



RF TEST REPORT

Product Name: AC1200 Wireless Dual Band Network card

Model Name: WF2190 Pro, WF2190 Plus , WF2190XX

FCC ID: T58WF2190PROR

Issued For : NETIS SYSTEMS CO., LTD

Floor 8, Building B, TongFang Information Harbor, No.11
Langshan Road, Nanshan District, Shenzhen, China

Issued By : Shenzhen LGT Test Service Co., Ltd.

Room 205, Building 13, Zone B, Chen Hsong Industrial Park,
No.177 Renmin West Road, Jinsha Community, Kengzi
Street, Pingshan New District, Shenzhen, China

Report Number: LGT22H037RF06

Sample Received Date: Aug. 30, 2022

Date of Tested: Aug. 30, 2022 ~ Sep. 25, 2022

Date of Issue: Sep. 25, 2022

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TEST REPORT CERTIFICATION

Applicant NETIS SYSTEMS CO., LTD
Address Floor,8, Building B, TongFang Information Harbor, No.11
Langshan Road, Nanshan District, Shenzhen, China
Manufacturer NETIS SYSTEMS CO., LTD
Address Floor,8, Building B, TongFang Information Harbor, No.11
Langshan Road, Nanshan District, Shenzhen, China
Product Name AC1200 Wireless Dual Band Network card
Trade Mark N/A
Model Name WF2190 Pro, WF2190 Plus , WF2190XX
Sample Status: Normal

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC Part 15.247, Subpart C ANSI C63.10-2013	PASS

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Revision History

Rev.	Issue Date	Contents
00	September 21, 2022	Initial Issue



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

§ 15.407, KDB 789033 D02 General U-NII Test Procedures New Rules v02r01

FCC Part 15.407		
FCC standard	Test Item	Results
15.207	AC Conducted Emission	PASS
15.407 (a) /15.407 (e)	26dB/6dB &99% Bandwidth	PASS
15.407(a)	Maximum Conducted Output Power	PASS
15.407(b)/15.205/15.209	Radiated Emission And (bandedge Emissions) Measurement	PASS
15.407(a)	Power Spectral Density	PASS
15.407(c)	Automatically Discontinue Transmission	PASS
15.203/15.204	Antenna Requirement	PASS

NOTE:

- (1) 'N/A' denotes test is not applicable in this Test Report.
- (2) All tests are according to ANSI C63.10-2013.



1.1 TEST FACTORY

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Chen Hsong Industrial Park, No.177 Renmin West Road, Jinsha Community, Kengzi Street, Pingshan New District, Shenzhen, China
Accreditation Certificate	A2LA Certificate No.: 6727.01
	FCC Registration No.: 746540
	CAB ID: CN0136

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately **95 %**.

No.	Item	Uncertainty
1	RF Output Power, Conducted	$\pm 0.71\text{dB}$
2	Power Spectral Density, Conducted	$\pm 1.57\text{ dB}$
3	Unwanted Emission, Conducted	$\pm 0.63\text{dB}$
4	Conducted emission	$\pm 2.80\text{dB}$
5	All Emissions, Radiated (0.009-30MHz)	$\pm 2.16\text{dB}$
6	All Emissions, Radiated (30MHz-1GHz)	$\pm 4.40\text{dB}$
7	All Emissions, Radiated (1GHz-18GHz)	$\pm 5.49\text{dB}$



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	AC1200 Wireless Dual Band Network card	
Trade Mark	N/A	
Model Name	WF2190 Pro	
Series Model	WF2190 Plus, WF2190XX	
Model Difference	This device hardware and Function is same, Only the sales market (area) is different, So model name is different.	
Product Description	The EUT is a AC1200 Wireless Dual Band Network card	
	Operation Frequency:	IEEE 802.11a/ n(HT20)/ac(VHT20): 5.180GHz-5.240GHz IEEE 802.11n(HT40)/ac(VHT40): 5.190GHz-5.230GHz IEEE 802.11ac(VHT80): 5.210GHz
		IEEE 802.11a/n(HT20)/ac(VHT20): 5.260GHz-5.320GHz IEEE 802.11 n(HT40)/ac(VHT40): 5.270GHz-5.310GHz IEEE 802.11ac(VHT80): 5.290GHz
		IEEE 802.11a/ n(HT20)/ac(VHT20): 5.500GHz-5.700GHz IEEE 802.11 n(HT40)/ac(VHT40): 5.510GHz-5.670GHz IEEE 802.11ac(VHT80): 5.530GHz-5.610GHz
		IEEE 802.11a/n(HT20)/ac(VHT20): 5.745GHz-5.825GHz IEEE 802.11a/ n(HT40)/ac(VHT40): 5.755GHz-5.795GHz IEEE 802.11ac(VHT80): 5.775GHz
	Modulation Type:	802.11a(OFDM): BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM): BPSK,QPSK,16-QAM,64-QAM 802.11ac(OFDM): BPSK,QPSK,16-QAM,64-QAM,256-QAM
	Antenna Designation:	Please refer to the Note 3.
More details of EUT technical specification, please refer to the User Manual.		
Test Channel	Please refer to the Note 2.	
Rating	USB DC 5V	
Adapter	N/A	
Battery	N/A	
Hardware version number	N/A	
Software version number	N/A	
Connecting I/O Port(s)	Please refer to the Note 1.	

Note

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.

2.	Operation Frequency of channel			
	5.180GHz-5.240GHz		5.500GHz-5.720GHz	
	Channel	Frequency	Channel	Frequency
	36	5180	100	5500
	38	5190	102	5510
	40	5200	104	5520
	42	5210	106	5530
	44	5220	108	5540
	46	5230	110	5550
	48	5240	112	5560
			116	5580
	5.260GHz-5.320GHz		118	5590
	Channel	Frequency	120	5600
	52	5260	122	5610
	54	5270	124	5620
	56	5280	126	5630
	58	5290	128	5640
	60	5300	132	5660
	62	5310	134	5670
	64	5320	136	5680
			140	5700
	5.745GHz-5.825GHz			
	Channel	Frequency		
	149	5745		
	151	5755		
	153	5765		
	157	5785		
	159	5795		
	161	5805		
	165	5825		

Note:

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:

Carrier Frequency Channel

5GHz:

For 802.11a/n(HT20)/ac(VHT20)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
36	5180	52	5260
40	5200	60	5300
48	5240	64	5320

For 802.11a/n(HT20)/ac(VHT20)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
100	5500	149	5745
116	5580	157	5785
140	5700	165	5825



For 802.11 n(HT40)/ac(VHT40)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
38	5190	54	5270
46	5230	62	5310

For 802.11 n(HT40)/ac(VHT40)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
102	5510	151	5755
110	5550	159	5795
134	5670		

For 802.11ac (VHT80)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
42	5210	58	5290

For 802.11ac (VHT80)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
106	5530	155	5775
122	5610		

3. KDB 662911 D01 Multiple Transmitter Output v02r01

2) Directional Gain Calculations for In-Band Measurements

a) Basic methodology with NANT transmit antennas, each with the same directional gain G_{ANT} dBi, being driven by NANT transmitter outputs of equal power. Directional gain is to be computed as follows:

(i) If any transmit signals are correlated with each other,

Directional gain = $G_{ANT} + 10 \log(N_{ANT})$ dBi

(ii) If all transmit signals are completely uncorrelated with each other,

Directional gain = G_{ANT}

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	WF2190 Pro	Integral Antenna	N/A	ANT 1: 5 ANT 2: 5 MIMO: 8.01	WLAN Antenna
2	N/A	WF2190 Pro	Integral Antenna	N/A		

Note: The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report.



2.2 DESCRIPTION OF TEST MODES

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

Worst Mode	Description	Data Rate
Mode 1	TX IEEE 802.11a HT20 CH36&CH40&CH48	6 Mbps
Mode 2	TX IEEE 802.11a HT20 CH52&CH60&CH64	6 Mbps
Mode 3	TX IEEE 802.11a HT20 CH100&CH116&CH140	6 Mbps
Mode 4	TX IEEE 802.11a HT20 CH149&CH157&CH165	6 Mbps
Mode 5	TX IEEE 802.11n HT20 CH36&CH40&CH48	MCS 0
Mode 6	TX IEEE 802.11ac HT20 CH36&CH40&CH48	NSS1 MCS0
Mode 7	TX IEEE 802.11n HT20 CH52&CH60&CH64	MCS 0
Mode 8	TX IEEE 802.11ac HT20 CH52&CH60&CH64	NSS1 MCS0
Mode 9	TX IEEE 802.11n HT20 CH100&CH116&CH140	MCS 0
Mode 10	TX IEEE 802.11ac HT20 CH100&CH116&CH140	NSS1 MCS0
Mode 11	TX IEEE 802.11n HT20 CH149&CH157&CH165	MCS 0
Mode 12	TX IEEE 802.11ac HT20 CH149&CH157&CH165	NSS1 MCS0
Mode 13	TX IEEE 802.11n HT40 CH38&CH46	MCS 0
Mode 14	TX IEEE 802.11ac HT40 CH38&CH46	NSS1 MCS0
Mode 15	TX IEEE 802.11n HT40 CH54 &CH62	MCS 0
Mode 16	TX IEEE 802.11ac HT40 CH54 &CH62	NSS1 MCS0
Mode 17	TX IEEE 802.11n HT40 CH102&CH110&CH134	MCS 0
Mode 18	TX IEEE 802.11ac HT40 CH102&CH110&CH134	NSS1 MCS0
Mode 19	TX IEEE 802.11n HT40 CH151&CH159	MCS 0
Mode 20	TX IEEE 802.11ac HT40 CH151&CH159	NSS1 MCS0
Mode 21	TX IEEE 802.11ac HT80 CH42	NSS1 MCS0
Mode 22	TX IEEE 802.11ac HT80 CH58	NSS1 MCS0
Mode 23	TX IEEE 802.11ac HT80 CH106&122	NSS1 MCS0
Mode 24	TX IEEE 802.11ac HT80 CH155	NSS1 MCS0

Note: (1) The measurements are performed at the highest, middle, lowest available channels.

(2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.



AC Conducted Emission

Test Case	
AC Conducted Emission	Mode 25: TX

2.3 TEST SOFTWARE AND POWER LEVEL

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	Power Class	Software For Testing
WIFI 2.4G	5150-5250 MHz	802.11a	ANT 1: 5 ANT 2: 5 MIMO: 8.01	14	MT7662UQA 1.0.3.24
		802.11n(HT20)		14	
		802.11n(HT40)		14	
		802.11ac(VHT20)		14	
		802.11ac(VHT40)		14	
		802.11ac(VHT80)		14	
RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	Power Class	Software For Testing
WIFI 2.4G	5250-5350 MHz	802.11a	ANT 1: 5 ANT 2: 5 MIMO: 8.01	14	MT7662UQA 1.0.3.24
		802.11n(HT20)		14	
		802.11n(HT40)		14	
		802.11ac(VHT20)		14	
		802.11ac(VHT40)		14	
		802.11ac(VHT80)		14	
RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	Power Class	Software For Testing
WIFI 2.4G	5470-5725 MHz	802.11a	ANT 1: 5 ANT 2: 5 MIMO: 8.01	14	MT7662UQA 1.0.3.24
		802.11n(HT20)		14	
		802.11n(HT40)		14	
		802.11ac(VHT20)		14	
		802.11ac(VHT40)		14	
		802.11ac(VHT80)		14	
RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	Power Class	Software For Testing
WIFI 2.4G	5725-5850 MHz	802.11a	ANT 1: 5 ANT 2: 5 MIMO: 8.01	14	MT7662UQA 1.0.3.24
		802.11n(HT20)		14	
		802.11n(HT40)		14	
		802.11ac(VHT20)		14	
		802.11ac(VHT40)		14	
		802.11ac(VHT80)		14	



2.4 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Accessories Equipment

Description	Manufacturer	Model	S/N	Rating
USB Cable	N/A	N/A	N/A	1.2m, shielded

Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Laptop	HUAWEI	HKF-16	N/A	N/A
Adapter	HUAWEI	HW-200450CP0	N/A	Input: 100-240V~50/60Hz, 1.6A Output: 5V/3A or 9V/3A or 12V/3A or 15V/5A or 20V/4.5A MAX
USB-C to USB-C adapter	HUAWEI	N/A	N/A	1.8m, shielded

Note:

(1) For detachable type I/O cable should be specified the length in cm in 『Length』 column.



2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESU8	100372	2022.04.12	2023.04.11
Active loop Antenna	R&S	HFH2-Z2	POS87139818 1	2022.06.02	2024.06.01
Spectrum Analyzer	Kesight	N9010B	MY60242508	2022.04.29	2023.04.28
Bilog Antenna	SCHAFFNER	CBL6112B	2705	2022.06.05	2024.06.04
Horn Antenna	SCHWARZBECK	3115	10SL0060	2022.06.02	2024.06.01
Pre-amplifier(0.1M-3G Hz)	HP	8447D	2727A05655	2022.04.11	2023.04.10
Pre-amplifier(1-26.5G)	Agilent	8449B	3008A4722	2022.04.13	2023.04.12
RE Cable (9K-1G)	N.A	R01	N.A	2022.05.05	2023.05.04
RE Cable (1-26G)	N.A	R02	N.A	2022.05.05	2023.05.04
Wireless Communications Test Set	R&S	CMW 500	137737	2022.04.29	2023.04.28
Temperature & Humidity	KTJ	TA218B	N.A	2022.05.05	2023.05.04
Testing Software	EZ-EMC(Ver.STSLAB 03A1 RE)				

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESU8	100372	2022.04.12	2023.04.11
LISN	COM-POWER	LI-115	02032	2022.04.13	2023.04.12
LISN	SCHWARZBECK	NNLK 8121	00847	2022.08.19	2023.08.18
CE Cable	N.A	C01	N.A	2022.05.05	2023.05.04
Transient Limiter	CYBERTEK	EM5010A	E2250100049	2022.08.19	2023.08.18
Temperature & Humidity	KTJ	TA218B	N.A	2022.05.05	2023.05.04
Testing Software	EZ-EMC(Ver.EMC-CON 3A1.1)				

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Company No.	Last calibration	Calibrated until
Signal Analyzer	keysight	N9010B	MY60242508	2022.04.29	2023.04.28
RF Automatic Test system	迈微	MW200-RFCB	MW220322LG	2022.04.29	2023.04.28
Temperature & Humidity	KTJ	TA218B	N.A	2022.05.05	2023.05.04
Temperature& Humidity test chamber	AISRY	LX-1000L	171200018	2022.05.10	2023.05.09
Attenuator	eastsheep	90db	N.A	2022.04.29	2023.04.28
Router	WAVLINK	WL-WN575A2	WL1512260336	N.C.R	N.C.R
Router	TP-LINK	TL-WR885N	1125074010735	N.C.R	N.C.R
Testing Software	MTS8310_V2.0.0.0_迈微				



3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class B (dBuV)		Standard
	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	56.00	46.00	CISPR
5.0 -30.0	60.00	50.00	CISPR

0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of “ * ” marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

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



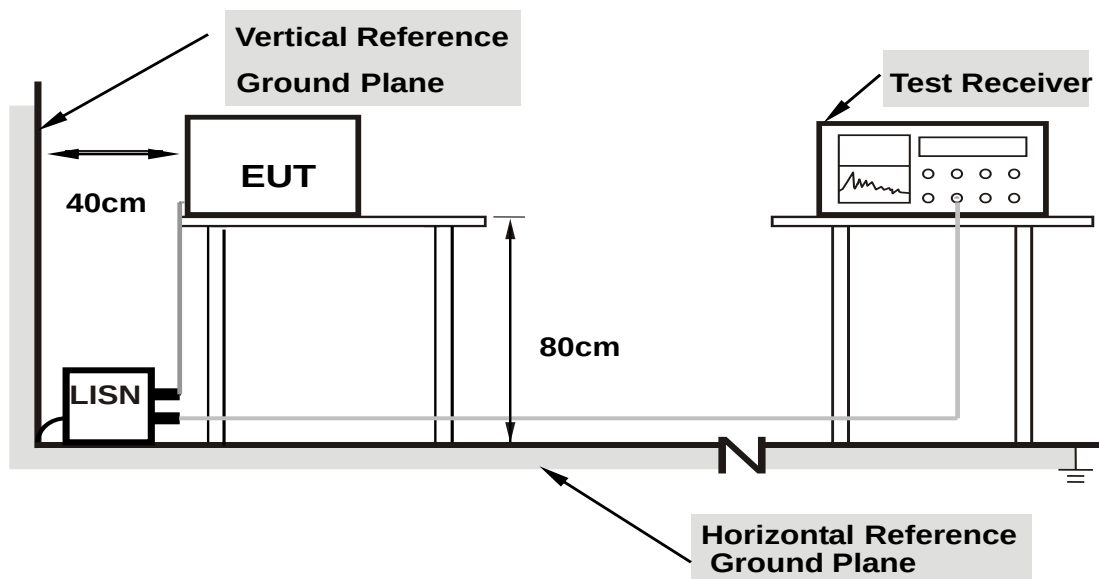
3.1.2 TEST PROCEDURE

- The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN is at least 80 cm from the nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes support units.

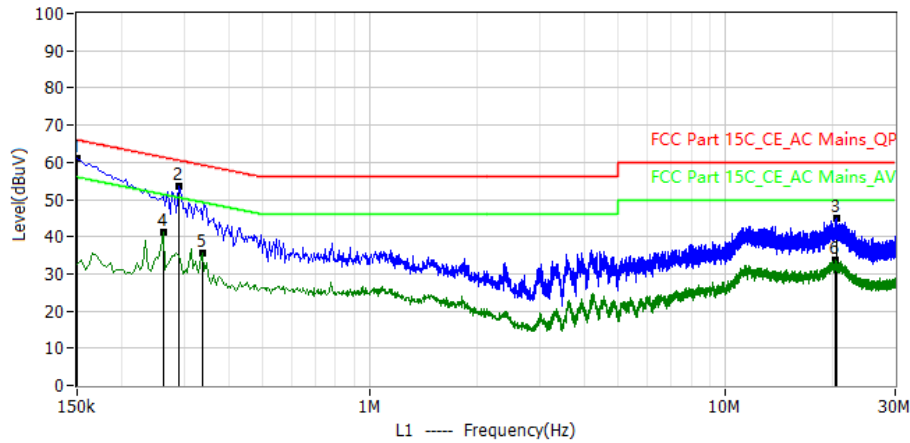
3.1.5 EUT OPERATING CONDITIONS

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.

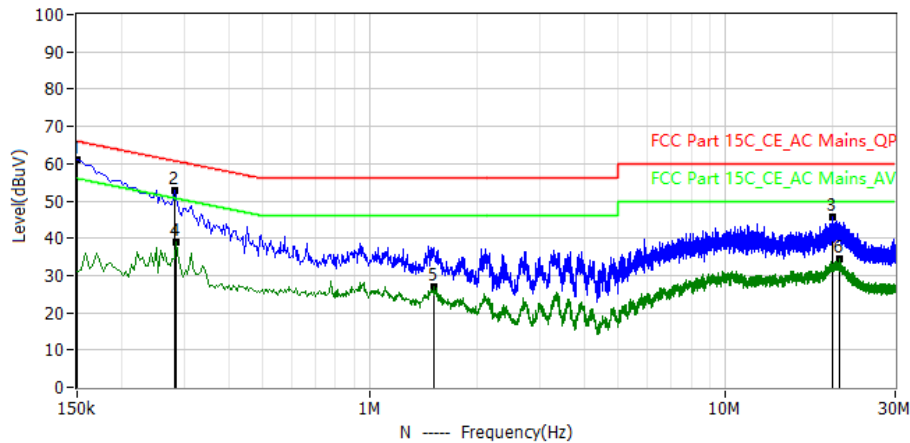


3.1.6 TEST RESULTS

M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: 5GHz WIFI TX	Test Voltage: DC 5V
Note:	Test Data: 2022-09-05



No.	Frequency	Limit dBuV	Level dBuV	Margin dB	Reading dBuV	Factor dB	Detector	Phase
1*	150.000kHz	66.00	61.06	-4.94	50.56	10.50	QP	L1
2*	290.000kHz	60.52	53.51	-7.02	43.01	10.50	QP	L1
3*	20.526MHz	60.00	44.87	-15.13	33.77	11.10	QP	L1
4*	262.000kHz	51.37	41.19	-10.17	30.69	10.50	AV	L1
5*	338.000kHz	49.25	35.76	-13.49	25.26	10.50	AV	L1
6*	20.394MHz	50.00	33.58	-16.42	22.48	11.10	AV	L1



No.	Frequency	Limit dBuV	Level dBuV	Margin dB	Reading dBuV	Factor dB	Detector	Phase
1*	150.000kHz	66.00	61.20	-4.80	50.70	10.50	QP	N
2*	282.000kHz	60.76	52.95	-7.81	42.45	10.50	QP	N
3*	19.914MHz	60.00	45.82	-14.18	34.72	11.10	QP	N
4*	286.000kHz	50.64	38.83	-11.81	28.33	10.50	AV	N
5*	1.514MHz	46.00	27.05	-18.95	16.41	10.64	AV	N
6*	20.966MHz	50.00	34.39	-15.61	23.28	11.11	AV	N



3.2 RADIATED EMISSION AND (BANDEDGE) MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

In case the emission fall within the restricted band specified on 15.407(b)7&15.205/209(a), then the limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	68.2	54

Notes:

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

LIMITS OF RESTRICTED FREQUENCY BANDS

FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
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	Above 38.6
13.36-13.41			

Note: In case the emission radiated emission above 1000MHz fall within the restricted band the restricted frequency bands, the peak limit is 74 dBuV/m.

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) + 95.3.

Peak Limit = -27dBm/MHz + 95.3 = 68.3 dBuV/m.

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier harmonic (Peak/AV)
RB / VB (emission in restricted band)	1 MHz / 1 MHz, AV=1 MHz /3 MHz

For Band edge

Spectrum Parameter	Setting
Detector	Peak
RB / VB (emission in restricted band)	1 MHz / 1 MHz, AV=1 MHz /3 MHz

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

- a. The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.



- b. The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The table was rotated 360 degree to determine the position of the highest radiation.
- c. The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
- d. 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 QuasiPeak detector mode will be re-measured.
- e. If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

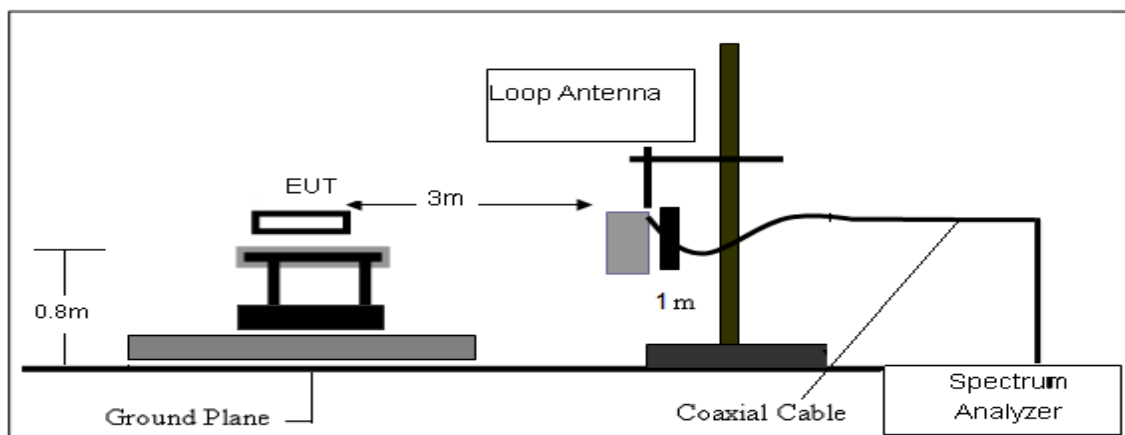
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

3.2.2 DEVIATION FROM TEST STANDARD

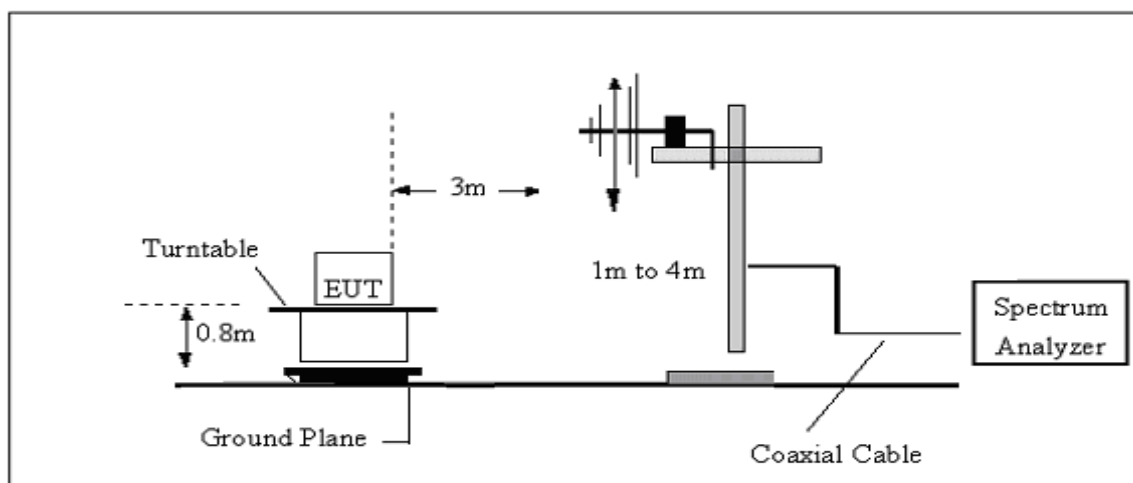
No deviation

3.2.3 TEST SETUP

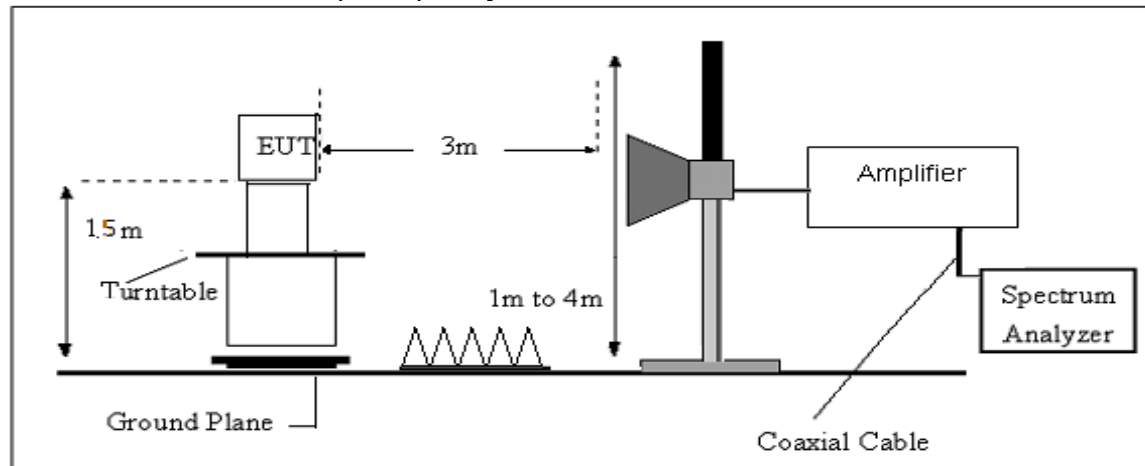
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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





3.2.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where

FS = Field Strength

CL = Cable Attenuation Factor (Cable Loss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

For example

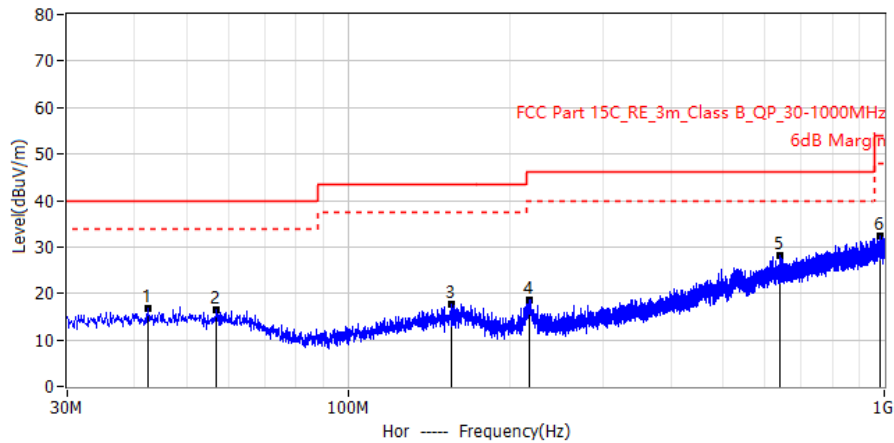
Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBμV/m)	(dBμV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

$$\text{Factor} = \text{AF} + \text{CL} - \text{AG}$$

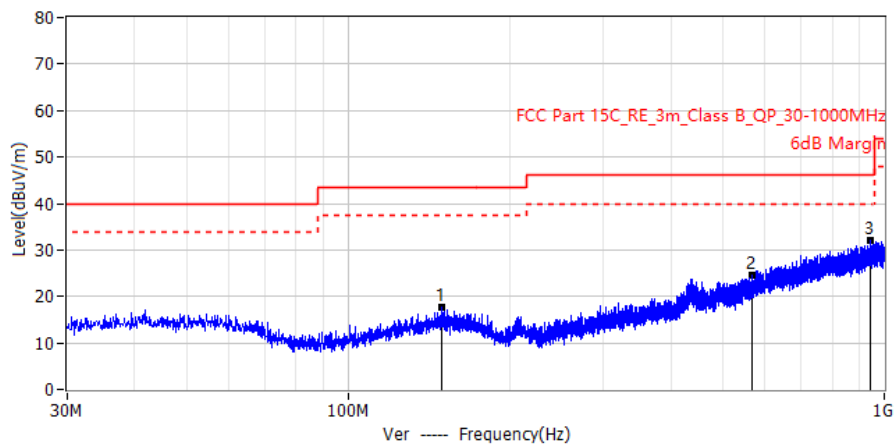


3.2.6 TEST RESULTS

M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: 5GHz WIFI TX	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20



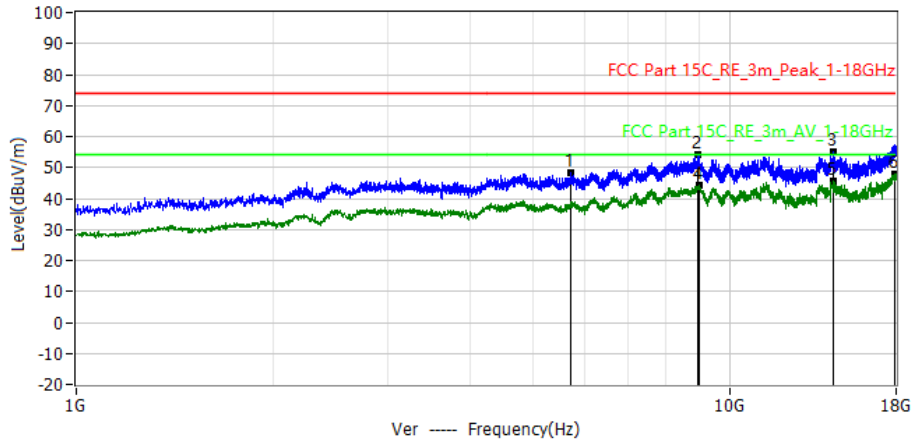
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	42.489MHz	40.00	16.86	-23.14	3.05	13.81	QP	Hor
2*	56.918MHz	40.00	16.54	-23.46	3.27	13.27	QP	Hor
3*	155.736MHz	43.50	17.77	-25.73	3.57	14.20	QP	Hor
4*	217.574MHz	46.00	18.68	-27.32	7.96	10.72	QP	Hor
5*	637.341MHz	46.00	28.20	-17.80	5.36	22.84	QP	Hor
6*	984.359MHz	54.00	32.25	-21.75	4.39	27.86	QP	Hor



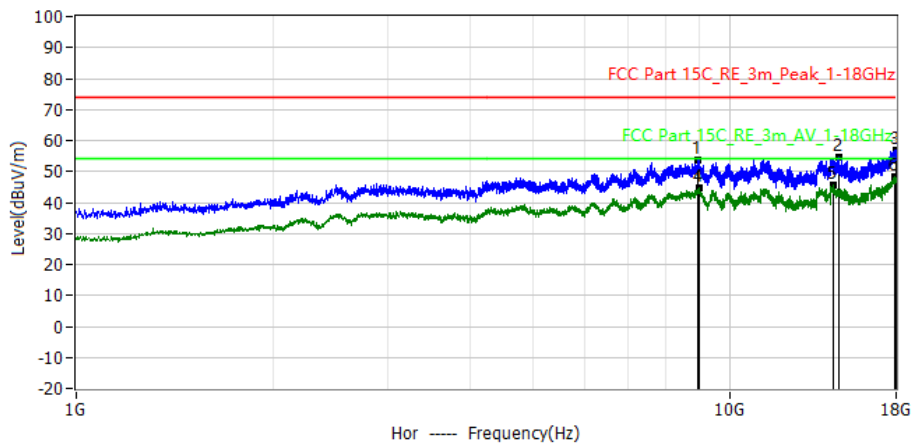
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	149.795MHz	43.50	17.75	-25.75	3.57	14.18	QP	Ver
2*	566.895MHz	46.00	24.70	-21.30	3.48	21.22	QP	Ver
3*	944.225MHz	46.00	32.12	-13.88	4.52	27.60	QP	Ver



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: B1 802.11ac20 5180	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20



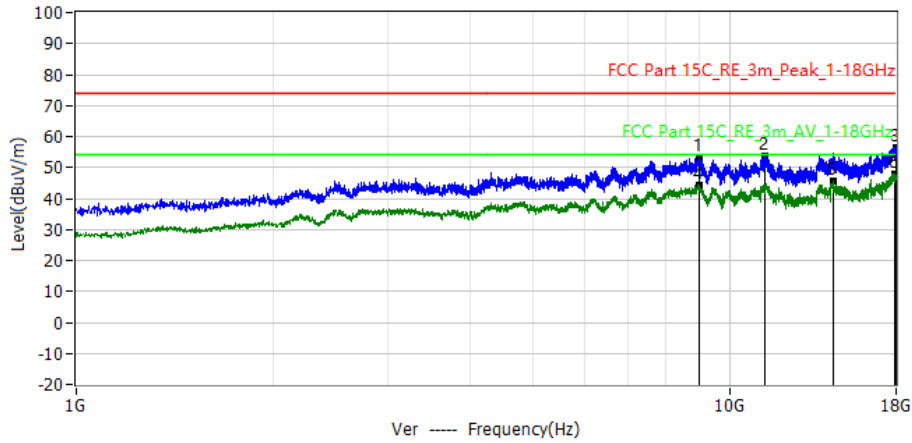
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	5.724GHz	74.00	48.28	-25.72	55.93	-7.65	PK	Ver
2*	8.941GHz	74.00	53.96	-20.04	55.30	-1.34	PK	Ver
3*	14.411GHz	74.00	55.19	-18.81	49.28	5.91	PK	Ver
4*	8.999GHz	54.00	44.10	-9.90	45.27	-1.17	AV	Ver
5*	14.413GHz	54.00	45.57	-8.43	39.66	5.91	AV	Ver
6*	17.913GHz	54.00	47.93	-6.07	39.47	8.46	AV	Ver



