RF MEASUREMENT REPORT

Applicant:	Honeywell International Inc
Address:	9680 Old Bailes Road, Fort Mill, SC 29707 United States
Product:	Barcode Scanner
Model No.:	HH1802
Brand Name:	Honeywell
Product Category:	Article 2, Paragraph 1, Item 19
Test Procedure:	MIC Notice No.88 Annex 43
Result:	Complies
Received Date:	2025-03-19
Test Date:	2025-03-26 ~ 2025-04-07

Reviewed By: Jame Yuan

Approved By: Robin Wu

The test results relate only to the samples tested.
The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.
The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
R25S1038035-J202	V01	Initial Report	2025-04-15	Valid

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1. General Information

1.1. Applicant

Honeywell International Inc

9680 Old Bailes Road, Fort Mill, SC 29707 United States

1.2. Manufacturer

Honeywell International Inc

9680 Old Bailes Road, Fort Mill, SC 29707 United States

1.3. Testing Facility

☒	**Test Site – MRT Suzhou Laboratory**				
	Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China **Laboratory Location (Suzhou - SIP)** 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China **Laboratory Location (Suzhou - Wujiang)** Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China				
	Laboratory Accreditations				
	A2LA: 3628.01		CNAS: L10551		
	FCC: CN1166		ISED: CN0001		
	VCCI:	☐R-20025	☐G-20034	☐C-20020	☐T-20020
		☐R-20141	☐G-20134	☐C-20103	☐T-20104
☐	**Test Site – MRT Shenzhen Laboratory**				
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China				
	Laboratory Accreditations				
	A2LA: 3628.02		CNAS: L10551		
	FCC: CN1284		ISED: CN0105		
☐	**Test Site – MRT Taiwan Laboratory**				
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)				
	Laboratory Accreditations				
	TAF: 3261				
	FCC: 291082, TW3261		ISED: TW3261		

1.4. Product Information

Product Name	Barcode Scanner
Model No.	HH1802
Serial No.	23129B186F (for Conducted) 24085B3E63 (for Radiated)
Hardware Version	HH1802 ver01
Software Version	HH1802 ver02
Bluetooth Version	v5.0 dual mode
Antenna Specification	Refer to Section 1.5
Operating Temperature	0 ~ 50 ℃
Accessory	
HH1802 Dock	Model No.: Base-2-1802 Input: 5V ⎓ 500mA
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification under Test

Frequency Range	2402 ~ 2480 MHz
Type of Modulation	GFSK, π/4 DQPSK, 8DPSK
Data Rate	1Mbps, 2Mbps, 3Mbps
Declared Output Power	0.20mW/MHz
Antenna Type	Ceramic Chip Antenna
Antenna Gain	-1.00 dBi

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1.6. Working Frequencies

Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2403 MHz	02	2404 MHz
03	2405 MHz	04	2406 MHz	05	2407 MHz
06	2408 MHz	07	2409 MHz	08	2410 MHz
09	2411 MHz	10	2412 MHz	11	2413 MHz
12	2414 MHz	13	2415 MHz	14	2416 MHz
15	2417 MHz	16	2418 MHz	17	2419 MHz
18	2420 MHz	19	2421 MHz	20	2422 MHz
21	2423 MHz	22	2424 MHz	23	2425 MHz
24	2426 MHz	25	2427 MHz	26	2428 MHz
27	2429 MHz	28	2430 MHz	29	2431 MHz
30	2432 MHz	31	2433 MHz	32	2434 MHz
33	2435 MHz	34	2436 MHz	35	2437 MHz
36	2438 MHz	37	2439 MHz	38	2440 MHz
39	2441 MHz	40	2442 MHz	41	2443 MHz
42	2444 MHz	43	2445 MHz	44	2446 MHz
45	2447 MHz	46	2448 MHz	47	2449 MHz
48	2450 MHz	49	2451 MHz	50	2452 MHz
51	2453 MHz	52	2454 MHz	53	2455 MHz
54	2456 MHz	55	2457 MHz	56	2458 MHz
57	2459 MHz	58	2460 MHz	59	2461 MHz
60	2462 MHz	61	2463 MHz	62	2464 MHz
63	2465 MHz	64	2466 MHz	65	2467 MHz
66	2468 MHz	67	2469 MHz	68	2470 MHz
69	2471 MHz	70	2472 MHz	71	2473 MHz
72	2474 MHz	73	2475 MHz	74	2476 MHz
75	2477 MHz	76	2478 MHz	77	2479 MHz
78	2480 MHz	--	--	--	--

2. Test Configuration

2.1. Test Mode

Mode 1: Transmitter - 1Mbps (GFSK)
Mode 2: Transmitter - 2Mbps (π/4-DQPSK)
Mode 3: Transmitter - 3Mbps (8DPSK)
Mode 4: Receiver - 1Mbps (GFSK)
Mode 5: Receiver - 2Mbps (π/4-DQPSK)
Mode 6: Receiver - 3Mbps (8DPSK)

2.2. Test Software

The test utility software used during testing was “Broadcom Bluetool” and the version was “1.9.6.2”.

2.3. Test Condition

The change of the measured voltage at the radio part of the EUT is below ±1%, when input voltage from external power supply to the equipment under test is varied by ±10%, thus the RF test is tested at rated voltage only.

Test Site	WZ-SR5	Temperature	21 °C
Test Engineer	Liz Yuan	Humidity	48.7 %RH
Test Date	2025-04-07		

Extreme Voltage	3.7V	3.33V	4.07V
Measure Voltage	3.298V	3.298V	3.298V
Tolerance	-	0%	0%

2.4. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- MIC Notice No.88 Annex 43
- Article 49-20 and the relevant articles of the Ordinance Regulating Radio Equipment
- ARIB STD-T66 v3.7

3. Measuring Instrument

Conducted Test Equipment (WZ-SR5)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Date	Cali. Due Date	Cali. Body	Cali. Method
USB Power Sensor	Keysight	U2021XA	MRTSUE06446	1 year	2024-05-09	2025-05-08	Ceprei	c
Thermohygrometer	testo	608-H1	MRTSUE06402	1 year	2024-05-13	2025-05-12	Ceprei	c
Signal Analyzer	Keysight	N9010B	MRTSUE06457	1 year	2024-05-09	2025-05-08	Ceprei	c
Digital Multimeter	Fluke	18B+	MRTSUE06636	1 year	2025-03-04	2026-03-03	Ceprei	c
Shielding Room	HUAMING	WZ-SR5	MRTSUE06442	N/A	N/A	N/A	N/A	N/A

Note: All the above test equipment was used and kept valid calibration period during the testing.

Calibration Method:

a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) or a designated calibration agency under Article 102-18 paragraph.

b) Correction conducted pursuant to the previous of Article 135 or Article 144 of the measurement Law (Law No. 51 of 1992), Japan calibration Service System

c) Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph.

4. Decision Rules and Measurement Uncertainty

4.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

4.2. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.5dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.5dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 3.2%

5. Test Result

5.1. Summary

ORRE Reference	Test Description	Test Condition	Verdict
Article 49-20	Spread Bandwidth	Conducted	Pass
Article 49-20	Dwell Time		Pass
Article 6	Occupied Bandwidth		Pass
Article 49-20	Antenna Power		Pass
Article 14 7	Antenna Power Tolerance		Pass
Article 49-20	EIRP		Pass
Article 5	Frequency Tolerance		Pass
Article 7	Unwanted Emission Strength		Pass
Article 24.2	Secondary Radiated Emission Strength		Pass
Article 49-20	Carrier Sensing		N/A
Article 9-4 8	Interference Prevention Function	Radiated	Pass

Notes:

1. The analyzer plots shown in this section were captured using a correction table to account for cable and attenuator losses in the system connecting the EUT to the analyzer across relevant frequencies.
2. “N/A” means that this item is not applicable, and the detail information refer to relevant section.
3. ORRE: Ordinance Regulating Radio Equipment.

5.2. Spread Bandwidth Measurement

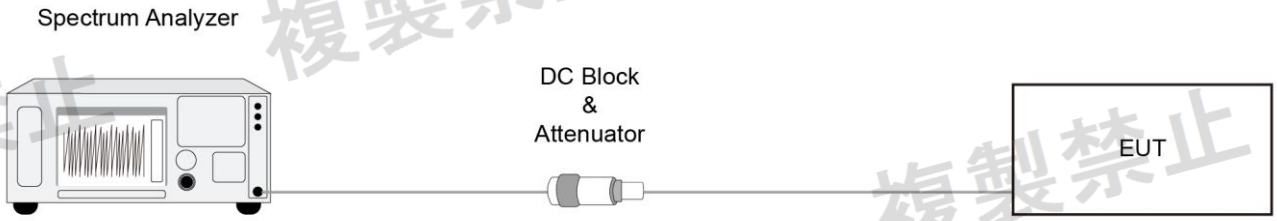
5.2.1. Test Limit

N/A

5.2.2. Test Procedure

1. A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.
2. A positive peak detector function must be used.
3. A measurement instrument with an integrated 90% power bandwidth function may be used to automate the test process.
4. The measurement instrument bandwidth and span must be set sufficiently with, and, the scan time set sufficiently slowly, to ensure all major modulation products are captured. Note that the measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result.
5. 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided the emission is repetitive in nature.

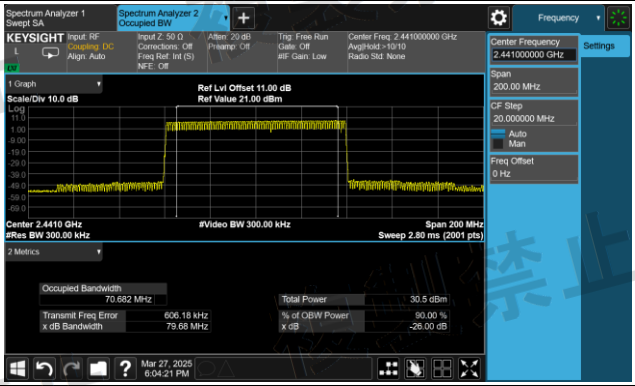
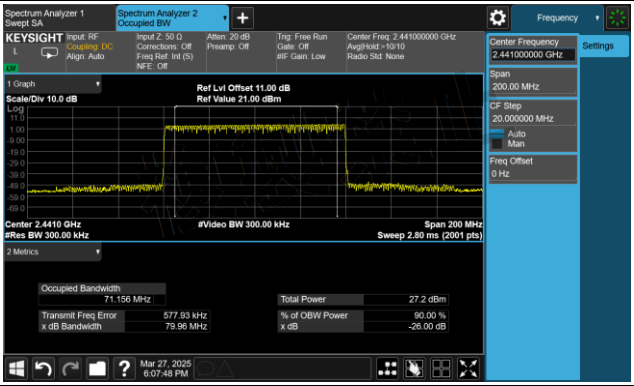
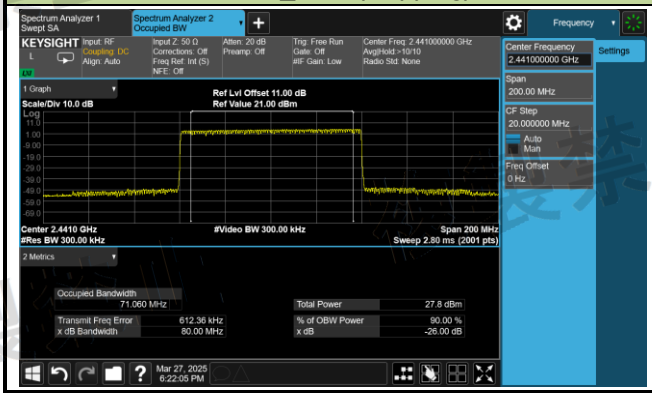
5.2.3. Test Setup



5.2.4. Test Result

Test Site	WZ-SR5	Temperature	23.9 °C
Test Engineer	Lynn Yang	Humidity	54.2 %RH
Test Date	2025-03-27		

Test Mode	Frequency (MHz)	Spread Bandwidth (MHz)
GFSK_DH5	2402 ~ 2480	70.682
π/4-DQPSK_DH5	2402 ~ 2480	71.156
8DPSK_DH5	2402 ~ 2480	71.060

Spread Bandwidth	
GFSK_DH5 (Hopping)	π/4-DQPSK_DH5 (Hopping)
	
8DPSK_DH5 (Hopping)	
	

5.3. Dwell Time Measurement

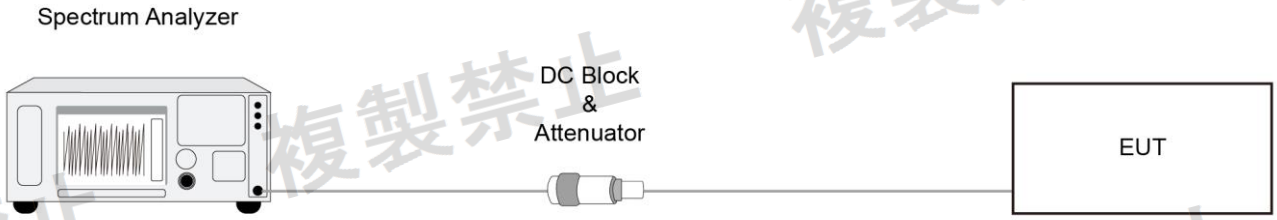
5.3.1. Test Limit

≤ 0.4s

5.3.2. Test Procedure

1. A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.
2. A positive peak detector function must be used.
3. The center frequency is set to the test frequency and the span is switched to zero.
4. The measurement instrument bandwidth and span must be set sufficiently with, and, the scan time set sufficiently slowly, to ensure all major modulation products are captured. Note that the measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result.
5. 'Single sweep' mode may be used to capture a packet over a single scan.

