

10 WATT DC-DC CONVERTER

OBS- SC / WC 12
SINGLE/ DUAL CHANNEL

Specifications	Model							
OBS**SC/WC12 10WATTS/SINGLE/2 OUTPUT	OBS05SC12	OBS12SC12	OBS15SC12	OBS24SC12	OBS22WC12		OBS23WC12	
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	
					±750		±750	
					±60		±75	
d.Temperature Coefficient *8	0.03% / °C maximum)							
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 Sence	Not available							
Trimming of output voltage[mV] *11	+250	+250	+350	+650				
	-250	-900	-1600	-4000				
[mV] *12								
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 50MÜ(minimum) by DC500V insulation tester							
Capacitance(input-output) [pF](typical)	4400							
Vibration	5-10Hz:10mm double amplitude,10-55Hz:19.6m/š,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

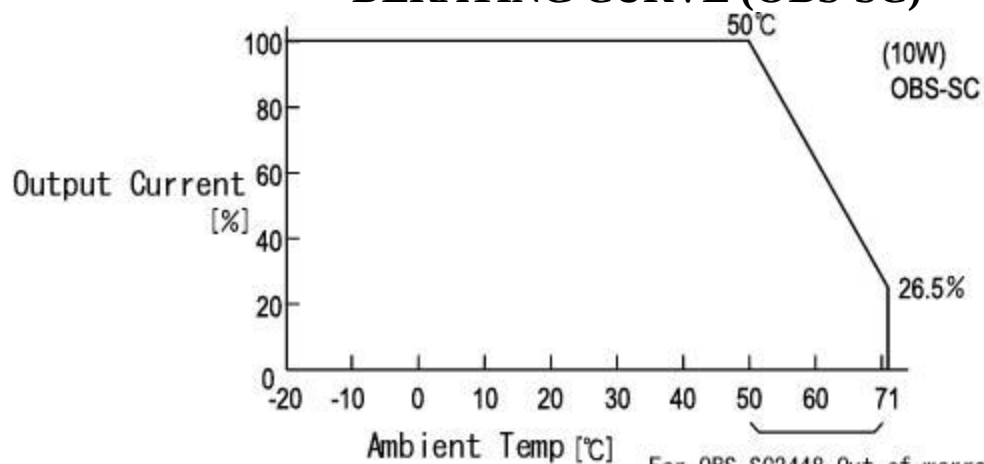
*9 for 7hour period after 1hour warm-up at 25 °C and rated input/output

*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

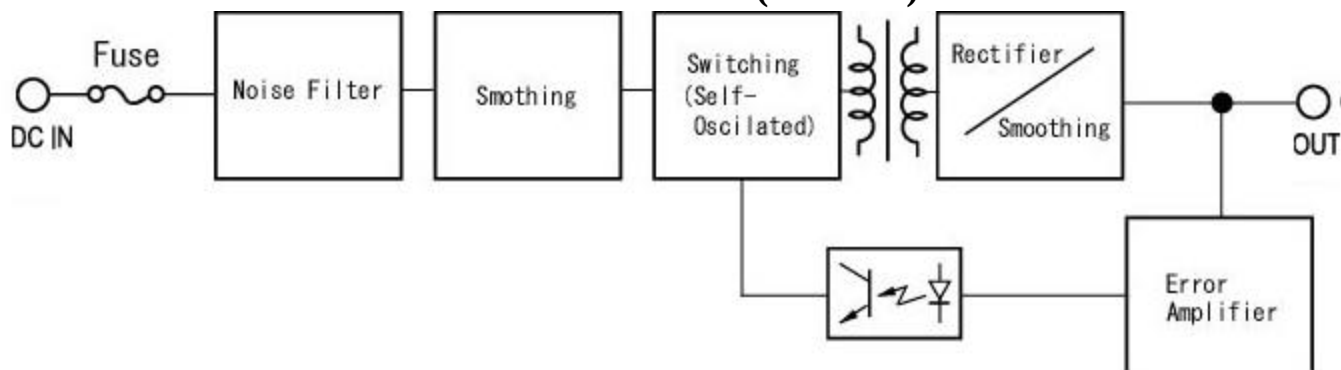
*12 to increase output voltage,put a resistor between pin"+" and trimming pin

DERATING CURVE (OBS-SC)

