FCC TEST REPORT

FCC ID: 2BGPD-ZMLH-T3

On Behalf of

SHENZHEN ZHIMEI LIHE INDUSTRIAL DEVELOPMENT CO.LTD

AI Intelligent scalp analyzer (T3)

Model No.: ZMLH-T3

Prepared for	:	SHENZHEN ZHIMEI LIHE INDUSTRIAL DEVELOPMENT CO.LTD
Address	:	5th Floor, Building C, Hengshunyuan Industrial Park, No. 4, Lou Yigong 6th Road, Guangming District, Shenzhen

Prepared By	:	Shenzhen PSI Testing Co., Ltd.
Address	:	1-2/F., Building 5, Yudafu Industrial Park, No.10, Xingye West Road, Shajing Subdistrict, Bao'an District, Shenzhen, Guangdong, China

Report Number	:	psi2505190-C01-R04
Date of Receipt	:	May 28, 2025
Date of Test	:	May 29, 2025- June 16, 2025
Date of Report	:	June 16, 2025
Version Number	:	V0

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TEST REPORT DECLARATION

Applicant	:	SHENZHEN ZHIMEI LIHE INDUSTRIAL DEVELOPMENT CO.LTD
Address	:	5th Floor, Building C, Hengshunyuan Industrial Park, No. 4, Lou Yigong 6th Road, Guangming District, Shenzhen
Manufacturer	:	SHENZHEN ZHIMEI LIHE INDUSTRIAL DEVELOPMENT CO.LTD
Address	:	5th Floor, Building C, Hengshunyuan Industrial Park, No. 4, Lou Yigong 6th Road, Guangming District, Shenzhen
EUT Description	:	AI Intelligent scalp analyzer (T3)
		(A) Model No. : ZMLH-T3
		(B) Trademark : N/A

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart E

ANSI C63.4:2014, ANSI C63.10:2013

Test Result: PASS

The device described above is tested by Shenzhen PSI Testing Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart E limits both conducted and radiated emissions. The test results are contained in this test report and Shenzhen PSI Testing Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After the test, our opinion is that EUT compliance with the requirement of the above standards.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen PSI Testing Co., Ltd.

Tested by (name + signature).....:	Jensen Wang Test Engineer	Jensen Wang
Approved by (name + signature).....:	Simple Guan Project Manager	Syple Guan
Date of issue.....:	June 16, 2025	

Revision History

Revision	Issue Date	Revisions	Revised By
V0	June 16, 2025	Initial released Issue	Jensen Wang

1 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	Section 15.203 Section 7.1.4 RSS-Gen Issue 5	PASS
AC Power Line Conducted Emission	Section 15.207 Section 7.2.4 RSS-GEN(8.8), ANSI C63.10	PASS
Occupied bandwidth	Section 15.407 (e)	PASS
Maximum Conducted Output Power	Section 15.407(a), RSS-247 5.4(2)	PASS
Power Spectral Density	Section 15.407(a), RSS-247 5.2(2)	PASS
Undesirable Emission	Section 15.407(b), RSS-247 5.5	PASS
Radiated Emission	Section 15.407(b)&15.209 Section 5.5 RSS-Gen(8.9), RSS-247(5.5), ANSI C63.10	PASS
Band Edge	15.205, RSS-247 Issue 2, ANSI C63.10	PASS
Frequency Stability	15.407(f), RSS-GEN(6.11)	PASS

Remark:

1. Pass: The EUT complies with the essential requirements in the standard.

2. Frequency Stability: The manufacturer stated in the user's manual.

3. The conclusion of this test report is judged by actual test data without considering measurement uncertainty.

4. Measurement-method usage KDB 789033 D02 General UNII Test Procedures New Rules v02r01

1.1 Measurement Uncertainty

Item	Uncertainty
Uncertainty for Power Line Conducted Emissions Test	2.17dB
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	3.5dB
Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz)	2.74dB(Polarize: V)
	2.76dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (1GHz to 18GHz)	4.29dB(Polarize: V)
	4.82dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (18GHz to 40GHz)	4.31dB(Polarize: V)
	4.30dB(Polarize: H)
Uncertainty for radio frequency	48.24KHz
Uncertainty for conducted RF Power	0.41dB
Uncertainty for Power Spectral Density	0.39 dB
Occupied-Bandwidth	968Hz
Conducted-Spurious Emission	1.26dB

2 General Information

2.1 General Description of EUT

EUT Name	:	AI Intelligent scalp analyzer (T3)
Model	:	ZMLH-T3
Diff	:	N/A
Test Voltage	:	AC 120V/60Hz

Radio Technology	:	5G WIFI
Operation frequency	:	802.11a/802.11ac20/802.11n(HT20): 5745-5825MHz 802.11ac40/802.11n(HT40): 5755-5795MHz 802.11ac80: 5775MHz
Channel separation	:	20MHz for 802.11a/802.11ac20/802.11n(HT20) 40MHz for 802.11ac40/802.11n(HT40) 80MHz for 802.11ac80
Modulation technology:	:	IEEE 802.11n: OFDM (64QAM,16QAM,QPSK,BPSK) IEEE 802.11a: OFDM (64QAM,16QAM,QPSK,BPSK) IEEE 802.11ac: OFDM (64QAM,16QAM, 256QAM,QPSK,BPSK)
Antenna Type	:	Internal antenna , Maximum Gain is 3.03dBi.
PMN	:	N/A
HVIN	:	N/A
Software version	:	N/A
Hardware version FVIN	:	N/A
Note	:	Antenna information is provided by applicant. Testing lab is not responsible for the accuracy of the information.

2.2 Test mode

Transmitting mode Keep the EUT in transmitting with modulation.
EUT was test with 99% duty cycle at its maximum power control level.

Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.

2.3 Test Facility

Shenzhen PSI Testing Co., Ltd.

1-2/F., Building 5, Yudafu Industrial Park, No.10, Xingye West Road, Shajing Subdistrict, Bao'an District, Shenzhen, Guangdong, China

September 13, 2023 File on Federal Communication Commission
Registration Number: 916281

September 21, 2023 Certificated by IC
Registration Number: 31123
CAB identifier: CN0158

2.4 Description of Support Units

Accessories 1	:	N/A
Manufacturer	:	N/A
Model	:	N/A
Rating	:	N/A

2.5 Deviation from Standards

None.

2.6 Abnormalities from Standard Conditions

None.

2.7 Other Information Requested by the Customer

None.

2.8 Additional instructions

Software (Used for test) from client

Channel	**Power level**
Lowest	Default
Middle	Default
Highest	Default

2.9 Test Conditions

Items	Required	Actual
Temperature range:	15-35℃	26℃
Humidity range:	25-75%	54%
Pressure range:	86-106kPa	101kPa

3 Test Instruments list

Item	Equipment	Manufacturer	Model No.	Serial No.	Firmware Version	Last Cal.	Cal. Interval
1.	9*6*6 anechoic chamber	SKET	9*6*6	N/A	/	2022.12.20	3 Year
2.	Test Receiver	Rohde&Schwarz	ESCI 7	101032/003	4.42 SP3	2024.12.18	1 Year
3.	L.I.S.N.#1	Rohde&Schwarz	ENV216	102282	/	2024.12.18	1 Year
4.	L.I.S.N.#2	RFT	NNB111	13835825	/	2024.12.18	1 Year
5.	Loop Antenna	Schwarz beck	FMZB 1519B	00128	/	2025.01.02	2 Year
6.	Bilog Antenna	Schwarz beck	VULB 9168	01448	/	2025.01.02	2 Year
7.	Spectrum Analyzer	Rohde&Schwarz	FSV-40N	101648	3.70	2024.12.18	1 Year
8.	Horn Antenna	Schwarz beck	BBHA 9120 D	02706	/	2025.01.02	2 Year
9.	Amplifier	SKET	LAPA_01G18G-45dB	SK2022032901	/	2024.12.18	1 Year
10.	Horn Antenna	Schwarz beck	BBHA 9170	00946	/	2024.12.31	2 Year
11.	Amplifier	SKET	LNPA_0118G-45	SK2020010801	/	2024.12.18	1 Year
12	RF Power Probe	Rohde&Schwarz	NRP-Z11	1138.3004.02-1111533-Fz	/	2024.12.18	1 Year
13	RF Sensor Unit	Tachoy	TR1029-2	20220428P008	/	2024.12.18	1 Year
14	Spectrum Analyzer	Agilent	N9020A	MY51281067	A.14.03	2024.12.18	1 Year
15	Temp. & Humid Chamber	Auchno	9606	/	/	2024.12.18	1 Year
16	Regulated DC Power Supply	Xinouhua	ADC120V10A	202211251638	/	2024.12.18	1 Year

For Test Software Information

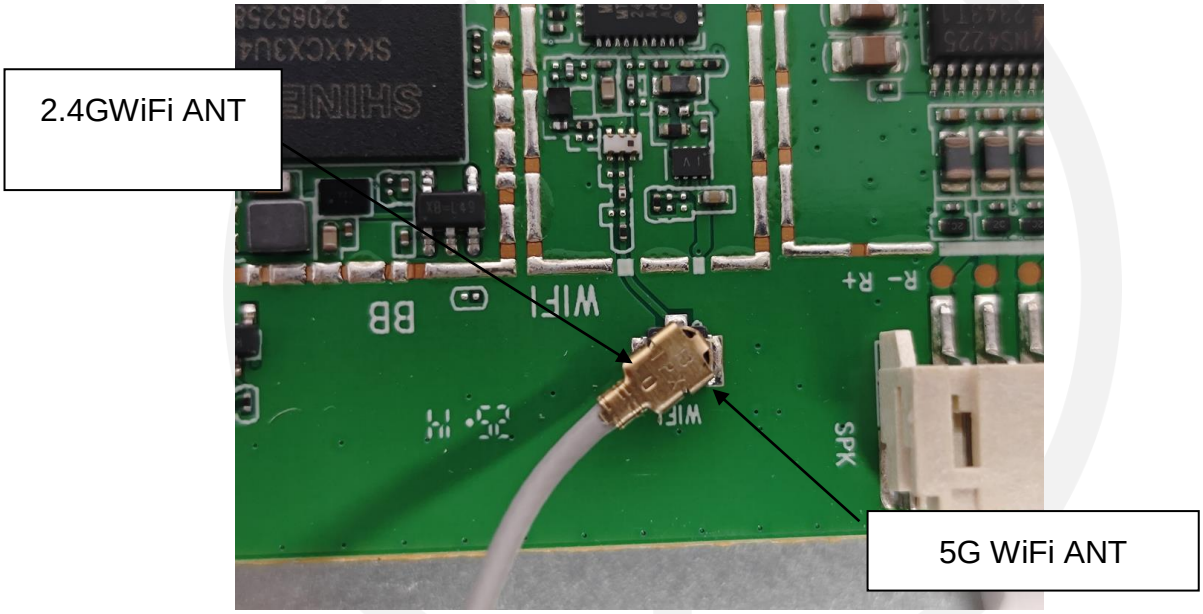
Item	Software Name	Manufacturer	Version
RE	EZ_EMC	Farad	PSI-3A1
CE	EZ_EMC	Farad	PSI-3A1
RF	RTS	TACHOY	V1.0.0

4 Test results and Measurement Data

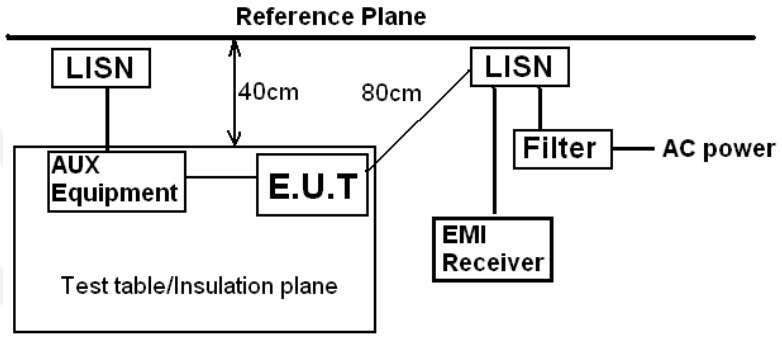
4.1 Antenna requirement:

Standard requirement:	FCC Part15 C Section 15.203, RSS-GEN(6.8)
15.203 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, 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.	
E.U.T Antenna:	

Internal antenna, Maximum Gain is 3.03dBi, for 5745-5845MHz



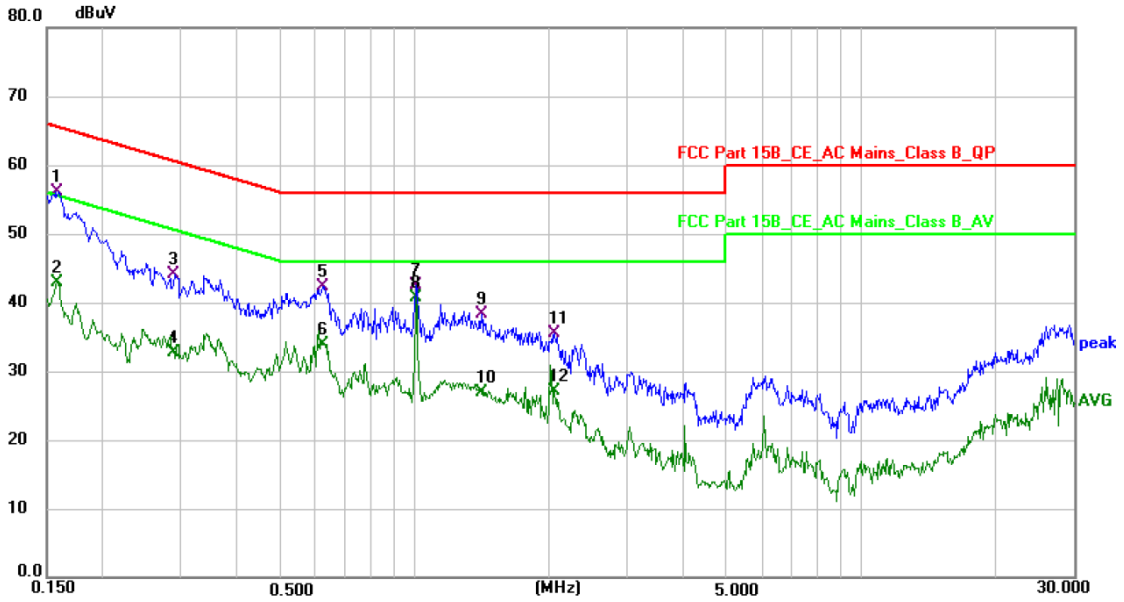
4.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207, RSS-Gen §8.8
Test Method:	ANSI C63.10:2013
Test Frequency Range:	150KHz to 30MHz
Class / Severity:	Class B
Receiver setup:	RBW=9KHz, VBW=30KHz
Limit:	Frequency range (MHz) / Limit (dBuV): Quasi-peak / Average 0.15-0.5: 66 to 56* / 56 to 46* 0.5-5: 56 / 46 5-30: 60 / 50 * Decreases with the logarithm of the frequency.
Test procedure	The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2013 on conducted measurement.
Test setup:	 *Remark:* *E.U.T: Equipment Under Test* *LISN: Line Impedence Stabilization Network* *Test table height=0.8m*
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Measurement Data

An initial pre-scan was performed on the line and neutral lines with peak detector. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

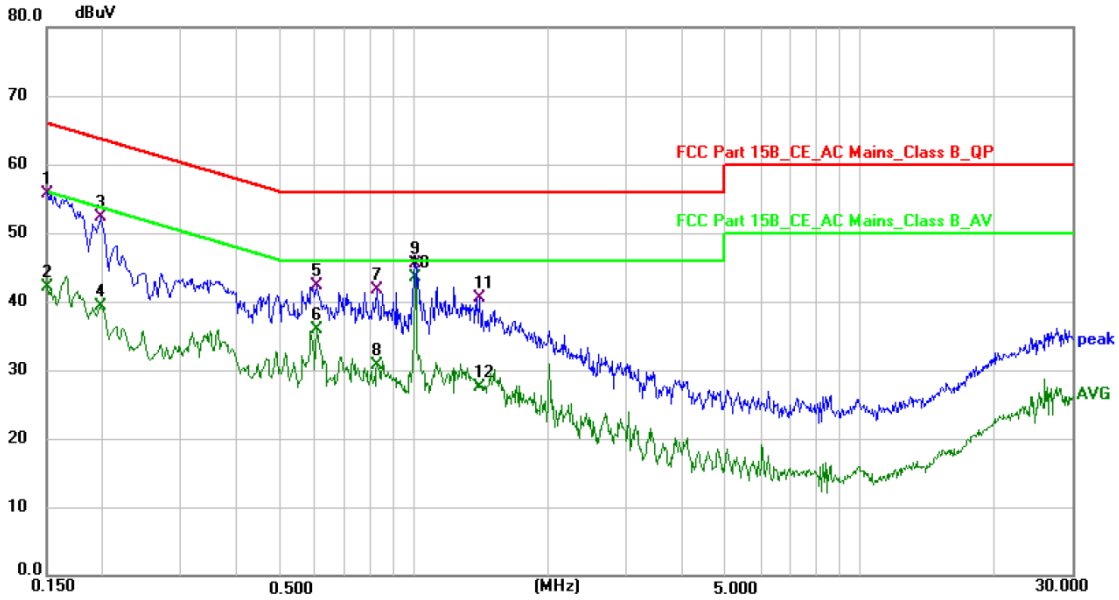
Line:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1590	46.14	9.94	56.08	65.52	-9.44	QP
2	0.1590	33.06	9.94	43.00	55.52	-12.52	AVG
3	0.2893	34.10	9.99	44.09	60.54	-16.45	QP
4	0.2893	22.62	9.99	32.61	50.54	-17.93	AVG
5	0.6260	32.74	9.61	42.35	56.00	-13.65	QP
6	0.6260	24.26	9.61	33.87	46.00	-12.13	AVG
7	1.0100	33.10	9.41	42.51	56.00	-13.49	QP
8 *	1.0100	31.36	9.41	40.77	46.00	-5.23	AVG
9	1.4180	28.94	9.40	38.34	56.00	-17.66	QP
10	1.4180	17.59	9.40	26.99	46.00	-19.01	AVG
11	2.0579	26.06	9.39	35.45	56.00	-20.55	QP
12	2.0579	17.79	9.39	27.18	46.00	-18.82	AVG

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit

Neutral:

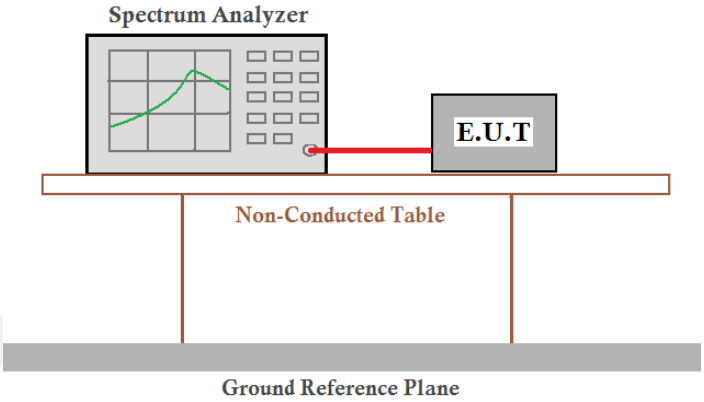


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1507	45.98	9.77	55.75	65.96	-10.21	QP
2	0.1507	32.30	9.77	42.07	55.96	-13.89	AVG
3	0.1980	42.17	10.04	52.21	63.69	-11.48	QP
4	0.1980	29.19	10.04	39.23	53.69	-14.46	AVG
5	0.6060	32.61	9.78	42.39	56.00	-13.61	QP
6	0.6060	26.07	9.78	35.85	46.00	-10.15	AVG
7	0.8300	31.95	9.66	41.61	56.00	-14.39	QP
8	0.8300	21.12	9.66	30.78	46.00	-15.22	AVG
9	1.0100	35.93	9.51	45.44	56.00	-10.56	QP
10 *	1.0100	33.95	9.51	43.46	46.00	-2.54	AVG
11	1.4100	31.04	9.41	40.45	56.00	-15.55	QP
12	1.4100	18.01	9.41	27.42	46.00	-18.58	AVG

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit

All modes and channels have been tested and only the A 5745MHz mode with the worst data is listed.

4.3 Emission Bandwidth and 99% Occupied Bandwidth

Test Requirement:	FCC Part15 E Section 15.407, RSS-Gen §6.7; RSS-247 §6.2
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Limit:	N/A
Test setup:	
Test procedure:	According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

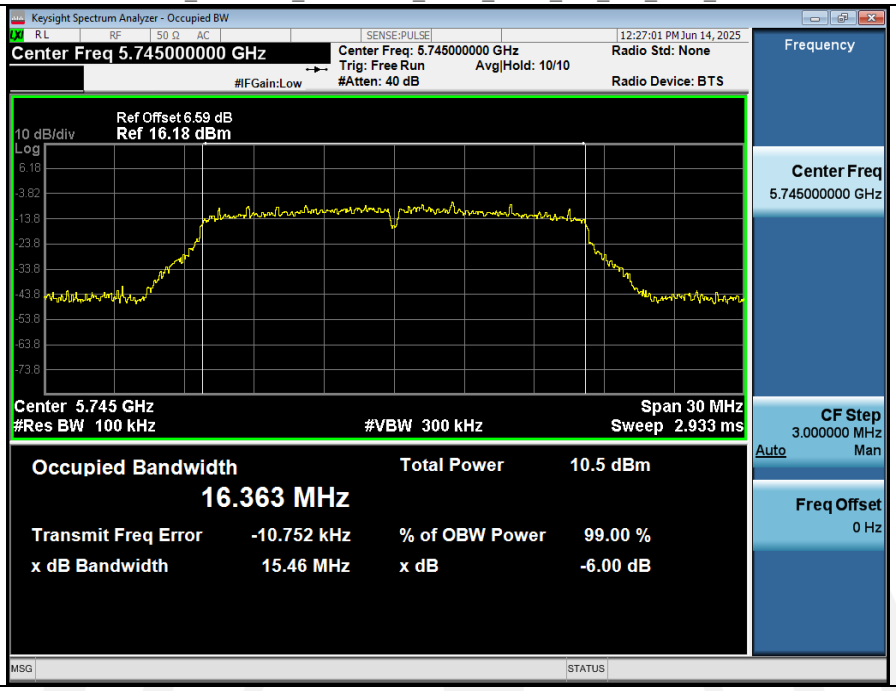
Note: Note: Both antennas have been tested and only the worst data of antenna 1 is shown.

