

# SBM845LSS

## ULTRA LOW VF SCHOTTKY RECTIFIER

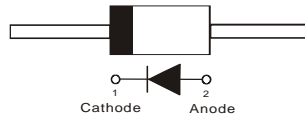
**VOLTAGE** 45 Volt **CURRENT** 8 Ampere

### FEATURES

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

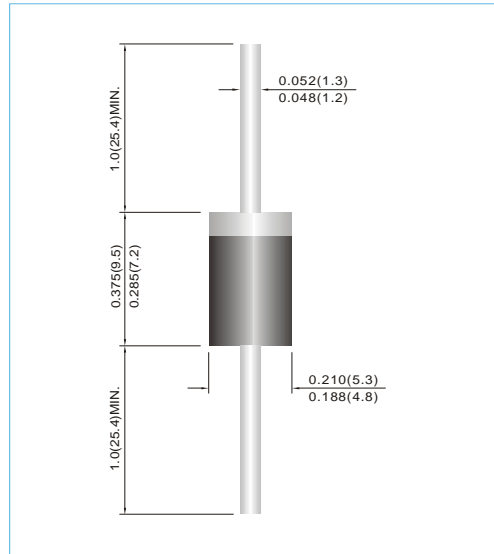
### MECHANICAL DATA

- 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<sub>A</sub>=25°C unless otherwise noted)

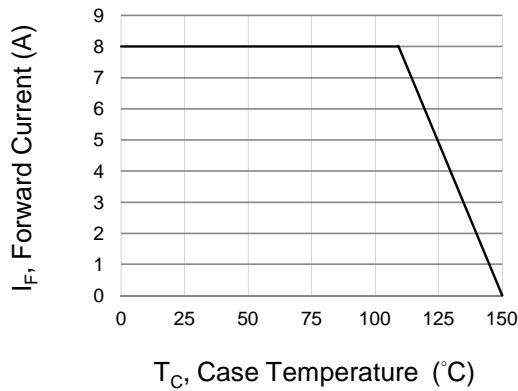
| PARAMETER   | SYMBOL                               | VALUE        | UNIT |
|---|--------------------------------------|--------------|------|
| Maximum repetitive peak reverse voltage   | V <sub>RRM</sub>                     | 45           | V    |
| Maximum rms voltage   | V <sub>RMS</sub>                     | 32           | V    |
| Maximum dc blocking voltage   | V <sub>R</sub>                       | 45           | V    |
| Maximum average forward rectified current   | I <sub>F(AV)</sub>                   | 8            | A    |
| Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load | I <sub>FSM</sub>                     | 150          | A    |
| Typical thermal resistance (Note 1)   | R <sub>θJA</sub><br>R <sub>θJL</sub> | 40<br>23     | °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.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.

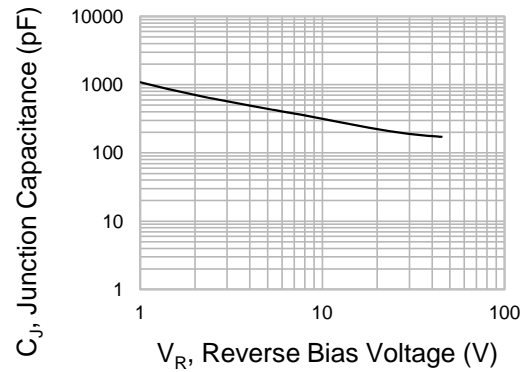
### ELECTRICAL CHARACTERISTICS(T<sub>A</sub>=25°C unless otherwise noted)

| PARAMETER                     | SYMBOL          | TEST CONDITIONS   | MIN.   | TYP.    | MAX.     | UNIT     |
|-------------------------------|-----------------|---|--------|---------|----------|----------|
| Breakdown voltage             | V <sub>BR</sub> | I <sub>R</sub> =0.5mA   | 45     | -       | -        | V        |
| Instantaneous forward voltage | V <sub>F</sub>  | I <sub>F</sub> =1A  | -      | 0.3     | -        | V        |
|                               |                 | I <sub>F</sub> =5A T <sub>J</sub> =25°C                           | -      | 0.39    | -        |          |
|                               |                 | I <sub>F</sub> =8A  | -      | 0.43    | 0.5      |          |
|                               |                 | I <sub>F</sub> =1A T <sub>J</sub> =125°C                          | -      | 0.2     | -        | V        |
| Reverse current               | I <sub>R</sub>  | I <sub>F</sub> =5A T <sub>J</sub> =125°C                          | -      | 0.33    | -        | μA       |
|                               |                 | V <sub>R</sub> =36V   | -      | 45      | -        |          |
|                               |                 | V <sub>R</sub> =45V T <sub>J</sub> =25°C<br>T <sub>J</sub> =125°C | -<br>- | -<br>12 | 250<br>- | μA<br>mA |

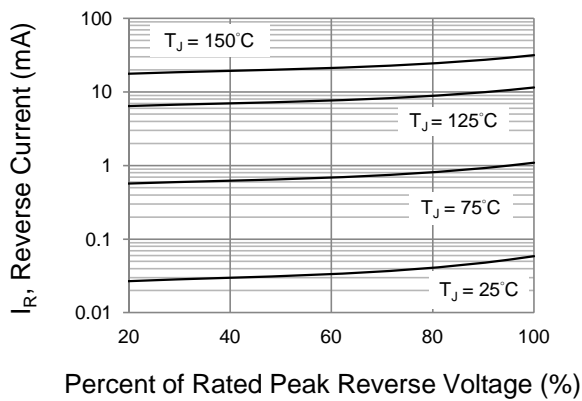
# SBM845LSS



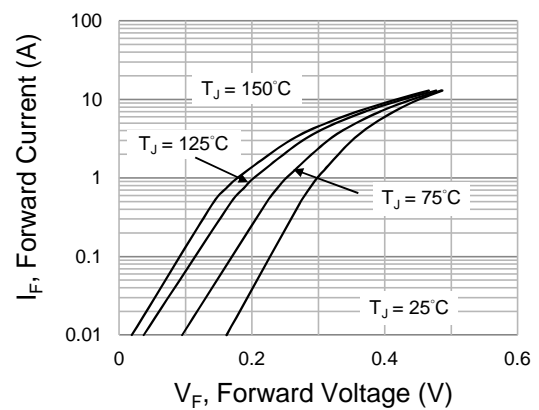
**Fig.1 Forward Current Derating Curve**



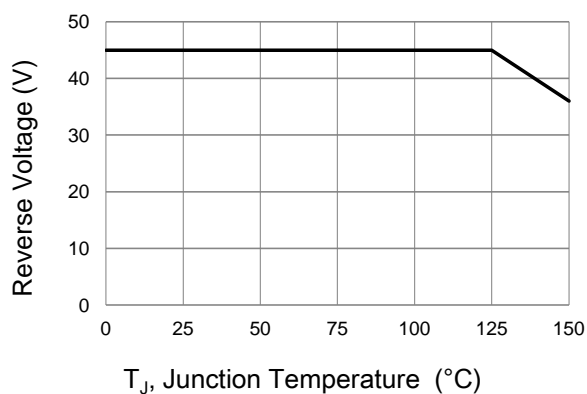
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**



**Fig.5 Operating Temperature Derating Curve**

# SBM845LSS

## Part No\_packing code\_Version

SBM845LSS\_AY\_00001

SBM845LSS\_AY\_10001

SBM845LSS\_B0\_00001

SBM845LSS\_B0\_10001

SBM845LSS\_R2\_00001

SBM845LSS\_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 <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>             |                           |                      |                                       |



## **SBM845LSS**

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