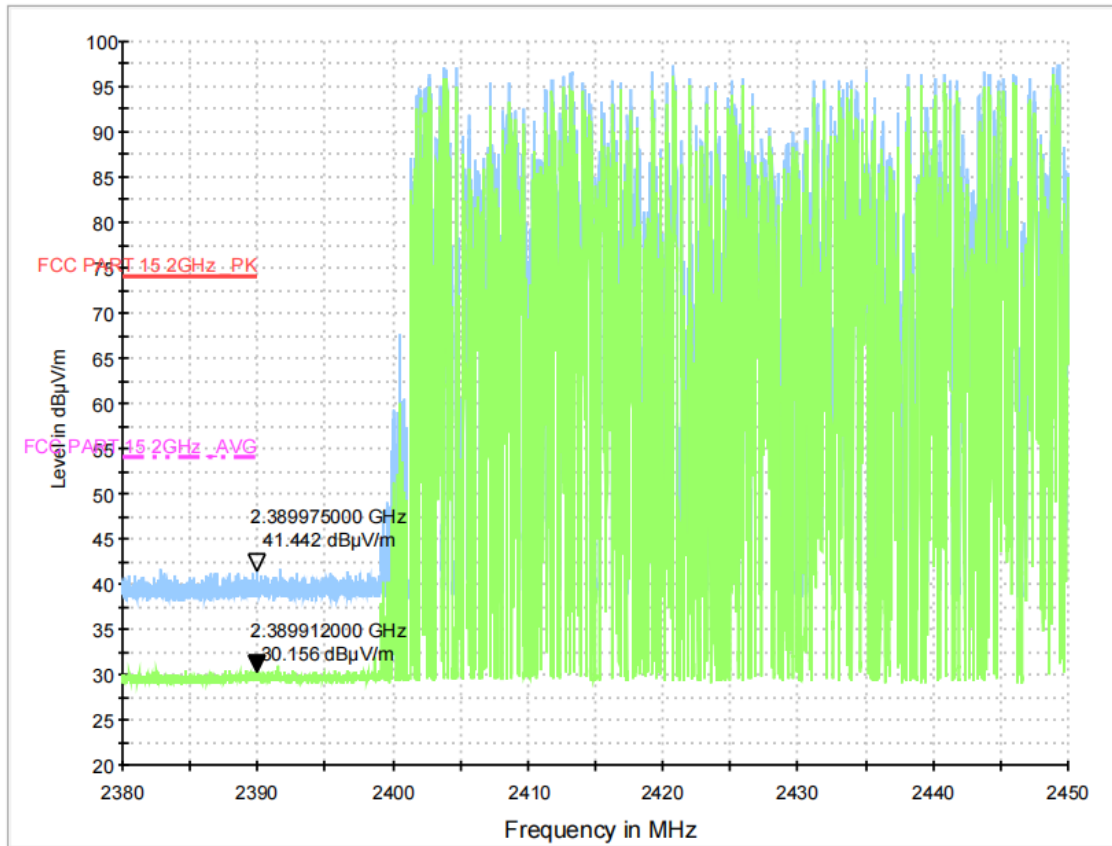
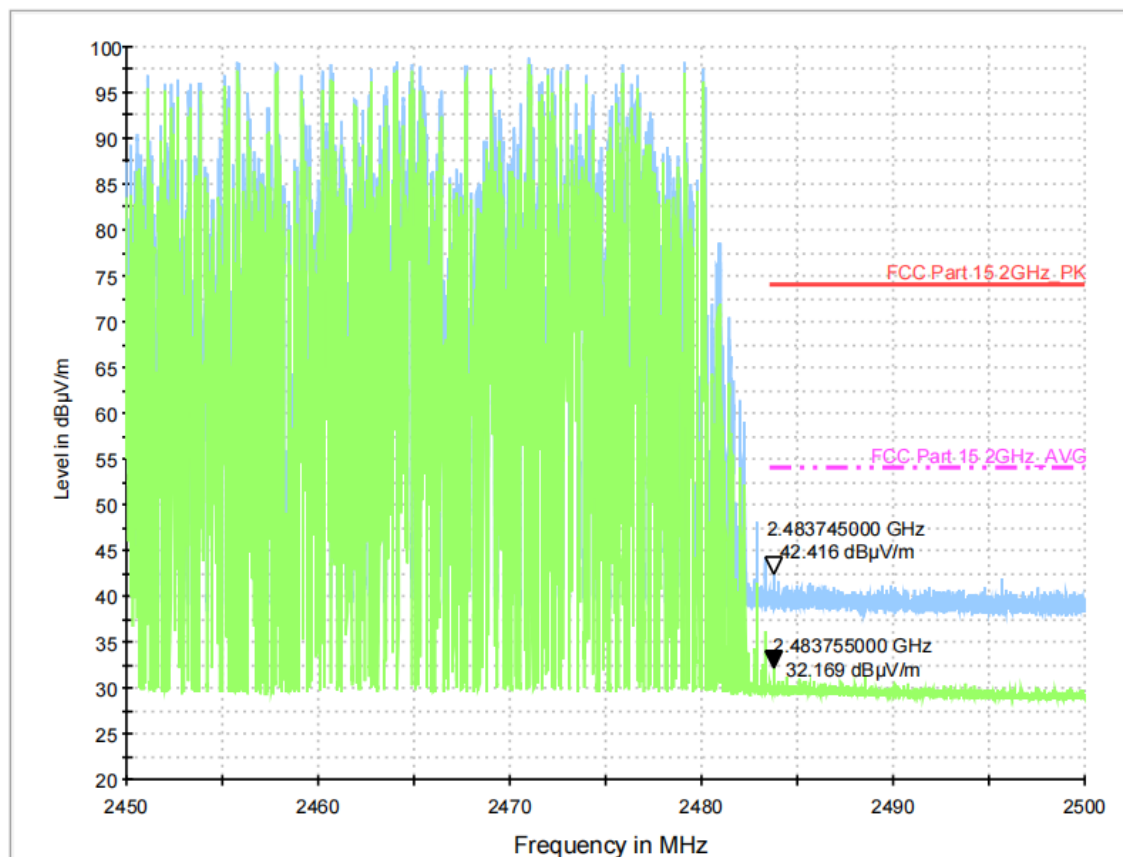


TM6 / Polarization: Horizontal, Vertical / Band: 2.4G / BW: 1 / CH: L



TM6 / Polarization: Horizontal, Vertical / Band: 2.4G / BW: 1 / CH: H



6.9 Emissions in restricted frequency bands (below 1GHz)

Test Requirement:	In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).`		
Test Method:	Radiated emissions tests		
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
	0.009-0.490	2400/F(kHz)	300
	0.490-1.705	24000/F(kHz)	30
	1.705-30.0	30	30
	30-88	100 **	3
	88-216	150 **	3
	216-960	200 **	3
	Above 960	500	3
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.			
Procedure:	ANSI C63.10-2013 section 6.6.4		

6.9.1 E.U.T. Operation:

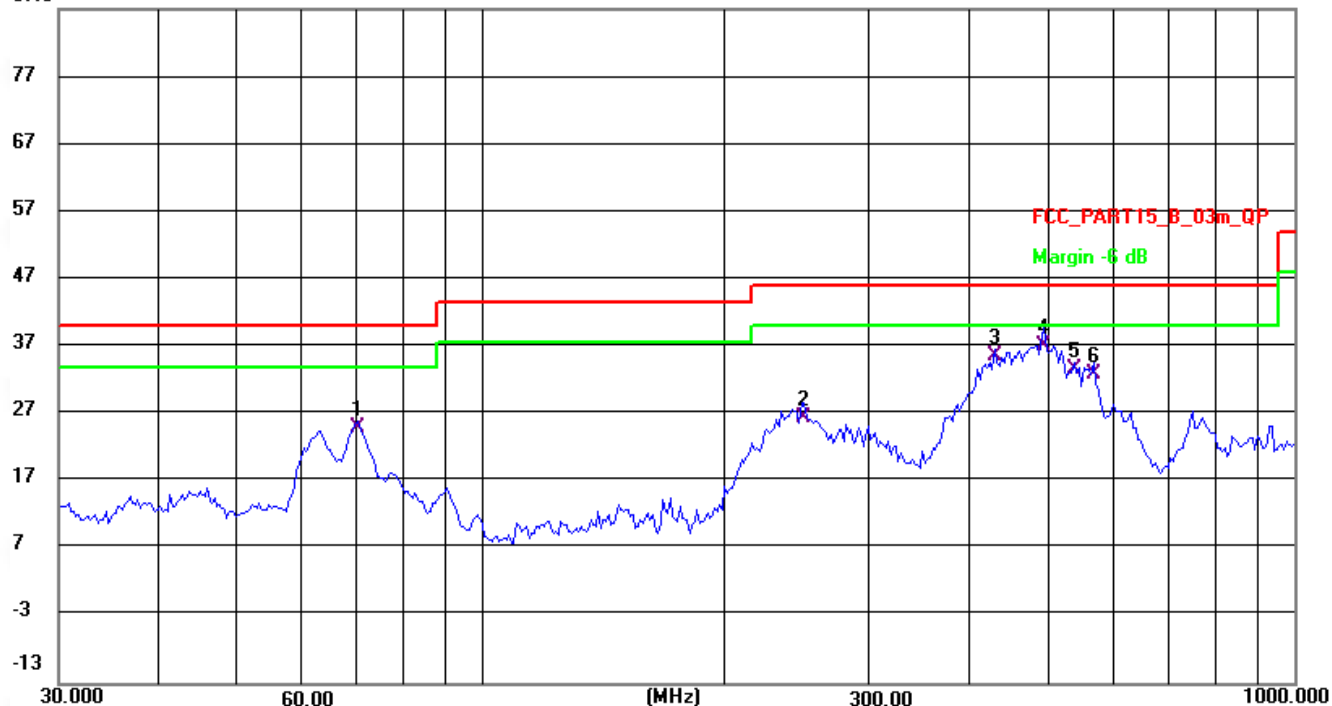
Operating Environment:	
Temperature:	24.9 °C
Humidity:	49.4 %
Atmospheric Pressure:	1010 mbar

6.9.2 Test Data:

Note: All the mode have been tested, and only the worst case of GFSK mode are in the report

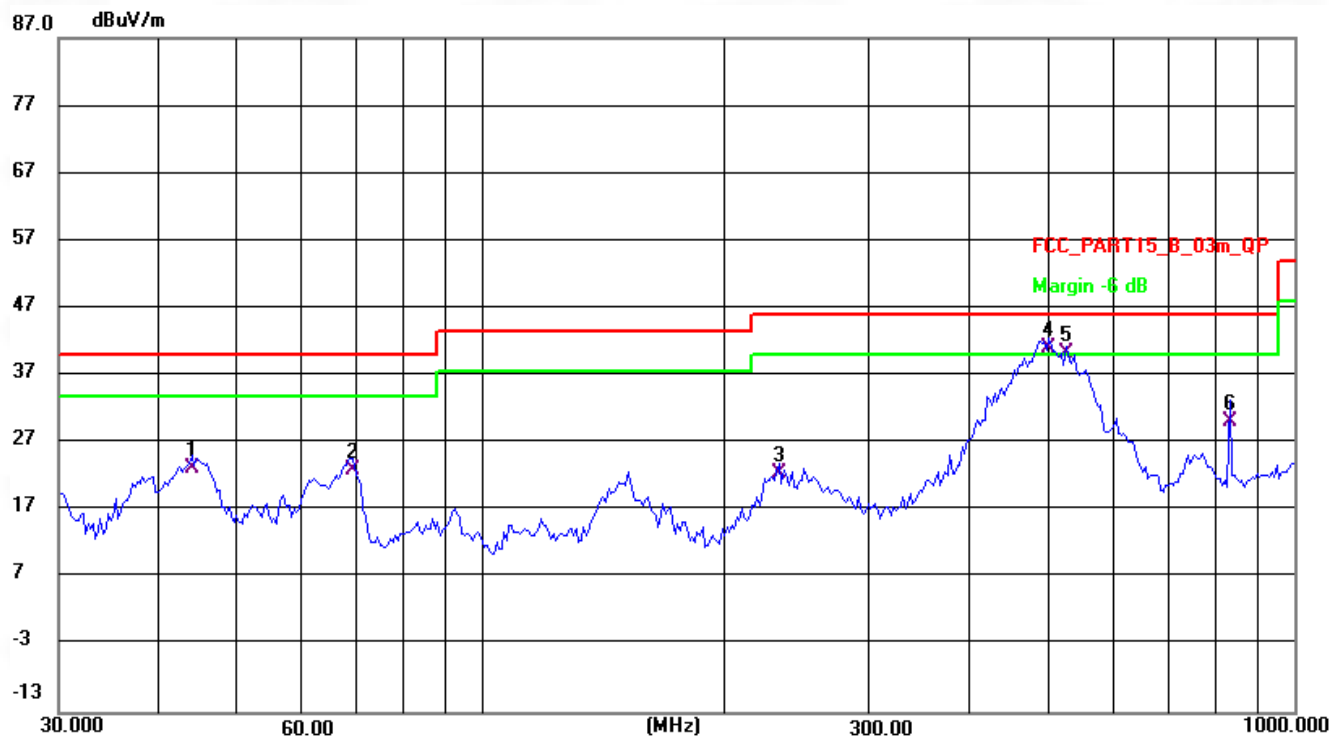
TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: H

87.0 dBuV/m



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)	Remark
1	70.2096	47.13	-22.12	25.01	40.00	-14.99	QP	199	348	
2	248.7319	50.44	-23.90	26.54	46.00	-19.46	QP	199	107	
3	427.2920	54.17	-18.60	35.57	46.00	-10.43	QP	100	271	
4 *	491.7700	54.26	-17.25	37.01	46.00	-8.99	QP	100	271	
5	535.0377	49.90	-16.32	33.58	46.00	-12.42	QP	199	261	
6	565.9776	48.24	-15.23	33.01	46.00	-12.99	QP	199	261	

TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)	Remark
1	43.8452	42.69	-19.44	23.25	40.00	-16.75	QP	100	119	
2	69.2297	44.95	-21.94	23.01	40.00	-16.99	QP	100	141	
3	231.8531	47.70	-25.12	22.58	46.00	-23.42	QP	100	12	
4 *	498.7303	58.16	-17.11	41.05	46.00	-4.95	QP	199	348	
5 !	523.8763	56.89	-16.64	40.25	46.00	-5.75	QP	100	358	
6	833.0127	40.03	-9.89	30.14	46.00	-15.86	QP	100	98	

6.10 Emissions in restricted frequency bands (above 1GHz)

Test Requirement:	In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).`		
Test Method:	Radiated emissions tests		
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
	0.009-0.490	2400/F(kHz)	300
	0.490-1.705	24000/F(kHz)	30
	1.705-30.0	30	30
	30-88	100 **	3
	88-216	150 **	3
	216-960	200 **	3
	Above 960	500	3
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.			
Procedure:	ANSI C63.10-2013 section 6.6.4		

6.10.1 E.U.T. Operation:

Operating Environment:	
Temperature:	24.9 °C
Humidity:	49.4 %
Atmospheric Pressure:	1010 mbar

6.10.2 Test Data:

From 1G-25GHz

(All modes have been tested, only show the worst mode data)

TM1 / Polarization: Horizontal, Vertical / Band: 2.4G / BW: 1

Test Mode: GFSK TX Low									
Freq (MHz)	Read Level (dBuV/m)	Polar (H/V)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4804	48.01	V	33.93	10.18	34.26	57.86	74	-16.14	PK
4804	36.28	V	33.93	10.18	34.26	46.13	54	-7.87	AV
7206	/	/	/	/	/	/	/	/	/
9608	/	/	/	/	/	/	/	/	/
4804	46.89	H	33.93	10.18	34.26	56.74	74	-17.262	PK
4804	36.59	H	33.93	10.18	34.26	46.44	54	-7.56	AV
7206	/	/	/	/	/	/	/	/	/
9608	/	/	/	/	/	/	/	/	/
Test Mode: GFSK TX Mid									
4882	49.08	V	33.95	10.20	34.26	58.97	74	-15.05	PK
4882	35.86	V	33.95	10.20	34.26	45.75	54	-8.25	AV
7323	/	/	/	/	/	/	/	/	/
9764	/	/	/	/	/	/	/	/	/
4882	48.80	H	33.95	10.20	34.26	58.69	74	-15.31	PK
4882	34.27	H	33.95	10.20	34.26	44.16	54	-9.84	AV
7323	/	/	/	/	/	/	/	/	/
9764	/	/	/	/	/	/	/	/	/
Test Mode: GFSK TX High									
4960	49.52	V	33.98	10.22	34.25	59.47	74	-14.53	PK
4960	36.28	V	33.98	10.22	34.25	46.23	54	-7.77	AV
7440	/	/	/	/	/	/	/	/	/
9920	/	/	/	/	/	/	/	/	/
4960	48.96	H	33.98	10.22	34.25	58.91	74	-15.09	PK
4960	37.35	H	33.98	10.22	34.25	47.3	54	-6.7	AV
7440	/	/	/	/	/	/	/	/	/
9920	/	/	/	/	/	/	/	/	/
Note:									
1, Result = Read level + Antenna factor + cable loss-Amp factor									
2, All the other emissions not reported were too low to read and deemed to comply with FCC limit									

