

2.2A, 400V - 1000V Glass Passivated Bridge Rectifier

FEATURES

- Glass passivated junction
- Ideal for automated placement
- Reliable low cost construction utilizing molded plastic technique
- High surge current capability
- UL Recognized File # E-326854
- Compliant to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_{F(AV)}$	2.2	A
V_{RRM}	400 - 1000	V
I_{FSM}	90	A
T_{JMAX}	150	°C
Package	YBS	
Configuration	Quad	

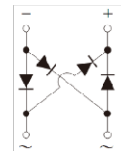
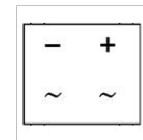
APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- TV
- Monitor


YBS

MECHANICAL DATA

- Case: YBS
- Molding compound meets UL 94V-0 flammability rating
- Moisture sensitivity level: level 1, per J-STD-020
- Packing code with suffix "G" means green compound (halogen-free)
- Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Weight: 0.22g (approximately)



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)						
PARAMETER	SYMBOL	YBS 2204G	YBS 2205G	YBS 2206G	YBS 2207G	UNIT
Marking code on the device		YBS2204G	YBS2205G	YBS2206G	YBS2207G	
Repetitive peak reverse voltage	V_{RRM}	400	600	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	280	420	560	700	V
Forward current	$I_{F(AV)}$	2.2				A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	90				A
I^2t value (of a surge on-state current)	I^2t	33				A^2s
Junction temperature	T_J	-55 to +150				°C
Storage temperature	T_{STG}	-55 to +150				°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-lead thermal resistance	$R_{\theta JL}$	40	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	50	°C/W
Junction-to-case thermal resistance	$R_{\theta JC}$	28	°C/W

Thermal Performance Note: Units mounted on recommended PCB (16mm x 16mm Cu pad test board)

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage ⁽¹⁾	$I_F = 1.1\text{A}, T_J = 25^\circ\text{C}$	V_F	0.86	0.92	V
	$I_F = 2.2\text{A}, T_J = 25^\circ\text{C}$		0.91	0.97	V
	$I_F = 1.1\text{A}, T_J = 125^\circ\text{C}$		0.73	0.9	V
	$I_F = 2.2\text{A}, T_J = 125^\circ\text{C}$		0.78	0.95	V
Reverse current @ rated V_R ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	0.2	5	μA
	$T_J = 125^\circ\text{C}$		35	100	μA
Junction capacitance	1 MHz, $V_R = 4.0\text{V}$	C_J	70	90	pF
Reverse recovery time	$I_F = 0.5\text{A}, I_R = 1.0\text{A}$ $I_{RR} = 0.25\text{A}$	t_{rr}	2400	4000	ns

Notes:

1. Pulse test with $PW = 0.3\text{ ms}$
2. Pulse test with $PW = 30\text{ ms}$

ORDERING INFORMATION

PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
YBS22xxG (Note 1, 2)	RA	G	YBS	3,000 / 13" Plastic reel

Notes:

1. "xx" defines voltage from 400V (YBS2204G) to 1000V (YBS2207G)
2. Whole series with green compound (halogen-free)

EXAMPLE

EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
YBS2207G RAG	YBS2207G	RA	G	Green compound

CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

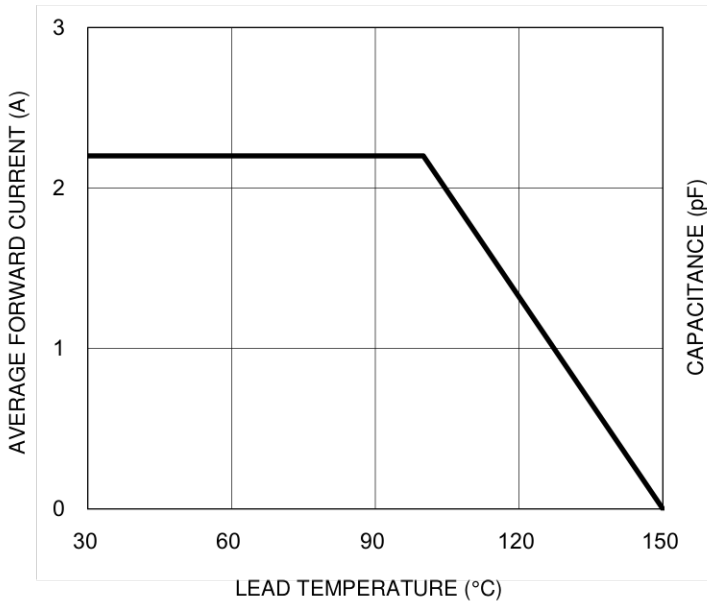


Fig.2 Typical Junction Capacitance

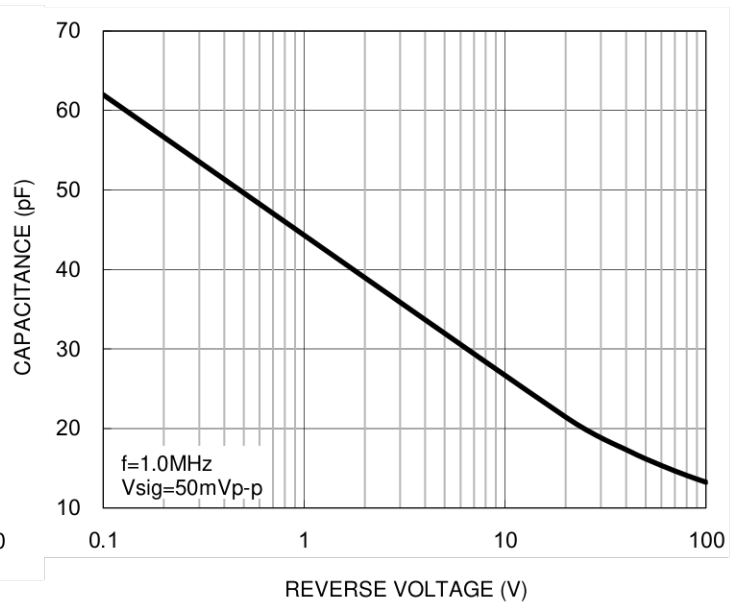


Fig.3 Typical Reverse Characteristics

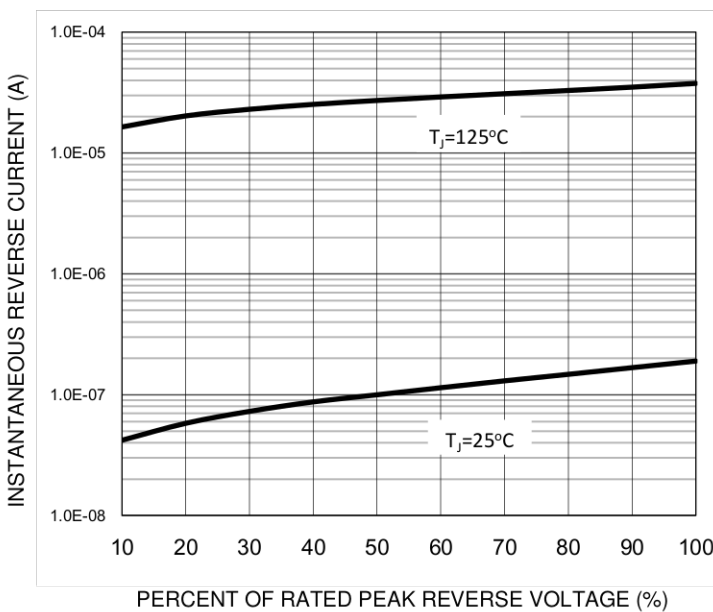
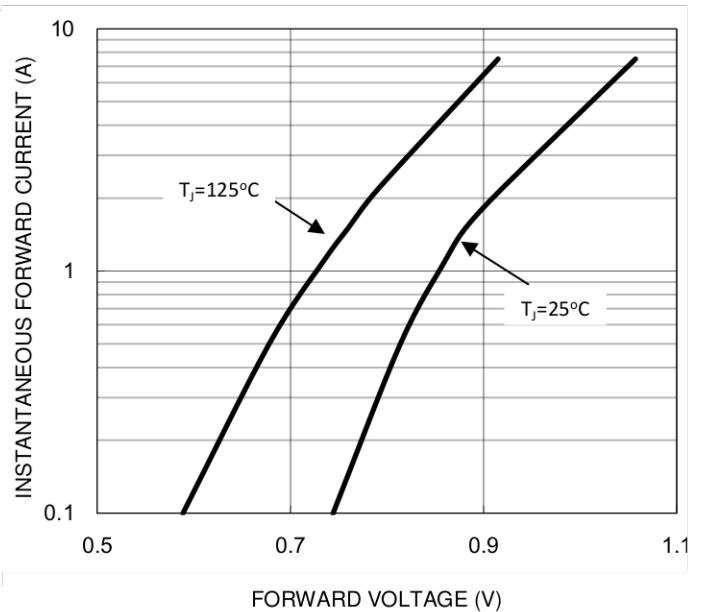
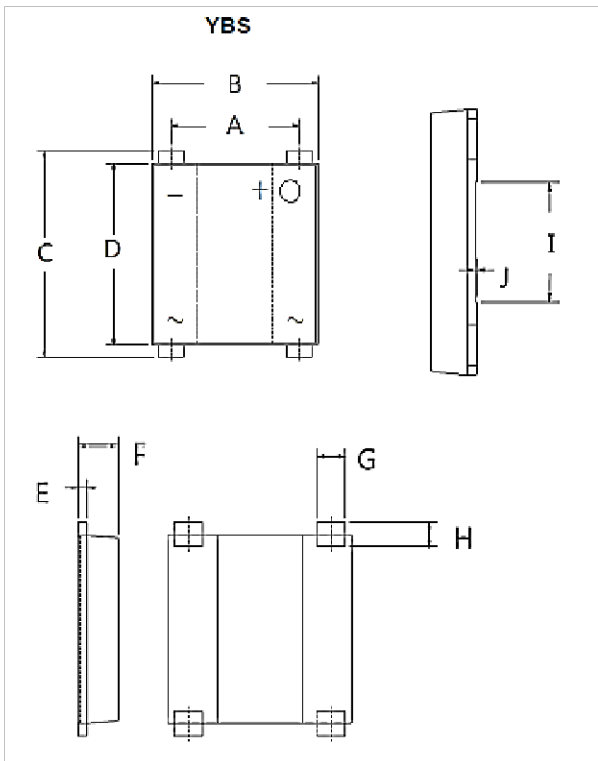


Fig.4 Typical Forward Characteristics

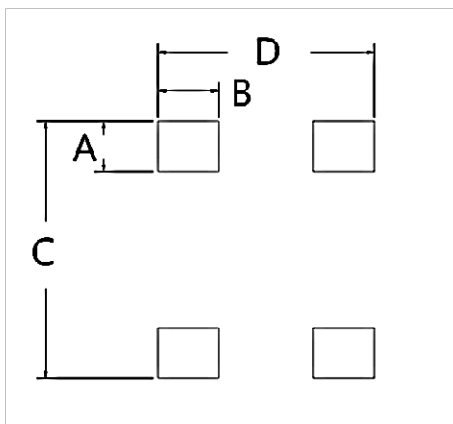


PACKAGE OUTLINE DIMENSIONS



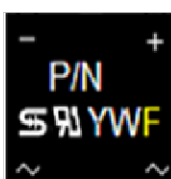
DIM	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	5.00	5.20	0.197	0.205
B	6.50	6.70	0.256	0.264
C	7.90	8.60	0.311	0.339
D	7.20	7.40	0.283	0.291
E	0.27	0.40	0.011	0.016
F	1.30	1.50	0.051	0.059
G	0.95	1.15	0.037	0.045
H	0.70	1.05	0.028	0.041
I	2.90	3.10	0.114	0.122
J	0.04	0.08	0.002	0.003

SUGGESTED PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	1.80	0.070
B	2.00	0.078
C	9.15	0.360
D	7.10	0.279

MARKING DIAGRAM



P/N = Marking Code
 YW = Date Code
 F = Factory Code

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