



RF TEST REPORT

Product Name: Smart phone

Model Name: TickTock-S, Golden Eye

FCC ID: 2AK6CTICKTOCK-S

Issued For : Shanghai Unihertz E-Commerce Co., Ltd

Room 308, Building C, 508Chundong Rd, Minhang district
Shanghai, China 201108

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: LGT22K048RF016

Sample Received Date: Nov. 21, 2022

Date of Test: Nov. 21, 2022 – Feb. 17, 2023

Date of Issue: Feb. 17, 2023

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TEST REPORT CERTIFICATION

Applicant Shanghai Unihertz E-Commerce Co., Ltd
Address Room 308, Building C, 508Chundong Rd, Minhang district
Shanghai, China 201108
Manufacturer OBLUE Communication Technology Co., Ltd.
Address Room 702, Hepingdayou industrial and trade industrial
park, No. 41, Yonghe Road, Heping Community, Fuhai
Street, Baoan District, Shenzhen City, China
Product Name Smart phone
Trademark Unihertz, iHunt, 8849
Model Name TickTock-S, Golden Eye
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





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Revision History

Rev.	Issue Date	Contents
00	Feb. 17, 2023	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.



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	FCC Registration No.: 746540
	A2LA Certificate No.: 6727.01

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	$\pm 0.68\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.988\text{dB}$
3	All emissions, radiated 9K-30MHz	$\pm 2.84\text{dB}$
4	All emissions, radiated 30M-1GHz	$\pm 4.39\text{dB}$
5	All emissions, radiated 1G-6GHz	$\pm 5.10\text{dB}$
6	All emissions, radiated >6G	$\pm 5.48\text{dB}$
7	Conducted Emission (9KHz-150KHz)	$\pm 2.79\text{dB}$
8	Conducted Emission (150KHz-30MHz)	$\pm 2.80\text{dB}$



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Smart phone											
Trademark	Unihertz											
Model Name	TickTock-S											
Series Model	Golden Eye											
Model Difference	The back of the TickTock-S is a 1.3-inch diameter circular screen with a resolution of 360*360. The back of the Golden Eye is a 500-lumen 1.3-inch diameter circular LED light (camping light).											
Product Description	The EUT is a Smart phone <table border="1"> <tr> <td rowspan="4">Operation Frequency:</td><td>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</td></tr> <tr> <td>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</td></tr> <tr> <td>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</td></tr> <tr> <td>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</td></tr> <tr> <td>Modulation Type:</td><td>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</td></tr> <tr> <td>Antenna Designation:</td><td>Please refer to the Note 3.</td></tr> <tr> <td>Antenna Gain(dBi)</td><td>1.2</td></tr> </table> More details of EUT technical specification, please refer to the User Manual.	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.	Antenna Gain(dBi)	1.2
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Antenna Designation:	Please refer to the Note 3.											
Antenna Gain(dBi)	1.2											
Test Channel	Please refer to the Note 2.											
Adapter	Input: 100-240V~50/60Hz, 0.8A Output: 5V, 3A OR 9V,3A OR 12V,2.75A, 33.0W MAX											
Battery	Capacity: 5200mAh Rated Voltage: 3.85V											
Hardware Version	G89_V1.1											
Software Version	TickTock-S_20220921											
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



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			
Channel	Frequency		
52	5260	120	5600
54	5270	122	5610
56	5280	124	5620
58	5290	126	5630
60	5300	128	5640
62	5310	132	5660
64	5320	134	5670
		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
102	5510	151	5755
110	5550	159	5795
134	5670		

For 802.11ac (VHT80)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
42	5210	58	5290
106	5530	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
1	Unihertz	TickTock-S	PIFA	N/A	0.2	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 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.
- (3) We have been tested for all available U.S. voltage and frequencies (For 120V, 50/60Hz and 240V, 50/60Hz) for which the device is capable of operation.



(4) The battery is fully-charged during the radiated and RF conducted test.

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.

Type	Mode Or Modulation type	Power Class	Software For Testing
5G WIFI Band1 (5150MHz-5250MHz)	802.11a	18	Engineering mode
	802.11n(HT20)	17	
	802.11n(HT40)	16	
	802.11ac(VHT20)	16	
	802.11ac(VHT40)	14	
	802.11ac(VHT80)	14	
5G WIFI Band2 (5250MHz-5350MHz)	802.11a	18	
	802.11n(HT20)	17	
	802.11n(HT40)	16	
	802.11ac(VHT20)	16	
	802.11ac(VHT40)	14	
	802.11ac(VHT80)	14	
5G WIFI Band3 (5470MHz-5725MHz)	802.11a	17	
	802.11n(HT20)	16	
	802.11n(HT40)	16	
	802.11ac(VHT20)	15	
	802.11ac(VHT40)	13	
	802.11ac(VHT80)	10	
5G WIFI Band4 (5725MHz-5850MHz)	802.11a	17	
	802.11n(HT20)	15	
	802.11n(HT40)	14	
	802.11ac(VHT20)	13	
	802.11ac(VHT40)	11	
	802.11ac(VHT80)	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
Type-C Cable	N/A	N/A	N/A	1m
Adapter	Shenzhen huajin Electronics Co.Ltd	HJ-PD33W-US	N/A	Input: 100-240V~50/60Hz, 0.8A Output: 5V, 3A OR 9V,3A OR 12V,2.75A 33.0W MAX

Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Earphone	N/A	39630078	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	ESU	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				

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESU	100372	2022.04.12	2023.04.11
Spectrum Analyzer	Keysight	N9010B	MY60242508	2022.04.29	2023.04.28
Bilog Antenna	Schwarzbeck	VULB 9168	01447	2022.12.12	2024.12.11
Horn Antenna(18GHz)	Schwarzbeck	3115	10SL0060	2022.06.02	2025.06.01
Horn Antenna(40 GHz)	A-INFO	LB-180400-KF	J211060273	2022.03.28	2025.03.27
Pre-amplifier(3GHz)	HP	8447D	2727A05655	2022.04.11	2023.04.10
Pre-amplifier(26.5G)	Agilent	8449B	3008A4722	2022.04.12	2023.04.11
Pre-amplifier(40 GHz)	com-mw	LNPA_18-40-01	18050001	2022.06.08	2023.06.07
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
Temperature & Humidity	KTJ	TA218B	N.A	2022.05.05	2023.05.04
Testing Software	EMC-I_V1.4.0.3_SKET				

RF Connected Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Signal Generator	Keysight	N5182B	MY59100717	2022.04.30	2023.04.29
Signal Analyzer	Keysight	N9010B	MY60242508	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
Testing Software	MTS 8310_2.0.0.0_MWRF-TEST				



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

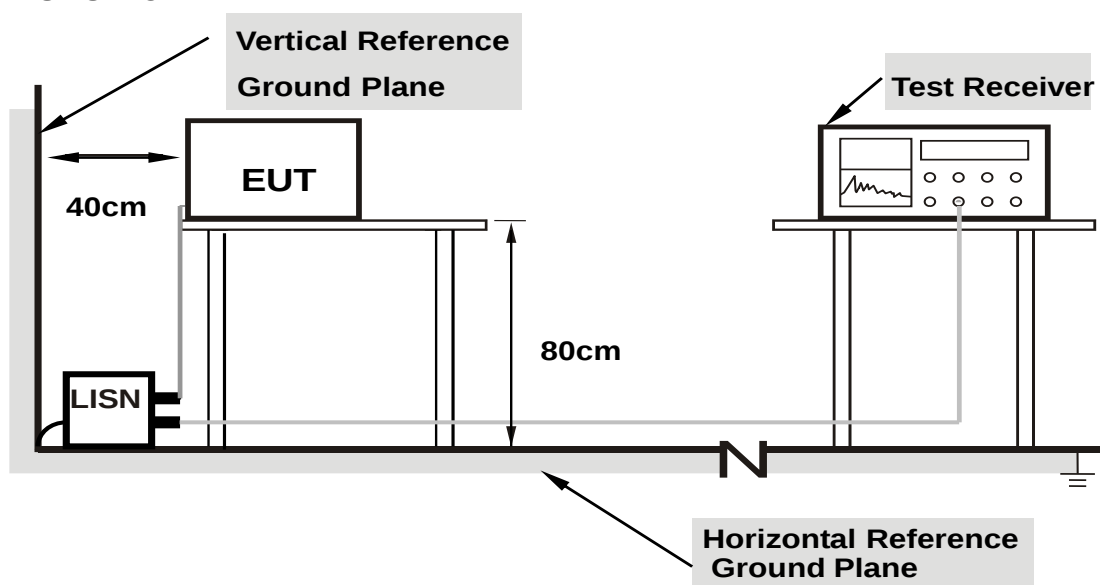
3.1.2 TEST PROCEDURE

- 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.

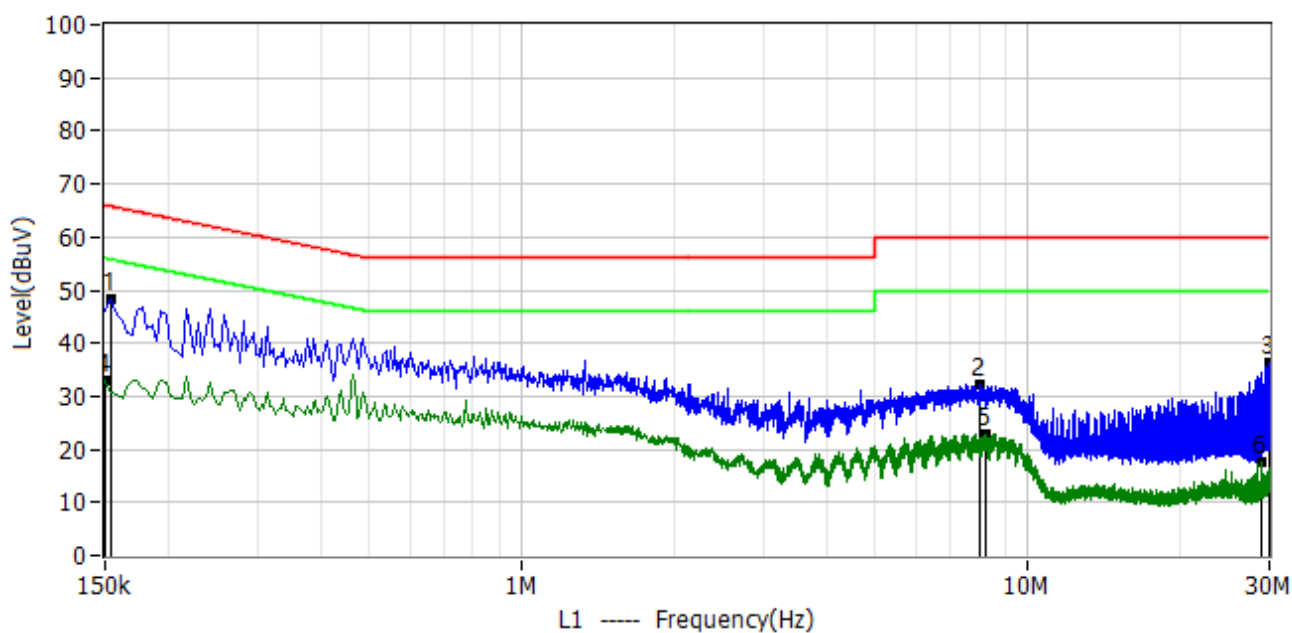
3.1.5 EUT OPERATING CONDITIONS

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

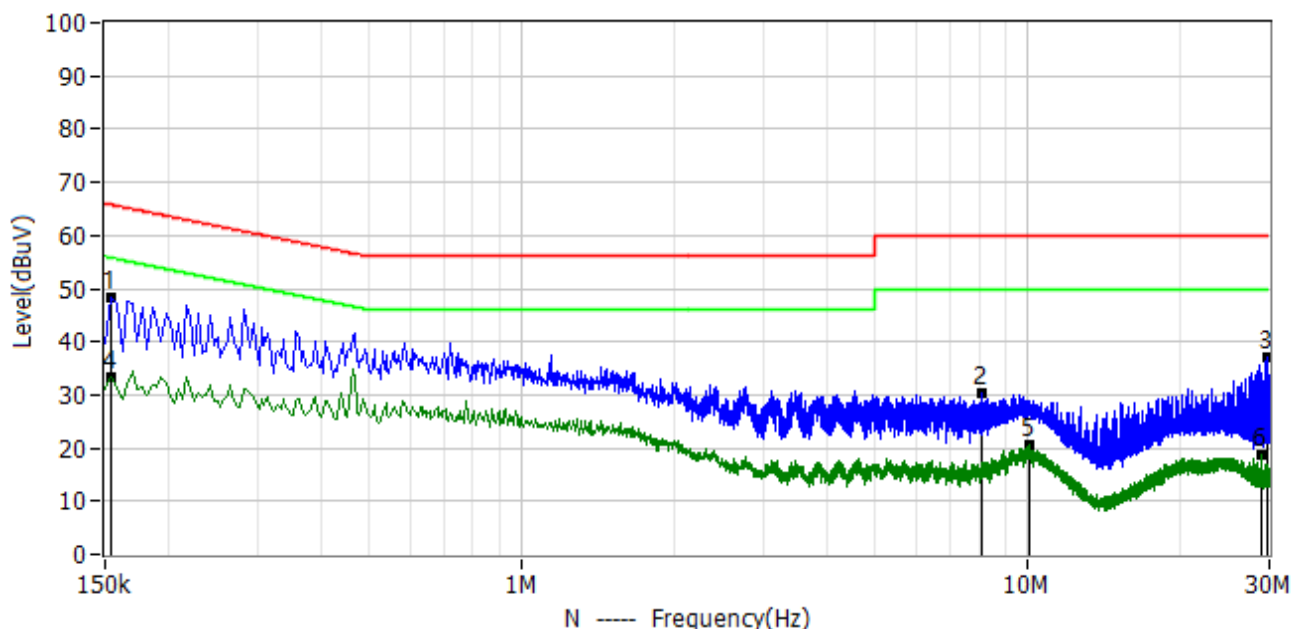
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.3℃
M/N: TickTock-S	Humidity: 60%RH
Test Voltage: AC 120V/60Hz	Test Data: 2022-11-25
Test Mode: TX 5G WIFI	
Note:	



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	154.000kHz	37.94	10.50	48.44	65.78	-17.34	PK	L1
2*	8.058MHz	21.16	10.90	32.06	60.00	-27.94	PK	L1
3*	29.994MHz	25.07	11.22	36.29	60.00	-23.71	PK	L1
4*	150.000kHz	22.30	10.50	32.80	56.00	-23.20	AV	L1
5*	8.242MHz	12.11	10.91	23.02	50.00	-26.98	AV	L1
6*	28.886MHz	6.39	11.21	17.60	50.00	-32.40	AV	L1



Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.3℃
M/N: TickTock-S	Humidity: 60%RH
Test Voltage: AC 120V/60Hz	Test Data: 2022-11-25
Test Mode: TX 5G WIFI	
Note:	



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	154.000kHz	37.83	10.50	48.33	65.78	-17.45	PK	N
2*	8.106MHz	19.38	10.91	30.29	60.00	-29.71	PK	N
3*	29.662MHz	25.86	11.22	37.08	60.00	-22.92	PK	N
4*	154.000kHz	22.77	10.50	33.27	55.78	-22.51	AV	N
5*	10.026MHz	9.50	10.96	20.46	50.00	-29.54	AV	N
6*	28.886MHz	7.45	11.21	18.66	50.00	-31.34	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:

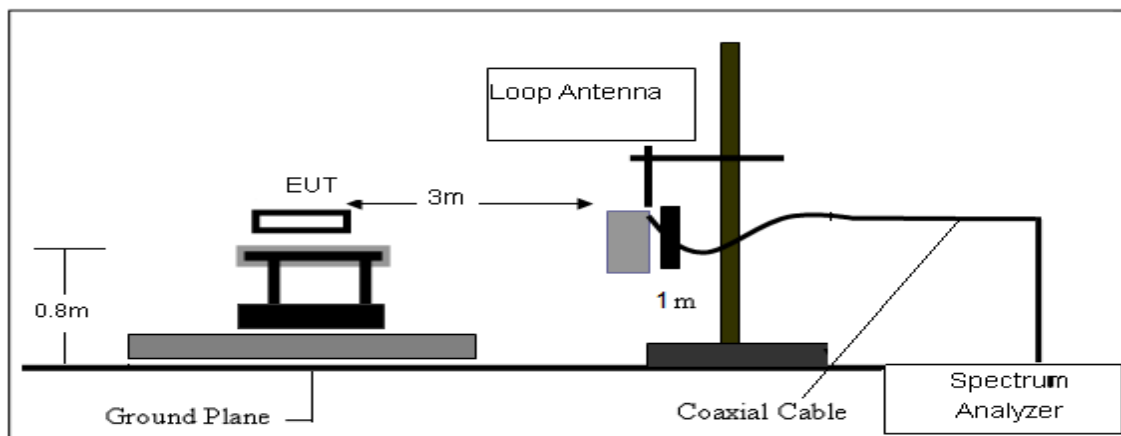
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

3.2.2 DEVIATION FROM TEST STANDARD

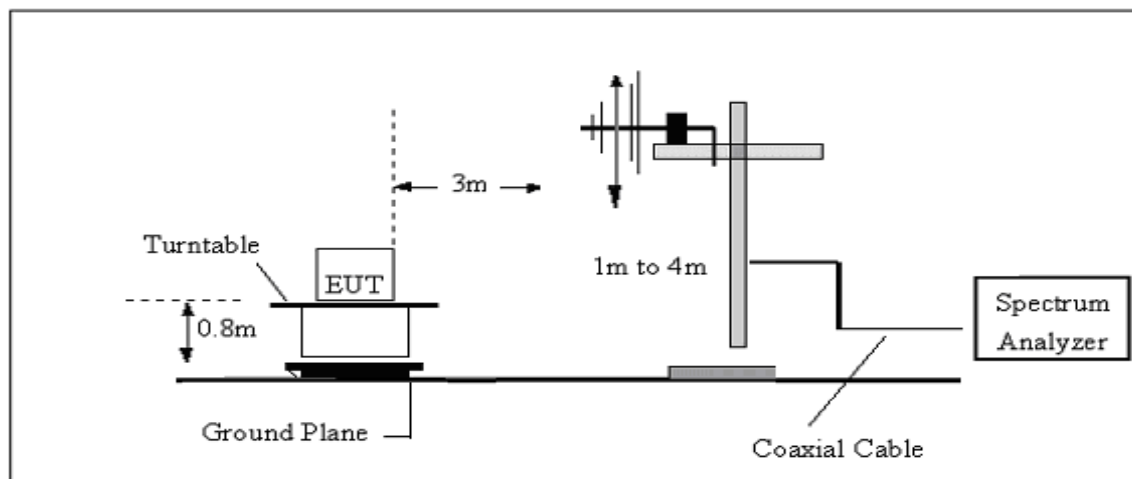
No deviation

3.2.3 TEST SETUP

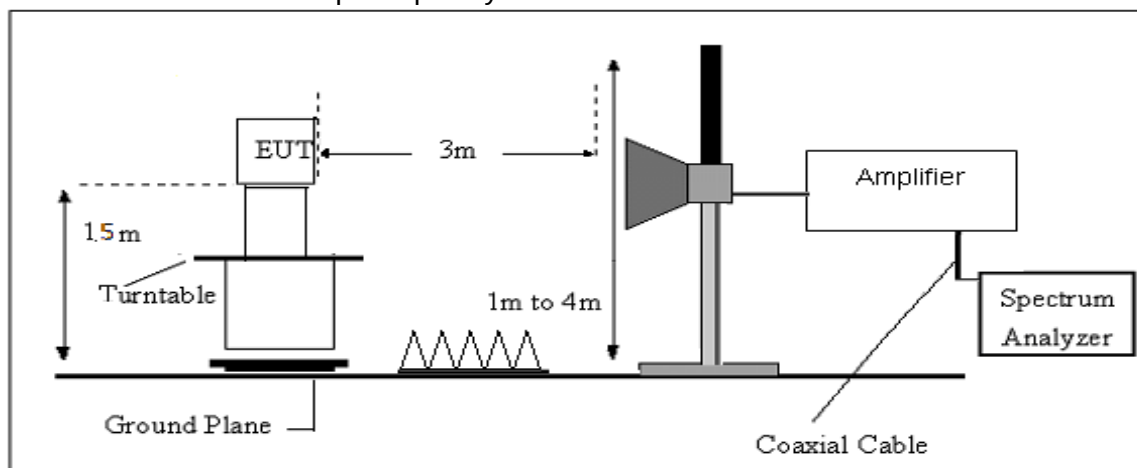
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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

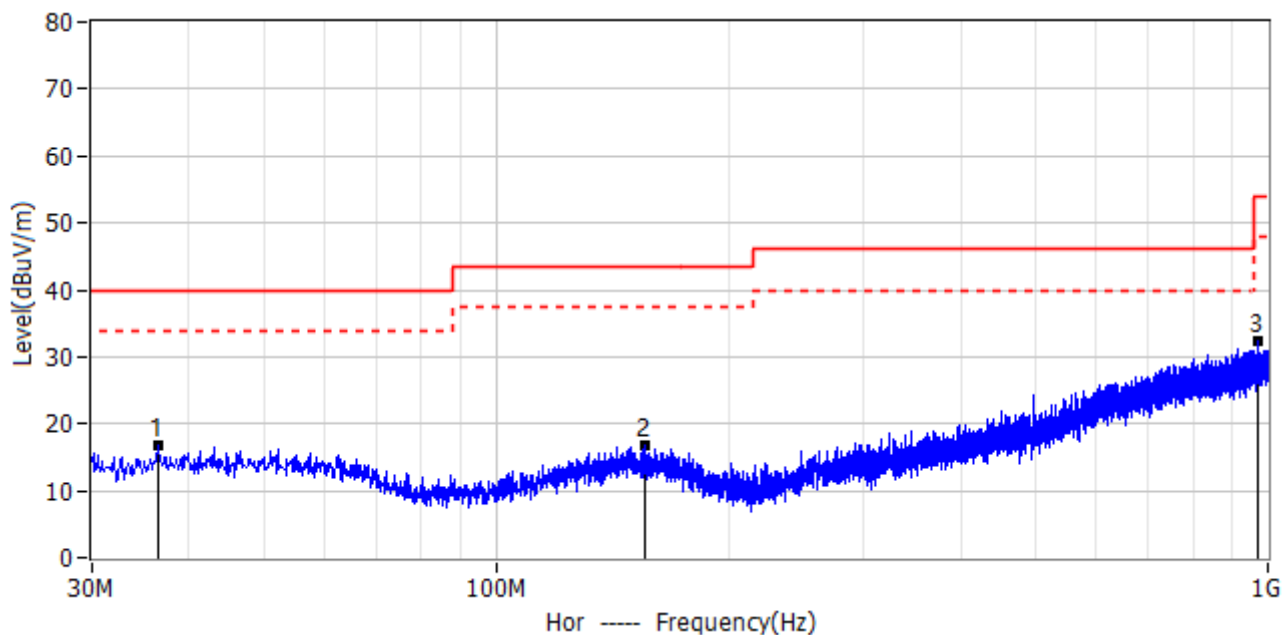
Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBμV/m)	(dBμV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

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



3.2.6 TEST RESULTS

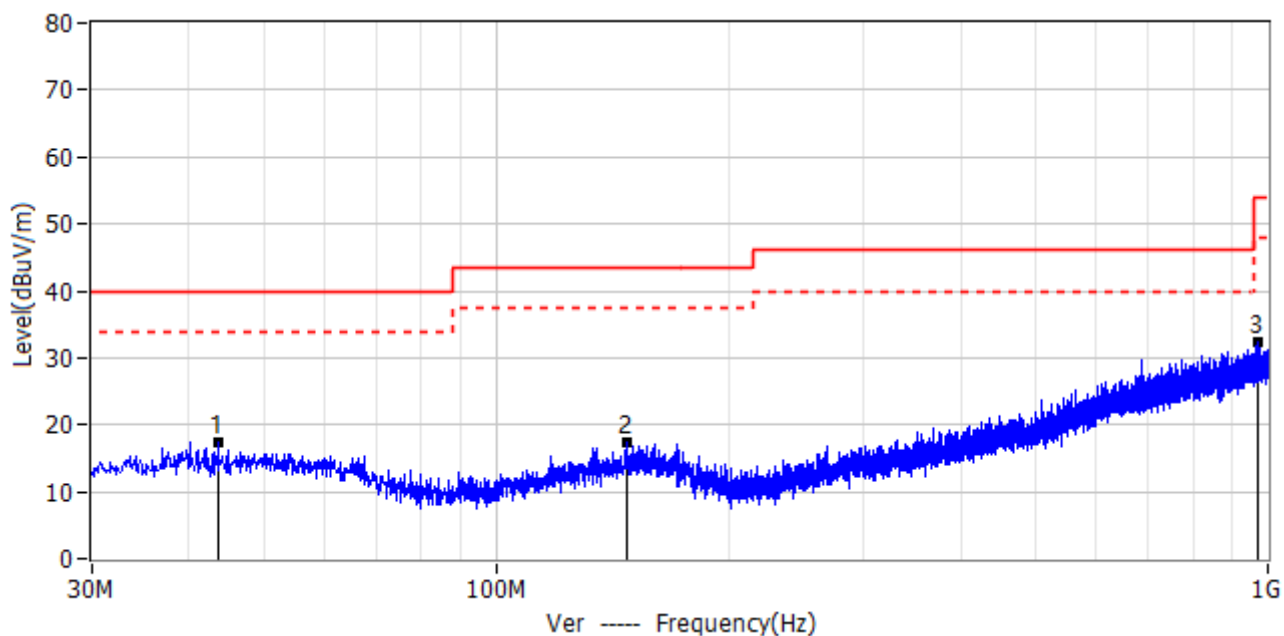
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.6℃
M/N: TickTock-S	Humidity: 49%RH
Test Voltage: Battery	Test Data: 2022-11-29
Test Mode: TX 5G WIFI	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	36.548MHz	3.48	13.39	16.87	40.00	-23.13	PK	Hor
2*	156.464MHz	2.43	14.20	16.63	43.50	-26.87	PK	Hor
3*	969.324MHz	4.56	27.81	32.37	54.00	-21.63	PK	Hor



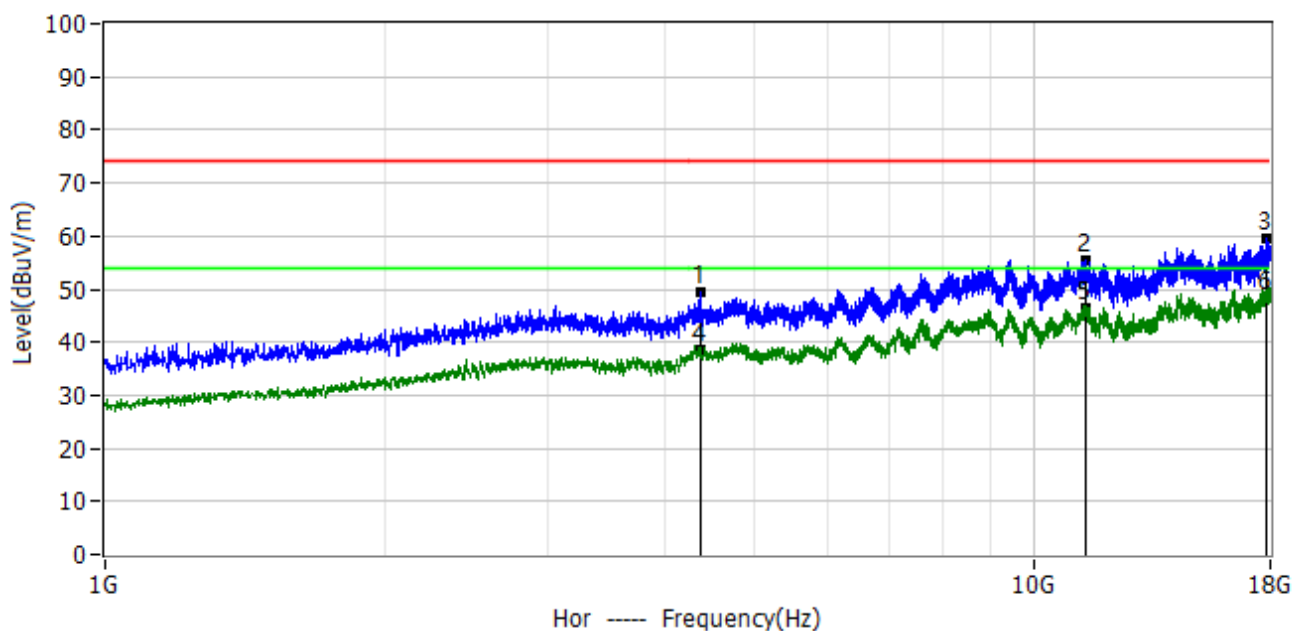
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.6℃
M/N: TickTock-S	Humidity: 49%RH
Test Voltage: Battery	Test Data: 2022-11-29
Test Mode: TX 5G WIFI	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	43.701MHz	3.66	13.75	17.41	40.00	-22.59	PK	Ver
2*	147.855MHz	3.50	14.02	17.52	43.50	-25.98	PK	Ver
3*	970.900MHz	4.68	27.82	32.50	54.00	-21.50	PK	Ver