7 Test Setup Photos

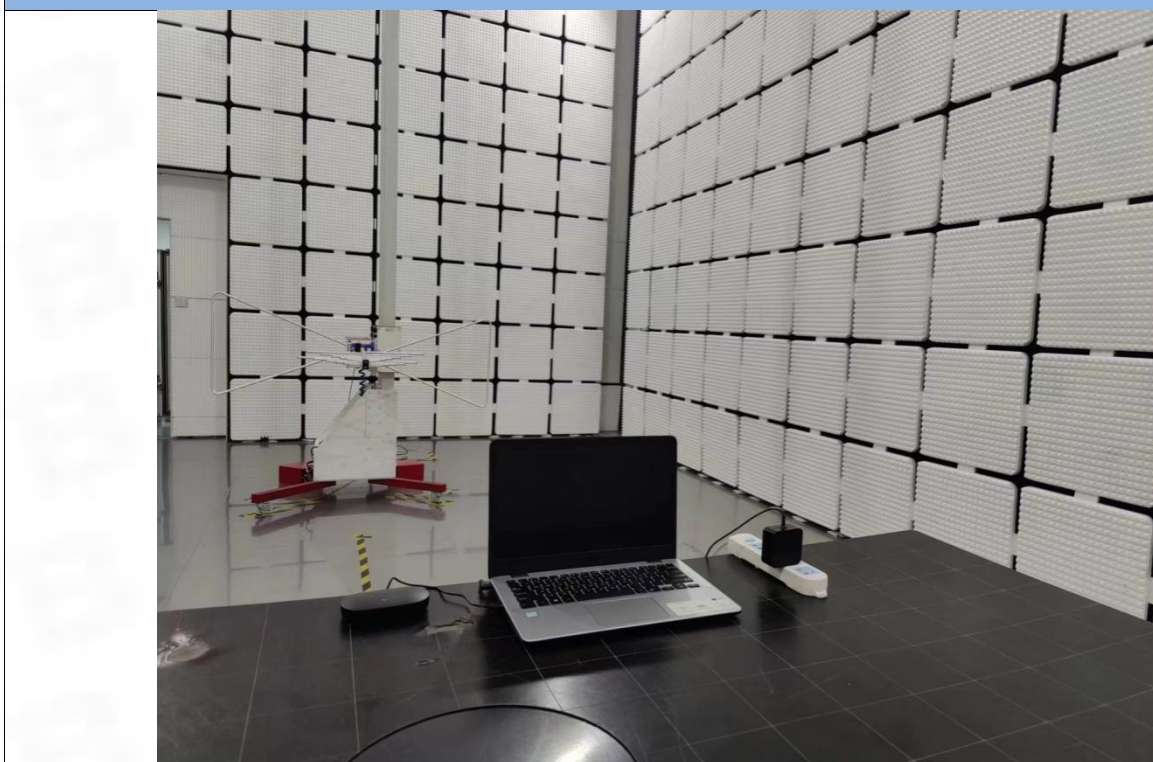
Conducted Emission at AC power line



Band edge emissions (Radiated)
Emissions in restricted frequency bands (above 1GHz)



Emissions in restricted frequency bands (below 1GHz)

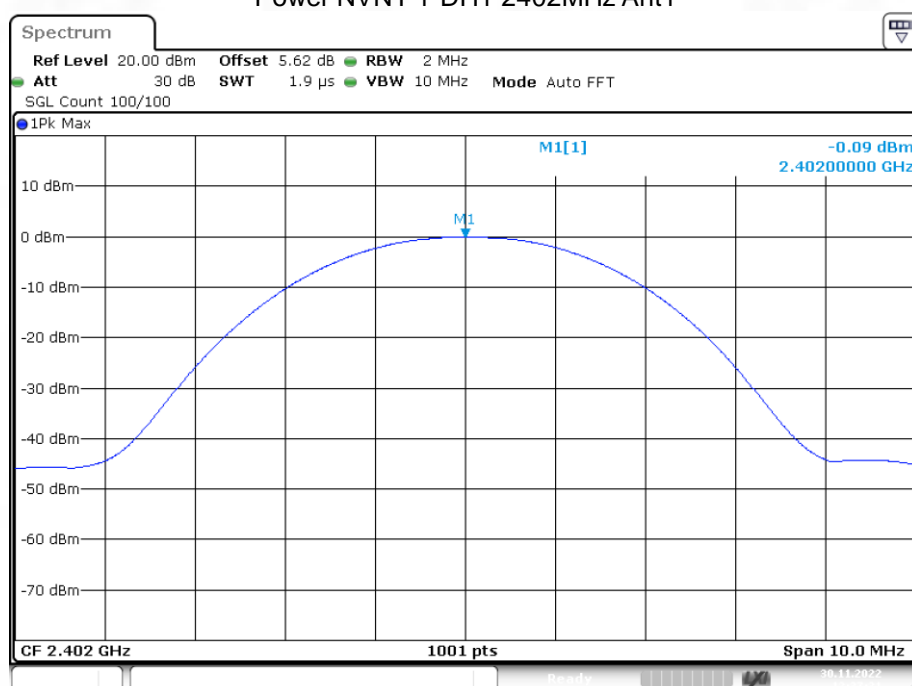


Appendix

Maximum Conducted Output Power

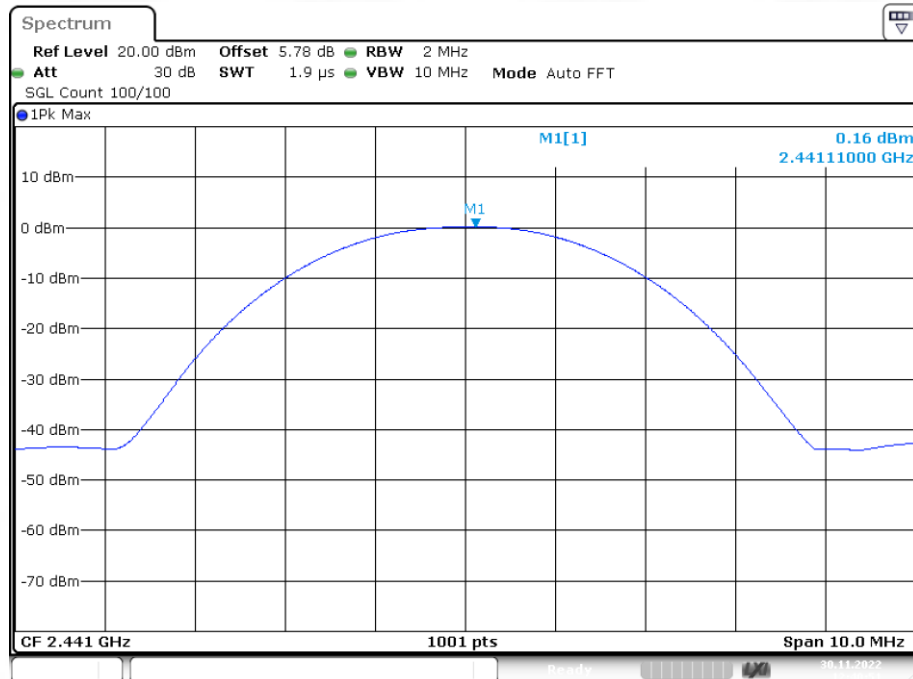
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	-0.091	0	-0.091	21	Pass
NVNT	1-DH1	2441	Ant1	0.16	0	0.16	21	Pass
NVNT	1-DH1	2480	Ant1	-0.593	0	-0.593	21	Pass
NVNT	1-DH3	2441	Ant1	0.101	0	0.101	21	Pass
NVNT	1-DH5	2441	Ant1	0.294	0	0.294	21	Pass
NVNT	2-DH1	2402	Ant1	-0.501	0	-0.501	21	Pass
NVNT	2-DH1	2441	Ant1	0.072	0	0.072	21	Pass
NVNT	2-DH1	2480	Ant1	-0.812	0	-0.812	21	Pass
NVNT	2-DH3	2441	Ant1	-0.323	0	-0.323	21	Pass
NVNT	2-DH5	2441	Ant1	-0.192	0	-0.192	21	Pass
NVNT	3-DH1	2402	Ant1	-0.452	0	-0.452	21	Pass
NVNT	3-DH1	2441	Ant1	-0.158	0	-0.158	21	Pass
NVNT	3-DH1	2480	Ant1	-0.862	0	-0.862	21	Pass
NVNT	3-DH3	2441	Ant1	0.459	0	0.459	21	Pass
NVNT	3-DH5	2441	Ant1	0.106	0	0.106	21	Pass

