

TEST REPORT

Report No.: BCTC2502454470-2E

Applicant: NEXXT SOLUTIONS

Product Name: Camera

Test Model: NHC-OP30DL

Tested Date: 2025-02-21 to 2025-06-10

Issued Date: 2025-06-10



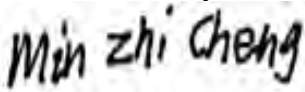
Shenzhen **BCTC** Testing Co., Ltd.



FCC ID: X4YHACOP30DL

Product Name: Camera
Trademark: N/A
Model/Type Reference: NHC-OP30DL
Prepared For: NEXXT SOLUTIONS
Address: 3505 N.W 107TH AVE. MIAMI, Florida 33178, United States
Manufacturer: Sungale Electronics (Shenzhen) Limited
Address: No. 1302, DaHong High-Tech Park, No. 6-18, Xinhe Road,Xinqiao, BaoAn,Shenzhen 518125, CHINA
Prepared By: Shenzhen BCTC Testing Co., Ltd.
Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date: 2025-02-21
Sample Tested Date: 2025-02-21 to 2025-06-10
Issue Date: 2025-06-10
Report No.: BCTC2502454470-2E
Test Standards: FCC Part15 15.407
ANSI C63.10:2013
KDB 662911 D01 v02r01
KDB 789033 D02 v02r01
Test Results: PASS
Remark: This is WIFI-5GHz band radio test report.

Tested by:



Min Zhi Cheng / Project Handler

Approved by:



Zero Zhou / Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

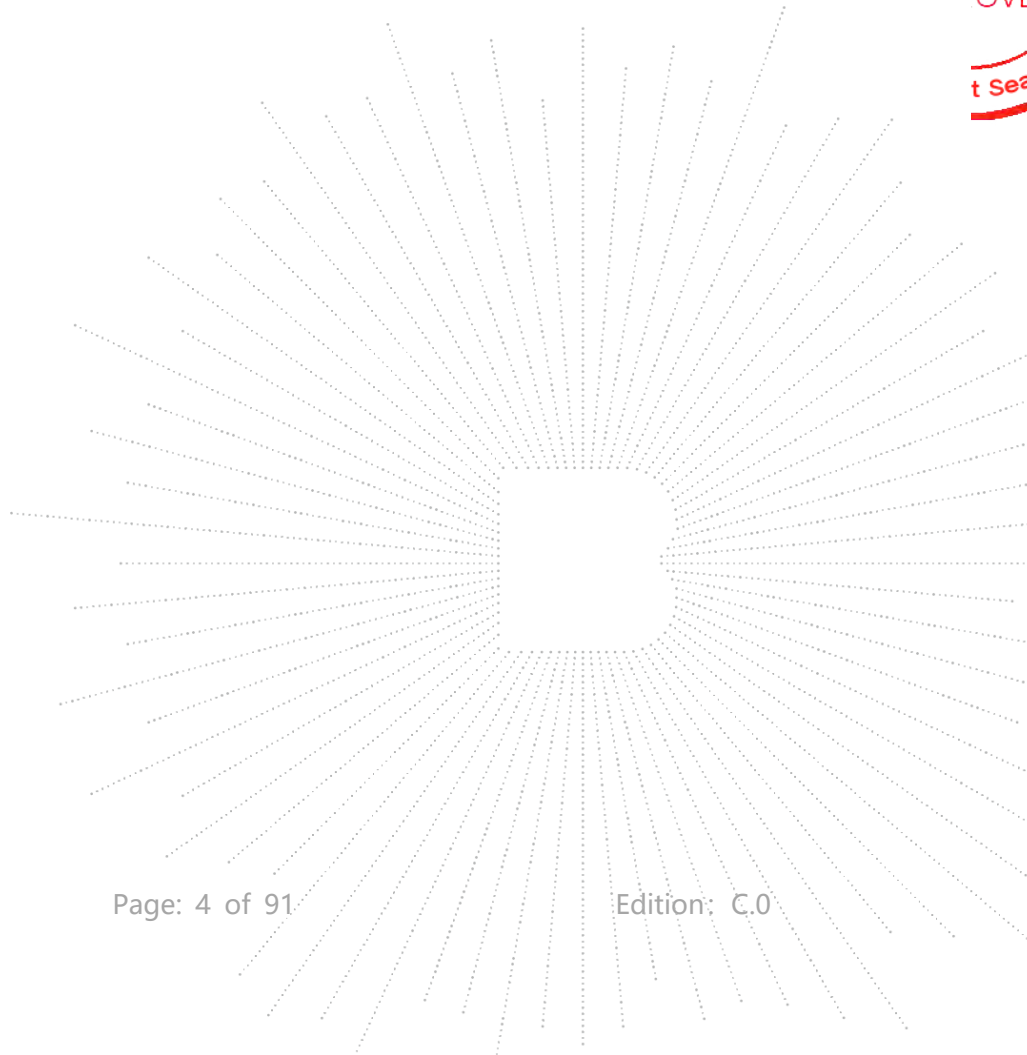
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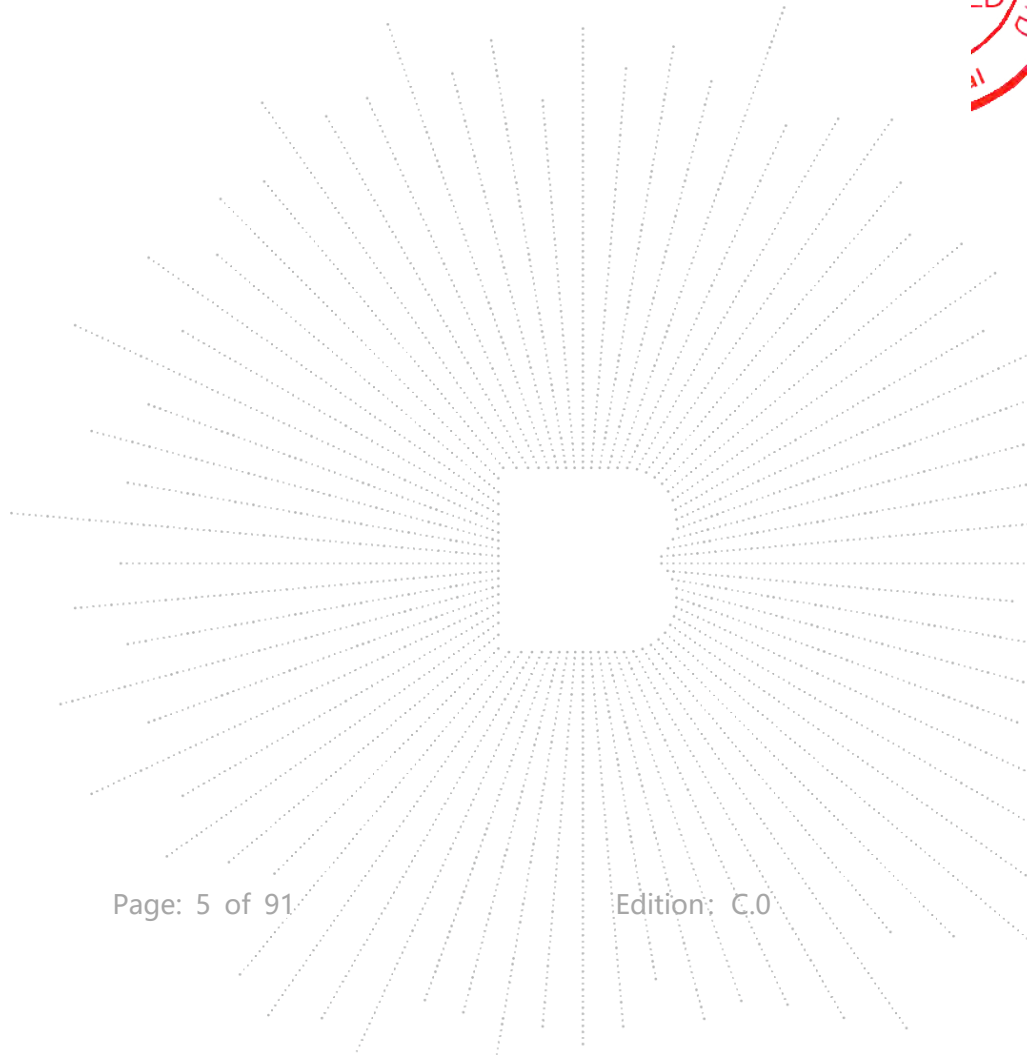
(Note: N/A Means Not Applicable)

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1. Version

Report No.	Issue Date	Description	Approved
BCTC2502454470-2E	2025-06-10	Original	Valid



2. Test Summary

The Product has been tested according to the following specifications:

1	Test Parameter	Clause No.	Results
1	Spurious Radiated Emissions	15.209(a), 15.407 (b)(1) 15.407 (b)(4) 15.407 (b)(8)	PASS
2	Conducted Emission	15.207	PASS
3	26 dB and 99% Emission Bandwidth	15.407 (a)(12) 15.1049	PASS
4	Minimum 6 dB bandwidth	15.407(e)	PASS
5	Maximum Conducted Output Power	15.407 (a)(1) 15.407 (a)(3)	PASS
6	Band Edge	2.1051, 15.407(b)(1) 15.407(b)(4)	PASS
7	Power Spectral Density	15.407 (a)(1) 15.407 (a)(3)	PASS
8	Spurious Emissions at Antenna Terminals	2.1051, 15.407(b)	PASS
9	Antenna Requirement	15.203	PASS

Note: The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure.

CO., LTD.

3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(9KHz-30MHz)	U=3.7dB
2	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=3.34dB
5	Conducted Emission (150kHz-30MHz)	U=3.20dB
6	Conducted Adjacent channel power	U=1.38dB
7	Power Spectral Density	U=1.19dB
8	Conducted output power uncertainty Above 1G	U=1.576dB
9	Conducted output power uncertainty below 1G	U=1.28dB
10	Conducted spurious emissions	U=0.55dB
11	Occupied Bandwidth/Frequency Range	U=3.46%
12	humidity uncertainty	U=5.3%
13	Temperature uncertainty	U=0.59℃
14	Frequency Error	U=53.50Hz
15	Frequency Drift	U=0.64kHz

4. Product Information And Test Setup

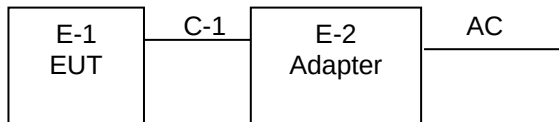
4.1 Product Information

Model/Type Reference:	NHC-OP30DL
Model Differences:	N/A
Hardware Version:	N/A
Software Version:	N/A
IEEE 802.11 WLAN Mode Supported:	802.11a/n (20MHz channel bandwidth) 802.11n (40MHz channel bandwidth)
Operation Frequency:	5180-5240MHz for 802.11a/n(HT20); 5190-5230MHz for 802.11n(HT40); 5745-5825 MHz for 802.11a/n(HT20); 5755-5795 MHz for 802.11a/n(HT40);
Data Rate:	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40): MCS0-MCS15;
Type of Modulation:	OFDM with BPSK/QPSK/16QAM/64QAM/256QAM for 802.11a/n;
Number Of Channel:	4 channels for 802.11a/n20 in the 5180-5240MHz band; 2 channels for 802.11 n40 in the 5190-5230MHz band; 5 channels for 802.11a/n20 in the 5745-5825MHz band; 2 channels for 802.11 n40 in the 5755-5795MHz band;
Antenna installation:	External antenna
Antenna Gain:	5.2G: 2.44dBi 5.8G: 3.73dBi Remark: ☒ The antenna gain of the product comes from the antenna report provided by the customer, and the test data is affected by the customer information. ☐ The antenna gain of the product is provided by the customer, and the test data is affected by the customer information.
Ratings:	DC 5V From Adapter
Adapter Information:	Manufacture: SHENZHENKEYU POWER SUPPLY TECHNOLOGY CO., LTD Model No.: KA12C-0502000US Input: AC 100-240V 50/60Hz 0.35A Max Output: DC 5V 2000mA

4.2 Test Setup Configuration

See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

Conducted Emission and Radiated Spurious Emission:



4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Camera	---	NHC-OP30DL	---	EUT
E-2	Adapter	---	KA12C-0502000US	---	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C-1	---	---	1m	DC cable unshielded

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

Frequency and Channel list for 802.11a/n (5180-5240MHz):

802.11a/n (20MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220	40	5200	48	5240

802.11n (40MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230	-	-	-	-

Frequency and Channel list for 802.11a/n /ac (5745-5825MHz):

802.11a/n (20MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	153	5765	157	5785	161	5805
165	5825	-	-	-	-	-	-

802.11n (40MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795	-	-	-	-

4.5 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	802.11a / n 20 CH36/ CH40/ CH 48 802.11a /n 20 CH149/ CH157/ CH 165
Mode 2	802.11n40 CH38/ CH 46 802.11n40 CH 151 / CH 159
Mode 3	Link Mode

Note: The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

4.6 Table Of Parameters Of Text Software Setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters

Test software Version	ATBM		
Parameters	DEF	DEF	DEF

5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address:1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

FCC Test Firm Registration Number: 712850

A2LA certificate registration number is: CN1212

ISED Registered No.: 23583

ISED CAB identifier: CN0017

5.2 Test Instrument Used

Conducted Emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR	102075	May 16, 2024	May 15, 2025
LISN	R&S	ENV216	101375	May 16, 2024	May 15, 2025
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Pulse limiter	Schwarzbeck	VTSD9561-F	01323	May 16, 2024	May 15, 2025

Conducted Emissions Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Receiver	R&S	ESR	102075	May 08, 2025	May 07, 2026
LISN	R&S	ENV216	101375	May 14, 2025	May 13, 2026
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Pulse limiter	Schwarzbeck	VTSD9561-F	01323	May 14, 2025	May 13, 2026

RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power Meter	Keysight	E4419	\	May 16, 2024	May 15, 2025
Power Sensor (AV)	Keysight	E9300A	\	May 16, 2024	May 15, 2025
Signal Analyzer 20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 16, 2024	May 15, 2025
Spectrum Analyzer 9kHz-40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025
Radio frequency control box	MAIWEI	MW100-RFC B	\	\	\
Software	MAIWEI	MTS 8310	\	\	\

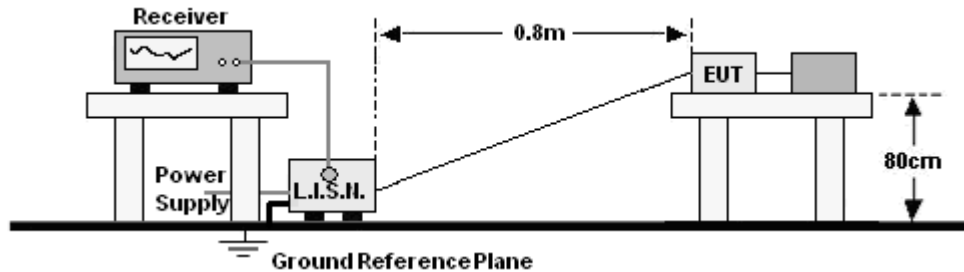
RF Conducted Test					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
Power Meter	Keysight	E4419	\	May 14, 2025	May 13, 2026
Power Sensor (AV)	Keysight	E9300A	\	May 14, 2025	May 13, 2026
Signal Analyzer 20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 14, 2025	May 13, 2026
Spectrum Analyzer 9kHz-40GHz	R&S	FSP40	100363	May 14, 2025	May 13, 2026
Radio frequency control box	MAIWEI	MW100-RFC B	\	\	\
Software	MAIWEI	MTS 8310	\	\	\

Radiated Emissions Test (966 Chamber02)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	SKET	966 Room	966	Oct. 31. 2024	Oct. 30. 2027
Receiver	R&S	ESR	102075	May 16, 2024	May 15, 2025
Receiver	R&S	ESR17	100010	Oct. 31. 2024	Oct. 30. 2025
Amplifier	SKET	LNPA-30M01 G-30	SK2021082004	Oct. 31. 2024	Oct. 30. 2025
TRILOG Broadband Antenna	Schwarzbeck	VULB9168	1323	May 21, 2024	May 20, 2025
Loop Antenna 9KHz-30MHz	Schwarzbeck	FMZB1519B	00014	May 21, 2024	May 20, 2025
Amplifier	SKET	LAPA_01G1 8G-45dB	SK2021040901	May 16, 2024	May 15, 2025
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 21, 2024	May 20, 2025
Amplifier 18GHz-40GHz	MITEQ	TTA1840-35-HG	2034381	May 16, 2024	May 15, 2025
Horn Antenna 18GHz-40GHz	Schwarzbeck	BBHA9170	00822	May 21, 2024	May 20, 2025
Spectrum Analyzer 9kHz-40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

