

2.2A, 400V - 1000V Standard Bridge Rectifier

FEATURES

- Glass passivated chip junction
- Ideal for automated placement
- Reliable low cost construction utilizing molded plastic technique
- High surge current capability
- UL Recognized File # E-326854
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

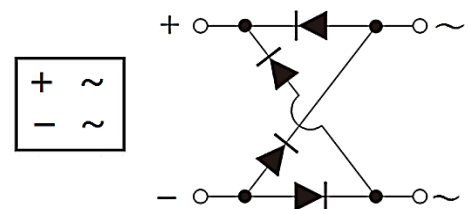
APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application

MECHANICAL DATA

- Case: YBS
- Molding compound meets UL 94V-0 flammability rating
- Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: As marked
- Weight: 0.220g (approximately)

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


YBS


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	2.2				A
Surge peak forward current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	90				A
Rating for fusing ($t < 8.3\text{ms}$)	I^2t	33.61				A^2s
Junction temperature	T_J	-55 to +150				°C
Storage temperature	T_{STG}	-55 to +150				°C

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	TYP	UNIT
Junction-to-lead thermal resistance	$R_{\theta JL}$	24	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	61	°C/W
Junction-to-case thermal resistance	$R_{\theta JC}$	11	°C/W

Thermal Performance Note: Units mounted on 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 per diode ⁽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	0.90	V
	$I_F = 2.2\text{A}, T_J = 125^\circ\text{C}$		0.78	0.95	V
Reverse current @ rated V_R per diode ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	-	5	μA
	$T_J = 125^\circ\text{C}$		-	100	μA
Junction capacitance per diode	1MHz, $V_R = 4.0\text{V}$	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 = 0.3ms
2. Pulse test with PW = 30ms

ORDERING INFORMATION		
ORDERING CODE	PACKAGE	PACKING
YBS22xG	YBS	3,000 / Tape & Reel

Notes:

1. "x" defines voltage from 400V(YBS2204G) to 1000V(YBS2207G)

