

## Miniature Ultrafast Glass Passivated Bridge Rectifiers

### FEATURES

- Ideal for automated placement, for compact PCB design
- High surge current capability
- Ultrafast reverse recovery time for high frequency
- Negligible leakage current
- Moisture sensitivity level: level 1, per J-STD-020
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

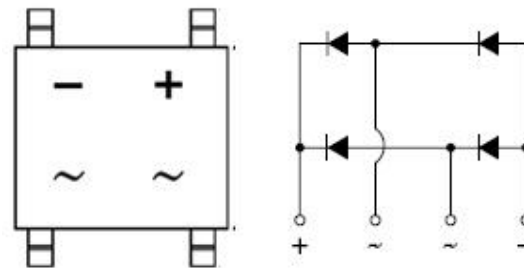


ABS



### TYPICAL APPLICATIONS

General purpose rectification for AC/DC bridge full wave rectification for SMPS. PFC function for LED lighting ballast. Also suitable for secondary stage of high frequency inverters.



### MECHANICAL DATA

**Case:** Molded plastic body

Molding compound, UL flammability classification rating 94V-0  
Base P/N with suffix "G" on packing code - halogen-free

**Terminal:** Matte tin plated leads, solderable per JESD22-B102  
Meet JESD 201 class 1A whisker test

**Polarity:** Polarity as marked on the body

**Weight:** 0.09 g (approximately)

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted) |                    |  |        |        |                  |
|--|--------------------|--|--------|--------|------------------|
| PARAMETER  | SYMBOL             | EABS1D   | EABS1G | EABS1J | Unit             |
| Maximum repetitive peak reverse voltage  | V <sub>RRM</sub>   | 200  | 400    | 600    | V                |
| Maximum RMS voltage  | V <sub>RMS</sub>   | 140  | 280    | 420    | V                |
| Maximum DC blocking voltage  | V <sub>DC</sub>    | 200  | 400    | 600    | V                |
| Maximum average forward rectified current  | I <sub>F(AV)</sub> | 1  |        |        | A                |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load          | I <sub>FSM</sub>   | 40   |        |        | A                |
| Rating for fusing (t<8.3ms)  | I <sup>2</sup> t   | 6.64   |        |        | A <sup>2</sup> s |
| Maximum instantaneous forward voltage (Note 1)<br>I <sub>F</sub> = 1 A                       | V <sub>F</sub>     | 0.95   | 1.20   | 1.70   | V                |
| Maximum DC reverse current<br>at rated DC blocking voltage                                   | I <sub>R</sub>     | 1<br>200                                       |        |        | μA               |
|  |                    | T <sub>J</sub> =25 °C<br>T <sub>J</sub> =125°C |        |        |                  |
| Maximum reverse recovery time (Note 2)   | t <sub>rr</sub>    | 35   |        |        | ns               |
| Typical thermal resistance   | R <sub>θJL</sub>   | 25   |        |        | °C/W             |
|  | R <sub>θJA</sub>   | 80   |        |        |                  |
| 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: Pulse test with PW=300μs, 1% duty cycle

Note 2: Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A

**ORDERING INFORMATION**

| PART NO.           | PACKING CODE | GREEN COMPOUND CODE | PACKAGE | PACKING                 |
|--------------------|--------------|---------------------|---------|-------------------------|
| EABS1x<br>(Note 1) | RE           | Suffix "G"          | ABS     | 1,000 / 7" Plastic reel |
|                    | RG           |                     | ABS     | 5,000 / 13" Paper reel  |

Note 1: "x" defines voltage from 200V (EABS1D) to 400V (EABS1J)

Note 2: For ABS: Packing code (Whole series with green compound)

**EXAMPLE**

| PREFERRED P/N | PART NO. | PACKING CODE | GREEN COMPOUND CODE | DESCRIPTION    |
|---------------|----------|--------------|---------------------|----------------|
| EABS1D REG    | EABS1D   | RE           | G                   | Green compound |

