



RF TEST REPORT

Product Name: DTEN D7X 75"

Model Name: DB71475, DB71475-S1

FCC ID: 2AQ7Q-DB71475

Issued For : DTEN Inc

97 E Brokaw Road suite 180 San Jose CA 95112

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: LGT22J013RF15

Sample Received Date: Oct. 13, 2022

Date of Tested: Oct. 13, 2022 – Nov.18, 2022

Date of Issue: Nov. 18, 2022

The test report is effective only with both signature and specialized stamp. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report only apply to the tested sample.



TEST REPORT CERTIFICATION

Applicant DTEN Inc
Address 97 E Brokaw Road suite 180 San Jose CA 95112
Manufacturer DTEN Inc
Address 97 E Brokaw Road suite 180 San Jose CA 95112
Product Name DTEN D7X 75"
Trade Mark DTEN
Model Name DB71475, DB71475-S1
Sample Status: Normal

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC Part 15.407, Subpart E ANSI C63.10-2013	PASS

Prepared by:

Zane Shan

Zane Shan
Engineer

Approved by:

Vita Li

Vita Li
Technical Director





Table of Contents	Page
1 . SUMMARY OF TEST RESULTS	6
1.1 TEST FACTORY	7
1.2 MEASUREMENT UNCERTAINTY	7
2 . GENERAL INFORMATION	8
2.1 GENERAL DESCRIPTION OF THE EUT	8
2.2 DESCRIPTION OF TEST MODES	11
2.3 TEST SOFTWARE AND POWER LEVEL	12
2.4 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS	13
2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS	14
3 . EMC EMISSION TEST	15
3.1 CONDUCTED EMISSION MEASUREMENT	15
3.2 RADIATED EMISSION AND (BANDEGE) MEASUREMENT	18
4. POWER SPECTRAL DENSITY TEST	49
4.1 LIMIT	49
4.2 TEST PROCEDURE	49
4.3 DEVIATION FROM STANDARD	50
4.4 TEST SETUP	50
4.5 EUT OPERATION CONDITIONS	50
4.6 TEST RESULTS	50
5. BANDWIDTH MEASUREMENT	51
5.1 EMISSION BANDWIDTH (EBW) 26 BANDWID PROCEDURES / LIMIT	51
5.2 OCCUPIED BANDWIDTH (99%) TEST APPLIED PROCEDURES / LIMIT	52
5.3 MINIMUM EMISSION BANDWIDTH(6 DB) PROCEDURES / LIMIT	54
6. MAXIMUM CONDUCTED OUTPUT POWER	55
6.1 LIMIT	55
6.2 TEST PROCEDURE	55
6.3 DEVIATION FROM STANDARD	55
6.4 TEST SETUP	55
6.5 EUT OPERATION CONDITIONS	55
6.6 TEST RESULTS	56
7. AUTOMATICALLY DISCONTINUE TRANSMISSION	57
7.1 LIMIT OF AUTOMATICALLY DISCONTINUE TRANSMISSION	57
7.2 TEST RESULT OF AUTOMATICALLY DISCONTINUE TRANSMISSION	57
8. ANTENNA REQUIREMENT	58



Table of Contents	Page
8.1 STANDARD REQUIREMENT	58
8.2 EUT ANTENNA	58
APPENDIX I:TEST RESULTS	59
DUTY CYCLE	59
MAXIMUM CONDUCTED OUTPUT POWER	98
-26DB BANDWIDTH	162
OCCUPIED CHANNEL BANDWIDTH	187
MAXIMUM POWER SPECTRAL DENSITY LEVEL	219
-6DB BANDWIDTH	283



Revision History

Rev.	Issue Date	Contents
00	Nov. 18, 2022	Initial Issue



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

Part 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.

(3) For model DB71475 and DB71475-S1, the TP control board have two types of A and B, this do not affect RF parameters. DB71475 with type A was selected as the typical model for all necessary tests performed. For the details of type A&B, please refer to the EUT photos.



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 %**.

Parameter	Uncertainty
Occupied Channel Bandwidth	$\pm 3.2 \%$
RF Output Power, Conducted	$\pm 0.71\text{dB}$
Power Spectral Density, Conducted	$\pm 1.57 \text{ dB}$
Unwanted Emission, Conducted	$\pm 0.63\text{dB}$
Conducted emission	$\pm 2.80\text{dB}$
All Emissions, Radiated (0.009-30MHz)	$\pm 2.16\text{dB}$
All Emissions, Radiated (30MHz-1GHz)	$\pm 4.40\text{dB}$
All Emissions, Radiated (1GHz-18GHz)	$\pm 5.49\text{dB}$
Temperature	$\pm 0.5^\circ\text{C}$
Humidity	$\pm 2\%$
Duty Cycle	$\pm 2.3\%$



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	DTEN D7X 75"	
Trademark	DTEN	
Model Name	DB71475	
Series Model	DB71475-S1	
Model Difference	Only the model name and shipping packaging method are different.	
Product Description	The EUT is a DTEN D7X 75"	
	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 802.11ac(VHT160):5.250GHz-5.570GHz
		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 802.11ac(VHT160):5.250GHz-5.570GHz
		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 802.11ac(VHT160):5.250GHz-5.570GHz
		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.
	Antenna Gain(dBi)	ANT 1:2.22 ANT 2:2.22 MIMO:5.23
	More details of EUT technical specification, please refer to the User Manual.	
Test Channel	Please refer to the Note 2.	
Rating	100-240V~ 50/60Hz 4.0A	
Hardware Version Number	OPSC17_V12	
Software Version Number	3.0.10	
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



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
		118	5590
5.260GHz-5.320GHz		120	5600
Channel	Frequency	122	5610
52	5260	124	5620
54	5270	126	5630
56	5280	128	5640
58	5290	132	5660
60	5300	134	5670
62	5310	136	5680
64	5320	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 (VHT160)			
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

Ant	Brand	Model Name	Ant Type	Connector	Gain (dBi)	NOTE
A	DONGGUAN SEYAN ELECTRONIC COMMUNICATION CO.,LTD	SY-W6E8412147BR050C1-L01	Copper tube antenna	N/A	ANT 1:2.22 ANT 2:2.22 MIMO:5.23	5G WLAN Ant

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 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.

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.

(3) We have be tested for all avaiable U.S. voltage and frequencies(For 120V,50/60Hz and 240V, 50/60Hz) for which the device is capable of operation.



AC Conducted Emission

Test Case	
AC Conducted Emission	Mode 25: TX Mode

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)	ANT_1 Power Class	ANT_2 Power Class	Software For Testing
WIFI(5G)	5G WIFI Band1 (5150MHz -5250MHz)	802.11a	ANT 1:2.22 ANT 2:2.22 MIMO:5.23	Default	Default	DRTU
		802.11n(HT20)		Default	Default	
		802.11n(HT40)		Default	Default	
		802.11ac(VHT20)		Default	Default	
		802.11ac(VHT40)		Default	Default	
		802.11ac(VHT80)		Default	Default	

RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_1 Power Class	ANT_2 Power Class	Software For Testing
WIFI(5G)	5G WIFI Band2 (5250MHz -5350MHz)	802.11a	ANT 1:2.22 ANT 2:2.22 MIMO:5.23	Default	Default	DRTU
		802.11n(HT20)		Default	Default	
		802.11n(HT40)		Default	Default	
		802.11ac(VHT20)		Default	Default	
		802.11ac(VHT40)		Default	Default	
		802.11ac(VHT80)		Default	Default	

RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_1 Power Class	ANT_2 Power Class	Software For Testing
WIFI(5G)	5G WIFI Band3 (5470MHz -5725MHz)	802.11a	ANT 1:2.22 ANT 2:2.22 MIMO:5.23	Default	Default	DRTU
		802.11n(HT20)		Default	Default	
		802.11n(HT40)		Default	Default	
		802.11ac(VHT20)		Default	Default	
		802.11ac(VHT40)		Default	Default	
		802.11ac(VHT80)		Default	Default	



RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_1 Power Class	ANT_2 Power Class	Software For Testing
WIFI(5G)	5G WIFI Band4 (5725MHz-5850MHz)	802.11a	ANT 1:2.22 ANT 2:2.22 MIMO:5.23	10	10	DRTU
		802.11n(HT20)		10	10	
		802.11n(HT40)		10	10	
		802.11ac(VHT20)		10	10	
		802.11ac(VHT40)		10	10	
		802.11ac(VHT80)		10	10	

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 C-to-C cable	DTEN	N/A	N/A	1.9m
stylus	DTEN	N/A	N/A	N/A
Power cord	XIEKANG ELECTRONIC	N/A	N/A	3m, US plug
Camera	DTEN	N/A	N/A	2pcs

Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
N/A	N/A	N/A	N/A	N/A

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

Conducted Emission					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. 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	EMC-I_V1.4.0.3_SKET				

Radiated Test equipment					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
EMI Test Receiver	R&S	ESU8	100372	2022.04.12	2023.04.11
Active loop Antenna	R&S	HFH2-Z2	POS871398181	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-3GHz)	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	EMC-I_V1.4.0.3_SKET				

Conducted Test equipment					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
Signal Analyzer	Keysight	N9010B	MY60242508	2022.04.29	2023.04.28
RF Automatic Test system	MW	MW200-RFCB	MW220322LG	2022.04.29	2023.04.28
MXG Vector Signal Generator	Keysight	N5182B	MY59100717	2022.06.02	2023.06.01
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_MW				



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

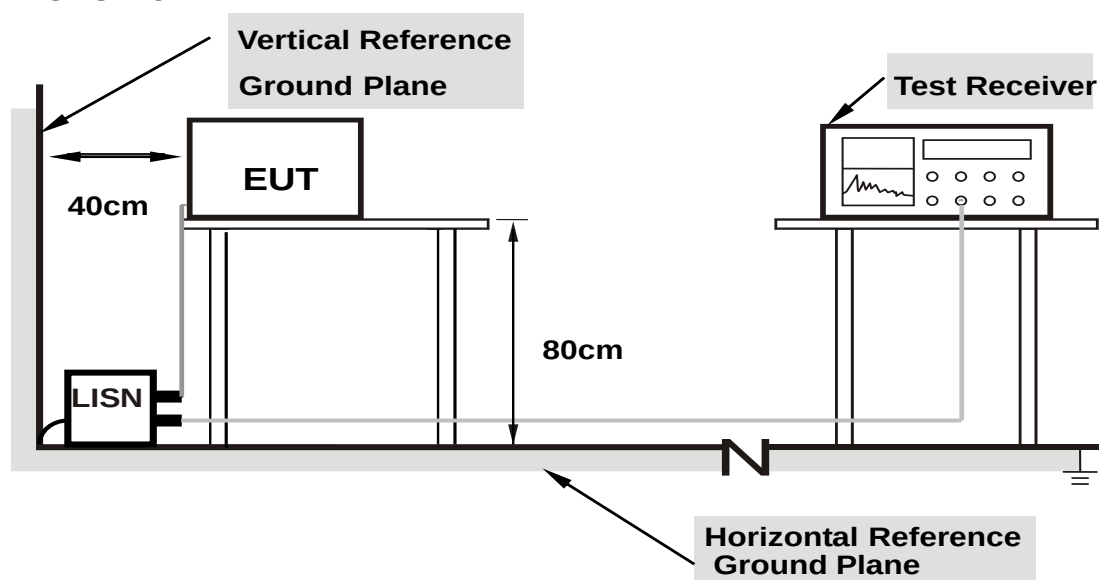
3.1.2 TEST PROCEDURE

- 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.

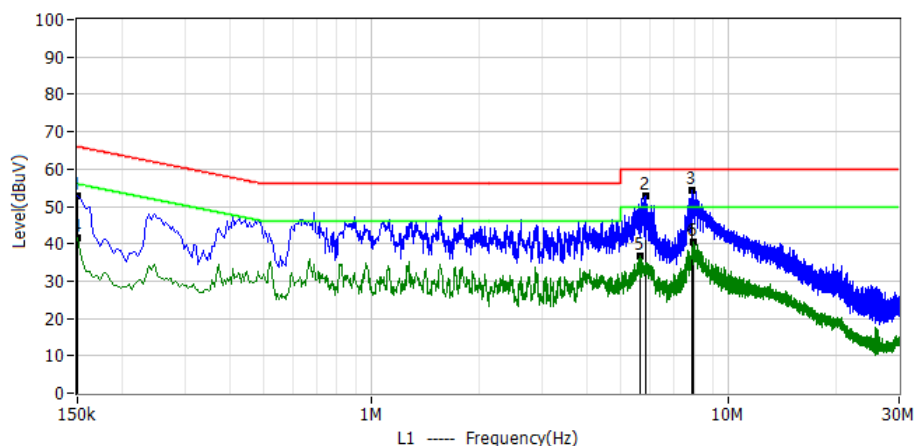
3.1.5 EUT OPERATING CONDITIONS

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.

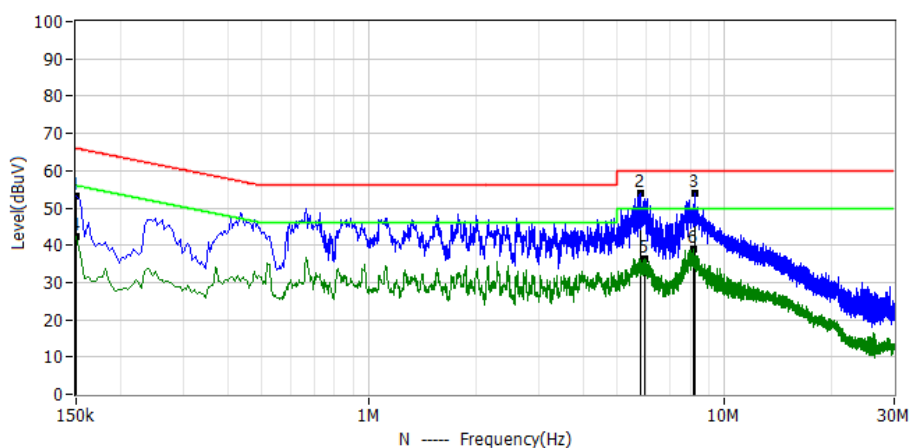


3.1.6 TEST RESULTS

Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Temperature: 25.1°C
M/N: DB71475	Humidity: 48%RH
Test Voltage: AC 120V/60Hz	Test Data: 2022-10-26
Test Mode: TX 5GHz	
Note:	



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	150.000kHz	42.42	10.50	52.92	66.00	-13.08	PK	L1
2*	5.854MHz	42.13	10.84	52.97	60.00	-7.03	PK	L1
3*	7.890MHz	43.57	10.90	54.47	60.00	-5.53	PK	L1
4*	150.000kHz	31.09	10.50	41.59	56.00	-14.41	AV	L1
5*	5.626MHz	25.73	10.83	36.56	50.00	-13.44	AV	L1
6*	7.934MHz	29.39	10.90	40.29	50.00	-9.71	AV	L1



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	150.000kHz	42.67	10.50	53.17	66.00	-12.83	PK	N
2*	5.818MHz	43.22	10.84	54.06	60.00	-5.94	PK	N
3*	8.242MHz	43.12	10.91	54.03	60.00	-5.97	PK	N
4*	150.000kHz	31.90	10.50	42.40	56.00	-13.60	AV	N
5*	5.974MHz	25.49	10.85	36.34	50.00	-13.66	AV	N
6*	8.166MHz	27.92	10.91	38.83	50.00	-11.17	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

- The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- 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.
- 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.
- 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.
- 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.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

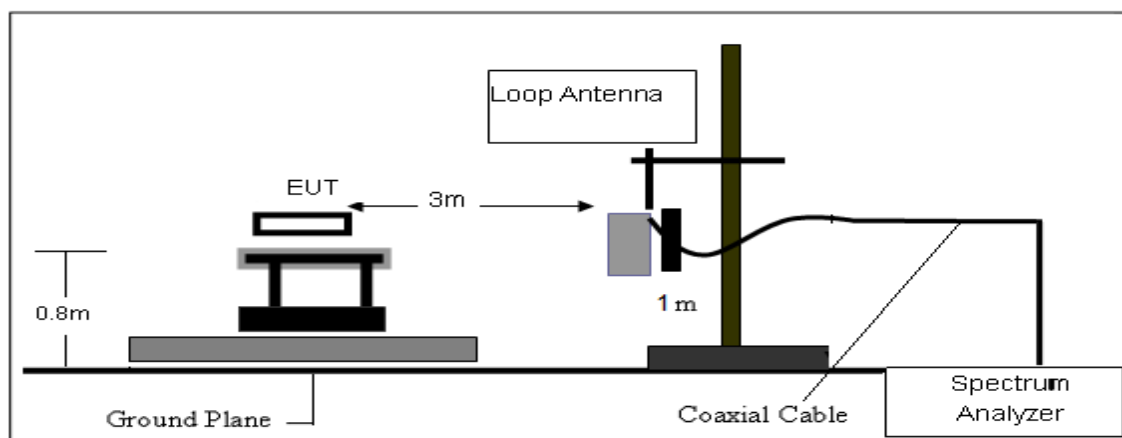
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

3.2.2 DEVIATION FROM TEST STANDARD

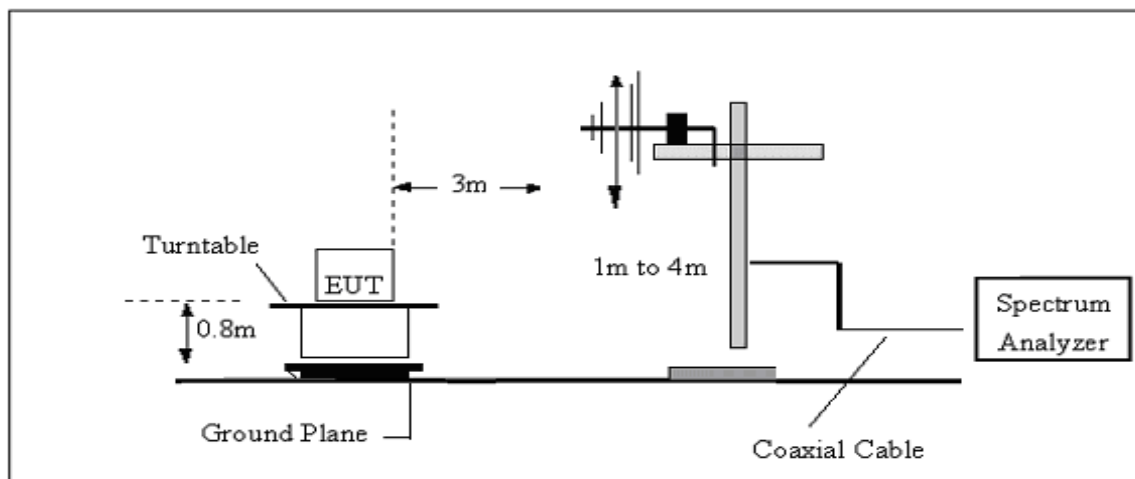
No deviation

3.2.3 TEST SETUP

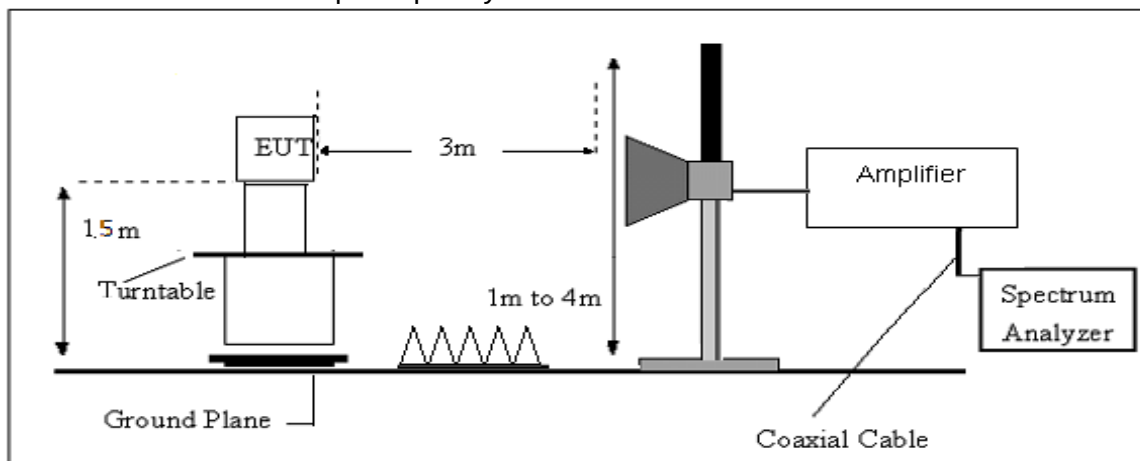
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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

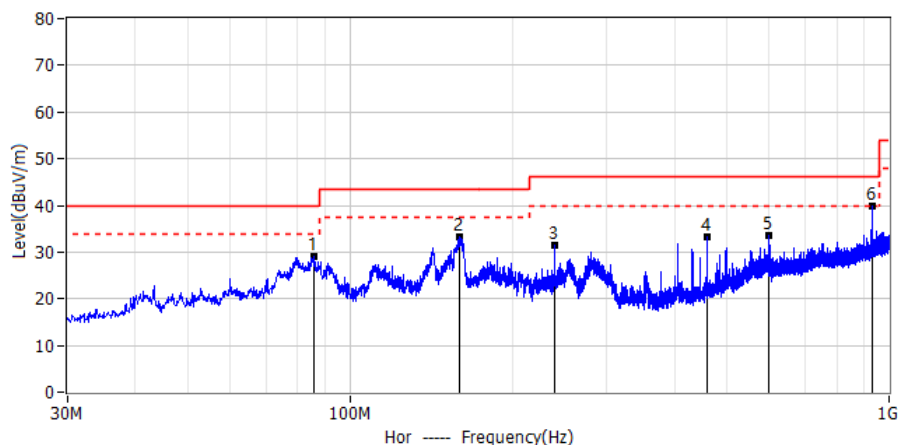
Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBμV/m)	(dBμV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

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

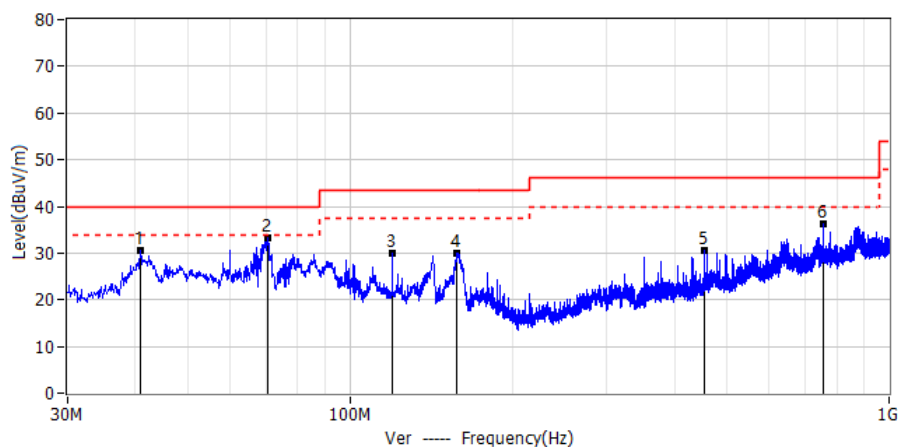


3.2.6 TEST RESULTS

Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 43%RH
Temperature: 24.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-17
Test Mode: TX 5GHz	
Note:	



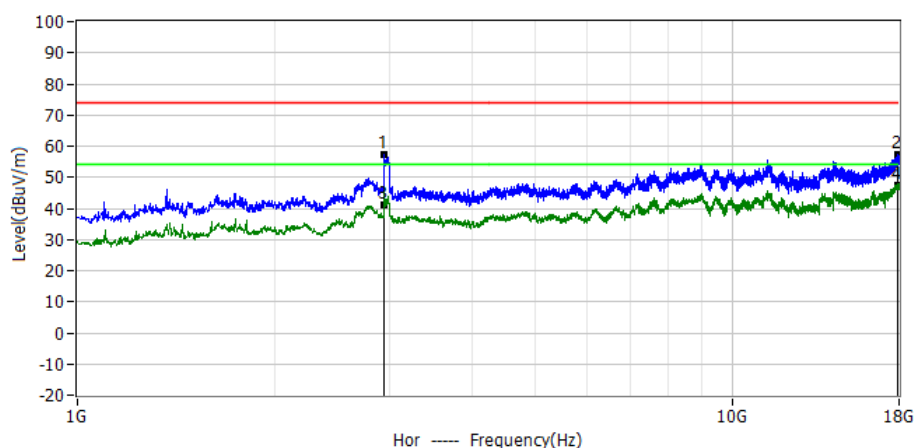
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	85.654MHz	19.44	9.51	28.95	40.00	-11.05	PK	Hor
2*	160.101MHz	18.92	14.20	33.12	43.50	-10.38	PK	Hor
3*	240.005MHz	19.12	12.25	31.37	46.00	-14.63	PK	Hor
4*	458.983MHz	14.53	18.64	33.17	46.00	-12.83	PK	Hor
5*	599.996MHz	11.44	22.15	33.59	46.00	-12.41	PK	Hor
6*	933.191MHz	12.44	27.33	39.77	46.00	-6.23	PK	Hor



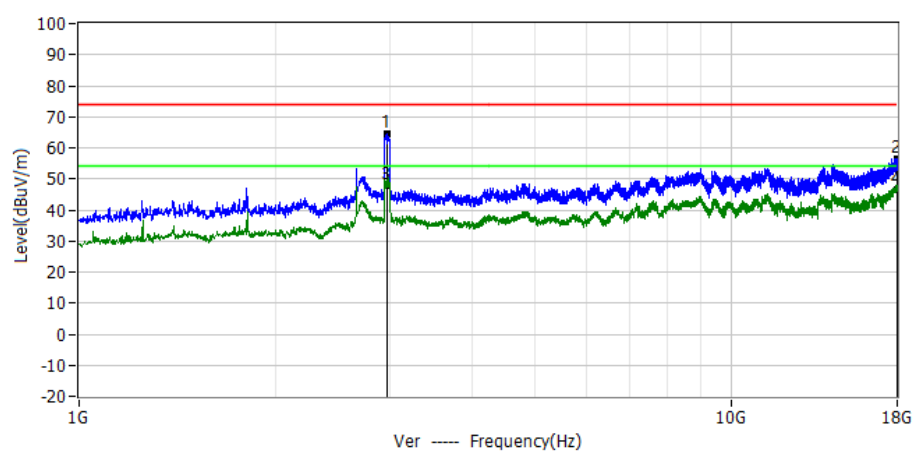
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	41.034MHz	16.76	13.89	30.65	40.00	-9.35	PK	Ver
2*	70.498MHz	21.93	11.42	33.35	40.00	-6.65	PK	Ver
3*	119.968MHz	17.70	12.23	29.93	43.50	-13.57	PK	Ver
4*	158.283MHz	15.74	14.20	29.94	43.50	-13.56	PK	Ver
5*	453.284MHz	12.12	18.55	30.67	46.00	-15.33	PK	Ver
6*	756.045MHz	11.35	24.95	36.30	46.00	-9.70	PK	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11a 5180	
Note:	



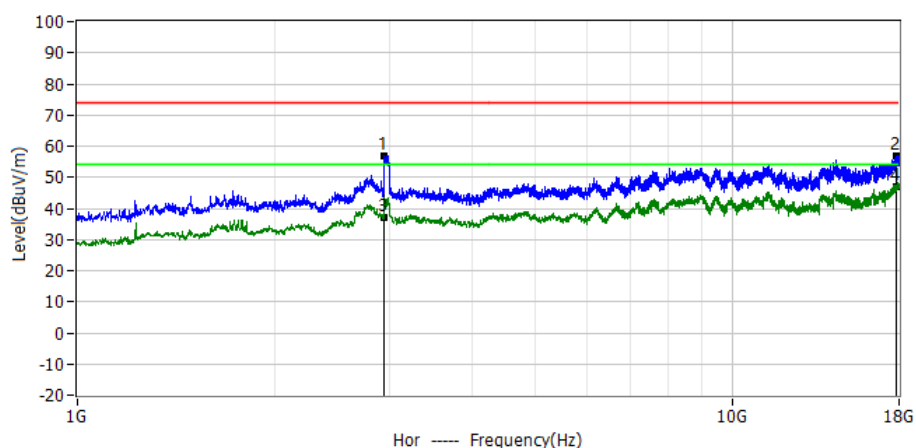
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.942GHz	65.91	-8.65	57.26	74.00	-16.74	PK	Hor
2*	17.921GHz	48.77	8.46	57.23	74.00	-16.77	PK	Hor
3*	2.942GHz	49.95	-8.65	41.30	54.00	-12.70	AV	Hor
4*	17.921GHz	38.84	8.46	47.30	54.00	-6.70	AV	Hor



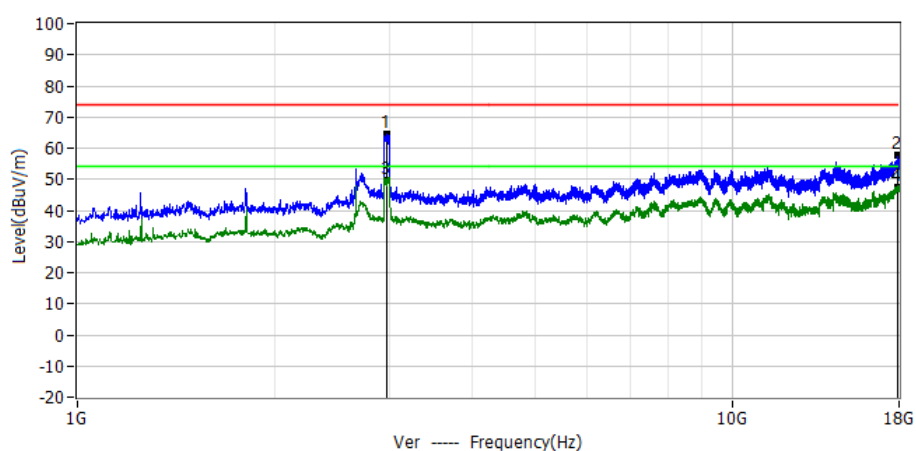
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.974GHz	72.82	-8.48	64.34	74.00	-9.66	PK	Ver
2*	17.983GHz	48.07	8.51	56.58	74.00	-17.42	PK	Ver
3*	2.974GHz	56.18	-8.48	47.70	54.00	-6.30	AV	Ver
4*	17.983GHz	38.19	8.51	46.70	54.00	-7.30	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11a 5200	
Note:	



