

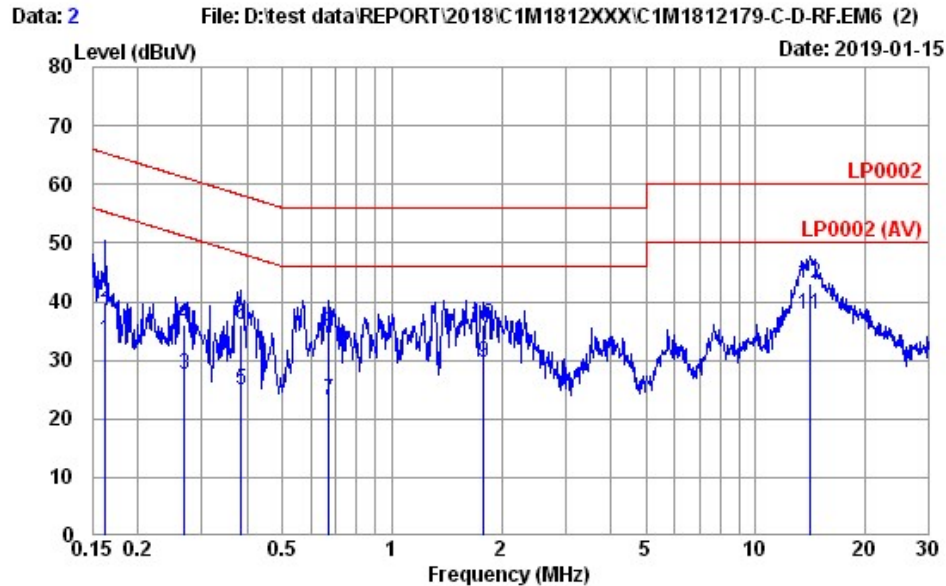
附錄 一

受測裝置之測試結果

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1. 電源線傳導干擾之量測

測試日期	2019/01/15	環境溫/濕度	23°C/60%
測試電壓	DC 5V (USB 透過筆記型電腦供電)		

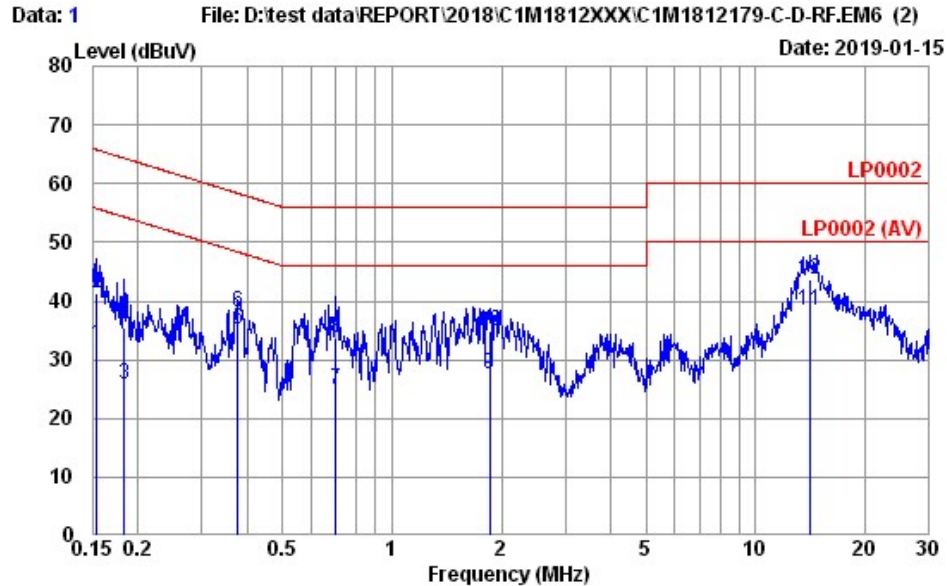


Site no. : No.8 Shielded Room Data no. : 2
Condition : ENV4200 100169 LISN Phase : NEUTRAL
Limit : LP0002
Env. / Ins. : 23°C / 60% ESR3 (1774) Engineer : Jemy
EUT : SRS-XB32
Power Rating : DC 5.0V (Via USB)
Test Mode : Operating

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Remark
1	0.162	10.56	0.03	9.98	12.85	33.42	55.34	21.92	Average
2	0.162	10.56	0.03	9.98	19.42	39.99	65.34	25.35	QP
3	0.269	10.48	0.03	9.98	7.07	27.56	51.16	23.60	Average
4	0.269	10.48	0.03	9.98	15.43	35.92	61.16	25.24	QP
5	0.385	10.43	0.04	9.98	4.51	24.96	48.17	23.21	Average
6	0.385	10.43	0.04	9.98	15.64	36.09	58.17	22.08	QP
7	0.672	10.42	0.05	9.99	2.69	23.15	46.00	22.85	Average
8	0.672	10.42	0.05	9.99	14.16	34.62	56.00	21.38	QP
9	1.790	10.45	0.07	9.99	9.00	29.51	46.00	16.49	Average
10	1.790	10.45	0.07	9.99	15.54	36.05	56.00	19.95	QP
11	14.138	12.40	0.22	10.05	15.16	37.83	50.00	12.17	Average
12	14.138	12.40	0.22	10.05	20.54	43.21	60.00	16.79	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.
2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

測試日期	2019/01/15	環境溫/濕度	23°C/60%
測試電壓	DC 5V (USB 透過筆記型電腦供電)		



Site no. : No.8 Shielded Room Data no. : 1
Condition : ENV4200 100169 LISN Phase : LINE
Limit : LP0002
Env. / Ins. : 23°C / 60% ESR3 (1774) Engineer : Jemy
EUT : SRS-XB32
Power Rating : DC 5.0V (Via USB)
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	10.62	0.03	9.98	11.83	32.46	55.78	23.32	Average
2	0.154	10.62	0.03	9.98	20.57	41.20	65.78	24.58	QP
3	0.183	10.58	0.03	9.98	5.15	25.74	54.33	28.59	Average
4	0.183	10.58	0.03	9.98	14.93	35.52	64.33	28.81	QP
5	0.377	10.46	0.04	9.98	14.73	35.21	48.34	13.13	Average
6	0.377	10.46	0.04	9.98	17.51	37.99	58.34	20.35	QP
7	0.701	10.44	0.05	9.99	4.57	25.05	46.00	20.95	Average
8	0.701	10.44	0.05	9.99	13.21	33.69	56.00	22.31	QP
9	1.858	10.47	0.07	9.99	7.08	27.61	46.00	18.39	Average
10	1.858	10.47	0.07	9.99	14.49	35.02	56.00	20.98	QP
11	14.063	12.41	0.22	10.05	15.74	38.42	50.00	11.58	Average
12	14.063	12.41	0.22	10.05	21.08	43.76	60.00	16.24	QP

Remarks: 1. Emission Level= AMN Factor + Cable Loss + Pulse Att. + Reading.
2. If the average limit is met when using a quasi-peak detector,
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

