

3DH5

Test Channel	Fundamental Frequency (GHz)	Max Output Power(dBm)	Limit (dBm)	Peak/Average	Pass/Fail
Lowest	2.402	0.45	20.97	Peak	Pass
Middle	2.441	0.87			Pass
Highest	2.480	1.59			Pass

Test result: The unit does meet the FCC requirements.

5.7. CONDUCTED BAND EDGES AND SPURIOUS EMISSIONS

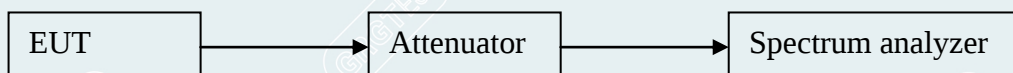
5.7.1. LIMITS

(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

5.7.2. TEST PROCEDURES

- 1) Remove the antenna from the EUT and then connect a low attenuation cable from the antenna port to the spectrum.
- 2) Set the spectrum analyzer: RBW =100KHz; VBW =300KHz, Span = 30MHz to 26GHz; Sweep = auto; Detector Function = Peak. Trace = Max, hold.
- 3) Measure and record the results in the test report.
- 4) The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 5) Measurements are made over the 9 kHz to 26GHz range with the transmitter set to the lowest, middle, and highest channels. No emission found between lowest internal used/generated frequency to 10MHz, it is only recorded 10MHz to 26GHz.

5.7.3. TEST SETUP



5.7.4. TEST RESULTS

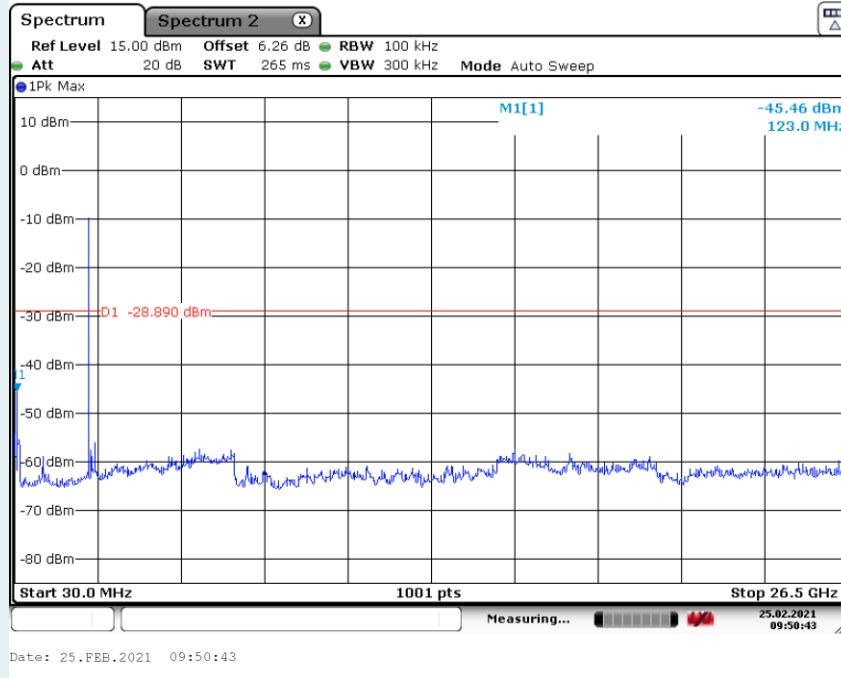
The unit does meet the FCC requirements.

Test result plot as follows:

