UMEC

SMPS SPECIFICATION

UMEC P/N:

UP220-AE-A(open frame)

UNIVERSAL MICROELECTRONICS

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1.0 DESCRIPTION

The power supply that is described by this report is a **3** output **220** watts unit. The model number is **UP220-AE**. This unit will be designed to meet the relevant safety and EMC regulations.

This unit is ready for "Green Product" and meet "Pb -free lead plating"&" ROHS Compliant" Requirement.

2.0 INPUT REQUIREMENTS

2.1 AC Input Voltage Range

Parameter	Minimum	Nominal	Maximum	Unit
Low Line	90	115	132	Vac
High Line	180	230	265	Vac

2.2 Line Frequency Range

Parameter	Minimum	Nominal	Maximum	Unit
Frequency	47	50/60	63	Hz

2.3 Input Current

Specifications	Max. (amps)	Unit
Inrush-Current @ 115Vac, cold start 25 Deg C	50	A
Inrush-Current @ 230Vac, cold start 25 Deg C	100	A
Steady-Current @ 115Vac	5	A
Steady-Current @ 230Vac	2.5	A

3.0 OUTPUT REQUIREMENTS

3.1 Output Voltage Regulation

Output	Range	Minimum	Nominal	Maximum	Unit
+5.1V	±5 %	4.845	5.100	5.355	V
+12V	±5 %	11.40	12.00	12.60	V
+24V	±5 %	22.80	24.00	25.20	V

3.2 Output Current Range

Output	Min. Current	Max. Current	Peak Current	Unit
+5.1V	0.2	3.5		A
+12V	0.5	1.7		A
+24V	0.5	7.5		A

3.3 Ripple & Noise

Output	Peak to Peak	Unit
+5.1V	50	mV
+12V	120	mV
+24V	250	mV

Measurements shall be made with an oscilloscope with 20 MHz bandwidth. Outputs shall be bypass with a 0.1 μF ceramic disk capacitor and a 10 μF electrolytic capacitor to simulate system loading.

4.0 PROTECTION REQUIREMENTS

4.1 Over-Voltage Protection

Output	**Maximum**	**Unit**
+5.1V	**6.50**	**V**
+12V	**15.50**	**V**
+24V	**31**	**V**

4.2 Short Circuit Protection

Output	**Spec.**
+5.1V	**Automatically recovery**
+12V	**Automatically recovery**
+24V	**Shut down and latch off**

5.0 GENERAL REQUIREMENTS

5.1 Turn-On Delay Time

The delay time for all output rises within regulation limit after the input power turn on.

AC100V~AC240V

Output	Specification (max.)	Unit
+12V	1	Sec
+24V	1	Sec

5.2 Overshoot at Turn on / Turn off

The overshoot voltage shall be present on any output during turn on or turn off.

Output	Range	Maximum	Unit
+5.1V	10 **%**	5.61	V
+12V	10 **%**	13.2	V
+24V	10 **%**	26.4	V

5.3 Rise Time

The time of output voltages rise from 10 % to 90 %.

Output	Spec.	Unit
+5.1V	200	ms
+12V	200	ms
+24V	200	ms

5.4 Efficiency

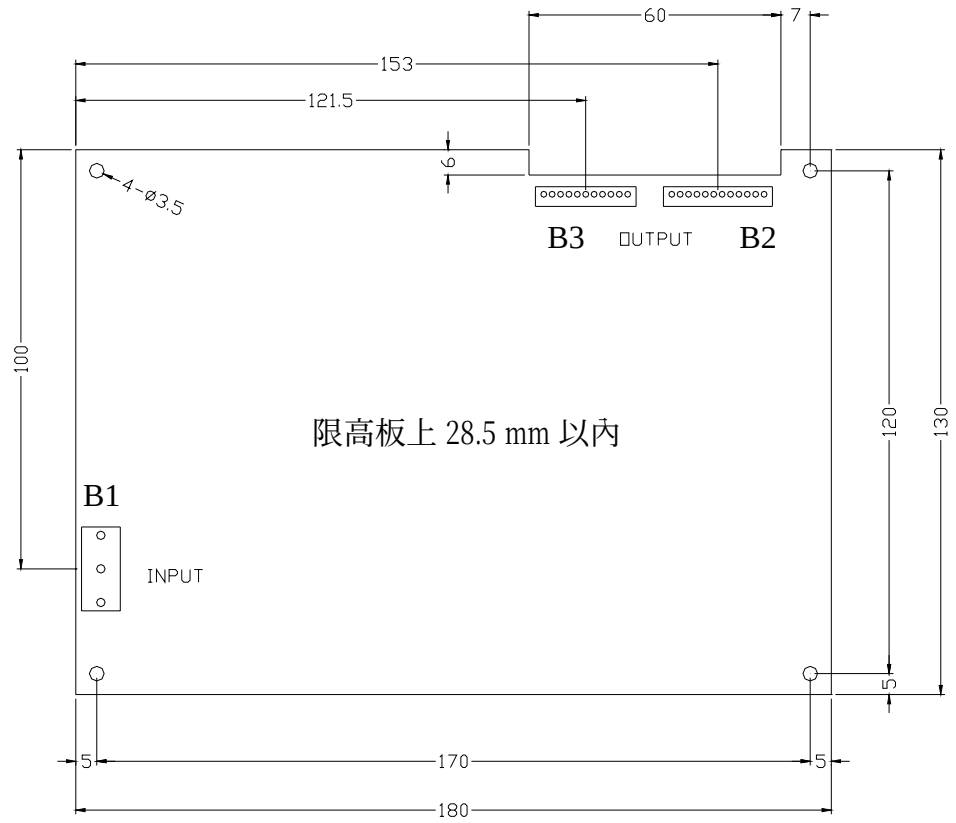
Input	**Spec. (min.)**	**Unit**
115Vac	**85**	**%**
230Vac	**87**	**%**

5.5 Hold-Up Time

The power supply shall maintain the output voltage regulation within the specified limits in paragraph 3.1 for at least 10ms after the AC input voltage is removed, measure at 115Vac and at maximum load.

