

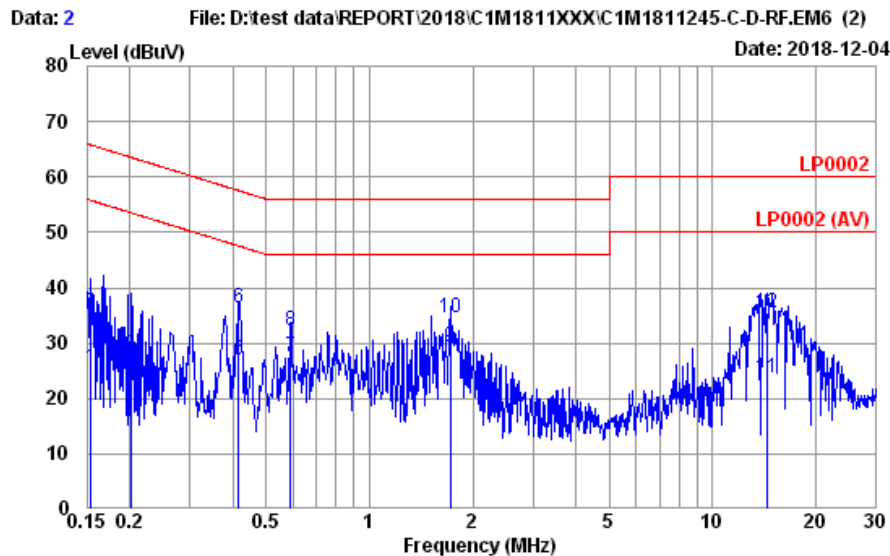
附錄一

受測裝置之測試結果

目錄	頁次
1. 電源線傳導干擾之量測.....	2
2. 場強輻射之量測.....	4
2.1. 30-1000MHz 頻率範圍，其他不必要發射量測	5
2.2. 1000MHz 以上頻率範圍，其他不必要發射量測	6
2.3. 禁用頻帶量測結果 (其他不必要發射).....	7
3. 發射頻寬之量測.....	11
3.1. 發射頻寬.....	11
3.2. 發射頻寬之量測圖.....	11
4. 峰值輸出功率之量測.....	12
4.1. 峰值輸出功率.....	12
4.2. 峰值輸出功率之量測圖.....	12
5. 頻帶邊緣之 RF 傳導發射之量測	13
6. 混附發射之 RF 傳導發射之量測	14
7. 功率密度之量測.....	17
7.1. 功率密度.....	17
7.2. 功率密度之量測圖.....	17

1. 電源線傳導干擾之量測

測試日期	2018/12/04	環境溫/濕度	24°C/58%
測試電壓	DC 5V (經筆記型電腦供電)		

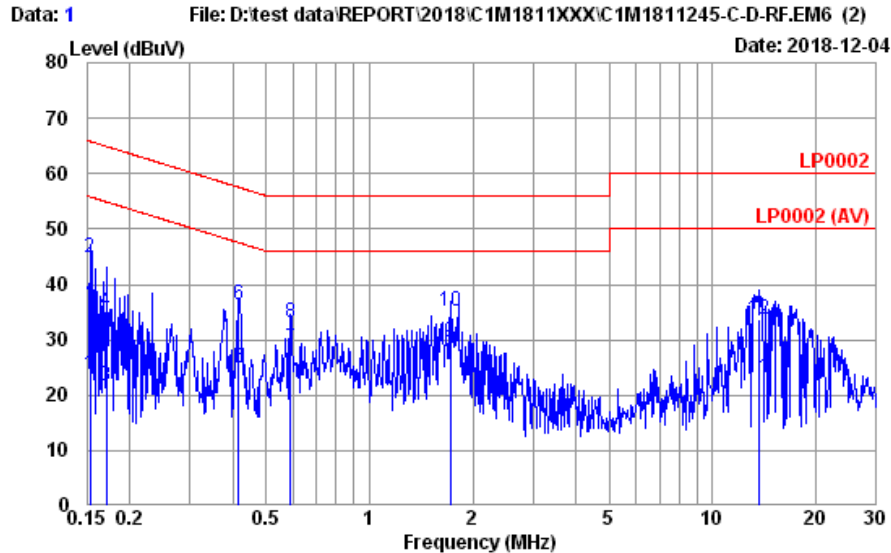


Site no. : No.8 Shielded Room Data no. : 2
 Condition : ENV4200 100169 LISN Phase : NEUTRAL
 Limit : LP0002
 Env. / Ins. : 24°C / 58% ESCI (0558) Engineer : Jemy
 EUT : WH-CH700N
 Power Rating : 110Vac/60Hz
 Test Mode : Operating

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Remark
1	0.154	10.57	0.03	9.98	4.78	25.36	55.78	30.42	Average
2	0.154	10.57	0.03	9.98	14.99	35.57	65.78	30.21	QP
3	0.202	10.52	0.03	9.98	7.16	27.69	53.54	25.85	Average
4	0.202	10.52	0.03	9.98	6.20	26.73	63.54	36.81	QP
5	0.415	10.43	0.04	9.98	6.38	26.83	47.55	20.72	Average
6	0.415	10.43	0.04	9.98	15.95	36.40	57.55	21.15	QP
7	0.589	10.43	0.05	9.98	7.19	27.65	46.00	18.35	Average
8	0.589	10.43	0.05	9.98	11.81	32.27	56.00	23.73	QP
9	1.716	10.45	0.07	9.99	8.86	29.37	46.00	16.63	Average
10	1.716	10.45	0.07	9.99	14.03	34.54	56.00	21.46	QP
11	14.440	12.47	0.23	10.05	1.07	23.82	50.00	26.18	Average
12	14.440	12.47	0.23	10.05	12.63	35.38	60.00	24.62	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.