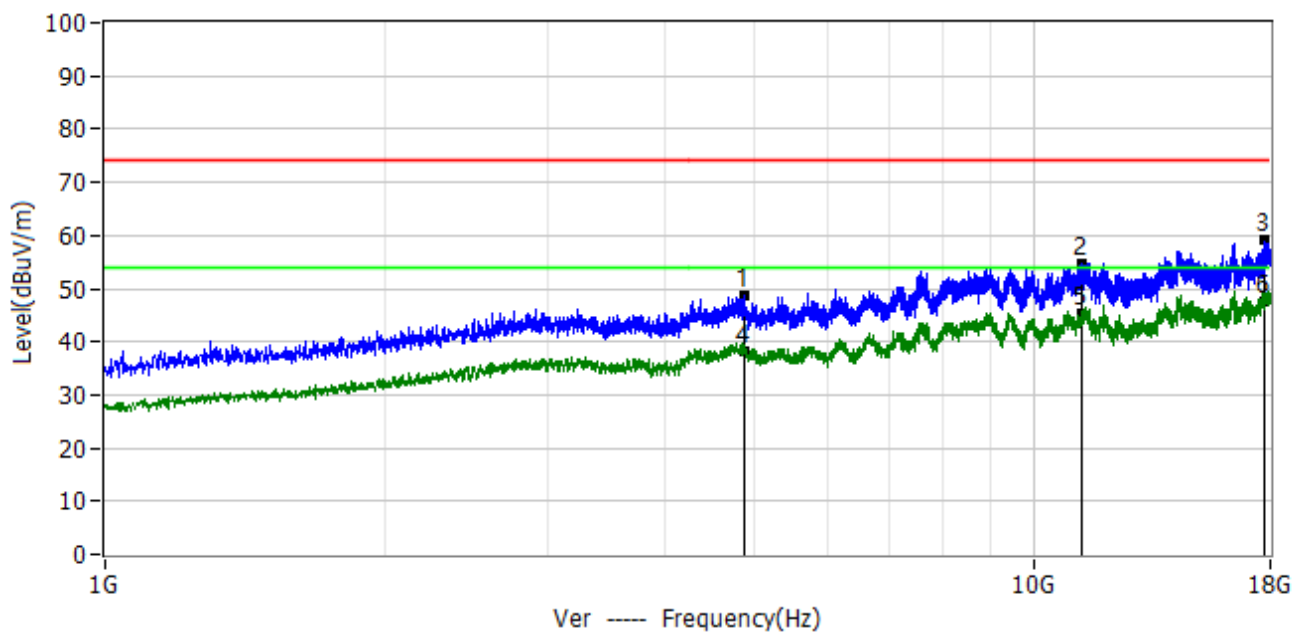
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5180	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.383GHz	55.53	-6.25	49.28	74.00	-24.72	PK	Hor
2*	11.387GHz	53.68	1.86	55.54	74.00	-18.46	PK	Hor
3*	17.828GHz	51.18	8.40	59.58	74.00	-14.42	PK	Hor
4*	4.383GHz	44.85	-6.25	38.60	54.00	-15.40	AV	Hor
5*	11.387GHz	44.44	1.86	46.30	54.00	-7.70	AV	Hor
6*	17.828GHz	40.00	8.40	48.40	54.00	-5.60	AV	Hor



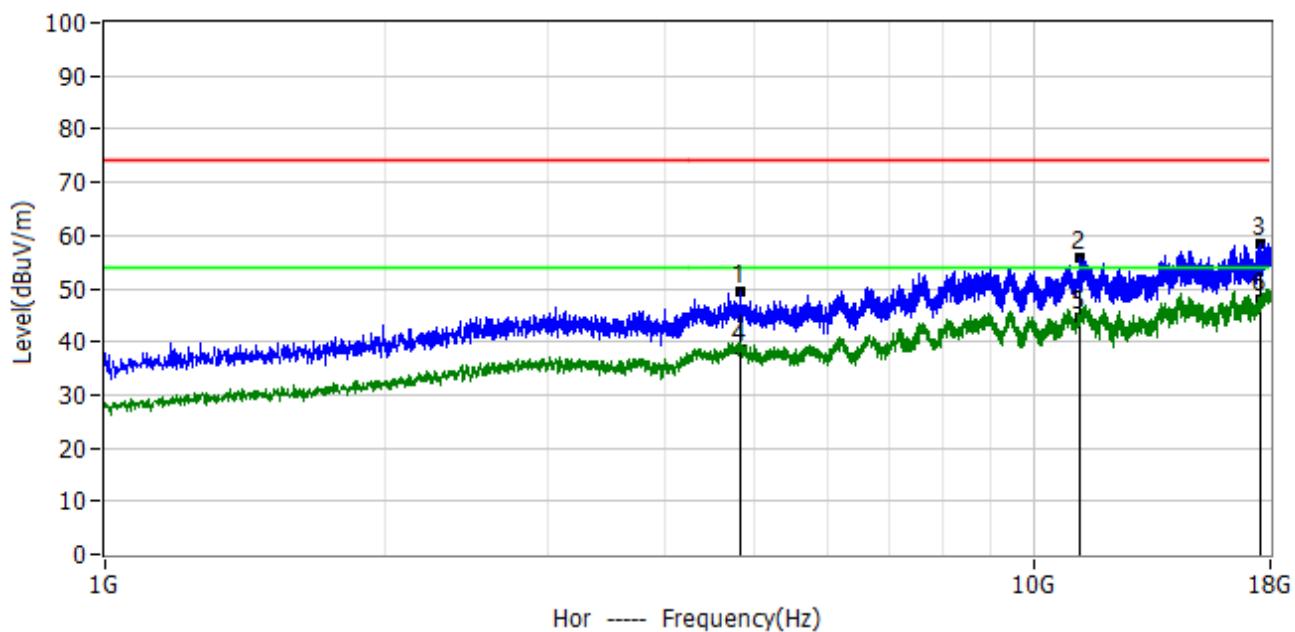
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5180	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.880GHz	54.69	-6.05	48.64	74.00	-25.36	PK	Ver
2*	11.270GHz	53.07	1.79	54.86	74.00	-19.14	PK	Ver
3*	17.777GHz	50.63	8.36	58.99	74.00	-15.01	PK	Ver
4*	4.880GHz	44.15	-6.05	38.10	54.00	-15.90	AV	Ver
5*	11.270GHz	43.61	1.79	45.40	54.00	-8.60	AV	Ver
6*	17.777GHz	39.24	8.36	47.60	54.00	-6.40	AV	Ver



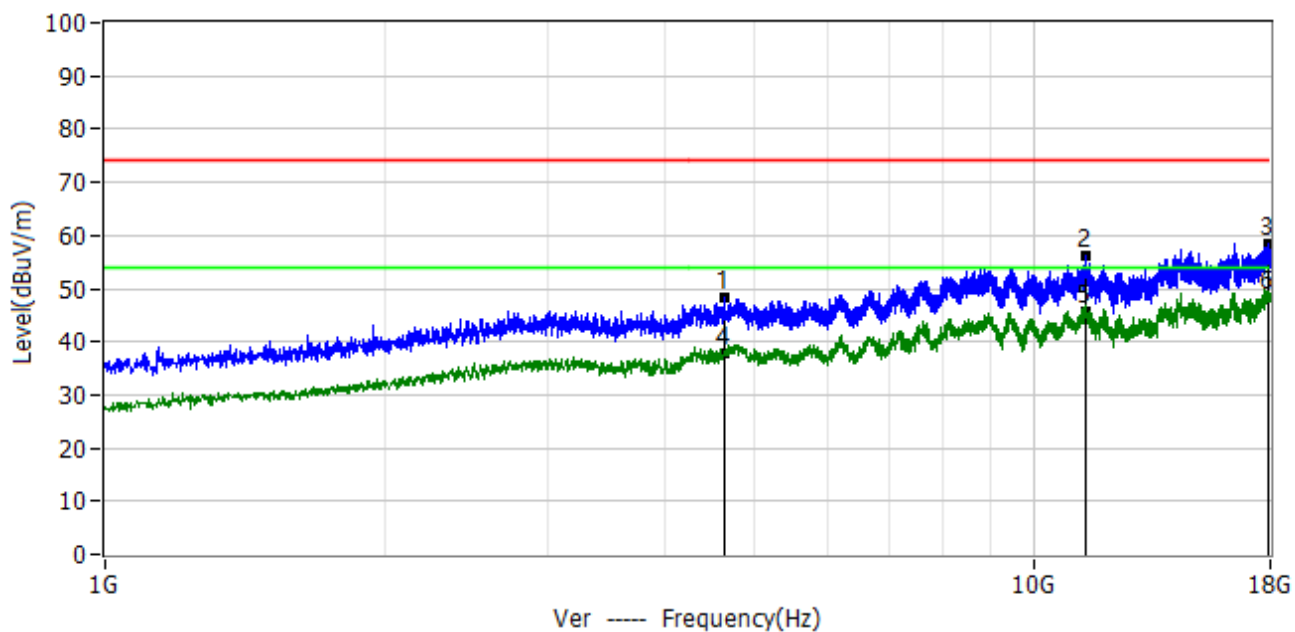
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5200	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.836GHz	55.27	-6.01	49.26	74.00	-24.74	PK	Hor
2*	11.243GHz	54.01	1.77	55.78	74.00	-18.22	PK	Hor
3*	17.592GHz	50.19	8.23	58.42	74.00	-15.58	PK	Hor
4*	4.836GHz	44.71	-6.01	38.70	54.00	-15.30	AV	Hor
5*	11.243GHz	42.93	1.77	44.70	54.00	-9.30	AV	Hor
6*	17.592GHz	39.67	8.23	47.90	54.00	-6.10	AV	Hor



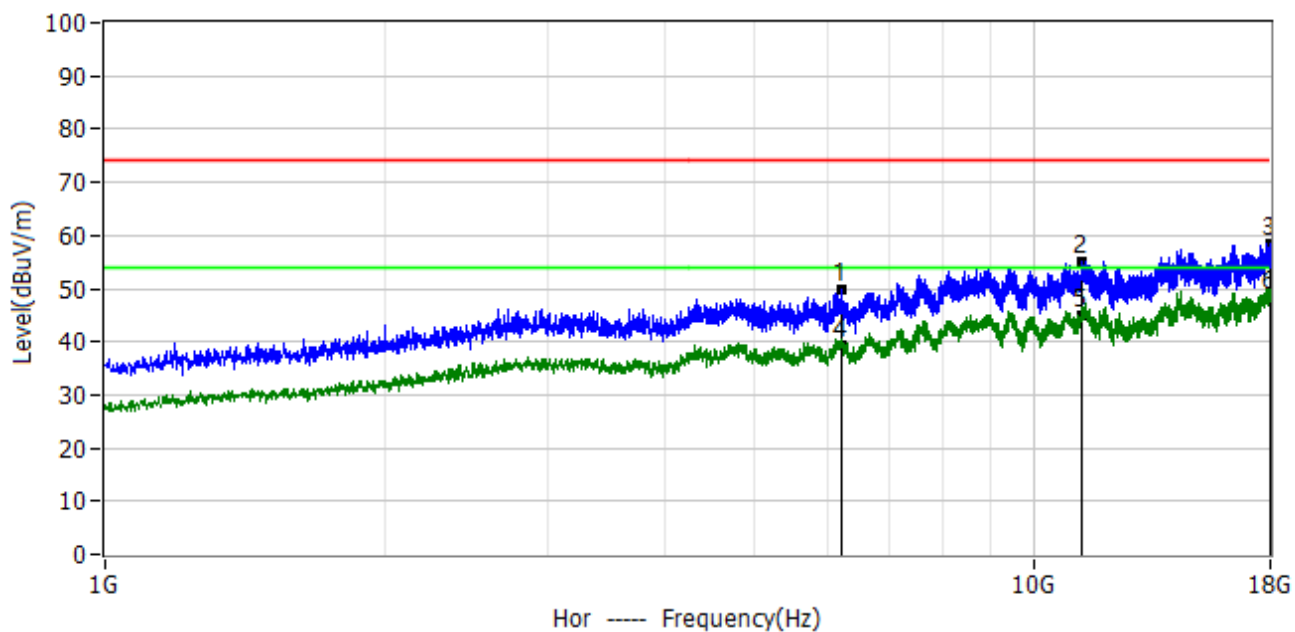
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5200	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.649GHz	54.04	-5.87	48.17	74.00	-25.83	PK	Ver
2*	11.393GHz	54.47	1.86	56.33	74.00	-17.67	PK	Ver
3*	17.879GHz	50.01	8.44	58.45	74.00	-15.55	PK	Ver
4*	4.649GHz	43.77	-5.87	37.90	54.00	-16.10	AV	Ver
5*	11.393GHz	43.94	1.86	45.80	54.00	-8.20	AV	Ver
6*	17.879GHz	39.76	8.44	48.20	54.00	-5.80	AV	Ver



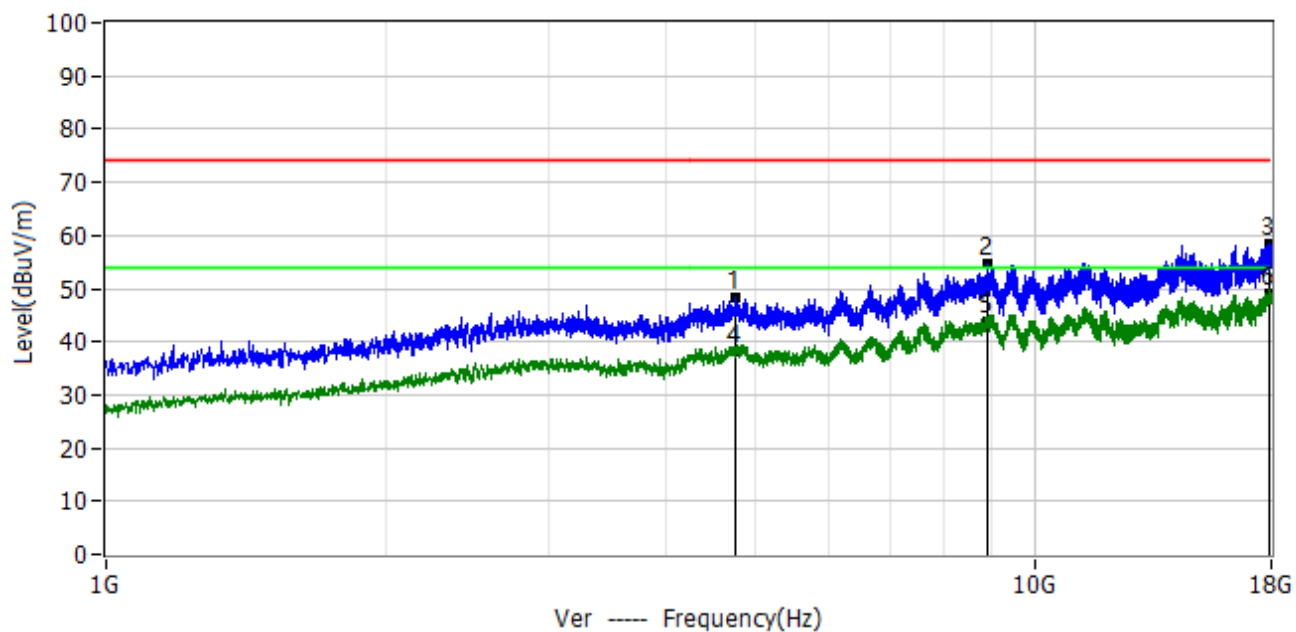
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5240	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	6.219GHz	56.94	-7.11	49.83	74.00	-24.17	PK	Hor
2*	11.274GHz	53.30	1.79	55.09	74.00	-18.91	PK	Hor
3*	17.992GHz	49.88	8.51	58.39	74.00	-15.61	PK	Hor
4*	6.219GHz	46.61	-7.11	39.50	54.00	-14.50	AV	Hor
5*	11.274GHz	43.31	1.79	45.10	54.00	-8.90	AV	Hor
6*	17.992GHz	39.79	8.51	48.30	54.00	-5.70	AV	Hor



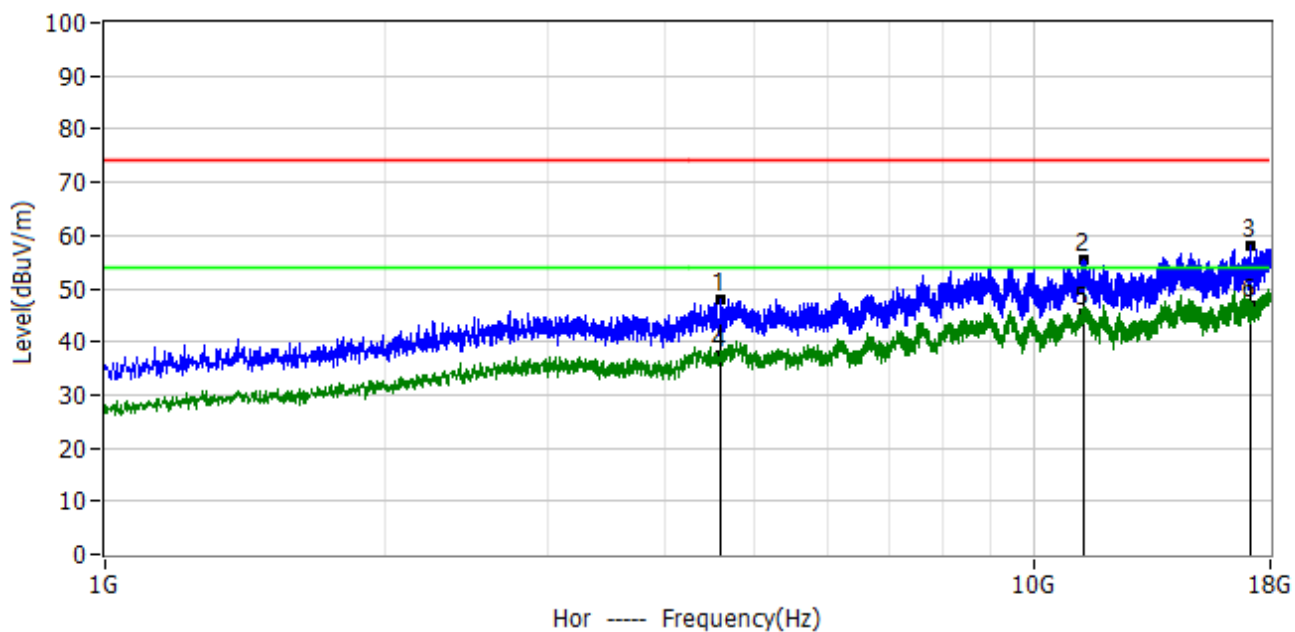
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5240	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.766GHz	54.43	-5.96	48.47	74.00	-25.53	PK	Ver
2*	8.905GHz	56.21	-1.44	54.77	74.00	-19.23	PK	Ver
3*	17.898GHz	50.02	8.45	58.47	74.00	-15.53	PK	Ver
4*	4.766GHz	44.06	-5.96	38.10	54.00	-15.90	AV	Ver
5*	8.905GHz	45.24	-1.44	43.80	54.00	-10.20	AV	Ver
6*	17.898GHz	40.55	8.45	49.00	54.00	-5.00	AV	Ver



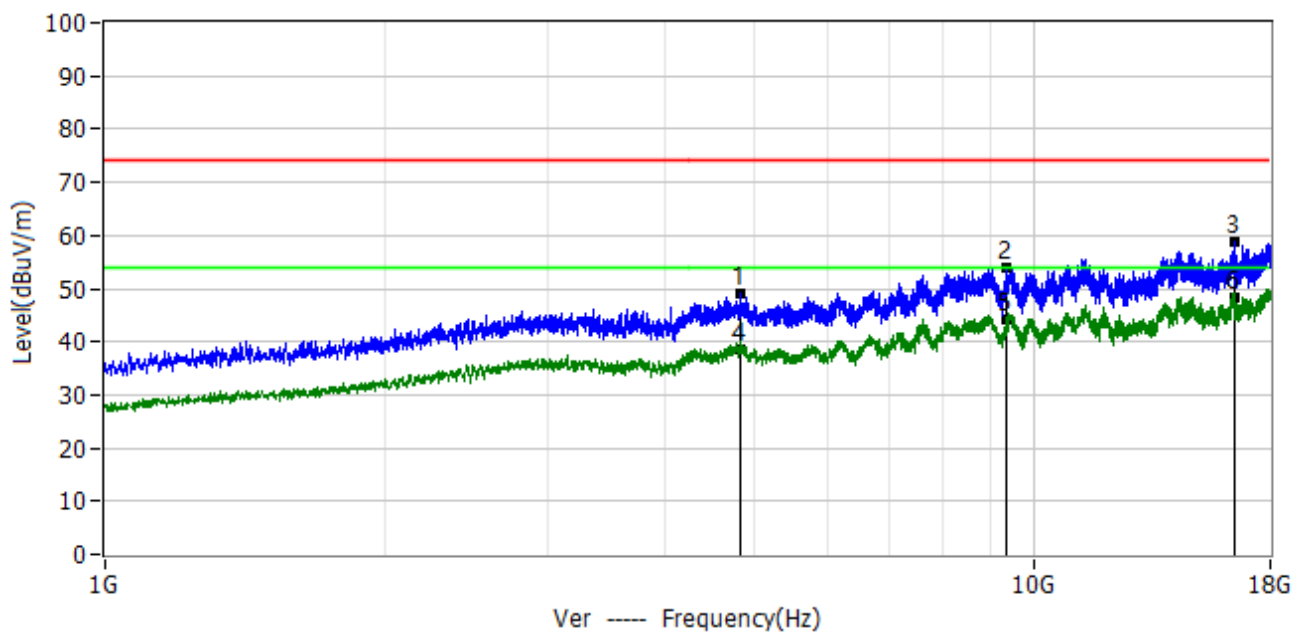
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5260	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.598GHz	53.85	-5.83	48.02	74.00	-25.98	PK	Hor
2*	11.347GHz	53.42	1.83	55.25	74.00	-18.75	PK	Hor
3*	17.120GHz	50.27	7.90	58.17	74.00	-15.83	PK	Hor
4*	4.598GHz	43.23	-5.83	37.40	54.00	-16.60	AV	Hor
5*	11.347GHz	43.67	1.83	45.50	54.00	-8.50	AV	Hor
6*	17.120GHz	39.00	7.90	46.90	54.00	-7.10	AV	Hor



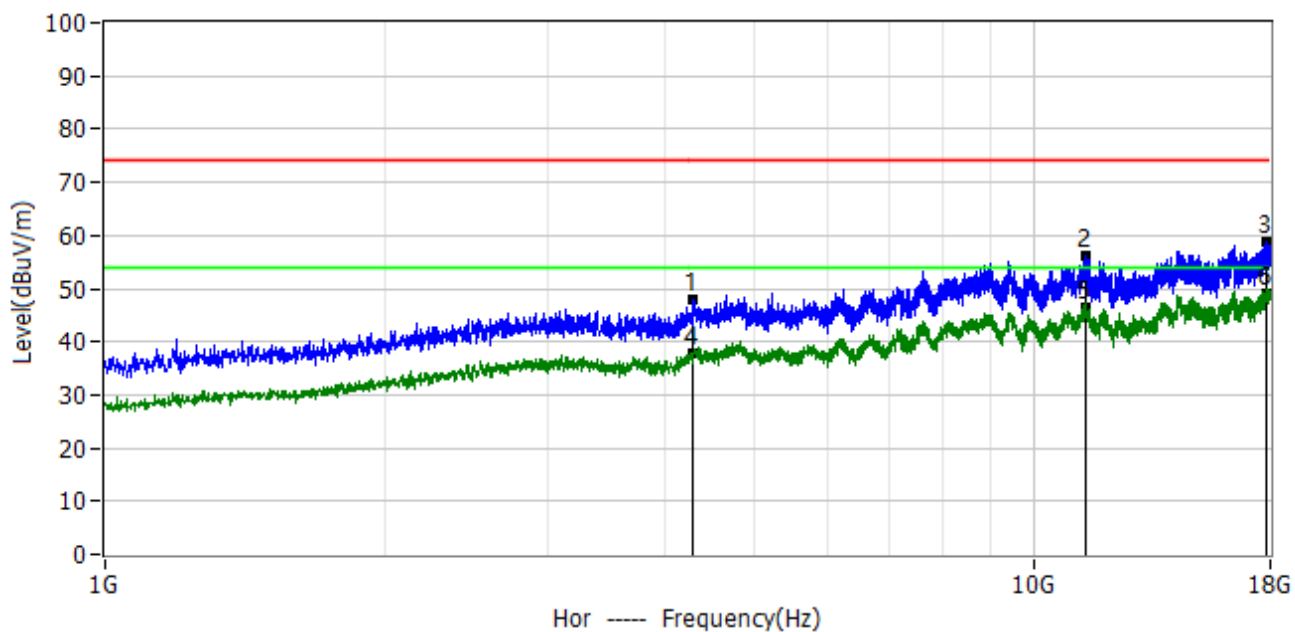
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5260	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.829GHz	55.05	-6.01	49.04	74.00	-24.96	PK	Ver
2*	9.364GHz	55.22	-1.17	54.05	74.00	-19.95	PK	Ver
3*	16.451GHz	51.70	6.96	58.66	74.00	-15.34	PK	Ver
4*	4.829GHz	44.51	-6.01	38.50	54.00	-15.50	AV	Ver
5*	9.364GHz	45.47	-1.17	44.30	54.00	-9.70	AV	Ver
6*	16.451GHz	41.54	6.96	48.50	54.00	-5.50	AV	Ver



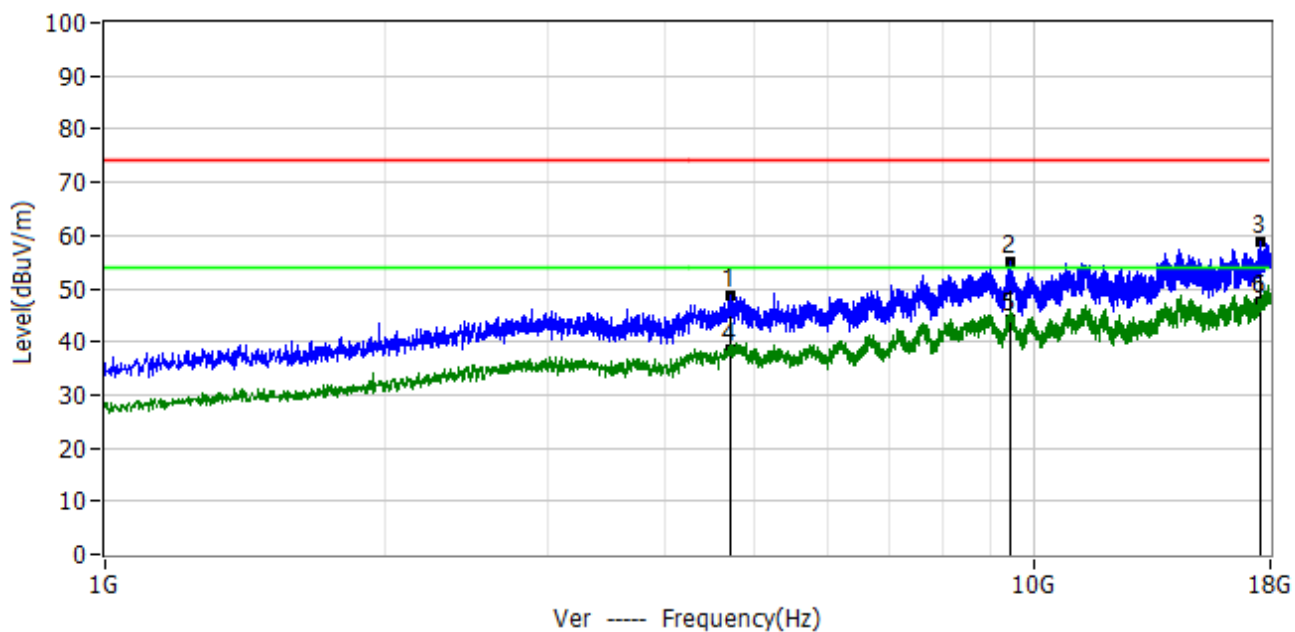
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5300	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.304GHz	54.53	-6.58	47.95	74.00	-26.05	PK	Hor
2*	11.393GHz	54.31	1.86	56.17	74.00	-17.83	PK	Hor
3*	17.813GHz	50.23	8.39	58.62	74.00	-15.38	PK	Hor
4*	4.304GHz	44.28	-6.58	37.70	54.00	-16.30	AV	Hor
5*	11.393GHz	44.44	1.86	46.30	54.00	-7.70	AV	Hor
6*	17.813GHz	40.51	8.39	48.90	54.00	-5.10	AV	Hor



