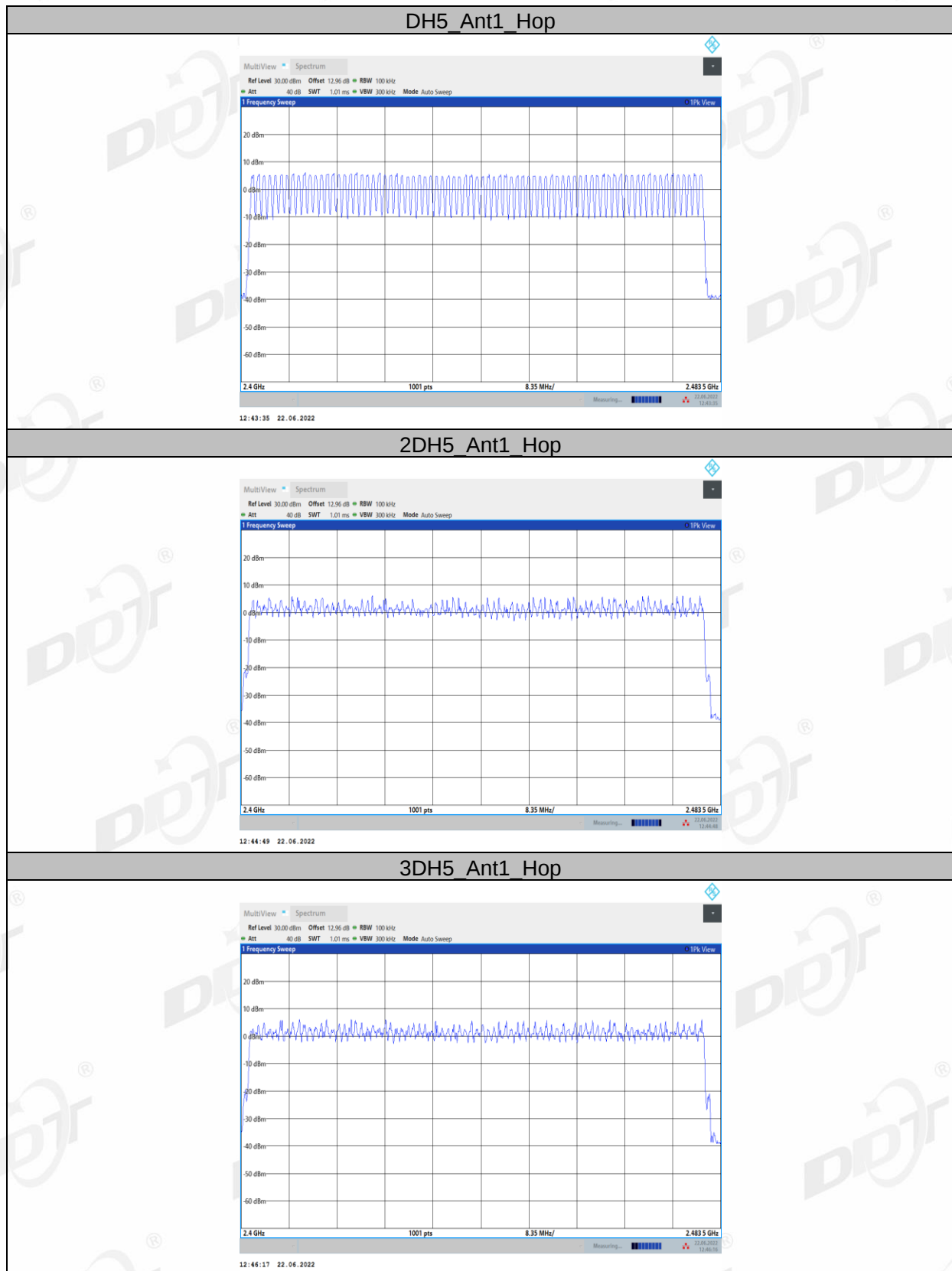
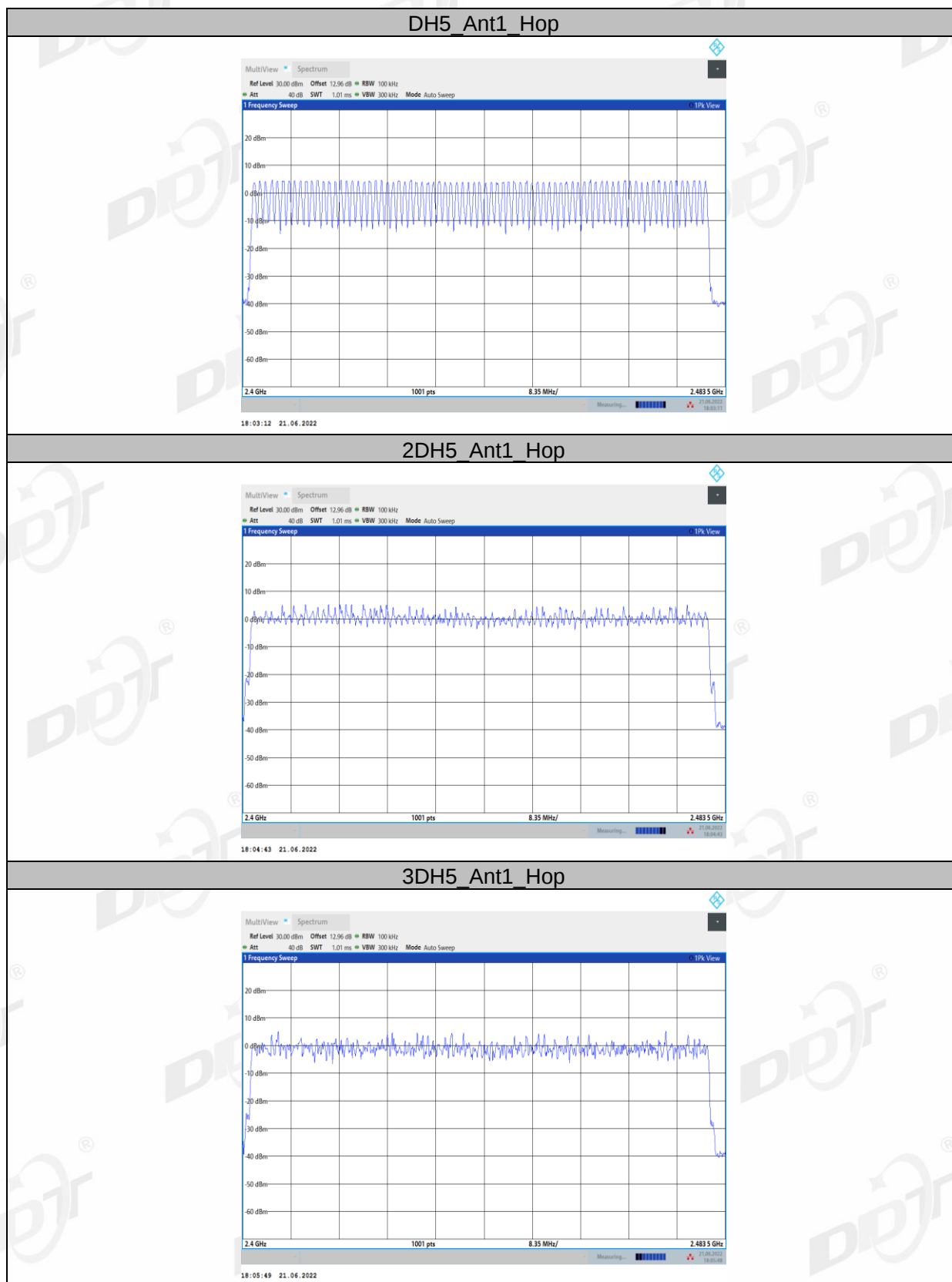


7.5. Original test data

Left side:



Right side:



8. Dwell Time

8.1. Block diagram of test setup

Same as section 4.1

8.2. Limits

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

8.3. Test procedure

- (1) Connect EUT's antenna output to spectrum analyzer by RF cable.
- (2) The test period: $T = 0.4 \text{ Second/Channel} \times 79 \text{ Channel} = 31.6 \text{ s}$
- (3) Measure the hopping number and on time of each pulse with spectrum analyzer in zero span set, and calculate dwell time with formula $\text{Dwell time} = \text{total hops} \times \text{pulse's on time}$.

8.4. Test result

Left side:

Mode	Dwell time (s)	Pulse's on time (ms)	Total hops	Limit	Verdict
DH1	0.120	0.37	320	<400ms	Pass
DH3	0.261	1.63	160	<400ms	Pass
DH5	0.308	2.88	107	<400ms	Pass
2DH1	0.121	0.38	320	<400ms	Pass
2DH3	0.261	1.63	160	<400ms	Pass
2DH5	0.308	2.88	107	<400ms	Pass
3DH1	0.121	0.38	320	<400ms	Pass
3DH3	0.261	1.63	160	<400ms	Pass
3DH5	0.308	2.88	107	<400ms	Pass

Note: $\text{Dwell time} = \text{total hops} \times \text{pulse's on time}$.

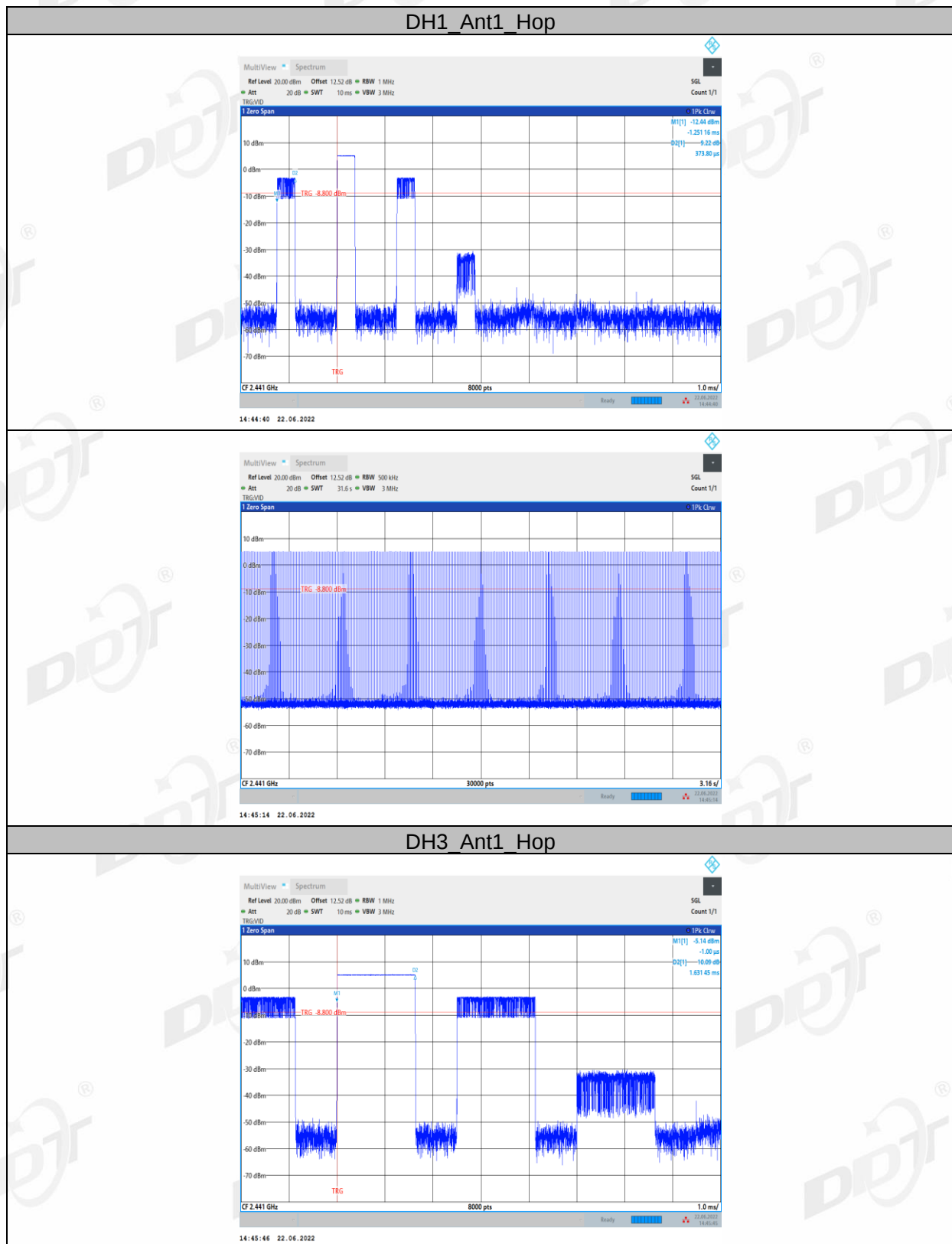
Right side:

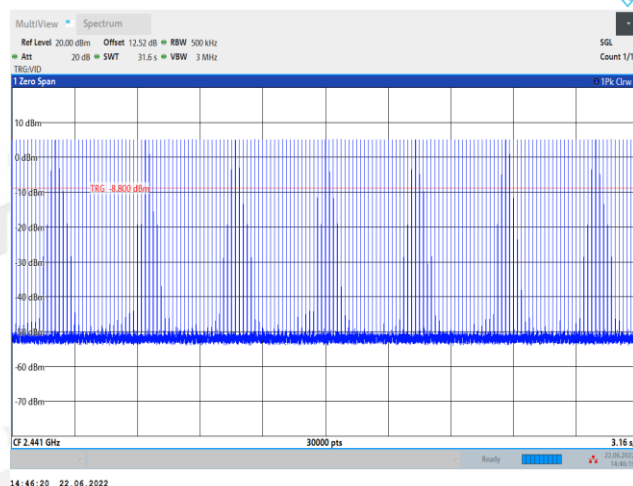
Mode	Dwell time (s)	Pulse's on time (ms)	Total hops	Limit	Verdict
DH1	0.120	0.38	320	<400ms	Pass
DH3	0.261	1.63	160	<400ms	Pass
DH5	0.308	2.88	107	<400ms	Pass
2DH1	0.122	0.38	320	<400ms	Pass
2DH3	0.261	1.63	160	<400ms	Pass
2DH5	0.308	2.88	107	<400ms	Pass
3DH1	0.121	0.38	320	<400ms	Pass
3DH3	0.261	1.63	160	<400ms	Pass
3DH5	0.308	2.88	107	<400ms	Pass

Note: Dwell time = total hops *pulse's on time.