Radiated Emissions Test (966 Chamber02)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	SKET	966 Room	966	Oct. 31. 2024	Oct. 30. 2027
Receiver	R&S	ESR	102075	May 08, 2025	May 07, 2026
Receiver	R&S	ESRI7	100010	Oct. 31. 2024	Oct. 30. 2025
Amplifier	SKET	LNPA-30M01 G-30	SK2021082004	Oct. 31. 2024	Oct. 30. 2025
TRILOG Broadband Antenna	Schwarzbeck	VULB9168	1323	May 24, 2025	May 23, 2026
Loop Antenna 9KHz-30MHz	Schwarzbeck	FMZB1519B	00014	May 24, 2025	May 23, 2026
Amplifier	SKET	LAPA_01G1 8G-45dB	SK2021040901	May 14, 2025	May 13, 2026
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 24, 2025	May 23, 2026
Amplifier 18GHz-40GHz	MITEQ	TTA1840-35- HG	2034381	May 14, 2025	May 13, 2026
Horn Antenna(18G Hz-40GHz)	Schwarzbeck	BBHA9170	00822	May 24, 2025	May 23, 2026
Spectrum Analyzer 9kHz-40GHz	R&S	FSP40	100363	May 14, 2025	May 13, 2026
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

Frequency (MHz)	Limit (dBuV)	
	Quas-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Notes:
1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

6.3 Test procedure

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

- The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

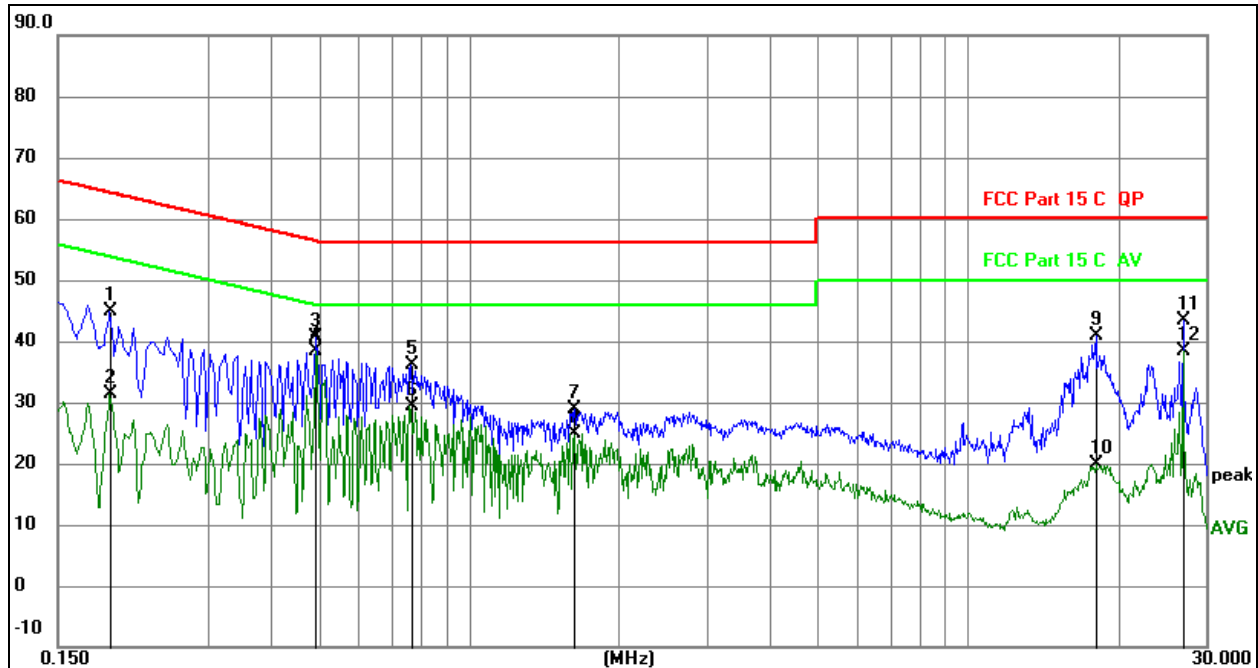
6.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

We pretest AC 120V and AC 240V, the worst voltage was AC 120V and the data recording in the report.

6.5 Test Result

Temperature:	24.3 °C	Relative Humidity:	53%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	Mode 3	Polarization :	L

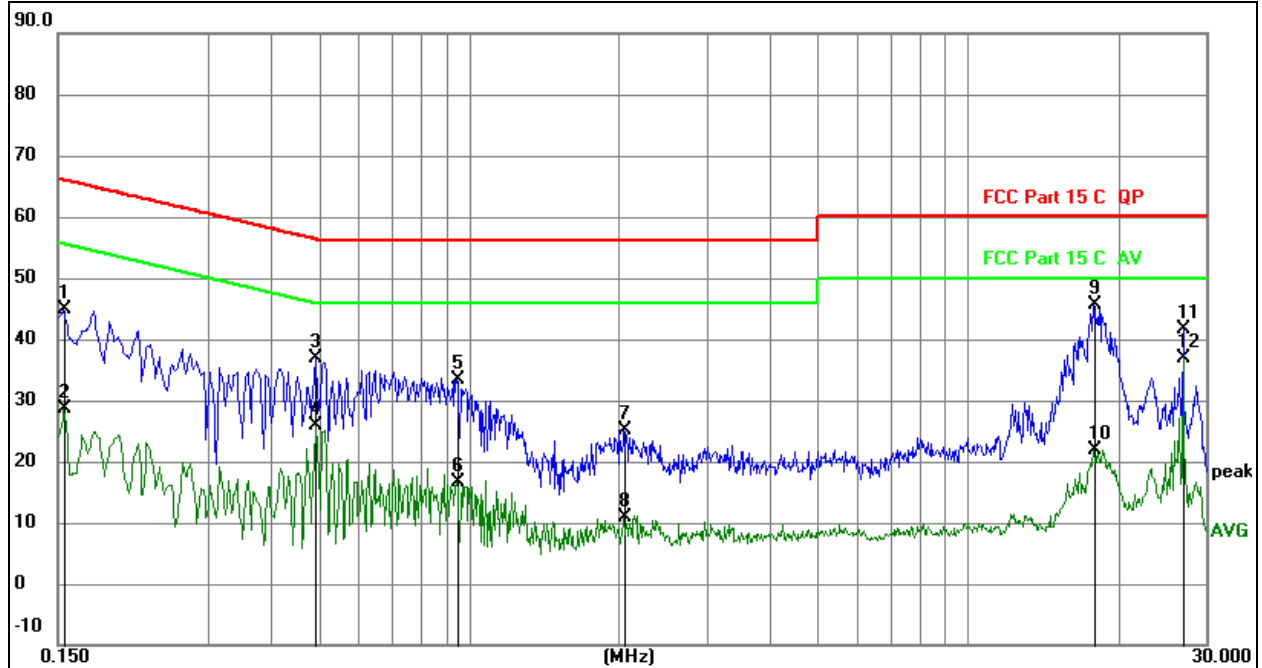


Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq. MHz	Reading Level dB	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1904	24.75	20.07	44.82	64.02	-19.20	QP
2		0.1904	11.36	20.07	31.43	54.02	-22.59	AVG
3		0.4941	20.58	20.08	40.66	56.10	-15.44	QP
4	*	0.4941	18.19	20.08	38.27	46.10	-7.83	AVG
5		0.7630	15.99	20.09	36.08	56.00	-19.92	QP
6		0.7630	9.21	20.09	29.30	46.00	-16.70	AVG
7		1.6276	8.72	20.10	28.82	56.00	-27.18	QP
8		1.6276	4.79	20.10	24.89	46.00	-21.11	AVG
9		18.0393	20.66	20.32	40.98	60.00	-19.02	QP
10		18.0393	-0.42	20.32	19.90	50.00	-30.10	AVG
11		26.9836	23.05	20.29	43.34	60.00	-16.66	QP
12		26.9836	18.18	20.29	38.47	50.00	-11.53	AVG

Temperature:	24.3 °C	Relative Humidity:	53%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	Mode 3	Polarization:	N



Remark:

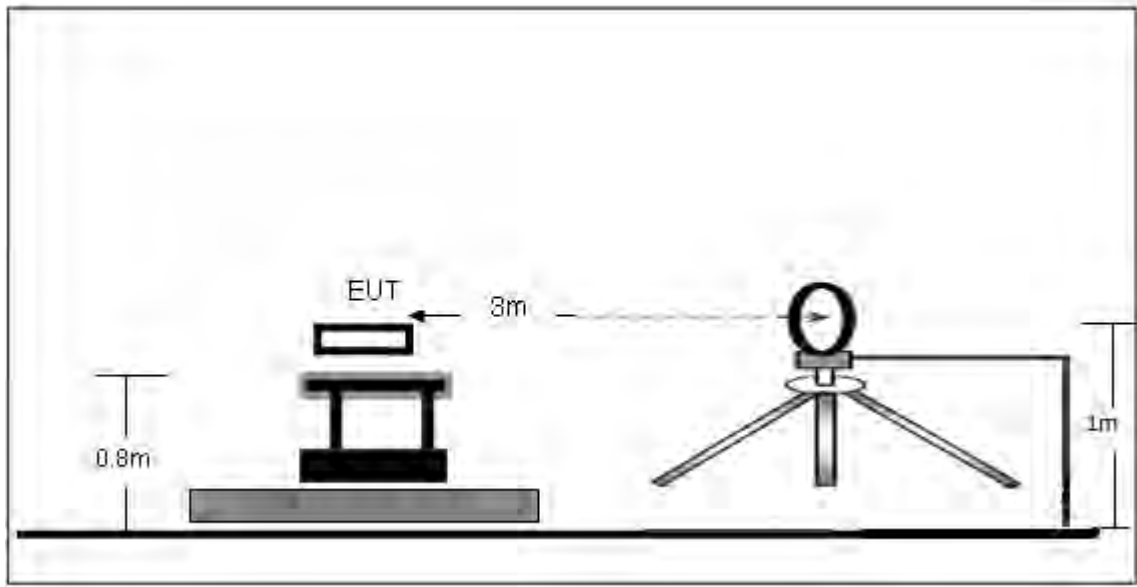
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement = Reading Level + Correct Factor
4. Over = Measurement - Limit

No.	Mk.	Freq. MHz	Reading Level dB	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1545	24.74	20.07	44.81	65.75	-20.94	QP
2		0.1545	8.44	20.07	28.51	55.75	-27.24	AVG
3		0.4920	16.74	20.08	36.82	56.13	-19.31	QP
4		0.4920	5.76	20.08	25.84	46.13	-20.29	AVG
5		0.9465	13.24	20.09	33.33	56.00	-22.67	QP
6		0.9465	-3.35	20.09	16.74	46.00	-29.26	AVG
7		2.0490	5.05	20.10	25.15	56.00	-30.85	QP
8		2.0490	-9.18	20.10	10.92	46.00	-35.08	AVG
9		17.9160	25.29	20.32	45.61	60.00	-14.39	QP
10		17.9160	1.59	20.32	21.91	50.00	-28.09	AVG
11		27.0015	21.26	20.29	41.55	60.00	-18.45	QP
12	*	27.0015	16.54	20.29	36.83	50.00	-13.17	AVG

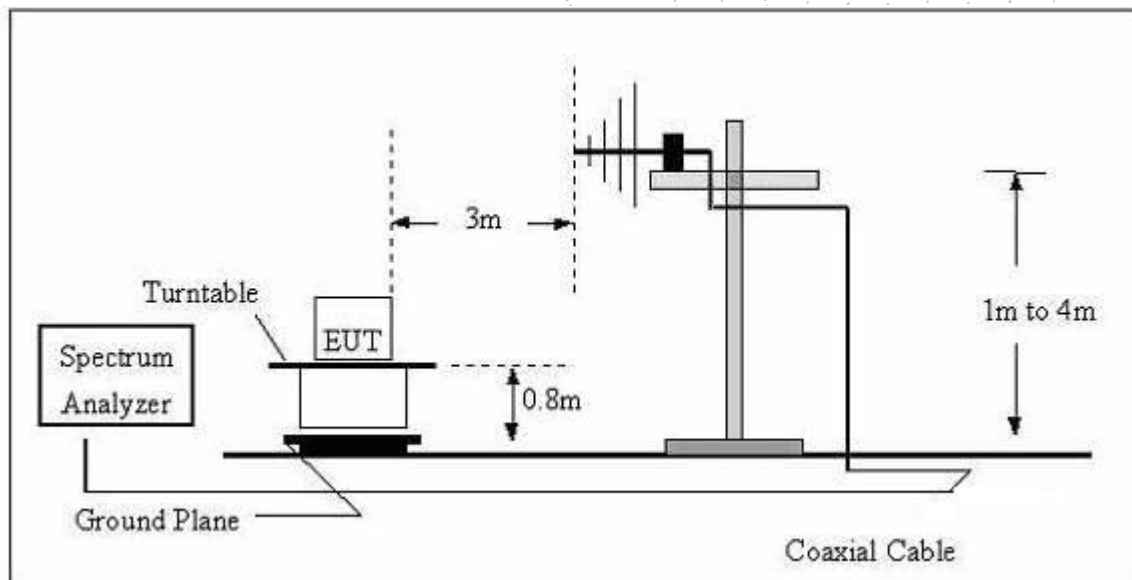
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

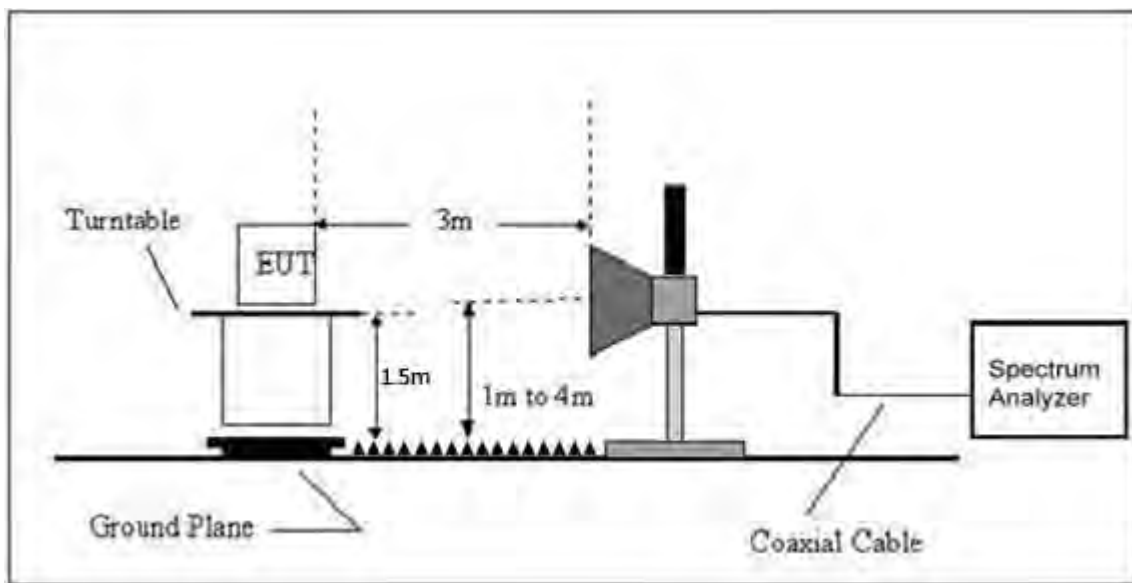
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



7.2 Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequency (MHz)	Field Strength uV/m	Distance (m)	Field Strength Limit at 3m Distance	
			uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	$10000 * 2400/F(\text{kHz})$	$20\log^{(2400/F(\text{kHz}))} + 80$
0.490 ~ 1.705	24000/F(kHz)	30	$100 * 24000/F(\text{kHz})$	$20\log^{(24000/F(\text{kHz}))} + 40$
1.705 ~ 30	30	30	$100 * 30$	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

Limits Of Radiated Emission Measurement (Above 1000MHz)

Frequency (MHz)	Limit (dBuV/m) (at 3M)	
	Peak	Average
Above 1000	74	54

Notes:

- (1)The limit for radiated test was performed according to FCC PART 15C.
- (2)The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

7.3 Test procedure

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10-2013. The test distance is 3m. The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.

This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205.

