

附錄一

受測裝置之測試結果

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1. 場強輻射之量測

【經實驗室評估量測後，以最差之調變方式 GFSK 進行本章節之測試】

本裝置有兩種電源供應模式分別為(1)電池(DC 3.67V 或 DC3.62V)、(2)USB 供電(DC 5V)，實驗室以單機(電池供電)分別以三種不同的擺設方式(站立、平放、側立)進行量試評估，最後選取最大場強值的擺設方式(站立)以低、中、高頻率來進行量測，並將下列測試模式之測試數據隨案件所附，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
SKU #1 BT (GFSK)	發射	2402MHz	1000-25000MHz
		2441MHz*	30-1000MHz
		2480MHz	1000-25000MHz
SKU #1 BT	接收	2441MHz	30-1000MHz
			1000-25000MHz

註 1：*：經評估後，以最差頻率進行 30-1000MHz 量測。

註 2：Charge 及 Normal 模式已於報告號碼(EM-NC200033)章節 5 進行評估，故不另行量測。

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 1.3。

模式	動作狀態	基本頻率	量測頻率範圍
SKU #1 BT (GFSK)	發射	2402MHz	2310-2410MHz
		2480MHz	2450-2900MHz
SKU #1 BT (8-DPSK)	發射	2402MHz	2310-2410MHz
		2480MHz	2450-2900MHz

測試日期	2020/01/15~17	環境溫/濕度	20°C/59~66%
測試電壓	DC 3.67V (經 SKU #1 電池供電)	測試人員	Sean Wang

1.1. 30-1000MHz 頻率範圍，其他不必要發射量測

Mode	SKU #1 BT (GFSK)	Frequency	TX 2441MHz
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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
75.590	13.06	1.97	17.29	32.32	40.00	7.68	Peak
167.740	16.05	3.10	22.06	41.21	43.50	2.29	Peak
323.910	20.43	4.81	14.40	39.64	46.00	6.36	Peak
696.390	25.42	7.34	8.93	41.69	46.00	4.31	Peak
925.310	27.51	8.61	-1.00	35.12	46.00	10.88	Peak
987.390	27.97	8.97	-1.60	35.34	54.00	18.66	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
75.590	13.06	1.97	9.85	24.88	40.00	15.12	Peak
199.750	16.27	3.42	8.73	28.42	43.50	15.08	Peak
540.220	24.15	6.81	4.05	35.01	46.00	10.99	Peak
671.170	25.25	7.23	6.03	38.51	46.00	7.49	Peak
835.100	26.80	8.10	-1.26	33.64	46.00	12.36	Peak
972.840	27.87	8.89	-1.64	35.12	54.00	18.88	Peak

Mode	SKU #1 BT (GFSK)	Frequency	RX 2441MHz
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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
75.590	13.06	1.97	15.15	30.18	40.00	9.82	Peak
167.740	16.05	3.10	20.96	40.11	43.50	3.39	Peak
323.910	20.43	4.81	13.99	39.23	46.00	6.77	Peak
515.970	23.88	6.77	4.58	35.23	46.00	10.77	Peak
660.500	25.19	7.18	0.61	32.98	46.00	13.02	Peak
974.780	27.89	8.90	-1.41	35.38	54.00	18.62	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
75.590	13.06	1.97	10.16	25.19	40.00	14.81	Peak
167.740	16.05	3.10	9.07	28.22	43.50	15.28	Peak
504.330	23.76	6.76	3.56	34.08	46.00	11.92	Peak
672.140	25.27	7.23	6.91	39.41	46.00	6.59	Peak
925.310	27.51	8.61	-1.06	35.06	46.00	10.94	Peak
997.090	28.04	9.02	-0.35	36.71	54.00	17.29	Peak

1.2. 1000MHz 以上頻率範圍，其他不必要發射量測

頻率範圍量測至主波發射的 10 倍諧波，其他未列在報告上乃因訊號太小無法量測。

Mode	SKU #1 BT (GFSK)	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	33.92	10.22	-0.69	43.45	54.00	10.55	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	33.92	10.22	-0.12	44.02	54.00	9.98	Peak

Mode	SKU #1 BT (GFSK)	Frequency	TX 2441MHz
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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
4882.00	34.36	10.24	32.59	42.76	54.00	11.24	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
4882.00	34.36	10.24	32.44	42.61	54.00	11.39	Peak

Mode	SKU #1 BT (GFSK)	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	34.32	10.27	-0.32	44.27	54.00	9.73	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	34.32	10.27	-0.84	43.75	54.00	10.25	Peak

Mode	SKU #1 BT	Frequency	RX 2441MHz
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Antenna at Horizontal Polarization

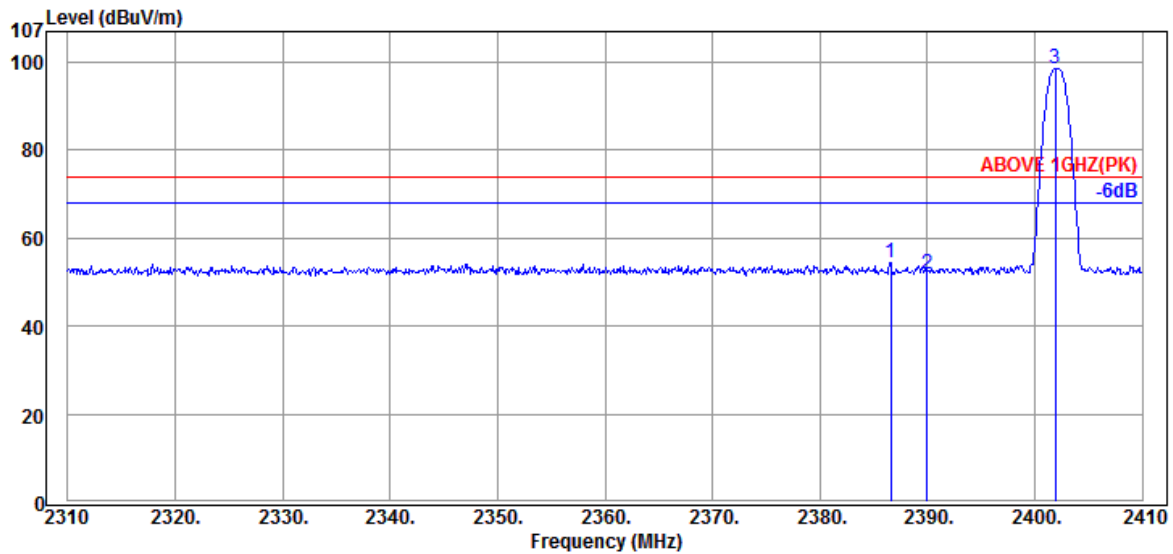
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4882.00	34.36	10.24	-2.27	42.33	54.00	11.67	Peak

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
4882.00	34.36	10.24	-3.27	41.33	54.00	12.67	Peak

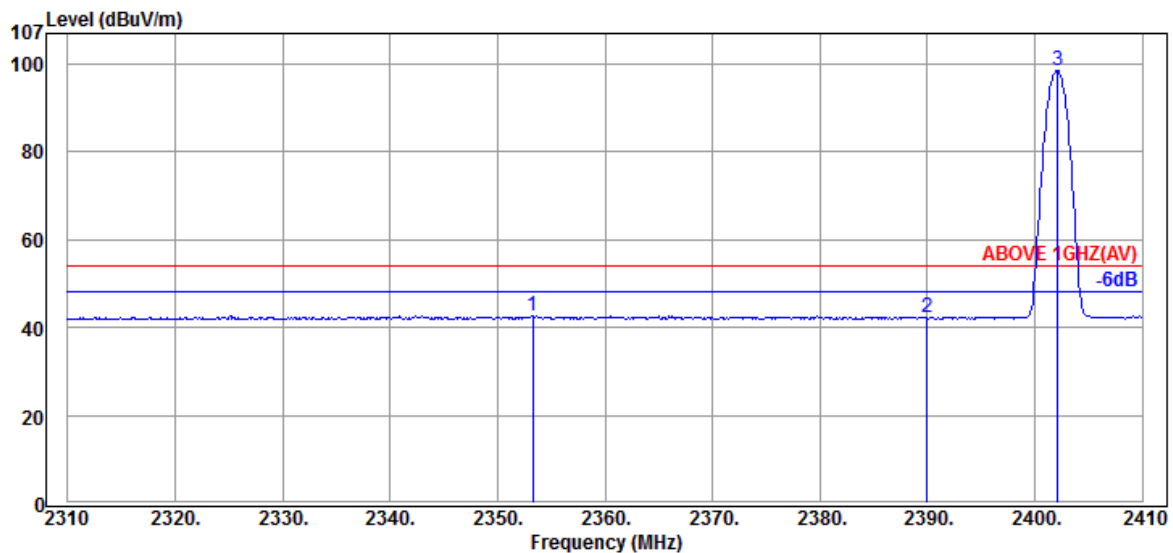
1.3. 禁用頻帶量測結果 (其他不必要發射)

Mode	SKU #1 BT (GFSK)	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
2386.60	32.00	8.52	13.94	54.46	74.00	19.54	Peak
2390.00	32.00	8.52	11.49	52.01	74.00	21.99	Peak
@ 2401.90	32.03	8.52	58.03	98.58	---	---	Peak

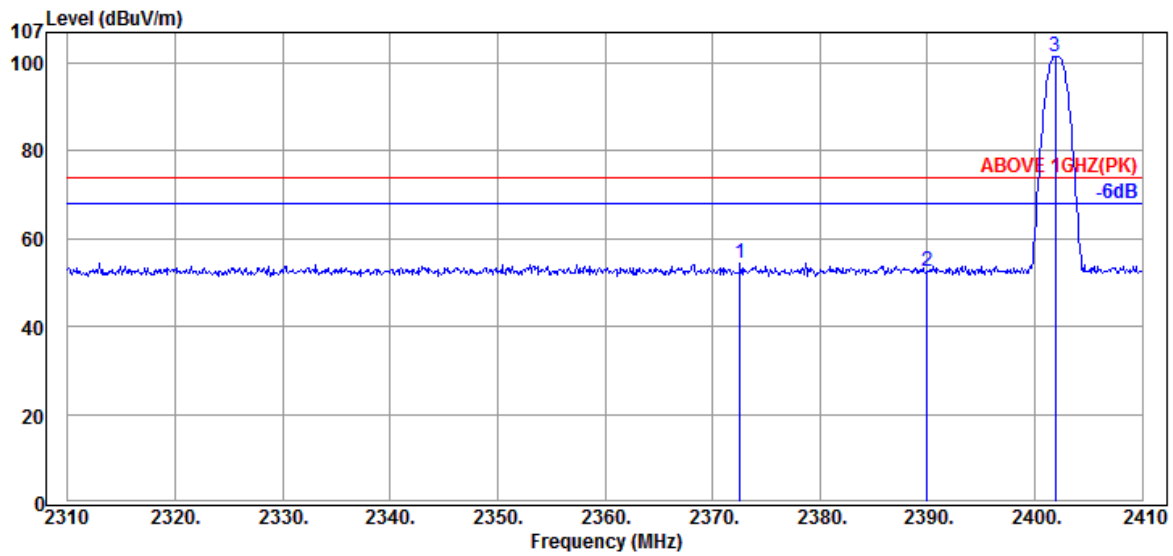


Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2353.30	32.00	8.49	2.13	42.62	54.00	11.38	Average
2390.00	32.00	8.52	1.70	42.22	54.00	11.78	Average
@ 2402.10	32.03	8.52	57.92	98.47	---	---	Average

