



RADIO TEST REPORT

Applicant	:	Cosonic Intelligent Technologies Co., Ltd.
Address of Applicant	:	NO. 3 Keyuan Road, Songshan Lake District, Dongguan City, Guangdong Province 523808
Manufacturer	:	Cosonic Intelligent Technologies Co., Ltd.
Address of Manufacturer	:	NO. 3 Keyuan Road, Songshan Lake District, Dongguan City, Guangdong Province 523808
Equipment under Test	:	WIRELESS HEADPHONES
Model No.	:	HA-NP3T
FCC ID	:	2ALVK-HANP3T
IC	:	11136A-HANP3T
Test Standard(s)	:	FCC Rules and Regulations Part 15 Subpart C, ANSI C63.10-2020+Cor.1-2023, RSS-247 Issue 4 July 24, 2025, RSS-Gen Issue 5, Apr. 2018, Amendment 2 (February 2021), ANSI C63.10-2020+Cor.1-2023+C63.10a- 2024+Errata to C63.10a-2024
Report No.	:	DDT-RE26070622-1E01
Issue Date	:	2026/08/17
Issue By	:	Guangdong Dongdian Testing Service Co., Ltd. Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

REPORT

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Test Report Declare

Applicant	:	Cosonic Intelligent Technologies Co., Ltd.
Address of Applicant	:	NO. 3 Keyuan Road, Songshan Lake District, Dongguan City, Guangdong Province 523808
Equipment under Test	:	WIRELESS HEADPHONES
Model No.	:	HA-NP3T
Manufacturer	:	Cosonic Intelligent Technologies Co., Ltd.
Address of Manufacturer	:	NO. 3 Keyuan Road, Songshan Lake District, Dongguan City, Guangdong Province 523808

Test Standard Used:

FCC Rules and Regulations Part 15 Subpart C,
ANSI C63.10-2020+Cor.1-2023,
RSS-247 Issue 4 July 24, 2025,
RSS-Gen Issue 5, Apr. 2018, Amendment 2 (February 2021),
ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024

We Declare:

The equipment described above is tested by Guangdong Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangdong Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

Report No.:	DDT-RE26070622-1E01		
Date of Receipt:	2026/07/08	Date of Test:	2026/07/08 - 2026/08/04

Created: Bobo Chen	Reviewed: Tiger Mo	Approved: Ella Gong
		
2026/08/04	2026/08/17	2026/08/17

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Version	Revision Content	Issue Date	Approved
V0	Initial issue	2026/08/17	Ella Gong

1. Summary of Test Results

No.	Test Parameter	Clause No.	Condition	Result
1	Maximum Peak Output Power	47 CFR Part 15 15.247(b)(1), RSS-247 clause 6.2.3.2(a)	/	Pass
2	20 dB Bandwidth	47 CFR Part 15 15.247(a)(1), RSS-247 clause 6.2.3.1(a)	/	Pass
3	99% Bandwidth	RSS-Gen clause 6.7	/	Pass
4	Carrier Frequency Separation	47 CFR Part 15 15.247(a)(1), RSS-247 clause 6.2.3.1(a)	/	Pass
5	Number of Hopping Channel	47 CFR Part 15 15.247(a)(1)(iii), RSS-247 clause 6.2.3.1(b)	/	Pass
6	Dwell Time	47 CFR Part 15 15.247(a)(1)(iii), RSS-247 clause 6.2.3.1(b)	/	Pass
7	RF Conducted Spurious Emissions	47 CFR Part 15 15.247(d), RSS-247 clause 6.6	/	Pass
8	Radiated Emission	47 CFR Part 15 15.205, 47 CFR Part 15 15.209, 47 CFR Part 15 15.247(d), RSS-247 clause 6.6, RSS-Gen clause 8.9, RSS-Gen clause 8.10	/	Pass
9	Band Edge Compliance	47 CFR Part 15 15.205, 47 CFR Part 15 15.209, 47 CFR Part 15 15.247(d), RSS-247 clause 6.6, RSS-Gen clause 8.9, RSS-Gen clause 8.10	/	Pass
10	Antenna Requirement	47 CFR Part 15 15.203, RSS-Gen clause 6.8	/	Pass
11	Power Line Conducted Emissions	47 CFR Part 15 15.207(a), RSS-Gen clause 8.8	/	Pass
Note: N/A is an abbreviation for Not Applicable, and means this item is not applicable for this device or no need to test according to standard.				

2. General Test Information

2.1. Description of EUT

EUT Name	: WIRELESS HEADPHONES
Model Number	: HA-NP3T
EUT Function Description	: Please reference user manual of this device
Power Supply	: CHARGING CASE: DC 5V from USB cable HEADSET: DC 5V from external charging case CHARGING CASE: DC 3.8V Lithium-ion built-in battery HEADSET: DC 3.85V Lithium-ion built-in battery
Antenna Type	: PIFA
Max Antenna Gain(dBi)	: Left side: -5.1dBi Right side: -3.8dBi

Radio Specification	: Bluetooth BR/EDR
Operation Frequency	: 2402 MHz to 2480 MHz
Modulation	: GFSK, $\pi/4$ -DQPSK, 8DPSK

Bluetooth BR/EDR Channel information					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	27	2429	54	2456
1	2403	28	2430	55	2457
2	2404	29	2431	56	2458
3	2405	30	2432	57	2459
4	2406	31	2433	58	2460
5	2407	32	2434	59	2461
6	2408	33	2435	60	2462
7	2409	34	2436	61	2463
8	2410	35	2437	62	2464
9	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476

21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454	/	
26	2428	53	2455	/	

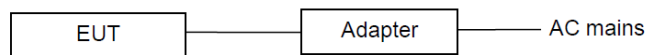
Note: The above EUT information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications or User's Manual. The above Antenna information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

“☒” means to be chosen or applicable; “☐” means don't to be chosen or not applicable; This note applies to entire report.

2.2. Accessories of EUT

Accessories	Manufacturer	Model number	Description
/	/	/	/

2.3. Block diagram of EUT configuration for test



2.4. Decision of final test mode

According pre-test, the worst test modes were reported as below:

Test software: FCC_assist_1.0.2.2.exe

The test software was used to control EUT work in Continuous Tx mode, and select test channel, wireless mode as below table.

The pathloss of external cable: 0.5 dB (According to the manufacturer's claims)

Tested mode, Tx Power Setting, Channel, and Frequency			
Tested mode	Tx Power Setting	Channel	Frequency (MHz)
GFSK hopping on Tx mode	10	CH0 to CH78	2402 to 2480
$\pi/4$ -DQPSK hopping on Tx mode	10	CH0 to CH78	2402 to 2480
8DPSK hopping on Tx mode	10	CH0 to CH78	2402 to 2480
GFSK hopping off Tx mode	10	CH0	2402
	10	CH39	2441
	10	CH78	2480
$\pi/4$ -DQPSK hopping off Tx mode	10	CH0	2402
	10	CH39	2441
	10	CH78	2480
8DPSK hopping off Tx mode	10	CH0	2402
	10	CH39	2441
	10	CH78	2480

Note: According exploratory test, EUT will have maximum output power in those data rate, worst-case data rates were: GFSK mode: DH5, $\pi/4$ -DQPSK mode: 2DH5, 8DPSK mode: 3DH5

2.5. Deviations of test standard

No deviation.

2.6. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	+15°C to +35 °C
Humidity range:	20% to 75%
Pressure range:	86 kPa to 106 kPa

Note: The specific temperature and humidity information of each test item refers to the temperature and humidity record in the corresponding test data.

2.7. Test laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20240, G-20118

2.8. Measurement uncertainty

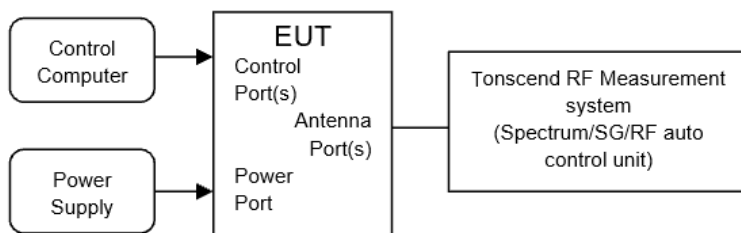
Test Item	Uncertainty
Bandwidth	1.9%
Peak Output Power (Conducted) (Spectrum analyzer)	0.98 dB
Peak Output Power (Conducted) (Power Sensor)	1.18 dB
Power Spectral Density (Base EIRP)	1.51 dB
Power Spectral Density (Spectrum analyzer)	0.98 dB
Frequencies Stability	1.9 kHz
Conducted spurious emissions	1.21 dB ($9\text{ kHz} \leq f < 7\text{ GHz}$);
	3.31 dB ($7\text{ GHz} \leq f < 40\text{ GHz}$)
Uncertainty for radio frequency (RBW < 20 kHz)	5.5×10^{-8}
Time	0.11%
Temperature	0.3 °C
Humidity	2 %
Uncertainty for Radiation Emission test (9 kHz – 30 MHz)	3.44 dB
Uncertainty for Radiation Emission test (30 MHz - 1 GHz)	4.28 dB (Antenna Polarize: V)
	4.14 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1 GHz - 40 GHz)	4.22 dB (1 - 6 GHz)
	4.52 dB (6 GHz - 18 GHz)
	4.58 dB (18 GHz - 40 GHz)
Uncertainty for Power line conduction emission test	3.32dB (150KHz-30MHz)
	3.72dB (9KHz-150KHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

3. Equipment Used During Conductive Test

Equipment	Manufacturer	Model No.	Serial Number	Due Date
☒ RF Connected Test (RF Measurement System 1#)				
SIGNAL ANALYZER	R&S	FSQ26	101272	2027/02/27
Wideband Radio Communication Tester	R&S	CMW500	117491	2027/02/27
MXG Vector Signal Generator	KEYSIGHT	N5182B	MY59100192	2027/02/27
MXG Vector Signal Generator	Agilent	N5182A	MY47420658	2027/02/27
RF Control Unit	Tonscend	JS0806-2	158060010	2027/02/27
TEMP&HUMI Programmable Chamber	ZHIXIANG	ZXGDJS-150L	ZX170110-A	2027/02/27
Test Software	Tonscend	JS1120-3	V3.6.21	N/A

4. 20 dB Bandwidth

4.1. Block diagram of test setup



4.2. Limits

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

4.3. Test procedure

- (1) The test according to ANSI C63.10 clause 6.9.2.
- (2) Connect EUT's antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results
- (3) Set the EUT as maximum power setting and enable the EUT transmit continuously
- (4) Use the following spectrum analyzer settings for the 20 dB bandwidth measurement:

RBW:	1% to 5% of the OBW
VBW:	approximately three times RBW
Span:	between 2 times and 5 times the OBW
Detector Mode:	Peak
Sweep time:	Auto
Trace mode:	Max hold

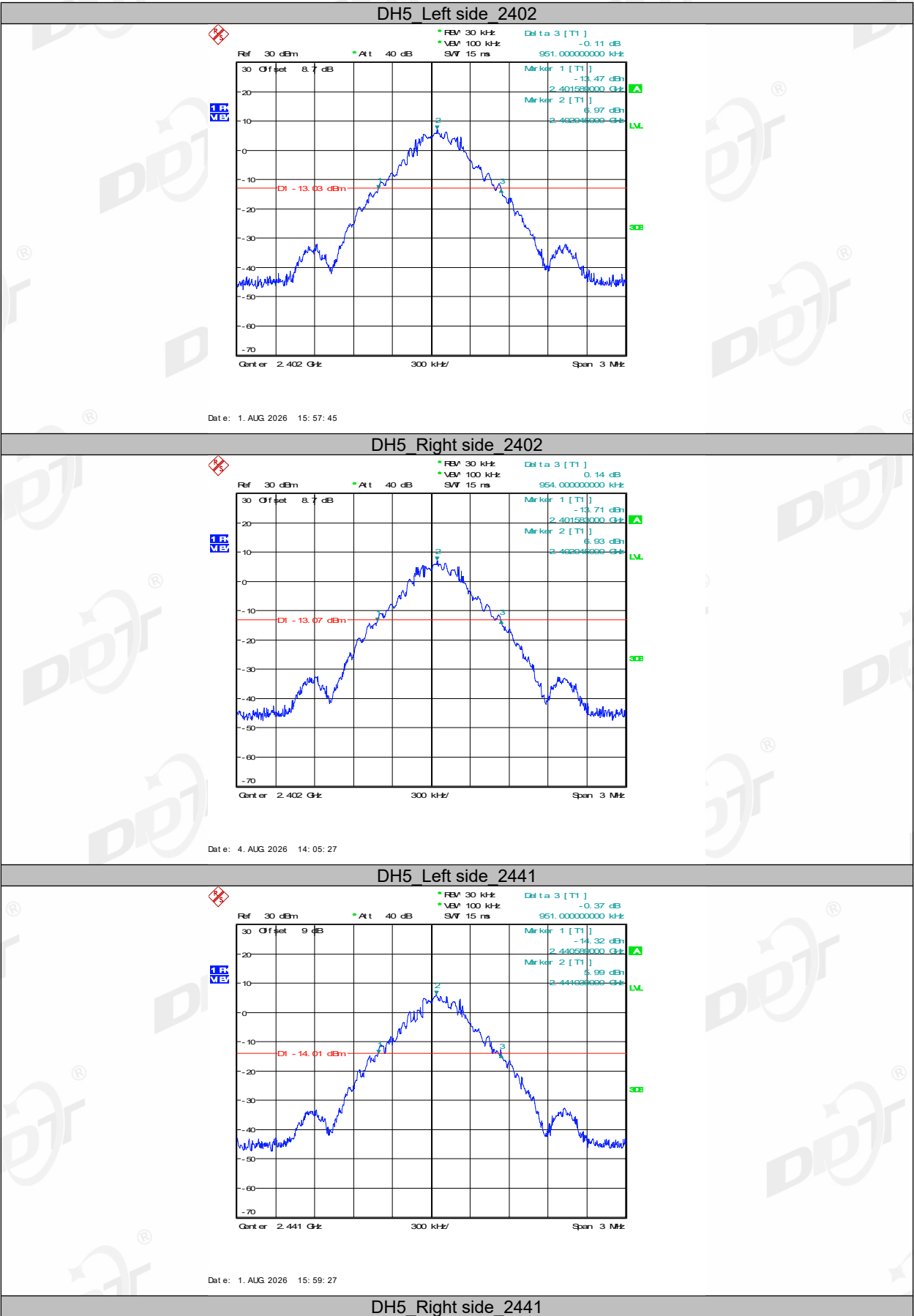
- (5) Measure and record the results in the report.

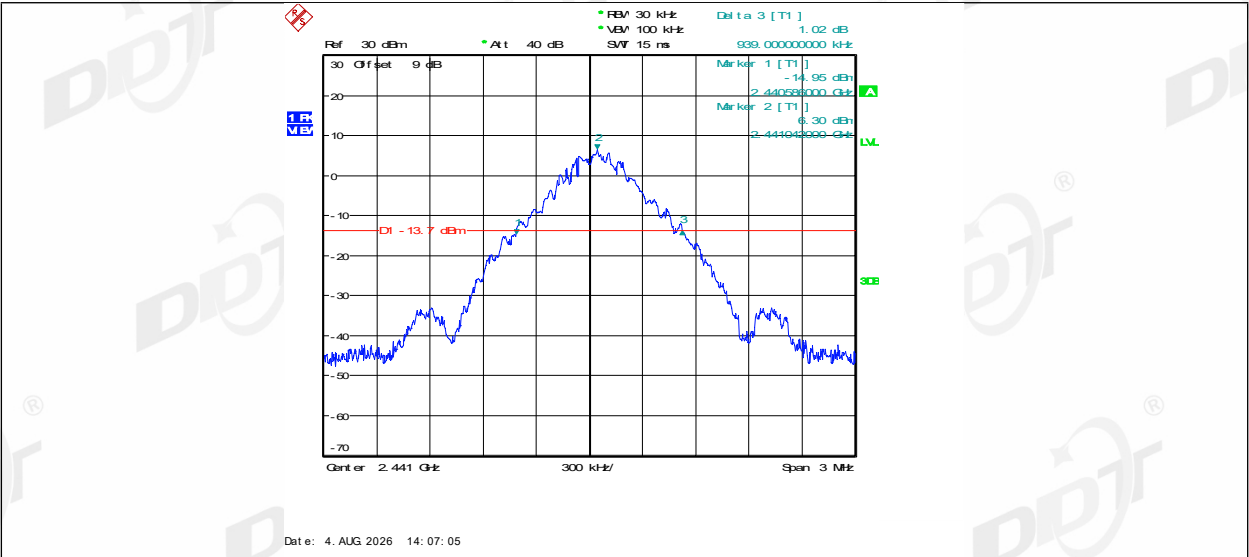
4.4. Test result

Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	27.3-28.2℃,35-53.6%RH	Test Date:	2026.8.1-2026.8.4
Test Power Supply:	Battery	Sample Number:	S26070622-009

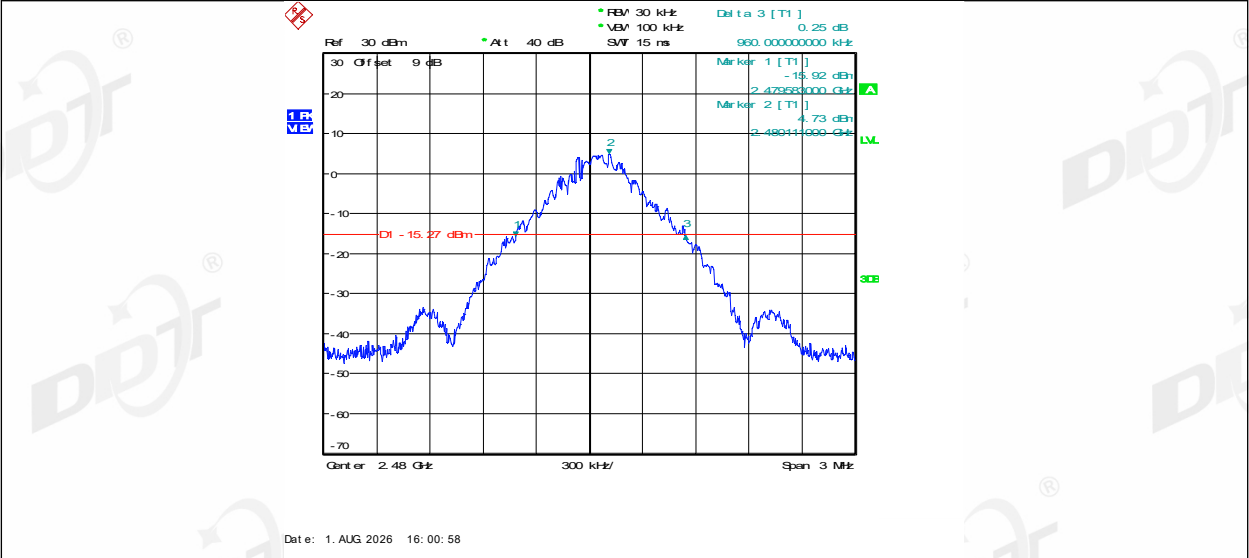
Test Mode	Antenna	Frequency [MHz]	20dB EBW[MHz]
DH5	Left side	2402	0.95
	Right side	2402	0.95
	Left side	2441	0.95
	Right side	2441	0.94
	Left side	2480	0.96
	Right side	2480	0.95
2DH5	Left side	2402	1.22
	Right side	2402	1.22
	Left side	2441	1.21
	Right side	2441	1.24
	Left side	2480	1.23
	Right side	2480	1.33
3DH5	Left side	2402	1.25
	Right side	2402	1.26
	Left side	2441	1.29
	Right side	2441	1.26
	Left side	2480	1.27
	Right side	2480	1.26

4.5. Test graphs

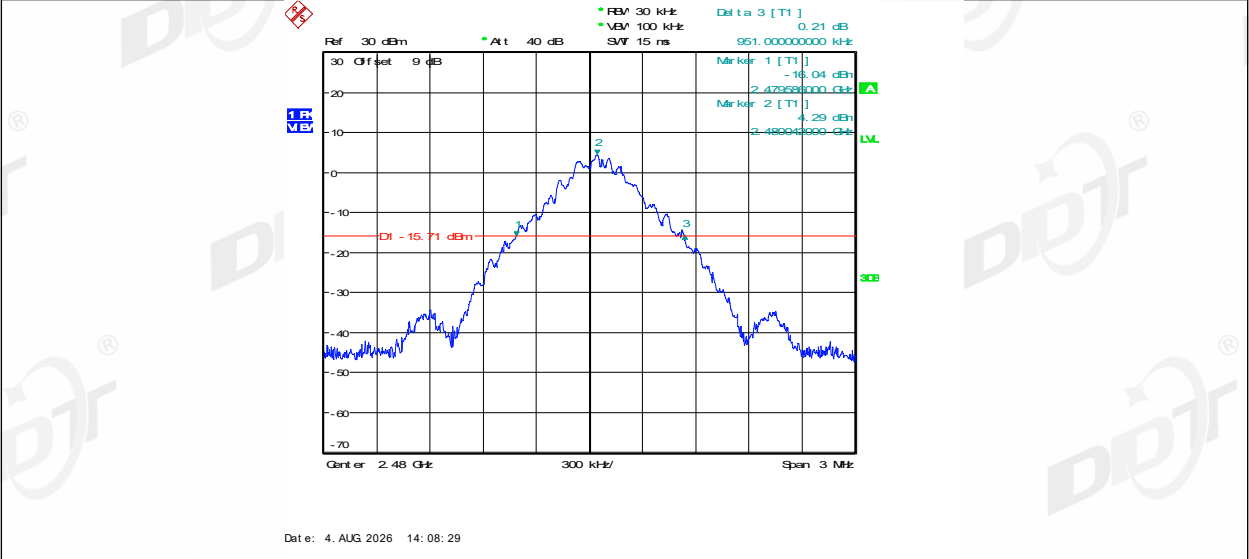




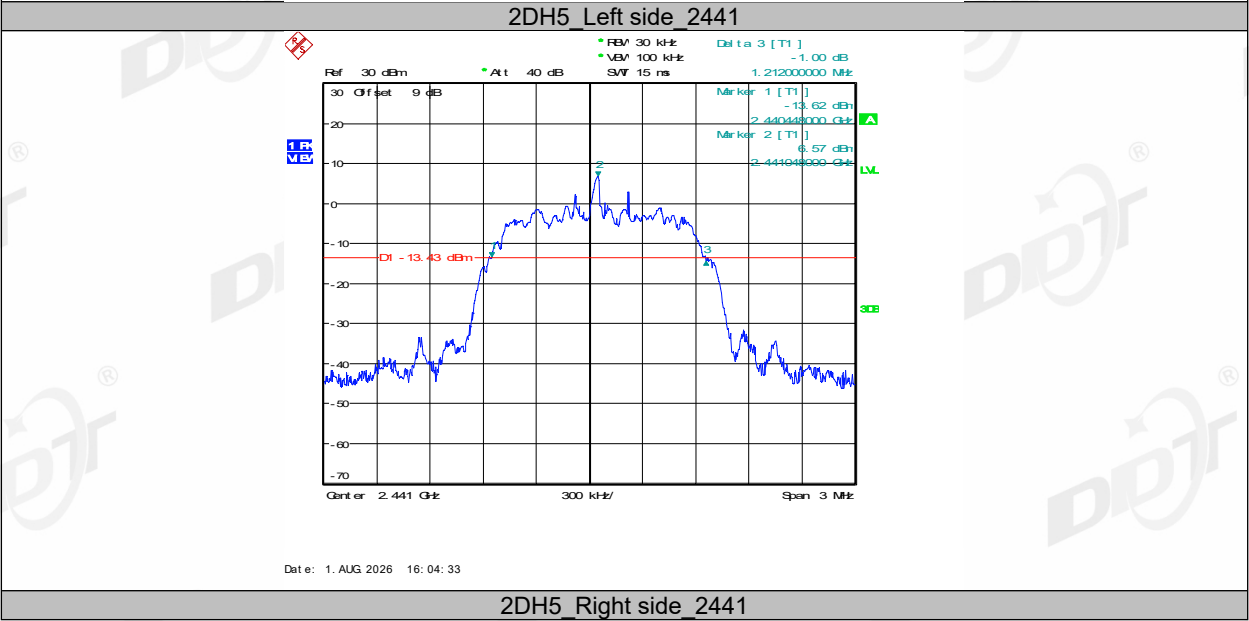
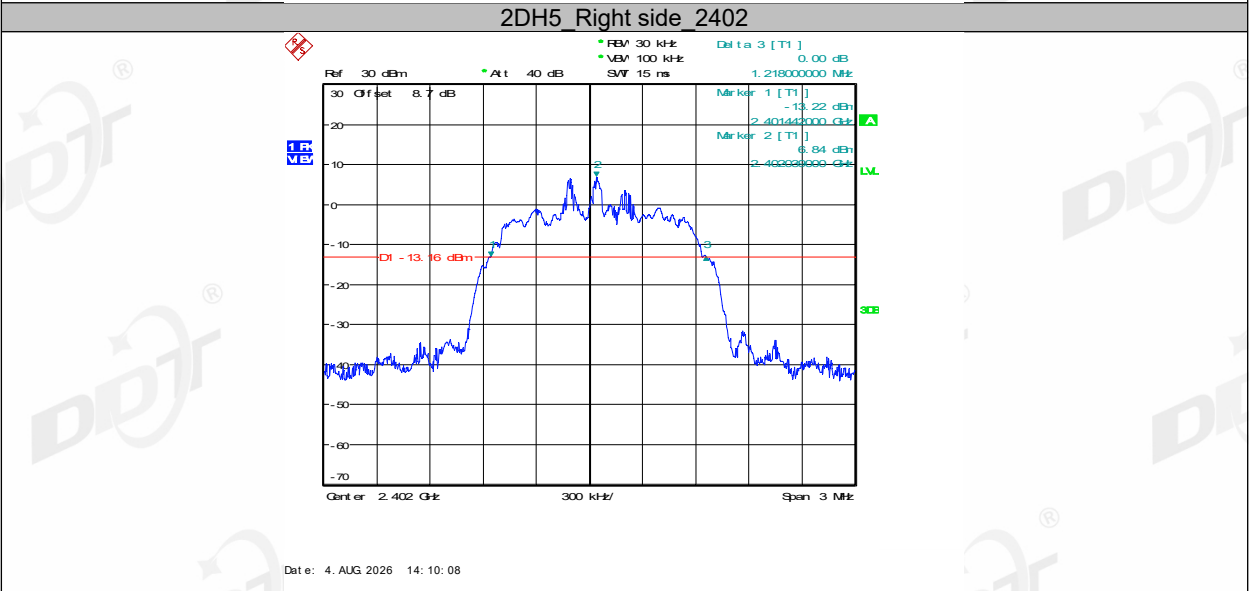
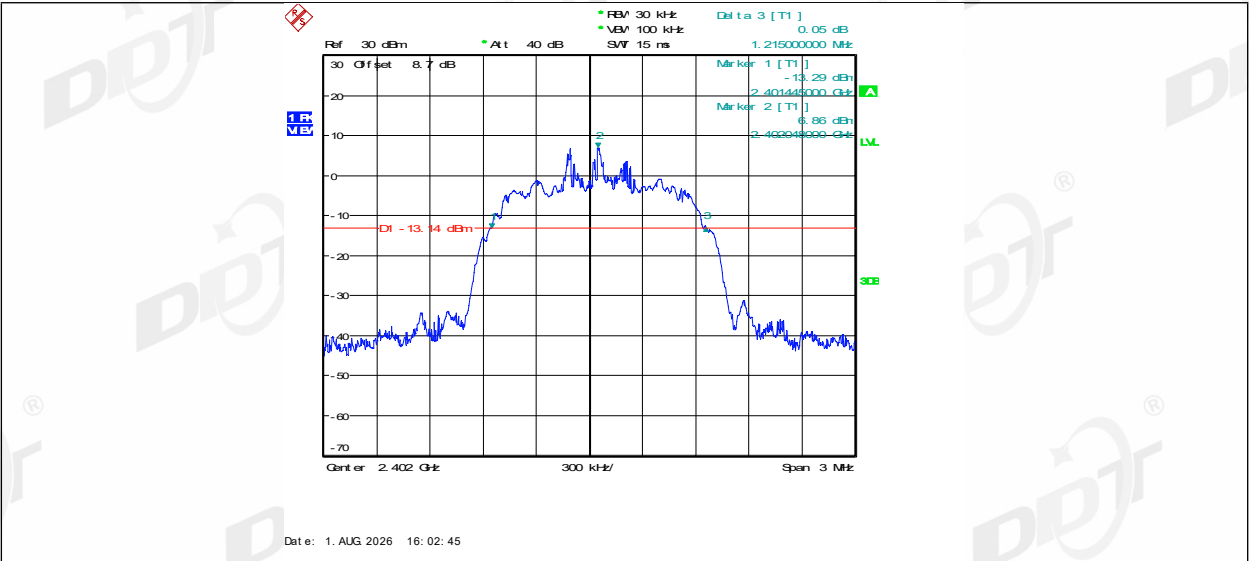
DH5 Left side 2480