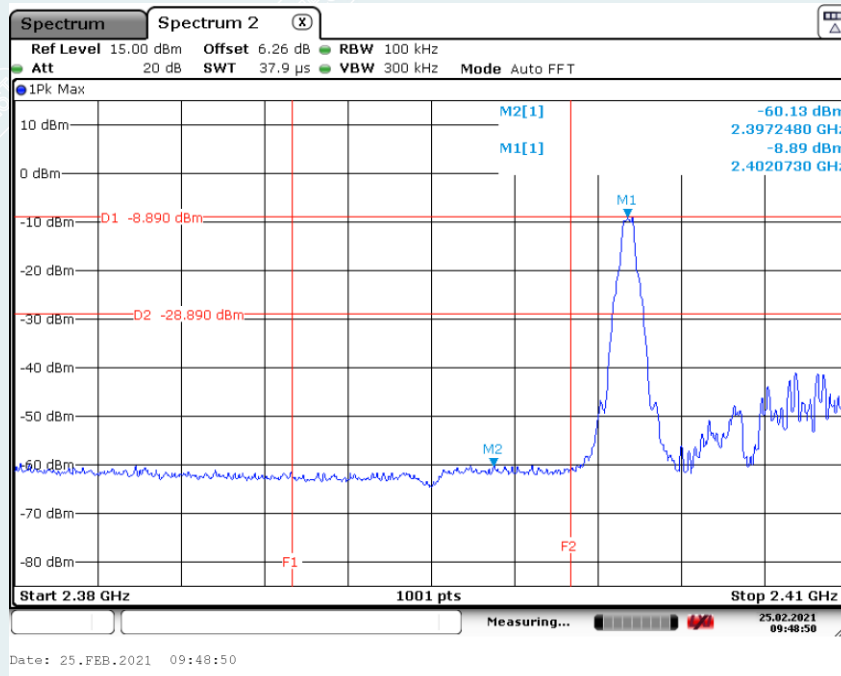
Hopping Off

DH5

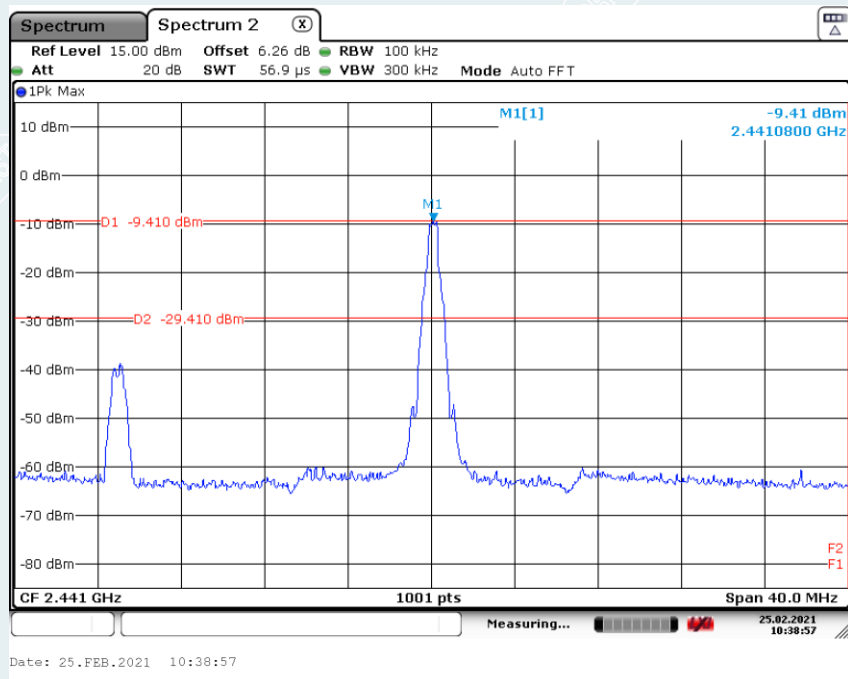
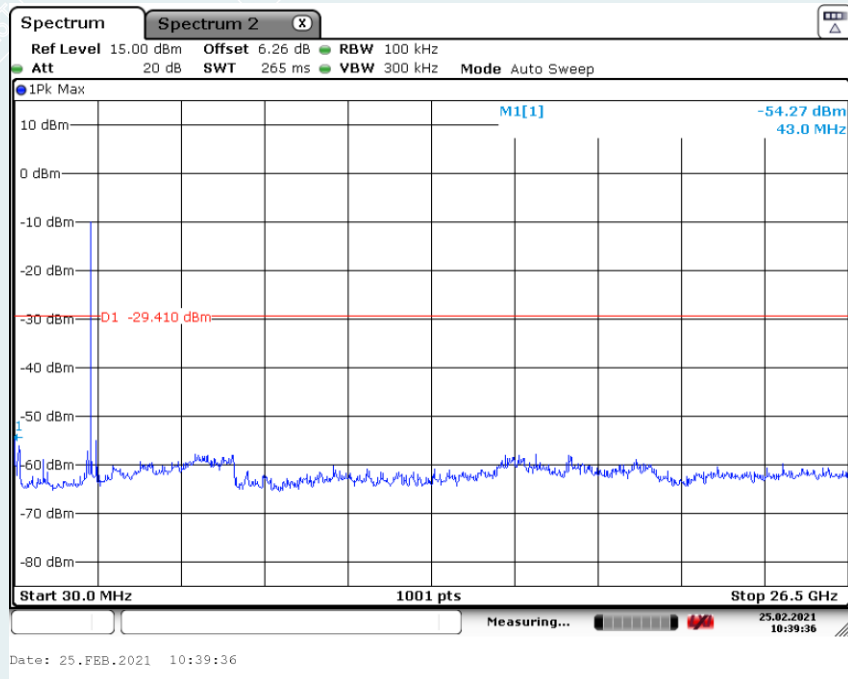
CH Low (30MHz ~26.5GHz)