Measurement Data:

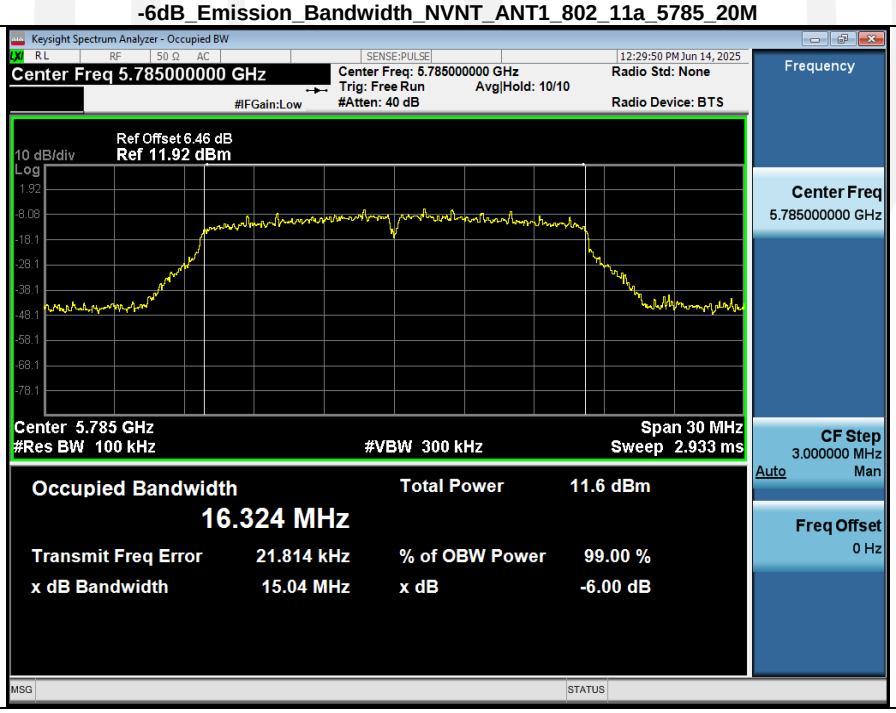
Band 4 (5725-5850 MHz):

Condition	Antenna	Mode	Frequency(MHz)	6dB_Emission_Bandwidth(MHz)	Limit(MHz)	Result
NVNT	ANT1	802.11a	5745.00	15.456	0.500	Pass
NVNT	ANT1	802.11a	5785.00	15.036	0.500	Pass
NVNT	ANT1	802.11a	5825.00	13.870	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	16.105	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	13.916	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	15.709	0.500	Pass
NVNT	ANT1	802.11ac(VHT20)	5745.00	15.903	0.500	Pass
NVNT	ANT1	802.11ac(VHT20)	5785.00	15.049	0.500	Pass
NVNT	ANT1	802.11ac(VHT20)	5825.00	15.725	0.500	Pass
NVNT	ANT1	802.11n(HT40)	5755.00	35.139	0.500	Pass
NVNT	ANT1	802.11n(HT40)	5795.00	35.075	0.500	Pass
NVNT	ANT1	802.11ac(VHT40)	5755.00	35.150	0.500	Pass
NVNT	ANT1	802.11ac(VHT40)	5795.00	35.152	0.500	Pass
NVNT	ANT1	802.11ac(VHT80)	5775.00	75.282	0.500	Pass

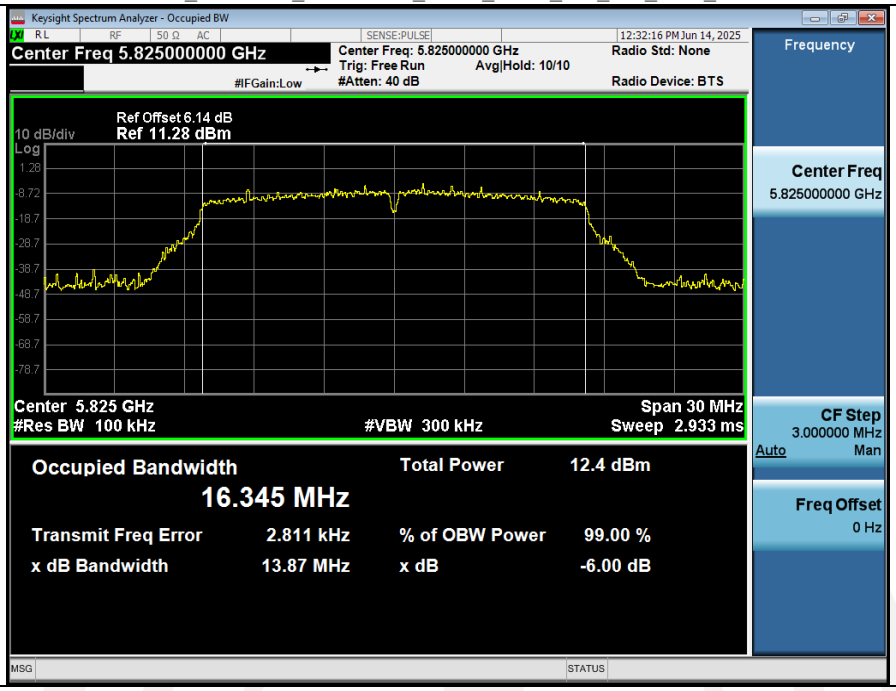
-6dB_Emission_Bandwidth_NVNT_ANT1_802_11a_5745_20M



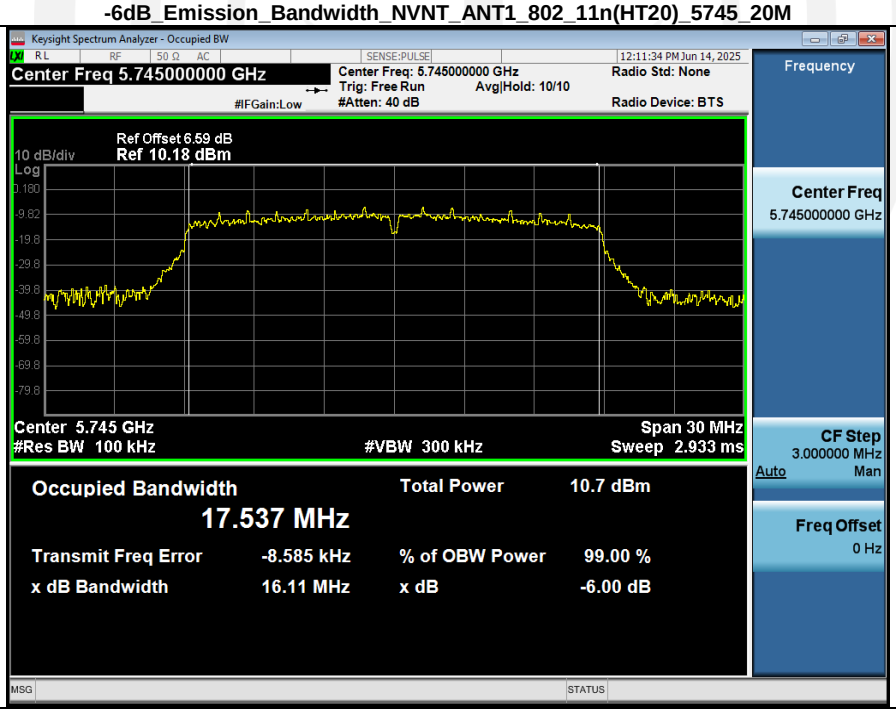
-6dB_Emission_Bandwidth_NVNT_ANT1_802_11a_5785_20M



-6dB_Emission_Bandwidth_NVNT_ANT1_802_11a_5825_20M

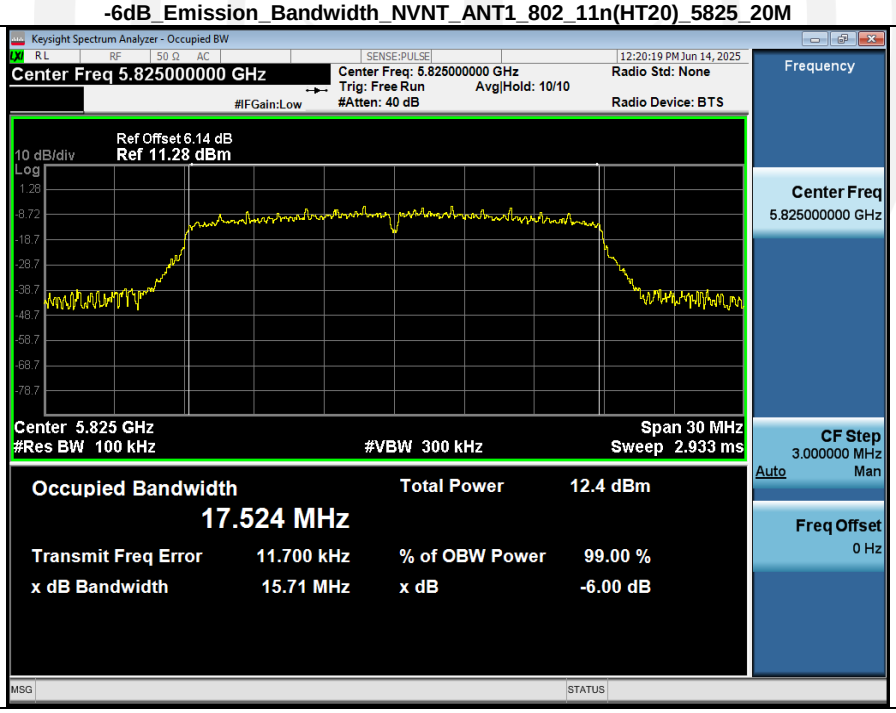


-6dB_Emission_Bandwidth_NVNT_ANT1_802_11n(HT20)_5745_20M



-6dB_Emission_Bandwidth_NVNT_ANT1_802_11n(HT20)_5785_20M

-6dB_Emission_Bandwidth_NVNT_ANT1_802_11n(HT20)_5825_20M



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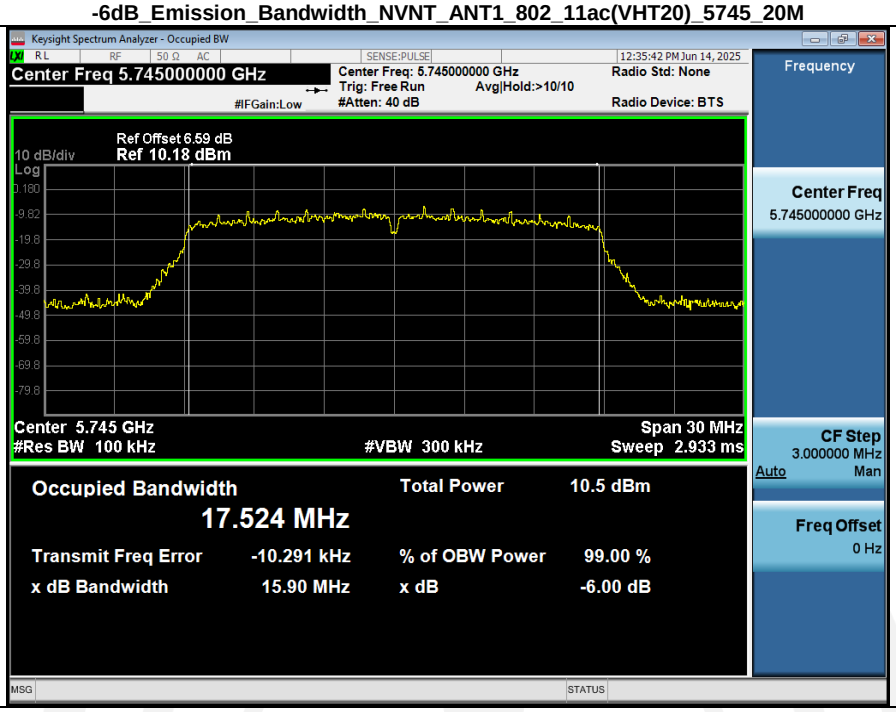
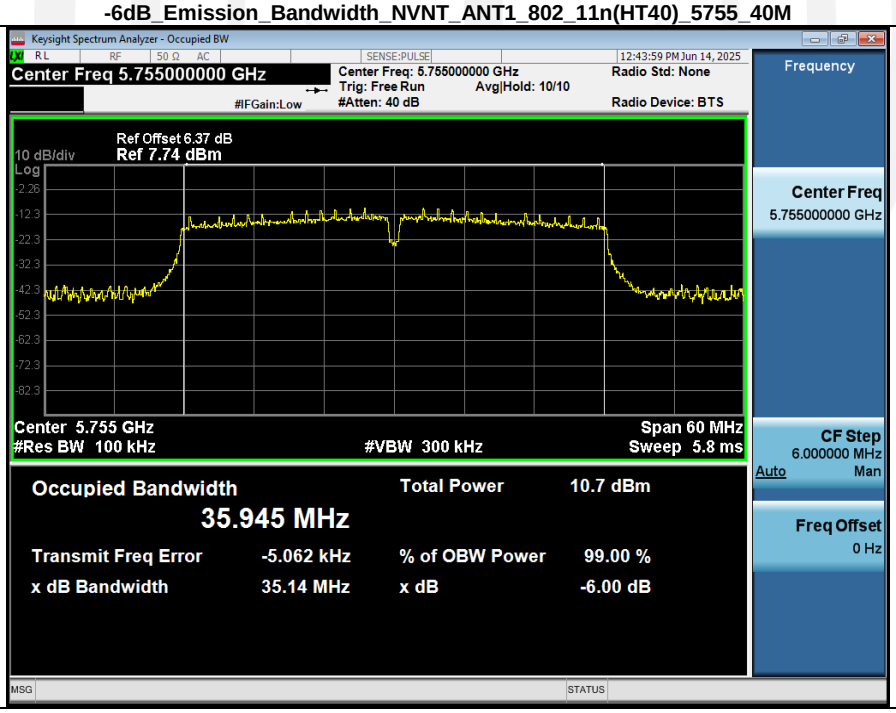


-6dB_Emission_Bandwidth_NVNT_ANT1_802_11ac(VHT20)_5785_20M

-6dB_Emission_Bandwidth_NVNT_ANT1_802_11ac(VHT20)_5825_20M

-6dB_Emission_Bandwidth_NVNT_ANT1_802_11n(HT40)_5755_40M



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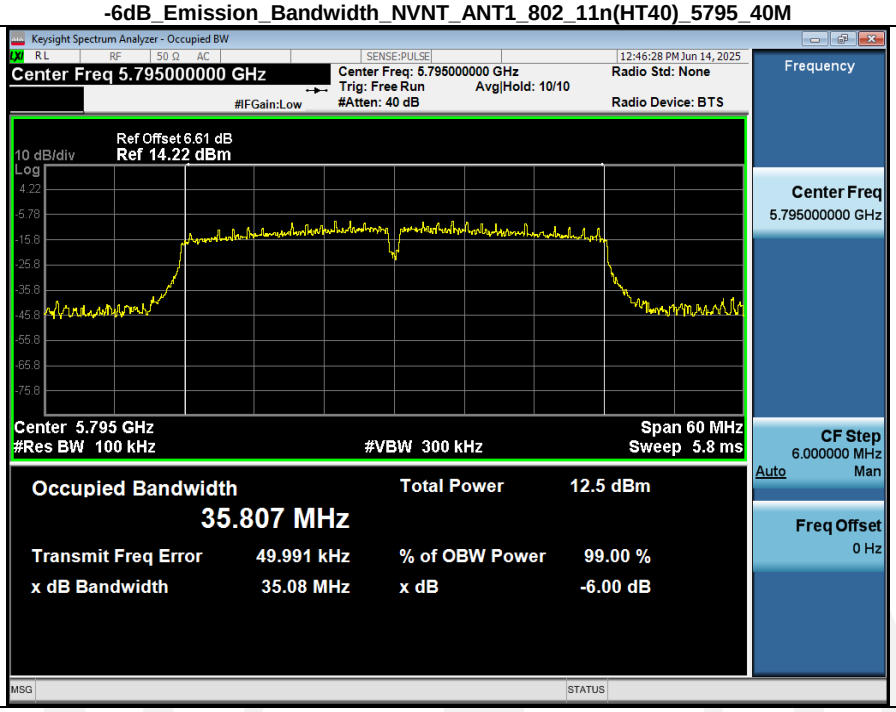
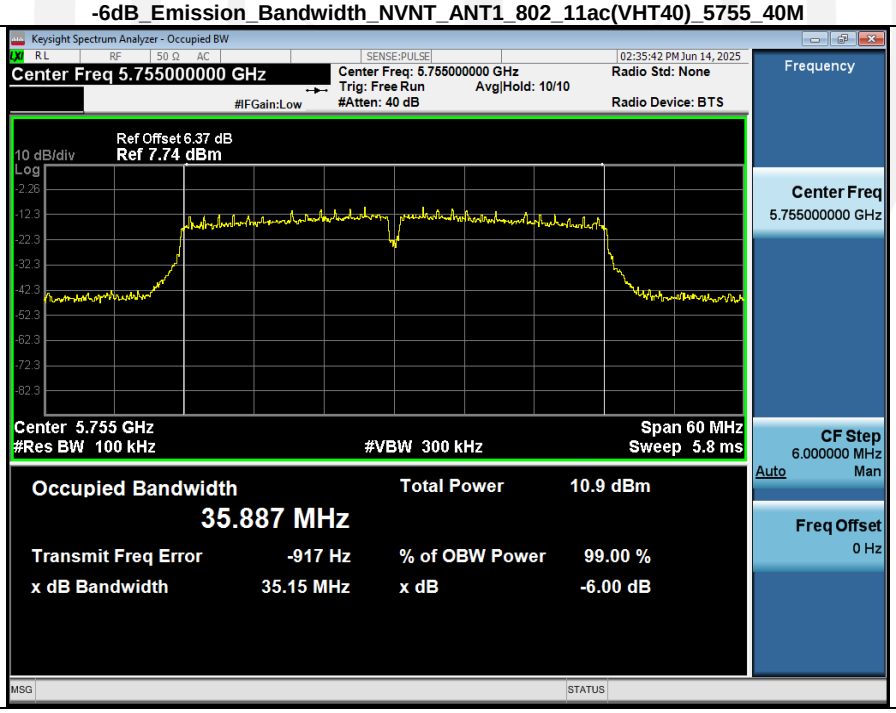


-6dB_Emission_Bandwidth_NVNT_ANT1_802_11ac(VHT40)_5755_40M



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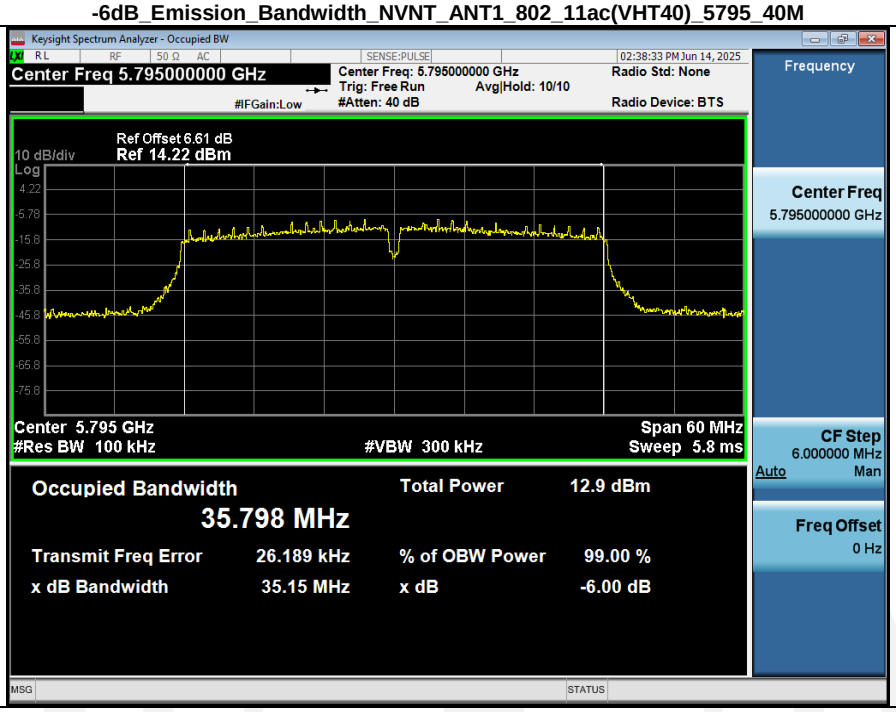

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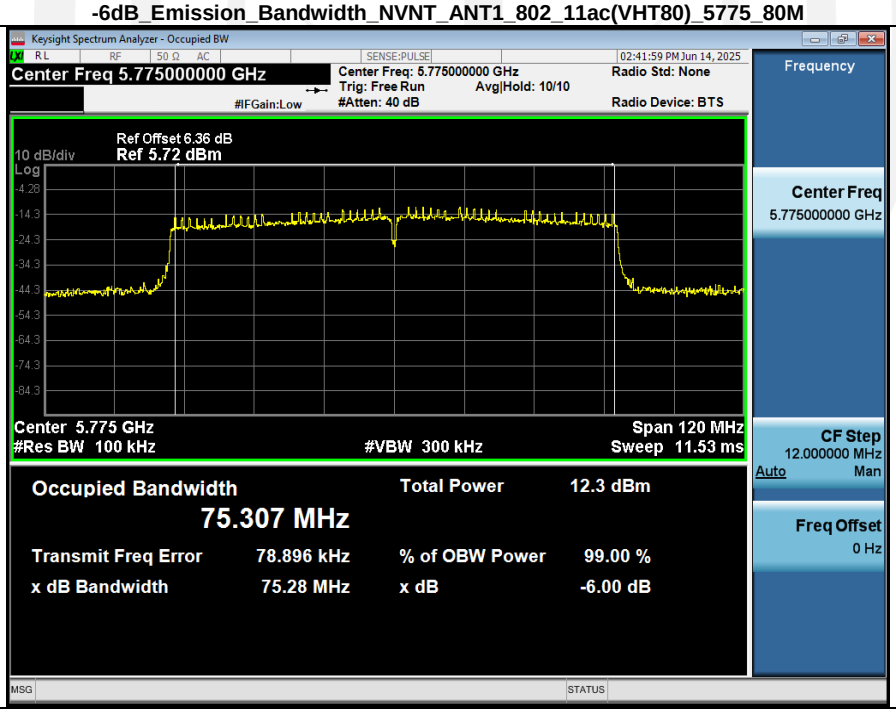
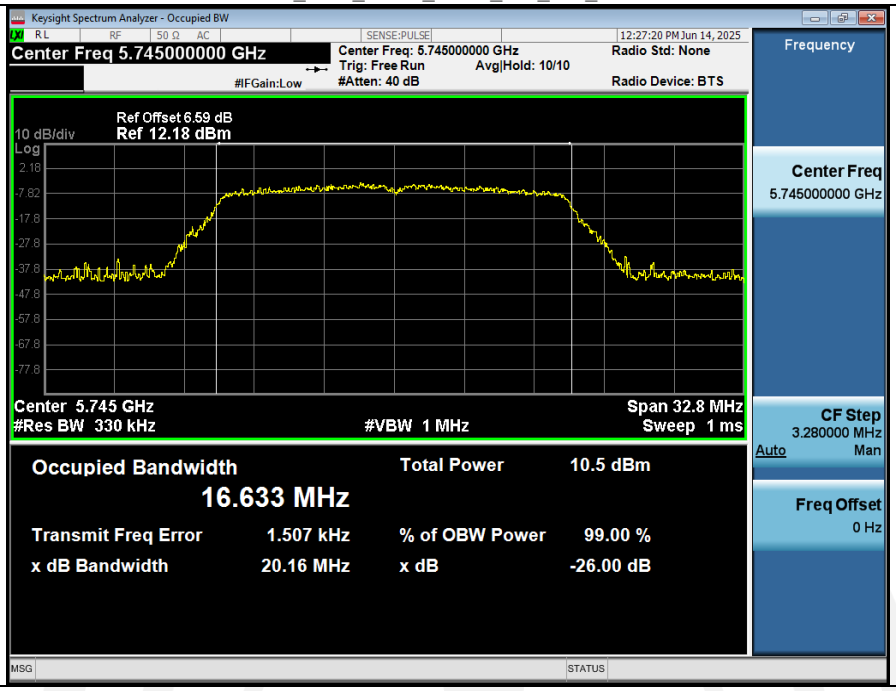
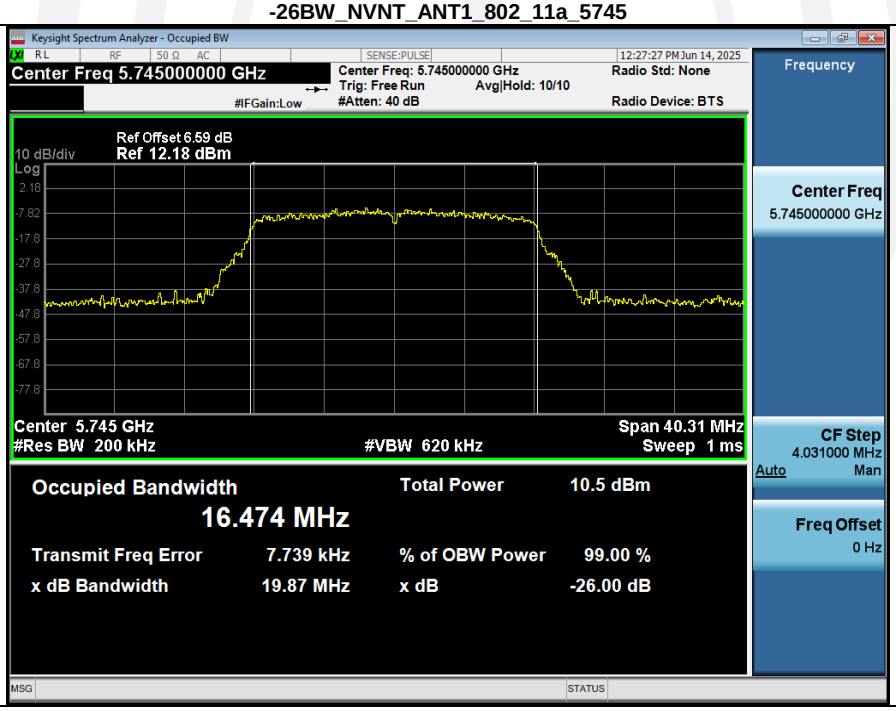