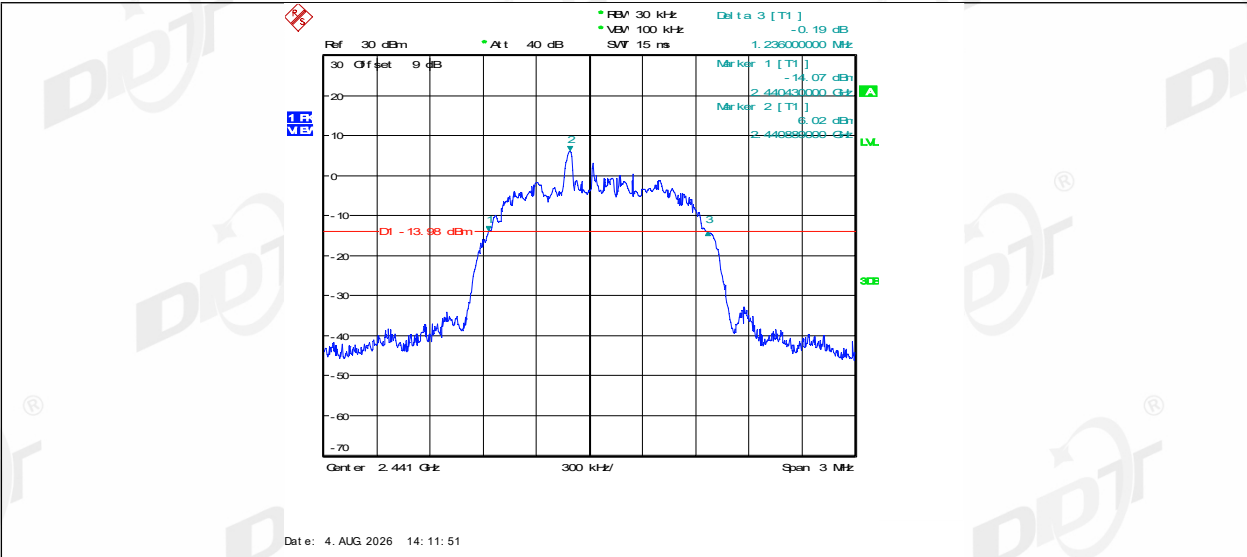


DH5 Right side 2480

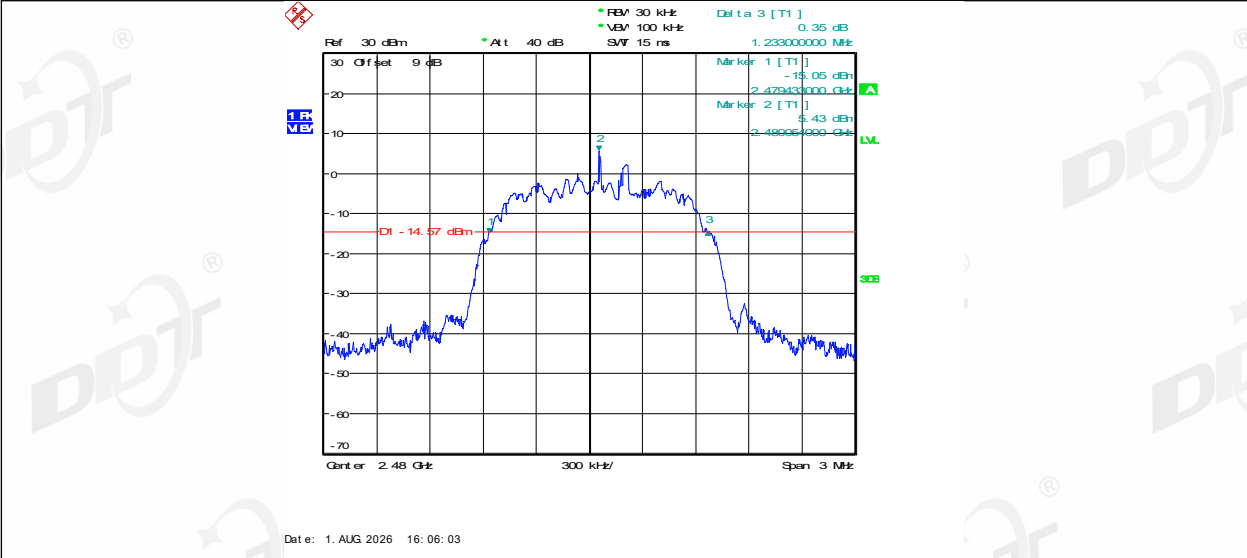


2DH5 Left side 2402

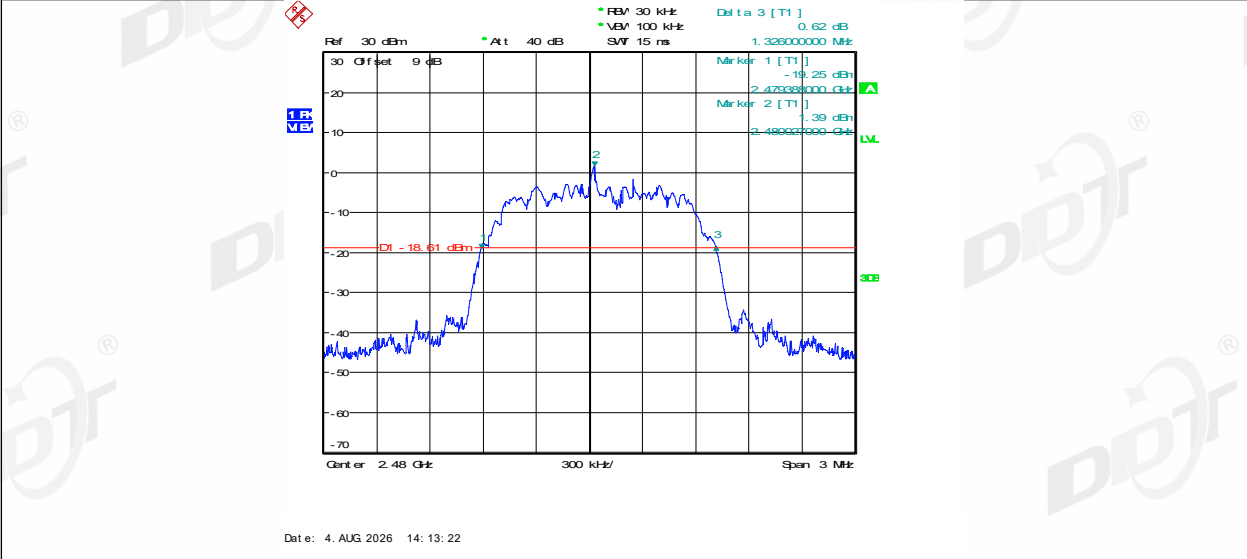




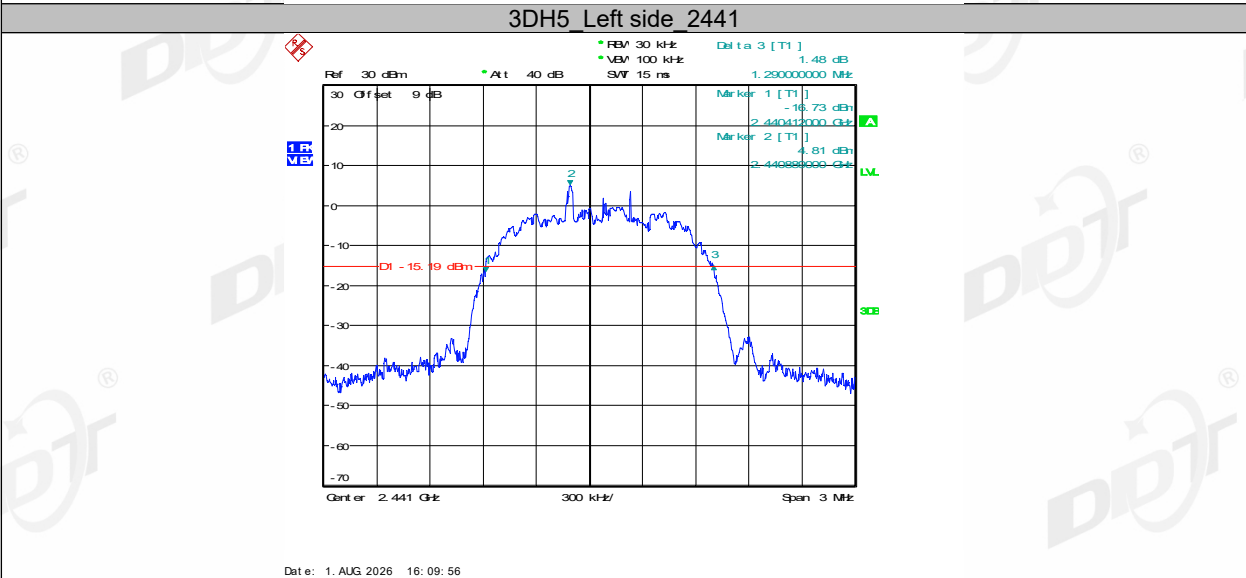
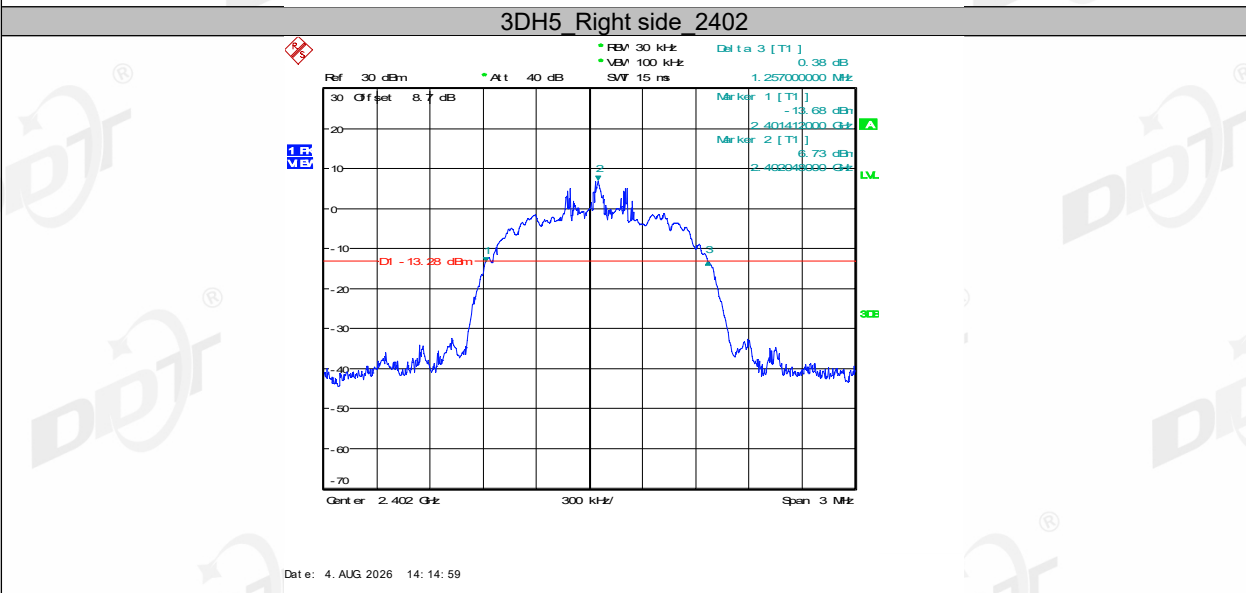
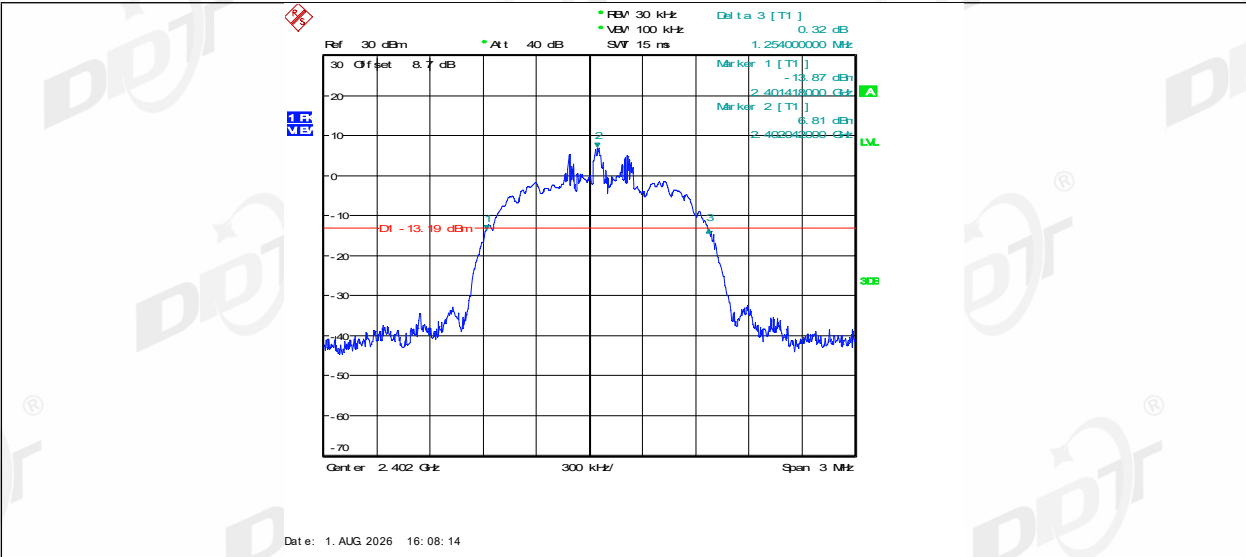
2DH5 Left side 2480

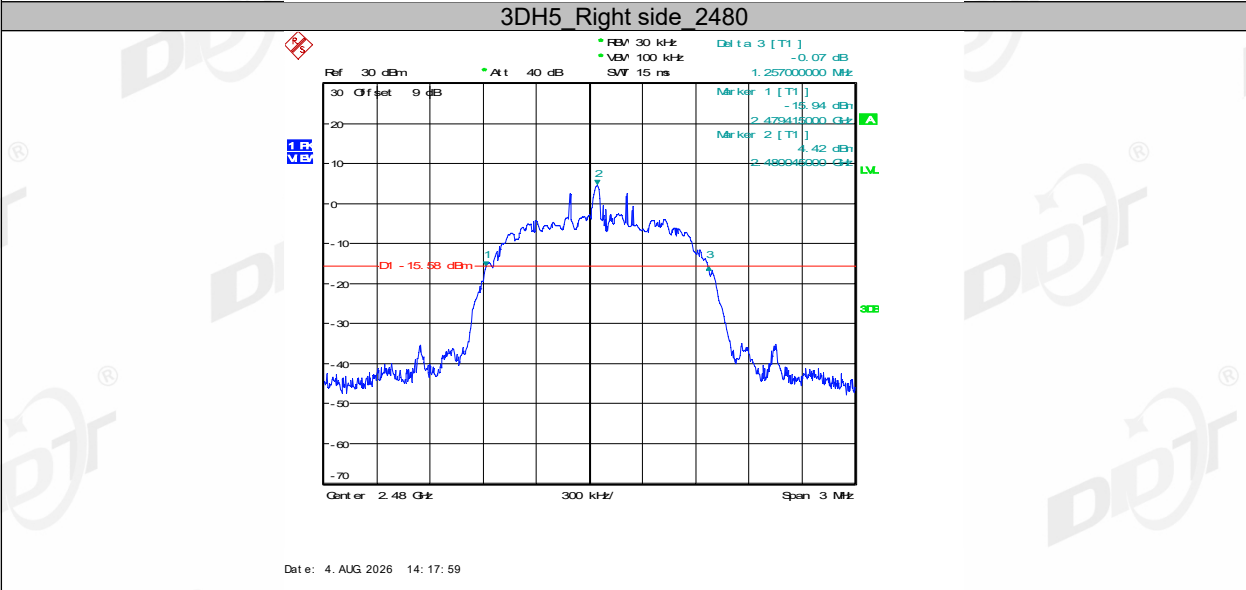
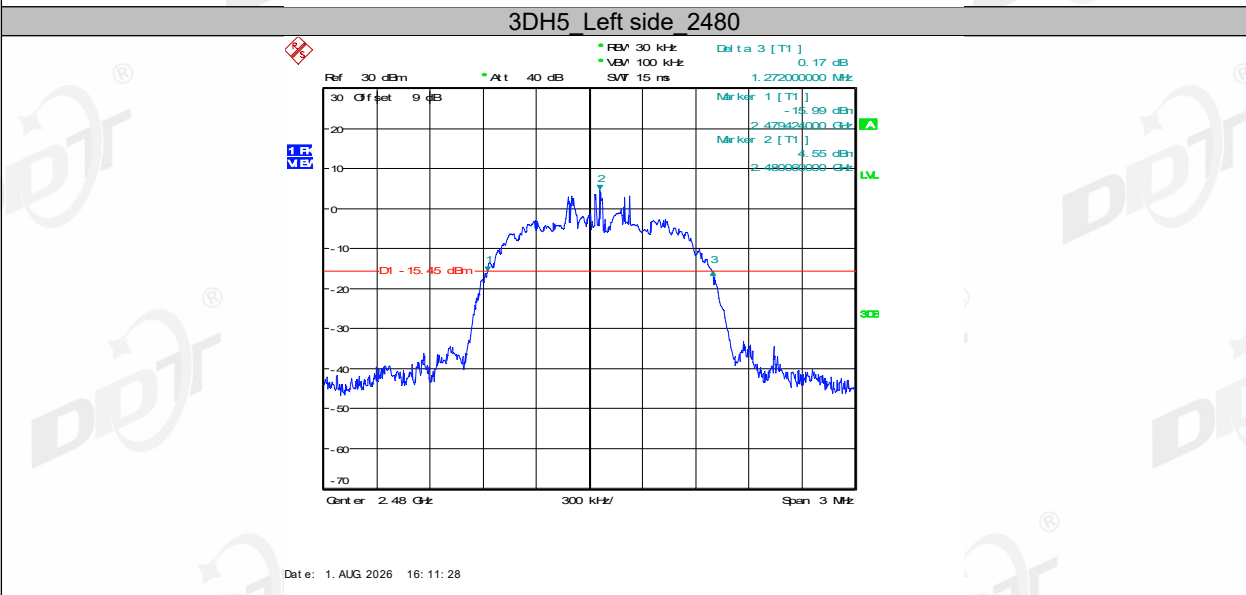
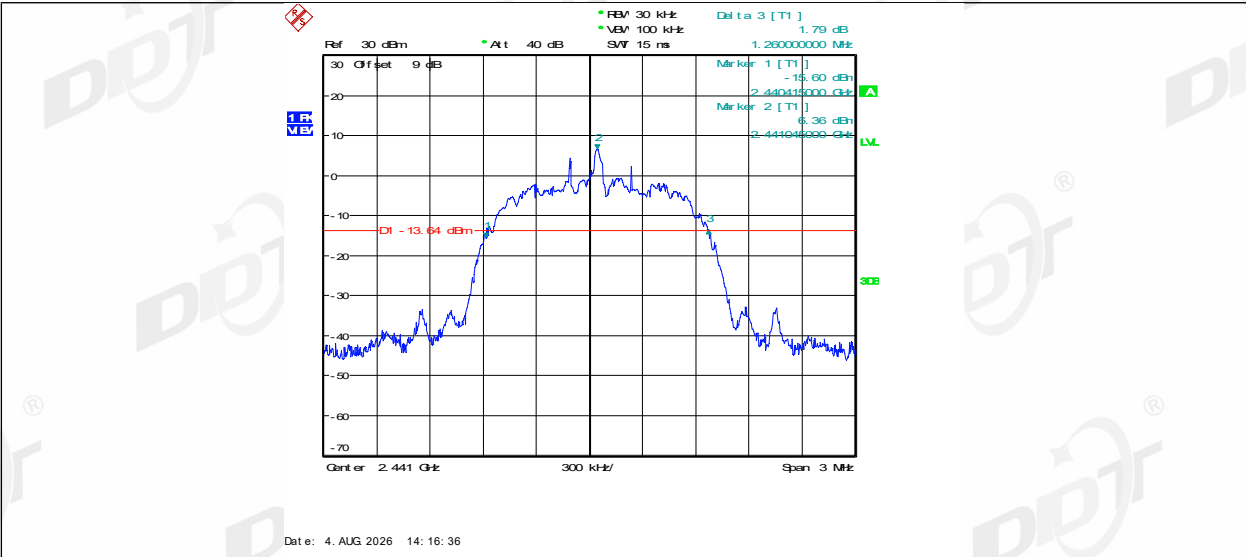


2DH5 Right side 2480



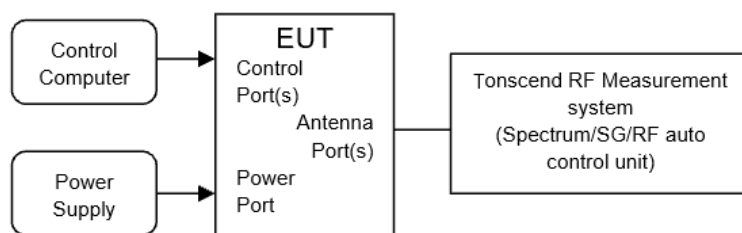
3DH5 Left side 2402





5. 99% Bandwidth

5.1. Block diagram of test setup



5.2. Limits

Just for Report.

5.3. Test procedure

- (1) The test according to ANSI C63.10 clause 6.9.3.
- (2) Connect EUT's antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results
- (3) Set the EUT as maximum power setting and enable the EUT transmit continuously
- (4) Use the following spectrum analyzer settings for the 99% bandwidth measurement:

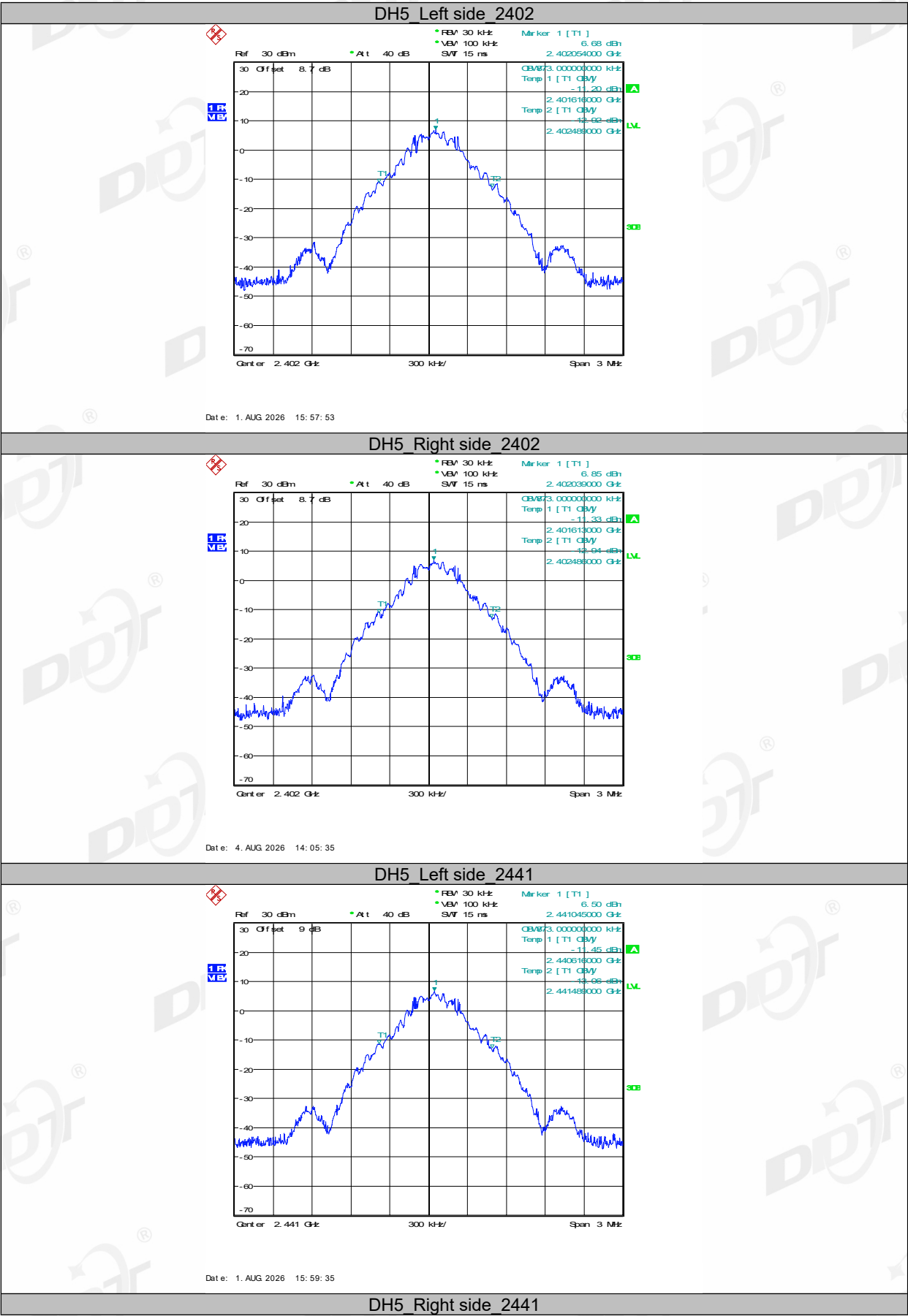
RBW:	1% to 5% of the OBW
VBW:	approximately three times RBW
Span:	between 1.5 times and 5.0 times the OBW
Detector Mode:	Peak
Sweep time:	Auto
Trace mode:	Max hold
- (5) Measure and record the results in the report.

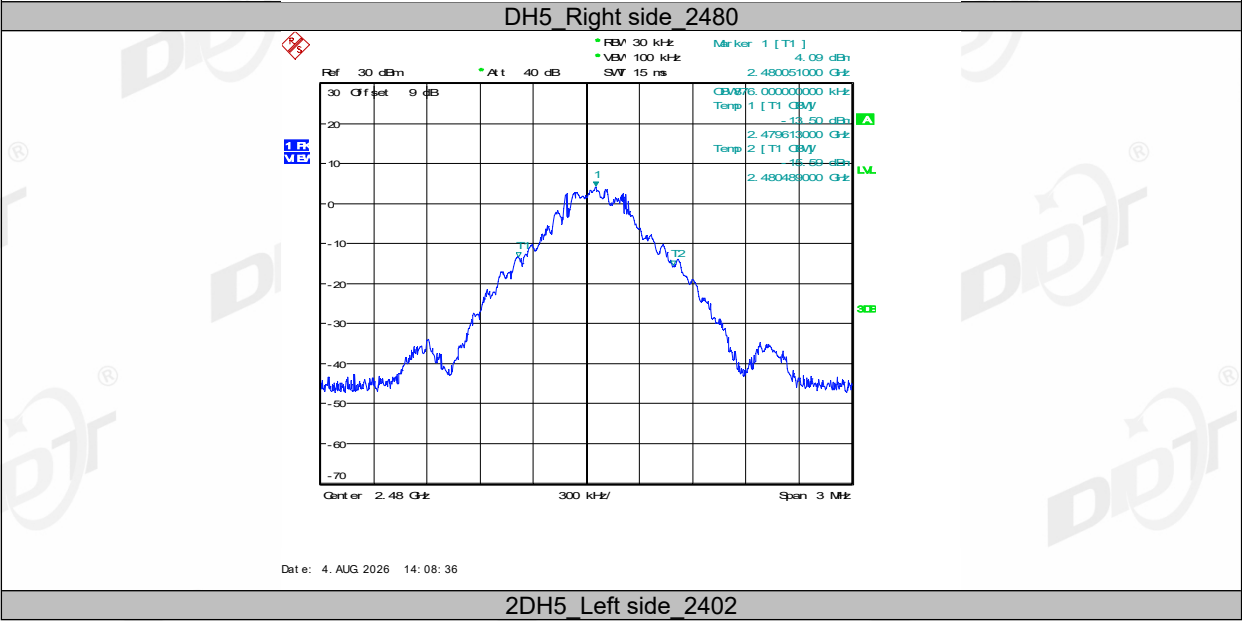
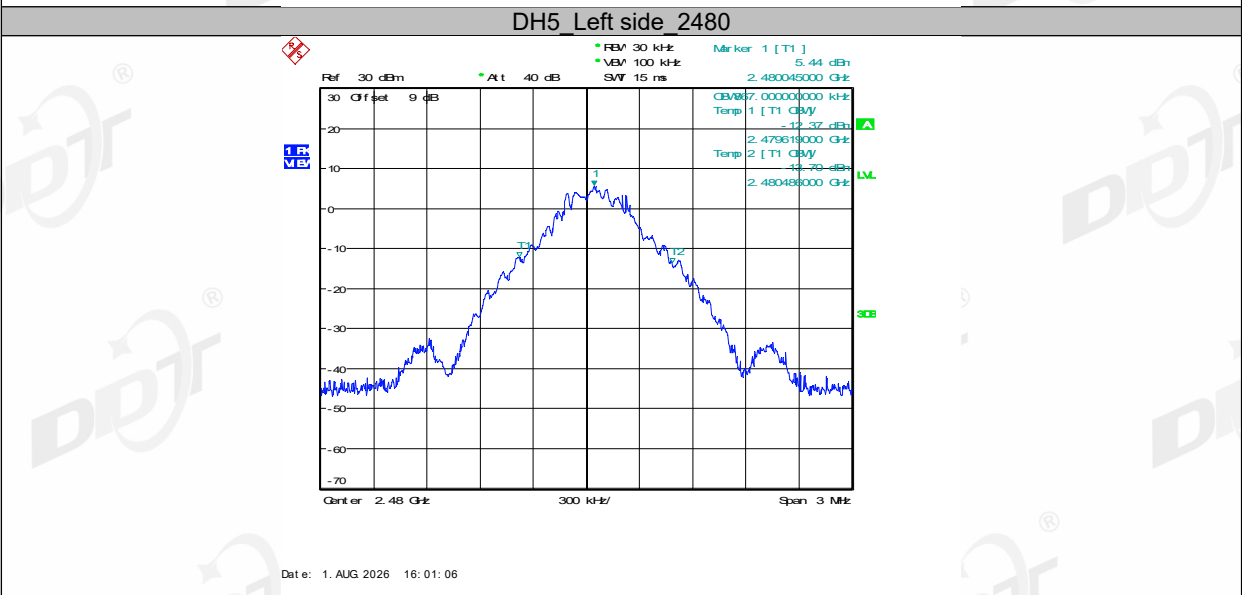
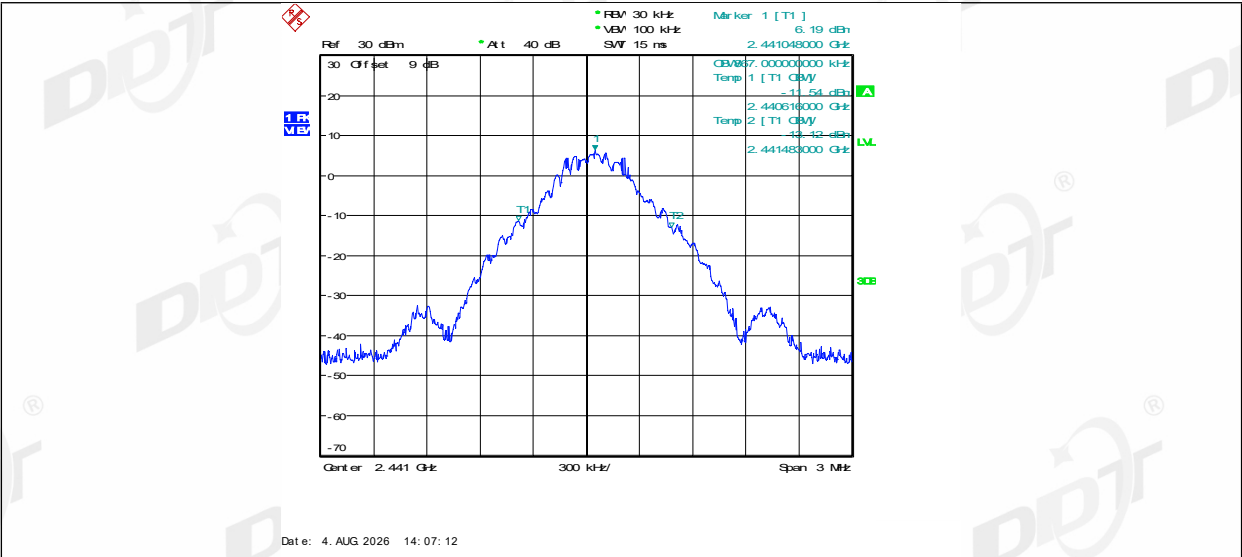
5.4. Test result

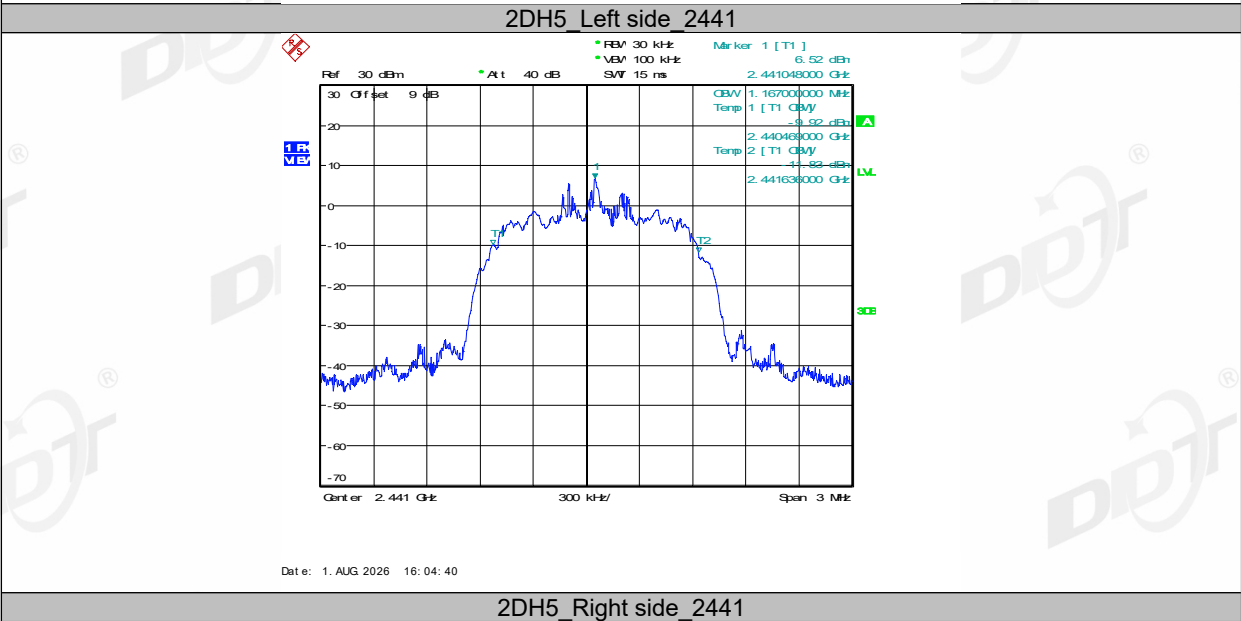
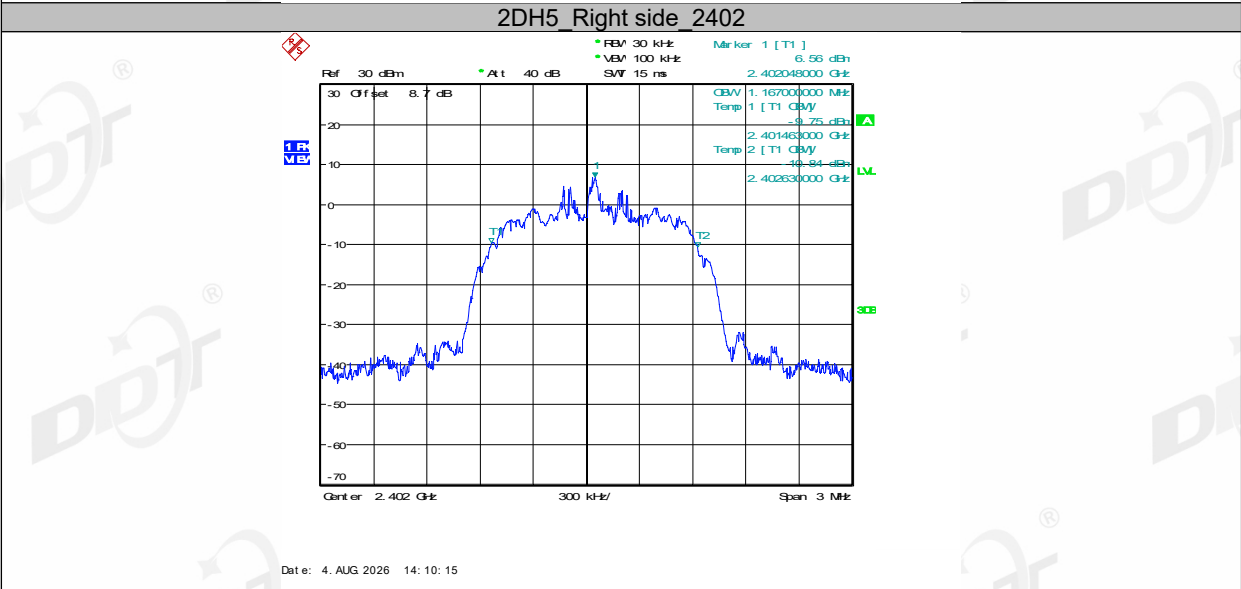
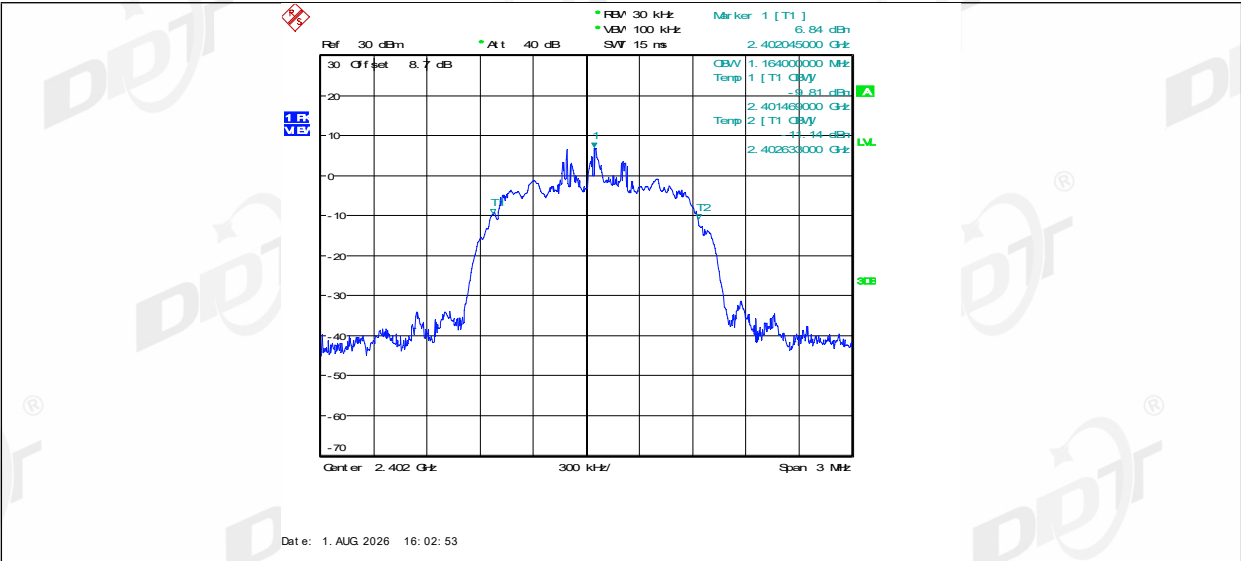
Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#		
Ambient Condition:	27.3-28.2℃,35-53.6%RH	Test Date:	2026.8.1-2026.8.4		
Test Power Supply:	Battery	Sample Number:	S26070622-009		

