



FCC TEST REPORT

FCC ID: 2BDTM-H27F

On Behalf of

Shenzhen Hongshengda Optoelectronic Technology Co. , Ltd
Portable Touchscreen Smart TV
Model No.: H27F

Prepared for : Shenzhen Hongshengda Optoelectronic Technology Co. , Ltd
Address : 3rd Floor, Building 4, No.161, Xingye Road,Fenghuang
Community,Fuyong Street,Bao 'an District, Shenzhen, China

Prepared By : Shenzhen PSI Testing Co., Ltd.
Address : 1-2/F., Building 5, Yudafu Industrial Park, No.10, Xingye West
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China

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TEST REPORT DECLARATION

Applicant : Shenzhen Hongshengda Optoelectronic Technology Co. , Ltd
Address : 3rd Floor, Building 4, No.161, Xingye Road,Fenghuang Community,Fuyong
Street,Bao 'an District, Shenzhen, China
Manufacturer : Shenzhen Hongshengda Optoelectronic Technology Co. , Ltd
Address : 3rd Floor, Building 4, No.161, Xingye Road,Fenghuang Community,Fuyong
Street,Bao 'an District, Shenzhen, China
EUT Description : Portable Touchscreen Smart TV
(A) Model No. : H27F
(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.

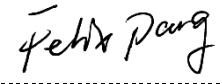
After the test, our opinion is that EUT compliance with the requirement of the above standards.

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.....:

Jan.29, 2026

Revision History

Revision	Issue Date	Revisions	Revised By
V0	Jan.29, 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)(12), 15.407(e)	PASS
Duty Cycle	15.407(a)(1)(iv)-(B1), (a)(2)-(B2/3), (a)(3)(i)-(B4)	PASS
Maximum Conducted Output Power	15.407(a)(1)(iv)-(B1), (a)(2)-(B2/3), (a)(3)(i)-(B4)	PASS
Power Spectral Density	15.407(a)(1)(iv)-(B1), (a)(2)-(B2/3), (a)(3)(i)-(B4)	PASS
Radiated Emission	15.205, 15.209, 15.407(b)(1) - (B1), (2) -(B2), (3) - (B3), (4) -(B4), (9), (10)	PASS
Band Edge	15.205, 15.209, 15.407(b)(1) - (B1), (2) -(B2), (3) - (B3), (4) -(B4), (9), (10)	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.

2 General Information

2.1 General Description of EUT

EUT Name : Portable Touchscreen Smart TV
Model : H27F,H27FC,H27CF,H27U,H27CU,H270,HSD01,H270F,H270CF
Diff : All models have the same circuit and RF module, except for the model name and color
Test Voltage : DC 19V from adapter

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 1, Maximum Gain is 4.80dBi.
PMN	: N/A
HVIN	: N/A
Software version	: N/A
Hardware version	: N/A
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

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Operation frequency: 5150 MHz – 5250 MHz 802.11b/g/n-HT20/ac-VHT20					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
36	5180	40	5200	48	5240
802.11n-HT40/ac-VHT40					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
38	5190	/	/	46	5230
802.11ac-VHT80					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
/	/	42	5210	/	/

Operation frequency: 5725 MHz – 5850 MHz 802.11b/g/n-HT20/ac-VHT20					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
149	5745	157	5785	165	5825
802.11n-HT40/ac-VHT40					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
151	5755	/	/	159	5795
802.11ac-VHT80					
Lowest channel		Middle channel		Highest channel	
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
/	/	155	5775	/	/

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 : AC/DC ADAPTER

Manufacturer : N/A

Model : FX65C-190342Z

Rating : INPUT: 100-240V 50/60Hz 1.5A
OUTPUT: DC 19V 3.42A

2.5 Test Software Description

Software name	Engineering Mode.	
Mode	The client 's preset testing software is used to control the operation of EUT in continuous transmission mode and select the testing channel, wireless mode:	
Power level setup by client		
Mode	Channel	Soft Set
Tx Mode	Lowest	The TX level is set to the default value.
	Middle	The TX level is set to the default value.
	Highest	The TX level is set to the default value.

2.6 Test Conditions

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

2.7 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

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	/	2025.12.18	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
RF	RTS	TACHOY	V1.0.0

4 Test results and Measurement Data

4.1 Antenna requirement:

Standard requirement:	FCC Part15 C Section 15.203 Section 7.1.4
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 1, Maximum Gain is 4.8dBi for 5180-5240MHz, 5745-5825MHz	

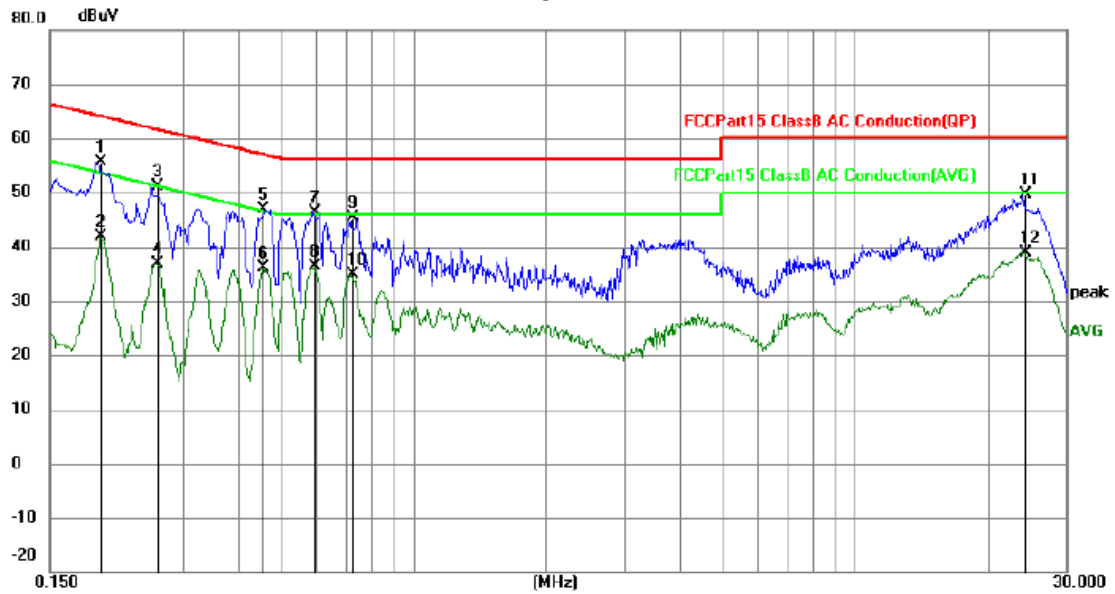
4.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207 Section 7.2.4, 15.407(b)(9)			
Test Method:	ANSI C63.10-2020			
Test Frequency Range:	150KHz to 30MHz			
Class / Severity: Class B	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:	Reference Plane LISN AUX Equipment E.U.T 40cm 80cm LISN Filter EMI Receiver AC power Test table/Insulation plane Remark 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			

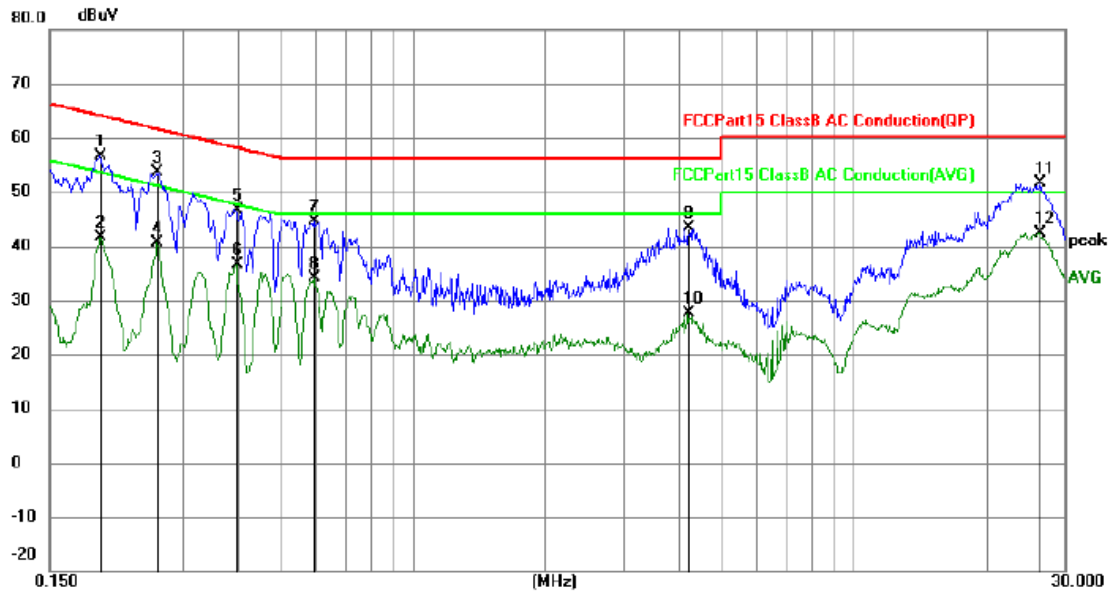
Measurement Data

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	0.1949	45.90	9.81	55.71	63.83	-8.12	QP
2	0.1949	32.06	9.81	41.87	53.83	-11.96	AVG
3	0.2625	41.25	9.83	51.08	61.35	-10.27	QP
4	0.2625	27.05	9.83	36.88	51.35	-14.47	AVG
5	0.4560	37.01	9.93	46.94	56.77	-9.83	QP
6	0.4560	26.17	9.93	36.10	46.77	-10.67	AVG
7	0.5954	36.48	9.94	46.42	56.00	-9.58	QP
8	0.5954	26.42	9.94	36.36	46.00	-9.64	AVG
9	0.7258	35.40	9.94	45.34	56.00	-10.66	QP
10	0.7258	25.06	9.94	35.00	46.00	-11.00	AVG
11	24.1980	39.96	9.60	49.56	60.00	-10.44	QP
12	24.1980	29.40	9.60	39.00	50.00	-11.00	AVG

Neutral:

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1949	46.71	9.81	56.52	63.83	-7.31	QP
2	0.1949	31.92	9.81	41.73	53.83	-12.10	AVG
3	0.2625	43.73	9.83	53.56	61.35	-7.79	QP
4	0.2625	30.70	9.83	40.53	51.35	-10.82	AVG
5	0.3975	36.85	9.90	46.75	57.91	-11.16	QP
6	0.3975	26.81	9.90	36.71	47.91	-11.20	AVG
7	0.5954	34.66	9.94	44.60	56.00	-11.40	QP
8	0.5954	24.14	9.94	34.08	46.00	-11.92	AVG
9	4.2179	33.61	9.83	43.44	56.00	-12.56	QP
10	4.2179	17.84	9.83	27.67	46.00	-18.33	AVG
11	26.3353	42.17	9.56	51.73	60.00	-8.27	QP
12	26.3353	32.81	9.56	42.37	50.00	-7.63	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 5180MHz mode with the worst data is listed.

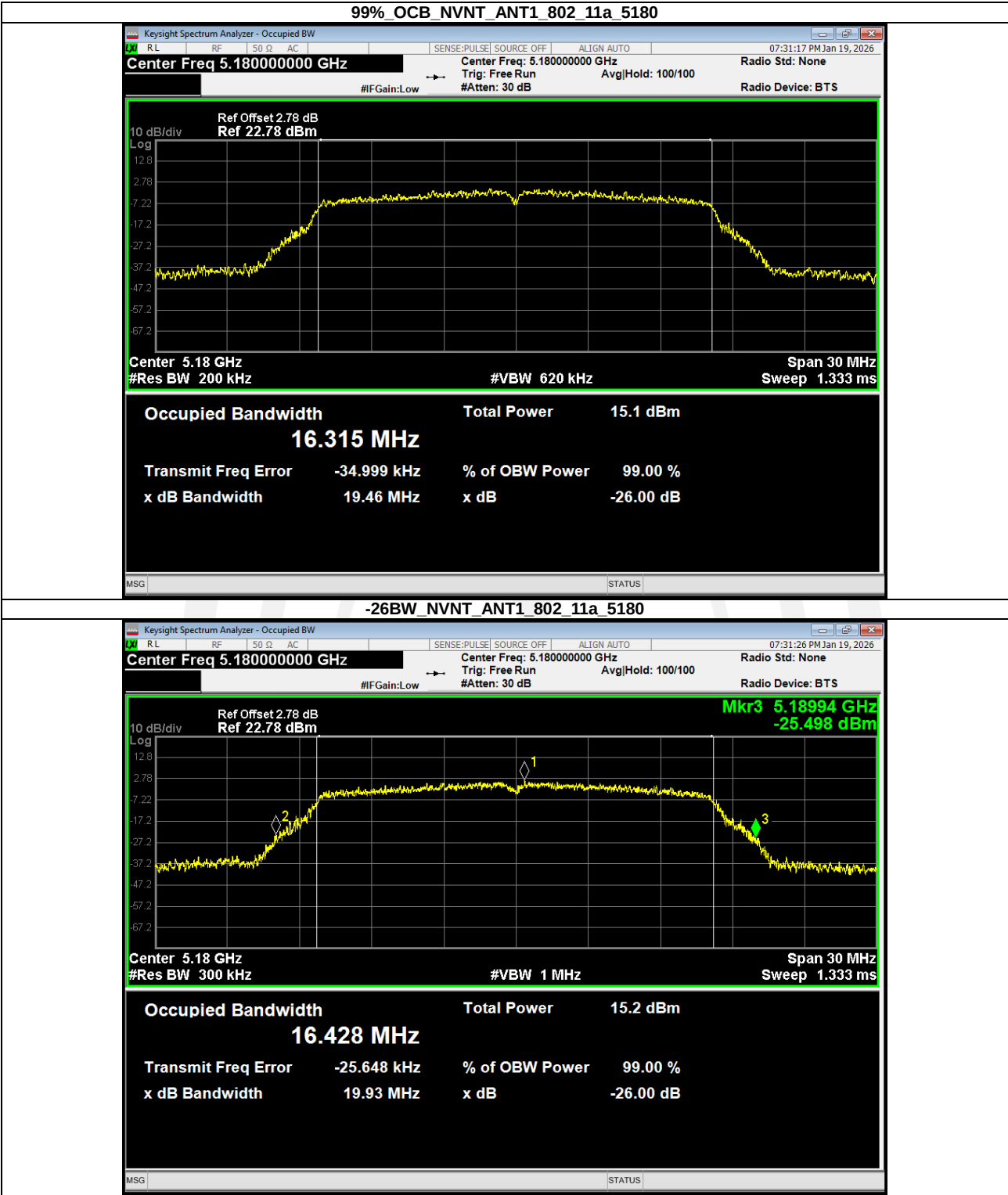
4.3 Emission Bandwidth and 99% Occupied Bandwidth

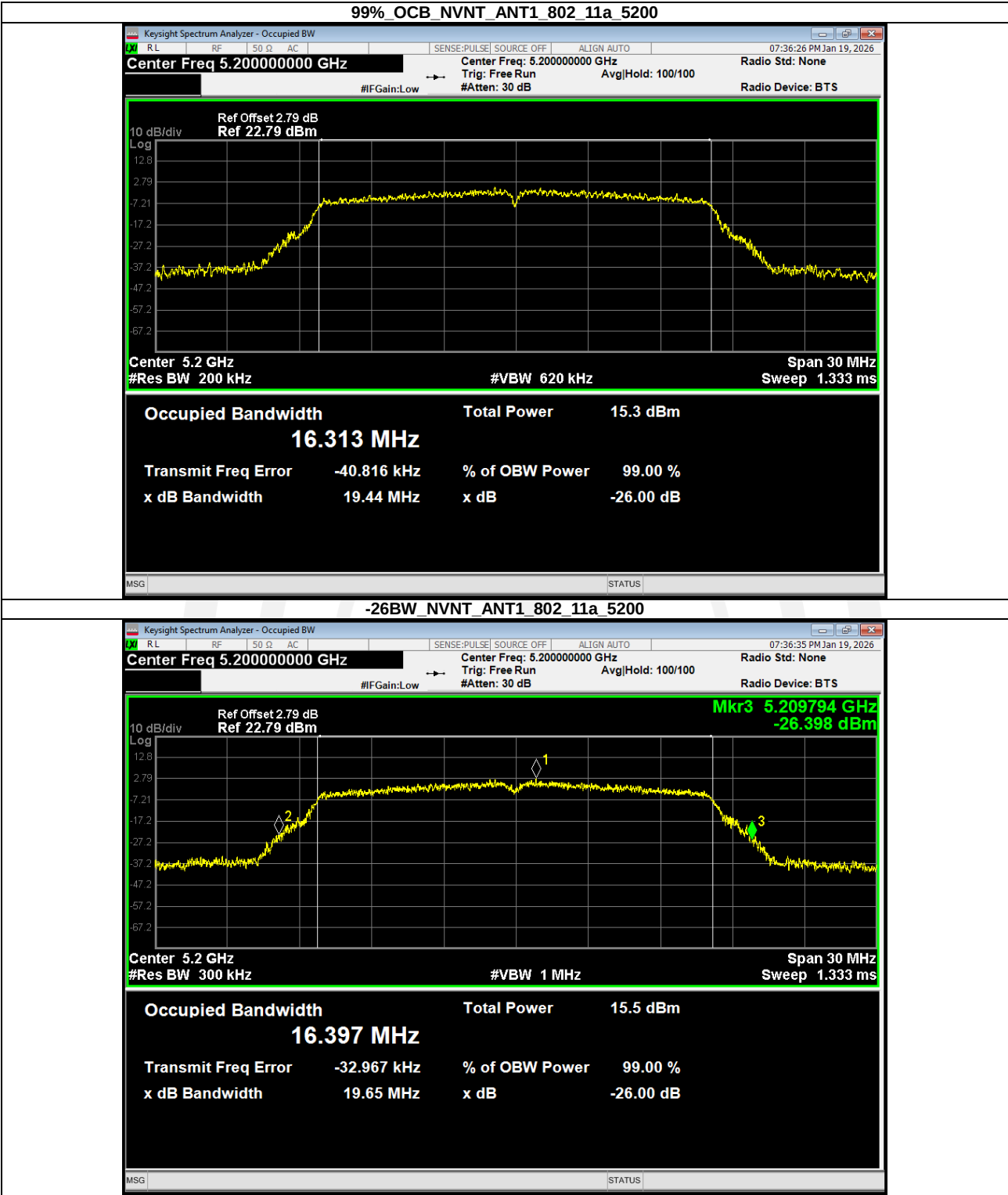
Test Requirement:	FCC Part15 E Section 15.407(a), 15.407(e)
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Limit:	N/A
Test setup:	 The diagram illustrates the test setup. On the left is a green box labeled 'Spectrum Analyzer' with a blue screen and two small circles representing ports. On the right is a yellow box labeled 'EUT' with a single circle representing a port. A black line connects the right port of the Spectrum Analyzer to the left port of the EUT.
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

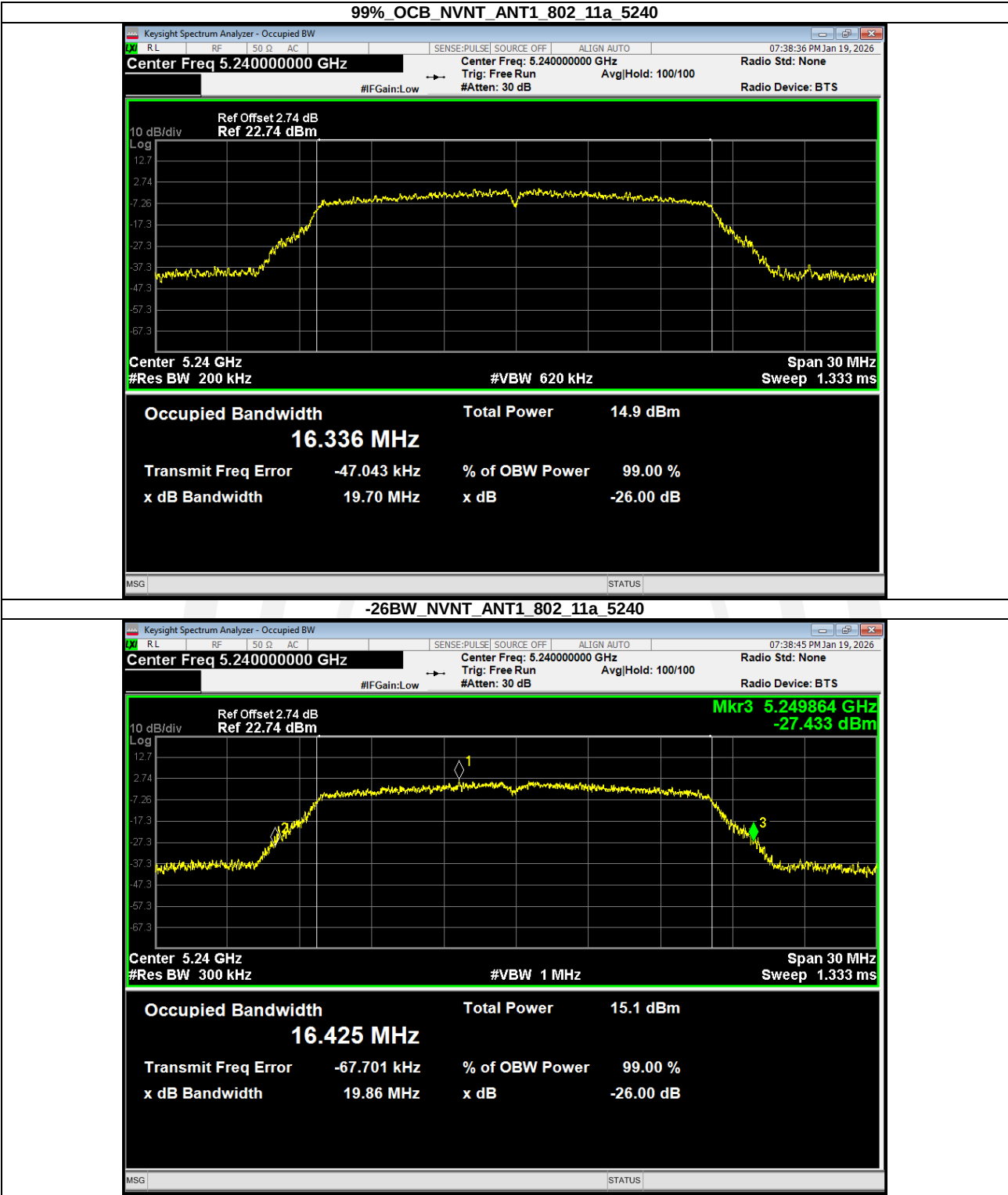
Measurement Data:

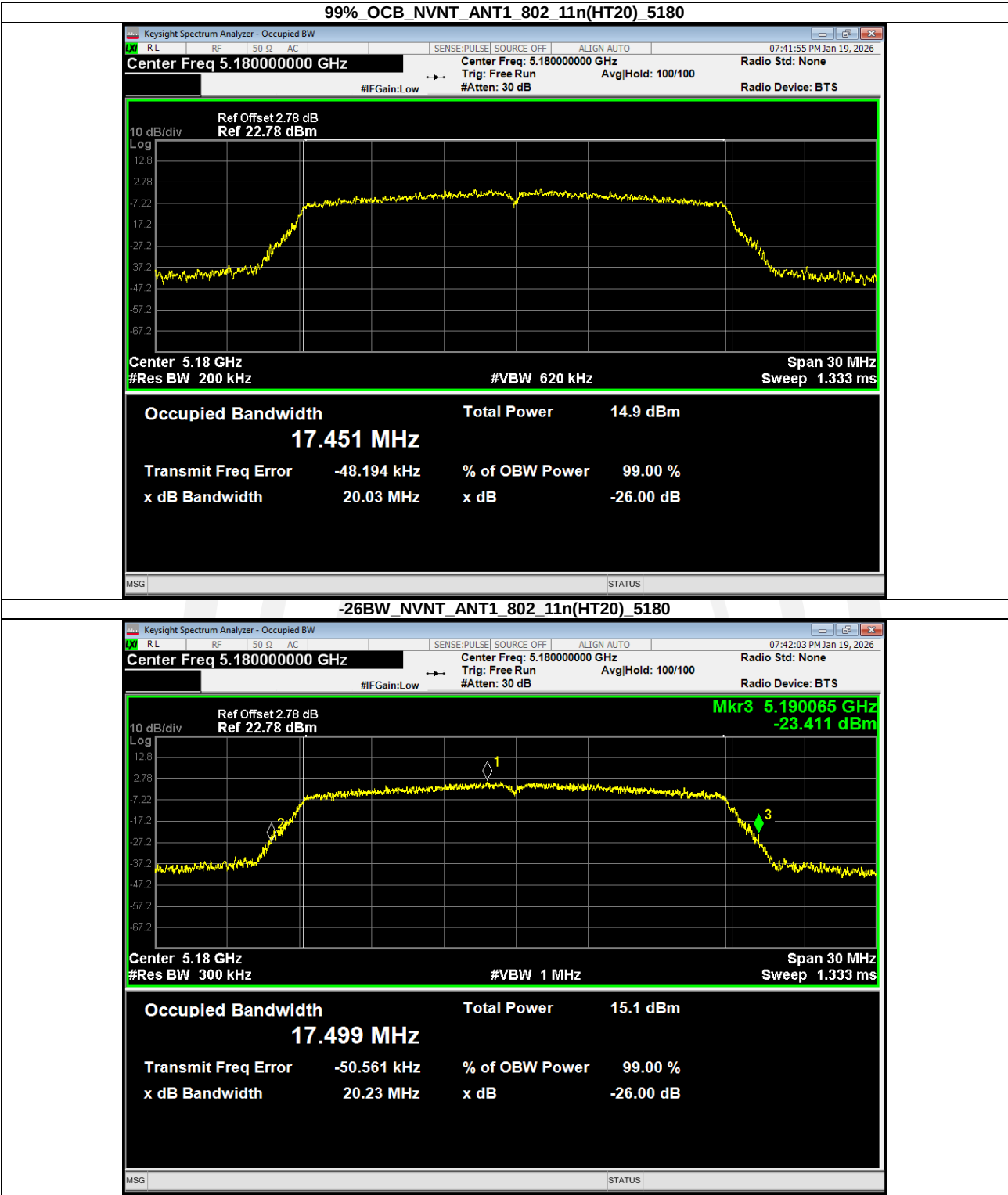
Band 1 (5150-5250 MHz):

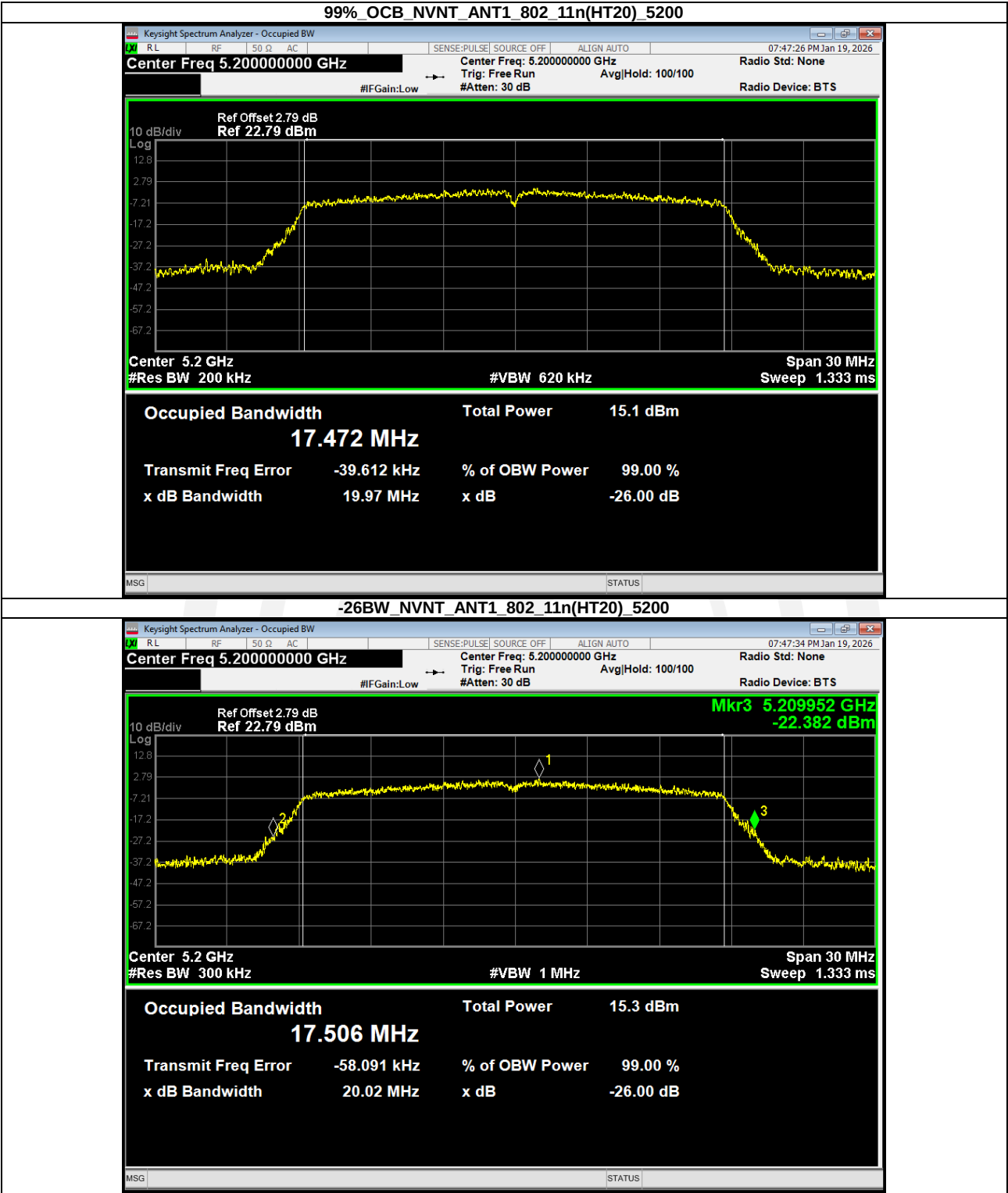
Condition	Antenna	Modulation	Frequency(MHz)	-26dB Emission Bandwidth(MHz)	Occupied Bandwidth(MHz)
NVNT	ANT1	802.11a	5180.00	19.93	16.315
NVNT	ANT1	802.11a	5200.00	19.66	16.313
NVNT	ANT1	802.11a	5240.00	19.86	16.336
NVNT	ANT1	802.11n(HT20)	5180.00	20.23	17.451
NVNT	ANT1	802.11n(HT20)	5200.00	20.02	17.472
NVNT	ANT1	802.11n(HT20)	5240.00	20.03	17.48
NVNT	ANT1	802.11ac(VHT20)	5180.00	20.09	17.472
NVNT	ANT1	802.11ac(VHT20)	5200.00	20.02	17.464
NVNT	ANT1	802.11ac(VHT20)	5240.00	19.99	17.48
NVNT	ANT1	802.11n(HT40)	5190.00	40.37	35.927
NVNT	ANT1	802.11n(HT40)	5230.00	40.01	35.913
NVNT	ANT1	802.11ac(VHT40)	5190.00	40.75	35.894
NVNT	ANT1	802.11ac(VHT40)	5230.00	40.25	35.902
NVNT	ANT1	802.11ac(VHT80)	5210.00	80.33	75.593

