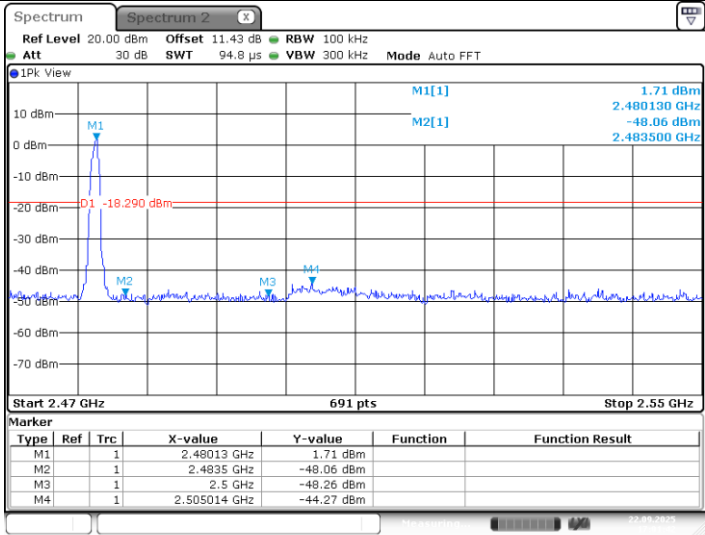
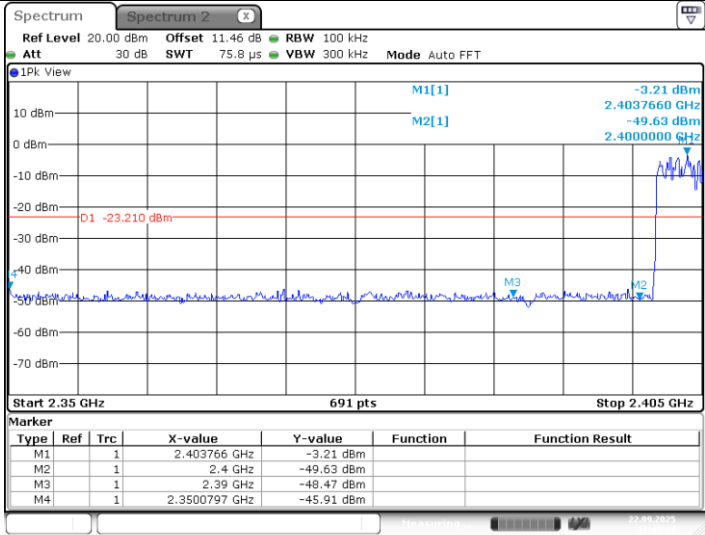




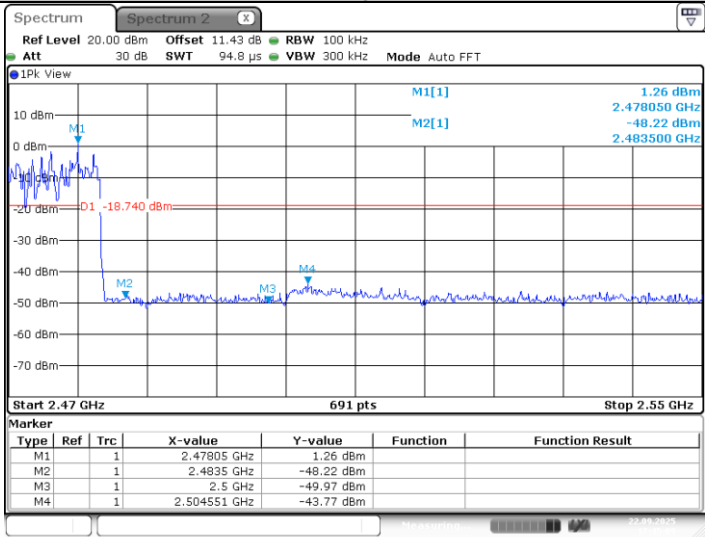
Date: 22.SEP.2025 17:01:42

3DH5 Ant1 Low Hop 2402



Date: 22.SEP.2025 17:43:27

3DH5 Ant1 High Hop 2480



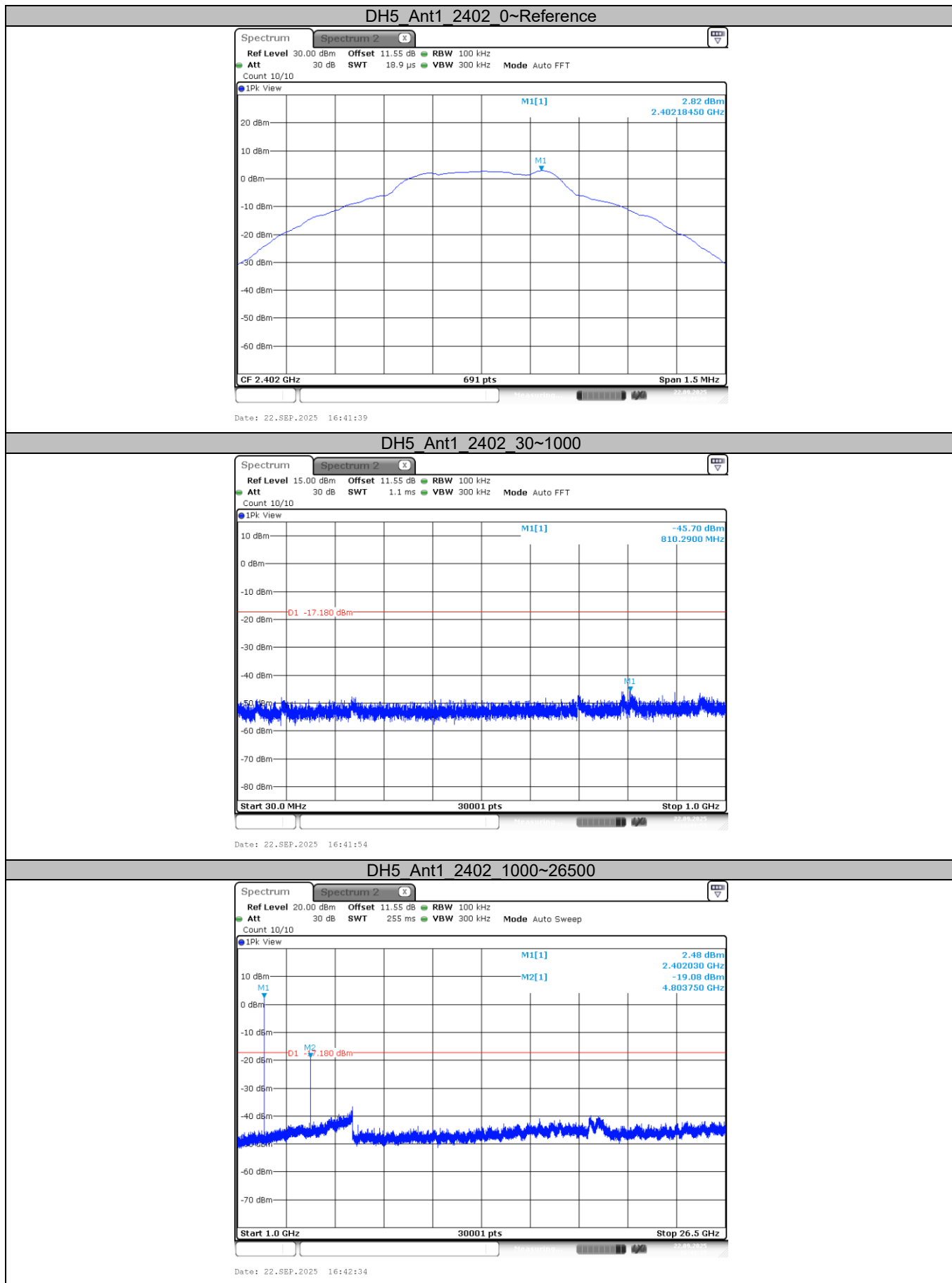
Date: 22.SEP.2025 17:45:09

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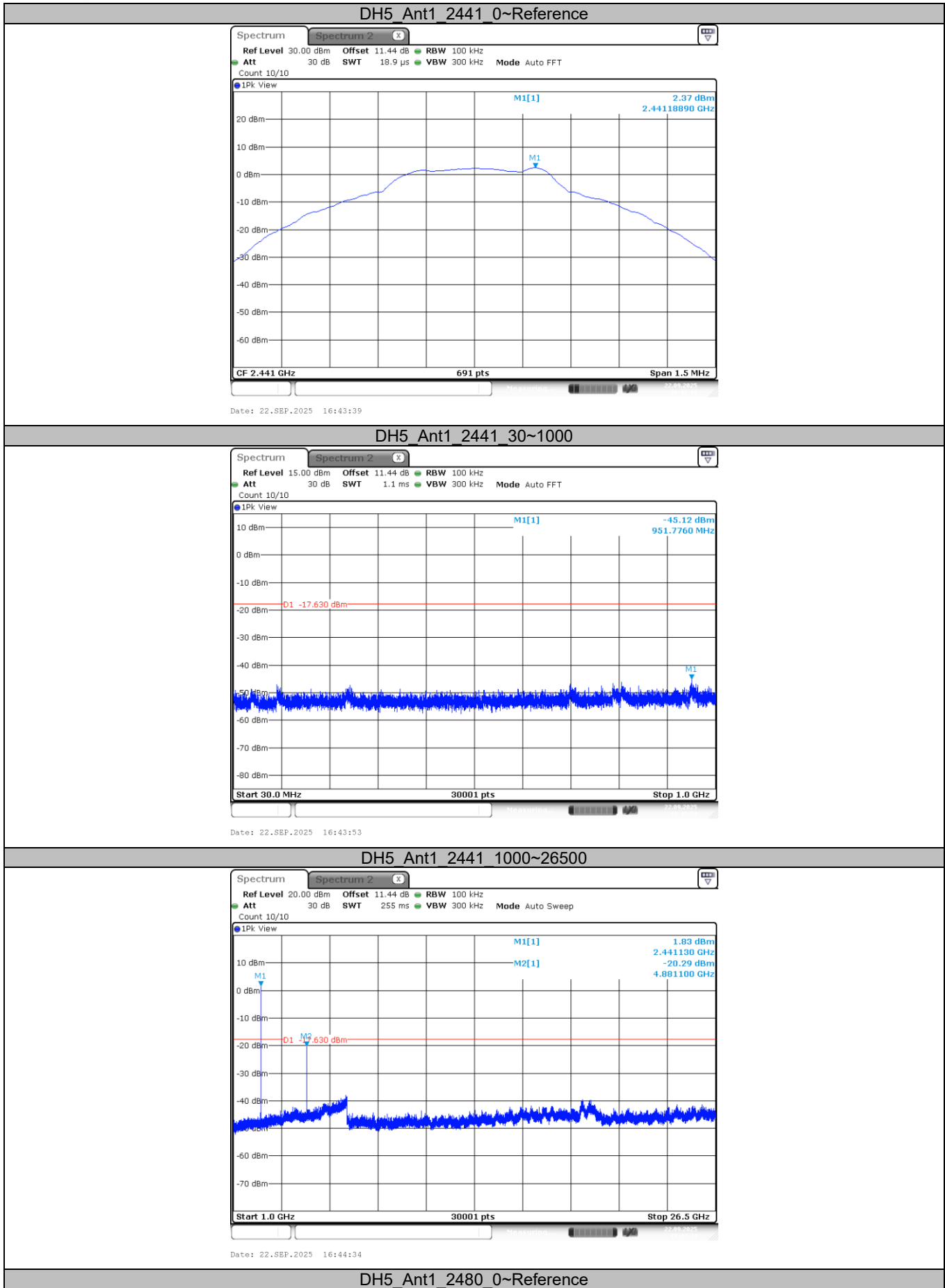
**R Conducted Spurious Emissions Test plot as follows**

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TRF No: CTC-TR-059_A2

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Society : yz.cncaq.com

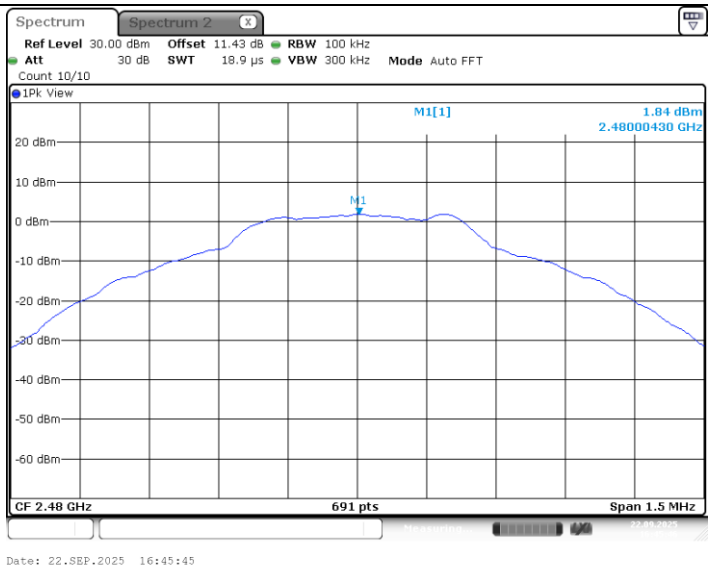


CTC Laboratories, Inc.

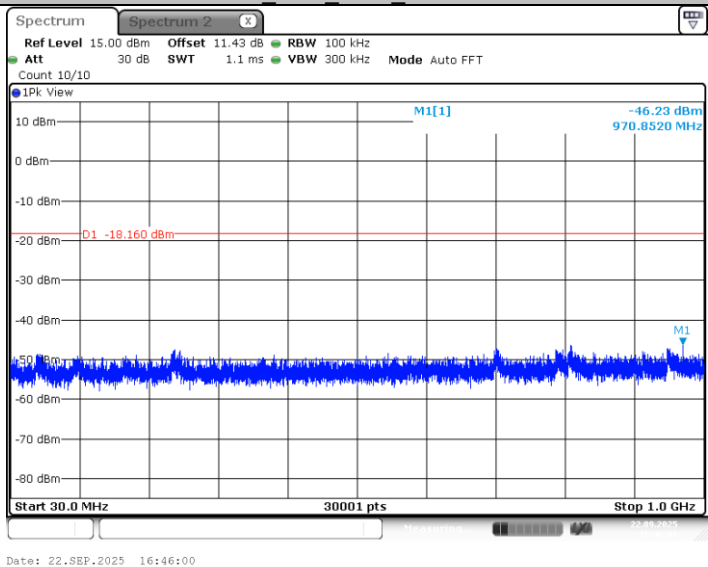
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-059_A2

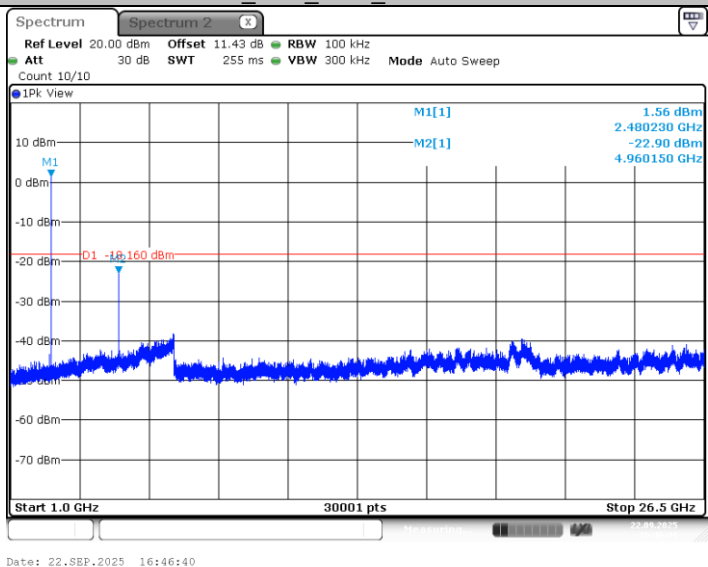
For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



DH5 Ant1_2480_30~1000



DH5 Ant1_2480_1000~26500



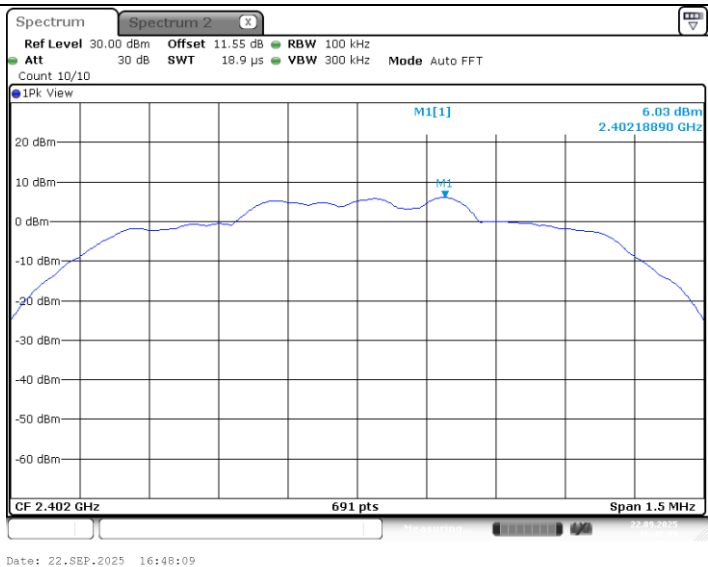
2DH5 Ant1_2402_0~Reference

CTC Laboratories, Inc.