5.3.3. Test Setup



5.3.4. Test Result

Test Site	WZ-SR5	Temperature	23.9 °C
Test Engineer	Lynn Yang	Humidity	54.2 %RH
Test Date	2025-03-27		

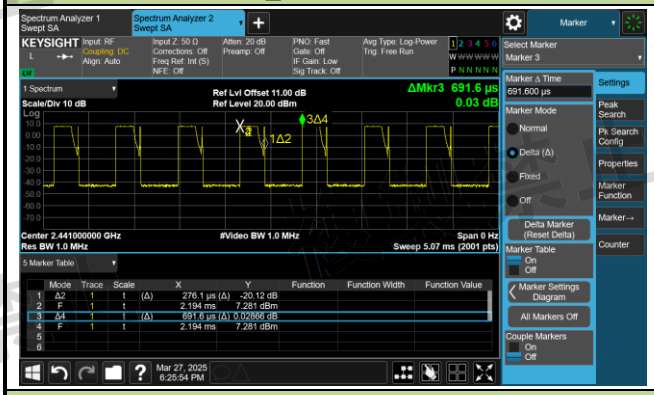
Test Mode	Test Frequency (MHz)	Burst Ratio	Dwell Time (s)	Limit (s)	Result
GFSK_DH5	2441	0.3992	0.143	≤ 0.4	Pass
π/4-DQPSK_DH5	2441	0.3992	0.144	≤ 0.4	Pass
8DPSK_DH5	2441	0.3992	0.144	≤ 0.4	Pass

Note 1: Burst Ratio = ON Time / (ON Time + OFF Time).

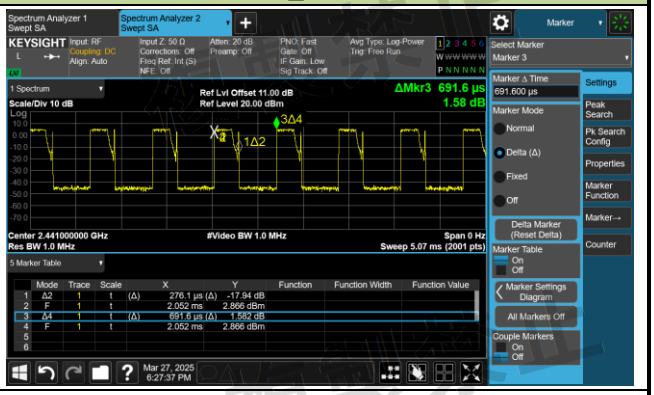
Note 2: Dwell Time = (Spreading Factor * 0.4) * (Burst Ratio / 79).

Transmission Time

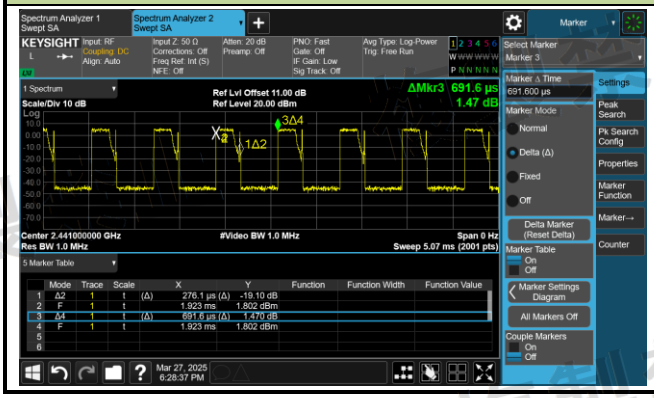
GFSK_DH5 - 2441MHz



π/4-DQPSK_DH5 - 2441MHz



8DPSK_DH5 - 2441MHz



5.4. Occupied Bandwidth Measurement

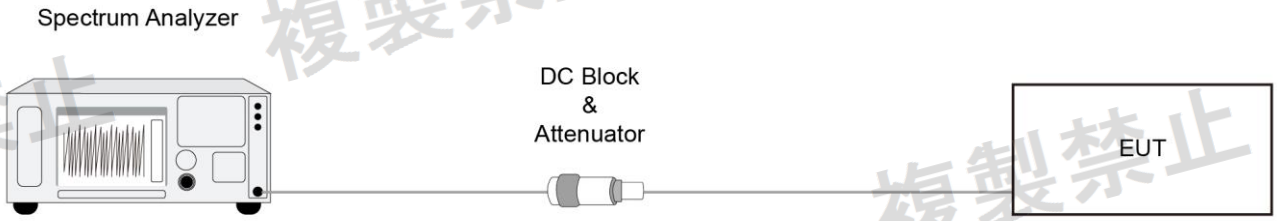
5.4.1. Test Limit

≤ 83.5 MHz for FHSS

5.4.2. Test Procedure

1. A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.
2. A positive peak detector function must be used.
3. A measurement instrument with an integrated 99% power bandwidth function may be used to automate the test process.
4. The measurement instrument bandwidth and span must be set sufficiently with, and, the scan time set sufficiently slowly, to ensure all major modulation products are captured. Note that the measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result.
5. 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided the emission is repetitive in nature.

5.4.3. Test Setup



5.4.4. Test Result

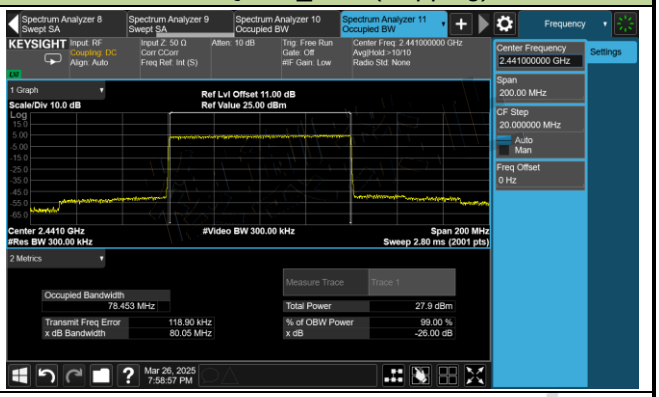
Test Site	WZ-SR5	Temperature	24.0 °C
Test Engineer	Lynn Yang	Humidity	46.7 %RH
Test Date	2025-03-26		

Test Mode	Frequency (MHz)	Occupied Bandwidth (MHz)	Limit (MHz)	Result
GFSK_DH5	2402 ~ 2480	78.160	≤ 83.5	Pass
π/4-DQPSK_DH5	2402 ~ 2480	78.453	≤ 83.5	Pass
8DPSK_DH5	2402 ~ 2480	78.372	≤ 83.5	Pass

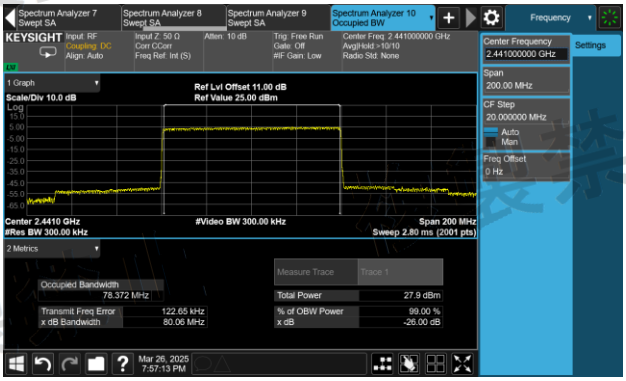
Occupied Bandwidth

GFSK_DH5 (Hopping)

π/4-DQPSK_DH5 (Hopping)



8DPSK_DH5 (Hopping)



5.5. Antenna Power, Antenna Power Tolerance and EIRP Measurement

5.5.1. Test Limit

Antenna Power ≤ 3mW/MHz

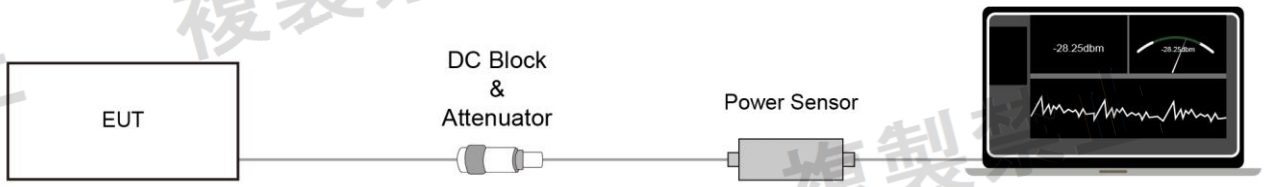
Antenna Power Tolerance: ≤ +20%

EIRP ≤ 6.91dBm/MHz

5.5.2. Test Procedure

1. Measure the total power by Power Meter in a state of hopping mode (with Average Sensor)
2. If it's the burst wave, please measure the burst ratio. Then calculate the real total power by burst ratio.
3. Calculate the mean power per 1MHz by dividing the total power by spread bandwidth.

5.5.3. Test Setup



5.5.4. Test Result

Test Site	WZ-SR5	Temperature	24.0 °C
Test Engineer	Lynn Yang	Humidity	46.7 %RH
Test Item	Output Power	Test Date	2025-03-26

Test Mode	Frequency (MHz)	Output Power (dBm)	Output Power (mW)	Output Power (mW/MHz)	Limit (mW/MHz)	Result
GFSK_DH5	2402~2480	6.45	4.42	0.1522	3	Pass
π/4-DQPSK_DH5	2402~2480	4.71	2.96	0.1041	3	Pass
8DPSK_DH5	2402~2480	4.58	2.87	0.1012	3	Pass

Note: Output Power(mW) = 10^[Output Power (dBm)/10].

Output (mW/MHz) = Output Power(mW) / Spread Bandwidth (MHz) / Burst Ratio.

Test Site	WZ-SR5	Temperature	24.0 °C
Test Engineer	Lynn Yang	Humidity	46.7 %RH
Test Item	Output Power Tolerance	Test Date	2025-03-26

Test Mode	Frequency (MHz)	Output Power (mW/MHz)	Declared Output Power (mW/MHz)	Tolerance (%)	Limit (%)	Result
GFSK_DH5	2402~2480	0.1522	0.20	-23.90	≤ +20	Pass
π/4-DQPSK_DH5	2402~2480	0.1041	0.20	-47.95	≤ +20	Pass
8DPSK_DH5	2402~2480	0.1012	0.20	-49.40	≤ +20	Pass

Note: Tolerance (%) = (Output Power (mW/MHz) - Declared Output Power (mW/MHz)) / Declared Output Power (mW/MHz) * 100%

Test Site	WZ-SR5	Temperature	24.0 °C
Test Engineer	Lynn Yang	Humidity	46.7 %RH
Test Item	EIRP	Test Date	2025-03-26

Test Mode	Frequency (MHz)	Output Power (mW/MHz)	EIRP (dBm/MHz)	Limit (dBm/MHz)	Result
GFSK_DH5	2402~2480	0.1522	-9.18	≤ 6.91	Pass
π/4-DQPSK_DH5	2402~2480	0.1041	-10.83	≤ 6.91	Pass
8DPSK_DH5	2402~2480	0.1012	-10.95	≤ 6.91	Pass

Note: EIRP (dBm/MHz) = 10*log[Output Power (mW/MHz)] + Ant Gain (dBi)

5.6. Frequency Tolerance Measurement

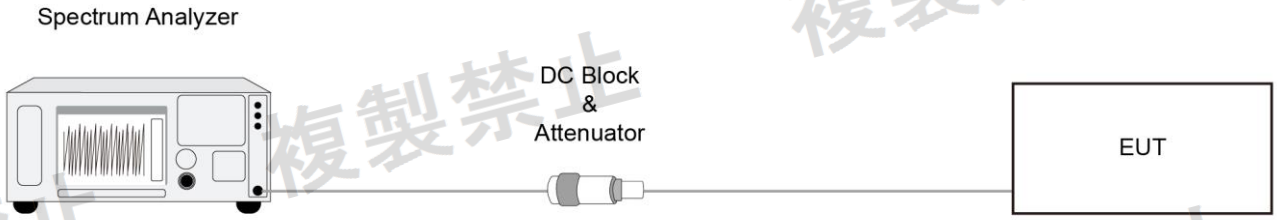
5.6.1. Test Limit

-50 ~ +50 ppm

5.6.2. Test Procedure

1. A spectrum analyzer or similar device shall be used to observe a sample of the unmodulated transmitter's radio frequency power output.
2. A positive peak detector function must be used.
3. The measurement instrument bandwidth and span must be set sufficiently with, and, the scan time set sufficiently slowly, to ensure all major modulation products are captured. Note that the measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result.
4. 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided the emission is repetitive in nature.

5.6.3. Test Setup



5.6.4. Test Result

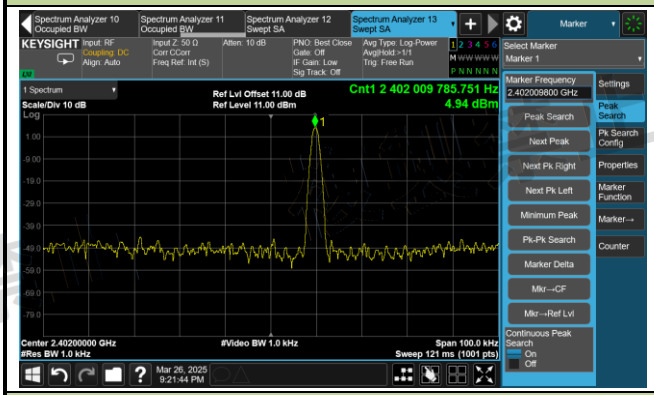
Test Site	WZ-SR5	Temperature	24.0 °C
Test Engineer	Lynn Yang	Humidity	46.7 %RH
Test Date	2025-03-26		

Test Mode	Measurement Frequency (MHz)	Reading Frequency (MHz)	Frequency Tolerance (ppm)	Limit (ppm)	Result
Carrier Wave	2402	2402.009786	4.07	-50 ~ +50	Pass
	2441	2441.014753	6.04	-50 ~ +50	Pass
	2480	2480.020150	8.12	-50 ~ +50	Pass

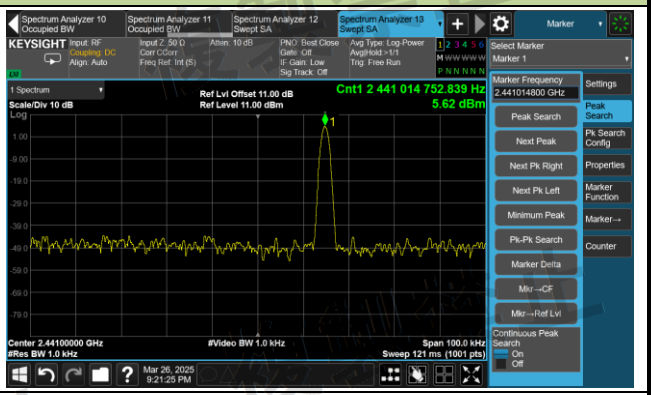
Note: Frequency Tolerance (ppm) = [Reading Frequency (MHz) - Measurement Frequency (MHz)] / Measurement Frequency * 10^6

