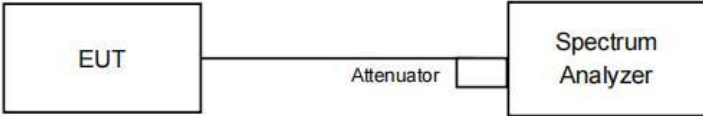


5.5 Carrier Frequencies Separation

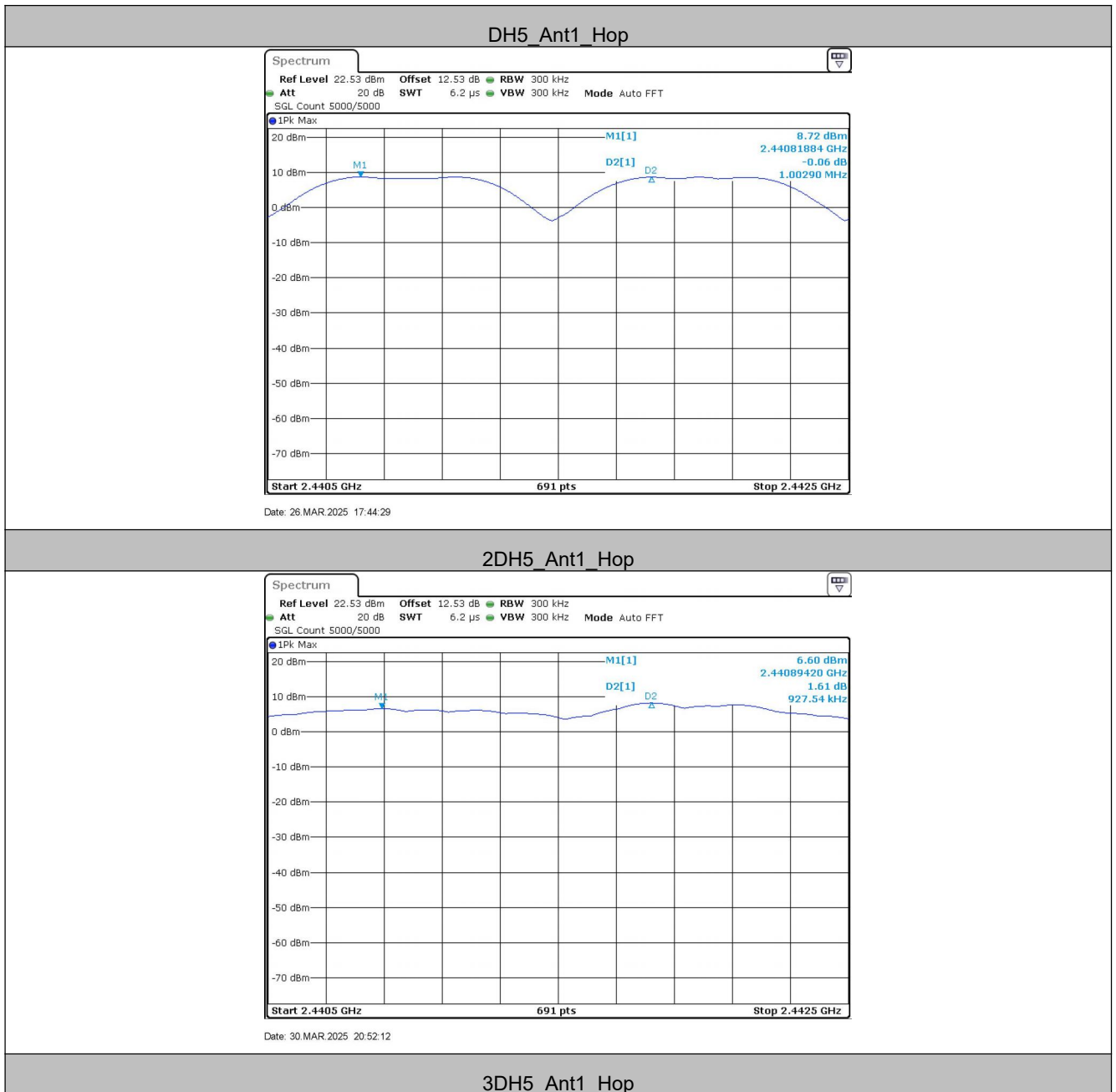
Test Requirement:	47 CFR Part 15C Section 15.247 (a)(1)
Test Method:	ANSI C63.10:2013
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Limit:	2/3 of the 20dB bandwidth
	Remark: the transmission power is less than 0.125W.
Exploratory Test Mode:	Hopping transmitting with all kind of modulation and all kind of data type
Final Test Mode:	Only the worst case is recorded in the report.
Test Results:	Pass

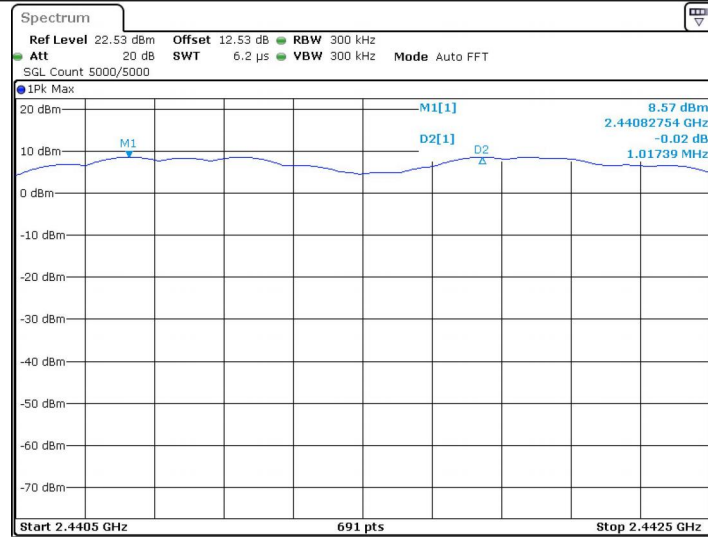
Measurement Data

TestMode	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Hop	0.67	≥ 0.620	PASS
2DH5	Hop	0.945	≥ 0.840	PASS
3DH5	Hop	0.997	≥ 0.840	PASS

Mode	20dB bandwidth (MHz) (worse case)	Limit (MHz) (Carrier Frequencies Separation)
GFSK	0.93	≥ 0.620
$\pi/4$ DQPSK	1.26	≥ 0.840
8DPSK	1.26	≥ 0.840

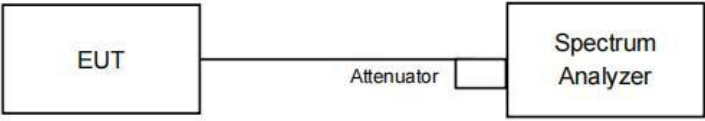
Test plot as follows:





Date: 26.MAR.2025 17:57:07

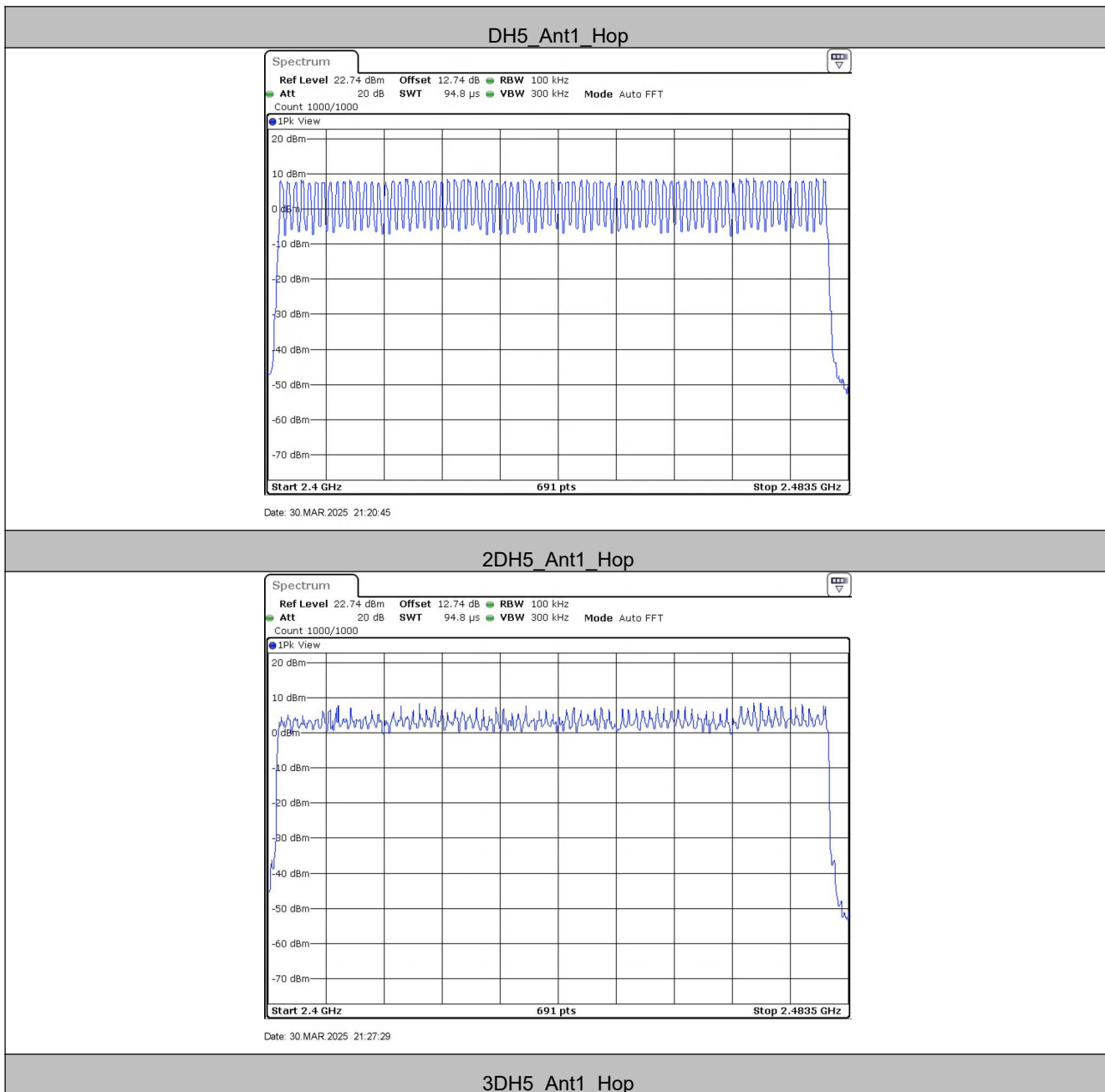
5.6 Hopping Channel Number

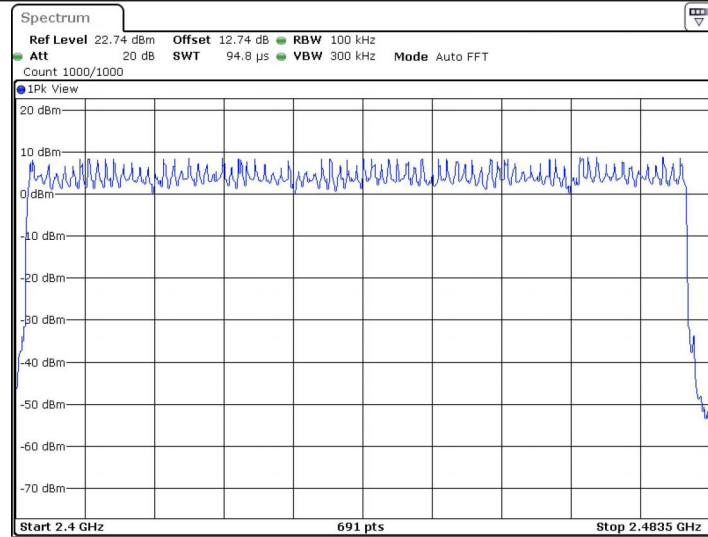
Test Requirement:	47 CFR Part 15C Section 15.247 (a)(1)
Test Method:	ANSI C63.10:2013
Test Setup:	 <i>Remark: Offset=Cable loss+ attenuation factor.</i>
Limit:	At least 15 channels
Exploratory Test Mode:	hopping transmitting with all kind of modulation and all kind of data type
Final Test Mode:	Only the worst case is recorded in the report.
Test Results:	Pass

Measurement Data

Mode	Hopping channel numbers	Limit
GFSK	79	≥15
$\pi/4$ DQPSK	79	≥15
8DPSK	79	≥15

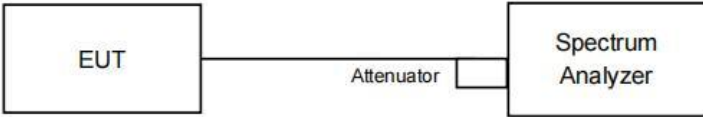
Test plot as follows:





Date: 30.MAR.2025 21:31:49

5.7 Dwell Time

Test Requirement:	47 CFR Part 15C Section 15.247 (a)(1)
Test Method:	ANSI C63.10:2013
Test Setup:	 <i>Remark: Offset=Cable loss+ attenuation factor.</i>
Test Mode:	Hopping transmitting with all kind of modulation and all kind of data type.
Limit:	0.4 Second
Test Results:	Pass

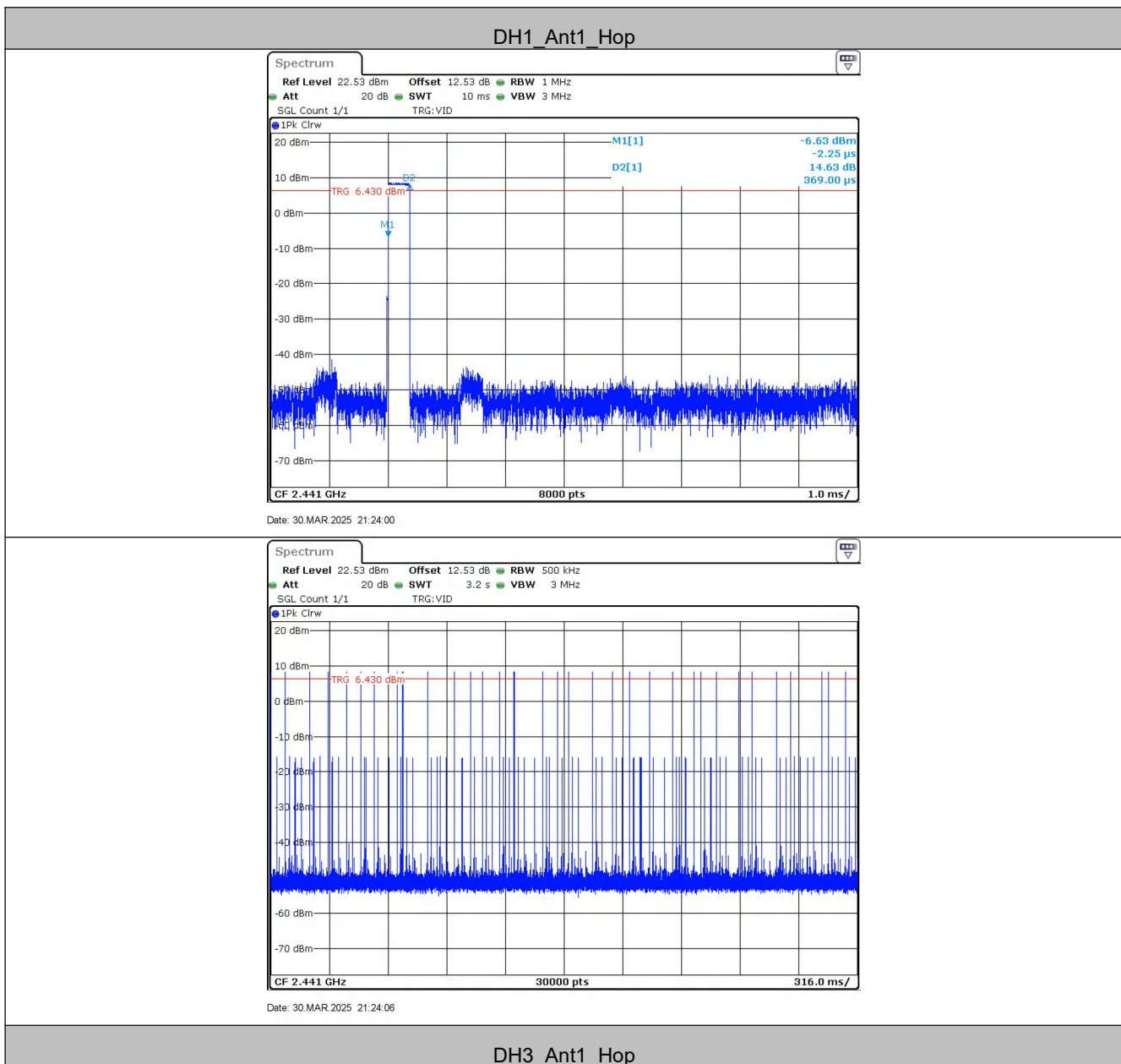
Measurement Data

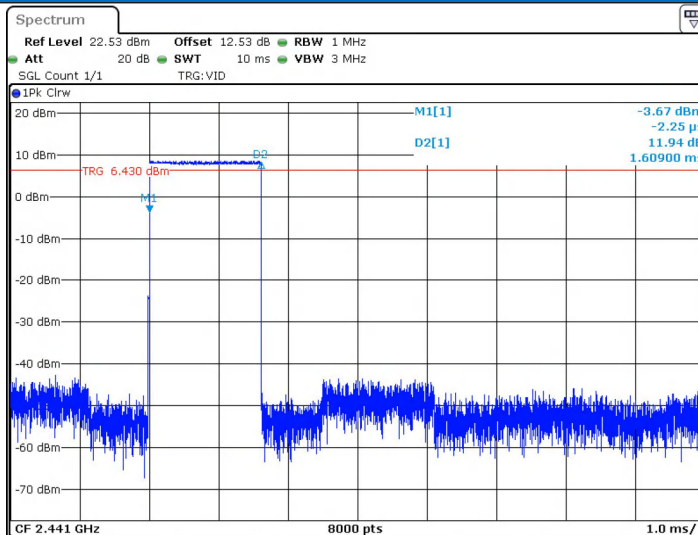
TestMode	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Hop	0.369	330	0.122	≤0.4	PASS
DH3	Hop	1.609	170	0.274	≤0.4	PASS
DH5	Hop	2.850	110	0.314	≤0.4	PASS
2DH1	Hop	0.376	330	0.124	≤0.4	PASS
2DH3	Hop	1.621	160	0.259	≤0.4	PASS
2DH5	Hop	2.862	110	0.315	≤0.4	PASS
3DH1	Hop	0.378	330	0.125	≤0.4	PASS
3DH3	Hop	1.619	170	0.275	≤0.4	PASS
3DH5	Hop	2.862	120	0.343	≤0.4	PASS

Remark:

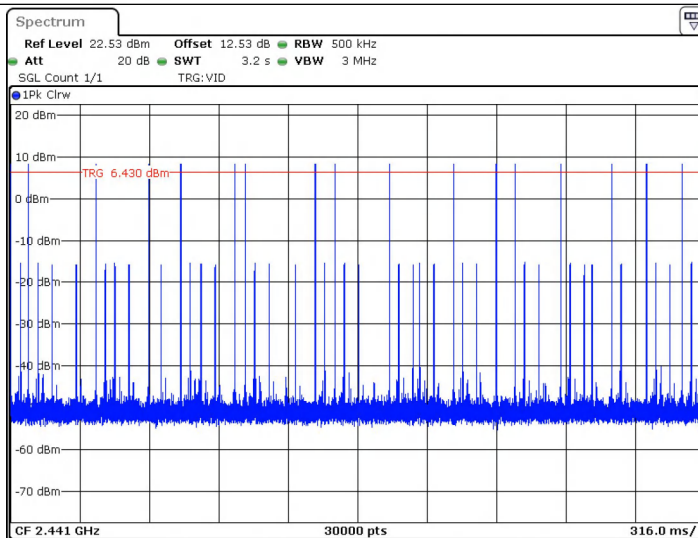
The test period: $T = 0.4 \text{ Second/Channel} \times 79 \text{ Channel} = 31.6 \text{ s}$

Test plot as follows:



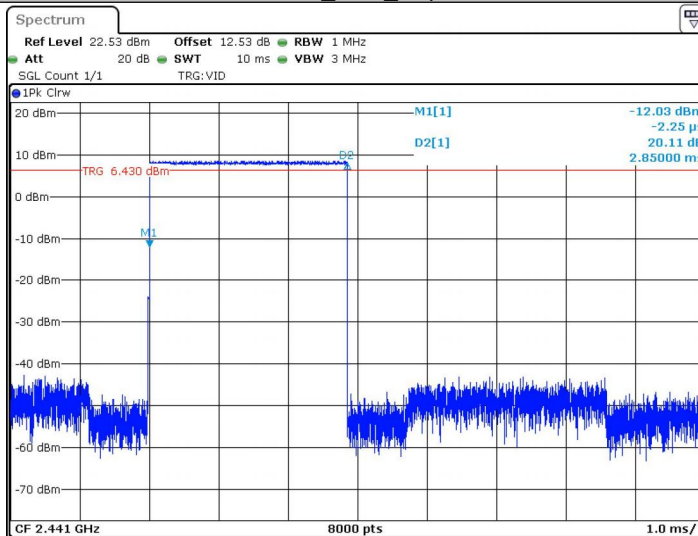


Date: 30.MAR.2025 21:24:30

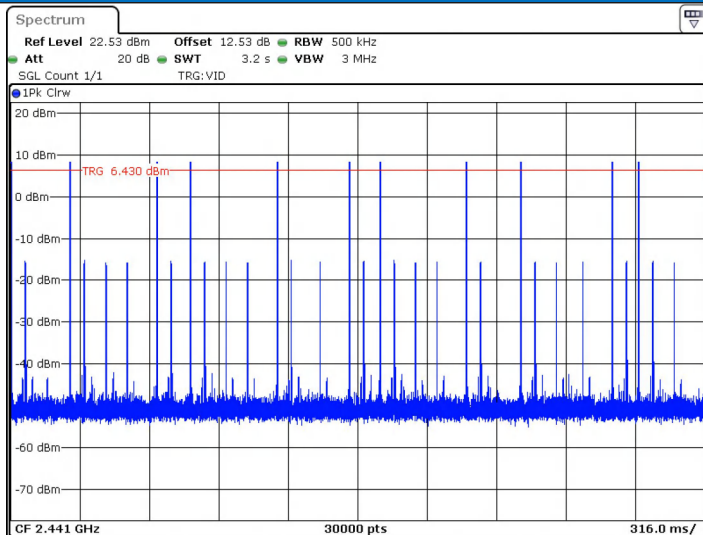


Date: 30.MAR.2025 21:24:35

DH5_Ant1_Hop

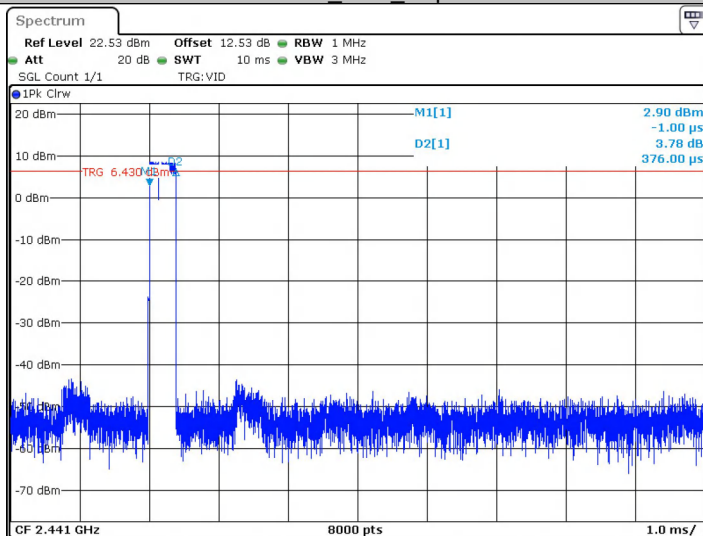


Date: 30.MAR.2025 21:21:00

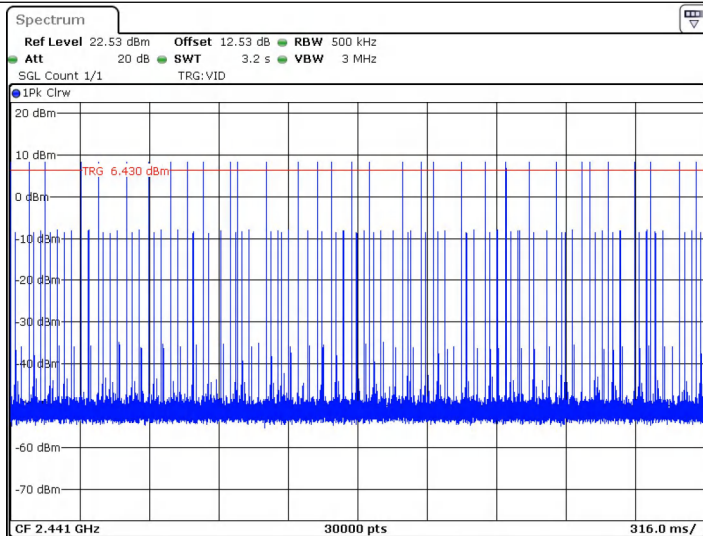


Date: 30.MAR.2025 21:21:06

2DH1_Ant1_Hop

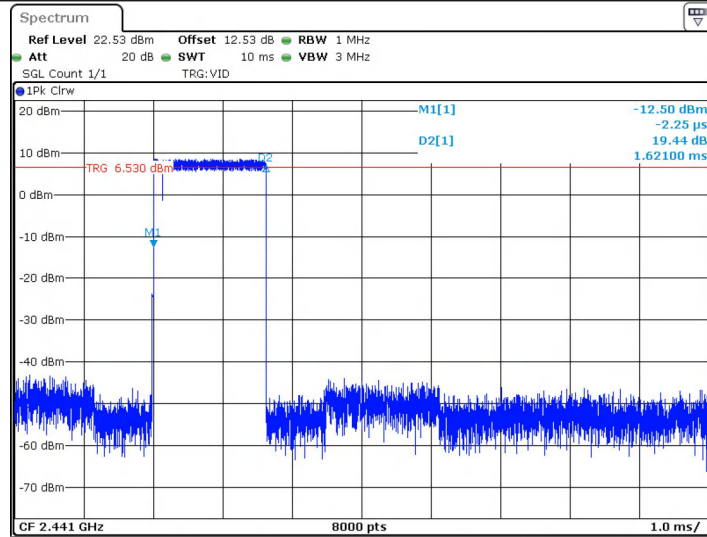


Date: 30.MAR.2025 21:28:41

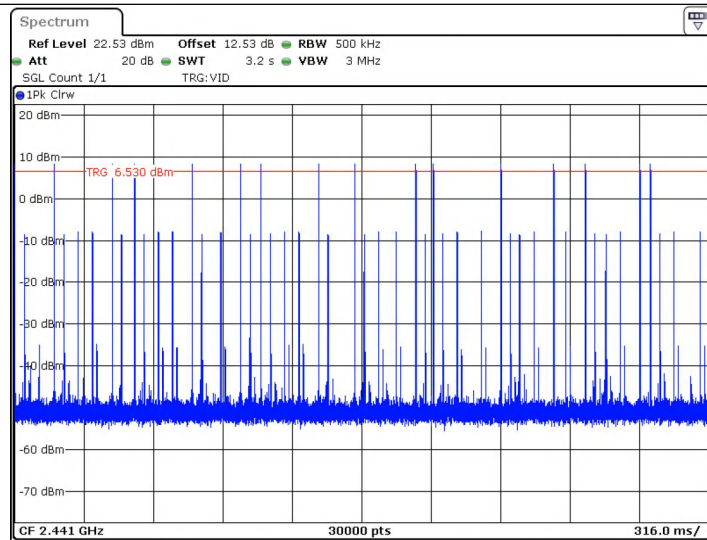


Date: 30.MAR.2025 21:28:46

2DH3_Ant1_Hop

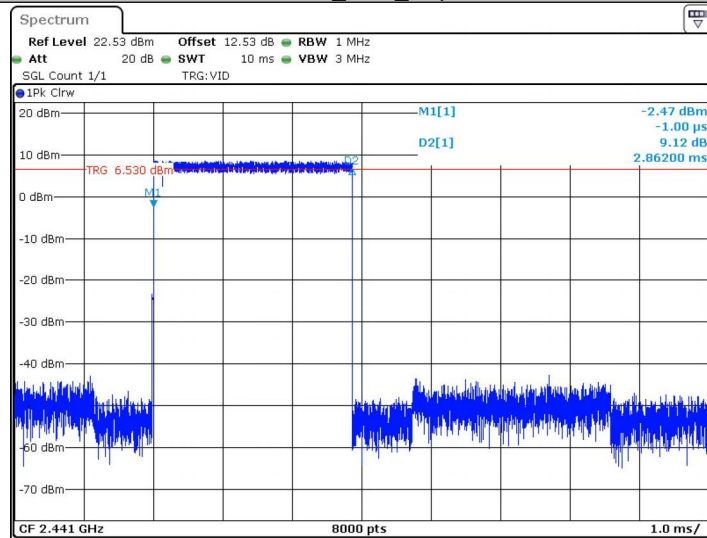


Date: 30.MAR.2025 21:29:25

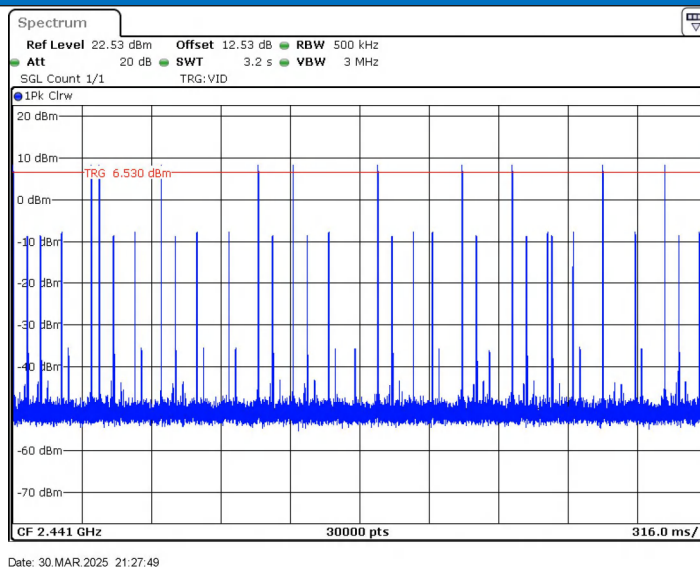


Date: 30.MAR.2025 21:29:30

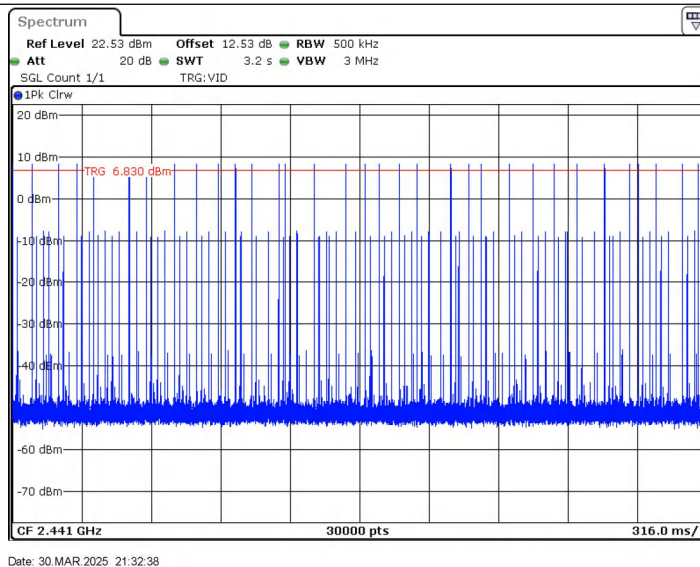
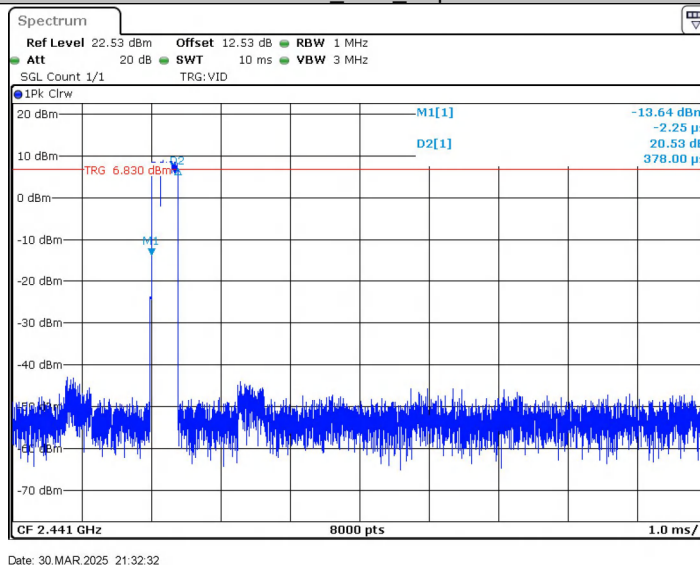
2DH5_Ant1_Hop



