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

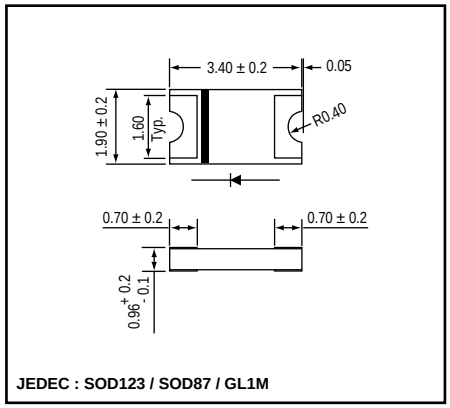
PACKING

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

OUTLINE DIMENSIONS

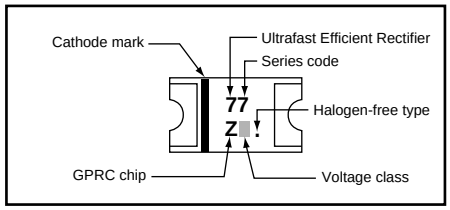
Case : 1206

Unit : mm



JEDEC : SOD123 / SOD87 / GL1M

MARKING



Absolute Maximum Ratings (Ta = 25 °C)

ITEM	Symbol	Conditions	*BYD77Z*				Unit
			AH	*BH*	*DH*	*GH*	
Repetitive peak reverse voltage	V_{RRM}	T_L = 25 °C	50	100	200	400	V
Average forward current	$I_{F(AV)}$		1.0				A
Peak forward surge current	I_{FSM}	8.3ms single half sine-wave	30				A
Reverse recovery time	T_{rr}	I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A	35		50		nS
Operating storage temperature Range	T_j,T_{STG}		-65 to +175				°C

Electrical characteristics (Ta = 25 °C)

ITEM	Symbol	Conditions	Type	Min.	Typ.	Max.	Unit
Forward voltage	V_F	I_F = 0.1A I_F = 0.5A I_F = 1.0A	***BYD77ZAH*** / ***BYD77ZBH***	- - -	0.70 0.85 0.94	- - 0.96	V
		I_F = 0.1A I_F = 0.5A I_F = 1.0A	***BYD77ZDH*** / ***BYD77ZGH***	- - -	0.73 0.89 0.98	- - 1.00	
Repetitive peak reverse current	I_{RRM}	V_R = Max. V_{RRM} , Ta = 25 °C		-	0.08	1	uA
Junction capacitance	C_j	V_R = 4V, f = 1.0 MHz		-	10	-	pF
Thermal resistance	$R_{th(JA)}$	Junction to ambient (NOTE 1)		-	90	-	°C/W
	$R_{th(JL)}$	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

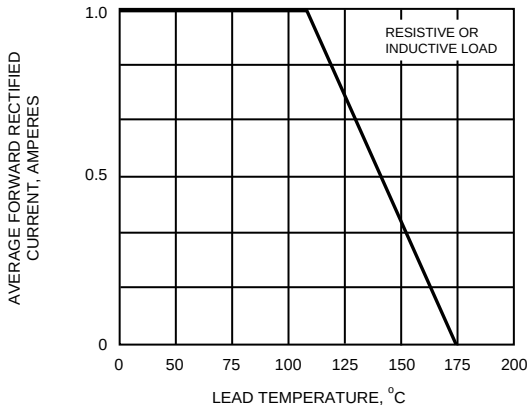


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

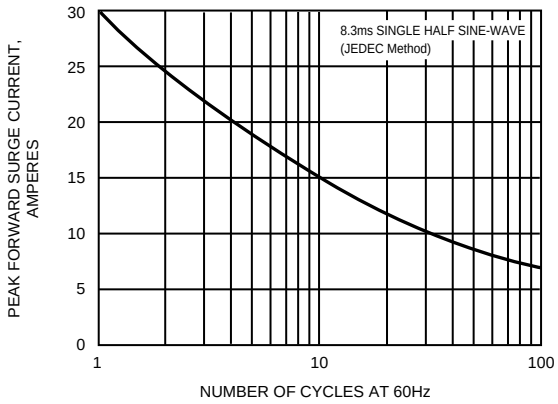


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

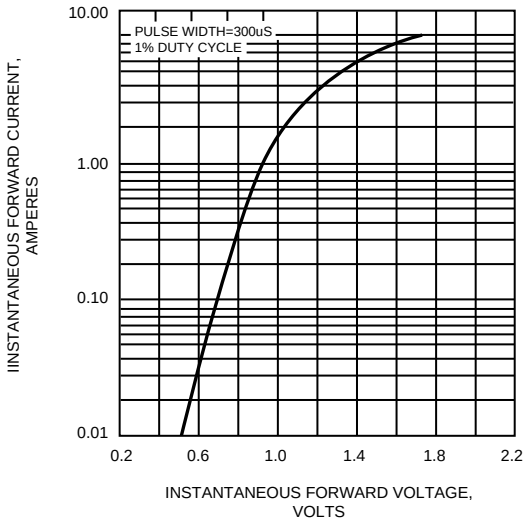


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

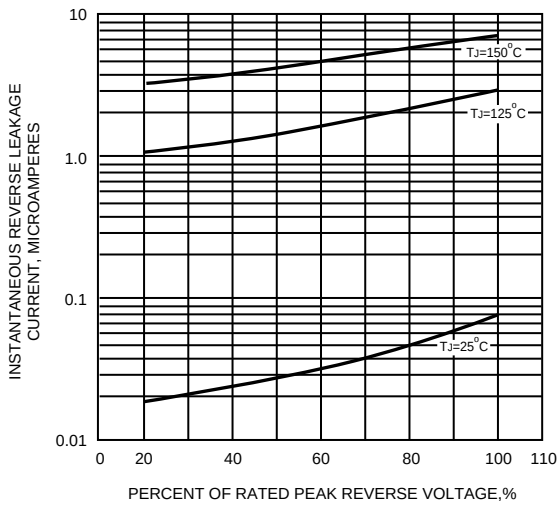


FIG.5 - TYPICAL JUNCTION CAPACITANCE