

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:** YBS
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	YBS30005A	YBS3001A	YBS3002A	YBS3004A	YBS3006A	YBS3008A	YBS3010A
Device marking code			YBS30005A	YBS3001A	YBS3002	YBS3004A	YBS3006A	YBS3008A	YBS3010A
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V _{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V _{DC}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, R-load, T _c =110°C	I _o	A	3.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25°C	I _{FSM}	A	120						
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25°C			240						
Current squared time @1ms≤t<8.3ms T _j =25°C, Rating of per diode	I ² t	A ² s	59.8						
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	YBS30005A	YBS3001A	YBS3002A	YBS3004A	YBS3006A	YBS3008A	YBS3010A
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =1.5A	1.0						
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	40						

■ **THERMAL CHARACTERISTICS** ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	YBS30005A	YBS3001A	YBS3002A	YBS3004A	YBS3006A	YBS3008A	YBS3010A
Typical Thermal Resistance	Between Junction and Ambient	$R_{\theta J-A}$	$^\circ\text{C/W}$	55.0						
	Between Junction and Lead	$R_{\theta J-L}$		15.0						
	Between Junction and Case	$R_{\theta J-C}$		10.0						

Note: Device mounted on P.C.B with 35mm*25mm*1.7mm.

■ **PACKAGING INFORMATION**

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YBS30005A-YBS3010A	F1	Approximate 0.220	3000	/	42000	13" reel

