



FCC AND ISED CERTIFICATION TEST REPORT

Applicant	:	Globe Electric Company Inc.
Address of Applicant	:	150 Oneida, Montreal, Quebec, Canada, H9R 1A8
Manufacturer	:	Globe Electric Company Inc.
Address of Manufacturer	:	150 Oneida, Montreal, Quebec, Canada, H9R 1A8
Equipment under Test	:	SMART Convertible Track
Model No.	:	64000163
FCC ID	:	2AQUQGL64163
IC	:	8290A-GL64163
Test Standard(s)	:	FCC Rules and Regulations Part 15 Subpart C, RSS-247 Issue 3 August 2023, ANSI C63.10:2013, RSS-Gen Issue 5, Apr. 2018, Amendment 2 (February 2021)
Report No.	:	DDT-RE24112617-1E02
Issue Date	:	2025/01/05
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

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Equipment under Test	:	SMART Convertible Track
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Address of Manufacturer	:	150 Oneida, Montreal, Quebec, Canada, H9R 1A8

Test Standard Used:

FCC Rules and Regulations Part 15 Subpart C,
RSS-247 Issue 3 August 2023,
ANSI C63.10:2013,
RSS-Gen Issue 5, Apr. 2018, Amendment 2 (February 2021)

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-RE24112617-1E02		
Date of Receipt:	2024/11/27	Date of Test:	2024/11/27 - 2025/01/05

Prepared By:

Tiger Mo/Engineer**Approved By:**

Damon Hu/EMC Manager

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

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	2025/01/05	

1. Summary of Test Results

No.	Test Parameter	Clause No.	Condition	Result
1	6 dB Bandwidth and 99% Bandwidth	FCC Part 15: 15.247(a)(2), RSS-247 Issue 3 clause 5.2(a), RSS-Gen Issue 5 clause 6.7	/	Pass
2	Peak Output Power	FCC Part 15: 15.247(b)(3), RSS-247 Issue 3 clause 5.4(d)	/	Pass
3	Power Spectral Density	FCC Part 15:15.247(e), RSS-247 Issue 3 clause 5.2(b)	/	Pass
4	RF Conducted Spurious Emissions	FCC Part 15: 15.247(d), RSS-247 Issue 3 clause 5.5	/	Pass
5	Radiated Emission	FCC Part 15: 15.205, FCC Part 15: 15.209, FCC Part 15: 15.247(d), RSS-247 Issue 3 clause 5.5, RSS-Gen Issue 5 clause 8.9, RSS-Gen Issue 5 clause 8.10	/	Pass
6	Band Edge Compliance	FCC Part 15: 15.205, FCC Part 15: 15.209, FCC Part 15: 15.247(d), RSS-247 Issue 3 clause 5.5, RSS-Gen Issue 5 clause 8.9, RSS-Gen Issue 5 clause 8.10	/	Pass
7	Power Line Conducted Emissions	FCC Part 15: 15.207(a), RSS-Gen Issue 5 clause 8.8	/	Pass
8	Antenna Requirement	FCC Part 15: 15.203, RSS-Gen Issue 5 clause 6.8	/	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	: SMART Convertible Track
Model Number	: 64000163
EUT Function Description	: Please reference user manual of this device
Power Supply	: AC 120V/60Hz
Antenna Type	: Wire antenna
Max Antenna Gain(dBi)	: 1

Note: This EUT support Bluetooth LE, 2.4 GHz WLAN, this report only for 2.4 GHz WLAN.

Radio Technology	: IEEE 802.11b/g/n
Operation frequency	: IEEE 802.11b: 2412MHz-2462MHz IEEE 802.11g: 2412MHz-2462MHz IEEE 802.11n HT20: 2412MHz-2462MHz IEEE 802.11n HT40: 2422MHz-2452MHz
Modulation	: IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK)

Channel information					
CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)
1	2412	5	2432	9	2452
2	2417	6	2437	10	2457
3	2422	7	2442	11	2462
4	2427	8	2447	/	/

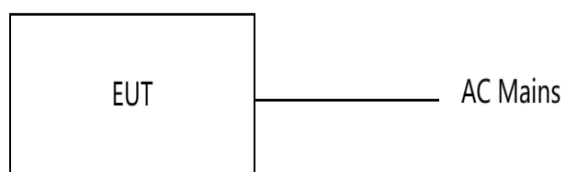
Note: The above EUT information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications or User's Manual. The above Antenna information is declared by manufacturer and for more detailed features description please refer to the manufacturer's 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: Beken Wi-Fi Test Tool V1.6.0.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: 0.5dB (According to the manufacturer's claims)

Tested mode, channel, and data rate information				
Mode	Setting Tx Power	Data rate (Mbps) (see Note)	Channel	Frequency (MHz)
	ANT1			
IEEE 802.11b	30	1	LCH: CH1	2412
	30	1	MCH: CH6	2437
	30	1	HCH: CH11	2462
IEEE 802.11g	65	6	LCH: CH1	2412
	65	6	MCH: CH6	2437
	65	6	HCH: CH11	2462
IEEE 802.11n HT20	60	MCS 0	LCH: CH1	2412
	60	MCS 0	MCH: CH6	2437
	60	MCS 0	HCH: CH11	2462
IEEE 802.11n HT40	60	MCS 0	LCH: CH3	2422
	60	MCS 0	MCH: CH6	2437
	60	MCS 0	HCH: CH9	2452

Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.

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 to106 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-20155, G-20118

2.8. Measurement uncertainty

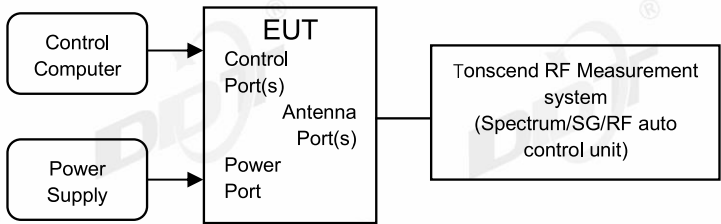
Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power (Conducted) (Spectrum analyzer)	0.86 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$); 1.38 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$)
Peak Output Power (Conducted) (Power Sensor)	0.74 dB
Power Spectral Density	0.74 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$); 1.38 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$)
Frequencies Stability	6.7×10^{-8} (Antenna couple method) 5.5×10^{-8} (Conducted method)
Conducted spurious emissions	0.86 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$); 1.40 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$) 1.66 dB ($8 \text{ GHz} \leq f < 26.5 \text{ GHz}$)
Uncertainty for radio frequency (RBW < 20 kHz)	3×10^{-8}
Temperature	0.4 °C
Humidity	2 %
Uncertainty for Radiation Emission test (9 kHz – 30 MHz)	3.44 dB
Uncertainty for Radiation Emission test (30 MHz - 1 GHz)	4.70 dB (Antenna Polarize: V) 4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1 GHz - 40 GHz)	4.10 dB (1 - 6 GHz) 4.40 dB (6 GHz - 18 GHz) 3.54 dB (18 GHz - 26 GHz) 4.30 dB (26 GHz - 40 GHz)
Uncertainty for Power line conduction emission test	3.34dB (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 3#)				
SIGNAL ANALYZER	R&S	FSV40	101407	2025/07/08
Wideband Radio Communication Tester	R&S	CMW500	117491	2025/03/31
EXG Analog Signal Generator	KEYSIGHT	N5173B	MY62153058	2025/07/08
MXG Vector Signal Generator	Agilent	N5182A	MY48180912	2025/03/31
RF Control Unit	Tonscend	JS0806-2	20C8060230	2025/03/31
TEMP&HUMI Programmable Chamber	ZHIXIANG	ZXGDJS-150L	ZX170110-A	2025/04/22
Test Software	Tonscend	JS1120-3	Ver.3.2.22	N/A

4. 6dB Bandwidth

4.1. Block diagram of test setup



4.2. Limits

For direct sequence systems, the minimum 6 dB bandwidth shall be at least 500 kHz

4.3. Test procedure

- (1) The test according to ANSI C63.10-2013 clause 11.8.
- (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 6 dB Bandwidth:

RBW:	100 kHz
VBW:	$\geq [3 \times \text{RBW}]$
Detector Mode:	peak
Sweep time:	auto
Trace mode	max hold

Allow the trace to stabilize, measure the 6 dB bandwidth of signal, and record the results in the report

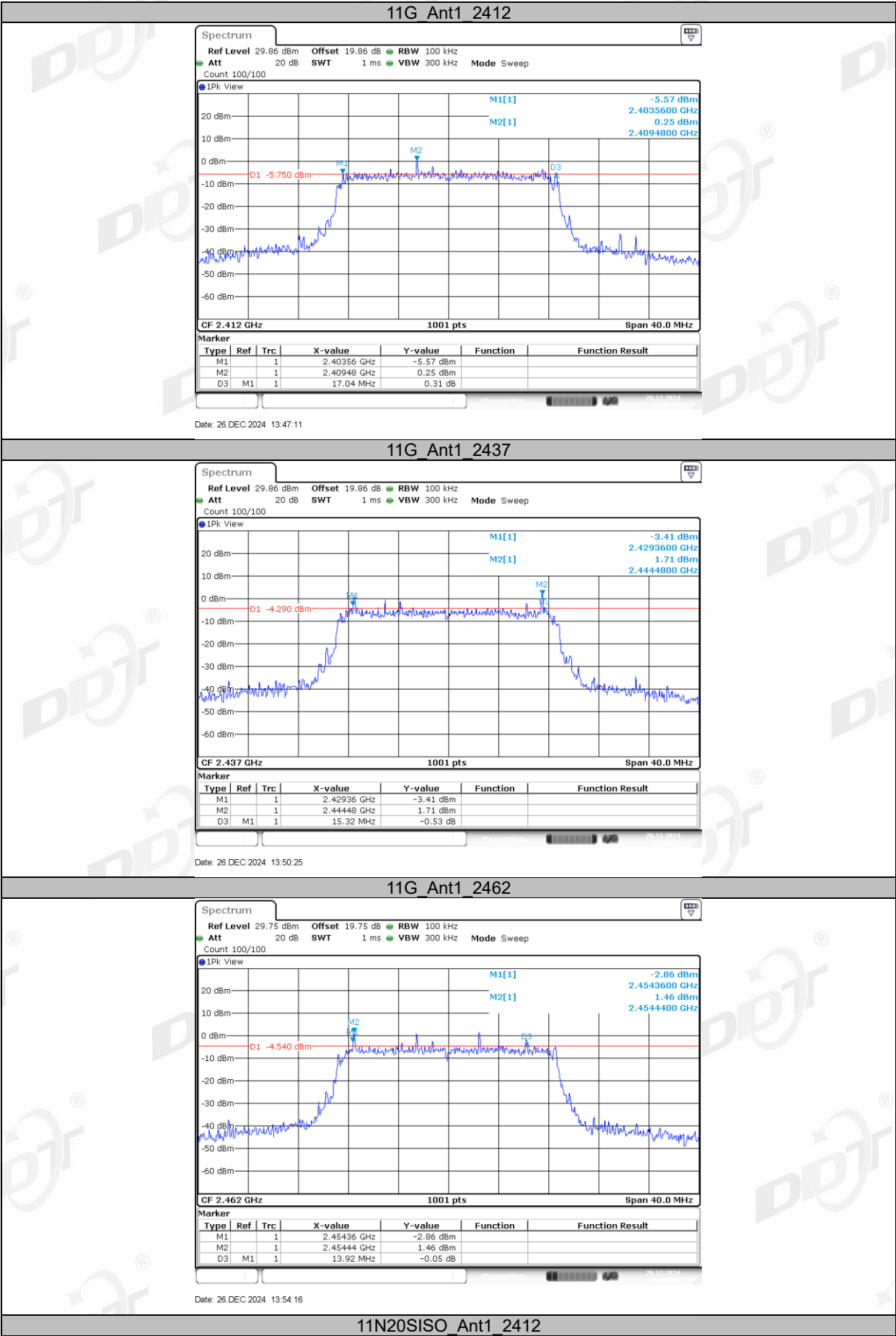
4.4. Test result

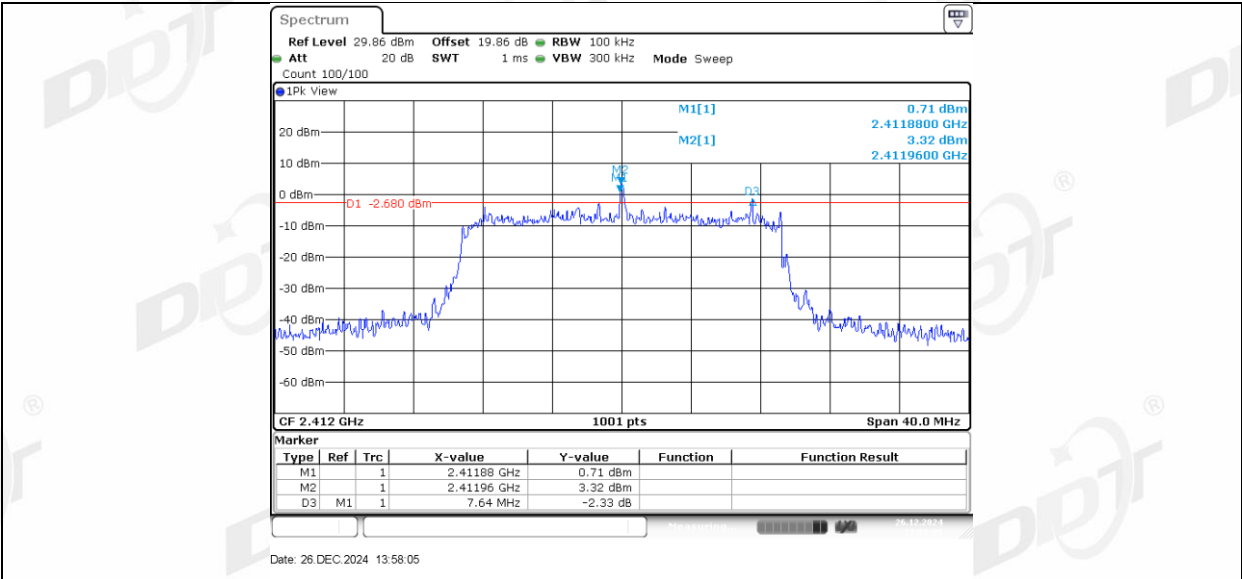
Test Engineer:	Zhongyao	Test Site:	RF Measurement System 3#
Ambient Condition:	25.8℃,42.1%RH	Test Date:	2024.12.26
Test Power Supply:	AC 120V/60HZ	Sample Number:	S24112617-001

Test Mode	Antenna	Frequency [MHz]	DTS BW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11B	Ant1	2412	11.08	2405.40	2416.48	0.5	PASS
		2437	10.56	2430.40	2440.96	0.5	PASS
		2462	11.08	2455.44	2466.52	0.5	PASS
11G	Ant1	2412	17.04	2403.56	2420.60	0.5	PASS
		2437	15.32	2429.36	2444.68	0.5	PASS
		2462	13.92	2454.36	2468.28	0.5	PASS
11N20SIS O	Ant1	2412	7.64	2411.88	2419.52	0.5	PASS
		2437	17.08	2429.08	2446.16	0.5	PASS
		2462	16.68	2452.80	2469.48	0.5	PASS
11N40SIS O	Ant1	2422	35.12	2404.40	2439.52	0.5	PASS
		2437	35.12	2419.40	2454.52	0.5	PASS
		2452	35.12	2434.40	2469.52	0.5	PASS