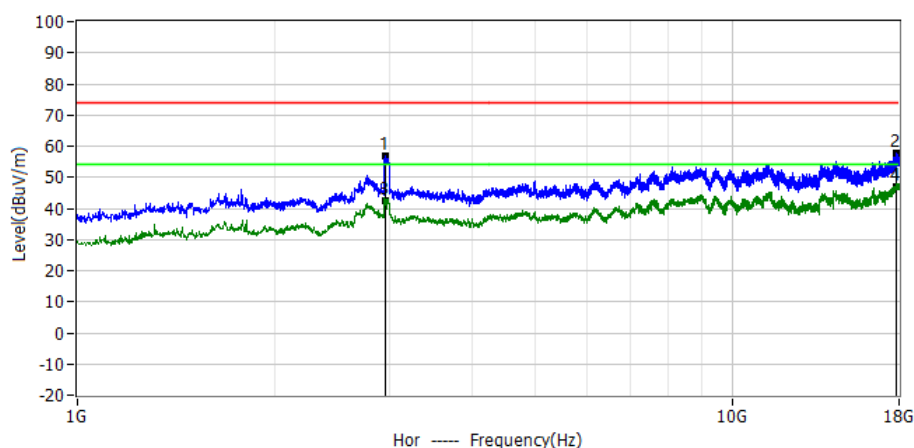
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.940GHz	65.47	-8.66	56.81	74.00	-17.19	PK	Hor
2*	17.843GHz	48.42	8.41	56.83	74.00	-17.17	PK	Hor
3*	2.940GHz	45.76	-8.66	37.10	54.00	-16.90	AV	Hor
4*	17.843GHz	38.39	8.41	46.80	54.00	-7.20	AV	Hor



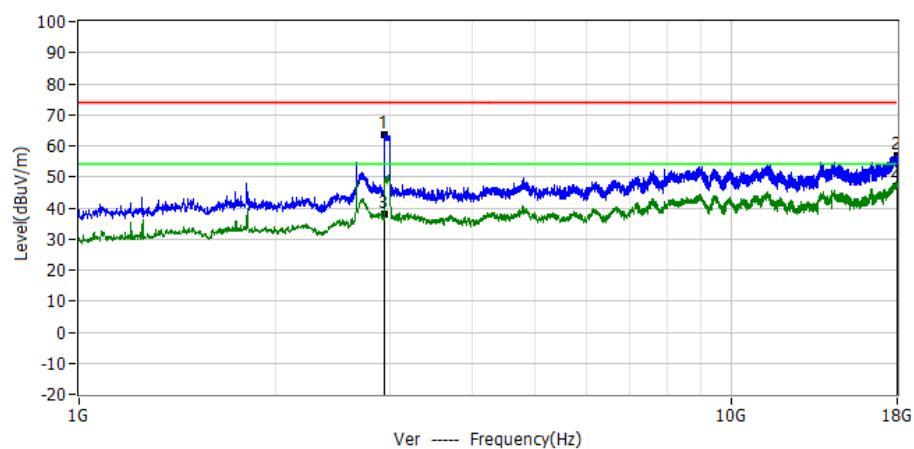
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.974GHz	72.91	-8.48	64.43	74.00	-9.57	PK	Ver
2*	17.904GHz	49.08	8.45	57.53	74.00	-16.47	PK	Ver
3*	2.974GHz	57.98	-8.48	49.50	54.00	-4.50	AV	Ver
4*	17.904GHz	38.95	8.45	47.40	54.00	-6.60	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11a 5240	
Note:	



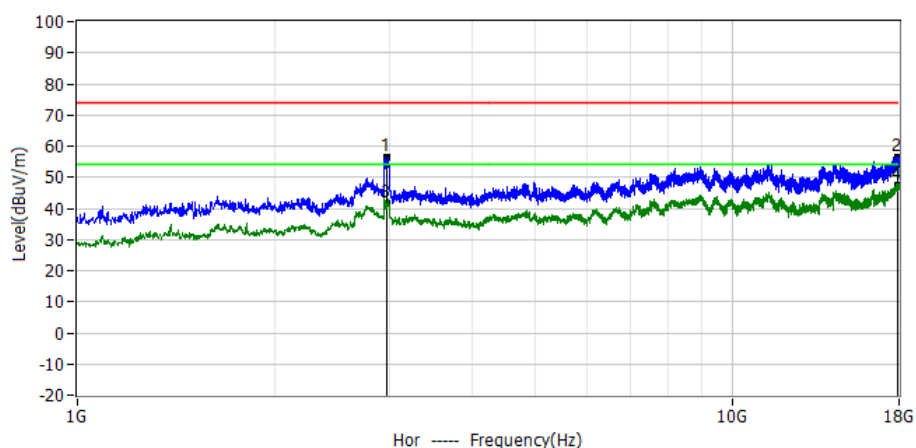
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.949GHz	65.49	-8.61	56.88	74.00	-17.12	PK	Hor
2*	17.834GHz	49.13	8.40	57.53	74.00	-16.47	PK	Hor
3*	2.949GHz	50.91	-8.61	42.30	54.00	-11.70	AV	Hor
4*	17.834GHz	38.40	8.40	46.80	54.00	-7.20	AV	Hor



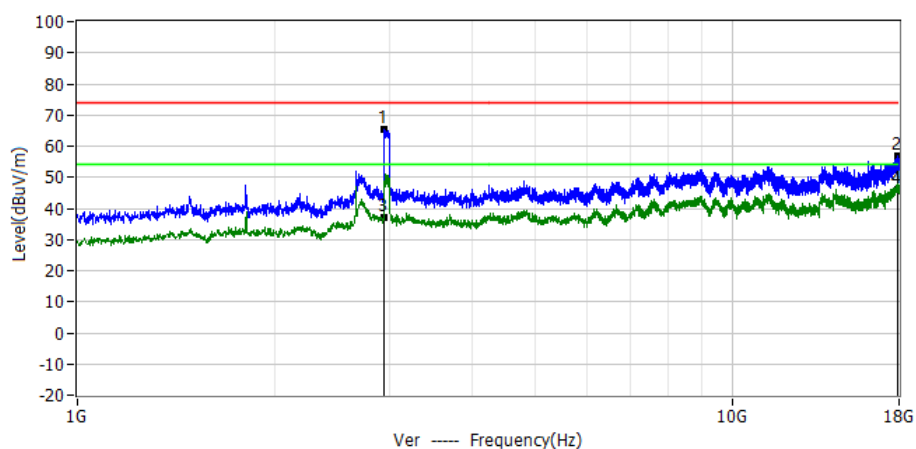
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.940GHz	72.27	-8.66	63.61	74.00	-10.39	PK	Ver
2*	17.966GHz	48.52	8.50	57.02	74.00	-16.98	PK	Ver
3*	2.940GHz	46.66	-8.66	38.00	54.00	-16.00	AV	Ver
4*	17.966GHz	38.60	8.50	47.10	54.00	-6.90	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11a 5260	
Note:	



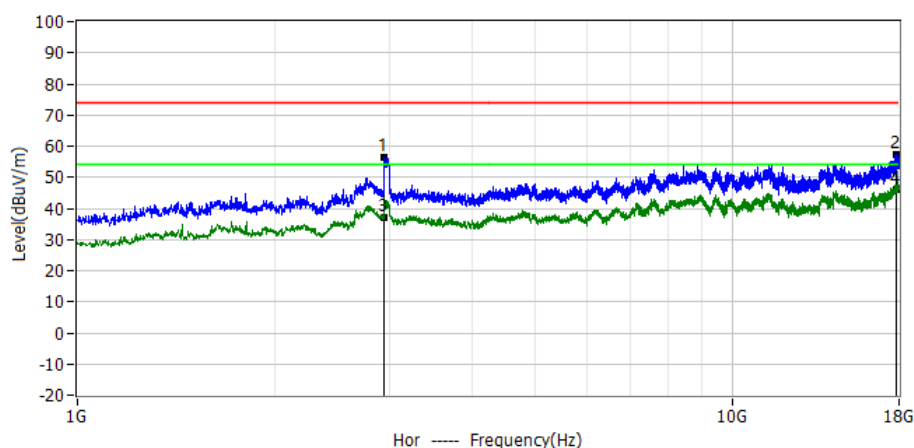
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.976GHz	64.92	-8.47	56.45	74.00	-17.55	PK	Hor
2*	17.900GHz	48.17	8.45	56.62	74.00	-17.38	PK	Hor
3*	2.976GHz	50.17	-8.47	41.70	54.00	-12.30	AV	Hor
4*	17.900GHz	38.75	8.45	47.20	54.00	-6.80	AV	Hor



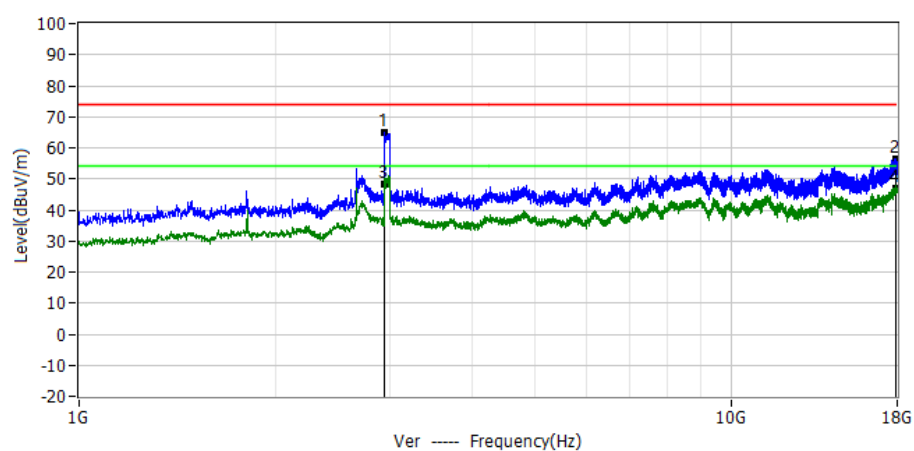
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.940GHz	73.88	-8.66	65.22	74.00	-8.78	PK	Ver
2*	17.885GHz	48.23	8.44	56.67	74.00	-17.33	PK	Ver
3*	2.940GHz	45.66	-8.66	37.00	54.00	-17.00	AV	Ver
4*	17.885GHz	37.46	8.44	45.90	54.00	-8.10	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11a 5300	
Note:	



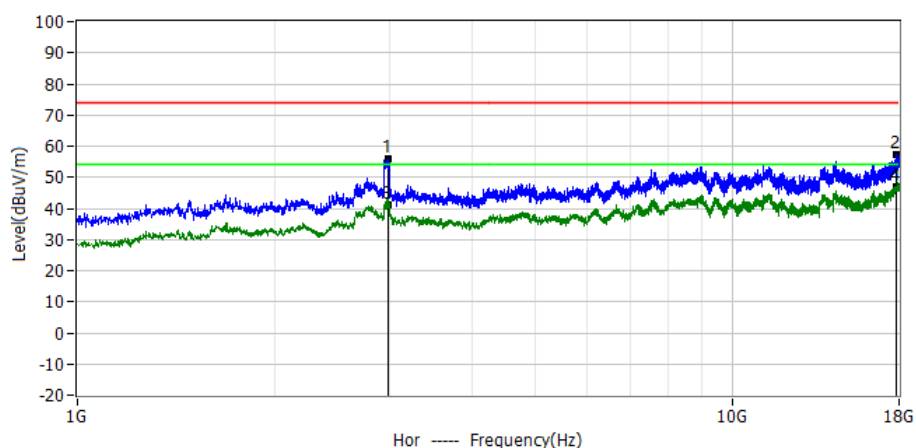
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.940GHz	64.99	-8.66	56.33	74.00	-17.67	PK	Hor
2*	17.794GHz	48.97	8.38	57.35	74.00	-16.65	PK	Hor
3*	2.940GHz	45.66	-8.66	37.00	54.00	-17.00	AV	Hor
4*	17.794GHz	37.82	8.38	46.20	54.00	-7.80	AV	Hor



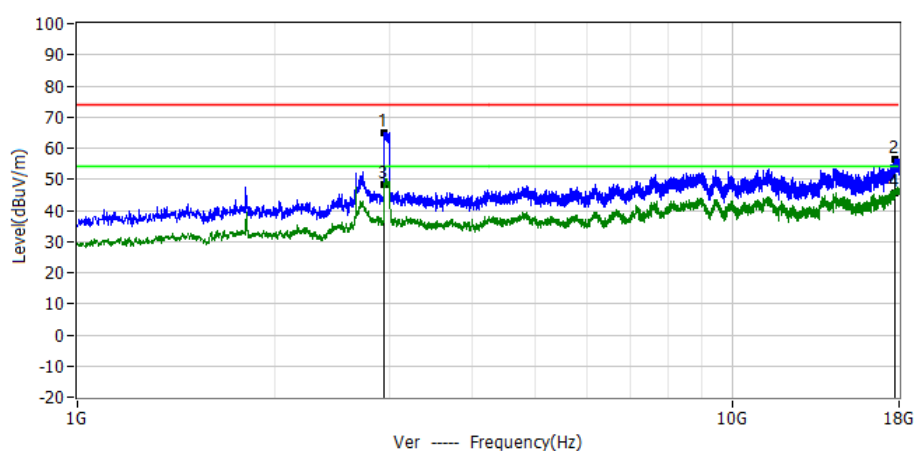
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.942GHz	73.76	-8.65	65.11	74.00	-8.89	PK	Ver
2*	17.907GHz	48.02	8.45	56.47	74.00	-17.53	PK	Ver
3*	2.942GHz	57.05	-8.65	48.40	54.00	-5.60	AV	Ver
4*	17.907GHz	38.35	8.45	46.80	54.00	-7.20	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11a 5320	
Note:	



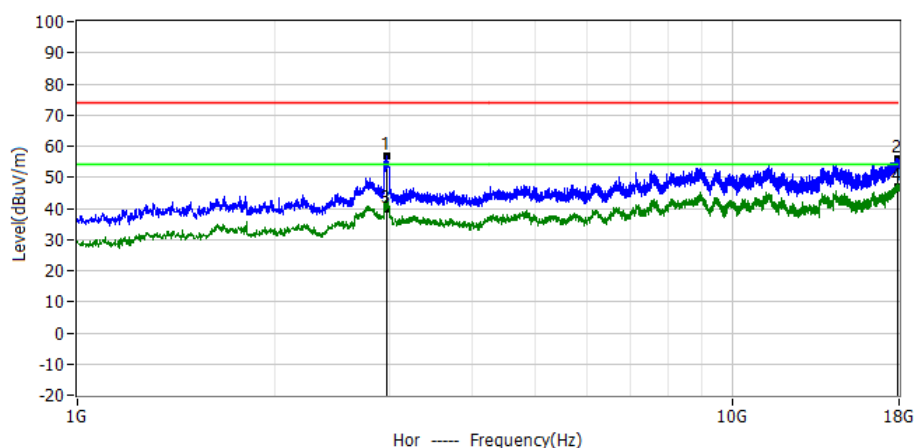
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.983GHz	64.27	-8.43	55.84	74.00	-18.16	PK	Hor
2*	17.834GHz	48.72	8.40	57.12	74.00	-16.88	PK	Hor
3*	2.983GHz	49.33	-8.43	40.90	54.00	-13.10	AV	Hor
4*	17.834GHz	38.50	8.40	46.90	54.00	-7.10	AV	Hor



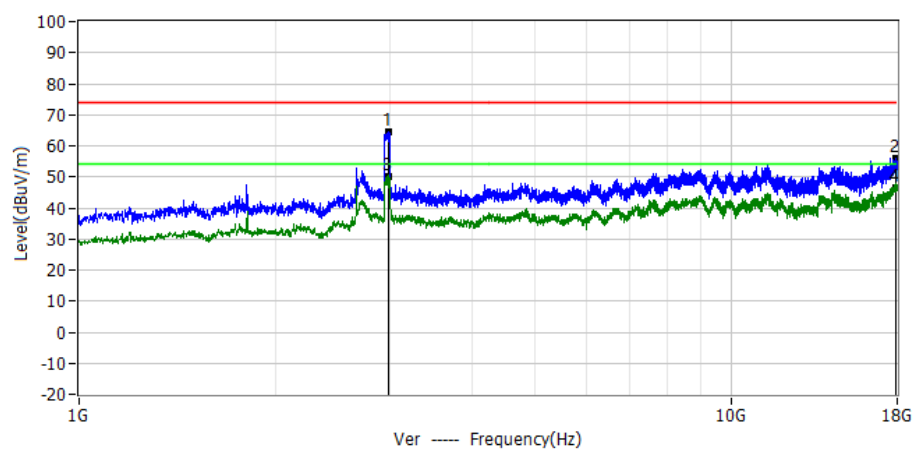
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.947GHz	73.67	-8.62	65.05	74.00	-8.95	PK	Ver
2*	17.726GHz	48.06	8.33	56.39	74.00	-17.61	PK	Ver
3*	2.947GHz	56.92	-8.62	48.30	54.00	-5.70	AV	Ver
4*	17.726GHz	37.17	8.33	45.50	54.00	-8.50	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11a 5500	
Note:	



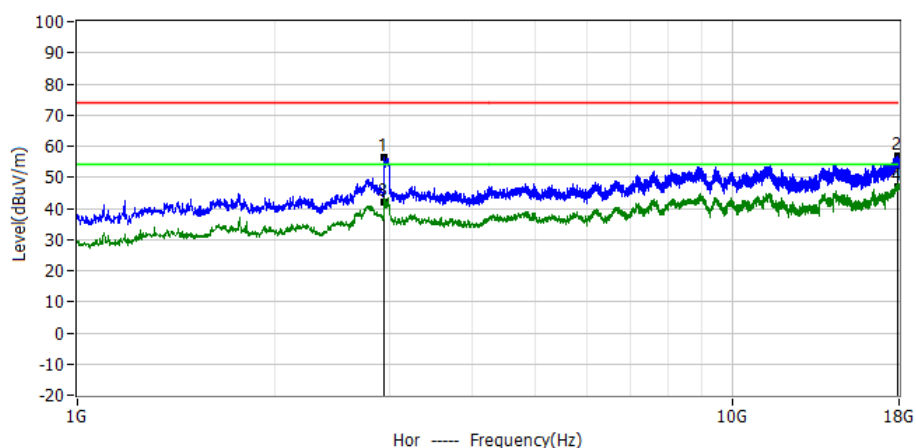
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.972GHz	65.17	-8.49	56.68	74.00	-17.32	PK	Hor
2*	17.949GHz	47.57	8.48	56.05	74.00	-17.95	PK	Hor
3*	2.972GHz	48.39	-8.49	39.90	54.00	-14.10	AV	Hor
4*	17.949GHz	38.42	8.48	46.90	54.00	-7.10	AV	Hor



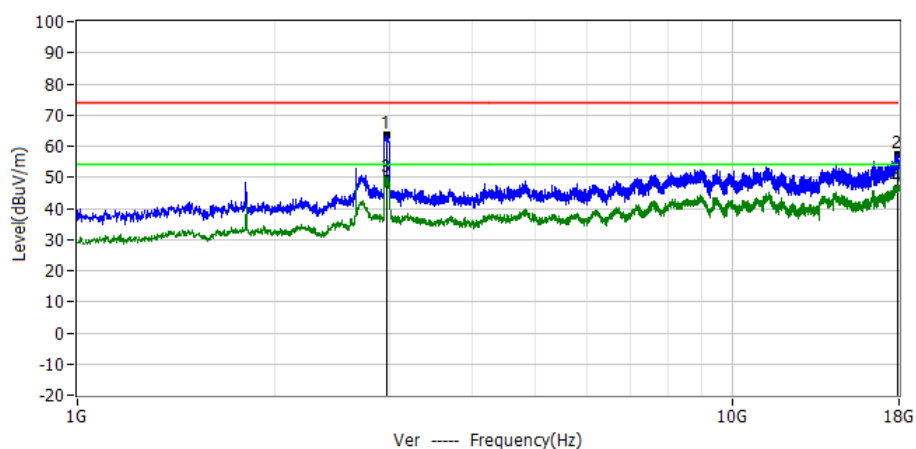
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.981GHz	72.78	-8.44	64.34	74.00	-9.66	PK	Ver
2*	17.943GHz	47.67	8.48	56.15	74.00	-17.85	PK	Ver
3*	2.981GHz	58.74	-8.44	50.30	54.00	-3.70	AV	Ver
4*	17.943GHz	38.12	8.48	46.60	54.00	-7.40	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11a 5580	
Note:	



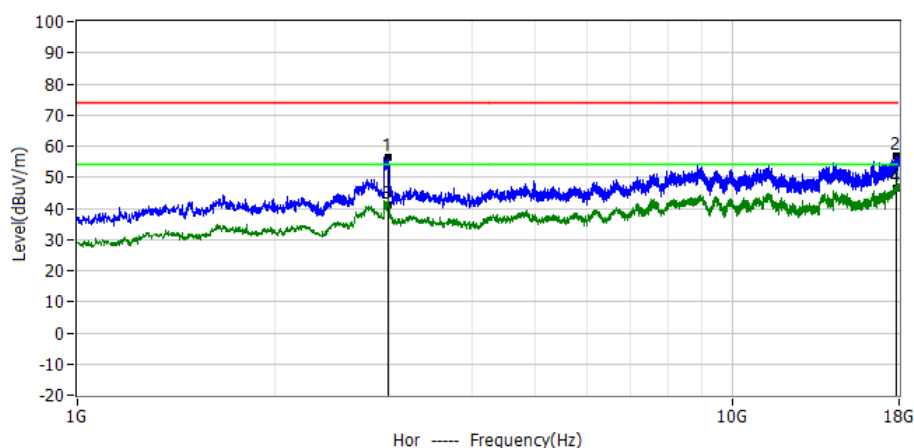
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.942GHz	65.20	-8.65	56.55	74.00	-17.45	PK	Hor
2*	17.941GHz	48.20	8.48	56.68	74.00	-17.32	PK	Hor
3*	2.942GHz	50.65	-8.65	42.00	54.00	-12.00	AV	Hor
4*	17.941GHz	38.32	8.48	46.80	54.00	-7.20	AV	Hor



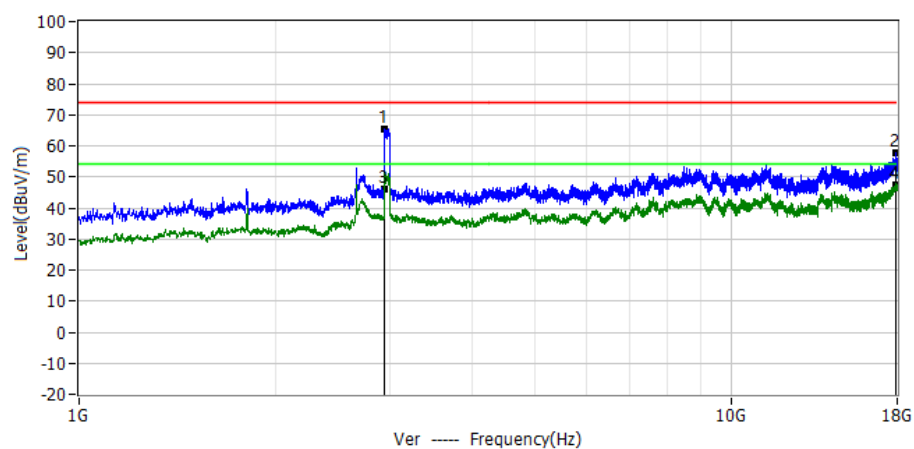
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.974GHz	71.89	-8.48	63.41	74.00	-10.59	PK	Ver
2*	17.900GHz	48.92	8.45	57.37	74.00	-16.63	PK	Ver
3*	2.974GHz	58.08	-8.48	49.60	54.00	-4.40	AV	Ver
4*	17.900GHz	38.05	8.45	46.50	54.00	-7.50	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11a 5700	
Note:	



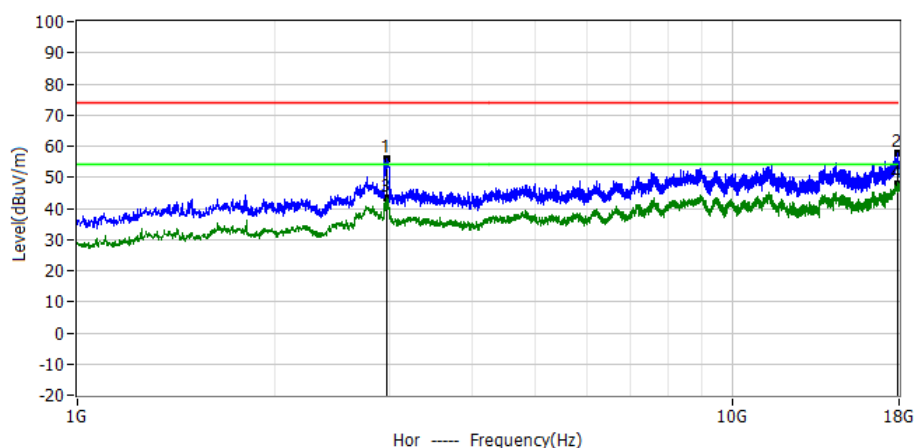
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.978GHz	65.05	-8.45	56.60	74.00	-17.40	PK	Hor
2*	17.811GHz	48.38	8.39	56.77	74.00	-17.23	PK	Hor
3*	2.978GHz	49.65	-8.45	41.20	54.00	-12.80	AV	Hor
4*	17.811GHz	37.91	8.39	46.30	54.00	-7.70	AV	Hor



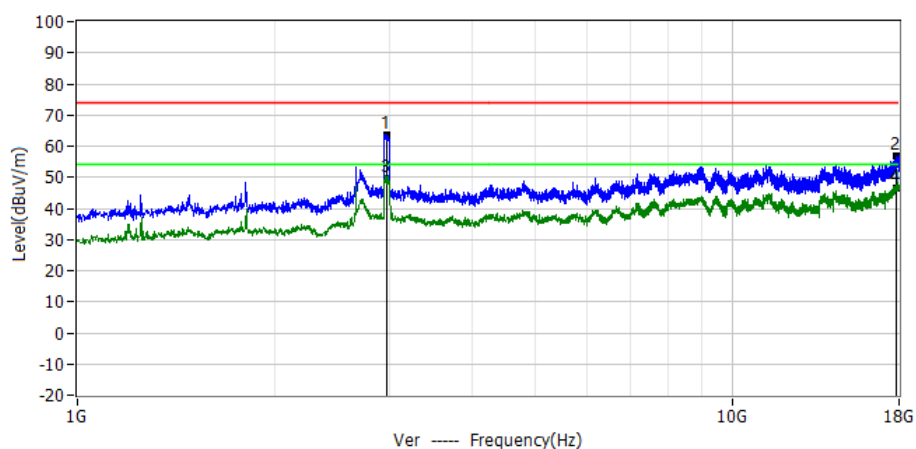
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.942GHz	73.94	-8.65	65.29	74.00	-8.71	PK	Ver
2*	17.907GHz	49.15	8.45	57.60	74.00	-16.40	PK	Ver
3*	2.942GHz	54.85	-8.65	46.20	54.00	-7.80	AV	Ver
4*	17.907GHz	38.85	8.45	47.30	54.00	-6.70	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11a 5745	
Note:	



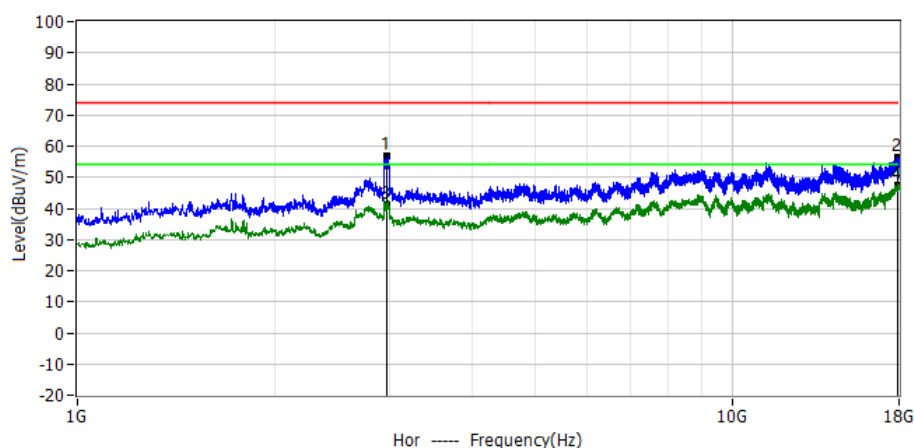
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.974GHz	64.40	-8.48	55.92	74.00	-18.08	PK	Hor
2*	17.887GHz	49.47	8.44	57.91	74.00	-16.09	PK	Hor
3*	2.974GHz	51.68	-8.48	43.20	54.00	-10.80	AV	Hor
4*	17.887GHz	39.46	8.44	47.90	54.00	-6.10	AV	Hor



