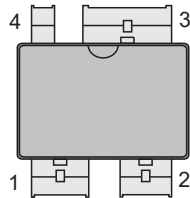


## BRIDGE RECTIFIER



HSB Package

### PINNING

| PIN | DESCRIPTION        |
|-----|--------------------|
| 1   | Input Pin (~)      |
| 2   | Input Pin (~)      |
| 3   | Output Anode (+)   |
| 4   | Output Cathode (-) |

### Features

- Glass Passivated Chip Junction
- Reverse Voltage - 800 V
- Forward Current - 15A
- High Surge Current Capability
- Designed For Surface Mount Application

### Benefits

- Case: HSB
- Terminals: Solderable Per MIL-STD-750
- Approx. Weight: 0.234g / 0.00825oz

### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

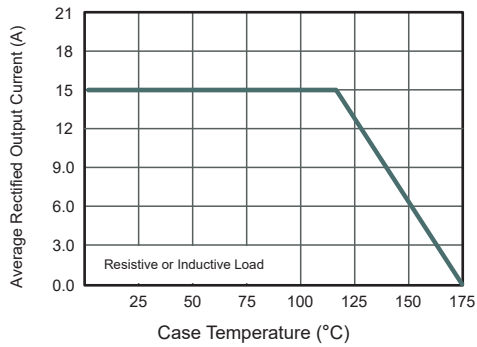
| Parameter                                                                                         | Symbols                 | HSB15K        | Units            |
|---------------------------------------------------------------------------------------------------|-------------------------|---------------|------------------|
| Maximum Repetitive Peak Reverse Voltage                                                           | VRRM                    | 800           | V                |
| Maximum RMS voltage                                                                               | VRMS                    | 560           | V                |
| Maximum DC Blocking Voltage                                                                       | VDC                     | 800           | V                |
| Average Rectified Output Current                                                                  | Io                      | 15.0          | A                |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | IFSM                    | 250           | A                |
| I <sup>2</sup> t rating for fusing ( 1ms< t < 8.3ms)                                              | I <sup>2</sup> t        | 259           | A <sup>2</sup> S |
| Maximum Forward Voltage at 7.5 A                                                                  | VF                      | 1.0           | V                |
| Maximum DC Reverse Current @TA=25 °C at Rated DC Blocking Voltage @TA=125 °C                      | IR                      | 5<br>100      | μA               |
| Typical Junction Capacitance (Note1)                                                              | Cj                      | 75            | pF               |
| Operating and Storage Temperature Range                                                           | Tj, Tstg                | -55 ~ +175    | °C               |
| Typical thermal resistance (Note 2)                                                               | RthJC<br>RthJA<br>RthJL | 5<br>25<br>10 | °C/W             |

Note: 1. Measured at 1MHz and applied reverse voltage of 4 VDC.

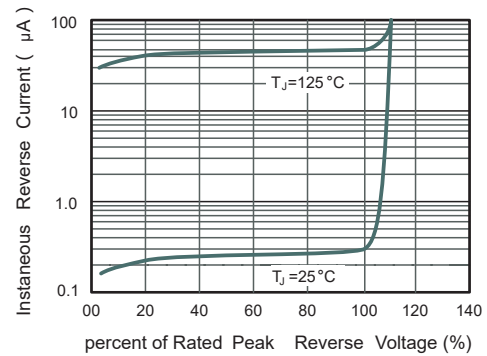
2. Thermal resistance from Junction to case, lead and ambient in accordance with JESD-51. Unit mounted on 15mm\*12mm\*1.6mm AL pad attach 195mm\*195mm\*10mm steel plate

## RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)

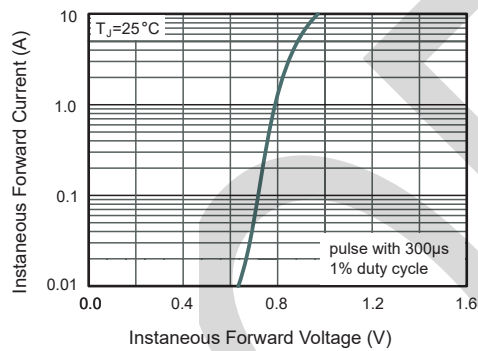
**Fig.1 Average Rectified Output Current Derating Curve**



