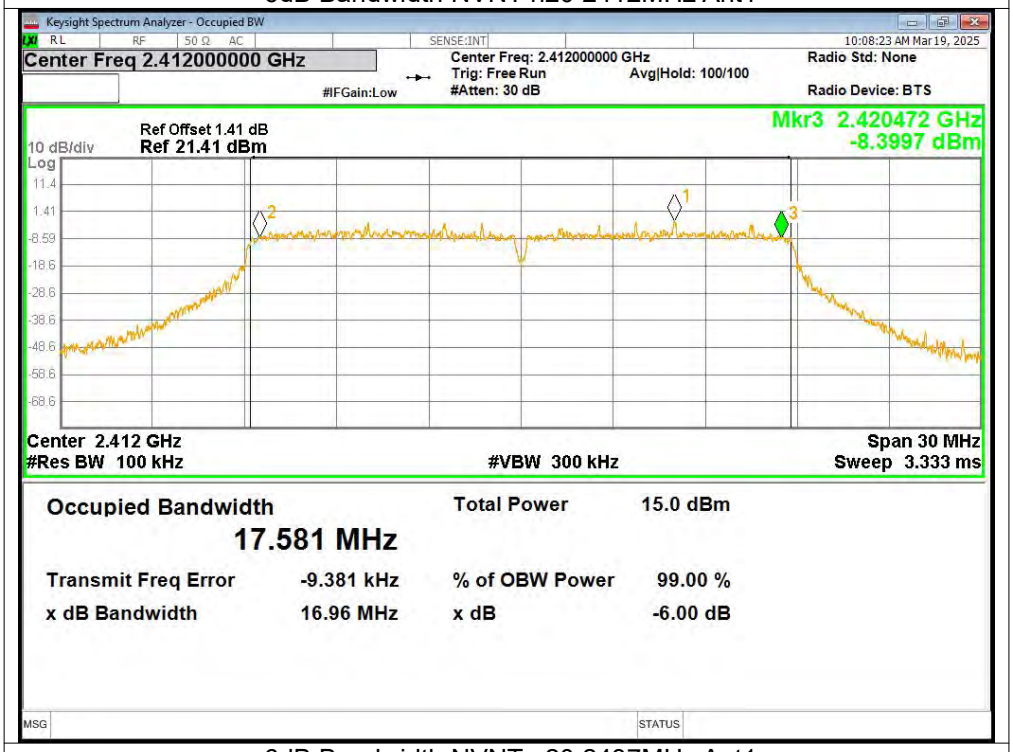
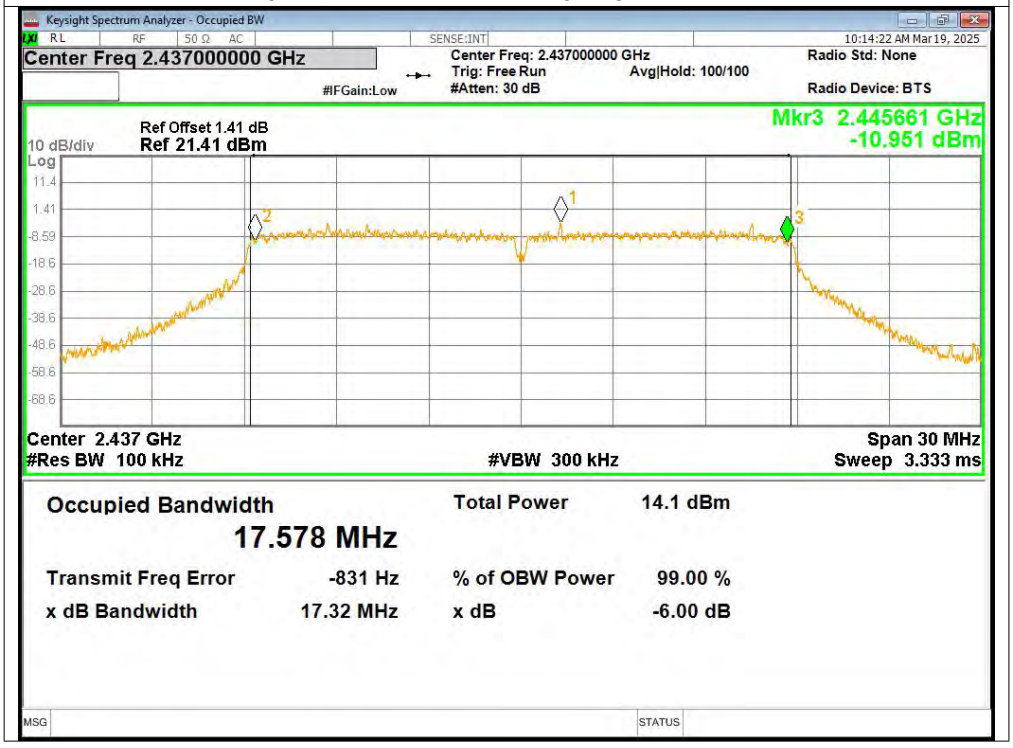
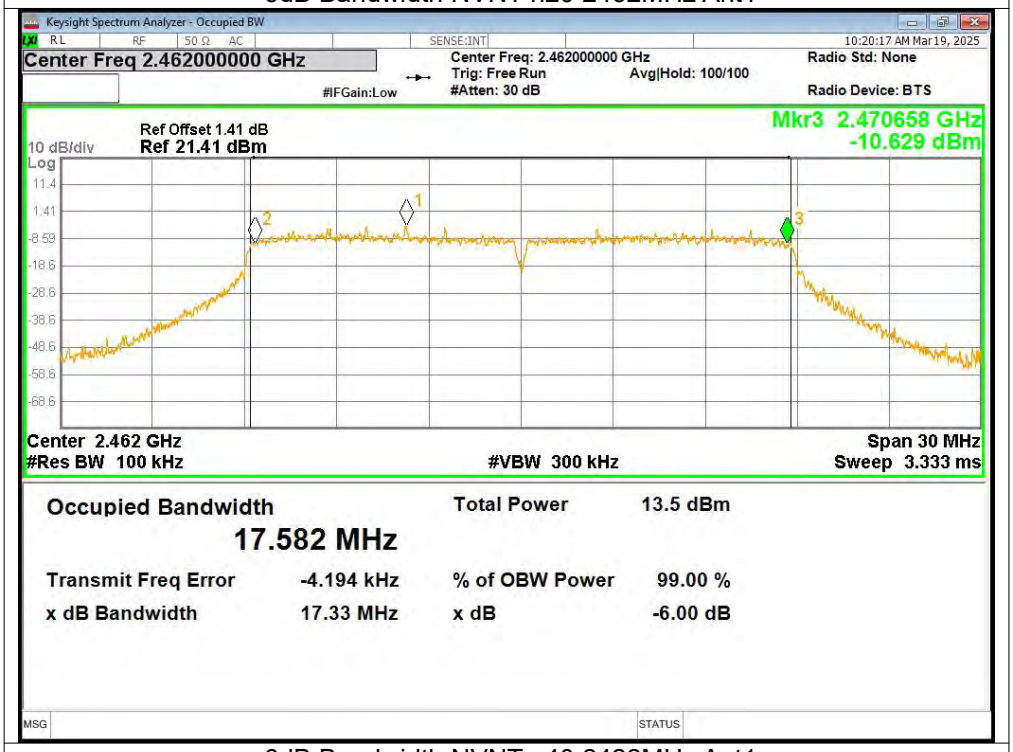
-6dB Bandwidth NVNT n20 2412MHz Ant1