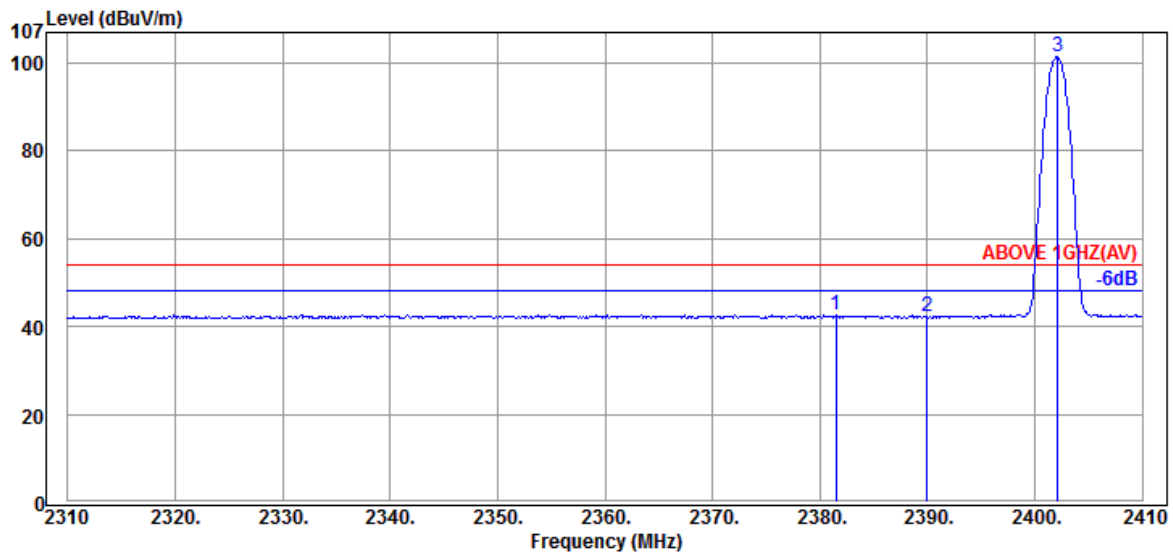
備註：“@”為主波，在此章節是不予以判定。

Mode	SKU #1 BT (GFSK)	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
2372.60	32.00	8.51	13.90	54.41	74.00	19.59	Peak
2390.00	32.00	8.52	12.13	52.65	74.00	21.35	Peak
@ 2401.90	32.03	8.52	61.03	101.58	---	---	Peak

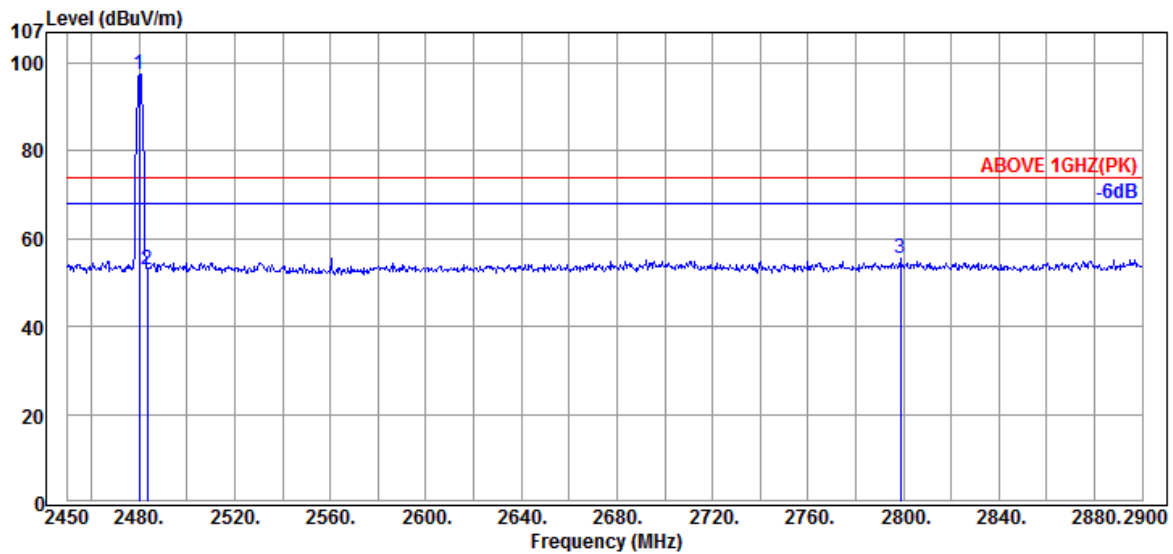


Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2381.50	32.00	8.51	2.13	42.64	54.00	11.36	Average
2390.00	32.00	8.52	1.64	42.16	54.00	11.84	Average
@ 2402.10	32.03	8.52	60.85	101.40	---	---	Average

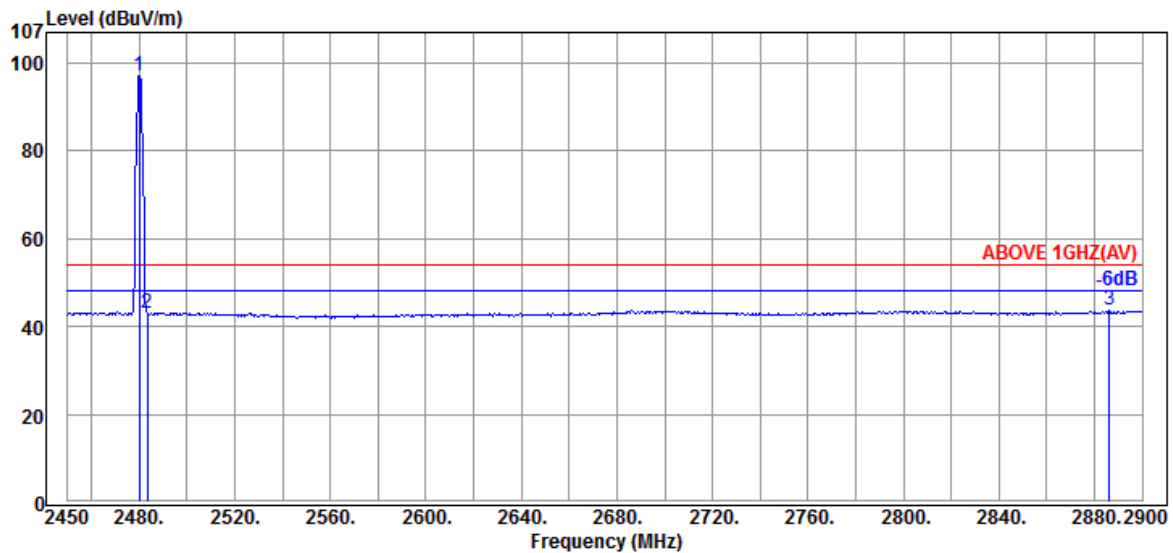
備註：“@”為主波，在此章節是不予以判定。

Mode	SKU #1 BT (GFSK)	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
@	2480.15	32.58	8.58	56.26	97.42	---	---	Peak
	2483.30	32.57	8.58	11.92	53.07	74.00	20.93	Peak
	2798.75	32.88	8.66	13.99	55.53	74.00	18.47	Peak

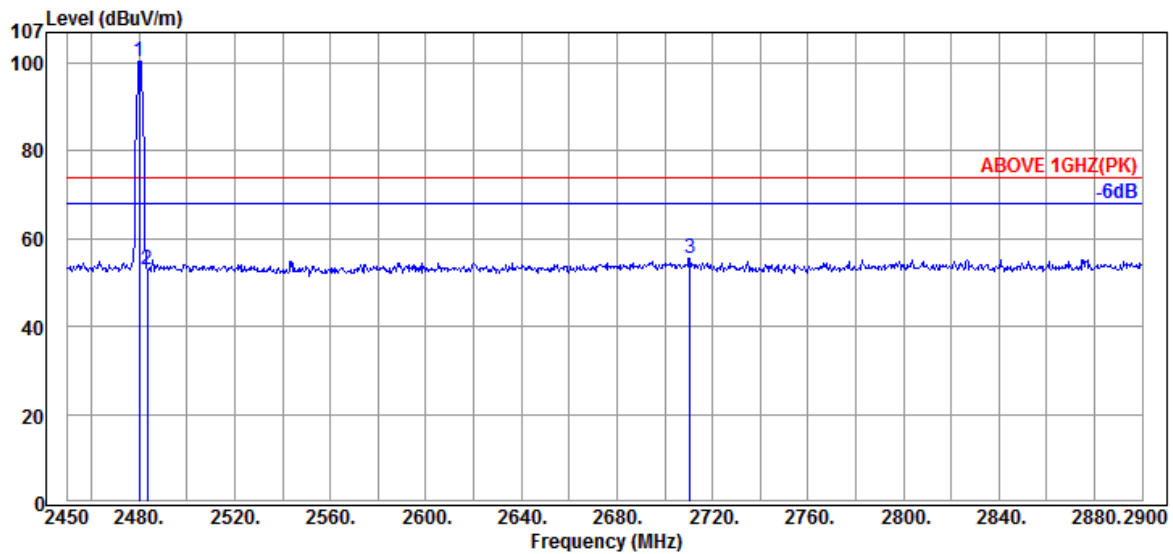


Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2480.15	32.58	8.58	56.04	97.20	---	---	Average
	2483.30	32.57	8.58	1.73	42.88	54.00	11.12	Average
	2886.05	32.92	8.68	2.11	43.71	54.00	10.29	Average