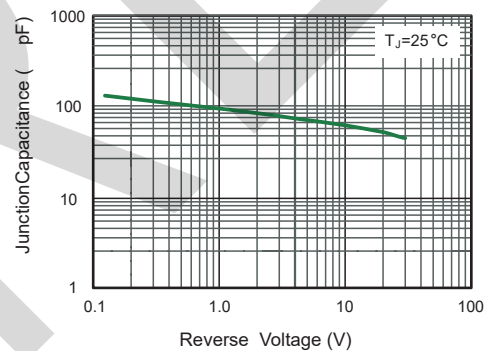
**Fig.2 Typical Reverse Characteristics**



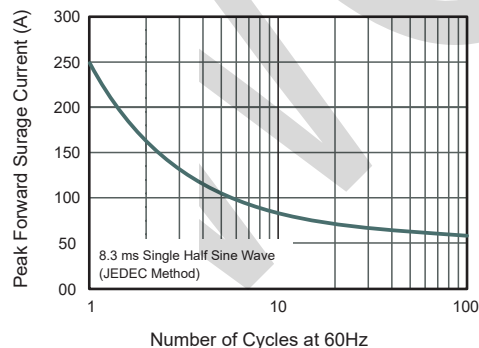
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**

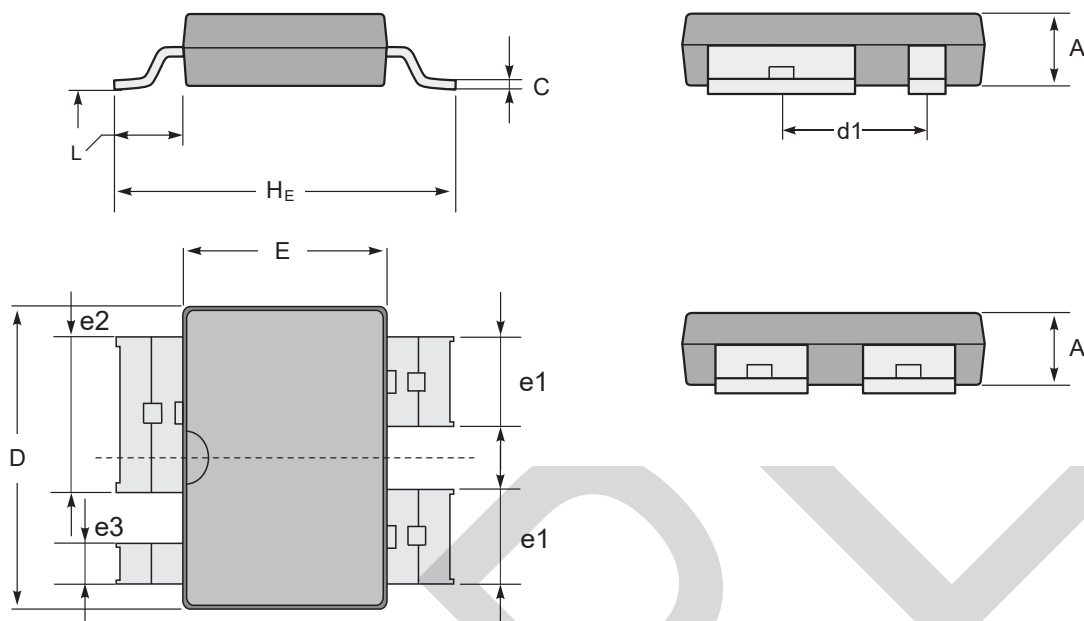


**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



## PACKAGE OUTLINE DIMENSIONS

### HSB



### HSB mechanical data

| UNIT |     | A     | C    | D     | E     | H <sub>E</sub> | e1    | e2    | e3    | d1    | L     |
|------|-----|-------|------|-------|-------|----------------|-------|-------|-------|-------|-------|
| mm   | min | 3.3   | 0.3  | 19.9  | 12.6  | 19.5           | 5.75  | 9.2   | 2.35  | 9.25  | 3.05  |
|      | max | 3.9   | 0.5  | 20.9  | 13.6  | 20.5           | 6.35  | 9.8   | 2.95  | 9.85  | 3.85  |
| mil  | min | 129.9 | 11.8 | 783.5 | 496.1 | 767.7          | 226.4 | 362.2 | 92.5  | 364.2 | 120.1 |
|      | max | 153.5 | 19.8 | 822.8 | 535.4 | 807.1          | 250.0 | 385.8 | 116.1 | 387.8 | 151.6 |

### HSB Suggested Pad Layout