測試日期	2018/12/04	環境溫/濕度	24°C/58%
測試電壓	DC 5V (經筆記型電腦供電)		



Site no. : No.8 Shielded Room Data no. : 1
Condition : ENV4200 100169 LISN Phase : LINE
Limit : LP0002
Env. / Ins. : 24°C / 58% ESCI (0558) Engineer : Jemy
EUT : WH-CH700N
Power Rating : 110Vac/60Hz
Test Mode : Operating

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Remark
1	0.153	10.62	0.03	9.98	3.08	23.71	55.82	32.11	Average
2	0.153	10.62	0.03	9.98	24.23	44.86	65.82	20.96	QP
3	0.171	10.60	0.03	9.98	1.12	21.73	54.90	33.17	Average
4	0.171	10.60	0.03	9.98	14.48	35.09	64.90	29.81	QP
5	0.415	10.45	0.04	9.98	4.48	24.95	47.55	22.60	Average
6	0.415	10.45	0.04	9.98	15.80	36.27	57.55	21.28	QP
7	0.589	10.45	0.05	9.98	7.87	28.35	46.00	17.65	Average
8	0.589	10.45	0.05	9.98	12.55	33.03	56.00	22.97	QP
9	1.716	10.46	0.07	9.99	9.22	29.74	46.00	16.26	Average
10	1.716	10.46	0.07	9.99	14.53	35.05	56.00	20.95	QP
11	13.623	12.30	0.22	10.04	0.52	23.08	50.00	26.92	Average
12	13.623	12.30	0.22	10.04	11.26	33.82	60.00	26.18	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.

2. 場強輻射之量測

對受測物裝置之其他不必要之發射(測至本地振盪頻率之 10 次諧波)依下列測試模式分別於電波暗室內進行量測，選擇低、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。所得讀值資料請見章節 2.1 ~2.2：

模式	動作狀態	基本頻率	量測頻率範圍
1	發射	2402MHz*	30-1000MHz
2			1000-3000MHz
3			3000-5000MHz
4			5000-8000MHz
5			8000-18000MHz
6			18000-25000MHz
7		2440MHz	1000-3000MHz
8			3000-5000MHz
9			5000-8000MHz
10			8000-18000MHz
11			18000-25000MHz
12		2480MHz	1000-3000MHz
13			3000-5000MHz
14			5000-8000MHz
15			8000-18000MHz
16			18000-25000MHz
17	接收	2440MHz	30-1000MHz
18			1000-3000MHz
19			3000-5000MHz
20			5000-8000MHz
21			8000-18000MHz
22			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。

對受測物裝置落於技術規範第 2.7 章節的禁用頻帶之混附發射以下列測試模式依規定分別進行量測，所得量測資料請見章節 2.3。

模式	動作狀態	基本頻率	量測頻率範圍
1	發射	2402MHz	2310-2430MHz
2		2480MHz	2430-2530MHz

測試日期	2018/12/06	環境溫/濕度	23°C/50%
測試電壓	DC 5V (經筆記型電腦供電)		

2.1. 30-1000MHz 頻率範圍，其他不必要發射量測

Mode	BLE	Frequency	TX 2402MHz
------	-----	-----------	------------

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
93.05	16.24	2.52	6.26	25.02	43.50	18.48	Peak
190.05	15.74	3.65	9.92	29.31	43.50	14.19	Peak
216.24	17.13	3.76	15.48	36.37	46.00	9.63	Peak
271.53	19.59	4.14	8.58	32.31	46.00	13.69	Peak
333.61	20.80	4.85	9.10	34.75	46.00	11.25	Peak
372.41	21.79	5.41	9.21	36.41	46.00	9.59	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
101.78	17.60	2.72	3.10	23.42	43.50	20.08	Peak
115.36	18.54	2.92	3.88	25.34	43.50	18.16	Peak
167.74	16.08	3.50	11.51	31.09	43.50	12.41	Peak
246.31	19.13	3.96	3.42	26.51	46.00	19.49	Peak
320.03	20.42	4.65	6.07	31.14	46.00	14.86	Peak
961.20	27.91	8.40	1.46	37.77	54.00	16.23	Peak

Mode	BLE	Frequency	RX 2440MHz
------	-----	-----------	------------

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
93.05	16.24	2.52	5.91	24.67	43.50	18.83	Peak
167.74	16.08	3.50	5.61	25.19	43.50	18.31	Peak
194.90	15.85	3.66	14.51	34.02	43.50	9.48	Peak
271.53	19.59	4.14	7.56	31.29	46.00	14.71	Peak
333.61	20.80	4.85	7.52	33.17	46.00	12.83	Peak
372.41	21.79	5.41	10.73	37.93	46.00	8.07	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
101.78	17.60	2.72	2.66	22.98	43.50	20.52	Peak
117.30	18.67	2.94	2.64	24.25	43.50	19.25	Peak
211.39	16.81	3.73	4.07	24.61	43.50	18.89	Peak
242.43	18.91	3.93	3.45	26.29	46.00	19.71	Peak
320.03	20.42	4.65	5.69	30.76	46.00	15.24	Peak
955.38	27.84	8.37	2.07	38.28	46.00	7.72	Peak

2.2. 1000MHz 以上頻率範圍，其他不必要發射量測

Mode	BLE	Frequency	TX 2402MHz
------	-----	-----------	------------

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4804.00	34.22	11.42	2.93	48.57	54.00	5.43	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4804.00	34.22	11.42	3.18	48.82	54.00	5.18	Peak

Mode	BLE	Frequency	TX 2440MHz
------	-----	-----------	------------

Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4880.00	34.25	13.00	2.21	49.46	54.00	4.54	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4880.00	34.25	13.00	3.79	51.04	54.00	2.96	Peak

Mode	BLE	Frequency	TX 2480MHz
------	-----	-----------	------------

Antenna at Horizontal Polarization

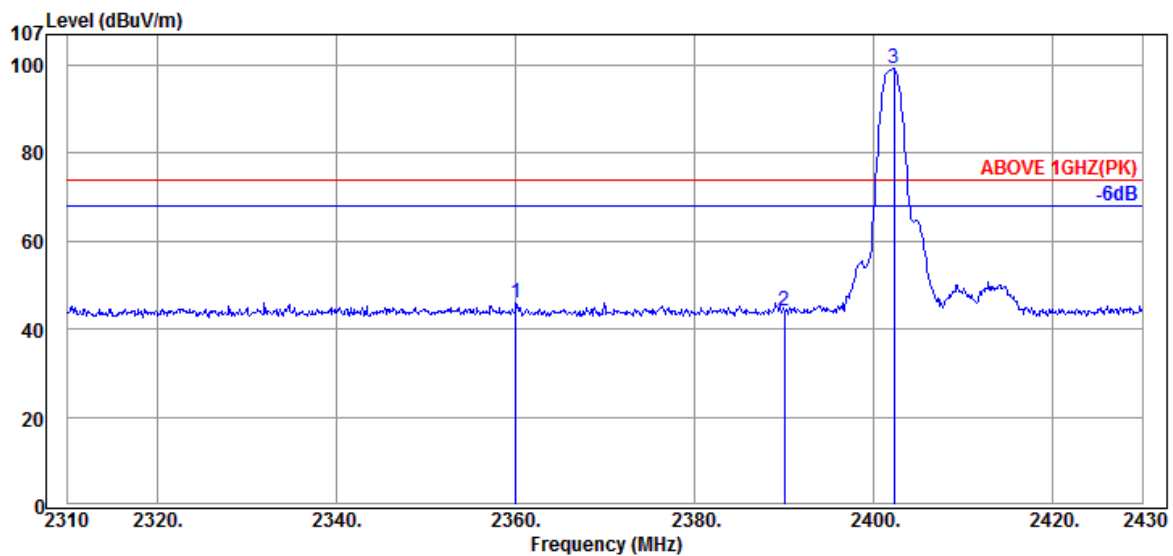
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4960.00	34.29	13.21	-0.06	47.44	54.00	6.56	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4960.00	34.29	13.21	0.95	48.45	54.00	5.55	Peak