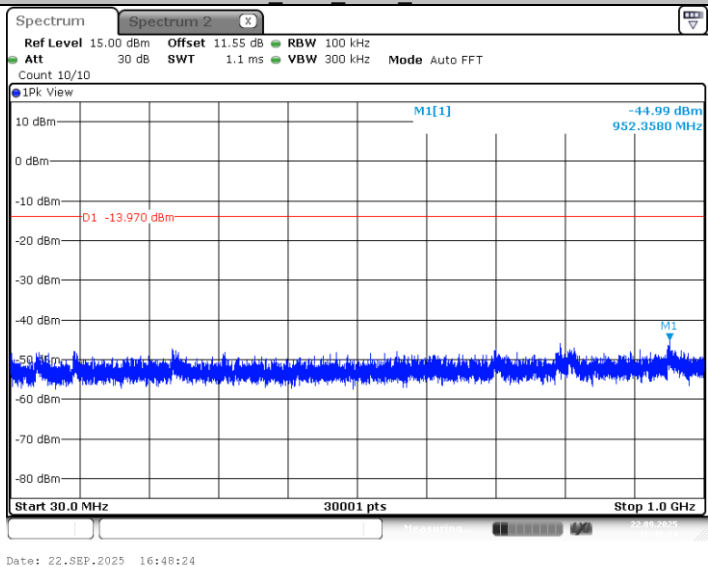
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-059_A2

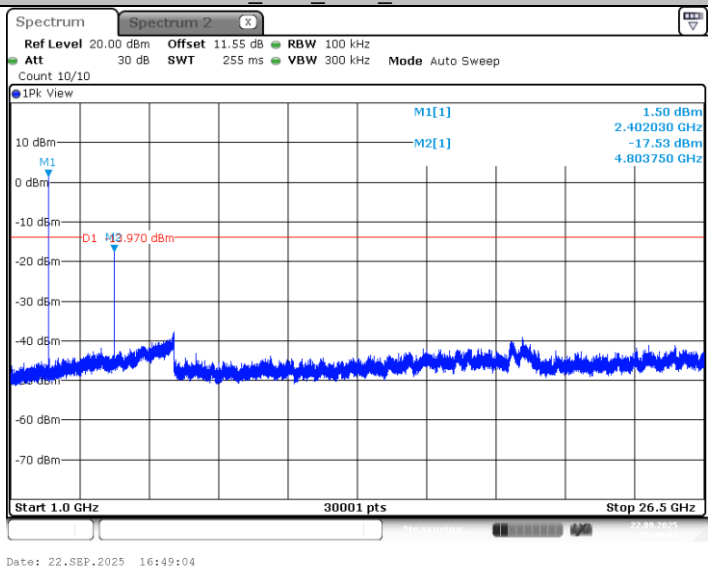
For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



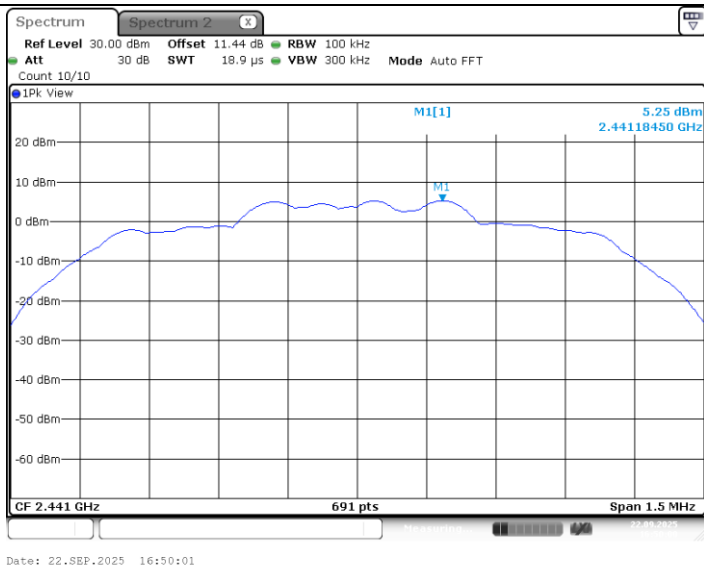
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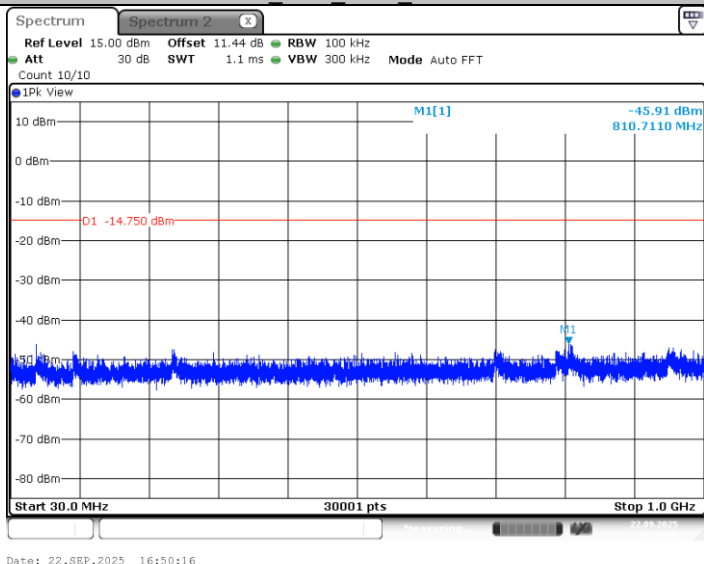
2DH5_Ant1_2402_1000~26500



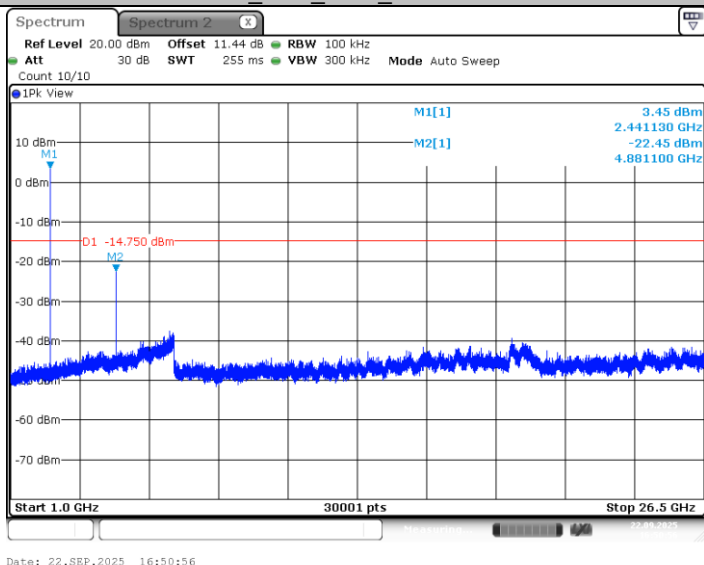
2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



2DH5_Ant1_2441_1000~26500



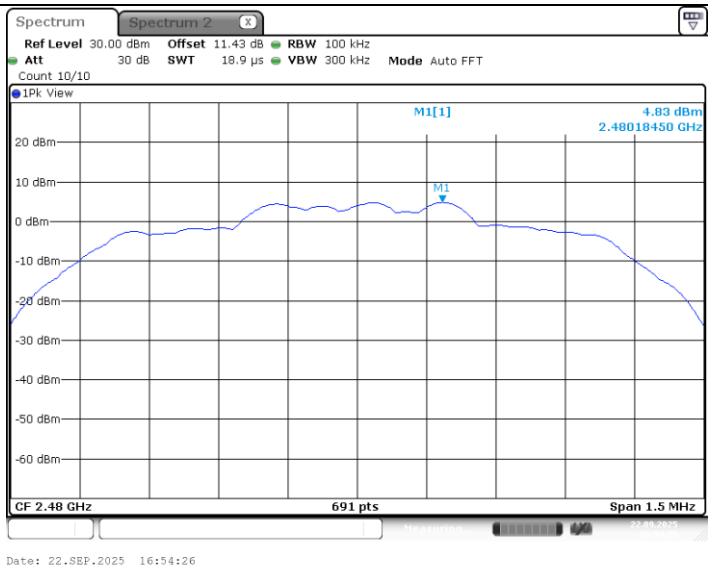
2DH5_Ant1_2480_0~Reference

CTC Laboratories, Inc.

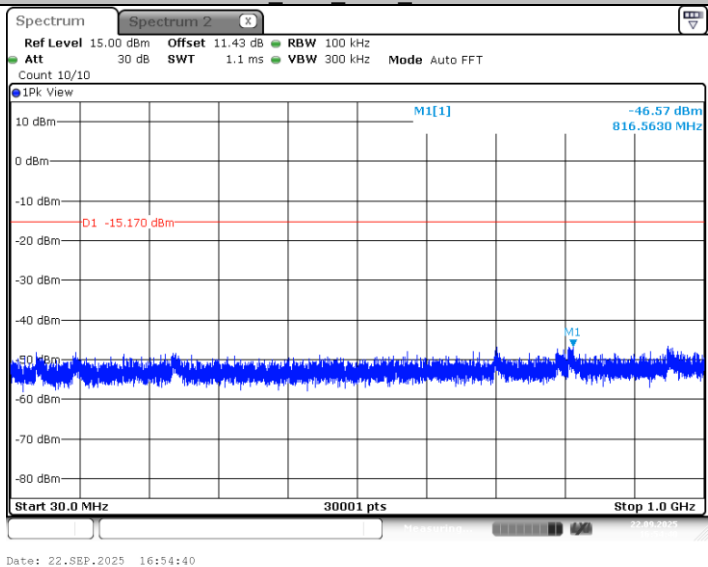
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TRF No: CTC-TR-059_A2

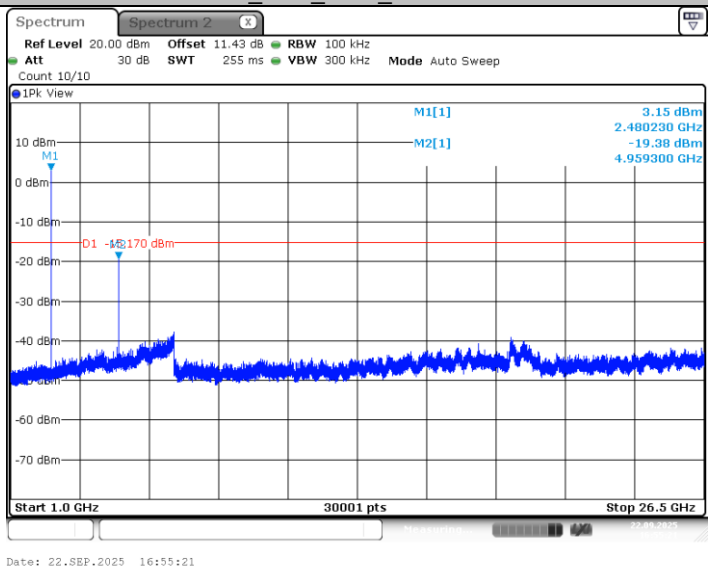
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2DH5 Ant1_2480_30~1000



2DH5 Ant1_2480_1000~26500



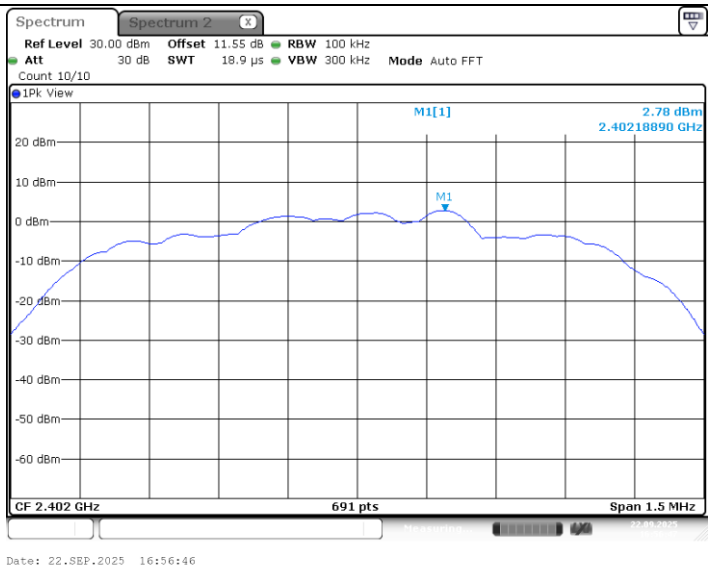
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CTC Laboratories, Inc.

