

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE
1G AP.EM6

Test Date : 2022-04-07

Tested By : Kennys Zhang

EUT : Clevershare Hub

Model Number : Clevershare Hub

Power Supply : AC 120V/60Hz

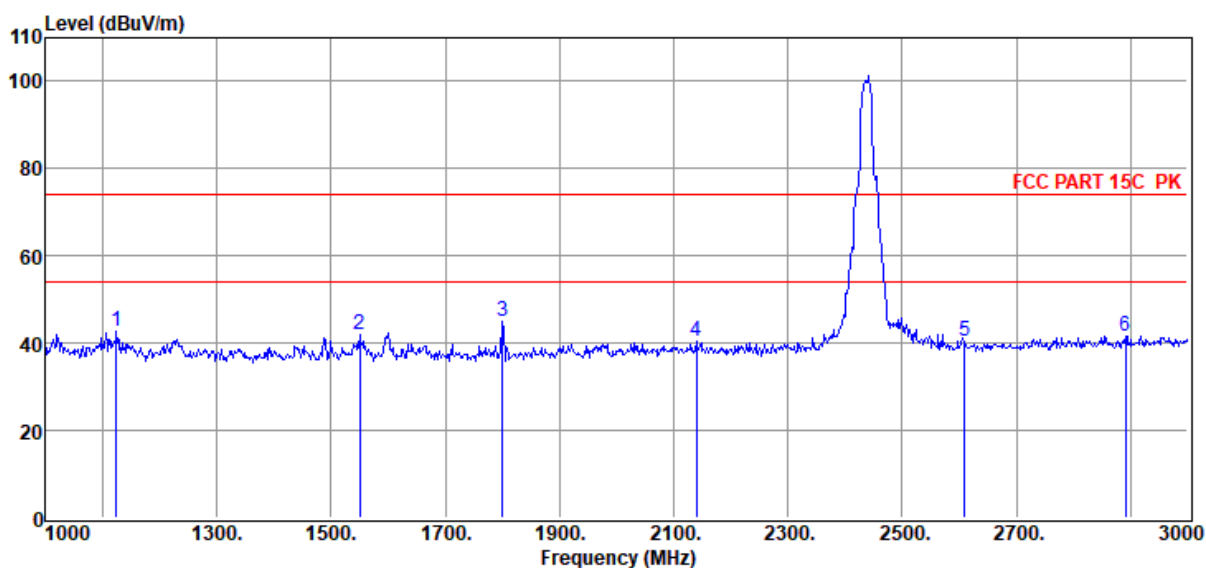
Test Mode : Tx Mode

Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa

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

Memo : 11N20 2437

Data: 27



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	1124.00	53.56	25.48	38.09	1.17	0.52	42.64	74.00	-31.36	Peak	VERTICAL
2	1550.00	53.09	25.53	38.73	1.40	0.60	41.89	74.00	-32.11	Peak	VERTICAL
3	1800.00	55.80	26.18	39.10	1.51	0.64	45.03	74.00	-28.97	Peak	VERTICAL
4	2140.00	50.46	26.95	39.47	1.64	0.70	40.28	74.00	-33.72	Peak	VERTICAL
5	2610.00	49.49	28.02	39.71	1.77	0.75	40.32	74.00	-33.68	Peak	VERTICAL
6	2892.00	49.79	29.09	39.85	1.84	0.78	41.65	74.00	-32.35	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#

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE
1G AP.EM6

Test Date : 2022-04-07

Tested By : Kennys Zhang

EUT : Clevershare Hub

Model Number : Clevershare Hub

Power Supply : AC 120V/60Hz

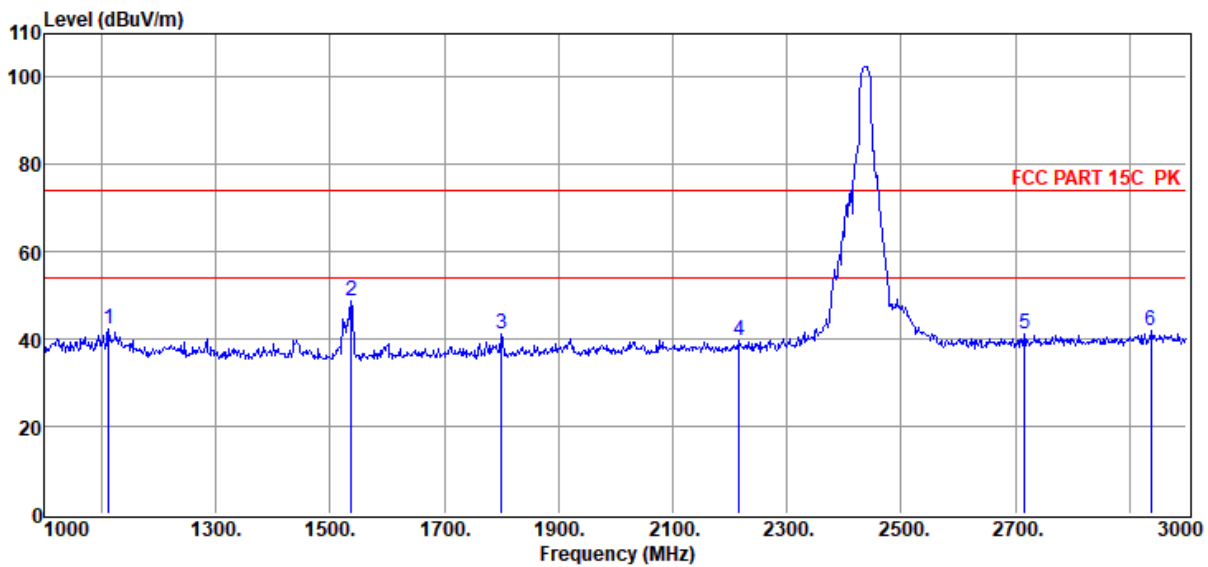
Test Mode : Tx Mode

Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa

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

Memo : 11N20 2437

Data: 28



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	1112.00	53.07	25.48	38.07	1.16	0.52	42.16	74.00	-31.84	Peak	HORIZONTAL
2	1538.00	60.04	25.50	38.71	1.40	0.60	48.83	74.00	-25.17	Peak	HORIZONTAL
3	1800.00	51.99	26.18	39.10	1.51	0.64	41.22	74.00	-32.78	Peak	HORIZONTAL
4	2216.00	49.56	27.09	39.51	1.66	0.70	39.50	74.00	-34.50	Peak	HORIZONTAL
5	2716.00	49.80	28.42	39.76	1.80	0.76	41.02	74.00	-32.98	Peak	HORIZONTAL
6	2938.00	49.75	29.26	39.87	1.85	0.78	41.77	74.00	-32.23	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.

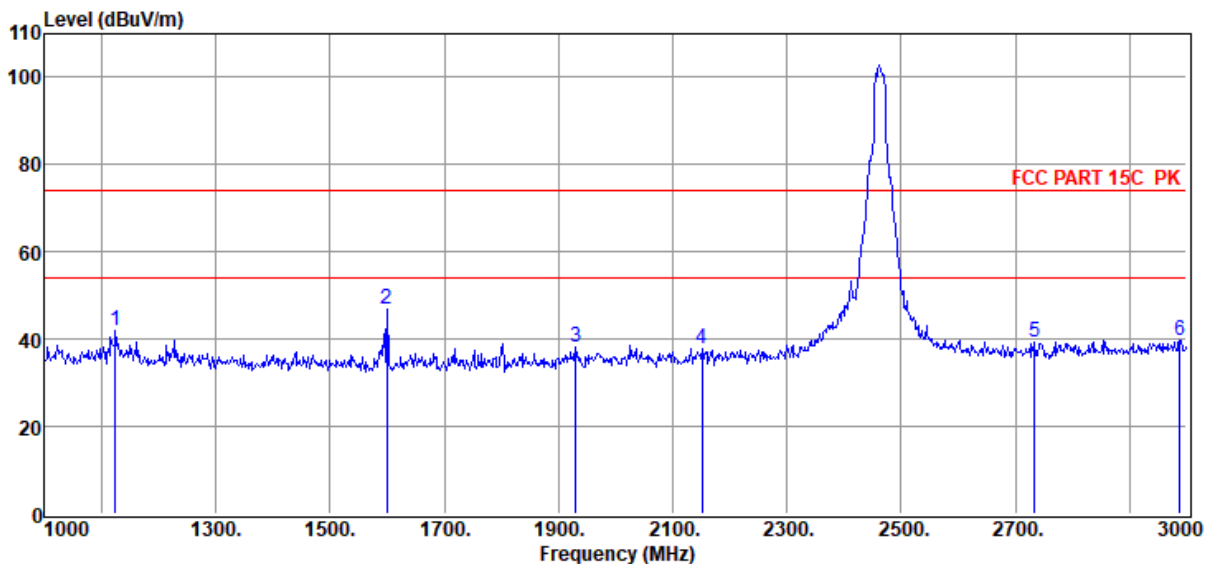
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-04-08
EUT : Clevershare Hub
Power Supply : AC 120V/60Hz
Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa
Memo : 11N20 2462

Tested By : Kennys Zhang
Model Number : Clevershare Hub
Test Mode : Tx Mode
Antenna/Distance : 2021 BBHA 9120D
 3#/3m/HORIZONTAL

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE
 1G AP.EM6

Data: 29



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	1124.00	52.88	25.48	38.09	1.17	0.52	41.96	74.00	-32.04	Peak	HORIZONTAL
2	1600.00	58.00	25.66	38.80	1.42	0.61	46.89	74.00	-27.11	Peak	HORIZONTAL
3	1930.00	48.54	26.52	39.30	1.57	0.67	38.00	74.00	-36.00	Peak	HORIZONTAL
4	2152.00	47.98	26.97	39.48	1.64	0.70	37.81	74.00	-36.19	Peak	HORIZONTAL
5	2734.00	47.91	28.49	39.77	1.80	0.76	39.19	74.00	-34.81	Peak	HORIZONTAL
6	2988.00	47.44	29.45	39.89	1.87	0.79	39.66	74.00	-34.34	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\Q21121709-2E\FCC ABOVE
1G AP.EM6

Test Date : 2022-04-08

Tested By : Kennys Zhang

EUT : Clevershare Hub

Model Number : Clevershare Hub

Power Supply : AC 120V/60Hz

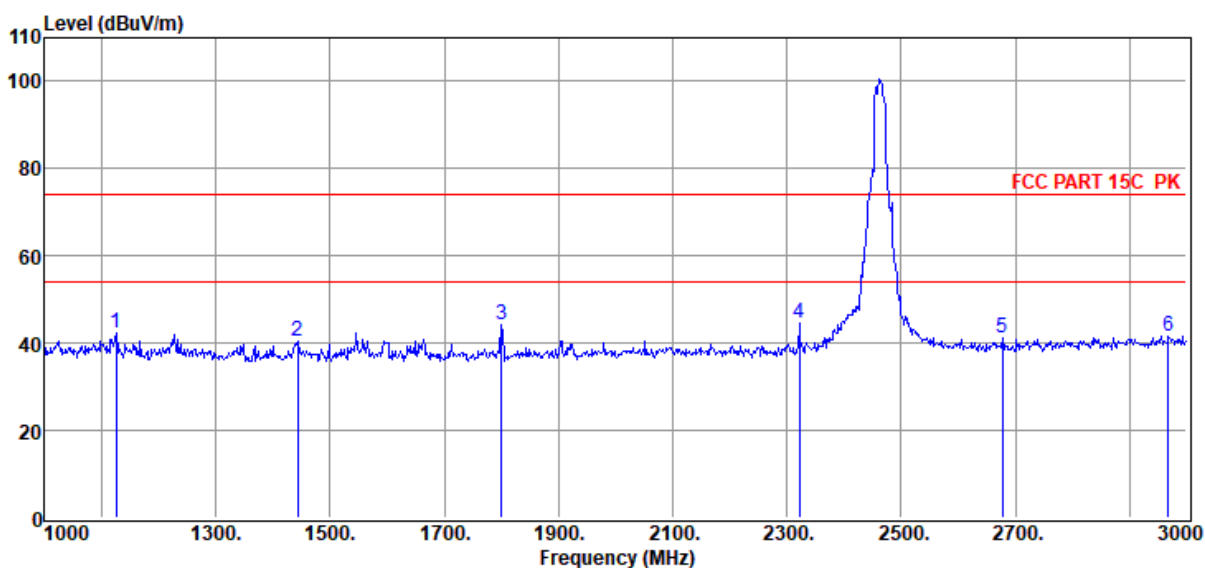
Test Mode : Tx Mode

Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa

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

Memo : 11N20 2462

Data: 30



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	1126.00	53.31	25.47	38.09	1.17	0.52	42.38	74.00	-31.62	Peak	VERTICAL
2	1444.00	51.51	25.41	38.57	1.35	0.58	40.28	74.00	-33.72	Peak	VERTICAL
3	1800.00	55.13	26.18	39.10	1.51	0.64	44.36	74.00	-29.64	Peak	VERTICAL
4	2322.00	54.59	27.28	39.56	1.69	0.72	44.72	74.00	-29.28	Peak	VERTICAL
5	2678.00	50.07	28.28	39.74	1.79	0.75	41.15	74.00	-32.85	Peak	VERTICAL
6	2968.00	49.50	29.38	39.88	1.86	0.79	41.65	74.00	-32.35	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#

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE
1G AP.EM6

Test Date : 2022-04-08

Tested By : Kennys Zhang

EUT : Clevershare Hub

Model Number : Clevershare Hub

Power Supply : AC 120V/60Hz

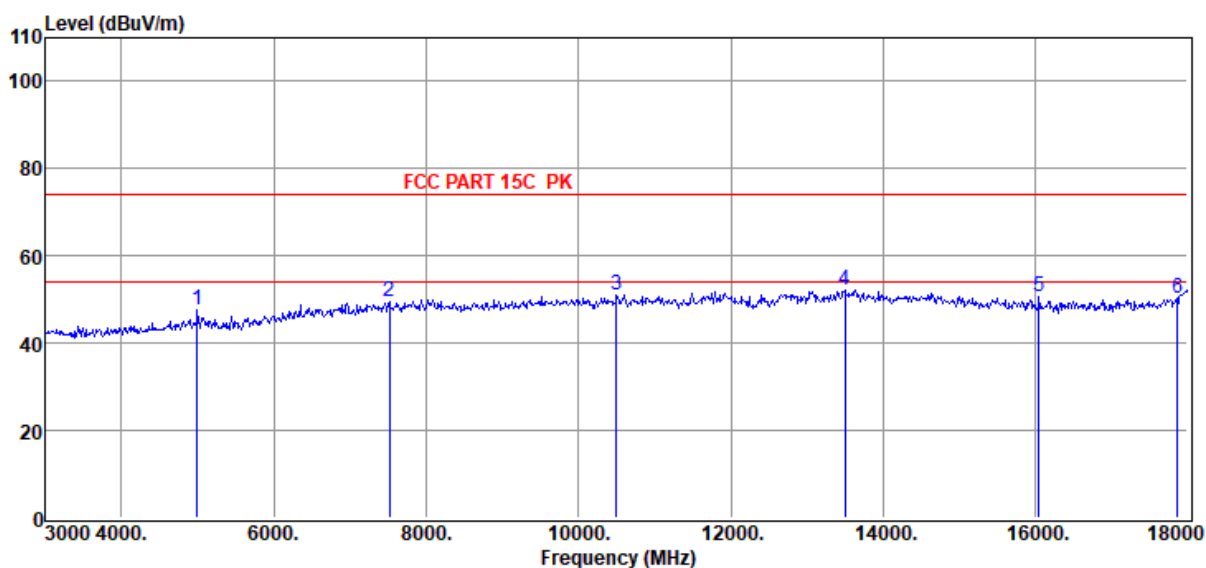
Test Mode : Tx Mode

Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa

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

Memo : 11N20 2412

Data: 35



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	4995.00	50.17	33.08	40.40	2.54	2.19	47.58	74.00	-26.42	Peak	VERTICAL
2	7515.00	47.32	36.42	39.75	3.14	2.27	49.40	74.00	-24.60	Peak	VERTICAL
3	10500.00	46.30	39.00	40.40	3.67	2.43	51.00	74.00	-23.00	Peak	VERTICAL
4	13500.00	45.40	40.00	40.05	3.99	2.93	52.27	74.00	-21.73	Peak	VERTICAL
5	16050.00	44.76	37.90	39.91	4.61	3.14	50.50	74.00	-23.50	Peak	VERTICAL
6	17865.00	40.46	41.66	40.62	4.92	3.75	50.17	74.00	-23.83	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.

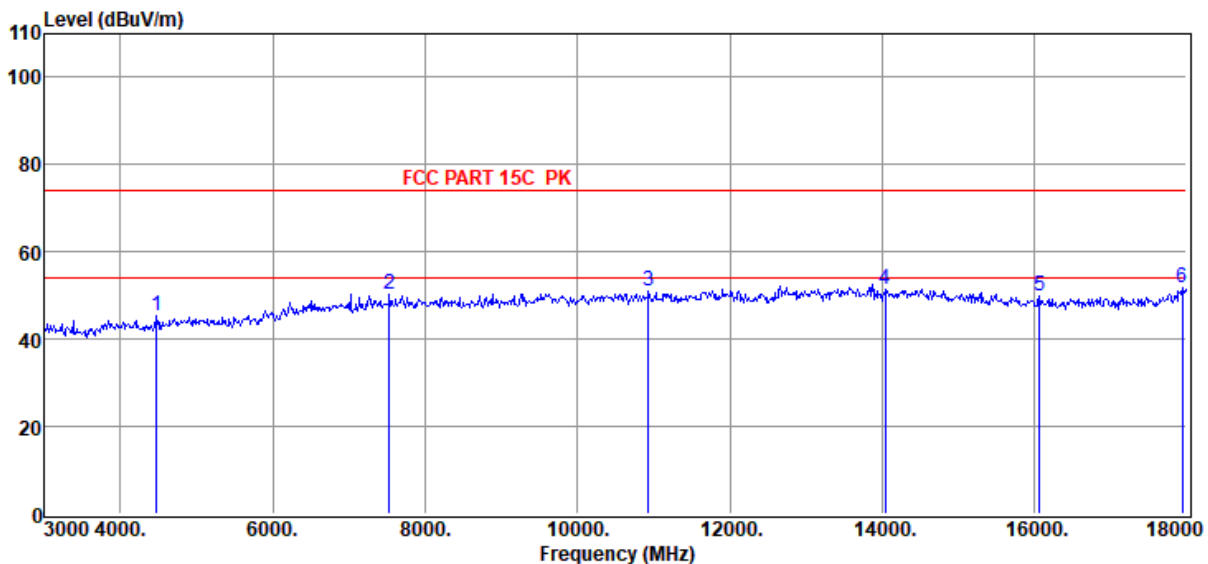
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-04-08
EUT : Clevershare Hub
Power Supply : AC 120V/60Hz
Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa
Memo : 11N20 2412

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE 1G AP.EM6
Tested By : Kennys Zhang
Model Number : Clevershare Hub
Test Mode : Tx Mode
Antenna/Distance : 2021 BBHA 9120D
 3#/3m/HORIZONTAL

Data: 36



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	4470.00	49.57	31.48	40.29	2.34	2.11	45.21	74.00	-28.79	Peak	HORIZONTAL
2	7530.00	48.15	36.44	39.75	3.14	2.27	50.25	74.00	-23.75	Peak	HORIZONTAL
3	10935.00	45.70	39.26	40.23	3.78	2.39	50.90	74.00	-23.10	Peak	HORIZONTAL
4	14040.00	43.76	39.90	39.70	4.52	2.89	51.37	74.00	-22.63	Peak	HORIZONTAL
5	16065.00	44.16	37.90	39.91	4.62	3.15	49.92	74.00	-24.08	Peak	HORIZONTAL
6	17940.00	41.50	42.13	40.66	4.94	3.77	51.68	74.00	-22.32	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\Q21121709-2E\FCC ABOVE
1G AP.EM6

Test Date : 2022-04-08

Tested By : Kennys Zhang

EUT : Clevershare Hub

Model Number : Clevershare Hub

Power Supply : AC 120V/60Hz

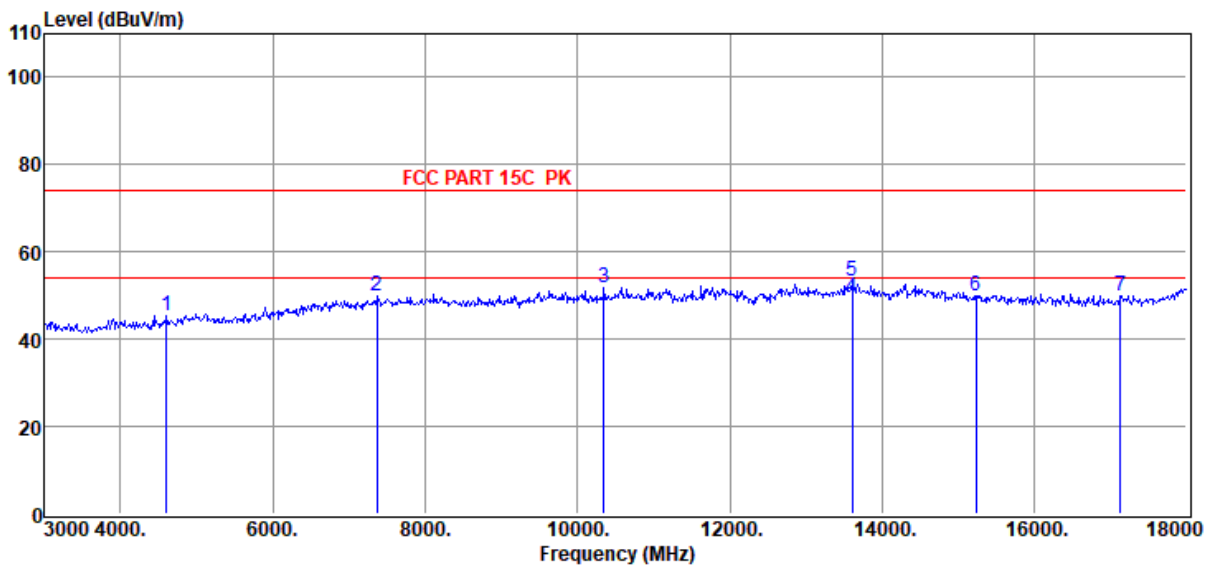
Test Mode : Tx Mode

Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa

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

Memo : 11N20 2437

Data: 33



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	4605.00	49.27	31.84	40.32	2.40	2.13	45.32	74.00	-28.68	Peak	HORIZONTAL
2	7365.00	47.80	36.29	39.74	3.11	2.27	49.73	74.00	-24.27	Peak	HORIZONTAL
3	10350.00	47.33	38.82	40.46	3.67	2.45	51.81	74.00	-22.19	Peak	HORIZONTAL
4	13605.00	42.62	39.98	39.98	4.10	2.92	49.64	54.00	-4.36	Average	HORIZONTAL
5	13605.00	46.14	39.98	39.98	4.10	2.92	53.16	74.00	-20.84	Peak	HORIZONTAL
6	15240.00	43.27	39.16	39.67	4.51	2.74	50.01	74.00	-23.99	Peak	HORIZONTAL
7	17130.00	43.18	38.73	40.18	4.74	3.55	50.02	74.00	-23.98	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.