Power NVNT 1-DH1 2402MHz Ant1

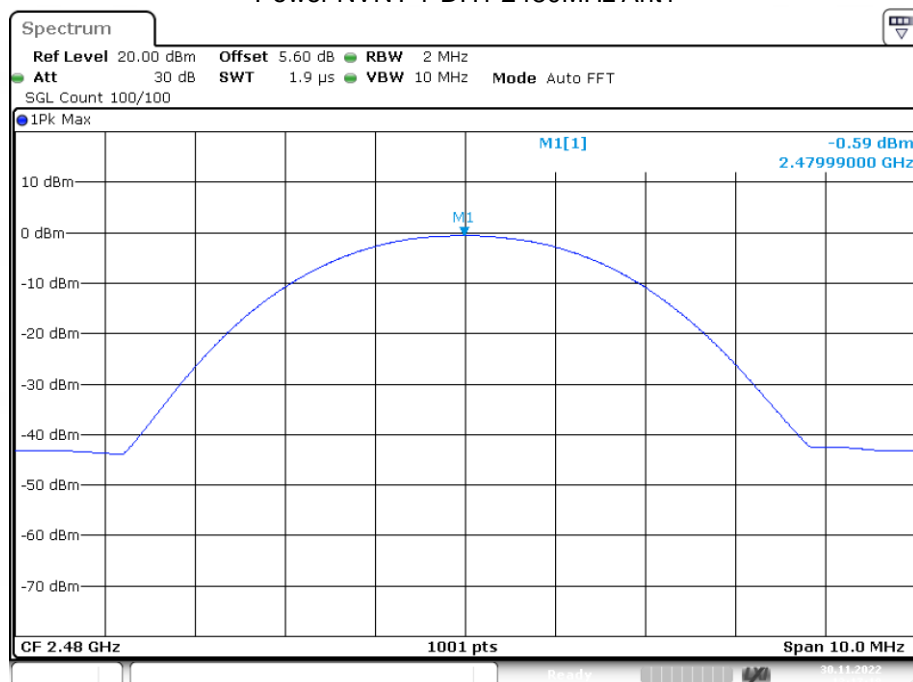


Date: 30.NOV.2022 12:37:30

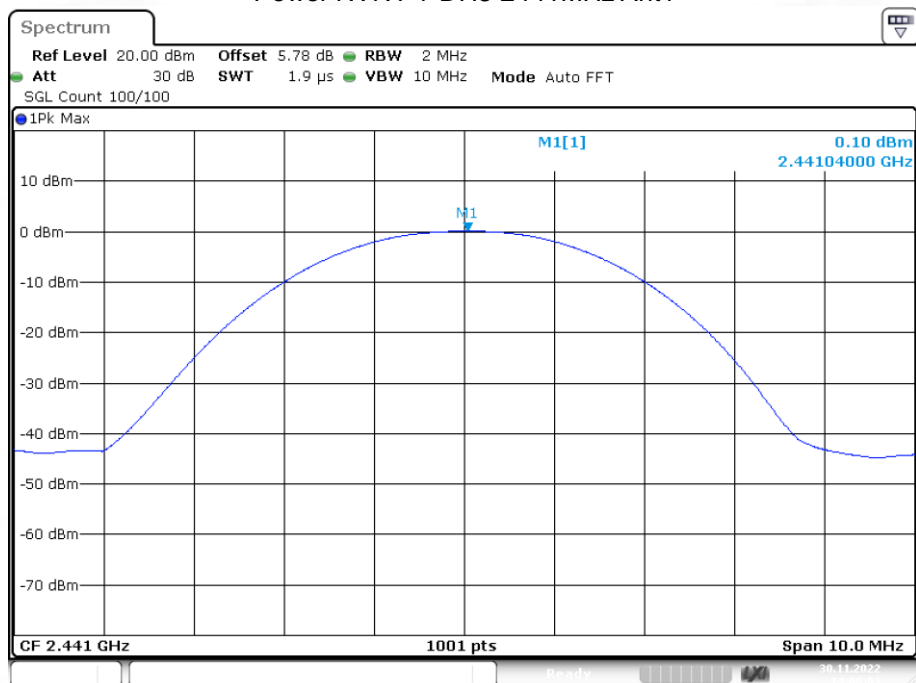
Power NVNT 1-DH1 2441MHz Ant1



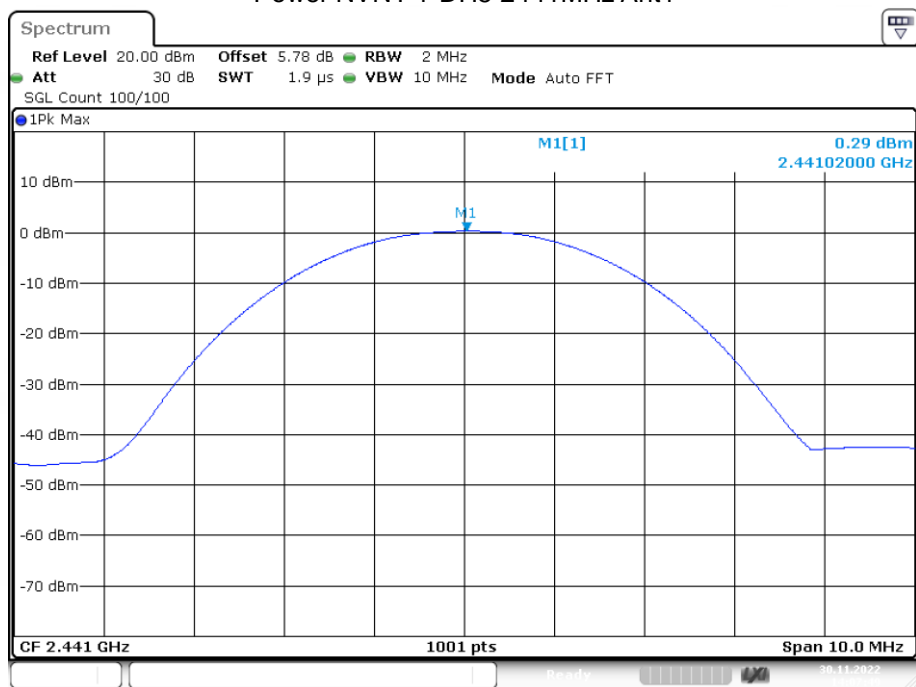
Power NVNT 1-DH1 2480MHz Ant1



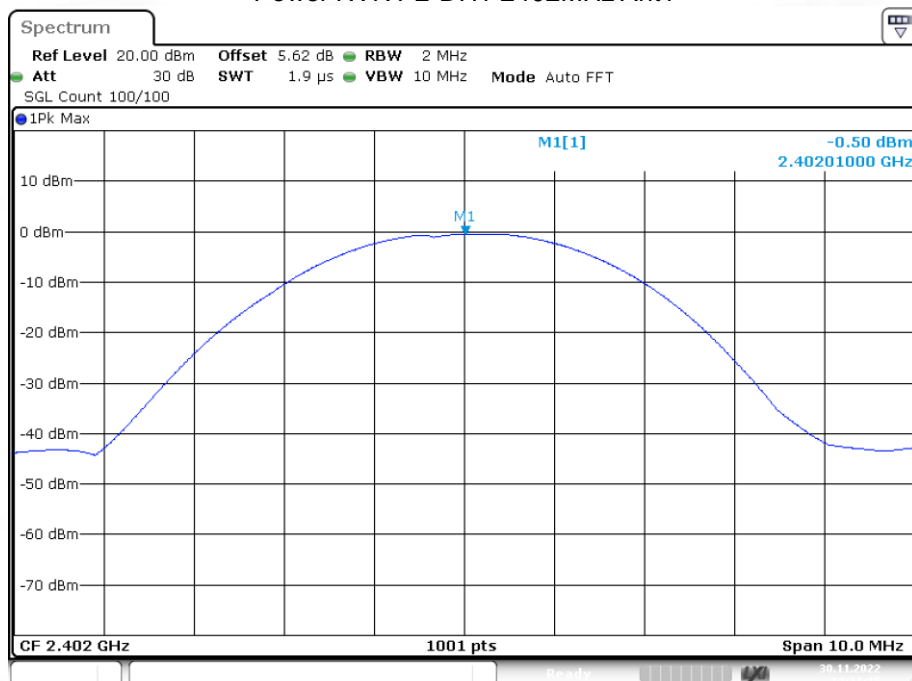
Power NVNT 1-DH3 2441MHz Ant1



Power NVNT 1-DH5 2441MHz Ant1

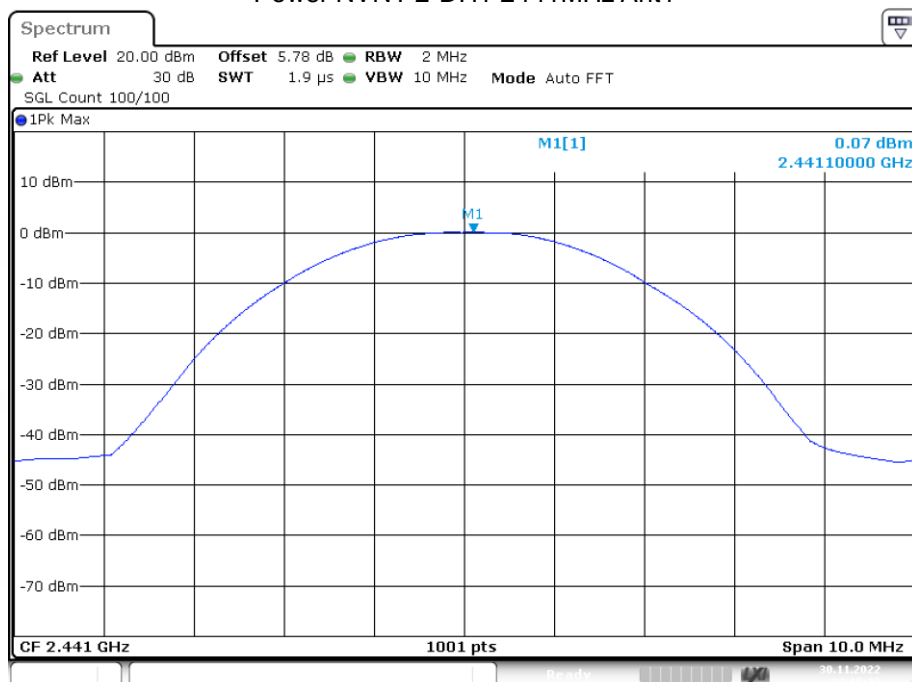


Power NVNT 2-DH1 2402MHz Ant1



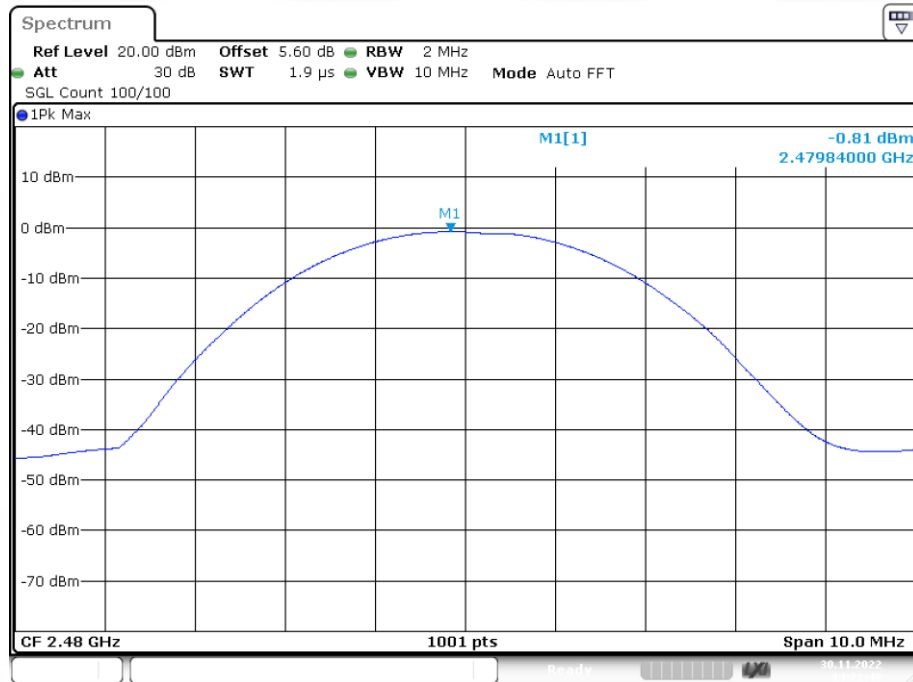
Date: 30.NOV.2022 14:11:16

Power NVNT 2-DH1 2441MHz Ant1



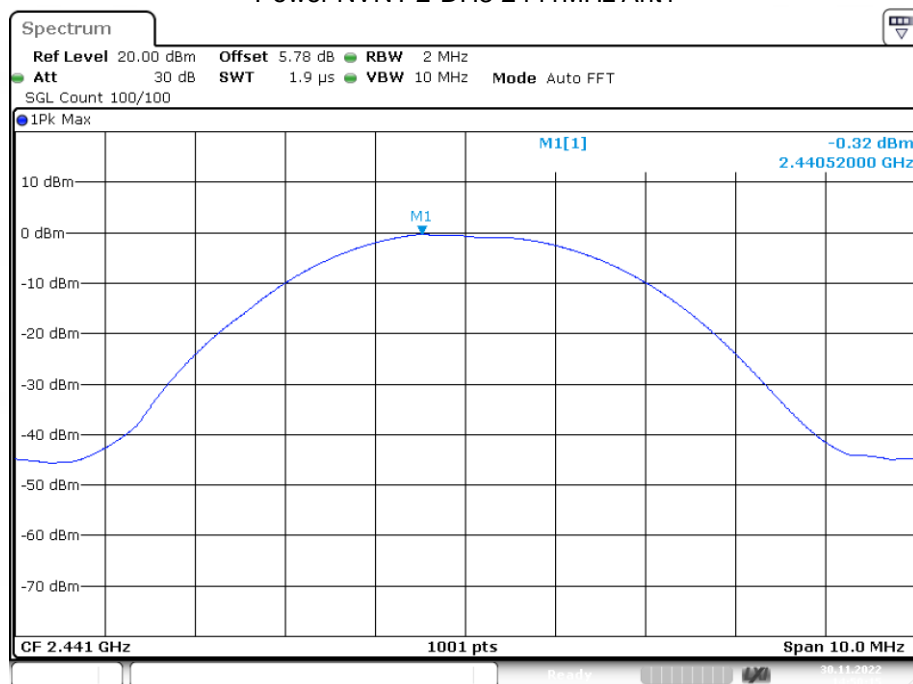
Date: 30.NOV.2022 14:19:32

Power NVNT 2-DH1 2480MHz Ant1



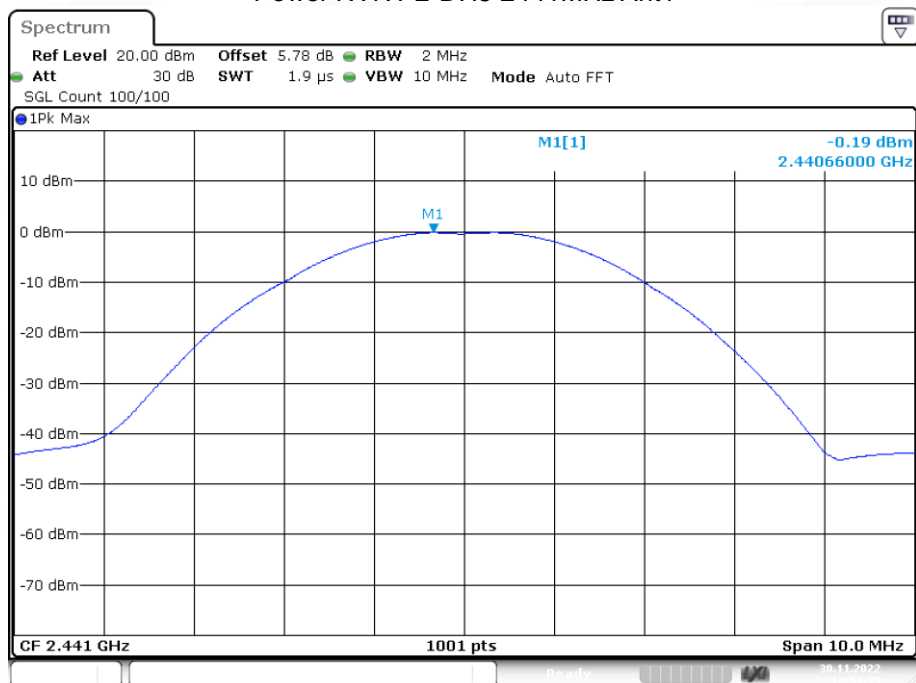
Date: 30.NOV.2022 14:22:48

Power NVNT 2-DH3 2441MHz Ant1



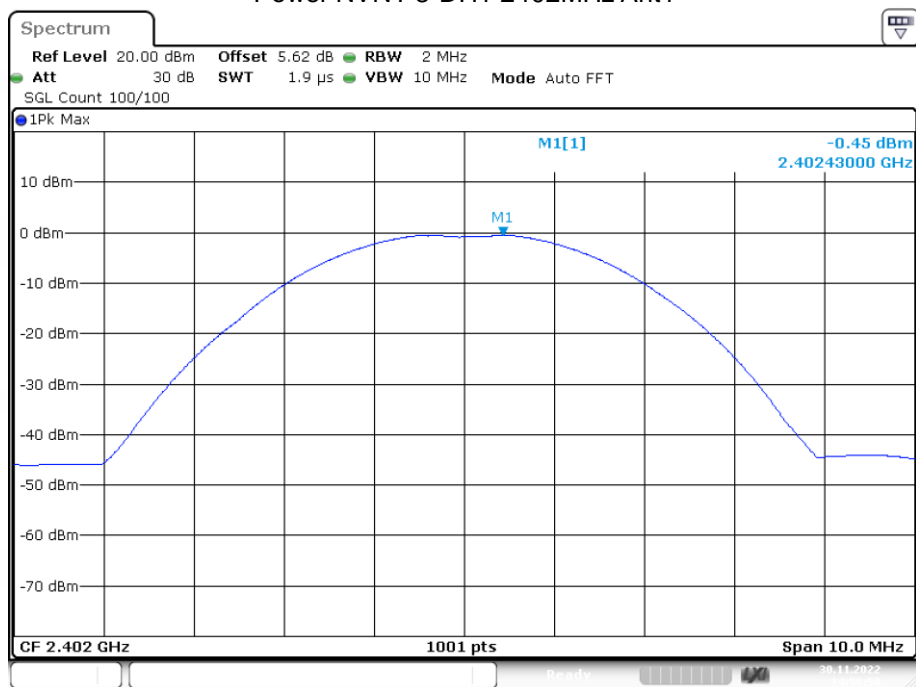
Date: 30.NOV.2022 14:50:15

Power NVNT 2-DH5 2441MHz Ant1



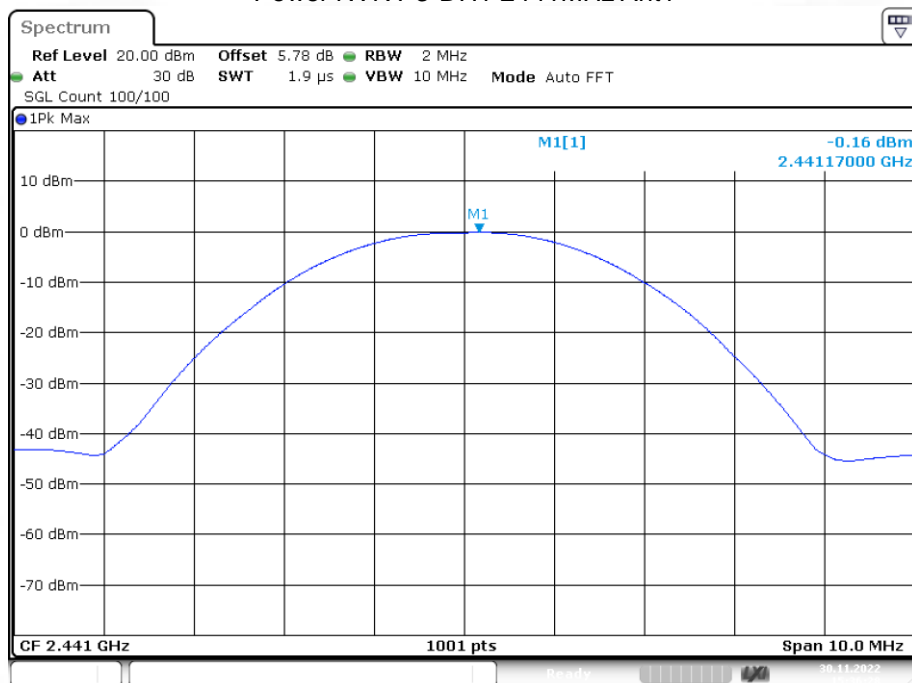
Date: 30.NOV.2022 14:53:59

Power NVNT 3-DH1 2402MHz Ant1



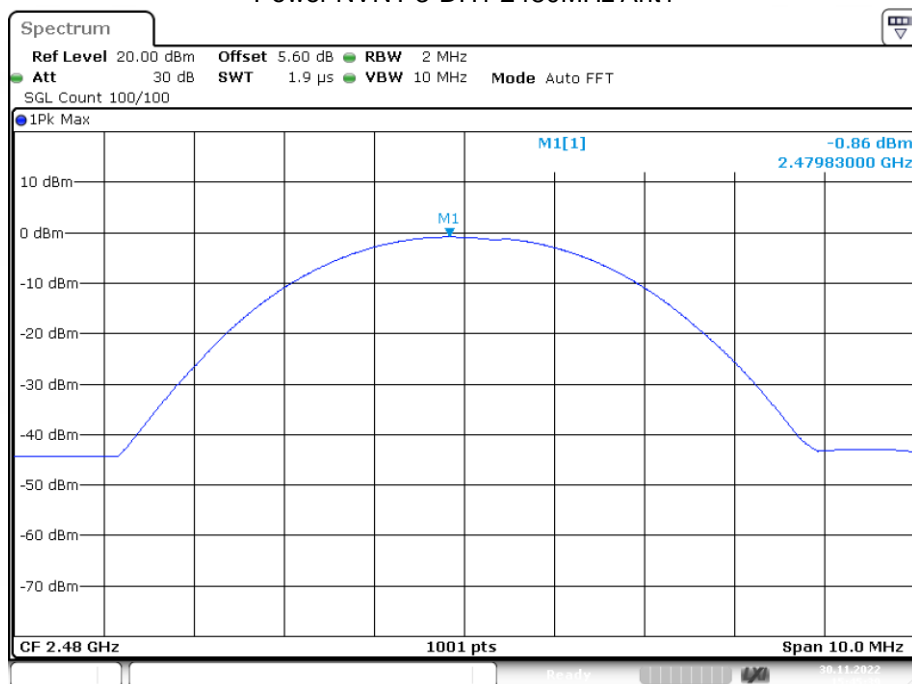
Date: 30.NOV.2022 14:58:50

Power NVNT 3-DH1 2441MHz Ant1



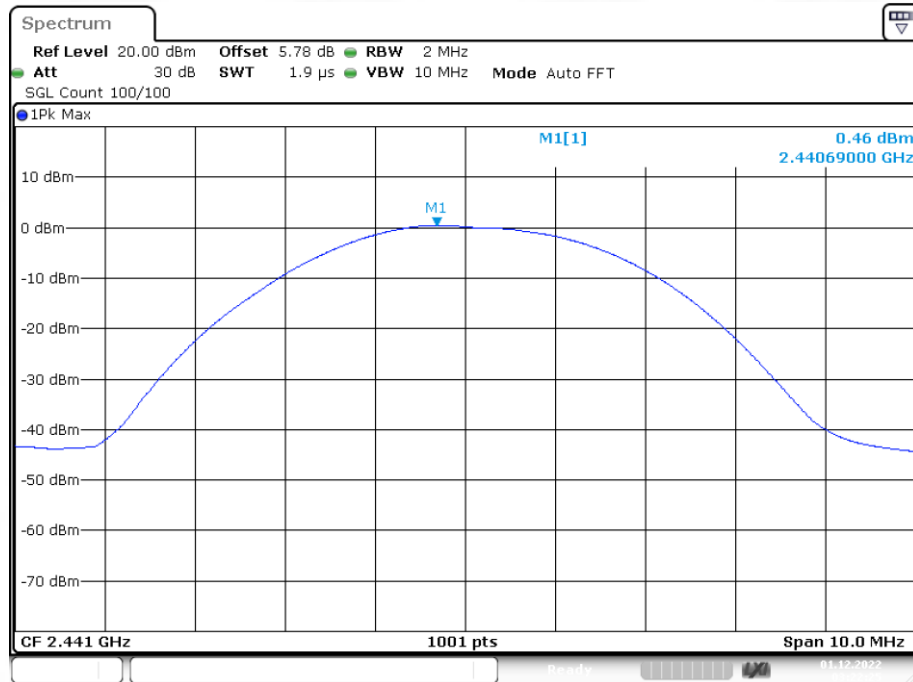
Date: 30.NOV.2022 15:36:28

Power NVNT 3-DH1 2480MHz Ant1

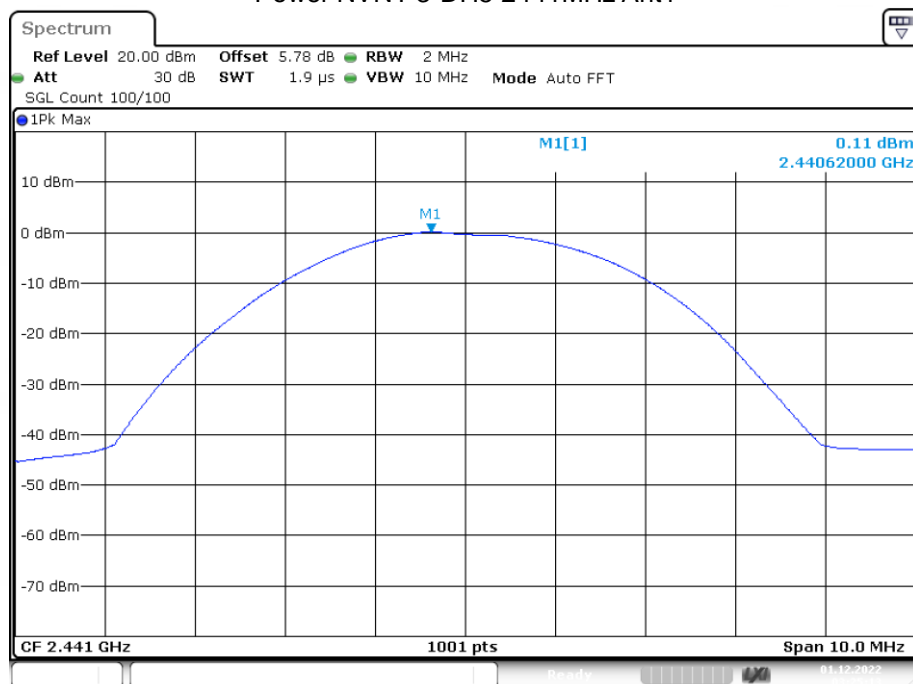