2. 場強輻射之量測

裝置有兩種電源供應模式分別為(1)電池(DC 7.4V)、(2)USB (DC 5V)，實驗室以單機(電池供電)及筆記型電腦 (USB, DC 5V)供電進行量試評估進行量測，**最後選取最大場強值的擺設方式筆記型電腦供電方式以低、中、高頻率來進行量測，並將所有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 2.1

~2.2：

模式	動作狀態	基本頻率	量測頻率範圍
1	充電	---	30-1000MHz
2	發射	2402MHz (CH37)	1000-3000MHz
3			3000-8000MHz
4			8000-18000MHz
5			18000-25000MHz
6		2440MHz* (CH17)	30-1000MHz
7			1000-3000MHz
8			3000-8000MHz
9			8000-18000MHz
10			18000-25000MHz
11		2480MHz (CH39)	1000-3000MHz
12			3000-8000MHz
13			8000-18000MHz
14			18000-25000MHz
15	接收	2440MHz (CH17)	30-1000MHz
16			1000-3000MHz
17			3000-8000MHz
18			8000-18000MHz
19			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 章節的禁用頻率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 (CH37)	2310-2430MHz
2		2480MHz (CH39)	2450-2530MHz

測試日期	2019/01/09	環境溫/濕度	24°C/50%
測試電壓	(1) DC 7.4V (透過內建鋰電池供電), (2) DC 5V (USB 透過筆記型電腦供電)		

2.1. 30-1000MHz 頻率範圍，其他不必要發射量測

Mode	充電	Frequency	---
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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
57.16	13.20	1.97	15.38	30.55	40.00	9.45	Peak
84.32	14.56	2.32	14.65	31.53	40.00	8.47	Peak
149.31	17.16	3.36	10.62	31.14	43.50	12.36	Peak
216.24	17.13	3.76	6.69	27.58	46.00	18.42	Peak
328.76	20.67	4.78	4.55	30.00	46.00	16.00	Peak
444.19	23.05	5.91	3.32	32.28	46.00	13.72	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
37.76	20.98	1.67	5.70	28.35	40.00	11.65	Peak
93.05	16.24	2.52	8.11	26.87	43.50	16.63	Peak
167.74	16.08	3.50	7.87	27.45	43.50	16.05	Peak
216.24	17.13	3.76	11.14	32.03	46.00	13.97	Peak
312.27	20.19	4.54	13.15	37.88	46.00	8.12	Peak
384.05	22.08	5.58	9.60	37.26	46.00	8.74	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
139.61	17.87	3.30	6.97	28.14	43.50	15.36	Peak
199.75	15.94	3.66	16.46	36.06	43.50	7.44	Peak
248.25	19.29	3.97	14.87	38.13	46.00	7.87	Peak
288.02	19.74	4.27	11.23	35.24	46.00	10.76	Peak
335.55	20.86	4.89	8.34	34.09	46.00	11.91	Peak
666.32	25.17	6.89	3.64	35.70	46.00	10.30	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
71.71	12.83	2.11	9.31	24.25	40.00	15.75	Peak
112.45	18.36	2.87	9.27	30.50	43.50	13.00	Peak
198.78	15.91	3.66	11.24	30.81	43.50	12.69	Peak
256.01	19.45	4.02	8.56	32.03	46.00	13.97	Peak
327.79	20.64	4.77	6.07	31.48	46.00	14.52	Peak
464.56	23.28	5.95	3.31	32.54	46.00	13.46	Peak

Mode	---	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
91.11	15.88	2.47	3.85	22.20	43.50	21.30	Peak
122.15	18.72	3.01	5.08	26.81	43.50	16.69	Peak
140.58	17.83	3.31	11.11	32.25	43.50	11.25	Peak
191.99	15.78	3.65	11.97	31.40	43.50	12.10	Peak
247.28	19.24	3.96	10.52	33.72	46.00	12.28	Peak
666.32	25.17	6.89	4.59	36.65	46.00	9.35	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	4.73	25.05	43.50	18.45	Peak
144.46	17.53	3.33	7.04	27.90	43.50	15.60	Peak
167.74	16.08	3.50	13.04	32.62	43.50	10.88	Peak
191.99	15.78	3.65	8.77	28.20	43.50	15.30	Peak
256.01	19.45	4.02	8.93	32.40	46.00	13.60	Peak
326.82	20.61	4.75	5.61	30.97	46.00	15.03	Peak

2.2. 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	-0.39	45.25	54.00	8.75	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	-1.10	44.54	54.00	9.46	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	-0.05	47.20	54.00	6.80	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	-0.87	46.38	54.00	7.62	Peak

Mode	BLE	Frequency	TX 2480MHz
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Antenna at Horizontal Polarization

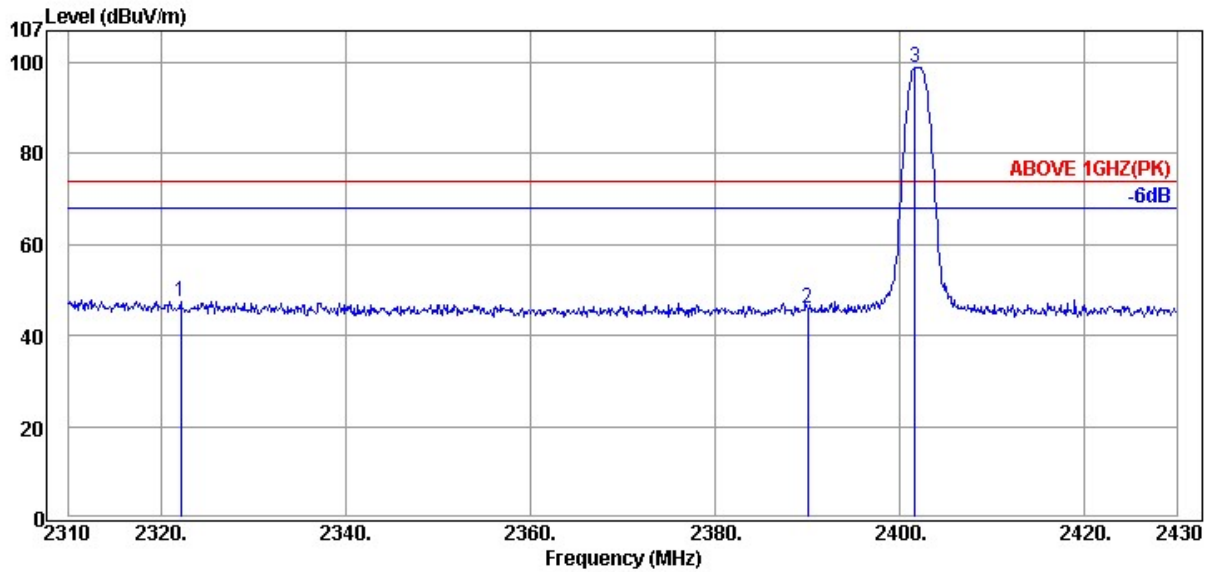
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4960.00	34.29	13.21	-1.97	45.53	54.00	8.47	Peak

