

**Z3PK1045RH**
**FEATURES**

- \* Halogen-free type
- \* Lead free product, compliance to RoHS
- \* 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

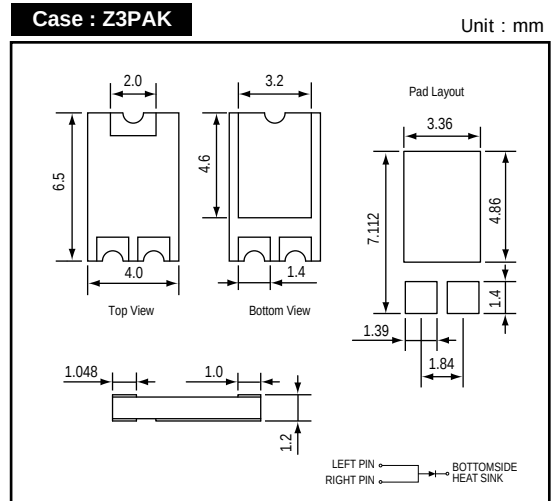
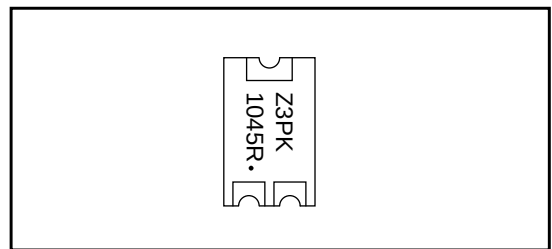
**APPLICATION**

- \* Switching mode power supply applications
- \* Portable equipment battery applications
- \* High frequency rectification
- \* DC / DC Converter
- \* Designed as bypass diodes for solar panels

**MECHANICAL DATA**

**Case :** Packed with FRP substrate and epoxy underfilled

**Terminals :** Pure Tin plated (Lead-Free),  
solderable per MIL-STD-750, Method 2026.

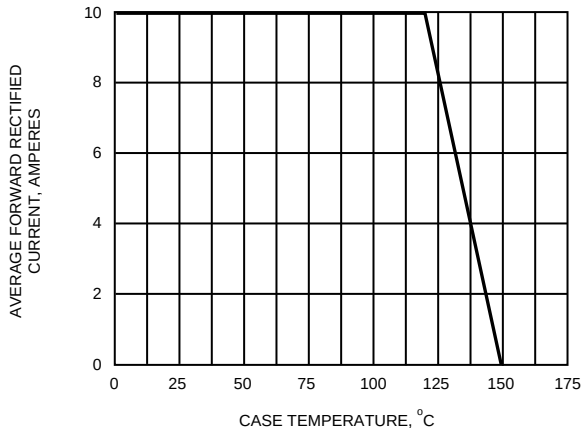
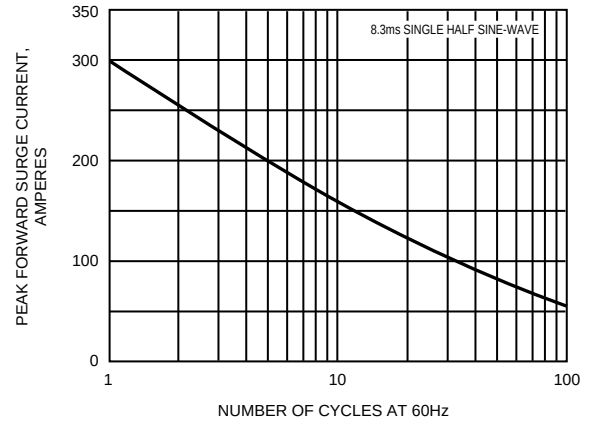
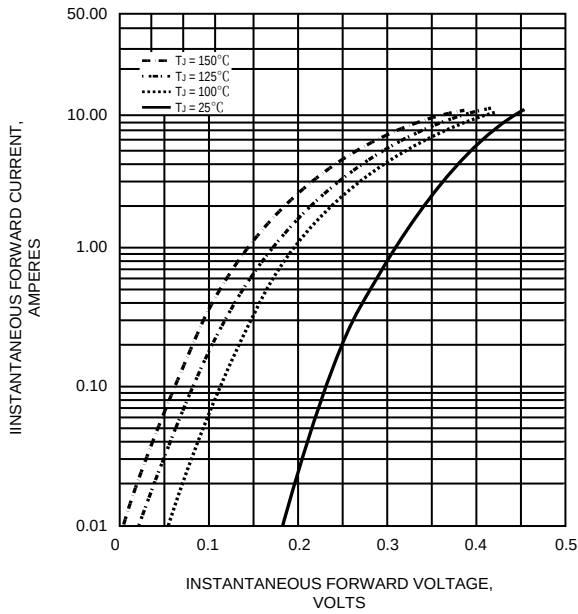
**OUTLINE DIMENSIONS**

**MARKING**

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

| ITEM                                 | Symbol | Conditions                  | Rating      | Unit |
|--------------------------------------|--------|-----------------------------|-------------|------|
|                                      |        |                             | Z3PK1045RH  |      |
| Repetitive peak reverse voltage      | VRRM   |                             | 45          | V    |
| Average forward current              | IF(AV) |                             | 10          | A    |
| Peak forward surge current           | IFSM   | 8.3ms single half sine-wave | 300         | 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 = 10A                     | -    | 0.44 | 0.47 | V    |
| Repetitive peak reverse current | IRRM    | VR = Max. VRRM<br>Ta = 25 °C | -    | -    | 0.25 | mA   |
|                                 |         | Ta = 100 °C                  | -    | -    | 15   |      |
| Thermal resistance              | Rth(JA) | Junction to ambient (NOTE 2) | -    | 114  | -    | °C/W |
|                                 | Rth(JC) | Junction to case (NOTE 2)    | -    | 17   | -    | °C/W |

NOTES : (1) Pulse test width PW=300usec , 1% duty cycle.  
(2) Mounted on P.C.B. with ( 3.36 x 4.86mm & 1.39 x 1.4mm )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**