Frequency Tolerance

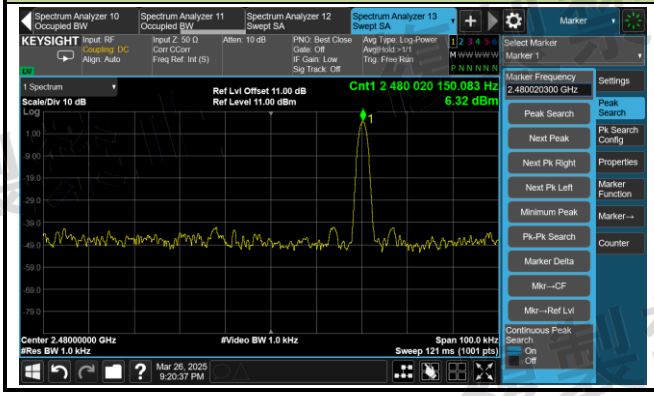
2402 MHz



2441MHz



2480 MHz



5.7. Unwanted Emission Strength Measurement

5.7.1. Test Limit

≤ 2.5μW/MHz for 30 ~ 2387MHz

≤ 25μW/MHz for 2387 ~ 2400MHz

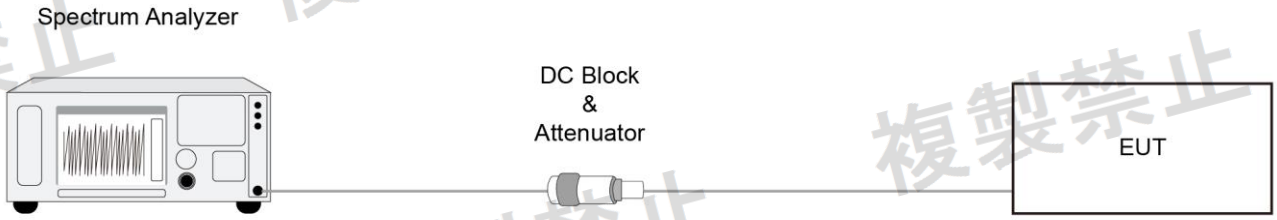
≤ 25μW/MHz for 2483.5 ~ 2496.5MHz

≤ 2.5μW/MHz for 2496.5 ~ 12500MHz

5.7.2. Test Procedure

1. A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.
2. A positive peak detector function must be used.
3. The measurement instrument bandwidth and span must be set sufficiently with, and, the scan time set sufficiently slowly, to ensure all major modulation products are captured. Note that the measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result.
4. 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided the emission is repetitive in nature.

5.7.3. Test Setup



5.7.4. Test Result

Test Site	WZ-SR5	Temperature	24.0 °C
Test Engineer	Lynn Yang	Humidity	46.7 %RH
Test Date	2025-03-26		

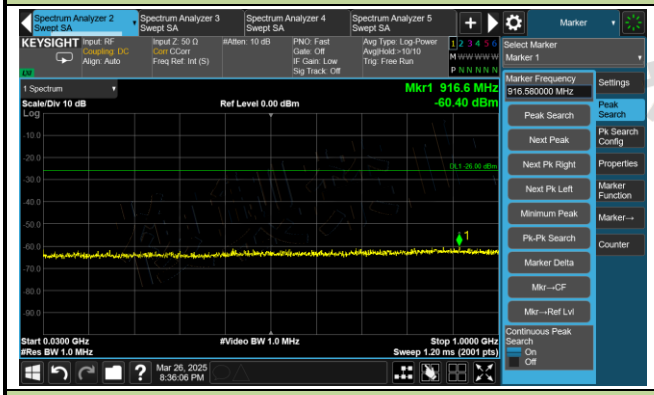
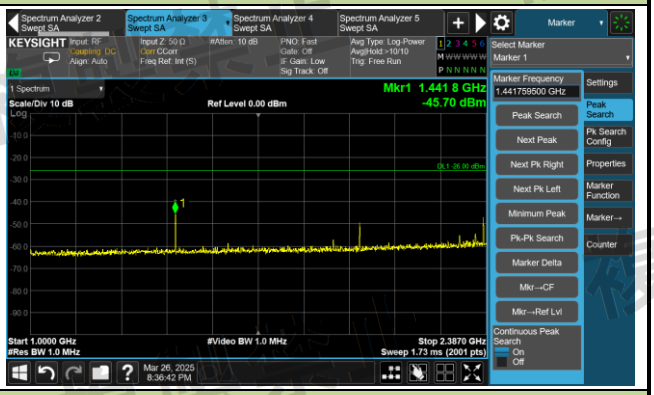
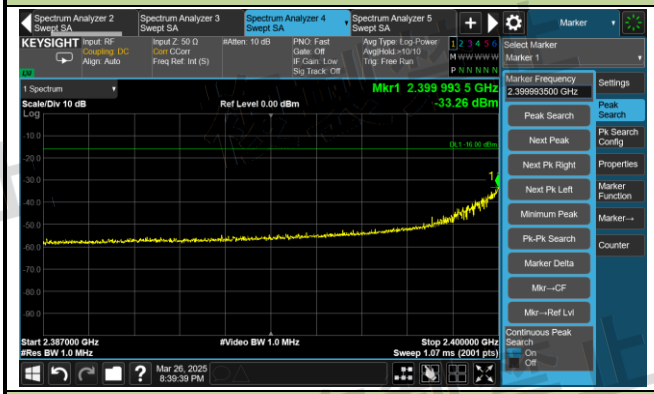
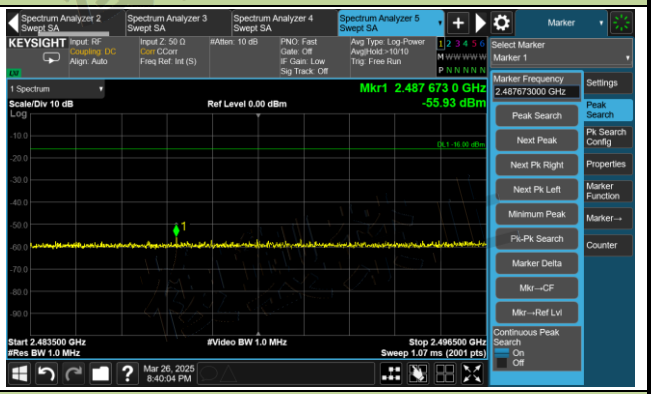
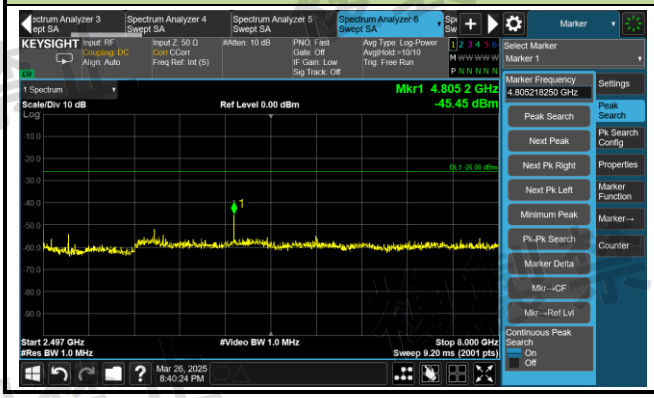
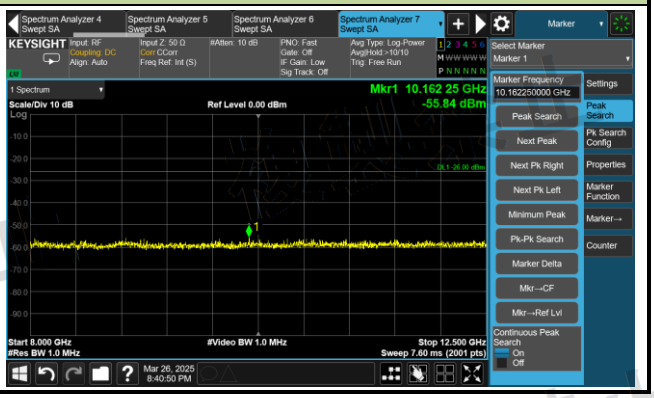
Test Frequency	Frequency Range (MHz)	Measurement Freq (MHz)	Max Measurement Level		Limit (μW/MHz)	Result
			(dBm/MHz)	(μW/MHz)		
GFSK_DH5						
2402MHz	30 ~1000	916.6	-60.40	0.0009	≤ 2.50	Pass
	1000 ~ 2387	1441.8	-45.70	0.0269	≤ 2.50	Pass
	2387 ~ 2400	2399.9935	-33.26	0.4721	≤ 25.00	Pass
	2483.5 ~ 2496.5	2487.673	-55.93	0.0026	≤ 25.00	Pass
	2496.5 ~ 8000	4805.2	-45.45	0.0285	≤ 2.50	Pass
	8000 ~ 12500	10162.25	-55.84	0.0026	≤ 2.50	Pass
2441MHz	30 ~1000	911.2	-60.99	0.0008	≤ 2.50	Pass
	1000 ~ 2387	1464.6	-45.30	0.0295	≤ 2.50	Pass
	2387 ~ 2400	2393.0645	-51.47	0.0071	≤ 25.00	Pass
	2483.5 ~ 2496.5	2489.4475	-50.70	0.0085	≤ 25.00	Pass
	2496.5 ~ 8000	4882.3	-44.64	0.0344	≤ 2.50	Pass
	8000 ~ 12500	10979.0	-56.34	0.0023	≤ 2.50	Pass
2480MHz	30 ~1000	976.7	-60.34	0.0009	≤ 2.50	Pass
	1000 ~ 2387	1488.2	-45.27	0.0297	≤ 2.50	Pass
	2387 ~ 2400	2395.814	-57.76	0.0017	≤ 25.00	Pass
	2483.5 ~ 2496.5	2483.5	-46.07	0.0247	≤ 25.00	Pass
	2496.5 ~ 8000	4959.3	-43.93	0.0405	≤ 2.50	Pass
	8000 ~ 12500	11467.25	-56.21	0.0024	≤ 2.50	Pass

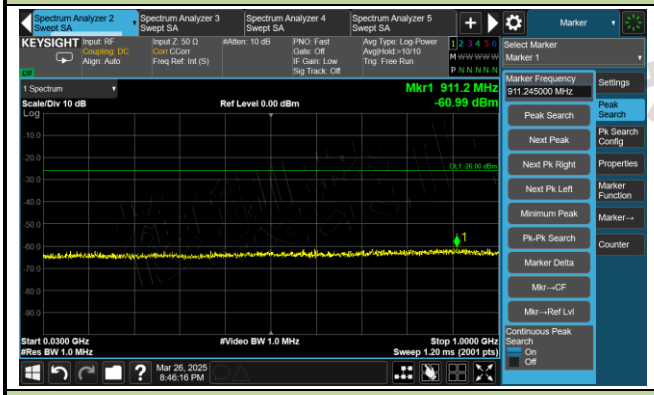
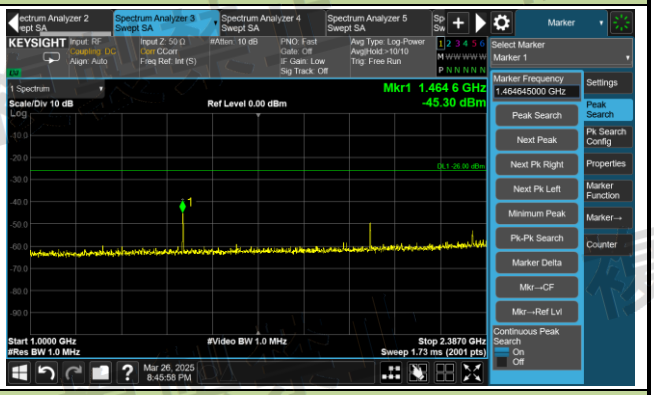
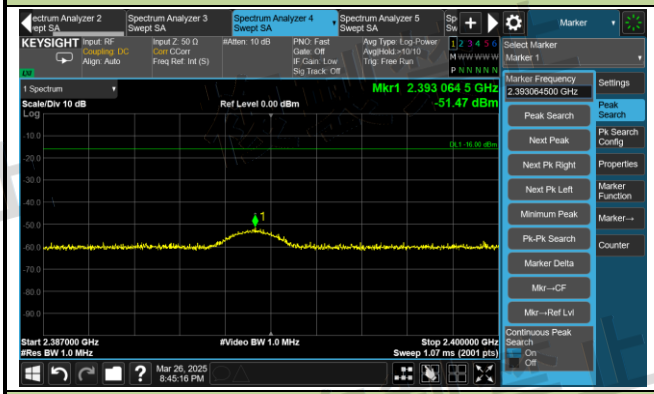
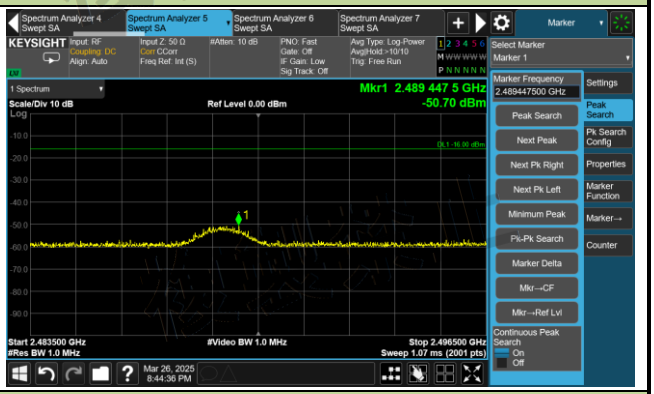
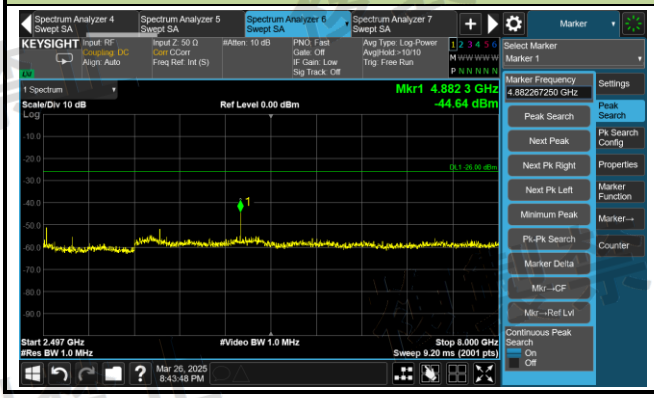
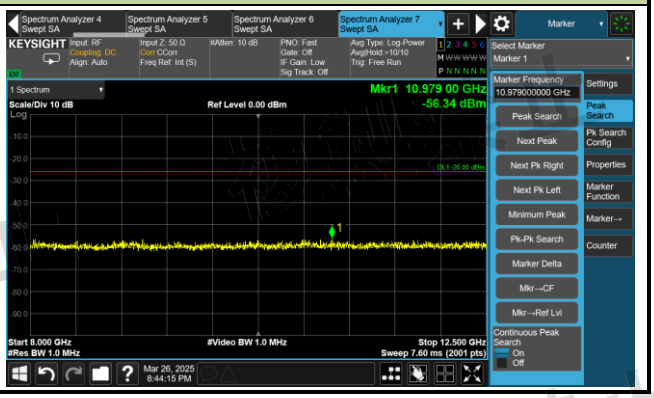
Test Site	WZ-SR5	Temperature	24.0 °C
Test Engineer	Lynn Yang	Humidity	46.7 %RH
Test Date	2025-03-26		

