

**BYD77ZH series**

● **FEATURES**

- \* Halogen-free type
- \* Lead free product, compliance to RoHs
- \* Lead less chip form, no lead damage
- \* Lead-free solder joint, no wire bond & lead frame
- \* Low power loss, High efficiency
- \* High current capability
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

● **APPLICATION**

- \* High frequency rectification
- \* AC/DC Power Supply

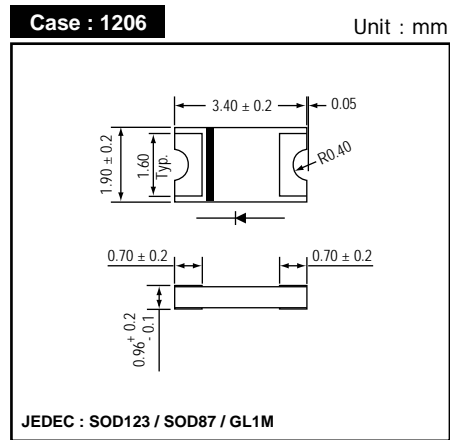
● **MECHANICAL DATA**

**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 :** 0.012 gram

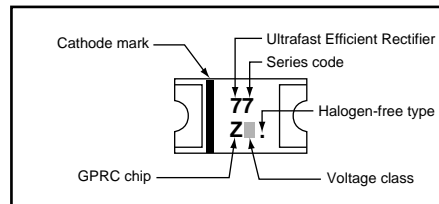
● **PACKING**

- \* 3,000 pieces per 7" (178mm ± 2mm) reel
- \* 4 reels per box
- \* 6 boxes per carton

● **OUTLINE DIMENSIONS**



● **MARKING**



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

ITEM	Symbol	Conditions	BYD77Z				Unit
			AH	BH	DH	GH	
Repetitive peak reverse voltage	VRRM	T <sub>L</sub> = 25 °C	50	100	200	400	V
Average forward current	I <sub>F(AV)</sub>		1.0				A
Peak forward surge current	I <sub>FSM</sub>	8.3ms single half sine-wave	30				A
Reverse recovery time	T <sub>rr</sub>	I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1.0A, I <sub>rr</sub> = 0.25A	35		50		nS
Operating storage temperature Range	T <sub>j</sub> , T <sub>STG</sub>		-65 to +175				°C

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

ITEM	Symbol	Conditions	Type	Min.	Typ.	Max.	Unit	
Forward voltage	V <sub>F</sub>	I <sub>F</sub> = 0.1A I <sub>F</sub> = 0.5A I <sub>F</sub> = 1.0A	BYD77ZAH / BYD77ZBH	-	0.70 0.85 0.94	- - 0.96	V	
			BYD77ZDH / BYD77ZGH	-	0.73 0.89 0.98	- - 1.00		
		I <sub>F</sub> = 0.1A I <sub>F</sub> = 0.5A I <sub>F</sub> = 1.0A		-				
				-				
Repetitive peak reverse current	I <sub>RRM</sub>	V <sub>R</sub> = Max. VRRM, Ta = 25 °C		-	0.08	1	uA	
Junction capacitance	C <sub>j</sub>	V <sub>R</sub> = 4V, f = 1.0 MHz		-	10	-	pF	
Thermal resistance	R <sub>th(JA)</sub>	Junction to ambient (NOTE 1)		-	90	-	°C/W	
	R <sub>th(JL)</sub>	Junction to lead (NOTE 1)		-	40	-		

NOTES : (1) Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas.  
 (2) Preliminary draft.

FIG.1 - FORWARD CURRENT DERATING CURVE

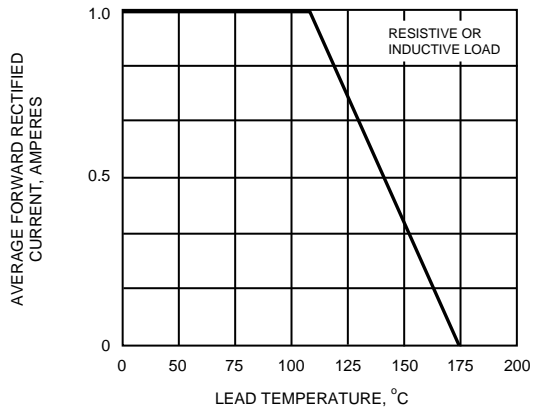


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

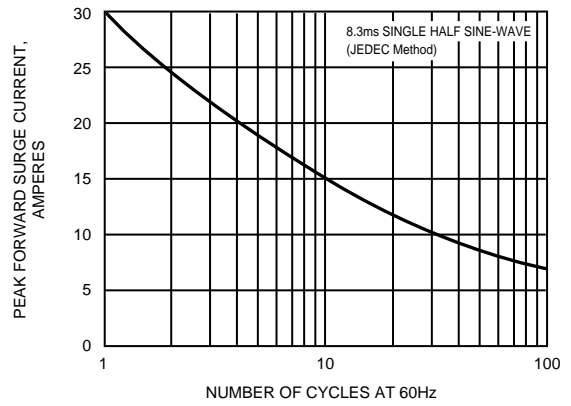


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

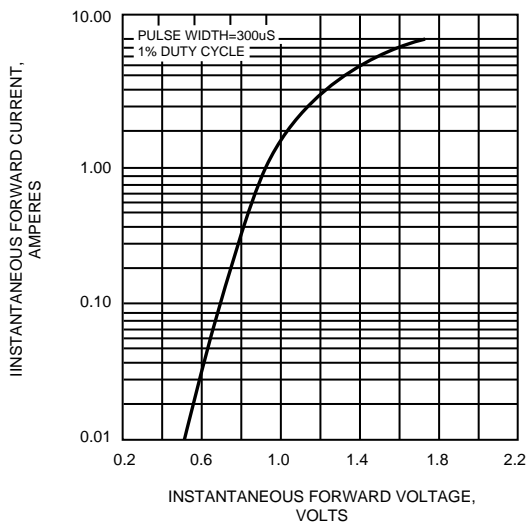


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

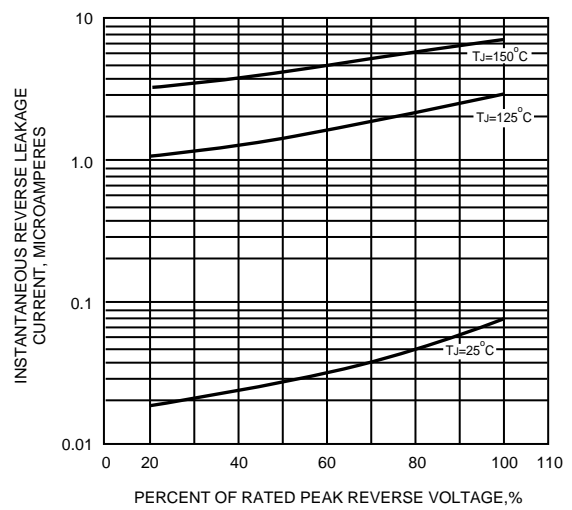


FIG.5 - TYPICAL JUNCTION CAPACITANCE

