

低功率射頻器材試驗報告

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產品名稱 Mavic 2 Enterprise Advanced

廠牌 DJI

型號 L1TE

系列申請 N/A

報告號碼 E2/2021/20048

試驗件收樣日期 本試驗報告引用試驗報告(E2/2021/20046, E2/2021/20047)僅執行
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試驗受理日期 民國110年2月8日

試驗執行日期 本試驗報告僅執行計算，未實際執行測試，故未有測試日期。

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待測裝置已於台灣檢驗科技股份有限公司射頻實驗中心，依據國家通訊傳播委員會於中華民國一百零九年七月頒佈之低功率射頻器材技術規範。

台灣檢驗科技股份有限公司根據此條文規範項目測試，測試各項數據皆能符合此規範規定之限度值。

報告中所描述之測試結果和待測設備的架構組合，均根據實際量測情況作詳實的記錄，且本測試報告僅對上述待測設備樣品負責。

Approved By:



裴笛翰 / 副主任



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Revision History

Report Number	Revision	Description	Issue Date	Revised By
E2/2021/20048	00	Original.	民國 110 年 4 月 8 日	林詩珊

Note:

- 1、Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

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1 測試實驗室資料:

實驗室認可登錄： 中華民國實驗室認證體系

認可編號： TAF 3702

認證有效期間： 109年01月30日起至110年06月13日止

測試場地： 桃園市龜山區(華亞科技園區)科技一路2號

實驗室名稱： 台灣檢驗科技股份有限公司射頻實驗中心

實驗室地址： 新北市新北產業園區五工路134號

電話： 886-2-22993939

傳真： 886-2-22982698

2 實驗室之量測不確定度

量測項目	量測不確定度 (擴充不確定度)
輸出功率	LP0002 ± 1 dB

附註: 1. K=2 即代表測試結果具有95%的量測可信度。

2. 本報告中的符合性判定僅依據試驗結果，不考慮其試驗結果的量測不確定度。

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3 一般資料

3.1 產品描述

產品名稱	Mavic 2 Enterprise Advanced	
型號	L1TE	
產品商標	DJI	
辰陽適配器	Model No.: QC24-US, Brand:DJI	
M2E 夜航燈	Model No.: M2E BEACON, Brand: DJI	
M2E 探照燈	Model No.: M2E SPOTLIGHT, Brand: DJI	
M2E 擴音器	Model No.: M2E SPEAKER, Brand: DJI	
Cable	1. Model No.: RC Cable, Brand: DJI 2. Model No.: A12-0103-AC2+A12-0102-AC2(125V 7A 2P C7), Brand: 博碩科技(江西)有限公司	
使用電源	15.4 Vdc from Lithium Ion Polymer Rechargeable Battery	
	Battery:	Model No.: FB2-3850mAh-15.4V, Brand: DJI
	Adapter:	Model No.: F2C60, Brand: DJI
	Remark: Battery is charged by 5V/2A , 17/3.53A , 17.6V/3.41A AC/DC Adapter	

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3.2 射頻特性

2.4G

帶寬 (occupied bandwidth)	發射頻帶	頻道數	輸出功率	Modulation Technology
1.4M	2403.5~2477.5	38	13.08 dBm	OFDM
10M	2405.5~2477.5	73	25.78 dBm	OFDM
20M	2410.5~2472.5	63	25.84 dBm	OFDM

5.8G

帶寬 (occupied bandwidth)	Frequency Range	Channels	Rated Power(Avg) (dBm) (Worst Case)	Modulation Technology
1.4M	5728.5-5844.5	60	10.84 dBm	OFDM
10M	5732.5-5844.5	115	22.93 dBm	OFDM
20M	5735.5~5839.5	105	22.56 dBm	OFDM

3.3 天線型式/天線增益

天線型式	Brand	Model No.	發射頻帶(MHz)	天線增益(dBi)
PCB	DJI	WM240 DRONE ANT L	2400-2483	3.5
PCB	DJI	WM240 DRONE ANT R	2400-2483	3.5