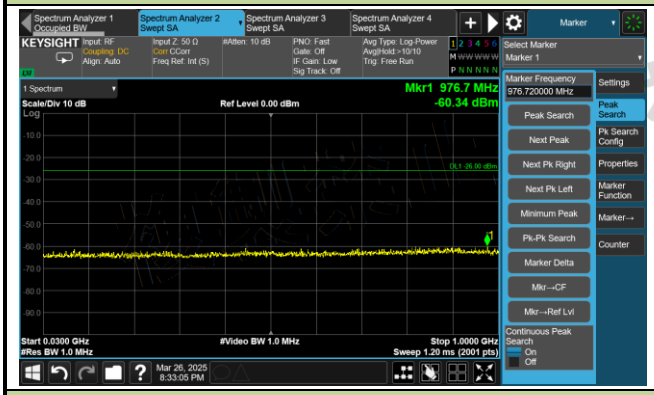
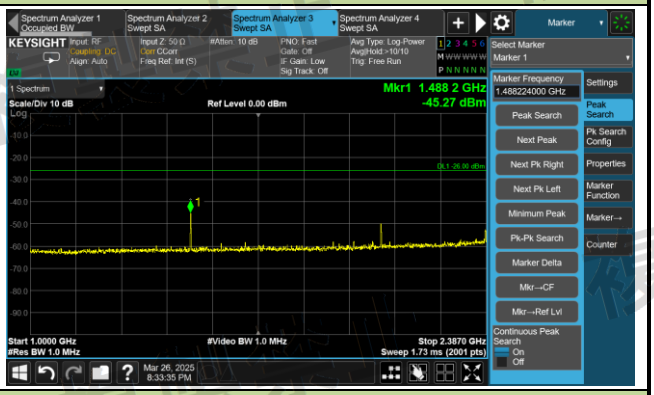
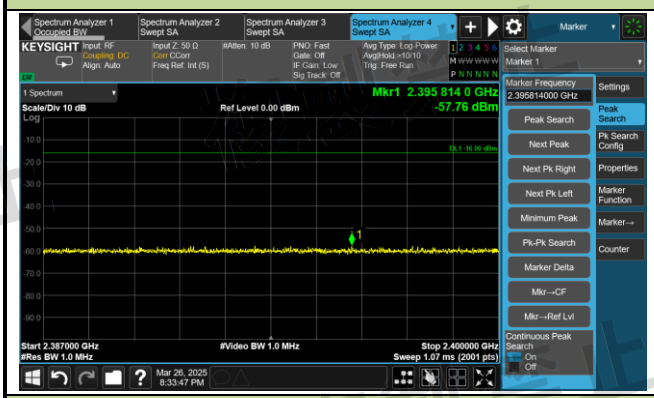
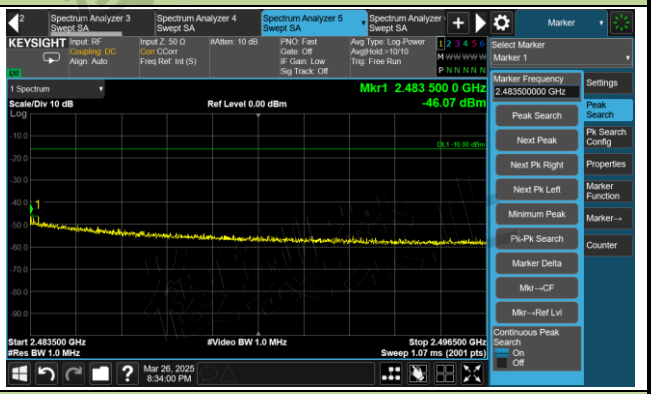
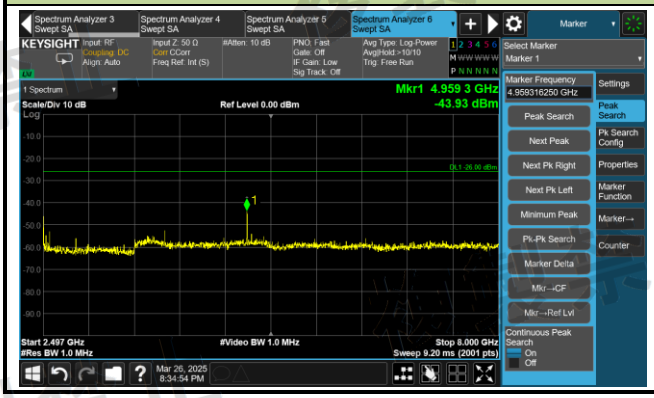
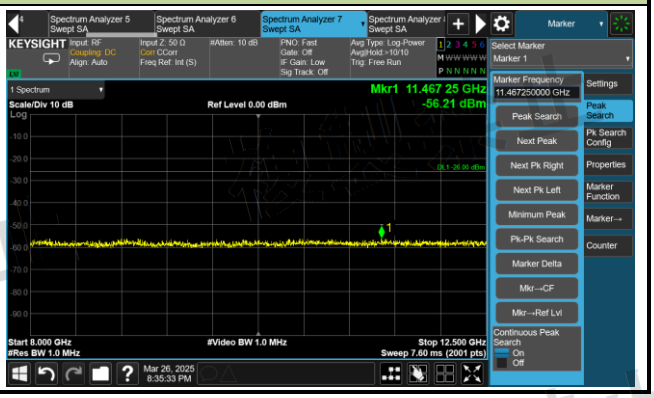
Test Frequency	Frequency Range (MHz)	Measurement Freq (MHz)	Max Measurement Level		Limit (μW/MHz)	Result
			(dBm/MHz)	(μW/MHz)		
π/4-DQPSK_DH5						
2402MHz	30 ~1000	951.0	-59.80	0.0010	≤ 2.50	Pass
	1000 ~ 2387	1441.8	-46.92	0.0203	≤ 2.50	Pass
	2387 ~ 2400	2400.0	-28.46	1.4256	≤ 25.00	Pass
	2483.5 ~ 2496.5	2492.873	-56.53	0.0022	≤ 25.00	Pass
	2496.5 ~ 8000	4805.2	-46.97	0.0201	≤ 2.50	Pass
	8000 ~ 12500	12340.25	-56.17	0.0024	≤ 2.50	Pass
2441MHz	30 ~1000	891.8	-60.95	0.0008	≤ 2.50	Pass
	1000 ~ 2387	1465.3	-46.70	0.0214	≤ 2.50	Pass
	2387 ~ 2400	2392.902	-54.26	0.0037	≤ 25.00	Pass
	2483.5 ~ 2496.5	2488.83	-52.48	0.0056	≤ 25.00	Pass
	2496.5 ~ 8000	4882.3	-47.61	0.0173	≤ 2.50	Pass
	8000 ~ 12500	10256.75	-56.20	0.0024	≤ 2.50	Pass
2480MHz	30 ~1000	993.2	-59.81	0.0010	≤ 2.50	Pass
	1000 ~ 2387	1488.2	-47.04	0.0198	≤ 2.50	Pass
	2387 ~ 2400	2395.606	-57.71	0.0017	≤ 25.00	Pass
	2483.5 ~ 2496.5	2483.578	-39.01	0.1256	≤ 25.00	Pass
	2496.5 ~ 8000	4959.3	-47.18	0.0191	≤ 2.50	Pass
	8000 ~ 12500	11523.5	-55.11	0.0031	≤ 2.50	Pass

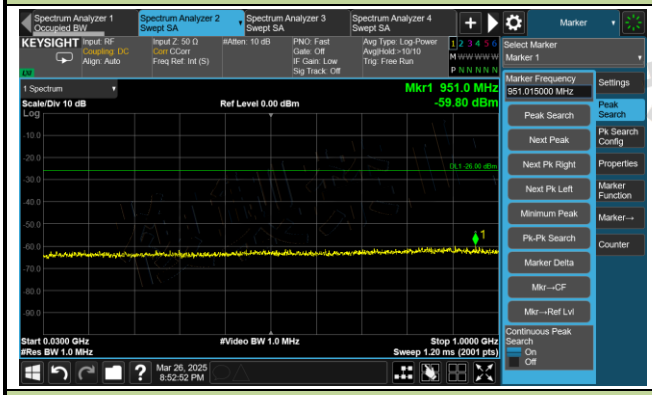
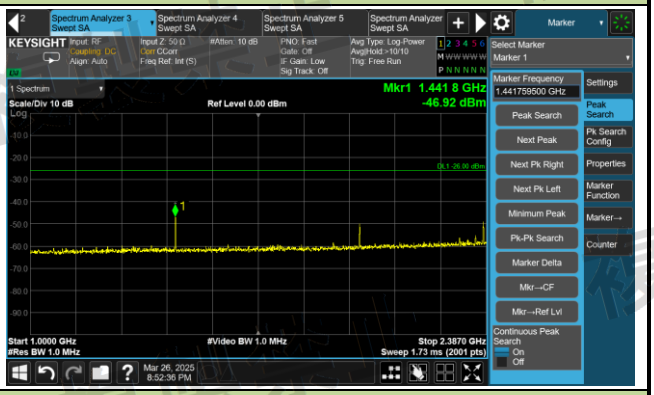
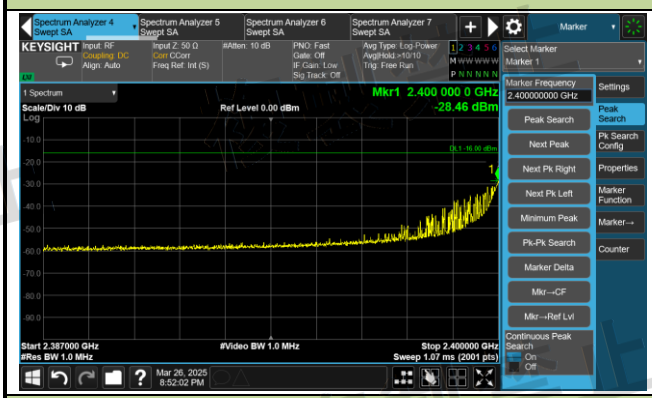
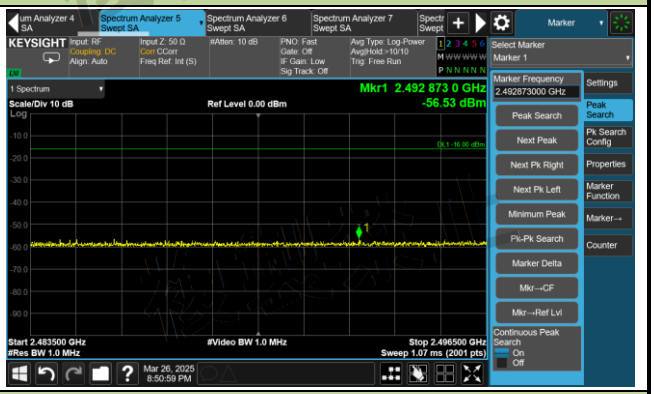
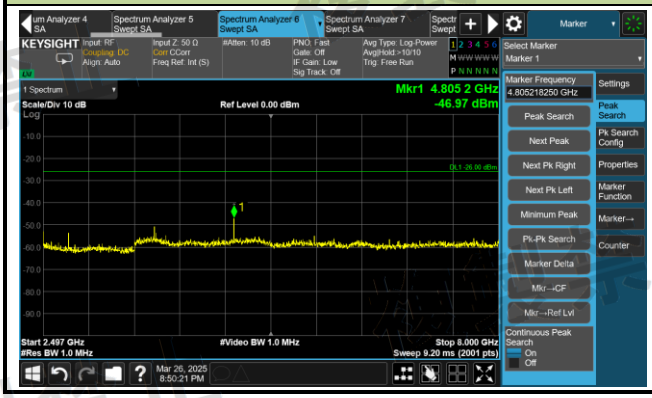
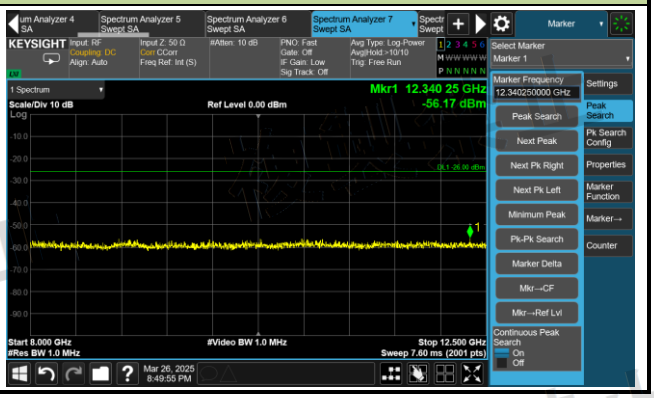
Test Site	WZ-SR5	Temperature	24.0 °C
Test Engineer	Lynn Yang	Humidity	46.7 %RH
Test Date	2025-03-26		