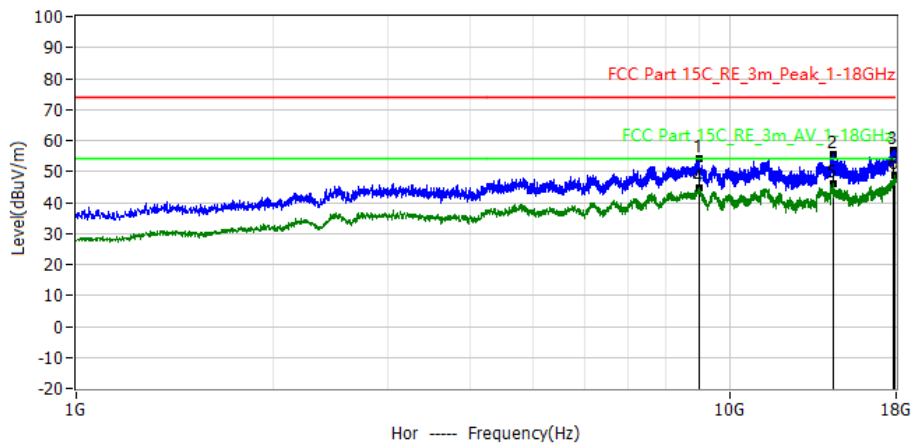
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	8.952GHz	74.00	53.77	-20.23	55.08	-1.31	PK	Hor
2*	14.732GHz	74.00	54.65	-19.35	48.71	5.94	PK	Hor
3*	17.996GHz	74.00	56.99	-17.01	48.47	8.52	PK	Hor
4*	8.996GHz	54.00	44.75	-9.25	45.93	-1.18	AV	Hor
5*	14.422GHz	54.00	45.77	-8.23	39.86	5.91	AV	Hor
6*	17.949GHz	54.00	48.41	-5.59	39.93	8.48	AV	Hor



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: B1 802.11ac20 5200	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20 14:02:14



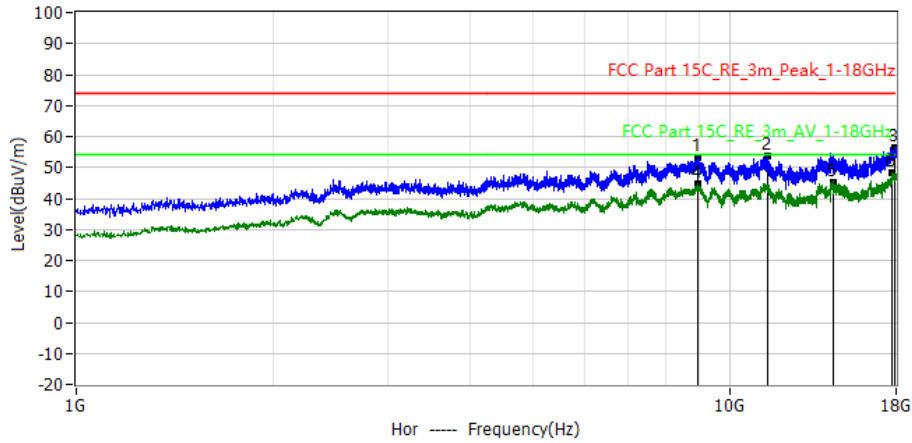
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	8.982GHz	74.00	53.15	-20.85	54.37	-1.22	PK	Ver
2*	11.336GHz	74.00	53.85	-20.15	52.02	1.83	PK	Ver
3*	17.964GHz	74.00	56.43	-17.57	47.94	8.49	PK	Ver
4*	8.984GHz	54.00	44.25	-9.75	45.47	-1.22	AV	Ver
5*	14.422GHz	54.00	45.71	-8.29	39.80	5.91	AV	Ver
6*	17.900GHz	54.00	48.06	-5.94	39.61	8.45	AV	Ver



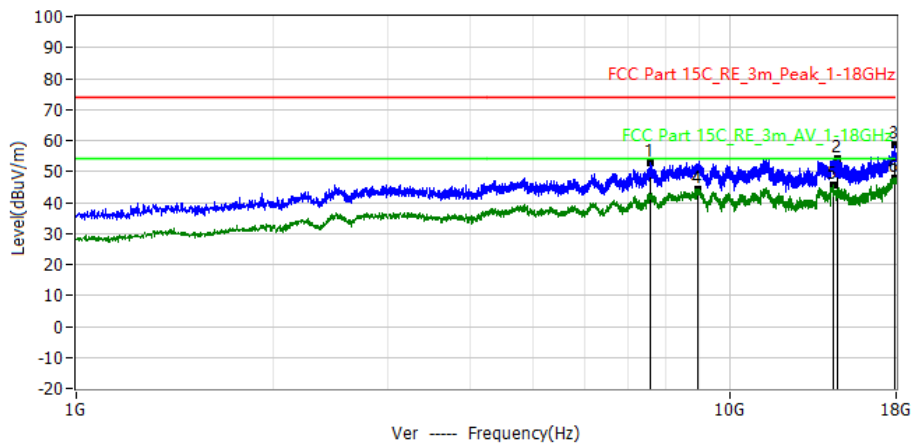
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	9.001GHz	74.00	54.18	-19.82	55.35	-1.17	PK	Hor
2*	14.394GHz	74.00	55.48	-18.52	49.57	5.91	PK	Hor
3*	17.860GHz	74.00	57.07	-16.93	48.65	8.42	PK	Hor
4*	9.009GHz	54.00	44.51	-9.49	45.68	-1.17	AV	Hor
5*	14.417GHz	54.00	46.09	-7.91	40.18	5.91	AV	Hor
6*	17.915GHz	54.00	48.60	-5.40	40.14	8.46	AV	Hor



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: B1 802.11ac20 5240	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20 14:03:51



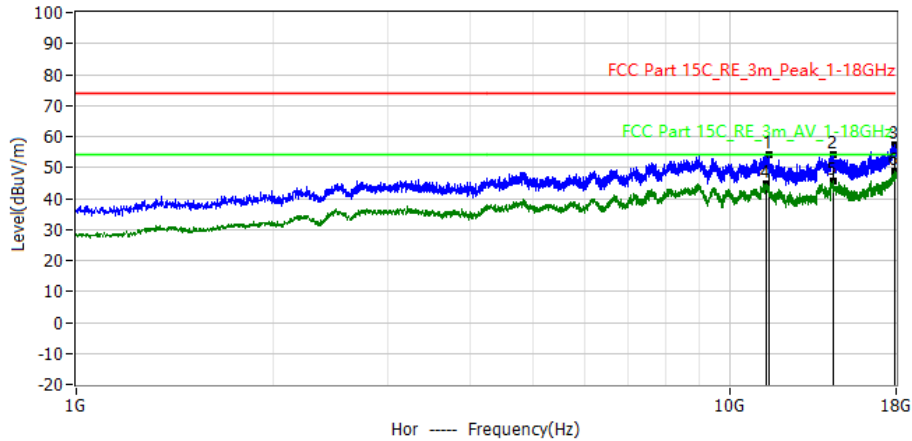
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	8.928GHz	74.00	53.06	-20.94	54.43	-1.37	PK	Hor
2*	11.442GHz	74.00	53.67	-20.33	51.78	1.89	PK	Hor
3*	17.898GHz	74.00	56.37	-17.63	47.92	8.45	PK	Hor
4*	8.931GHz	54.00	44.61	-9.39	45.98	-1.37	AV	Hor
5*	14.415GHz	54.00	45.39	-8.61	39.48	5.91	AV	Hor
6*	17.717GHz	54.00	48.13	-5.87	39.81	8.32	AV	Hor



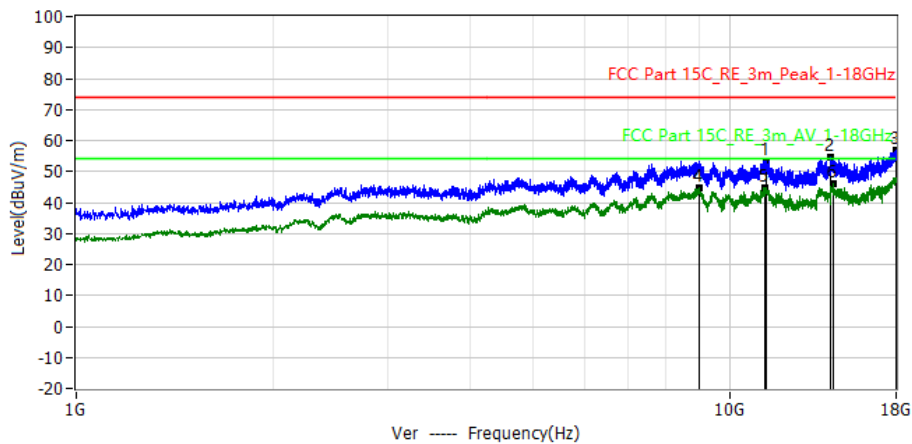
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	7.583GHz	74.00	52.71	-21.29	56.96	-4.25	PK	Ver
2*	14.660GHz	74.00	54.37	-19.63	48.44	5.93	PK	Ver
3*	17.943GHz	74.00	58.43	-15.57	49.95	8.48	PK	Ver
4*	8.956GHz	54.00	44.43	-9.57	45.72	-1.29	AV	Ver
5*	14.415GHz	54.00	45.71	-8.29	39.80	5.91	AV	Ver
6*	17.902GHz	54.00	48.03	-5.97	39.58	8.45	AV	Ver



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: B2 802.11ac20 5260	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20 14:05:49



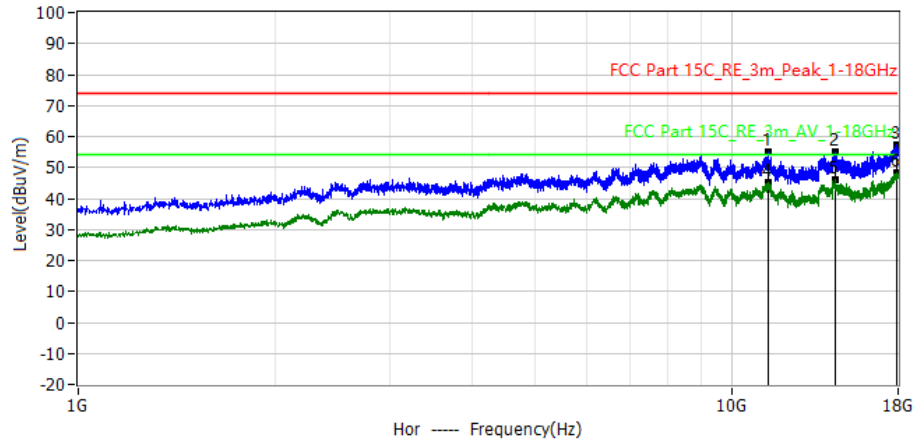
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	11.495GHz	74.00	54.16	-19.84	52.24	1.92	PK	Hor
2*	14.413GHz	74.00	54.11	-19.89	48.20	5.91	PK	Hor
3*	17.904GHz	74.00	57.47	-16.53	49.02	8.45	PK	Hor
4*	11.400GHz	54.00	44.66	-9.34	42.79	1.87	AV	Hor
5*	14.417GHz	54.00	45.49	-8.51	39.58	5.91	AV	Hor
6*	17.907GHz	54.00	48.56	-5.44	40.11	8.45	AV	Hor



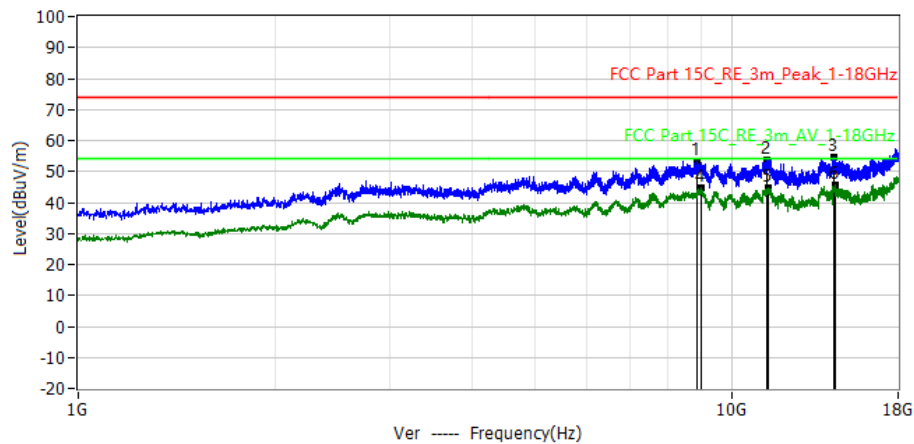
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector
1*	11.400GHz	74.00	53.41	-20.59	51.54	1.87	PK
2*	14.290GHz	74.00	54.61	-19.39	48.71	5.90	PK
3*	17.960GHz	74.00	56.92	-17.08	48.43	8.49	PK
4*	9.009GHz	54.00	44.64	-9.36	45.81	-1.17	AV
5*	11.342GHz	54.00	44.70	-9.30	42.87	1.83	AV
6*	14.411GHz	54.00	45.97	-8.03	40.06	5.91	AV



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: B2 802.11ac20 5300	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20 14:06:10



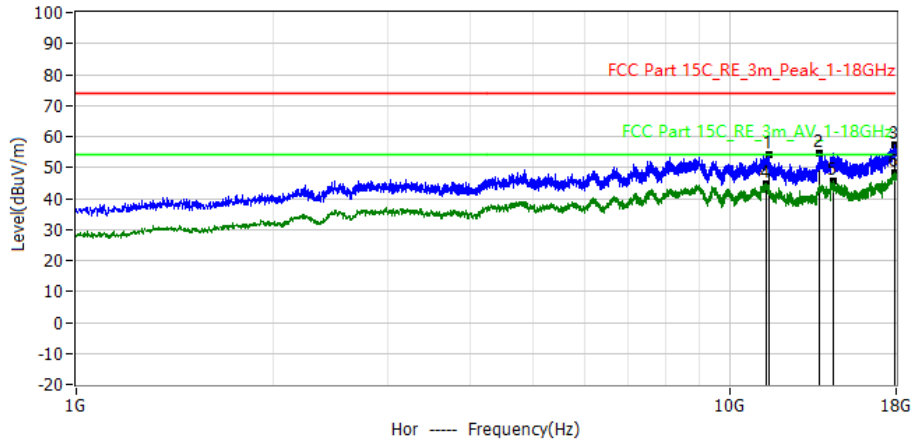
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	11.402GHz	74.00	55.04	-18.96	53.17	1.87	PK	Hor
2*	14.405GHz	74.00	55.14	-18.86	49.23	5.91	PK	Hor
3*	17.955GHz	74.00	57.36	-16.64	48.87	8.49	PK	Hor
4*	11.387GHz	54.00	45.00	-9.00	43.14	1.86	AV	Hor
5*	14.415GHz	54.00	45.93	-8.07	40.02	5.91	AV	Hor
6*	17.947GHz	54.00	48.43	-5.57	39.95	8.48	AV	Hor



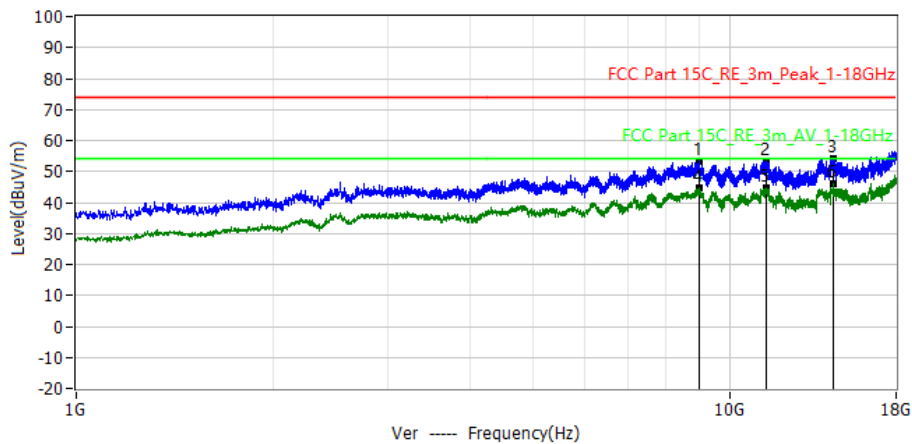
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	8.869GHz	74.00	53.47	-20.53	55.01	-1.54	PK	Ver
2*	11.347GHz	74.00	53.89	-20.11	52.06	1.83	PK	Ver
3*	14.351GHz	74.00	54.39	-19.61	48.49	5.90	PK	Ver
4*	8.999GHz	54.00	44.64	-9.36	45.81	-1.17	AV	Ver
5*	11.402GHz	54.00	44.63	-9.37	42.76	1.87	AV	Ver
6*	14.411GHz	54.00	45.59	-8.41	39.68	5.91	AV	Ver



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: B2 802.11ac20 5320	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20 14:06:34



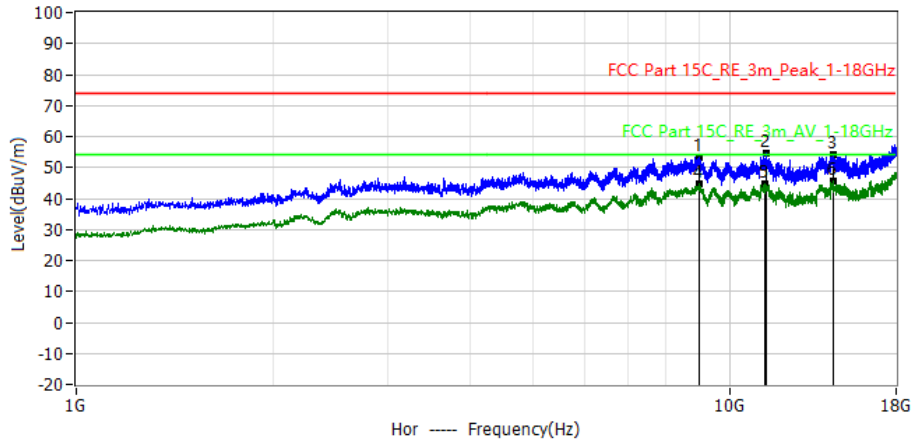
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	11.502GHz	74.00	53.98	-20.02	52.05	1.93	PK	Hor
2*	13.744GHz	74.00	54.55	-19.45	49.56	4.99	PK	Hor
3*	17.941GHz	74.00	57.50	-16.50	49.02	8.48	PK	Hor
4*	11.391GHz	54.00	44.75	-9.25	42.89	1.86	AV	Hor
5*	14.417GHz	54.00	45.58	-8.42	39.67	5.91	AV	Hor
6*	17.953GHz	54.00	48.22	-5.78	39.73	8.49	AV	Hor



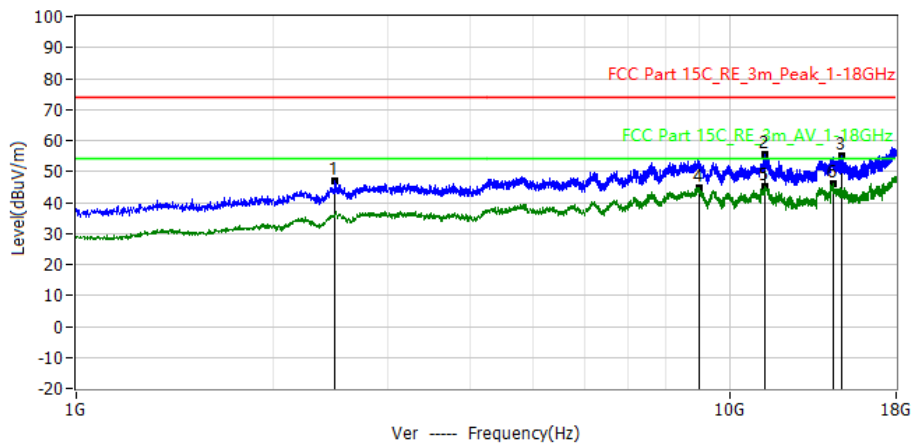
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	8.973GHz	74.00	53.04	-20.96	54.29	-1.25	PK	Ver
2*	11.400GHz	74.00	53.27	-20.73	51.40	1.87	PK	Ver
3*	14.413GHz	74.00	54.32	-19.68	48.41	5.91	PK	Ver
4*	9.001GHz	54.00	44.53	-9.47	45.70	-1.17	AV	Ver
5*	11.406GHz	54.00	44.63	-9.37	42.76	1.87	AV	Ver
6*	14.396GHz	54.00	45.87	-8.13	39.96	5.91	AV	Ver



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: B3 802.11ac80 5530	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20 14:10:14



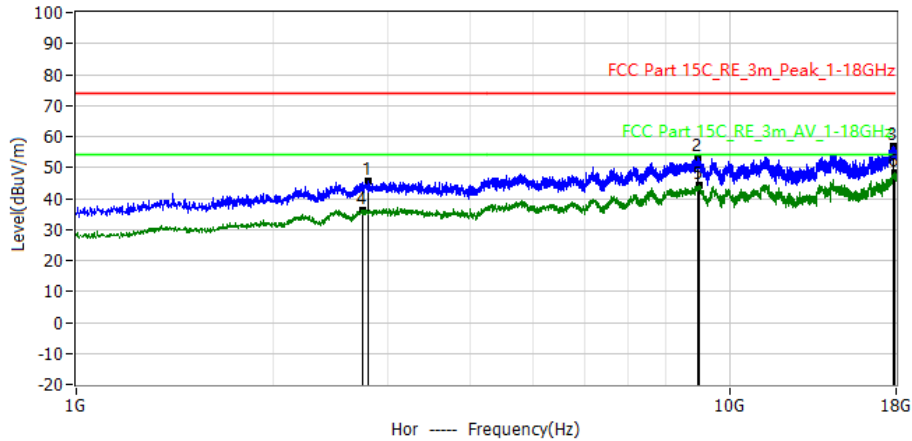
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	9.007GHz	74.00	53.33	-20.67	54.50	-1.17	PK	Hor
2*	11.402GHz	74.00	54.40	-19.60	52.53	1.87	PK	Hor
3*	14.400GHz	74.00	54.05	-19.95	48.14	5.91	PK	Hor
4*	9.007GHz	54.00	44.52	-9.48	45.69	-1.17	AV	Hor
5*	11.349GHz	54.00	44.63	-9.37	42.79	1.84	AV	Hor
6*	14.413GHz	54.00	45.55	-8.45	39.64	5.91	AV	Hor



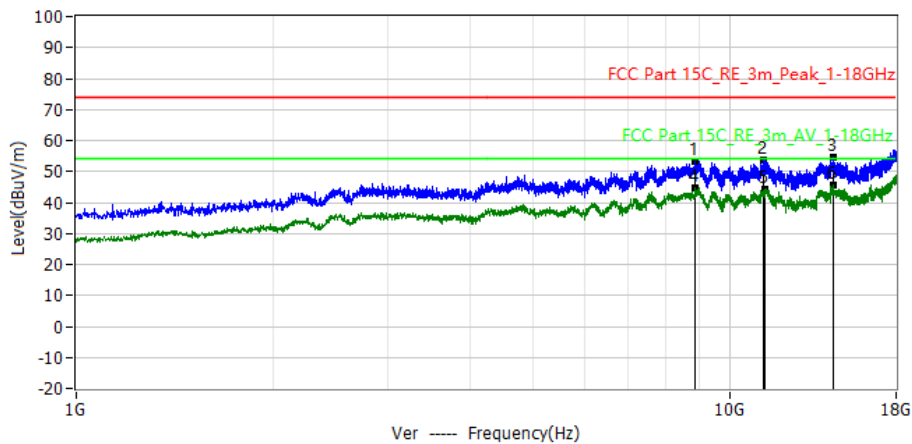
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	2.492GHz	74.00	47.02	-26.98	58.09	-11.07	PK	Ver
2*	11.334GHz	74.00	55.35	-18.65	53.52	1.83	PK	Ver
3*	14.842GHz	74.00	55.04	-18.96	49.09	5.95	PK	Ver
4*	8.994GHz	54.00	44.72	-9.28	45.91	-1.19	AV	Ver
5*	11.342GHz	54.00	44.99	-9.01	43.16	1.83	AV	Ver
6*	14.415GHz	54.00	46.08	-7.92	40.17	5.91	AV	Ver



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: B3 802.11ac80 5610	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20 14:11:05



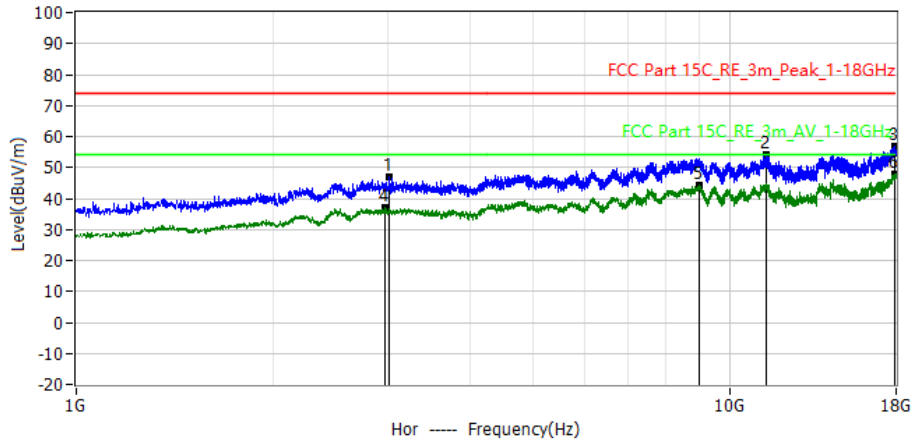
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	2.804GHz	74.00	45.51	-28.49	54.89	-9.38	PK	Hor
2*	8.952GHz	74.00	53.32	-20.68	54.63	-1.31	PK	Hor
3*	17.790GHz	74.00	56.79	-17.21	48.42	8.37	PK	Hor
4*	2.747GHz	54.00	36.39	-17.61	46.07	-9.68	AV	Hor
5*	9.005GHz	54.00	44.33	-9.67	45.50	-1.17	AV	Hor
6*	17.917GHz	54.00	48.43	-5.57	39.97	8.46	AV	Hor



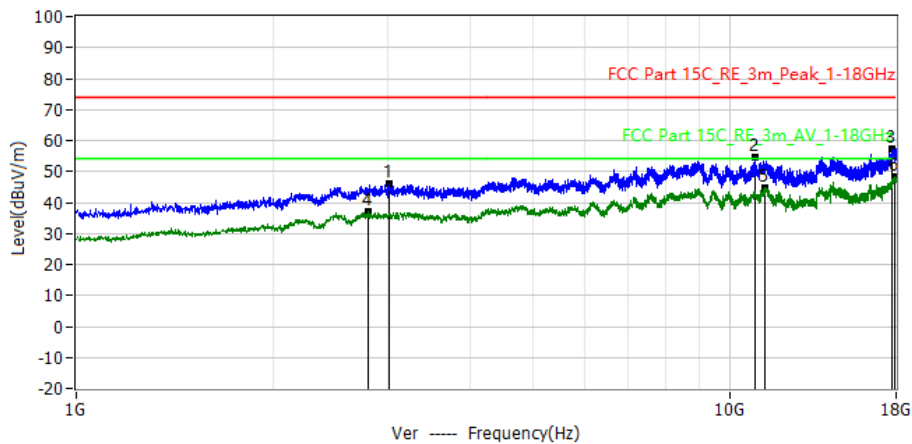
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	8.854GHz	74.00	53.21	-20.79	54.79	-1.58	PK	Ver
2*	11.277GHz	74.00	53.73	-20.27	51.94	1.79	PK	Ver
3*	14.413GHz	74.00	54.66	-19.34	48.75	5.91	PK	Ver
4*	8.867GHz	54.00	44.83	-9.17	46.38	-1.55	AV	Ver
5*	11.355GHz	54.00	44.39	-9.61	42.55	1.84	AV	Ver
6*	14.409GHz	54.00	45.56	-8.44	39.65	5.91	AV	Ver



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: B4 802.11n20 5745	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20 14:12:17



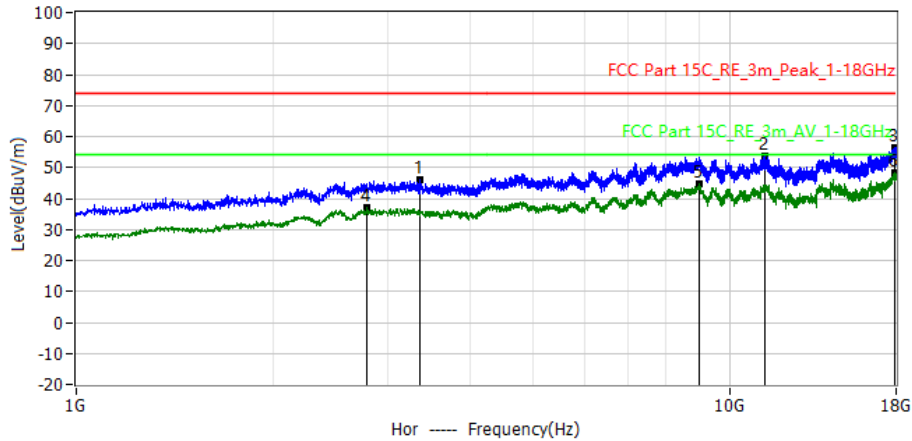
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	3.012GHz	74.00	46.90	-27.10	55.24	-8.34	PK	Hor
2*	11.406GHz	74.00	54.21	-19.79	52.34	1.87	PK	Hor
3*	17.898GHz	74.00	57.04	-16.96	48.59	8.45	PK	Hor
4*	2.970GHz	54.00	37.01	-16.99	45.51	-8.50	AV	Hor
5*	8.990GHz	54.00	44.31	-9.69	45.51	-1.20	AV	Hor
6*	17.941GHz	54.00	48.06	-5.94	39.58	8.48	AV	Hor



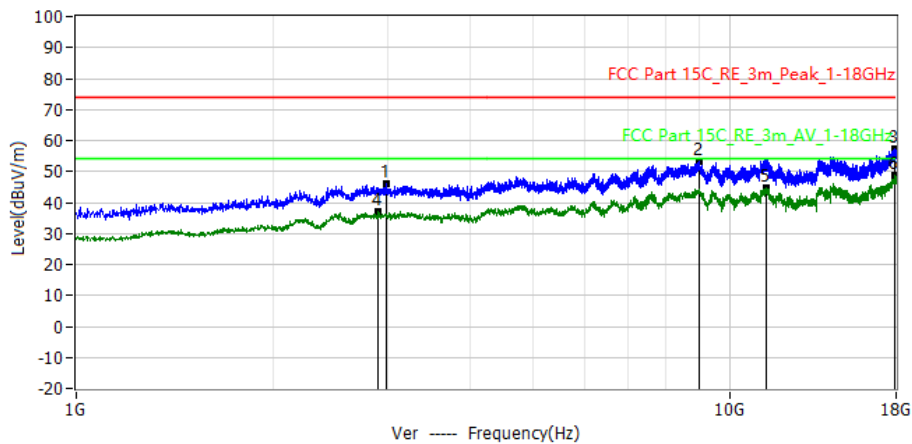
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	3.006GHz	74.00	45.90	-28.10	54.24	-8.34	PK	Ver
2*	10.966GHz	74.00	54.82	-19.18	53.28	1.54	PK	Ver
3*	17.711GHz	74.00	57.41	-16.59	49.09	8.32	PK	Ver
4*	2.802GHz	54.00	36.93	-17.07	46.32	-9.39	AV	Ver
5*	11.338GHz	54.00	44.72	-9.28	42.89	1.83	AV	Ver
6*	17.904GHz	54.00	48.51	-5.49	40.06	8.45	AV	Ver



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: B4 802.11n20 5785	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20 14:13:02



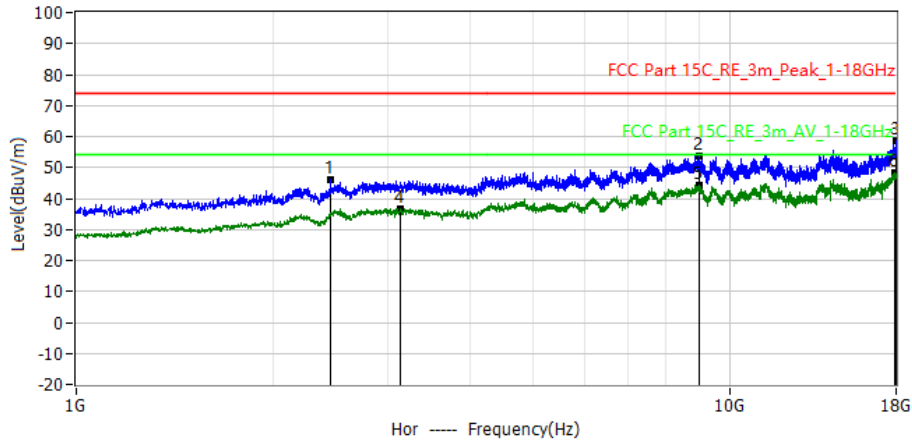
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	3.350GHz	74.00	46.16	-27.84	54.62	-8.46	PK	Hor
2*	11.328GHz	74.00	53.64	-20.36	51.82	1.82	PK	Hor
3*	17.936GHz	74.00	56.27	-17.73	47.79	8.48	PK	Hor
4*	2.783GHz	54.00	37.17	-16.83	46.66	-9.49	AV	Hor
5*	8.990GHz	54.00	44.50	-9.50	45.70	-1.20	AV	Hor
6*	17.945GHz	54.00	48.48	-5.52	40.00	8.48	AV	Hor



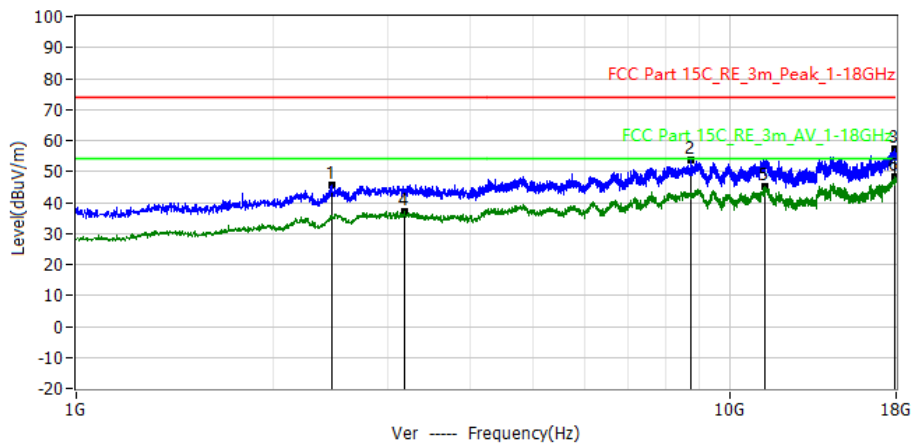
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	2.978GHz	74.00	45.88	-28.12	54.33	-8.45	PK	Ver
2*	8.992GHz	74.00	53.08	-20.92	54.27	-1.19	PK	Ver
3*	17.883GHz	74.00	57.19	-16.81	48.75	8.44	PK	Ver
4*	2.902GHz	54.00	37.05	-16.95	45.91	-8.86	AV	Ver
5*	11.398GHz	54.00	44.76	-9.24	42.90	1.86	AV	Ver
6*	17.909GHz	54.00	48.55	-5.45	40.09	8.46	AV	Ver



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: B4 802.11n20 5825	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20 14:13:29



No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	2.447GHz	74.00	46.23	-27.77	57.77	-11.54	PK	Hor
2*	8.992GHz	74.00	53.89	-20.11	55.08	-1.19	PK	Hor
3*	17.979GHz	74.00	58.78	-15.22	50.27	8.51	PK	Hor
4*	3.136GHz	54.00	36.78	-17.22	45.16	-8.38	AV	Hor
5*	8.994GHz	54.00	44.17	-9.83	45.36	-1.19	AV	Hor
6*	17.938GHz	54.00	48.10	-5.90	39.62	8.48	AV	Hor

