

MODEL LIST

ADP-200JB HA	ADP-200JB HB	ADP-200JB HA88	ADP-200JB HD	ADP-200JB HC
ADP-200JB KA	ADP-200JB KB	ADP-200JK KA-2	ADP-200JK KA-3	ADP-200JK KA1W

- 1 測試注意事項內容，未經工程師許可，不可任意變更。

Test Notice contents shall not be changed or revised without engineer permission.

- 2 此測試規格用於主線測試，所有項目均需被測試，因設備或線速限制無法全數測試時，需測試 **worst case**，QC 需按抽樣標準做抽樣測試。

The production line shall perform all or worst test items/conditions, and QC shall follow the sampling plan to perform the sampling test.

- 3 測試注意事項：

- 所有 ATS 測試時，須偵測 CONNECTOR 端之電壓。
- Thermal 測試環境：用電木測試
- Acoustic noise 測試時須使用 AC source 6530
- Acoustic noise 測試高壓時用 254VAC
- Power Saving 皆須使用積分 5 分鐘的方式測試
- Hi-Pot 測試時 AC cable 須使用兩芯線
- 所有測試外掛系統電容(2000uF 日系電容)需直接加在治具端上，不可使用電容盒聯接
- 測試 PLD 時，需先滿載 B/I 十分鐘後在測試，電阻負載須接地。
- AC on/off 測試必須設 Von 點為 15V
- EMI/RFI margin 6dB(以母機種 ADP-200JB BA 能力值判定)



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DELTA ELECTRONICS, INC.

DESCRIPTION :

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MODEL NO. :

ADP-200JB SERIES

Date

Drawn

Design (EE)

Design (ME)

DOCUMENT NAME. :

REV.

05/22'24

邱美淳

顏偉任/孔維良

廖明運/陳俊豪
/張伯毅

TS-200JB SERIES

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4 燒錄 IC :

無

5 小板(小板名稱)動態測試 :

無

6 手調測試站 :

a. Full Load Test: 檢查滿載輸出是否符合規格

b. Min. Load Test: 檢查輕載輸出是否符合規格

c. OTP Test :

Load Condition : 10A

ADP-200JB HA\HB\HC\HD\HA88

敘述測試方法: NTC31 並聯 2KF,檢查輸出電壓是否 shutdown and Latch off.

ADP-200JB KA\KB

敘述測試方法: NTC31 並聯 2KF,檢查輸出電壓是否 shutdown and Latch off.

d. OVP Test :

Load Condition : 0A or 10A

ADP-200JB HA\HB\HC\HD\HA88

敘述測試方法,例如: 持續短路 R134 大於 5sec,檢查輸出電壓是否小於 27V, OVP 動作模式為 Latch off.

ADP-200JB KA\KB

敘述測試方法,例如: turn on 後輸出外加 22V 的 DC 電壓,檢查輸出電壓是否小於 27V, OVP 動作模式為 Latch off.

e. AC On/Off:

Power supply 連續開關機 On= 3 秒, Off= 3 秒, 5 次後, 必須無損壞情形。



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7 Function test (ATS) procedure :

Input Specification Table:

INPUT VOLTAGE	MINIMUM	MAXIMUM	NOMINAL(RATED)
LOW RANGE	90 VAC	132 VAC	100 VAC
HIGH RANGE	180V AC	264V AC	240 VAC

Output Specification Table:

OUTPUT	MINIMUM	MAXIMUM	NOMINAL(RATED)
Voltage (Vdc)	19	21	20
Loading (Amp)	0A	10A	0~10A

Test Item	Vin	Load	Spec	Remark
Inrush Current	264V/63Hz; Phase 90°	10A	No damage	
Turn On Time	100V/50Hz 240V/50Hz	10A	<3Sec	該項 CPK 以 Bench 為準
Hold up Time	100V/50Hz	10A	>16mS	
Rise Time	90V/47Hz 264V/63Hz	10A	<40mSec	
Overshoot	90V/47Hz 264V/63Hz	0A, 10A	<21V	
Line Regulation	90/115/230/264V 47/63Hz	0A, 10A	19~21V	
Load/Combine Regulation	120V/60Hz	0A, 10A	19~21V	
Capacitor Load	90V/47Hz 264V/63Hz	10A	Shall not cause the adapter to shut down	2000uF
Ripple & Noise	90V/47Hz 264V/63Hz	0A, 10A	<350mVp-p	0.1uF//10uF BW : 20MHz
Sync Dynamic	90V/47Hz 264V/63Hz	0.05A~100%Load	18.8~21.2V	S/R: 2.5A/uS, 100Hz~100 KHz
Peak Load	100V/50Hz 240V/50Hz	a) 9A~20A b) 8.75A~22.5A	>18.3V	a) L(18ms),H(2ms) b) L(13.5ms),H(1ms) S/R: 2.5A/uS,
Surge Load	100V/50Hz 240V/50Hz	10A(1s) to 12A(1s)	>18.5V	S/R: 2.5A/uS,