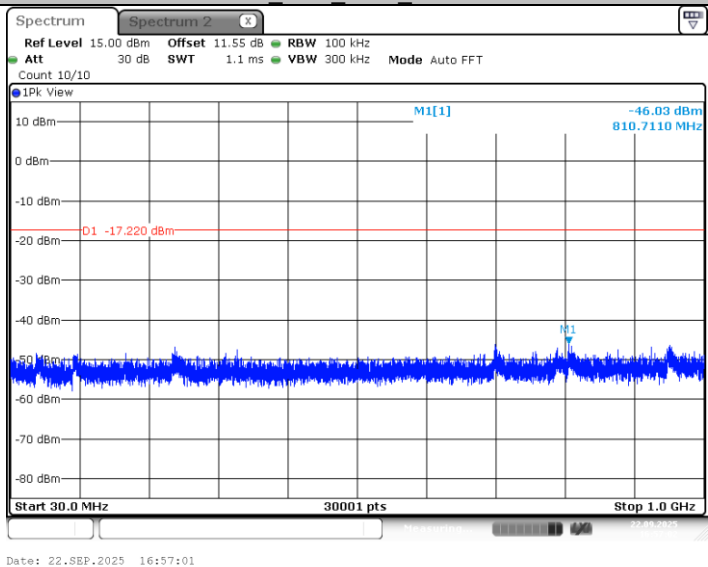
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TRF No: CTC-TR-059_A2

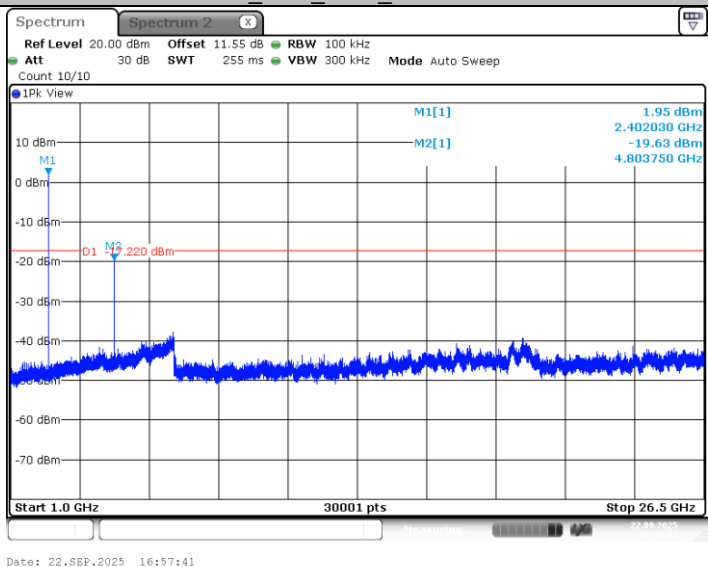
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3DH5 Ant1_2402_30~1000



3DH5 Ant1_2402_1000~26500



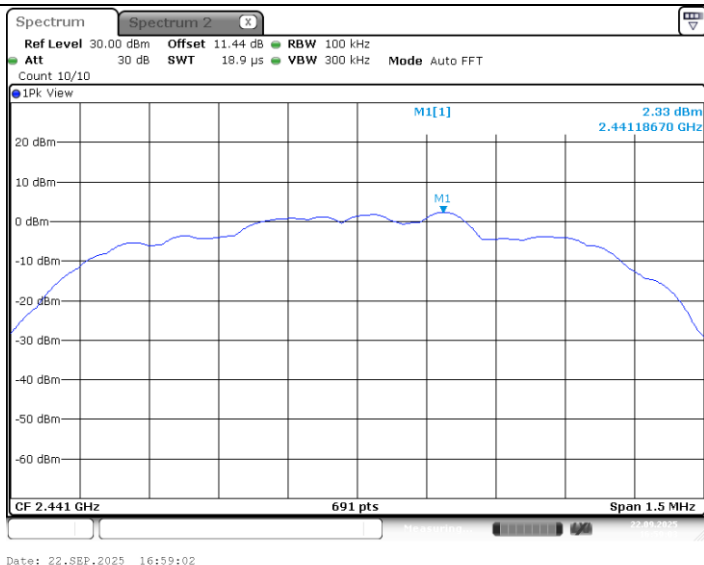
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CTC Laboratories, Inc.

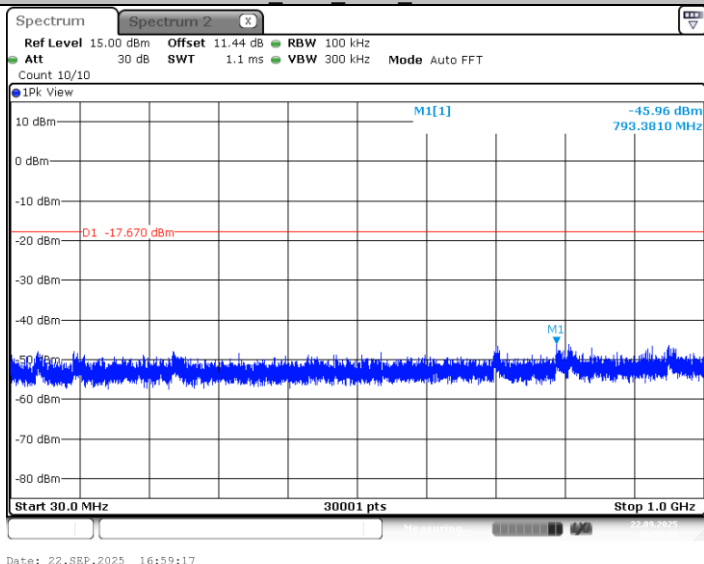
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TRF No: CTC-TR-059_A2

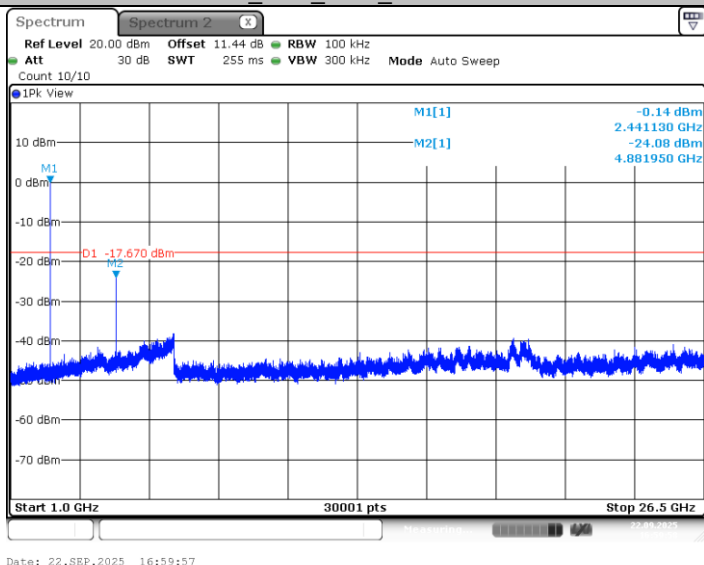
For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



3DH5 Ant1_2441_30~1000



3DH5 Ant1_2441_1000~26500



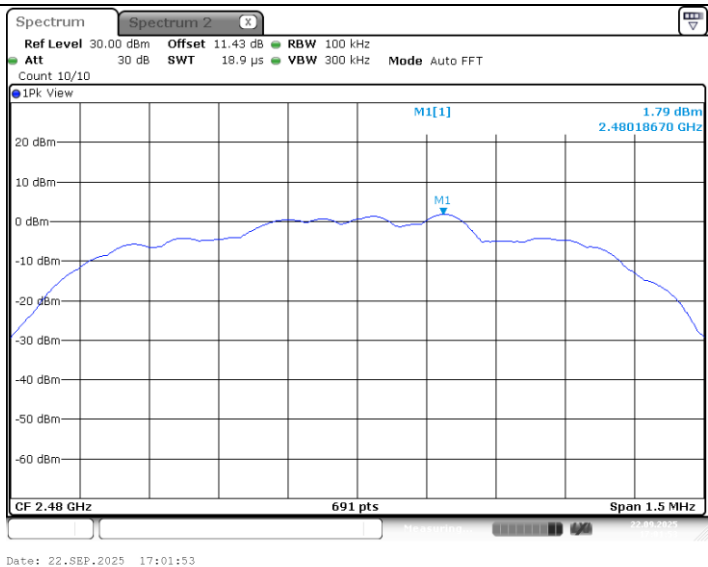
3DH5 Ant1_2480_0~Reference

CTC Laboratories, Inc.

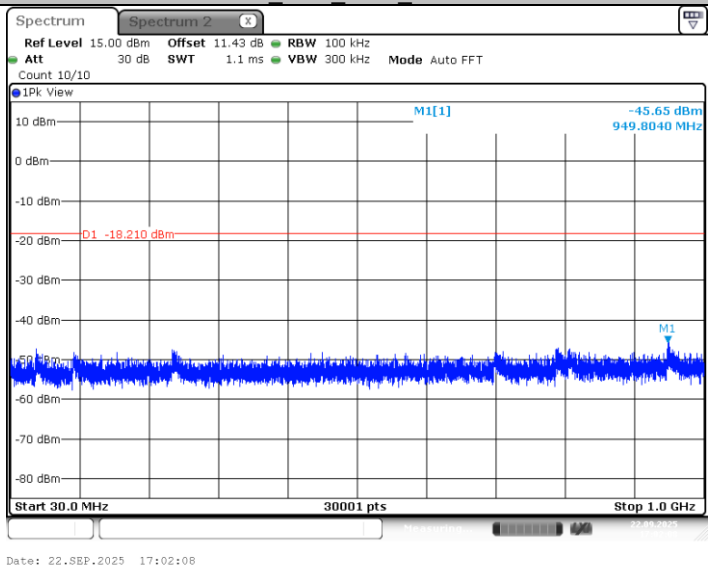
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TRF No: CTC-TR-059_A2

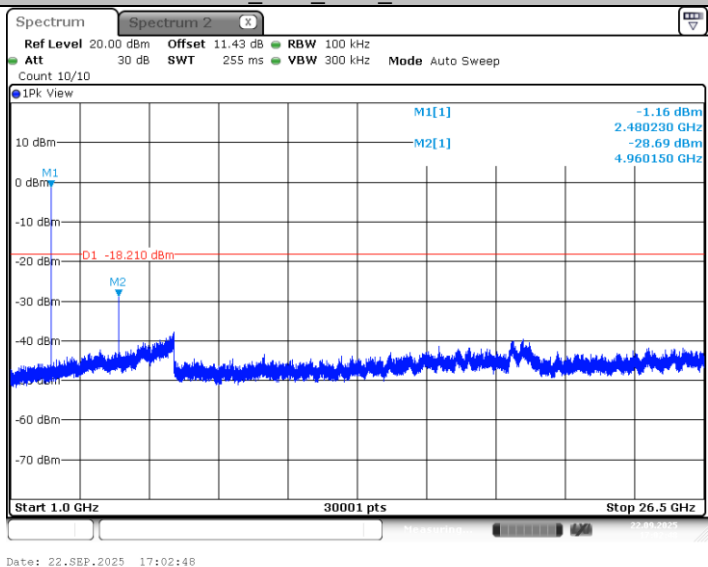
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3DH5 Ant1_2480_30~1000



3DH5 Ant1_2480_1000~26500



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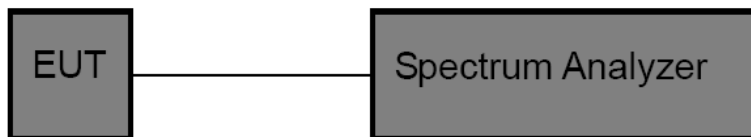


4.5. 20dB Bandwidth

Limit

N/A

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. OCB and 20dB Spectrum Setting:
 - (1) Set RBW = 1% ~ 5% occupied bandwidth.
 - (2) Set the video bandwidth (VBW) ≥ 3 RBW.
 - (3) Detector = Peak.
 - (4) Trace mode = Max hold.
 - (5) Sweep = Auto couple.

Note: The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

Test Mode

Please refer to the clause 2.4.

L Test Result

Test Mode	Frequency (MHz)	99% Bandwidth (MHz)	20dB Bandwidth (MHz)	20dB Bandwidth *2/3 (MHz)
GFSK	2402	0.929	1.03	0.687
	2441	0.92	1.03	0.687
	2480	0.929	1.03	0.687
$\pi/4$ -DQPSK	2402	1.139	1.23	0.820
	2441	1.136	1.24	0.827
	2480	1.133	1.25	0.833
8-DPSK	2402	1.13	1.25	0.833
	2441	1.139	1.28	0.853
	2480	1.142	1.25	0.833

R Test Result

Test Mode	Frequency (MHz)	99% Bandwidth (MHz)	20dB Bandwidth (MHz)	20dB Bandwidth *2/3 (MHz)
GFSK	2402	0.92	1.03	0.613
	2441	0.92	1.05	0.613
	2480	0.92	1.03	0.613
$\pi/4$ -DQPSK	2402	1.139	1.28	0.759
	2441	1.148	1.28	0.765
	2480	1.142	1.28	0.761
8-DPSK	2402	1.16	1.28	0.773
	2441	1.151	1.26	0.767
	2480	1.151	1.26	0.767

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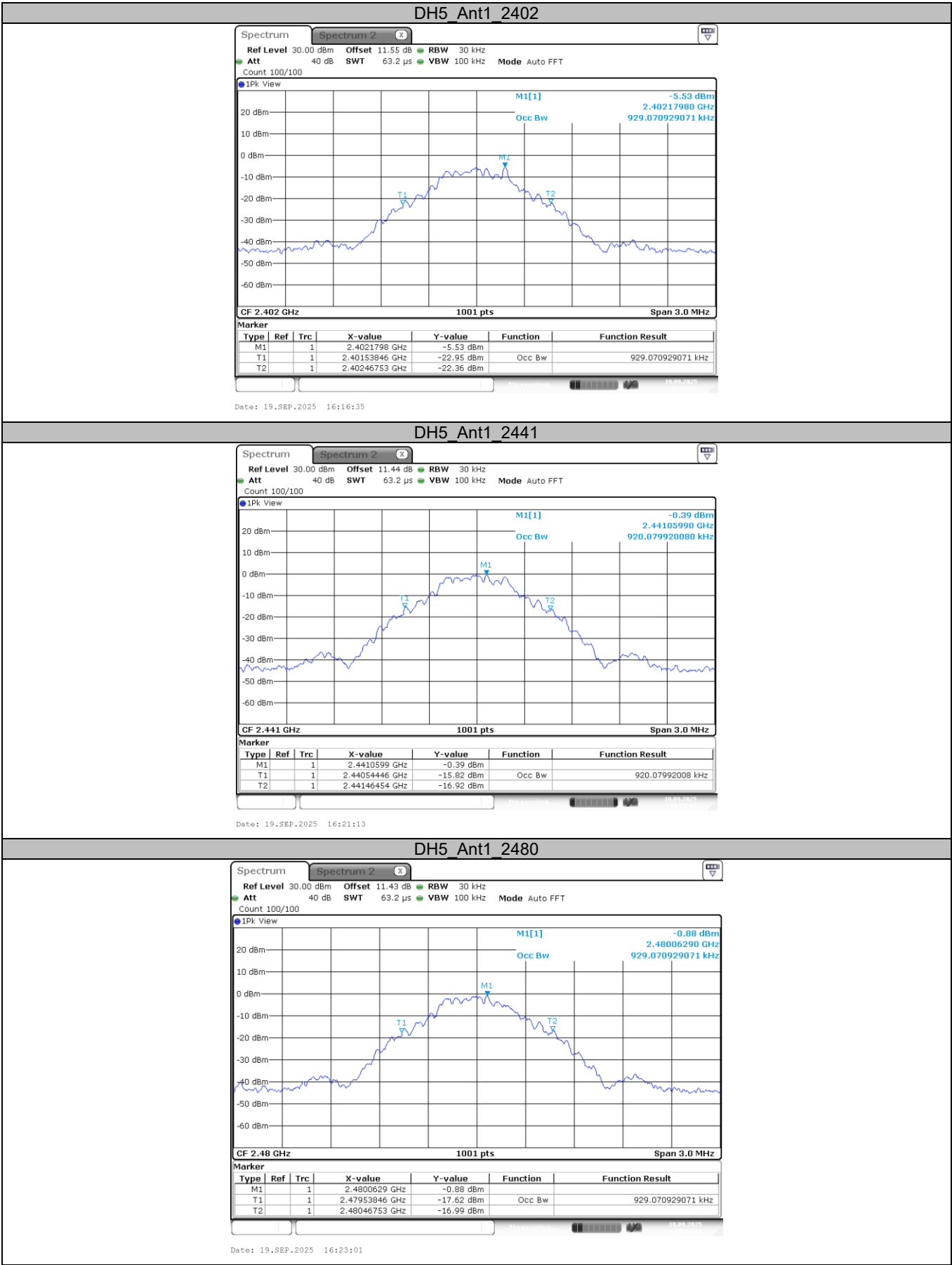
TRF No: CTC-TR-059_A2

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L Test Result:

99% Bandwidth:

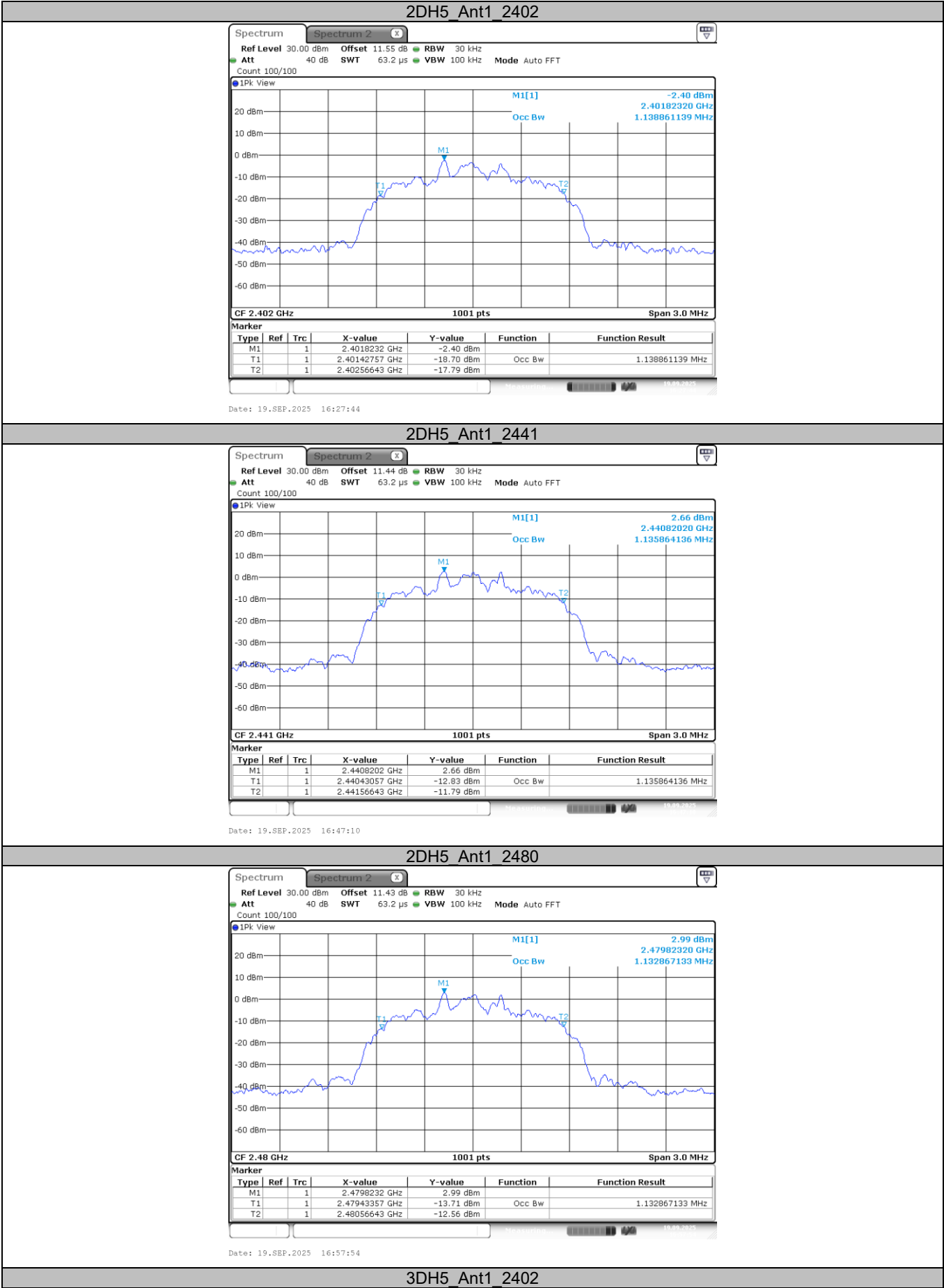


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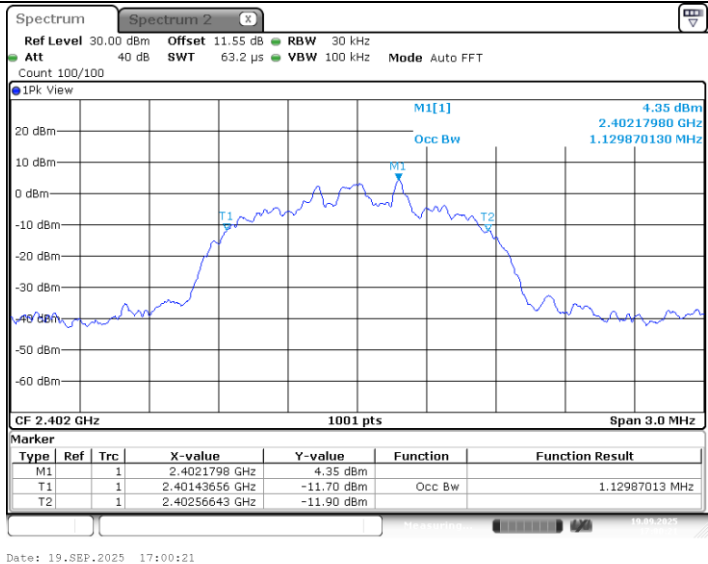


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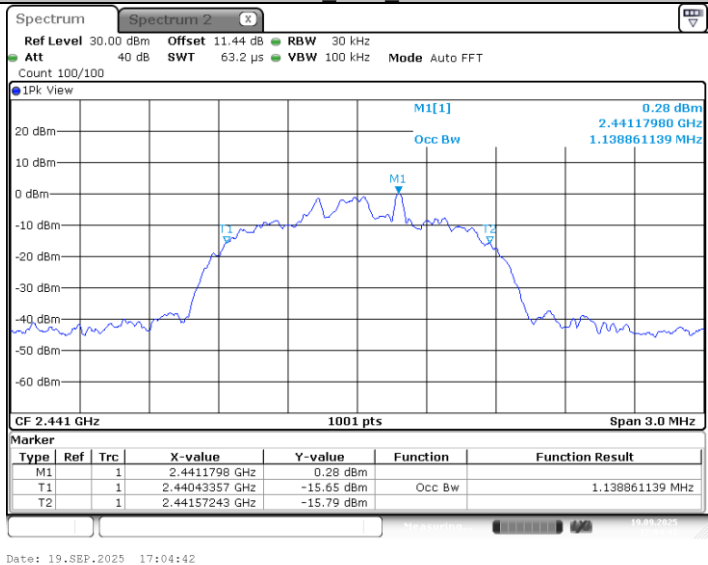
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TRF No: CTC-TR-059_A2

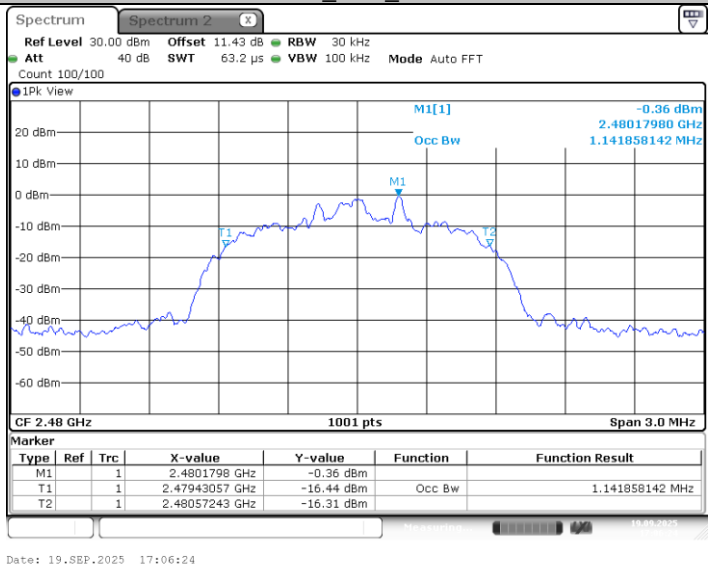
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3DH5_Ant1_2441



3DH5_Ant1_2480



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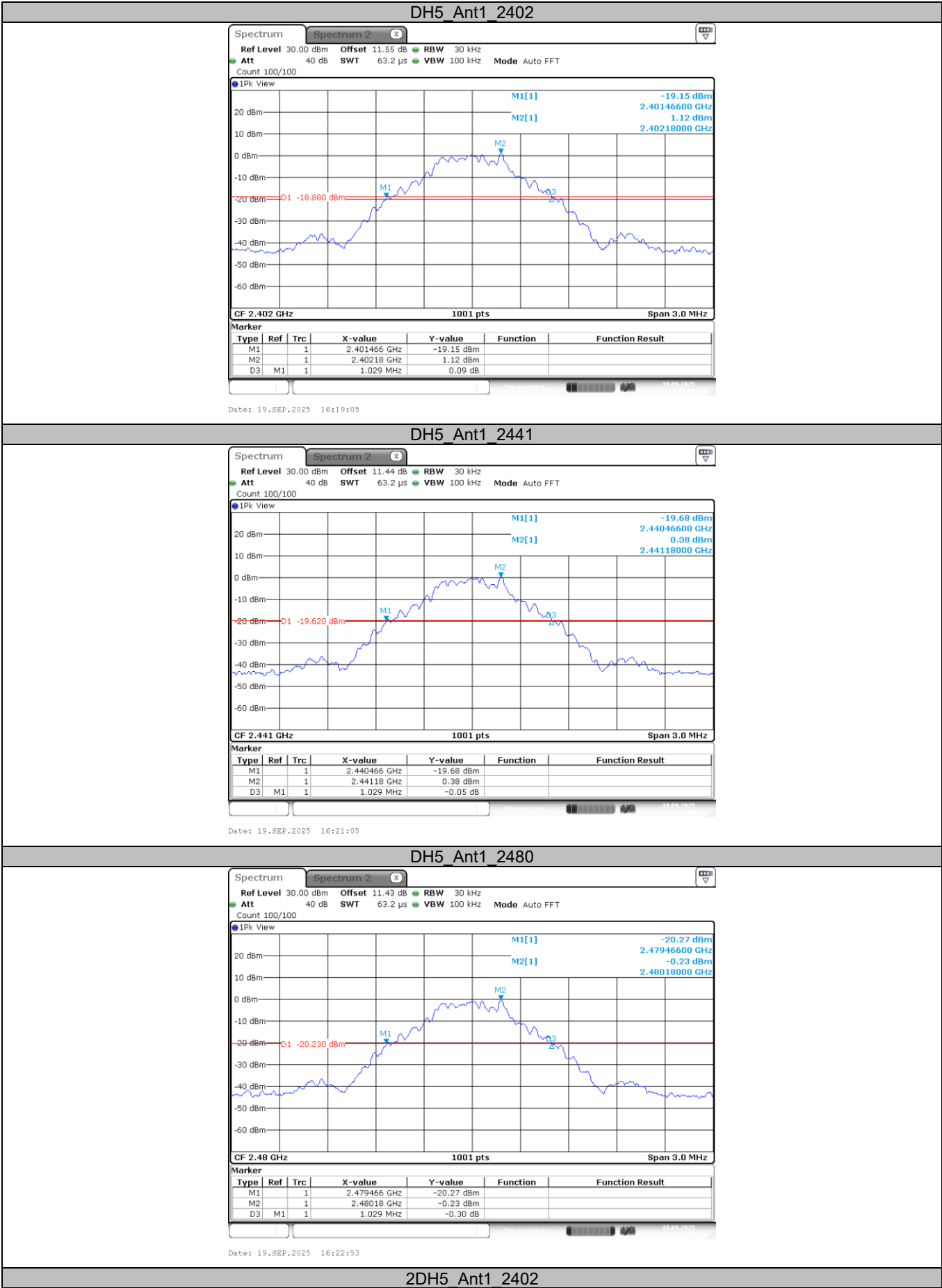
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20dB Bandwidth:

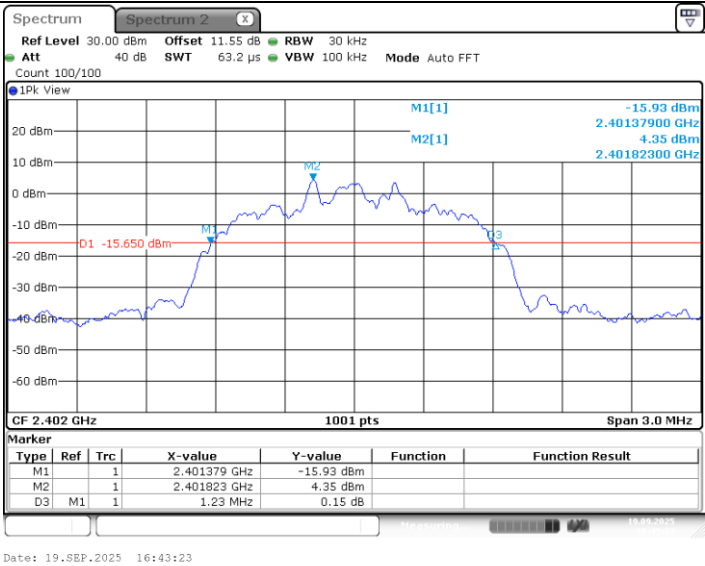


CTC Laboratories, Inc.

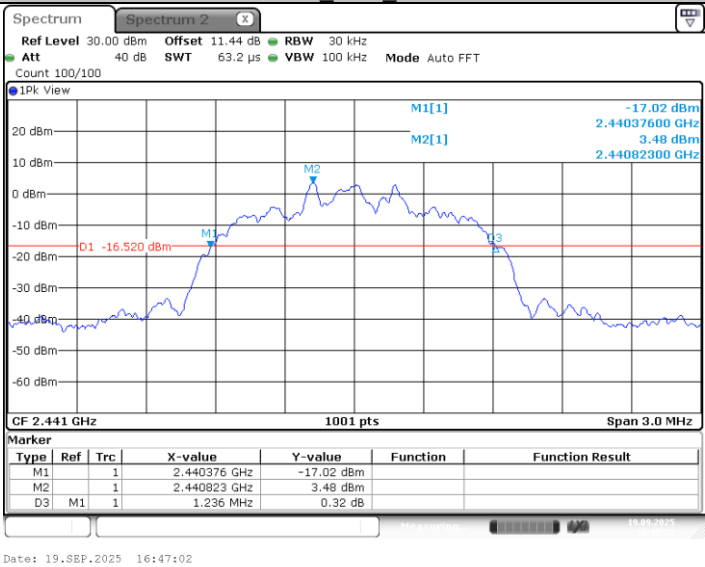
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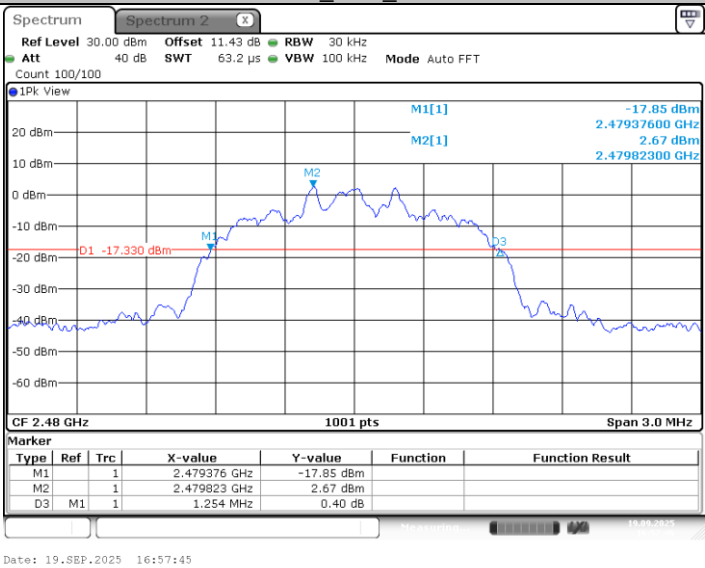
For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



