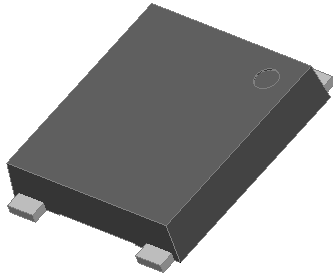


Bridge Rectifiers

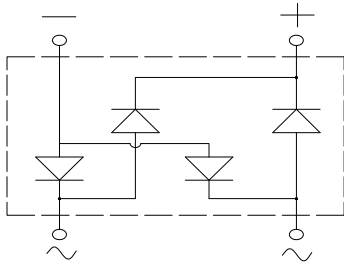


Features

- 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:** YBS
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 | YBS30005 | YBS3001 | YBS3002 | YBS3004 | YBS3006 | YBS3008 | YBS3010 |
|---|------------------|------------------|------------|---------|---------|---------|---------|---------|---------|
| Device marking code | | | YBS30005 | YBS3001 | YBS3002 | YBS3004 | YBS3006 | YBS3008 | YBS3010 |
| Maximum Repetitive Peak Reverse Voltage | V _{RRM} | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Maximum RMS Voltage | V _{RMS} | V | 35 | 70 | 140 | 280 | 420 | 560 | 700 |
| Maximum DC blocking Voltage | V _{DC} | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average rectified output current @60Hz sine wave, R-load, T _c =110°C | I _O | A | 3.0 | | | | | | |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25°C | I _{FSM} | A | 110 | | | | | | |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25°C | | | 220 | | | | | | |
| Current squared time @1ms≤t<8.3ms T _j =25°C, Rating of per diode | I ² t | A ² s | 50.2 | | | | | | |
| Storage temperature | T _{stg} | °C | -55 ~ +150 | | | | | | |
| Junction temperature | T _j | °C | -55 ~ +150 | | | | | | |



YBS30005 THRU YBS3010

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

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | YBS30005 | YBS3001 | YBS3002 | YBS3004 | YBS3006 | YBS3008 | YBS3010 |
|---|----------------|------|---|----------|---------|---------|---------|---------|---------|---------|
| Maximum instantaneous forward voltage drop per diode | V _F | V | I _{FM} =1.5A | 1.0 | | | | | | |
| Maximum DC reverse current at rated DC blocking voltage per diode | I _R | μA | T _j =25°C | 5 | | | | | | |
| | | | T _j =125°C | 100 | | | | | | |
| Typical junction capacitance | C _j | pF | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 34 | | | | | | |