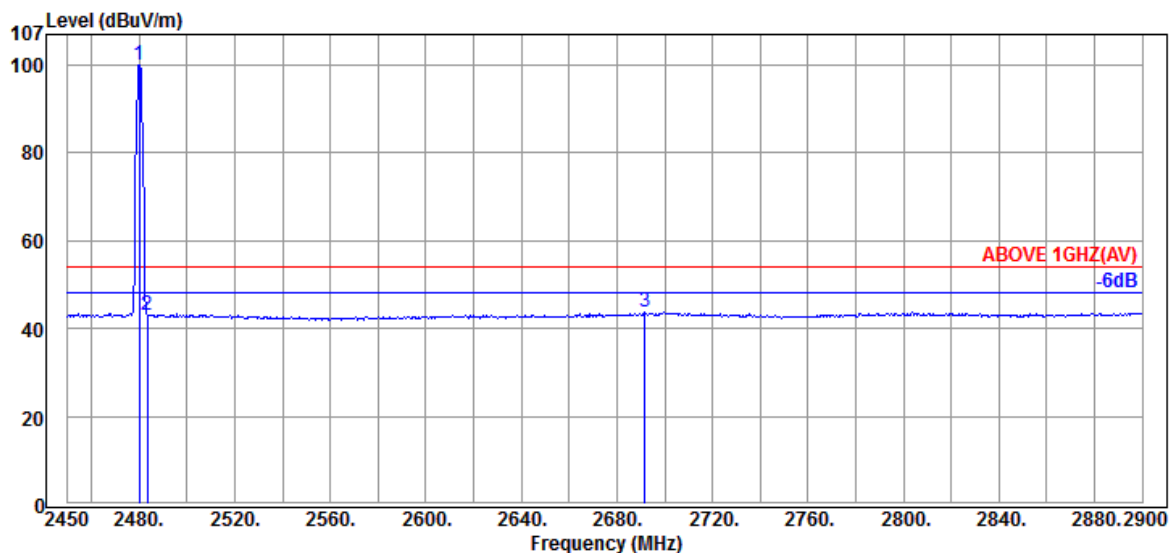
備註：“@”為主波，在此章節是不予以判定。

Mode	SKU #1 BT (GFSK)	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
@ 2480.15	32.58	8.58	59.31	100.47	---	---	Peak
2483.30	32.57	8.58	11.95	53.10	74.00	20.90	Peak
2710.55	32.67	8.64	14.16	55.47	74.00	18.53	Peak

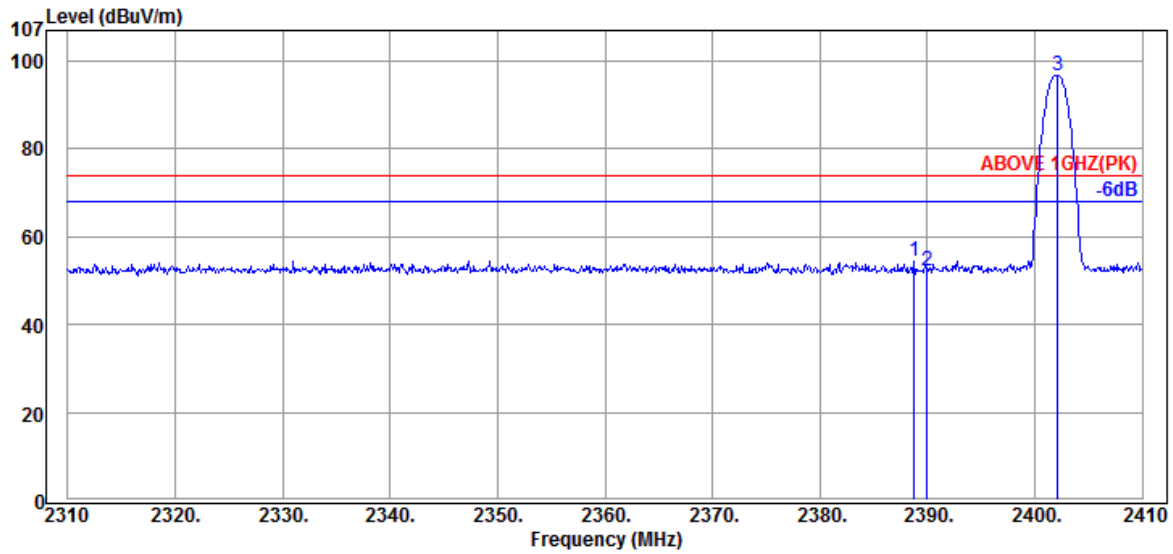


Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2480.15	32.58	8.58	58.99	100.15	---	---	Average
2483.30	32.57	8.58	1.76	42.91	54.00	11.09	Average
2691.65	32.67	8.64	2.31	43.62	54.00	10.38	Average

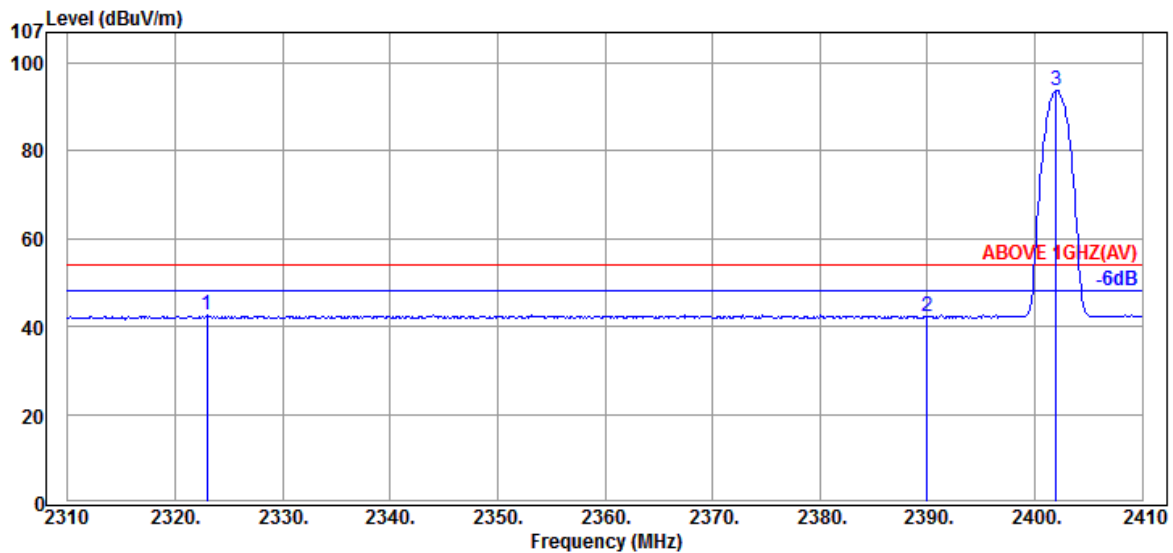
備註：“@”為主波，在此章節是不予以判定。

Mode	SKU #1 BT (8-DPSK)	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
2388.80	32.00	8.52	14.06	54.58	74.00	19.42	Peak
2390.00	32.00	8.52	11.71	52.23	74.00	21.77	Peak
@ 2402.10	32.03	8.52	56.24	96.79	---	---	Peak

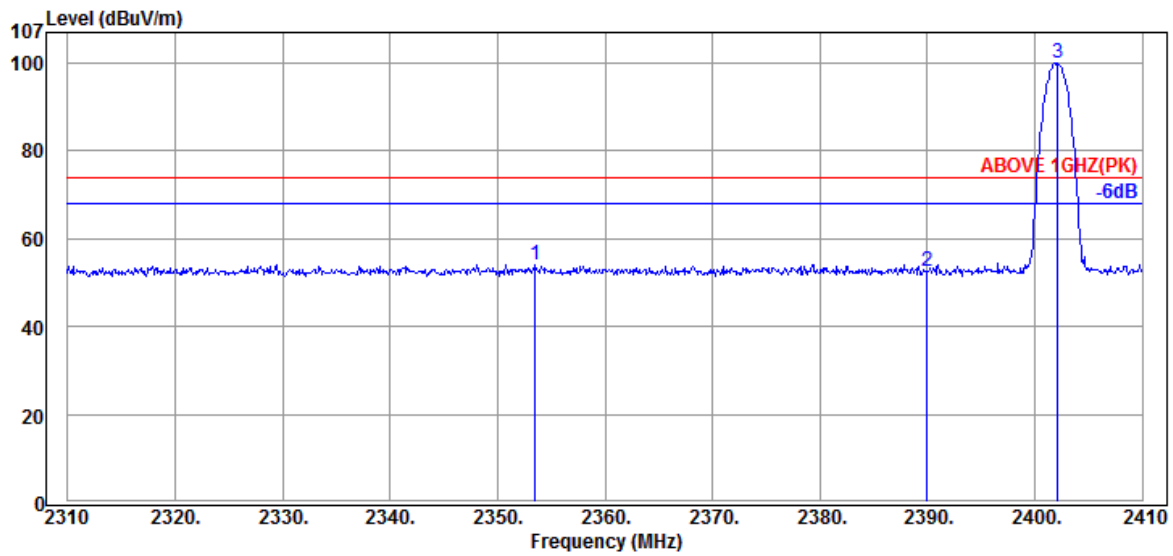


Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2323.00	32.00	8.47	2.14	42.61	54.00	11.39	Average
2390.00	32.00	8.52	1.73	42.25	54.00	11.75	Average
@ 2402.00	32.03	8.52	53.11	93.66	---	---	Average

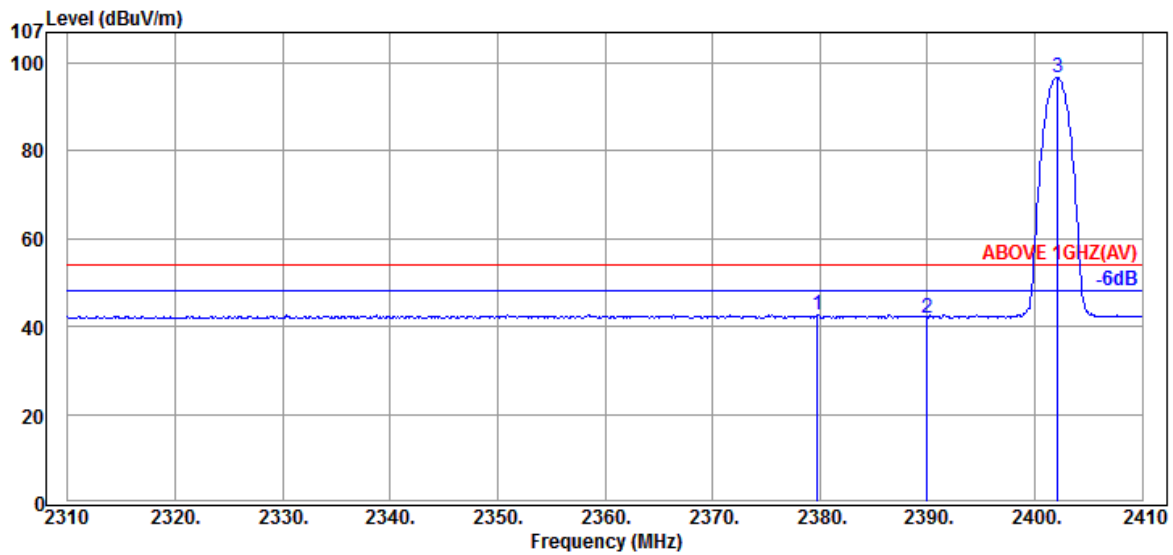
備註：“@”為主波，在此章節是不予以判定。

Mode	SKU #1 BT (8-DPSK)	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
2353.50	32.00	8.49	13.69	54.18	74.00	19.82	Peak
2390.00	32.00	8.52	12.07	52.59	74.00	21.41	Peak
@ 2402.10	32.03	8.52	59.52	100.07	---	---	Peak

