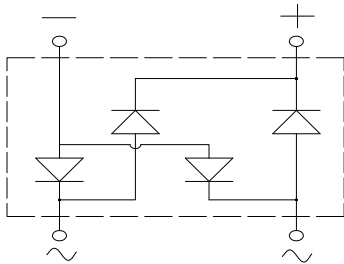
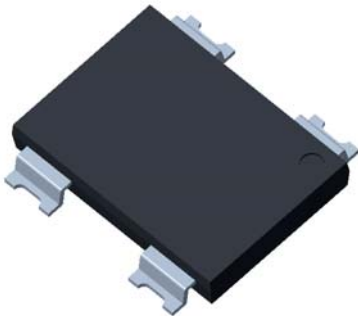


## Fast Recovery Bridge Rectifiers



### Features

- UL recognition, file #E313149
- Glass passivated chip junction
- Ideal for automated placement
- High surge current capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

### Typical Applications

General purpose use in AC/DC bridge full wave rectification for SMPS, lighting ballaster, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

### Mechanical Data

- **Package:** YBS2G  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, Halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

### ■Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	RYBSA3010A
Device marking code			RYBSA3010A
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	V	1000
Maximum RMS Voltage	V <sub>RMS</sub>	V	700
Maximum DC blocking Voltage	V <sub>DC</sub>	V	1000
Average rectified output current @60Hz sine wave, R-load, T <sub>c</sub> =110°C	I <sub>o</sub>	A	3.0
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T <sub>j</sub> =25°C	I <sub>FSM</sub>	A	100
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T <sub>j</sub> =25°C			200
Current squared time @1ms≤t<8.3ms T <sub>j</sub> =25°C, Rating of per diode	I <sup>2</sup> t	A <sup>2</sup> s	50.2
Storage temperature	T <sub>stg</sub>	°C	-55 ~ +150
Junction temperature	T <sub>j</sub>	°C	-55 ~ +150



# RYBSA3010A

## ■Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	RYBSA3010A
Maximum reverse recovery time	t <sub>rr</sub>	ns	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	500
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =1.5A	1.3
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>R</sub>	μA	T <sub>j</sub> =25°C	5
			T <sub>j</sub> =125°C	100
Typical junction capacitance	C <sub>j</sub>	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	36

## ■Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

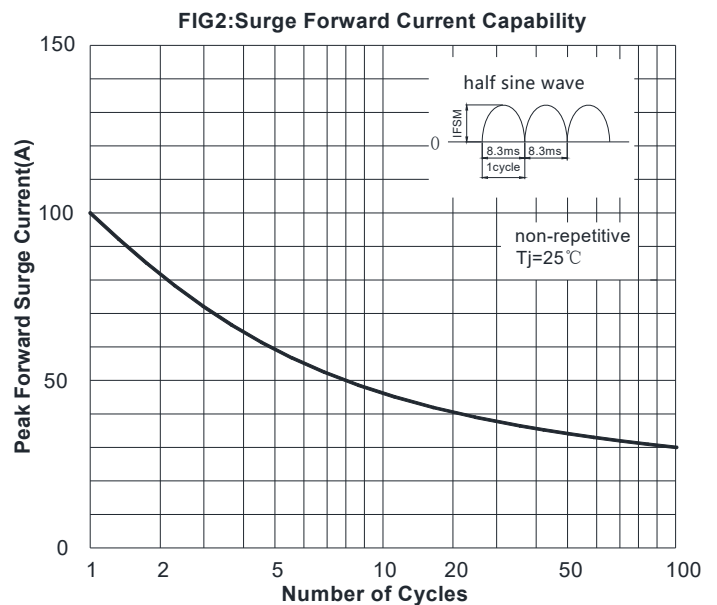
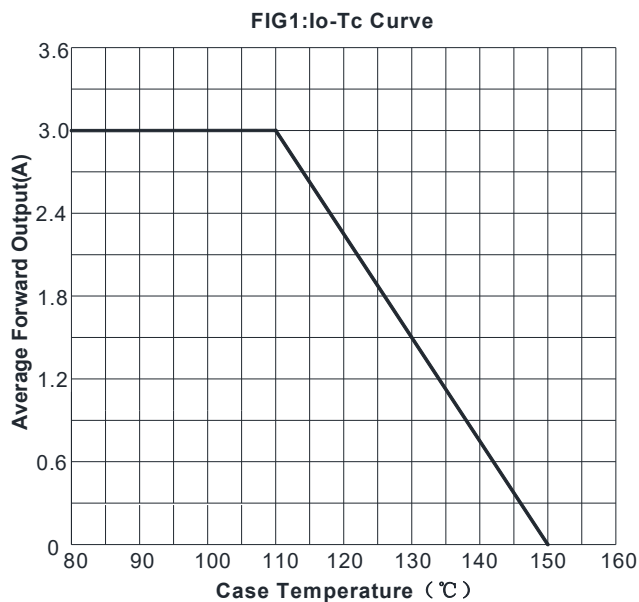
PARAMETER		SYMBOL	UNIT	RYBSA3010A
Typical Thermal Resistance	Between Junction and Ambient	R <sub>θJ-A</sub>	°C/W	55
	Between Junction and Lead	R <sub>θJ-L</sub>		11
	Between Junction and Case	R <sub>θJ-C</sub>		7