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	-2.54	44.96	54.00	9.04	Peak

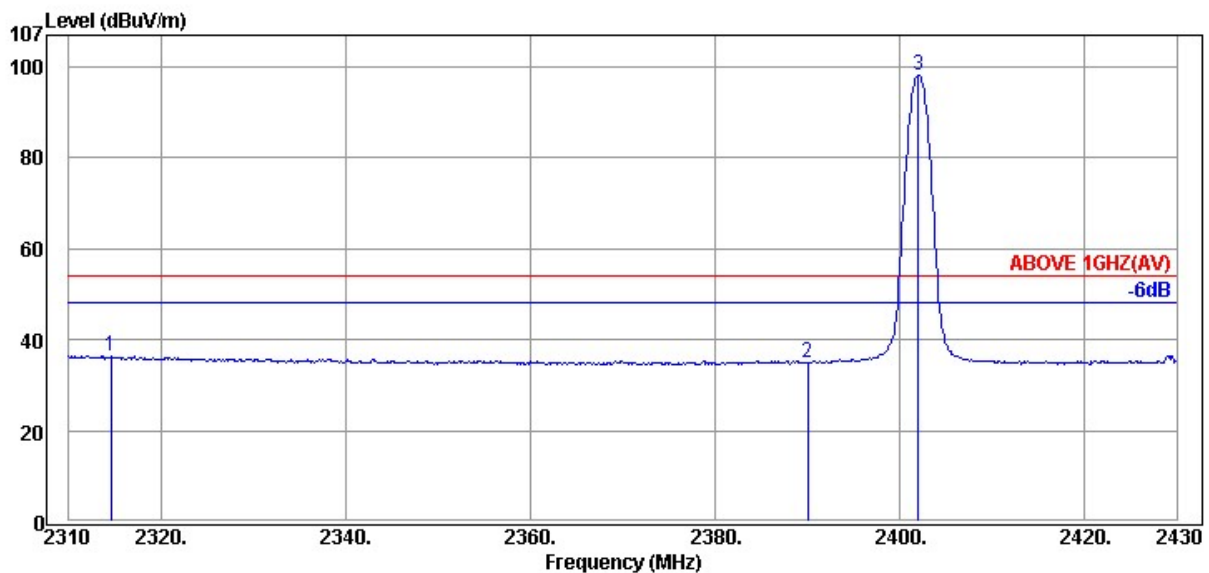
2.3. 禁用頻帶量測結果 (其他不必要發射)

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
2322.12	32.06	7.79	7.65	47.50	74.00	26.50	Peak
2390.04	32.16	7.92	6.03	46.11	74.00	27.89	Peak
@ 2401.68	32.16	7.92	59.01	99.09	---	---	Peak

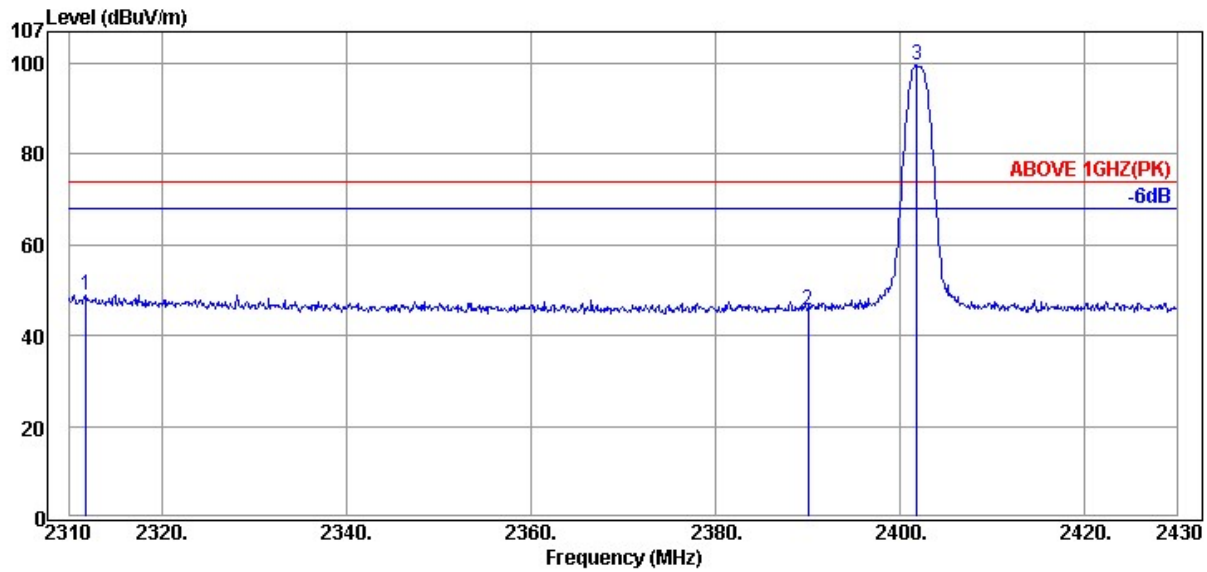


Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2314.56	32.03	7.76	-3.45	36.34	54.00	17.66	Average
2390.04	32.16	7.92	-5.07	35.01	54.00	18.99	Average
@ 2402.04	32.16	7.92	58.22	98.30	---	---	Average