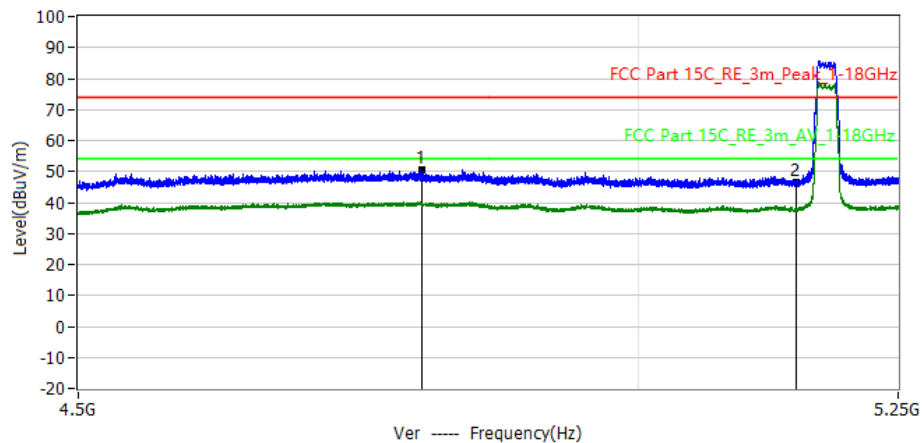


No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	2.458GHz	74.00	45.42	-28.58	56.85	-11.43	PK	Ver
2*	8.744GHz	74.00	53.58	-20.42	55.48	-1.90	PK	Ver
3*	17.894GHz	74.00	57.17	-16.83	48.72	8.45	PK	Ver
4*	3.178GHz	54.00	37.19	-16.81	45.59	-8.40	AV	Ver
5*	11.338GHz	54.00	45.39	-8.61	43.56	1.83	AV	Ver
6*	17.949GHz	54.00	48.38	-5.62	39.90	8.48	AV	Ver

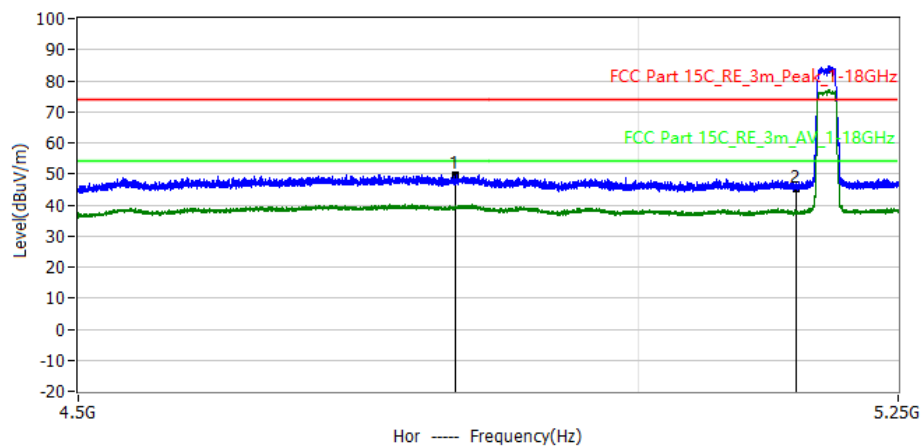


3.2.7 TEST RESULTS (RESTRICTED BANDS REQUIREMENTS)

M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: MIMO_802.11ac20_5180	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20



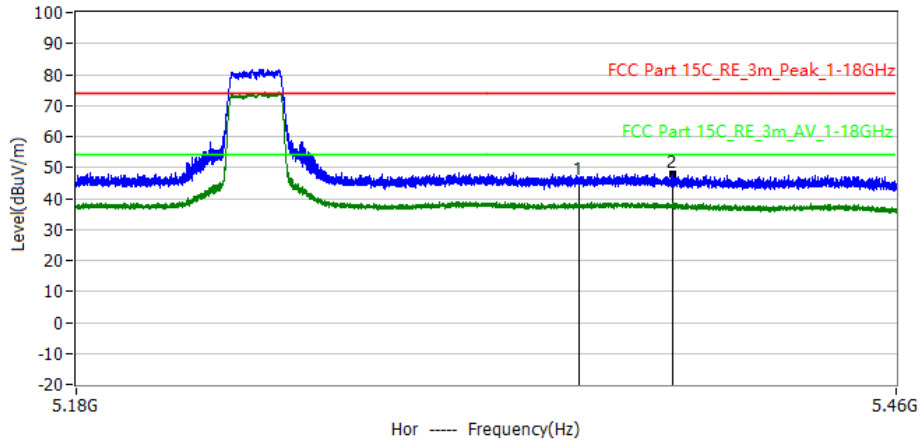
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	4.800GHz	74.00	50.70	-23.30	56.69	-5.99	PK	Ver
2*	5.150GHz	74.00	46.70	-27.30	53.32	-6.62	PK	Ver



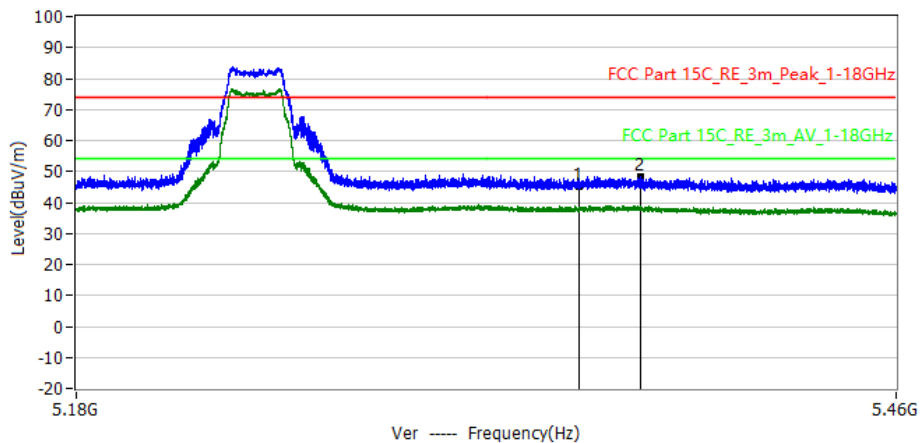
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	4.831GHz	74.00	49.83	-24.17	55.84	-6.01	PK	Hor
2*	5.150GHz	74.00	45.30	-28.70	51.92	-6.62	PK	Hor



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: MIMO_802.11ac20_5240	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20



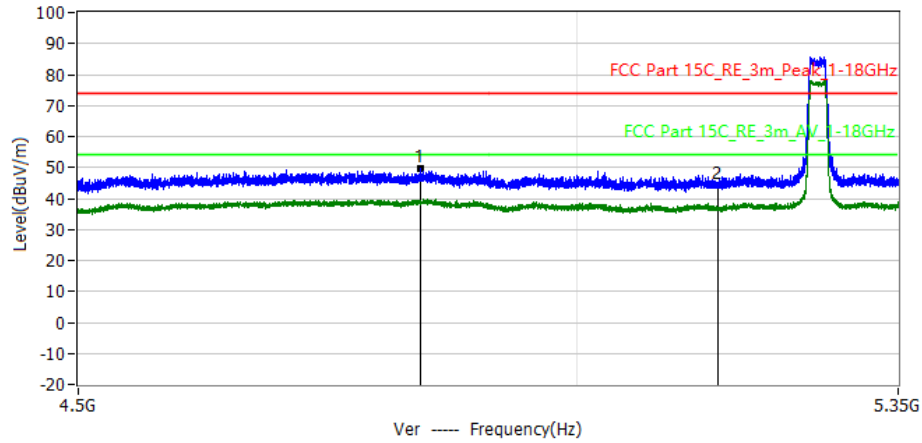
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	5.350GHz	74.00	45.80	-28.20	53.06	-7.26	PK	Hor
2*	5.382GHz	74.00	48.00	-26.00	55.36	-7.36	PK	Hor



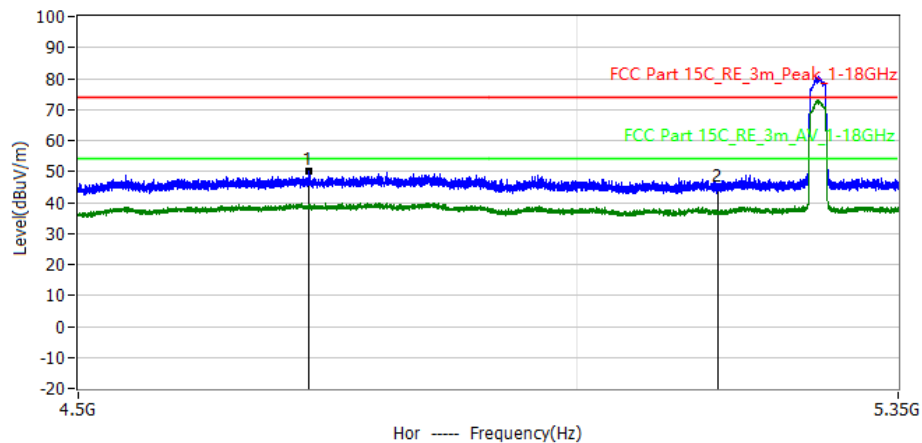
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	5.350GHz	74.00	45.30	-28.70	52.56	-7.26	PK	Ver
2*	5.371GHz	74.00	48.15	-25.85	55.48	-7.33	PK	Ver



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: MIMO_802.11ac20_5260	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20



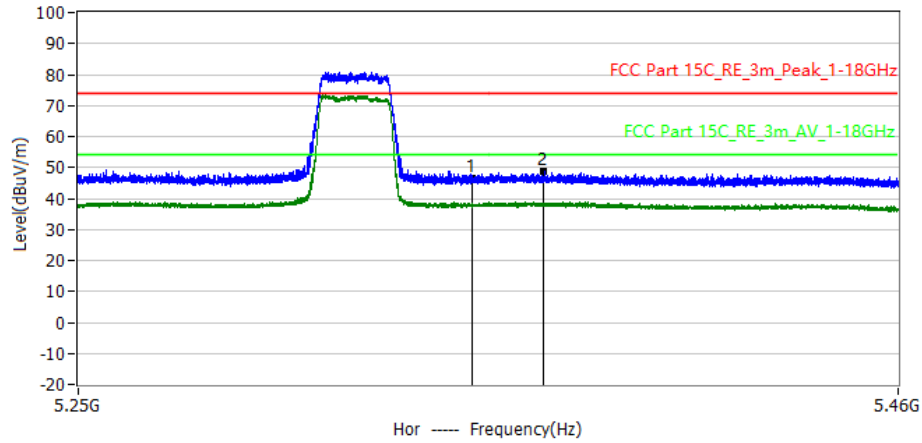
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	4.837GHz	74.00	49.46	-24.54	55.47	-6.01	PK	Ver
2*	5.150GHz	74.00	44.10	-29.90	50.72	-6.62	PK	Ver



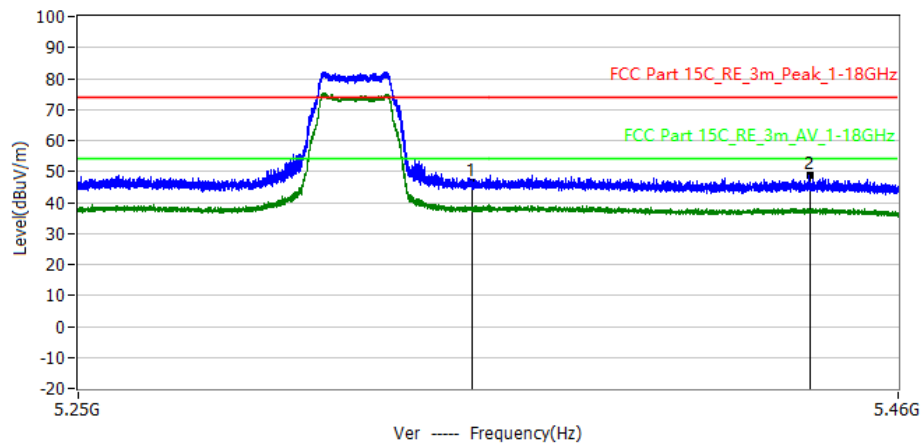
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	4.724GHz	74.00	50.24	-23.76	56.17	-5.93	PK	Hor
2*	5.150GHz	74.00	44.60	-29.40	51.22	-6.62	PK	Hor



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: MIMO_802.11ac20_5320	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20



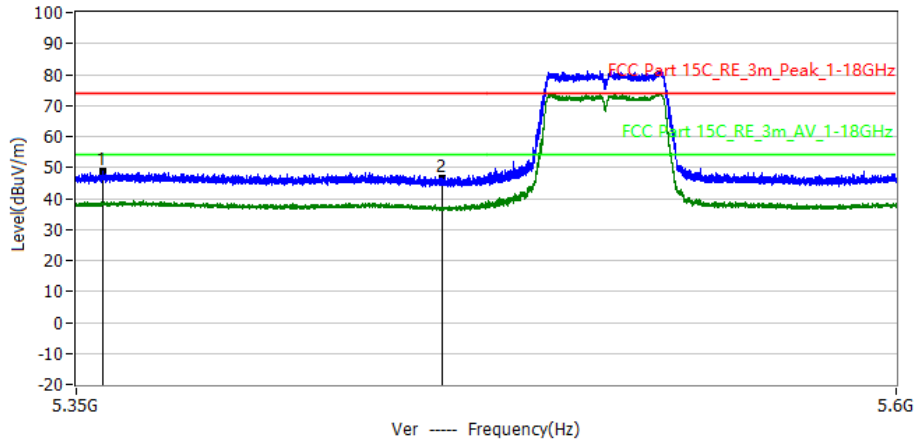
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	5.350GHz	74.00	46.60	-27.40	53.86	-7.26	PK	Hor
2*	5.368GHz	74.00	48.64	-25.36	55.96	-7.32	PK	Hor



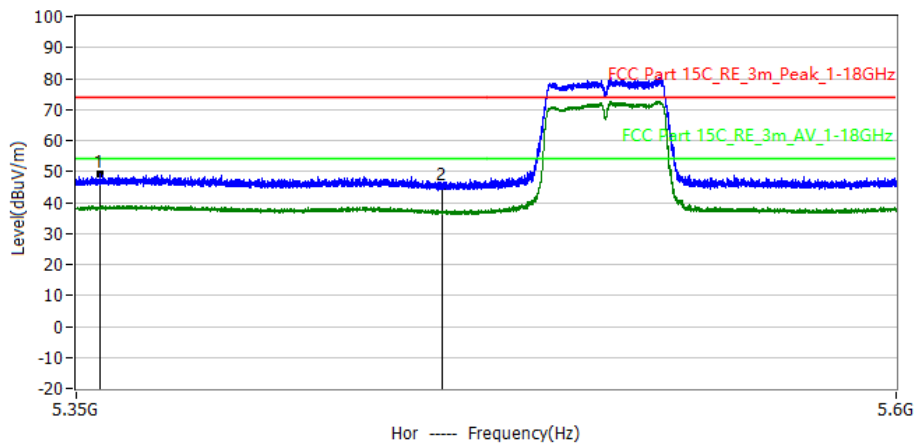
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	5.350GHz	74.00	46.50	-27.50	53.76	-7.26	PK	Ver
2*	5.437GHz	74.00	48.96	-25.04	56.50	-7.54	PK	Ver



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: MIMO_802.11ac80_5530	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20



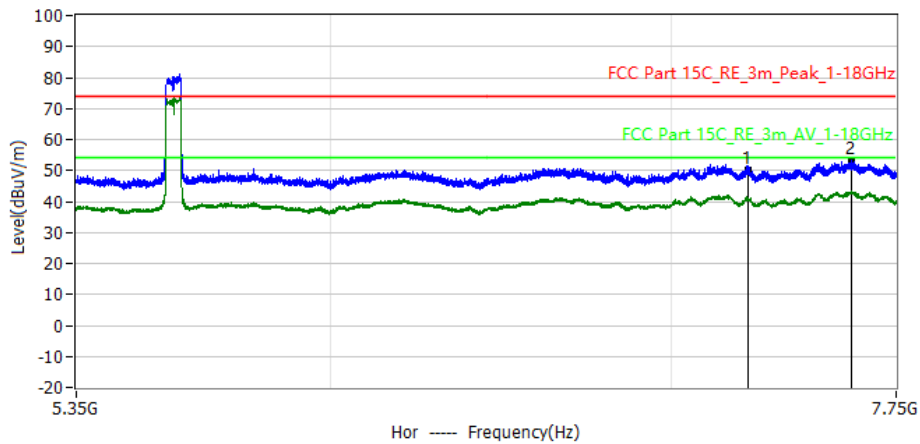
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	5.358GHz	74.00	48.62	-25.38	55.90	-7.28	PK	Ver
2*	5.460GHz	74.00	46.40	-27.60	54.01	-7.61	PK	Ver



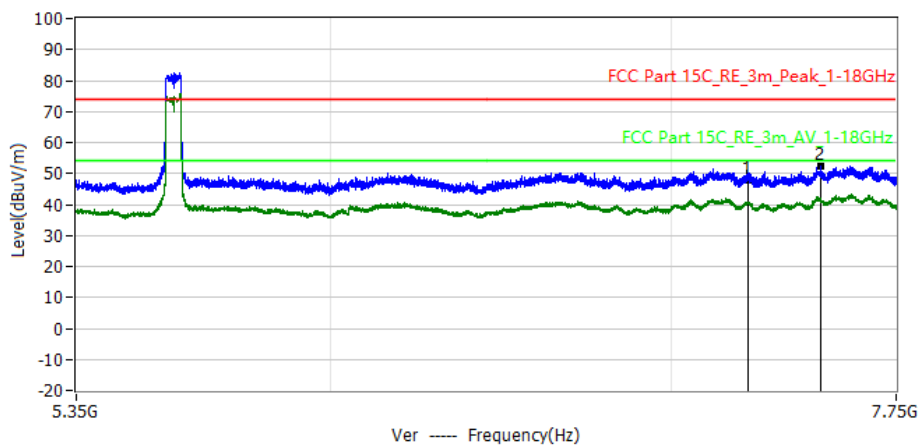
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	5.357GHz	74.00	49.21	-24.79	56.49	-7.28	PK	Hor
2*	5.460GHz	74.00	45.30	-28.70	52.91	-7.61	PK	Hor



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: MIMO_802.11ac80_5610	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20



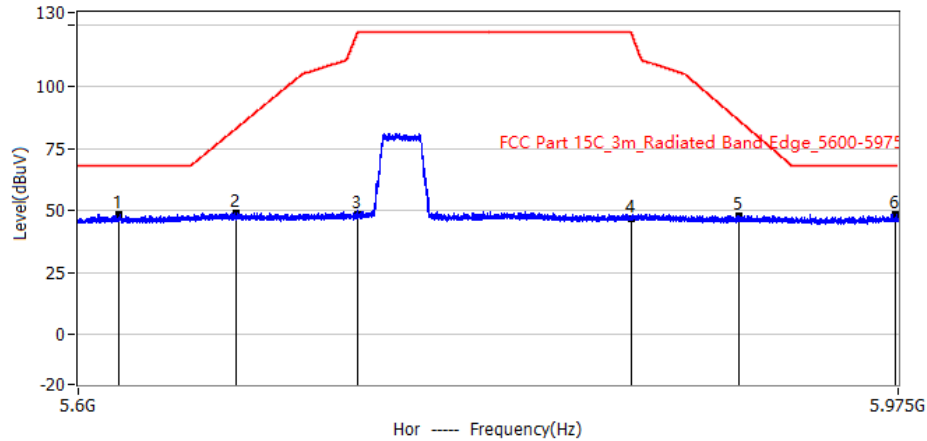
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	7.250GHz	74.00	49.90	-24.10	54.89	-4.99	PK	Hor
2*	7.597GHz	74.00	53.09	-20.91	57.33	-4.24	PK	Hor



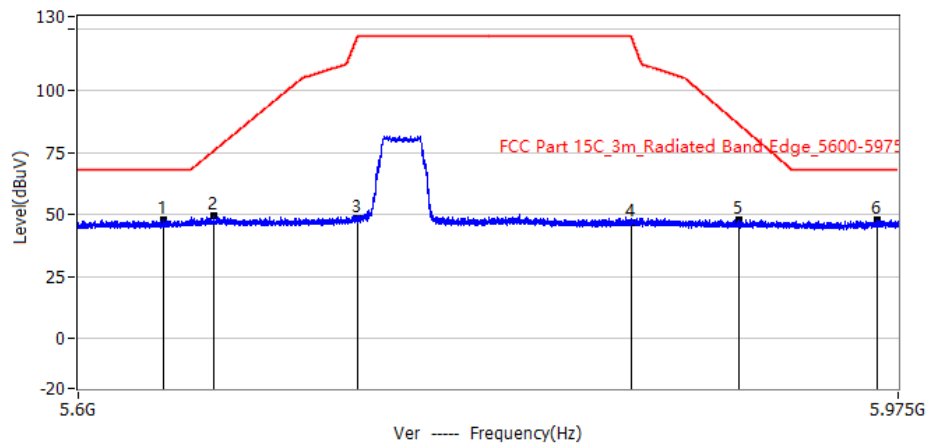
No.	Frequency	Limit dBuV/m	Level dBuV/m	Delta dB	Reading dBuV	Factor dB/m	Detector	Polar
1*	7.250GHz	74.00	48.00	-26.00	52.99	-4.99	PK	Ver
2*	7.491GHz	74.00	52.21	-21.79	56.53	-4.32	PK	Ver



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: MIMO_802.11n20_5745	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20



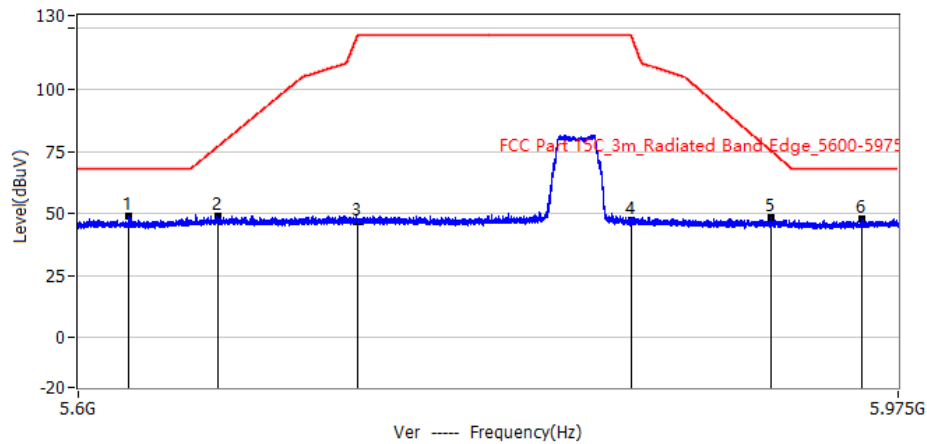
No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Polar
1*	5.618GHz	68.20	48.50	-19.70	56.19	-7.69	PK	Hor
2*	5.670GHz	82.78	49.26	-33.53	56.93	-7.67	PK	Hor
3*	5.725GHz	122.20	48.30	-73.90	55.95	-7.65	PK	Hor
4*	5.850GHz	122.20	46.90	-75.20	54.50	-7.60	PK	Hor
5*	5.900GHz	86.52	48.14	-38.38	55.72	-7.58	PK	Hor
6*	5.974GHz	68.20	48.54	-19.66	56.09	-7.55	PK	Hor



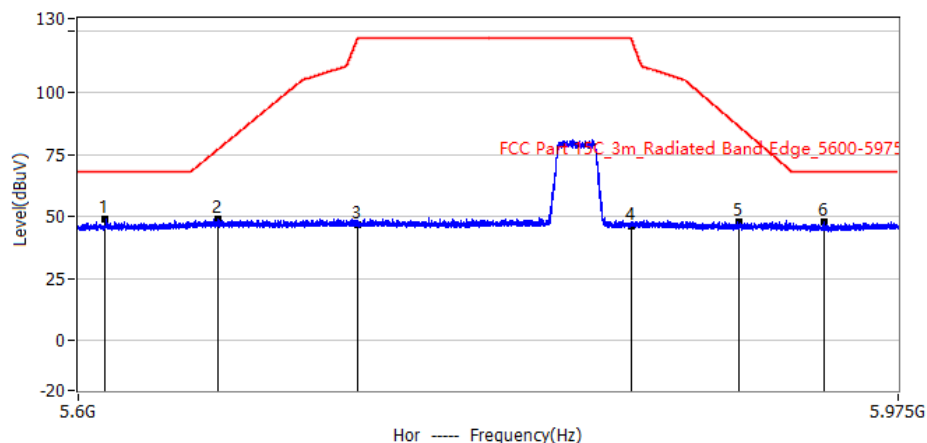
No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Polar
1*	5.638GHz	68.20	47.92	-20.28	55.60	-7.68	PK	Ver
2*	5.660GHz	75.83	49.48	-26.35	57.16	-7.68	PK	Ver
3*	5.725GHz	122.20	48.60	-73.60	56.25	-7.65	PK	Ver
4*	5.850GHz	122.20	46.70	-75.40	54.30	-7.60	PK	Ver
5*	5.900GHz	86.38	48.21	-38.18	55.79	-7.58	PK	Ver
6*	5.965GHz	68.20	47.89	-20.31	55.44	-7.55	PK	Ver



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: MIMO_802.11n20_5825	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20



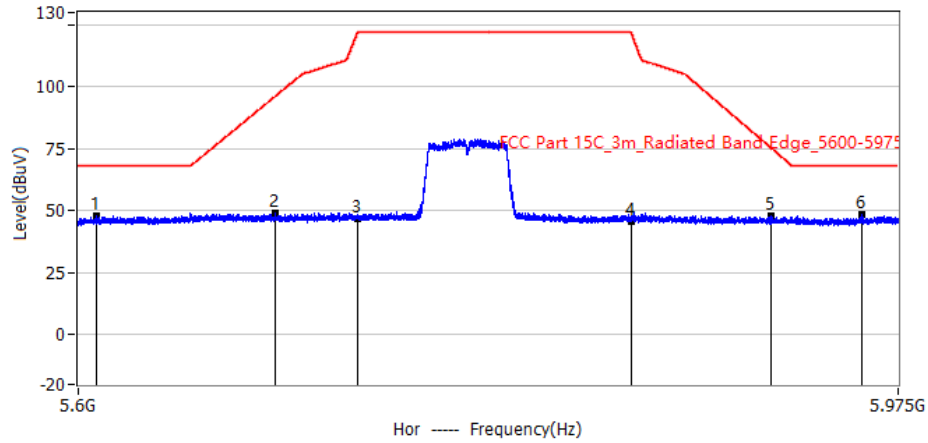
No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Polar
1*	5.622GHz	68.20	48.87	-19.33	56.56	-7.69	PK	Ver
2*	5.662GHz	76.81	49.24	-27.57	56.92	-7.68	PK	Ver
3*	5.725GHz	122.20	46.70	-75.50	54.35	-7.65	PK	Ver
4*	5.850GHz	122.20	47.50	-74.70	55.10	-7.60	PK	Ver
5*	5.915GHz	75.61	48.30	-27.31	55.87	-7.57	PK	Ver
6*	5.958GHz	68.20	47.88	-20.32	55.44	-7.56	PK	Ver



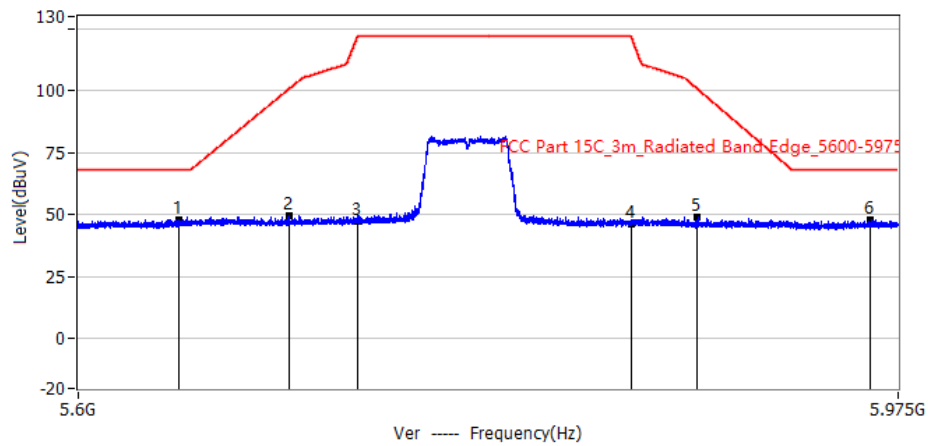
No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Polar
1*	5.612GHz	68.20	48.91	-19.29	56.61	-7.70	PK	Hor
2*	5.662GHz	77.47	48.85	-28.62	56.53	-7.68	PK	Hor
3*	5.725GHz	122.20	46.80	-75.40	54.45	-7.65	PK	Hor
4*	5.850GHz	122.20	46.20	-76.00	53.80	-7.60	PK	Hor
5*	5.900GHz	86.80	48.01	-38.79	55.59	-7.58	PK	Hor
6*	5.940GHz	68.20	47.81	-20.39	55.37	-7.56	PK	Hor



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: MIMO_802.11n40_5755	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20



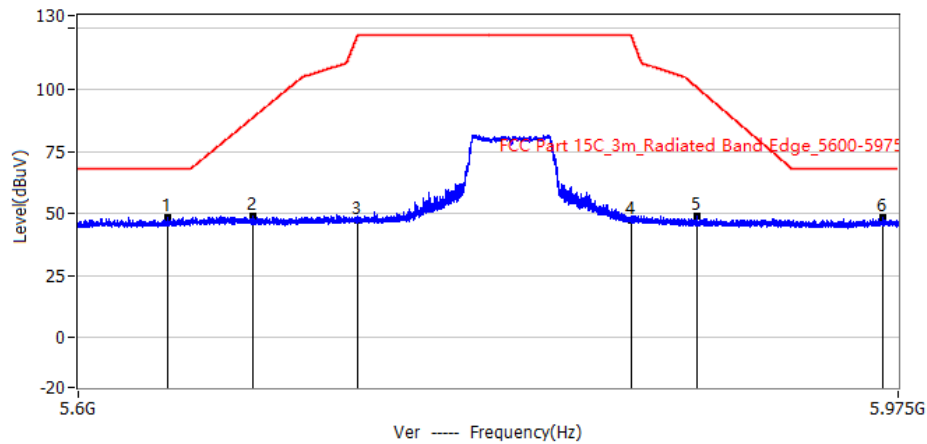
No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Polar
1*	5.608GHz	68.20	47.90	-20.30	55.60	-7.70	PK	Hor
2*	5.688GHz	96.17	48.88	-47.29	56.54	-7.66	PK	Hor
3*	5.725GHz	122.20	47.10	-75.10	54.75	-7.65	PK	Hor
4*	5.850GHz	122.20	46.00	-76.20	53.60	-7.60	PK	Hor
5*	5.915GHz	75.57	48.21	-27.36	55.78	-7.57	PK	Hor
6*	5.958GHz	68.20	48.26	-19.94	55.82	-7.56	PK	Hor



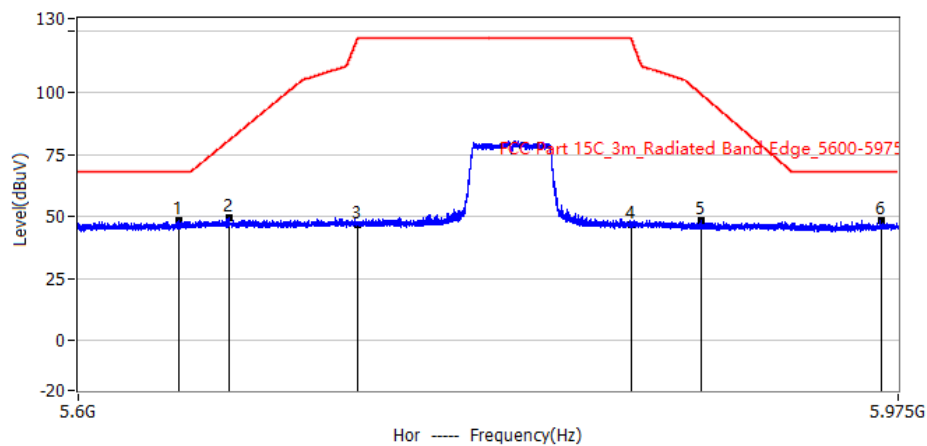
No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Polar
1*	5.645GHz	68.20	47.93	-20.27	55.61	-7.68	PK	Ver
2*	5.694GHz	100.73	49.58	-51.16	57.24	-7.66	PK	Ver
3*	5.725GHz	122.20	47.40	-74.80	55.05	-7.65	PK	Ver
4*	5.850GHz	122.20	46.40	-75.80	54.00	-7.60	PK	Ver
5*	5.881GHz	100.42	48.91	-51.51	56.50	-7.59	PK	Ver
6*	5.962GHz	68.20	47.79	-20.41	55.35	-7.56	PK	Ver



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: MIMO_802.11n40_5795	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20



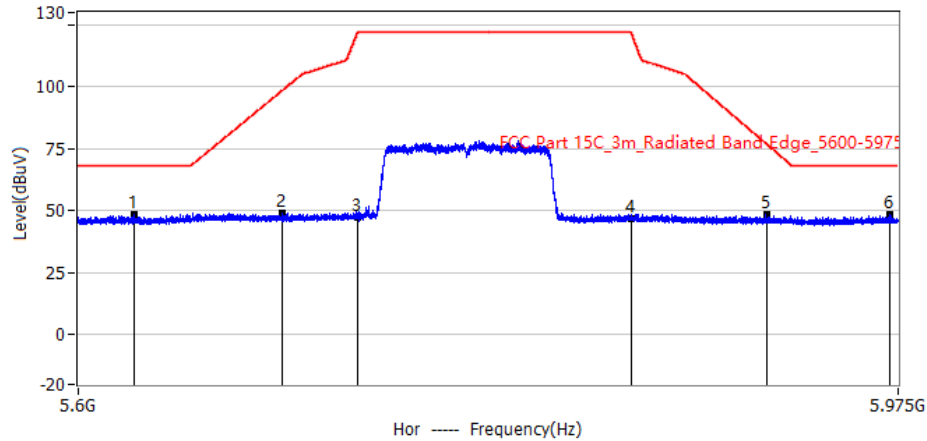
No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Polar
1*	5.640GHz	68.20	48.76	-19.44	56.44	-7.68	PK	Ver
2*	5.678GHz	88.82	49.24	-39.58	56.91	-7.67	PK	Ver
3*	5.725GHz	122.20	47.30	-74.90	54.95	-7.65	PK	Ver
4*	5.850GHz	122.20	47.50	-74.70	55.10	-7.60	PK	Ver
5*	5.881GHz	100.98	48.96	-52.02	56.55	-7.59	PK	Ver
6*	5.968GHz	68.20	48.30	-19.90	55.85	-7.55	PK	Ver



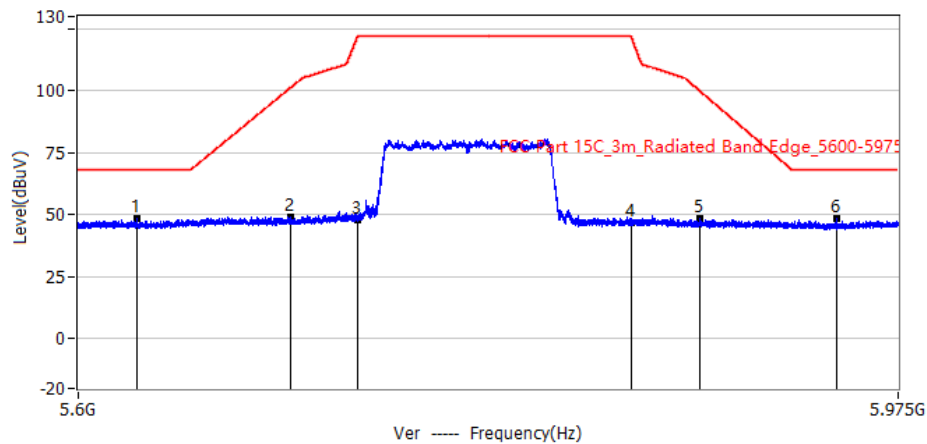
No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Polar
1*	5.645GHz	68.20	48.46	-19.74	56.14	-7.68	PK	Hor
2*	5.667GHz	81.01	49.47	-31.54	57.14	-7.67	PK	Hor
3*	5.725GHz	122.20	47.10	-75.10	54.75	-7.65	PK	Hor
4*	5.850GHz	122.20	46.60	-75.60	54.20	-7.60	PK	Hor
5*	5.883GHz	99.34	48.47	-50.87	56.06	-7.59	PK	Hor
6*	5.967GHz	68.20	48.52	-19.68	56.07	-7.55	PK	Hor



M/N: WF2190 Pro	Temperature: 25°C
S/N:	Humidity: 45%RH
Test Mode: MIMO_802.11ac80_5775	Test Voltage: DC 5V
Note:	Test Data: 2022-09-20



No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Polar
1*	5.625GHz	68.20	48.63	-19.57	56.32	-7.69	PK	Hor
2*	5.691GHz	98.34	49.24	-49.10	56.90	-7.66	PK	Hor
3*	5.725GHz	122.20	47.40	-74.80	55.05	-7.65	PK	Hor
4*	5.850GHz	122.20	46.70	-75.50	54.30	-7.60	PK	Hor
5*	5.913GHz	77.20	48.51	-28.70	56.08	-7.57	PK	Hor
6*	5.971GHz	68.20	48.42	-19.78	55.97	-7.55	PK	Hor



No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Reading dBuV	Factor dB	Detector	Polar
1*	5.626GHz	68.20	48.49	-19.71	56.18	-7.69	PK	Ver
2*	5.695GHz	101.25	49.27	-51.98	56.93	-7.66	PK	Ver
3*	5.725GHz	122.20	48.10	-74.10	55.75	-7.65	PK	Ver
4*	5.850GHz	122.20	47.10	-75.10	54.70	-7.60	PK	Ver
5*	5.882GHz	100.00	48.68	-51.33	56.27	-7.59	PK	Ver
6*	5.946GHz	68.20	48.50	-19.70	56.06	-7.56	PK	Ver



4. POWER SPECTRAL DENSITY TEST

4.1 LIMIT

1. For mobile and portable 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.
2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, 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.
3. For the band 5.725-5.850 GHz, the peak power spectral density shall not exceed 30 dBm in any 500kHz band. If transmitting antenna directional gain is greater than 6 dBi, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in Db that the directional gain of the antenna exceeds 6 dBi.