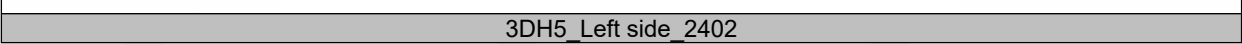
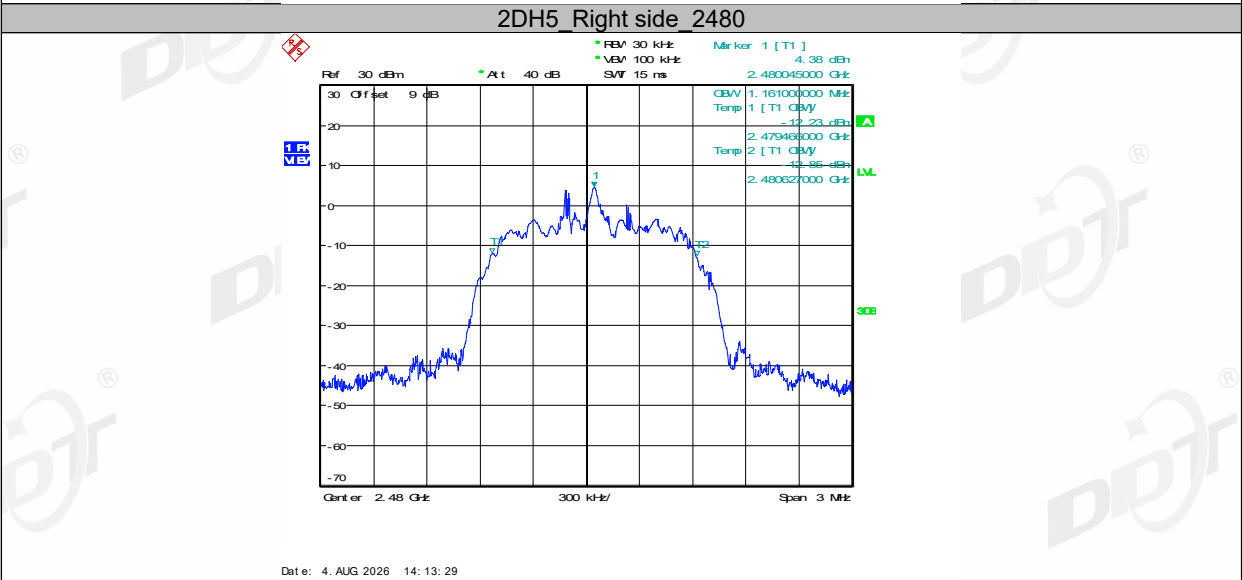
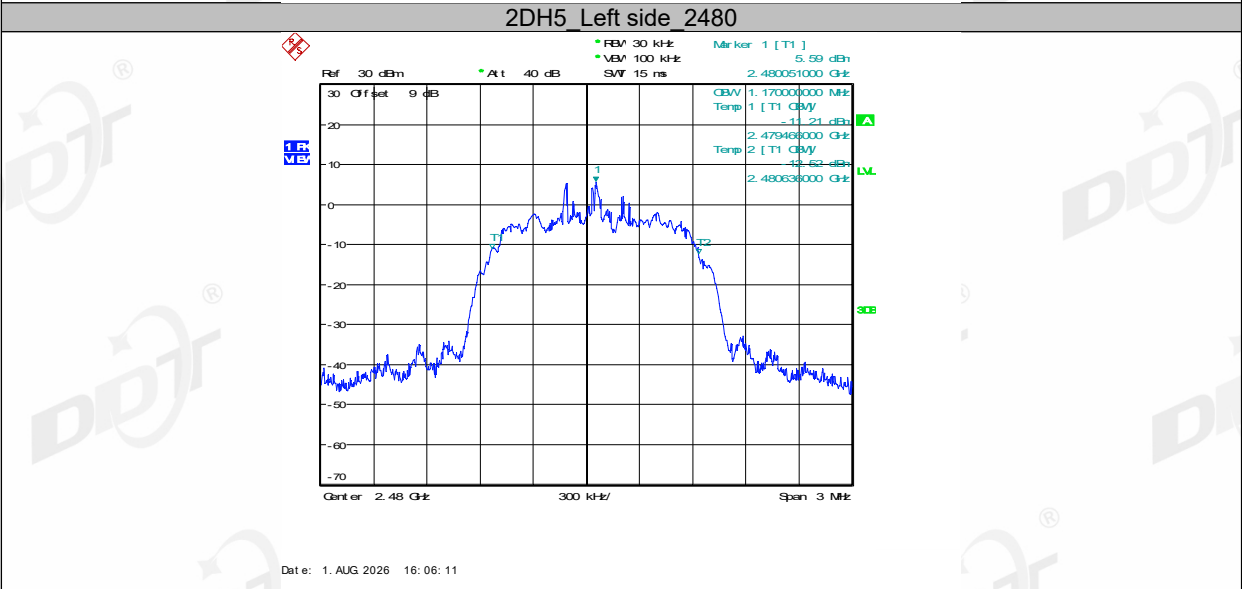
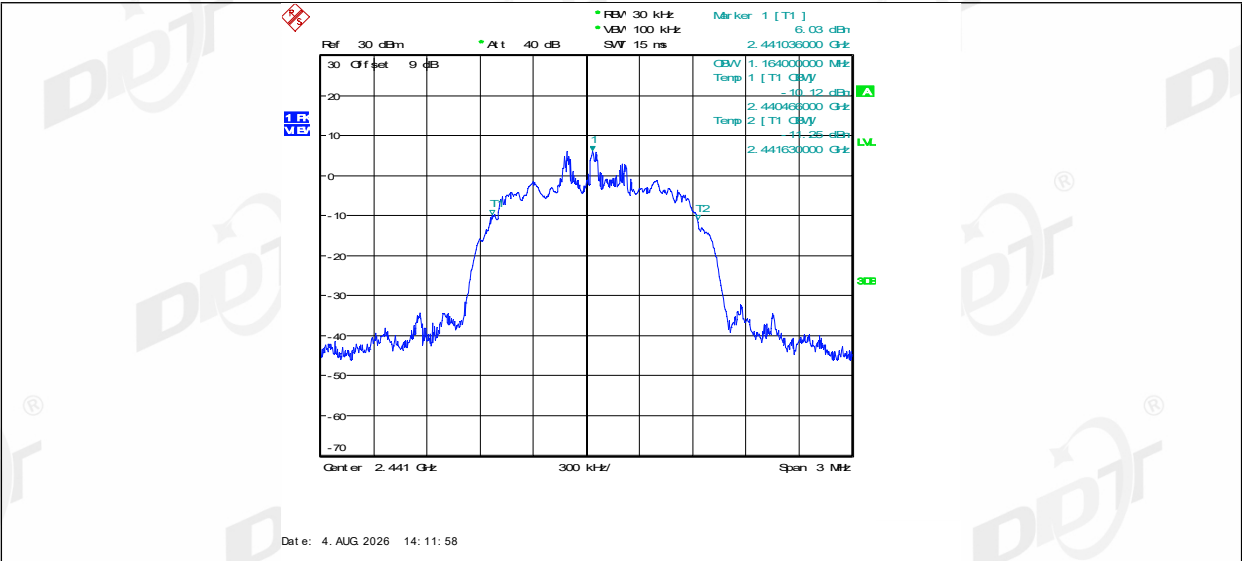
Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL[MHz]	FH[MHz]
DH5	Left side	2402	0.87300	2401.6160	2402.4890
	Right side	2402	0.87300	2401.6130	2402.4860
	Left side	2441	0.87300	2440.6160	2441.4890
	Right side	2441	0.86700	2440.6160	2441.4830
	Left side	2480	0.86700	2479.6190	2480.4860
	Right side	2480	0.87600	2479.6130	2480.4890
2DH5	Left side	2402	1.1640	2401.4690	2402.6330
	Right side	2402	1.1670	2401.4630	2402.6300
	Left side	2441	1.1670	2440.4690	2441.6360
	Right side	2441	1.1640	2440.4660	2441.6300
	Left side	2480	1.1700	2479.4660	2480.6360
	Right side	2480	1.1610	2479.4660	2480.6270
3DH5	Left side	2402	1.1670	2401.4690	2402.6360
	Right side	2402	1.1700	2401.4660	2402.6360
	Left side	2441	1.1610	2440.4750	2441.6360
	Right side	2441	1.1850	2440.4600	2441.6450
	Left side	2480	1.1730	2479.4690	2480.6420
	Right side	2480	1.1640	2479.4690	2480.6330

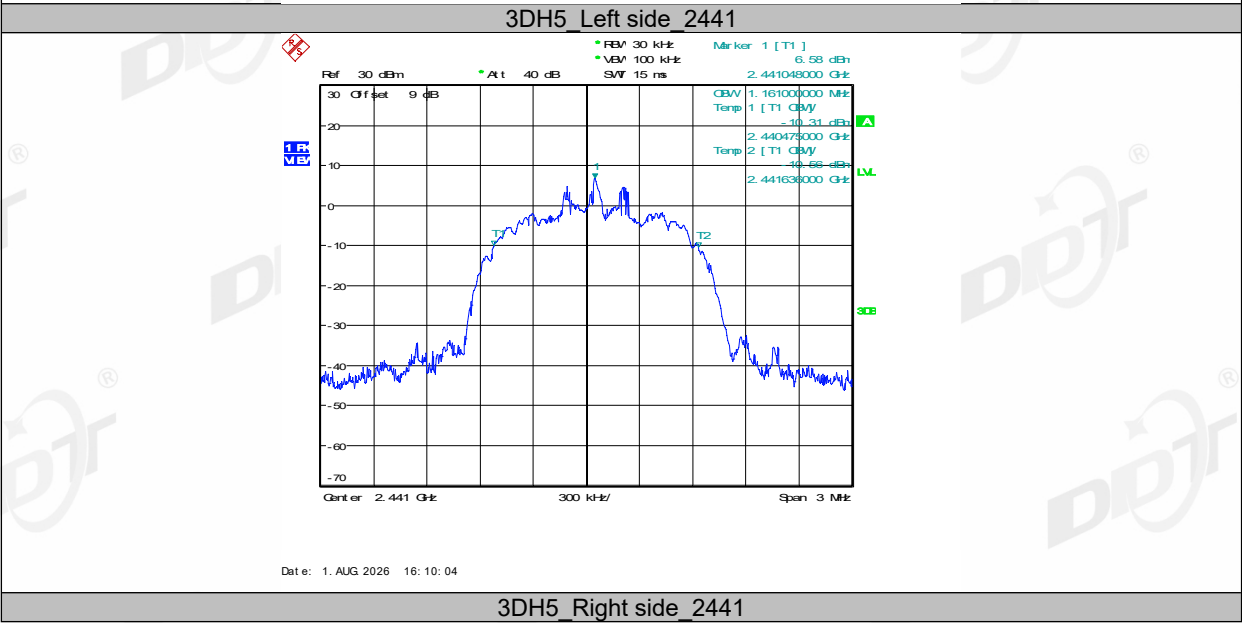
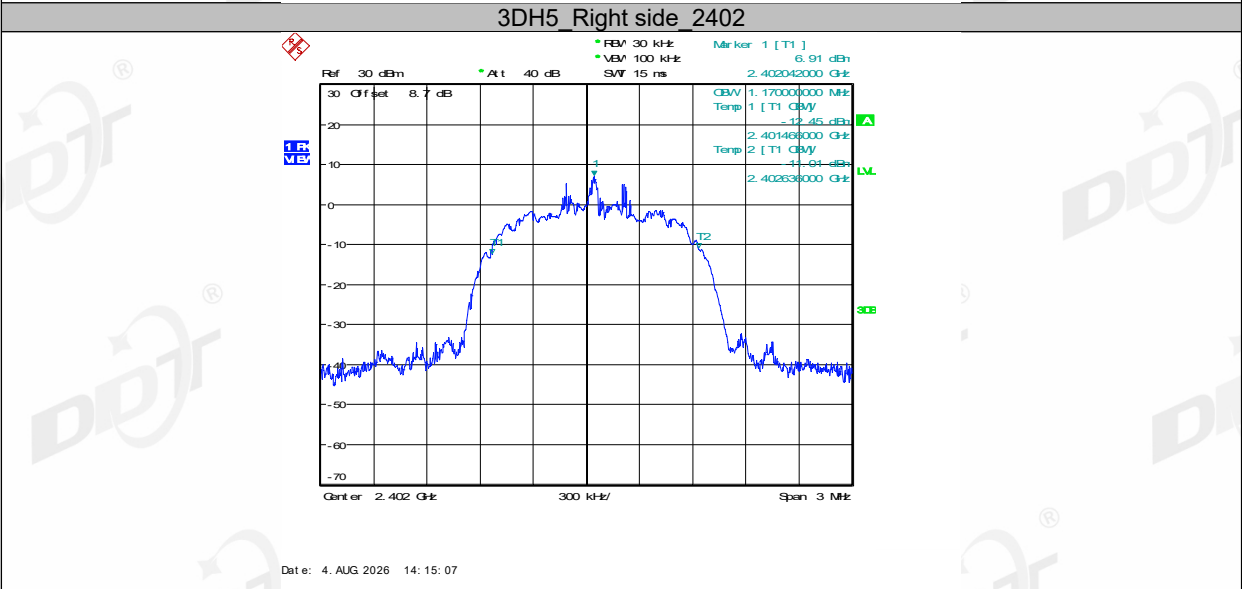
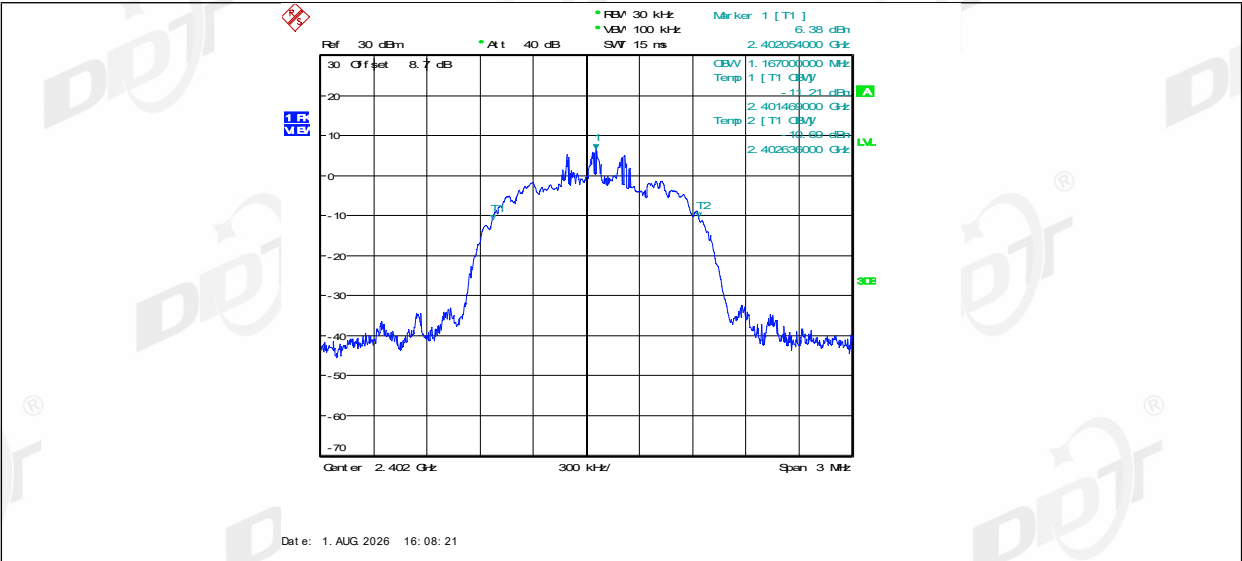
5.5. Test graphs

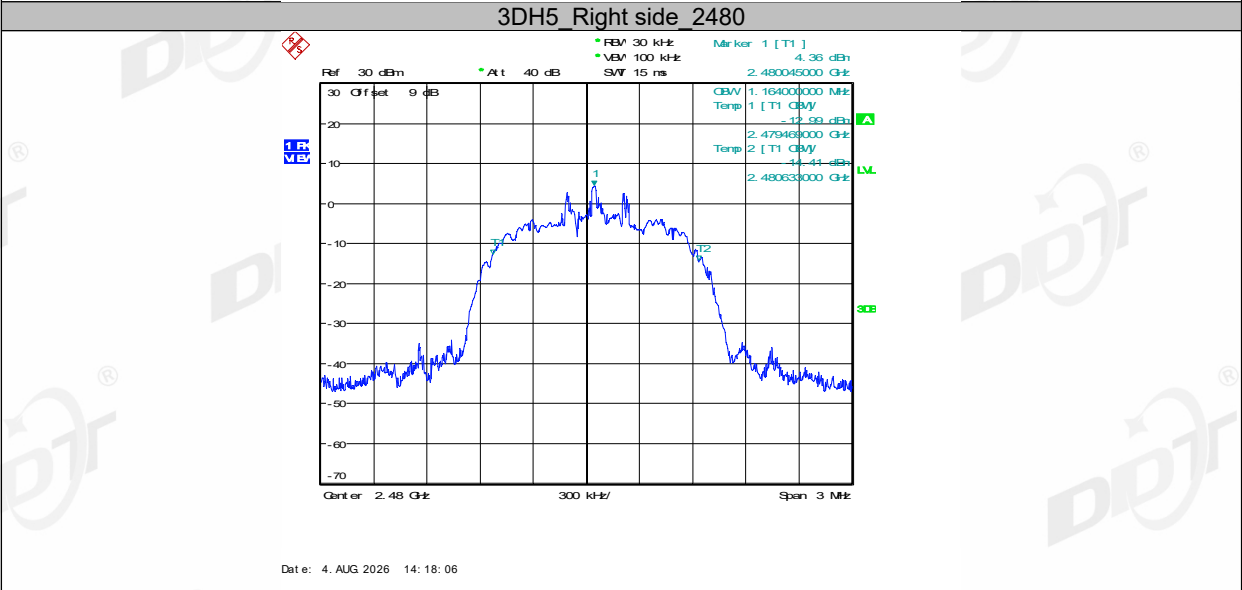
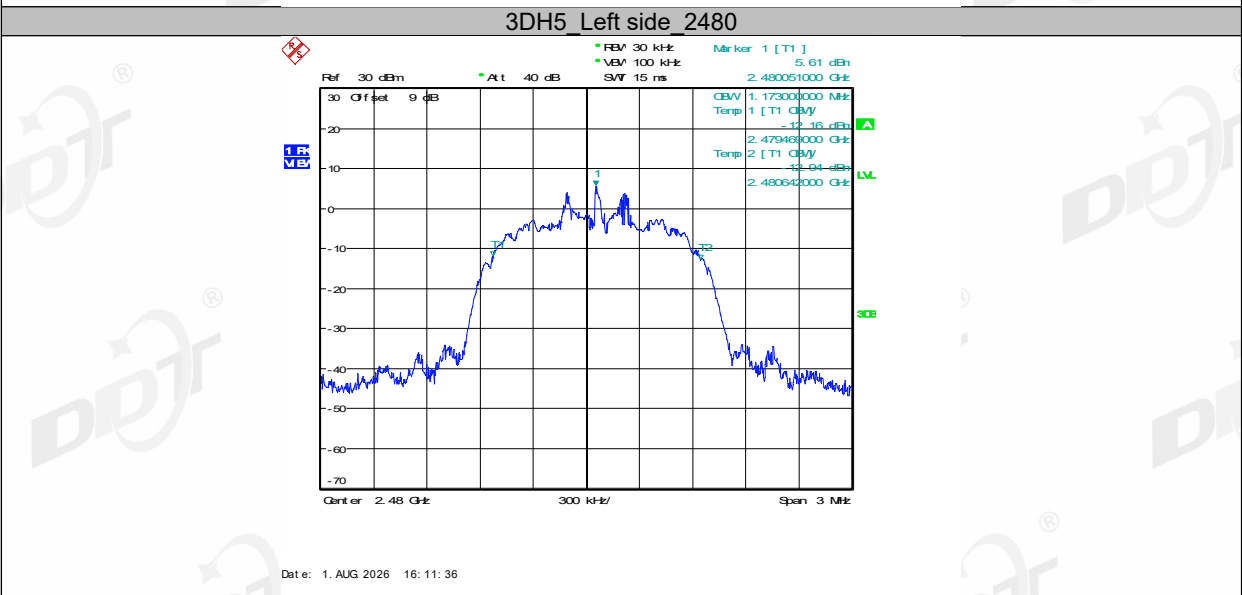
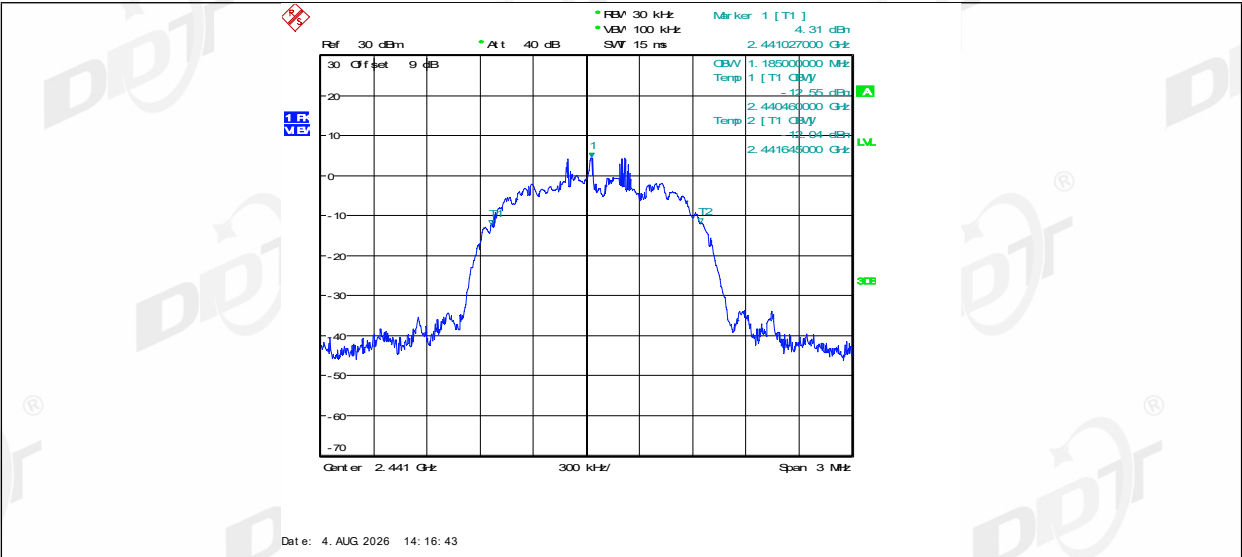






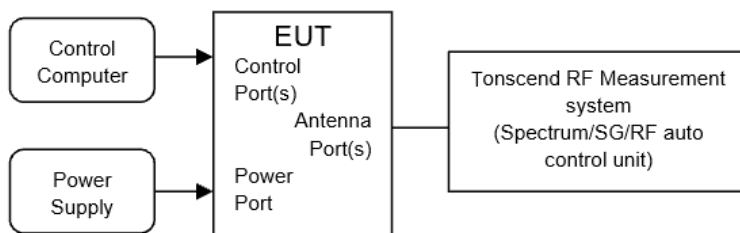






6. Maximum Peak Output Power

6.1. Block diagram of test setup



6.2. Limits

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts, the e.i.r.p shall not exceed 4W.

6.3. Test procedure

- (1) The test according to ANSI C63.10 clause 7.8.5.
- (2) Connect EUT's antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results.
- (3) Set the EUT as maximum power setting and enable the EUT transmit continuously.
- (4) Use the following spectrum analyzer settings for the maximum peak output power measurement:

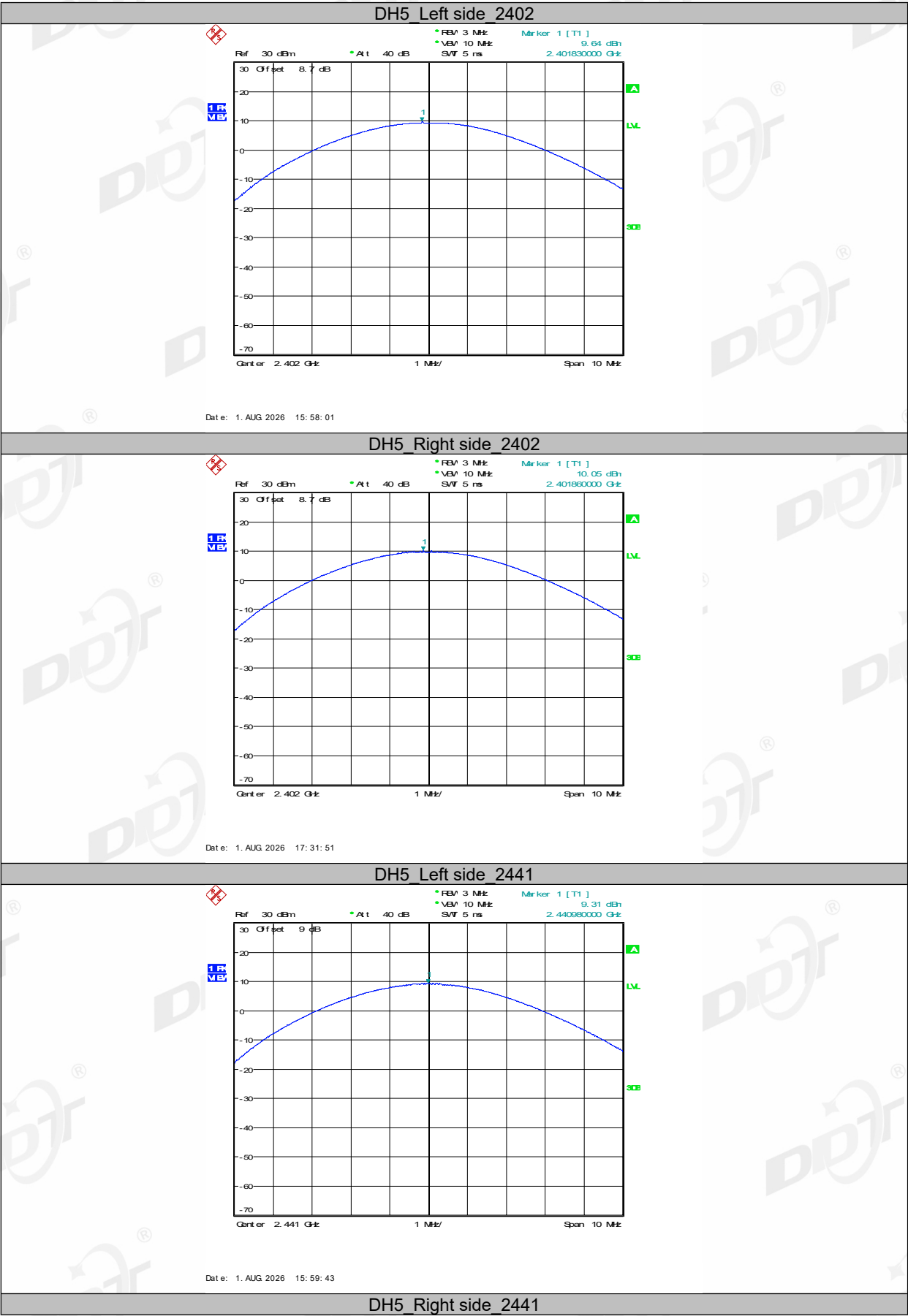
RBW:	> 20 dB bandwidth of the emission being measured.
VBW:	VBW $\geq$ RBW.
Span:	Approximately five times the 20 dB bandwidth, centered on a hopping channel.
Detector Mode:	Peak
Sweep time:	Auto
Trace mode:	Max hold
- (5) Use the marker-to-peak function to set the marker to the peak of the emission and record the results in the report.