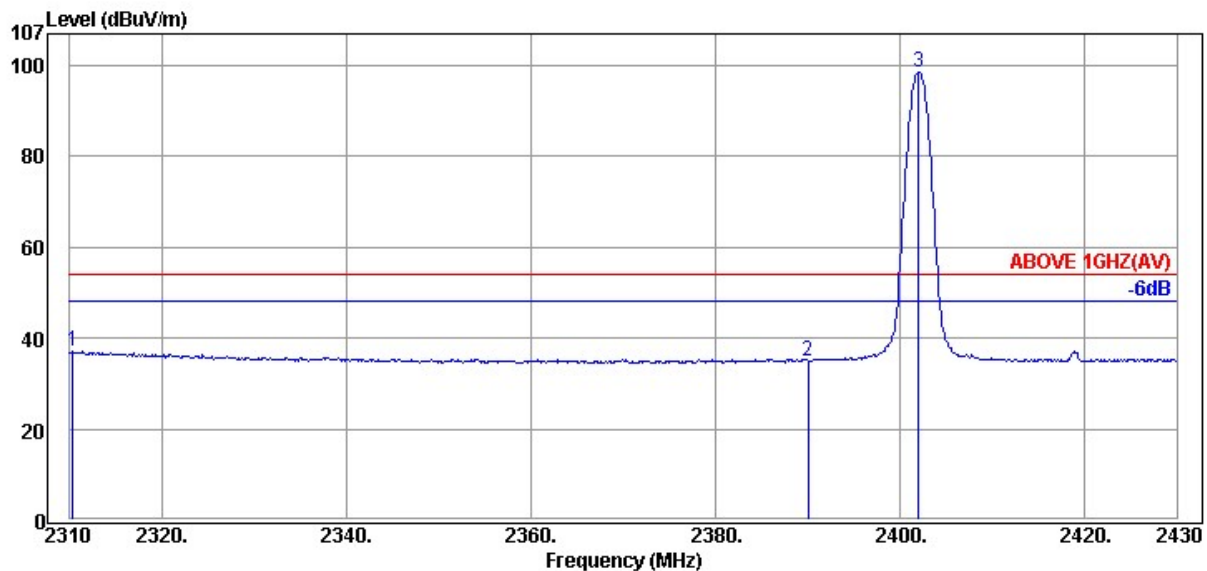
備註: “@”為主波，在此章節是不予以判定。

Mode	BLE	Frequency	TX 2402MHz
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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
2311.80	32.03	7.76	9.20	48.99	74.00	25.01	Peak
2390.04	32.16	7.92	5.68	45.76	74.00	28.24	Peak
@ 2401.80	32.16	7.92	59.39	99.47	---	---	Peak

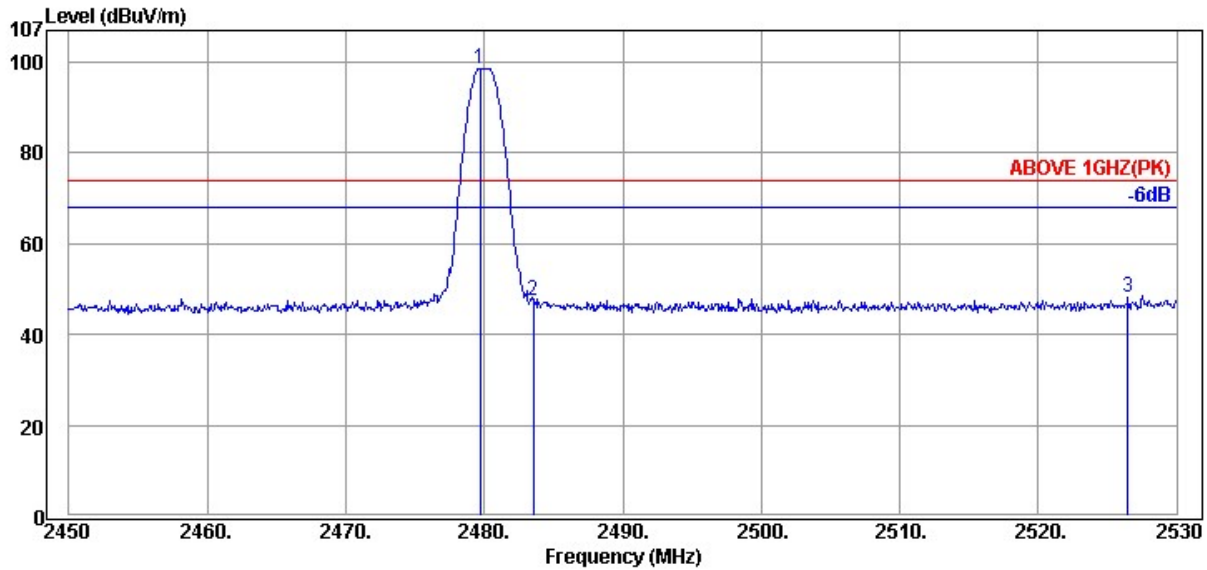


Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2310.36	32.03	7.76	-2.82	36.97	54.00	17.03	Average
2390.04	32.16	7.92	-5.07	35.01	54.00	18.99	Average
@ 2402.04	32.16	7.92	58.58	98.66	---	---	Average

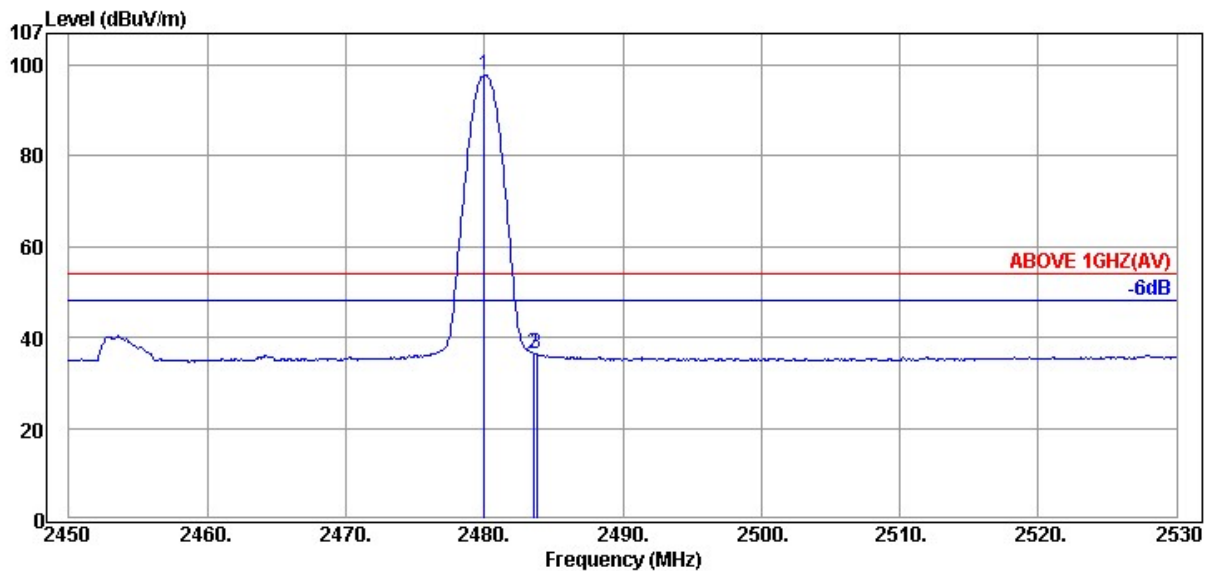
備註：“@”為主波，在此章節是不予以判定。

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
@	2479.68	32.28	7.90	58.53	98.71	---	---	Peak
	2483.52	32.28	7.90	7.09	47.27	74.00	26.73	Peak
	2526.48	32.34	7.98	7.77	48.09	74.00	25.91	Peak