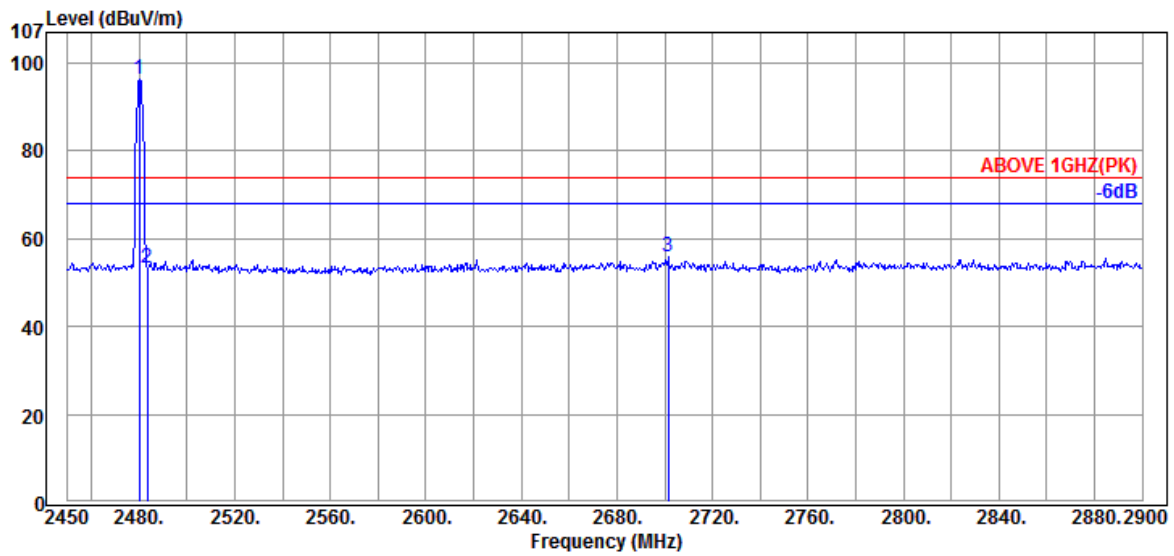


Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2379.80	32.00	8.51	2.32	42.83	54.00	11.17	Average
2390.00	32.00	8.52	1.57	42.09	54.00	11.91	Average
@ 2402.10	32.03	8.52	56.05	96.60	---	---	Average

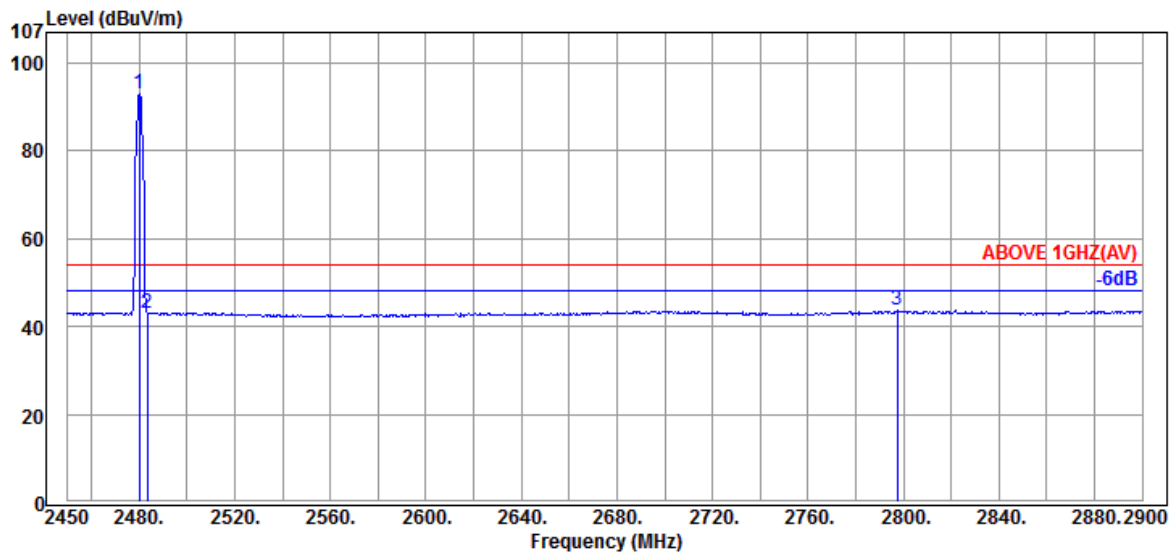
備註：“@”為主波，在此章節是不予以判定。

Mode	SKU #1 BT (8-DPSK)	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
@	2480.15	32.58	8.58	55.15	96.31	---	---	Peak
	2483.30	32.57	8.58	12.14	53.29	74.00	20.71	Peak
	2701.55	32.78	8.64	14.61	56.03	74.00	17.97	Peak

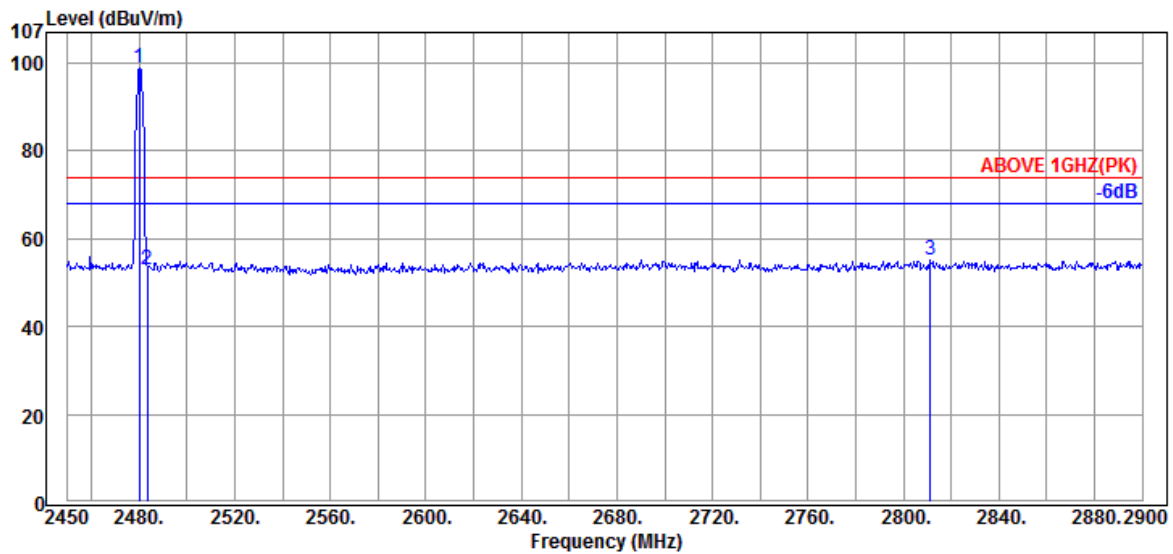


Antenna at Horizontal Polarization

	Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Meter Reading (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@	2480.15	32.58	8.58	51.74	92.90	---	---	Average
	2483.30	32.57	8.58	1.86	43.01	54.00	10.99	Average
	2797.40	32.86	8.66	2.15	43.67	54.00	10.33	Average

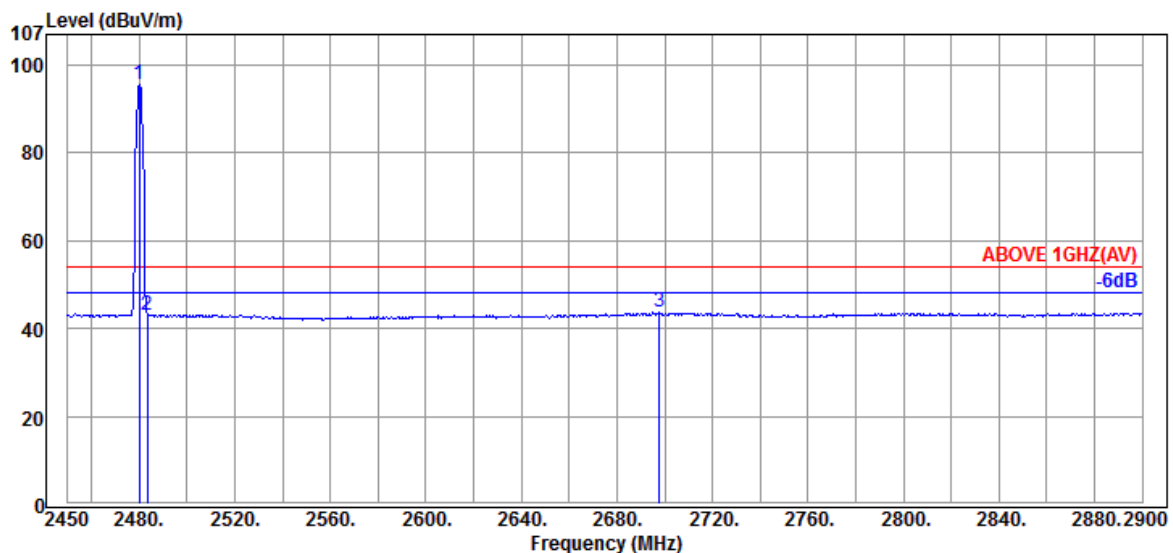
備註：“@”為主波，在此章節是不予以判定。

Mode	SKU #1 BT (8-DPSK)	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
@	2480.15	32.58	8.58	57.67	98.83	---	---	Peak
	2483.30	32.57	8.58	11.85	53.00	74.00	21.00	Peak
	2811.35	32.85	8.67	13.67	55.19	74.00	18.81	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
@	2480.15	32.58	8.58	54.51	95.67	---	---	Average
	2483.30	32.57	8.58	1.91	43.06	54.00	10.94	Average
	2697.95	32.77	8.64	2.18	43.59	54.00	10.41	Average