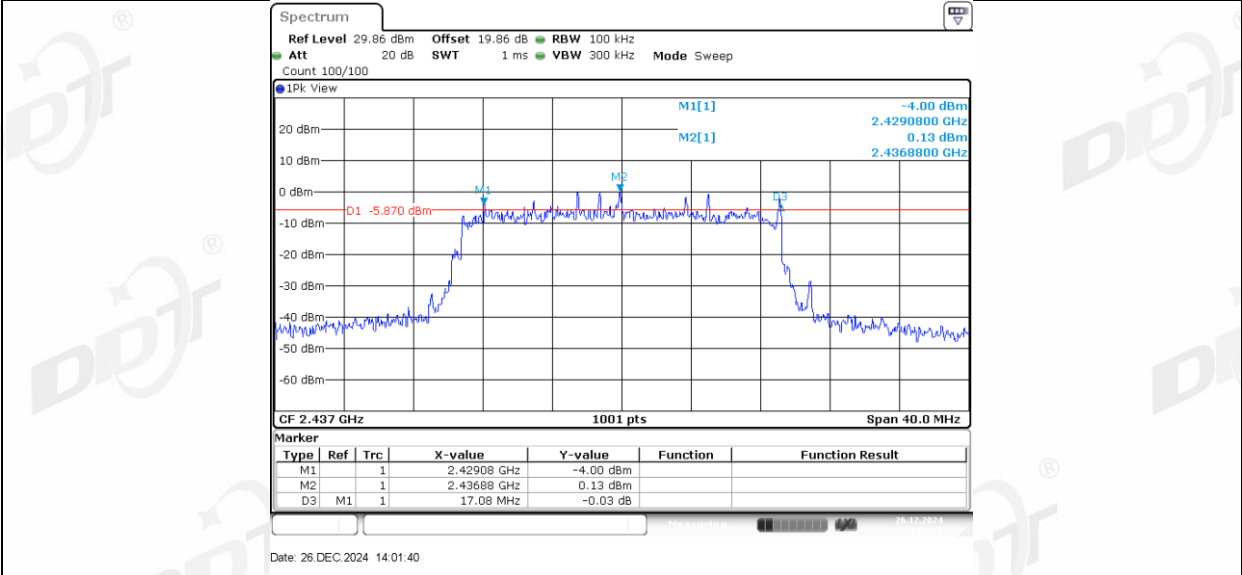
4.5. Test graphs



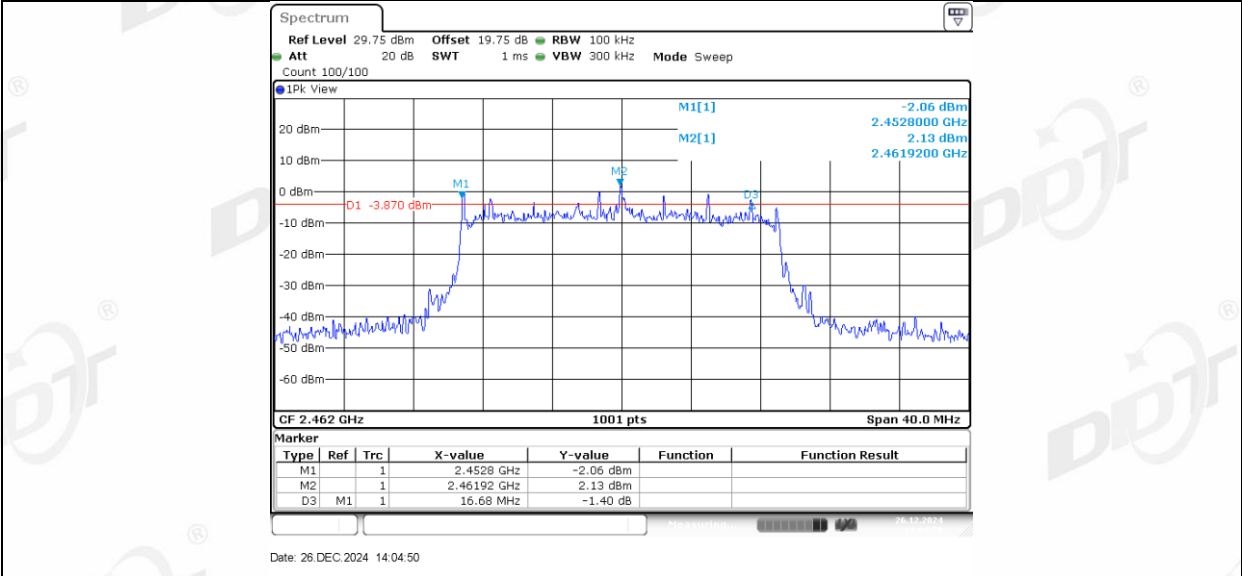




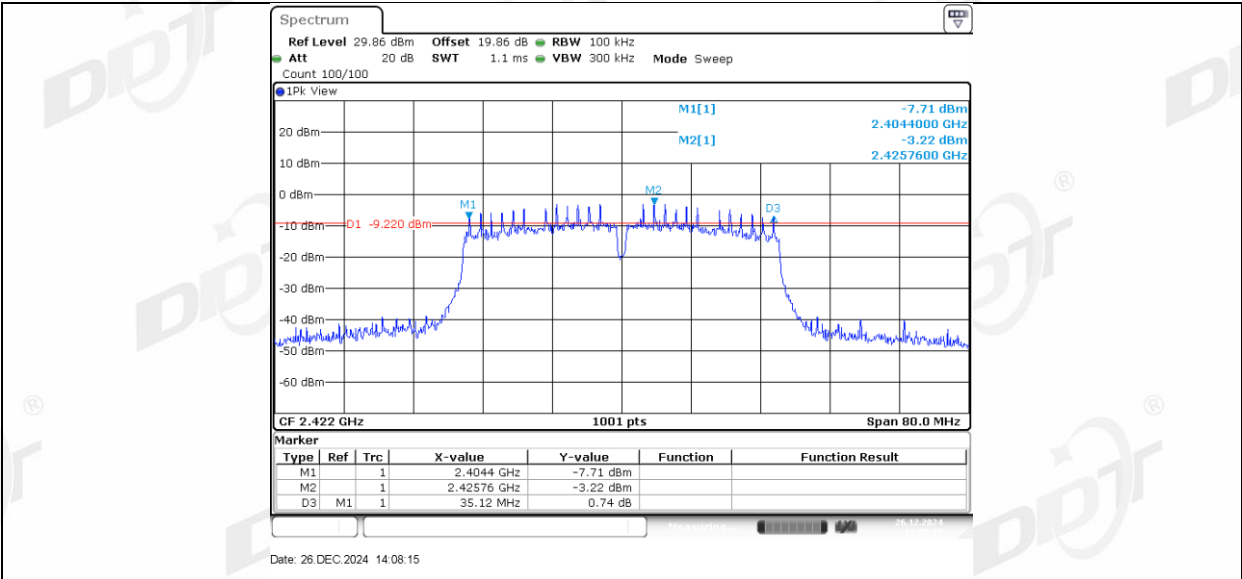
11N20SISO Ant1 2437



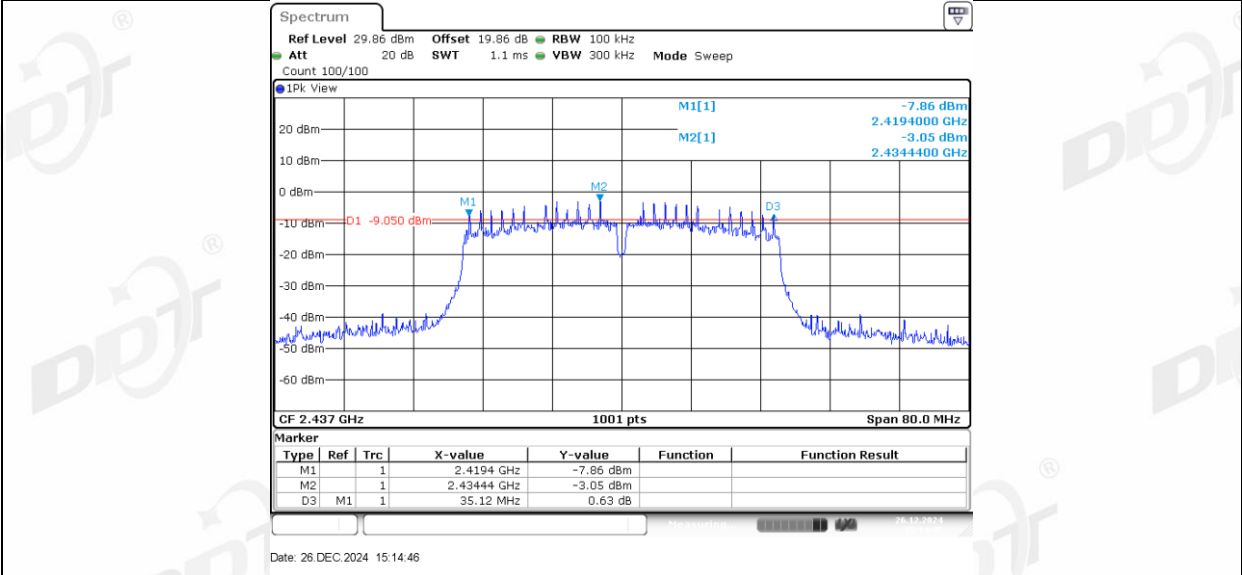
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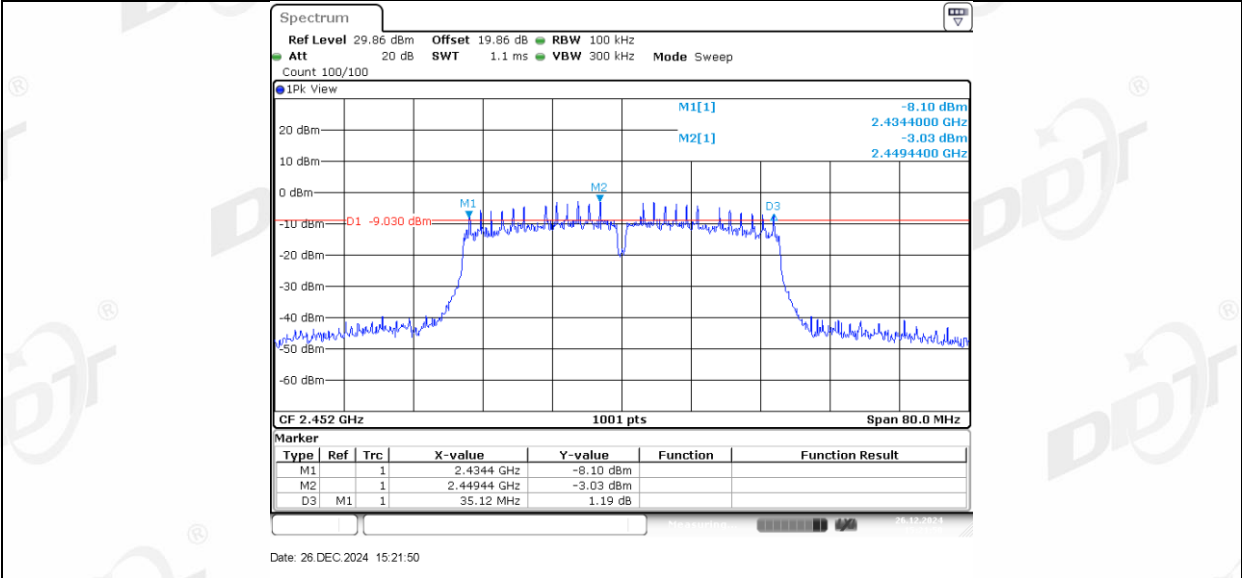
11N40SISO Ant1 2422



11N40SISO Ant1 2437

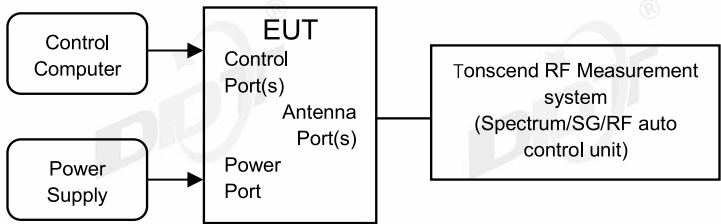


11N40SISO Ant1 2452



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 C63.10-2013 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:

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

Allow the trace to stabilize, measure the 99% bandwidth of signal, and record the results in the report.

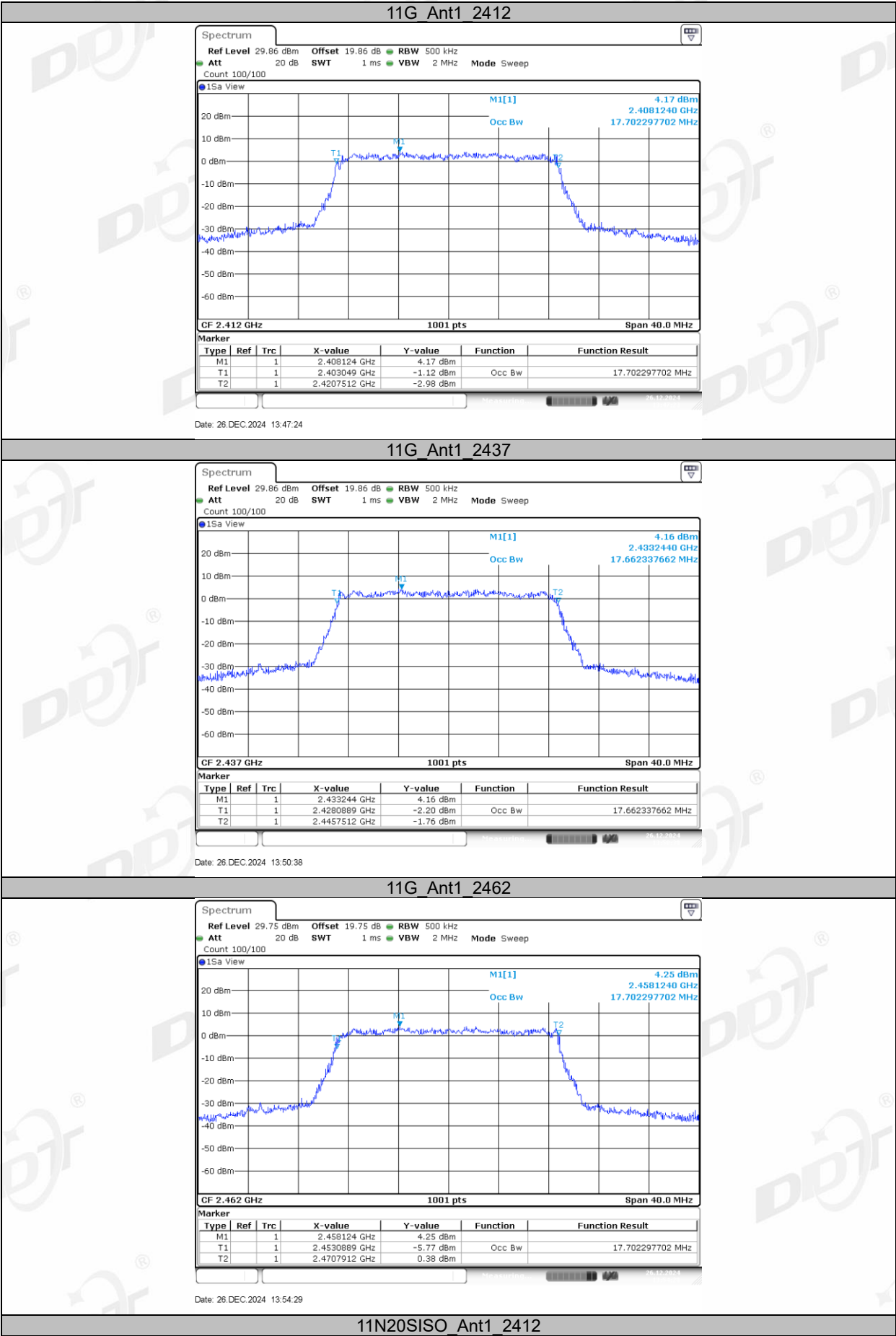
5.4. Test result

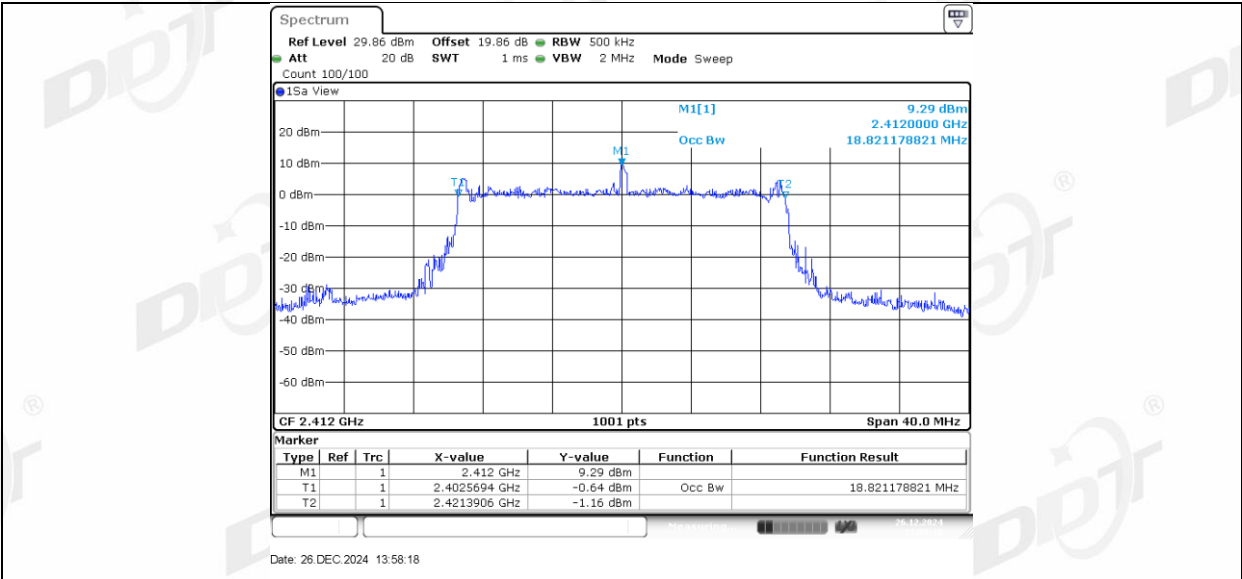
Test Engineer:	Zhongyao	Test Site:	RF Measurement System 3#
Ambient Condition:	25.8℃,42.1%RH	Test Date:	2024.12.26
Test Power Supply:	AC 120V/60HZ	Sample Number:	S24112617-001

TestMode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.865	2403.8881	2418.7532	---	---
		2437	14.865	2428.8482	2443.7133	---	---
		2462	14.865	2453.8482	2468.7133	---	---
11G	Ant1	2412	17.702	2403.0490	2420.7512	---	---
		2437	17.662	2428.0889	2445.7512	---	---
		2462	17.702	2453.0889	2470.7912	---	---
11N20SIS O	Ant1	2412	18.821	2402.5694	2421.3906	---	---
		2437	18.741	2427.5295	2446.2707	---	---
		2462	18.781	2452.5295	2471.3107	---	---
11N40SIS O	Ant1	2422	36.124	2403.8581	2439.9820	---	---
		2437	36.284	2418.7782	2455.0619	---	---
		2452	36.204	2433.7782	2469.9820	---	---

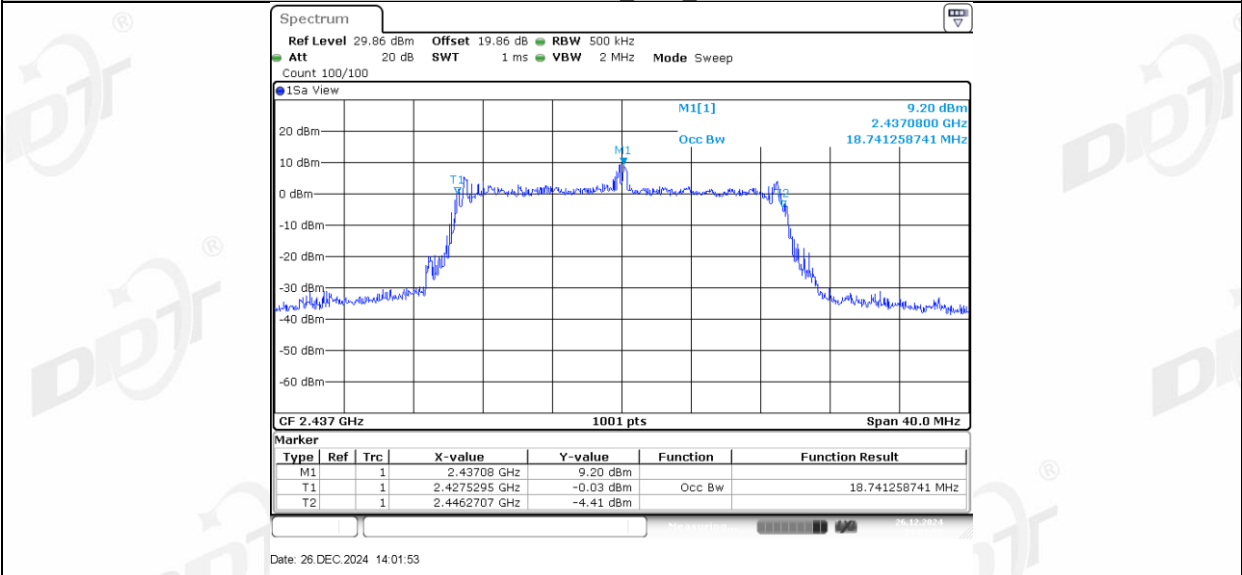
5.5. Test graphs



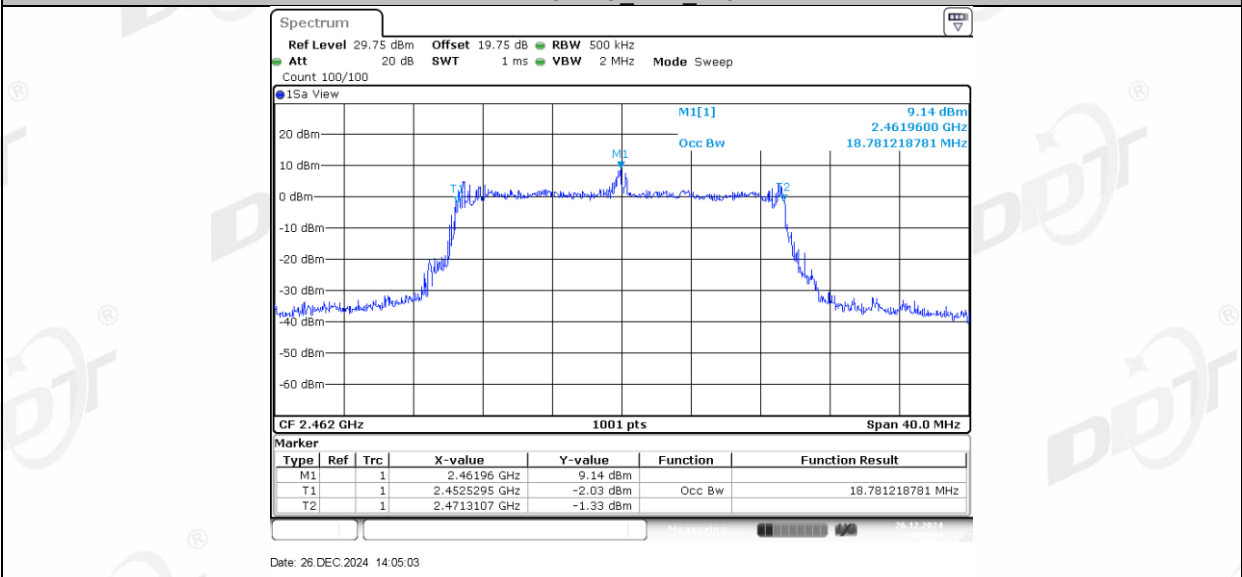




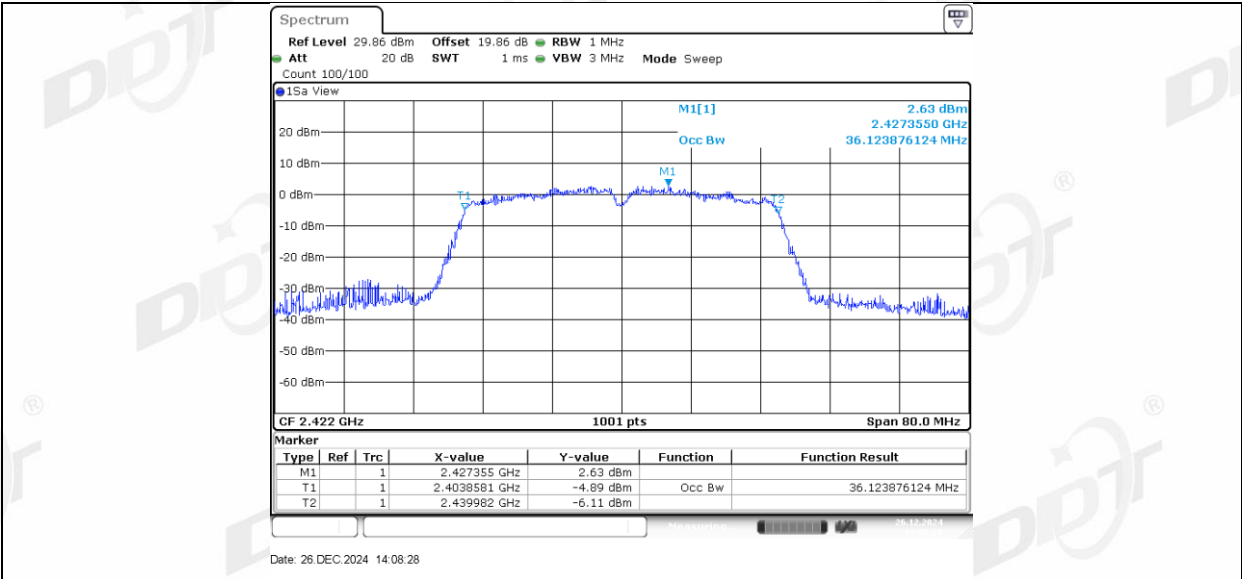
11N20SISO Ant1 2437



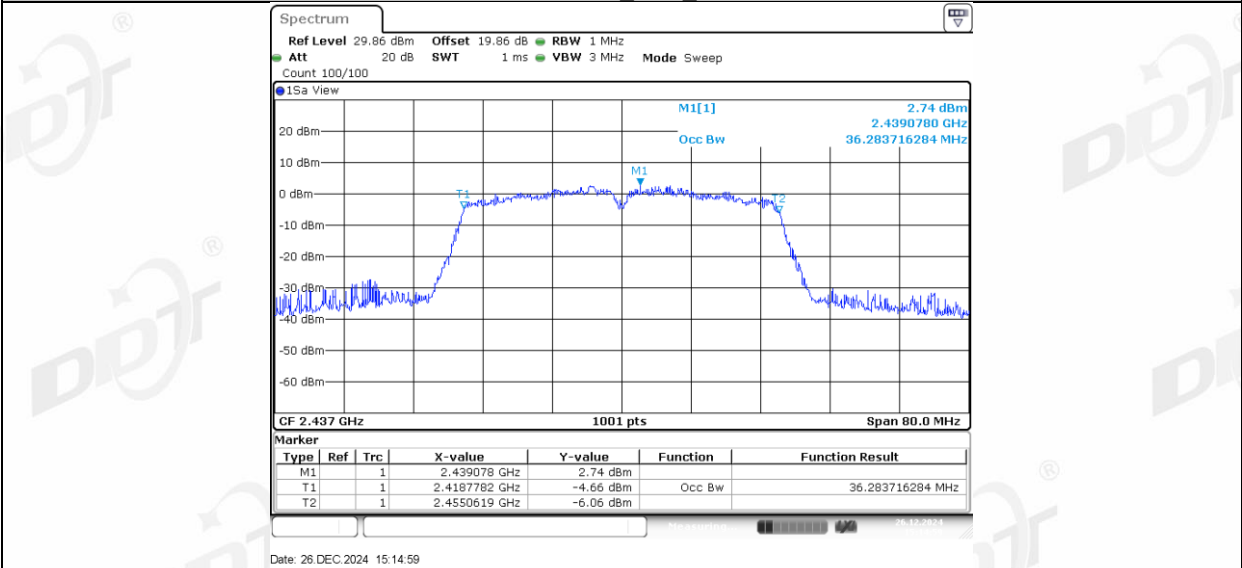
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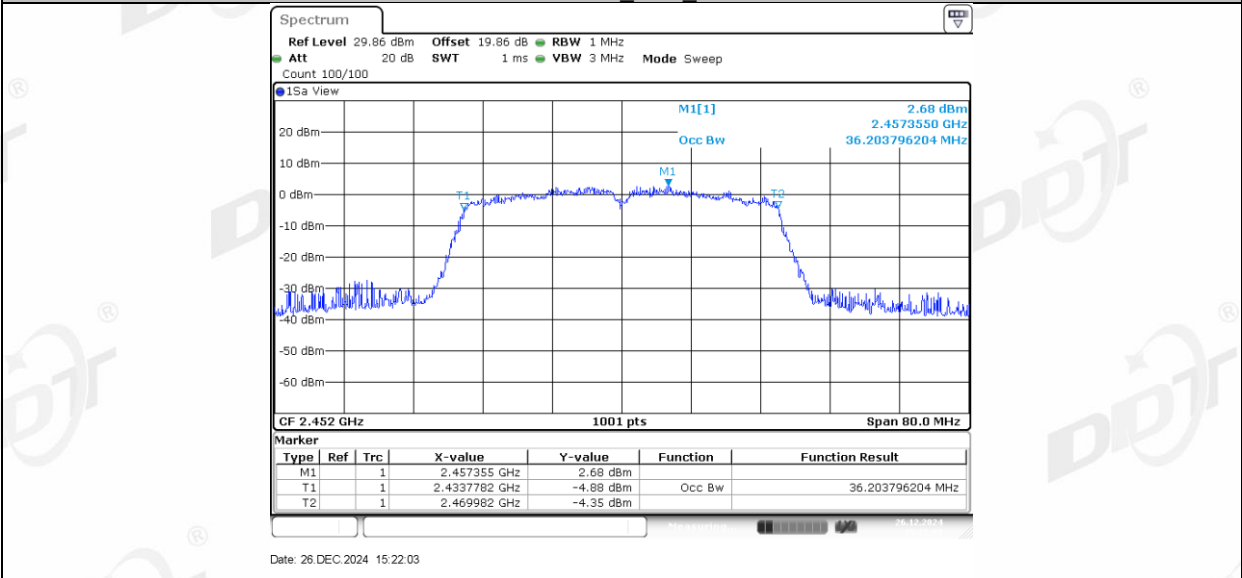
11N40SISO Ant1 2422



