

**Z3PK1045PH**
**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

**IEC COMPATIBILITY**

- \* IEC61000-4-2 (ESD)  $\pm 15\text{Kv}$  (air),  $\pm 8\text{Kv}$  (contact)

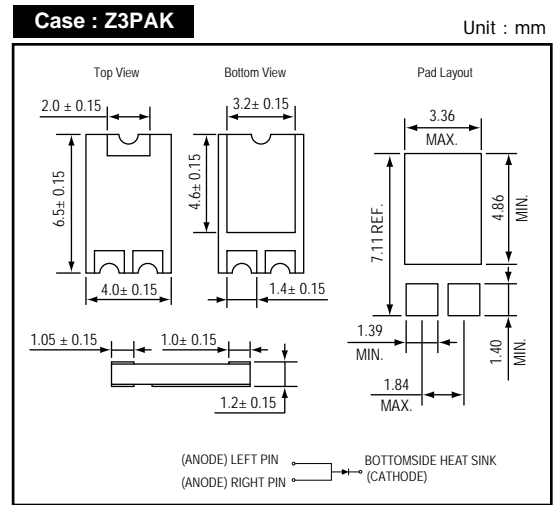
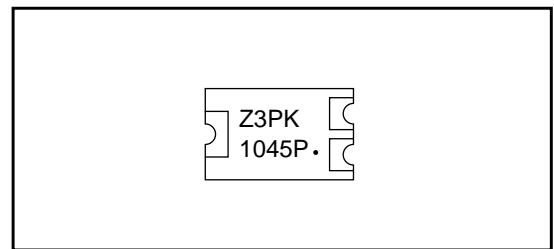
**MECHANICAL DATA**

**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  $\pm$  2mm) reel
- \* 2 reels per box
- \* 5 boxes per carton

**OUTLINE DIMENSIONS**

**MARKING**

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

ITEM	Symbol	Conditions	Rating	Unit
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	-	0.46	0.49	V
Repetitive peak reverse current	IRRM	VR = Max. VRRM Tj = 25 °C Tj = 100 °C	-	0.04	0.10 10	mA
Junction capacitance	Cj	VR = 4V, f = 1.0 MHz	-	655	-	pF
Thermal resistance	Rth(JA)	Junction to ambient (NOTE 2)	-	60	-	°C/W
	Rth(JC)	Junction to case (NOTE 2)	-	20	-	°C/W

NOTES : (1) Pulse test width PW=300usec , 1% duty cycle.  
(2) Mounted on P.C.B. with 14 x 14mm copper pad areas.

FIG.1 - FORWARD CURRENT DERATING CURVE

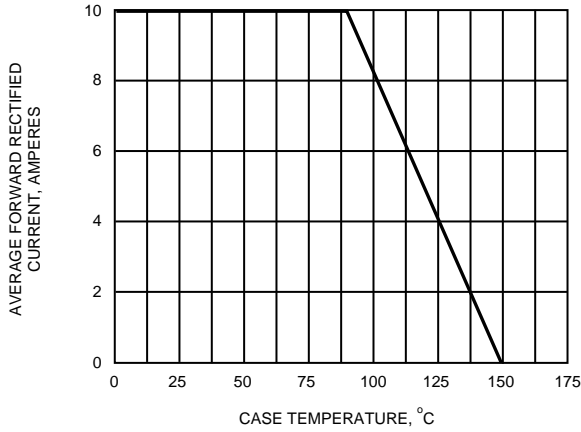


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

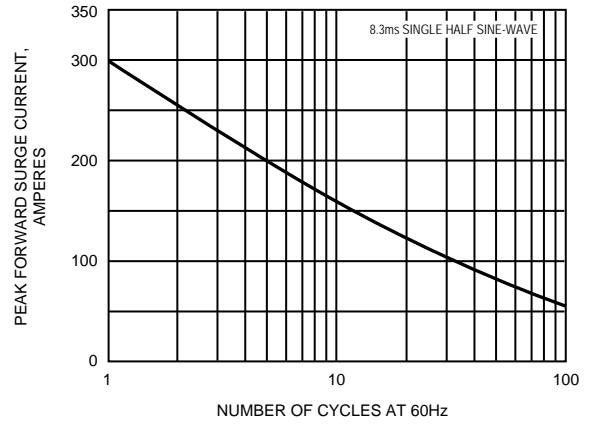


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

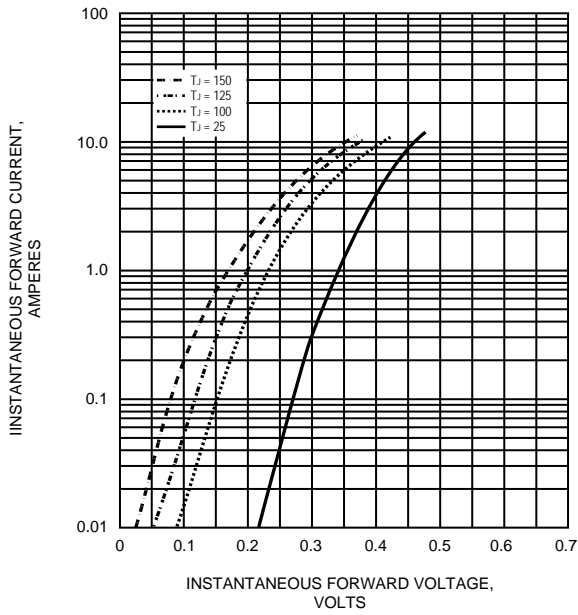


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