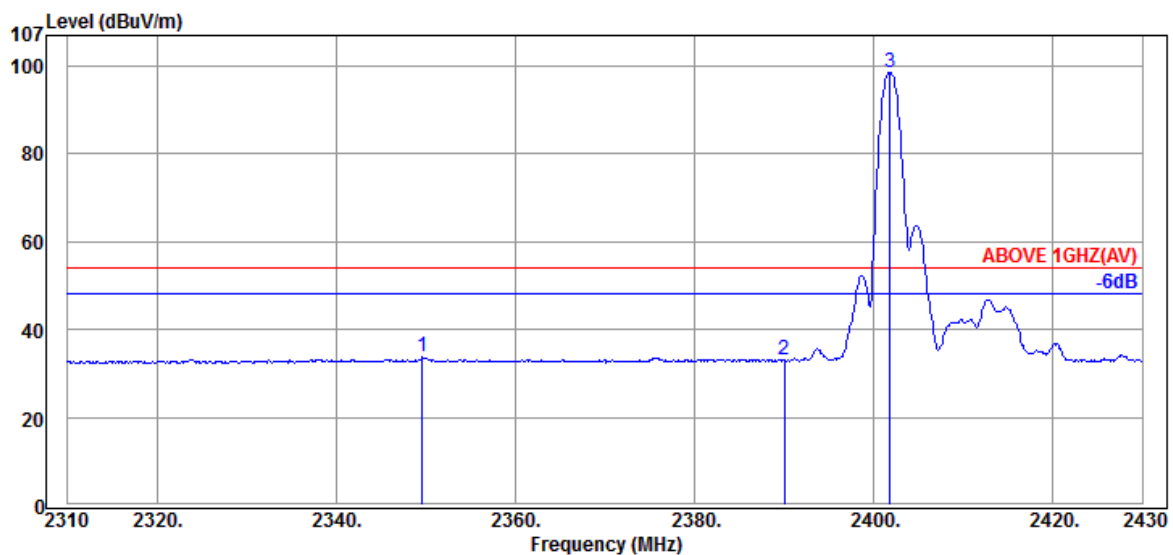
2.3. 禁用頻帶量測結果 (其他不必要發射)

Mode	BLE	Frequency	TX 2402MHz
------	-----	-----------	------------



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
2360.04	32.11	7.86	6.13	46.10	74.00	27.90	Peak
2390.04	32.16	7.92	3.91	43.99	74.00	30.01	Peak
@ 2402.28	32.16	7.92	59.08	99.16	---	---	Peak

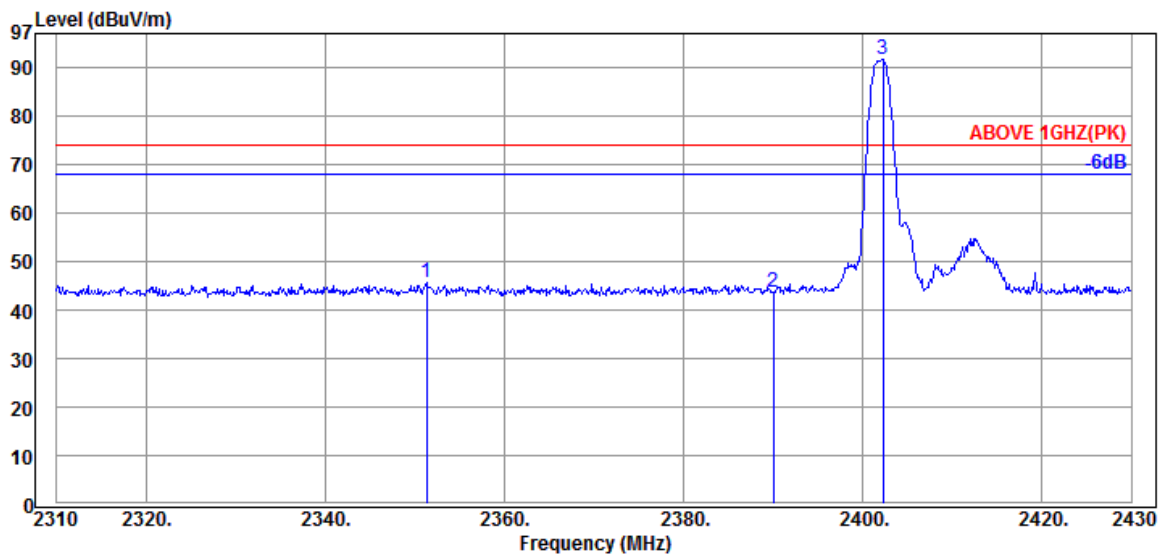


Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2349.60	32.08	7.82	-6.17	33.73	54.00	20.27	Average
2390.04	32.16	7.92	-6.98	33.10	54.00	20.90	Average
@ 2401.80	32.16	7.92	58.63	98.71	---	---	Average

