



FCC TEST REPORT

FCC ID: 2BU2K-HL160G

On Behalf of

Wuhan Tianhua Technology Development Co., Ltd.

Laptop Computer

Model No.: HL160G(For more models, please refer to the General Description of EUT.)

Prepared for : Wuhan Tianhua Technology Development Co., Ltd.
Address : Room 608, Building 4, Mingshi No.1, Shucheng Road,
Hongshan District, Wuhan, Hubei, China

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

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Version Number : V0

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TEST REPORT DECLARATION

Applicant : Wuhan Tianhua Technology Development Co., Ltd.
Address : Room 608, Building 4, Mingshi No.1, Shucheng Road, Hongshan District,
Wuhan, Hubei, China
Manufacturer : Wuhan Tianhua Technology Development Co., Ltd.
Address : Room 608, Building 4, Mingshi No.1, Shucheng Road, Hongshan District,
Wuhan, Hubei, China
EUT Description : Laptop Computer

(A) Model No. : HL160G(For more models, please refer to the
General Description of EUT.)

(B) Trademark : N/A

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart E

ANSI C63.10-2020

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).....:

Felix Pang

Test Engineer



Approved by (name + signature).....:

Simple Guan

Project Manager



Date of issue.....:

Feb.27, 2026

Revision History

Revision	Issue Date	Revisions	Revised By
V0	Feb.27, 2026	Initial released Issue	Felix Pang



1 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203 Section 7.1.4	PASS
AC Power Line Conducted Emission	15.207 Section 7.2.4, 15.407(b)(9)	PASS
Occupied bandwidth	15.407(a), 15.407(e)	PASS
Maximum Conducted Output Power	15.407(a)(1)(iv)-(B1), (a)(3)(i)-(B4)	PASS
Power Spectral Density	15.407(a)(1)(iv)-(B1), (a)(3)(i)-(B4)	PASS
Radiated Emission	15.205, 15.209, 15.407(b)(1)-(B1), (4) -(B4)	PASS
Band Edge	15.407(b), 15.209	PASS
Frequency Stability	15.407(g)	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
5. All tests are according to ANSI C63.10-2020.

1.1 Measurement Uncertainty

Item	Uncertainty
Power Line Conducted Emissions Test	2.13dB
Radiation Emission test in 3m chamber(Below 30MHz)	4.07dB
Radiation Emission test in 3m chamber(30MHz to 1GHz)	4.51dB
Radiation Emission test in 3m chamber(1GHz to 18GHz)	5.07dB
Radiation Emission test in 3m chamber(18GHz to 40GHz)	5.21dB
Radio Frequency	48.24KHz
Conducted RF Power	0.41dB
Power Spectral Density	0.39 dB
Occupied-Bandwidth	968Hz
Duty Cycle	1%
Conducted-Spurious Emission	1.26dB

2 General Information

2.1 General Description of EUT

EUT Name	: Laptop Computer
Model	: HL160G,HL140C,HC140CM,HL140G,HL156E,HL156C7,HL156CN,HL160C,HL160CM,HL160GA
Diff	: All models have the same circuit and RF module, except for the model name and color
Test Voltage	: DC 12V From Adapter or DC 7.6V Form Battery

Radio Technology : 5G WIFI

Operation frequency : 802.11a/802.11ac20/802.11n(HT20): 5180-5240MHz, 5745-5825MHz
802.11ac40/802.11n(HT40): 5190-5230MHz, 5755-5795MHz
802.11ac80: 5210MHz, 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 : FPC antenna , Maximum Gain is 2.89dBi.

PMN : N/A

HVIN : N/A

Software version : N/A

Hardware version : N/A
FVIN

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 : AC/DC ADAPTER
Manufacturer : N/A
Model : J302-1203000CX
Rating : INPUT: AC 100-240V 50/60Hz

2.5 Test Mode Description

Keeping TX			
Test channel	Frequency (MHz)		
	802.11 a /n(HT20)/ac(VHT20)	802.11 n(HT40)/ac(VHT40)	802.11ac(VHT80)
Lowest channel	5180	5190	5210
Middle channel	5200		
Highest channel	5240	5230	

Test channel	Frequency (MHz)		
	802.11 a /n(HT20)/ac(VHT20)	802.11 n(HT40)/ac(VHT40)	802.11ac(VHT80)
Lowest channel	5745	5755	5775
Middle channel	5785		
Highest channel	5825	5795	

Channel list:					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
CH36	5180	CH38	5190	CH40	5200
CH42	5210	CH44	5220	CH46	5230
CH48	5240				
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
CH149	5745	CH151	5755	CH153	5765
CH155	5775	CH157	5785	CH159	5795
CH161	5805	CH165	5825		

2.6 Deviation from Standards

None.

2.7 Abnormalities from Standard Conditions

None.

2.8 Other Information Requested by the Customer

None.

2.9 Additional instructions

Software (Used for test) from client

Channel	Power level
Lowest	Default
Middle	Default
Highest	Default

2.10 Test Conditions

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

3 Test Instruments list

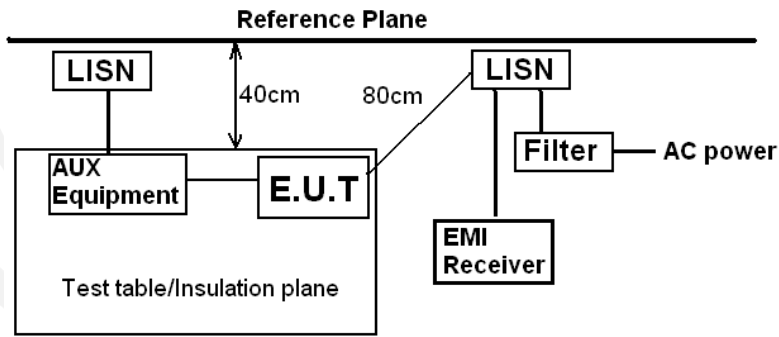
Item	Equipment	Manufacturer	Model No.	Serial No.	Firmware Version	Last Cal.	Cal. Interval
1.	9*6*6 anechoic chamber	SKET	9*6*6	N/A	/	2025.12.19	3 Year
2.	Test Receiver	Rohde&Schwarz	ESCI 7	101032/003	4.42 SP3	2025.12.18	1 Year
3.	L.I.S.N.#1	Rohde&Schwarz	ENV 216	102282	/	2025.12.18	1 Year
4.	L.I.S.N.#2	EMCO	3810-2	00094944	/	2025.12.18	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	FSV40-N	101648	3.70	2025.12.18	1 Year
8.	Horn Antenna	Schwarz beck	BBHA 9120 D	02706	/	2025.01.02	2 Year
9.	Amplifier	SKET	LNPA_0118 G-50	SK20220329 01	/	2025.12.18	1 Year
10.	Horn Antenna	Schwarz beck	BBHA 9170	00946	/	2024.12.31	2 Year
11.	Amplifier	SKET	LNPA_1840 G-50	SK20190403 02	/	2025.12.18	1 Year
12.	RF Power Probe	Rohde&Schwarz	NRP-Z11	1138.3004.02 -1111533-Fz	/	2025.12.18	1 Year
13.	RF Sensor Unit	Tachoy	TR1029-2	20220428P0 08	/	2025.12.18	1 Year
14.	Spectrum Analyzer	Agilent	N9020A	MY51281067	A.14.03	2025.12.18	1 Year
15.	Temp. & Humid Chamber	Auchno	9606	/	/	2025.12.18	1 Year
16.	Regulated DC Power Supply	Xinouhua	ADC120V10 A	20221125163 8	/	2025.12.18	1 Year
17.	Cable	SKET	Cable-RE-1	#02/#03	/	2025.12.18	1 Year
18.	Cable	SKET	Cable-RE-2	#01	/	2025.12.18	1 Year
19.	Cable	SKET	Cable-RE-3	#04	/	2025.12.18	1 Year
20.	Cable	SKET	Cable-CE-1	A-E-24	/	2025.12.18	1 Year
21.	6dB Attenuator	Schwarzbeck	DGA 9552N 6dB	CK4186	/	2025.12.18	1 Year
22.	Power meter	Agilent	E4419B	GB40202121	/	2025.12.18	1 Year
23.	Comprehensive Test Instrument	Rohde&Schwarz	CMW 500	145266	/	2025.12.18	1 Year
For Test Software Information							
Item	Software Name	Manufacturer			Version		
RE	EZ EMC	Farad			PSI-3A1		
CE	EZ EMC	Farad			PSI-3A1		

4 Test results and Measurement Data

4.1 Antenna requirement:

Standard requirement:	FCC Part15 C Section 15.203
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:	
FPC antenna, Maximum Gain is 2.89dBi for 5180-5240MHz, 5745-5825MHz	

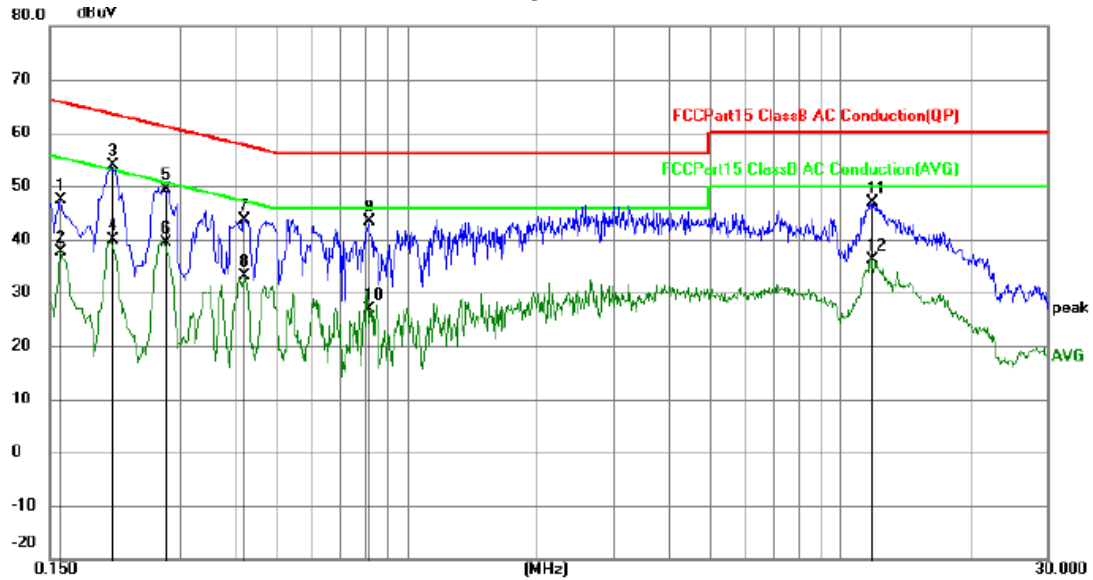
4.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207, 15.407(b)(9)		
Test Method:	ANSI C63.10-2020		
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 C63.10-2020 on conducted measurement.		
Test setup:	 <i>Remark</i> E.U.T: Equipment Under Test LISN: Line Impedance 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.

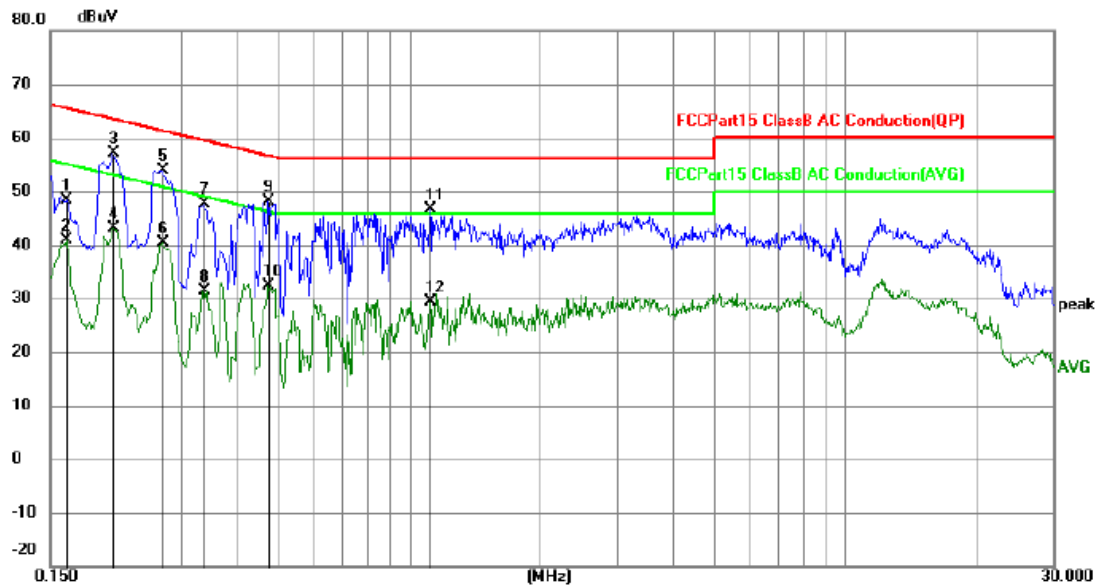
Line:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1590	37.65	9.70	47.35	65.52	-18.17	QP
2	0.1590	27.86	9.70	37.56	55.52	-17.96	AVG
3	0.2084	44.18	9.71	53.89	63.27	-9.38	QP
4	0.2084	30.17	9.71	39.88	53.27	-13.39	AVG
5	0.2760	39.67	9.71	49.38	60.94	-11.56	QP
6	0.2760	29.60	9.71	39.31	50.94	-11.63	AVG
7	0.4200	33.93	9.73	43.66	57.45	-13.79	QP
8	0.4200	23.42	9.73	33.15	47.45	-14.30	AVG
9	0.8204	33.59	9.76	43.35	56.00	-12.65	QP
10	0.8204	17.04	9.76	26.80	46.00	-19.20	AVG
11	11.7825	37.30	9.48	46.78	60.00	-13.22	QP
12	11.7825	26.53	9.48	36.01	50.00	-13.99	AVG

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

Factor= LISN Factor + Cable Loss+ Attenuator Factor

Neutral:

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1635	38.68	9.70	48.38	65.28	-16.90	QP
2	0.1635	31.13	9.70	40.83	55.28	-14.45	AVG
3	0.2084	47.30	9.71	57.01	63.27	-6.26	QP
4	0.2084	33.42	9.71	43.13	53.27	-10.14	AVG
5	0.2714	44.18	9.71	53.89	61.07	-7.18	QP
6	0.2714	30.59	9.71	40.30	51.07	-10.77	AVG
7	0.3390	37.94	9.73	47.67	59.23	-11.56	QP
8	0.3390	21.76	9.73	31.49	49.23	-17.74	AVG
9	0.4738	38.43	9.74	48.17	56.45	-8.28	QP
10	0.4738	22.61	9.74	32.35	46.45	-14.10	AVG
11	1.1172	36.75	9.76	46.51	56.00	-9.49	QP
12	1.1172	19.65	9.76	29.41	46.00	-16.59	AVG

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

Factor= LISN Factor + Cable Loss+ Attenuator Factor

All modes and channels have been tested and only the n20 5180MHz mode with the worst data is listed.

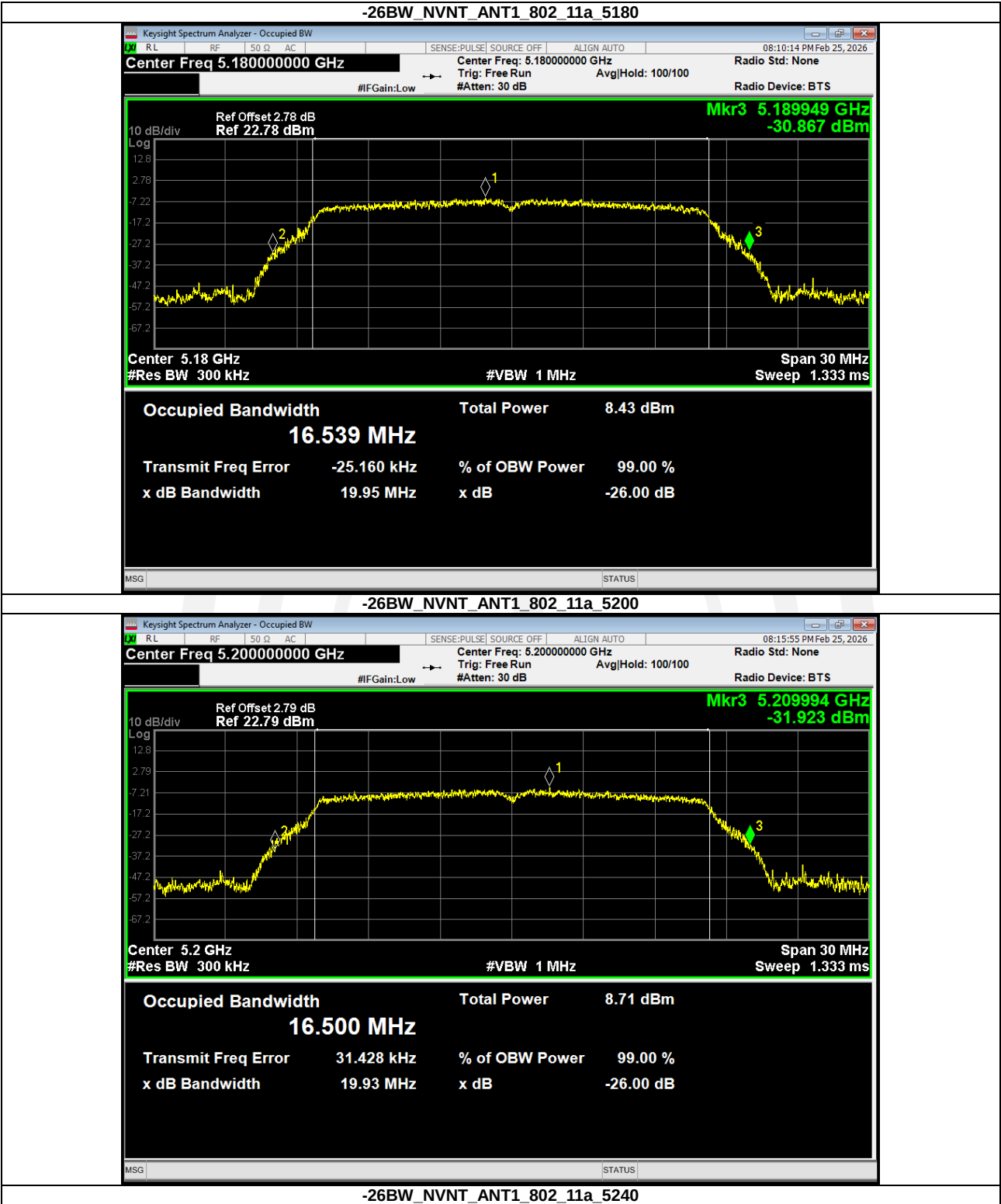
4.3 Emission Bandwidth and 99% Occupied Bandwidth

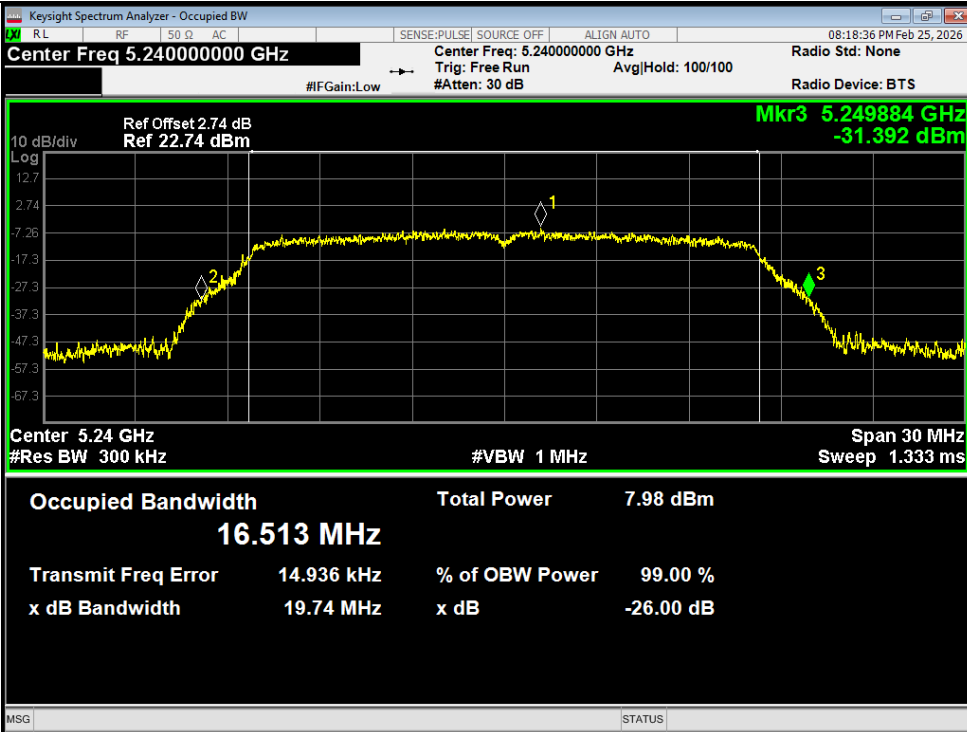
Test Requirement:	FCC Part15 E Section 15.407(a), 15.407(e)
Test Method:	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01, ANSI C63.10-2020§12.5
Limit:	UNII-1 : N/A UNII-3 : Bandwidth >500KHz
Test setup:	 The diagram shows a green Spectrum Analyzer connected by a cable to a yellow EUT (Equipment Under Test).
Test procedure:	Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%. The test receiver set RBW =1-5%BW, VBW>3*RBW, Peak Detector, Sweep time set auto, detail see the test plot. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission. The test receiver set RBW =100KHz, VBW≥3*RBW, Peak Detector, Sweep time set auto, detail see the test plot.
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Measurement Data:

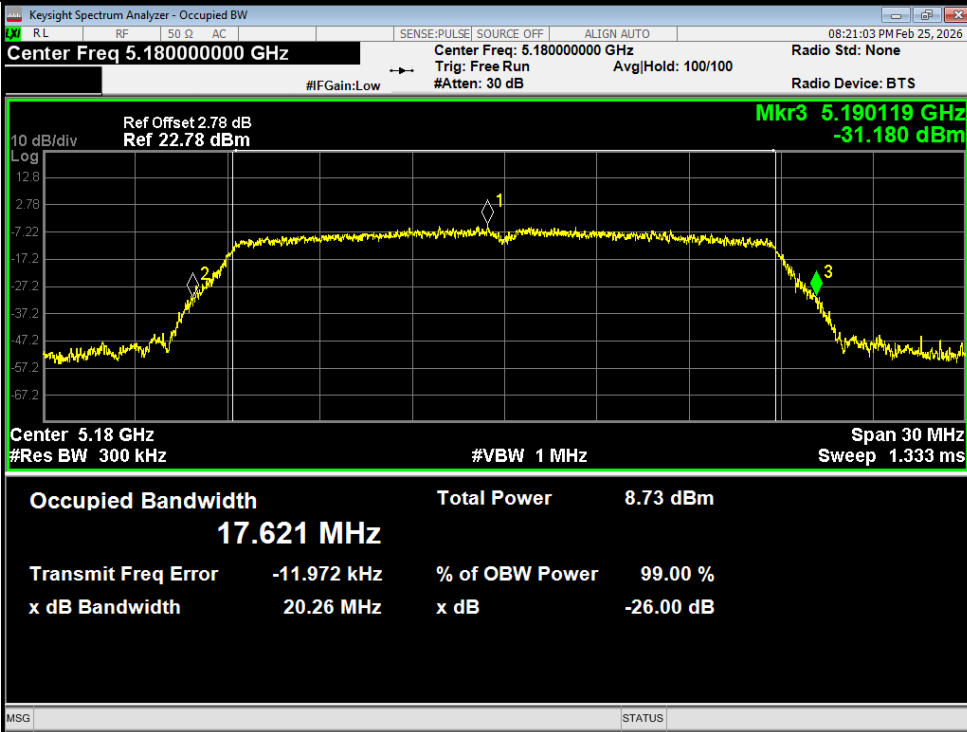
Band 1 (5150-5250 MHz):

Condition	Antenna	Modulation	Frequency(MHz)	-26dB_Emission_Bandwidth(MHz)
NVNT	ANT1	802.11a	5180.00	19.95
NVNT	ANT1	802.11a	5200.00	19.93
NVNT	ANT1	802.11a	5240.00	19.74
NVNT	ANT1	802.11n(HT20)	5180.00	20.26
NVNT	ANT1	802.11n(HT20)	5200.00	20.27
NVNT	ANT1	802.11n(HT20)	5240.00	20.17
NVNT	ANT1	802.11ac(VHT20)	5180.00	20.24
NVNT	ANT1	802.11ac(VHT20)	5200.00	20.17
NVNT	ANT1	802.11ac(VHT20)	5240.00	20.28
NVNT	ANT1	802.11n(HT40)	5190.00	40.06
NVNT	ANT1	802.11n(HT40)	5230.00	40.31
NVNT	ANT1	802.11ac(VHT40)	5190.00	40.68
NVNT	ANT1	802.11ac(VHT40)	5230.00	40.2
NVNT	ANT1	802.11ac(VHT80)	5210.00	80.28