4.2 TEST PROCEDURE

The setting follows Method SA-1 of FCC KDB 789033 D02 General U-NII Test Procedures New Rules v02r01.

For devices operating in the band, 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 $RBW (< 500 \text{ kHz})$ 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 $RBW (< 1 \text{ MHz})$ 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 $RBW=100 \text{ KHZ}$ is available on nearly all spectrum analyzers.



4.3 DEVIATION FROM STANDARD

No deviation.

4.4 TEST SETUP



4.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

4.5 EUT OPERATION CONDITIONS

For the measurement records, refer to the appendix I.



5. BANDWIDTH MEASUREMENT

5.1 EMISSION BANDWIDTH (EBW) 26 BANDWID PROCEDURES / LIMIT

The following procedure shall be used for measuring 26 bandwidth.

5.1.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW $\geq$ RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26 dB down from the peak 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%.

5.1.2 LIMIT

The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320 megahertz.

5.1.3 TEST SETUP



5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.5 TEST RESULTS

FOR THE MEASUREMENT RECORDS, REFER TO THE APPENDIX I.



5.2 OCCUPIED BANDWIDTH (99%) TEST APPLIED PROCEDURES / LIMIT

The following procedure shall be used for measuring (99 %) power bandwidth.

5.2.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v02r01.

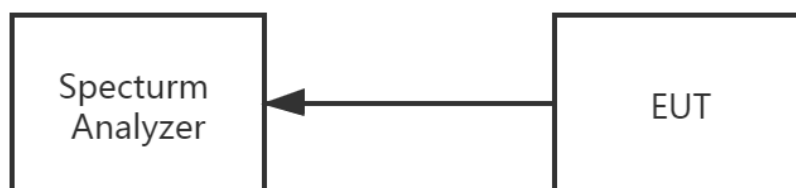
The following procedure shall be used for measuring (99 %) power bandwidth:

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.

5.2.2 LIMIT

The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320 megahertz.

5.2.3 TEST SETUP



5.2.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.2.5 TEST RESULTS

For the measurement records, refer to the appendix I.



5.3 MINIMUM EMISSION BANDWIDTH(6 DB) PROCEDURES / LIMIT

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth.

5.3.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v02r01.
 - a) Set RBW = 100 kHz.
 - b) Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
 - c) Detector = Peak.
 - d) Trace mode = max hold.
 - e) Sweep = auto couple.
 - f) Allow the trace to stabilize.
 - g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.3.2 DEVIATION FROM STANDARD

No deviation.

5.3.3 TEST SETUP



5.3.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.3.5 TEST RESULTS

FOR THE MEASUREMENT RECORDS, REFER TO THE APPENDIX I.



6. MAXIMUM CONDUCTED OUTPUT POWER

6.1 LIMIT

For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. 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 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz, If transmitting antennas of directional gain greater than 6 dBi are used.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used.

FCC Part15 (15.407) , Subpart E				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.407(a) (1) (iv)	Peak Output Power	0.25 watt	5150-5250	PASS
		The lesser of 250 mW or $11 \text{ dBm} + 10 \log (26 \text{ dB emission bandwidth})$	5250-5350 5470-5725	
15.407(a) (3)		1 watt	5725-5825	

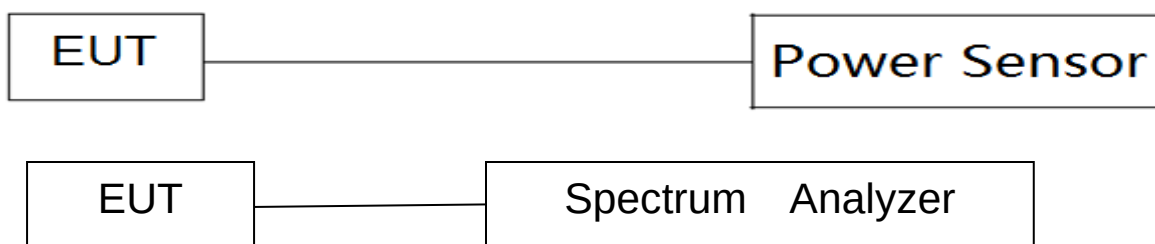
6.2 TEST PROCEDURE

The EUT was directly connected to the Power Sensor&PC

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 5 Unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULTS

For the measurement records, refer to the appendix I.



7. AUTOMATICALLY DISCONTINUE TRANSMISSION

7.1 LIMIT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

7.2 TEST RESULT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission



8. ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: 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.

8.2 EUT ANTENNA

The EUT antenna is Integral Antenna. It comply with the standard requirement.



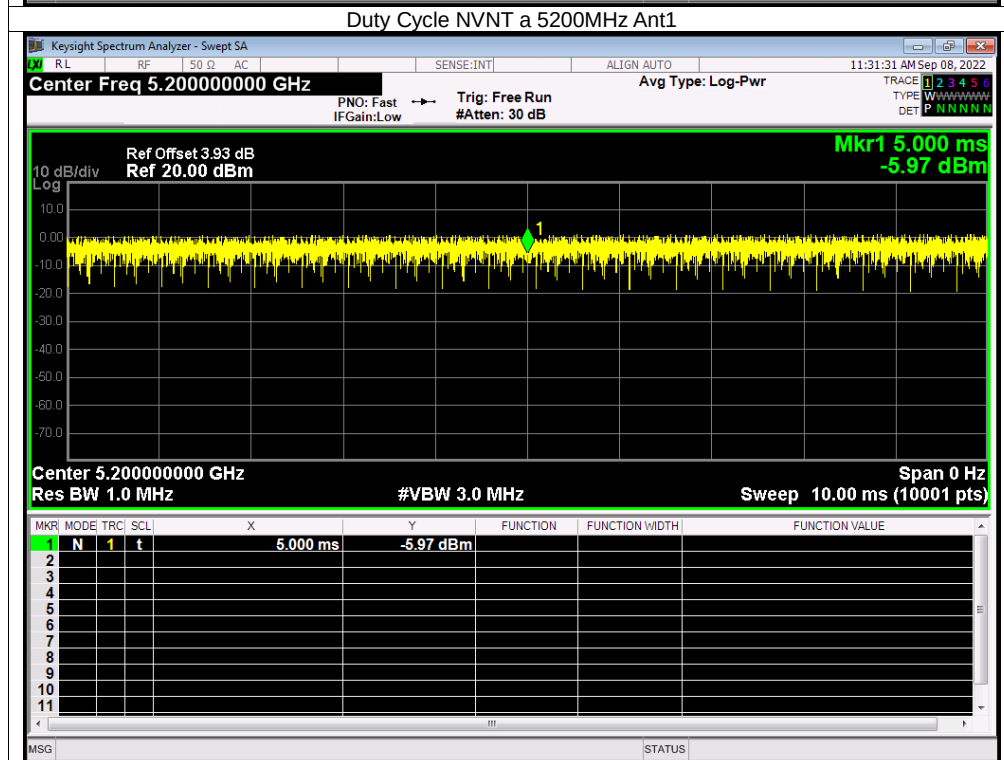
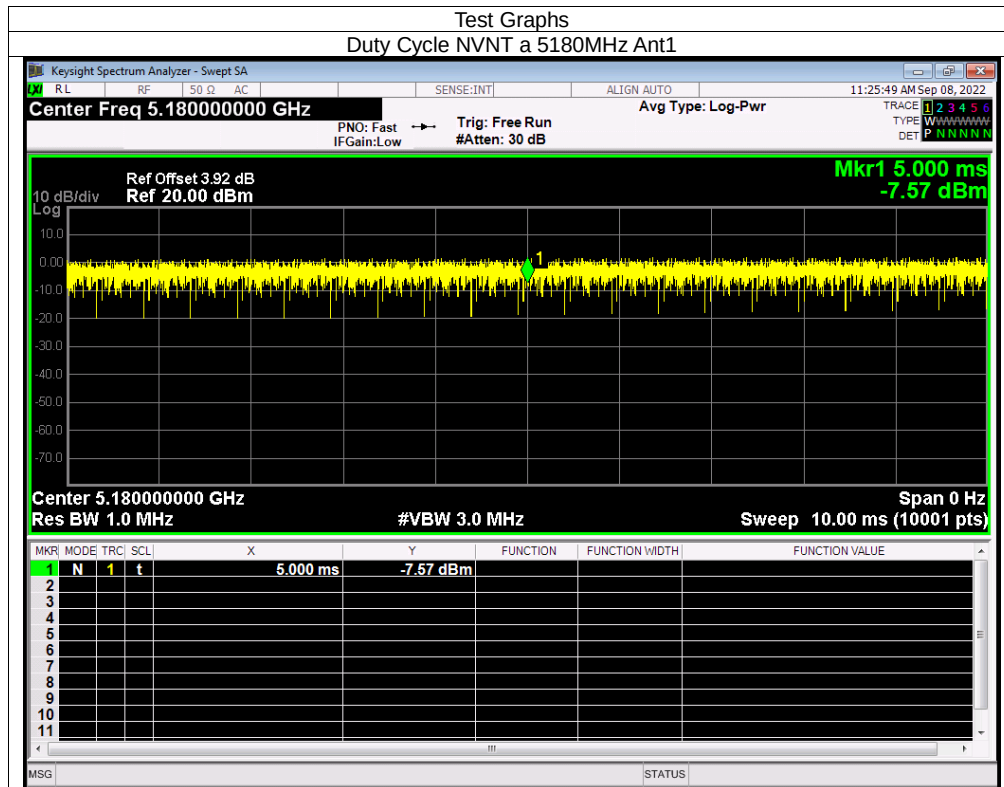
APPENDIX I:TEST RESULTS

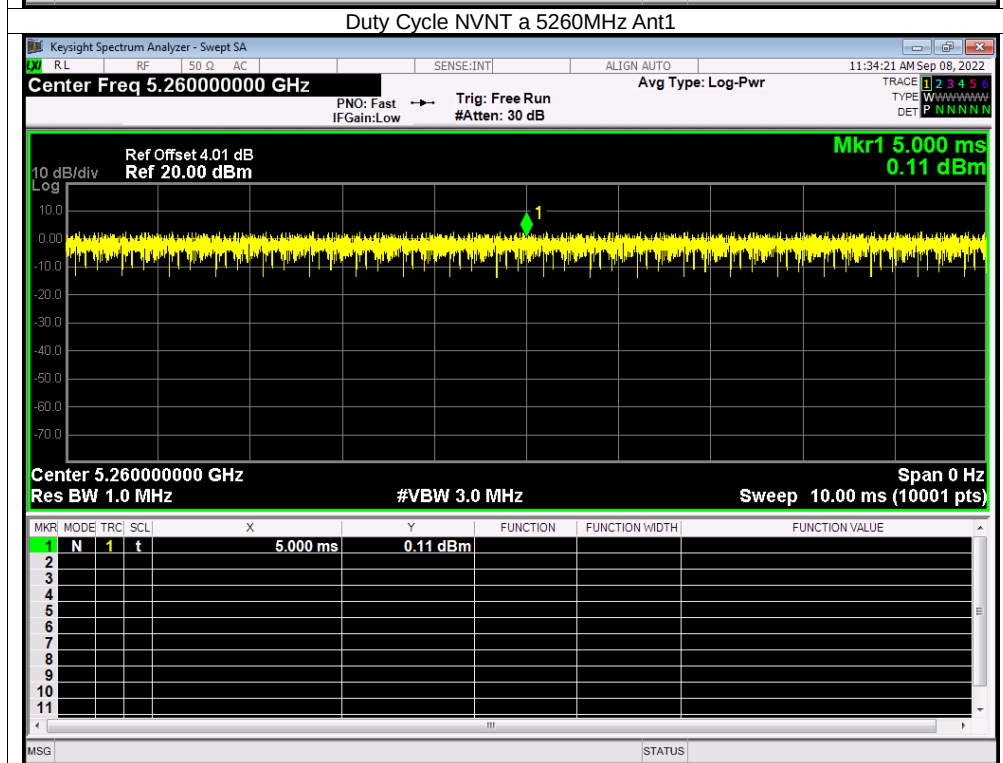
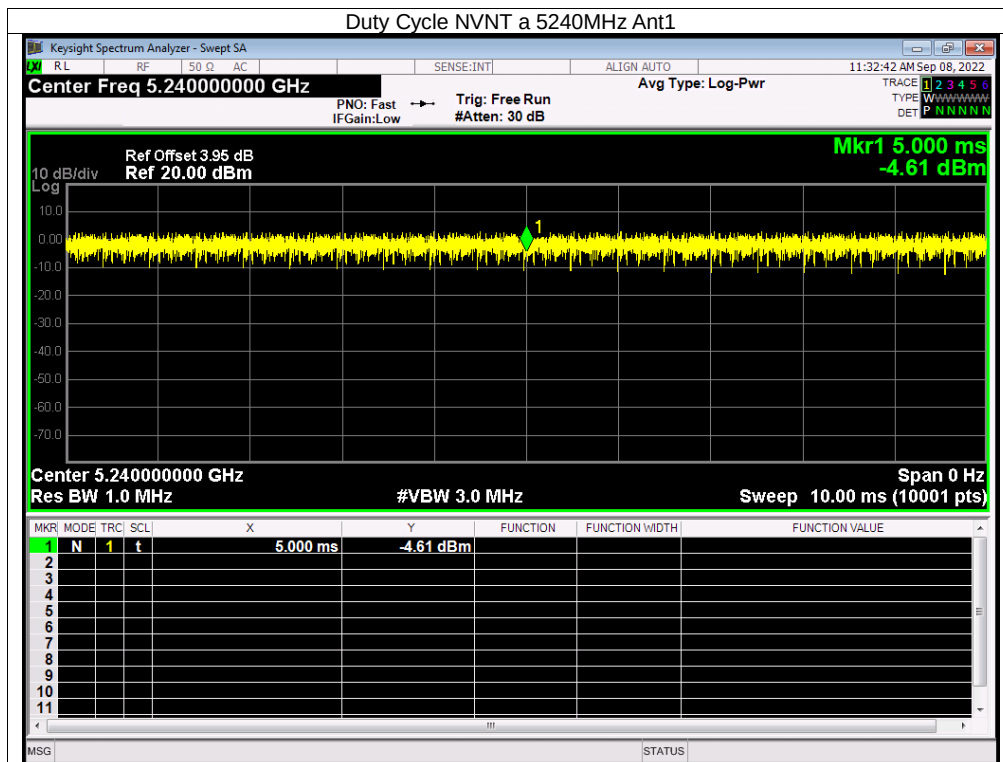
DUTY CYCLE

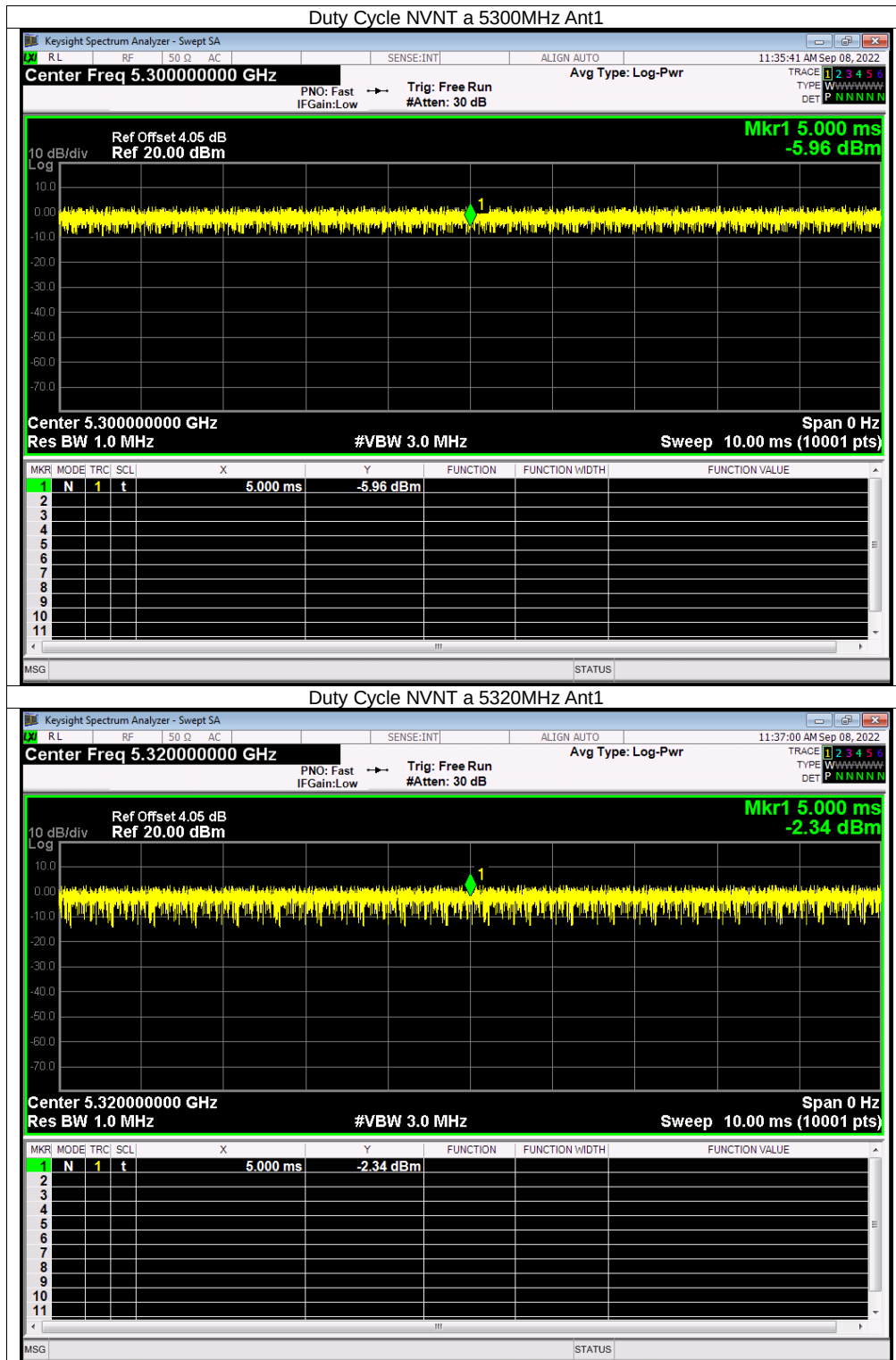
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant1	100	0	0
NVNT	a	5200	Ant1	100	0	0
NVNT	a	5240	Ant1	100	0	0
NVNT	a	5260	Ant1	100	0	0
NVNT	a	5300	Ant1	100	0	0
NVNT	a	5320	Ant1	100	0	0
NVNT	a	5500	Ant1	100	0	0
NVNT	a	5580	Ant1	100	0	0
NVNT	a	5700	Ant1	100	0	0
NVNT	a	5745	Ant1	100	0	0
NVNT	a	5785	Ant1	100	0	0
NVNT	a	5825	Ant1	100	0	0
NVNT	a	5180	Ant2	100	0	0
NVNT	a	5200	Ant2	100	0	0
NVNT	a	5240	Ant2	100	0	0
NVNT	a	5260	Ant2	100	0	0
NVNT	a	5300	Ant2	100	0	0
NVNT	a	5320	Ant2	100	0	0
NVNT	a	5500	Ant2	100	0	0
NVNT	a	5580	Ant2	100	0	0
NVNT	a	5700	Ant2	100	0	0
NVNT	a	5745	Ant2	100	0	0
NVNT	a	5785	Ant2	100	0	0
NVNT	a	5825	Ant2	100	0	0
NVNT	ac20	5180	Sum	100	0	0
NVNT	ac20	5200	Sum	100	0	0
NVNT	ac20	5240	Sum	100	0	0
NVNT	ac20	5260	Sum	100	0	0
NVNT	ac20	5300	Sum	100	0	0
NVNT	ac20	5320	Sum	100	0	0
NVNT	ac20	5500	Sum	100	0	0
NVNT	ac20	5580	Sum	100	0	0
NVNT	ac20	5700	Sum	100	0	0
NVNT	ac20	5745	Sum	100	0	0
NVNT	ac20	5785	Sum	100	0	0
NVNT	ac20	5825	Sum	100	0	0
NVNT	ac40	5190	Sum	100	0	0
NVNT	ac40	5230	Sum	100	0	0
NVNT	ac40	5270	Sum	100	0	0
NVNT	ac40	5310	Sum	100	0	0
NVNT	ac40	5510	Sum	100	0	0
NVNT	ac40	5550	Sum	100	0	0
NVNT	ac40	5670	Sum	100	0	0
NVNT	ac40	5755	Sum	100	0	0
NVNT	ac40	5795	Sum	100	0	0
NVNT	ac80	5210	Sum	100	0	0
NVNT	ac80	5290	Sum	100	0	0
NVNT	ac80	5530	Sum	100	0	0
NVNT	ac80	5610	Sum	100	0	0
NVNT	ac80	5775	Sum	100	0	0
NVNT	n20	5180	Sum	100	0	0
NVNT	n20	5200	Sum	100	0	0
NVNT	n20	5240	Sum	100	0	0
NVNT	n20	5260	Sum	100	0	0
NVNT	n20	5300	Sum	100	0	0

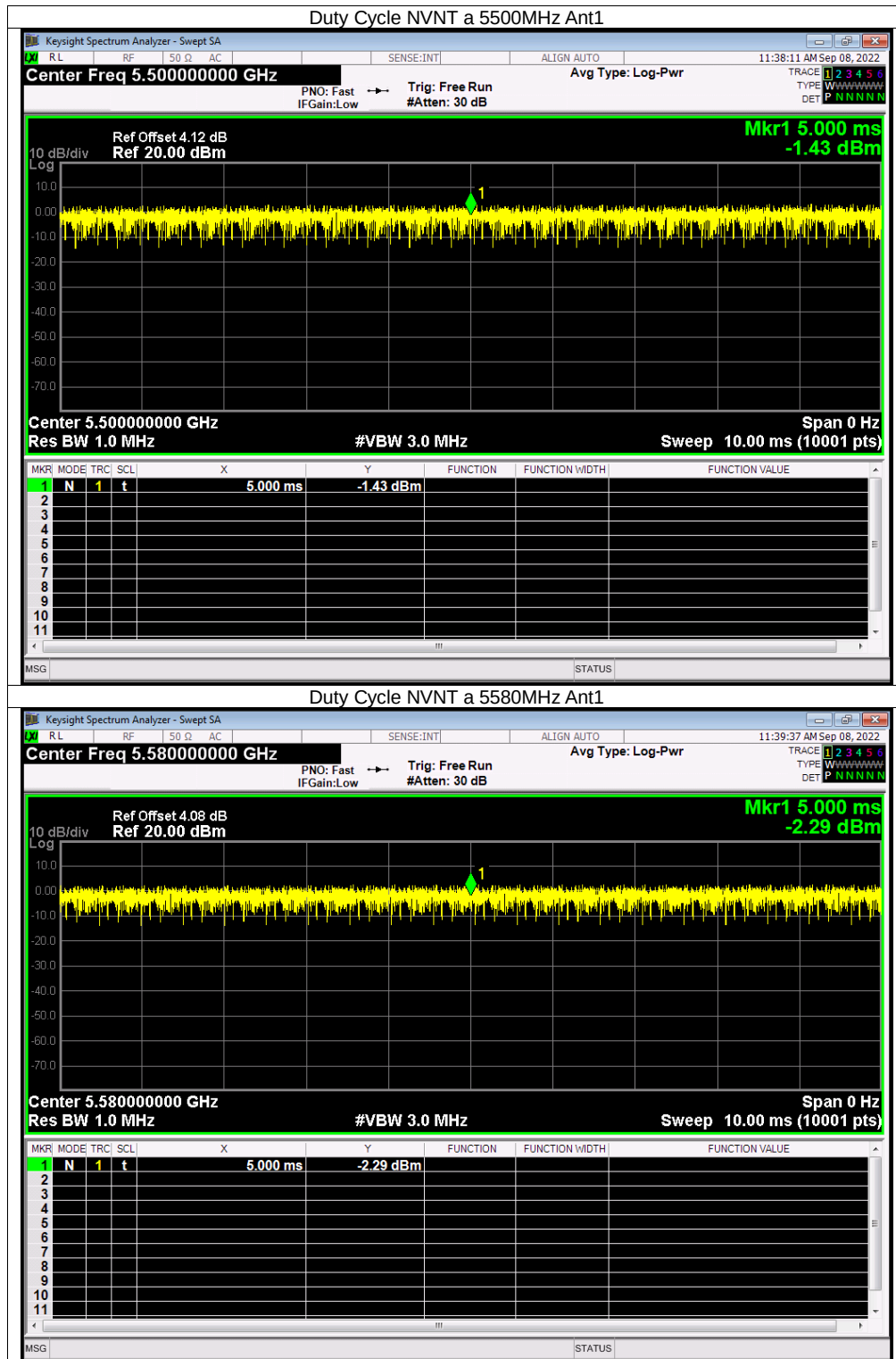


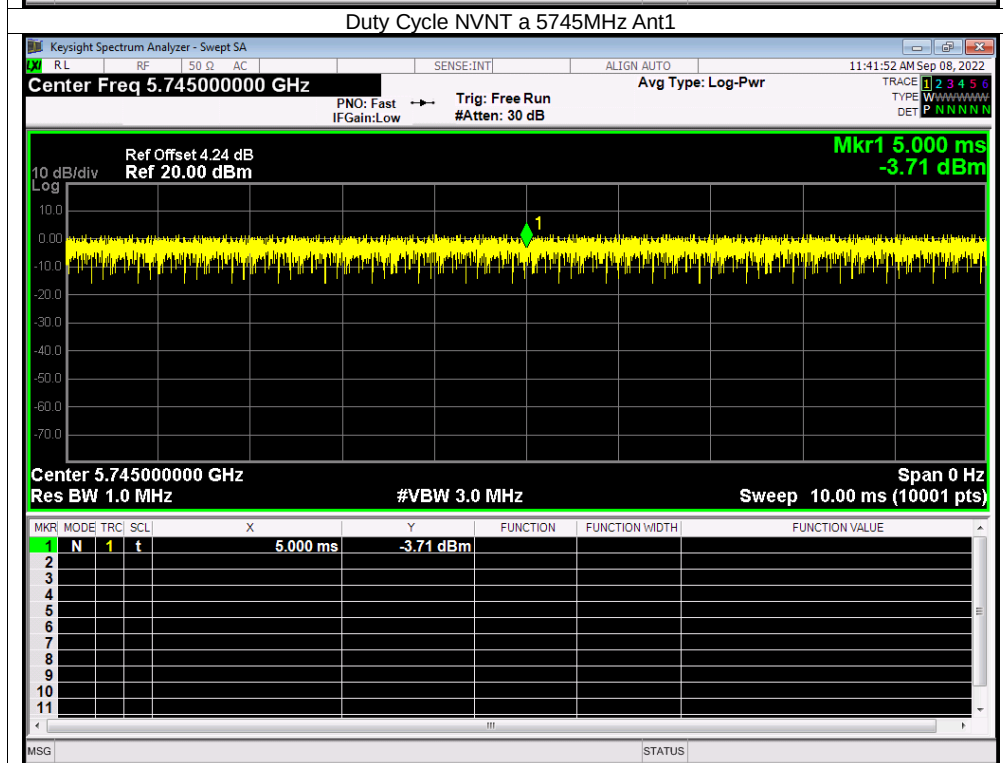
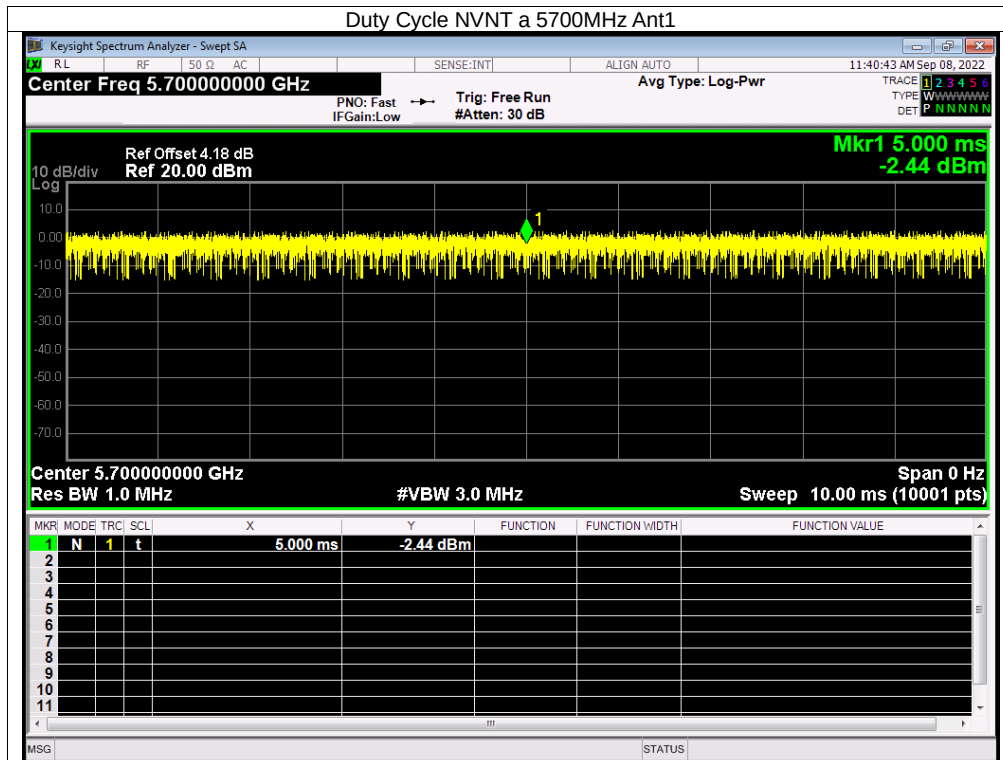
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NVNT	n20	5500	Sum	100	0	0
NVNT	n20	5580	Sum	100	0	0
NVNT	n20	5700	Sum	100	0	0
NVNT	n20	5745	Sum	100	0	0
NVNT	n20	5785	Sum	100	0	0
NVNT	n20	5825	Sum	100	0	0
NVNT	n40	5190	Sum	100	0	0
NVNT	n40	5230	Sum	100	0	0
NVNT	n40	5270	Sum	100	0	0
NVNT	n40	5310	Sum	100	0	0
NVNT	n40	5510	Sum	100	0	0
NVNT	n40	5550	Sum	100	0	0
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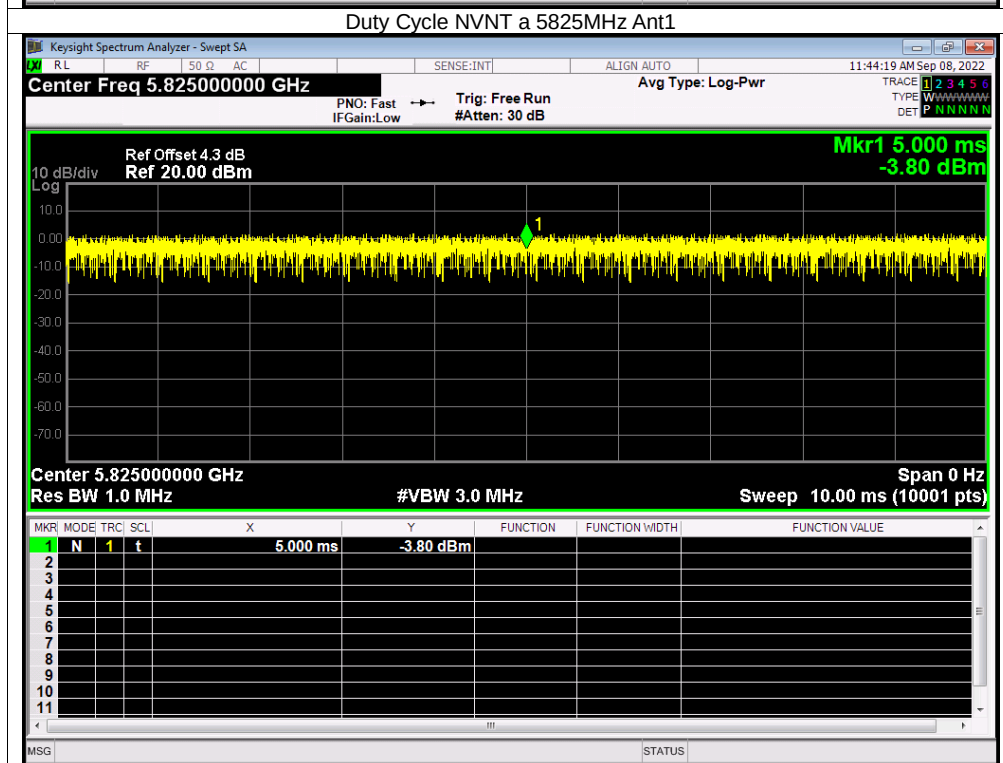
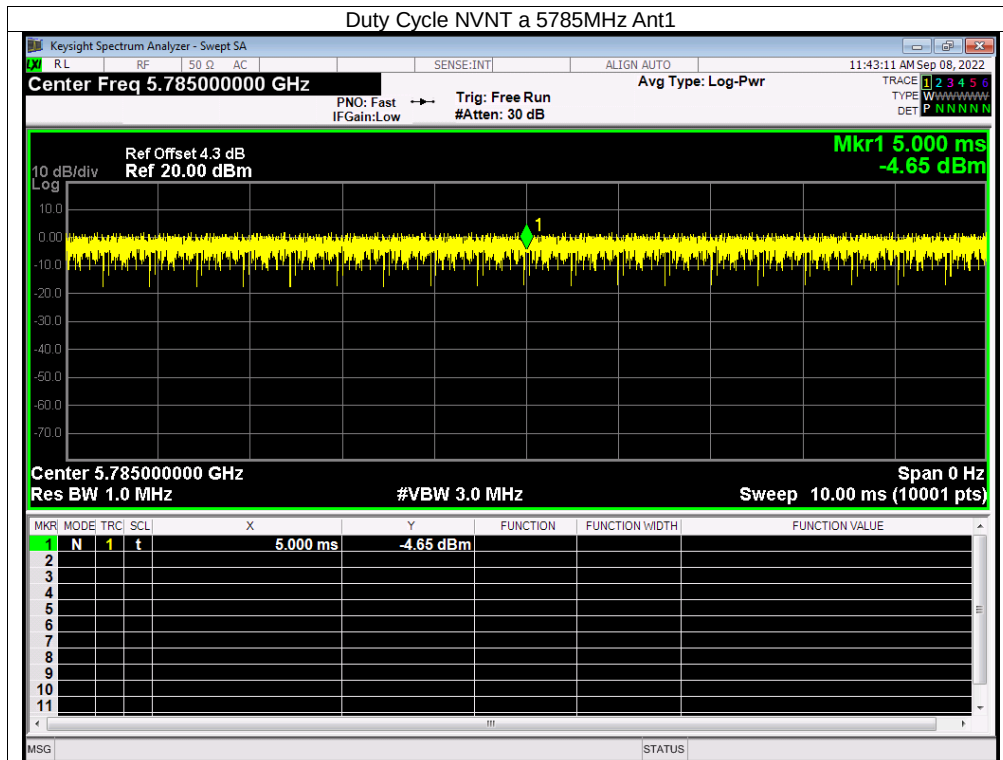