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

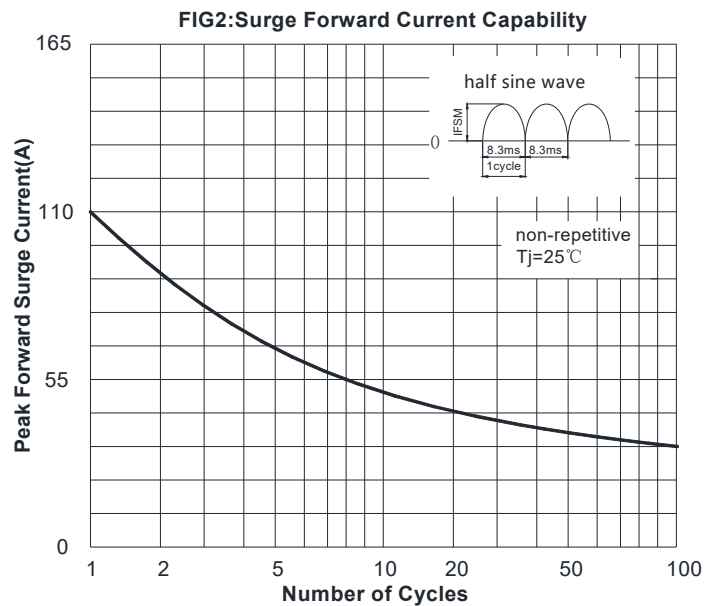
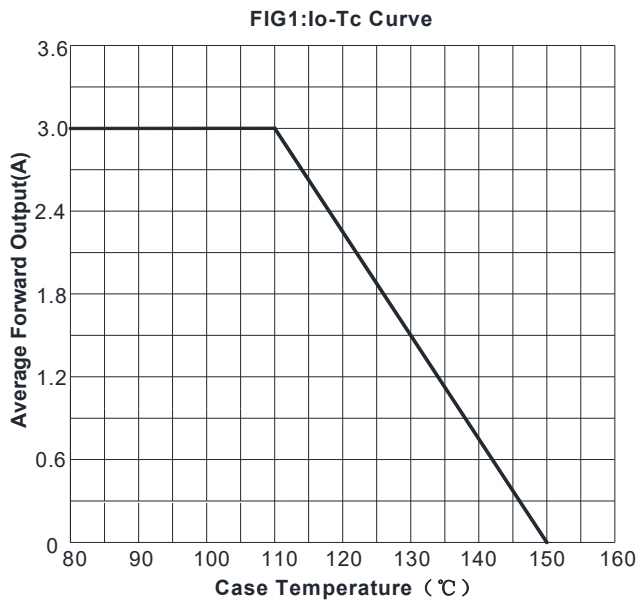
| PARAMETER | | SYMBOL | UNIT | YBS30005 | YBS3001 | YBS3002 | YBS3004 | YBS3006 | YBS3008 | YBS3010 |
|----------------------------|------------------------------|-------------------|------|----------|---------|---------|---------|---------|---------|---------|
| Typical Thermal Resistance | Between Junction and Ambient | R _{θJ-A} | °C/W | 55.0 | | | | | | |
| | Between Junction and Lead | R _{θJ-L} | | 15.0 | | | | | | |
| | Between Junction and Case | R _{θJ-C} | | 10.0 | | | | | | |

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 |
|------------------|--------------|-------------------|-----------------------|-------------------------|----------------------------|---------------|
| YBS30005-YBS3010 | F1 | Approximate 0.220 | 3000 | / | 42000 | 13" reel |

■ Characteristics(Typical)





