

10 WATT AC-DC CONVERTER

**OBS- SA/WA SERIES
SINGLE/ DUAL CHANNEL**

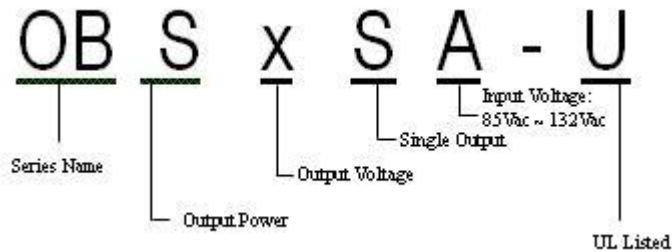


Dimension: 43Wx51.7Lx18.5H [mm]



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.



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

Application

Industrial

Input

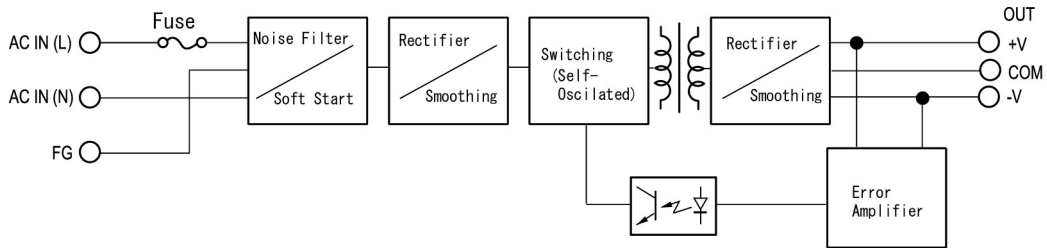
Input Voltage:	AC100-240V
Input Voltage Range:	AC85-264V
Frequency:	50/60Hz
Input Frequency Range:	47-440Hz
Phase:	Single
Inrush Current: *1	18A max. at AC100V

Output Characteristic	Unit	Models					
		OBS3.3SA-U	OBS05SA-U	OBS12SA-U	OBS15SA-U	OBS24SA-U	OBS48SA-U
Output Voltage	V	3.3	5	12	15	24	48
Output Current	A	0.35A					
Voltage Adjust Range	V	±5% of Rated Output Voltage (at no load within the input range)					
Ripple & Noise(max)	mVpp	120					
Rise time	mS	100mS max					
Hold up time	mS	20mS minimum					
Regulation							
a. Line Regulation [max]	mV	5	10	24	30	48	96
b. Load Regulation	mV	10	15	36	45	72	144
c. Temperature Coefficient	°C	0.03% / °C					
d. Drift(maximum)	mV	30	40	75	90	135	255
e. Dynamic Load Regulation (typ.) *2	mV	±200	±250	±360	±450	±720	±1500
f. Recovery Time *2	mS	10mS					
Efficiency *1	%	73~84%					

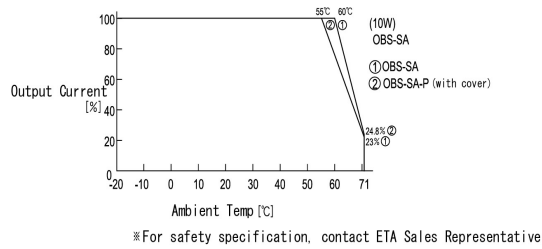
Output Characteristic	Unit	Models			
		OBS22WA-U		OBS23WA-U	
Output Voltage	V	+12	-12	+15	-15
Output Current	A	0.3A			
Voltage Adjust Range	V	±5% of Rated Output Voltage (at no load within the input range)			
Ripple & Noise(max)	mVpp	100			
Rise time	mS	100mS max			
Hold up time	mS	20mS minimum			
Regulation					
a. Line Regulation [max]	mV	60		75	
b. Load Regulation	mV	± 1.6		±2	
c. Temperature Coefficient	°C	0.03% / °C			
d. Drift(maximum)	mV	75		90	
e. Dynamic Load Regulation (typ.) *2	mV	±480		±600	
f. Recovery Time *2	mS	20mS			
Efficiency *1	%	81%			

Environmental Specification	
Operating Temperature*3	-20 to +71 °C
Derating Curve	See diagram
Operating Humidity	30~90[%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
Isolation Resistance	Primary-Secondary-Frame Ground 50MΩ(minimum) by DC500V insulation tester
Vibration	5~10Hz:10mm double amplitude,10-55Hz:19.6m/s ² ,30 minute cycle each along X,Y,Z axes(non-operating)
Shock	294 m/s ²
Cooling	Convection
Leakage current	OBS-SA 40μA /OBS-WA 70 μA
Environmental Agencies	
Line Conducted Noise [EMI]	Built to meet FCC Part 15 Class B Built to meet VCCI Class A
Line Harmonic Distortion/Current	No info
Safety	UL: UL1950 , C-UL: CSA 22.2 no. 950
Function/Protection	
Over current Protection	Foldback/current limiting with automatic recovery at discontinuous short circuit condition
Over voltage Protection	Not available
Remote Sense	Not available
Remote Control	Not available
Series Operation	Not available
Parallel Operation	Not available
Mechanical	
Dimension [mm]	43W × 51.7L × 18.5H
Weight [g] (typical)	33g

Block Diagram

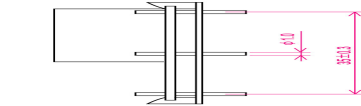
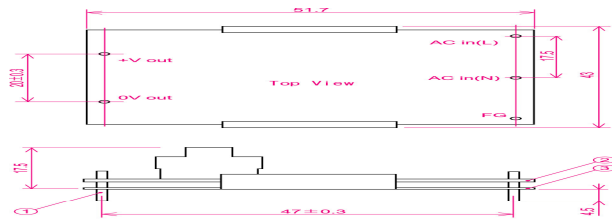


DERATING DIAGRAM



Derating Curve OBS-SA(10W)

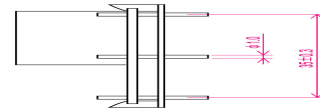
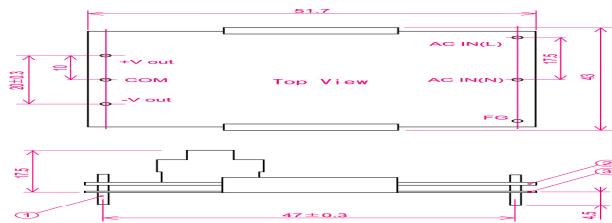
DIMENSION DIAGRAM OBS-SA



- ① 1.0 DIA PIN Material B&B 2700 1/2H
Copper Plating 1~3µm
Solder Plating 3~8µm
- ② Double-sided PCB FR4 t=1.0
- ③ Insulator UL94V2
*Tolerance ±0.5

Dimension Diagram OBS-SA

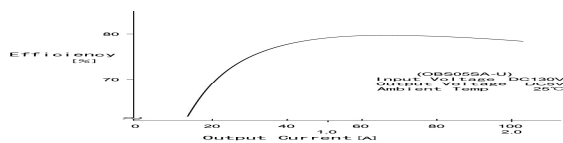
DIMENSION DIAGRAM OBS-WA



- ① 1.0 DIA PIN Material B&B 2700 1/2H
Copper Plating 1~3µm
Solder Plating 3~8µm
- ② Double-sided PCB FR4 t=1.0
- ③ Insulator UL94V2
*Tolerance ±0.5

Dimension Diagram OBS-WA

EFFICIENCY CURVE



Efficiency Curve OBS055A