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Short Circuit Protection	90V/47Hz 264V/63Hz	10A		latch
Over Current Protection	90/115/230/264Vac	10A-16A	12~16A Debounce time 400ms	latch
Input Current	100V/50Hz	10A	<2.5A	
Harmonic Current Power Factor	230V/50Hz	Pin = 75W 100% Load	EN-61000-3-2	
Power factor	100V/50Hz 240V/50Hz	100% Load	PF >0.9	
10% Load Efficiency	115V/60Hz 230V/50Hz	10% Load	76% 79%	Cold Hot
Average Efficiency	115V/60Hz 230V/50Hz	25%, 50%, 75% & 100% Load	>86%	Cold
Average Efficiency	115V/60Hz 230V/50Hz	25%, 50%, 75% & 100% Load	>89%	Hot
Pin at No Load	115V/60Hz 230V/50Hz	No Load	<0.15W	輸出端不可接到負載 請以積分測試, 該項 CPK 以 Bench 為準
Pin at standby Load	115V/60Hz 230V/50Hz	18W 11W 3W 1.65W 1.5W 1W 0.25W	<22.7W <15W <5W <3W <2.2W <1.6W <0.45W	請以積分測試, 該項 CPK 以 Bench 為準 不考慮 CPK

Note 1: After completes required DVT test matrix, identifies and selects the worst case condition for the Production MTR. It is not required that all test conditions be tested. Example: If worst case condition for Output Ripple is minimum input voltage and maximum dc load, then that is the test condition to be used.

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8. Safety

8.1 Hi-POT test :

- 8.1.1 PRIMARY to SECONDARY use 3000+10% Vac. (上昇時間: DC=1Sec, AC=0.1Sec) 。
Test time=1sec 。 Arcing current=Level 8(EVT1: 5mA, EVT2, DVT: 8mA, PVT/MP: 10mA)
Hi-Limit current=10mA 。 Lo-Limit current=0.01mA 。
Primary to FG :1.5KVac for 1minute

8.2 Insulation Resistance (IR) test :

- 8.2.1 PRIMARY to SECONDARY use 500Vdc test ; Insulation resistance limit: >30M ohm 。

8.3 Leakage current

- 8.3.1 The power supply leakage current shall be less than 100 uA by 240Vac/50Hz
Test with AC cable 80cm

9. Burn-in 測試作業規範

Follow Delta Standard Burn-in Condition

10. I2C 測試作業規範

N.A.

11. FRU Data Barcode Read/Write 測試作業規範

N.A.

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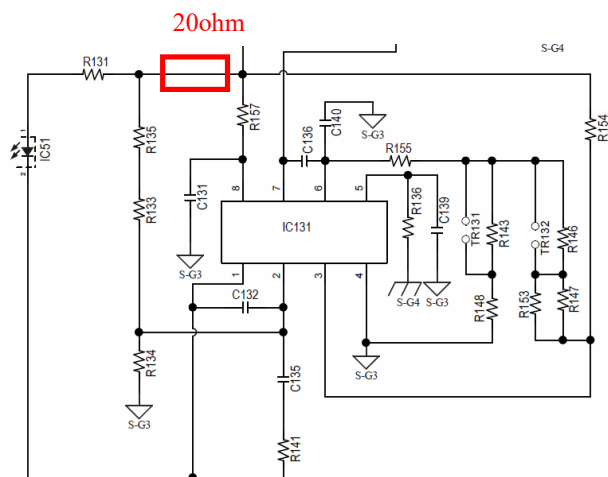
12. Loop/Gain 測試作業規範

Disturbance voltage setting 1.77V

線路如下所示:

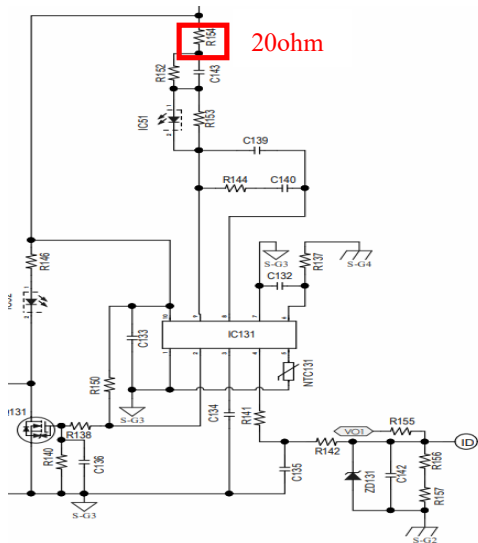
FOR ADP-200JB HA/HB/HA88/HD/HC

將 R131/R135 與 Vo 間的 trace 斷開串入 20ohm, 由該 20ohm 電阻進行 loop gain 之量測



FOR ADP-200JB KA/KB

將 R154 由 0ohm 改成 20ohm, 由該 20ohm 電阻進行 loop gain 之量測



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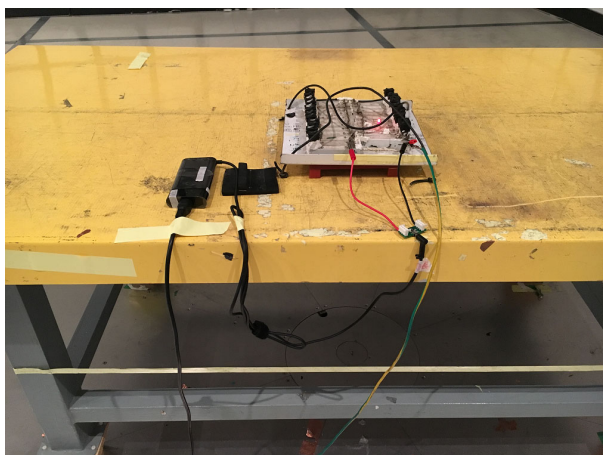
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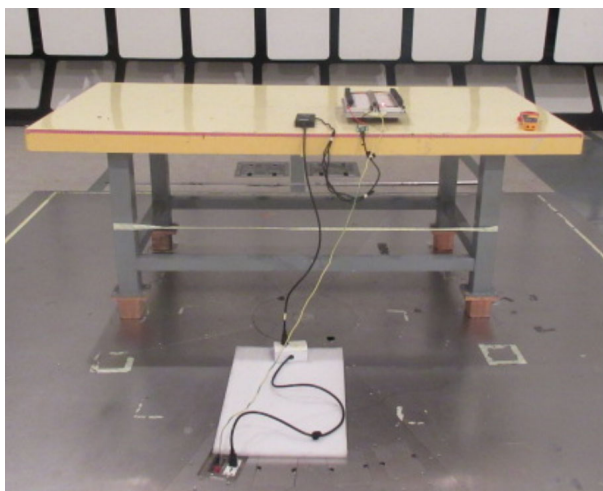
13. EMI/RFI Setup

1. AC power cord 使用 1M 線
2. 樣品 DC cable 放在樣品與 dummy load 之間 (不能跨到 AC power cord 及接地線)
3. Dummy load 放桌內, 治具與桌面切齊
4. 判定方式以原始機種擺放方式測試結果判定 .