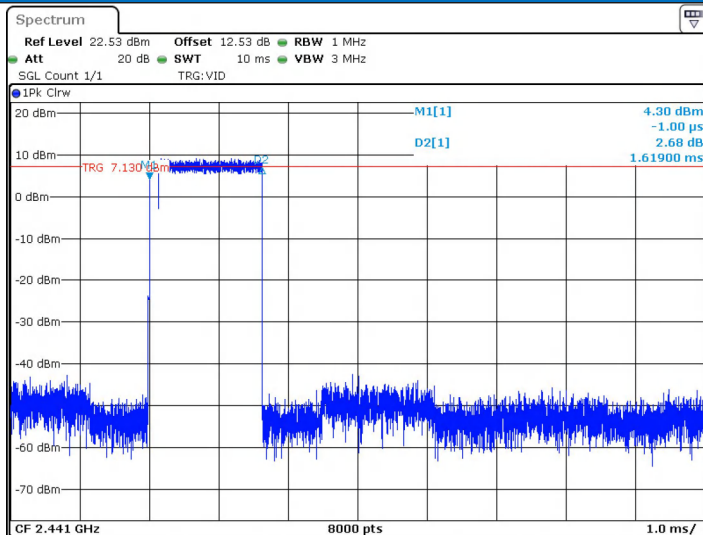
Date: 30.MAR.2025 21:27:44



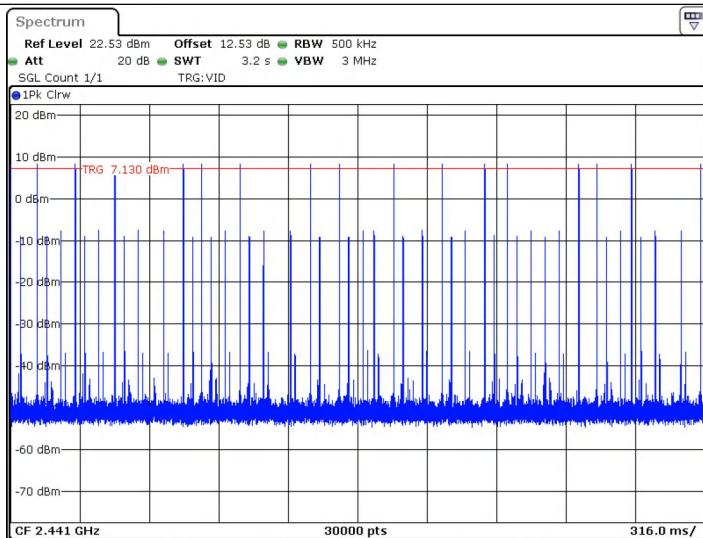
3DH1_Ant1_Hop



3DH3_Ant1_Hop

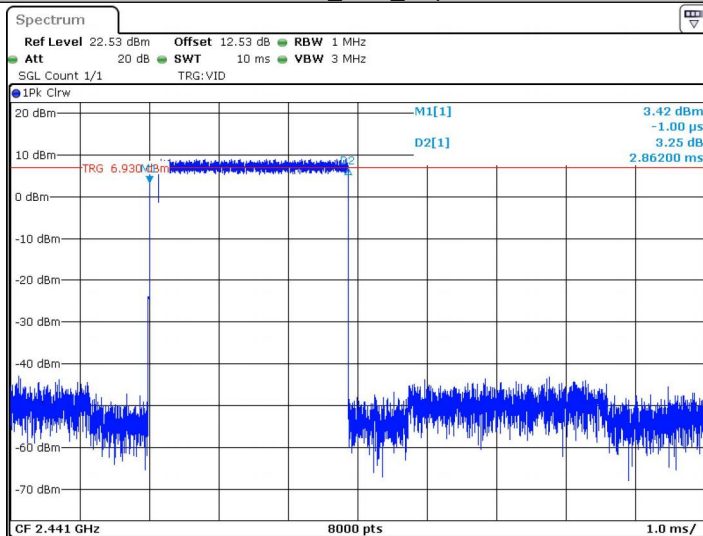


Date: 30.MAR.2025 21:34:09

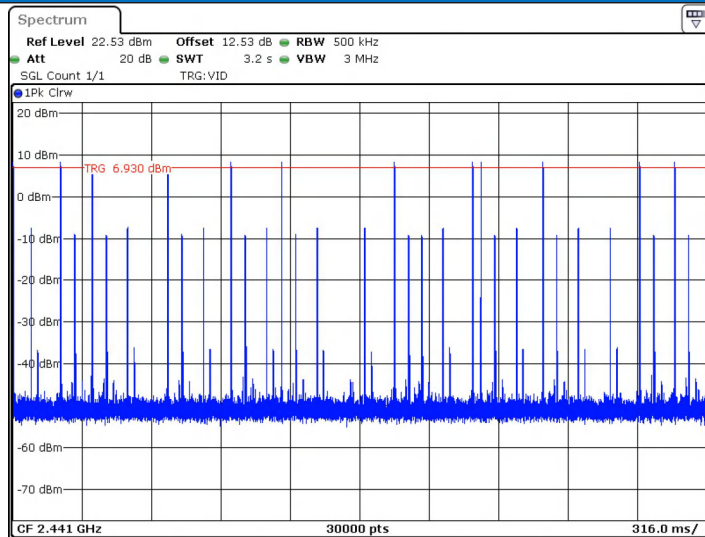


Date: 30.MAR.2025 21:34:15

3DH5_Ant1_Hop

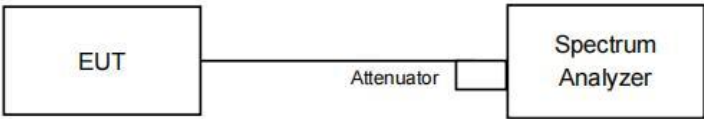


Date: 30.MAR.2025 21:32:05



Date: 30.MAR.2025 21:32:10

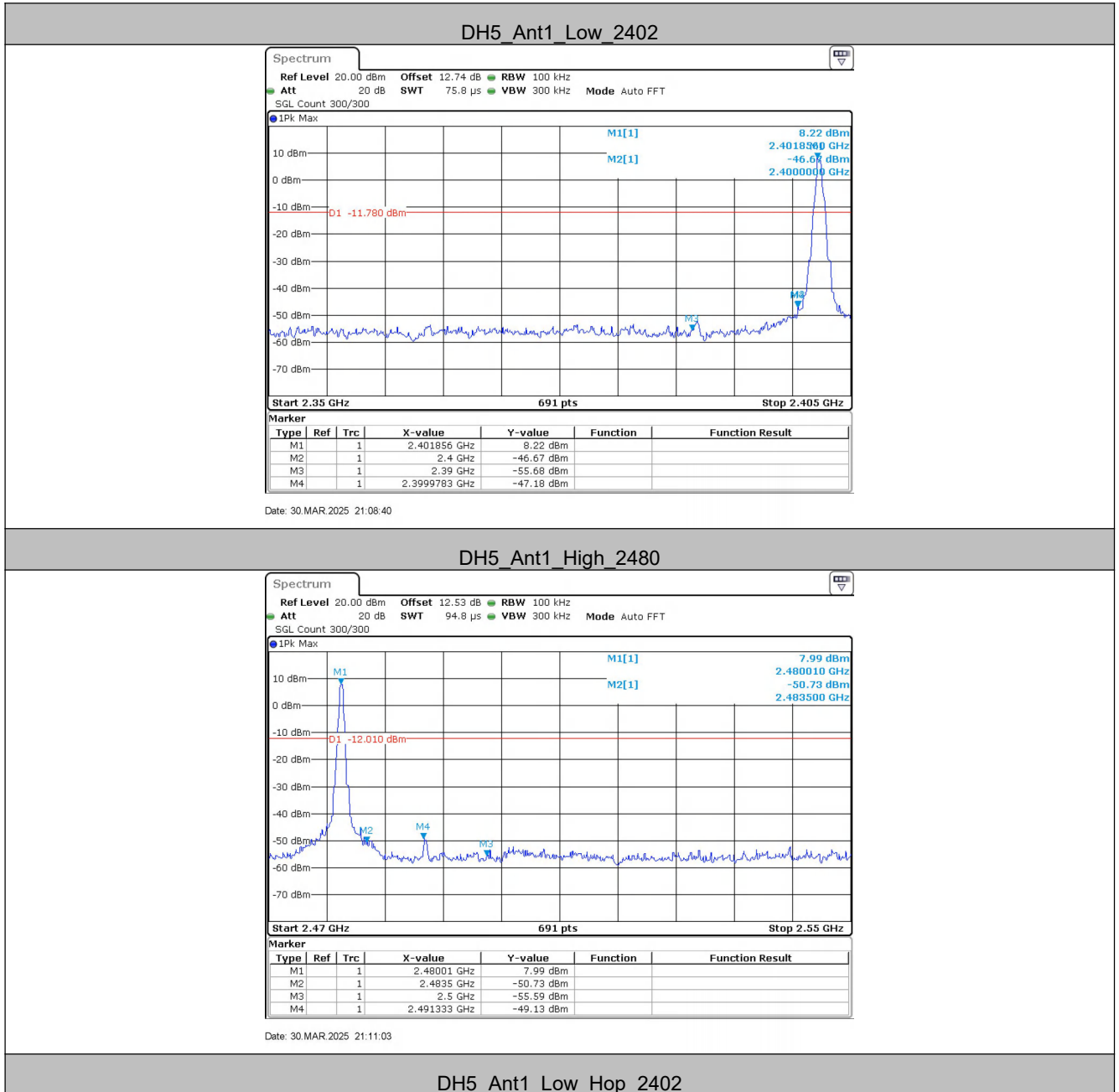
5.8 Band-edge for RF Conducted Emissions

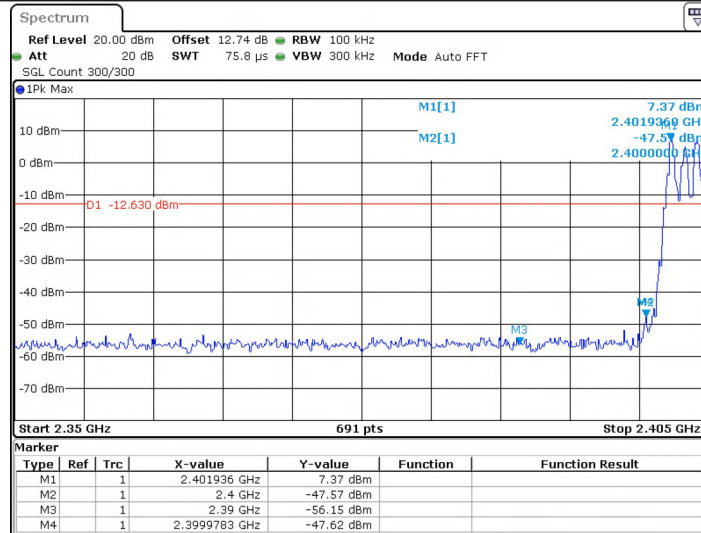
Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	ANSI C63.10:2013
Test Setup:	 <i>Remark: Offset=cable loss+ attenuation factor.</i>
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that 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, based on either an RF conducted or a radiated measurement.
Exploratory Test Mode:	Hopping and Non-hopping transmitting with all kind of modulation and all kind of data type
Final Test Mode:	Only the worst case is recorded in the report.
Test Results:	Pass

Measurement Data

TestMode	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Low	2402	8.22	-47.18	≤ -11.78	PASS
	High	2480	7.99	-49.13	≤ -12.01	PASS
	Low	Hop_2402	7.37	-47.62	≤ -12.63	PASS
	High	Hop_2480	7.60	-50.78	≤ -12.4	PASS
2DH5	Low	2402	7.12	-46.18	≤ -12.88	PASS
	High	2480	7.89	-50.45	≤ -12.11	PASS
	Low	Hop_2402	6.92	-48.49	≤ -13.08	PASS
	High	Hop_2480	7.56	-52.39	≤ -12.44	PASS
3DH5	Low	2402	8.22	-45.75	≤ -11.78	PASS
	High	2480	8.46	-50.28	≤ -11.54	PASS
	Low	Hop_2402	6.29	-49.05	≤ -13.71	PASS
	High	Hop_2480	8.43	-52.39	≤ -11.57	PASS

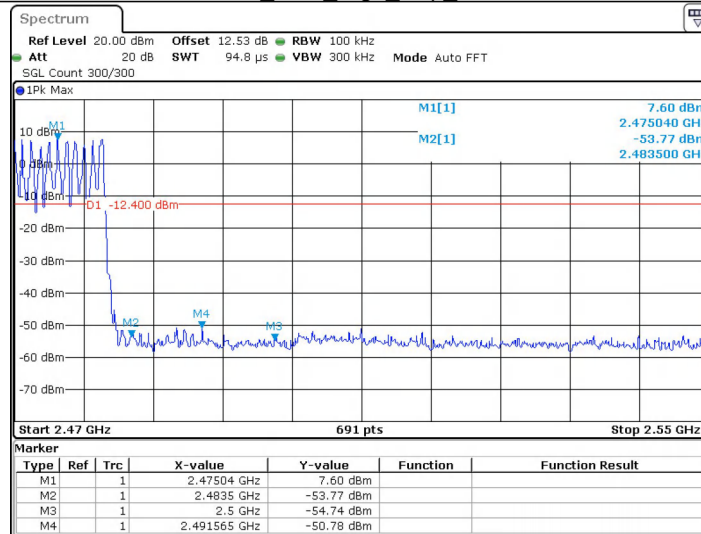
Test plot as follows:





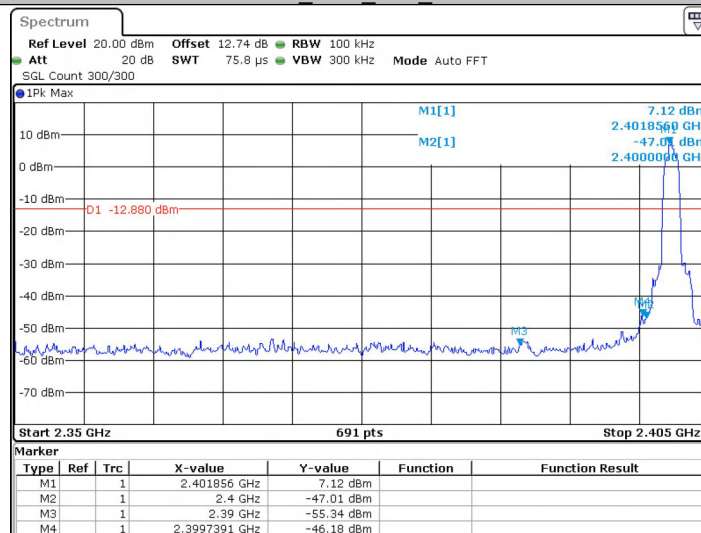
Date: 30.MAR.2025 21:40:54

DH5_Ant1_High_Hop_2480



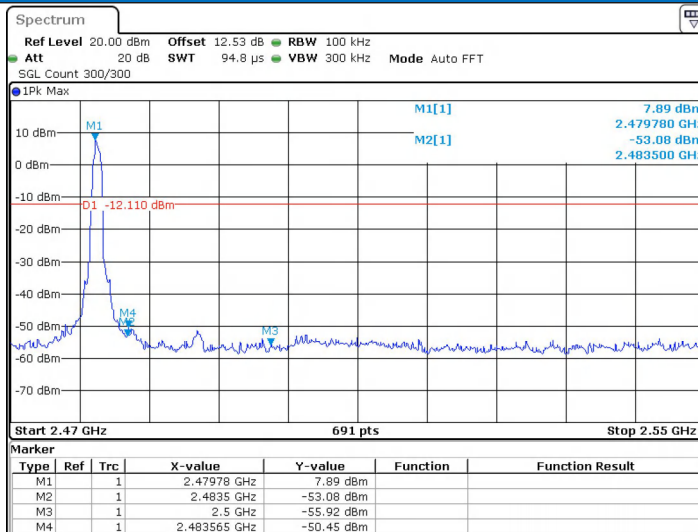
Date: 30.MAR.2025 21:41:12

2DH5_Ant1_Low_2402



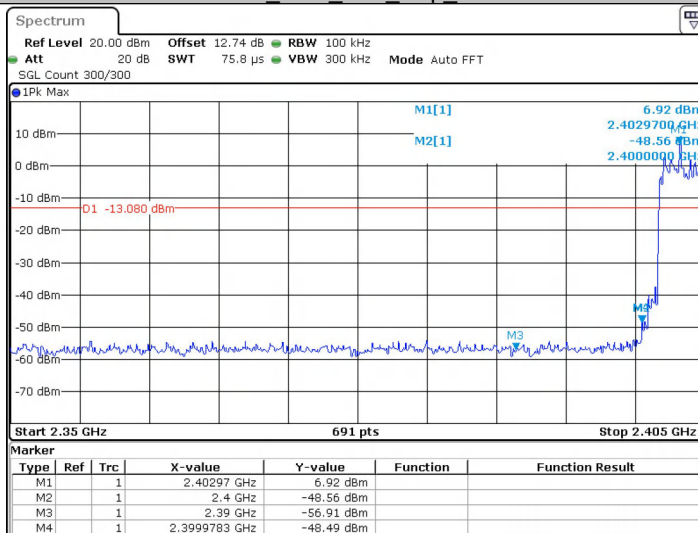
Date: 30.MAR.2025 21:12:08

2DH5_Ant1_High_2480



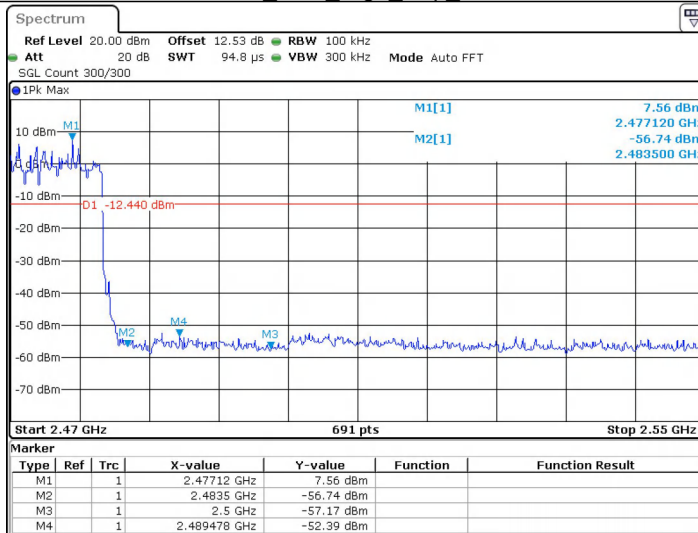
Date: 30.MAR.2025 21:14:11

2DH5_Ant1_Low_Hop_2402



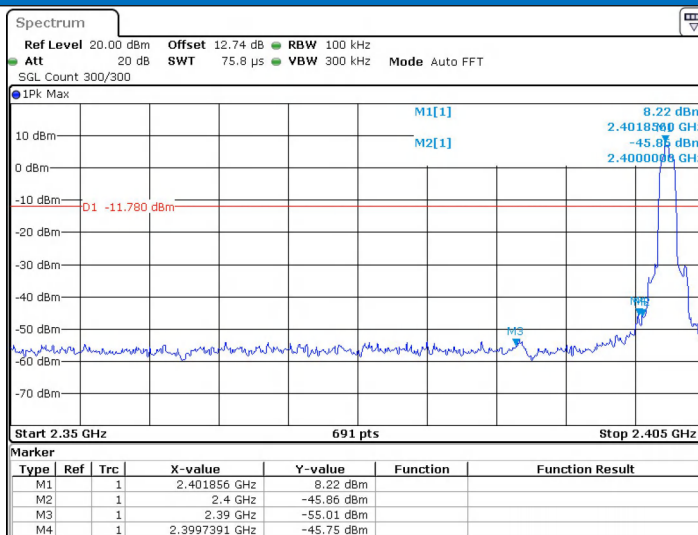
Date: 30.MAR.2025 21:41:25

2DH5_Ant1_High_Hop_2480



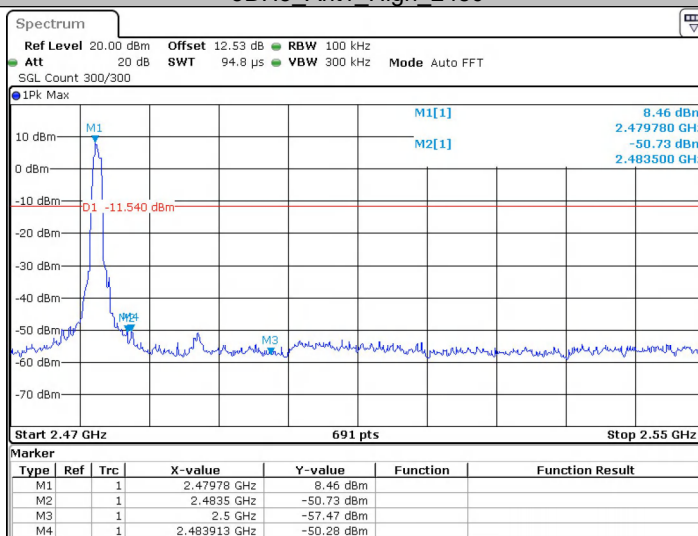
Date: 30.MAR.2025 21:41:34

3DH5_Ant1_Low_2402



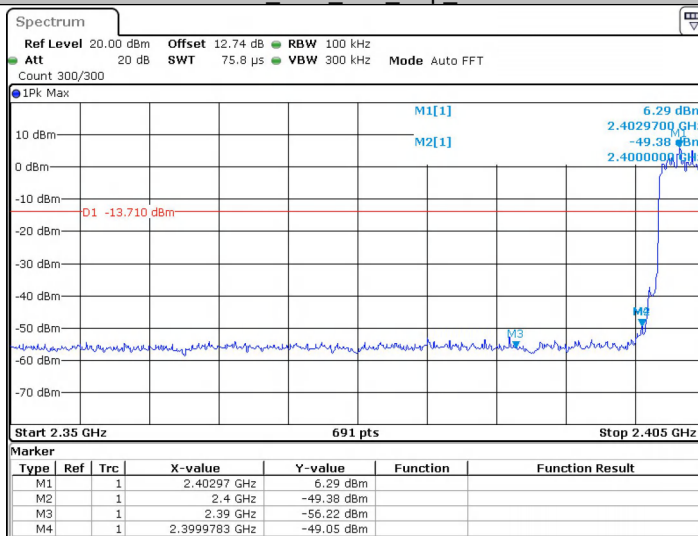
Date: 30.MAR.2025 21:15:12

3DH5_Ant1_High_2480



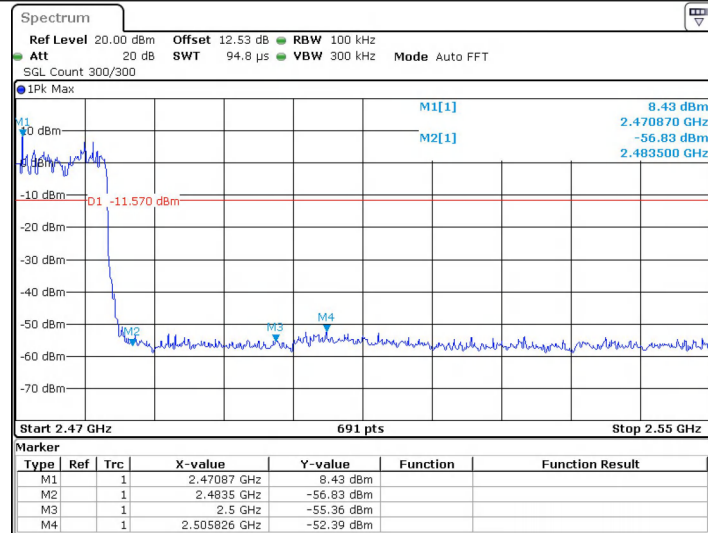
Date: 30.MAR.2025 21:17:13

3DH5_Ant1_Low_Hop_2402



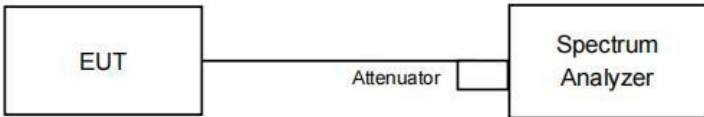
Date: 30.MAR.2025 21:42:48