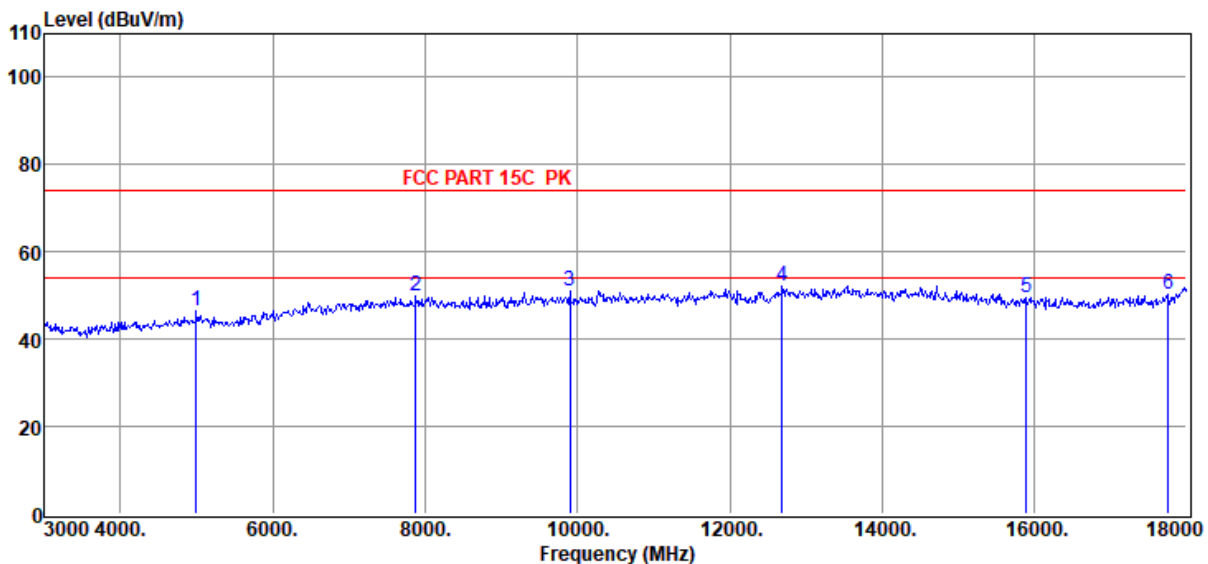
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-04-08
EUT : Clevershare Hub
Power Supply : AC 120V/60Hz
Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa
Memo : 11N20 2437

Tested By : Kennys Zhang
Model Number : Clevershare Hub
Test Mode : Tx Mode
Antenna/Distance : 2021 BBHA 9120D 3#/3m/VERTICAL

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE 1G AP.EM6

Data: 34



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	4995.00	49.23	33.08	40.40	2.54	2.19	46.64	74.00	-27.36	Peak	VERTICAL
2	7875.00	47.32	36.85	39.79	3.18	2.28	49.84	74.00	-24.16	Peak	VERTICAL
3	9900.00	47.13	38.46	40.53	3.66	2.45	51.17	74.00	-22.83	Peak	VERTICAL
4	12690.00	46.32	39.23	40.31	3.97	2.79	52.00	74.00	-22.00	Peak	VERTICAL
5	15900.00	43.65	38.08	39.87	4.59	3.07	49.52	74.00	-24.48	Peak	VERTICAL
6	17760.00	41.17	41.01	40.56	4.89	3.72	50.23	74.00	-23.77	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.

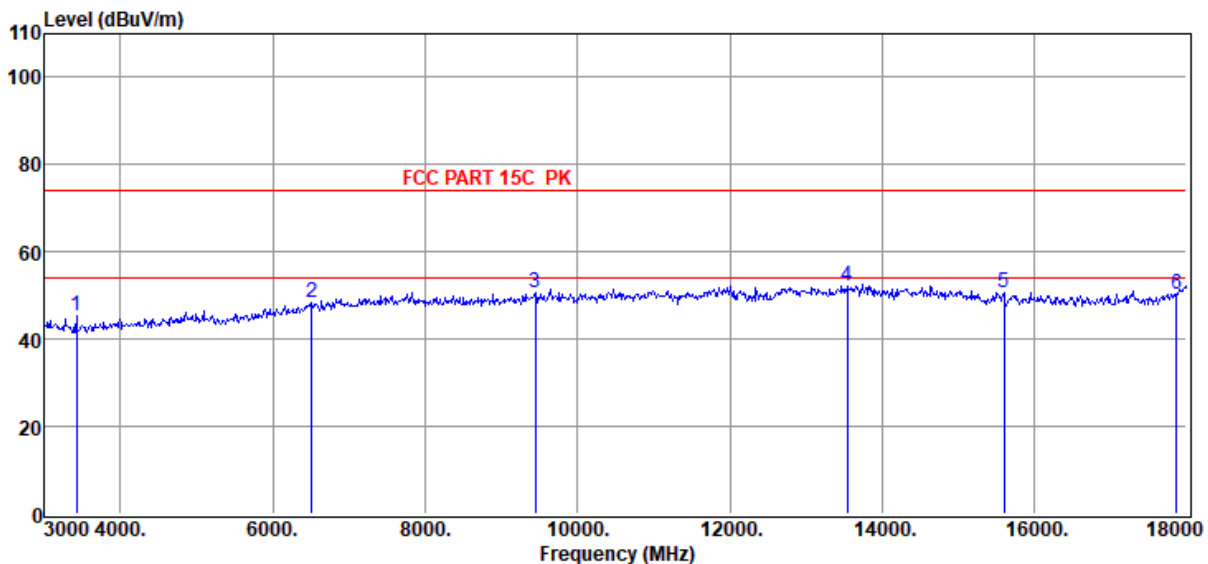
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-04-08
EUT : Clevershare Hub
Power Supply : AC 120V/60Hz
Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa
Memo : 11N20 2462

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE 1G AP.EM6
Tested By : Kennys Zhang
Model Number : Clevershare Hub
Test Mode : Tx Mode
Antenna/Distance : 2021 BBHA 9120D 3#/3m/VERTICAL

Data: 31



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	3420.00	51.38	29.42	40.03	1.72	2.70	45.19	74.00	-28.81	Peak	VERTICAL
2	6510.00	47.37	35.22	40.09	3.26	2.52	48.28	74.00	-25.72	Peak	VERTICAL
3	9450.00	46.45	38.66	40.22	3.59	2.32	50.80	74.00	-23.20	Peak	VERTICAL
4	13545.00	45.16	39.99	40.02	4.04	2.93	52.10	74.00	-21.90	Peak	VERTICAL
5	15600.00	44.37	38.62	39.78	4.57	2.92	50.70	74.00	-23.30	Peak	VERTICAL
6	17865.00	40.73	41.66	40.62	4.92	3.75	50.44	74.00	-23.56	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#

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE
1G AP.EM6

Test Date : 2022-04-08

Tested By : Kennys Zhang

EUT : Clevershare Hub

Model Number : Clevershare Hub

Power Supply : AC 120V/60Hz

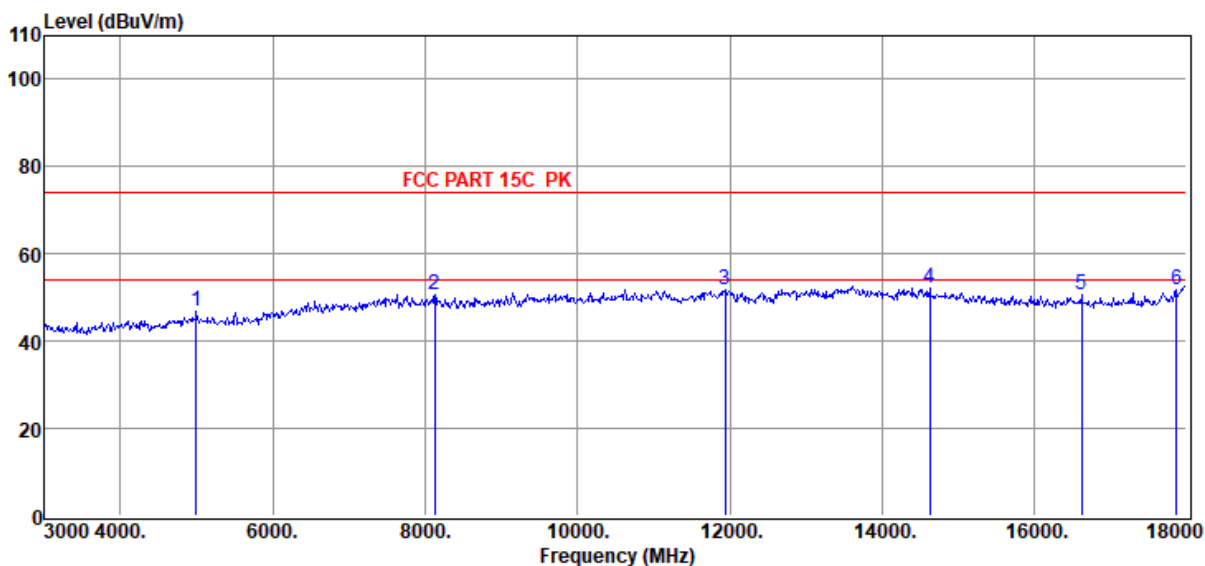
Test Mode : Tx Mode

Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa

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

Memo : 11N20 2462

Data: 32



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	4995.00	49.54	33.08	40.40	2.54	2.19	46.95	74.00	-27.05	Peak	HORIZONTAL
2	8130.00	47.70	37.21	39.81	3.20	2.27	50.57	74.00	-23.43	Peak	HORIZONTAL
3	11940.00	46.18	39.18	40.11	4.04	2.40	51.69	74.00	-22.31	Peak	HORIZONTAL
4	14625.00	44.77	39.80	39.64	4.38	2.72	52.03	74.00	-21.97	Peak	HORIZONTAL
5	16620.00	44.50	38.04	40.02	4.73	3.36	50.61	74.00	-23.39	Peak	HORIZONTAL
6	17865.00	42.07	41.66	40.62	4.92	3.75	51.78	74.00	-22.22	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.

9. RF Conducted Spurious Emissions

9.1. Block diagram of test setup

Same as section 4.1

9.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

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:

Center frequency	Test frequency
RBW:	100 kHz
VBW:	300 kHz
Span	Wide enough to capture the peak level of the in-band emission
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.

(4) Set the spectrum analyzer as follows:

RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Number of measurement points	$\geq \text{span}/\text{RBW}$
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(5) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude of all unwanted emissions outside of the authorized frequency band

EUT Set Mode	CH or Frequency	Result (dBm)	EUT Set Mode	CH or Frequency	Result Result (dBm)
11b	CH1	Pass	11n HT 20	CH1	Pass
	CH6	Pass		CH6	Pass
	CH11	Pass		CH11	Pass
11g	CH1	Pass	11n HT 40	CH3	Pass
	CH6	Pass		CH6	Pass
	CH11	Pass		CH9	Pass

11B Ant1 2412 0~Reference

Ref 30 dBm Att 30 dB RBW 100 kHz VBW 300 kHz SWT 15 ms Marker 1 [T1] 8.11 dBm 2.41200000 GHz

Offset 19.2 dB

SWP 30 Hz

Center 2.412 GHz Span 30 MHz

1 dB View

1A

1VZ

3dB

Date: 24.MAR.2022 15:17:33

11B Ant1 2412 30~1000

Ref 15 dBm Att 20 dB RBW 100 kHz VBW 300 kHz SWT 125 ms Marker 1 [T1] -49.10 dBm 854.758666667 MHz

