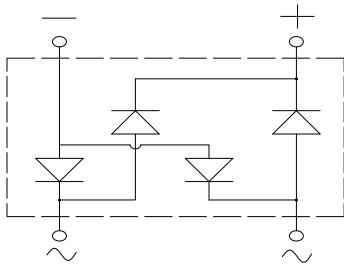
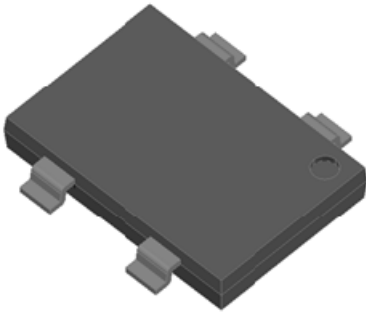


## Bridge Rectifiers



### Features

- UL recognition, file #E313149
- Glass passivated chip junction
- Ideal for automated placement
- High surge current capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

### Typical Applications

General purpose use in AC/DC bridge full wave rectification for SMPS, lighting ballaster, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

### Mechanical Data

- **Package:** YBS3  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, Halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

### ■Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL           | UNIT             | RYBSM8010  |
|---|------------------|------------------|------------|
| Device marking code   |                  |                  | RYBSM8010  |
| Maximum Repetitive Peak Reverse Voltage   | VRRM             | V                | 1000       |
| Maximum RMS Voltage   | VRMS             | V                | 700        |
| Maximum DC blocking Voltage   | VDC              | V                | 1000       |
| Average rectified output current<br>@60Hz sine wave, R-load, T <sub>c</sub> =30°C             | I <sub>O</sub>   | A                | 8.0        |
| Forward Surge Current (Non-repetitive)<br>@60Hz Half-sine wave, 1 cycle, T <sub>j</sub> =25°C | IFSM             | A                | 200        |
| Forward Surge Current (Non-repetitive)<br>@1ms, square wave, 1 cycle, T <sub>j</sub> =25°C    |                  |                  | 400        |
| Current squared time<br>@1ms≤t≤8.3ms T <sub>j</sub> =25°C, Rating of per diode                | I <sup>2</sup> t | A <sup>2</sup> s | 166        |
| Storage temperature   | T <sub>stg</sub> | °C               | -55 ~ +150 |
| Junction temperature  | T <sub>j</sub>   | °C               | -55 ~ +150 |

### ■Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL         | UNIT | TEST CONDITIONS   | RYBSM8010 |
|---|----------------|------|---|-----------|
| Maximum reverse recovery time                                     | t <sub>r</sub> | ns   | I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>r</sub> =0.25A | 500       |
| Maximum instantaneous forward voltage drop per diode              | V <sub>F</sub> | V    | I <sub>FM</sub> =4.0A   | 1.3       |
| Maximum DC reverse current at rated DC blocking voltage per diode | I <sub>R</sub> | μA   | T <sub>j</sub> =25°C  | 5         |
|   |                |      | T <sub>j</sub> =125°C   | 100       |
| Typical junction capacitance                                      | C <sub>j</sub> | pF   | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C         | 68        |



# RYBSM8010

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER                  |                              | SYMBOL           | UNIT | RYBSM8010 |
|----------------------------|------------------------------|------------------|------|-----------|
| Typical Thermal Resistance | Between Junction and Ambient | R <sub>θJA</sub> | °C/W | 55        |
|                            | Between Junction and Lead    | R <sub>θJL</sub> |      | 14        |
|                            | Between Junction and Case    | R <sub>θJC</sub> |      | 8         |

Note: Device mounted on P.C.B with 35mm\*25mm\*1.7mm.

## ■ Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g)   | MINIIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|------------------|-----------------------|-------------------------|----------------------------|---------------|
| RYBSM8010     | F1           | Approximate 0.38 | 1800                  | 3600                    | 25200                      | 13" Reel      |

