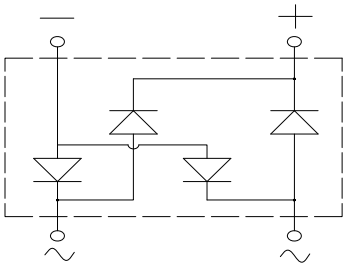
Fast Recovery Bridge Rectifiers



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**: YBS6
  Molding compound meets UL 94 V-0 flammability rating, -compliant, Halogen-free
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

■Maximum Ratings (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	RYBSN10010
Device marking code			RYBSN10010
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, Tc=118℃	I_O	A	10
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	300
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			600
Current squared time @1ms≤t≤8.3ms Tj=25℃， Rating of per diode	I^2t	A^2s	374
Storage temperature	Tstg	℃	-55 ~ +150
Junction temperature	Tj	℃	-55 ~ +150

RYBSN10010

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	RYBSN10010
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}=5.0A	1.3
Maximum DC reverse current at rated DC blocking voltage per diode	I_R	μA	Tj =25℃	5
			Tj =125℃	100
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	75

■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER		SYMBOL	UNIT	RYBSN10010
Typical Thermal Resistance	Between Junction and Ambient	$R_{\theta J-A}$	℃/W	48
	Between Junction and Lead	$R_{\theta J-L}$		12
	Between Junction and Case	$R_{\theta J-C}$		7

Note: Thermal Resistance mounted on P.C.B with 30mm*15mm*1.6mm

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
RYBSN10010	F1	Approximate 0.96	1500	/	21000	13'' Reel

■ Characteristics (Typical)