Date: 30.NOV.2022 15:45:39

Power NVNT 3-DH3 2441MHz Ant1



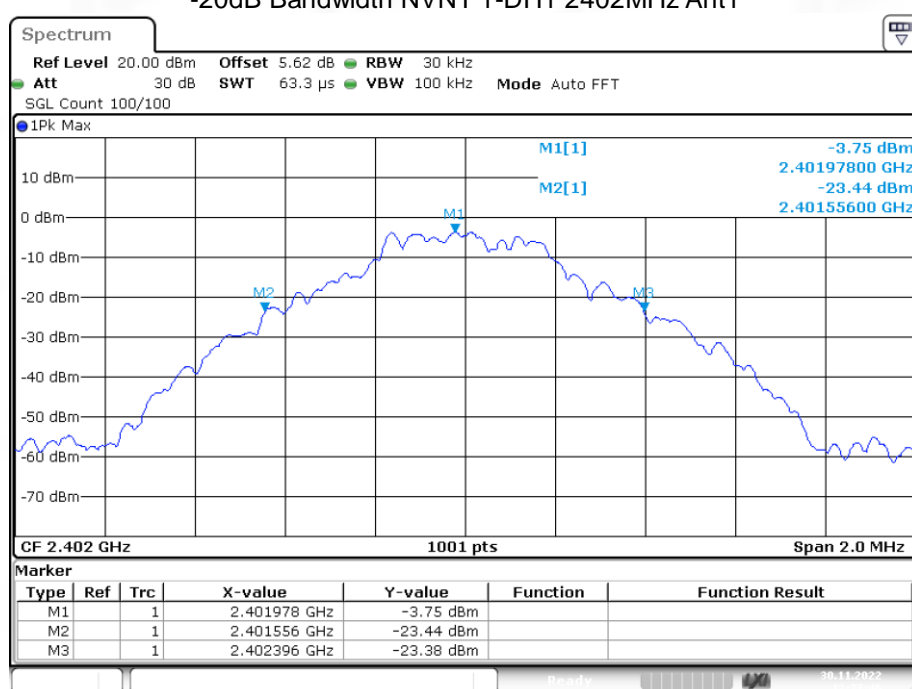
Power NVNT 3-DH5 2441MHz Ant1



-20dB Bandwidth

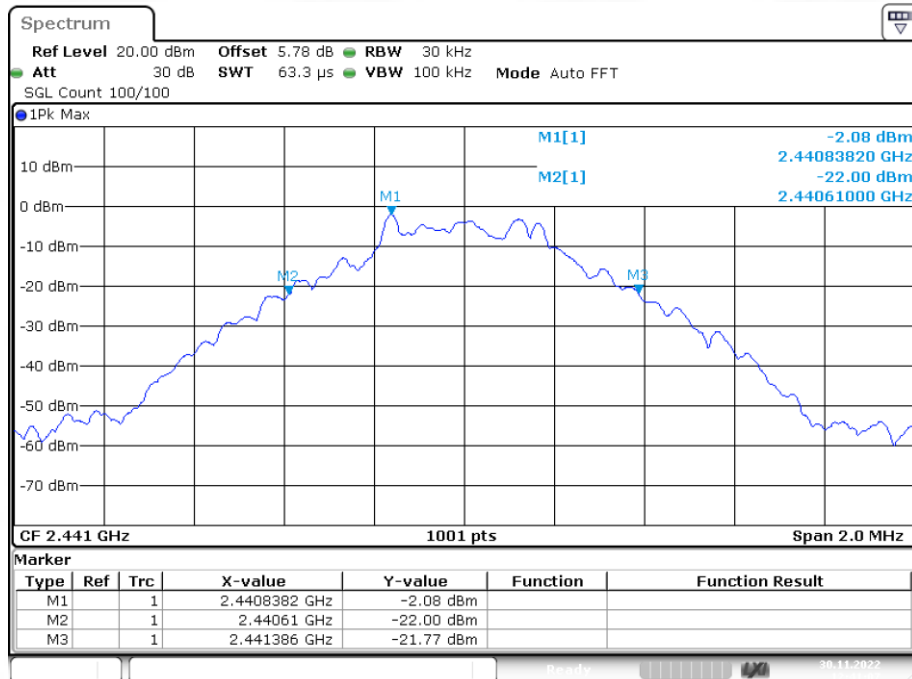
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.84	0	Pass
NVNT	1-DH1	2441	Ant1	0.776	0	Pass
NVNT	1-DH1	2480	Ant1	0.8	0	Pass
NVNT	2-DH1	2402	Ant1	1.216	0	Pass
NVNT	2-DH1	2441	Ant1	1.23	0	Pass
NVNT	2-DH1	2480	Ant1	1.238	0	Pass
NVNT	3-DH1	2402	Ant1	1.208	0	Pass
NVNT	3-DH1	2441	Ant1	1.208	0	Pass
NVNT	3-DH1	2480	Ant1	1.208	0	Pass

-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1

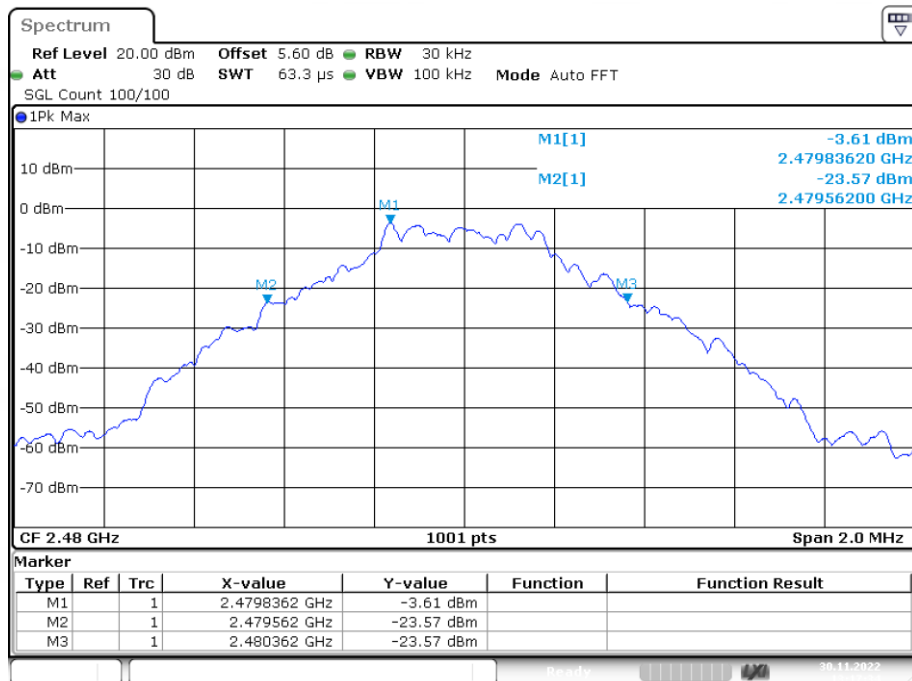


Date: 30.NOV.2022 12:37:45

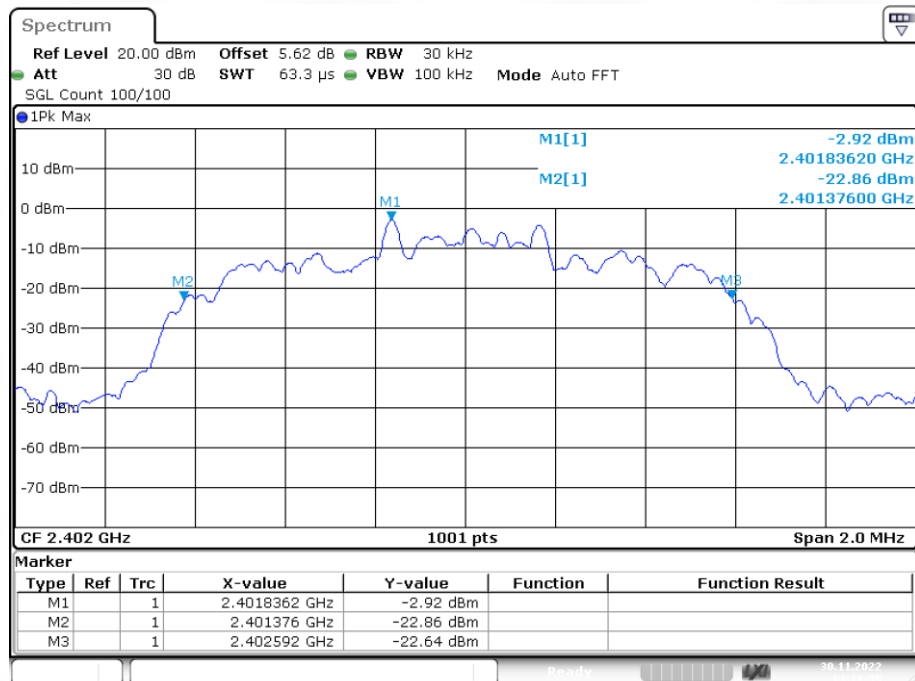
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



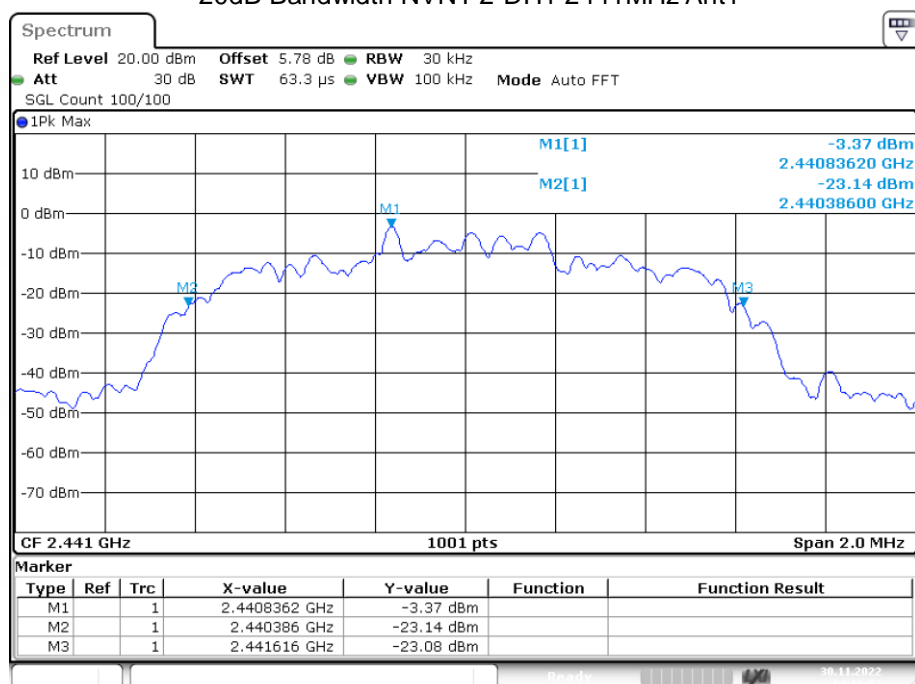
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



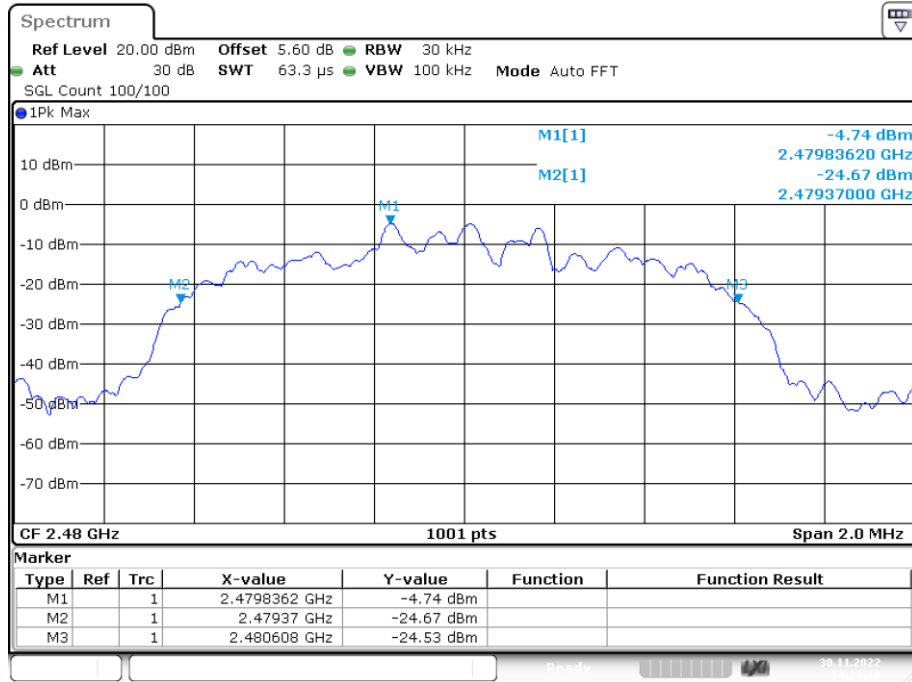
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



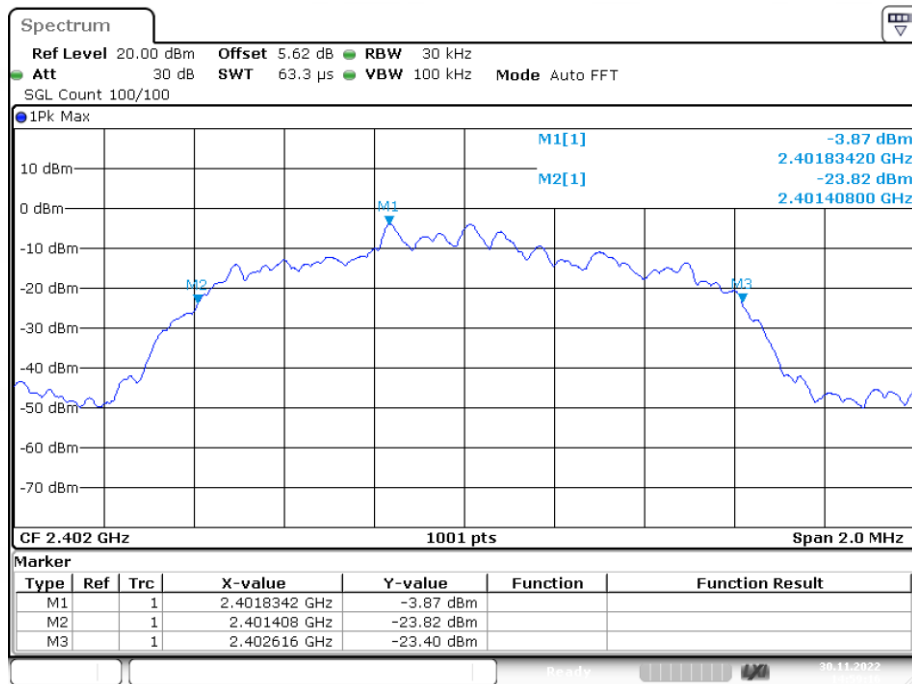
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



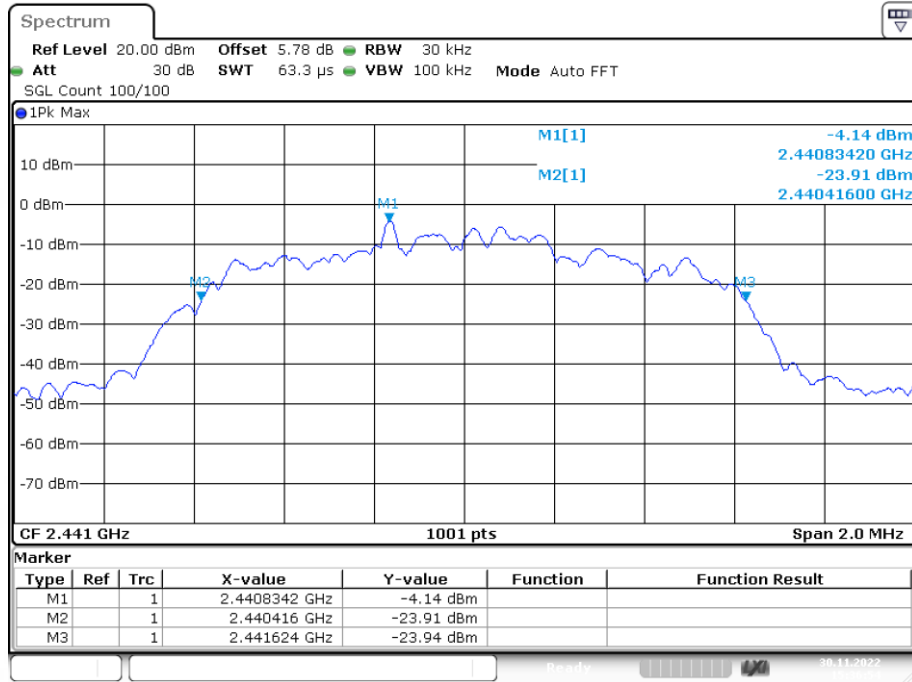
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1