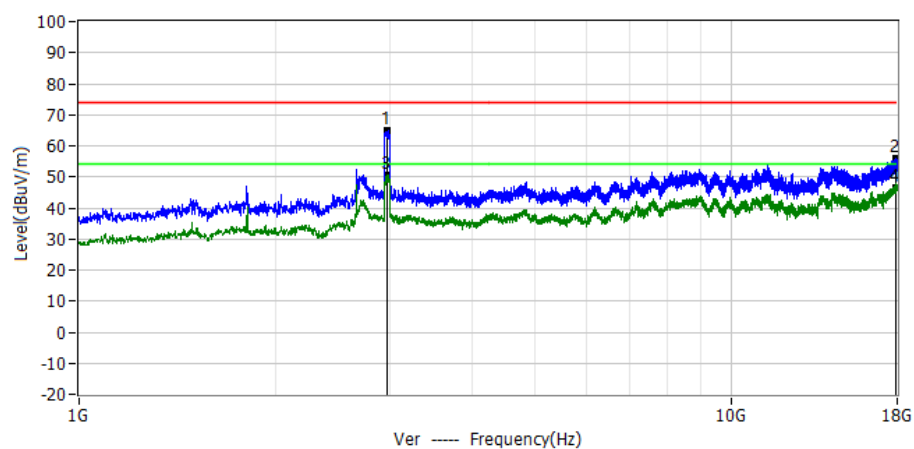
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.974GHz	72.09	-8.48	63.61	74.00	-10.39	PK	Ver
2*	17.839GHz	48.36	8.41	56.77	74.00	-17.23	PK	Ver
3*	2.974GHz	58.18	-8.48	49.70	54.00	-4.30	AV	Ver
4*	17.839GHz	37.89	8.41	46.30	54.00	-7.70	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11a 5785	
Note:	



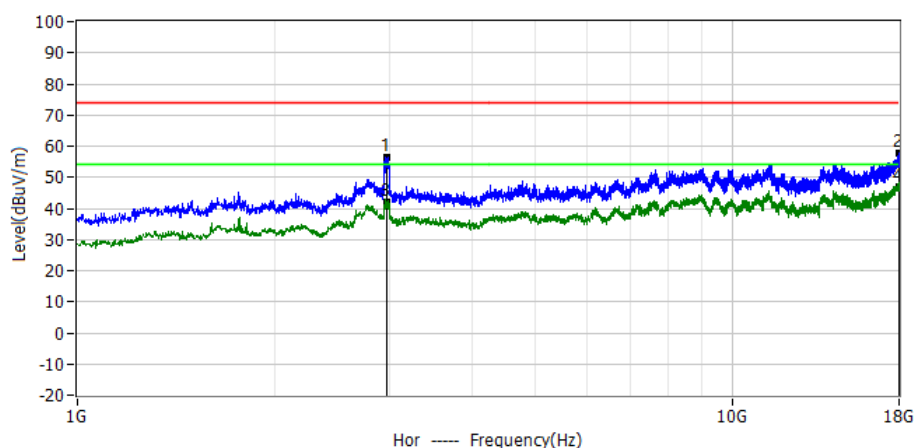
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.976GHz	65.31	-8.47	56.84	74.00	-17.16	PK	Hor
2*	17.900GHz	48.03	8.45	56.48	74.00	-17.52	PK	Hor
3*	2.976GHz	49.77	-8.47	41.30	54.00	-12.70	AV	Hor
4*	17.900GHz	38.95	8.45	47.40	54.00	-6.60	AV	Hor



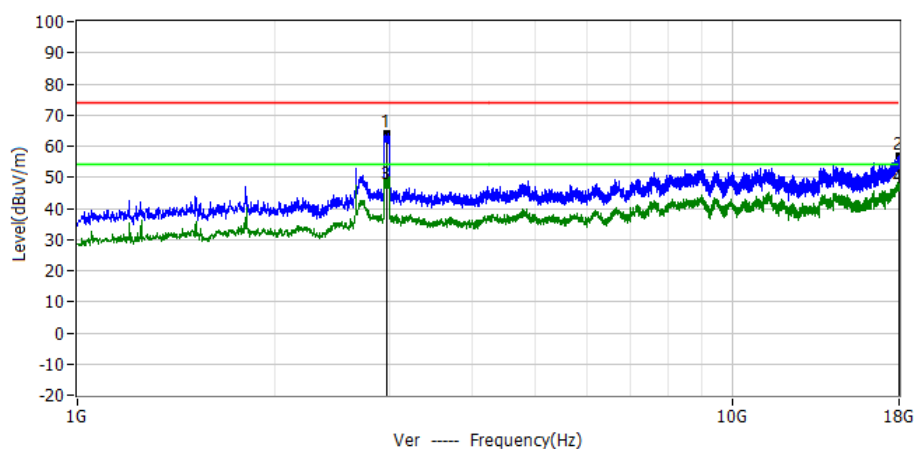
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.976GHz	73.56	-8.47	65.09	74.00	-8.91	PK	Ver
2*	17.917GHz	47.35	8.46	55.81	74.00	-18.19	PK	Ver
3*	2.976GHz	58.97	-8.47	50.50	54.00	-3.50	AV	Ver
4*	17.917GHz	38.24	8.46	46.70	54.00	-7.30	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 46%RH
Temperature: 26.9°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-10-18
Test Mode: 802.11a 5825	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.976GHz	65.07	-8.47	56.60	74.00	-17.40	PK	Hor
2*	17.975GHz	49.17	8.50	57.67	74.00	-16.33	PK	Hor
3*	2.976GHz	50.37	-8.47	41.90	54.00	-12.10	AV	Hor
4*	17.975GHz	38.30	8.50	46.80	54.00	-7.20	AV	Hor

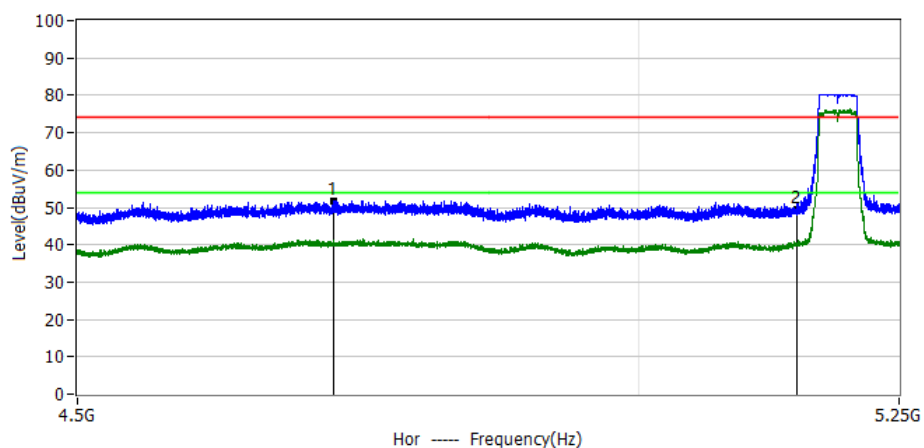


No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	2.976GHz	72.50	-8.47	64.03	74.00	-9.97	PK	Ver
2*	17.958GHz	48.16	8.49	56.65	74.00	-17.35	PK	Ver
3*	2.976GHz	55.67	-8.47	47.20	54.00	-6.80	AV	Ver
4*	17.958GHz	38.21	8.49	46.70	54.00	-7.30	AV	Ver

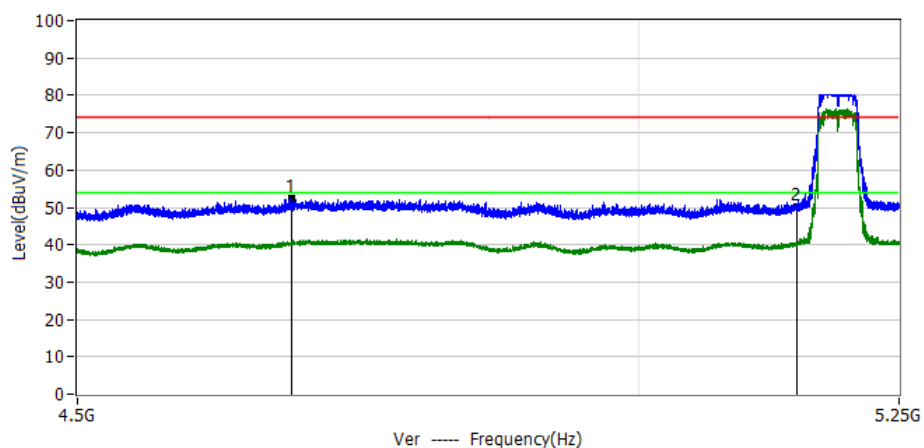


3.2.7 Radiated Band Edge

Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: MIMO_802.11n40_5190	
Note:	



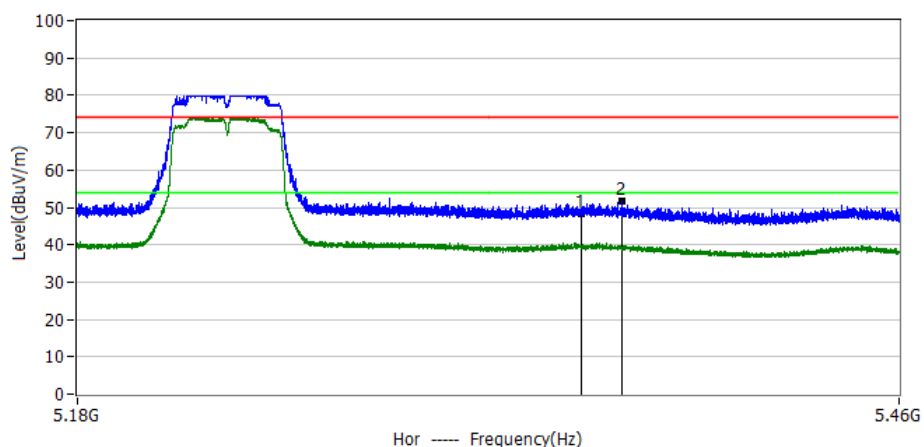
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.722GHz	57.80	-5.93	51.87	74.00	-22.13	PK	Hor
2*	5.150GHz	56.22	-6.62	49.60	74.00	-24.40	PK	Hor



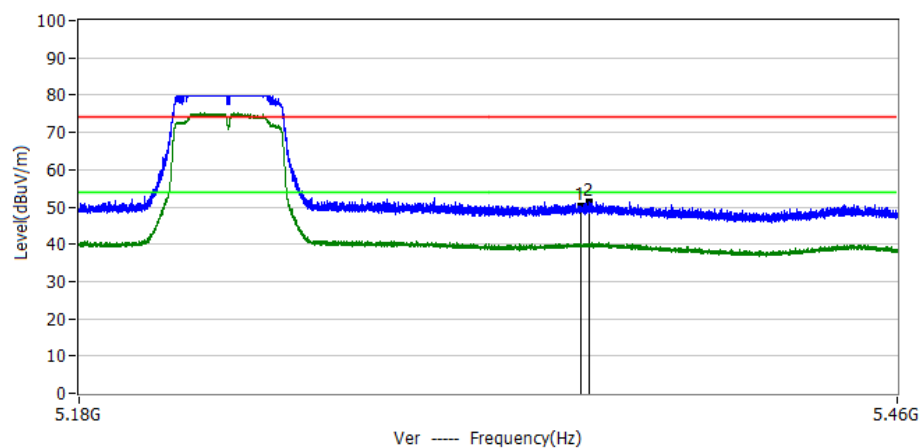
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.684GHz	58.51	-5.90	52.61	74.00	-21.39	PK	Ver
2*	5.150GHz	56.82	-6.62	50.20	74.00	-23.80	PK	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: MIMO_802.11n40_5230	
Note:	



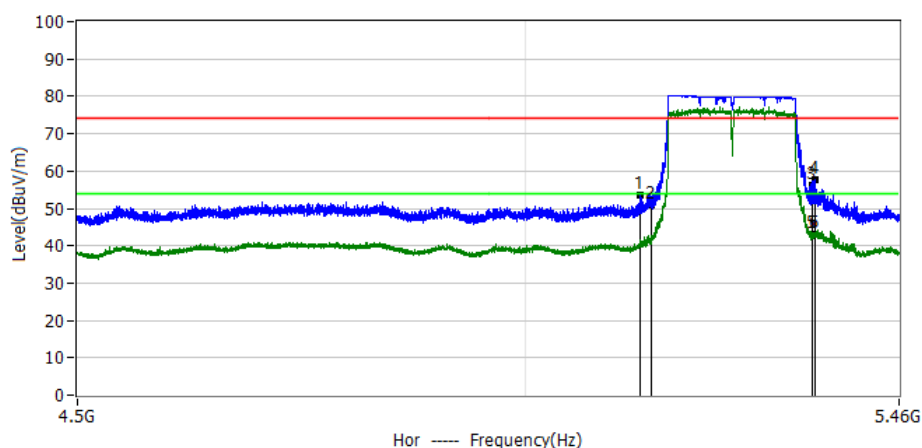
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.350GHz	55.76	-7.26	48.50	74.00	-25.50	PK	Hor
2*	5.364GHz	58.83	-7.30	51.53	74.00	-22.47	PK	Hor



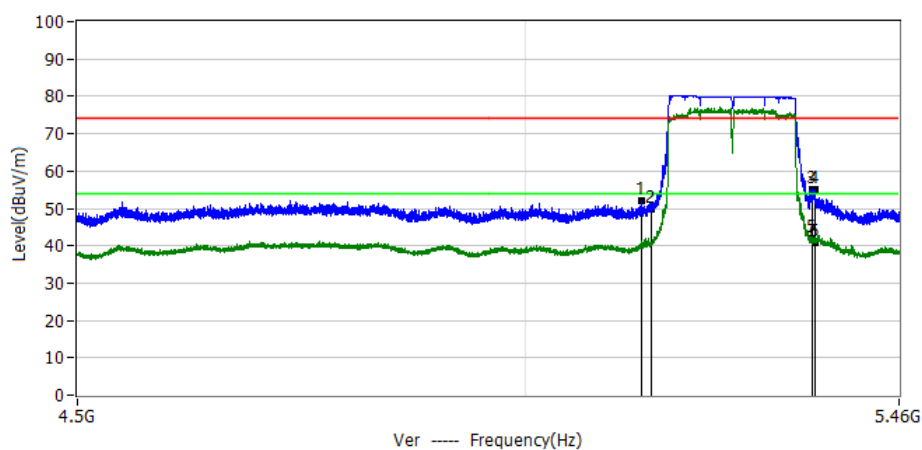
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.350GHz	57.36	-7.26	50.10	74.00	-23.90	PK	Ver
2*	5.353GHz	58.71	-7.27	51.44	74.00	-22.56	PK	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: MIMO_802.11n40_5230	
Note:	



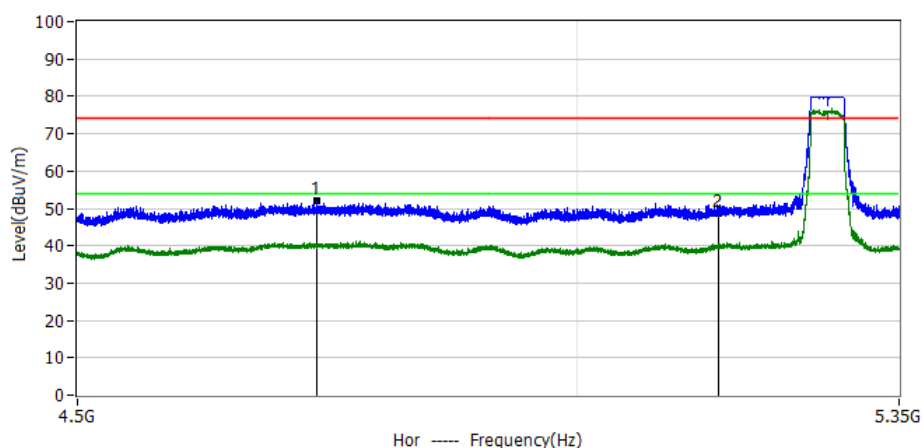
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.137GHz	60.08	-6.58	53.50	74.00	-20.50	PK	Hor
2*	5.150GHz	57.52	-6.62	50.90	74.00	-23.10	PK	Hor
3*	5.350GHz	63.36	-7.26	56.10	74.00	-17.90	PK	Hor
4*	5.353GHz	64.83	-7.27	57.56	74.00	-16.44	PK	Hor
5*	5.350GHz	50.36	-7.26	43.10	54.00	-10.90	AV	Hor
6*	5.353GHz	50.47	-7.27	43.20	54.00	-10.80	AV	Hor



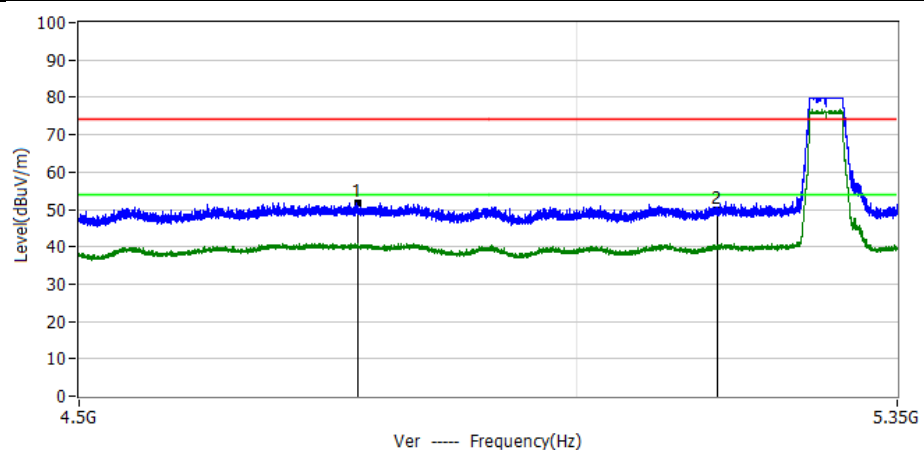
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.139GHz	58.73	-6.58	52.15	74.00	-21.85	PK	Ver
2*	5.150GHz	56.62	-6.62	50.00	74.00	-24.00	PK	Ver
3*	5.350GHz	62.26	-7.26	55.00	74.00	-19.00	PK	Ver
4*	5.353GHz	62.34	-7.27	55.07	74.00	-18.93	PK	Ver
5*	5.350GHz	49.16	-7.26	41.90	54.00	-12.10	AV	Ver
6*	5.353GHz	48.27	-7.27	41.00	54.00	-13.00	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: MIMO_802.11ac40_5270	
Note:	



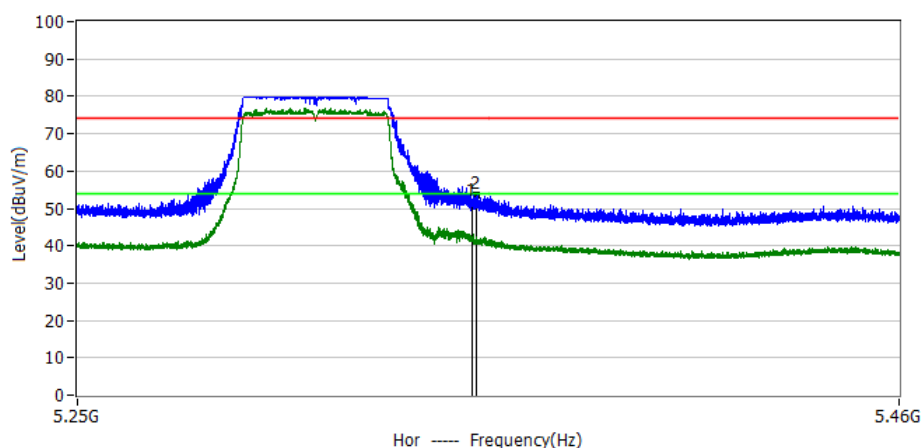
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.732GHz	57.87	-5.93	51.94	74.00	-22.06	PK	Hor
2*	5.150GHz	55.32	-6.62	48.70	74.00	-25.30	PK	Hor



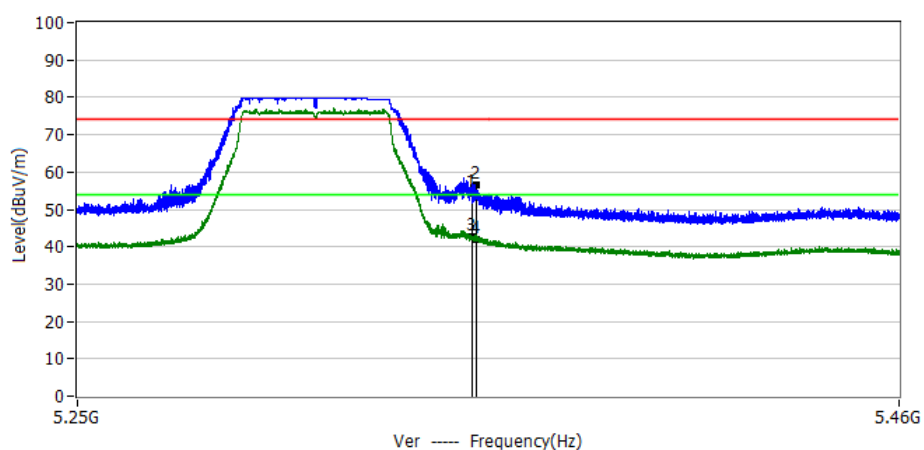
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.773GHz	57.82	-5.96	51.86	74.00	-22.14	PK	Ver
2*	5.150GHz	56.62	-6.62	50.00	74.00	-24.00	PK	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: MIMO_802.11ac40_5310	
Note:	



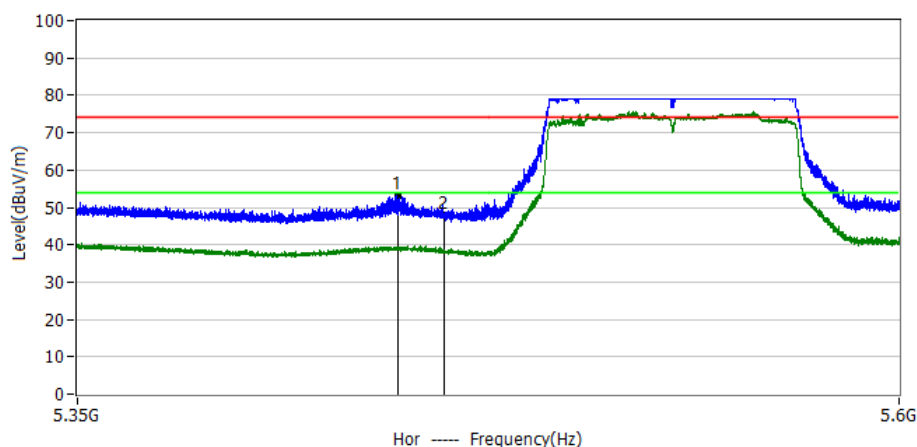
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.350GHz	58.76	-7.26	51.50	74.00	-22.50	PK	Hor
2*	5.351GHz	60.90	-7.26	53.64	74.00	-20.36	PK	Hor



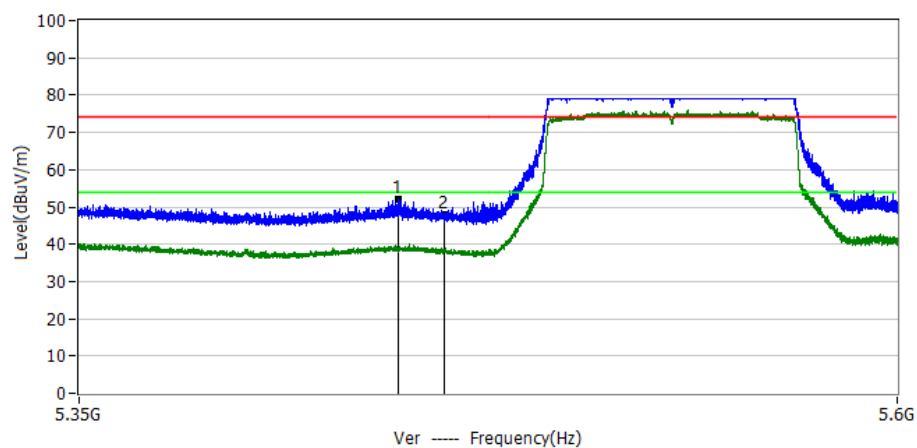
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.350GHz	61.66	-7.26	54.40	74.00	-19.60	PK	Ver
2*	5.351GHz	63.72	-7.26	56.46	74.00	-17.54	PK	Ver
3*	5.350GHz	49.86	-7.26	42.60	54.00	-11.40	AV	Ver
4*	5.351GHz	49.36	-7.26	42.10	54.00	-11.90	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: MIMO_802.11ac80_5530	
Note:	



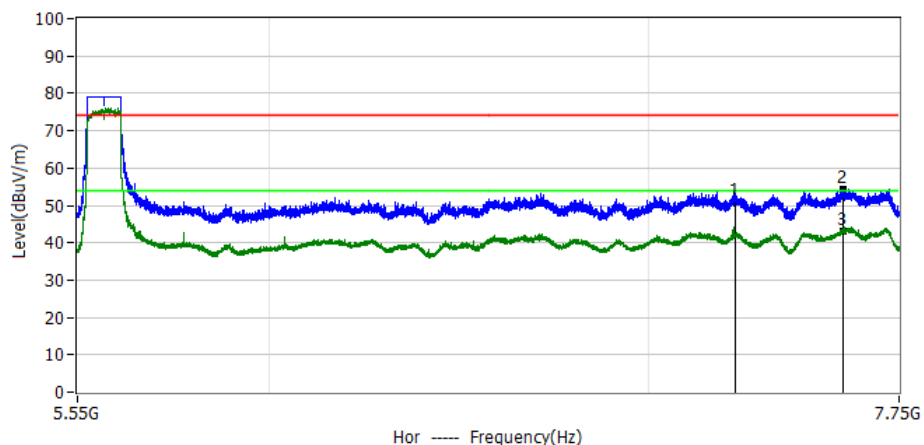
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.446GHz	60.75	-7.57	53.18	74.00	-20.82	PK	Hor
2*	5.460GHz	55.41	-7.61	47.80	74.00	-26.20	PK	Hor



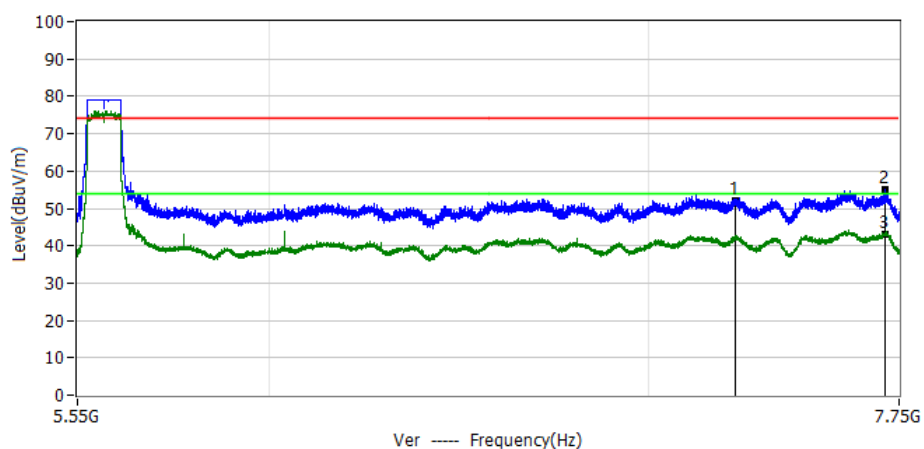
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.446GHz	59.49	-7.57	51.92	74.00	-22.08	PK	Ver
2*	5.460GHz	55.61	-7.61	48.00	74.00	-26.00	PK	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: MIMO_802.11ac80_5610	
Note:	



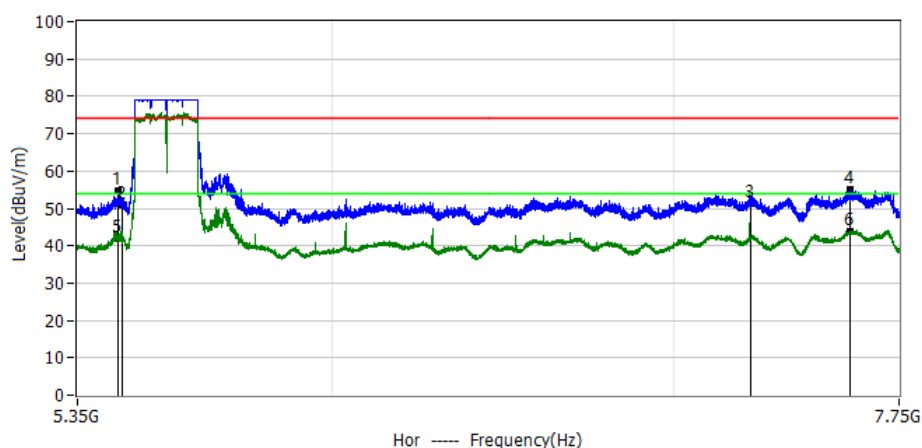
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	7.250GHz	55.89	-4.99	50.90	74.00	-23.10	PK	Hor
2*	7.576GHz	58.67	-4.25	54.42	74.00	-19.58	PK	Hor
3*	7.576GHz	47.25	-4.25	43.00	54.00	-11.00	AV	Hor



