

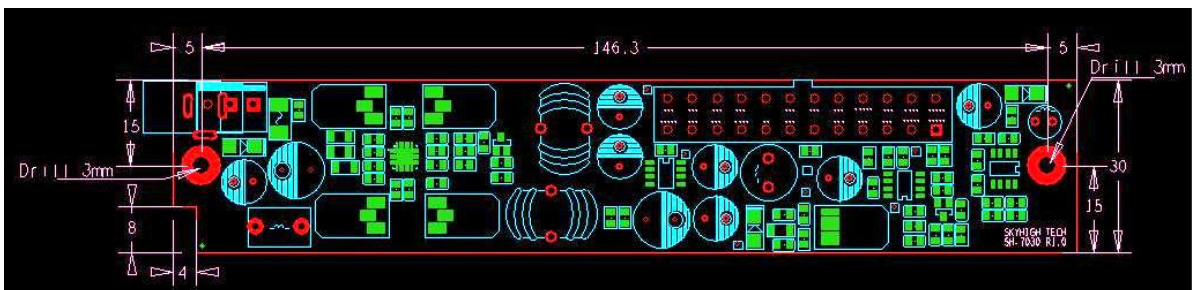
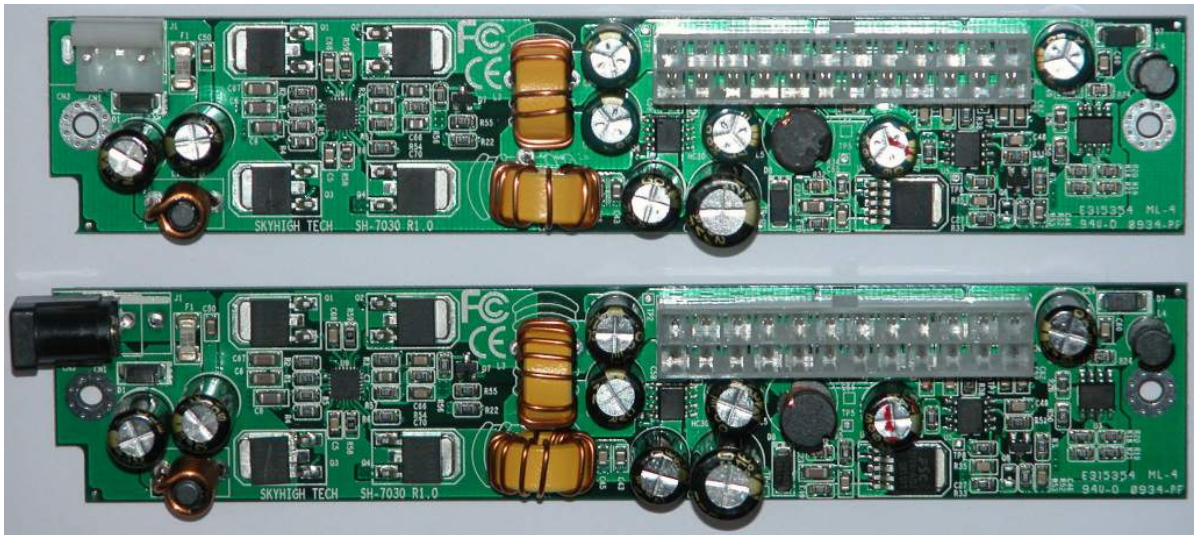
Compact and silent power solution for mini ITX

SH-7030

Specification

DC to DC Converter

Rev. 1.0



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1.0 Scope

This specification defines the physical, functional and electrical characteristics of 108 watts with 5 outputs DC-DC switching power supply that supports **mini ITX mainboard**. Vin is supposed to be AC adaptor with **single 12VDC output**. Testing whole system **in advance for compatibility** is required.