It must be performed with the highest gain of each type of antenna proposed for use with the EUT. Use the following spectrum analyzer settings:

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

- The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

Note: for the frequency ranges below 30 MHz, a narrower RBW is used for these ranges but the measured value should add a RBW correction factor (RBWCF) where $RBWCF [dB] = 10 \cdot \lg(100 [kHz] / \text{narrower RBW} [kHz])$. , the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

7.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

7.5 Test Result

Below 30MHz

Temperature:	26 °C	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	Mode 3		

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

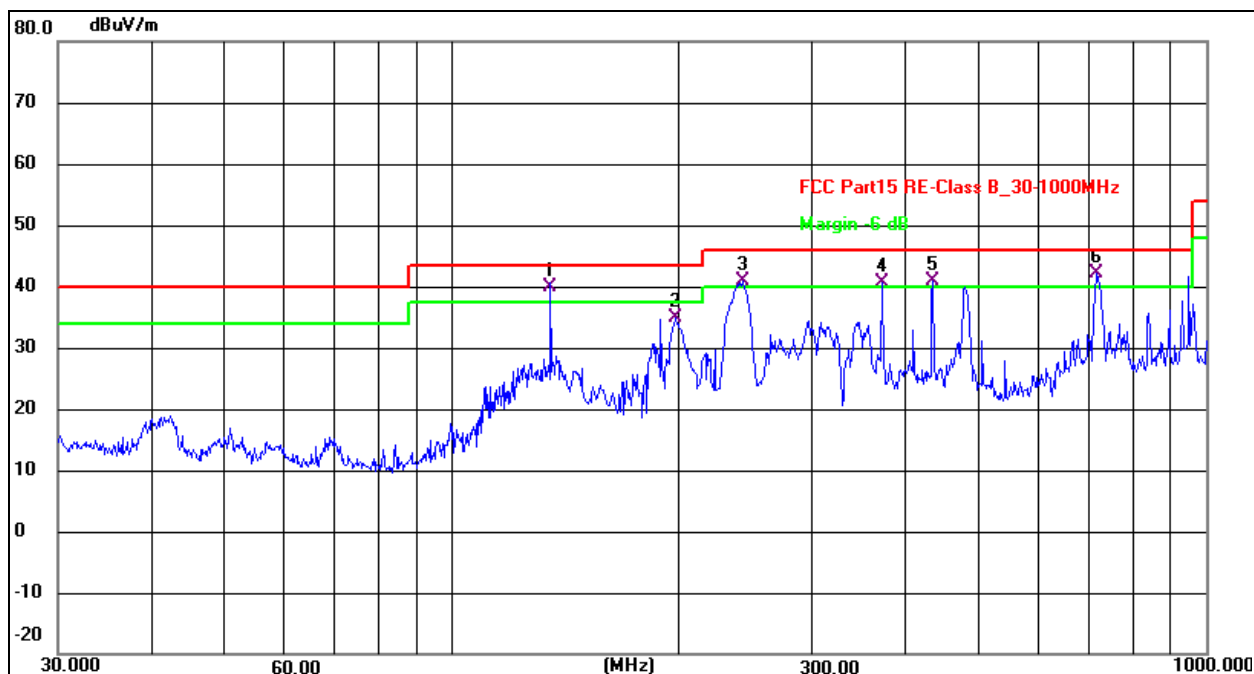
Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance/test distance})$ (dB);

Limit line = specific limits(dBuV) + distance extrapolation factor.

Temperature:	24.1℃	Relative Humidity:	51%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	Mode 3	Polarization :	Horizontal

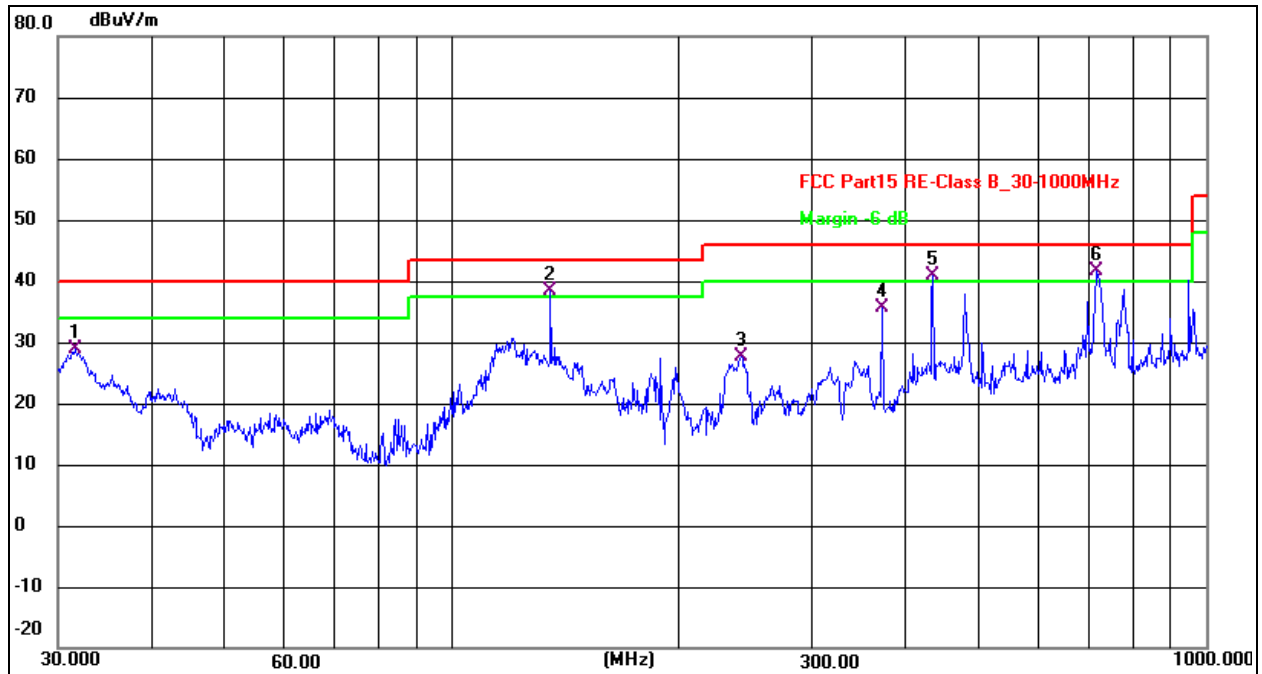


Remark:

- Factor = Antenna Factor + Cable Loss – Pre-amplifier.
- Measurement = Reading Level + Correct Factor
- Over = Measurement - Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	135.0318	52.03	-12.19	39.84	43.50	-3.66	QP
2	197.8928	49.30	-14.44	34.86	43.50	-8.64	QP
3 !	242.5252	53.79	-12.90	40.89	46.00	-5.11	QP
4 !	372.0045	49.18	-8.44	40.74	46.00	-5.26	QP
5 !	434.0650	47.74	-6.78	40.96	46.00	-5.04	QP
6 !	716.6820	42.49	-0.25	42.24	46.00	-3.76	QP

Temperature:	24.1℃	Relative Humidity:	51%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	Mode 3	Polarization:	Vertical



Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement = Reading Level + Correct Factor
3. Over = Measurement - Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	31.6201	41.14	-12.32	28.82	40.00	-11.18	QP
2 !	135.0319	50.46	-12.19	38.27	43.50	-5.23	QP
3	241.6763	40.46	-12.93	27.53	46.00	-18.47	QP
4	372.0045	43.97	-8.44	35.53	46.00	-10.47	QP
5 !	434.0650	47.75	-6.78	40.97	46.00	-5.03	QP
6 *	716.6820	41.93	-0.25	41.68	46.00	-4.32	QP

☒ Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

All the modes has been tested and the worst result 802.11a recorded as below:

Test mode: 802.11a Frequency(MHz): 5180

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)
5149.19	H	63.99	74	45.84	54
5149.56	V	55.39	74	41.62	54

Test mode: 802.11a Frequency(MHz): 5240

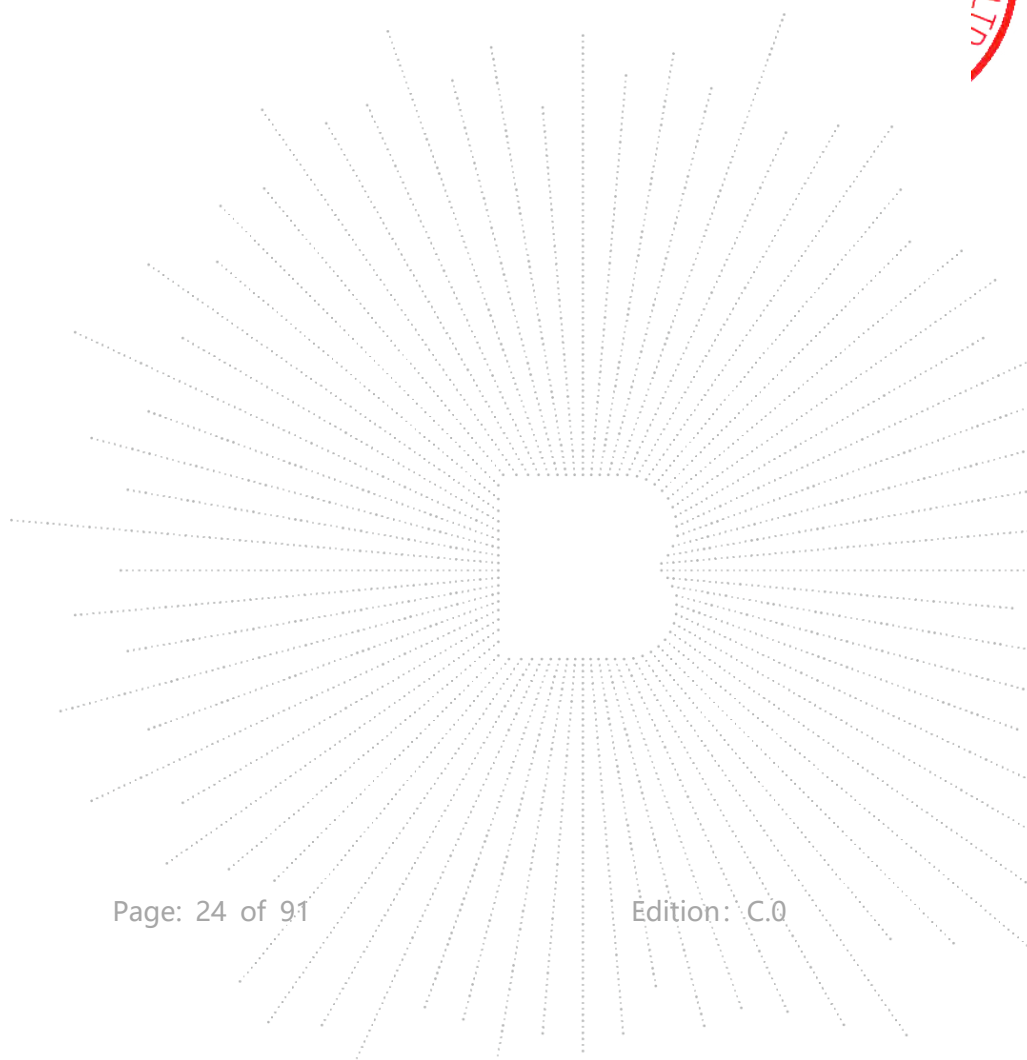
Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)
5300.79	H	45.60	74	34.64	54
5300.46	V	41.31	74	28.23	54

Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).

(2) Emission Level= Reading Level+Correct Factor.

(3) Correct Factor= Ant_F + Cab_L - Preamp

CO., LTD.