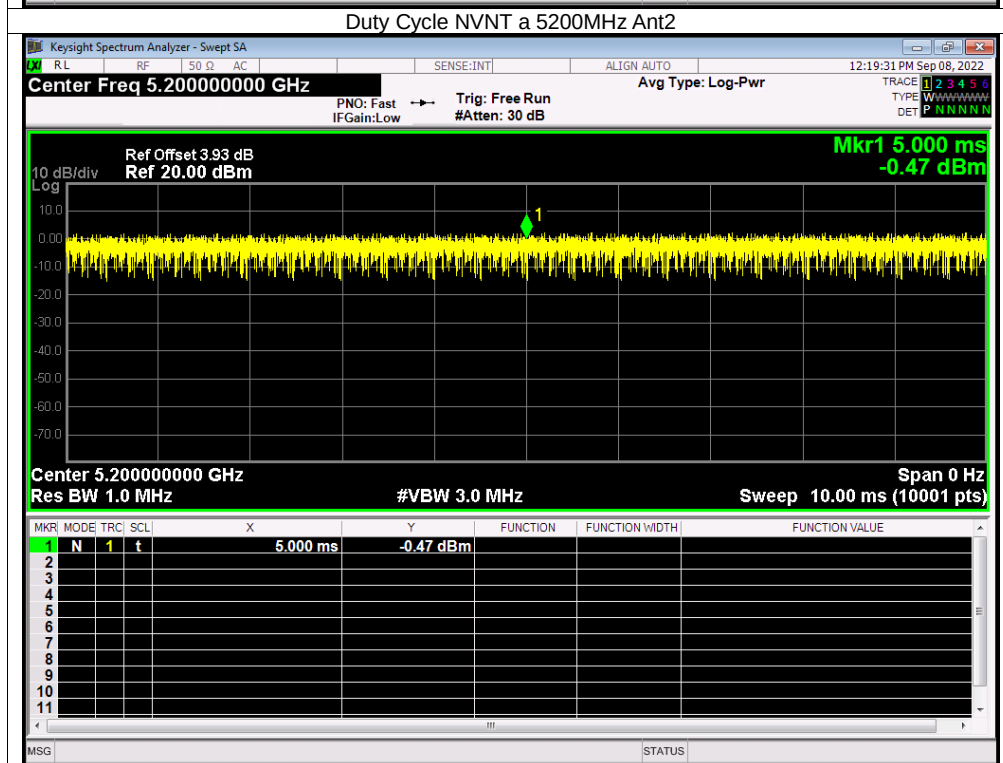
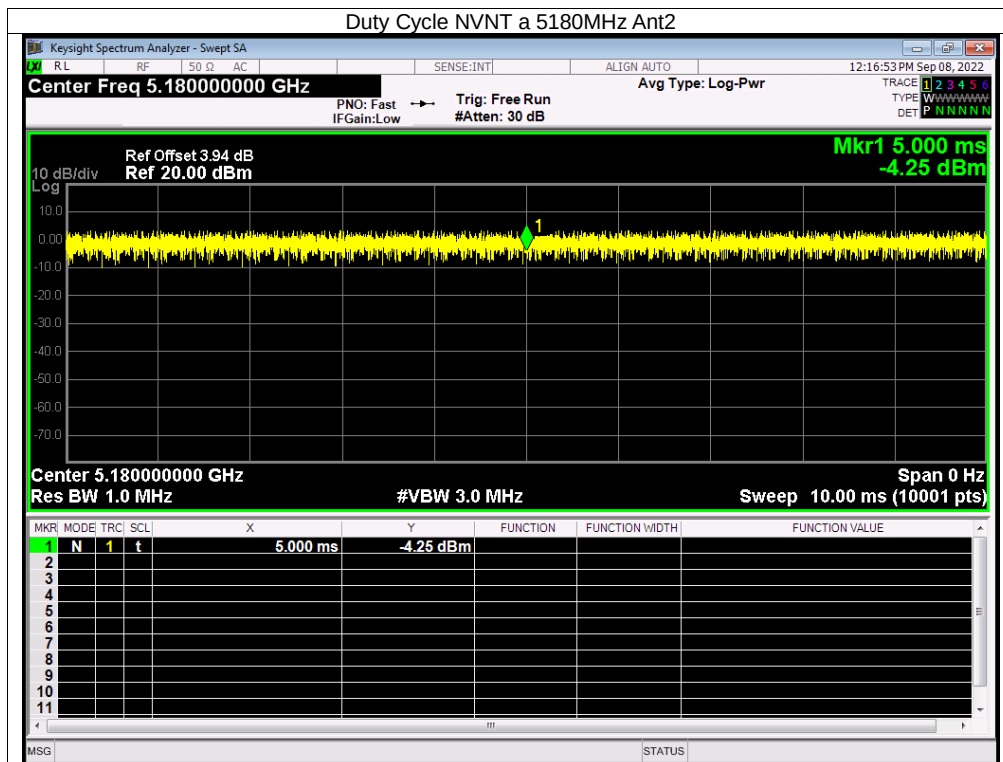


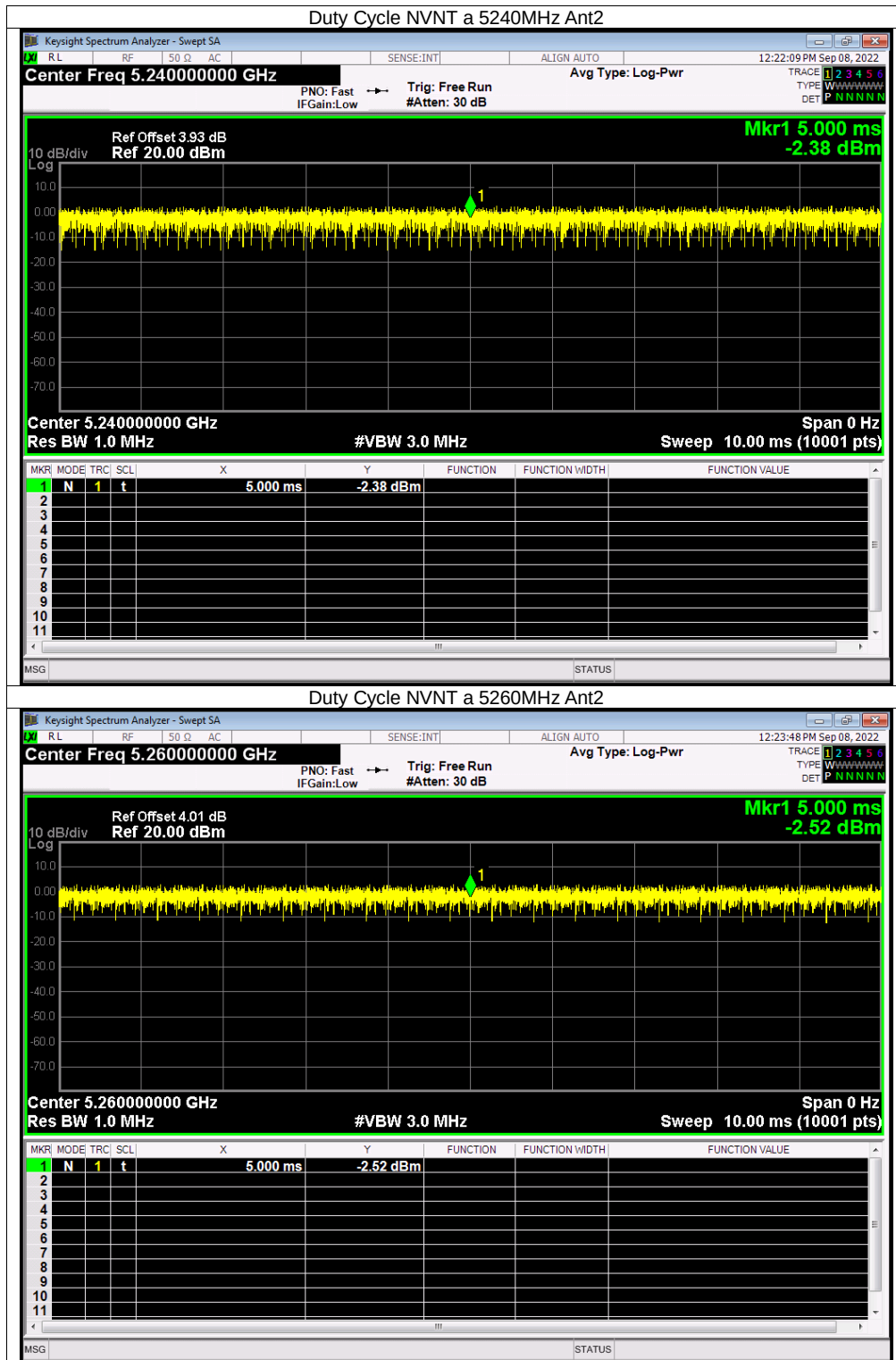


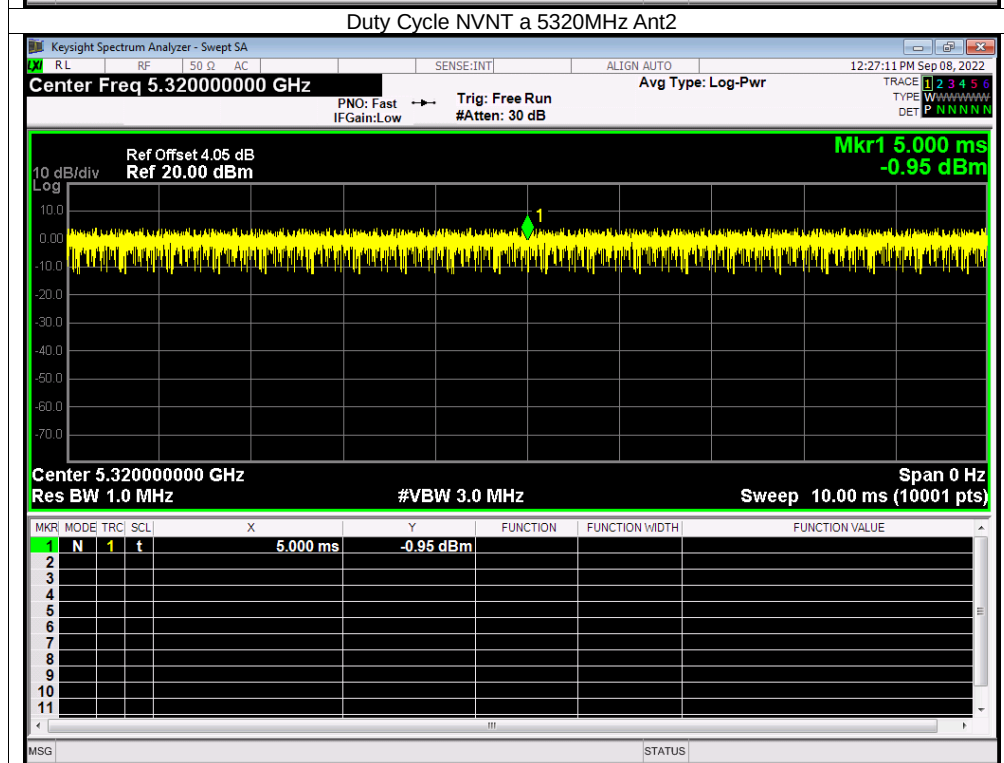
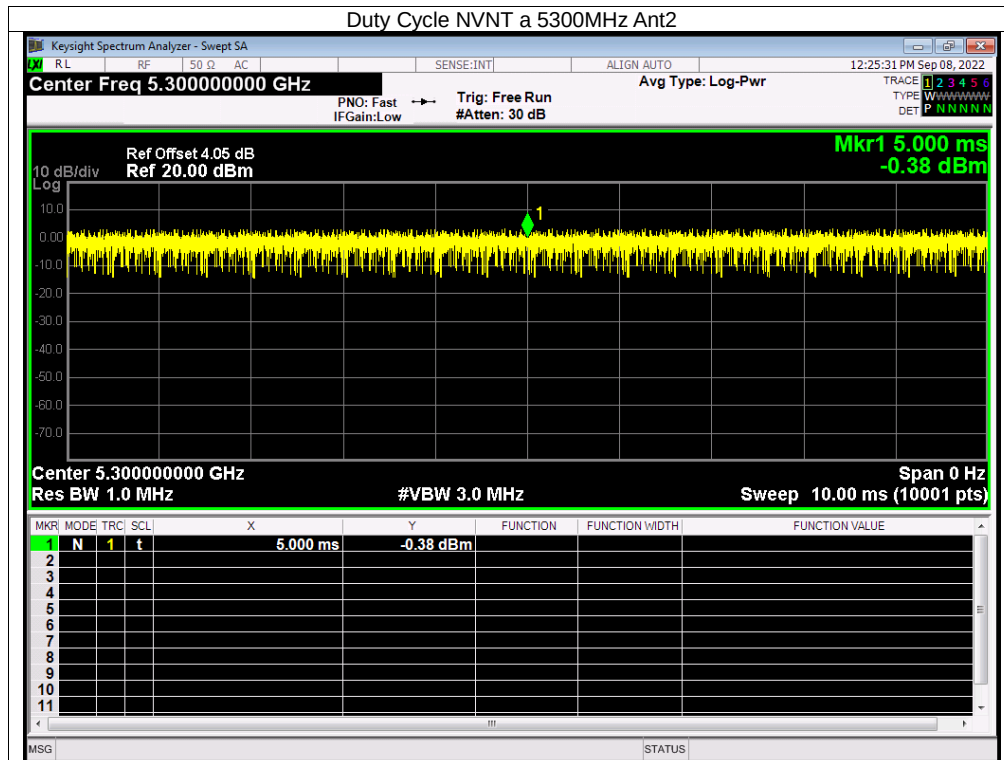


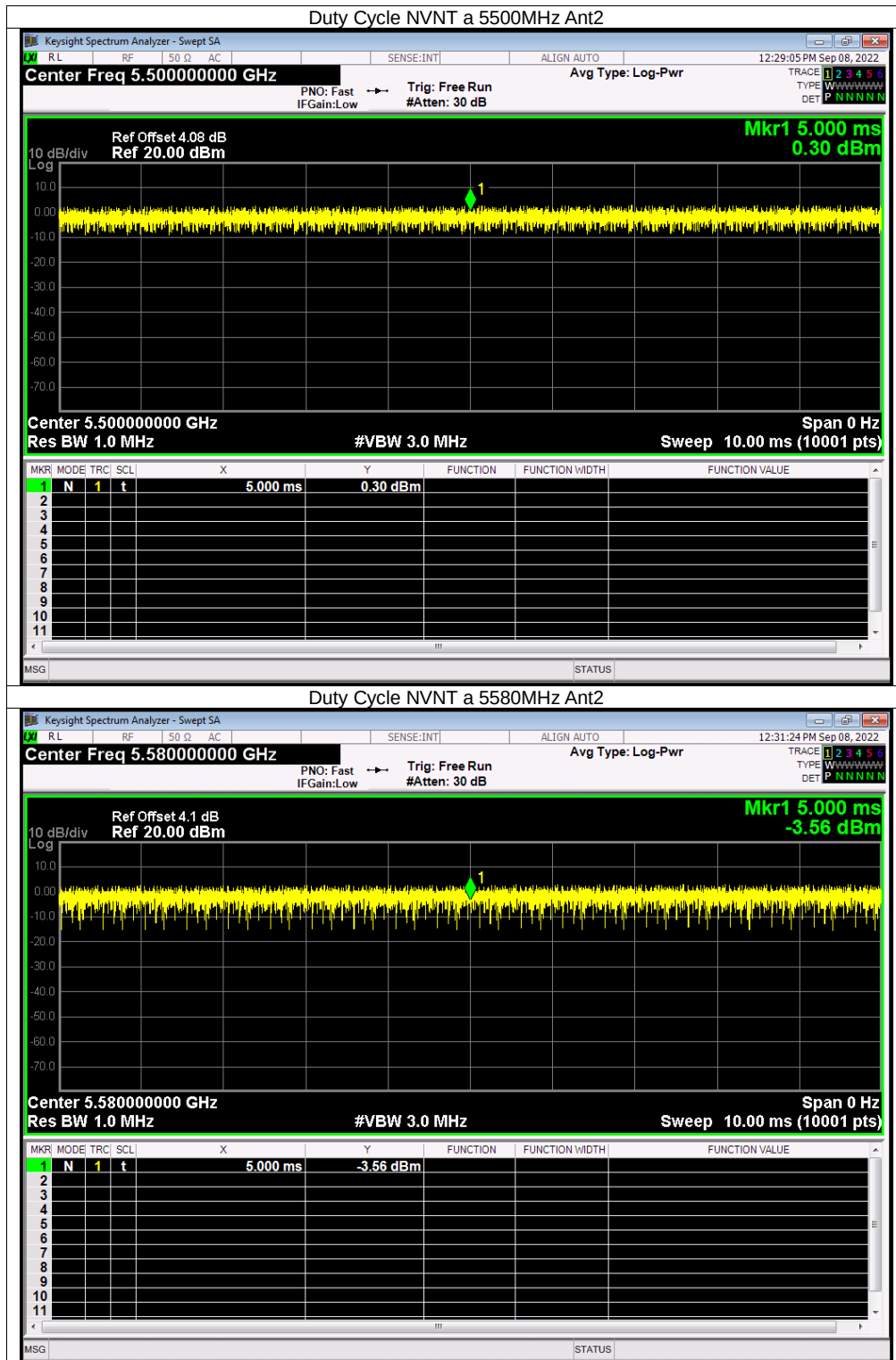


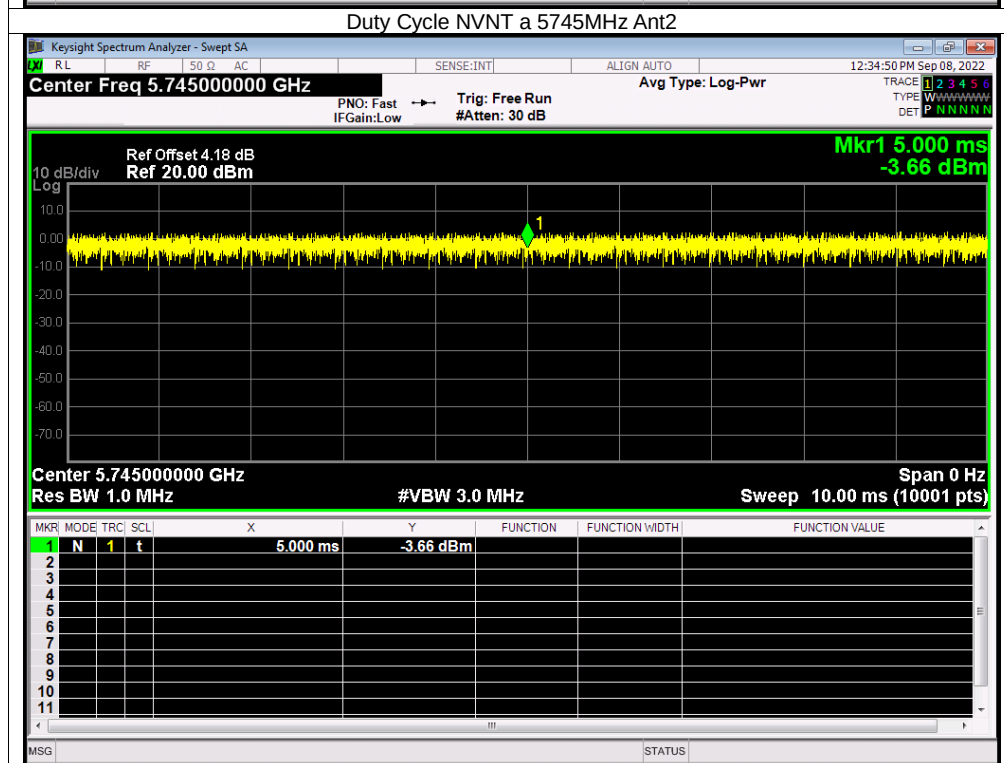
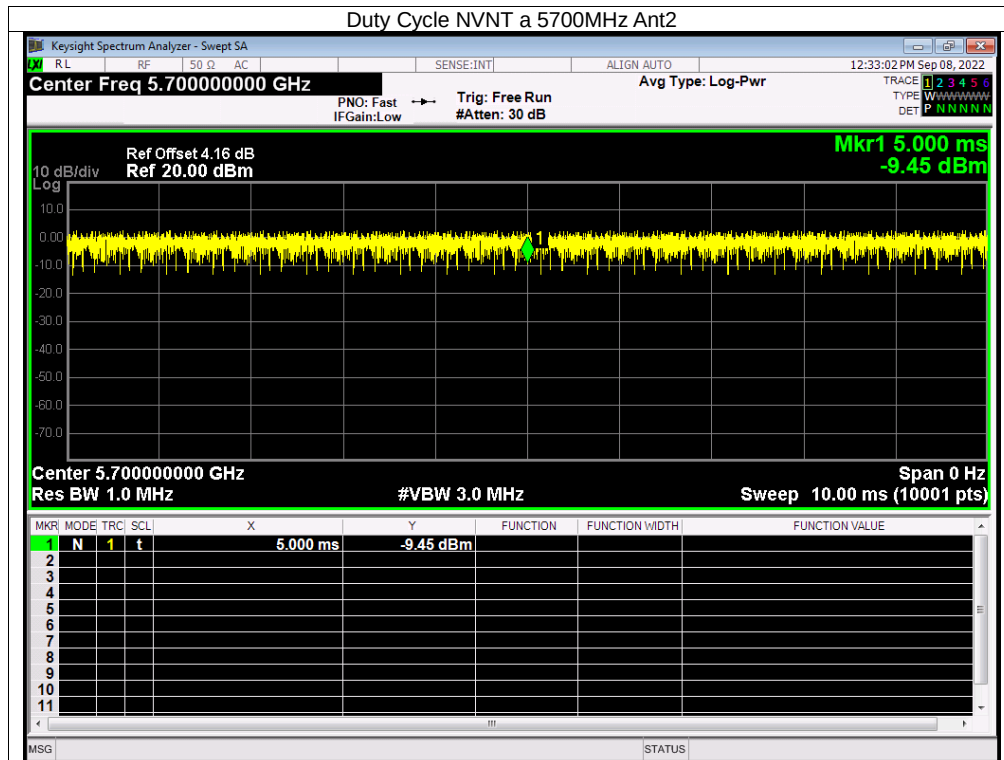


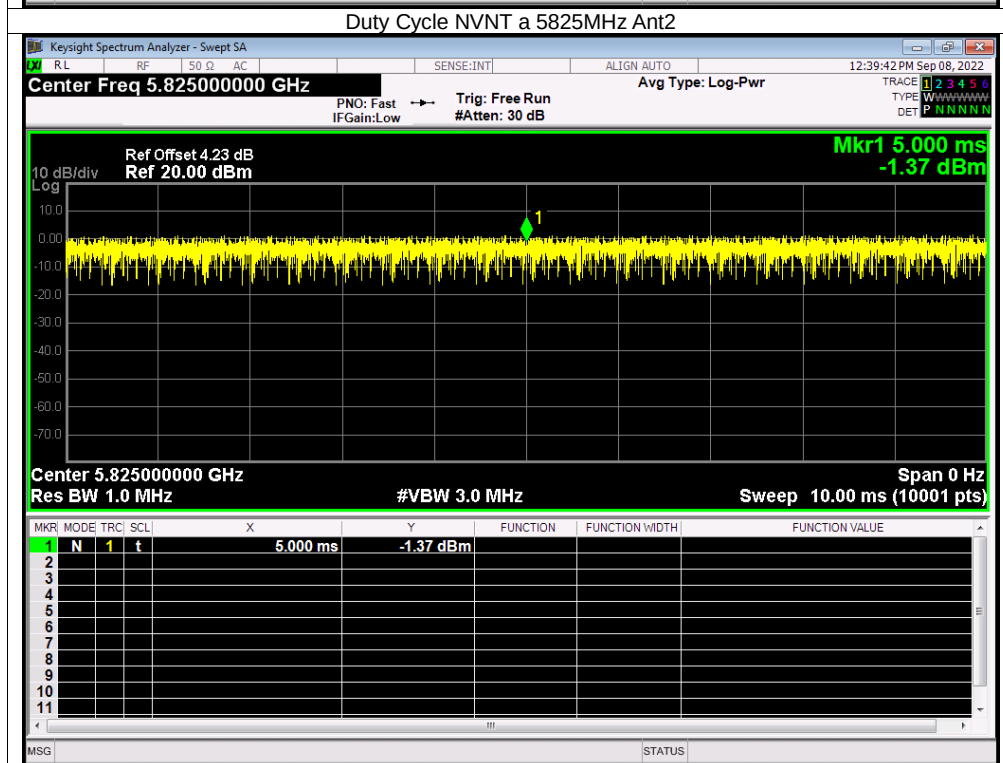
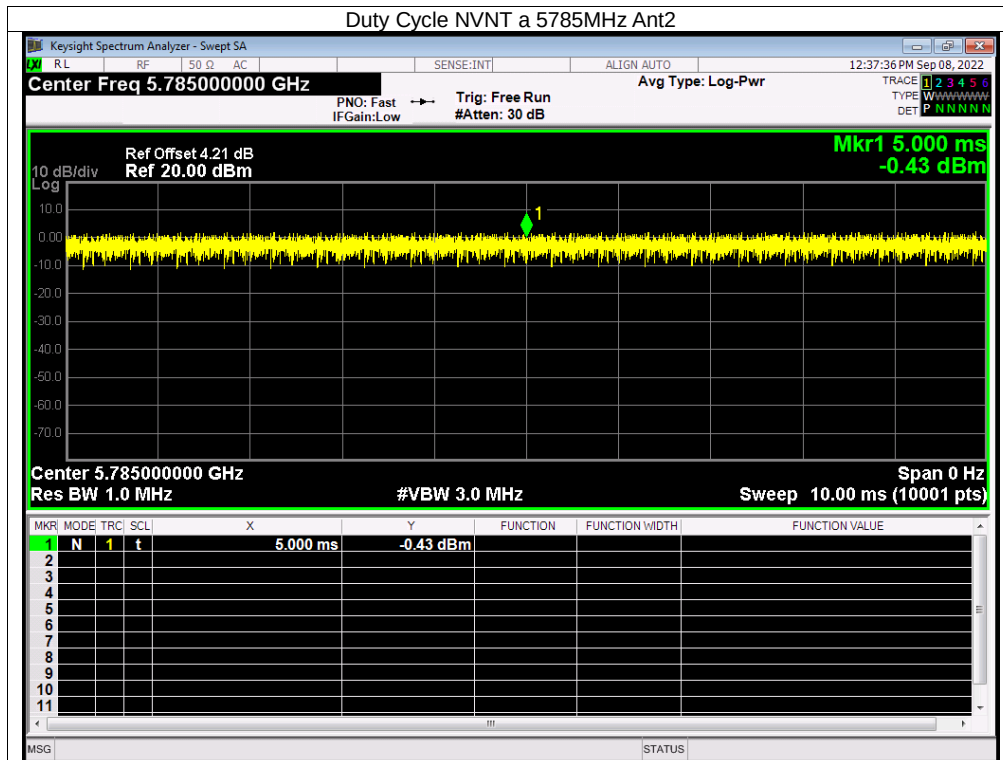


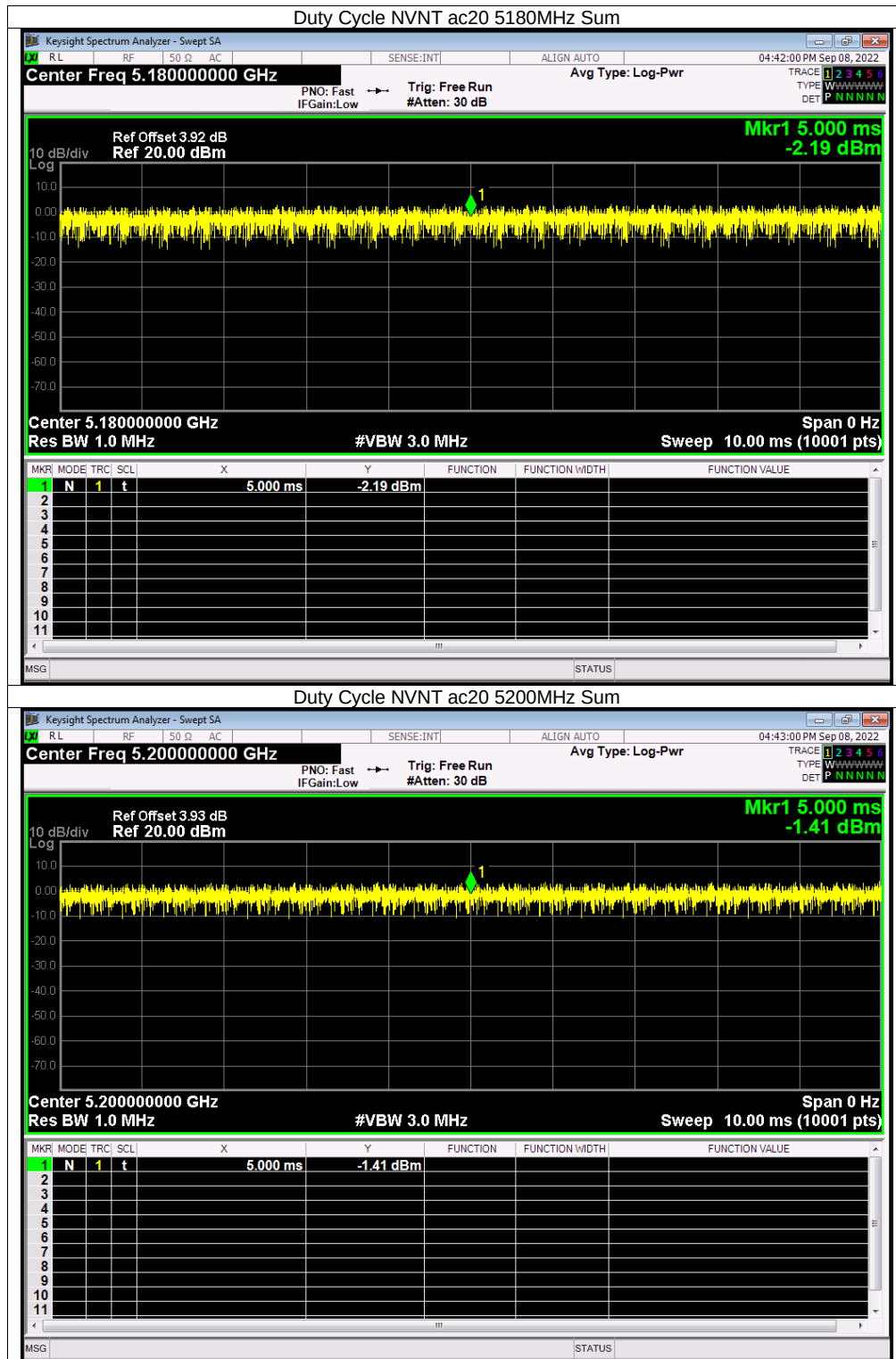


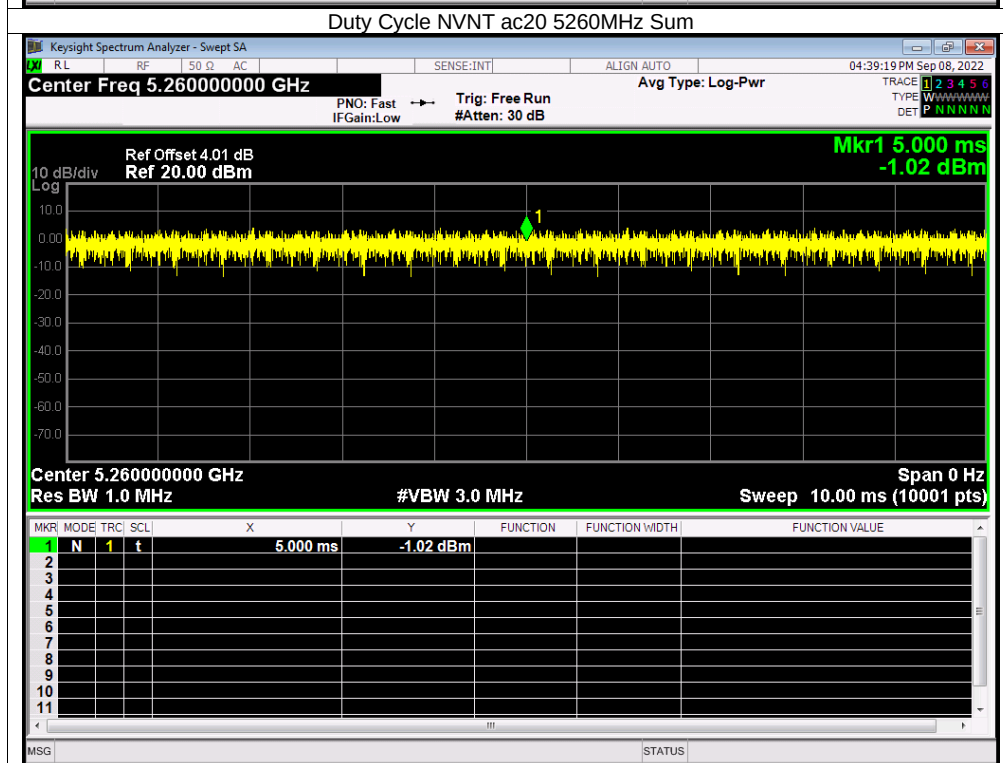
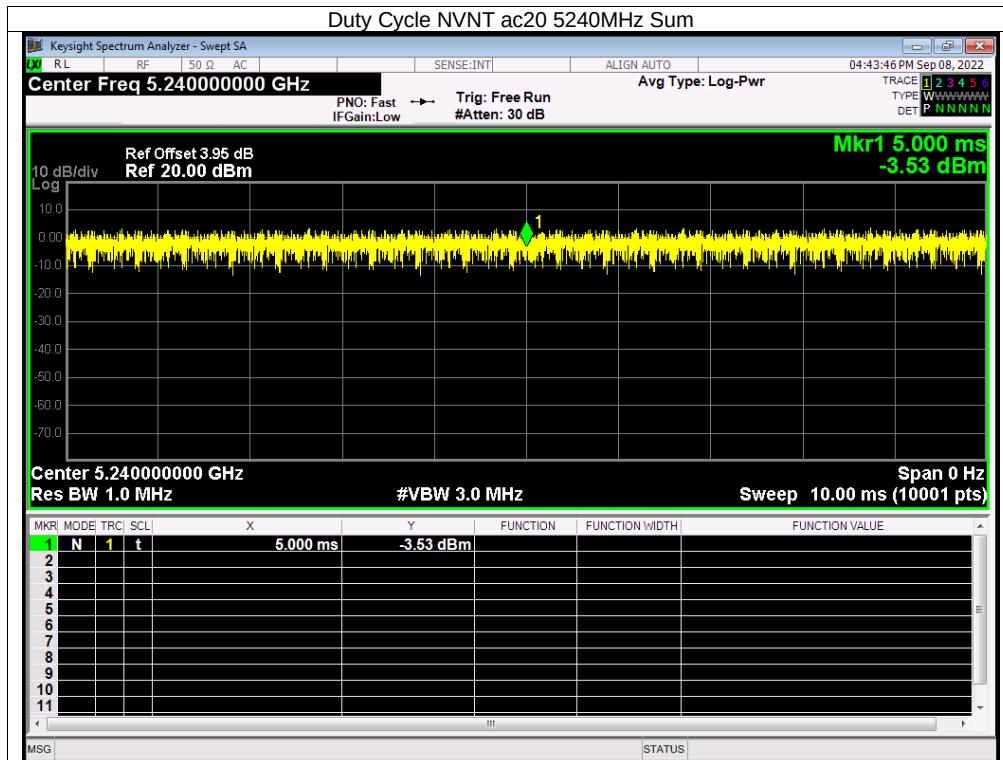


