

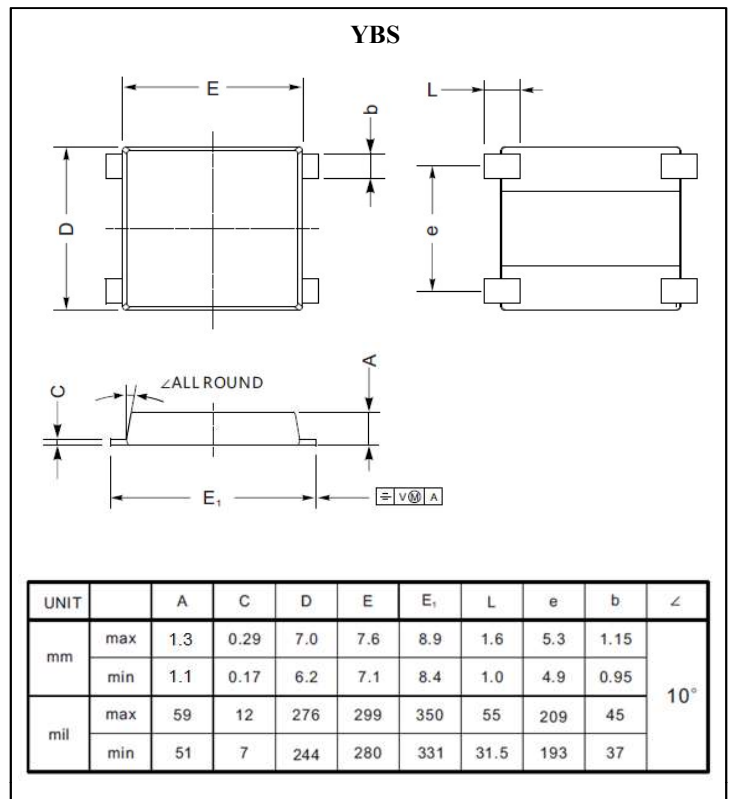
Small Surface Mount Fast Recovery Rectifiers
Reverse Voltage 100 to 1000 Volts, Forward Current 3.0 Amperes

Features

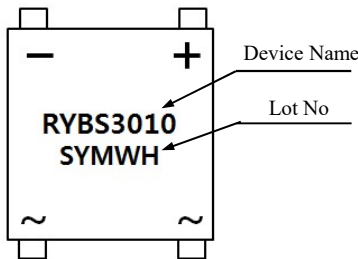
- For surface mounted application
- Glass passivated junction chip
- Fast switching for high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

Mechanical Data

- Case : YBS Package
- Terminals : Solderable per MIL-STD-750
- Polarity : Polarity as marked on the body
- Approx. Weight : 0.23g (approximately)



Marking



Maximum Ratings & Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified
Single phase half wave 60 Hz, resistive or inductive load,
For capacitive load, derate current by 20%

| Parameter | Symbol | RYBS 3001 | RYBS 3002 | RYBS 3004 | RYBS 3006 | RYBS 3008 | RYBS 3010 | Unit | Remark |
|--|---------------|-------------|-----------|-----------|-----------|-----------|-----------|-------|----------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Maximum RMS Voltage | V_{RMS} | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| Maximum DC Blocking Voltage | V_{DC} | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Maximum Average Forward Rectified Current | $I_F(AV)$ | 3.0 | | | | | | A | |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 95 | | | | | | A | |
| Maximum Instantaneous Forward Voltage at 3.0A | V_F | 1.3 | | | | | | V | |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I_R | 5.0 | | | | | | uA | Ta=25°C |
| | | 200 | | | | | | uA | Ta=125°C |
| Typical Junction Capacitance | C_J | 40 | | | | | | pF | Note 1 |
| Reverse Recovery Time | t_{rr} | 160 | | | | | | ns | Note 2 |
| Typical Thermal Resistance | $R_{th(j-a)}$ | 30 | | | | | | °C /W | Note 3 |
| Operation Junction Temperature Range | T_J | -55 to +150 | | | | | | °C | |
| Storage Temperature Range | T_{STG} | -55 to +150 | | | | | | °C | |

Note 1. Measured at 1MHz and Applied Reverse Voltage of 4.0Volts D.C.
Note 2. Reverse Recovery Test Conditions : $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
Note 3. Mounted on glass epoxy PC board with 4×1.5"×1.5"(3.81×3.81cm) copper pad.