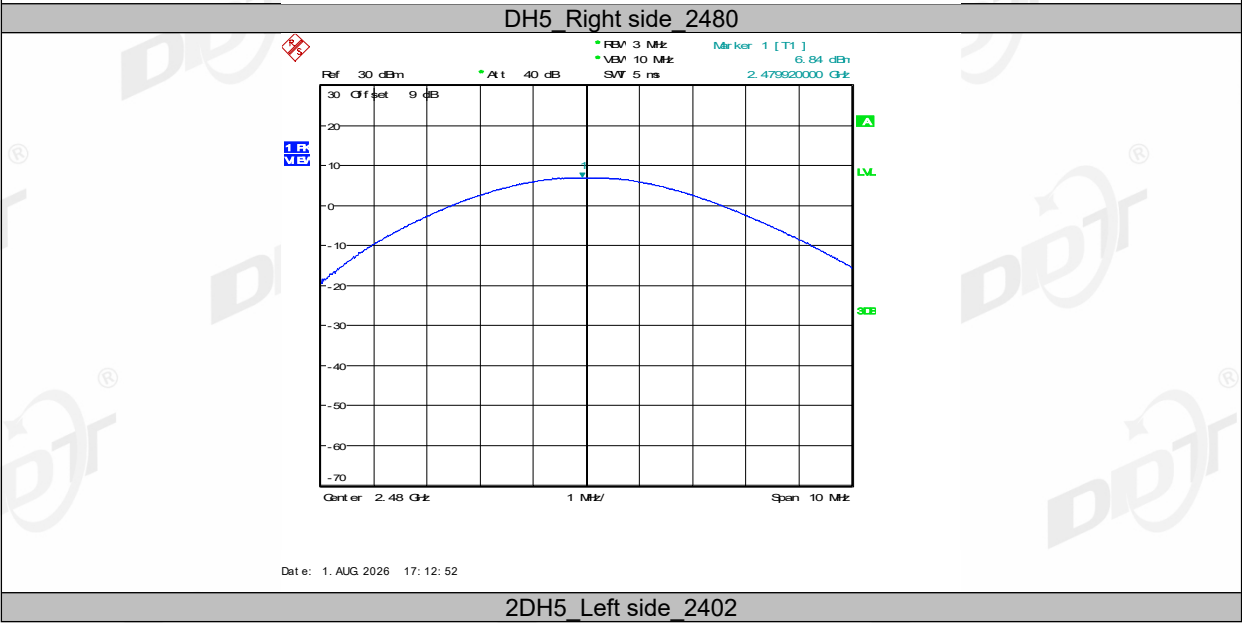
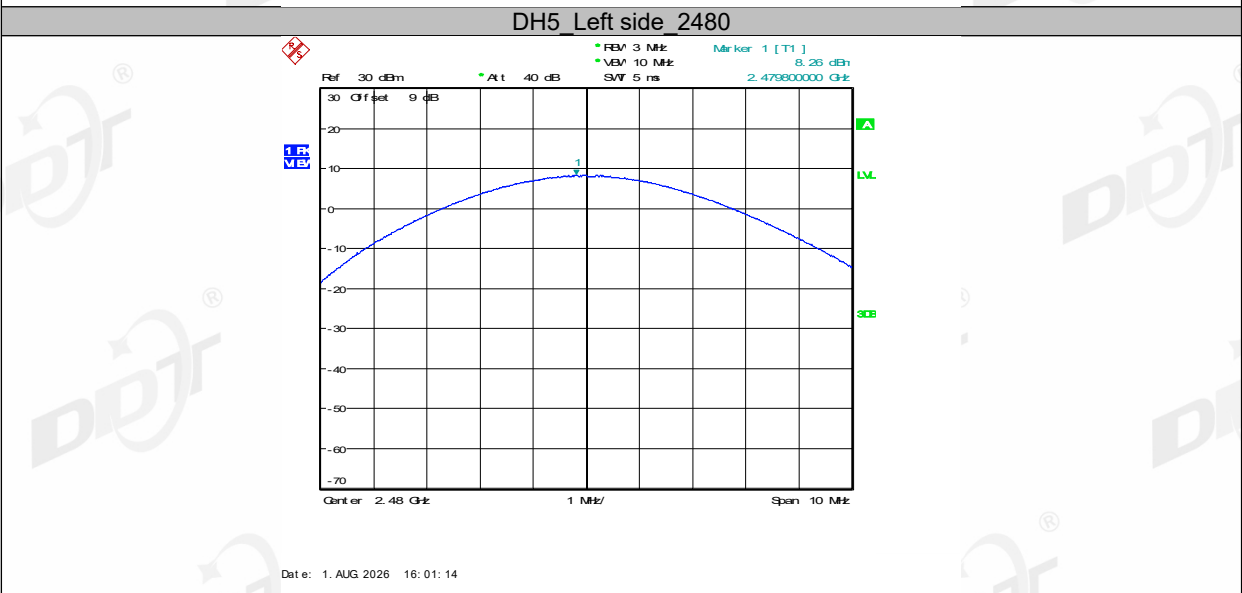
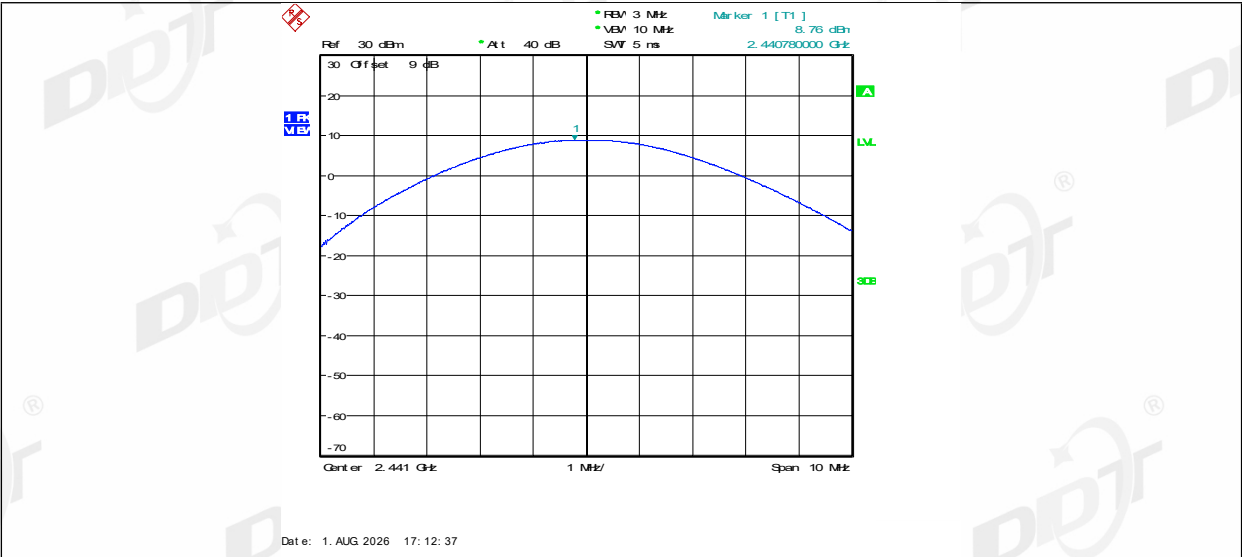
6.4. Test result

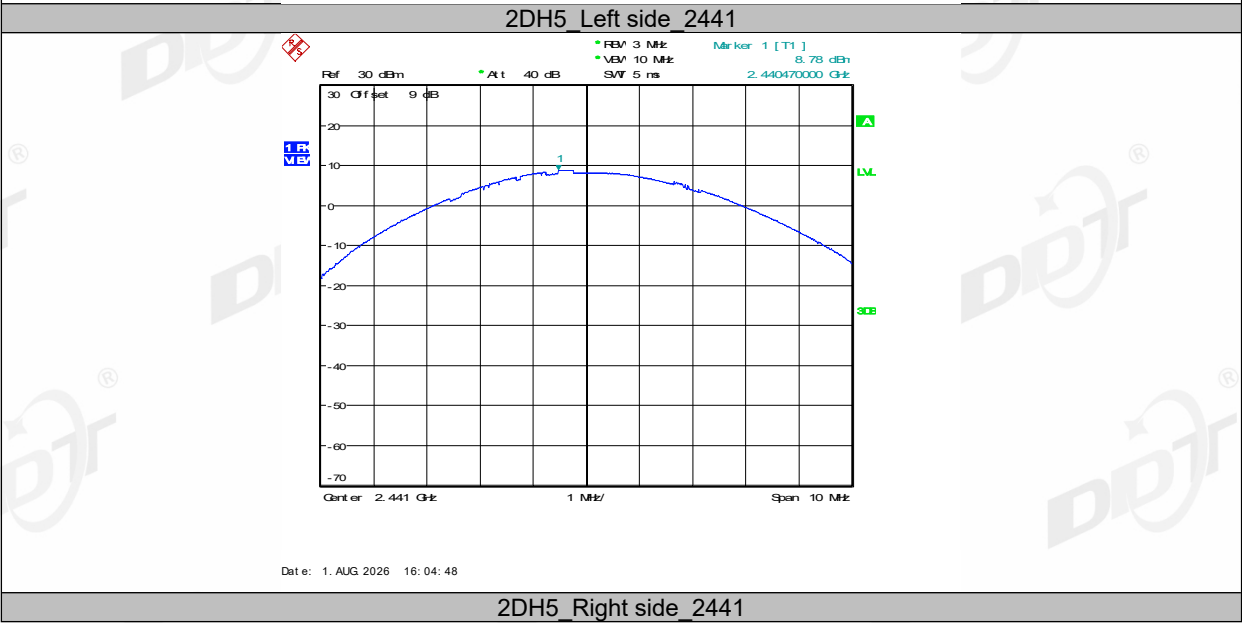
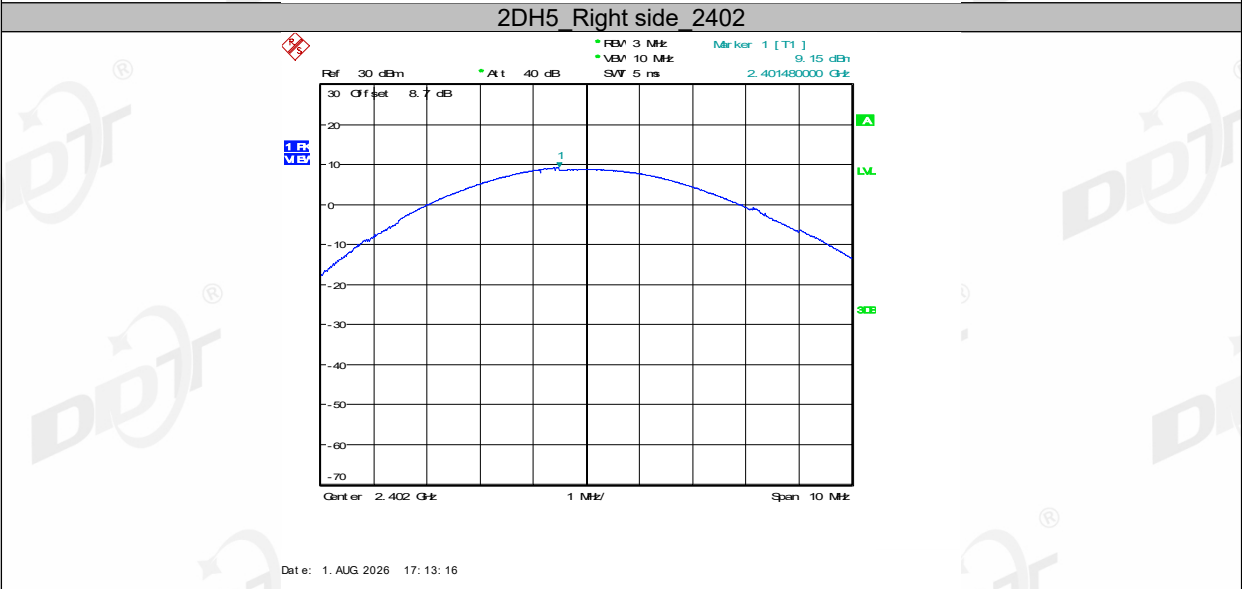
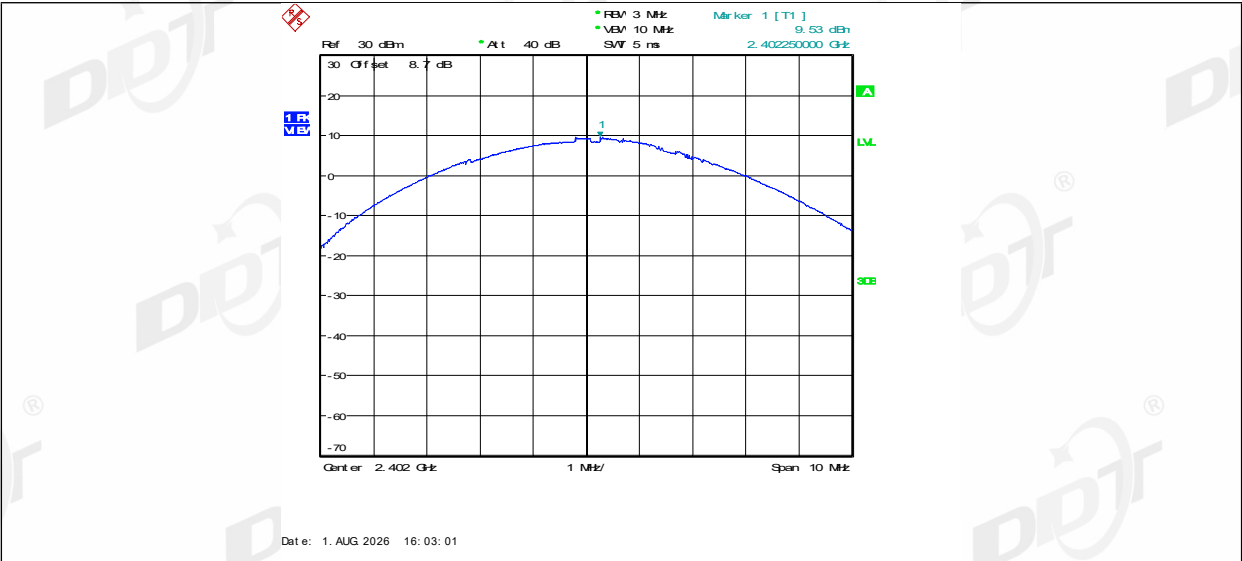
Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	27.3-28.2℃,35-53.6%RH	Test Date:	2026.8.1-2026.8.4
Test Power Supply:	Battery	Sample Number:	S26070622-009

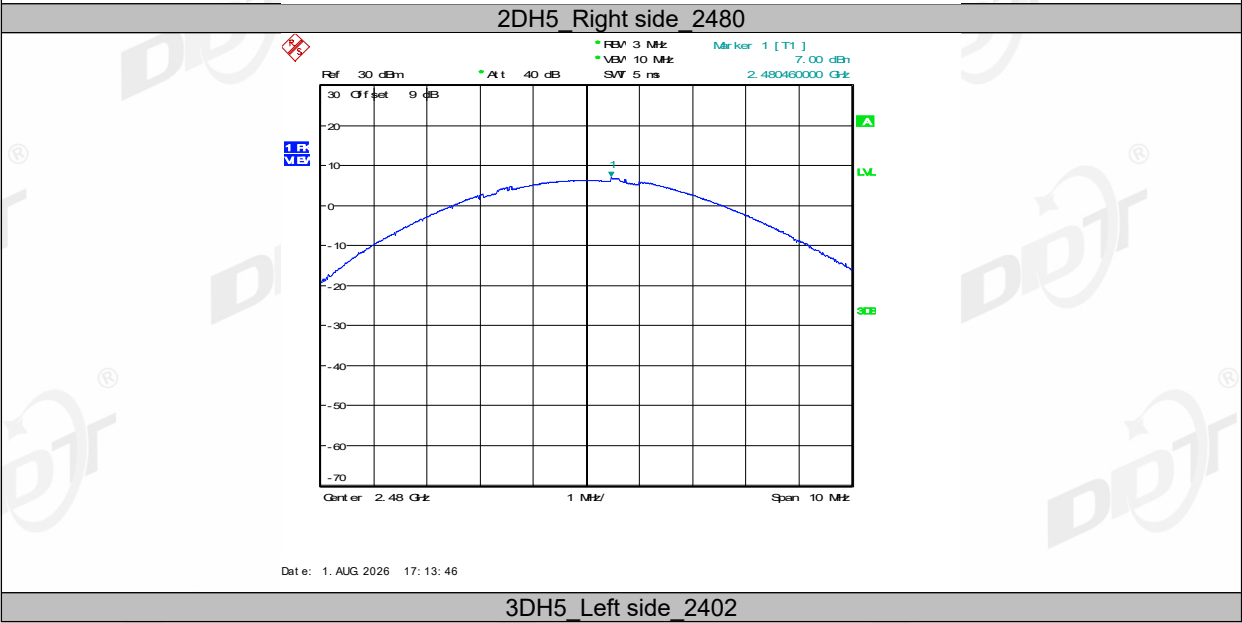
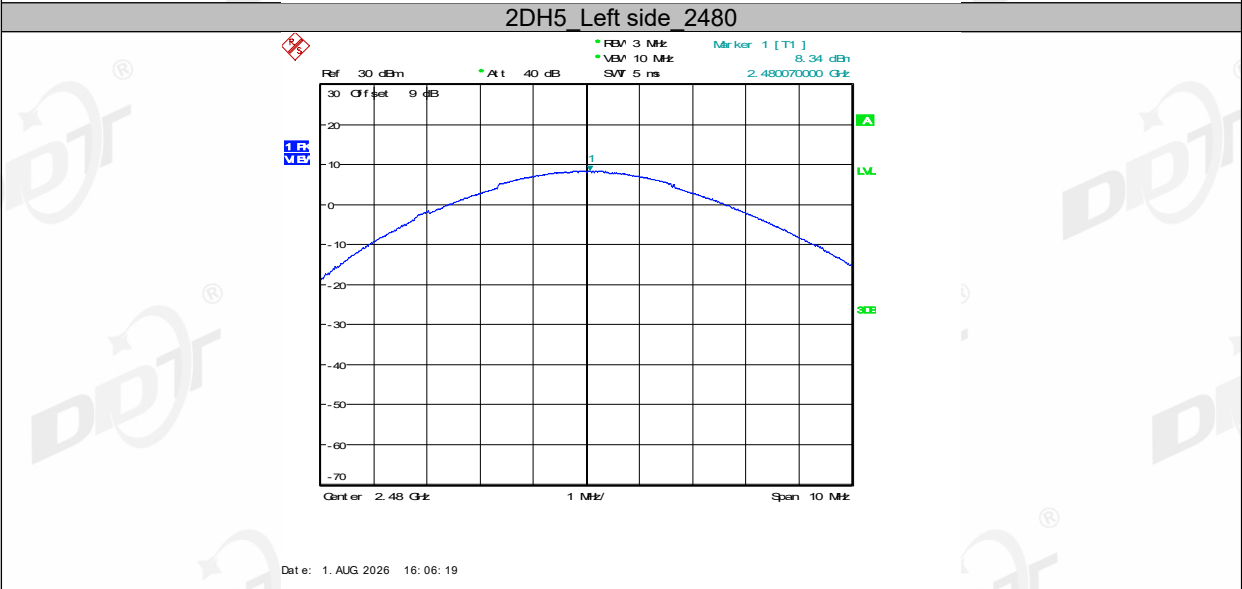
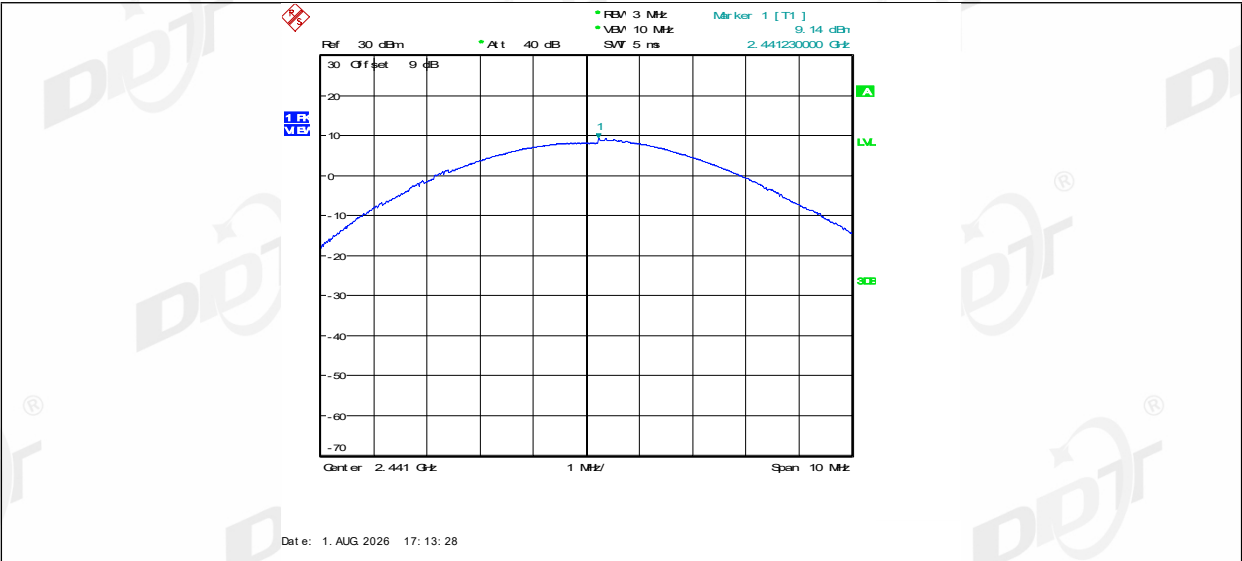
Test Mode	Antenna	Frequency [MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
DH5	Left side	2402	9.64	≤20.97	9.64	≤36	PASS
	Right side	2402	10.05	≤20.97	10.05	≤36	PASS
	Left side	2441	9.31	≤20.97	9.31	≤36	PASS
	Right side	2441	8.76	≤20.97	8.76	≤36	PASS
	Left side	2480	8.26	≤20.97	8.26	≤36	PASS
	Right side	2480	6.84	≤20.97	6.84	≤36	PASS
2DH5	Left side	2402	9.53	≤20.97	9.53	≤36	PASS
	Right side	2402	9.15	≤20.97	9.15	≤36	PASS
	Left side	2441	8.78	≤20.97	8.78	≤36	PASS
	Right side	2441	9.14	≤20.97	9.14	≤36	PASS
	Left side	2480	8.34	≤20.97	8.34	≤36	PASS
	Right side	2480	7.00	≤20.97	7.00	≤36	PASS
3DH5	Left side	2402	9.46	≤20.97	9.46	≤36	PASS
	Right side	2402	9.20	≤20.97	9.20	≤36	PASS
	Left side	2441	9.31	≤20.97	9.31	≤36	PASS
	Right side	2441	9.19	≤20.97	9.19	≤36	PASS
	Left side	2480	8.37	≤20.97	8.37	≤36	PASS
	Right side	2480	7.11	≤20.97	7.11	≤36	PASS

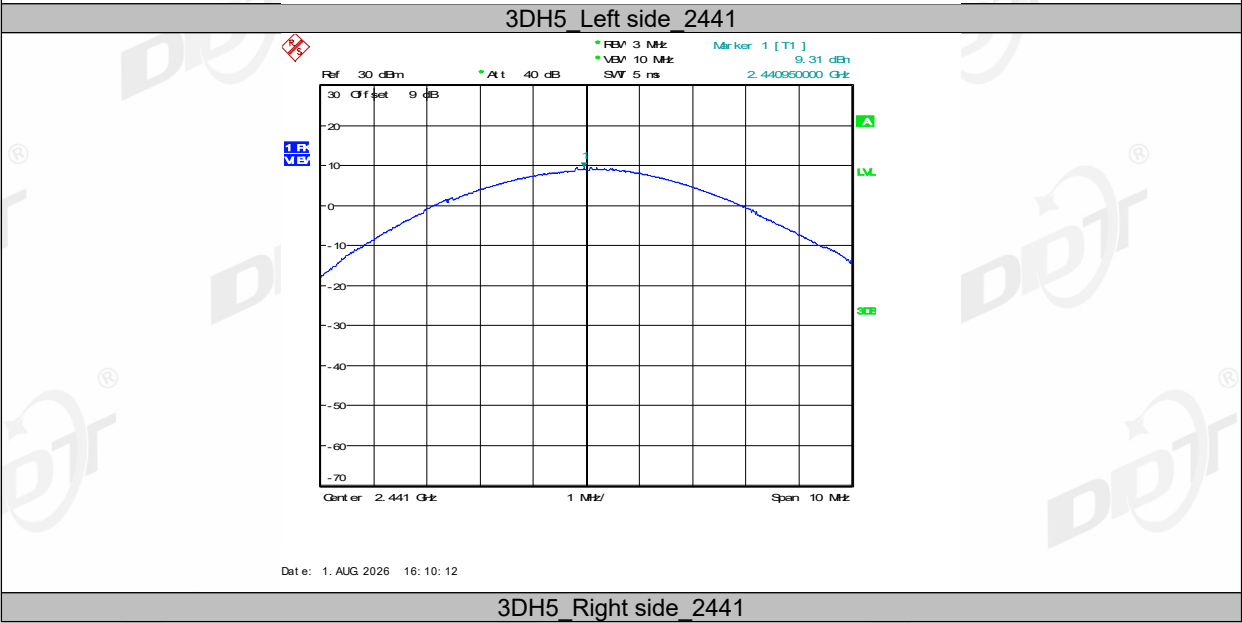
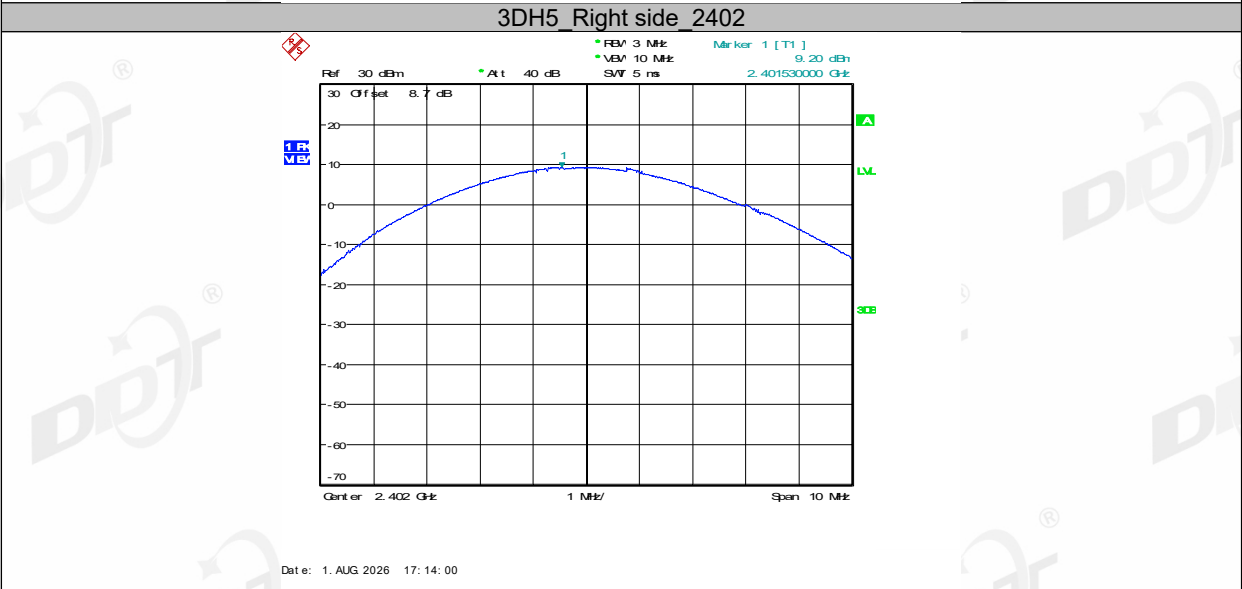
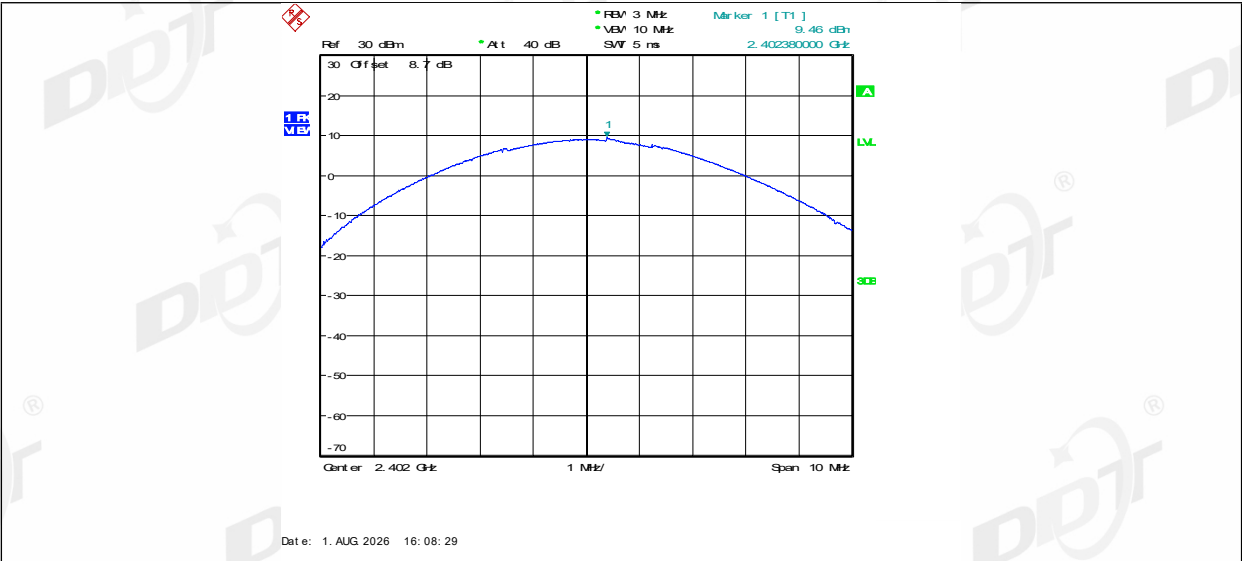
6.5. Test graphs

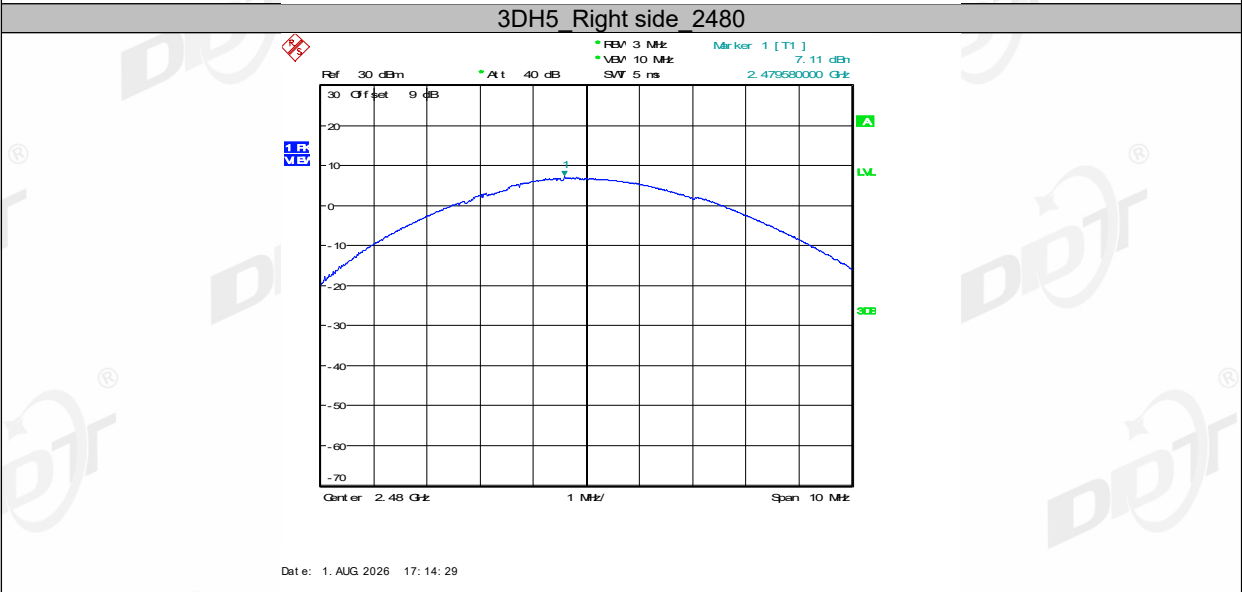
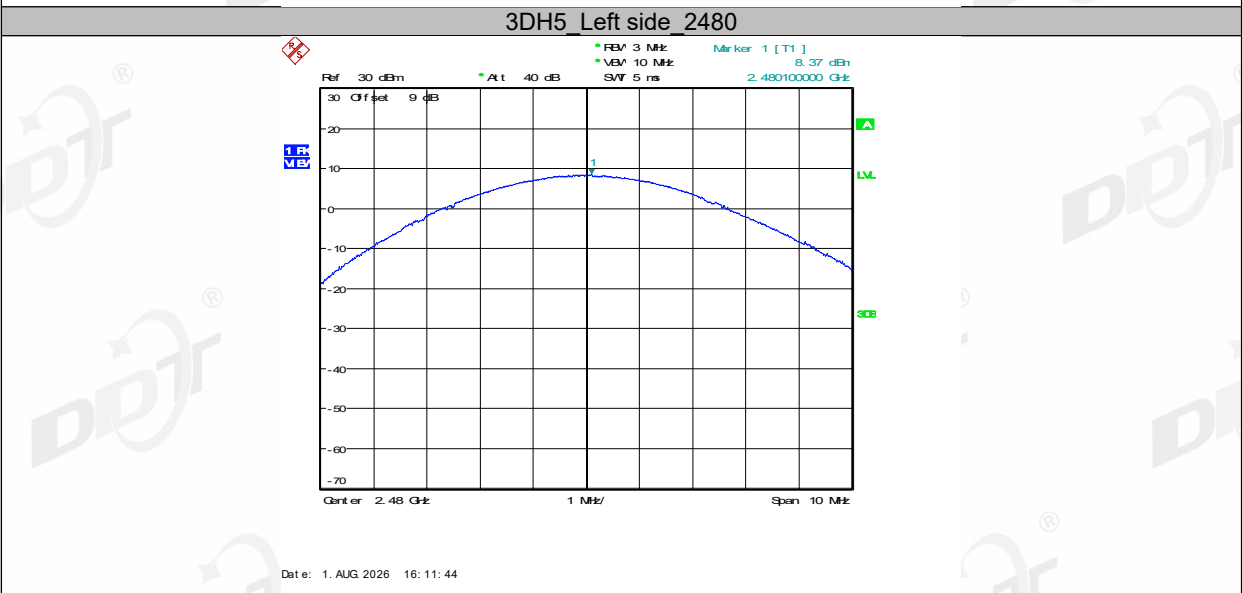
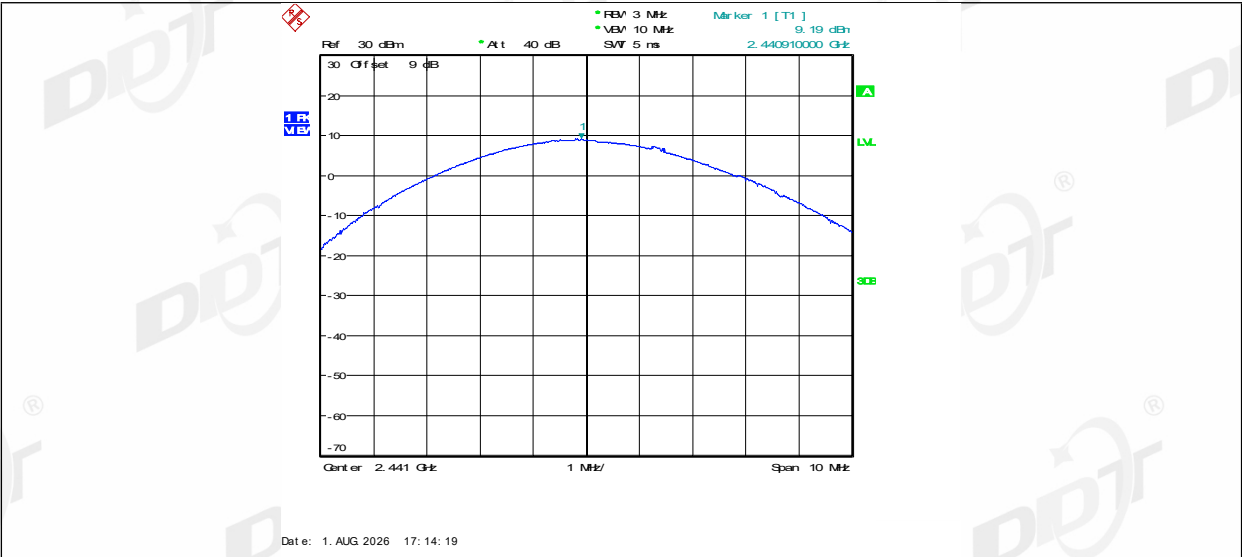






