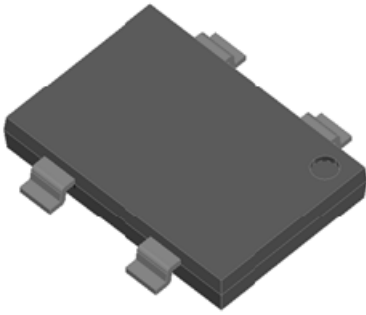


Fast Recovery Bridge Rectifiers

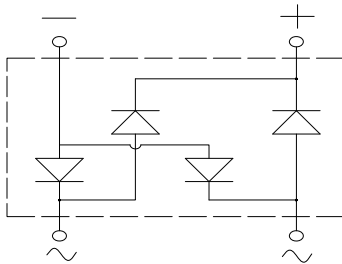


Features

- 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_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	RYBSM8010
Device marking code			RYBSM8010
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	1000
Maximum RMS Voltage	V _{RMS}	V	700
Maximum DC blocking Voltage	V _{DC}	V	1000
Average rectified output current @60Hz sine wave, R-load, T _c =30°C	I _O	A	8.0
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25°C	I _{FSM}	A	200
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25°C			400
Current squared time @1ms≤t≤8.3ms T _j =25°C, Rating of per diode	I ² t	A ² s	166
Storage temperature	T _{stg}	°C	-55 ~ +150
Junction temperature	T _j	°C	-55 ~ +150

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	RYBSM8010
Maximum reverse recovery time	t _{rr}	ns	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	500
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =4.0A	1.3
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	μA	T _j =25°C	5
			T _j =125°C	100
Typical junction capacitance	C _j	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	68



RYBSM8010

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	RYBSM8010
Typical Thermal Resistance	Between Junction and Ambient	R _{θJA}	°C/W	55
	Between Junction and Lead	R _{θJL}		14
	Between Junction and Case	R _{θJC}		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
RYBSM8010	F1	Approximate 0.38	1800	3600	25200	13" Reel

■ Characteristics (Typical)