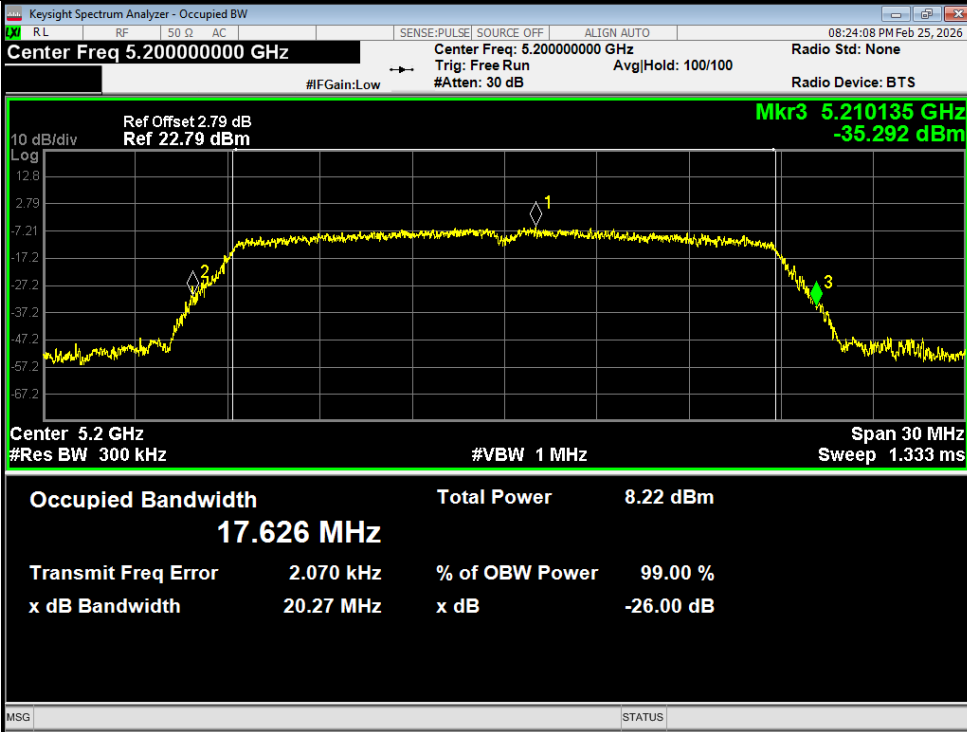




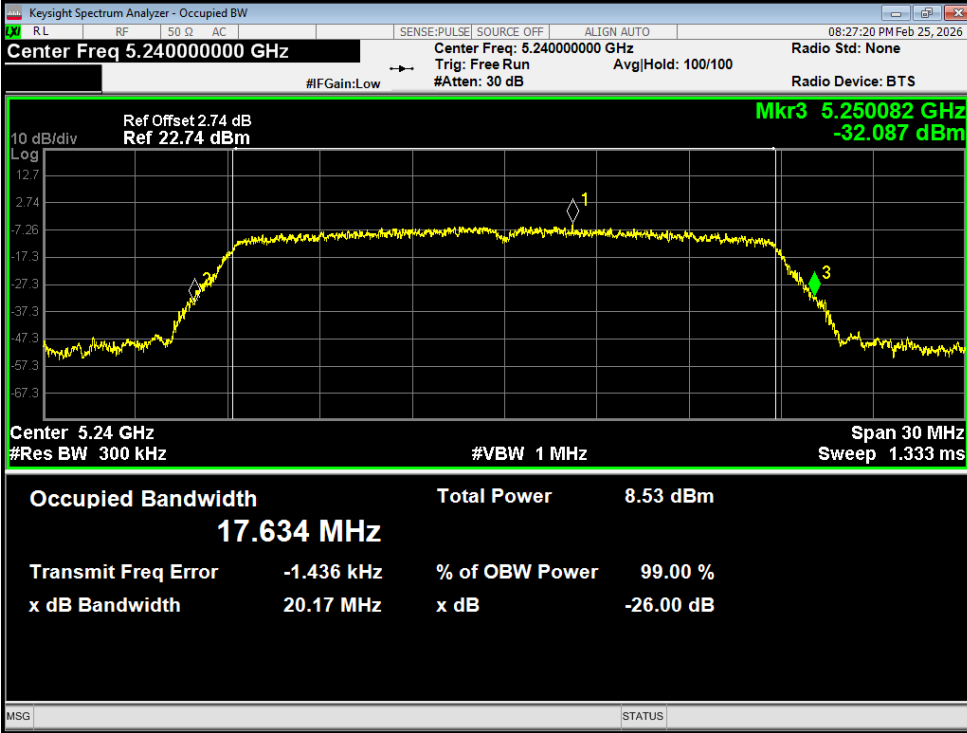
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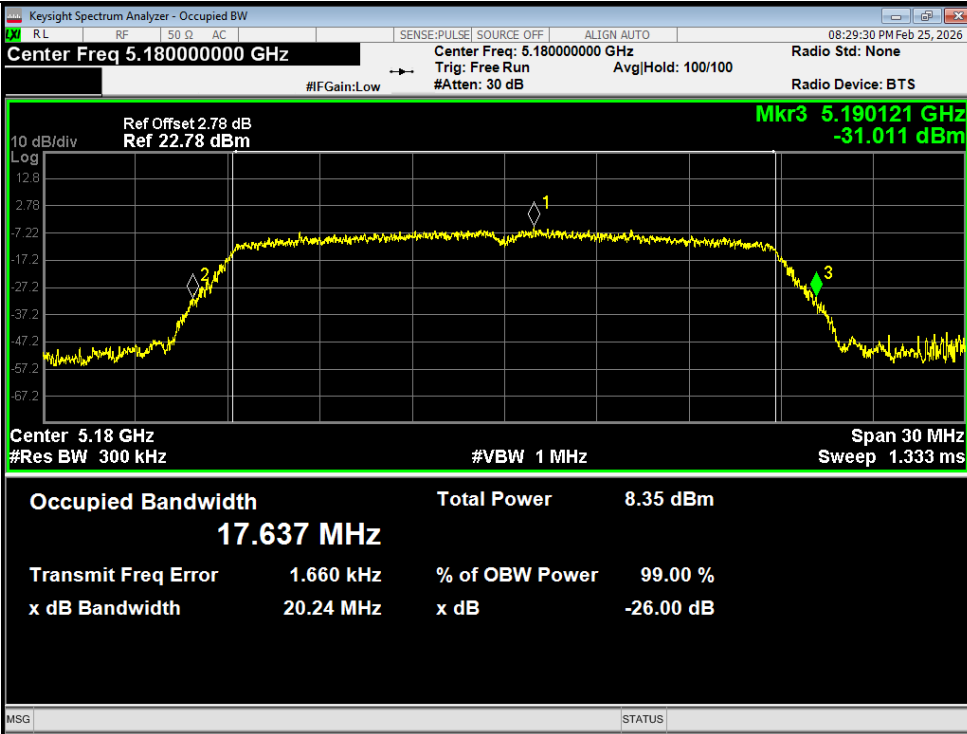
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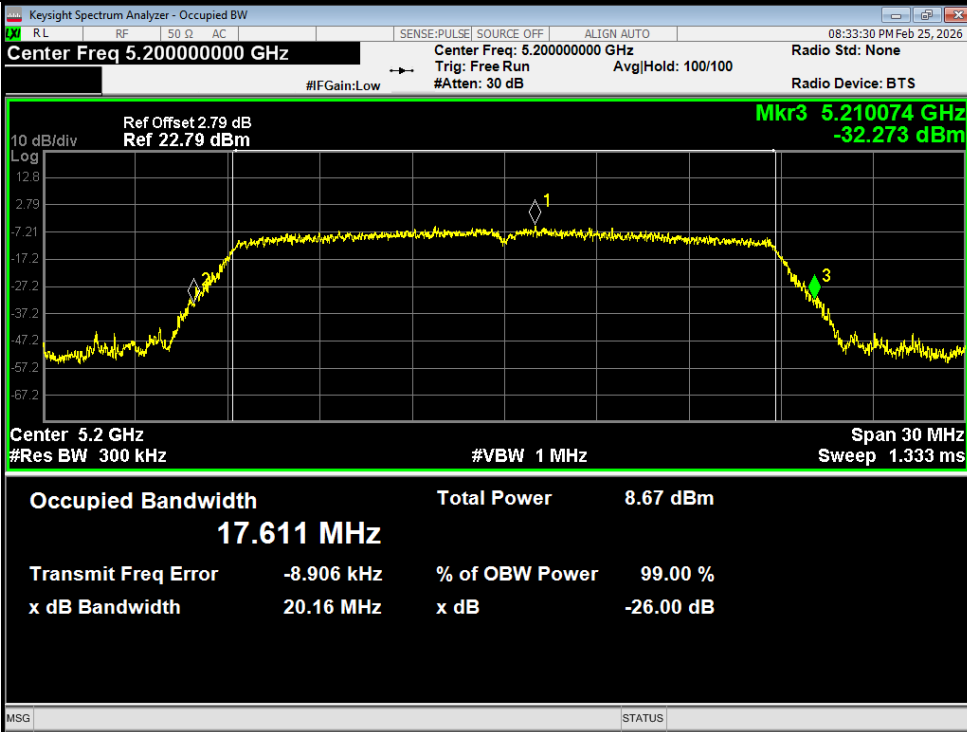
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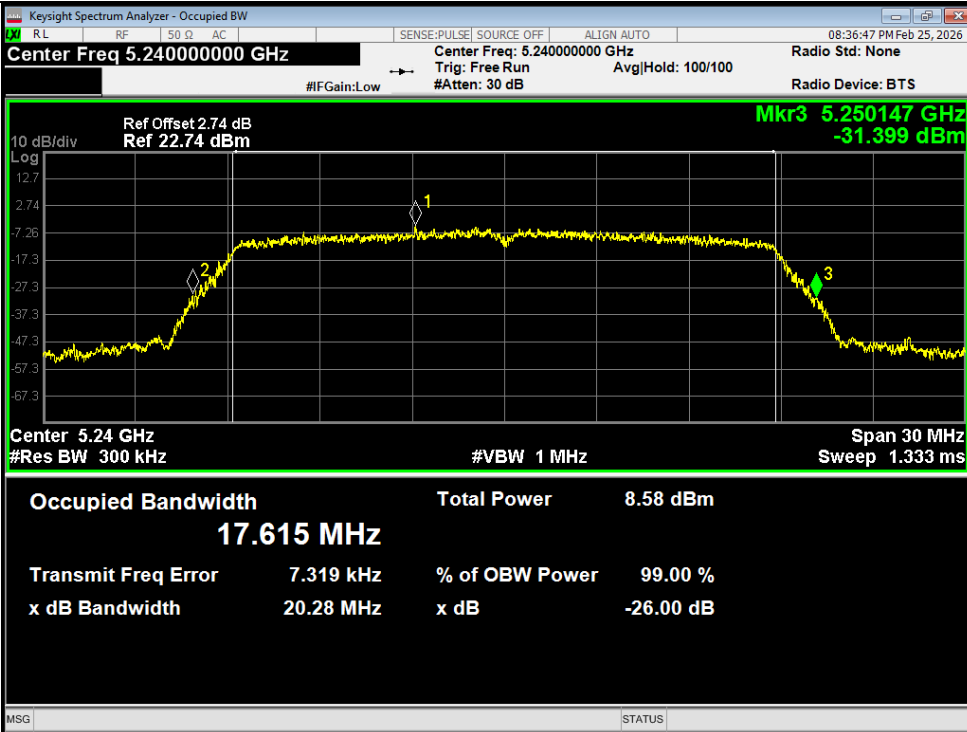
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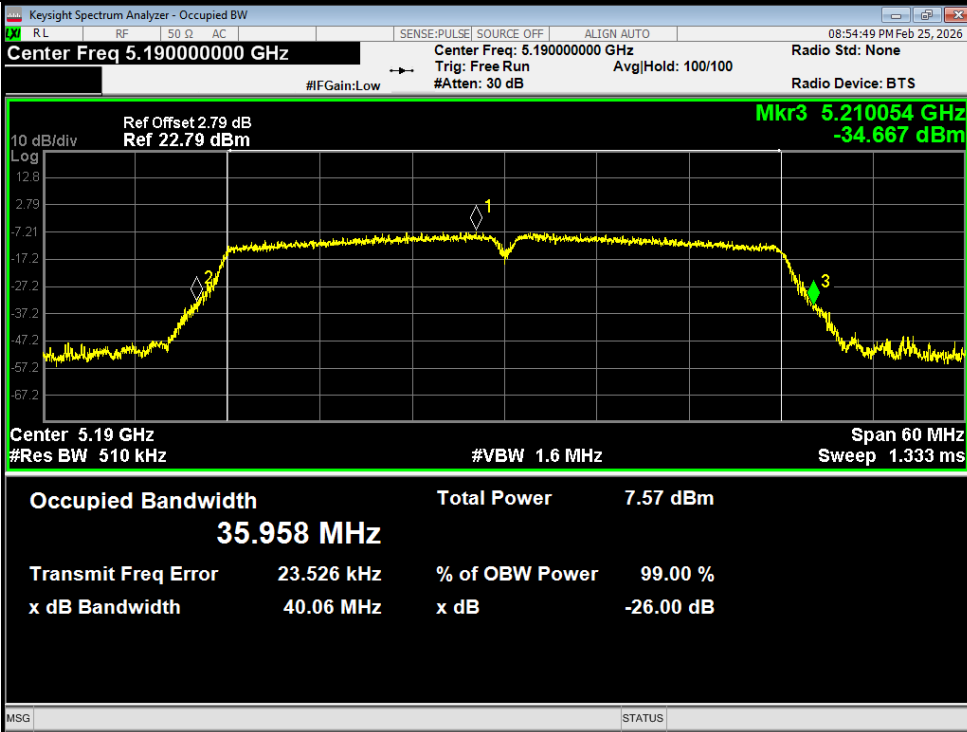
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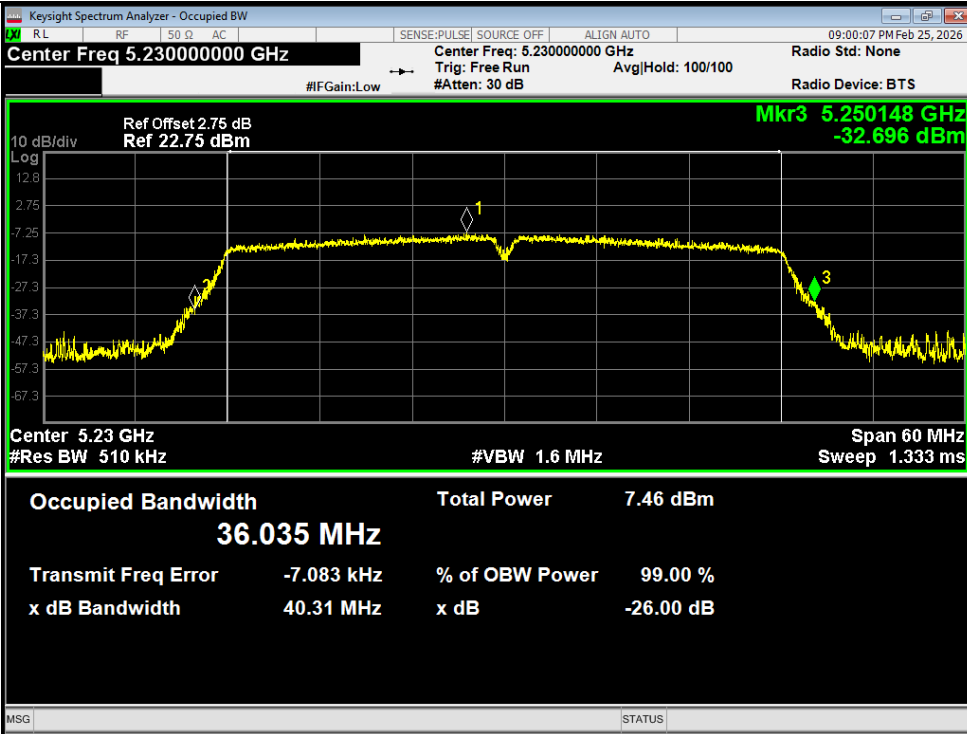
-26BW_NVNT_ANT1_802_11ac(VHT20)_5240



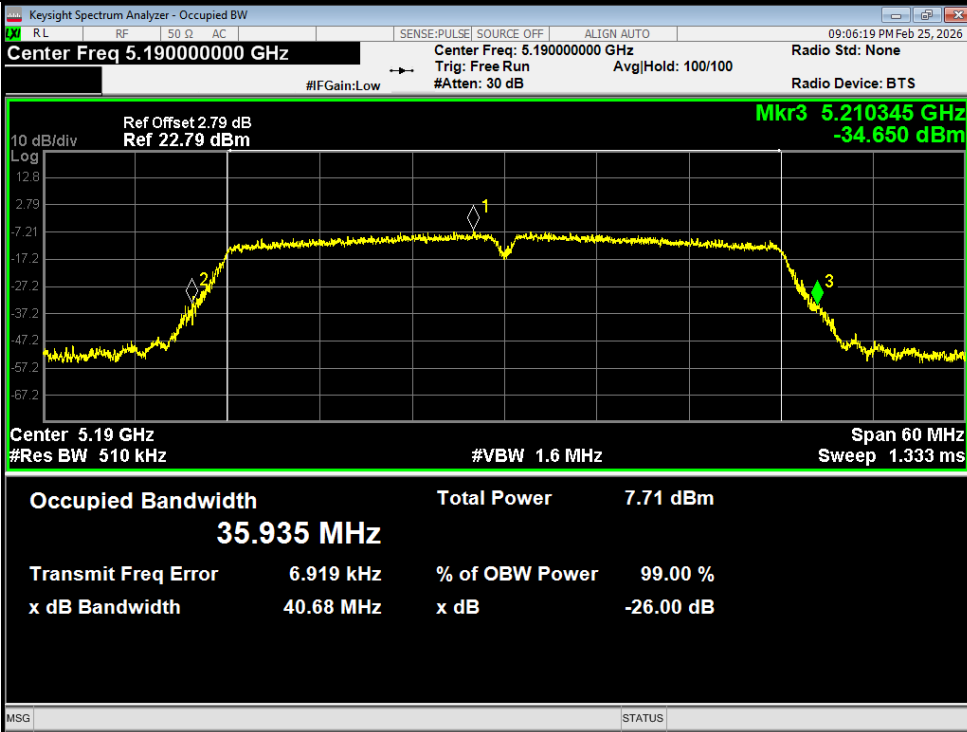
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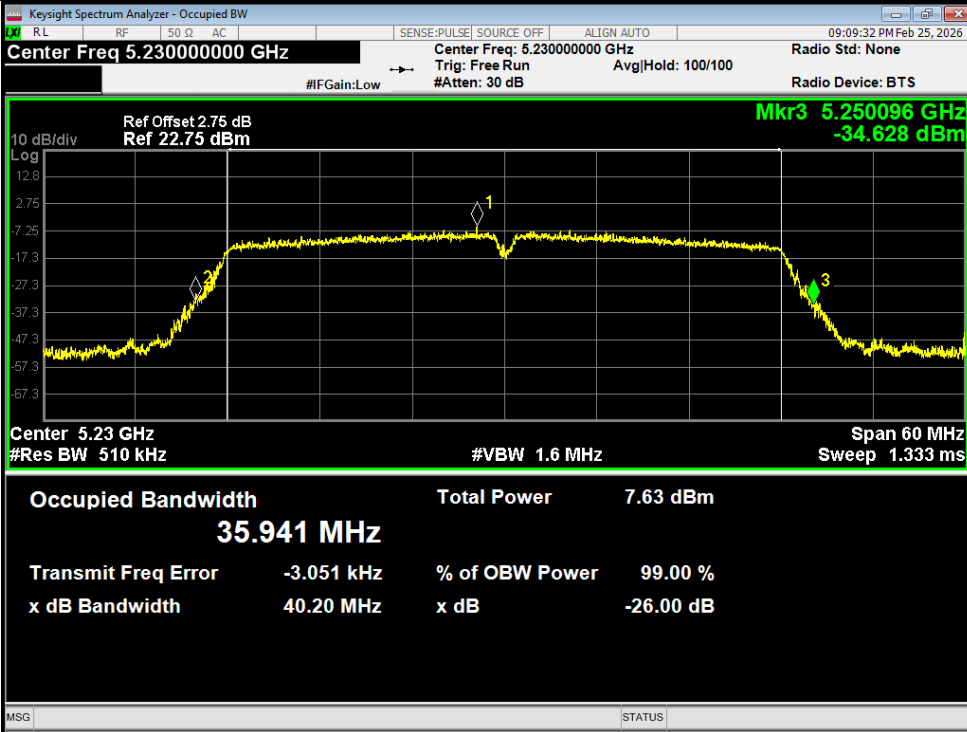
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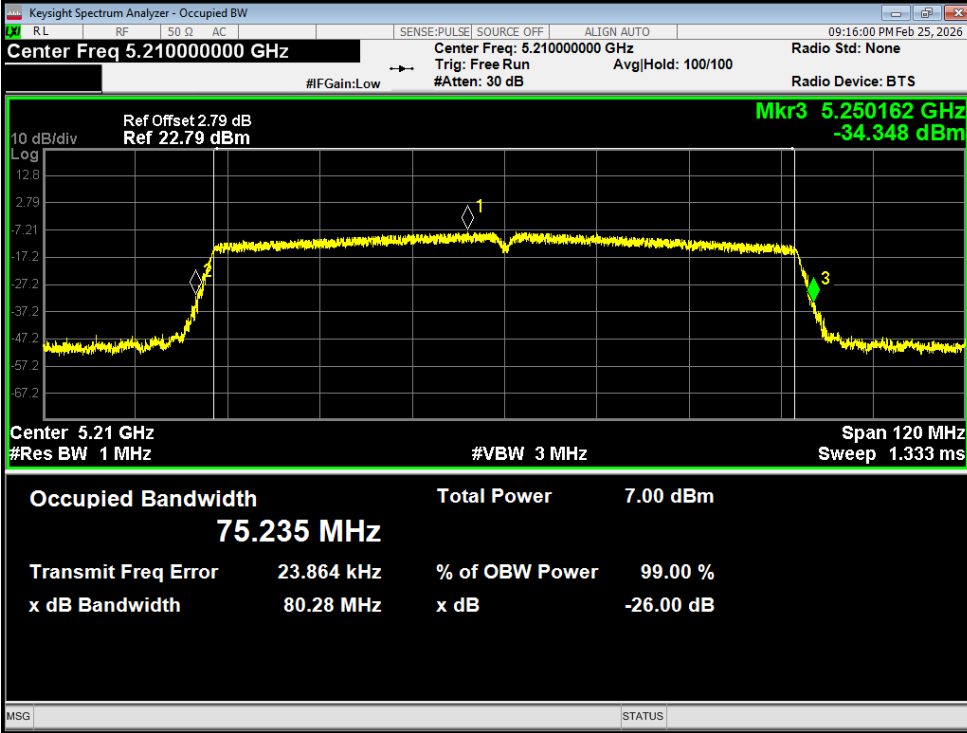
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-26BW_NVNT_ANT1_802_11ac(VHT40)_5230



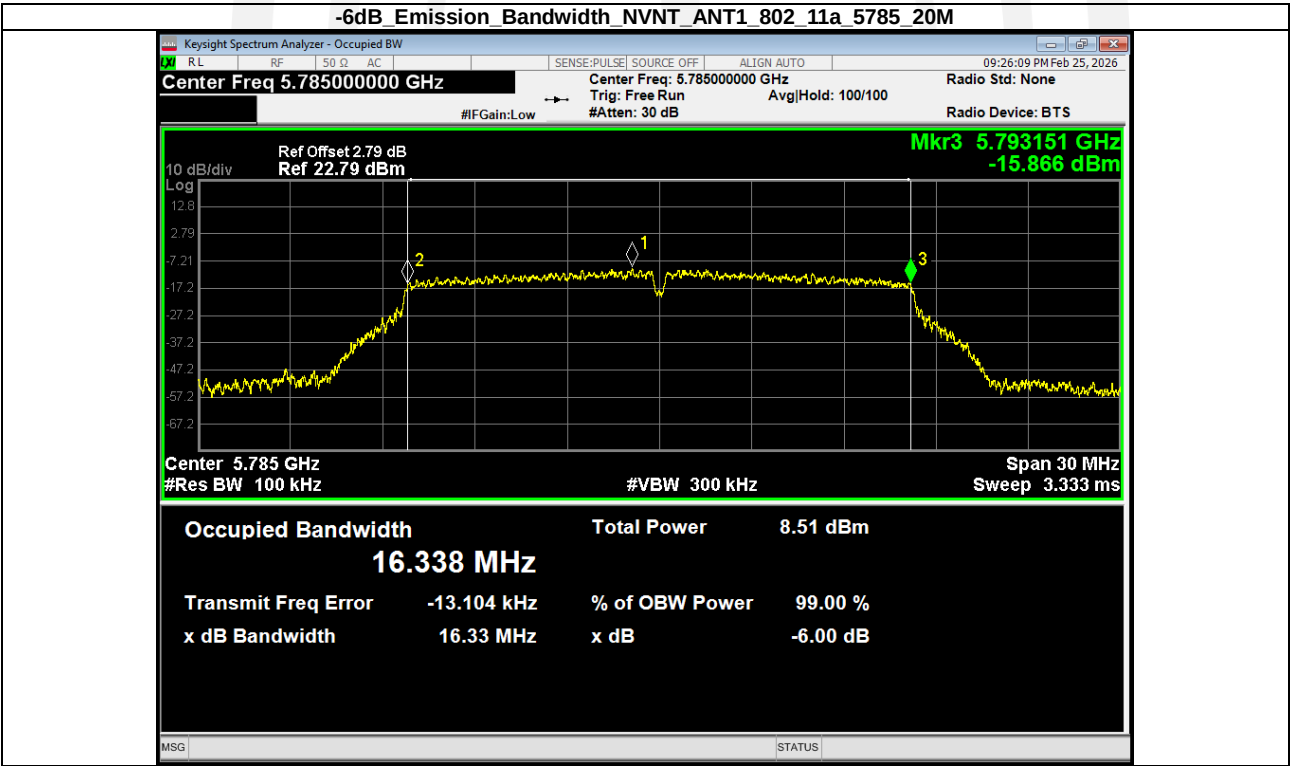
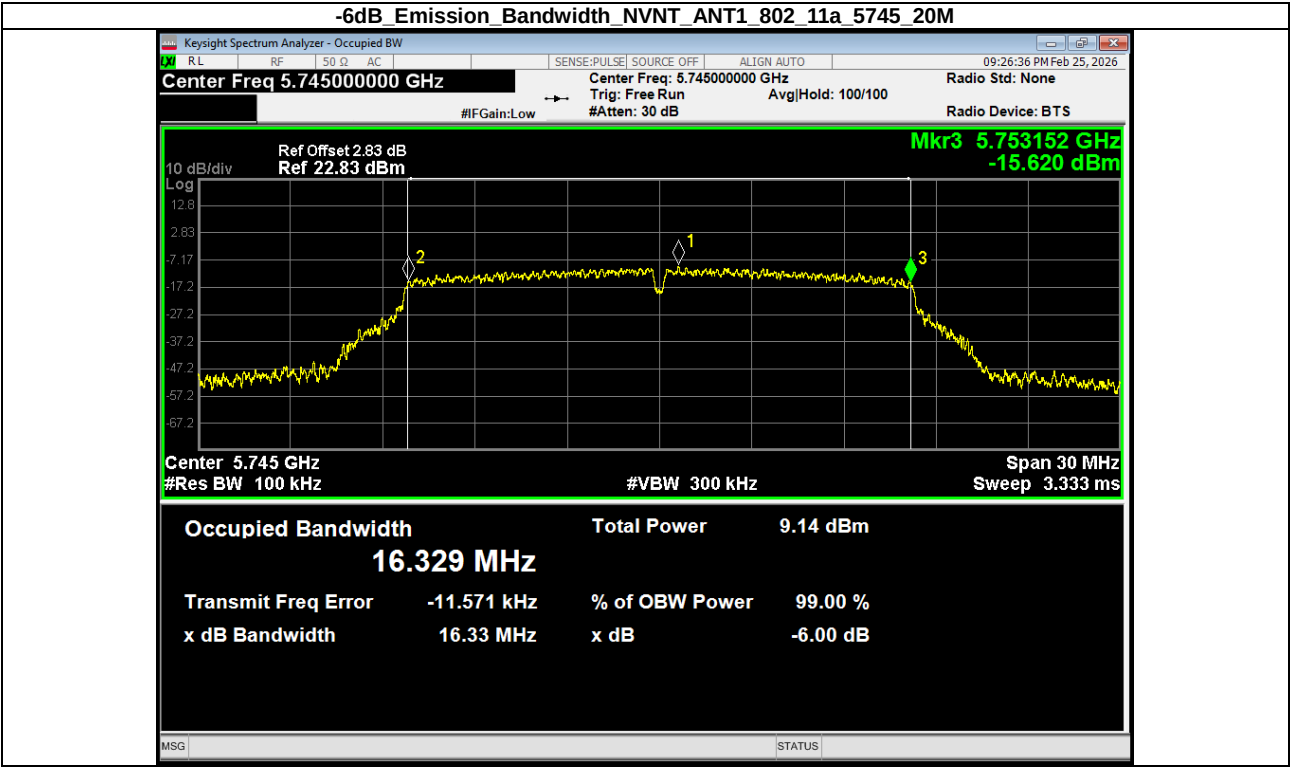
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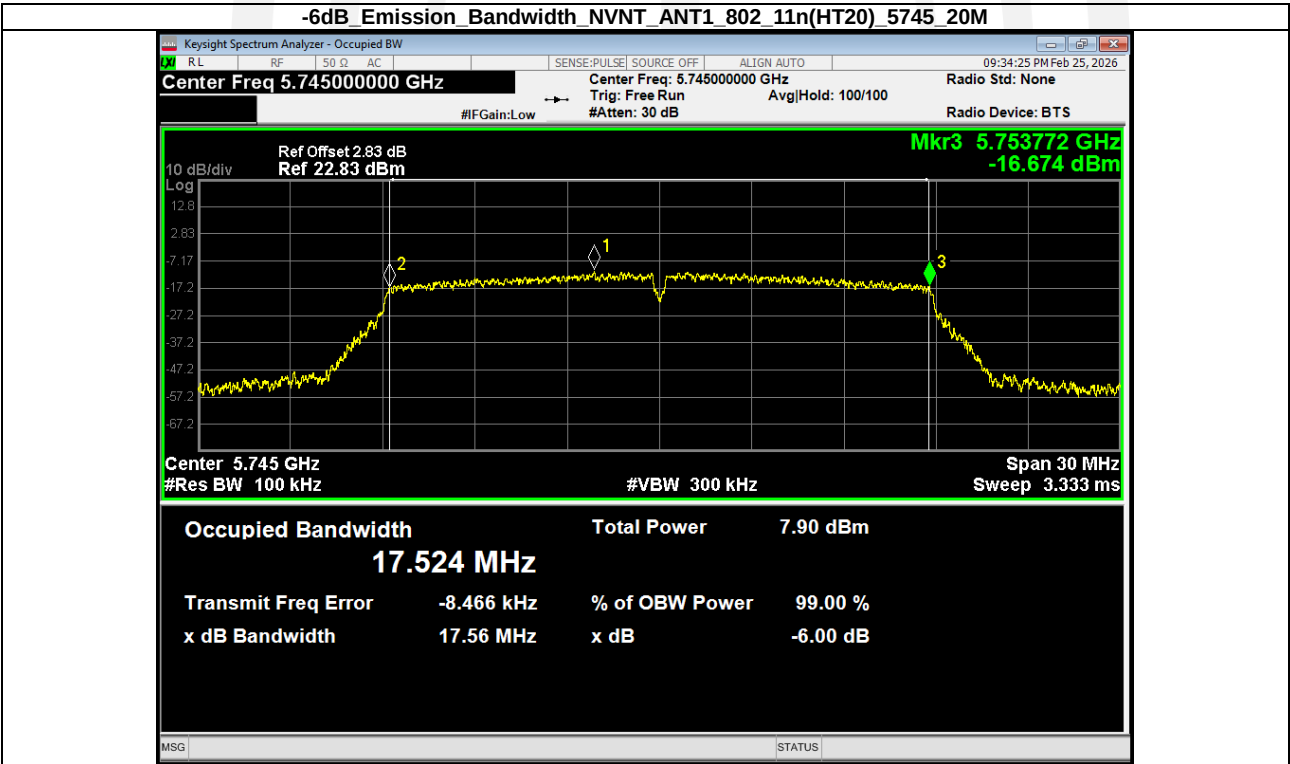
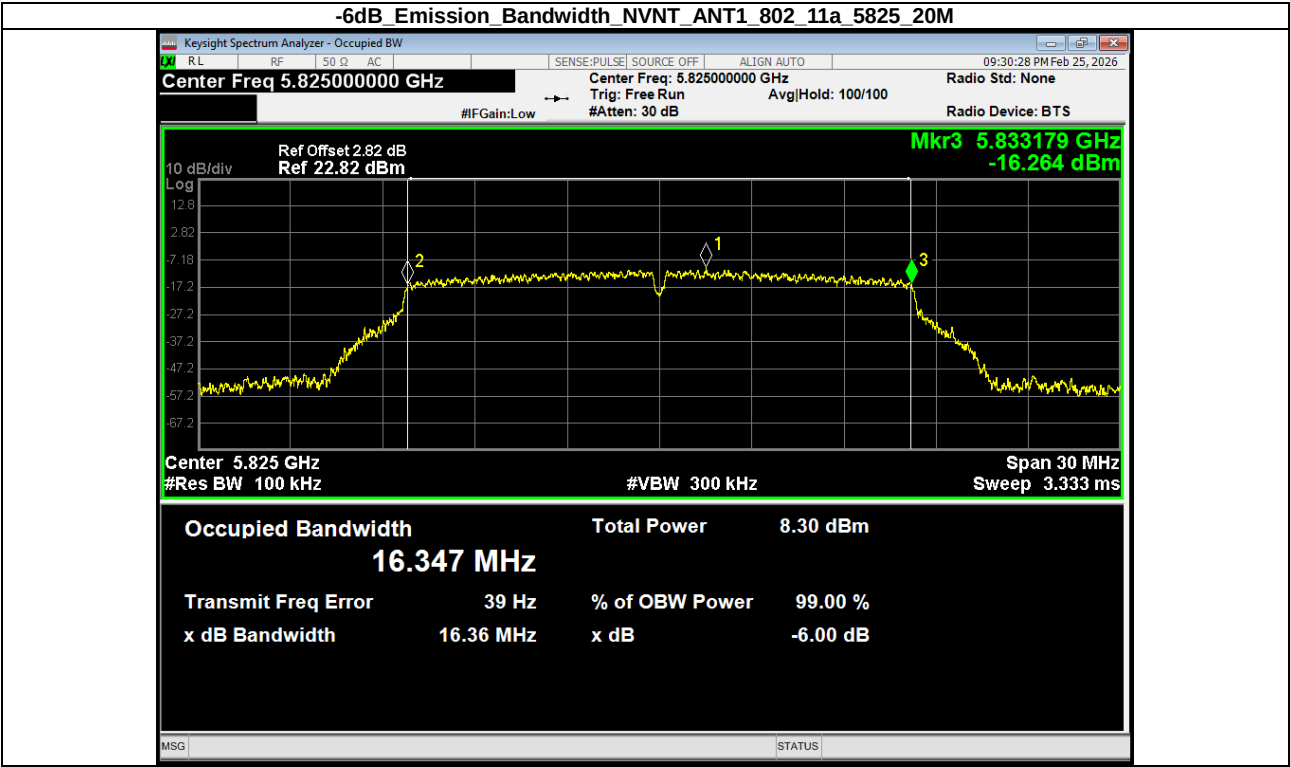


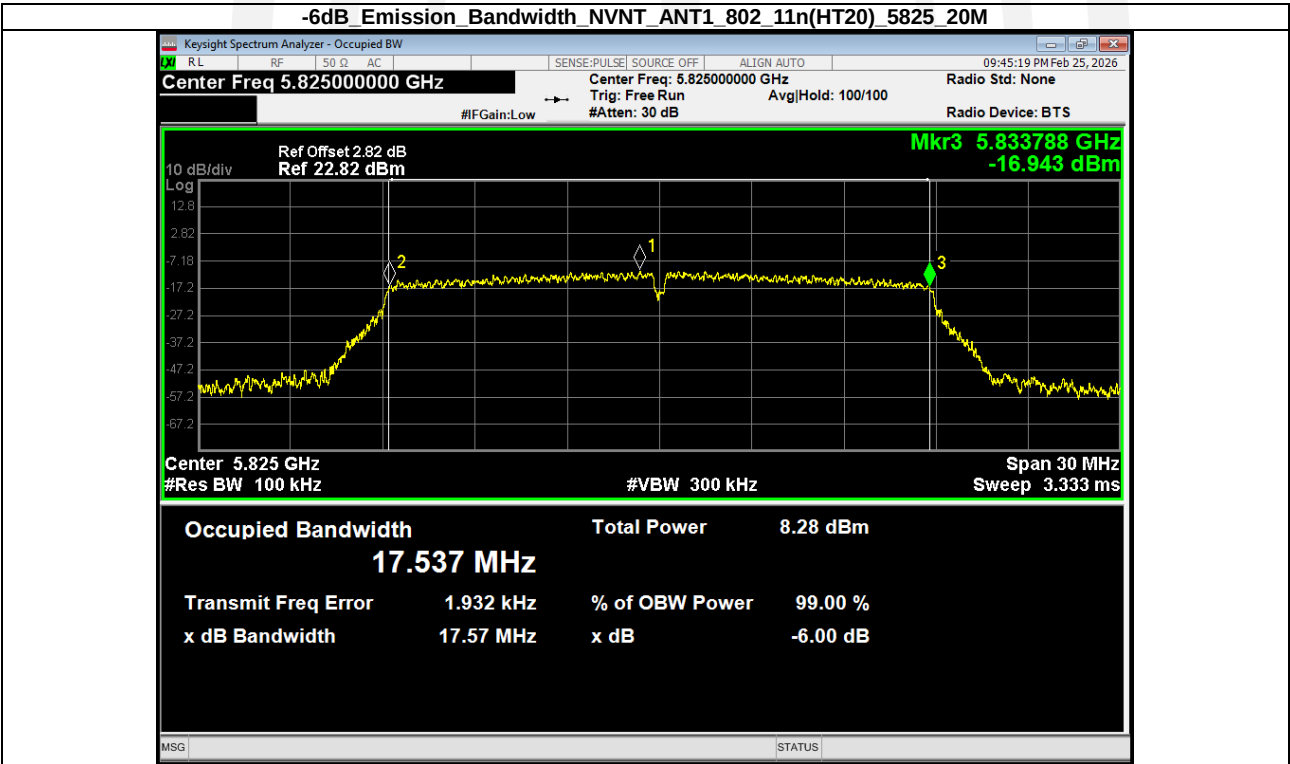
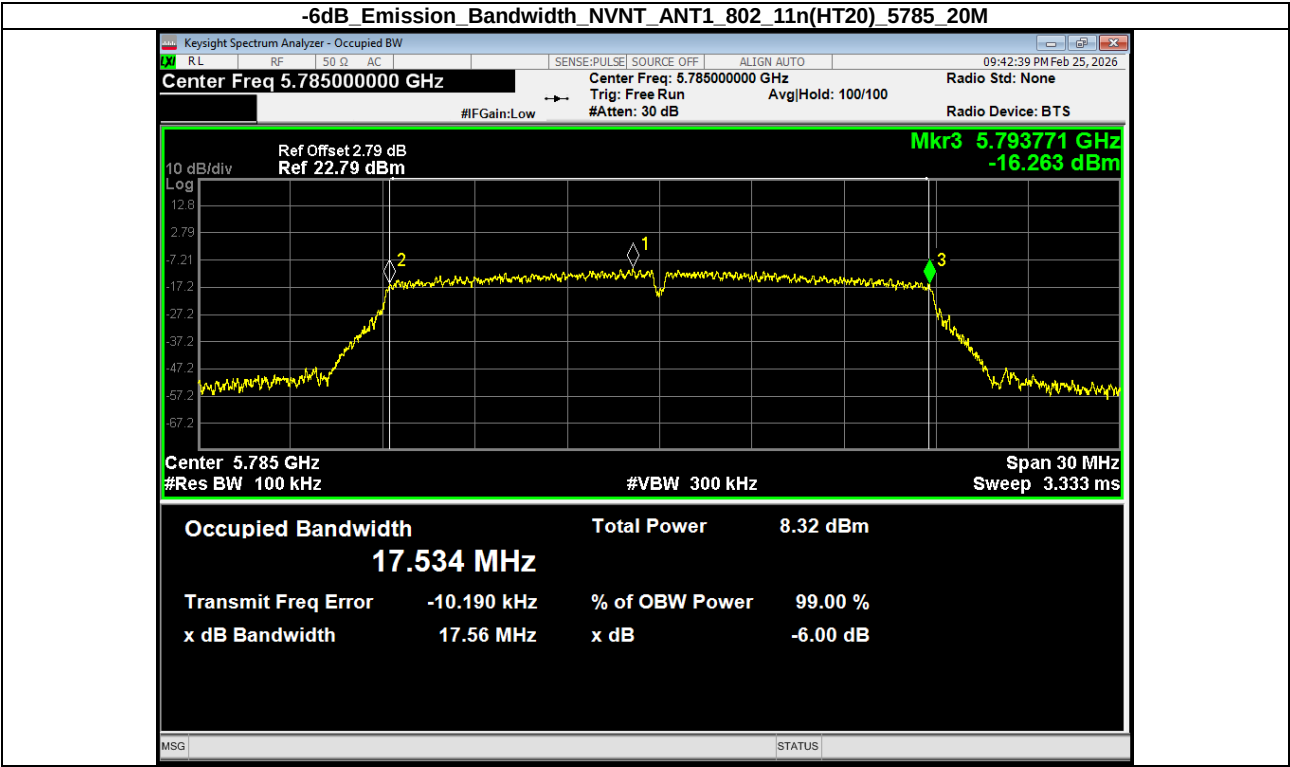
Band 4 (5725-5850 MHz):