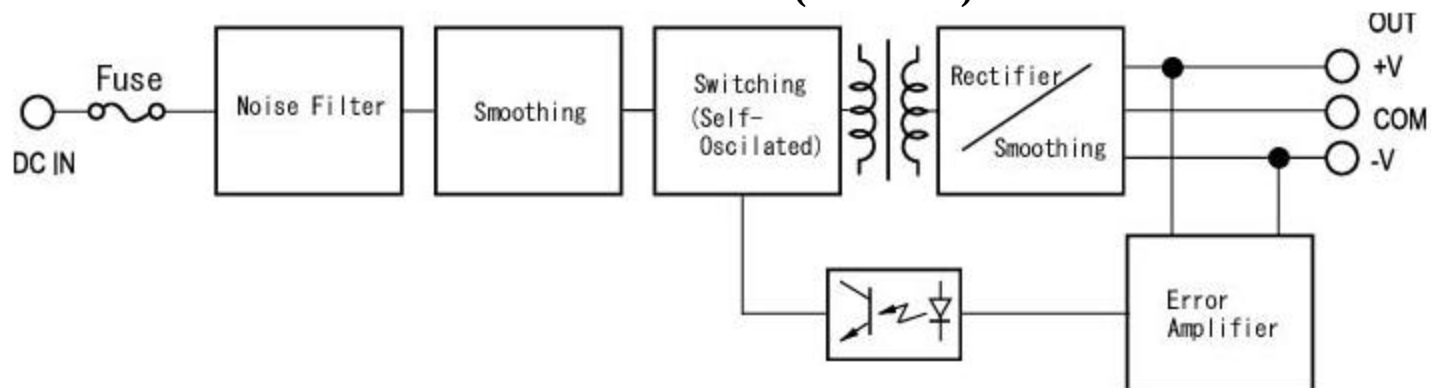


For OBS-SC2448 Out of warranty $\geq$ DC63V input

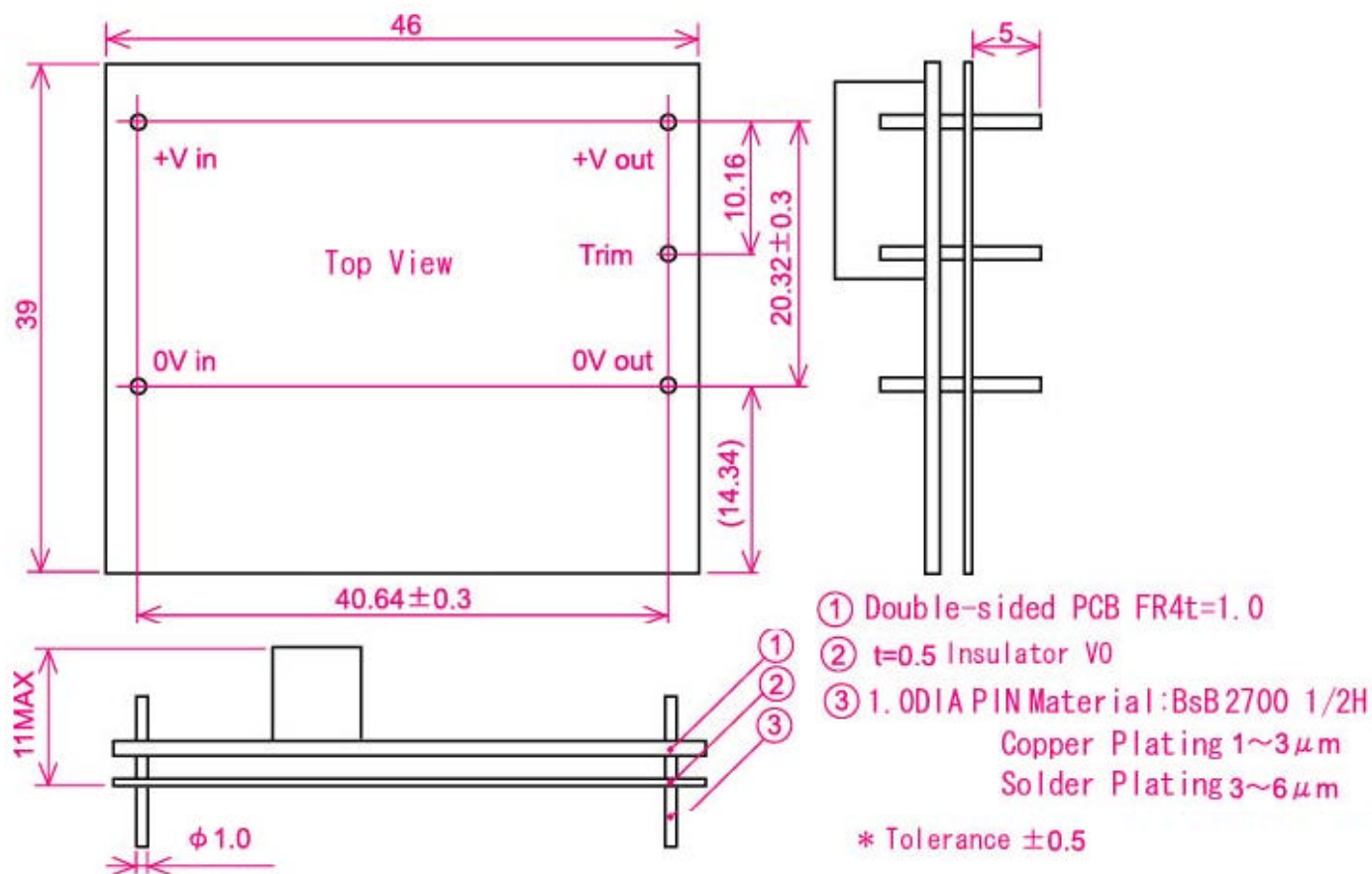
BLOCK DIAGRAM(OBS-SC)