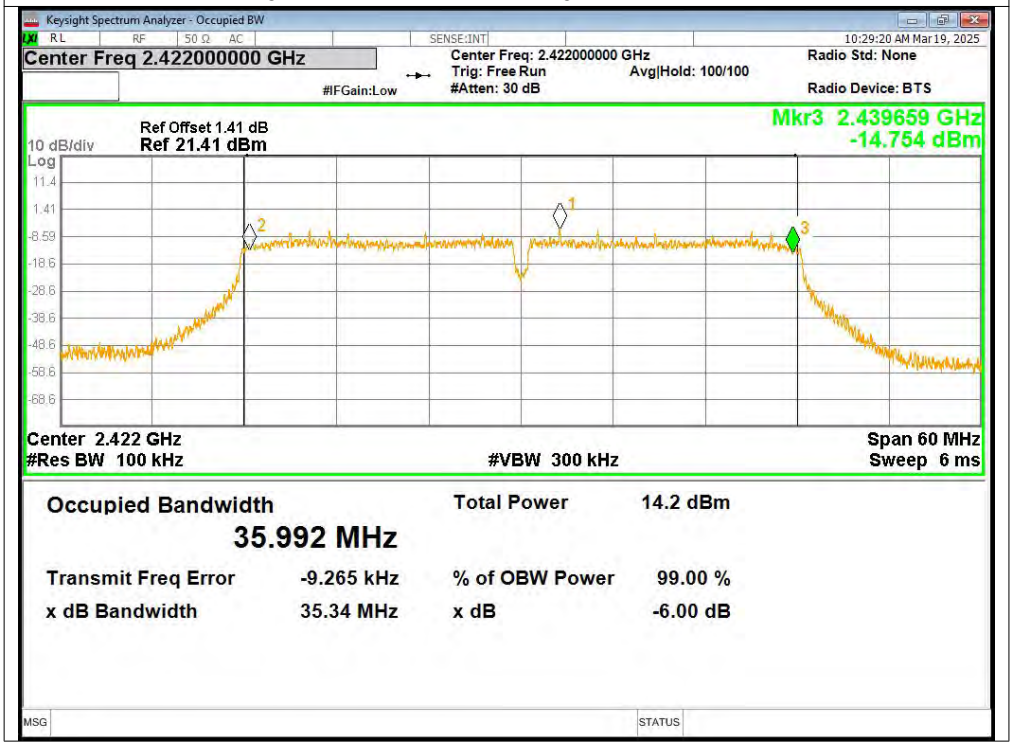
-6dB Bandwidth NVNT n20 2437MHz Ant1



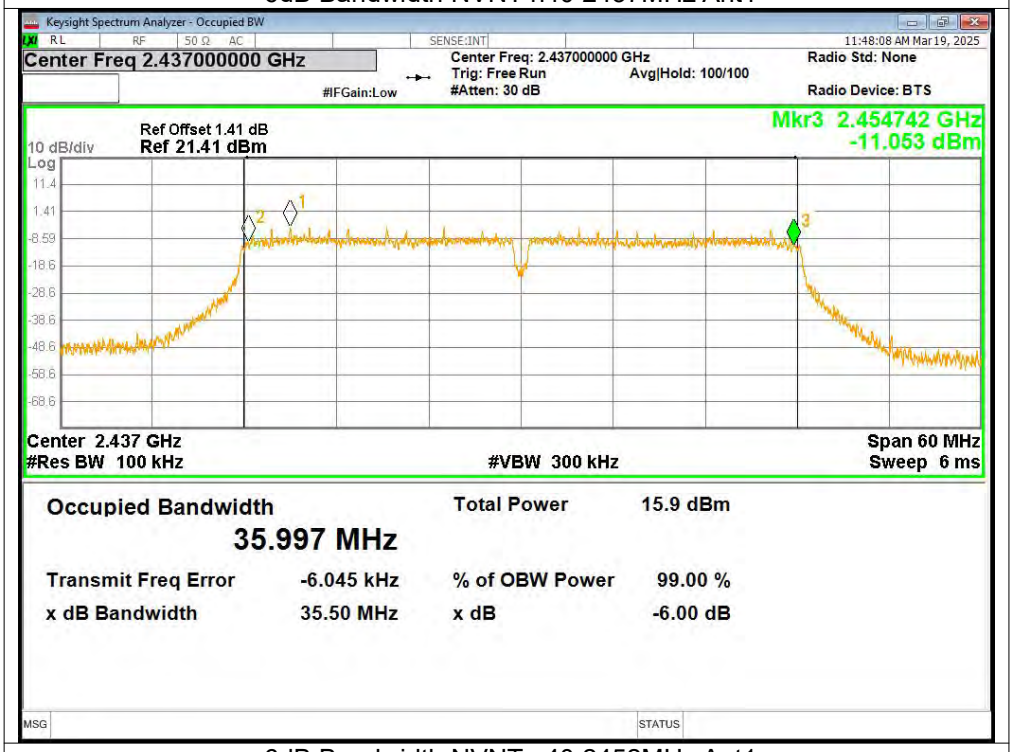
-6dB Bandwidth NVNT n20 2462MHz Ant1



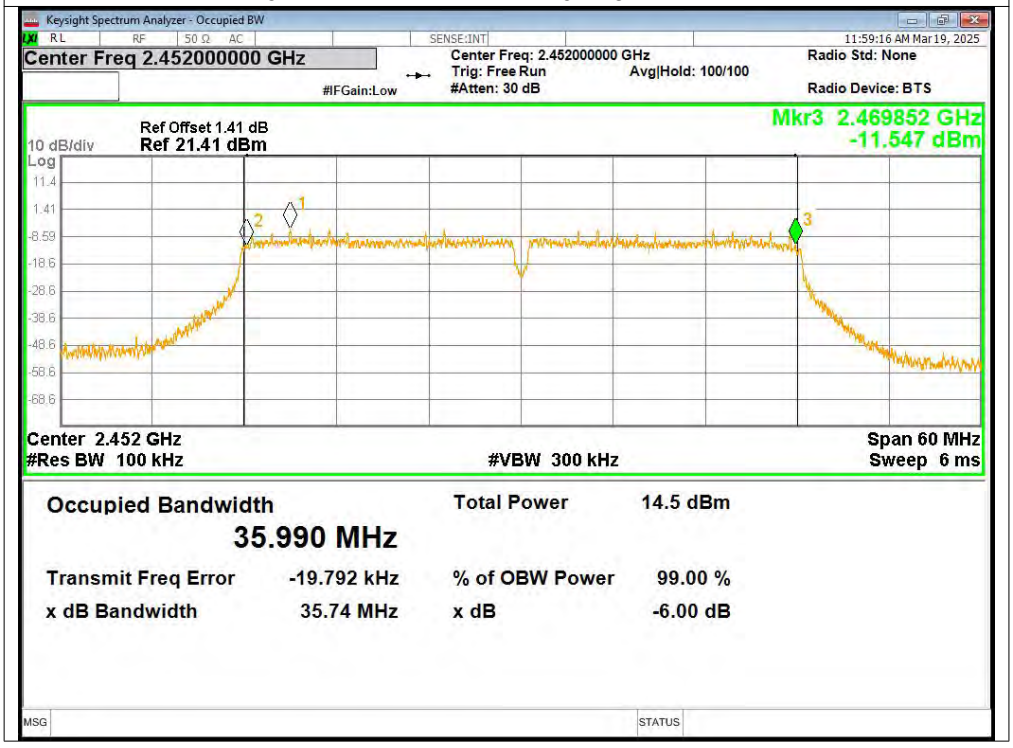
-6dB Bandwidth NVNT n40 2422MHz Ant1



-6dB Bandwidth NVNT n40 2437MHz Ant1



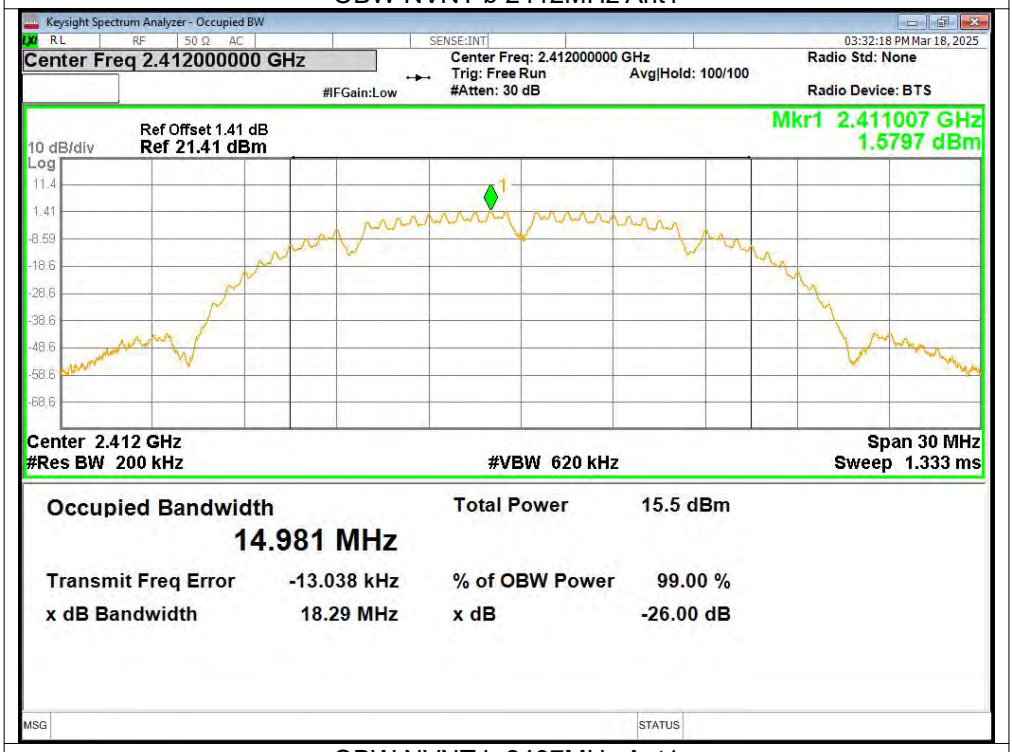