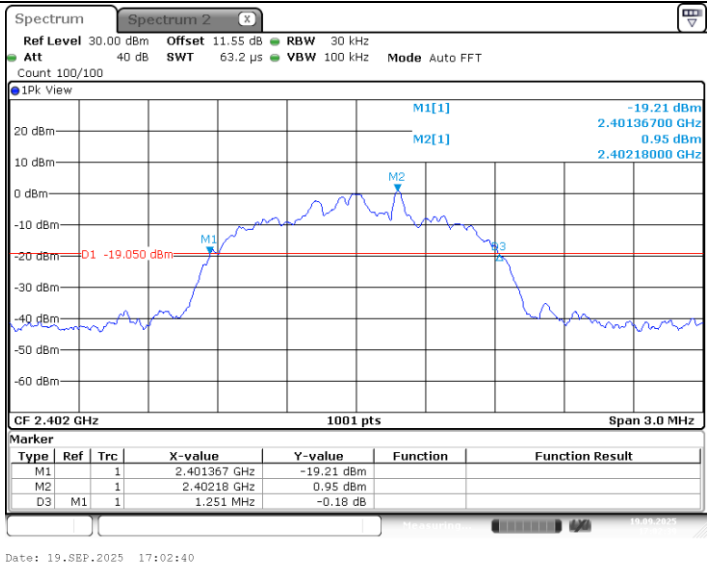
2DH5_Ant1_2441



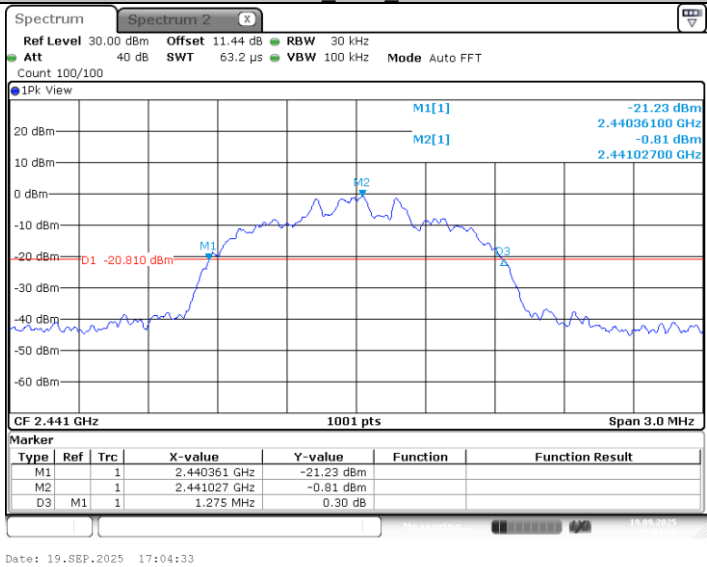
2DH5_Ant1_2480



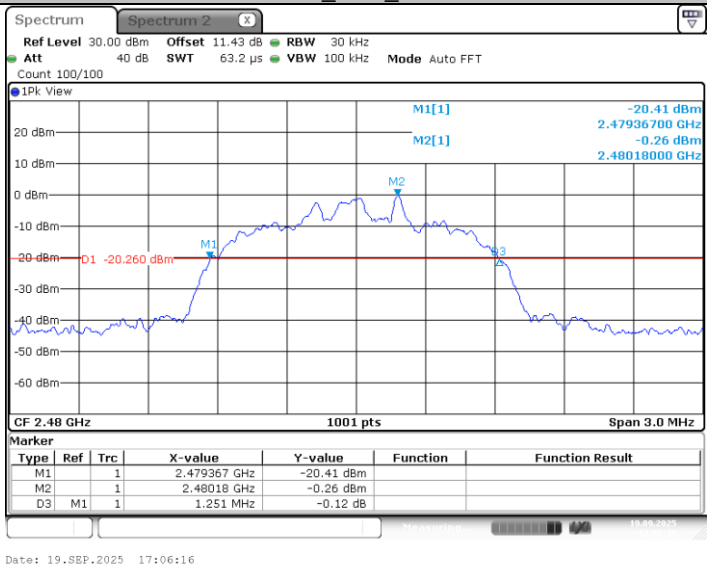
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



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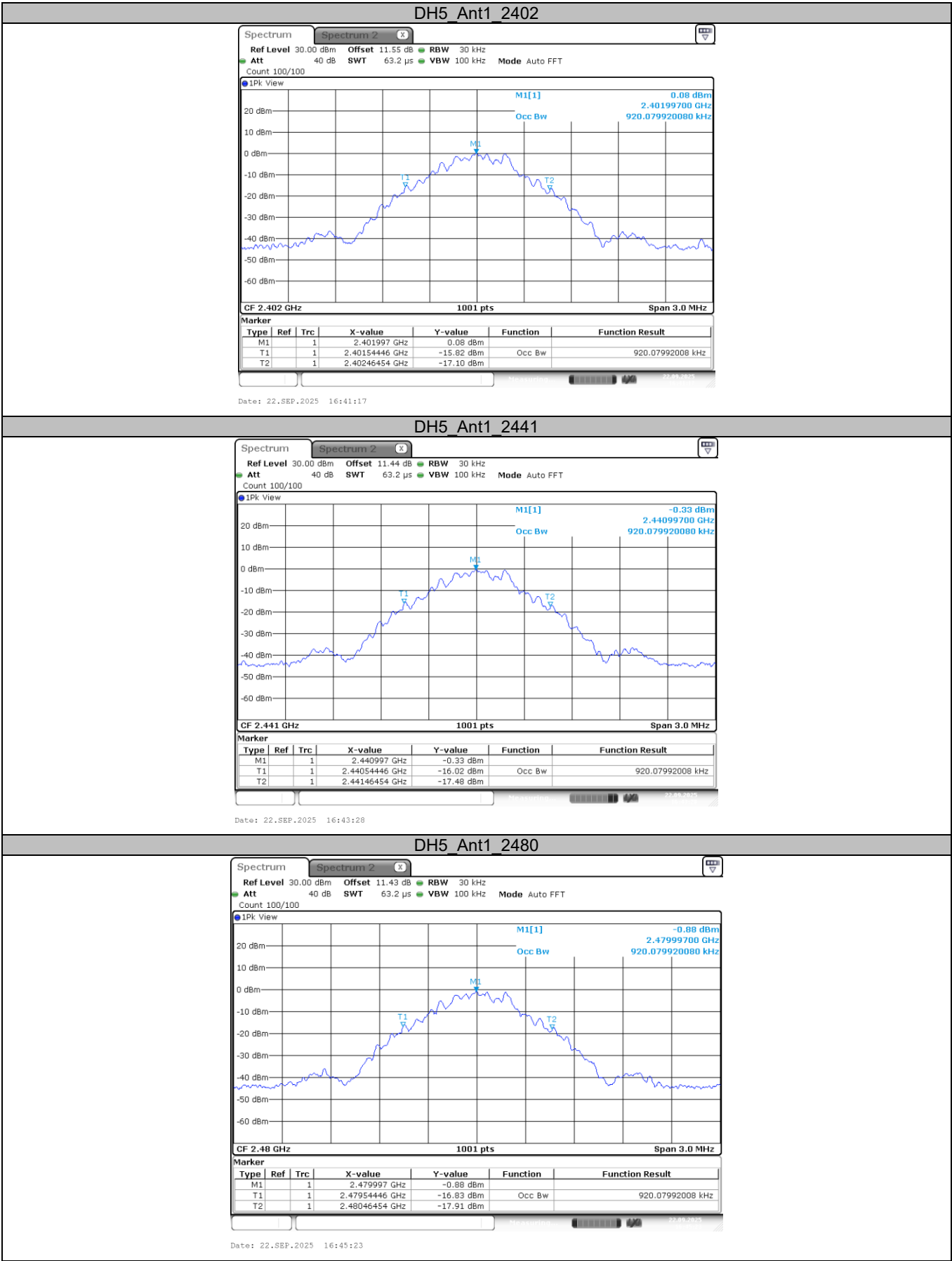
TRF No: CTC-TR-059_A2

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R Test Result:

99% Bandwidth:

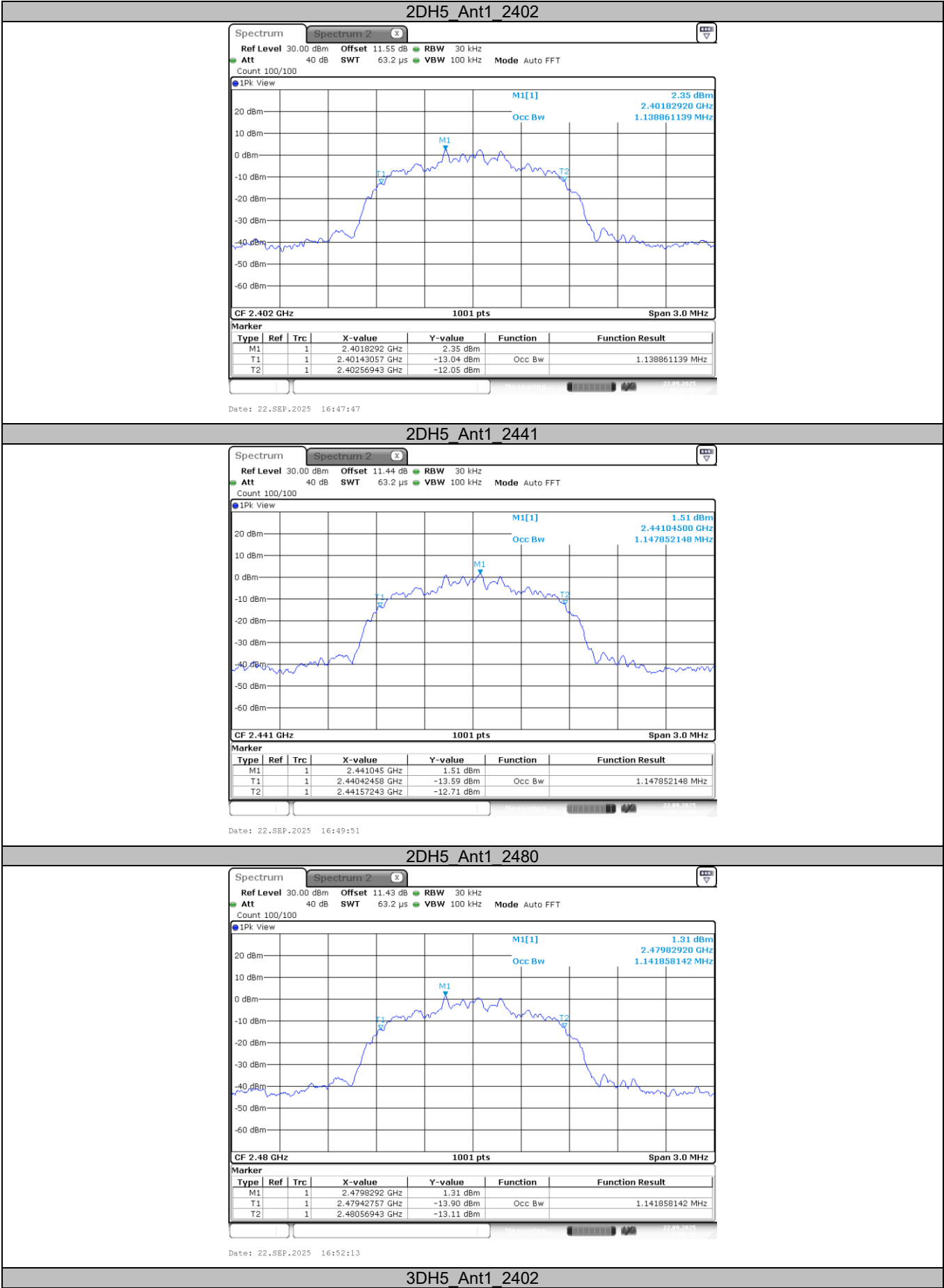


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TRF No: CTC-TR-059_A2

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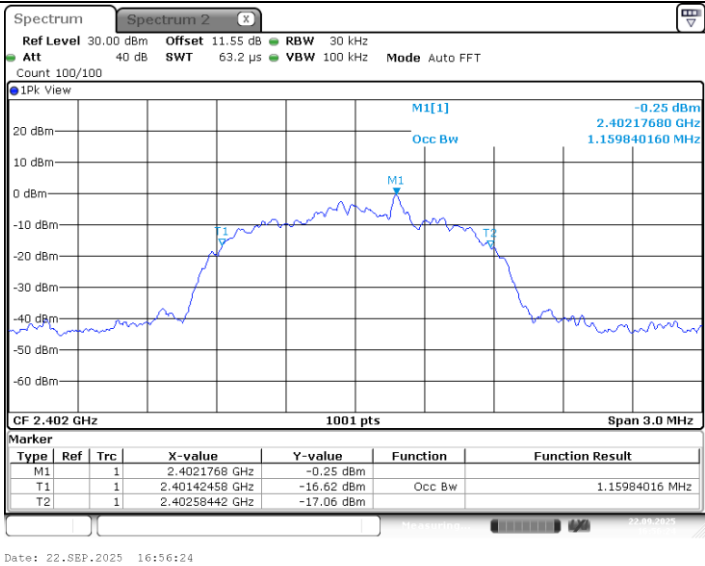


CTC Laboratories, Inc.

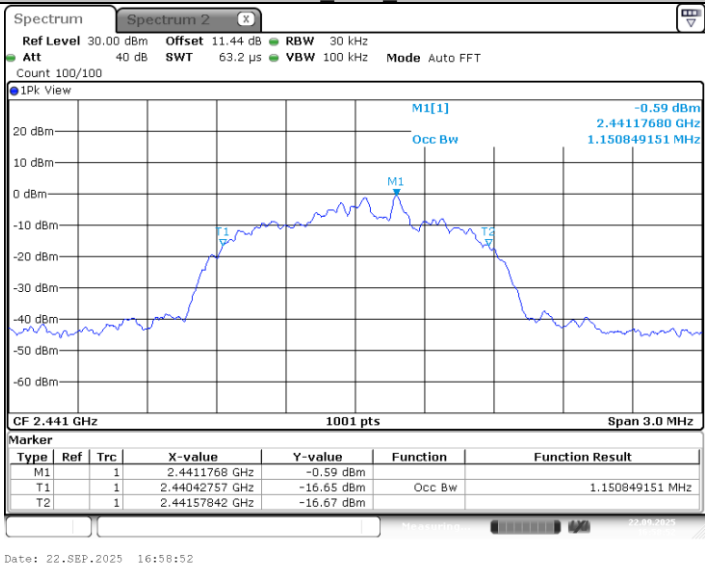
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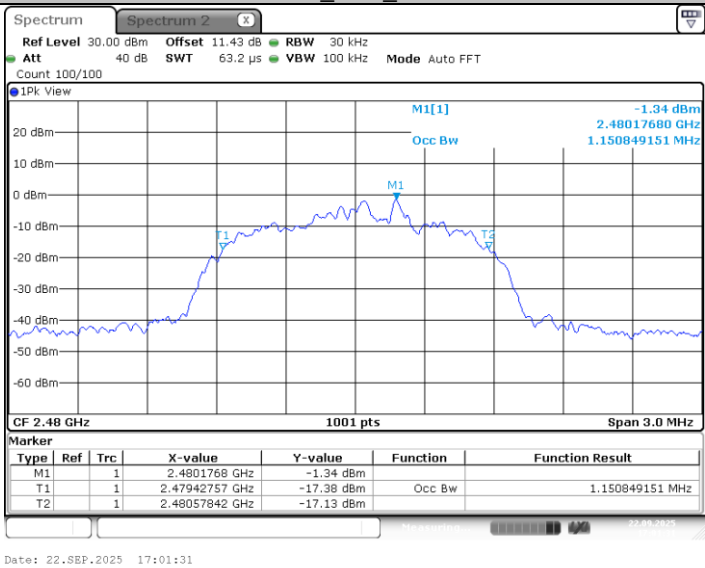
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3DH5_Ant1_2441



3DH5_Ant1_2480



CTC Laboratories, Inc.