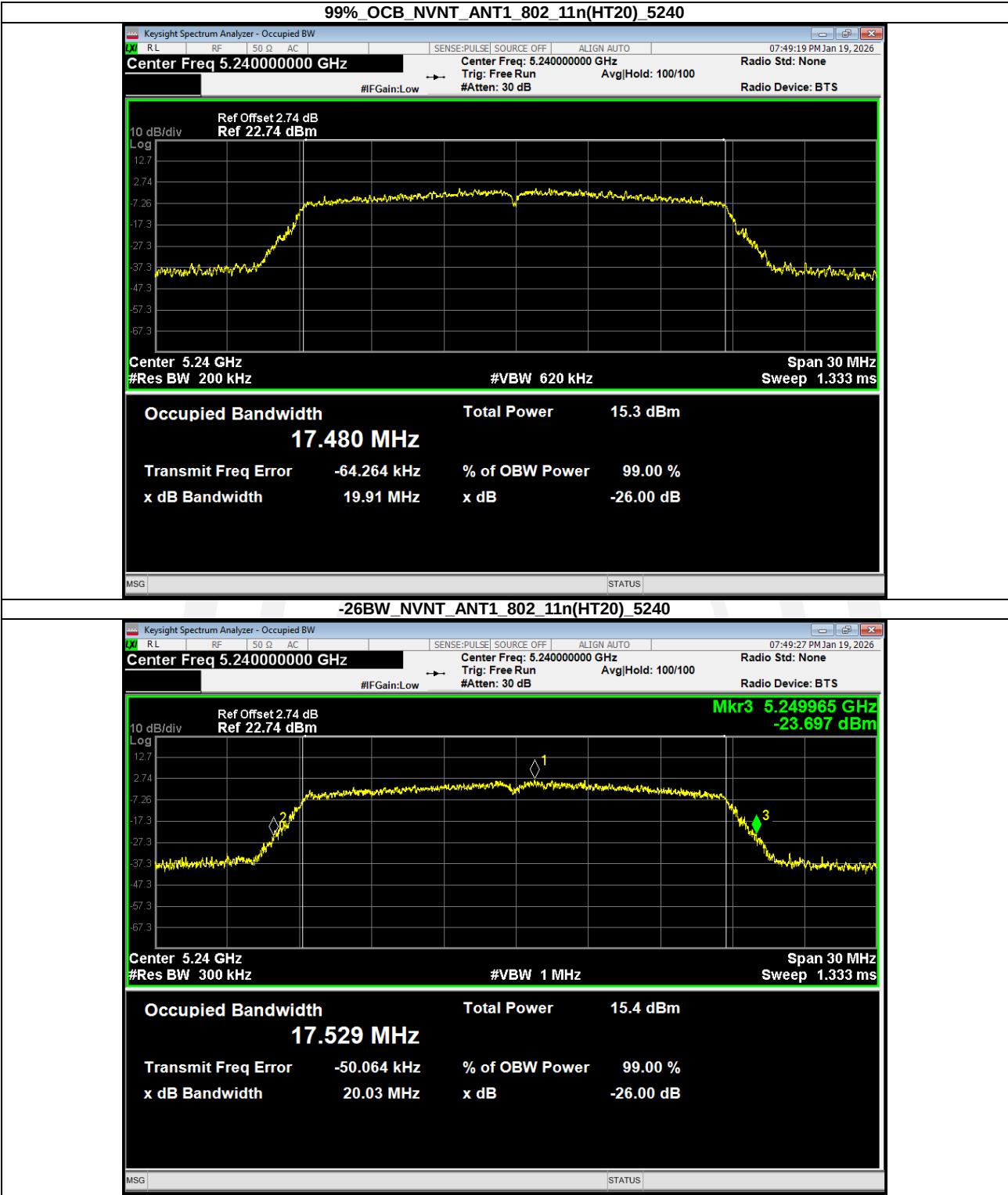


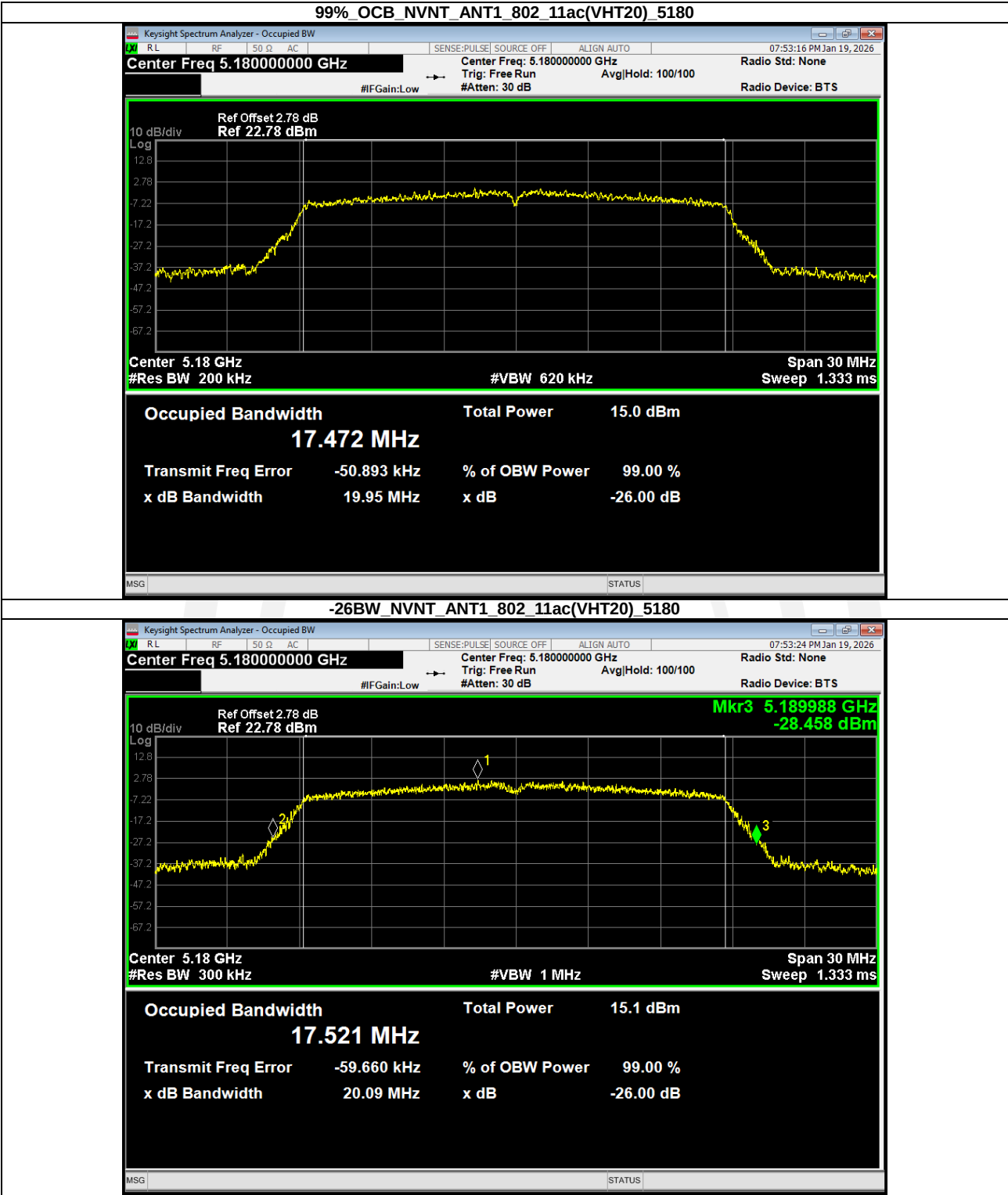


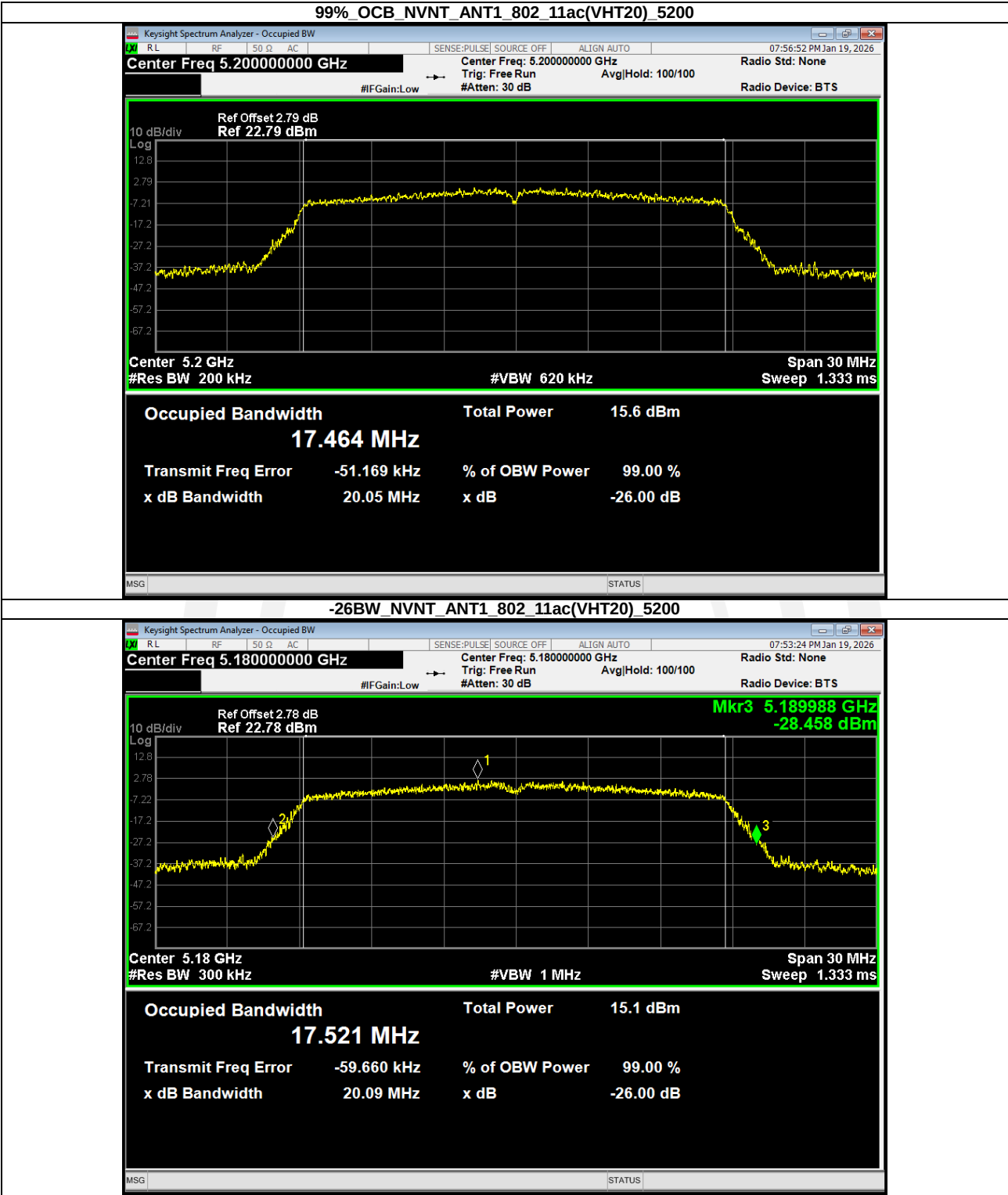


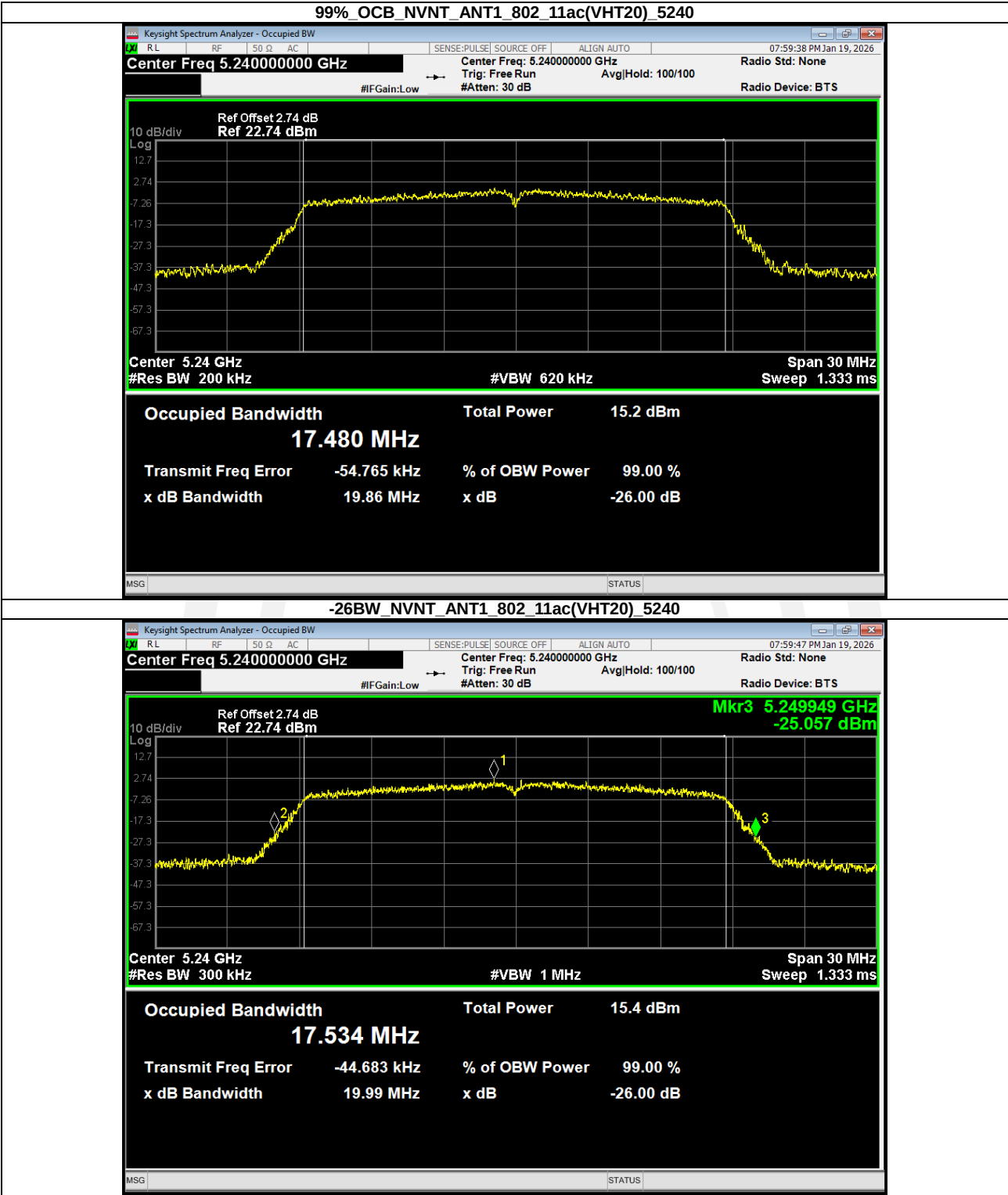


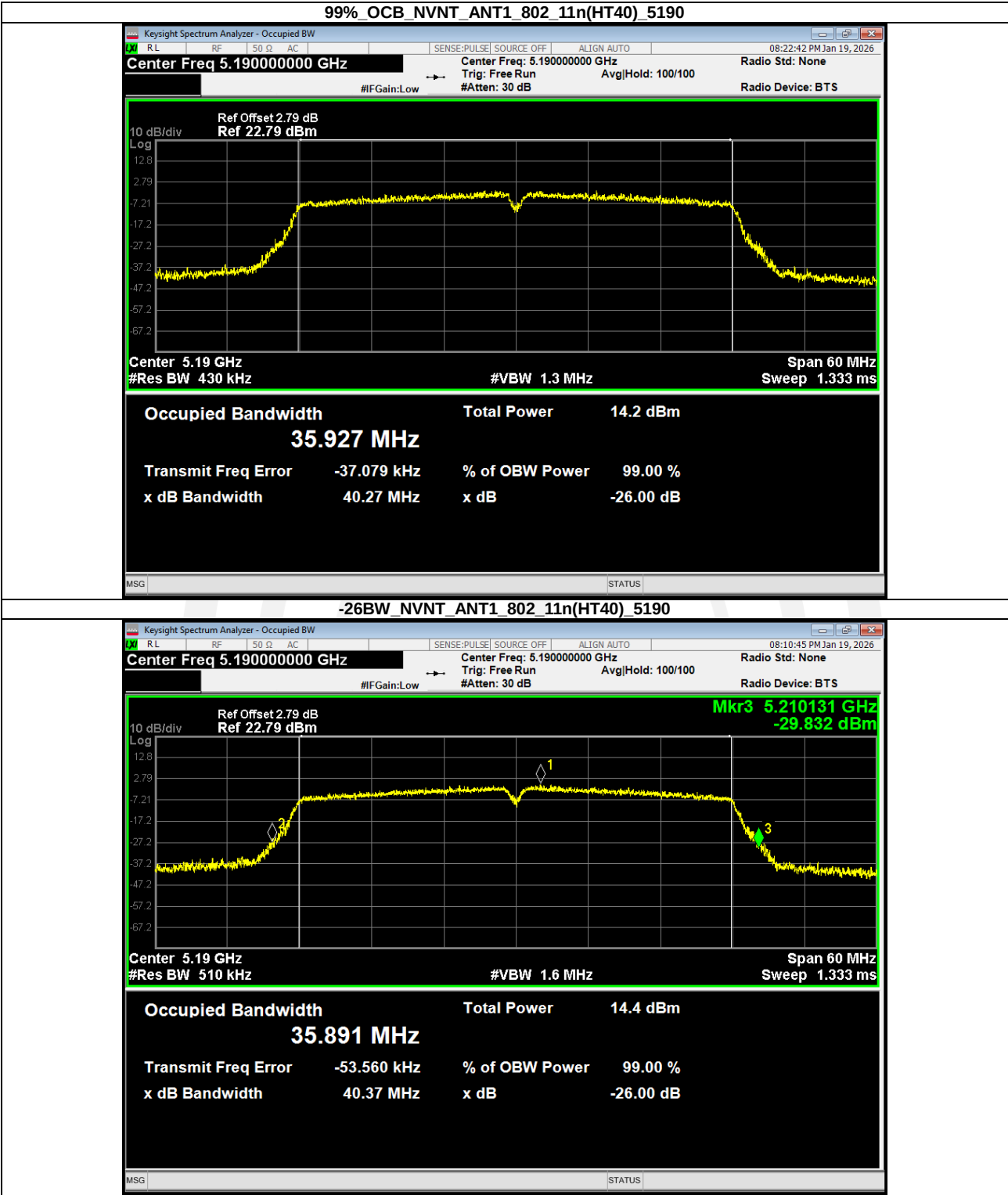


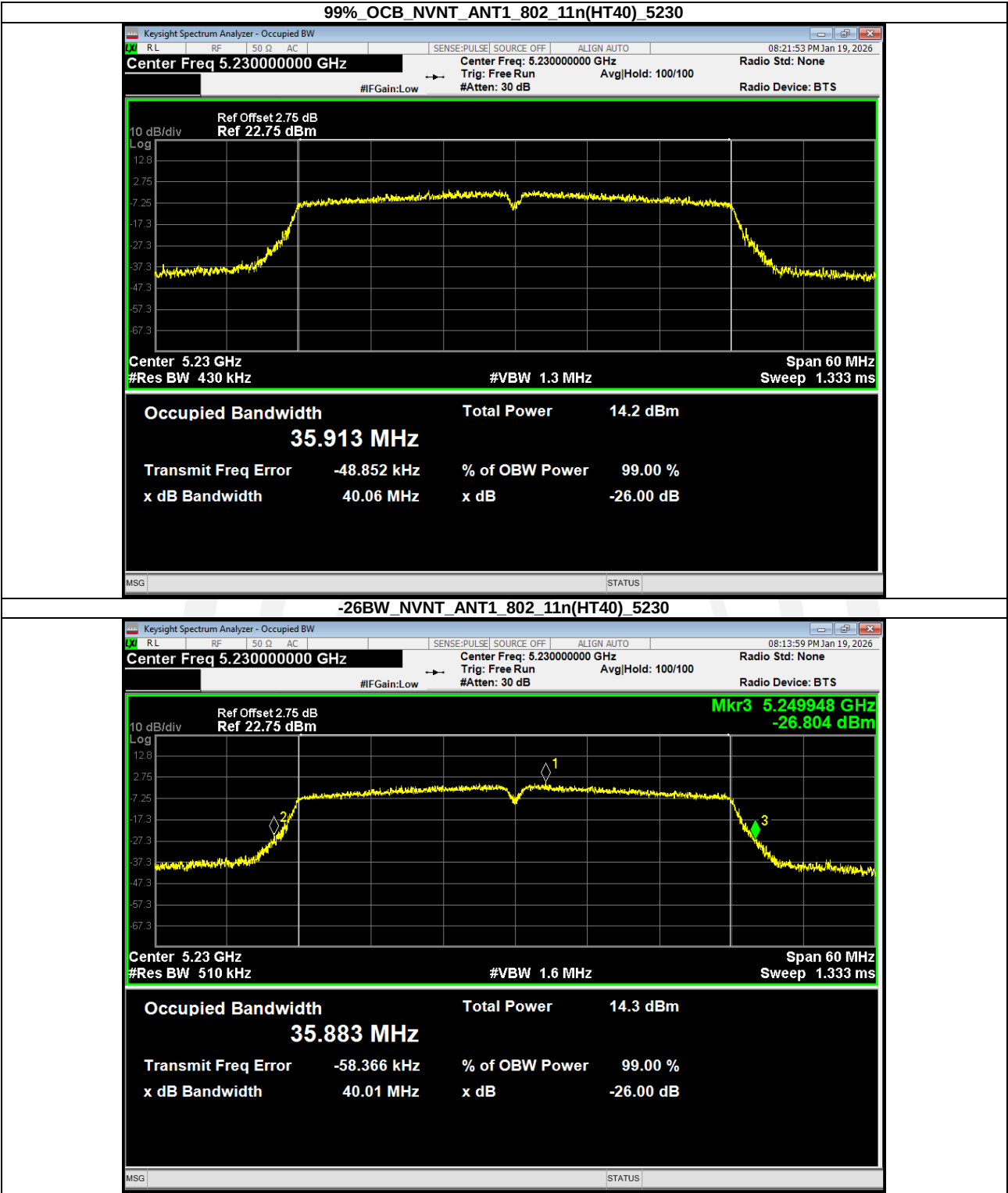


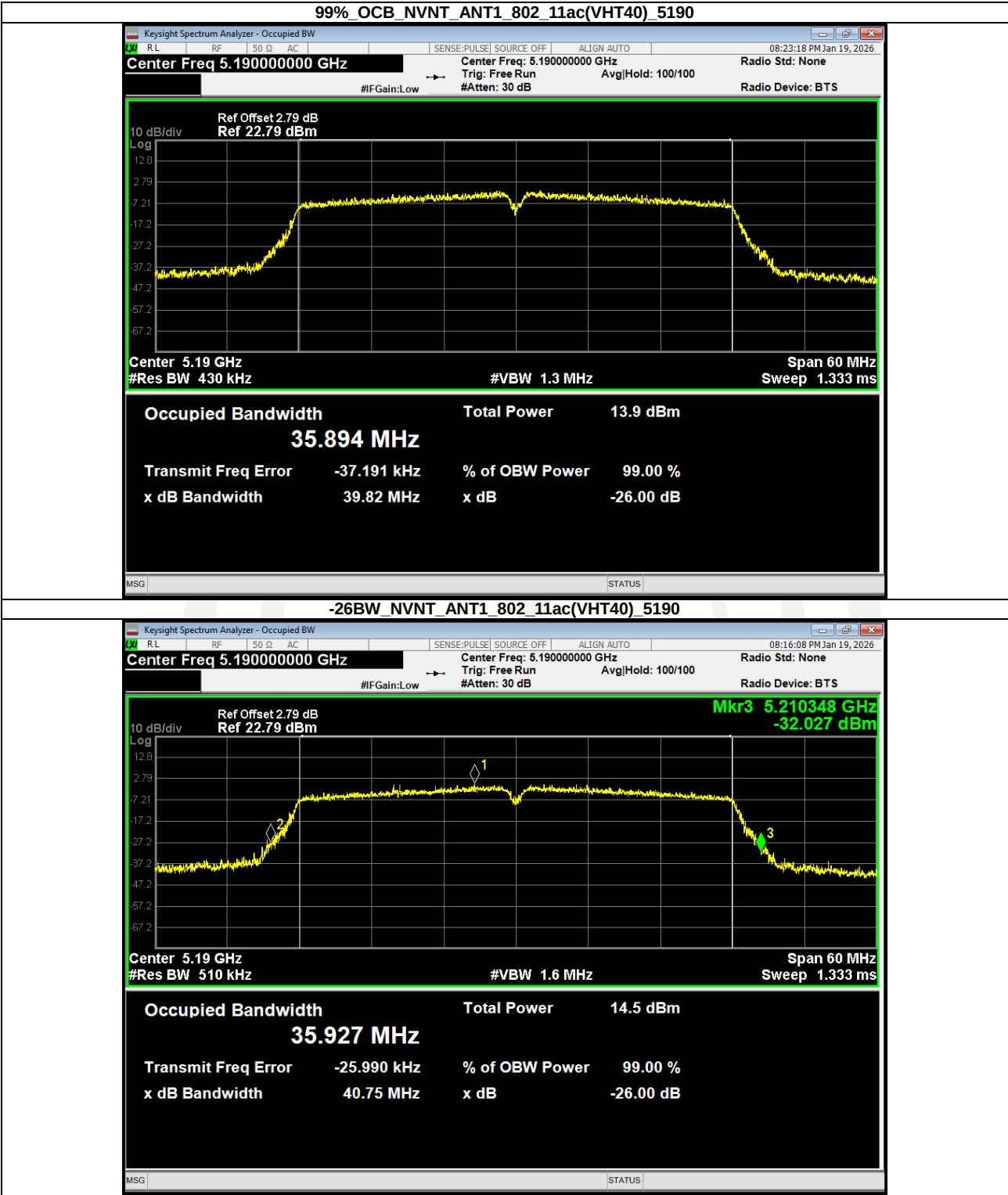


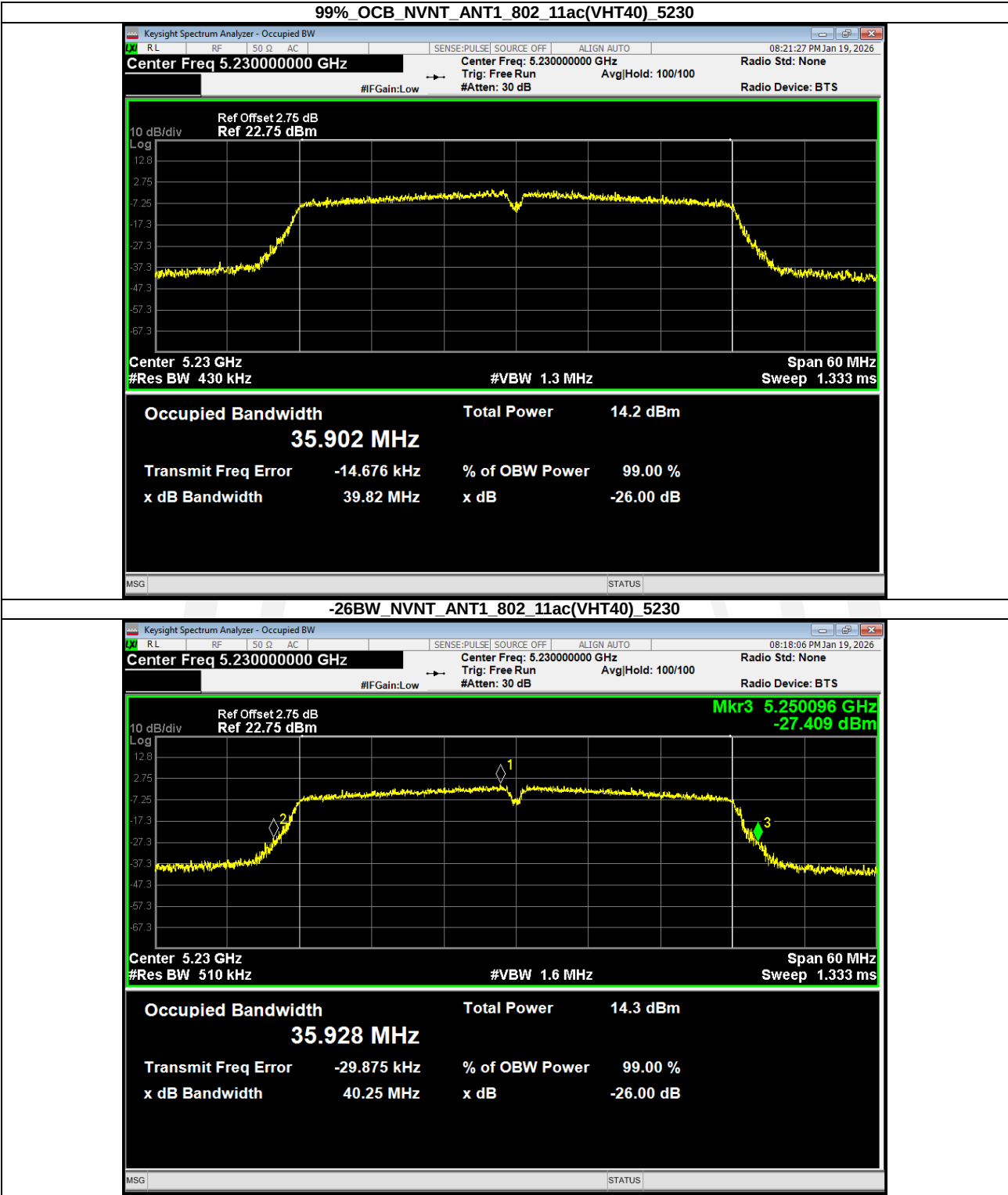


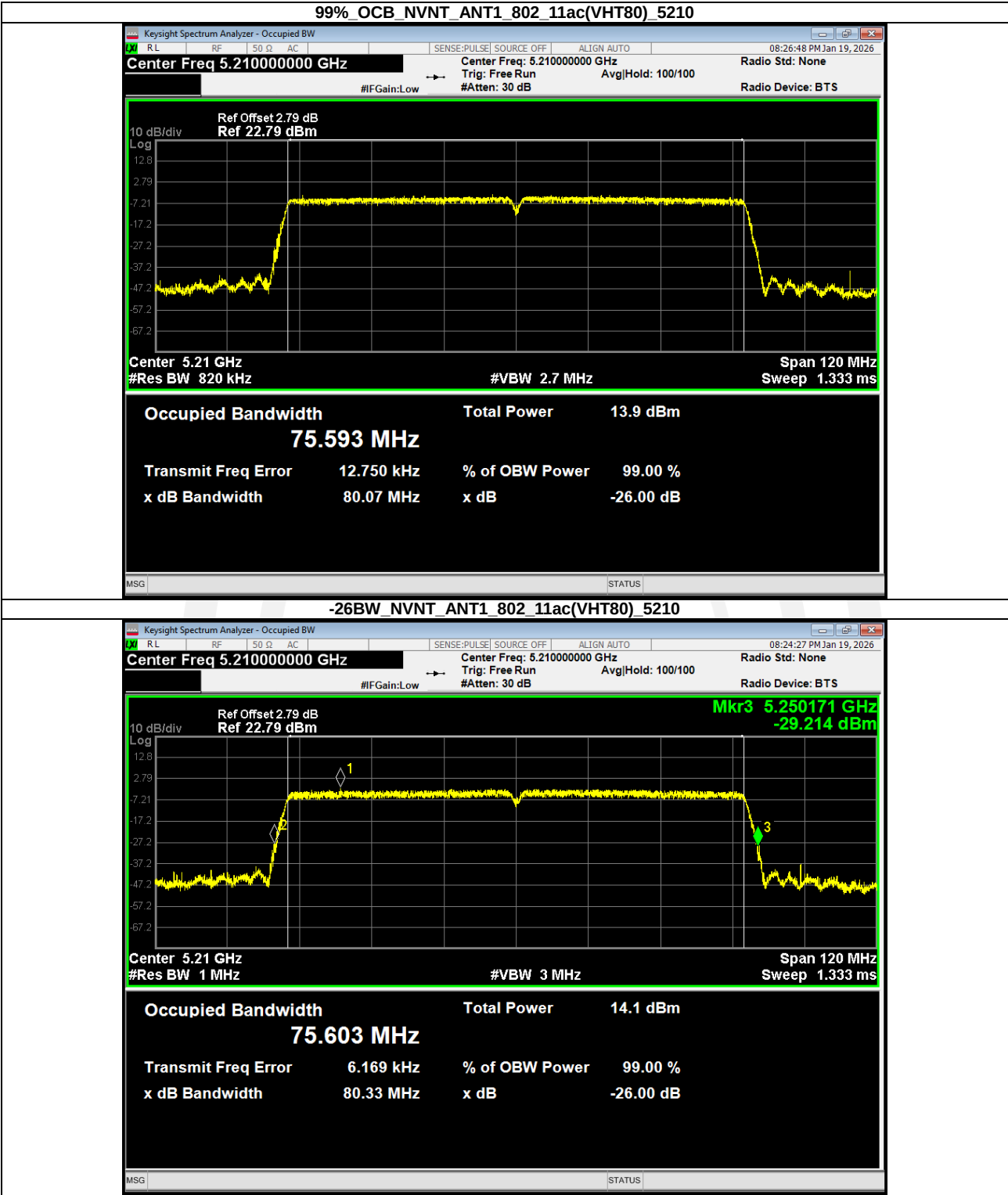








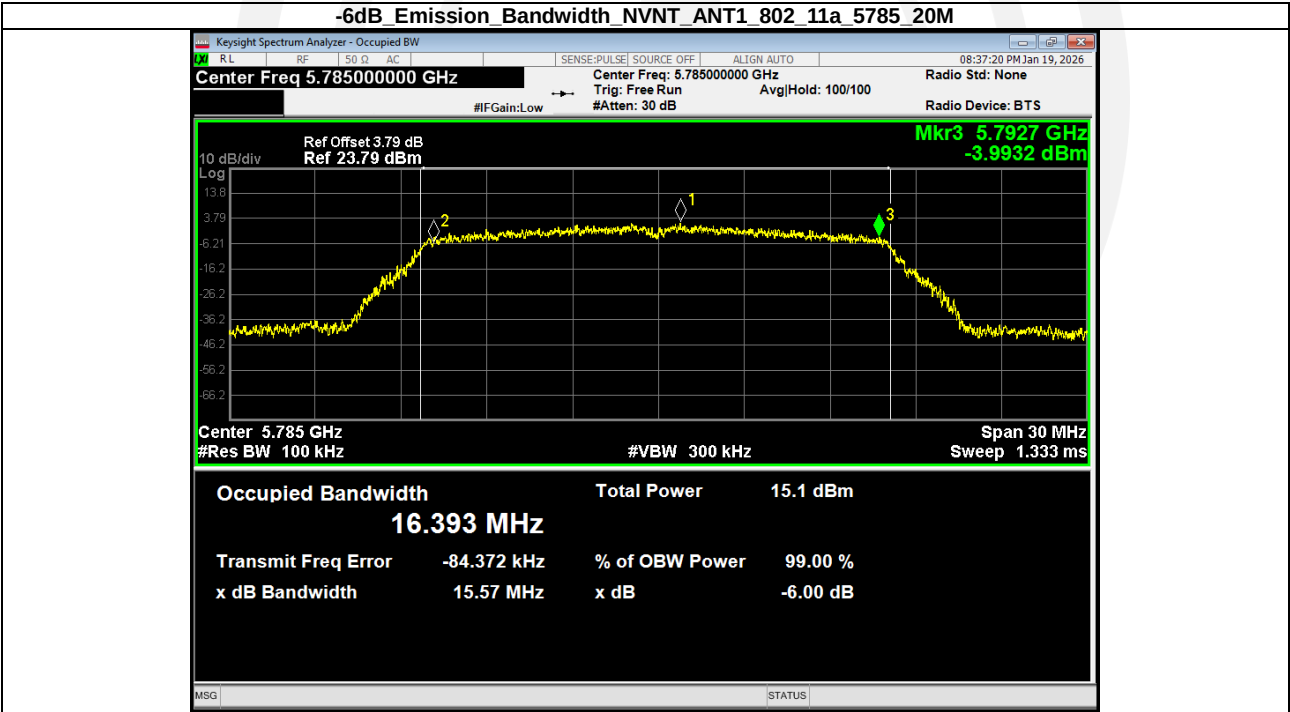
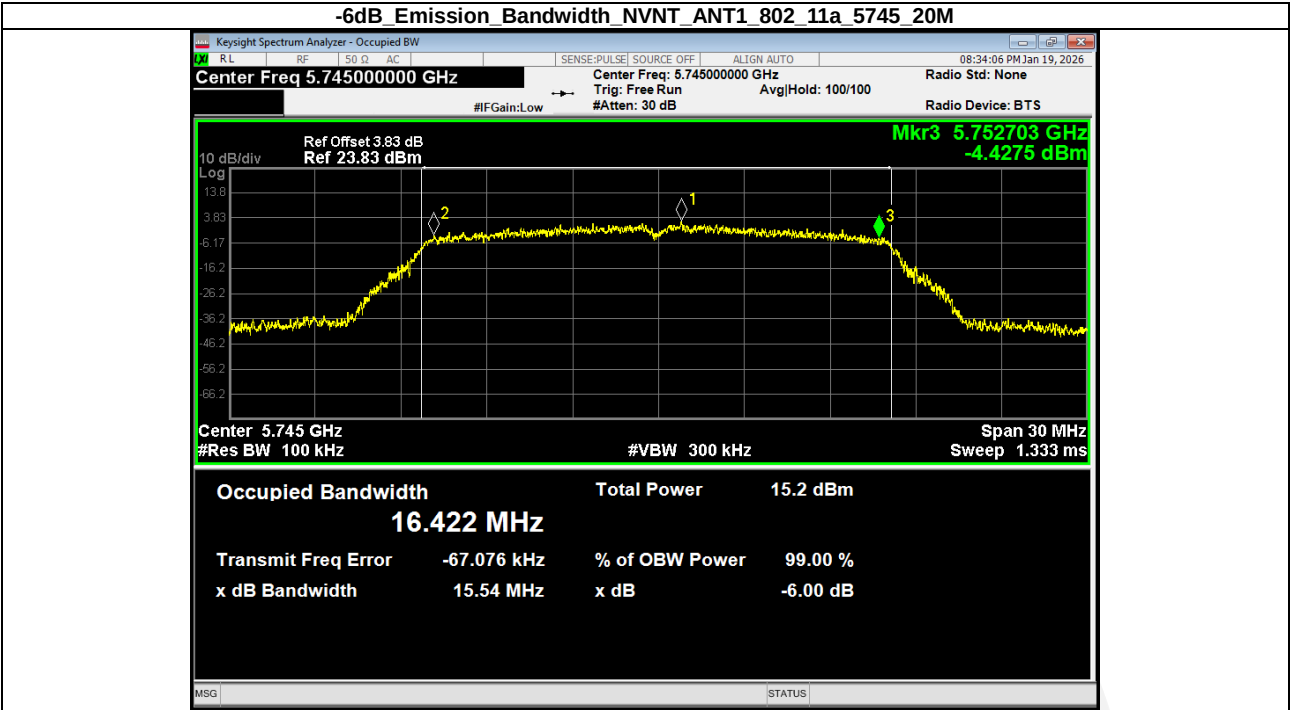