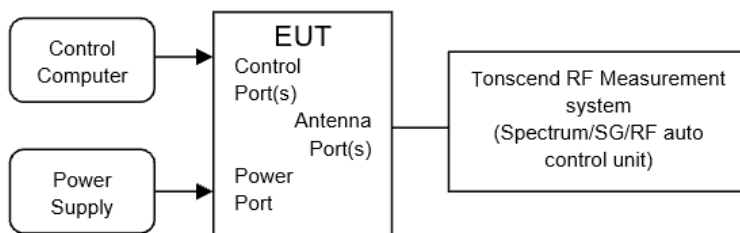






7. Carrier Frequency Separation

7.1. Block diagram of test setup



7.2. Limits

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

7.3. Test procedure

- (1) The test according to ANSI C63.10 clause 7.8.2.
- (2) Connect EUT's antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results.
- (3) Set the EUT as maximum power setting and enable the EUT transmit continuously.
- (4) Use the following spectrum analyzer settings for the maximum peak output power measurement:

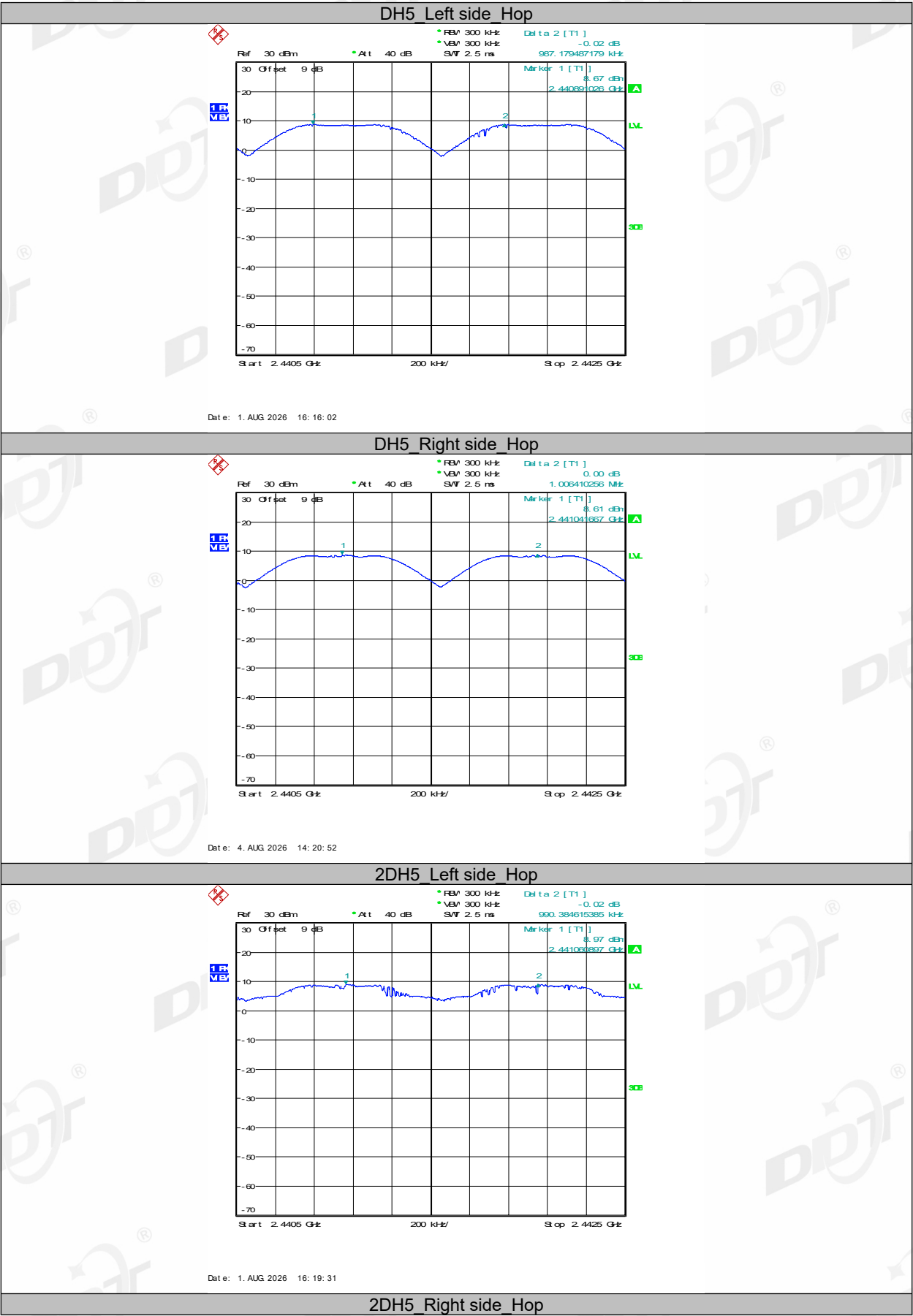
RBW:	approximately 30% of the channel spacing
VBW:	$VBW \geq RBW$.
Span:	Wide enough to capture the peaks of two adjacent channels.
Detector Mode:	Peak
Sweep time:	Auto
Trace mode:	Max hold
- (5) Use the marker-delta function to determine the separation between the peaks of the adjacent channels and record the results in the report.

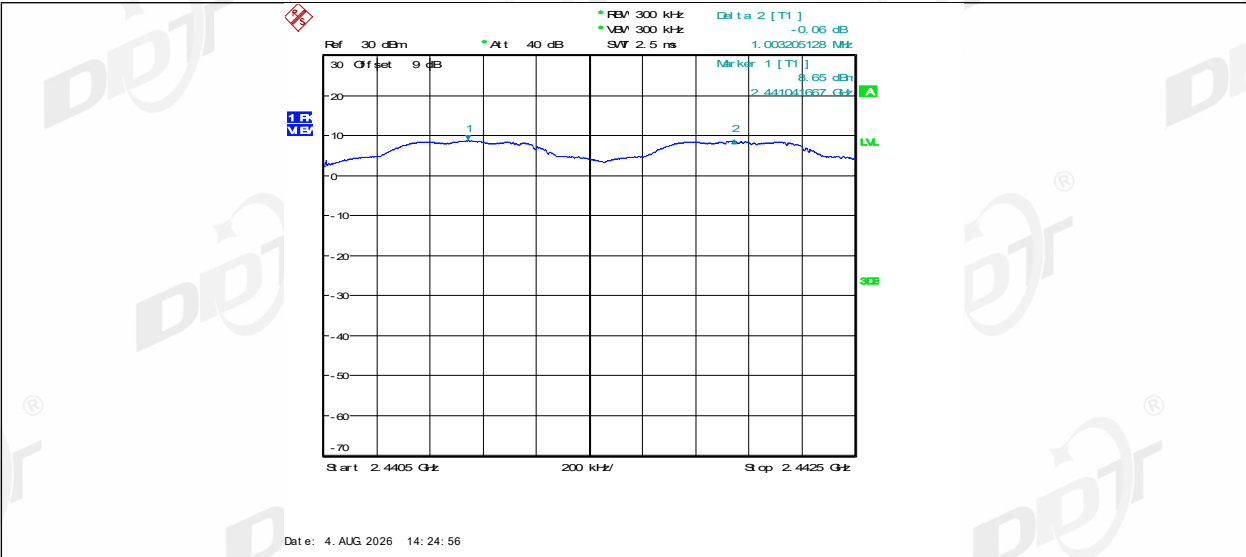
7.4. Test result

Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#		
Ambient Condition:	27.3-28.2℃,35-53.6%RH	Test Date:	2026.8.1-2026.8.4		
Test Power Supply:	Battery	Sample Number:	S26070622-009		

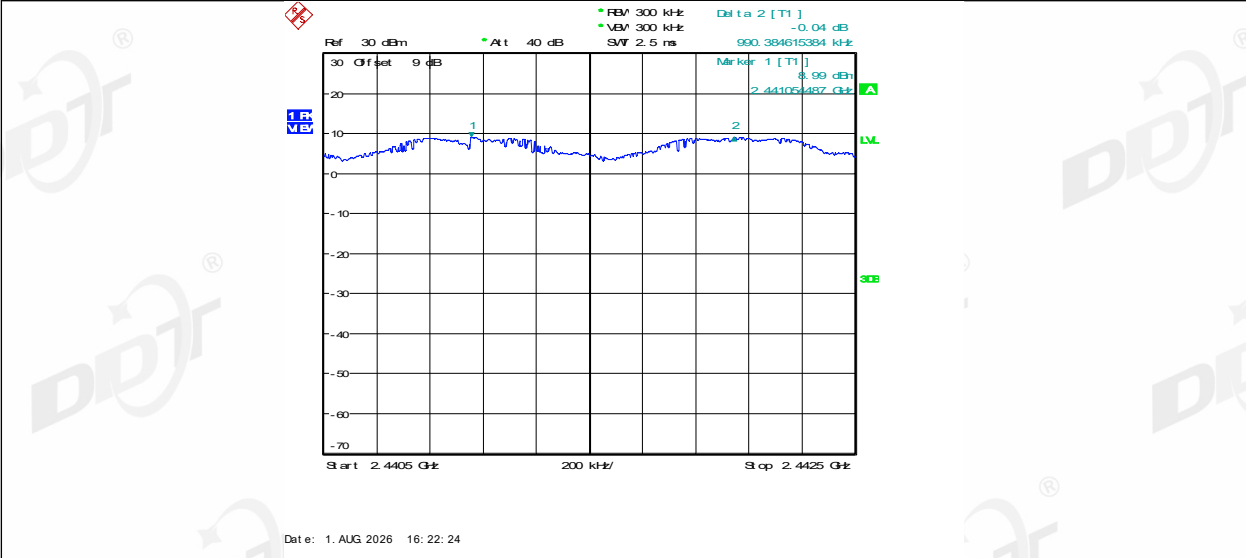
Test Mode	Antenna	Frequency [MHz]	Result [MHz]	Limit [MHz]	Verdict
DH5	Left side	Hop	0.987	≥0.960	PASS
	Right side	Hop	1.006	≥0.950	PASS
2DH5	Left side	Hop	0.99	≥0.820	PASS
	Right side	Hop	1.003	≥0.887	PASS
3DH5	Left side	Hop	0.99	≥0.860	PASS
	Right side	Hop	0.997	≥0.840	PASS

7.5. Test graphs

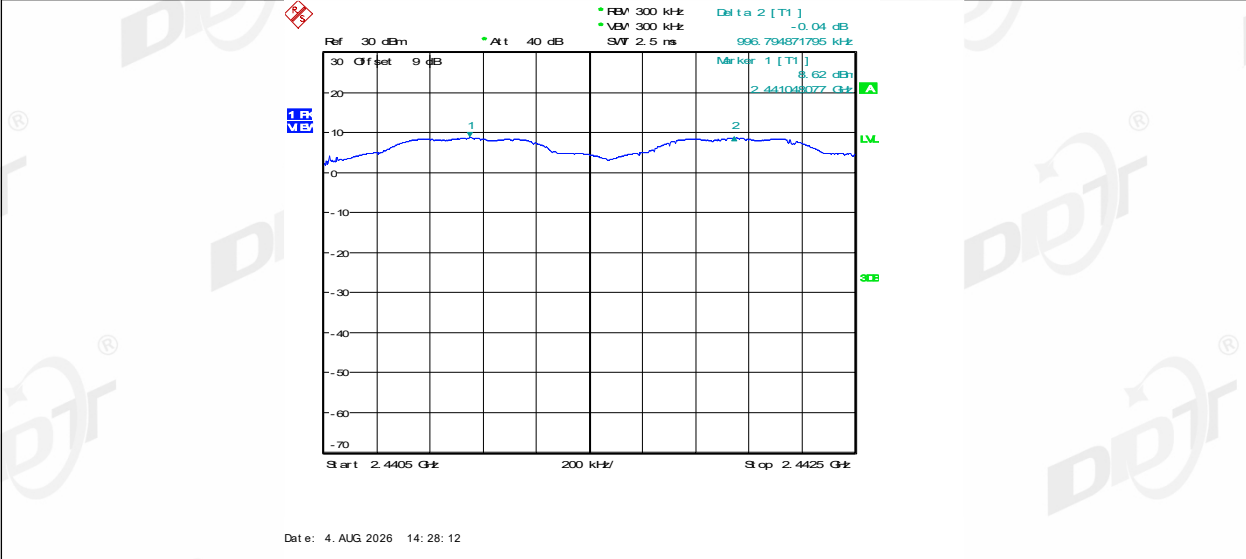




3DH5_Left side_Hop

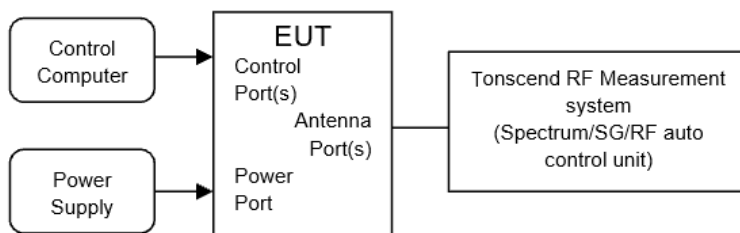


3DH5_Right side_Hop



8. Dwell Time

8.1. Block diagram of test setup



8.2. Limits

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

8.3. Test procedure

- (1) The test according to ANSI C63.10 clause 7.8.4.
- (2) Connect EUT's antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results.
- (3) Set the EUT as maximum power setting and enable the EUT transmit continuously.
- (4) Use the following spectrum analyzer settings for the maximum peak output power measurement:

RBW:	≤ channel spacing and where possible RBW should be set $\gg 1 / T$
VBW:	$VBW \geq RBW$.
Span:	Zero span, centered on a hopping channel.
Detector Mode:	Peak
Sweep time:	Auto
Trace mode:	Clear Write.
- (5) The test period: $T = 0.4 \text{ Second/Channel} \times 79 \text{ Channel} = 31.6 \text{ s}$
- (6) Measure the hopping number and on time of each pulse with spectrum analyzer in zero span set, and calculate dwell time with formula Dwell time = total hops * pulse's on time.
- (7) Measure and record the results in the report.

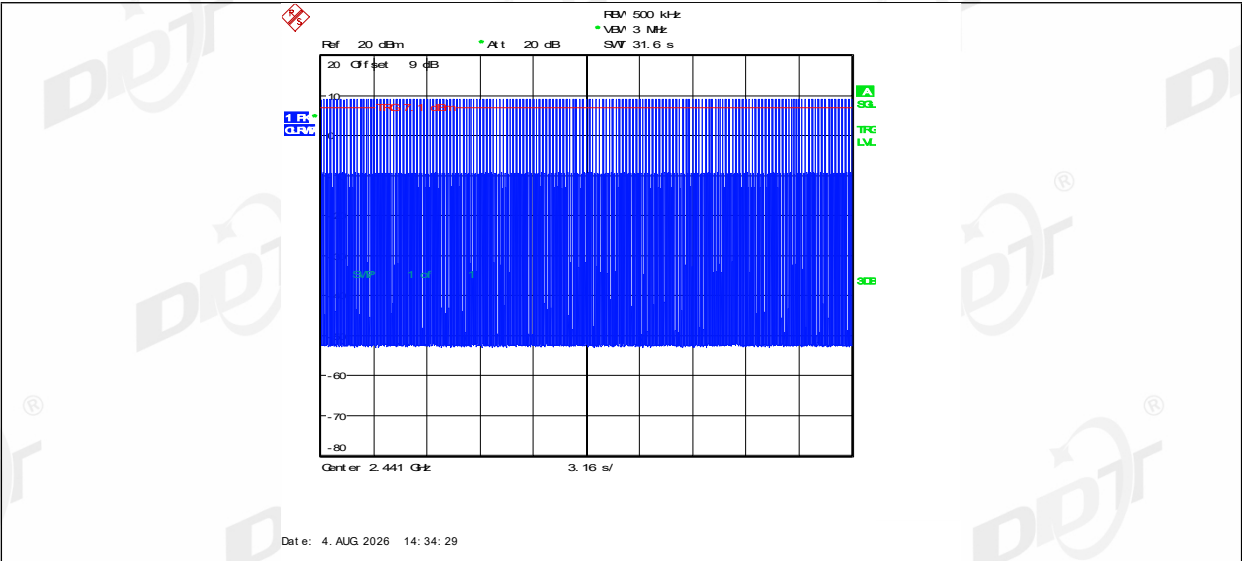
8.4. Test result

Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	27.3-28.2℃,35-53.6%RH	Test Date:	2026.8.1-2026.8.4
Test Power Supply:	Battery	Sample Number:	S26070622-009

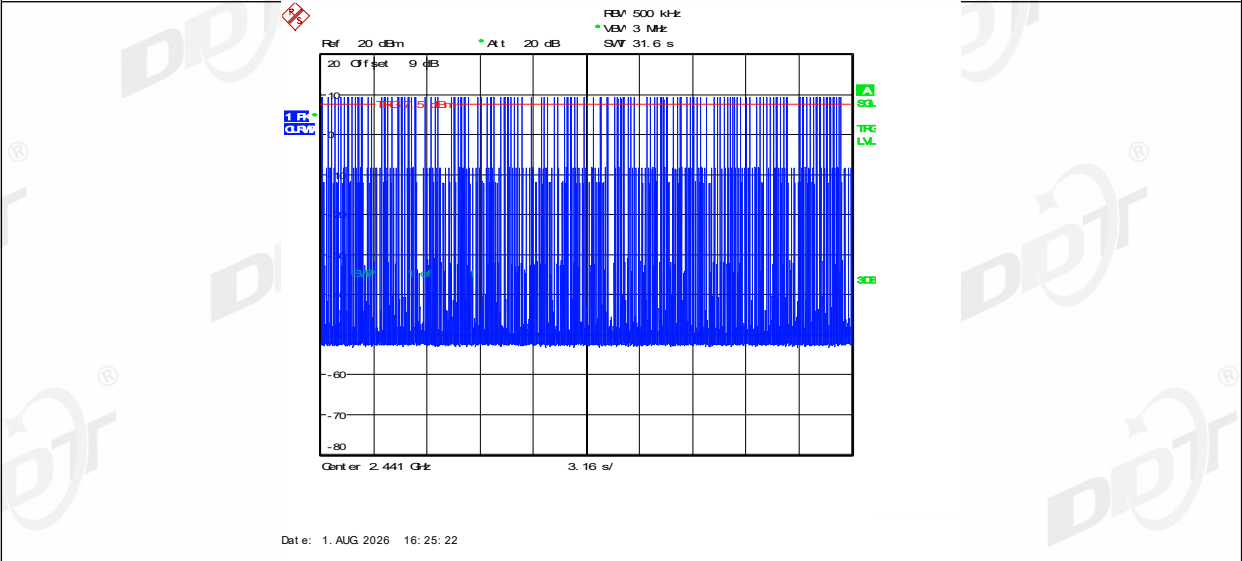
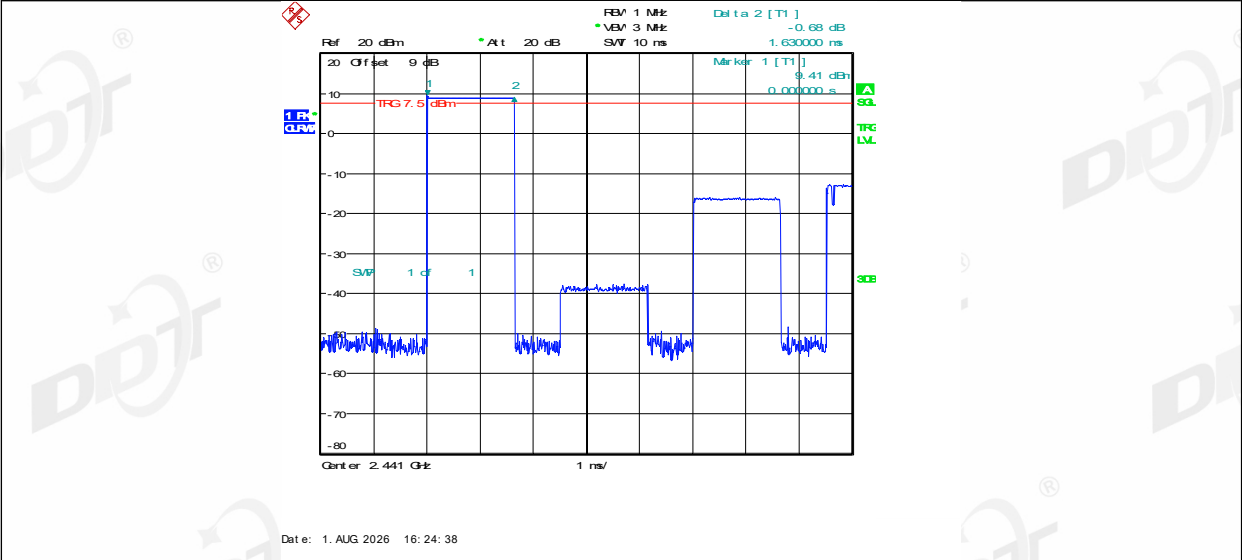
Test Mode	Antenna	Frequency [MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Left side	Hop	0.370	321	0.119	≤0.4	PASS
	Right side	Hop	0.370	317	0.117	≤0.4	PASS
DH3	Left side	Hop	1.630	163	0.266	≤0.4	PASS
	Right side	Hop	1.630	157	0.256	≤0.4	PASS
DH5	Left side	Hop	2.880	113	0.325	≤0.4	PASS
	Right side	Hop	2.870	119	0.342	≤0.4	PASS
2DH1	Left side	Hop	0.380	318	0.121	≤0.4	PASS
	Right side	Hop	0.380	317	0.12	≤0.4	PASS
2DH3	Left side	Hop	1.630	163	0.266	≤0.4	PASS
	Right side	Hop	1.630	152	0.248	≤0.4	PASS
2DH5	Left side	Hop	2.880	115	0.331	≤0.4	PASS
	Right side	Hop	2.880	104	0.3	≤0.4	PASS
3DH1	Left side	Hop	0.380	318	0.121	≤0.4	PASS
	Right side	Hop	0.370	317	0.117	≤0.4	PASS
3DH3	Left side	Hop	1.640	161	0.264	≤0.4	PASS
	Right side	Hop	1.630	156	0.254	≤0.4	PASS
3DH5	Left side	Hop	2.890	104	0.301	≤0.4	PASS
	Right side	Hop	2.890	102	0.295	≤0.4	PASS

8.5. Test graphs

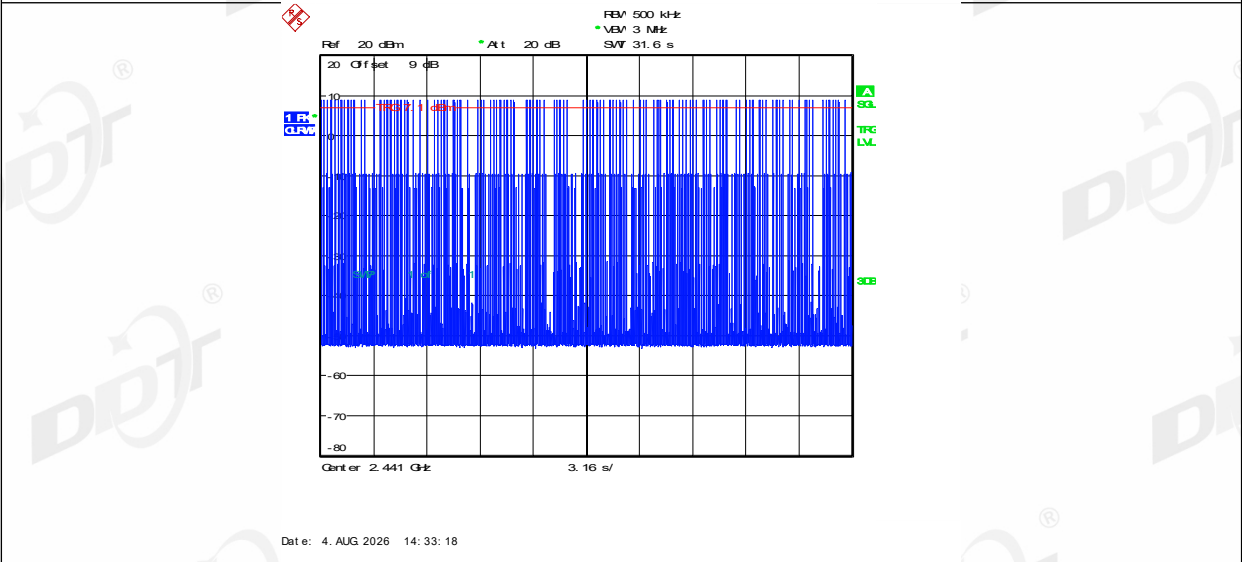
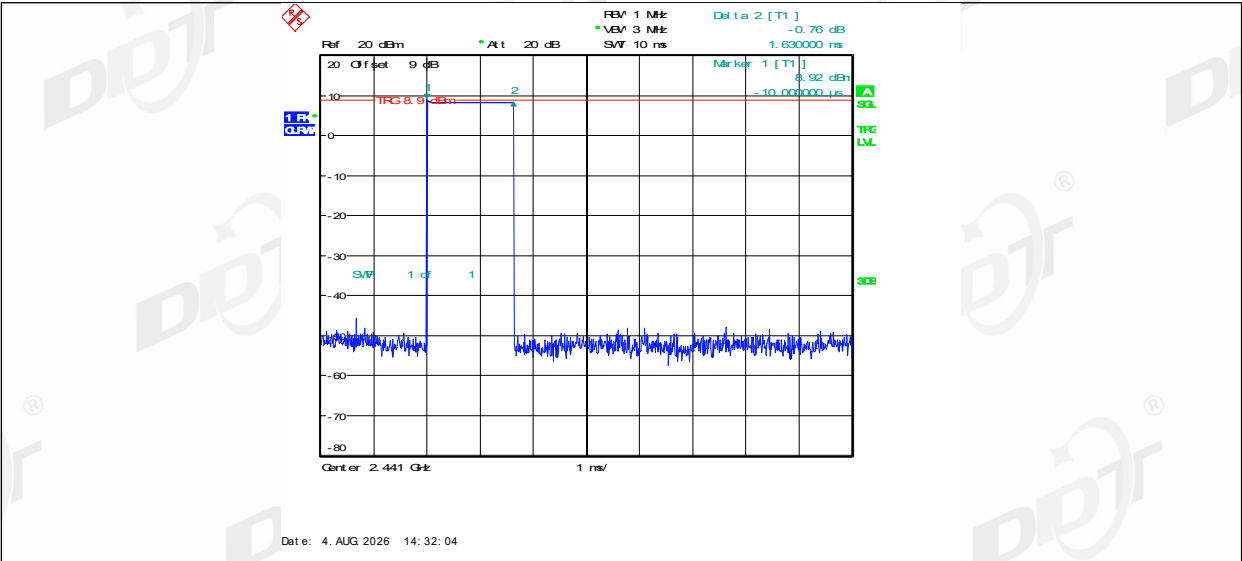




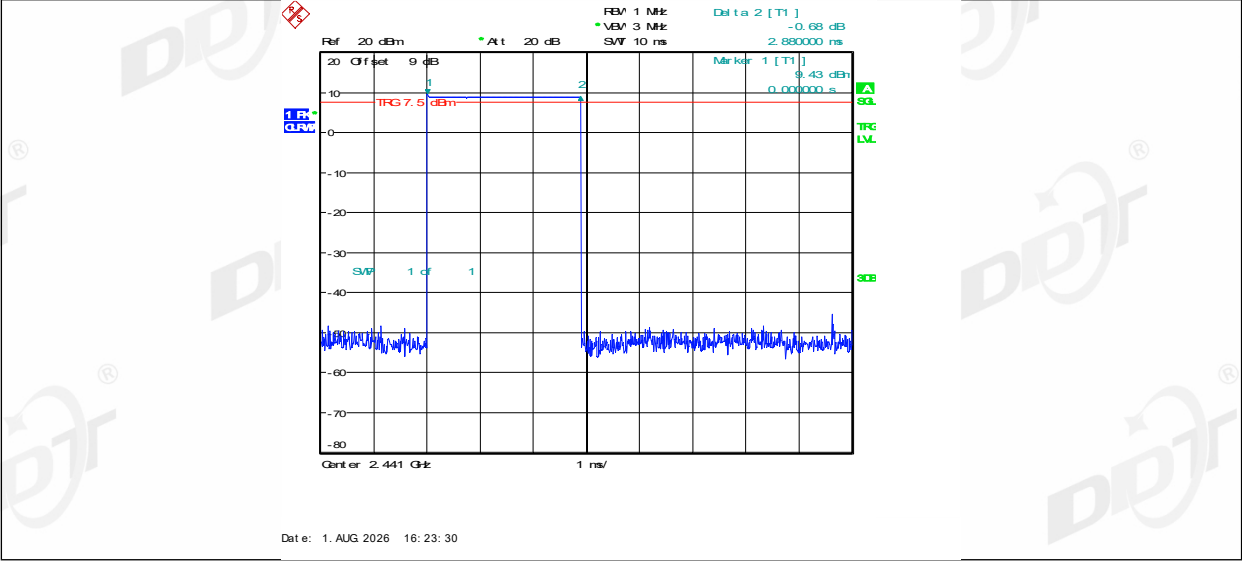
DH3_Left side_Hop

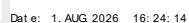


DH3_Right side_Hop

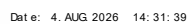
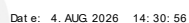