Condition	Antenna	Modulation	Frequency(MHz)	-26dB_Emission_Bandwidth(MHz)	Occupied Bandwidth(MHz)
NVNT	ANT1	802.11a	5745.00	19.87	16.63
NVNT	ANT1	802.11a	5785.00	19.68	16.64
NVNT	ANT1	802.11a	5825.00	19.70	16.69
NVNT	ANT1	802.11n(HT20)	5745.00	20.35	17.79
NVNT	ANT1	802.11n(HT20)	5785.00	20.21	17.73
NVNT	ANT1	802.11n(HT20)	5825.00	20.33	17.77
NVNT	ANT1	802.11ac(VHT20)	5745.00	20.47	17.74
NVNT	ANT1	802.11ac(VHT20)	5785.00	19.98	17.68
NVNT	ANT1	802.11ac(VHT20)	5825.00	20.16	17.73
NVNT	ANT1	802.11n(HT40)	5755.00	64.73	36.44
NVNT	ANT1	802.11n(HT40)	5795.00	40.50	36.25
NVNT	ANT1	802.11ac(VHT40)	5755.00	40.21	36.30
NVNT	ANT1	802.11ac(VHT40)	5795.00	40.35	36.21
NVNT	ANT1	802.11ac(VHT80)	5775.00	80.95	75.54

99%_OCB_NVNT_ANT1_802_11a_5745



-26BW_NVNT_ANT1_802_11a_5745



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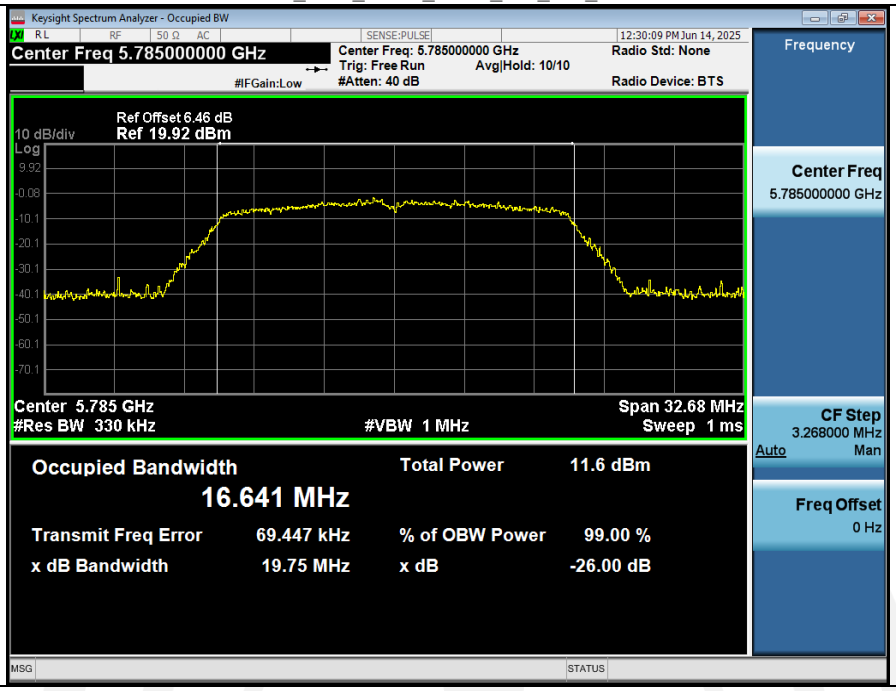

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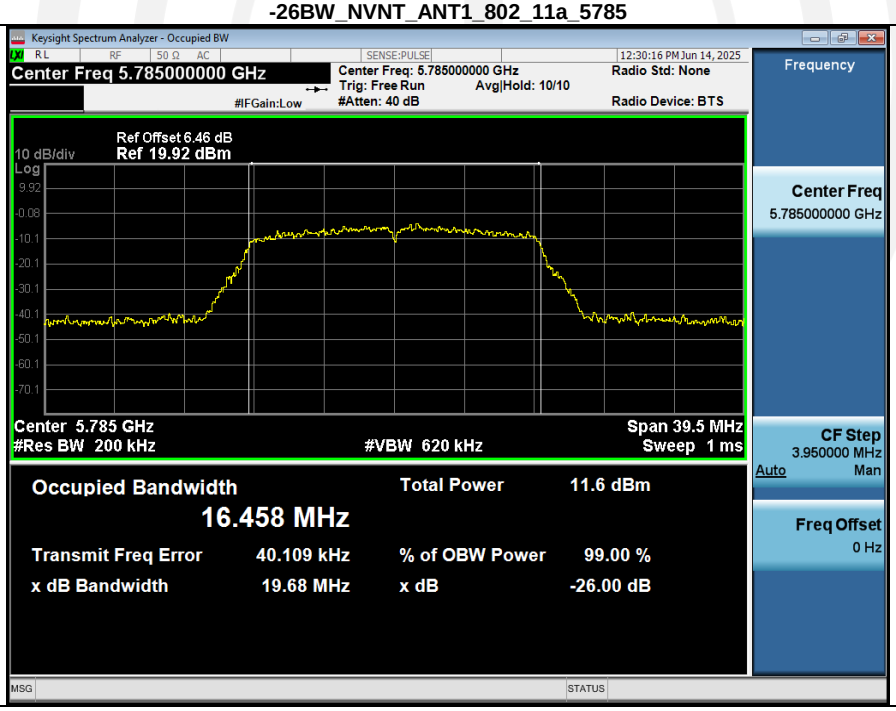

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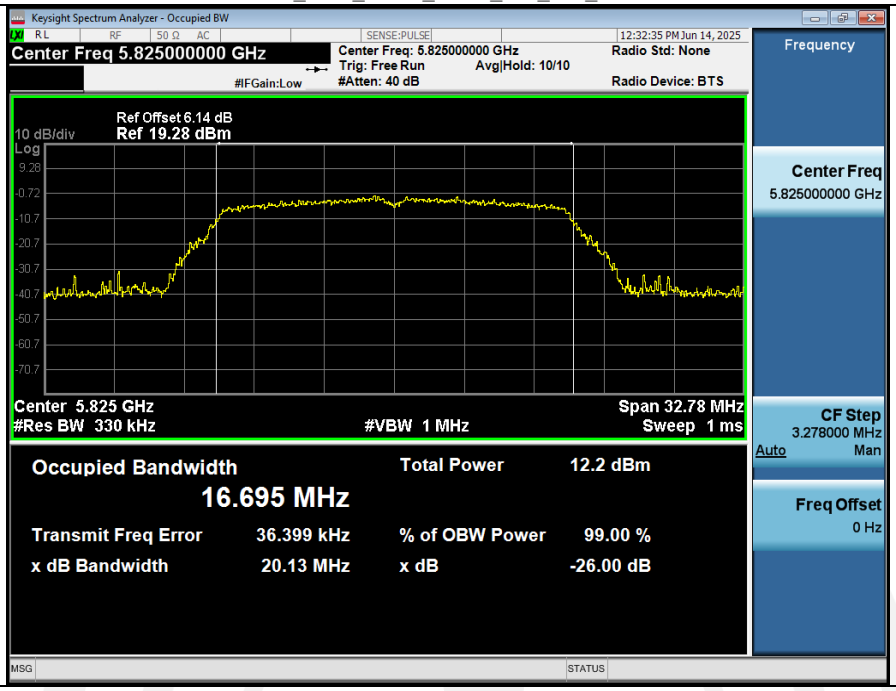

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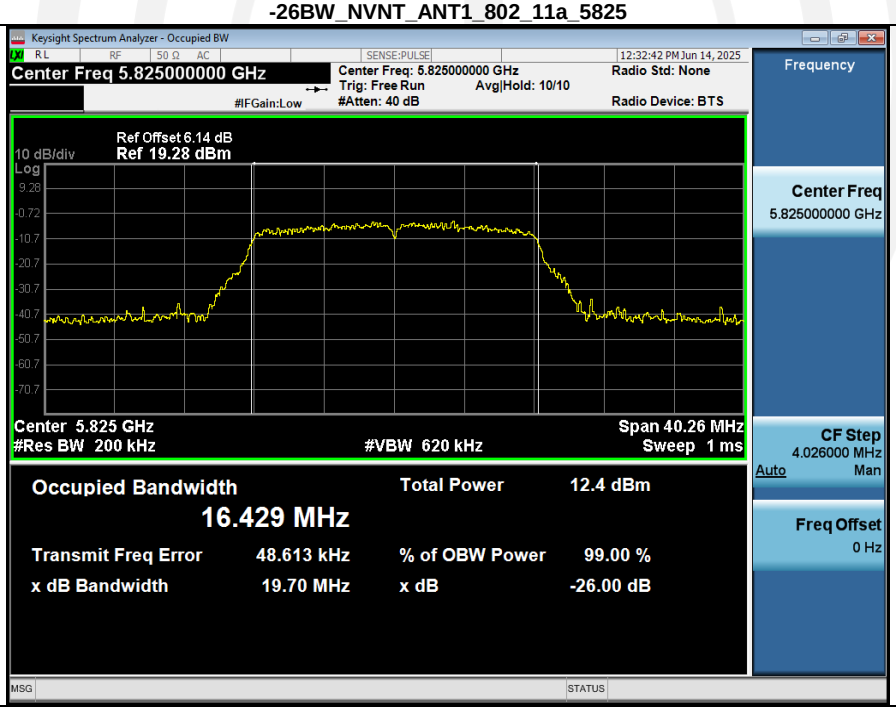

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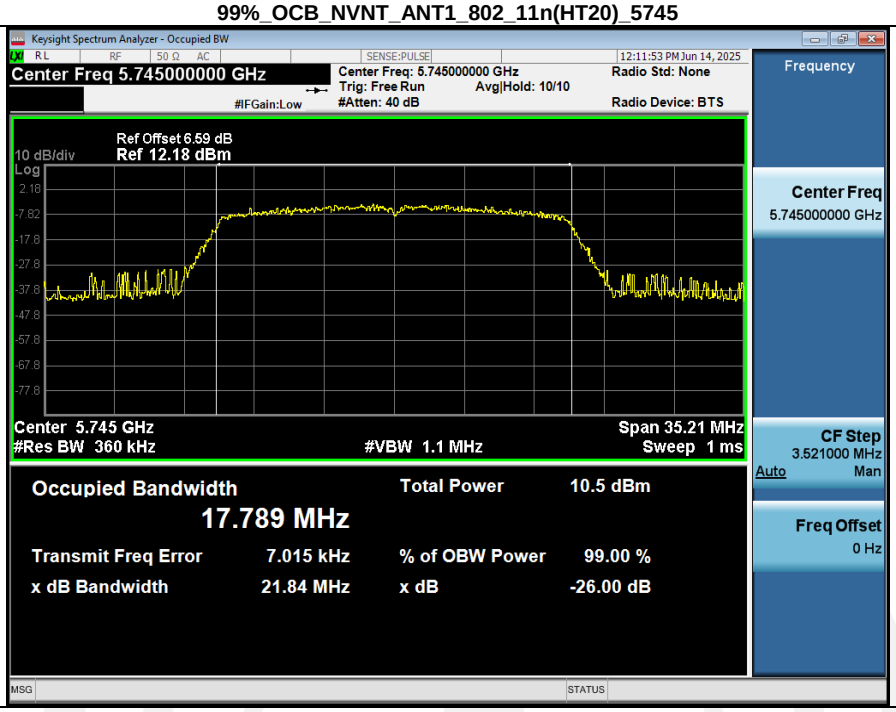

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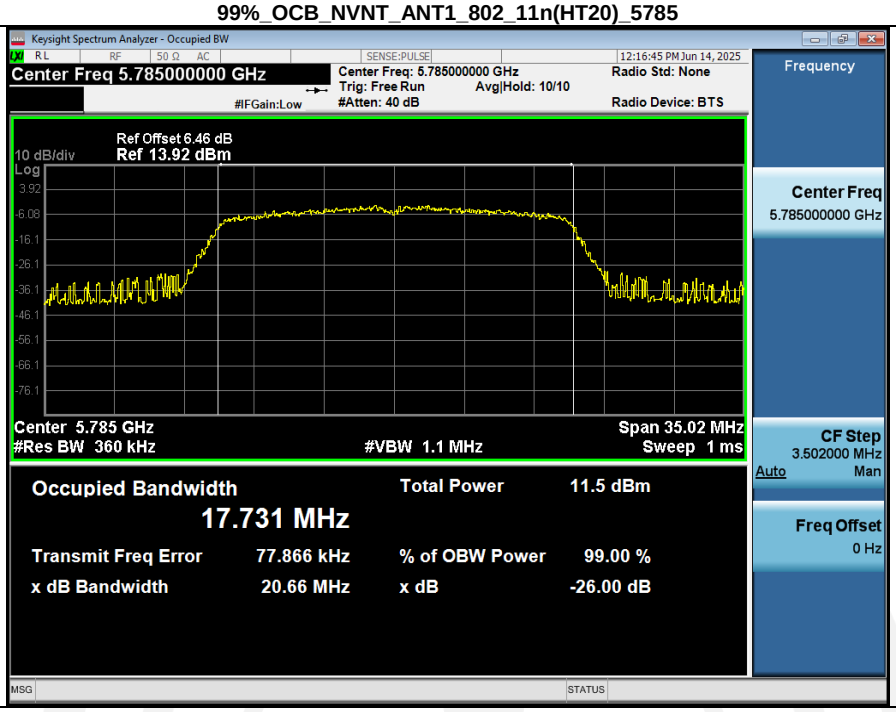
99%_OCB_NVNT_ANT1_802_11n(HT20)_5785



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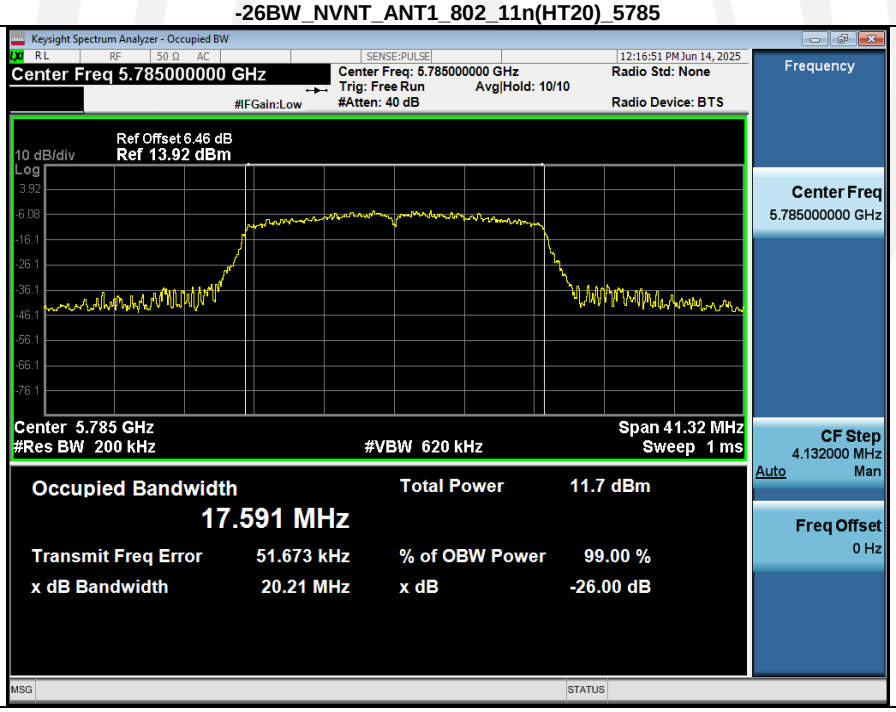

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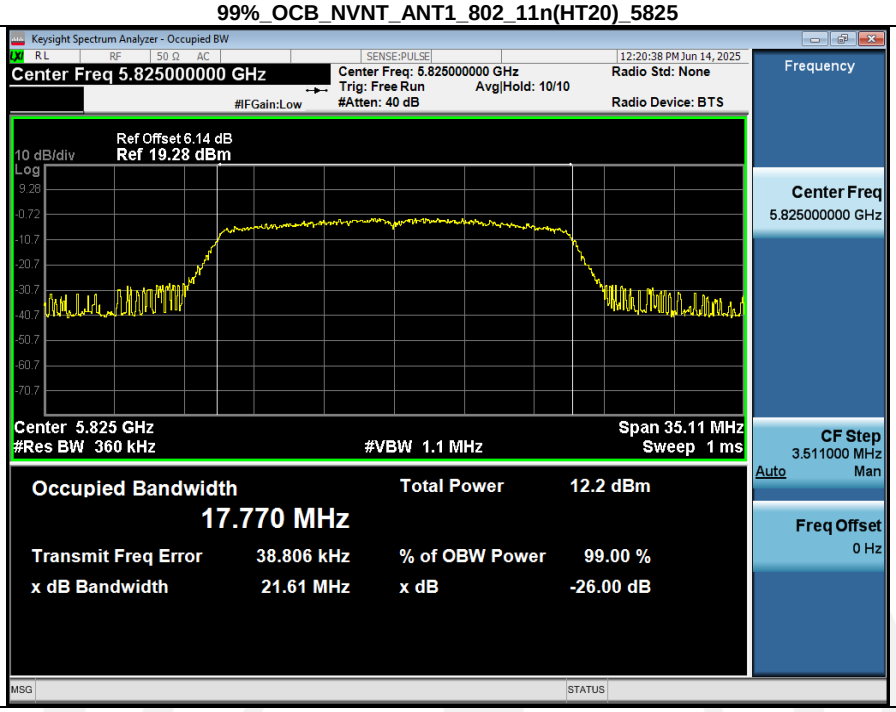

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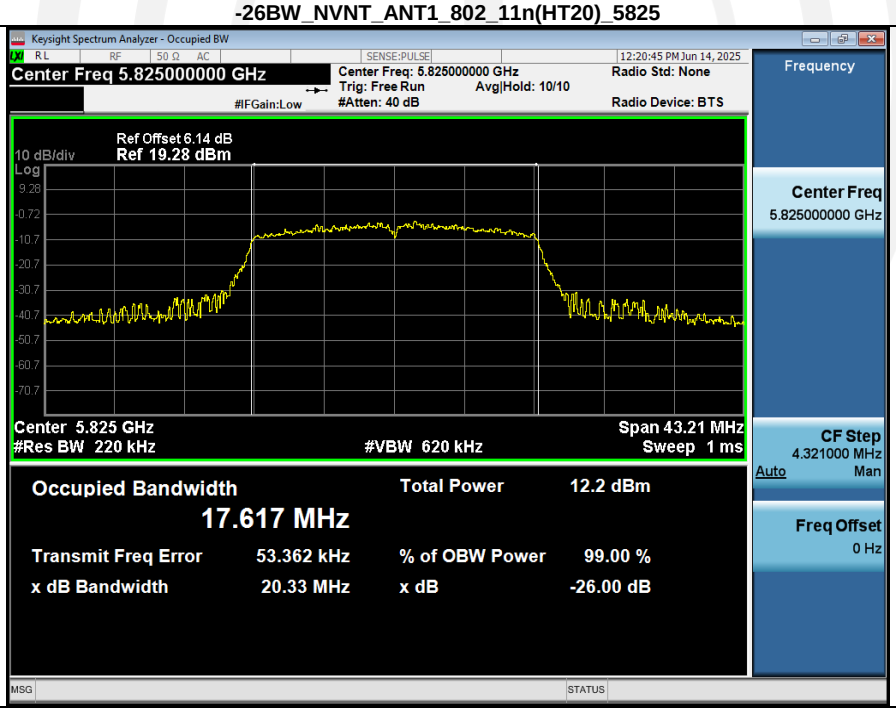

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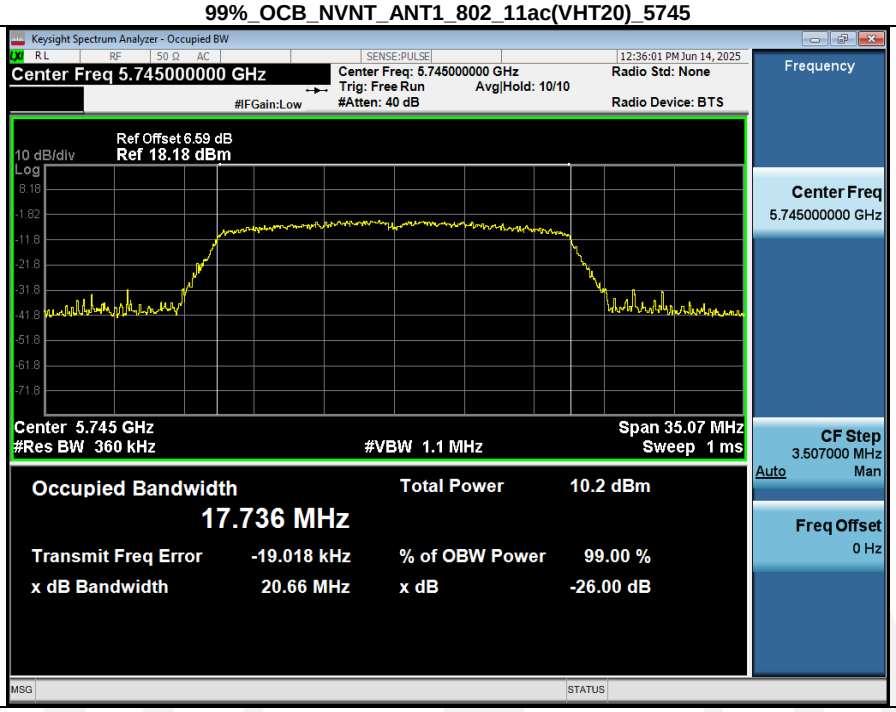

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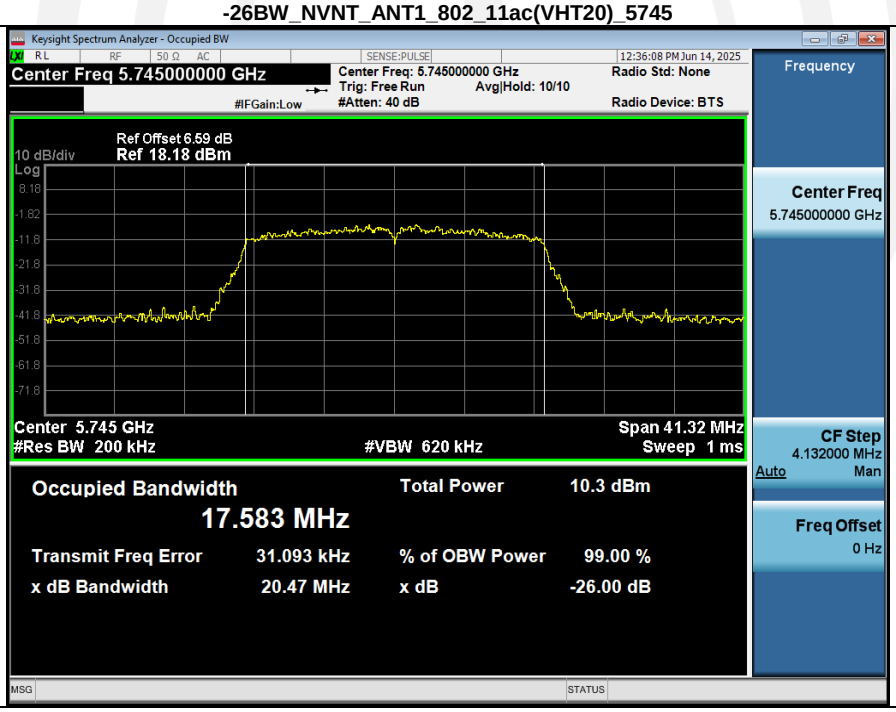