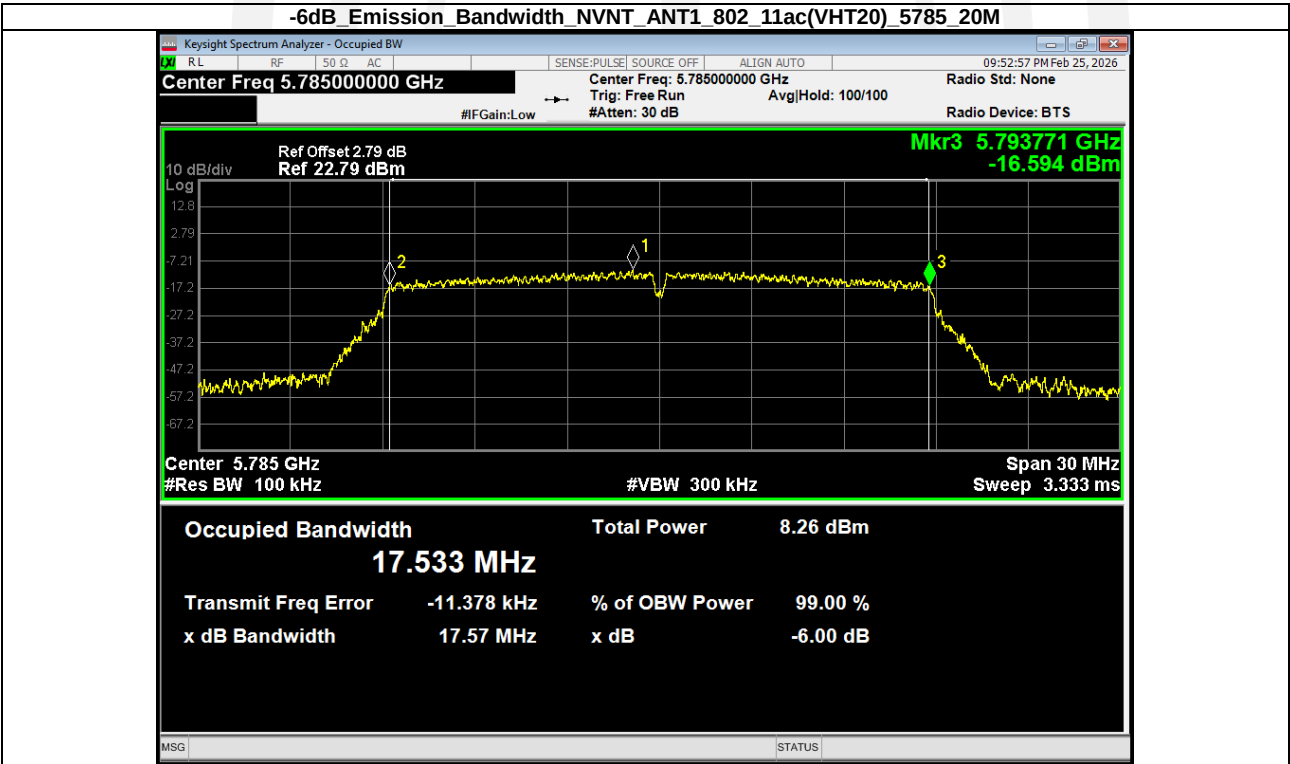
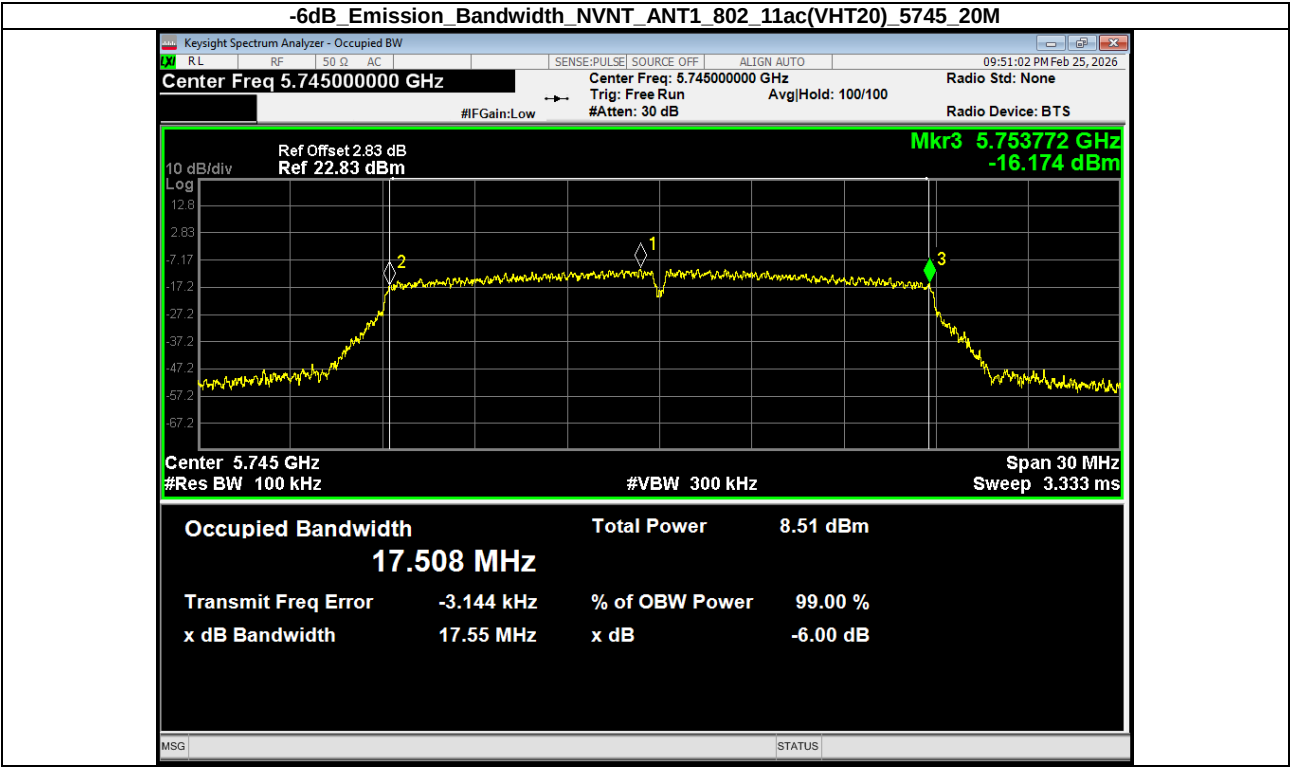
Condition	Antenna	Mode	Frequency(MHz)	-6dB_Emission_Bandwidth(MHz)	Limit(MHz)	Result
NVNT	ANT1	802.11a	5745.00	16.33	0.500	Pass
NVNT	ANT1	802.11a	5785.00	16.33	0.500	Pass
NVNT	ANT1	802.11a	5825.00	16.36	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	17.56	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	17.56	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	17.57	0.500	Pass
NVNT	ANT1	802.11ac(VHT20)	5745.00	17.55	0.500	Pass
NVNT	ANT1	802.11ac(VHT20)	5785.00	17.57	0.500	Pass
NVNT	ANT1	802.11ac(VHT20)	5825.00	17.59	0.500	Pass
NVNT	ANT1	802.11n(HT40)	5755.00	36.03	0.500	Pass
NVNT	ANT1	802.11n(HT40)	5795.00	36.31	0.500	Pass
NVNT	ANT1	802.11ac(VHT40)	5755.00	36.05	0.500	Pass
NVNT	ANT1	802.11ac(VHT40)	5795.00	35.99	0.500	Pass
NVNT	ANT1	802.11ac(VHT80)	5775.00	75.68	0.500	Pass

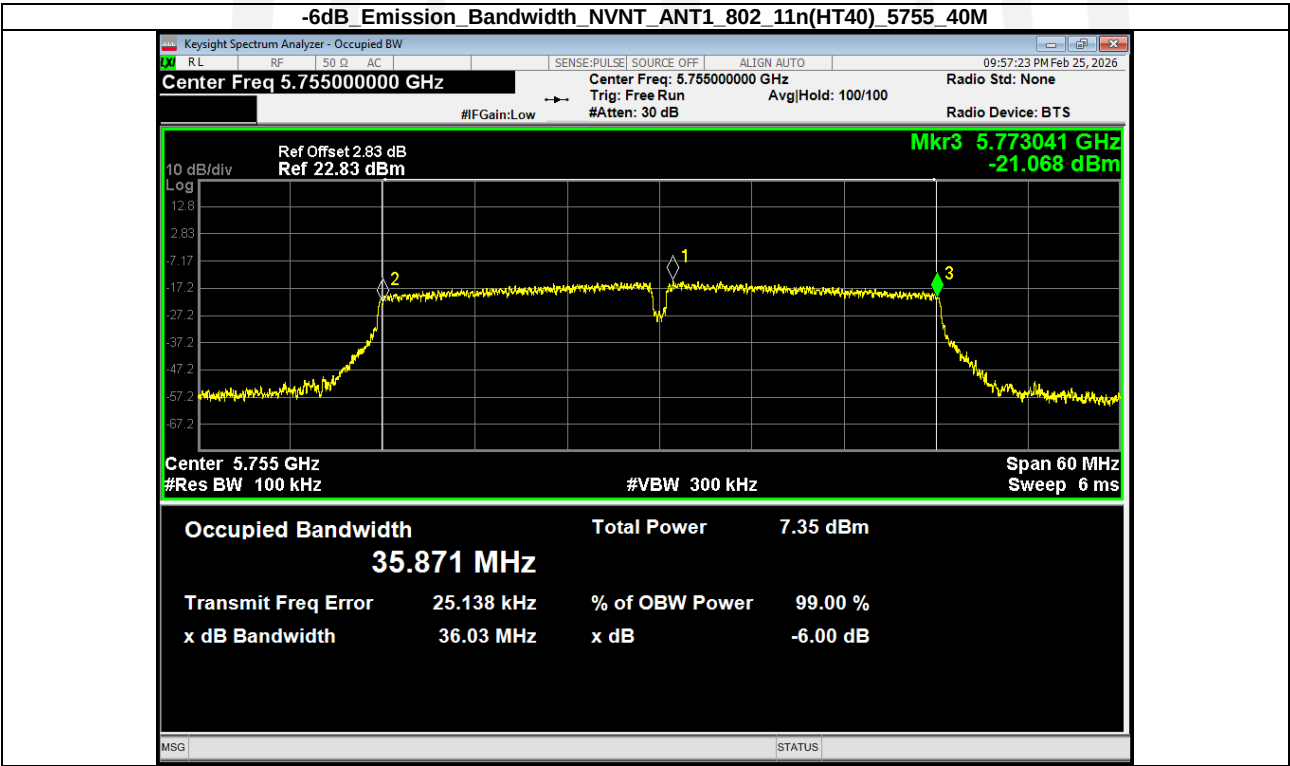
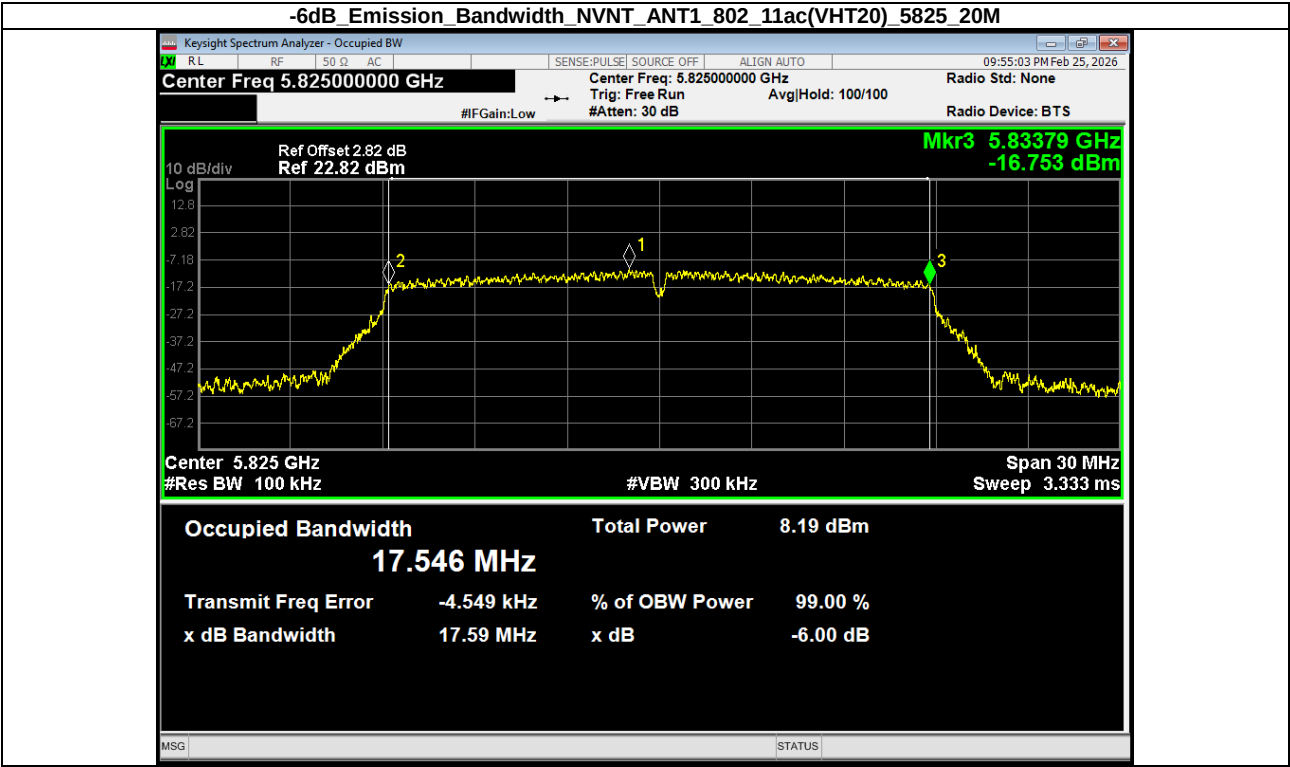


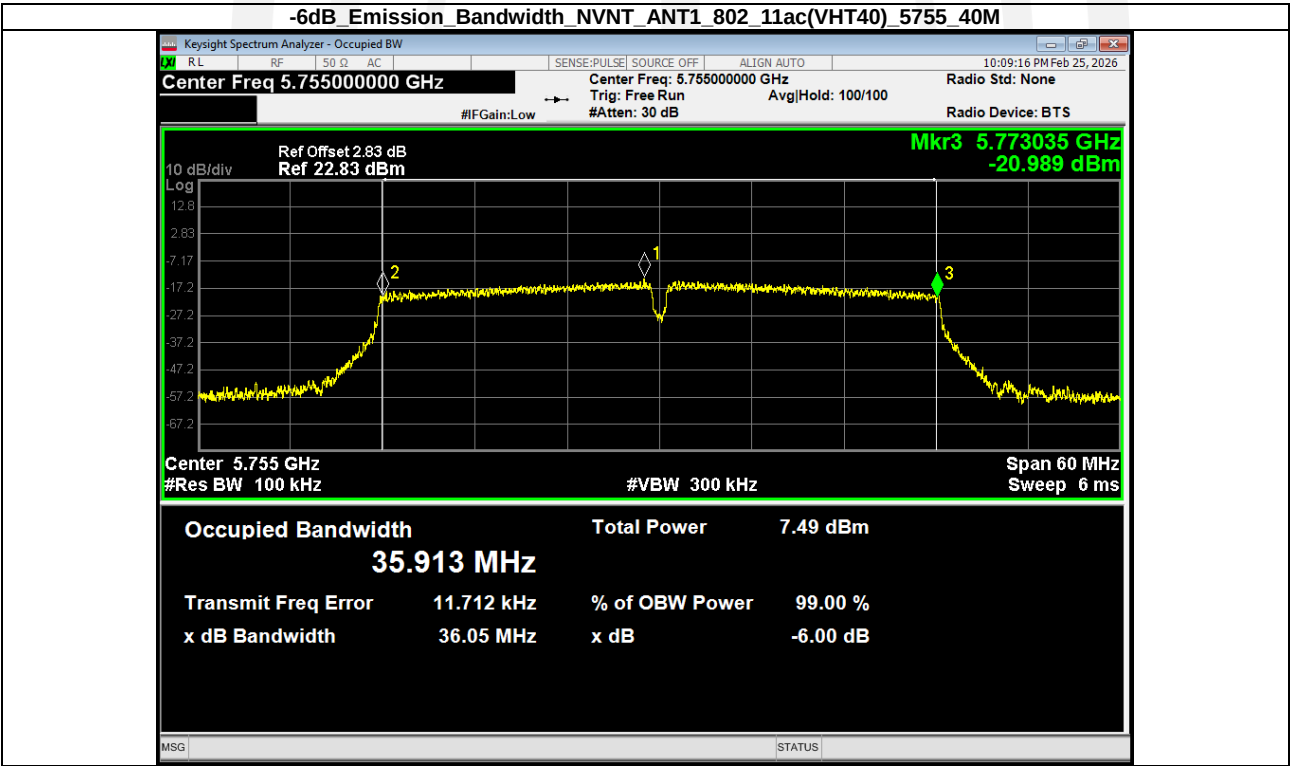
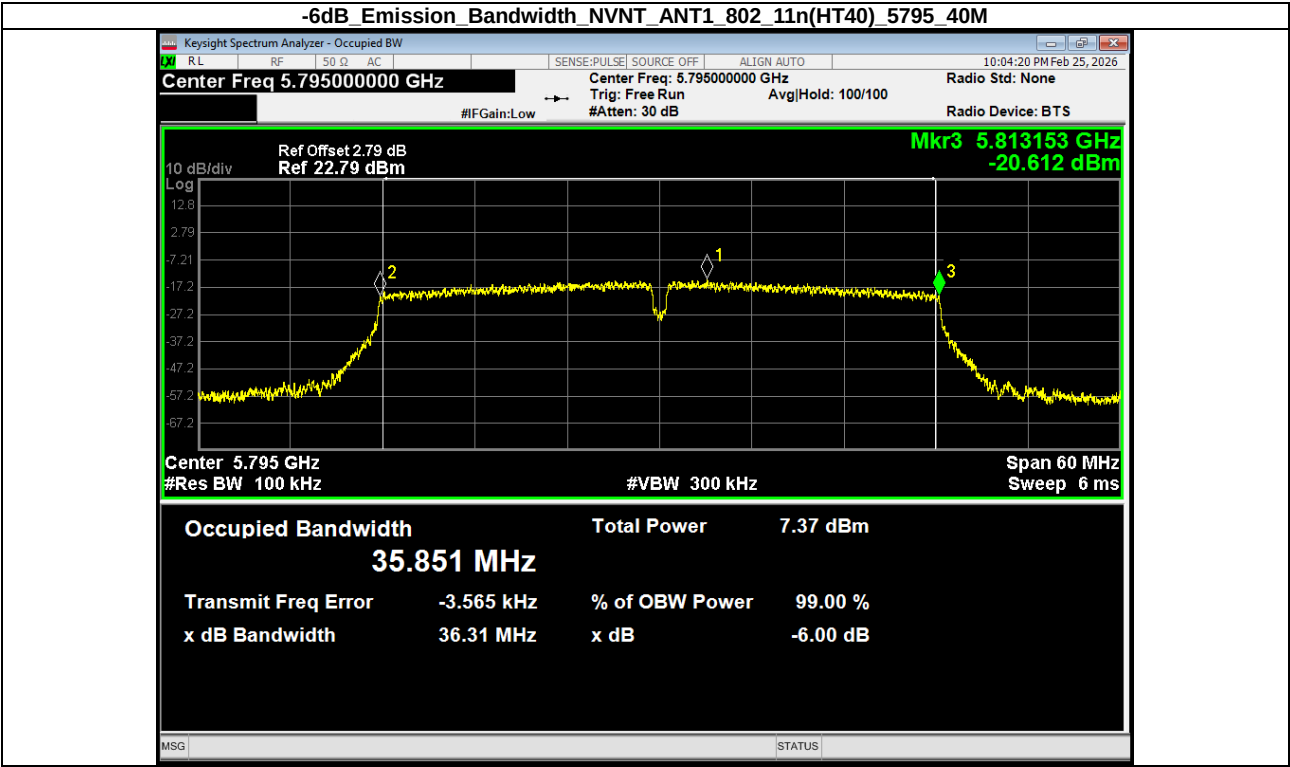


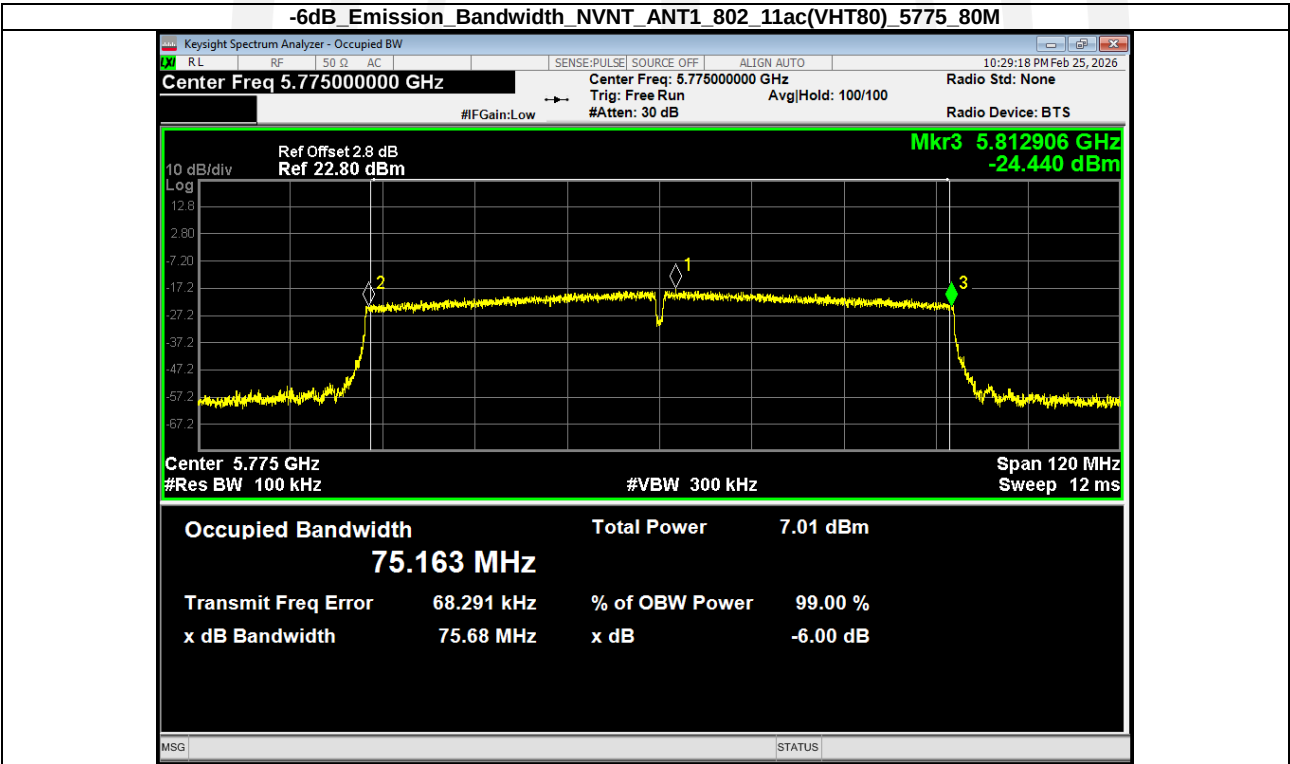
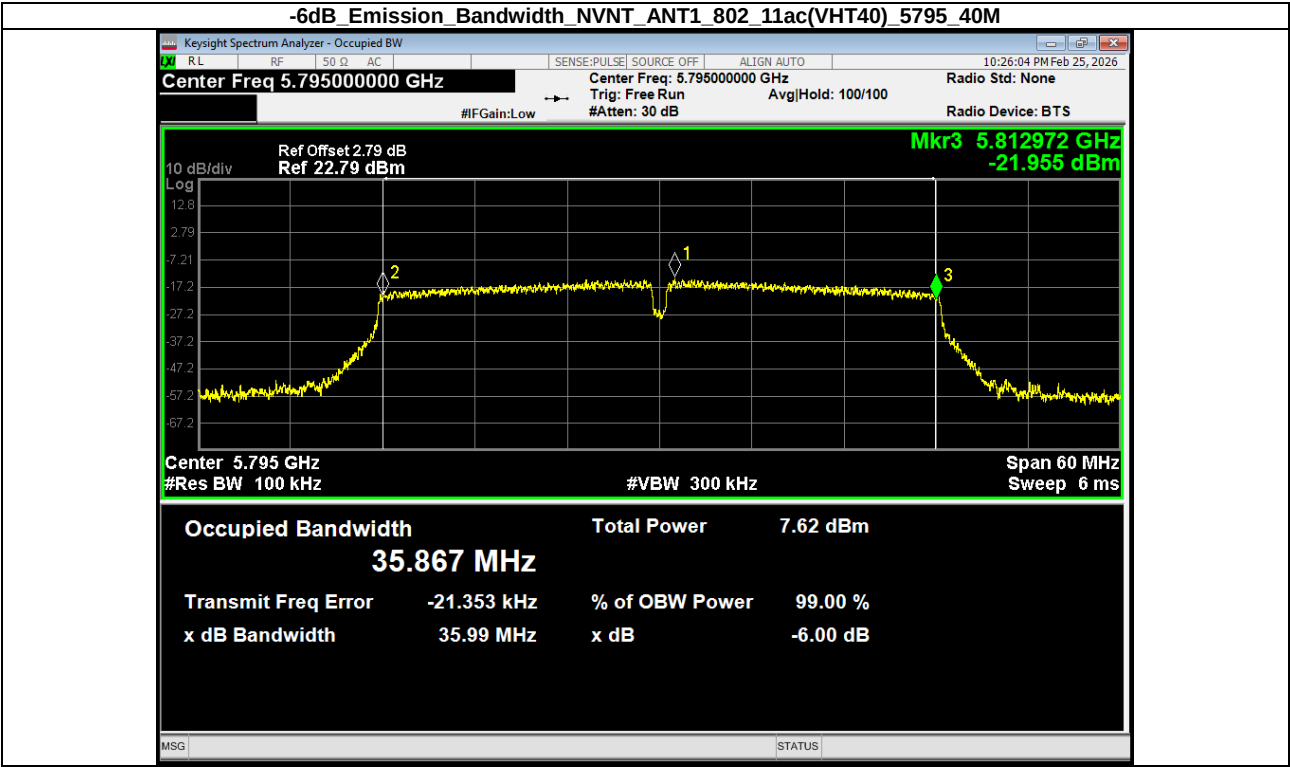




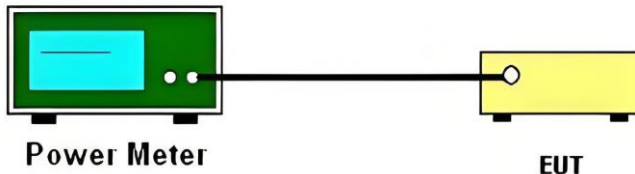








4.4 Maximum Conducted Output Power

Test Requirement:	FCC Part15 E Section 15.407(a)(1)(iv)-(B1), (a)(3)(i)-(B4)
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. 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:	 The diagram illustrates the test setup. On the left is a green rectangular device labeled 'Power Meter' with a blue screen and two small white circles. A black line representing a cable connects it to a yellow rectangular device on the right labeled 'EUT' (Equipment Under Test), which has a single white circle on its left side.
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., $10 \log(1/0.25)$ 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 1 (5150-5250 MHz) SISO:**

Antenna	Modulation	Frequency (MHz)	Conducted Power(dBm)	Duty factor(dB)	Total Power(dBm)	FCC Limit (dBm)	Result
ANT1	802.11a	5180.00	7.45	0.00	7.45	24	Pass
ANT1	802.11a	5200.00	7.69	0.00	7.69	24	Pass
ANT1	802.11a	5240.00	7.00	0.00	7.00	24	Pass
ANT1	802.11n(HT20)	5180.00	7.74	0.00	7.74	24	Pass
ANT1	802.11n(HT20)	5200.00	7.15	0.00	7.15	24	Pass
ANT1	802.11n(HT20)	5240.00	7.62	0.00	7.62	24	Pass
ANT1	802.11ac(VHT20)	5180.00	7.30	0.00	7.30	24	Pass
ANT1	802.11ac(VHT20)	5200.00	7.66	0.00	7.66	24	Pass
ANT1	802.11ac(VHT20)	5240.00	7.66	0.00	7.66	24	Pass
ANT1	802.11n(HT40)	5190.00	6.31	0.00	6.31	24	Pass
ANT1	802.11n(HT40)	5230.00	6.29	0.00	6.29	24	Pass
ANT1	802.11ac(VHT40)	5190.00	6.53	0.00	6.53	24	Pass
ANT1	802.11ac(VHT40)	5230.00	6.37	0.00	6.37	24	Pass
ANT1	802.11ac(VHT80)	5210.00	5.11	0.00	5.11	24	Pass

Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty_factor
ANT1	802.11a	5200.00	100.00	0.00
ANT1	802.11n(HT20)	5200.00	100.00	0.00
ANT1	802.11ac(VHT20)	5200.00	100.00	0.00
ANT1	802.11n(HT40)	5190.00	100.00	0.00
ANT1	802.11ac(VHT40)	5190.00	100.00	0.00
ANT1	802.11ac(VHT80)	5210.00	100.00	0.00

Note:

1.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.

2.Please refer to section 4.9 of the report for duty cycle data

Band 4 (5725 – 5850 MHz) SISO:

Antenna	Modulation	Frequency (MHz)	Conducted Power(dBm)	Duty factor(dB)	Total Power(dBm)	FCC Limit (dBm)	Result
ANT1	802.11a	5745.00	7.67	0.00	7.67	30	Pass
ANT1	802.11a	5785.00	7.47	0.00	7.47	30	Pass
ANT1	802.11a	5825.00	7.23	0.00	7.23	30	Pass
ANT1	802.11n(HT20)	5745.00	6.83	0.00	6.83	30	Pass
ANT1	802.11n(HT20)	5785.00	7.29	0.00	7.29	30	Pass
ANT1	802.11n(HT20)	5825.00	7.31	0.00	7.31	30	Pass
ANT1	802.11ac(VHT20)	5745.00	7.46	0.00	7.46	30	Pass
ANT1	802.11ac(VHT20)	5785.00	7.22	0.00	7.22	30	Pass
ANT1	802.11ac(VHT20)	5825.00	7.13	0.00	7.13	30	Pass
ANT1	802.11n(HT40)	5755.00	6.26	0.00	6.26	30	Pass
ANT1	802.11n(HT40)	5795.00	6.23	0.00	6.23	30	Pass
ANT1	802.11ac(VHT40)	5755.00	6.43	0.00	6.43	30	Pass
ANT1	802.11ac(VHT40)	5795.00	6.40	0.00	6.40	30	Pass
ANT1	802.11ac(VHT80)	5775.00	4.74	0.00	4.74	30	Pass

Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty_factor
ANT1	802.11a	5785.00	100.00	0.00
ANT1	802.11n(HT20)	5785.00	100.00	0.00
ANT1	802.11ac(VHT20)	5785.00	100.00	0.00
ANT1	802.11n(HT40)	5755.00	100.00	0.00
ANT1	802.11ac(VHT40)	5755.00	100.00	0.00
ANT1	802.11ac(VHT80)	5775.00	100.00	0.00

Note:

- 1.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.
- 2.Please refer to section 4.9 of the report for duty cycle data

4.5 Power Spectral Density

Test Requirement:	FCC Part15 E Section 15.407(a)(1)(iv)-(B1), (a)(3)(i)-(B4)
Test Method:	U-NII-3:KDB 789033 D02 General UNII Test Procedures New Rules v02r01 U-NII-1:ANSI C63.10-2020§12.6
Limit:	FCC: 1.≤11.00dBm/MHz for 5150MHz-5250MHz, 5250-5350MHz and 5470-5725 MHz 2.≤30.00dBm/500KHz for 5725MHz-5850MHz
Test setup:	 Spectrum Analyzer DUT
Test procedure:	For devices operating in the bands 5.15–5.25 GHz, 5.25–5.35 GHz, and 5.47–5.725 GHz, the preceding procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in Section 15.407(a)(5). For devices operating in the band 5.725–5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If 789033 D02 General UNII Test Procedures New Rules v02r01 Page 10 measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply U-NII -1 Set RBW = 1 MHz. Set VBW ≥ 3 RBW Span=1.5* OBW Sweep time = auto. Detector = Power averaging (rms), if available. Otherwise, use sample detector mode. The result is the PSD. U-NII -3 Set RBW =510KHz. Set VBW ≥ 3 RBW. Span=1.5* OBW Sweep time = auto. Detector = Power averaging (rms), if available. Otherwise, use sample detector mode. The result is the PSD. NEOT: If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500 kHz/RBW) to the measured result, whereas RBW (<500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details

Test results:

Pass

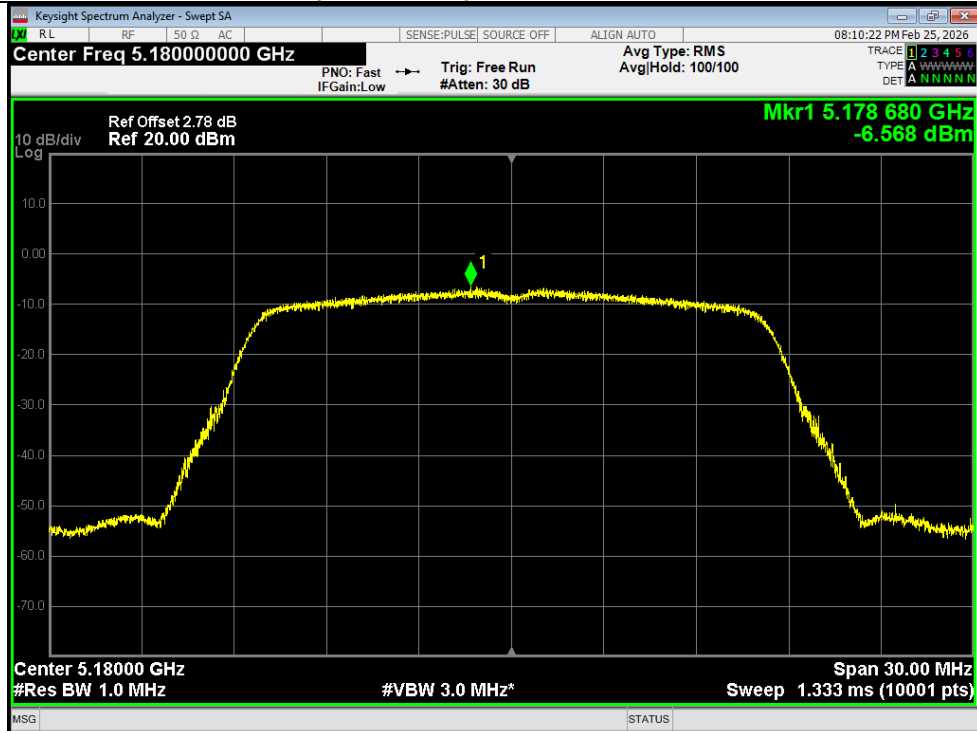


Measurement Data**Band 1 (5150-5250 MHz) SISO:**

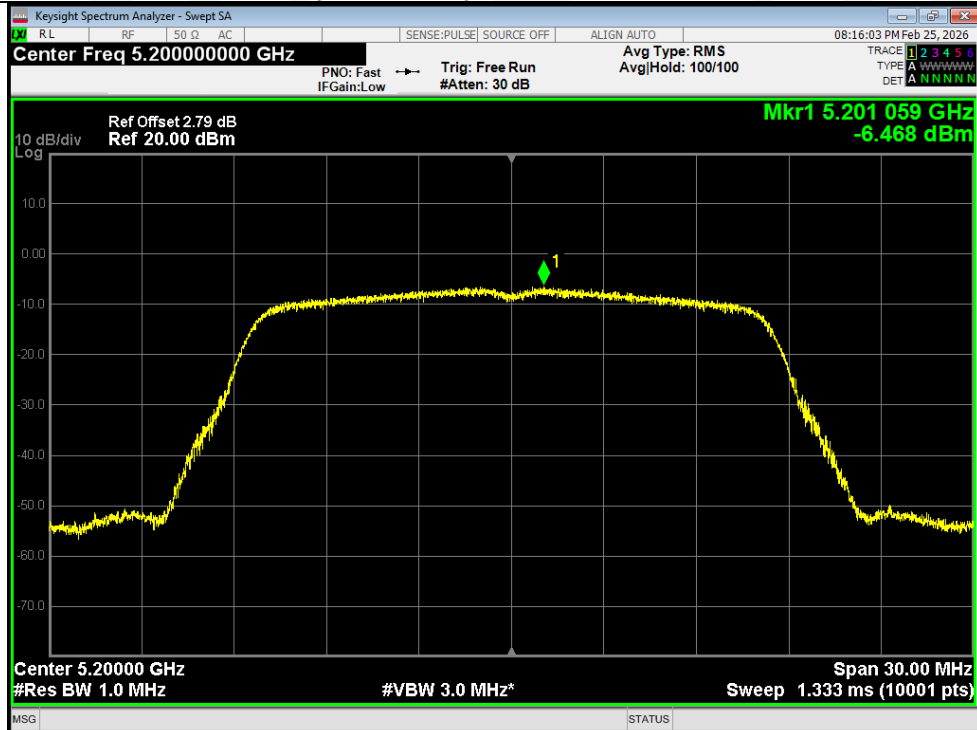
Condition	Antenna	Modulation	Frequency (MHz)	PSD (dBm/MHz)	Duty factor (dB)	Total PSD (dBm/MHz)	FCC Limit (dBm)	Result
NVNT	ANT1	802.11a	5180.00	-6.568	0.00	-6.568	11	Pass
NVNT	ANT1	802.11a	5200.00	-6.468	0.00	-6.468	11	Pass
NVNT	ANT1	802.11a	5240.00	-7.142	0.00	-7.142	11	Pass
NVNT	ANT1	802.11n(HT20)	5180.00	-6.521	0.00	-6.521	11	Pass
NVNT	ANT1	802.11n(HT20)	5200.00	-6.965	0.00	-6.965	11	Pass
NVNT	ANT1	802.11n(HT20)	5240.00	-6.892	0.00	-6.892	11	Pass
NVNT	ANT1	802.11ac(VHT20)	5180.00	-6.782	0.00	-6.782	11	Pass
NVNT	ANT1	802.11ac(VHT20)	5200.00	-6.736	0.00	-6.736	11	Pass
NVNT	ANT1	802.11ac(VHT20)	5240.00	-6.739	0.00	-6.739	11	Pass
NVNT	ANT1	802.11n(HT40)	5190.00	-10.816	0.00	-10.816	11	Pass
NVNT	ANT1	802.11n(HT40)	5230.00	-11.224	0.00	-11.224	11	Pass
NVNT	ANT1	802.11ac(VHT40)	5190.00	-11.026	0.00	-11.026	11	Pass
NVNT	ANT1	802.11ac(VHT40)	5230.00	-10.68	0.00	-10.68	11	Pass
NVNT	ANT1	802.11ac(VHT80)	5210.00	-15.274	0.00	-15.274	11	Pass



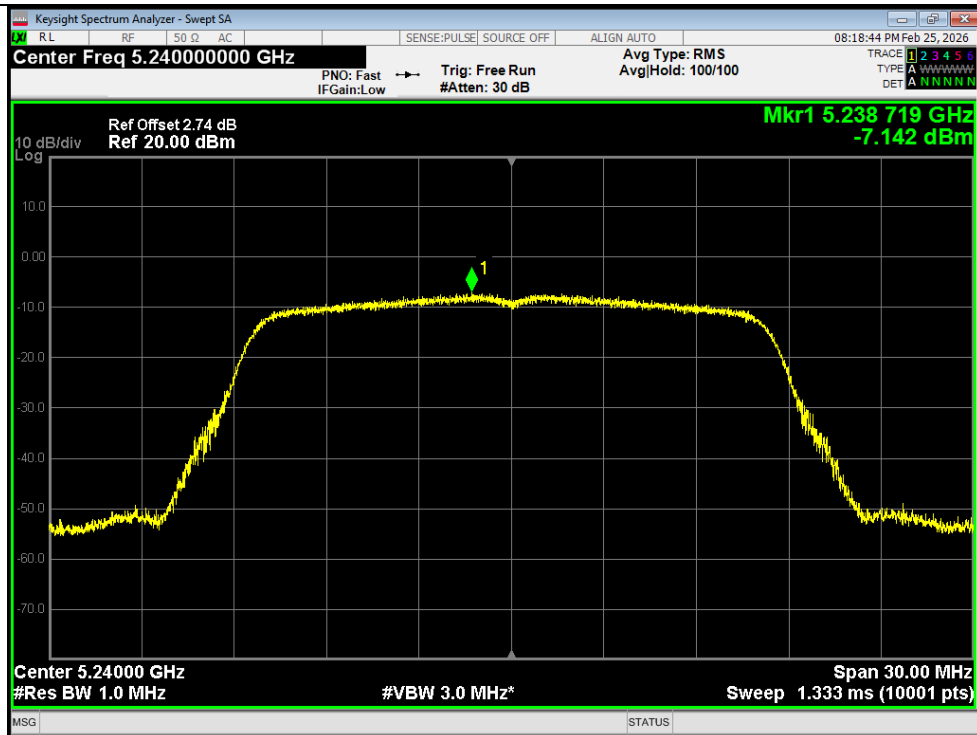
Power Spectral Density NVNT_ANT1_802_11a_5180



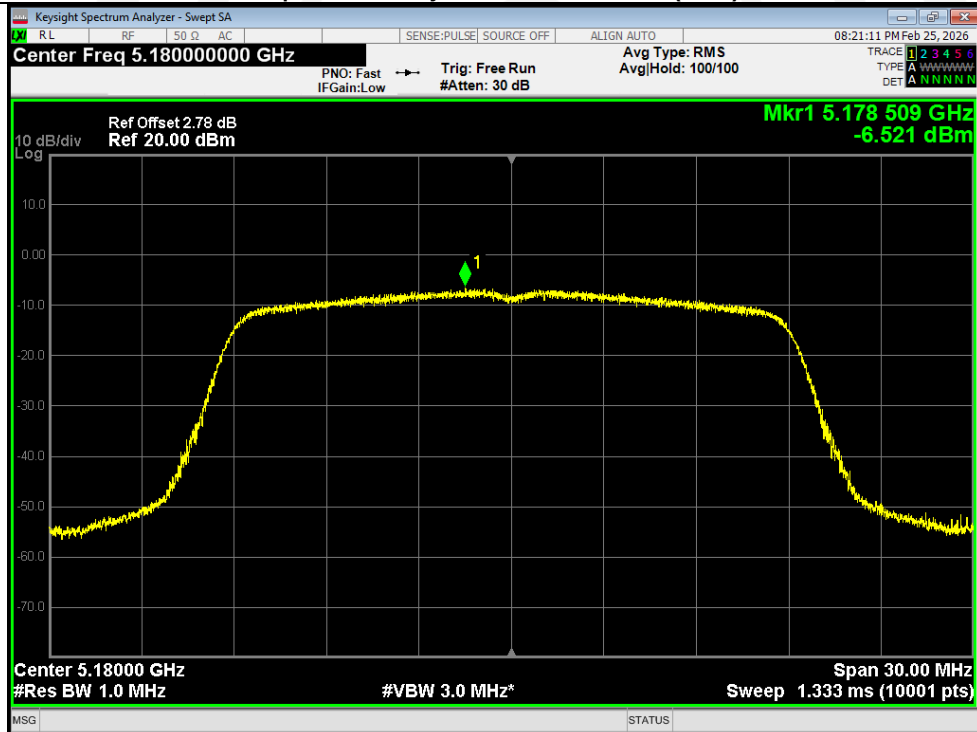
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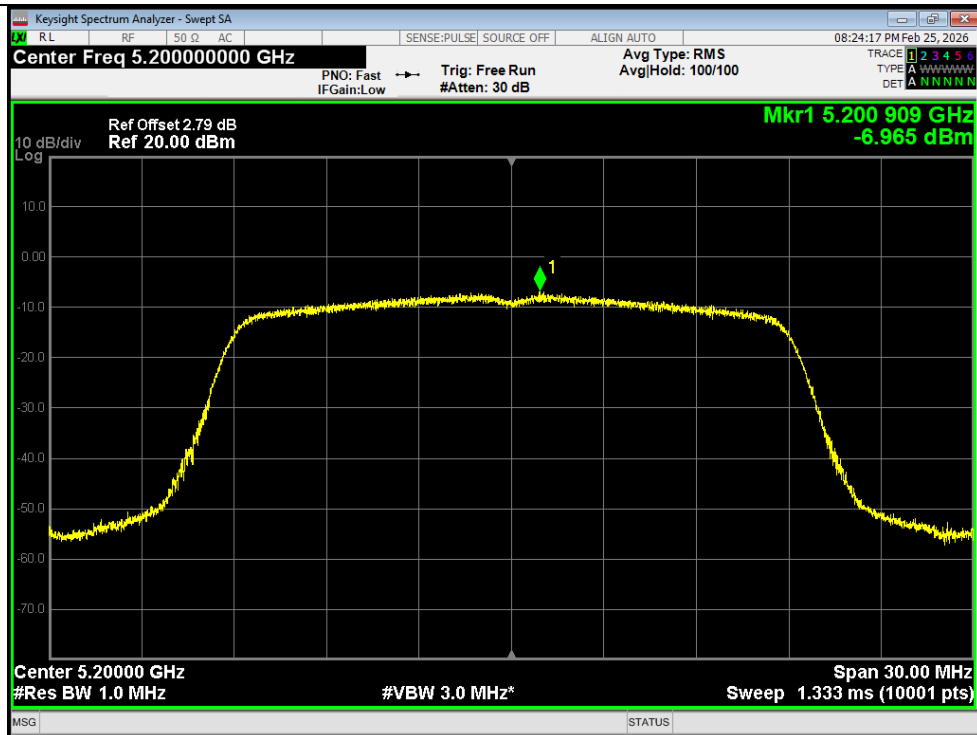
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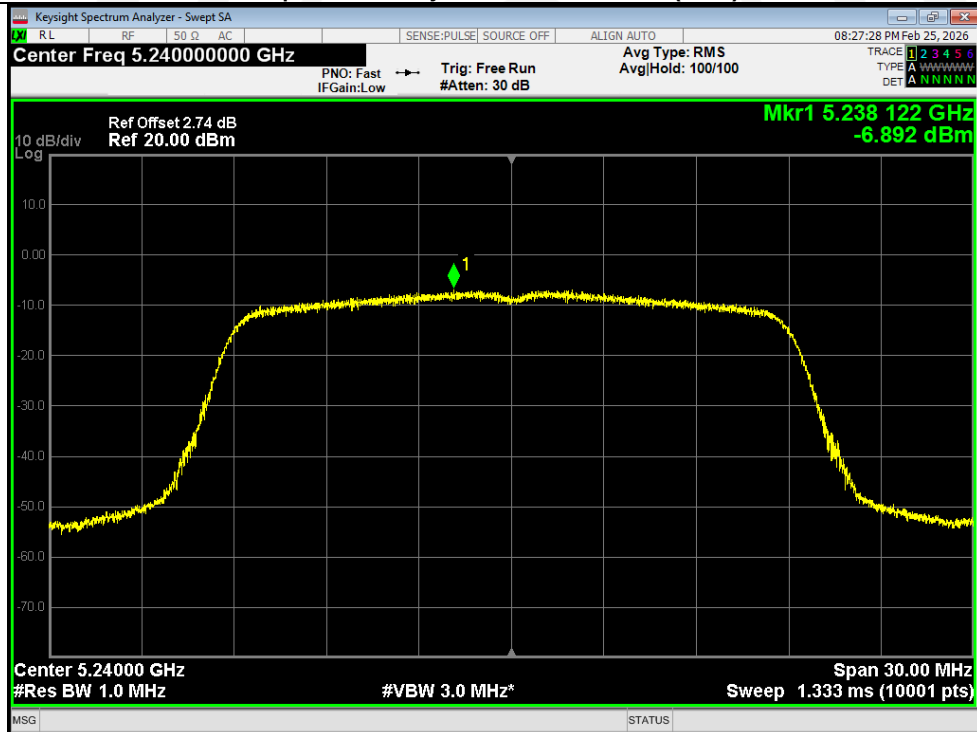
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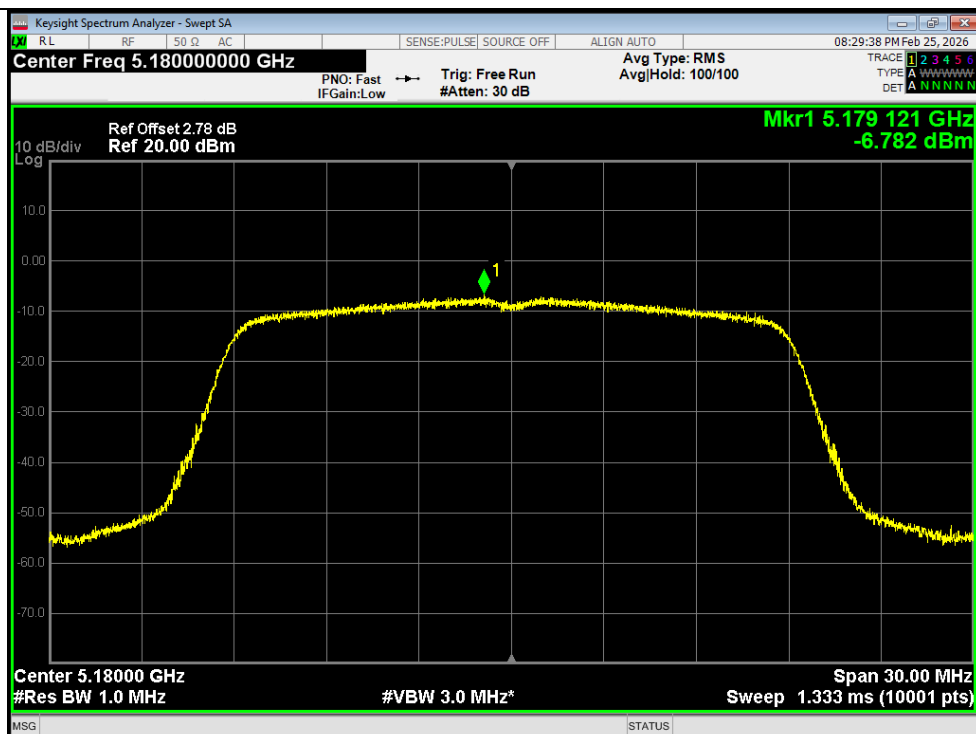
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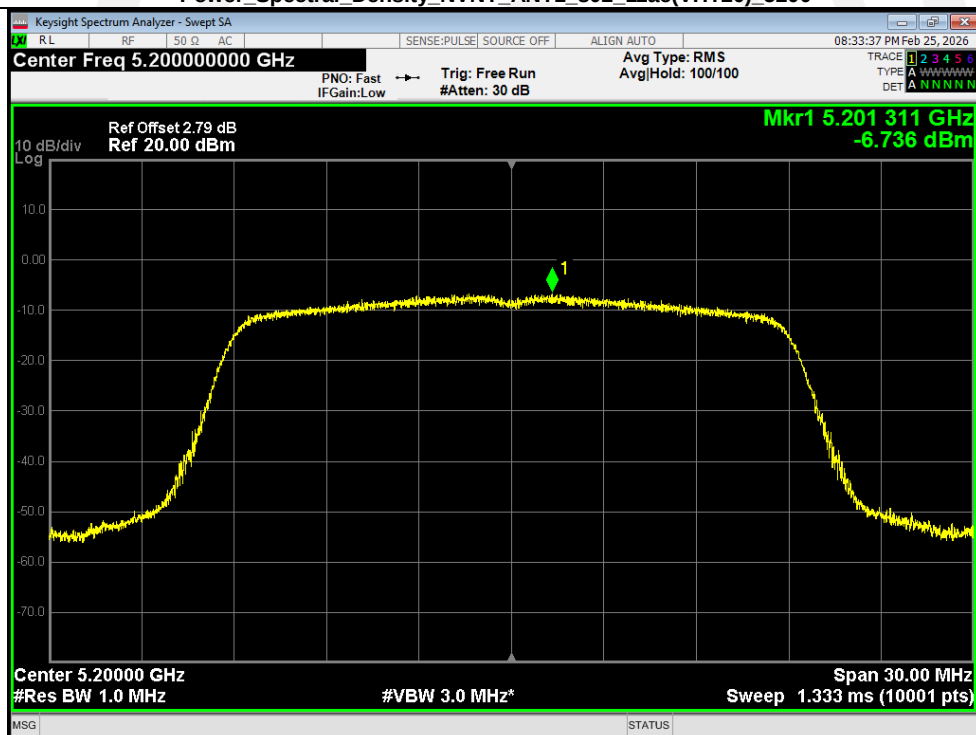
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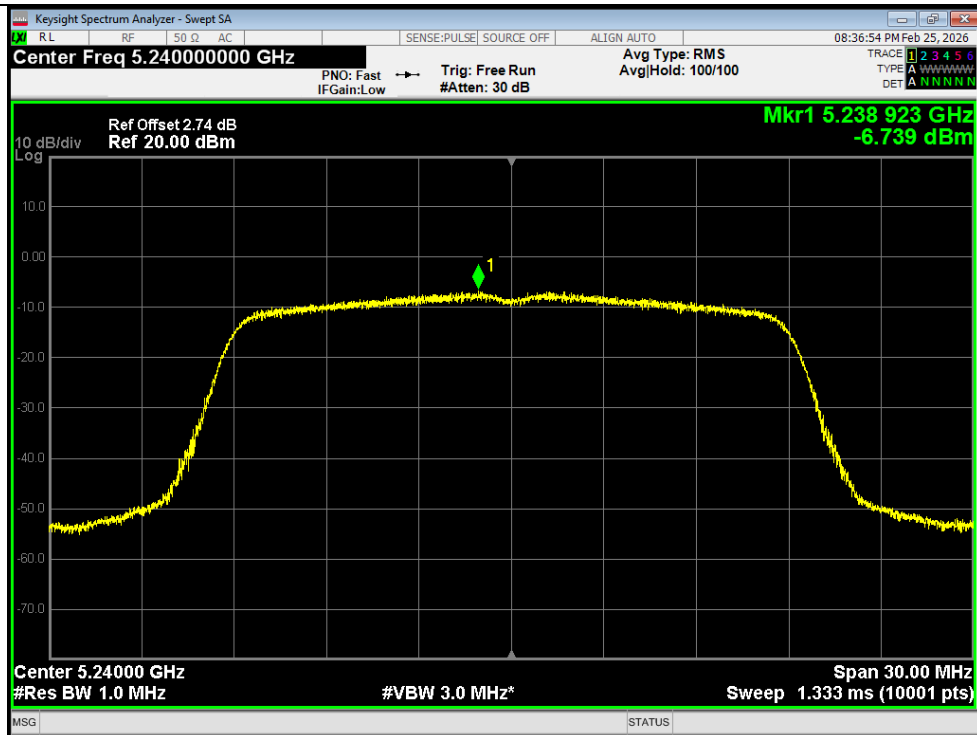
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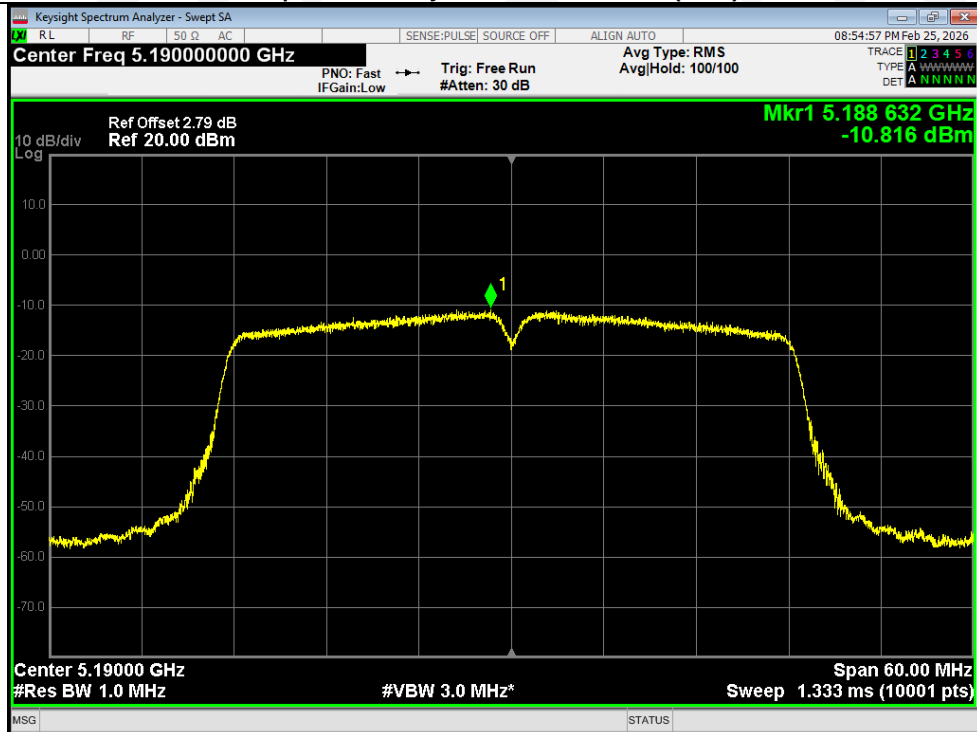
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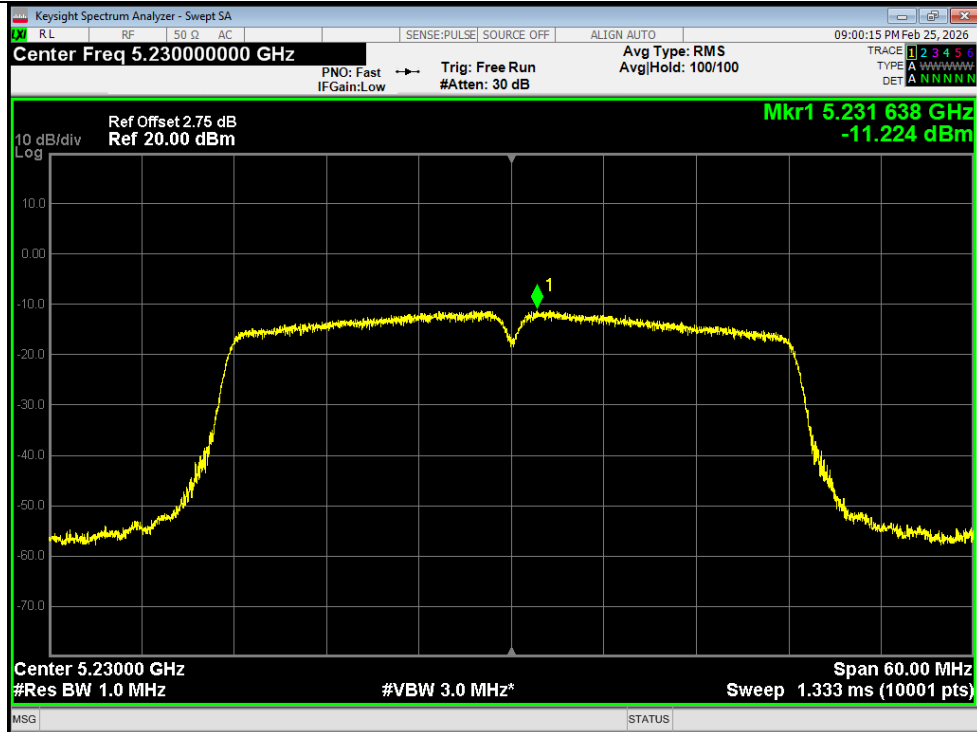
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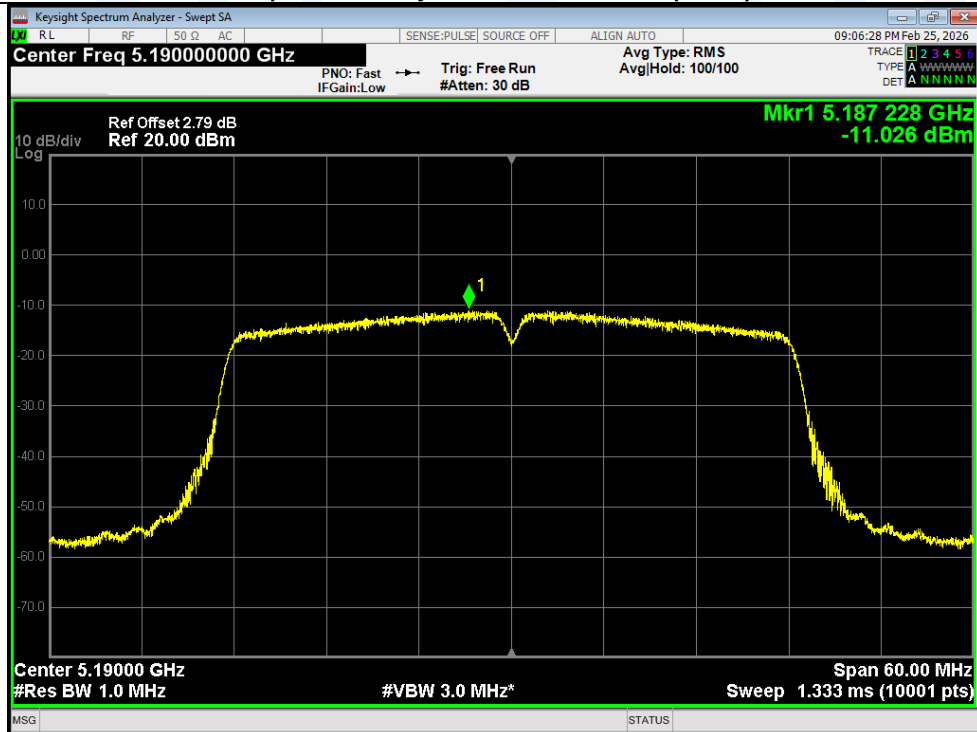
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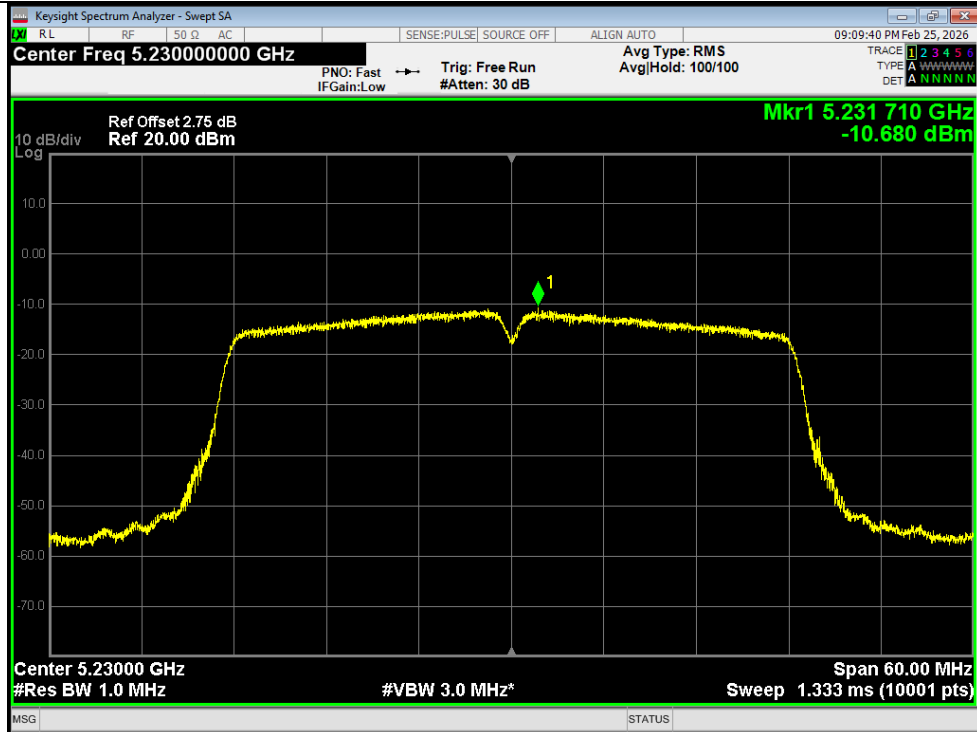
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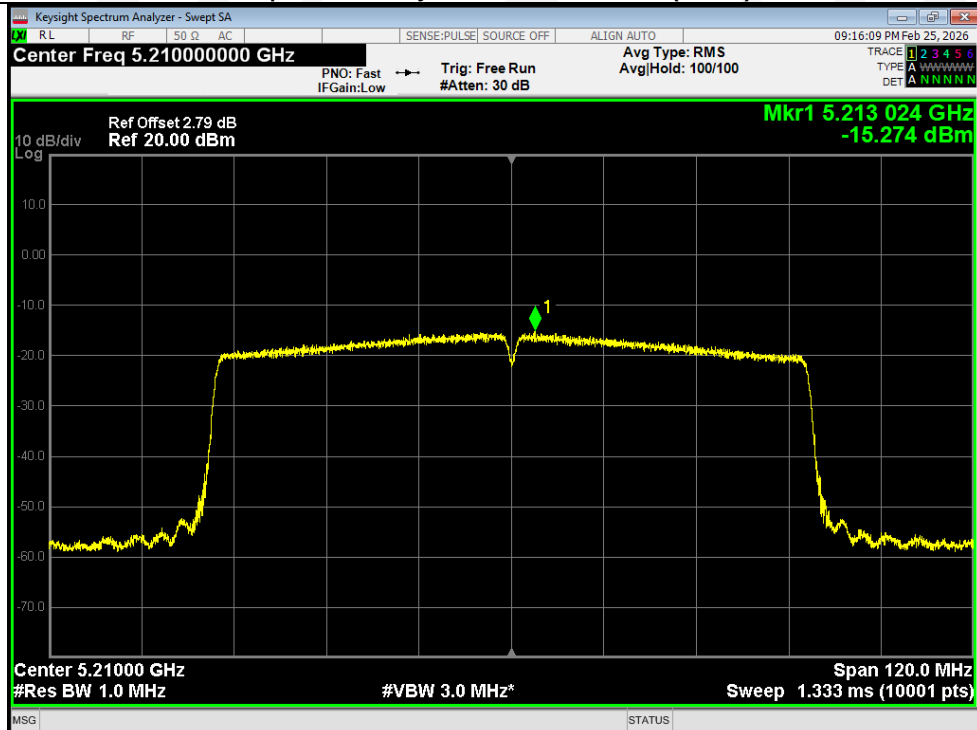
Power_Spectral_Density_NVNT_ANT1_802_11ac(VHT40)_5190



Power_Spectral_Density_NVNT_ANT1_802_11ac(VHT40)_5230



Power Spectral Density NVNT_ANT1_802_11ac(VHT80)_5210



Band 4 (5725 – 5850 MHz) SISO:

Antenna	Modulation	Frequency (MHz)	PSD SA (dBm/RBW)	Duty factor(dB)	RB factor(dB)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Result
ANT1	802.11a	5745.00	-9.407	0.00	-0.086	-9.493	30	Pass
ANT1	802.11a	5785.00	-9.66	0.00	-0.086	-9.746	30	Pass
ANT1	802.11a	5825.00	-9.668	0.00	-0.086	-9.754	30	Pass
ANT1	802.11n(HT20)	5745.00	-10.434	0.00	-0.086	-10.52	30	Pass
ANT1	802.11n(HT20)	5785.00	-9.947	0.00	-0.086	-10.033	30	Pass
ANT1	802.11n(HT20)	5825.00	-10.124	0.00	-0.086	-10.21	30	Pass
ANT1	802.11ac(VHT20)	5745.00	-9.076	0.00	-0.086	-9.162	30	Pass
ANT1	802.11ac(VHT20)	5785.00	-10.011	0.00	-0.086	-10.097	30	Pass
ANT1	802.11ac(VHT20)	5825.00	-10.118	0.00	-0.086	-10.204	30	Pass
ANT1	802.11n(HT40)	5755.00	-14.08	0.00	-0.086	-14.166	30	Pass
ANT1	802.11n(HT40)	5795.00	-14.132	0.00	-0.086	-14.218	30	Pass
ANT1	802.11ac(VHT40)	5755.00	-13.979	0.00	-0.086	-14.065	30	Pass
ANT1	802.11ac(VHT40)	5795.00	-13.842	0.00	-0.086	-13.928	30	Pass
ANT1	802.11ac(VHT80)	5775.00	-17.699	0.00	-0.086	-17.785	30	Pass

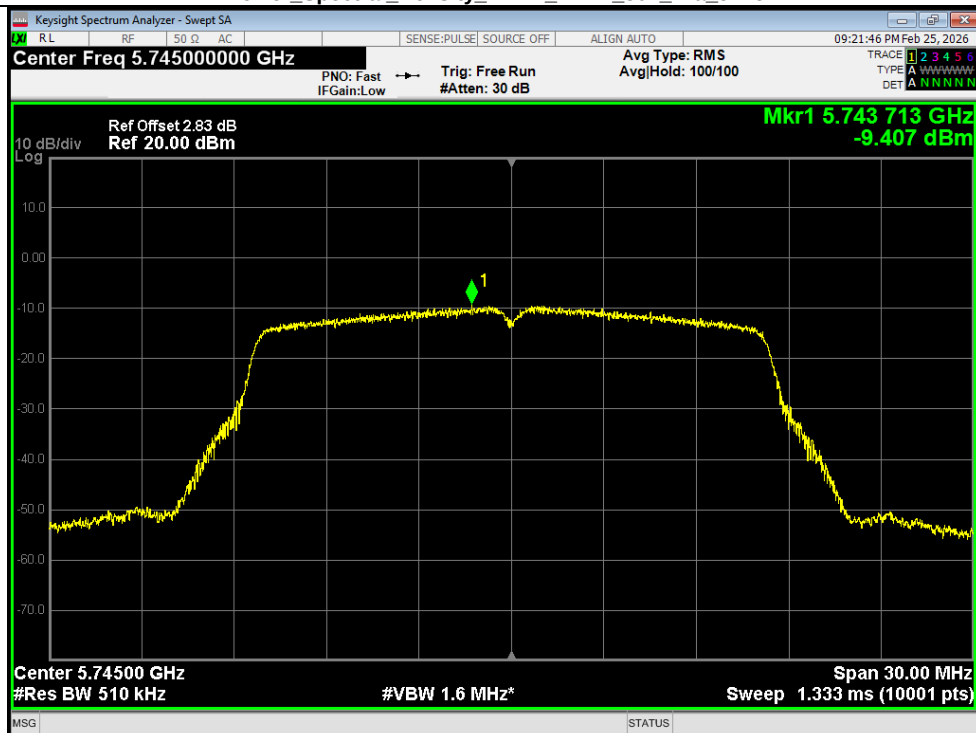
Note: 1. Total Measured Power Density (dBm/500KHz)=dbm/510KHz-(10*log(510/500))+Duty cycle factor.