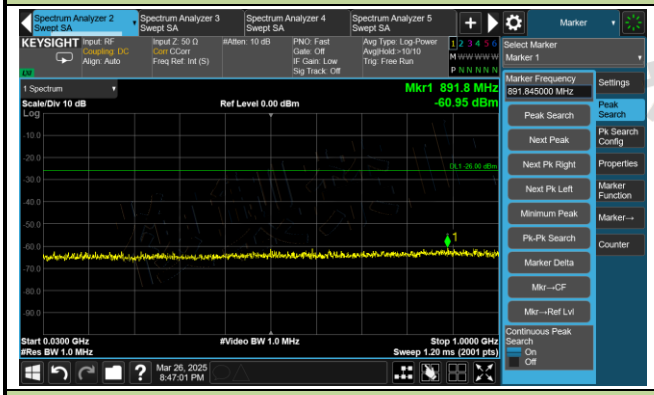
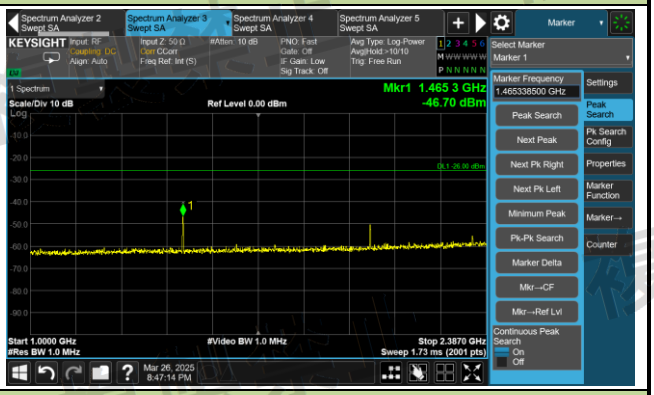
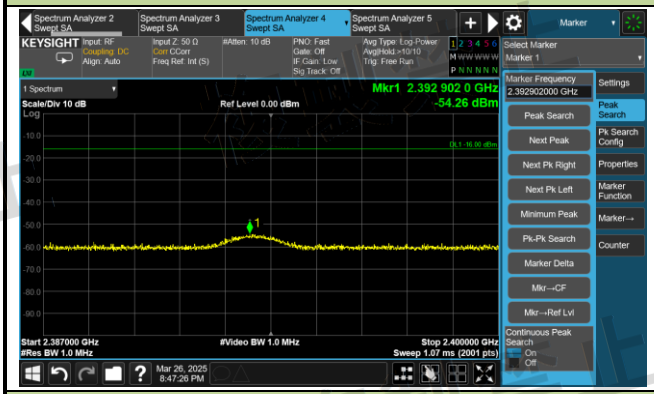
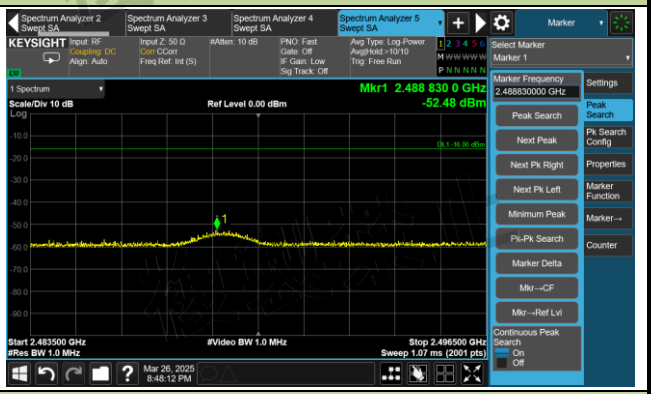
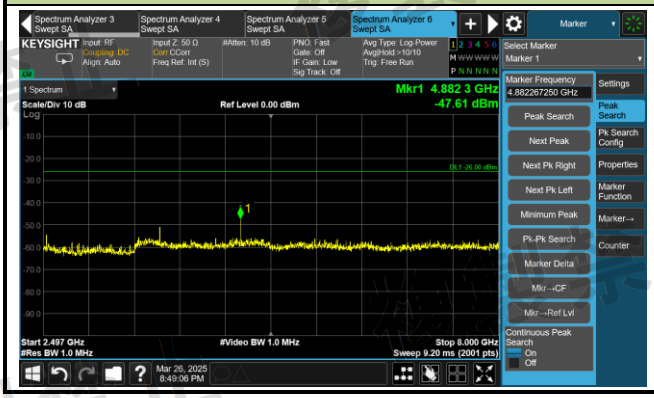
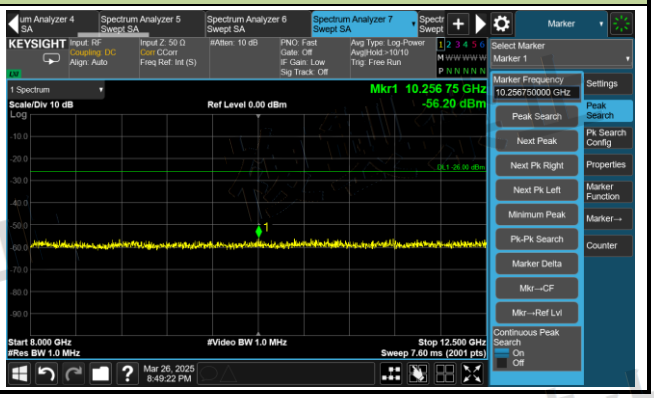
Test Frequency	Frequency Range (MHz)	Measurement Freq (MHz)	Max Measurement Level		Limit (μW/MHz)	Result
			(dBm/MHz)	(μW/MHz)		
8DPSK_DH5						
2402MHz	30 ~1000	883.1	-59.77	0.0011	≤ 2.50	Pass
	1000 ~ 2387	1441.1	-46.84	0.0207	≤ 2.50	Pass
	2387 ~ 2400	2400.0	-28.77	1.3274	≤ 25.00	Pass
	2483.5 ~ 2496.5	2496.0775	-56.96	0.0020	≤ 25.00	Pass
	2496.5 ~ 8000	4805.2	-48.26	0.0149	≤ 2.50	Pass
	8000 ~ 12500	10826.0	-55.67	0.0027	≤ 2.50	Pass
2441MHz	30 ~1000	869.5	-60.48	0.0009	≤ 2.50	Pass
	1000 ~ 2387	1464.6	-46.56	0.0221	≤ 2.50	Pass
	2387 ~ 2400	2393.1425	-54.52	0.0035	≤ 25.00	Pass
	2483.5 ~ 2496.5	2488.791	-53.96	0.0040	≤ 25.00	Pass
	2496.5 ~ 8000	4882.3	-46.30	0.0234	≤ 2.50	Pass
	8000 ~ 12500	11647.25	-56.27	0.0024	≤ 2.50	Pass
2480MHz	30 ~1000	841.4	-60.43	0.0009	≤ 2.50	Pass
	1000 ~ 2387	1488.2	-46.51	0.0223	≤ 2.50	Pass
	2387 ~ 2400	2398.778	-57.80	0.0017	≤ 25.00	Pass
	2483.5 ~ 2496.5	2483.526	-40.18	0.0959	≤ 25.00	Pass
	2496.5 ~ 8000	4959.3	-46.96	0.0201	≤ 2.50	Pass
	8000 ~ 12500	10880.0	-55.71	0.0027	≤ 2.50	Pass

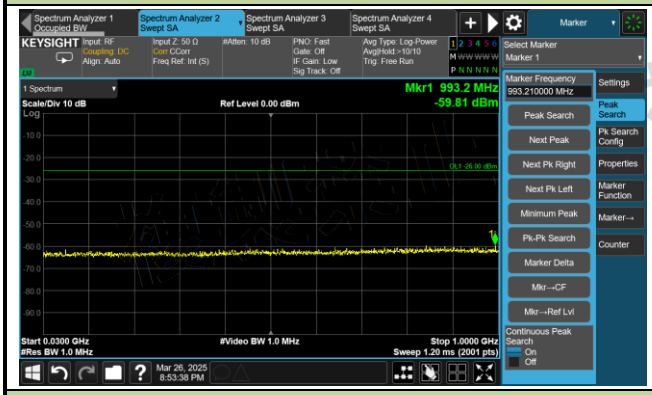
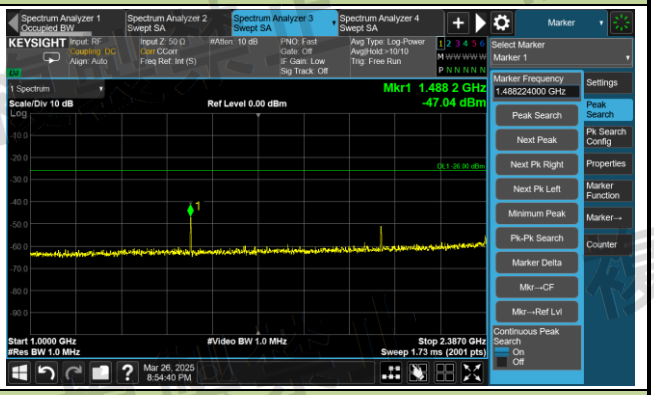
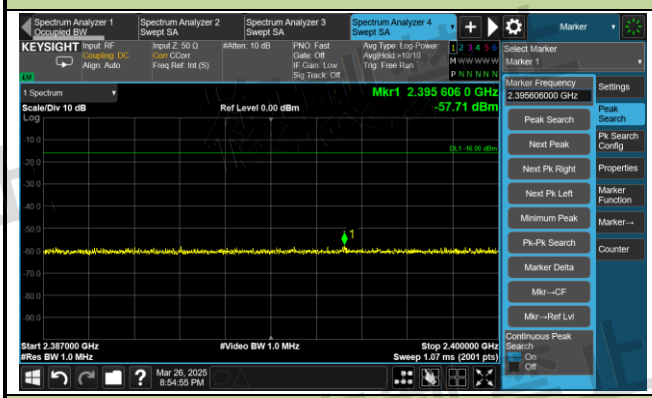
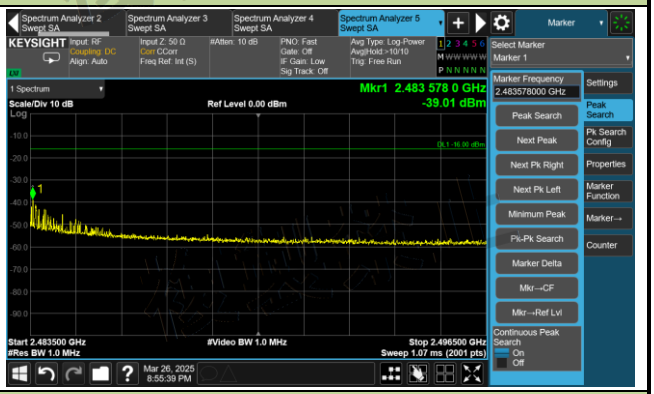
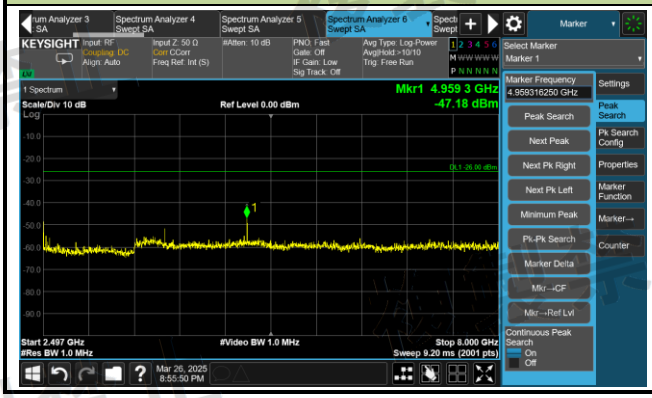
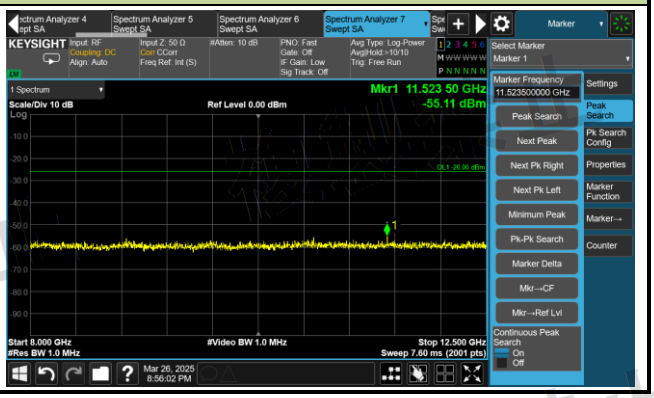
GFSK_DH5 Unwanted Emission Strength	
2402MHz	
30 ~ 1000MHz	1000 ~ 2387MHz
	