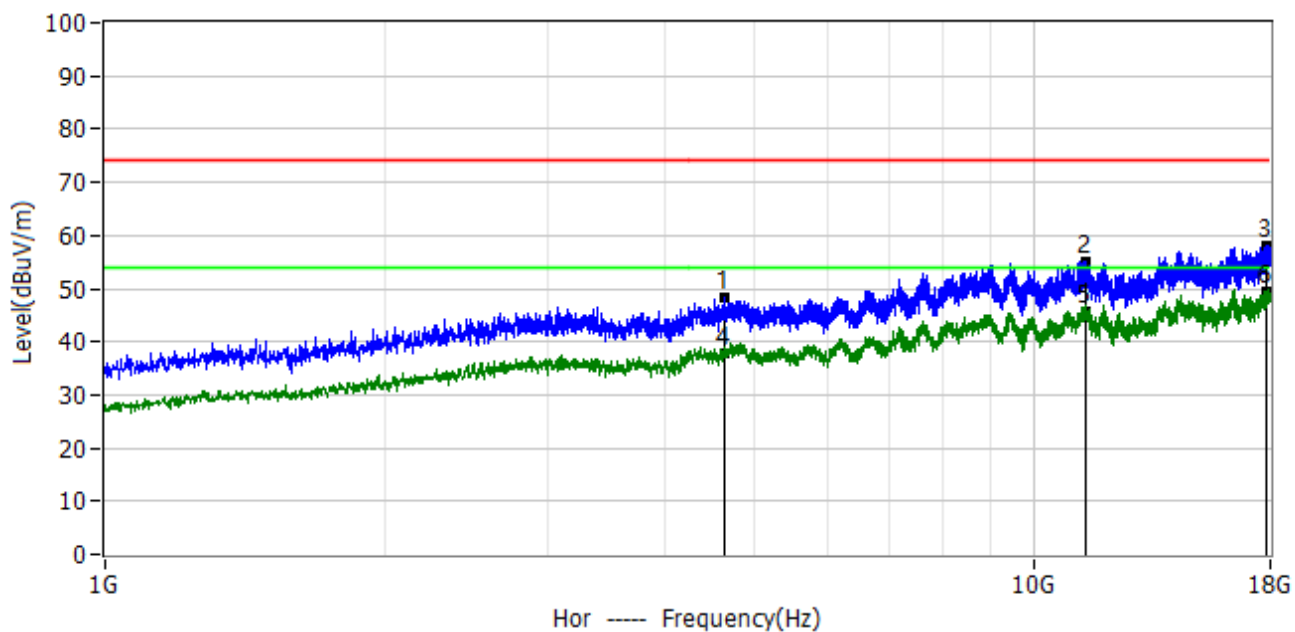
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5300	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.708GHz	54.64	-5.92	48.72	74.00	-25.28	PK	Ver
2*	9.424GHz	56.10	-1.17	54.93	74.00	-19.07	PK	Ver
3*	17.560GHz	50.77	8.21	58.98	74.00	-15.02	PK	Ver
4*	4.708GHz	44.62	-5.92	38.70	54.00	-15.30	AV	Ver
5*	9.424GHz	45.27	-1.17	44.10	54.00	-9.90	AV	Ver
6*	17.560GHz	39.19	8.21	47.40	54.00	-6.60	AV	Ver



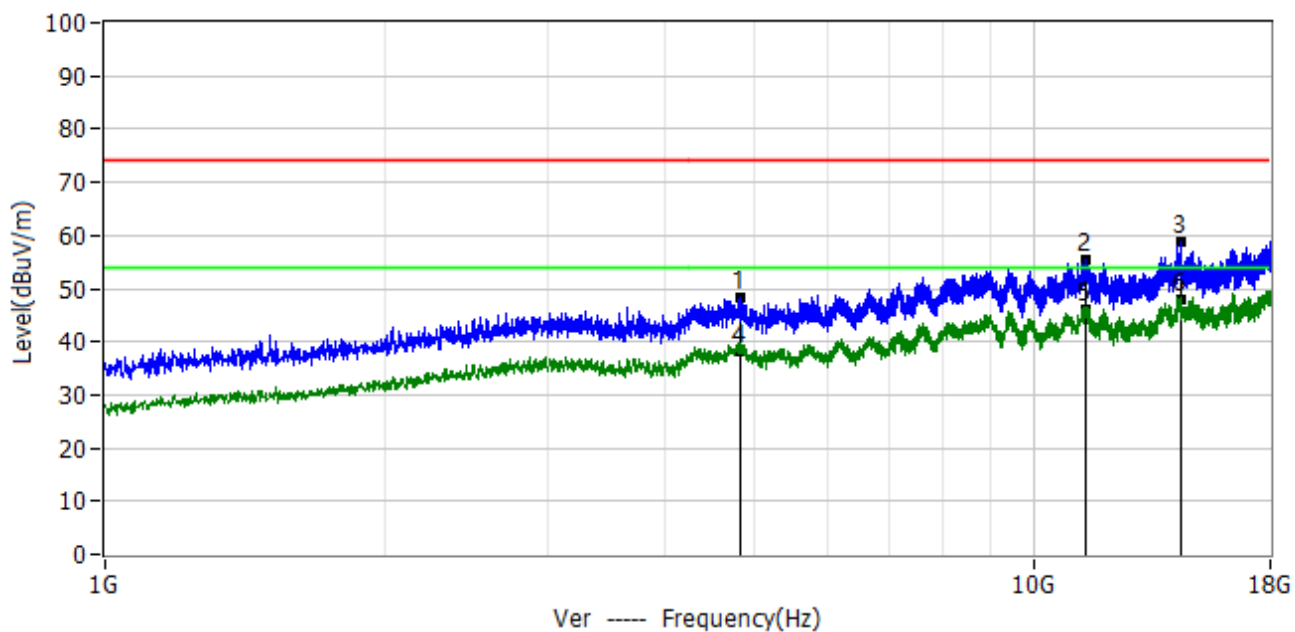
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5320	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.636GHz	54.08	-5.86	48.22	74.00	-25.78	PK	Hor
2*	11.387GHz	53.31	1.86	55.17	74.00	-18.83	PK	Hor
3*	17.790GHz	49.60	8.37	57.97	74.00	-16.03	PK	Hor
4*	4.636GHz	43.56	-5.86	37.70	54.00	-16.30	AV	Hor
5*	11.387GHz	43.94	1.86	45.80	54.00	-8.20	AV	Hor
6*	17.790GHz	40.93	8.37	49.30	54.00	-4.70	AV	Hor



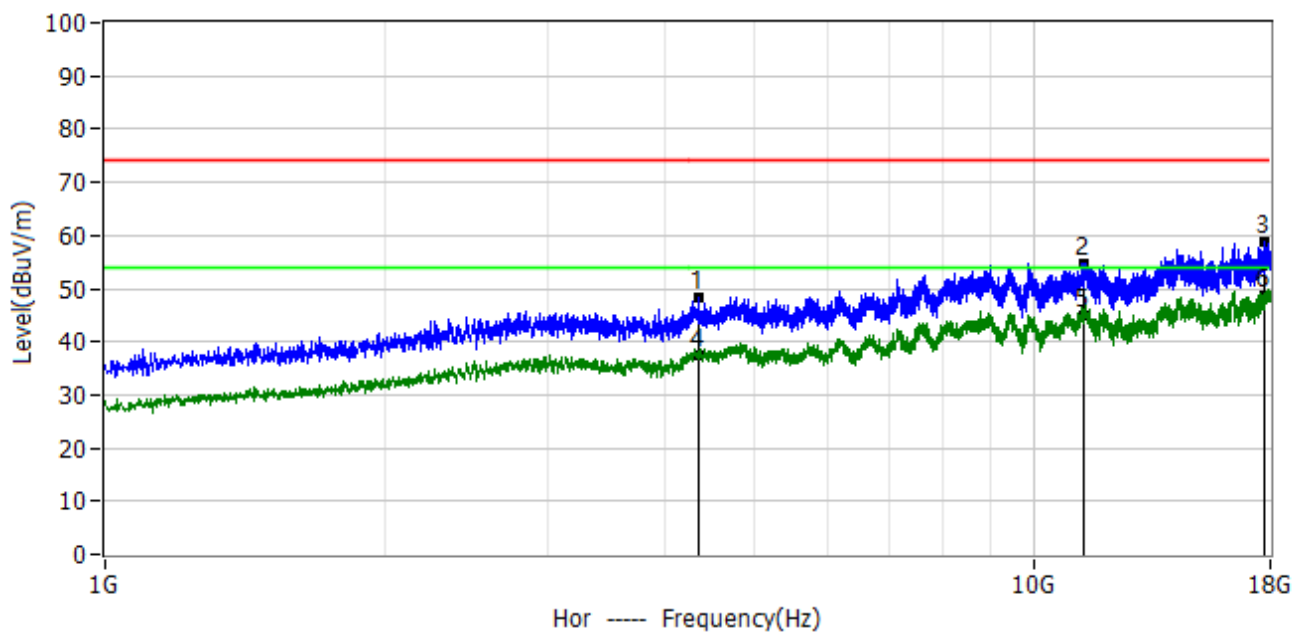
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5320	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.827GHz	54.44	-6.01	48.43	74.00	-25.57	PK	Ver
2*	11.400GHz	53.52	1.87	55.39	74.00	-18.61	PK	Ver
3*	14.407GHz	52.86	5.91	58.77	74.00	-15.23	PK	Ver
4*	4.827GHz	44.31	-6.01	38.30	54.00	-15.70	AV	Ver
5*	11.400GHz	44.33	1.87	46.20	54.00	-7.80	AV	Ver
6*	14.407GHz	42.19	5.91	48.10	54.00	-5.90	AV	Ver



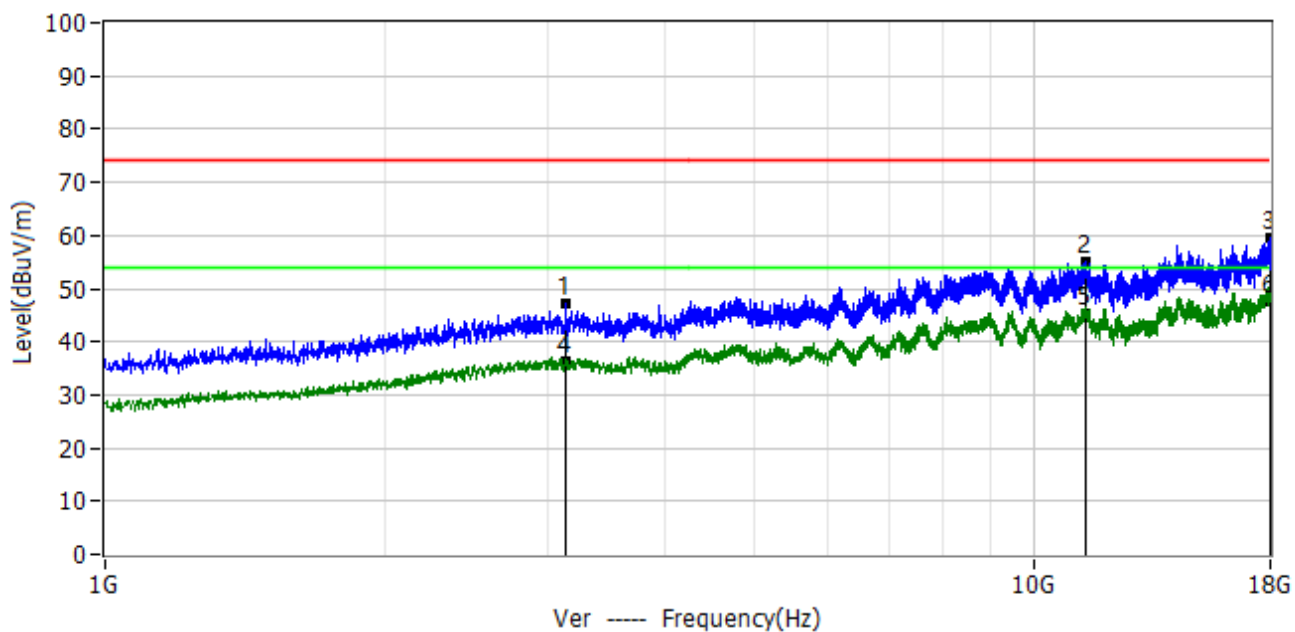
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5500	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.364GHz	54.63	-6.33	48.30	74.00	-25.70	PK	Hor
2*	11.325GHz	52.98	1.82	54.80	74.00	-19.20	PK	Hor
3*	17.711GHz	50.64	8.32	58.96	74.00	-15.04	PK	Hor
4*	4.364GHz	43.63	-6.33	37.30	54.00	-16.70	AV	Hor
5*	11.325GHz	43.18	1.82	45.00	54.00	-9.00	AV	Hor
6*	17.711GHz	40.38	8.32	48.70	54.00	-5.30	AV	Hor



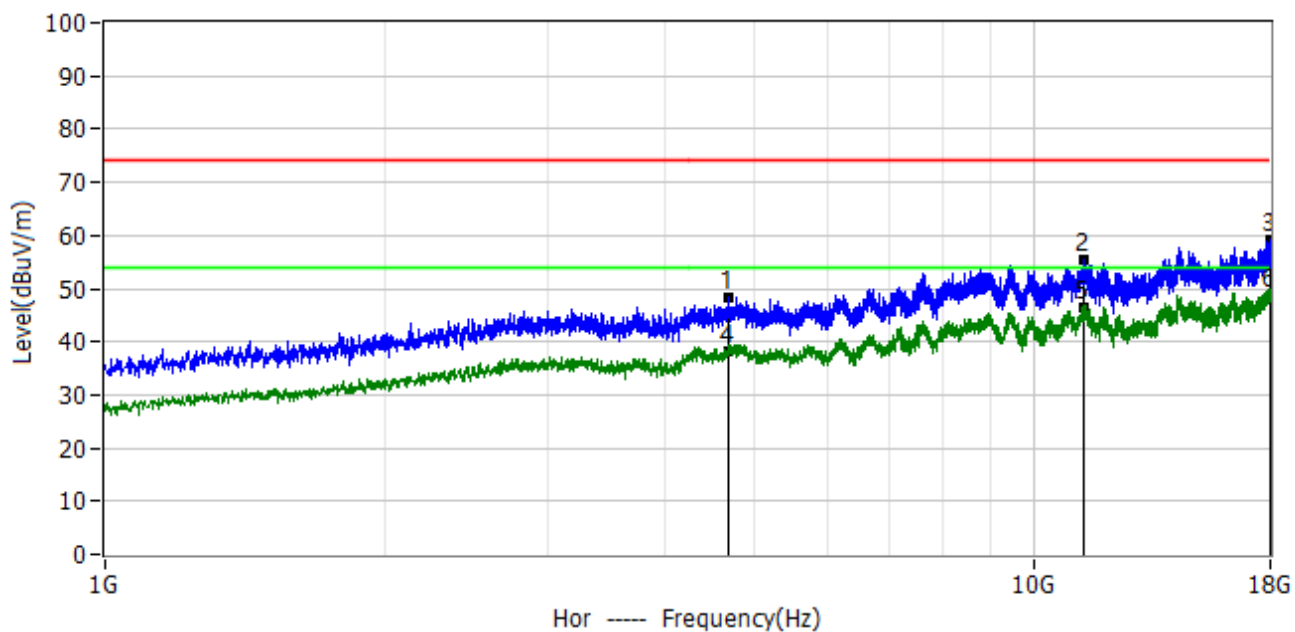
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5500	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	3.134GHz	55.43	-8.38	47.05	74.00	-26.95	PK	Ver
2*	11.413GHz	53.17	1.87	55.04	74.00	-18.96	PK	Ver
3*	18.000GHz	51.14	8.52	59.66	74.00	-14.34	PK	Ver
4*	3.134GHz	44.68	-8.38	36.30	54.00	-17.70	AV	Ver
5*	11.413GHz	43.33	1.87	45.20	54.00	-8.80	AV	Ver
6*	18.000GHz	39.18	8.52	47.70	54.00	-6.30	AV	Ver



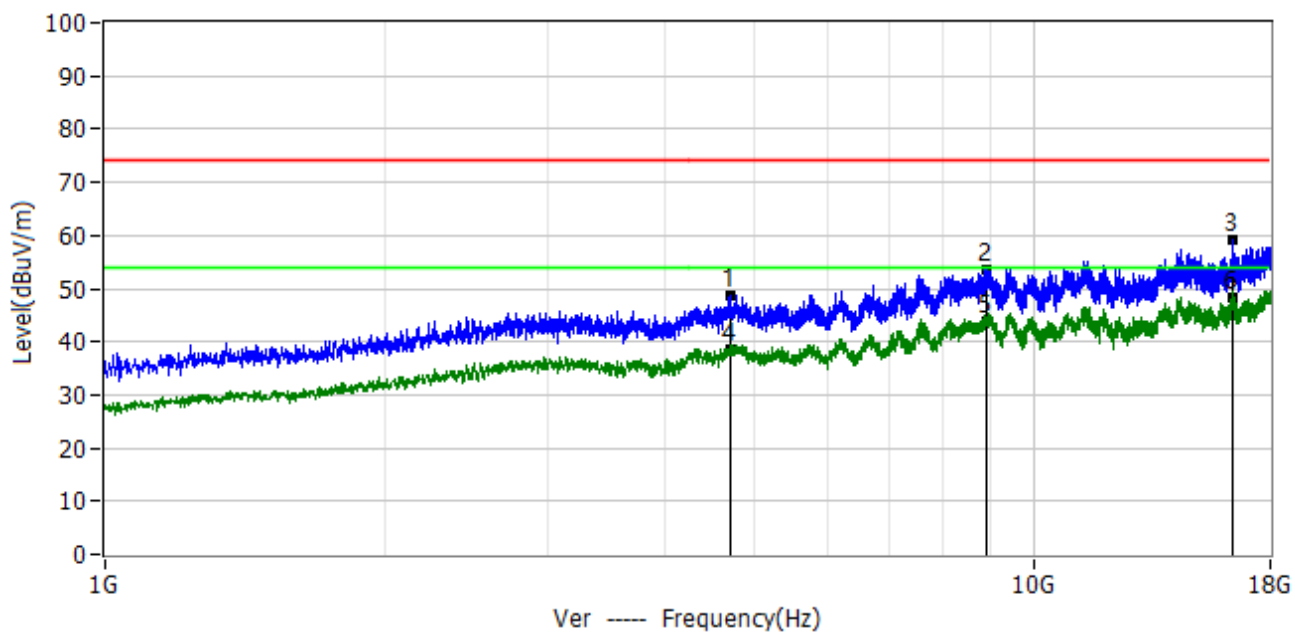
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5580	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.687GHz	54.29	-5.90	48.39	74.00	-25.61	PK	Hor
2*	11.340GHz	53.58	1.83	55.41	74.00	-18.59	PK	Hor
3*	17.960GHz	50.65	8.49	59.14	74.00	-14.86	PK	Hor
4*	4.687GHz	44.20	-5.90	38.30	54.00	-15.70	AV	Hor
5*	11.340GHz	44.47	1.83	46.30	54.00	-7.70	AV	Hor
6*	17.960GHz	40.31	8.49	48.80	54.00	-5.20	AV	Hor



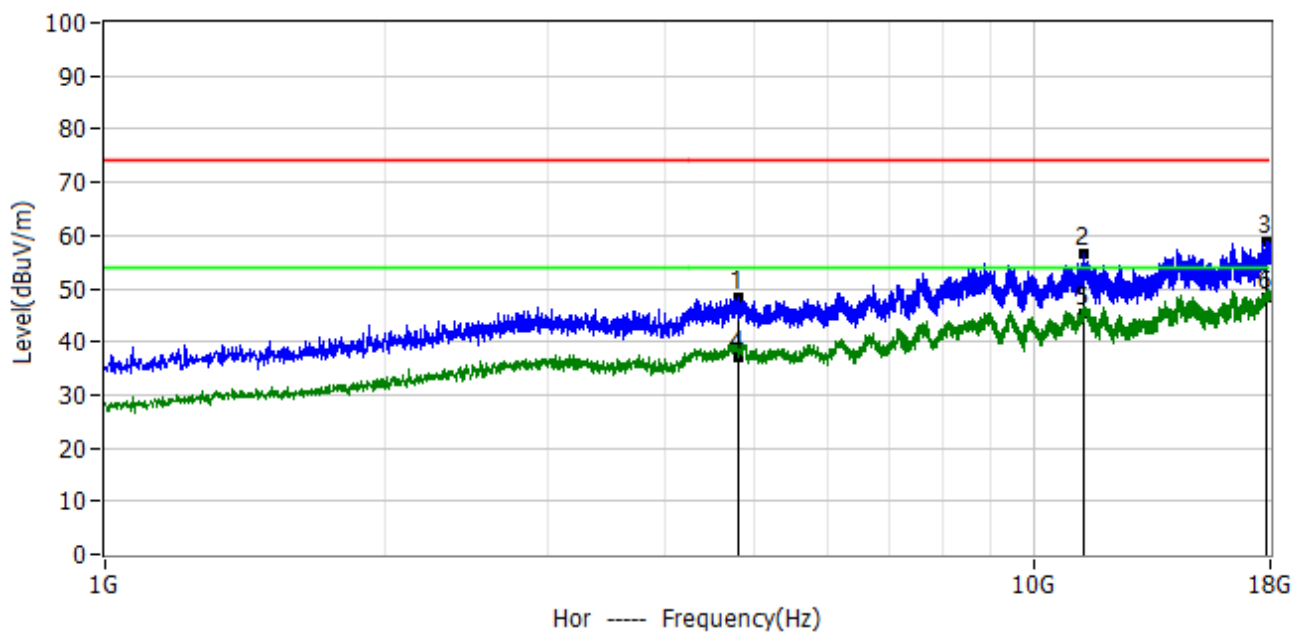
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5580	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.708GHz	54.53	-5.92	48.61	74.00	-25.39	PK	Ver
2*	8.886GHz	55.09	-1.49	53.60	74.00	-20.40	PK	Ver
3*	16.374GHz	52.46	6.84	59.30	74.00	-14.70	PK	Ver
4*	4.708GHz	44.32	-5.92	38.40	54.00	-15.60	AV	Ver
5*	8.886GHz	45.49	-1.49	44.00	54.00	-10.00	AV	Ver
6*	16.374GHz	41.36	6.84	48.20	54.00	-5.80	AV	Ver



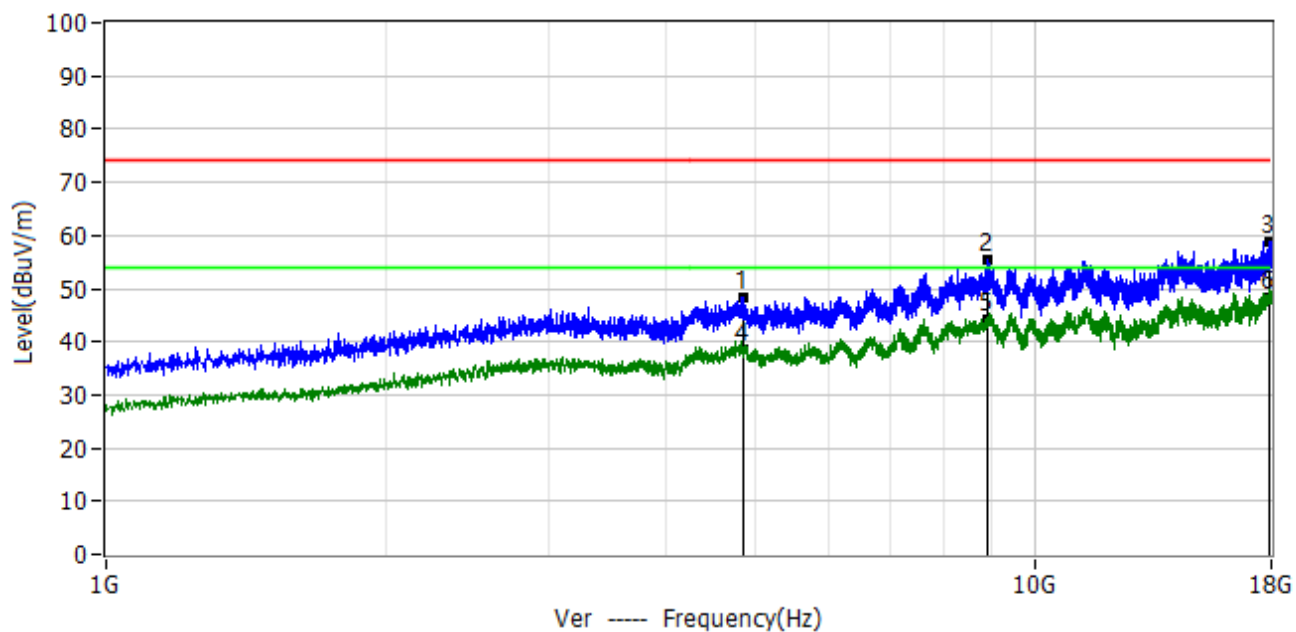
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5700	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.821GHz	54.26	-6.00	48.26	74.00	-25.74	PK	Hor
2*	11.338GHz	54.57	1.83	56.40	74.00	-17.60	PK	Hor
3*	17.843GHz	50.43	8.41	58.84	74.00	-15.16	PK	Hor
4*	4.821GHz	43.20	-6.00	37.20	54.00	-16.80	AV	Hor
5*	11.338GHz	43.47	1.83	45.30	54.00	-8.70	AV	Hor
6*	17.843GHz	40.09	8.41	48.50	54.00	-5.50	AV	Hor



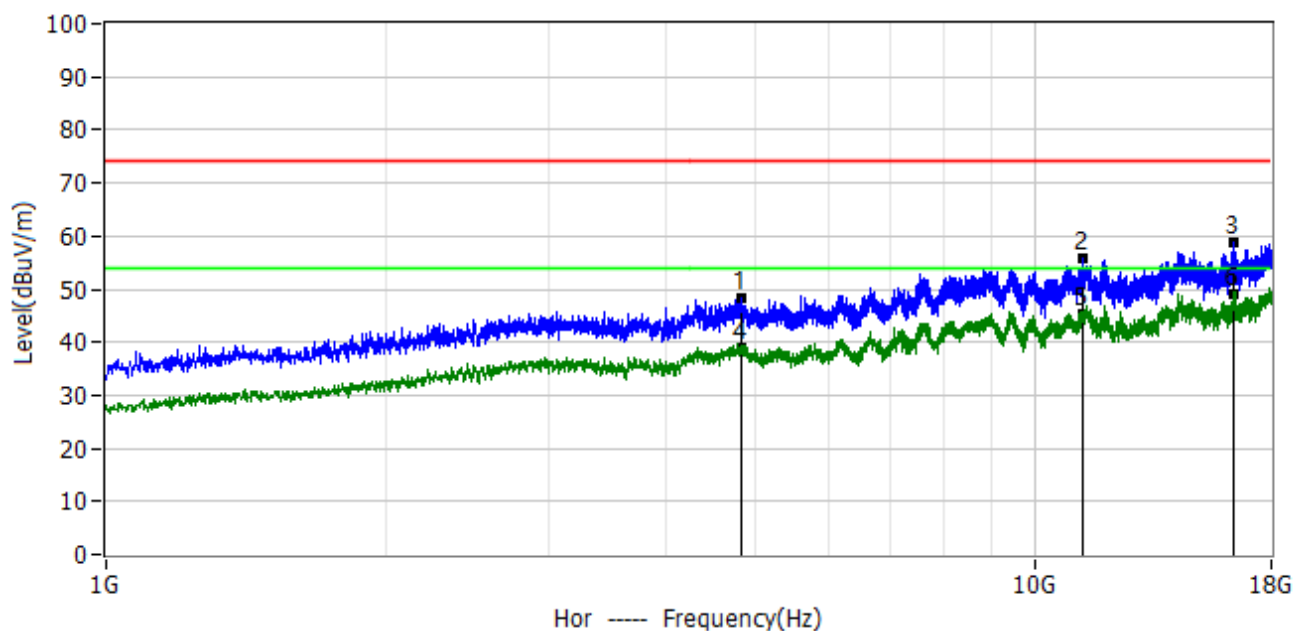
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5700	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.846GHz	54.52	-6.02	48.50	74.00	-25.50	PK	Ver
2*	8.922GHz	56.97	-1.39	55.58	74.00	-18.42	PK	Ver
3*	17.941GHz	50.40	8.48	58.88	74.00	-15.12	PK	Ver
4*	4.846GHz	44.62	-6.02	38.60	54.00	-15.40	AV	Ver
5*	8.922GHz	45.59	-1.39	44.20	54.00	-9.80	AV	Ver
6*	17.941GHz	39.82	8.48	48.30	54.00	-5.70	AV	Ver