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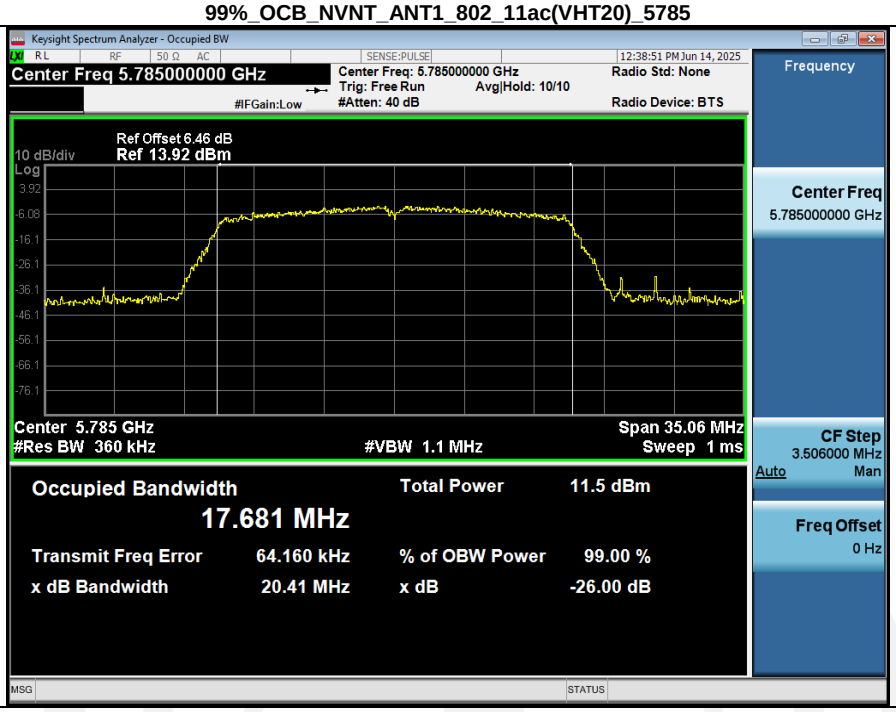

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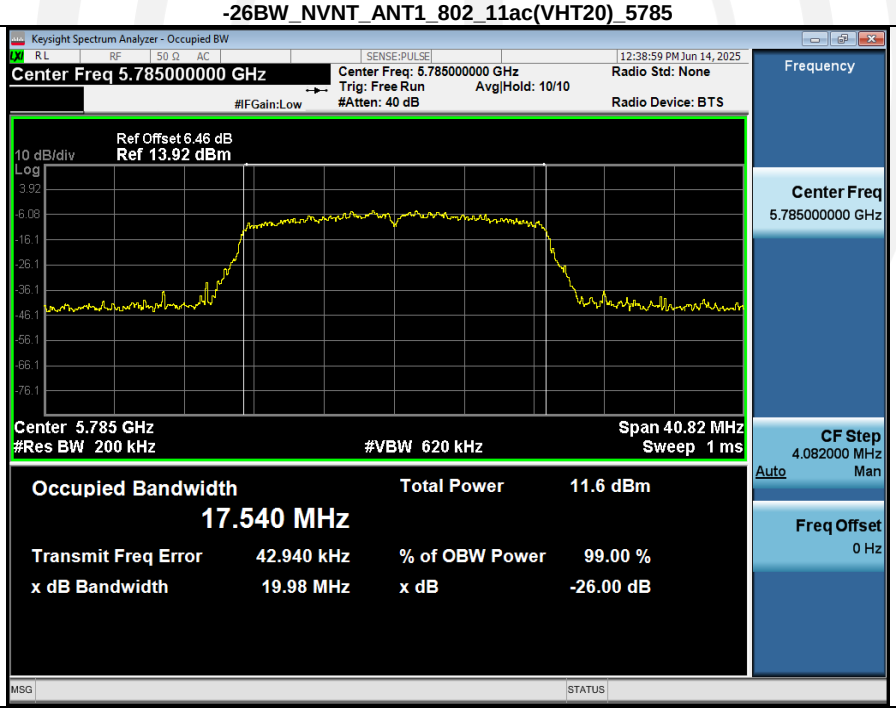

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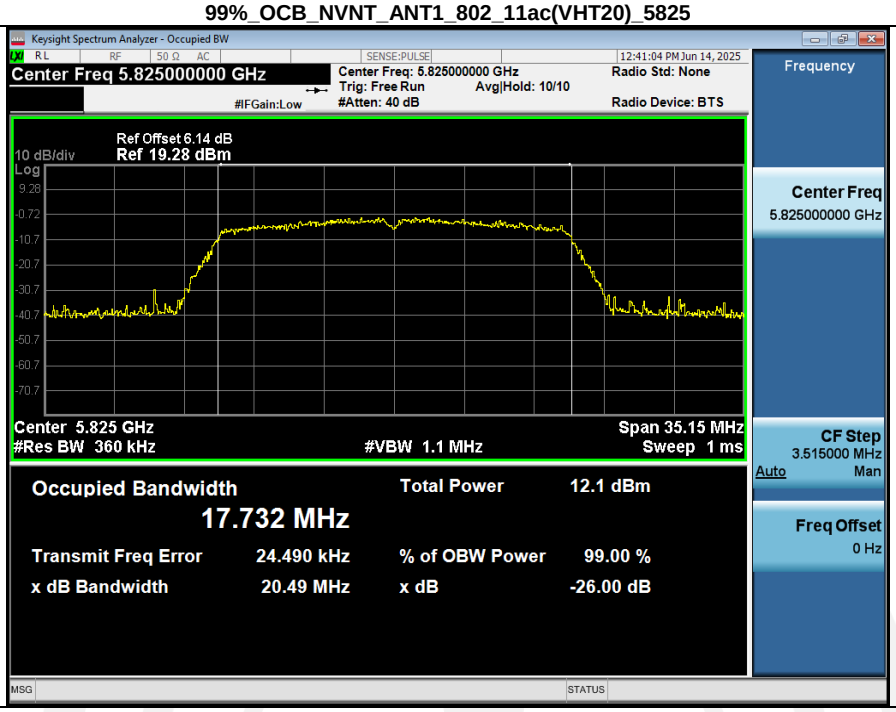

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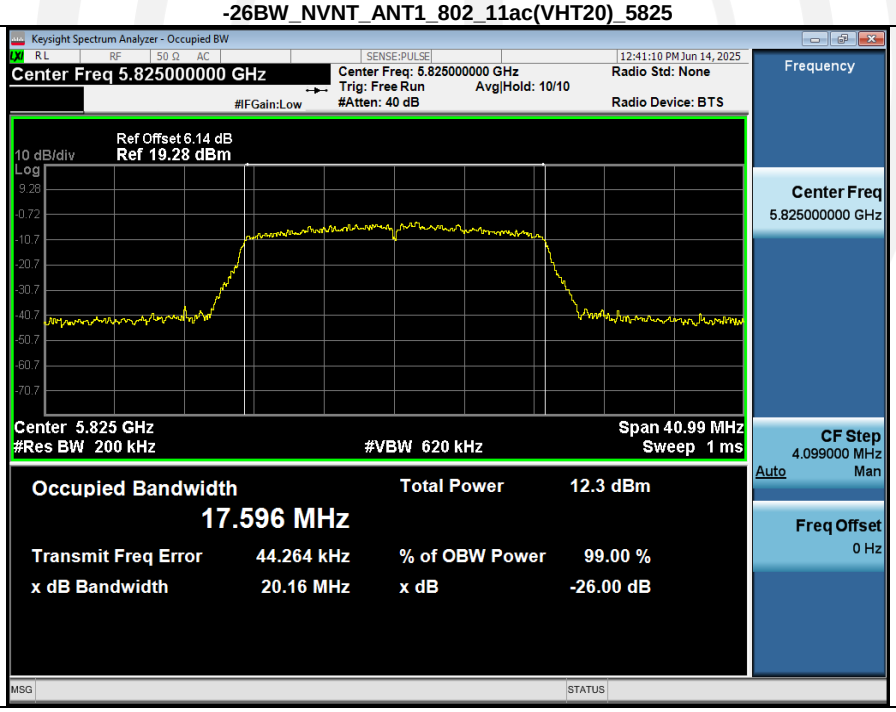

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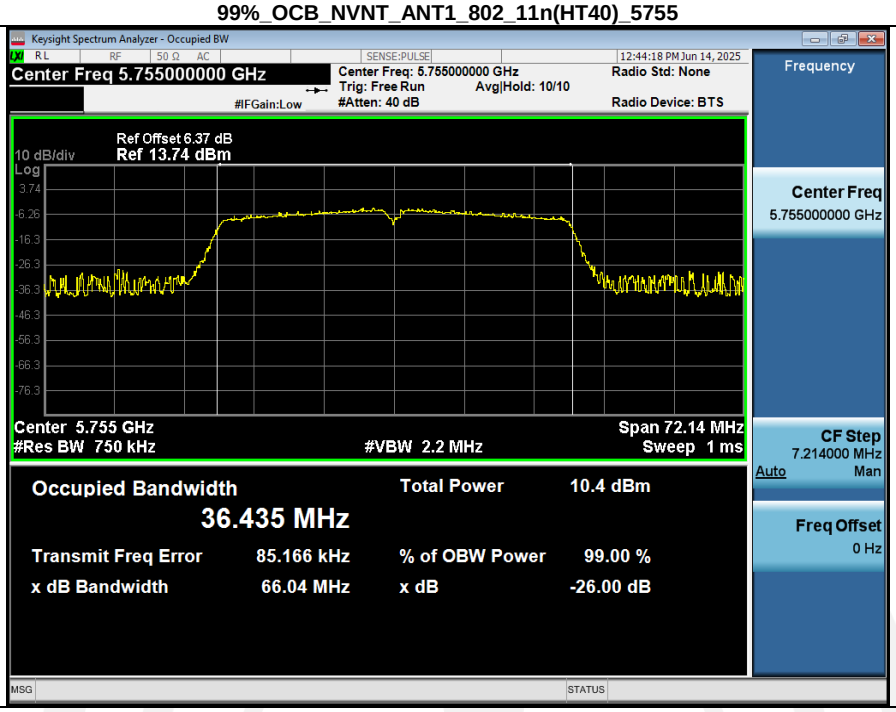

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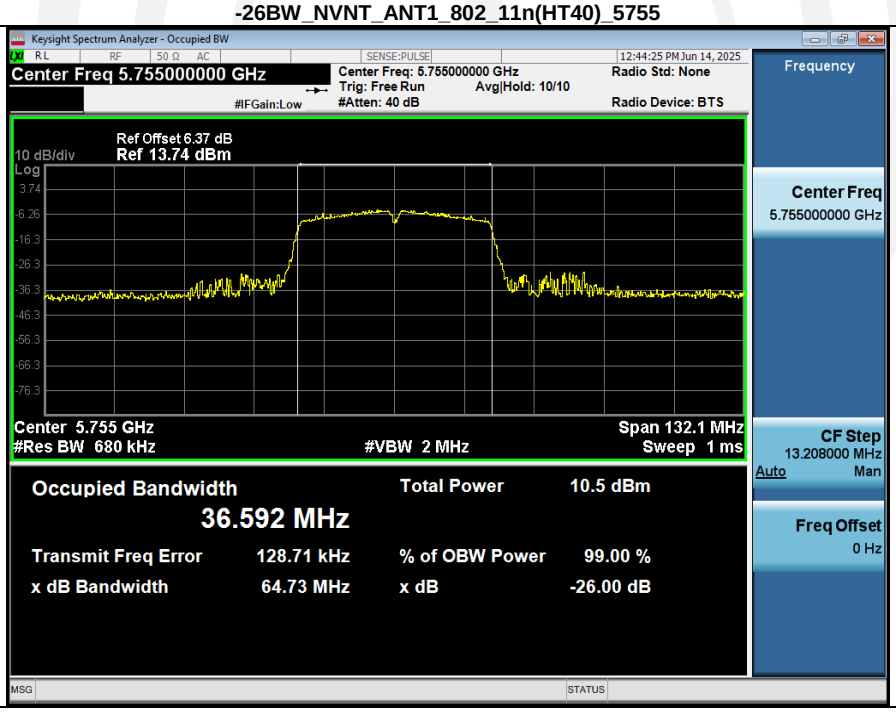

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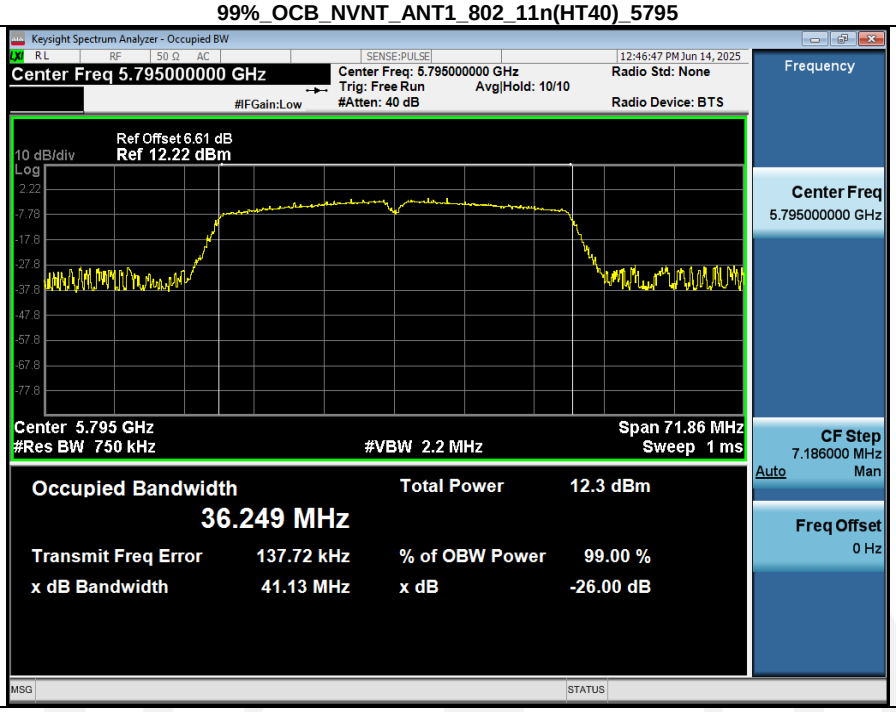

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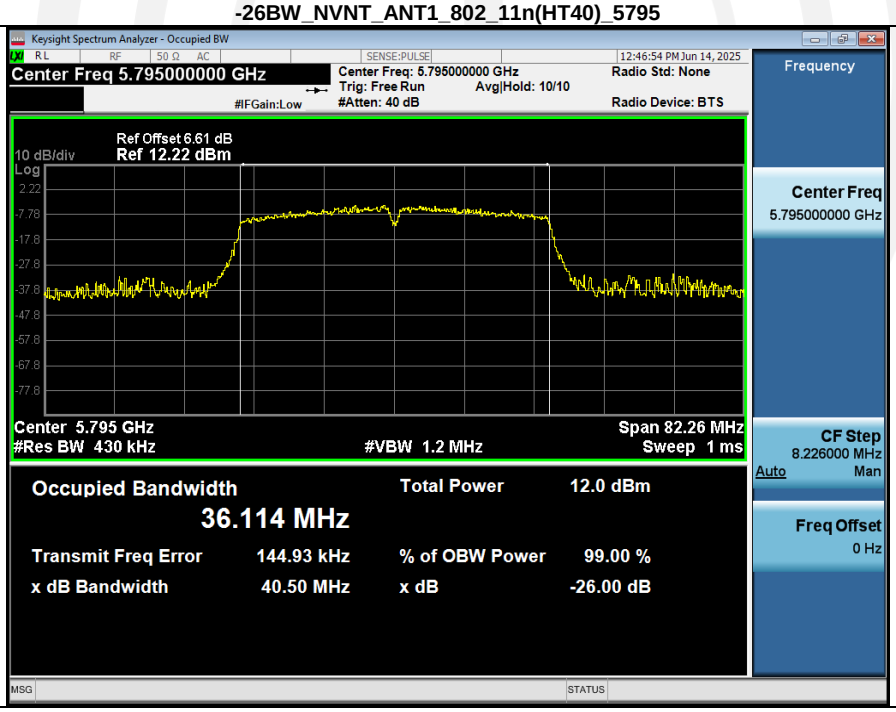

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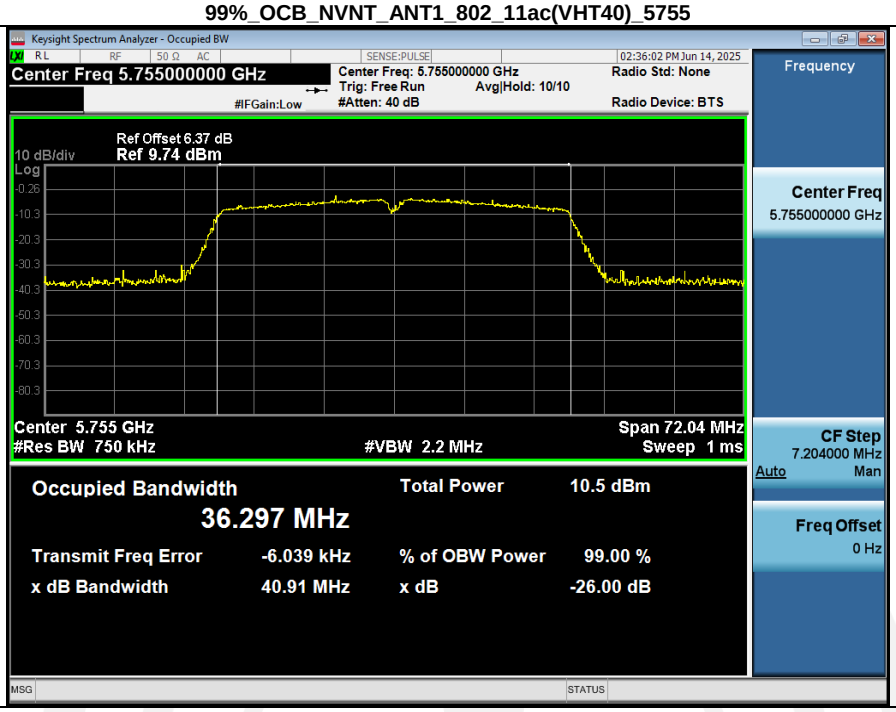

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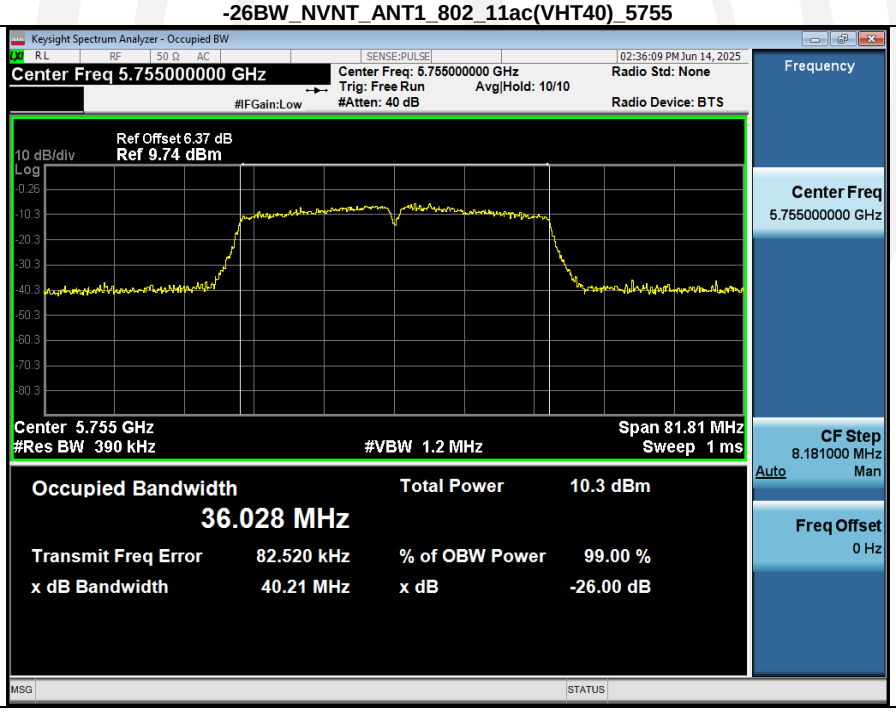

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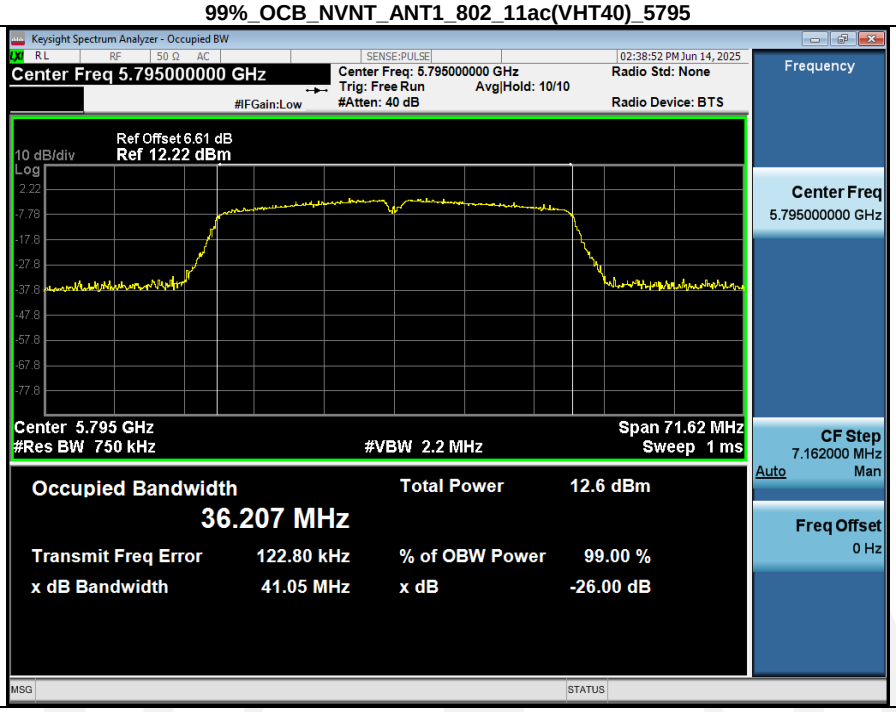