Test Mode:	TX(5.1G) - 802.11a
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Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measurement (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G							
V	4434.066	71.12	-20.73	50.39	68.20	-17.81	PK
V	4434.066	59.65	-20.73	38.92	54.00	-15.08	AV
V	10360.061	61.20	-9.36	51.84	68.20	-16.36	PK
V	10360.061	49.94	-9.36	40.58	54.00	-13.42	AV
V	15540.175	64.34	-7.84	56.50	74.00	-17.50	PK
V	15540.175	49.44	-7.84	41.60	54.00	-12.40	AV
H	4434.061	73.69	-20.73	52.96	68.20	-15.24	PK
H	4434.061	59.81	-20.73	39.08	54.00	-14.92	AV
H	10360.093	60.80	-9.36	51.44	68.20	-16.76	PK
H	10360.093	49.63	-9.36	40.27	54.00	-13.73	AV
H	15540.083	61.34	-7.84	53.50	74.00	-20.50	PK
H	15540.083	49.43	-7.84	41.59	54.00	-12.41	AV
Middle Channel (5200 MHz)-Above 1G							
V	4592.077	70.68	-20.42	50.27	74.00	-23.73	PK
V	4592.077	59.37	-20.42	38.96	54.00	-15.04	AV
V	10400.071	63.66	-9.30	54.36	68.20	-13.84	PK
V	10400.071	49.32	-9.30	40.02	54.00	-13.98	AV
V	15600.128	60.29	-7.82	52.47	74.00	-21.53	PK
V	15600.128	49.78	-7.82	41.96	54.00	-12.04	AV
H	4592.089	72.39	-20.42	51.98	74.00	-22.02	PK
H	4592.089	59.61	-20.42	39.19	54.00	-14.81	AV
H	10400.028	64.89	-9.30	55.59	68.20	-12.61	PK
H	10400.028	49.69	-9.30	40.39	54.00	-13.61	AV
H	15600.051	64.99	-7.82	57.17	74.00	-16.83	PK
H	15600.051	49.53	-7.82	41.71	54.00	-12.29	AV
High Channel (5240 MHz)-Above 1G							
V	4739.137	70.99	-20.12	50.87	74.00	-23.13	PK
V	4739.137	59.23	-20.12	39.10	54.00	-14.90	AV
V	10480.199	61.47	-9.18	52.29	68.20	-15.91	PK
V	10480.199	49.64	-9.18	40.46	54.00	-13.54	AV
V	15720.194	62.13	-7.78	54.35	74.00	-19.65	PK
V	15720.194	49.55	-7.78	41.77	54.00	-12.23	AV
H	4739.176	74.28	-20.12	54.16	74.00	-19.84	PK
H	4739.176	59.65	-20.12	39.53	54.00	-14.47	AV
H	10480.075	62.24	-9.18	53.06	68.20	-15.14	PK
H	10480.075	49.06	-9.18	39.88	54.00	-14.12	AV
H	15720.065	62.44	-7.78	54.66	74.00	-19.34	PK
H	15720.065	49.36	-7.78	41.58	54.00	-12.42	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11n-HT20
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Polar (H/V)	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5180 MHz)-Above 1G							
V	4434.037	74.35	-20.73	53.62	68.20	-14.58	PK
V	4434.037	59.69	-20.73	38.95	54.00	-15.05	AV
V	10360.183	61.19	-9.36	51.83	68.20	-16.37	PK
V	10360.183	49.37	-9.36	40.01	54.00	-13.99	AV
V	15540.019	62.63	-7.84	54.79	74.00	-19.21	PK
V	15540.019	49.01	-7.84	41.17	54.00	-12.83	AV
H	4434.055	73.95	-20.73	53.22	68.20	-14.98	PK
H	4434.055	59.61	-20.73	38.87	54.00	-15.13	AV
H	10360.122	63.24	-9.36	53.88	68.20	-14.32	PK
H	10360.122	49.74	-9.36	40.38	54.00	-13.62	AV
H	15540.061	64.46	-7.84	56.62	74.00	-17.38	PK
H	15540.061	49.87	-7.84	42.03	54.00	-11.97	AV
Middle Channel (5200 MHz)-Above 1G							
V	4592.188	72.00	-20.42	51.59	74.00	-22.41	PK
V	4592.188	59.36	-20.42	38.95	54.00	-15.05	AV
V	10400.116	64.34	-9.30	55.04	68.20	-13.16	PK
V	10400.116	49.61	-9.30	40.31	54.00	-13.69	AV
V	15600.112	63.61	-7.82	55.79	74.00	-18.21	PK
V	15600.112	49.52	-7.82	41.70	54.00	-12.30	AV
H	4592.161	74.70	-20.42	54.28	74.00	-19.72	PK
H	4592.161	59.13	-20.42	38.72	54.00	-15.28	AV
H	10400.119	63.40	-9.30	54.10	68.20	-14.10	PK
H	10400.119	49.85	-9.30	40.55	54.00	-13.45	AV
H	15600.019	64.47	-7.82	56.65	74.00	-17.35	PK
H	15600.019	49.59	-7.82	41.77	54.00	-12.23	AV
High Channel (5240 MHz)-Above 1G							
V	4739.076	71.77	-20.12	51.65	74.00	-22.35	PK
V	4739.076	59.57	-20.12	39.45	54.00	-14.55	AV
V	10480.055	62.36	-9.18	53.18	68.20	-15.02	PK
V	10480.055	49.24	-9.18	40.06	54.00	-13.94	AV
V	15720.184	61.46	-7.78	53.68	74.00	-20.32	PK
V	15720.184	49.67	-7.78	41.89	54.00	-12.11	AV
H	4739.070	72.81	-20.12	52.69	74.00	-21.31	PK
H	4739.070	59.40	-20.12	39.28	54.00	-14.72	AV
H	10480.144	63.68	-9.18	54.50	68.20	-13.70	PK
H	10480.144	49.55	-9.18	40.37	54.00	-13.63	AV
H	15720.166	64.79	-7.78	57.01	74.00	-16.99	PK
H	15720.166	49.18	-7.78	41.40	54.00	-12.60	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.1G) - 802.11n-HT40
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Polar (H/V)	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5190 MHz)-Above 1G							
V	4434.180	74.10	-20.73	53.37	68.20	-14.83	PK
V	4434.180	59.90	-20.73	39.17	54.00	-14.83	AV
V	10380.187	60.51	-9.33	51.18	68.20	-17.02	PK
V	10380.187	49.21	-9.33	39.88	54.00	-14.12	AV
V	15570.038	64.60	-7.83	56.77	74.00	-17.23	PK
V	15570.038	49.13	-7.83	41.30	54.00	-12.70	AV
H	4434.193	73.69	-20.73	52.96	74.00	-21.04	PK
H	4434.193	59.32	-20.73	38.58	54.00	-15.42	AV
H	10380.196	60.53	-9.33	51.20	68.20	-17.00	PK
H	10380.196	49.47	-9.33	40.14	54.00	-13.86	AV
H	15570.066	61.48	-7.83	53.65	74.00	-20.35	PK
H	15570.066	49.22	-7.83	41.39	54.00	-12.61	AV
High Channel (5230 MHz)-Above 1G							
V	4739.008	73.63	-20.12	53.50	68.20	-14.70	PK
V	4739.008	59.97	-20.12	39.84	54.00	-14.16	AV
V	10460.172	63.97	-9.21	54.76	68.20	-13.44	PK
V	10460.172	49.32	-9.21	40.11	54.00	-13.89	AV
V	15690.092	64.90	-7.79	57.11	74.00	-16.89	PK
V	15690.092	49.50	-7.79	41.71	54.00	-12.29	AV
H	4739.133	71.65	-20.12	51.53	68.20	-16.67	PK
H	4739.133	59.16	-20.12	39.03	54.00	-14.97	AV
H	10460.147	61.68	-9.21	52.47	68.20	-15.73	PK
H	10460.147	49.32	-9.21	40.11	54.00	-13.89	AV
H	15690.110	61.28	-7.79	53.49	74.00	-20.51	PK
H	15690.110	49.44	-7.79	41.65	54.00	-12.35	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.8G) - 802.11a
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Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measurement (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G							
V	4679.058	70.02	-20.24	49.77	74.00	-24.23	PK
V	4679.058	59.87	-20.24	39.63	54.00	-14.37	AV
V	11490.154	61.36	-8.79	52.57	68.20	-15.63	PK
V	11490.154	49.64	-8.79	40.85	54.00	-13.15	AV
V	17235.120	56.57	-3.18	53.39	68.20	-14.81	PK
V	17235.120	44.21	-3.18	41.03	54.00	-12.97	AV
H	4679.046	74.16	-20.73	53.43	74.00	-20.57	PK
H	4679.046	59.31	-20.73	38.58	54.00	-15.42	AV
H	11490.191	62.88	-8.79	54.09	68.20	-14.11	PK
H	11490.191	49.03	-8.79	40.24	54.00	-13.76	AV
H	17235.072	56.26	-3.18	53.08	68.20	-15.12	PK
H	17235.072	44.36	-3.18	41.18	54.00	-12.82	AV
Middle Channel (5785 MHz)-Above 1G							
V	4592.006	72.77	-20.42	52.35	74.00	-21.65	PK
V	4592.006	59.66	-20.42	39.24	54.00	-14.76	AV
V	11570.192	63.89	-8.86	55.03	68.20	-13.17	PK
V	11570.192	49.17	-8.86	40.31	54.00	-13.69	AV
V	17355.130	58.20	-2.52	55.68	68.20	-12.52	PK
V	17355.130	44.09	-2.52	41.57	54.00	-12.43	AV
H	4592.162	72.58	-20.42	52.17	74.00	-21.83	PK
H	4592.162	59.75	-20.42	39.33	54.00	-14.67	AV
H	11570.041	61.14	-8.86	52.28	68.20	-15.92	PK
H	11570.041	49.43	-8.86	40.57	54.00	-13.43	AV
H	17355.194	58.08	-2.52	55.56	68.20	-12.64	PK
H	17355.194	44.65	-2.52	42.13	54.00	-11.87	AV
High Channel (5825 MHz)-Above 1G							
V	6039.087	71.67	-18.93	52.73	68.20	-15.47	PK
V	6039.087	59.85	-18.93	40.92	54.00	-13.08	AV
V	11650.156	60.04	-8.92	51.12	74.00	-22.88	PK
V	11650.156	49.42	-8.92	40.50	54.00	-13.50	AV
V	17475.019	57.45	-1.86	55.59	68.20	-12.61	PK
V	17475.019	44.04	-1.86	42.18	54.00	-11.82	AV
H	6039.189	72.20	-18.93	53.27	68.20	-14.93	PK
H	6039.189	59.44	-18.93	40.50	54.00	-13.50	AV
H	11650.151	61.01	-8.92	52.09	74.00	-21.91	PK
H	11650.151	49.04	-8.92	40.12	54.00	-13.88	AV
H	17475.189	59.27	-1.86	57.41	68.20	-10.79	PK
H	17475.189	44.17	-1.86	42.31	54.00	-11.69	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode: TX(5.8G) - 802.11n-HT20

Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measurement (dBuV/m)	Limits (dBuV/m)	Over (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G							
V	4679.176	72.68	-20.24	52.44	74.00	-21.56	PK
V	4679.176	59.31	-20.24	39.06	54.00	-14.94	AV
V	11490.054	61.08	-8.79	52.29	68.20	-15.91	PK
V	11490.054	49.82	-8.79	41.03	54.00	-12.97	AV
V	17235.157	56.57	-3.18	53.39	68.20	-14.81	PK
V	17235.157	44.33	-3.18	41.15	54.00	-12.85	AV
H	4679.028	70.04	-20.24	49.80	74.00	-24.20	PK
H	4679.028	59.88	-20.24	39.64	54.00	-14.36	AV
H	11490.179	61.82	-8.79	53.03	68.20	-15.17	PK
H	11490.179	49.53	-8.79	40.74	54.00	-13.26	AV
H	17235.059	55.81	-3.18	52.63	68.20	-15.57	PK
H	17235.059	44.72	-3.18	41.54	54.00	-12.46	AV
Middle Channel (5785 MHz)-Above 1G							
V	4592.170	70.92	-20.42	50.50	74.00	-23.50	PK
V	4592.170	59.52	-20.42	39.11	54.00	-14.89	AV
V	11570.086	60.12	-8.86	51.26	68.20	-16.94	PK
V	11570.086	49.96	-8.86	41.10	54.00	-12.90	AV
V	17355.052	56.80	-2.52	54.28	68.20	-13.92	PK
V	17355.052	44.59	-2.52	42.07	54.00	-11.93	AV
H	4592.166	71.12	-20.42	50.70	74.00	-23.30	PK
H	4592.166	59.47	-20.42	39.06	54.00	-14.94	AV
H	11570.135	62.28	-8.86	53.42	68.20	-14.78	PK
H	11570.135	49.56	-8.86	40.70	54.00	-13.30	AV
H	17355.101	57.65	-2.52	55.13	68.20	-13.07	PK
H	17355.101	44.86	-2.52	42.34	54.00	-11.66	AV
High Channel (5825 MHz)-Above 1G							
V	6039.062	73.73	-18.93	54.80	68.20	-13.40	PK
V	6039.062	59.25	-18.93	40.32	54.00	-13.68	AV
V	11650.120	60.02	-8.92	51.10	74.00	-22.90	PK
V	11650.120	49.19	-8.92	40.27	54.00	-13.73	AV
V	17475.040	55.50	-1.86	53.64	68.20	-14.56	PK
V	17475.040	44.93	-1.86	43.07	54.00	-10.93	AV
H	6039.037	71.31	-18.93	52.38	68.20	-15.82	PK
H	6039.037	59.72	-18.93	40.79	54.00	-13.21	AV
H	11650.064	60.92	-8.92	52.00	74.00	-22.00	PK
H	11650.064	49.88	-8.92	40.96	54.00	-13.04	AV
H	17475.097	55.41	-1.86	53.55	68.20	-14.65	PK
H	17475.097	44.23	-1.86	42.37	54.00	-11.63	AV

Note: PK value is lower than the Average value limit, So average didn't record.

The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Test Mode:	TX(5.8G) - 802.11n-HT40
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Polar (H/V)	Frequency	Reading Level	Correct Factor	Measurement	Limits	Over	Detector Type
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
Low Channel (5755 MHz)-Above 1G							
V	4679.156	74.85	-20.24	54.61	74.00	-19.39	PK
V	4679.156	59.84	-20.24	39.60	54.00	-14.40	AV
V	11510.094	64.15	-8.81	55.34	74.00	-18.66	PK
V	11510.094	49.16	-8.81	40.35	54.00	-13.65	AV
V	17265.103	56.13	-3.01	53.12	68.20	-15.08	PK
V	17265.103	44.51	-3.01	41.50	54.00	-12.50	AV
H	4679.021	70.19	-20.24	49.95	74.00	-24.05	PK
H	4679.021	59.92	-20.24	39.68	54.00	-14.32	AV
H	11510.115	64.06	-8.81	55.25	74.00	-18.75	PK
H	11510.115	49.87	-8.81	41.06	54.00	-12.94	AV
H	17265.099	56.57	-3.01	53.56	68.20	-14.64	PK
H	17265.099	44.70	-3.01	41.69	54.00	-12.31	AV
High Channel (5795 MHz)-Above 1G							
V	6039.183	74.81	-18.93	55.88	68.20	-12.32	PK
V	6039.183	59.10	-18.93	40.17	54.00	-13.83	AV
V	11590.094	60.37	-8.87	51.50	74.00	-22.50	PK
V	11590.094	49.11	-8.87	40.24	54.00	-13.76	AV
V	17385.171	55.13	-2.35	52.78	68.20	-15.42	PK
V	17385.171	44.21	-2.35	41.86	54.00	-12.14	AV
H	6039.191	73.77	-18.93	54.84	68.20	-13.36	PK
H	6039.191	59.71	-18.93	40.78	54.00	-13.22	AV
H	11590.142	62.39	-8.87	53.52	74.00	-20.48	PK
H	11590.142	49.23	-8.87	40.36	54.00	-13.64	AV
H	17385.008	59.95	-2.35	57.60	68.20	-10.60	PK
H	17385.008	44.09	-2.35	41.74	54.00	-12.26	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

8. Power Spectral Density Test

8.1 Block Diagram Of Test Setup



8.2 Limit

For the band 5.15-5.25 GHz,

(i) For an outdoor Wifi Repeater operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor Wifi Repeater operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point Wifi Repeaters operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz

(3) For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

8.3 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 above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 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 a 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 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:

- a) Set $RBW \geq 1/T$, where T is defined in section II.B.I.a).
- b) Set $VBW \geq 3$ RBW.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/RBW)$ to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
- d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add $10\log(1\text{MHz}/RBW)$ to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
- e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since RBW=100 KHz is available on nearly all spectrum analyzers.