備註：“@”為主波，在此章節是不予以判定。

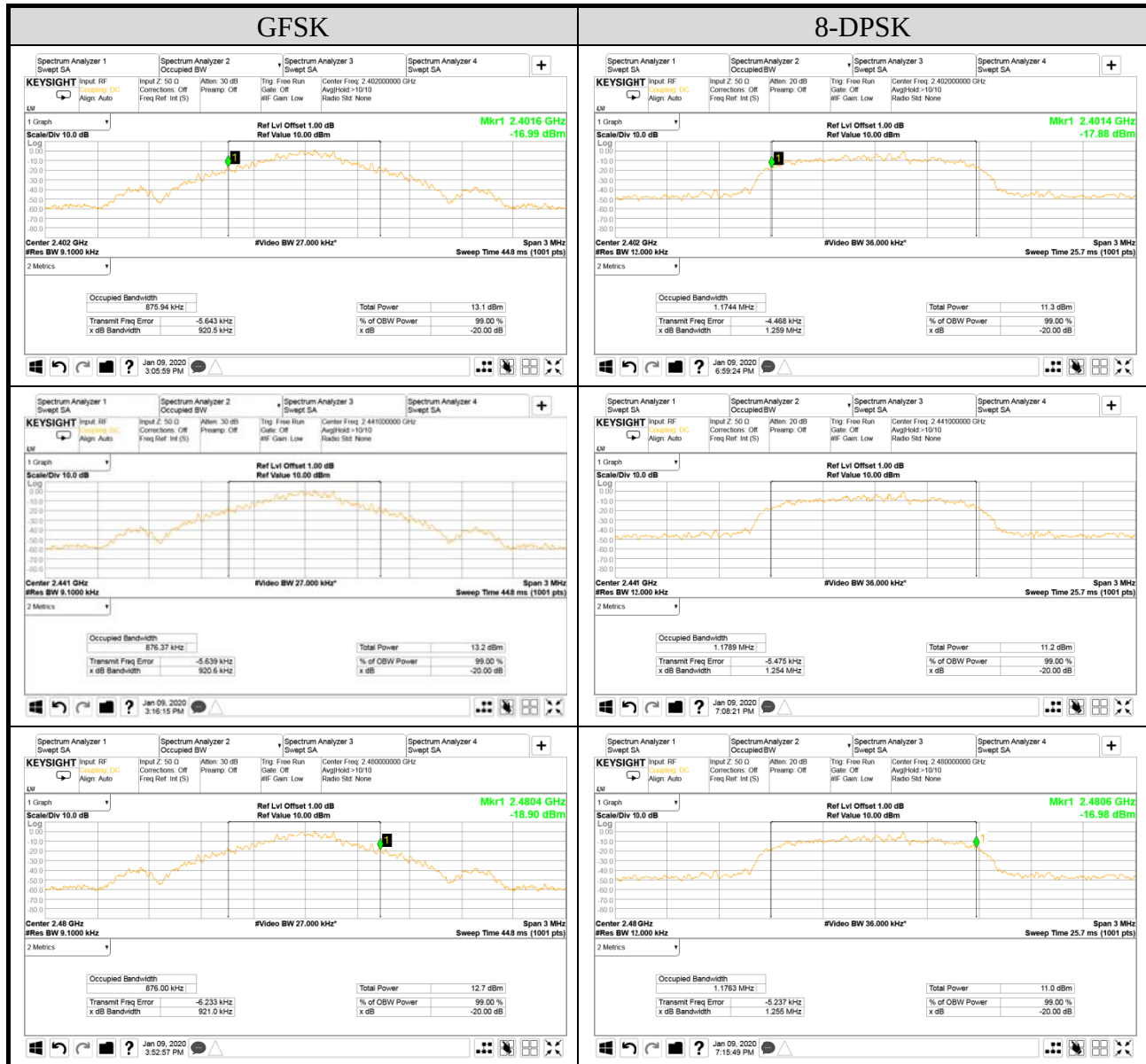
2. 20dB 頻寬之量測

測試日期	2020/01/09	環境溫/濕度	21°C/51%
電纜損失	1.0dB	測試人員	Sean Wang
測試電壓	DC 3.67V(經電池供電)	Test SKU	SKU #1

2.1. 20dB 頻寬

模式	測試頻率 (MHz)	20dB 頻寬 (MHz)	頻道間隔參考限制值 2/3 (20dB 頻寬) (MHz)
GFSK	2402	0.9205	0.614
	2441	0.9206	0.614
	2480	0.9210	0.614
8-DPSK	2402	1.259	0.839
	2441	1.254	0.836
	2480	1.255	0.837

2.2. 20dB 頻寬之量測圖



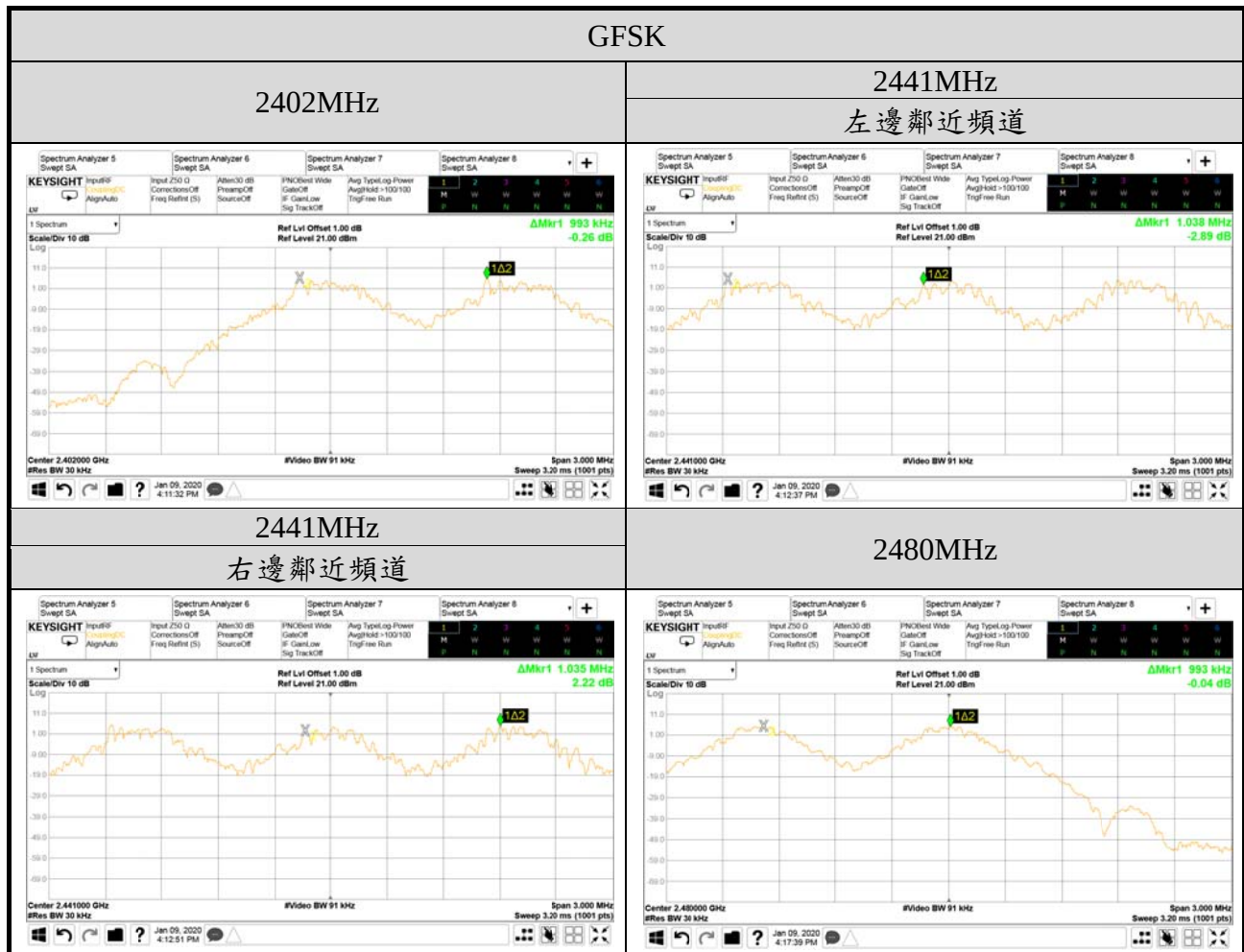
3. 載波頻率間隔之量測

測試日期	2020/01/09	環境溫/濕度	21°C/51%
電纜損失	1.0dB	測試人員	Sean Wang
測試電壓	DC 3.67V(經電池供電)	Test SKU	SKU #1

3.1. 載波頻率間隔

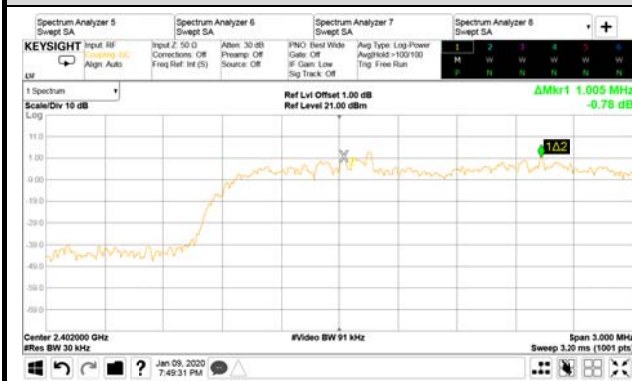
模式 (Mode)	測試頻率 (MHz)	頻道間隔(MHz)	頻道間隔參考限制值 2/3 (20dB 頻寬) (MHz)
GFSK	2402	0.993	> 0.614
	2441 (左邊鄰近頻道)	1.038	
	2441 (右邊鄰近頻道)	1.035	
	2480	0.993	
8-DPSK	2402	1.005	> 0.839
	2441 (左邊鄰近頻道)	0.993	
	2441 (右邊鄰近頻道)	0.993	
	2480	1.005	