-6dB Bandwidth NVNT n40 2452MHz Ant1



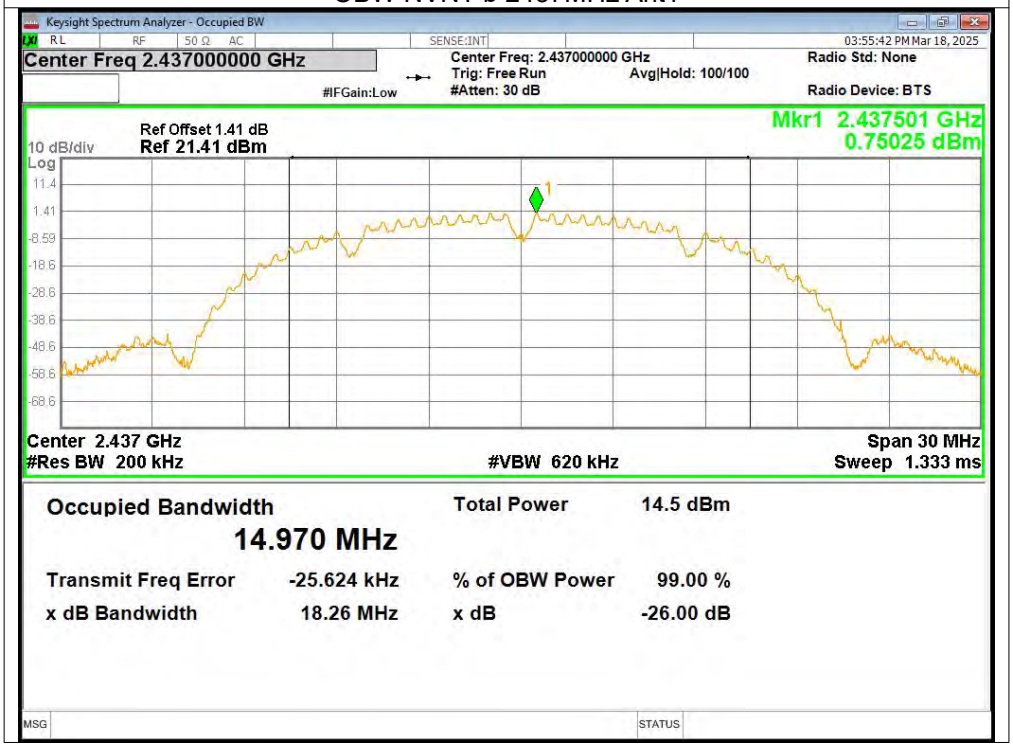
Mode	Frequency (MHz)	99% OBW (MHz)
b	2412	14.981
b	2437	14.97
b	2462	14.96
g	2412	16.564
g	2437	16.544
g	2462	16.557
n20	2412	17.626
n20	2437	17.629
n20	2462	17.619
n40	2422	36.176
n40	2437	36.102
n40	2452	36.144