8.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

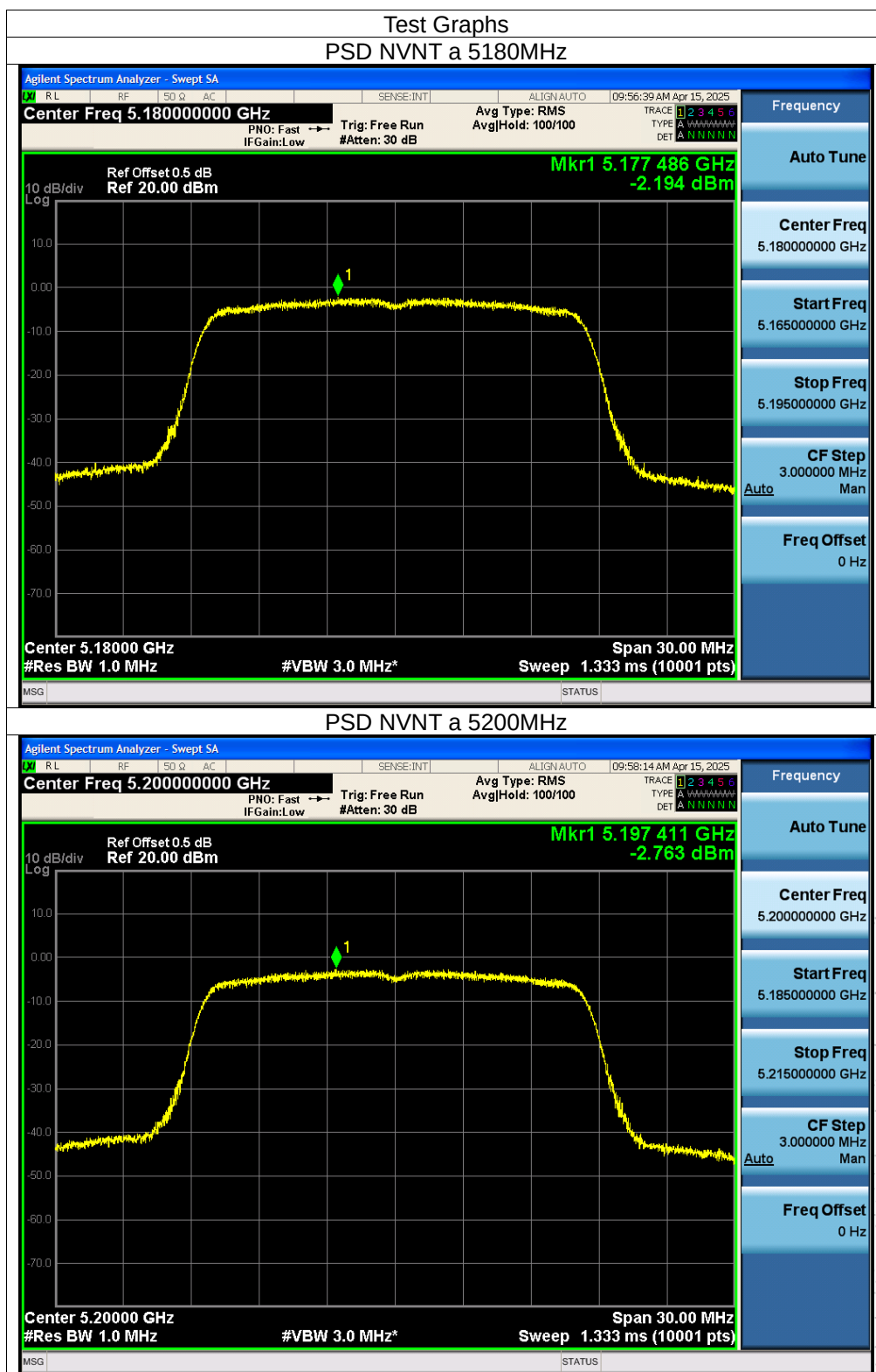


8.5 Test Result

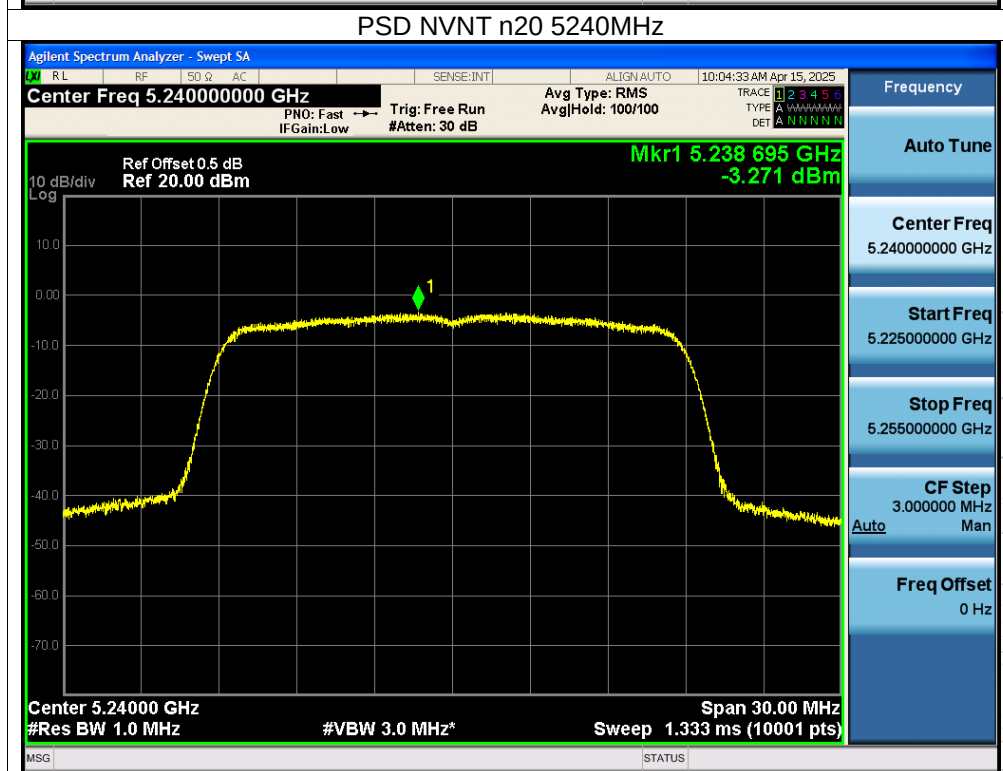
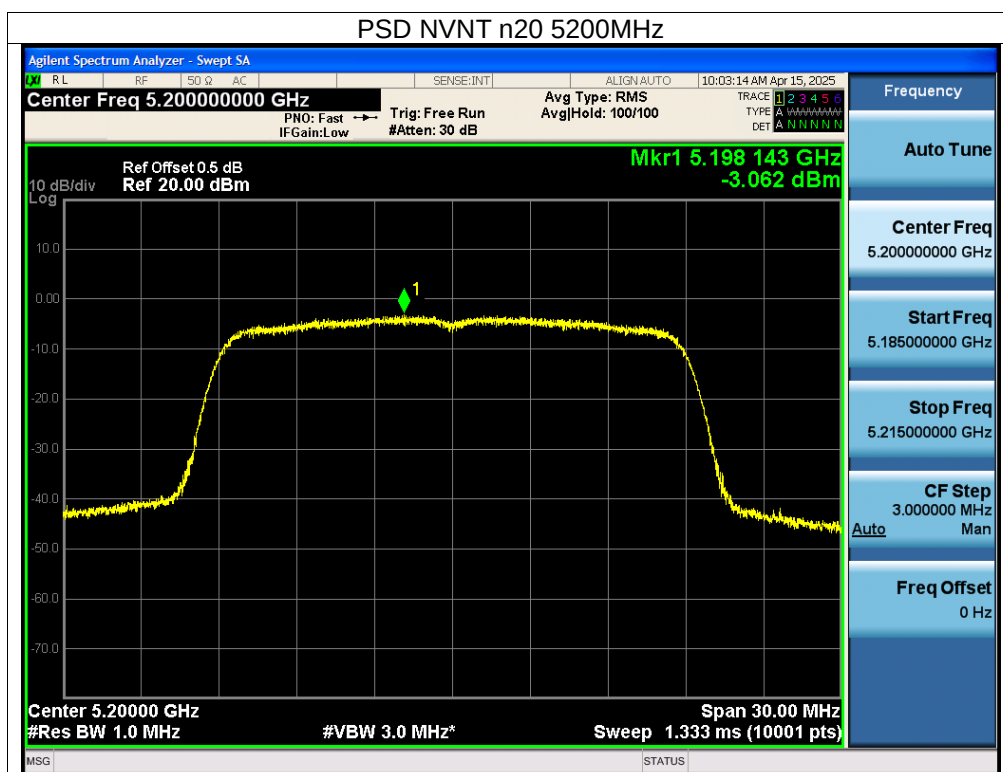
Temperature:	26 °C	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	(5180-5240MHz); (5745-5825MHz)		

Condition	Mode	Frequency (MHz)	Conducted PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	-2.19	11	Pass
NVNT	a	5200	-2.76	11	Pass
NVNT	a	5240	-3.03	11	Pass
NVNT	n20	5180	-3.14	11	Pass
NVNT	n20	5200	-3.06	11	Pass
NVNT	n20	5240	-3.27	11	Pass
NVNT	n40	5190	-7.98	11	Pass
NVNT	n40	5230	-8.32	11	Pass

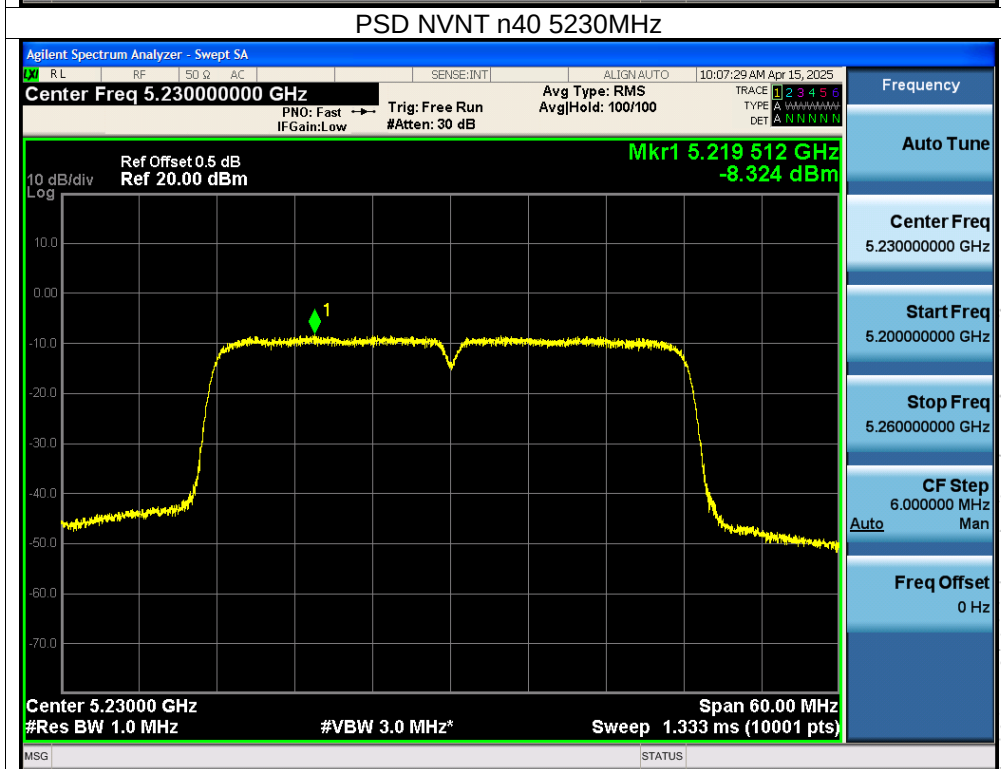
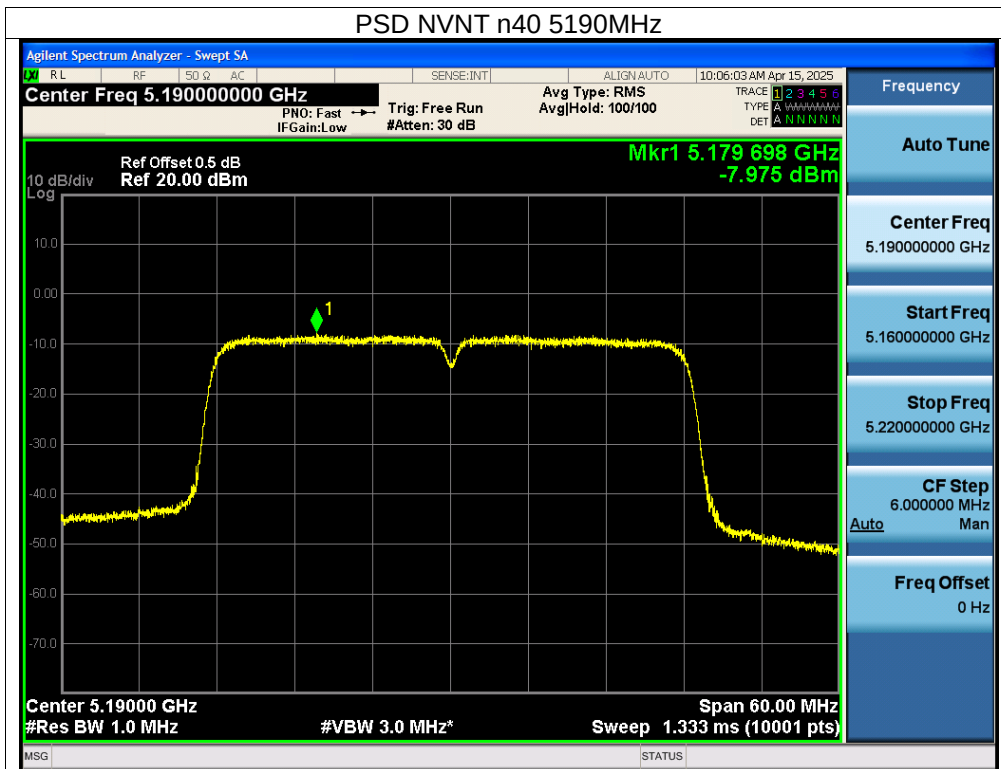
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	-2.31	30	Pass
NVNT	a	5785	-3.19	30	Pass
NVNT	a	5825	-4.39	30	Pass
NVNT	n20	5745	-2.87	30	Pass
NVNT	n20	5785	-3.45	30	Pass
NVNT	n20	5825	-4.46	30	Pass
NVNT	n40	5755	-7.83	30	Pass
NVNT	n40	5795	-8.16	30	Pass