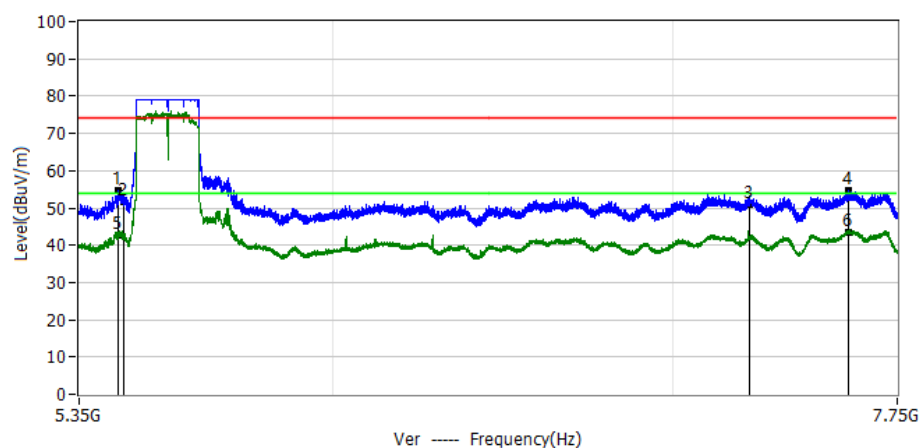
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	7.250GHz	56.99	-4.99	52.00	74.00	-22.00	PK	Ver
2*	7.705GHz	59.07	-4.17	54.90	74.00	-19.10	PK	Ver
3*	7.705GHz	47.17	-4.17	43.00	54.00	-11.00	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: MIMO_802.11ac160_5570	
Note:	



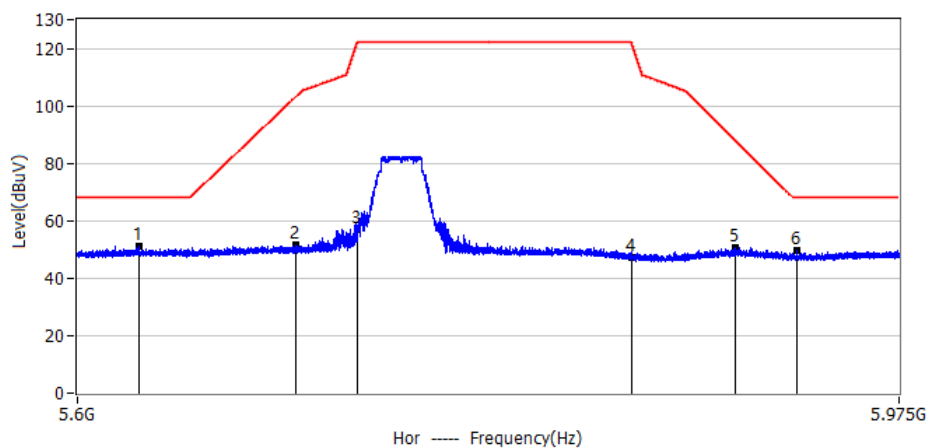
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.448GHz	62.17	-7.57	54.60	74.00	-19.40	PK	Hor
2*	5.460GHz	58.41	-7.61	50.80	74.00	-23.20	PK	Hor
3*	7.250GHz	56.29	-4.99	51.30	74.00	-22.70	PK	Hor
4*	7.582GHz	59.29	-4.25	55.04	74.00	-18.96	PK	Hor
5*	5.448GHz	49.67	-7.57	42.10	54.00	-11.90	AV	Hor
6*	7.582GHz	48.05	-4.25	43.80	54.00	-10.20	AV	Hor



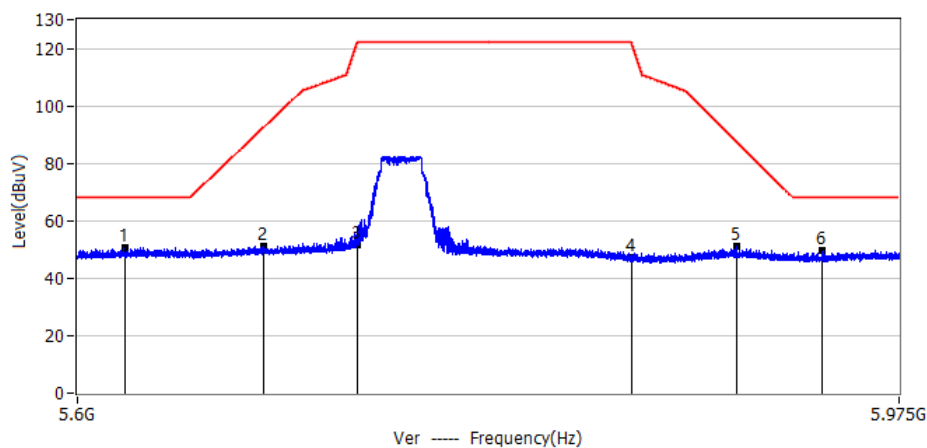
No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.446GHz	62.19	-7.57	54.62	74.00	-19.38	PK	Ver
2*	5.460GHz	59.41	-7.61	51.80	74.00	-22.20	PK	Ver
3*	7.250GHz	55.89	-4.99	50.90	74.00	-23.10	PK	Ver
4*	7.583GHz	58.98	-4.25	54.73	74.00	-19.27	PK	Ver
5*	5.446GHz	50.37	-7.57	42.80	54.00	-11.20	AV	Ver
6*	7.583GHz	47.75	-4.25	43.50	54.00	-10.50	AV	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: MIMO_802.11ac20_5745	
Note:	



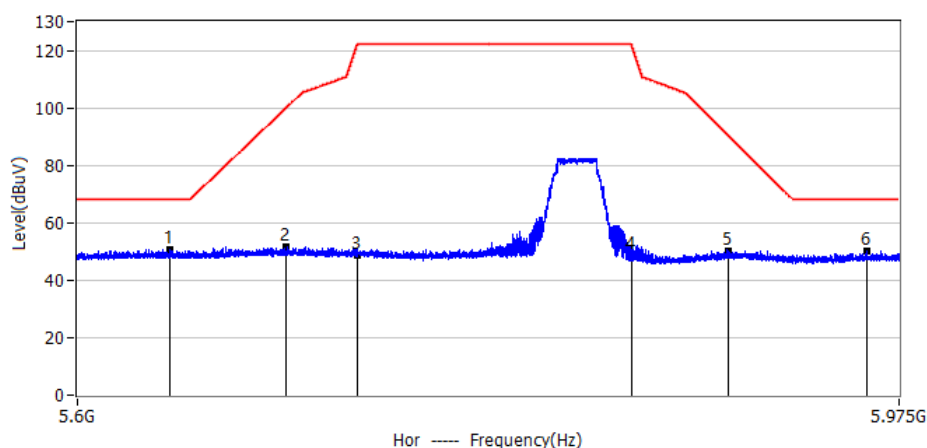
No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	5.627GHz	58.74	-7.69	51.05	68.20	-17.15	PK	Hor
2*	5.697GHz	59.04	-7.66	51.38	103.29	-51.91	PK	Hor
3*	5.725GHz	64.45	-7.65	56.80	122.20	-65.40	PK	Hor
4*	5.850GHz	54.80	-7.60	47.20	122.20	-75.00	PK	Hor
5*	5.898GHz	58.24	-7.58	50.66	88.08	-37.42	PK	Hor
6*	5.927GHz	57.33	-7.57	49.76	68.20	-18.44	PK	Hor



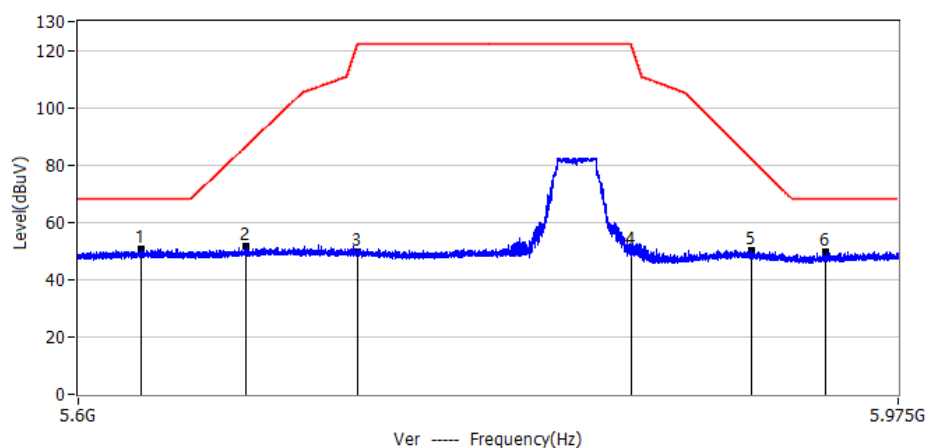
No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	5.621GHz	58.47	-7.69	50.78	68.20	-17.42	PK	Ver
2*	5.683GHz	58.80	-7.67	51.13	92.77	-41.65	PK	Ver
3*	5.725GHz	59.35	-7.65	51.70	122.20	-70.40	PK	Ver
4*	5.850GHz	54.60	-7.60	47.00	122.20	-75.10	PK	Ver
5*	5.899GHz	58.59	-7.58	51.01	87.67	-36.66	PK	Ver
6*	5.939GHz	57.11	-7.56	49.55	68.20	-18.65	PK	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: MIMO_802.11ac20_5825	
Note:	



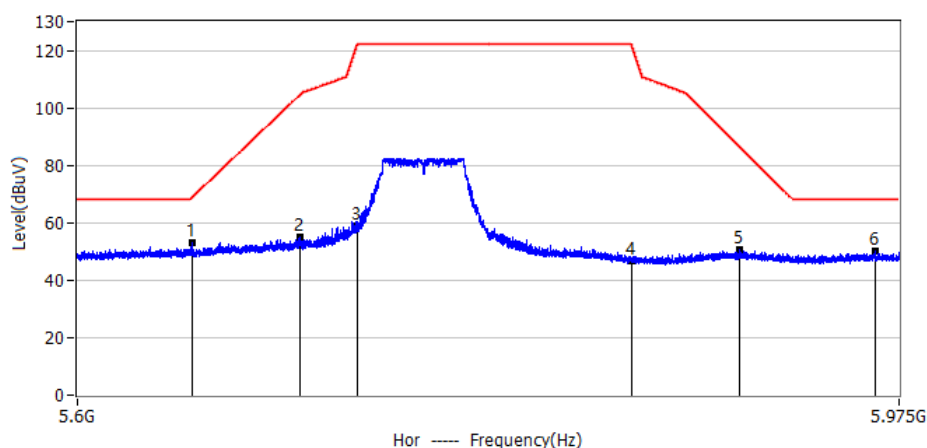
No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	5.641GHz	58.34	-7.68	50.66	68.20	-17.54	PK	Hor
2*	5.693GHz	59.46	-7.66	51.80	100.28	-48.48	PK	Hor
3*	5.725GHz	56.15	-7.65	48.50	122.20	-73.70	PK	Hor
4*	5.850GHz	56.50	-7.60	48.90	122.20	-73.30	PK	Hor
5*	5.895GHz	57.97	-7.58	50.39	90.69	-40.29	PK	Hor
6*	5.960GHz	57.58	-7.56	50.02	68.20	-18.18	PK	Hor



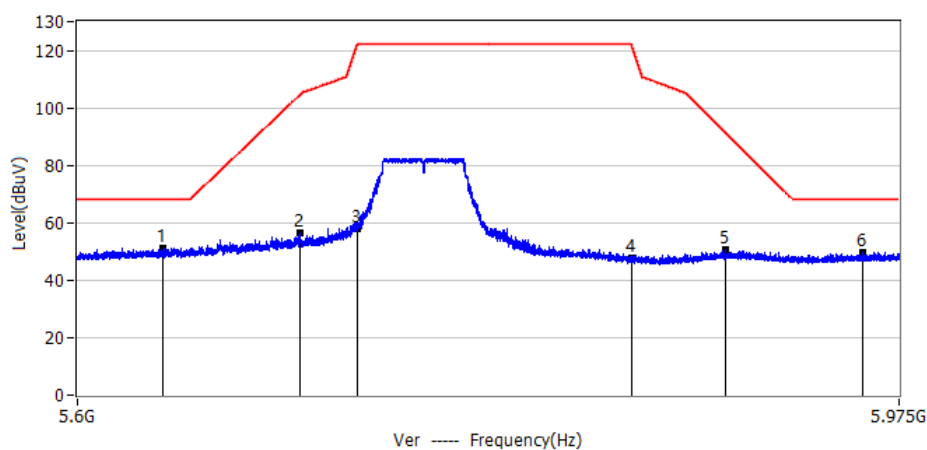
No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	5.628GHz	58.39	-7.69	50.70	68.20	-17.50	PK	Ver
2*	5.675GHz	59.16	-7.67	51.49	86.81	-35.32	PK	Ver
3*	5.725GHz	57.35	-7.65	49.70	122.20	-72.40	PK	Ver
4*	5.850GHz	57.80	-7.60	50.20	122.20	-71.90	PK	Ver
5*	5.906GHz	57.68	-7.58	50.10	82.15	-32.05	PK	Ver
6*	5.941GHz	57.36	-7.56	49.80	68.20	-18.40	PK	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: MIMO_802.11n40_5755	
Note:	



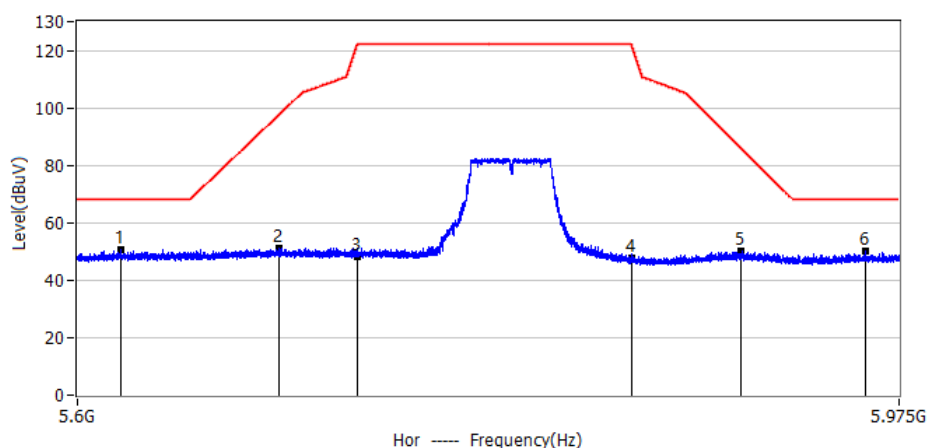
No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	5.651GHz	60.80	-7.68	53.12	68.66	-15.54	PK	Hor
2*	5.699GHz	62.52	-7.66	54.86	104.67	-49.81	PK	Hor
3*	5.725GHz	66.65	-7.65	59.00	122.20	-63.20	PK	Hor
4*	5.850GHz	54.50	-7.60	46.90	122.20	-75.30	PK	Hor
5*	5.900GHz	58.11	-7.58	50.53	86.49	-35.96	PK	Hor
6*	5.964GHz	57.80	-7.55	50.25	68.20	-17.95	PK	Hor



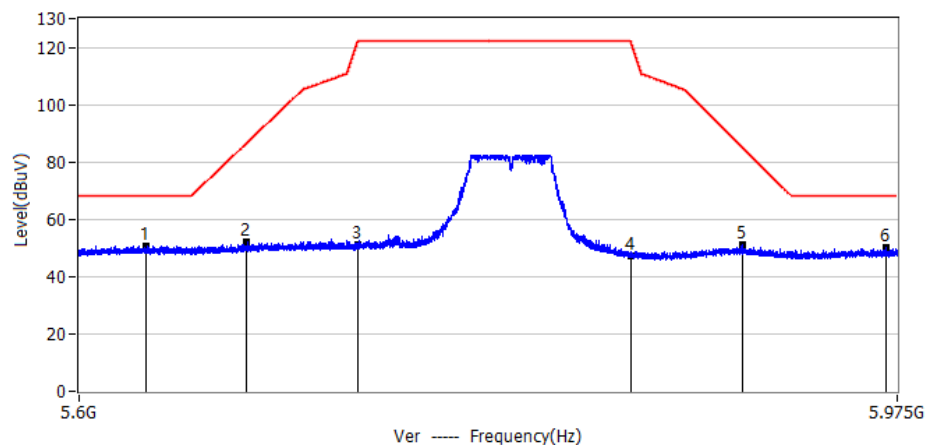
No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	5.638GHz	58.99	-7.68	51.31	68.20	-16.89	PK	Ver
2*	5.699GHz	63.95	-7.66	56.29	104.46	-48.17	PK	Ver
3*	5.725GHz	65.55	-7.65	57.90	122.20	-64.30	PK	Ver
4*	5.850GHz	55.20	-7.60	47.60	122.20	-74.60	PK	Ver
5*	5.894GHz	58.01	-7.58	50.43	91.14	-40.71	PK	Ver
6*	5.958GHz	57.38	-7.56	49.82	68.20	-18.38	PK	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: MIMO_802.11n40_5795	
Note:	



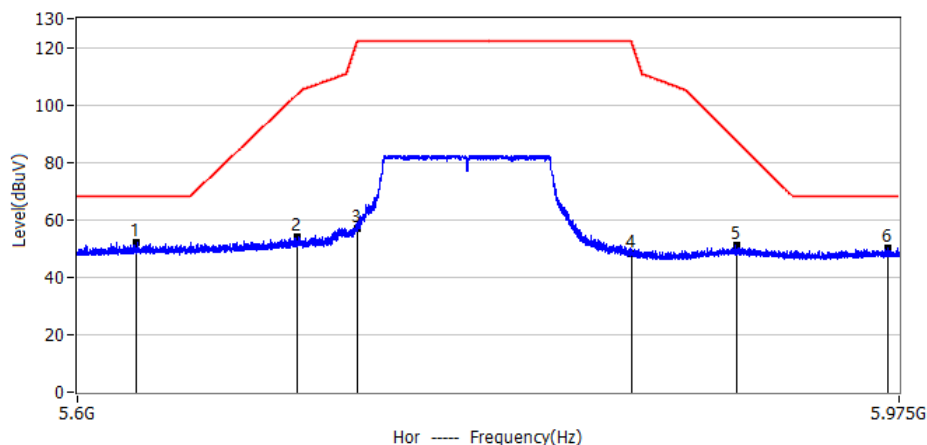
No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	5.619GHz	58.54	-7.69	50.85	68.20	-17.35	PK	Hor
2*	5.690GHz	58.86	-7.66	51.20	97.48	-46.28	PK	Hor
3*	5.725GHz	55.95	-7.65	48.30	122.20	-73.80	PK	Hor
4*	5.850GHz	55.10	-7.60	47.50	122.20	-74.70	PK	Hor
5*	5.901GHz	57.53	-7.58	49.95	85.72	-35.77	PK	Hor
6*	5.959GHz	57.82	-7.56	50.26	68.20	-17.94	PK	Hor



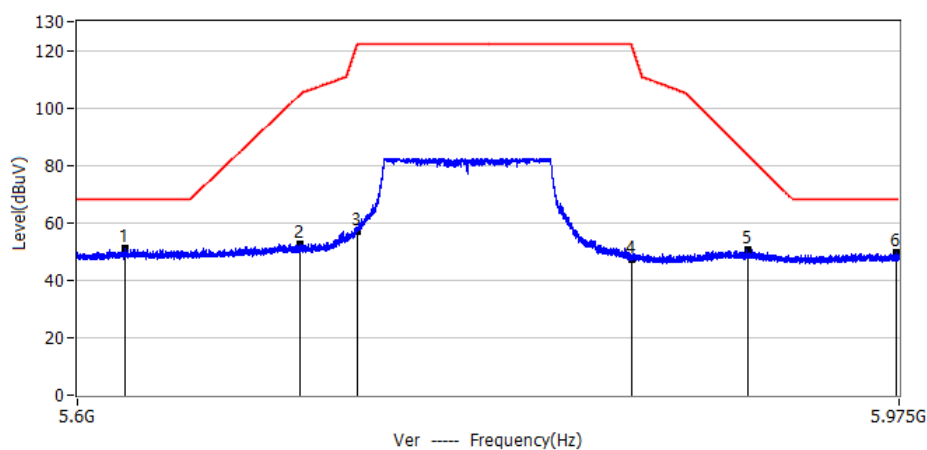
No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	5.630GHz	58.45	-7.69	50.76	68.20	-17.44	PK	Ver
2*	5.675GHz	59.76	-7.67	52.09	86.91	-34.82	PK	Ver
3*	5.725GHz	58.85	-7.65	51.20	122.20	-71.00	PK	Ver
4*	5.850GHz	54.90	-7.60	47.30	122.20	-74.90	PK	Ver
5*	5.902GHz	58.76	-7.58	51.18	84.82	-33.64	PK	Ver
6*	5.970GHz	57.88	-7.55	50.33	68.20	-17.87	PK	Ver



Project: LGT22J013	Test Engineer: Dylan.shi
EUT: DTEN D7X 75"	Humidity: 61%RH
Temperature: 23.7°C	Test Voltage: AC 120V/60Hz
M/N: DB71475	Test Data: 2022-11-04
Test Mode: MIMO_802.11ac80_5775	
Note:	



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	5.626GHz	59.61	-7.69	51.92	68.20	-16.28	PK	Hor
2*	5.698GHz	61.87	-7.66	54.21	103.91	-49.70	PK	Hor
3*	5.725GHz	64.55	-7.65	56.90	122.20	-65.30	PK	Hor
4*	5.850GHz	56.00	-7.60	48.40	122.20	-73.80	PK	Hor
5*	5.899GHz	58.50	-7.58	50.92	87.74	-36.82	PK	Hor
6*	5.970GHz	57.71	-7.55	50.16	68.20	-18.04	PK	Hor



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	5.621GHz	58.98	-7.69	51.29	68.20	-16.91	PK	Ver
2*	5.699GHz	60.20	-7.66	52.54	104.50	-51.96	PK	Ver
3*	5.725GHz	64.85	-7.65	57.20	122.20	-65.00	PK	Ver
4*	5.850GHz	54.70	-7.60	47.10	122.20	-75.10	PK	Ver
5*	5.904GHz	58.16	-7.58	50.58	83.96	-33.38	PK	Ver
6*	5.974GHz	57.40	-7.55	49.85	68.20	-18.35	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



1. 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.

4.6 TEST RESULTS

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 DEVIATION FROM STANDARD

No deviation.

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 DEVIATION FROM STANDARD

No deviation.

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	

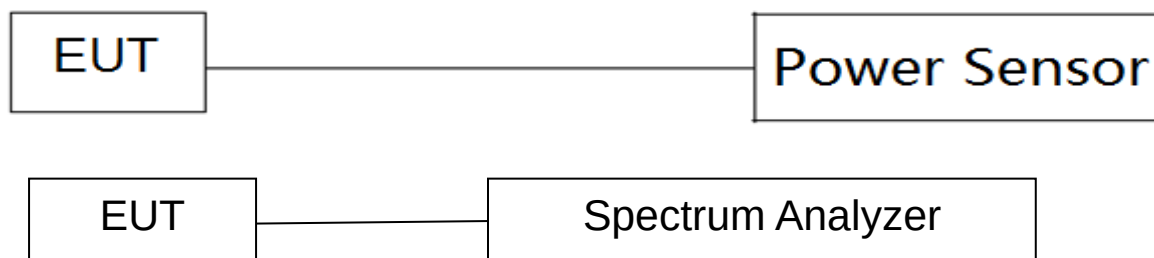
6.2 TEST PROCEDURE

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

Part 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 Copper tube Antenna with RP-SMA connector. It comply with the standard requirement.



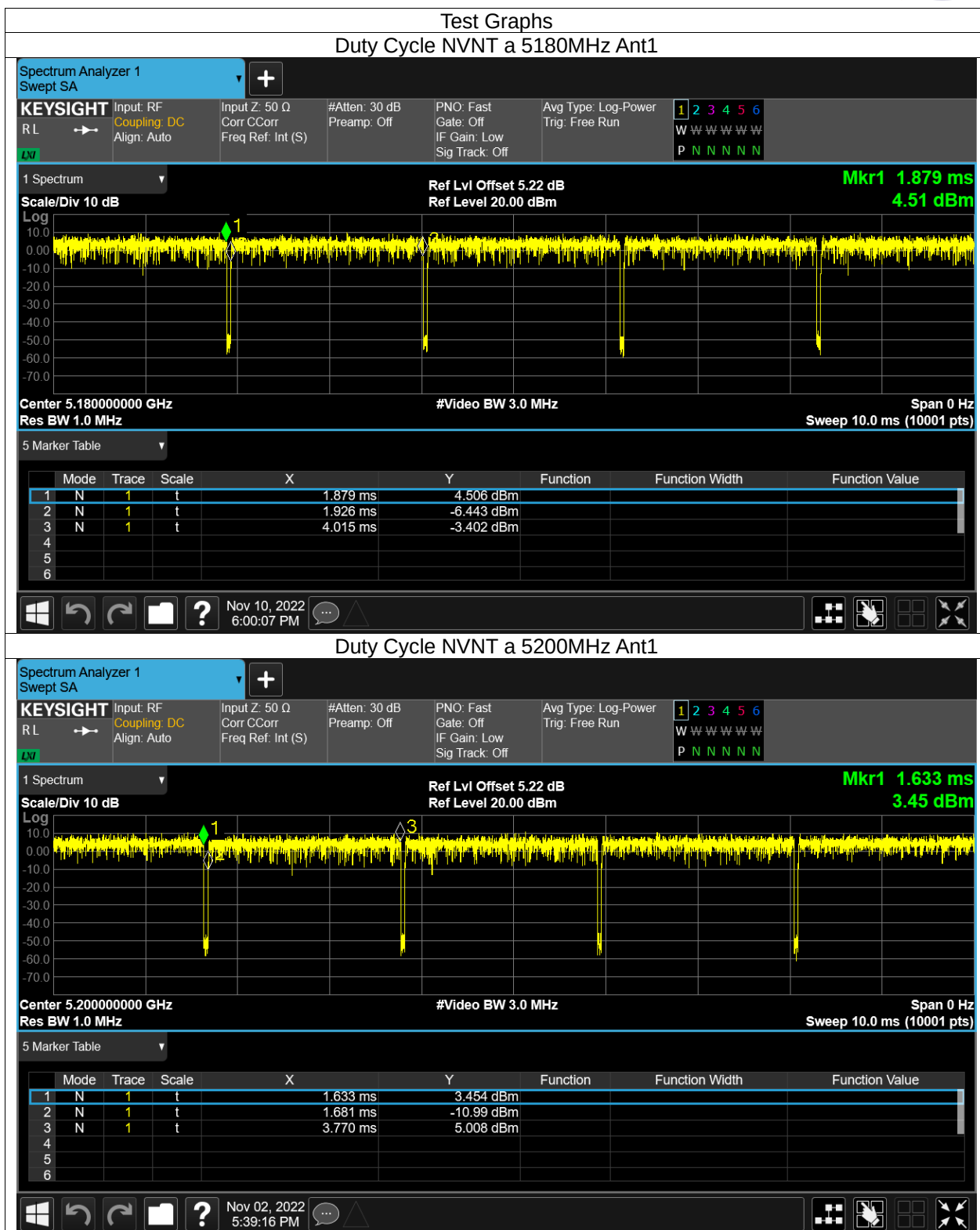
APPENDIX I:TEST RESULTS

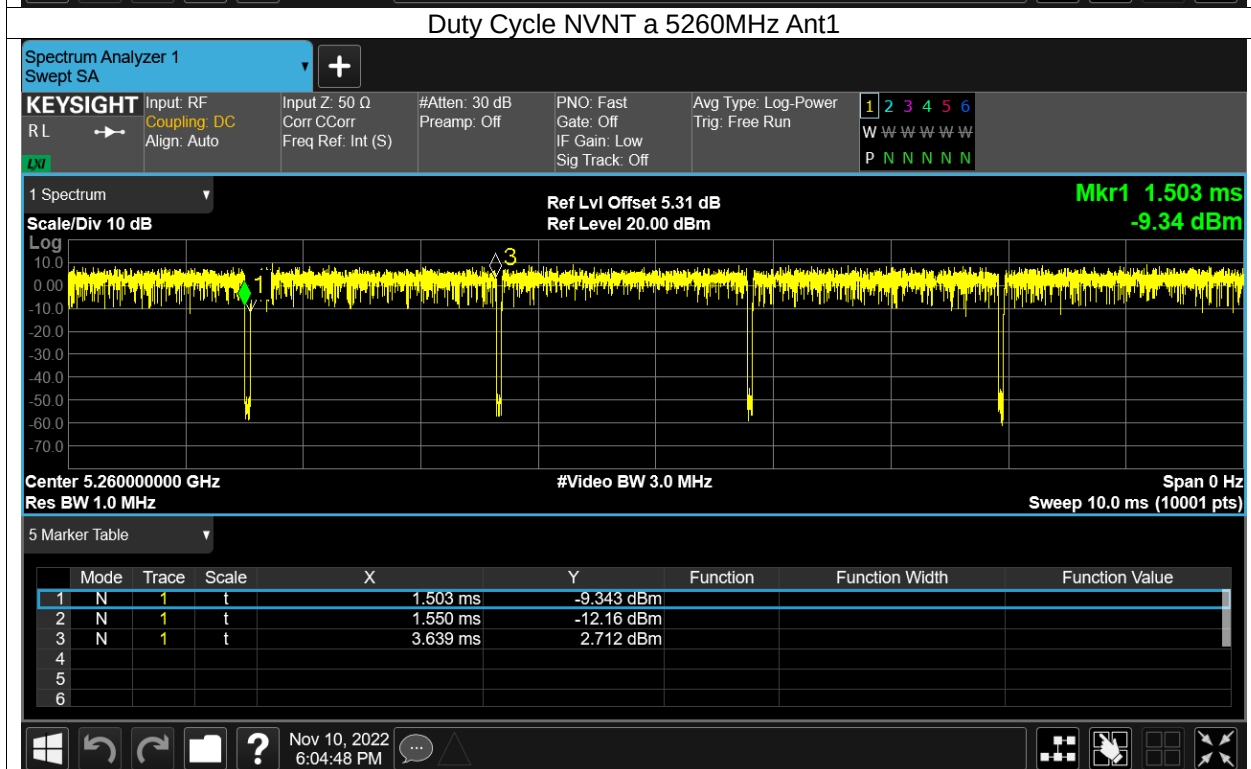
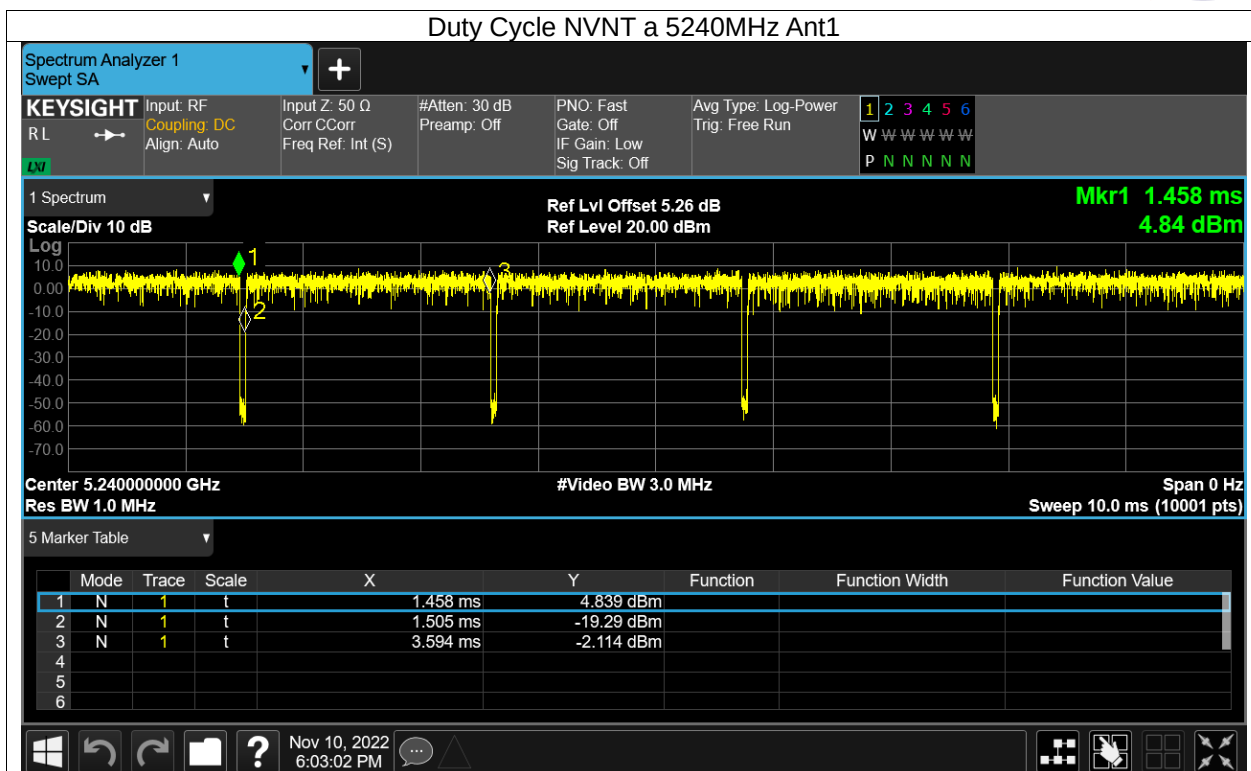
DUTY CYCLE