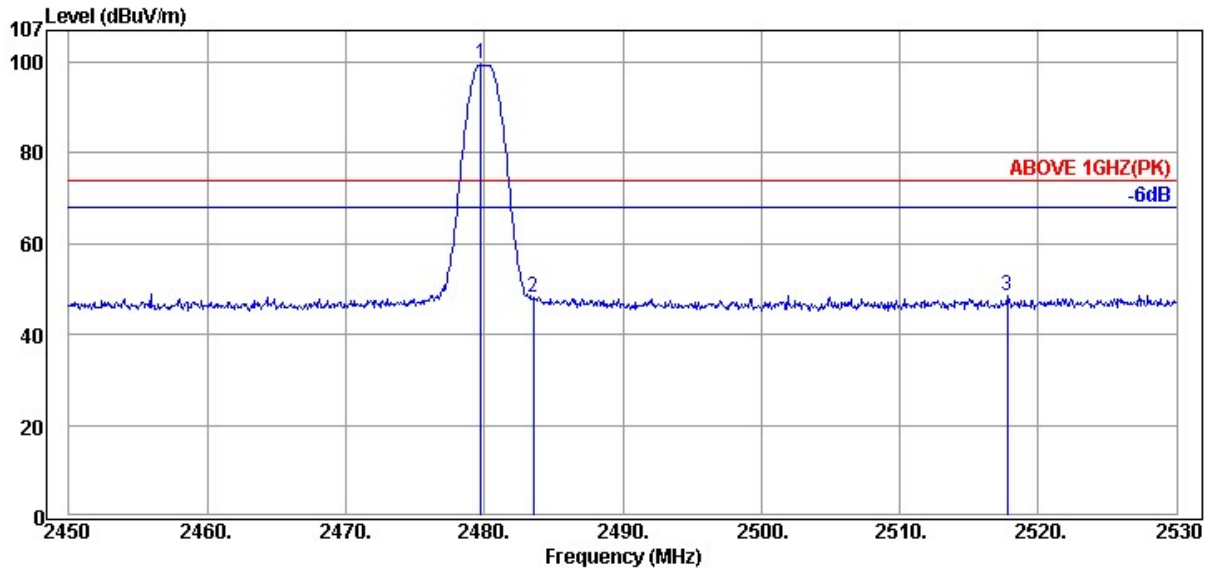


Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2480.00	32.28	7.90	57.75	97.93	---	---	Average
	2483.52	32.28	7.90	-3.77	36.41	54.00	17.59	Average
	2483.76	32.28	7.90	-3.64	36.54	54.00	17.46	Average

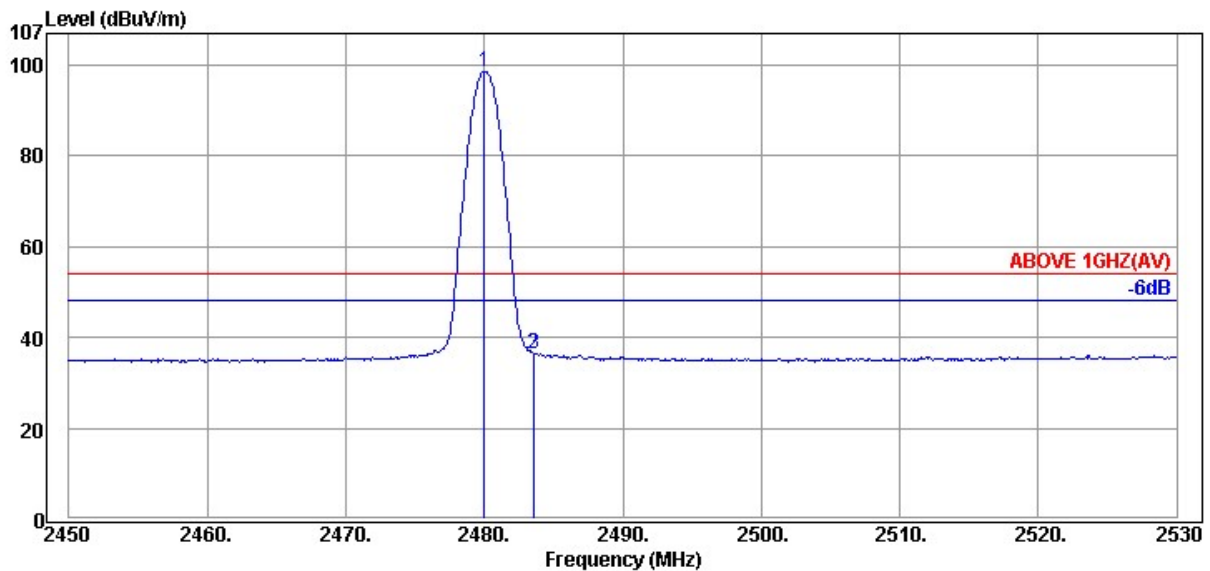
備註：“@”為主波，在此章節是不予以判定。

Mode	BLE	Frequency	TX 2480MHz
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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
@	2479.76	32.28	7.90	59.30	99.48	---	---	Peak
	2483.52	32.28	7.90	7.87	48.05	74.00	25.95	Peak
	2517.76	32.32	7.94	8.28	48.54	74.00	25.46	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
@	2480.00	32.28	7.90	58.52	98.70	---	---	Average
	2483.52	32.28	7.90	-3.74	36.44	54.00	17.56	Average
	2483.60	32.28	7.90	-3.63	36.55	54.00	17.45	Average