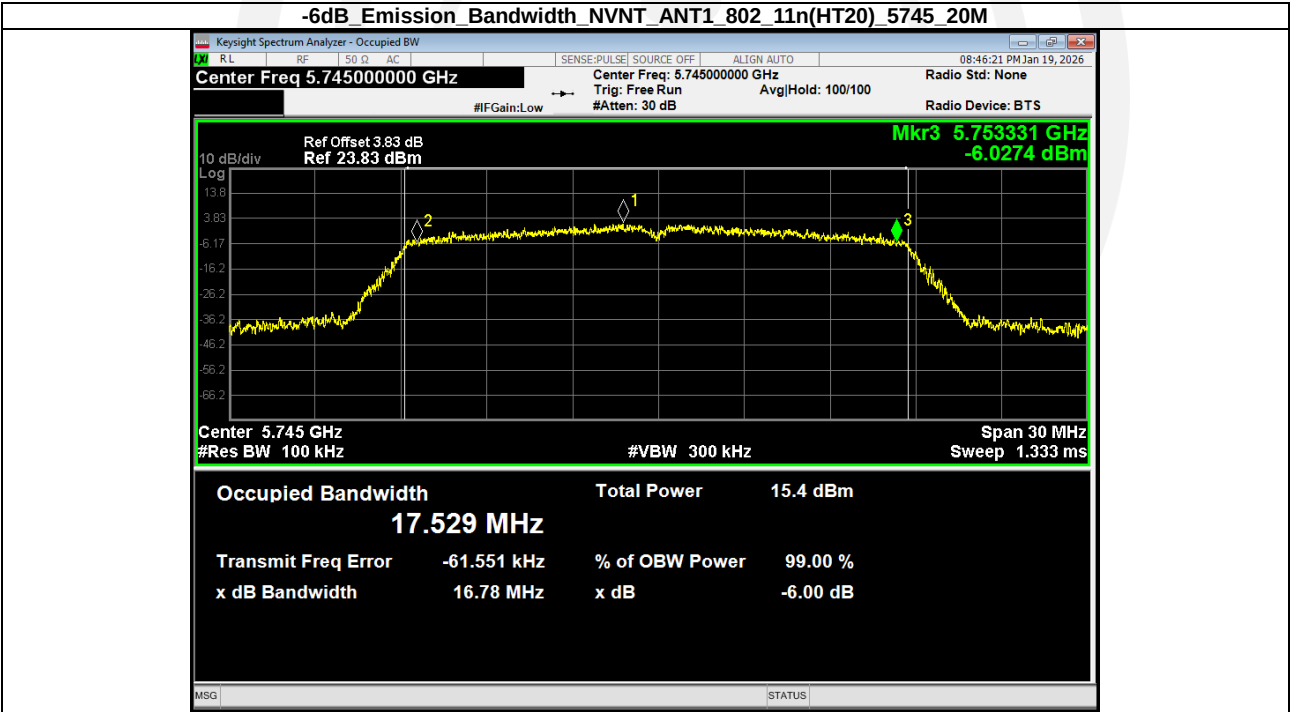
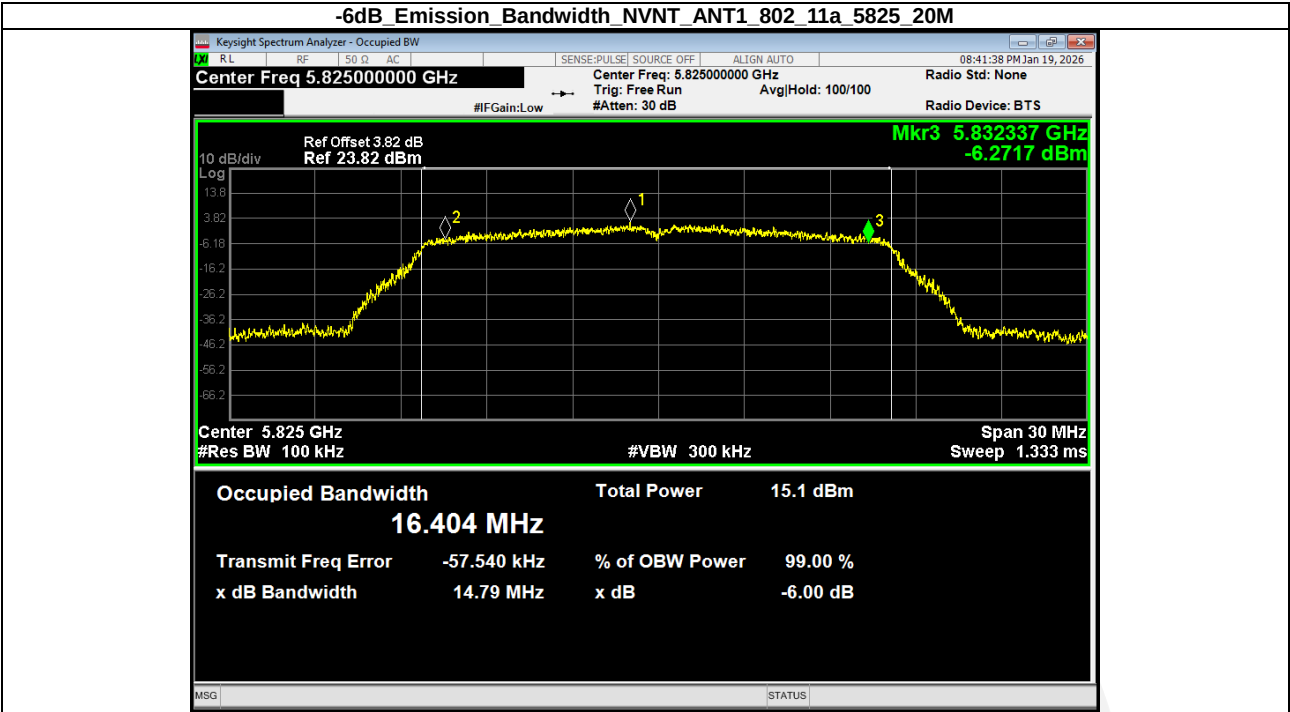


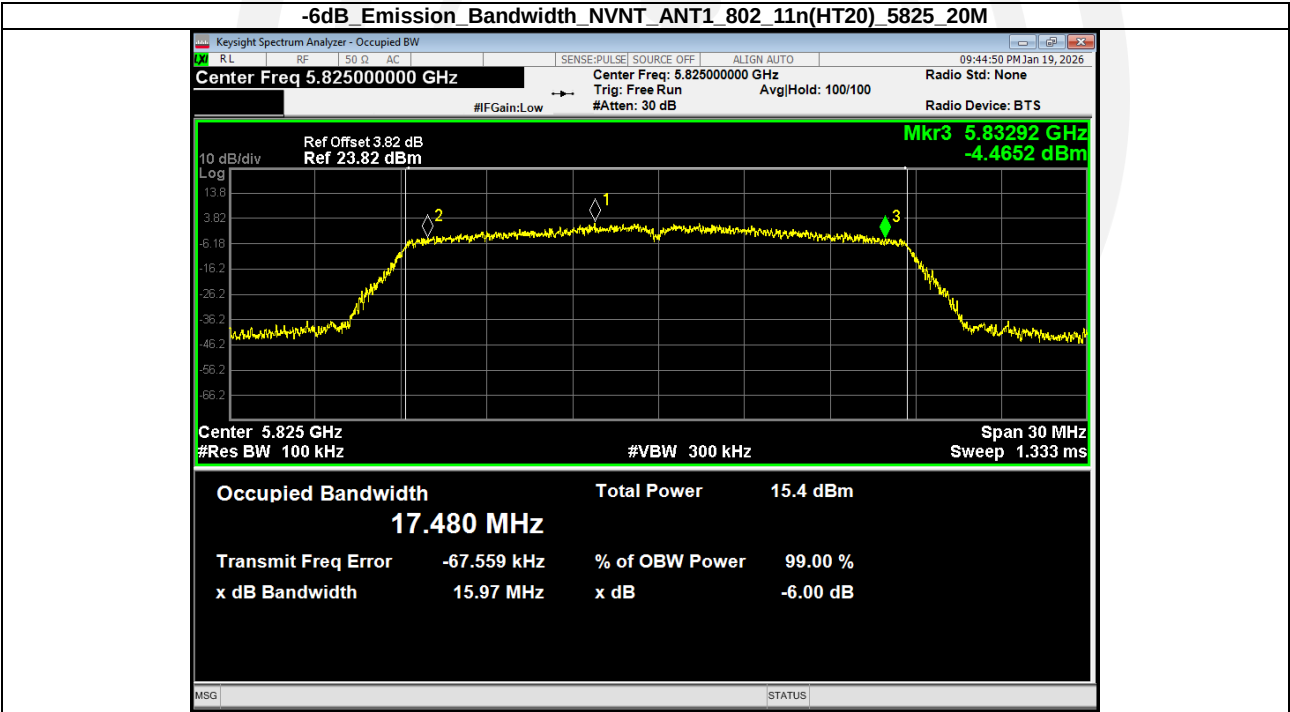
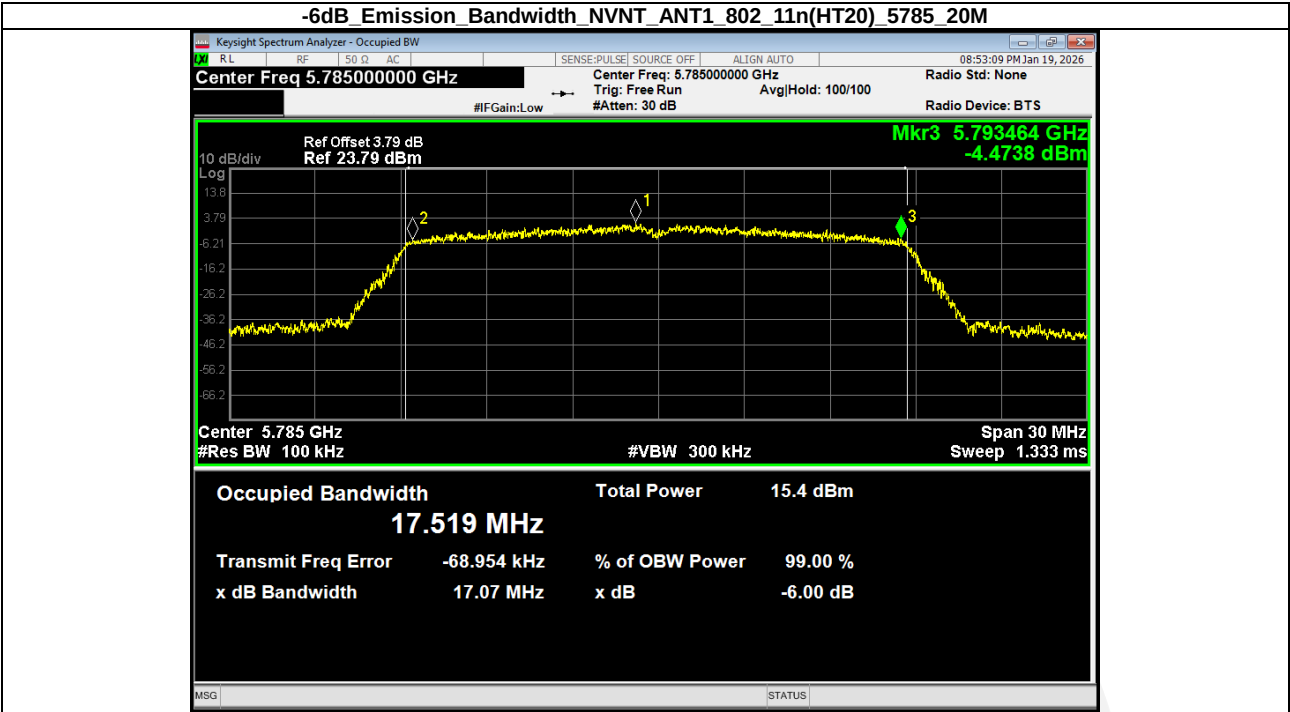
Band 4 (5725-5850 MHz):

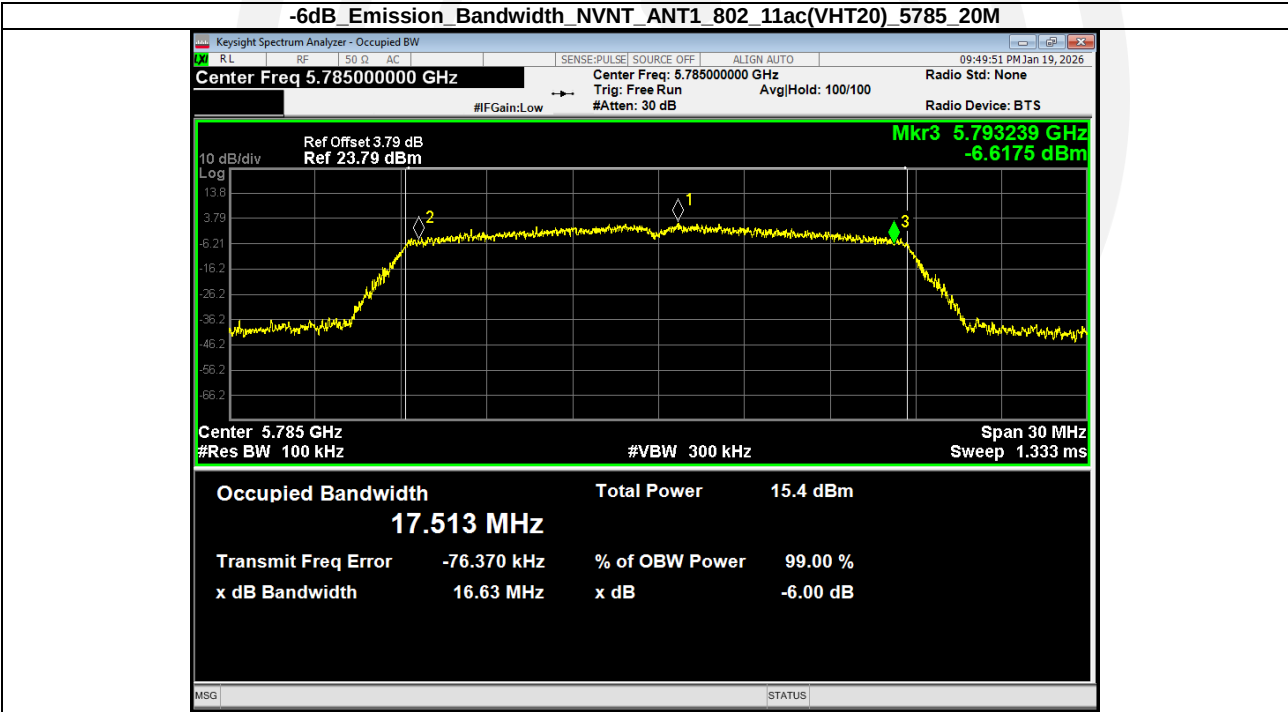
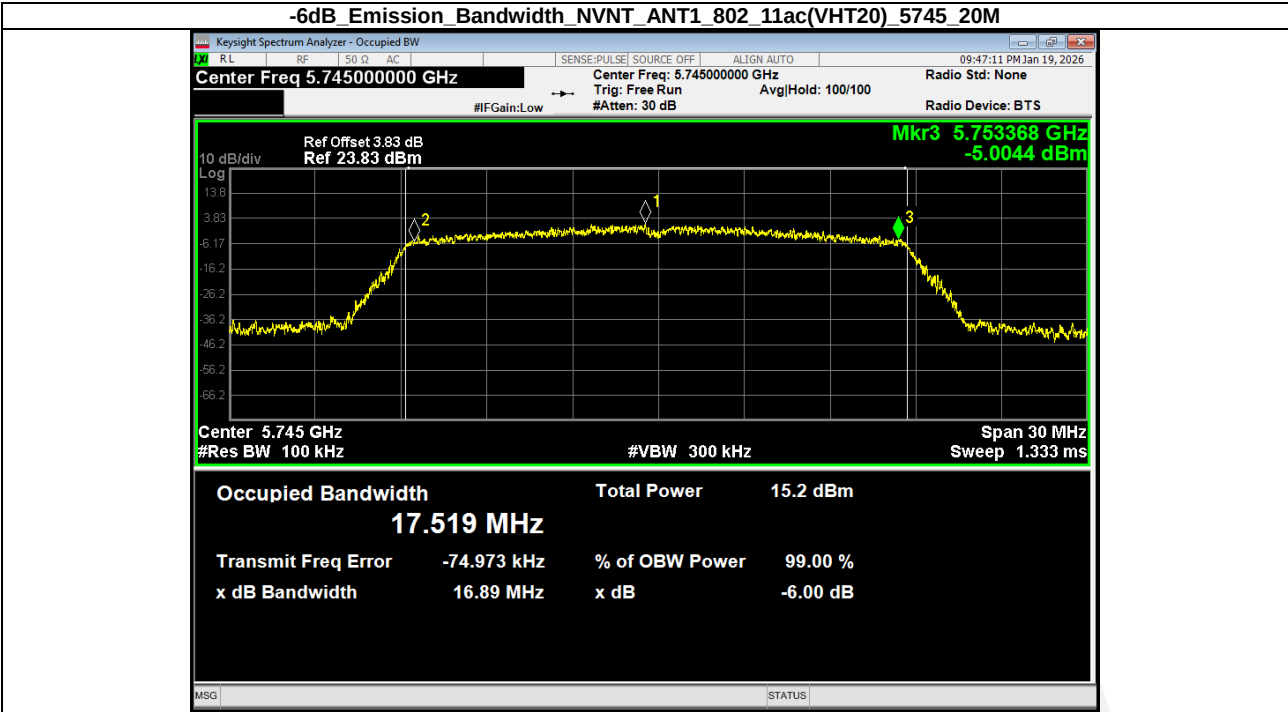
Condition	Antenna	Mode	Frequency(MHz)	6dB_Emission_Bandwidth(MHz)	Limit(MHz)	Result
NVNT	ANT1	802.11a	5745.00	15.54	0.500	Pass
NVNT	ANT1	802.11a	5785.00	15.57	0.500	Pass
NVNT	ANT1	802.11a	5825.00	14.79	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5745.00	16.78	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5785.00	17.07	0.500	Pass
NVNT	ANT1	802.11n(HT20)	5825.00	15.98	0.500	Pass
NVNT	ANT1	802.11ac(VHT20)	5745.00	16.89	0.500	Pass
NVNT	ANT1	802.11ac(VHT20)	5785.00	16.63	0.500	Pass
NVNT	ANT1	802.11ac(VHT20)	5825.00	16.87	0.500	Pass
NVNT	ANT1	802.11n(HT40)	5755.00	35.20	0.500	Pass
NVNT	ANT1	802.11n(HT40)	5795.00	34.95	0.500	Pass
NVNT	ANT1	802.11ac(VHT40)	5755.00	35.59	0.500	Pass
NVNT	ANT1	802.11ac(VHT40)	5795.00	31.26	0.500	Pass
NVNT	ANT1	802.11ac(VHT80)	5775.00	76.28	0.500	Pass

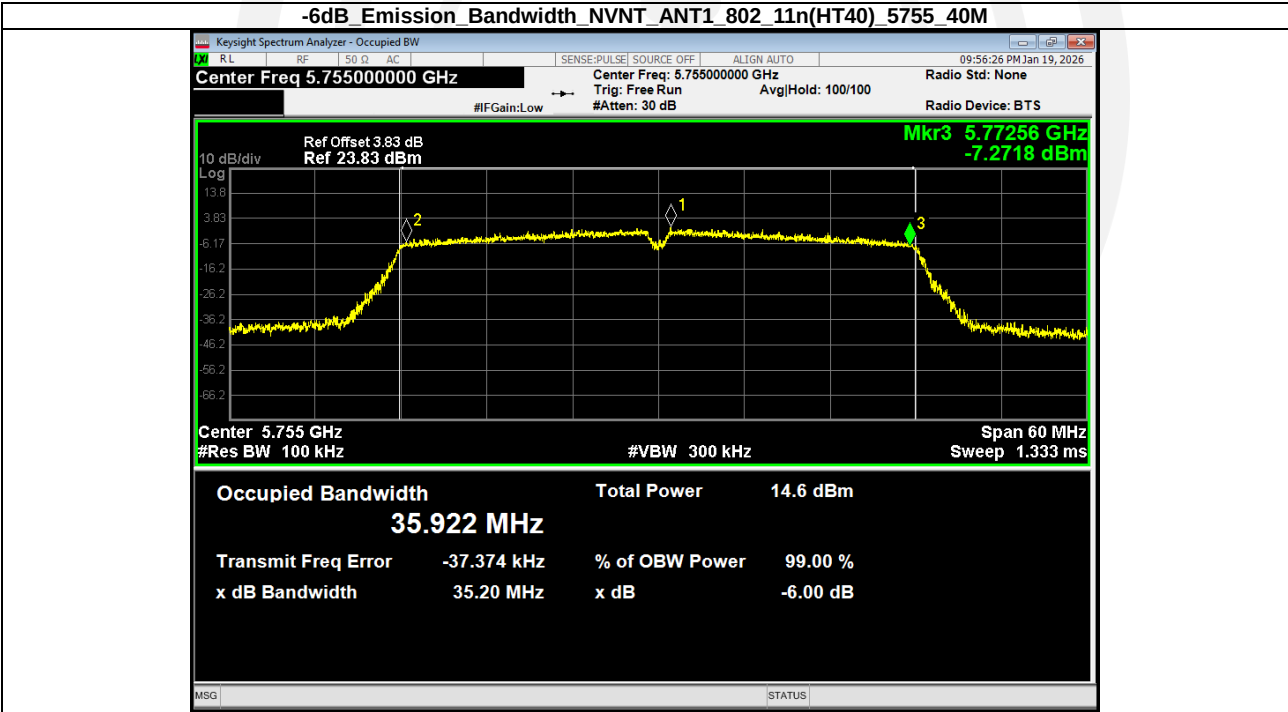
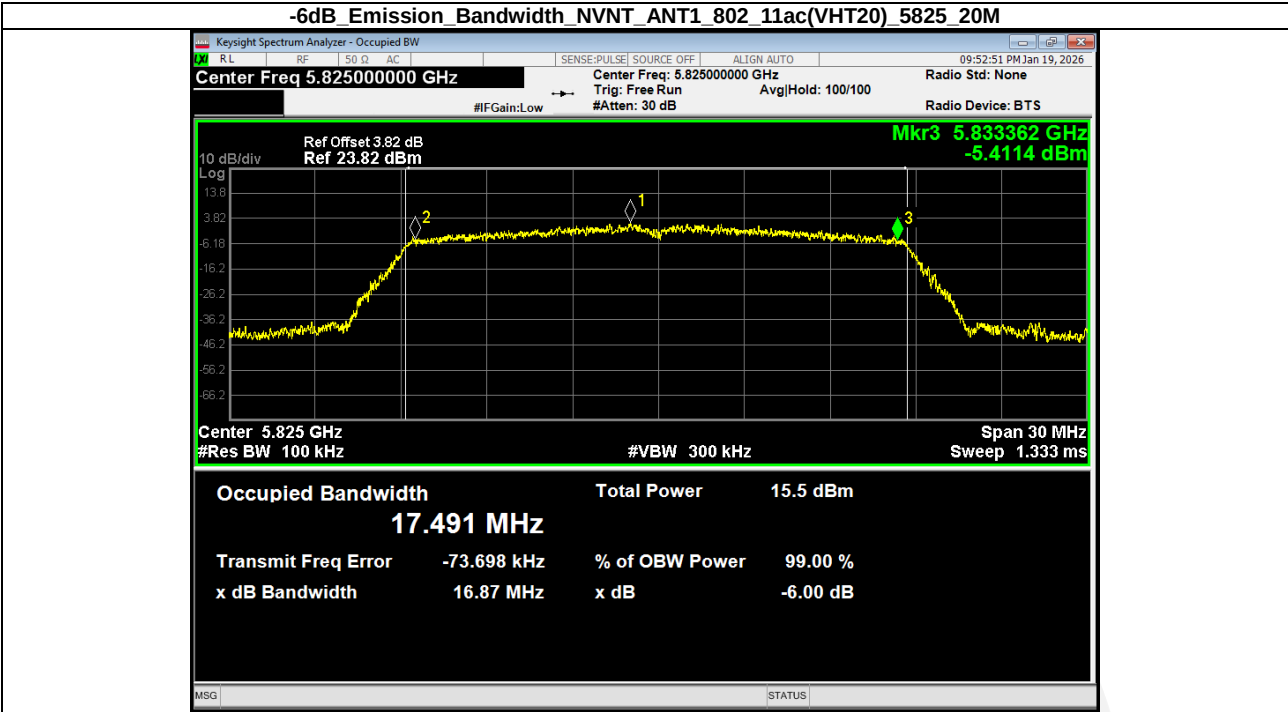


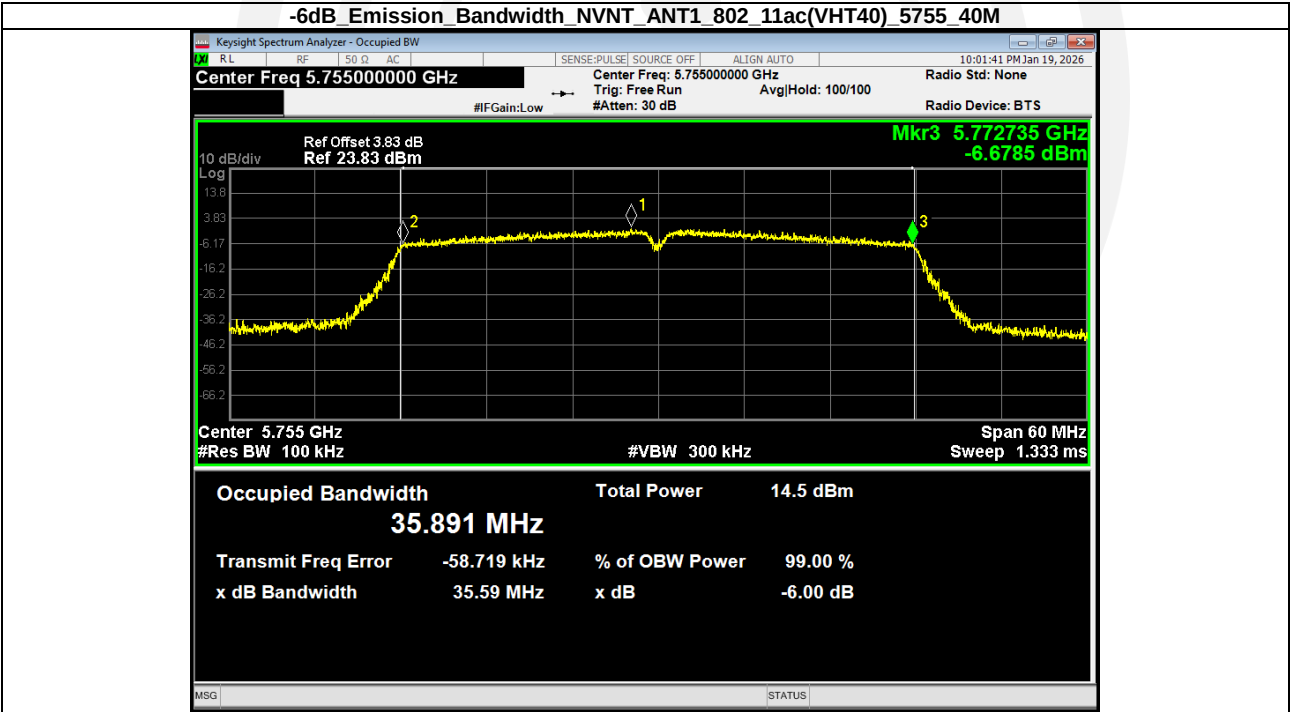
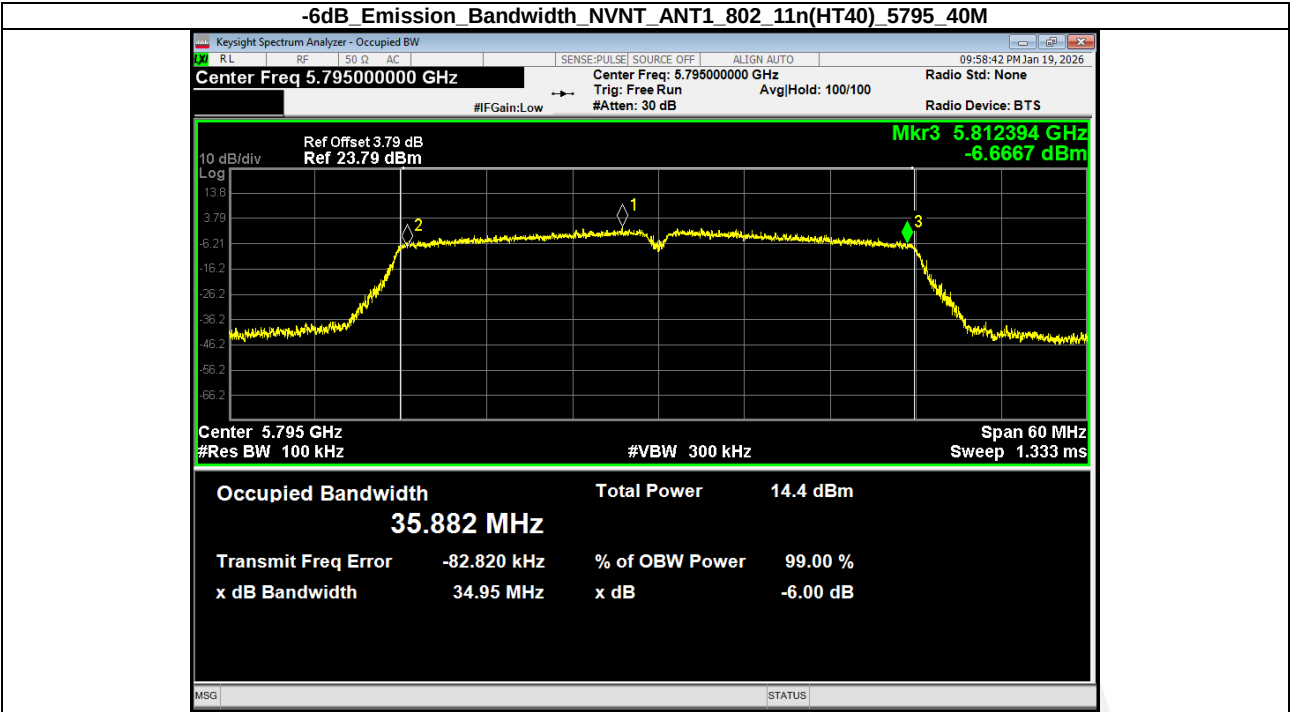