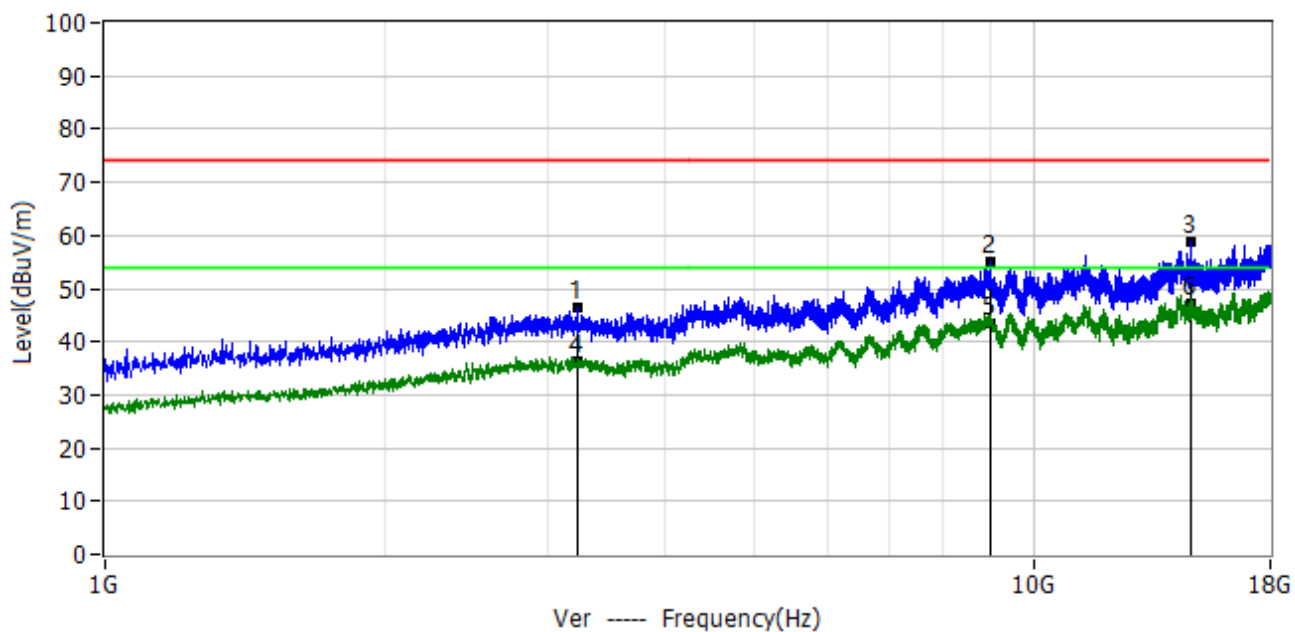
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5745	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.831GHz	54.48	-6.01	48.47	74.00	-25.53	PK	Hor
2*	11.264GHz	53.91	1.79	55.70	74.00	-18.30	PK	Hor
3*	16.368GHz	52.04	6.83	58.87	74.00	-15.13	PK	Hor
4*	4.831GHz	45.11	-6.01	39.10	54.00	-14.90	AV	Hor
5*	11.264GHz	43.71	1.79	45.50	54.00	-8.50	AV	Hor
6*	16.368GHz	42.17	6.83	49.00	54.00	-5.00	AV	Hor



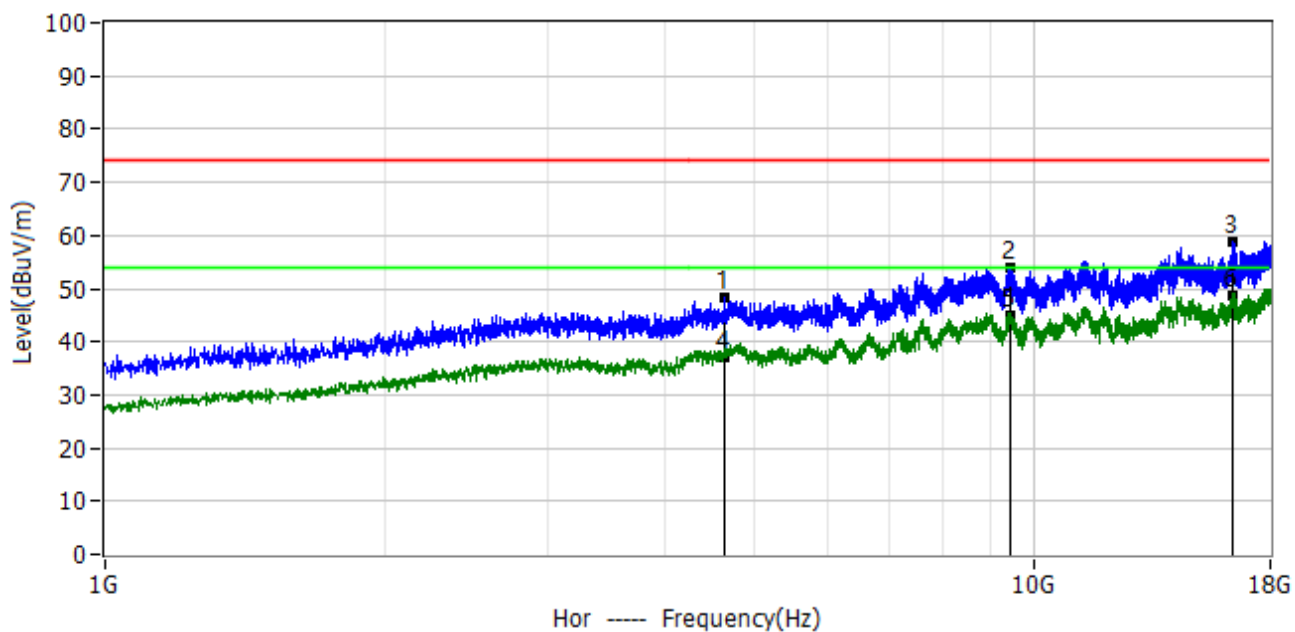
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5745	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	3.227GHz	54.75	-8.41	46.34	74.00	-27.66	PK	Ver
2*	9.005GHz	56.28	-1.17	55.11	74.00	-18.89	PK	Ver
3*	14.764GHz	52.88	5.94	58.82	74.00	-15.18	PK	Ver
4*	3.227GHz	44.81	-8.41	36.40	54.00	-17.60	AV	Ver
5*	9.005GHz	44.67	-1.17	43.50	54.00	-10.50	AV	Ver
6*	14.764GHz	41.16	5.94	47.10	54.00	-6.90	AV	Ver



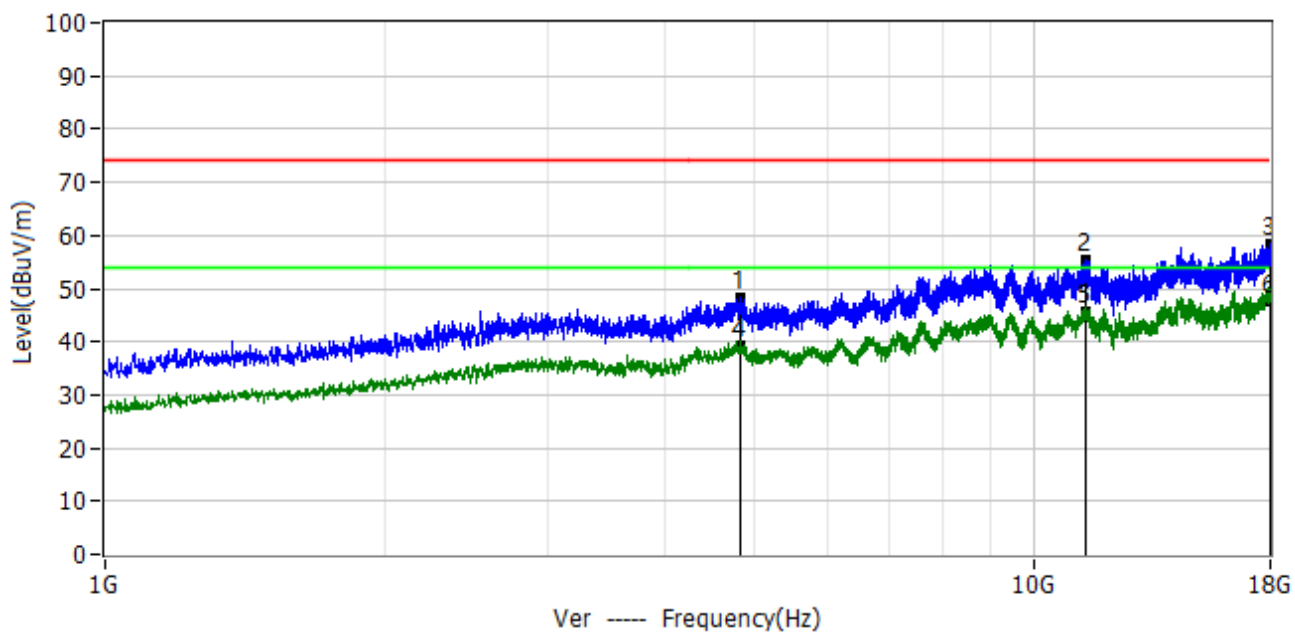
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5785	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.640GHz	54.28	-5.86	48.42	74.00	-25.58	PK	Hor
2*	9.462GHz	55.15	-1.17	53.98	74.00	-20.02	PK	Hor
3*	16.381GHz	51.97	6.85	58.82	74.00	-15.18	PK	Hor
4*	4.640GHz	42.96	-5.86	37.10	54.00	-16.90	AV	Hor
5*	9.462GHz	46.07	-1.17	44.90	54.00	-9.10	AV	Hor
6*	16.381GHz	41.75	6.85	48.60	54.00	-5.40	AV	Hor



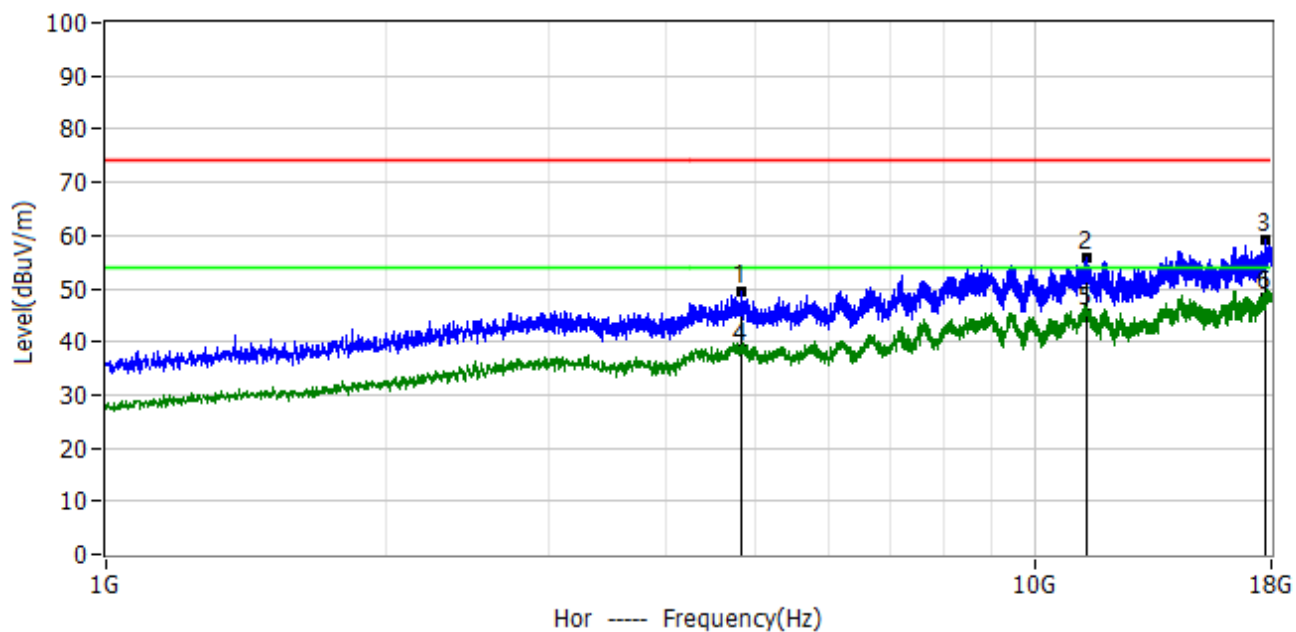
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5785	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.842GHz	54.49	-6.02	48.47	74.00	-25.53	PK	Ver
2*	11.372GHz	53.47	1.85	55.32	74.00	-18.68	PK	Ver
3*	17.983GHz	50.00	8.51	58.51	74.00	-15.49	PK	Ver
4*	4.842GHz	45.22	-6.02	39.20	54.00	-14.80	AV	Ver
5*	11.372GHz	43.75	1.85	45.60	54.00	-8.40	AV	Ver
6*	17.983GHz	39.09	8.51	47.60	54.00	-6.40	AV	Ver



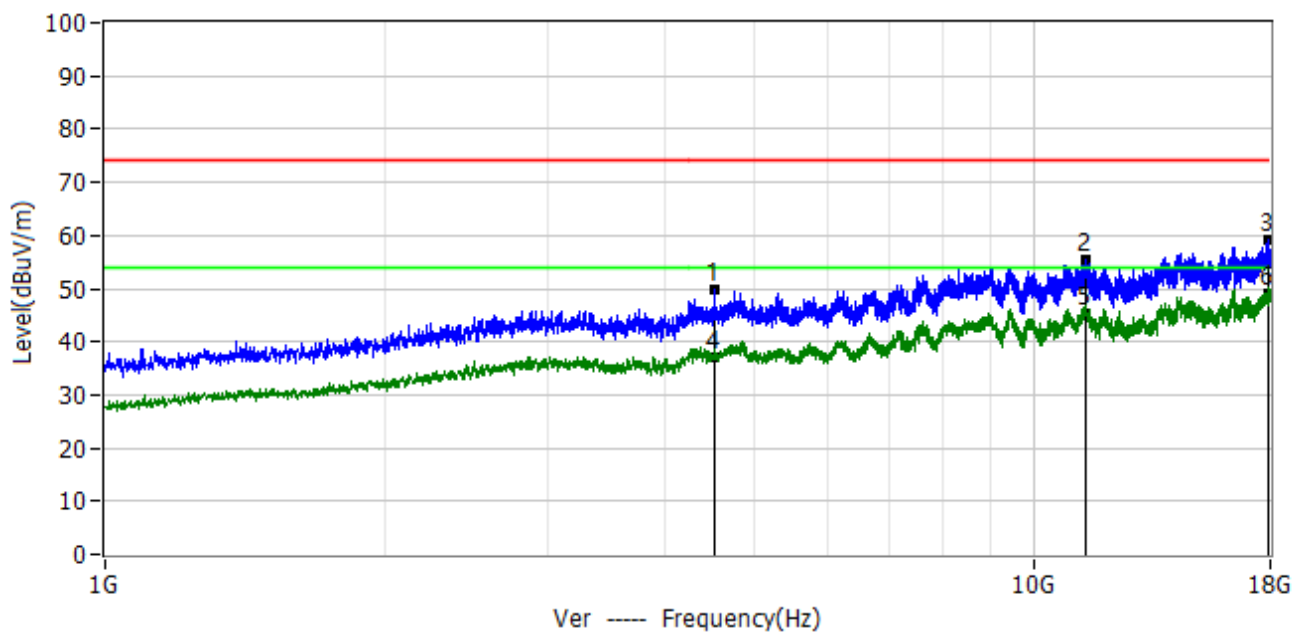
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5825	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.838GHz	55.51	-6.02	49.49	74.00	-24.51	PK	Hor
2*	11.379GHz	54.03	1.85	55.88	74.00	-18.12	PK	Hor
3*	17.722GHz	50.80	8.33	59.13	74.00	-14.87	PK	Hor
4*	4.838GHz	44.62	-6.02	38.60	54.00	-15.40	AV	Hor
5*	11.379GHz	43.65	1.85	45.50	54.00	-8.50	AV	Hor
6*	17.722GHz	39.97	8.33	48.30	54.00	-5.70	AV	Hor



Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 20.5℃
M/N: TickTock-S	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2023-01-08
Test Mode: 802.11a 5825	
Note:	

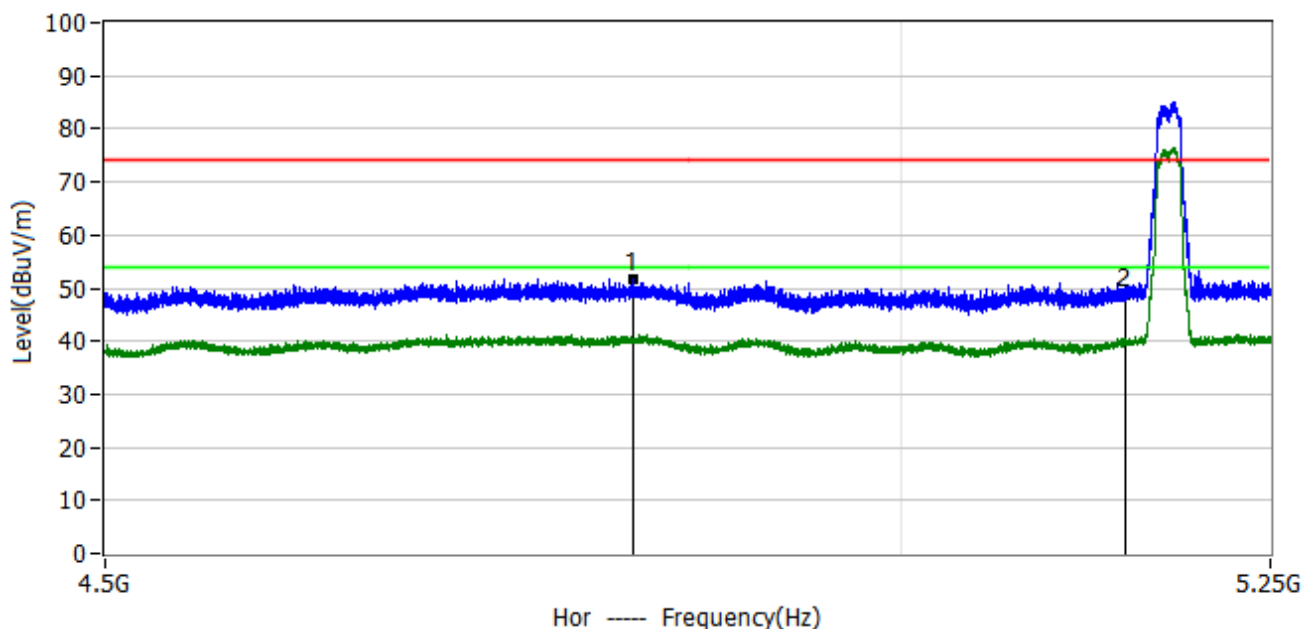


No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.542GHz	55.61	-5.79	49.82	74.00	-24.18	PK	Ver
2*	11.359GHz	53.54	1.84	55.38	74.00	-18.62	PK	Ver
3*	17.904GHz	50.71	8.45	59.16	74.00	-14.84	PK	Ver
4*	4.542GHz	42.69	-5.79	36.90	54.00	-17.10	AV	Ver
5*	11.359GHz	43.66	1.84	45.50	54.00	-8.50	AV	Ver
6*	17.904GHz	40.65	8.45	49.10	54.00	-4.90	AV	Ver



3.2.7 TEST RESULTS(Band edge Requirements)

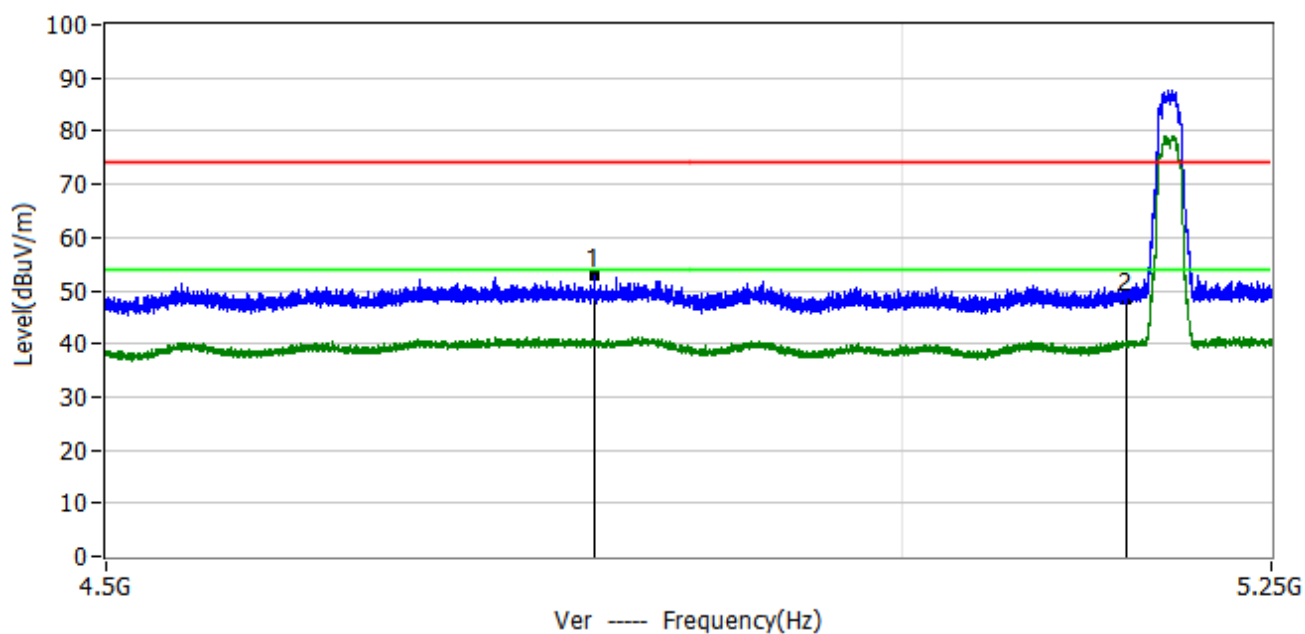
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5180	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.825GHz	57.56	-6.01	51.55	74.00	-22.45	PK	Hor
2*	5.150GHz	55.42	-6.62	48.80	74.00	-25.20	PK	Hor



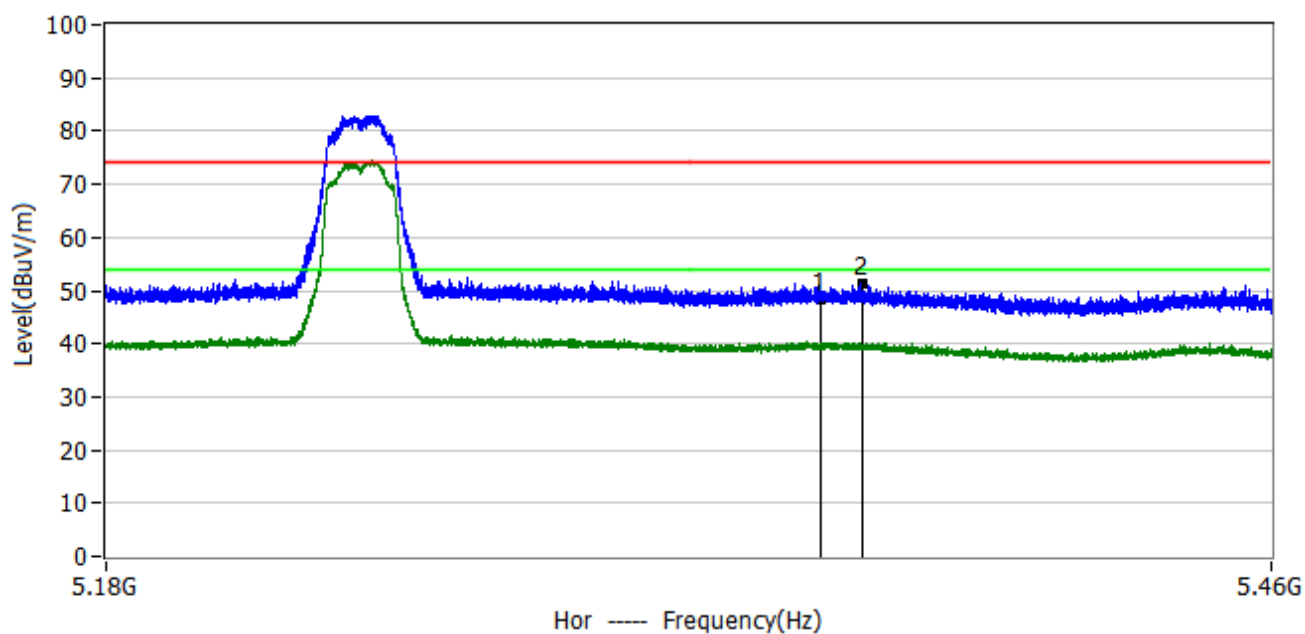
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5180	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.800GHz	58.97	-5.99	52.98	74.00	-21.02	PK	Ver
2*	5.150GHz	54.82	-6.62	48.20	74.00	-25.80	PK	Ver



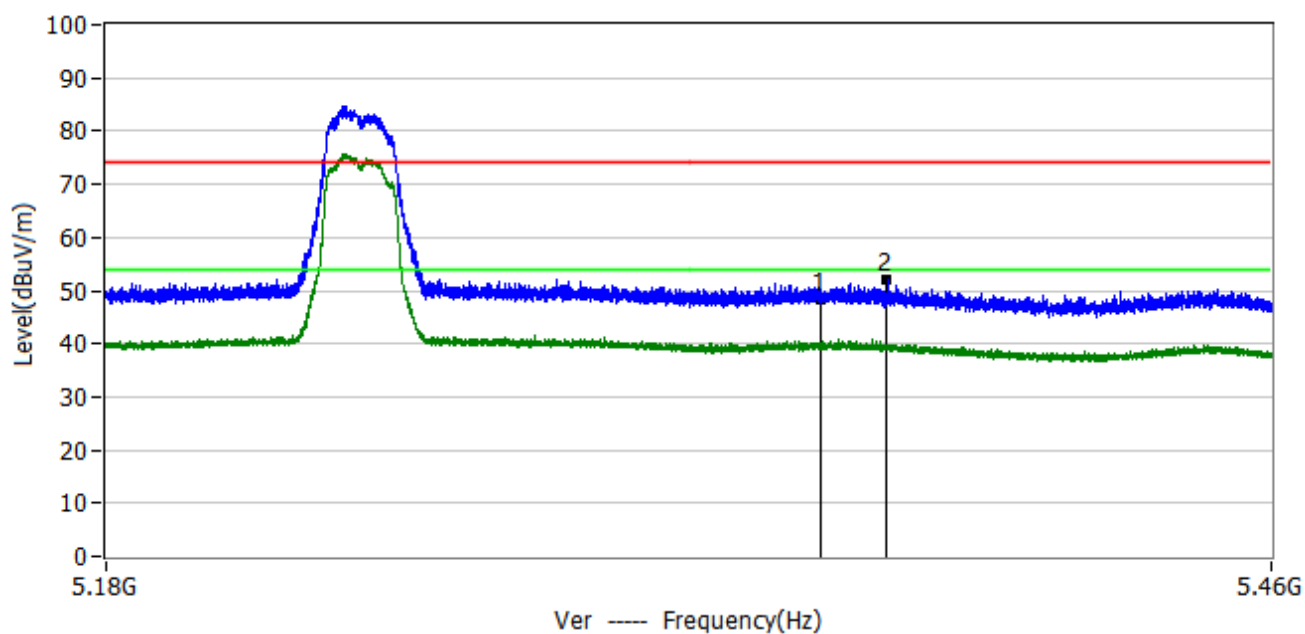
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5240	
Note:	



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*	5.360GHz	58.42	-7.29	51.13	74.00	-22.87	PK	Hor