11N40SISO Ant1 2437

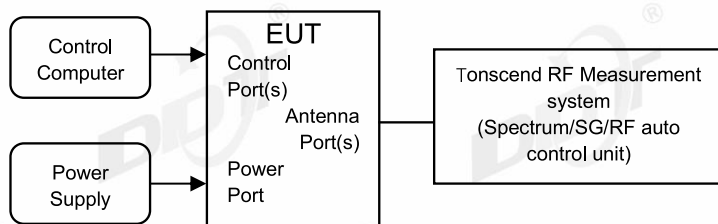


11N40SISO Ant1 2452



6. Conducted Output Power

6.1. Block diagram of test setup



6.2. Limits

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.3. Test procedure

- (1) The test according to ANSI C63.10-2013 clause 11.9.2.3.
- (2) Connect EUT's antenna output to RF power meter 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, If the transmitter does not transmit continuously, measure the duty cycle, D, of the transmitter output signal.
- (4) Measure the average power of the transmitter. This measurement is an average over both the ON and OFF periods of the transmitter.
- (5) Adjust the measurement in dBm by adding $[10 \log (1 / D)]$, where D is the duty cycle.
- (6) Record the RF average power of each antenna port.

6.4. Test result average

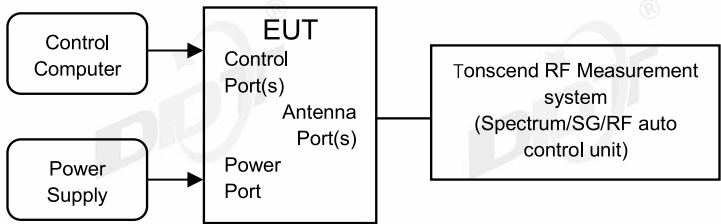
Test Engineer:	Zhongyao	Test Site:	RF Measurement System 3#
Ambient Condition:	25.8℃,42.1%RH	Test Date:	2024.12.26
Test Power Supply:	AC 120V/60HZ	Sample Number:	S24112617-001

Test Mode	Antenna	Frequency [MHz]	Average power [dBm]	Duty Cycle [%]	DC Factor [dB]	Result [dBm]	Limit [dBm]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11B	Ant1	2412	9.82	19.50	7.10	16.92	≤30.00	17.92	≤36.00	PASS
		2437	9.84	19.50	7.10	16.94	≤30.00	17.94	≤36.00	PASS
		2462	8.81	19.50	7.10	15.91	≤30.00	16.91	≤36.00	PASS
11G	Ant1	2412	1.02	10.06	9.97	10.99	≤30.00	11.99	≤36.00	PASS
		2437	1.08	10.06	9.97	11.05	≤30.00	12.05	≤36.00	PASS
		2462	0.98	10.06	9.97	10.95	≤30.00	11.95	≤36.00	PASS
11N20SISO	Ant1	2412	-0.37	9.86	10.06	9.69	≤30.00	10.69	≤36.00	PASS
		2437	0.21	9.86	10.06	10.27	≤30.00	11.27	≤36.00	PASS
		2462	-0.35	9.86	10.06	9.71	≤30.00	10.71	≤36.00	PASS
11N40SISO	Ant1	2422	-1.30	10.06	9.97	8.67	≤30.00	9.67	≤36.00	PASS
		2437	-1.54	10.06	9.97	8.43	≤30.00	9.43	≤36.00	PASS
		2452	-1.40	10.06	9.97	8.57	≤30.00	9.57	≤36.00	PASS

Note: EIRP (dBm)=Conducted Output Power (dBm)+ Antenna Gain (dBi)

7. Power Spectral Density

7.1. Block diagram of test setup



7.2. Limits

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

7.3. Test procedure

- (1) The test according to ANSI C63.10-2013 clause 11.10.5.
- (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 Power Spectral Density measurement:

Center frequency	DTS Channel center frequency
RBW:	$3\text{ kHz} \leq \text{RBW} \leq 100\text{ kHz}$
VBW:	$\geq 3\text{RBW}$
Span	1.5 times the DTS bandwidth
Detector Mode:	RMS
Sweep time:	auto
Trace mode	max hold
	Employ trace averaging (rms)
Trace	mode over a minimum of 100 traces.

(5) Add $[10 \log (1 / D)]$, where D is the duty cycle measured in step a), to the measured PSD to compute the average PSD during the actual transmission time.
If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

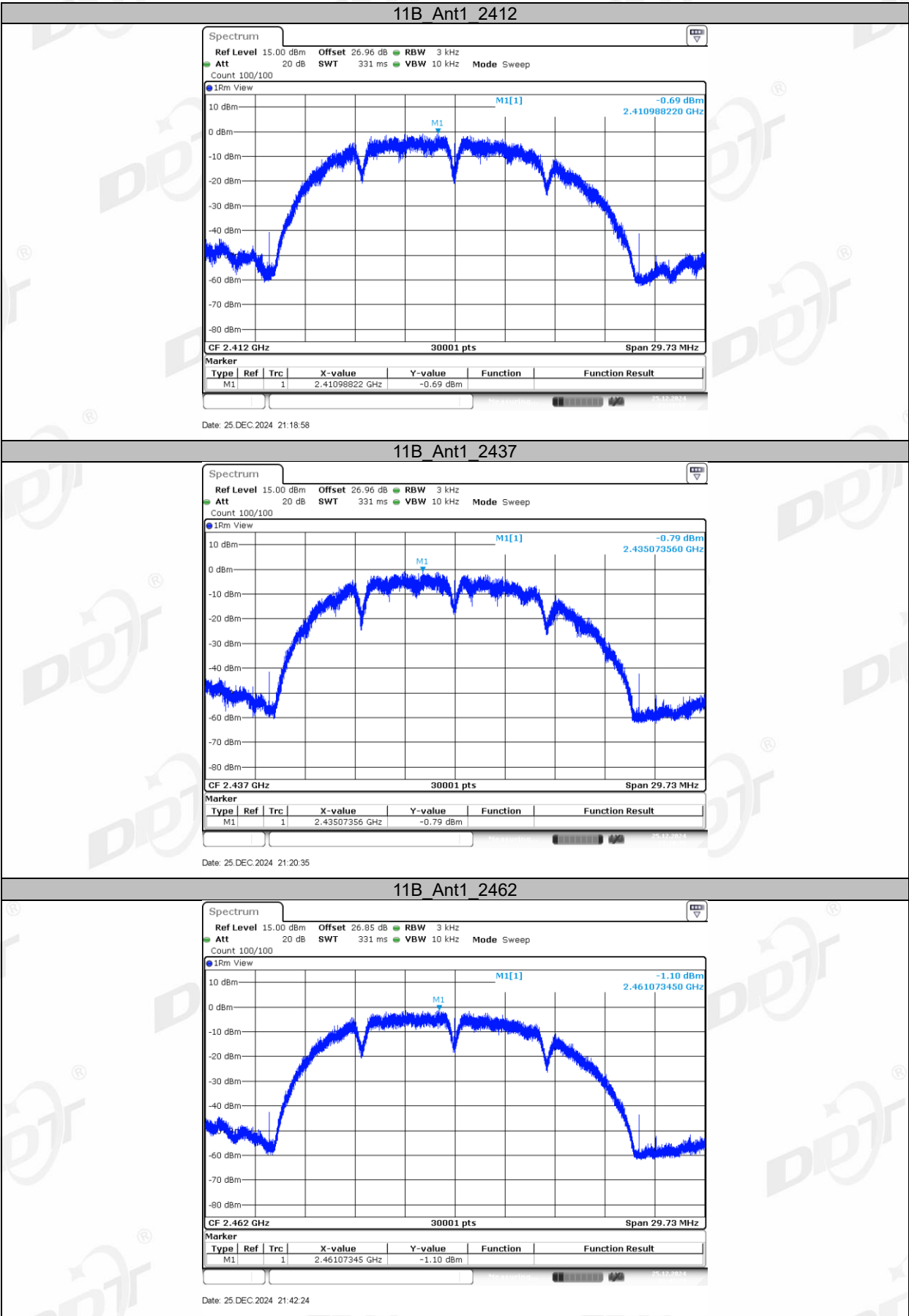
7.4. Test result

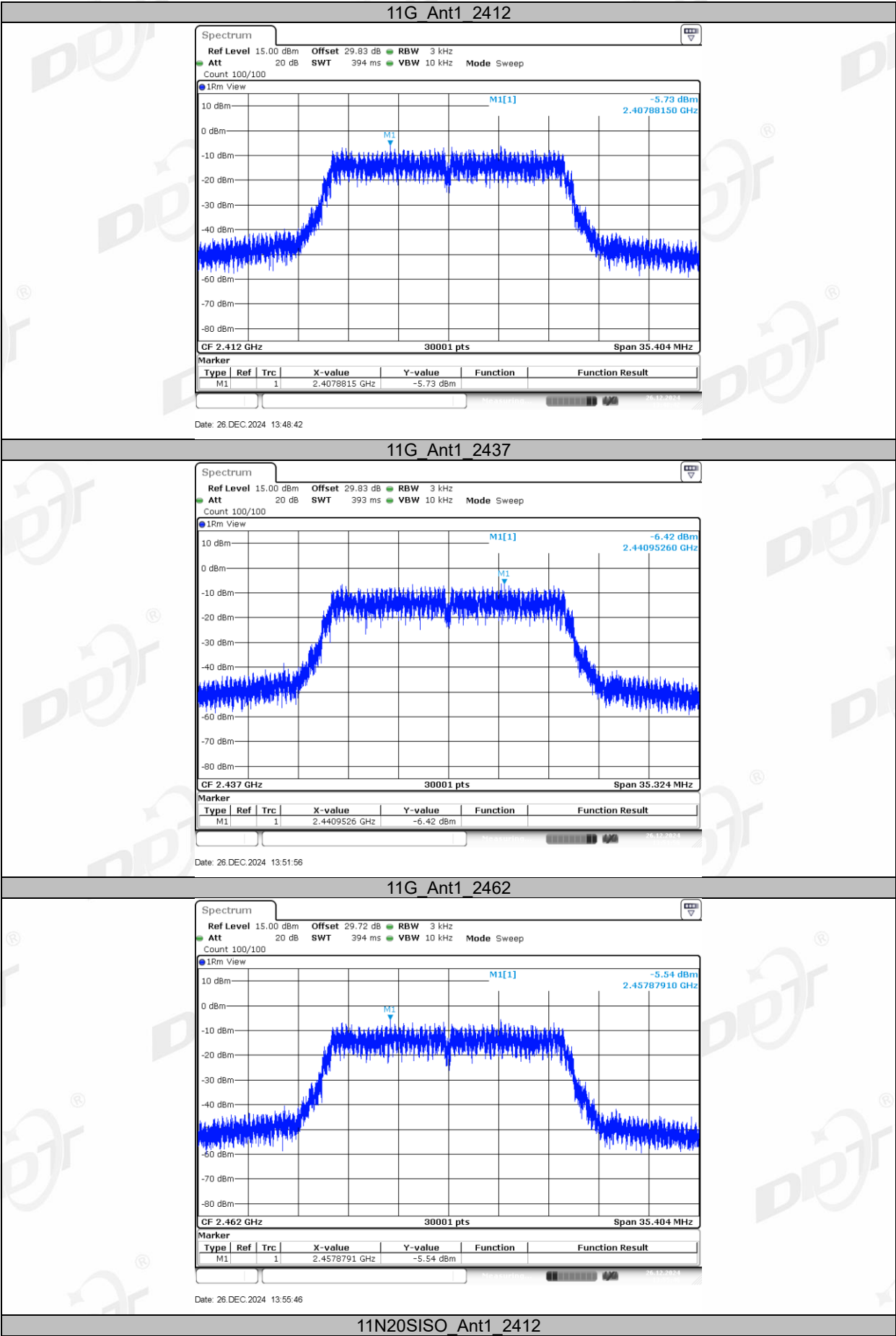
Test Engineer:	Zhongyao	Test Site:	RF Measurement System 3#
Ambient Condition:	25.8℃,42.1%RH	Test Date:	2024.12.26
Test Power Supply:	AC 120V/60HZ	Sample Number:	S24112617-001

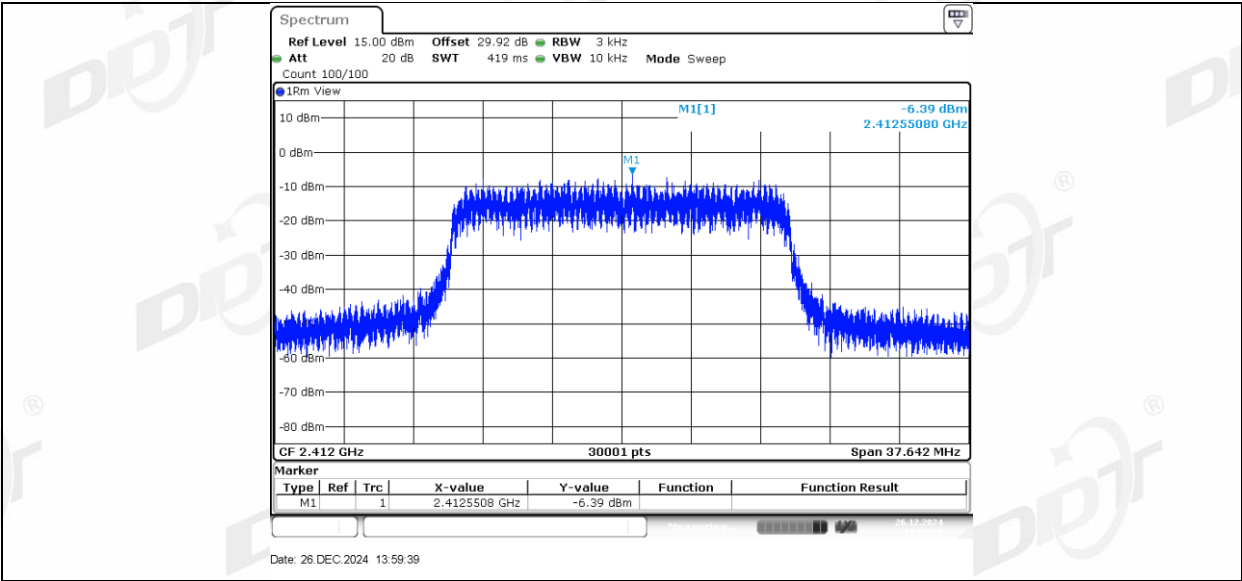
Test Mode	Antenna	Frequency [MHz]	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-0.69	≤8.00	PASS
		2437	-0.79	≤8.00	PASS
		2462	-1.10	≤8.00	PASS
11G	Ant1	2412	-5.73	≤8.00	PASS
		2437	-6.42	≤8.00	PASS
		2462	-5.54	≤8.00	PASS
11N20SISO	Ant1	2412	-6.39	≤8.00	PASS
		2437	-5.88	≤8.00	PASS
		2462	-6.22	≤8.00	PASS
11N40SISO	Ant1	2422	-10.01	≤8.00	PASS
		2437	-10.65	≤8.00	PASS
		2452	-10.61	≤8.00	PASS

Note: The Duty Cycle Factor is compensated in the graph.