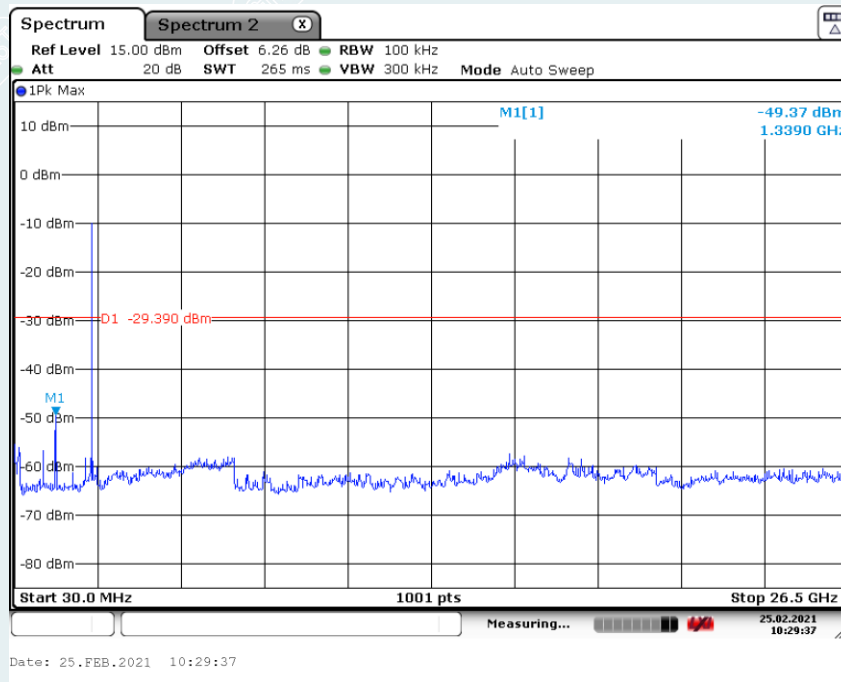
CH Low (2.31GHz ~2.41GHz)



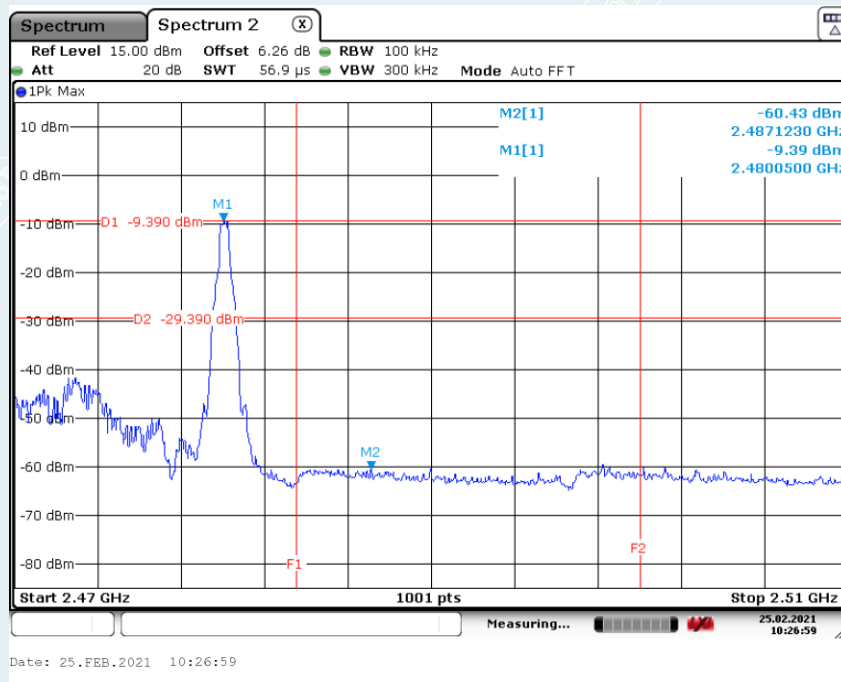
CH Mid (30MHz ~26.5GHz)