天線型式	Brand	Model No.	發射頻帶(MHz)	天線增益(dBi)
PCB	DJI	WM240 DRONE ANT L	5725~5850	4
PCB	DJI	WM240 DRONE ANT R	5725~5850	4

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4 測試方法之依據

本測試報告之所有項目皆依據國家通訊傳播委員會低功率射頻電機技術規範(LP0002, 109.7.1版本)。

項次	評估項目	適用規範
☑	最大暴露量允許值	LP0002 低功率射頻電機技術規範6.20.2.2節

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5 適用規範

5.1 LP0002 規範要求

依據 NCC 低功率射頻電機技術規範之 6.20.2，其發射機距離人體 20 公分以上者，需證明其符合電波暴露量之要求，限制值如下：

5.1.1 職業性/可控制之暴露

頻率範圍 (MHz)	電場強度 (V/m)	磁場強度 (A/m)	功率密度 (mW/cm ²)	平均時間 (minutes)
0.3-3.0	614	1.63	*100	6
3-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500	-----	-----	f/300	6
1,500-100,000	-----	-----	5.0	6

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：百萬赫(MHz)。

5.1.2 一般人/不可控制之暴露

頻率範圍 (MHz)	電場強度 (V/m)	磁場強度 (A/m)	功率密度 (mW/cm ²)	平均時間 (minutes)
0.3-3.0	614	1.63	*100	30
3-30	1842/f	4.89/f	*180/f ²	30
30-300	27.5	0.073	1.0	30
300-1,500	-----	-----	f/1500	30
1,500-100,000	-----	-----	1.0	30

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：百萬赫(MHz)。

此待測物，為一般市面上販售，固適用表 2) 之限制值

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6 最大暴露允許值 (MAXIMUM PERMISSIBLE EXPOSURE, MPE)

6.1 LP0002 最大暴露允許值之評估

僅以最差模式進行評估。

2.4G

(20M) Ch1						
CH	Freq. (MHz)	Power set	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (dBm)	RESULT
1	2410.5	-4	21.04	127.06	30.00	PASS
32	2441.5	0	25.84	383.71	30.00	PASS
63	2472.5	-8	15.84	38.37	30.00	PASS

導入之公式: page 18 of OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

S = 功率密度 P = 傳導功率 G = 天線增益值 R = 人體與天線之距離

Max. output power including tune-up tolerancel:	25.84	(dBm)
Max. output power including tune-up tolerancel:	383.7072	(mW)
Peak Antenna gain (Maximum):	3.5	(dBi)
Peak Antenna gain (linear):	2.238721	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	2441.5	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1	(mW/cm ²)
Power density at predication frequency at 20 (cm) distance	0.1710	(mW/cm ²)

運算之結果:

當功率密度在 20 cm，其最大暴露值為 0.171 mW/cm².

註:工作頻率為 2441.5 (MHz), 固其對應之限制值為 1mW/cm².

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5.8G

(10M)

CH	Frequency (MHz)	Power set	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
3	5732.5	0	22.93	196.443	30	PASS
58	5787.5	0	22.68	185.454	30	PASS
115	5844.5	0	22.21	166.432	30	PASS

導入之公式: page 18 of OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

S = 功率密度 P = 傳導功率 G = 天線增益值 R = 人體與天線之距離

Max. output power including tune-up tolerancel:	22.93	(dBm)
Max. output power including tune-up tolerancel:	196.336	(mW)
Peak Antenna gain (Maximum):	4	(dBi)
Peak Antenna gain (linear):	2.511886	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5732.5	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1	(mW/cm ²)
Power density at predication frequency at 20 (cm) distance	0.0982	(mW/cm ²)

運算之結果:

當功率密度在 20 cm，其最大暴露值為 0.098 mW/cm²。註:工作頻率為 5732.5 (MHz), 固其對應之限制值為 1mW/cm²。

~ End of Report ~

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