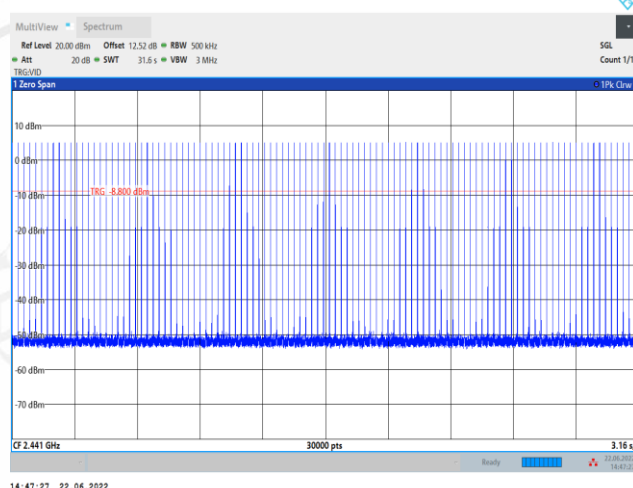
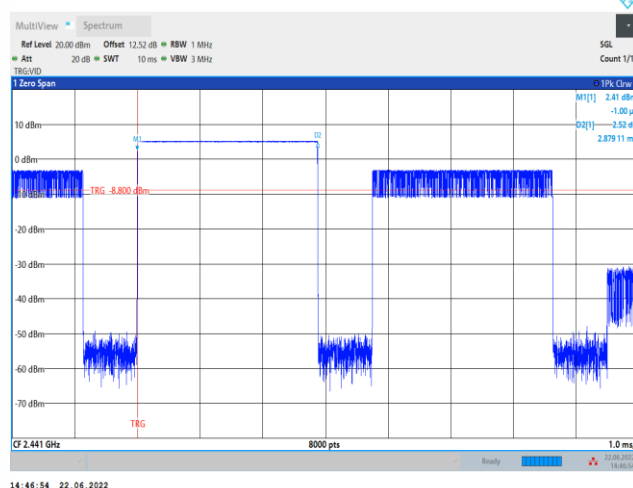
8.5. Original test data

Left side:

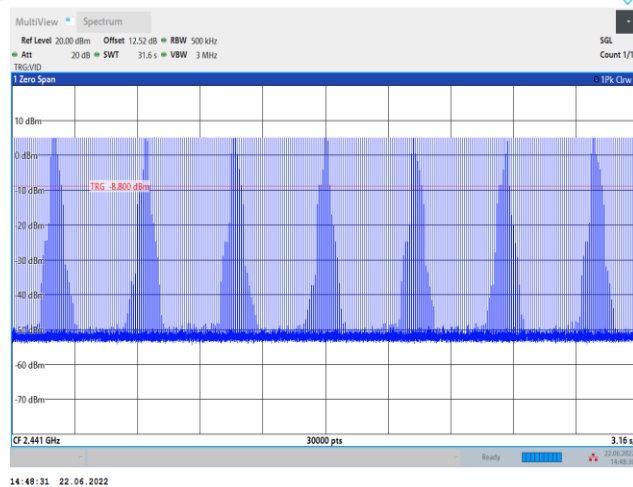
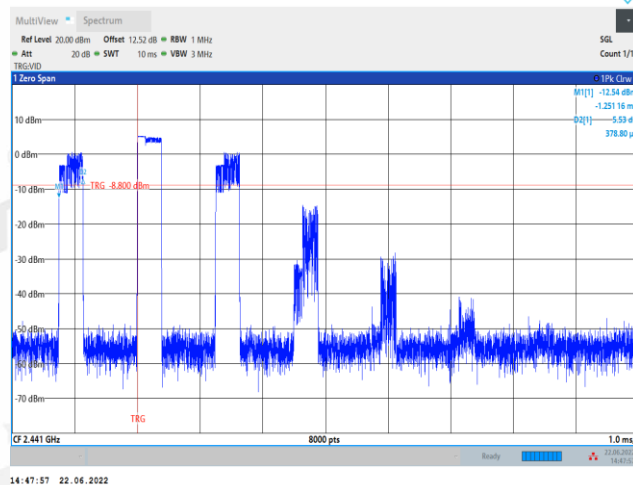




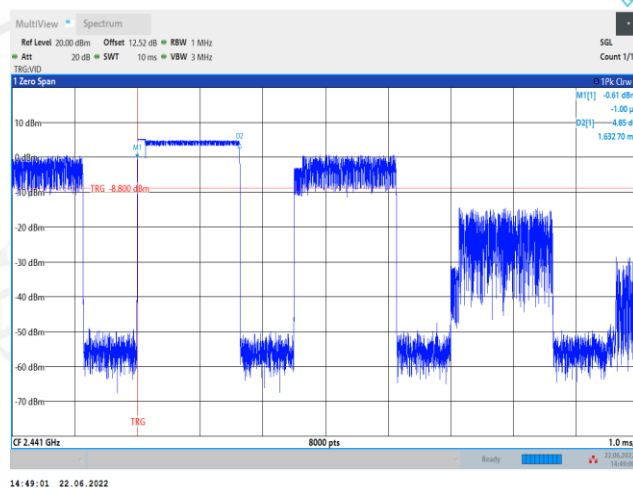
DH5_Ant1_Hop

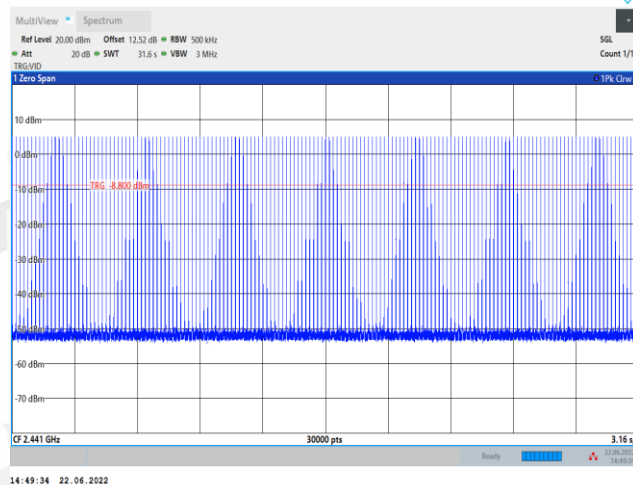


2DH1_Ant1_Hop

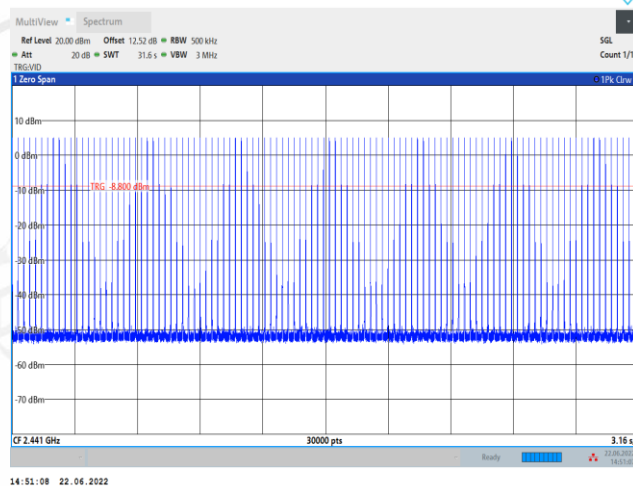
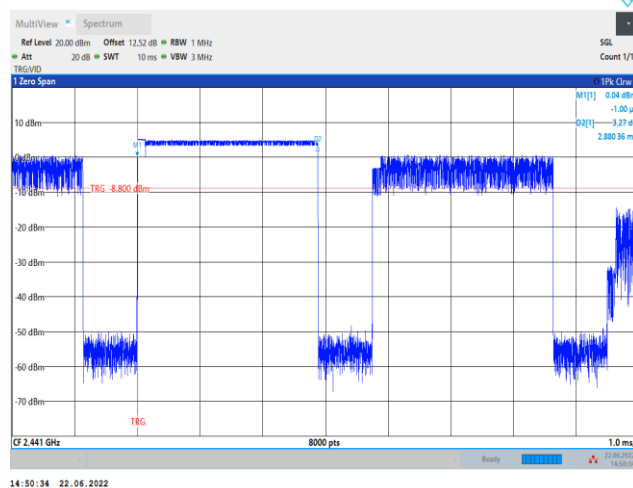


2DH3 Ant1 Hop

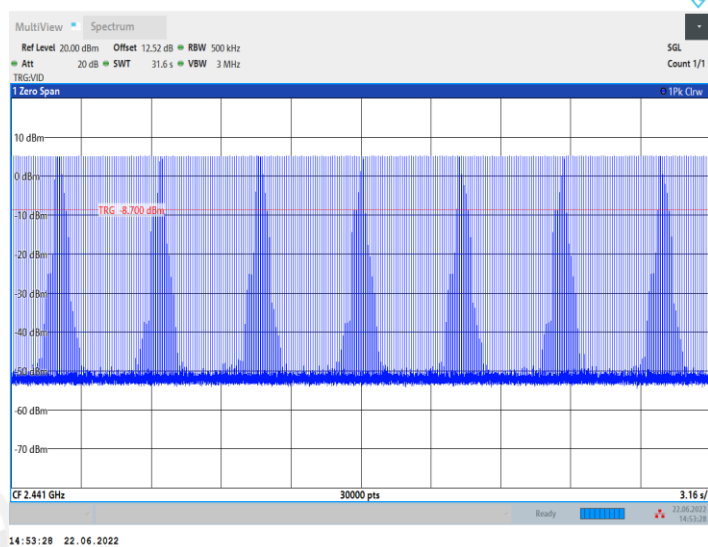
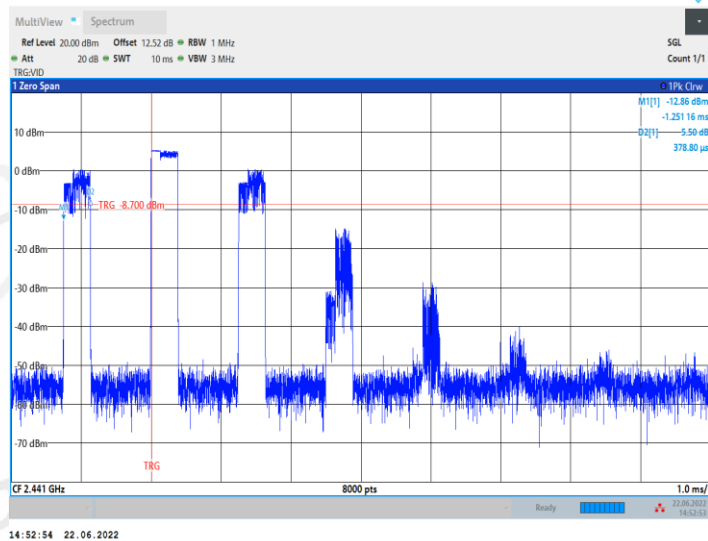




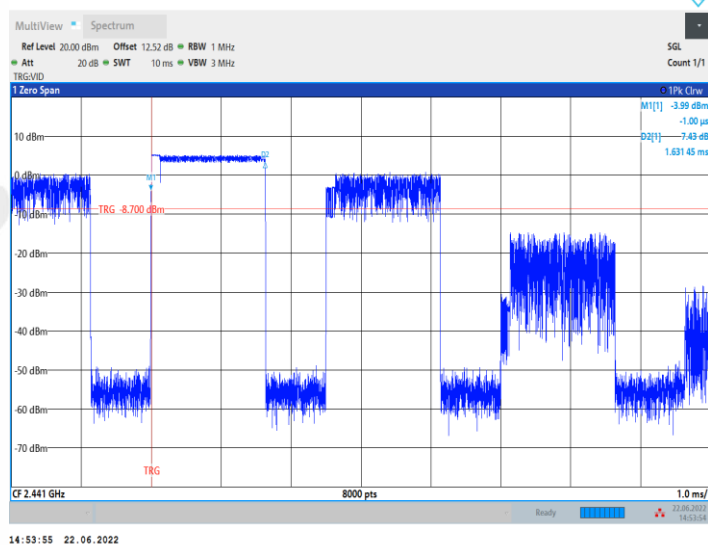
2DH5_Ant1_Hop

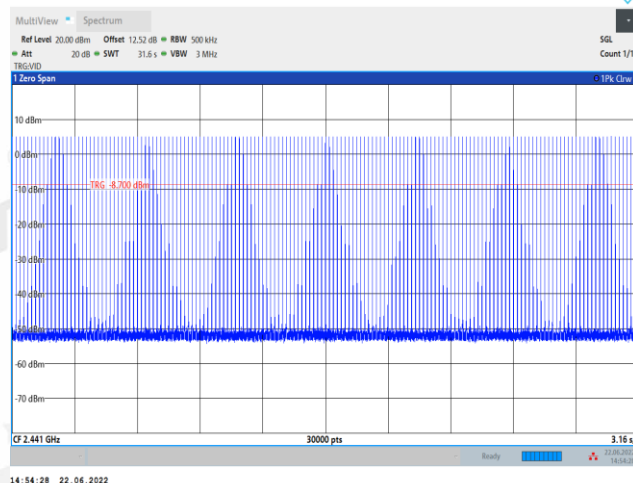


3DH1_Ant1_Hop

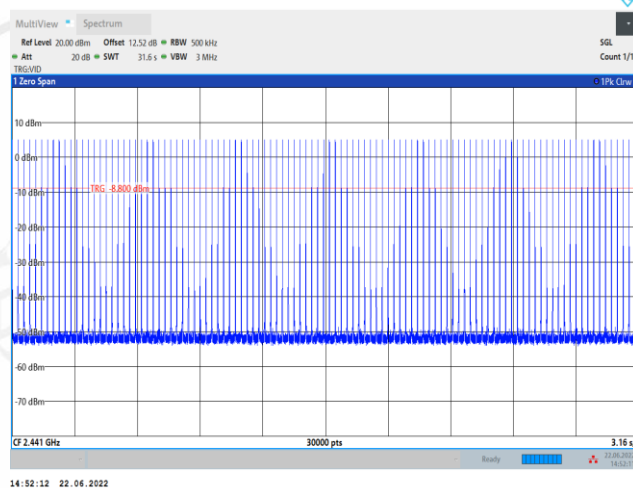
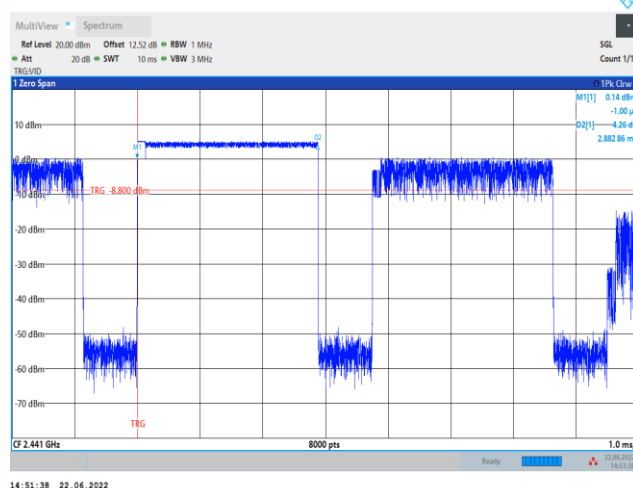