Ratings and Characteristics Curves (Ta=25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

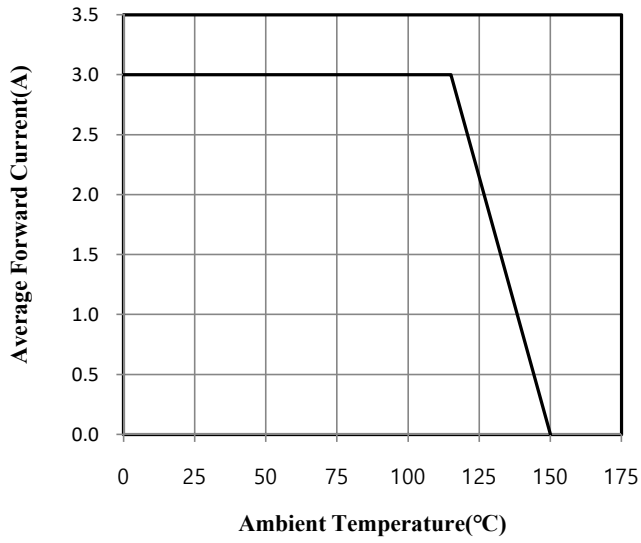


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

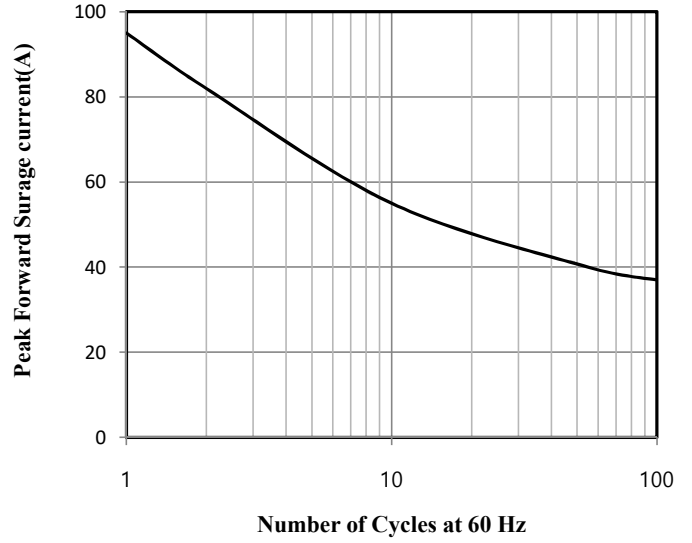


Fig.3 Typical Instantaneous Forward Characteristics

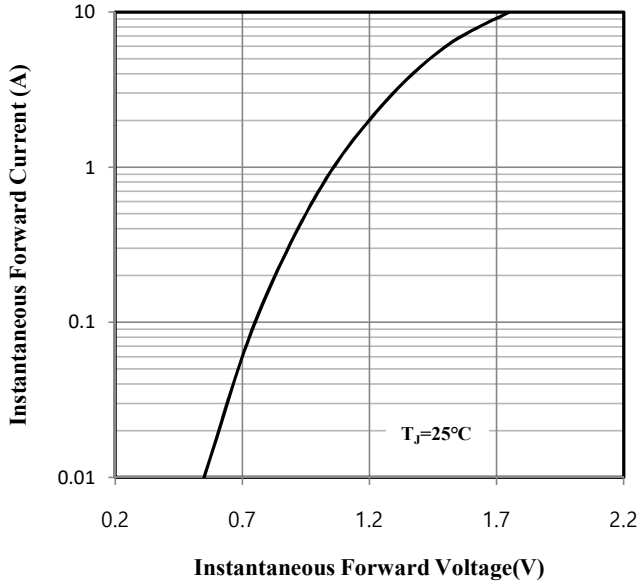


Fig.4 Typical Junction Capacitance

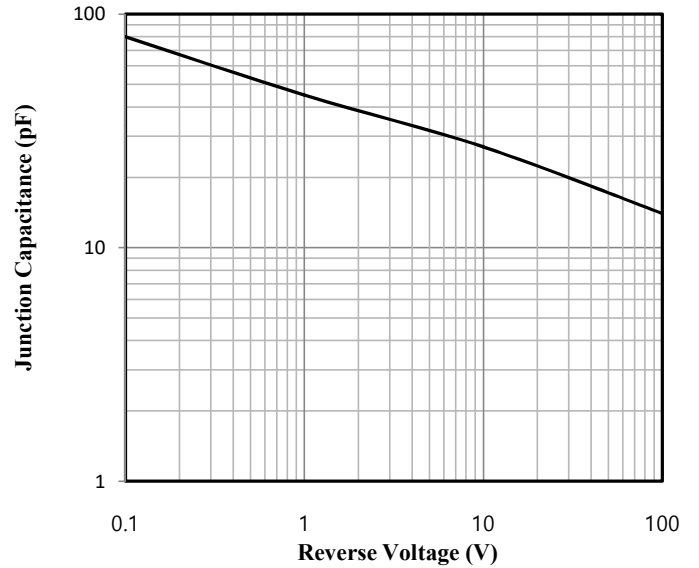


Fig.5 Typical Reverse Characteristics