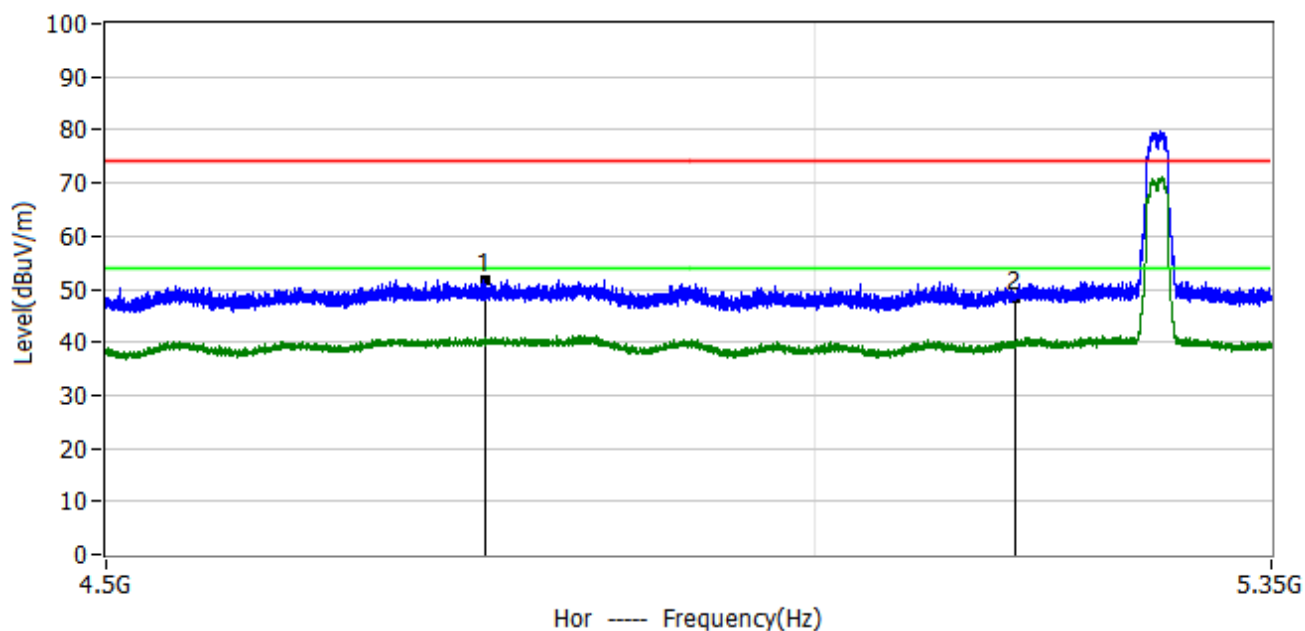
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5240	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.350GHz	55.66	-7.26	48.40	74.00	-25.60	PK	Ver
2*	5.366GHz	59.33	-7.31	52.02	74.00	-21.98	PK	Ver



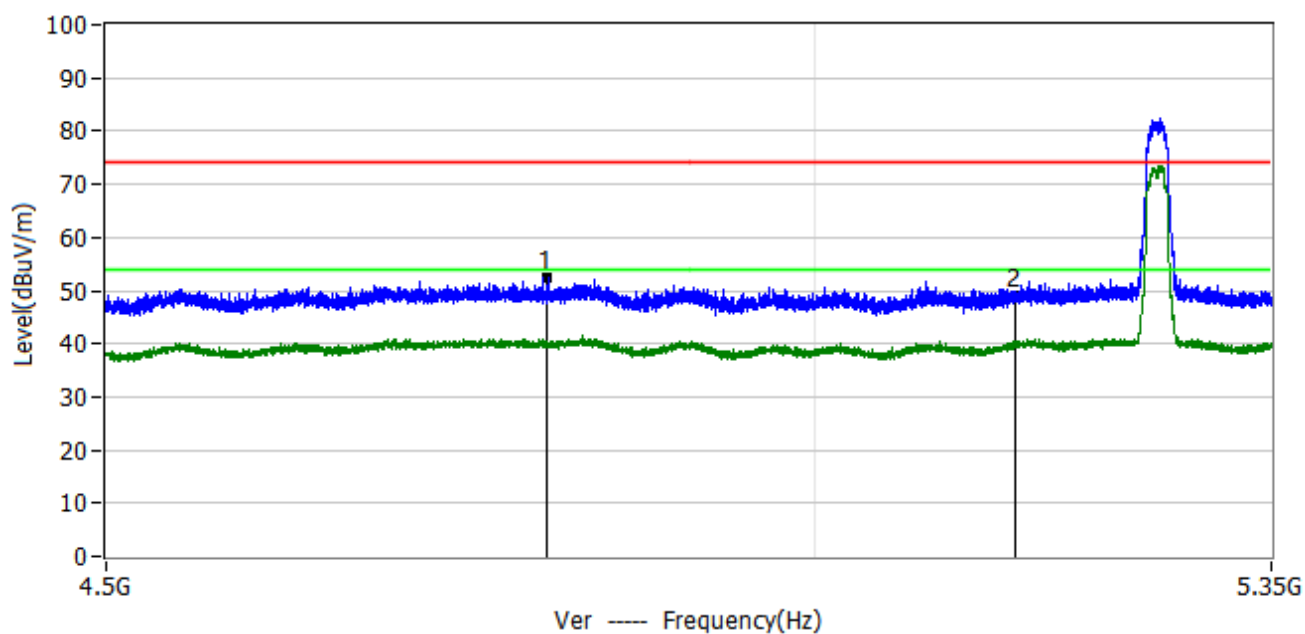
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5260	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.760GHz	57.64	-5.96	51.68	74.00	-22.32	PK	Hor
2*	5.150GHz	55.12	-6.62	48.50	74.00	-25.50	PK	Hor



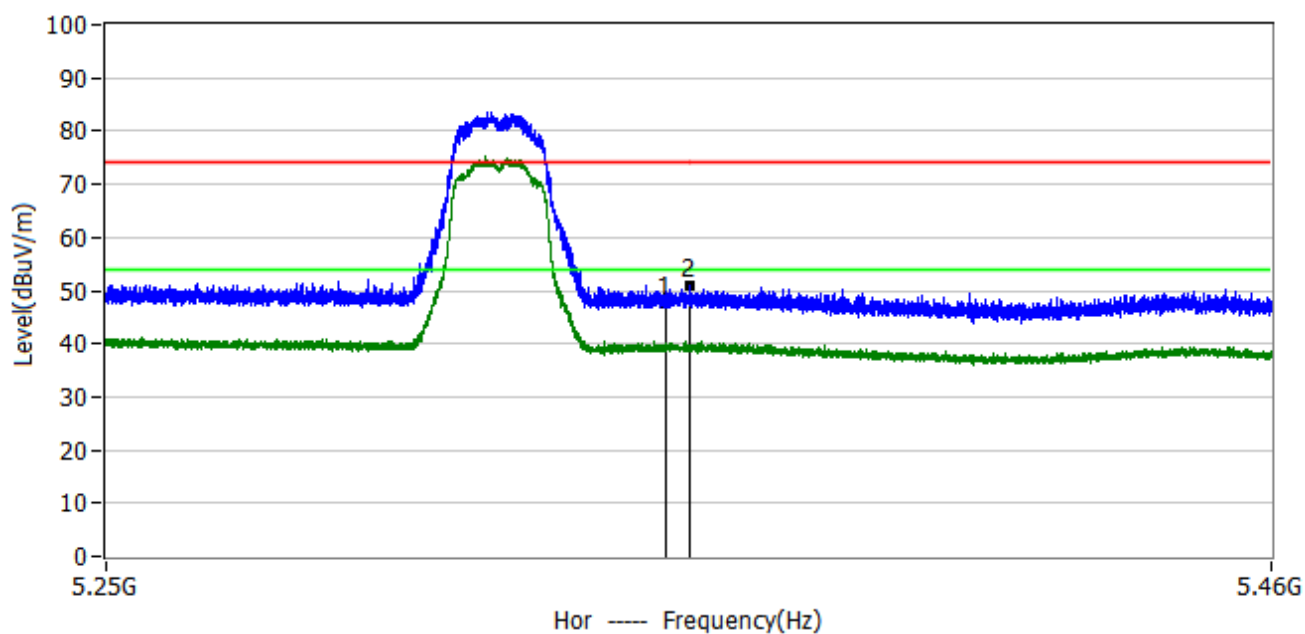
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5260	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	4.805GHz	58.35	-5.99	52.36	74.00	-21.64	PK	Ver
2*	5.150GHz	55.62	-6.62	49.00	74.00	-25.00	PK	Ver



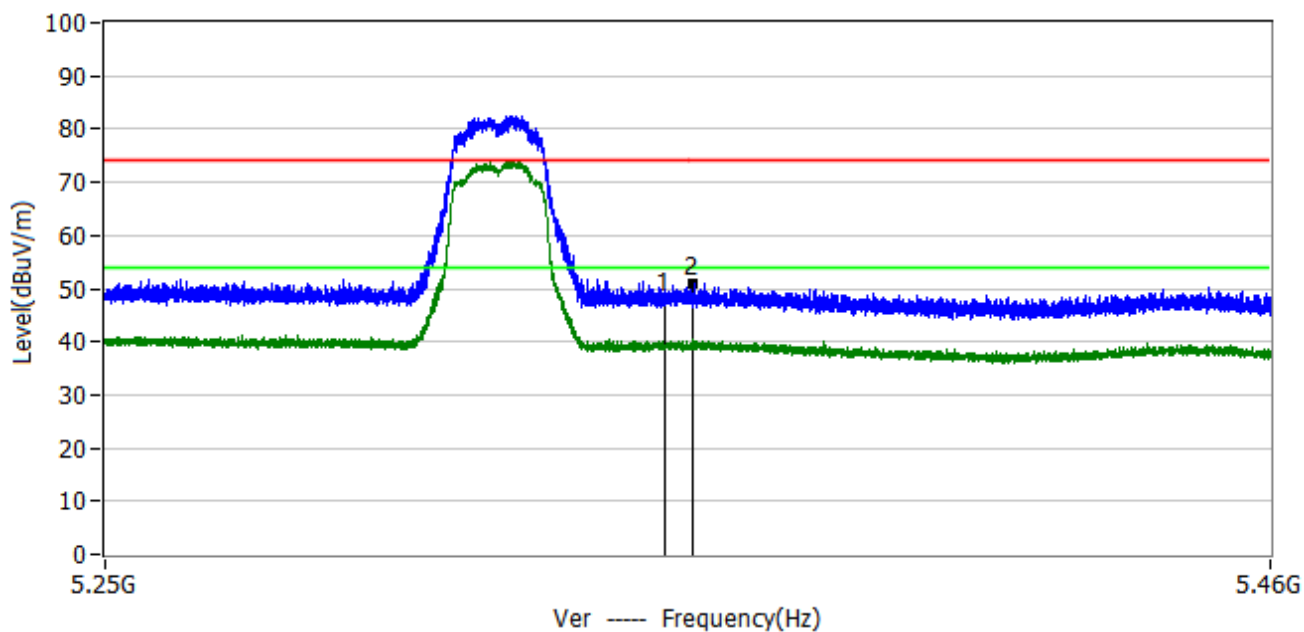
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5320	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.350GHz	54.96	-7.26	47.70	74.00	-26.30	PK	Hor
2*	5.354GHz	58.12	-7.27	50.85	74.00	-23.15	PK	Hor



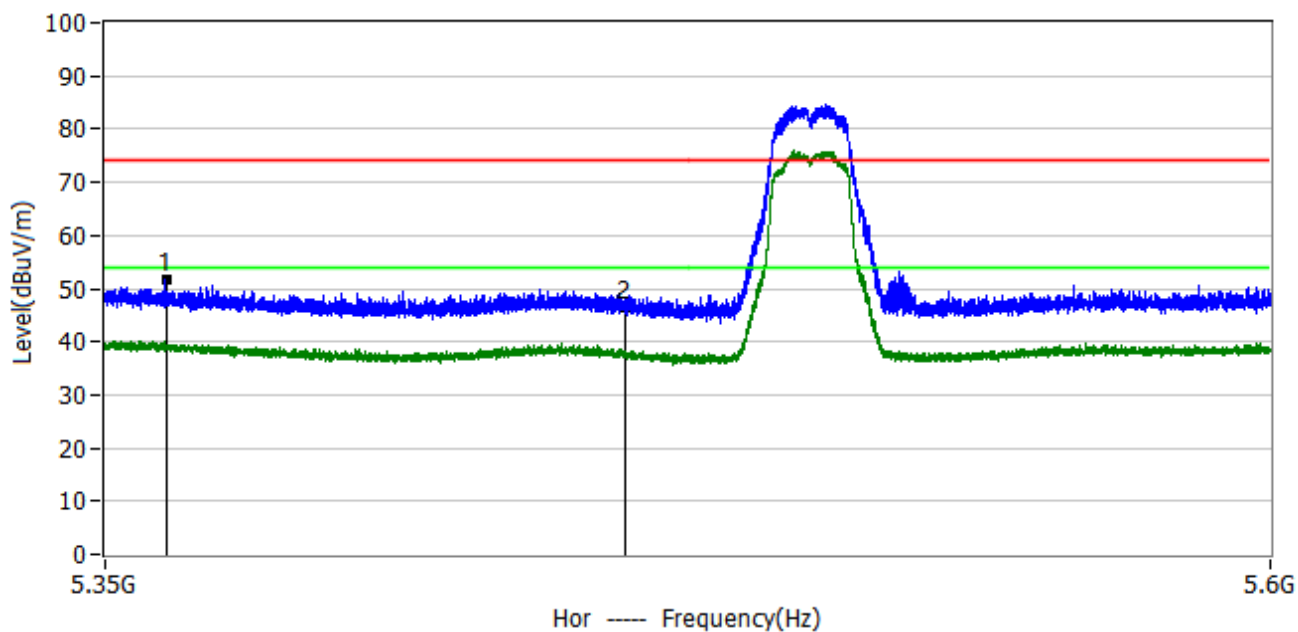
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5320	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.350GHz	55.36	-7.26	48.10	74.00	-25.90	PK	Ver
2*	5.355GHz	58.29	-7.28	51.01	74.00	-22.99	PK	Ver



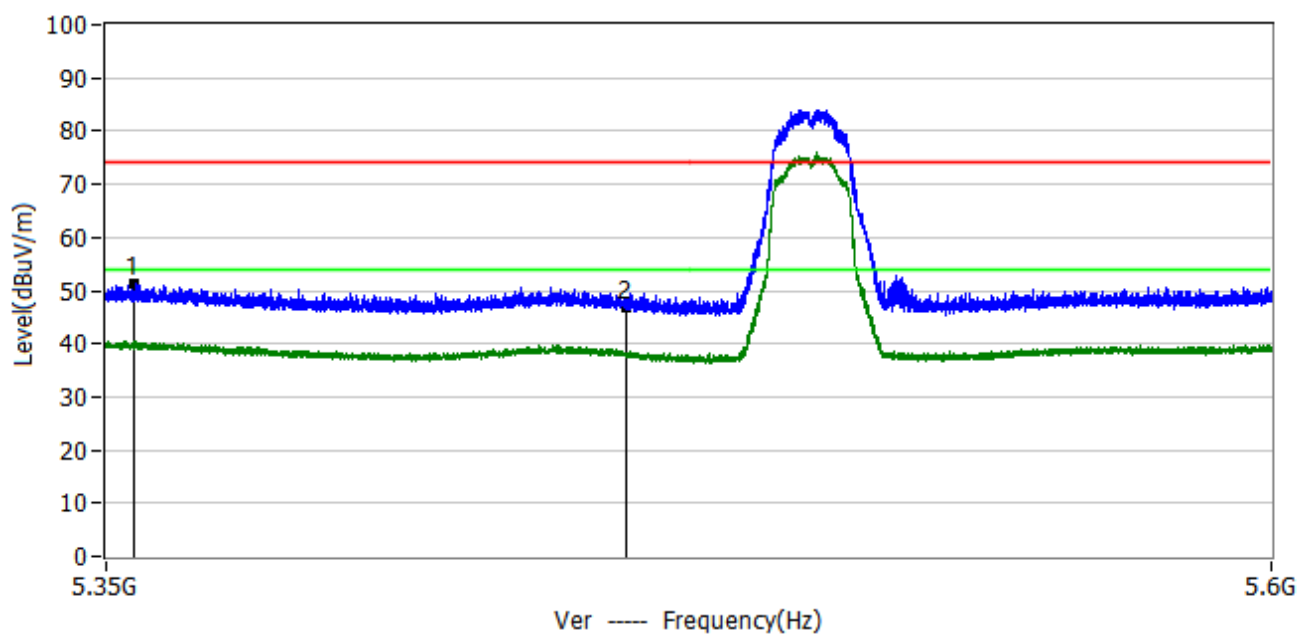
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5500	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.363GHz	58.86	-7.30	51.56	74.00	-22.44	PK	Hor
2*	5.460GHz	54.01	-7.61	46.40	74.00	-27.60	PK	Hor



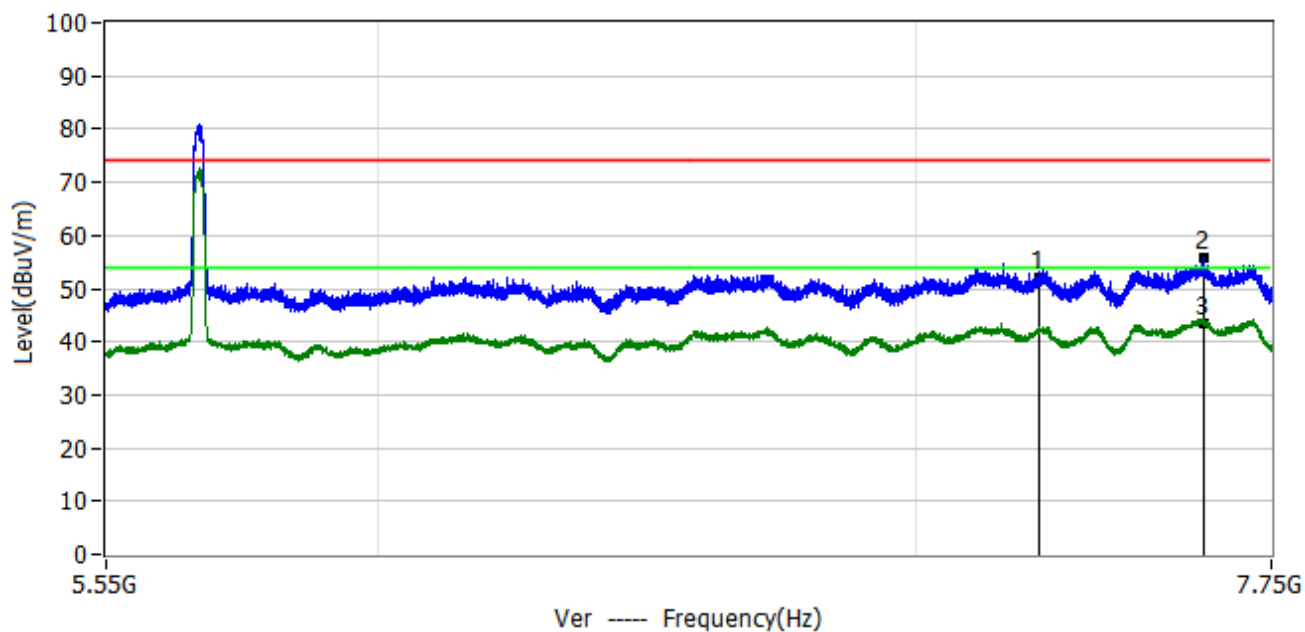
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5500	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	5.356GHz	58.45	-7.28	51.17	74.00	-22.83	PK	Ver
2*	5.460GHz	54.41	-7.61	46.80	74.00	-27.20	PK	Ver



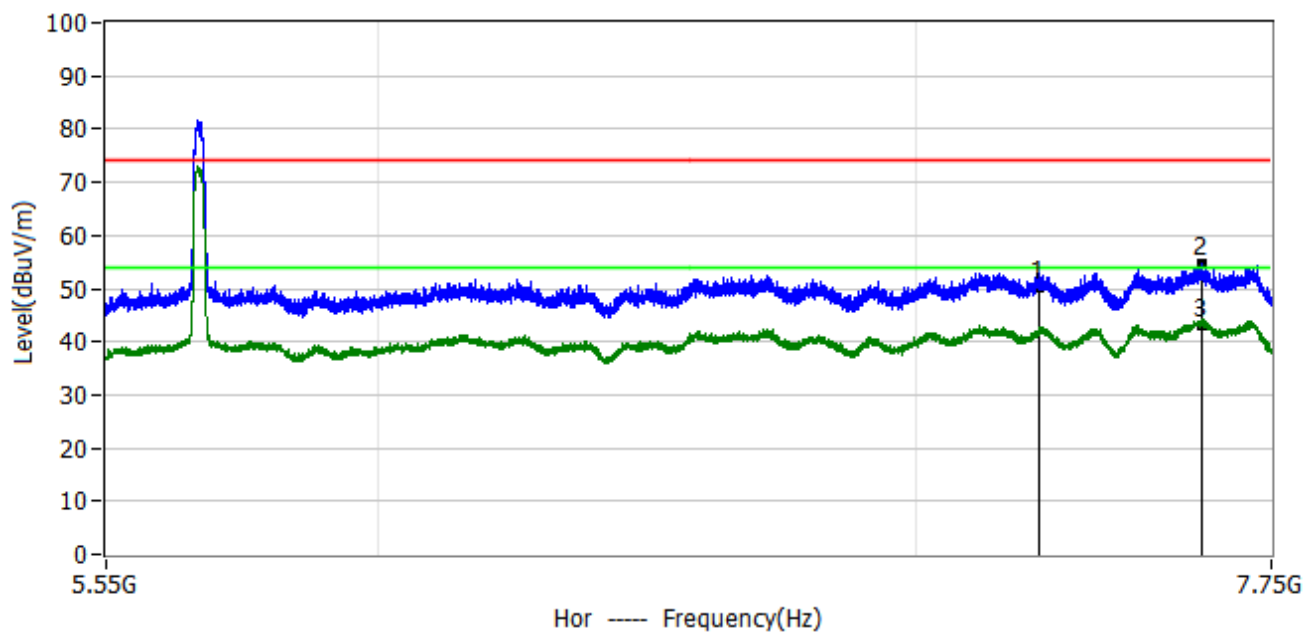
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5700	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	7.250GHz	56.89	-4.99	51.90	74.00	-22.10	PK	Ver
2*	7.600GHz	60.07	-4.24	55.83	74.00	-18.17	PK	Ver
3*	7.600GHz	47.74	-4.24	43.50	54.00	-10.50	AV	Ver



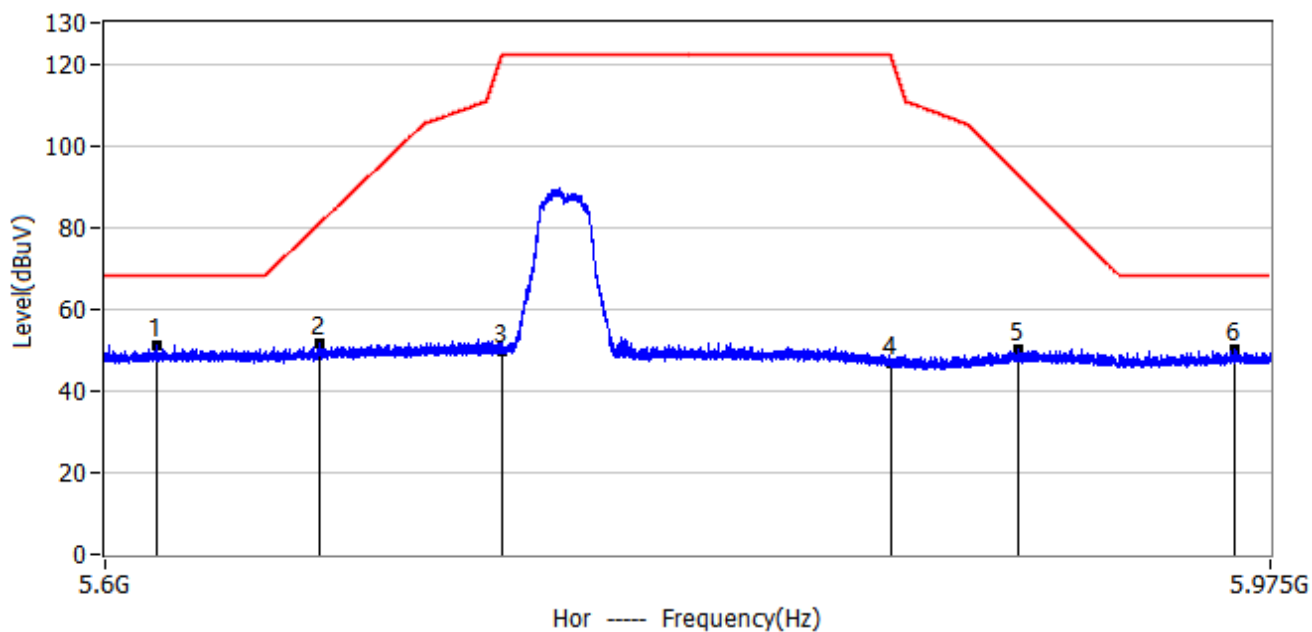
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5700	
Note:	



No.	Frequency	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	7.250GHz	55.09	-4.99	50.10	74.00	-23.90	PK	Hor
2*	7.598GHz	58.79	-4.24	54.55	74.00	-19.45	PK	Hor
3*	7.598GHz	47.44	-4.24	43.20	54.00	-10.80	AV	Hor



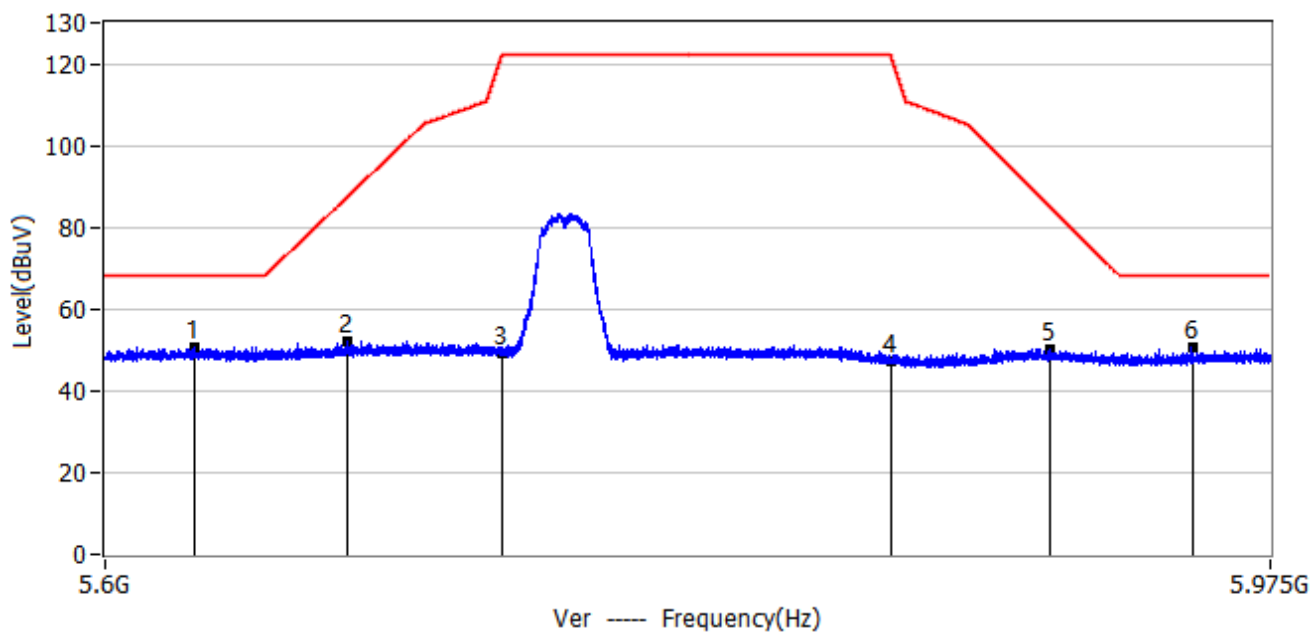
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5745	
Note:	



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	5.616GHz	58.64	-7.69	50.95	68.20	-17.25	PK	Hor
2*	5.667GHz	59.19	-7.67	51.52	80.77	-29.25	PK	Hor
3*	5.725GHz	57.45	-7.65	49.80	122.20	-72.40	PK	Hor
4*	5.850GHz	54.20	-7.60	46.60	122.20	-75.60	PK	Hor
5*	5.892GHz	57.62	-7.58	50.04	92.77	-42.73	PK	Hor
6*	5.963GHz	57.56	-7.55	50.01	68.20	-18.19	PK	Hor