3DH3_Ant1_Hop

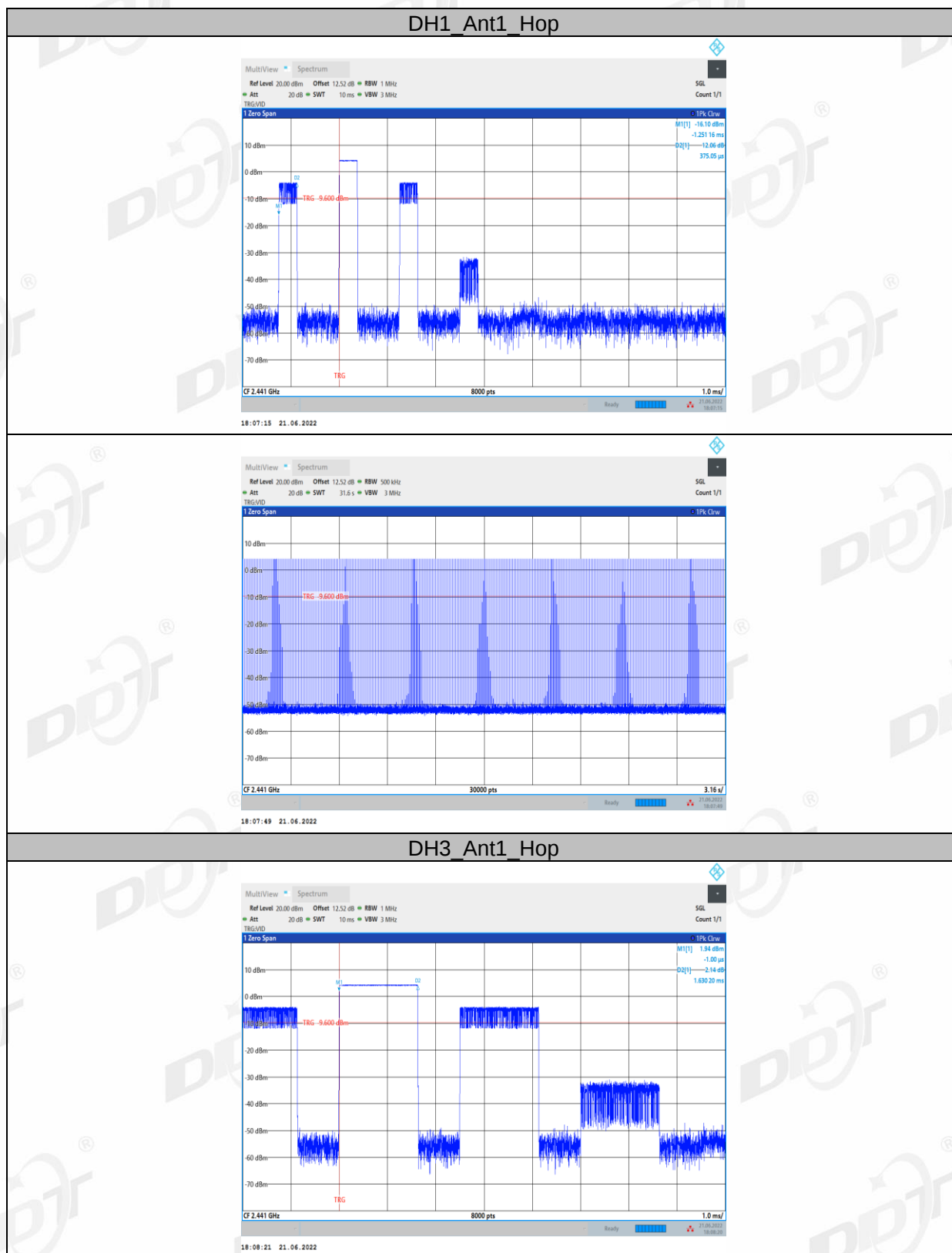


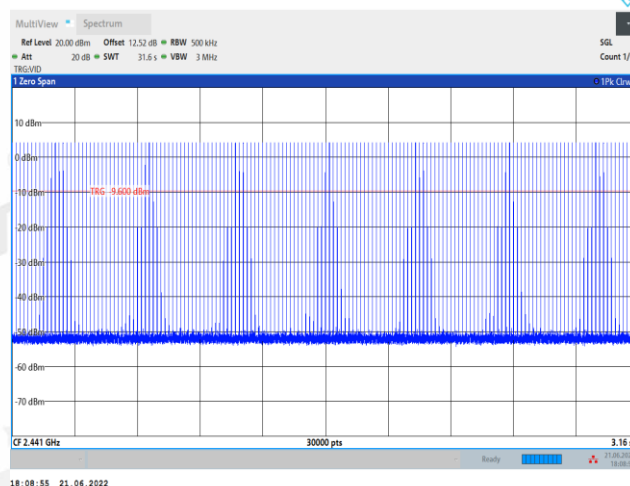


3DH5_Ant1_Hop

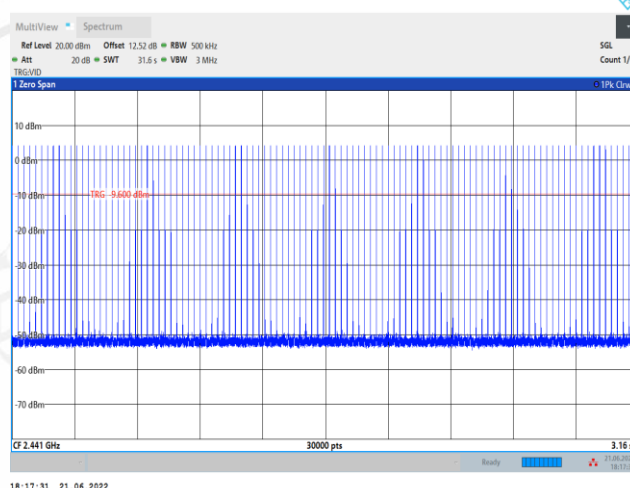
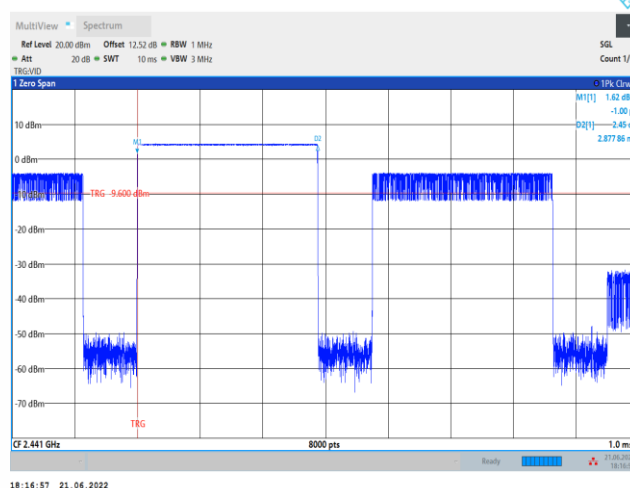


Right side:

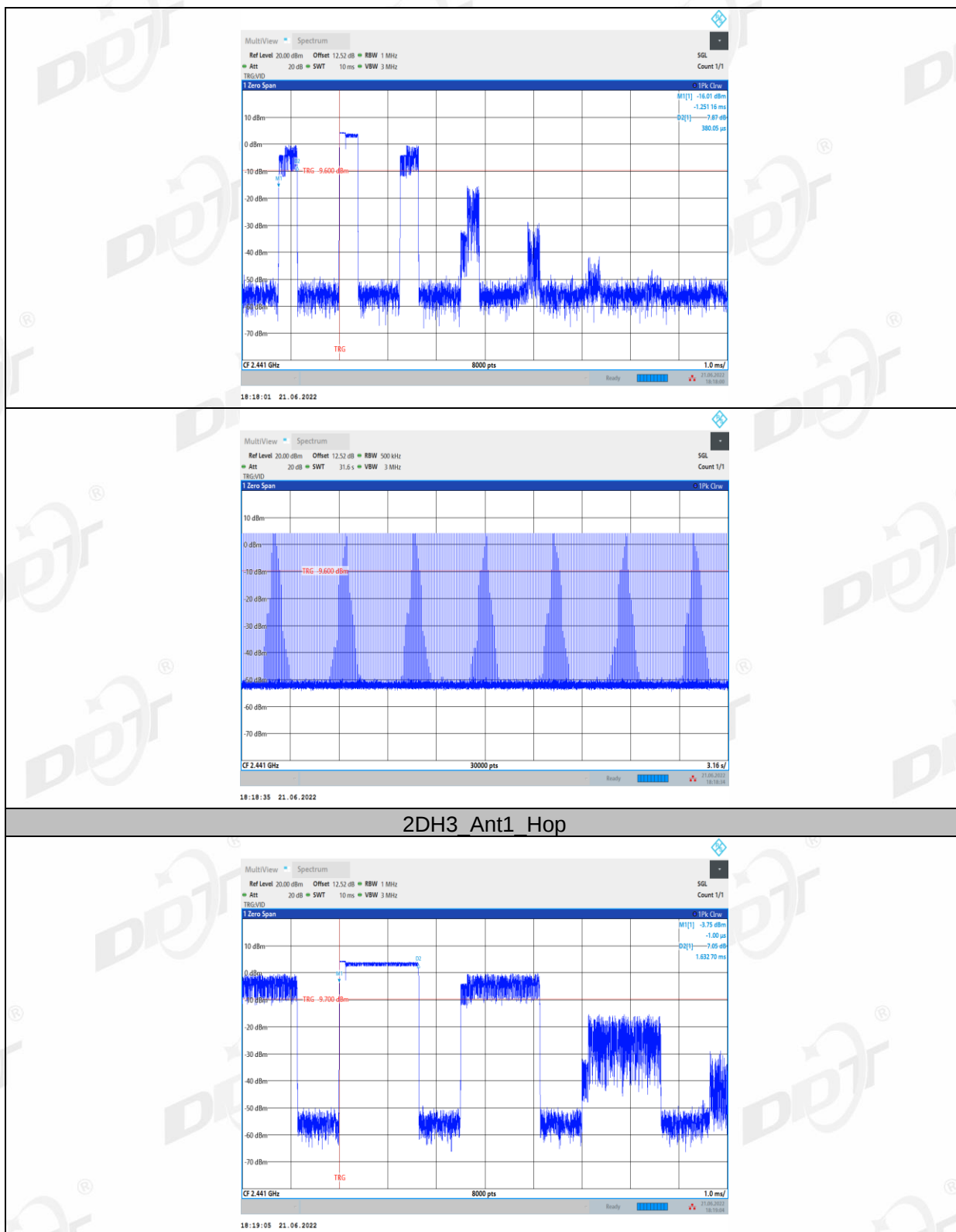


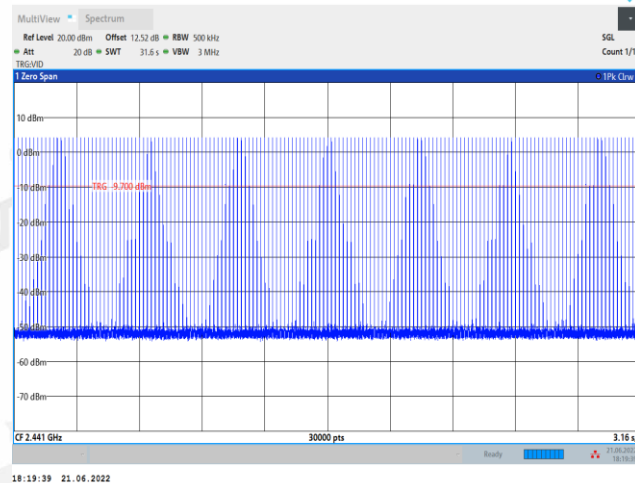


DH5_Ant1_Hop

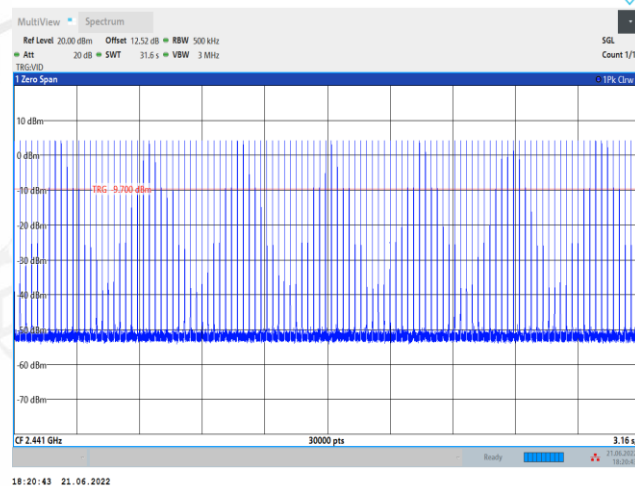
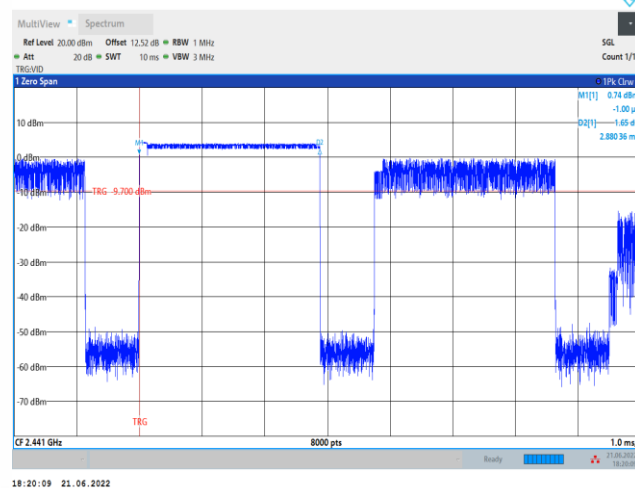


