

**3A, 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

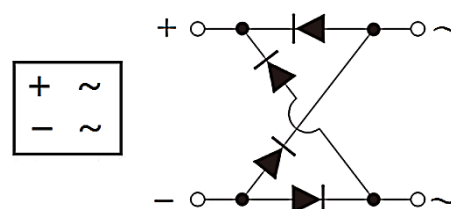
**YBS**

**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)


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

PARAMETER	SYMBOL	YBS 3004G	YBS 3005G	YBS 3006G	YBS 3007G	UNIT
Marking code on the device		YBS3004G	YBS3005G	YBS3006G	YBS3007G	
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	$I_F$	3				A
Surge peak forward current, single half sine-wave superimposed on rated load	t = 8.3ms	25°C	110			A
		125°C	88			A
	t = 1.0ms	25°C	220			A
		125°C	175			A
Rating for fusing (t<8.3ms)	$I^2t$	50.21				A <sup>2</sup> s
Junction temperature	$T_J$	-55 to +150				°C
Storage temperature	$T_{STG}$	-55 to +150				°C

<b>THERMAL PERFORMANCE</b>			
<b>PARAMETER</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>UNIT</b>
Junction-to-lead thermal resistance	$R_{\theta JL}$	22	$^{\circ}C/W$
Junction-to-ambient thermal resistance	$R_{\theta JA}$	61	$^{\circ}C/W$
Junction-to-case thermal resistance	$R_{\theta JC}$	9	$^{\circ}C/W$

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

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^{\circ}C$ unless otherwise noted)					
<b>PARAMETER</b>	<b>CONDITIONS</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>MAX</b>	<b>UNIT</b>
Forward voltage per diode <sup>(1)</sup>	$I_F = 1.5A, T_J = 25^{\circ}C$	$V_F$	0.89	1.02	V
	$I_F = 3.0A, T_J = 25^{\circ}C$		0.93	1.10	V
	$I_F = 1.5A, T_J = 125^{\circ}C$		0.76	0.90	V
	$I_F = 3.0A, T_J = 125^{\circ}C$		0.82	1.00	V
Reverse current @ rated $V_R$ per diode <sup>(2)</sup>	$T_J = 25^{\circ}C$	$I_R$	-	5	$\mu A$
	$T_J = 125^{\circ}C$		-	100	$\mu A$
Junction capacitance per diode	1MHz, $V_R = 4.0V$	$C_J$	33	-	pF