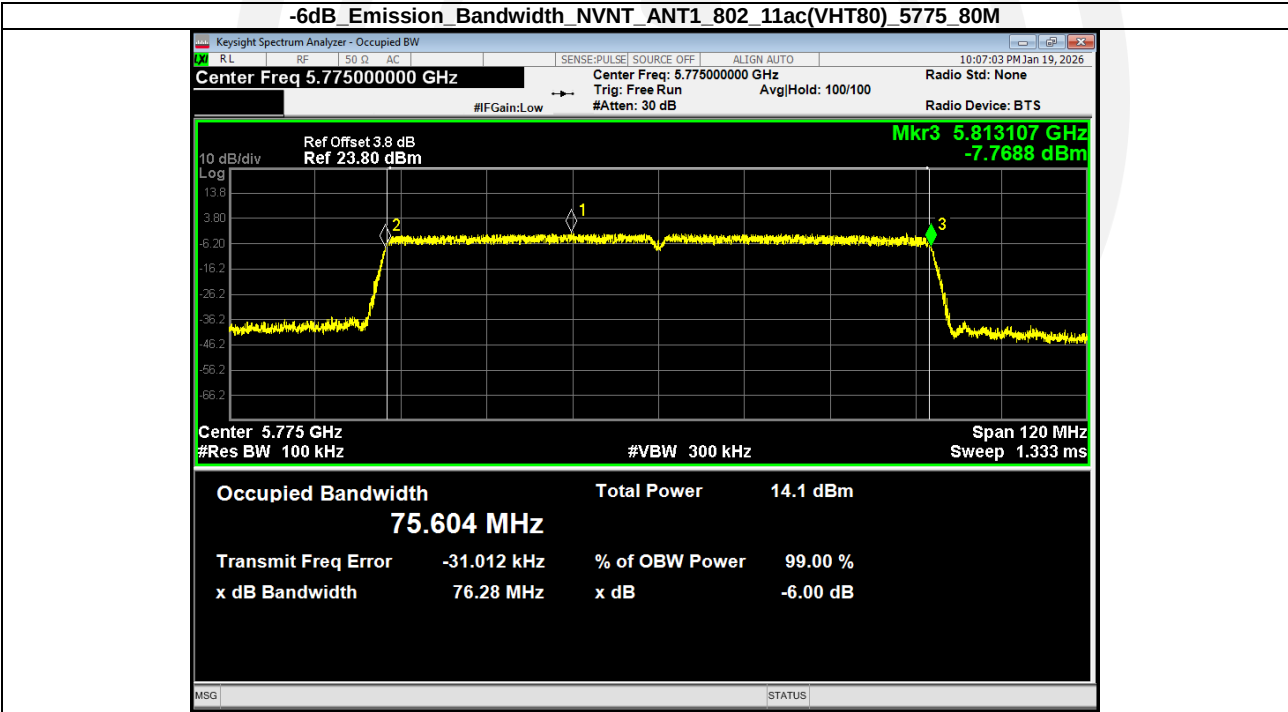
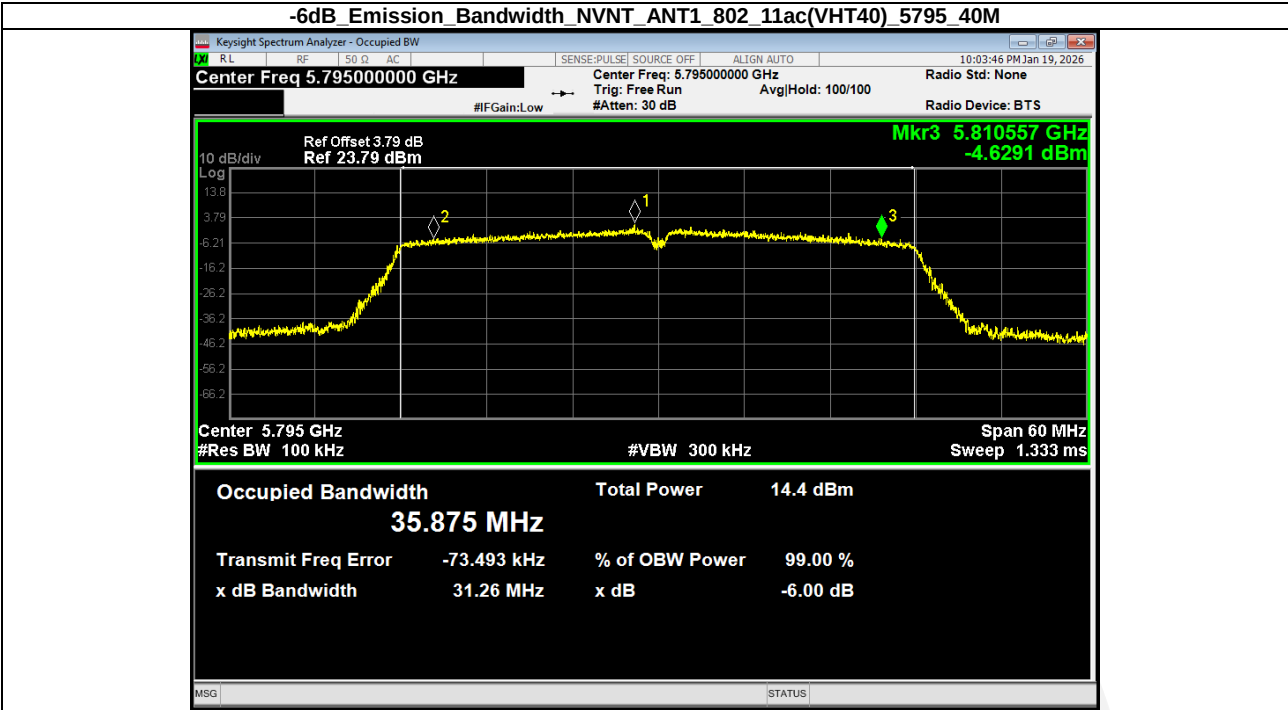




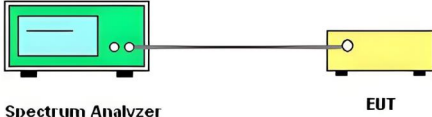




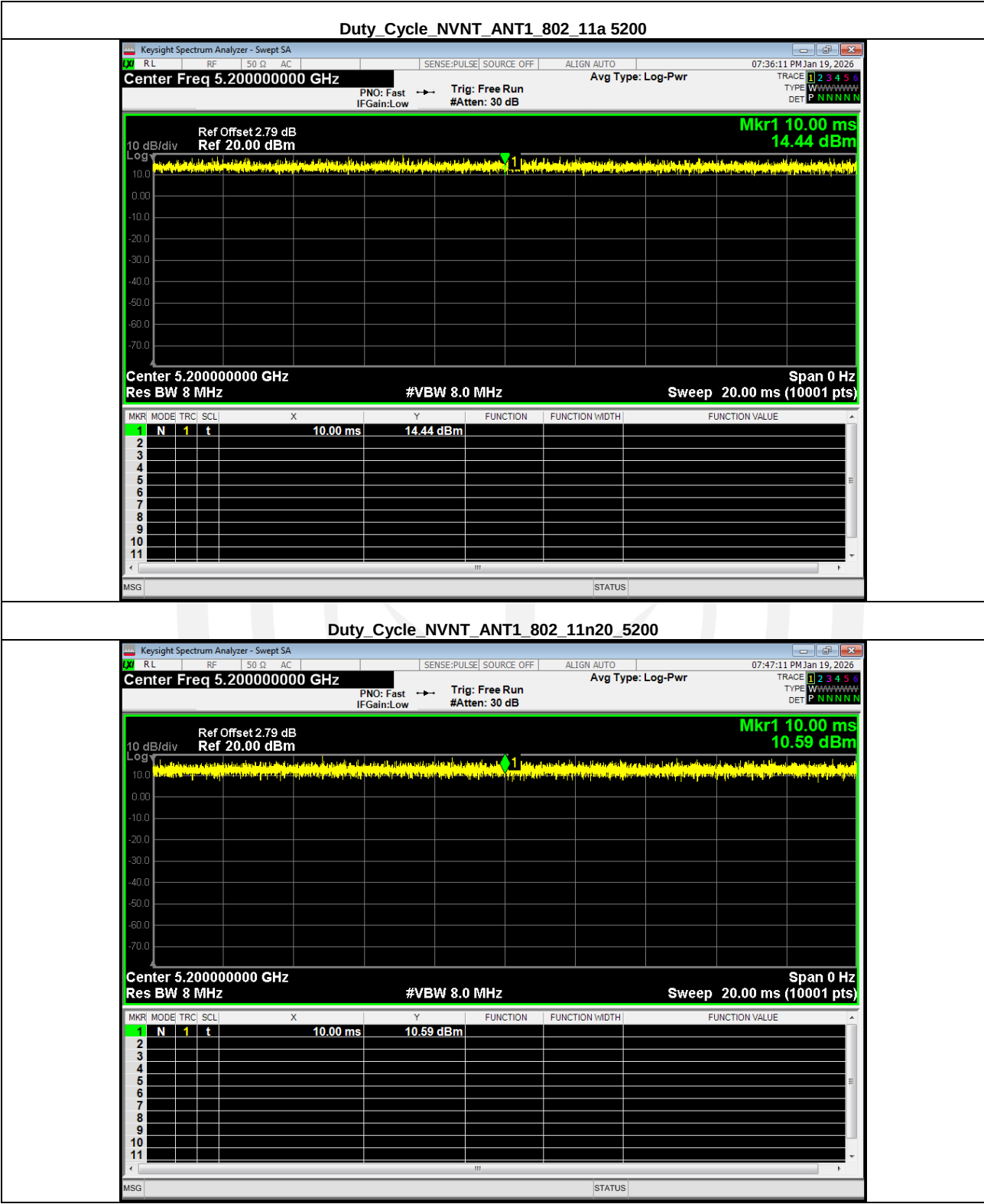


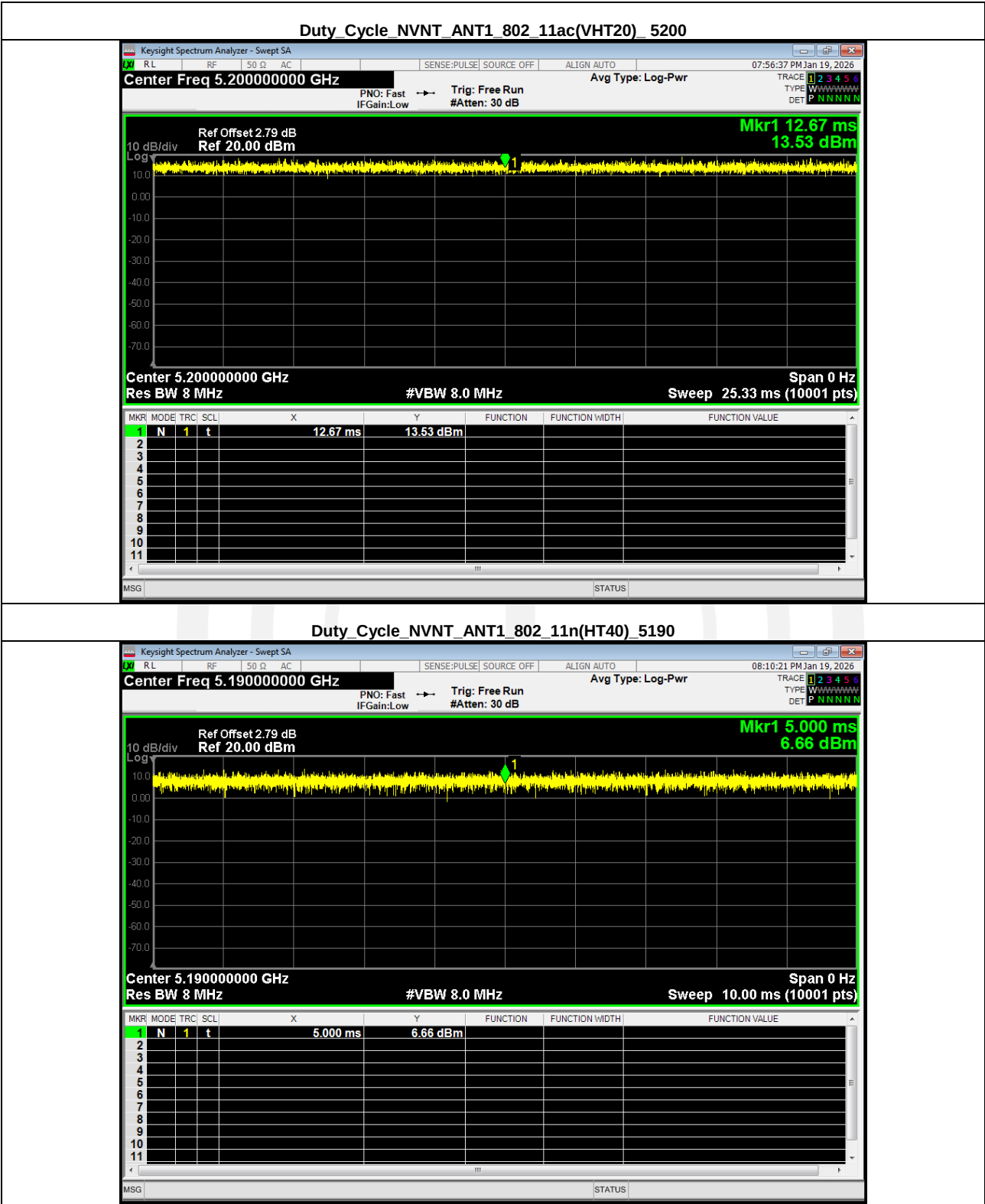


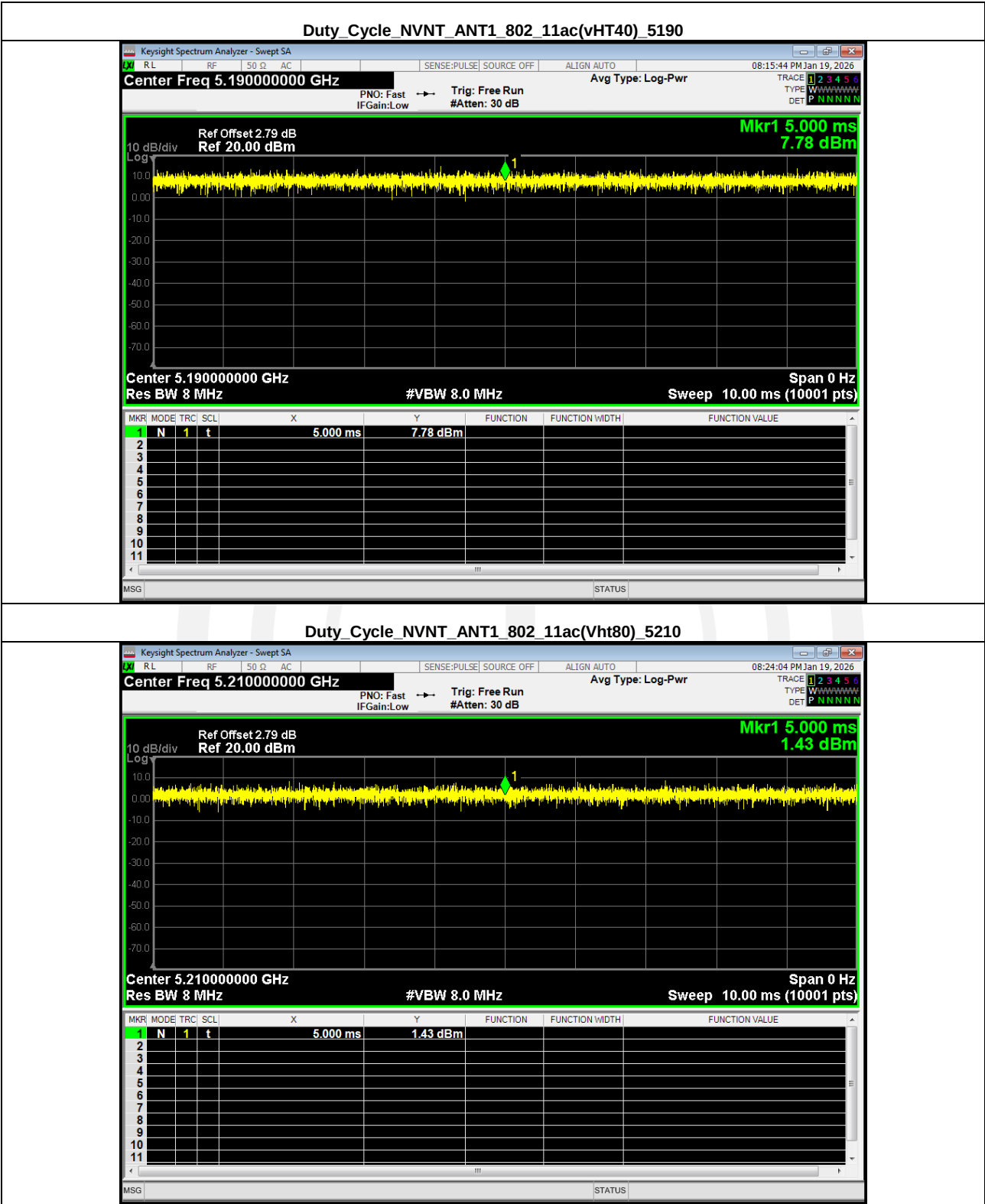
4.4 Duty Cycle

Test Requirement:	All measurements are to be performed with the EUT transmitting at 100% duty cycle at its maximum power control level; however, if 100% duty cycle cannot be achieved, measurements of duty cycle, x, and maximum-power transmission duration, T, are required for each tested mode of operation.
Test Method:	Please refer to ANSI C63.10-2020 Section 12.2
Limit:	No limits
Test setup:	 The diagram illustrates the test setup. On the left is a green rectangular device labeled 'Spectrum Analyzer'. A black cable connects its output to a yellow rectangular device labeled 'EUT' on the right.
Test procedure:	i) Set the center frequency of the instrument to the center frequency of the transmission. ii) Set RBW $\geq$ EBW if possible; otherwise, set RBW to the largest available value. iii) Set VBW $\geq$ RBW. iv) Set detector = peak. v) The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$, where T is defined in item a1) of 12.2, and the number of sweep points across duration T exceeds 100.
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

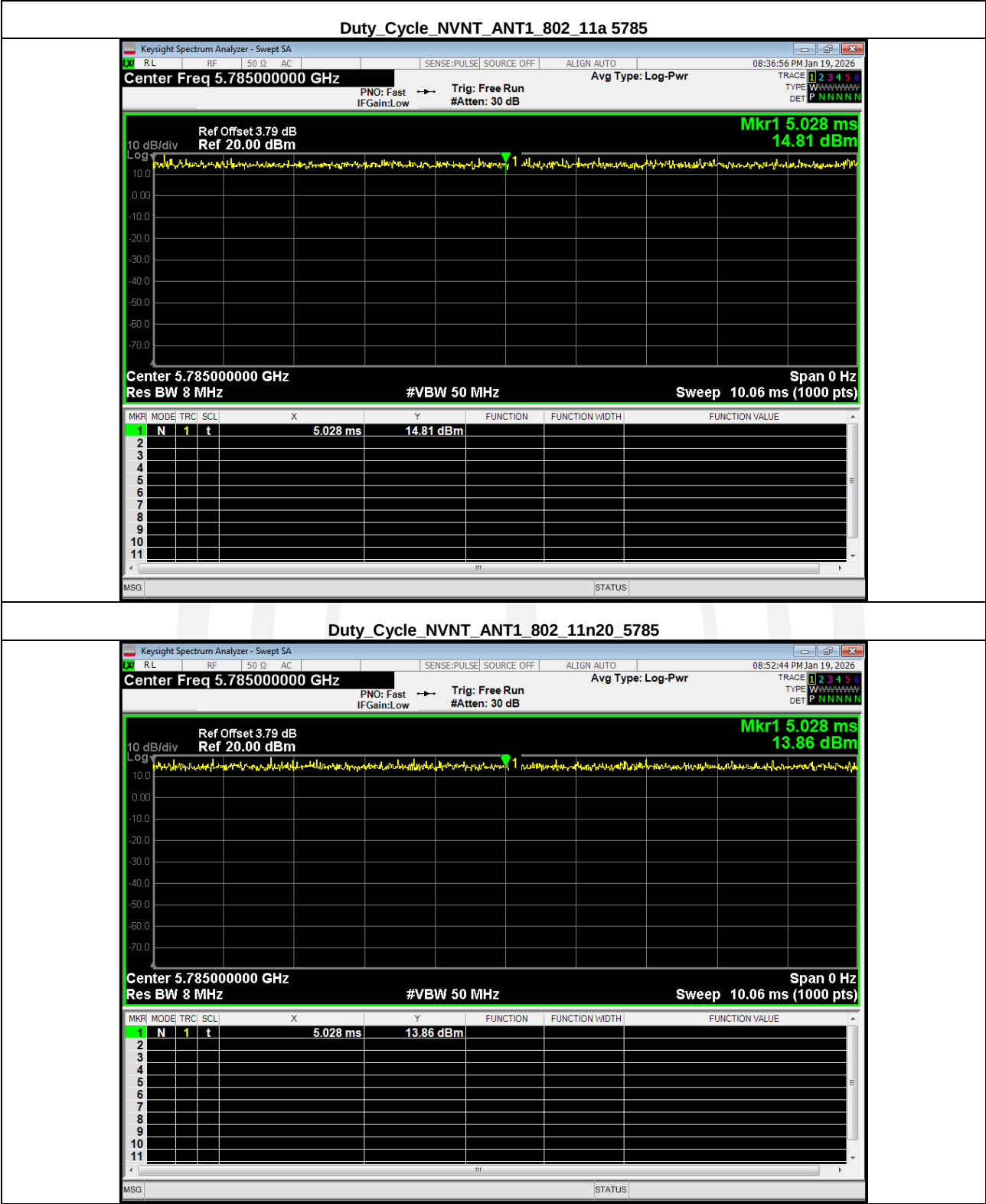
Data:
5180-5240MHz

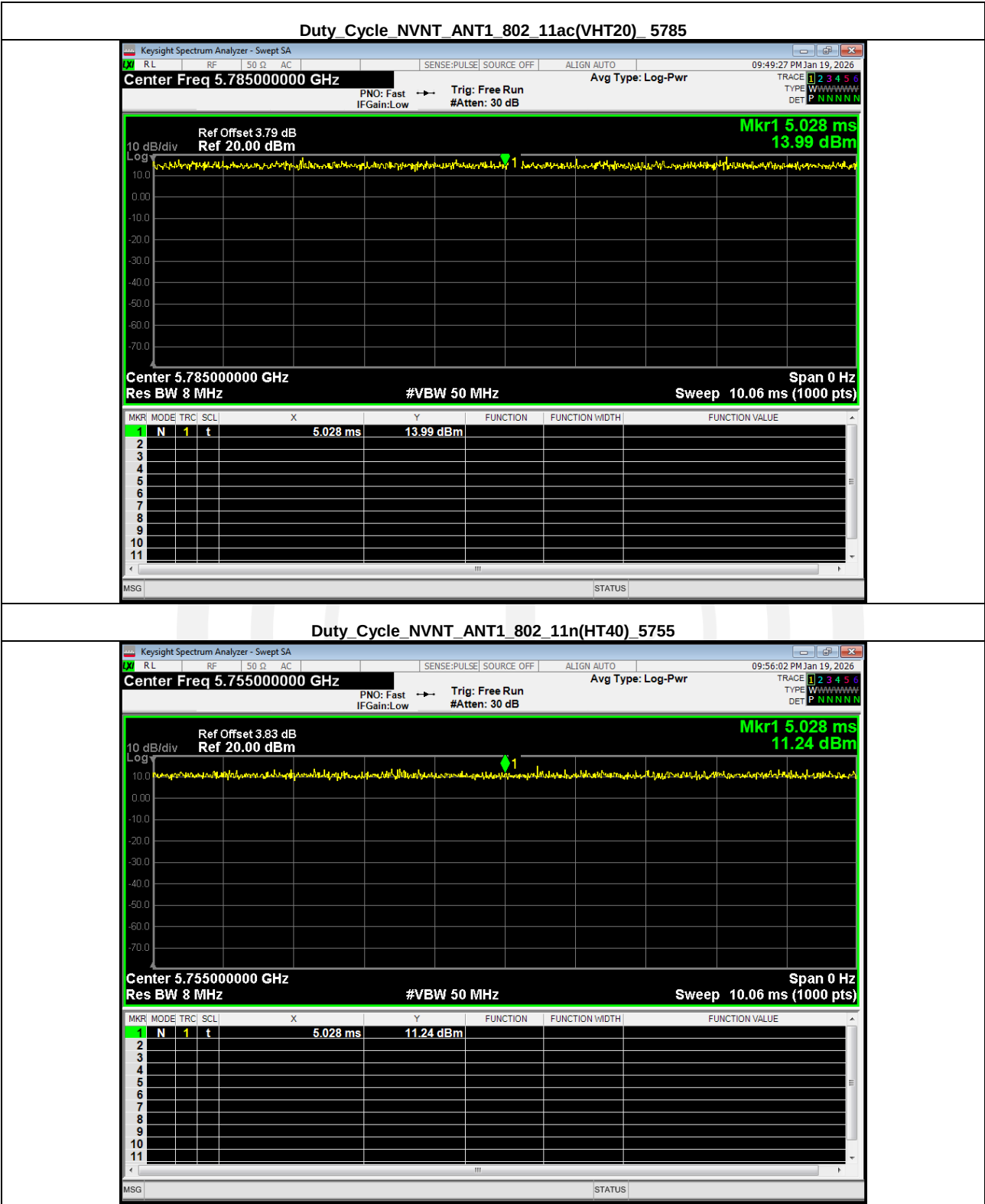


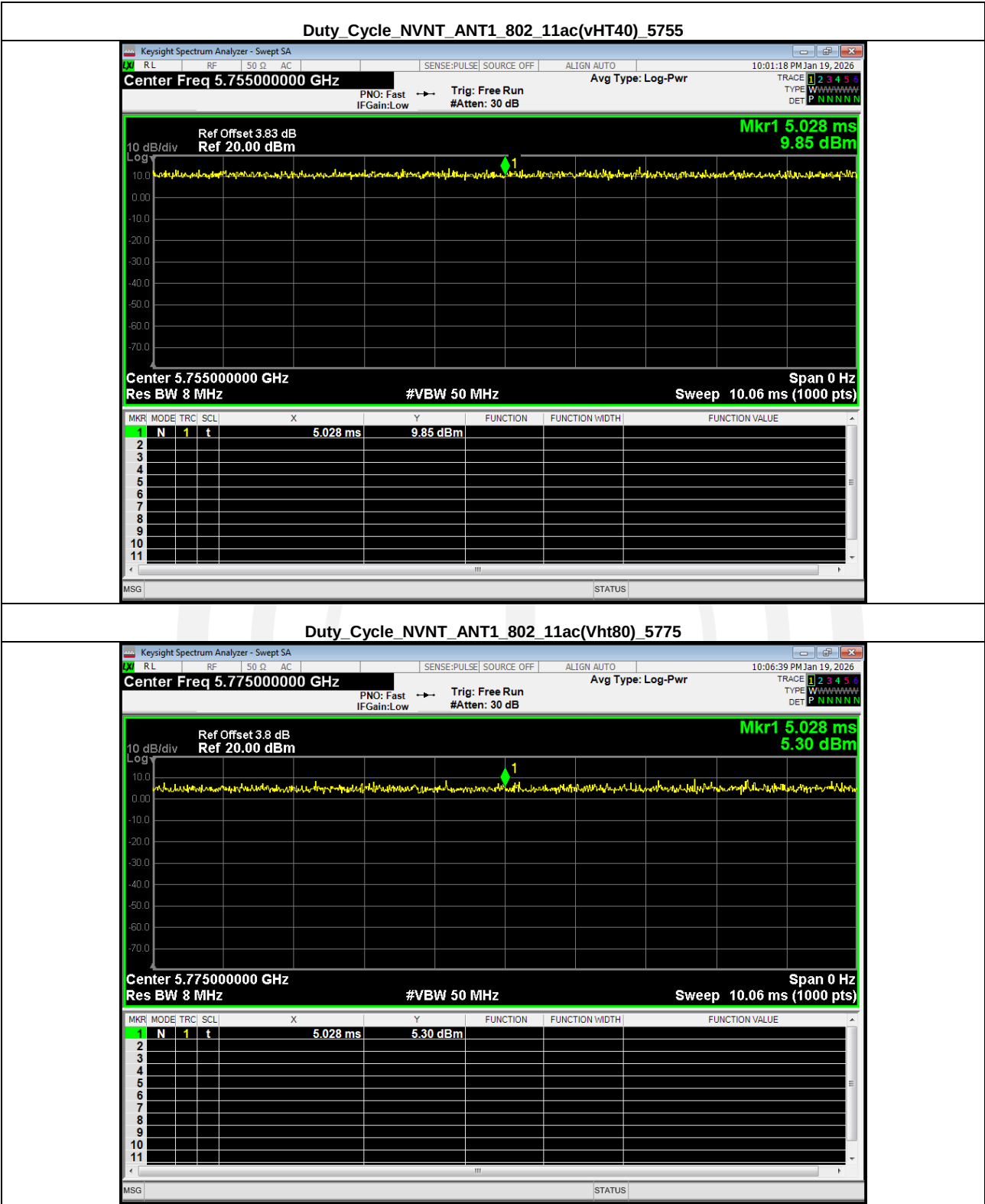




5745-5825 MHz







4.5 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 box labeled 'Power Meter' with a blue screen and two small white circles. A black line representing a cable connects the Power Meter to a yellow rectangular box on the right labeled 'EUT' (Equipment Under Test), which has a single circular port 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	14.19	0.00	14.19	24	Pass
ANT1	802.11a	5200.00	14.44	0.00	14.44	24	Pass
ANT1	802.11a	5240.00	14.01	0.00	14.01	24	Pass
ANT1	802.11n(HT20)	5180.00	14.00	0.00	14.00	24	Pass
ANT1	802.11n(HT20)	5200.00	14.25	0.00	14.25	24	Pass
ANT1	802.11n(HT20)	5240.00	14.32	0.00	14.32	24	Pass
ANT1	802.11ac(VHT20)	5180.00	14.06	0.00	14.06	24	Pass
ANT1	802.11ac(VHT20)	5200.00	14.64	0.00	14.64	24	Pass
ANT1	802.11ac(VHT20)	5240.00	14.39	0.00	14.39	24	Pass
ANT1	802.11n(HT40)	5190.00	13.35	0.00	13.35	24	Pass
ANT1	802.11n(HT40)	5230.00	13.18	0.00	13.18	24	Pass
ANT1	802.11ac(VHT40)	5190.00	13.35	0.00	13.35	24	Pass
ANT1	802.11ac(VHT40)	5230.00	13.20	0.00	13.20	24	Pass
ANT1	802.11ac(VHT80)	5210.00	12.16	0.00	12.16	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

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	14.05	0.00	14.05	30	Pass
ANT1	802.11a	5785.00	14.12	0.00	14.12	30	Pass
ANT1	802.11a	5825.00	14.13	0.00	14.13	30	Pass
ANT1	802.11n(HT20)	5745.00	14.37	0.00	14.37	30	Pass
ANT1	802.11n(HT20)	5785.00	14.30	0.00	14.30	30	Pass
ANT1	802.11n(HT20)	5825.00	14.42	0.00	14.42	30	Pass
ANT1	802.11ac(VHT20)	5745.00	14.22	0.00	14.22	30	Pass
ANT1	802.11ac(VHT20)	5785.00	14.35	0.00	14.35	30	Pass
ANT1	802.11ac(VHT20)	5825.00	14.47	0.00	14.47	30	Pass
ANT1	802.11n(HT40)	5755.00	13.36	0.00	13.36	30	Pass
ANT1	802.11n(HT40)	5795.00	13.17	0.00	13.17	30	Pass
ANT1	802.11ac(VHT40)	5755.00	13.46	0.00	13.46	30	Pass
ANT1	802.11ac(VHT40)	5795.00	13.29	0.00	13.29	30	Pass
ANT1	802.11ac(VHT80)	5775.00	12.31	0.00	12.31	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: 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.