FIG1:Io-Tc Curve

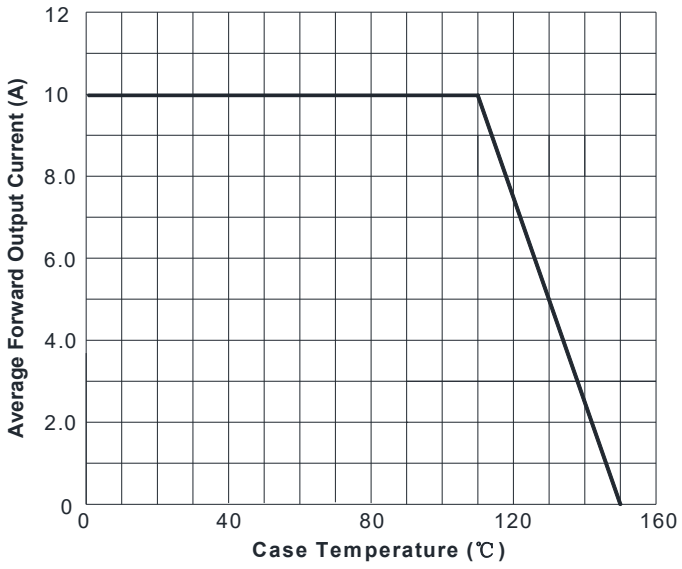


FIG2:Surge Forward Current Capability

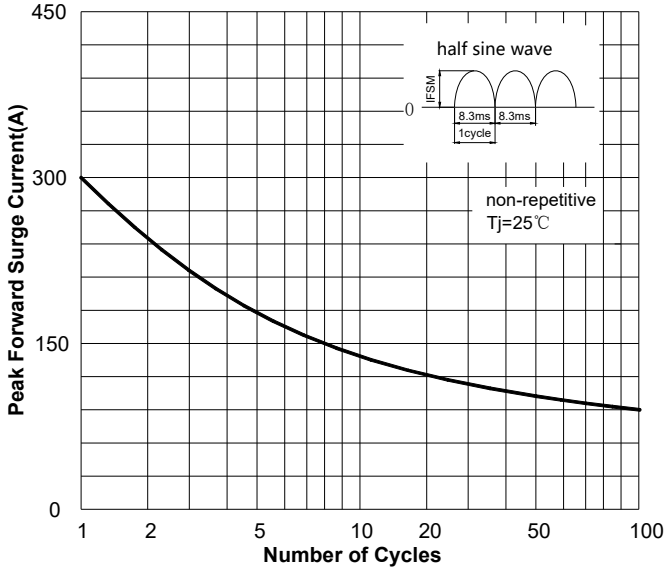


FIG3: Typical Forward Voltage

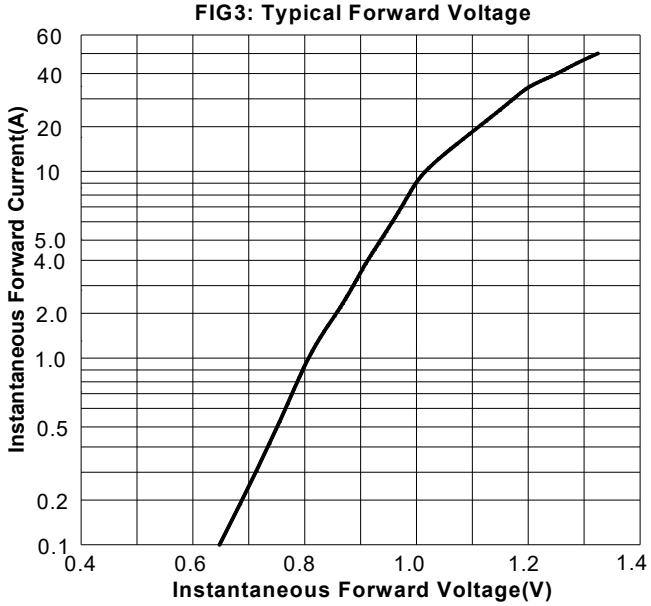


FIG4:Typical Reverse Characteristics

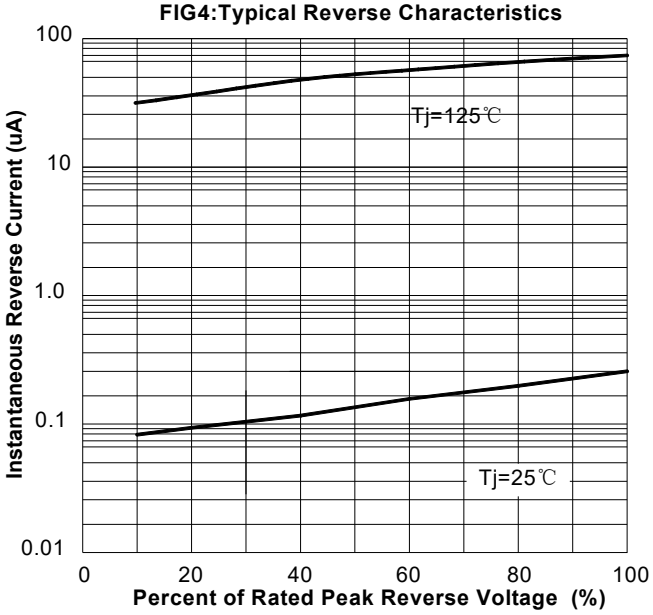
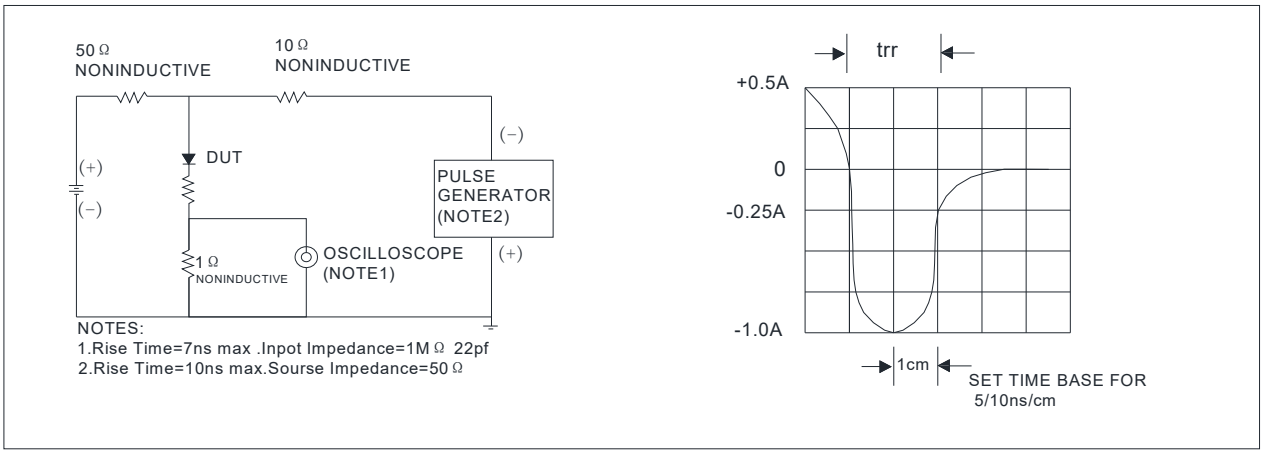
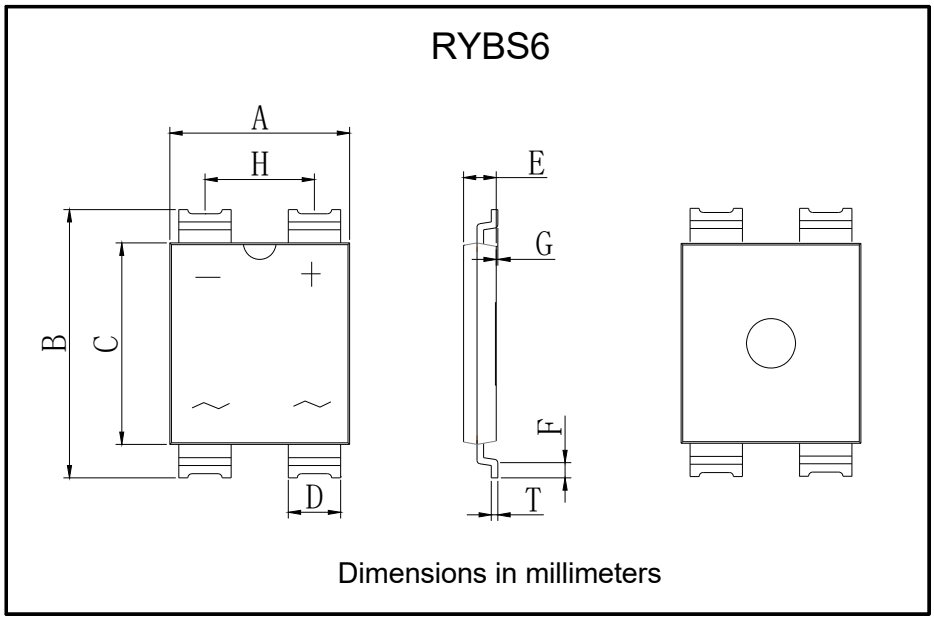