CH High (30MHz ~26.5GHz)

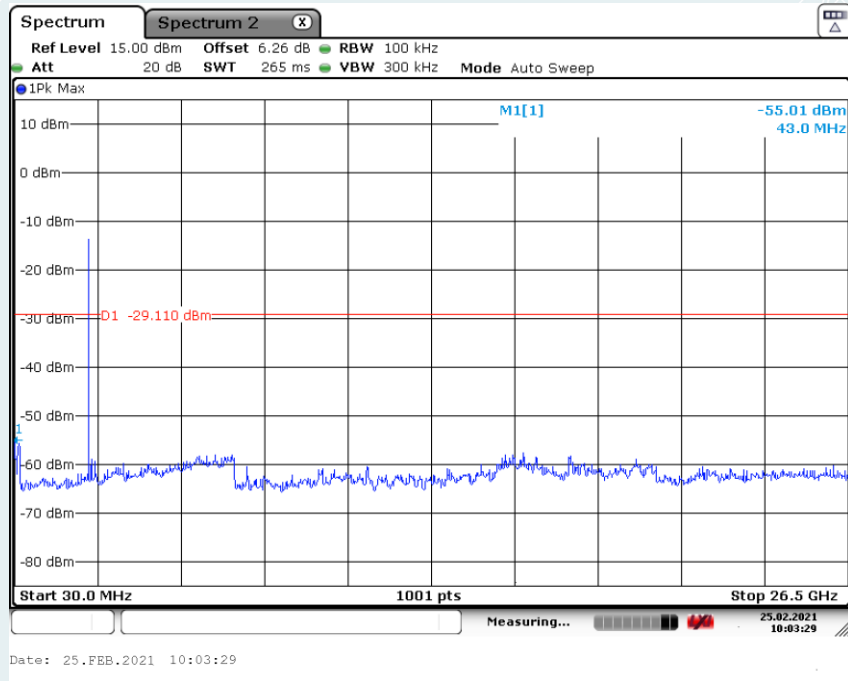


CH High (2.475GHz ~ 2.5GHz)