2. Correction Factor (dB)= duty cycle factor, RB Factor=10*log(510KHz/500KHz).

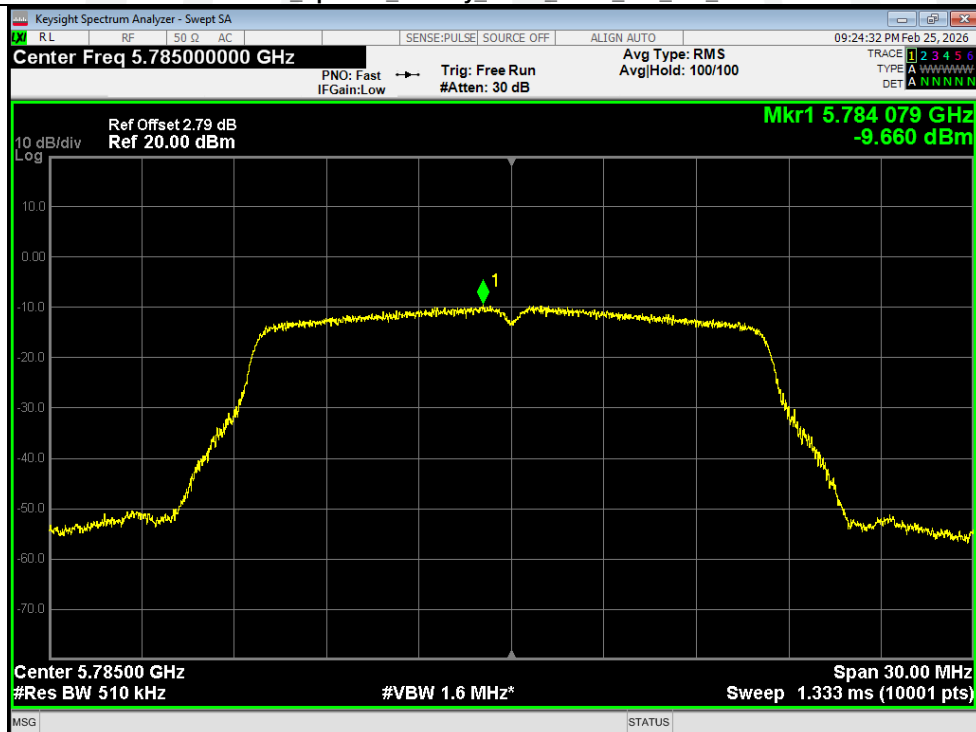
3. Offset= cable loss



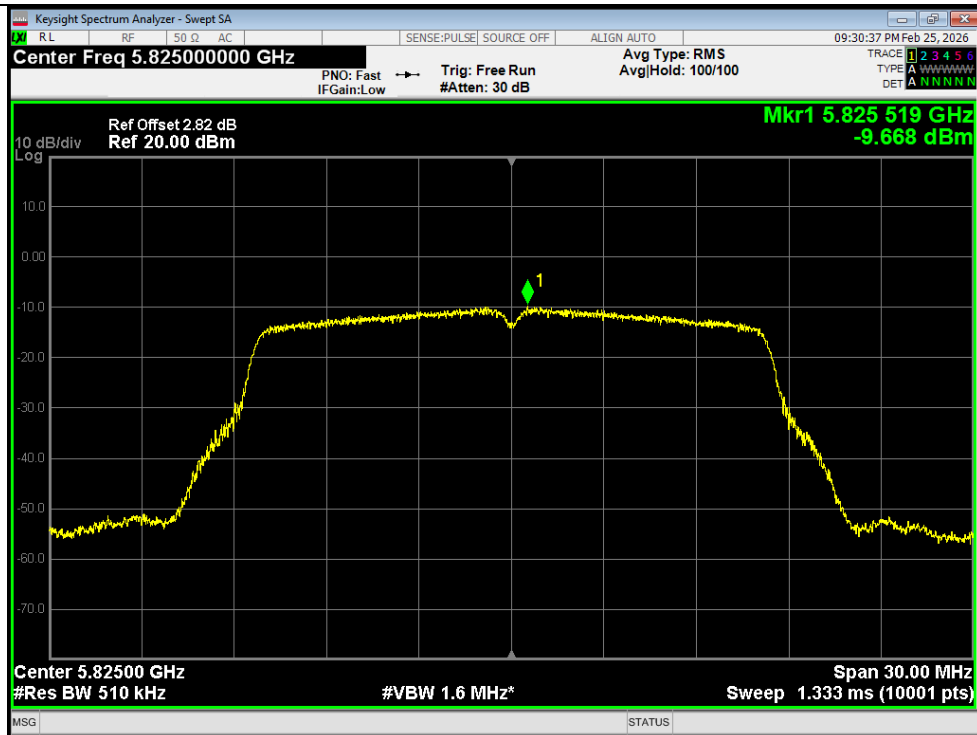
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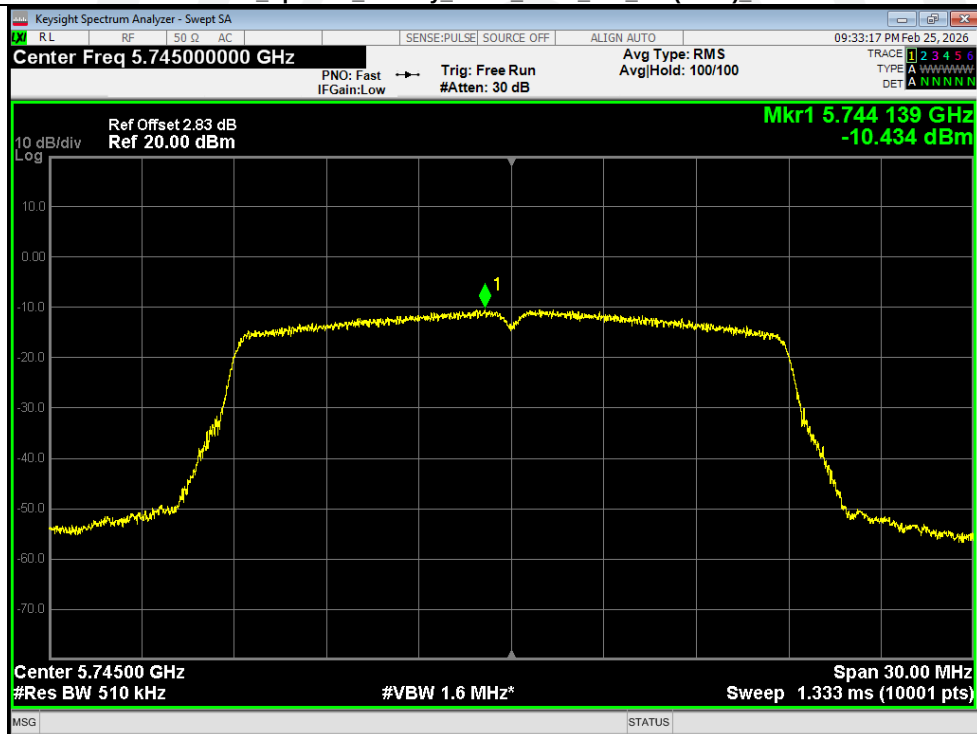
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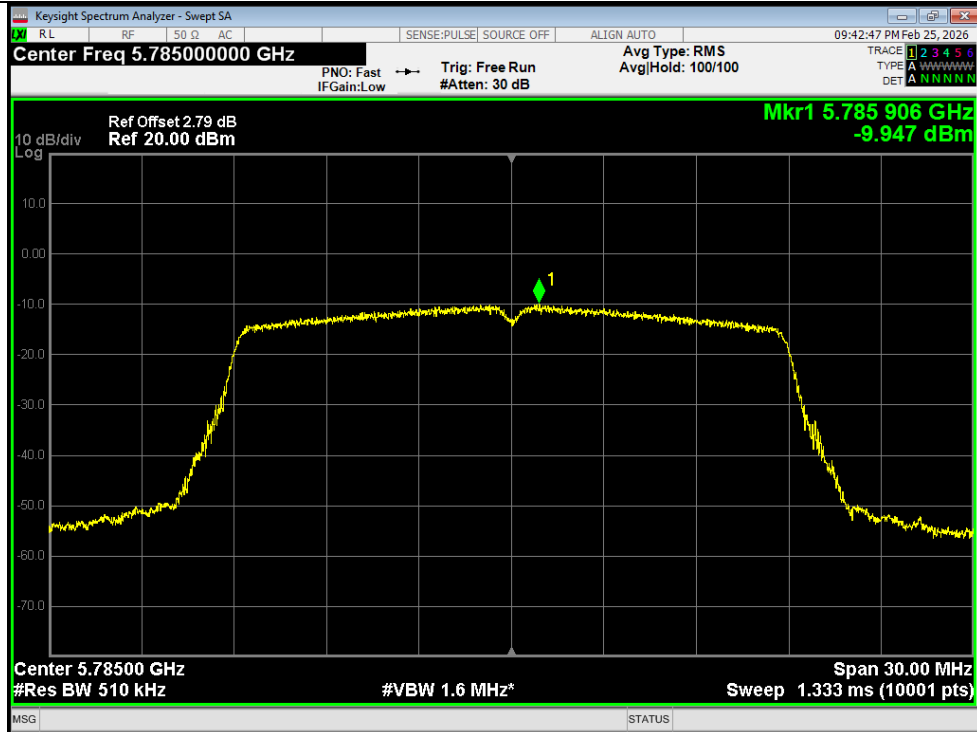
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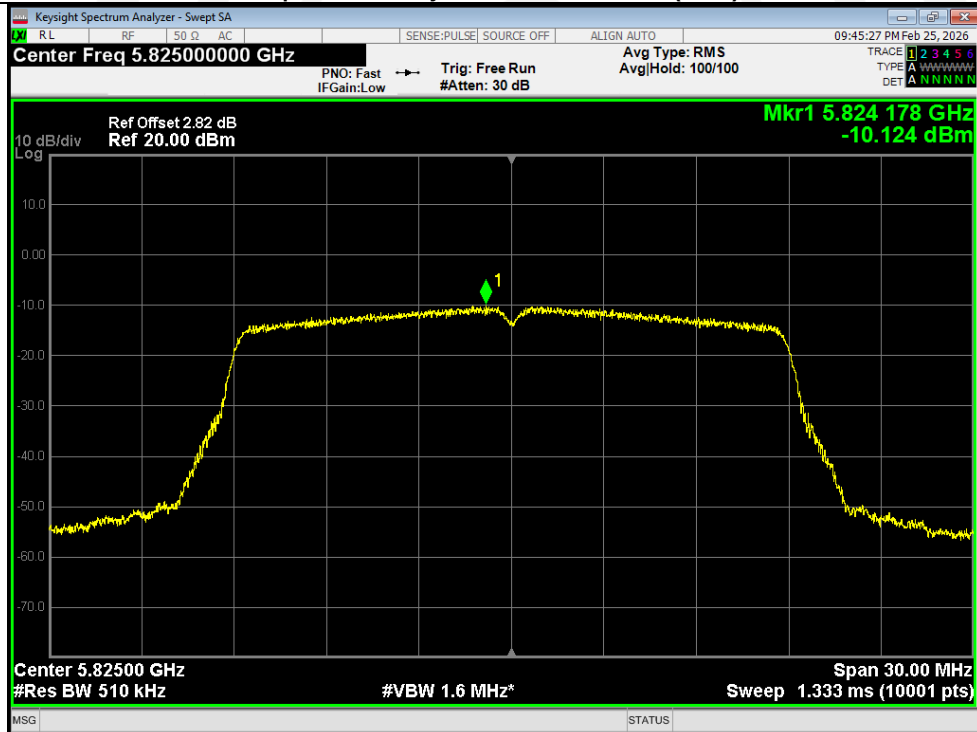
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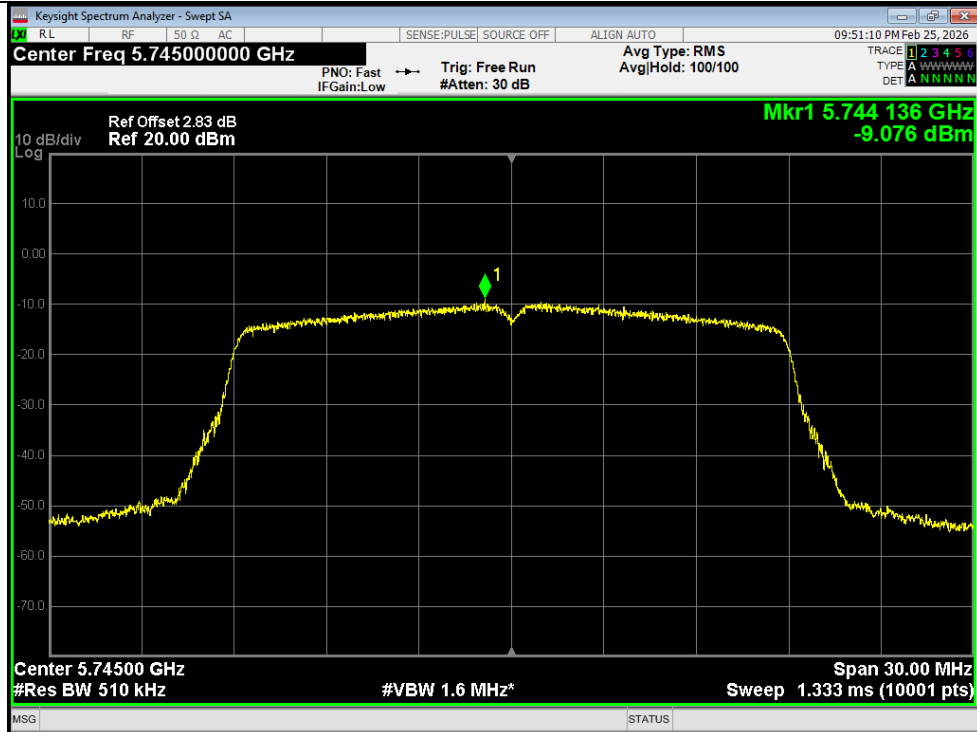
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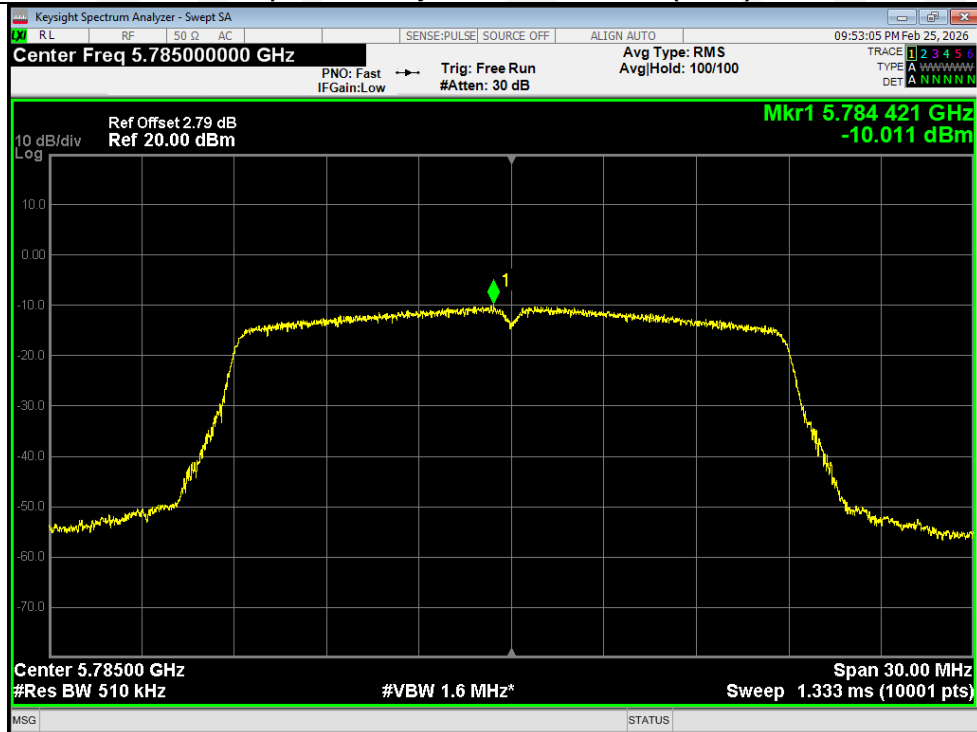
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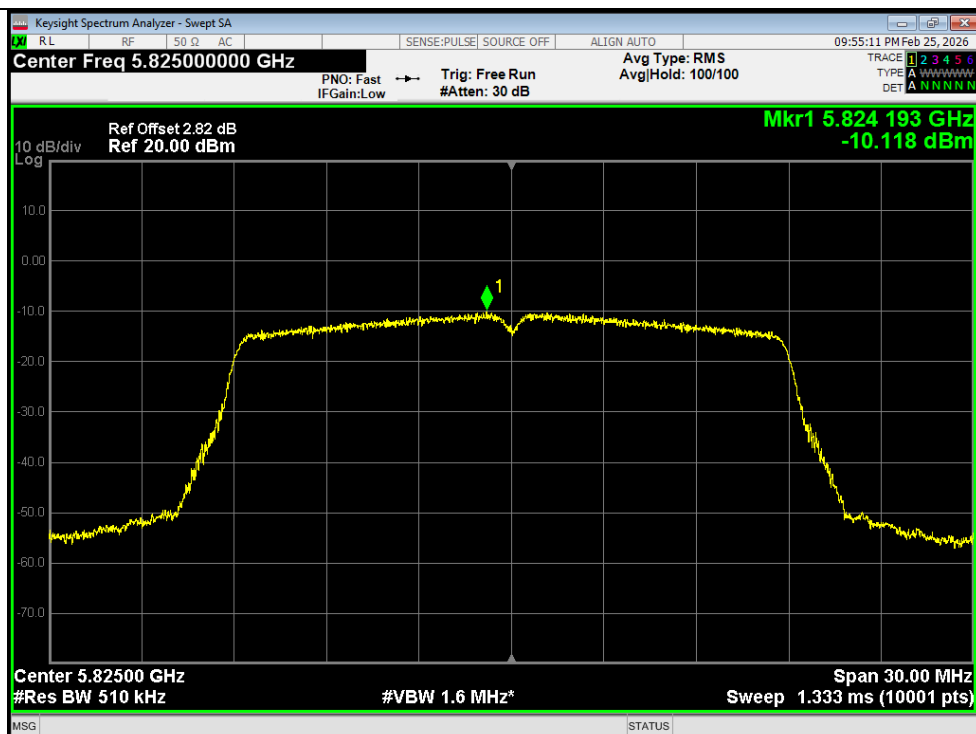
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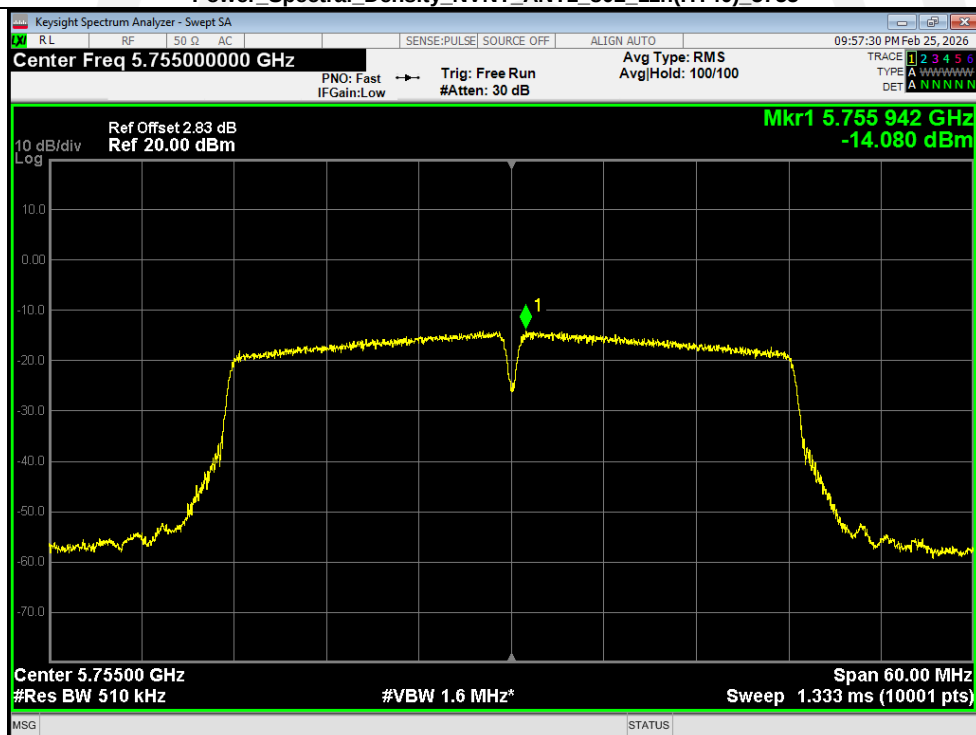
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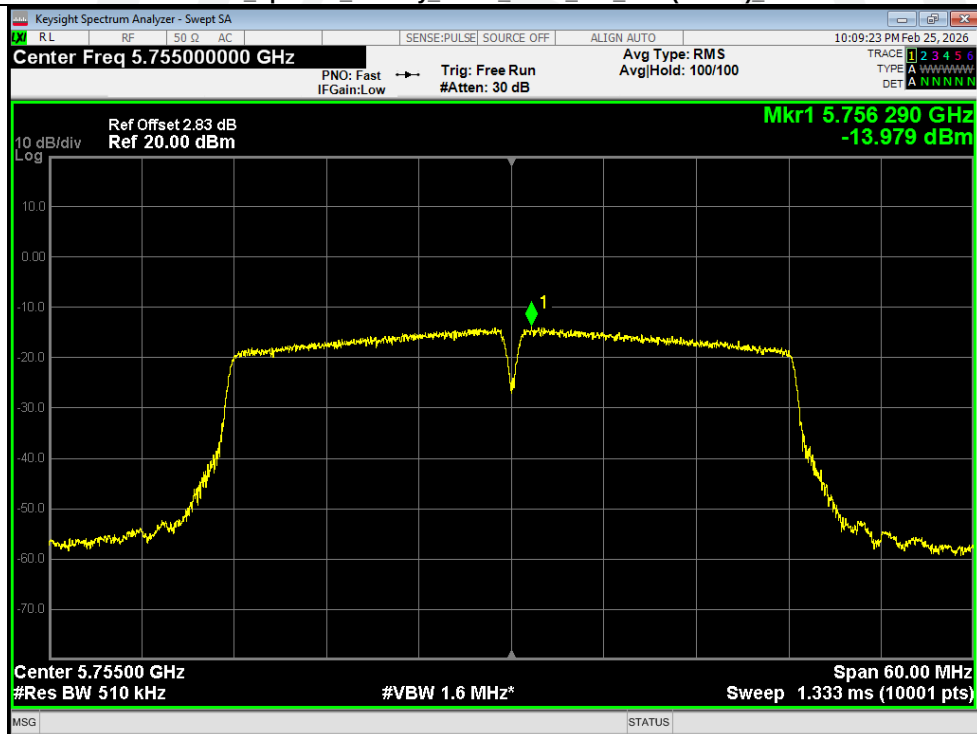
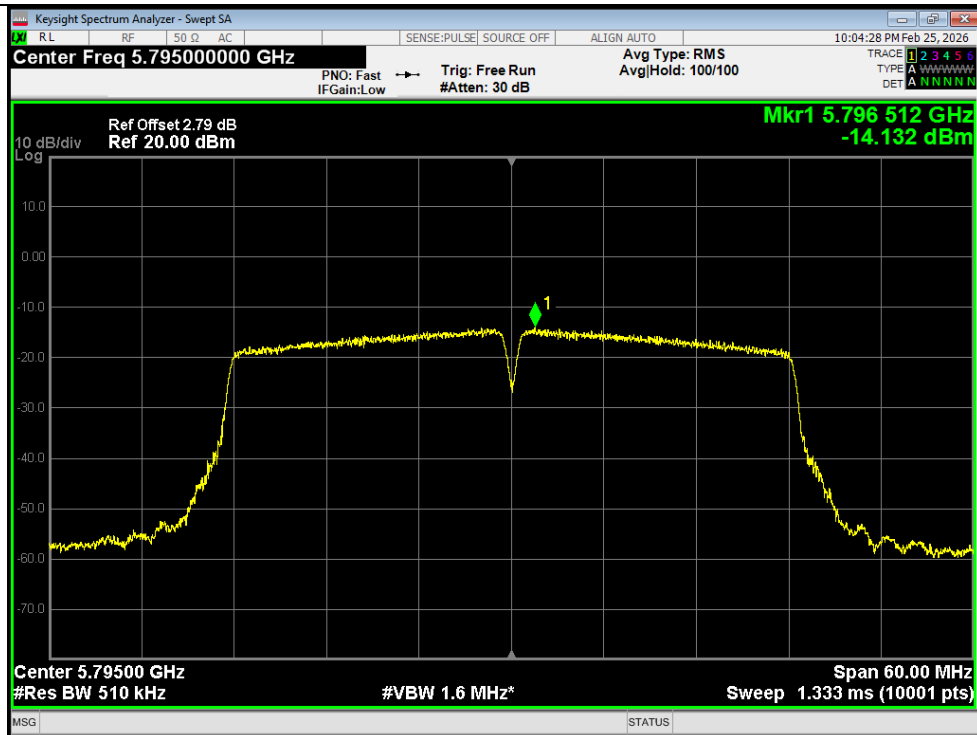
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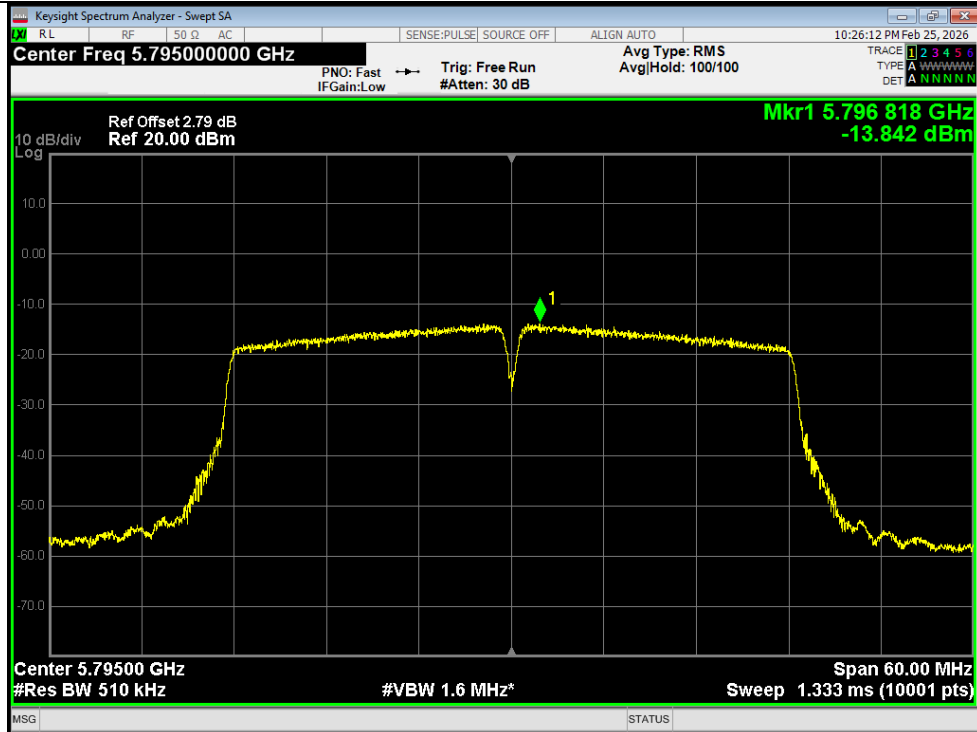


Power_Spectral_Density NVNT_ANT1_802_11n(HT40)_5755

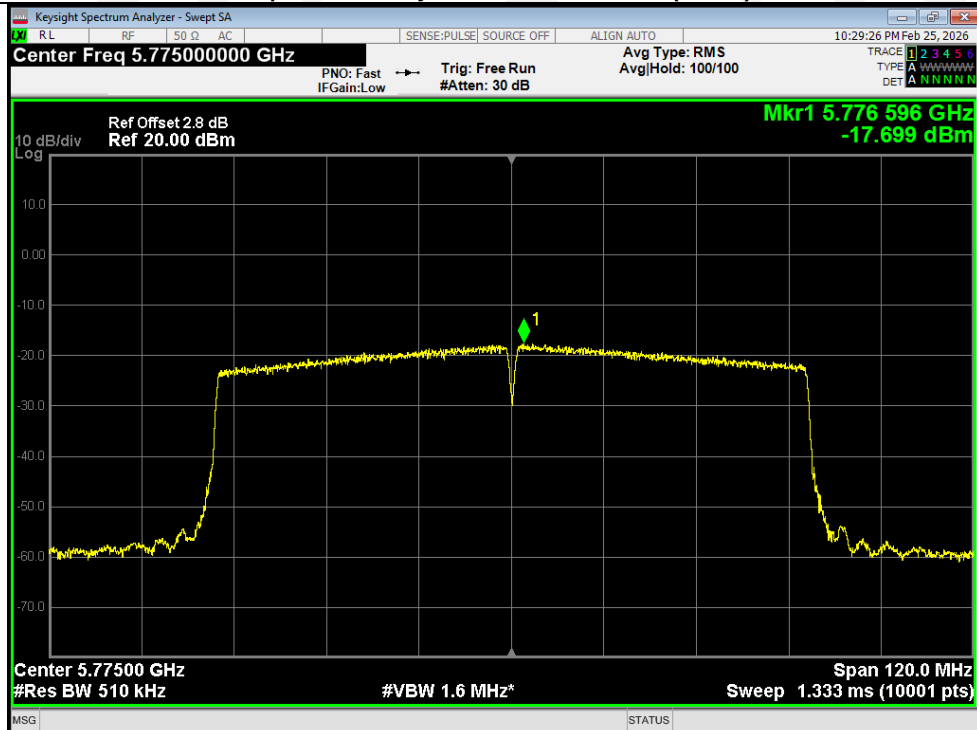


Power_Spectral_Density NVNT_ANT1_802_11n(HT40)_5795





Power Spectral Density NVNT_ANT1_802_11ac(VHT80)_5775



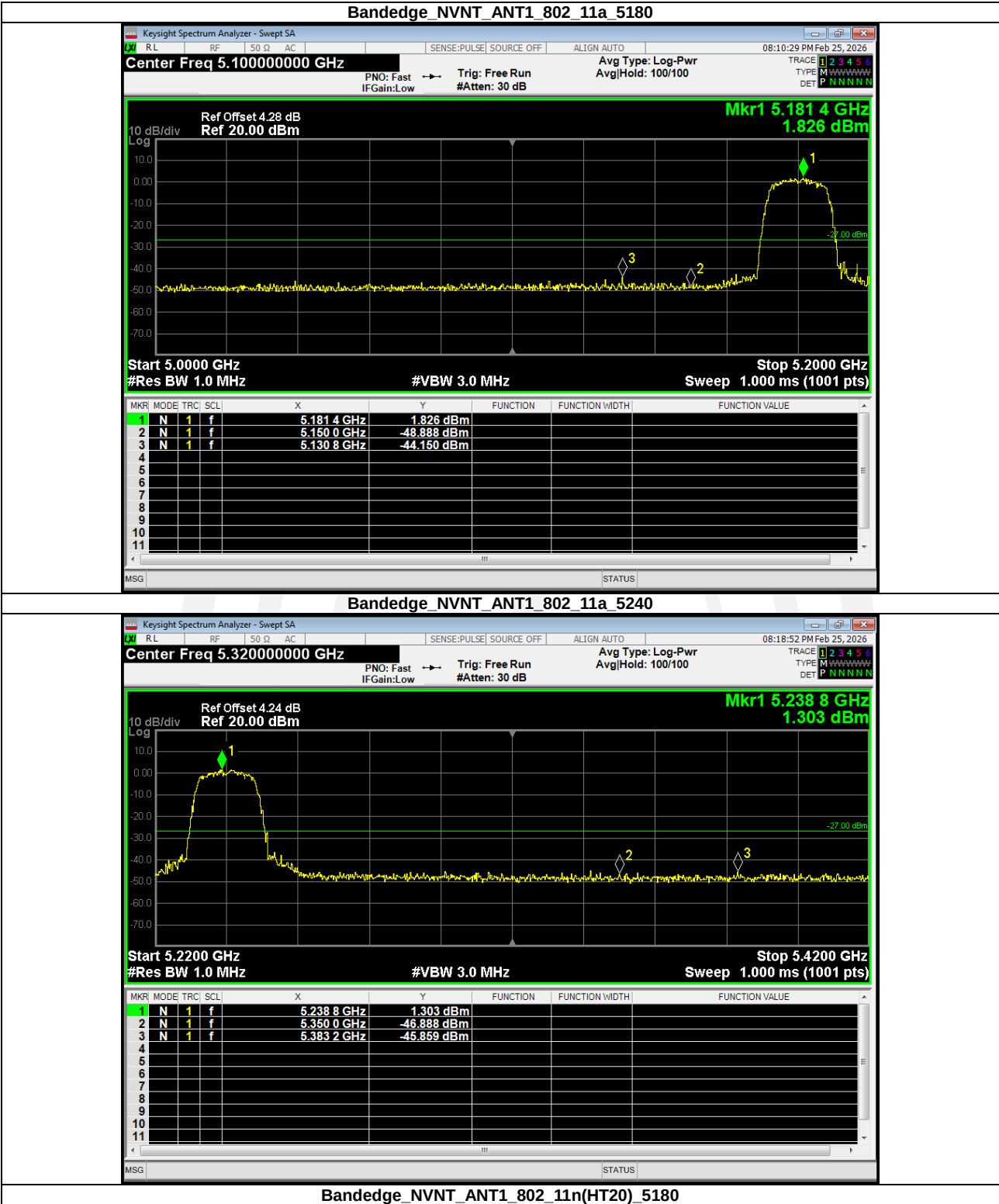
4.6 Band Edge

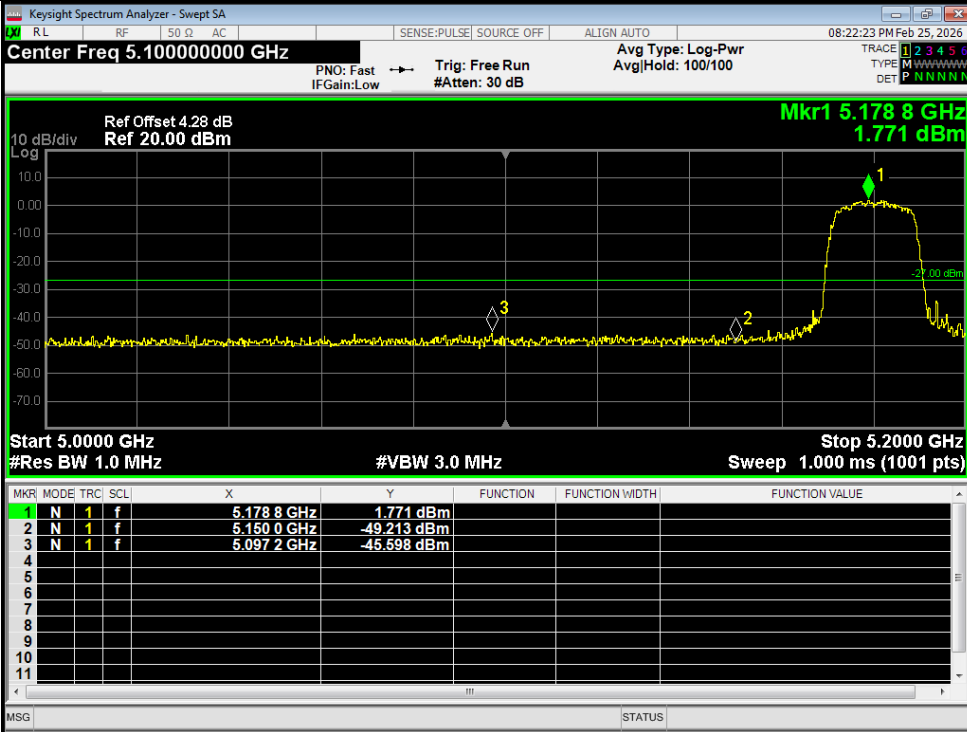
Test Requirement:	FCC Part15 E Section 15.407 and 15.205, 15.209
Test Method:	ANSI C63.10-2020
Limit:	U-NNI -1: All eirp emissions should not exceed -27 dBm/MHz U-NNI -3:All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz 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.
Test Procedure:	- Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator. - Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range. - Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span. - Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency. - Repeat above procedures until all measured frequencies were complete..
Test setup:	 Spectrum Analyzer EUT
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Measurement Data:

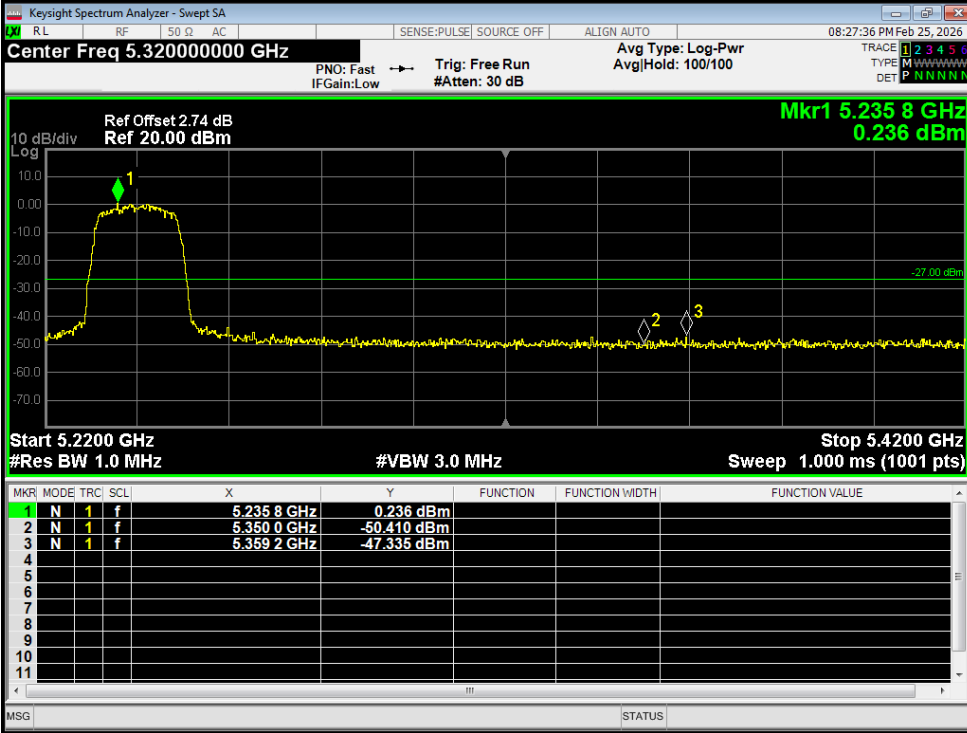
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBm)	Antenna(dBi)	Max Value (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	-44.14	2.89	-41.25	-27	Pass
NVNT	a	5240	Ant1	-45.85	2.89	-42.96	-27	Pass
NVNT	n20	5180	Ant1	-45.59	2.89	-42.7	-27	Pass
NVNT	n20	5240	Ant1	-47.33	2.89	-44.44	-27	Pass
NVNT	n40	5190	Ant1	-47.36	2.89	-44.47	-27	Pass
NVNT	n40	5230	Ant1	-48.05	2.89	-45.16	-27	Pass
NVNT	ac20	5180	Ant1	-47.06	2.89	-44.17	-27	Pass
NVNT	ac20	5240	Ant1	-47.6	2.89	-44.71	-27	Pass
NVNT	ac40	5190	Ant1	-46.53	2.89	-43.64	-27	Pass
NVNT	ac40	5230	Ant1	-47.65	2.89	-44.76	-27	Pass
NVNT	ac80	5210	Ant1	-47.20	2.89	-44.31	-27	Pass

Band1

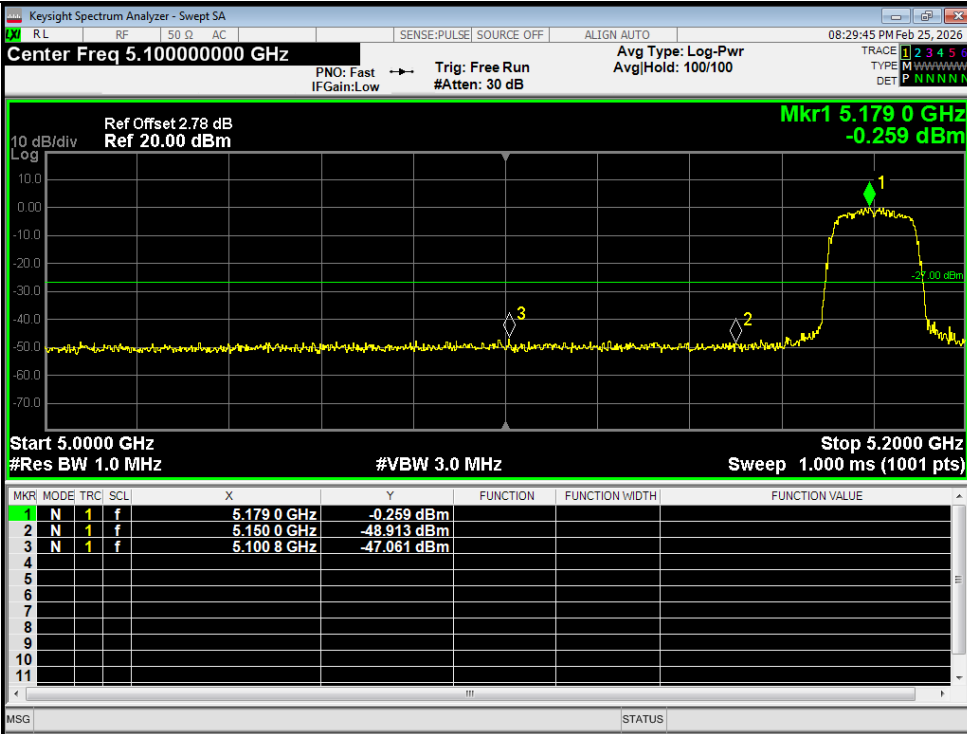




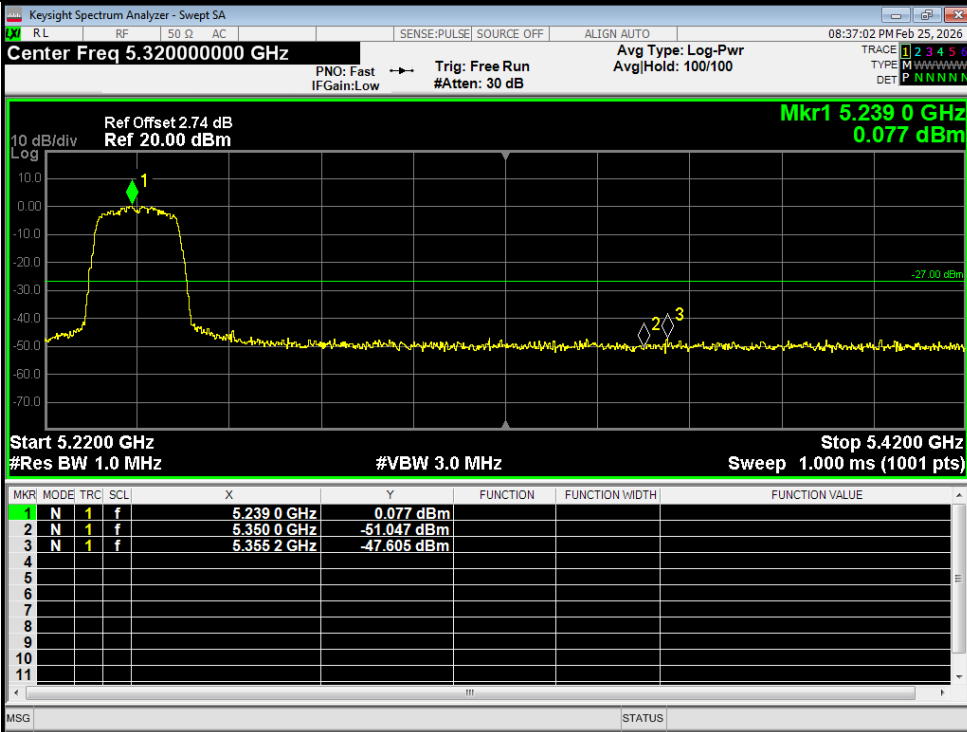
Bandedge_NVNT_ANT1_802_11n(HT20)_5240



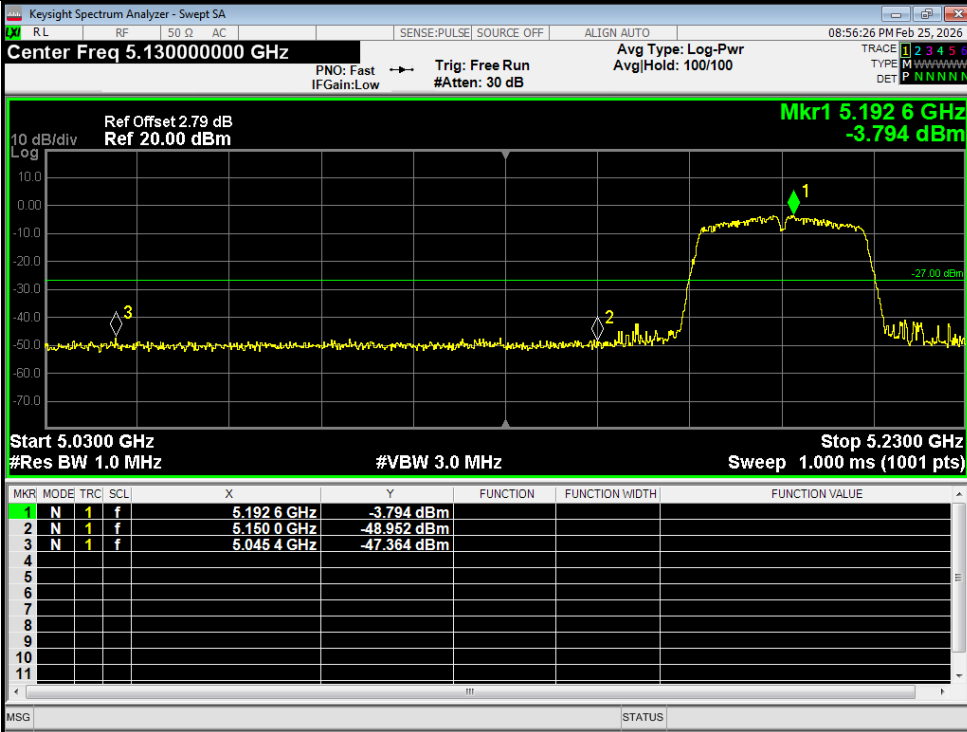
Bandedge_NVNT_ANT1_802_11ac(VHT20)_5180



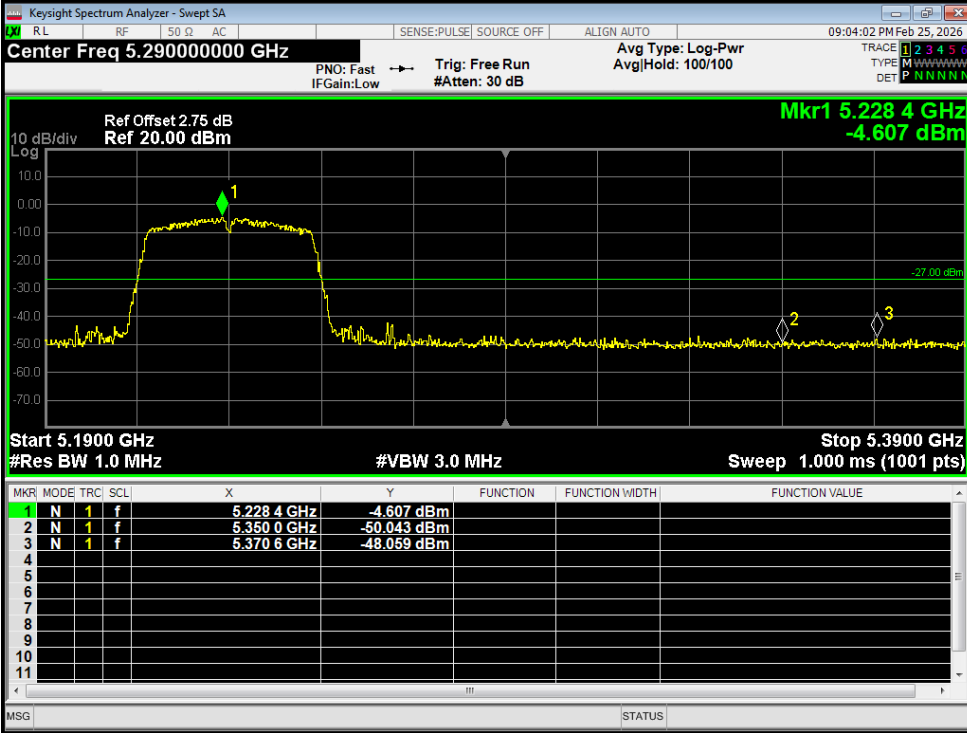
Bandedge_NVNT_ANT1_802_11ac(VHT20)_5240



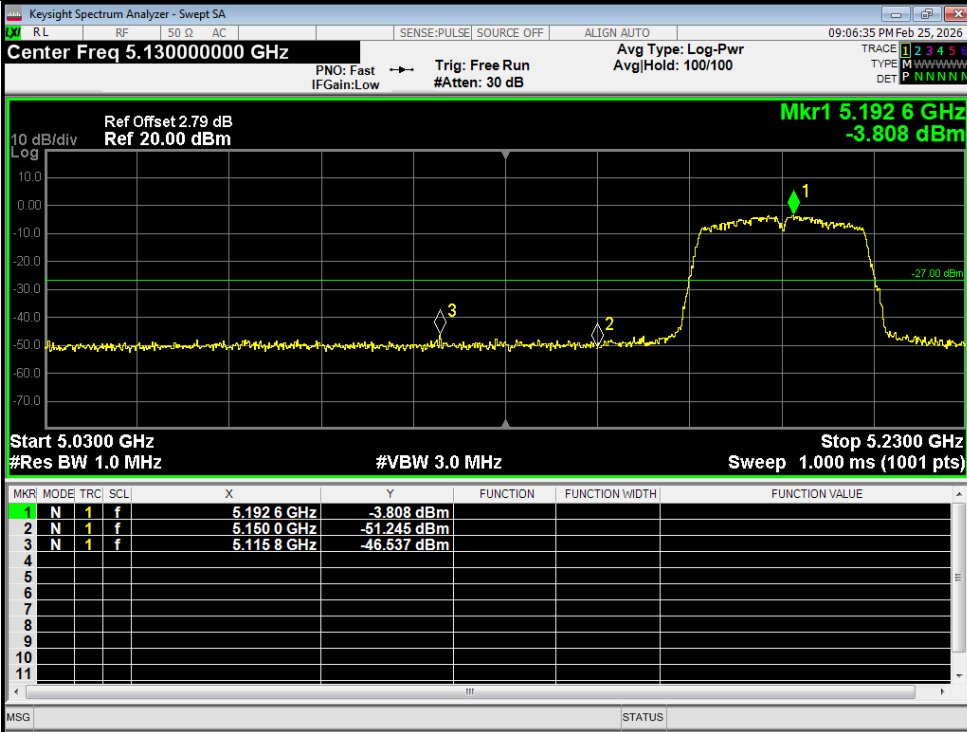
Bandedge_NVNT_ANT1_802_11n(HT40)_5190



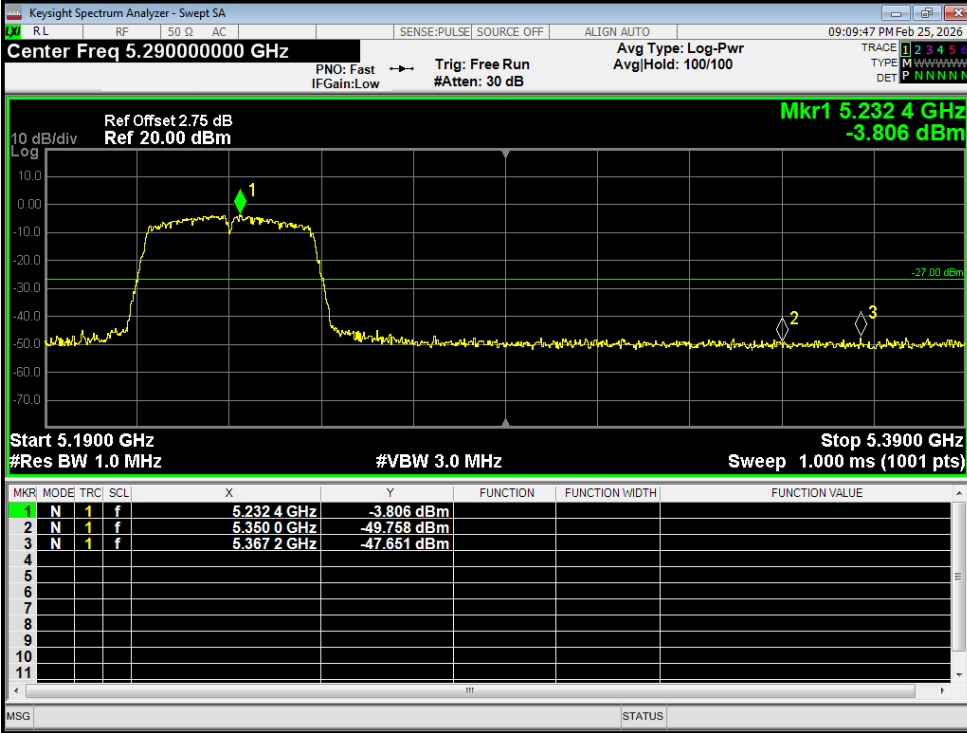
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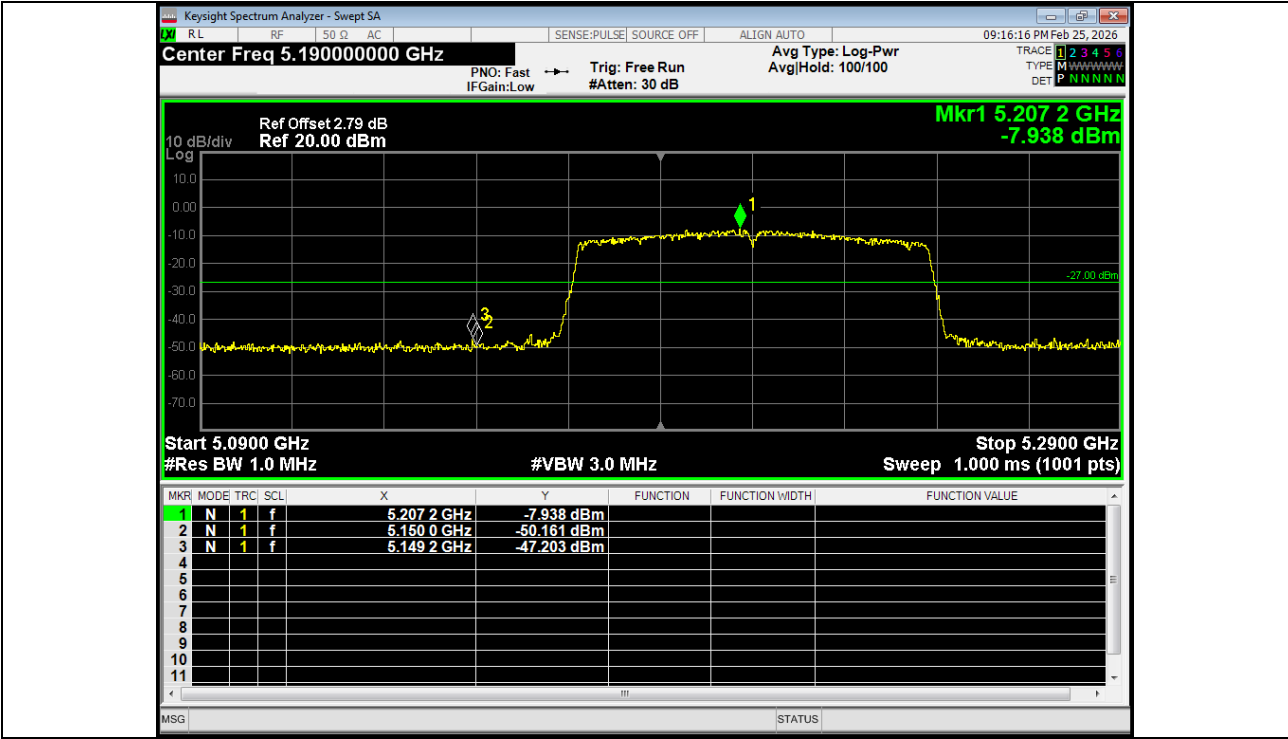
Bandedge_NVNT_ANT1_802_11ac(VHT40)_5190



Bandedge_NVNT_ANT1_802_11ac(VHT40) 5230

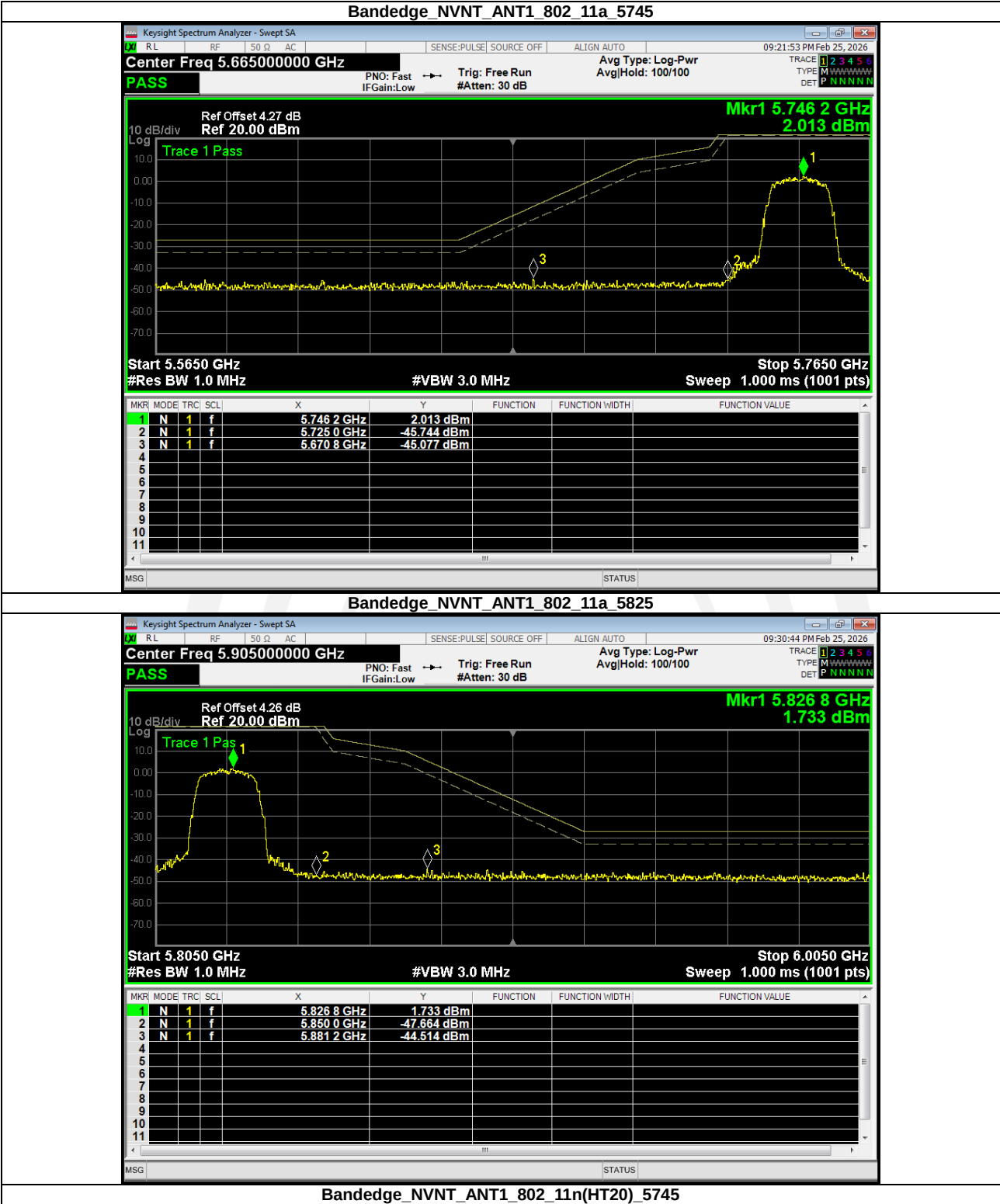


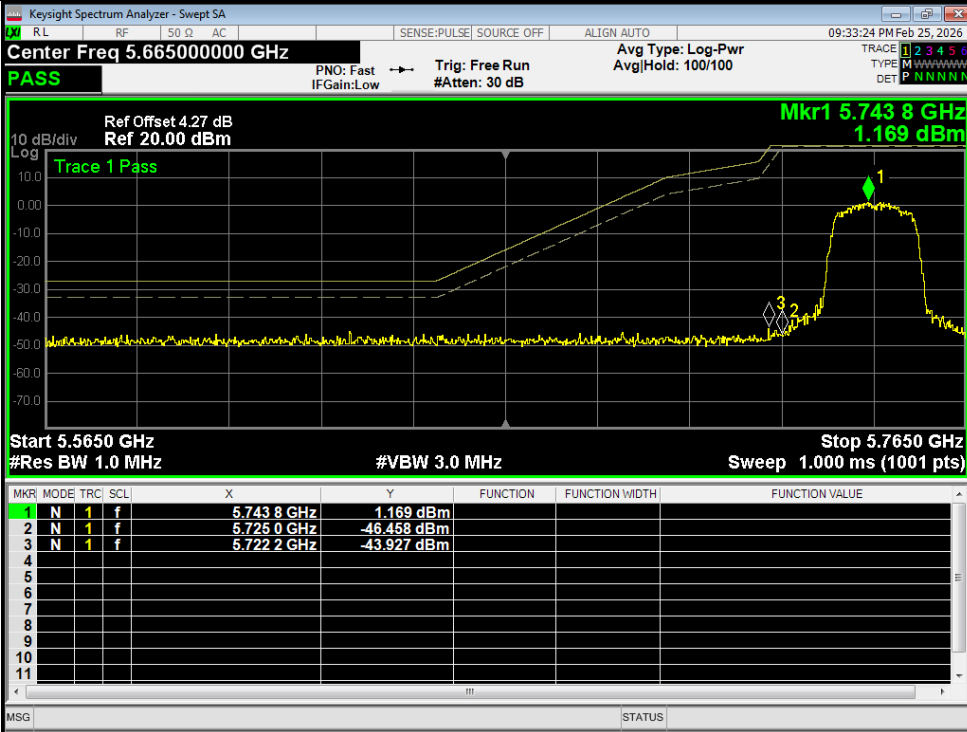
Bandedge_NVNT_ANT1_802_11ac(VHT80) 5210



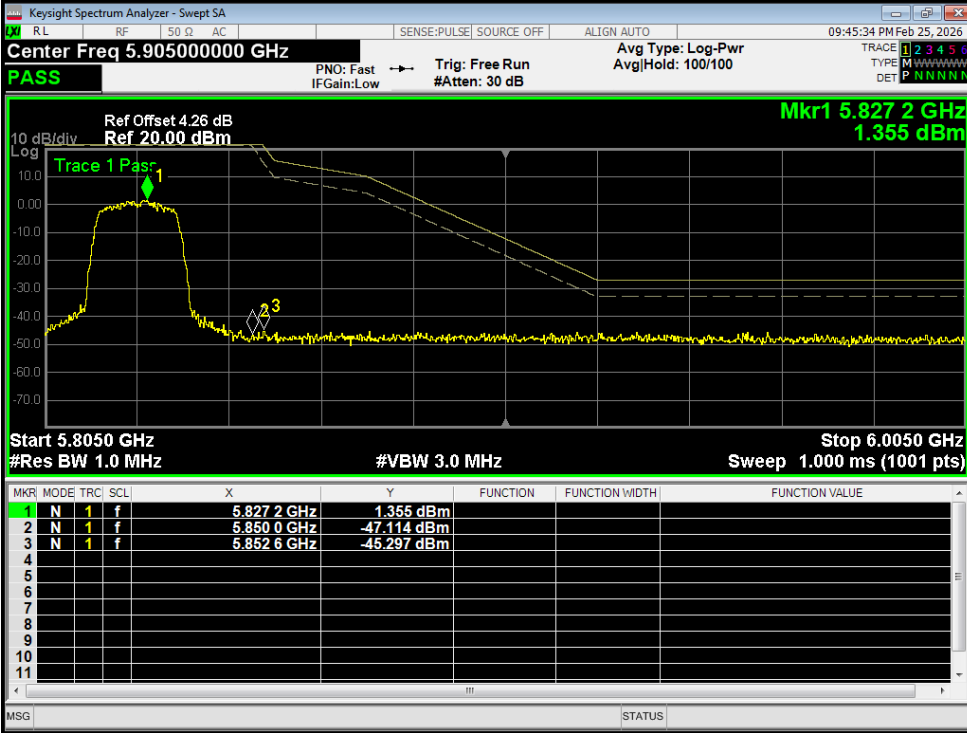
Band4

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBm)	Antenna(dBi)	Max Value (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	Ant1	-45.07	2.89	-42.18	-26.40	Pass
NVNT	a	5825	Ant1	-44.51	2.89	-41.62	5.41	Pass
NVNT	n20	5745	Ant1	-43.92	2.89	-41.03	10.62	Pass
NVNT	n20	5825	Ant1	-45.29	2.89	-42.40	21.07	Pass
NVNT	n40	5755	Ant1	-42.69	2.89	-39.80	11.40	Pass
NVNT	n40	5795	Ant1	-44.58	2.89	-41.69	3.93	Pass
NVNT	ac20	5745	Ant1	-41.24	2.89	-38.35	11.23	Pass
NVNT	ac20	5825	Ant1	-44.7	2.89	-41.81	8.67	Pass
NVNT	ac40	5755	Ant1	-42.52	2.89	-39.63	11.18	Pass
NVNT	ac40	5795	Ant1	-45.12	2.89	-42.23	10.90	Pass
NVNT	ac80	5775	Ant1	-43.43	2.89	-40.54	11.40	Pass