2.0 INPUT CHARACTERISTICS

2.1 Input Voltage

11.4~13.0 VDC

2.2 Input Current

Typical 8.3A, 10A maximum

2.3 Maximal Inrush current

45 A @ 12V (at 25oC ambient cold start).

3.0 OUTPUT CHARACTERISTICS

3.1 DC Output Characteristics

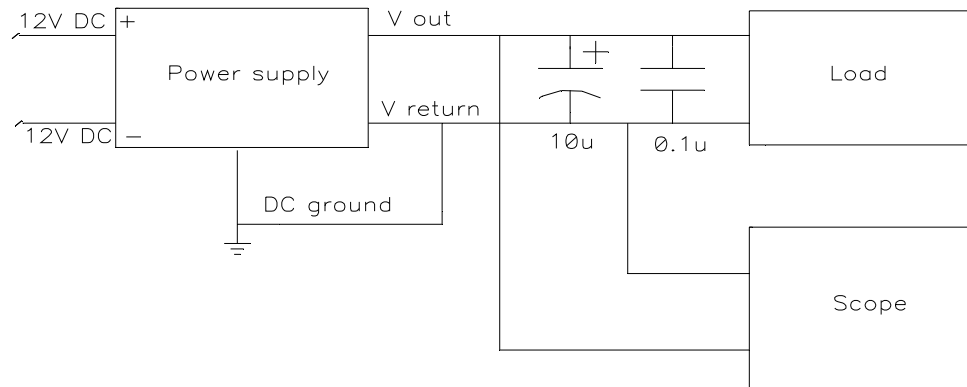
Output Voltage	V1 +5V	V2 +3.3V	V3 +12V	V4 -12V	V5 +5Vsb
Rated Load	6.5A	8.0A	3.2A	0.1A	2.0A
Peak load	10A	10A	5.5A	0.5A	2.5A
Rated output power	32.5W	26.4W	38.4W	1.2W	10.0W
Over All Reg. %	+/-5%	+/-5%	Switched power	+/-5%	+/-5%
Ripple & Noise	50mVpp	50mVpp	Note 1	120mVpp	50mVpp

Note 1. Regulation Condition

Regulation, ripple & noise of 12Vout are decided by switched power.

Note: 2. The maximum allowed ripple/noise output of the power supply is measured over a bandwidth of 0Hz to 20 MHz at the power supply output connectors. A 10uF electrolytic capacitor in parallel with a 0.1uF ceramic capacitor are placed at the point of measurement.

3.2 Ripple voltage circuit



3.3 Efficiency

80 % min. at full load.

3.4 Remote on/off control

When the logic level "PS-ON" is low, the DC outputs are to be enabled.

When the logic level is high or open collector, the DC outputs are to be disabled.

4. PROTECTION

4.1 OVER LOAD PROTECTION

This power supply will be shutdown and latch on between 105% and 130% of rated power.

4.2 SHORT CIRCUIT PROTECTION

This power supply is capable of sustaining the application of a short circuit to ground for any duration. Meanwhile this power supply shall restart when the fault is removed and there shall be no damage to this power supply.

4.3 NO LOAD OPERATION

The power supply must be no damage when operating in no load and full input voltage.

4.4 OVER CURRENT PROTECTION ON INPUT

In order to avoid over current on input, fast blow fuse is build in.

5.0 TIMING

5.1 SIGNAL TIMING DRAWING

The figure 1 represents the timing characteristics of the power good signal. The timing relationship is shown as below:

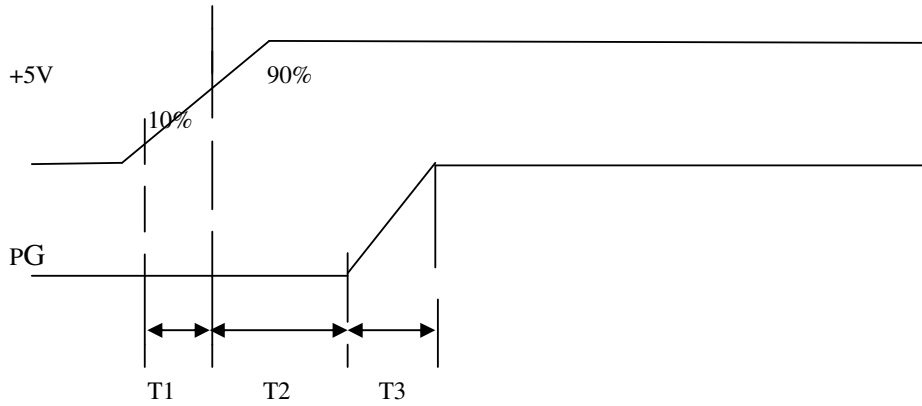


Figure 1.

$$2\text{mS} \leq T_1 \leq 20\text{mS}$$

$$100\text{mS} \leq T_2 \leq 500\text{mS}$$

$$T_3 \leq 10\text{mS}$$

6.0 PHYSICAL CHARACTERISTICS

6.1 Size : 30W*156.3L*18H mm

6.2 weight : 53.0g

7.0 Output DC Connectors

7.1 DC INPUT CONNECTOR

Connector : DC input (CN1)

Pin	Signal
1	+12V
2	GND

7.2 DC OUTPUT CONNECTOR

Connector : DC output (CN2)

Pin	Signal	Pin	Signal
1	+3.3V	13	+3.3V
2	+3.3V	14	-12V
3	GND	15	GND
4	+5V	16	PS_ON
5	GND	17	GND
6	+5V	18	GND
7	GND	19	GND
8	+PG	20	-
9	+5Vsb	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	+3.3V	24	GND

8.0 Environmental requirement:**8.1 Temperature****8.1.1 Operating :** 0°C to 50°C.**8.1.2 None – Operating :** -20°C to 70°C**8.2 Relative Humidity****8.2.1 Operating :** To 85 % relative humidity (non-condensing)**8.2.2 Non-Operating :** To 95 % relative humidity (non-condensing)**9.0 MTBF**

100,000 hours at 25°C .



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Certificate No: EC8D1922

CERTIFICATE

EQUIPMENT : DC to DC Converter

MODEL NO. : SH-7030

APPLICANT : Skyhigh Technology Co., Ltd.

9F, No. 129, Section 2, Chung Shan North Road, Taipei City



I HEREBY

CERTIFY THAT:

THE MEASUREMENTS SHOWN IN THIS TEST REPORT WERE MADE IN ACCORDANCE WITH THE PROCEDURES GIVEN IN EUROPEAN COUNCIL DIRECTIVE 2004/108/EC. THE EQUIPMENT WAS PASSED THE TEST PERFORMED ACCORDING TO

European Standard EN 55022:2006 Class B,
EN 61000-3-2:2006, EN 61000-3-3:1995/A1:2001/A2:2005,
EN 55024:1998/A1:2001/A2:2003 (IEC 61000-4-2:2001,
IEC 61000-4-3:2006, IEC 61000-4-4:1995/A2:2001,
IEC 61000-4-5:2005, IEC 61000-4-6:2003/A1:2004/A2:2006,
IEC 61000-4-8:2001, IEC 61000-4-11:2004).

THE TEST WAS CARRIED OUT ON Dec. 30, 2008 AT
SPORTON INTERNATIONAL INC. LAB.

Castries Huang Dec 31, 2008

Castries Huang

Supervisor

SPORTON INTERNATIONAL INC. 6F, No.106, Sec.1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

FCC TEST REPORT

for

47 CFR FCC Rules and Regulations Part 15

Subpart B, Class B Digital Device

Equipment : DC to DC Converter
Model No. : SH-7030
FCC ID : N/A
Filing Type : Verification
Applicant : **Skyhigh Technology Co., Ltd.**
9F, No. 129, Section 2, Chung Shan North Road, Taipei City

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