Specification

Model No： **PB-1240-6SA1**

Description： **12V 24W AC Adapter**

Revision： **A**

Issued Date： **2013/05/21**

Customer Part No.：

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Change List			
ECN No	**REV**	**Revision Description**	**Date**
	A	Initial	2013/05/21

Contents

1. Description

This product is an adapter type AC to DC power transfer device; it is able to provide 24W single dc output with constant voltage source.

2. Electrical

2.1 Input Voltage (AC ~)

a. From 100-120 Vac Nominal.

b. From 90-132 Vac Maximum.

2.2 Input Frequency

a. 50/60 Hz Nominal.

b. From 47-63 Hz Maximum.

2.3 Input Current

0.6A max at 90Vac and dc output max load.

2.4 Inrush Current

60A max. at DC output at Full-load and 132Vac/60Hz input for Cold Start at 25℃, AC input voltage's phase angle is 90±10° degrees.

2.5 Hold-Up time (main interruption requirement)

16.7 ms minimum at full-load at 90Vac 60Hz AC input.

2.6 Efficiency

Average 25/50/75/100% load power efficiency need to >= 82.5% at 115Vac to compliance with CEC level V efficiency requirement.

Test condition will be tested after full load operating for 30min then measure it.

2.7 Safety Test

a. Leakage current less then 0.25mA.

b. Hi-pot test: 3000Vac 5mA, 1 minus between Primary to Secondary.

c. Insulation: 500Vdc, 2Sec between Primary to Secondary circuit, IR shall≧20MΩ.

2.8 Start Up

The output voltage shall rise from 0 volt and settle within regulation in less then 2sec, from apply of 115Vac.

2.9 No load power consumption

AC input power Pin shall be less then 0.3W at no load and 115Vac, 60Hz condition.

2.10 Rise Time

From 10% to 90% of dc output voltage shall be less then 50msec with the 1000uF capacitive load to that of the product.

2.11 Over-Shoot and under-shoot

Less than 5% of nominal AC input voltage.

2.12 DC output requirement

Vout	+12V	Remark
Vout min	11.4V	Vdc
Vout typ	12.0V	Vdc
Vout max	12.6V	Vdc
Ripple/noise	120	mVpp
Iout max	2	A
Iout min	0	A

Ripple and Noise.

Tested by dc loading side parallel with a 22uF/EC and 0.1uF/Ceramic capacitor and Measured Band-Width with DC-20MHz.

2.14 Output circuit protection

a. SCP: short circuited protection with auto-recovery function.

b. OCP: Over current protection with auto recovery function.
Current limit: 3A (max) at 115 Vac.

c. OVP: Over voltage protection with auto-recovery function.
Tripped voltage will be less than 18Vdc at any duration.

2.15 Transient Response

Dynamic load condition.

Vin (AC)	DC output	Vout Max	Vout Min	I1(A)	I2(A)	I1 time	I2 time	dI/dT
115Vac/60Hz	12V	12.6	11.4	0.2	2	5msec	5msec	0.1A/usec

3. Environment

3.1 Temperature

a. Operation: 0 to 40 ℃ for nominal input condition.

b. Storage: -40 to 70 ℃

3.2 Humidity

a. Operation: 5-95% for nominal input condition.

b. Storage: 5-95%.

4. Safety / EMC

4.1 Safety

Safety referring Standards
IEC / EN60950-1 2nd
IEC / EN60065

4.2 EMS

Test Item	Test Specification		IEC Standards	Performance Criteria
ESD	Contact	8KV	61000-4-2	A
ESD	Air	15KV	61000-4-2	A
RS	FR : 80MHz-1.0GHz,Field Strength : 3V/M		61000-4-3	
EFT	2KV on AC power line.		61000-4-4	A
CS	FR: 150KHz-80MHz 3Vrms		61000-4-6	
DIPS	>95% reduction, 0.5 periods		61000-4-11	A
	>30% reduction, 25 Periods			A
	>95% reduction, 250 Periods			B