Test Graphs

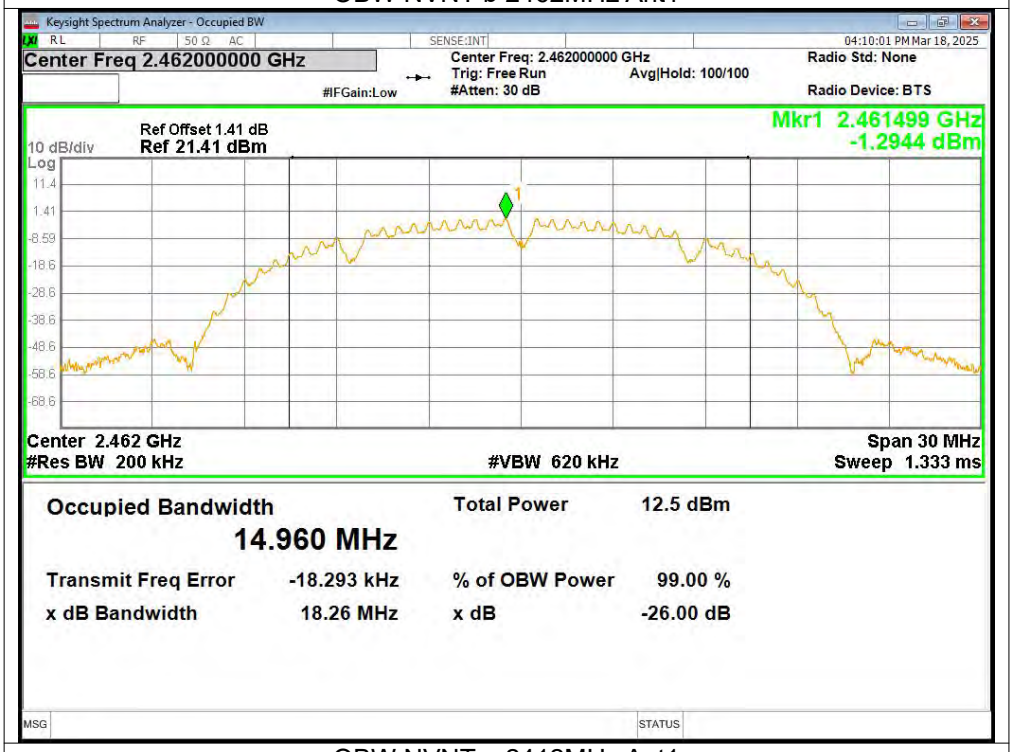
OBW NVNT b 2412MHz Ant1



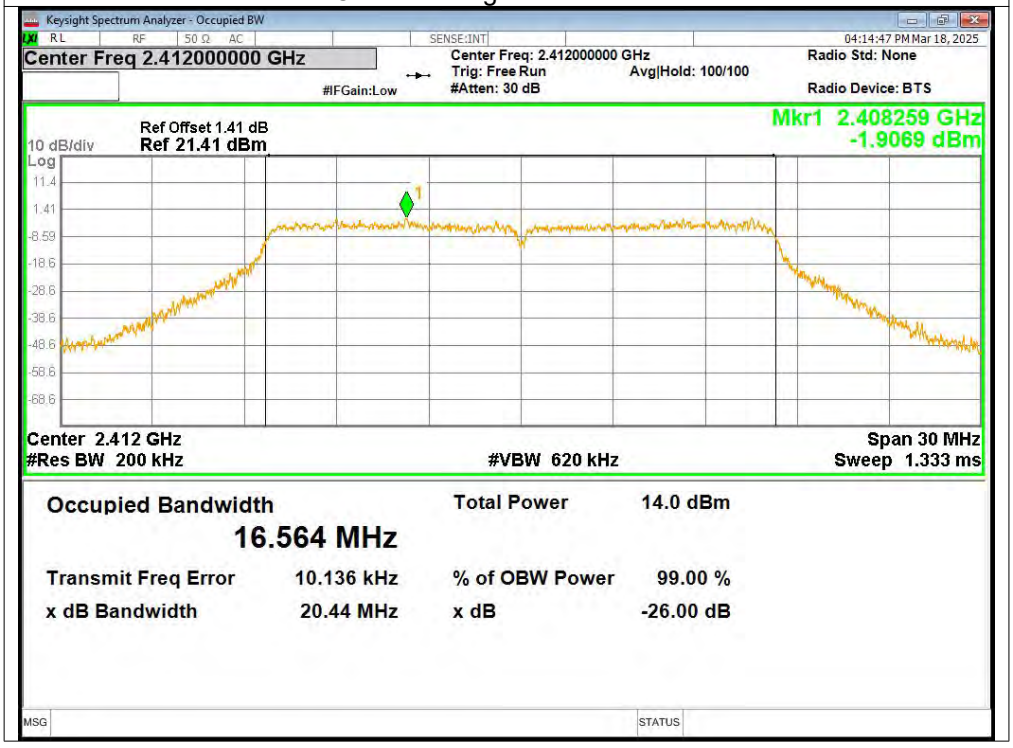
OBW NVNT b 2437MHz Ant1



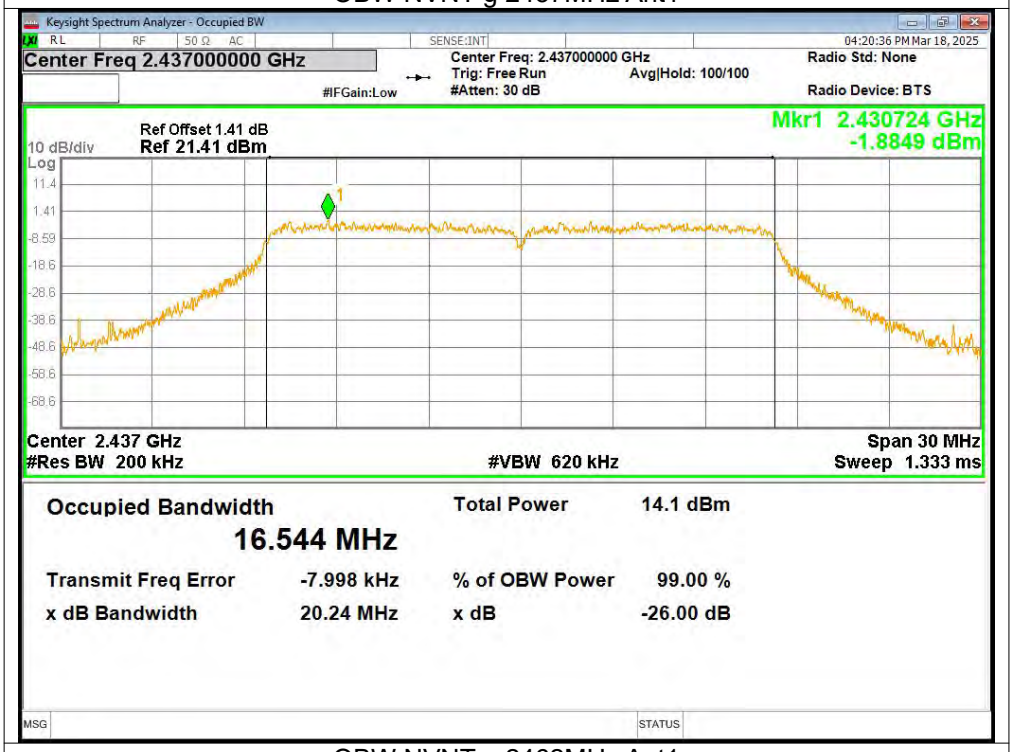
OBW NVNT b 2462MHz Ant1



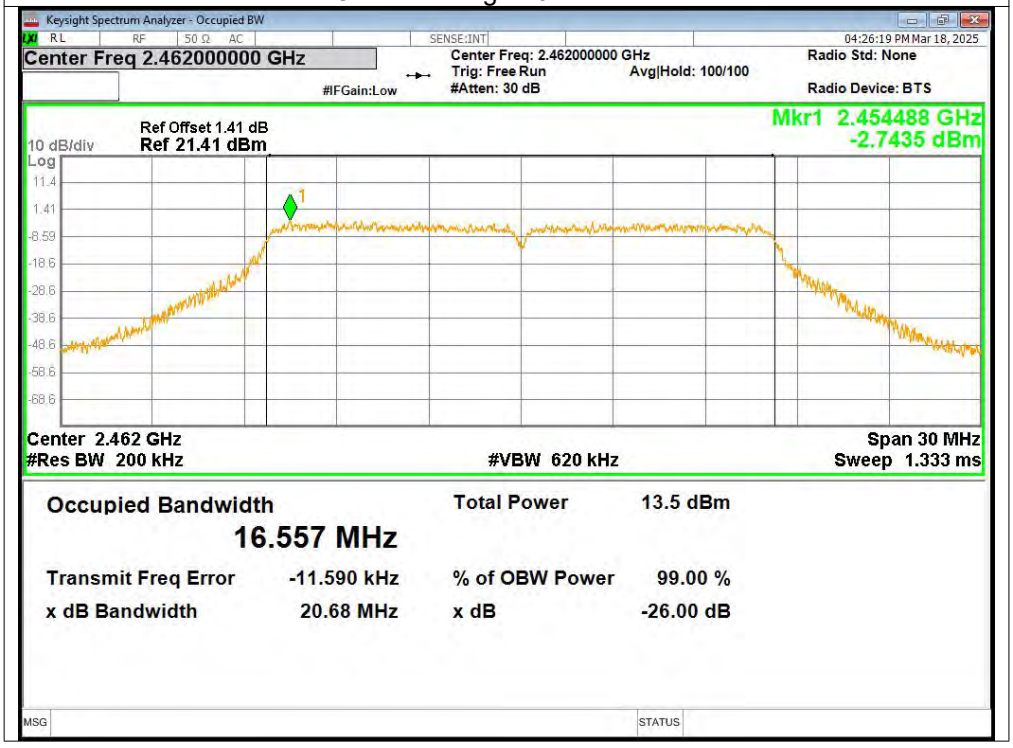
OBW NVNT g 2412MHz Ant1



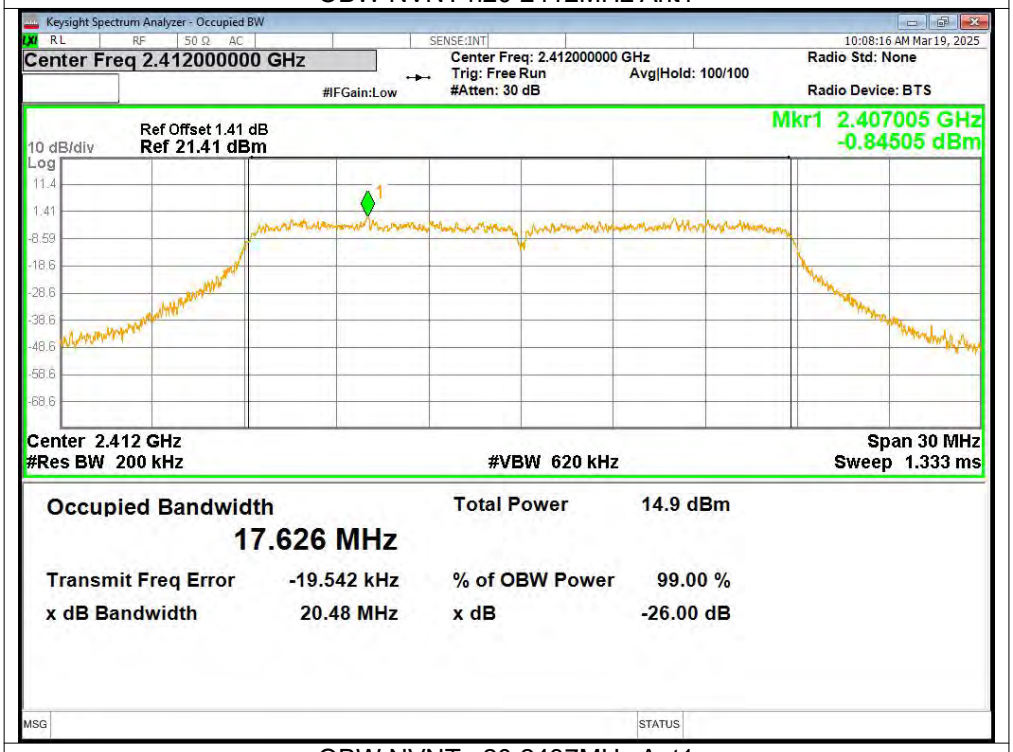
OBW NVNT g 2437MHz Ant1



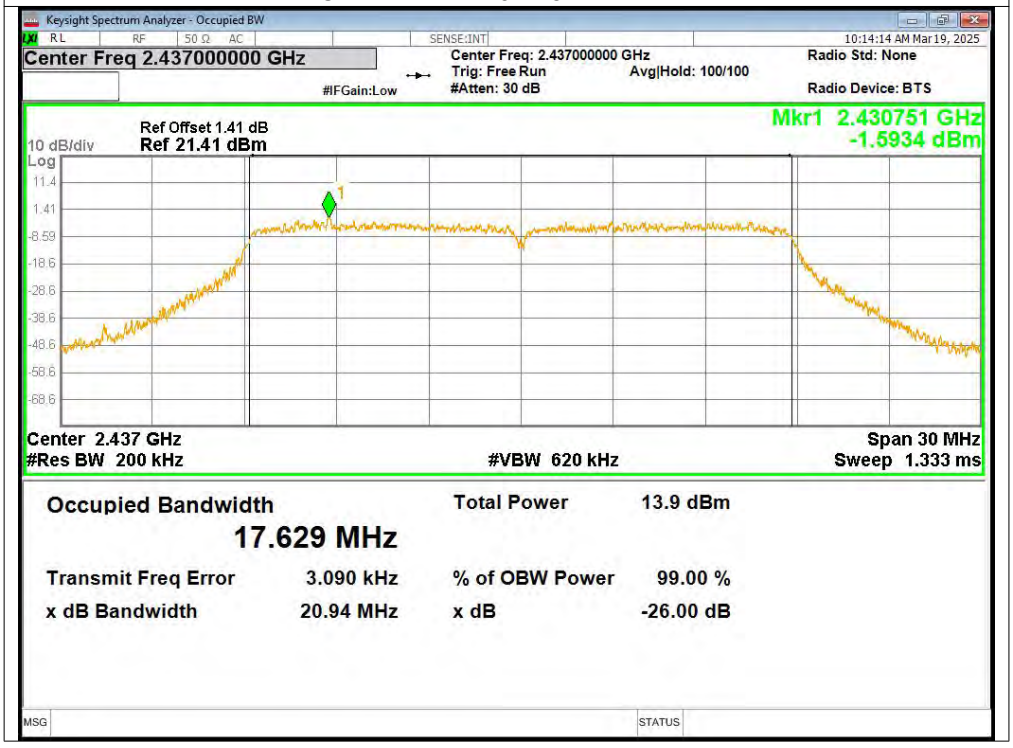
OBW NVNT g 2462MHz Ant1