2DH1_Ant1_Hop

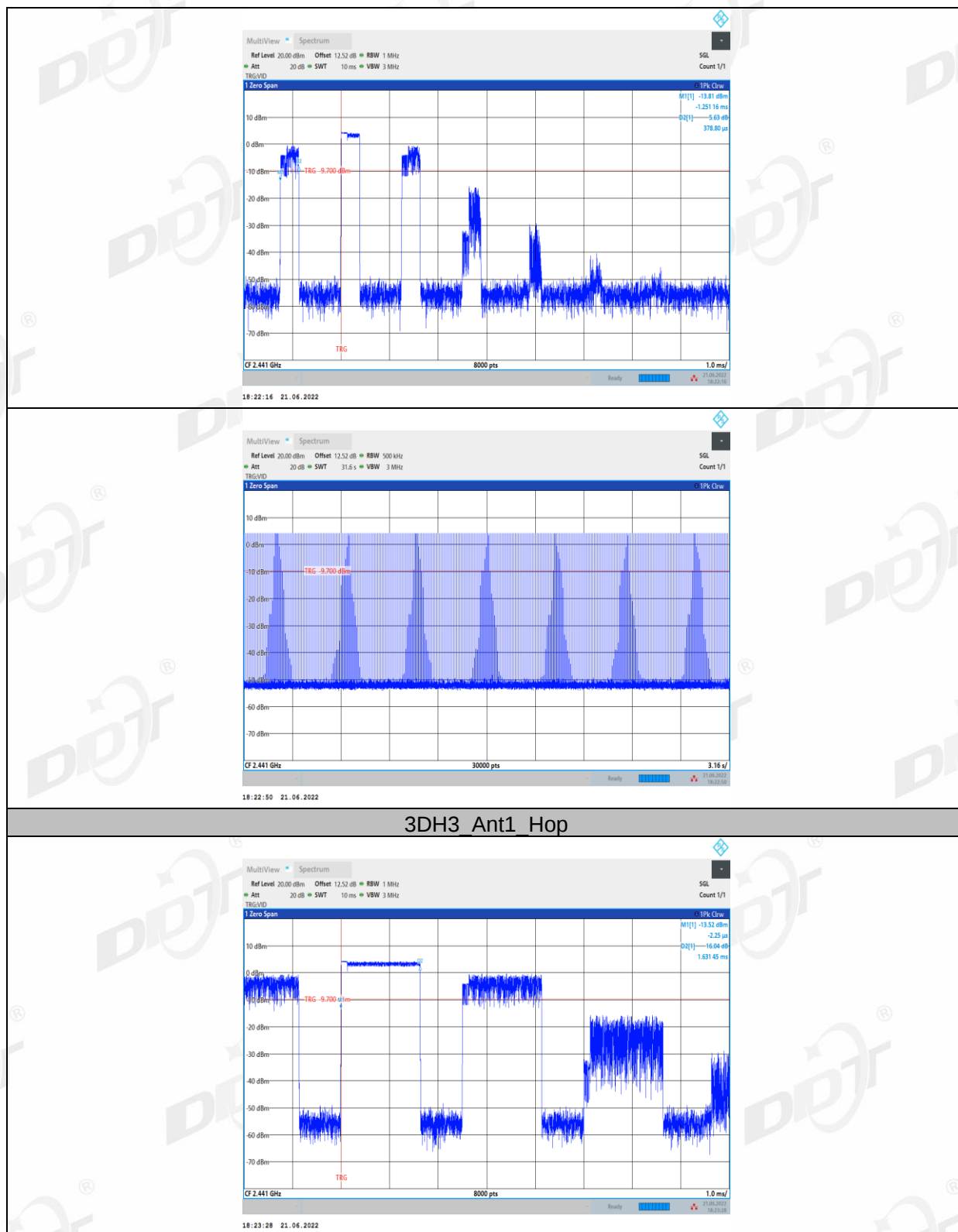


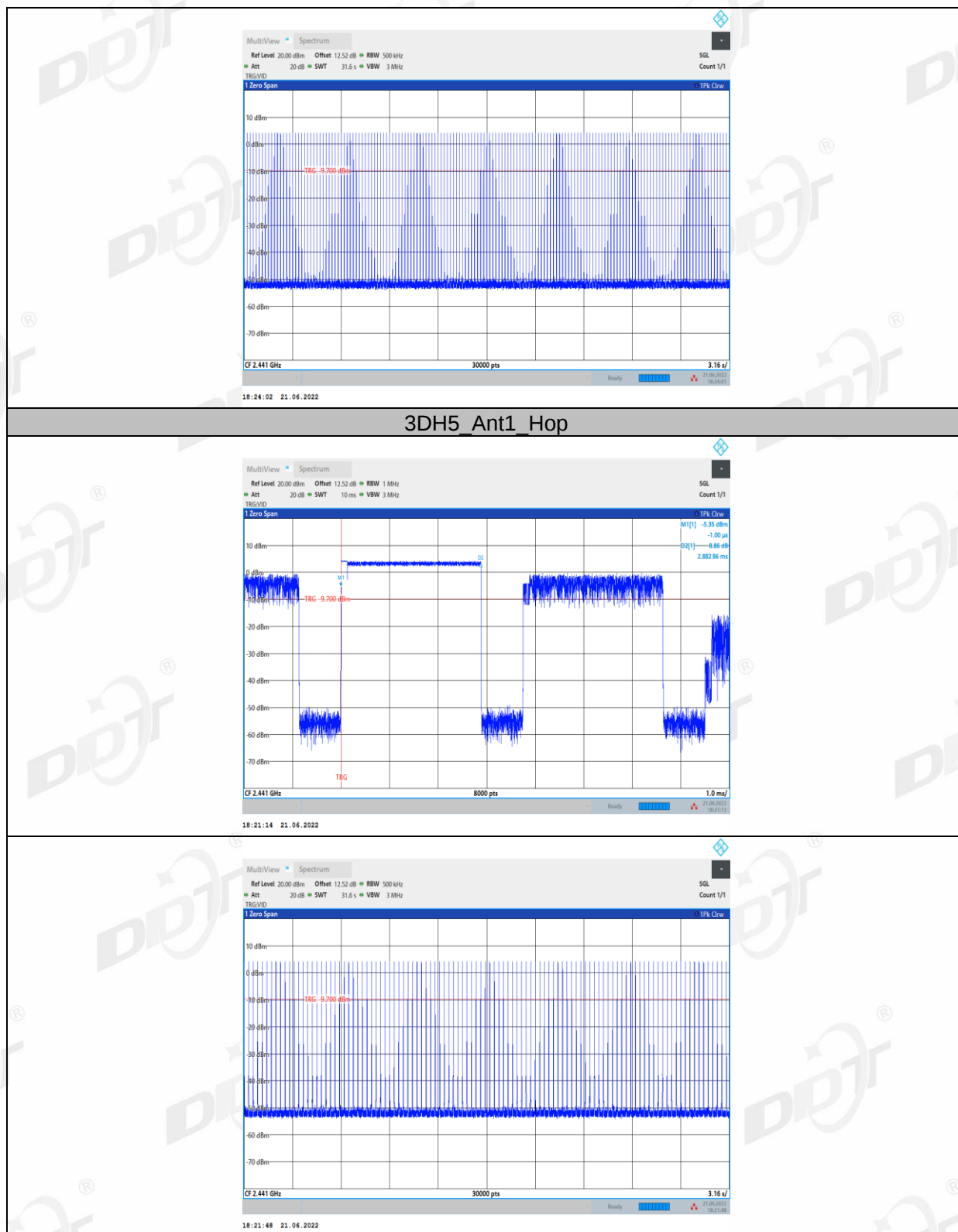


2DH5_Ant1_Hop



3DH1_Ant1_Hop





9. Band Edge Compliance (Conducted Method)

9.1. Block diagram of test setup

Same as section 4.1

9.2. Limit

All restriction band should comply with 15.209, other emission should be at least 20dB below the fundamental.

9.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Establish a reference level by using the following procedure:

RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.

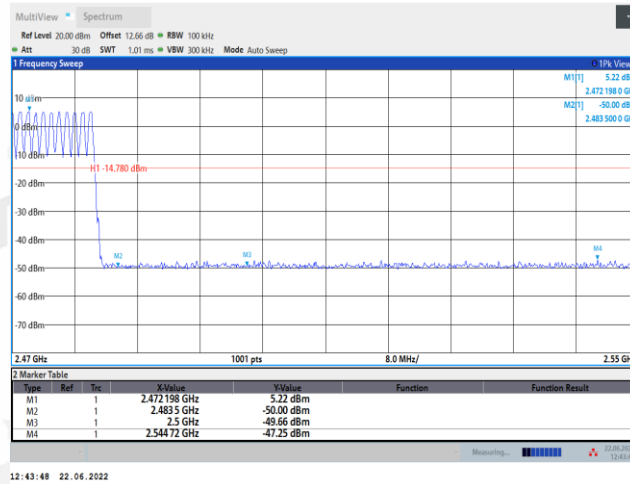
9.4. Test result

Mode	Freq. (MHz)	Verdict
GFSK	Hopping off 2402	Pass
	Hopping off 2480	Pass
	Hopping on	Pass
$\pi/4$ -DQPSK	Hopping off 2402	Pass
	Hopping off 2480	Pass
	Hopping on	Pass
8DPSK	Hopping off 2402	Pass
	Hopping off 2480	Pass
	Hopping on	Pass

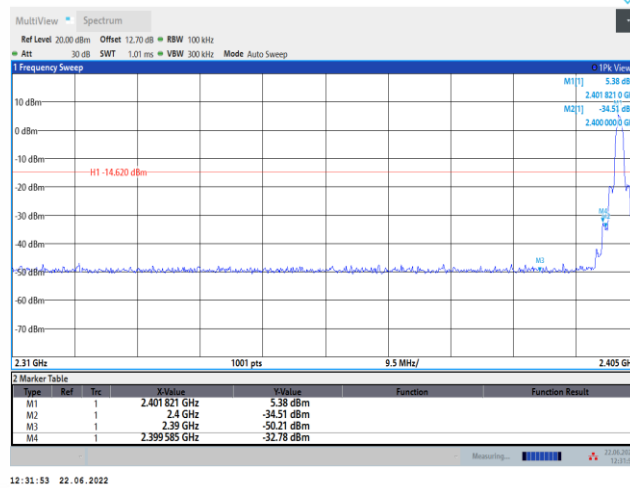
9.5. Original test data

Left side:

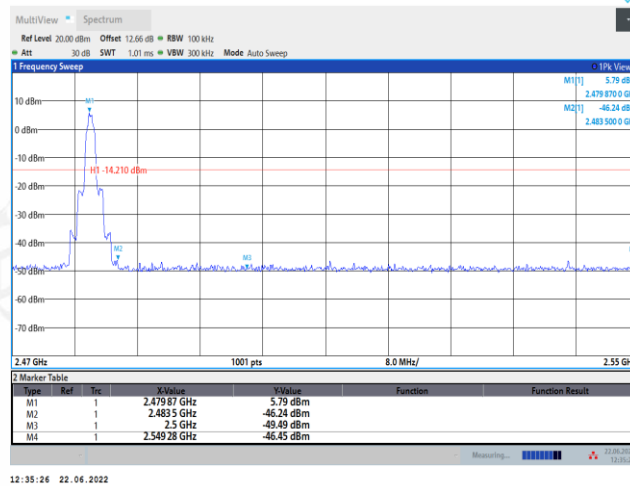




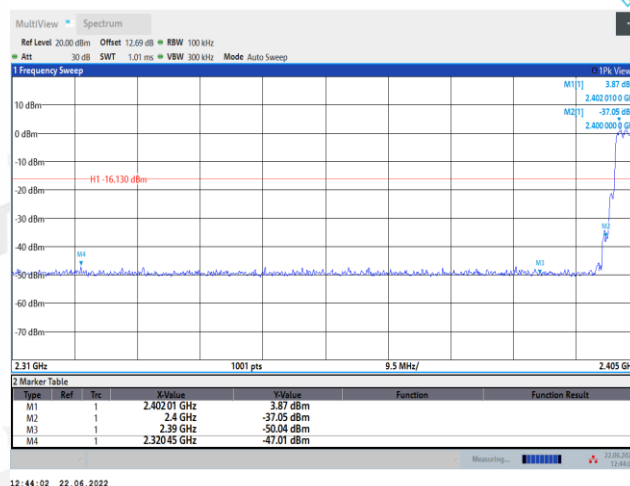
2DH5_Ant1_Low_2402



2DH5_Ant1_High_2480



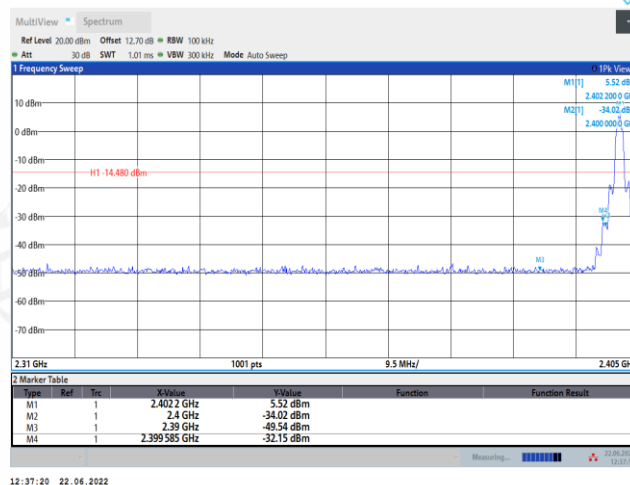
2DH5_Ant1_Low_Hop_2402



2DH5_Ant1_High_Hop_2480



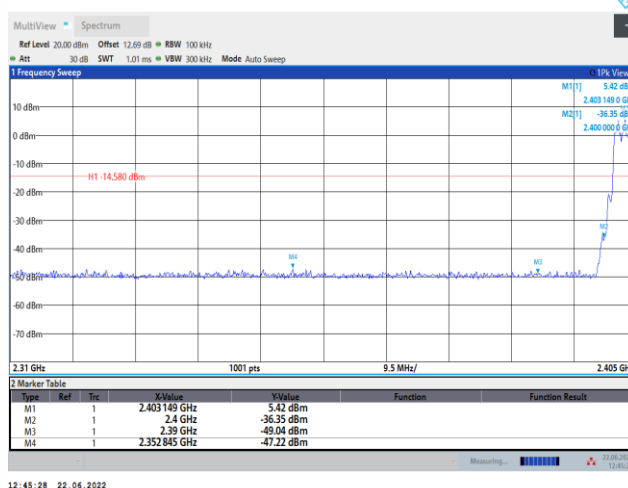
3DH5_Ant1_Low_2402



3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402

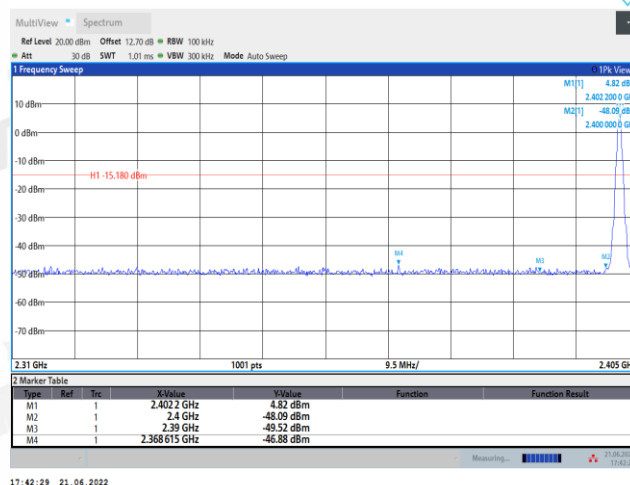


3DH5_Ant1_High_Hop_2480

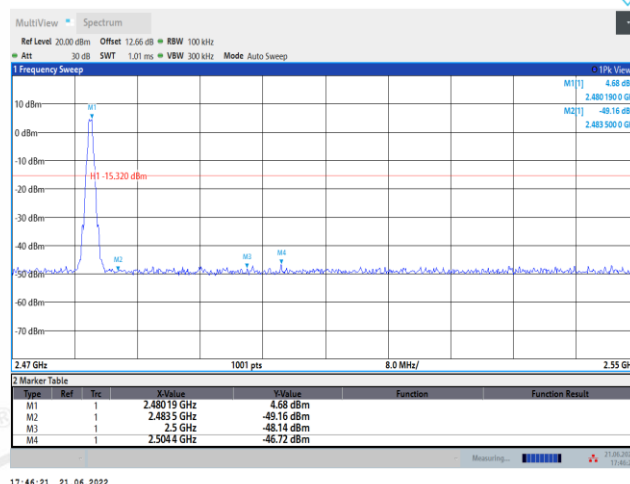


Right side:

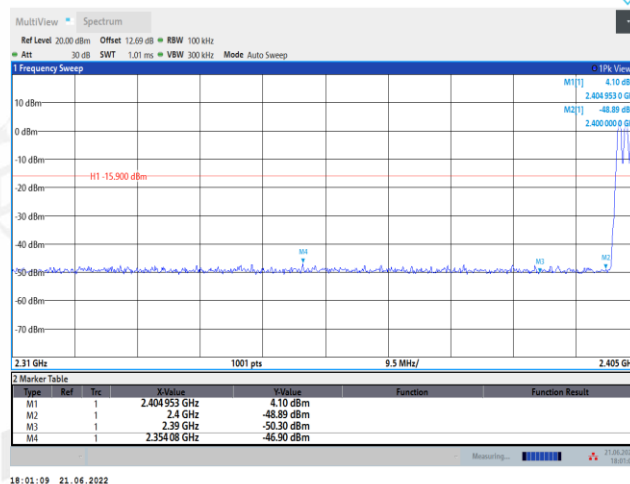
DH5_Ant1_Low_2402



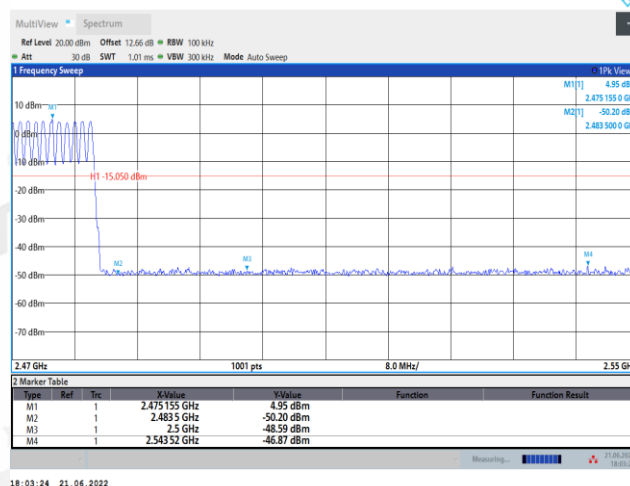
DH5_Ant1_High_2480



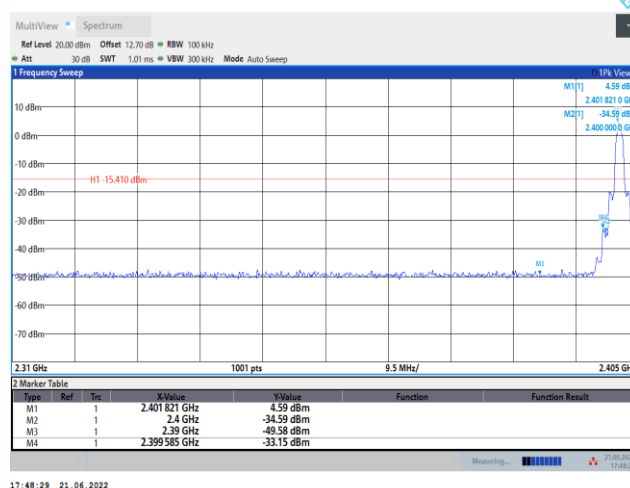
DH5_Ant1_Low_Hop_2402



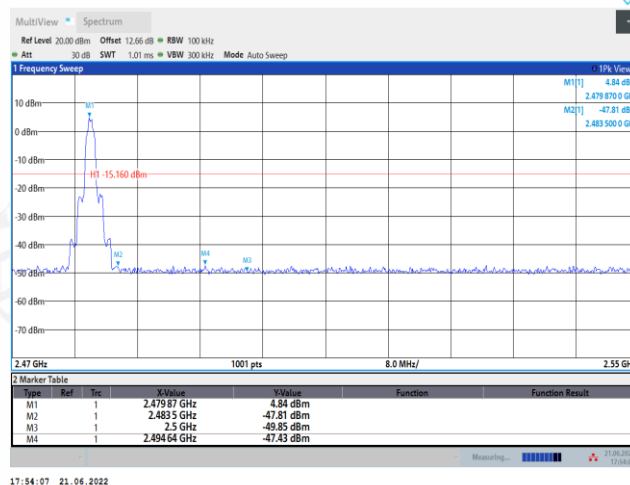
DH5_Ant1_High_Hop_2480



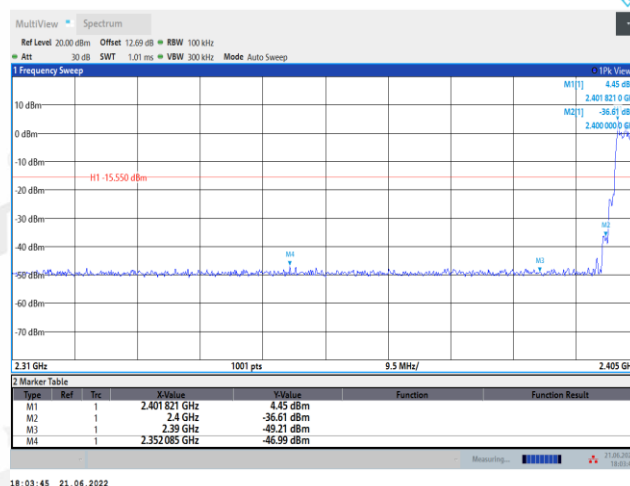
2DH5 Ant1 Low 2402



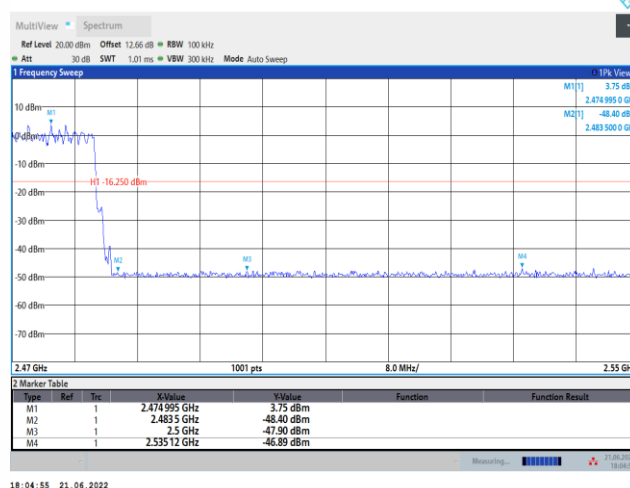
2DH5 Ant1 High 2480



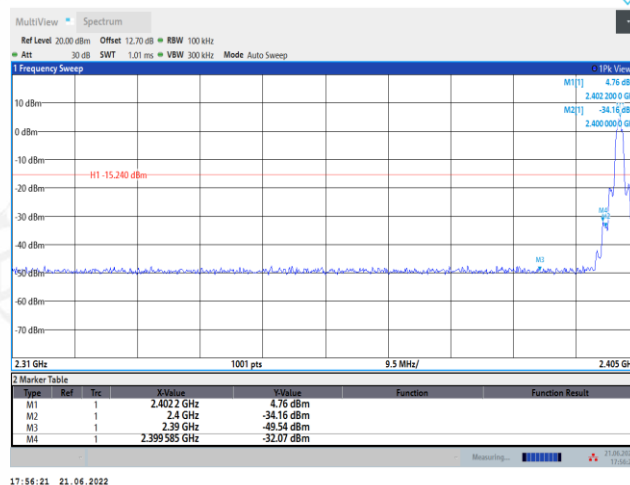
2DH5 Ant1 Low Hop 2402



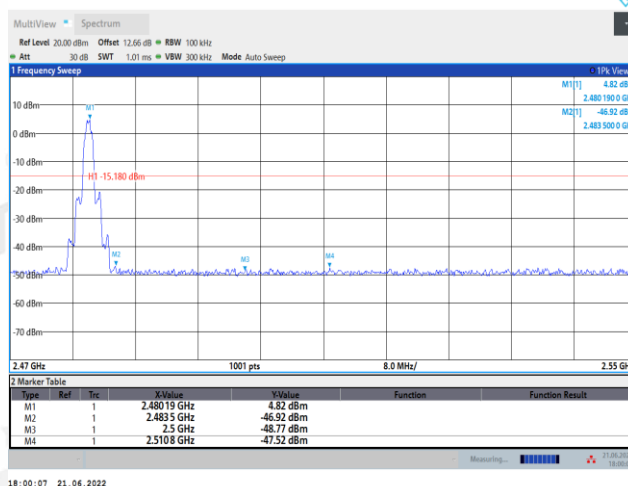
2DH5_Ant1_High_Hop_2480



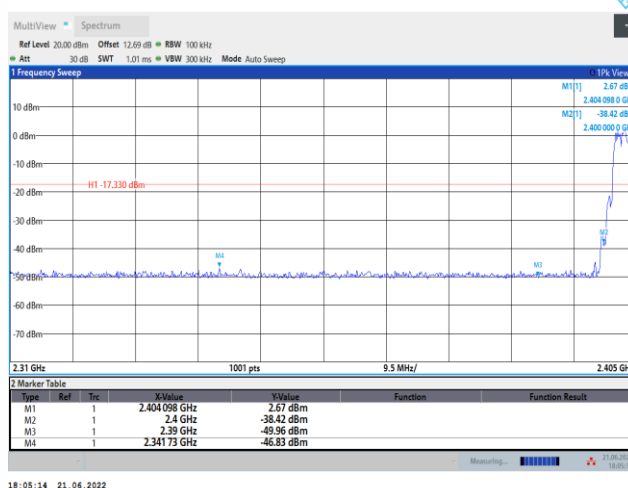
3DH5_Ant1_Low_2402



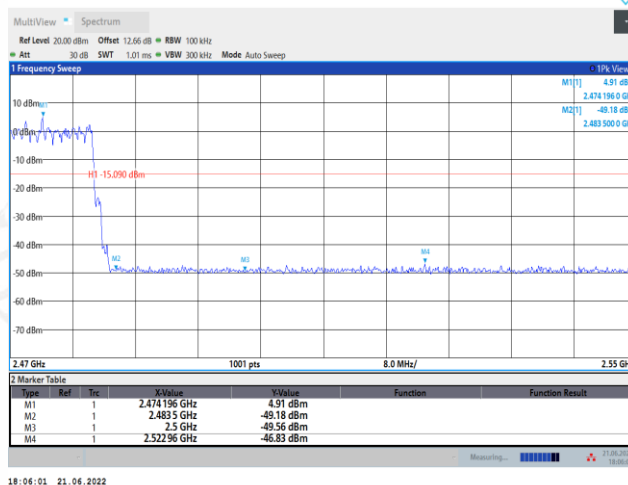
3DH5_Ant1_High_2480



3DH5_Ant1_Low_Hop_2402



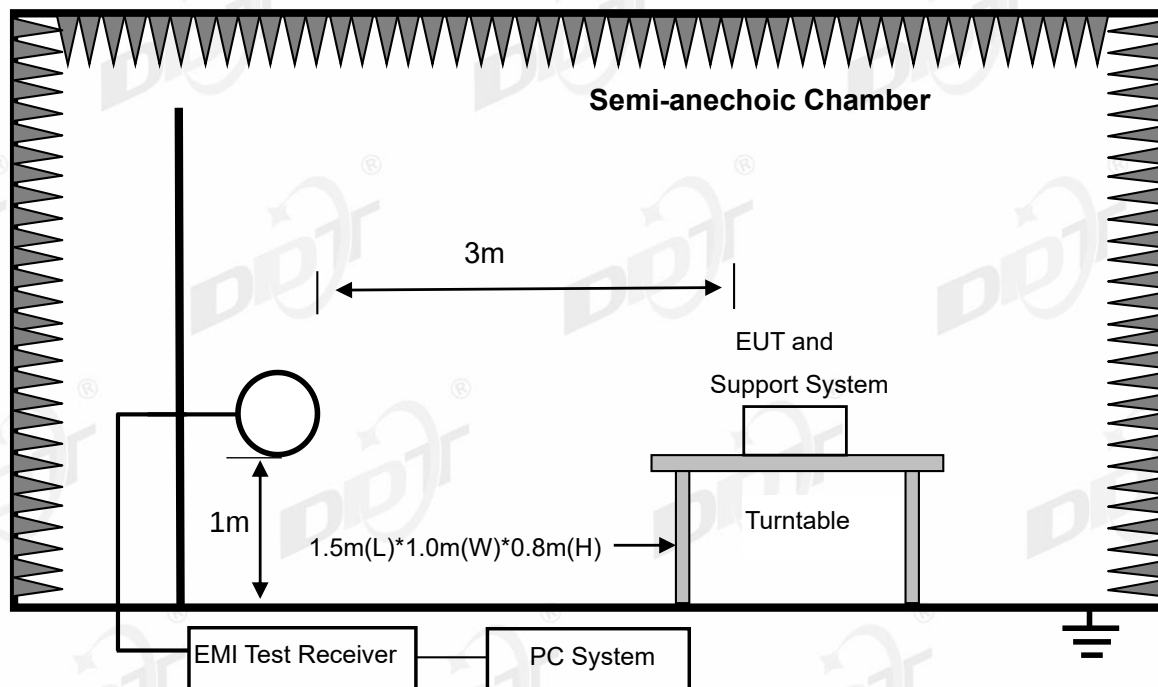
3DH5_Ant1_High_Hop_2480



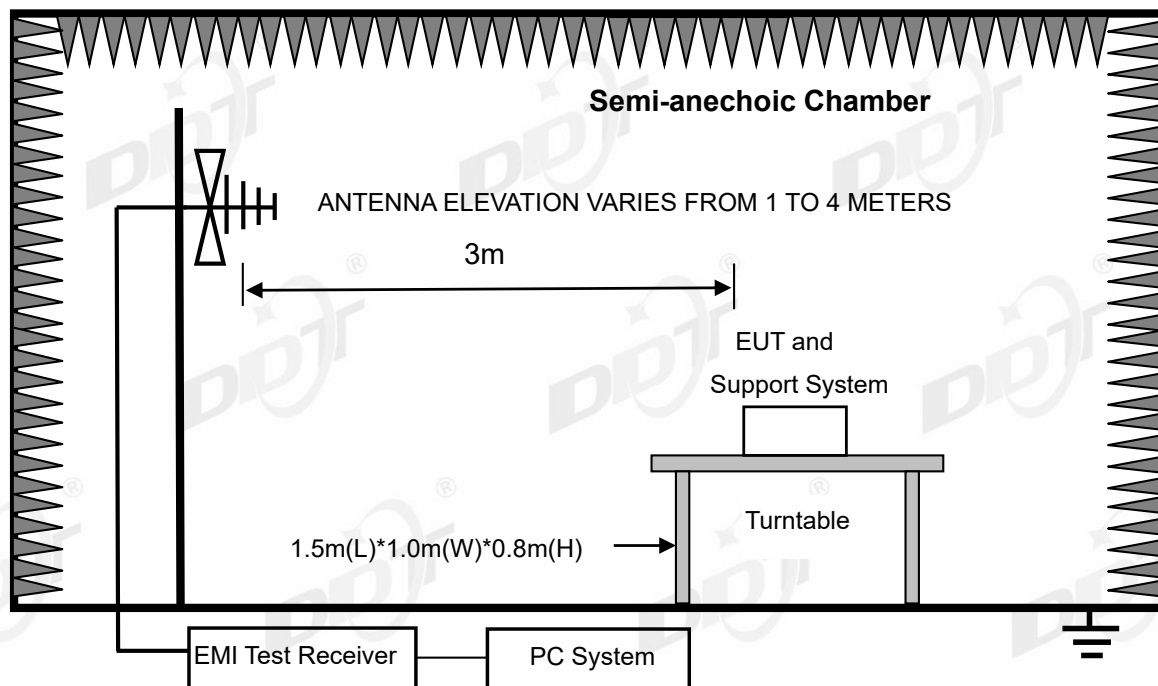
10. Radiated Emission

10.1. Block diagram of test setup

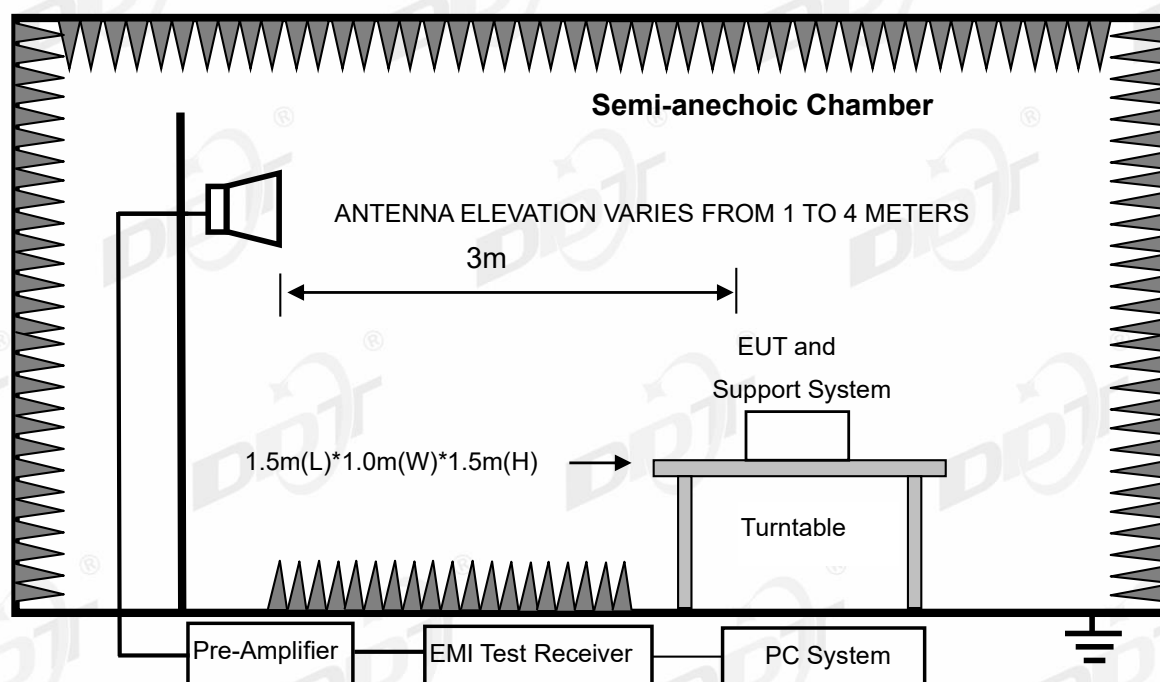
In 3 m Anechoic Chamber, test setup diagram for 9 kHz - 30 MHz:



In 3 m Anechoic Chamber, test setup diagram for 30 MHz - 1 GHz:



In 3 m Anechoic Chamber, test setup diagram for frequency above 1 GHz:



Note: For harmonic emissions test an appropriate high pass filter was inserted in the input port of AMP.

10.2. Limit

(1) FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			

¹Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

²Above 38.6

RSS-Gen section 8.10 Restricted frequency bands*

MHz	MHz	MHz	GHz
0.090-0.110	12.51975-12.52025	240-285	3.5-4.4
0.495-0.505	12.57675-12.57725	322-335.4	4.5-5.15
2.1735-2.1905	13.36-13.41	399.9-410	5.35-5.46
3.020-3.026	16.42-16.423	608-614	7.25-7.75
4.125-4.128	16.69475-16.69525	960-1427	8.025-8.5
4.1772&4.17775	16.80425-16.80475	1435-1626.5	9.0-9.2
4.2072&4.20775	25.5-25.67	1645.5-1646.5	9.3-9.5
5.677-5.683	37.5-38.25	1660-1710	10.6-12.7
6.215-6.218	73-74.6	1718.8-1722.2	13.25-13.4
6.26775-6.26825	74.8-75.2	2200-2300	14.47-14.5
6.31175-6.31225	108-138	2310-2390	15.35-16.2
8.291-8.294	149.9-150.05	2483.5-2500	17.7-21.4
8.362-8.366	156.52475-156.52525	2655-2900	22.01-23.12
8.37625-8.38675	156.7-156.9	3260-3267	23.6-24.0
8.41425-8.41475	162.0125-167.17	3332-3339	31.2-31.8
12.29-12.293	167.72-173.2	3345.8-3358	36.43-36.5
			Above 38.6

* Certain frequency bands listed in table and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

(2) FCC 15.209 Limit & RSS-Gen section 8.9 Limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V})/\text{m}$
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Note: (1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz and above 1000 MHz, radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30 MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$\text{Limit}_{3\text{m}}(\text{dB}\mu\text{V}/\text{m}) = \text{Limit}_{30\text{m}}(\text{dB}\mu\text{V}/\text{m}) + 40\text{Log}(30\text{m}/3\text{m})$$

(3) Limit for this EUT

The emissions appearing within 15.205 restricted frequency bands shall not exceed the limits

shown in 15.209, and the emissions appearing within RSS-Gen section 8.10 Restricted frequency bands shall not exceed the limits shown in RSS-Gen section 8.9, all the other emissions shall be at least 20 dB below the fundamental emissions or comply with 15.209 limits and RSS-Gen section 8.9 limits.

10.3. Test Procedure

- (1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber for below 1G and 150 cm above the ground plane inside a fully-anechoic chamber for above 1G.
- (2) Test antenna was located 3 m from the EUT on an adjustable mast, and the antenna used as below table.