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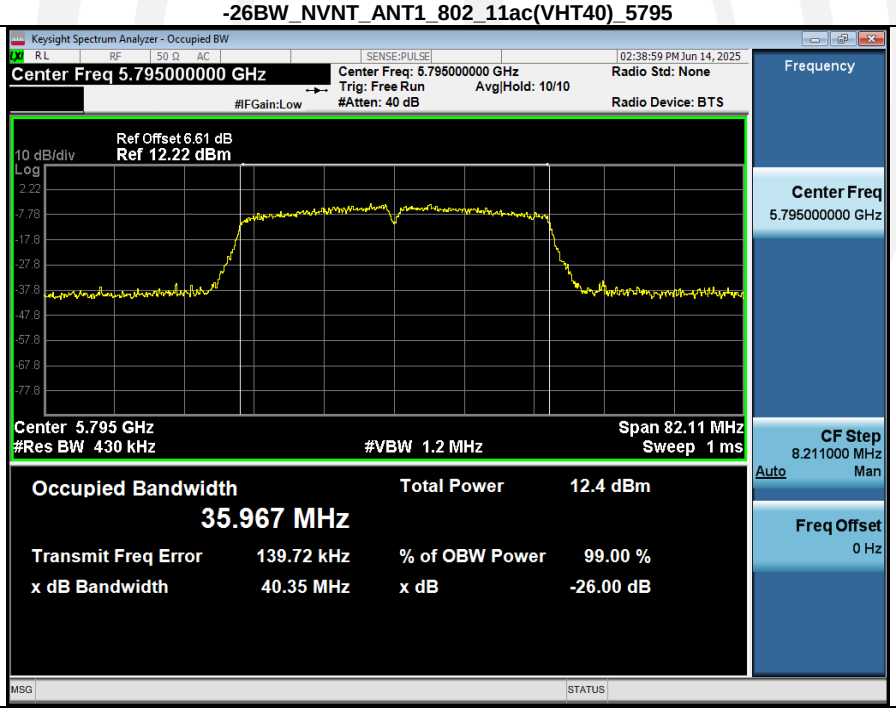

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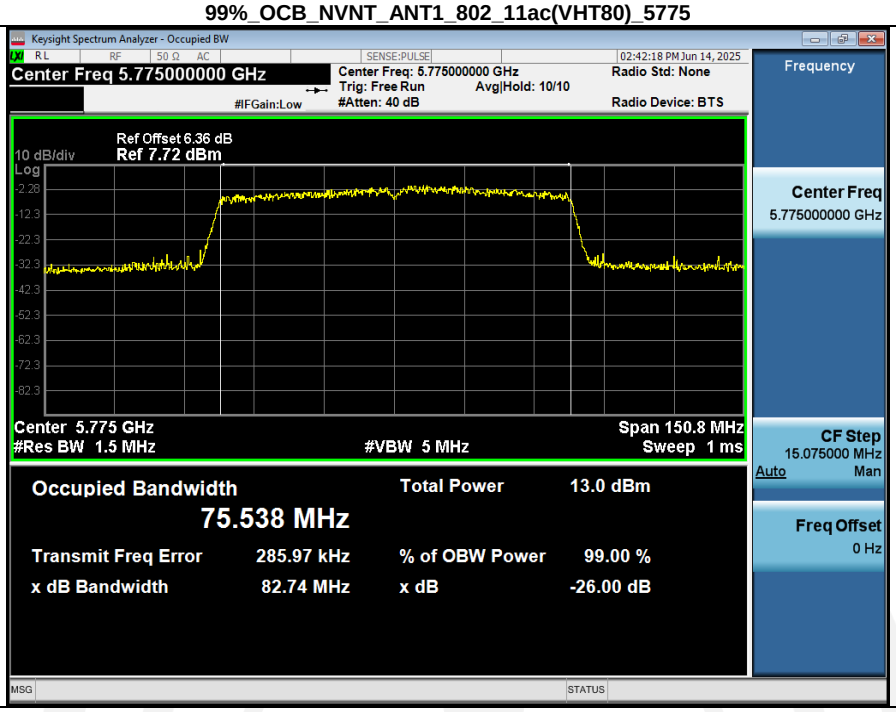

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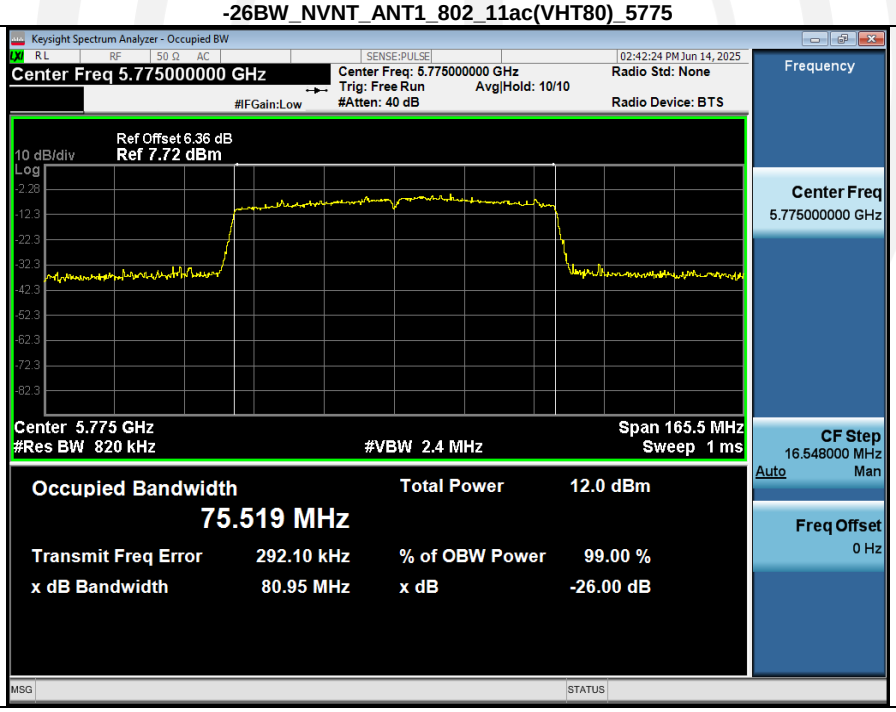
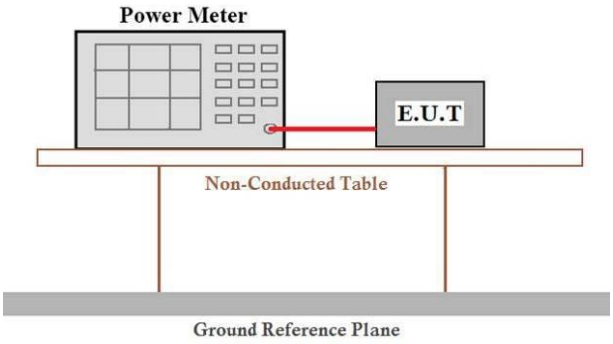


4.4 Maximum Conducted Output Power

Test Requirement:	FCC Part15 E Section 15.407, RSS-247 §6.2
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Limit:	For the band 5.15-5.25GHz, 5.25-5.35GHz, 5.47-5.725GHz, the maximum conducted output power over the frequency bands of operation shall not exceed 250mW. For the band 5.725-5.85GHz, the maximum conducted output power over the frequency bands of operation shall not exceed 1W. IC: For the 5.15–5.25 GHz band, For other devices, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10 B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. For the 5.25–5.35 GHz band, Other than devices installed in vehicles, the maximum conducted output power shall not exceed 250 mW or 11 + 10 log10 B, dBm, whichever power is less. The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10 B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. For the 5.47–5.6 GHz and 5.65–5.725 GHz band, the maximum conducted output power shall not exceed 250 mW or 11 + 10 log10 B, dBm, whichever power is less. The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10 B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. For Straddle Channel, According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, If the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance. If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
Test setup:	
Test procedure:	**Measurement using an RF average power meter** (i) Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the

	conditions listed below are satisfied a) The EUT is configured to transmit continuously or to transmit with a constant duty cycle. b) At all times when the EUT is transmitting, it must be transmitting at its maximum power control level. c) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five. (ii) If the transmitter does not transmit continuously, measure the duty cycle, x, of the transmitter output signal as described in section B). (iii) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter. (iv) Adjust the measurement in dBm by adding 10 log(1/x) where x is the duty cycle (e.g., 10log(1/0.25) if the duty cycle is 25 percent).
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Measurement Data

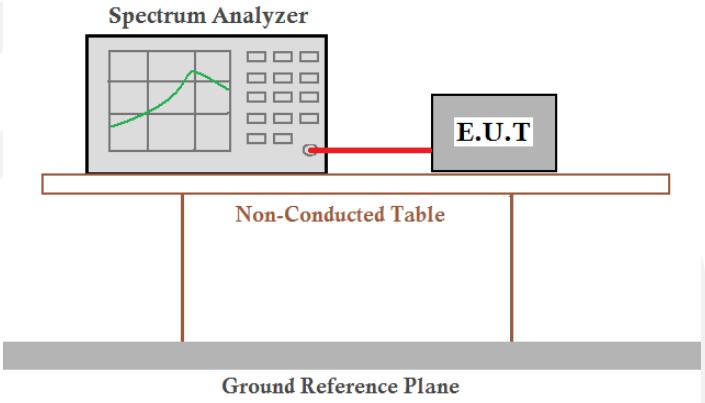
Band 4 (5725 – 5850 MHz) SISO:

Condition	Antenna	Modulation	Frequency (MHz)	Conducted Power(dBm)	Duty factor(dB)	Total Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11a	5745.00	3.52	0.12	3.64	30	Pass
NVNT	ANT1	802.11a	5785.00	4.88	0.12	5.00	30	Pass
NVNT	ANT1	802.11a	5825.00	5.59	0.12	5.71	30	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	3.92	0.13	4.05	30	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	4.88	0.13	5.01	30	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	5.44	0.13	5.57	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5745.00	3.66	0.13	3.79	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5785.00	4.96	0.13	5.09	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5825.00	5.57	0.20	5.77	30	Pass
NVNT	ANT1	802.11n(HT40)	5755.00	3.32	0.39	3.71	30	Pass
NVNT	ANT1	802.11n(HT40)	5795.00	5.09	0.26	5.35	30	Pass
NVNT	ANT1	802.11ac(VHT40)	5755.00	3.50	0.26	3.76	30	Pass
NVNT	ANT1	802.11ac(VHT40)	5795.00	5.45	0.26	5.71	30	Pass
NVNT	ANT1	802.11ac(VHT80)	5775.00	4.11	0.51	4.62	30	Pass

Condition	Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty_factor
NVNT	ANT1	802.11a	5745.00	97.22	0.12
NVNT	ANT1	802.11a	5785.00	97.22	0.12
NVNT	ANT1	802.11a	5825.00	97.22	0.12
NVNT	ANT1	802.11n(HT20)	5745.00	97.01	0.13
NVNT	ANT1	802.11n(HT20)	5785.00	97.01	0.13
NVNT	ANT1	802.11n(HT20)	5825.00	97.01	0.13
NVNT	ANT1	802.11ac(VHT20)	5745.00	97.01	0.13
NVNT	ANT1	802.11ac(VHT20)	5785.00	97.06	0.13
NVNT	ANT1	802.11ac(VHT20)	5825.00	95.59	0.20
NVNT	ANT1	802.11n(HT40)	5755.00	91.43	0.39
NVNT	ANT1	802.11n(HT40)	5795.00	94.12	0.26
NVNT	ANT1	802.11ac(VHT40)	5755.00	94.29	0.26
NVNT	ANT1	802.11ac(VHT40)	5795.00	94.12	0.26
NVNT	ANT1	802.11ac(VHT80)	5775.00	88.89	0.51

Note: The measure-and-sum technique shall be used for measuring in-band transmit power of a device. Total power is the sum of the conducted power levels measured at the various output ports.

4.5 Power Spectral Density

Test Requirement:	FCC Part15 E Section 15.407, RSS-247 §6.2
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Limit:	FCC: 1.≤11.00dBm/MHz for 5150MHz-5250MHz, 5250-5350MHz and 5470-5725 MHz 2.≤30.00dBm/500KHz for 5725MHz-5850MHz IC: 1.For the 5.15-5.25 GHz, The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band. 2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.
Test setup:	
Test procedure:	1) Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E)2) for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA-1, SA-2, SA-3, or alternatives to each) and apply it up to, but not including, the step labeled, “Compute power…”. 2) Use the peak search function on the instrument to find the peak of the spectrum. 3) Make the following adjustments to the peak value of the spectrum, if applicable: a) If Method SA-2 or SA-2 Alternative was used, add 10 log(1/x), where x is the duty cycle, to the peak of the spectrum. b) If Method SA-3 Alternative was used and the linear mode was used in step E)2)g)(viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging. 4) The result is the PSD.
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

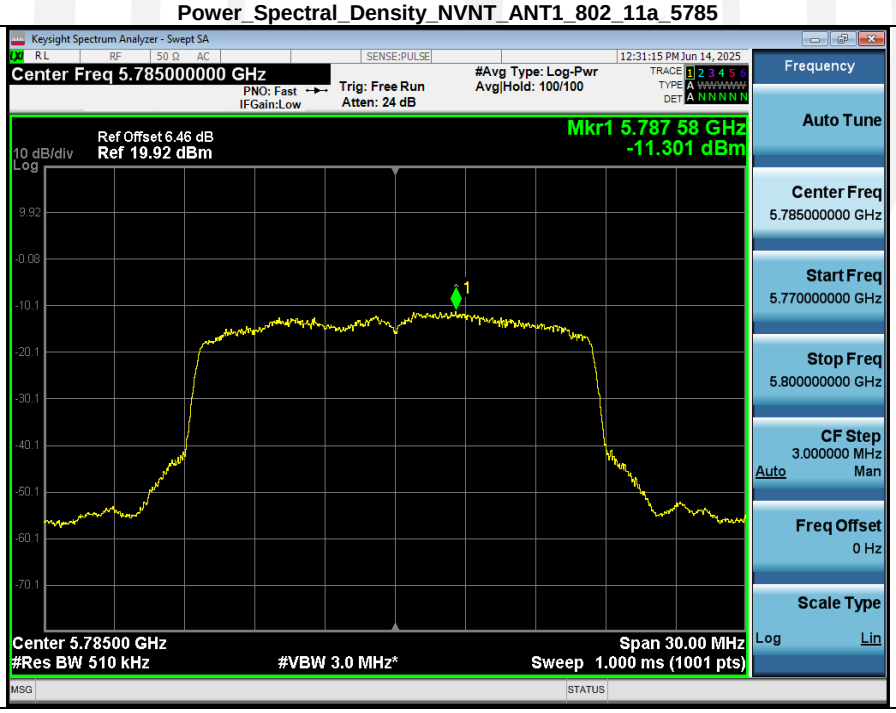
Measurement Data

Band 4 (5725 – 5850 MHz) SISO:

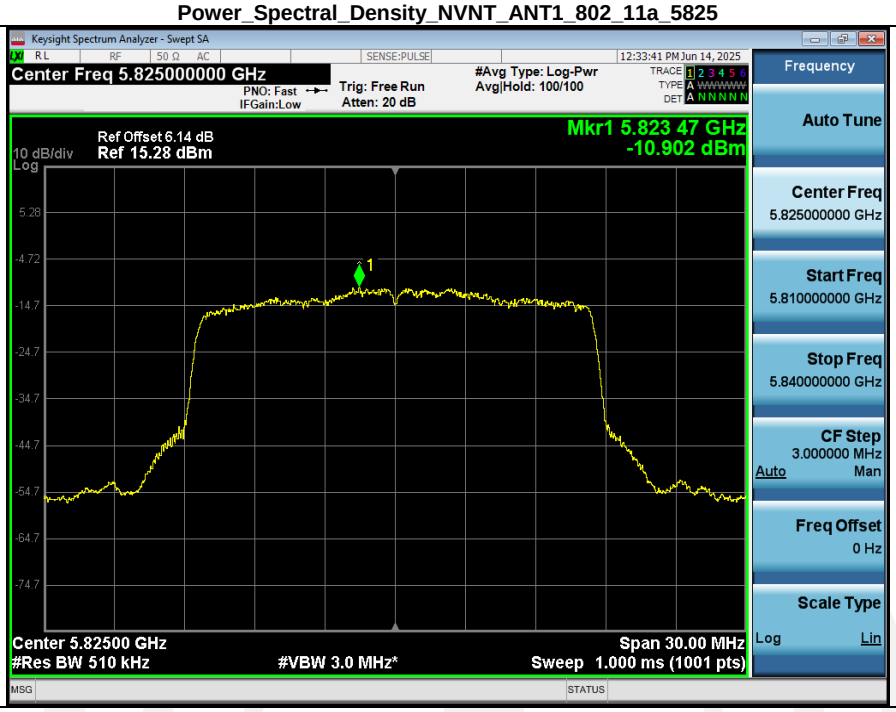
Condition	Antenna	Modulation	Frequency (MHz)	PSD_SA (dBm/RBW)	Duty factor(dB)	RB factor(dB)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Result
NVNT	ANT1	802.11a	5745.00	-12.34	0.12	-0	-12.31	30	Pass
NVNT	ANT1	802.11a	5785.00	-11.30	0.12	-0	-11.27	30	Pass
NVNT	ANT1	802.11a	5825.00	-10.90	0.12	-0	-10.87	30	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	-12.09	0.13	-0	-12.05	30	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	-12.12	0.13	-0	-12.08	30	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	-11.30	0.13	-0	-11.26	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5745.00	-13.28	0.13	-0	-13.23	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5785.00	-11.16	0.13	-0	-11.11	30	Pass
NVNT	ANT1	802.11ac(VHT20)	5825.00	-10.94	0.20	-0	-10.83	30	Pass
NVNT	ANT1	802.11n(HT40)	5755.00	-16.60	0.39	-0	-16.30	30	Pass
NVNT	ANT1	802.11n(HT40)	5795.00	-15.59	0.26	-0	-15.41	30	Pass
NVNT	ANT1	802.11ac(VHT40)	5755.00	-16.88	0.26	-0	-16.70	30	Pass
NVNT	ANT1	802.11ac(VHT40)	5795.00	-15.98	0.26	-0	-15.81	30	Pass
NVNT	ANT1	802.11ac(VHT80)	5775.00	-19.96	0.51	-0	-19.54	30	Pass

Power_Spectral_Density_NVNT_ANT1_802_11a_5745

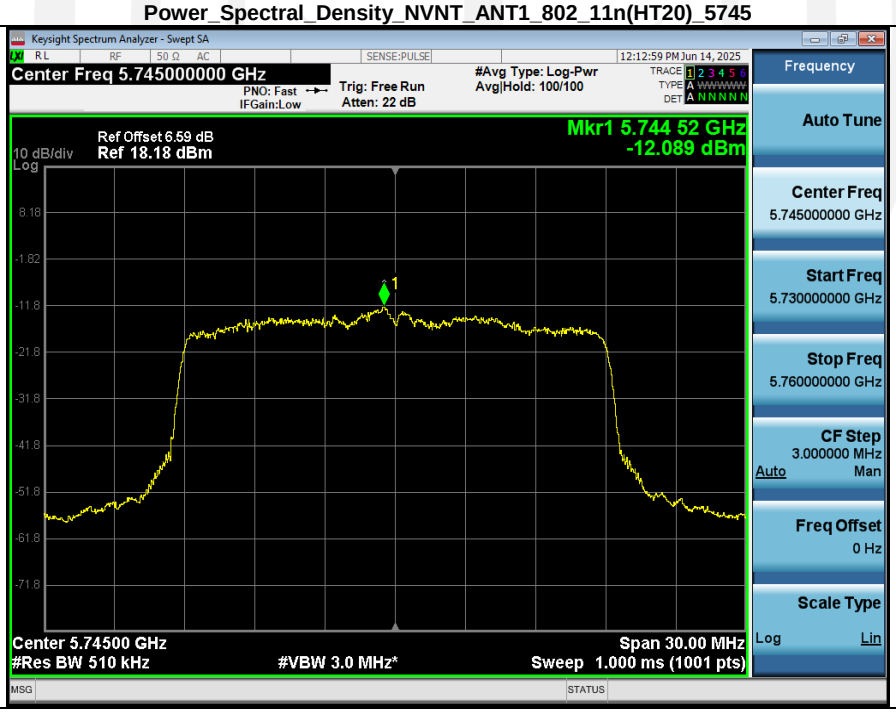
Power_Spectral_Density_NVNT_ANT1_802_11a_5785



Power_Spectral_Density_NVNT_ANT1_802_11a_5825



Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_5745



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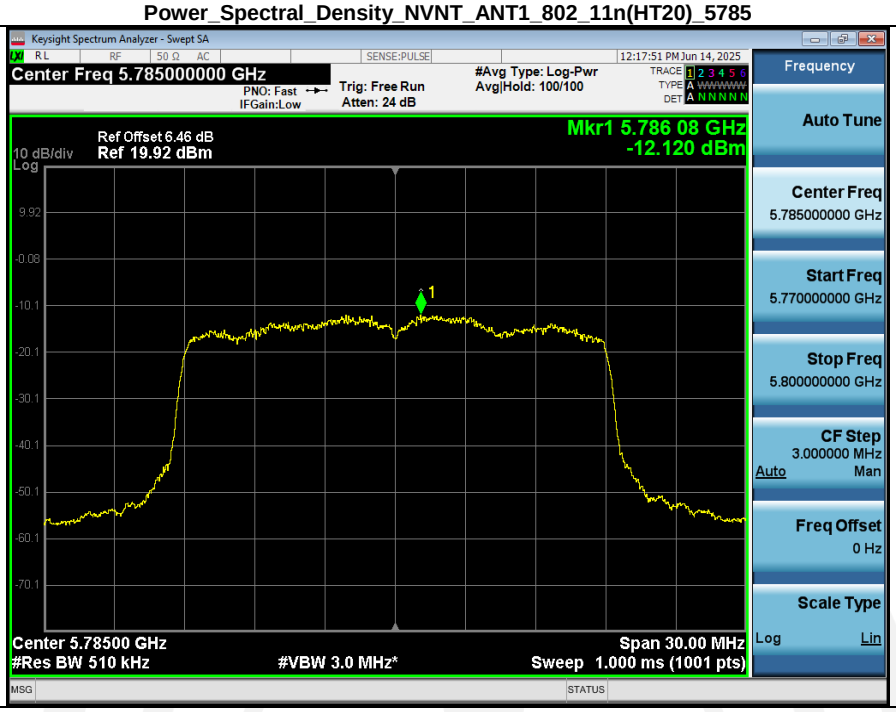
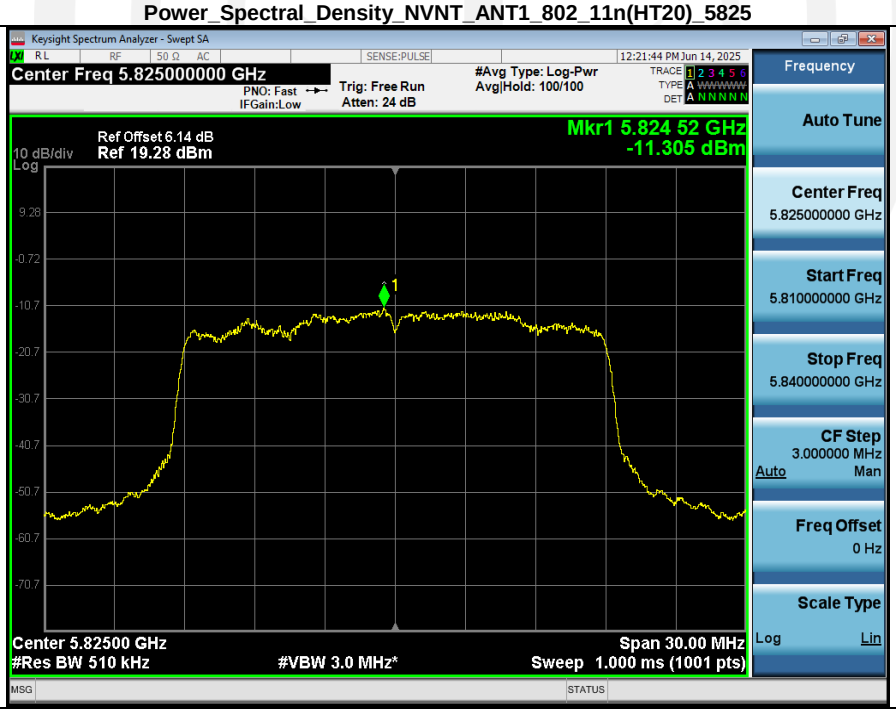
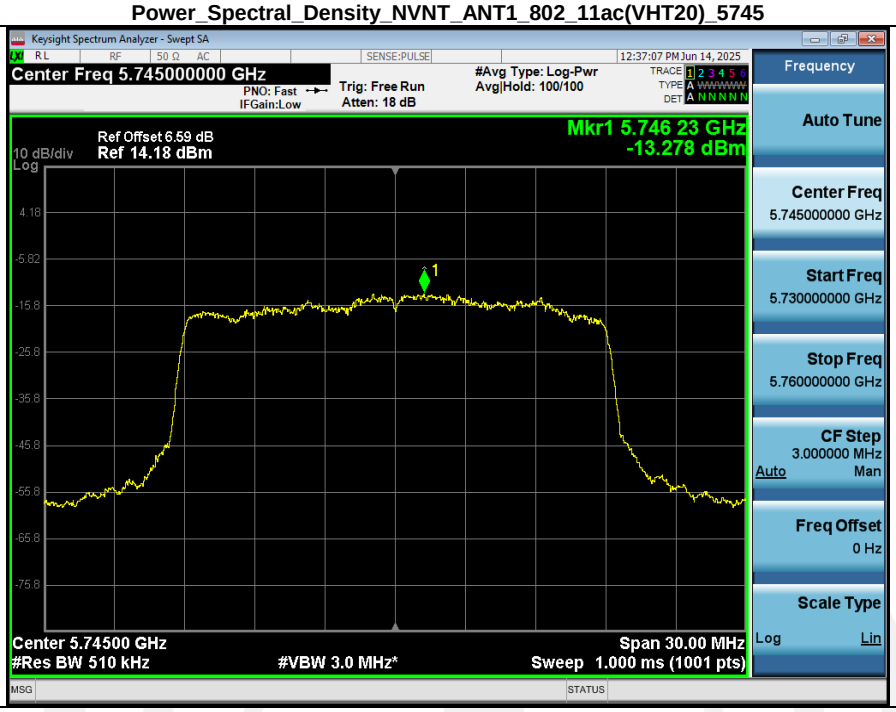


