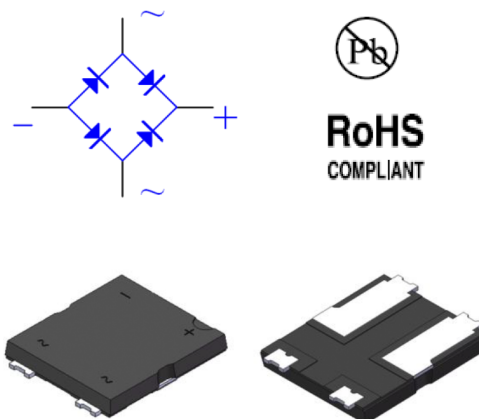


## Features

- Glass passivated Bridge Rectifiers
- Ideal for automated placement
- Very low profile - max height 1.2 mm
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds



case: E91

## Mechanical Data

- Case:E91,Molding compound meets UL 94V-0 flammability rating
- Terminals:Matte tin plated leads,solderable per MII-STD-750 Method 2026,J-STD-002 and JESD22-B102

## Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for TV,Monitor,SMPS,Adapter, Printer,Audio equipment,and Home Applications application

## Maximum Ratings (TA = 25 °C unless otherwise noted)

| Parameter                                                                          | Symbol           | E91201A     | E91202A | E91203A | E91204A | Unit             |
|------------------------------------------------------------------------------------|------------------|-------------|---------|---------|---------|------------------|
| Maximum repetitive peak reverse voltage                                            | VRRM             | 50          | 100     | 200     | 400     | V                |
| Maximum RMS voltage                                                                | VRMS             | 35          | 70      | 140     | 280     | V                |
| Maximum DC blocking voltage                                                        | VDC              | 50          | 100     | 200     | 400     | V                |
| Maximum average output rectified current                                           | Io(AV)           | 2.0         |         |         |         | A                |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | IFSM             | 50          |         |         |         | A                |
| Rating for fusing (t≤8.3ms)                                                        | I <sup>2</sup> t | 10          |         |         |         | A <sup>2</sup> s |
| Operating junction and storage temperature range                                   | TJ,<br>TSTG      | -55 to +150 |         |         |         | °C               |

## Electrical Characteristics (TA = 25 °C unless otherwise noted)

| Parameter                                               | Test Conditions | Symbol         | E91201A | E91202A | E91203A | E91204A | Unit  |
|---------------------------------------------------------|-----------------|----------------|---------|---------|---------|---------|-------|
| Maximum instantaneous forward voltage                   | IF=1.0A         | V <sub>F</sub> | 0.95    |         |         |         | Volts |
|                                                         | IF=2.0A         |                | 1.0     |         |         |         |       |
| Maximum DC reverse current at rated DC blocking voltage | TA=25°C         | I <sub>R</sub> | 5.0     |         |         |         | μA    |
|                                                         | TA=125°C        |                | 50      |         |         |         |       |
| Typical junction capacitance                            | 4.0 V, 1 MHz    | C <sub>J</sub> | 22      |         |         |         | pF    |

## Thermal Characteristics (Ta=25°C unless otherwise noted)

| Parameter                  | Test Conditions                   | Symbol           | E91201A | E91202A | E91203A | E91204A | Unit |
|----------------------------|-----------------------------------|------------------|---------|---------|---------|---------|------|
| Typical thermal resistance | junction to ambient <sup>1)</sup> | R <sub>θJA</sub> | 45      |         |         |         | °C/W |
|                            | junction to case <sup>1)</sup>    | R <sub>θJC</sub> | 12.6    |         |         |         |      |
|                            | junction to ambient <sup>2)</sup> | R <sub>θJA</sub> | 29.8    |         |         |         |      |
|                            | junction to case <sup>2)</sup>    | R <sub>θJC</sub> | 8.4     |         |         |         |      |

Note:1), The thermal resistance from junction to ambient and case, mounted on glass epoxy FR-4 P.C.B with recommended copper pads

2), The thermal resistance from junction to ambient and case, mounted on glass epoxy FR-4 P.C.B with 13\*13mm copper pads

## Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

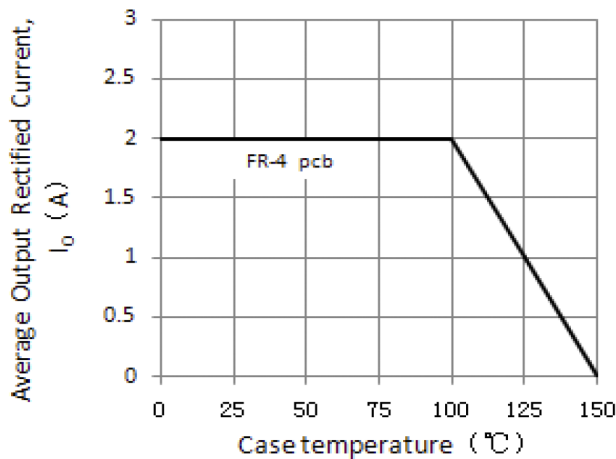


Figure 1. Forward Current Derating Curve

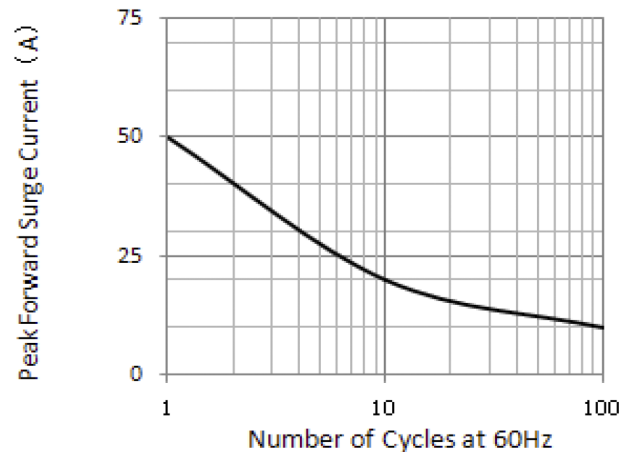


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

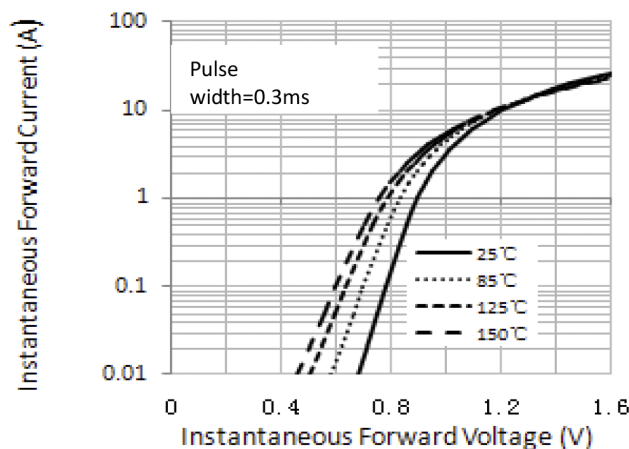


Figure 3. Typical Instantaneous Forward Characteristics

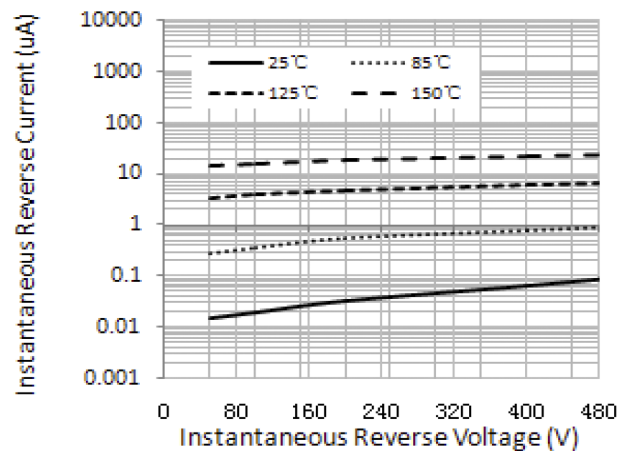
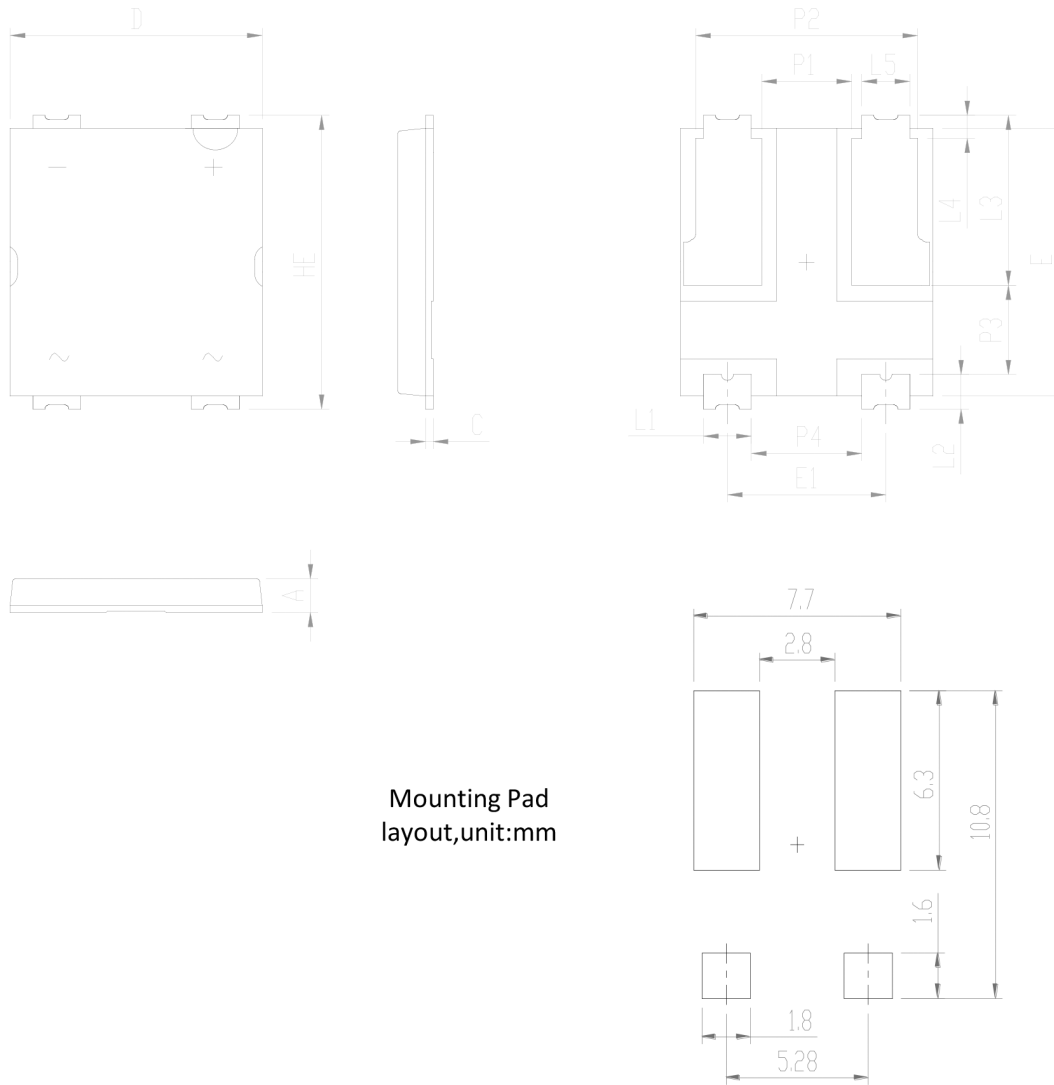


Figure 4. Typical Reverse Characteristics

## Package Outline Dimensions



(Unit:mm)

| Dim | Min      | Nom. | Max  | Dim | Min      | Nom. | Max |
|-----|----------|------|------|-----|----------|------|-----|
| A   | 1.10     | 1.17 | 1.20 | L3  | 5.7      | 5.9  | 6.1 |
| C   | 0.20     | 0.25 | 0.35 | L4  | 0.6      | 0.80 | 1   |
| D   | 8.3      | 8.4  | 8.6  | L5  | 1.4      | 1.6  | 1.8 |
| HE  | 10.0     | 10.2 | 10.4 | P1  | 3.0 REF  |      |     |
| E   | 9.1      | 9.30 | 9.5  | P2  | 7.4 REF  |      |     |
| E1  | 5.28 REF |      |      | P3  | 3.1 REF  |      |     |
| L1  | 1.4      | 1.60 | 1.80 | P4  | 3.68 REF |      |     |
| L2  | 1.0      | 1.2  | 1.4  |     |          |      |     |