DH5 Left side Hop





DH5 Right side Hop

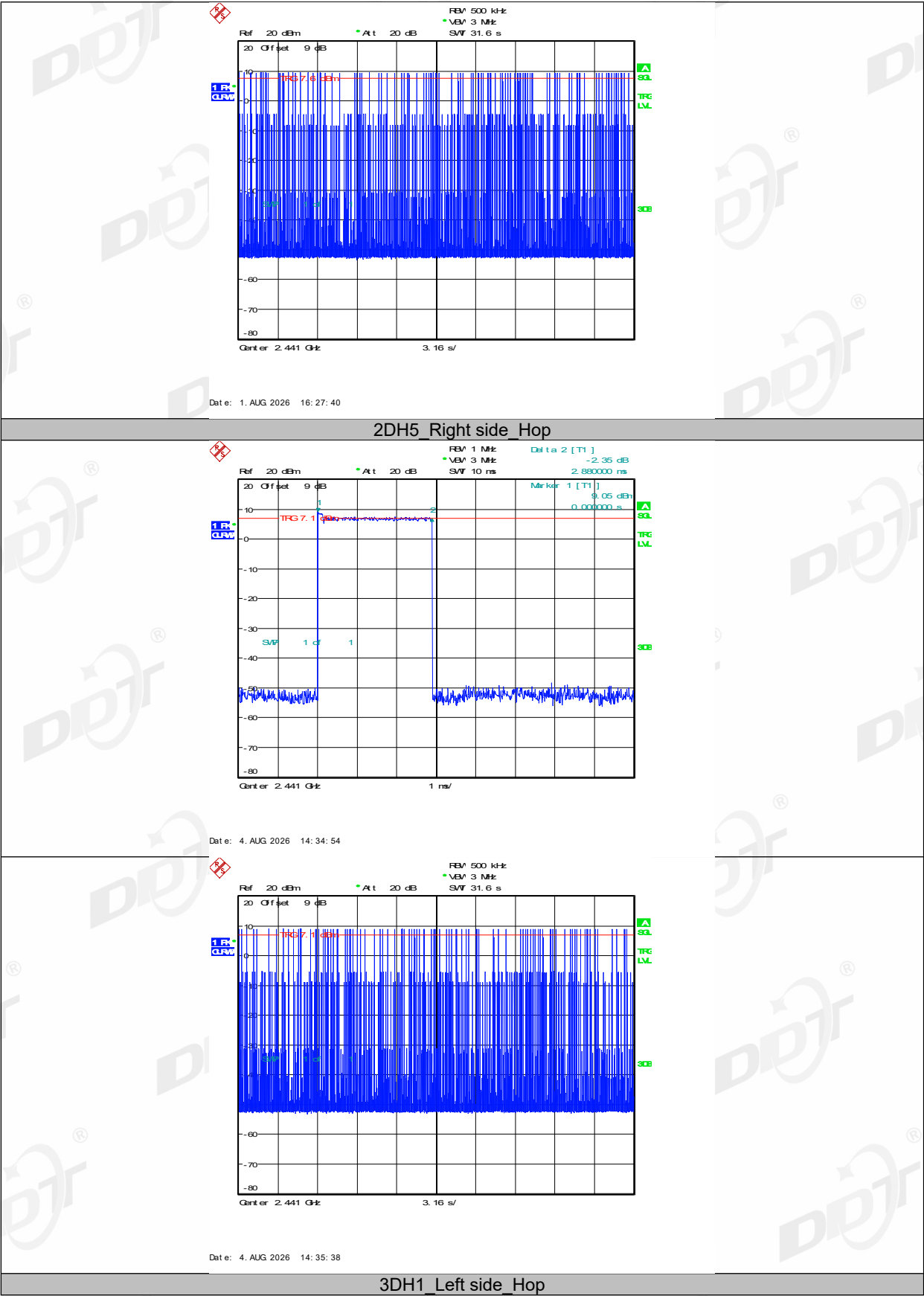


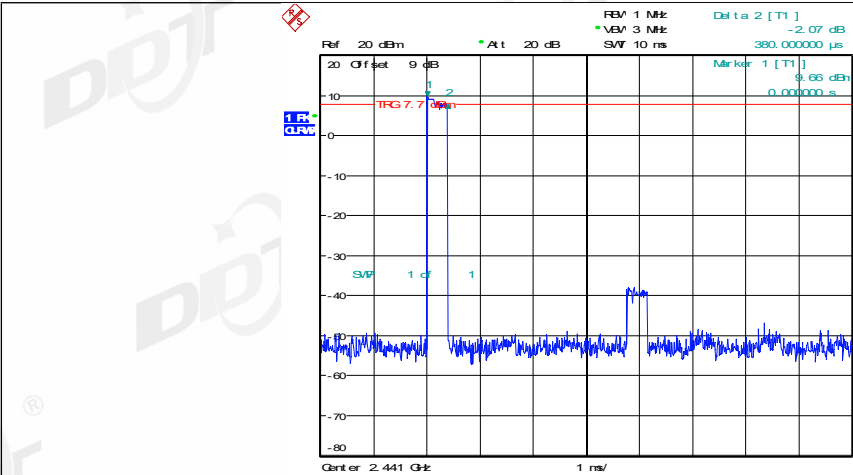




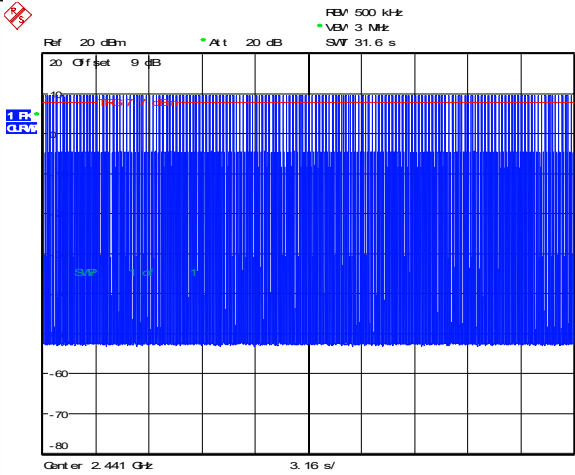


Date: 1. AUG 2026 16:26:56



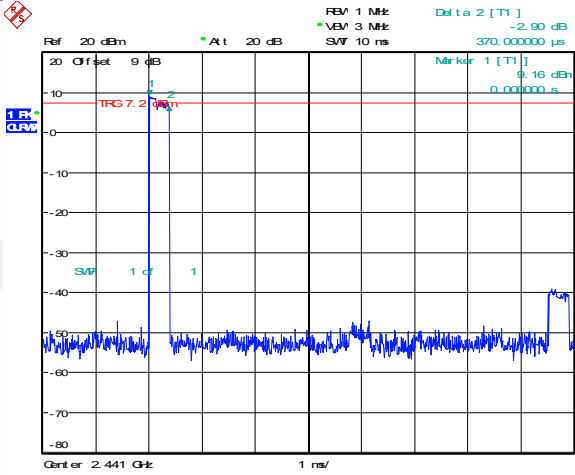


Date: 1. AUG 2026 16:33:48

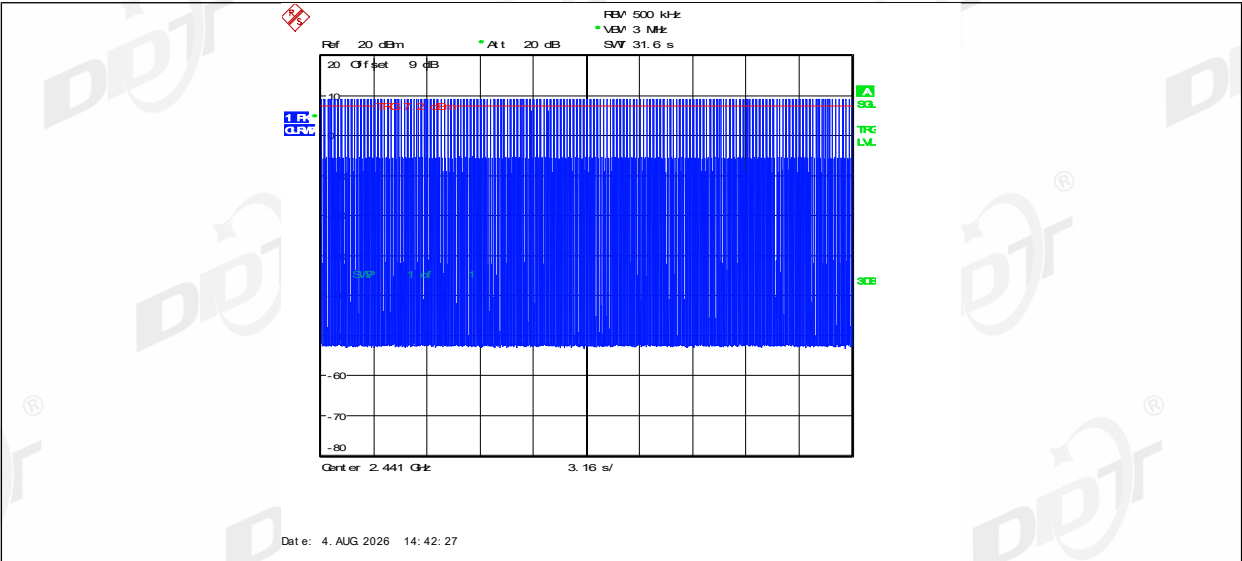


Date: 1. AUG 2026 16:34:32

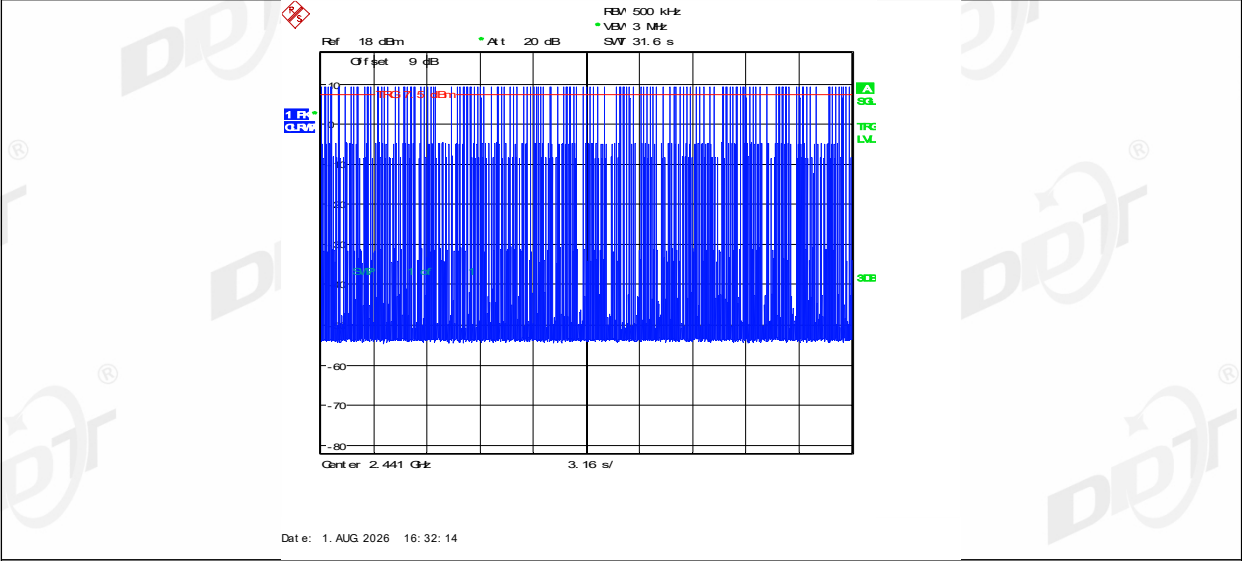
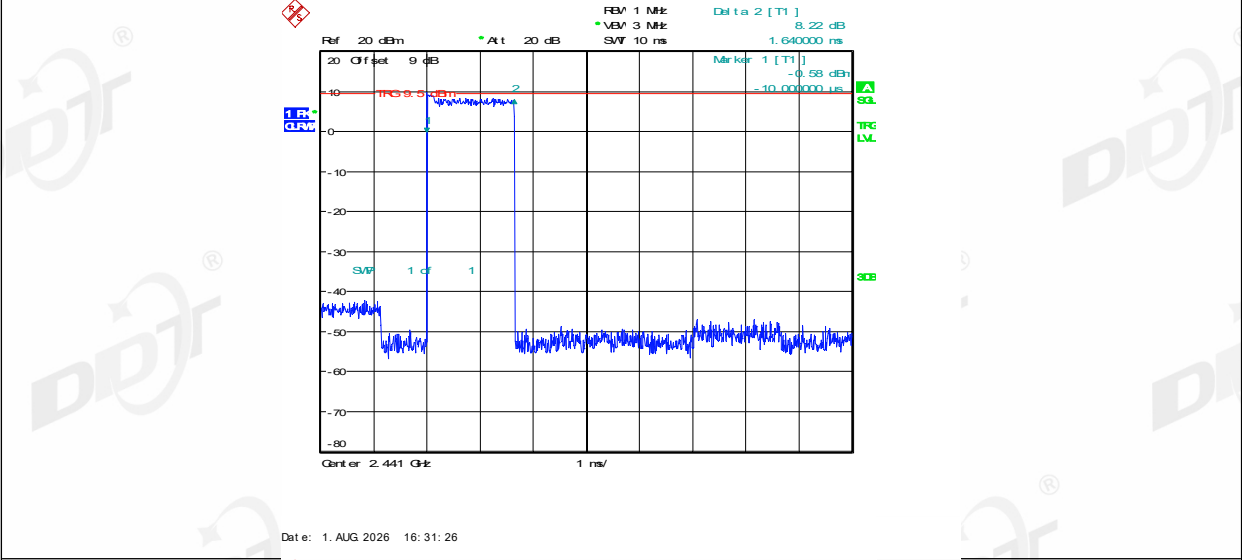
3DH1_Right side_Hop



Date: 4. AUG 2026 14:41:44

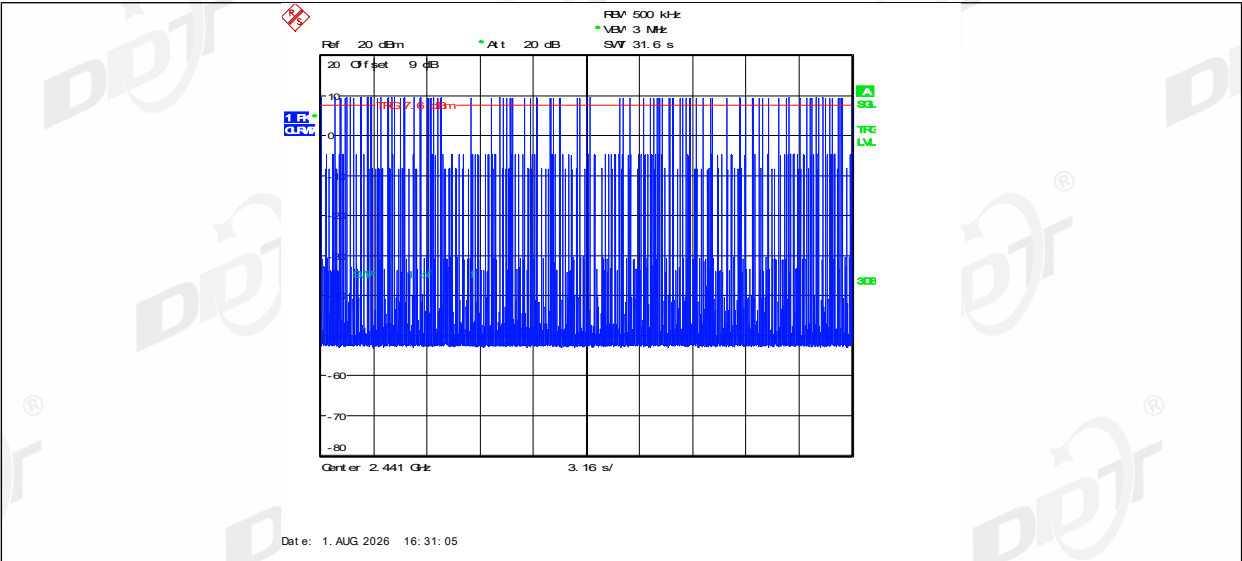


3DH3_Left side_Hop

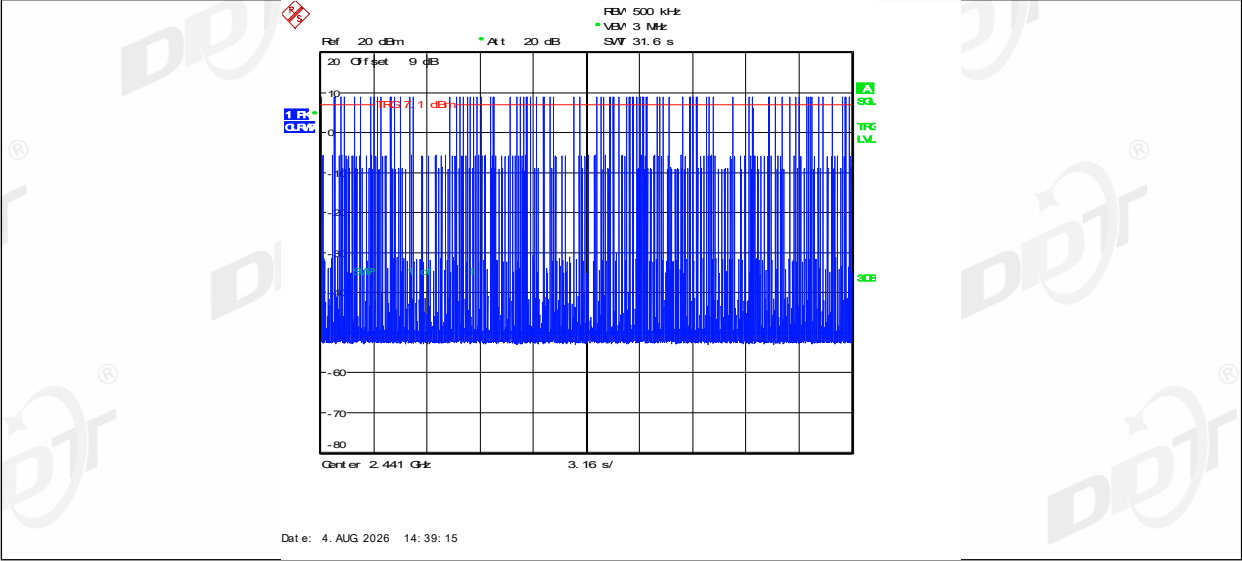
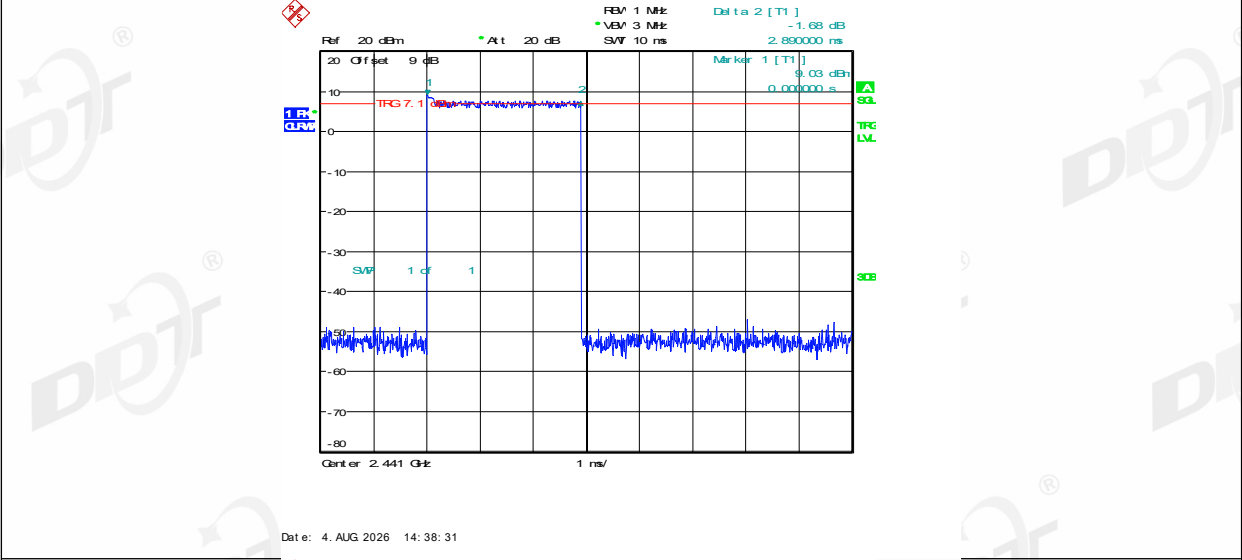


3DH3_Right side_Hop



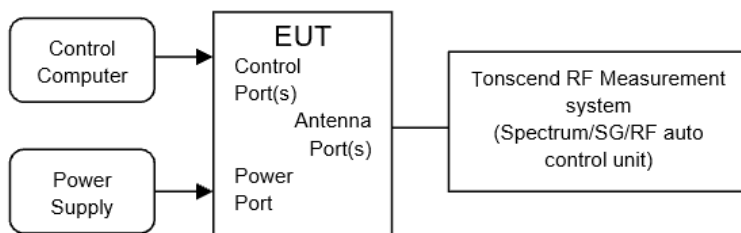


3DH5_Right side_Hop



9. Number of Hopping Channel

9.1. Block diagram of test setup



9.2. Limits

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

9.3. Test procedure

- (1) The test according to ANSI C63.10 clause 7.8.3.
- (2) Connect EUT's antenna output to spectrum analyzer by RF cable, the path loss was compensated to the results.
- (3) Set the EUT as maximum power setting and enable the EUT transmit continuously.
- (4) Use the following spectrum analyzer settings for the maximum peak output power measurement:

RBW:	RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
VBW:	VBW $\geq$ RBW.
Span:	The frequency band of operation
Detector Mode:	Peak
Sweep time:	Auto
Trace mode:	Max hold
- (5) Measure the hopping number and record the results in the report.
- (6) Measure and record the results in the report.

9.4. Test result

Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	27.3-28.2℃,35-53.6%RH	Test Date:	2026.8.1-2026.8.4
Test Power Supply:	Battery	Sample Number:	S26070622-009

Test Mode	Antenna	Frequency [MHz]	Result [Num]	Limit [Num]	Verdict
DH5	Left side	Hop	79	≥15	PASS
	Right side	Hop	79	≥15	PASS
2DH5	Left side	Hop	79	≥15	PASS
	Right side	Hop	79	≥15	PASS
3DH5	Left side	Hop	79	≥15	PASS
	Right side	Hop	79	≥15	PASS

DH5 Left side Hop

Ref 30 dBm Alt 40 dB RBW 300 kHz VBW 300 kHz S/V 2.5 ns

30 Offset 8.7 dB

1 RBW VIEW

Start 2.4 GHz 8.35 MHz Stop 2.4835 GHz

Date: 1. AUG 2026 16:16:21

DH5 Right side Hop

Ref 30 dBm Alt 40 dB RBW 300 kHz VBW 300 kHz S/V 2.5 ns

30 Offset 8.7 dB

1 RBW VIEW

Center 2.44175 GHz 8.35 MHz Span 83.5 MHz

Date: 4. AUG 2026 14:23:03

2DH5 Left side Hop

Ref 30 dBm Alt 40 dB RBW 300 kHz VBW 300 kHz S/V 2.5 ns

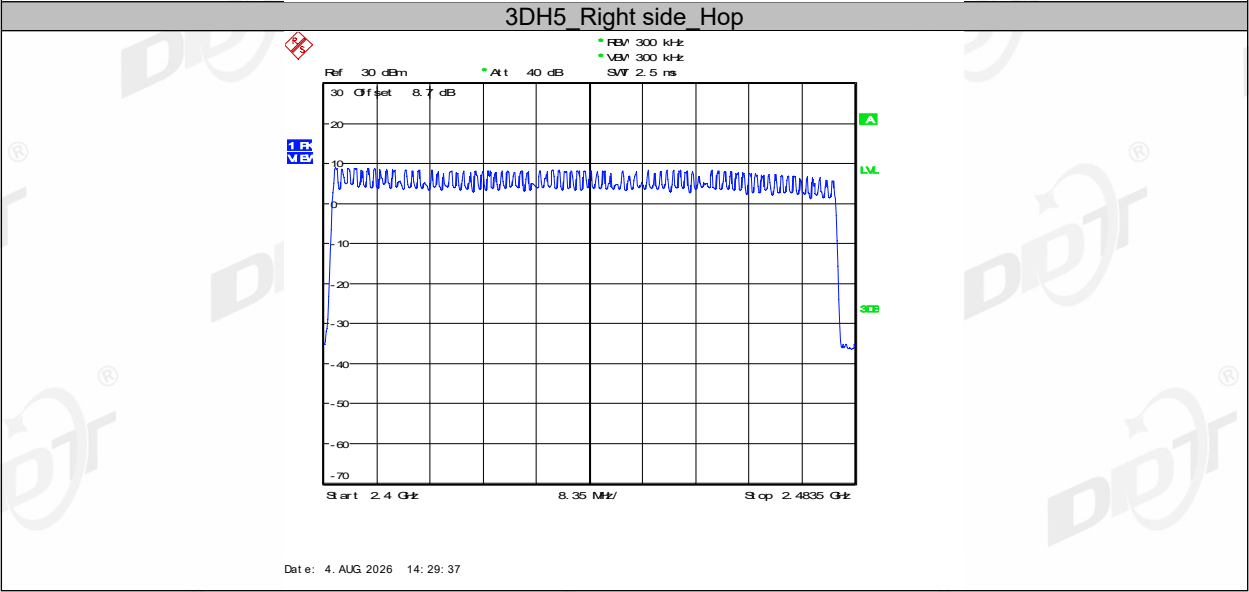
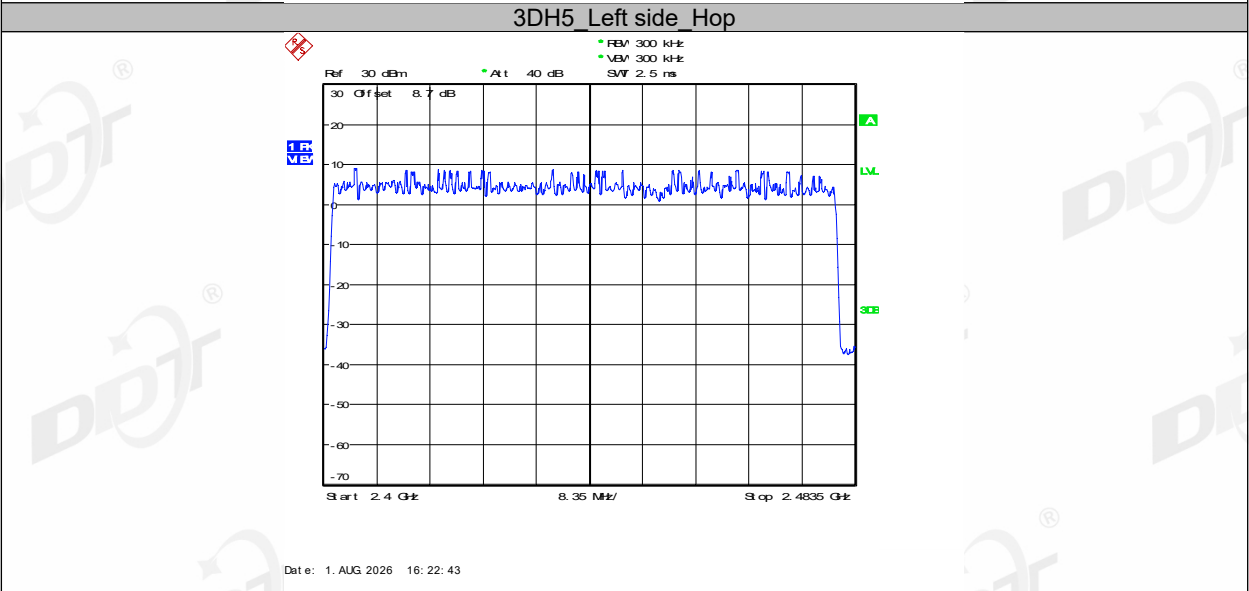
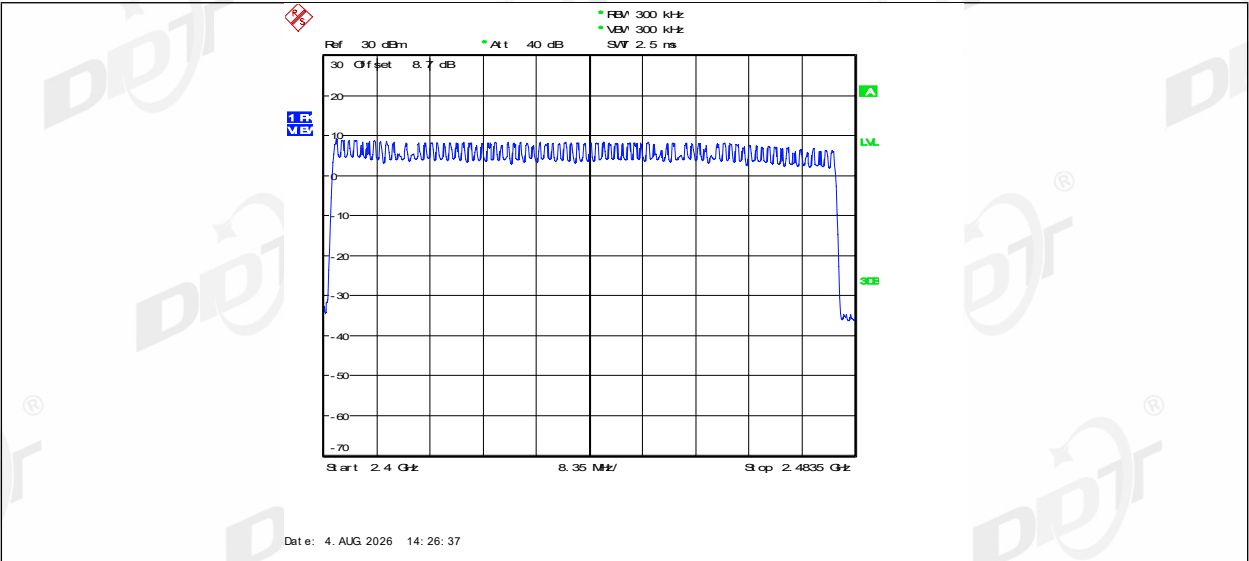
30 Offset 8.7 dB

1 RBW VIEW

Start 2.4 GHz 8.35 MHz Stop 2.4835 GHz

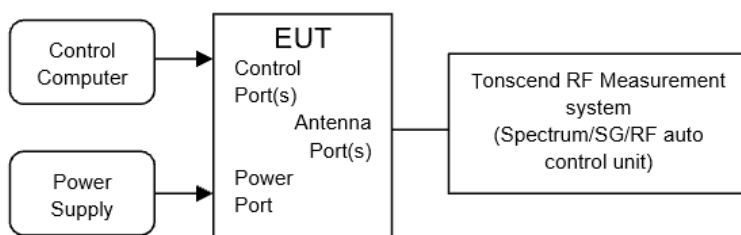
Date: 1. AUG 2026 16:19:52

2DH5 Right side Hop



10. Band Edge Compliance (Conducted Method)

10.1. Block diagram of test setup



10.2. Limit

All restriction band should comply with 15.209, other emission should be at least 20dB below the fundamental.

10.3. Test procedure

- (1) Connect EUT's antenna output to spectrum analyzer by RF cable.
- (2) Establish a reference level by using the following procedure:

RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Detector Mode:	Peak
Sweep time:	Auto
Trace mode	Max hold
- (3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.
- (4) Then mark the maximum amplitude of all unwanted emissions outside of the authorized frequency band.