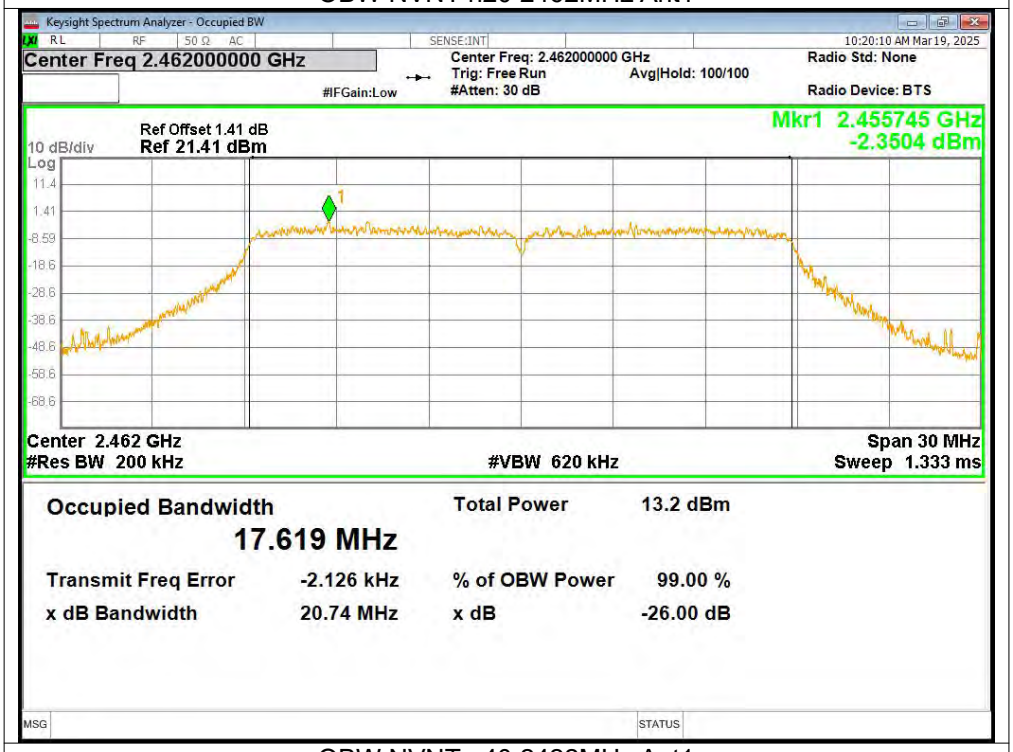
OBW NVNT n20 2412MHz Ant1



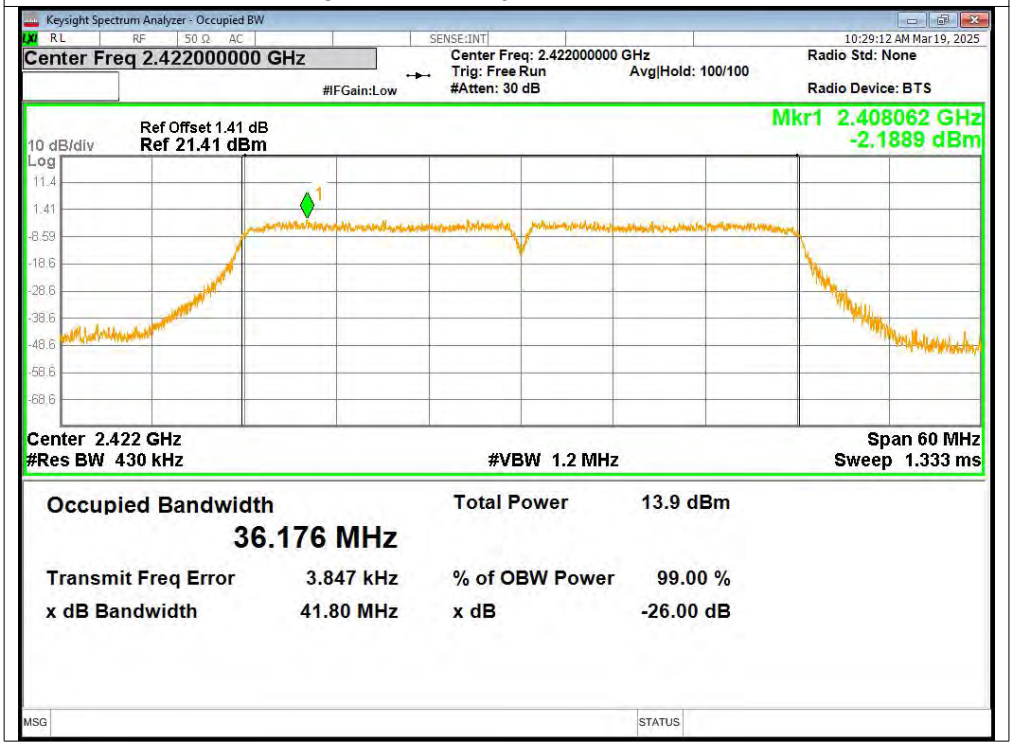
OBW NVNT n20 2437MHz Ant1



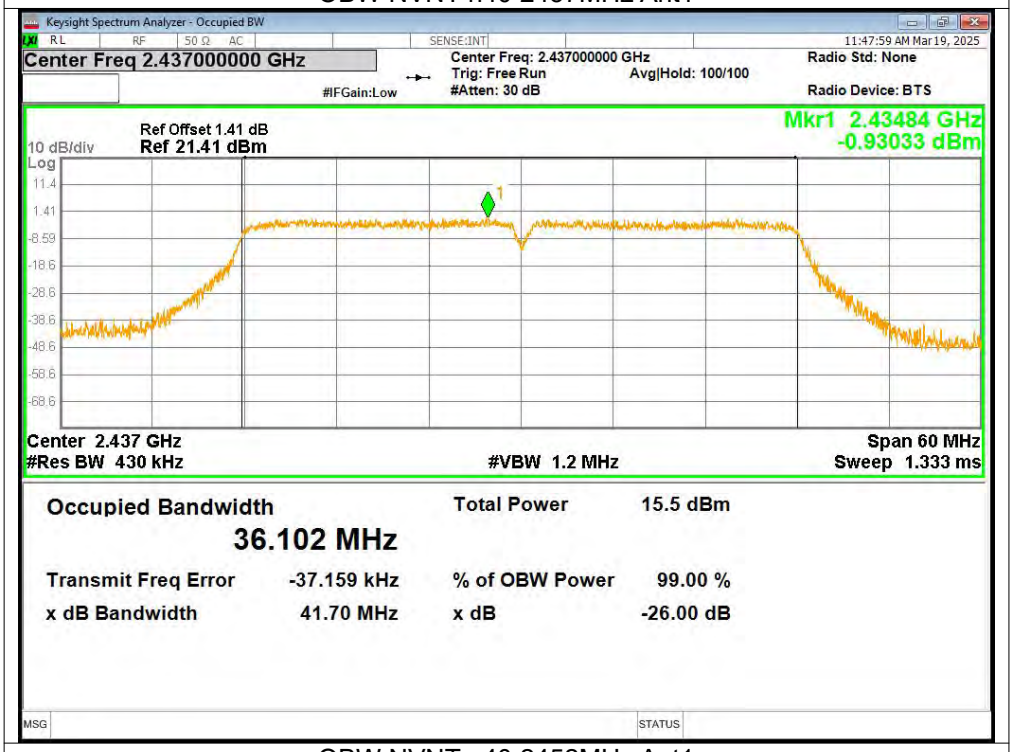
OBW NVNT n20 2462MHz Ant1



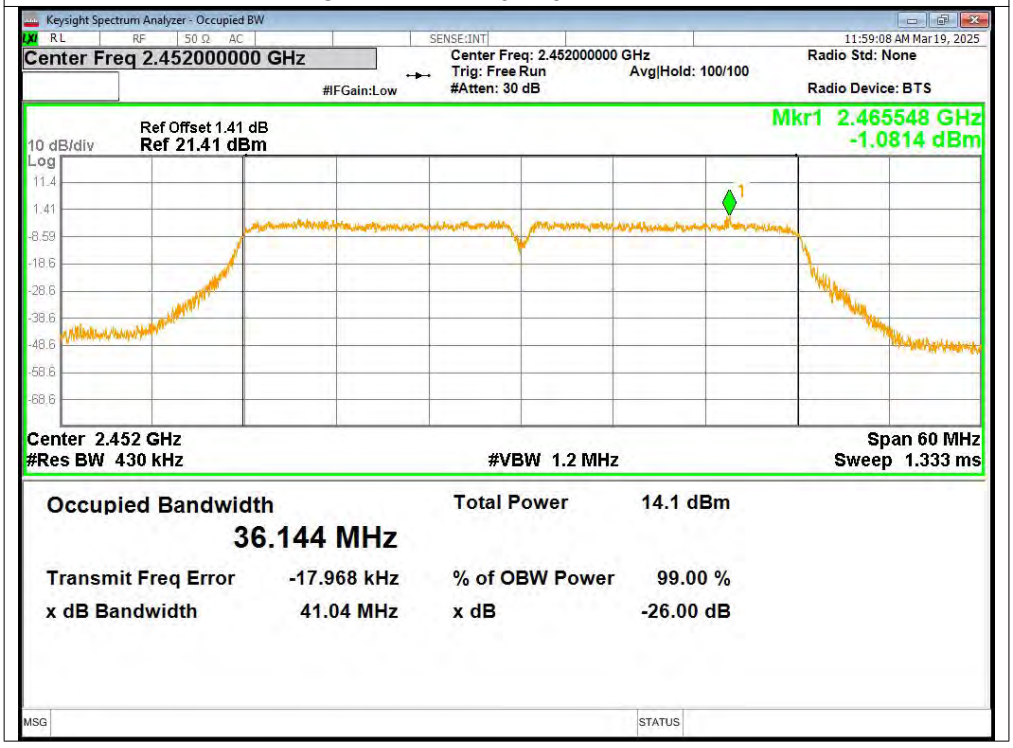
OBW NVNT n40 2422MHz Ant1



OBW NVNT n40 2437MHz Ant1



OBW NVNT n40 2452MHz Ant1



9. Duty Cycle

Mode	Frequency (MHz)	T_{on} ms	T_{otal} ms	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
b	2412	12.42	12.58	98.73	-19.94	0.08
b	2437	12.42	12.52	99.20	-19.97	0.08
b	2462	12.42	12.56	98.89	-19.95	0.08
g	2412	2.07	2.24	92.41	-19.66	0.48
g	2437	2.07	2.22	93.24	-19.70	0.48
g	2462	2.07	2.15	96.28	-19.84	0.48
n20	2412	1.93	2.10	91.90	-19.63	0.52
n20	2437	1.93	2.01	96.02	-19.82	0.52
n20	2462	1.92	2.08	92.31	-19.65	0.52
n40	2422	0.95	1.07	88.79	-19.48	1.05
n40	2437	0.95	1.07	88.79	-19.48	1.05
n40	2452	0.95	1.12	84.82	-19.29	1.05

