

10 WATT DC-DC CONVERTER

OBS- SC / WC 12
SINGLE/ DUAL CHANNEL

Specifications	Model					
	OBS05SC12	OBS12SC12	OBS15SC12	OBS24SC12	OBS22WC12	OBS23WC12
OBS**SC/WC12 10WATTS/SINGLE/2 OUTPUT						
Input Voltage DC[V]	12	12	12	12	12	12
Input Range DC[V]	8-18					
Inrush Current [A]	Not specified					
Input Range						
at no load [mA](typical)	32	37	39	42	44	47
at full load[mA](typical)	1042	1097	1040	1046	1097	1041
Line Back Noise [mVp-p] (typical)	500	500	500	500	500	500
Efficiency [%] (typical) *1	80	82	84	86	82	84
Output Voltage [V]	5	12	15	24	+12 -12	+15 -15
Output Current [A]	2	0.9	0.70	0.45	0.045-0.45	0.035-0.35
Voltage Tolerance +/-[mV](maximum) *2	100	240	300	480	240 240	300 300
Ripple and Noise [mVp-p](maximum) *3	100					
Regulation						
a.Static Line Regulation [mV](maximum)	25	60	75	120	60	75
b.Dynamic Line Regulation +/-[mV](maximum) *4	100	100	100	100	200	300
c.Static Load Regulation [mV](maximum) *5	25	60	75	120	±1500	±1500
[mV](maximum) *6					±750	±750
[mV](maximum) *7					±60	±75
d.Temperature Coefficient *8	0.03% ^ρ Cmaximum)					
e.Drift[mV](maximum) *9	40	75	90	135	75	90
f.Dynamic Load Regulation [mV](maximum) *10	200	400	300	400	300	400
g.Recovery Time *4,*10	10mS(typical)					
Rise up time	10mS(typical) at rated input/output					
Hold up time	Not specified					
Overcurrent Protection	Foldback/Current Limiting with automatic recovery at discontinuous short circuit conditions					
Overvoltage Protection	Not available					
Remote Sense	Not available					
Trimming of output voltage[mV] *11	+250	+250	+350	+650		
[mV] *12	-250	-900	-1600	-4000		
Input Fuse	Installed					
Operating Temperature	-20 to 71°C					
(derating)	3.5%/°C(50°C to 71°C) (out of warranty >= 71 °C)					
Operating Humidity	20-90%/RH(non-condensing)					
Storage Temperature	-20 to +85°C					
Storage Humidity	20 to 90%/RH(non-condensing)					
Withstanding Voltage	Primary-Secondary AC500V for 1minute					
Isolation Resistance	Primary-Secondary 50MΩ(minimum) by DC500V insulation tester					
Capacitance(input-output) [pF](typical)	4400					
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					
Weight (typical)	open board type:14g					

*1 at 25°C and rated input/output

*2 OBS**WC12 satisfies the above-mentioned specifications at the same load conditions on both outputs

*3 measured by a probe at the output connector at a 0 to 100MHz bandwidth

*4 when input voltage changed from 8V to 18V rapidly at rated input

*5 when output current changed from 0mA to rated current keeping the current of other output below minimum rated current at rated input

*6 when output current changed from minimum rated current to rated current keeping the current of other output above minimum rated current

*7 output current of both outputs changed from 0mA to rated current identically at rated input