Test frequency range	Test antenna used	Test antenna distance
9 kHz - 30 MHz	Active Loop antenna	3 m
30 MHz - 1 GHz	Trilog Broadband Antenna	3 m
1 GHz - 18 GHz	Double Ridged Horn Antenna (1 GHz - 18 GHz)	3 m
18 GHz - 40 GHz	Horn Antenna (18 GHz - 40 GHz)	1 m

According ANSI C63.10:2013 clause 6.4.6 and 6.5.3, for measurements below 30 MHz, Antenna was located 3 m from EUT, the loop antenna was positioned in three antenna orientations (parallel, perpendicular, and round-parallel), for each measurement antenna alignment, the EUT shall be rotated through 0° to 360° on a turntable, and the lowest height of the magnetic antenna shall be 1 m above the ground. For measurement above 30 MHz, the trilog Broadband Antenna or Horn Antenna was located 3 m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

- (3) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 25 GHz:

- (a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1 m above ground.)

- (b) Change work frequency or channel of device if practicable.

- (c) Change modulation type of device if practicable.

- (d) Change power supply range from 85% to 115% of the rated supply voltage

- (e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9 kHz to 25 GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 18 GHz to 25 GHz, so below

final test was performed with frequency range from 9 kHz to 18 GHz.

- (4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1 m and 4 m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed according to ANSI C63.10:2013 on Radiated Emission test.
- (5) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz, for emissions from 9 kHz - 90 kHz, 110 kHz - 490 kHz and above 1 GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.
- (6) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW.

Frequency band	RBW
9 kHz - 150 kHz	200 Hz
150 kHz - 30 MHz	9 kHz
30 MHz - 1 GHz	120 kHz

- (7) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1 MHz, VBW is set at 3 MHz for Peak measure; According ANSI C63.10:2013 clause 4.1.4.2.2 procedure for average measure.
- (8) X axis, Y axis, Z axis are tested, and worse setup X axis is reported.

10.4. Test result

Pass. (See below detailed test result)

All the emissions except fundamental emission from 9 kHz to 25 GHz were comply with 15.209 limits and RSS-Gen section 8.9 limits.

Note1: According exploratory test, the emission levels are 20 dB below the limit detected from 9 kHz to 30 MHz and 18 GHz to 25 GHz, so the final test was performed with frequency range from 30 MHz to 18 GHz and recorded in below.

Note2: 30 MHz ~ 25 GHz: (Scan with GFSK, $\pi/4$ -DQPSK and 8DPSK, the worst case is Left side $\pi/4$ -DQPSK Mode)

Note3: For emissions below 1 GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1 GHz, the final test was only performed with EUT working in Left side $\pi/4$ -DQPSK, Tx 2480 MHz mode.

Note4: For emissions above 1 GHz. If peak results comply with AV limit, AV Result is deemed to comply with AV limit.

Radiated Emission test (below 1 GHz)

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q22060723-2E
MP-20TWS\L\FCC BELOW 1G.EM6

Test Date : 2022-06-22

Tested By : James Gan

EUT : True Wireless Dual-Driver Earbuds with
Active Noise Cancelling

Model Number : MP-20TWS

Power Supply : Battery

Test Mode : Tx mode

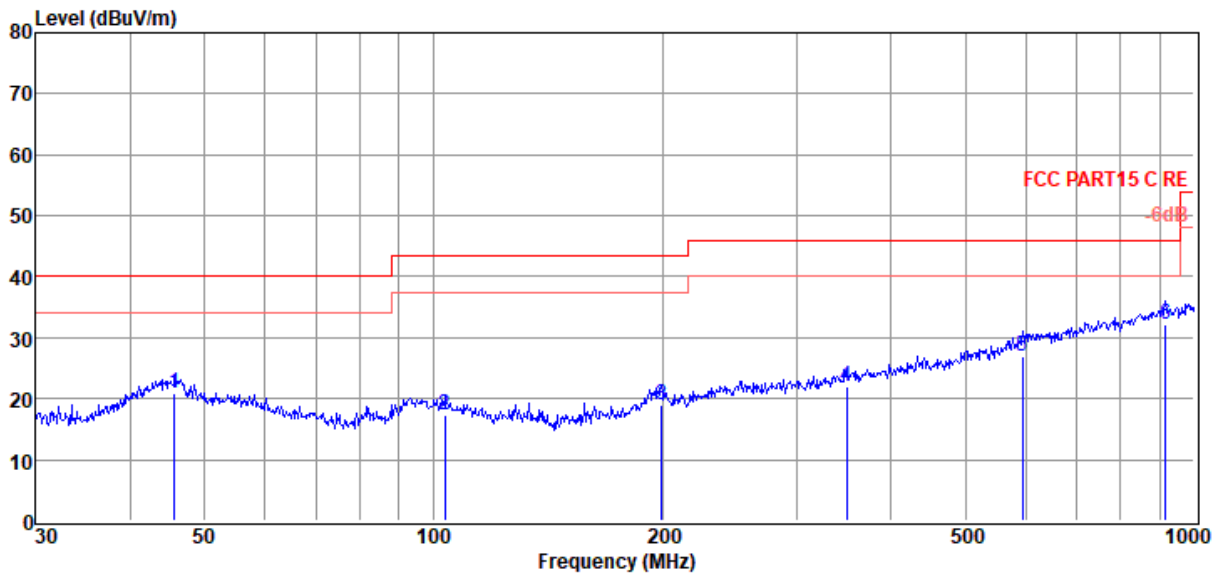
Condition : Temp:22.4°C,Humi:57%,Press:100.1kPa

Antenna/Distance : 2021 VLUB 9163 #3/3m/HORIZONTAL

Memo :

Data:

