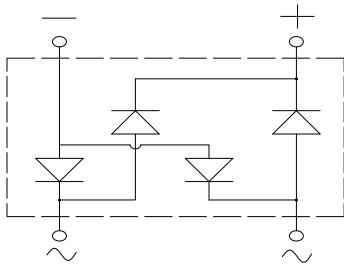
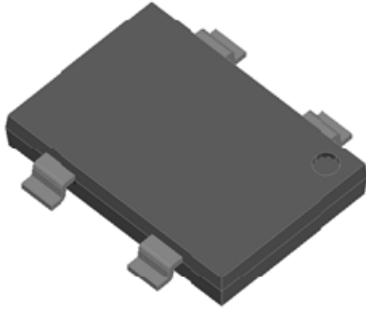


## Fast Recovery Bridge Rectifiers



### 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:** YBS3  
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	RYBSM4010
Device marking code			RYBSM4010
Maximum Repetitive Peak Reverse Voltage	VRRM	V	1000
Maximum RMS Voltage	VRMS	V	700
Maximum DC blocking Voltage	VDC	V	1000
Average rectified output current @60Hz sine wave, R-load, T <sub>c</sub> =86°C	I <sub>O</sub>	A	4.0
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T <sub>j</sub> =25°C	IFSM	A	120
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T <sub>j</sub> =25°C			240
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	59.8
Storage temperature	T <sub>stg</sub>	°C	-55 ~ +150
Junction temperature	T <sub>j</sub>	°C	-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	RYBSM4010
Maximum reverse recovery time	t <sub>r</sub>	ns	I <sub>f</sub> =0.5A, I <sub>r</sub> =1.0A, I <sub>r</sub> =0.25A	500
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =2.0A	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	50



# RYBSM4010

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

PARAMETER		SYMBOL	UNIT	RYBSM4010
Typical Thermal Resistance	Between Junction and Ambient	R <sub>θJA</sub>	°C/W	55
	Between Junction and Lead	R <sub>θJL</sub>		14
	Between Junction and Case	R <sub>θJC</sub>		8

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
RYBSM4010	F1	Approximate 0.36	1800	3600	25200	13" Reel