## ■ Characteristics (Typical)

FIG1: I<sub>o</sub>-T<sub>c</sub> Curve

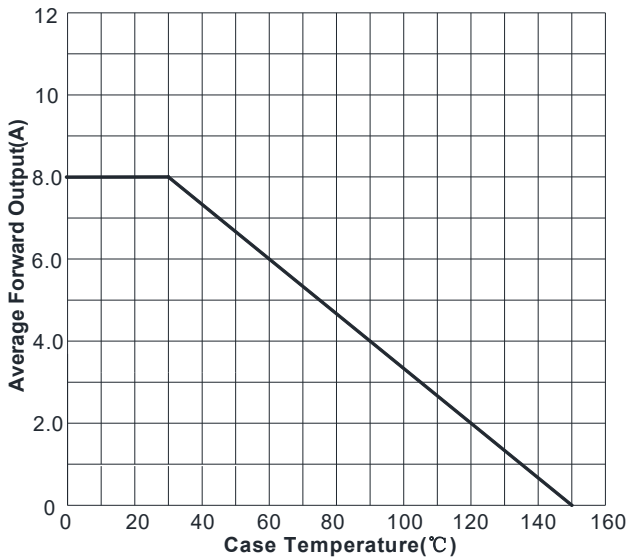


FIG2: Surge Forward Current Capability

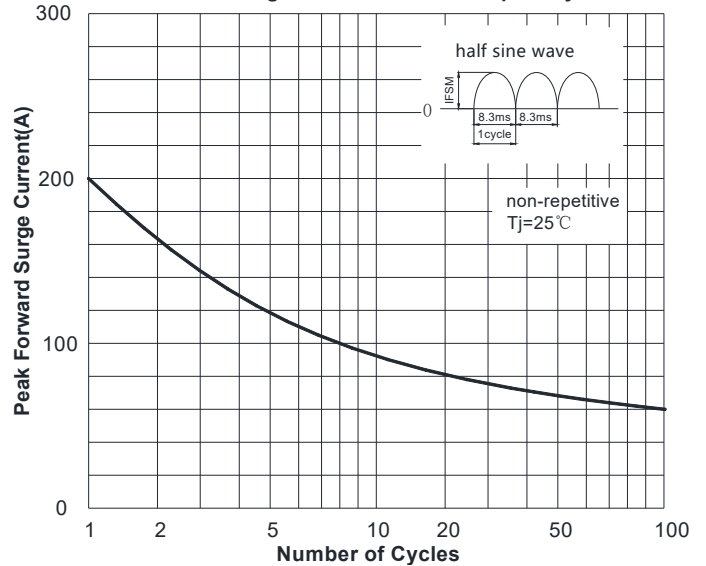


FIG3: Typical Forward Voltage

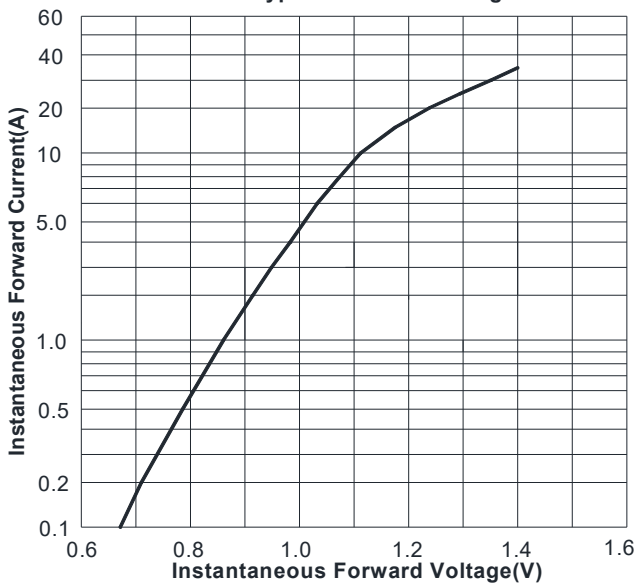


FIG4: Typical Reverse Characteristics

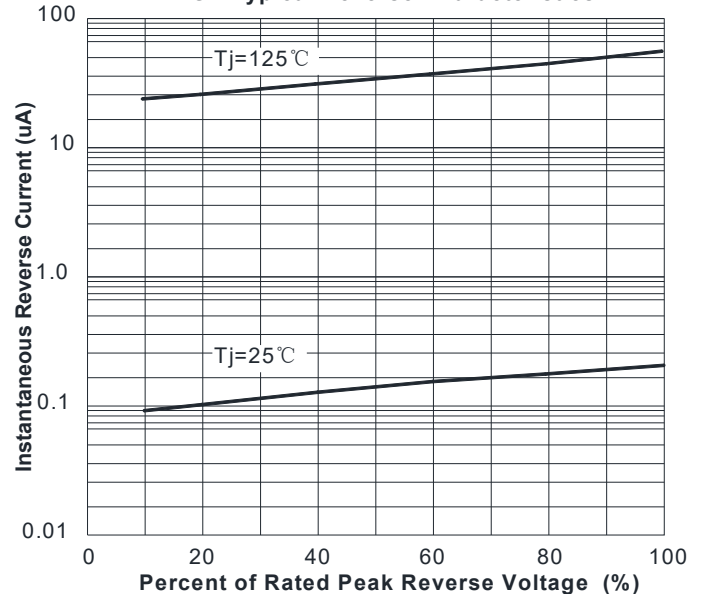
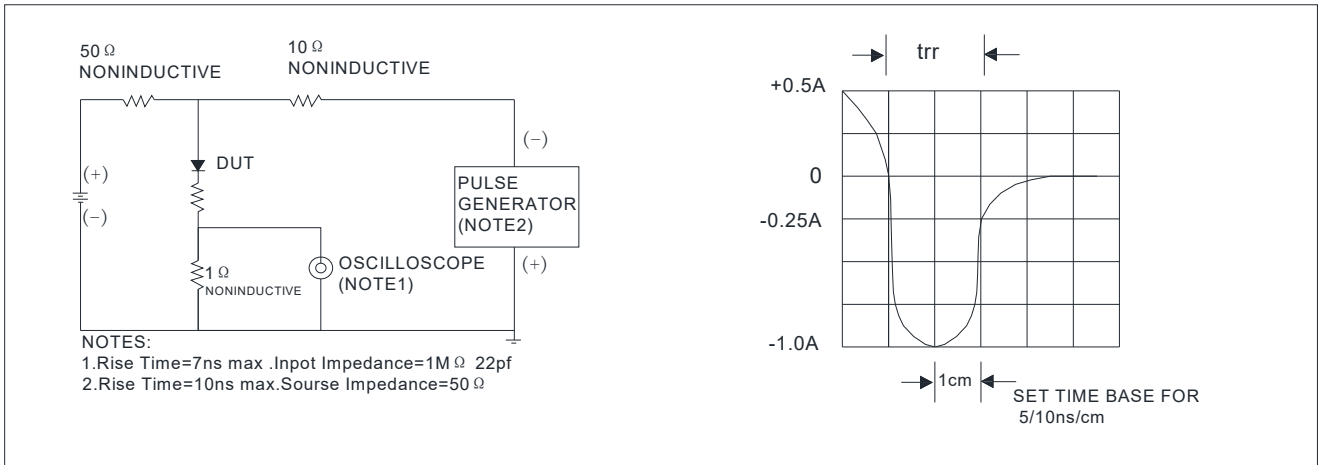
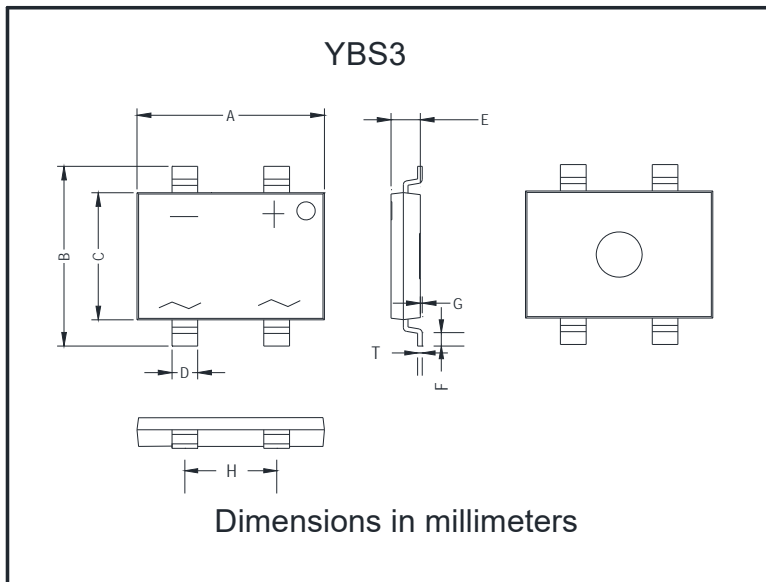


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

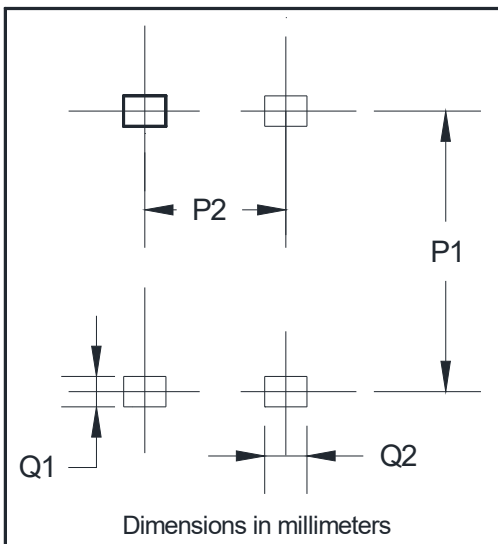


## ■ Outline Dimensions



| YBS3 |       |       |
|------|-------|-------|
| Dim  | Min   | Max   |
| A    | 10.00 | 10.40 |
| B    | 9.70  | 10.10 |
| C    | 6.80  | 7.20  |
| D    | 1.3   | 1.5   |
| E    | 1.4   | 1.8   |
| F    | 0.5   | 1.1   |
| G    | 0     | 0.15  |
| H    | 4.9   | 5.1   |
| T    | 0.20  | 0.30  |

## ■ Suggested pad layout



| YBS3 |      |
|------|------|
| Dim  | Min  |
| P1   | 9.25 |
| P2   | 5.00 |
| Q1   | 1.00 |
| Q2   | 1.5  |



## Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.