1



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	45.70	2.52	14.75	3.65	20.92	40.00	-19.08	QP	HORIZONTAL
2	103.44	1.88	11.41	4.00	17.29	43.50	-26.21	QP	HORIZONTAL
3	199.29	2.51	11.97	4.45	18.93	43.50	-24.57	QP	HORIZONTAL
4	349.25	1.99	15.04	4.99	22.02	46.00	-23.98	QP	HORIZONTAL
5	595.13	2.11	19.10	5.73	26.94	46.00	-19.06	QP	HORIZONTAL
6	916.07	3.12	22.40	6.51	32.03	46.00	-13.97	QP	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q22060723-2E
MP-20TWS\L\FCC BELOW 1G.EM6

Test Date : 2022-06-22

Tested By : James Gan

EUT : True Wireless Dual-Driver Earbuds with
Active Noise Cancelling

Model Number : MP-20TWS

Power Supply : Battery

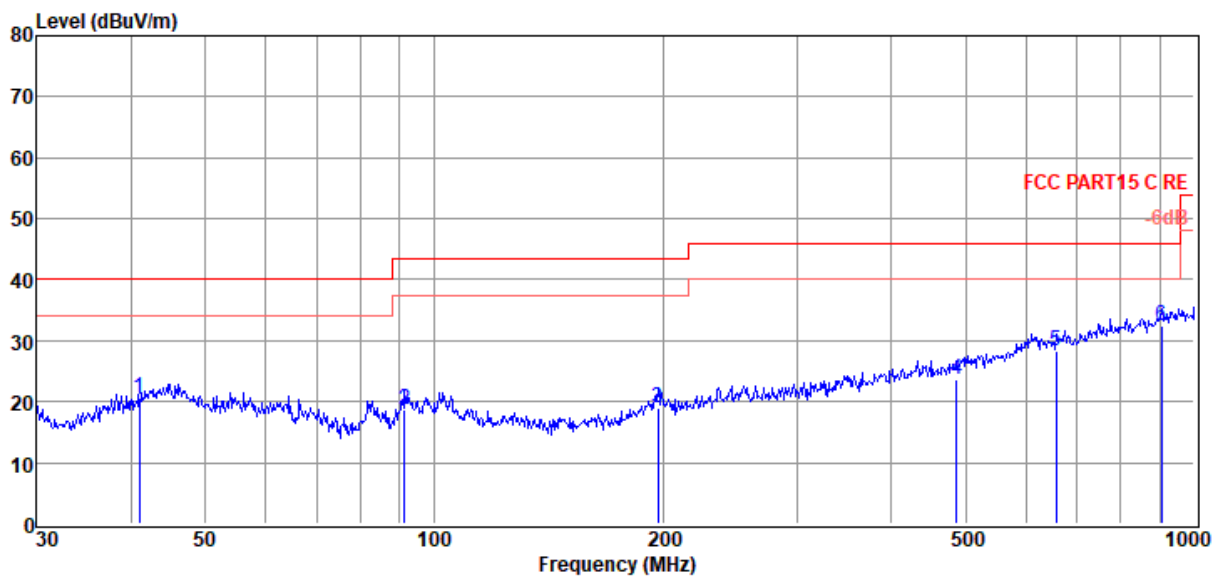
Test Mode : Tx mode

Condition : Temp:22.4°C,Humi:57%,Press:100.1kPa

Antenna/Distance : 2021 VLUB 9163 #3/3m/VERTICAL

Memo :

Data:
2



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	40.99	3.68	13.19	3.62	20.49	40.00	-19.51	QP	VERTICAL
2	91.50	4.40	10.35	3.94	18.69	43.50	-24.81	QP	VERTICAL
3	197.20	2.79	11.82	4.44	19.05	43.50	-24.45	QP	VERTICAL
4	487.32	1.61	16.55	5.44	23.60	46.00	-22.40	QP	VERTICAL
5	658.84	3.32	19.00	5.88	28.20	46.00	-17.80	QP	VERTICAL
6	906.48	3.59	22.23	6.49	32.31	46.00	-13.69	QP	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

Radiated Emission test (above 1 GHz)

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#

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MP-20TWS\R\FCC ABOVE 1G .EM6

Test Date : 2022-06-28

Tested By : Bairong

EUT : True Wireless Dual-Driver Earbuds with
Active Noise Cancelling

Model Number : MP-20TWS

Power Supply : Battery

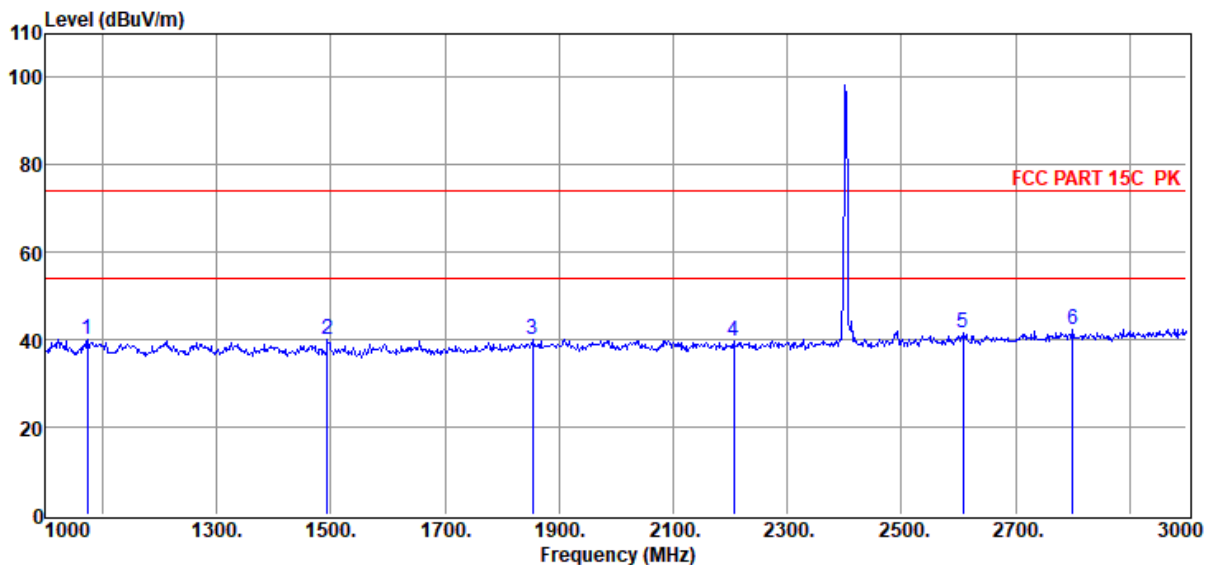
Test Mode : Tx mode

Condition : Temp:22°C,Humi:59.4%,Press:100.3kPa

Antenna/Distance : 2021 BBHA 9120D
3#/3m/HORIZONTAL

Memo : DH5 2402

Data: 1



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	1074.00	50.96	25.49	38.01	1.14	0.51	40.09	74.00	-33.91	Peak	HORIZONTAL
2	1494.00	51.43	25.40	38.64	1.38	0.59	40.16	74.00	-33.84	Peak	HORIZONTAL
3	1854.00	50.76	26.32	39.18	1.54	0.65	40.09	74.00	-33.91	Peak	HORIZONTAL
4	2206.00	49.78	27.07	39.50	1.66	0.70	39.71	74.00	-34.29	Peak	HORIZONTAL
5	2608.00	50.60	28.01	39.70	1.77	0.75	41.43	74.00	-32.57	Peak	HORIZONTAL
6	2800.00	50.83	28.74	39.80	1.82	0.77	42.36	74.00	-31.64	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.

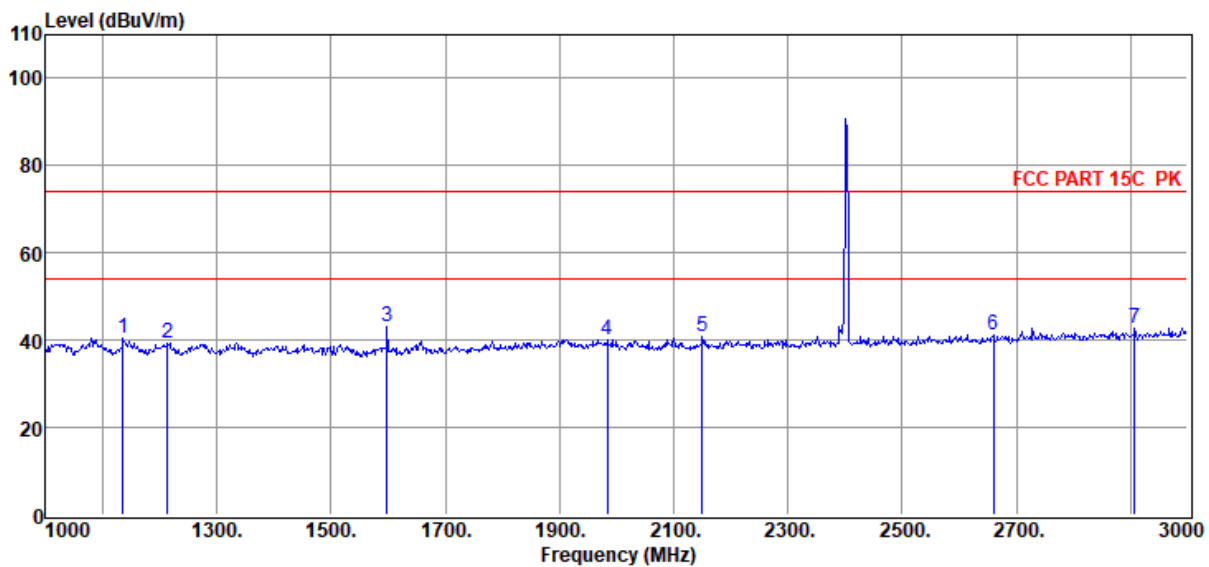
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#D:\E3 6.111\2022 Report Data\Q22060723-2E
MP-20TWS\R\FCC ABOVE 1G .EM6**Test Date** : 2022-06-28**Tested By** : Bairong**EUT** : True Wireless Dual-Driver Earbuds with
Active Noise Cancelling**Model Number** : MP-20TWS**Power Supply** : Battery**Test Mode** : Tx mode**Condition** : Temp:22°C,Humi:59.4%,Press:100.3kPa**Antenna/Distance** : 2021 BBHA 9120D 3#/3m/VERTICAL**Memo** : DH5 2402

Data: 2



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	1136.00	51.45	25.47	38.10	1.18	0.52	40.52	74.00	-33.48	Peak	VERTICAL
2	1214.00	50.47	25.46	38.22	1.22	0.54	39.47	74.00	-34.53	Peak	VERTICAL
3	1598.00	54.27	25.65	38.80	1.42	0.61	43.15	74.00	-30.85	Peak	VERTICAL
4	1984.00	50.62	26.66	39.38	1.59	0.68	40.17	74.00	-33.83	Peak	VERTICAL
5	2150.00	50.87	26.97	39.48	1.64	0.70	40.70	74.00	-33.30	Peak	VERTICAL
6	2660.00	50.22	28.21	39.73	1.78	0.75	41.23	74.00	-32.77	Peak	VERTICAL
7	2908.00	50.62	29.15	39.85	1.85	0.78	42.55	74.00	-31.45	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

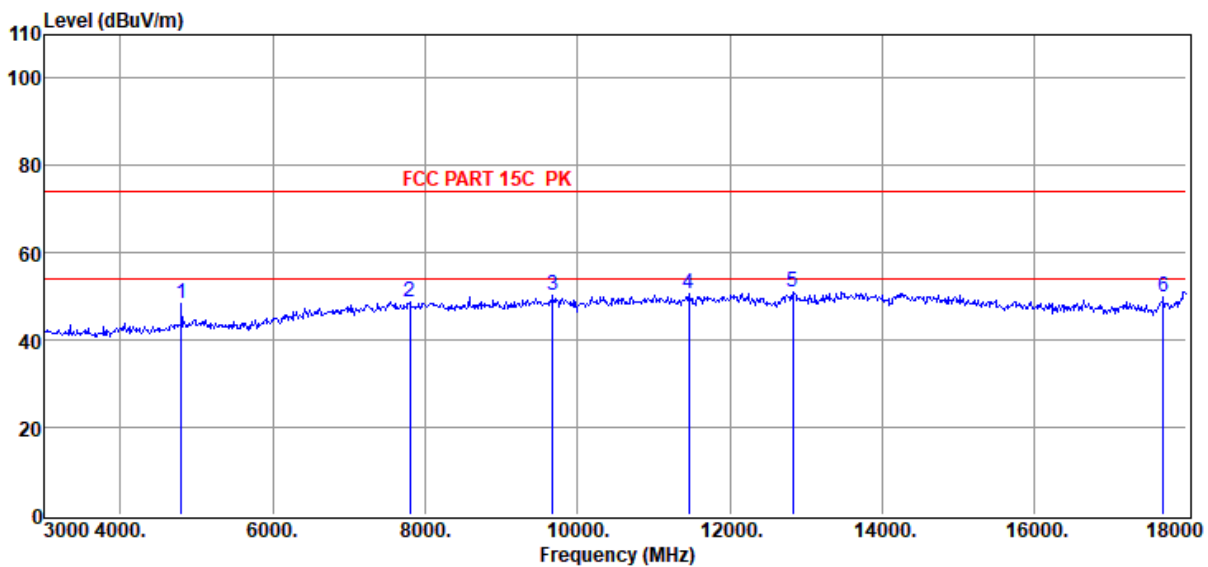
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-06-28
EUT : True Wireless Dual-Driver Earbuds with Active Noise Cancelling
Power Supply : Battery
Condition : Temp:22°C,Humi:59.4%,Press:100.3kPa
Memo : DH5 2402

Tested By : Bairong
Model Number : MP-20TWS
Test Mode : Tx mode
Antenna/Distance : 2021 BBHA 9120D 3#/3m/HORIZONTAL

D:\E3 6.111\2022 Report Data\Q22060723-2E
 MP-20TWS\R\FCC ABOVE 1G .EM6

Data: 3



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	4800.00	51.54	32.46	40.36	2.47	2.16	48.27	74.00	-25.73	Peak	HORIZONTAL
2	7800.00	46.29	36.76	39.78	3.17	2.28	48.72	74.00	-25.28	Peak	HORIZONTAL
3	9675.00	46.13	38.60	40.37	3.64	2.38	50.38	74.00	-23.62	Peak	HORIZONTAL
4	11460.00	45.44	39.02	40.15	3.96	2.39	50.66	74.00	-23.34	Peak	HORIZONTAL
5	12825.00	44.88	39.39	40.35	4.16	2.86	50.94	74.00	-23.06	Peak	HORIZONTAL
6	17700.00	41.37	40.64	40.52	4.88	3.71	50.08	74.00	-23.92	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