Note: Device mounted on P.C.B with 35mm\*25mm\*1.7mm.

## ■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
RYBSA3010A	F1	Approximate 0.270	2500	/	35000	13" reel

## ■ Characteristics (Typical)





# RYBSA3010A

FIG3: Typical Forward Voltage

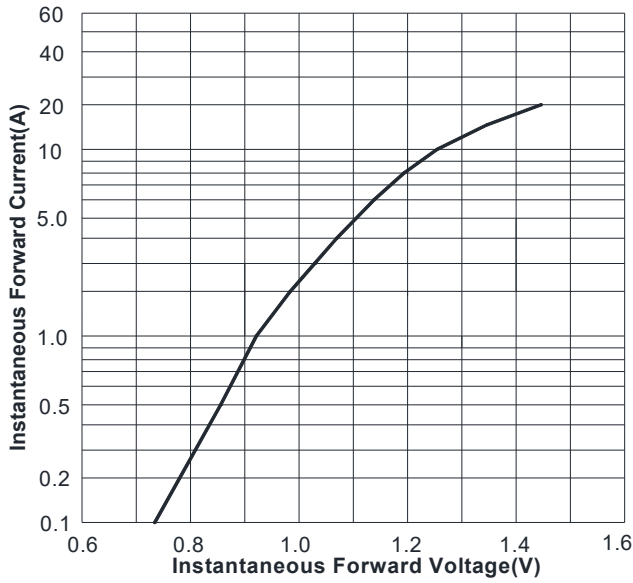


FIG4: Typical Reverse Characteristics

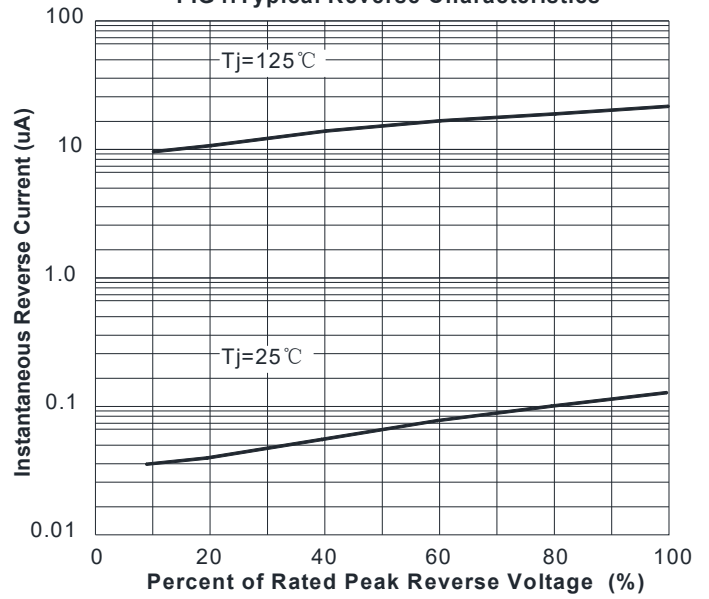
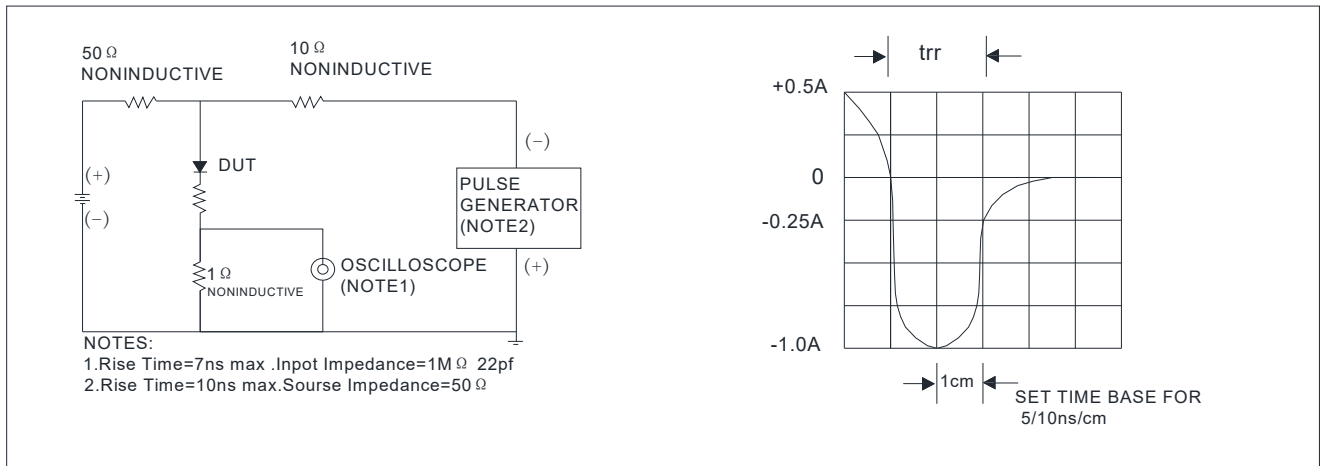