YBS30005 THRU YBS3010

FIG3: Typical Forward Voltage

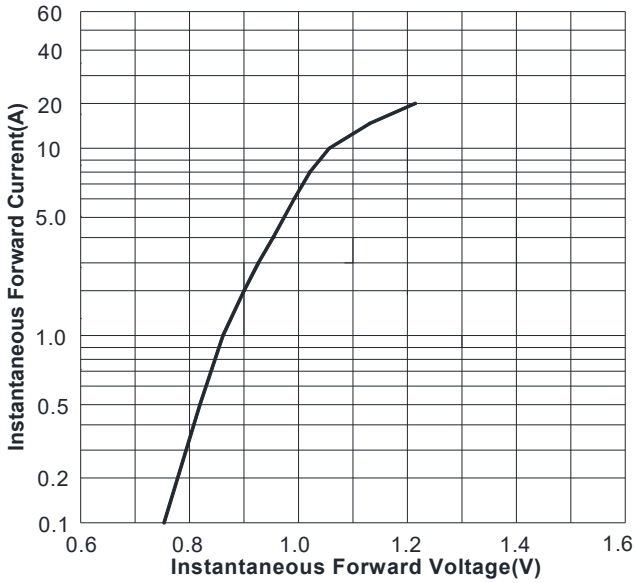
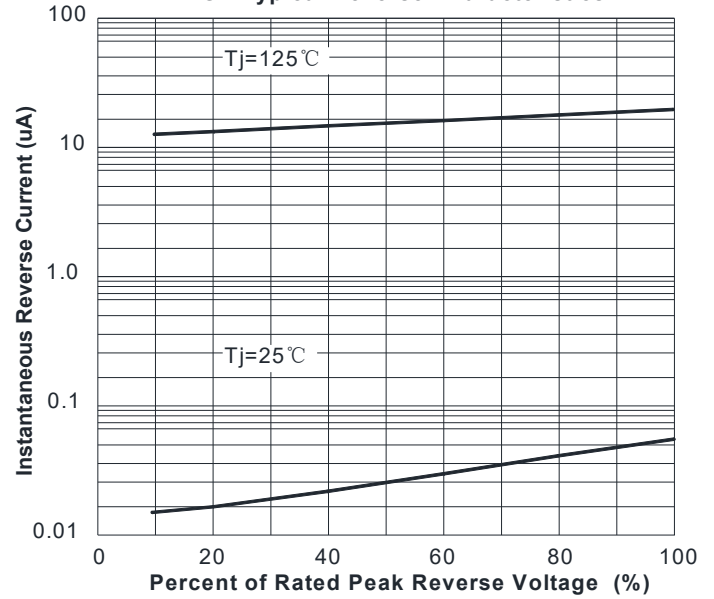
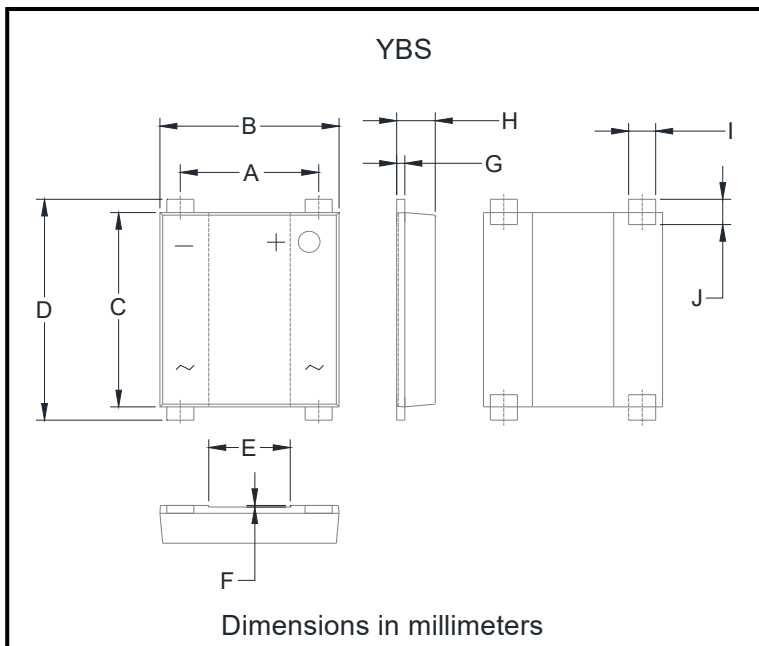


FIG4: Typical Reverse Characteristics



Outline Dimensions

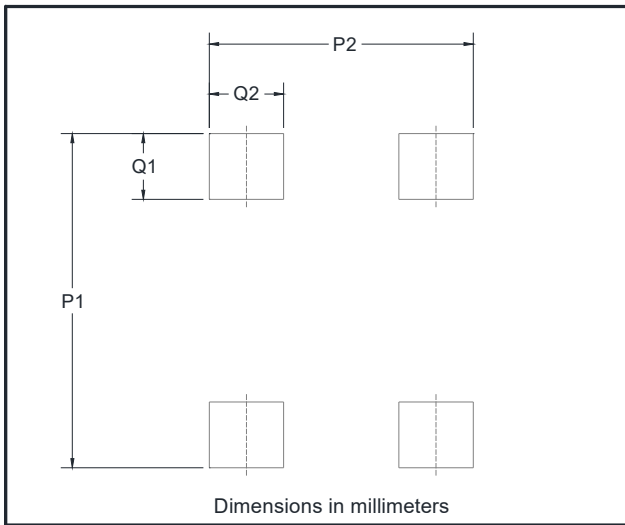


| YBS | | |
|-----|------|------|
| Dim | Min | Max |
| A | 5.00 | 5.20 |
| B | 6.50 | 6.70 |
| C | 7.20 | 7.40 |
| D | 7.90 | 8.60 |
| E | 2.90 | 3.10 |
| F | 0.04 | 0.08 |
| G | 0.27 | 0.40 |
| H | 1.30 | 1.50 |
| I | 0.95 | 1.15 |
| J | 0.70 | 1.05 |



YBS30005 THRU YBS3010

■ Suggested pad layout



| Dim | Min |
|-----|------|
| P1 | 9.15 |
| P2 | 7.10 |
| Q1 | 1.80 |
| Q2 | 2.00 |



YBS30005 THRU YBS3010

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