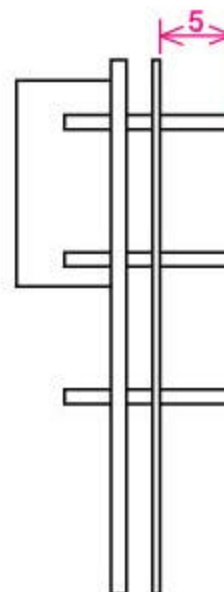
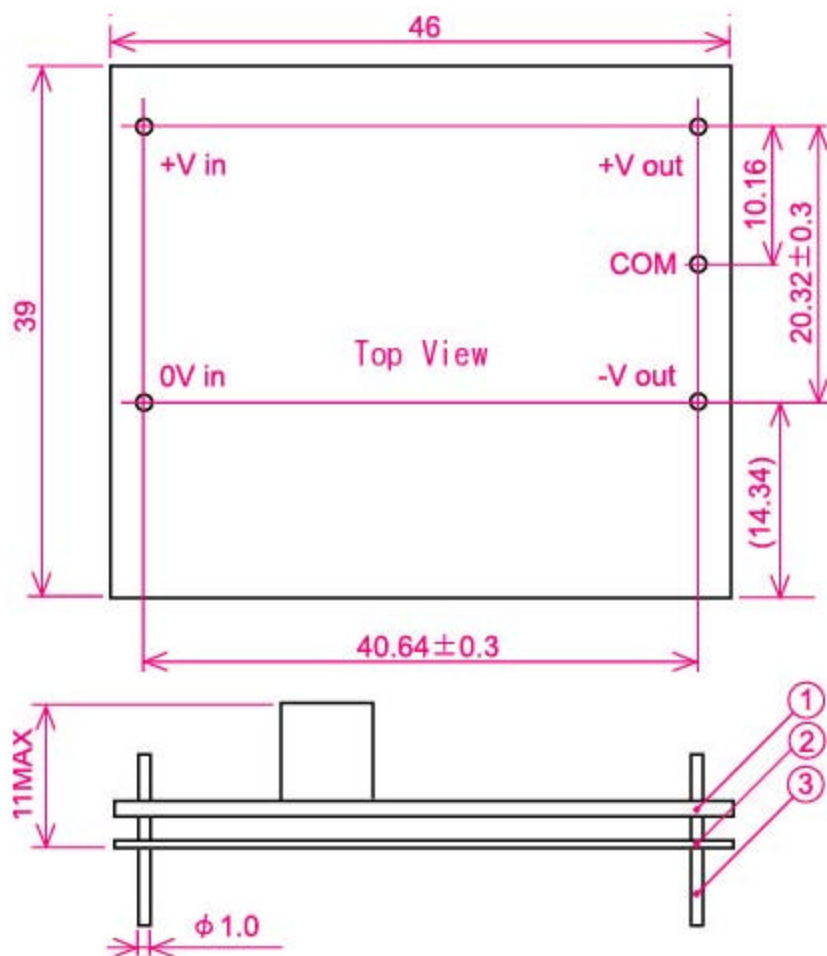
BLOCK DIAGRAM(OBS-WC)



DIMENSION DIAGRAM(OBS-SC)



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
Solder Plating 3~6μm
- * Tolerance ±0.5