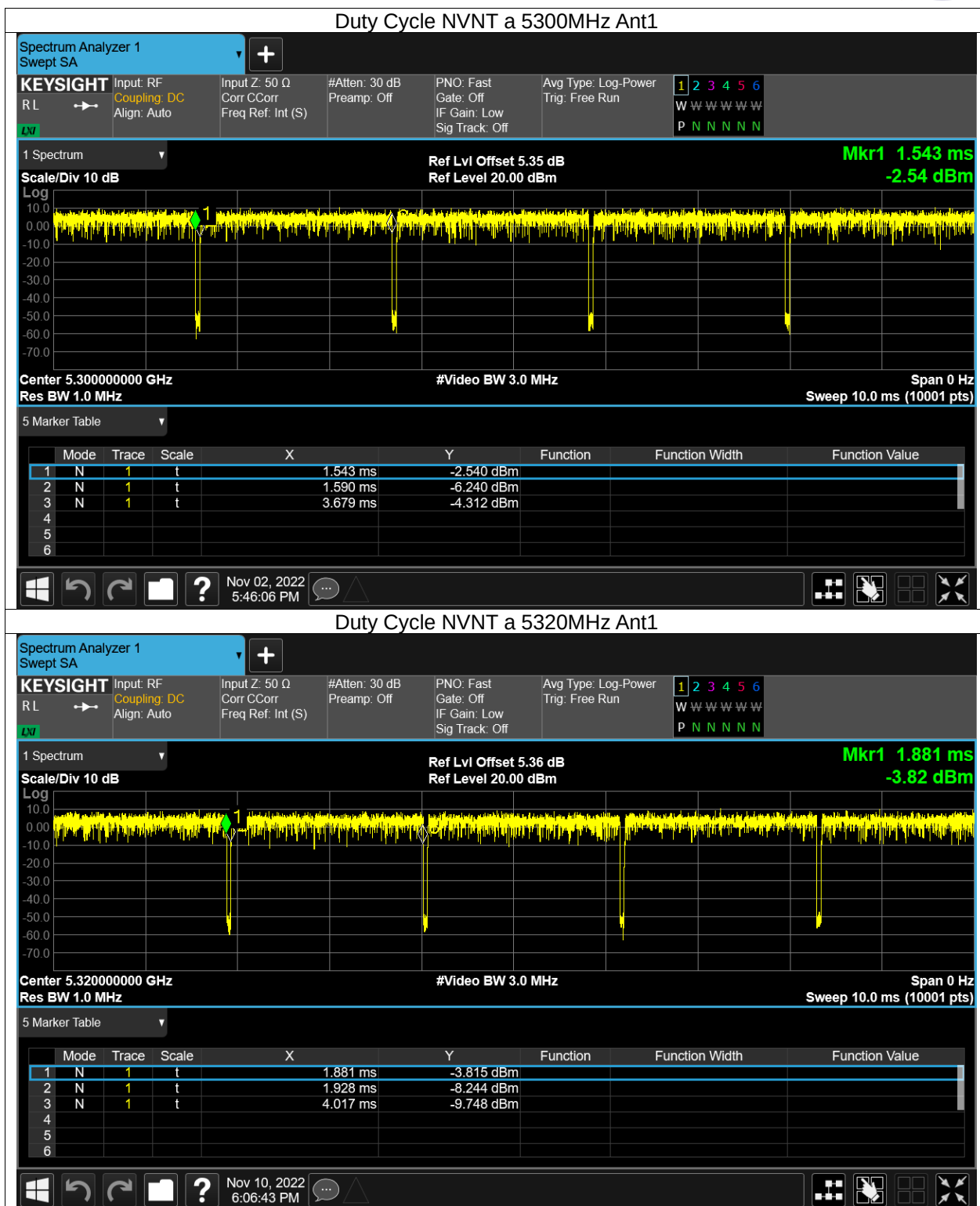
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant1	97.8	0.1	0.48
NVNT	a	5200	Ant1	97.75	0.1	0.48
NVNT	a	5240	Ant1	97.8	0.1	0.48
NVNT	a	5260	Ant1	97.8	0.1	0.48
NVNT	a	5300	Ant1	97.8	0.1	0.48
NVNT	a	5320	Ant1	97.8	0.1	0.48
NVNT	a	5500	Ant1	97.8	0.1	0.48
NVNT	a	5580	Ant1	97.75	0.1	0.48
NVNT	a	5700	Ant1	97.8	0.1	0.48
NVNT	a	5745	Ant1	97.8	0.1	0.48
NVNT	a	5785	Ant1	97.8	0.1	0.48
NVNT	a	5825	Ant1	97.8	0.1	0.48
NVNT	a	5180	Ant2	97.8	0.1	0.48
NVNT	a	5200	Ant2	97.8	0.1	0.48
NVNT	a	5240	Ant2	97.75	0.1	0.48
NVNT	a	5260	Ant2	97.8	0.1	0.48
NVNT	a	5300	Ant2	97.75	0.1	0.48
NVNT	a	5320	Ant2	97.8	0.1	0.48
NVNT	a	5500	Ant2	97.75	0.1	0.48
NVNT	a	5580	Ant2	97.8	0.1	0.48
NVNT	a	5700	Ant2	97.8	0.1	0.48
NVNT	a	5745	Ant2	97.8	0.1	0.48
NVNT	a	5785	Ant2	97.75	0.1	0.48
NVNT	a	5825	Ant2	97.75	0.1	0.48
NVNT	ac160	5250	Sum	99.08	0	0.18
NVNT	ac160	5570	Sum	99.08	0	0.18
NVNT	ac20	5180	Sum	99.39	0	0.13
NVNT	ac20	5200	Sum	99.39	0	0.13
NVNT	ac20	5240	Sum	99.39	0	0.13
NVNT	ac20	5260	Sum	99.39	0	0.13
NVNT	ac20	5300	Sum	99.43	0	0.13
NVNT	ac20	5320	Sum	99.39	0	0.13
NVNT	ac20	5500	Sum	99.39	0	0.13
NVNT	ac20	5580	Sum	99.39	0	0.13
NVNT	ac20	5700	Sum	99.39	0	0.13
NVNT	ac20	5745	Sum	99.39	0	0.13
NVNT	ac20	5785	Sum	99.43	0	0.13
NVNT	ac20	5825	Sum	99.39	0	0.13
NVNT	ac40	5190	Sum	99.39	0	0.13
NVNT	ac40	5230	Sum	99.43	0	0.13
NVNT	ac40	5270	Sum	99.39	0	0.13
NVNT	ac40	5310	Sum	99.36	0	0.13
NVNT	ac40	5510	Sum	99.39	0	0.13
NVNT	ac40	5550	Sum	99.43	0	0.13
NVNT	ac40	5670	Sum	99.43	0	0.13
NVNT	ac40	5755	Sum	99.43	0	0.13
NVNT	ac40	5795	Sum	99.43	0	0.13
NVNT	ac80	5210	Sum	99.4	0	0.13
NVNT	ac80	5290	Sum	99.36	0	0.13
NVNT	ac80	5530	Sum	99.36	0	0.13
NVNT	ac80	5610	Sum	99.39	0	0.13
NVNT	ac80	5775	Sum	99.43	0	0.13
NVNT	n20	5180	Sum	99.4	0	0.13
NVNT	n20	5200	Sum	99.4	0	0.13
NVNT	n20	5240	Sum	99.42	0	0.13

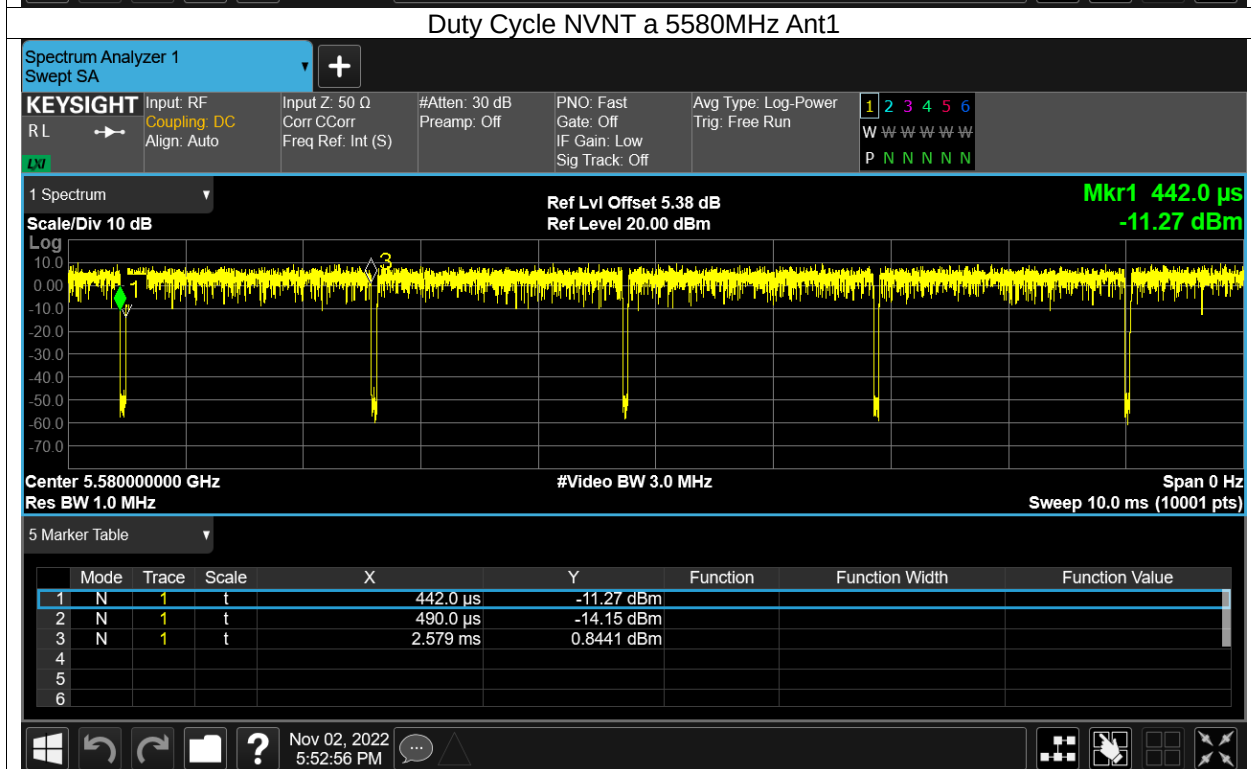
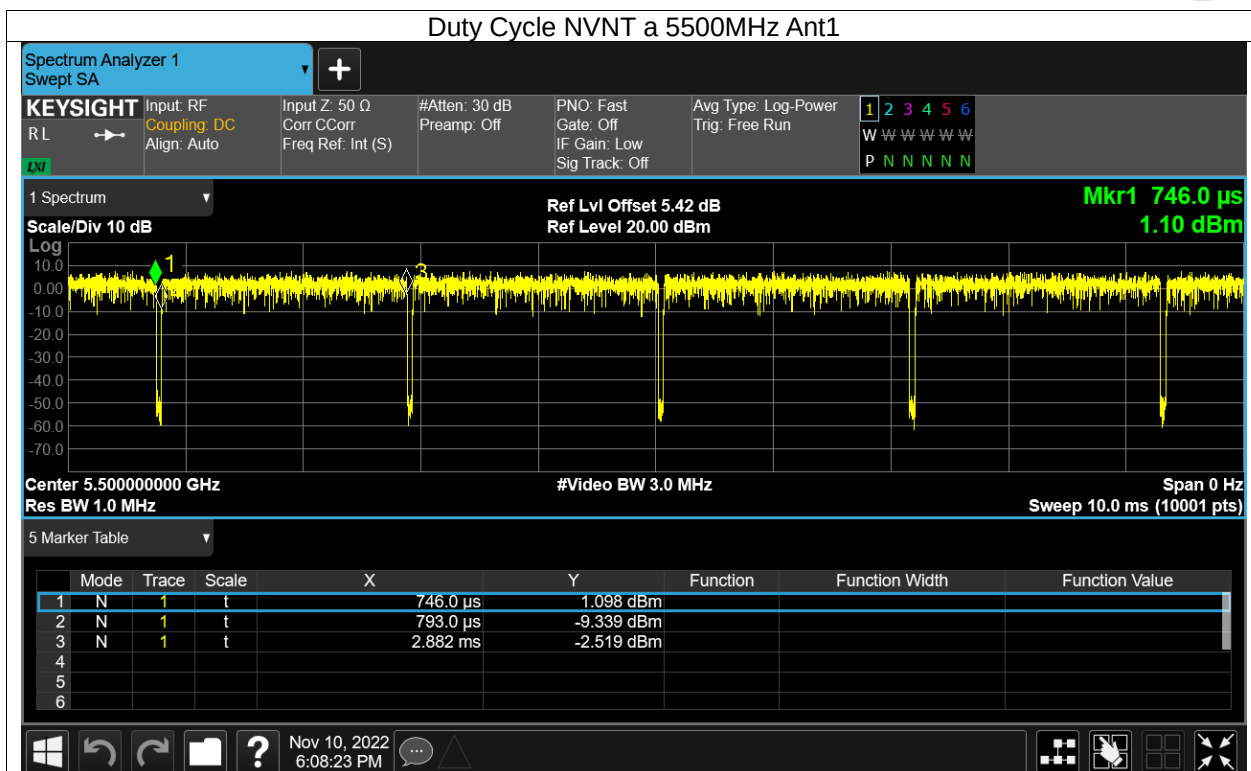


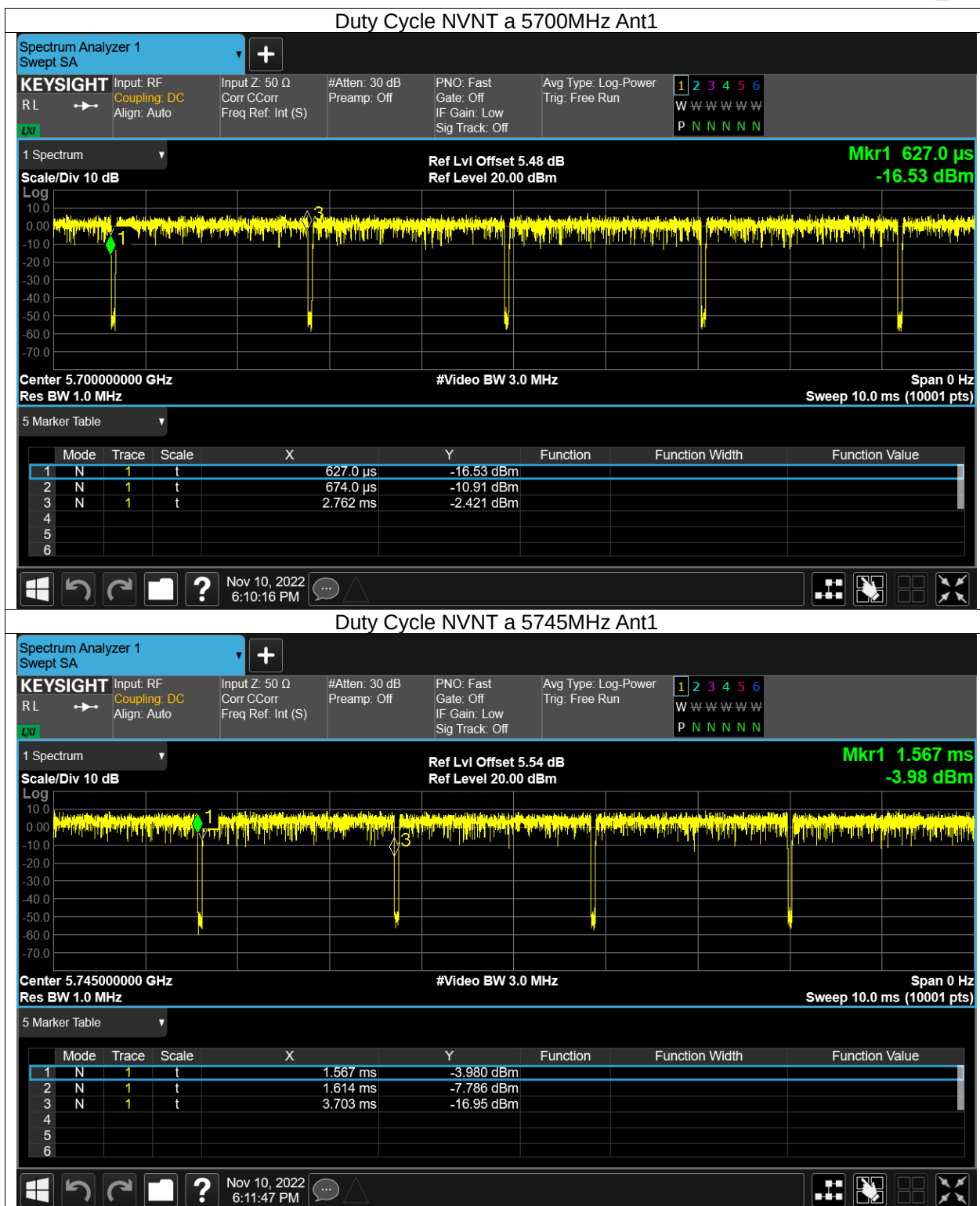
NVNT	n20	5260	Sum	99.4	0	0.13
NVNT	n20	5300	Sum	99.42	0	0.13
NVNT	n20	5320	Sum	99.4	0	0.13
NVNT	n20	5500	Sum	99.4	0	0.13
NVNT	n20	5580	Sum	99.4	0	0.13
NVNT	n20	5700	Sum	99.42	0	0.13
NVNT	n20	5745	Sum	99.4	0	0.13
NVNT	n20	5785	Sum	99.4	0	0.13
NVNT	n20	5825	Sum	99.42	0	0.13
NVNT	n40	5190	Sum	99.36	0	0.13
NVNT	n40	5230	Sum	99.4	0	0.13
NVNT	n40	5270	Sum	99.4	0	0.13
NVNT	n40	5310	Sum	99.35	0	0.13
NVNT	n40	5510	Sum	99.36	0	0.13
NVNT	n40	5550	Sum	99.43	0	0.13
NVNT	n40	5670	Sum	99.4	0	0.13
NVNT	n40	5755	Sum	99.4	0	0.13
NVNT	n40	5795	Sum	99.4	0	0.13

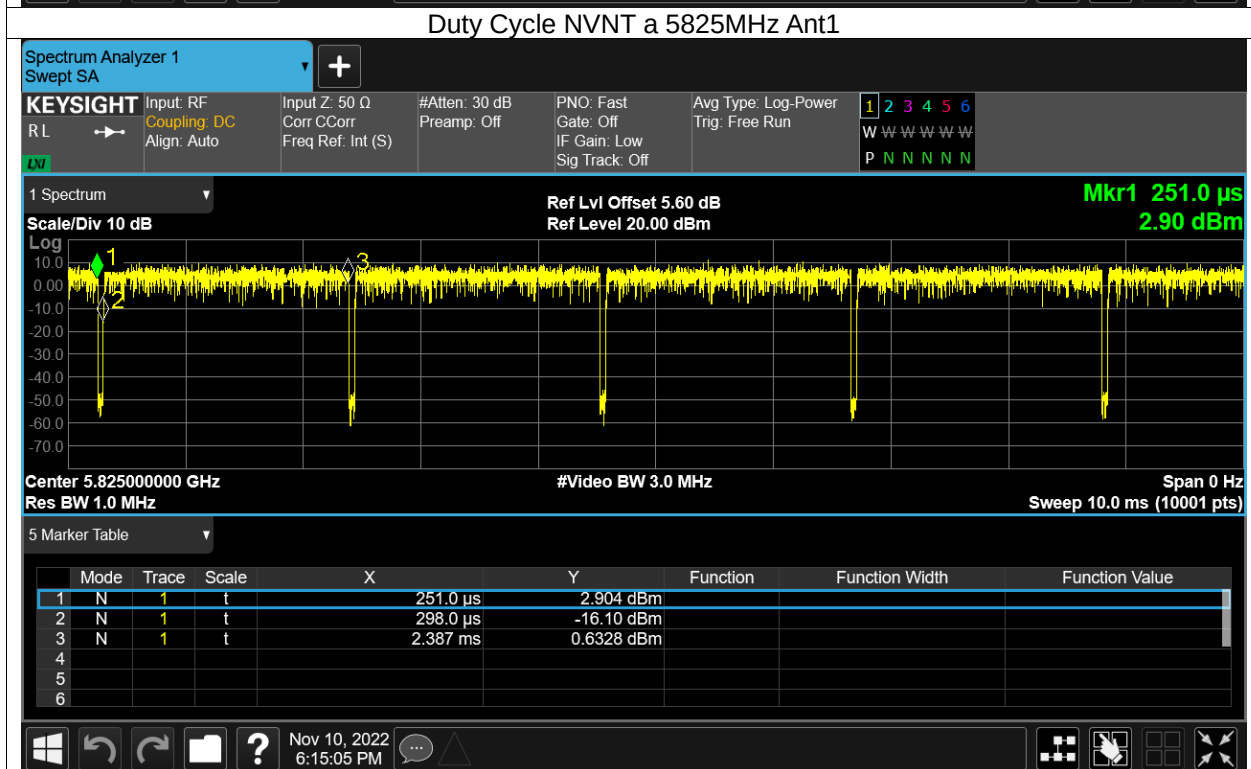
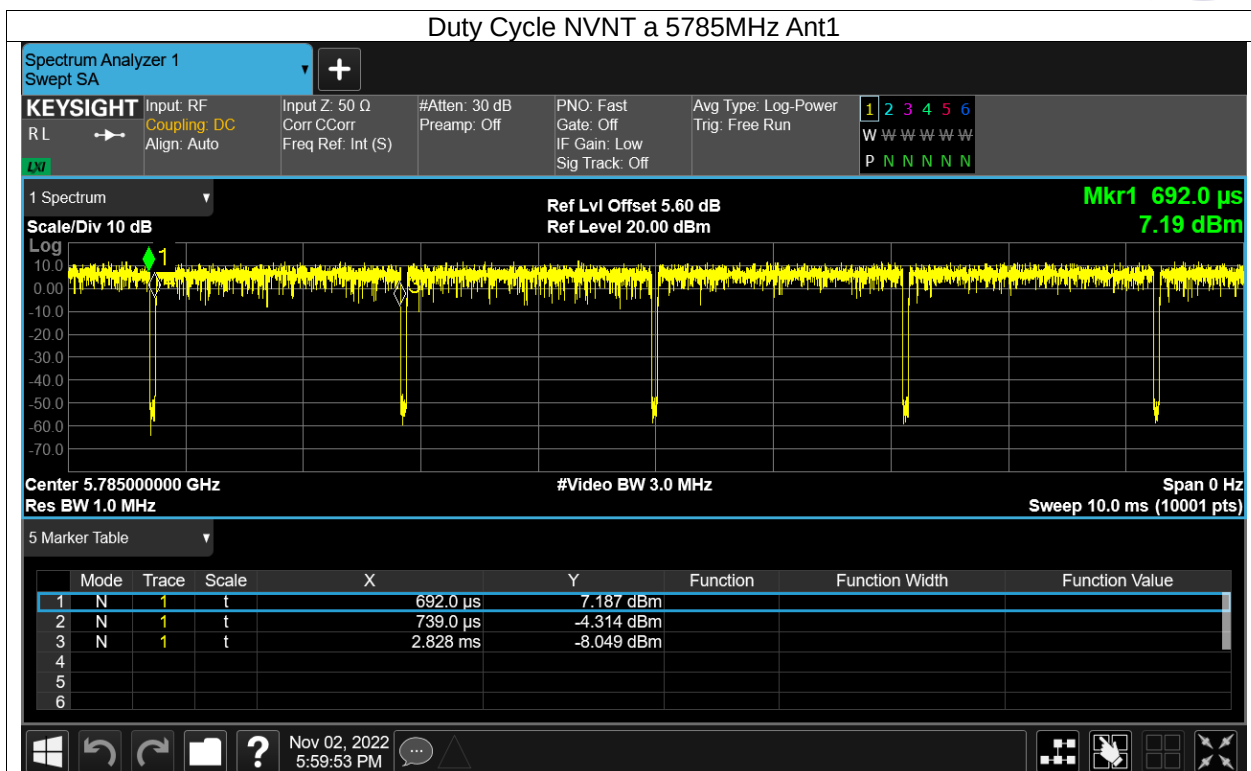