6.0 Mechanical

6.1 Power Supply Dimensions



6.2 AC Connectors

B1: 2.54mm Pitch

Pin	Signal
1	L
2	NC
3	FG
4	NC
5	N

6.3 DC Connectors

B2: 2.0mm pitch

Pin	Signal
1	24V
2	24V
3	12V
4	12V
5	5.1V
6	5.1V
7	5.1V
8	GND
9	GND
10	GND
11	B/L Adj.
12	ON/OFF
13	B/L on/off

B3: 2.0mm pitch

Pin	Signal
1	B/L on/off
2	B/L Adj.
3	24V
4	24V
5	24V
6	24V
7	24V
8	GND
9	GND
10	GND
11	GND
12	GND

6.4 ON/OFF

The ON/OFF signal is required to remotely turn on/off the power supply. ON/OFF signal is an active high signal that turns on the 12V, and 24V power rail.

ON/OFF Signal Characteristic

Signal	Specification	
ON/OFF = Open or Low	Power Supply Off	
ON/OFF = high	Power Supply On	
	Min.	Max.
Logic level low	0V	2.0V
Logic level High	3.0V	5.25V

7.0 Environmental Temperature/Humidity

7.1 Temperature

Operating ambient: 0°C to 50°C.

o/p power de-rating from 25°C to 50°C ----- 1.25%/°C.

Non-operating ambient: -25°C to +70°C.

7.2 Humidity

Operating: To 85% relative humidity (non-condensing).

Non-operating: To 95% relative humidity (non-condensing)

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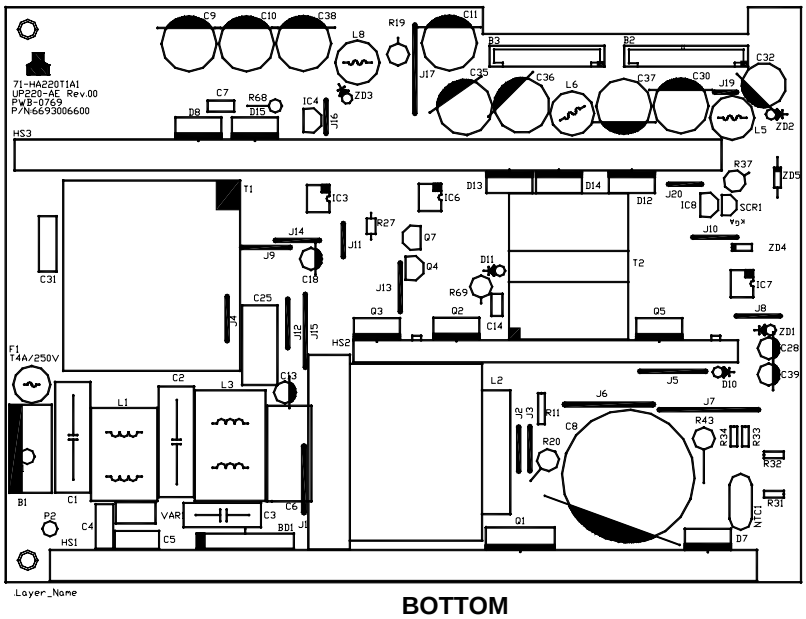
10.0 Test Placement

測試時需擺放方式如下圖所示

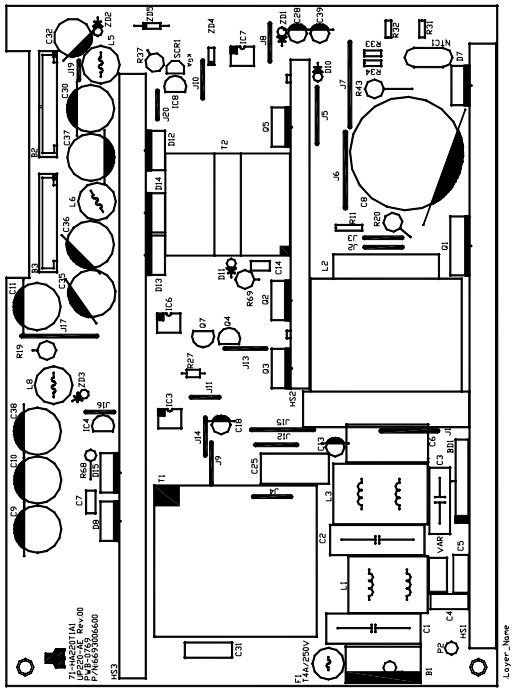
TOP



BOTTOM

TOP

測試時需擺放方式如右圖所示



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