



General Description

BS-Series are open frame, board type power supply with AC input range of 85~132 VAC for use in Japan and North America market. Simplified circuit design gives high cost-effectiveness and small size. This series meets UL/CSA and Japan Electrical Appliance and Material Control law, in addition to EMI limits of FCC class B and VCCI class.



Features

1. Cost effective
2. High efficiency
3. Small size
4. Input: 85-132VAC
5. Mountable, 5 ways mounting

Options

Cover
Wire harness

Specifications<AC/DC>	Model	
BSB**SA 60/80WATTS/SINGLE	BSB12SA	BSB24HSA
Input Characteristic		
Input Voltage	AC100V(DC130V)	
Input Range	AC85-132V(DC110-175V)	
Input Frequency	50/60Hz	
Input Frequency Range	47-440Hz	
Phase	Single	
Inrush Current *1	30A(maximum) at AC100V	
Efficiency [%] (typical) *2	84	86

Specifications<AC/DC>	Model	
BSB**SA-HAS 60/80W ATTS/SINGLE	BSB12SA	BSB24HSA
Output Characteristic		
Output Voltage [V]	12	24
Output Current [A]	5.0	3.3
Voltage Adjust Range	+/- 10% of Rated Output Voltage(at no load within the input range)	
Ripple and Noise [mVp-p](maximum) *3	170	300
Regulation		
a.Statistic Line Regulation [mV](maximum)	96	192
b.Statistic Load Regulation [mV](maximum)	108	216
c.Temperature Coefficient *4	0.03%/C	
d.Drift[mV](maximum) *5	75	135
e.Dynamic Load Regulation [mV](typical) *6	360	720
f.Recovery Time *6	40mS	40mS
Rise up time	200mS(maximum) at 25C and rated input/output	
Hold up time	20mS(minimum) at 25C and rated input/output	
Functions		
Overcurrent Protection [A]	Current Limiting with automatic recovery	
	5.5	3.5
Overvoltage Protection [V]	Output shutdown(to reset,leave 3useconds after shut-off)	
	14	28
Remote Sense	not available	
Remote On/Off	not available	
Environmental		
Operating Temperature	-10 to +50C	
Operating Humidity	20 to 90%RH(non-condensing)	
Storage Temperature	-20 to +85C	
Storage Humidity	20 to 90%RH(non-condensing)	
Withstanding Voltage	Primary-Secondary AC1,500V for 1minute	
	Primary-Frame Ground AC1,500V for 1minute	
	Secondary-Frame Ground AC500V for 1minute	
Isolation Resistance	Primary-Secondary-Frame Ground 50MOhm(minimum) by DC500V insulation tester	
Vibration	5-10Hz:10mm double amplitude,10-55Hz:19.6m/s ² 20minutes' period for 60minutes each along X,Y,Z axes(non-operating)	
Shock	294m/s ²	
Cooling	Convection	
Leakage Current	0.5mA(maximum) at 25C,rated input/output and rated input frequency	
Line Conducted Noise	Built to meet VCCI Class B	
Safety		
Weight (typical)	open board type:180g	
MTBF [H]	600,000	
Switching Frequency[kHz](typical) *7	90	100

Conditions:

*1 at cold start

*2 at DC130V input/rated output

*3 measured by a bayonet probe at the end of a pair of 15cm long wires terminated with a 100uF electrolytic capacitor and 0.1uF film capacitor in parallel at a 0 to 100MHz bandwidth

*4 at -10 to +50°C

*5 for 7hour period after 1hour warm-up at 25°Cand rated input/output

*6 when output current changed from 25% of rated output current to 75% rapidly at AC100V input

*7 variable on input voltage and load conditions


ETA-USA

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