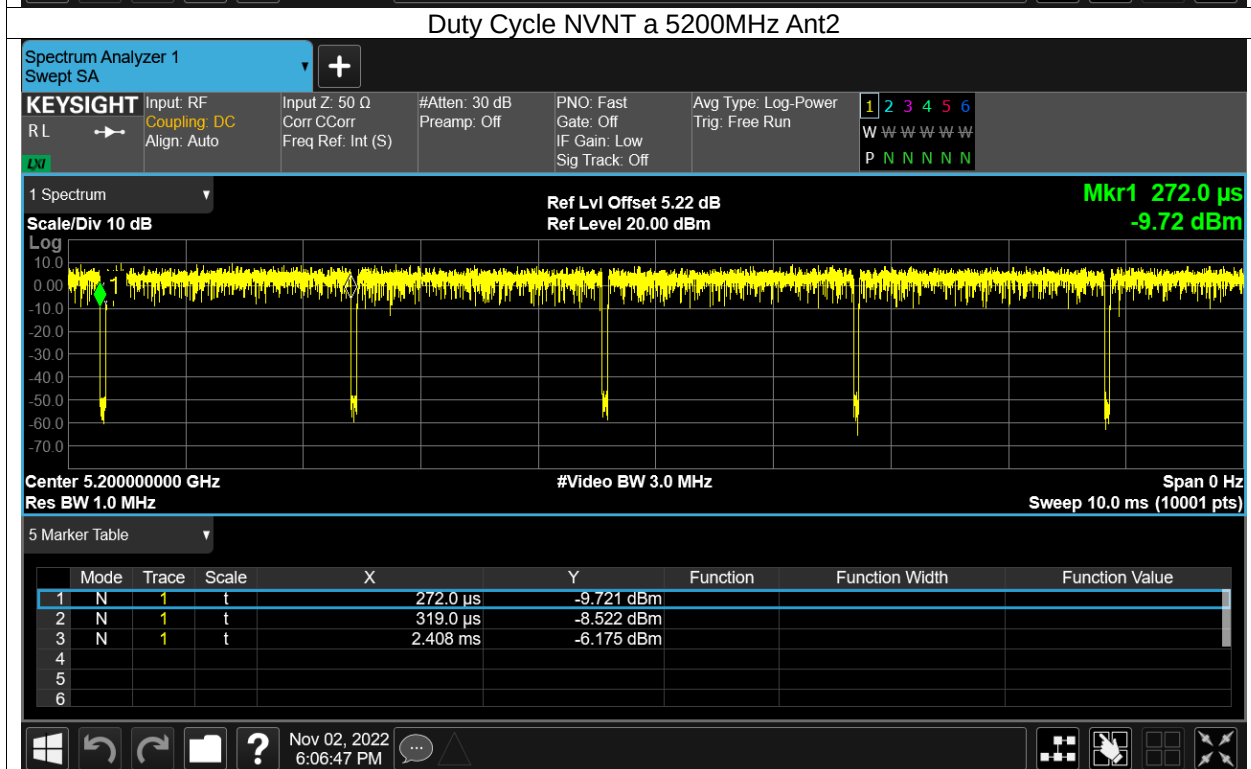
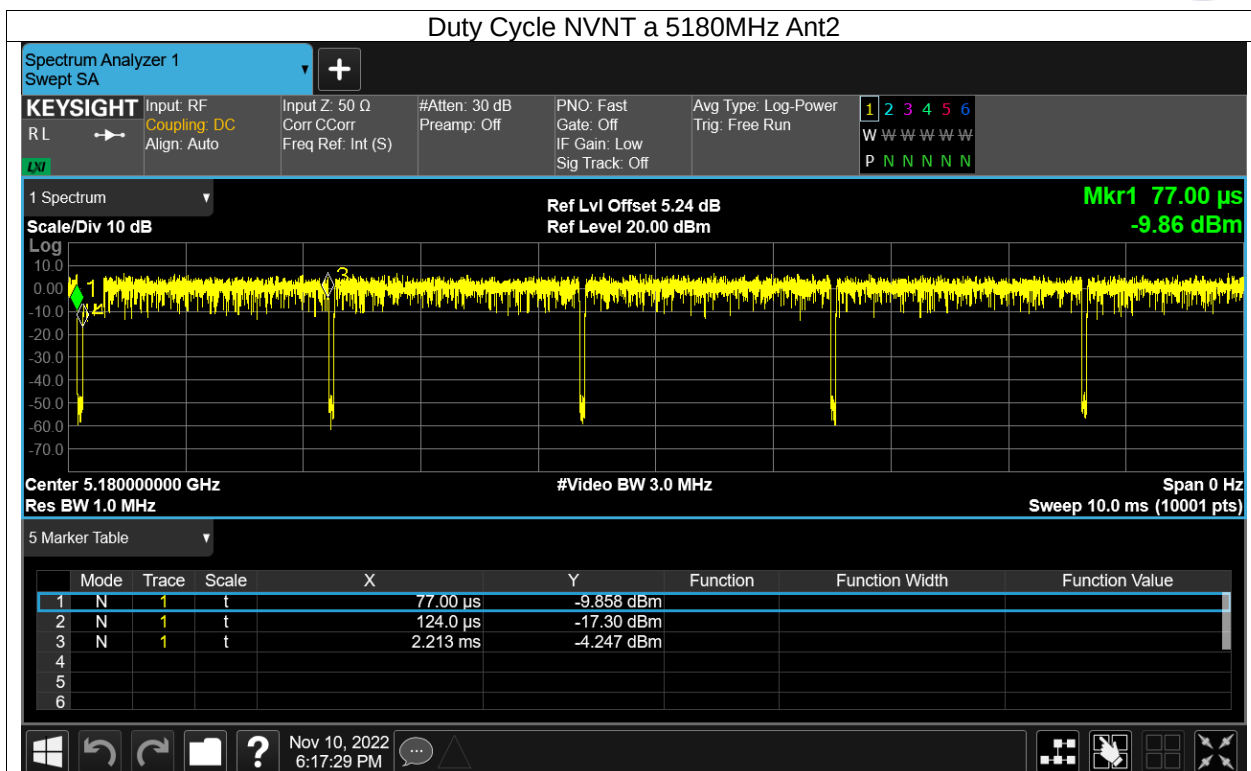


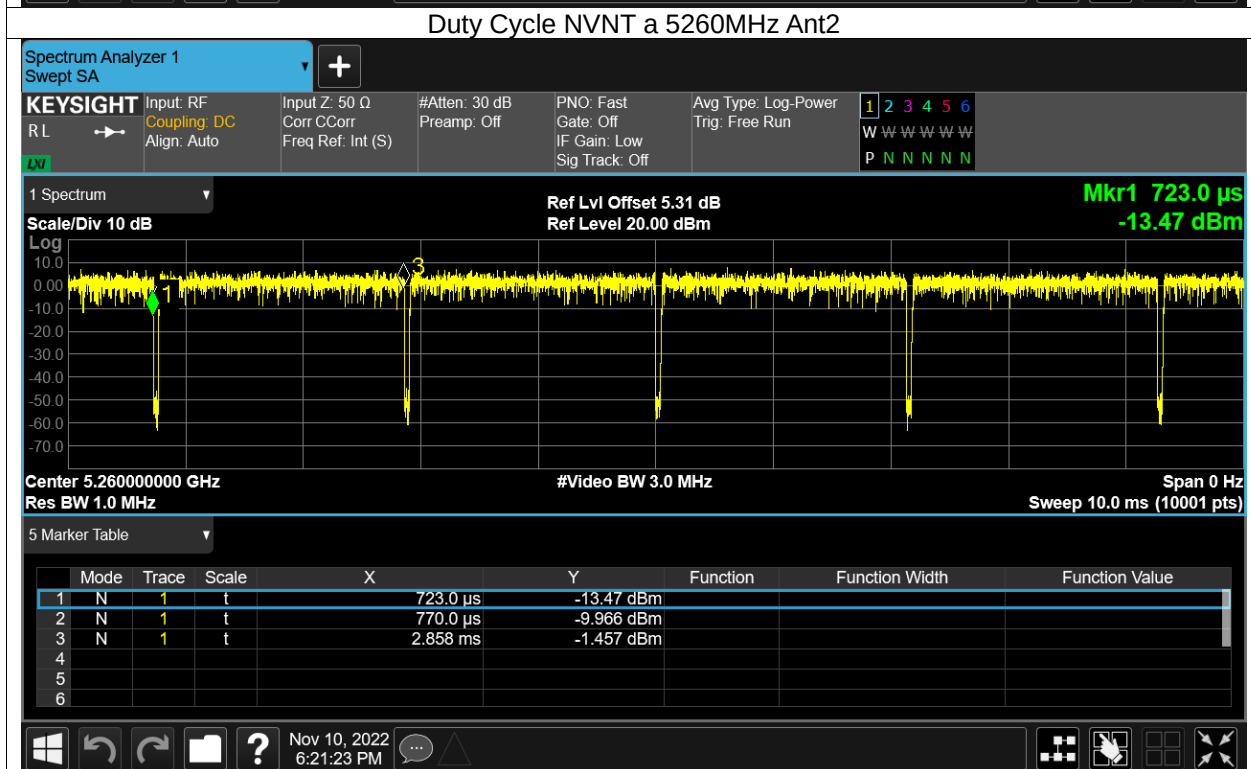
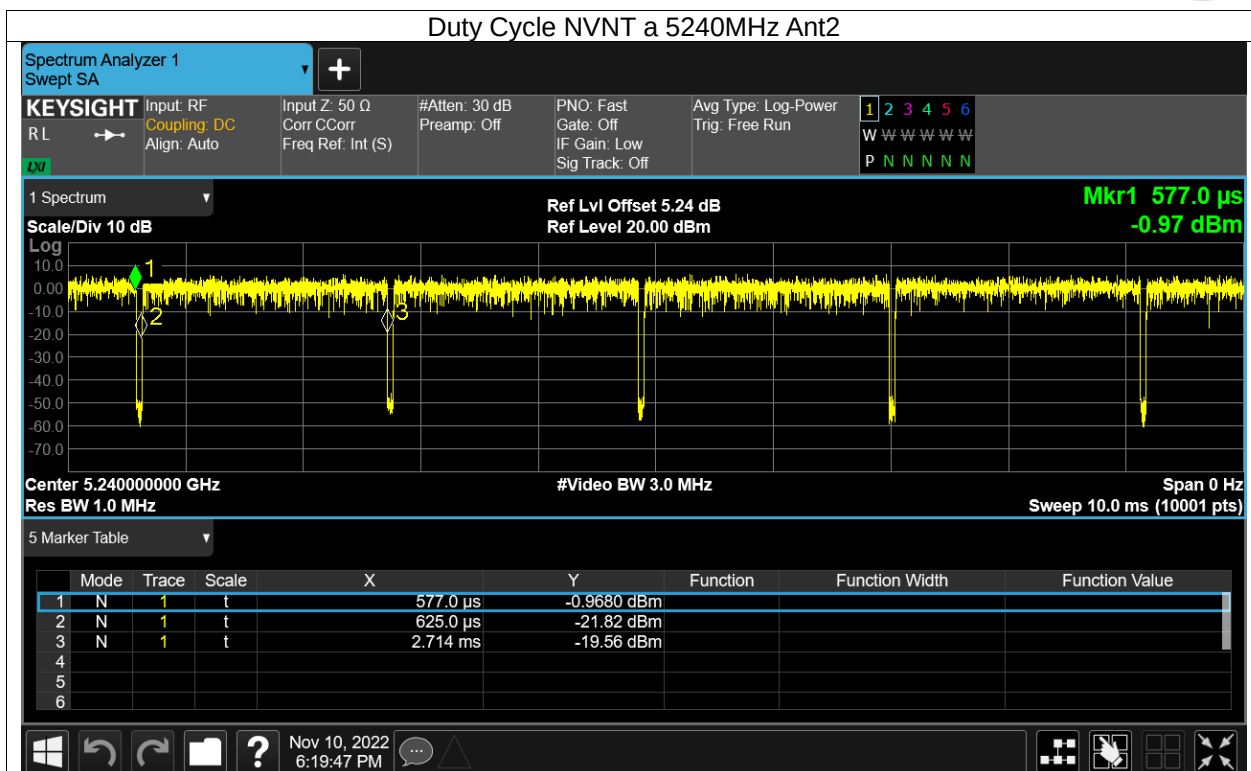


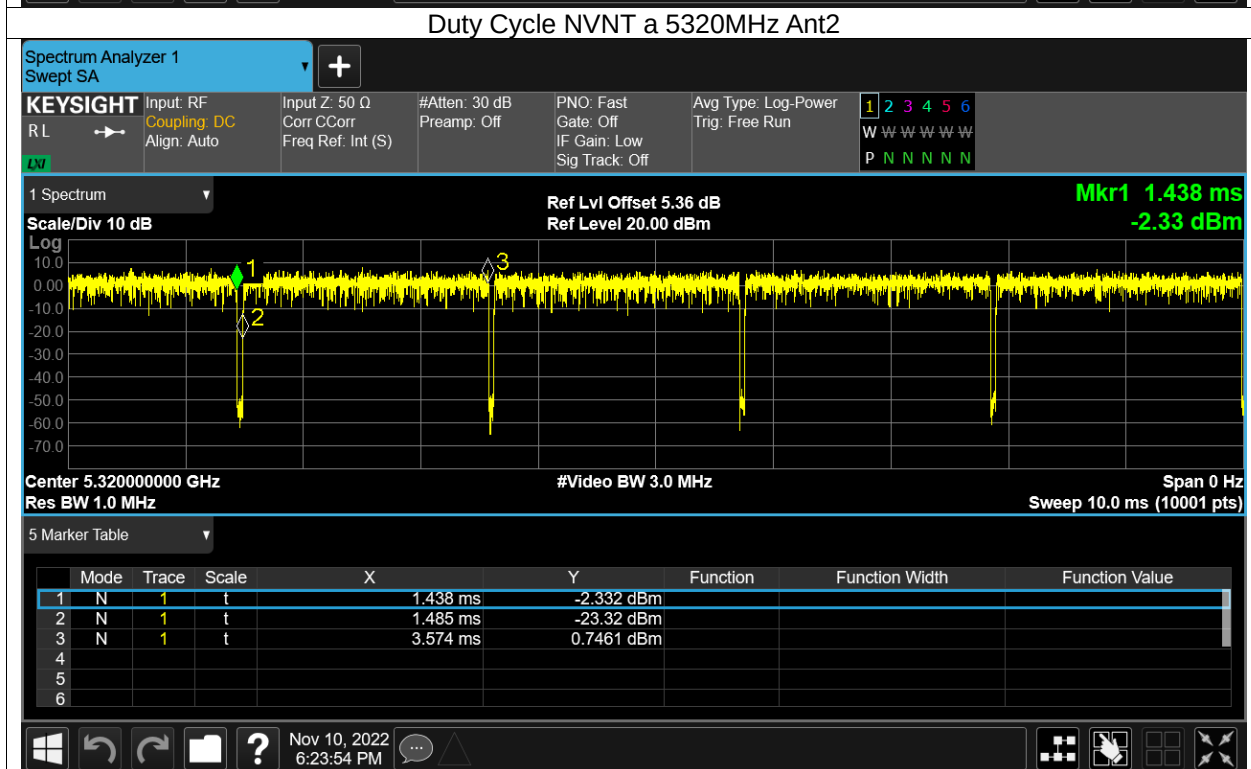
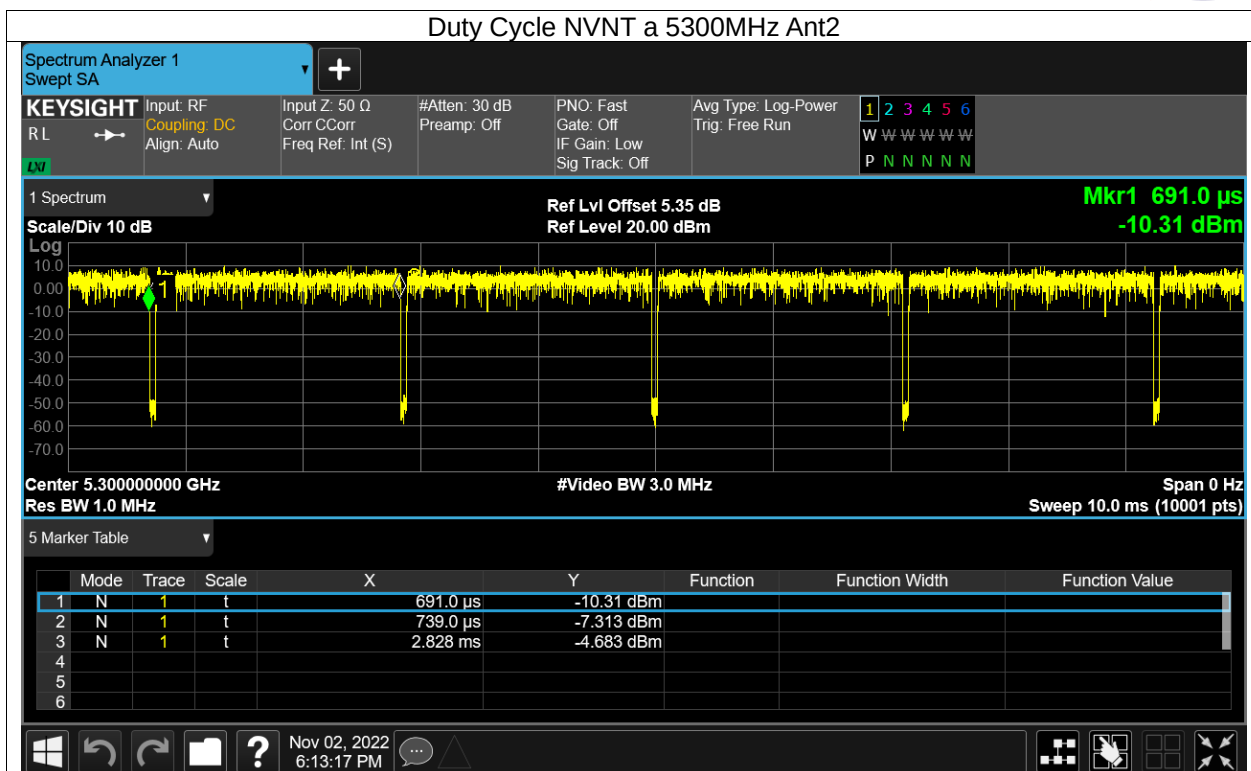


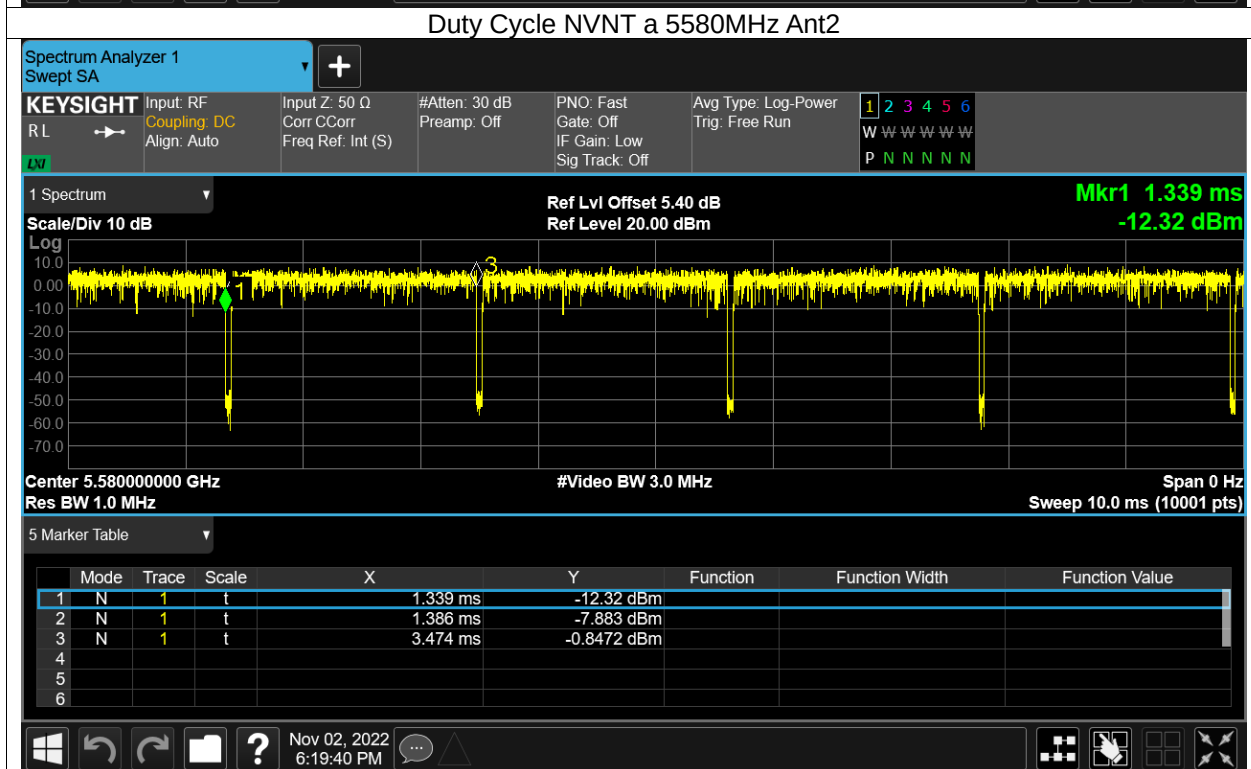
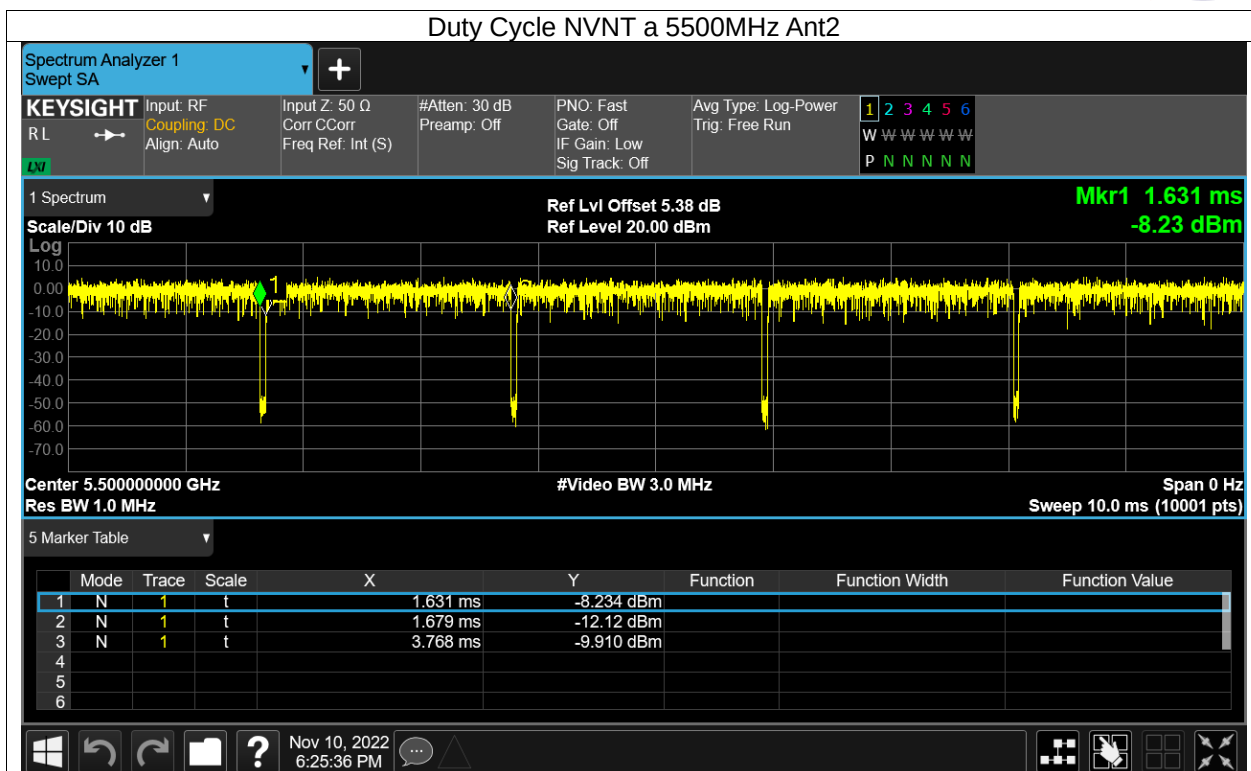


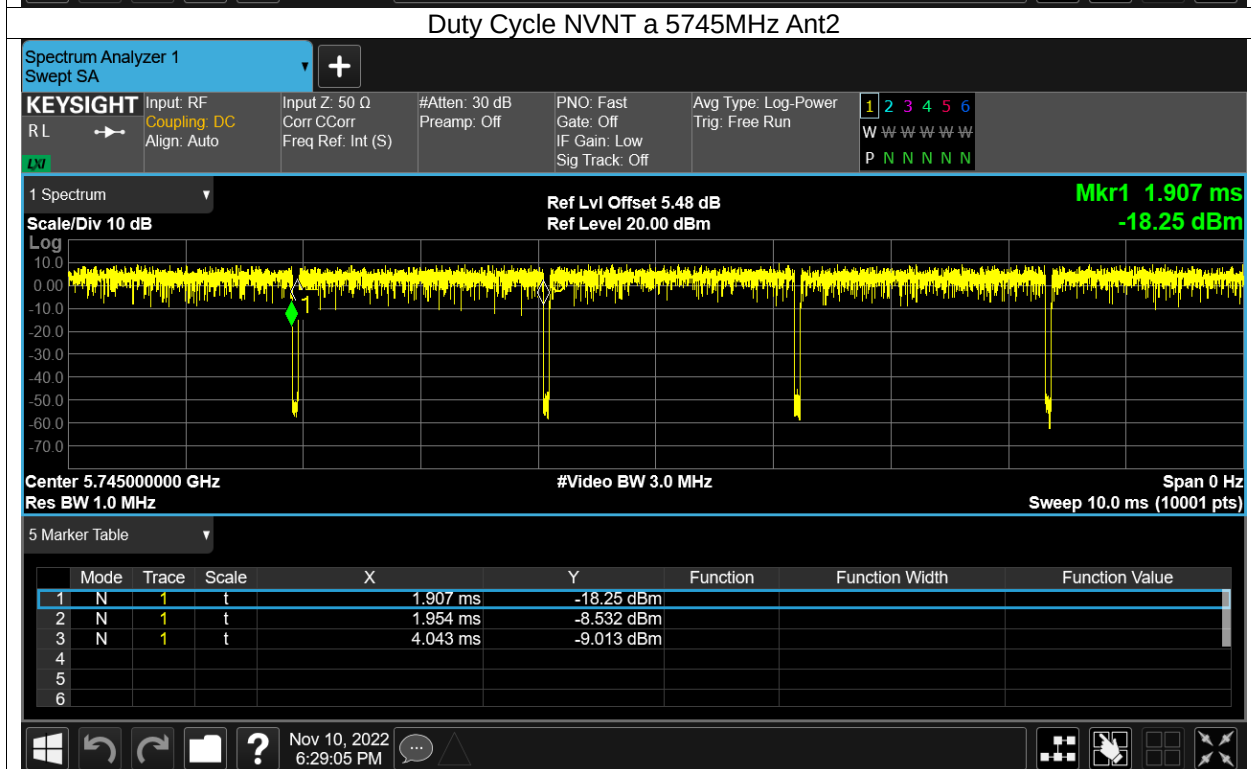
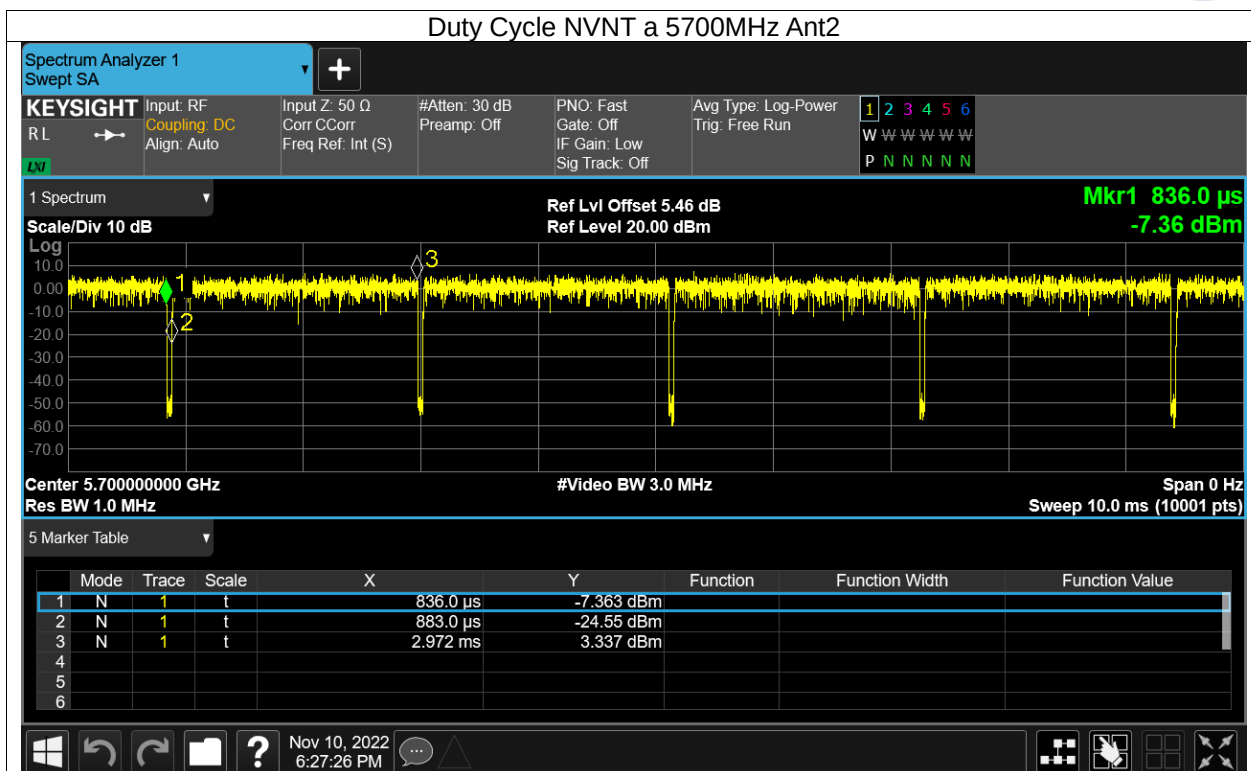