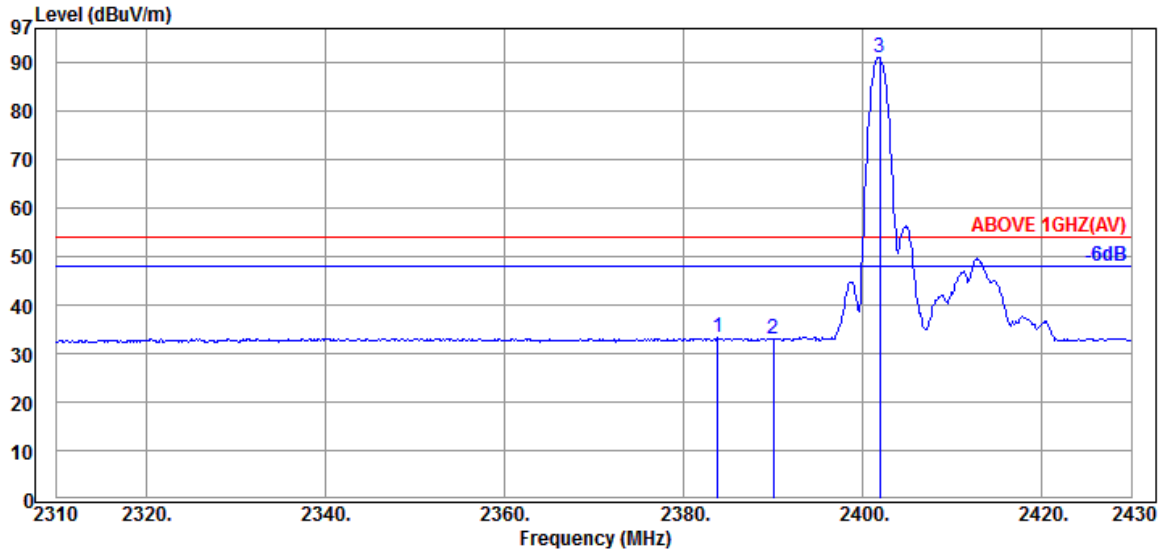
備註：“@”為主波，在此章節是不予以判定。

Mode	BLE	Frequency	TX 2402MHz
------	-----	-----------	------------



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
2351.28	32.08	7.82	5.91	45.81	74.00	28.19	Peak
2390.04	32.16	7.92	3.72	43.80	74.00	30.20	Peak
@ 2402.28	32.16	7.92	51.57	91.65	---	---	Peak

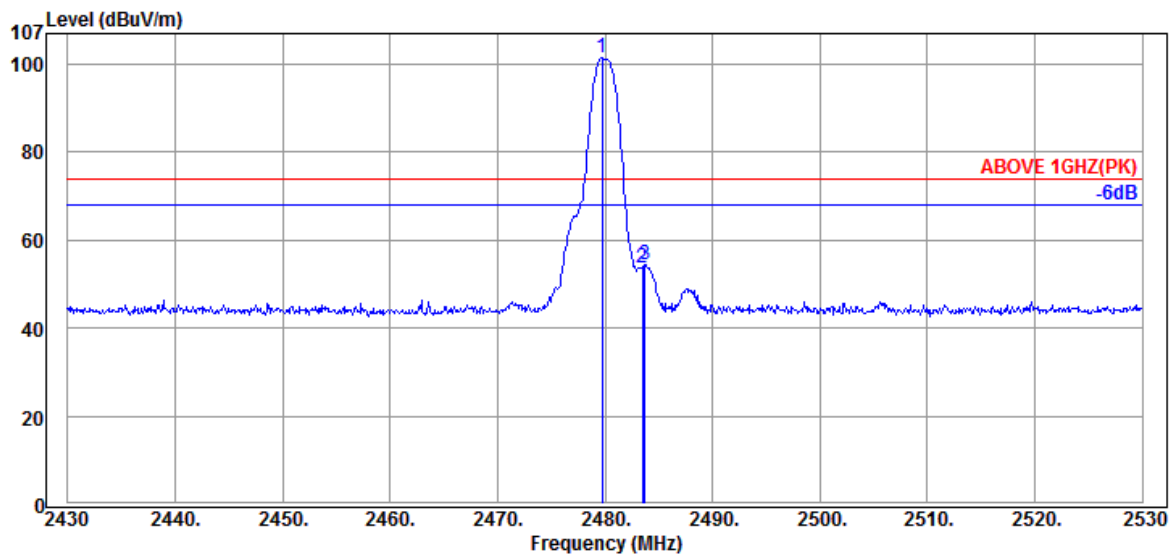


Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2383.80	32.13	7.89	-6.79	33.23	54.00	20.77	Average
2390.04	32.16	7.92	-7.11	32.97	54.00	21.03	Average
@ 2401.92	32.16	7.92	50.91	90.99	---	---	Average

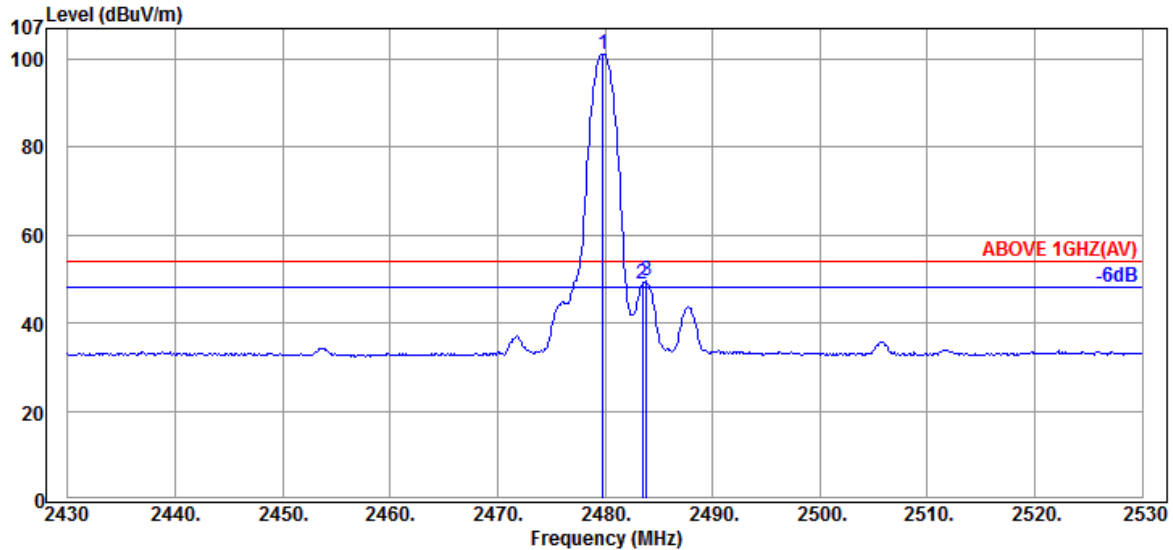
備註：“@”為主波，在此章節是不予以判定。

Mode	BLE	Frequency	TX 2480MHz
------	-----	-----------	------------



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
@	2479.70	32.28	7.90	61.30	101.48	---	---	Peak
	2483.50	32.28	7.90	13.59	53.77	74.00	20.23	Peak
	2483.70	32.28	7.90	14.38	54.56	74.00	19.44	Peak