Offset 19.2 dB

Start 30 MHz Stop 1 GHz

1 dB View

1A

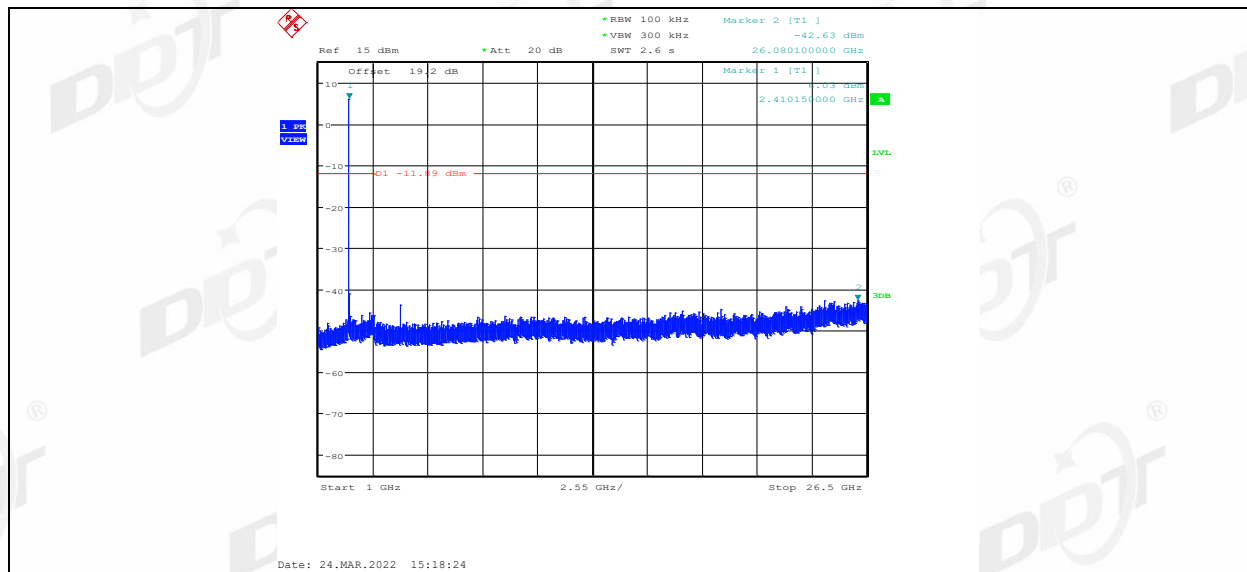
1VZ

3dB

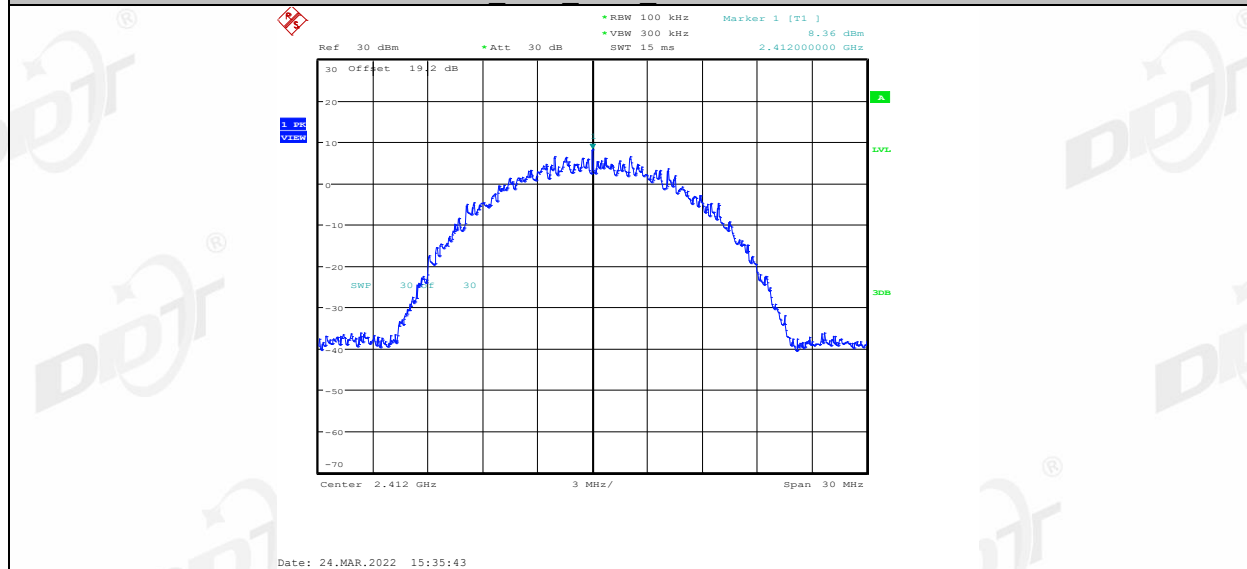
1

Date: 24.MAR.2022 15:17:46

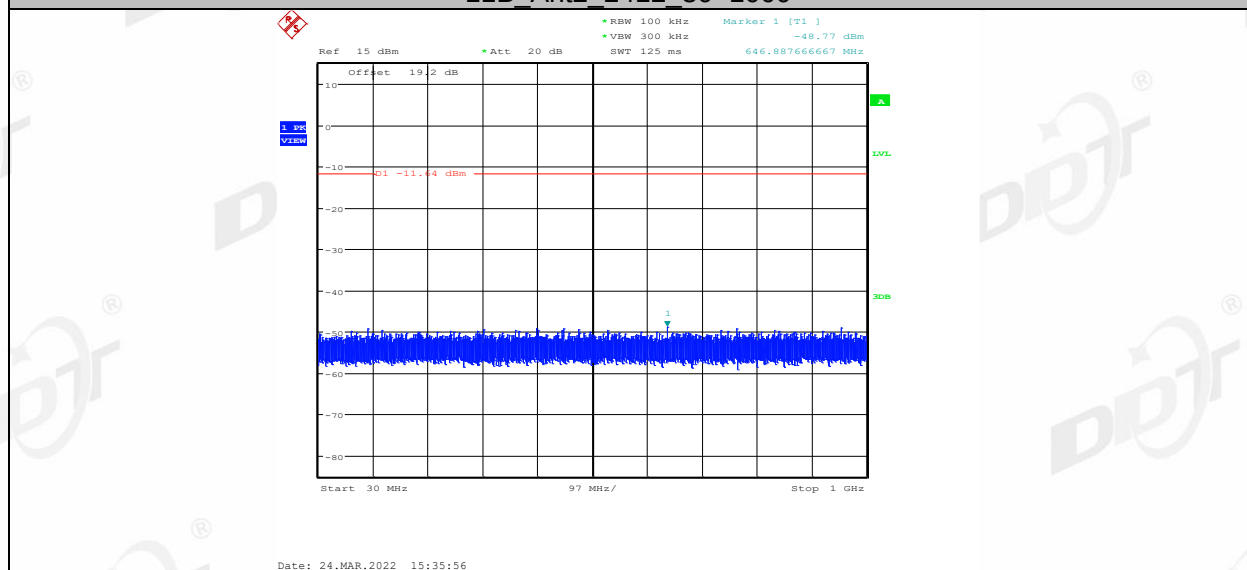
11B Ant1 2412 1000~26500



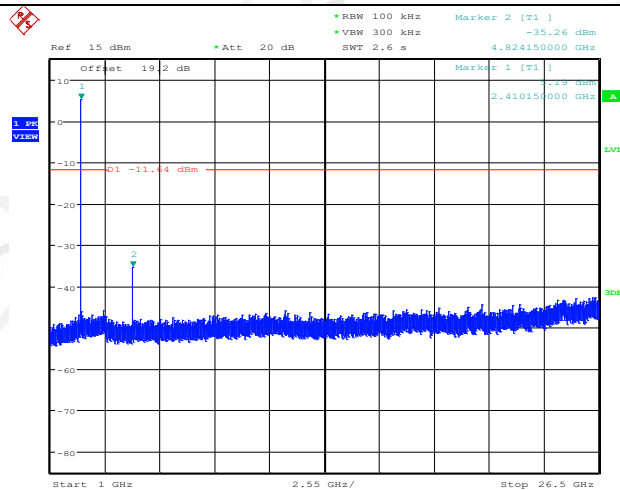
11B_Ant2_2412_0~Reference



11B_Ant2_2412_30~1000

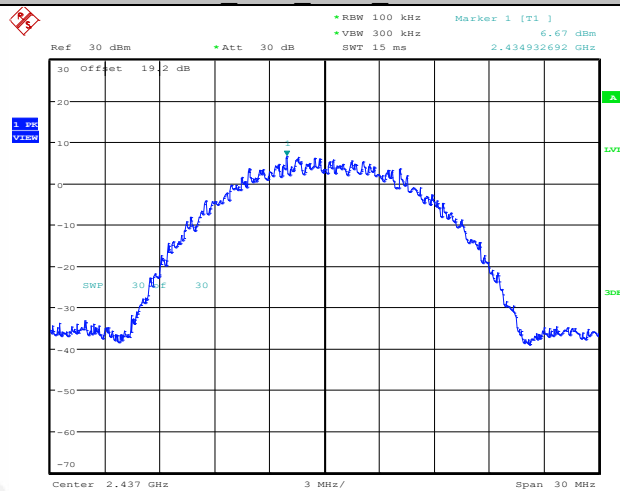


11B_Ant2_2412_1000~26500



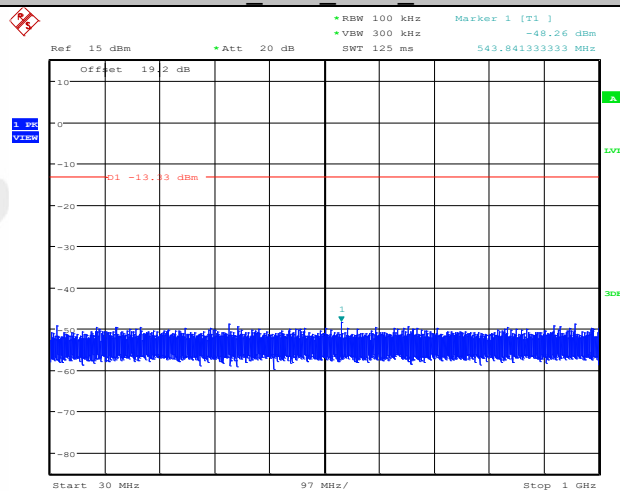
Date: 24.MAR.2022 15:36:35

11B Ant1 2437 0~Reference



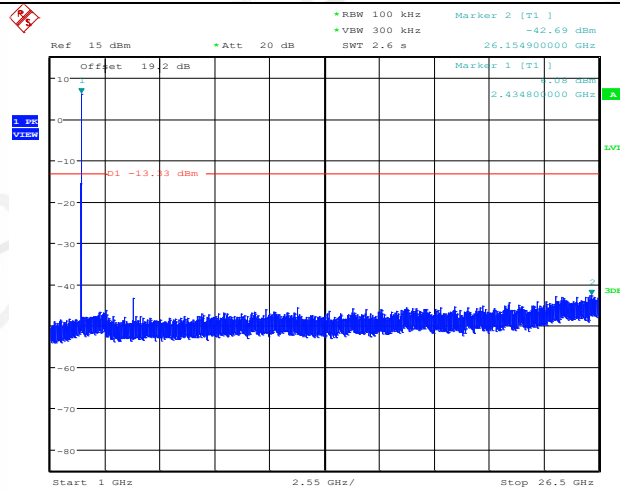
Date: 24.MAR.2022 15:20:14

11B Ant1 2437 30~1000



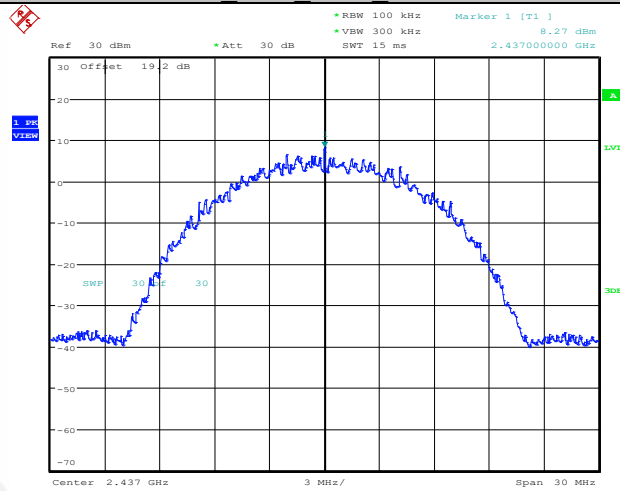
Date: 24.MAR.2022 15:20:26

11B	Ant1	2437	1000~26500
-----	------	------	------------



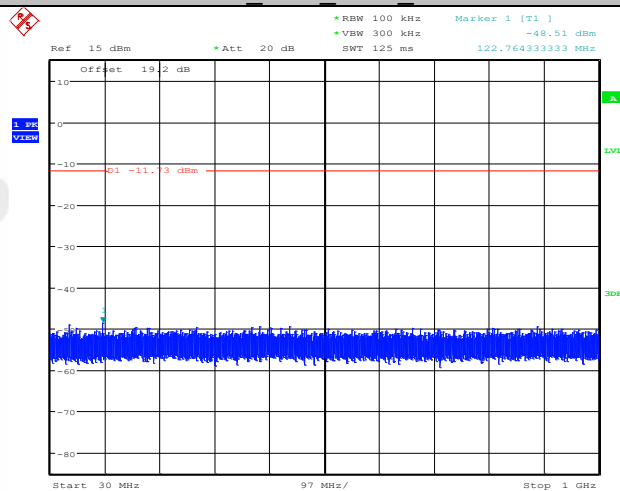
Date: 24.MAR.2022 15:21:05

11B_Ant2_2437_0~Reference



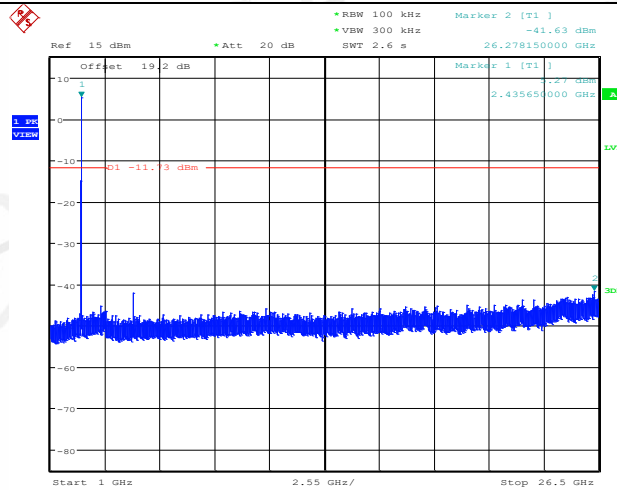
Date: 24.MAR.2022 16:20:36

11B_Ant2_2437_30~1000



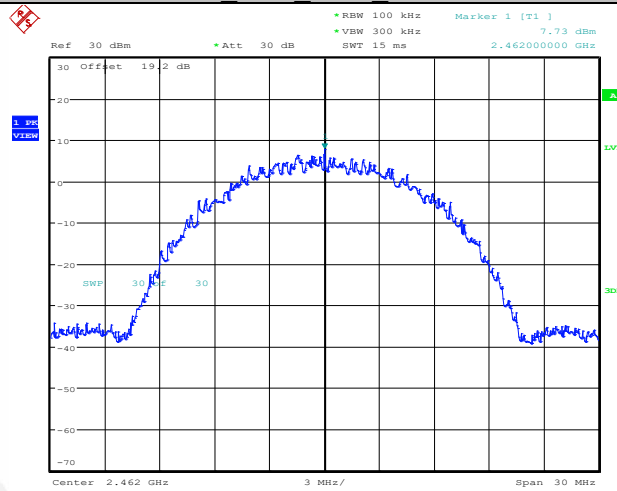
Date: 24.MAR.2022 16:20:48

11B_Ant2_2437_1000~26500



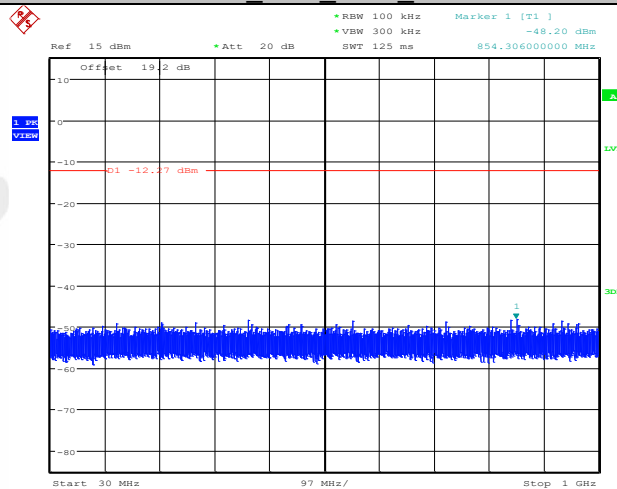
Date: 24.MAR.2022 16:21:27

11B_Ant1_2462_0~Reference



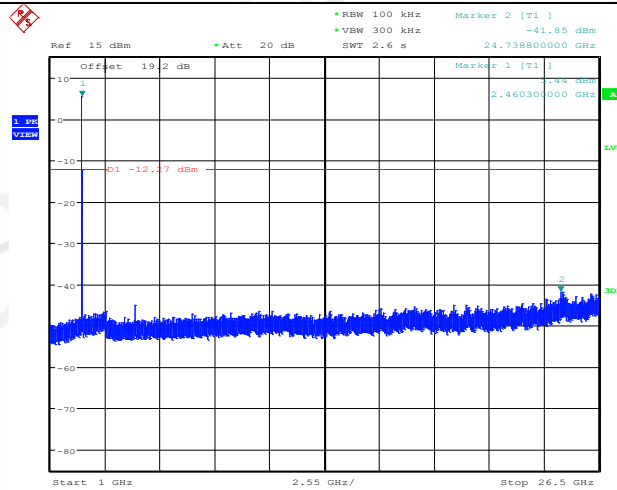
Date: 24.MAR.2022 15:23:20

11B_Ant1_2462_30~1000



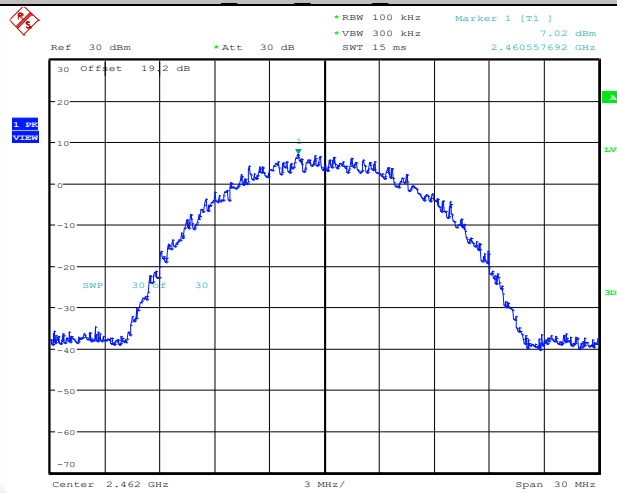
Date: 24.MAR.2022 15:23:33

11B_Ant1_2462_1000~26500



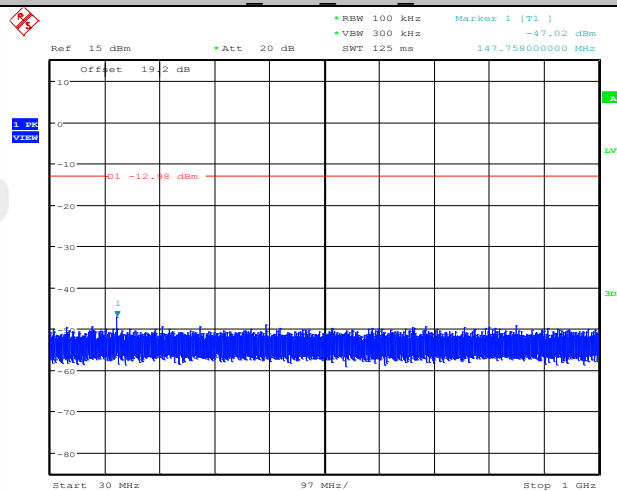
Date: 24.MAR.2022 15:24:12

11B_Ant2_2462_0~Reference



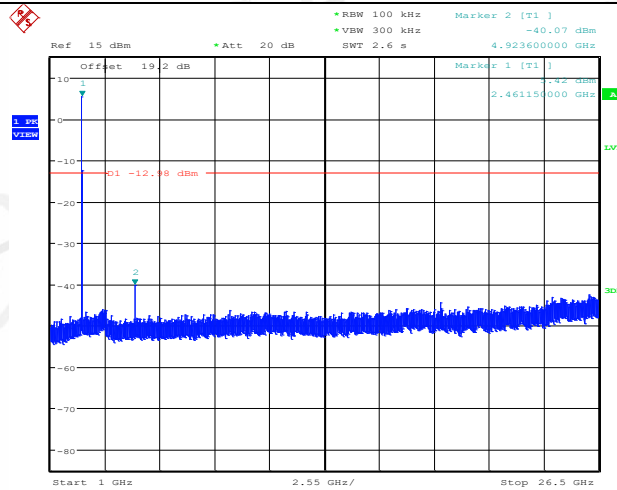
Date: 24.MAR.2022 16:23:45

11B_Ant2_2462_30~1000



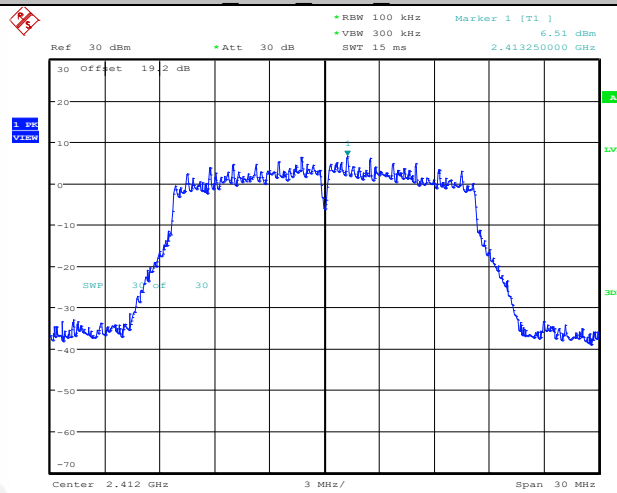
Date: 24.MAR.2022 16:23:57

11B_Ant2_2462_1000~26500



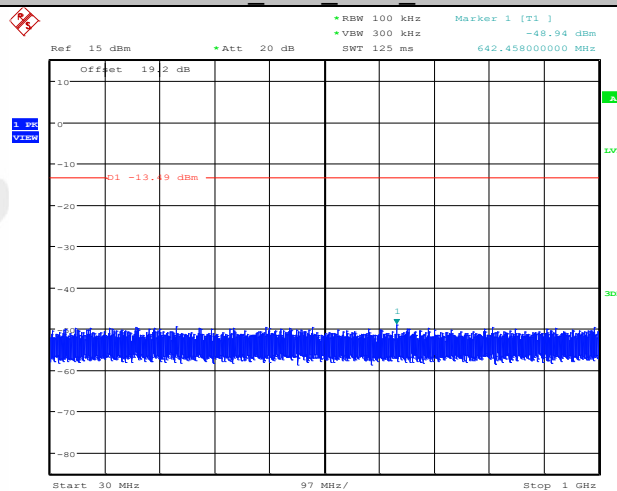
Date: 24.MAR.2022 16:24:36

11G_Ant1_2412_0~Reference



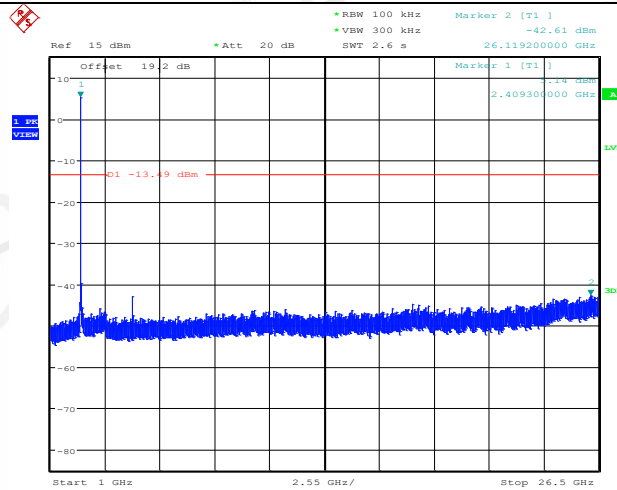
Date: 24.MAR.2022 15:26:32

11G_Ant1_2412_30~1000



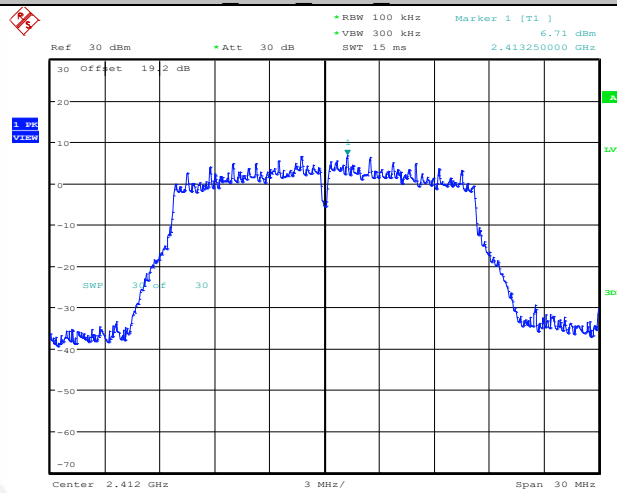
Date: 24.MAR.2022 15:26:44

11G_Ant1_2412_1000~26500



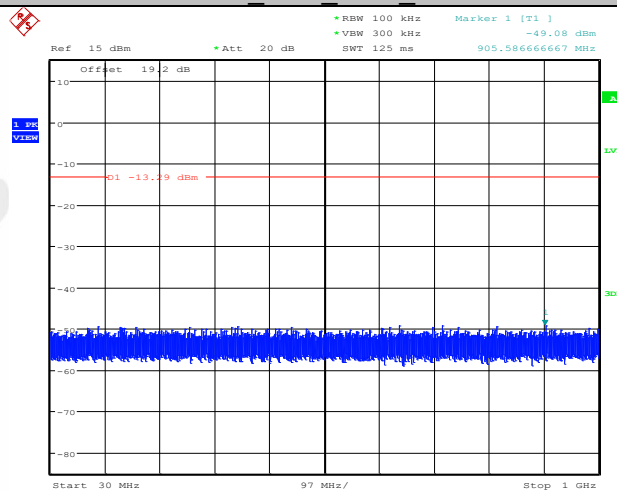
Date: 24.MAR.2022 15:27:23

11G_Ant2_2412_0~Reference



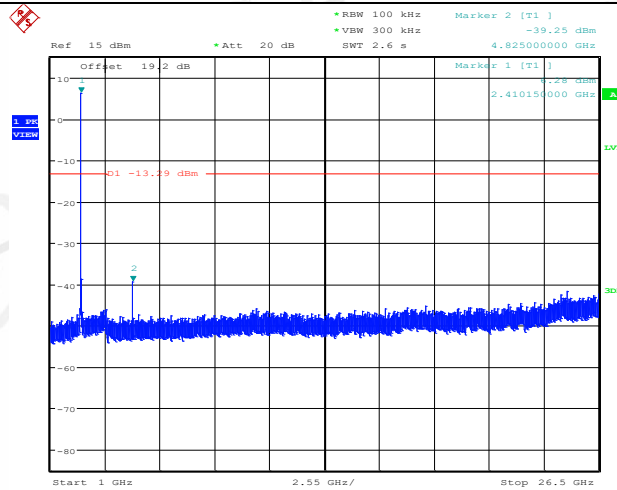
Date: 24.MAR.2022 16:27:31

11G_Ant2_2412_30~1000



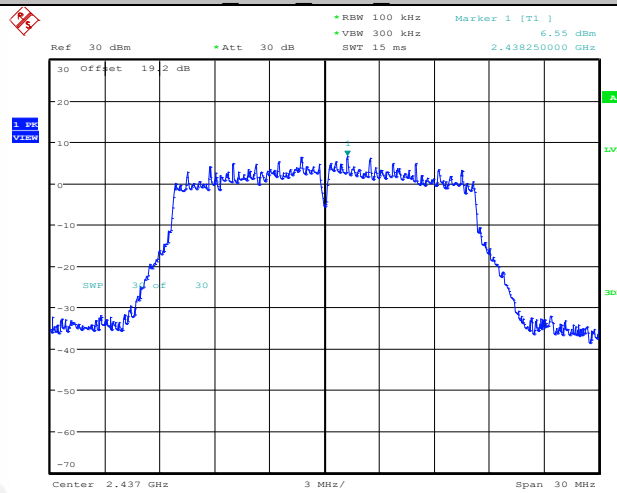
Date: 24.MAR.2022 16:27:44

11G_Ant2_2412_1000~26500



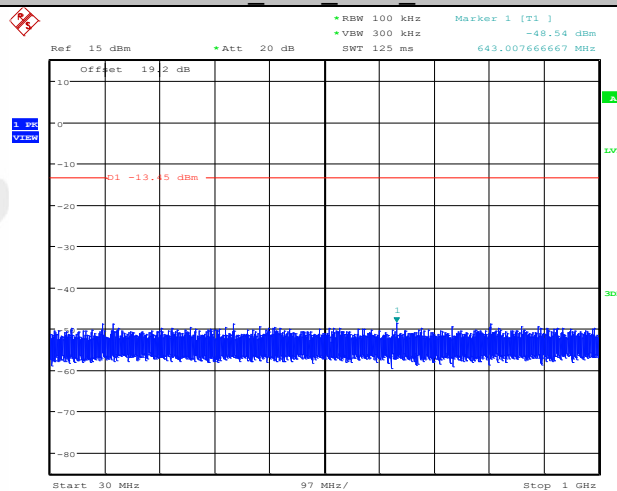
Date: 24.MAR.2022 16:28:23

11G_Ant1_2437_0-Reference



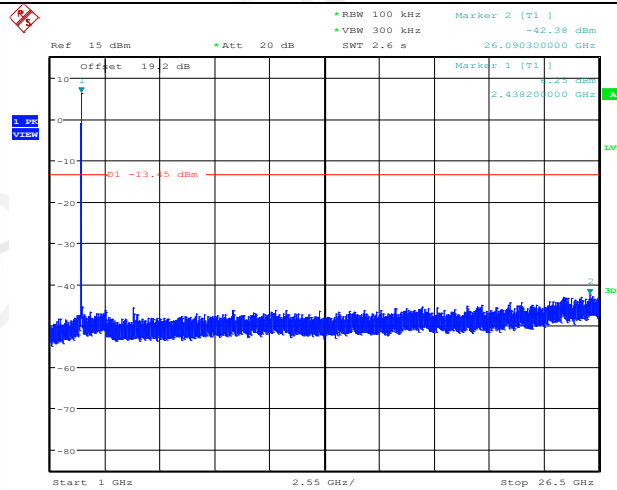
Date: 24.MAR.2022 15:29:38

11G_Ant1_2437_30~1000



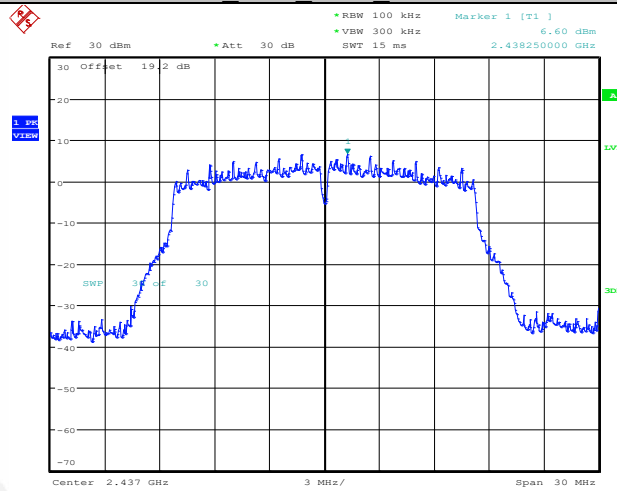
Date: 24.MAR.2022 15:29:50

11G_Ant1_2437_1000~26500



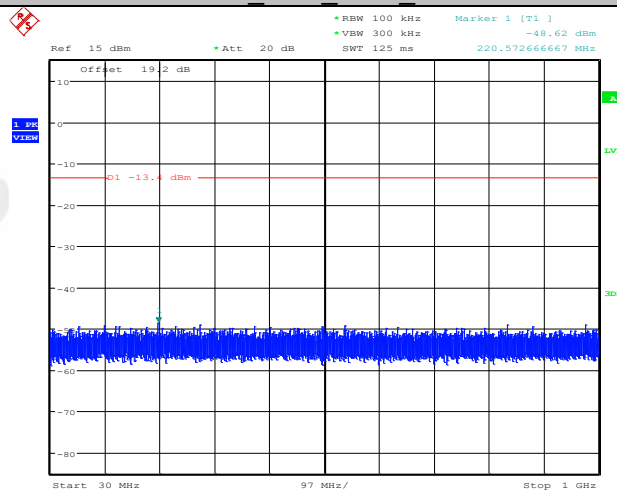
Date: 24.MAR.2022 15:30:29

11G_Ant2 2437 0-Reference



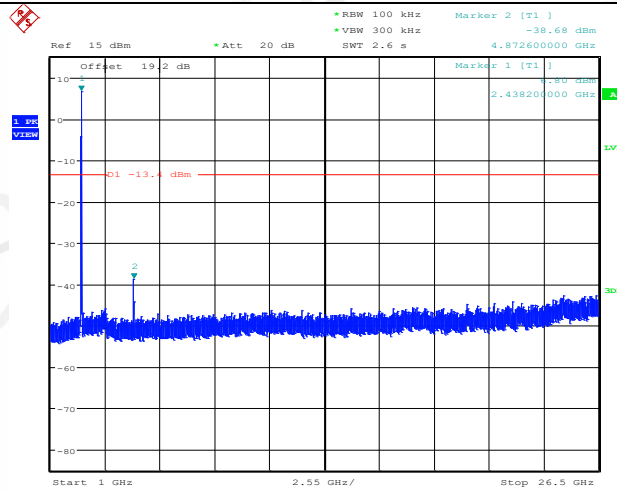
Date: 24.MAR.2022 16:30:20