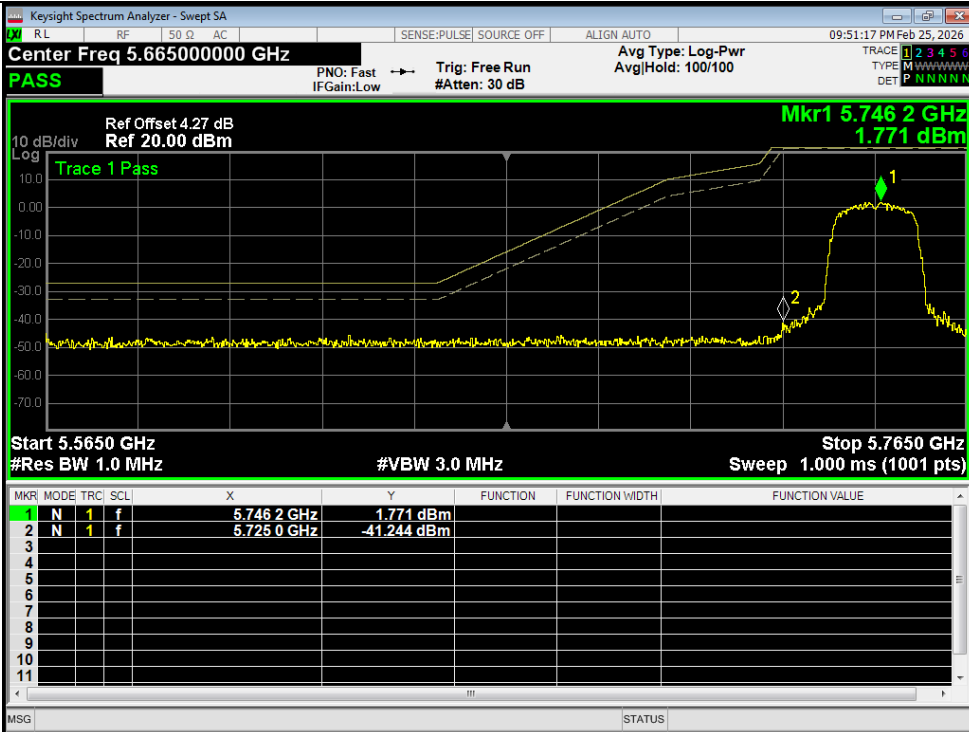




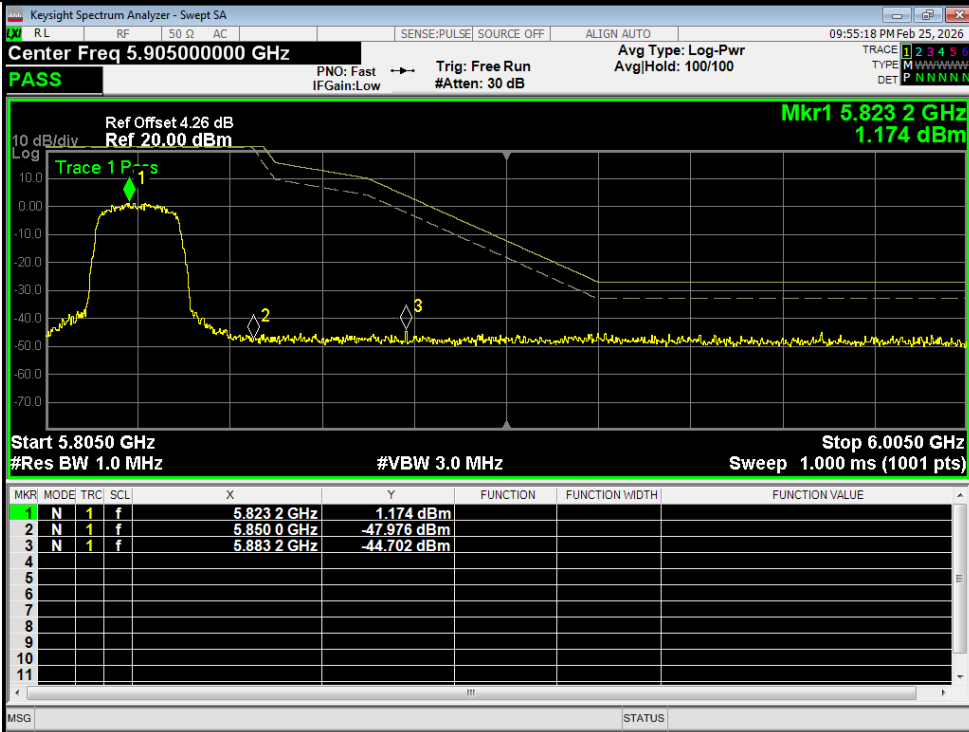
Bandedge_NVNT_ANT1_802_11n(HT20)_5825



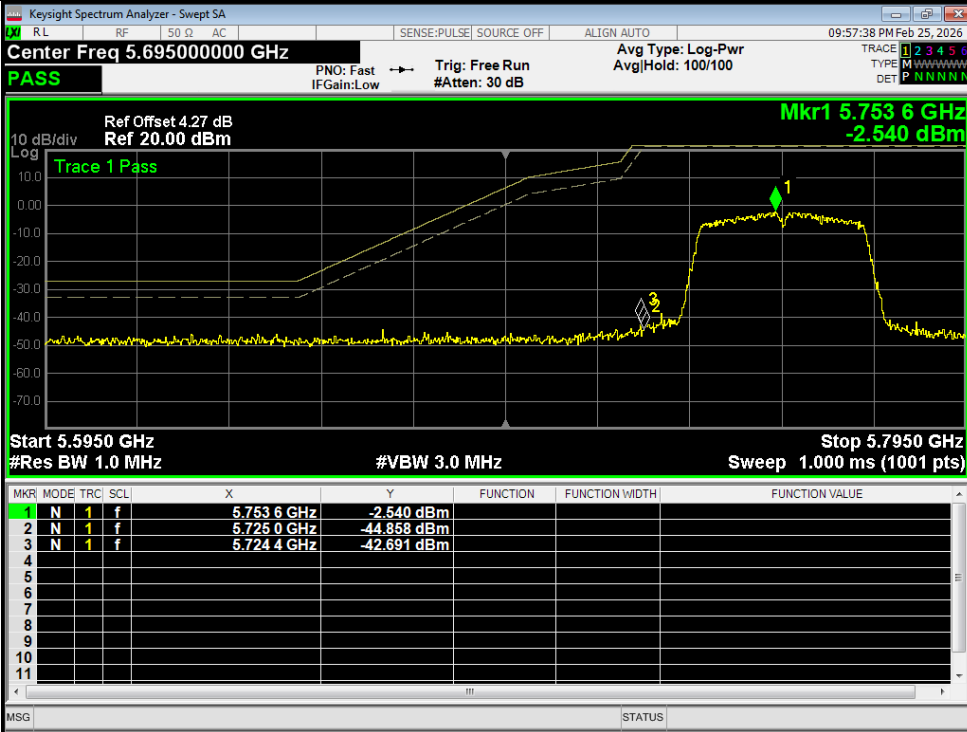
Bandedge_NVNT_ANT1_802_11ac(VHT20)_5745



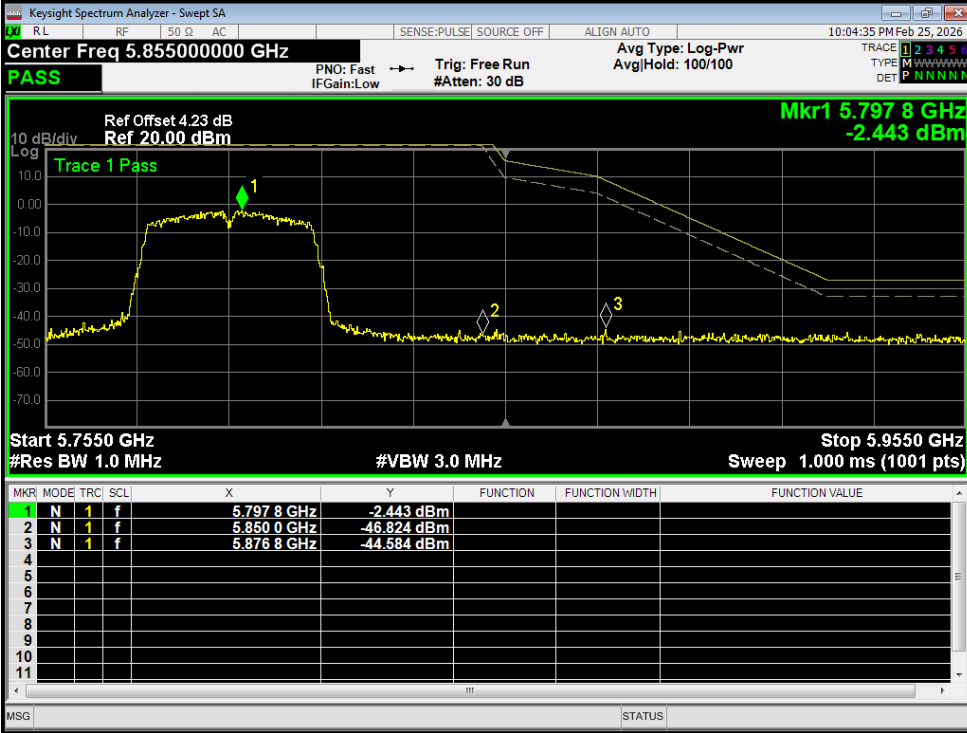
Bandedge_NVNT_ANT1_802_11ac(VHT20)_5825



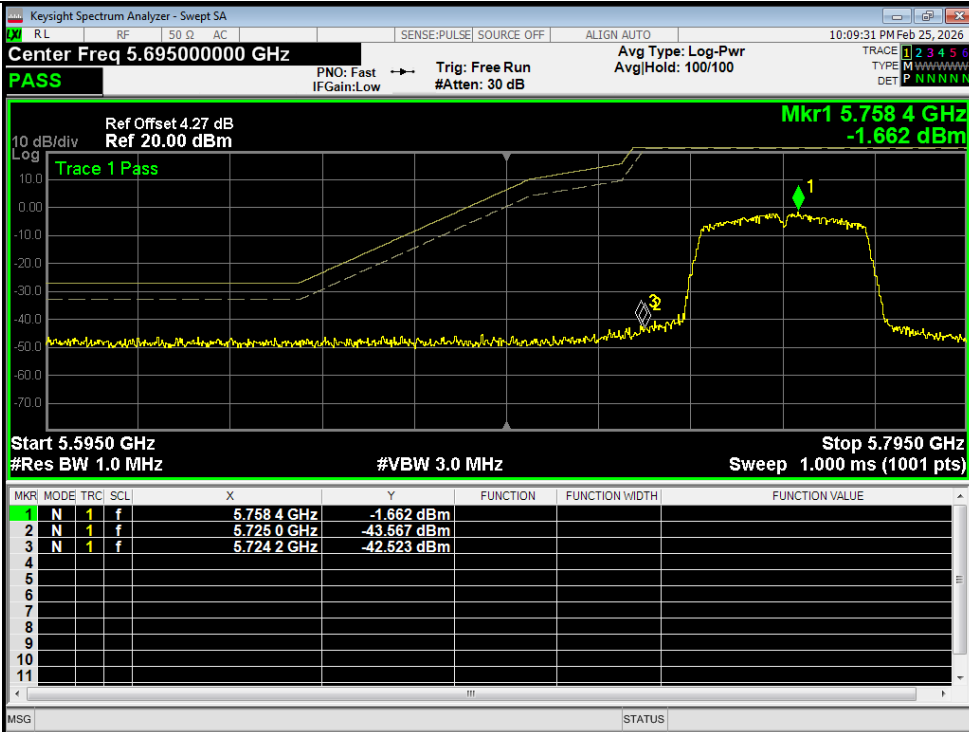
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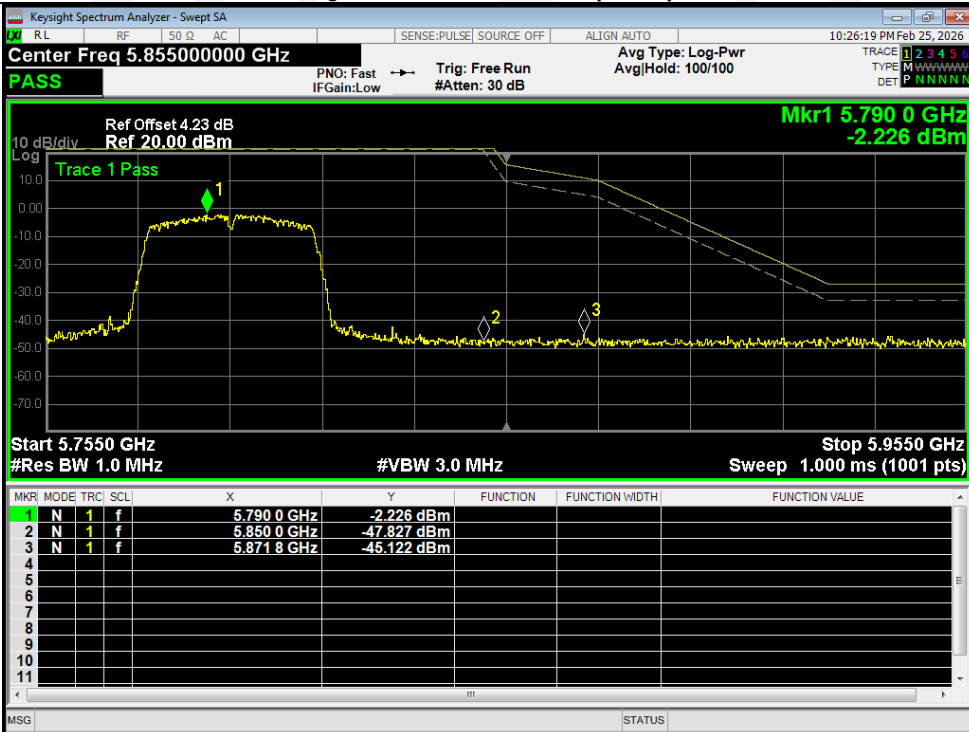
Bandedge_NVNT_ANT1_802_11n(HT40)_5795



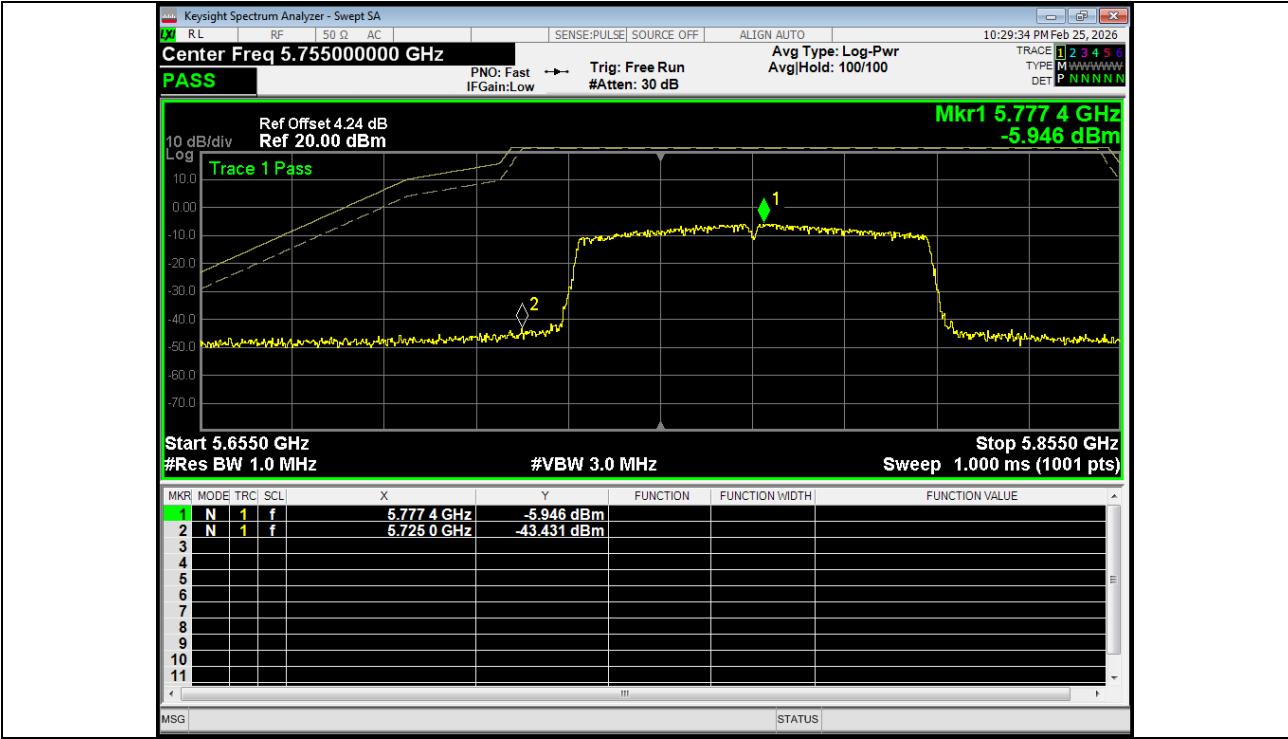
Bandedge_NVNT_ANT1_802_11ac(VHT40)_5755



Bandedge_NVNT_ANT1_802_11ac(VHT40) 5795

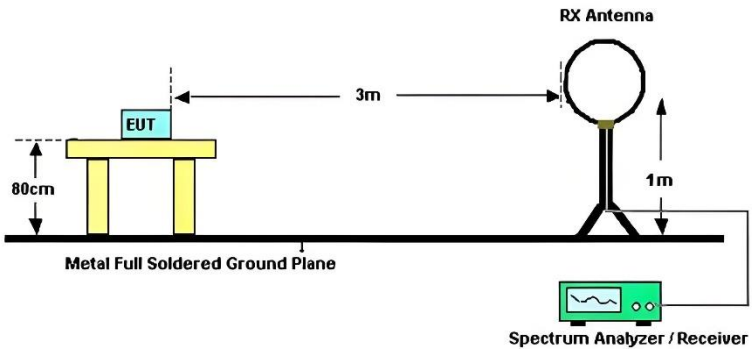


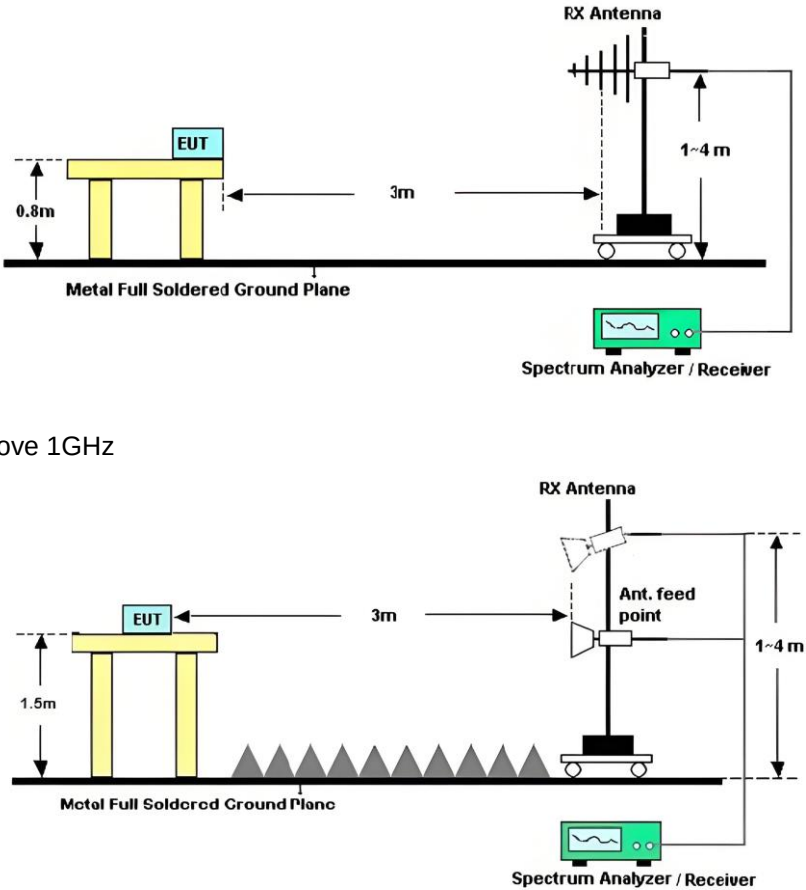
Bandedge_NVNT_ANT1_802_11ac(VHT80) 5775



4.7 Radiated Emission

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.10-2020				
Test Frequency Range:	9KHz to 40GHz				
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	9kHz-150KHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value
	150kHz-30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
		AV	1MHz	3MHz	Average Value
Limit:	Frequency	Limit (uV/m)	Value	Measurement Distance	
	0.009MHz-0.490MHz	2400/F(KHz)	QP	300m	
	0.490MHz-1.705MHz	24000/F(KHz)	QP	300m	
	1.705MHz-30MHz	30	QP	30m	
	30MHz-88MHz	100	QP	3m	
	88MHz-216MHz	150	QP		
	216MHz-960MHz	200	QP		
	960MHz-1GHz	500	QP		
	Frequency	Limit (dBm/MHz)	Remark		
	Above 1GHz	-27.0	Peak Value		
Test Procedure:	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 rotatable 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 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: $\text{EIRP(dBm)} = \text{Pg(dBm)} - \text{cable loss (dB)} + \text{antenna gain (dBi)}$ where: Pg is the generator output power into the substitution antenna.
Test setup:	below 30MHz  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:

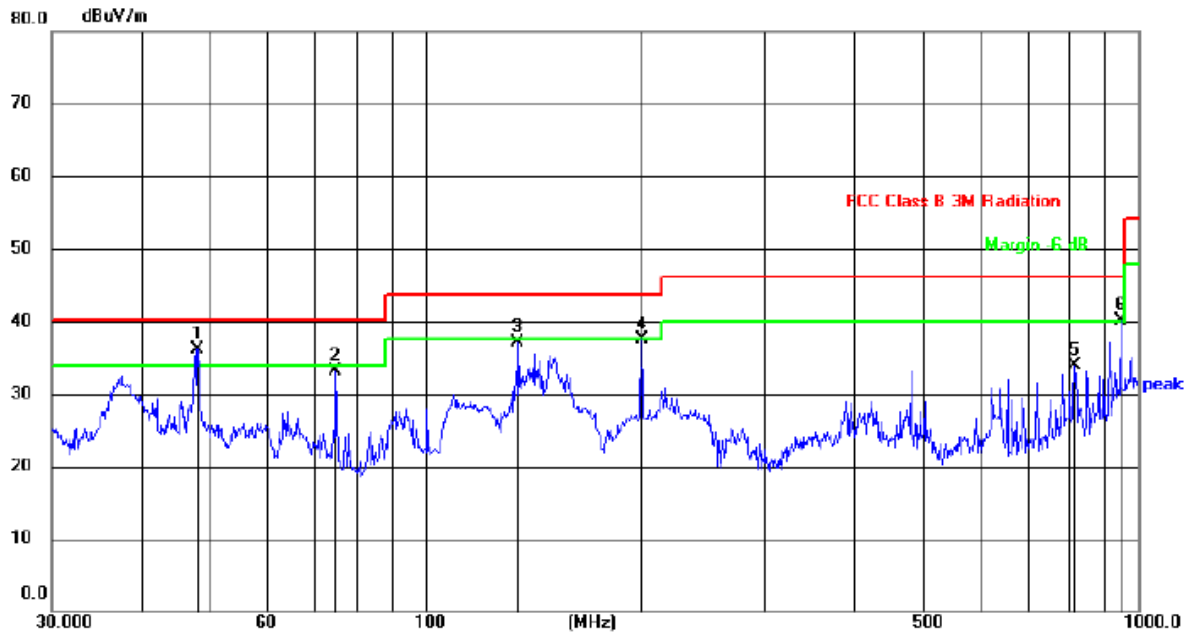
We have scanned from 9kHz to the 10th harmonic of the EUT's highest frequency.
Detailed information please see the following page.

From 9KHz to 30MHz:	
Test Date : 2026.02.03	Temperature : 22.1℃
Test Engineer : Felix Pang	Humidity : 48%
Test Mode : IEEE 802.11n20 mode	
Test Results : PASS	
Note:	The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

From 30MHz to 1000MHz:	
Test Date : 2026.02.03	Temperature : 22.1℃
Test Engineer : Felix Pang	Humidity : 48%

Test Mode : IEEE 802.11n20 mode	
Test Results : PASS	
Note:	1. The test results are listed in next pages. 2. 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 and quasi-peak detector need not be carried out. 3. All modes and channels have been tested, and only worst data of IEEE 802.11n20(HT20)_ 5180MHz was listed in this report.



Polarization: Vertical

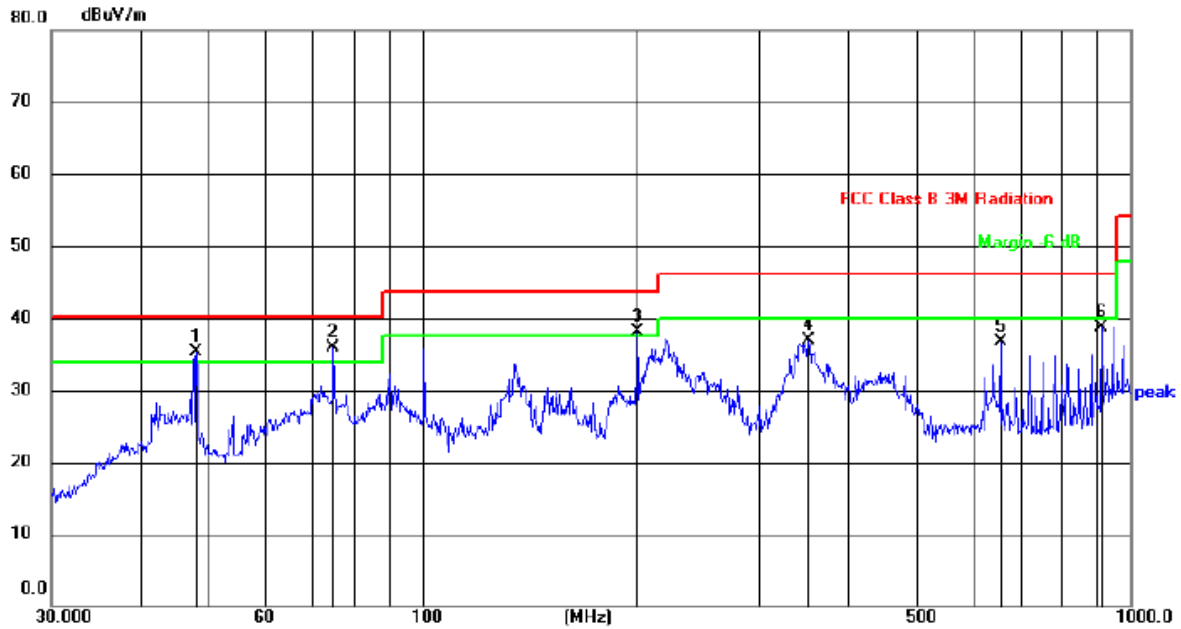
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	47.9938	57.66	-21.56	36.10	40.00	-3.90	QP
2	74.9191	58.21	-25.11	33.10	40.00	-6.90	QP
3	135.0318	59.22	-22.09	37.13	43.50	-6.37	QP
4	201.3930	60.89	-23.39	37.50	43.50	-6.00	QP
5	815.9678	40.40	-6.43	33.97	46.00	-12.03	QP
6	945.4400	44.03	-3.96	40.07	46.00	-5.93	QP

Remark:

Result(dBuV/m) = Reading(dBuV) + Factor(dB/m);

Over Limit(dB) = Result(dBuV/m) - Limit(dBuV/m)

Factor=Antenna Factor + Cable Loss – Pre-amplifier

Polarization: Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	47.9938	56.82	-21.56	35.26	40.00	-4.74	QP
2	74.9191	60.99	-25.11	35.88	40.00	-4.12	QP
3	201.3930	61.54	-23.39	38.15	43.50	-5.35	QP
4	351.7078	56.19	-19.33	36.86	46.00	-9.14	QP
5	656.5300	46.89	-10.25	36.64	46.00	-9.36	QP
6	912.8618	43.78	-5.02	38.76	46.00	-7.24	QP

Remark:

Result(dBμV/m) = Reading(dBμV) + Factor(dB/m);

Over Limit(dB) = Result(dBμV/m) - Limit(dBμV/m)

Factor=Antenna Factor + Cable Loss – Pre-amplifier

Above 1GHz:**U-NII-1:**

Test Mode: IEEE 802.11a							
Test channel: Low CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
10360	62.49	-11.79	50.70	68.20	-17.50	V	Peak
15540	57.71	-7.28	50.43	74.00	-23.57	V	Peak
10360	62.59	-11.79	50.80	68.20	-17.40	H	Peak
15540	57.31	-7.28	50.03	74.00	-23.97	H	Peak
10360	44.31	-11.79	32.52	54.00	-21.48	V	AVG
15540	40.98	-7.28	33.70	54.00	-20.30	V	AVG
10360	45.14	-11.79	33.35	54.00	-20.65	H	AVG
15540	39.89	-7.28	32.61	54.00	-21.39	H	AVG
Test channel: Middle CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
10400	62.97	-11.74	51.23	68.20	-16.97	V	Peak
15600	58.46	-7.18	51.28	74.00	-22.72	V	Peak
10400	62.48	-11.74	50.74	68.20	-17.46	H	Peak
15600	57.7	-7.18	50.52	74.00	-23.48	H	Peak
10400	44.69	-11.74	32.95	54.00	-21.05	V	AVG
15600	41.75	-7.18	34.57	54.00	-19.43	V	AVG
10400	44.65	-11.74	32.91	54.00	-21.09	H	AVG
15600	39.66	-7.18	32.48	54.00	-21.52	H	AVG
Test channel: High CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
10480	63.21	-11.63	51.58	68.20	-16.62	V	Peak
15720	58.83	-6.97	51.86	74.00	-22.14	V	Peak
10480	62.08	-11.63	50.45	68.20	-17.75	H	Peak
15720	56.13	-6.97	49.16	74.00	-24.84	H	Peak
10480	44.91	-11.63	33.28	54.00	-20.72	V	AVG
15720	40.37	-6.97	33.40	54.00	-20.60	V	AVG
10480	44.34	-11.63	32.71	54.00	-21.29	H	AVG
15720	40.83	-6.97	33.86	54.00	-20.14	H	AVG

Test Mode: IEEE 802.11n(HT20)							
Test channel: Low CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
10360	62.33	-11.79	50.54	68.20	-17.66	V	Peak
15540	57.4	-7.28	50.12	74.00	-23.88	V	Peak
10360	62.04	-11.79	50.25	68.20	-17.95	H	Peak
15540	57.44	-7.28	50.16	74.00	-23.84	H	Peak
10360	45.49	-11.79	33.70	54.00	-20.30	V	AVG
15540	40.18	-7.28	32.90	54.00	-21.10	V	AVG
10360	44.91	-11.79	33.12	54.00	-20.88	H	AVG
15540	39.32	-7.28	32.04	54.00	-21.96	H	AVG
Test channel: Middle CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
10400	63.28	-11.74	51.54	68.20	-16.66	V	Peak
15600	57.67	-7.18	50.49	74.00	-23.51	V	Peak
10400	62.48	-11.74	50.74	68.20	-17.46	H	Peak
15600	57.7	-7.18	50.52	74.00	-23.48	H	Peak
10400	43.77	-11.74	32.03	54.00	-21.97	V	AVG
15600	40.64	-7.18	33.46	54.00	-20.54	V	AVG
10400	44.69	-11.74	32.95	54.00	-21.05	H	AVG
15600	39.2	-7.18	32.02	54.00	-21.98	H	AVG
Test channel: High CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
10480	67.06	-11.63	55.43	68.20	-12.77	V	Peak
15720	62.14	-6.97	55.17	74.00	-18.83	V	Peak
10480	66.68	-11.63	55.05	68.20	-13.15	H	Peak
15720	61.39	-6.97	54.42	74.00	-19.58	H	Peak
10480	48.48	-11.63	36.85	54.00	-17.15	V	AVG
15720	43.7	-6.97	36.73	54.00	-17.27	V	AVG
10480	48.07	-11.63	36.44	54.00	-17.56	H	AVG
15720	43.81	-6.97	36.84	54.00	-17.16	H	AVG

Test Mode: IEEE 802.11n(HT40)							
Test channel: Low CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
10380	68.45	-11.77	56.68	68.20	-11.52	V	Peak
15570	63.75	-7.24	56.51	74.00	-17.49	V	Peak
10380	67.76	-11.77	55.99	68.20	-12.21	H	Peak
15570	61.75	-7.24	54.51	74.00	-19.49	H	Peak
10380	47.69	-11.77	35.92	54.00	-18.08	V	AVG
15570	44.32	-7.24	37.08	54.00	-16.92	V	AVG
10380	48.9	-11.77	37.13	54.00	-16.87	H	AVG
15570	42.32	-7.24	35.08	54.00	-18.92	H	AVG
Test channel: High CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
10460	67.89	-11.65	56.24	68.20	-11.96	V	Peak
15690	62.41	-7.03	55.38	74.00	-18.62	V	Peak
10460	66.39	-11.65	54.74	68.20	-13.46	H	Peak
15690	62.17	-7.03	55.14	74.00	-18.86	H	Peak
10460	49.01	-11.65	37.36	54.00	-16.64	V	AVG
15690	45.02	-7.03	37.99	54.00	-16.01	V	AVG
10460	48.19	-11.65	36.54	54.00	-17.46	H	AVG
15690	42.59	-7.03	35.56	54.00	-18.44	H	AVG

Test Mode: IEEE 802.11ac(HT20)							
Test channel: Low CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
10360	66.23	-11.79	54.44	68.20	-13.76	V	Peak
15540	61.51	-7.28	54.23	74.00	-19.77	V	Peak
10360	64.7	-11.79	52.91	68.20	-15.29	H	Peak
15540	60.62	-7.28	53.34	74.00	-20.66	H	Peak
10360	46.31	-11.79	34.52	54.00	-19.48	V	AVG
15540	43.76	-7.28	36.48	54.00	-17.52	V	AVG
10360	46.86	-11.79	35.07	54.00	-18.93	H	AVG
15540	42.74	-7.28	35.46	54.00	-18.54	H	AVG
Test channel: Middle CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
10400	65.85	-11.74	54.11	68.20	-14.09	V	Peak
15600	60.57	-7.18	53.39	74.00	-20.61	V	Peak
10400	65.73	-11.74	53.99	68.20	-14.21	H	Peak
15600	60.72	-7.18	53.54	74.00	-20.46	H	Peak
10400	46.12	-11.74	34.38	54.00	-19.62	V	AVG
15600	43.08	-7.18	35.90	54.00	-18.10	V	AVG
10400	47.17	-11.74	35.43	54.00	-18.57	H	AVG
15600	42.8	-7.18	35.62	54.00	-18.38	H	AVG
Test channel: High CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
10480	66.06	-11.63	54.43	68.20	-13.77	V	Peak
15720	61.63	-6.97	54.66	74.00	-19.34	V	Peak
10480	65.78	-11.63	54.15	68.20	-14.05	H	Peak
15720	60.36	-6.97	53.39	74.00	-20.61	H	Peak
10480	47.77	-11.63	36.14	54.00	-17.86	V	AVG
15720	42.49	-6.97	35.52	54.00	-18.48	V	AVG
10480	46.45	-11.63	34.82	54.00	-19.18	H	AVG
15720	42.64	-6.97	35.67	54.00	-18.33	H	AVG

Test Mode: IEEE 802.11ac(HT40)							
Test channel: Low CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
10380	69.12	-11.77	57.35	68.20	-10.85	V	Peak
15570	64.37	-7.24	57.13	74.00	-16.87	V	Peak
10380	68.42	-11.77	56.65	68.20	-11.55	H	Peak
15570	62.35	-7.24	55.11	74.00	-18.89	H	Peak
10380	48.15	-11.77	36.38	54.00	-17.62	V	AVG
15570	44.75	-7.24	37.51	54.00	-16.49	V	AVG
10380	49.38	-11.77	37.61	54.00	-16.39	H	AVG
15570	42.73	-7.24	35.49	54.00	-18.51	H	AVG
Test channel: High CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
10460	68.55	-11.65	56.90	68.20	-11.30	V	Peak
15690	63.01	-7.03	55.98	74.00	-18.02	V	Peak
10460	67.04	-11.65	55.39	68.20	-12.81	H	Peak
15690	62.77	-7.03	55.74	74.00	-18.26	H	Peak
10460	49.48	-11.65	37.83	54.00	-16.17	V	AVG
15690	45.46	-7.03	38.43	54.00	-15.57	V	AVG
10460	48.66	-11.65	37.01	54.00	-16.99	H	AVG
15690	43	-7.03	35.97	54.00	-18.03	H	AVG

Test Mode: IEEE 802.11ac(HT80)							
Test channel: Low CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
11060	68.2	-10.85	57.35	74.00	-16.65	V	Peak
16590	63.27	-5.67	57.60	68.20	-10.60	V	Peak
11060	68.07	-10.85	57.22	74.00	-16.78	H	Peak
16590	62.46	-5.67	56.79	68.20	-11.41	H	Peak
11060	48.68	-10.85	37.83	54.00	-16.17	V	AVG
16590	45.69	-5.67	40.02	54.00	-13.98	V	AVG
11060	47.95	-10.85	37.10	54.00	-16.90	H	AVG
16590	43.51	-5.67	37.84	54.00	-16.16	H	AVG

Note:

1. Level = Read Level + Factor. (Factor=Antenna Factor+ Cable loss- Preamp Factor)
2. All modes have been measurement, only worst mode was reported.
3. The frequency emission of peak points not shown in the above form (1GHz to 40GHz) should be at least 20dB below the limit, and the frequency emission mainly comes from environmental noise.