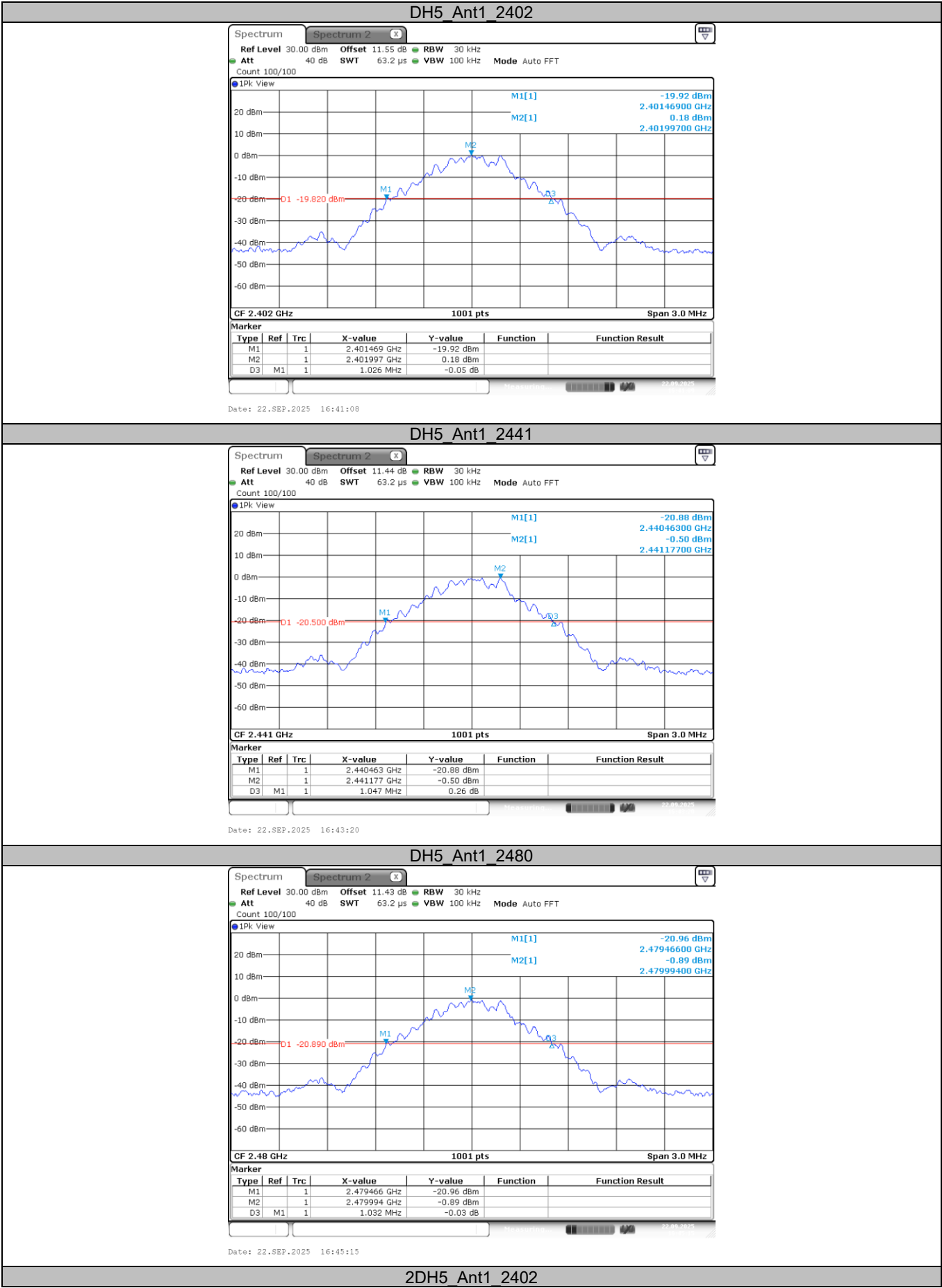
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhu Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-059_A2

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20dB Bandwidth:

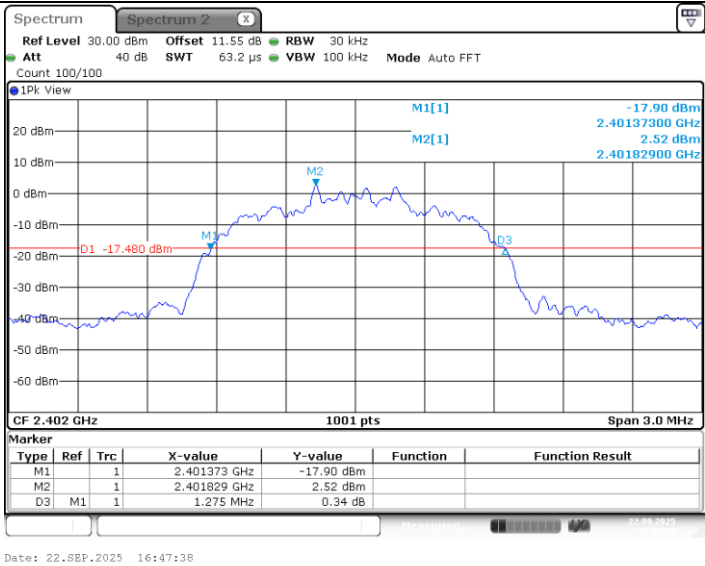


CTC Laboratories, Inc.

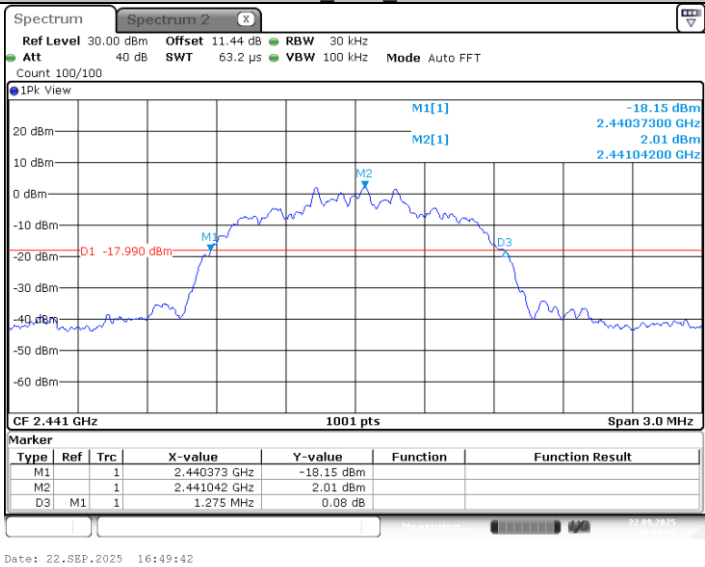
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TRF No: CTC-TR-059_A2

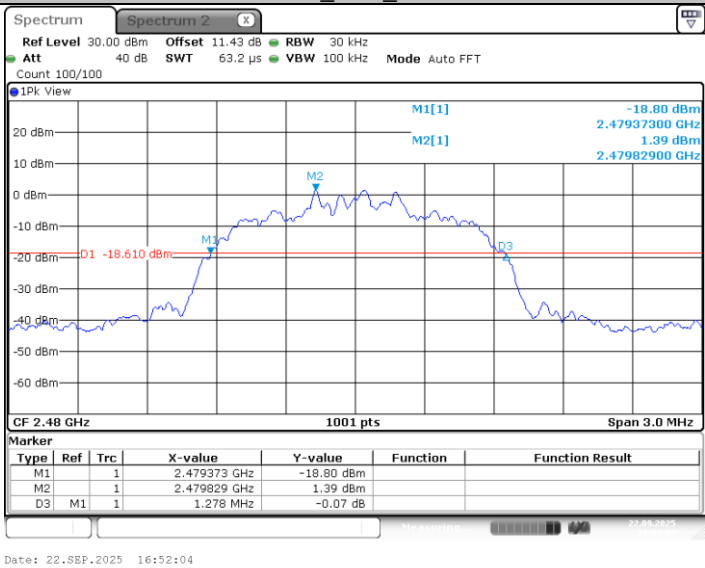
For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



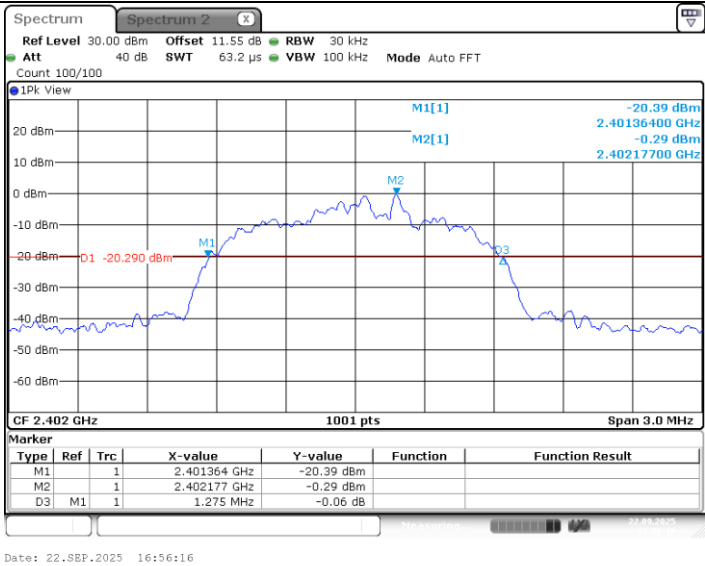
2DH5_Ant1_2441



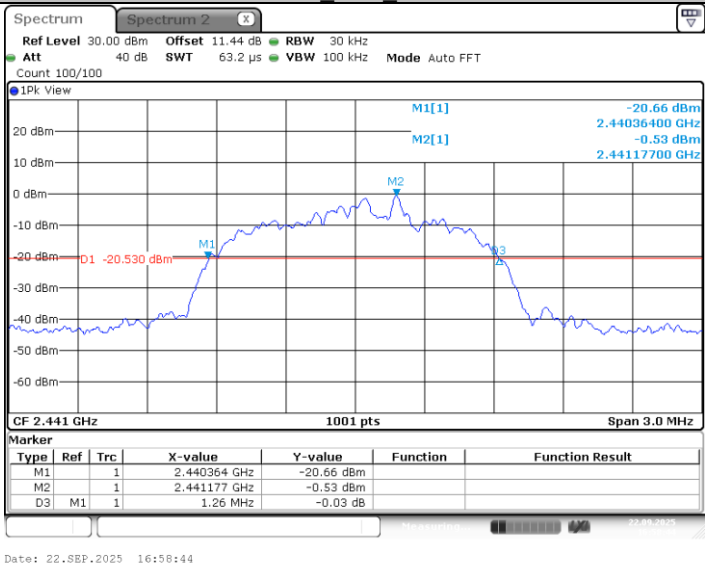
2DH5_Ant1_2480



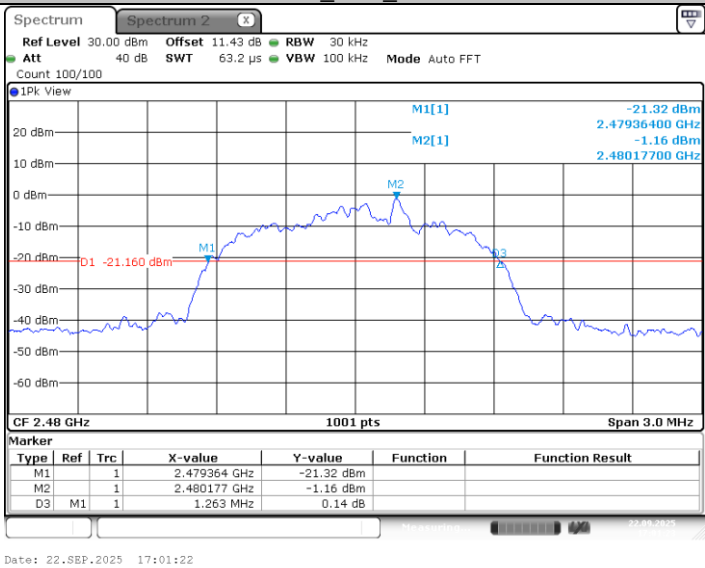
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



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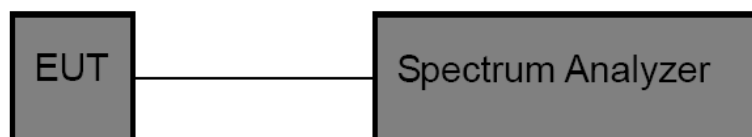
4.6. Channel Separation

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(1)

Test Item	Limit	Frequency Range (MHz)
Channel Separation	>25kHz or >two-thirds of the 20 dB bandwidth Which is greater	2400~2483.5

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. Spectrum Setting:
 - (1) Set RBW = 100 kHz.
 - (2) Set the video bandwidth (VBW) ≥ 3 RBW.
 - (3) Detector = Peak.
 - (4) Trace mode = Max hold.
 - (5) Sweep = Auto couple.

Test Mode

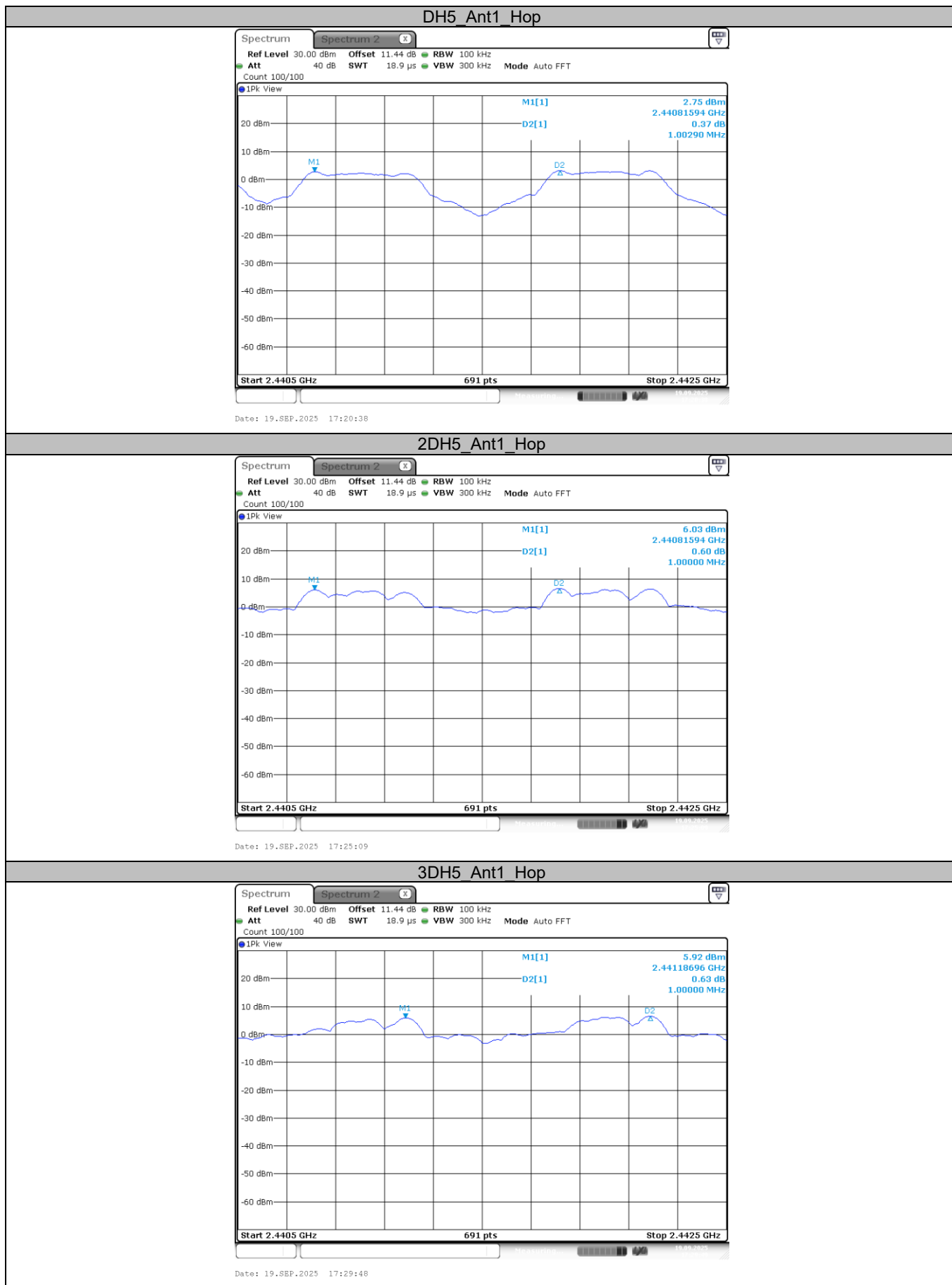
Please refer to the clause 2.4.