11G_Ant2 2437 30-1000



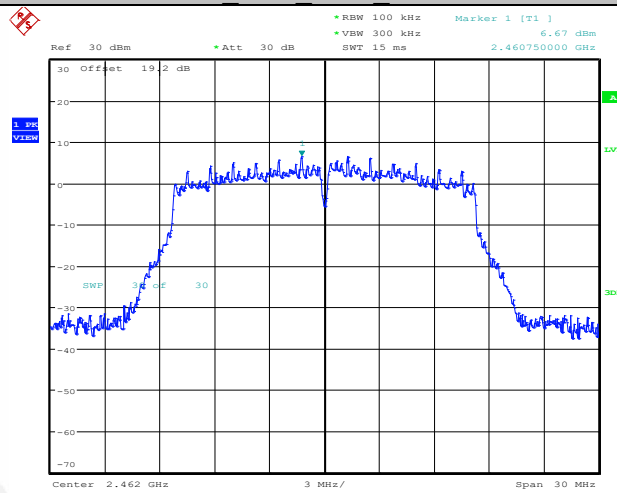
Date: 24.MAR.2022 16:30:33

11G_Ant2 2437 1000-26500



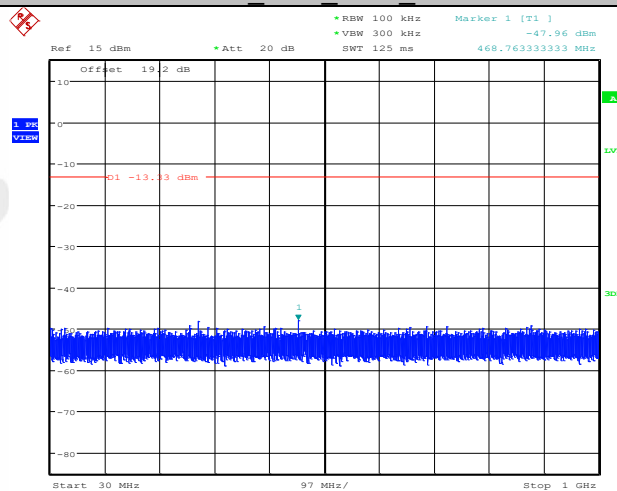
Date: 24.MAR.2022 16:31:11

11G_Ant1_2462_0-Reference



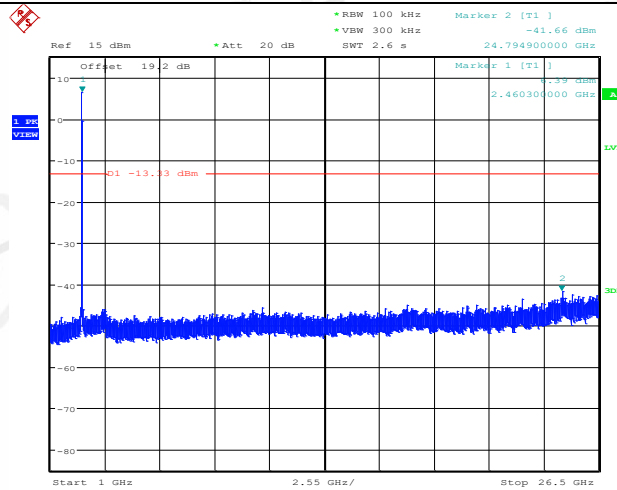
Date: 24.MAR.2022 15:32:47

11G_Ant1_2462_30~1000



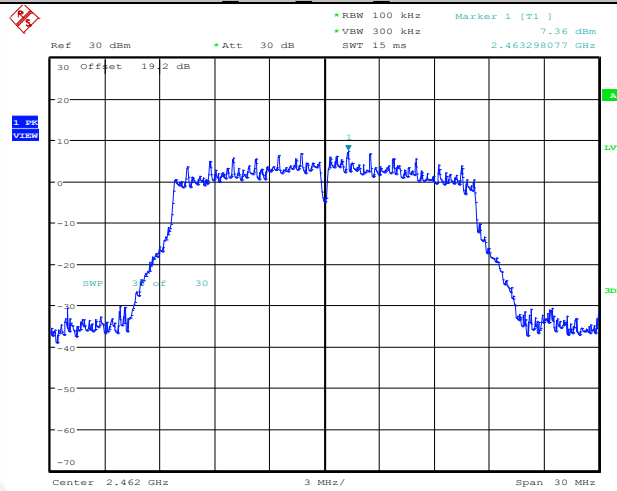
Date: 24.MAR.2022 15:32:59

11G_Ant1_2462_1000~26500



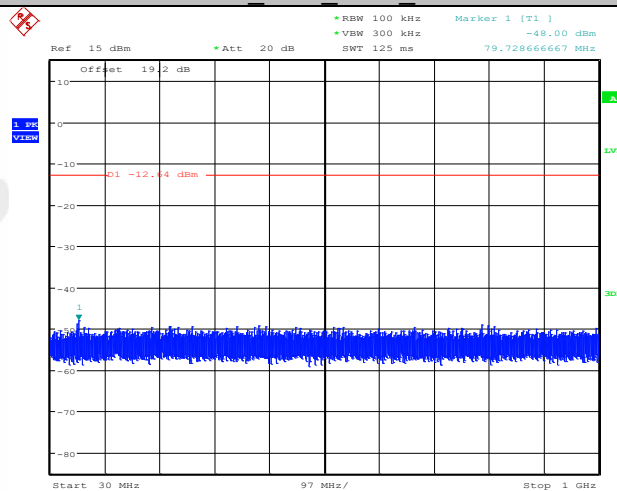
Date: 24.MAR.2022 15:33:38

11G_Ant2_2462_0~Reference



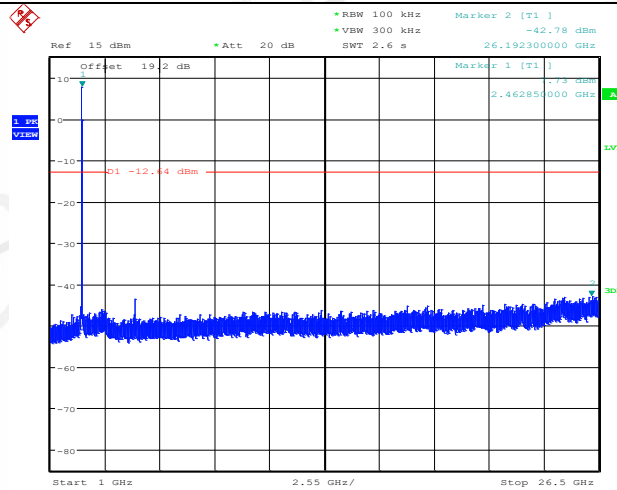
Date: 24.MAR.2022 16:33:38

11G_Ant2_2462_30~1000



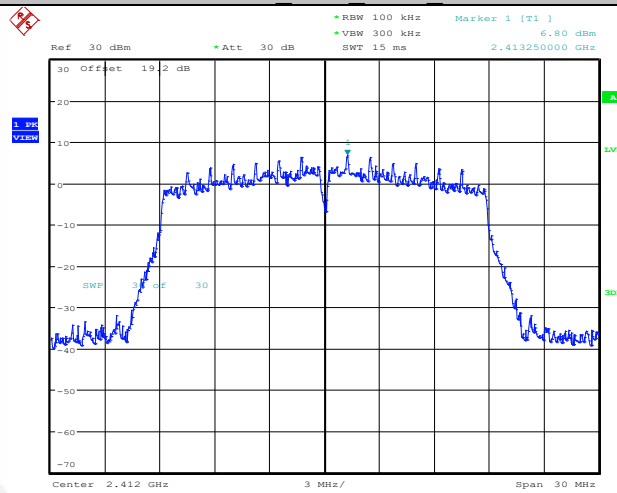
Date: 24.MAR.2022 16:33:51

11G_Ant2_2462_1000~26500



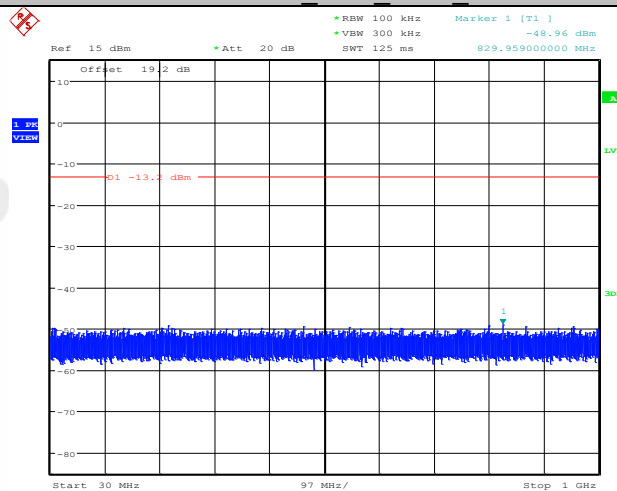
Date: 24.MAR.2022 16:34:30

11N20MIMO_Ant1_2412_0~Reference



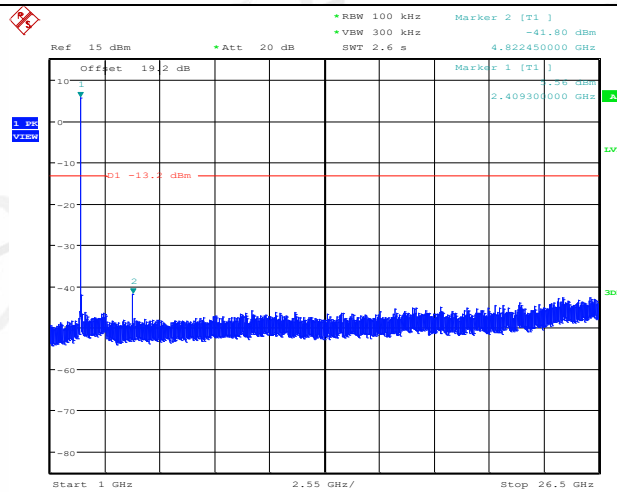
Date: 24.MAR.2022 16:37:47

11N20MIMO_Ant1_2412_30~1000



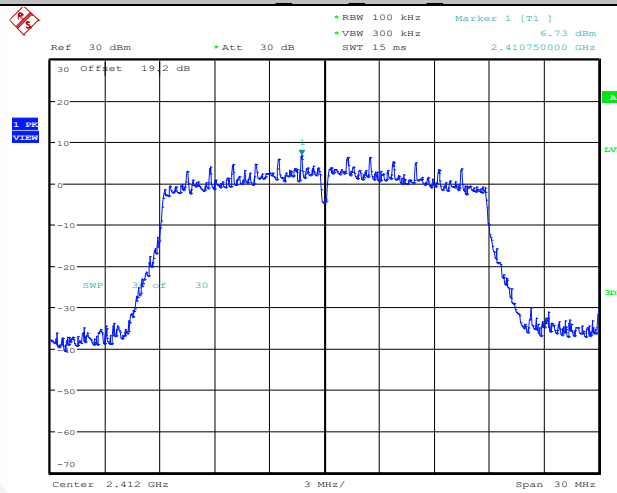
Date: 24.MAR.2022 16:38:00

11N20MIMO_Ant1_2412_1000~26500



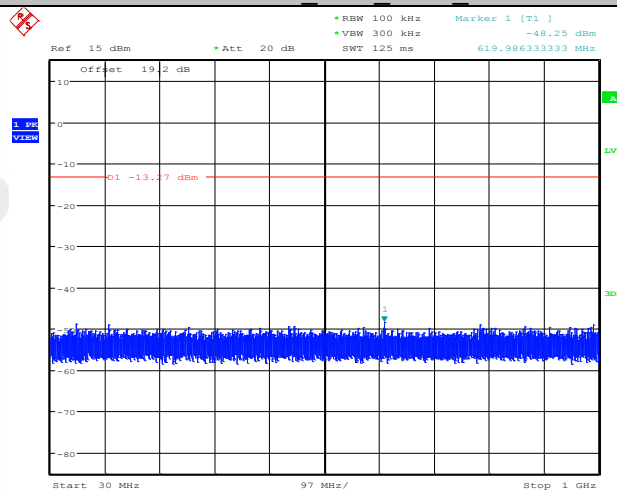
Date: 24.MAR.2022 16:38:39

11N20MIMO_Ant2_2412_0~Reference



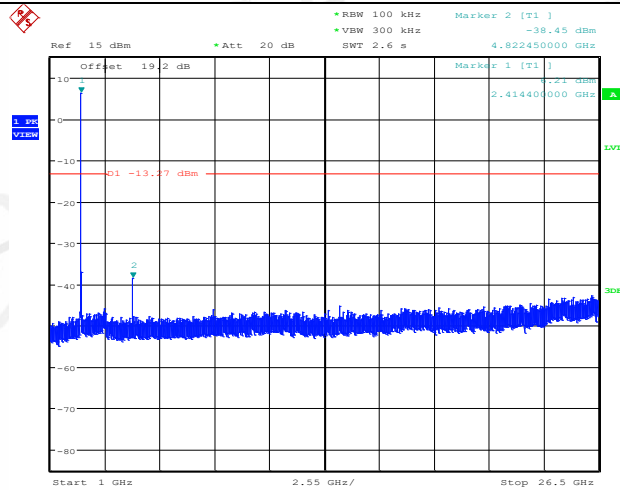
Date: 24.MAR.2022 16:41:23

11N20MIMO_Ant2_2412_30~1000



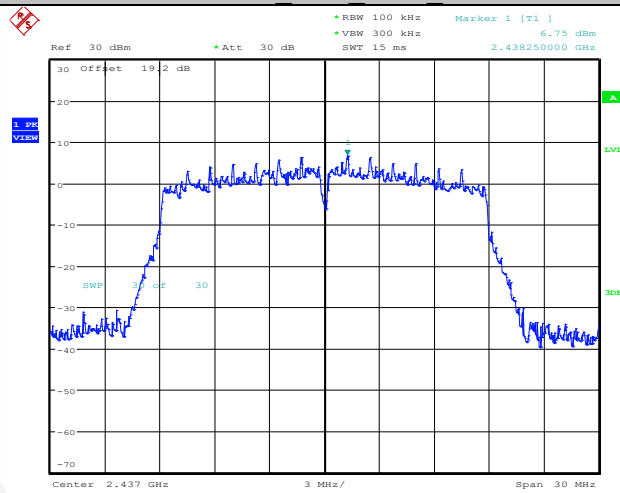
Date: 24.MAR.2022 16:41:36

11N20MIMO_Ant2_2412_1000~26500



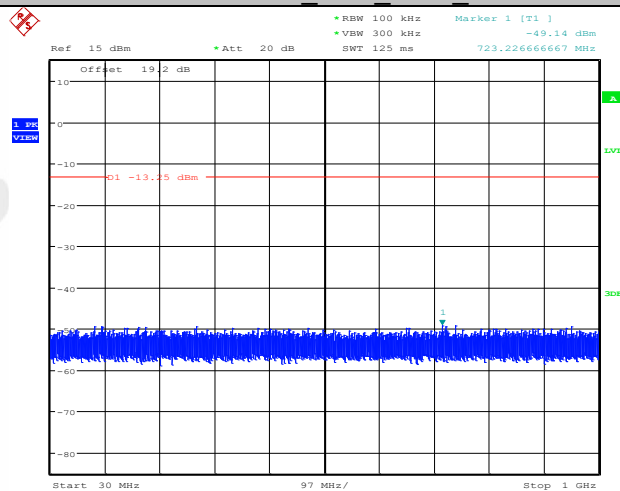
Date: 24.MAR.2022 16:42:15

11N20MIMO_Ant1_2437_0~Reference



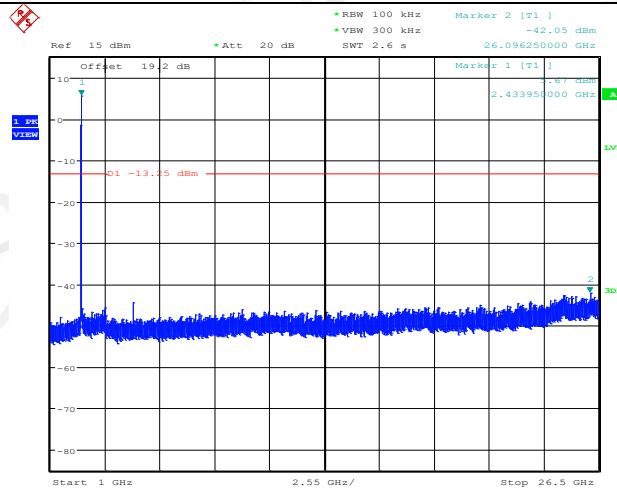
Date: 24.MAR.2022 16:44:18

11N20MIMO_Ant1_2437_30~1000



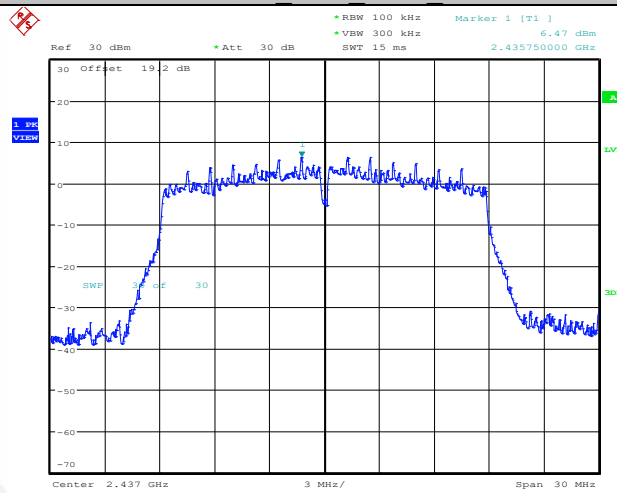
Date: 24.MAR.2022 16:44:31

11N20MIMO_Ant1_2437_1000~26500



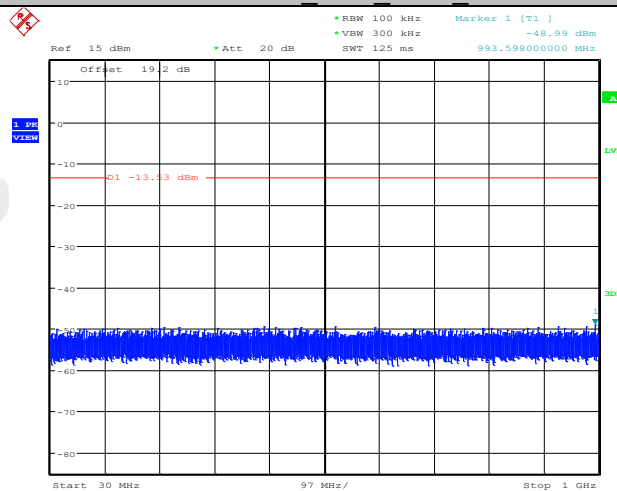
Date: 24.MAR.2022 16:45:10

11N20MIMO_Ant2_2437_0~Reference



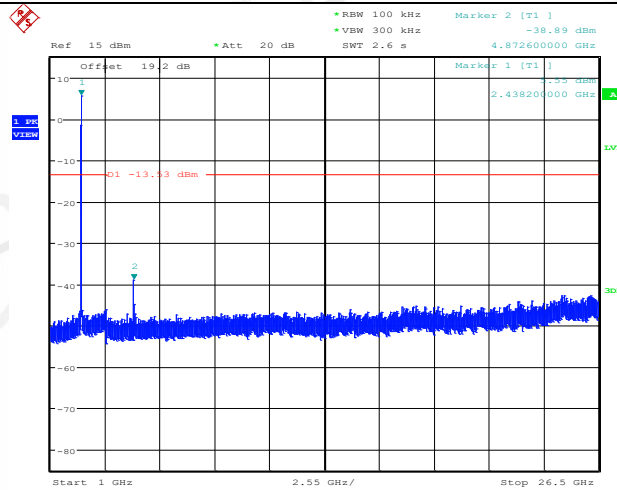
Date: 24.MAR.2022 16:47:03

11N20MIMO_Ant2_2437_30~1000



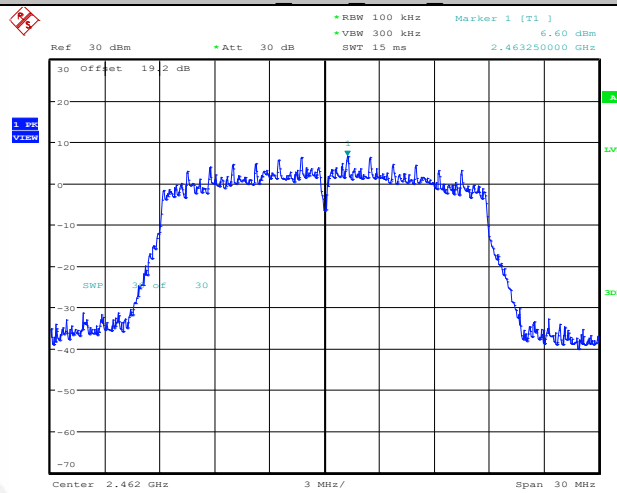
Date: 24.MAR.2022 16:47:15

11N20MIMO_Ant2_2437_1000~26500



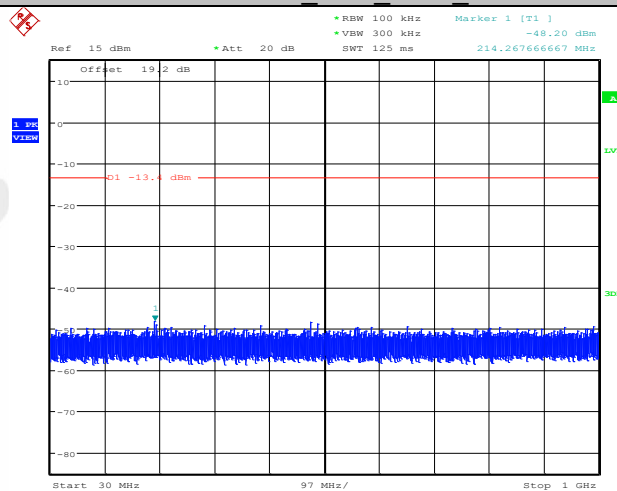
Date: 24.MAR.2022 16:47:54

11N20MIMO_Ant1_2462_0~Reference



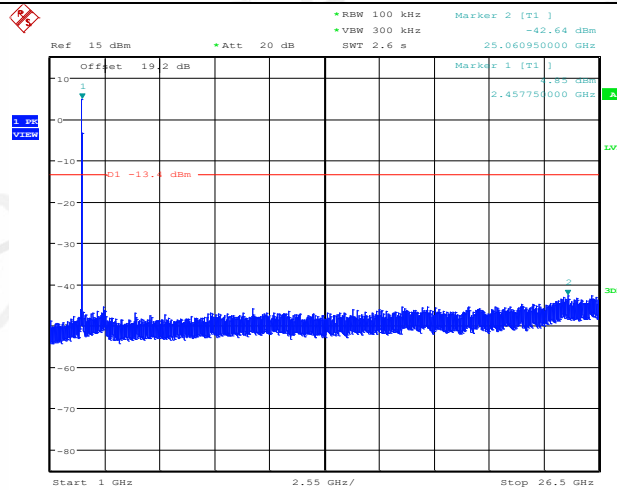
Date: 24.MAR.2022 16:50:14

11N20MIMO_Ant1_2462_30~1000



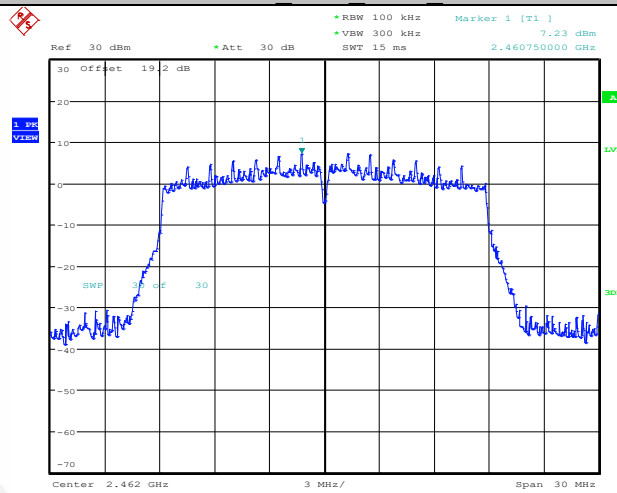
Date: 24.MAR.2022 16:50:26

11N20MIMO_Ant1_2462_1000~26500



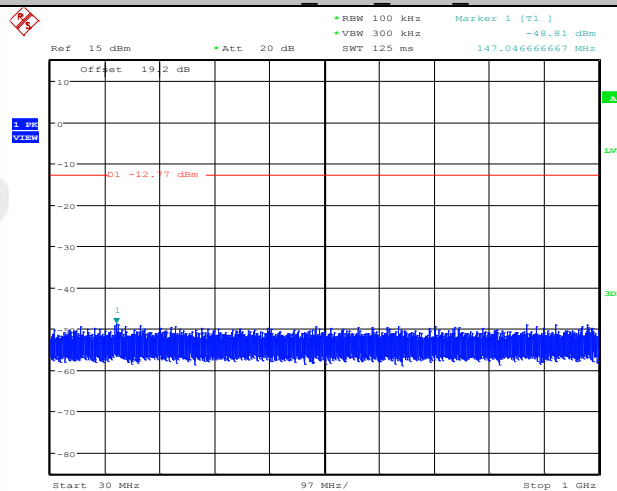
Date: 24.MAR.2022 16:51:05

11N20MIMO_Ant2_2462_0~Reference



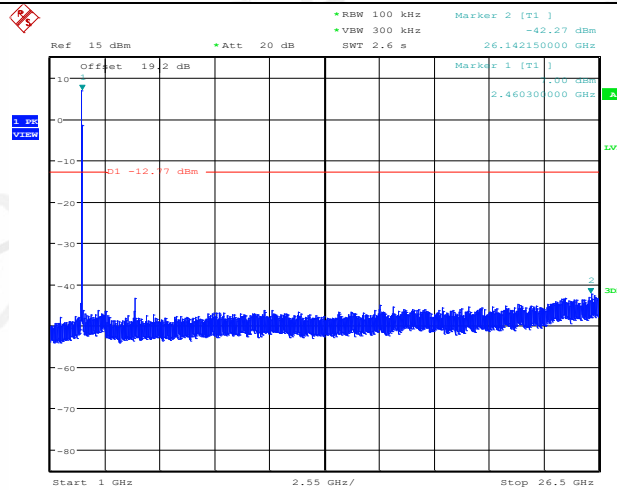
Date: 24.MAR.2022 16:53:12

11N20MIMO_Ant2_2462_30~1000



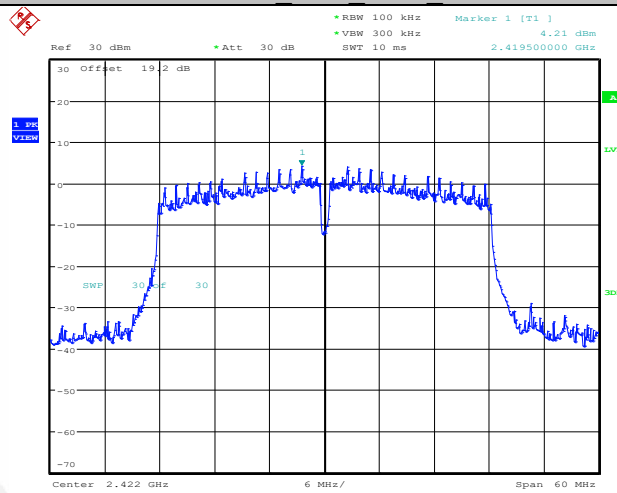
Date: 24.MAR.2022 16:53:24

11N20MIMO_Ant2_2462_1000~26500



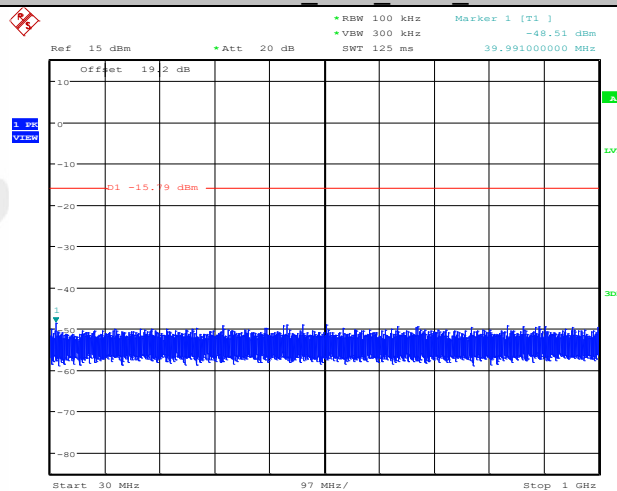
Date: 24.MAR.2022 16:54:03

11N40MIMO_Ant1_2422_0~Reference