4.6 Power Spectral Density

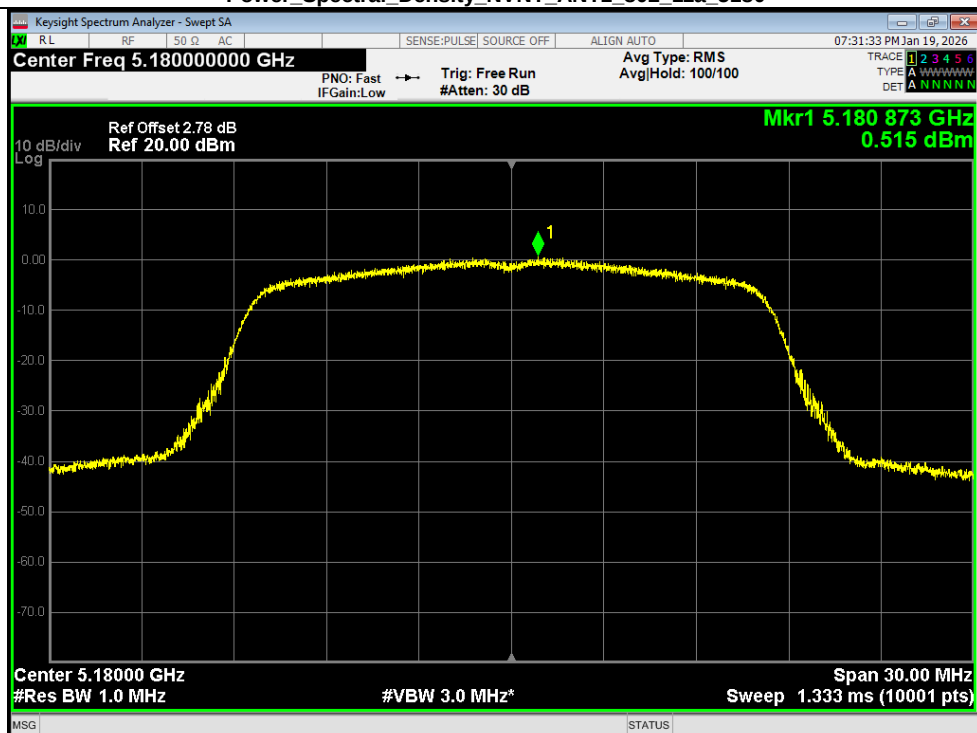
Test Requirement:	FCC Part15 E Section 15.407(a)(1)(iv)-(B1), (a)(3)(i)-(B4)
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01
Limit:	FCC: $1. \leq 11.00\text{dBm/MHz}$ for 5150MHz-5250MHz, 5250-5350MHz and 5470-5725 MHz $2. \leq 30.00\text{dBm/500KHz}$ for 5725MHz-5850MHz
Test setup:	 Spectrum Analyzer EUT
Test procedure:	1) Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E2) 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 E2)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 1 (5150-5250 MHz) SISO:**

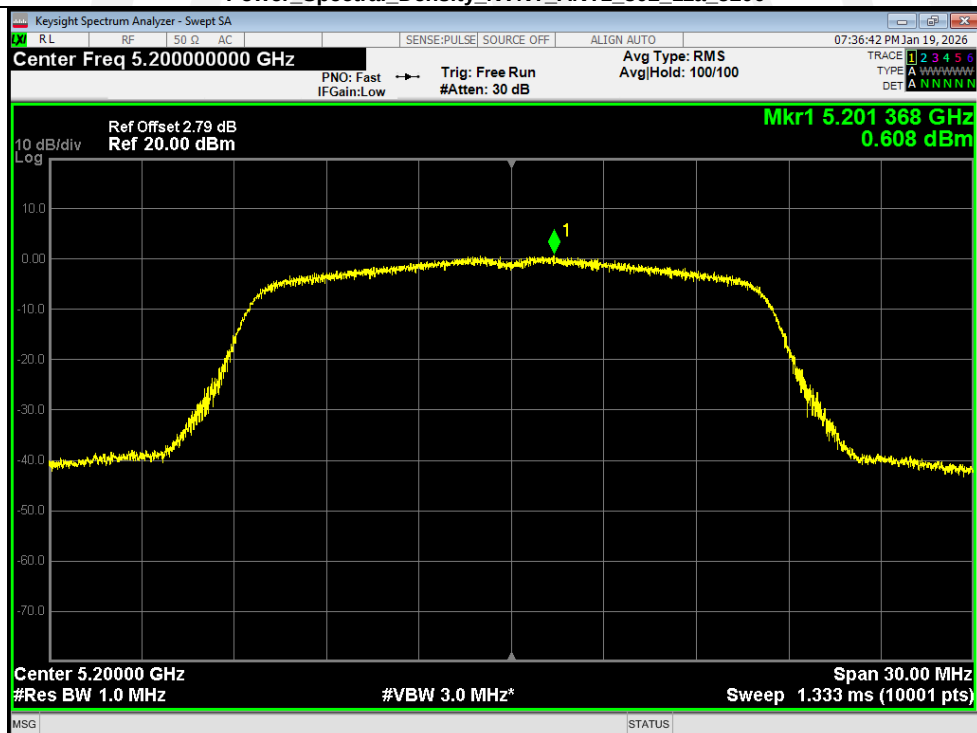
Condition	Antenna	Modulation	Frequency (MHz)	PSD (dBm/MHz)	Duty factor (dB)	Total PSD (dBm/MHz)	FCC Limit (dBm)	Result
NVNT	ANT1	802.11a	5180.00	0.515	0.00	0.515	11	Pass
NVNT	ANT1	802.11a	5200.00	0.608	0.00	0.608	11	Pass
NVNT	ANT1	802.11a	5240.00	0.291	0.00	0.291	11	Pass
NVNT	ANT1	802.11n(HT20)	5180.00	0.207	0.00	0.207	11	Pass
NVNT	ANT1	802.11n(HT20)	5200.00	0.508	0.00	0.508	11	Pass
NVNT	ANT1	802.11n(HT20)	5240.00	0.334	0.00	0.334	11	Pass
NVNT	ANT1	802.11ac(VHT20)	5180.00	0.178	0.00	0.178	11	Pass
NVNT	ANT1	802.11ac(VHT20)	5200.00	0.655	0.00	0.655	11	Pass
NVNT	ANT1	802.11ac(VHT20)	5240.00	0.39	0.00	0.39	11	Pass
NVNT	ANT1	802.11n(HT40)	5190.00	-3.725	0.00	-3.725	11	Pass
NVNT	ANT1	802.11n(HT40)	5230.00	-3.768	0.00	-3.768	11	Pass
NVNT	ANT1	802.11ac(VHT40)	5190.00	-3.442	0.00	-3.442	11	Pass
NVNT	ANT1	802.11ac(VHT40)	5230.00	-3.893	0.00	-3.893	11	Pass
NVNT	ANT1	802.11ac(VHT80)	5210.00	-9.303	0.00	-9.303	11	Pass



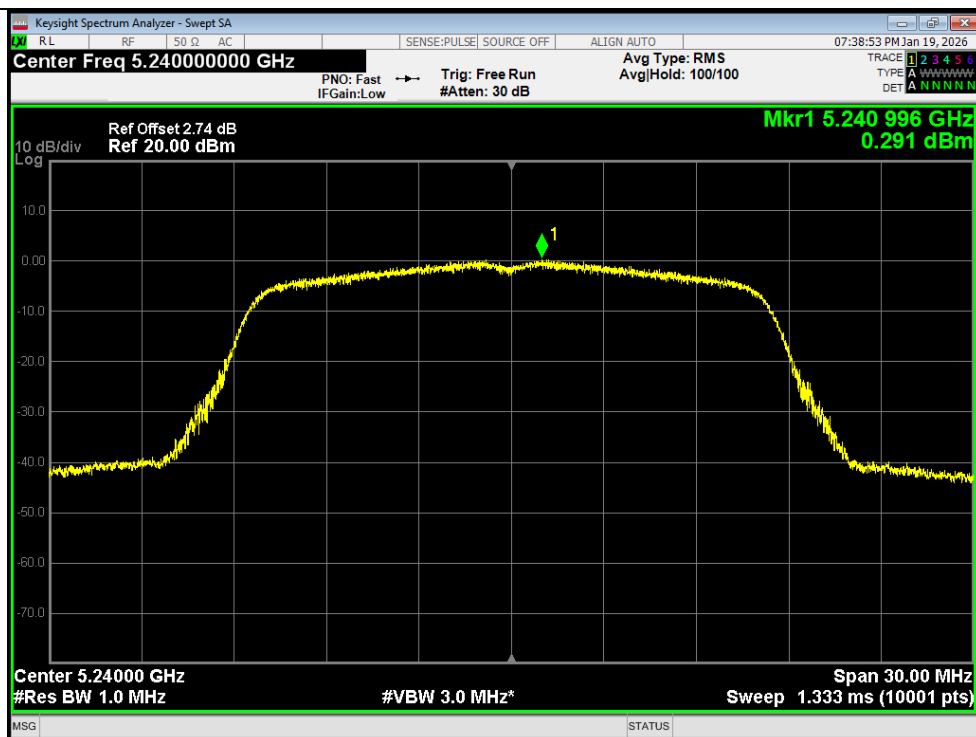
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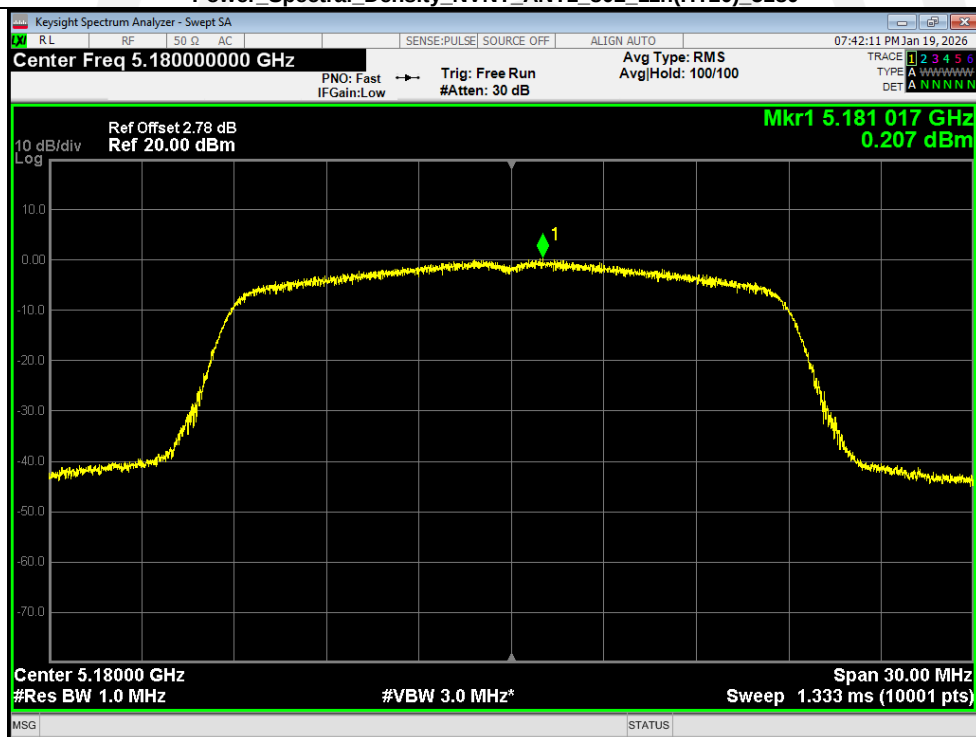
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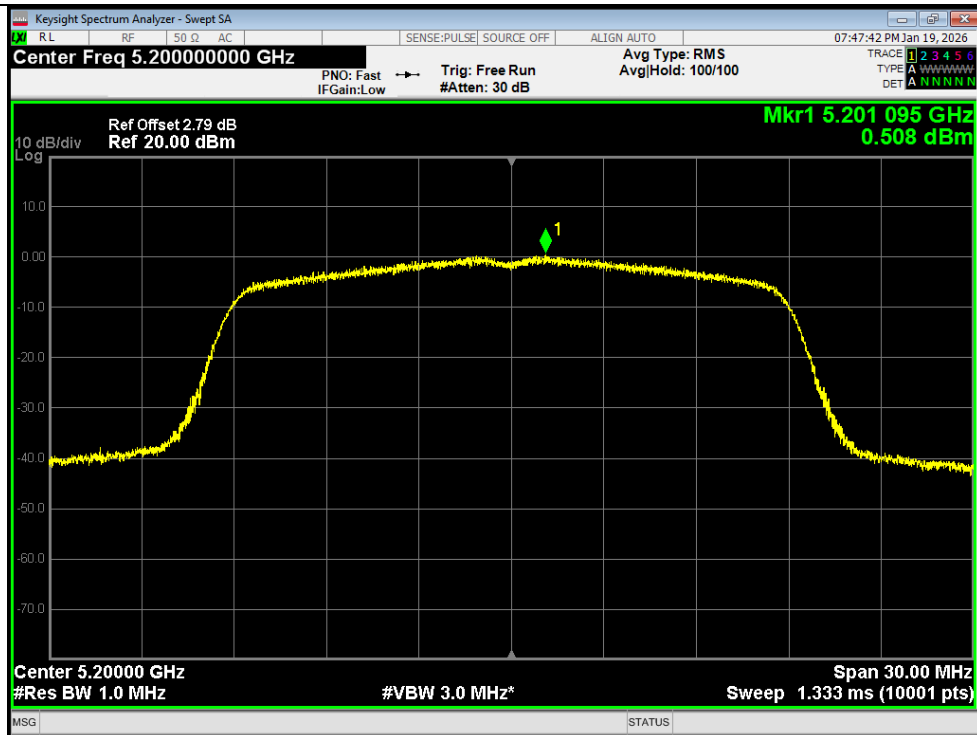
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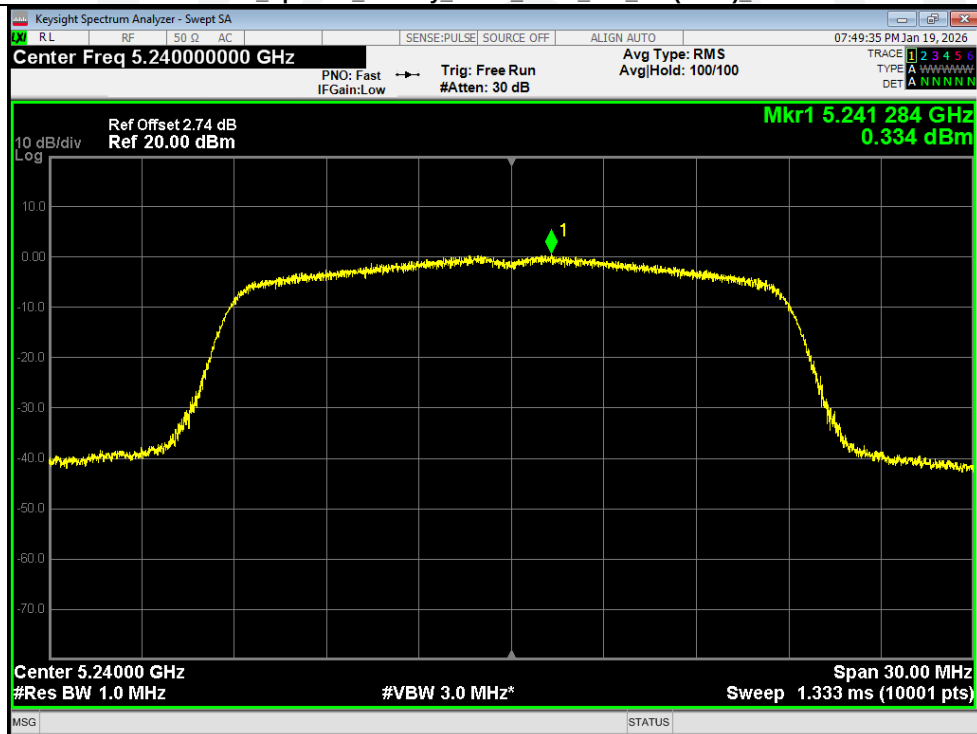
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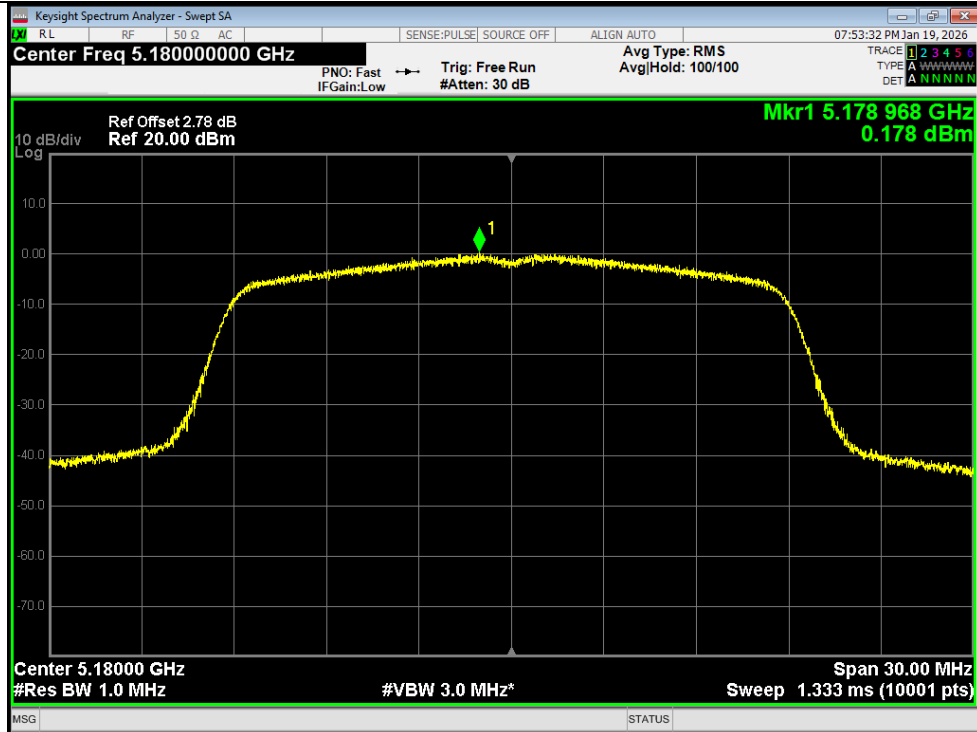
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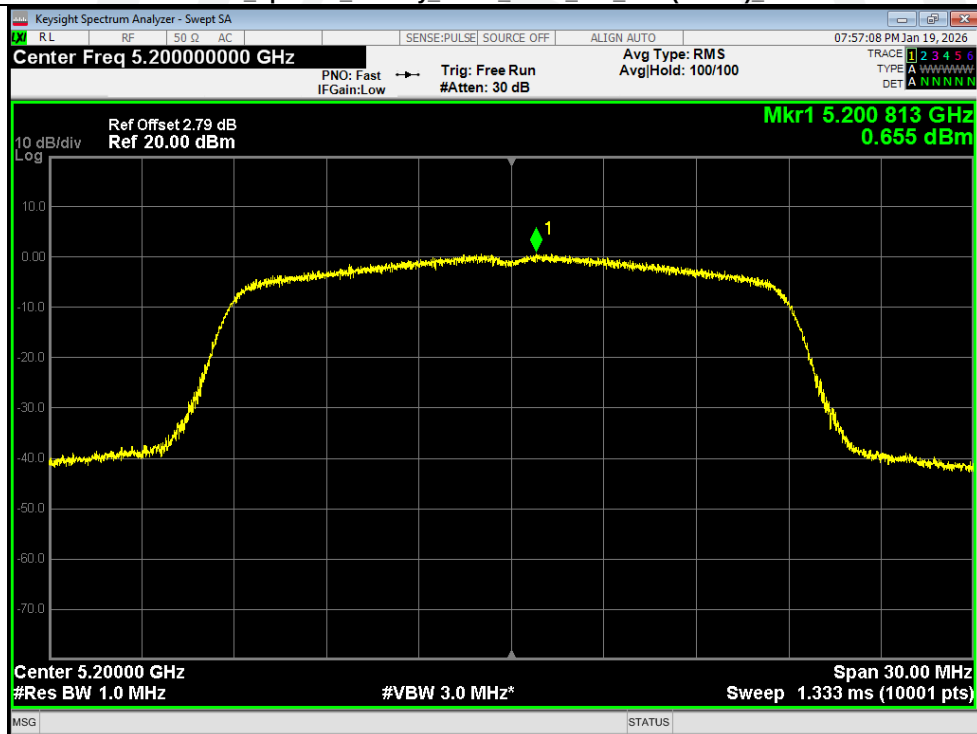
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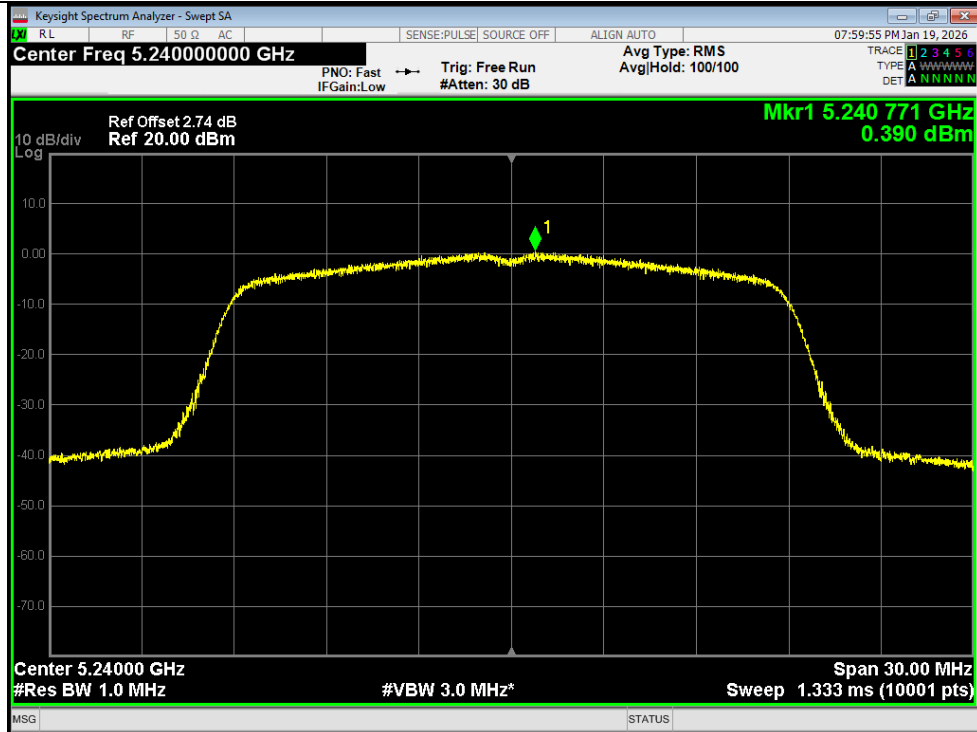
Power_Spectral_Density_NVNT_ANT1_802_11ac(VHT20)_5180



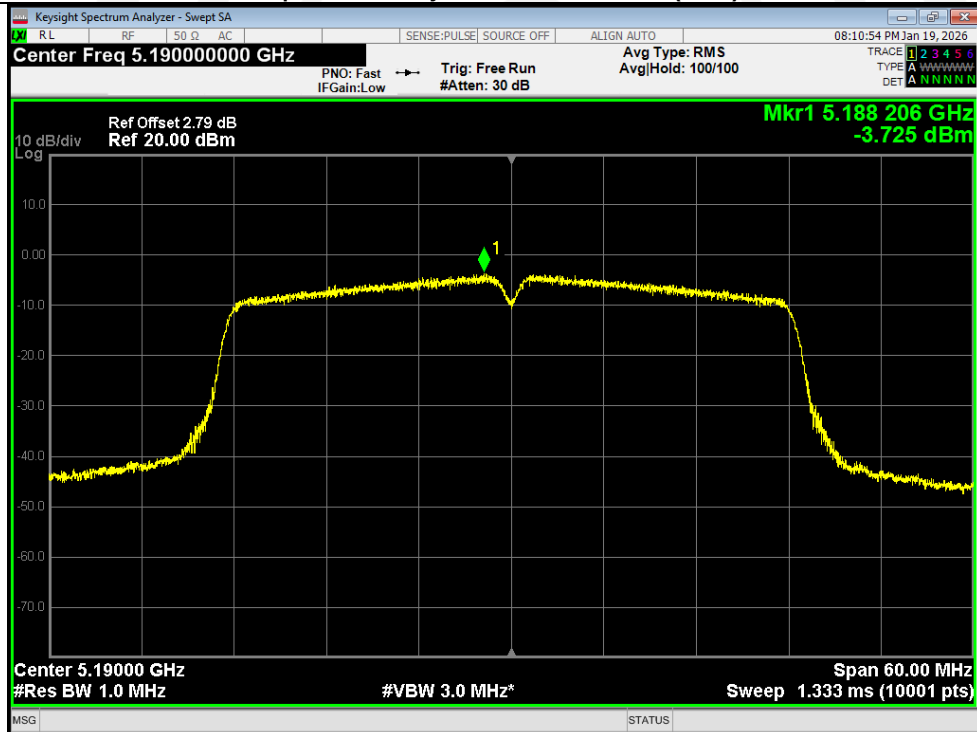
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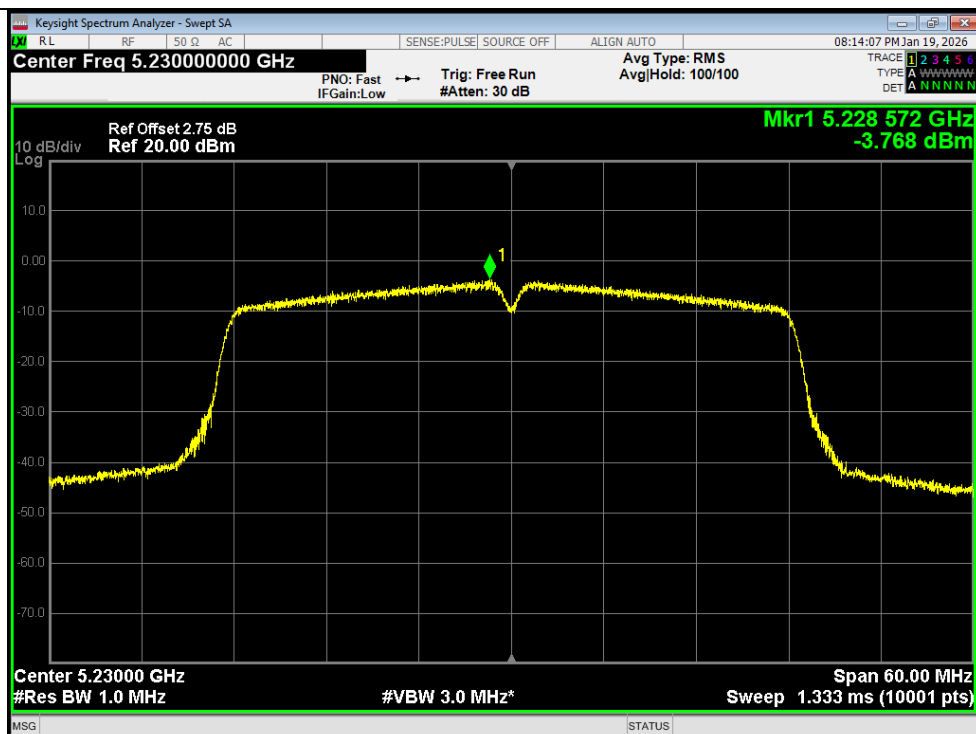
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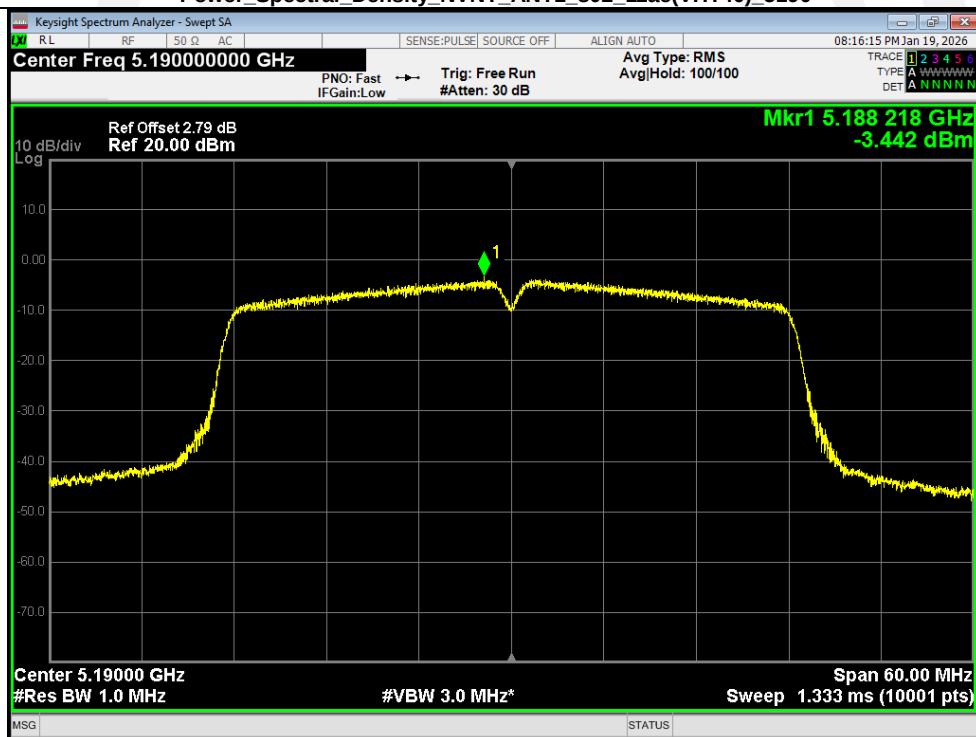
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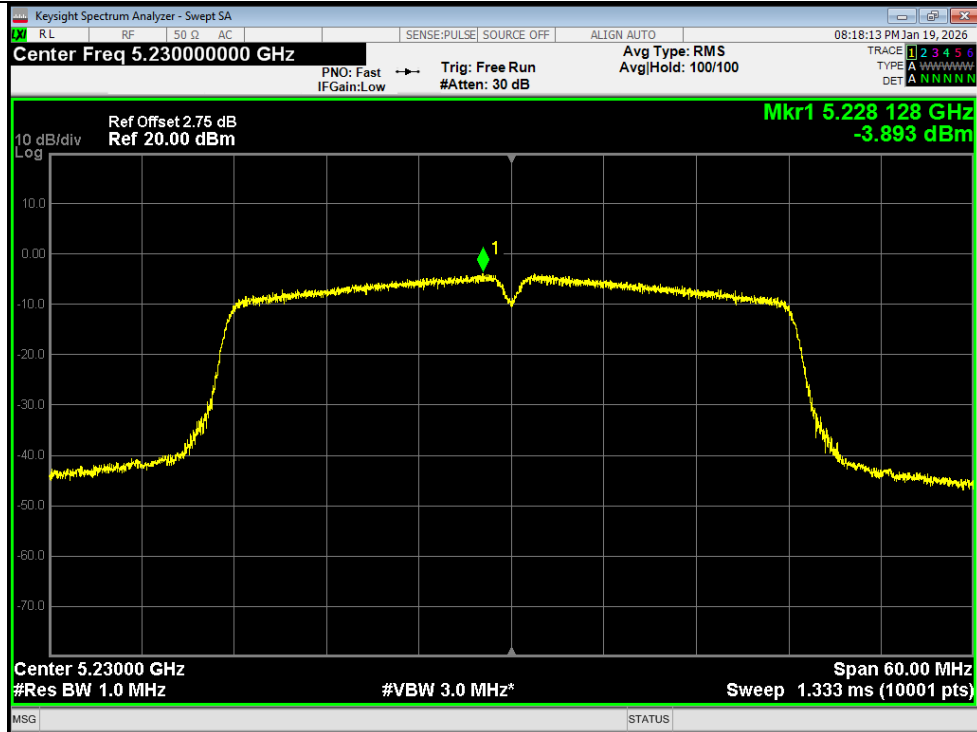
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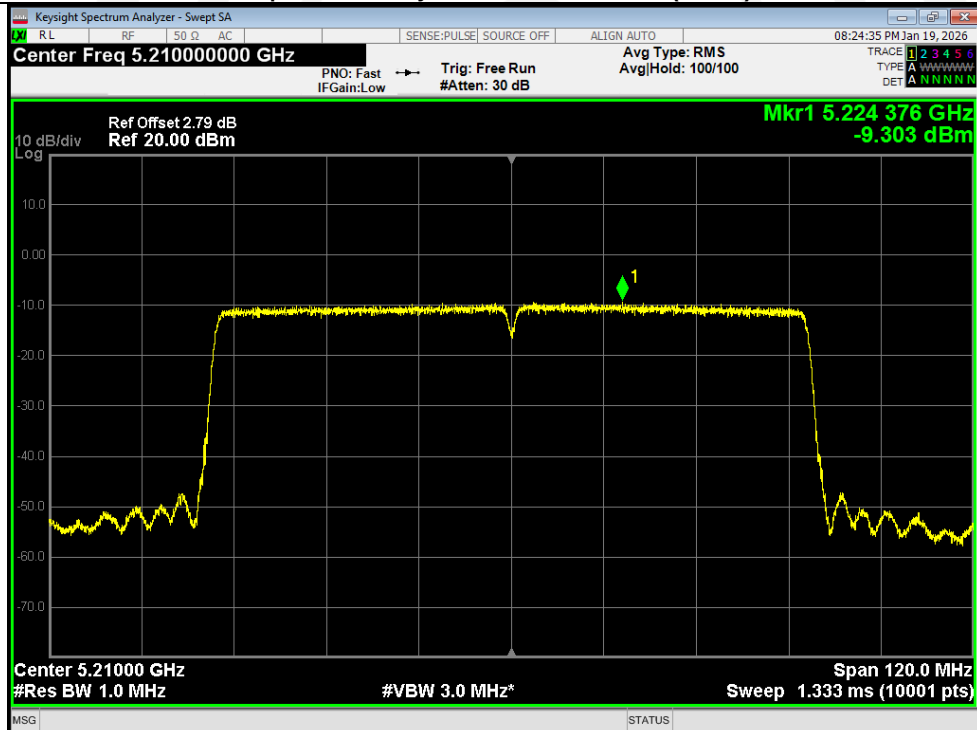
Power_Spectral_Density_NVNT_ANT1_802_11ac(VHT40)_5190



Power_Spectral_Density_NVNT_ANT1_802_11ac(VHT40)_5230



Power Spectral Density NVNT_ANT1_802_11ac(VHT80)_5210



Band 4 (5725 – 5850 MHz) SISO:

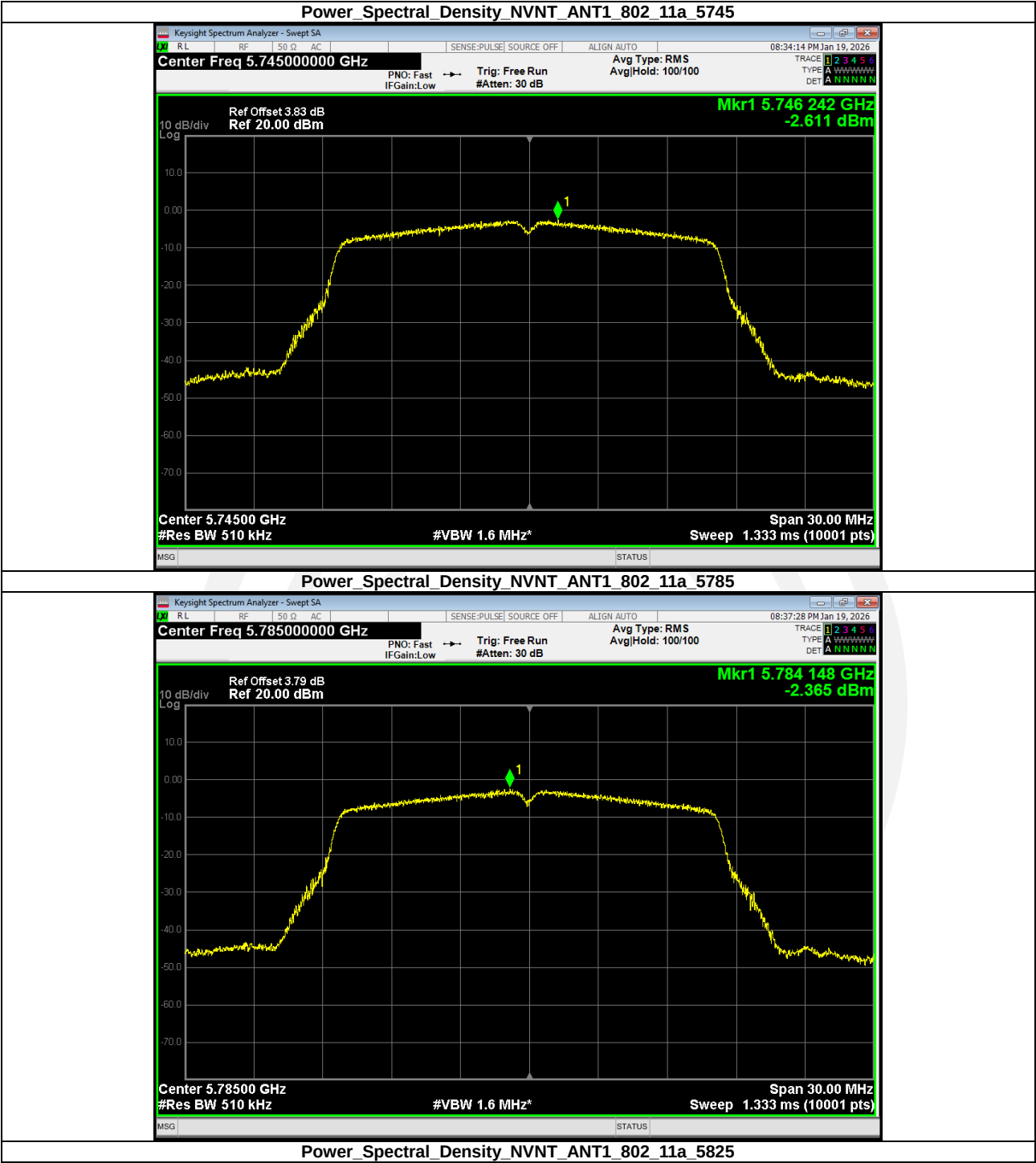
Antenna	Modulation	Frequency (MHz)	PSD SA (dBm/RBW)	Duty factor(dB)	RB factor(dB)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Result
ANT1	802.11a	5745.00	-2.611	0	-0.086	-2.697	30	Pass
ANT1	802.11a	5785.00	-2.365	0	-0.086	-2.451	30	Pass
ANT1	802.11a	5825.00	-2.371	0	-0.086	-2.457	30	Pass
ANT1	802.11n(HT20)	5745.00	-2.46	0	-0.086	-2.546	30	Pass
ANT1	802.11n(HT20)	5785.00	-2.488	0	-0.086	-2.574	30	Pass
ANT1	802.11n(HT20)	5825.00	-2.353	0	-0.086	-2.439	30	Pass
ANT1	802.11ac(VHT20)	5745.00	-2.425	0	-0.086	-2.511	30	Pass
ANT1	802.11ac(VHT20)	5785.00	-2.365	0	-0.086	-2.451	30	Pass
ANT1	802.11ac(VHT20)	5825.00	-2.183	0	-0.086	-2.269	30	Pass
ANT1	802.11n(HT40)	5755.00	-6.379	0	-0.086	-6.465	30	Pass
ANT1	802.11n(HT40)	5795.00	-6.77	0	-0.086	-6.856	30	Pass
ANT1	802.11ac(VHT40)	5755.00	-6.644	0	-0.086	-6.73	30	Pass
ANT1	802.11ac(VHT40)	5795.00	-6.782	0	-0.086	-6.868	30	Pass
ANT1	802.11ac(VHT80)	5775.00	-12.481	0	-0.086	-12.567	30	Pass

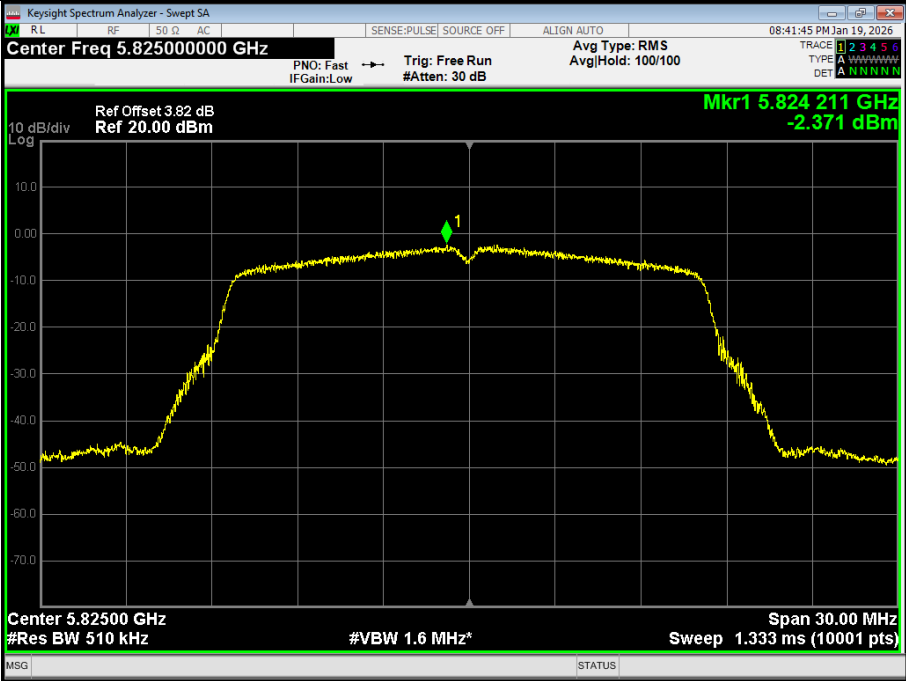
Note: 1. Total Measured Power Density (dBm/500KHz)=dbm/510KHz-(10*log(510/500))+Duty cycle factor.

