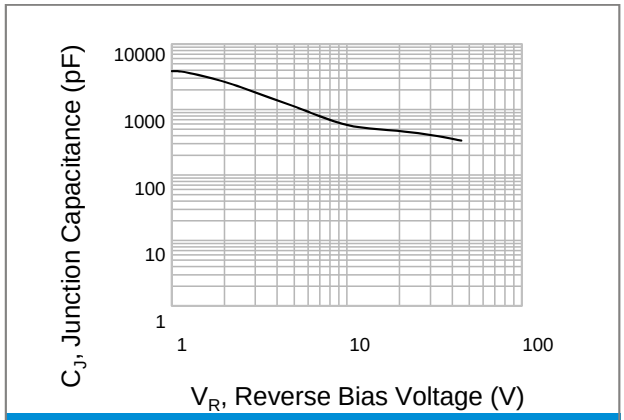



**Fig.2 Typical Junction Capacitance**

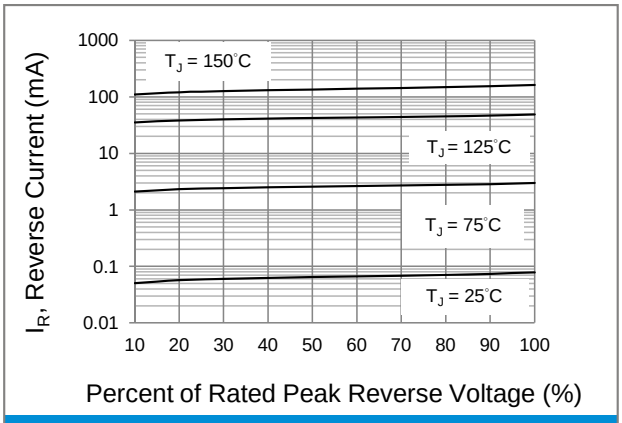



**Fig.3 Typical Reverse Characteristics**

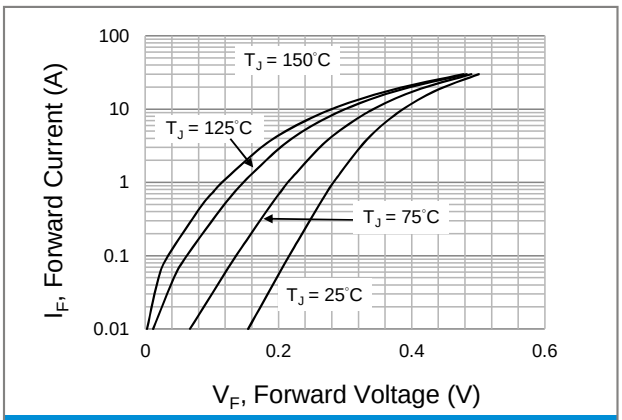



**Fig.4 Typical Forward Characteristics**

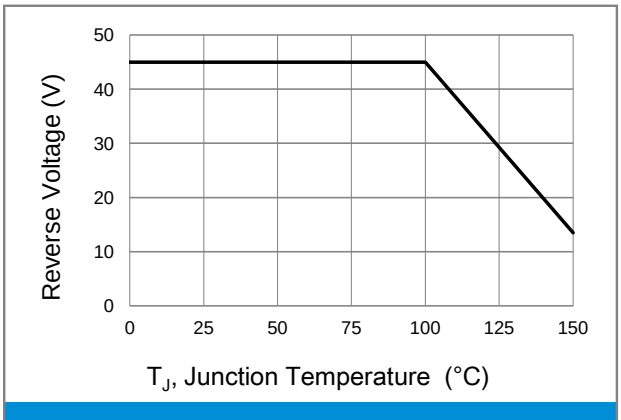



**Fig.5 Operating Temperature Derating Curve**

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**Part No_packing code_Version**

SBT1545LSS_AY_00001
SBT1545LSS_AY_10001
SBT1545LSS_B0_00001
SBT1545LSS_B0_10001
SBT1545LSS_R2_00001
SBT1545LSS_R2_10001

**For example :**

**RB500V-40_R2_00001**

**Part No.**

**Serial number**
**Version code means HF**
**Packing size code means 13"**
**Packing type means T/R**

| Packing Code XX | | | | Version Code XXXXX | | |
|---|---|---|---|---|---|---|
| Packing type | 1st Code | Packing size code | 2nd Code | HF or RoHS | 1st Code | 2nd~5th 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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