備註：“@”為主波，在此章節是不予以判定。

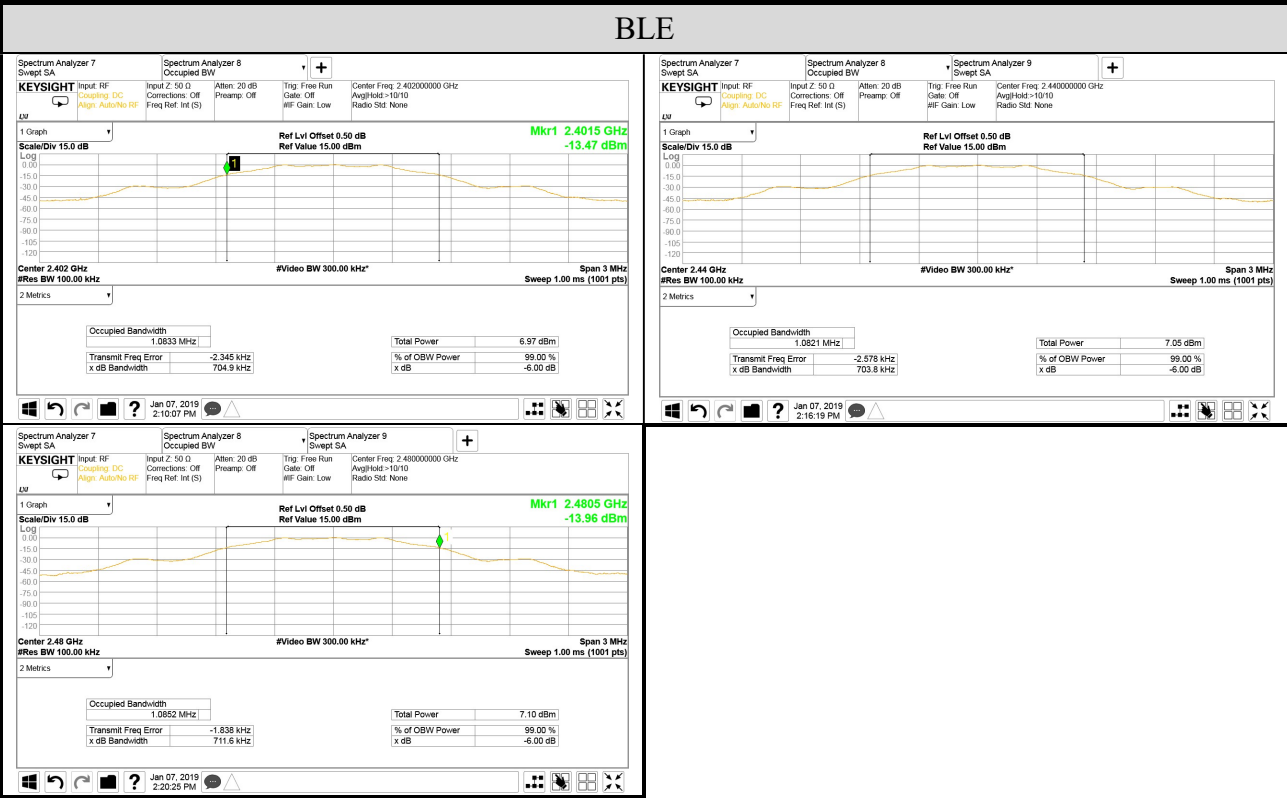
3. 發射頻寬之量測

測試日期	2019/01/07	環境溫/濕度	23℃/45%
測試電壓	DC 5V (透過筆記型電腦供電)		

3.1. 發射頻寬

模式 (Mode)	測試頻率 (MHz)	6dB 頻寬 (MHz)	限制值 (kHz)
BLE	2402	0.7049	>500
	2440	0.7038	
	2480	0.7116	

3.2. 發射頻寬之量測圖



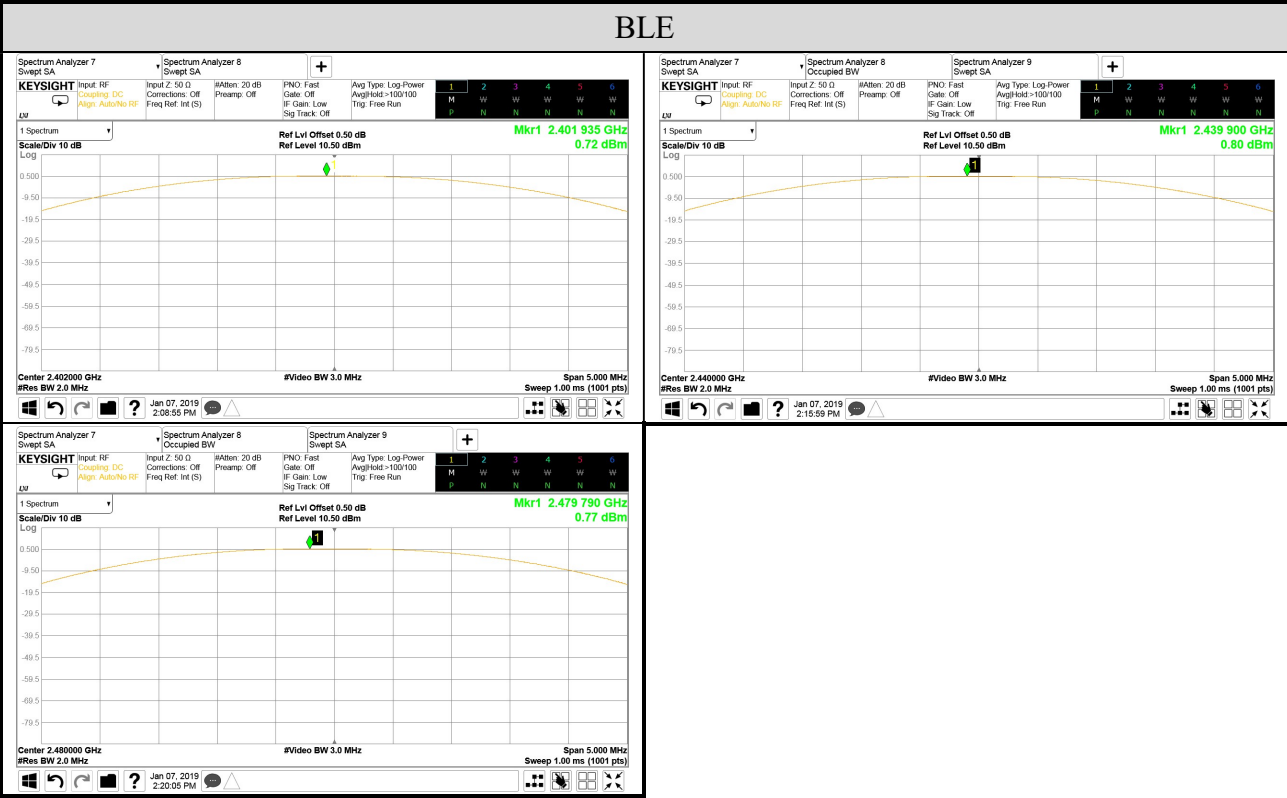
4. 峰值輸出功率之量測

測試日期	2019/01/07	環境溫/濕度	23℃/45%
測試電壓	DC 5V (透過筆記型電腦供電)		

4.1. 峰值輸出功率

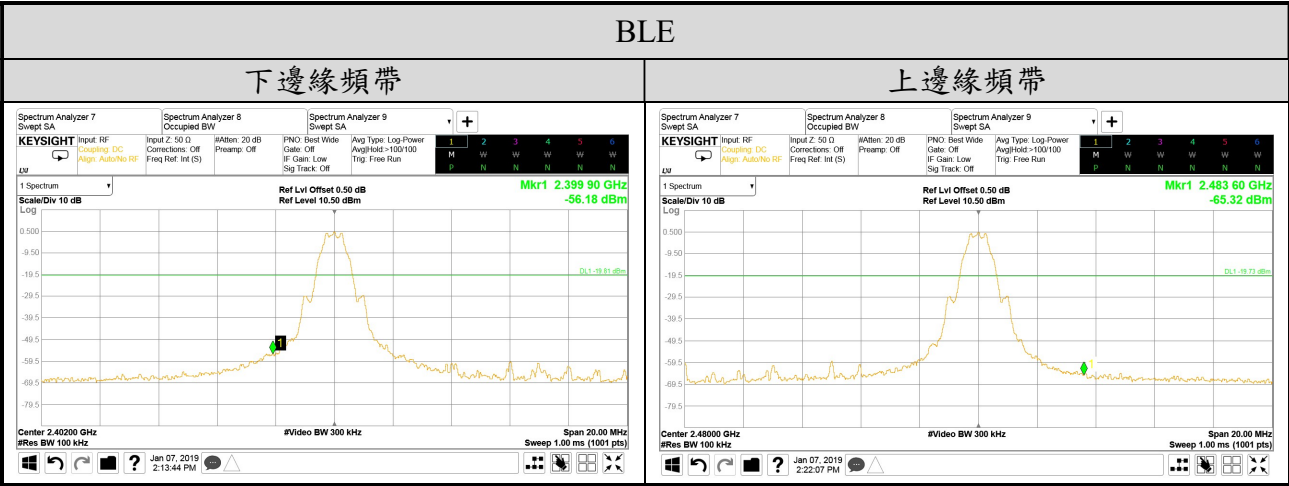
模式 (Mode)	測試頻率 (MHz)	最大輸出功率 (dBm)	限制值 (dBm)
BLE	2402	0.72	30
	2440	0.80	
	2480	0.77	