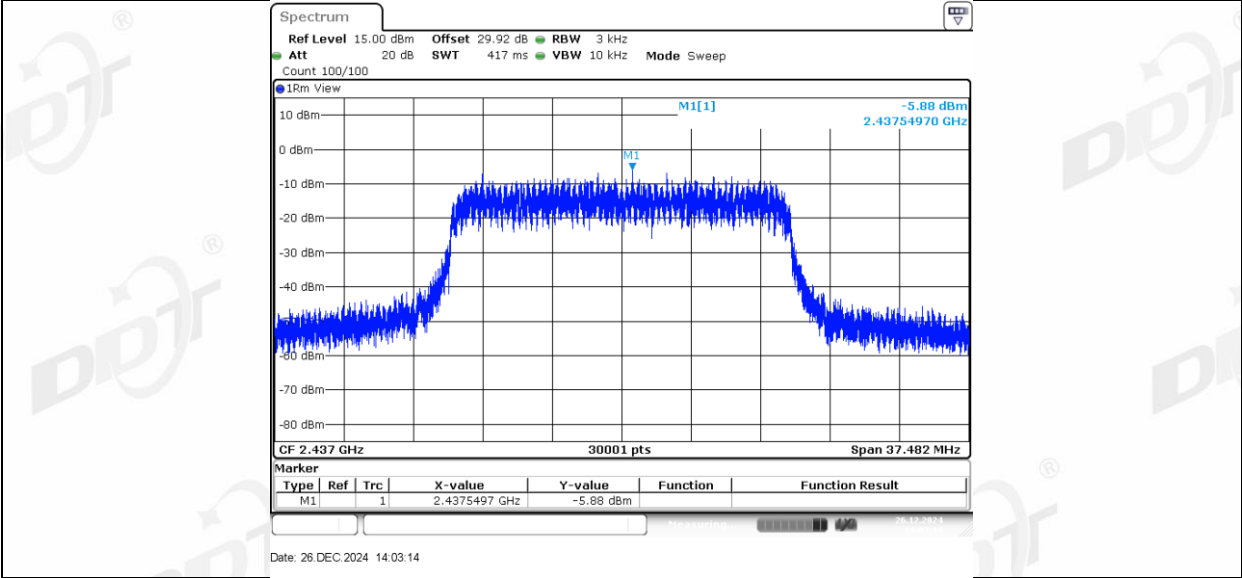
7.5. Test graphs



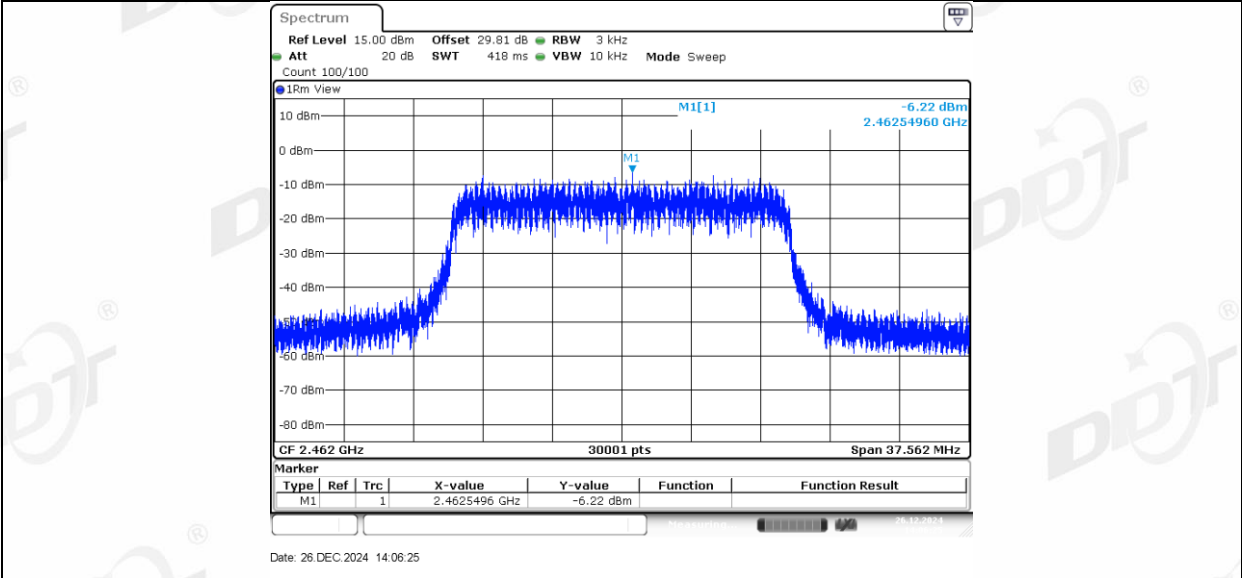




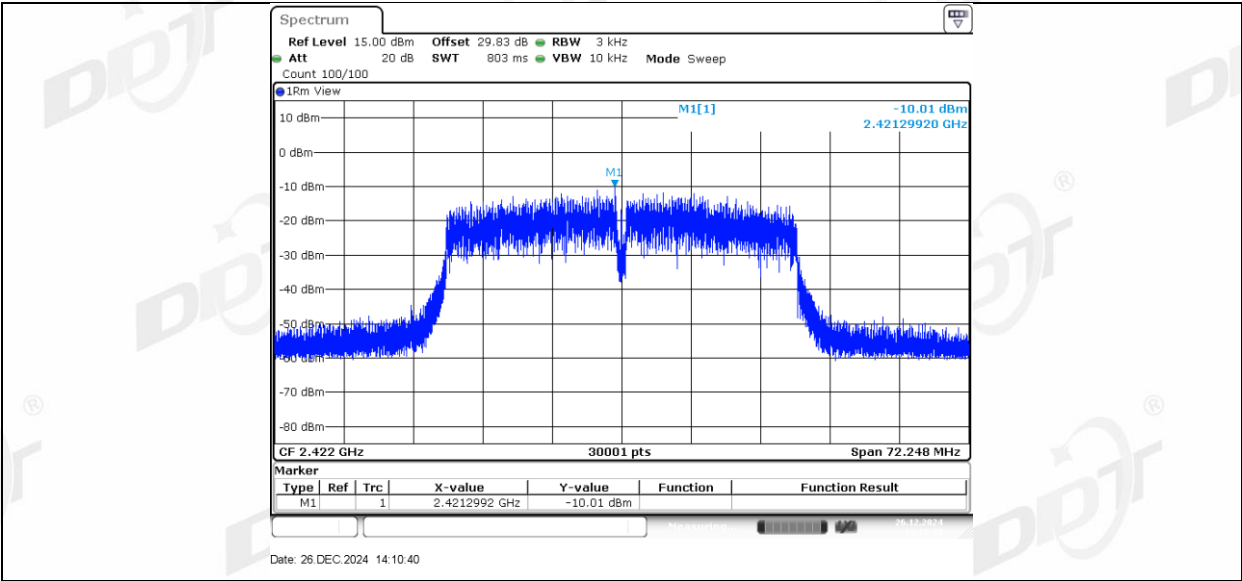
11N20SISO Ant1 2437



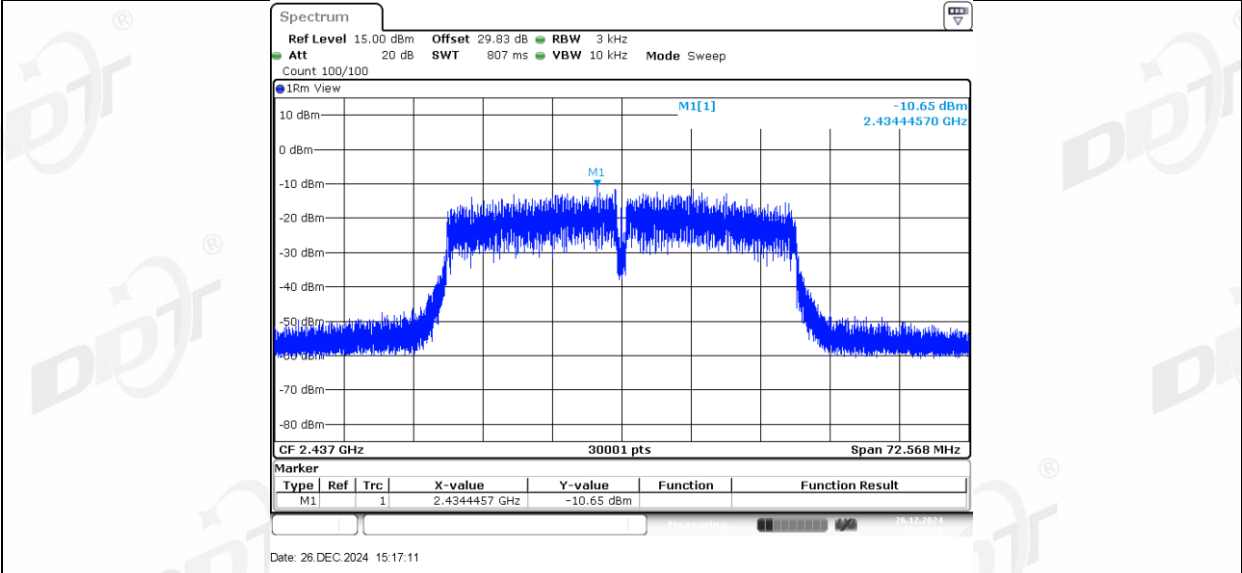
11N20SISO Ant1 2462



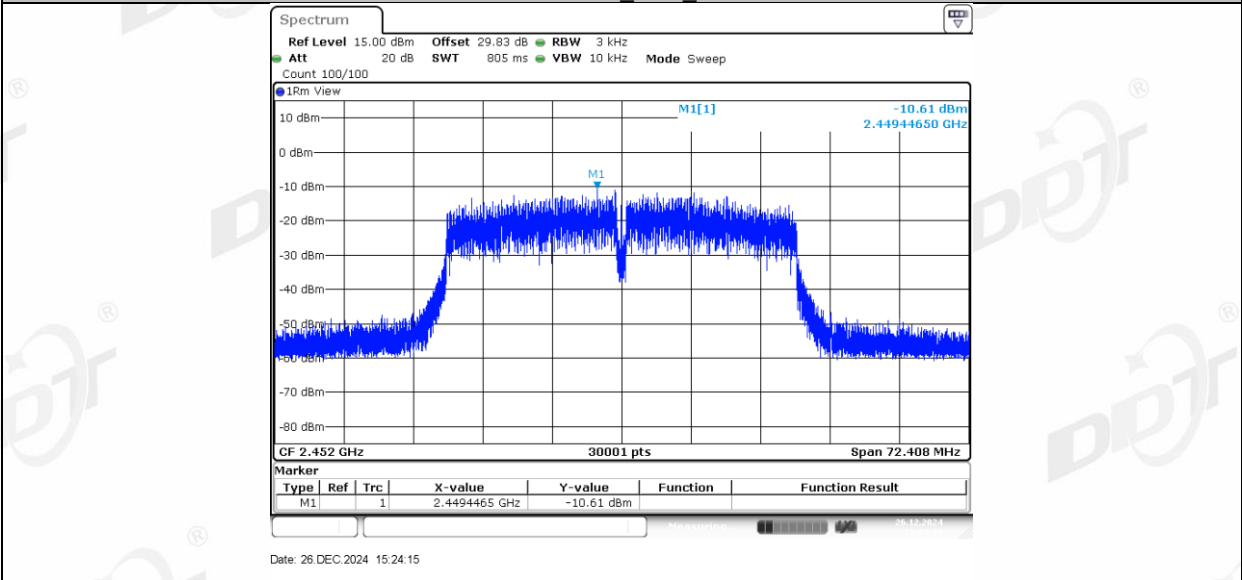
11N40SISO Ant1 2422



11N40SISO Ant1 2437

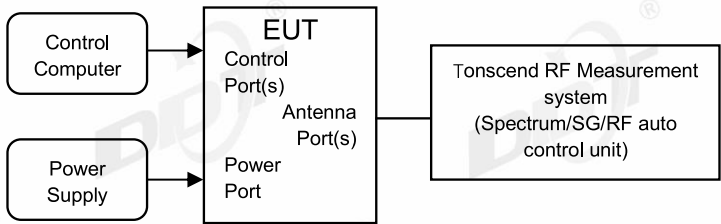


11N40SISO Ant1 2452



8. Band Edge Compliance (Conducted Method)

8.1. Block diagram of test setup



8.2. 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 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

8.3. 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.
Then mark the maximum amplitude of all unwanted emissions outside of the authorized frequency band.

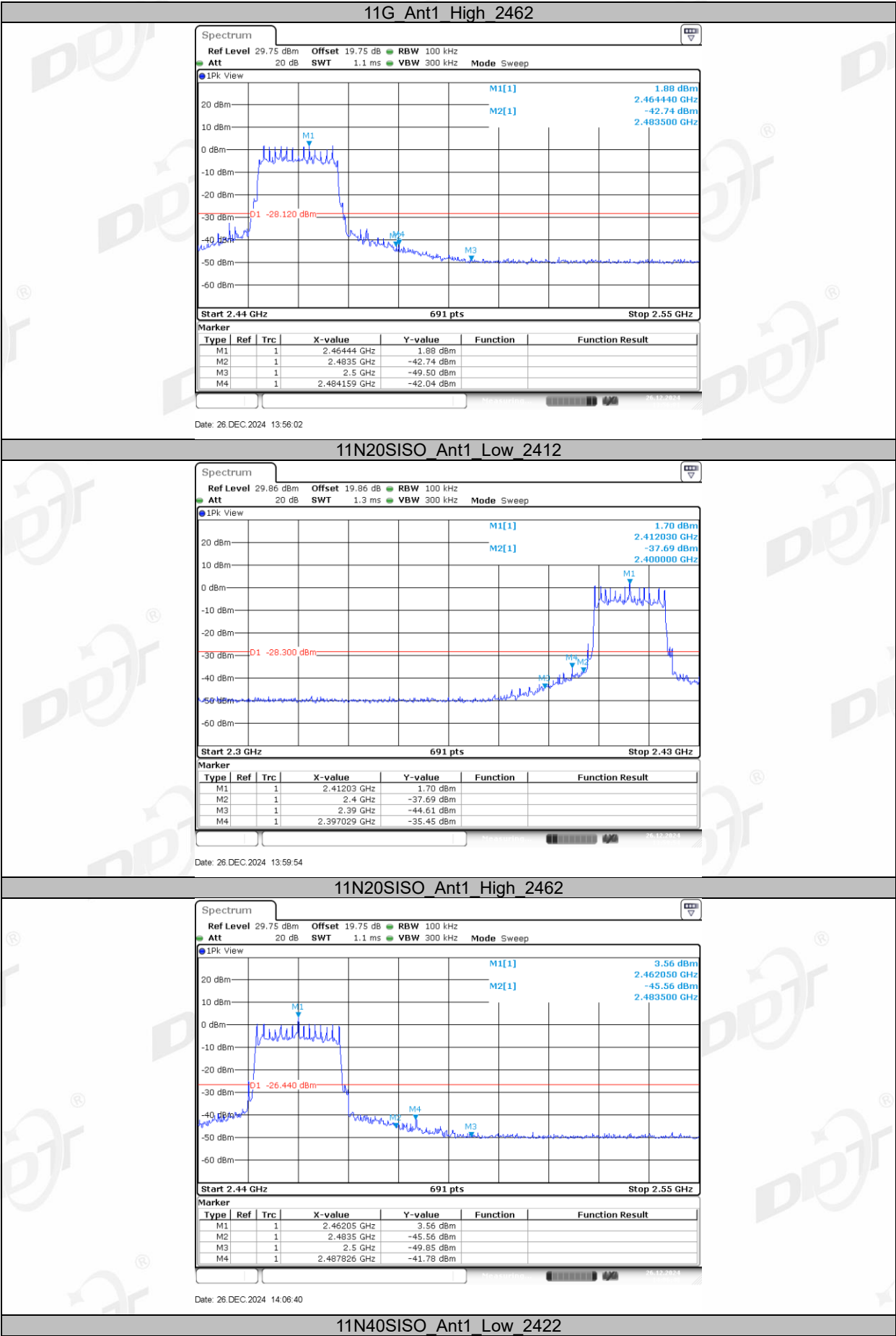
8.4. Test result

Test Engineer:	Zhongyao	Test Site:	RF Measurement System 3#
Ambient Condition:	25.8℃,42.1%RH	Test Date:	2024.12.26
Test Power Supply:	AC 120V/60HZ	Sample Number:	S24112617-001

EUT Set Mode	CH or Frequency	Result(dBm)	EUT Set Mode	CH or Frequency	Result (dBm)
11b	CH1	Pass	11g	CH1	Pass
	CH11	Pass		CH11	Pass
11n HT 20	CH1	Pass	11n HT 40	CH3	Pass
	CH11	Pass		CH9	Pass

8.5. Test graphs

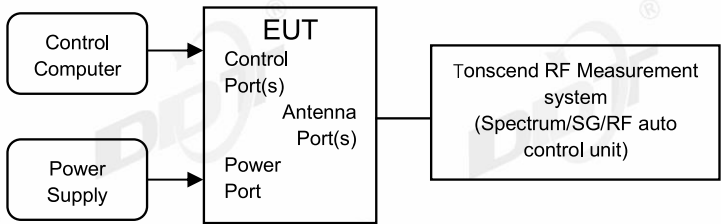






9. RF Conducted Spurious Emissions

9.1. Block diagram of test setup



9.2. 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 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

9.3. 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	$\geq \text{Span/RBW}$
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

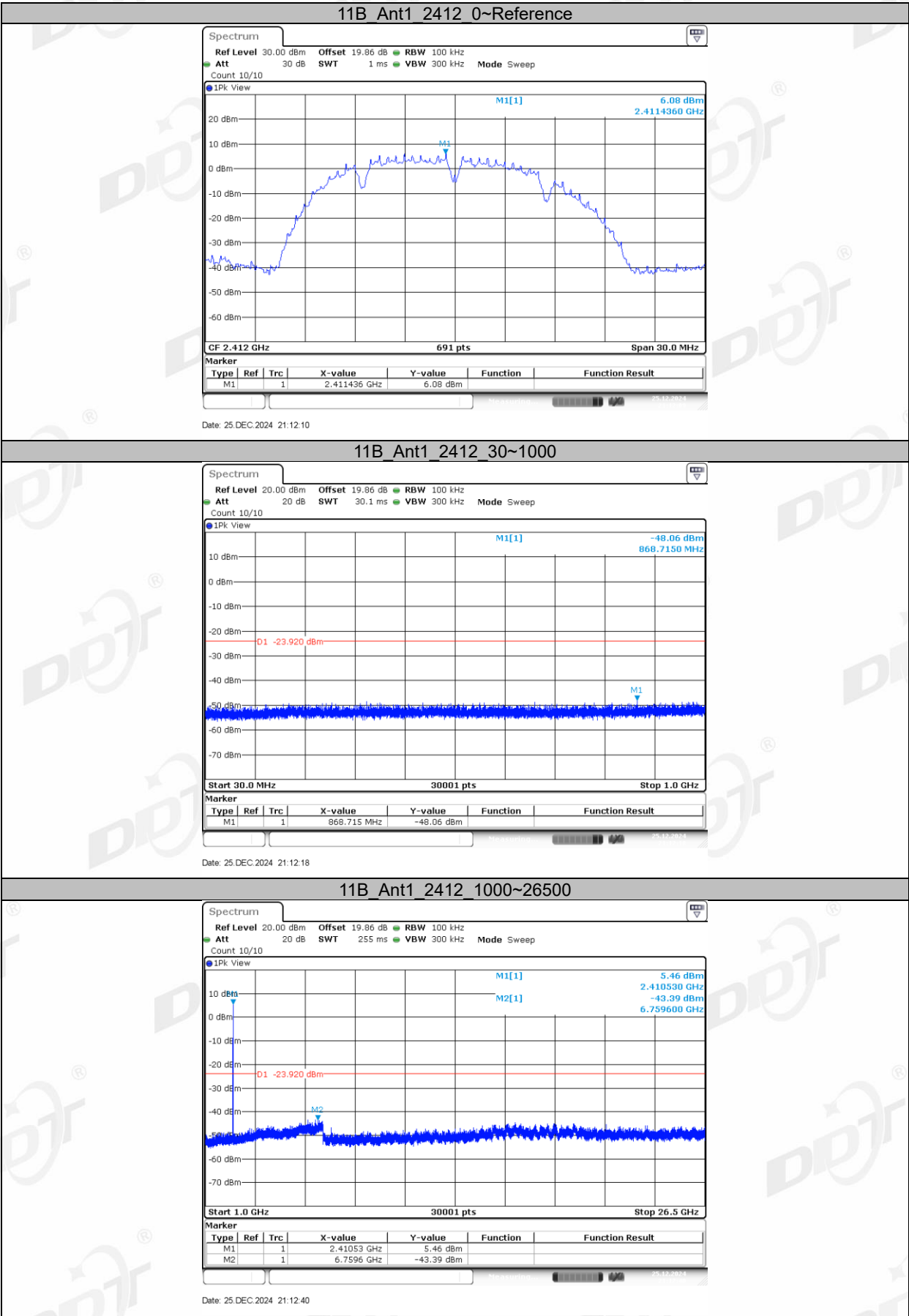
- (5) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude of all unwanted emissions outside of the authorized frequency band

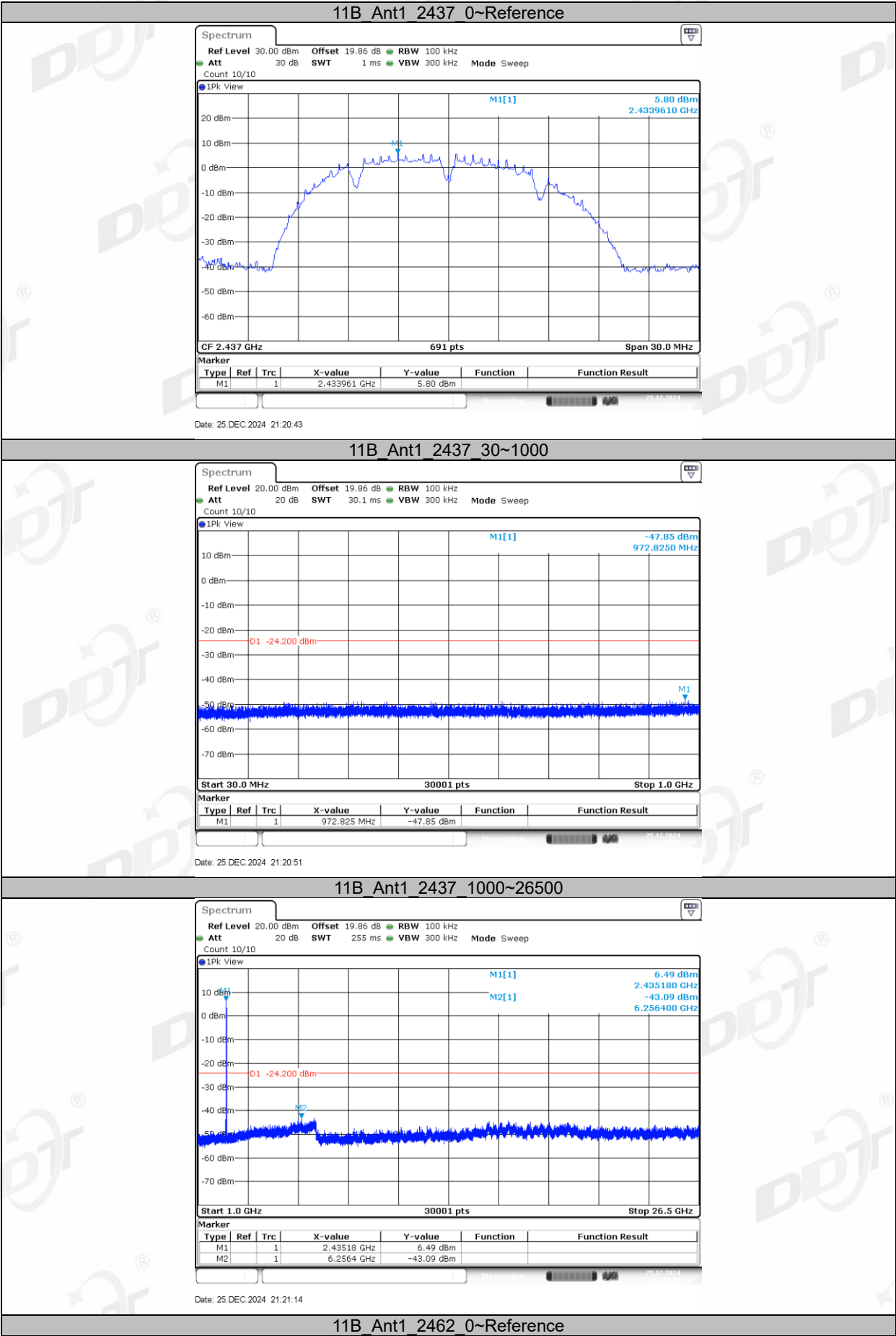
9.4. Test result

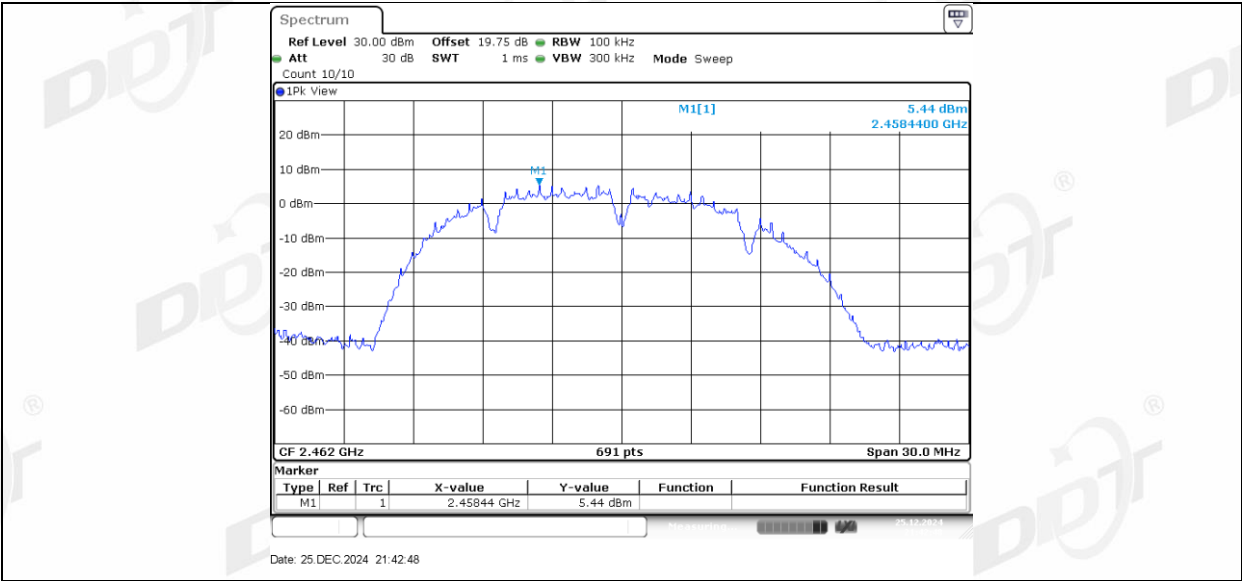
Test Engineer:	Zhongyao	Test Site:	RF Measurement System 3#
Ambient Condition:	25.8℃,42.1%RH	Test Date:	2024.12.26
Test Power Supply:	AC 120V/60HZ	Sample Number:	S24112617-001