3.2. 載波頻率間隔之量測圖



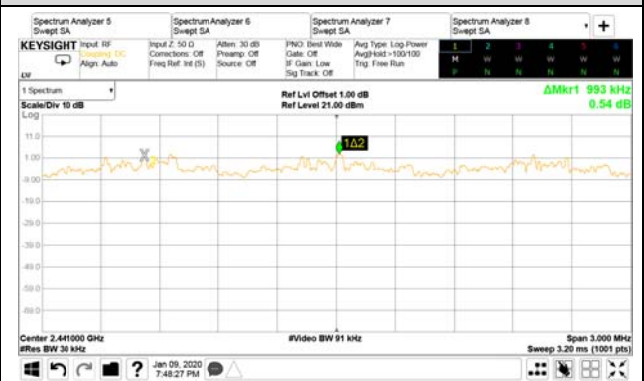
8-DPSK

2402MHz



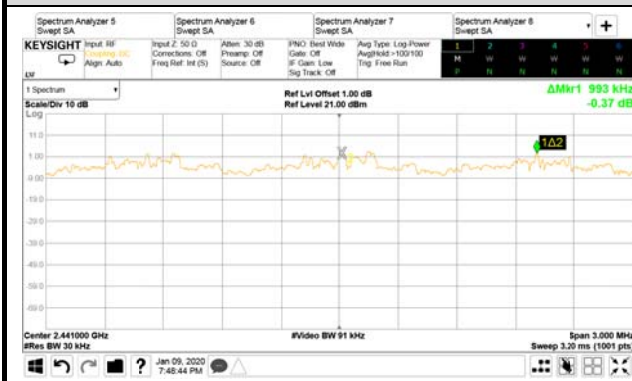
2441MHz

左邊鄰近頻道

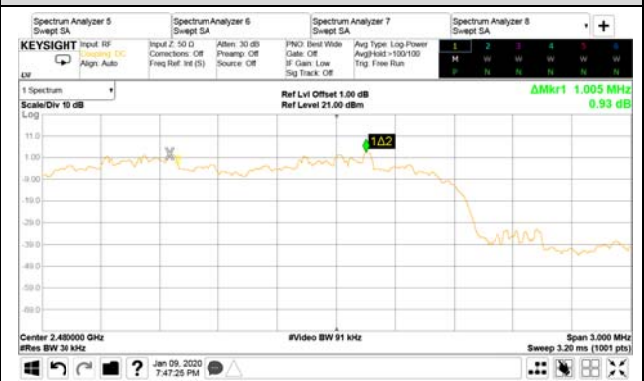


2441MHz

右邊鄰近頻道

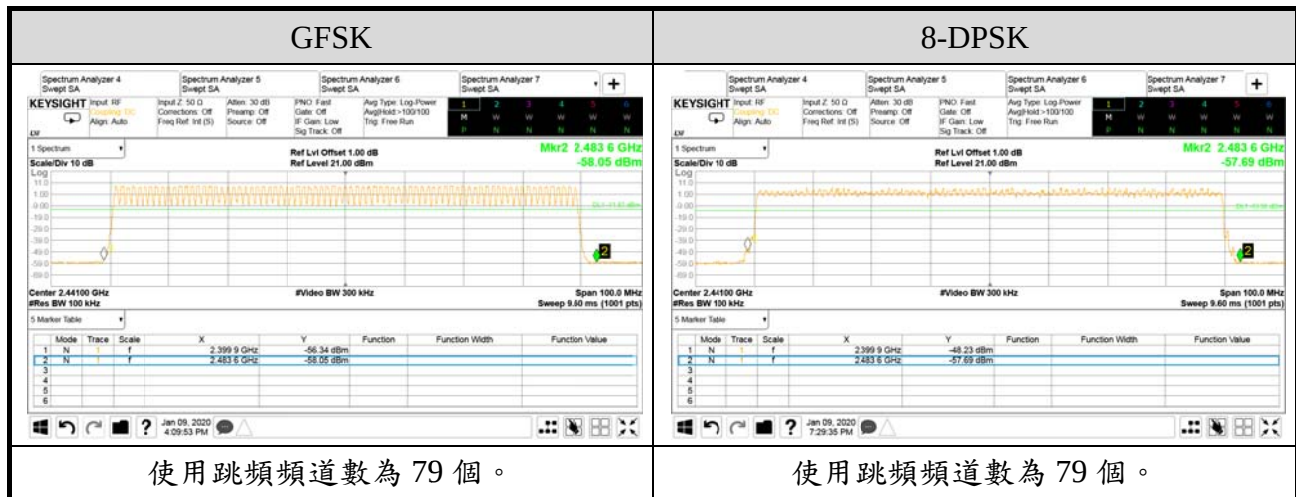


2480MHz



4. 跳頻頻率數目之量測

測試日期	2020/01/09	環境溫/濕度	21°C/51%
電纜損失	1.0dB	測試人員	Sean Wang
測試電壓	DC 3.67V(經電池供電)	Test SKU	SKU #1



5. 佔用時間(停留時間)之量測

測試日期	2020/01/09	環境溫/濕度	21°C/51%
電纜損失	1.0dB	測試人員	Sean Wang
測試電壓	DC 3.67V(經電池供電)	Test SKU	SKU #1

5.1. 佔用時間(停留時間)

模式	測試頻率 (MHz)	封包	每秒出現 頻道數	佔用時間 (ms)	佔用時間加總 (ms)	限制值 (ms)
GFSK	2402	DH1	8	0.370	93.536	<400
		DH3	5	1.630	257.540	<400
		DH5	2	2.870	181.384	<400

週期之計算: $79 \text{ 頻道數} * 0.4 \text{ 秒} = 31.6 \text{ 秒}$

封包模式: DH1

以每1秒出現 8 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$$8 \text{ 頻道數} * 31.6 \text{ 秒} * 0.370 \text{ ms} = 93.536 \text{ ms} (<400\text{ms})$$

封包模式: DH3

以每1秒出現 5 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

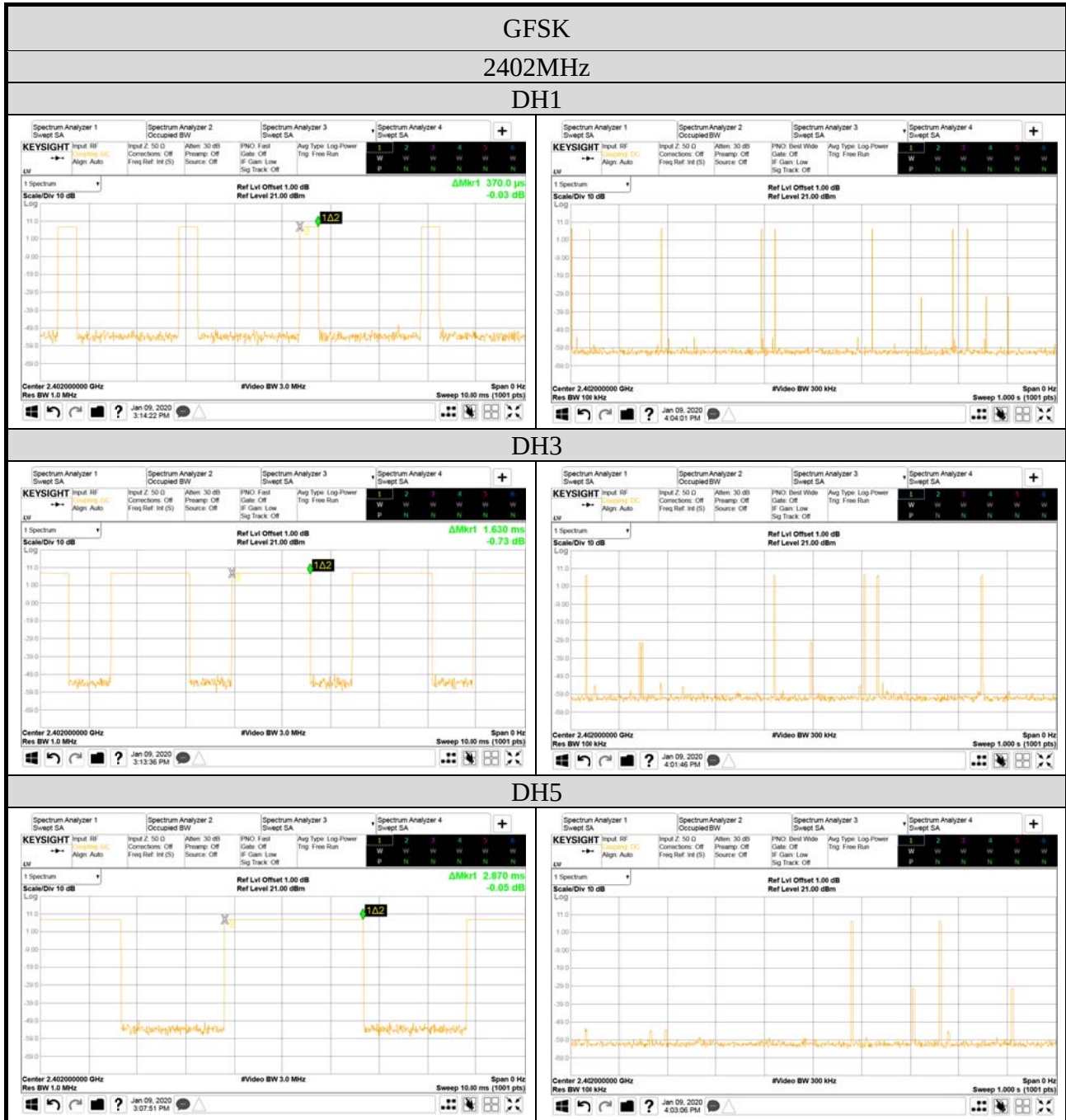
$$5 \text{ 頻道數} * 31.6 \text{ 秒} * 1.630 \text{ ms} = 257.540 \text{ ms} (<400\text{ms})$$

封包模式: DH5

以每1秒出現 2 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$$2 \text{ 頻道數} * 31.6 \text{ 秒} * 2.870 \text{ ms} = 181.384 \text{ ms} (<400\text{ms})$$

● 佔用時間(停留時間)之量測圖



模式	測試頻率 (MHz)	封包	每秒出現 頻道數	佔用時間 (ms)	佔用時間加總 (ms)	限制值 (ms)
GFSK	2441	DH1	8	0.370	93.536	<400
		DH3	5	1.630	257.540	<400
		DH5	2	2.880	182.016	<400

週期之計算: $79 \text{ 頻道數} * 0.4 \text{ 秒} = 31.6 \text{ 秒}$

封包模式: DH1

以每1秒出現 8 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$$8 \text{ 頻道數} * 31.6 \text{ 秒} * 0.370 \text{ ms} = 93.536 \text{ ms} (<400\text{ms})$$

封包模式: DH3

以每1秒出現 5 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$$5 \text{ 頻道數} * 31.6 \text{ 秒} * 1.630 \text{ ms} = 257.540 \text{ ms} (<400\text{ms})$$

封包模式: DH5

以每1秒出現 2 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$$2 \text{ 頻道數} * 31.6 \text{ 秒} * 2.880 \text{ ms} = 182.016 \text{ ms} (<400\text{ms})$$