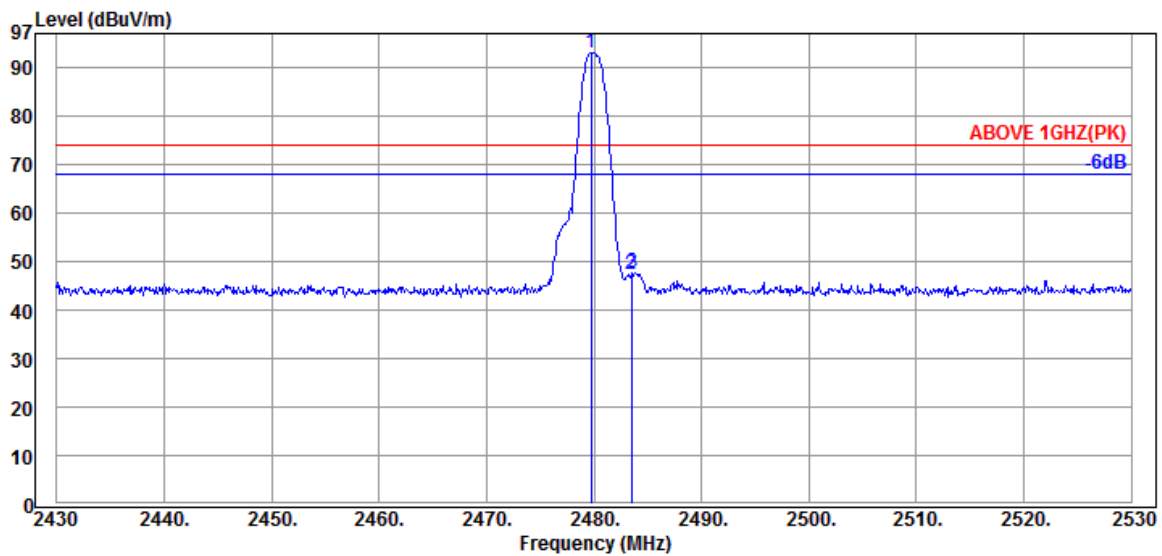


Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2479.80	32.28	7.90	61.10	101.28	---	---	Average
	2483.50	32.28	7.90	8.82	49.00	54.00	5.00	Average
	2483.90	32.28	7.90	9.30	49.48	54.00	4.52	Average

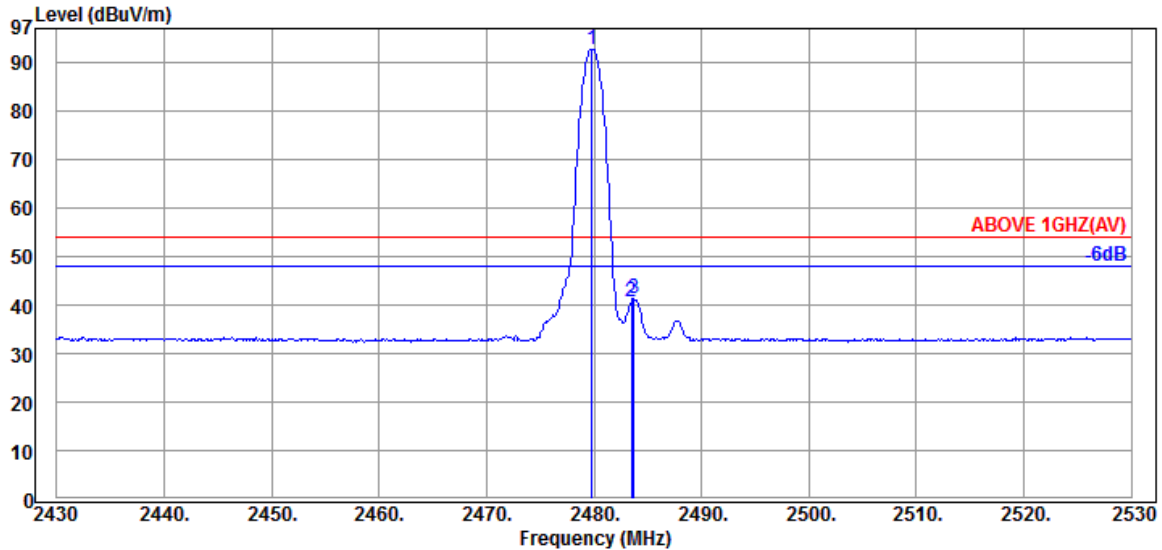
備註：“@”為主波，在此章節是不予以判定。

Mode	BLE	Frequency	TX 2480MHz
------	-----	-----------	------------



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
@	2479.70	32.28	7.90	52.93	93.11	---	---	Peak
	2483.50	32.28	7.90	7.26	47.44	74.00	26.56	Peak
	2483.60	32.28	7.90	7.50	47.68	74.00	26.32	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
@	2479.80	32.28	7.90	52.48	92.66	---	---	Average
	2483.50	32.28	7.90	0.65	40.83	54.00	13.17	Average
	2483.70	32.28	7.90	1.18	41.36	54.00	12.64	Average