Power_Spectral_Density_NVNT_ANT1_802_11n(HT20)_5825



Power_Spectral_Density_NVNT_ANT1_802_11ac(VHT20)_5745



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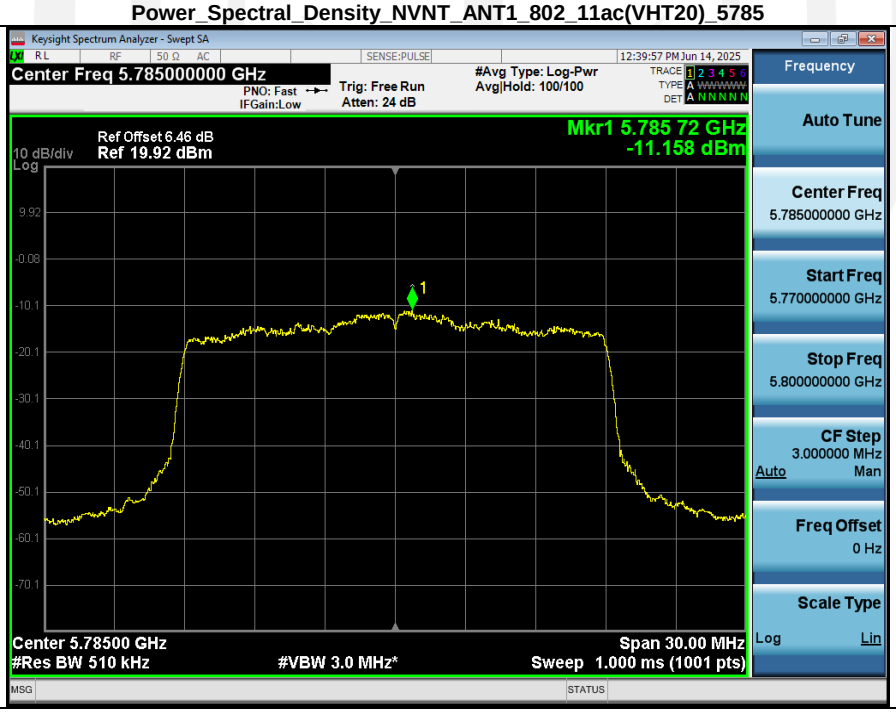

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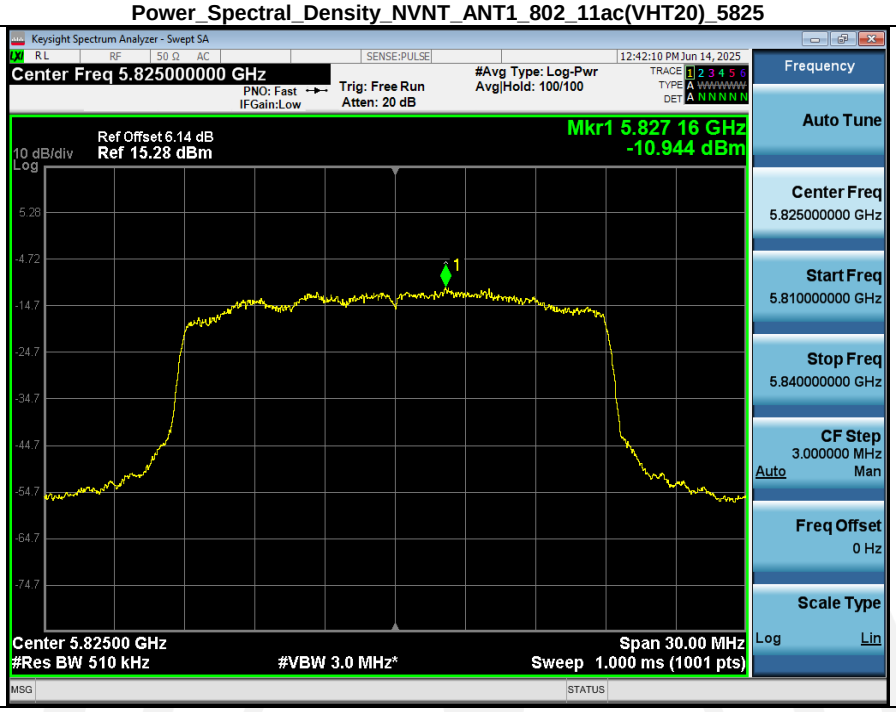

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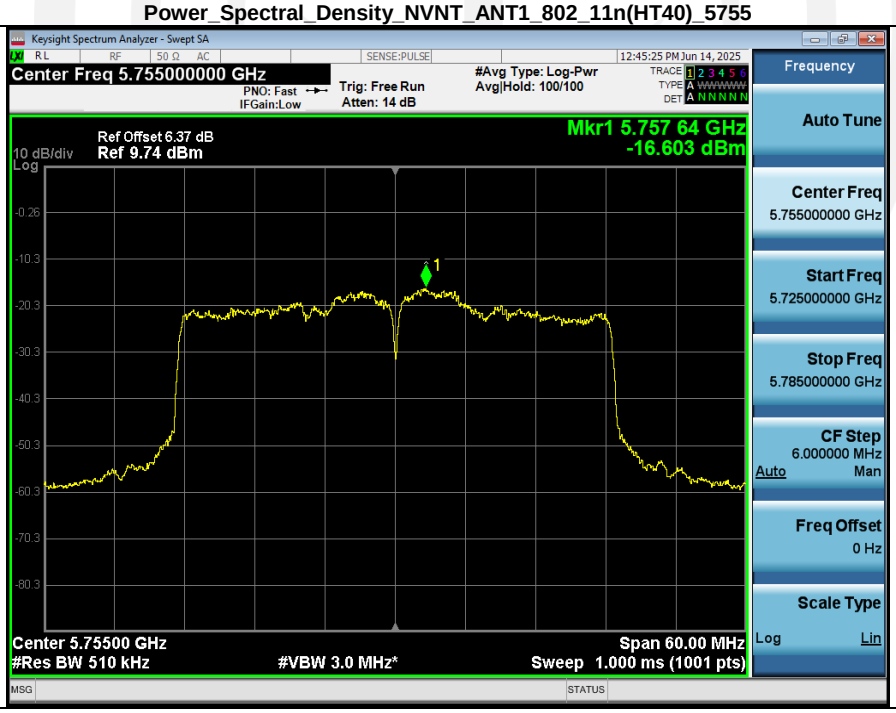
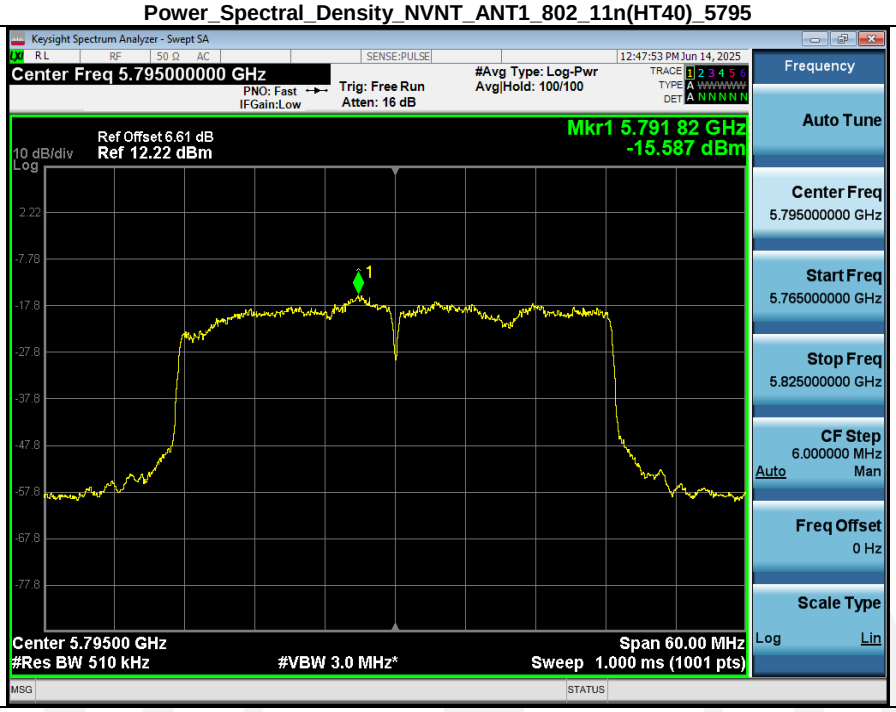
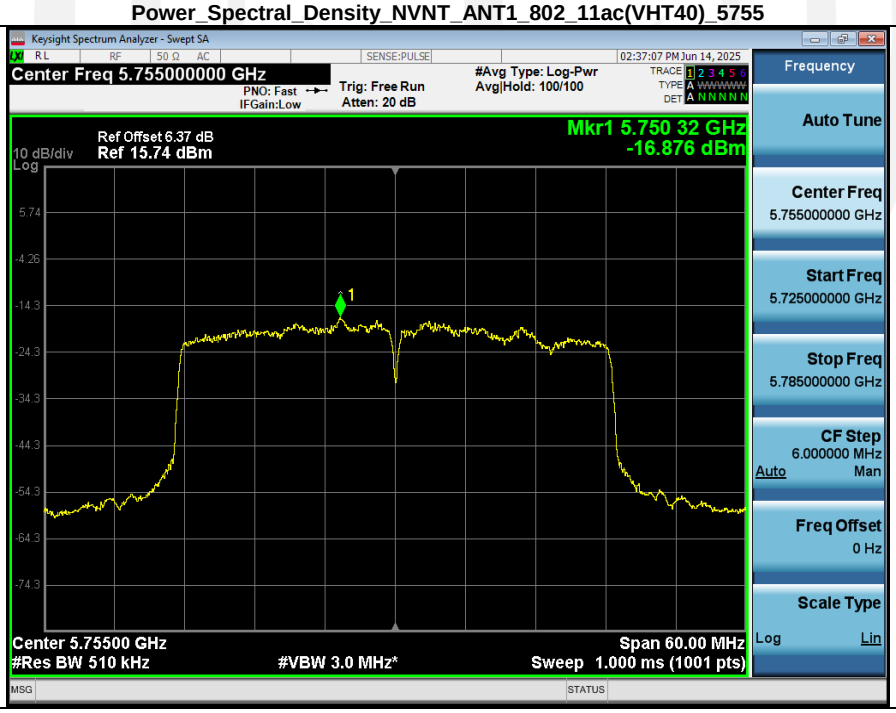


Power_Spectral_Density_NVNT_ANT1_802_11n(HT40)_5795



Power_Spectral_Density_NVNT_ANT1_802_11ac(VHT40)_5755



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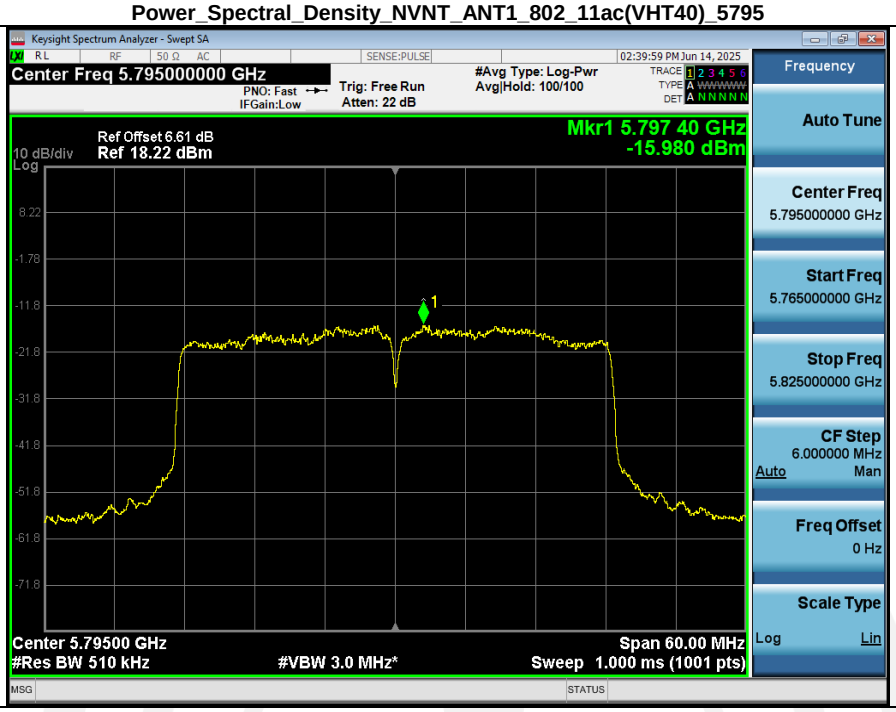

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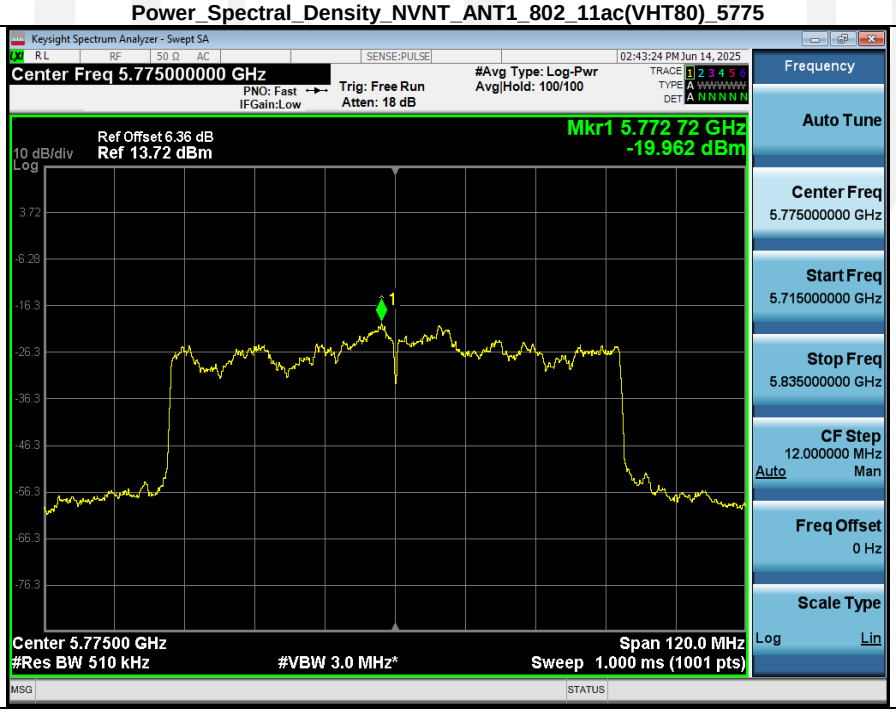
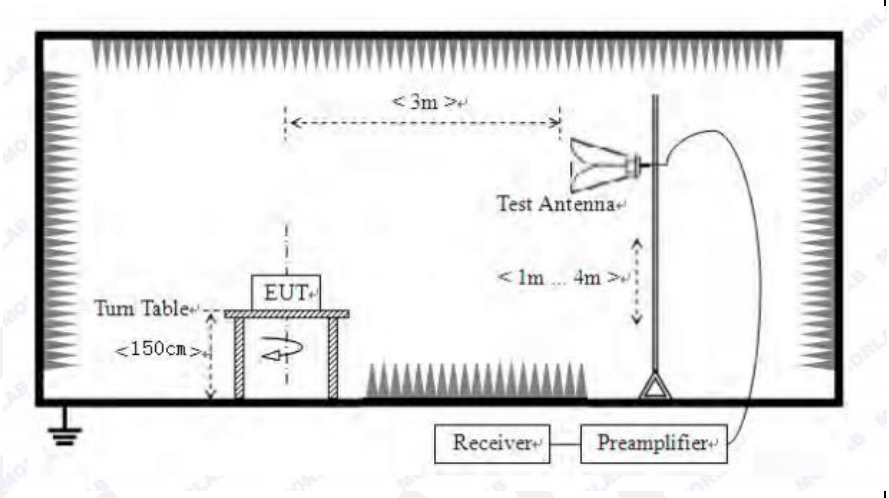


4.6 Band Edge

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 E Section 15.407 and 15.205, RSS-Gen §8.9</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.10:2013</td></tr>
<tr><td>Test site:</td><td>Measurement Distance: 3m (Semi-Anechoic Chamber)</td></tr>
<tr><td>Receiver setup:</td><td>
<table>
<tr><th>Frequency</th><th>Detector</th><th>RBW</th><th>VBW</th><th>Remark</th></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>AV</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><th>Frequency</th><th>Limit (dBuV/m @3m)</th><th>Remark</th></tr>
<tr><td>30MHz-88MHz</td><td>40.0</td><td>Quasi-peak Value</td></tr>
<tr><td>88MHz-216MHz</td><td>43.5</td><td>Quasi-peak Value</td></tr>
<tr><td>216MHz-960MHz</td><td>46.0</td><td>Quasi-peak Value</td></tr>
<tr><td>960MHz-1GHz</td><td>54.0</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>54.0</td><td>Average Value</td></tr>
<tr><td>68.2</td><td>Peak Value</td></tr>
</table>
Undesirable emission limits:
(1) For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.
(2) For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.
(3) For transmitters operating in the 5.47-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of −27 dBm/MHz.
(4) For transmitters operating in the 5.725-5.85 GHz band:
All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
</td></tr>
<tr><td>Test Procedure:</td><td>
a. The EUT was placed on the top of a rotating table 1.5 m above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values
</td></tr>
</table>

	of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test setup:	Above 1GHz 
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Remark:

According to KDB 789033 D02 v02r01 section G) 1) (d), for For measurements above 1000 MHz @ 3m distance, the limit of field strength is computed as follows:

E[dBuV/m] = EIRP[dBm] + 95.2,

For example, if EIRP = -27dBm

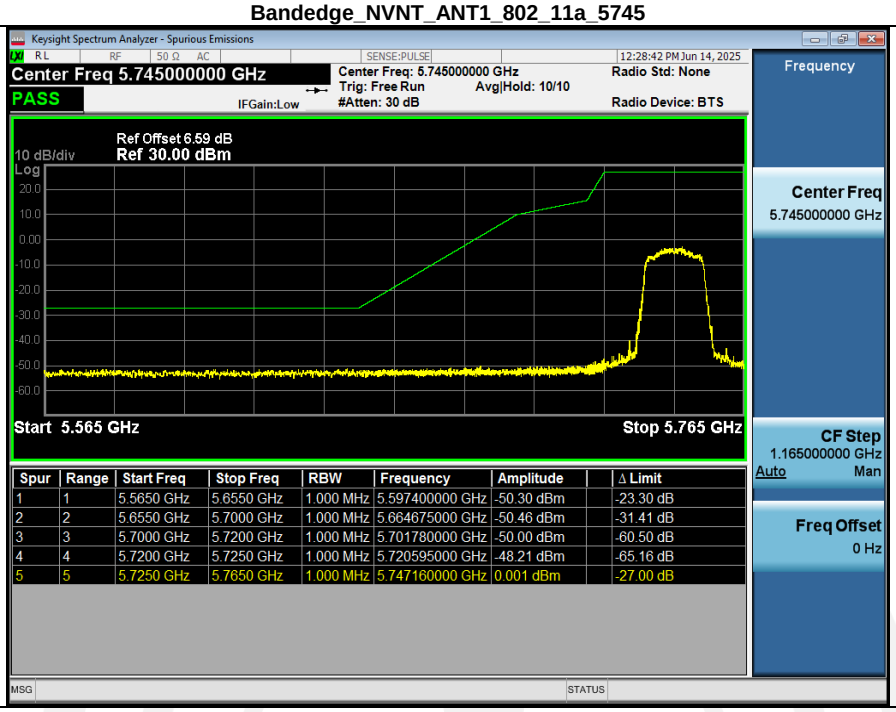
E[dBuV/m] = -27 + 95.2 = 68.2dBuV/m.