2387 ~ 2400MHz	2483.5 ~ 2496.5MHz
	
2496.5 ~ 8000MHz	8000 ~ 12500MHz
	

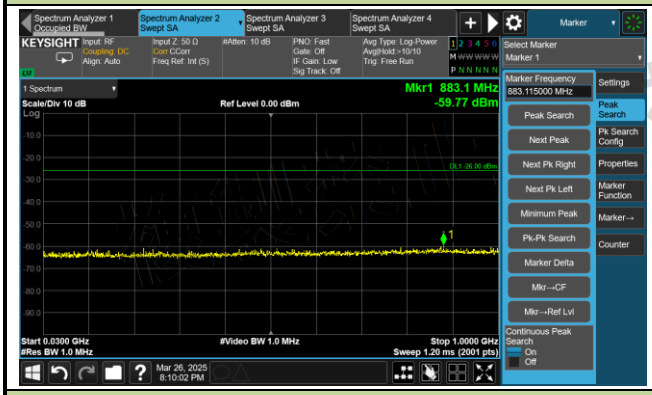
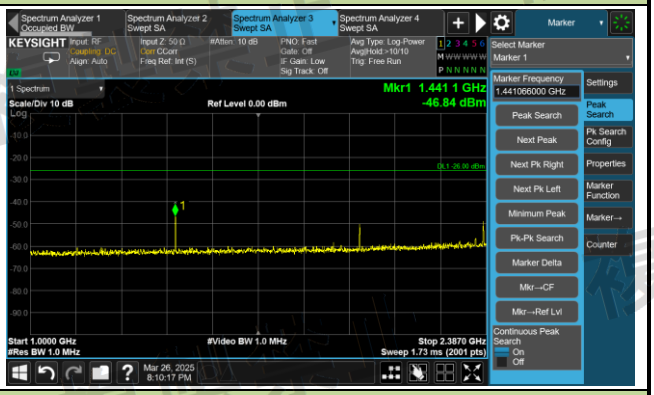
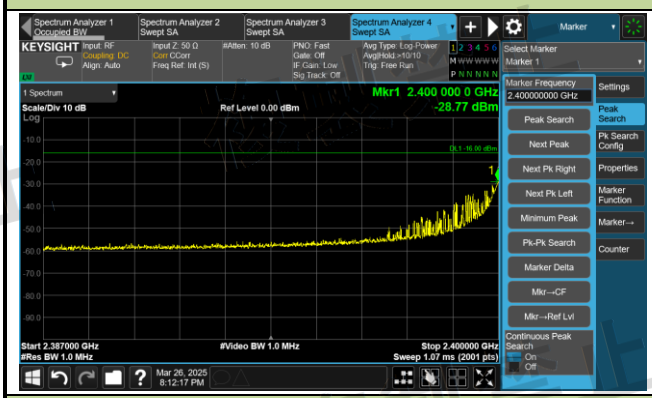
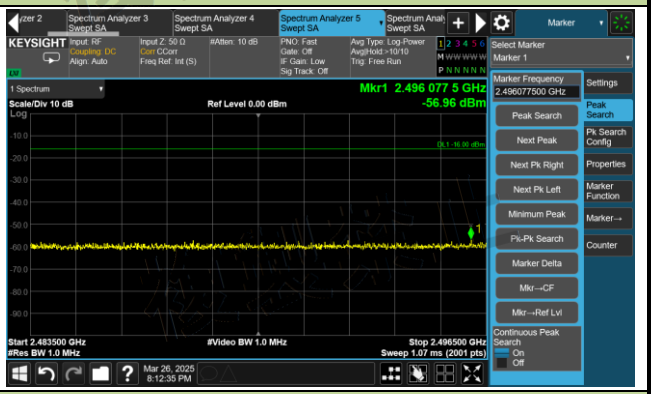
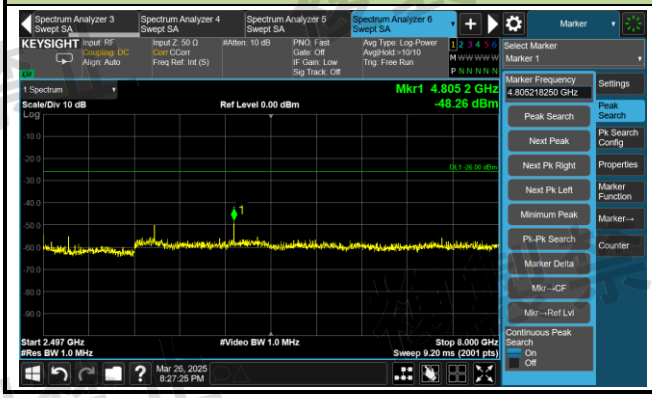
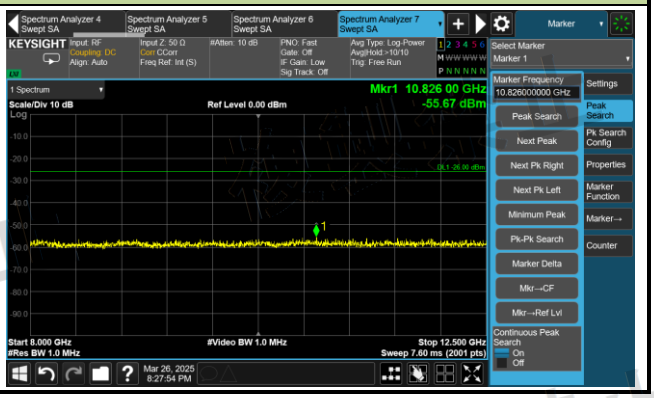
GFSK_DH5 Unwanted Emission Strength	
2441MHz	
30 ~ 1000MHz	1000 ~ 2387MHz
	
2387 ~ 2400MHz	2483.5 ~ 2496.5MHz
	
2496.5 ~ 8000MHz	8000 ~ 12500MHz
	

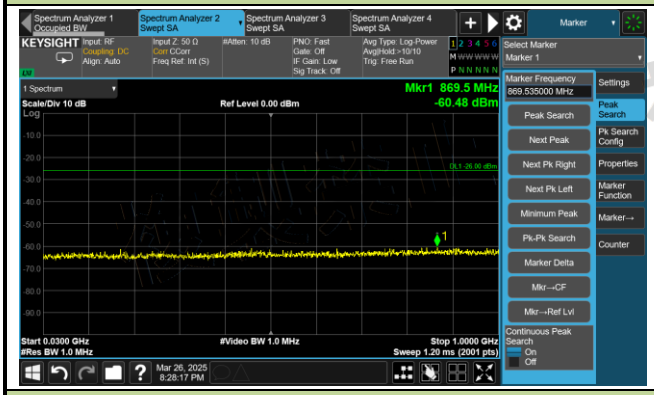
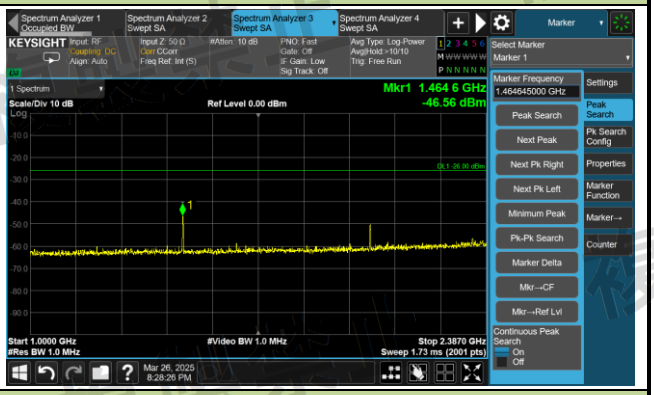
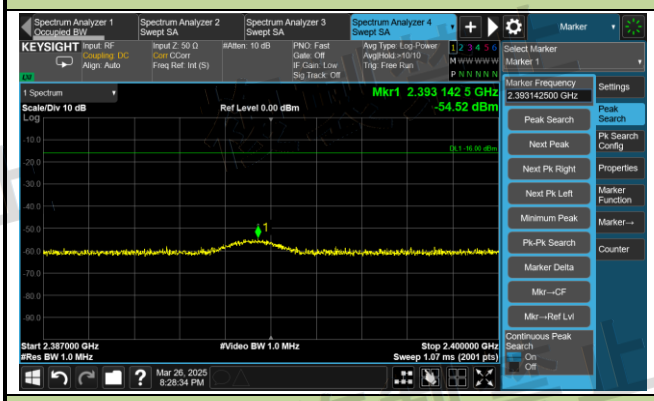
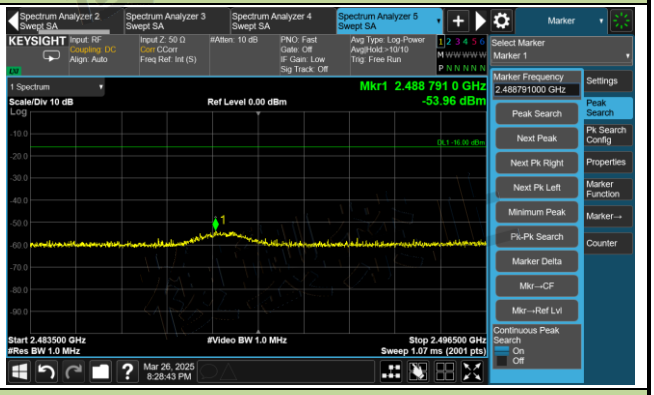
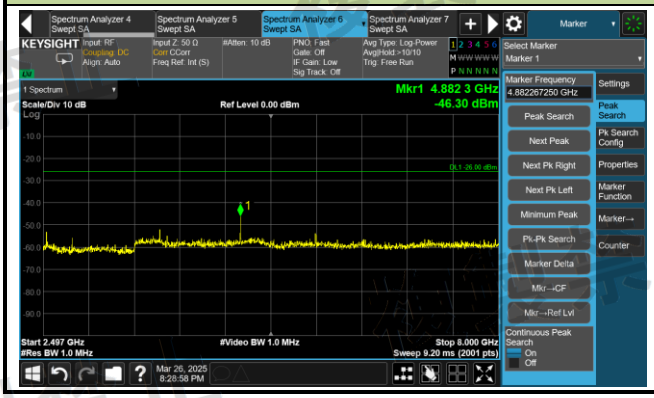
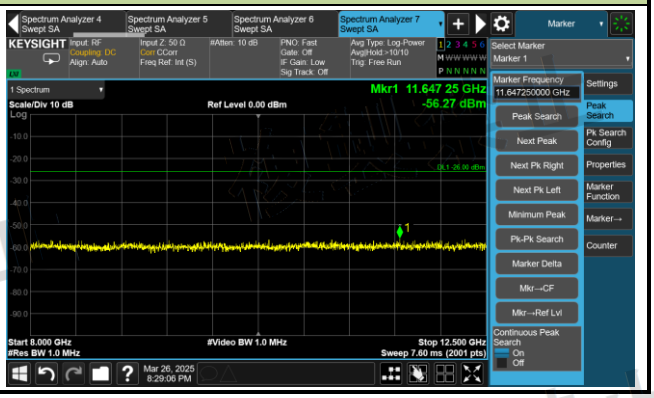
GFSK_DH5 Unwanted Emission Strength	
2480MHz	
30 ~ 1000MHz	1000 ~ 2387MHz
	
2387 ~ 2400MHz	2483.5 ~ 2496.5MHz
	
2496.5 ~ 8000MHz	8000 ~ 12500MHz
	

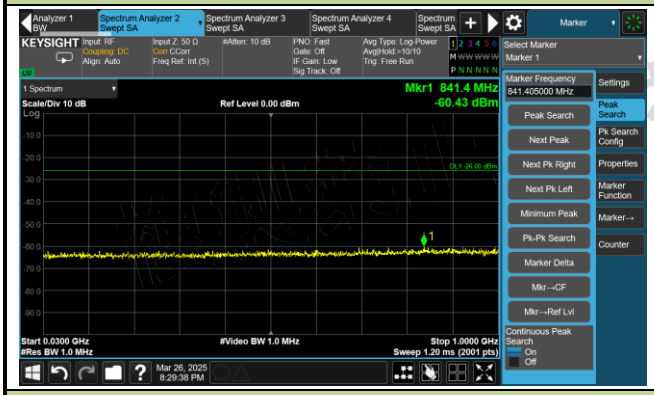
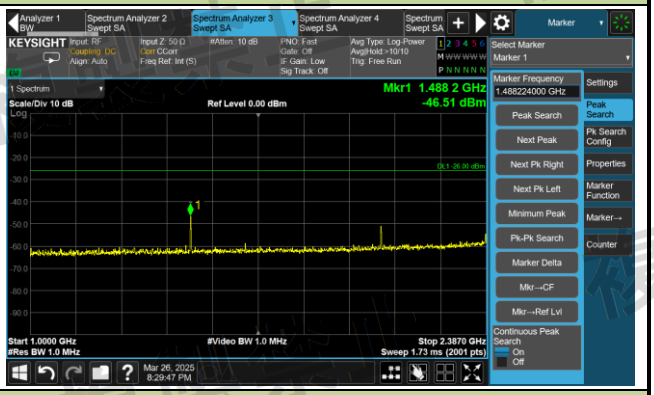
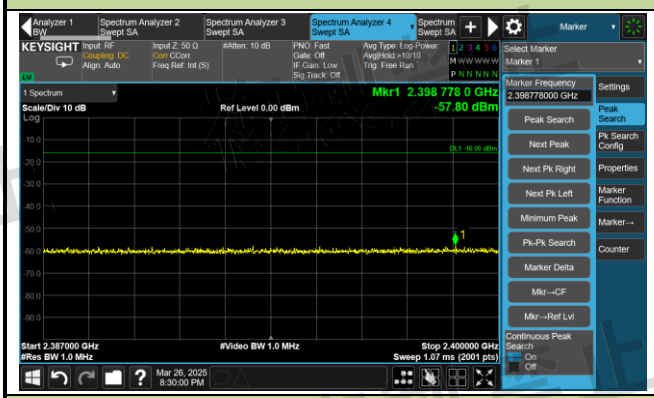
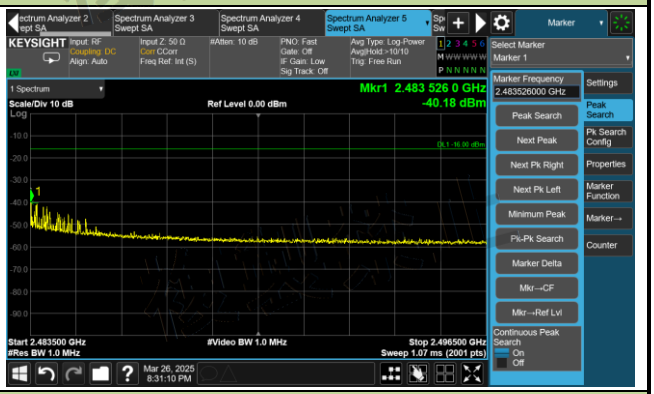
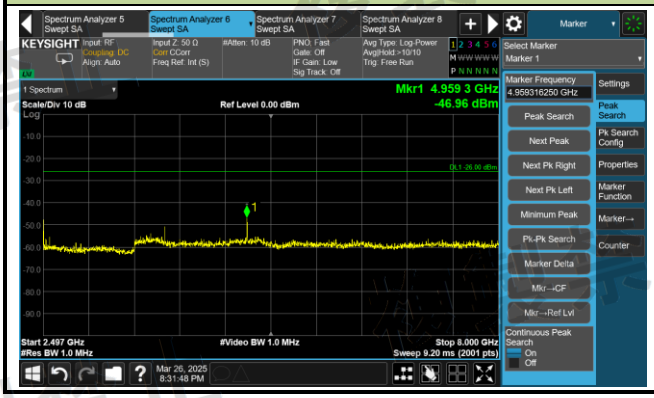
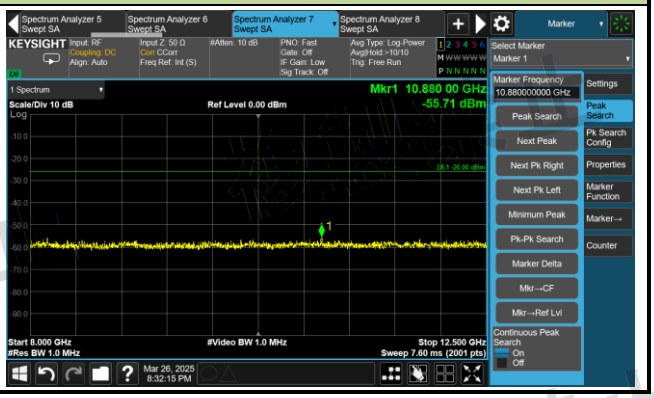
π/4-DQPSK_DH5 Unwanted Emission Strength	
2402MHz	
30 ~ 1000MHz	1000 ~ 2387MHz
	