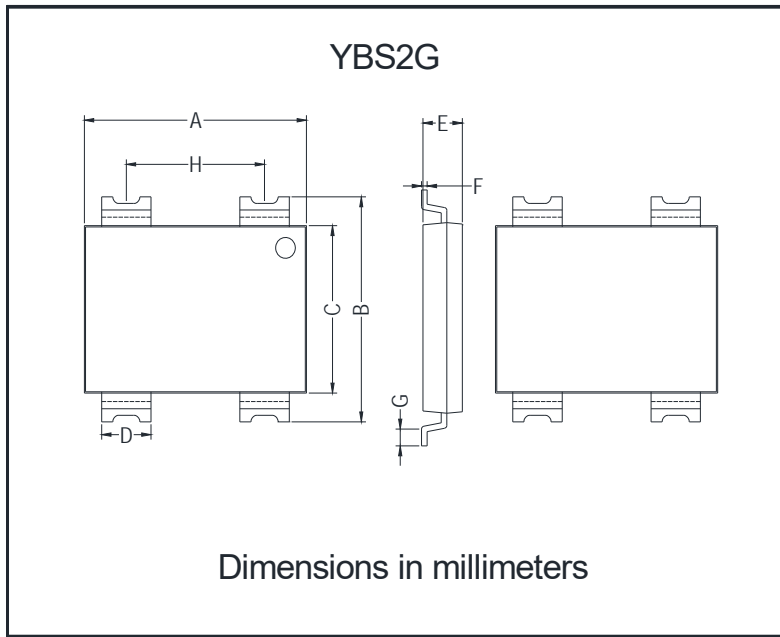


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



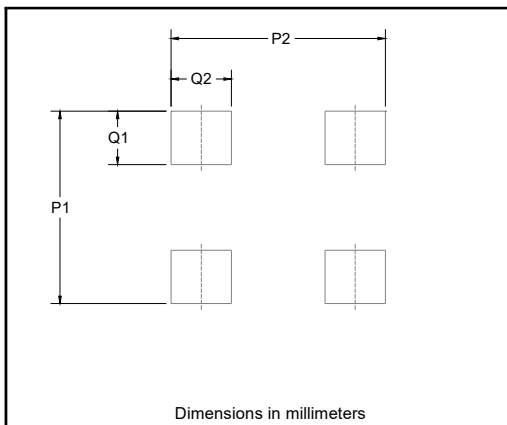


## ■ Outline Dimensions



YBS2G		
Dim	Min	Max
A	8.6	9.2
B	8.3	8.9
C	6.2	6.6
D	1.85	2.15
E	1.35	1.75
F	0.1	0.3
G	0.4	0.8
H	5.4	5.8

## ■ Suggested pad layout



YBS2G	
Dim	Min
P1	11
P2	7.8
Q1	2.4
Q2	2.2



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