


MODEL LIST:

ADP-15WH AA/AB/AAA/AAB/AAC/AS/ASA/ASB/ASC/ASD

- 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**.
The production line shall perform all or worst test items/conditions.
- 3 測試注意事項：(以下為範例寫法請依據產品特性自行修正)
 - a. 功能測試時，電子負載需設定 Von 點為 0V.
 - b. 所有 ATS 測試時，須偵測 CONNECTOR 端之電壓。
 - c. 在測試及崩應時，治具上各組輸出須有加 10uF/10V & 104pF 電容。
 - d. Open frame 或是 Case 未組裝前的各項測試，於測試完成後須對 BULK CAP 放電。
- 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 : 2.8A
NTC31 並聯 1K 歐姆電阻，檢查輸出電壓是否 Latch off.

 台達電子工業股份有限公司 DELTA ELECTRONICS, INC.				DESCRIPTION : 測試注意事項 (Test Specification)	
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Date	Drawn	Design (EE)	Design (ME)	DOCUMENT NAME. :	REV.
10/24/2022	呂翠娥	王竹君	李昱緯	TS-15WH SERIES	S09

d. OVP Test :

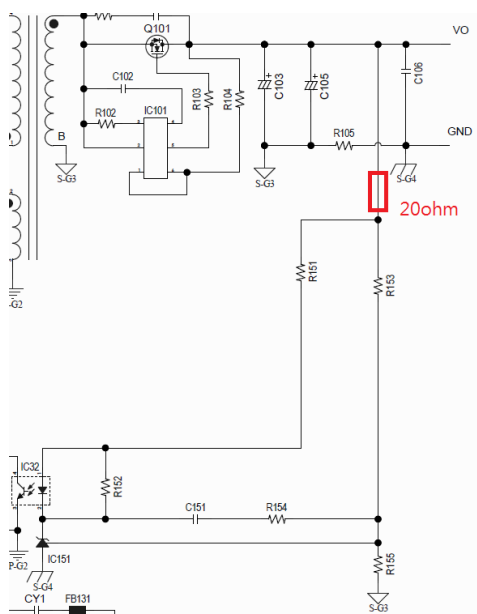
短路 R155 , Input voltage: 90Vac~276Vac , Output current: 0~2.8A , Protection mode: Latch off , $\leq 8V(\text{spec})$

e. AC On/Off: Power supply 連續開關機 On= 5 秒, Off= 5 秒, 5 次後, 必須無損壞情形。

f. Loop gain:

Test Condition: 1500mV

將 R151/R153 與 Vo 間的 trace 斷開串入 20ohm 電阻,由該 20ohm 電阻進行 loop gain 之量測
線路如下所示:



7 Function test (ATS) procedure :

Input Specification Table:

INPUT VOLTAGE	MINIMUM	MAXIMUM
Input voltage range	90Vac	276Vac
Rated input voltage	100Vac	240Vac



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Rated frequency	50Hz	60Hz
Frequency Range	47Hz	63Hz

Output Specification Table:

OUTPUT	MINIMUM	MAXIMUM	NOMINAL(RATED)
Voltage (Vdc)	5.1V	5.3V	5.3V
Loading (Amp)	0A	2.8A	2.8A

Test Item	Vin	Load	Spec	Remark
Inrush current	276V	2.8A	No damage	
Ripple & Noise	90V/276V	2.8A	$\leq 100\text{mVp-p}$	10uF & 104pF
No load output voltage	90V/276V	0A	5.4V ~ 5.5V	
Output voltage	90V/276V	1.4A , 2.8A	5.1~5.5V	-
Surge Load	90V/276V	2.8A 10 seconds to 3.8A for 1second	5.0V>Output Voltage > 5.5V.	(低溫測試需待 1 分鐘後測試)
No load input current	90V/100V 240V/276V	0A	$\leq 10\text{mA}$ $\leq 20\text{mA}$	-
Rated load input current	90Vac 100Vac 240Vac 276Vac	2.8A (Rated load)	$\leq 400\text{mA}$ $\leq 350\text{mA}$ $\leq 200\text{mA}$ $\leq 190\text{mA}$	-
No load power consumption	115 & 230Vac	0A	$\leq 75\text{mW}$	
Rated load power consumption	90Vac~276Vac	2.8A (Rated load)	$\leq 20\text{W}$	-
Short circuit protection	90Vac~276Va		Protection mode: Auto reset	-
Over current protection	90Vac~276Vac		3.9A < OCP < 7.8A Auto reset	Load Start: 2.8A Load Step: 0.2A Step Time: 200mS