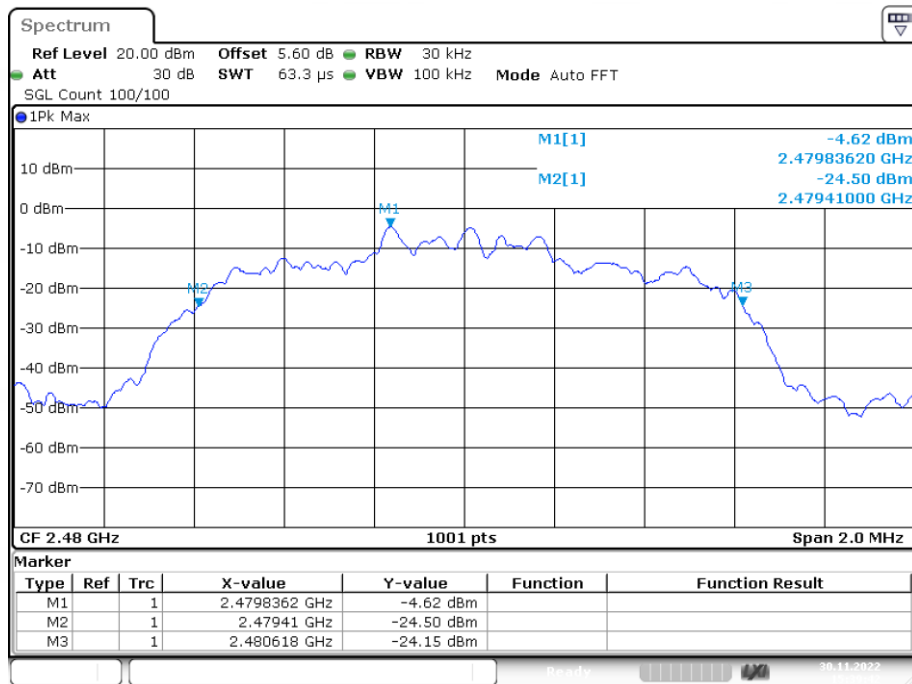
-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



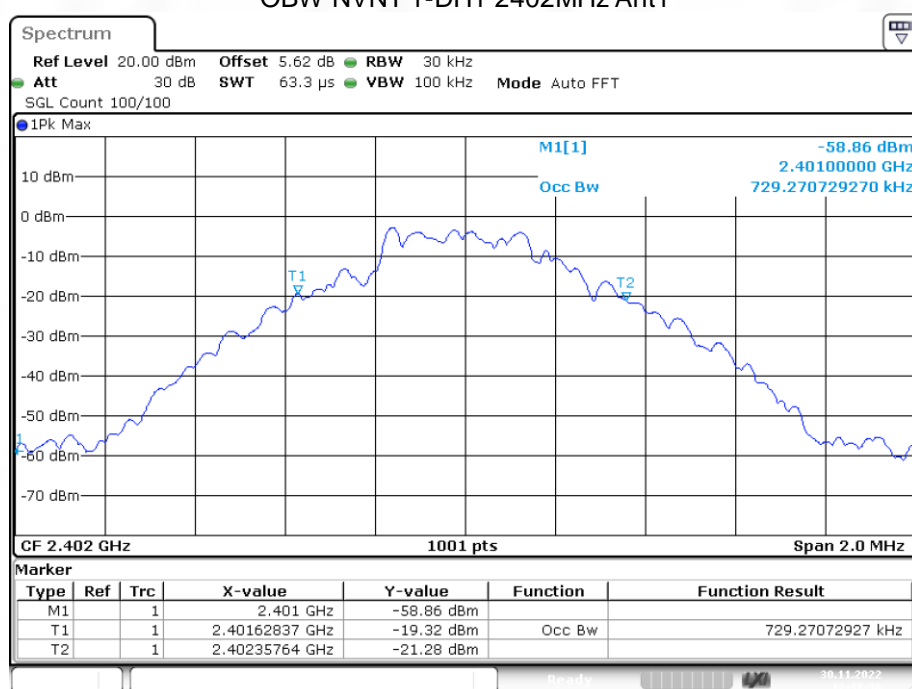
-20dB Bandwidth NVNT 3-DH1 2480MHz Ant1



Occupied Channel Bandwidth

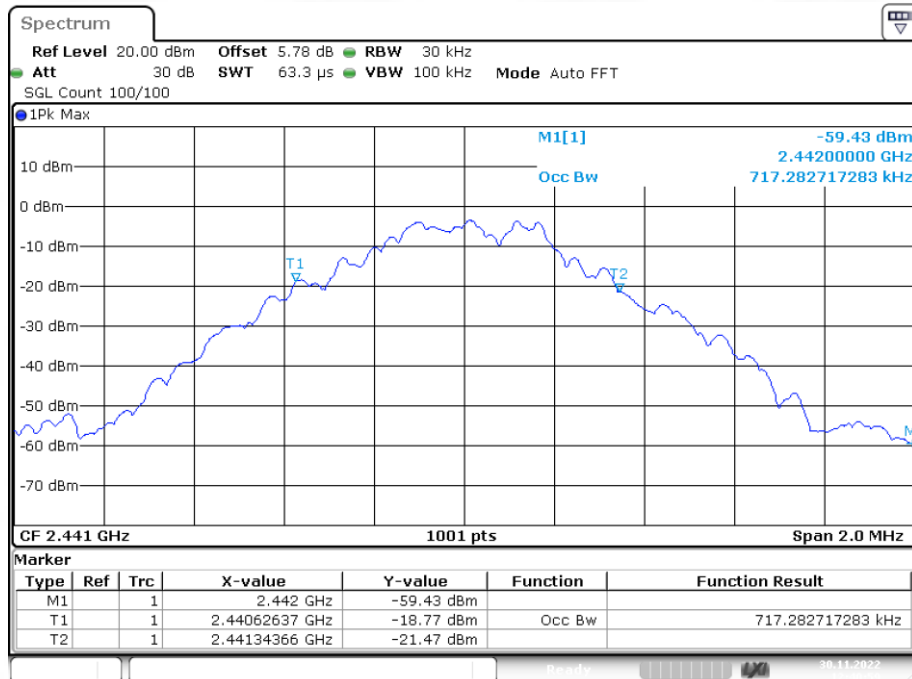
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.729
NVNT	1-DH1	2441	Ant1	0.717
NVNT	1-DH1	2480	Ant1	0.737
NVNT	2-DH1	2402	Ant1	1.129
NVNT	2-DH1	2441	Ant1	1.157
NVNT	2-DH1	2480	Ant1	1.145
NVNT	3-DH1	2402	Ant1	1.141
NVNT	3-DH1	2441	Ant1	1.123
NVNT	3-DH1	2480	Ant1	1.137

