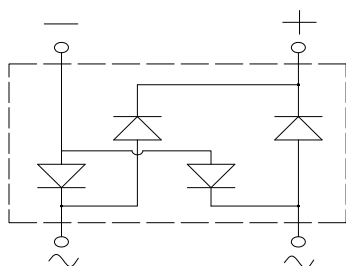


## Low VF Bridge Rectifiers



### 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, -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 | YBSML6006  | YBSML6008 |
|----------------------------------------------------------------------------------|--------|------|------------|-----------|
| Device marking code                                                              |        |      | YBSML6006  | YBSML6008 |
| Maximum Repetitive Peak Reverse Voltage                                          | VRRM   | V    | 600        | 800       |
| Maximum RMS Voltage                                                              | VRMS   | V    | 420        | 560       |
| Maximum DC blocking Voltage                                                      | VDC    | V    | 600        | 800       |
| Average rectified output current<br>@60Hz sine wave, R-load, Tc=110°C            | Io     | A    | 6.0        |           |
| Forward Surge Current (Non-repetitive)<br>@60Hz Half-sine wave, 1 cycle, Tj=25°C | IFSM   | A    | 200        |           |
| Forward Surge Current (Non-repetitive)<br>@1ms, square wave, 1 cycle, Tj=25°C    |        |      | 400        |           |
| Current squared time<br>@1ms≤t≤8.3ms Tj=25°C, Rating of per diode                | I²t    | A²s  | 166        |           |
| Storage temperature                                                              | Tstg   | °C   | -55 ~ +150 |           |
| Junction temperature                                                             | Tj     | °C   | -55 ~ +150 |           |

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

| PARAMETER                                                 | SYMBOL | UNIT | TEST CONDITIONS                                           | Min | Typ   | Max  |
|-----------------------------------------------------------|--------|------|-----------------------------------------------------------|-----|-------|------|
| Instantaneous forward voltage drop per diode              | VF     | V    | IFM=3.0A                                                  | 0.7 | 0.875 | 0.92 |
| DC reverse current at rated DC blocking voltage per diode | IR     | μA   | Tj=25°C                                                   | -   | 0.18  | 5    |
|                                                           |        |      | Tj=125°C                                                  | -   | 50    | 100  |
| Junction capacitance                                      | Cj     | pF   | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 28  | 55    | 110  |

# YBSML6006 THRU YBSML6008

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

| PARAMETER                  |                              | SYMBOL            | UNIT | YBSML6006 | YBSML6008 |
|----------------------------|------------------------------|-------------------|------|-----------|-----------|
| Typical Thermal Resistance | Between Junction and Ambient | R <sub>θJ-A</sub> | °C/W | 55        |           |
|                            | Between Junction and Lead    | R <sub>θJ-L</sub> |      | 10        |           |
|                            | Between Junction and Case    | R <sub>θJ-C</sub> |      | 5         |           |

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

## ■ Ordering Information (Example)

| PREFERRED P/N           | PACKING CODE | UNIT WEIGHT(g)   | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|-------------------------|--------------|------------------|----------------------|-------------------------|----------------------------|---------------|
| YBSML6006-<br>YBSML6008 | F1           | Approximate 0.38 | 1800                 | /                       | 25200                      | 13" Reel      |