U-NII-3:

Test Mode: IEEE 802.11ac(HT20)							
Test channel: Low CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
11490.00	63.72	-10.56	53.16	74.00	-20.84	V	Peak
17235.00	59.74	-5.21	54.53	68.20	-13.67	V	Peak
11490.00	62.59	-10.56	52.03	74.00	-21.97	H	Peak
17235.00	58.3	-5.21	53.09	68.20	-15.11	H	Peak
11490.00	45.97	-10.56	35.41	54.00	-18.59	V	AVG
17235.00	41.01	-5.21	35.80	54.00	-18.20	V	AVG
11490.00	45.62	-10.56	35.06	54.00	-18.94	H	AVG
17235.00	40.24	-5.21	35.03	54.00	-18.97	H	AVG
Test channel: Middle CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
11570.00	64.71	-10.5	54.21	74.00	-19.79	V	Peak
17355.00	59.04	-5.28	53.76	68.20	-14.44	V	Peak
11570.00	63.1	-10.5	52.60	74.00	-21.40	H	Peak
17355.00	57.59	-5.28	52.31	68.20	-15.89	H	Peak
11570.00	46.53	-10.5	36.03	54.00	-17.97	V	AVG
17355.00	41.61	-5.28	36.33	54.00	-17.67	V	AVG
11570.00	45	-10.5	34.50	54.00	-19.50	H	AVG
17355.00	40.03	-5.28	34.75	54.00	-19.25	H	AVG
Test channel: High CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
11650.00	64.58	-10.44	54.14	74.00	-19.86	V	Peak
17475.00	59.12	-5.34	53.78	68.20	-14.42	V	Peak
11650.00	62.48	-10.44	52.04	74.00	-21.96	H	Peak
17475.00	58.32	-5.34	52.98	68.20	-15.22	H	Peak
11650.00	46.54	-10.44	36.10	54.00	-17.90	V	AVG
17475.00	40.87	-5.34	35.53	54.00	-18.47	V	AVG
11650.00	46.25	-10.44	35.81	54.00	-18.19	H	AVG
17475.00	41.47	-5.34	36.13	54.00	-17.87	H	AVG

Test Mode: IEEE 802.11ac(HT40)							
Test channel: Low CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
11510.00	62.72	-10.54	52.18	74.00	-21.82	V	Peak
17265.00	58.82	-5.24	53.58	68.20	-14.62	V	Peak
11510.00	62.25	-10.54	51.71	74.00	-22.29	H	Peak
17265.00	57.32	-5.24	52.08	68.20	-16.12	H	Peak
11510.00	44.29	-10.54	33.75	54.00	-20.25	V	AVG
17265.00	41.04	-5.24	35.80	54.00	-18.20	V	AVG
11510.00	45.45	-10.54	34.91	54.00	-19.09	H	AVG
17265.00	39.17	-5.24	33.93	54.00	-20.07	H	AVG
Test channel: High CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
11550.00	63.33	-10.51	52.82	74.00	-21.18	V	Peak
17325.00	57.61	-5.26	52.35	68.20	-15.85	V	Peak
11550.00	61.1	-10.51	50.59	74.00	-23.41	H	Peak
17325.00	56.05	-5.26	50.79	68.20	-17.41	H	Peak
11550.00	44.22	-10.51	33.71	54.00	-20.29	V	AVG
17325.00	41.31	-5.26	36.05	54.00	-17.95	V	AVG
11550.00	43.77	-10.51	33.26	54.00	-20.74	H	AVG
17325.00	40.7	-5.26	35.44	54.00	-18.56	H	AVG

Test Mode: IEEE 802.11ac(HT80)							
Test channel: Low CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
11060.00	61.96	-10.85	51.11	74.00	-22.89	V	Peak
16590.00	57.97	-5.67	52.30	74.00	-21.70	V	Peak
11060.00	62.61	-10.85	51.76	74.00	-22.24	H	Peak
16590.00	57.29	-5.67	51.62	74.00	-22.38	H	Peak
11060.00	44.54	-10.85	33.69	54.00	-20.31	V	AVG
16590.00	40.83	-5.67	35.16	54.00	-18.84	V	AVG
11060.00	44.75	-10.85	33.90	54.00	-20.10	H	AVG
16590.00	39.51	-5.67	33.84	54.00	-20.16	H	AVG

Note:

1. Level = Read Level + Factor. (Factor=Antenna Factor+ Cable loss- Preamp Factor)
2. All modes have been measurement, only worst mode was reported.
3. The frequency emission of peak points not shown in the above form (1GHz to 40GHz) should be at least 20dB below the limit, and the frequency emission mainly comes from environmental noise.

4.8 Frequency stability

Test Standard	15.407(g)
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 Procedure:	a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage. b. Turn the EUT on and couple its output to a spectrum analyzer. c. Turn the EUT off and set the chamber to the highest temperature specified. d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes. e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature. f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minute s. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.
Test setup:	Temperature Chamber Spectrum analyzer EUT Variable Power Supply Note : Measurement setup for testing on Antenna connector
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Measurement Data:

Mode	Voltage (V)	FHL (5180MHz)	Deviation (KHz)	FHH (5240MHz)	Deviation (KHz)
Band 1 (5150-5250 MHz)	DC 6.46V	5179.998	2	5239.997	3
	DC 7.60V	5179.997	3	5239.992	8
	DC 8.74V	5179.995	5	5239.999	1
Mode	Voltage (V)	FHL (5745MHz)	Deviation (KHz)	FHH (5825MHz)	Deviation (KHz)
Band 4 (5725-5850 MHz)	DC 6.46V	5744.998	2	5824.995	5
	DC 7.60V	5744.996	4	5824.994	6
	DC 8.74V	5744.996	4	5824.999	1

Mode	Temperature (°C)	FHL (5180MHz)	Deviation (KHz)	FHH (5240MHz)	Deviation (KHz)
Band 1 (5150-5250 MHz)	-10°C	5179.994	6	5239.995	5
	0°C	5179.995	5	5239.994	6
	+10°C	5179.996	4	5239.995	5
	+20°C	5179.992	8	5239.996	4
	+30°C	5179.993	7	5239.992	8
	+40°C	5179.998	2	5239.993	7
	+50°C	5179.993	7	5239.992	8
Mode	Temperature (°C)	FHL (5745MHz)	Deviation (KHz)	FHH (5825MHz)	Deviation (KHz)
Band 4 (5725-5850 MHz)	-10°C	5744.997	3	5824.996	4
	0°C	5744.995	5	5824.994	6
	+10°C	5744.994	6	5824.995	5
	+20°C	5744.995	5	5824.996	4
	+30°C	5744.996	4	5824.997	3
	+40°C	5744.995	5	5824.992	8
	+50°C	5744.994	6	5824.995	5

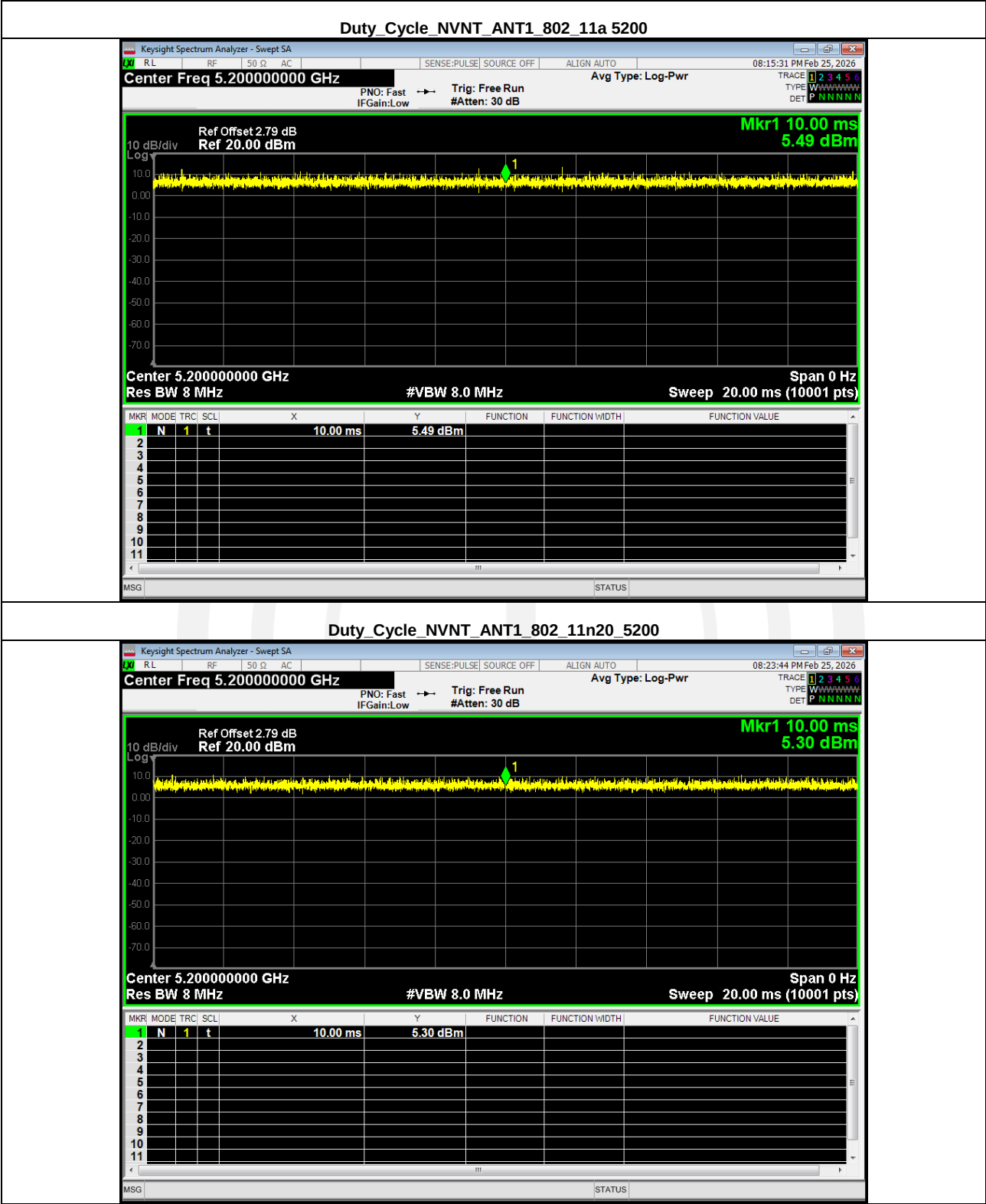
4.9 Duty cycle

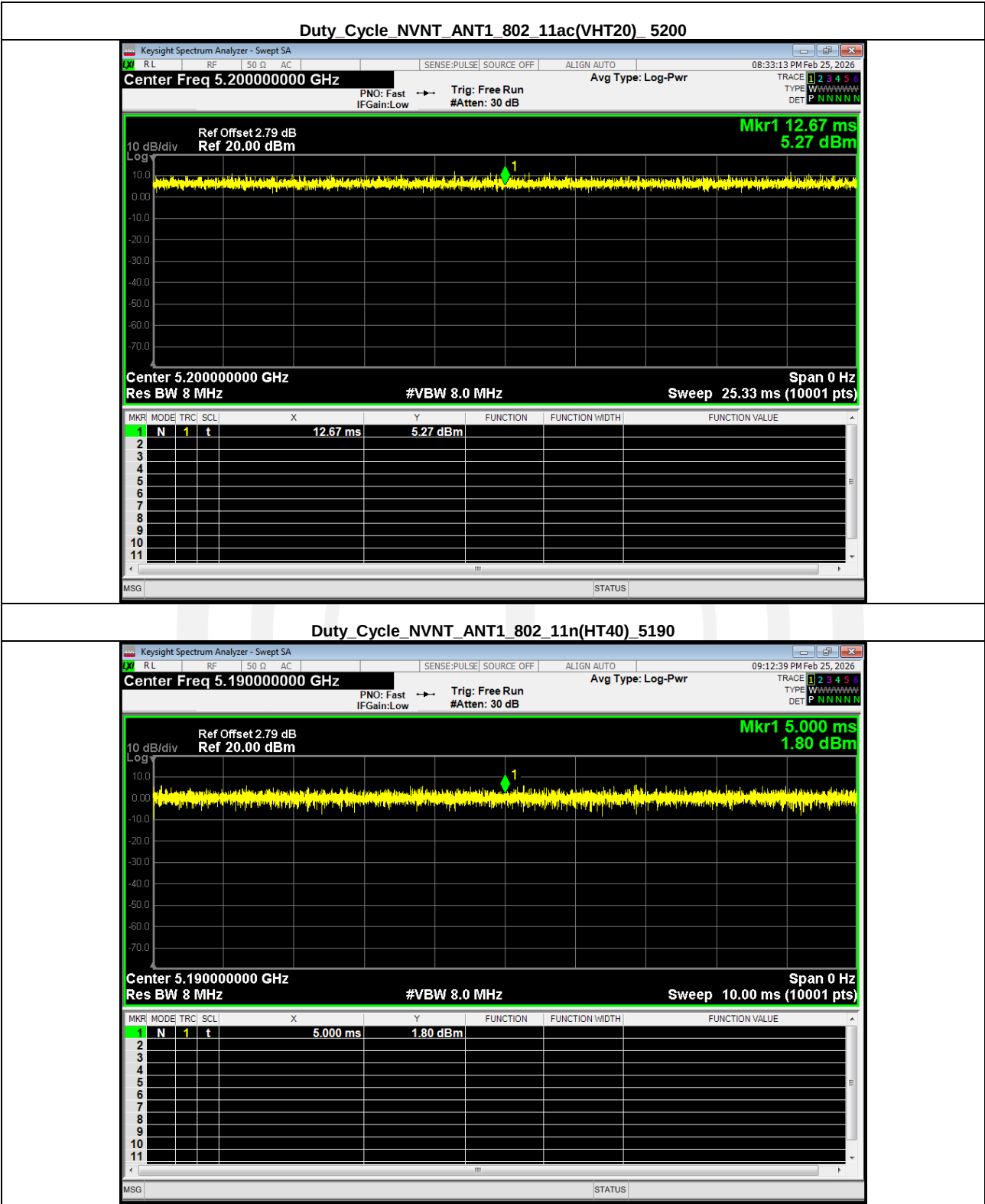
Test Method :	ANSI C63.10-2020§12.2
Limit:	/
Test setup:	 The diagram illustrates the test setup. On the left is a green Spectrum Analyzer with a blue screen and two small circular ports. A black cable connects one of these ports to a yellow rectangular box on the right, labeled 'EUT' (Equipment Under Test). Below the Spectrum Analyzer is the label 'Spectrum Analyzer', and below the yellow box is the label 'EUT'.
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

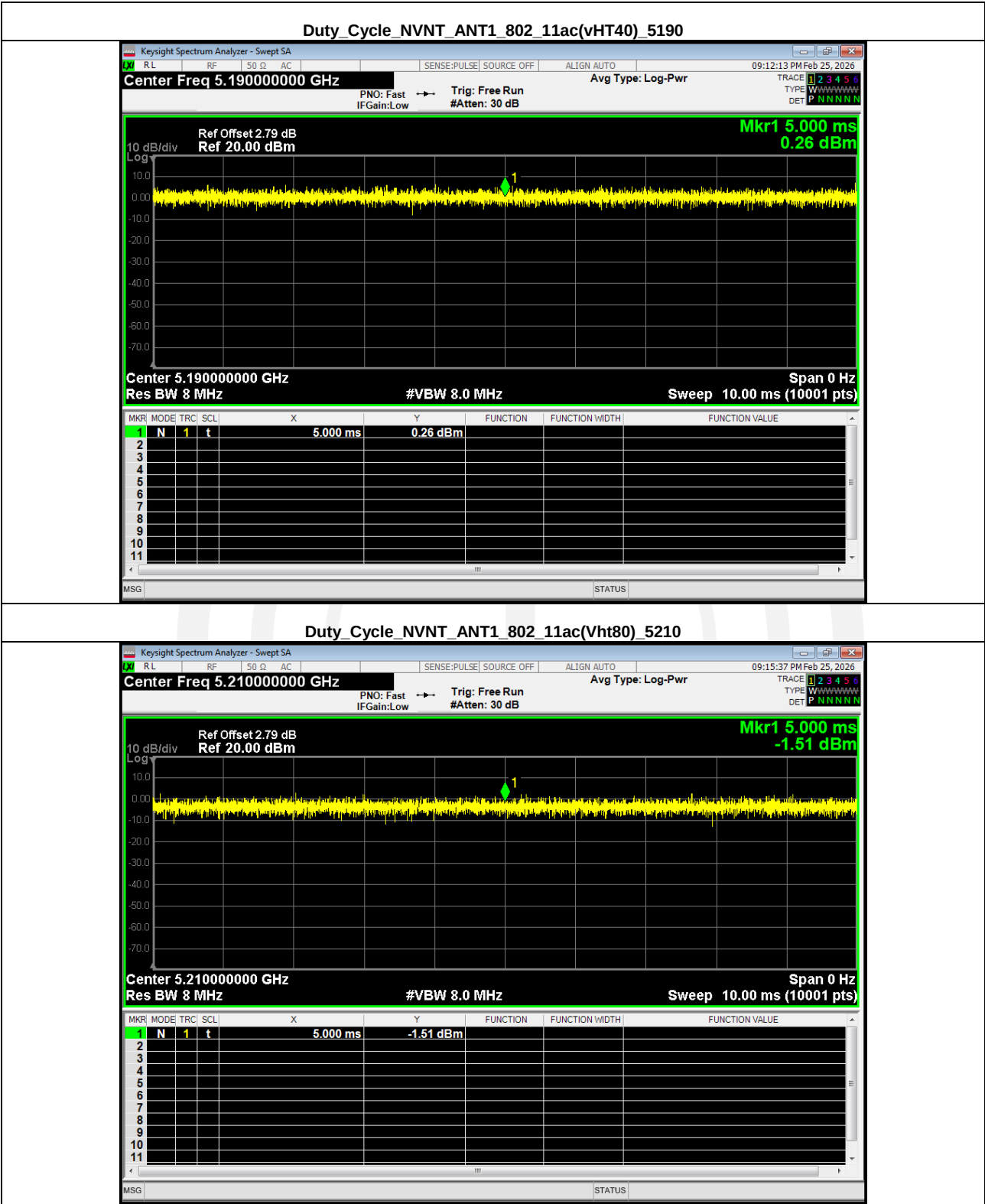
Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty_factor
ANT1	802.11a	5200.00	100.00	0.00
ANT1	802.11n(HT20)	5200.00	100.00	0.00
ANT1	802.11ac(VHT20)	5200.00	100.00	0.00
ANT1	802.11n(HT40)	5190.00	100.00	0.00
ANT1	802.11ac(VHT40)	5190.00	100.00	0.00
ANT1	802.11ac(VHT80)	5210.00	100.00	0.00

Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty_factor
ANT1	802.11a	5785.00	100.00	0.00
ANT1	802.11n(HT20)	5785.00	100.00	0.00
ANT1	802.11ac(VHT20)	5785.00	100.00	0.00
ANT1	802.11n(HT40)	5755.00	100.00	0.00
ANT1	802.11ac(VHT40)	5755.00	100.00	0.00
ANT1	802.11ac(VHT80)	5775.00	100.00	0.00

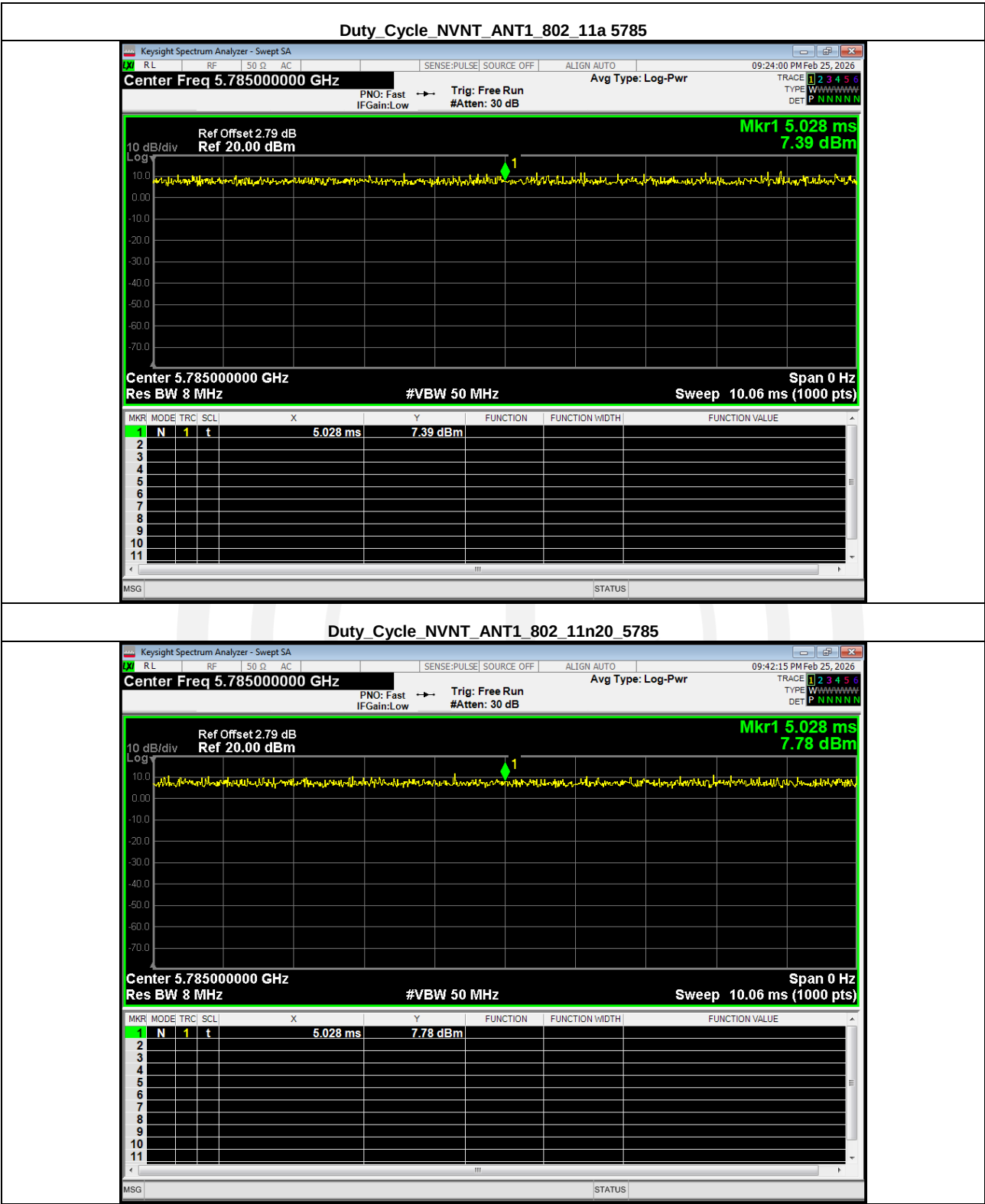
5180-5240MHz

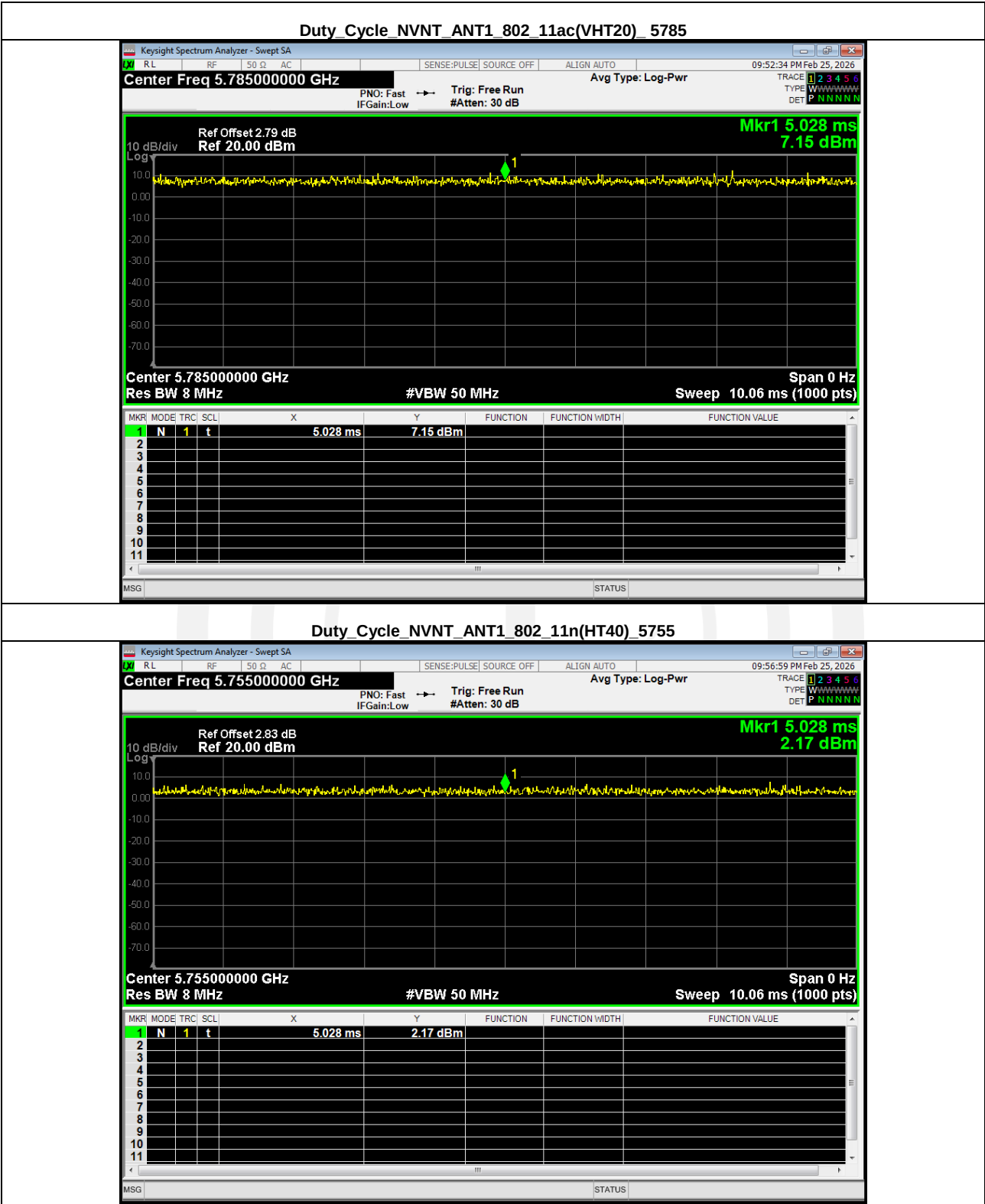


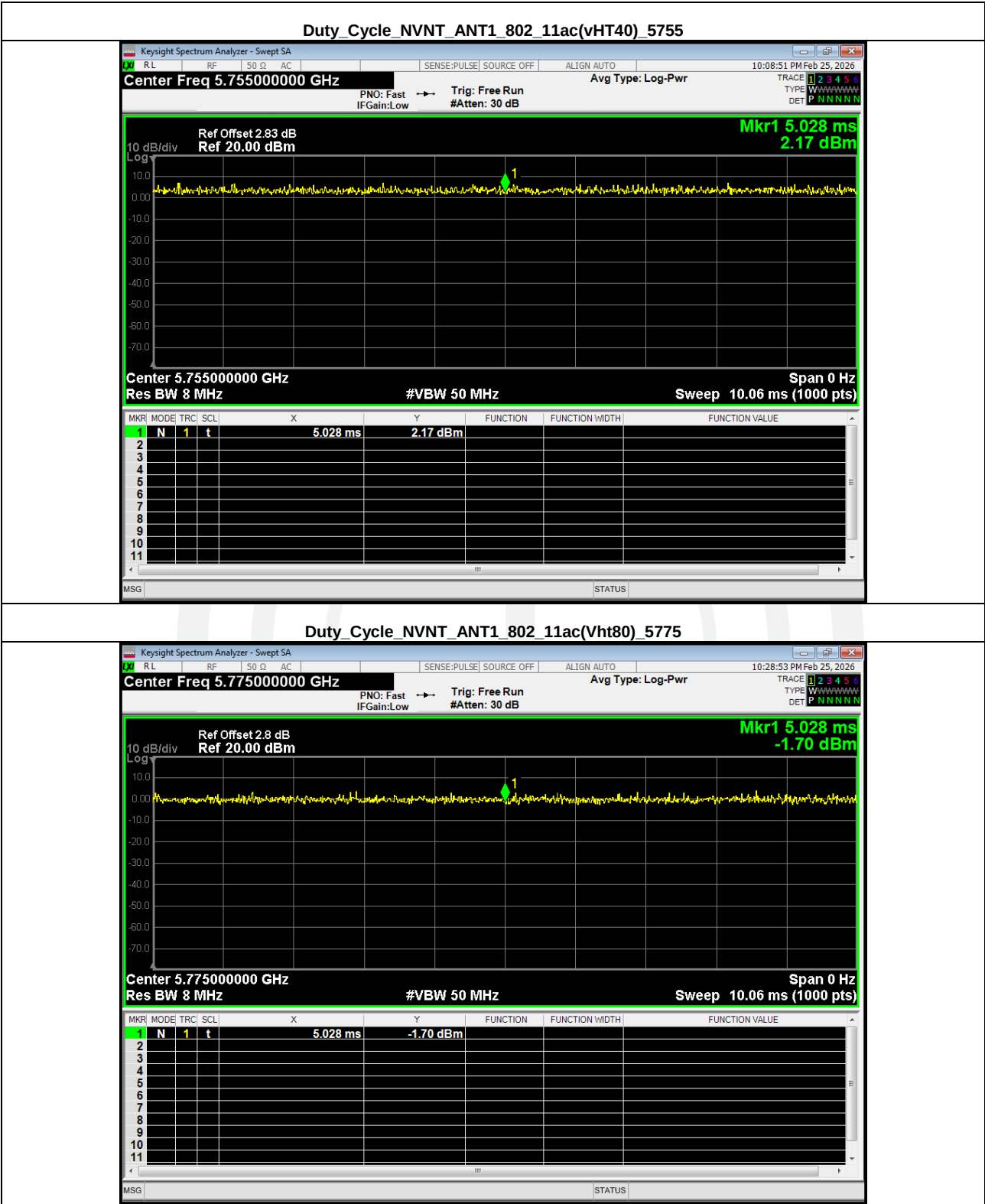




5745-5825 MHz







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-----