備註：“@”為主波，在此章節是不予以判定。

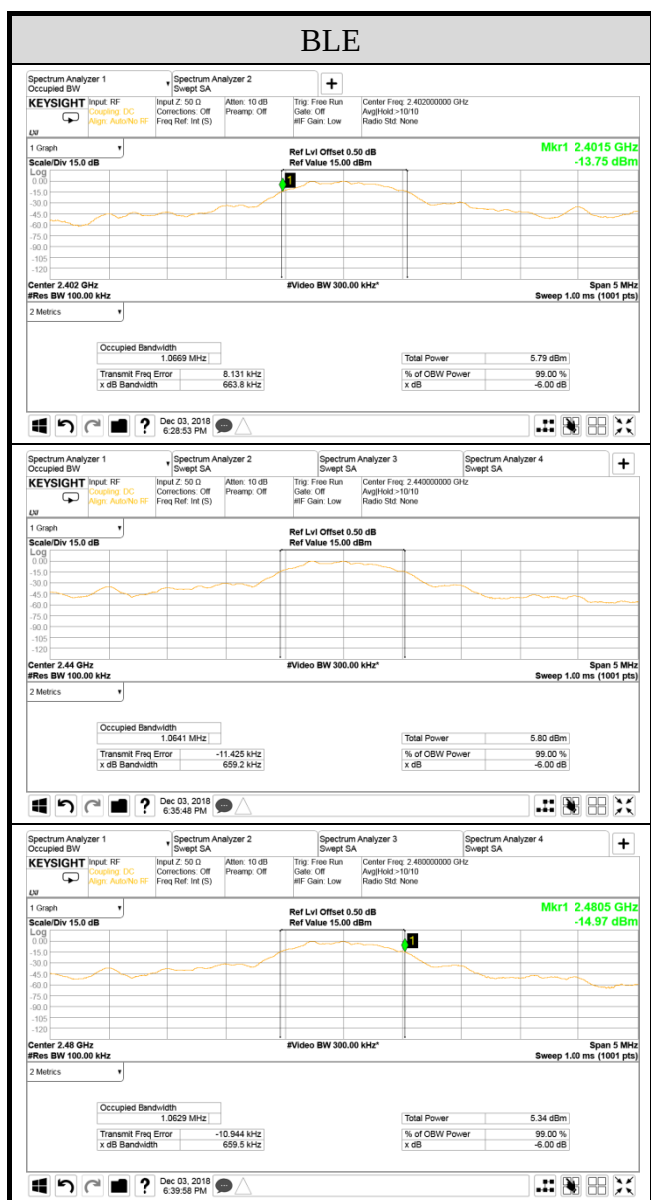
3. 發射頻寬之量測

測試日期	2018/12/03	環境溫/濕度	24°C/52%
測試電壓	DC 5V (經筆記型電腦供電)		

3.1. 發射頻寬

模式	測試頻率 (MHz)	6dB 頻寬 (MHz)	限制值 (kHz)
BLE	2402	0.6638	>500
	2440	0.6592	
	2480	0.6595	

3.2. 發射頻寬之量測圖



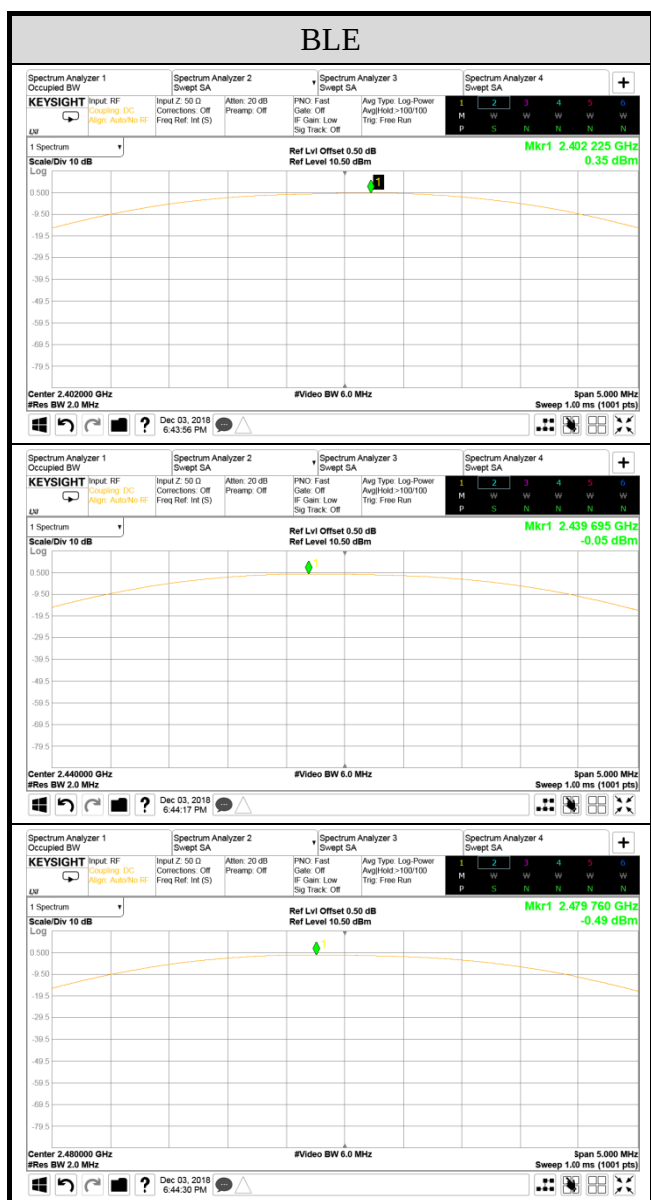
4. 峰值輸出功率之量測

測試日期	2018/12/03	環境溫/濕度	24°C/52%
測試電壓	DC 5V (經筆記型電腦供電)		

4.1. 峰值輸出功率

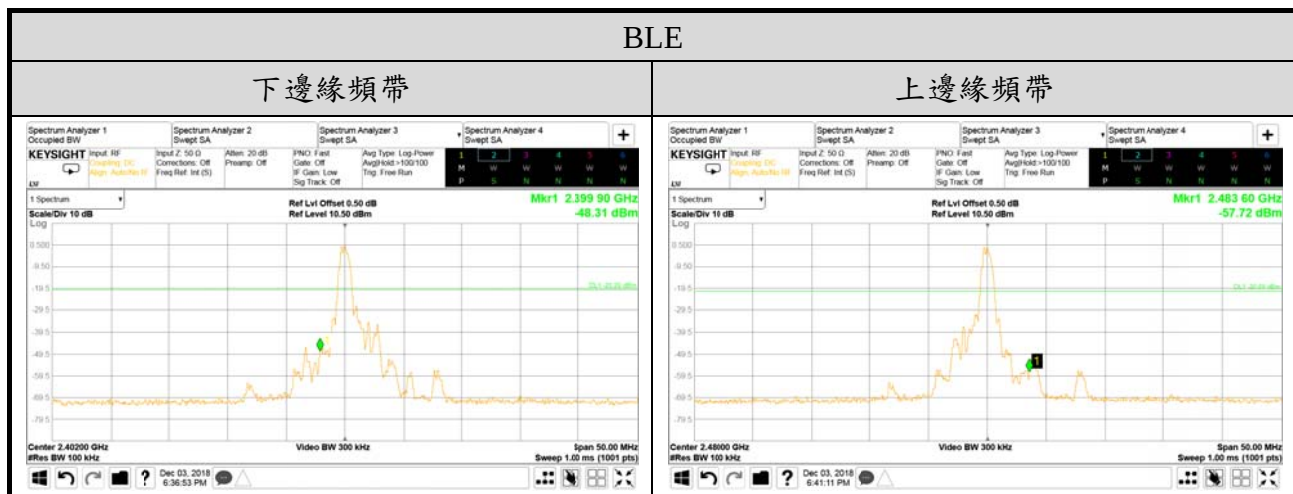
模式	測試頻率 (MHz)	Peak 輸出功率(dBm)	限制值 (dBm)
BLE	2402	0.35	30
	2440	-0.05	
	2480	-0.49	