*8 at -20 to +71°C

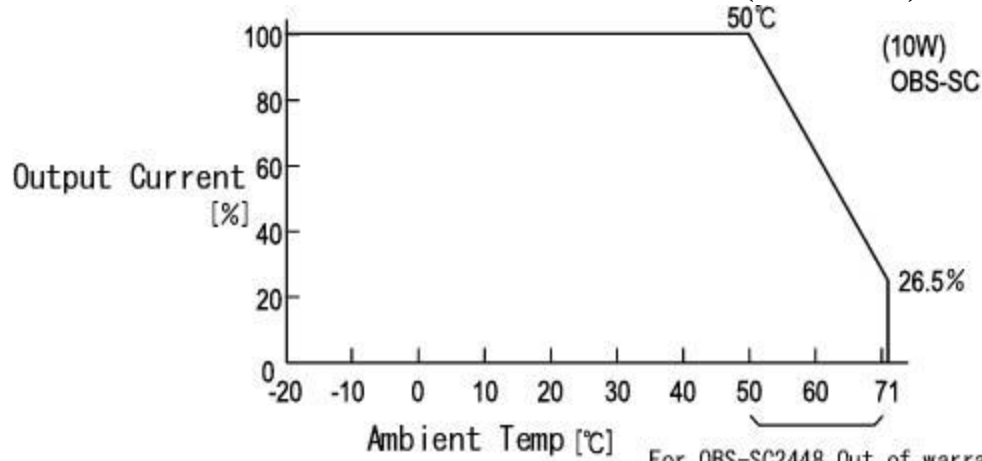
*9 for 7hour period after 1hour warm-up at 25 °C and rated input/output

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

*11 to reduce output voltage,put a resistor between pin"0" and trimming pin

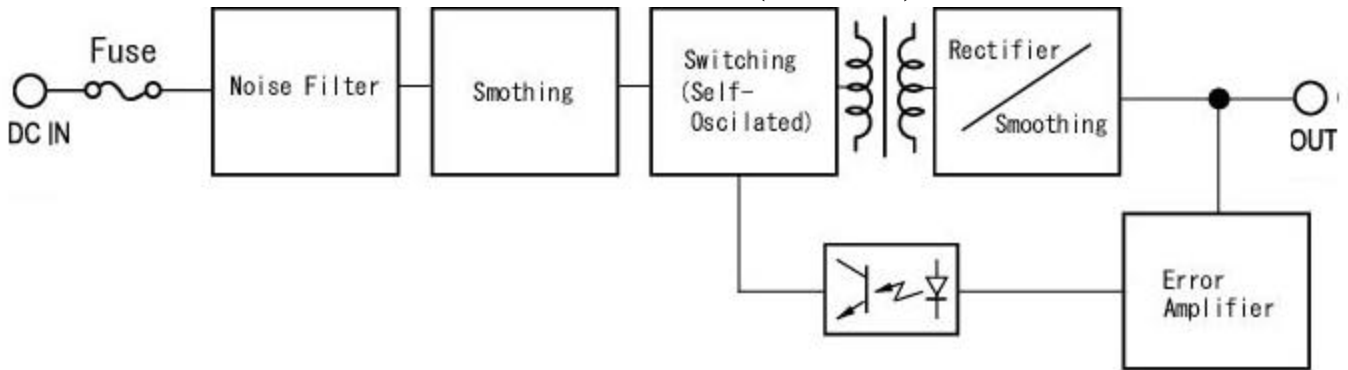
*12 to increase output voltage,put a resistor between pin"+" and trimming pin

DERATING CURVE (OBS-SC)

