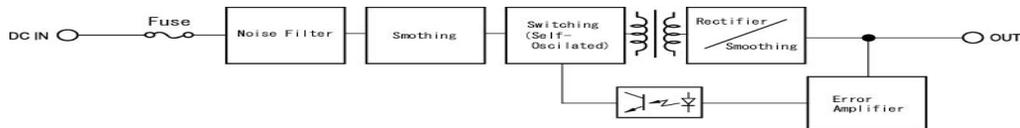


3 WATT DC-DC CONVERTER

**OBQ- SC / WC 1224
SINGLE/ DUAL CHANNEL**

Specifications	Model												
OBQ**SC/WC1224 3WATTS/SINGLE/2 OUTPUT	OBQ05SC1224	OBQ12SC1224	OBQ15SC1224	OBQ24SC1224	OBQ22WC1224	OBQ23WC1224							
Input Characteristic													
Input Voltage DC[V]	12	24	12	24	12	24	12	24	12	24	12	24	
Input Range DC[V]	8-32												
Inrush Current [A]	Not specified								9A/DC12V,18A/DC24V 10uS				
Input Range													
at no load [mA](typical)	22	24	28	29	28	29	30	30	35	31	32	29	
at full load[mA](typical)	267	144	312	168	304	164	317	171	329	173	308	164	
Line Back Noise [mVp-p](typical)	300	150	300	150	300	150	300	150	1000	500	1000	500	
Efficiency [%] (typical) *1	78	72	80	74	82	76	82	76	79	75	81	76	

BLOCK DIAGRAM



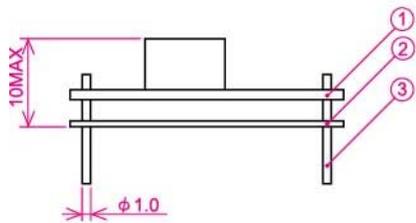
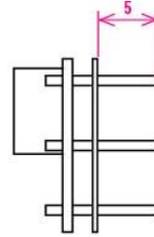
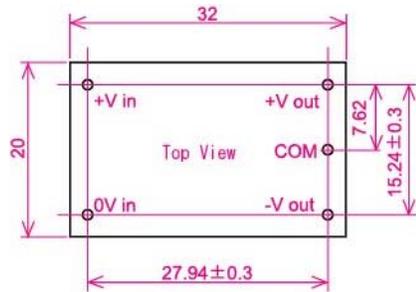
Block diagram OBQ-SC

Specifications	Model							
	OBQ05SC1224	OBQ12SC1224	OBQ15SC1224	OBQ24SC1224	OBQ22WC1224		OBQ23WC1224	
OBQ**SC/WC1224 3WATTS/SINGLE/2 OUTPUT								
Output Voltage [V]	5	12	15	24	+12	-12	+15	-15
Output Current [A]	0.5	0.25	0.20	0.13	0.013-0.13		0.010-0.10	
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	60	75	75
b.Dynamic Line Regulation +/-[mV](maximum) *4	200	200	200	200	300	300	300	300
c.Static Load Regulation [mV](maximum) *5	25	60	75	120	±1000	±1000	±1200	±1200
[mV](maximum) *6					±480	±480	±600	±600
[mV](maximum) *7					±60	±60	±75	±75
d.Temperature Coefficient *8	0.03%/°C(maximum)							
e.Drift[mV](maximum) *9	40	75	90	135	75	75	90	90
f.Dynamic Load Regulation [mV](maximum) *10	150	360	250	500	300	300	300	300
g.Recovery Time *4, *10	20mS(typical)							
Rise up time	10mS(typical) at rated input/output							
Hold up time	Not specified							
Functions								
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] (typical) *11	+250	+250	+350	+650				
[mV](typical) *12	-250	-900	-1600	-4000				
Input Fuse	Installed							
Environmental								
Operating Temperature (derating) *13	-20 to 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)	2200							
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:6g							

Conditions:

- *1 at 25°C and rated input/output
- *2 OBQ**WC0512 satisfies the above-mentioned specifications at the same load conditions on both outputs
- *3 measured by a bayonet probe at the output connector at a 0 to 100Mhz bandwidth
- *4 when input voltage changed from 8V to 32V rapidly at rated output
- *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 at rated input
- *7 when 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 rapidly between 25% and 75% of rated current at rated input
- *11 to increase output voltage, put a resistor between pin"0" and trimming pin
- *12 to reduce output voltage, put a resistor between pin"+" and trimming pin
- *13 operating temperature of OBQ**WC1224 should be $\leq 1-2^{\circ}\text{C}$ (Ein-24) at input voltage from 24V to 32V (Ein=Input Voltage)

DIMENSION DIAGRAM



- ① Double-sided PCB FR4t=1.0
 - ② t=0.5 Insulator V0
 - ③ 1.0DIA PIN Material:BsB 2700 1/2H
Copper Plating 1~3 μ m
Solder Plating 3~6 μ m
- * Tolerance ± 0.5

Block Diagram OBQ-WC