Measurement Data:

Band4

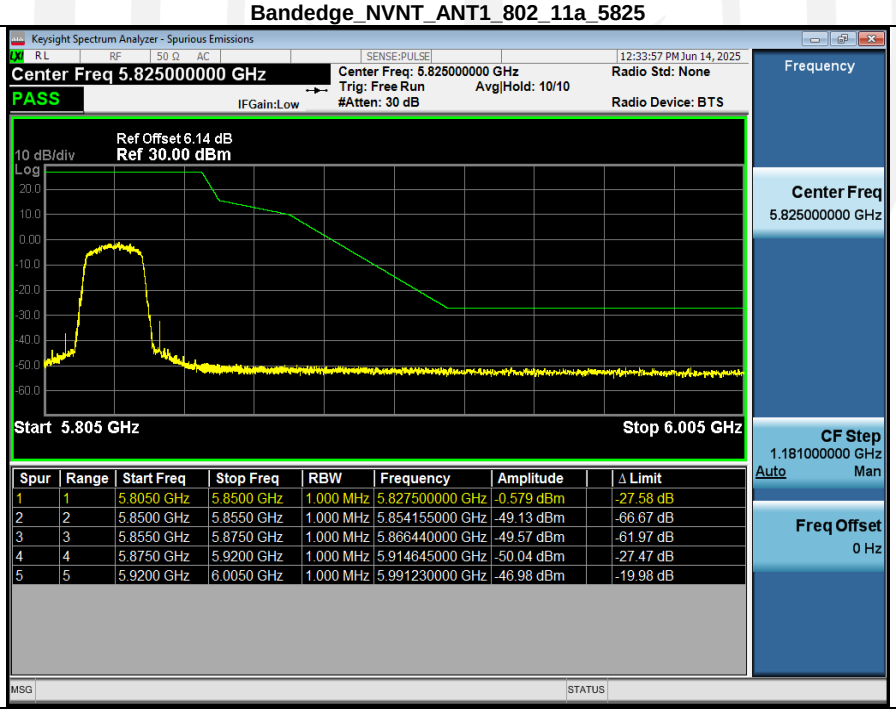
Condition	Antenna	Modulation	TX_Frequency (MHz)	Frequency Area(MHz)	Frequency(MHz)	Amplitude(dBm)	Limit(dBm)	Result
NVNT	ANT1	802.11a	LCH	5565-5655	5597.400	-50.30	-27.00	Pass
NVNT	ANT1	802.11a	LCH	5655-5700	5664.675	-50.46	-19.04	Pass
NVNT	ANT1	802.11a	LCH	5700-5720	5701.780	-50.00	10.50	Pass
NVNT	ANT1	802.11a	LCH	5720-5725	5720.595	-48.21	16.96	Pass
NVNT	ANT1	802.11a	HCH	5850-5855	5854.155	-49.13	17.53	Pass
NVNT	ANT1	802.11a	HCH	5855-5875	5866.440	-49.57	12.40	Pass
NVNT	ANT1	802.11a	HCH	5875-5920	5914.645	-50.04	-22.60	Pass
NVNT	ANT1	802.11a	HCH	5920-6005	5991.230	-46.98	-27.00	Pass
NVNT	ANT1	802.11n(HT20)	LCH	5565-5655	5567.520	-50.67	-27.00	Pass
NVNT	ANT1	802.11n(HT20)	LCH	5655-5700	5660.310	-50.74	-22.63	Pass
NVNT	ANT1	802.11n(HT20)	LCH	5700-5720	5705.140	-50.13	11.44	Pass
NVNT	ANT1	802.11n(HT20)	LCH	5720-5725	5724.685	-41.21	26.28	Pass
NVNT	ANT1	802.11n(HT20)	HCH	5850-5855	5854.635	-48.05	16.43	Pass
NVNT	ANT1	802.11n(HT20)	HCH	5855-5875	5874.720	-49.66	10.08	Pass
NVNT	ANT1	802.11n(HT20)	HCH	5875-5920	5907.895	-49.97	-17.05	Pass
NVNT	ANT1	802.11n(HT20)	HCH	5920-6005	5927.650	-46.03	-27.00	Pass
NVNT	ANT1	802.11ac(VHT20)	LCH	5565-5655	5591.370	-50.68	-27.00	Pass
NVNT	ANT1	802.11ac(VHT20)	LCH	5655-5700	5659.725	-50.79	-23.11	Pass
NVNT	ANT1	802.11ac(VHT20)	LCH	5700-5720	5702.540	-49.72	10.71	Pass
NVNT	ANT1	802.11ac(VHT20)	LCH	5720-5725	5720.325	-48.32	16.34	Pass
NVNT	ANT1	802.11ac(VHT20)	HCH	5850-5855	5852.870	-48.89	20.46	Pass
NVNT	ANT1	802.11ac(VHT20)	HCH	5855-5875	5871.660	-48.41	10.94	Pass
NVNT	ANT1	802.11ac(VHT20)	HCH	5875-5920	5914.375	-50.14	-22.38	Pass
NVNT	ANT1	802.11ac(VHT20)	HCH	5920-6005	5923.910	-46.67	-27.00	Pass
NVNT	ANT1	802.11n(HT40)	LCH	5595-5655	5616.600	-50.93	-27.00	Pass
NVNT	ANT1	802.11n(HT40)	LCH	5655-5700	5671.065	-50.06	-13.79	Pass
NVNT	ANT1	802.11n(HT40)	LCH	5700-5720	5717.640	-40.79	14.94	Pass
NVNT	ANT1	802.11n(HT40)	LCH	5720-5725	5721.370	-38.42	18.72	Pass
NVNT	ANT1	802.11n(HT40)	HCH	5850-5855	5853.270	-48.55	19.54	Pass
NVNT	ANT1	802.11n(HT40)	HCH	5855-5875	5873.740	-49.00	10.35	Pass
NVNT	ANT1	802.11n(HT40)	HCH	5875-5920	5917.480	-49.60	-24.93	Pass
NVNT	ANT1	802.11n(HT40)	HCH	5920-5955	5922.730	-44.88	-27.00	Pass
NVNT	ANT1	802.11ac(VHT40)	LCH	5595-5655	5632.200	-50.30	-27.00	Pass
NVNT	ANT1	802.11ac(VHT40)	LCH	5655-5700	5656.215	-51.00	-26.00	Pass
NVNT	ANT1	802.11ac(VHT40)	LCH	5700-5720	5718.640	-46.83	15.22	Pass
NVNT	ANT1	802.11ac(VHT40)	LCH	5720-5725	5720.745	-45.14	17.30	Pass
NVNT	ANT1	802.11ac(VHT40)	HCH	5850-5855	5854.735	-48.89	16.20	Pass
NVNT	ANT1	802.11ac(VHT40)	HCH	5855-5875	5868.200	-49.14	11.90	Pass
NVNT	ANT1	802.11ac(VHT40)	HCH	5875-5920	5919.010	-49.81	-26.19	Pass
NVNT	ANT1	802.11ac(VHT40)	HCH	5920-5955	5926.790	-45.21	-27.00	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5650-5655	5651.565	-50.86	-27.00	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5655-5700	5679.345	-48.24	-6.98	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5700-5720	5710.640	-44.05	12.98	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5720-5725	5721.860	-43.00	19.84	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5850-5855	5853.600	-45.06	18.79	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5855-5875	5869.460	-45.88	11.55	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5875-5920	5891.380	-48.82	-3.47	Pass
NVNT	ANT1	802.11ac(VHT80)	MCH	5920-5925	5921.225	-44.93	-27.00	Pass

Bandedge_NVNT_ANT1_802_11a_5745



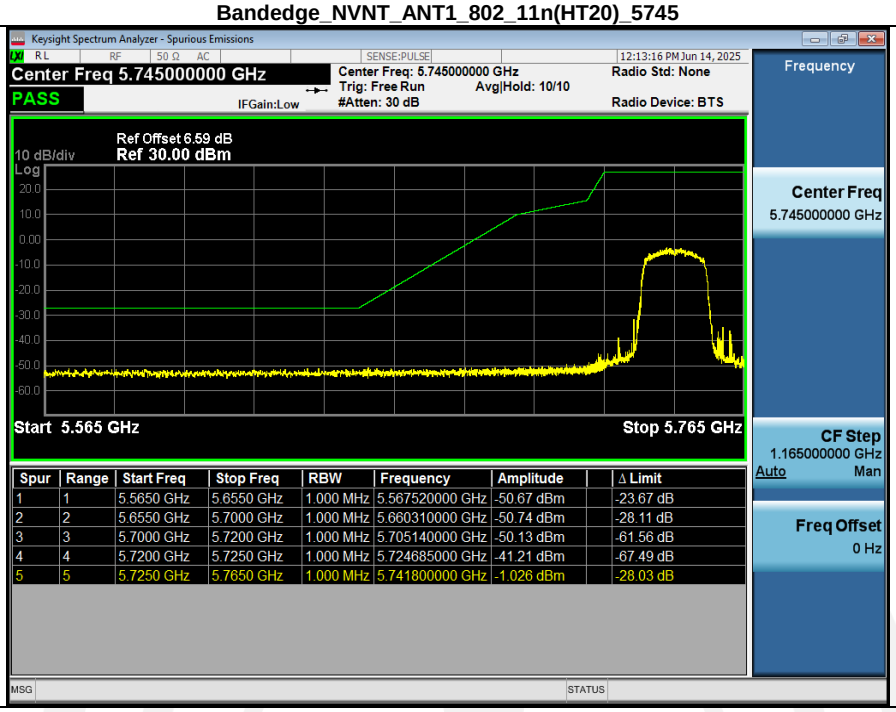
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	5.5650 GHz	5.6550 GHz	1.000 MHz	5.597400000 GHz	-50.30 dBm	-23.30 dB
2	2	5.6550 GHz	5.7000 GHz	1.000 MHz	5.664675000 GHz	-50.46 dBm	-31.41 dB
3	3	5.7000 GHz	5.7200 GHz	1.000 MHz	5.701780000 GHz	-50.00 dBm	-60.50 dB
4	4	5.7200 GHz	5.7250 GHz	1.000 MHz	5.720595000 GHz	-48.21 dBm	-65.16 dB
5	5	5.7250 GHz	5.7650 GHz	1.000 MHz	5.747160000 GHz	0.001 dBm	-27.00 dB

Bandedge_NVNT_ANT1_802_11a_5825



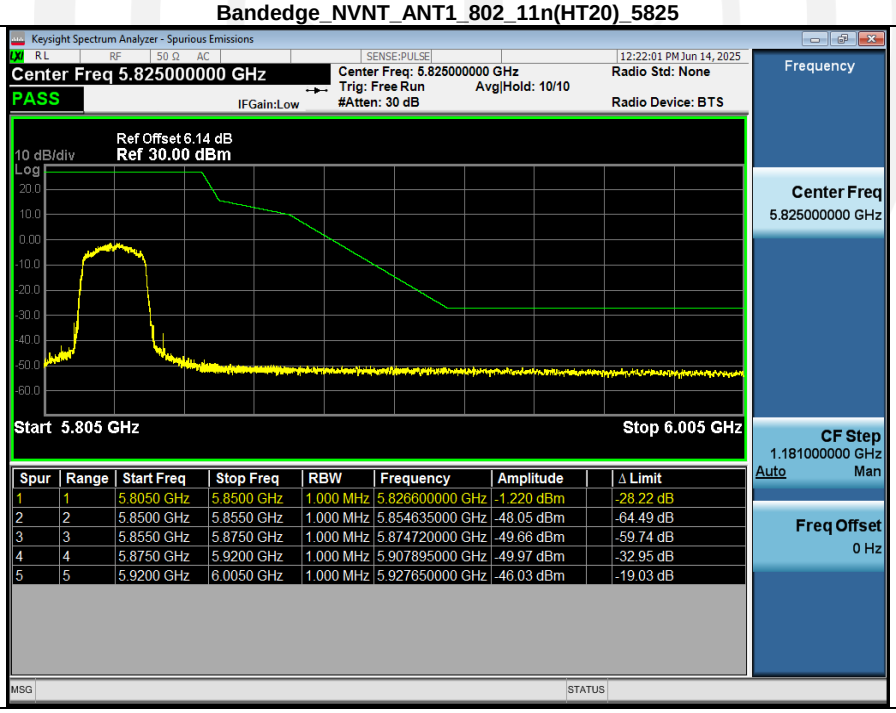
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	5.8050 GHz	5.8500 GHz	1.000 MHz	5.827500000 GHz	-0.579 dBm	-27.58 dB
2	2	5.8500 GHz	5.8550 GHz	1.000 MHz	5.854155000 GHz	-49.13 dBm	-66.67 dB
3	3	5.8550 GHz	5.8750 GHz	1.000 MHz	5.866440000 GHz	-49.57 dBm	-61.97 dB
4	4	5.8750 GHz	5.9200 GHz	1.000 MHz	5.914645000 GHz	-50.04 dBm	-27.47 dB
5	5	5.9200 GHz	6.0050 GHz	1.000 MHz	5.991230000 GHz	-46.98 dBm	-19.98 dB

Bandedge_NVNT_ANT1_802_11n(HT20)_5745



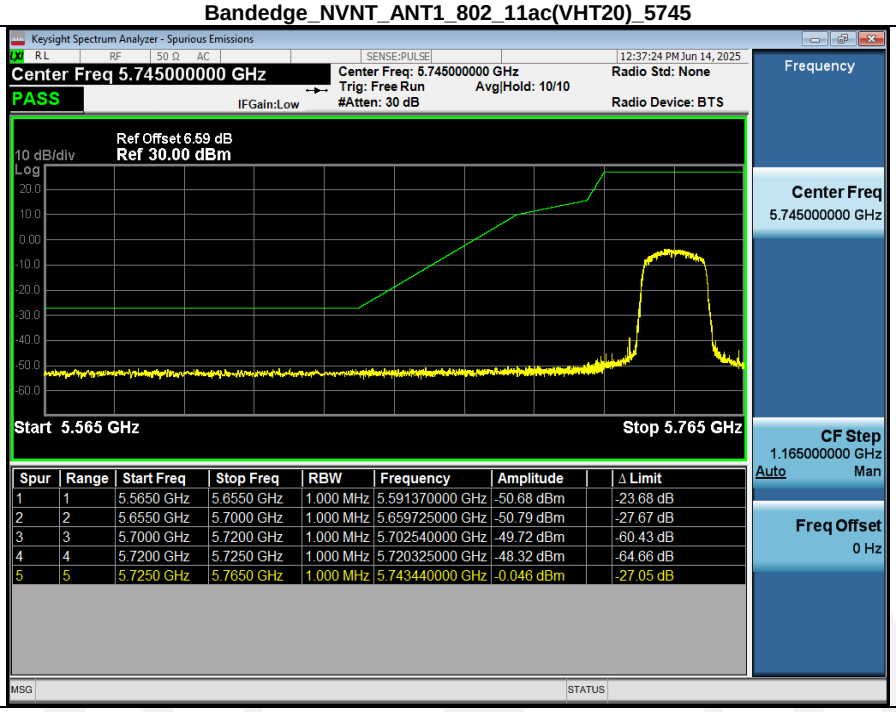
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	5.5650 GHz	5.6550 GHz	1.000 MHz	5.567520000 GHz	-50.67 dBm	-23.67 dB
2	2	5.6550 GHz	5.7000 GHz	1.000 MHz	5.660310000 GHz	-50.74 dBm	-28.11 dB
3	3	5.7000 GHz	5.7200 GHz	1.000 MHz	5.705140000 GHz	-50.13 dBm	-61.56 dB
4	4	5.7200 GHz	5.7250 GHz	1.000 MHz	5.724685000 GHz	-41.21 dBm	-67.49 dB
5	5	5.7250 GHz	5.7650 GHz	1.000 MHz	5.741800000 GHz	-1.026 dBm	-28.03 dB

Bandedge_NVNT_ANT1_802_11n(HT20)_5825



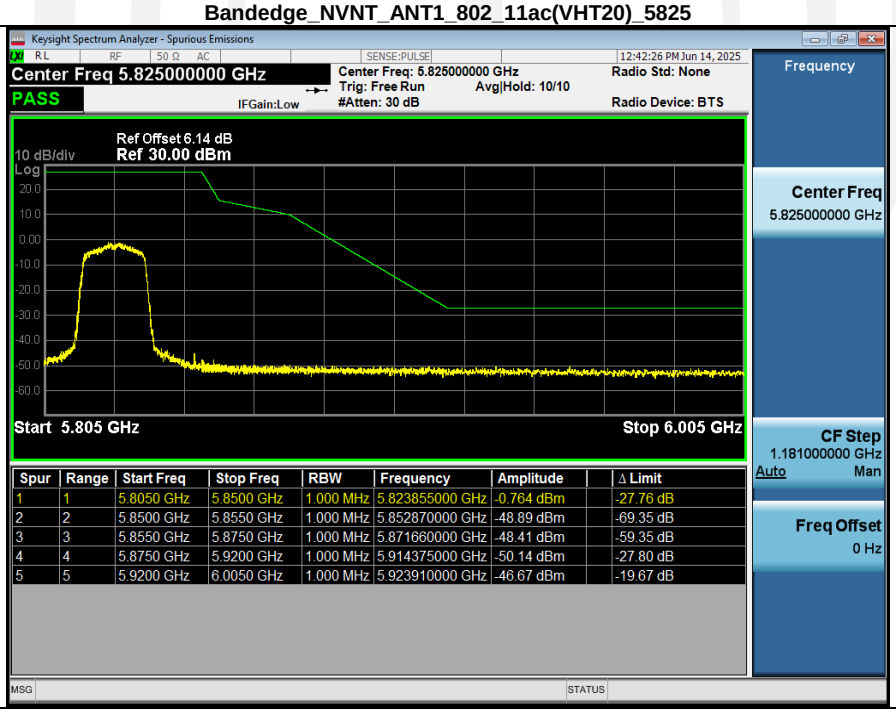
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	5.8050 GHz	5.8500 GHz	1.000 MHz	5.826600000 GHz	-1.220 dBm	-28.22 dB
2	2	5.8500 GHz	5.8550 GHz	1.000 MHz	5.854635000 GHz	-48.05 dBm	-64.49 dB
3	3	5.8550 GHz	5.8750 GHz	1.000 MHz	5.874720000 GHz	-49.66 dBm	-59.74 dB
4	4	5.8750 GHz	5.9200 GHz	1.000 MHz	5.907895000 GHz	-49.97 dBm	-32.95 dB
5	5	5.9200 GHz	6.0050 GHz	1.000 MHz	5.927650000 GHz	-46.03 dBm	-19.03 dB

Bandedge_NVNT_ANT1_802_11ac(VHT20)_5745



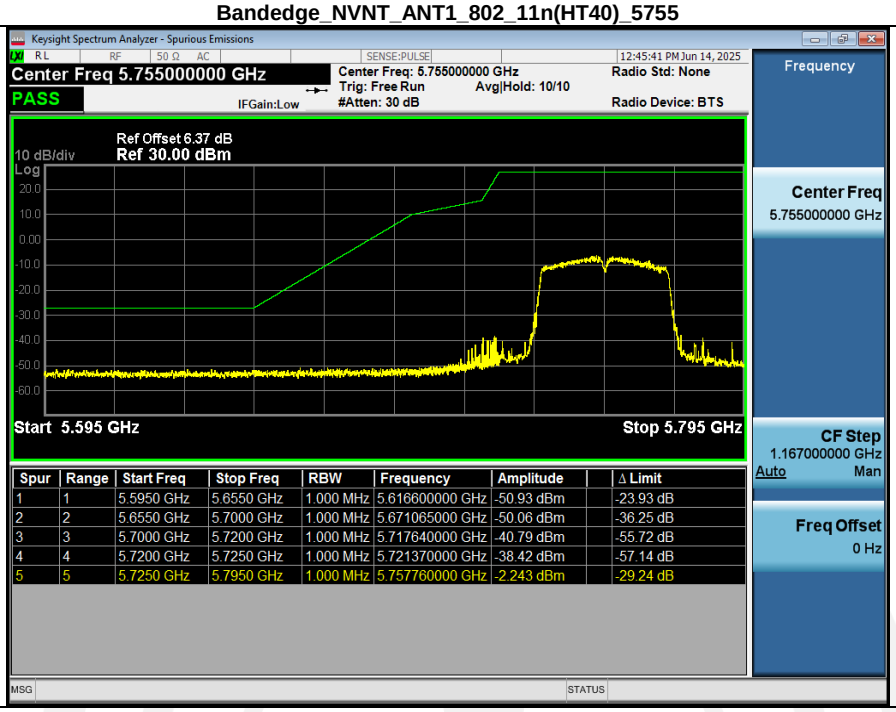
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	5.5650 GHz	5.6550 GHz	1.000 MHz	5.591370000 GHz	-50.68 dBm	-23.68 dB
2	2	5.6550 GHz	5.7000 GHz	1.000 MHz	5.659725000 GHz	-50.79 dBm	-27.67 dB
3	3	5.7000 GHz	5.7200 GHz	1.000 MHz	5.702540000 GHz	-49.72 dBm	-60.43 dB
4	4	5.7200 GHz	5.7250 GHz	1.000 MHz	5.720325000 GHz	-48.32 dBm	-64.66 dB
5	5	5.7250 GHz	5.7650 GHz	1.000 MHz	5.743440000 GHz	-0.046 dBm	-27.05 dB

Bandedge_NVNT_ANT1_802_11ac(VHT20)_5825



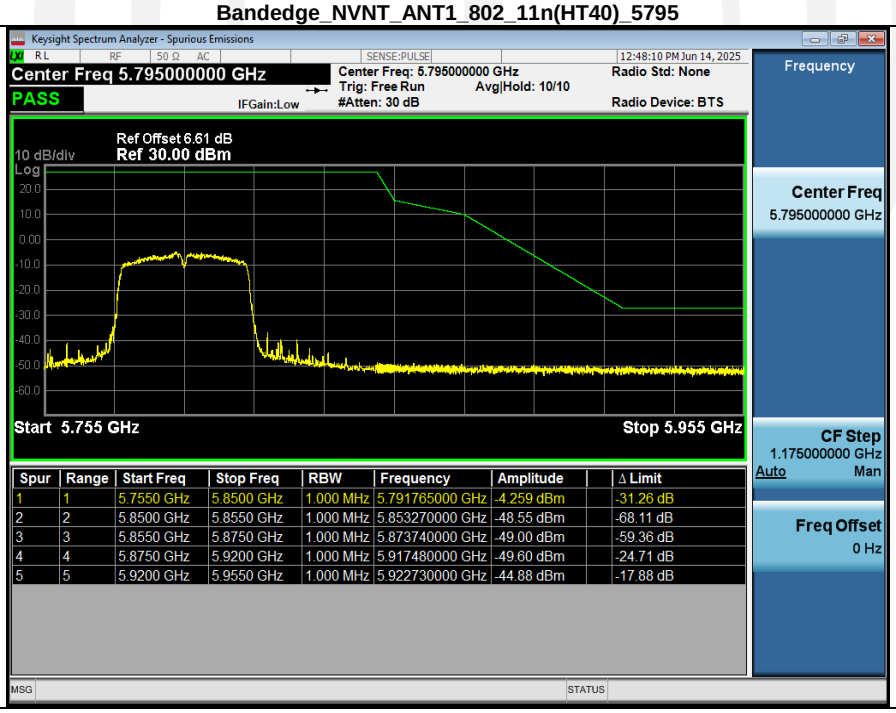
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	5.8050 GHz	5.8500 GHz	1.000 MHz	5.823855000 GHz	-0.764 dBm	-27.76 dB
2	2	5.8500 GHz	5.8550 GHz	1.000 MHz	5.852870000 GHz	-48.89 dBm	-69.35 dB
3	3	5.8550 GHz	5.8750 GHz	1.000 MHz	5.871660000 GHz	-48.41 dBm	-59.35 dB
4	4	5.8750 GHz	5.9200 GHz	1.000 MHz	5.914375000 GHz	-50.14 dBm	-27.80 dB
5	5	5.9200 GHz	6.0050 GHz	1.000 MHz	5.923910000 GHz	-46.67 dBm	-19.67 dB

Bandedge_NVNT_ANT1_802_11n(HT40)_5755



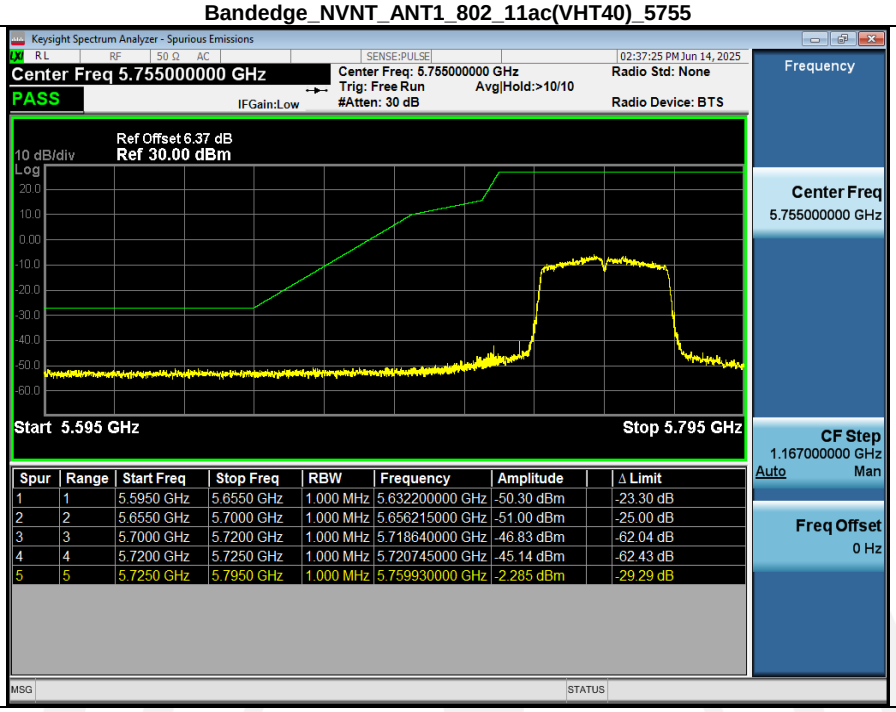
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	5.5950 GHz	5.6550 GHz	1.000 MHz	5.616600000 GHz	-50.93 dBm	-23.93 dB
2	2	5.6550 GHz	5.7000 GHz	1.000 MHz	5.671065000 GHz	-50.06 dBm	-36.25 dB
3	3	5.7000 GHz	5.7200 GHz	1.000 MHz	5.717640000 GHz	-40.79 dBm	-55.72 dB
4	4	5.7200 GHz	5.7250 GHz	1.000 MHz	5.721370000 GHz	-38.42 dBm	-57.14 dB
5	5	5.7250 GHz	5.7950 GHz	1.000 MHz	5.757760000 GHz	-2.243 dBm	-29.24 dB