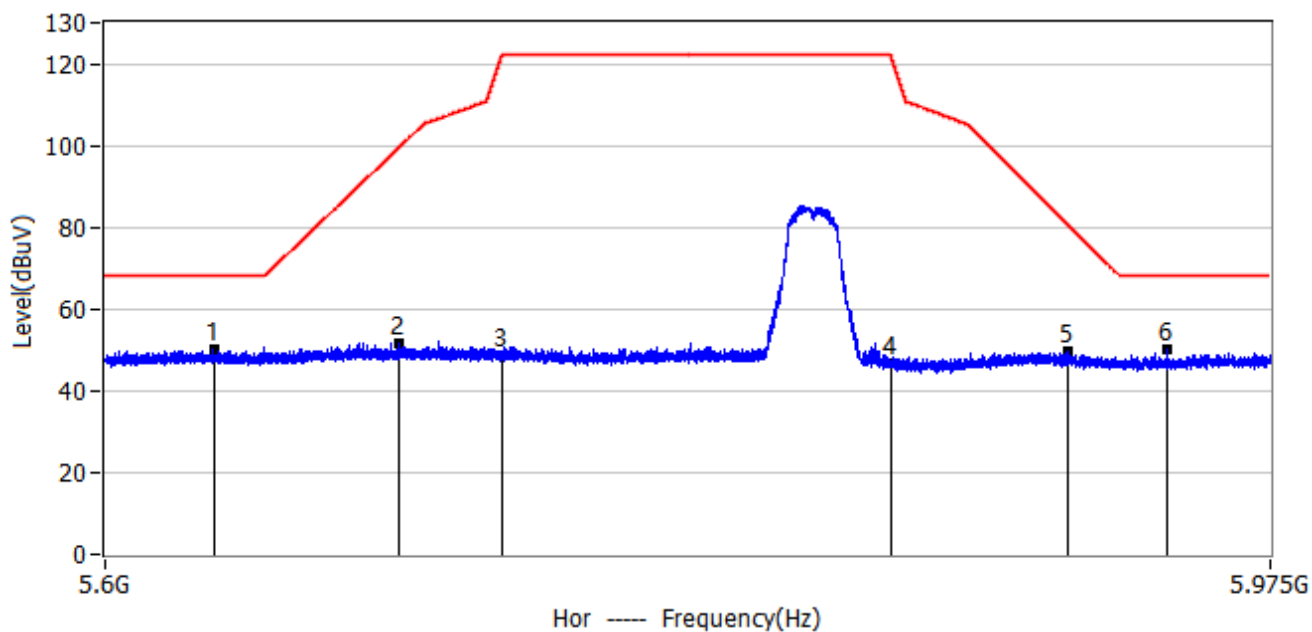
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5745	
Note:	



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	5.628GHz	58.35	-7.69	50.66	68.20	-17.54	PK	Ver
2*	5.676GHz	59.76	-7.67	52.09	87.47	-35.37	PK	Ver
3*	5.725GHz	56.65	-7.65	49.00	122.20	-73.20	PK	Ver
4*	5.850GHz	55.00	-7.60	47.40	122.20	-74.80	PK	Ver
5*	5.902GHz	57.85	-7.58	50.27	85.07	-34.79	PK	Ver
6*	5.949GHz	58.08	-7.56	50.52	68.20	-17.68	PK	Ver



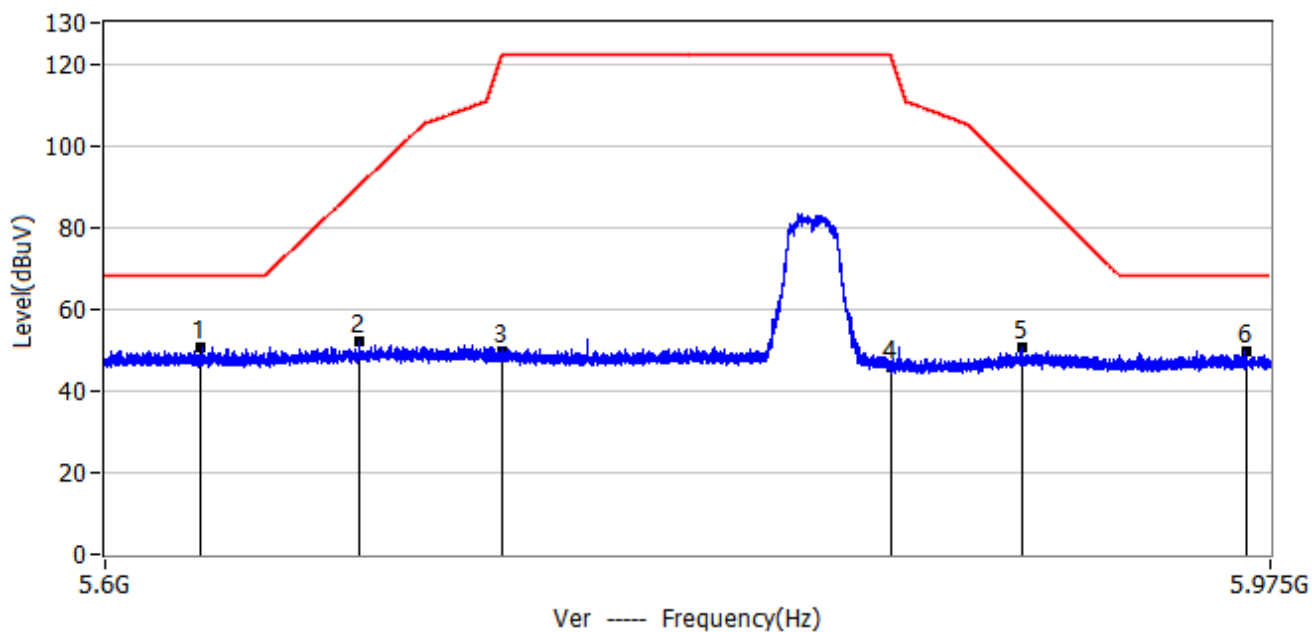
Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5825	
Note:	



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	5.634GHz	57.60	-7.69	49.91	68.20	-18.29	PK	Hor
2*	5.692GHz	59.41	-7.66	51.75	99.66	-47.91	PK	Hor
3*	5.725GHz	56.15	-7.65	48.50	122.20	-73.70	PK	Hor
4*	5.850GHz	54.50	-7.60	46.90	122.20	-75.30	PK	Hor
5*	5.908GHz	57.17	-7.58	49.59	80.49	-30.90	PK	Hor
6*	5.941GHz	57.54	-7.56	49.98	68.20	-18.22	PK	Hor



Project: LGT22K048	Test Engineer: Dylan.shi
EUT: Smart phone	Temperature: 24.7℃
M/N: TickTock-S	Humidity: 47%RH
Test Voltage: Battery	Test Data: 2022-12-08
Test Mode: 802.11a 5825	
Note:	



No.	Frequency	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	5.630GHz	58.10	-7.69	50.41	68.20	-17.79	PK	Ver
2*	5.680GHz	59.55	-7.67	51.88	90.24	-38.36	PK	Ver
3*	5.725GHz	57.25	-7.65	49.60	122.20	-72.50	PK	Ver
4*	5.850GHz	53.40	-7.60	45.80	122.20	-76.40	PK	Ver
5*	5.893GHz	58.18	-7.58	50.60	91.90	-41.30	PK	Ver
6*	5.967GHz	57.27	-7.55	49.72	68.20	-18.48	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.

4.6 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

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	

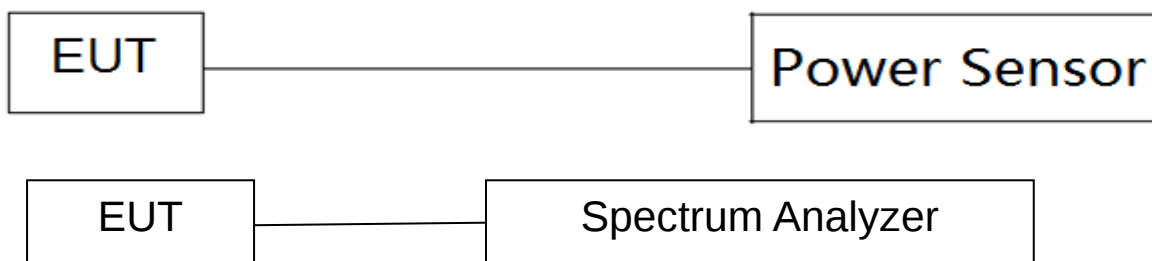
6.2 TEST PROCEDURE

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 PIFA Antenna with RP-SMA connector. It comply with the standard requirement.



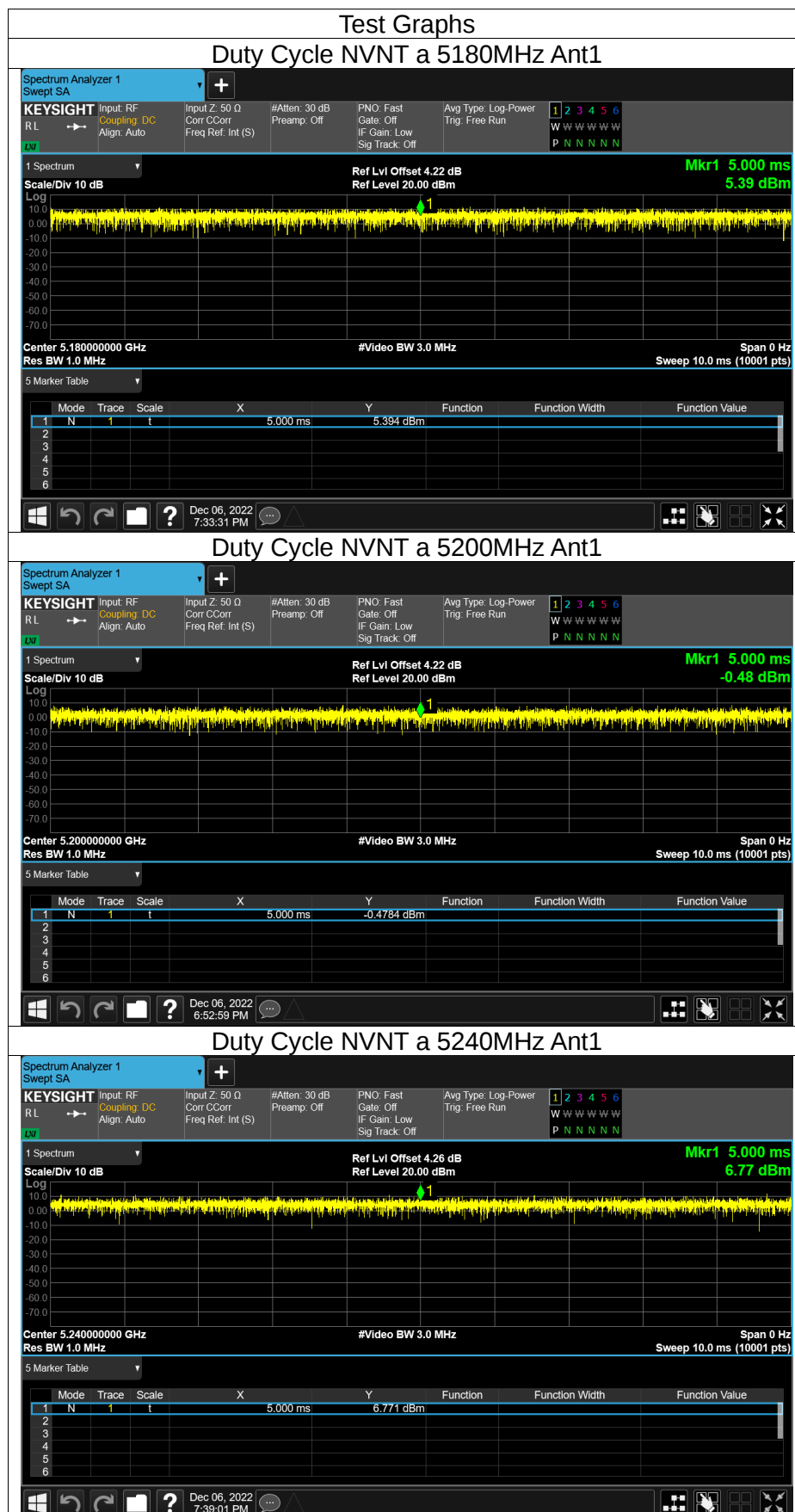
APPENDIX I:TEST RESULTS

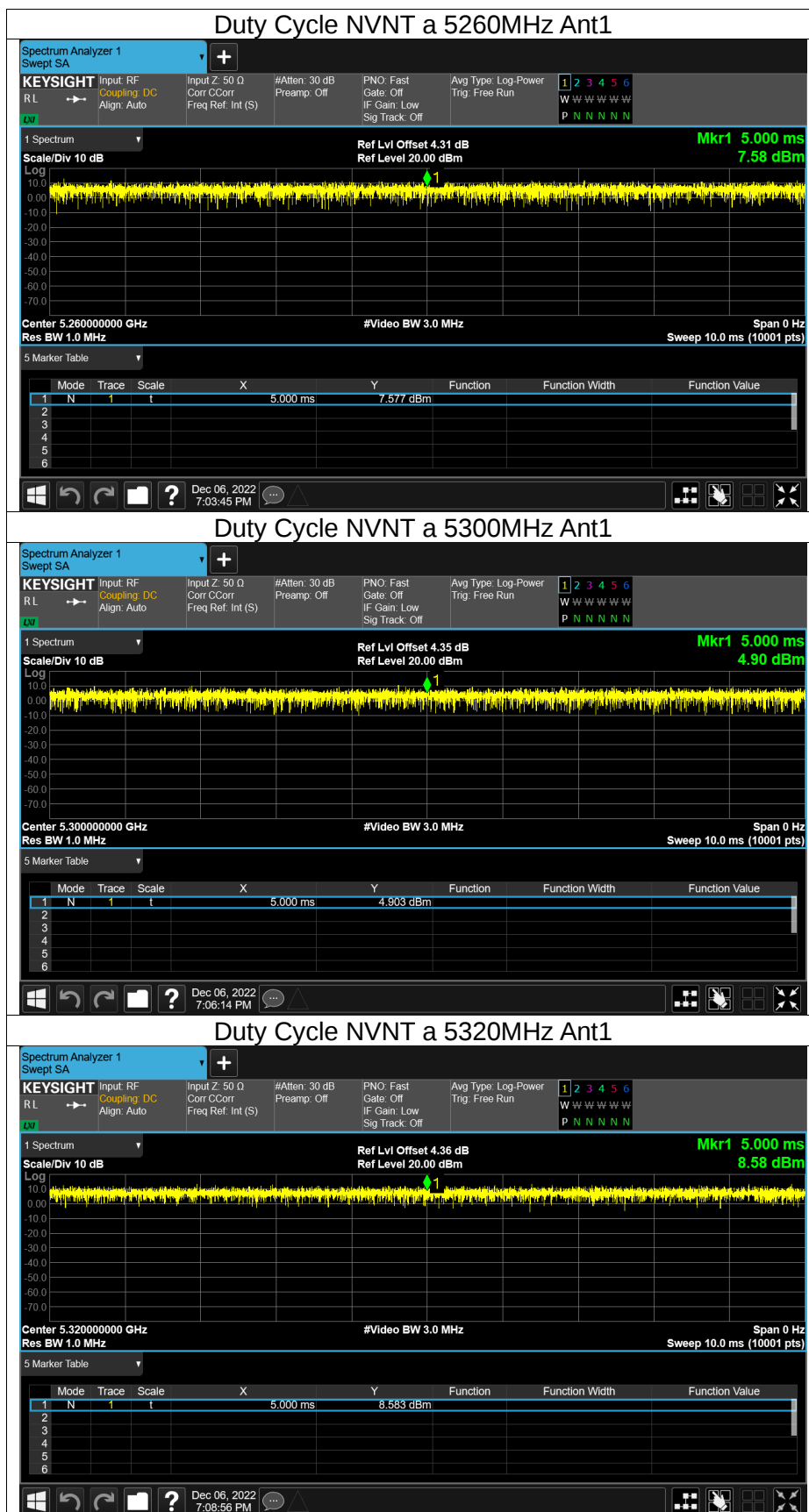
Duty Cycle

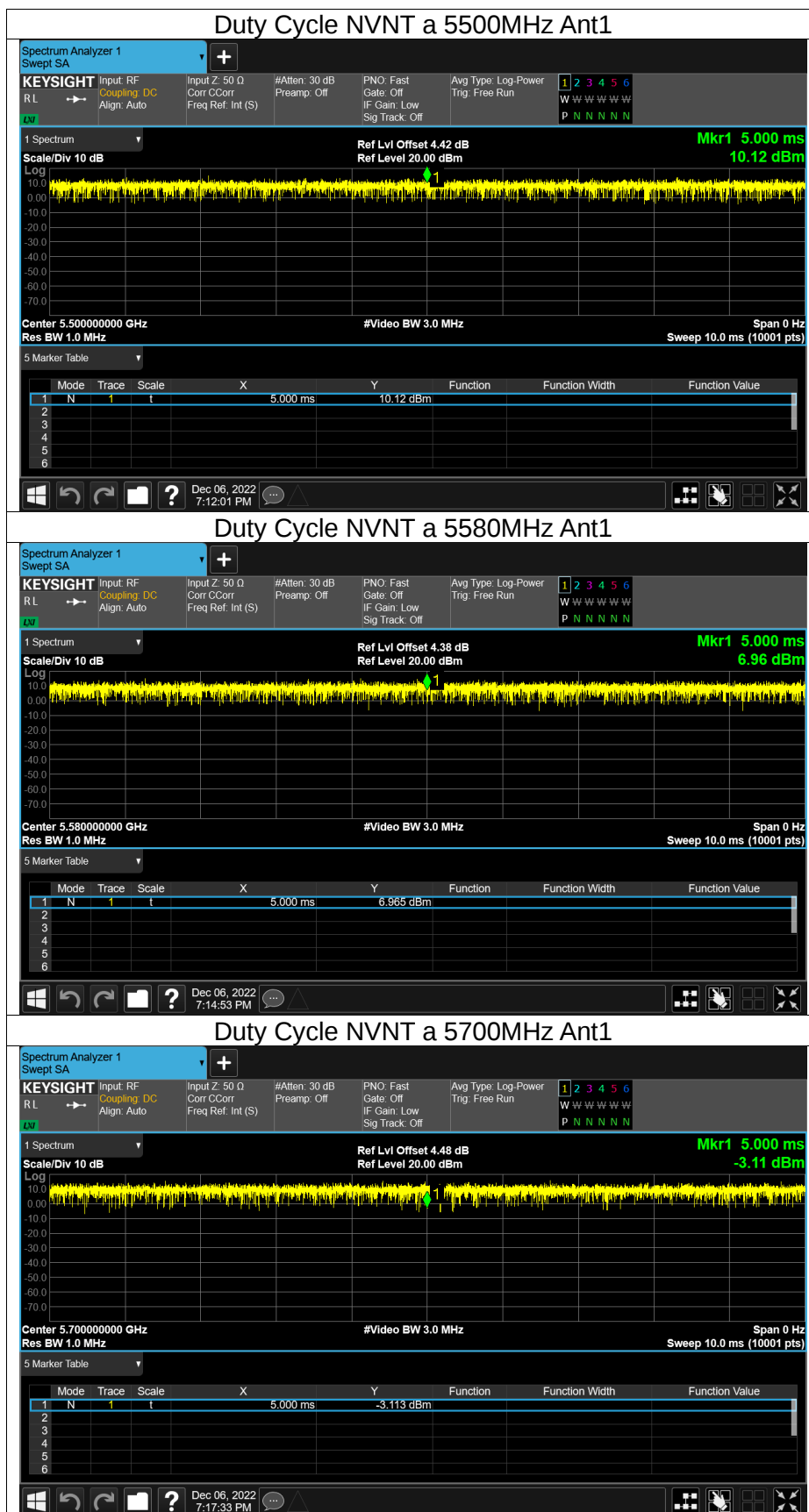
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant1	100	0	0
NVNT	a	5200	Ant1	100	0	0
NVNT	a	5240	Ant1	100	0	0
NVNT	a	5260	Ant1	100	0	0
NVNT	a	5300	Ant1	100	0	0
NVNT	a	5320	Ant1	100	0	0
NVNT	a	5500	Ant1	100	0	0
NVNT	a	5580	Ant1	100	0	0
NVNT	a	5700	Ant1	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	n20	5180	Ant1	100	0	0
NVNT	n20	5200	Ant1	100	0	0
NVNT	n20	5240	Ant1	100	0	0
NVNT	n20	5260	Ant1	100	0	0
NVNT	n20	5300	Ant1	100	0	0
NVNT	n20	5320	Ant1	100	0	0
NVNT	n20	5500	Ant1	100	0	0
NVNT	n20	5580	Ant1	100	0	0
NVNT	n20	5700	Ant1	100	0	0
NVNT	n20	5745	Ant1	100	0	0
NVNT	n20	5785	Ant1	100	0	0
NVNT	n20	5825	Ant1	100	0	0
NVNT	n40	5190	Ant1	100	0	0
NVNT	n40	5230	Ant1	100	0	0
NVNT	n40	5270	Ant1	100	0	0
NVNT	n40	5310	Ant1	100	0	0
NVNT	n40	5510	Ant1	100	0	0
NVNT	n40	5550	Ant1	100	0	0
NVNT	n40	5670	Ant1	100	0	0
NVNT	n40	5755	Ant1	100	0	0
NVNT	n40	5795	Ant1	100	0	0
NVNT	ac20	5180	Ant1	100	0	0
NVNT	ac20	5200	Ant1	100	0	0
NVNT	ac20	5240	Ant1	100	0	0
NVNT	ac20	5260	Ant1	100	0	0
NVNT	ac20	5300	Ant1	100	0	0
NVNT	ac20	5320	Ant1	100	0	0
NVNT	ac20	5500	Ant1	100	0	0
NVNT	ac20	5580	Ant1	100	0	0
NVNT	ac20	5700	Ant1	100	0	0
NVNT	ac20	5745	Ant1	100	0	0
NVNT	ac20	5785	Ant1	100	0	0
NVNT	ac20	5825	Ant1	100	0	0
NVNT	ac40	5190	Ant1	100	0	0
NVNT	ac40	5230	Ant1	100	0	0
NVNT	ac40	5270	Ant1	100	0	0
NVNT	ac40	5310	Ant1	100	0	0
NVNT	ac40	5510	Ant1	100	0	0

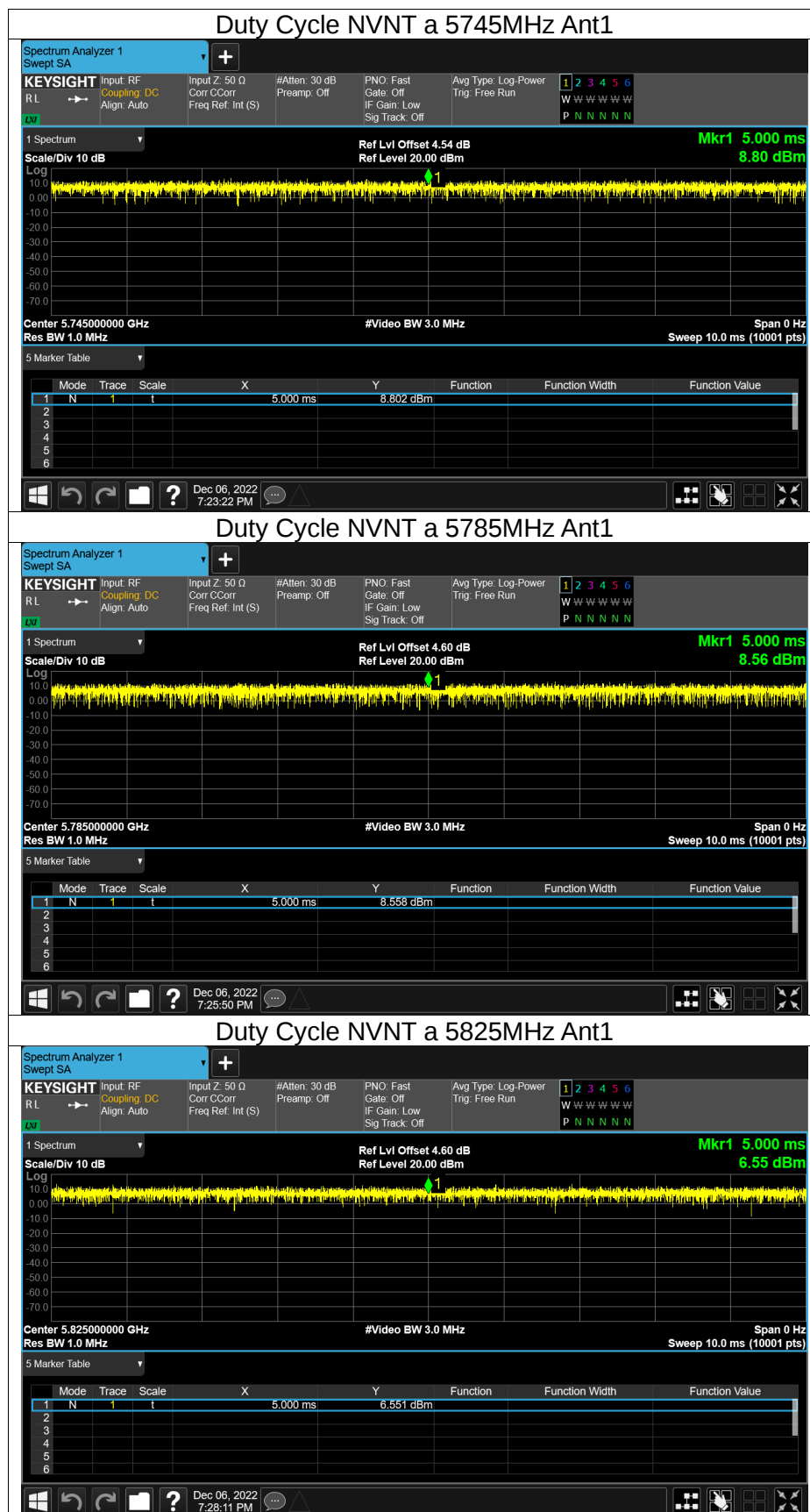


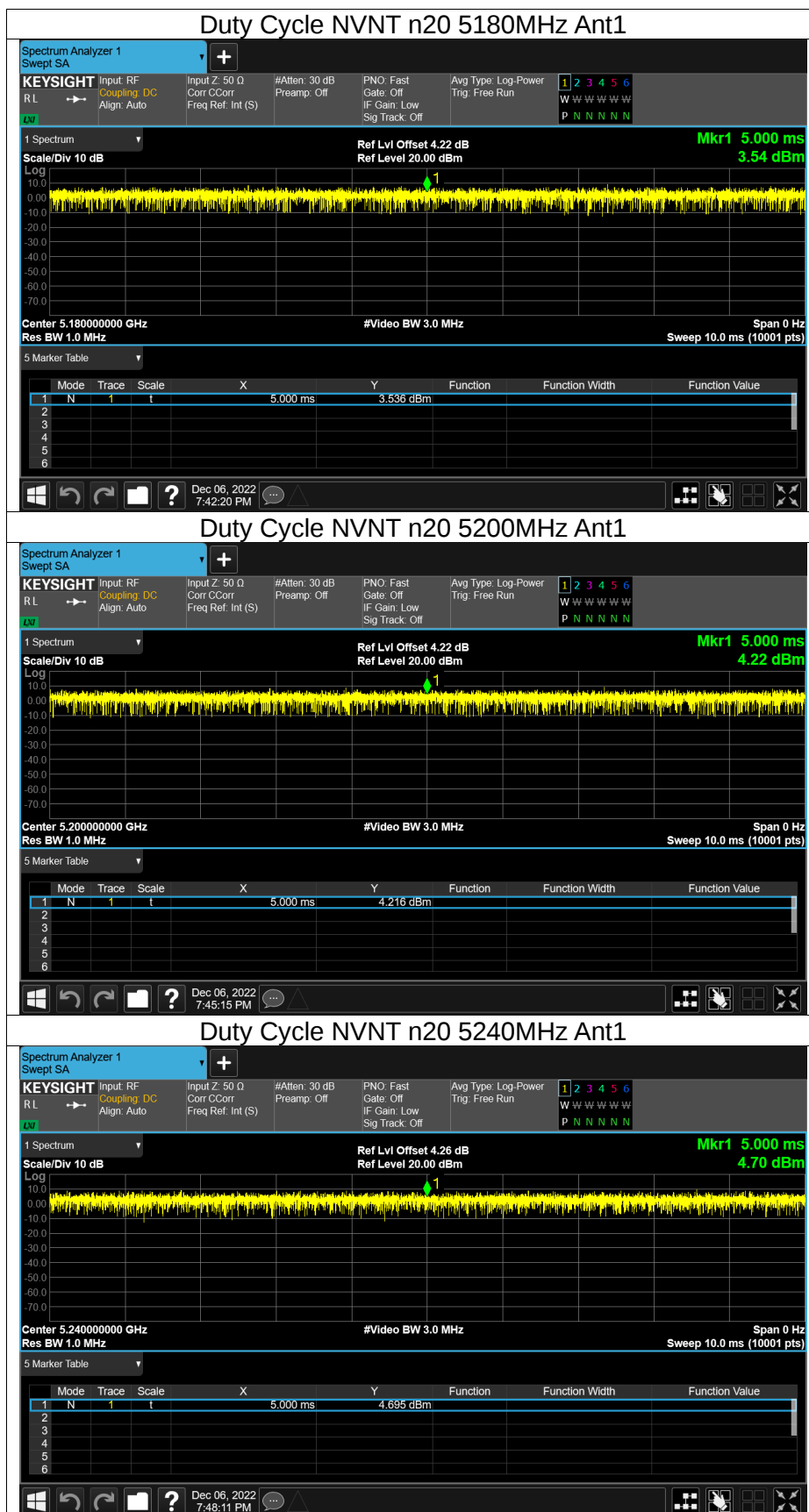
NVNT	ac40	5550	Ant1	100	0	0
NVNT	ac40	5670	Ant1	100	0	0
NVNT	ac40	5755	Ant1	100	0	0
NVNT	ac40	5795	Ant1	100	0	0
NVNT	ac80	5210	Ant1	100	0	0
NVNT	ac80	5290	Ant1	100	0	0
NVNT	ac80	5530	Ant1	100	0	0
NVNT	ac80	5610	Ant1	100	0	0
NVNT	ac80	5775	Ant1	100	0	0