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

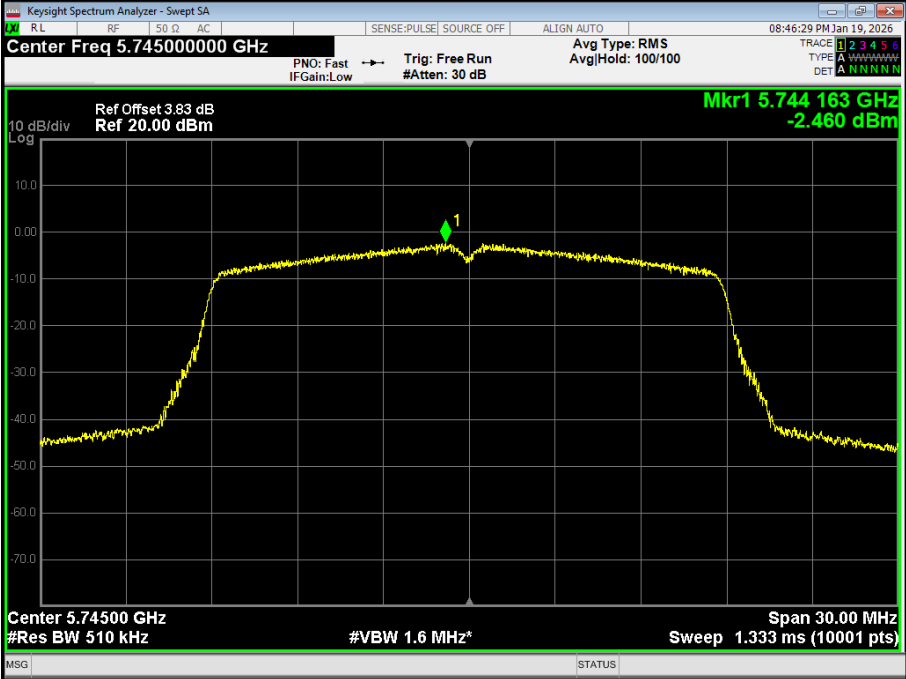
3. Offset= cable loss



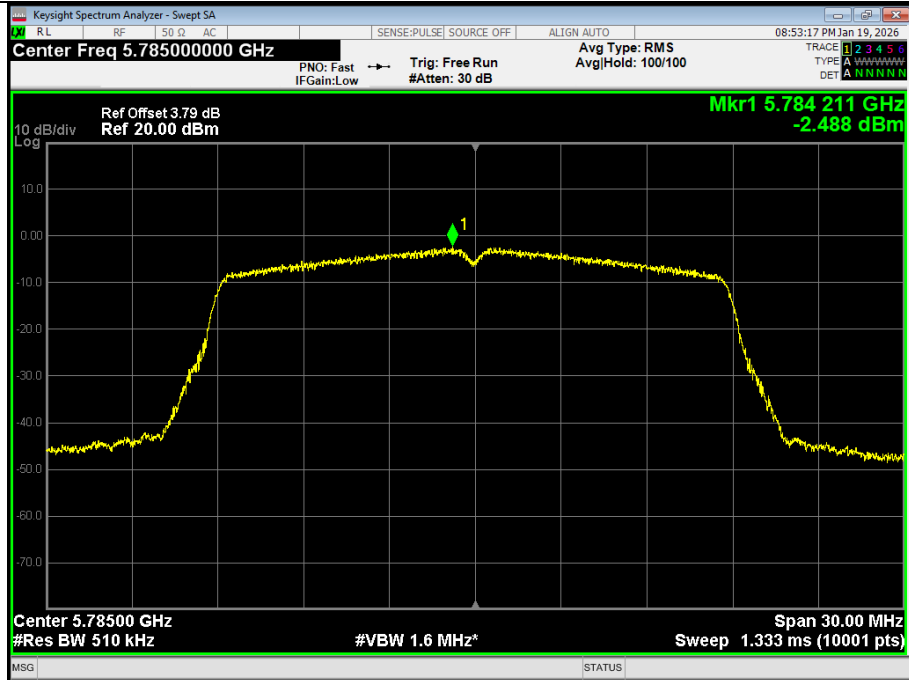
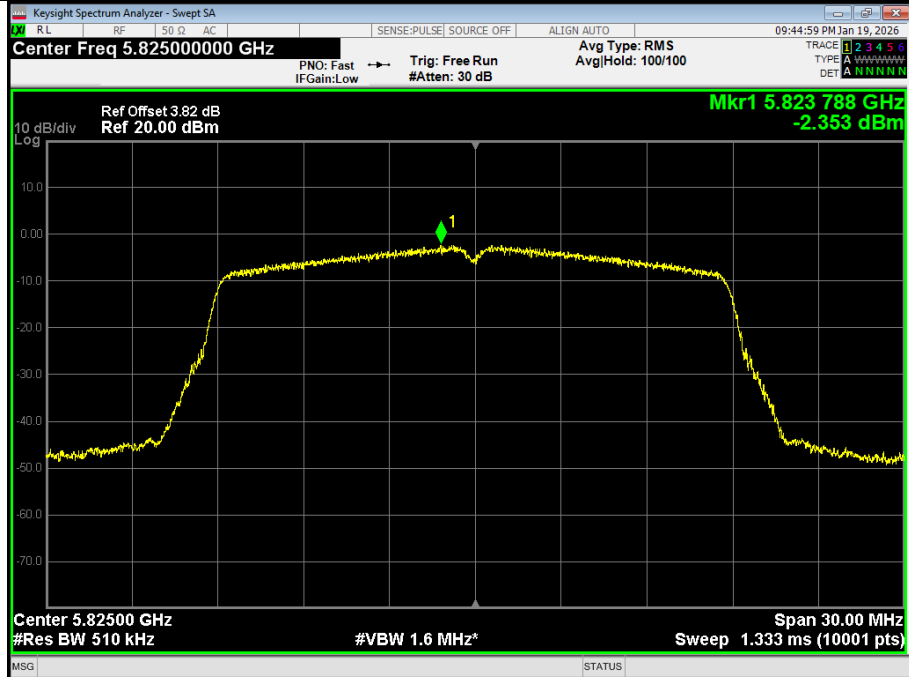


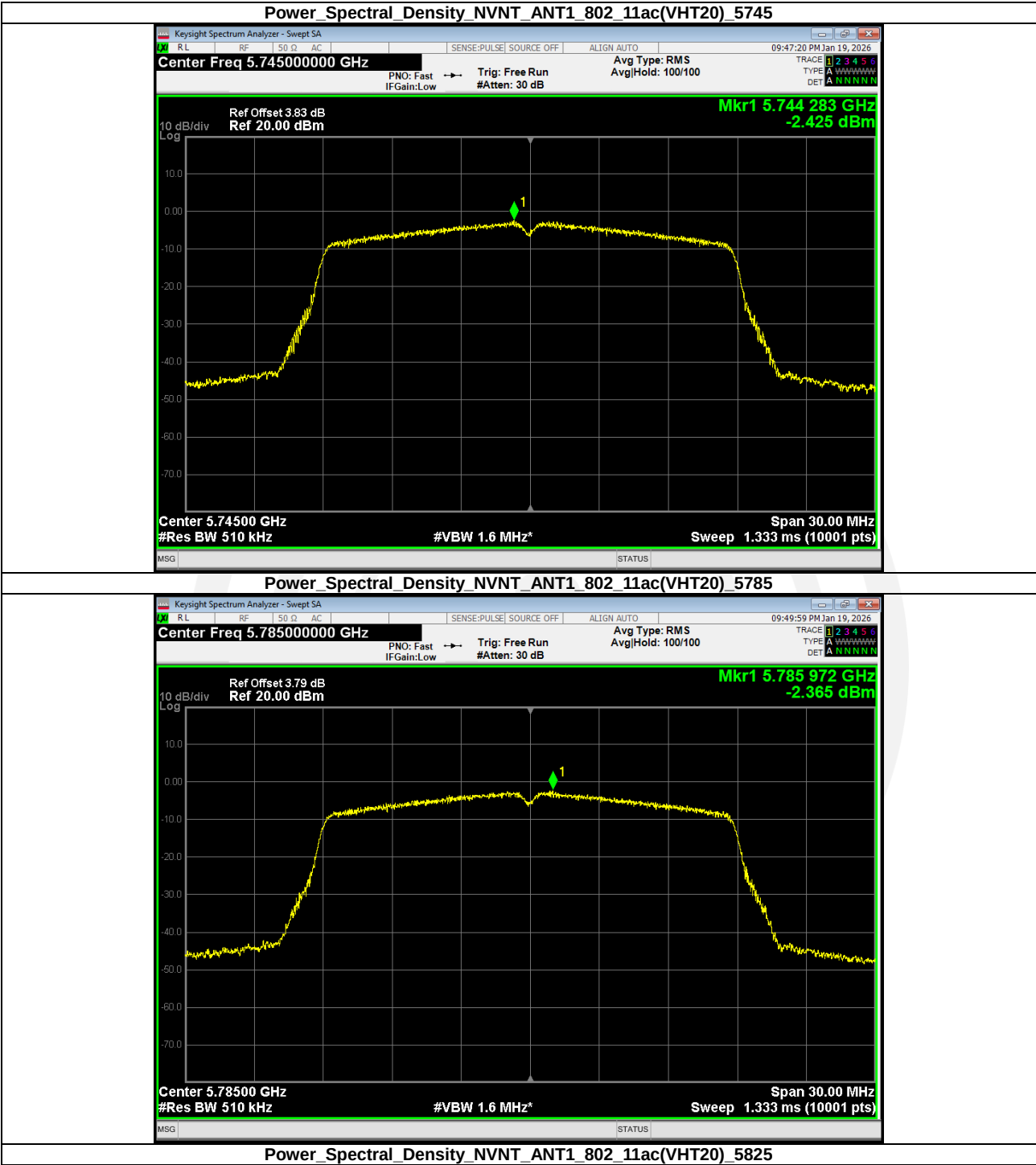


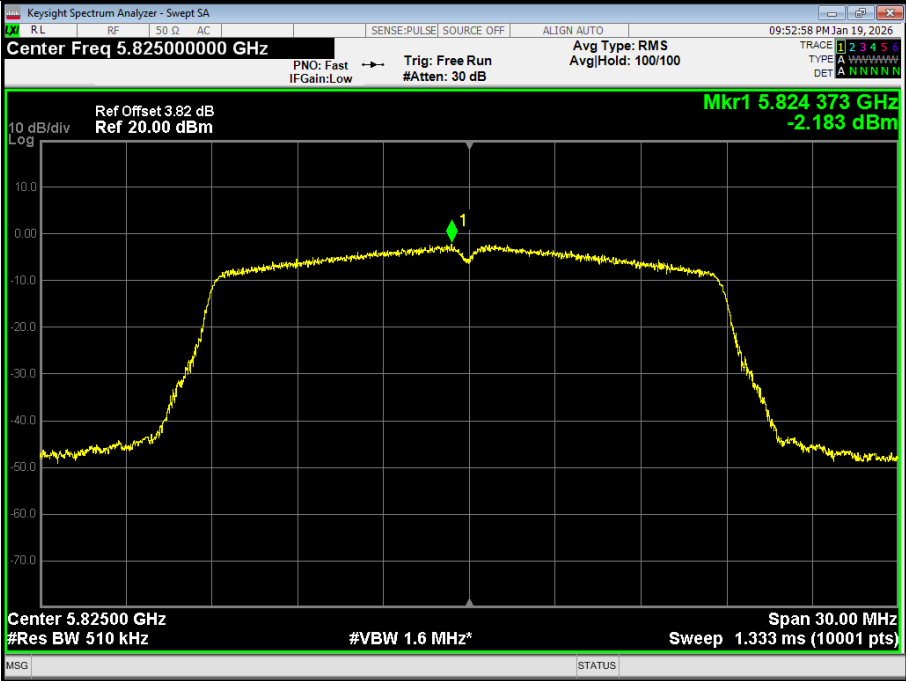
Power Spectral Density NVNT_ANT1_802_11n(HT20)_5745



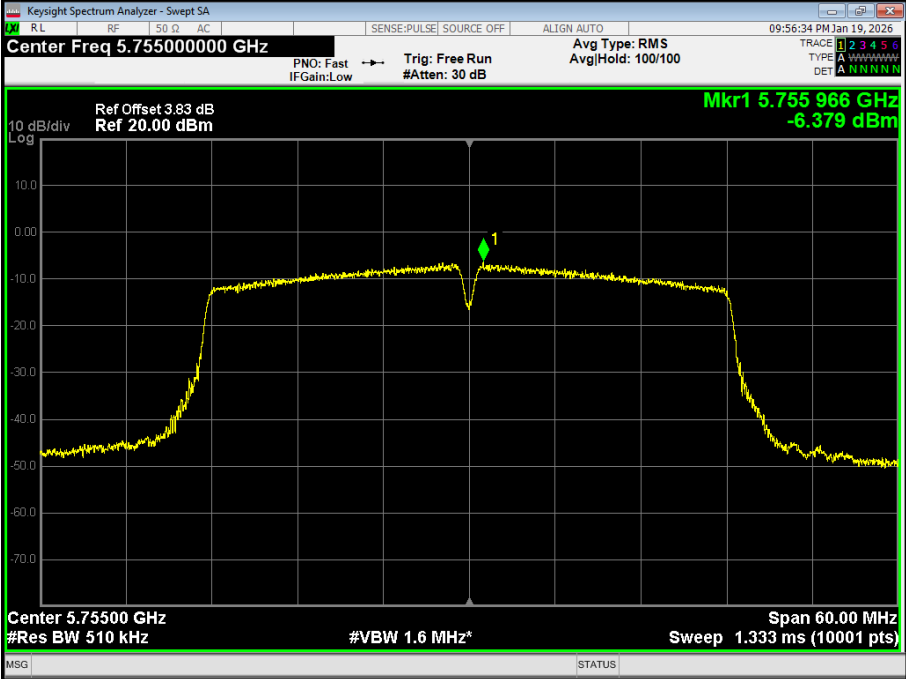
Power Spectral Density NVNT_ANT1_802_11n(HT20)_5785

**Power Spectral Density NVNT ANT1_802_11n(HT20)_5825**

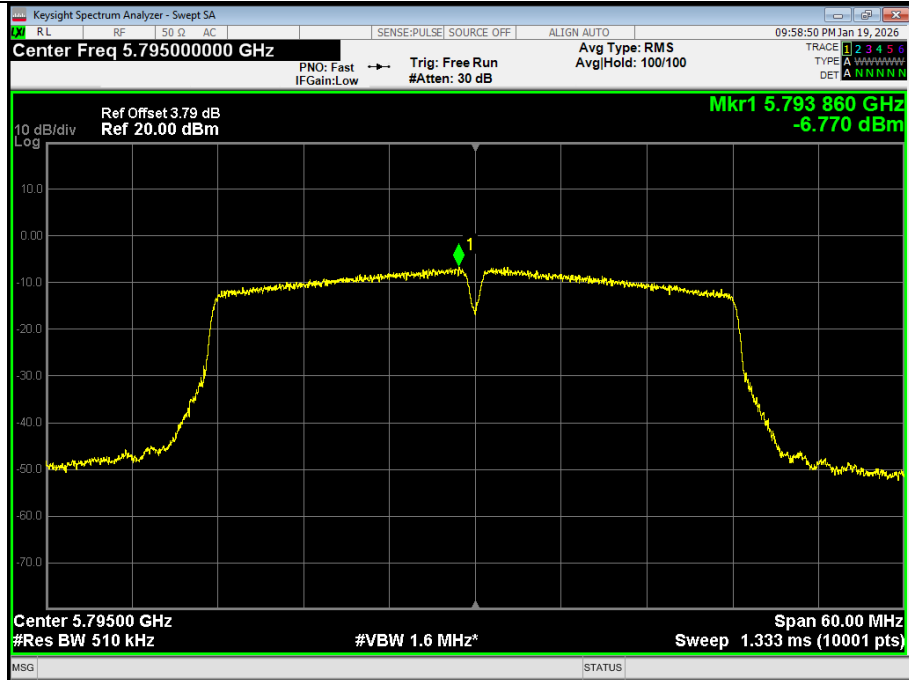




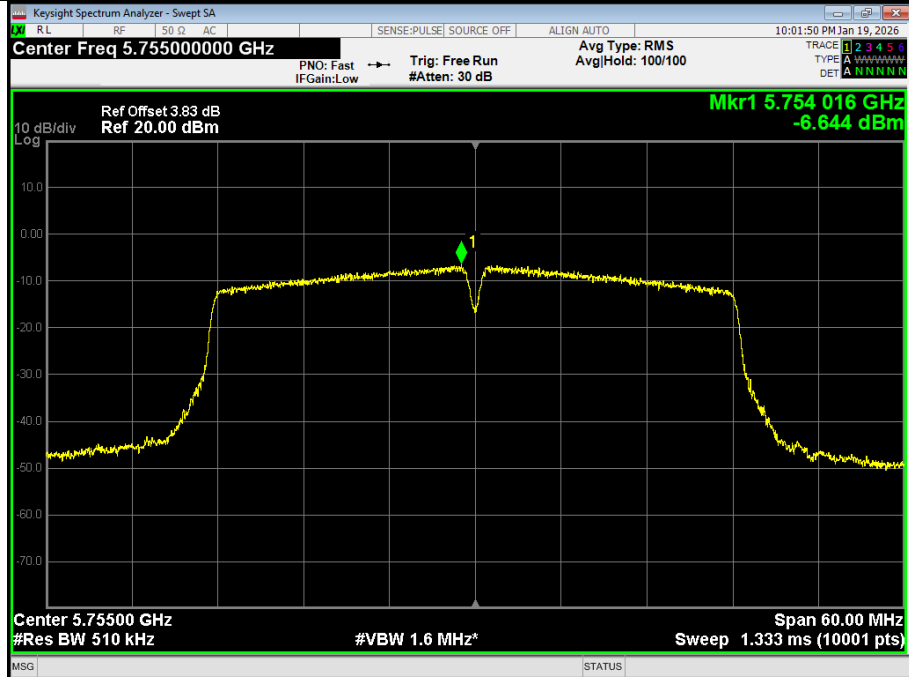
Power Spectral Density NVNT_ANT1_802_11n(HT40)_5755

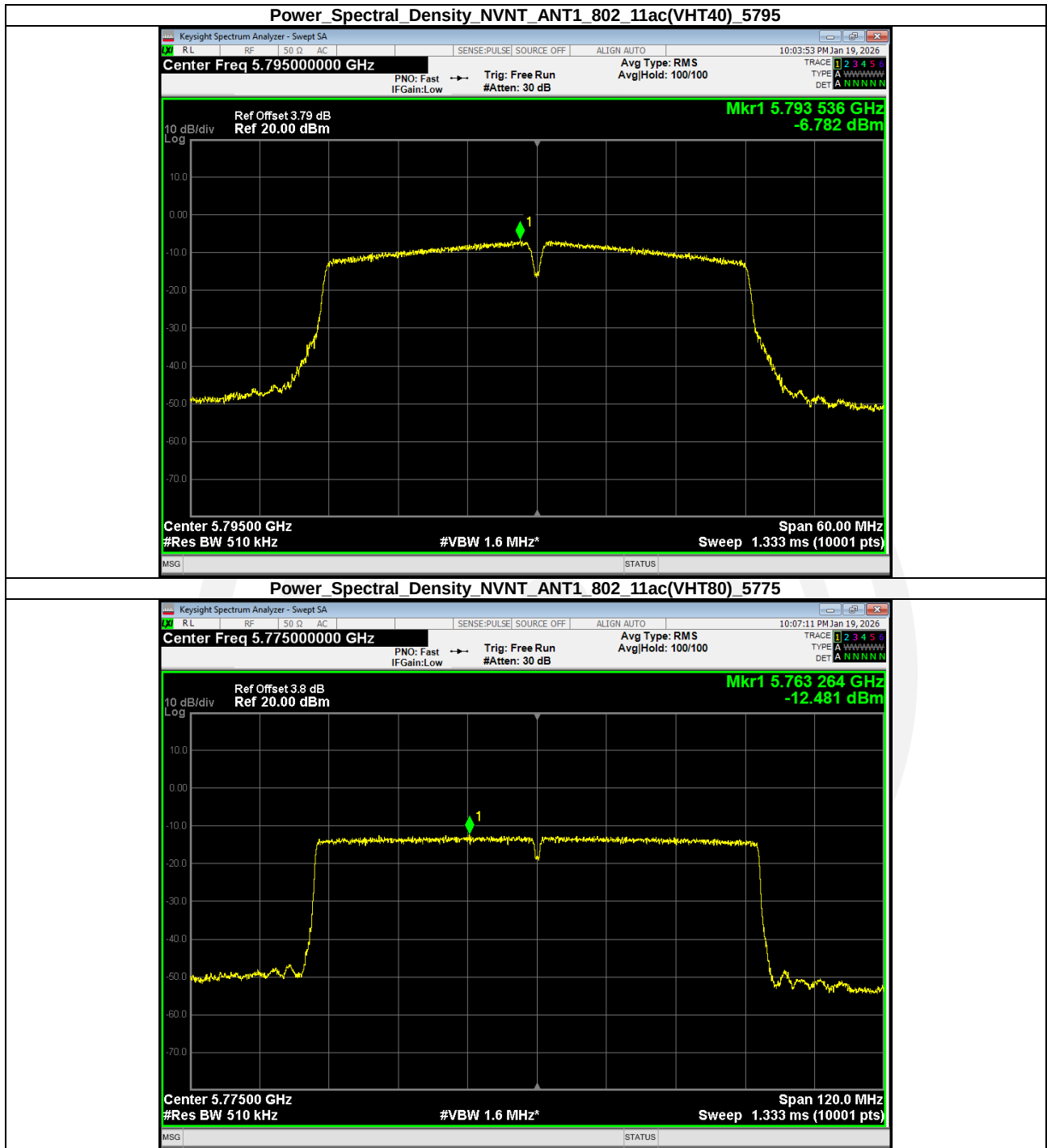


Power Spectral Density NVNT_ANT1_802_11n(HT40)_5795



Power_Spectral_Density_NVNT_ANT1_802_11ac(VHT40)_5755





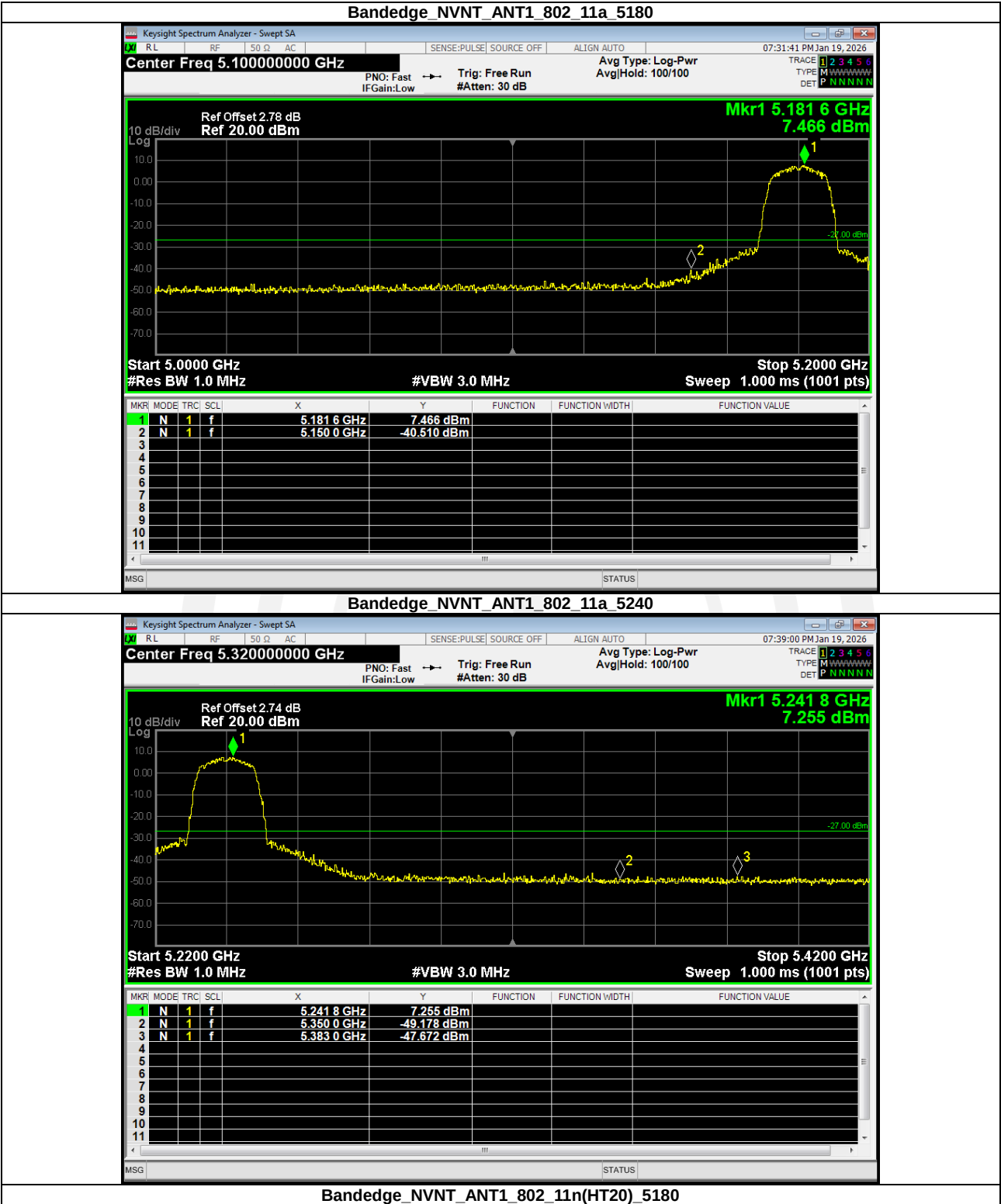
4.7 Band Edge

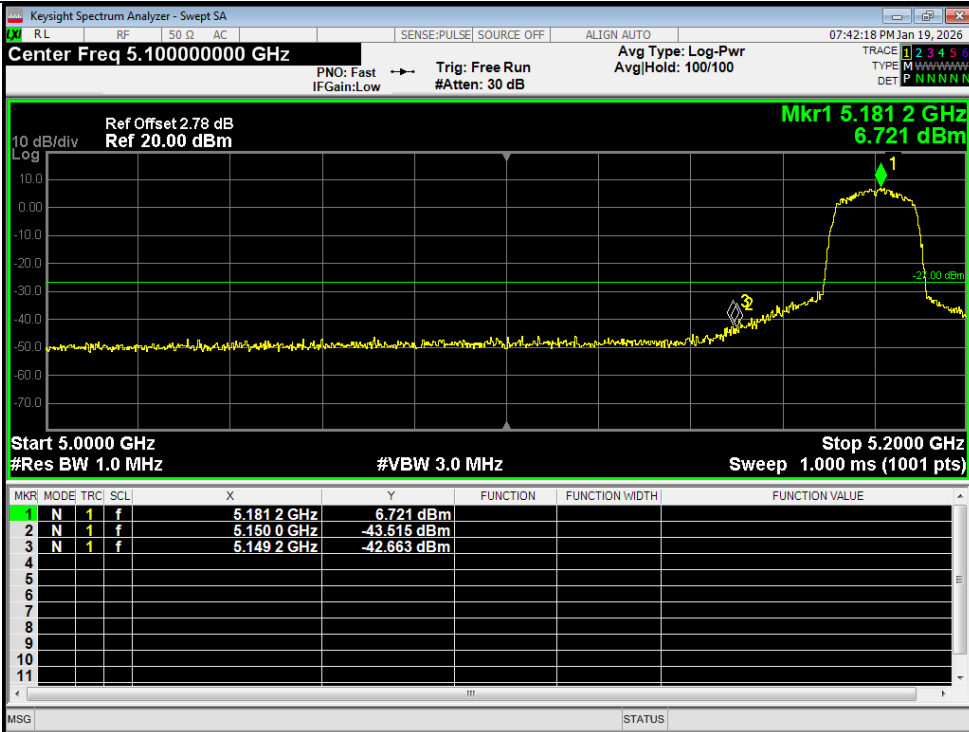
Test Requirement:	FCC Part15 E Section 15.407 and 15.205, 15.209
Test Method:	ANSI C63.10-2020
Limit:	All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above 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:	 The diagram illustrates the test setup. On the left is a green Spectrum Analyzer with a blue screen and two small white circles representing ports. A black cable connects one of these ports to a yellow rectangular box on the right, which is labeled 'EUT' (Equipment Under Test). Below the Spectrum Analyzer is the text 'Spectrum Analyzer' and below the yellow box is the text 'EUT'.
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

Measurement Data:

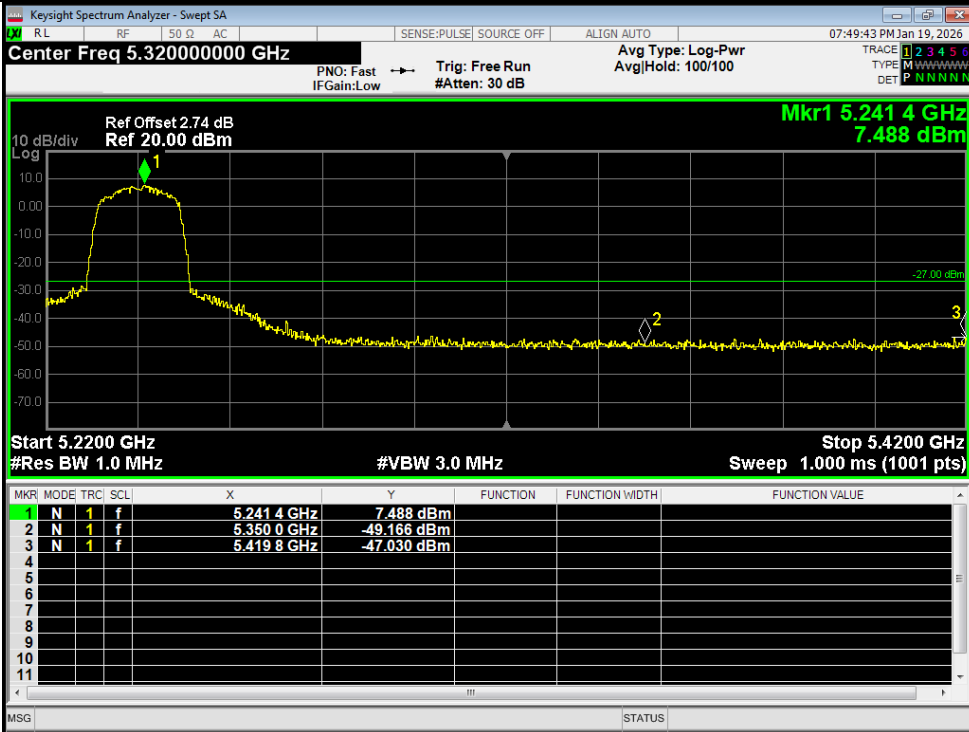
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Gain (dbi)	EIRP Max Value (dBc)	Limit (dBc)	Verdict
NVNT	a	5180	Ant1	-40.51	4.80	-35.71	-27	Pass
NVNT	a	5240	Ant1	-47.67	4.80	-42.87	-27	Pass
NVNT	n20	5180	Ant1	-42.66	4.80	-37.86	-27	Pass
NVNT	n20	5240	Ant1	-47.02	4.80	-42.22	-27	Pass
NVNT	n40	5190	Ant1	-38.27	4.80	-33.47	-27	Pass
NVNT	n40	5230	Ant1	-48.06	4.80	-43.26	-27	Pass
NVNT	ac20	5180	Ant1	-42.75	4.80	-37.95	-27	Pass
NVNT	ac20	5240	Ant1	-47.08	4.80	-42.28	-27	Pass
NVNT	ac40	5190	Ant1	-38.34	4.80	-33.54	-27	Pass
NVNT	ac40	5230	Ant1	-46.34	4.80	-41.54	-27	Pass
NVNT	ac80	5210	Ant1	-40.07	4.80	-35.27	-27	Pass