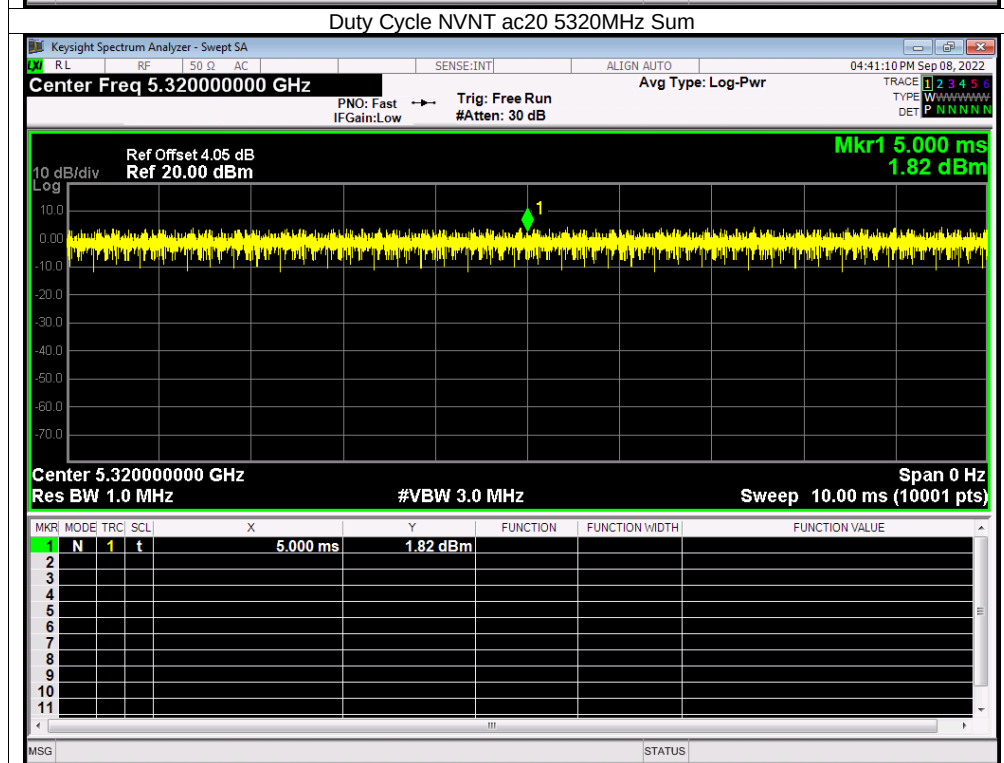
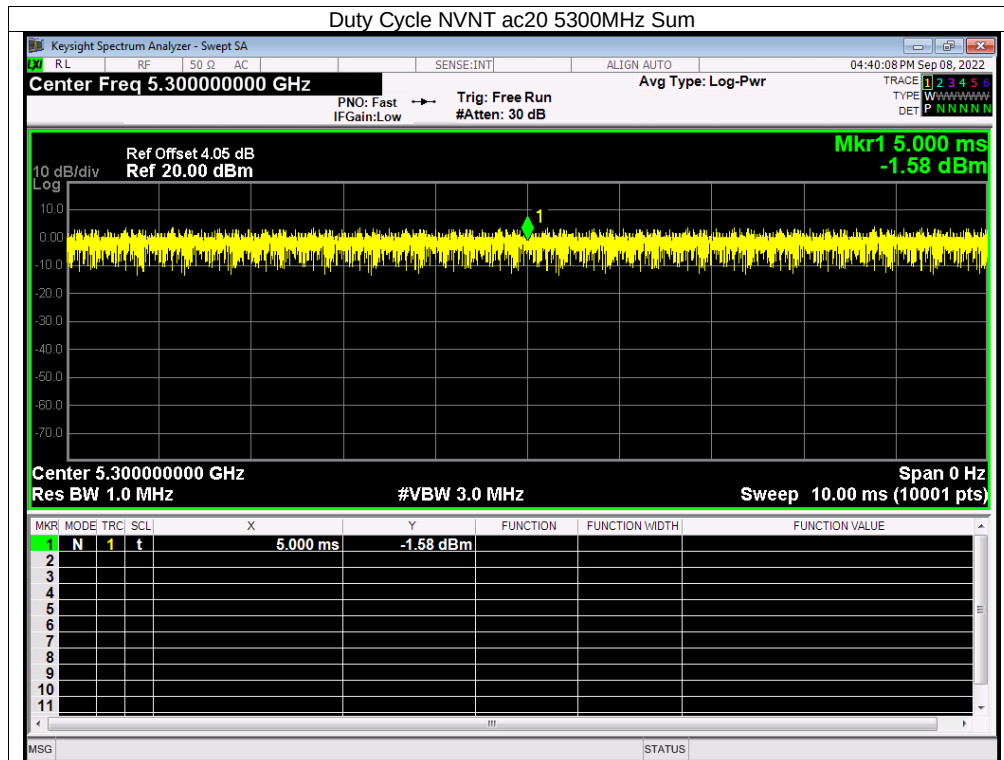


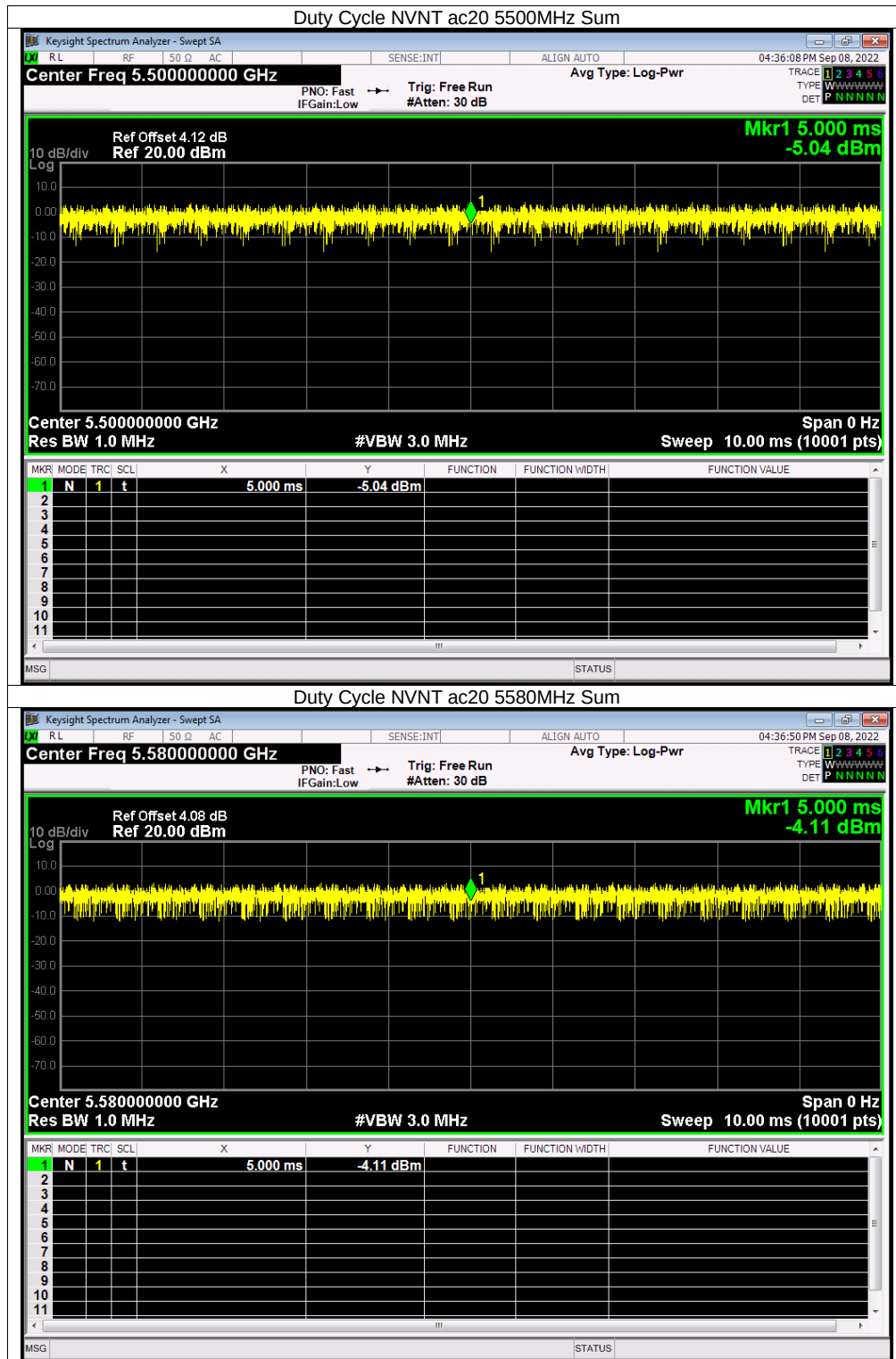


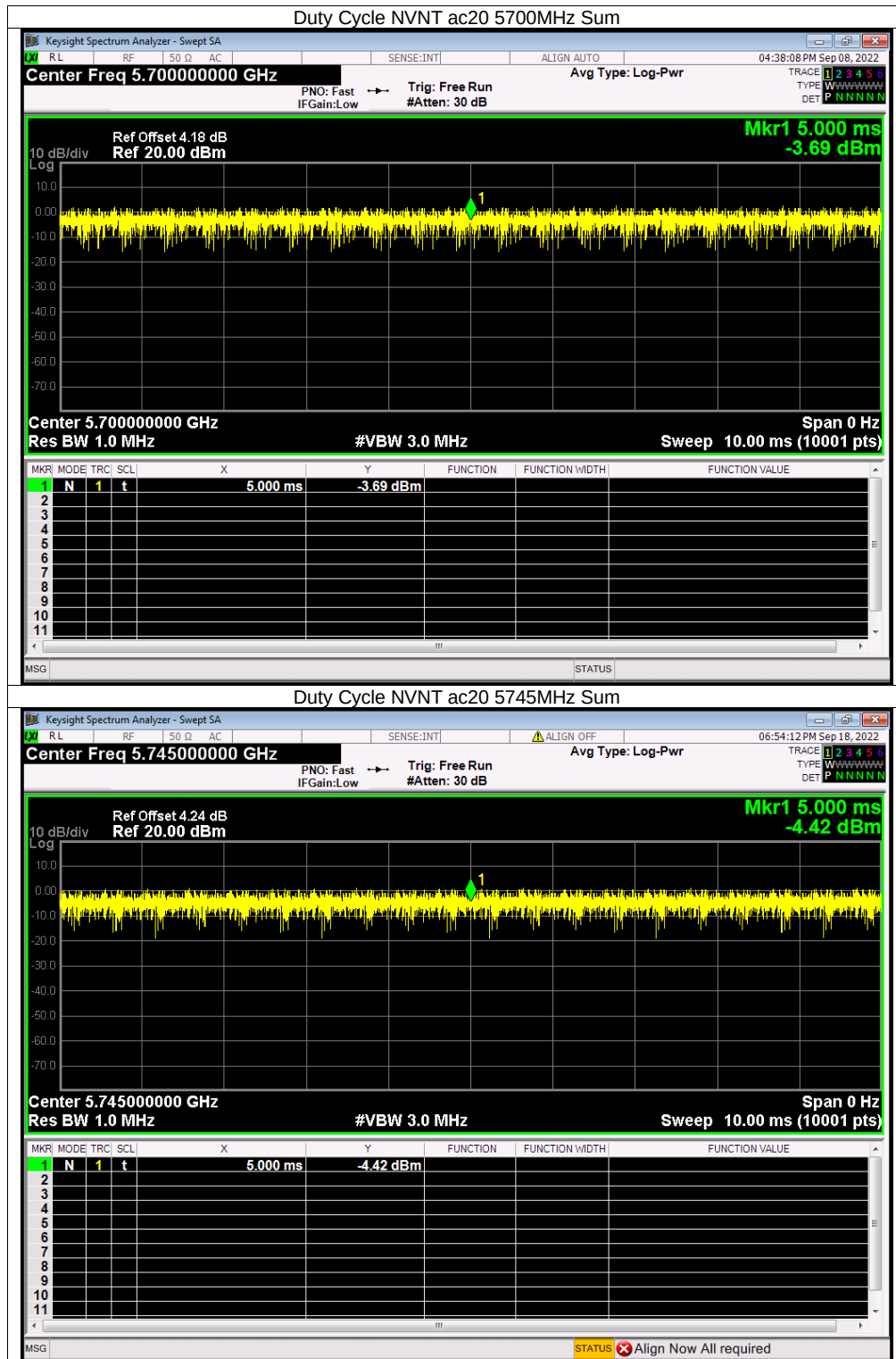


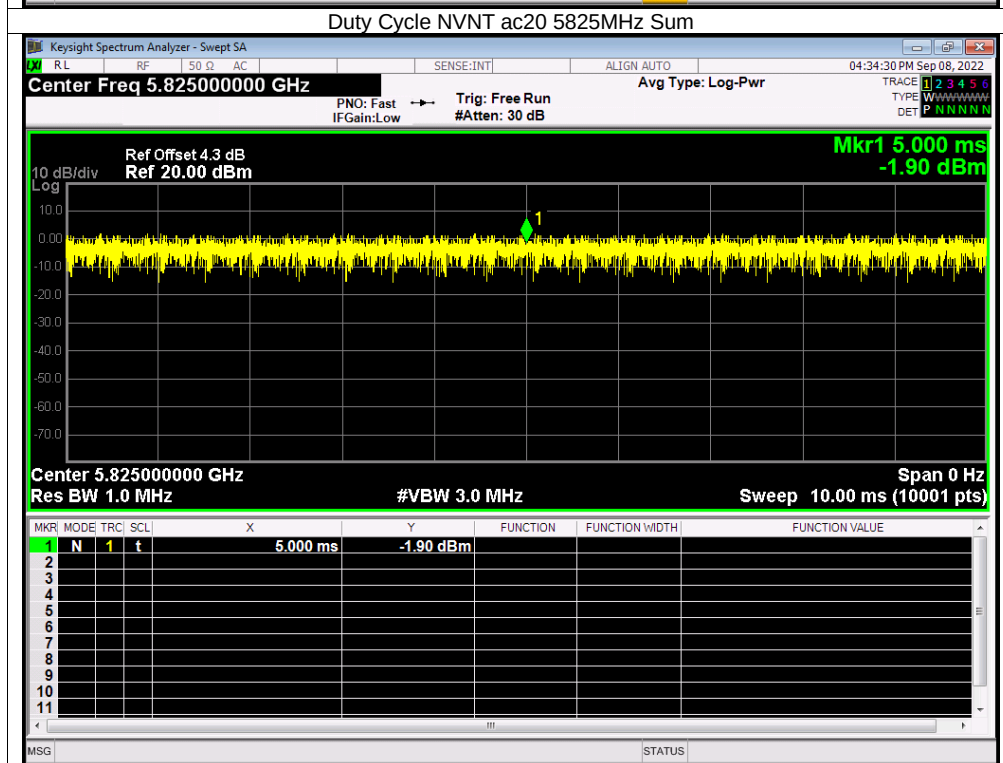
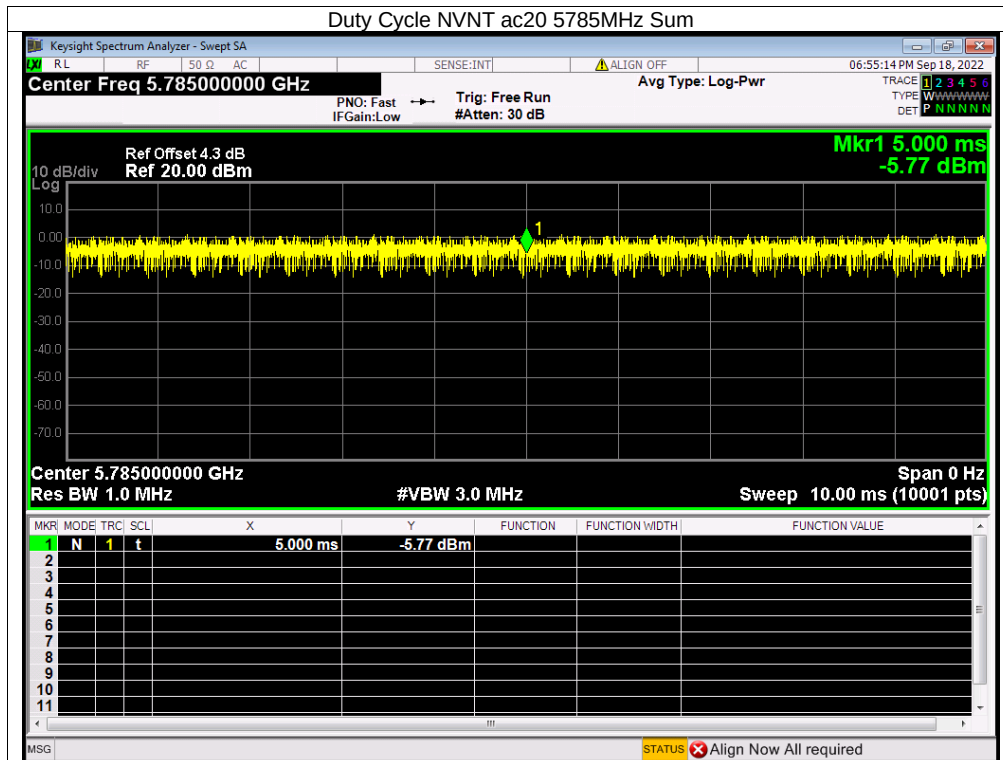


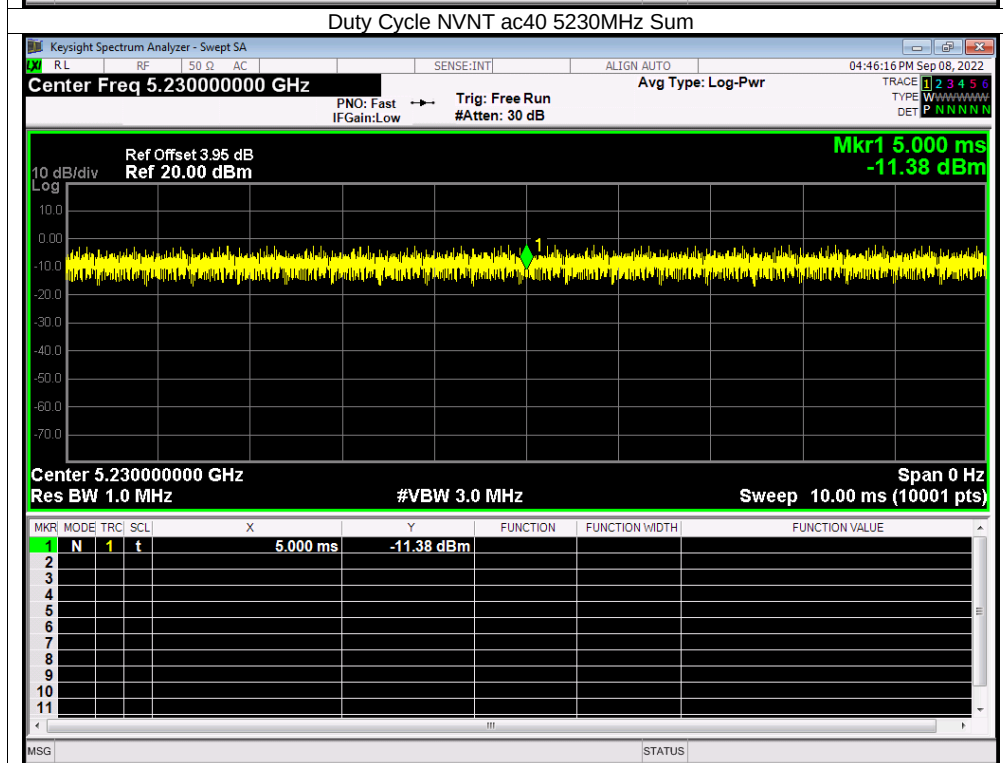
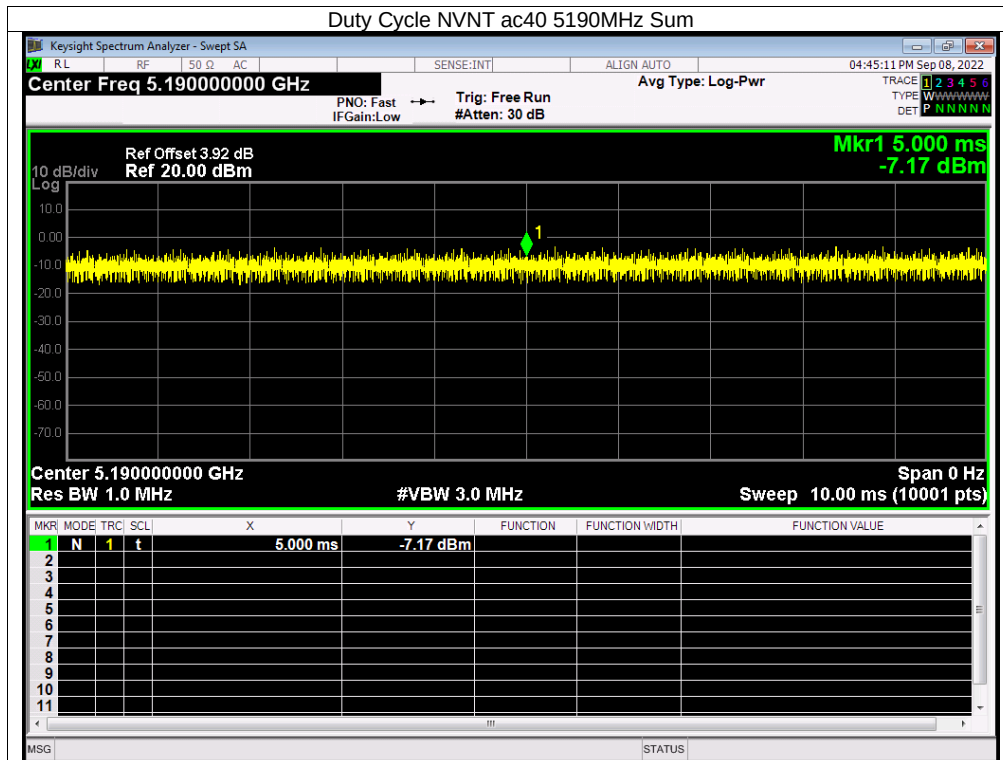


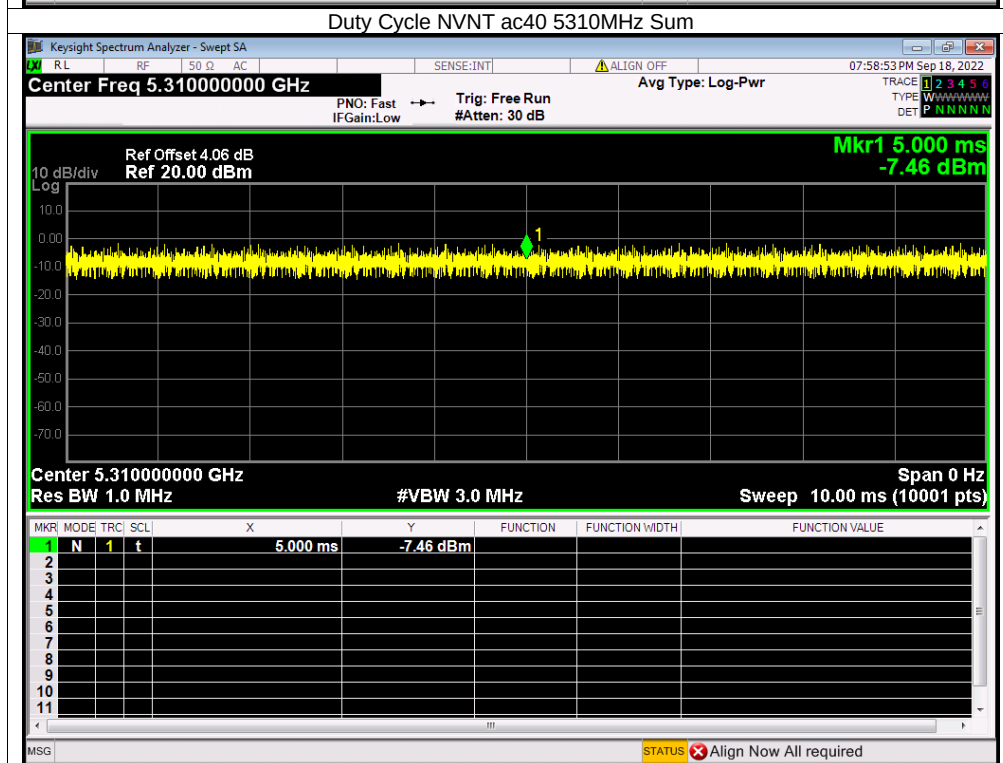
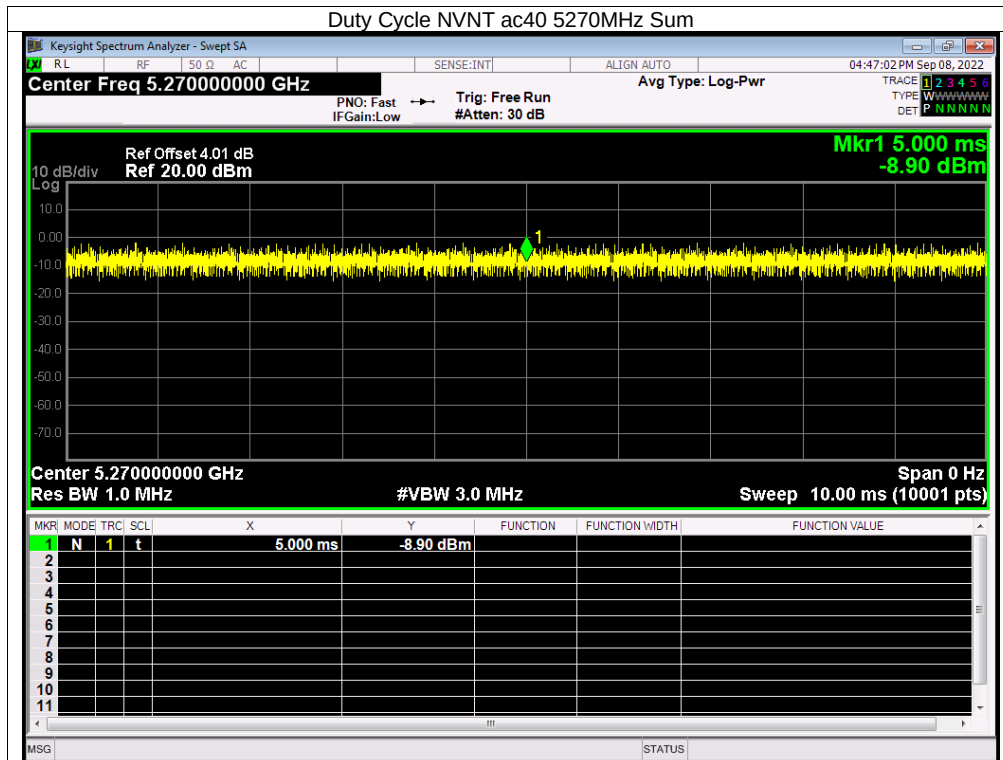