4.2. 峰值輸出功率之量測圖



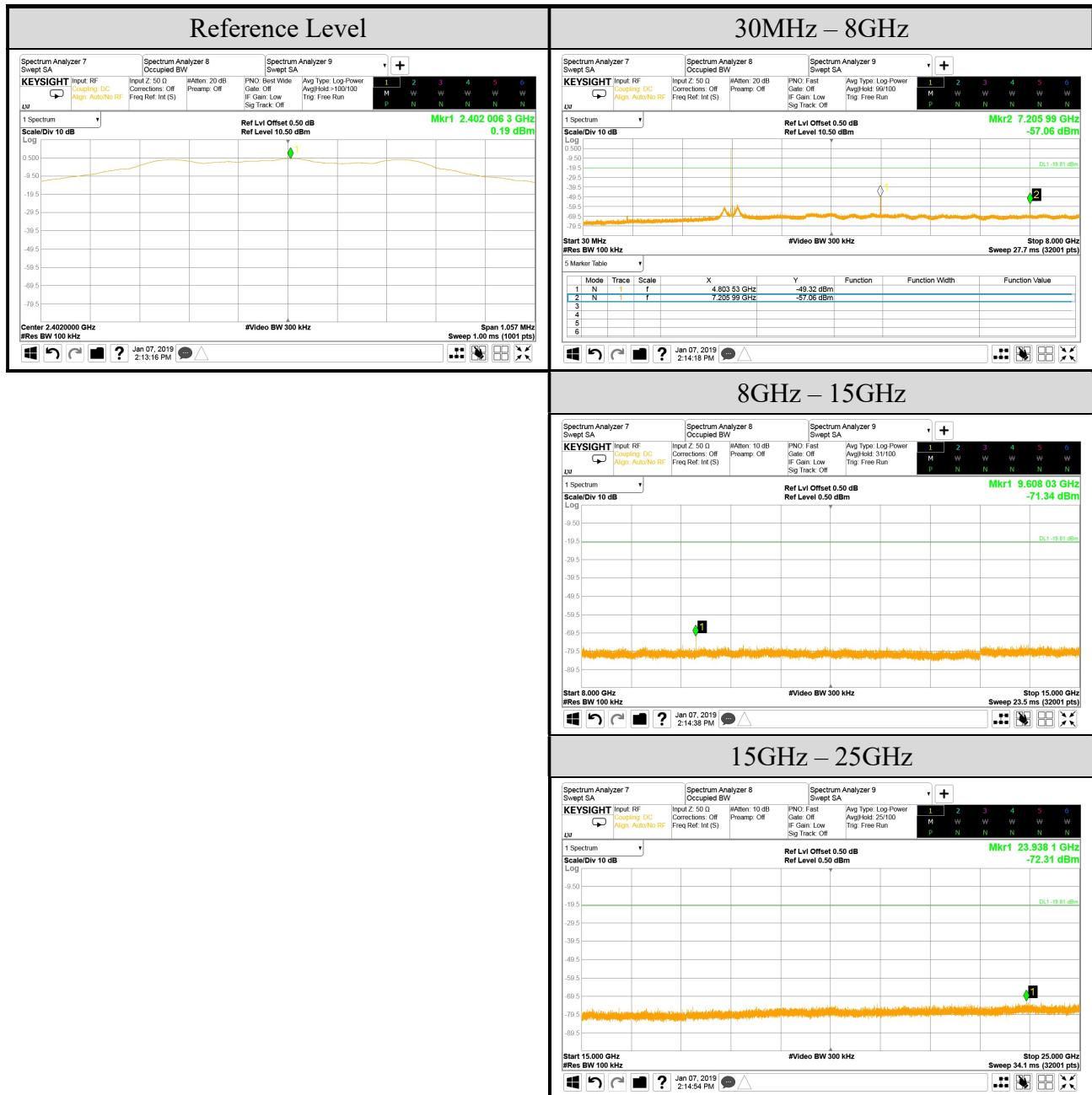
5. 頻帶邊緣之 RF 傳導發射之量測

測試日期	2019/01/07	環境溫/濕度	23°C/45%
測試電壓	DC 5V (透過筆記型電腦供電)		

