

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 (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | YBS22005 | YBS2201 | YBS2202 | YBS2204 | YBS2206 | YBS2208 | YBS2210 |
|--|------------------|------------------|------------|---------|---------|---------|---------|---------|---------|
| Device marking code | | | YBS22005 | YBS2201 | YBS2202 | YBS2204 | YBS2206 | YBS2208 | YBS2210 |
| 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, Tc=110°C | I _o | A | 2.2 | | | | | | |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Tj=25°C | I _{FSM} | A | 90 | | | | | | |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C | | | 180 | | | | | | |
| Current squared time @1ms≤t<8.3ms Tj=25°C, Rating of per diode | I ² t | A ² s | 33.6 | | | | | | |
| Storage temperature | T _{stg} | °C | -55 ~ +150 | | | | | | |
| Junction temperature | T _j | °C | -55 ~ +150 | | | | | | |

ELECTRICAL CHARACTERISTICS (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | YBS22005 | YBS2201 | YBS2202 | YBS2204 | YBS2206 | YBS2208 | YBS2210 |
|---|----------------|------|---|----------|---------|---------|---------|---------|---------|---------|
| Maximum instantaneous forward voltage drop per diode | V _F | V | I _{FM} =1.1A | 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** ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

| PARAMETER | | SYMBOL | UNIT | YBS22005 | YBS2201 | YBS2202 | YBS2204 | YBS2206 | YBS2208 | YBS2210 |
|----------------------------|------------------------------|------------------|-----------------------------|----------|---------|---------|---------|---------|---------|---------|
| Typical Thermal Resistance | Between Junction and Ambient | $R_{\theta J-A}$ | $^{\circ}\text{C}/\text{W}$ | 55.0 | | | | | | |
| | Between Junction and Lead | $R_{\theta J-L}$ | | 15.0 | | | | | | |
| | Between Junction and Case | $R_{\theta J-C}$ | | 10.0 | | | | | | |

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

■ **PACKAGING INFORMATION**

| PREFERED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|------------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| YBS22005-YBS2210 | F1 | Approximate 0.220 | 3000 | / | 42000 | 13" reel |