FIG1: I_o-T_c Curve

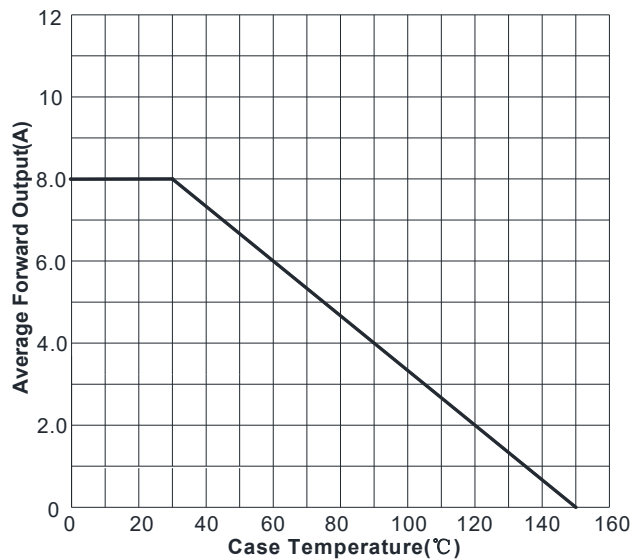


FIG2: Surge Forward Current Capability

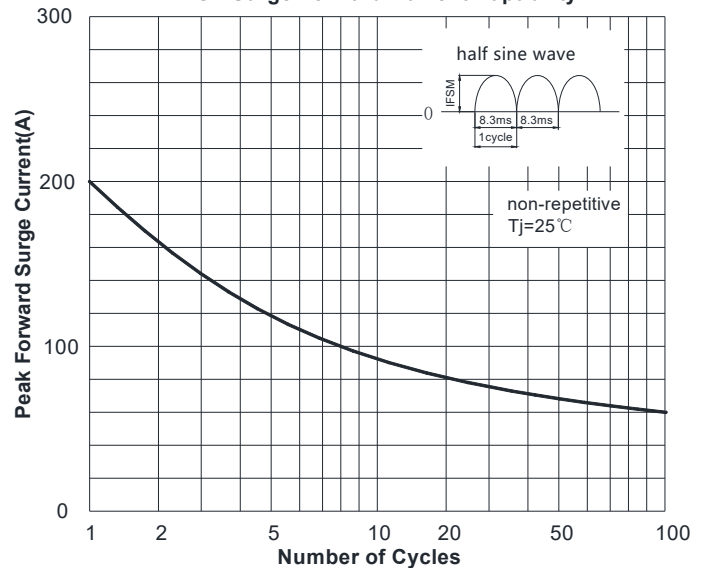


FIG3: Typical Forward Voltage

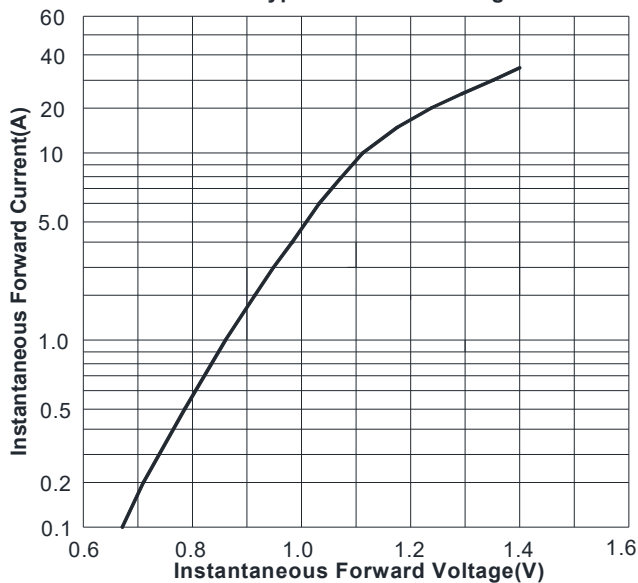


FIG4: Typical Reverse Characteristics

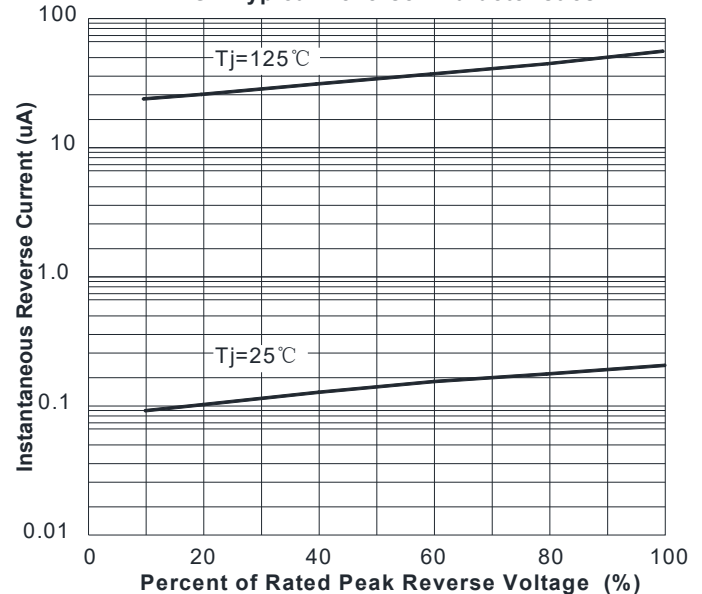