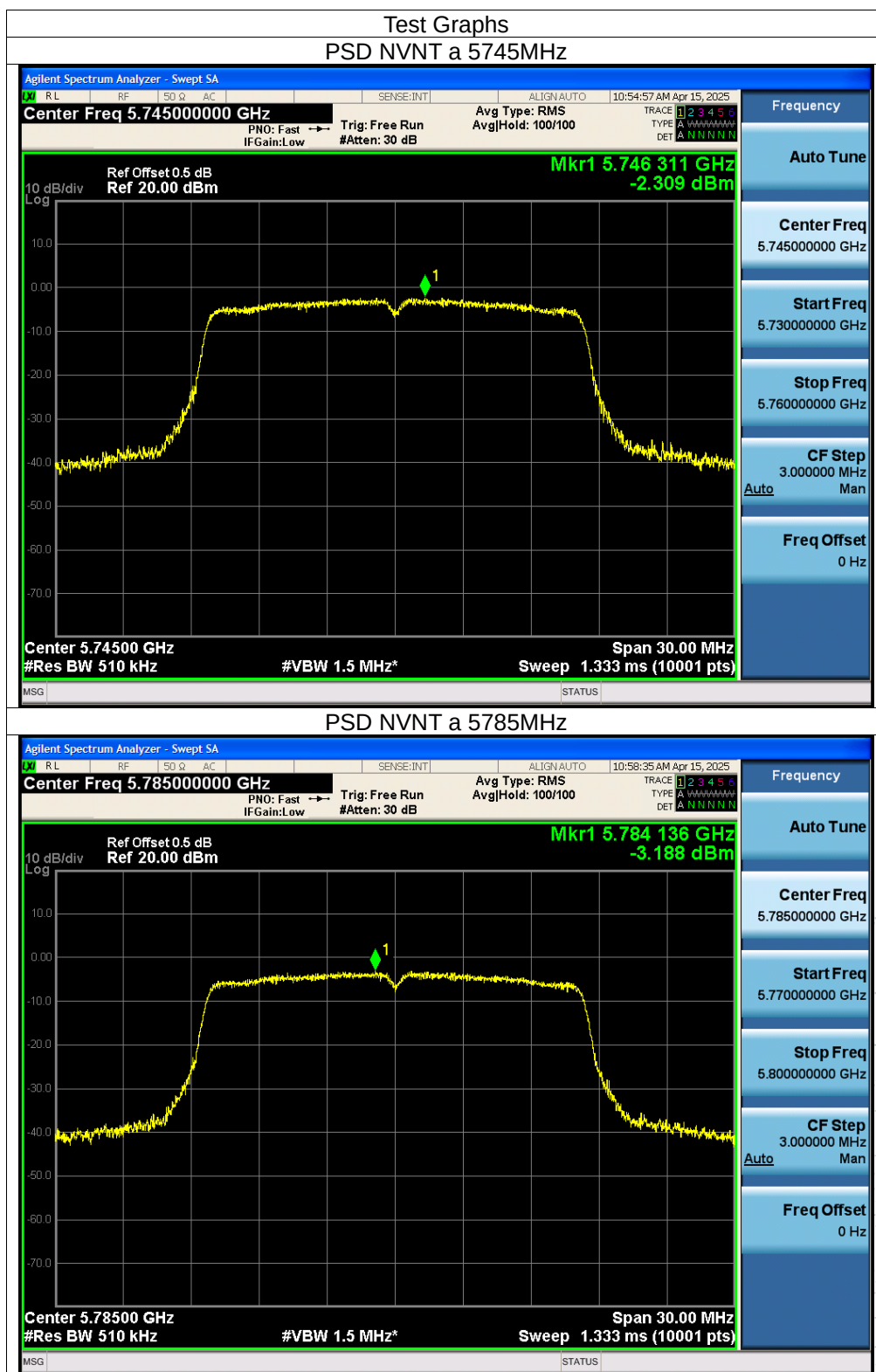


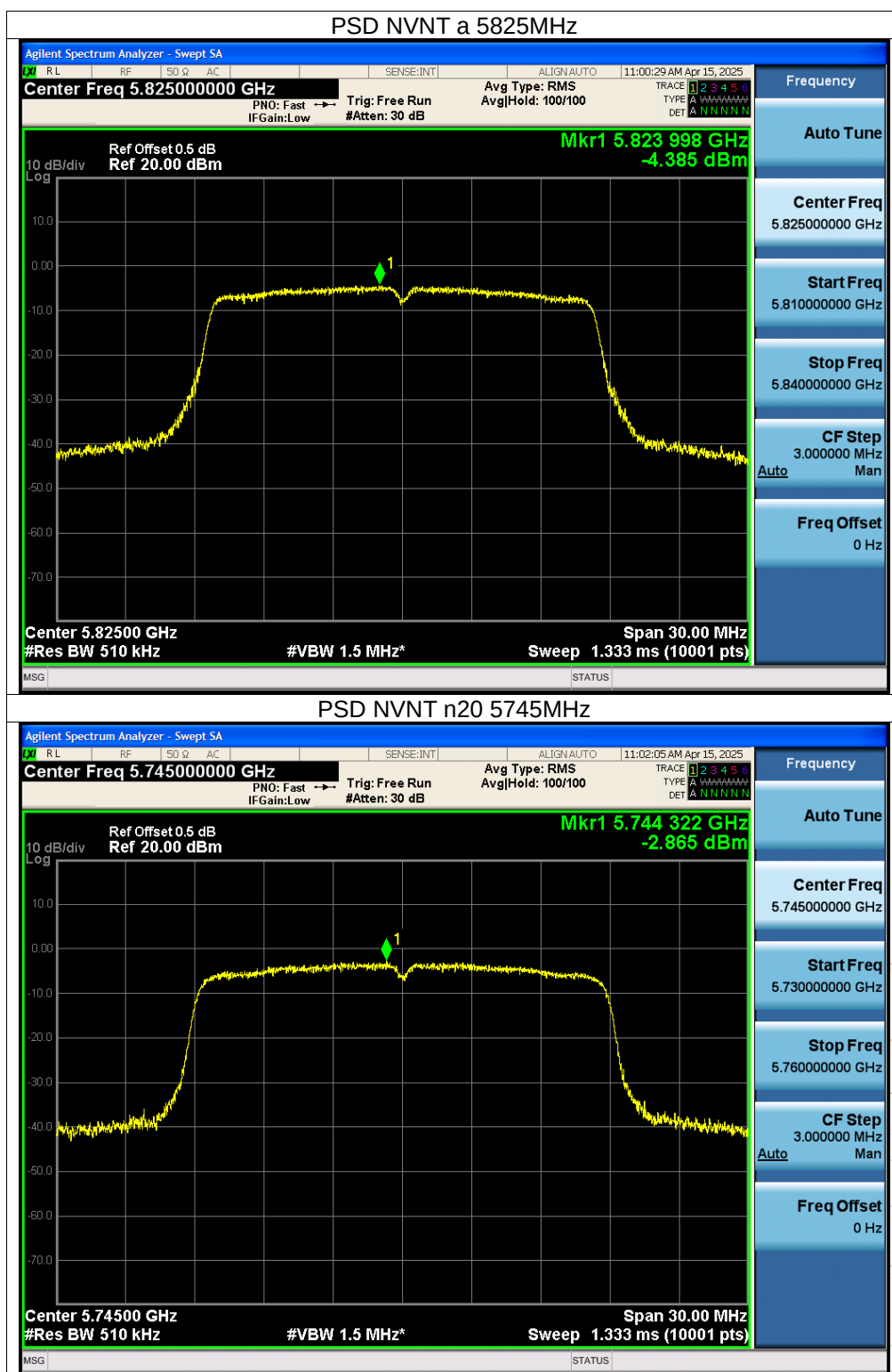


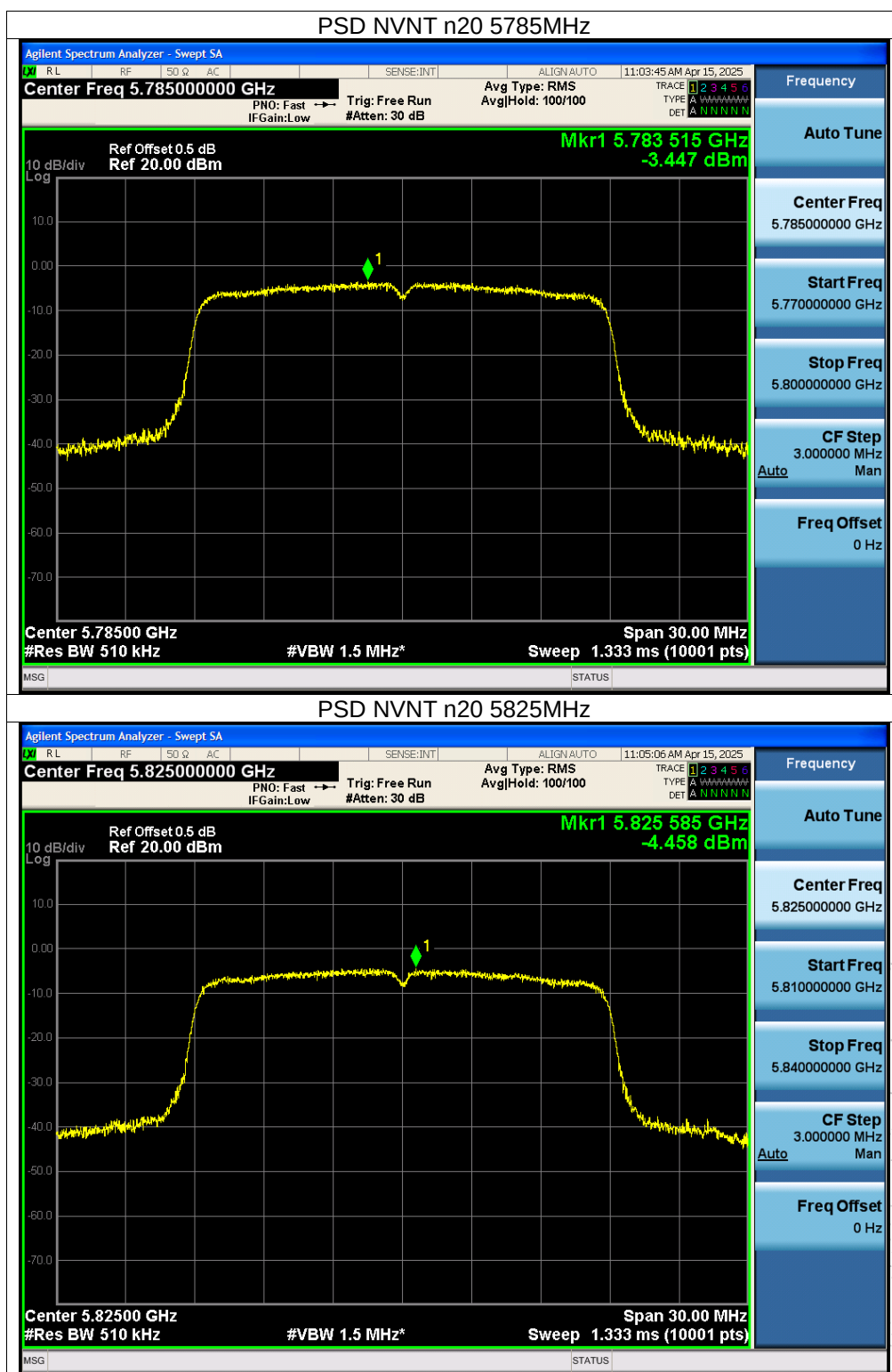


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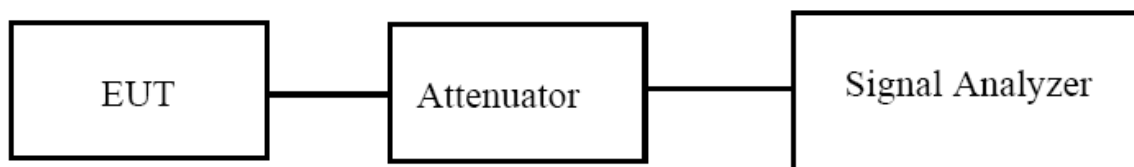






9. 26dB & 6dB & 99% Emission Bandwidth

9.1 Block Diagram Of Test Setup



9.2 Limit

The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

9.3 Test procedure

a) Set RBW = approximately 1% of the emission bandwidth.

b) Set the VBW > RBW.

c) Detector = Peak.

d) Trace mode = max hold.

e) 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 following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.

2. Set span = 1.5 times to 5.0 times the OBW.

3. Set RBW = 1 % to 5 % of the OBW

4. Set VBW $\geq 3 \cdot$ RBW

5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

6. Use the 99 % power bandwidth function of the instrument (if available).

7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

9.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

9.5 Test Result

Temperature:	26 °C	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	(5180-5240MHz)		

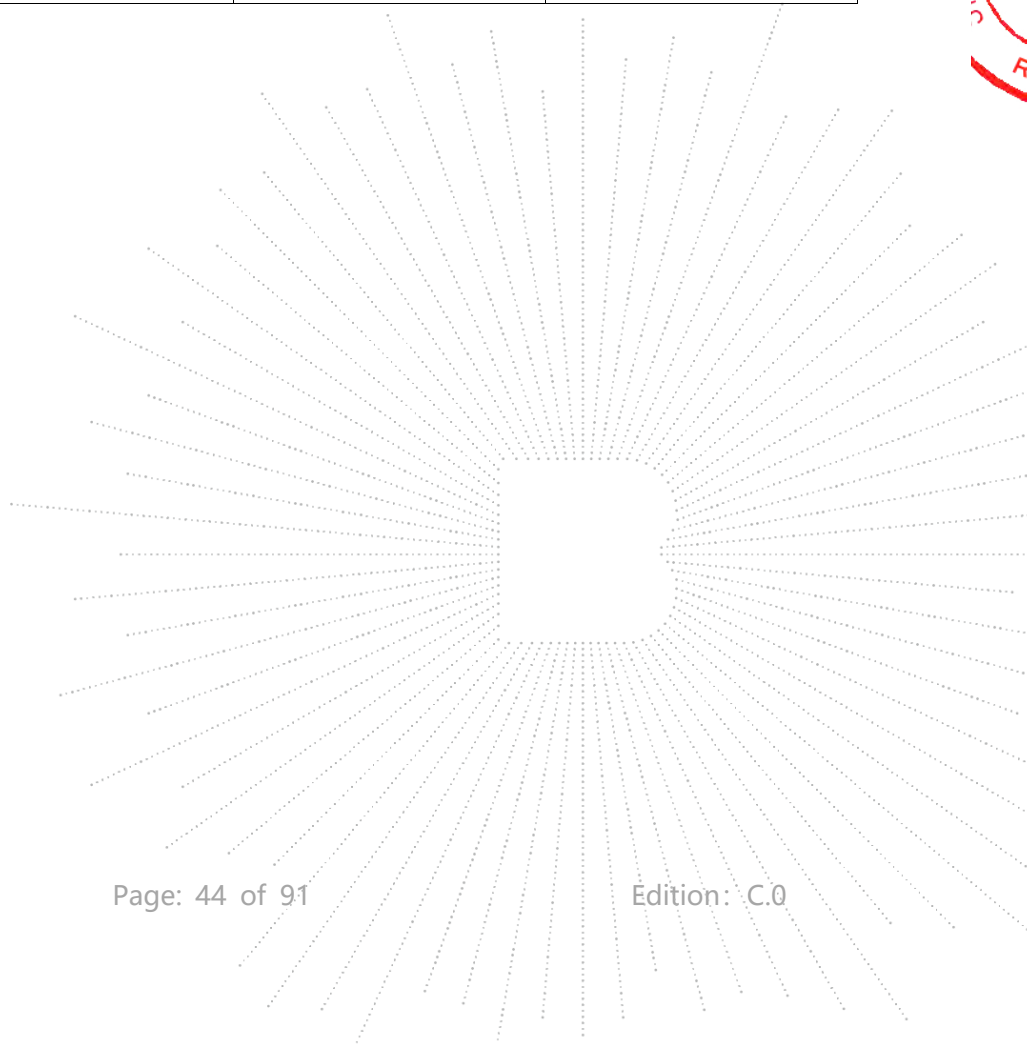
Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)
NVNT	a	5180	18.99
NVNT	a	5200	18.75
NVNT	a	5240	18.90
NVNT	n20	5180	19.19
NVNT	n20	5200	19.44
NVNT	n20	5240	19.45
NVNT	n40	5190	38.93
NVNT	n40	5230	38.87

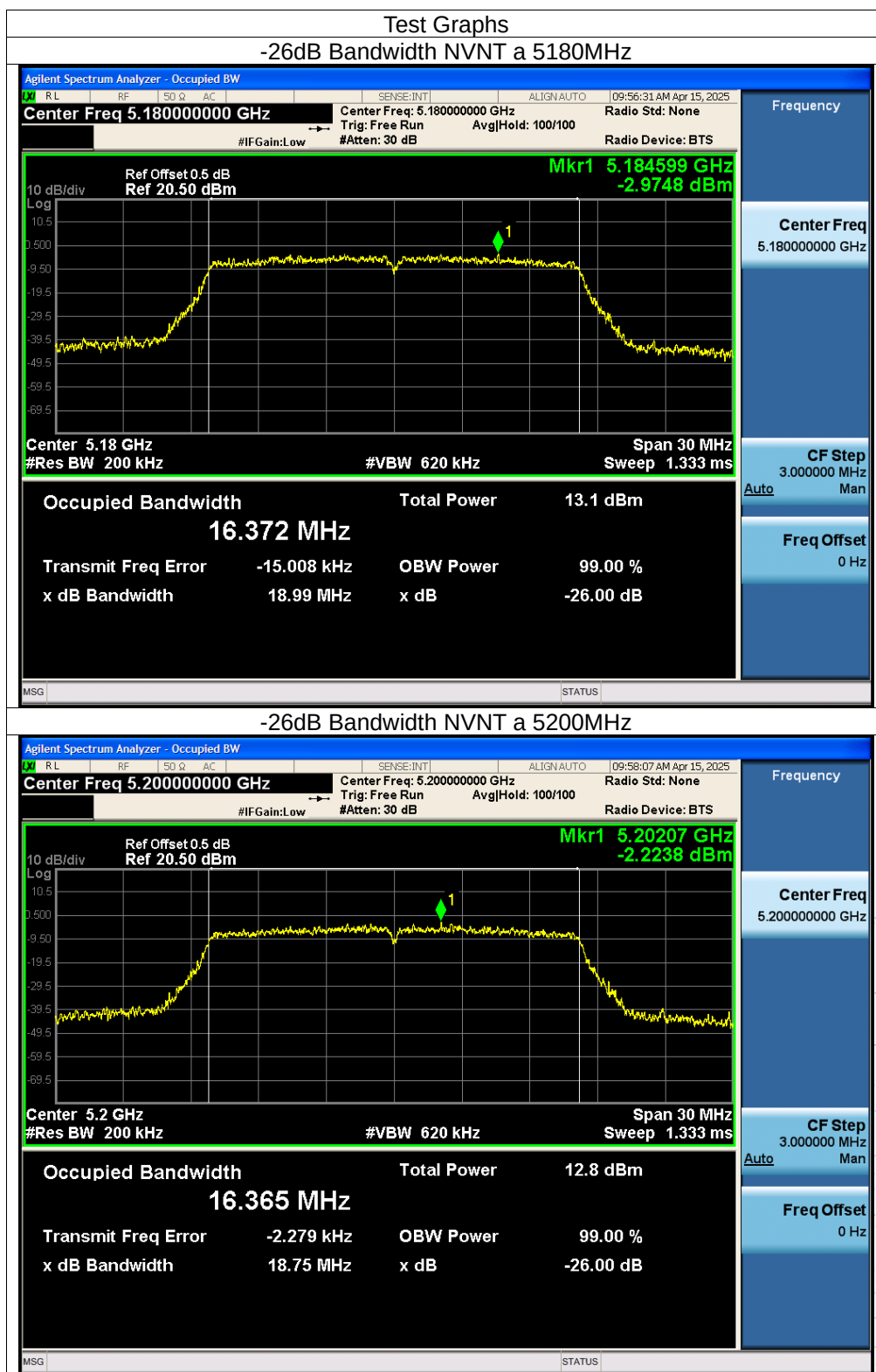
Condition	Mode	Frequency (MHz)	99% OBW (MHz)
NVNT	a	5180	16.37
NVNT	a	5200	16.38
NVNT	a	5240	16.35
NVNT	n20	5180	17.41
NVNT	n20	5200	17.40
NVNT	n20	5240	17.41
NVNT	n40	5190	35.87
NVNT	n40	5230	35.86

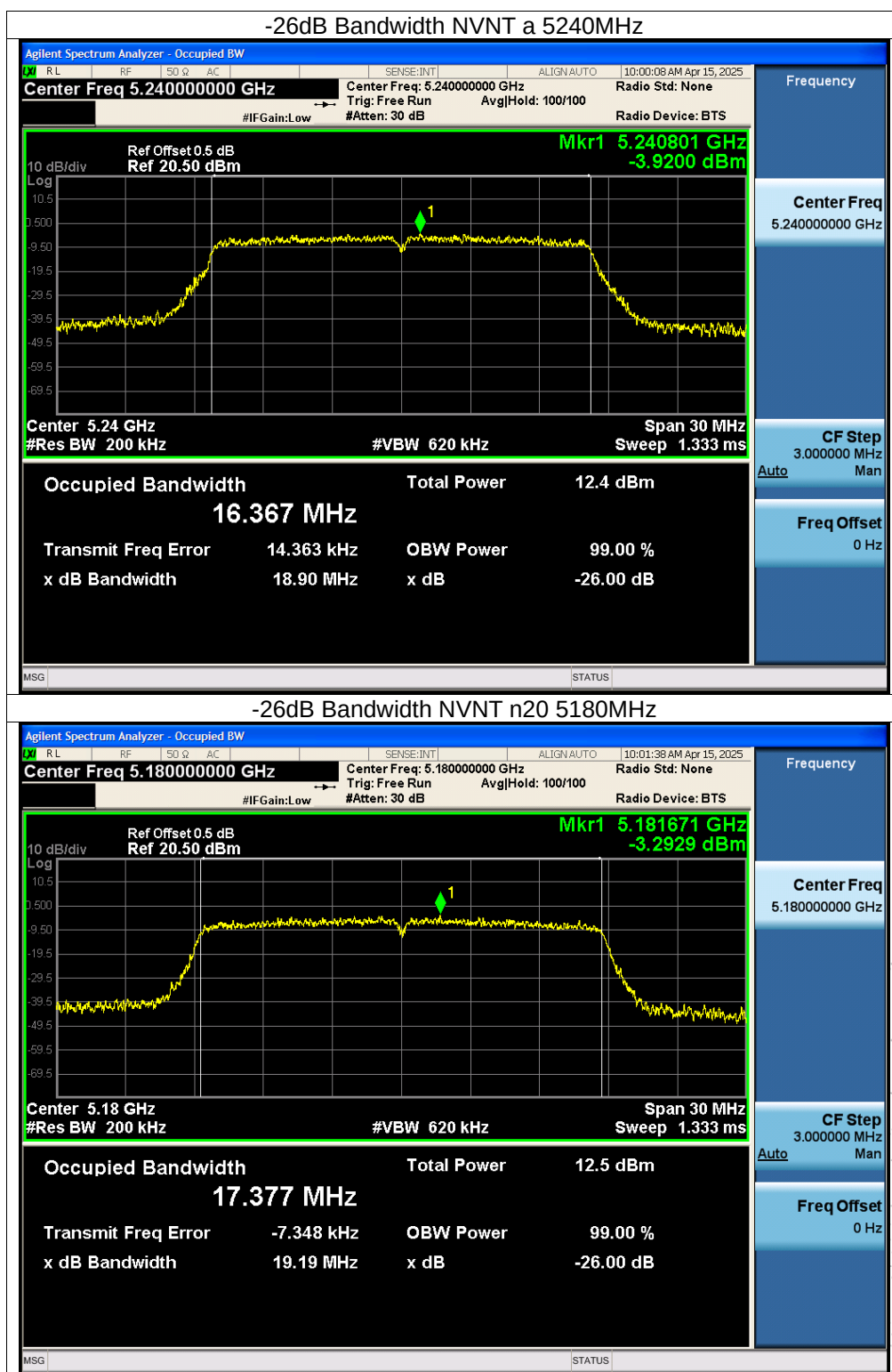
Temperature:	26 °C	Relative Humidity:	54%RH
Pressure:	101KPa	Test Voltage:	AC 120V/60Hz
Test Mode:	(5745-5825MHz)		