4.2. 峰值輸出功率之量測圖



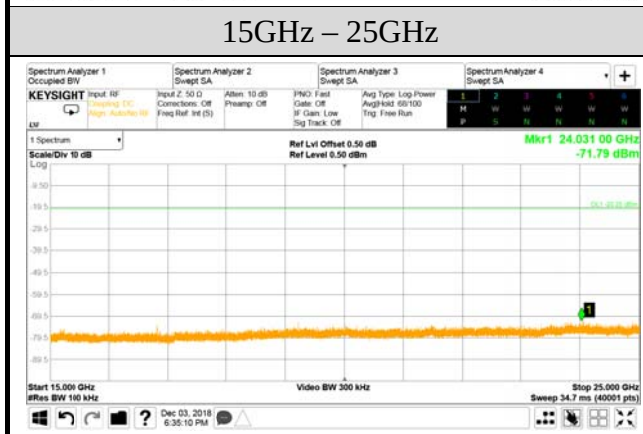
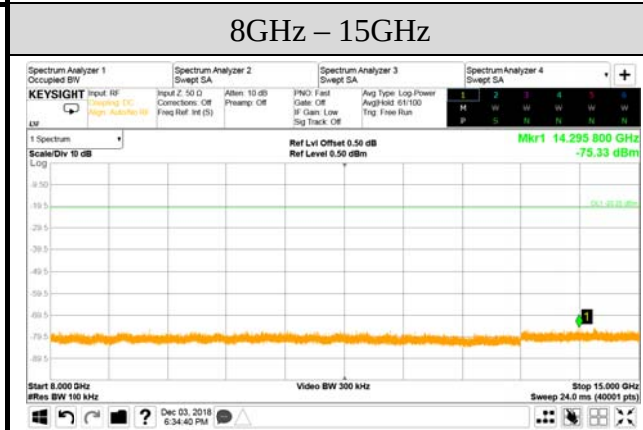
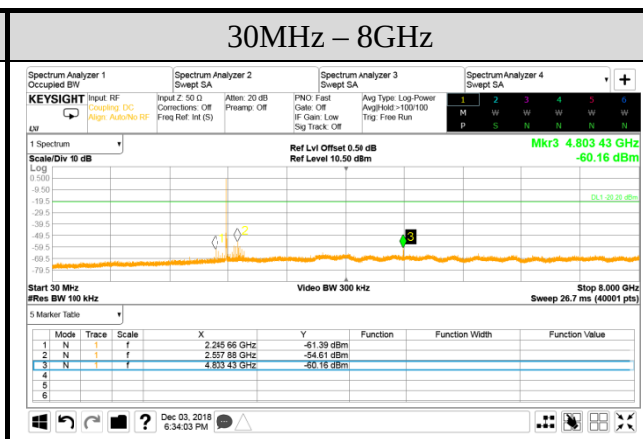
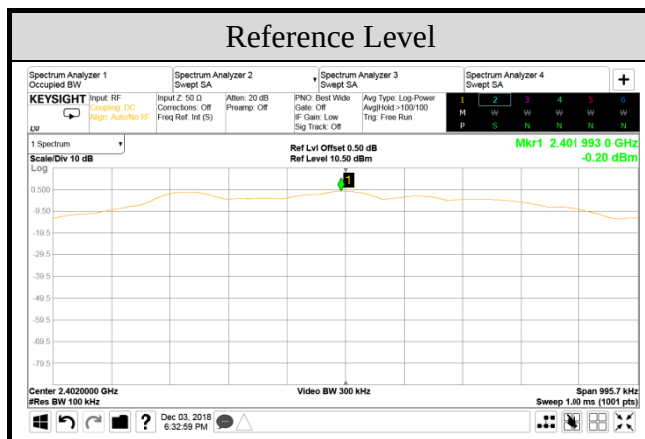
5. 頻帶邊緣之 RF 傳導發射之量測

測試日期	2018/12/03	環境溫/濕度	24°C/52%
測試電壓	DC 5V (經筆記型電腦供電)		

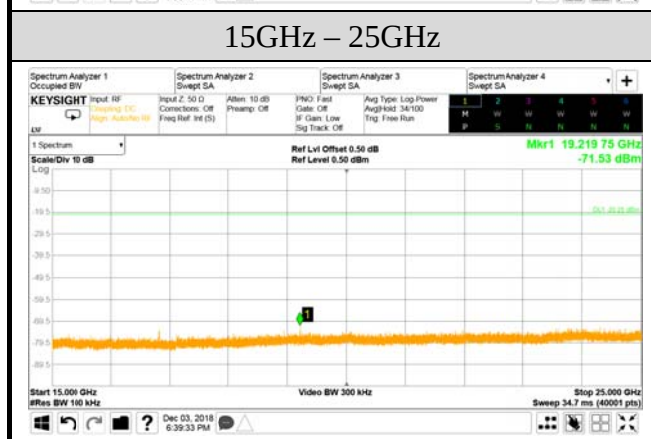
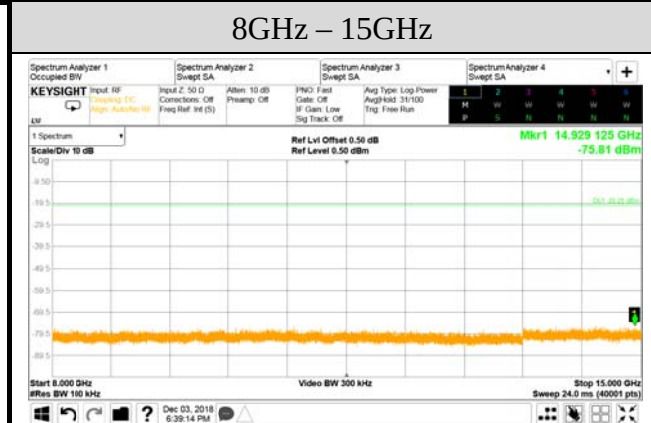
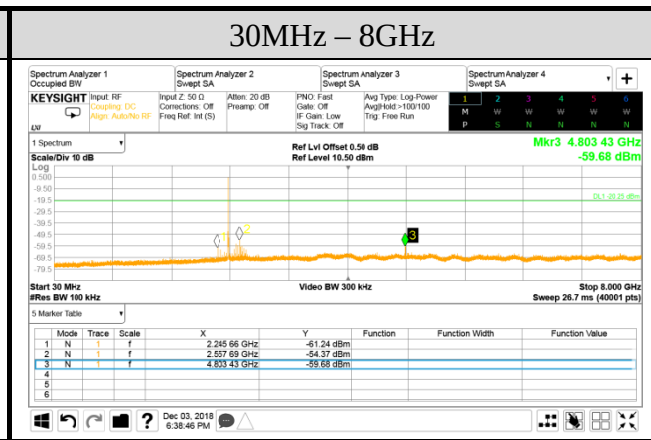
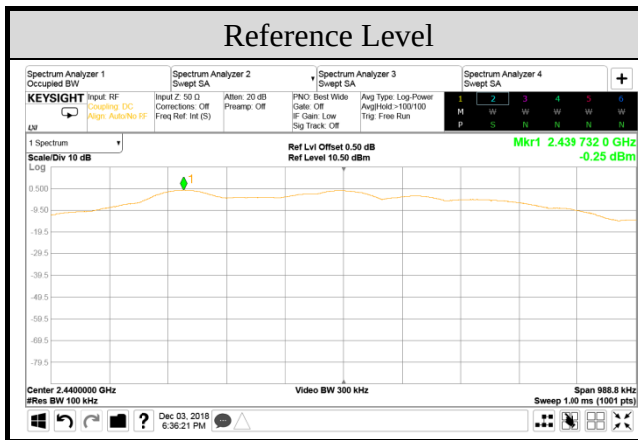


