

附錄 一

受測裝置之測試結果

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1. 場強輻射之量測

本裝置有兩種電源供應模式分別為(1)電池(DC 3.7V)、(2)USB (DC 5V, 充電時無法開機使用)，實驗室以單機(電池供電)進行量試評估，最後選取最大場強值的擺設方式筆記型電腦供電以低、中、高頻率來進行量測，並將下列測試模式之掃頻圖檢附於附錄中。；最後，選擇較差模式進行讀值之測量，所得讀值資料請見章節 1.1 ~ 1.2：

模式	動作狀態	基本頻率	量測頻率範圍
1	發射	2402MHz (CH37)	1000-3000MHz
2			3000-8000MHz
3			8000-18000MHz
4			18000-25000MHz
5		2440MHz* (CH17)	30-1000MHz
6			1000-3000MHz
7			3000-8000MHz
8			8000-18000MHz
9			18000-25000MHz
10		2480MHz (CH39)	1000-3000MHz
11			3000-8000MHz
12			8000-18000MHz
13			18000-25000MHz
14	接收	2440MHz (CH17)	30-1000MHz
15			1000-3000MHz
16			3000-8000MHz
17			8000-18000MHz
18			18000-25000MHz

註：1. 以上所有模式之掃頻圖是檢附於附錄中。

2.*: 經評估後，以最差頻率進行 30-1000MHz 量測。

測試日期	2018/10/30	環境溫/濕度	24°C/53%
測試電壓	DC 3.7V (透過內建鋰電池供電)		

1.1. 30-1000MHz 頻率範圍，其他不必要發射量測

Mode	BLE	Frequency	TX 2440MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
56.19	13.35	1.67	12.77	27.79	40.00	12.21	Peak
101.78	17.60	2.29	6.31	26.20	43.50	17.30	Peak
327.79	20.28	4.69	3.96	28.93	46.00	17.07	Peak
440.31	22.53	5.93	3.59	32.05	46.00	13.95	Peak
579.99	24.38	6.69	1.98	33.05	46.00	12.95	Peak
932.10	27.15	8.39	2.41	37.95	46.00	8.05	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
30.97	24.27	1.22	14.11	39.60	40.00	0.40	Peak
53.28	13.98	1.63	19.43	35.04	40.00	4.96	Peak
136.70	17.96	2.69	9.33	29.98	43.50	13.52	Peak
213.33	16.71	3.47	9.82	30.00	43.50	13.50	Peak
320.03	20.06	4.58	7.16	31.80	46.00	14.20	Peak
809.88	26.02	7.67	3.06	36.75	46.00	9.25	Peak

Mode	BLE	Frequency	RX 2440MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
56.19	13.35	1.67	12.67	27.69	40.00	12.31	Peak
101.78	17.60	2.29	6.93	26.82	43.50	16.68	Peak
288.02	19.41	4.19	4.99	28.59	46.00	17.41	Peak
579.99	24.38	6.69	2.03	33.10	46.00	12.90	Peak
809.88	26.02	7.67	3.64	37.33	46.00	8.67	Peak
989.33	27.73	8.76	2.38	38.87	54.00	15.13	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
30.97	24.27	1.22	13.24	38.73	40.00	1.27	Peak
54.25	13.77	1.64	20.19	35.60	40.00	4.40	Peak
136.70	17.96	2.69	9.11	29.76	43.50	13.74	Peak
213.33	16.71	3.47	10.27	30.45	43.50	13.05	Peak
320.03	20.06	4.58	6.89	31.53	46.00	14.47	Peak
971.87	27.56	8.65	2.88	39.09	54.00	14.91	Peak

1.2. 1000MHz 以上頻率範圍，其他不必要發射量測

Mode	BLE	Frequency	TX 2402MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4804.00	34.22	11.42	-1.64	44.00	54.00	10.00	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4804.00	34.22	11.42	-1.70	43.94	54.00	10.06	Peak

Mode	BLE	Frequency	TX 2440MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4880.00	34.25	13.00	-1.38	45.87	54.00	8.13	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4880.00	34.25	13.00	-1.64	45.61	54.00	8.39	Peak

Mode	BLE	Frequency	TX 2480MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4960.00	34.29	13.21	-1.50	46.00	54.00	8.00	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4960.00	34.29	13.21	-1.92	45.58	54.00	8.42	Peak

2. 峰值輸出功率之量測

測試日期	2018/10/22	環境溫/濕度	24°C/53%
測試電壓	DC 3.7V (透過內建鋰電池供電)		

2.1. 峰值輸出功率

模式 (Mode)	測試頻率 (MHz)	最大輸出功率 (dBm)	限制值 (dBm)
BLE	2402	-0.40	30
	2440	0.11	
	2480	-2.27	

2.2. 峰值輸出功率之量測圖

