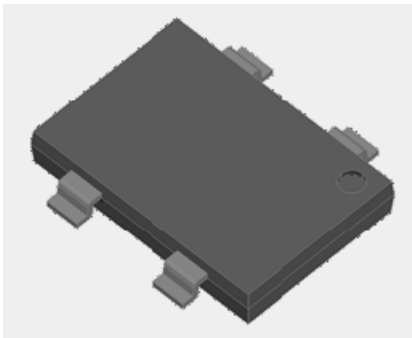


Bridge Rectifiers

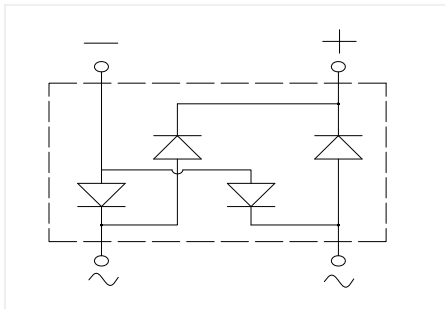


Features

- 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_a=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 @60Hz sine wave, R-load, T _c =30 | I _O | A | 8.0 |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25 | IFSM | A | 200 |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25 | | | 400 |
| Current squared time @1ms t 8.3ms T _j =25, Rating of per diode | I ² t | A ² s | 166 |
| Storage temperature | T _{stg} | | -55 ~ +150 |
| Junction temperature | T _j | | -55 ~ +150 |

Electrical Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | RYBSM8010 |
|---|----------------|------|---|-----------|
| Maximum reverse recovery time | t _r | ns | I _F =0.5A, I _R =1.0A, I _r =0.25A | 500 |
| Maximum instantaneous forward voltage drop per diode | V _F | V | I _{FM} =4.0A | 1.3 |
| Maximum DC reverse current at rated DC blocking voltage per diode | I _R | μA | T _j =25 | 5 |
| | | | T _j =125 | 100 |
| Typical junction capacitance | C _j | pF | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 68 |



RYBSM8010

Thermal Characteristics (T_a=25°C Unless otherwise specified)

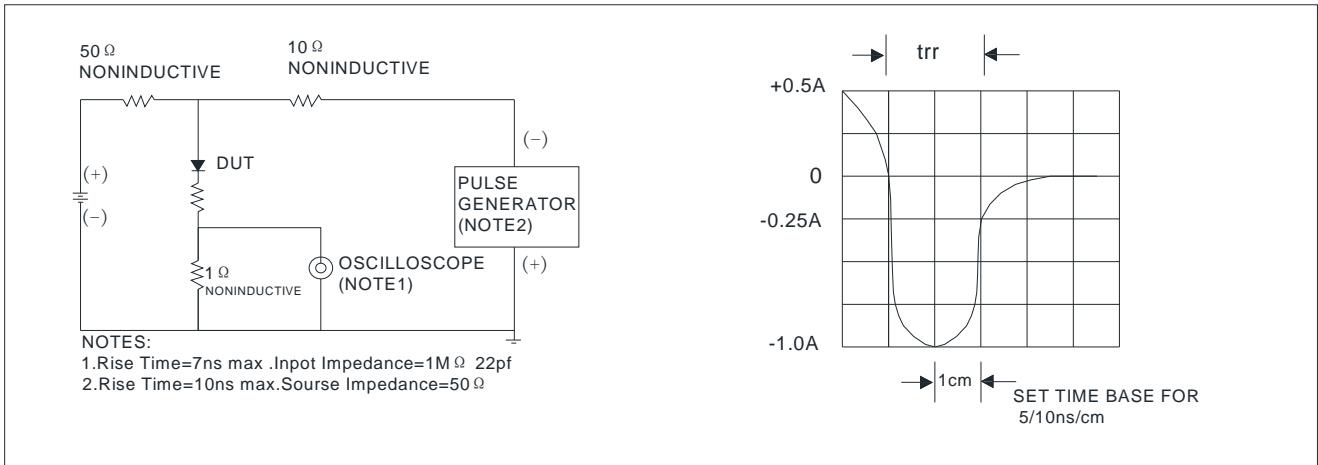
| PARAMETER | | SYMBOL | UNIT | RYBSM8010 |
|----------------------------|------------------------------|------------------|------|-----------|
| Typical Thermal Resistance | Between Junction and Ambient | R _{J-A} | /W | 55 |
| | Between Junction and Lead | R _{J-L} | | 14 |
| | Between Junction and Case | R _{J-C} | | 8 |

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

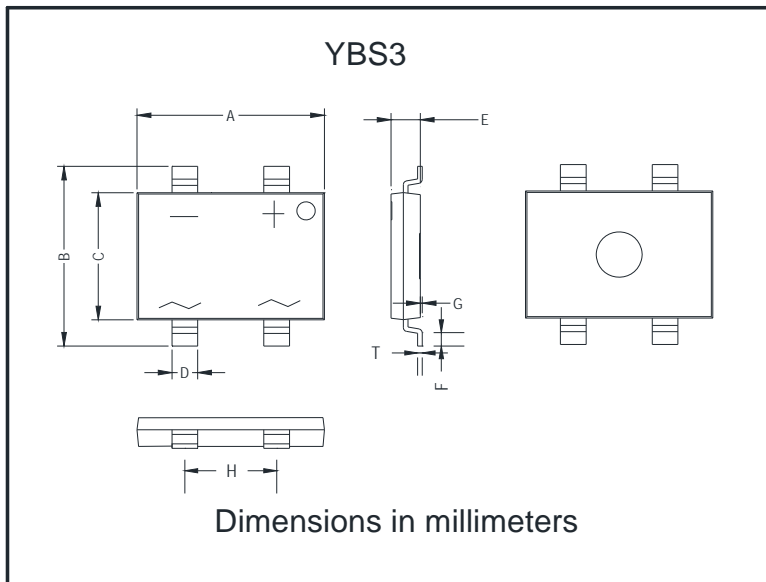
Ordering Information (Example)

| PREFERED 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 |

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

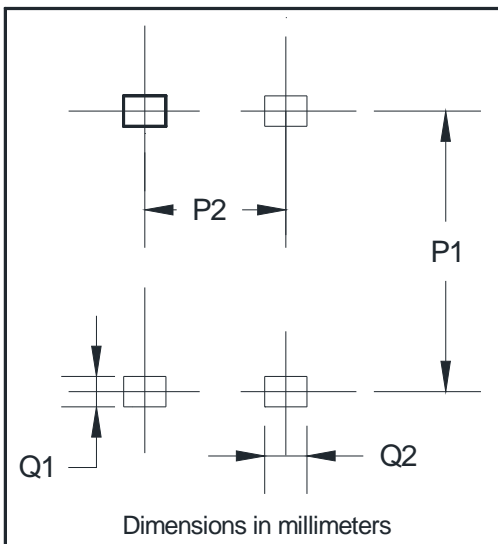


Outline Dimensions



| 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

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