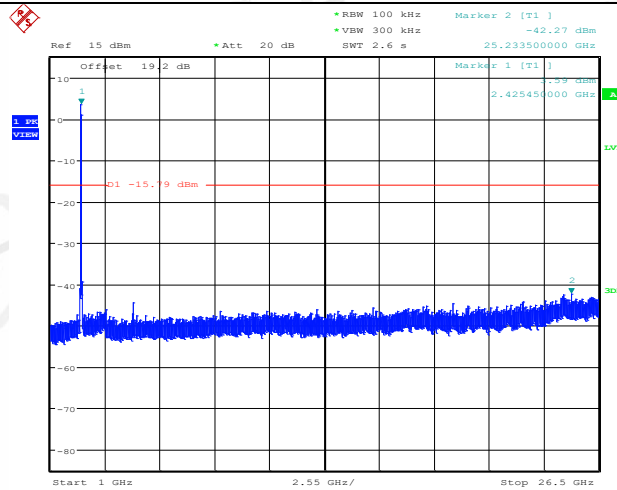
Date: 24.MAR.2022 16:56:44

11N40MIMO_Ant1_2422_30~1000



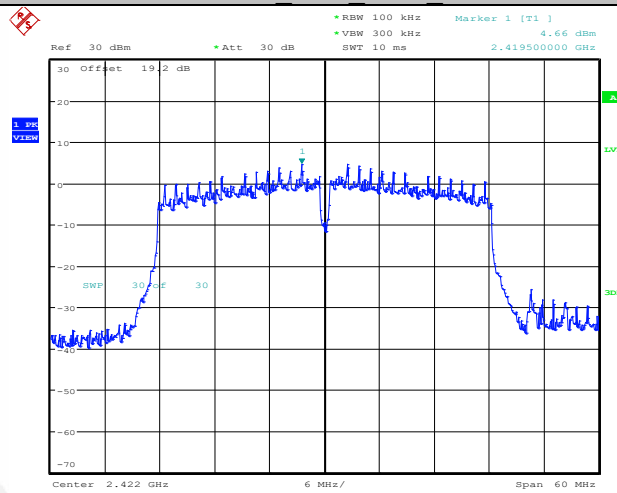
Date: 24.MAR.2022 16:56:57

11N40MIMO_Ant1_2422_1000~26500



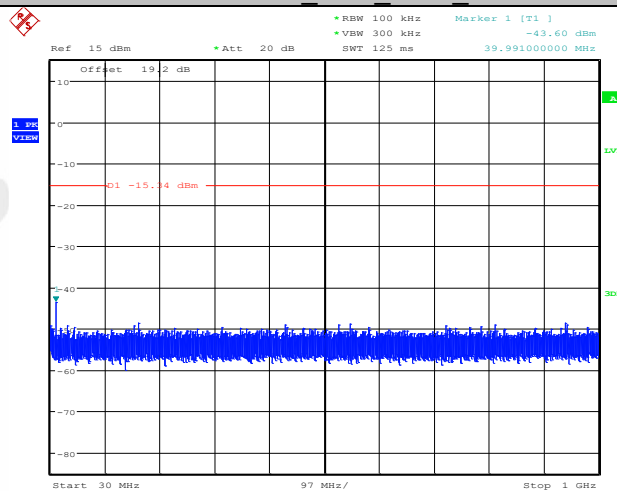
Date: 24.MAR.2022 16:57:36

11N40MIMO_Ant2_2422_0~Reference



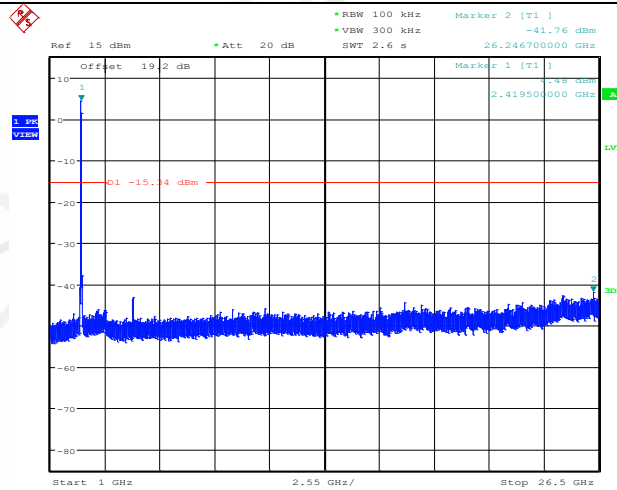
Date: 24.MAR.2022 16:59:56

11N40MIMO_Ant2_2422_30~1000



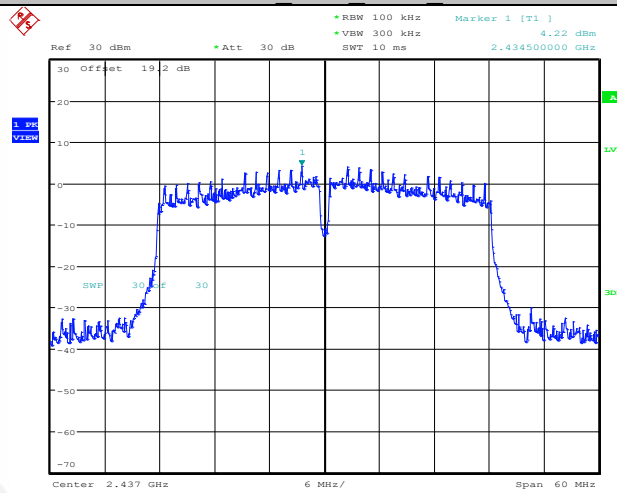
Date: 24.MAR.2022 17:00:09

11N40MIMO_Ant2_2422_1000~26500



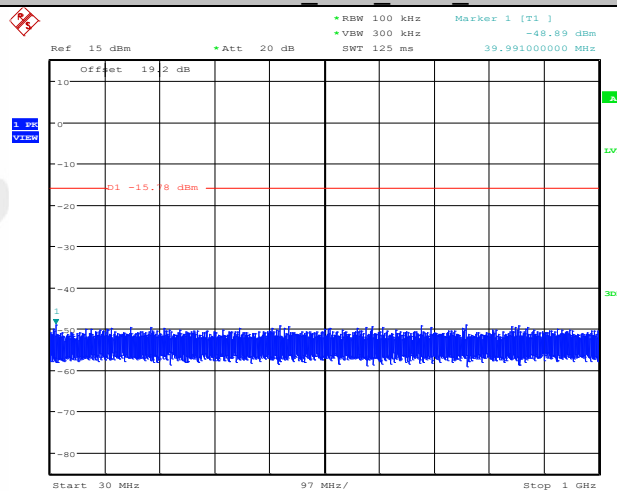
Date: 24.MAR.2022 17:00:48

11N40MIMO_Ant1_2437_0~Reference



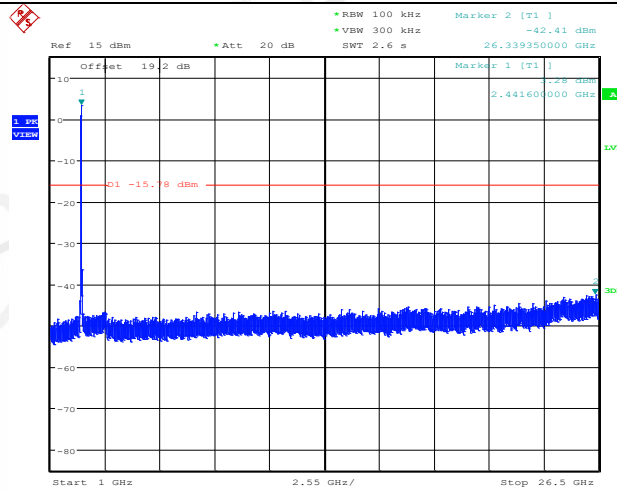
Date: 24.MAR.2022 17:03:22

11N40MIMO_Ant1_2437_30~1000



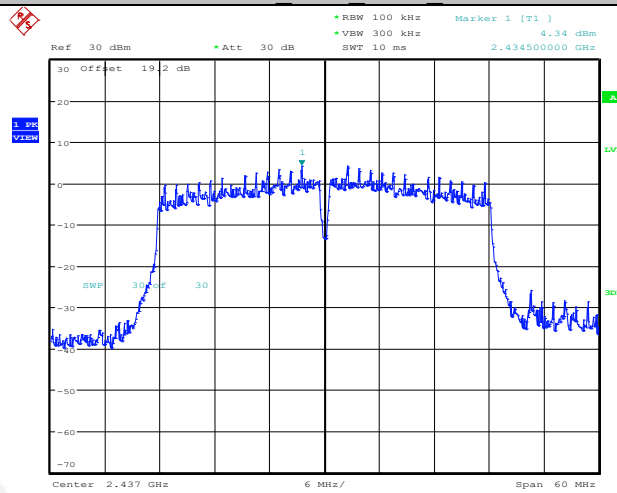
Date: 24.MAR.2022 17:03:34

11N40MIMO_Ant1_2437_1000~26500



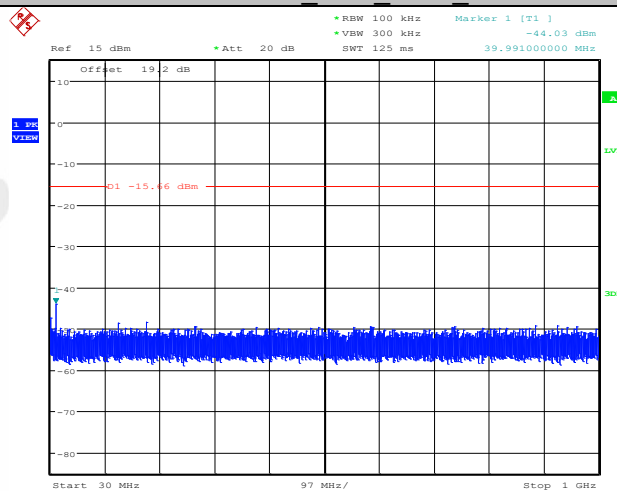
Date: 24.MAR.2022 17:04:13

11N40MIMO_Ant2_2437_0~Reference



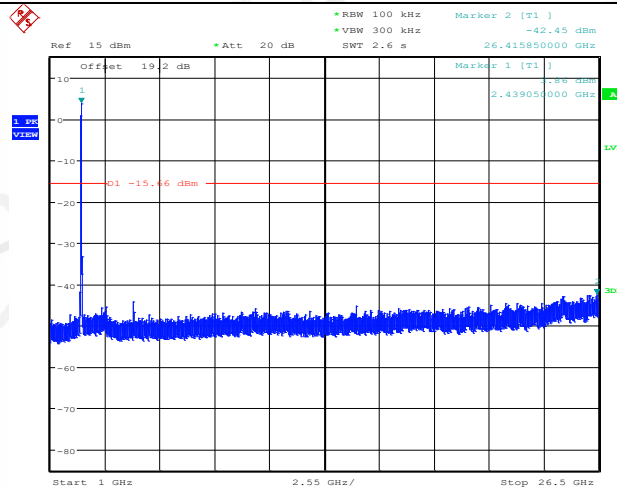
Date: 24.MAR.2022 17:06:21

11N40MIMO_Ant2_2437_30~1000



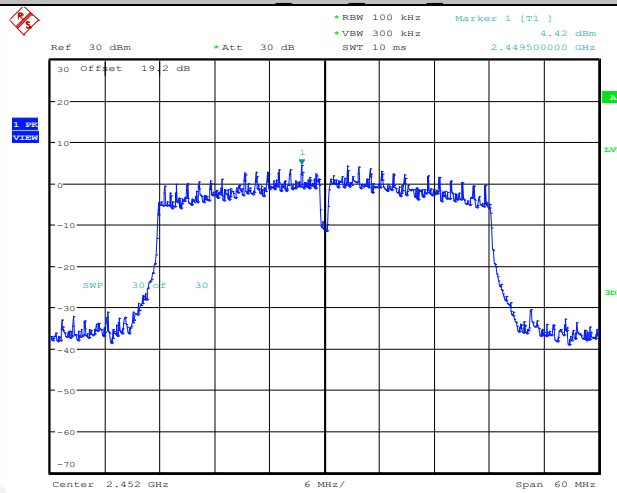
Date: 24.MAR.2022 17:06:34

11N40MIMO_Ant2_2437_1000~26500



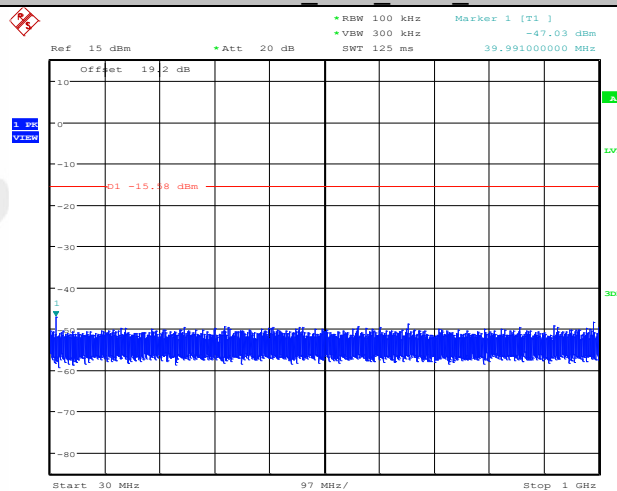
Date: 24.MAR.2022 17:07:12

11N40MIMO_Ant1_2452_0~Reference



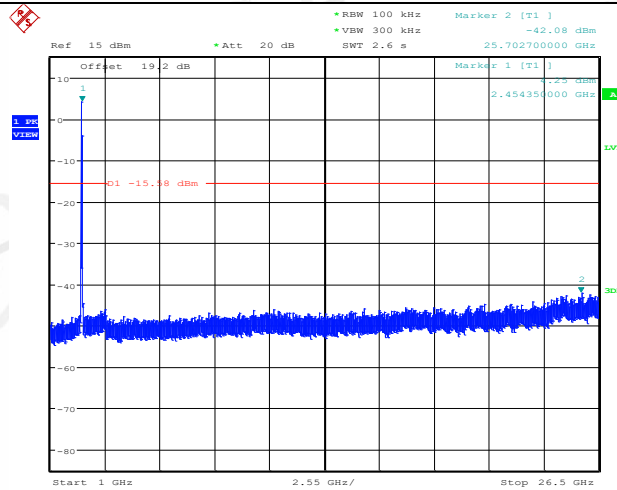
Date: 24.MAR.2022 17:09:53

11N40MIMO_Ant1_2452_30~1000



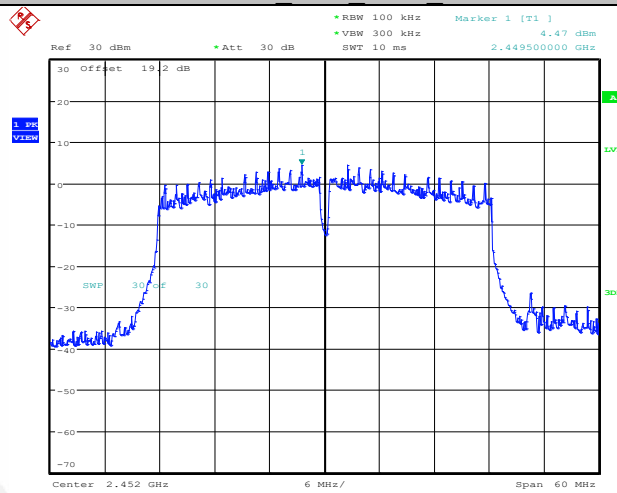
Date: 24.MAR.2022 17:10:06

11N40MIMO_Ant1_2452_1000~26500



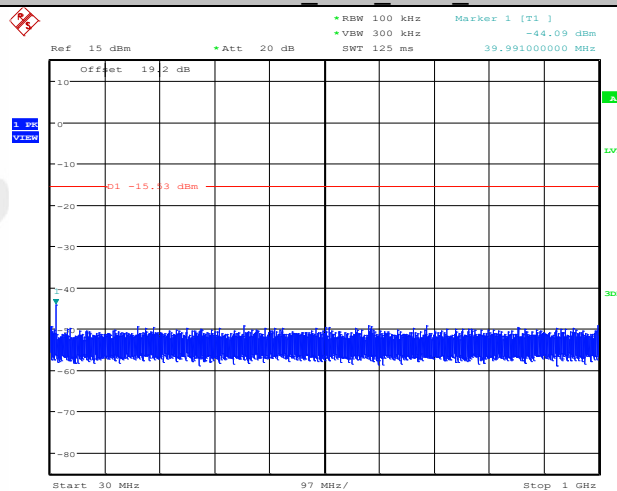
Date: 24.MAR.2022 17:10:45

11N40MIMO_Ant2_2452_0~Reference



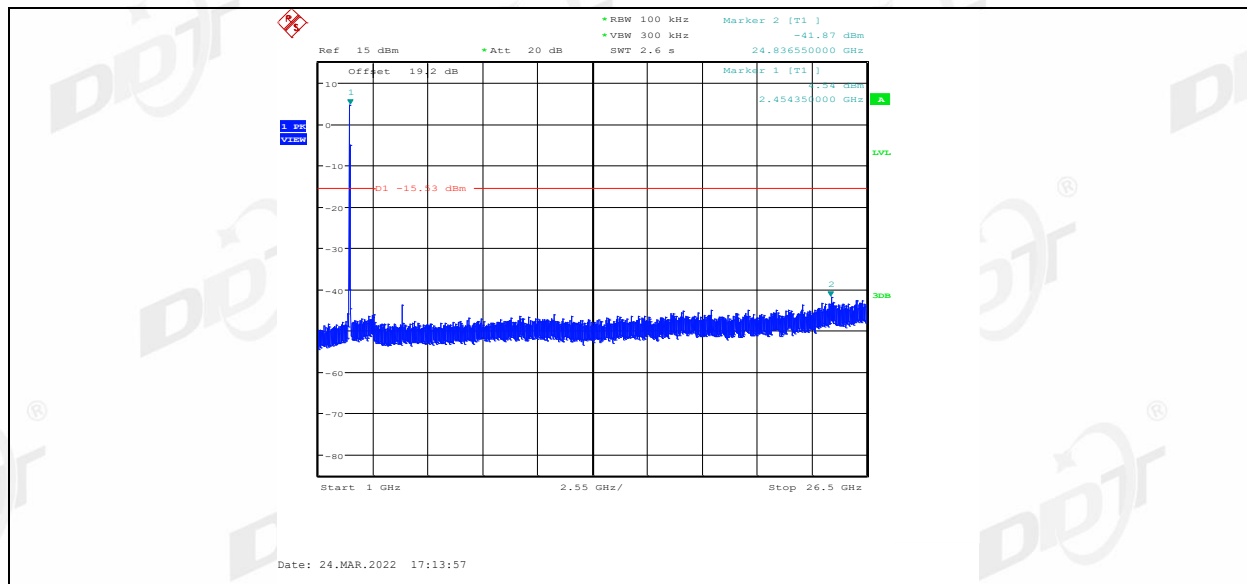
Date: 24.MAR.2022 17:13:06

11N40MIMO_Ant2_2452_30~1000



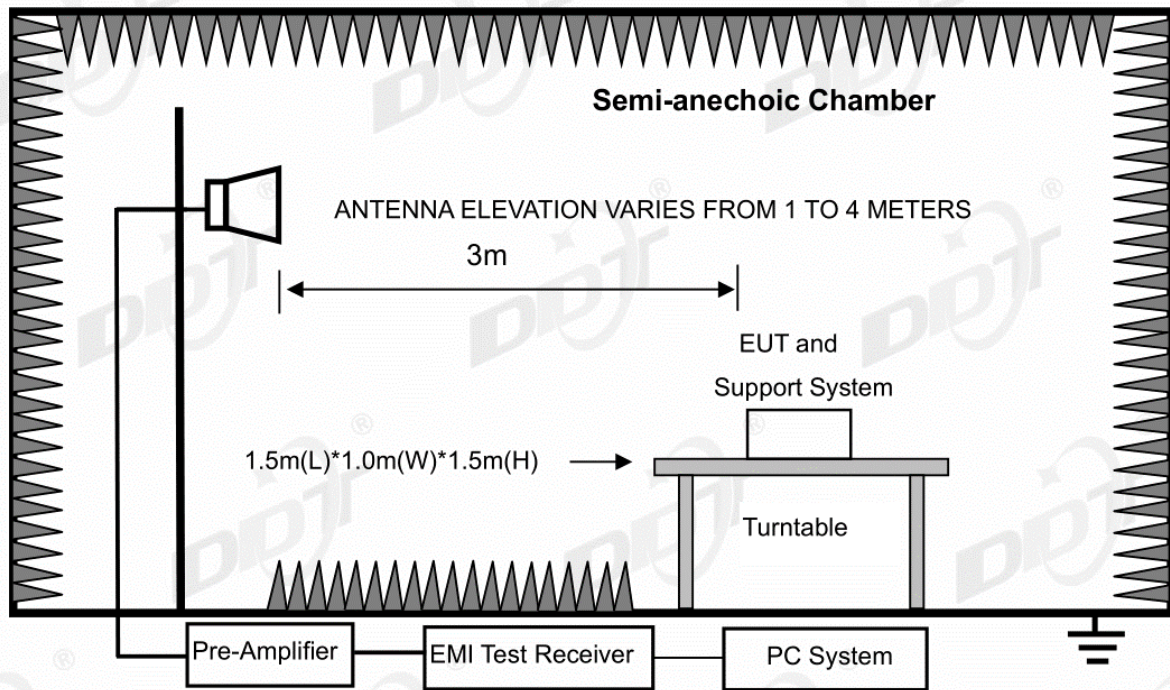
Date: 24.MAR.2022 17:13:18

11N40MIMO_Ant2_2452_1000~26500



10. Radiated Band Edge Compliance

10.1. Block diagram of test setup



10.2. Limit

All restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400 MHz to 2483.5 MHz shall be at least 20dB below the fundamental emissions or comply with RSS-Gen Issue 3 clause 7.2.5 (Same as FCC 15.209) limits.

10.3. Test Procedure

Same with clause 8.3 except change investigated frequency range from 2310 MHz to 2430 MHz and 2445 MHz to 2500 MHz.

Remark: All restriction band have been tested, and only the worst case is shown in report.

10.4. Test result

Pass. (See below detailed test result)

Note: All mode was tested and only the worst case was recorded this report.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE
1G AP.EM6

Test Date : 2022-04-07

Tested By : Kennys Zhang

EUT : Clevershare Hub

Model Number : Clevershare Hub

Power Supply : AC 120V/60Hz

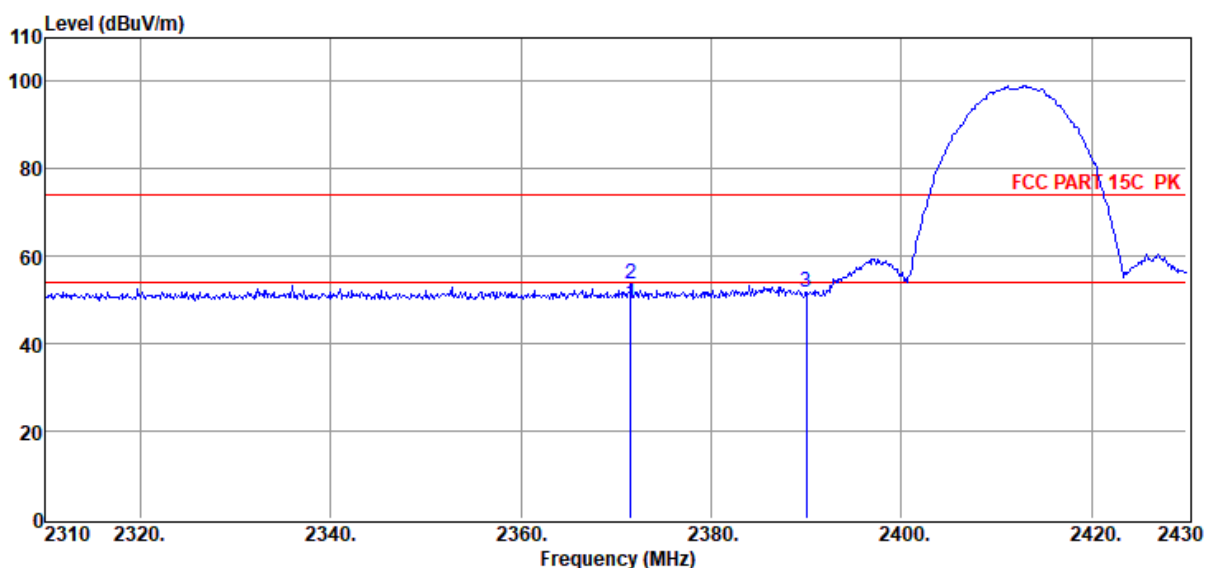