模式	測試頻率 (MHz)	封包	每秒出現 頻道數	佔用時間 (ms)	佔用時間加總 (ms)	限制值 (ms)
GFSK	2480	DH1	8	0.370	93.536	<400
		DH3	5	1.620	255.960	<400
		DH5	2	2.880	182.016	<400

週期之計算: $79 \text{ 頻道數} * 0.4 \text{ 秒} = 31.6 \text{ 秒}$

封包模式: DH1

以每1秒出現 8 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$$8 \text{ 頻道數} * 31.6 \text{ 秒} * 0.370 \text{ ms} = 93.536 \text{ ms} (<400\text{ms})$$

封包模式: DH3

以每1秒出現 5 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

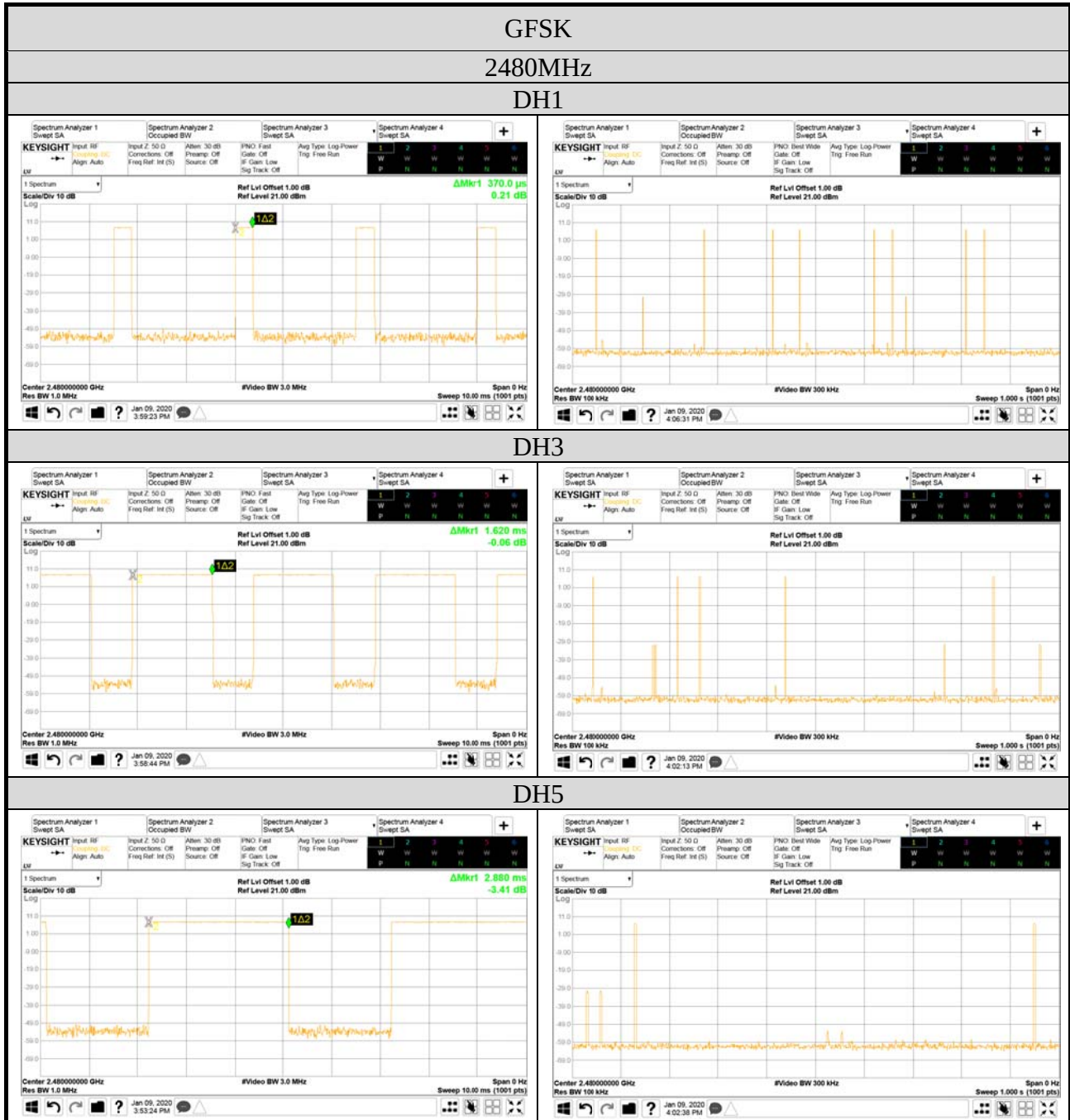
$$5 \text{ 頻道數} * 31.6 \text{ 秒} * 1.620 \text{ ms} = 255.960 \text{ ms} (<400\text{ms})$$

封包模式: DH5

以每1秒出現 2 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$$2 \text{ 頻道數} * 31.6 \text{ 秒} * 2.880 \text{ ms} = 182.016 \text{ ms} (<400\text{ms})$$

● 佔用時間(停留時間)之量測圖



模式	測試頻率 (MHz)	封包	每秒出現 頻道數	佔用時間 (ms)	佔用時間加總 (ms)	限制值 (ms)
8-DPSK	2402	3DH1	8	0.380	96.064	<400
		3DH3	5	1.630	257.540	<400
		3DH5	2	2.880	182.016	<400

週期之計算: $79 \text{ 頻道數} * 0.4 \text{ 秒} = 31.6 \text{ 秒}$

封包模式: 3DH1

以每1秒出現 8 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$8 \text{ 頻道數} * 31.6 \text{ 秒} * 0.380 \text{ ms} = 96.064 \text{ ms} (<400\text{ms})$

封包模式: 3DH3

以每1秒出現 5 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$5 \text{ 頻道數} * 31.6 \text{ 秒} * 1.630 \text{ ms} = 257.540 \text{ ms} (<400\text{ms})$

封包模式: 3DH5

以每1秒出現 2 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$2 \text{ 頻道數} * 31.6 \text{ 秒} * 2.880 \text{ ms} = 182.016 \text{ ms} (<400\text{ms})$

● 佔用時間(停留時間)之量測圖

8-DPSK

2402MHz

3DH1



3DH3



3DH5



模式	測試頻率 (MHz)	封包	每秒出現 頻道數	佔用時間 (ms)	佔用時間加總 (ms)	限制值 (ms)
8-DPSK	2441	3DH1	9	0.380	108.072	<400
		3DH3	5	1.620	255.960	<400
		3DH5	2	2.880	182.016	<400

週期之計算: $79 \text{ 頻道數} * 0.4 \text{ 秒} = 31.6 \text{ 秒}$

封包模式: 3DH1

以每1秒出現 9 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$9 \text{ 頻道數} * 31.6 \text{ 秒} * 0.380 \text{ ms} = 108.072 \text{ ms} (<400\text{ms})$

封包模式: 3DH3

以每1秒出現 5 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

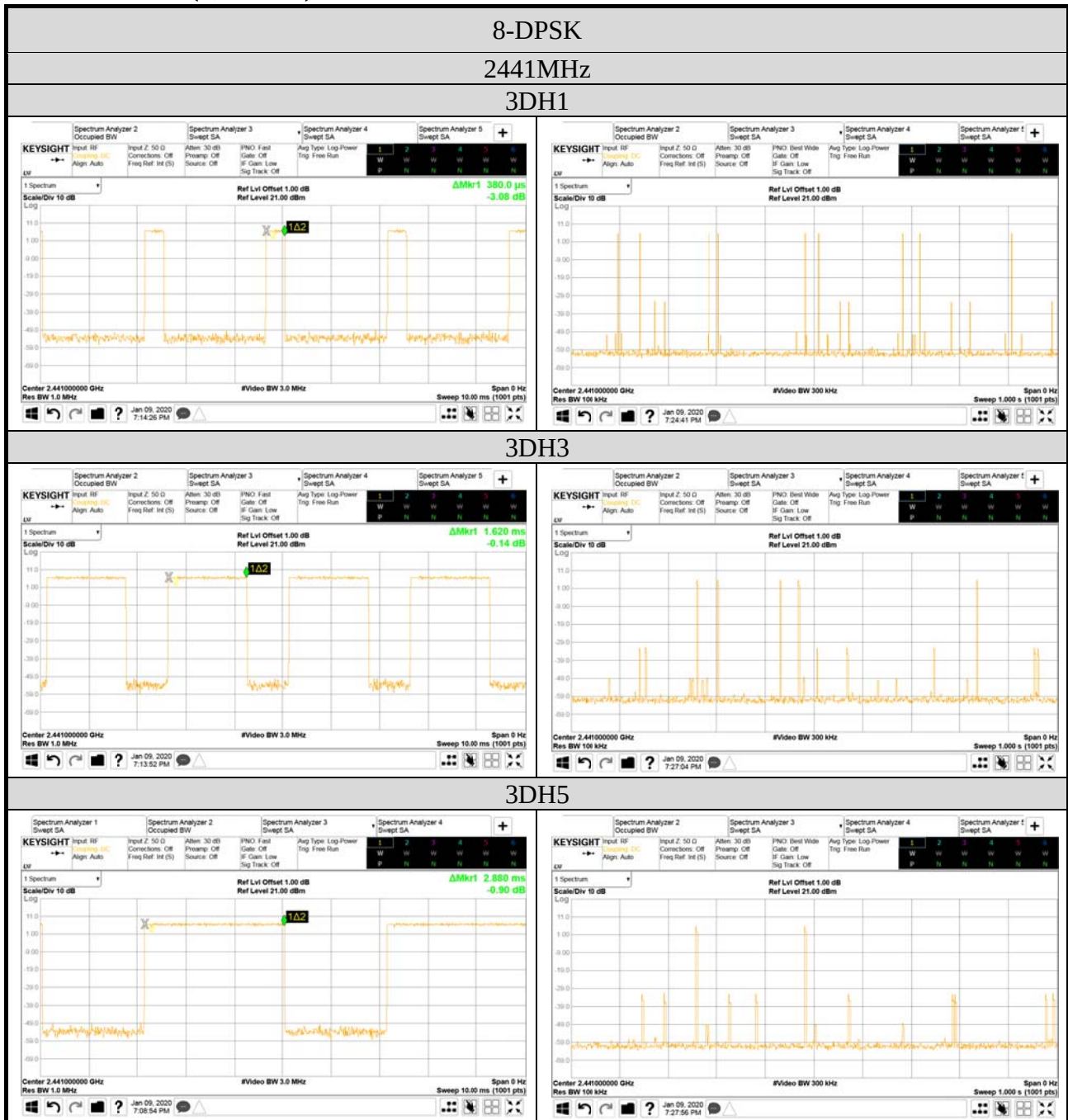
$5 \text{ 頻道數} * 31.6 \text{ 秒} * 1.620 \text{ ms} = 255.960 \text{ ms} (<400\text{ms})$