Bandedge_NVNT_ANT1_802_11n(HT40)_5795



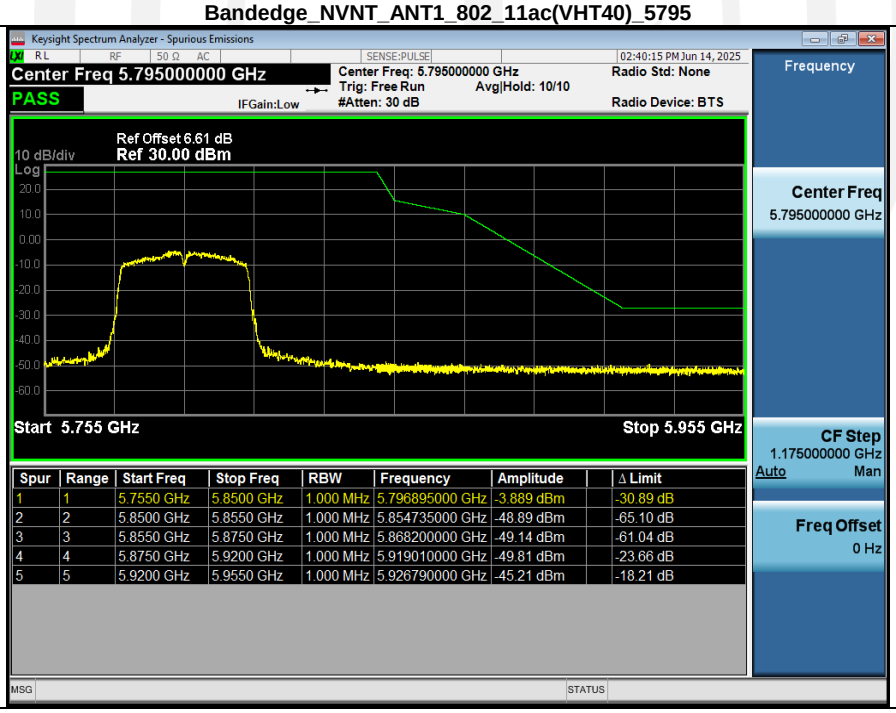
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	5.7550 GHz	5.8500 GHz	1.000 MHz	5.791765000 GHz	-4.259 dBm	-31.26 dB
2	2	5.8500 GHz	5.8550 GHz	1.000 MHz	5.853270000 GHz	-48.55 dBm	-68.11 dB
3	3	5.8550 GHz	5.8750 GHz	1.000 MHz	5.873740000 GHz	-49.00 dBm	-59.36 dB
4	4	5.8750 GHz	5.9200 GHz	1.000 MHz	5.917480000 GHz	-49.60 dBm	-24.71 dB
5	5	5.9200 GHz	5.9550 GHz	1.000 MHz	5.922730000 GHz	-44.88 dBm	-17.88 dB

Bandedge_NVNT_ANT1_802_11ac(VHT40)_5755



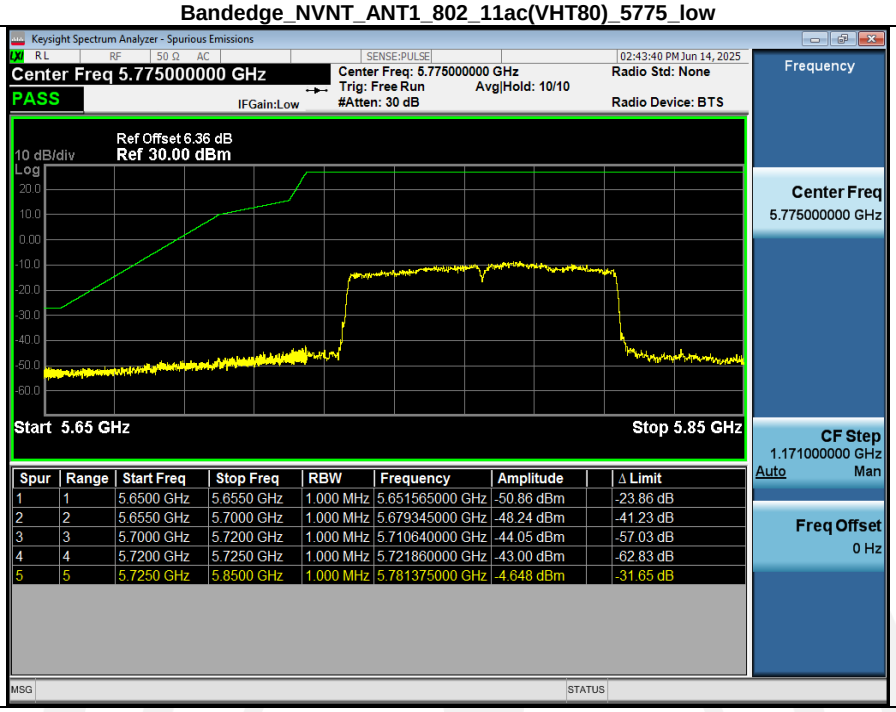
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	5.5950 GHz	5.6550 GHz	1.000 MHz	5.632200000 GHz	-50.30 dBm	-23.30 dB
2	2	5.6550 GHz	5.7000 GHz	1.000 MHz	5.656215000 GHz	-51.00 dBm	-25.00 dB
3	3	5.7000 GHz	5.7200 GHz	1.000 MHz	5.718640000 GHz	-46.83 dBm	-62.04 dB
4	4	5.7200 GHz	5.7250 GHz	1.000 MHz	5.720745000 GHz	-45.14 dBm	-62.43 dB
5	5	5.7250 GHz	5.7950 GHz	1.000 MHz	5.759930000 GHz	-2.285 dBm	-29.29 dB

Bandedge_NVNT_ANT1_802_11ac(VHT40)_5795



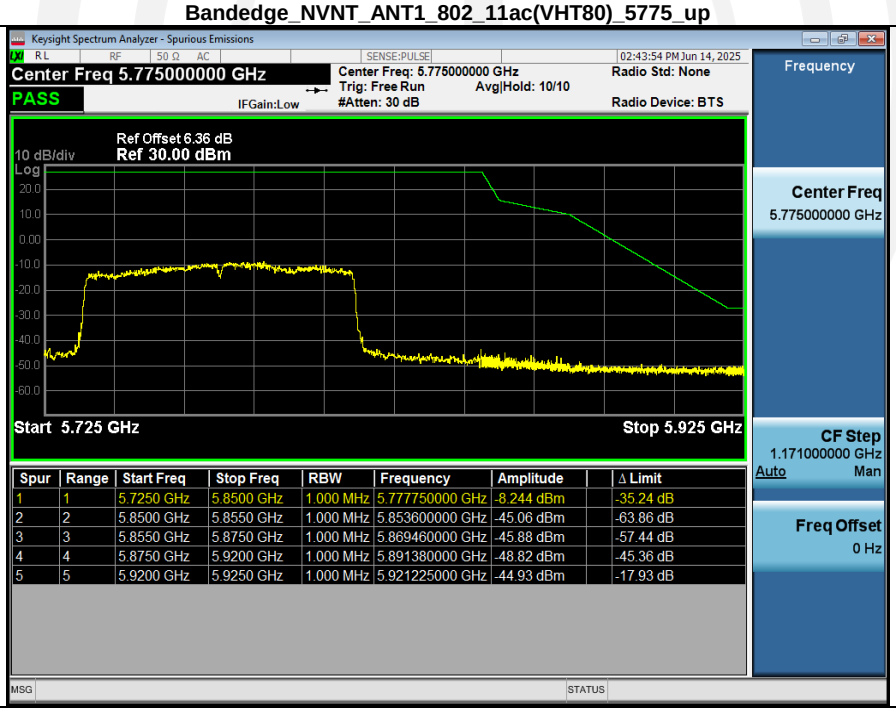
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	5.7550 GHz	5.8500 GHz	1.000 MHz	5.796895000 GHz	-3.889 dBm	-30.89 dB
2	2	5.8500 GHz	5.8550 GHz	1.000 MHz	5.854735000 GHz	-48.89 dBm	-65.10 dB
3	3	5.8550 GHz	5.8750 GHz	1.000 MHz	5.868200000 GHz	-49.14 dBm	-61.04 dB
4	4	5.8750 GHz	5.9200 GHz	1.000 MHz	5.919010000 GHz	-49.81 dBm	-23.66 dB
5	5	5.9200 GHz	5.9550 GHz	1.000 MHz	5.926790000 GHz	-45.21 dBm	-18.21 dB

Bandedge_NVNT_ANT1_802_11ac(VHT80)_5775_low



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	5.6500 GHz	5.6550 GHz	1.000 MHz	5.651565000 GHz	-50.86 dBm	-23.86 dB
2	2	5.6550 GHz	5.7000 GHz	1.000 MHz	5.679345000 GHz	-48.24 dBm	-41.23 dB
3	3	5.7000 GHz	5.7200 GHz	1.000 MHz	5.710640000 GHz	-44.05 dBm	-57.03 dB
4	4	5.7200 GHz	5.7250 GHz	1.000 MHz	5.721860000 GHz	-43.00 dBm	-62.83 dB
5	5	5.7250 GHz	5.8500 GHz	1.000 MHz	5.781375000 GHz	-4.648 dBm	-31.65 dB

Bandedge_NVNT_ANT1_802_11ac(VHT80)_5775_up



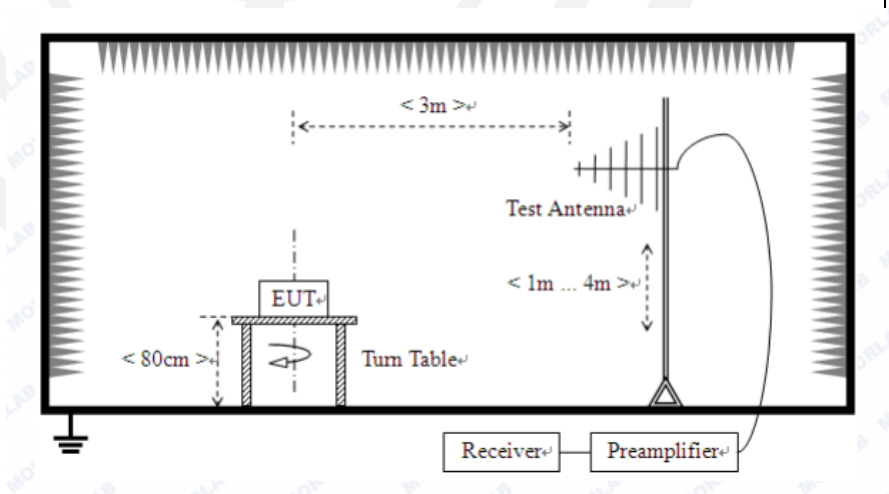
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	5.7250 GHz	5.8500 GHz	1.000 MHz	5.777750000 GHz	-8.244 dBm	-35.24 dB
2	2	5.8500 GHz	5.8550 GHz	1.000 MHz	5.853600000 GHz	-45.06 dBm	-63.86 dB
3	3	5.8550 GHz	5.8750 GHz	1.000 MHz	5.869460000 GHz	-45.88 dBm	-57.44 dB
4	4	5.8750 GHz	5.9200 GHz	1.000 MHz	5.891380000 GHz	-48.82 dBm	-45.36 dB
5	5	5.9200 GHz	5.9250 GHz	1.000 MHz	5.921225000 GHz	-44.93 dBm	-17.93 dB

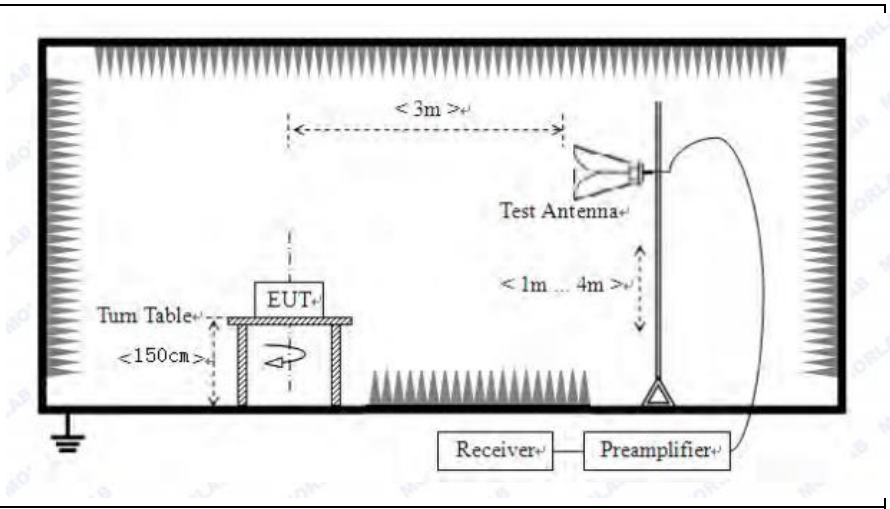
4.7 Radiated Emission

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.209 and 15.205, RSS-Gen §8.9</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.10:2013</td></tr>
<tr><td>Test Frequency Range:</td><td>30MHz to 40GHz</td></tr>
<tr><td>Test site:</td><td>Measurement Distance: 3m (Semi-Anechoic Chamber)</td></tr>
<tr><td>Receiver setup:</td><td>
<table>
<tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Value</td></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>AV</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><td>Frequency</td><td>Limit (dBuV/m @3m)</td><td>Remark</td></tr>
<tr><td>30MHz-88MHz</td><td>40.0</td><td>Quasi-peak Value</td></tr>
<tr><td>88MHz-216MHz</td><td>43.5</td><td>Quasi-peak Value</td></tr>
<tr><td>216MHz-960MHz</td><td>46.0</td><td>Quasi-peak Value</td></tr>
<tr><td>960MHz-1GHz</td><td>54.0</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>74.0</td><td>Peak Value</td></tr>
<tr><td>54.0</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Test Procedure:</td><td>
Substitution method was performed to determine the actual ERP emission levels of the EUT.
The following test procedure as below:

1>.Below 1GHz test procedure:
1. The EUT was placed on the top of a rotating table (0.8m for below 1GHz and 1.5 meters for above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

2>.Above 1GHz test procedure:
1. On the test site as test setup graph above,the EUT shall be placed at the 1.5m support on the turntable and in the position closest to normal use as declared by the provider.
2. The test antenna shall be oriented initially for vertical polarization and shall be chosen to correspond to the frequency of the transmitter.The output of the test antenna shall be connected to the measuring receiver.
3. The transmitter shall be switched on, if possible, without modulation and the measuring receiver shall be tuned to the frequency of the
</td></tr>
</table>

	transmitter under test. 4. The test antenna shall be raised and lowered from 1m to 4m until a maximum signal level is detected by the measuring receiver. Then the turntable should be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver. 5. Repeat step 4 for test frequency with the test antenna polarized horizontally. 6. Remove the transmitter and replace it with a substitution antenna 7. Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a nonradiating cable. With the antennas at both ends vertically polarized, and with the signal generator tuned to a particular test frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output. 8. Repeat step 7 with both antennas horizontally polarized for each test frequency. 9. Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps 7 and 8 by the power loss in the cable between the generator and the antenna, and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna by the following formula: EIRP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBi) where: Pg is the generator output power into the substitution antenna.
Test setup:	Below 1GHz  Above 1GHz

	
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Measurement Data:

Below 1GHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
33.13	48.23	11.49	0.83	30.32	30.23	40	-9.77	Vertical
55.12	41.06	12.40	1.28	30.43	24.31	40	-15.69	Vertical
121.07	46.44	9.50	1.46	29.67	27.72	43.5	-15.78	Vertical
172.57	43.47	8.94	2.14	29.75	24.80	43.5	-18.70	Vertical
440.82	37.02	16.47	3.23	29.59	27.13	46	-18.87	Vertical
860.66	33.39	22.01	4.87	29.32	30.94	46	-15.06	Vertical
64.54	36.44	9.05	1.22	30.21	16.50	40	-23.50	Horizontal
100.25	33.91	12.21	1.67	30.18	17.61	43.5	-25.89	Horizontal
270.05	45.94	12.55	2.24	29.81	30.91	46	-15.09	Horizontal
351.16	36.53	14.54	2.66	29.77	23.96	46	-22.04	Horizontal
627.96	35.72	19.85	4.25	29.69	30.13	46	-15.87	Horizontal
955.80	41.48	22.96	5.48	29.52	40.41	46	-5.59	Horizontal

Above 1GHz:

802.11a 5745MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.82	50.62	11.73	14.77	32.77	44.34	68.2	-23.86	Vertical
15540.71	51.43	12.24	17.67	34.71	46.63	74	-27.37	Vertical
10360.11	52.20	9.63	14.63	33.12	43.34	68.2	-24.86	Horizontal
15540.83	53.03	8.66	18.09	34.72	45.06	74	-28.94	Horizontal

802.11a 5785MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.92	50.19	11.39	15.11	32.77	43.92	68.2	-24.28	Vertical
15540.90	51.95	12.10	17.96	34.54	47.46	74	-26.54	Vertical
10360.95	52.09	9.48	14.64	32.84	43.37	68.2	-24.83	Horizontal
15540.77	53.44	8.87	17.66	34.72	45.26	74	-28.74	Horizontal

802.11a 5825MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.94	50.46	11.37	14.75	32.76	43.82	68.2	-24.38	Vertical
15540.98	51.74	12.11	17.84	34.63	47.06	74	-26.94	Vertical
10360.56	52.18	9.63	14.71	32.95	43.57	68.2	-24.63	Horizontal
15540.13	53.46	8.67	17.98	34.51	45.60	74	-28.40	Horizontal

802.11n(HT20) 5745MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.50	50.39	11.49	14.71	32.80	43.78	68.2	-24.42	Vertical
15540.80	51.20	12.13	18.07	34.51	46.89	74	-27.11	Vertical
10360.85	52.55	9.75	15.04	33.08	44.27	68.2	-23.93	Horizontal
15540.11	53.67	8.81	17.90	34.57	45.81	74	-28.19	Horizontal

802.11n(HT20) 5785MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.95	50.47	11.38	14.98	33.01	43.82	68.2	-24.38	Vertical
15540.54	51.44	12.05	18.07	34.55	47.00	74	-27.00	Vertical
10360.09	52.24	9.75	14.89	33.09	43.79	68.2	-24.41	Horizontal
15540.18	53.63	8.85	17.82	34.84	45.46	74	-28.54	Horizontal

802.11n(HT20) 5825MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.22	50.79	11.29	14.69	32.93	43.84	68.2	-24.36	Vertical
15540.95	51.83	11.96	17.79	34.80	46.78	74	-27.22	Vertical
10360.11	52.73	9.88	14.96	32.82	44.76	68.2	-23.44	Horizontal
15540.47	53.06	8.91	17.89	34.77	45.09	74	-28.91	Horizontal

802.11ac(HT20) 5745MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.26	50.88	11.58	14.64	32.76	44.35	68.2	-23.85	Vertical
15540.35	51.52	11.96	18.09	34.53	47.04	74	-26.96	Vertical
10360.00	52.18	9.53	14.74	32.67	43.78	68.2	-24.42	Horizontal
15540.68	53.63	8.99	17.71	34.51	45.82	74	-28.18	Horizontal

802.11ac(HT20) 5785MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.76	50.30	11.67	14.91	32.76	44.13	68.2	-24.07	Vertical
15540.26	51.69	12.19	17.86	34.76	46.98	74	-27.02	Vertical
10360.76	52.00	9.64	15.09	32.91	43.83	68.2	-24.37	Horizontal
15540.93	53.22	8.63	17.68	34.71	44.82	74	-29.18	Horizontal

802.11ac(HT20) 5825MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.68	50.76	11.54	14.97	32.80	44.47	68.2	-23.73	Vertical
15540.90	51.31	12.02	17.96	34.55	46.74	74	-27.26	Vertical
10360.83	52.38	9.74	15.01	33.11	44.01	68.2	-24.19	Horizontal
15540.83	53.85	8.76	18.16	34.48	46.28	74	-27.72	Horizontal

802.11n(HT40) 5755MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.55	50.55	11.68	15.10	32.93	44.40	68.2	-23.80	Vertical
15540.97	51.19	12.20	18.05	34.60	46.84	74	-27.16	Vertical
10360.65	52.35	9.76	14.82	33.08	43.85	68.2	-24.35	Horizontal
15540.30	53.07	8.96	18.13	34.53	45.62	74	-28.38	Horizontal

802.11n(HT40) 5795MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.90	50.37	11.34	15.01	33.02	43.70	68.2	-24.50	Vertical
15540.71	51.33	12.12	18.00	34.49	46.96	74	-27.04	Vertical
10360.47	52.01	9.49	14.75	32.78	43.47	68.2	-24.73	Horizontal
15540.09	53.72	8.80	17.77	34.93	45.36	74	-28.64	Horizontal

802.11ac(HT40) 5755MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.45	50.28	11.43	14.95	33.10	43.56	68.2	-24.64	Vertical
15540.82	51.41	12.02	17.96	34.52	46.88	74	-27.12	Vertical
10360.79	52.15	9.77	14.64	32.68	43.89	68.2	-24.31	Horizontal
15540.99	53.06	8.77	18.10	34.82	45.11	74	-28.89	Horizontal

802.11ac(HT40) 5795MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.44	50.01	11.49	15.10	33.01	43.59	68.2	-24.61	Vertical
15540.51	51.94	12.22	17.89	34.55	47.51	74	-26.49	Vertical
10360.58	52.79	9.42	14.81	32.72	44.31	68.2	-23.89	Horizontal
15540.13	53.03	8.85	17.98	34.47	45.38	74	-28.62	Horizontal

802.11ac(HT80) 5775MHz

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.60	50.05	11.63	15.10	32.83	43.95	68.2	-24.25	Vertical
15540.67	51.75	12.40	17.93	34.82	47.26	74	-26.74	Vertical
10360.45	52.38	9.69	14.82	32.70	44.19	68.2	-24.01	Horizontal
15540.77	53.98	8.63	18.07	34.81	45.86	74	-28.14	Horizontal

Note:

1. Level = Read Level + Antenna Factor+ Cable loss- Preamp Factor.

2. The test trace is same as the ambient noise (the test frequency range: 18GHz~40GHz), therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

4. This Report only show the test plots of the worst case (U-NII-3).

4.8 Frequency stability

Test Standard	15.407(f), RSS-Gen §6.11
Test limit	Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.
Test results:	Pass

Measurement Data:

Mode	Voltage (V)	FHL (5745MHz)	Deviation (KHz)	FHH (5825MHz)	Deviation (KHz)
Band 4 (5725-5850 MHz)	DC 10.8V	5744.996	4	5824.998	2
	DC 12.0V	5744.996	4	5824.993	7
	DC 13.2V	5744.995	5	5824.992	8

Mode	Temperature (℃)	FHL (5745MHz)	Deviation (KHz)	FHH (5825MHz)	Deviation (KHz)
Band 4 (5725-5850 MHz)	-10℃	5744.994	6	5824.991	9
	0℃	5744.998	2	5824.998	2
	+10℃	5744.992	8	5824.991	9
	+20℃	5744.999	1	5824.993	7
	+30℃	5744.991	9	5824.994	6
	+40℃	5744.999	1	5824.996	4
	+50℃	5744.993	7	5824.994	6

5 Photos Of Test Setup

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

6 Photos Of EUT

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

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