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

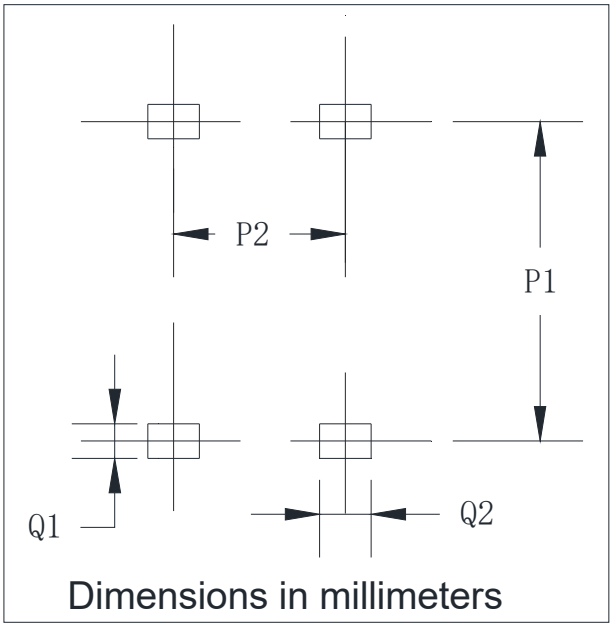


■ Outline Dimensions



YBS6		
Dim	**Min**	**Max**
A	10.70	11.30
B	15.85	16.65
C	11.70	12.30
D	3.05	3.35
E	1.80	2.20
F	0.70	1.10
G	0	0.20
H	6.55	6.85
T	0.35	0.55

■ Suggested pad layout



RYBS6	
Dim	**Min**
P1	15.50
P2	6.70
Q1	1.00
Q2	3.20

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