Band1

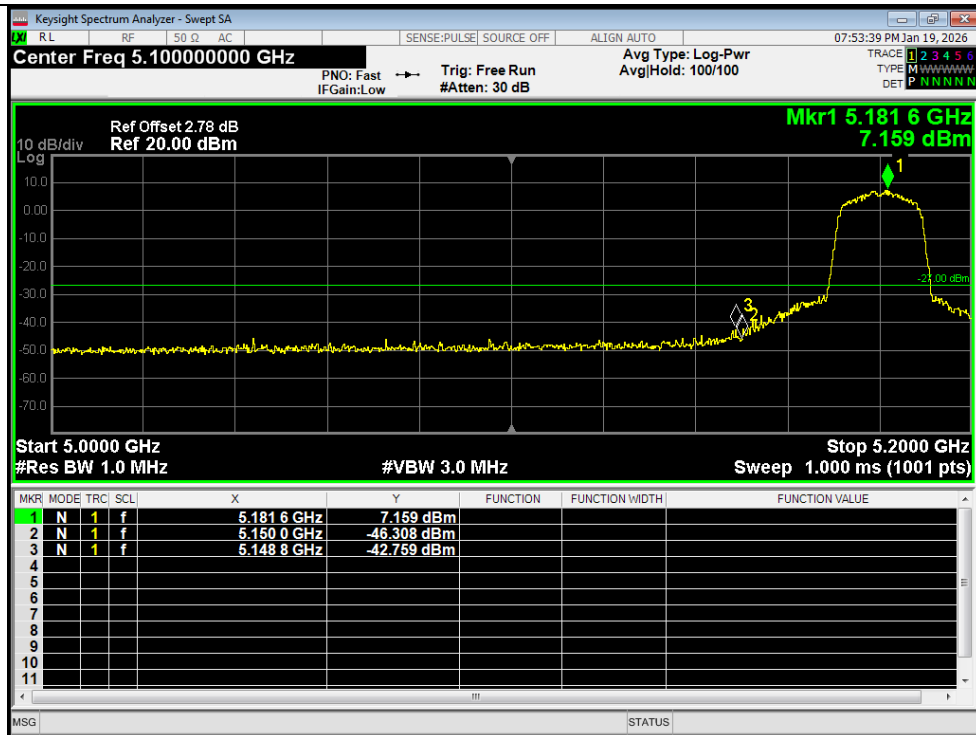




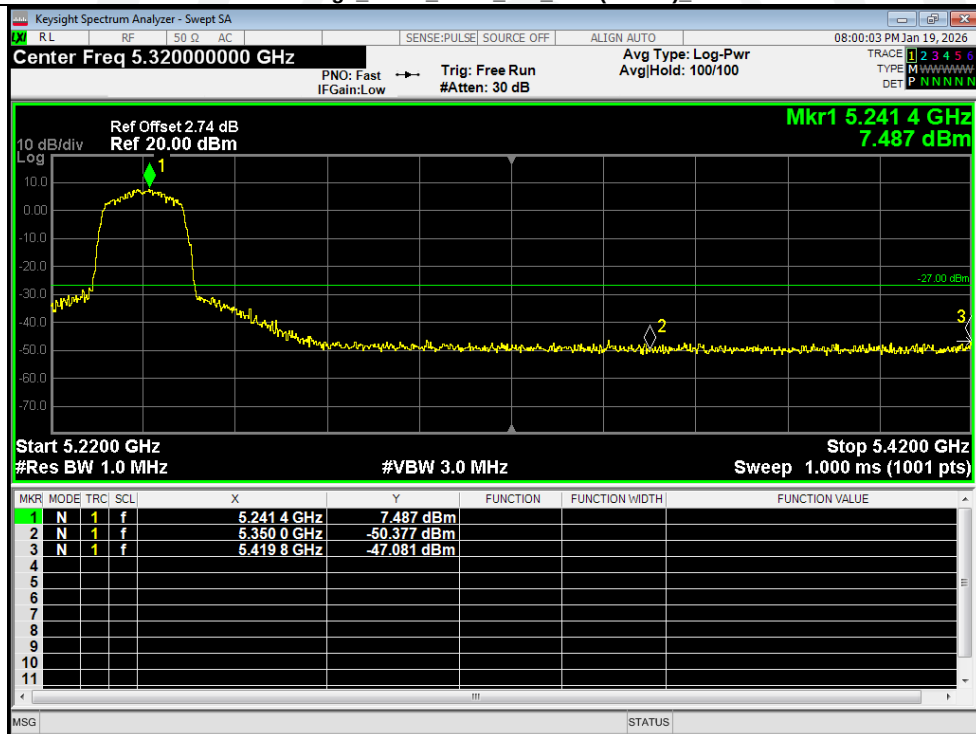
Bandedge_NVNT_ANT1_802_11n(HT20)_5240



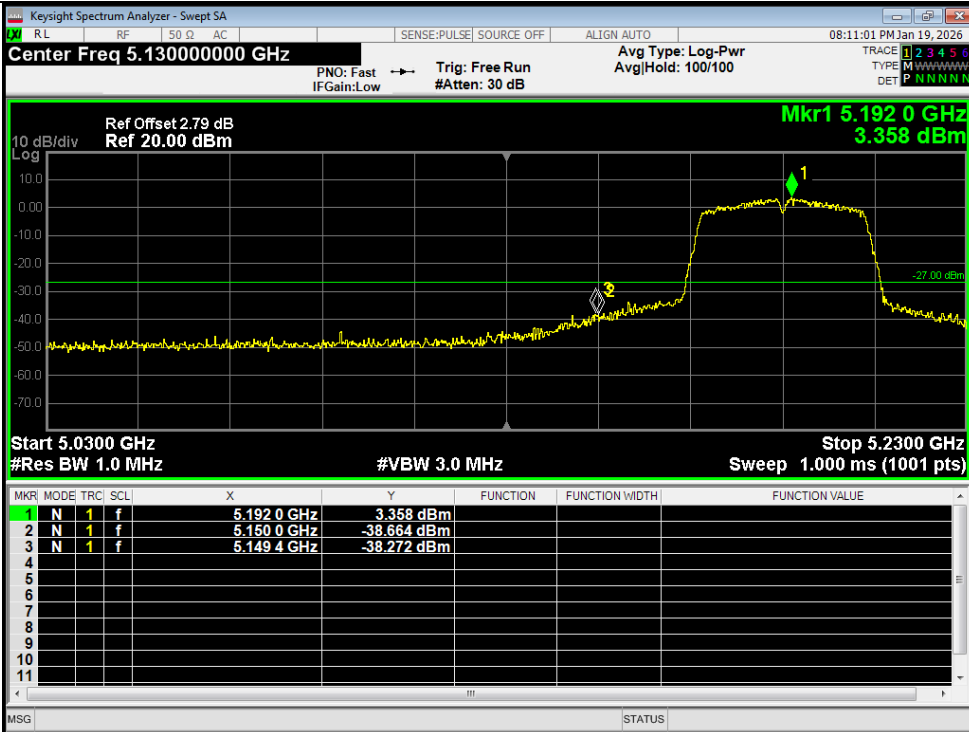
Bandedge_NVNT_ANT1_802_11ac(VHT20)_5180



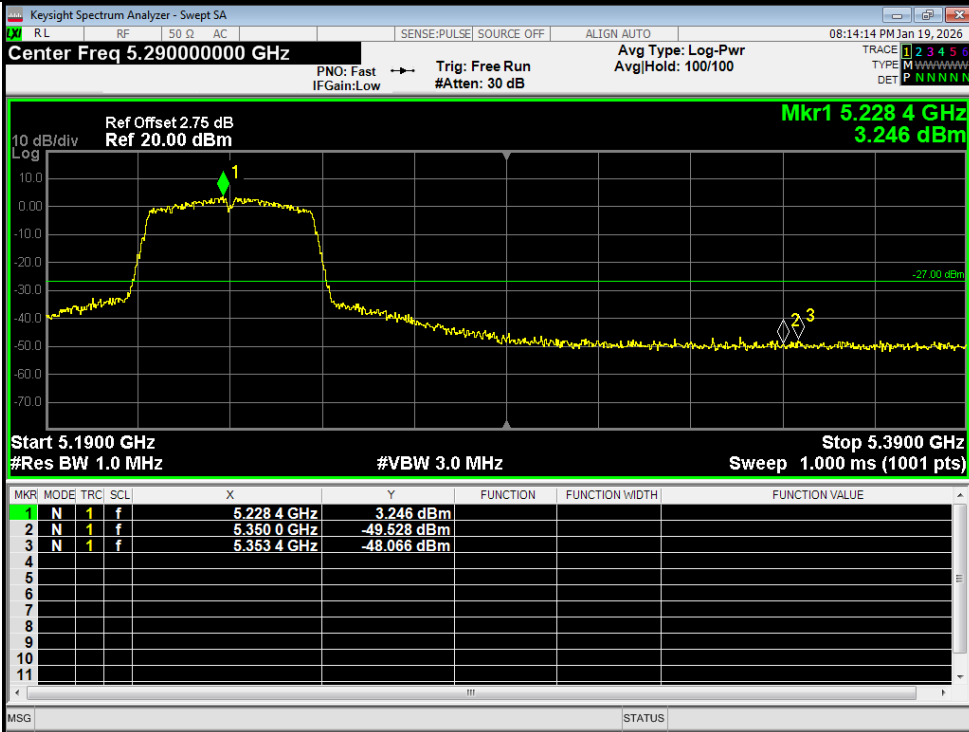
Bandedge_NVNT_ANT1_802_11ac(VHT20)_5240



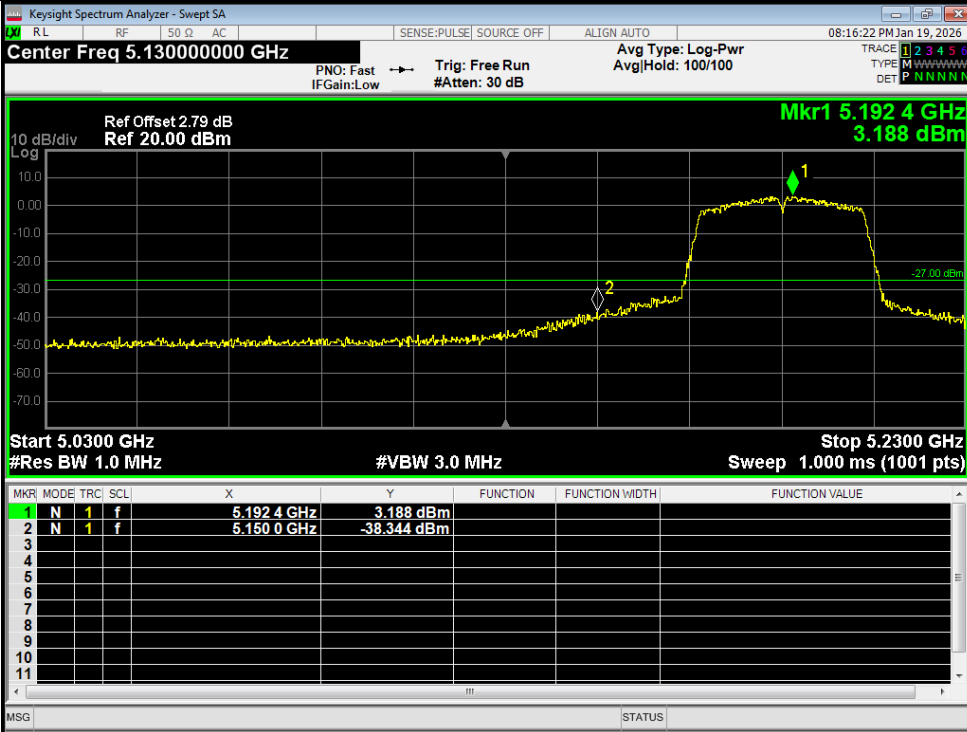
Bandedge_NVNT_ANT1_802_11n(HT40)_5190



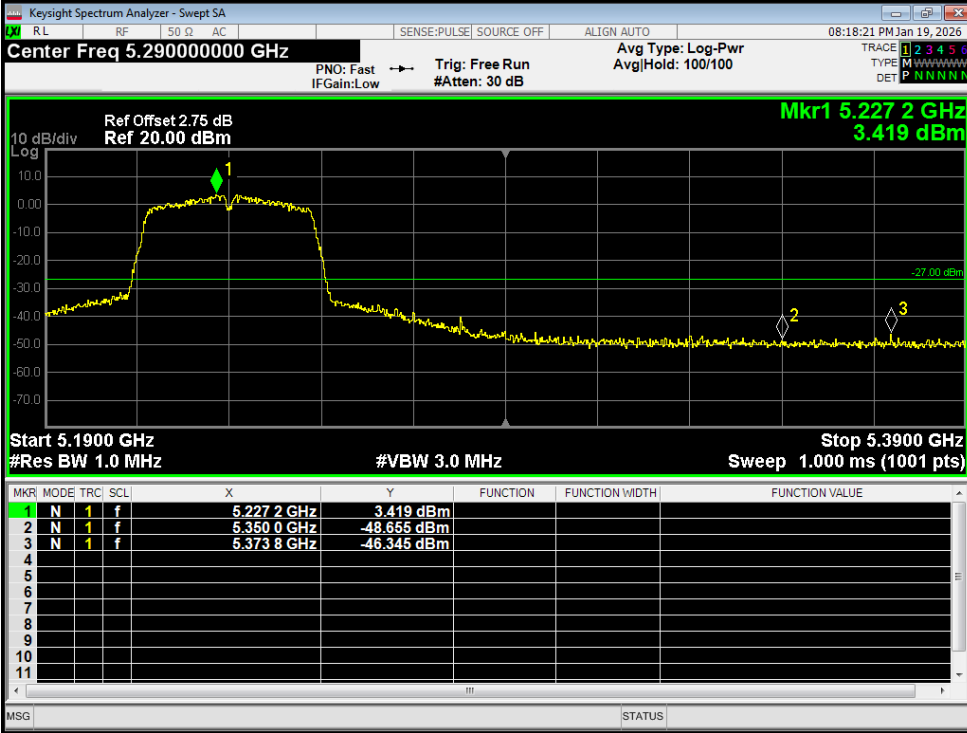
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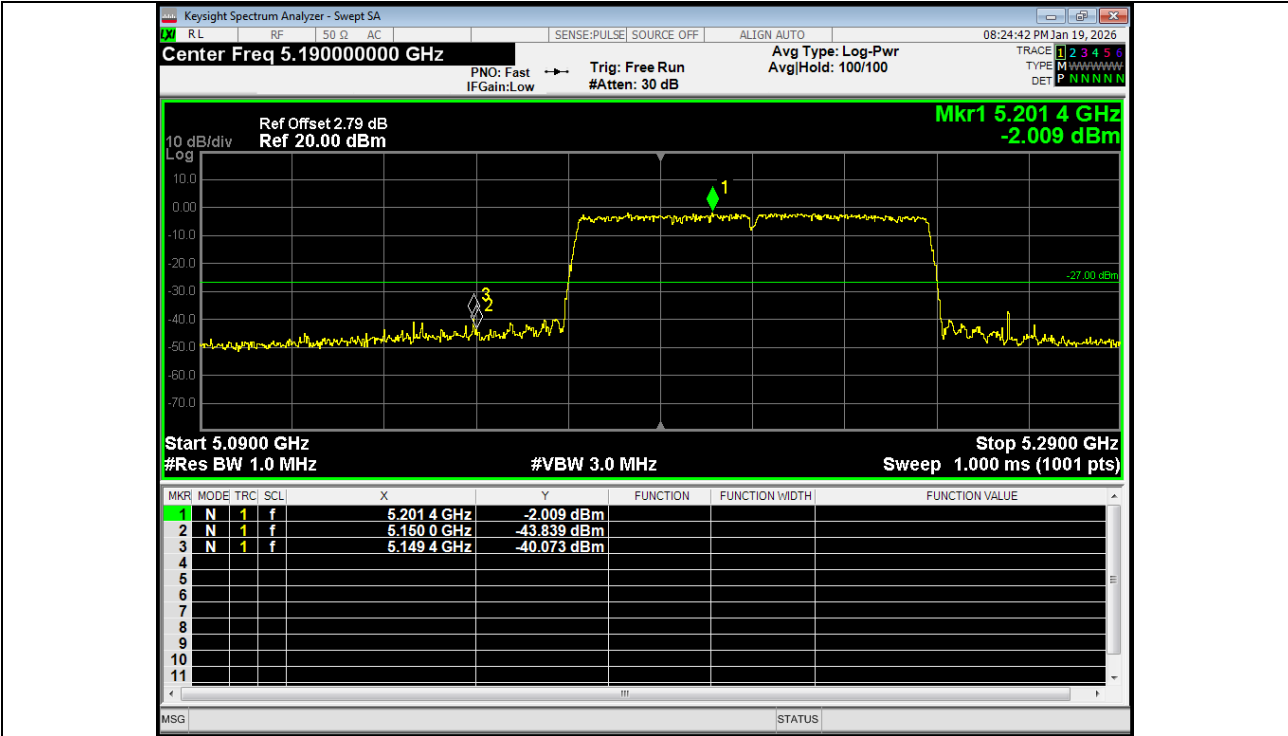
Bandedge_NVNT_ANT1_802_11ac(VHT40)_5190



Bandedge_NVNT_ANT1_802_11ac(VHT40) 5230

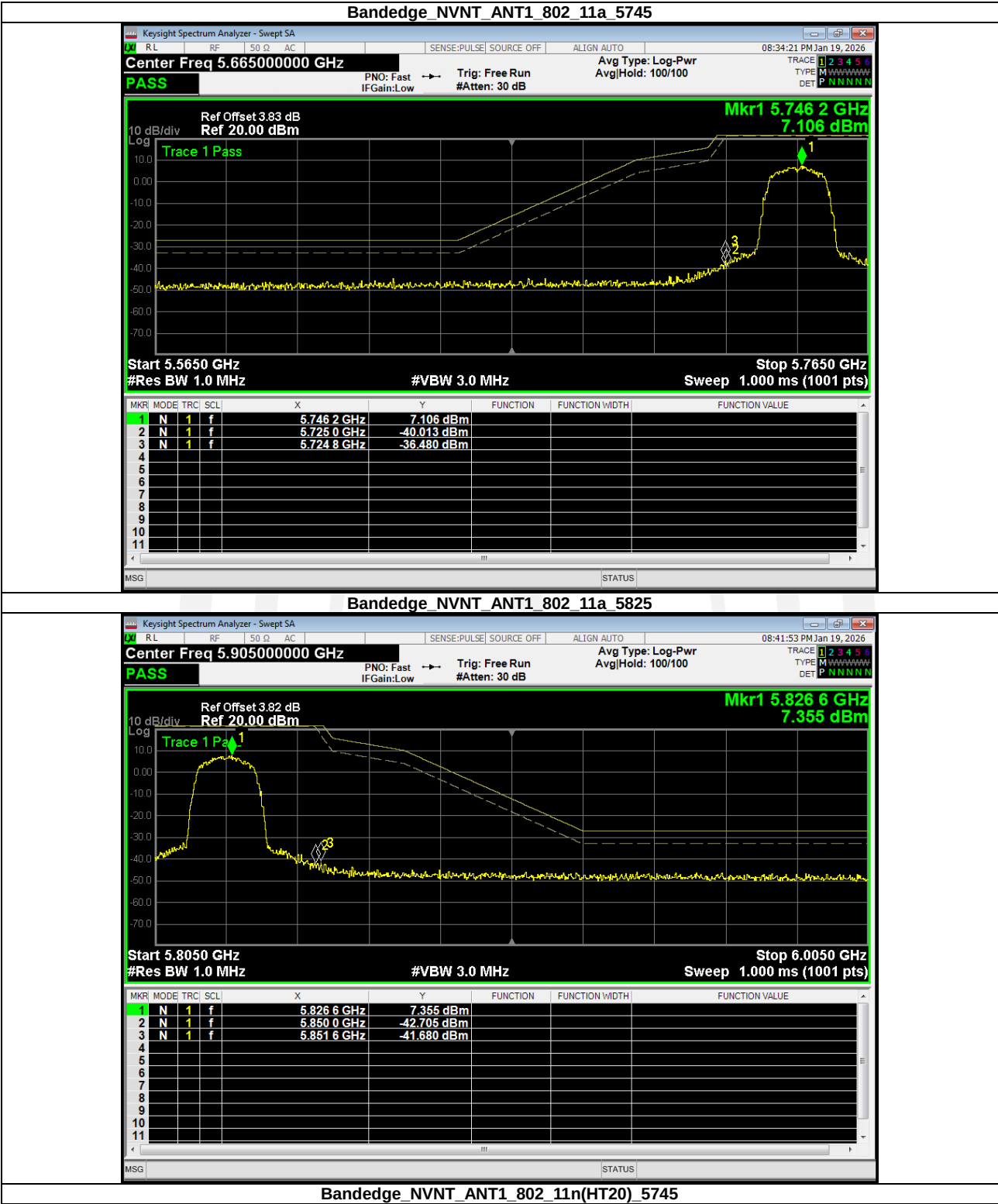


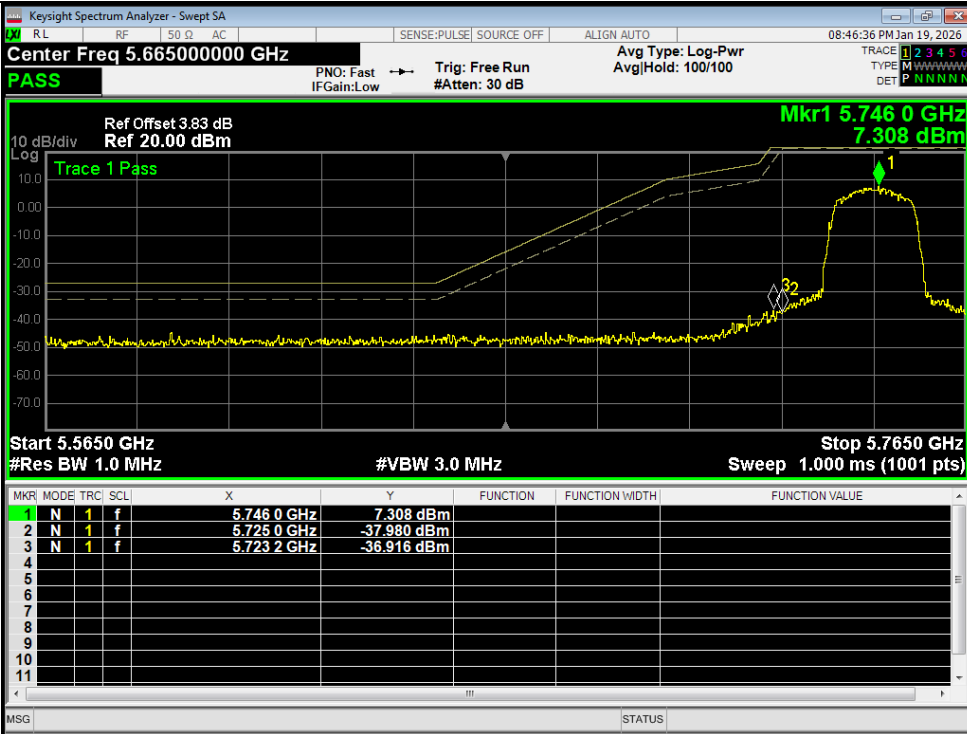
Bandedge_NVNT_ANT1_802_11ac(VHT80) 5210



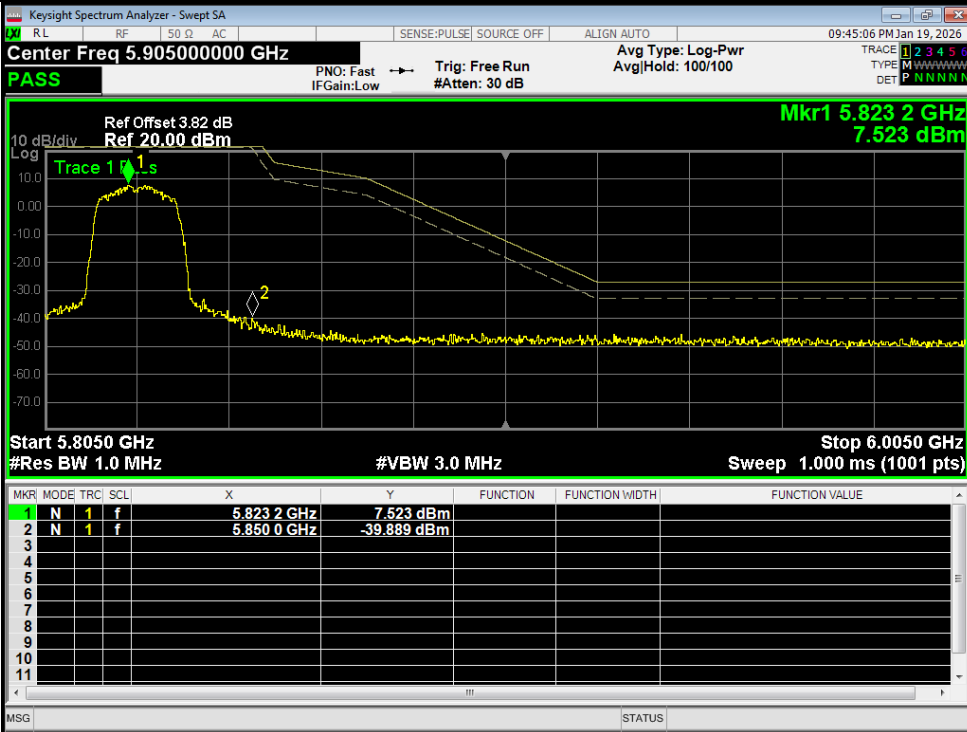
Band4

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Gain (dbi)	EIRP Max Value (dBc)	Limit (dBc)	Verdict
NVNT	a	5745	Ant1	-36.48	4.80	-31.68	-27	Pass
NVNT	a	5825	Ant1	-41.67	4.80	-36.87	-27	Pass
NVNT	n20	5745	Ant1	-36.91	4.80	-32.11	-27	Pass
NVNT	n20	5825	Ant1	-39.88	4.80	-35.08	-27	Pass
NVNT	n40	5755	Ant1	-35.01	4.80	-30.21	-27	Pass
NVNT	n40	5795	Ant1	-44.93	4.80	-40.13	-27	Pass
NVNT	ac20	5745	Ant1	-35.92	4.80	-31.12	-27	Pass
NVNT	ac20	5825	Ant1	-39.92	4.80	-35.12	-27	Pass
NVNT	ac40	5755	Ant1	-35.37	4.80	-30.57	-27	Pass
NVNT	ac40	5795	Ant1	-44.47	4.80	-39.67	-27	Pass
NVNT	ac80	5775	Ant1	-34.43	4.80	-29.63	-27	Pass

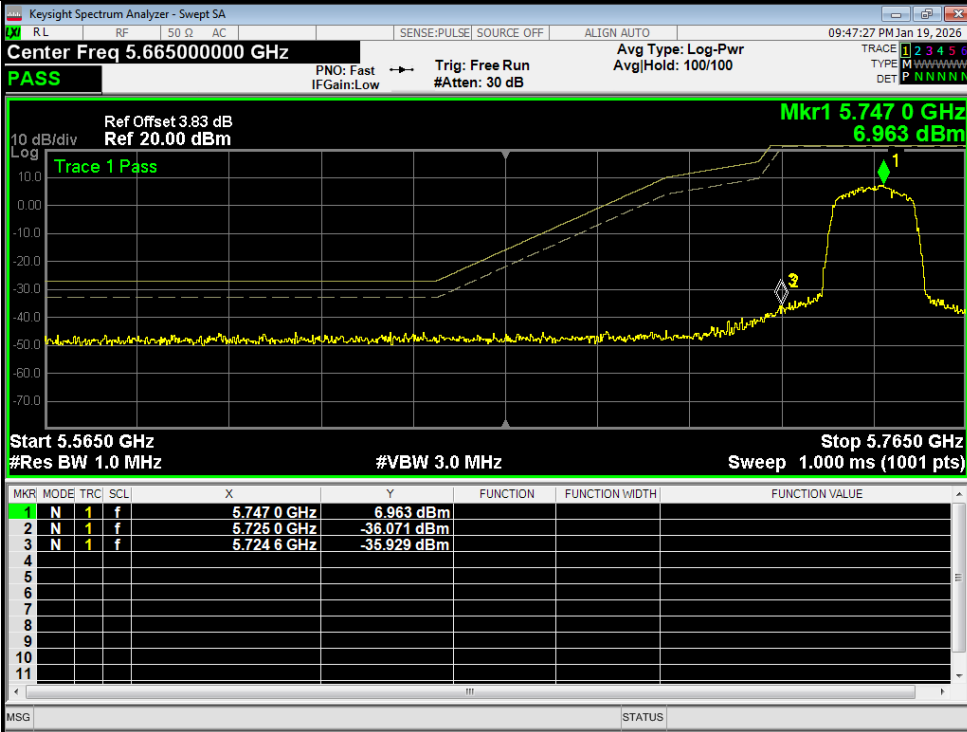




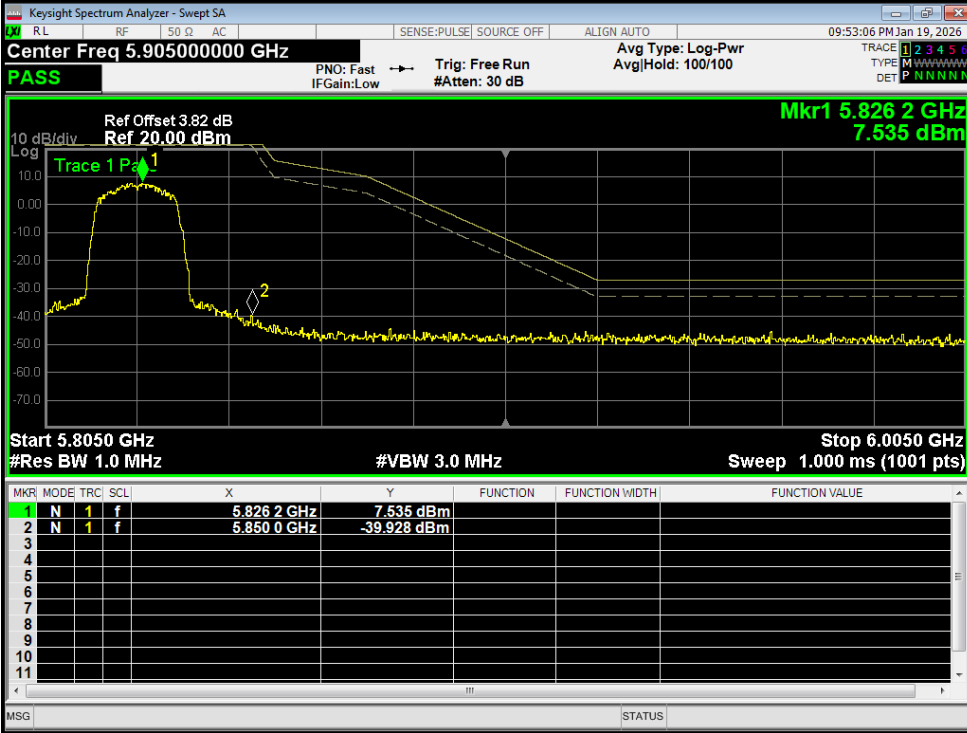
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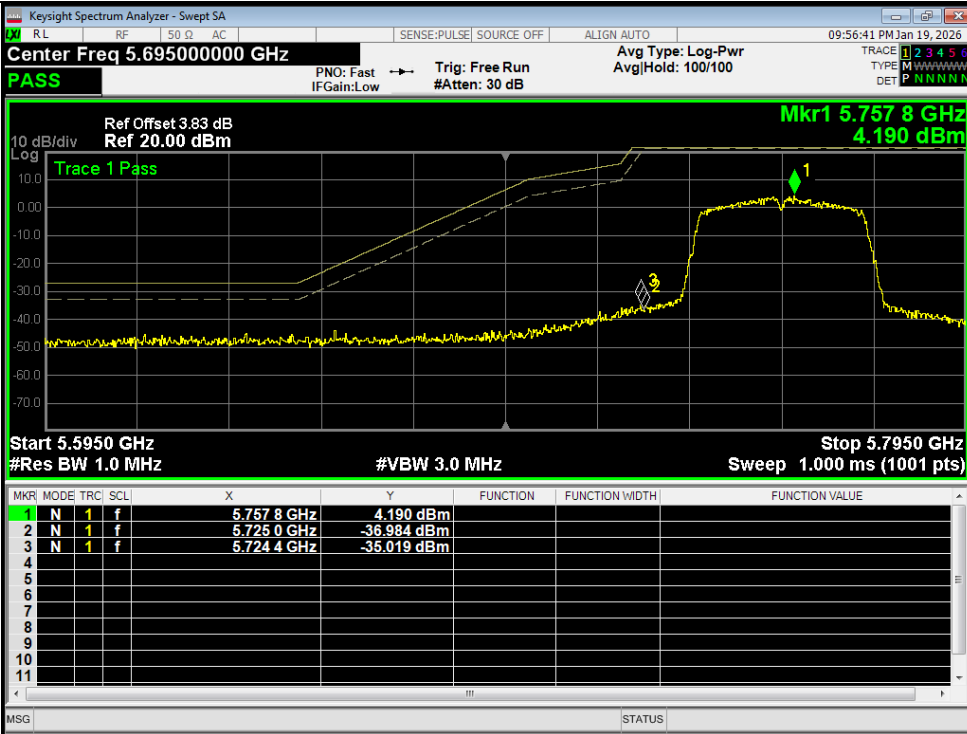
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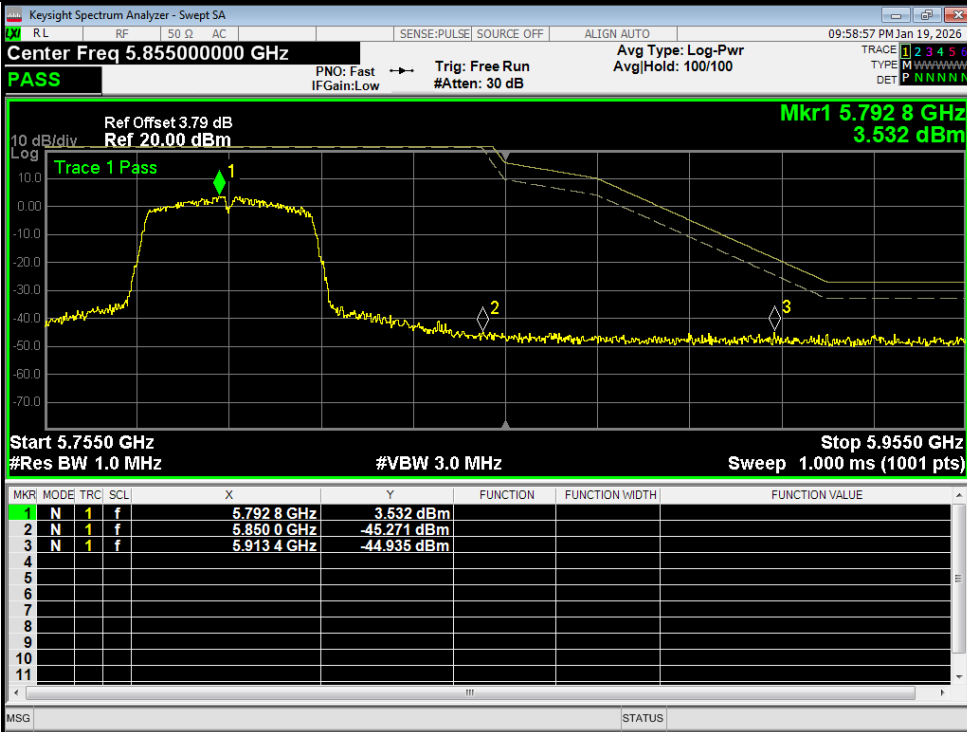
Bandedge_NVNT_ANT1_802_11ac(VHT20)_5825



