

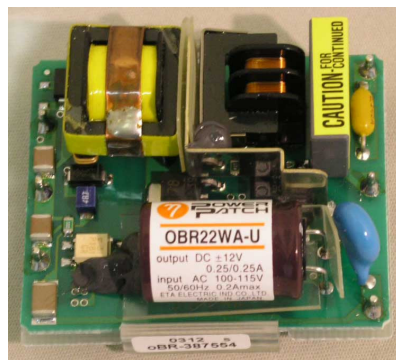


ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

AC/DC SWITCHING POWER SUPPLY
INPUT: 85~132VAC
SINGLE OUTPUT
6 WATTS

OBRxSA SERIES



Dimension: 43Wx47.5Lx18.5H [mm]

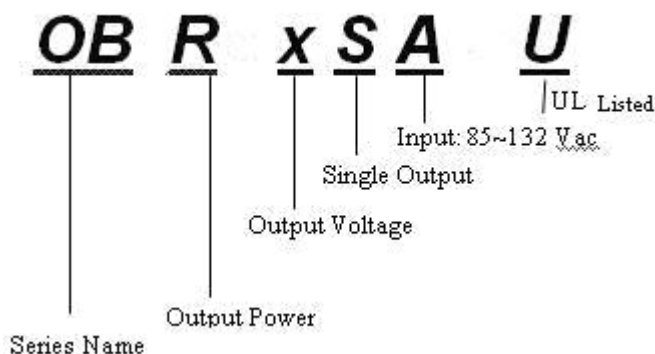


Features

1. PCB Mountable
2. Small , Light Weight
3. High Efficiency
4. Cost effective
5. Output Voltage adjustable
6. Over Voltage Protection
7. EMI: complies to FCC/B
8. Safety: UL 1950, CSA 950(C-UL) approved

General Description

OB-Series AC/DC Switching Power Supplies are designed and built to be installed right onto the user's printed circuit board like a piece of "patch-work". They are small, light in weight and cost effective.



Input Characteristics		Models					
	Unit	OBR3.3SA-U	OBR05SA-U	OBR12SA-U	OBR15SA-U	OBR24SA-U	OBR48SA-U
Input Voltage	Vac	AC 115 V [DC 132 V]					
Input Voltage Range	Vdc	AC85~132V [DC110~175V]					
Input Current	A	0.25					
Input Frequency	Hz	50/60Hz					
Input Frequency Range	Hz	47~440Hz					
Inrush Current *1	A	18A (maximum) at AC100V					
Efficiency (typical) *2	%	68	75	78	79	81	81

Output Characteristics		OBR3.3SA-U	OBR05SA-U	OBR12SA-U	OBR15SA-U	OBR24SA-U	OBR48SA-U
	Unit						
Output Voltage	Vdc	3.3	5	12	15	24	48
Output Current	A	1	1	0.5	0.4	0.26	0.13
Voltage Tolerance	V	±0.07	±0.1	±0.24	±0.3	±0.48	±0.96
Ripple and Noise(max.) *3	mV	100mVp-p MAX					
Regulation							
a. Static Line Regulation max.	mV	5	10	24	30	48	96
b. Static Load Regulation max. *4	mV	10	15	36	45	72	144
c. Temperature Coefficient *5	%/°C	≤0.03%/°C					
d.Drift max. *6	mV	30	40	75	90	135	255
e.Dynamic Load Reg. typ.*7	mV	±200	±250	±360	±450	±720	±1500
f. Recovery Time *7	mS						
g. Rise Time	mS	100mS(maximum) at rated input/output					
h. Hold Up Time	mS	20mS(typical) at rated input/output					



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Environmental Specification	
Operating Temperature	-20~+71°C
Operating Humidity	30~85%RH(non-condensing)
Storage Temperature	-20 to +85°C
Storage Humidity	20~90%RH(non-condensing)
Withstanding Voltage	Primary-Secondary AC2,000V for 1minute Primary-Frame Ground AC2,000V for 1minute Secondary-Frame Ground AC500V for 1minute
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
Isolation Resistance	Primary-Secondary-Frame Ground 50MΩ(minimum) by DC500V insulation tester
Environmental Agencies	
EMI(Electromagnetic Interference)	Built to meet FCC Part15-B Class B Built to meet VCCI Class A
Safety	UL: UL1950, C-UL: CSA C22.2 No.950
Function/Protection	
Over current Protection *8	Fold back/current limiting with automatic recovery at discontinuous short circuit conditions
Over voltage Protection	Not Available
Other Specifications	
Leakage Current(typ.)	40uA at AC100V input
MTBF [H] *9	1,000,000
Mechanical Specification	
Dimension [mm]	43Wx47.5Lx18.5H [mm]
Weight (typical)	open board type:27g[unit with chassis/cover:30g]

Conditions:

- *1 cold start
- *2 at DC130V input and rated output
- *3 measured by a bayonet probe at the output connector at a 0 to 100MHz bandwidth
- *4 when output current changed from minimum rated current to rated current keeping the current of other output below minimum rated current
- *5 when output current changed from minimum rated current to rated current keeping the current of other output above minimum rated current
- *6 when output current of both outputs changed from 0mA to rated current identically
- *7 at -10 to +71°C
- *8 when output current of both outputs changed from 0mA to rated current identically only for 7hours from 1hour after switch-on at 25°C and rated input/output
- *9 when output current changed rapidly between 25% and 75% of rated current at AC100V input
- *10 satisfy the above-mentioned specifications only for less than 1minute of over current and short circuit
- *11 may vary on input voltage and load conditions