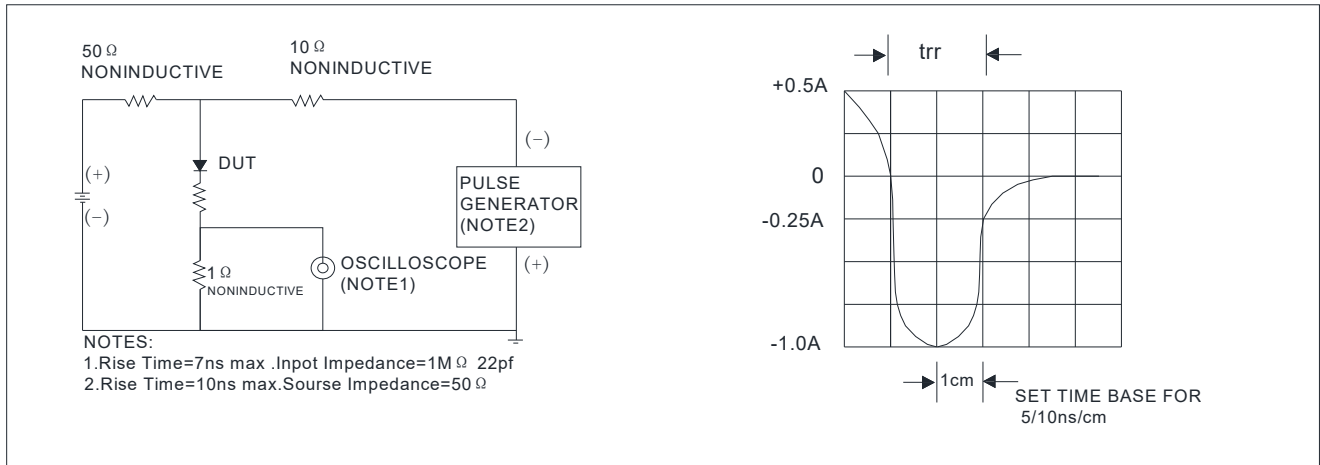
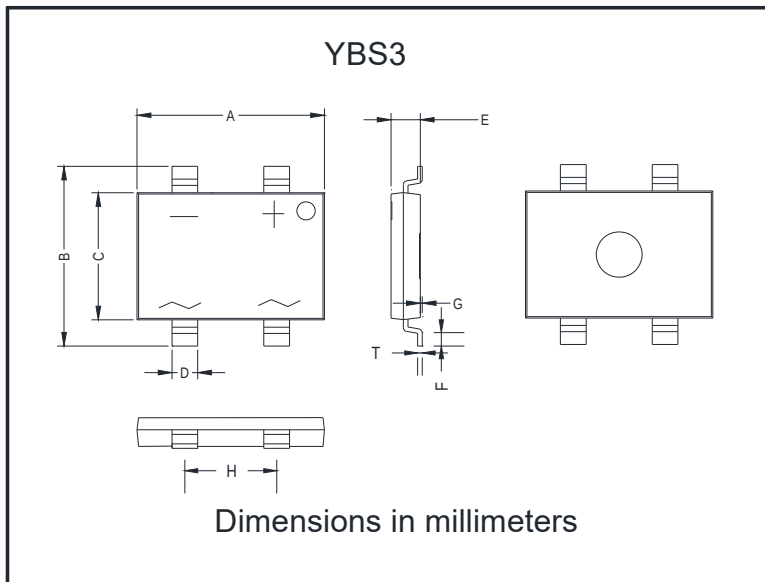


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

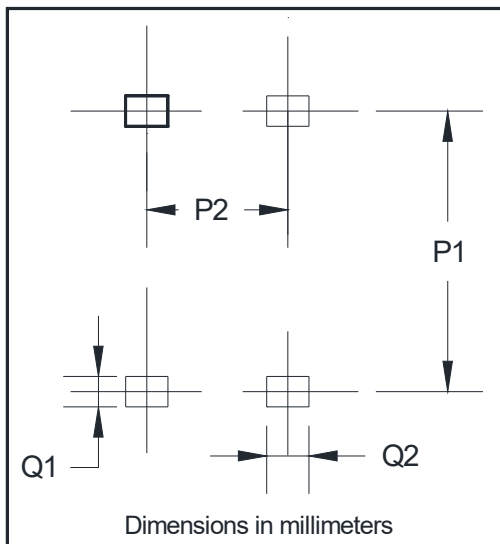


■ Outline Dimensions



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



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