2387 ~ 2400MHz	2483.5 ~ 2496.5MHz
	
2496.5 ~ 8000MHz	8000 ~ 12500MHz
	

π/4-DQPSK_DH5 Unwanted Emission Strength	
2441MHz	
30 ~ 1000MHz	1000 ~ 2387MHz
	
2387 ~ 2400MHz	2483.5 ~ 2496.5MHz
	
2496.5 ~ 8000MHz	8000 ~ 12500MHz
	

π/4-DQPSK_DH5 Unwanted Emission Strength	
2480MHz	
30 ~ 1000MHz	1000 ~ 2387MHz
	
2387 ~ 2400MHz	2483.5 ~ 2496.5MHz
	
2496.5 ~ 8000MHz	8000 ~ 12500MHz
	

8DPSK_DH5 Unwanted Emission Strength	
2402MHz	
30 ~ 1000MHz	1000 ~ 2387MHz
	
2387 ~ 2400MHz	2483.5 ~ 2496.5MHz
	
2496.5 ~ 8000MHz	8000 ~ 12500MHz
	

8DPSK_DH5 Unwanted Emission Strength	
2441MHz	
30 ~ 1000MHz	1000 ~ 2387MHz
	
2387 ~ 2400MHz	2483.5 ~ 2496.5MHz
	
2496.5 ~ 8000MHz	8000 ~ 12500MHz
	

8DPSK_DH5 Unwanted Emission Strength	
2480MHz	
30 ~ 1000MHz	1000 ~ 2387MHz
	
2387 ~ 2400MHz	2483.5 ~ 2496.5MHz
	
2496.5 ~ 8000MHz	8000 ~ 12500MHz
	

5.8. Secondary Radiated Emission Strength Measurement

5.8.1. Test Limit

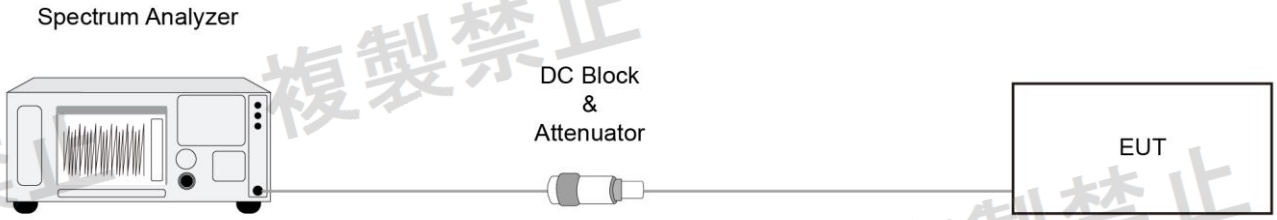
≤ 4nW for 30 ~ 1000MHz

≤ 20nW for 1000 ~ 12500MHz

5.8.2. Test Procedure

1. A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.
2. A positive peak detector function must be used.
3. The measurement instrument bandwidth and span must be set sufficiently with, and, the scan time set sufficiently slowly, to ensure all major modulation products are captured. Note that the measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result.
4. 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided the emission is repetitive in nature.

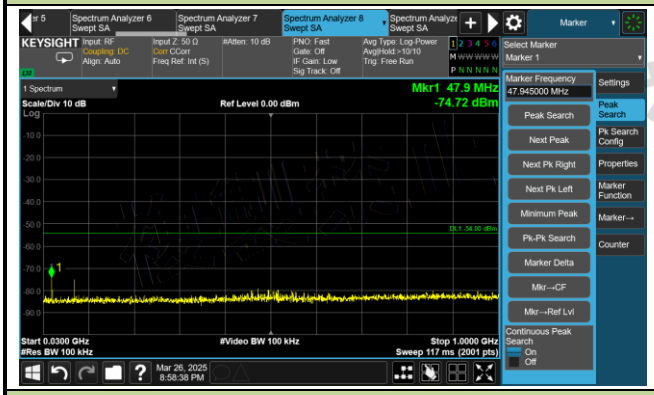
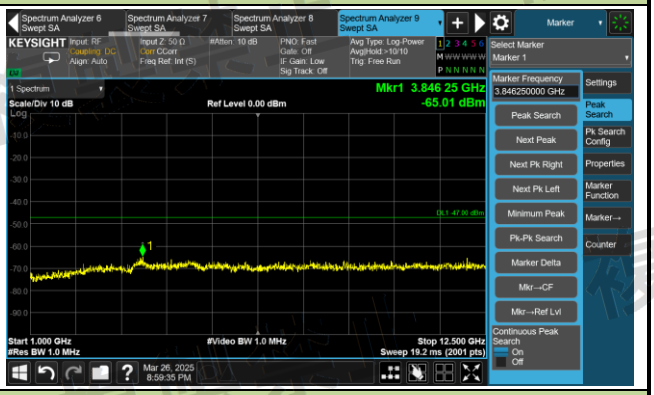
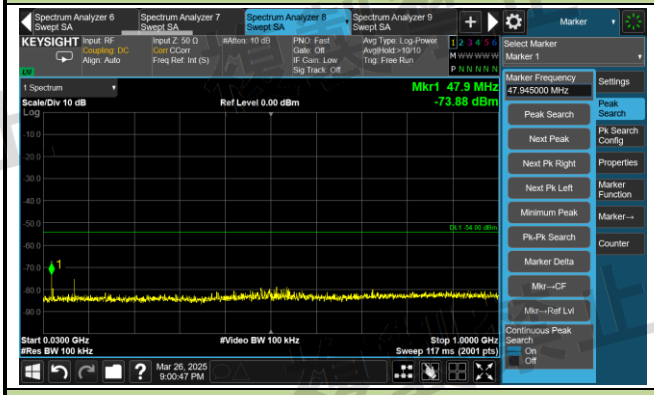
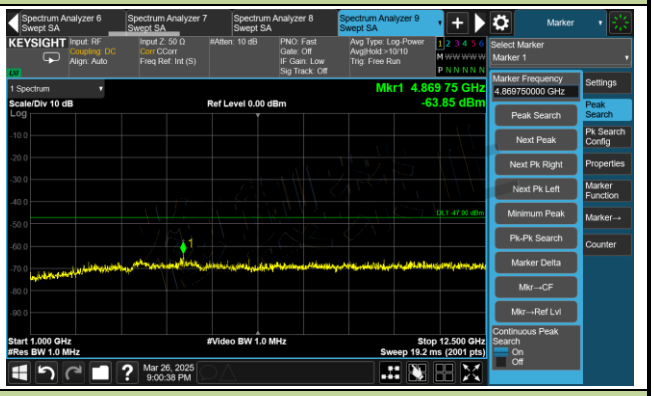
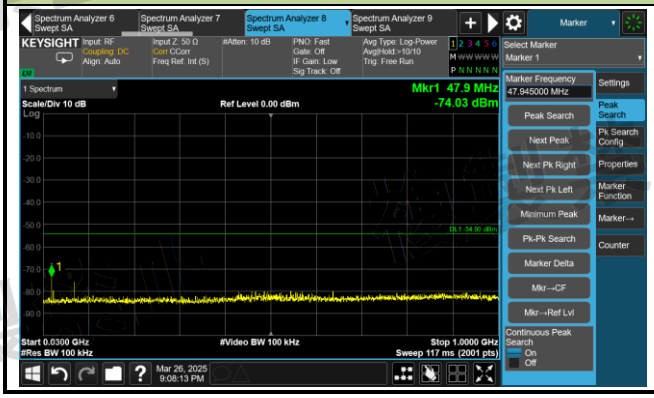
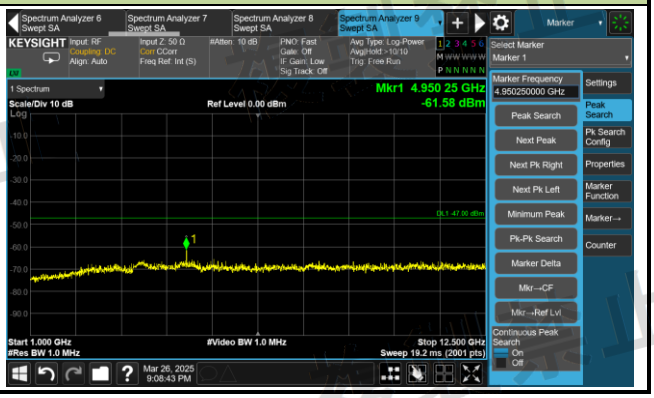
5.8.3. Test Setup

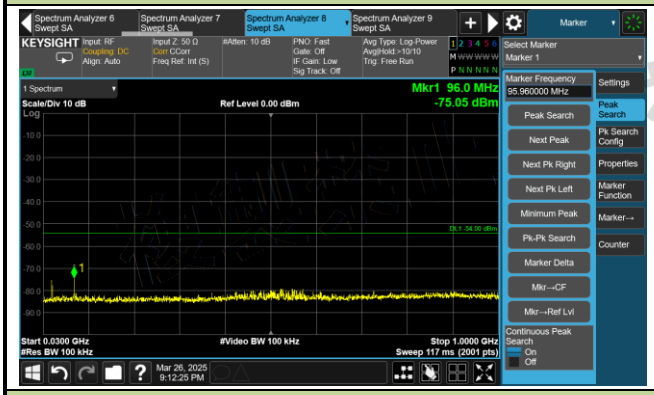
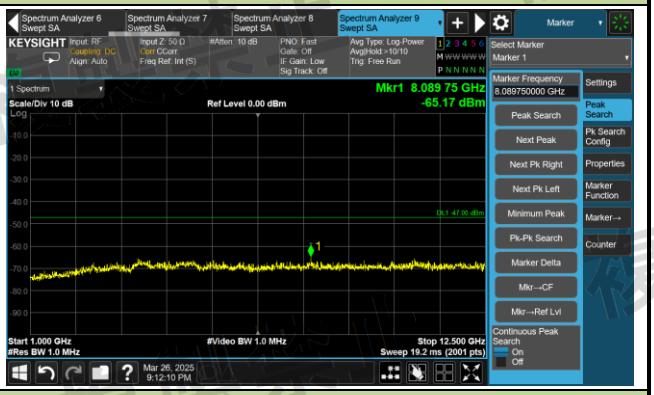
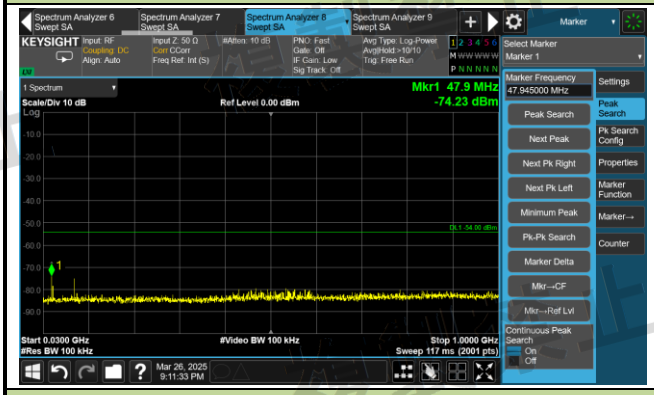
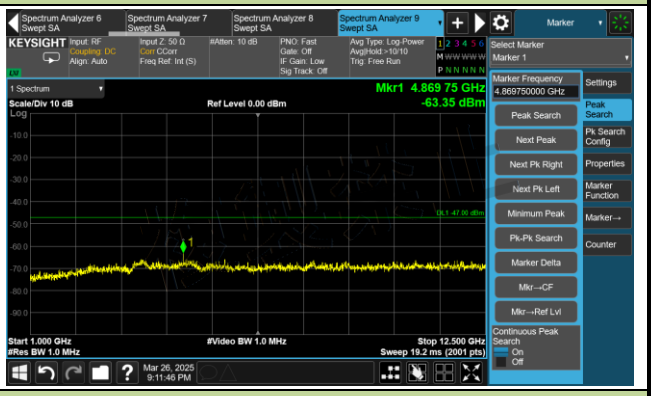
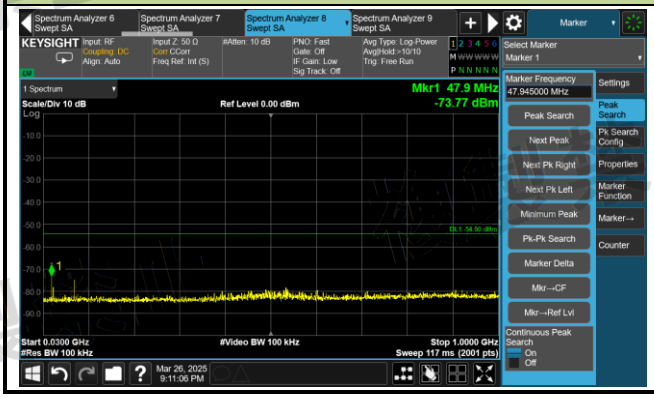
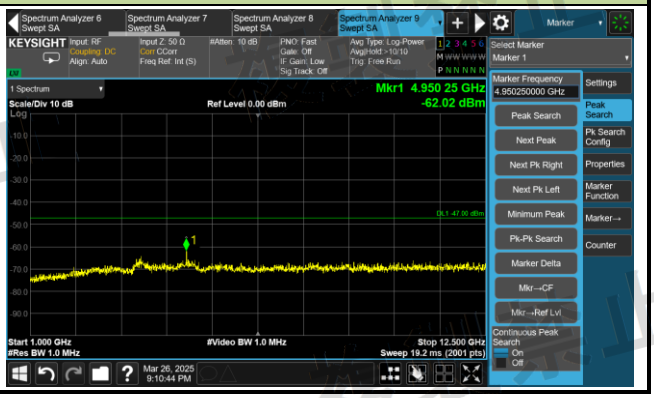


