

**BYD37ZH series**

● **FEATURES**

- \* Halogen-free type
- \* Compliance to RoHS product
- \* GPRC (Glass passivated rectifier chip) inside
- \* Lead less chip form, no lead damage
- \* Low power loss, High efficiency
- \* High current capability
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

● **APPLICATION**

- \* High frequency rectification
- \* AC/DC Power Supply

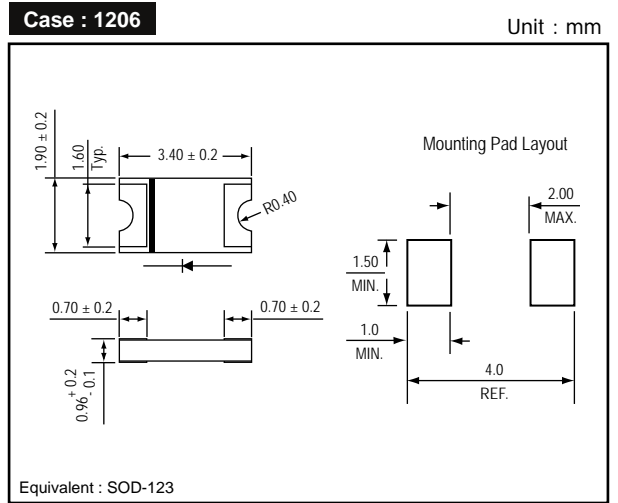
● **MECHANICAL DATA**

**Case** : Packed with FRP substrate and epoxy underfilled  
**Terminals** : Pure Tin plated (Lead-Free), solderable per MIL-STD-750, Method 2026.  
**Polarity** : Laser Cathode band marking  
**Weight** : 0.012 gram

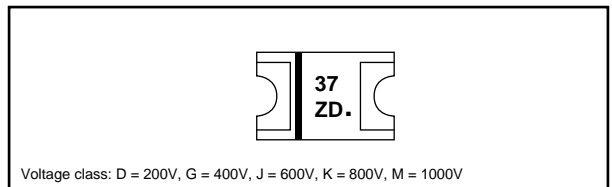
● **PACKING**

- \* 3,000 pieces per 7" (178mm ± 2mm) reel
- \* 4 reels per box
- \* 6 boxes per carton