Test Mode : Tx Mode

Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa

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

Memo : 11B 2412 ANT1

Data: 1



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	2371.56	19.22	27.37	0.00	1.70	0.72	49.01	54.00	-4.99	Average	HORIZONTAL
2	2371.56	23.83	27.37	0.00	1.70	0.72	53.62	74.00	-20.38	Peak	HORIZONTAL
3	2390.04	21.82	27.40	0.00	1.71	0.72	51.65	74.00	-22.35	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.

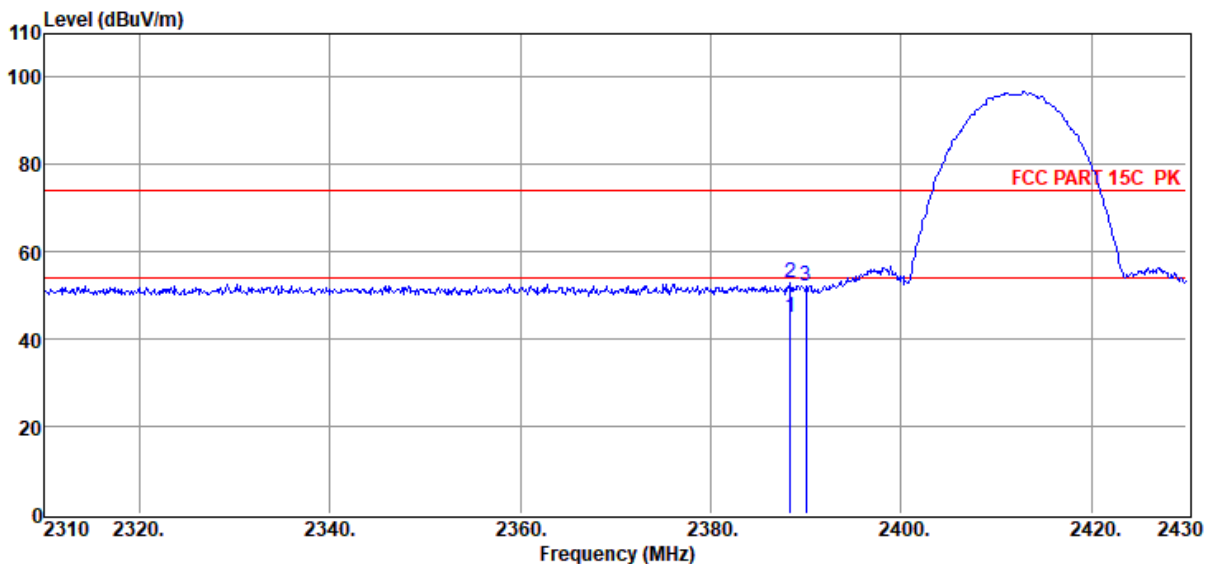
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-04-07
EUT : Clevershare Hub
Power Supply : AC 120V/60Hz
Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa
Memo : 11B 2412 ANT1

Tested By : Kennys Zhang
Model Number : Clevershare Hub
Test Mode : Tx Mode
Antenna/Distance : 2021 BBHA 9120D 3#/3m/VERTICAL

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE 1G AP.EM6

Data: 2



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	2388.36	15.25	27.40	0.00	1.71	0.72	45.08	54.00	-8.92	Average	VERTICAL
2	2388.36	22.98	27.40	0.00	1.71	0.72	52.81	74.00	-21.19	Peak	VERTICAL
3	2390.04	22.17	27.40	0.00	1.71	0.72	52.00	74.00	-22.00	Peak	VERTICAL

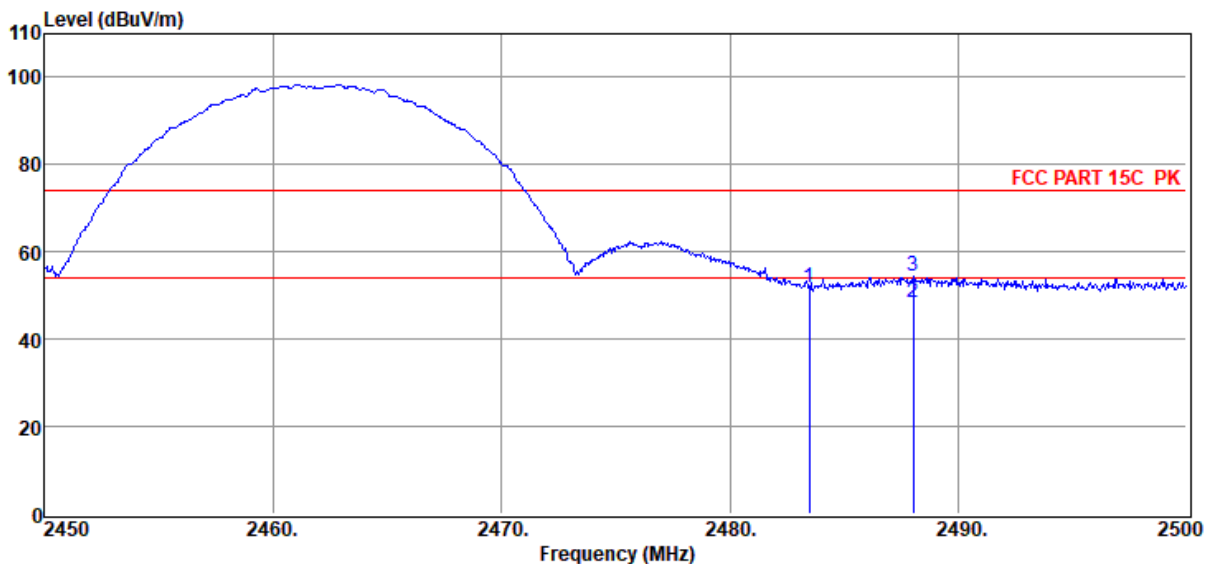
- Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-04-07
EUT : Clevershare Hub
Power Supply : AC 120V/60Hz
Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa
Memo : 11B 2462 ANT1

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE 1G AP.EM6
Tested By : Kennys Zhang
Model Number : Clevershare Hub
Test Mode : Tx Mode
Antenna/Distance : 2021 BBHA 9120D
 3#/3m/HORIZONTAL

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	2483.50	21.87	27.57	0.00	1.74	0.73	51.91	74.00	-22.09	Peak	HORIZONTAL
2	2488.05	18.26	27.58	0.00	1.74	0.73	48.31	54.00	-5.69	Average	HORIZONTAL
3	2488.05	24.50	27.58	0.00	1.74	0.73	54.55	74.00	-19.45	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.

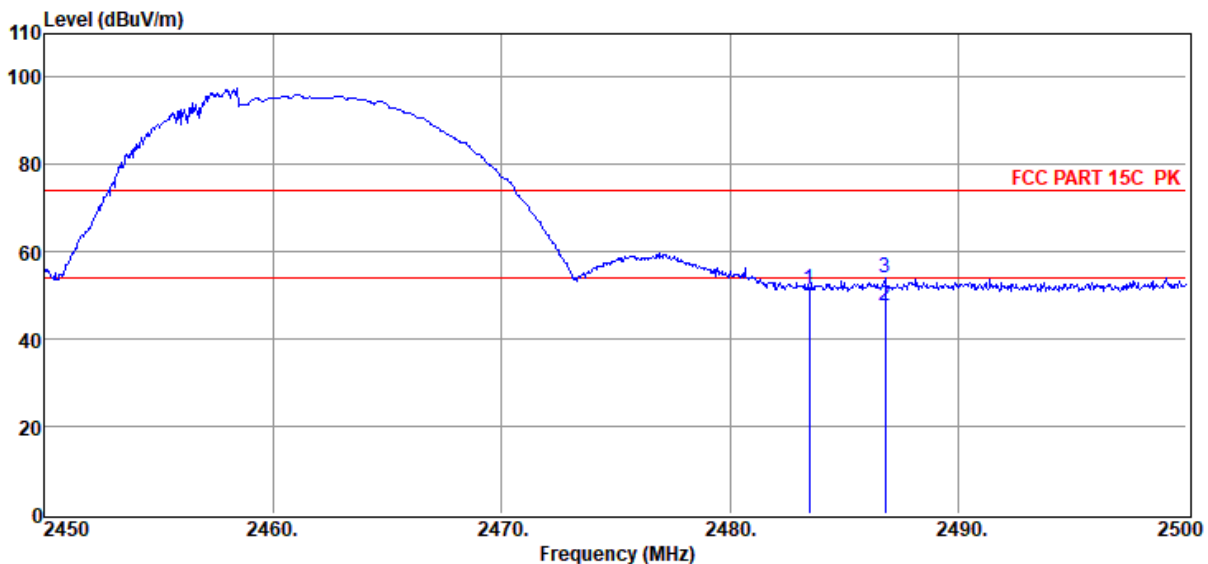
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-04-07
EUT : Clevershare Hub
Power Supply : AC 120V/60Hz
Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa
Memo : 11B 2462 ANT1

Tested By : Kennys Zhang
Model Number : Clevershare Hub
Test Mode : Tx Mode
Antenna/Distance : 2021 BBHA 9120D 3#/3m/VERTICAL

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE 1G AP.EM6

Data: 6



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	2483.50	21.46	27.57	0.00	1.74	0.73	51.50	74.00	-22.50	Peak	VERTICAL
2	2486.80	17.47	27.58	0.00	1.74	0.73	47.52	54.00	-6.48	Average	VERTICAL
3	2486.80	24.05	27.58	0.00	1.74	0.73	54.10	74.00	-19.90	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.

