

**Z1PK104SH**

● **FEATURES**

- \* Halogen-free type
- \* Compliance to RoHS product
- \* Lead less chip form, no lead damage
- \* Low power loss, High efficiency
- \* High current capability, low VF
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Patented ZPAK™ Package Technology

● **APPLICATION**

- \* Switching mode power supply applications
- \* Portable equipment battery applications
- \* High frequency rectification
- \* DC / DC Converter
- \* Telecommunication

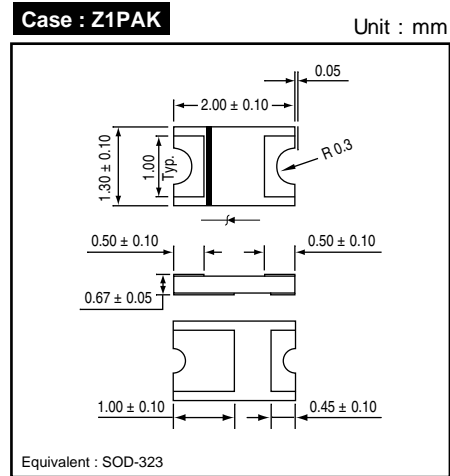
● **MECHANICAL DATA**

**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 :** 0.005 gram

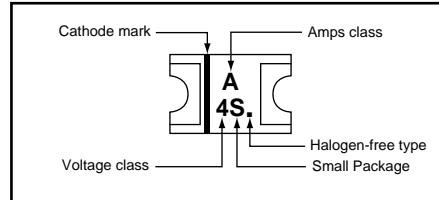
● **PACKING**

- \* 3,000 pieces per 7" (178mm ± 2mm) reel
- \* 5 reels per box
- \* 6 boxes per carton

● **OUTLINE DIMENSIONS**



● **MARKING**



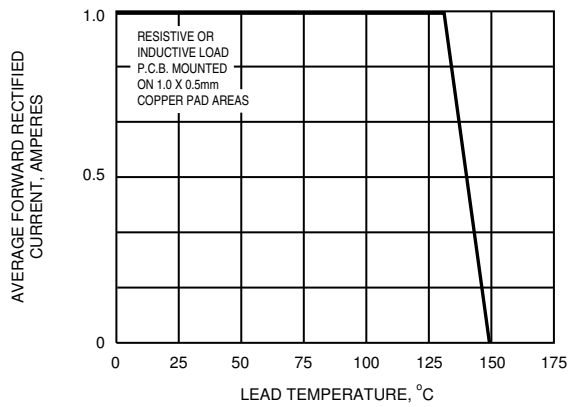
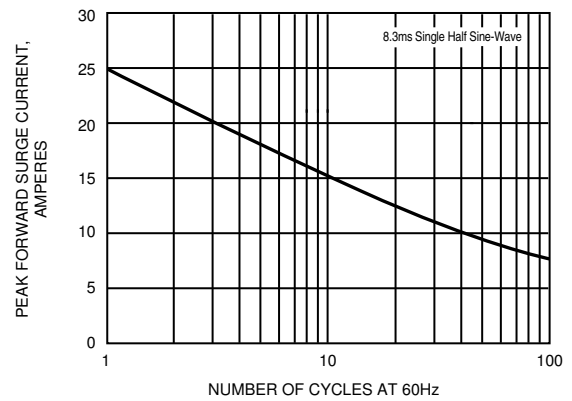
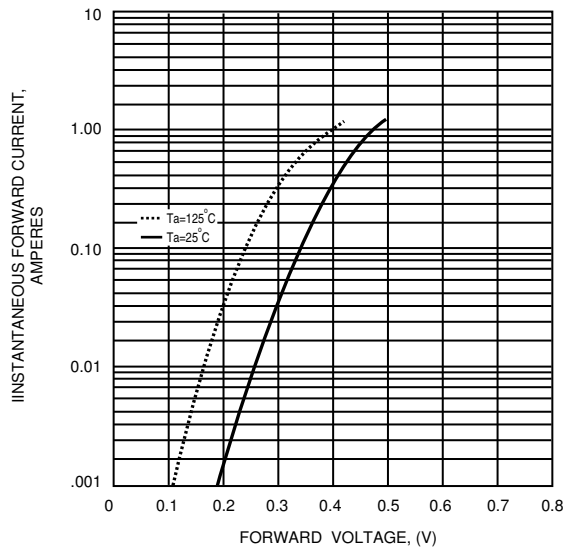
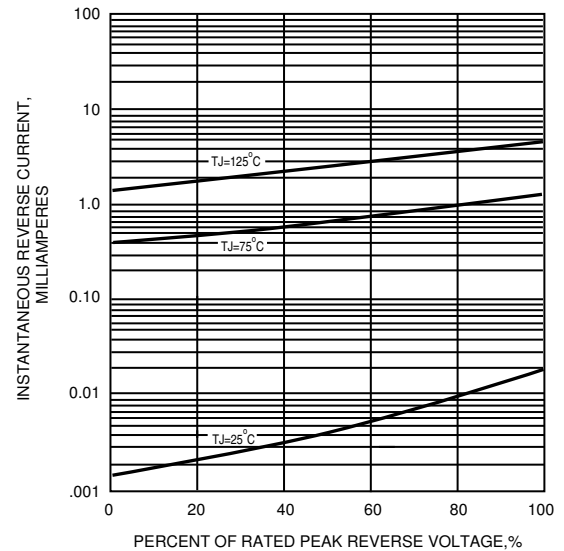
**Absolute Maximum Ratings (Ta = 25 °C)**

| ITEM                                 | Symbol | Conditions                  | Rating       | Unit |
|--------------------------------------|--------|-----------------------------|--------------|------|
| Repetitive peak reverse voltage      | VRRM   |                             | 40           | V    |
| Average forward current              | IF(AV) |                             | 1.0          | A    |
| Peak forward surge current           | IFSM   | 8.3ms single half sine-wave | 25           | A    |
| Operating junction temperature Range | Tj     |                             | -55 to +150  | °C   |
| Storage temperature Range            | TSTG   |                             | - 55 to +150 | °C   |

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

| ITEM                                     | Symbol  | Conditions                                  | Min.   | Typ.      | Max.       | Unit |
|--|---------|---|--------|-----------|------------|------|
| Forward voltage (NOTE 1)                 | VF      | IF = 0.5 A<br>Ta = 25 °C                    | -      | 0.41      | -          | V    |
|  |         | IF = 1.0 A<br>Ta = 25 °C                    | -      | 0.47      | 0.50       |      |
|  |         | IF = 0.5 A<br>Ta = 125 °C                   | -      | 0.31      | -          |      |
|  |         | IF = 1.0 A<br>Ta = 125 °C                   | -      | 0.40      | 0.45       |      |
| Repetitive peak reverse current (NOTE 1) | IRRM    | VR = Max. VRRM<br>Ta = 25 °C<br>Ta = 125 °C | -<br>- | 0.02<br>5 | 0.20<br>15 | mA   |
| Junction capacitance                     | Cj      | VR = 4V, f = 1.0 MHz                        | -      | 45        | -          | pF   |
| Thermal resistance                       | Rth(JA) | Junction to ambient                         | -      | 112       | -          | °C/W |
|  | Rth(JL) | Junction to lead                            | -      | 18        | -          | °C/W |

NOTES : (1) Pulse test width PW=300usec , 1% duty cycle.  
 (2) Mounted on P.C. board with 1.0 x 0.5mm copper pad areas.

**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**