## ■ Characteristics(Typical)

FIG1: I<sub>o</sub>-T<sub>c</sub> Curve

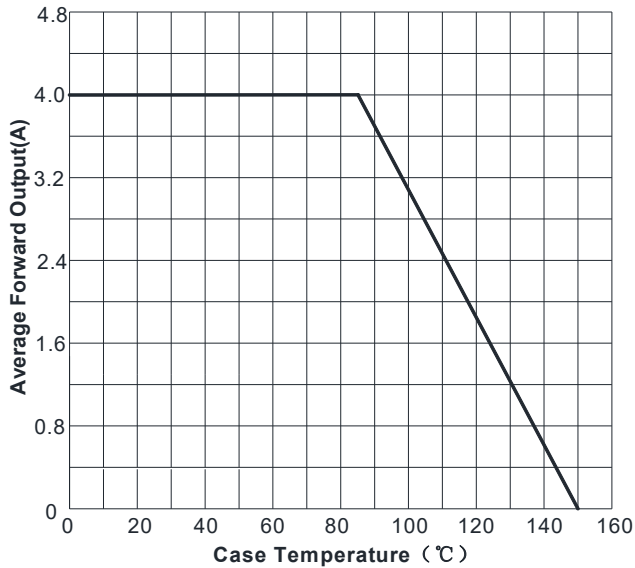


FIG2: Surge Forward Current Capability

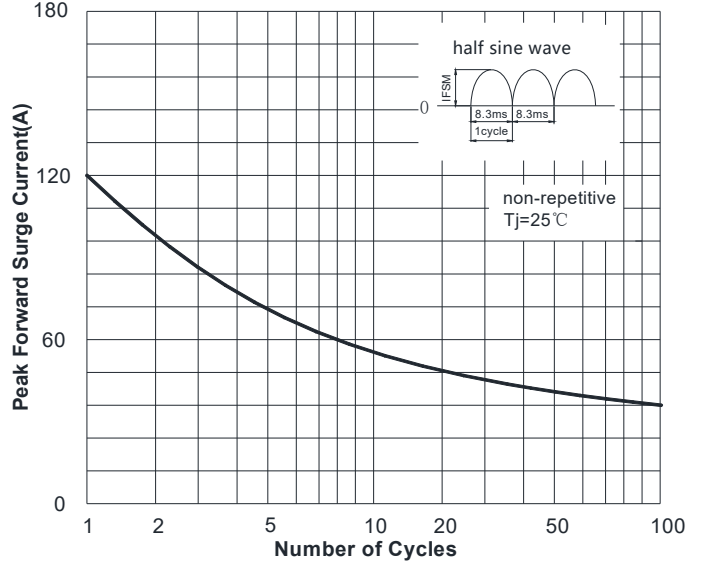


FIG3: Typical Forward Voltage

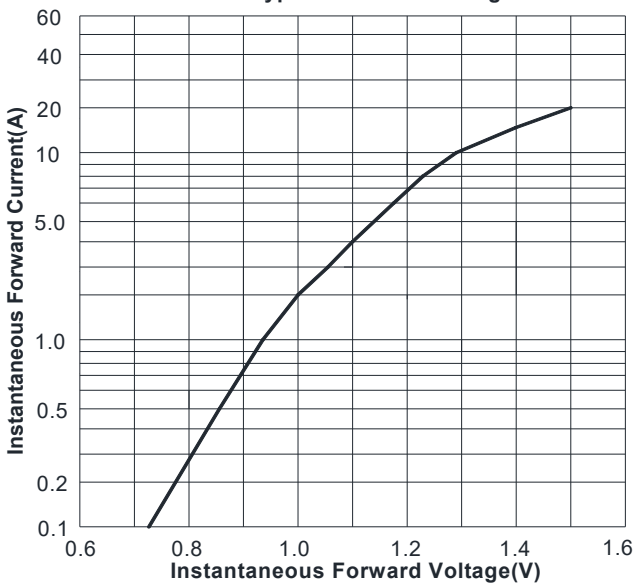


FIG4: Typical Reverse Characteristics

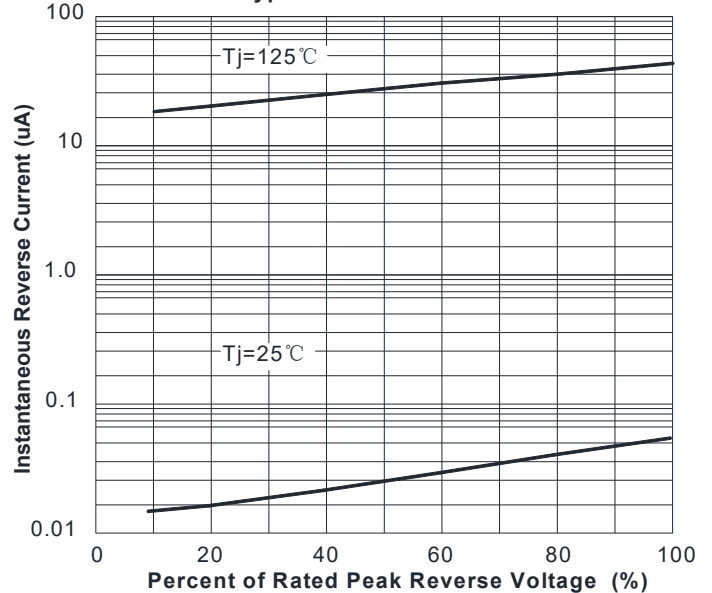
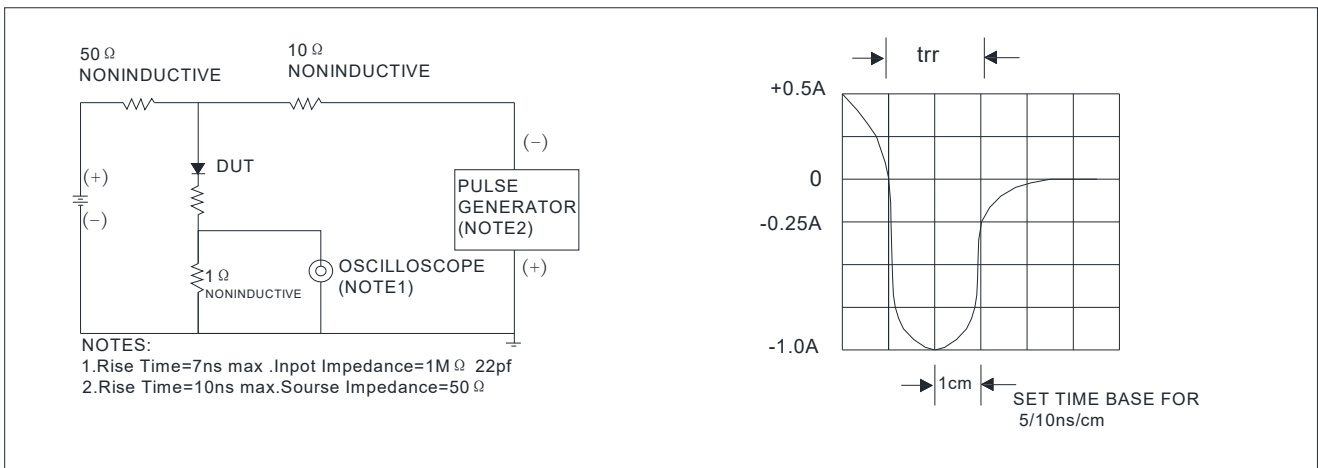