L Test Result

Test Mode	Frequency (MHz)	Carrier Frequencies Separation (MHz)	Limit (MHz)	Verdict
GFSK	Hop_2441	1.003	>0.687	Pass
$\pi/4$ -DQPSK	Hop_2441	1.000	>0.833	Pass
8-DPSK	Hop_2441	1.000	>0.853	Pass

R Test Result

Test Mode	Frequency (MHz)	Carrier Frequencies Separation (MHz)	Limit (MHz)	Verdict
GFSK	Hop_2441	1.000	>0.613	Pass
$\pi/4$ -DQPSK	Hop_2441	1.017	>0.765	Pass
8-DPSK	Hop_2441	1.000	>0.773	Pass

**L Test plot as follows:**

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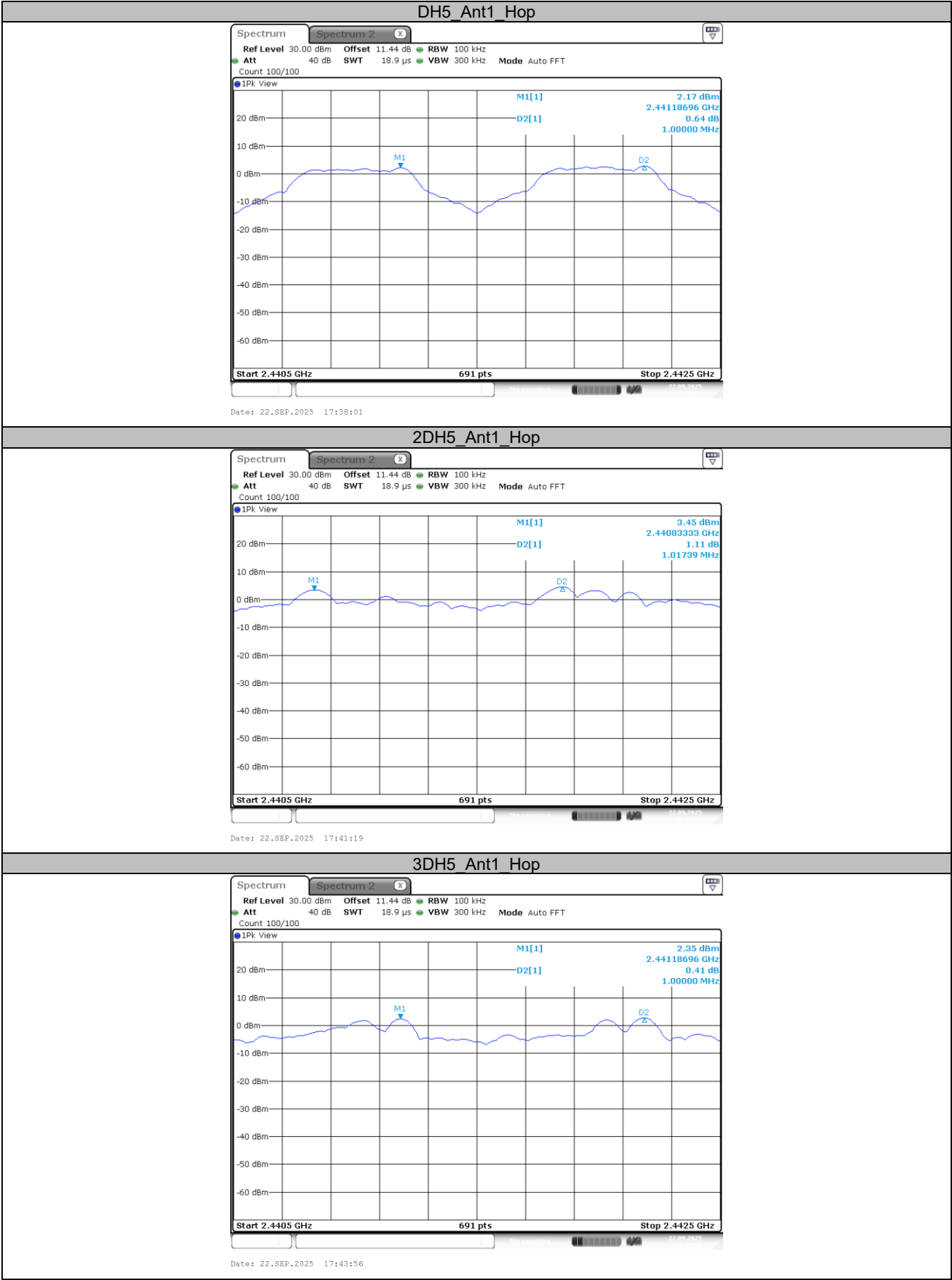
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict,
Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

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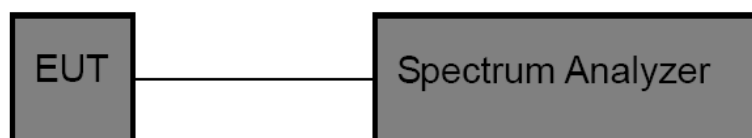
4.7. Number of Hopping Channel

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(iii)

Section	Test Item	Limit
15.247 (a)(iii) RSS-247 5.1 d	Number of Hopping Channel	≥ 15

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. Spectrum Setting:
 - (1) Peak Detector: RBW=100 kHz, VBW $\geq$ RBW, Sweep time= Auto.

Test Mode

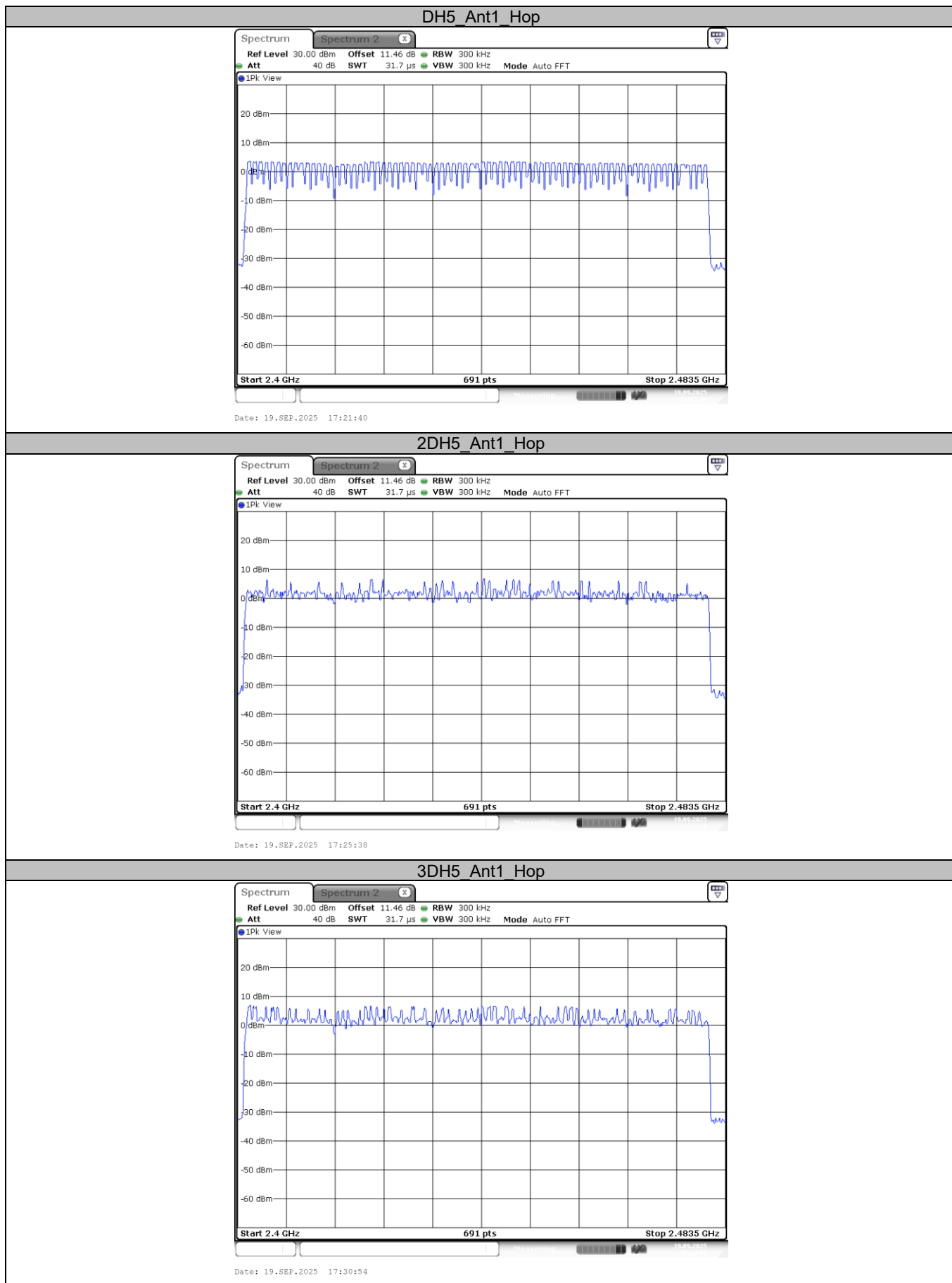
Please refer to the clause 2.4.

L Test Result

Test Mode	Channel Number	Limit	Verdict
GFSK	79	≥ 15	Pass
$\pi/4$ -DQPSK	79	≥ 15	Pass
8-DPSK	79	≥ 15	Pass

R Test Result

Test Mode	Channel Number	Limit	Verdict
GFSK	79	≥ 15	Pass
$\pi/4$ -DQPSK	79	≥ 15	Pass
8-DPSK	79	≥ 15	Pass

**L Test plot as follows:**

CTC Laboratories, Inc.

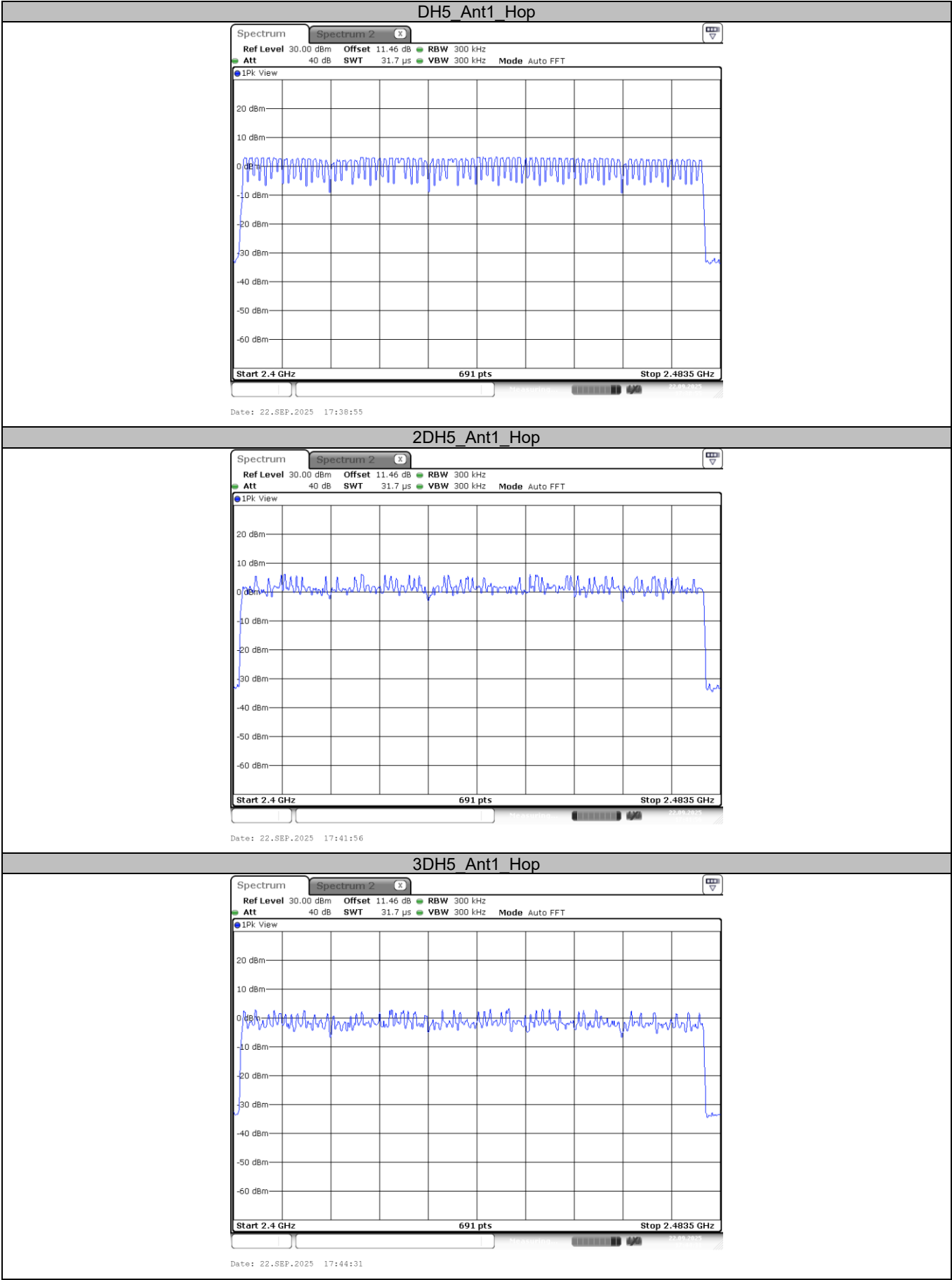
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhua Community, Guanhu Subdistrict,
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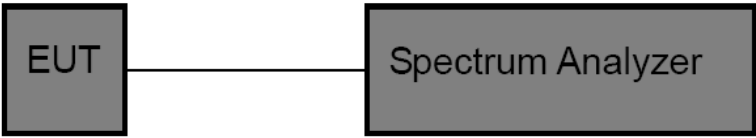
4.8. Dwell Time

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(iii)

Section	Test Item	Limit
15.247 (a)(iii) RSS-247 5.1 d	Average Time of Occupancy	0.4 sec

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. Spectrum Setting:
 - (1) Spectrum Setting: RBW=1MHz, VBW $\geq$ RBW.
 - (2) Use video trigger with the trigger level set to enable triggering only on full pulses.
 - (3) Sweep Time is more than once pulse time.
 - (4) Set the center frequency on any frequency would be measure and set the frequency span to zero.
 - (5) Measure the maximum time duration of one single pulse.
 - (6) Set the EUT for packet transmitting.