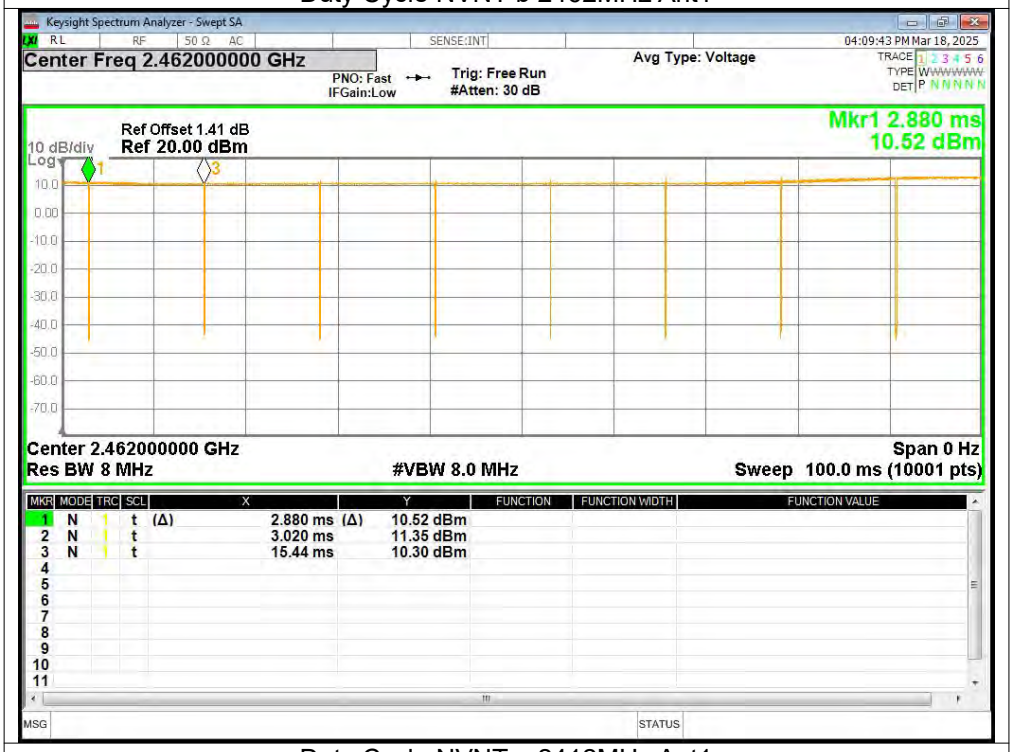
Note:
1. Duty Cycle = T_{on} / T_{otal}
2.Correction Factor = 10 log (1/ Duty Cycle).
3.$1/T=1/T_{on}$

Test Graphs

Duty Cycle NVNT b 2412MHz Ant1

Duty Cycle NVNT b 2437MHz Ant1

Duty Cycle NVNT b 2462MHz Ant1



Duty Cycle NVNT g 2412MHz Ant1

Duty Cycle NVNT g 2437MHz Ant1

Duty Cycle NVNT g 2462MHz Ant1

Duty Cycle NVNT n20 2412MHz Ant1

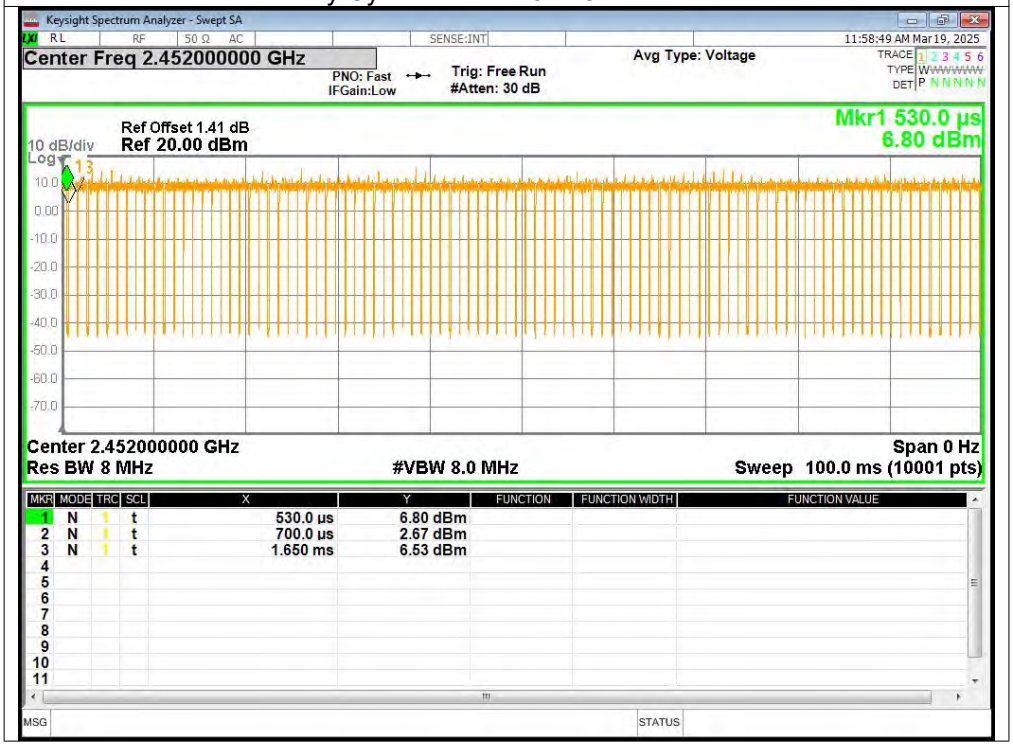
Duty Cycle NVNT n20 2437MHz Ant1

Duty Cycle NVNT n20 2462MHz Ant1

Duty Cycle NVNT n40 2422MHz Ant1

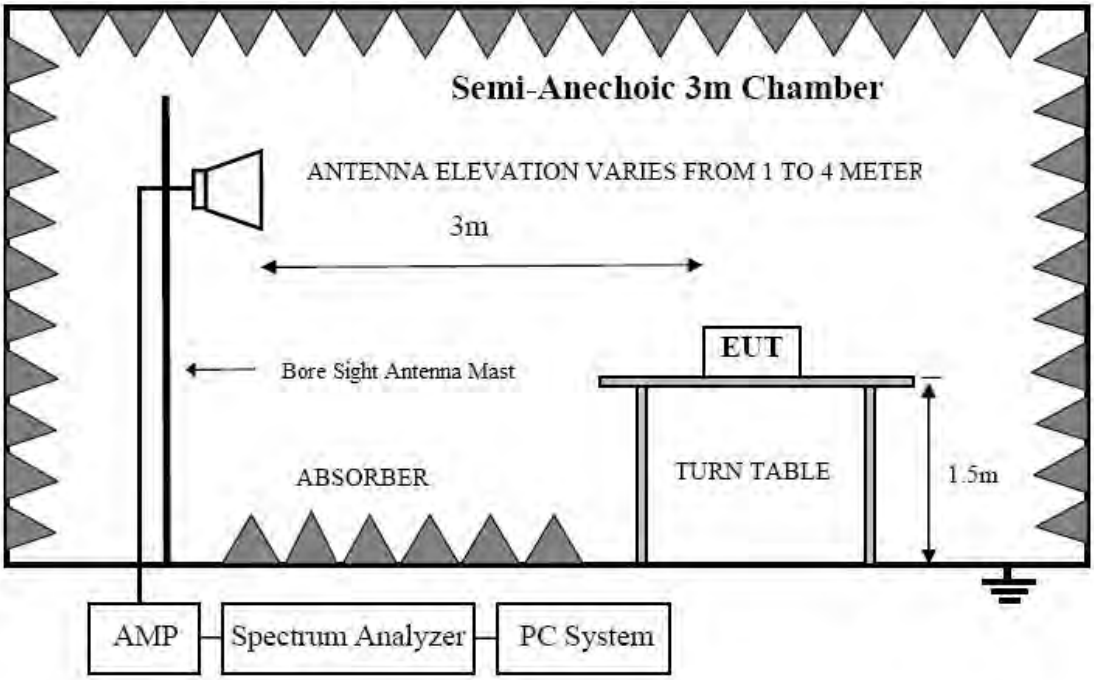
Duty Cycle NVNT n40 2437MHz Ant1

Duty Cycle NVNT n40 2452MHz Ant1



10. Band Edge Test

10.1.Block Diagram of Test Setup



10.2.Test Limit

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)).