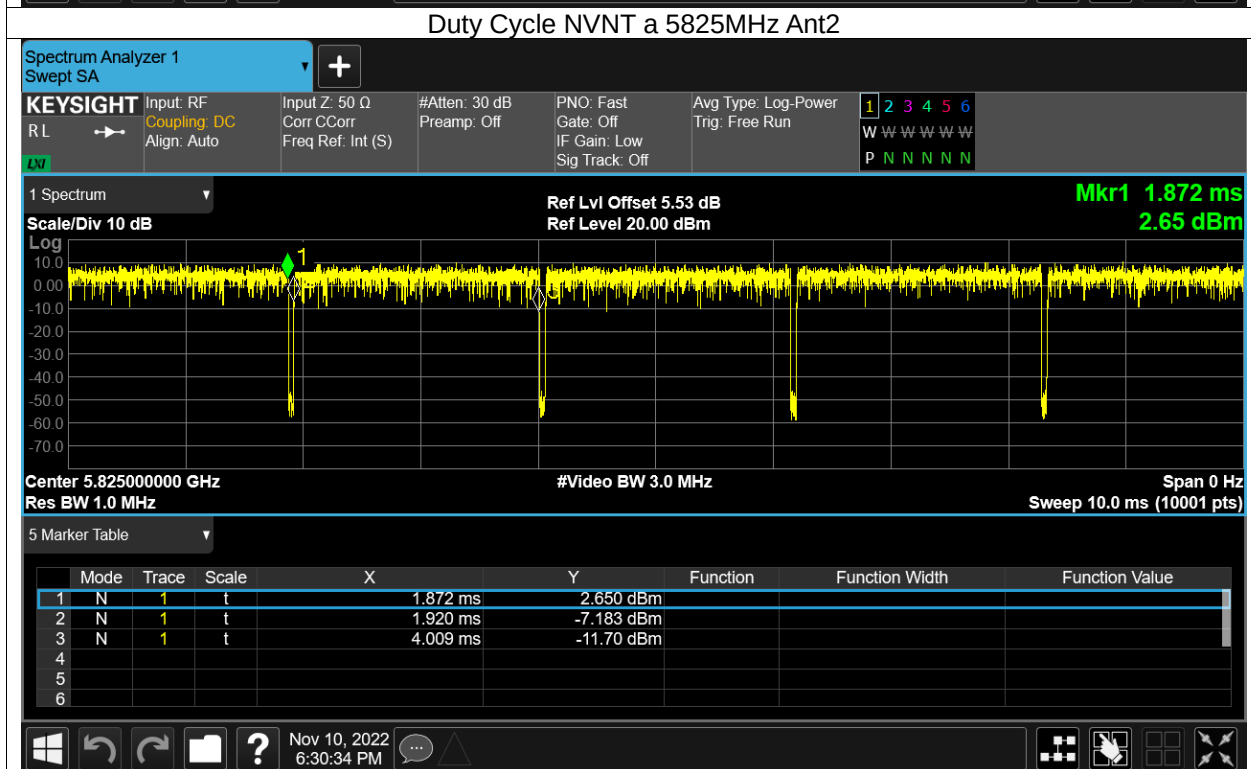
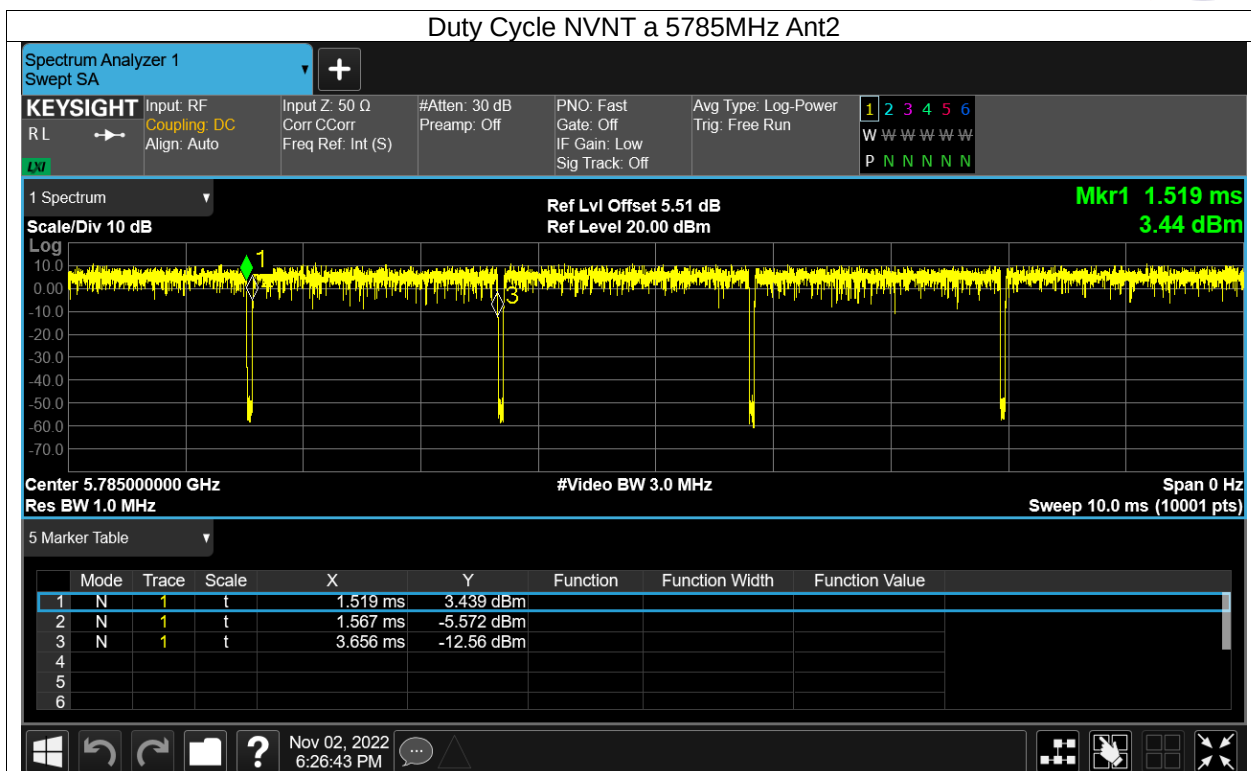