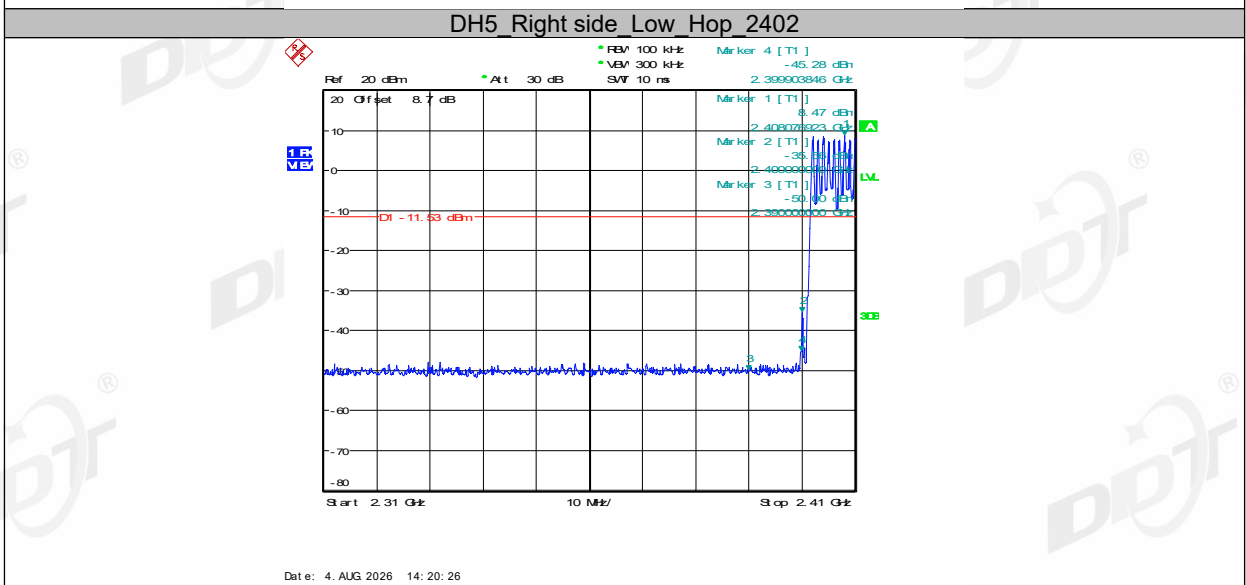
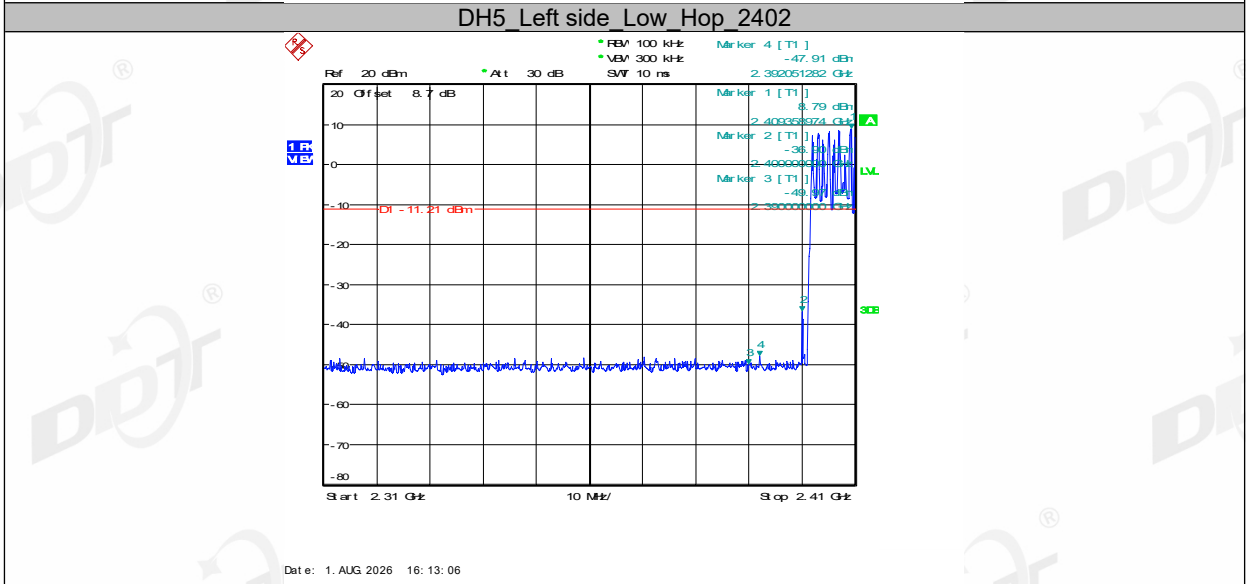
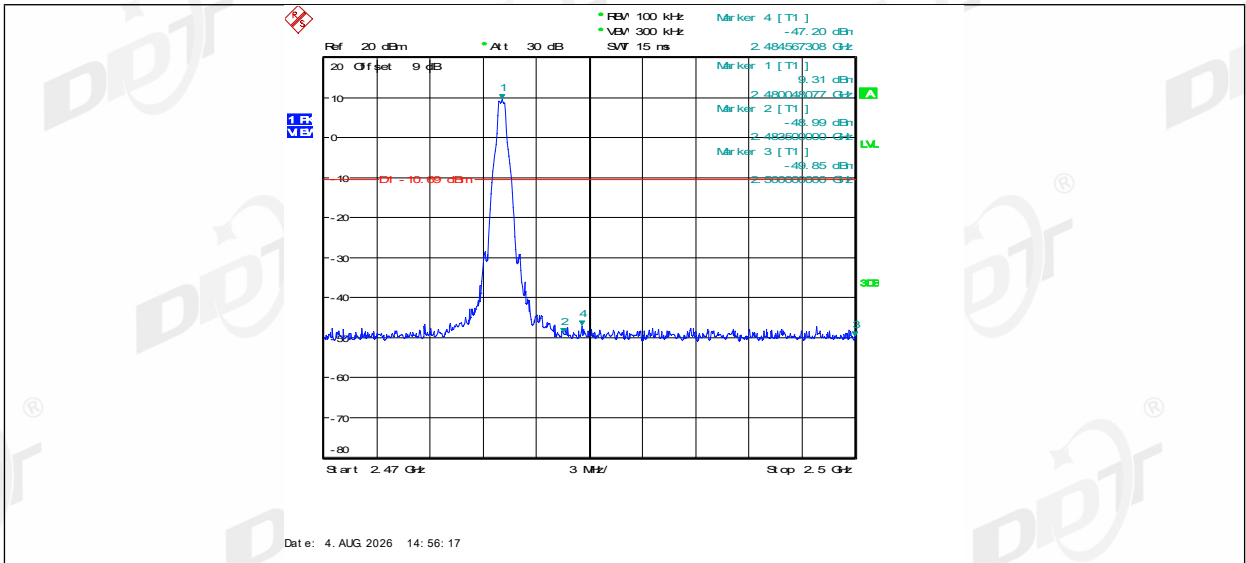
10.4. Test result

Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	27.3-28.2℃,35-53.6%RH	Test Date:	2026.8.1-2026.8.4
Test Power Supply:	Battery	Sample Number:	S26070622-009

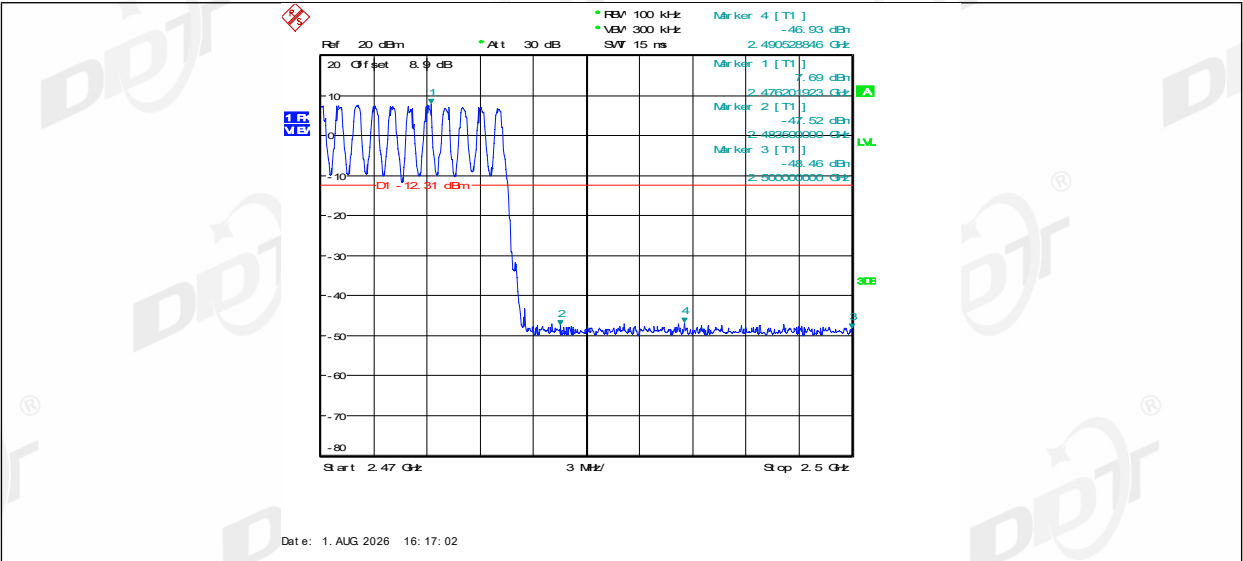
Mode	Freq. (MHz)	Verdict
GFSK	Hopping off 2402	Pass
	Hopping off 2480	Pass
	Hopping on	Pass
$\pi/4$ -DQPSK	Hopping off 2402	Pass
	Hopping off 2480	Pass
	Hopping on	Pass
8DPSK	Hopping off 2402	Pass
	Hopping off 2480	Pass
	Hopping on	Pass

10.5. Test graphs

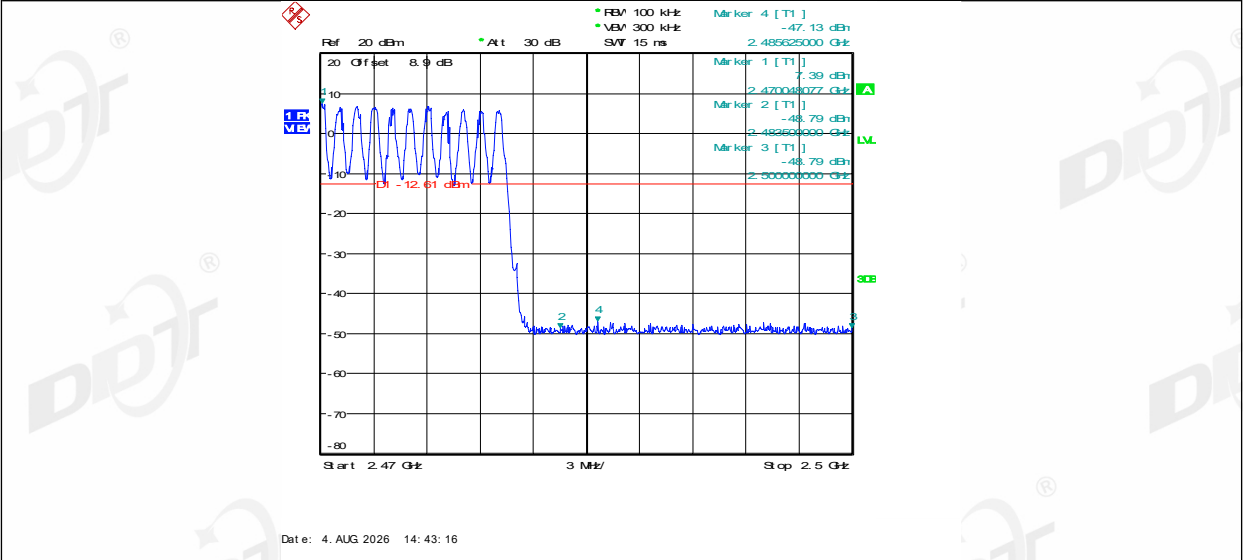




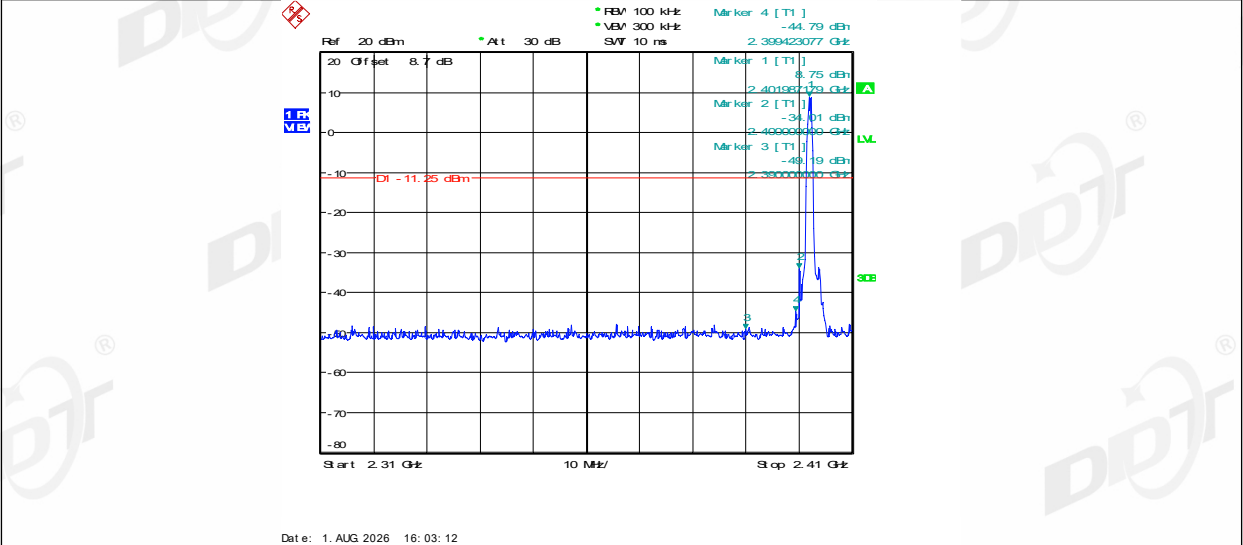
DH5 Left side High Hop 2480



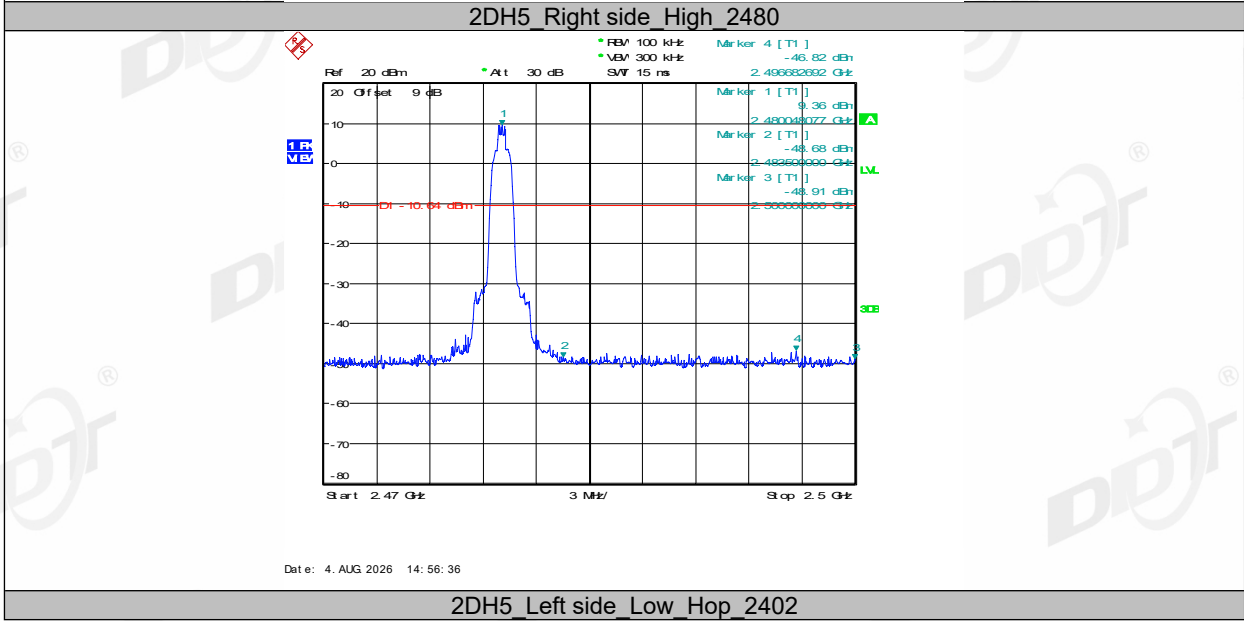
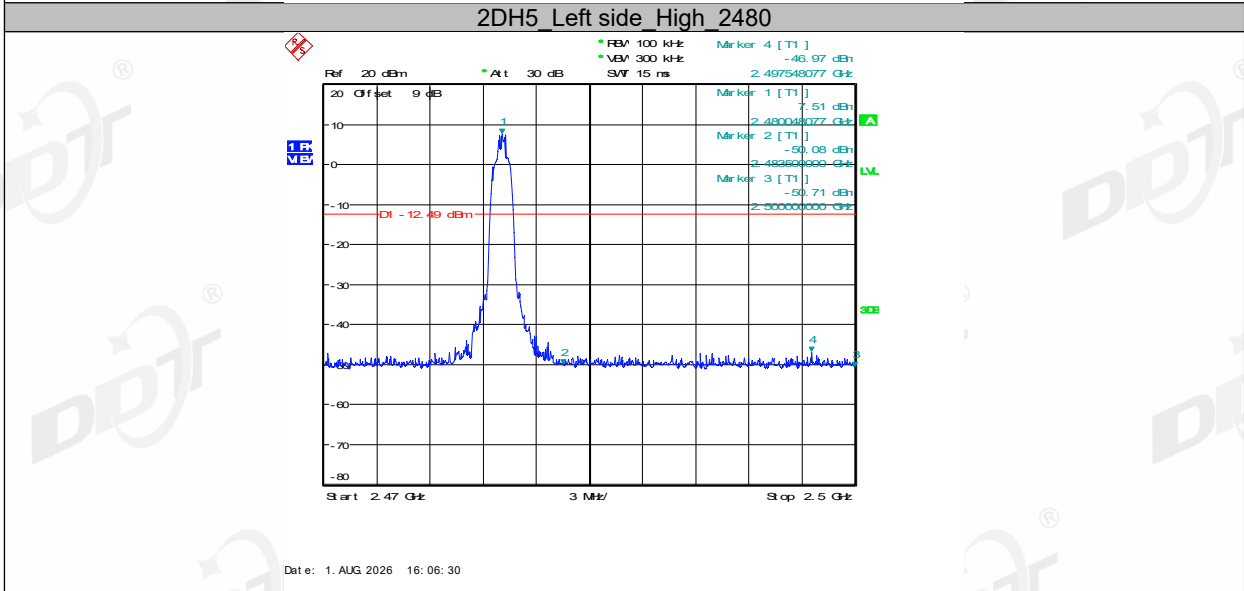
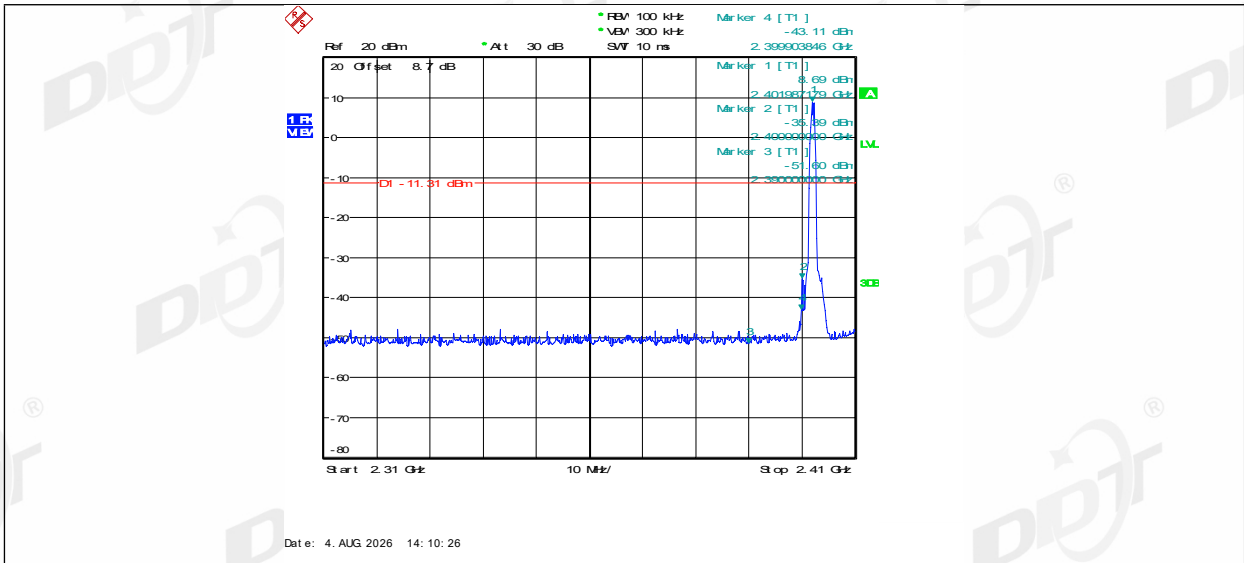
DH5_Right side_High_Hop_2480

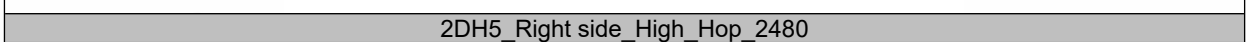
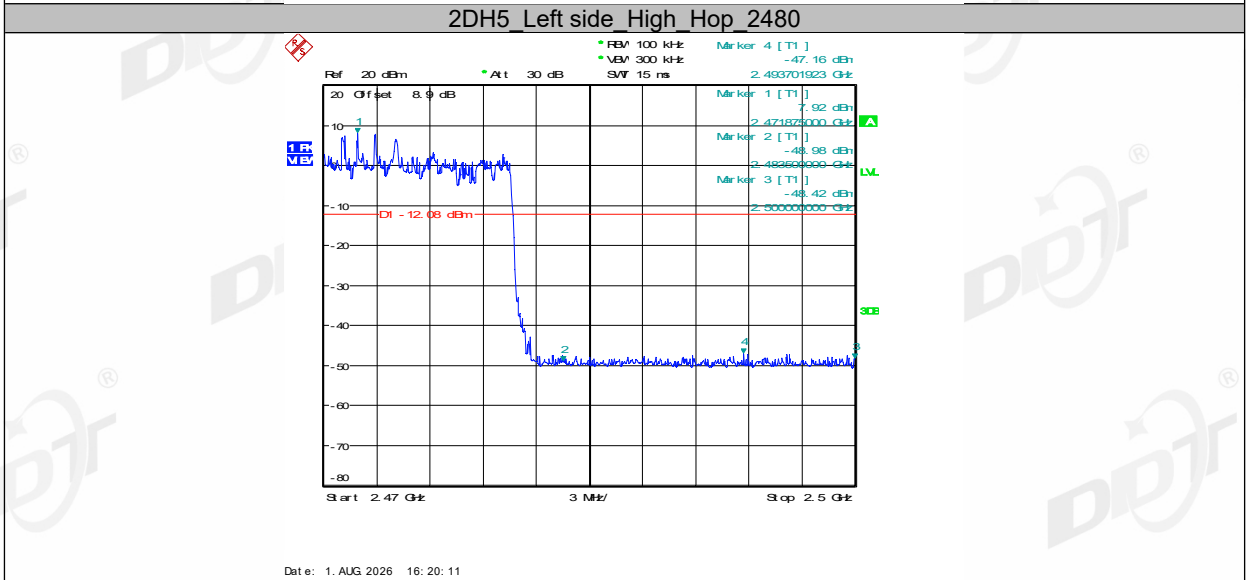
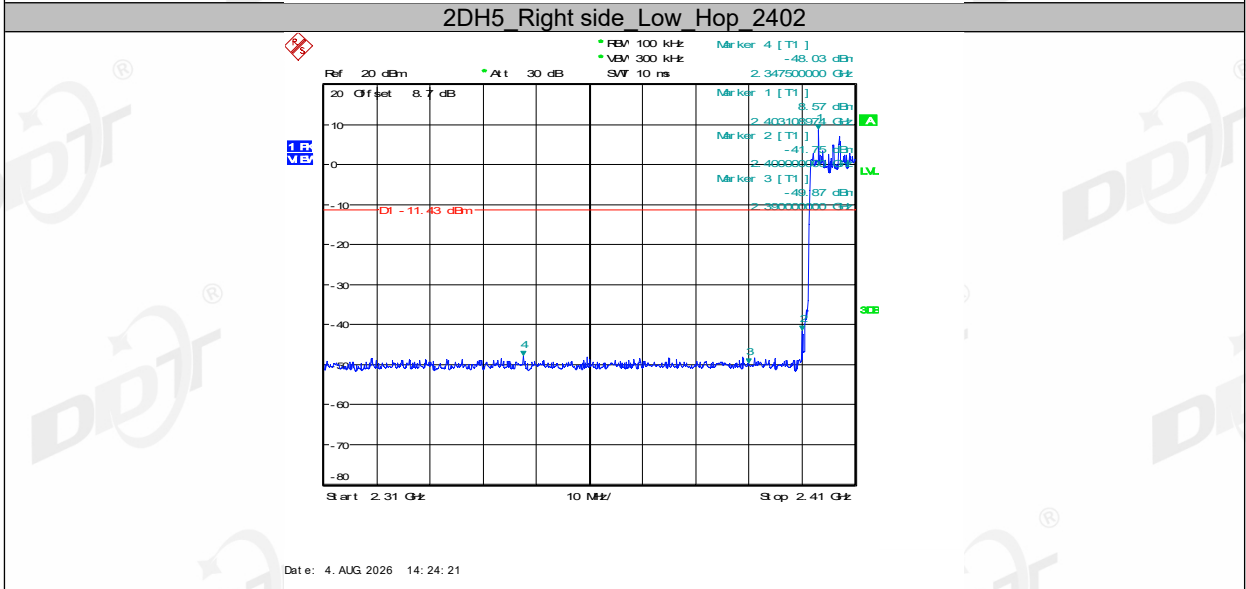
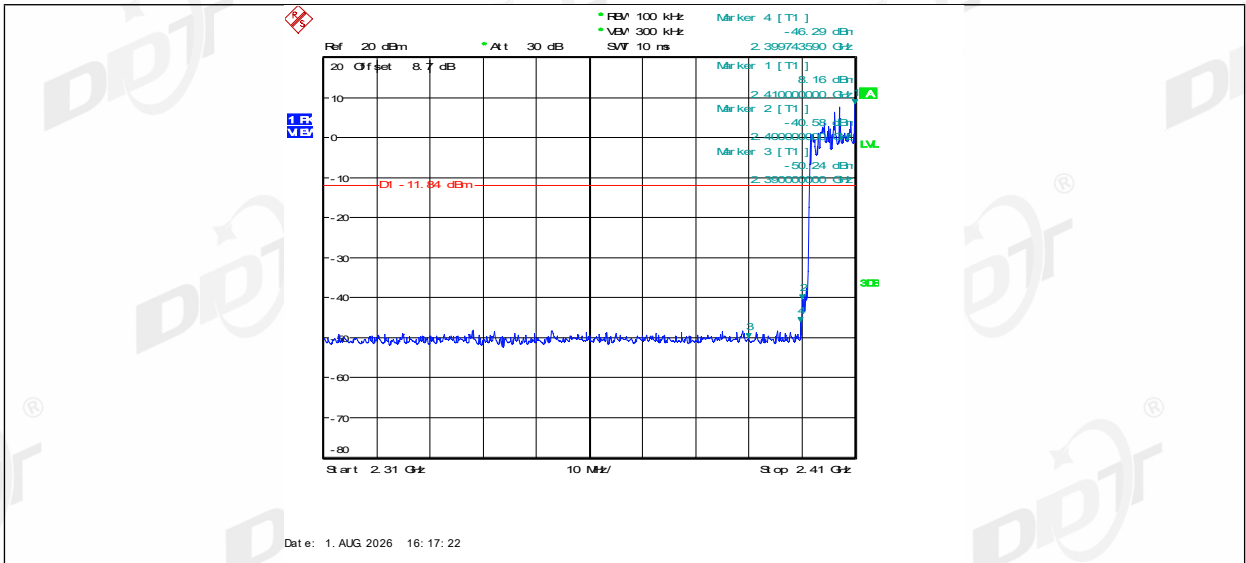


2DH5_Left side_Low_2402

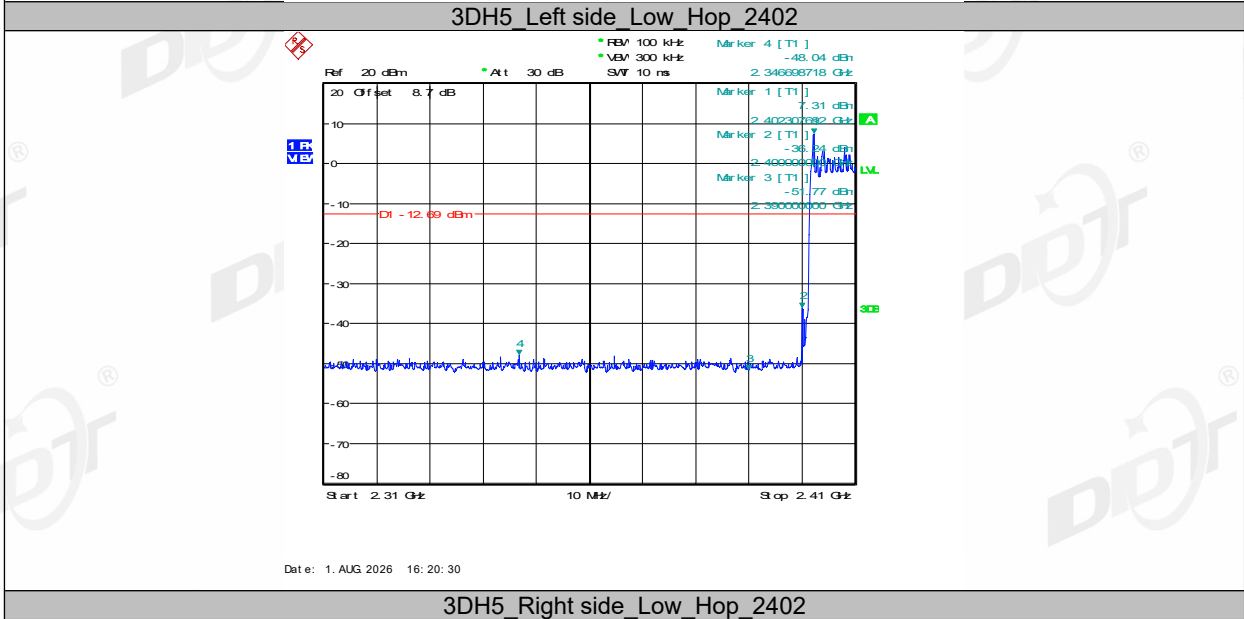
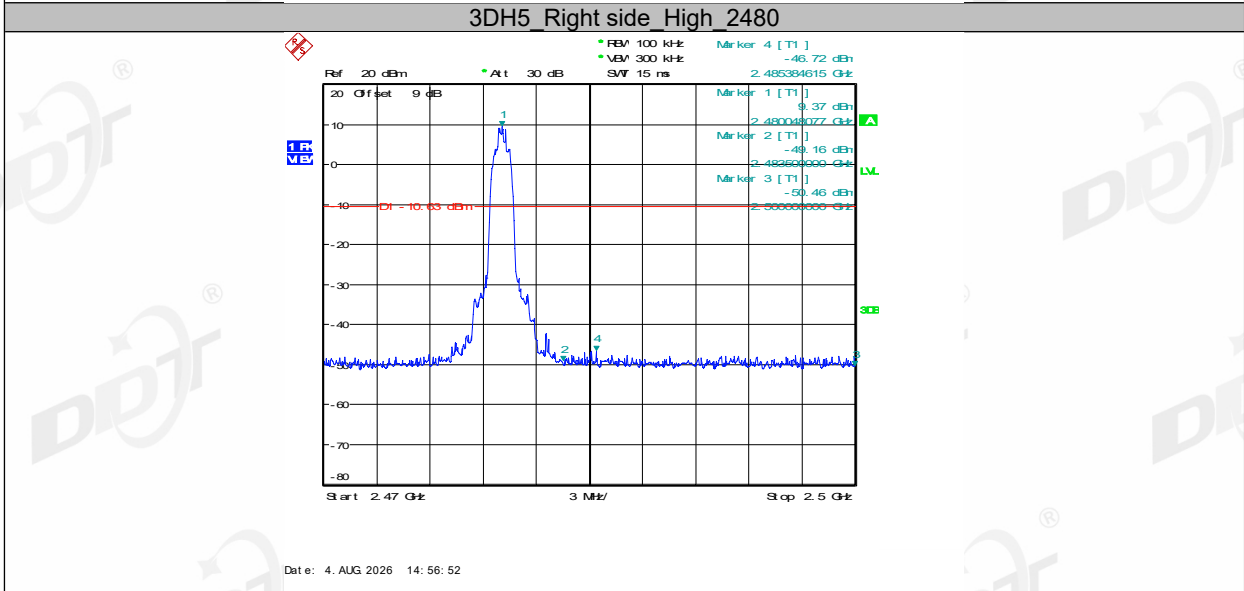
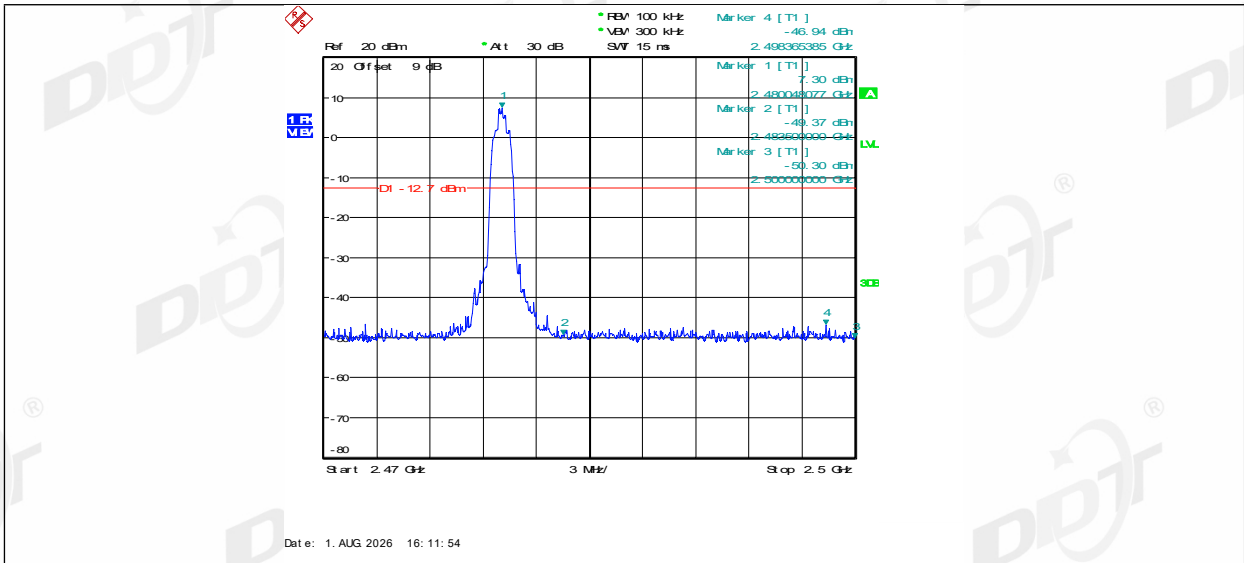