3DH5_Ant1_High_Hop_2480

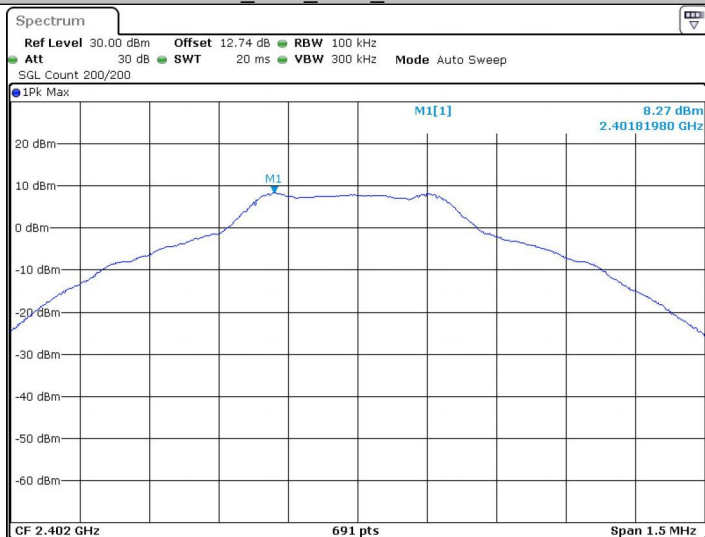


Date: 30.MAR.2025 21:42:56

5.9 Spurious RF Conducted Emissions

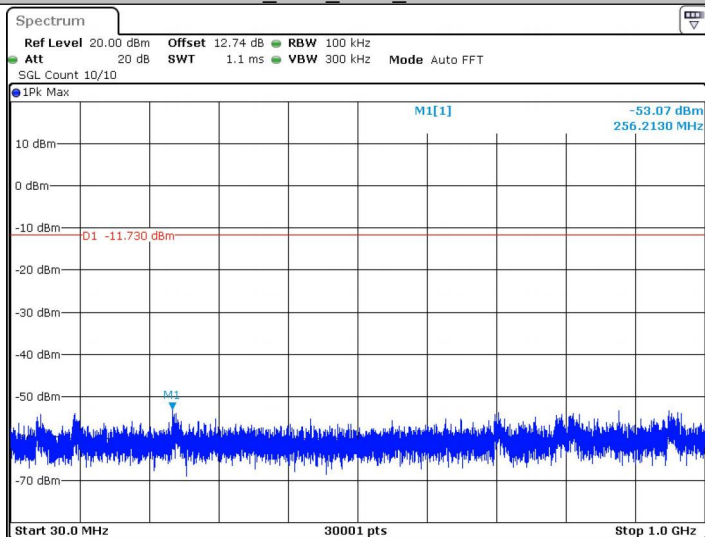
Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	ANSI C63.10:2013
Test Setup:	 Remark: Offset=cable loss+ attenuation factor.
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced 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, based on either an RF conducted or a radiated measurement.
Exploratory Test Mode:	Non-hopping transmitting with all kind of modulation and all kind of data type
Final Test Mode:	Through Pre-scan, find the DH5 of data type is the worst case of GFSK modulation type, 2-DH5 of data type is the worst case of $\pi/4$ DQPSK modulation type, 3-DH5 of data type is the worst case of 8DPSK modulation type.
Test Results:	Pass