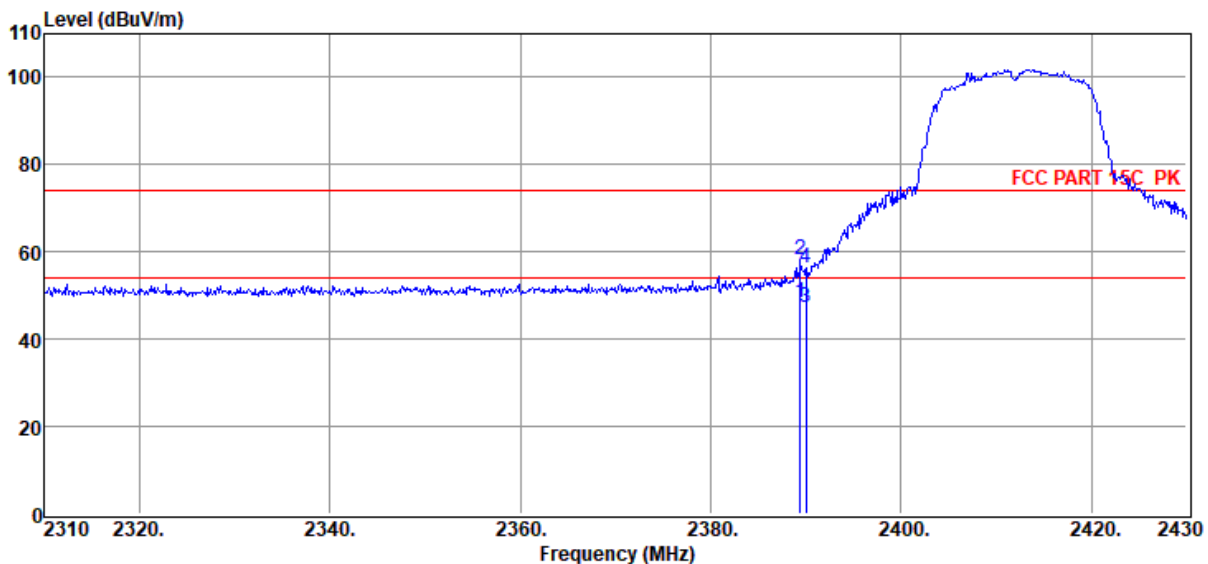
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-04-07
EUT : Clevershare Hub
Power Supply : AC 120V/60Hz
Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa
Memo : 11G 2412 ANT1

Tested By : Kennys Zhang
Model Number : Clevershare Hub
Test Mode : Tx Mode
Antenna/Distance : 2021 BBHA 9120D
 3#/3m/HORIZONTAL

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE
 1G AP.EM6

Data: 9



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	2389.44	18.46	27.40	0.00	1.71	0.72	48.29	54.00	-5.71	Average	HORIZONTAL
2	2389.44	28.30	27.40	0.00	1.71	0.72	58.13	74.00	-15.87	Peak	HORIZONTAL
3	2390.04	17.24	27.40	0.00	1.71	0.72	47.07	54.00	-6.93	Average	HORIZONTAL
4	2390.04	26.49	27.40	0.00	1.71	0.72	56.32	74.00	-17.68	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\Q21121709-2E\FCC ABOVE
1G AP.EM6

Test Date : 2022-04-07

Tested By : Kennys Zhang

EUT : Clevershare Hub

Model Number : Clevershare Hub

Power Supply : AC 120V/60Hz

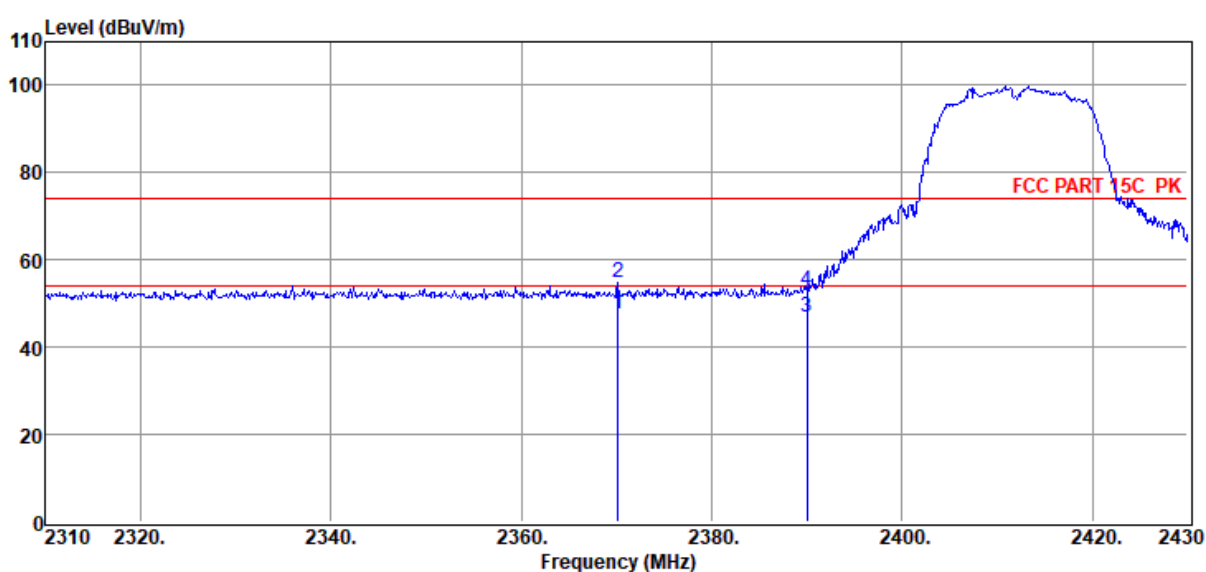
Test Mode : Tx Mode

Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa

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

Memo : 11G 2412 ANT1

Data: 10



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	2370.12	17.68	27.37	0.00	1.70	0.72	47.47	54.00	-6.53	Average	VERTICAL
2	2370.12	24.93	27.37	0.00	1.70	0.72	54.72	74.00	-19.28	Peak	VERTICAL
3	2390.04	17.18	27.40	0.00	1.71	0.72	47.01	54.00	-6.99	Average	VERTICAL
4	2390.04	23.22	27.40	0.00	1.71	0.72	53.05	74.00	-20.95	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#

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE
1G AP.EM6

Test Date : 2022-04-07

Tested By : Kennys Zhang

EUT : Clevershare Hub

Model Number : Clevershare Hub

Power Supply : AC 120V/60Hz

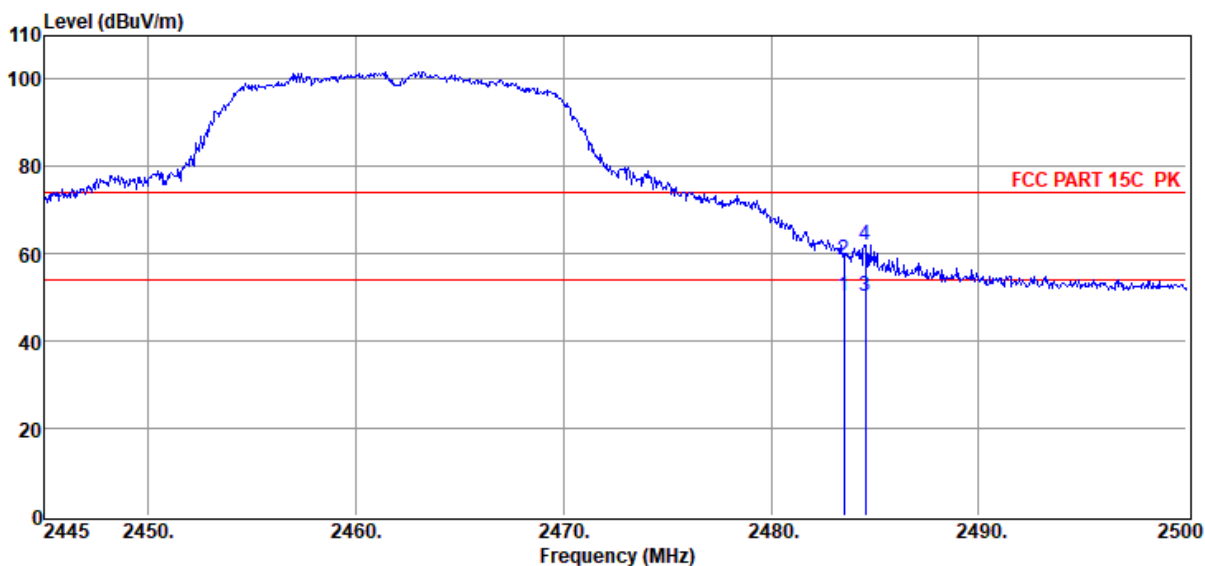
Test Mode : Tx Mode

Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa

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

Memo : 11G 2462 ANT1

Data: 13



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	2483.50	20.29	27.57	0.00	1.74	0.73	50.33	54.00	-3.67	Average	HORIZONTAL
2	2483.50	28.43	27.57	0.00	1.74	0.73	58.47	74.00	-15.53	Peak	HORIZONTAL
3	2484.55	20.13	27.57	0.00	1.74	0.73	50.17	54.00	-3.83	Average	HORIZONTAL
4	2484.55	31.94	27.57	0.00	1.74	0.73	61.98	74.00	-12.02	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\Q21121709-2E\FCC ABOVE
1G AP.EM6

Test Date : 2022-04-07

Tested By : Kennys Zhang

EUT : Clevershare Hub

Model Number : Clevershare Hub

Power Supply : AC 120V/60Hz

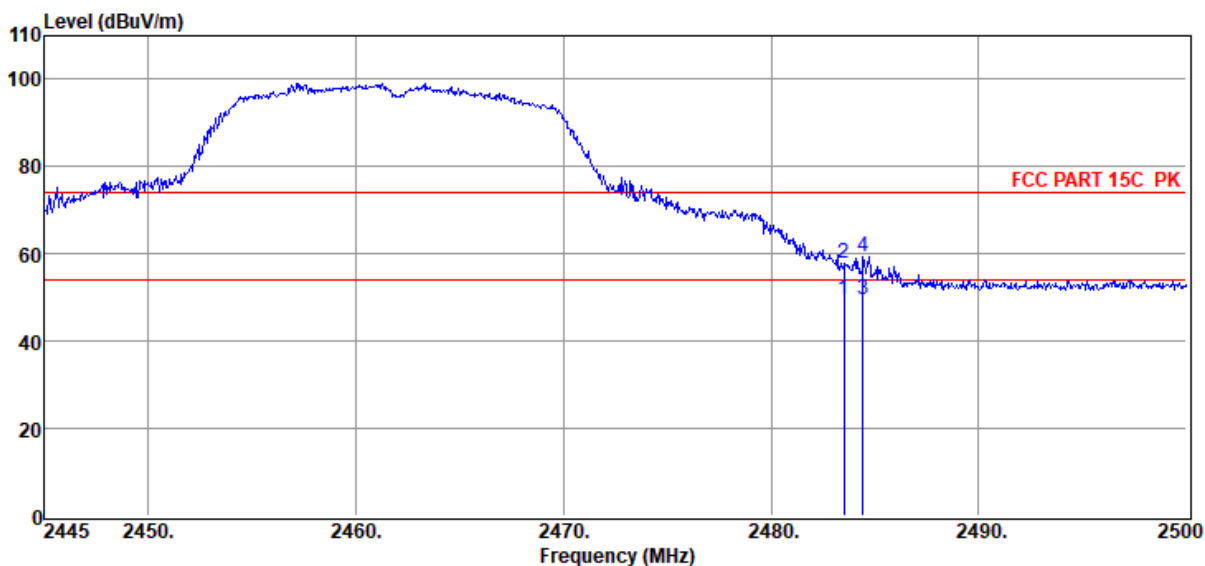
Test Mode : Tx Mode

Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa

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

Memo : 11G 2462 ANT1

Data: 14



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	2483.50	19.51	27.57	0.00	1.74	0.73	49.55	54.00	-4.45	Average	VERTICAL
2	2483.50	27.74	27.57	0.00	1.74	0.73	57.78	74.00	-16.22	Peak	VERTICAL
3	2484.44	19.37	27.57	0.00	1.74	0.73	49.41	54.00	-4.59	Average	VERTICAL
4	2484.44	29.34	27.57	0.00	1.74	0.73	59.38	74.00	-14.62	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.

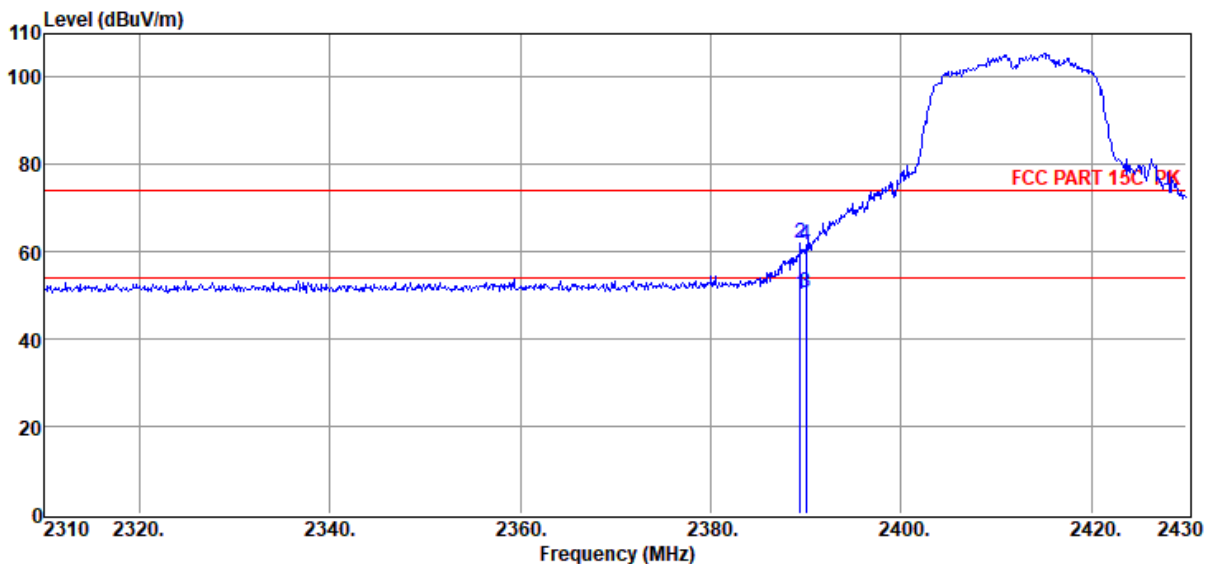
TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-04-07
EUT : Clevershare Hub
Power Supply : AC 120V/60Hz
Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa
Memo : 11N20 2412 MIMO

Tested By : Kennys Zhang
Model Number : Clevershare Hub
Test Mode : Tx Mode
Antenna/Distance : 2021 BBHA 9120D
 3#/3m/HORIZONTAL

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE
 1G AP.EM6

Data: 17



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	2389.44	20.47	27.40	0.00	1.71	0.72	50.30	54.00	-3.70	Average	HORIZONTAL
2	2389.44	32.18	27.40	0.00	1.71	0.72	62.01	74.00	-11.99	Peak	HORIZONTAL
3	2390.04	20.66	27.40	0.00	1.71	0.72	50.49	54.00	-3.51	Average	HORIZONTAL
4	2390.04	31.82	27.40	0.00	1.71	0.72	61.65	74.00	-12.35	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\Q21121709-2E\FCC ABOVE
1G AP.EM6

Test Date : 2022-04-07

Tested By : Kennys Zhang

EUT : Clevershare Hub

Model Number : Clevershare Hub

Power Supply : AC 120V/60Hz

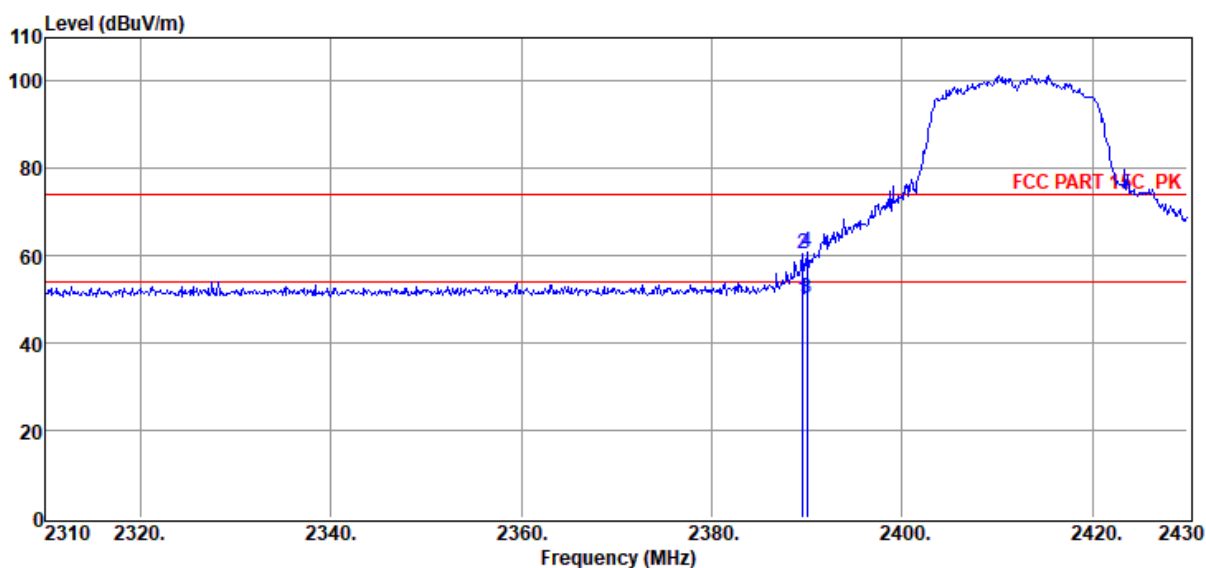
Test Mode : Tx Mode

Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa

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

Memo : 11N20 2412 MIMO

Data: 18



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	2389.56	20.18	27.40	0.00	1.71	0.72	50.01	54.00	-3.99	Average	VERTICAL
2	2389.56	30.48	27.40	0.00	1.71	0.72	60.31	74.00	-13.69	Peak	VERTICAL
3	2390.04	20.41	27.40	0.00	1.71	0.72	50.24	54.00	-3.76	Average	VERTICAL
4	2390.04	31.10	27.40	0.00	1.71	0.72	60.93	74.00	-13.07	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#

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE
1G AP.EM6

Test Date : 2022-04-07

Tested By : Kennys Zhang

EUT : Clevershare Hub

Model Number : Clevershare Hub

Power Supply : AC 120V/60Hz

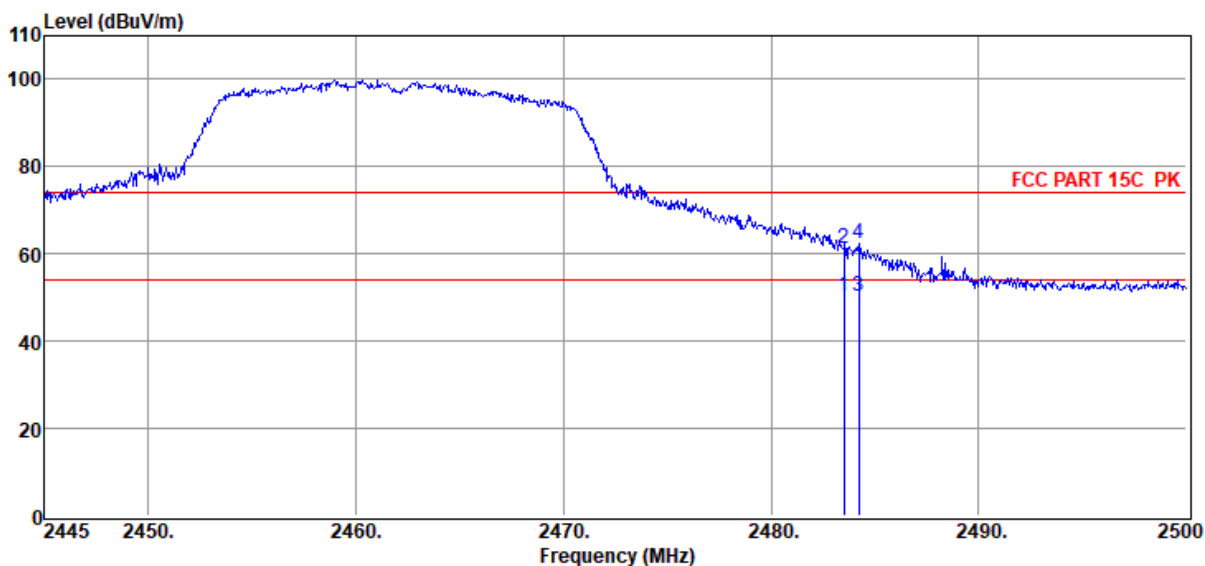
Test Mode : Tx Mode

Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa

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

Memo : 11N20 2472 MIMO

Data: 19



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	2483.50	20.27	27.57	0.00	1.74	0.73	50.31	54.00	-3.69	Average	VERTICAL
2	2483.50	31.23	27.57	0.00	1.74	0.73	61.27	74.00	-12.73	Peak	VERTICAL
3	2484.22	20.13	27.57	0.00	1.74	0.73	50.17	54.00	-3.83	Average	VERTICAL
4	2484.22	32.44	27.57	0.00	1.74	0.73	62.48	74.00	-11.52	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#

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE
1G AP.EM6

Test Date : 2022-04-07

Tested By : Kennys Zhang

EUT : Clevershare Hub

Model Number : Clevershare Hub

Power Supply : AC 120V/60Hz

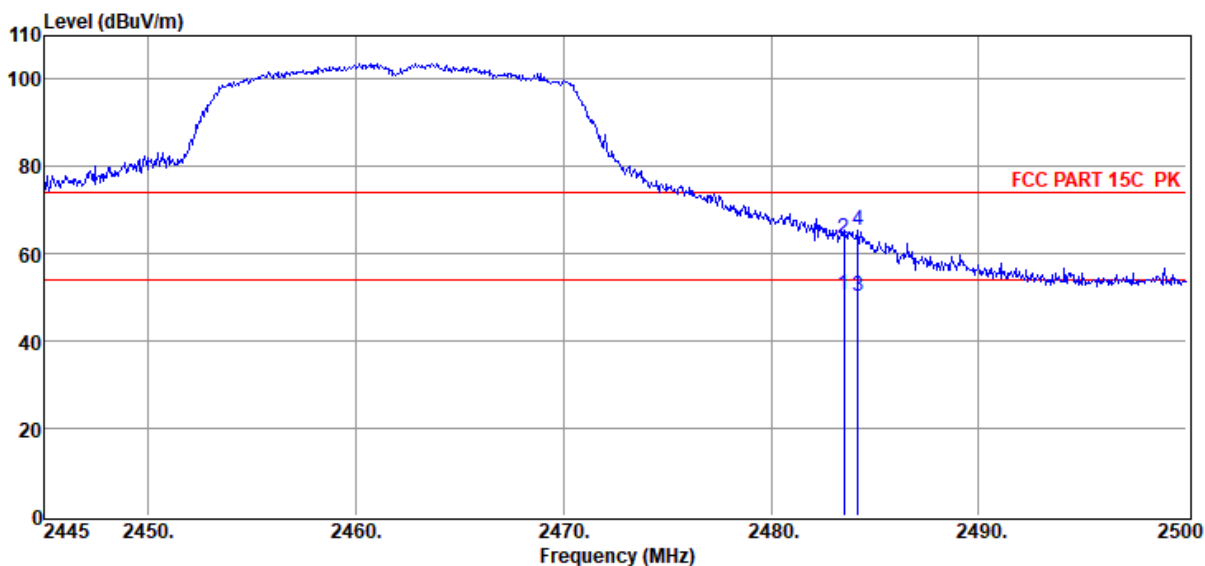
Test Mode : Tx Mode

Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa

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

Memo : 11N20 2462 MIMO

Data: 20



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	2483.50	20.55	27.57	0.00	1.74	0.73	50.59	54.00	-3.41	Average	HORIZONTAL
2	2483.50	33.38	27.57	0.00	1.74	0.73	63.42	74.00	-10.58	Peak	HORIZONTAL
3	2484.16	20.41	27.57	0.00	1.74	0.73	50.45	54.00	-3.55	Average	HORIZONTAL
4	2484.16	35.35	27.57	0.00	1.74	0.73	65.39	74.00	-8.61	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.