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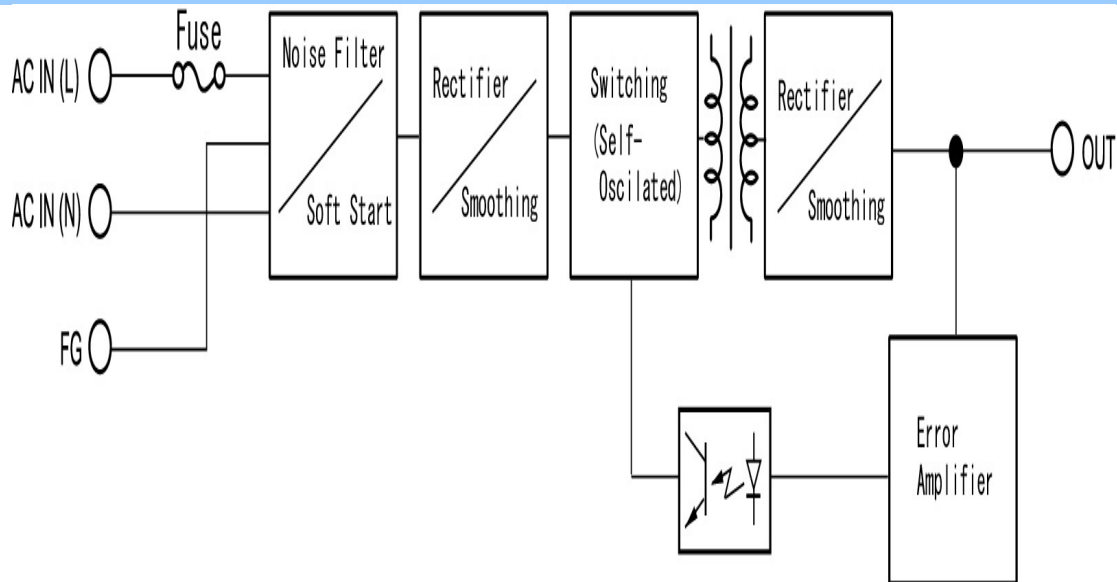
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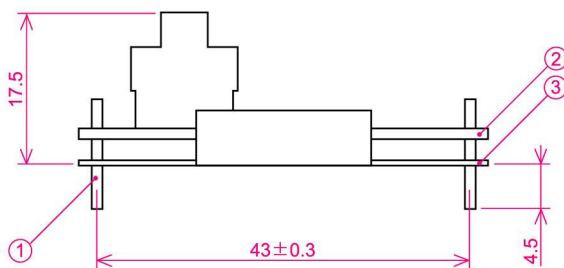
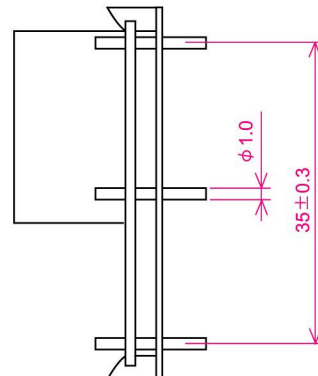
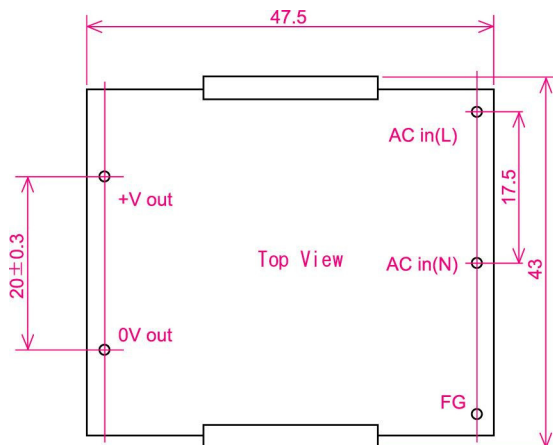
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BLOCK DIAGRAM



DIMENSION DIAGRAM

**Dimension in mm*



- ① 1.0DIA PIN Material:BsB 2700 1/2H
Copper Plating 1~3μm
Solder Plating 3~8μm
 - ② Double-sided PCB FR4t=1.0
 - ③ Insulator UL94V2
- * Tolerance ±0.5



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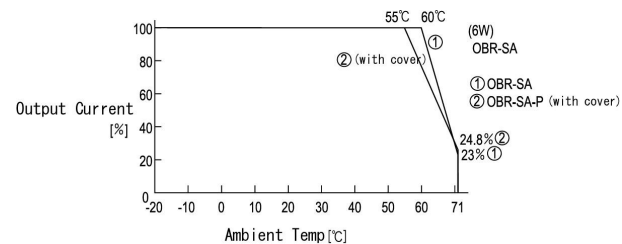
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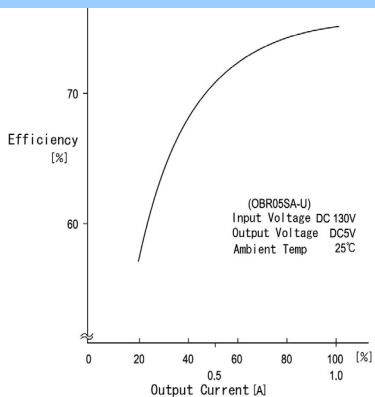
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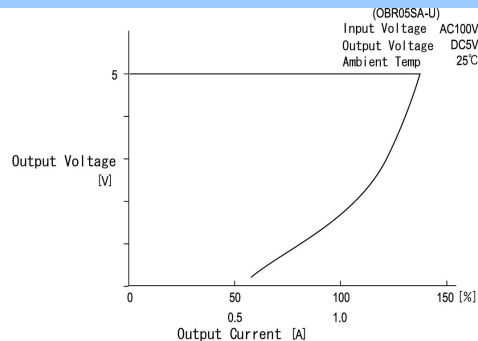
DERATING CURVE



EFFICIENCY CURVE



OCP CURVES



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