ZOWIE

Schottky Barrier Diode

**(45V / 15A)**

# Z3PK1545TH

## 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.

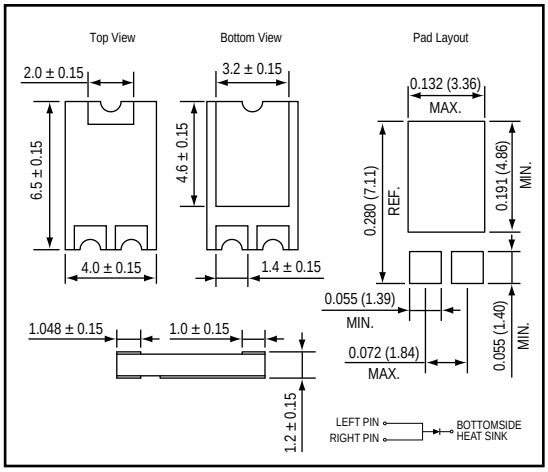
## PACKING

* 5,000 pieces per 13" (330mm ± 2mm) reel
* 2 reels per box
* 5 boxes per carton

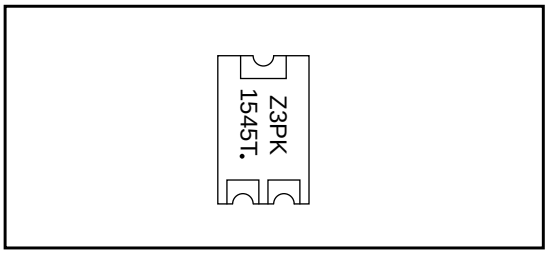
## OUTLINE DIMENSIONS

**Case : Z3PAK**

Unit : mm




## MARKING




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

| ITEM | Symbol | Conditions | Rating | Unit |
|---|---|---|---|---|
| | | | *Z3PK1545TH* | |
| Repetitive peak reverse voltage | $V_{RRM}$ | | 45 | V |
| Average forward current | $I_{F(AV)}$ | | 15 | A |
| Peak forward surge current | $I_{FSM}$ | 8.3ms single half sine-wave | 300 | A |
| Operating junction temperature Range | $T_j$ | | 175 | °C |
| Storage temperature Range | $T_{STG}$ | | -55 to +150 | °C |

## Electrical characteristics (Ta = 25 °C)

| ITEM | Symbol | Conditions | | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|---|
| Forward voltage (NOTE 1) | $V_F$ | $I_F$ = 15A | | - | 0.59 | 0.62 | V |
| Repetitive peak reverse current | $I_{RRM}$ | $V_R$ = Max. $V_{RRM}$ | Ta = 25 °C<br>Ta = 125 °C | -<br>- | 0.005<br>- | 0.02<br>10 | mA |
| Thermal resistance | $R_{th(JA)}$ | Junction to ambient (NOTE 2) | | - | 129 | - | °C/W |
| | $R_{th(JC)}$ | Junction to case (NOTE 2) | | - | 25 | - | °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

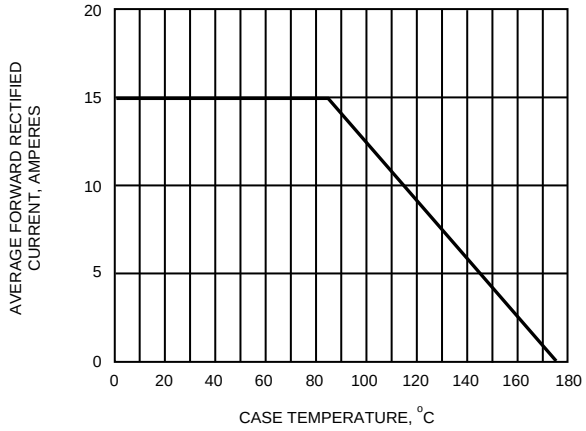



FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

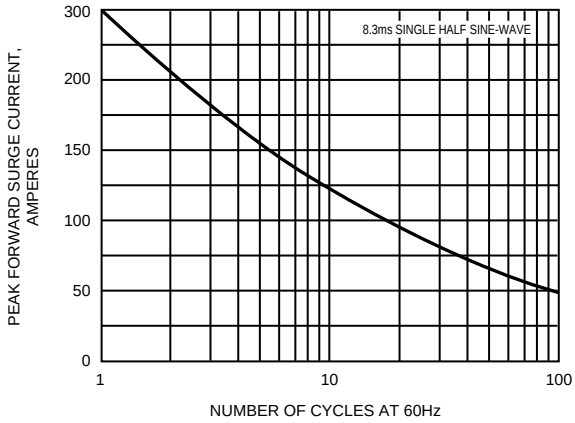



FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

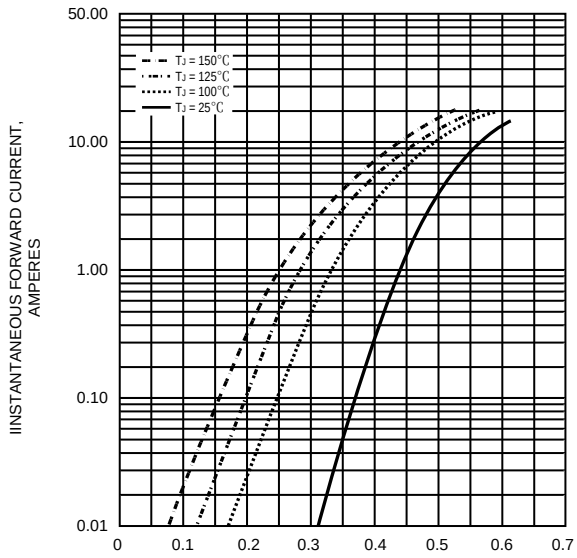



FIG.4 - TYPICAL REVERSE CHARACTERISTICS