EUT Set Mode	CH or Frequency	Result(dBm)	EUT Set Mode	CH or Frequency	Result (dBm)
11b	CH1	Pass	11g	CH1	Pass
	CH11	Pass		CH11	Pass
11n HT 20	CH1	Pass	11n HT 40	CH3	Pass
	CH11	Pass		CH9	Pass

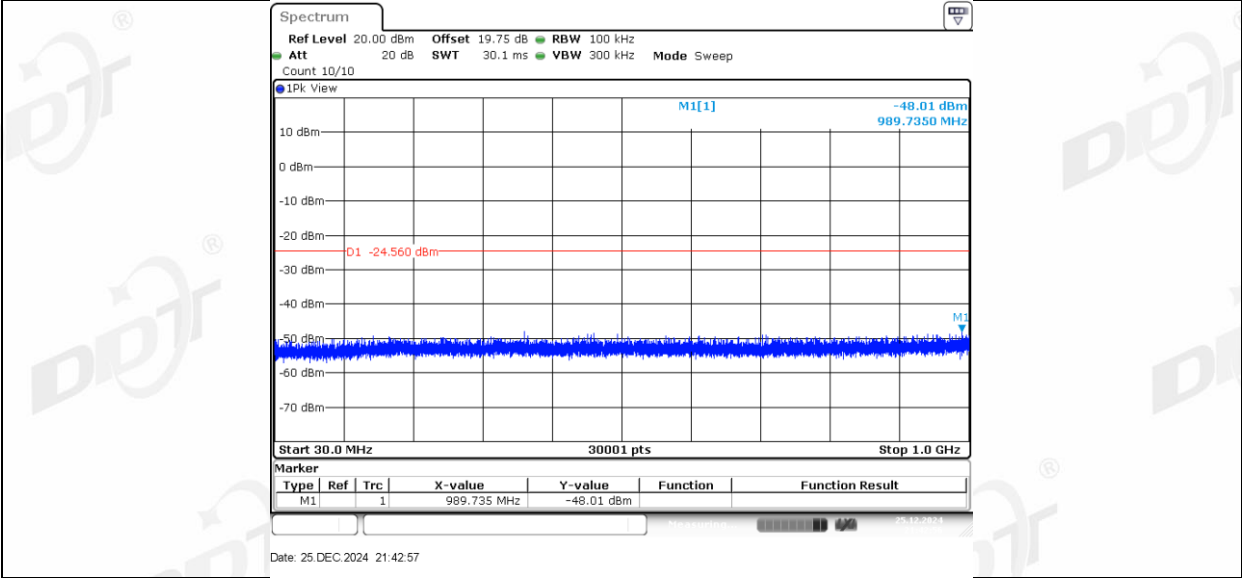
9.5. Test graphs



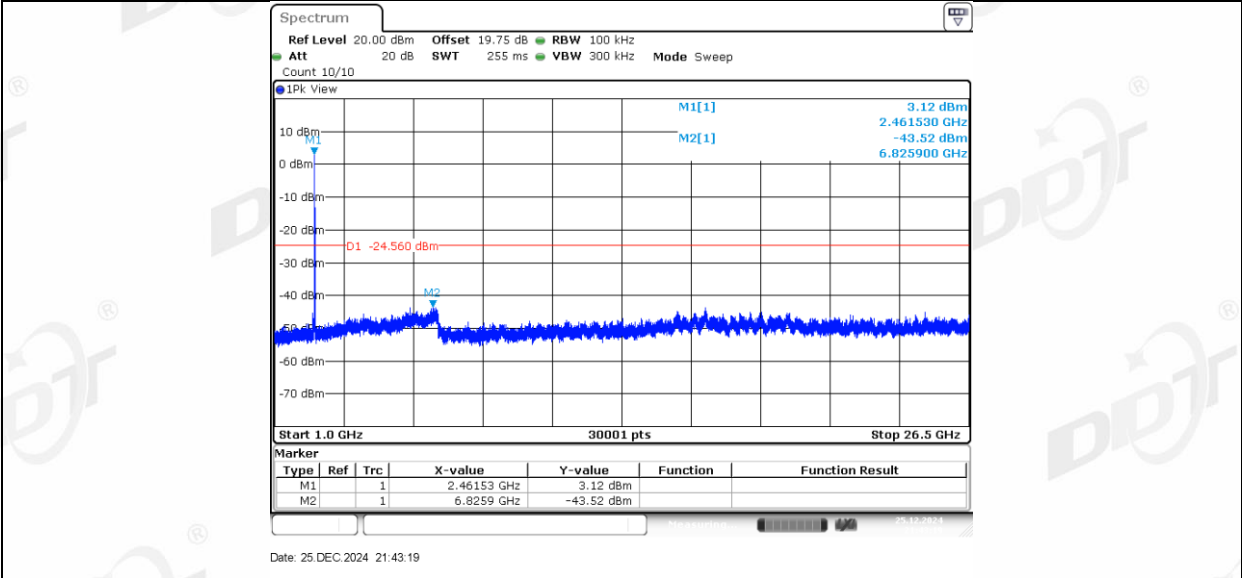




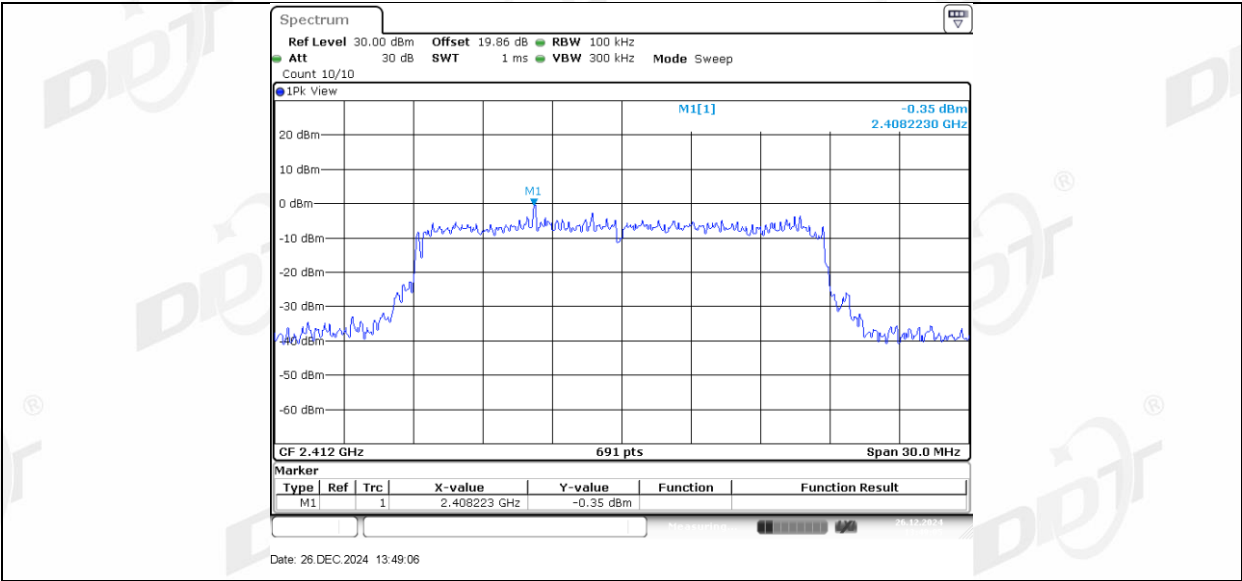
11B Ant1 2462 30~1000



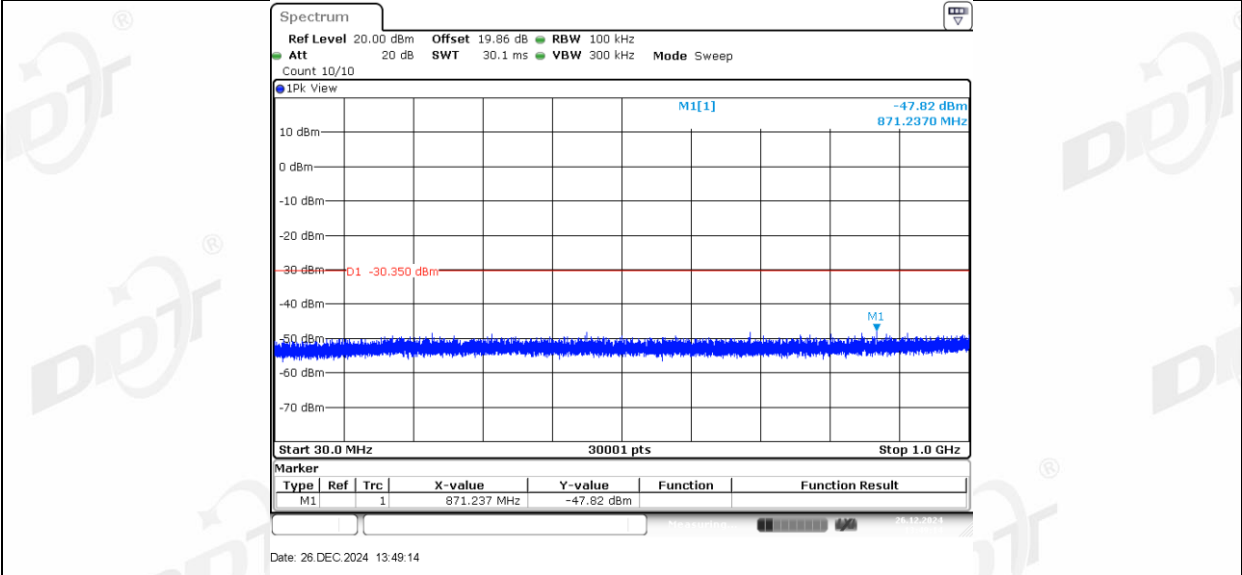
11B Ant1 2462 1000~26500



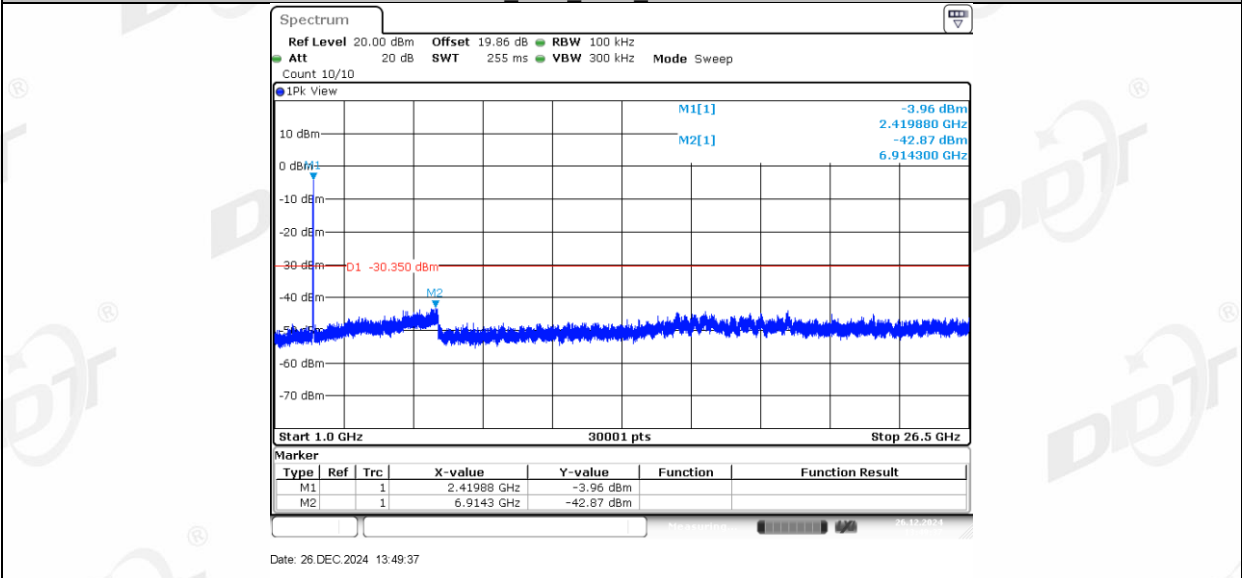
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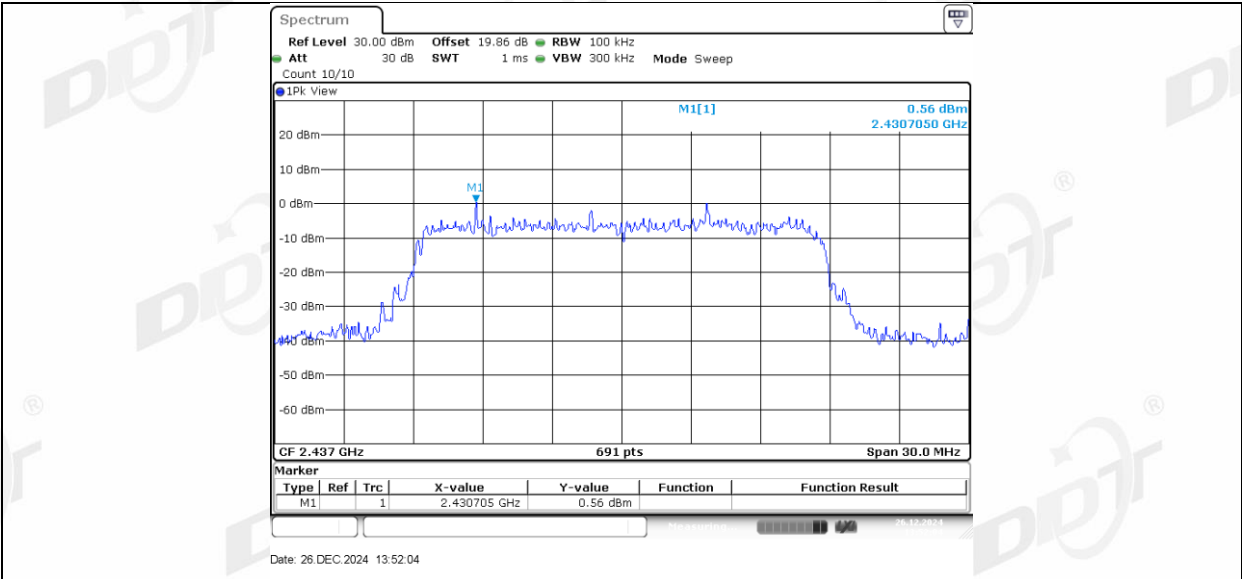
11G Ant1 2412 30~1000