DH5_Ant1_2402_0~Reference



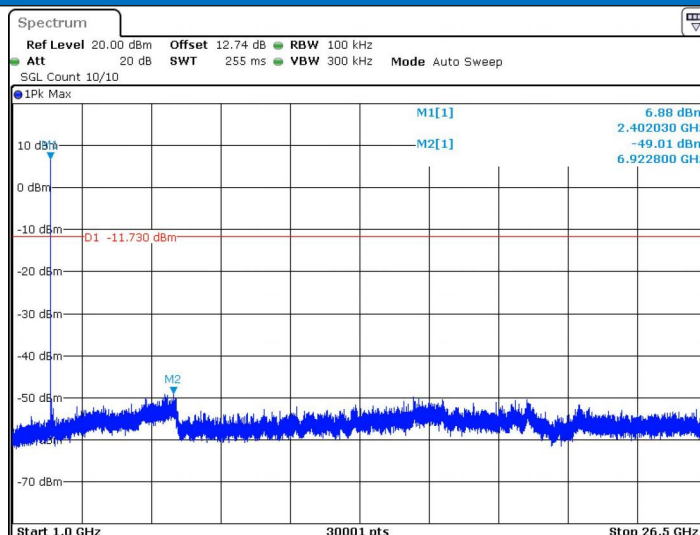
Date: 30.MAR.2025 21:09:04

DH5_Ant1_2402_30~1000



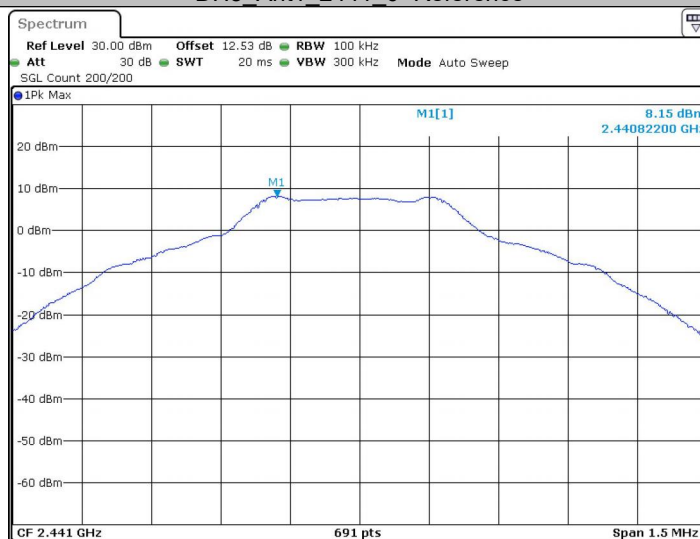
Date: 30.MAR.2025 21:09:09

DH5_Ant1_2402_1000~26500



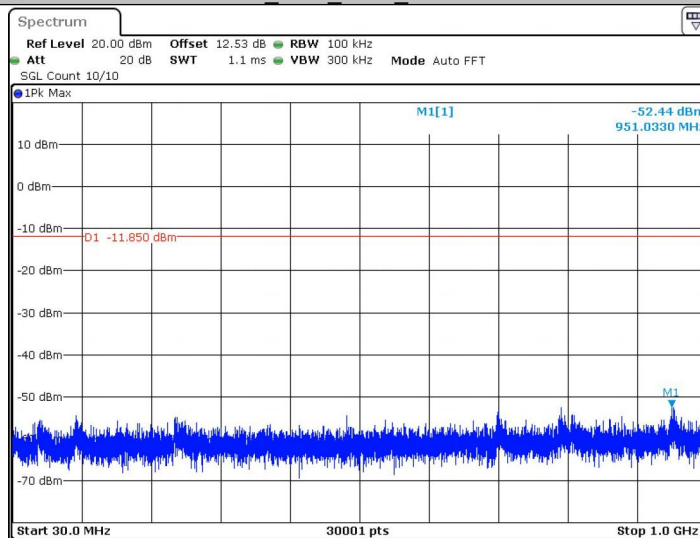
Date: 30.MAR.2025 21:09:19

DH5_Ant1_2441_0~Reference



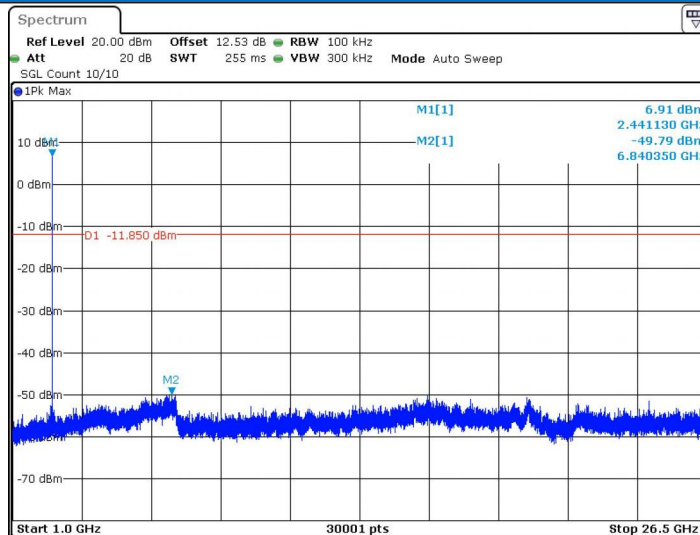
Date: 30.MAR.2025 21:09:56

DH5_Ant1_2441_30~1000



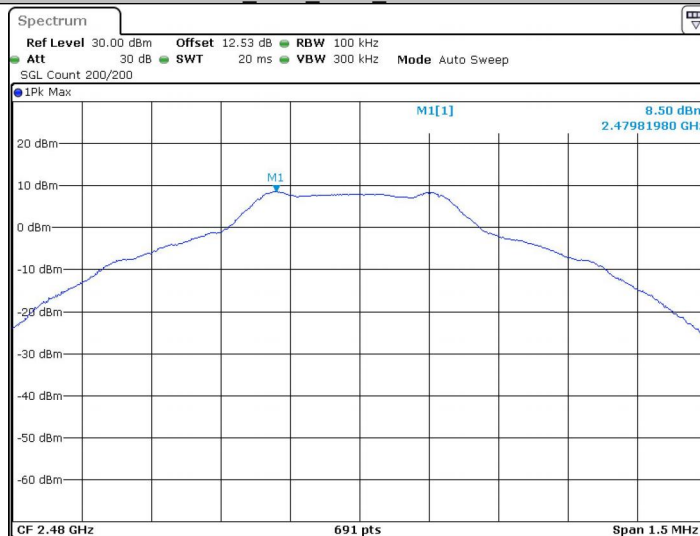
Date: 30.MAR.2025 21:10:00

DH5_Ant1_2441_1000~26500



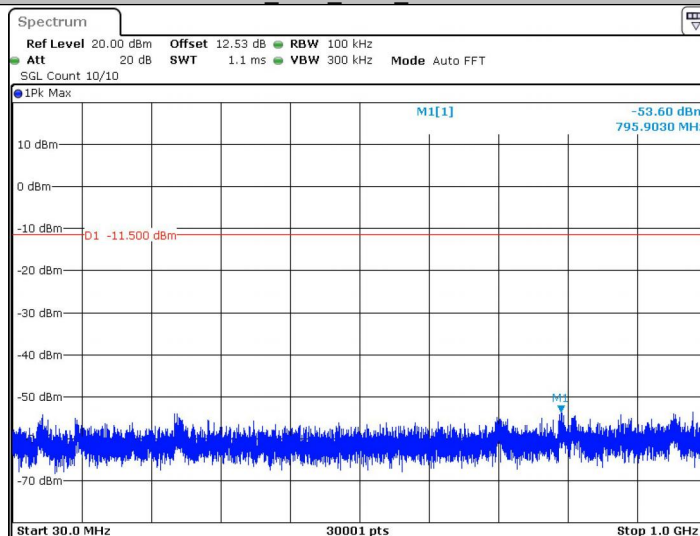
Date: 30.MAR.2025 21:10:11

DH5_Ant1_2480_0~Reference



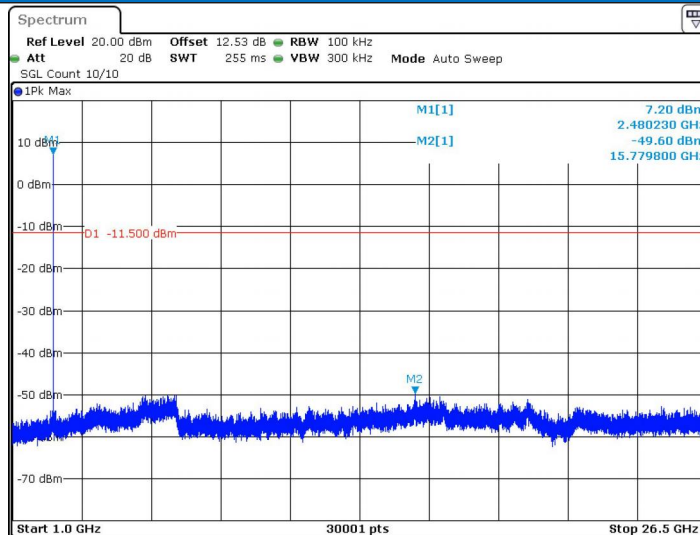
Date: 30.MAR.2025 21:11:26

DH5_Ant1_2480_30~1000



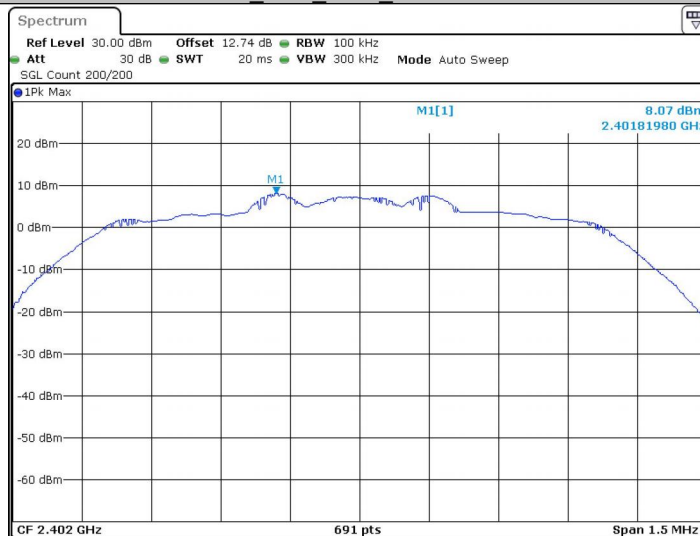
Date: 30.MAR.2025 21:11:30

DH5_Ant1_2480_1000~26500