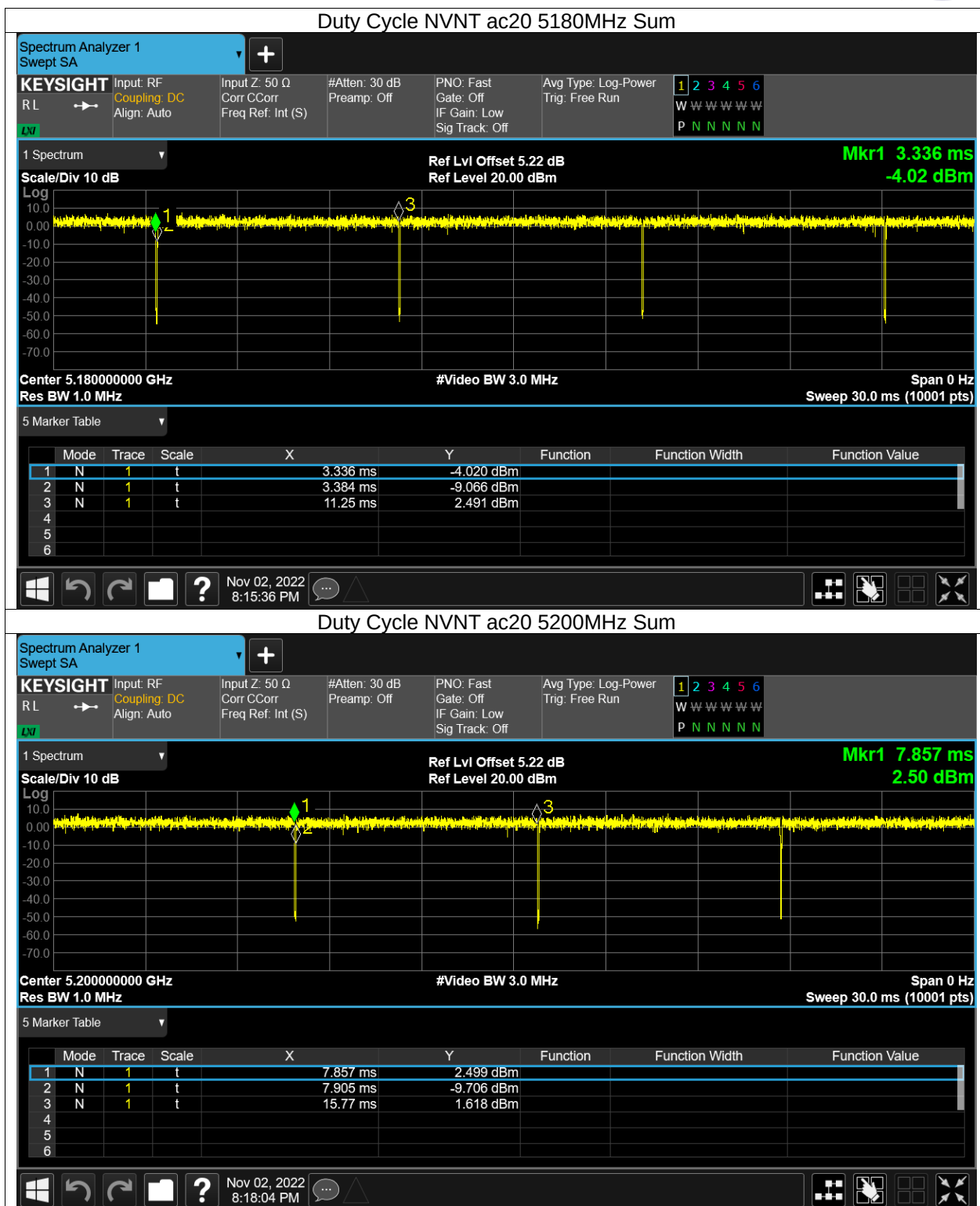


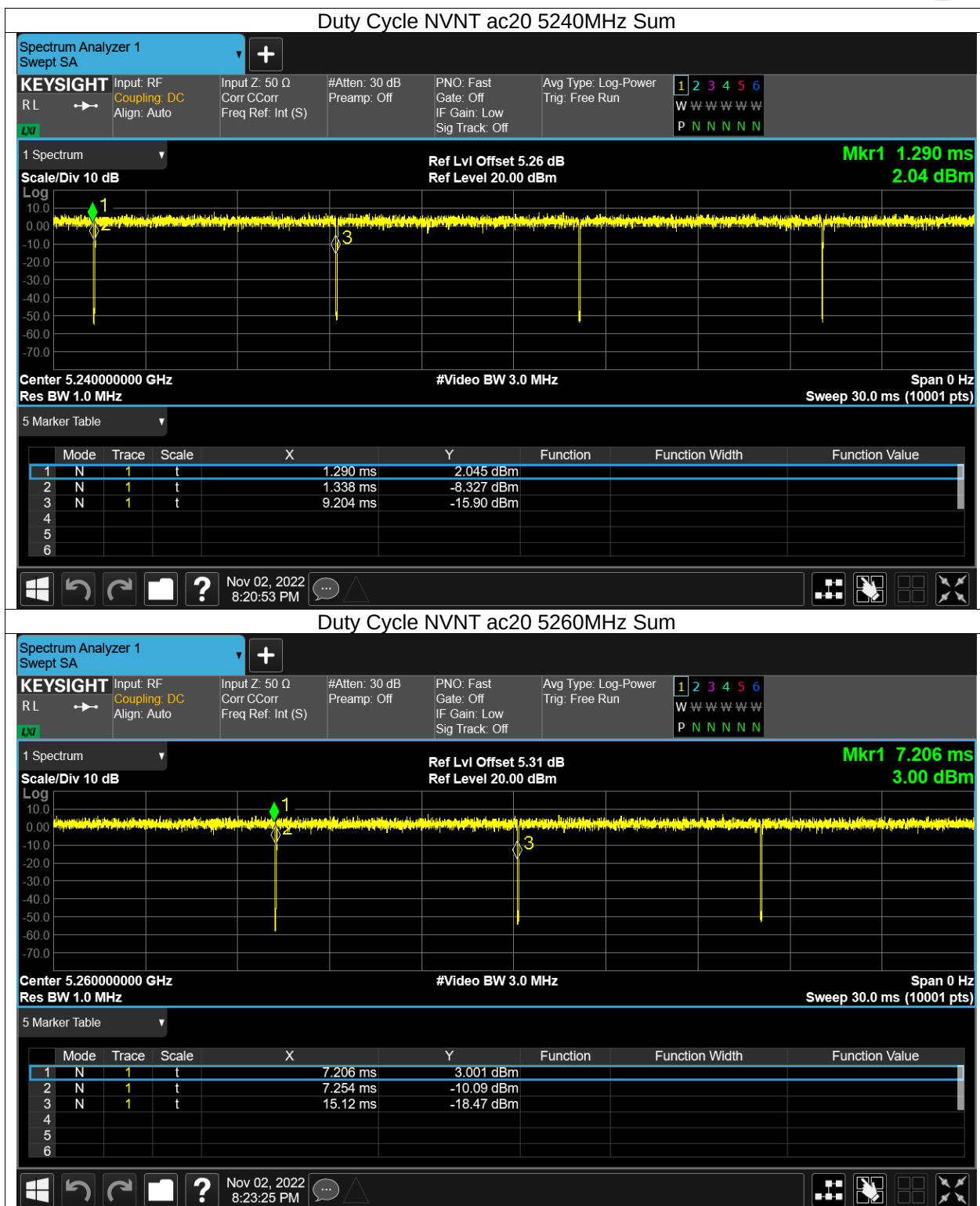
Duty Cycle NVNT ac160 5250MHz Sum

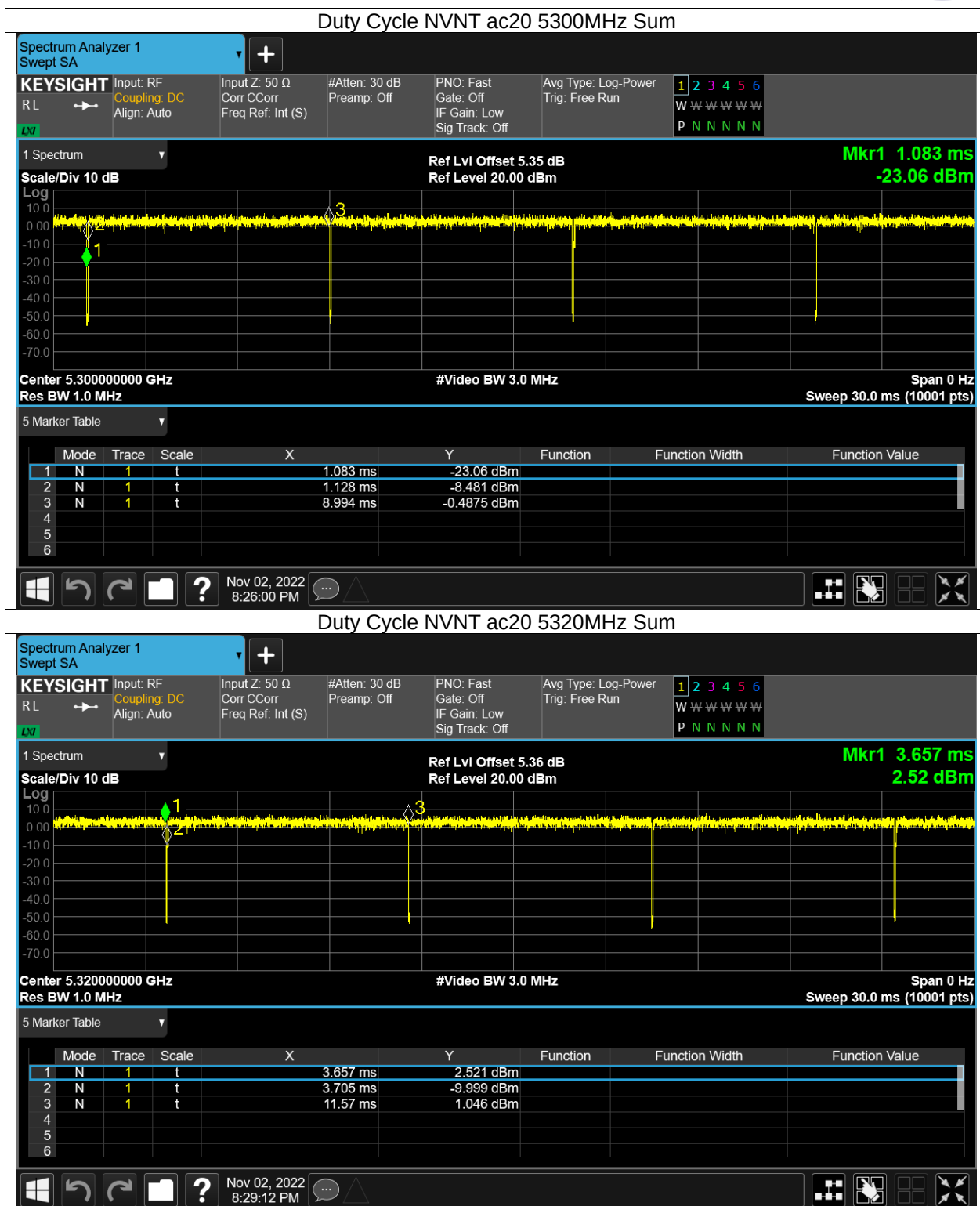


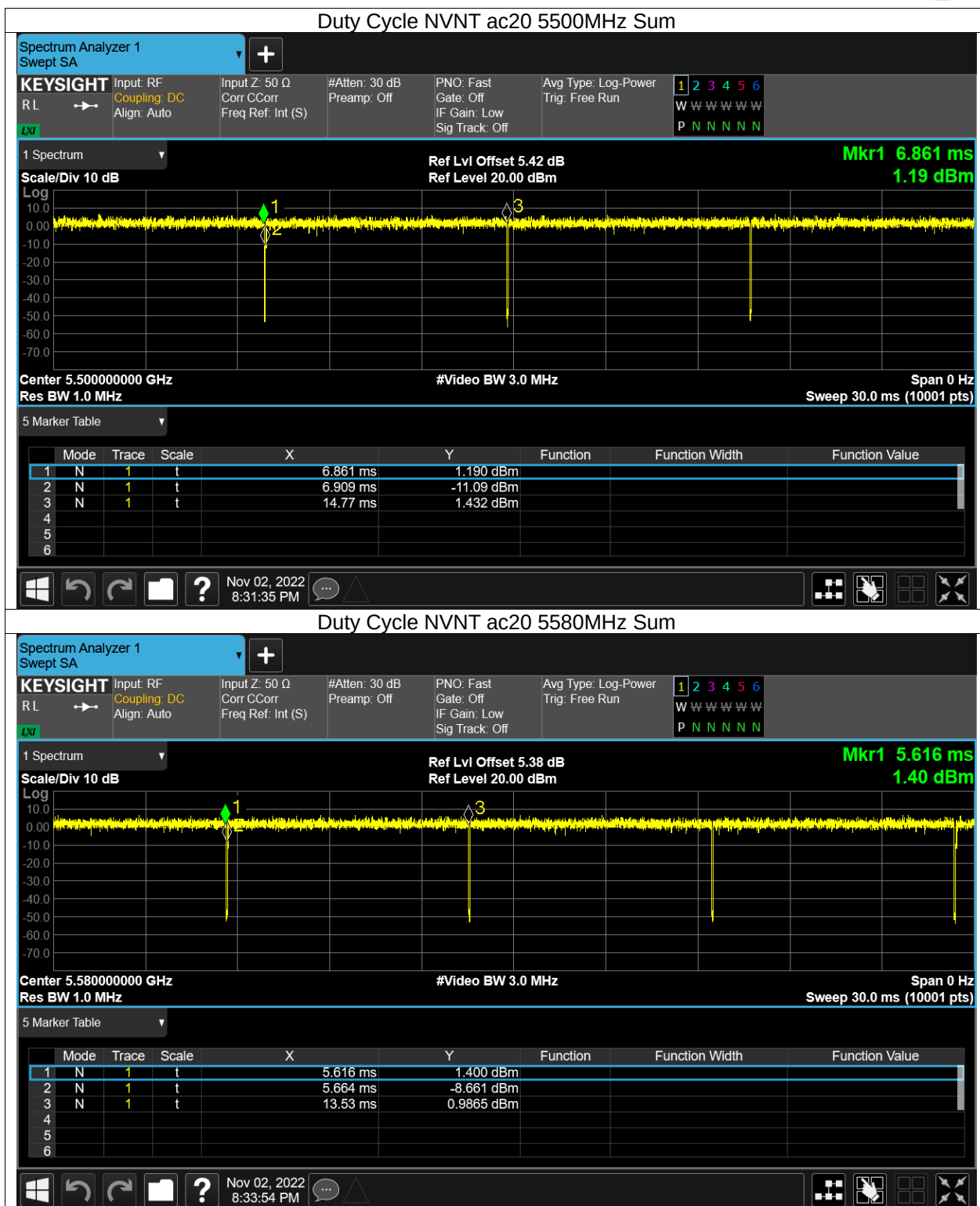
Duty Cycle NVNT ac160 5570MHz Sum

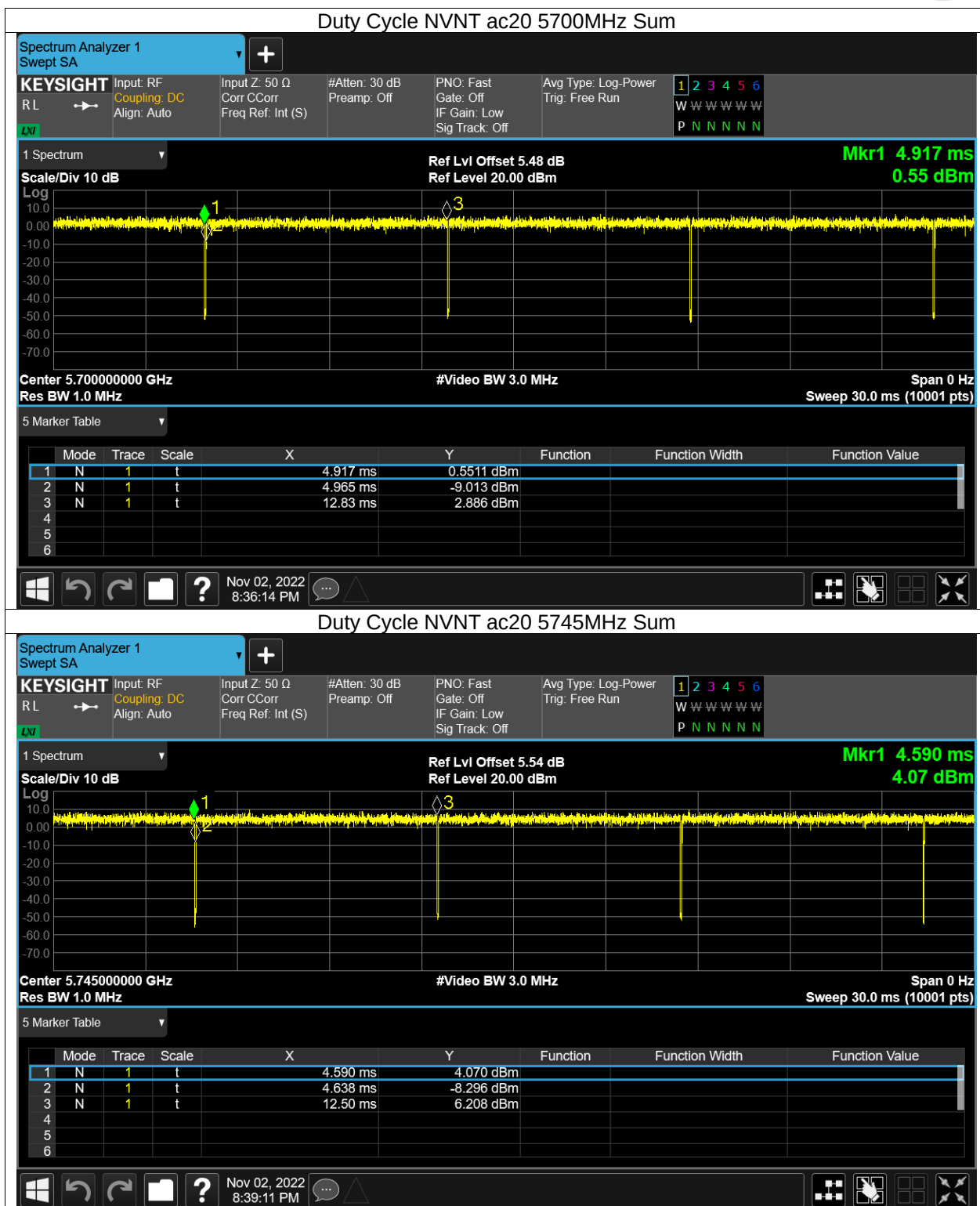


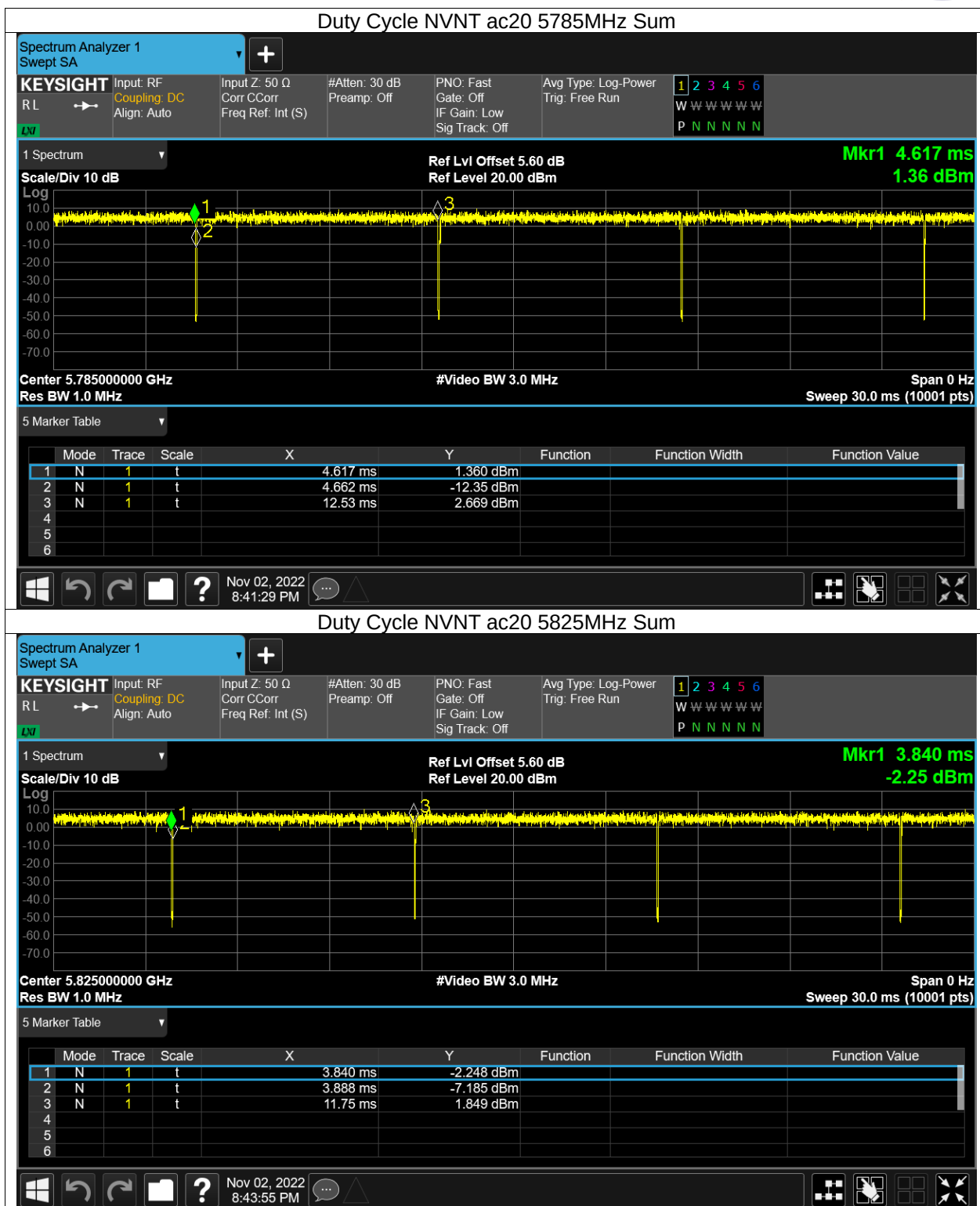


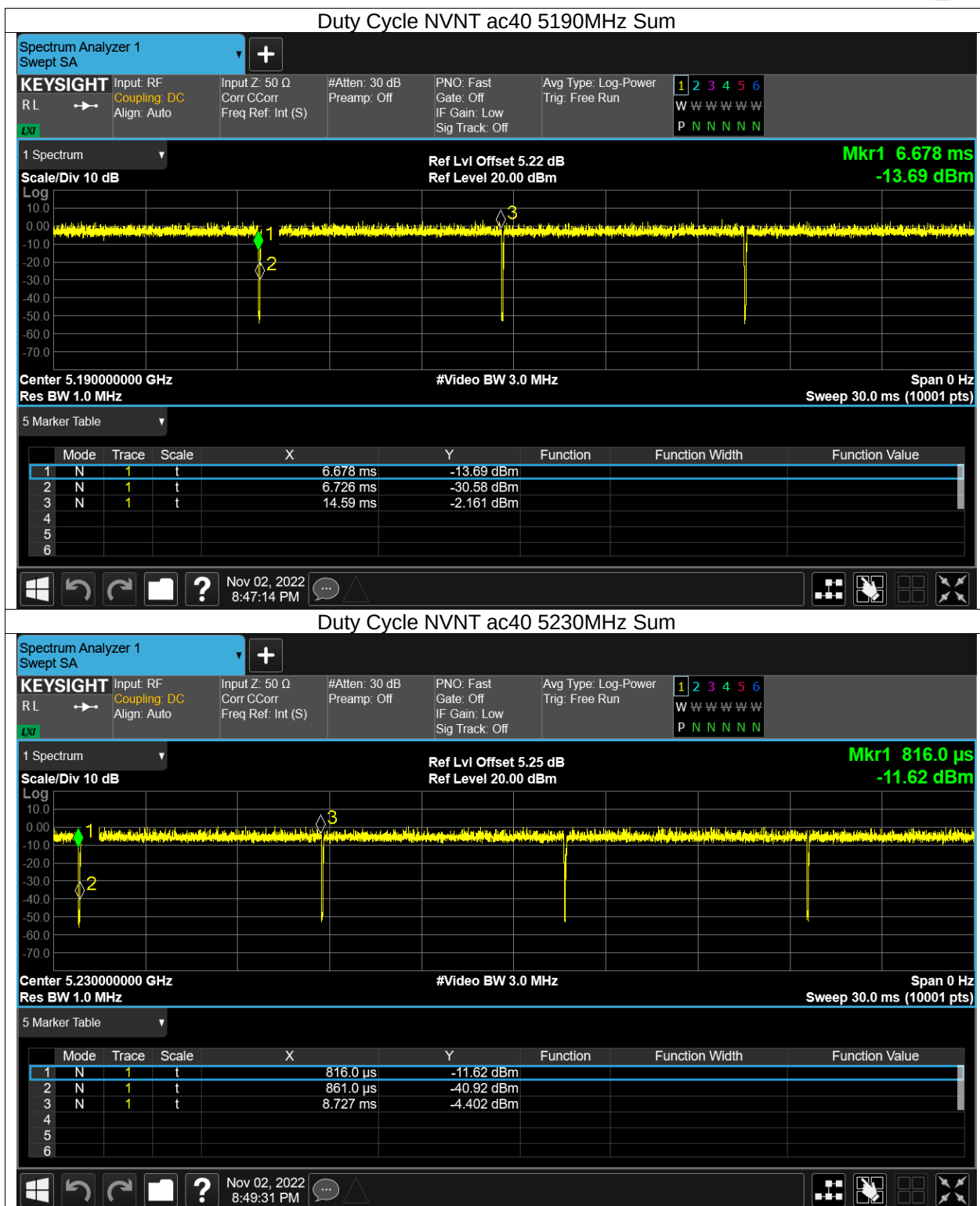


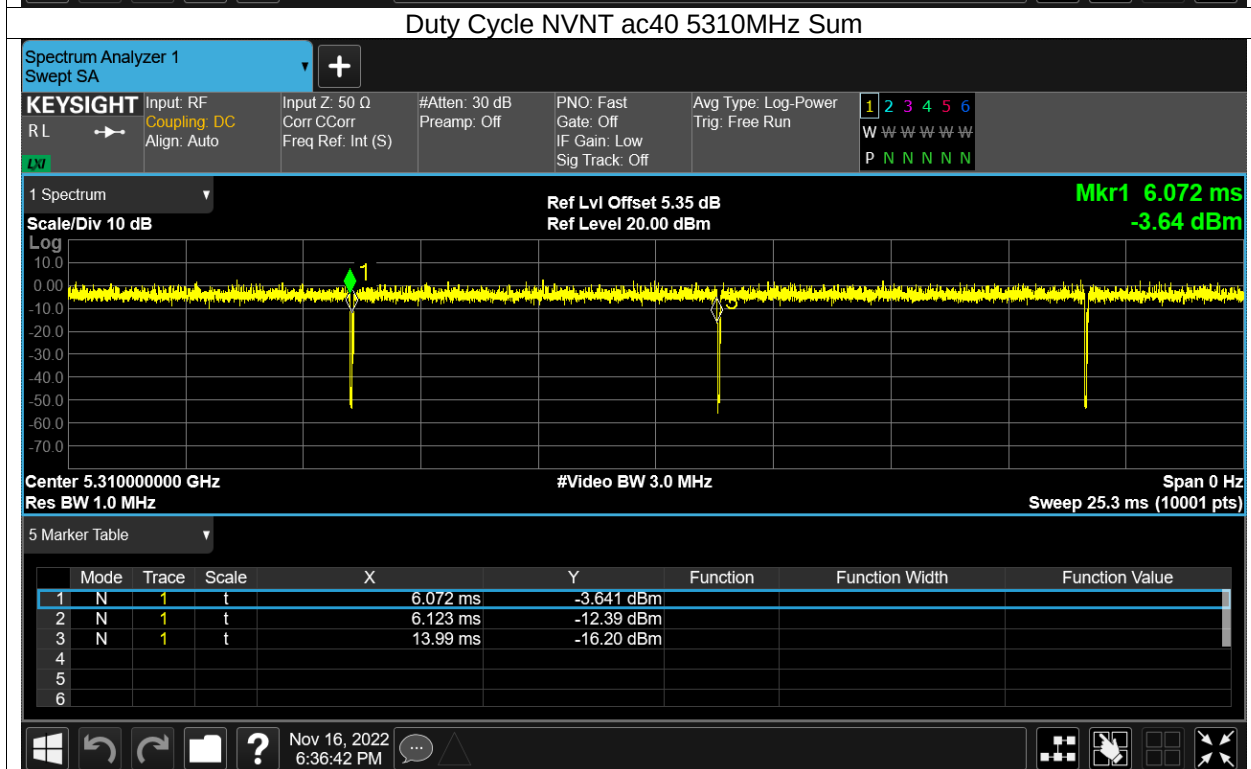
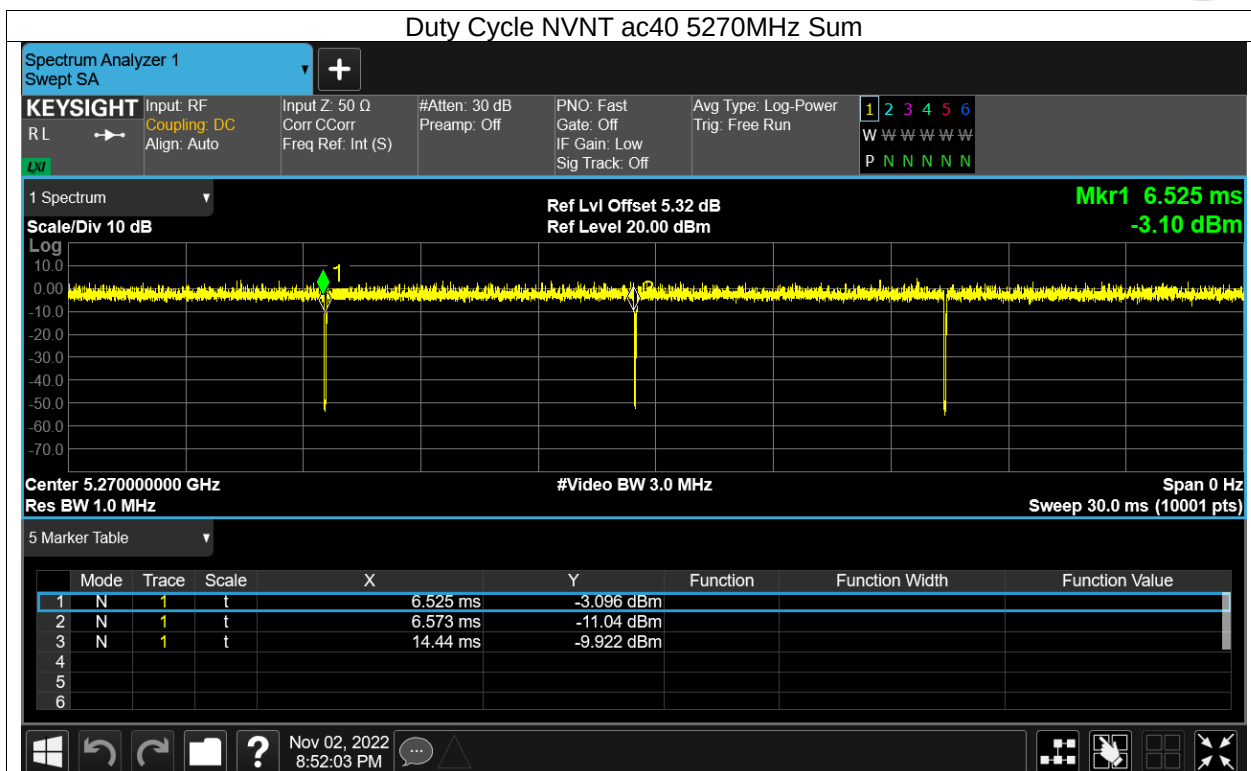


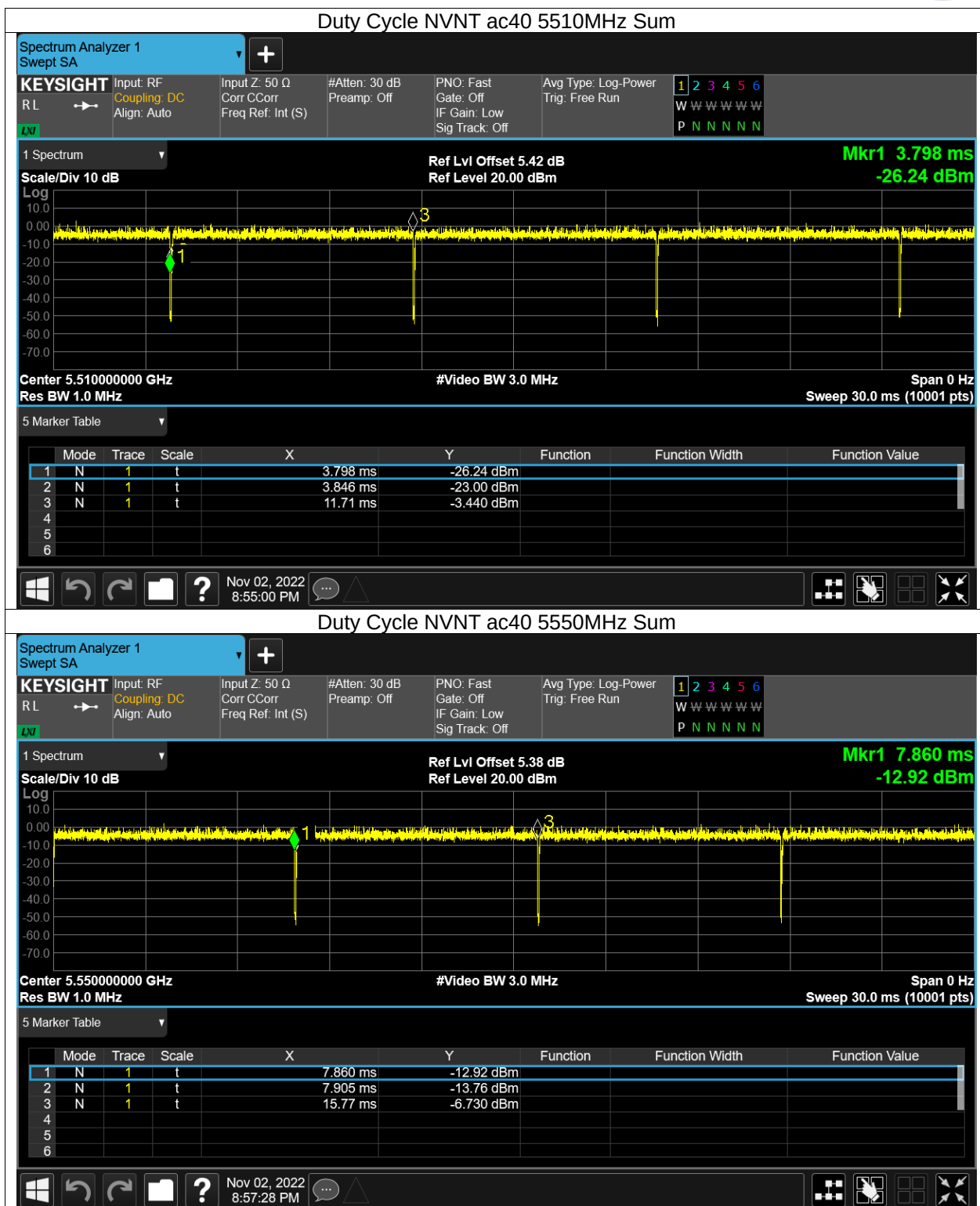


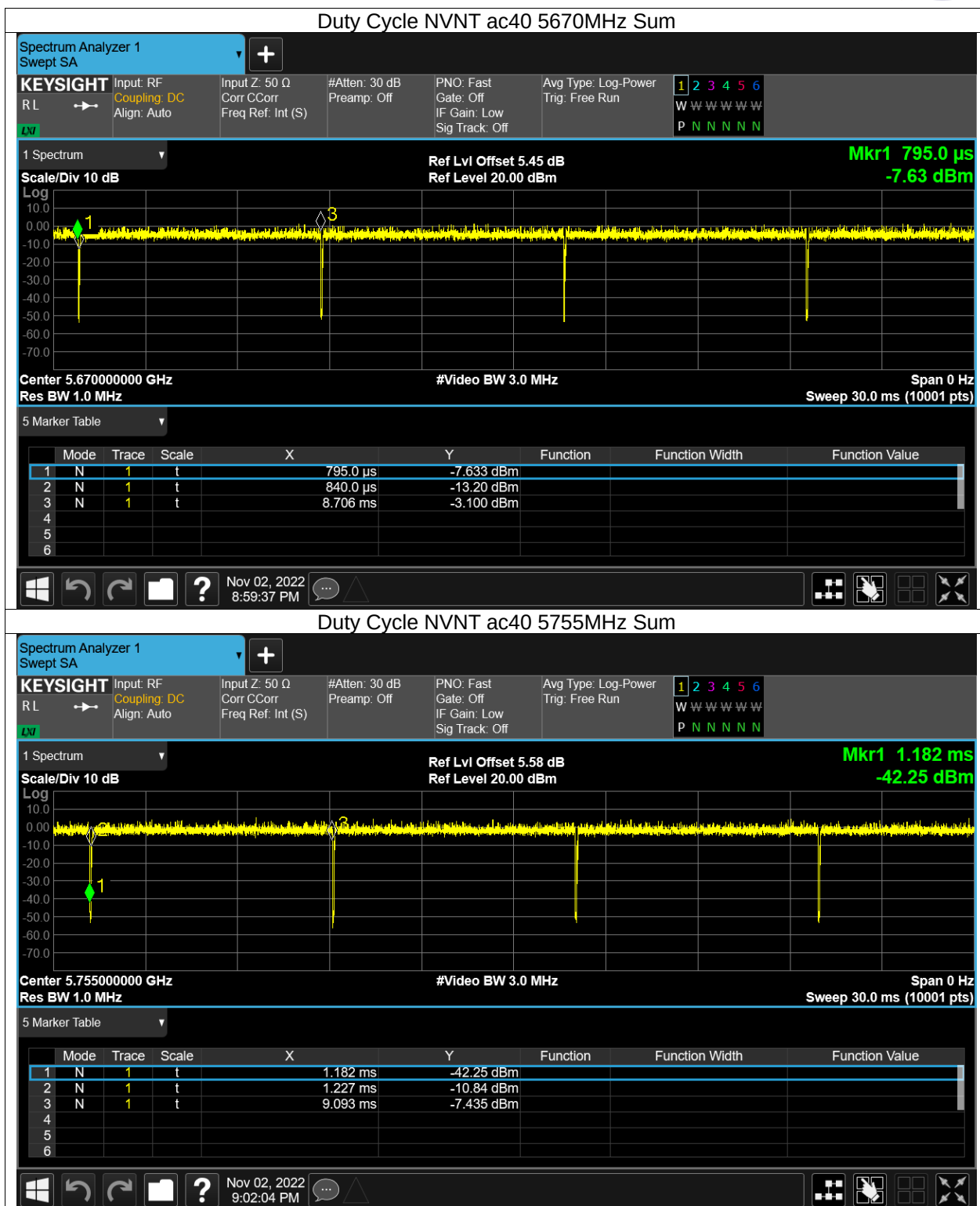


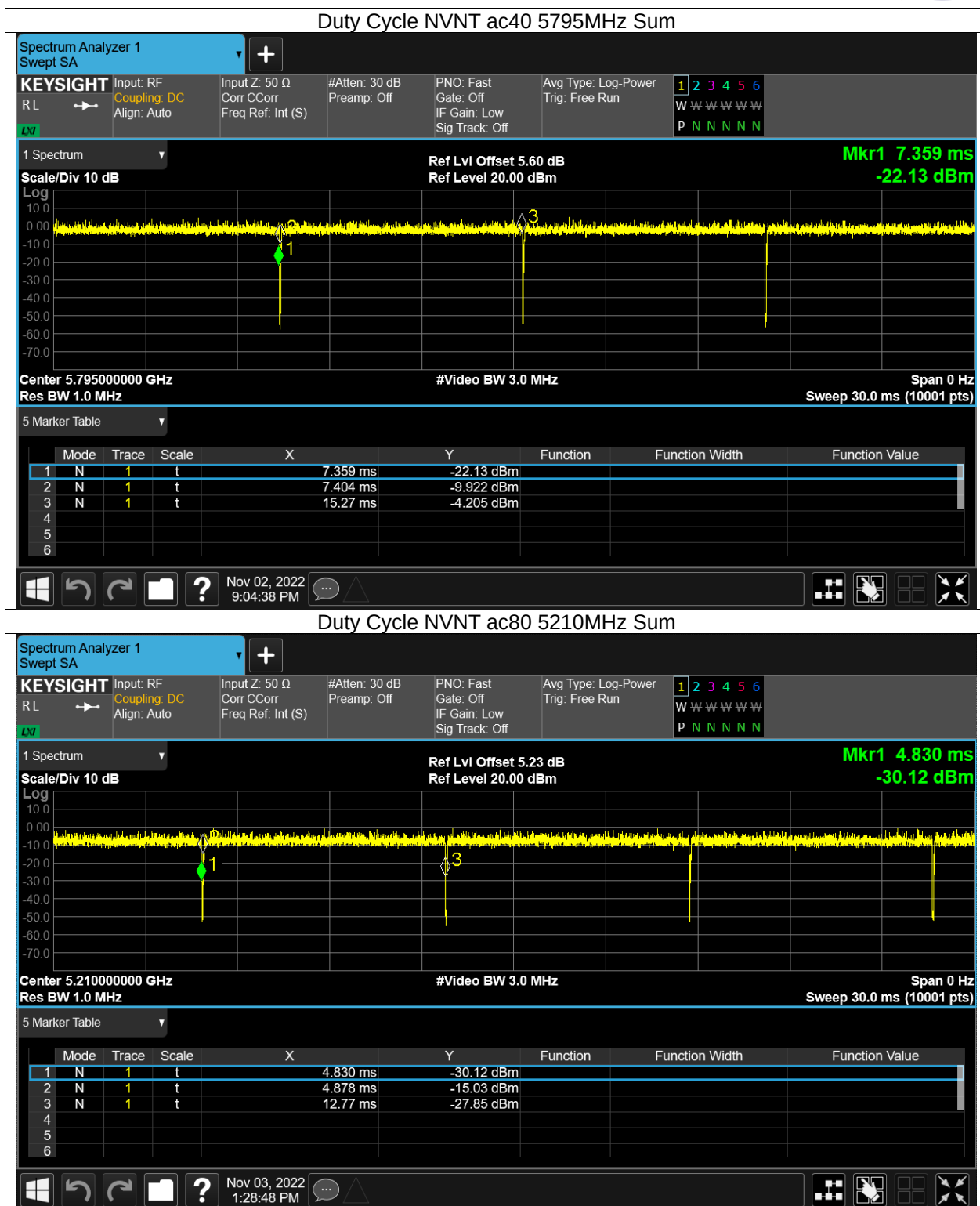


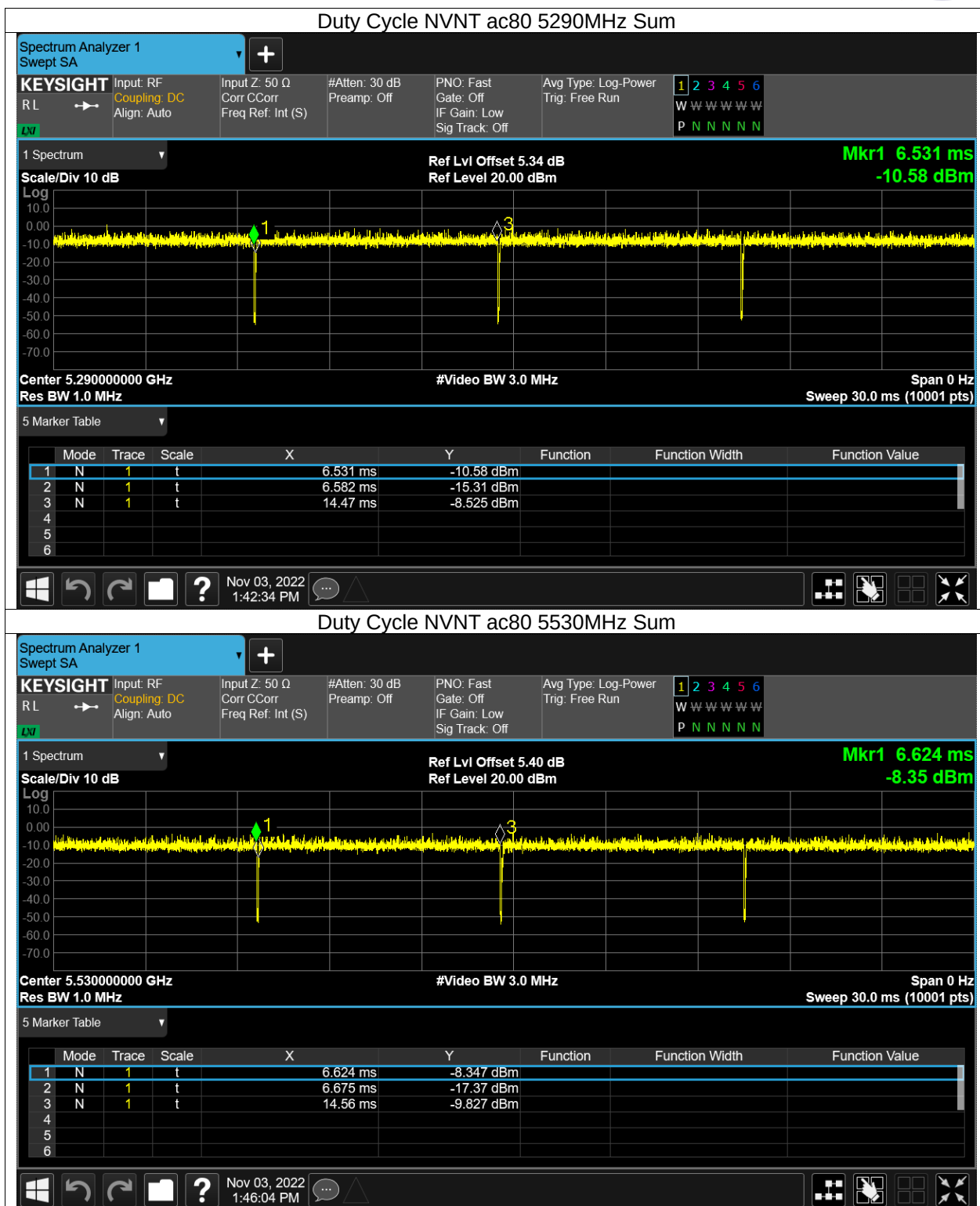


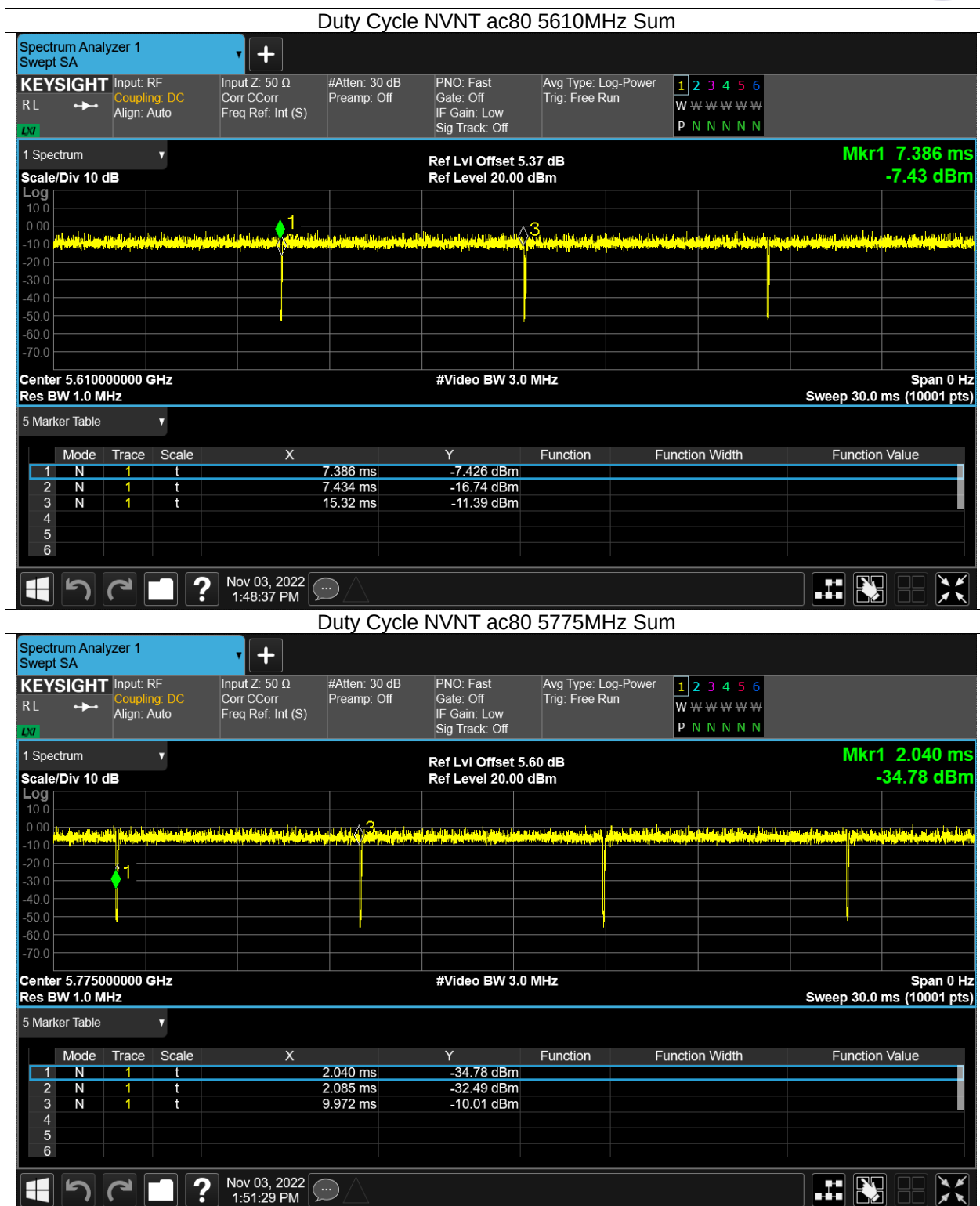






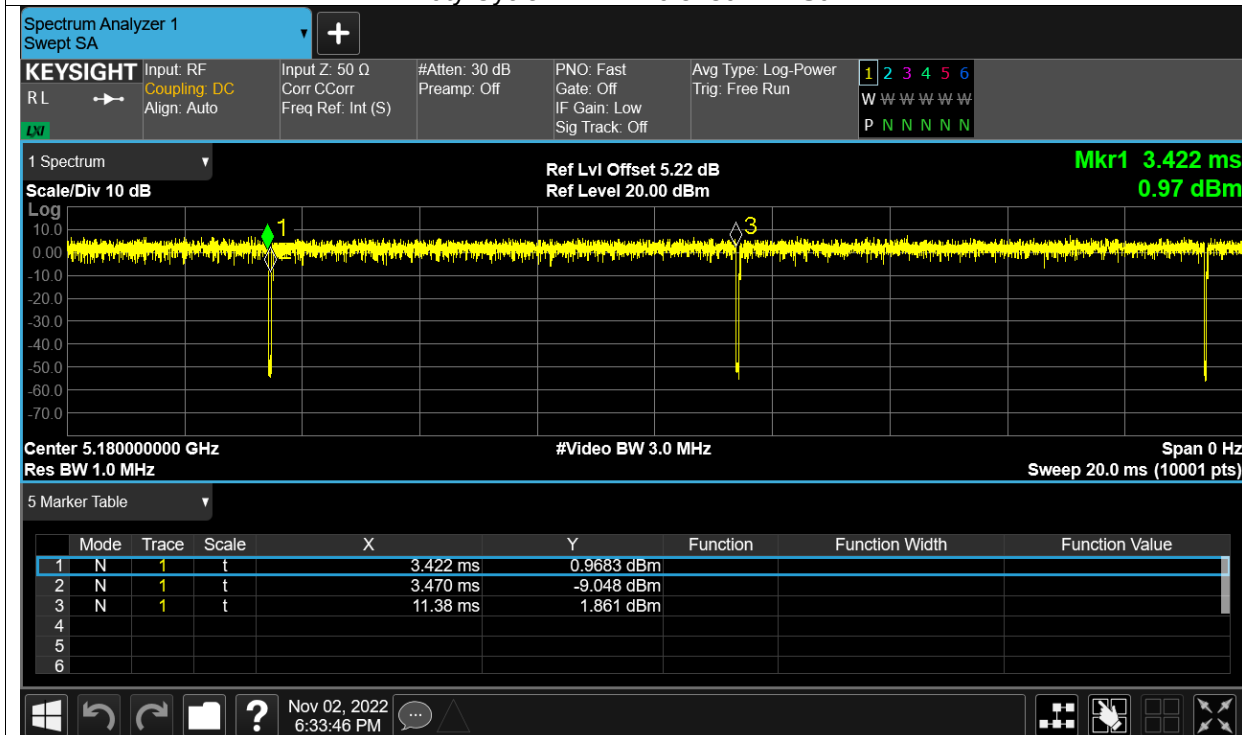








Duty Cycle NVNT n20 5180MHz Sum



Duty Cycle NVNT n20 5200MHz Sum