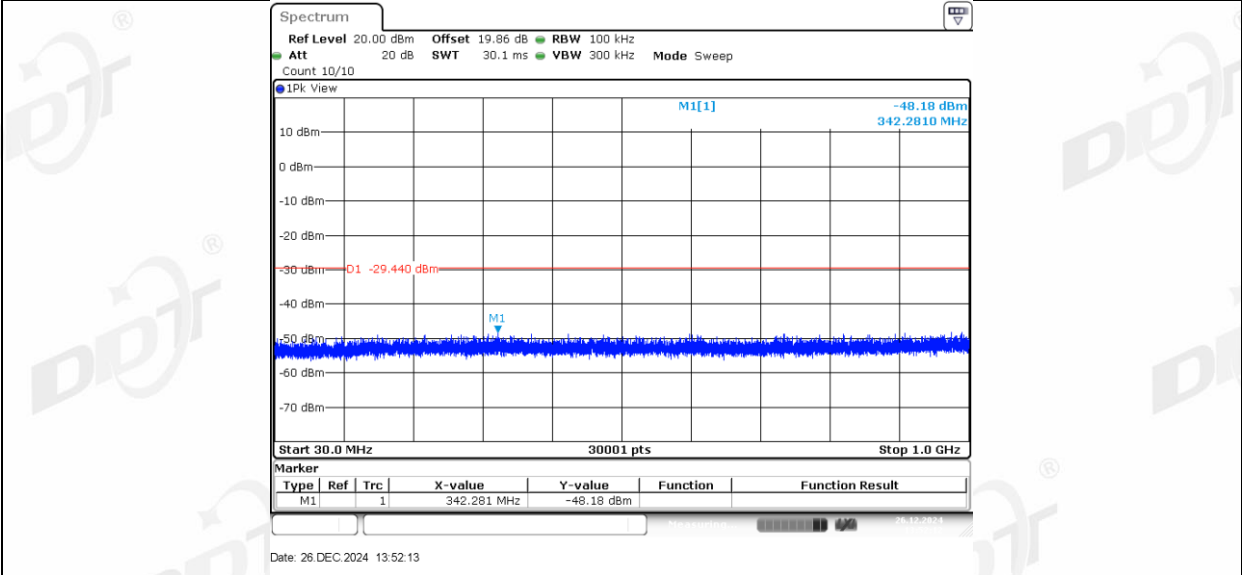
11G Ant1 2412 1000~26500



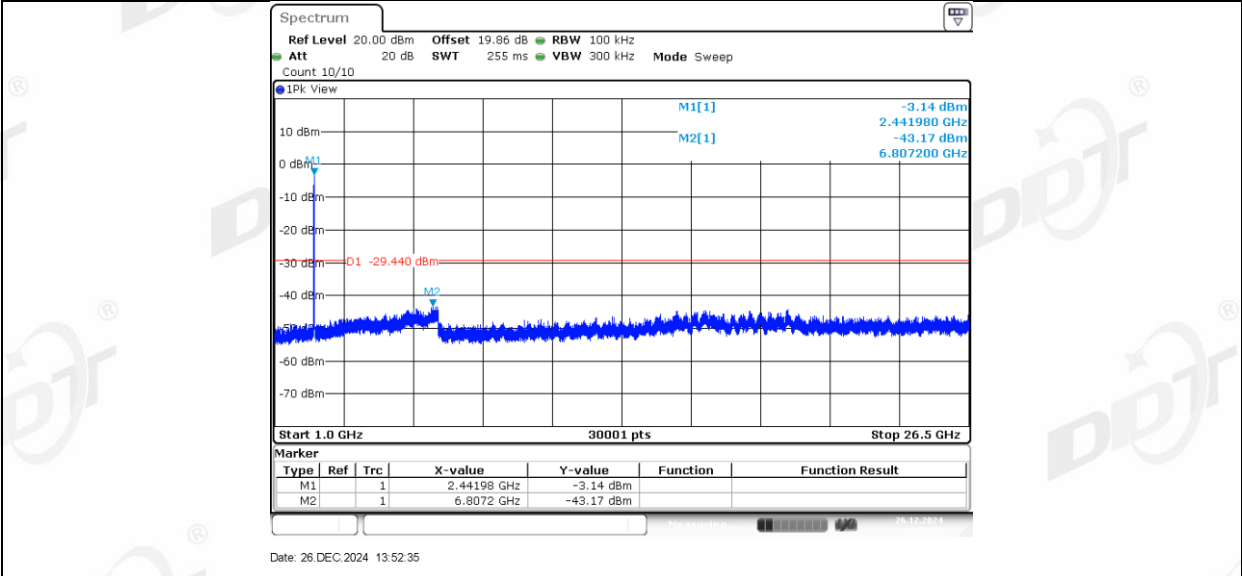
11G Ant1 2437 0~Reference



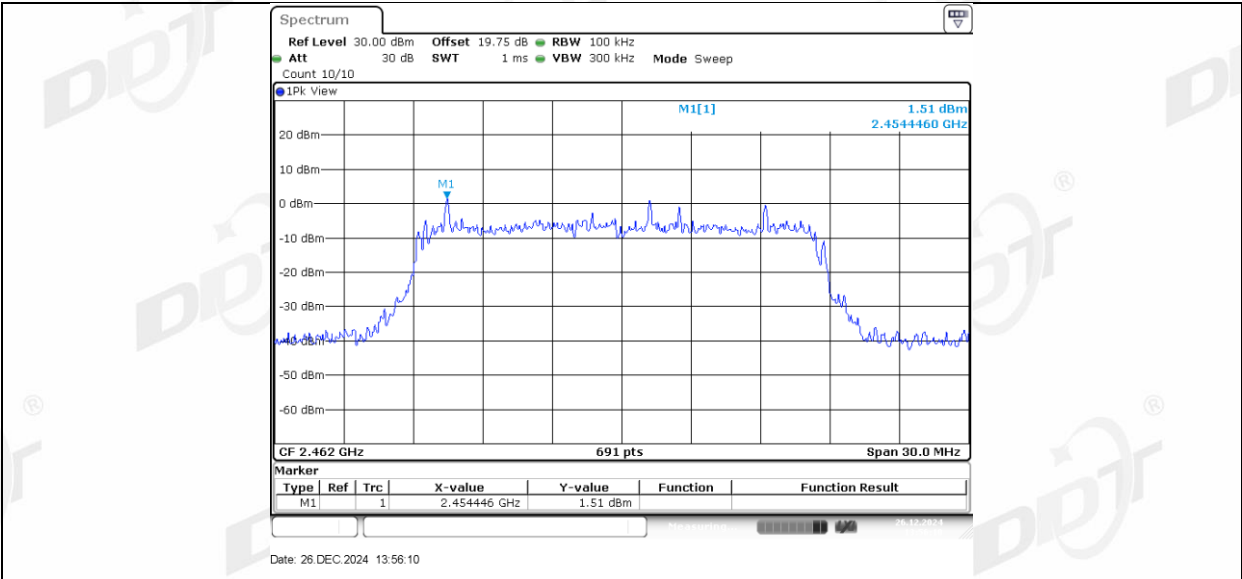
11G Ant1 2437 30~1000



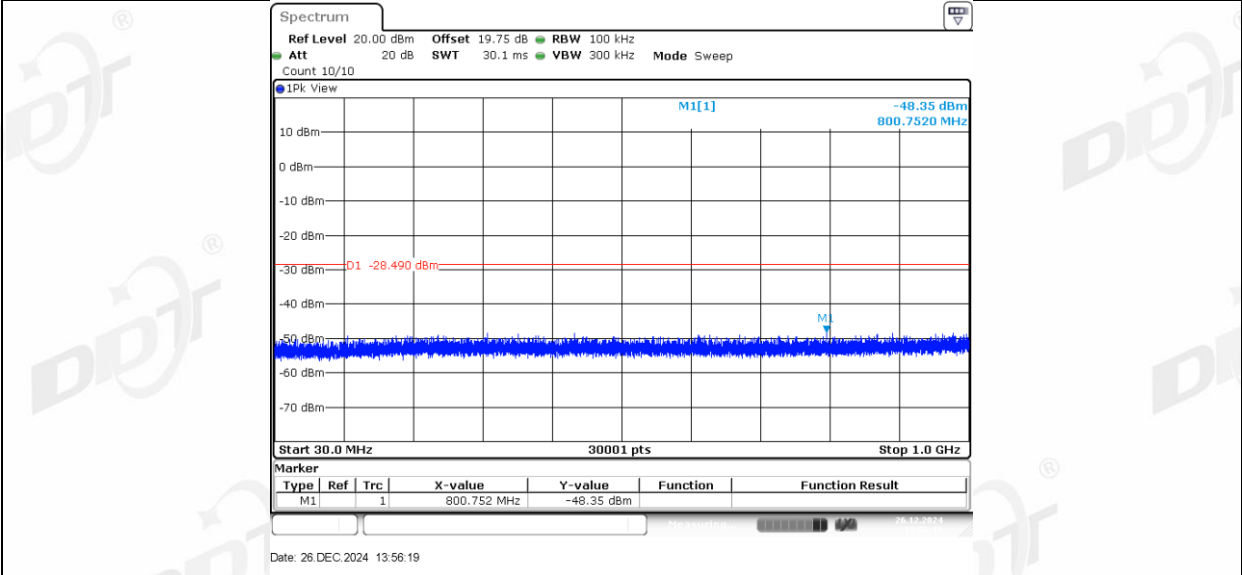
11G Ant1 2437 1000~26500



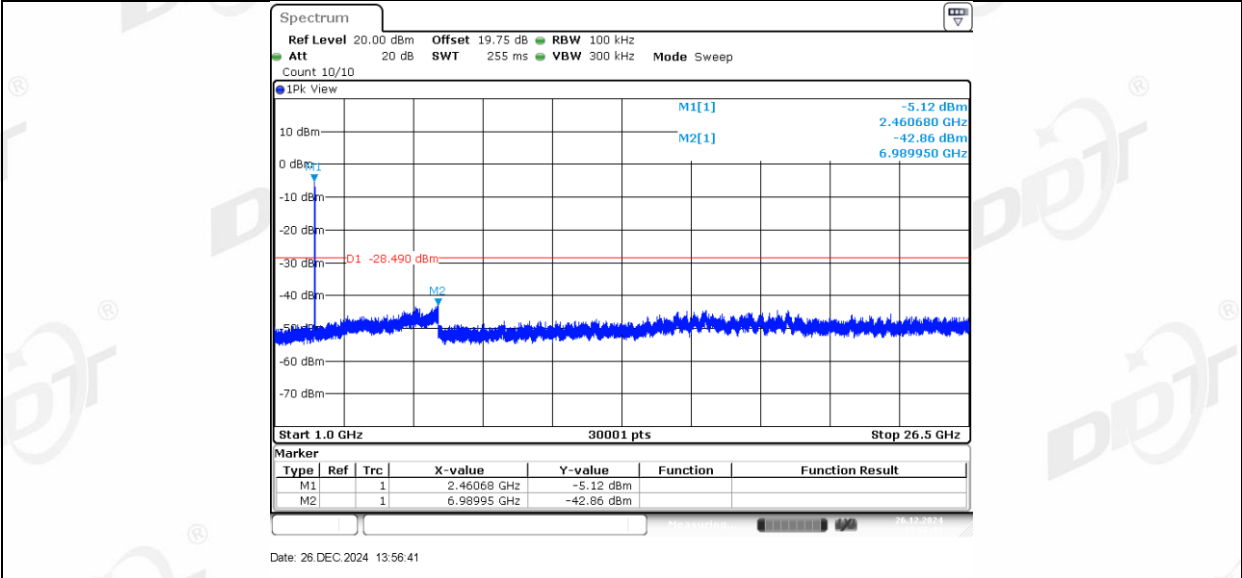
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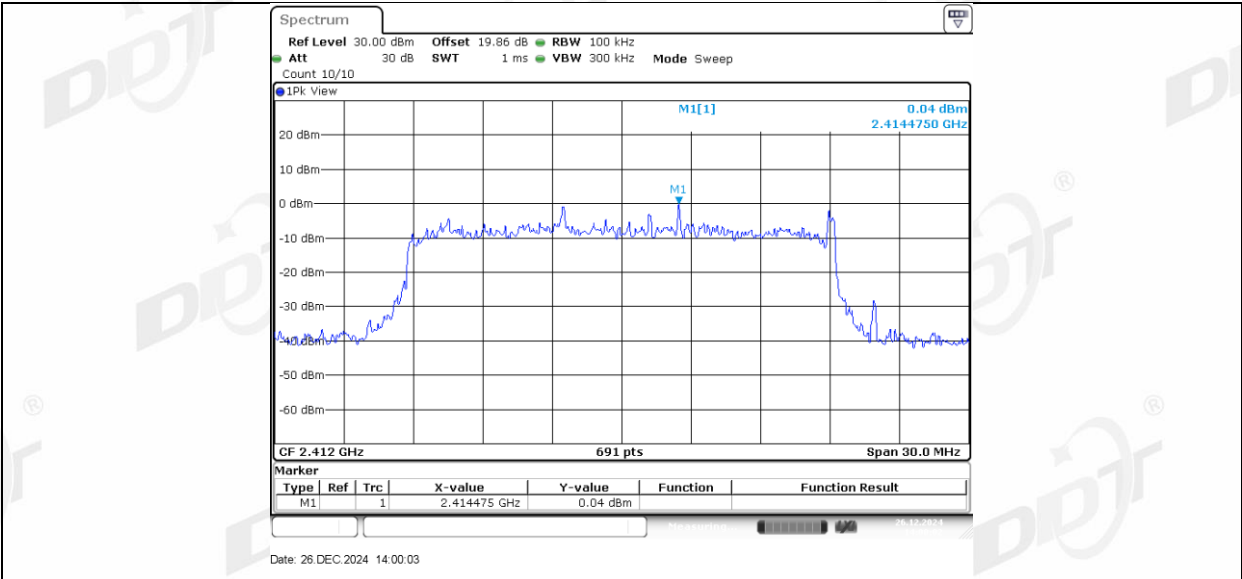
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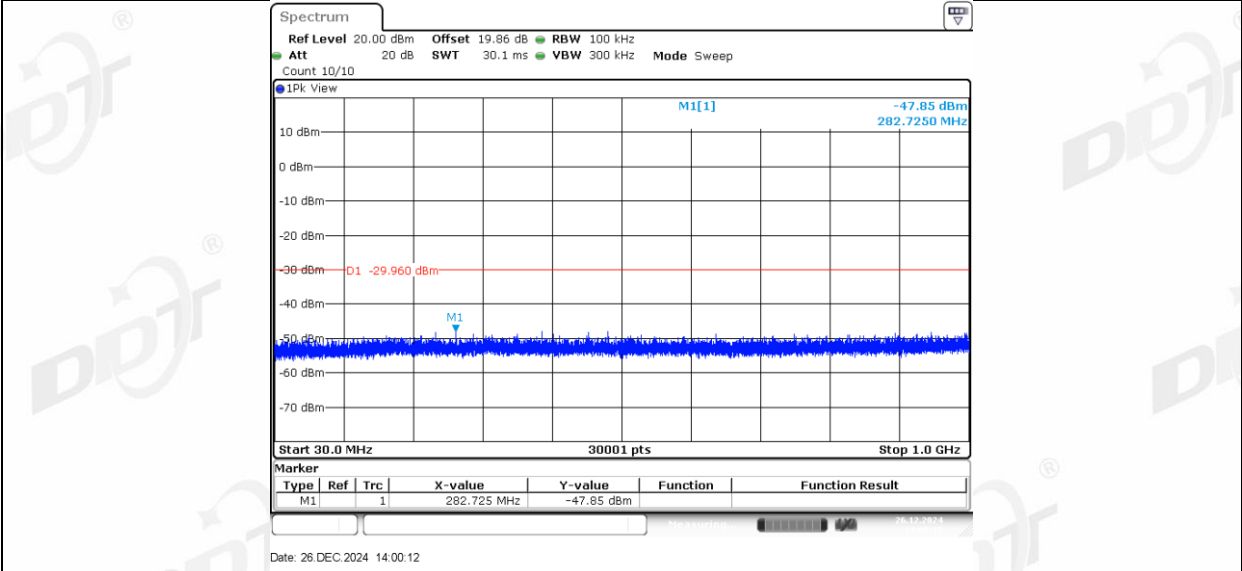
11G Ant1 2462 1000~26500



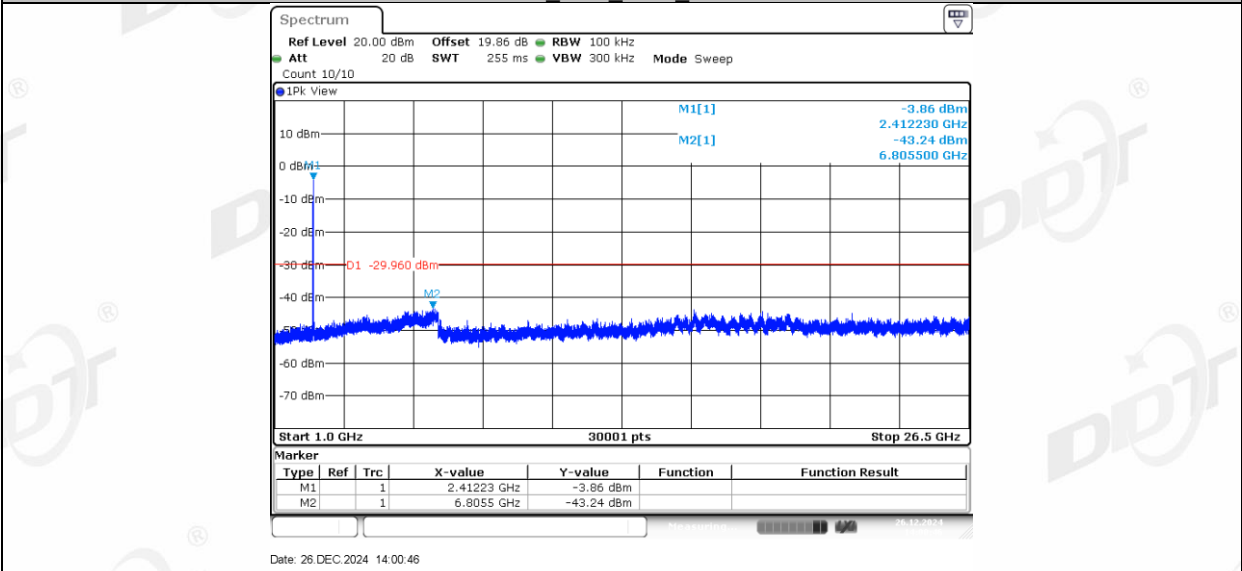
11N20SISO Ant1 2412 0~Reference



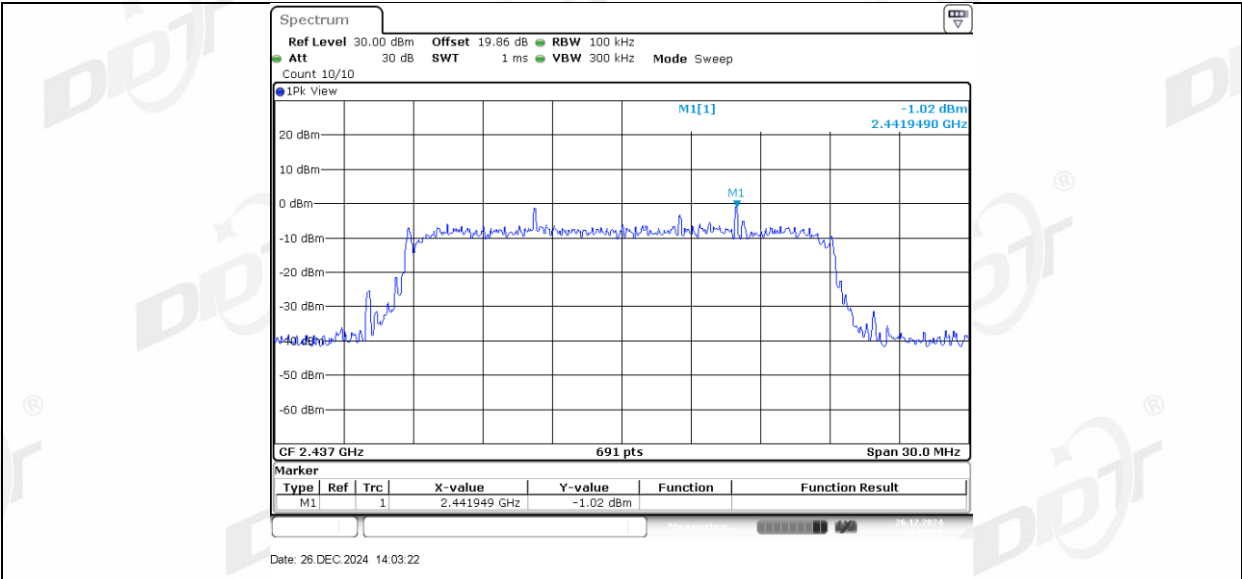
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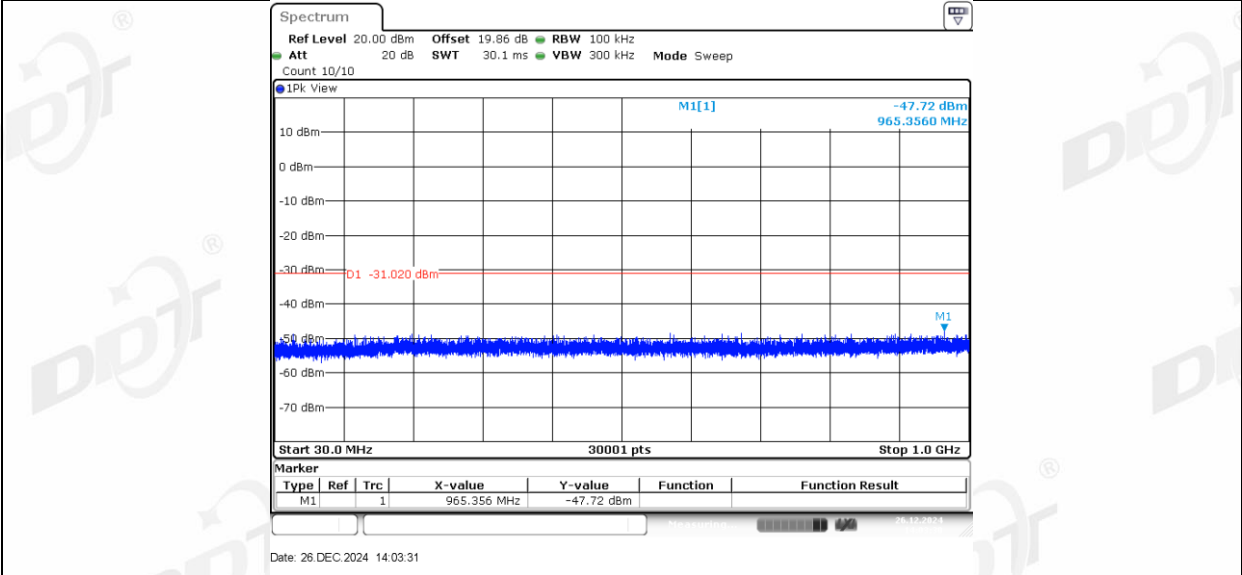
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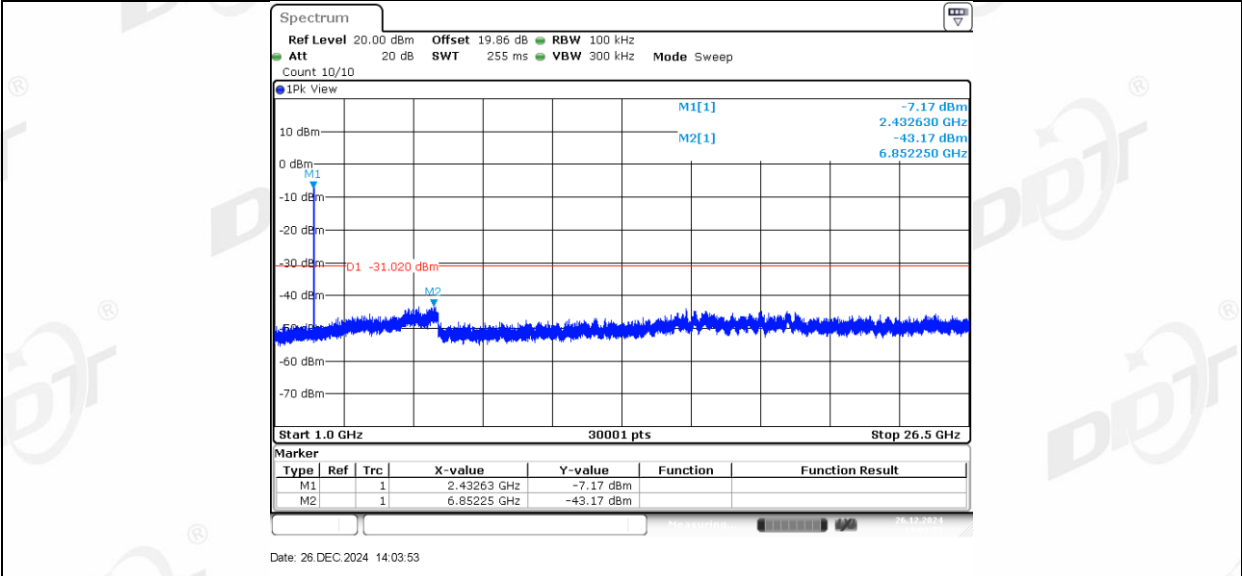
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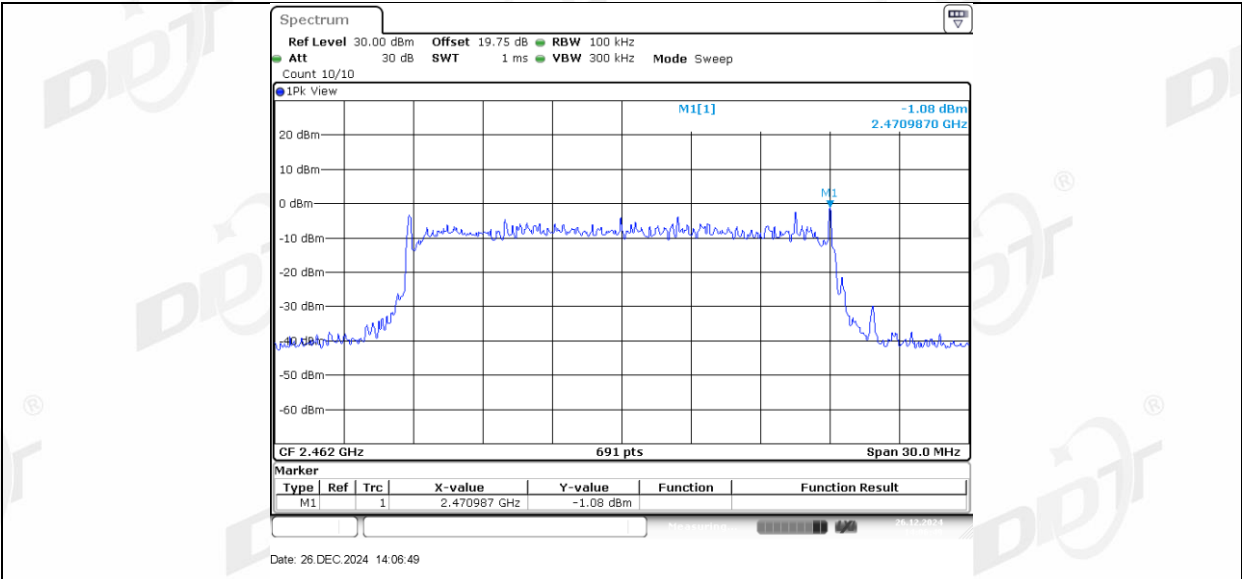
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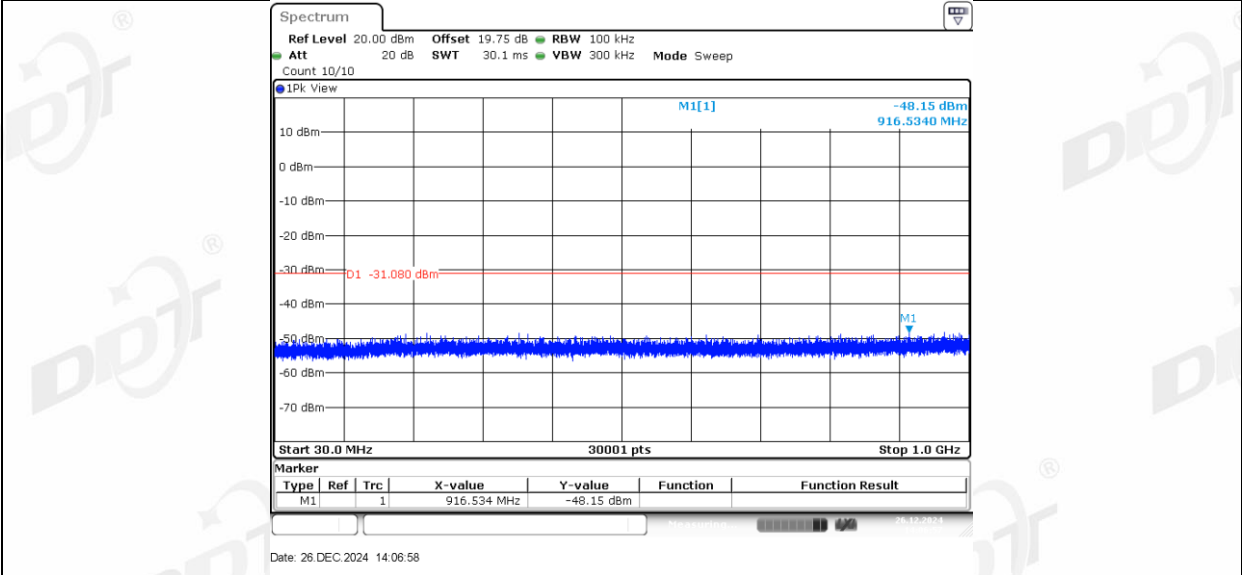
11N20SISO Ant1 2437 1000~26500