6. 混附發射之 RF 傳導發射之量測

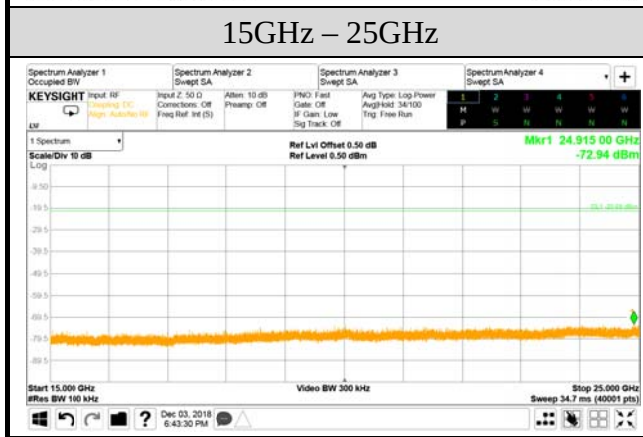
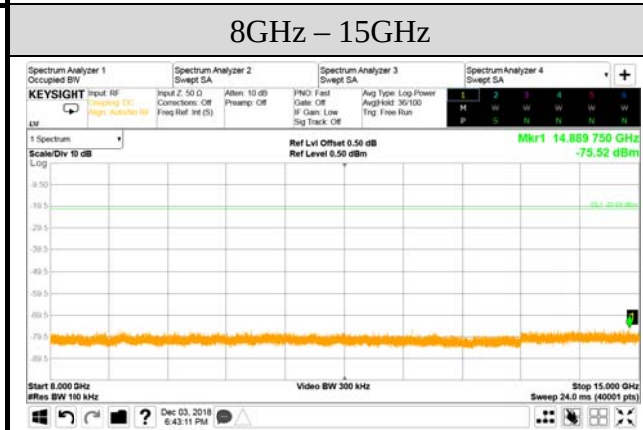
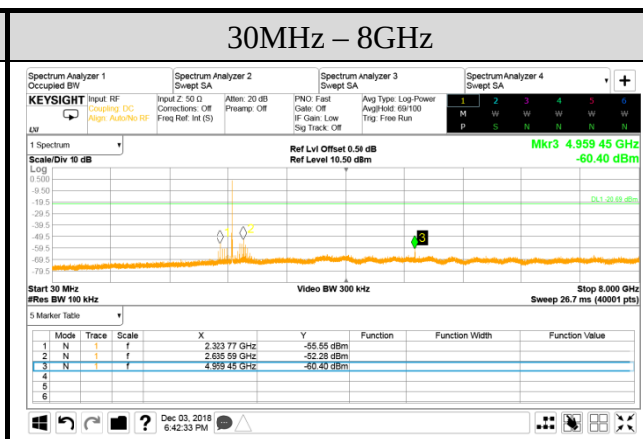
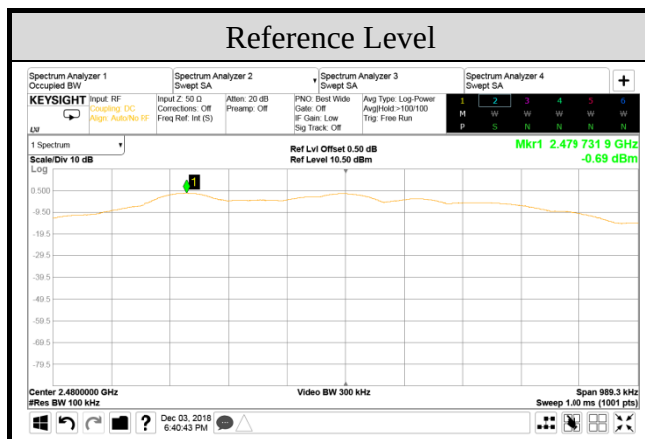
測試日期	2018/12/03	環境溫/濕度	24°C/52%
測試電壓	DC 5V (經筆記型電腦供電)	模式	BLE
		測試頻率	2402MHz



測試日期	2018/12/03	環境溫/濕度	24°C/52%
測試電壓	DC 5V (經筆記型電腦供電)	模式	BLE
		測試頻率	2440MHz



測試日期	2018/12/03	環境溫/濕度	24°C/52%
測試電壓	DC 5V (經筆記型電腦供電)	模式	BLE
		測試頻率	2480MHz



7. 功率密度之量測

測試日期	2018/12/03	環境溫/濕度	24°C/52%
測試電壓	DC 5V (經筆記型電腦供電)		

7.1. 功率密度

模式	測試頻率 (MHz)	功率密度 (dBm)	限制值 (dBm)
BLE	2402	-0.20	8
	2440	-0.25	
	2480	-0.69	

註：測試結果係依照 FCC 公告之 KDB558074 D01V05，解析頻寬以 100kHz 量測其測試結果較 3kHz 嚴格

7.2. 功率密度之量測圖