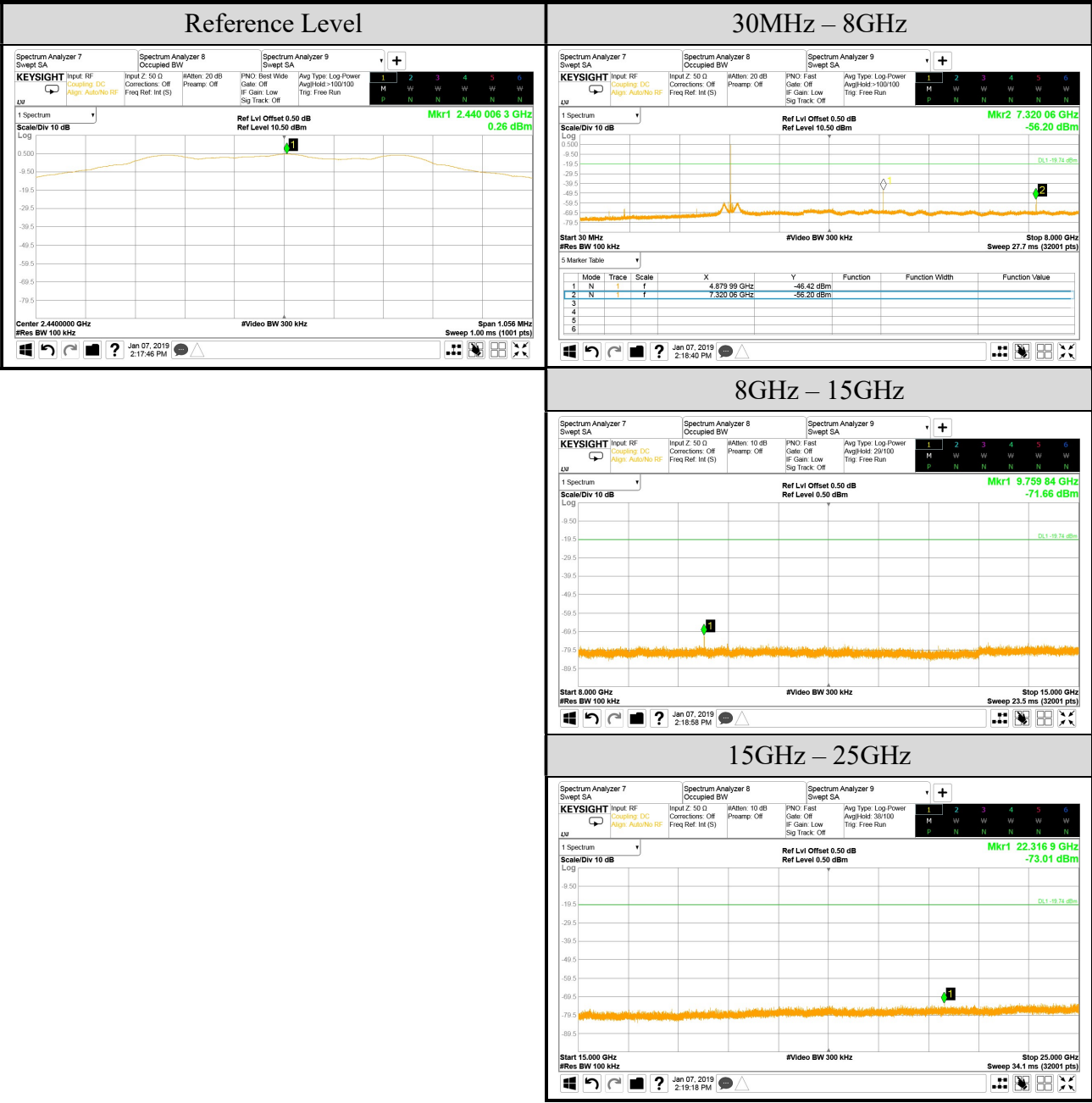


6. 混附發射之 RF 傳導發射之量測

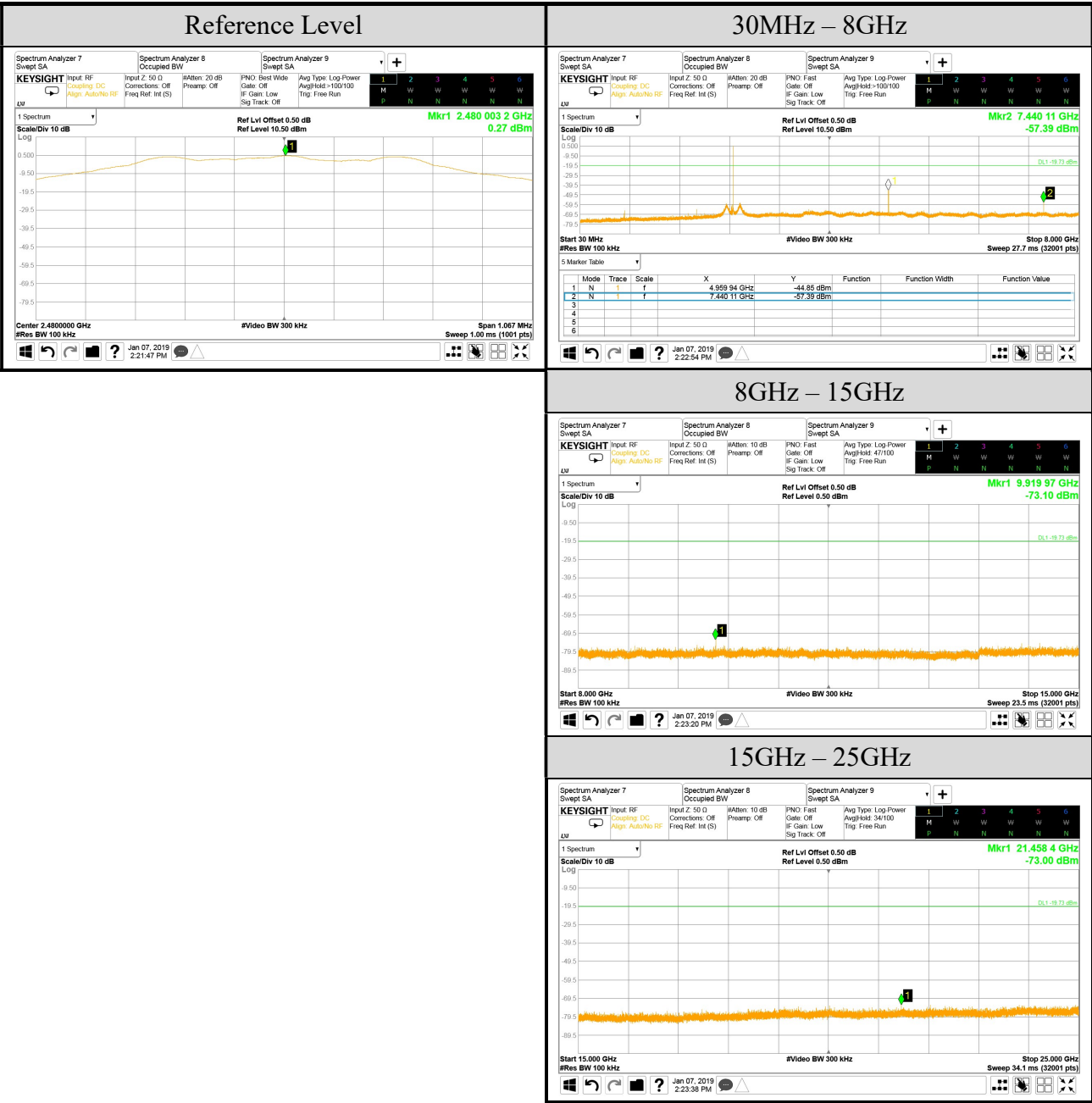
測試日期	2019/01/07	環境溫/濕度	23°C/45%
測試電壓	DC 5V (透過筆記型電腦供電)	模式	BLE
		測試頻率	2402MHz



測試日期	2019/01/07	環境溫/濕度	23°C/45%
測試電壓	DC 5V (透過筆記型電腦供電)	模式	BLE
		測試頻率	2440MHz



測試日期	2019/01/07	環境溫/濕度	23°C/45%
測試電壓	DC 5V (透過筆記型電腦供電)	模式	BLE
		測試頻率	2480MHz



7. 功率密度之量測

測試日期	2019/01/07	環境溫/濕度	23°C/45%
測試電壓	DC 5V (透過筆記型電腦供電)		

7.1. 功率密度

模式 (Mode)	測試頻率 (MHz)	功率密度 (dBm)	限制值 (dBm)
BLE	2402	0.19	8
	2440	0.26	
	2480	0.27	

測試結果係依照 FCC 公告之 KDB558074 D01V04，且解析頻寬以 100kHz 量測其測試結果較 3kHz 嚴格

7.2. 功率密度之量測圖