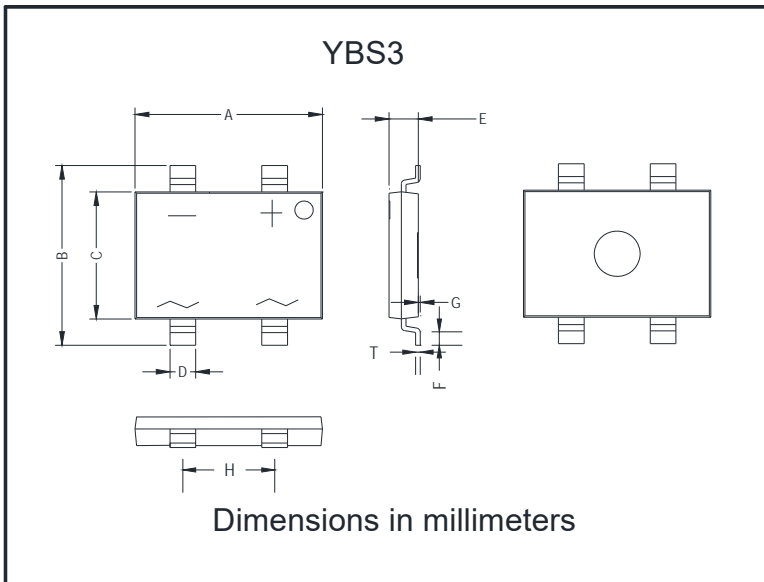


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

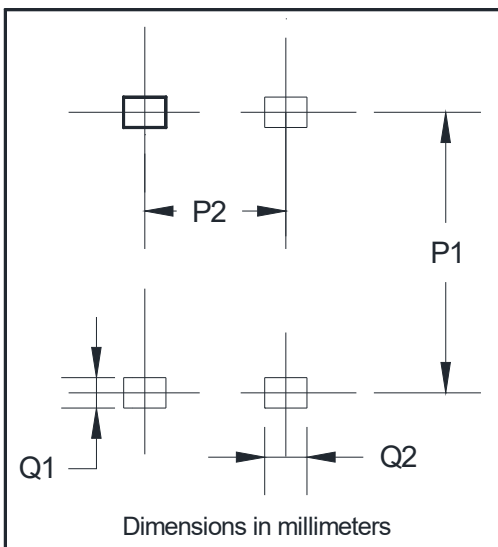


## ■ Outline Dimensions



YBS3		
Dim	Min	Max
A	10.00	10.40
B	9.70	10.10
C	6.80	7.20
D	1.3	1.5
E	1.4	1.8
F	0.5	1.1
G	0	0.15
H	4.9	5.1
T	0.20	0.30

## ■ Suggested pad layout



YBS3	
Dim	Min
P1	9.25
P2	5.00
Q1	1.00
Q2	1.5



## Disclaimer

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