Please refer RSS-GEN & FCC PART 15.247

10.3.Test Procedure

Refer to ANSI C 63.10, Clause 6.10.
All restriction band and non- restriction band have been tested, only worse case is reported.
Details see the KDB558074 D01 Meas Guidance v05r02

1. Put the EUT on a 1.5m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission
2. Check the spurious emissions out of band.
3. RBW 1MHz, VBW 3MHz, peak detector for peak value, RBW 1MHz, VBW 10Hz, RMS detector for AV value.

10.4.Test Results

Test Date : 2024.3.20					Temperature : 24.2℃			
Test Engineer : Felix Pang					Humidity : 53.6%			
Test Results : **PASS**								
Frequency Range : **2310MHz~2410MHz**								
Test Mode : IEEE 802.11b TX 2412MHz								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	62.79	-20.45	42.34	74	-31.66	Peak
2	2390	H	--	-20.45	--	54	--	Avg
3	2400	H	62.97	-20.41	42.56	74	-31.44	Peak
4	2400	H	--	-20.41	--	54	--	Avg
1	2390	V	62.22	-20.45	41.77	74	-32.23	Peak
2	2390	V	--	-20.45	--	54	--	Avg
3	2400	V	62.37	-20.41	41.96	74	-32.04	Peak
4	2400	V	--	-20.41	--	54	--	Avg
Frequency Range : **2450MHz~2550MHz**								
Test Mode : IEEE 802.11b TX 2462MHz								
1	2483.5	H	62.01	-20.15	41.86	74	-32.14	Peak
2	2483.5	H	--	-20.15	--	54	--	Avg
1	2483.5	V	62.7	-20.15	42.55	74	-31.45	Peak
2	2483.5	V	--	-20.15	--	54	--	Avg
Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.								

Frequency Range : **2310MHz~2410MHz**								
Test Mode : IEEE 802.11g TX 2412MHz								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	62	-20.45	41.55	74	-32.45	Peak
2	2390	H	--	-20.45	--	54	--	Avg
3	2400	H	62.42	-20.41	42.01	74	-31.99	Peak
4	2400	H	--	-20.41	--	54	--	Avg
1	2390	V	62.53	-20.45	42.08	74	-31.92	Peak
2	2390	V	--	-20.45	--	54	--	Avg
3	2400	V	62.46	-20.41	42.05	74	-31.95	Peak
4	2400	V	--	-20.41	--	54	--	Avg
Frequency Range : **2450MHz~2550MHz**								
Test Mode : IEEE 802.11g TX 2462MHz								
1	2483.5	H	62.76	-20.15	42.61	74	-31.39	Peak
2	2483.5	H	--	-20.15	--	54	--	Avg
1	2483.5	V	62.5	-20.15	42.35	74	-31.65	Peak
2	2483.5	V	--	-20.15	--	54	--	Avg

Note:
1. Means other frequency and mode comply with standard requirements and at least have 20dB margin.
2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain.
Result=Reading + Correct Factor. Margin= Result-Limit.
3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.

Frequency Range : **2310MHz~2410MHz**								
Test Mode : IEEE 802.11n/HT20 TX 2412MHz								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	62.02	-20.45	41.57	74	-32.43	Peak
2	2390	H	--	-20.45	--	54	--	Avg
3	2400	H	62.9	-20.41	42.49	74	-31.51	Peak
4	2400	H	--	-20.41	--	54	--	Avg
1	2390	V	62.45	-20.45	42	74	-32	Peak
2	2390	V	--	-20.45	--	54	--	Avg
3	2400	V	62.93	-20.41	42.52	74	-31.48	Peak
4	2400	V	--	-20.41	--	54	--	Avg
Frequency Range : **2450MHz~2550MHz**								
Test Mode : IEEE 802.11n/HT20 TX 2462MHz								
1	2483.5	H	62.17	-20.15	42.02	74	-31.98	Peak
2	2483.5	H	--	-20.15	--	54	--	Avg
3	2483.5	V	62.99	-20.15	42.84	74	-31.16	Peak
4	2483.5	V	--	-20.15	--	54	--	Avg
Note:	1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.							

Frequency Range : **2310MHz~2410MHz**								
Test Mode : IEEE 802.11n/HT40 TX 2422MHz								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	62.81	-20.45	42.36	74	-31.64	Peak
2	2390	H	--	-20.45	--	54	--	Avg
3	2400	H	62.36	-20.41	41.95	74	-32.05	Peak
4	2400	H	--	-20.41	--	54	--	Avg
1	2390	V	62.94	-20.45	42.49	74	-31.51	Peak
2	2390	V	--	-20.45	--	54	--	Avg
3	2400	V	62.24	-20.41	41.83	74	-32.17	Peak
4	2400	V	--	-20.41	--	54	--	Avg
Frequency Range : **2450MHz~2550MHz**								
Test Mode : IEEE 802.11n/HT40 TX 2452MHz								
1	2483.5	H	62.19	-20.15	42.04	74	-31.96	Peak
2	2483.5	H	--	-20.15	--	54	--	Avg
1	2483.5	V	62.73	-20.15	42.58	74	-31.42	Peak
2	2483.5	V	--	-20.15	--	54	--	Avg

Note:
1. Means other frequency and mode comply with standard requirements and at least have 20dB margin.
2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain.
Result=Reading + Correct Factor, Margin= Result-Limit.
3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.

11. Frequency stability

11.1. Test limit

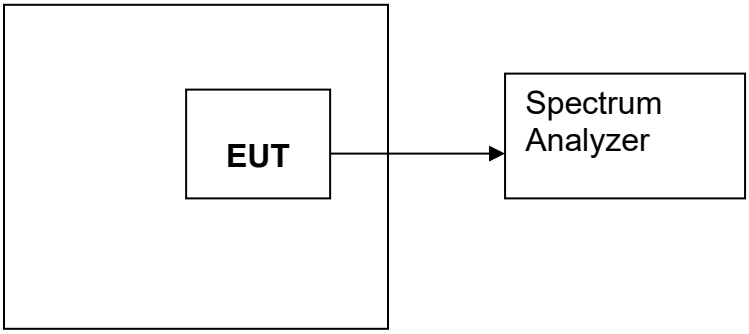
Please refer section RSS-Gen.

Regulation RSS-Gen If the frequency stability of the licence-exempt radio apparatus is not specified in the applicable RSS, the fundamental emissions of the radio apparatus should be kept within at least the central 80% of its permitted operating frequency band in order to minimize the possibility of out-of-band operation. In addition, its occupied bandwidth shall be entirely outside the restricted bands and the prohibited TV bands of 54-72 MHz, 76-88 MHz, 174-216 MHz, and 470-602 MHz, unless otherwise indicated.

11.2. Test Procedure

The following equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

11.3. Test Setup



Temperature controller

11.4. Test Results

Not Applicable.

12. Antenna Requirement

12.1.Standard Requirement

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

12.2.Antenna Connected Construction

The antenna connector is unique antenna and no consideration of replacement. Please see EUT photo for details.

12.3.Results

The EUT antenna is FPC antenna. It complies with the standard requirement.

13. Photos of test setup

Reference to the **appendix I Test Setup Photo** for details.

14. Photos of EUT

Reference to the **appendix II external photos** and **appendix III internal photos** for details.

------ END OF REPORT------