OBW NVNT 1-DH1 2402MHz Ant1

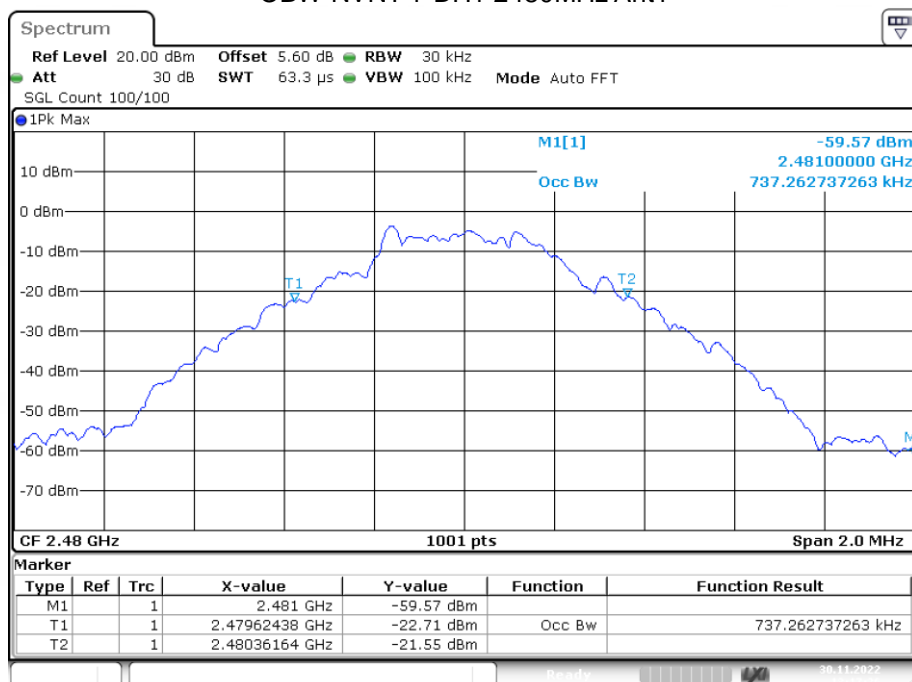


Date: 30.NOV.2022 12:37:37

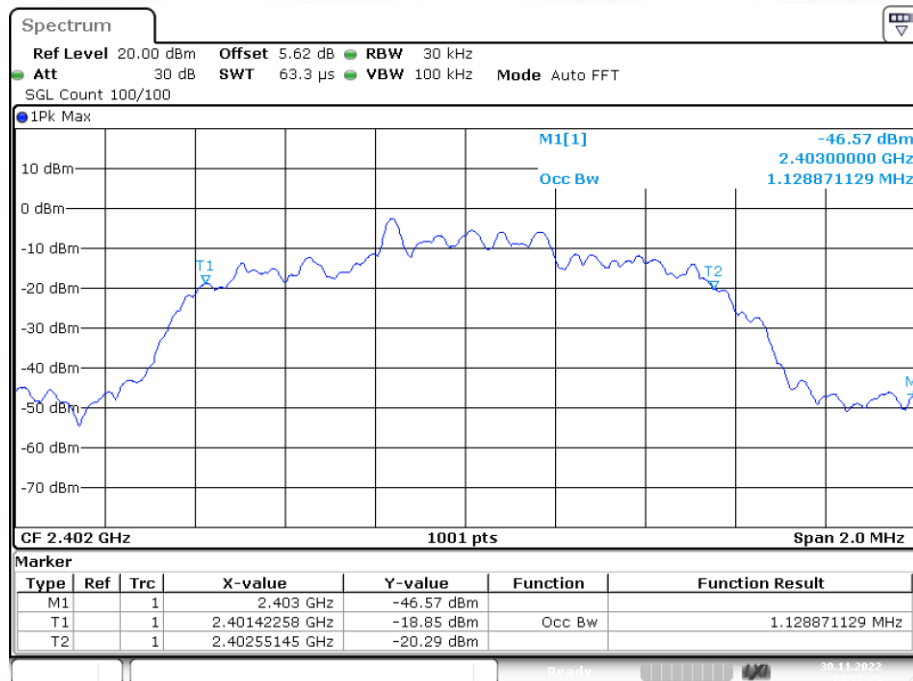
OBW NVNT 1-DH1 2441MHz Ant1



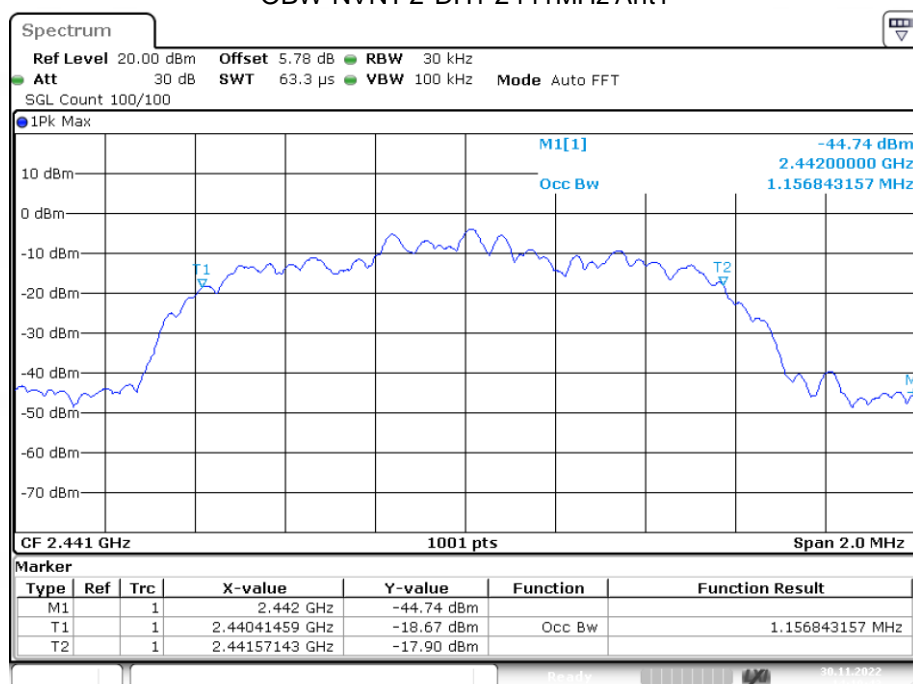
OBW NVNT 1-DH1 2480MHz Ant1



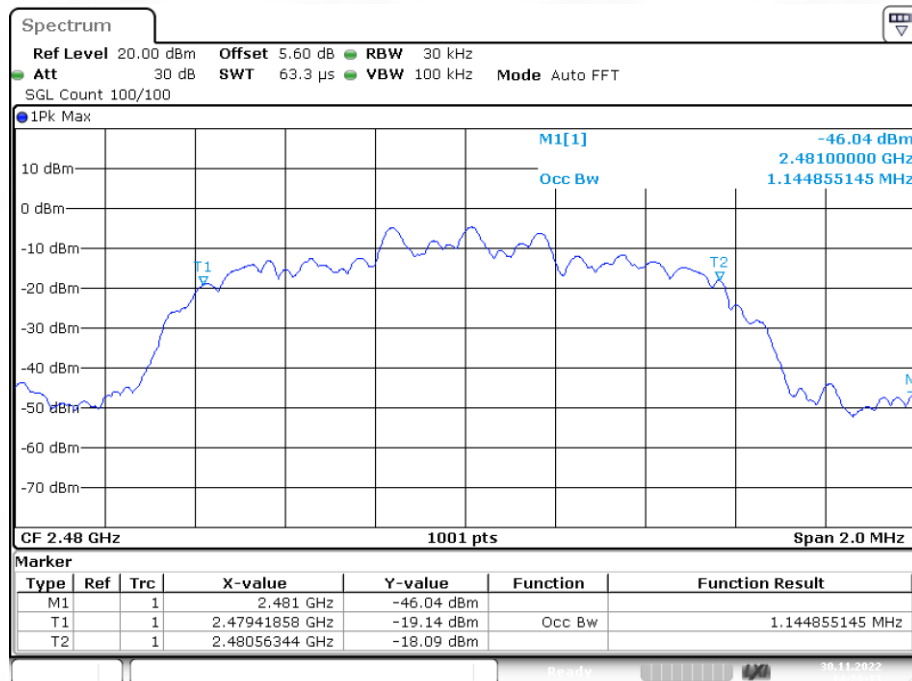
OBW NVNT 2-DH1 2402MHz Ant1



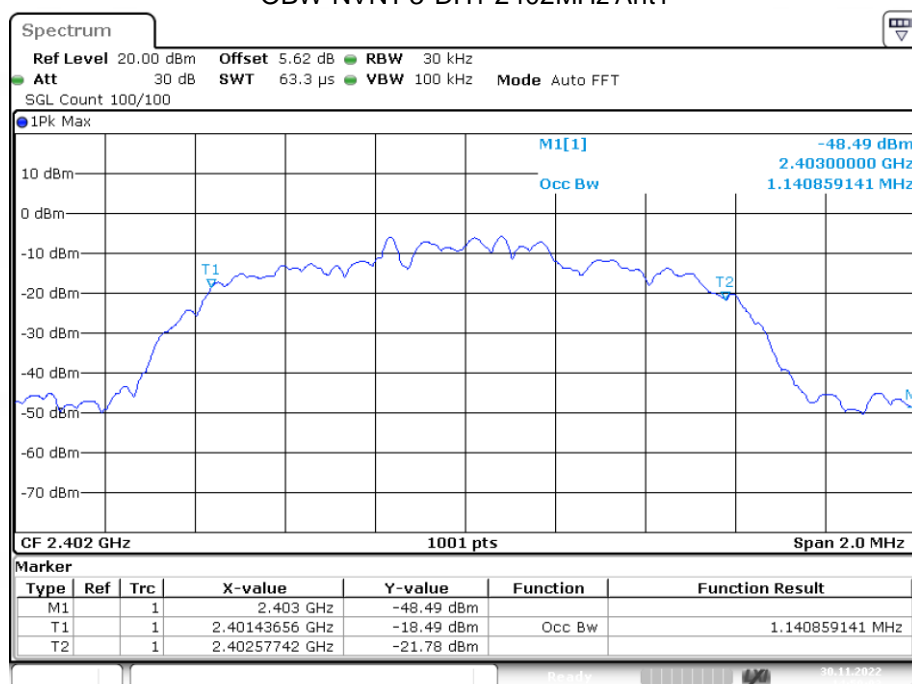
OBW NVNT 2-DH1 2441MHz Ant1



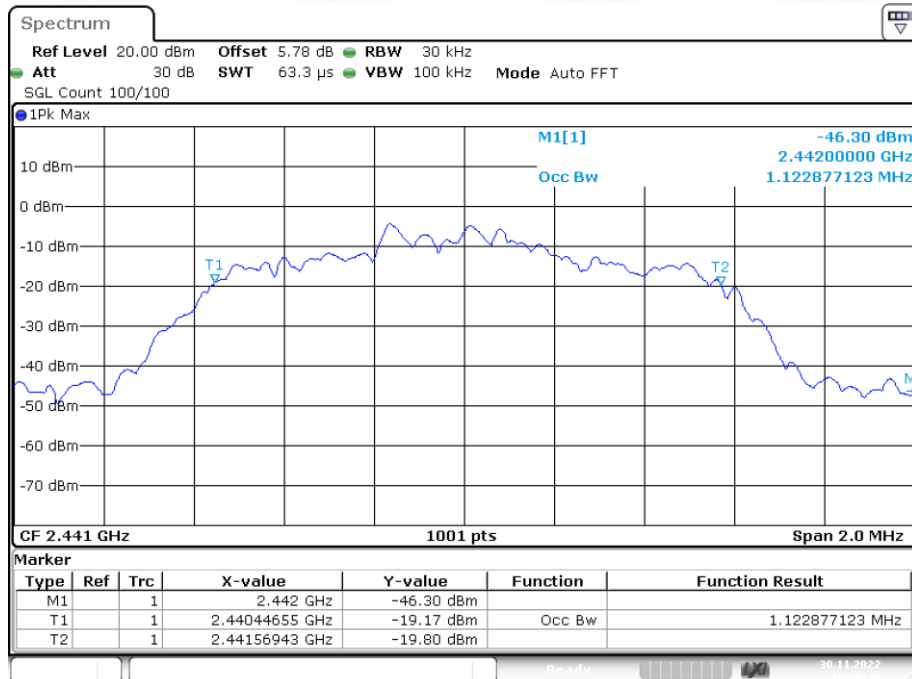
OBW NVNT 2-DH1 2480MHz Ant1



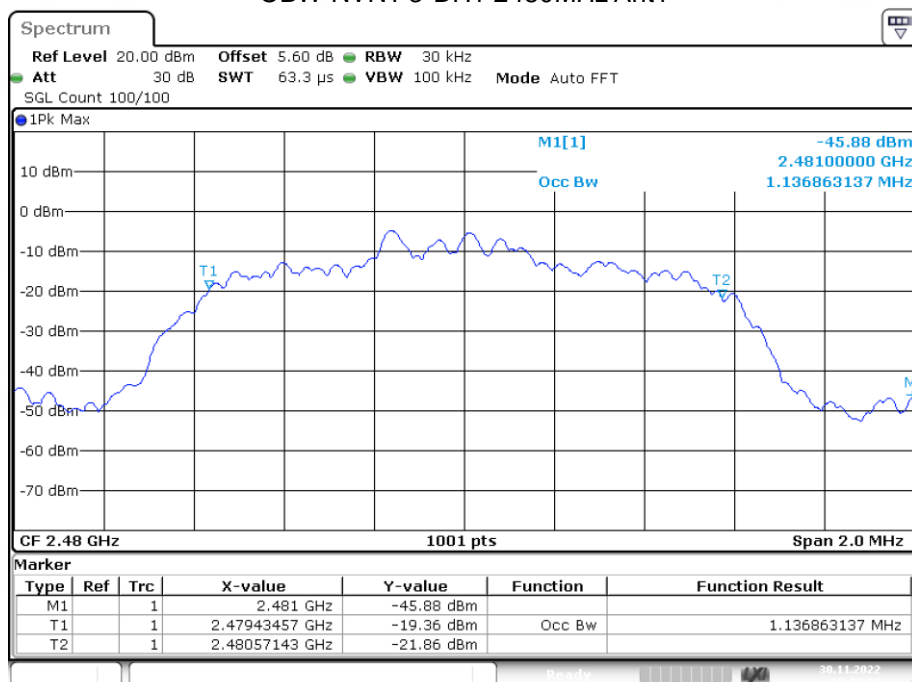
OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



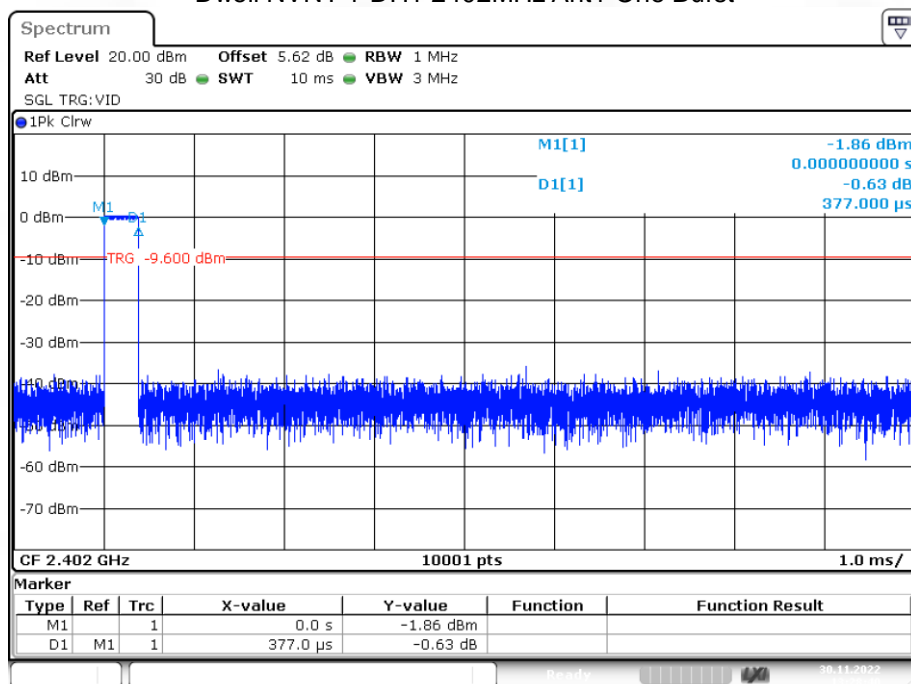
OBW NVNT 3-DH1 2480MHz Ant1



Dwell Time

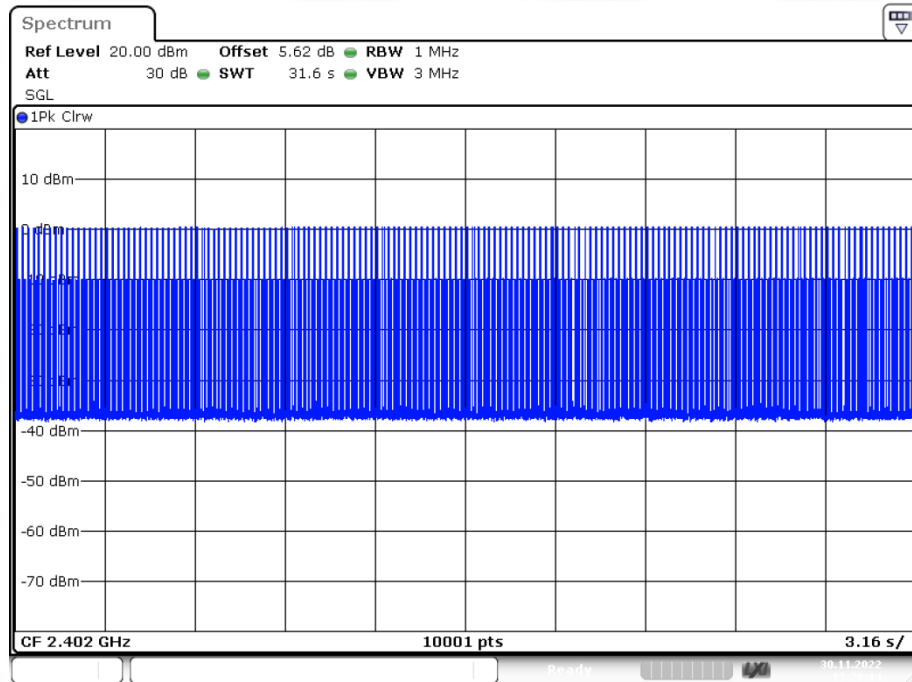
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2402	Ant1	0.377	119.509	317	31600	400	Pass
NVNT	1-DH1	2441	Ant1	0.378	119.826	317	31600	400	Pass
NVNT	1-DH1	2480	Ant1	0.378	118.692	314	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.632	256.224	157	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.881	290.981	101	31600	400	Pass
NVNT	2-DH1	2402	Ant1	0.38	120.46	317	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.38	118.56	312	31600	400	Pass
NVNT	2-DH1	2480	Ant1	0.384	121.344	316	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.637	255.372	156	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.88	296.64	103	31600	400	Pass
NVNT	3-DH1	2402	Ant1	0.386	123.134	319	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.386	122.362	317	31600	400	Pass
NVNT	3-DH1	2480	Ant1	0.386	122.362	317	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.635	253.425	155	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.887	291.587	101	31600	400	Pass