**RATINGS AND CHARACTERISTICS CURVES**

(TA=25°C unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

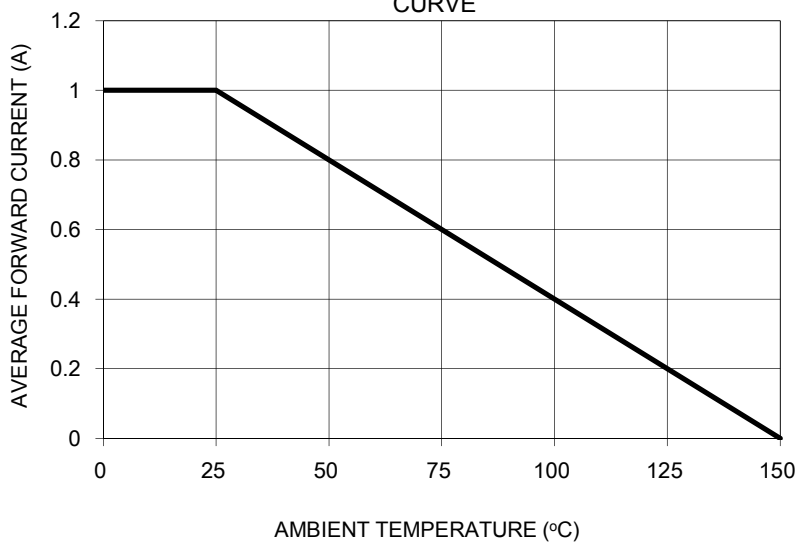


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

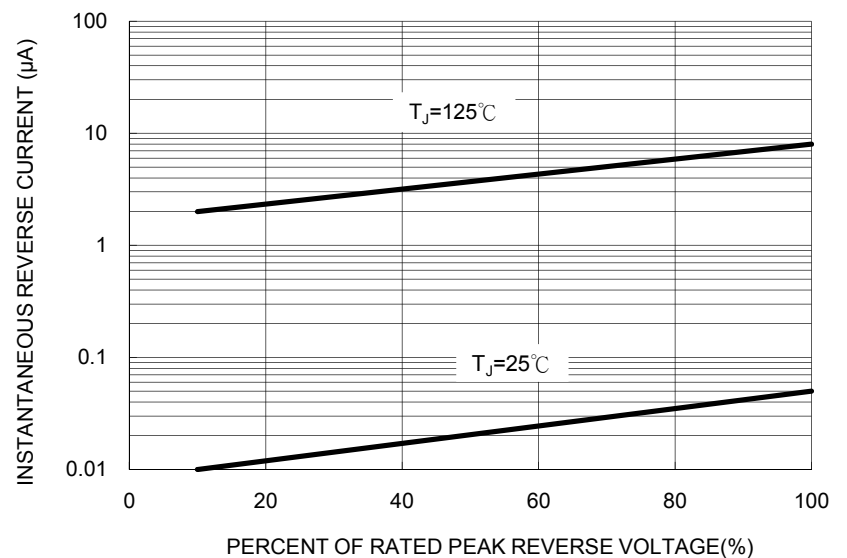


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

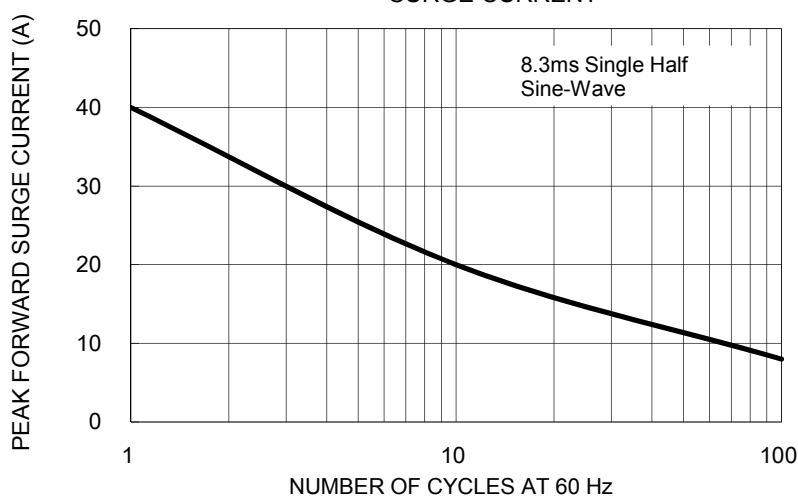


FIG. 4 TYPICAL JUNCTION CAPACITANCE

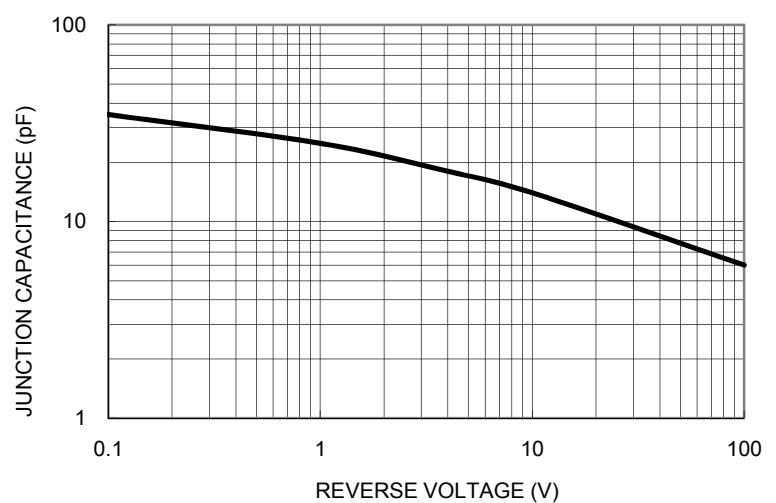
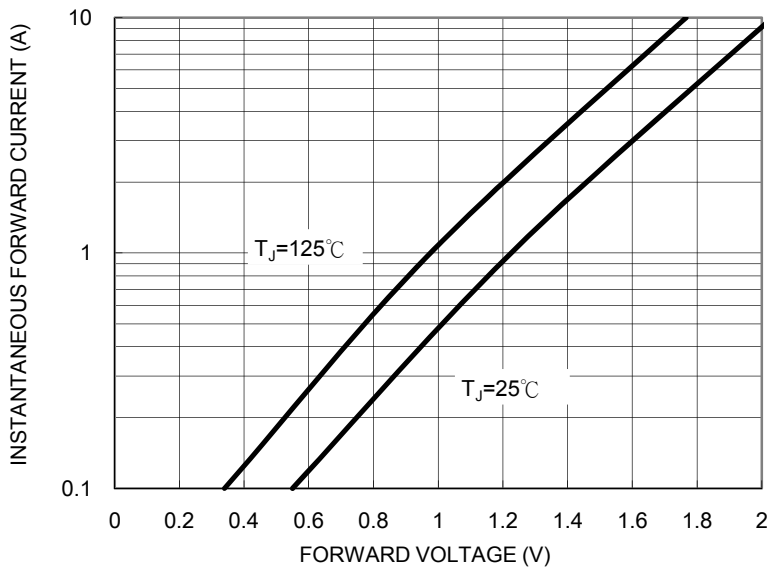
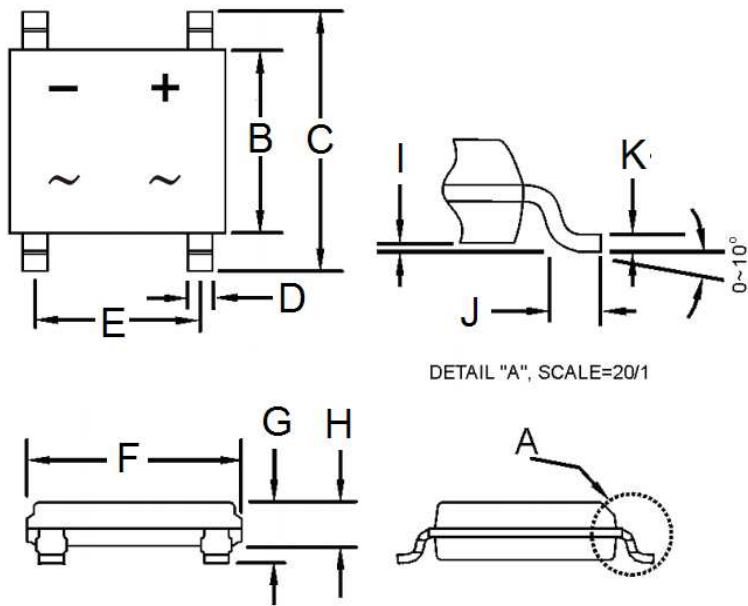


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

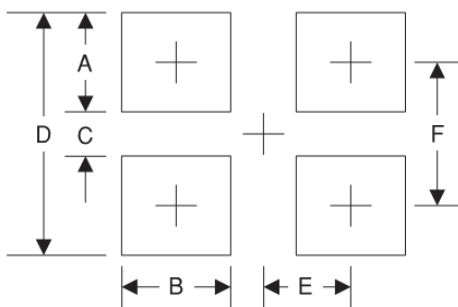


**PACKAGE OUTLINE DIMENSIONS**



| DIM. | Unit (mm) |      | Unit (inch) |       |
|------|-----------|------|-------------|-------|
|      | Min       | Max  | Min         | Max   |
| B    | 4.30      | 4.50 | 0.169       | 0.177 |
| C    | 6.25      | 6.65 | 0.246       | 0.262 |
| D    | 0.60      | 0.70 | 0.024       | 0.028 |
| E    | 3.90      | 4.10 | 0.154       | 0.161 |
| F    | 4.90      | 5.10 | 0.193       | 0.200 |
| G    | 1.40      | 1.60 | 0.055       | 0.063 |
| H    | 1.35      | 1.45 | 0.053       | 0.057 |
| I    | 0.05      | 0.15 | 0.002       | 0.006 |
| J    | 0.30      | 0.70 | 0.012       | 0.028 |
| K    | 0.15      | 0.25 | 0.006       | 0.010 |

**SUGGESTED PAD LAYOUT**



| Symbol | Unit (mm) | Unit (inch) |
|--------|-----------|-------------|
| A      | 1.5       | 0.059       |
| B      | 0.9       | 0.035       |
| C      | 4.22      | 0.166       |
| D      | 7.22      | 0.284       |
| E      | 2.05      | 0.081       |
| F      | 5.72      | 0.225       |

**MARKING DIAGRAM**



P/N = Specific Device Code  
 YW = Date Code  
 F = Factory Code

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