ZOWIE

Schottky Barrier Diode

(40V / 1.0 A)

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

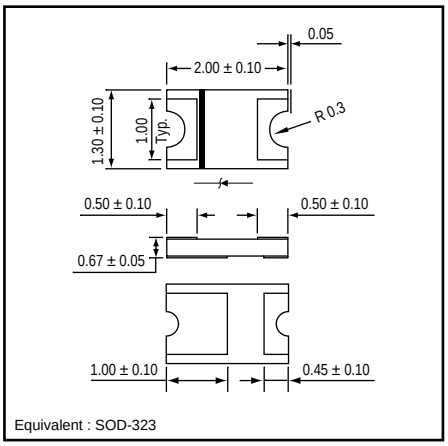
PACKING

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

OUTLINE DIMENSIONS

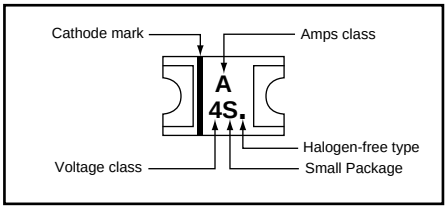
Case : Z1PAK

Unit : mm



Equivalent : SOD-323

MARKING



Absolute Maximum Ratings (Ta = 25 °C)

ITEM	Symbol	Conditions	Rating	Unit
Repetitive peak reverse voltage	V_{RRM}		40	V
Average forward current	$I_{F(AV)}$		1.0	A
Peak forward surge current	I_{FSM}	8.3ms single half sine-wave	25	A
Operating junction temperature Range	T_j		-55 to +150	°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 = 0.5 A	Ta = 25 °C	-	0.41	-	V
		I_F = 1.0 A		-	0.47	0.50	
		I_F = 0.5 A	Ta = 125 °C	-	0.31	-	
		I_F = 1.0 A		-	0.40	0.45	
Repetitive peak reverse current (NOTE 1)	I_{RRM}	V_R = Max. V_{RRM}	Ta = 25 °C	-	0.02	0.20	mA
			Ta = 125 °C	-	5	15	
Junction capacitance	C_j	V_R = 4V, f = 1.0 MHz		-	45	-	pF
Thermal resistance	$R_{th(JA)}$	Junction to ambient		-	112	-	°C/W
	$R_{th(JL)}$	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

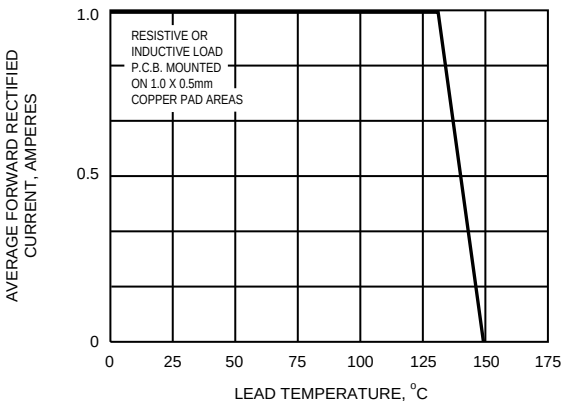


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

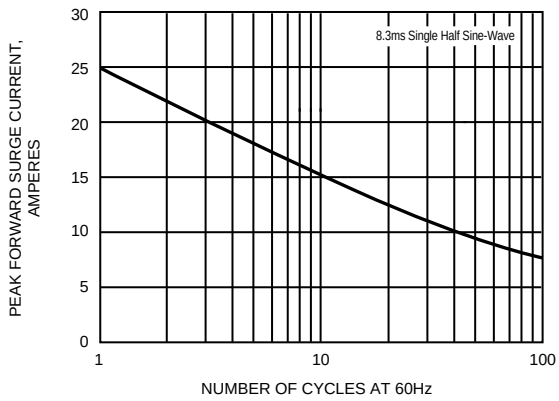


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

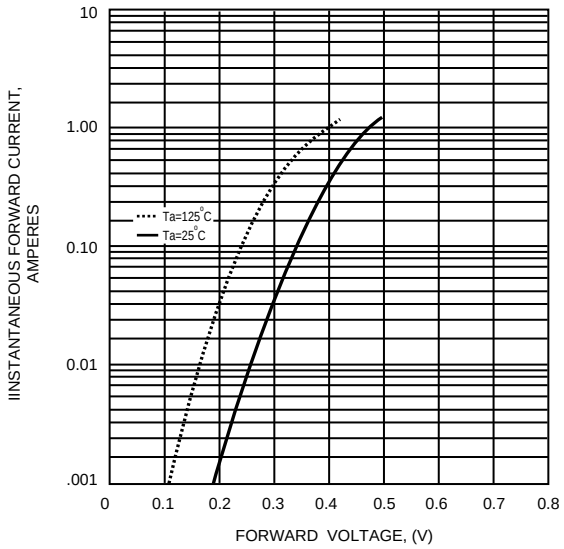


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

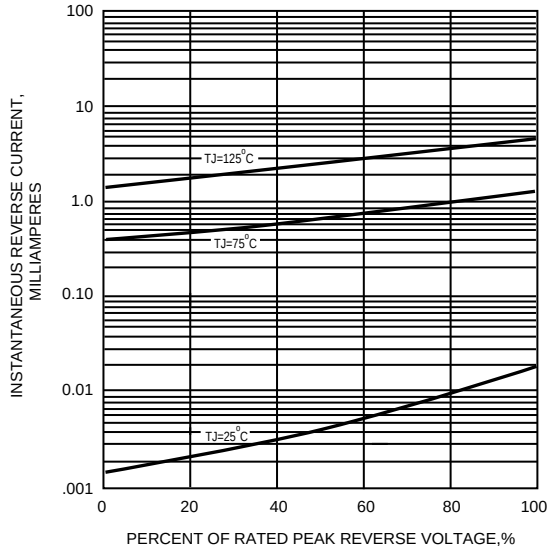


FIG. 5 - TYPICAL JUNCTION CAPACITANCE