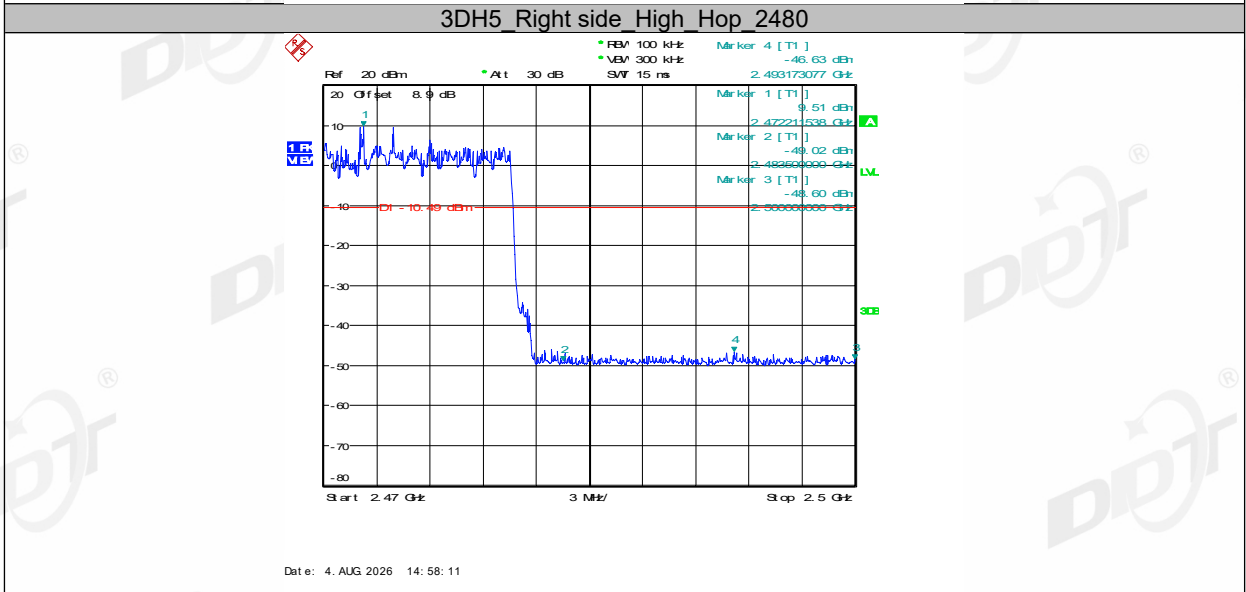
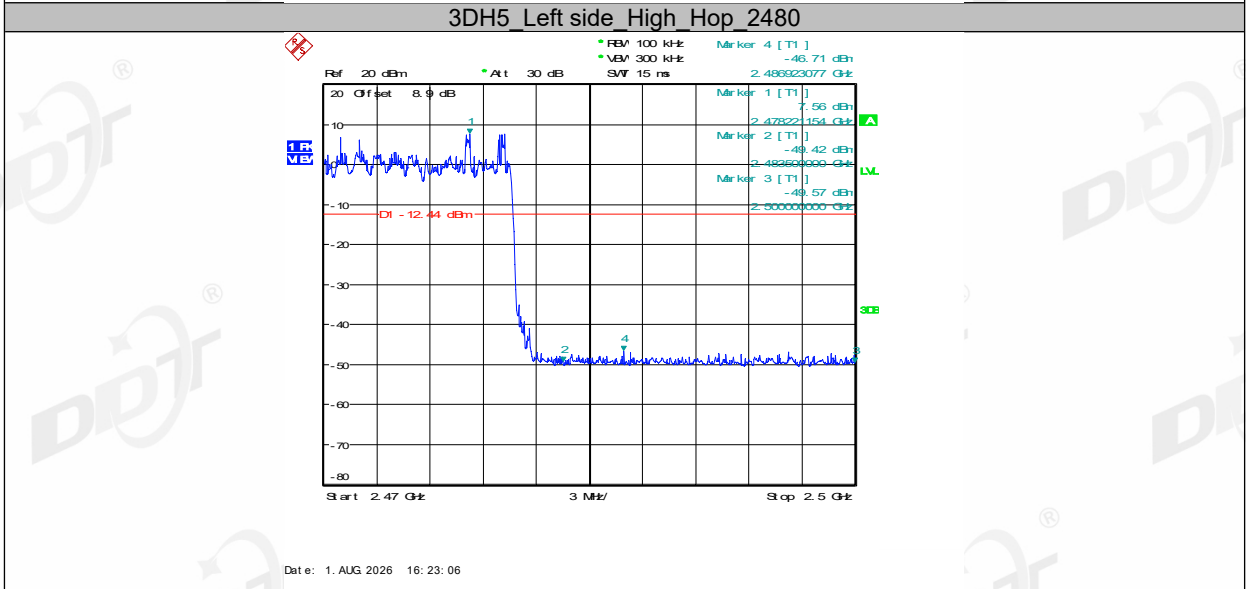
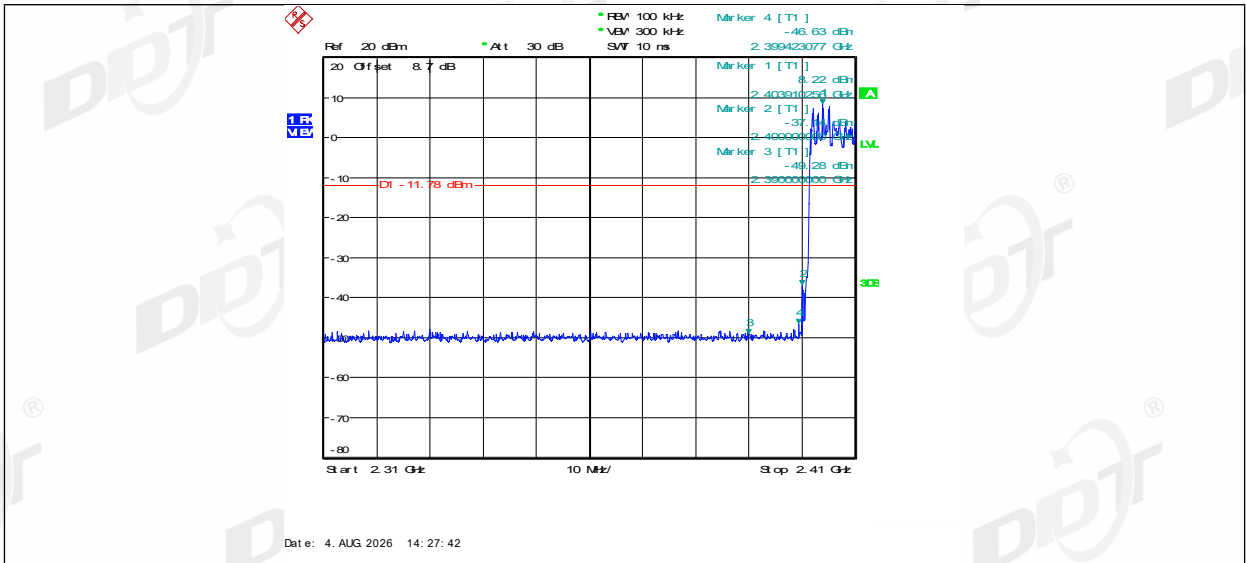
2DH5_Right side_Low_2402





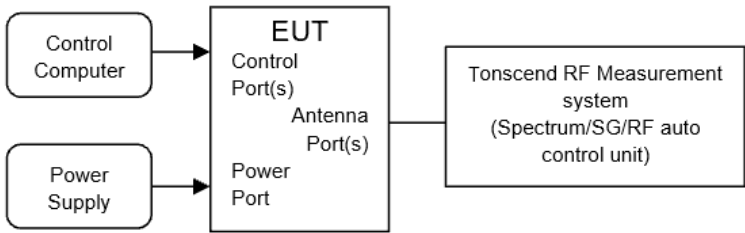






11. RF Conducted Spurious Emissions

11.1. Block diagram of test setup



11.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

11.3. Test procedure

- (1) Connect EUT's antenna output to spectrum analyzer by RF cable.
- (2) Establish a reference level by using the following procedure:

Center frequency	Test frequency
RBW:	100 kHz
VBW:	300 kHz
Span	Wide enough to capture the peak level of the in-band emission
Detector Mode:	Peak
Sweep time:	Auto
Trace mode	Max hold
- (3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.
- (4) Set the spectrum analyzer as follows:

RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Number of measurement points	$\geq \text{Span}/\text{RBW}$
Detector Mode:	Peak
Sweep time:	Auto
Trace mode	Max hold

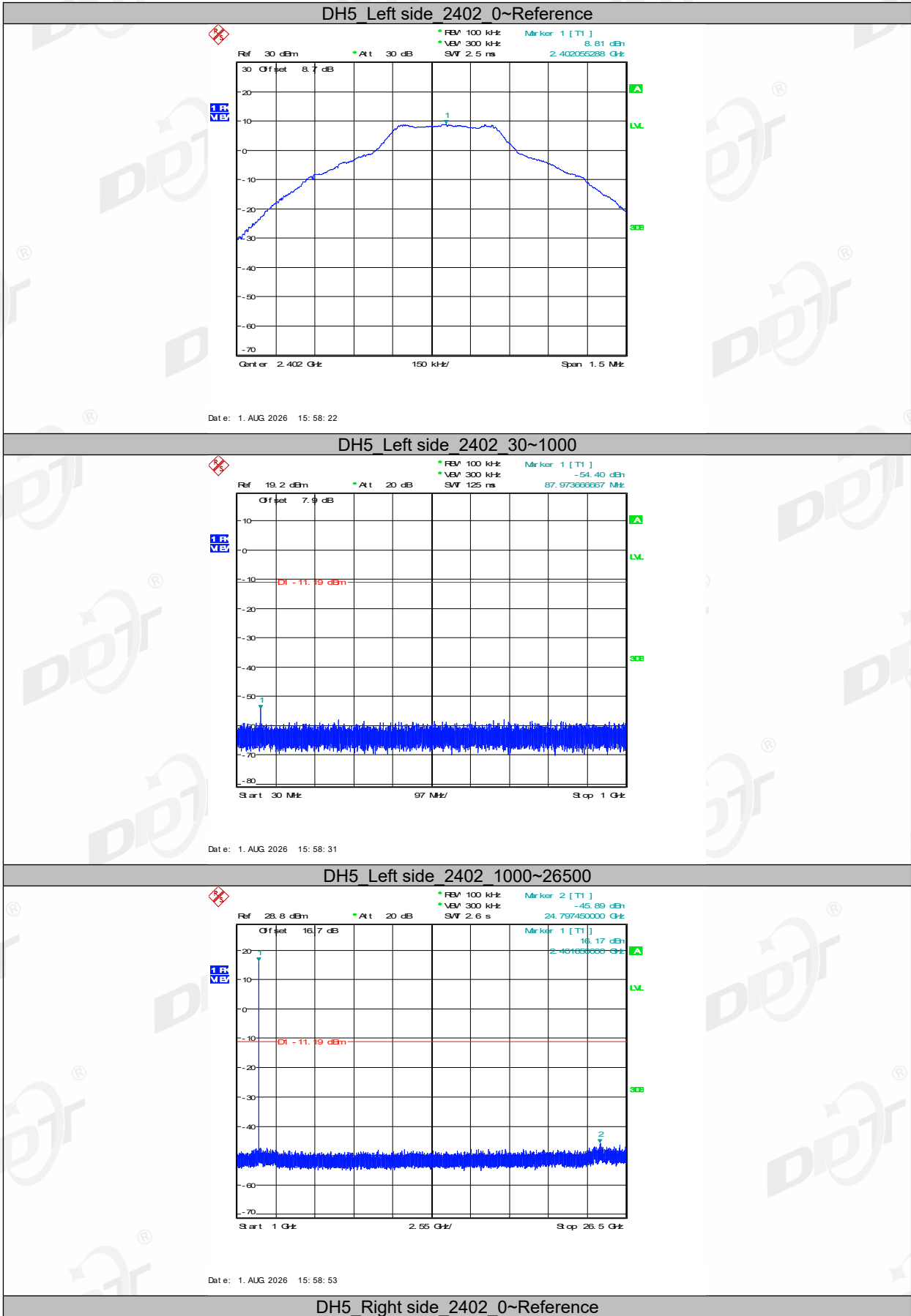
Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude of all unwanted emissions outside of the authorized frequency band

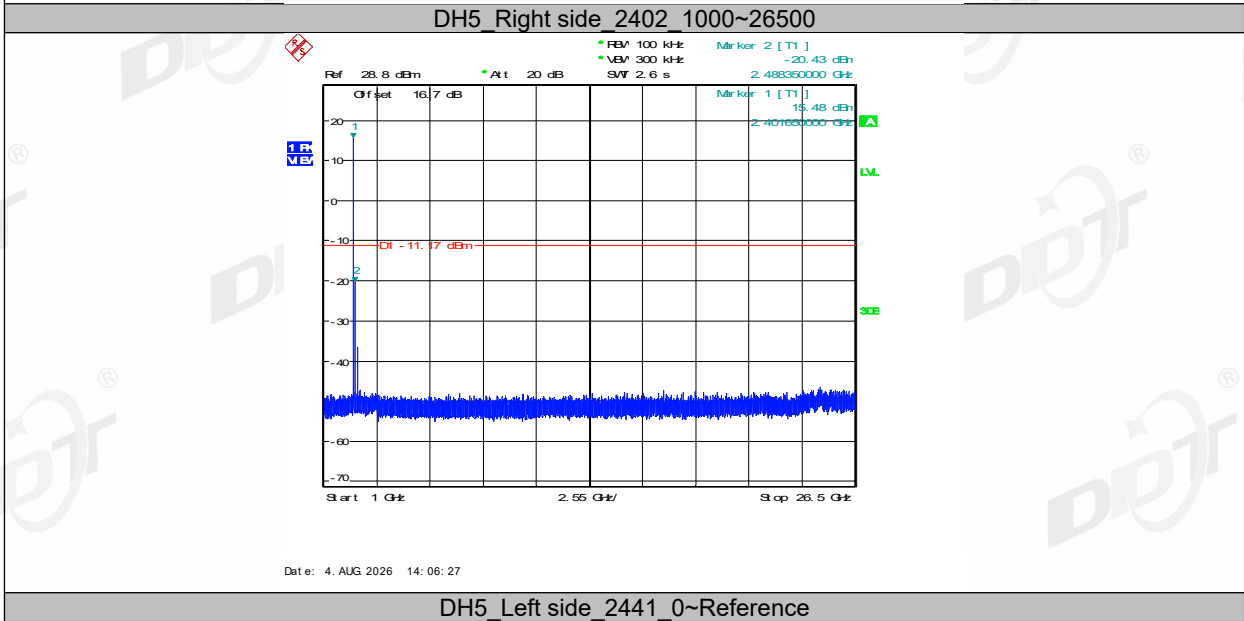
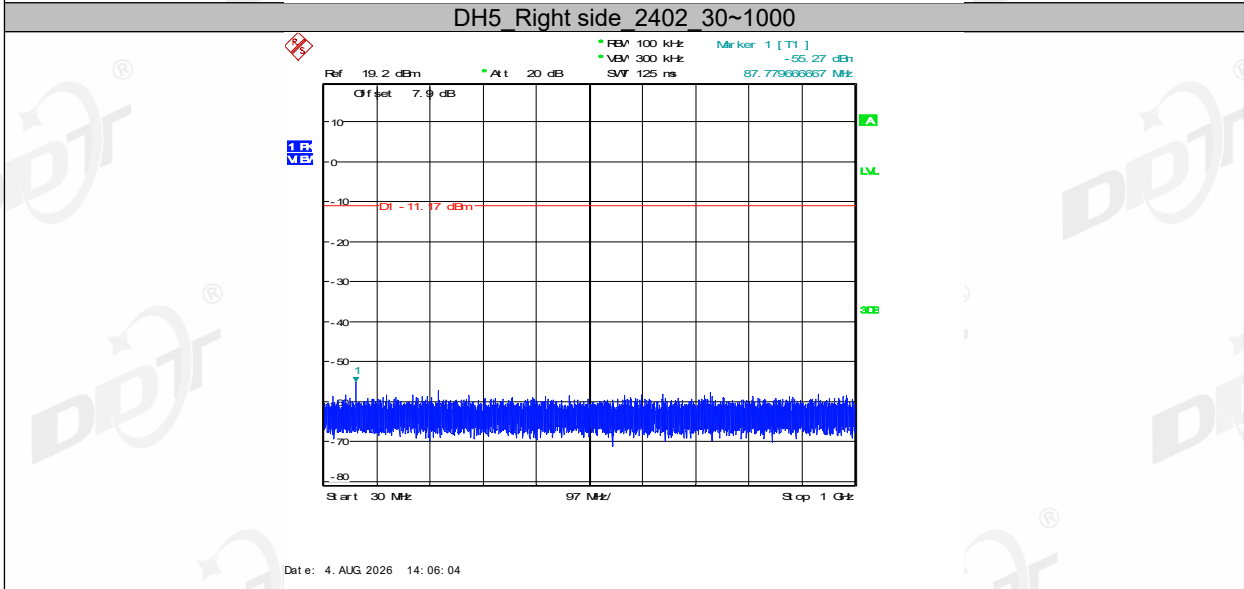
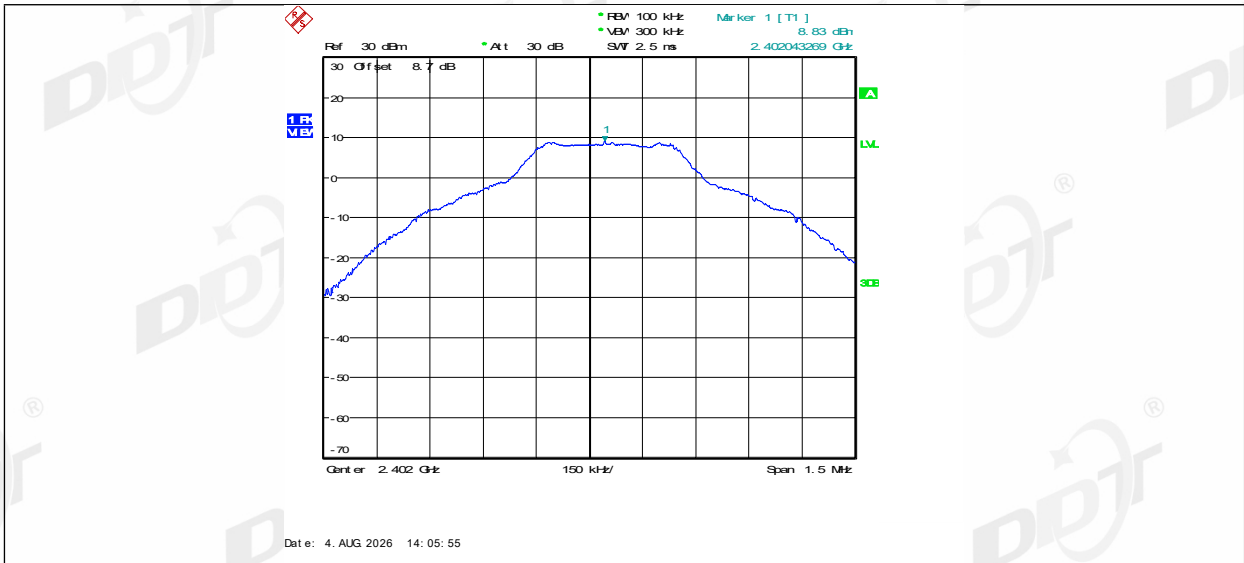
11.4. Test result

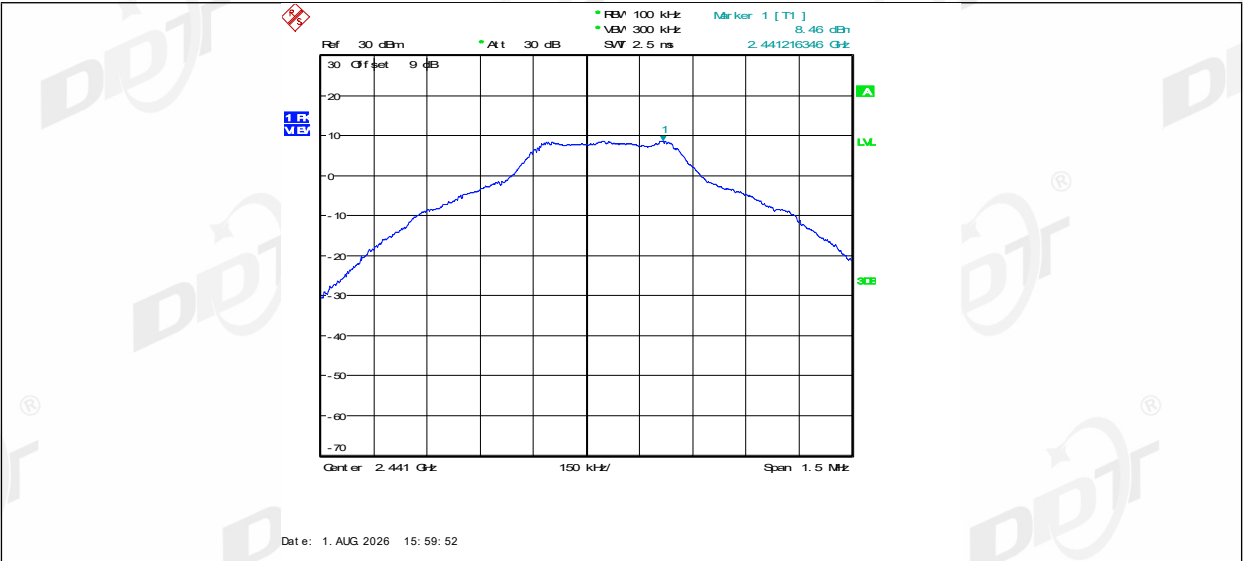
Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	27.3-28.2℃,35-53.6%RH	Test Date:	2026.8.1-2026.8.4
Test Power Supply:	Battery	Sample Number:	S26070622-009

Mode	Freq. (MHz)	Verdict
GFSK	Hopping off 2402	Pass
	Hopping off 2441	Pass
	Hopping off 2480	Pass
$\pi/4$ -DQPSK	Hopping off 2402	Pass
	Hopping off 2441	Pass
	Hopping off 2480	Pass
8DPSK	Hopping off 2402	Pass
	Hopping off 2441	Pass
	Hopping off 2480	Pass

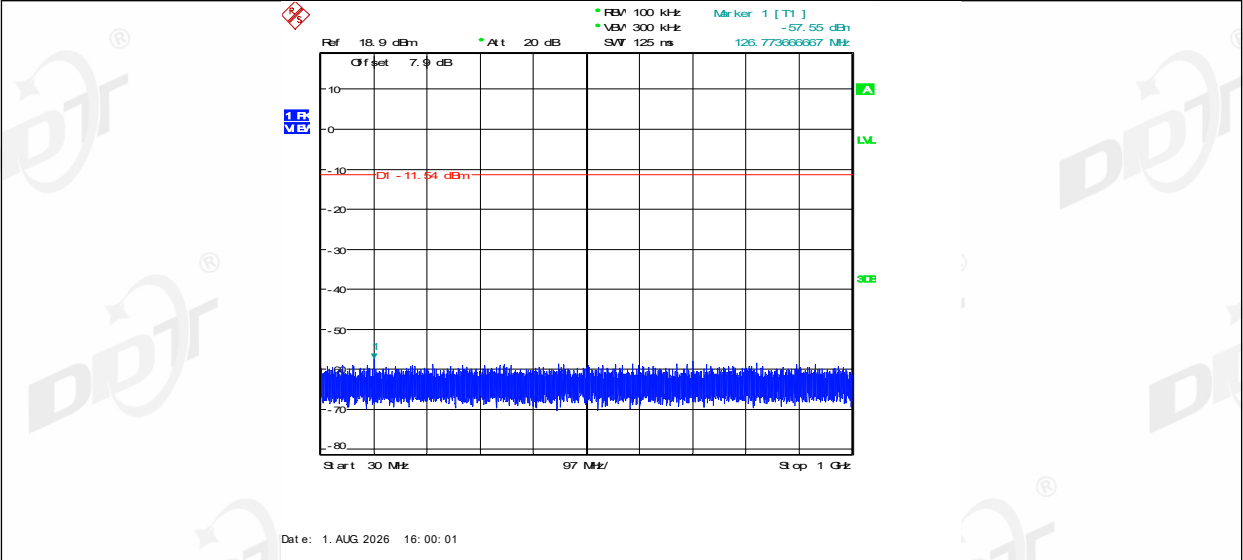
11.5. Test graphs



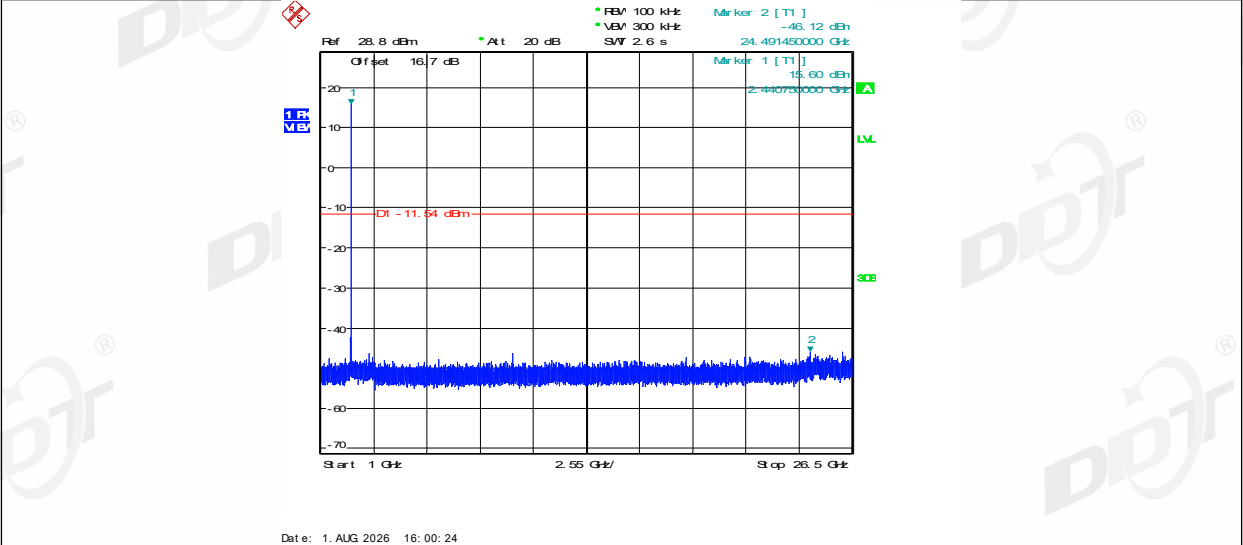




DH5_Left side_2441_30~1000



DH5_Left side_2441_1000~26500



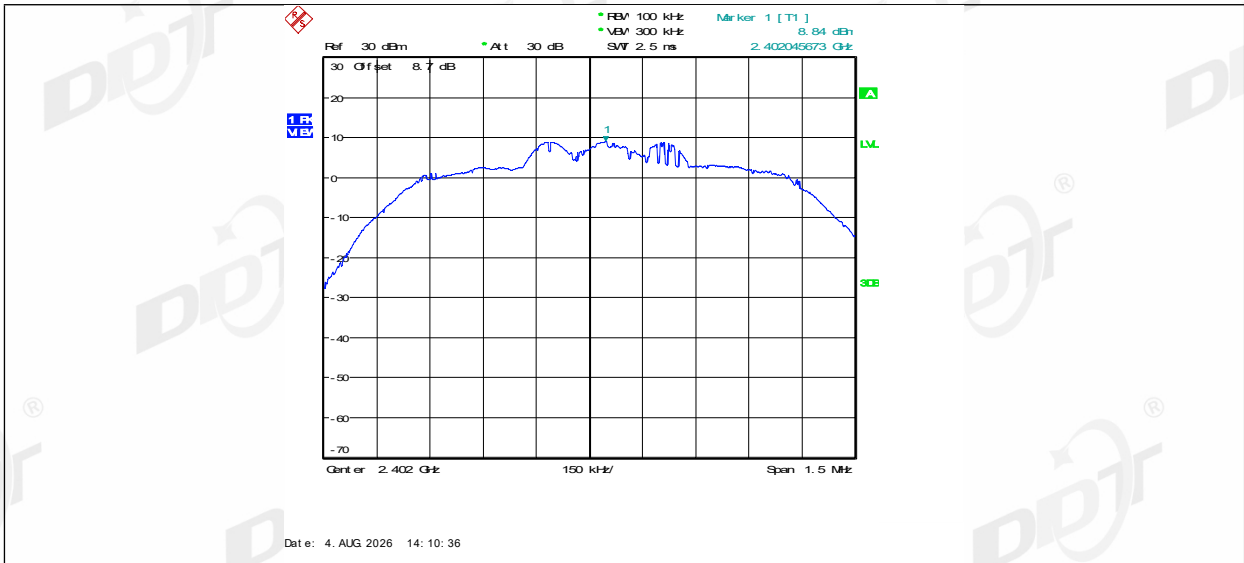
DH5_Right side_2441_0~Reference



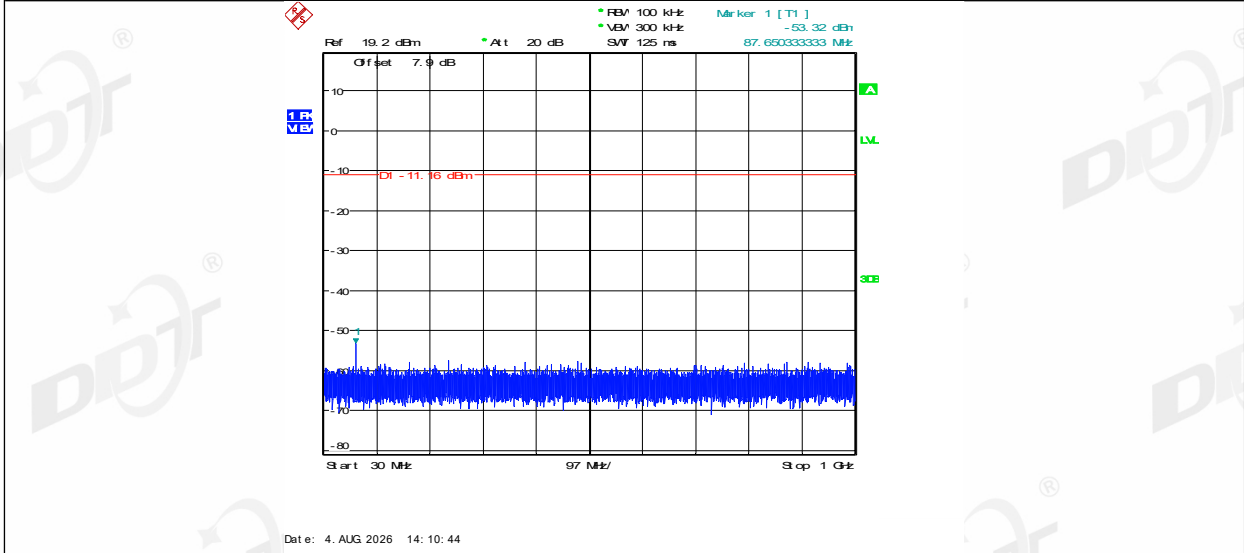




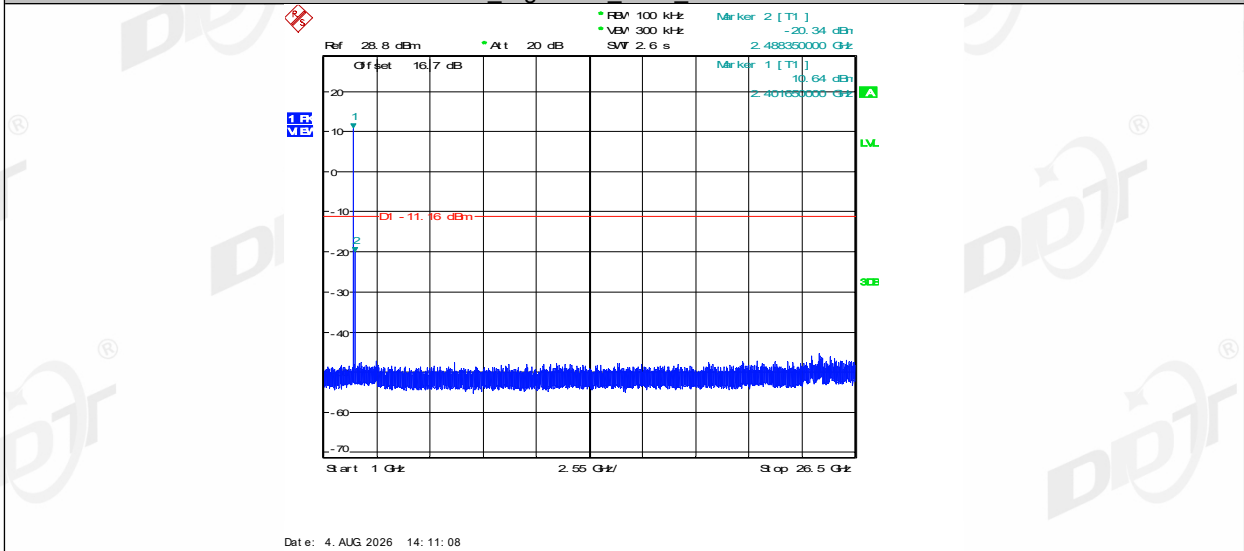




2DH5_Right side_2402_30~1000



2DH5_Right side_2402_1000~26500



2DH5_Left side_2441_0~Reference