Dwell NVNT 1-DH1 2402MHz Ant1 One Burst



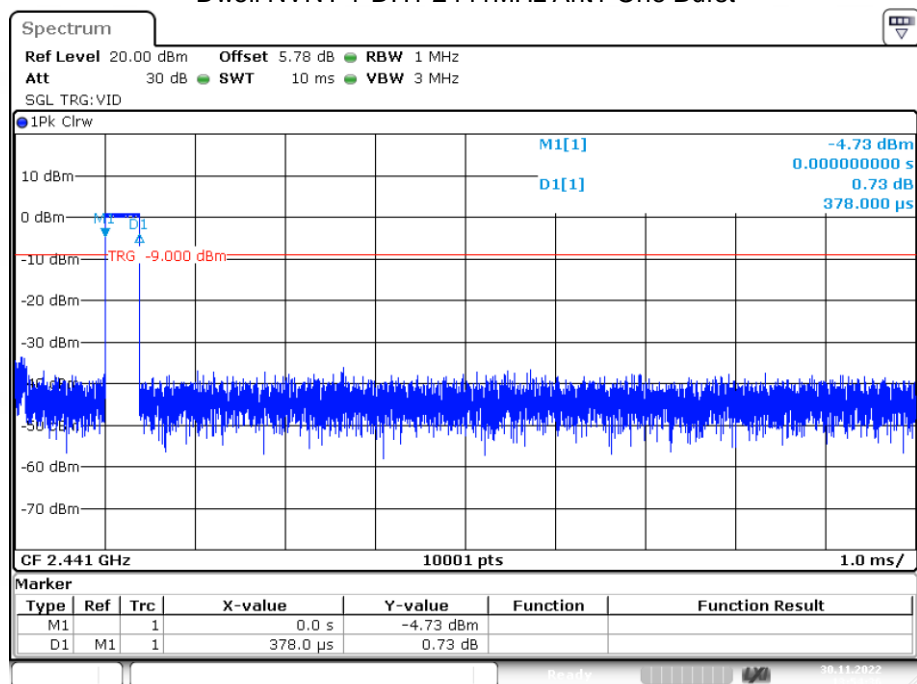
Date: 30.NOV.2022 13:28:40

Dwell NVNT 1-DH1 2402MHz Ant1 Accumulated



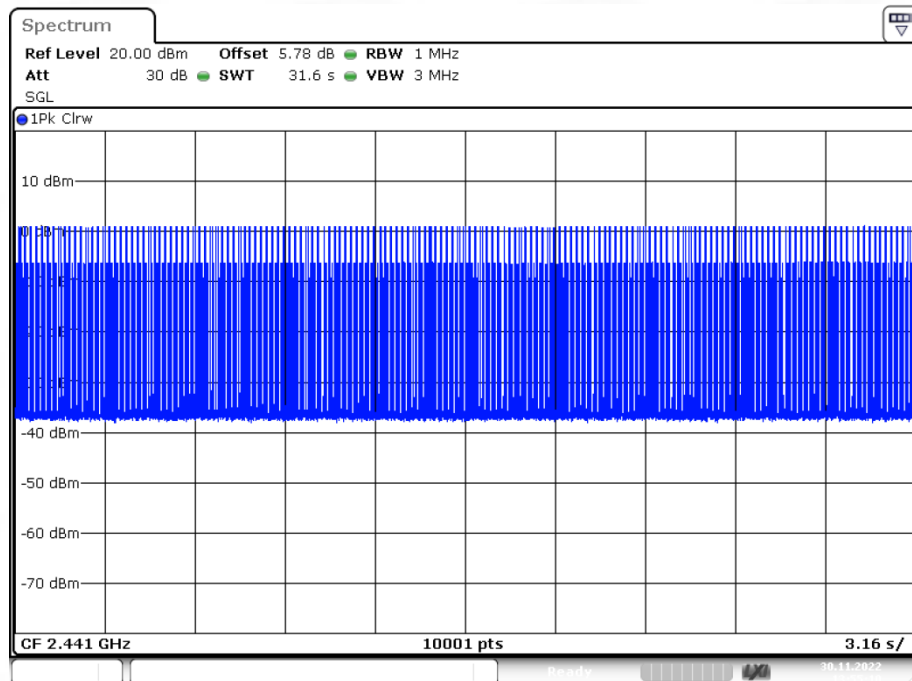
Date: 30.NOV.2022 13:29:14

Dwell NVNT 1-DH1 2441MHz Ant1 One Burst



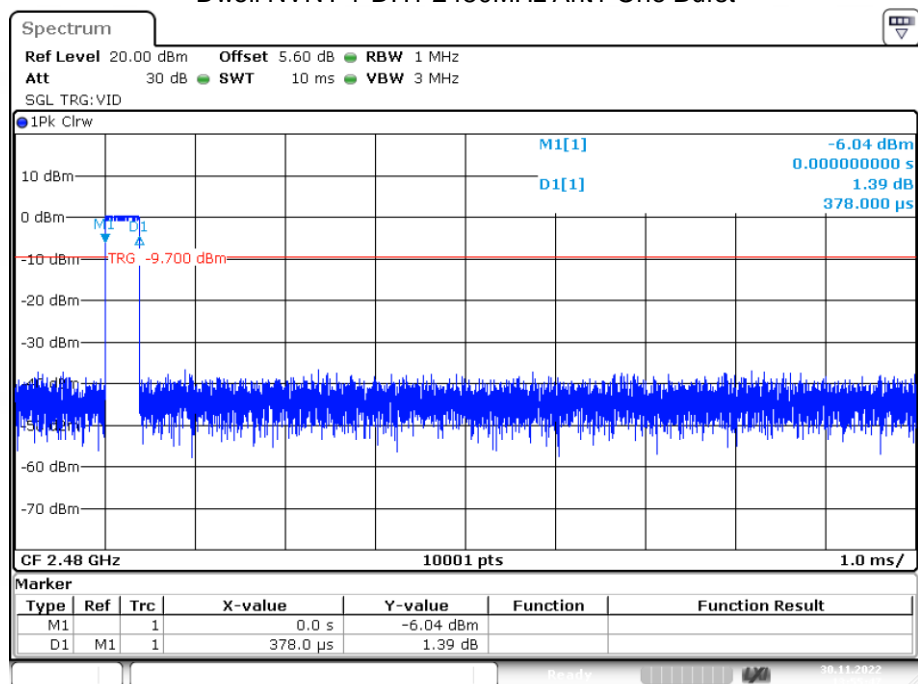
Date: 30.NOV.2022 13:54:36

Dwell NVNT 1-DH1 2441MHz Ant1 Accumulated



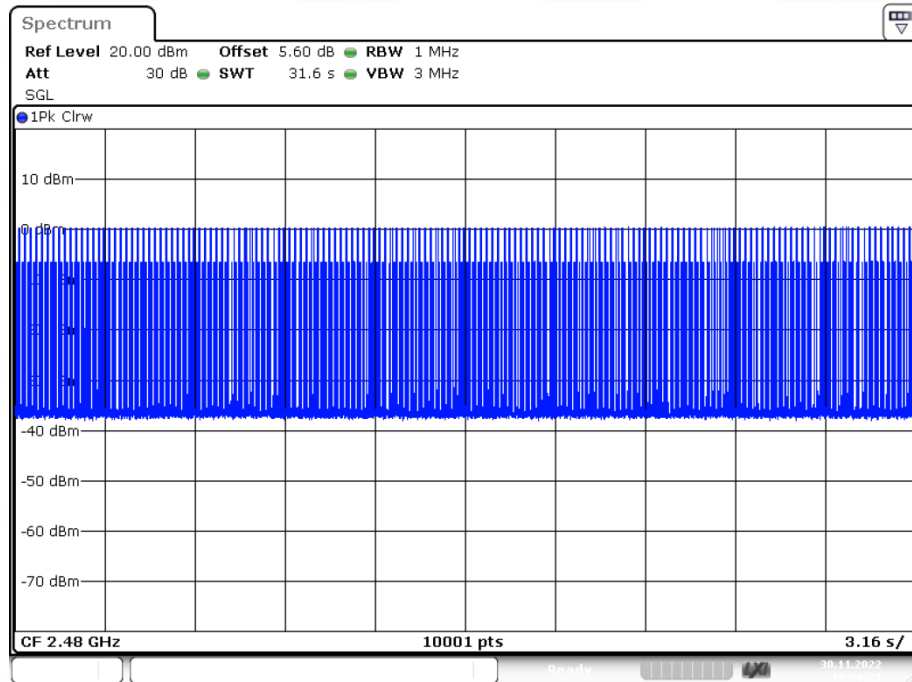
Date: 30.NOV.2022 13:55:10

Dwell NVNT 1-DH1 2480MHz Ant1 One Burst

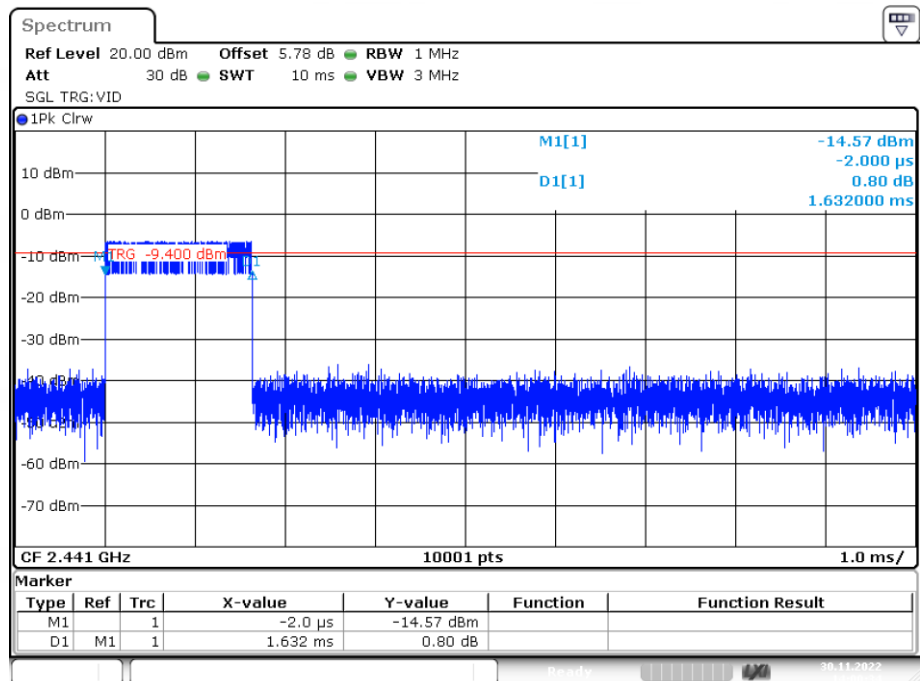


Date: 30.NOV.2022 13:55:46

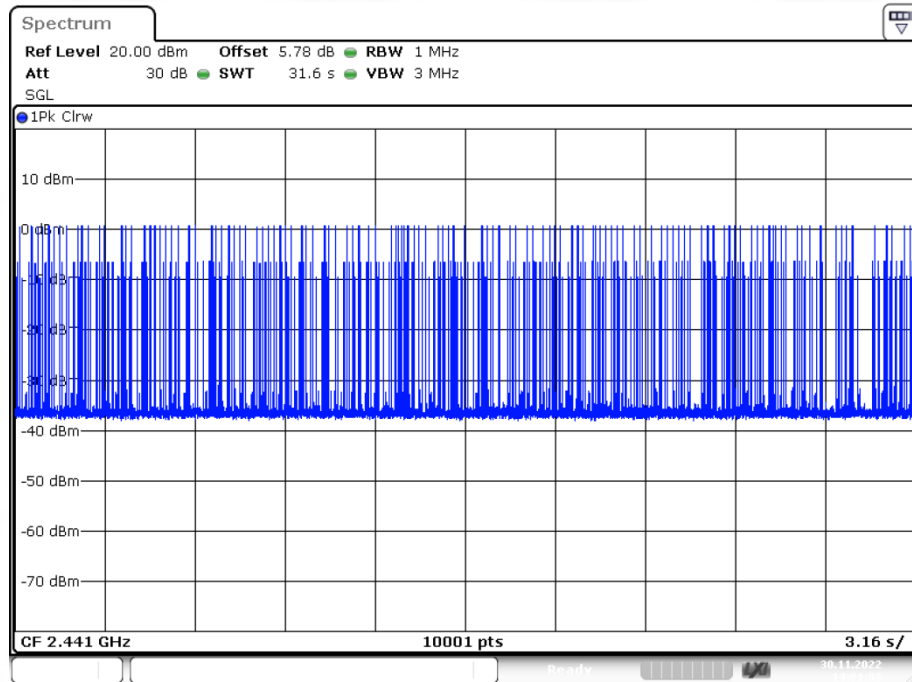
Dwell NVNT 1-DH1 2480MHz Ant1 Accumulated



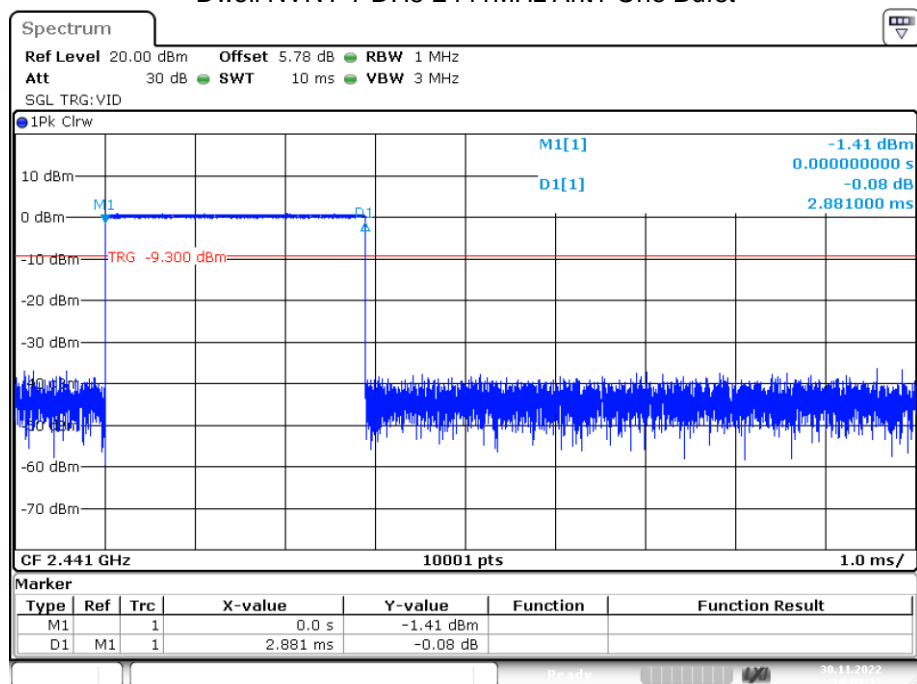
Dwell NVNT 1-DH3 2441MHz Ant1 One Burst



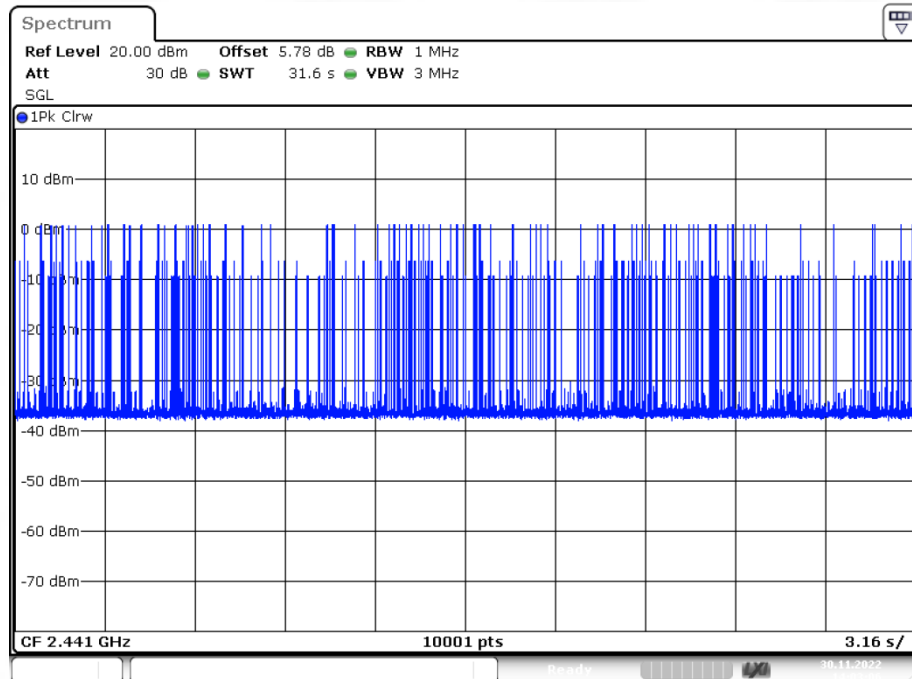
Dwell NVNT 1-DH3 2441MHz Ant1 Accumulated



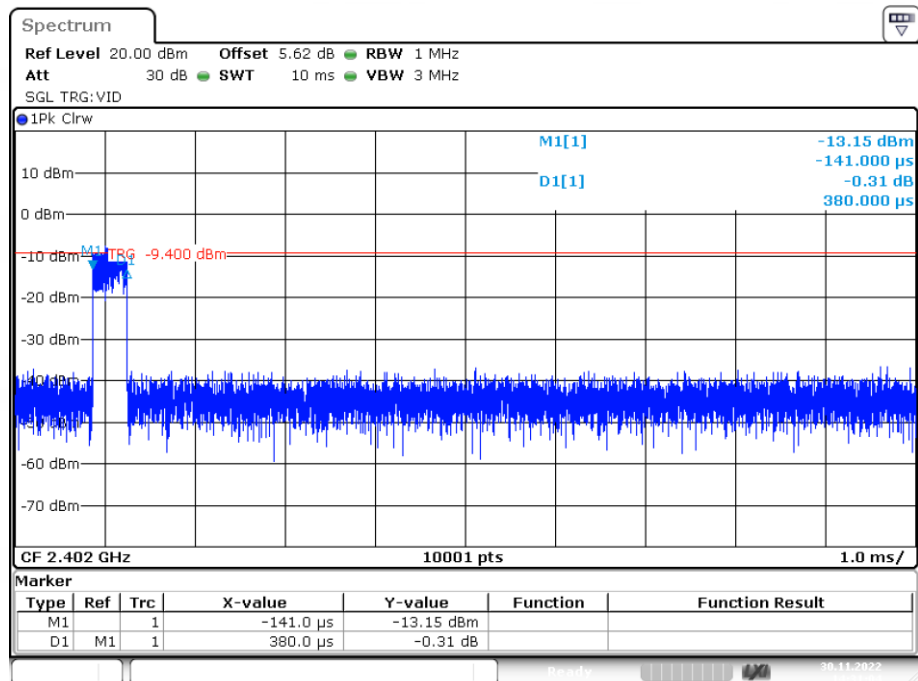
Dwell NVNT 1-DH5 2441MHz Ant1 One Burst



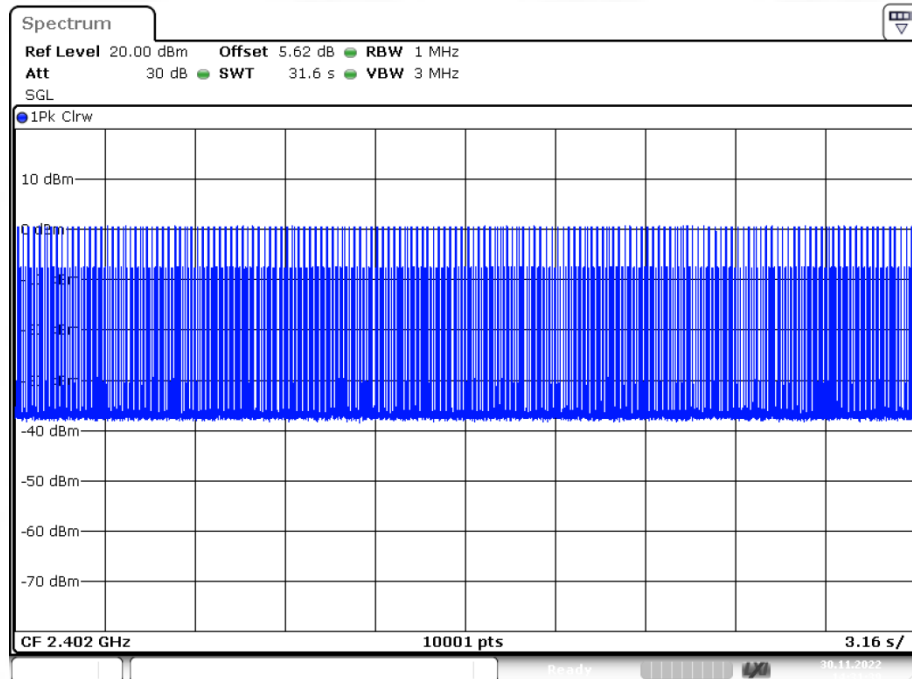
Dwell NVNT 1-DH5 2441MHz Ant1 Accumulated



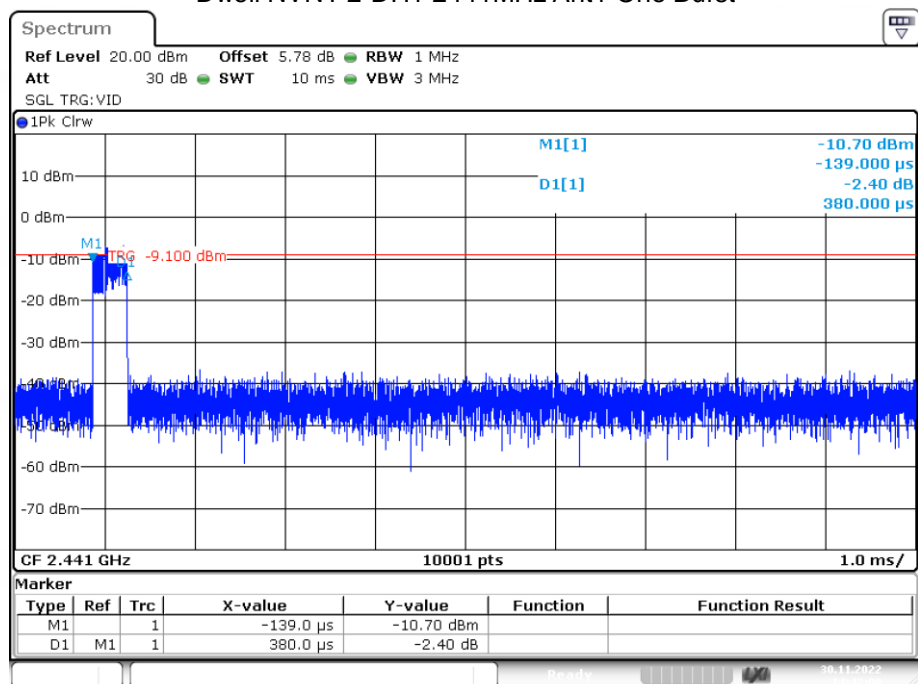
Dwell NVNT 2-DH1 2402MHz Ant1 One Burst



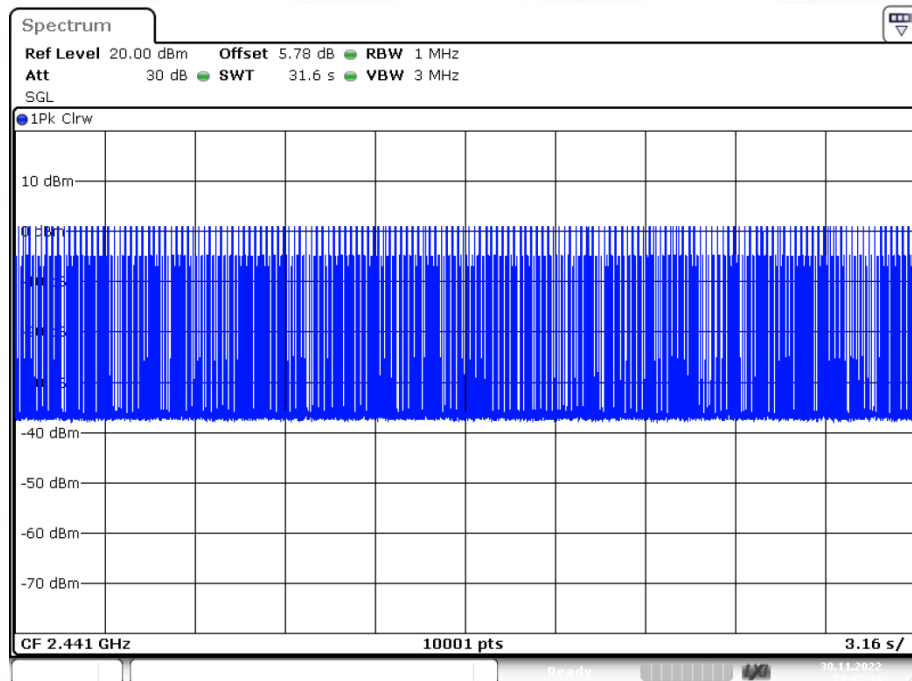
Dwell NVNT 2-DH1 2402MHz Ant1 Accumulated