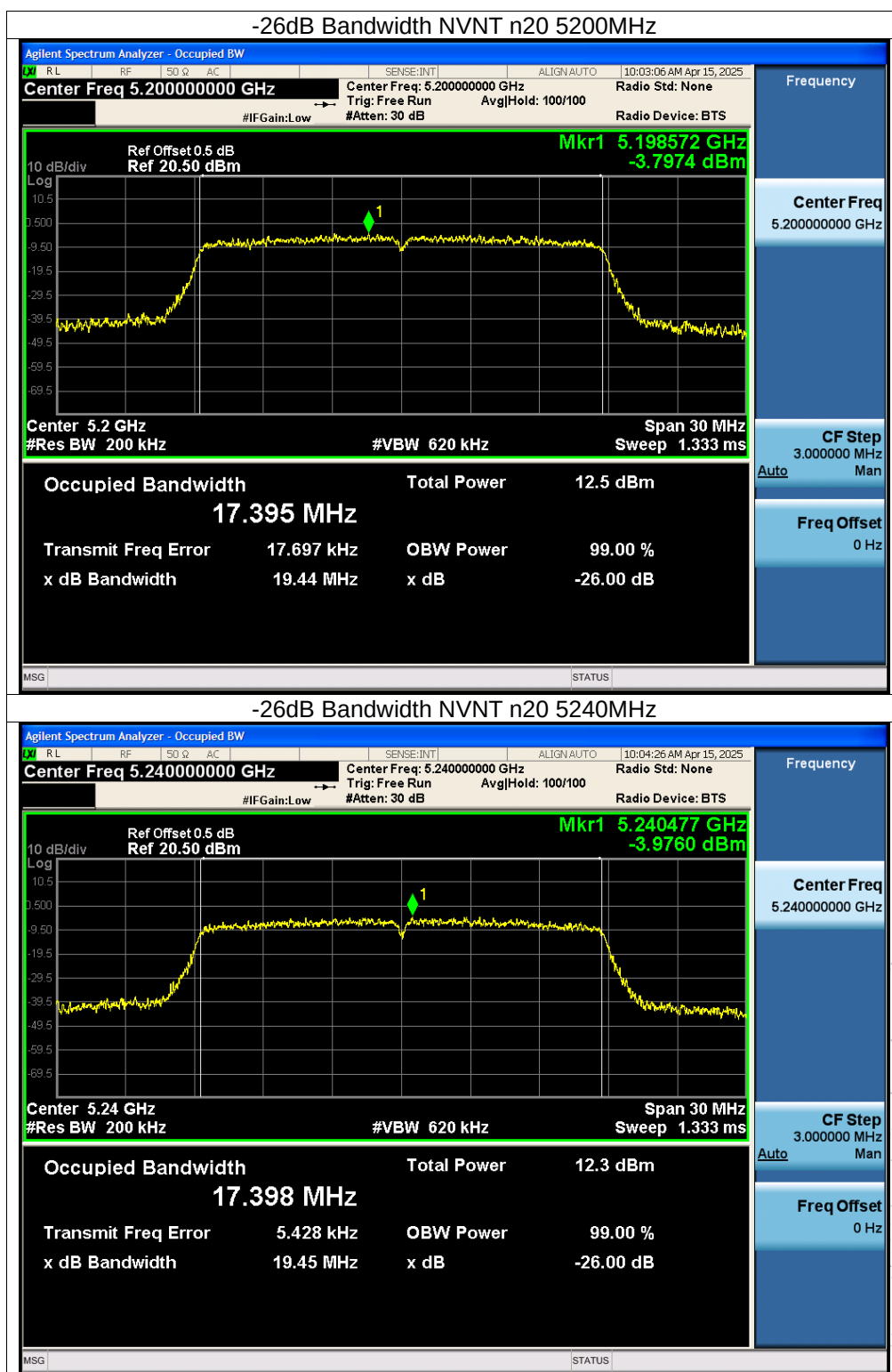
Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)
NVNT	a	5745	16.39
NVNT	a	5785	16.30
NVNT	a	5825	15.90
NVNT	n20	5745	17.33
NVNT	n20	5785	16.93
NVNT	n20	5825	17.33
NVNT	n40	5755	35.28
NVNT	n40	5795	35.33

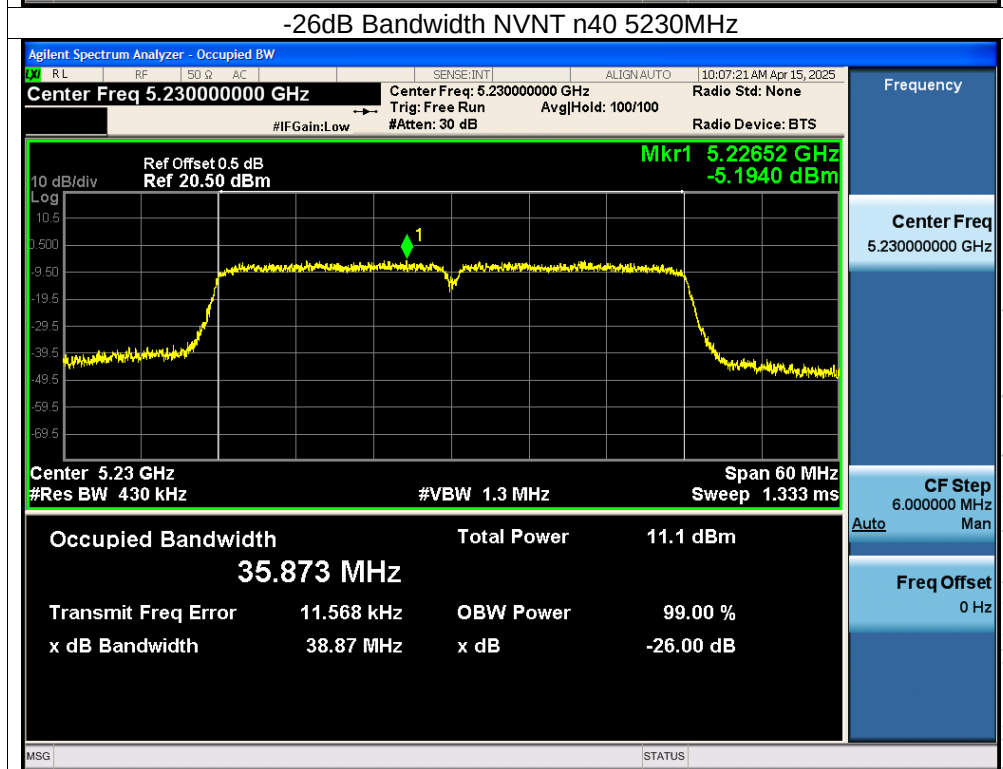
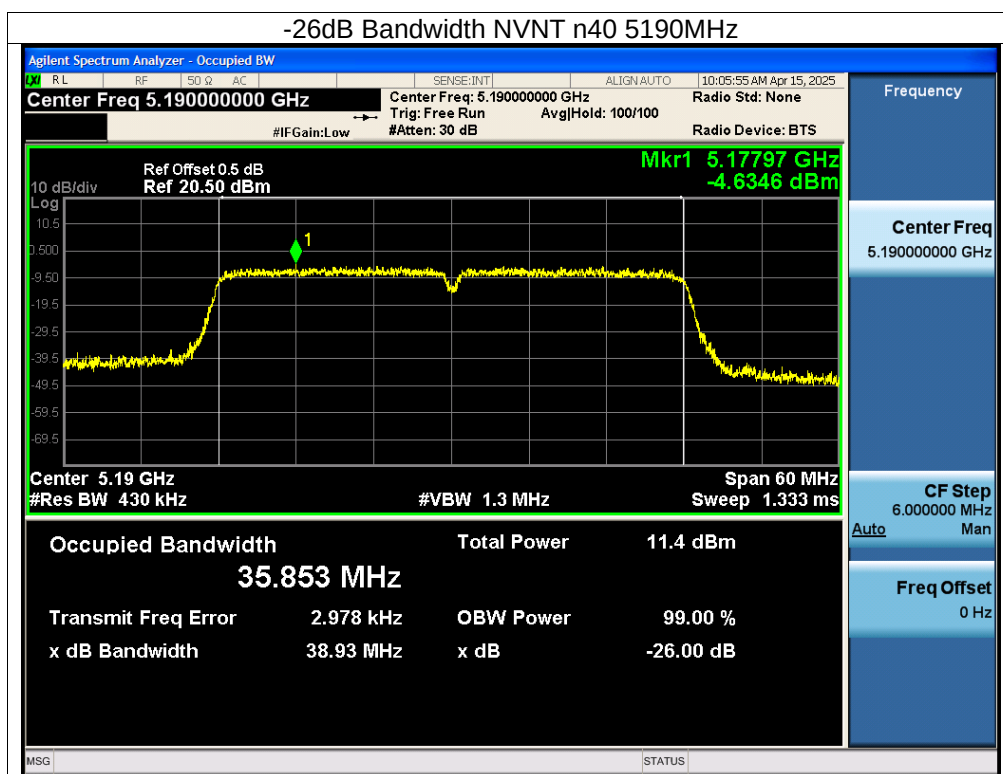
Condition	Mode	Frequency (MHz)	99% OBW (MHz)
NVNT	a	5745	16.39
NVNT	a	5785	16.39
NVNT	a	5825	16.38
NVNT	n20	5745	17.41
NVNT	n20	5785	17.41
NVNT	n20	5825	17.40
NVNT	n40	5755	35.84
NVNT	n40	5795	35.81