Test Mode

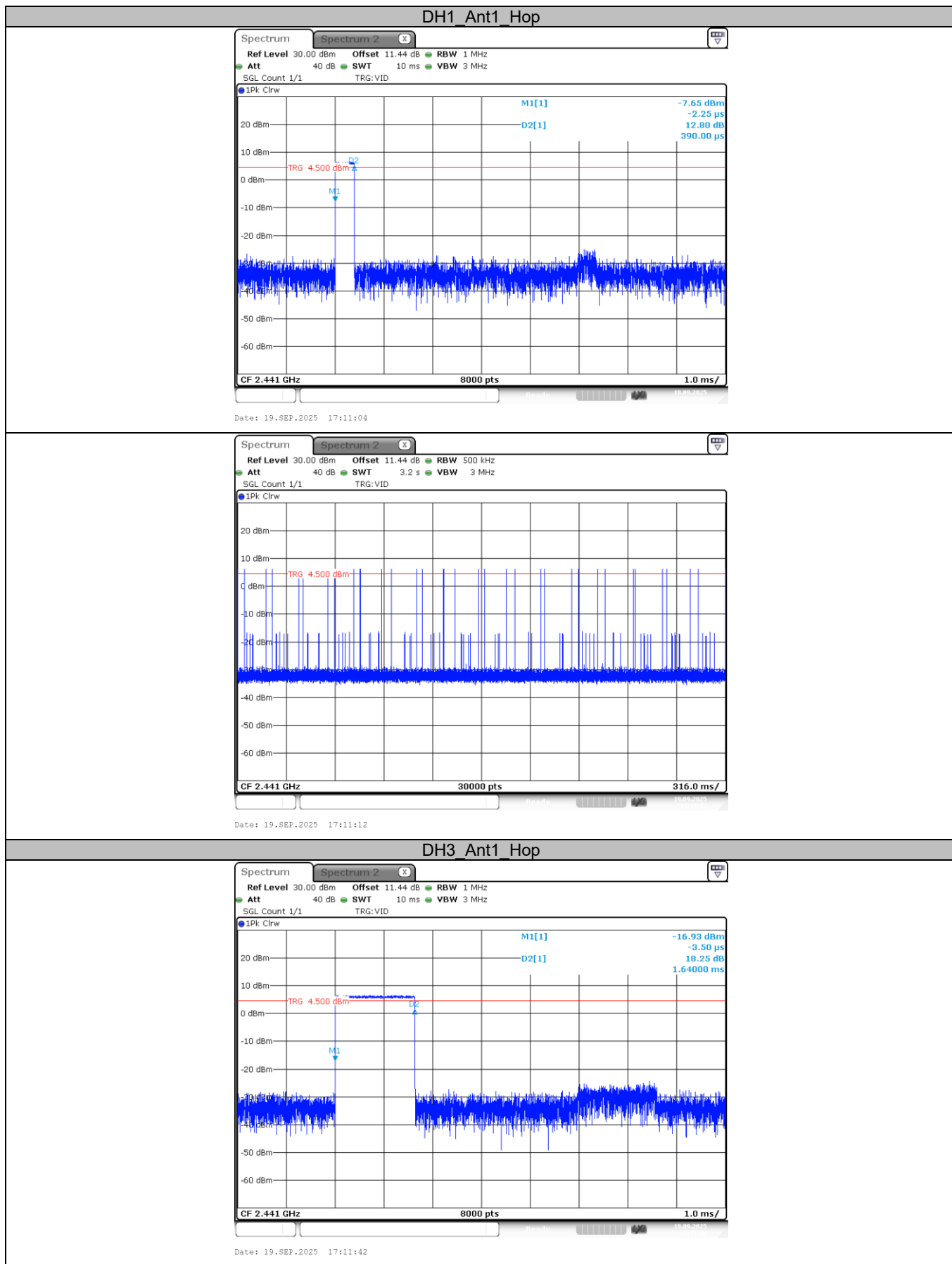
Please refer to the clause 2.4.

**L Test Result**

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.390	320	0.125	≤0.4	PASS
DH3	Ant1	Hop	1.640	190	0.312	≤0.4	PASS
DH5	Ant1	Hop	2.879	100	0.288	≤0.4	PASS
2DH1	Ant1	Hop	0.400	330	0.132	≤0.4	PASS
2DH3	Ant1	Hop	1.644	170	0.279	≤0.4	PASS
2DH5	Ant1	Hop	2.885	80	0.231	≤0.4	PASS
3DH1	Ant1	Hop	0.401	330	0.132	≤0.4	PASS
3DH3	Ant1	Hop	1.643	160	0.263	≤0.4	PASS
3DH5	Ant1	Hop	2.887	90	0.26	≤0.4	PASS

R Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.390	330	0.129	≤0.4	PASS
DH3	Ant1	Hop	1.640	170	0.279	≤0.4	PASS
DH5	Ant1	Hop	2.880	50	0.144	≤0.4	PASS
2DH1	Ant1	Hop	0.401	320	0.128	≤0.4	PASS
2DH3	Ant1	Hop	1.645	160	0.263	≤0.4	PASS
2DH5	Ant1	Hop	2.885	90	0.26	≤0.4	PASS
3DH1	Ant1	Hop	0.401	320	0.128	≤0.4	PASS
3DH3	Ant1	Hop	1.644	180	0.296	≤0.4	PASS
3DH5	Ant1	Hop	2.887	100	0.289	≤0.4	PASS

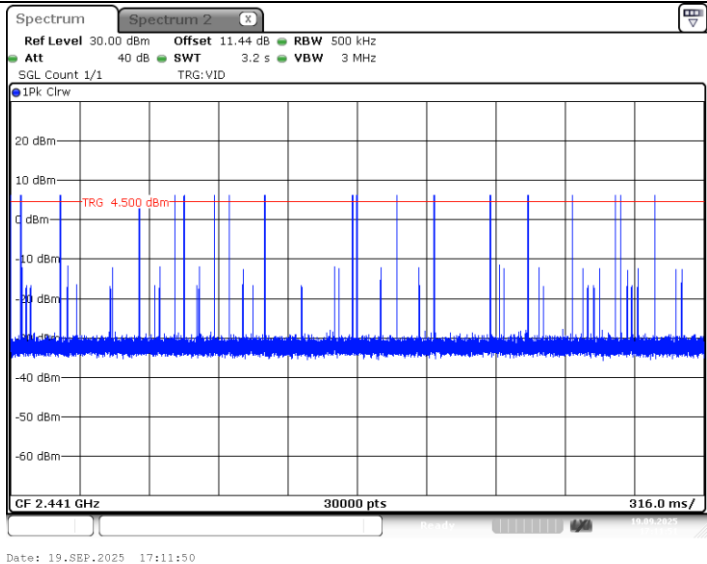
**L Test plot as follows:**

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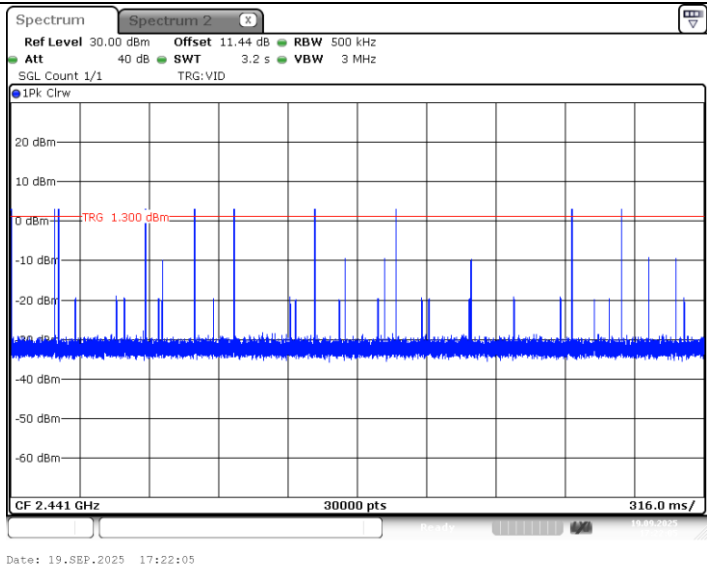
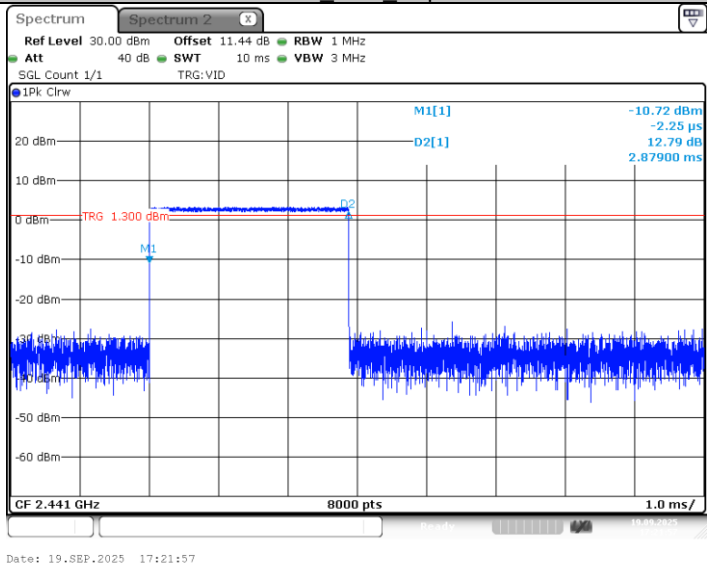
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DH5_Ant1_Hop



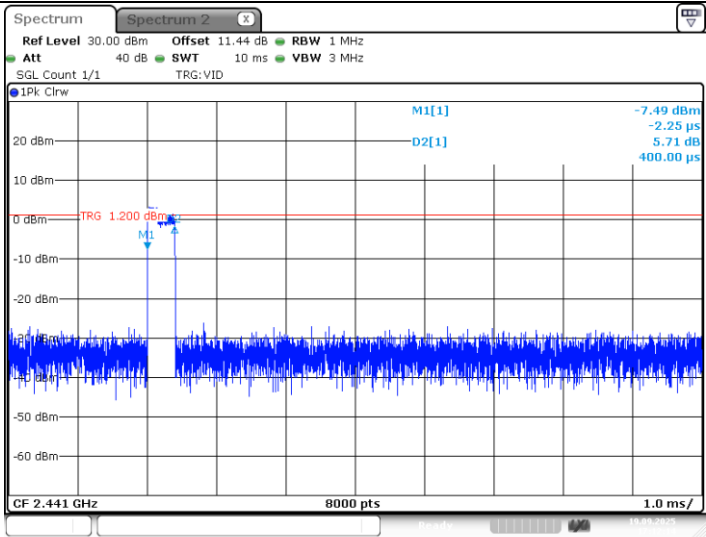
2DH1_Ant1_Hop

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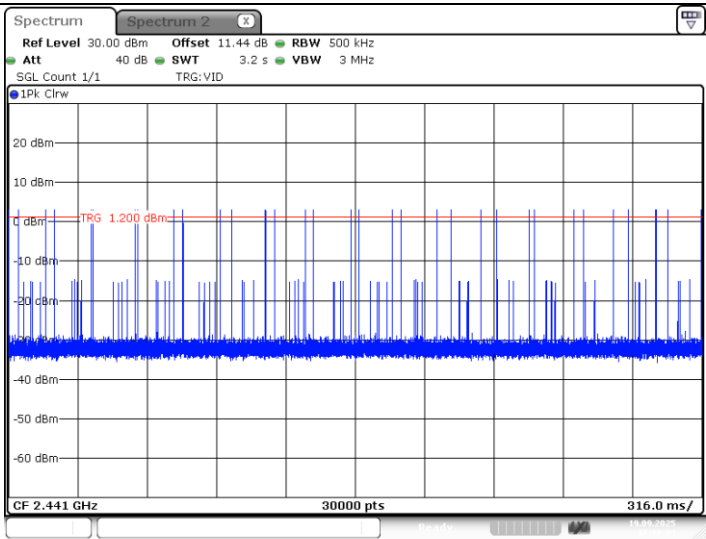
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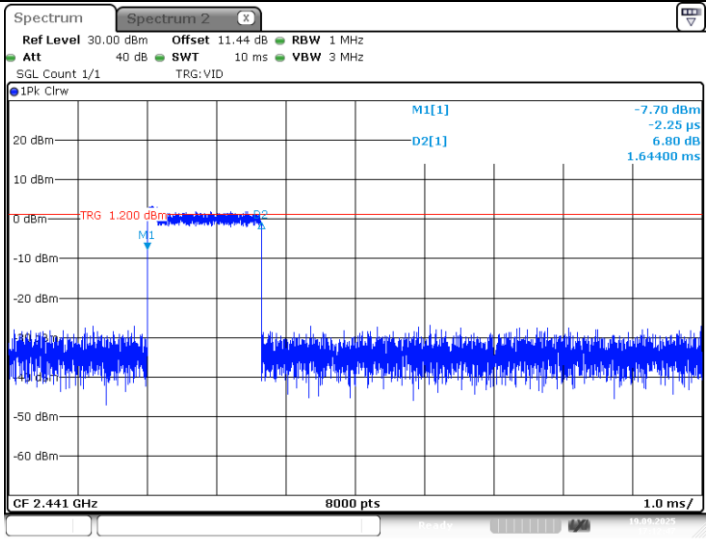


Date: 19.SEP.2025 17:12:14



Date: 19.SEP.2025 17:12:23

2DH3 Ant1 Hop



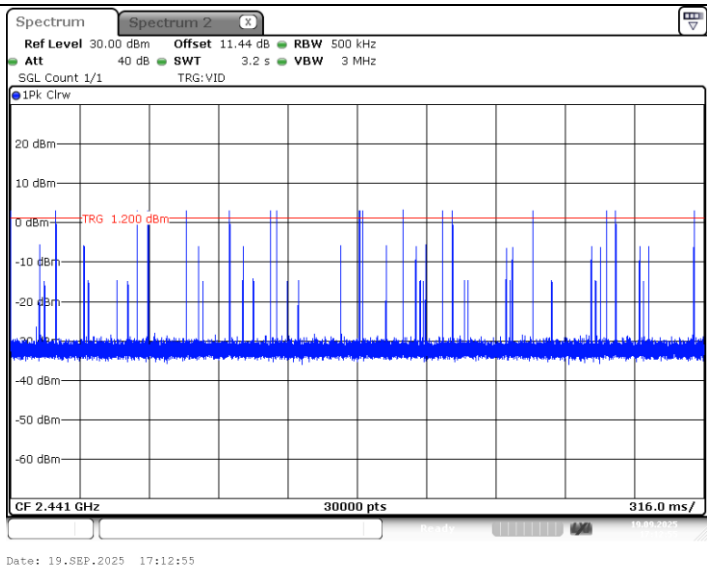
Date: 19.SEP.2025 17:12:47

CTC Laboratories, Inc.

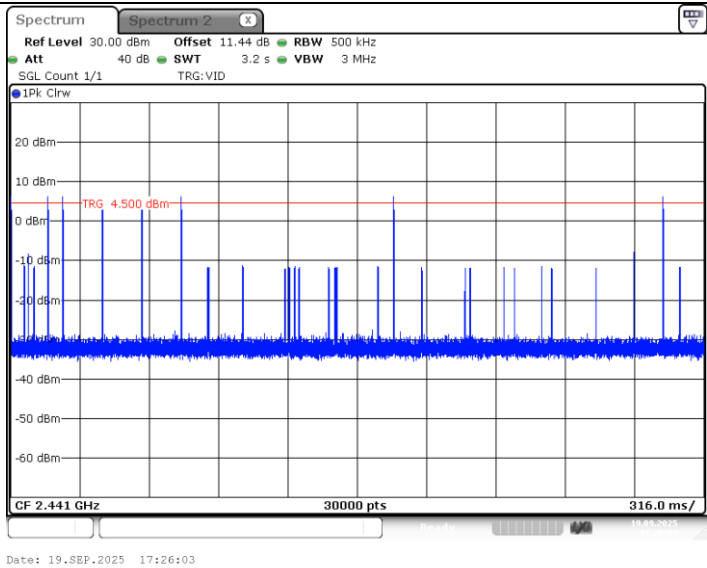
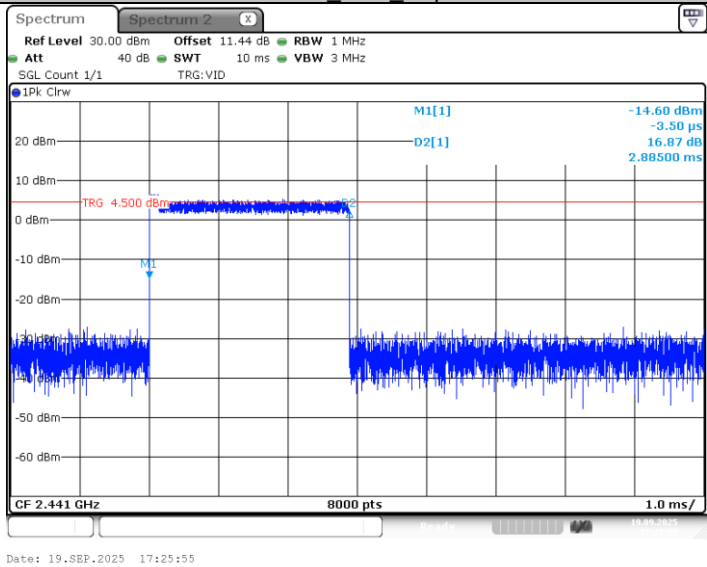
Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luh Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn

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2DH5_Ant1_Hop



3DH1_Ant1_Hop