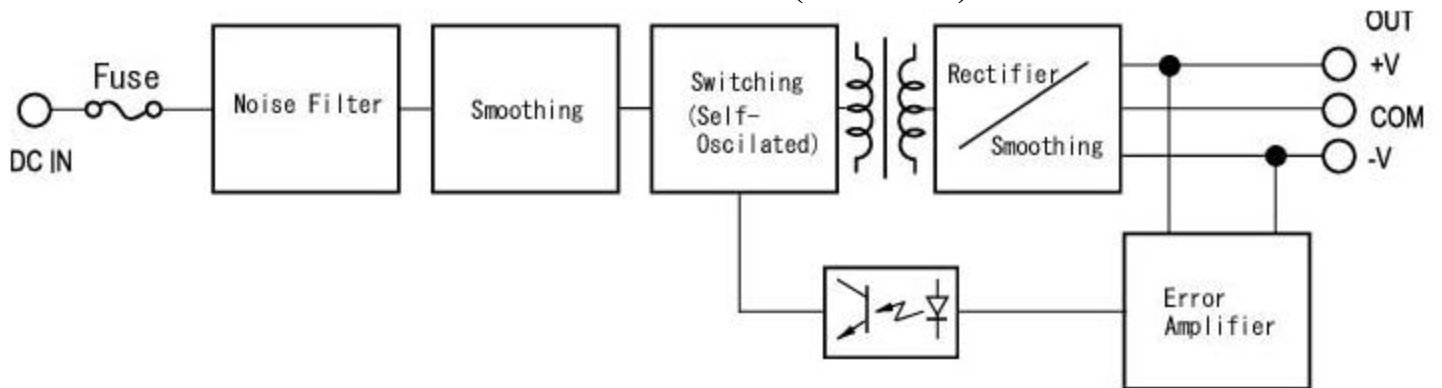


For OBS-SC2448 Out of warranty \geq DC63V input

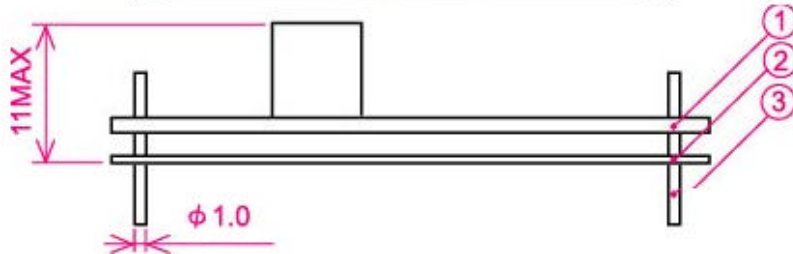
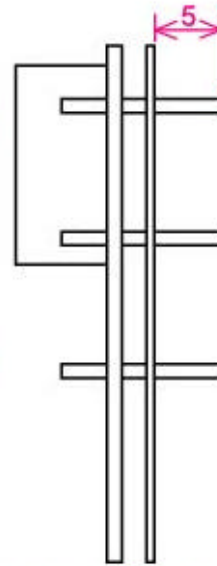
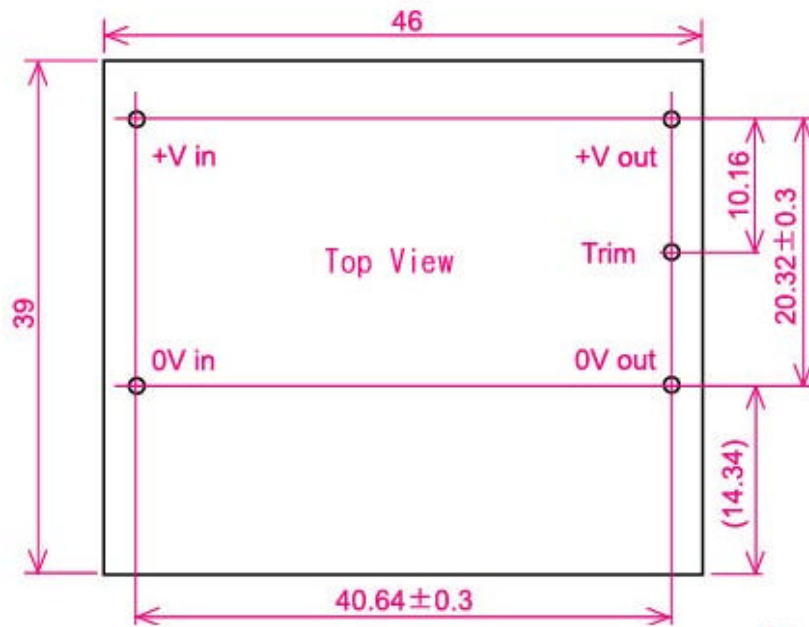
BLOCK DIAGRAM(OBS-SC)