■ **CHARACTERISTICS (TYPICAL)**

FIG1: I_o - T_c Curve

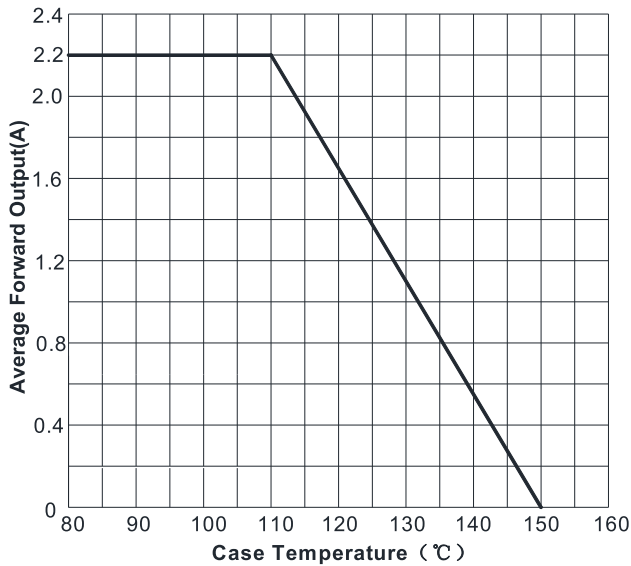


FIG2: Surge Forward Current Capability

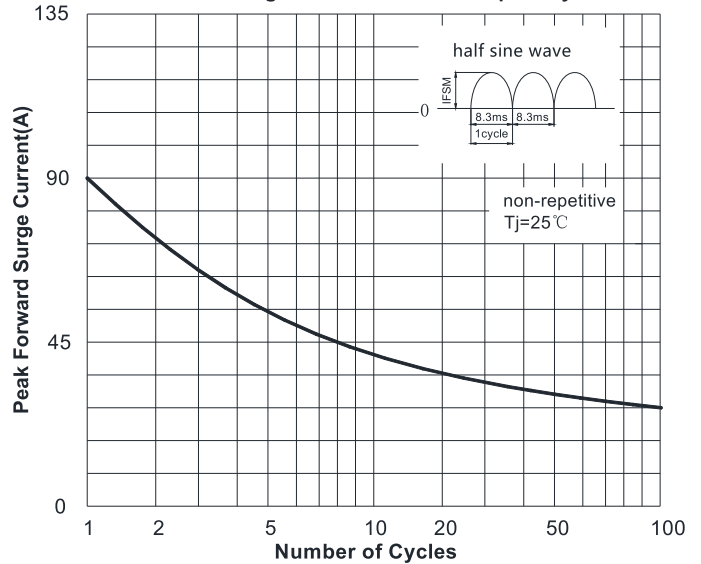


FIG3: Typical Forward Voltage

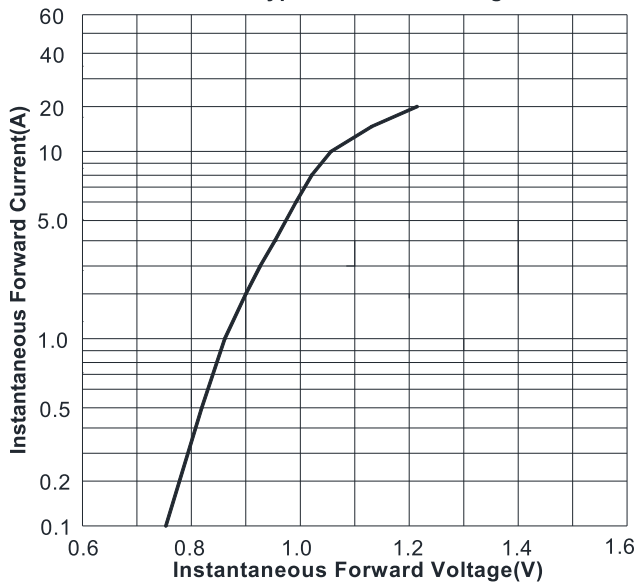
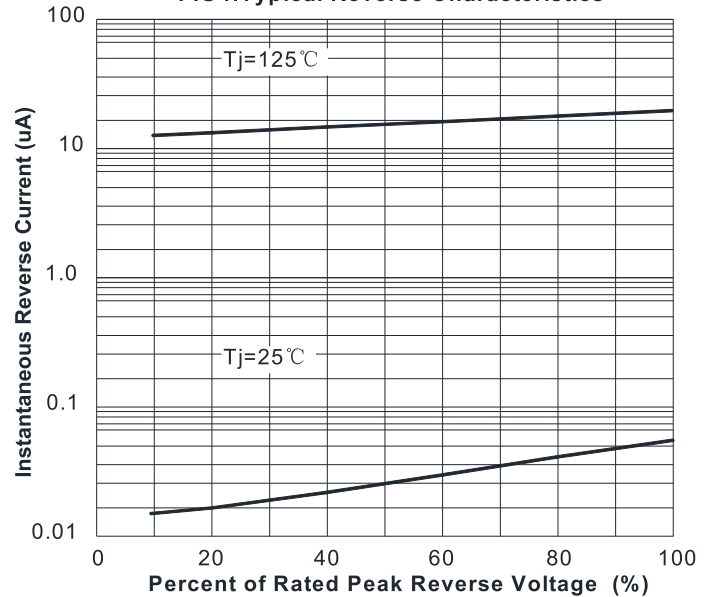
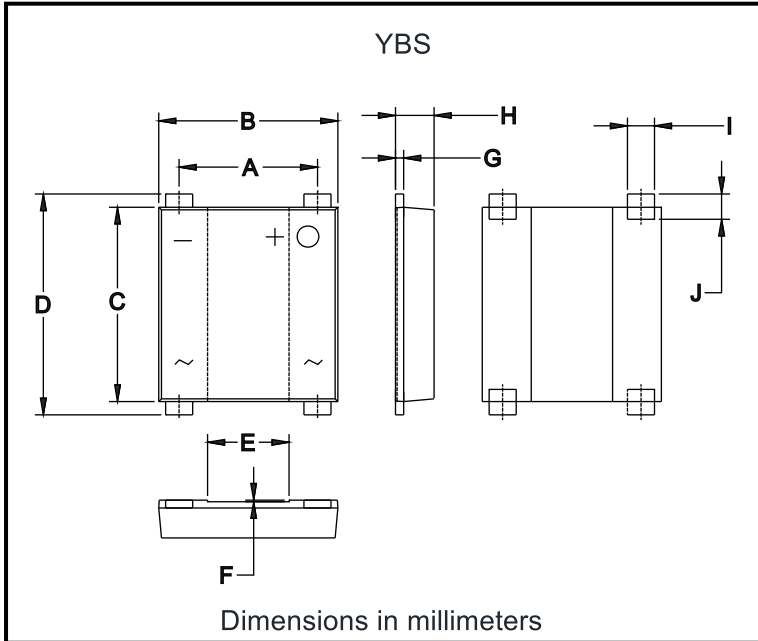


FIG4: Typical Reverse Characteristics

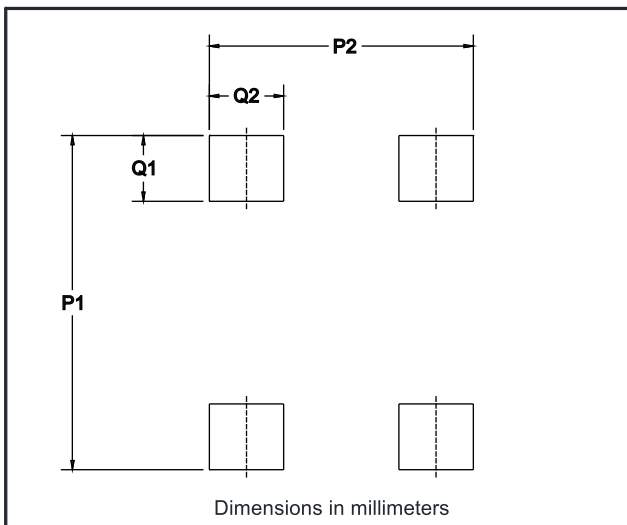


■ **OUTLINE DIMENSIONS**



| Dim | YBS | |
|-----|------|------|
| | 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 |

■ **SUGGESTED PAD LAYOUT**



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