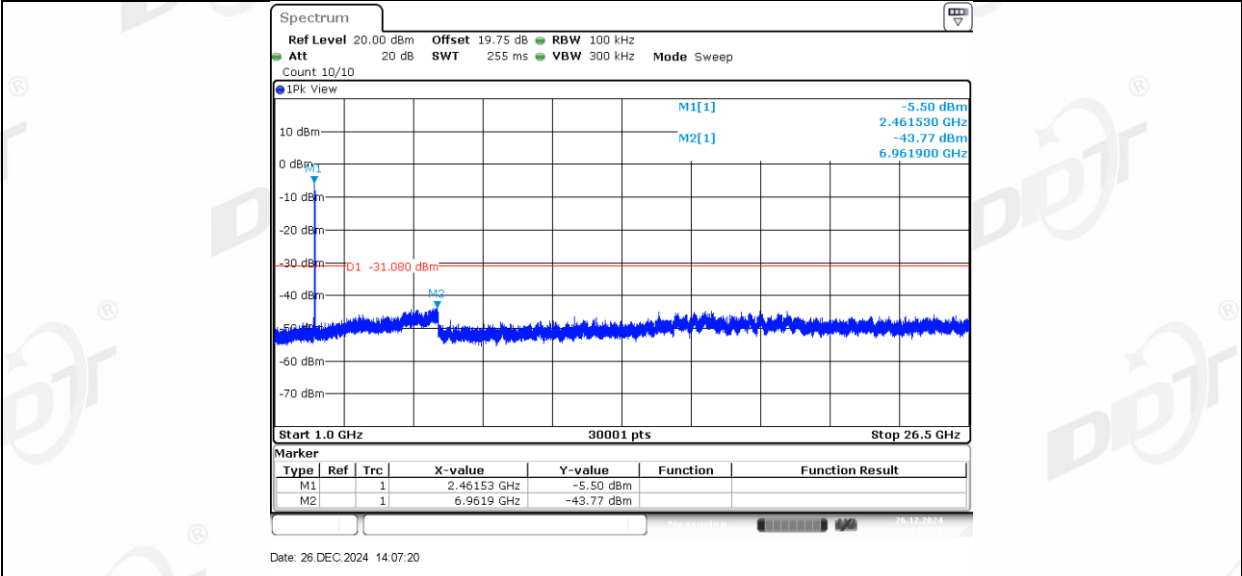
11N20SISO Ant1 2462 0~Reference



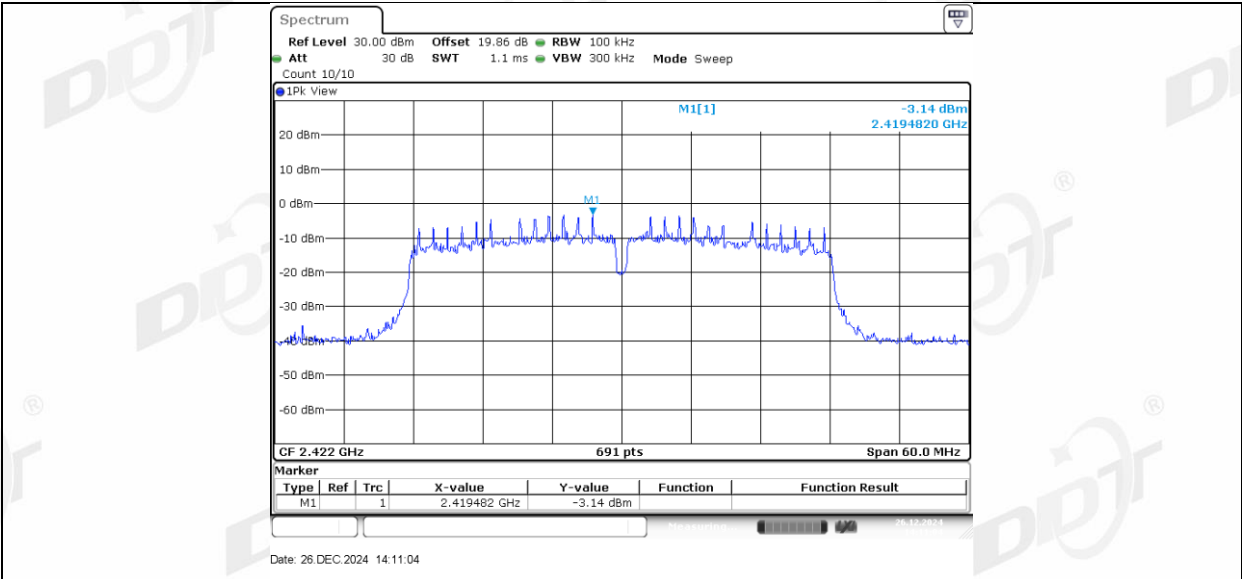
11N20SISO Ant1 2462 30~1000



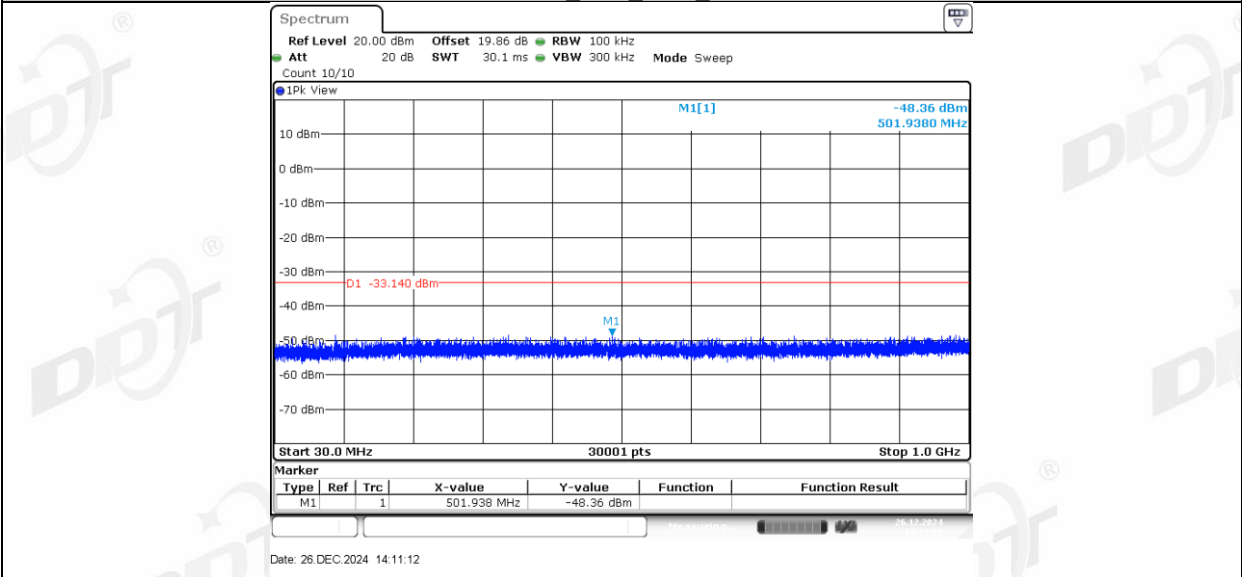
11N20SISO Ant1 2462 1000~26500



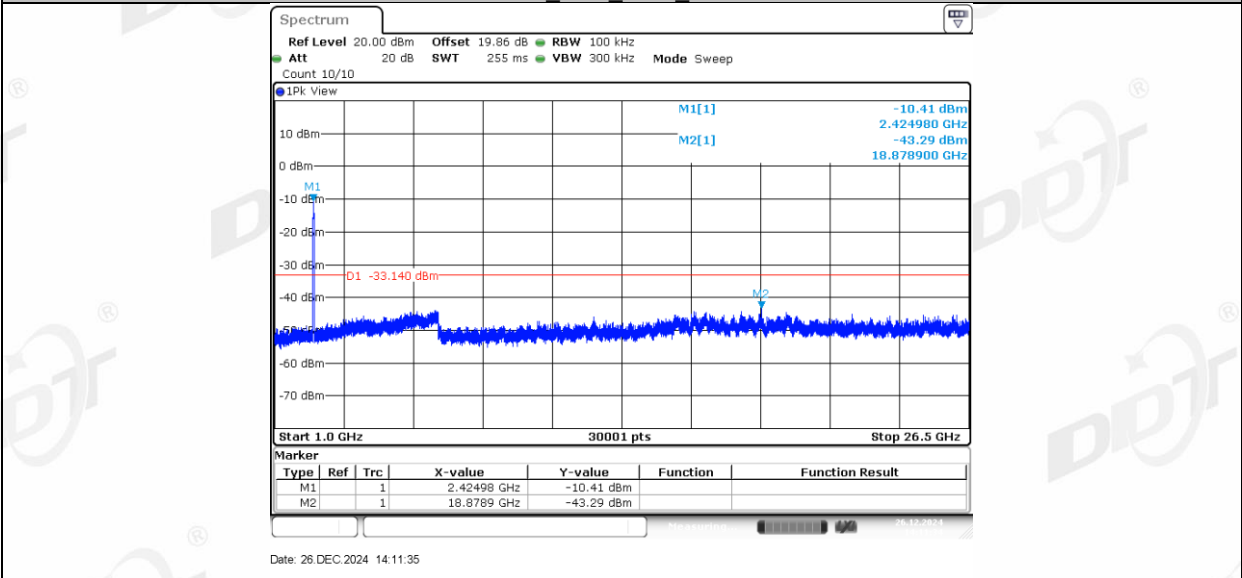
11N40SISO Ant1 2422 0~Reference



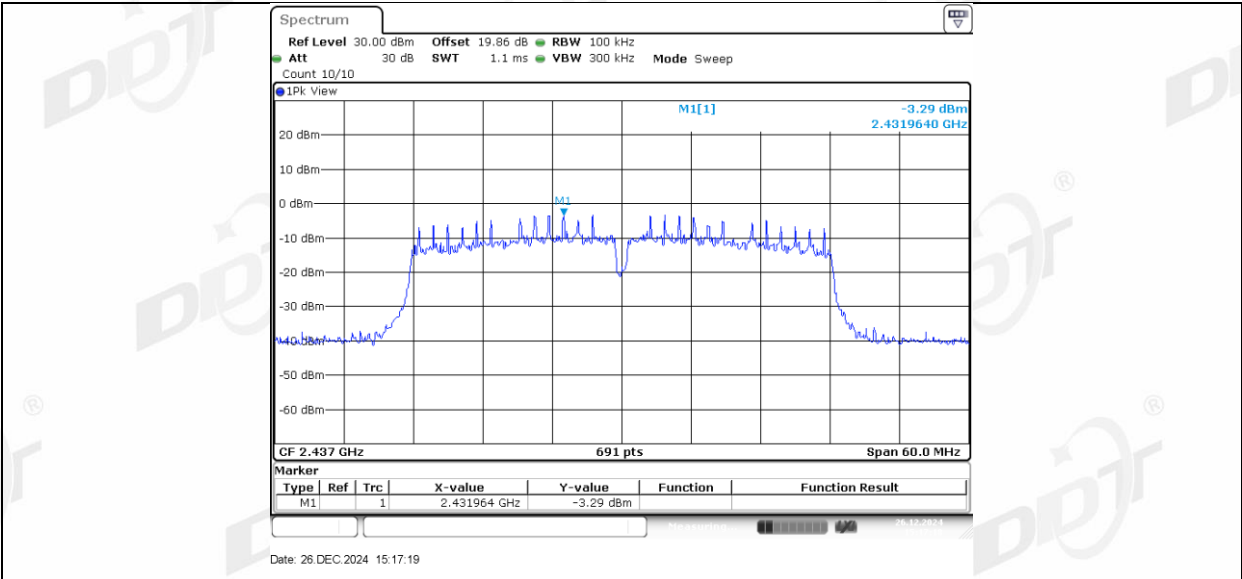
11N40SISO Ant1 2422 30~1000



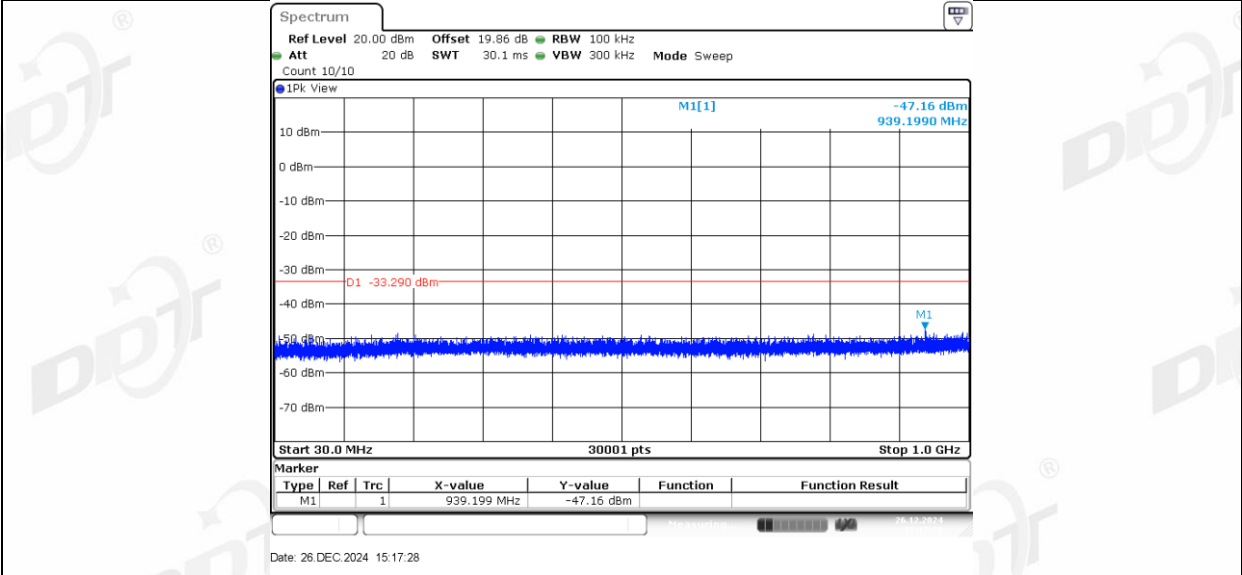
11N40SISO Ant1 2422 1000~26500



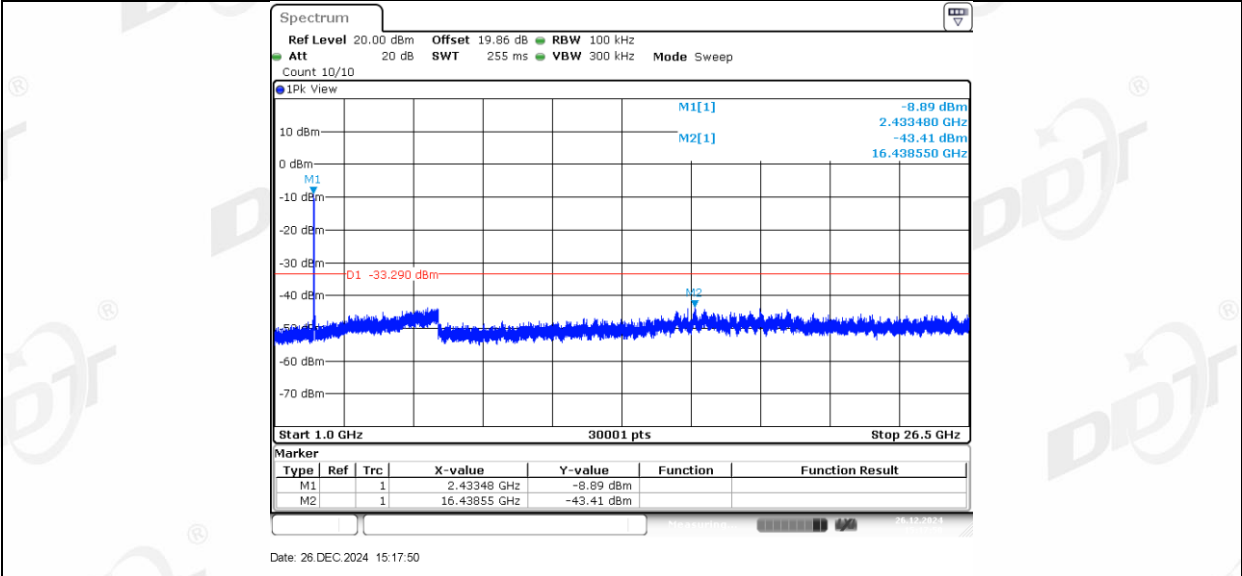
11N40SISO Ant1 2437 0~Reference



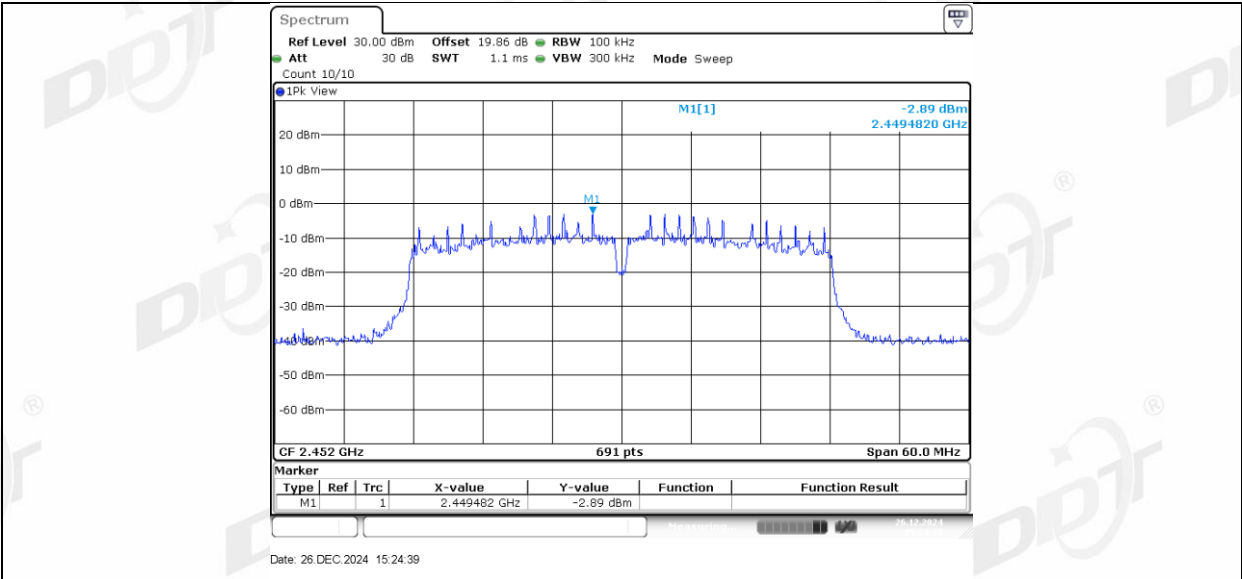
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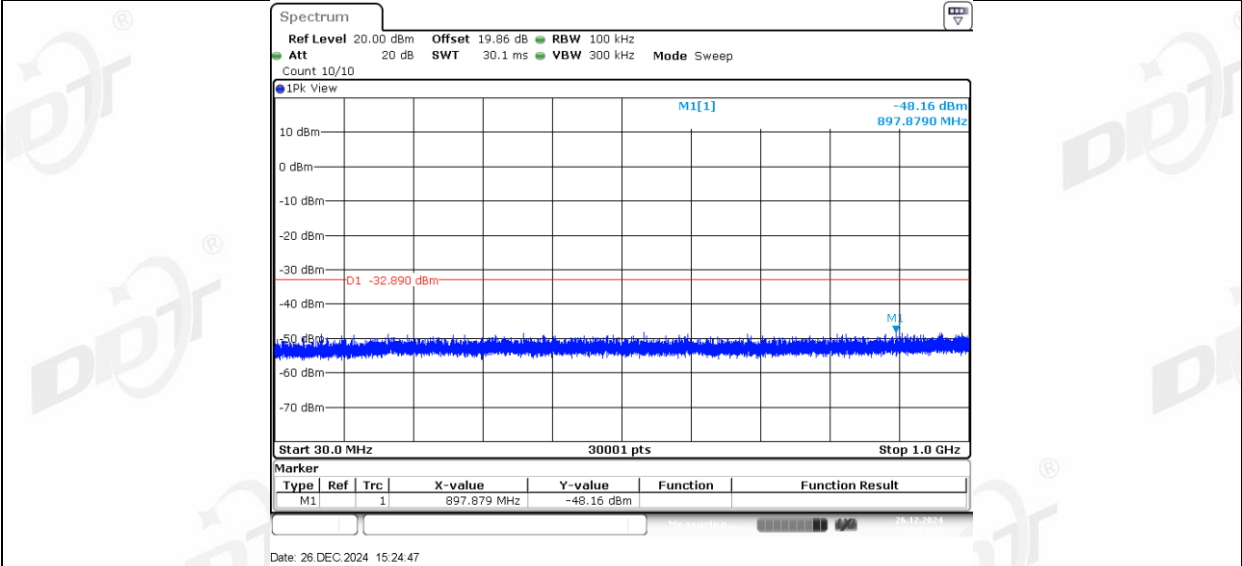
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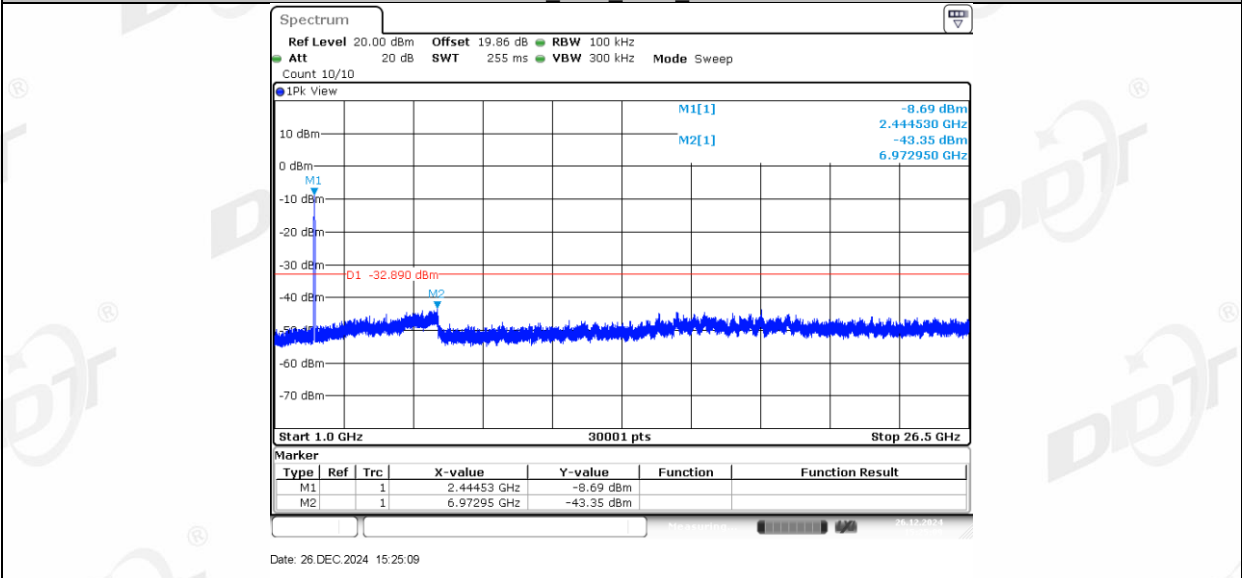
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11N40SISO Ant1 2452 30~1000

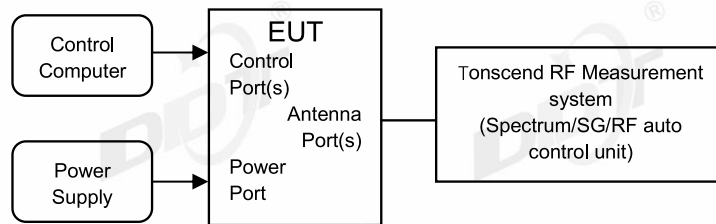


11N40SISO Ant1 2452 1000~26500



10. Duty Cycle

10.1. Block diagram of test setup



10.2. Limit

Just for Report.

10.3. Test procedure

- (1) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, The cable loss and attenuator loss have been put into spectrum analyzer as amplitude offset.
set the Spectrum Analyzer as below:
 - Centre Frequency: The centre frequency of the middle hopping channel.
 - Resolution BW: 10 MHz.
 - Video BW: 10 MHz.
 - Span: Zero span.
 - Detector: Peak.
 - Trace Mode: Clear Write.
 - Sweep: Video Trigger
- (2) When the trace is complete, measure the sending time of 1 burst and the duty cycle of 1 burst cycle.