● **OUTLINE DIMENSIONS**



● **MARKING**



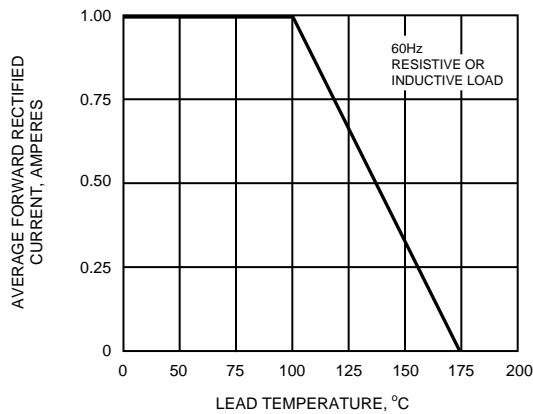
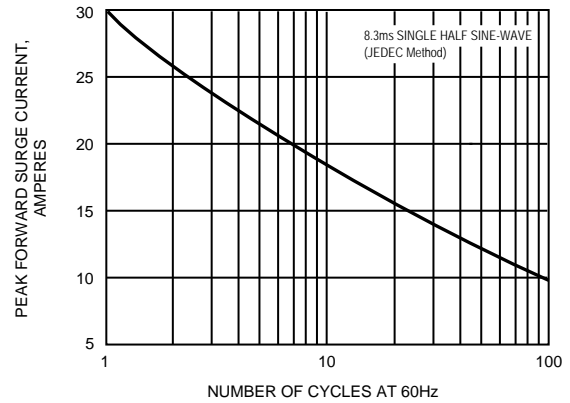
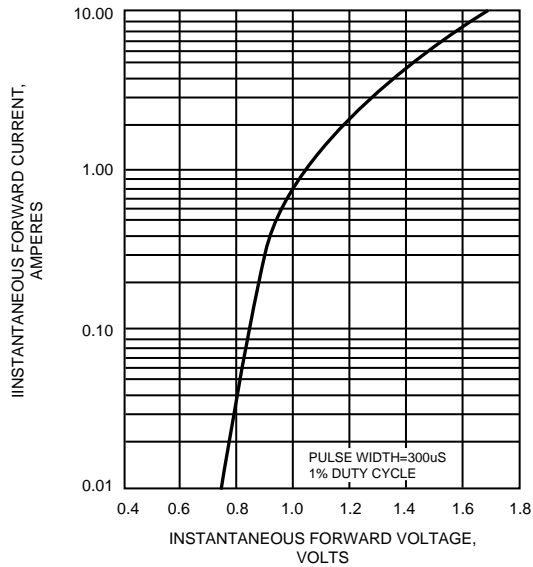
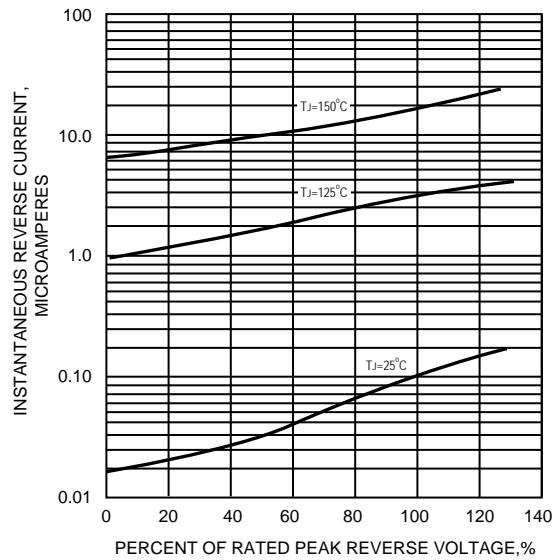
**Absolute Maximum Ratings (Ta = 25 °C)**

| ITEM                                | Symbol  | Conditions                        | BYD37Z      |     |     |     |      | Unit |
|-------------------------------------|---------|-----------------------------------|-------------|-----|-----|-----|------|------|
|                                     |         |                                   | DH          | GH  | JH  | KH  | MH   |      |
| Repetitive peak reverse voltage     | VRRM    |                                   | 200         | 400 | 600 | 800 | 1000 | V    |
| Average forward current             | IF(AV)  |                                   | 1.0         |     |     |     |      | A    |
| Peak forward surge current          | IFSM    | 8.3ms single half sine-wave       | 30          |     |     |     |      | A    |
| Reverse recovery time               | Trr     | IF = 0.5A, IR = 1.0A, Irr = 0.25A | 250         |     | 300 |     |      | nS   |
| Operating storage temperature Range | Tj,TSTG |                                   | -65 to +175 |     |     |     |      | °C   |

**Electrical characteristics (Ta = 25 °C)**

| ITEM                            | Symbol  | Conditions                          | Min. | Typ.                 | Max.           | Unit |
|---------------------------------|---------|-------------------------------------|------|----------------------|----------------|------|
| Forward voltage                 | VF      | IF = 0.1A<br>IF = 0.5A<br>IF = 1.0A | -    | 0.85<br>0.95<br>1.05 | -<br>-<br>1.30 | V    |
| Repetitive peak reverse current | IRRM    | VR = Max. VRRM , Ta = 25 °C         | -    | 0.10                 | 1              | uA   |
| Junction capacitance            | Cj      | VR = 4V, f = 1.0 MHz                | -    | 15                   | -              | pF   |
| Thermal resistance              | Rth(JA) | Junction to ambient (NOTE 1)        | -    | 130                  | -              | °C/W |
|                                 | Rth(JL) | Junction to lead (NOTE 1)           | -    | 40                   | -              |      |

NOTES : (1) Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas.  
 (2) Preliminary draft.

**FIG.1 - FORWARD CURRENT DERATING CURVE**

**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**

**FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**

**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

**FIG.5 - TYPICAL JUNCTION CAPACITANCE**