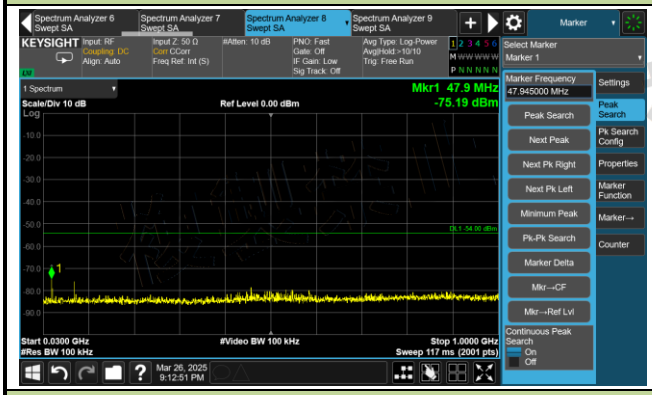
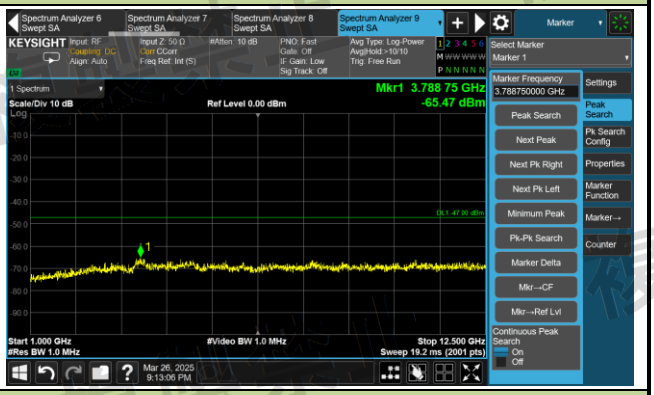
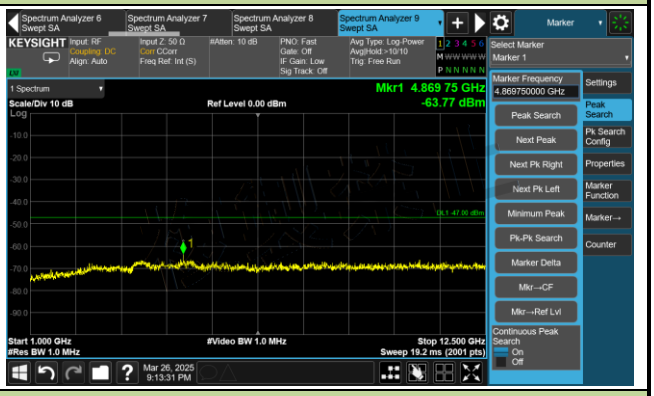
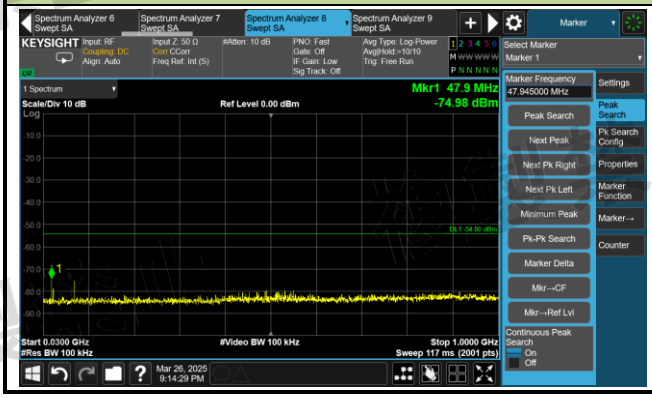
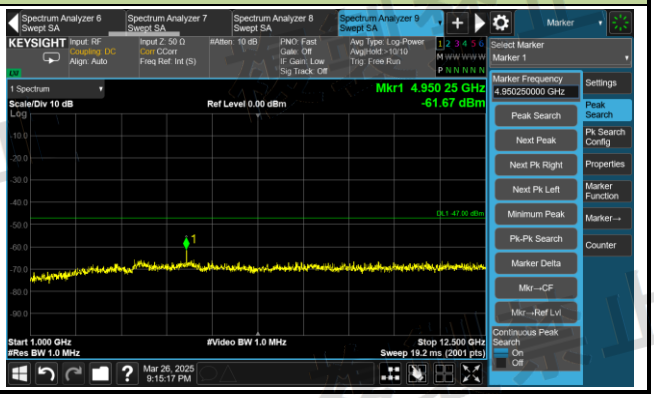
5.8.4. Test Result

Test Site	WZ-SR5	Temperature	24.0 °C
Test Engineer	Lynn Yang	Humidity	46.7 %RH
Test Date	2025-03-26		

Test Frequency (MHz)	Frequency Range (MHz)	Measured Freq (MHz)	Max Measurement Level (dBm)		Limit (nW)	Result
			(dBm)	(nW)		
GFSK_DH5						
2402	30 ~ 1000	47.9	-74.72	0.0337	≤ 4.00	Pass
	1000 ~ 12500	3846.25	-65.01	0.3155	≤ 20.00	Pass
2441	30 ~ 1000	47.9	-73.88	0.0409	≤ 4.00	Pass
	1000 ~ 12500	4869.75	-63.85	0.4121	≤ 20.00	Pass
2480	30 ~ 1000	47.9	-74.03	0.0395	≤ 4.00	Pass
	1000 ~ 12500	4950.25	-61.58	0.6950	≤ 20.00	Pass
π/4-DQPSK_DH5						
2402	30 ~ 1000	96.0	-75.05	0.0313	≤ 4.00	Pass
	1000 ~ 12500	8089.75	-65.17	0.3041	≤ 20.00	Pass
2441	30 ~ 1000	47.9	-74.23	0.0378	≤ 4.00	Pass
	1000 ~ 12500	4869.75	-63.35	0.4624	≤ 20.00	Pass
2480	30 ~ 1000	47.9	-73.77	0.0420	≤ 4.00	Pass
	1000 ~ 12500	4950.25	-62.02	0.6281	≤ 20.00	Pass
8DPSK_DH5						
2402	30 ~ 1000	47.9	-75.19	0.0303	≤ 4.00	Pass
	1000 ~ 12500	3788.75	-65.47	0.2838	≤ 20.00	Pass
2441	30 ~ 1000	47.9	-74.16	0.0384	≤ 4.00	Pass
	1000 ~ 12500	4869.75	-63.77	0.4198	≤ 20.00	Pass
2480	30 ~ 1000	47.9	-74.98	0.0318	≤ 4.00	Pass
	1000 ~ 12500	4950.25	-61.67	0.6808	≤ 20.00	Pass

GFSK_DH5 Secondary Radiated Emission Strength	
2402MHz	
30 ~ 1000MHz	1000 ~ 12500MHz
	
2441MHz	
30 ~ 1000MHz	1000 ~ 12500MHz
	
2480MHz	
30 ~ 1000MHz	1000 ~ 12500MHz
	

π/4-DQPSK_DH5 Secondary Radiated Emission Strength	
2402MHz	
30 ~ 1000MHz	1000 ~ 12500MHz
	
2441MHz	
30 ~ 1000MHz	1000 ~ 12500MHz
	
2480MHz	
30 ~ 1000MHz	1000 ~ 12500MHz
	

8DPSK_DH5 Secondary Radiated Emission Strength	
2402MHz	
30 ~ 1000MHz	1000 ~ 12500MHz
	
2441MHz	
30 ~ 1000MHz	1000 ~ 12500MHz
	
2480MHz	
30 ~ 1000MHz	1000 ~ 12500MHz
	

5.9. Carrier Sensing Measurement

5.9.1. Test Limit

Stop transmission while carrier detecting.

Field intensity in the direction of the maximum gain of a receiving antenna: 100mV/m (It's a radiated testing detection threshold level).

The conducted detection threshold level shows as below:

(6)式の電界強度 E を既定値の 100mV/m（100dBμV/m）とし、λ(m)を F（MHz）に変換し、P を dBm 単位で表すと（7）式を得る。

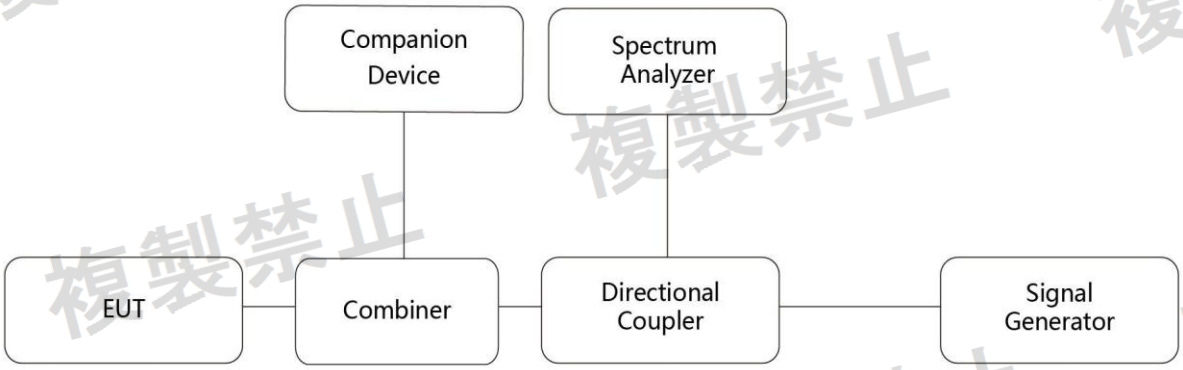
$$P[dBm]=22.79 + G - 20\log F \quad \text{----------} \quad (7)$$

P: 受信機のアンテナ端子に入力される受信電力 [dBm]
G: 受信アンテナの絶対利得 [dBi]
F: キャリア周波数 [MHz]

5.9.2. Test Procedure

1. A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.
2. Link EUT and Access Point to Directional Coupler input port.
3. Link Signal Generator and Spectrum Analyzer to test port and output port in the Directional Coupler separately.
4. A positive Peak Detector function in Spectrum Analyzer must be used.
5. Set the Span to Zero.
6. Press the Signal Generator on and it will output the Carrier Signal. When the Link breaks off, wait a minute and press the Signal Generator off. After a while, reset the Link and done the test.

5.9.3. Test Setup



5.9.4. Test Result

The requirement does not apply for FHSS modulation.

5.10. Interference Protection Function Measurement

5.10.1. Test Limit

Chiefly, the one automatically to transmit and to receive identification coed with the wireless equipment of the wireless station used in the same premises.

5.10.2. Test Procedure

(1) In the case that the EUT has the function of automatically transmitting the identification codes:

a. Transmit the predetermined identification codes from the EUT.

b. Check the transmitted identification codes with the demodulator.

(2) In the case of receiving the identification codes:

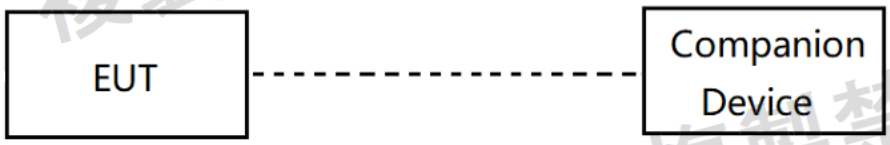
a. Transmit the predetermined identification codes from the counterpart.

b. Check if the communication is normal.

c. Transmit the signals other than predetermined ID codes from the counterpart.

d. Check if the EUT stops the transmission, or if it displays that the identification codes are different from the predetermined ones.

5.10.3. Test Setup



5.10.4. Test Result

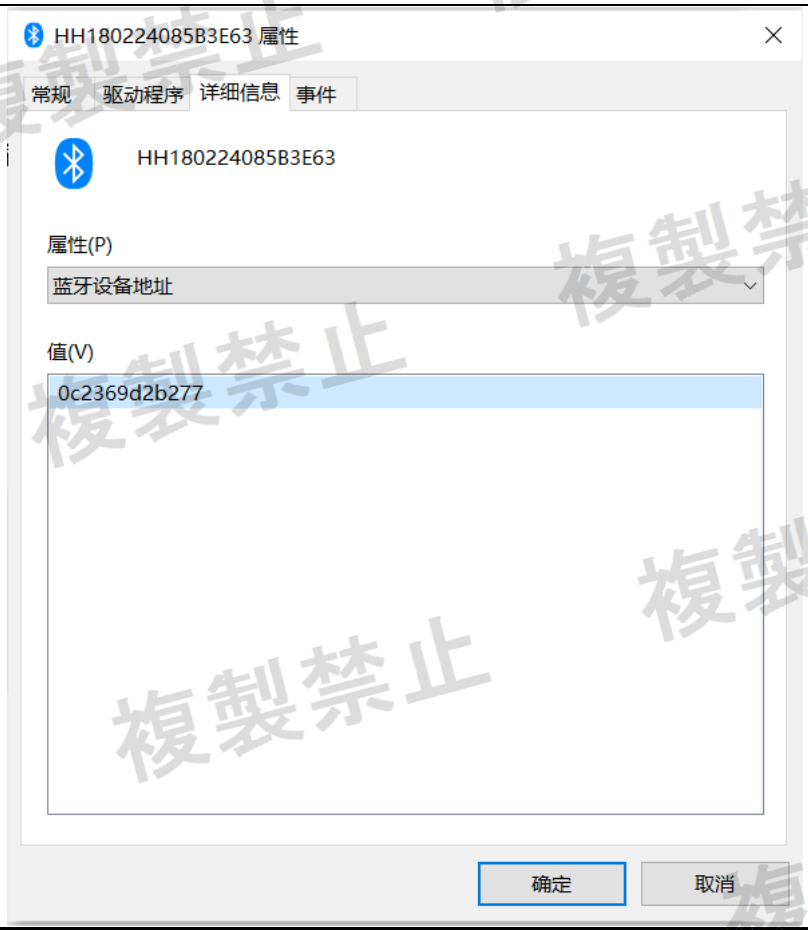
Test Site	WZ-SR5	Temperature	21 °C
Test Engineer	Liz Yuan	Humidity	48.7 %RH
Test Date	2025-04-07		

The Result of Interference Protection Function	
☒	Good
☐	NG

Note:

1, NG means not good.

2, When the EUT work on normal operation, we can read this EUT address from EUT's Setting interface.



Appendix A - EUT Photograph

Refer to “R25S1038035-JE” file.

Appendix B - Test Setup Photograph

Refer to “R25S1038035-JT” file.

複製禁止

The End