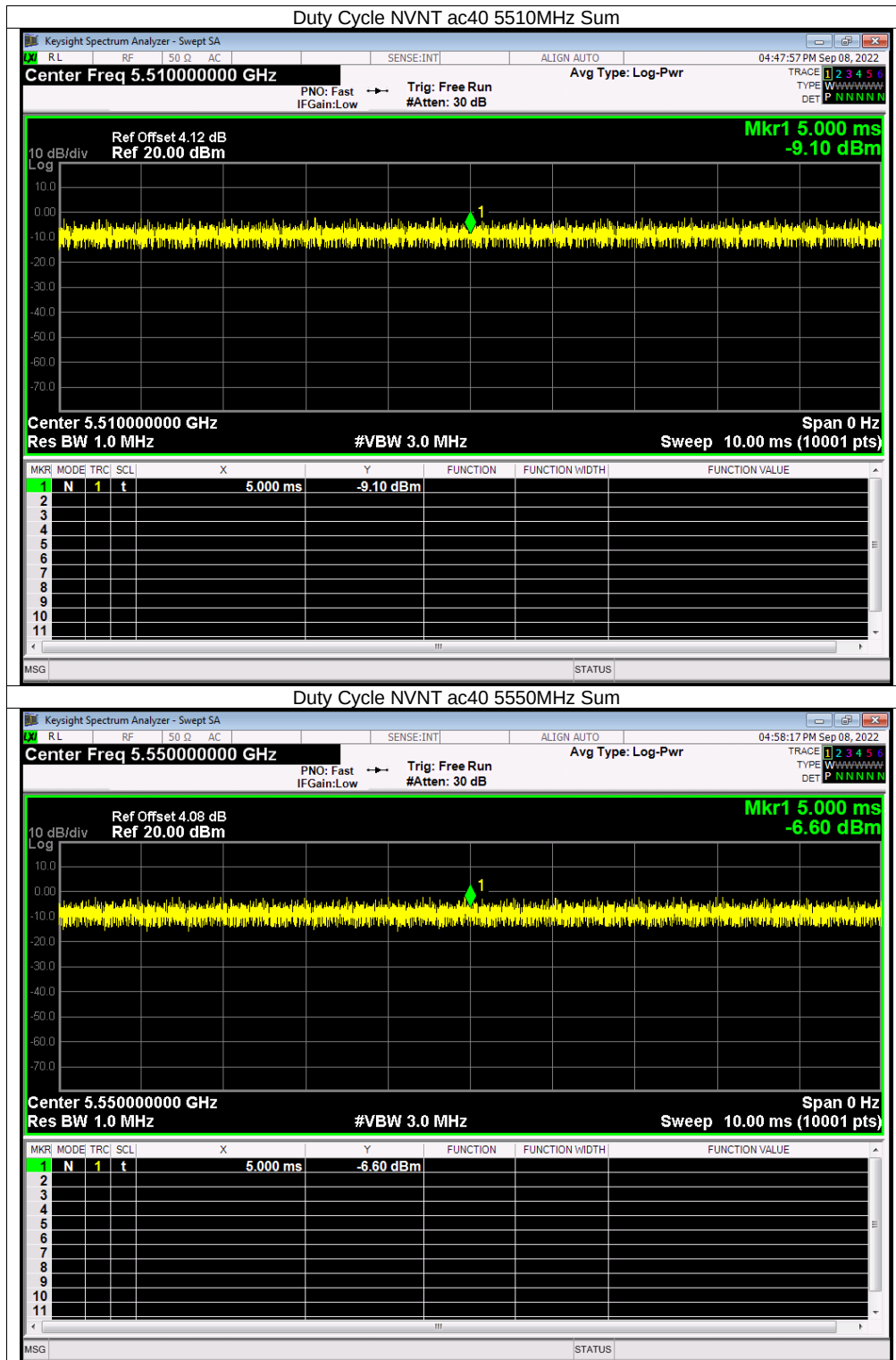


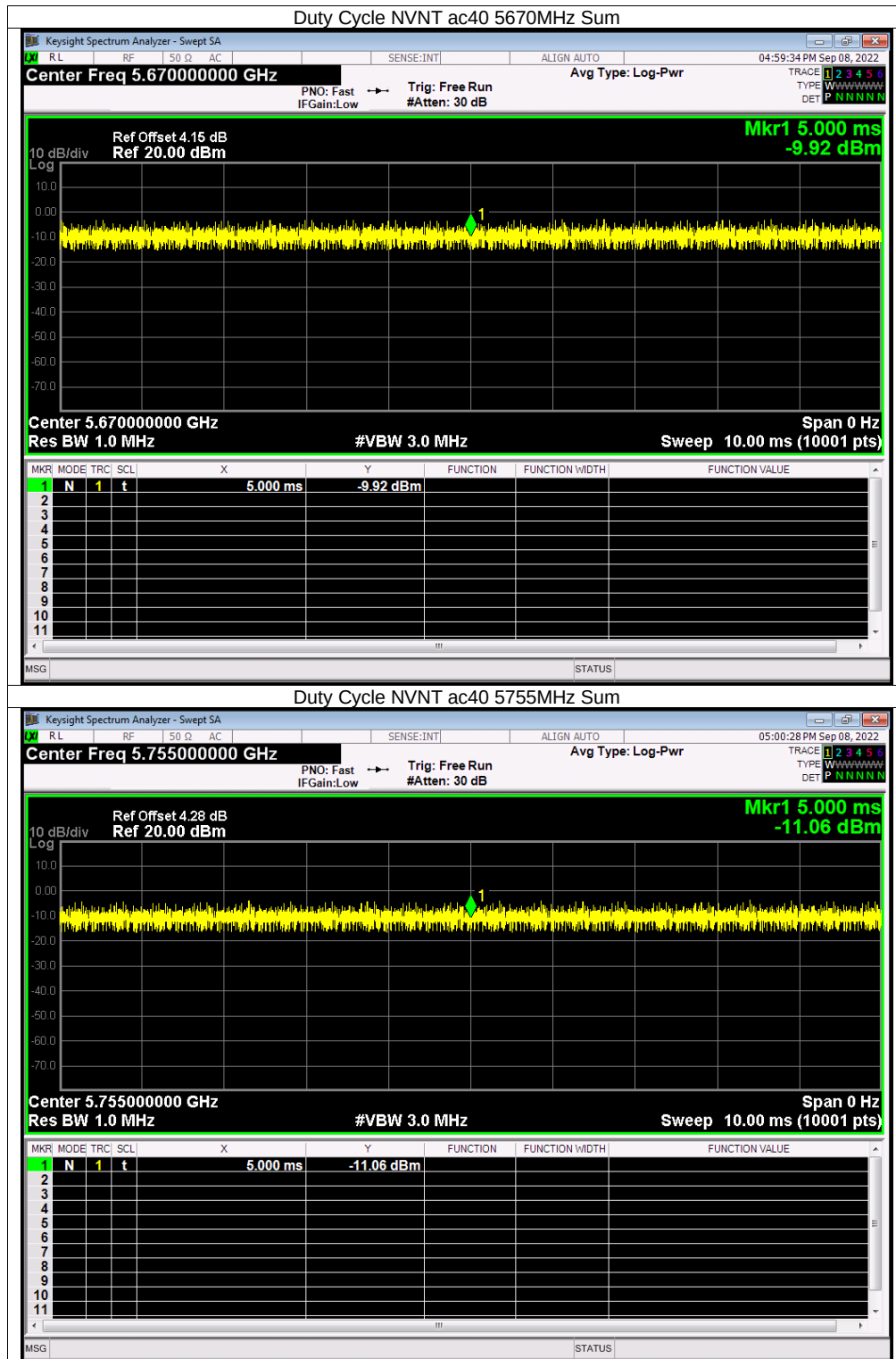


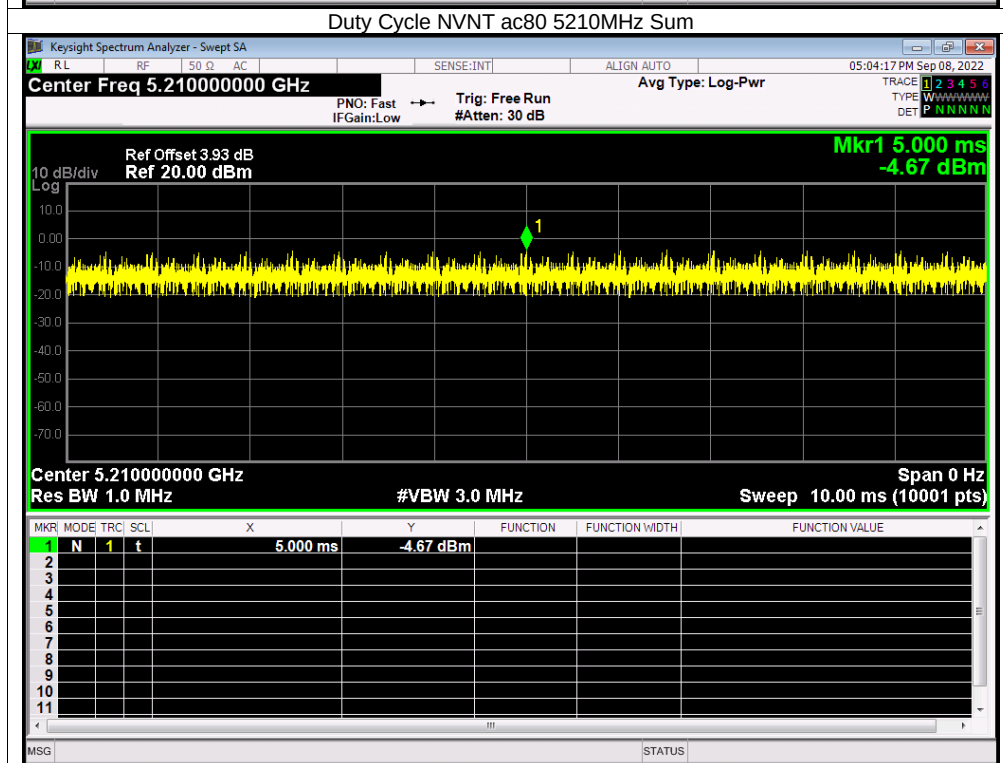
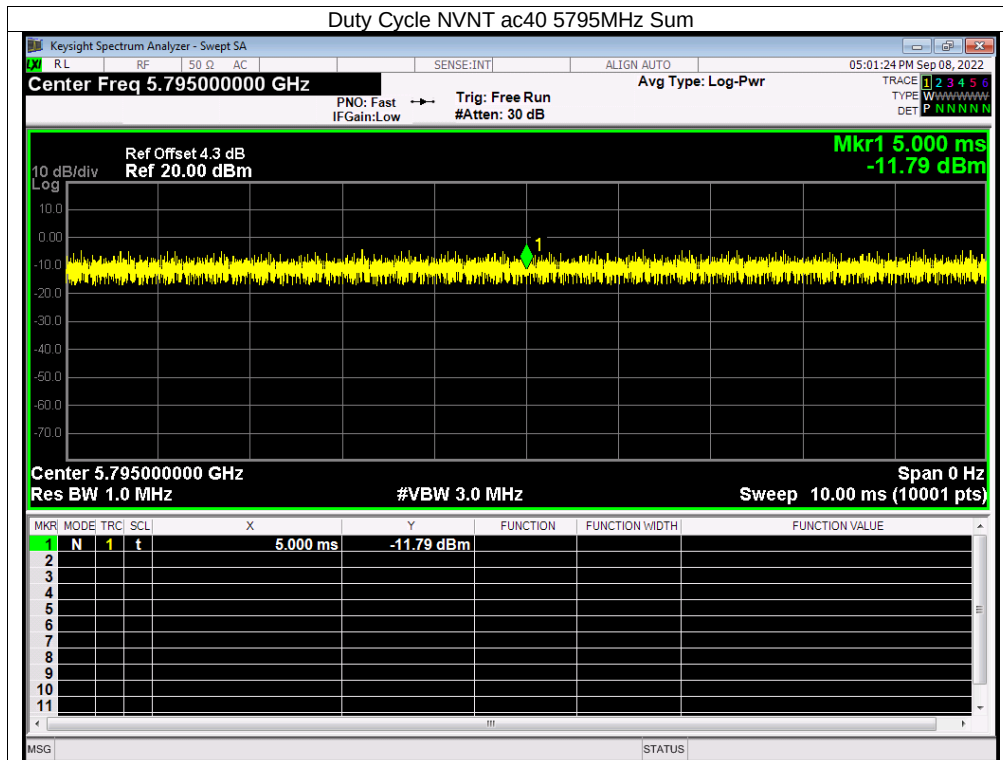


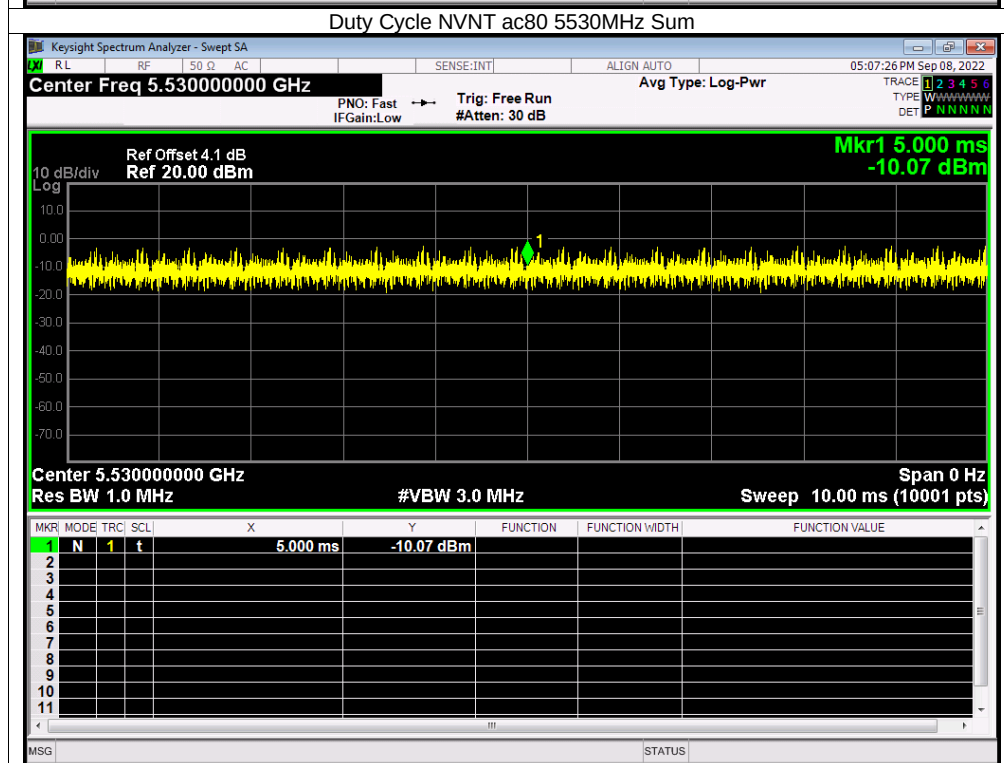
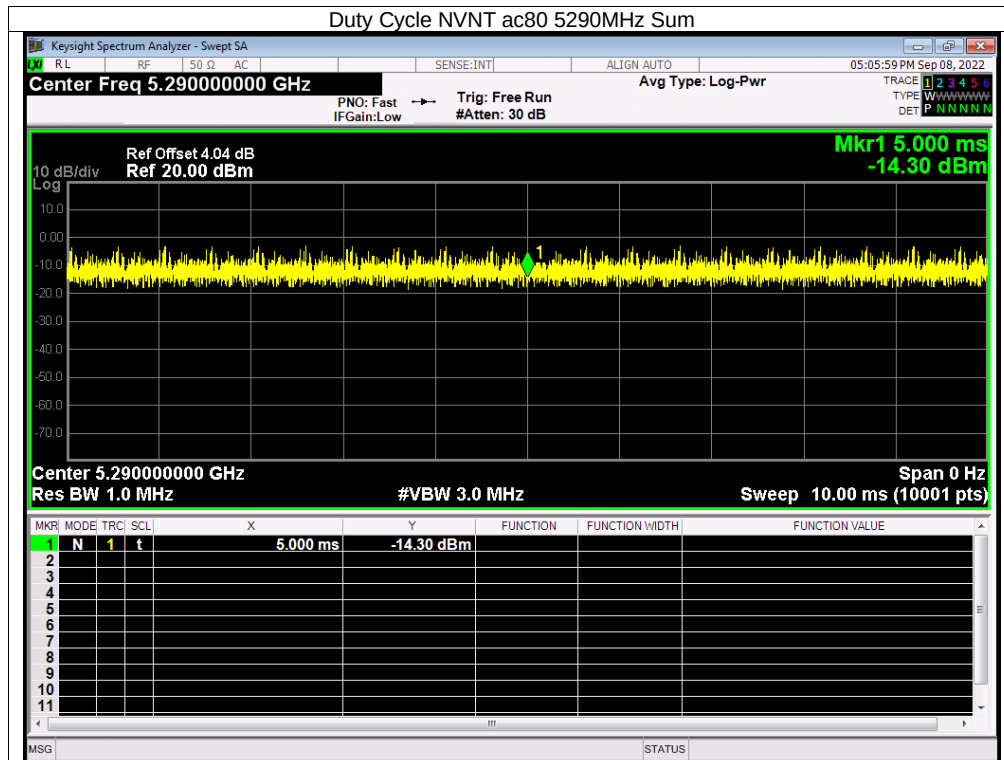


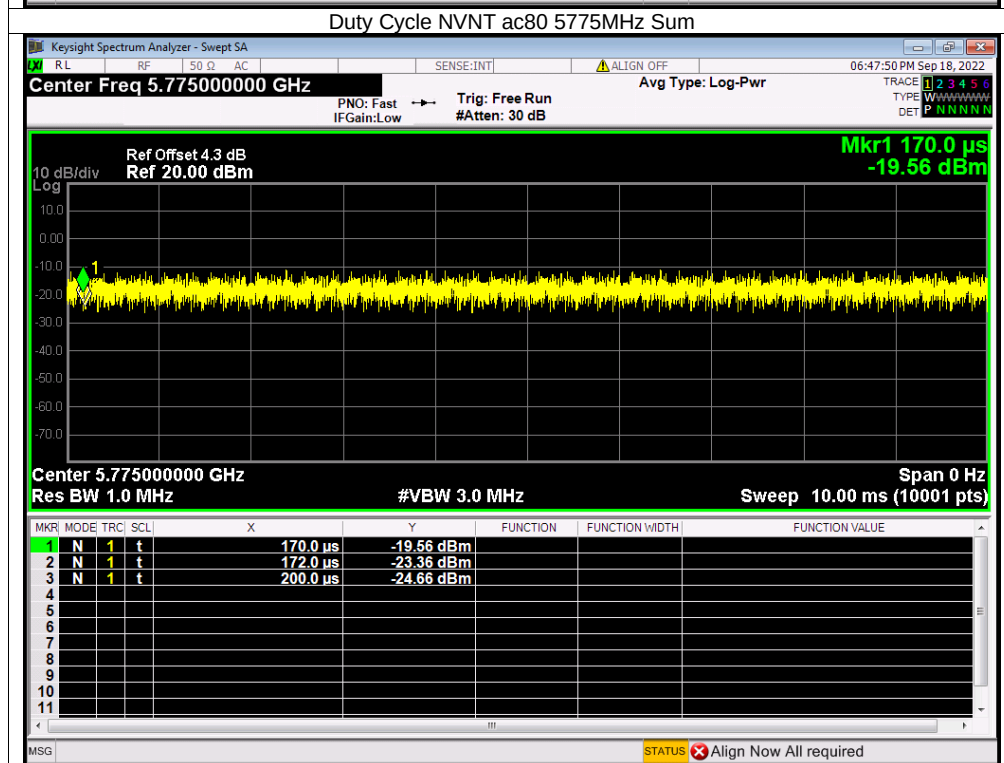
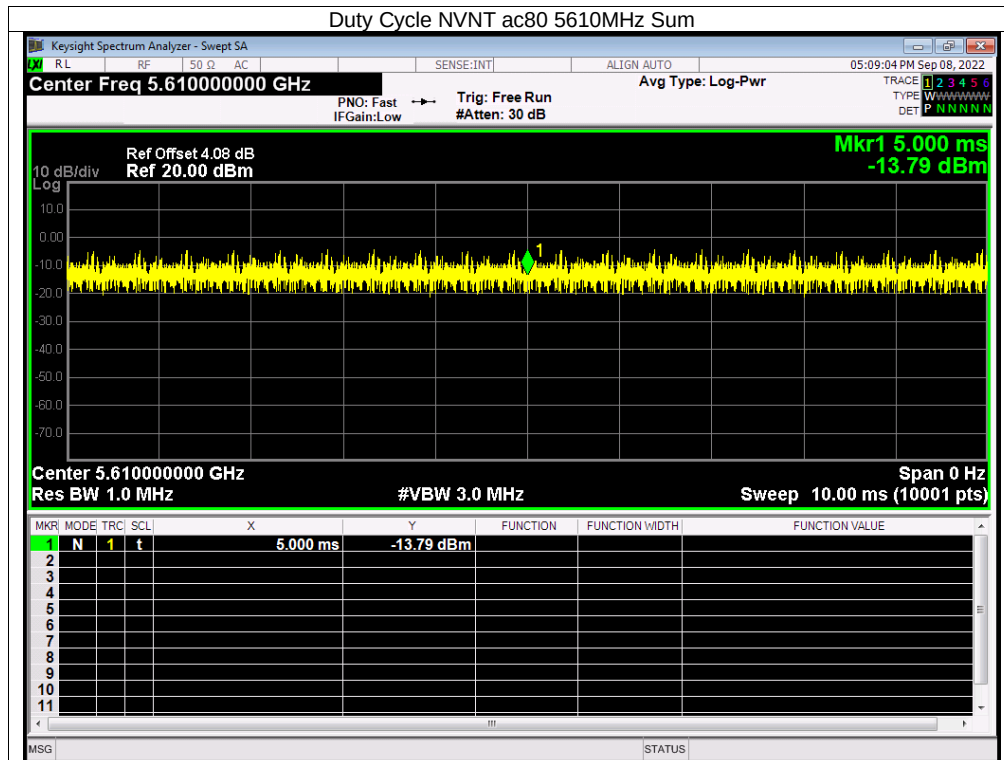