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Average efficiency	115 & 230Vac	2.8A	$\geq 78\%$	Cold start
Average efficiency	115 & 230Vac	2.8A	$\geq 79.3\%$	Burn in 30 min
Rated load efficiency	90 & 276Vac	2.8A	$\geq 75\%$	Cold start
Cap load	90 & 276Vac	2.8A	Normal start	輸出並聯 470uF/50V
Output short protect	90 & 276Vac	2.8A	Input power less than 10W	
Dynamic load	90 & 276Vac	(1) From rated load 0% to 50% (2) From rated load 50% to 100% at 0.5A/us slew rate, 10Hz and 1kHz frequency and 50% duty.	5.0~6.0V	

8. Safety

8.1 Hi-POT test :

Between input Plug and DC plug, 3.64KV/1min (verification), 3.64KV/1second (products line),
(上昇時間: DC=1Sec, AC=0.1Sec) 。 Hi-Limit current(cut off current)=5mA 。 Lo-Limit
current=0.01mA 。 ARCING SENSE 需設為 Level 6(10mA).

8.2 Insulation Resistance (IR) test :

PRIMARY to SECONDARY use 500Vdc test ; Insulation resistance limit: >100M ohm.

8.3 Leakage Current :

The measured reading is less than **100uA** at 240 Vac, 60Hz.



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9. Burn-in 測試作業規範

Ambient is 40℃, 5.1V/2.8A.

10. I2C 測試作業規範

N.A.


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

N.A.

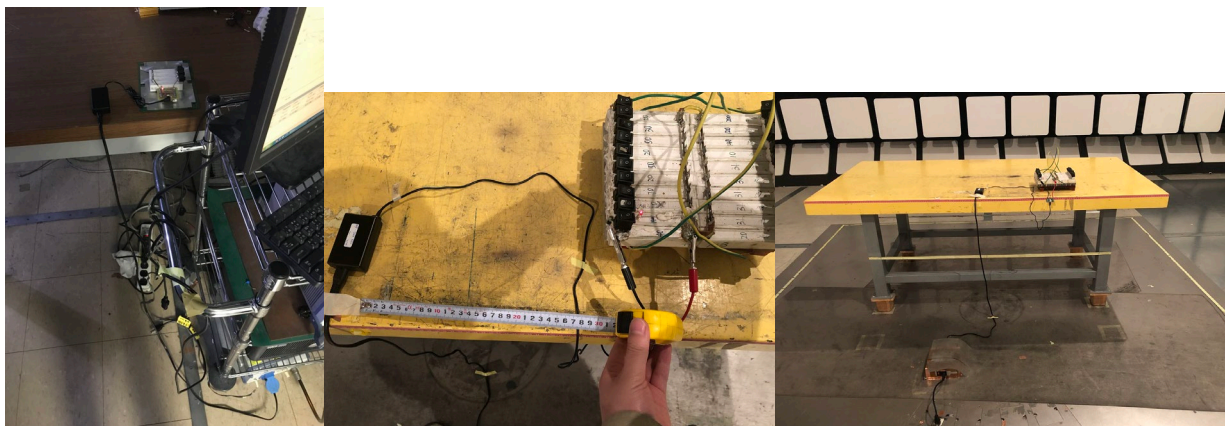
12. Note:

1.系統如下圖,因無觸控功能,CMN 測試不作驗證; 因無網路功能, ISN 測試不作驗證



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2. EMI/ RFI Test Set up: 測試 RFI 時, PSU 需與 dummy load 相差 30cm, AC Cable 需垂直於地面, DC Cable 延伸至 dummy load 後自然擺垂於桌緣.




3. 因系統沒接地,EMI RFI 只測沒接地條件

4. ESD : 每打一次 ESD,就需對治具放電一次.

5. 所有測試需使用客戶指定 AC cable: 美規 AC 2C LS-7H 1.5M



6. 高溫 45°C 測試時, 任何 load change 測試的 Min. Load 由 0A 改為 10mA.

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