封包模式: 3DH5

以每1秒出現 2 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$2 \text{ 頻道數} * 31.6 \text{ 秒} * 2.880 \text{ ms} = 182.016 \text{ ms} (<400\text{ms})$

● 佔用時間(停留時間)之量測圖



模式	測試頻率 (MHz)	封包	每秒出現 頻道數	佔用時間 (ms)	佔用時間加總 (ms)	限制值 (ms)
8-DPSK	2480	3DH1	8	0.380	96.064	<400
		3DH3	5	1.629	257.382	<400
		3DH5	2	2.880	182.016	<400

週期之計算: $79 \text{ 頻道數} * 0.4 \text{ 秒} = 31.6 \text{ 秒}$

封包模式: 3DH1

以每1秒出現 8 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$8 \text{ 頻道數} * 31.6 \text{ 秒} * 0.380 \text{ ms} = 96.064 \text{ ms} (<400\text{ms})$

封包模式: 3DH3

以每1秒出現 5 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$5 \text{ 頻道數} * 31.6 \text{ 秒} * 1.629 \text{ ms} = 257.382 \text{ ms} (<400\text{ms})$

封包模式: 3DH5

以每1秒出現 2 個頻道數為例, 每 31.6 秒內之最長佔用時間為:

$2 \text{ 頻道數} * 31.6 \text{ 秒} * 2.880 \text{ ms} = 182.016 \text{ ms} (<400\text{ms})$

● 佔用時間(停留時間)之量測圖

8-DPSK

2480MHz

3DH1



3DH3



3DH5



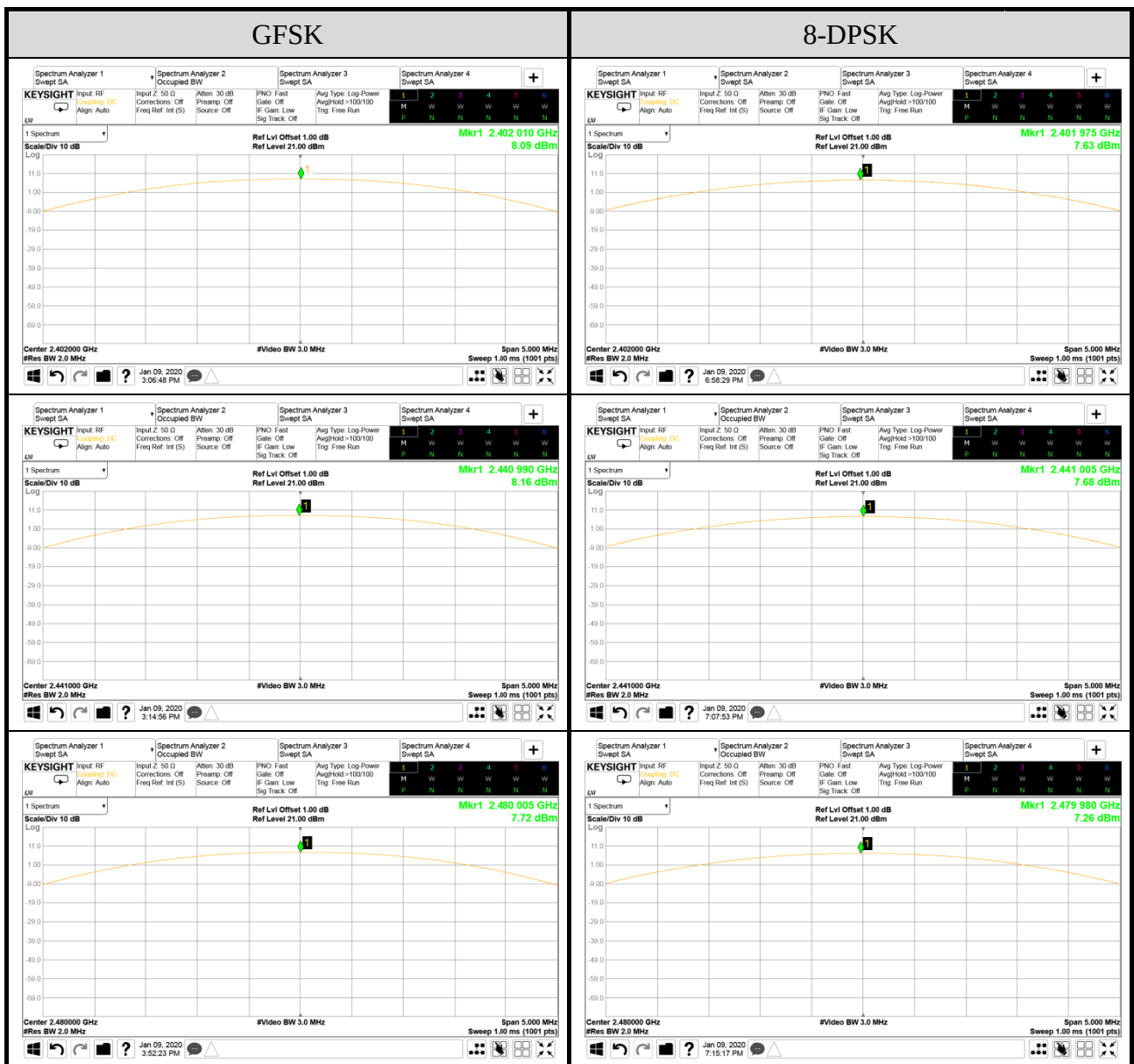
6. 峰值輸出功率之量測

測試日期	2020/01/09	環境溫/濕度	21°C/51%
電纜損失	1.0dB	測試人員	Sean Wang
測試電壓	DC 3.67V(經電池供電)	Test SKU	SKU #1

6.1. 峰值輸出功率

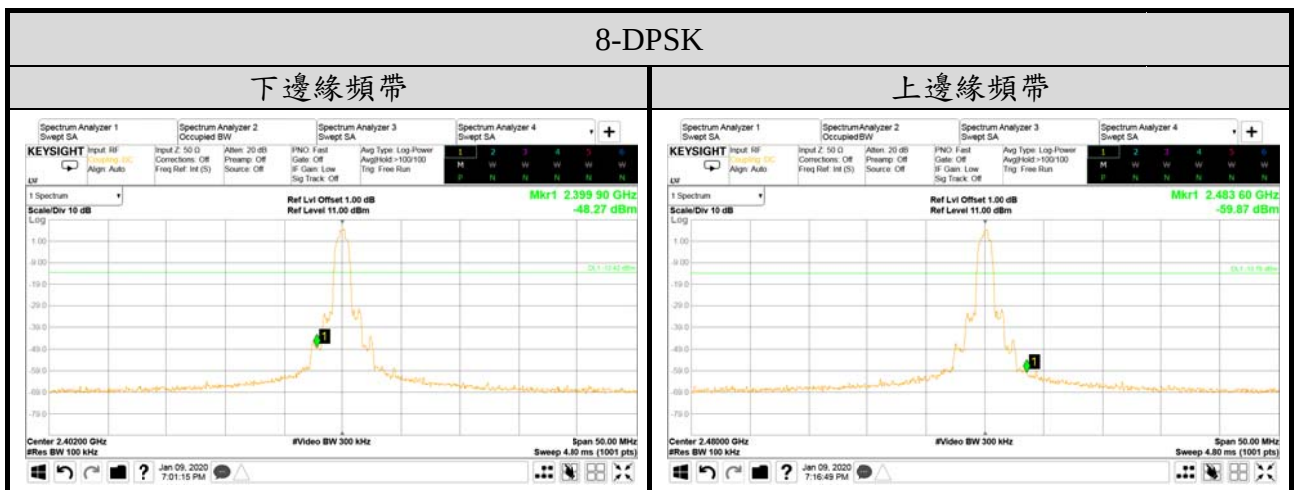
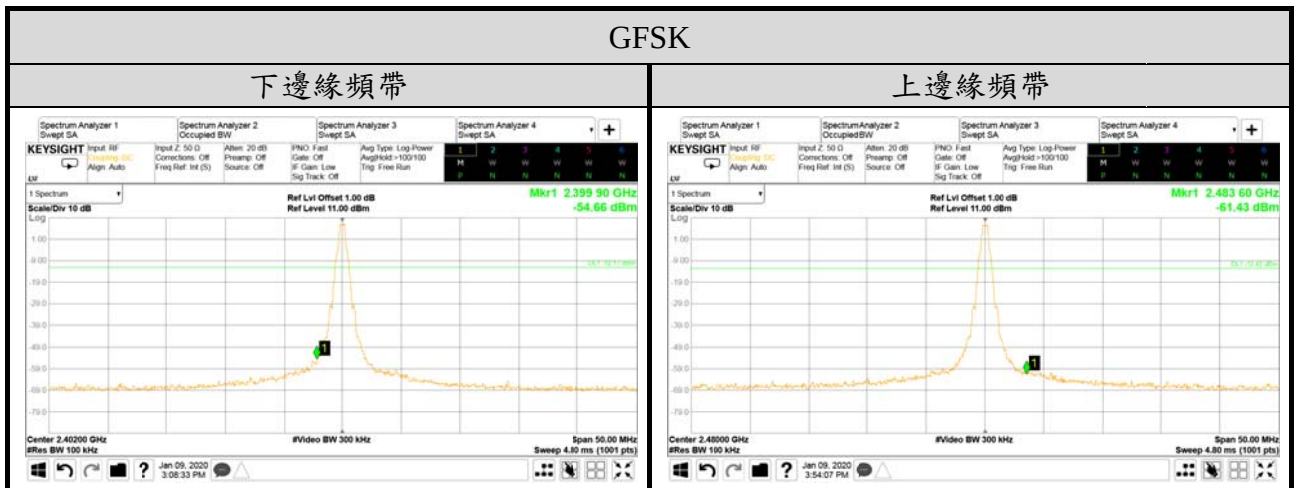
模式	測試頻率 (MHz)	峰值輸出功率(dBm)
GFSK	2402	8.09
	2441	8.16
	2480	7.72
8-DPSK	2402	7.63
	2441	7.68
	2480	7.26

6.2. 峰值輸出功率之量測圖



7. 頻帶邊緣之 RF 傳導發射之量測

測試日期	2020/01/09	環境溫/濕度	21°C/51%
電纜損失	1.0dB	測試人員	Sean Wang
測試電壓	DC 3.67V(經電池供電)	Test SKU	SKU #1



8. 混附發射之 RF 傳導發射之量測

測試日期	2020/01/09	環境溫/濕度	21°C/51%
電纜損失	1.0dB	測試人員	Sean Wang
測試電壓	DC 3.67V(經電池供電)	Test SKU	SKU #1