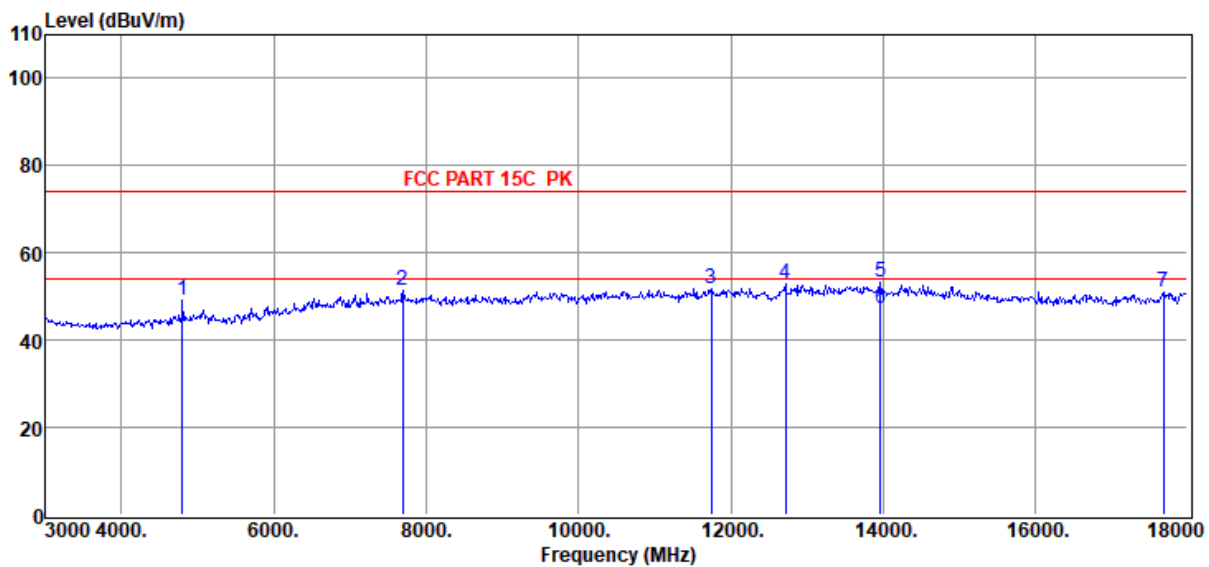
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-06-28
EUT : True Wireless Dual-Driver Earbuds with Active Noise Cancelling
Power Supply : Battery
Condition : Temp:22°C,Humi:59.4%,Press:100.3kPa
Memo : DH5 2402

Tested By : Bairong
Model Number : MP-20TWS
Test Mode : Tx mode
Antenna/Distance : 2021 BBHA 9120D 3#/3m/VERTICAL

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 MP-20TWS\R\FCC ABOVE 1G .EM6

Data: 4



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	4800.00	52.34	32.46	40.36	2.47	2.16	49.07	74.00	-24.93	Peak	VERTICAL
2	7695.00	49.09	36.63	39.77	3.16	2.27	51.38	74.00	-22.62	Peak	VERTICAL
3	11745.00	46.48	39.10	40.13	4.01	2.39	51.85	74.00	-22.15	Peak	VERTICAL
4	12720.00	47.14	39.26	40.32	4.01	2.80	52.89	74.00	-21.11	Peak	VERTICAL
5	13965.00	45.57	39.91	39.72	4.49	2.90	53.15	74.00	-20.85	Peak	VERTICAL
6	13965.00	39.57	39.91	39.72	4.49	2.90	47.15	54.00	-6.85	Average	VERTICAL
7	17685.00	42.50	40.55	40.51	4.87	3.70	51.11	74.00	-22.89	Peak	VERTICAL
8	18000.00	42.66	42.50	40.70	4.96	3.79	53.21	74.00	-20.79	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

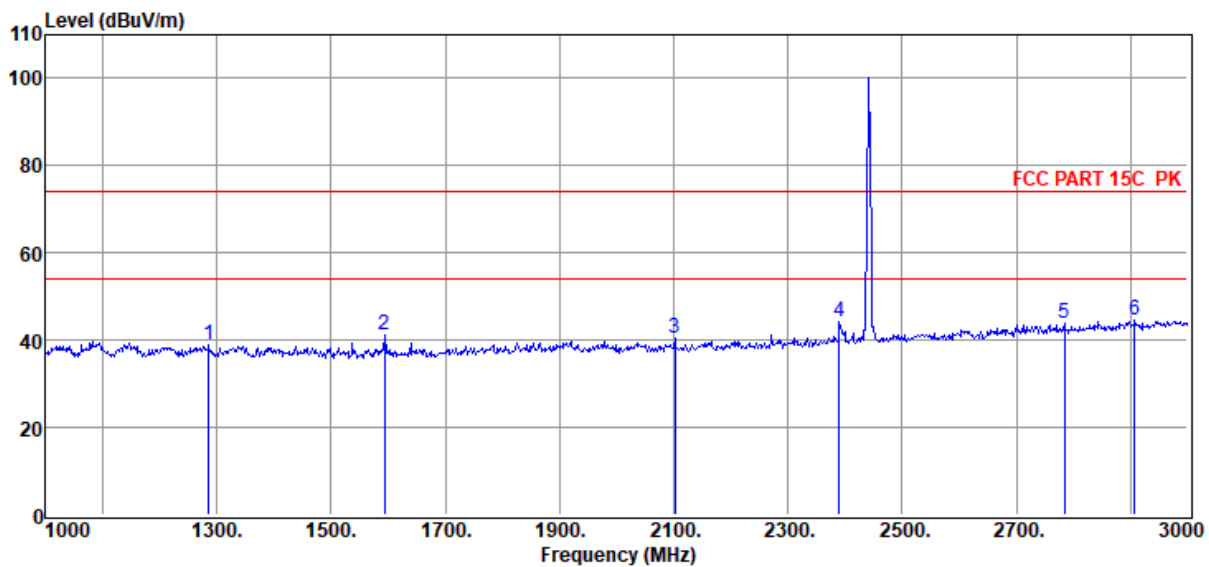
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-06-28
EUT : True Wireless Dual-Driver Earbuds with Active Noise Cancelling
Power Supply : Battery
Condition : Temp:22°C,Humi:59.4%,Press:100.3kPa
Memo : DH5 2441

Tested By : Bairong
Model Number : MP-20TWS
Test Mode : Tx mode
Antenna/Distance : 2021 BBHA 9120D
3#/3m/HORIZONTAL

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MP-20TWS\R\FCC ABOVE 1G .EM6

Data: 5



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
1	1286.00	50.41	25.44	38.33	1.26	0.00	38.78	74.00	-35.22	Peak	HORIZONTAL
2	1594.00	52.94	25.64	38.79	1.42	0.00	41.21	74.00	-32.79	Peak	HORIZONTAL
3	2102.00	51.09	26.88	39.45	1.63	0.32	40.47	74.00	-33.53	Peak	HORIZONTAL
4	2390.00	53.32	27.40	39.60	1.71	1.24	44.07	74.00	-29.93	Peak	HORIZONTAL
5	2784.00	50.71	28.68	39.79	1.81	2.49	43.90	74.00	-30.10	Peak	HORIZONTAL
6	2908.00	50.70	29.15	39.85	1.85	2.88	44.73	74.00	-29.27	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

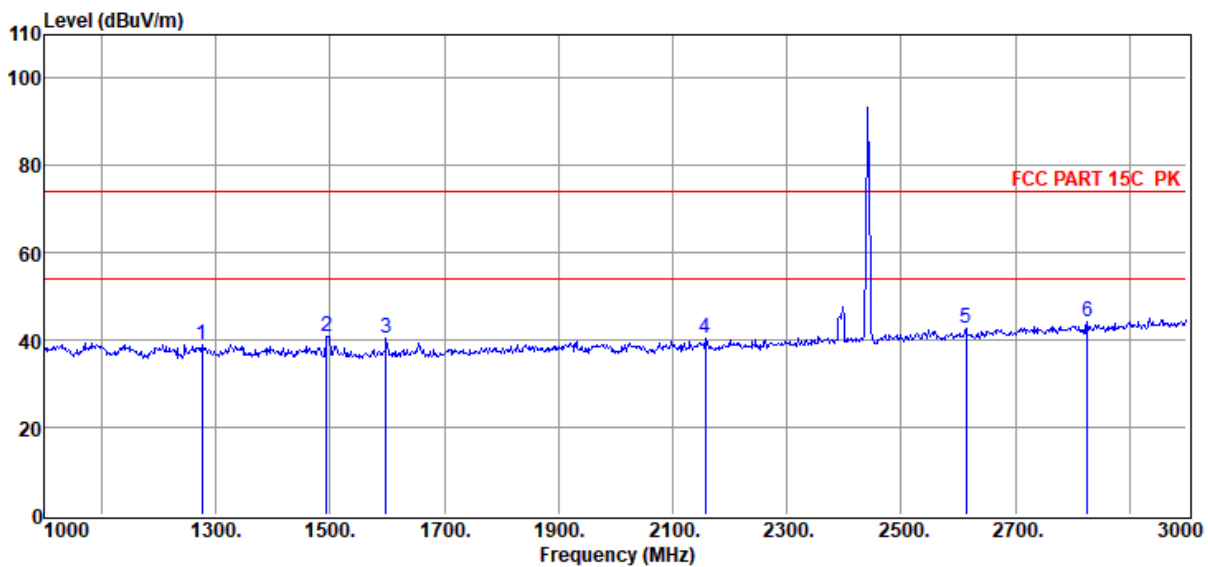
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-06-29
EUT : True Wireless Dual-Driver Earbuds with Active Noise Cancelling
Power Supply : Battery
Condition : Temp:22°C,Humi:59.4%,Press:100.3kPa
Memo : DH5 2441

Tested By : Bairong
Model Number : MP-20TWS
Test Mode : Tx mode
Antenna/Distance : 2021 BBHA 9120D 3#/3m/VERTICAL

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Data: 6



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	1276.00	50.63	25.44	38.31	1.25	0.00	39.01	74.00	-34.99	Peak	VERTICAL
2	1494.00	52.73	25.40	38.64	1.38	0.00	40.87	74.00	-33.13	Peak	VERTICAL
3	1598.00	52.21	25.65	38.80	1.42	0.00	40.48	74.00	-33.52	Peak	VERTICAL
4	2158.00	50.84	26.98	39.48	1.64	0.50	40.48	74.00	-33.52	Peak	VERTICAL
5	2614.00	50.55	28.03	39.71	1.77	1.95	42.59	74.00	-31.41	Peak	VERTICAL
6	2826.00	50.85	28.84	39.81	1.82	2.62	44.32	74.00	-29.68	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

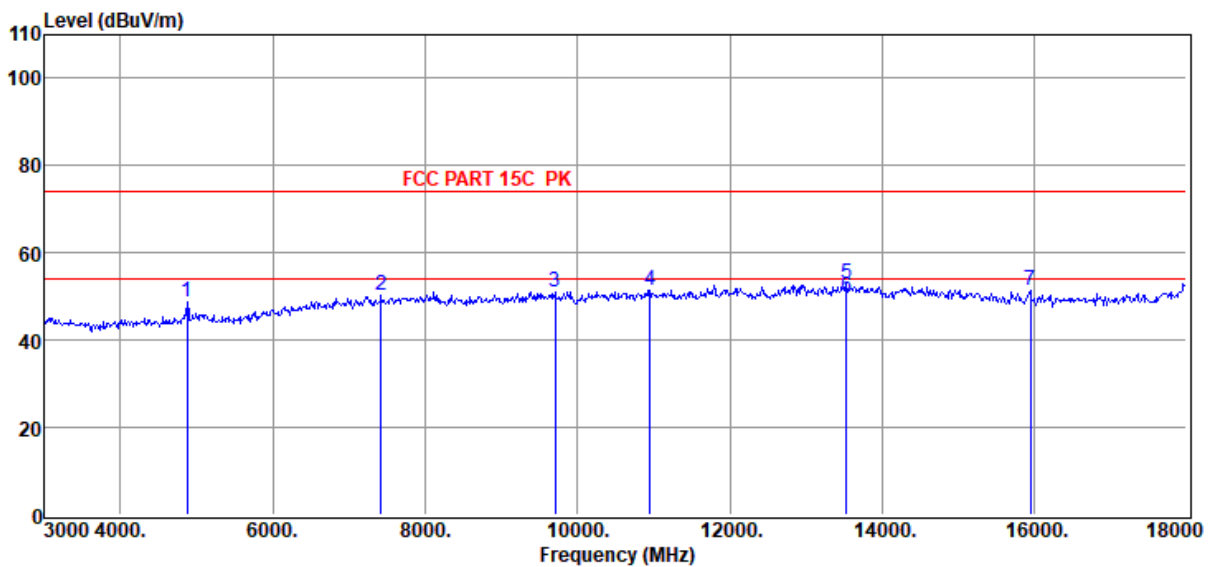
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-06-29
EUT : True Wireless Dual-Driver Earbuds with Active Noise Cancelling
Power Supply : Battery
Condition : Temp:22°C,Humi:59.4%,Press:100.3kPa
Memo : DH5 2441

Tested By : Bairong
Model Number : MP-20TWS
Test Mode : Tx mode
Antenna/Distance : 2021 BBHA 9120D
3#/3m/HORIZONTAL

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MP-20TWS\R\FCC ABOVE 1G .EM6

Data: 7



Item (Mark)	Freq. (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Filter Factor dB	Result Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	4875.00	51.72	32.70	40.38	2.49	2.17	48.70	74.00	-25.30	Peak	HORIZONTAL
2	7425.00	48.28	36.34	39.74	3.12	2.27	50.27	74.00	-23.73	Peak	HORIZONTAL
3	9705.00	46.90	38.58	40.39	3.64	2.39	51.12	74.00	-22.88	Peak	HORIZONTAL
4	10950.00	46.26	39.27	40.22	3.79	2.39	51.49	74.00	-22.51	Peak	HORIZONTAL
5	13530.00	46.02	39.99	40.03	4.02	2.93	52.93	74.00	-21.07	Peak	HORIZONTAL
6	13530.00	43.02	39.99	40.03	4.02	2.93	49.93	54.00	-4.07	Average	HORIZONTAL
7	15945.00	45.77	38.00	39.88	4.60	3.09	51.58	74.00	-22.42	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.