Dwell NVNT 2-DH1 2441MHz Ant1 One Burst

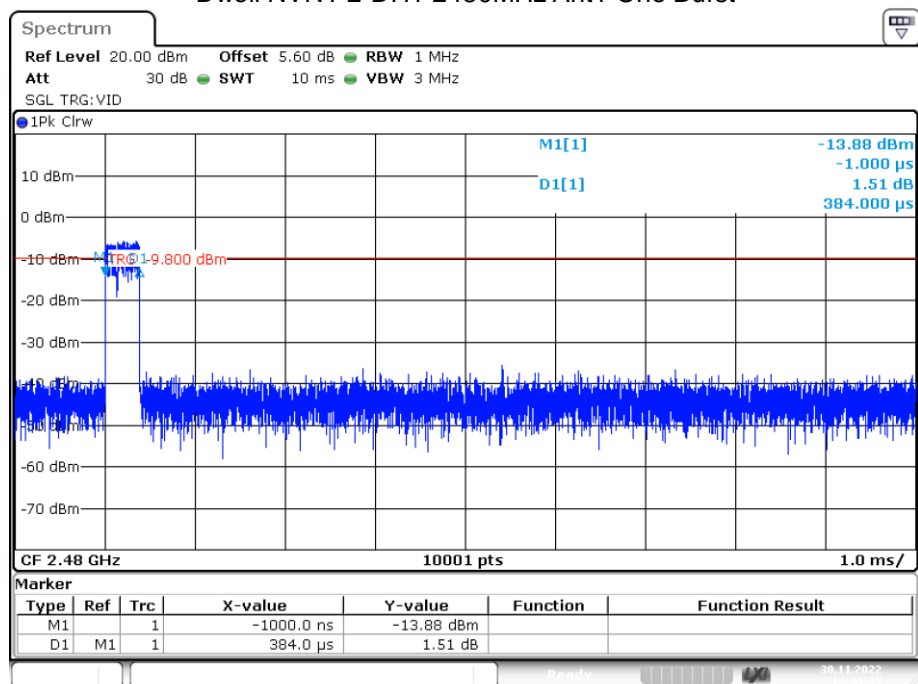


Dwell NVNT 2-DH1 2441MHz Ant1 Accumulated



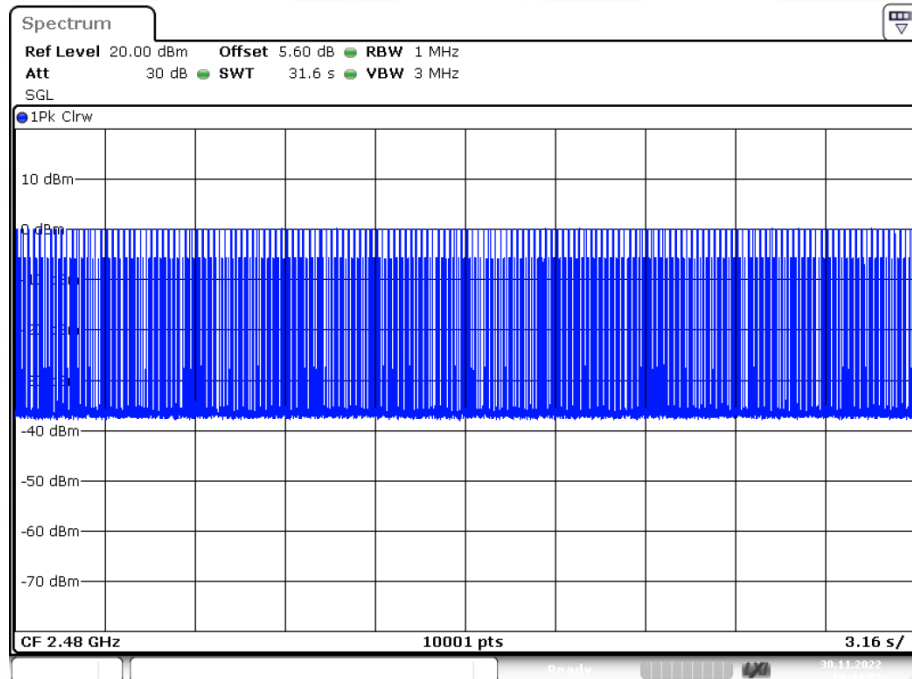
Date: 30.NOV.2022 14:42:34

Dwell NVNT 2-DH1 2480MHz Ant1 One Burst



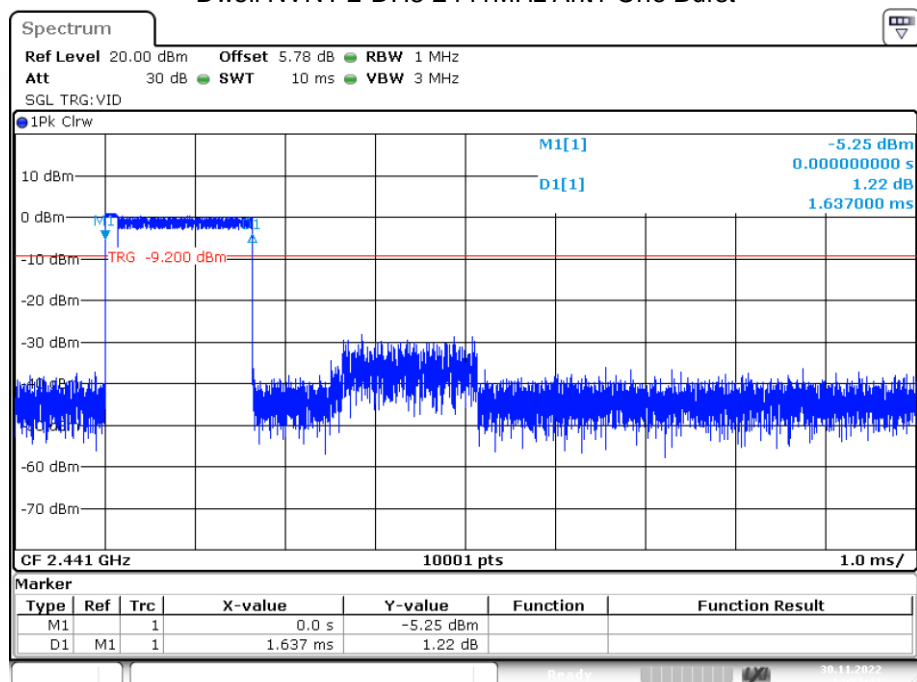
Date: 30.NOV.2022 14:43:35

Dwell NVNT 2-DH1 2480MHz Ant1 Accumulated



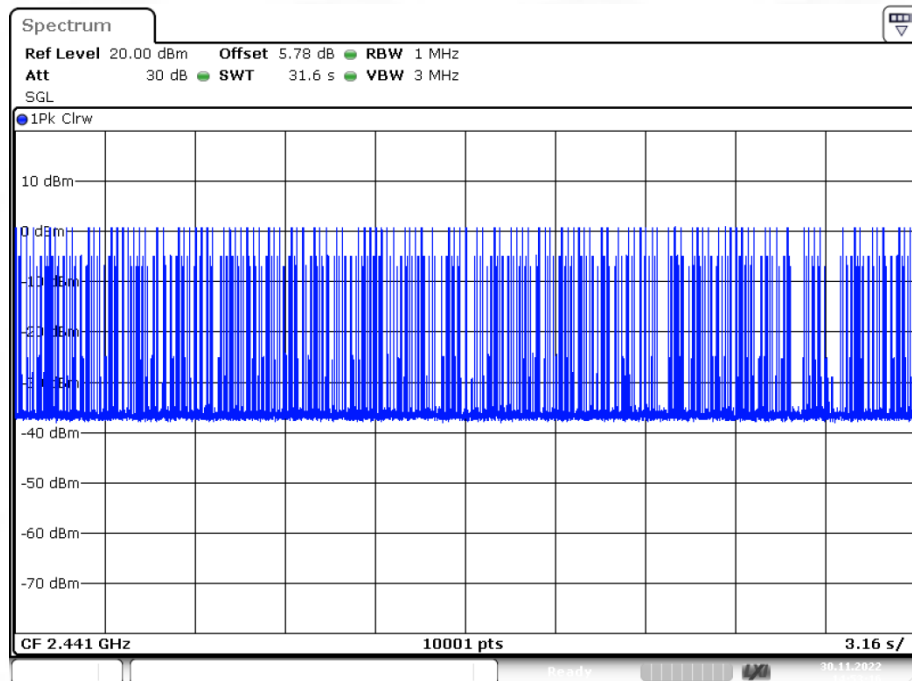
Date: 30.NOV.2022 14:44:09

Dwell NVNT 2-DH3 2441MHz Ant1 One Burst



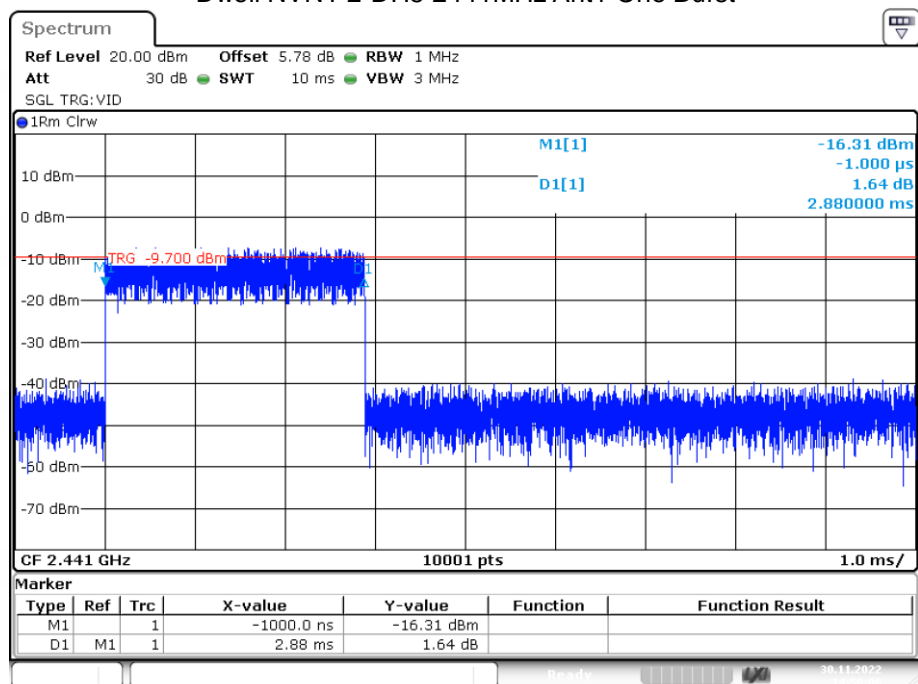
Date: 30.NOV.2022 14:52:41

Dwell NVNT 2-DH3 2441MHz Ant1 Accumulated



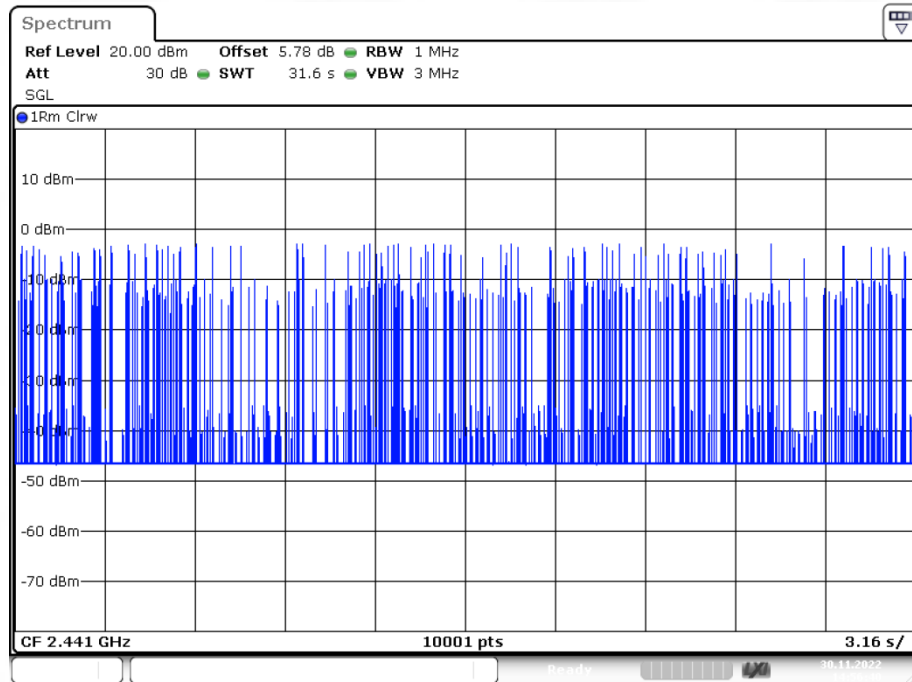
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Dwell NVNT 2-DH5 2441MHz Ant1 One Burst

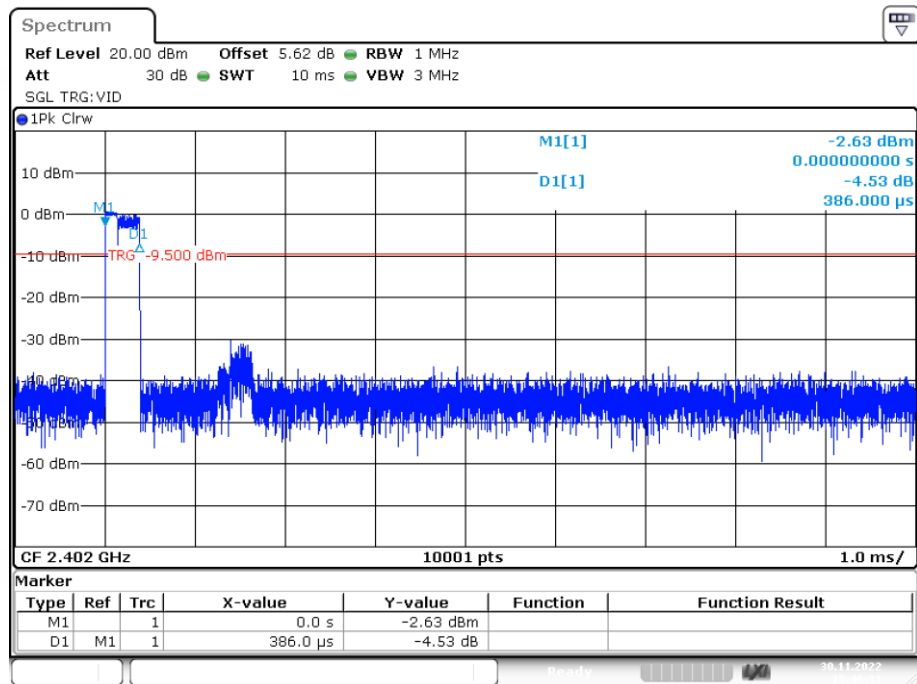


Date: 30.NOV.2022 14:56:06

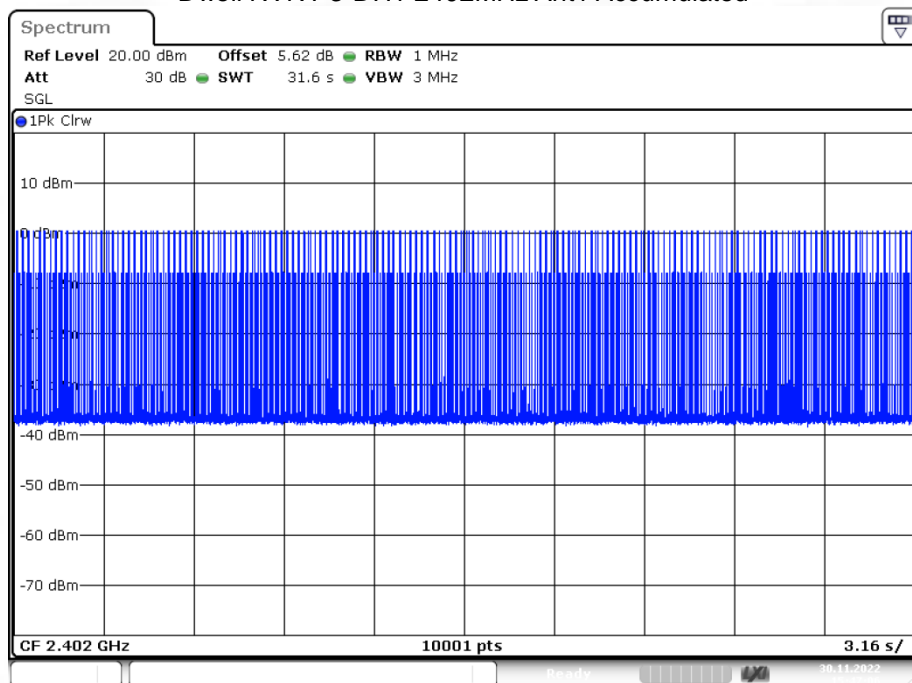
Dwell NVNT 2-DH5 2441MHz Ant1 Accumulated



Dwell NVNT 3-DH1 2402MHz Ant1 One Burst



Dwell NVNT 3-DH1 2402MHz Ant1 Accumulated



Dwell NVNT 3-DH1 2441MHz Ant1 One Burst