原始機種的擺放方式



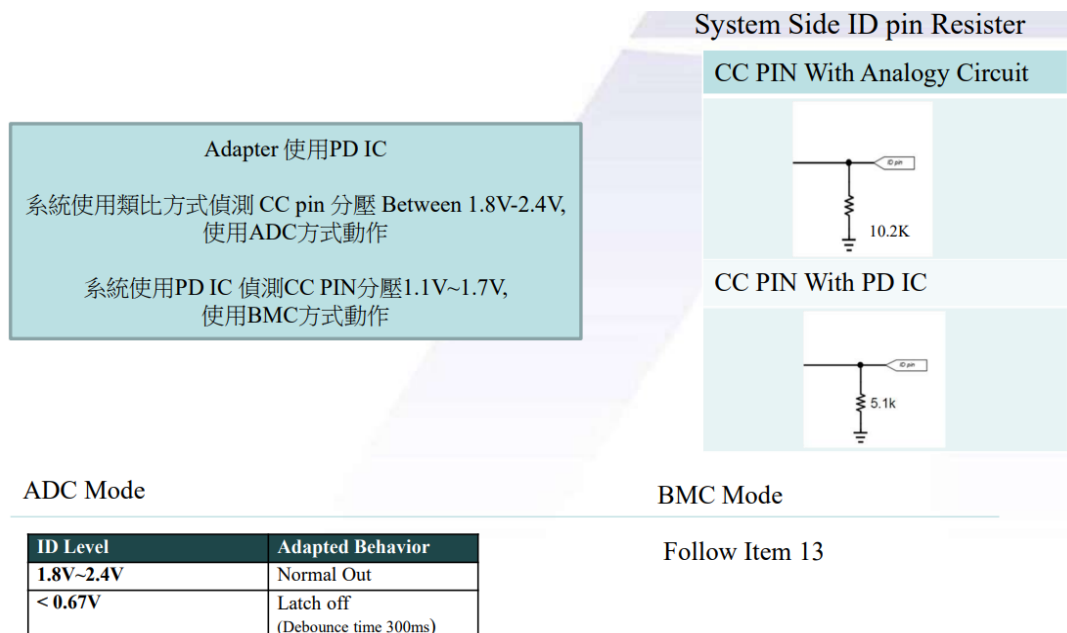
Asus 機種接用 power box 的擺放方式



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14. DC Plug OTP(FOR ADP-230JB KA/KB)



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15. Mechanical 包裝測試條件: 請參照台達規範: 10000-0089

(1) Drop Test

a. 條件

Carton weight

~25kg, 高度 60cm

26~50, 高度 45cm

51~75, 高度 35cm

76~100, 高度 30cm

b. 紙箱測試順序

以紙箱之1個稜角/3個稜線/6個面, 每次落下試驗可取任一稜角(傾斜角不得超過10度)

c. 試驗步驟如下

Step1. 垂直落下此角 (Corner 2-3-5)

Step2. 由此角引申之最小稜線 (Edge 3-5)

Step3. 由此角引申之次長稜線 (Edge 2-5)

Step4. 由此角引申之最長稜線 (Edge 2-3)

Step5. 最小的面 (Front 5)

Step6. 相對的最小面 (Rear 6)

Step7. 次小的面 (Right 2)

Step8. 相對的次小面 (Left 4)

Step9. 最大的面 (Bottom 3)

Step10. 相對的最大面 (Top 1)

(2) Vibration Test

a. 條件

頻率 5 Hz, 振幅 20 mm, 時間 5 Min.

頻率 10 Hz, 振幅 5 mm, 時間 5 Min.

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頻率 15 Hz, 振幅 2.2 mm, 時間 5 Min.

頻率 20 Hz, 振幅 1.25 mm, 時間 5 Min.

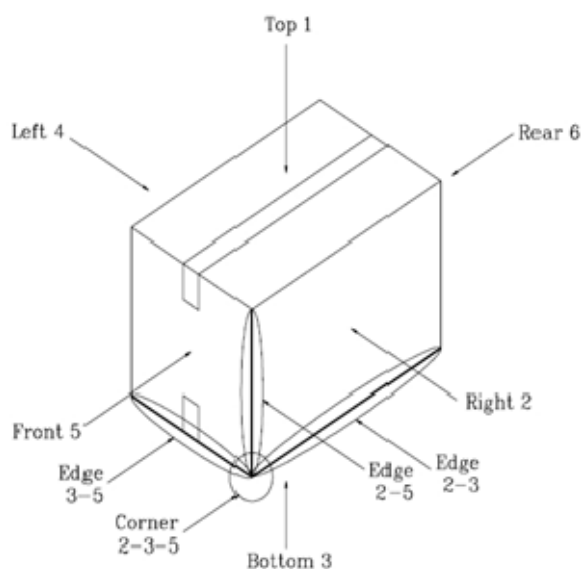
* 包裝測試後判定標準:

(1) Drop Test --- 產品 --- 外觀無損壞, 輸出正常, Hi-Pot 測試無不良.

--- 包材 --- 外箱可變形, 隔板潰縮移位不可大於同方向紙箱內尺寸之 4%,
產品自身之單體包裝 (PE Bag, 彩盒, 吸塑盒.....) 不得有變形及破損.

(2) Vibration Test --- 產品 --- 外觀無損壞, 輸出正常, Hi-Pot 測試無不良, 包裝材料無損壞.

* 如果參考機種已完成包裝測試, 則不需重新測試.



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