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

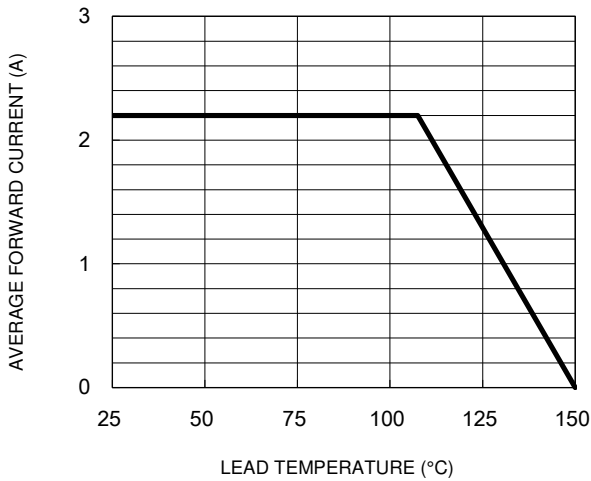


Fig.2 Typical Junction Capacitance

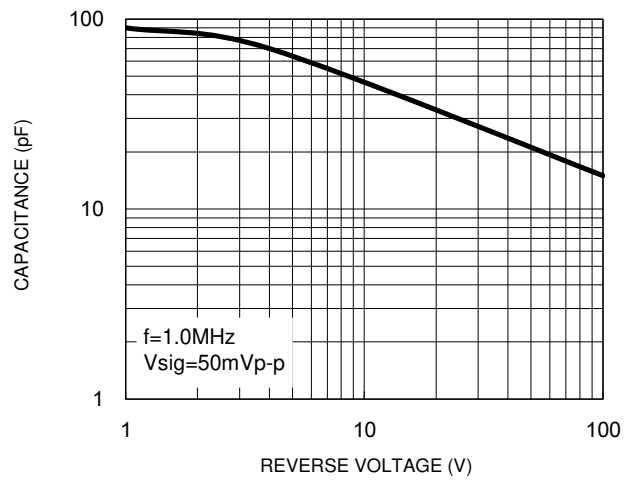


Fig.3 Typical Reverse Characteristics

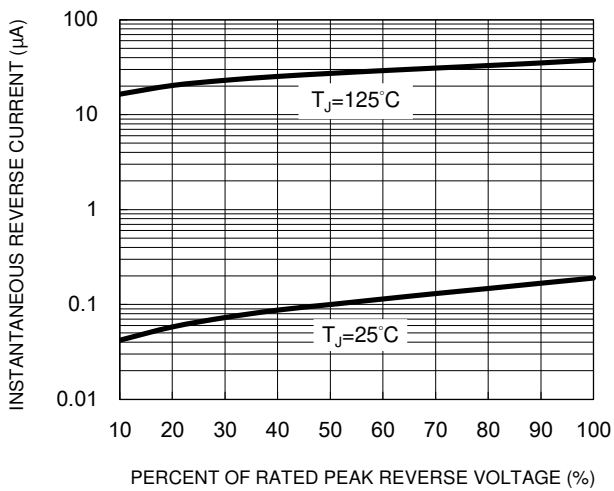
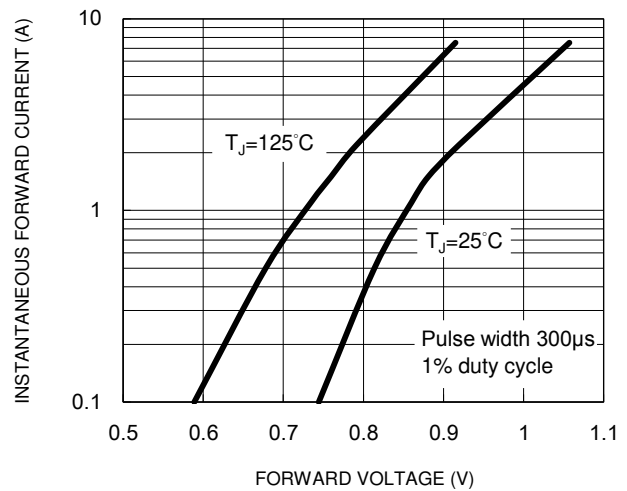
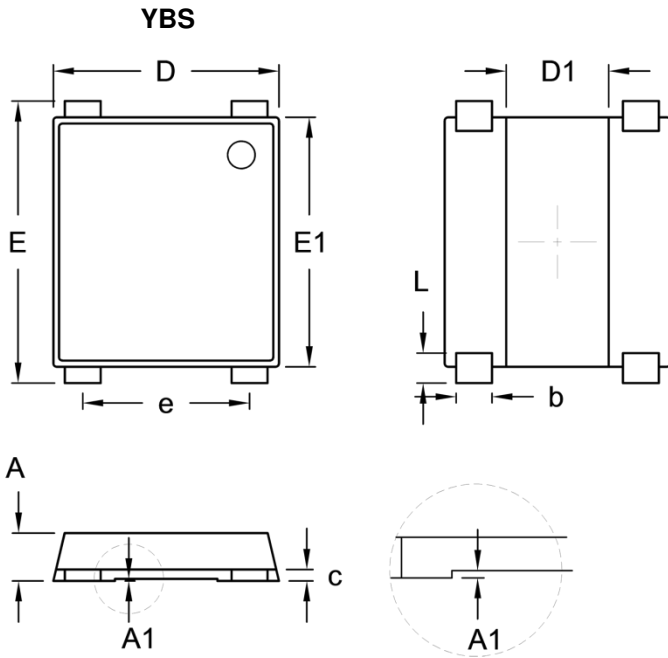


Fig.4 Typical Forward Characteristics

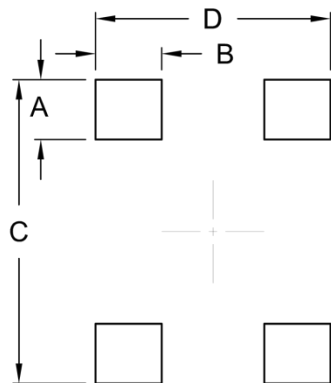


PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	1.30	1.50	0.051	0.059
A1	0.04	0.08	0.002	0.003
b	0.95	1.15	0.037	0.045
c	0.27	0.40	0.011	0.016
D	6.50	6.70	0.256	0.264
D1	2.90	3.10	0.114	0.122
E	7.90	8.60	0.311	0.339
E1	7.20	7.40	0.283	0.291
e	5.00	5.20	0.197	0.205
L	0.70	1.05	0.028	0.041

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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