■ **CHARACTERISTICS (TYPICAL)**

FIG1: I_o - T_c Curve

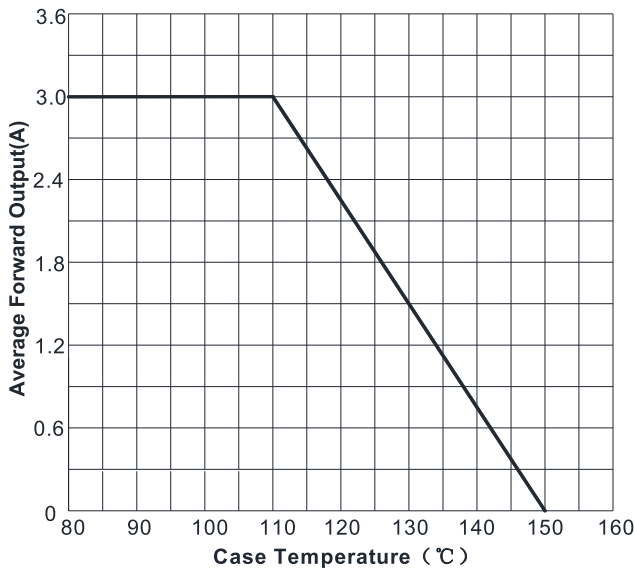


FIG2: Surge Forward Current Capability

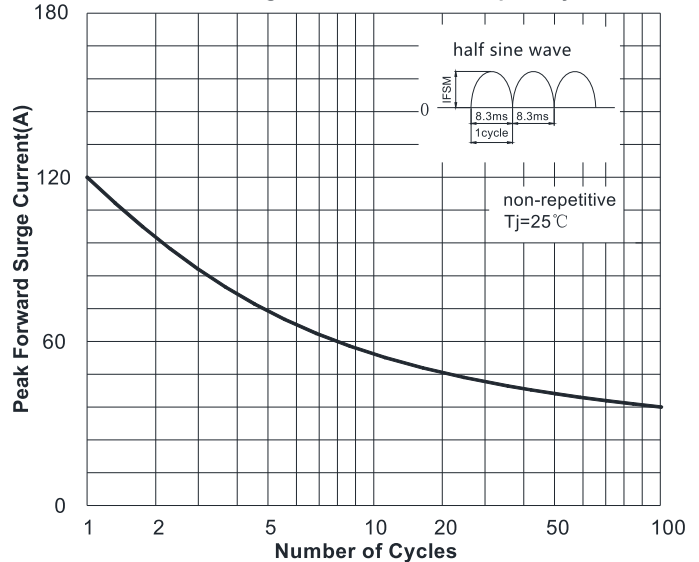


FIG3: Typical Forward Voltage

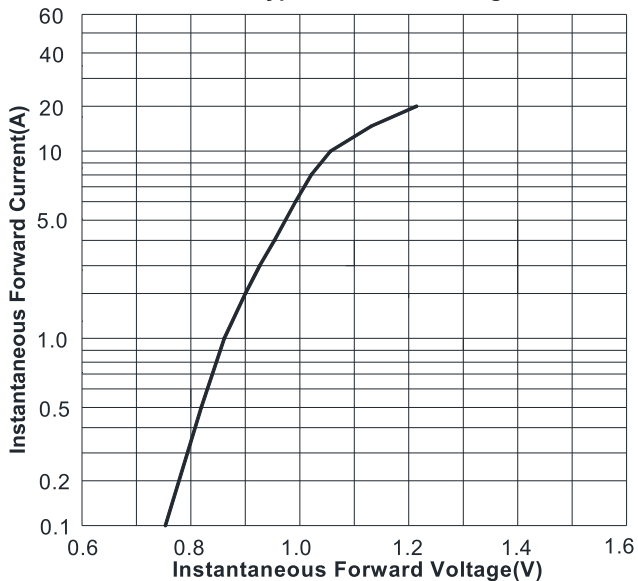
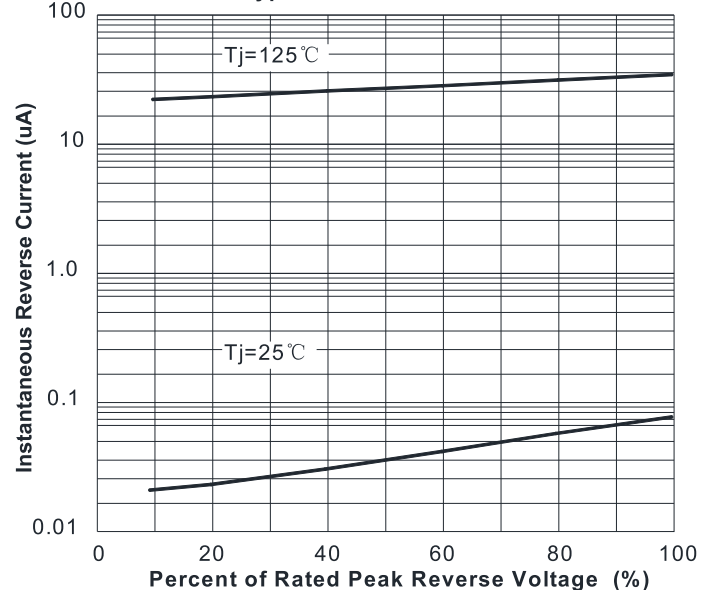
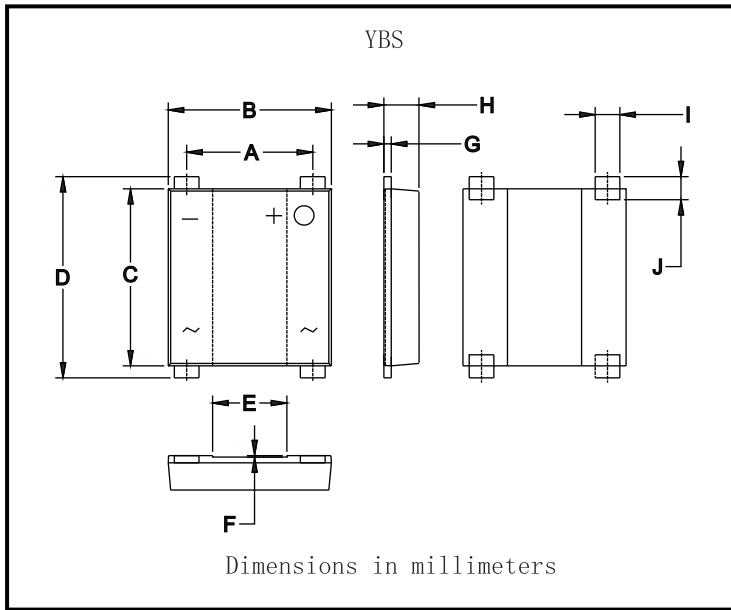


FIG4: Typical Reverse Characteristics

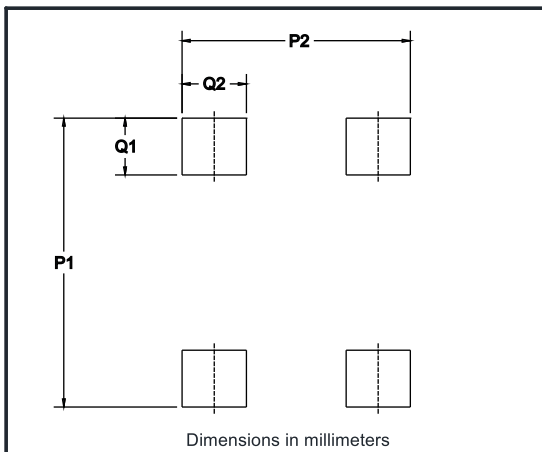


■ **OUTLINE DIMENSIONS**



YBS		
Dim	Min	Max
A	5.00	5.20
B	6.50	6.70
C	7.20	7.40
D	7.90	8.60
E	2.90	3.10
F	0.04	0.08
G	0.27	0.40
H	1.30	1.50
I	0.95	1.15
J	0.70	1.05

■ **SUGGESTED PAD LAYOUT**



Dim	Min
P1	9.15
P2	7.10
Q1	1.80
Q2	2.00