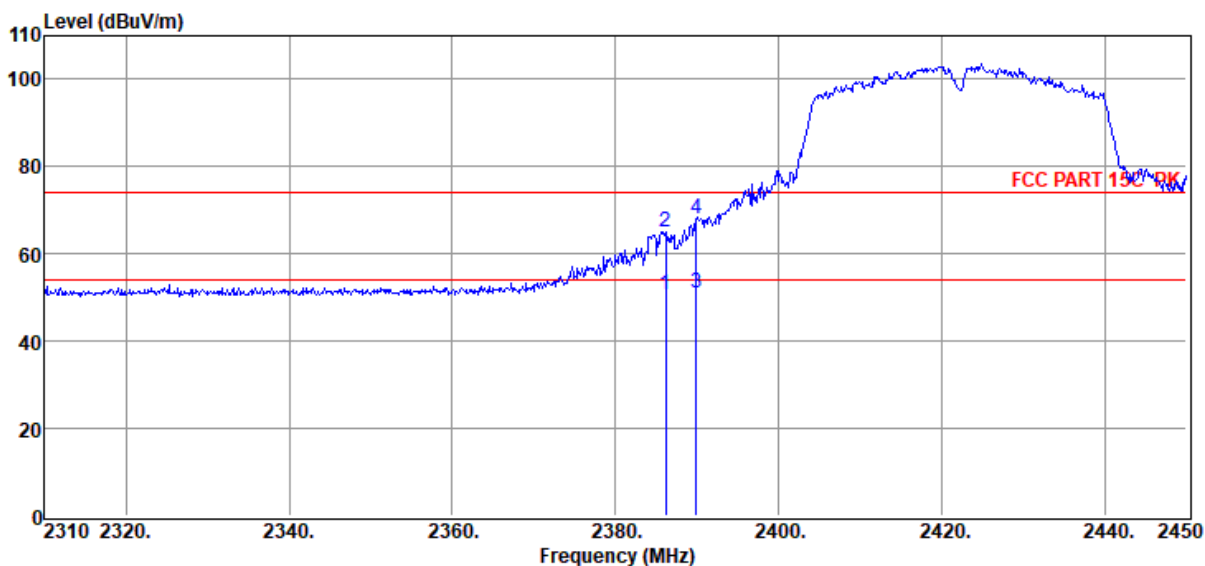
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-04-07
EUT : Clevershare Hub
Power Supply : AC 120V/60Hz
Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa
Memo : 11N40 2422 MIMO

Tested By : Kennys Zhang
Model Number : Clevershare Hub
Test Mode : Tx Mode
Antenna/Distance : 2021 BBHA 9120D
 3#/3m/HORIZONTAL

Data: 21



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	2386.16	20.98	27.40	0.00	1.71	0.72	50.81	54.00	-3.19	Average	HORIZONTAL
2	2386.16	35.25	27.40	0.00	1.71	0.72	65.08	74.00	-8.92	Peak	HORIZONTAL
3	2389.94	21.09	27.40	0.00	1.71	0.72	50.92	54.00	-3.08	Average	HORIZONTAL
4	2389.94	38.10	27.40	0.00	1.71	0.72	67.93	74.00	-6.07	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.

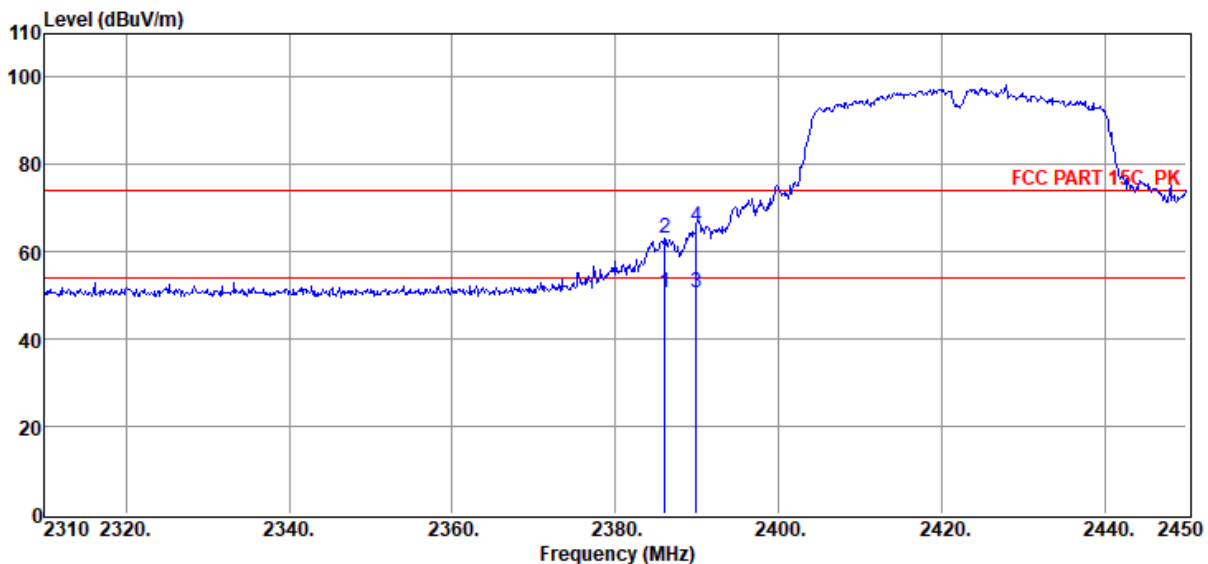
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site : DDT 3m Chamber 3#
Test Date : 2022-04-07
EUT : Clevershare Hub
Power Supply : AC 120V/60Hz
Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa
Memo : 11N40 2422 MIMO

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE 1G AP.EM6
Tested By : Kennys Zhang
Model Number : Clevershare Hub
Test Mode : Tx Mode
Antenna/Distance : 2021 BBHA 9120D 3#/3m/VERTICAL

Data: 22



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	2386.02	20.75	27.39	0.00	1.71	0.72	50.57	54.00	-3.43	Average	VERTICAL
2	2386.02	33.14	27.39	0.00	1.71	0.72	62.96	74.00	-11.04	Peak	VERTICAL
3	2389.94	20.87	27.40	0.00	1.71	0.72	50.70	54.00	-3.30	Average	VERTICAL
4	2389.94	36.10	27.40	0.00	1.71	0.72	65.93	74.00	-8.07	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#

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE
1G AP.EM6

Test Date : 2022-04-07

Tested By : Kennys Zhang

EUT : Clevershare Hub

Model Number : Clevershare Hub

Power Supply : AC 120V/60Hz

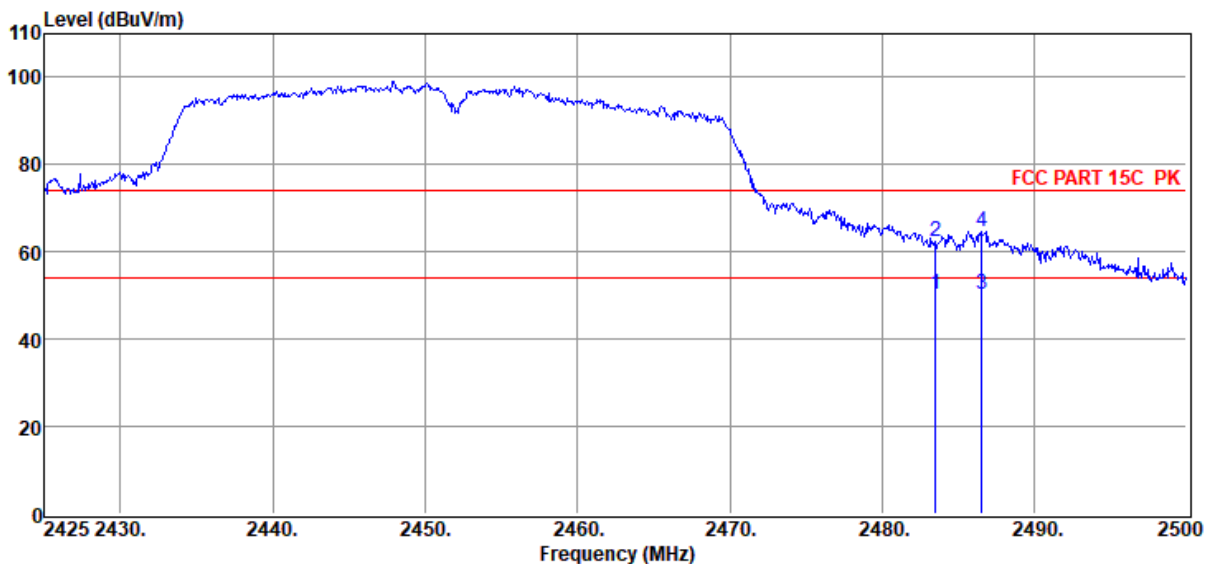
Test Mode : Tx Mode

Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa

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

Memo : 11N40 2452 MIMO

Data: 23



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	2483.50	20.22	27.57	0.00	1.74	0.73	50.26	54.00	-3.74	Average	VERTICAL
2	2483.50	32.32	27.57	0.00	1.74	0.73	62.36	74.00	-11.64	Peak	VERTICAL
3	2486.58	20.10	27.58	0.00	1.74	0.73	50.15	54.00	-3.85	Average	VERTICAL
4	2486.58	34.58	27.58	0.00	1.74	0.73	64.63	74.00	-9.37	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#

D:\E3 6.111\2022 Report Data\Q21121709-2E\FCC ABOVE
1G AP.EM6

Test Date : 2022-04-07

Tested By : Kennys Zhang

EUT : Clevershare Hub

Model Number : Clevershare Hub

Power Supply : AC 120V/60Hz

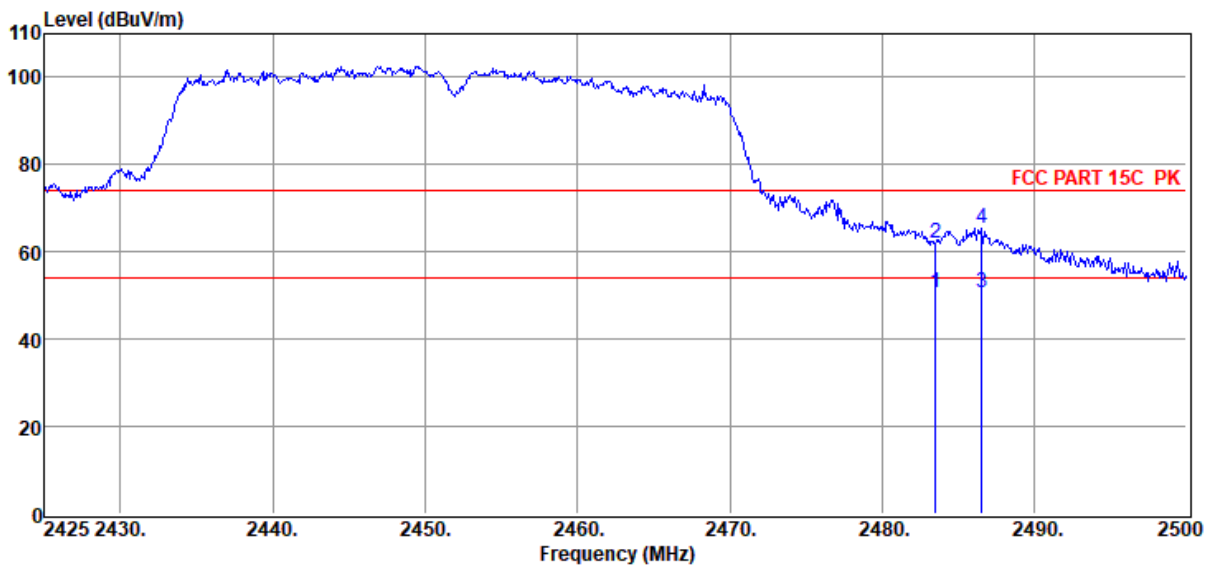
Test Mode : Tx Mode

Condition : Temp:24.5°C,Humi:55%,Press:100.1kPa

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

Memo : 11N40 2452 MIMO

Data: 24



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	2483.50	20.57	27.57	0.00	1.74	0.73	50.61	54.00	-3.39	Average	HORIZONTAL
2	2483.50	31.93	27.57	0.00	1.74	0.73	61.97	74.00	-12.03	Peak	HORIZONTAL
3	2486.58	20.61	27.58	0.00	1.74	0.73	50.66	54.00	-3.34	Average	HORIZONTAL
4	2486.58	35.40	27.58	0.00	1.74	0.73	65.45	74.00	-8.55	Peak	HORIZONTAL

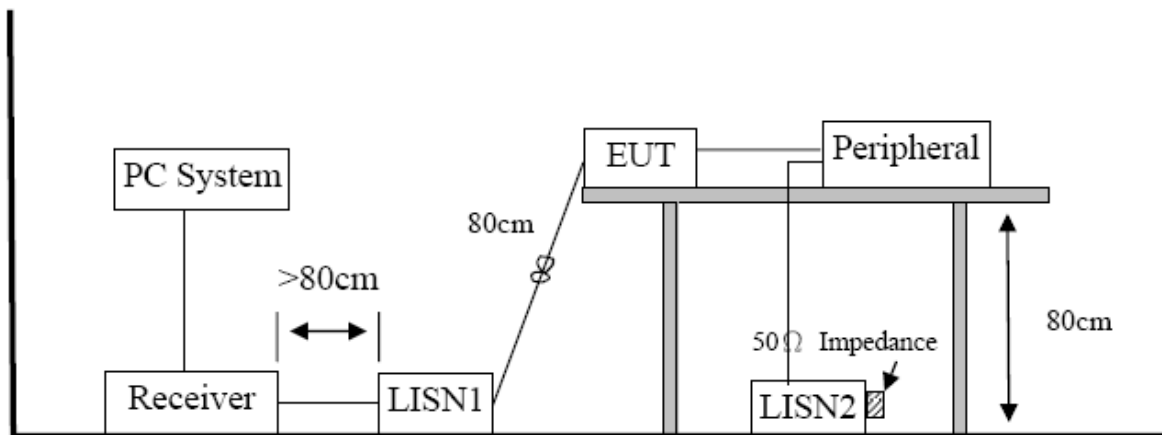
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss + Filter Factor - PRM Factor.

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.

11. Power Line Conducted Emission

11.1. Block diagram of test setup



11.2. Power Line Conducted Emission Limits (Class B)

Frequency	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150 kHz ~ 500 kHz	66 ~ 56*	56 ~ 46*
500 kHz ~ 5 MHz	56	46
5 MHz ~ 30 MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

11.3. Test Procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 kHz.

11.4. Test Result

Pass. (See below detailed test result)

Note1: All emissions not reported below are too low against the prescribed limits.

Note2: “-----” means peak detection; “-----” means average detection

Note3: Pre-test AC conducted emission at both voltage AC 120V/60Hz and AC 240V/60Hz, recorded worse case.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room

D:\2022 CE report date\Q21121709-2E Clevershare Hub\FCC.EM6

Test Date : 2022-04-21

Tested By : James Gan

EUT : Clevershare Hub

Model Number : Clevershare Hub

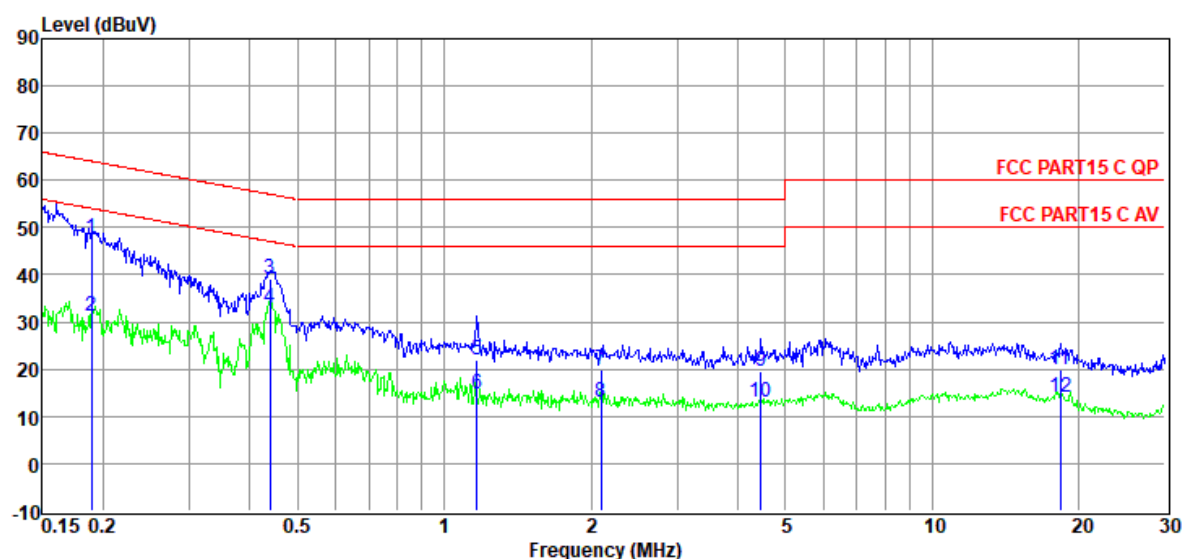
Power Supply : AC 120V/60Hz

Test Mode : TX mode

Condition : TEMP:24.3°C, RH:53.0%, BP:101.0kPa LISN

: 2021 1# ENV216/NEUTRAL

Memo : 2.4G WIFI



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.19	27.87	9.80	0.01	9.92	47.60	64.06	-16.46	QP	NEUTRAL
2	0.19	11.61	9.80	0.01	9.92	31.34	54.06	-22.72	Average	NEUTRAL
3	0.44	19.59	9.54	0.02	9.91	39.06	57.07	-18.01	QP	NEUTRAL
4	0.44	13.42	9.54	0.02	9.91	32.89	47.07	-14.18	Average	NEUTRAL
5	1.17	2.51	9.68	0.03	9.89	22.11	56.00	-33.89	QP	NEUTRAL
6	1.17	-4.75	9.68	0.03	9.89	14.85	46.00	-31.15	Average	NEUTRAL
7	2.10	0.51	9.61	0.04	9.89	20.05	56.00	-35.95	QP	NEUTRAL
8	2.10	-6.64	9.61	0.04	9.89	12.90	46.00	-33.10	Average	NEUTRAL
9	4.45	-0.18	9.76	0.06	9.92	19.56	56.00	-36.44	QP	NEUTRAL
10	4.45	-6.75	9.76	0.06	9.92	12.99	46.00	-33.01	Average	NEUTRAL
11	18.33	-0.07	9.74	0.16	9.95	19.78	60.00	-40.22	QP	NEUTRAL
12	18.33	-5.77	9.74	0.16	9.95	14.08	50.00	-35.92	Average	NEUTRAL

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room

D:\2022 CE report date\Q21121709-2E Clevershare Hub\FCC.EM6

Test Date : 2022-04-21

Tested By : James Gan

EUT : Clevershare Hub

Model Number : Clevershare Hub

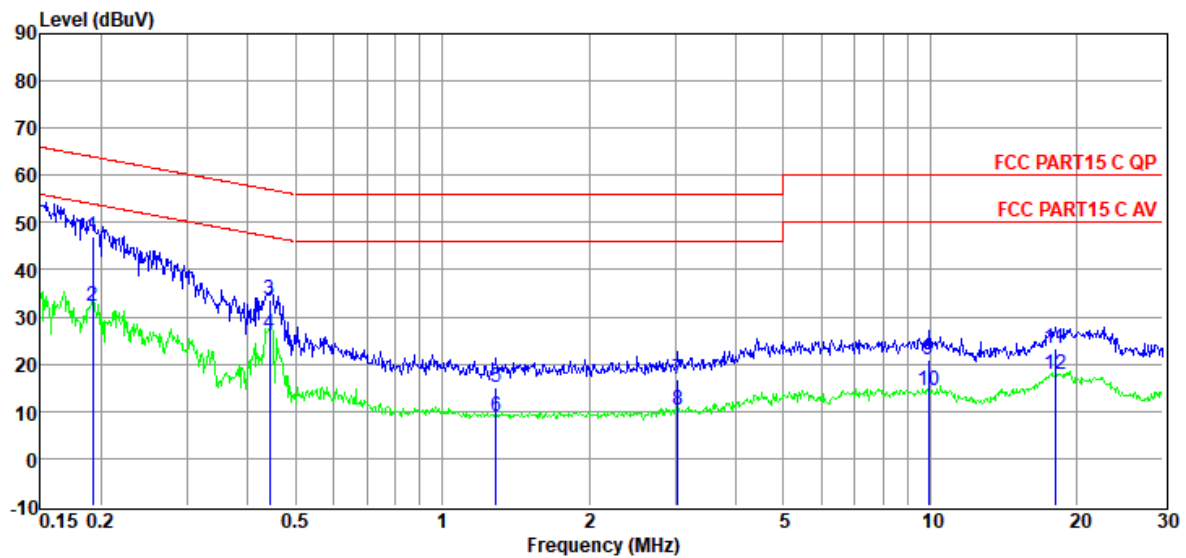
Power Supply : AC 120V/60Hz

Test Mode : TX mode

Condition : TEMP:24.3°C, RH:53.0%, BP:101.0kPa LISN

: 2021 1# ENV216/LINE

Memo : 2.4G WIFI



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.19	27.17	9.77	0.01	9.92	46.87	63.93	-17.06	QP	LINE
2	0.19	12.51	9.77	0.01	9.92	32.21	53.93	-21.72	Average	LINE
3	0.44	14.02	9.63	0.02	9.91	33.58	57.02	-23.44	QP	LINE
4	0.44	6.78	9.63	0.02	9.91	26.34	47.02	-20.68	Average	LINE
5	1.29	-4.36	9.56	0.03	9.89	15.12	56.00	-40.88	QP	LINE
6	1.29	-10.43	9.56	0.03	9.89	9.05	46.00	-36.95	Average	LINE
7	3.04	-2.75	9.56	0.05	9.91	16.77	56.00	-39.23	QP	LINE
8	3.04	-9.22	9.56	0.05	9.91	10.30	46.00	-35.70	Average	LINE
9	9.91	1.34	9.50	0.11	9.94	20.89	60.00	-39.11	QP	LINE
10	9.91	-5.19	9.50	0.11	9.94	14.36	50.00	-35.64	Average	LINE
11	18.04	3.50	9.67	0.16	9.95	23.28	60.00	-36.72	QP	LINE
12	18.04	-1.86	9.67	0.16	9.95	17.92	50.00	-32.08	Average	LINE

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

12. Antenna Requirements

12.1. Limit

For intentional device, according to FCC 47 CFR Section 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For intentional device, according to RSS-Gen issue 5 section 6.8.

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

12.2. Result

The device support 2T2R MIMO, the antennas both used for this product are PCB antennas and no antenna other than that furnished by the responsible party shall be used with the device, maximum antenna gain is 2.44 dBi for antenna 1, 2.44 dBi for antenna 2.