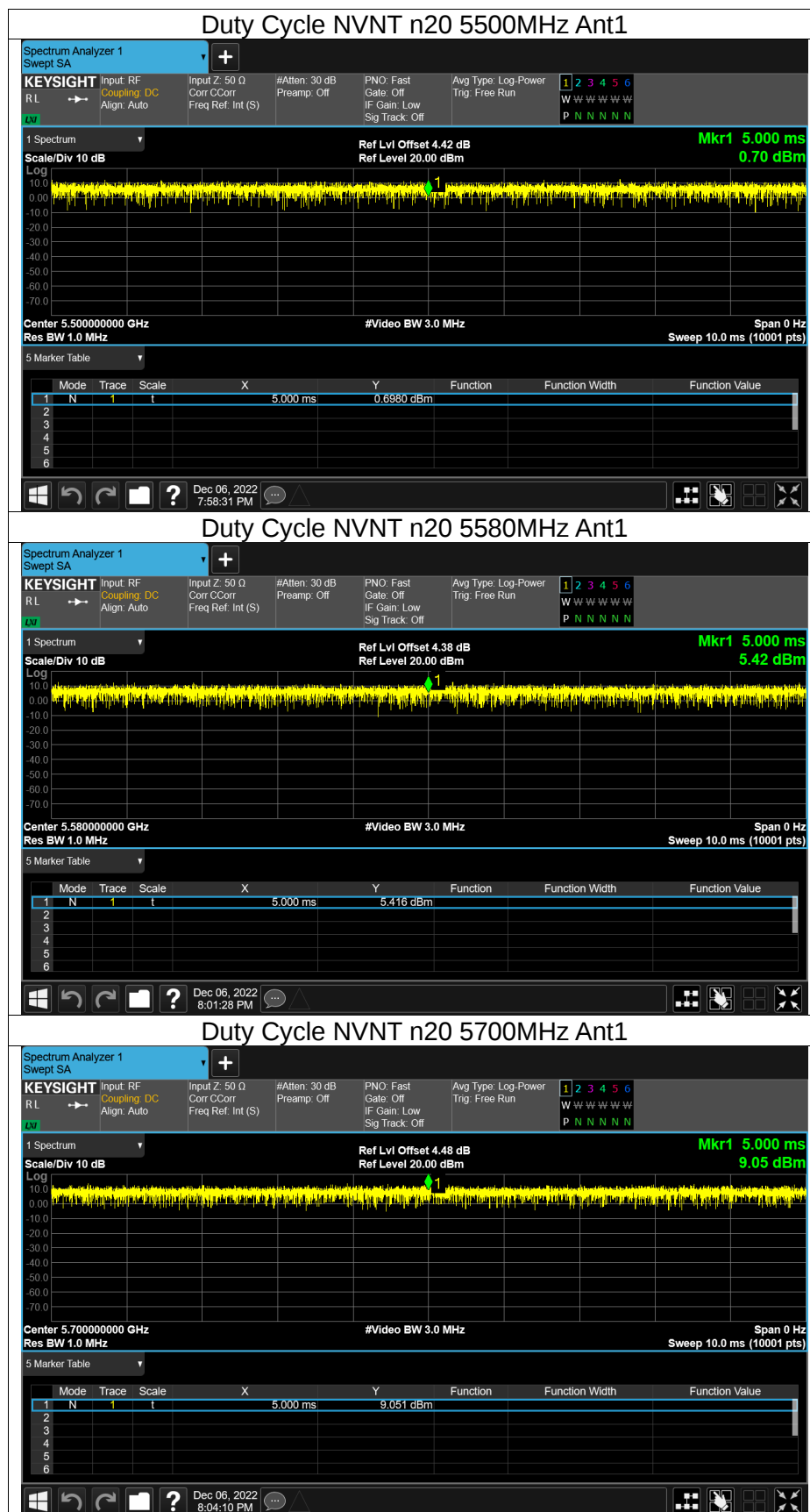


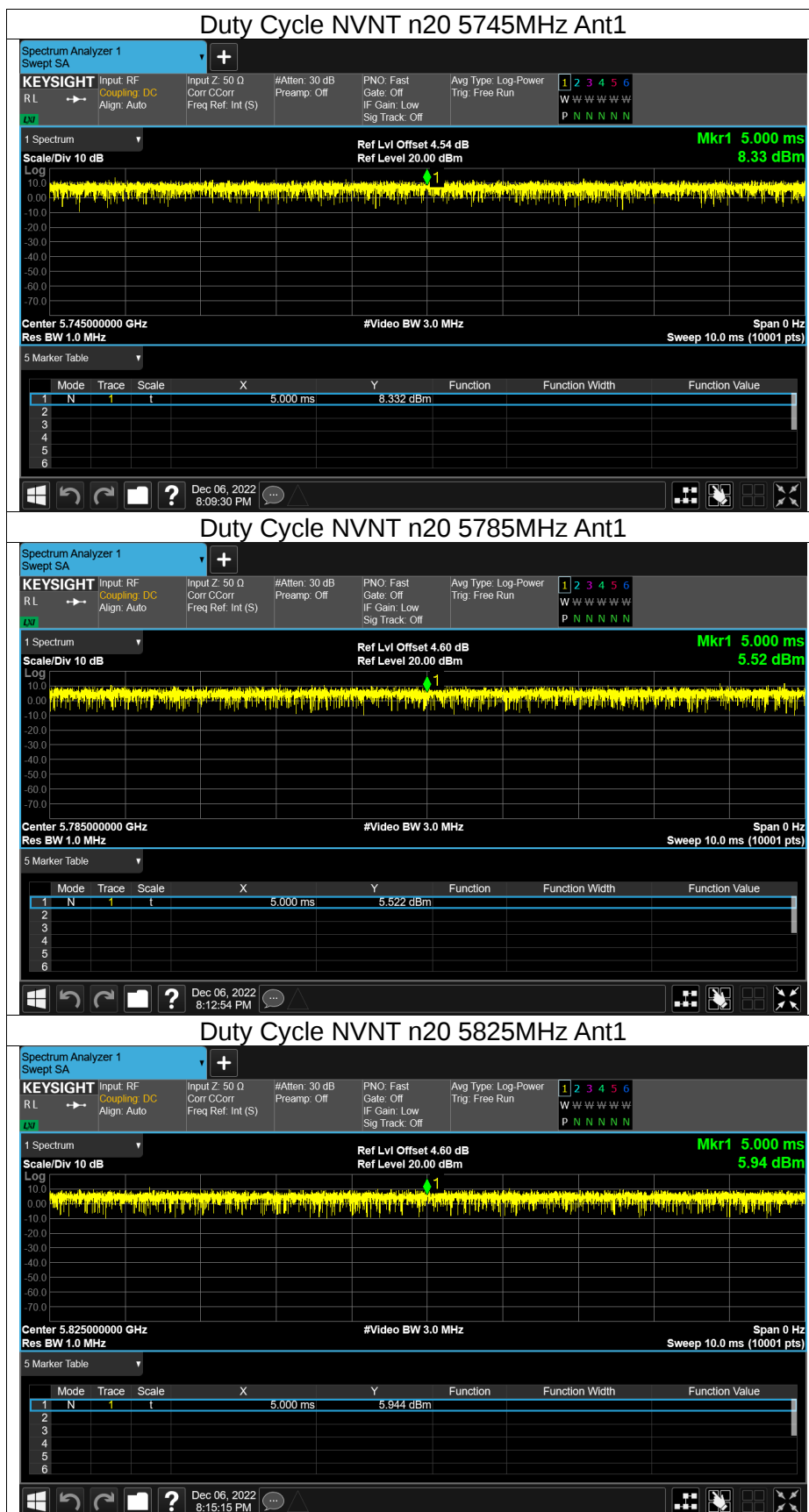


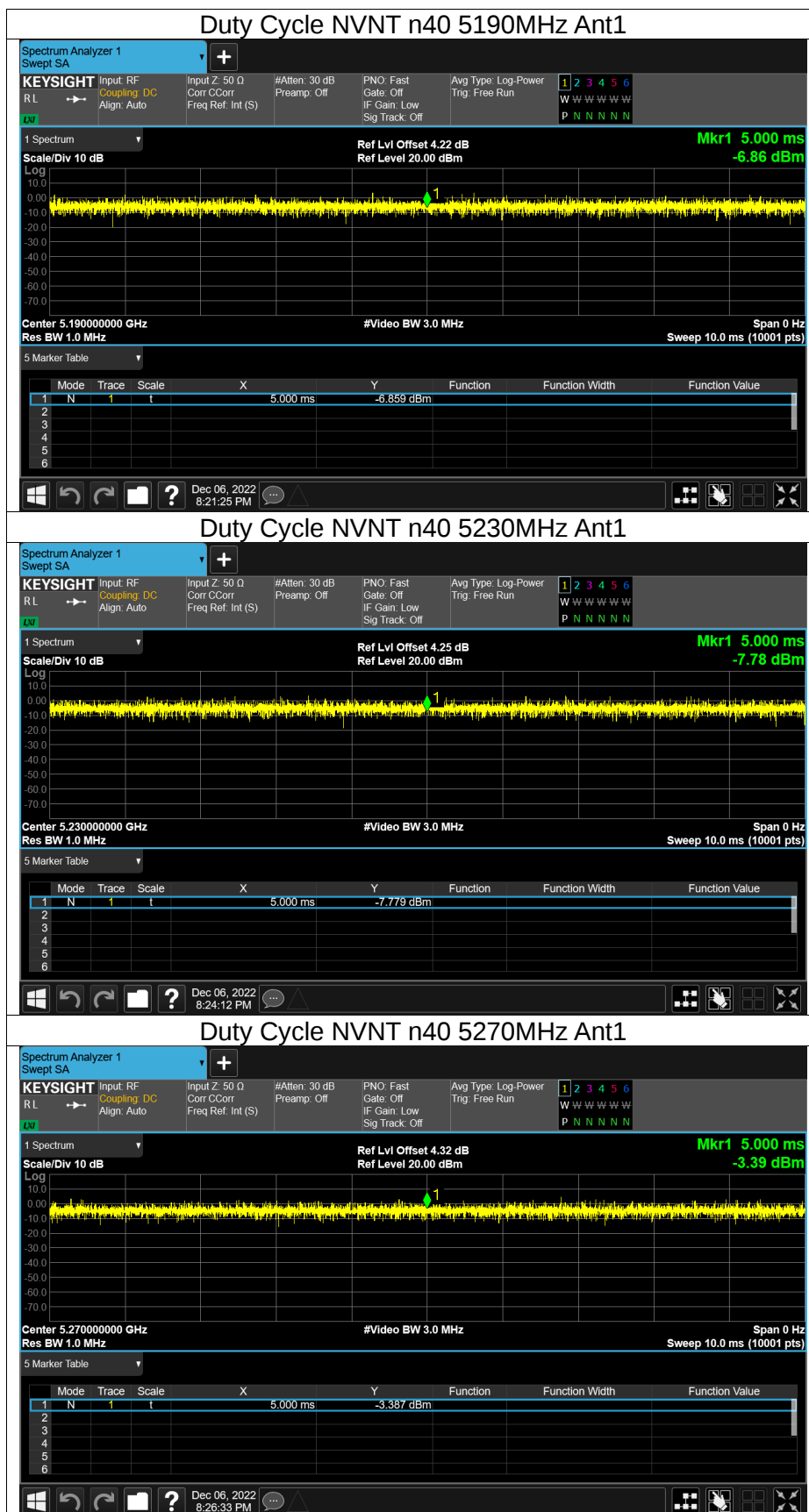


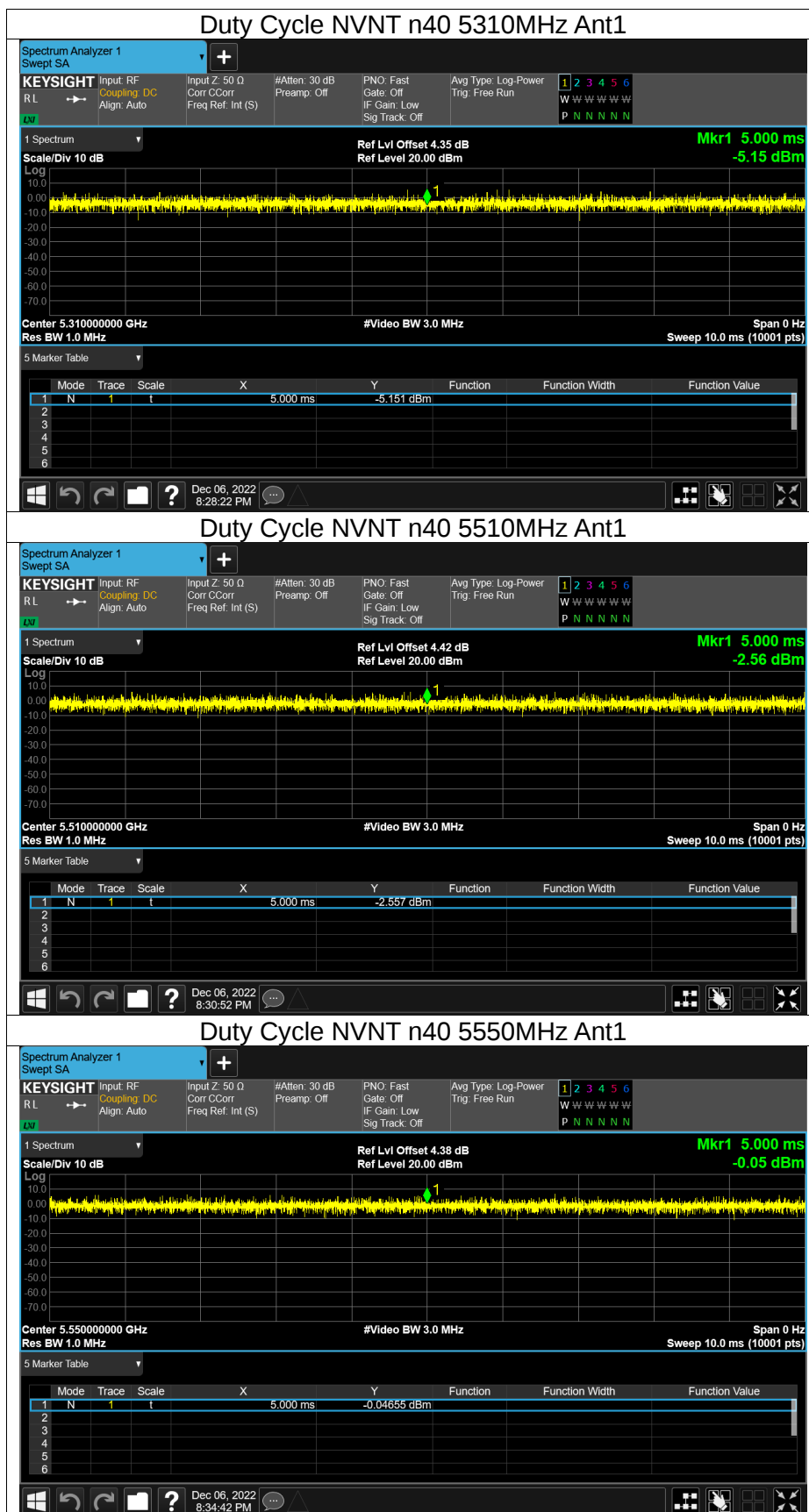


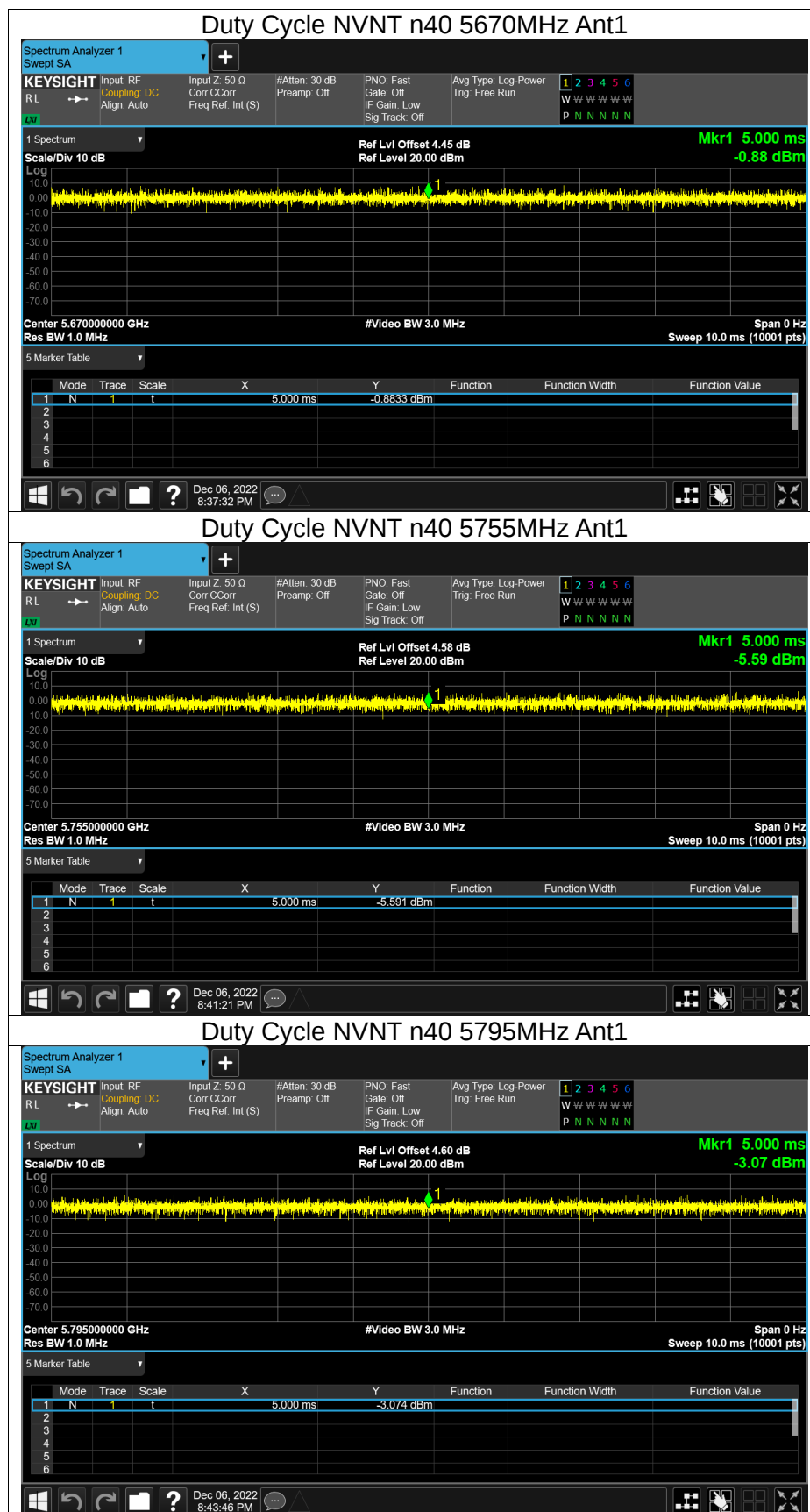


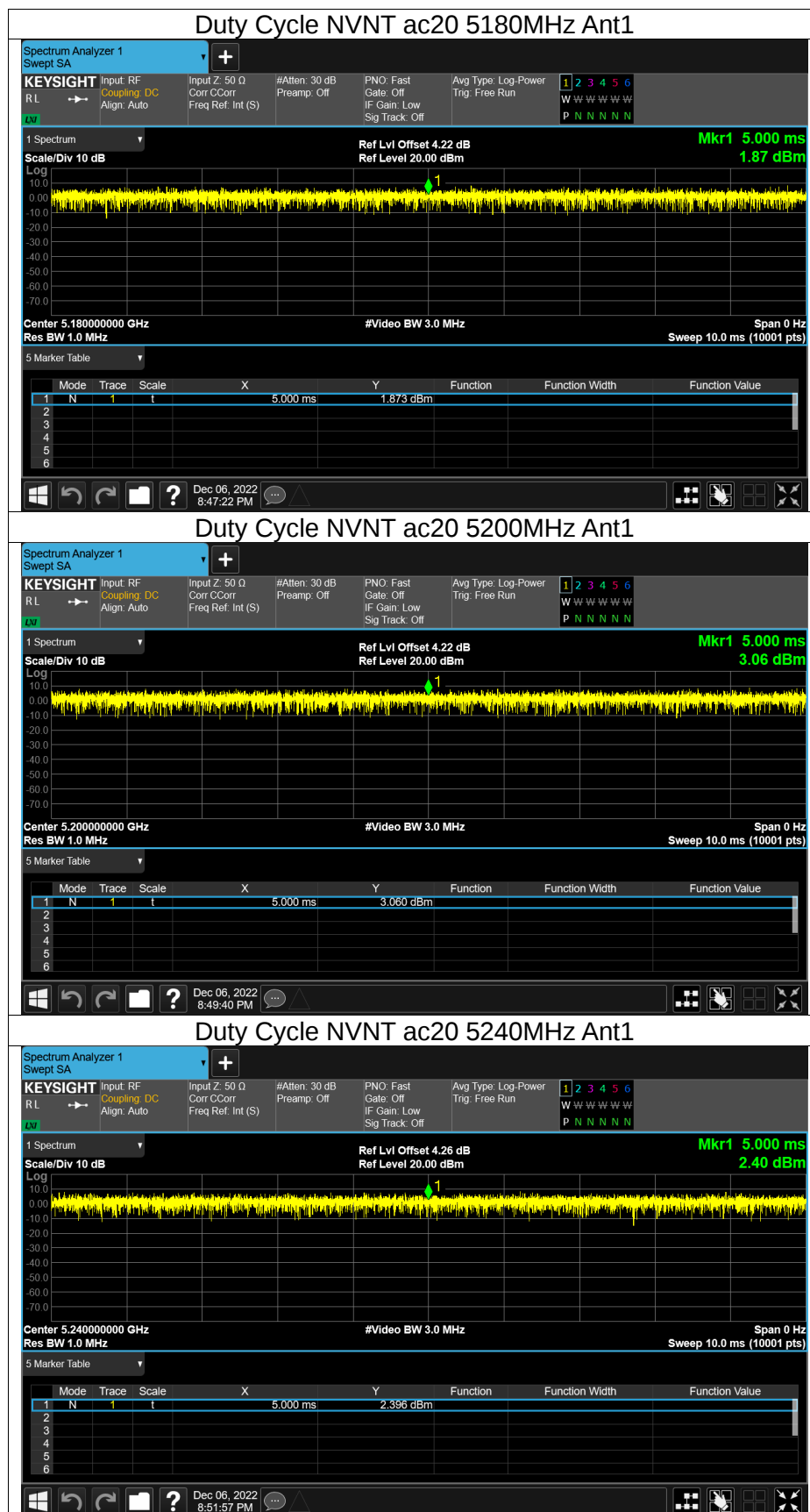


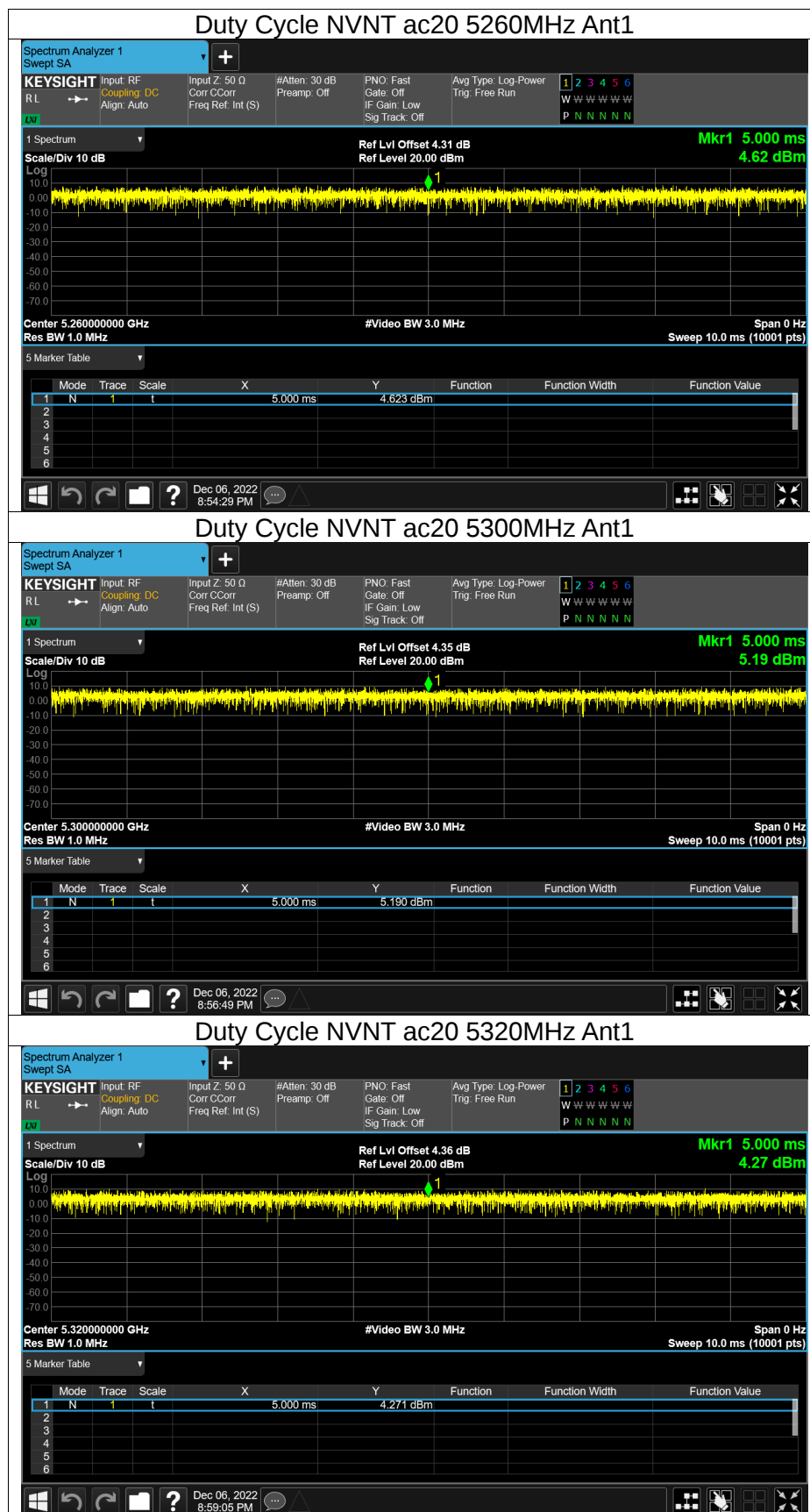


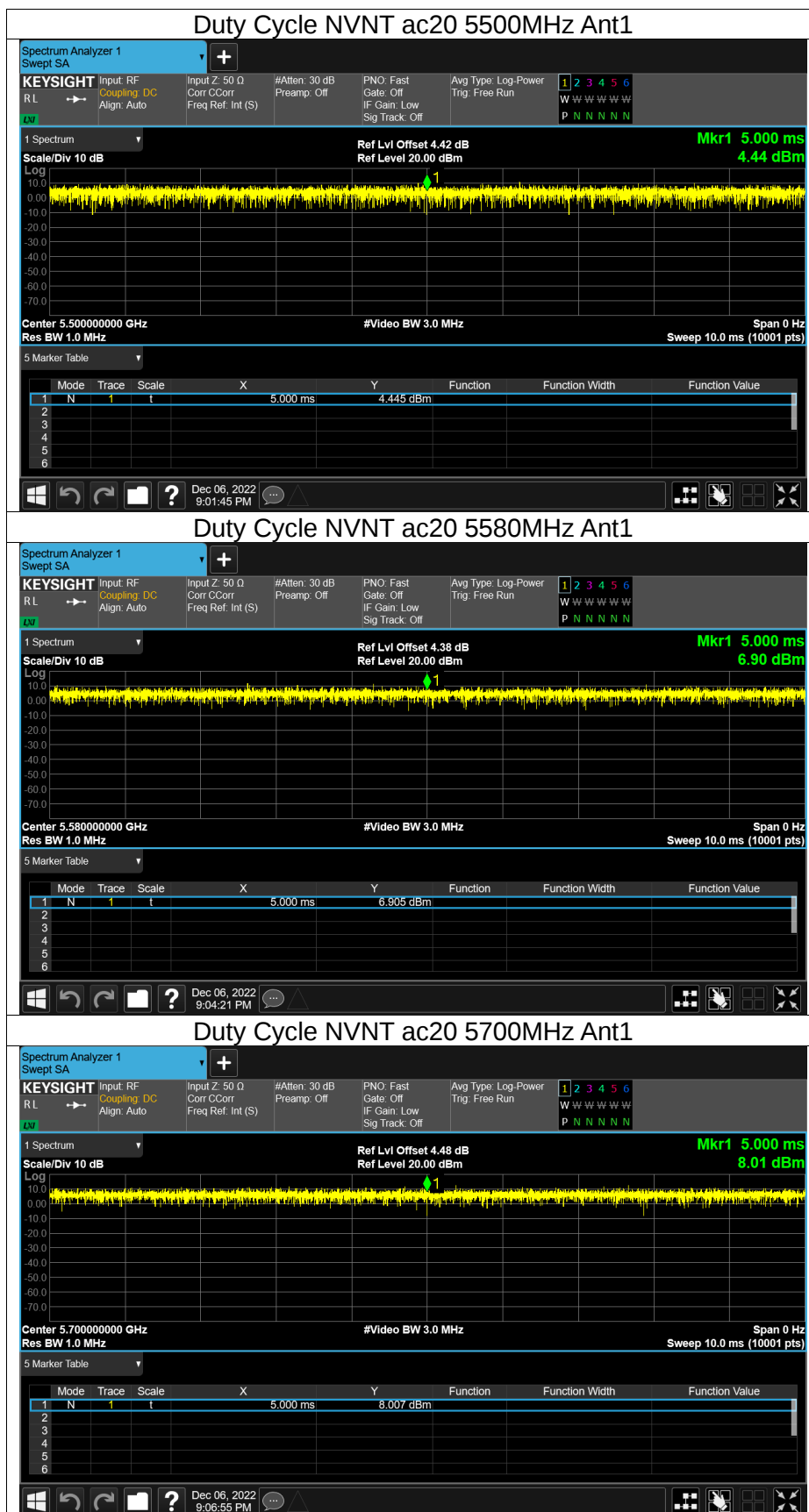


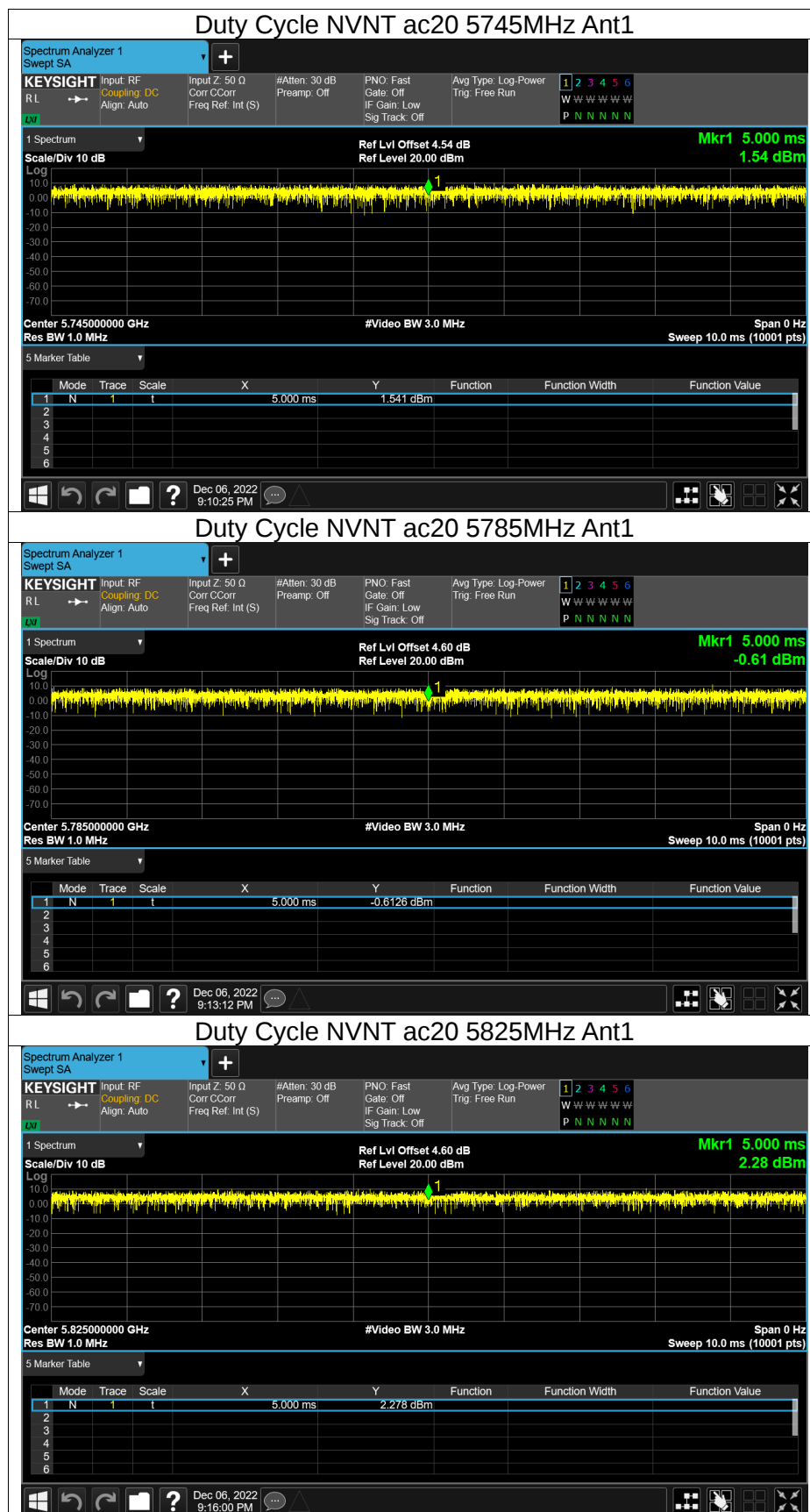


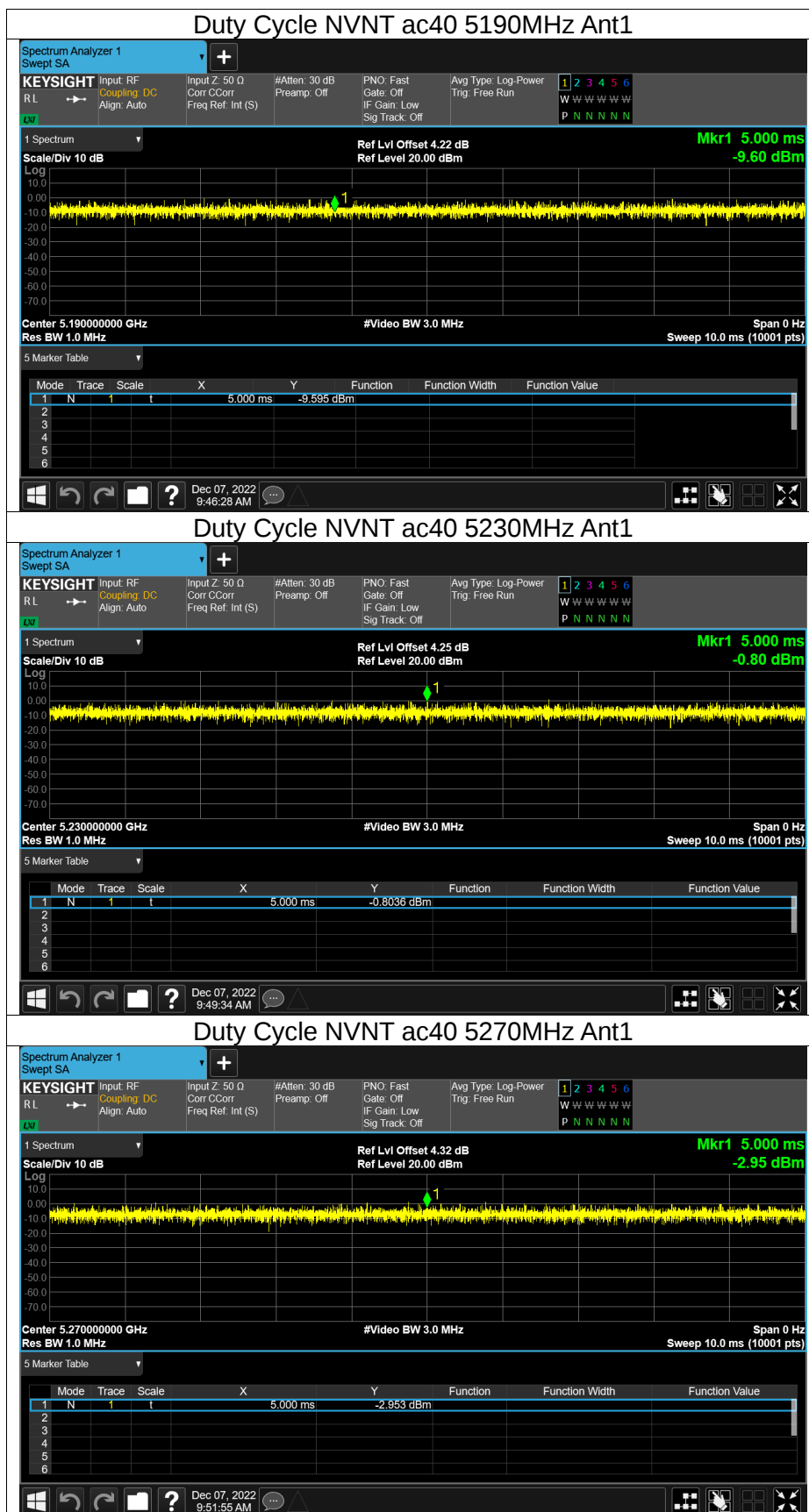


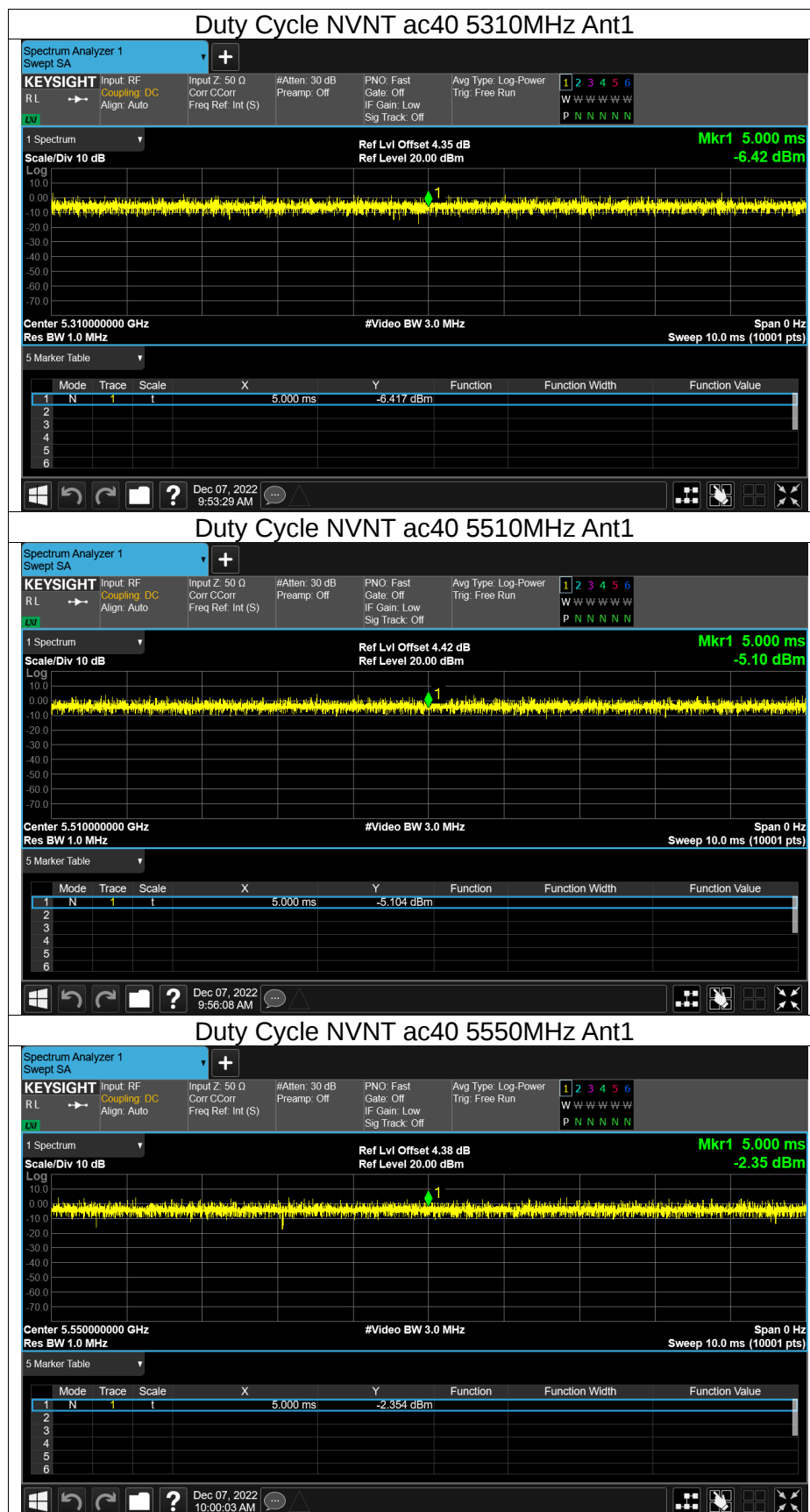


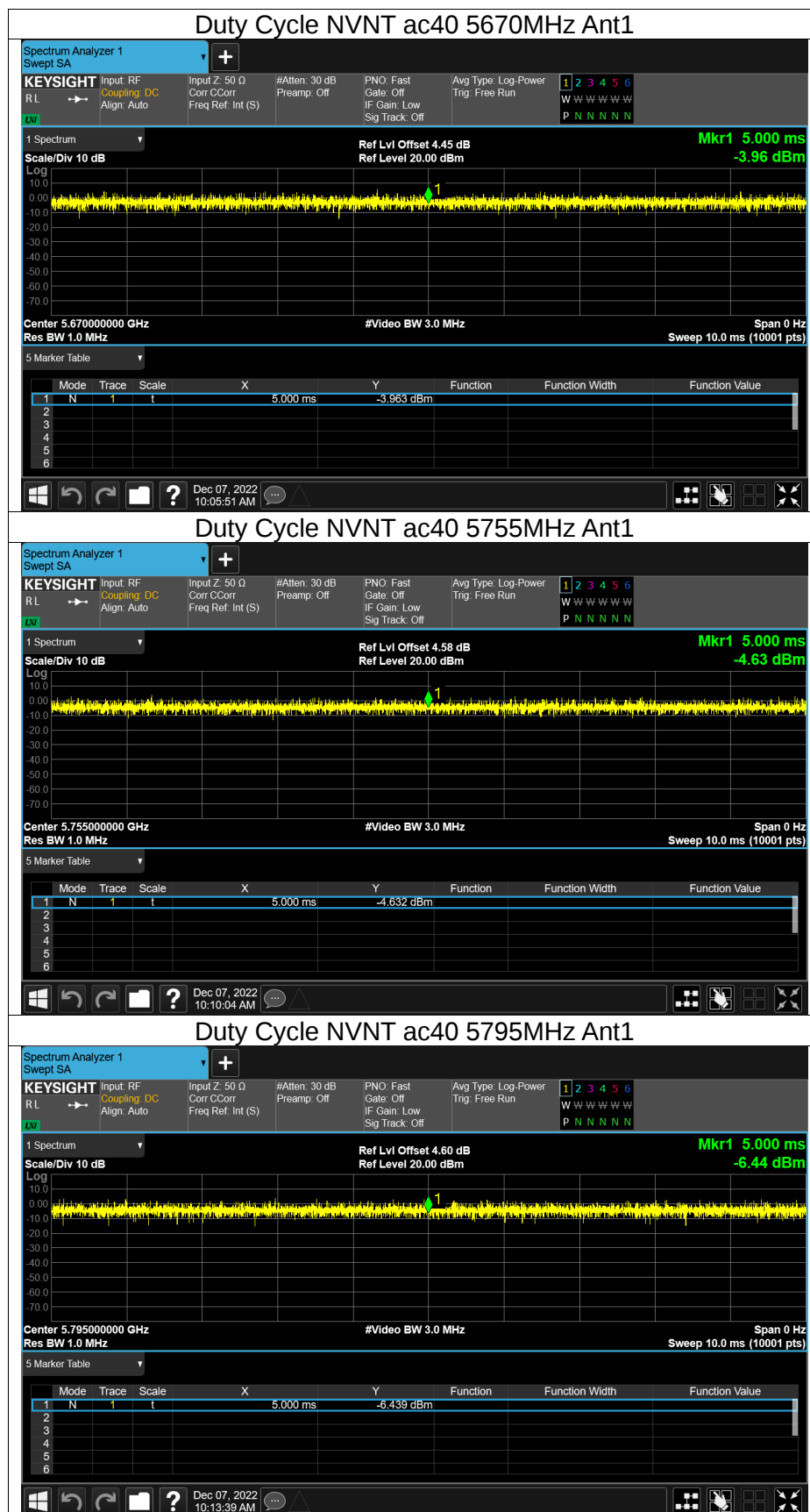


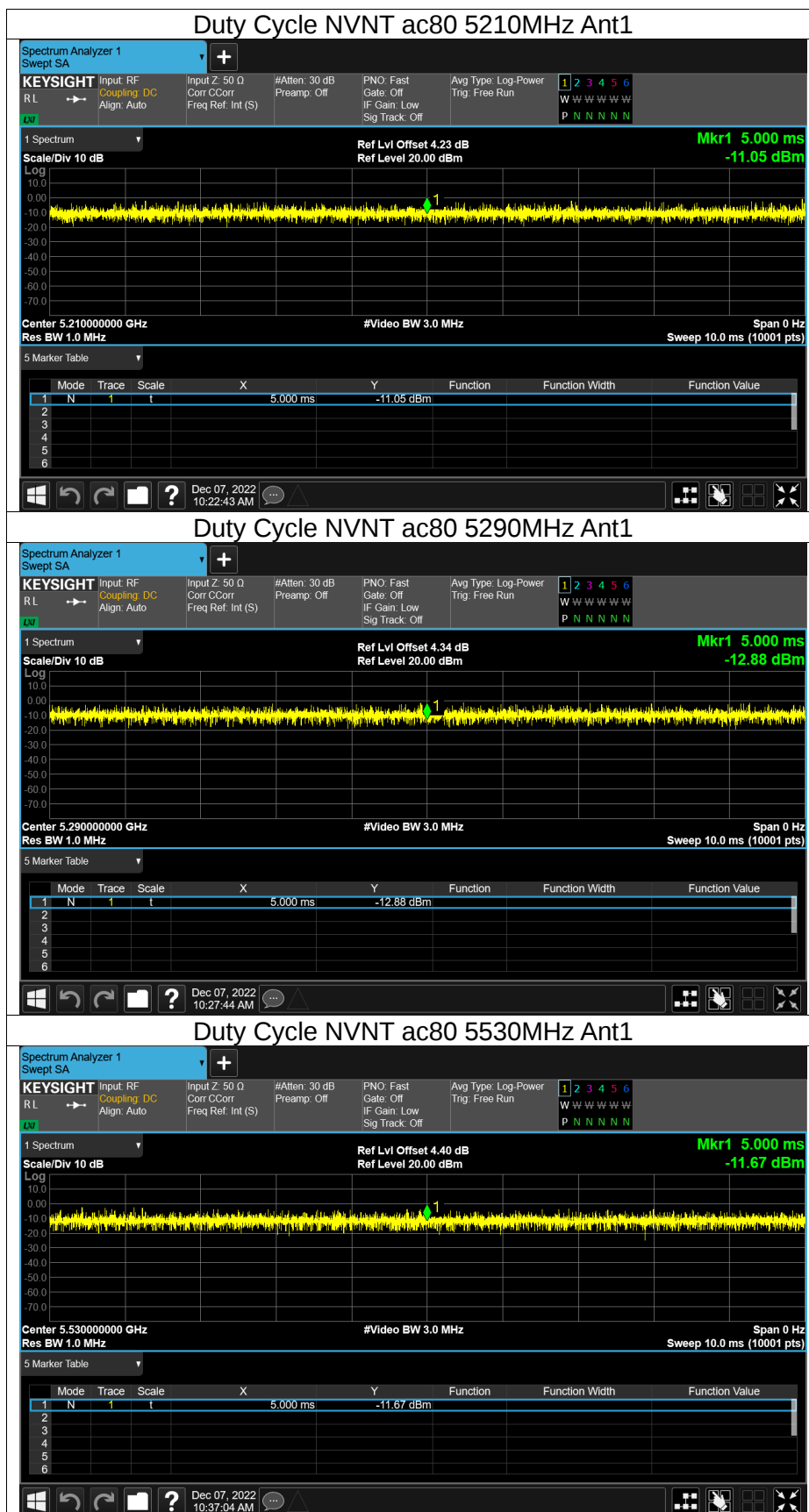


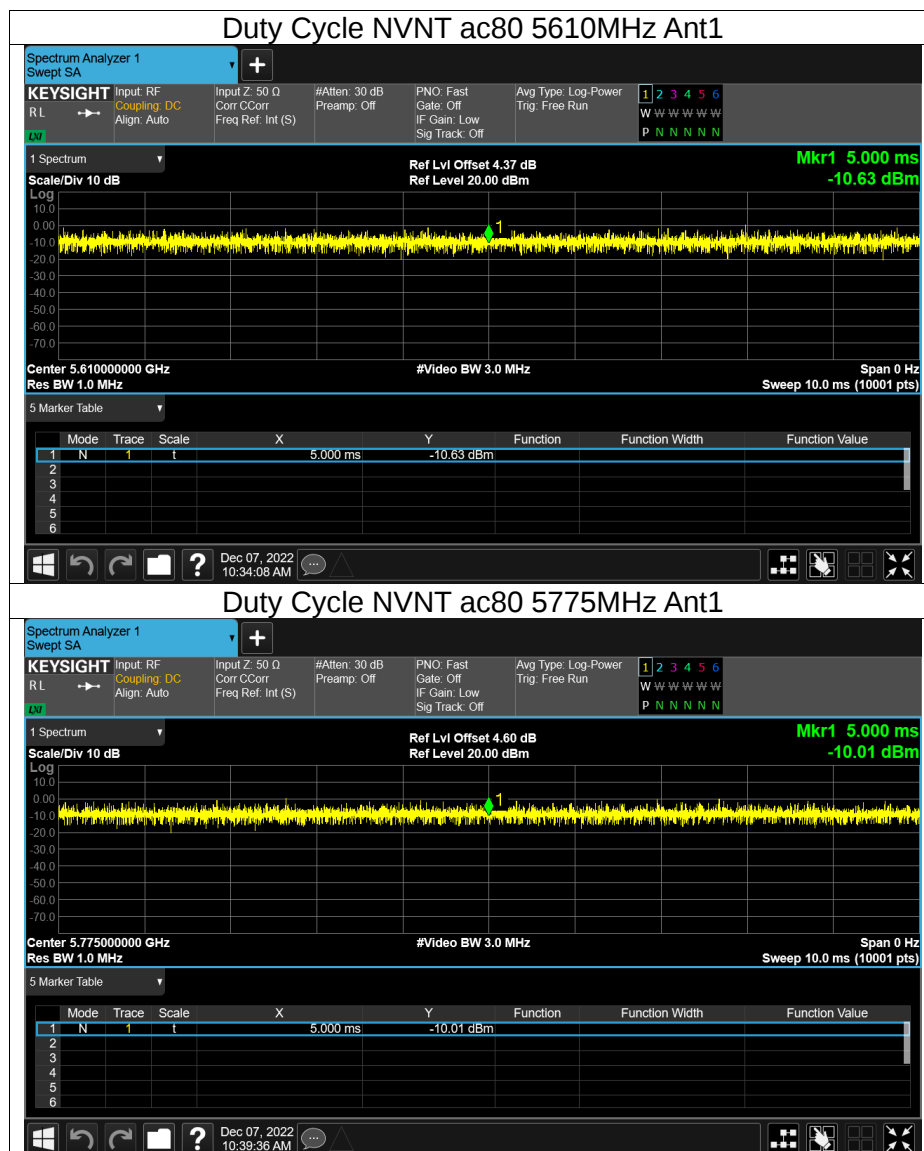














Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	14.7	0	14.7	24	Pass
NVNT	a	5200	Ant1	14.93	0	14.93	24	Pass
NVNT	a	5240	Ant1	13.63	0	13.63	24	Pass
NVNT	a	5260	Ant1	15.16	0	15.16	24	Pass
NVNT	a	5300	Ant1	15.11	0	15.11	24	Pass
NVNT	a	5320	Ant1	16.35	0	16.35	24	Pass
NVNT	a	5500	Ant1	15.75	0	15.75	24	Pass
NVNT	a	5580	Ant1	15.09	0	15.09	24	Pass
NVNT	a	5700	Ant1	15.1	0	15.1	24	Pass
NVNT	a	5745	Ant1	15.85	0	15.85	30	Pass
NVNT	a	5785	Ant1	15.82	0	15.82	30	Pass
NVNT	a	5825	Ant1	15.96	0	15.96	30	Pass
NVNT	n20	5180	Ant1	11.74	0	11.74	24	Pass
NVNT	n20	5200	Ant1	11.85	0	11.85	24	Pass
NVNT	n20	5240	Ant1	12.27	0	12.27	24	Pass
NVNT	n20	5260	Ant1	12.16	0	12.16	24	Pass
NVNT	n20	5300	Ant1	13.86	0	13.86	24	Pass
NVNT	n20	5320	Ant1	14.27	0	14.27	24	Pass
NVNT	n20	5500	Ant1	13.78	0	13.78	24	Pass
NVNT	n20	5580	Ant1	14.33	0	14.33	24	Pass
NVNT	n20	5700	Ant1	15.36	0	15.36	24	Pass
NVNT	n20	5745	Ant1	14.86	0	14.86	30	Pass