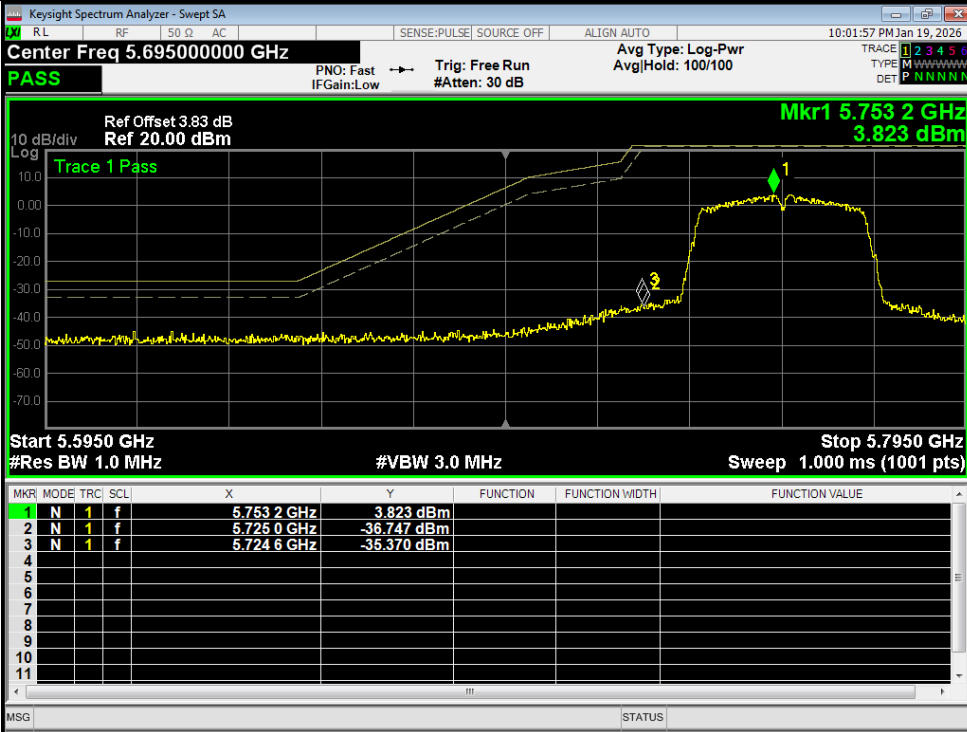
Bandedge_NVNT_ANT1_802_11n(HT40)_5755



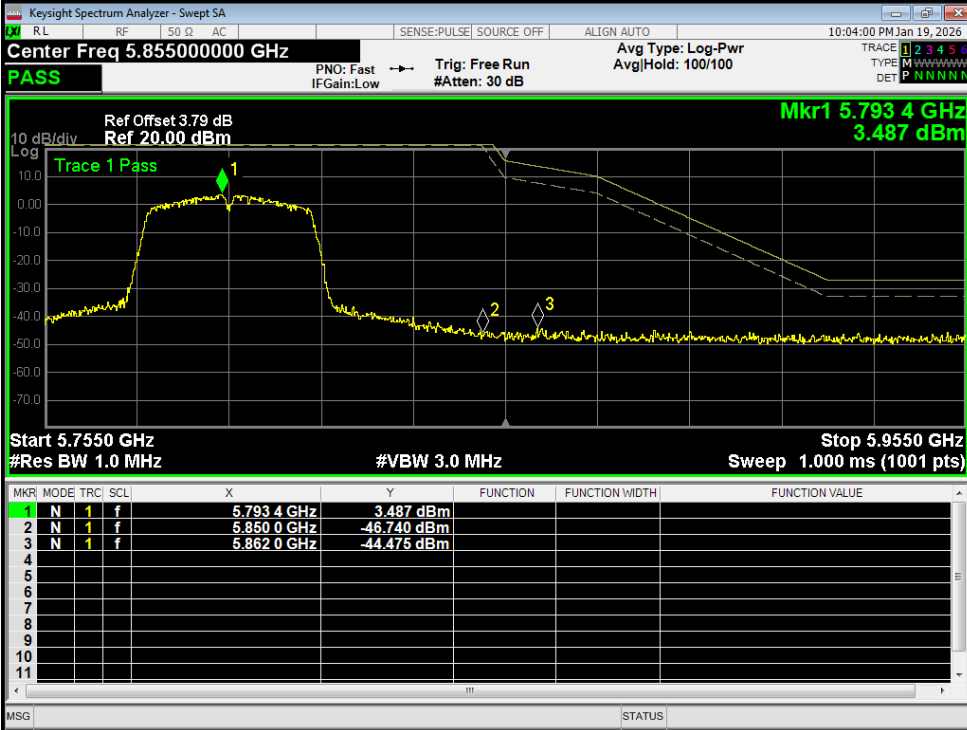
Bandedge_NVNT_ANT1_802_11n(HT40)_5795



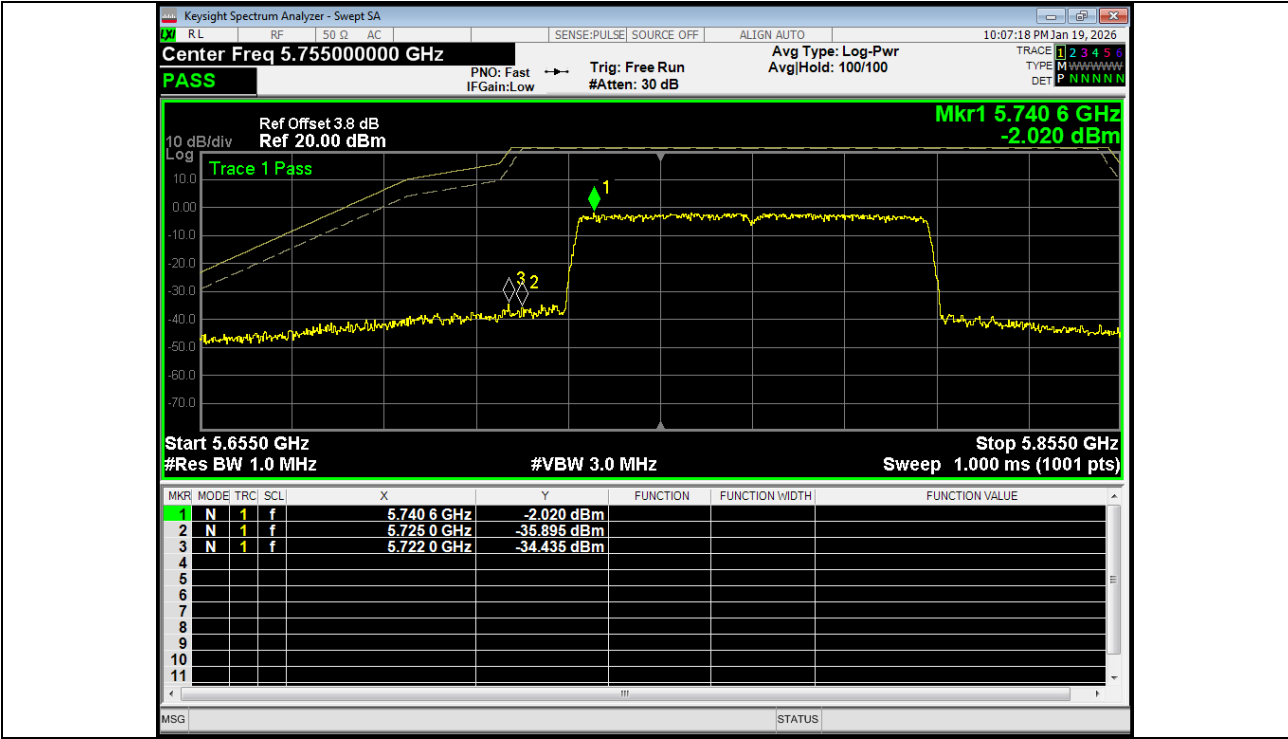
Bandedge_NVNT_ANT1_802_11ac(VHT40)_5755



Bandedge_NVNT_ANT1_802_11ac(VHT40) 5795



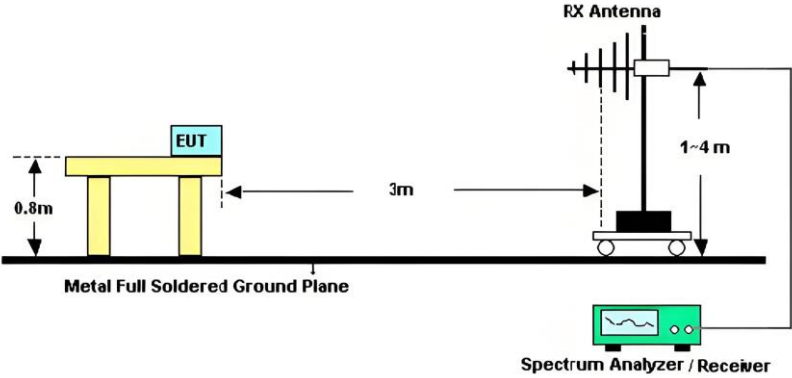
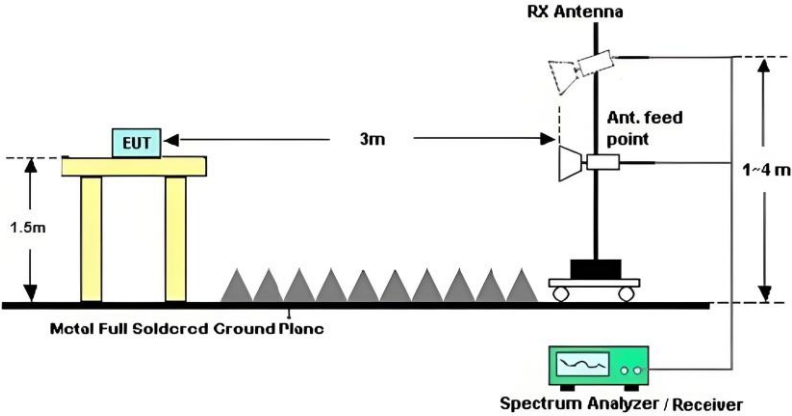
Bandedge_NVNT_ANT1_802_11ac(VHT80) 5775



4.8 Radiated Emission

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.10-2020				
Test Frequency Range:	30MHz to 40GHz				
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
		AV	1MHz	3MHz	Average Value
Limit:	Frequency		Limit (dBuV/m @3m)		Remark
	30MHz-88MHz		40.0		Quasi-peak Value
	88MHz-216MHz		43.5		Quasi-peak Value
	216MHz-960MHz		46.0		Quasi-peak Value
	960MHz-1GHz		54.0		Quasi-peak Value
	Above 1GHz		74.0		Peak Value
			54.0		Average Value
	MHz		MHz	MHz	GHz
	0.090-0.110		16.42-16.423	399.9-410	4.5-5.15
	1 ¹ 0.495-0.505		16.69475-16.69525	608-614	5.35-5.46
	2.1735-2.1905		16.80425-16.80475	960-1240	7.25-7.75
	4.125-4.128		25.5-25.67	1300-1427	8.025-8.5
	4.17725-4.17775		37.5-38.25	1435-1626.5	9.0-9.2
	4.20725-4.20775		73-74.6	1645.5-1646.5	9.3-9.5
	6.215-6.218		74.8-75.2	1660-1710	10.6-12.7
	6.26775-6.26825		108-121.94	1718.8-1722.2	13.25-13.4
	6.31175-6.31225		123-138	2200-2300	14.47-14.5
	8.291-8.294		149.9-150.05	2310-2390	15.35-16.2
	8.362-8.366		156.52475-156.52525	2483.5-2500	17.7-21.4
	8.37625-8.38675		156.7-156.9	2690-2900	22.01-23.12
	8.41425-8.41475		162.0125-167.17	3260-3267	23.6-24.0
	12.29-12.293		167.72-173.2	3332-3339	31.2-31.8
	12.51975-12.52025		240-285	3345.8-3358	36.43-36.5
	12.57675-12.57725		322-335.4	3600-4400	(²)
	13.36-13.41.				
	¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.				
	² Above 38.6				
	LIMITS OF EMISSIONS OUTSIDE OF THE FREQUENCY BANDS				
	Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following 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 e.i.r.p. 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 e.i.r.p. of -27 dBm/MHz.				
	(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 e.i.r.p. of -27 dBm/MHz.				
	(4) For transmitters operating in the 5.725-5.85 GHz band:				
	(i) 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.				
	Note: dBuV/m(at 3M) = EIRP(dBm) + 95.2.				
	Peak Limit = -27dBm/MHz + 95.2 = 68.2 dBuV/m				
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 1GHz

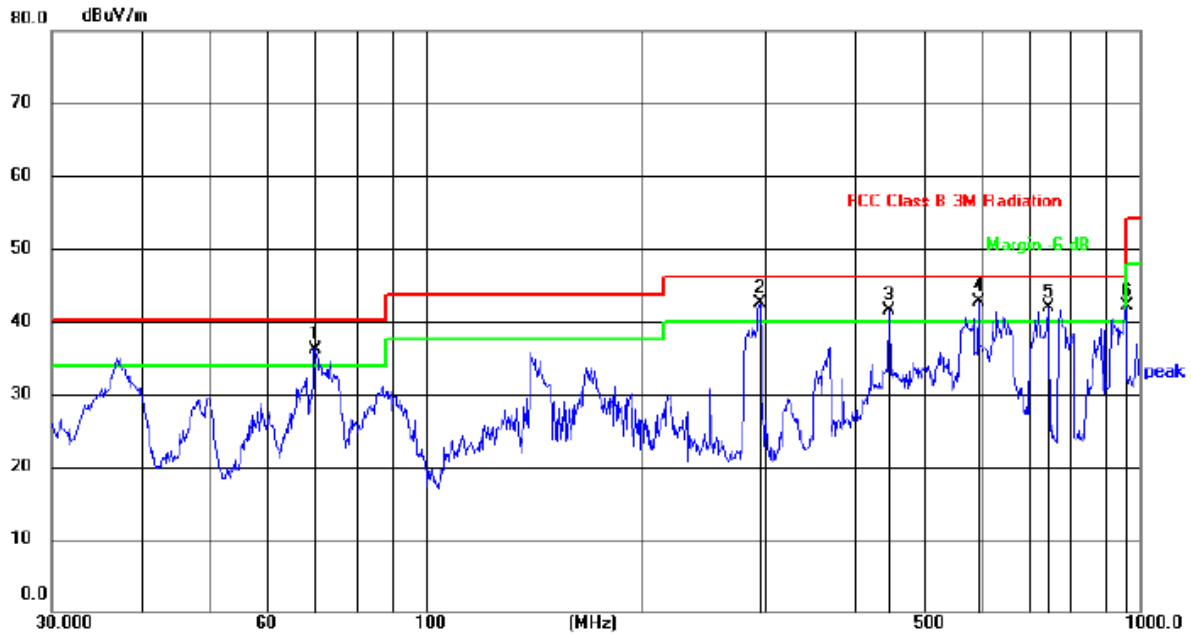
 Above 1GHz 	
Test Instruments:	Refer to section 3.0 for details
Test mode:	Refer to section 2.2 for details
Test results:	Pass

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 : 2026.01.12	Temperature : 23.7℃
Test Engineer : Felix Pang	Humidity : 38%
Test Mode : IEEE 802.11ac 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.

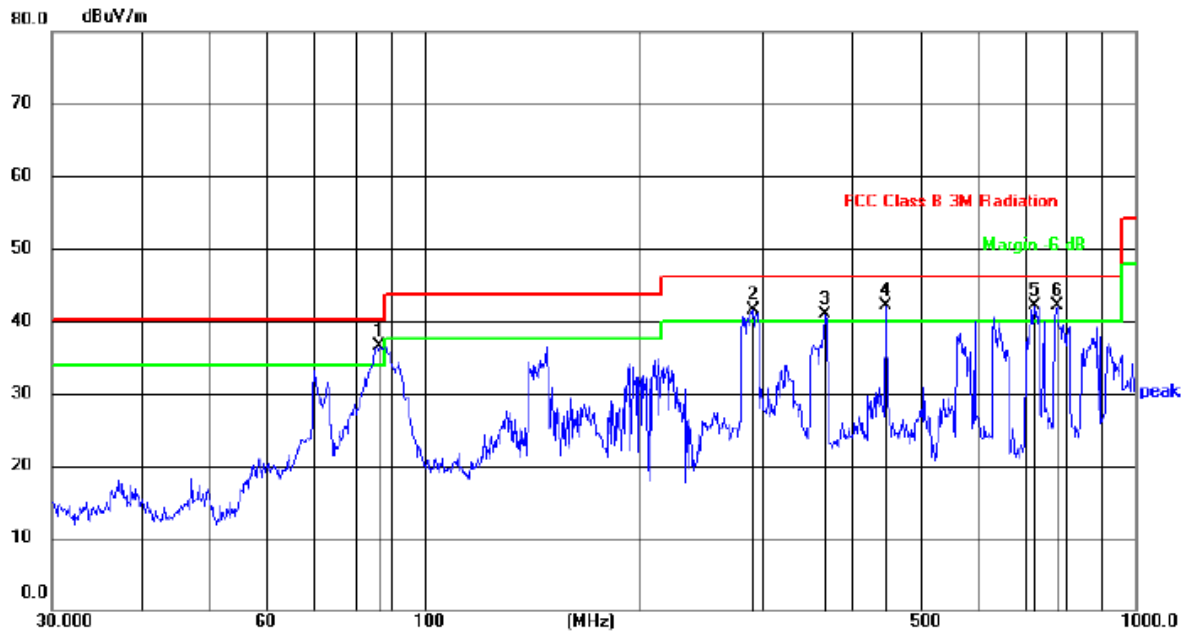
From 30MHz to 1000MHz:	
Test Date : 2026.01.12	Temperature : 23.7℃
Test Engineer : Felix Pang	Humidity : 38%
Test Mode : IEEE 802.11ac mode	
Test Results : PASS	
Note:	1. The test results are listed in next pages. 2. If the limits for the measurement with the average detector are met when using a receiver 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 802.11ac(VHT20) 5200MHz 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	70.0901	60.32	-24.18	36.14	40.00	-3.86	QP
2	294.1136	63.02	-20.58	42.44	46.00	-3.56	QP
3	446.4139	57.21	-15.65	41.56	46.00	-4.44	QP
4	595.1326	54.51	-11.86	42.65	46.00	-3.35	QP
5	744.8659	50.07	-8.21	41.86	46.00	-4.14	QP
6	958.7943	45.75	-3.73	42.02	46.00	-3.98	QP

Remark:

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

Polarization: Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	86.5027	62.09	-25.64	36.45	40.00	-3.55	QP
2	290.0172	62.23	-20.80	41.43	46.00	-4.57	QP
3	366.8231	59.53	-18.57	40.96	46.00	-5.04	QP
4	446.4139	57.75	-15.65	42.10	46.00	-3.90	QP
5	721.7258	50.75	-8.68	42.07	46.00	-3.93	QP
6	776.8777	49.33	-7.24	42.09	46.00	-3.91	QP

Remark:

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

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	67.10	-11.79	55.31	68.20	-12.89	V	Peak
15540	61.97	-7.28	54.69	68.20	-13.52	V	Peak
10360	67.20	-11.79	55.41	68.20	-12.79	H	Peak
15540	61.54	-7.28	54.26	68.20	-13.94	H	Peak
10360	47.57	-11.79	35.78	54.00	-18.22	V	AVG
15540	44.00	-7.28	36.72	54.00	-17.28	V	AVG
10360	48.47	-11.79	36.68	54.00	-17.32	H	AVG
15540	42.83	-7.28	35.55	54.00	-18.45	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	67.61	-11.74	55.87	68.20	-12.33	V	Peak
15600	62.77	-7.18	55.59	68.20	-12.61	V	Peak
10400	67.09	-11.74	55.35	68.20	-12.85	H	Peak
15600	61.95	-7.18	54.77	68.20	-13.43	H	Peak
10400	47.98	-11.74	36.24	54.00	-17.76	V	AVG
15600	44.83	-7.18	37.65	54.00	-16.35	V	AVG
10400	47.94	-11.74	36.20	54.00	-17.80	H	AVG
15600	42.59	-7.18	35.41	54.00	-18.60	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	67.87	-11.63	56.24	68.20	-11.96	V	Peak
15720	63.17	-6.97	56.20	68.20	-12.00	V	Peak
10480	66.66	-11.63	55.03	68.20	-13.17	H	Peak
15720	60.26	-6.97	53.29	68.20	-14.91	H	Peak
10480	48.22	-11.63	36.59	54.00	-17.41	V	AVG
15720	43.34	-6.97	36.37	54.00	-17.63	V	AVG
10480	47.60	-11.63	35.97	54.00	-18.03	H	AVG
15720	43.84	-6.97	36.87	54.00	-17.13	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	66.92	-11.79	55.13	68.20	-13.07	V	Peak
15540	61.63	-7.28	54.35	68.20	-13.85	V	Peak
10360	66.62	-11.79	54.83	68.20	-13.37	H	Peak
15540	61.67	-7.28	54.39	68.20	-13.81	H	Peak
10360	48.84	-11.79	37.05	54.00	-16.95	V	AVG
15540	43.14	-7.28	35.86	54.00	-18.14	V	AVG
10360	48.22	-11.79	36.43	54.00	-17.57	H	AVG
15540	42.22	-7.28	34.94	54.00	-19.06	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	67.94	-11.74	56.20	68.20	-12.00	V	Peak
15600	61.92	-7.18	54.74	68.20	-13.46	V	Peak
10400	67.09	-11.74	55.35	68.20	-12.85	H	Peak
15600	61.95	-7.18	54.77	68.20	-13.43	H	Peak
10400	46.99	-11.74	35.25	54.00	-18.75	V	AVG
15600	43.64	-7.18	36.46	54.00	-17.54	V	AVG
10400	47.98	-11.74	36.24	54.00	-17.76	H	AVG
15600	42.09	-7.18	34.91	54.00	-19.09	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	66.41	-11.63	54.78	68.20	-13.42	V	Peak
15720	61.54	-6.97	54.57	68.20	-13.63	V	Peak
10480	66.03	-11.63	54.40	68.20	-13.80	H	Peak
15720	60.79	-6.97	53.82	68.20	-14.38	H	Peak
10480	48.01	-11.63	36.38	54.00	-17.62	V	AVG
15720	43.28	-6.97	36.31	54.00	-17.69	V	AVG
10480	47.60	-11.63	35.97	54.00	-18.03	H	AVG
15720	43.38	-6.97	36.41	54.00	-17.59	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	67.79	-11.77	56.02	68.20	-12.18	V	Peak
15570	63.13	-7.24	55.89	68.20	-12.31	V	Peak
10380	67.11	-11.77	55.34	68.20	-12.86	H	Peak
15570	61.15	-7.24	53.91	68.20	-14.29	H	Peak
10380	47.23	-11.77	35.46	54.00	-18.54	V	AVG
15570	43.89	-7.24	36.65	54.00	-17.35	V	AVG
10380	48.43	-11.77	36.66	54.00	-17.34	H	AVG
15570	41.91	-7.24	34.67	54.00	-19.33	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	67.23	-11.65	55.58	68.20	-12.62	V	Peak
15690	61.80	-7.03	54.77	68.20	-13.43	V	Peak
10460	65.75	-11.65	54.10	68.20	-14.10	H	Peak
15690	61.57	-7.03	54.54	68.20	-13.66	H	Peak
10460	48.53	-11.65	36.88	54.00	-17.12	V	AVG
15690	44.58	-7.03	37.55	54.00	-16.45	V	AVG
10460	47.73	-11.65	36.08	54.00	-17.92	H	AVG
15690	42.18	-7.03	35.15	54.00	-18.85	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	67.53	-11.79	55.74	68.20	-12.46	V	Peak
15540	62.72	-7.28	55.44	68.20	-12.76	V	Peak
10360	65.97	-11.79	54.18	68.20	-14.02	H	Peak
15540	61.81	-7.28	54.53	68.20	-13.67	H	Peak
10360	47.22	-11.79	35.43	54.00	-18.57	V	AVG
15540	44.61	-7.28	37.33	54.00	-16.67	V	AVG
10360	47.78	-11.79	35.99	54.00	-18.01	H	AVG
15540	43.57	-7.28	36.29	54.00	-17.71	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	67.15	-11.74	55.41	68.20	-12.79	V	Peak
15600	61.76	-7.18	54.58	68.20	-13.62	V	Peak
10400	67.02	-11.74	55.28	68.20	-12.92	H	Peak
15600	61.91	-7.18	54.73	68.20	-13.47	H	Peak
10400	47.02	-11.74	35.28	54.00	-18.72	V	AVG
15600	43.92	-7.18	36.74	54.00	-17.26	V	AVG
10400	48.09	-11.74	36.35	54.00	-17.65	H	AVG
15600	43.64	-7.18	36.46	54.00	-17.54	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	67.36	-11.63	55.73	68.20	-12.47	V	Peak
15720	62.84	-6.97	55.87	68.20	-12.33	V	Peak
10480	67.08	-11.63	55.45	68.20	-12.75	H	Peak
15720	61.55	-6.97	54.58	68.20	-13.62	H	Peak
10480	48.71	-11.63	37.08	54.00	-16.93	V	AVG
15720	43.32	-6.97	36.35	54.00	-17.65	V	AVG
10480	47.36	-11.63	35.73	54.00	-18.27	H	AVG
15720	43.47	-6.97	36.50	54.00	-17.50	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	67.79	-11.77	56.02	68.20	-12.18	V	Peak
15570	63.13	-7.24	55.89	68.20	-12.31	V	Peak
10380	67.11	-11.77	55.34	68.20	-12.86	H	Peak
15570	61.15	-7.24	53.91	68.20	-14.29	H	Peak
10380	47.23	-11.77	35.46	54.00	-18.54	V	AVG
15570	43.89	-7.24	36.65	54.00	-17.35	V	AVG
10380	48.43	-11.77	36.66	54.00	-17.34	H	AVG
15570	41.91	-7.24	34.67	54.00	-19.33	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	67.23	-11.65	55.58	68.20	-12.62	V	Peak
15690	61.80	-7.03	54.77	68.20	-13.43	V	Peak
10460	65.75	-11.65	54.10	68.20	-14.10	H	Peak
15690	61.57	-7.03	54.54	68.20	-13.66	H	Peak
10460	48.53	-11.65	36.88	54.00	-17.12	V	AVG
15690	44.58	-7.03	37.55	54.00	-16.45	V	AVG
10460	47.73	-11.65	36.08	54.00	-17.92	H	AVG
15690	42.18	-7.03	35.15	54.00	-18.85	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	66.89	-10.85	56.04	68.20	-12.16	V	Peak
16590	62.06	-5.67	56.39	68.20	-11.81	V	Peak
11060	66.76	-10.85	55.91	68.20	-12.29	H	Peak
16590	61.26	-5.67	55.59	68.20	-12.61	H	Peak
11060	47.75	-10.85	36.90	54.00	-17.10	V	AVG
16590	44.81	-5.67	39.14	54.00	-14.86	V	AVG
11060	47.03	-10.85	36.18	54.00	-17.82	H	AVG
16590	42.68	-5.67	37.01	54.00	-16.99	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	67.00	-10.56	56.44	68.20	-11.76	V	Peak
17235.00	62.82	-5.21	57.61	68.20	-10.59	V	Peak
11490.00	65.82	-10.56	55.26	68.20	-12.94	H	Peak
17235.00	61.30	-5.21	56.09	68.20	-12.11	H	Peak
11490.00	48.34	-10.56	37.78	54.00	-16.22	V	AVG
17235.00	43.13	-5.21	37.92	54.00	-16.08	V	AVG
11490.00	47.97	-10.56	37.41	54.00	-16.59	H	AVG
17235.00	42.31	-5.21	37.10	54.00	-16.90	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	68.04	-10.50	57.54	68.20	-10.66	V	Peak
17355.00	62.09	-5.28	56.81	68.20	-11.39	V	Peak
11570.00	66.35	-10.50	55.85	68.20	-12.35	H	Peak
17355.00	60.56	-5.28	55.28	68.20	-12.92	H	Peak
11570.00	48.93	-10.50	38.43	54.00	-15.57	V	AVG
17355.00	43.76	-5.28	38.48	54.00	-15.52	V	AVG
11570.00	47.32	-10.50	36.82	54.00	-17.18	H	AVG
17355.00	42.10	-5.28	36.82	54.00	-17.18	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	67.91	-10.44	57.47	68.20	-10.73	V	Peak
17475.00	62.17	-5.34	56.83	68.20	-11.37	V	Peak
11650.00	65.70	-10.44	55.26	68.20	-12.94	H	Peak
17475.00	61.32	-5.34	55.98	68.20	-12.22	H	Peak
11650.00	48.94	-10.44	38.50	54.00	-15.50	V	AVG
17475.00	42.97	-5.34	37.63	54.00	-16.37	V	AVG
11650.00	48.63	-10.44	38.19	54.00	-15.81	H	AVG
17475.00	43.61	-5.34	38.27	54.00	-15.74	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	67.34	-10.54	56.80	68.20	-11.40	V	Peak
17265.00	63.16	-5.24	57.92	68.20	-10.28	V	Peak
11510.00	66.84	-10.54	56.30	68.20	-11.90	H	Peak
17265.00	61.55	-5.24	56.31	68.20	-11.89	H	Peak
11510.00	47.55	-10.54	37.01	54.00	-16.99	V	AVG
17265.00	44.06	-5.24	38.82	54.00	-15.18	V	AVG
11510.00	48.80	-10.54	38.26	54.00	-15.74	H	AVG
17265.00	42.05	-5.24	36.81	54.00	-17.19	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	67.99	-10.51	57.48	68.20	-10.72	V	Peak
17325.00	61.85	-5.26	56.59	68.20	-11.61	V	Peak
11550.00	65.61	-10.51	55.10	68.20	-13.10	H	Peak
17325.00	60.18	-5.26	54.92	68.20	-13.28	H	Peak
11550.00	47.48	-10.51	36.97	54.00	-17.03	V	AVG
17325.00	44.35	-5.26	39.09	54.00	-14.91	V	AVG
11550.00	46.99	-10.51	36.48	54.00	-17.52	H	AVG
17325.00	43.70	-5.26	38.44	54.00	-15.56	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	66.52	-10.85	55.67	68.20	-12.53	V	Peak
16590.00	62.24	-5.67	56.57	68.20	-11.63	V	Peak
11060.00	67.22	-10.85	56.37	68.20	-11.83	H	Peak
16590.00	61.51	-5.67	55.84	68.20	-12.36	H	Peak
11060.00	47.82	-10.85	36.97	54.00	-17.03	V	AVG
16590.00	43.84	-5.67	38.17	54.00	-15.83	V	AVG
11060.00	48.04	-10.85	37.19	54.00	-16.81	H	AVG
16590.00	42.42	-5.67	36.75	54.00	-17.25	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.

4.9 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 results:	Pass

Measurement Data:

Mode	Voltage (V)	FHL (5180MHz)	Deviation (KHz)	FHH (5240MHz)	Deviation (KHz)
Band 1 (5150-5250 MHz)	DC 16.15V	5179.999	1	5239.995	5
	DC 19.00V	5179.993	7	5239.996	4
	DC 21.85V	5179.992	8	5239.993	7
Mode	Voltage (V)	FHL (5745MHz)	Deviation (KHz)	FHH (5825MHz)	Deviation (KHz)
Band 4 (5725-5850 MHz)	DC 16.15V	5744.996	4	5824.996	4
	DC 19.00V	5744.998	2	5824.997	3
	DC 21.85V	5744.995	5	5824.996	4

Mode	Temperature (°C)	FHL (5180MHz)	Deviation (KHz)	FHH (5240MHz)	Deviation (KHz)
Band 1 (5150-5250 MHz)	-10°C	5179.995	5	5239.992	8
	0°C	5179.994	6	5239.994	6
	+10°C	5179.993	7	5239.991	9
	+20°C	5179.999	1	5239.994	6
	+30°C	5179.999	1	5239.996	4
	+40°C	5179.994	6	5239.995	5
	+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	5744.996	4	5824.994	6
	0°C	5744.995	5	5824.997	3
	+10°C	5744.991	9	5824.998	2
	+20°C	5744.995	5	5824.996	4
	+30°C	5744.995	5	5824.998	2
	+40°C	5744.992	8	5824.997	3
	+50°C	5744.993	7	5824.995	5

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-----