SURGE	Surge Immunity Tests: 1) +/-6kV Combination Wave: 2Ω, 1.2/50μSec ; N=5 strikes at + 6kV & N=5 strikes at -6kV per all noted modes {A, B & C} & all noted reference angles {A, B & C}. 2) +/-6kV Ring Wave: 12Ω; 0.5μS; N=5 strikes at + 6kV & N=5 strikes @ -6kV per all noted modes {A, B & C} & all noted reference angles {A, B & C}. Note 1: Modes : A) L to N B) N to PE ; C) L to PE Note 2: Reference Angles: A) 0° B) 90° C) 270° Note 3: Protective Earth {PE} is defined as DC output ground connection. Note 4: PS shall meet spec after test. No permanent damage allowed.	61000-4-5 61000-4-12	

4.3 EMI for both Conduction & Radiation

Referring Standards	Spec / Certified
FCC	Part 15,class B
CISPR	CISPR 22, class B

5. Reliability

5.1 Aluminum Capacitor Lifetime

61320 hours at full load & 90VAC, ambient temperature 40℃.

5.2 Burn-in

100% Burn-In with 80-100% loading & 30-40℃ Environment temperature.

5.3 Vibration Test

Vibration of 1.25G peak, 5Hz-55Hz, constant acceleration swept from 0-60Hz with a two minute sweep time, and cycled from 60 minutes per each of three axes.

5.4 M.T.B.F

Prediction: Minimum 100,000 hours @ 25 °C SR-332

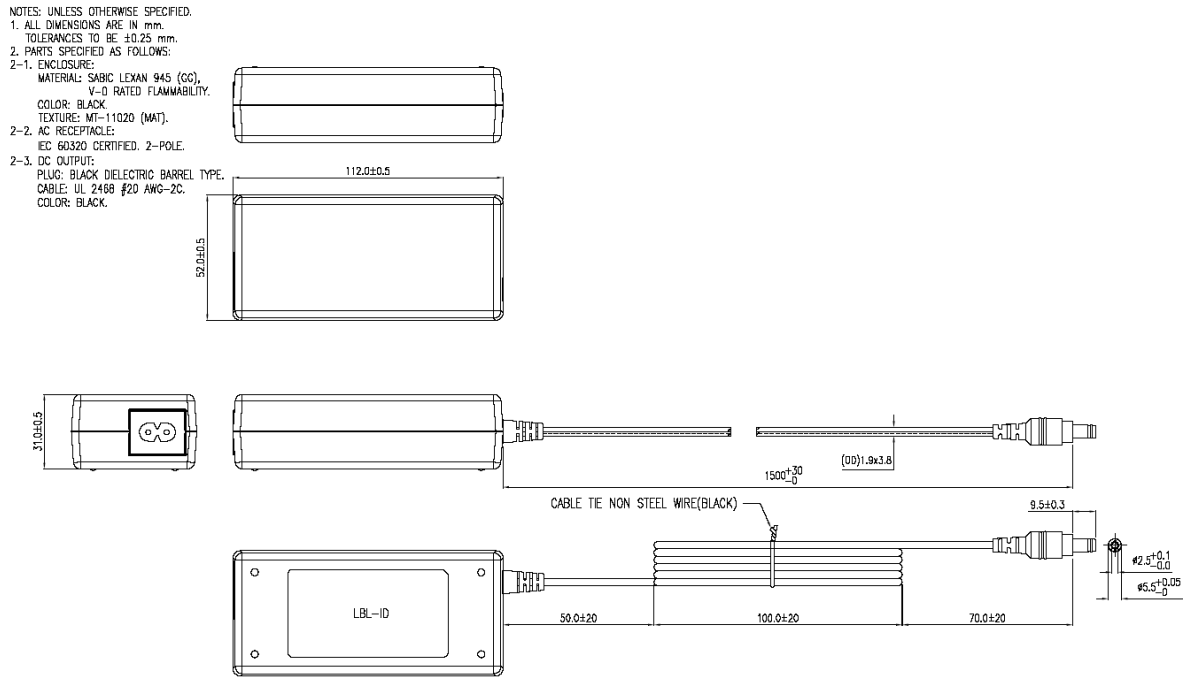
5.5 Acoustic

The power supply must have a maximum sound pressure noise level of less than 25 dB at a distance of 1 meter under all operating conditions.

6. Mechanical

6.1 Physical Size

Plastic case size 112x52x31mm



Outline Drawing

6.2 Input connector

UL Pin.

6.3 Output connector

DC output with traditional barrel 180 degrees angle type 5.5 x 2.5 x 9.5mm, 1.5M, UL2468 20AWG cable

6.4 Weight about

160g +/-10 g.

6.4 Flammability

must meet 94V-0 and VW-1.