BLOCK DIAGRAM(OBS-WC)

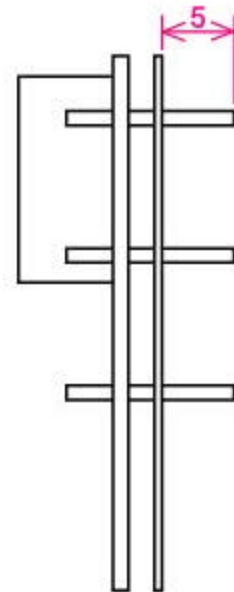
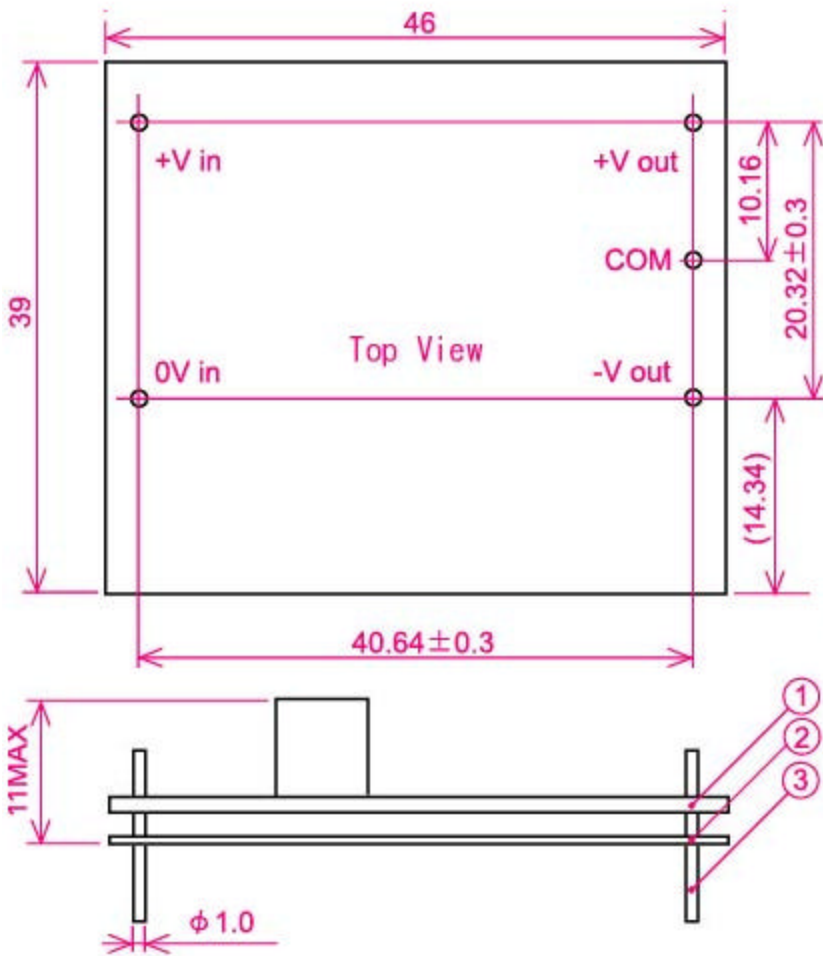


DIMENSION DIAGRAM(OBS-SC)



- ① Double-sided PCB FR4t=1.0
 - ② t=0.5 Insulator V0
 - ③ 1.0DIA PIN Material:BsB2700 1/2H
Copper Plating 1~3 μ m
Solder Plating 3~6 μ m
- * Tolerance ± 0.5

DIMENSION DIAGRAM(OBS-WC)



- ① Double-sided PCB FR4t=1.0
 - ② t=0.5 Insulator V0
 - ③ 1.0DIA PIN Material:BsB2700 1/2H
Copper Plating 1~3μm
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- * Tolerance ±0.5