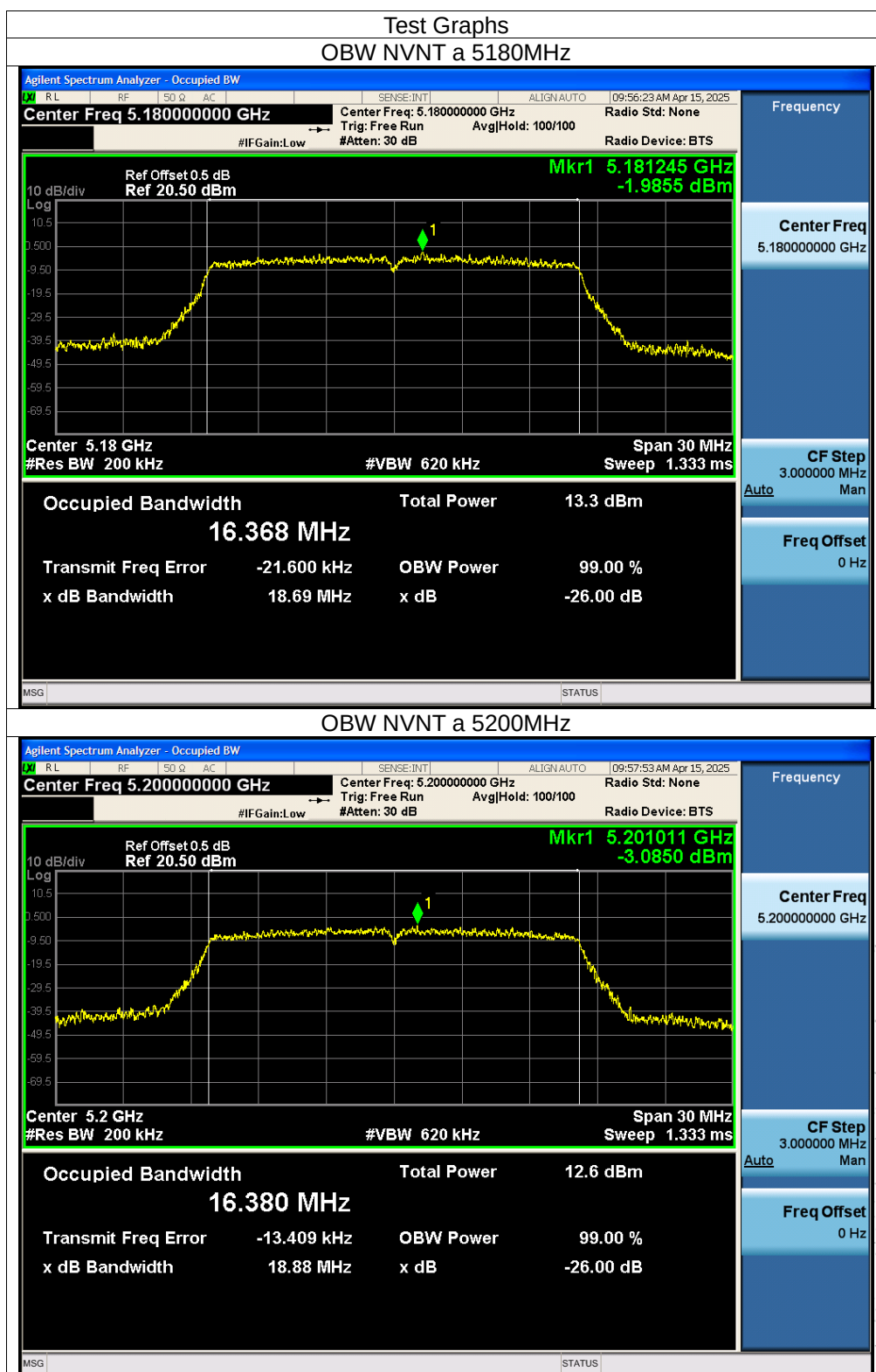


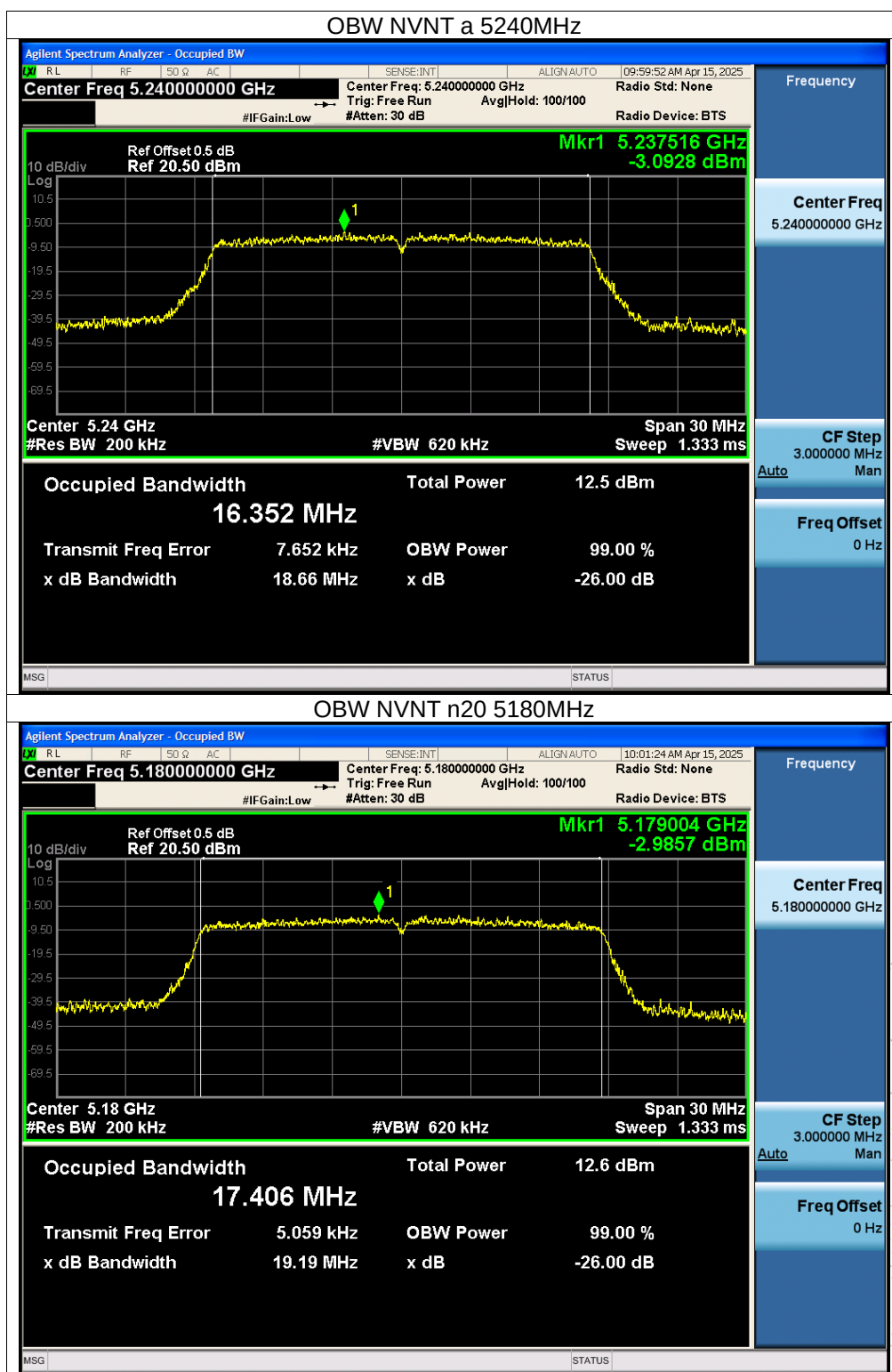


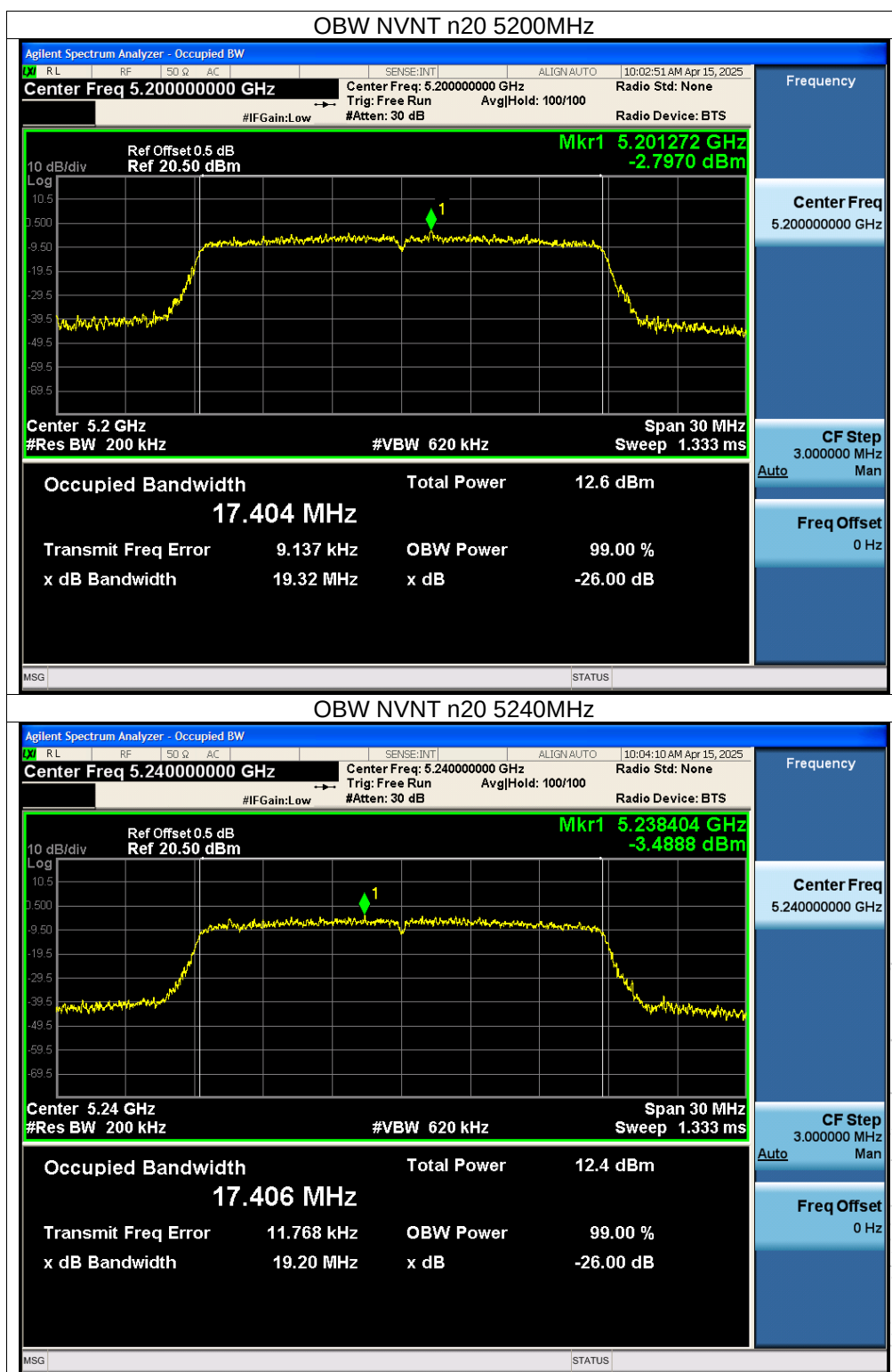


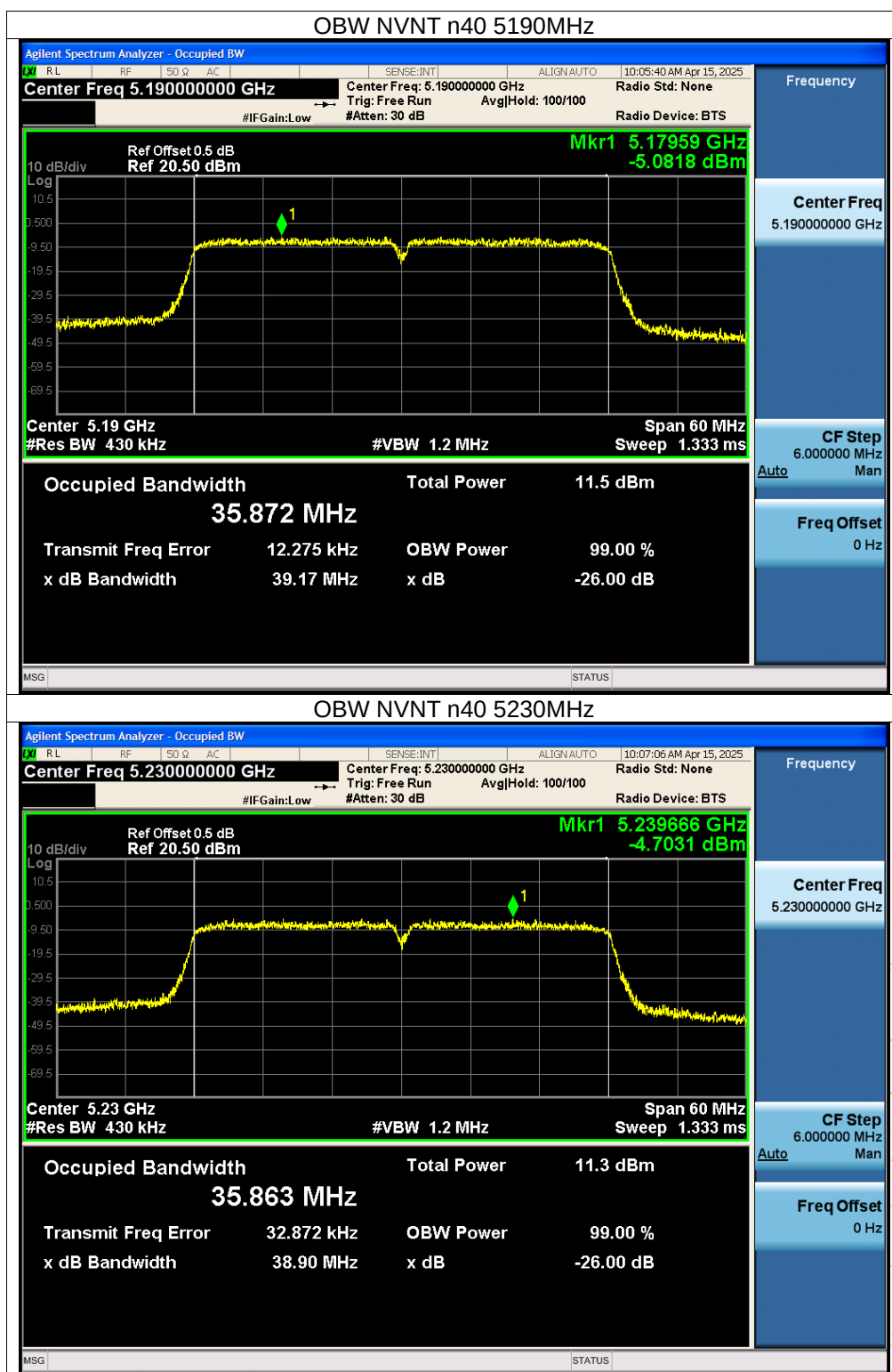


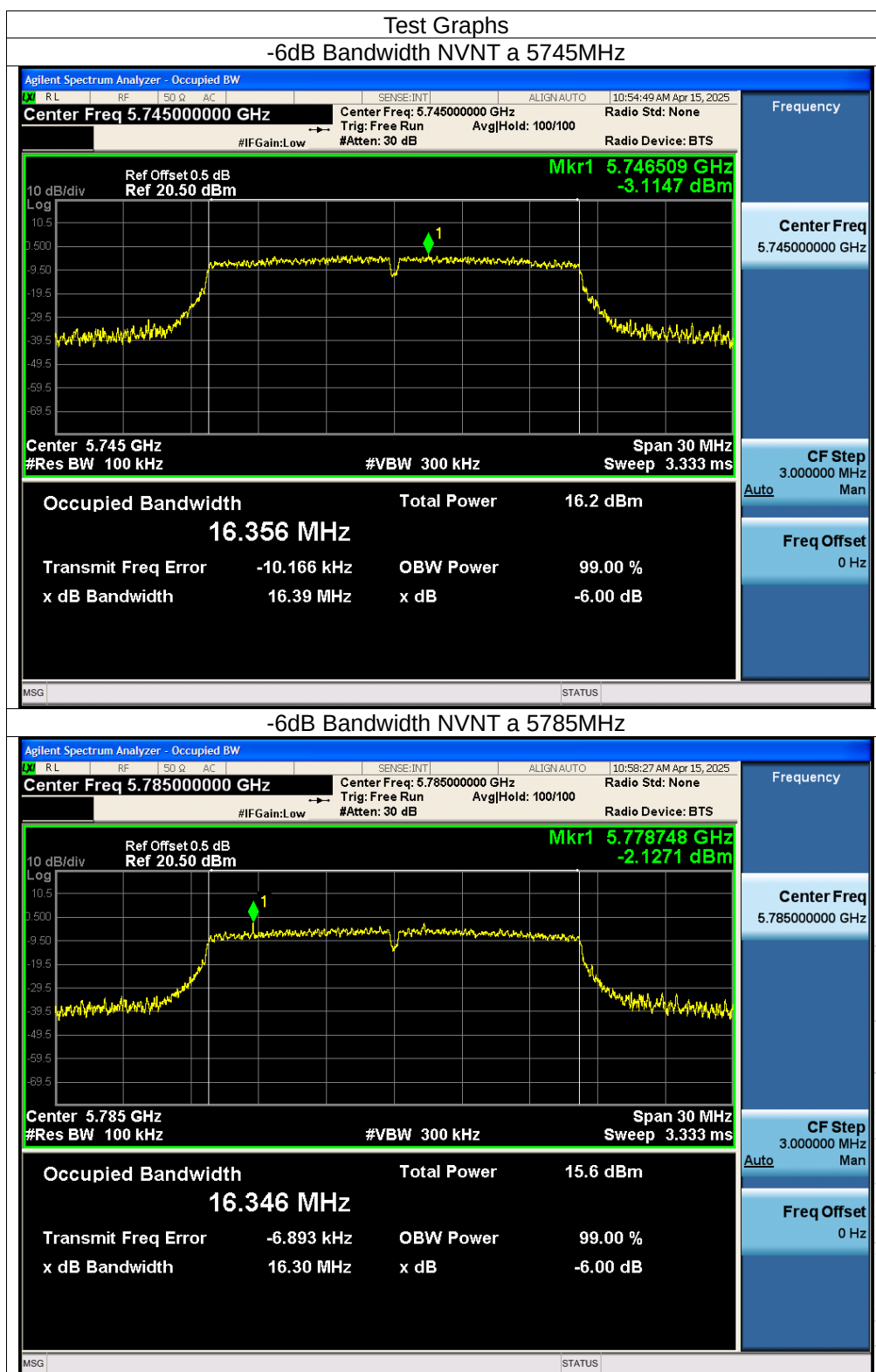
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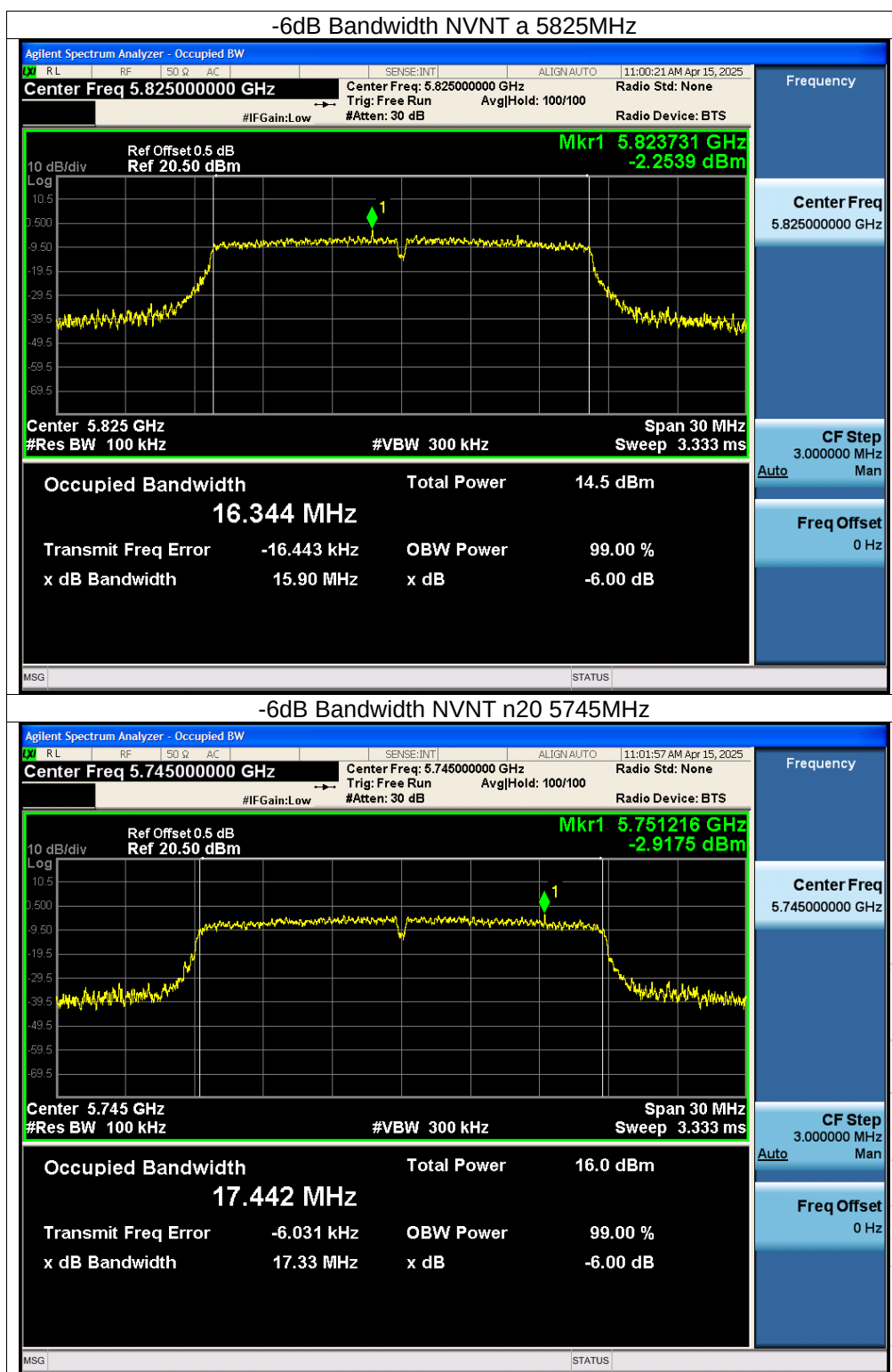












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