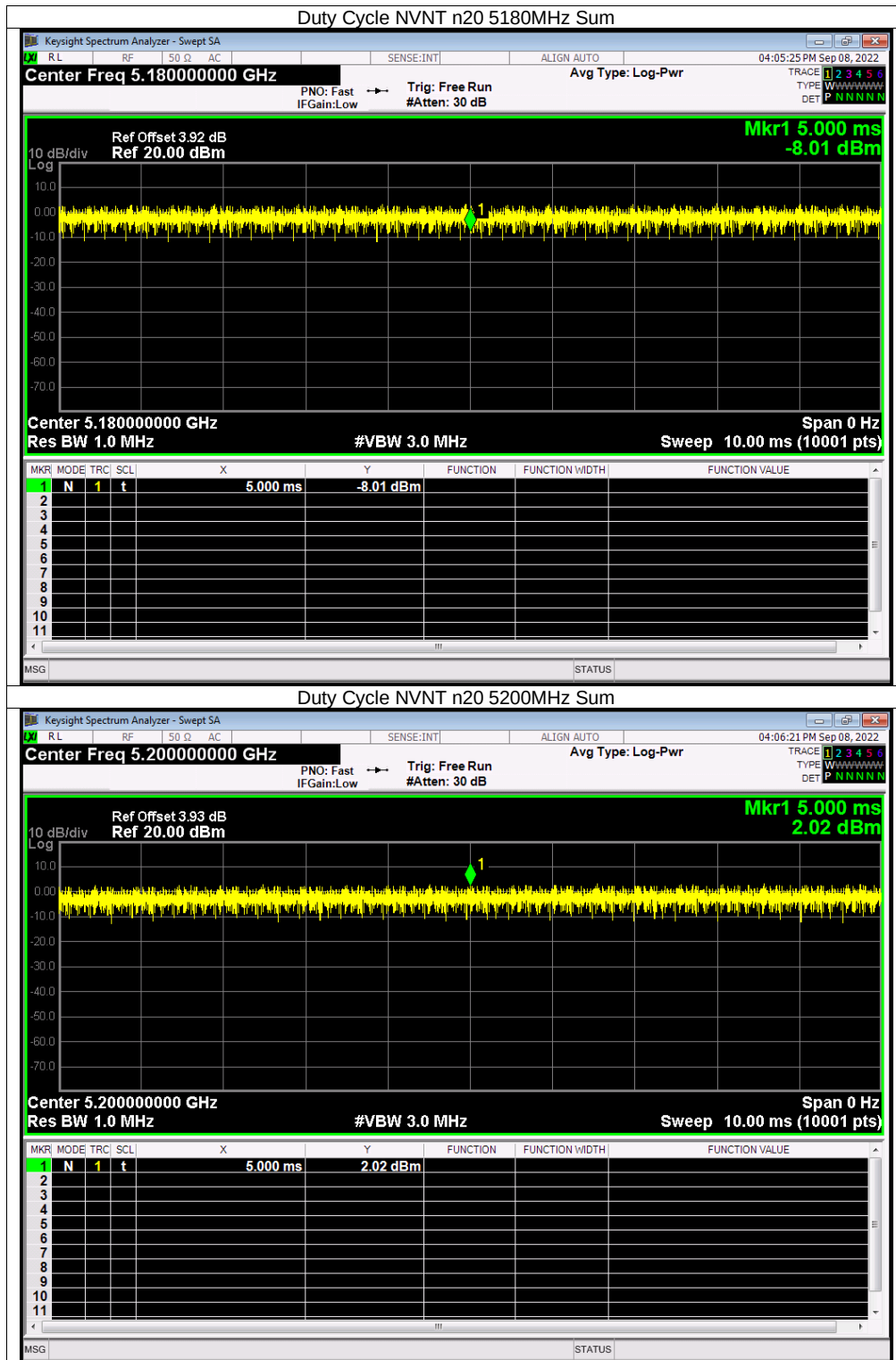


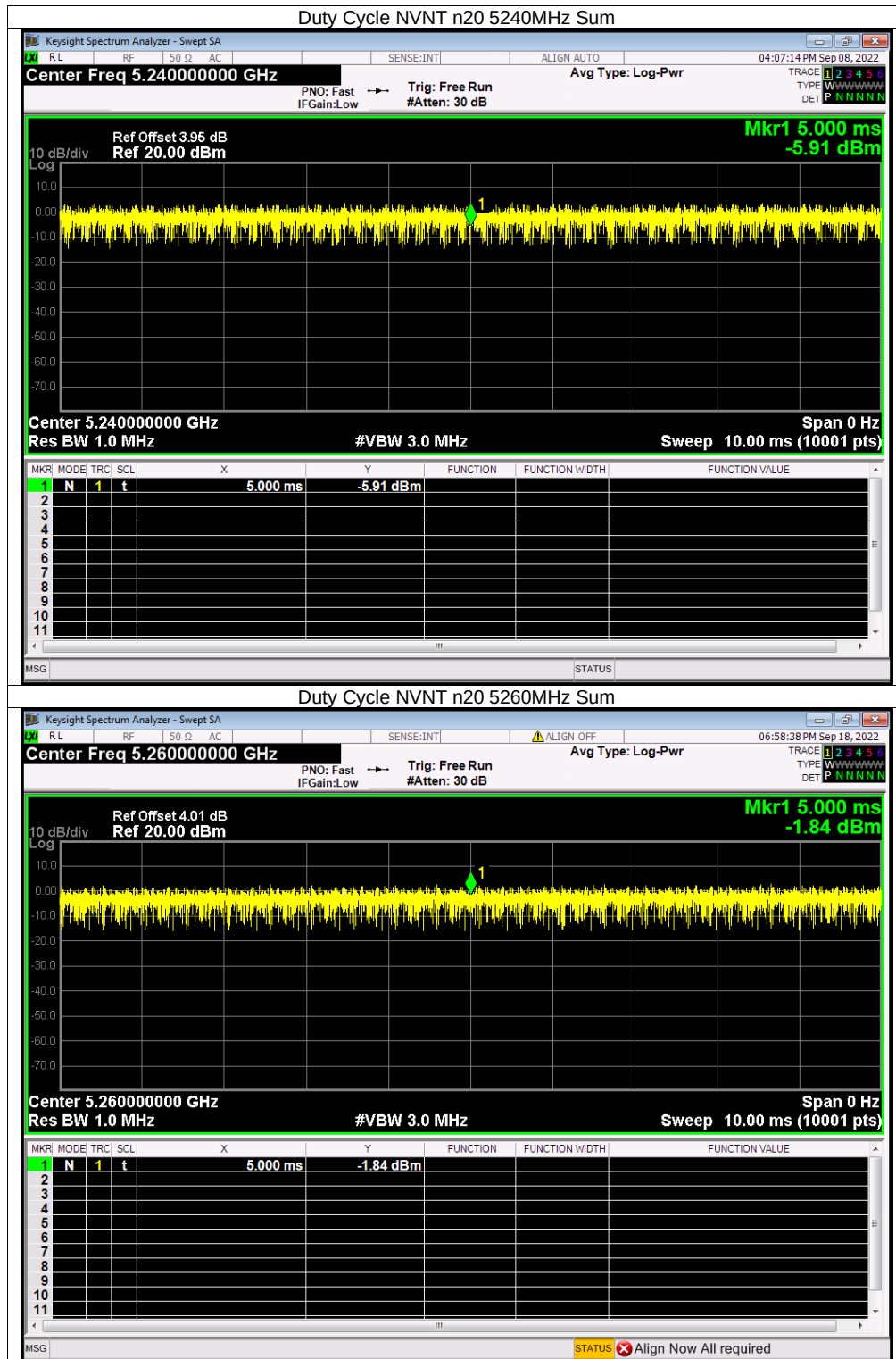


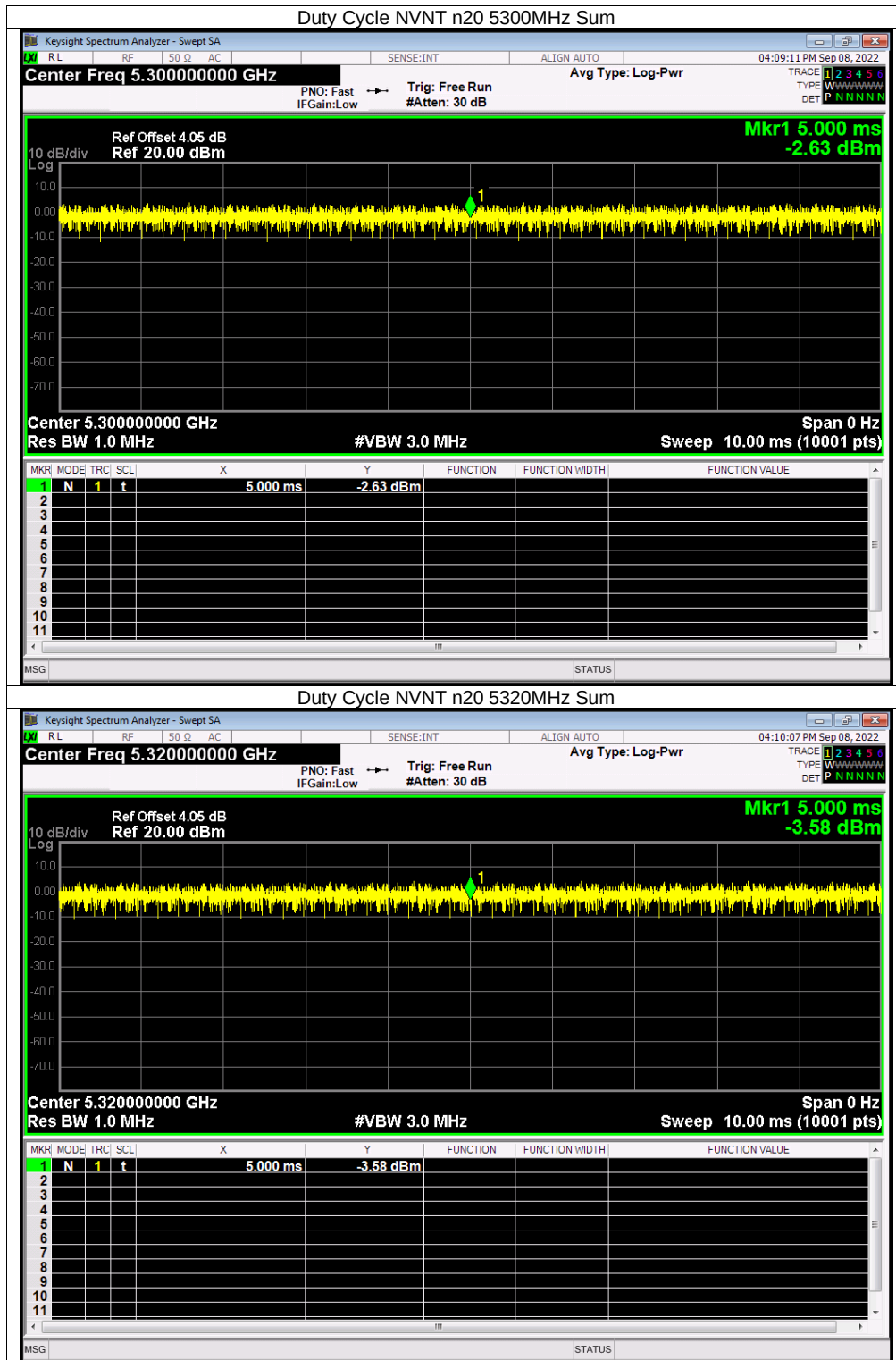


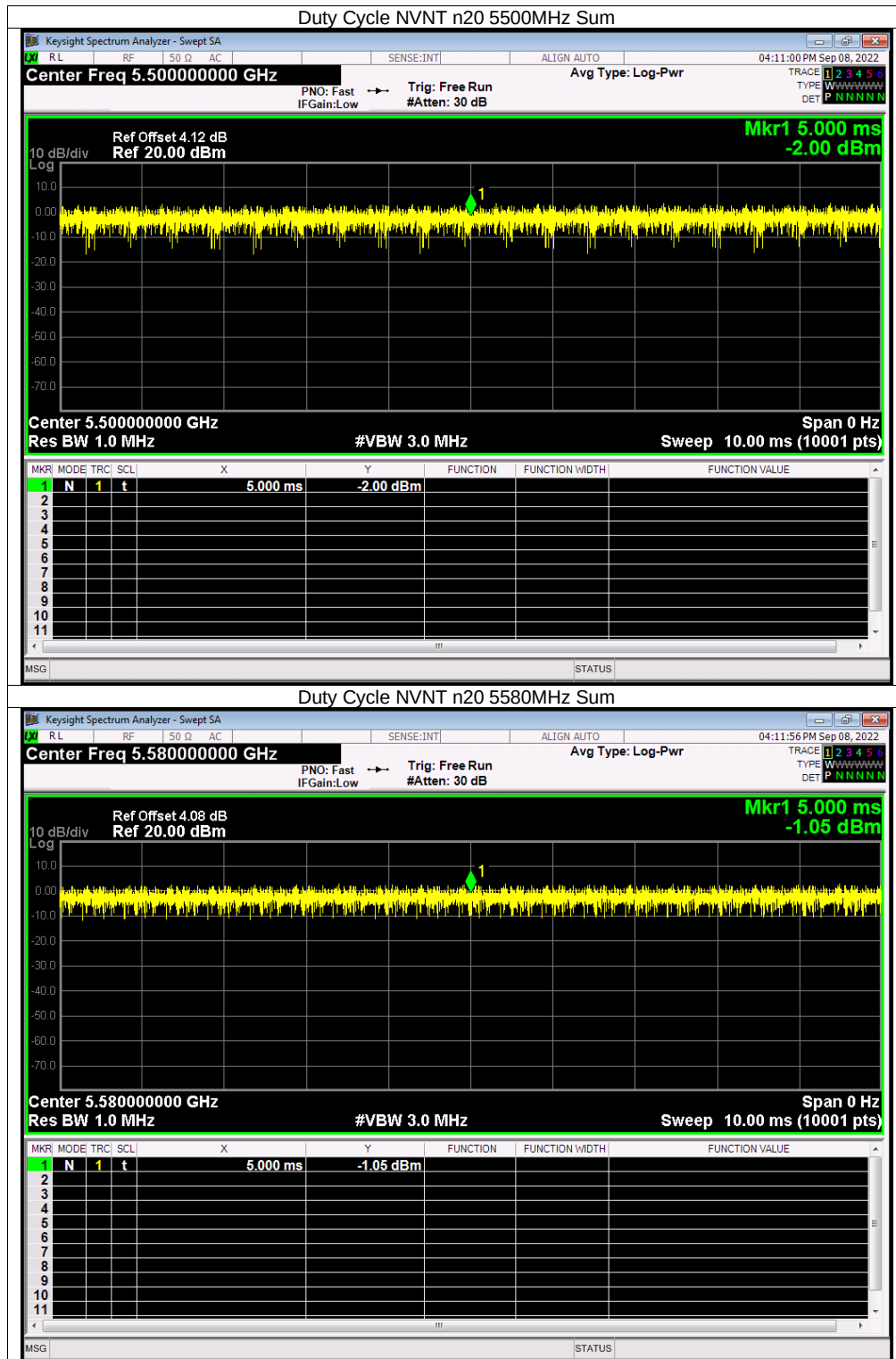


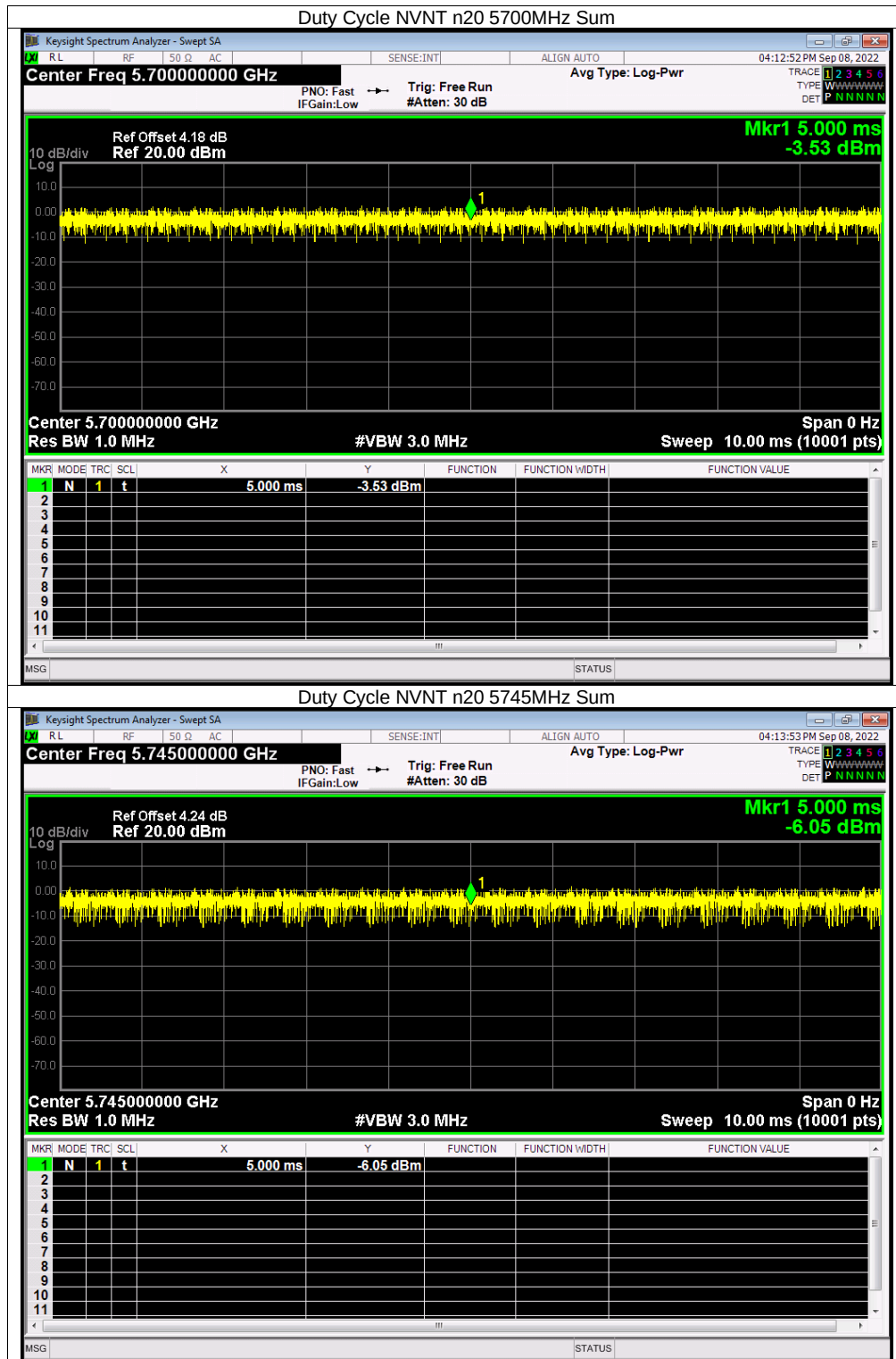


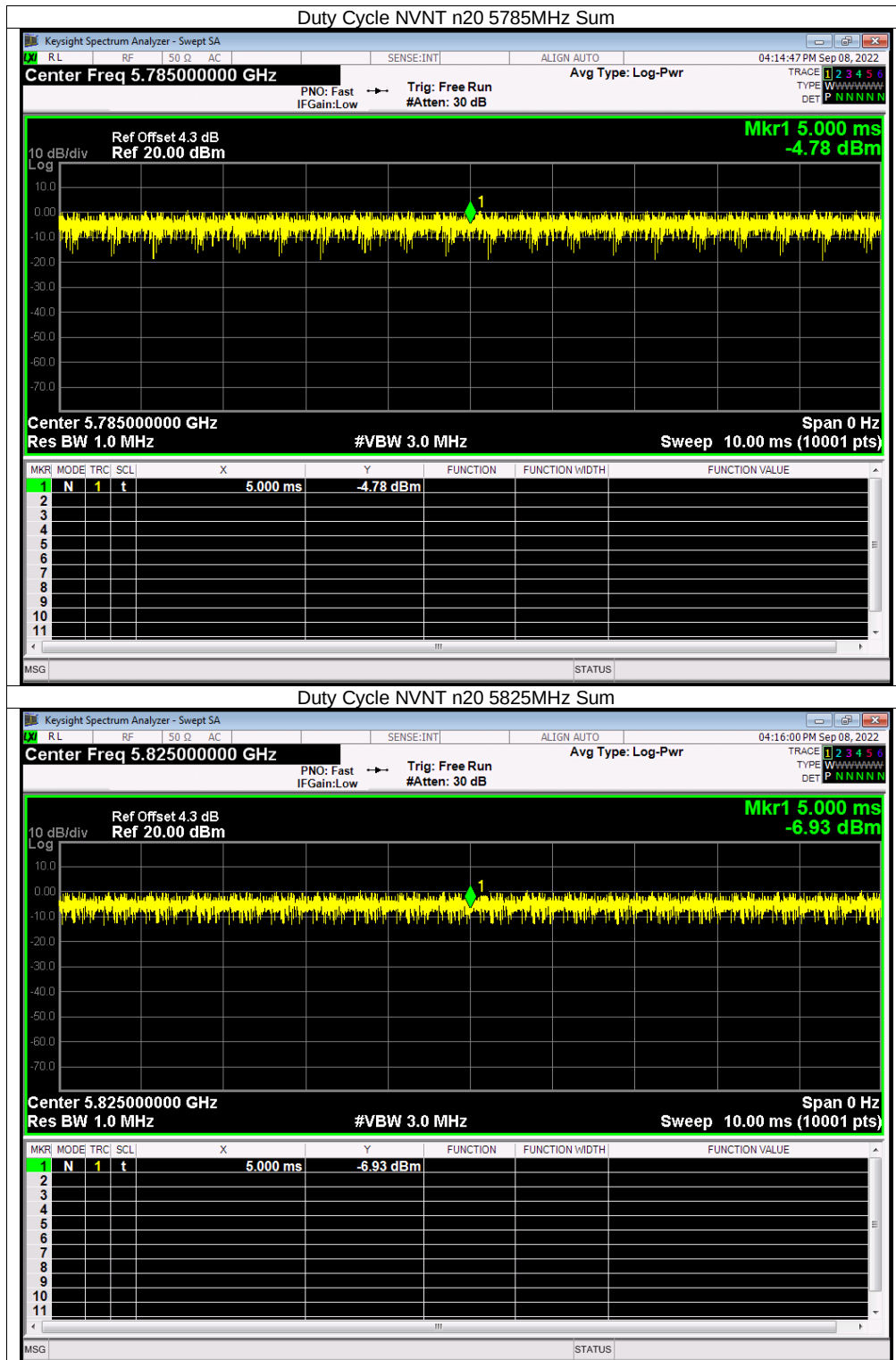


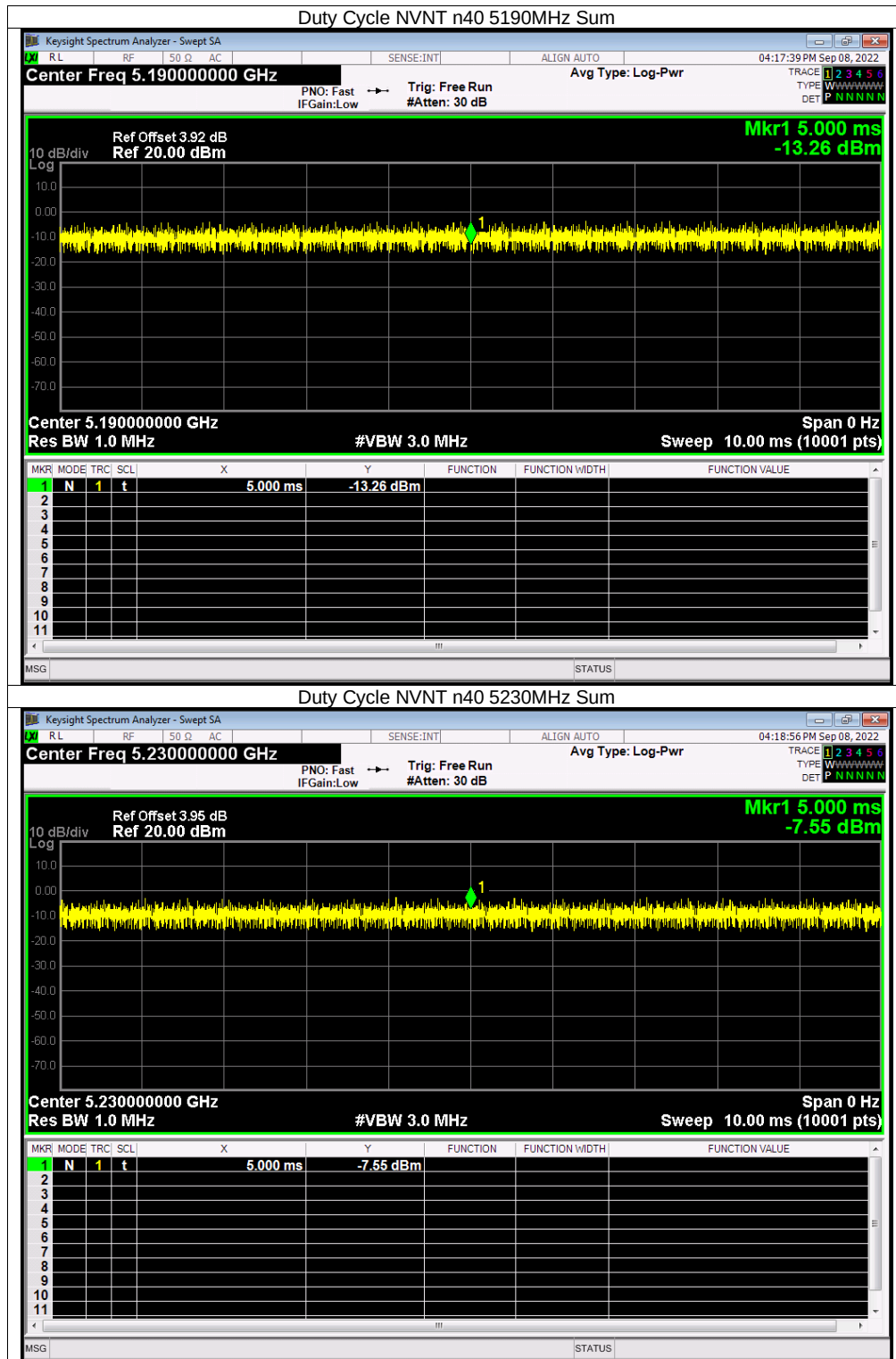


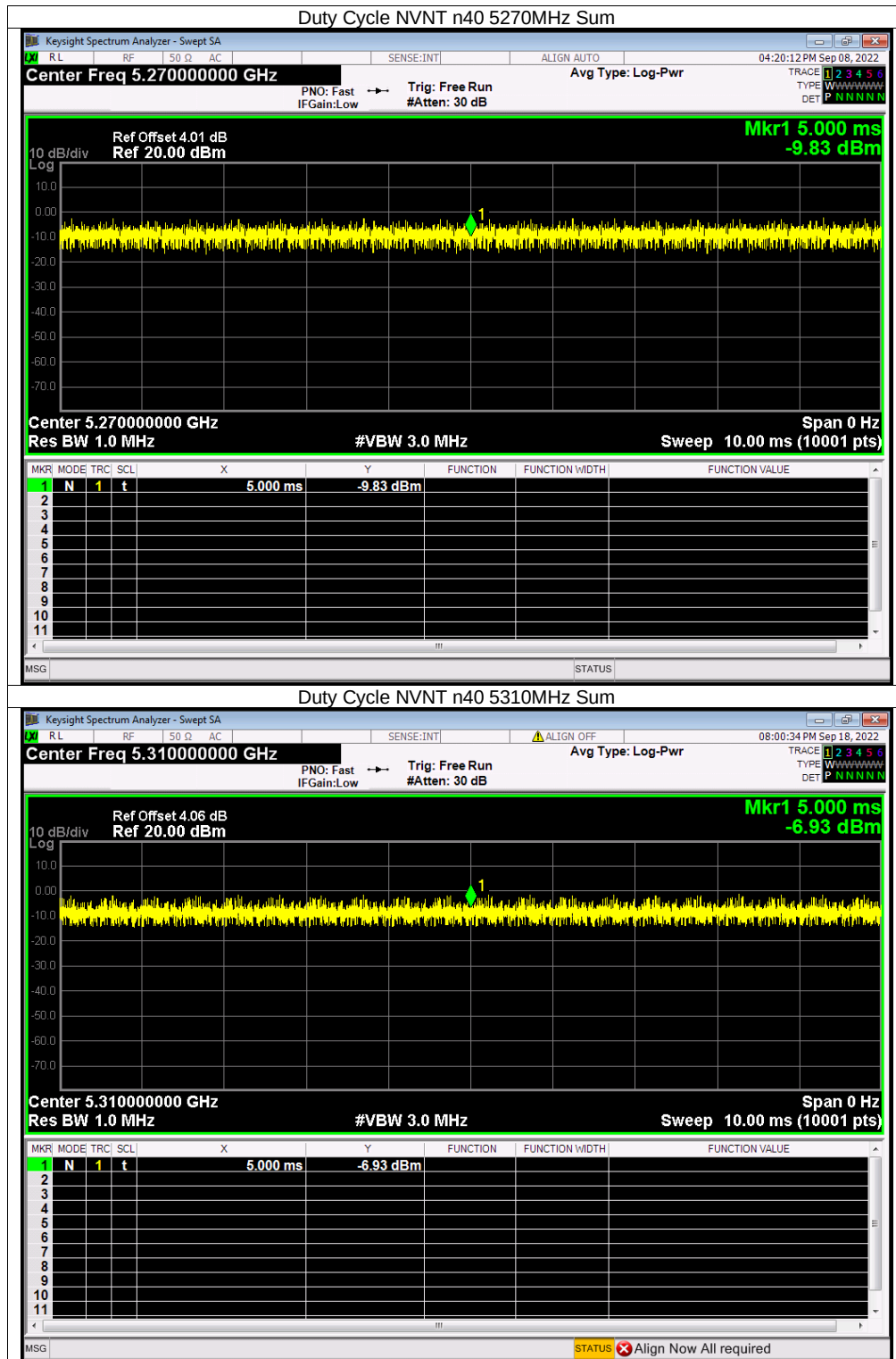


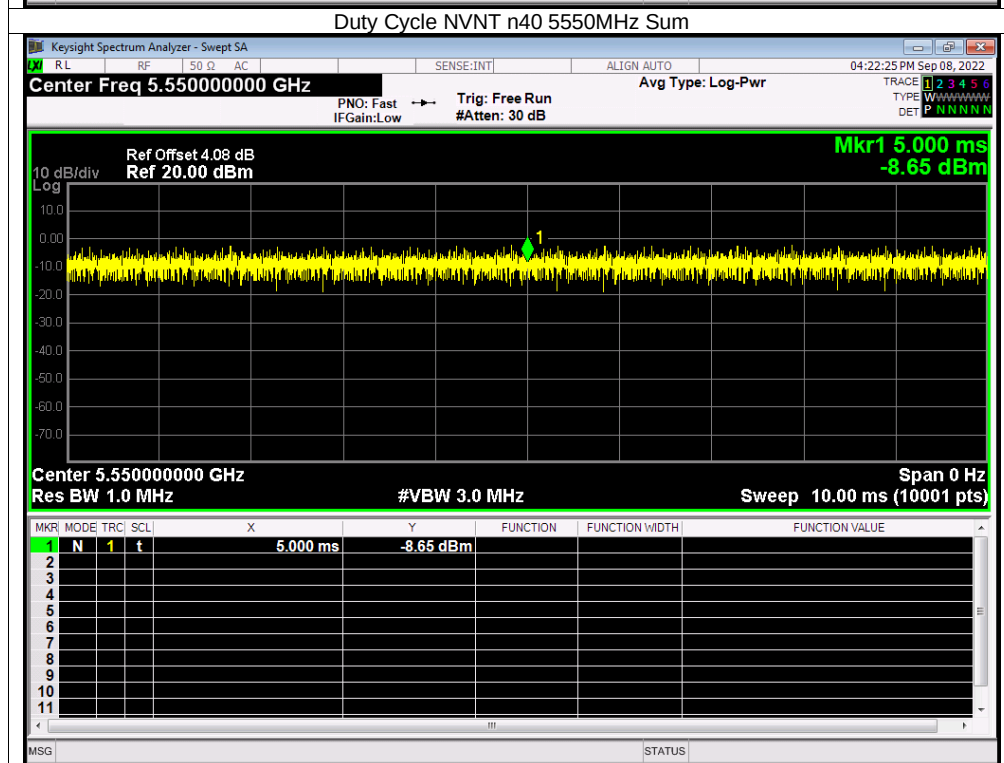
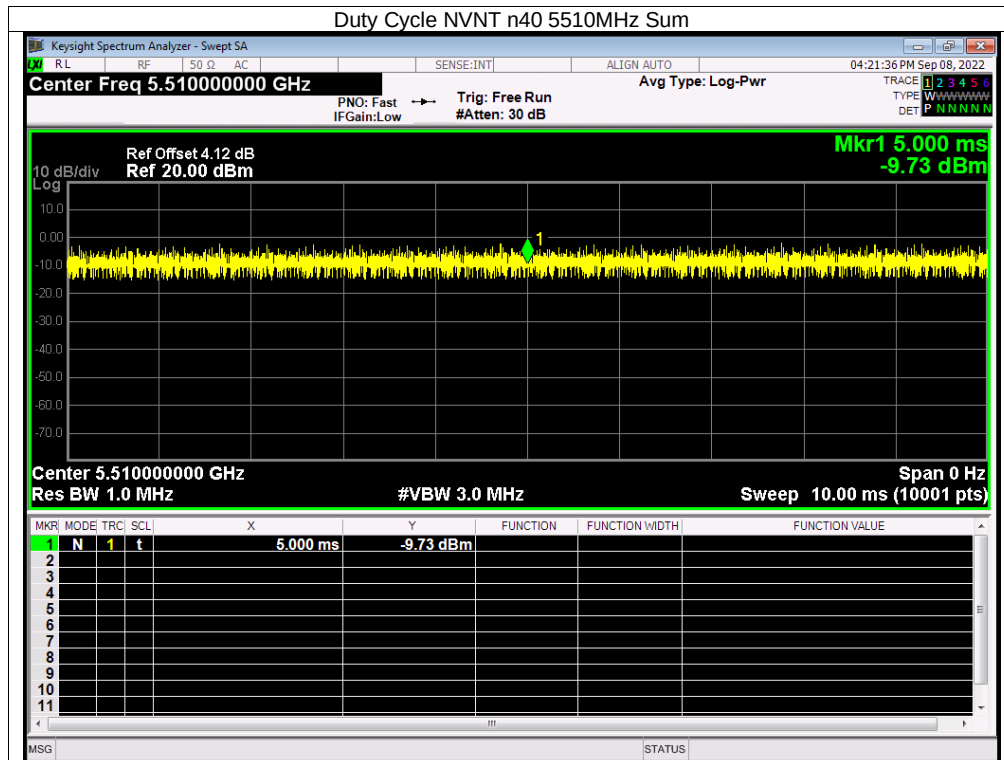


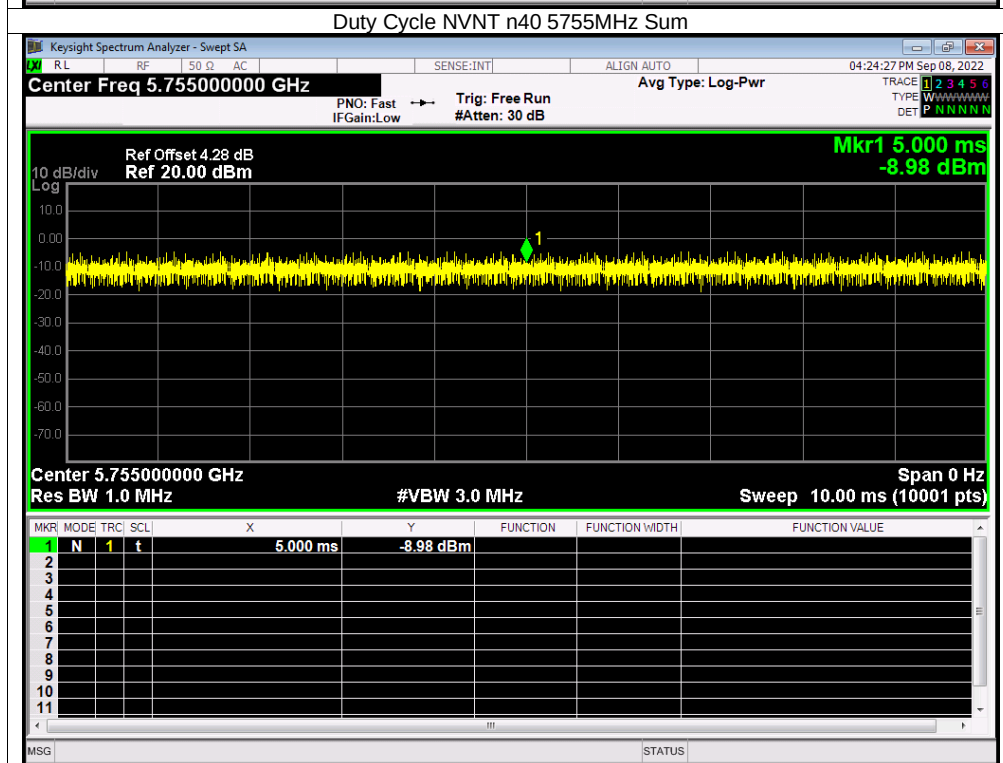
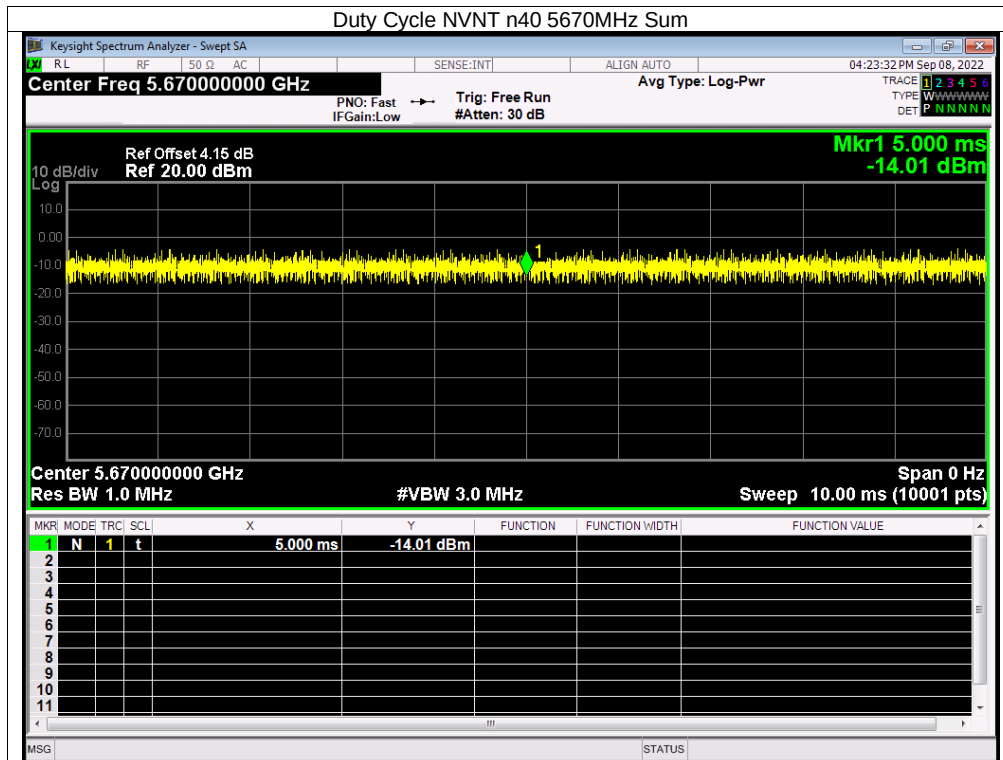


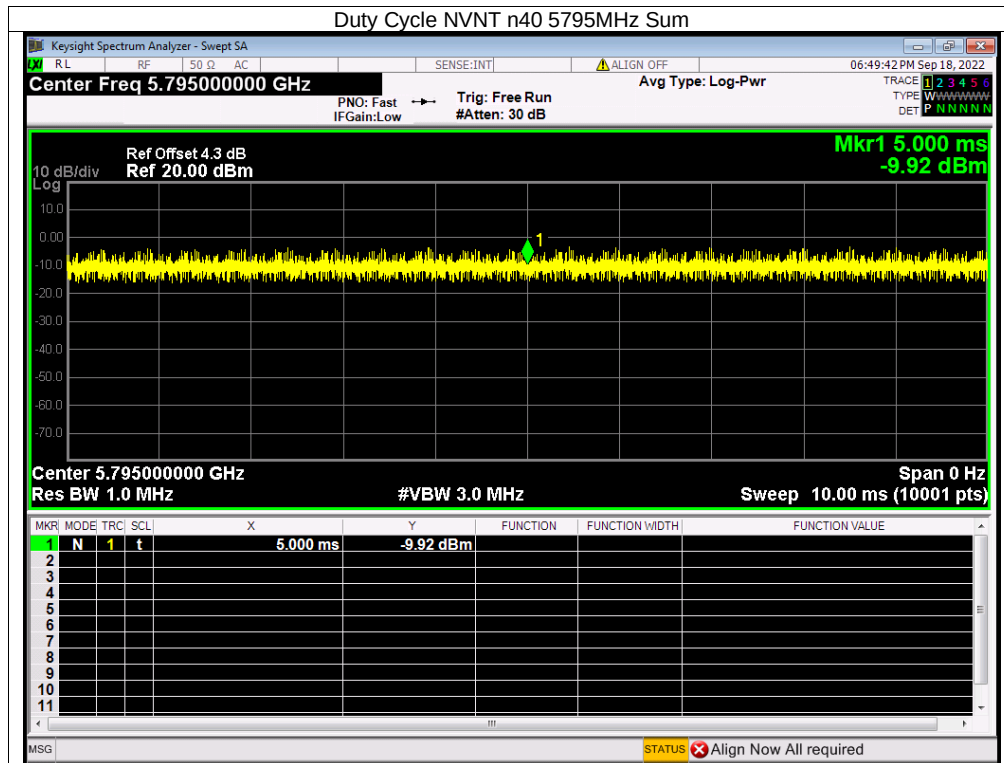














MAXIMUM CONDUCTED OUTPUT POWER

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	6.74	0	6.74	24	Pass
NVNT	a	5200	Ant1	5.99	0	5.99	24	Pass
NVNT	a	5240	Ant1	7.05	0	7.05	24	Pass
NVNT	a	5260	Ant1	7.26	0	7.26	24	Pass
NVNT	a	5300	Ant1	7.33	0	7.33	24	Pass
NVNT	a	5320	Ant1	7.38	0	7.38	24	Pass
NVNT	a	5500	Ant1	7.68	0	7.68	24	Pass
NVNT	a	5580	Ant1	7.36	0	7.36	24	Pass
NVNT	a	5700	Ant1	7.2	0	7.2	24	Pass
NVNT	a	5745	Ant1	6.54	0	6.54	30	Pass
NVNT	a	5785	Ant1	6.55	0	6.55	30	Pass
NVNT	a	5825	Ant1	6.63	0	6.63	30	Pass
NVNT	a	5180	Ant2	6.86	0	6.86	24	Pass
NVNT	a	5200	Ant2	6.32	0	6.32	24	Pass
NVNT	a	5240	Ant2	6.86	0	6.86	24	Pass
NVNT	a	5260	Ant2	7.34	0	7.34	24	Pass
NVNT	a	5300	Ant2	7.68	0	7.68	24	Pass
NVNT	a	5320	Ant2	8.14	0	8.14	24	Pass
NVNT	a	5500	Ant2	7.07	0	7.07	24	Pass
NVNT	a	5580	Ant2	7.12	0	7.12	24	Pass
NVNT	a	5700	Ant2	7.19	0	7.19	24	Pass
NVNT	a	5745	Ant2	6.95	0	6.95	30	Pass
NVNT	a	5785	Ant2	6.51	0	6.51	30	Pass
NVNT	a	5825	Ant2	5.76	0	5.76	30	Pass
NVNT	ac20	5180	Ant1	6.72	0	6.72	24	Pass
NVNT	ac20	5180	Ant2	8.43	0	8.43	24	Pass
NVNT	ac20	5180	Sum	10.67	0	10.67	24	Pass
NVNT	ac20	5200	Ant1	7.37	0	7.37	24	Pass
NVNT	ac20	5200	Ant2	6.9	0	6.9	24	Pass
NVNT	ac20	5200	Sum	10.15	0	10.15	24	Pass
NVNT	ac20	5240	Ant1	7.18	0	7.18	24	Pass
NVNT	ac20	5240	Ant2	6.48	0	6.48	24	Pass
NVNT	ac20	5240	Sum	9.85	0	9.85	24	Pass
NVNT	ac20	5260	Ant1	7.64	0	7.64	24	Pass
NVNT	ac20	5260	Ant2	7.72	0	7.72	24	Pass
NVNT	ac20	5260	Sum	10.69	0	10.69	24	Pass
NVNT	ac20	5300	Ant1	7.6	0	7.6	24	Pass
NVNT	ac20	5300	Ant2	9.44	0	9.44	24	Pass
NVNT	ac20	5300	Sum	11.63	0	11.63	24	Pass
NVNT	ac20	5320	Ant1	8	0	8	24	Pass
NVNT	ac20	5320	Ant2	9.42	0	9.42	24	Pass
NVNT	ac20	5320	Sum	11.78	0	11.78	24	Pass
NVNT	ac20	5500	Ant1	7.57	0	7.57	24	Pass
NVNT	ac20	5500	Ant2	4.65	0	4.65	24	Pass
NVNT	ac20	5500	Sum	9.36	0	9.36	24	Pass
NVNT	ac20	5580	Ant1	6.8	0	6.8	24	Pass
NVNT	ac20	5580	Ant2	7.68	0	7.68	24	Pass
NVNT	ac20	5580	Sum	10.27	0	10.27	24	Pass
NVNT	ac20	5700	Ant1	6.34	0	6.34	24	Pass
NVNT	ac20	5700	Ant2	7.41	0	7.41	24	Pass
NVNT	ac20	5700	Sum	9.92	0	9.92	24	Pass
NVNT	ac20	5745	Ant1	5.21	0	5.21	30	Pass
NVNT	ac20	5745	Ant2	5.33	0	5.33	30	Pass
NVNT	ac20	5745	Sum	8.28	0	8.28	30	Pass
NVNT	ac20	5785	Ant1	5.2	0	5.2	30	Pass
NVNT	ac20	5785	Ant2	3.98	0	3.98	30	Pass
NVNT	ac20	5785	Sum	7.64	0	7.64	30	Pass
NVNT	ac20	5825	Ant1	5.65	0	5.65	30	Pass
NVNT	ac20	5825	Ant2	6.1	0	6.1	30	Pass
NVNT	ac20	5825	Sum	8.89	0	8.89	30	Pass
NVNT	ac40	5190	Ant1	6.06	0	6.06	24	Pass
NVNT	ac40	5190	Ant2	7.1	0	7.1	24	Pass
NVNT	ac40	5190	Sum	9.62	0	9.62	24	Pass
NVNT	ac40	5230	Ant1	7.21	0	7.21	24	Pass
NVNT	ac40	5230	Ant2	6.52	0	6.52	24	Pass
NVNT	ac40	5230	Sum	9.89	0	9.89	24	Pass



NVNT	ac40	5270	Ant1	7.39	0	7.39	24	Pass
NVNT	ac40	5270	Ant2	8.09	0	8.09	24	Pass
NVNT	ac40	5270	Sum	10.76	0	10.76	24	Pass
NVNT	ac40	5310	Ant1	7.66	0	7.66	24	Pass
NVNT	ac40	5310	Ant2	6.95	0	6.95	24	Pass
NVNT	ac40	5310	Sum	10.33	0	10.33	24	Pass
NVNT	ac40	5510	Ant1	7.37	0	7.37	24	Pass
NVNT	ac40	5510	Ant2	5.72	0	5.72	24	Pass
NVNT	ac40	5510	Sum	9.63	0	9.63	24	Pass
NVNT	ac40	5550	Ant1	7.25	0	7.25	24	Pass
NVNT	ac40	5550	Ant2	7.49	0	7.49	24	Pass
NVNT	ac40	5550	Sum	10.38	0	10.38	24	Pass
NVNT	ac40	5670	Ant1	6.66	0	6.66	24	Pass
NVNT	ac40	5670	Ant2	6.49	0	6.49	24	Pass
NVNT	ac40	5670	Sum	9.59	0	9.59	24	Pass
NVNT	ac40	5755	Ant1	5.86	0	5.86	30	Pass
NVNT	ac40	5755	Ant2	5.46	0	5.46	30	Pass
NVNT	ac40	5755	Sum	8.67	0	8.67	30	Pass
NVNT	ac40	5795	Ant1	4.91	0	4.91	30	Pass
NVNT	ac40	5795	Ant2	5.39	0	5.39	30	Pass
NVNT	ac40	5795	Sum	8.17	0	8.17	30	Pass
NVNT	ac80	5210	Ant1	6.57	0	6.57	24	Pass
NVNT	ac80	5210	Ant2	7.43	0	7.43	24	Pass
NVNT	ac80	5210	Sum	10.03	0	10.03	24	Pass
NVNT	ac80	5290	Ant1	7.79	0	7.79	24	Pass
NVNT	ac80	5290	Ant2	9.16	0	9.16	24	Pass
NVNT	ac80	5290	Sum	11.54	0	11.54	24	Pass
NVNT	ac80	5530	Ant1	8.26	0	8.26	24	Pass
NVNT	ac80	5530	Ant2	7.6	0	7.6	24	Pass
NVNT	ac80	5530	Sum	10.95	0	10.95	24	Pass
NVNT	ac80	5610	Ant1	6.28	0	6.28	24	Pass
NVNT	ac80	5610	Ant2	6.65	0	6.65	24	Pass
NVNT	ac80	5610	Sum	9.48	0	9.48	24	Pass
NVNT	ac80	5775	Ant1	2.23	0	2.23	30	Pass
NVNT	ac80	5775	Ant2	2.58	0	2.58	30	Pass
NVNT	ac80	5775	Sum	5.42	0	5.42	30	Pass
NVNT	n20	5180	Ant1	6.31	0	6.31	24	Pass
NVNT	n20	5180	Ant2	7.19	0	7.19	24	Pass
NVNT	n20	5180	Sum	9.78	0	9.78	24	Pass
NVNT	n20	5200	Ant1	6.65	0	6.65	24	Pass
NVNT	n20	5200	Ant2	6.78	0	6.78	24	Pass
NVNT	n20	5200	Sum	9.73	0	9.73	24	Pass
NVNT	n20	5240	Ant1	7.36	0	7.36	24	Pass
NVNT	n20	5240	Ant2	6	0	6	24	Pass
NVNT	n20	5240	Sum	9.74	0	9.74	24	Pass
NVNT	n20	5260	Ant1	6.36	0	6.36	24	Pass
NVNT	n20	5260	Ant2	6.18	0	6.18	24	Pass
NVNT	n20	5260	Sum	9.28	0	9.28	24	Pass
NVNT	n20	5300	Ant1	7.68	0	7.68	24	Pass
NVNT	n20	5300	Ant2	9.42	0	9.42	24	Pass
NVNT	n20	5300	Sum	11.65	0	11.65	24	Pass
NVNT	n20	5320	Ant1	7.97	0	7.97	24	Pass
NVNT	n20	5320	Ant2	9.29	0	9.29	24	Pass
NVNT	n20	5320	Sum	11.69	0	11.69	24	Pass
NVNT	n20	5500	Ant1	7.09	0	7.09	24	Pass
NVNT	n20	5500	Ant2	5.51	0	5.51	24	Pass
NVNT	n20	5500	Sum	9.38	0	9.38	24	Pass
NVNT	n20	5580	Ant1	6.56	0	6.56	24	Pass
NVNT	n20	5580	Ant2	7.53	0	7.53	24	Pass
NVNT	n20	5580	Sum	10.08	0	10.08	24	Pass
NVNT	n20	5700	Ant1	6.5	0	6.5	24	Pass
NVNT	n20	5700	Ant2	7.16	0	7.16	24	Pass
NVNT	n20	5700	Sum	9.85	0	9.85	24	Pass
NVNT	n20	5745	Ant1	5.58	0	5.58	30	Pass
NVNT	n20	5745	Ant2	6.39	0	6.39	30	Pass
NVNT	n20	5745	Sum	9.01	0	9.01	30	Pass
NVNT	n20	5785	Ant1	4.83	0	4.83	30	Pass
NVNT	n20	5785	Ant2	4.87	0	4.87	30	Pass
NVNT	n20	5785	Sum	7.86	0	7.86	30	Pass
NVNT	n20	5825	Ant1	3.72	0	3.72	30	Pass
NVNT	n20	5825	Ant2	6.54	0	6.54	30	Pass



NVNT	n20	5825	Sum	8.37	0	8.37	30	Pass
NVNT	n40	5190	Ant1	5.98	0	5.98	24	Pass
NVNT	n40	5190	Ant2	6.64	0	6.64	24	Pass
NVNT	n40	5190	Sum	9.33	0	9.33	24	Pass
NVNT	n40	5230	Ant1	6.7	0	6.7	24	Pass
NVNT	n40	5230	Ant2	6.1	0	6.1	24	Pass
NVNT	n40	5230	Sum	9.42	0	9.42	24	Pass
NVNT	n40	5270	Ant1	6.79	0	6.79	24	Pass
NVNT	n40	5270	Ant2	7.96	0	7.96	24	Pass
NVNT	n40	5270	Sum	10.42	0	10.42	24	Pass
NVNT	n40	5310	Ant1	7.42	0	7.42	24	Pass
NVNT	n40	5310	Ant2	7.31	0	7.31	24	Pass
NVNT	n40	5310	Sum	10.38	0	10.38	24	Pass
NVNT	n40	5510	Ant1	7.25	0	7.25	24	Pass
NVNT	n40	5510	Ant2	5.63	0	5.63	24	Pass
NVNT	n40	5510	Sum	9.53	0	9.53	24	Pass
NVNT	n40	5550	Ant1	7.13	0	7.13	24	Pass
NVNT	n40	5550	Ant2	7.08	0	7.08	24	Pass
NVNT	n40	5550	Sum	10.12	0	10.12	24	Pass
NVNT	n40	5670	Ant1	5.58	0	5.58	24	Pass
NVNT	n40	5670	Ant2	6.37	0	6.37	24	Pass
NVNT	n40	5670	Sum	9	0	9	24	Pass
NVNT	n40	5755	Ant1	5.27	0	5.27	30	Pass
NVNT	n40	5755	Ant2	6.23	0	6.23	30	Pass
NVNT	n40	5755	Sum	8.79	0	8.79	30	Pass
NVNT	n40	5795	Ant1	5.37	0	5.37	30	Pass
NVNT	n40	5795	Ant2	5.39	0	5.39	30	Pass
NVNT	n40	5795	Sum	8.39	0	8.39	30	Pass