NVNT	n20	5785	Ant1	14.72	0	14.72	30	Pass
NVNT	n20	5825	Ant1	14.51	0	14.51	30	Pass
NVNT	n40	5190	Ant1	10.4	0	10.4	24	Pass
NVNT	n40	5230	Ant1	10.79	0	10.79	24	Pass
NVNT	n40	5270	Ant1	11.45	0	11.45	24	Pass
NVNT	n40	5310	Ant1	12.15	0	12.15	24	Pass
NVNT	n40	5510	Ant1	13.14	0	13.14	24	Pass
NVNT	n40	5550	Ant1	13.87	0	13.87	24	Pass
NVNT	n40	5670	Ant1	13.7	0	13.7	24	Pass
NVNT	n40	5755	Ant1	14.67	0	14.67	30	Pass
NVNT	n40	5795	Ant1	14.65	0	14.65	30	Pass
NVNT	ac20	5180	Ant1	10.99	0	10.99	24	Pass
NVNT	ac20	5200	Ant1	11.41	0	11.41	24	Pass
NVNT	ac20	5240	Ant1	11.14	0	11.14	24	Pass
NVNT	ac20	5260	Ant1	11.64	0	11.64	24	Pass
NVNT	ac20	5300	Ant1	12.64	0	12.64	24	Pass
NVNT	ac20	5320	Ant1	13.04	0	13.04	24	Pass
NVNT	ac20	5500	Ant1	12.73	0	12.73	24	Pass
NVNT	ac20	5580	Ant1	13.52	0	13.52	24	Pass
NVNT	ac20	5700	Ant1	14.36	0	14.36	24	Pass
NVNT	ac20	5745	Ant1	13.91	0	13.91	30	Pass
NVNT	ac20	5785	Ant1	13.6	0	13.6	30	Pass
NVNT	ac20	5825	Ant1	13.88	0	13.88	30	Pass
NVNT	ac40	5190	Ant1	7.99	0	7.99	24	Pass
NVNT	ac40	5230	Ant1	8.07	0	8.07	24	Pass
NVNT	ac40	5270	Ant1	8.83	0	8.83	24	Pass
NVNT	ac40	5310	Ant1	10.25	0	10.25	24	Pass
NVNT	ac40	5510	Ant1	11.8	0	11.8	24	Pass
NVNT	ac40	5550	Ant1	11.66	0	11.66	24	Pass
NVNT	ac40	5670	Ant1	12.24	0	12.24	24	Pass



NVNT	ac40	5755	Ant1	11.97	0	11.97	30	Pass
NVNT	ac40	5795	Ant1	12.06	0	12.06	30	Pass
NVNT	ac80	5210	Ant1	8.84	0	8.84	24	Pass
NVNT	ac80	5290	Ant1	9.57	0	9.57	24	Pass
NVNT	ac80	5530	Ant1	7.75	0	7.75	24	Pass
NVNT	ac80	5610	Ant1	9.77	0	9.77	24	Pass
NVNT	ac80	5775	Ant1	10.95	0	10.95	30	Pass