- (3) Calculate dwell time follow below formula:
Duty cycle= Pulse's on time / Burst cycle

10.4. Test result

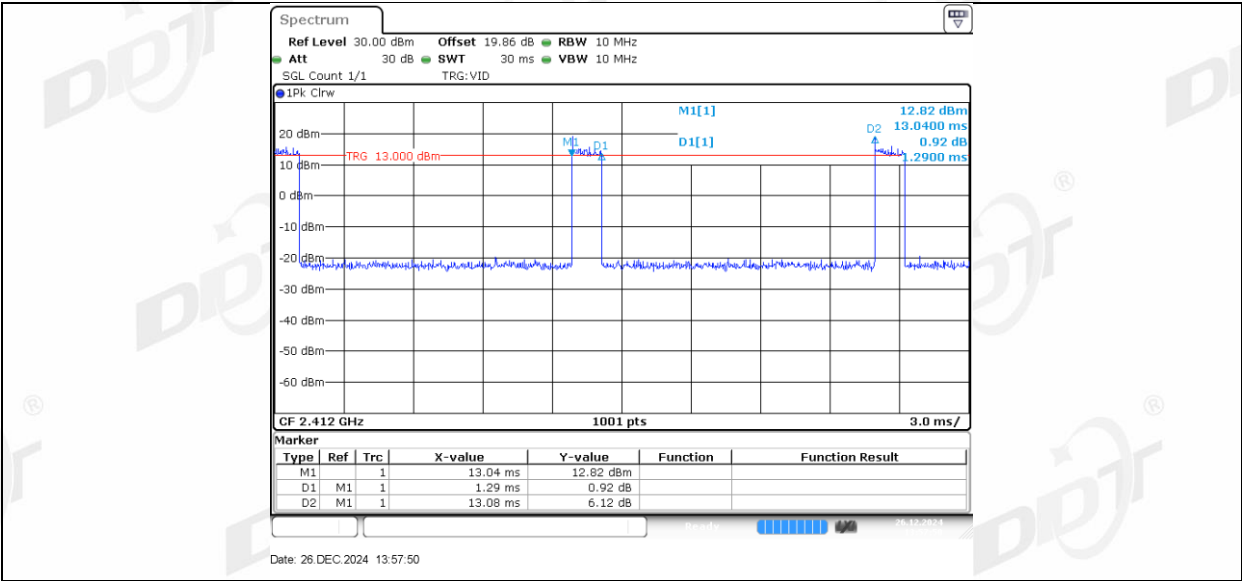
Test Engineer:	Zhongyao	Test Site:	RF Measurement System 3#
Ambient Condition:	25.8℃,42.1%RH	Test Date:	2024.12.26
Test Power Supply:	AC 120V/60HZ	Sample Number:	S24112617-001

Test Mode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11B	Ant1	2412	8.46	43.38	19.50
		2437	8.46	43.38	19.50
		2462	8.46	43.38	19.50
11G	Ant1	2412	1.41	14.01	10.06
		2437	1.41	14.01	10.06
		2462	1.41	14.01	10.06
11N20SISO	Ant1	2412	1.29	13.08	9.86
		2437	1.29	13.08	9.86
		2462	1.29	13.08	9.86
11N40SISO	Ant1	2422	0.66	6.56	10.06
		2437	0.66	6.56	10.06
		2452	0.66	6.56	10.06

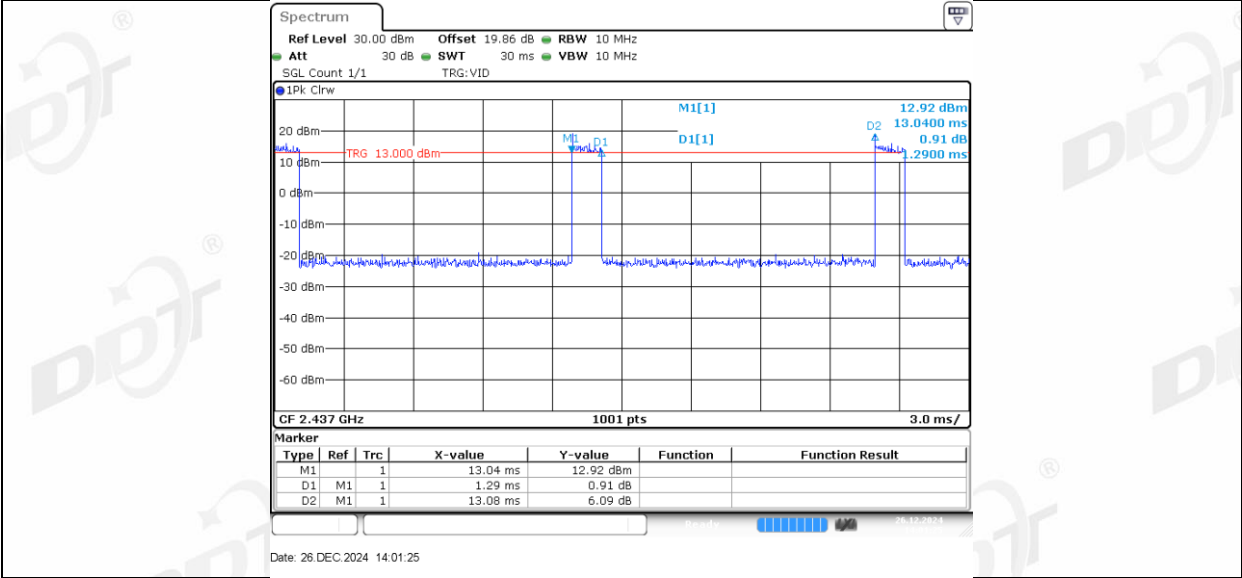
10.5. Test graphs



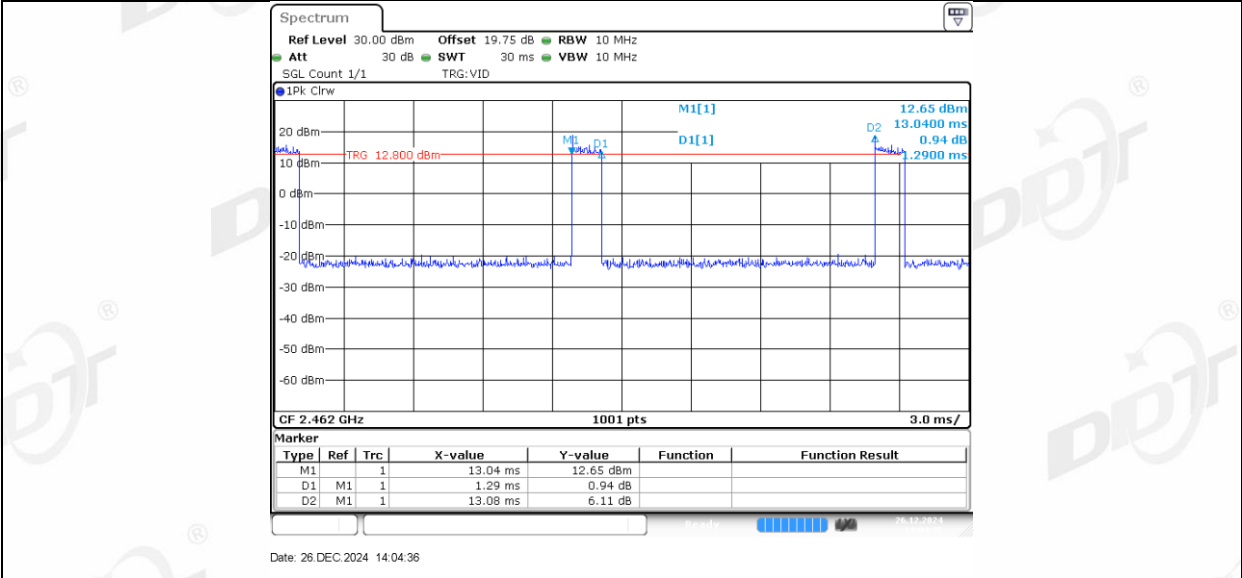




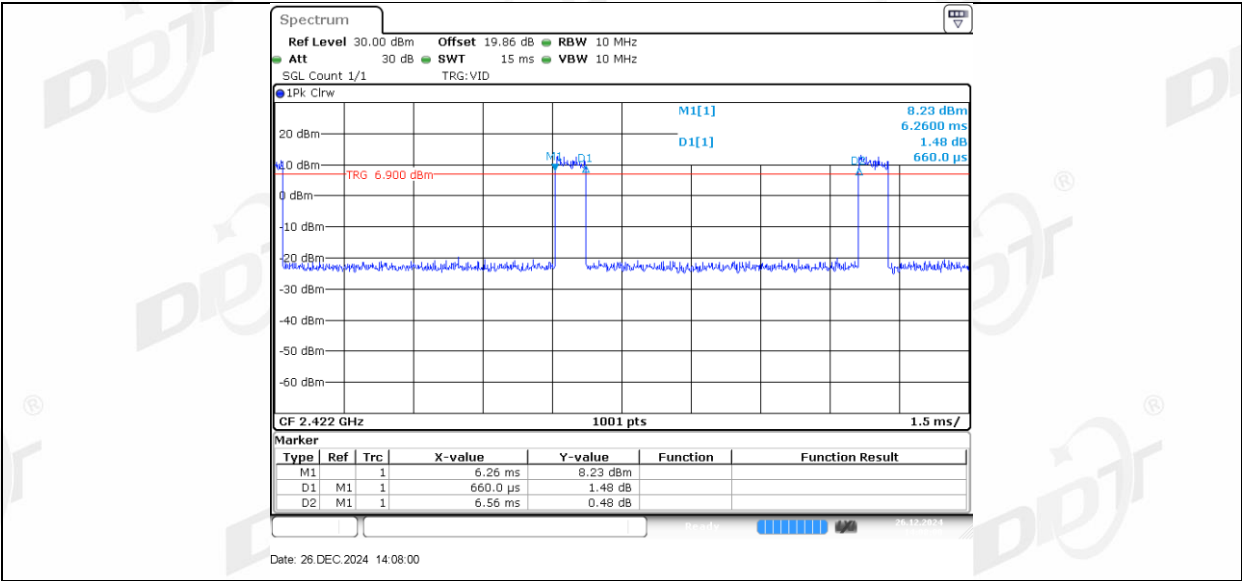
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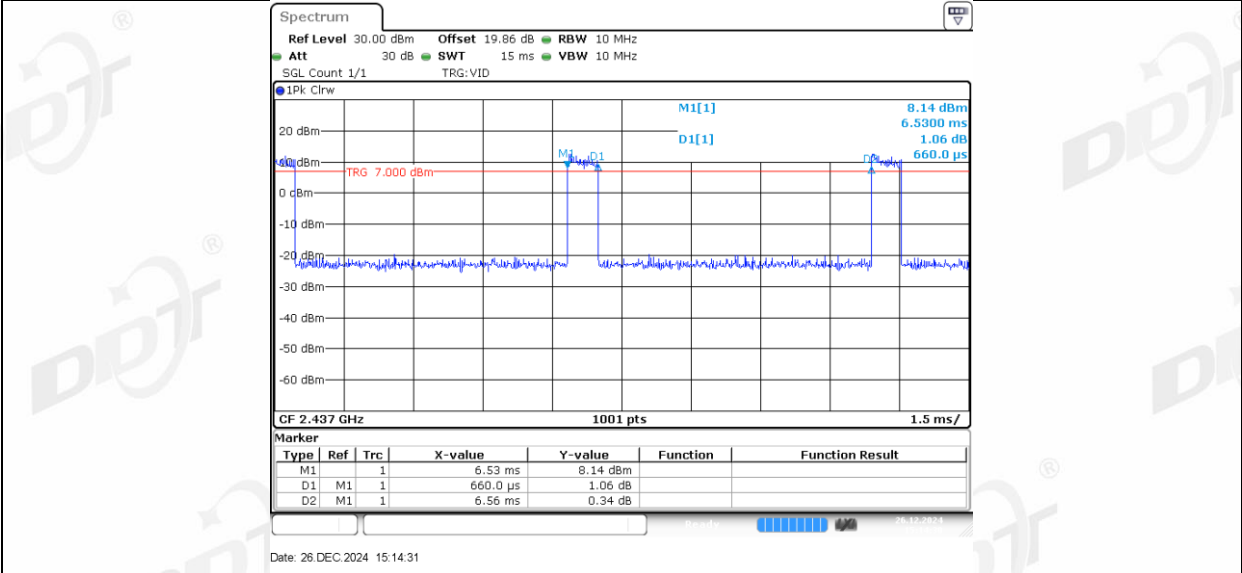
11N20SISO Ant1 2462



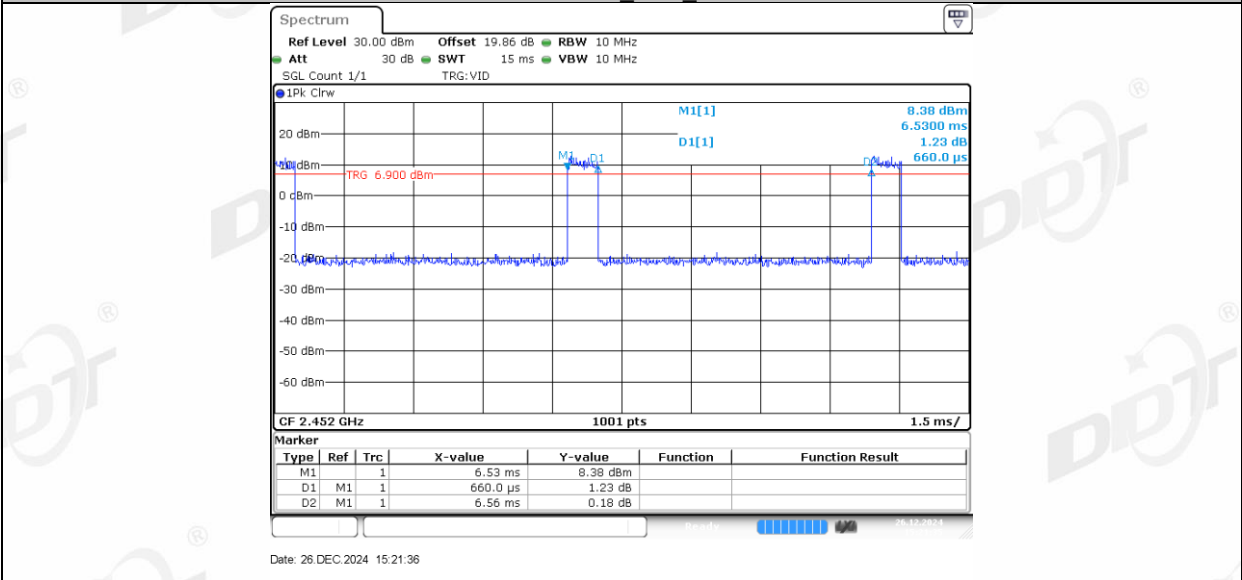
11N40SISO Ant1 2422



11N40SISO Ant1 2437



11N40SISO Ant1 2452



11. Antenna Requirements

11.1. Limit

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For intentional device, according to RSS-Gen issue 5 section 6.8.

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

11.2. Result

The antenna used for this product as Antenna information described in section 2.1 of the report, and there is no other antenna than that furnished by the responsible party shall be used with the device.