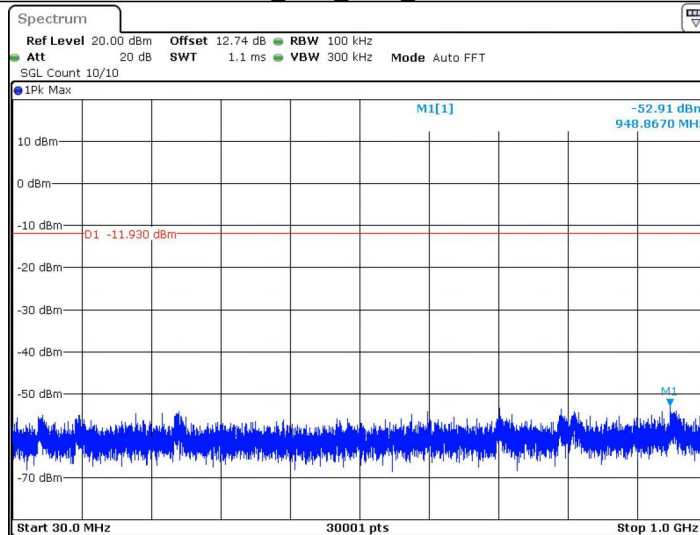
Date: 30.MAR.2025 21:11:41

2DH5_Ant1_2402_0~Reference



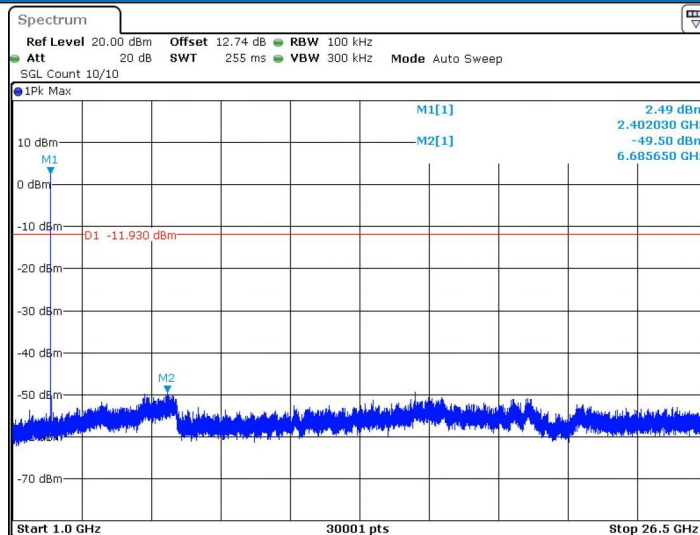
Date: 30.MAR.2025 21:12:32

2DH5_Ant1_2402_30~1000



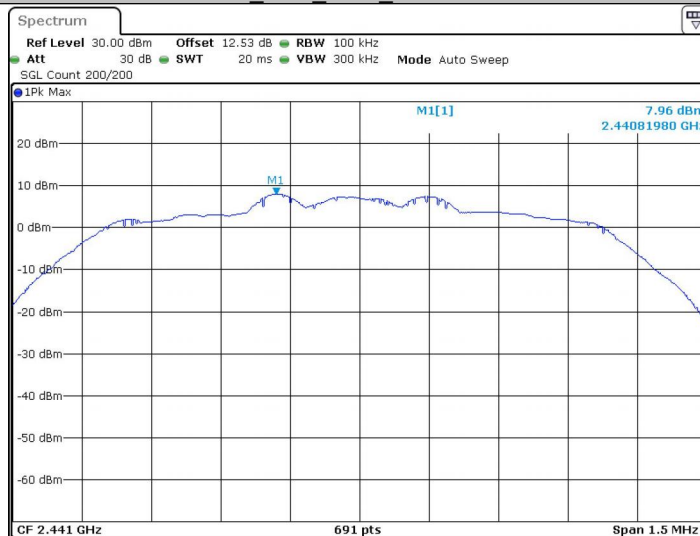
Date: 30.MAR.2025 21:12:37

2DH5_Ant1_2402_1000~26500



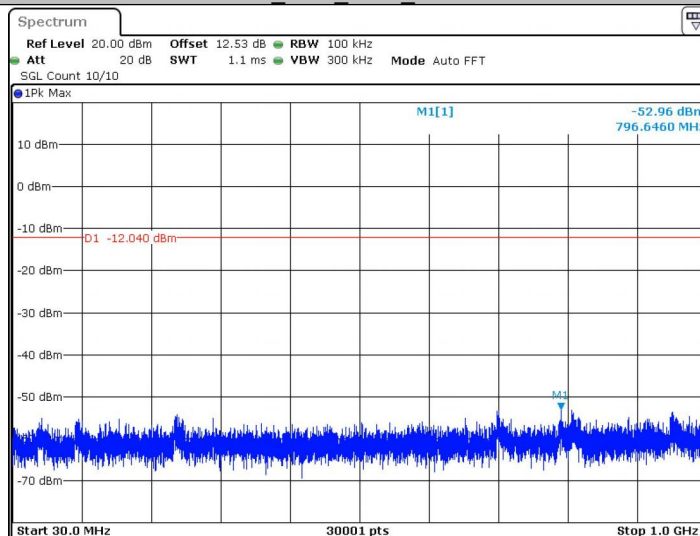
Date: 30.MAR.2025 21:12:47

2DH5_Ant1_2441_0~Reference



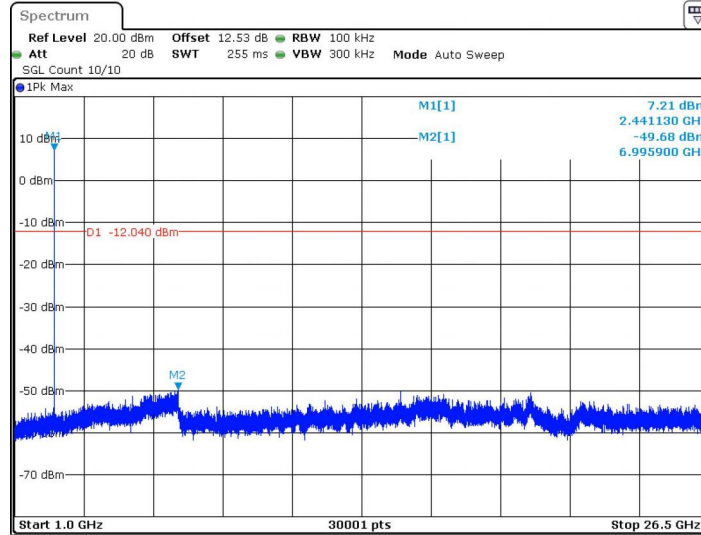
Date: 30.MAR.2025 21:13:15

2DH5_Ant1_2441_30~1000



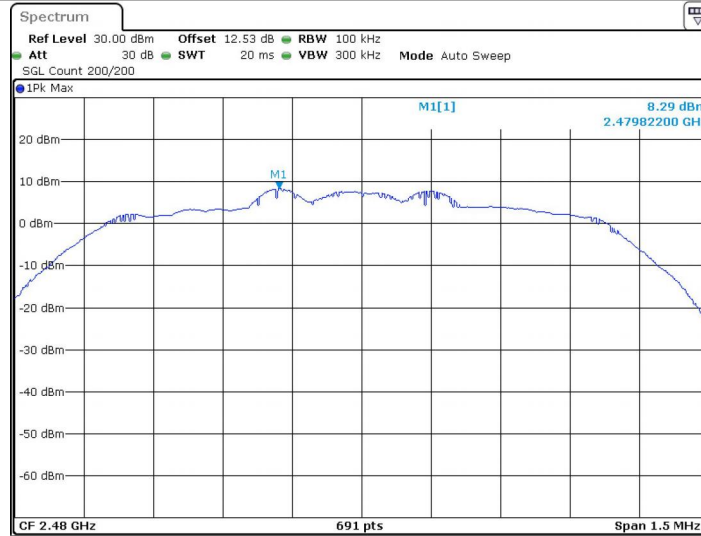
Date: 30.MAR.2025 21:13:19

2DH5_Ant1_2441_1000~26500



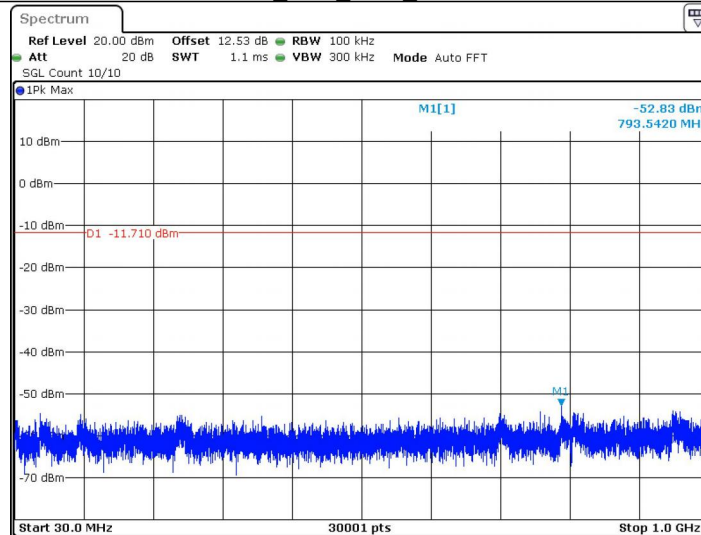
Date: 30.MAR.2025 21:13:30

2DH5_Ant1_2480_0~Reference



Date: 30.MAR.2025 21:14:34

2DH5_Ant1_2480_30~1000



Date: 30.MAR.2025 21:14:38

2DH5_Ant1_2480_1000~26500