## ■ Characteristics (Typical)

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

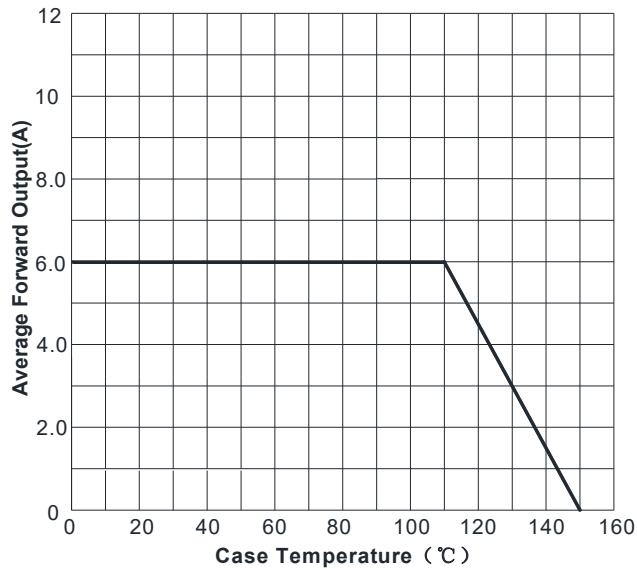


FIG2: Surge Forward Current Capability

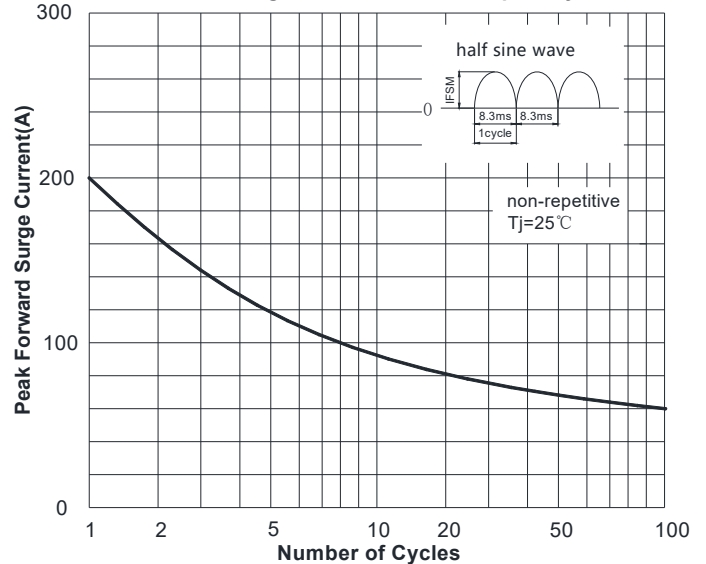


FIG3: Typical Forward Voltage

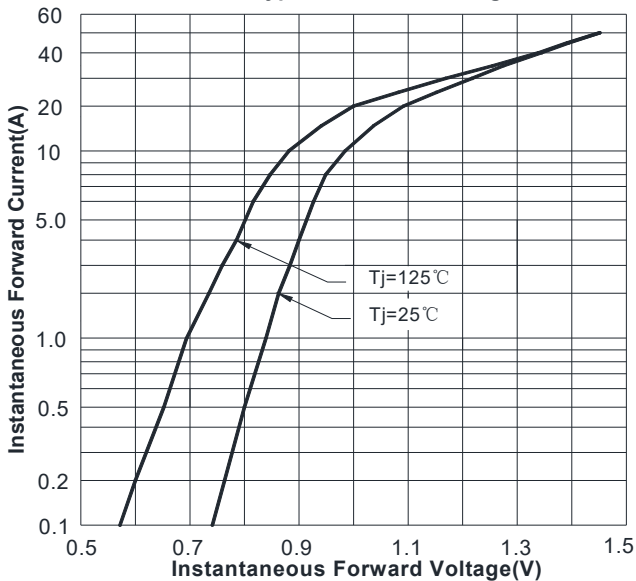
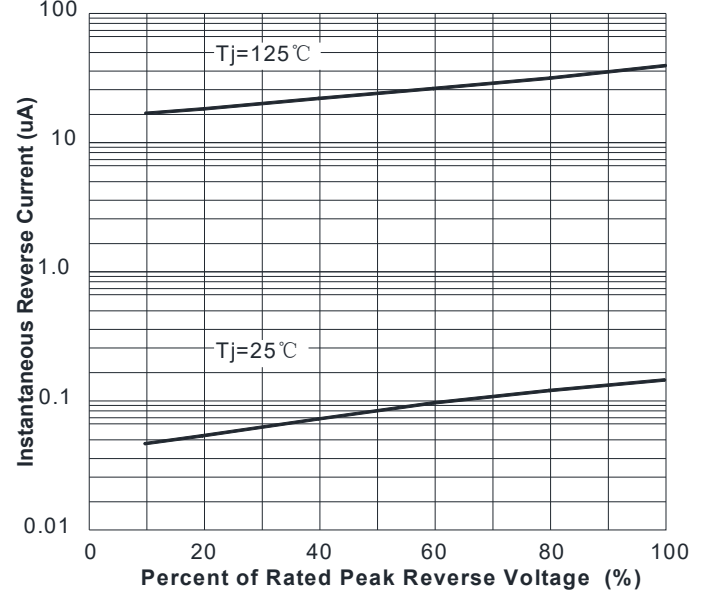
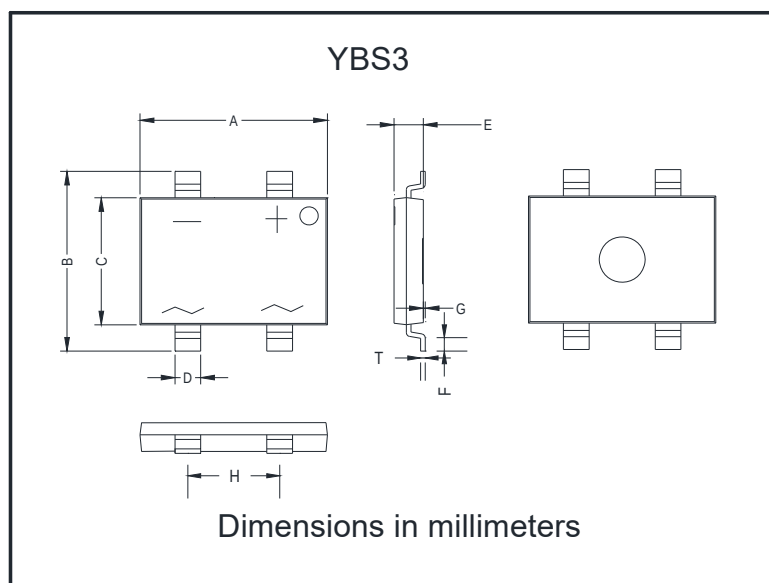


FIG4: Typical Reverse Characteristics

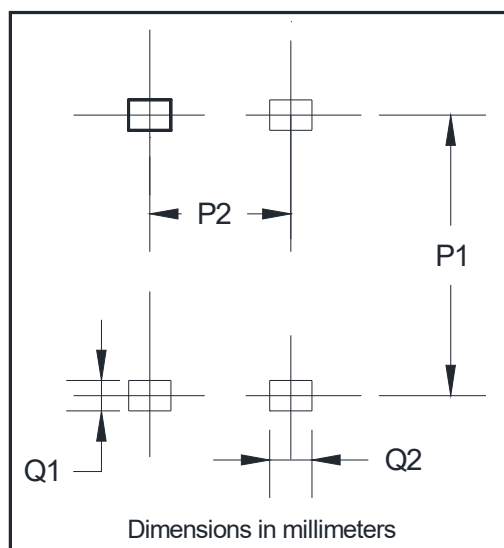


## ■ Outline Dimensions



| 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  |

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