**Notes:**

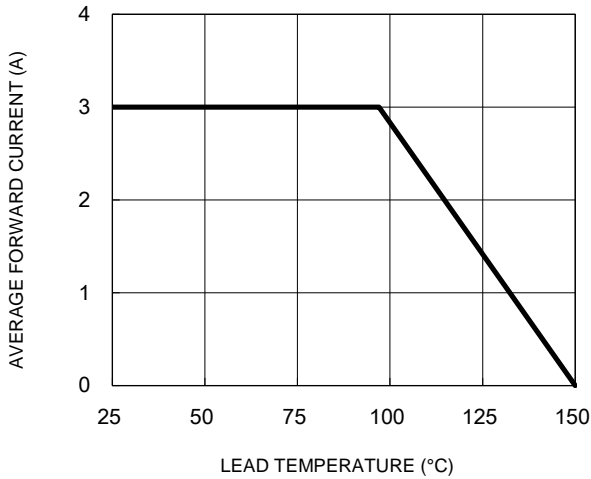
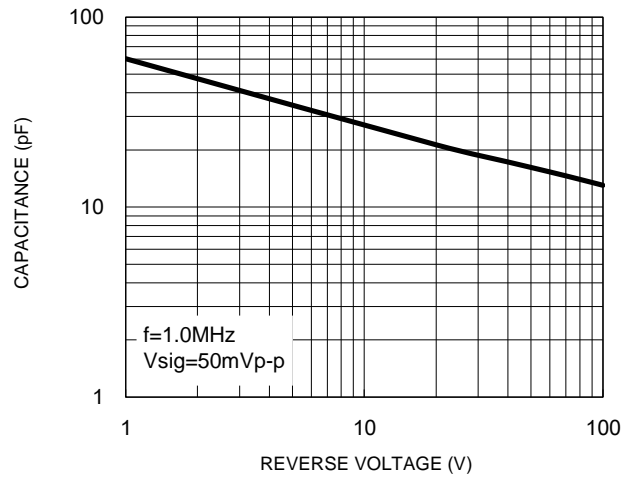
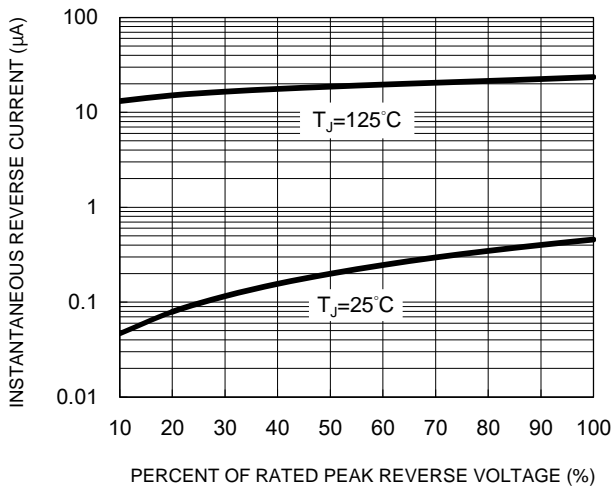
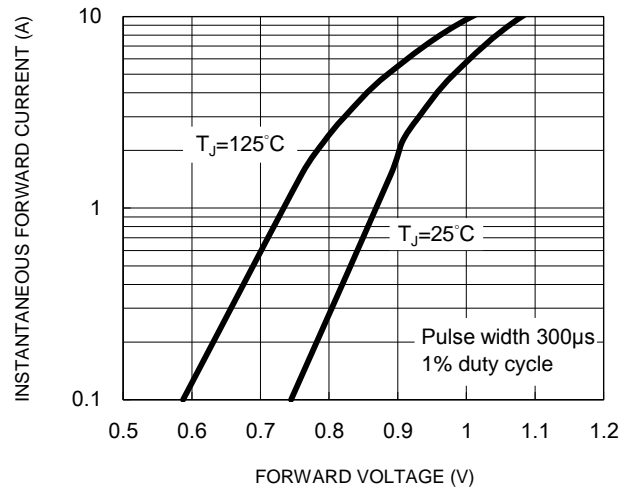
1. Pulse test with PW = 0.3ms
2. Pulse test with PW = 30ms

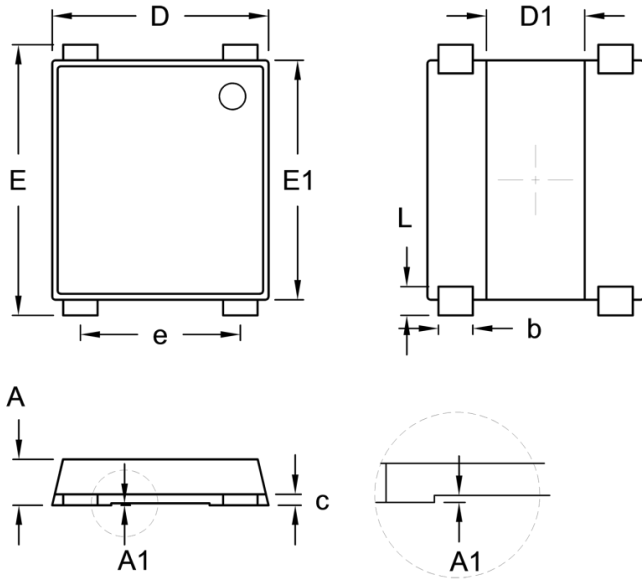
<b>ORDERING INFORMATION</b>		
<b>ORDERING CODE</b>	<b>PACKAGE</b>	<b>PACKING</b>
YBS3xG	YBS	3,000 / Tape & Reel

**Notes:**

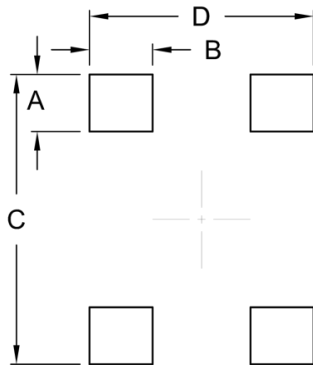
1. "x" defines voltage from 400V(YBS3004G) to 1000V(YBS3007G)

**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**
**YBS**


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

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