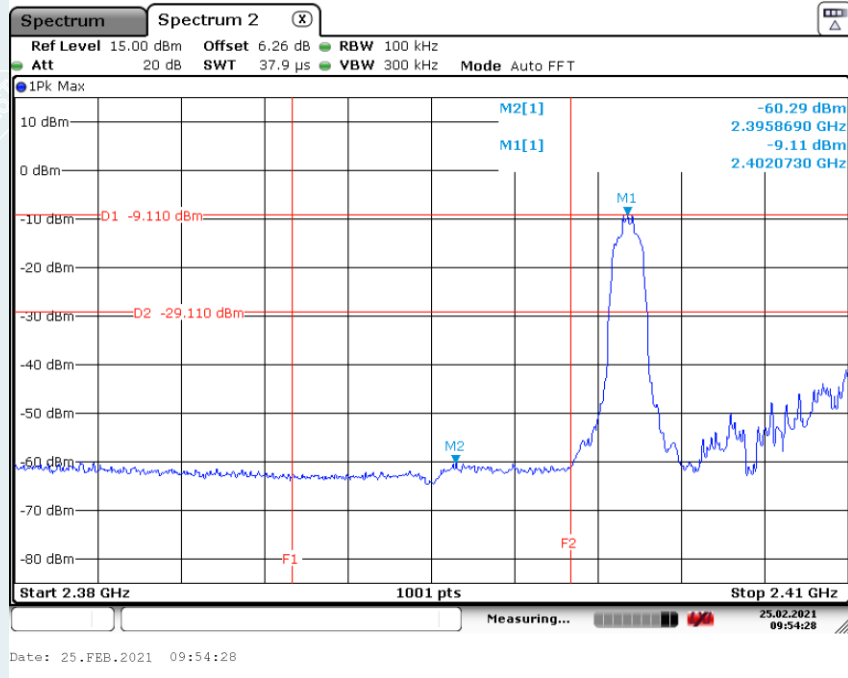


2DH5

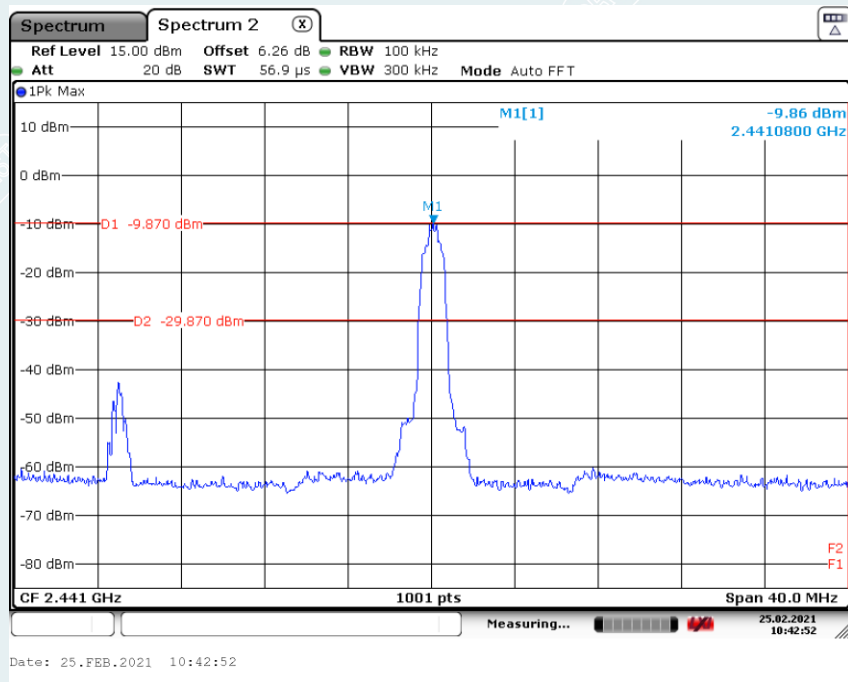
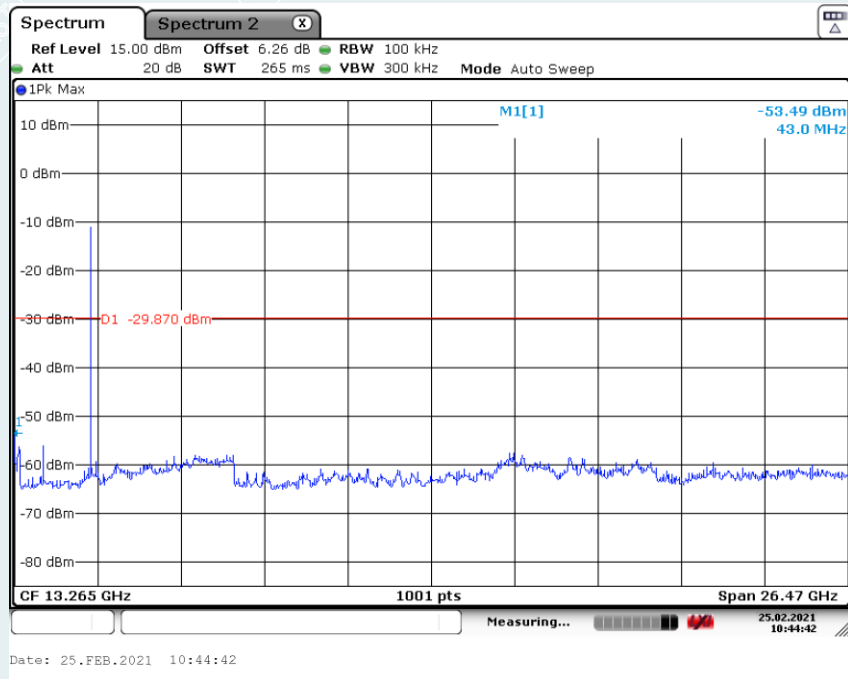
CH Low (30MHz ~26.5GHz)



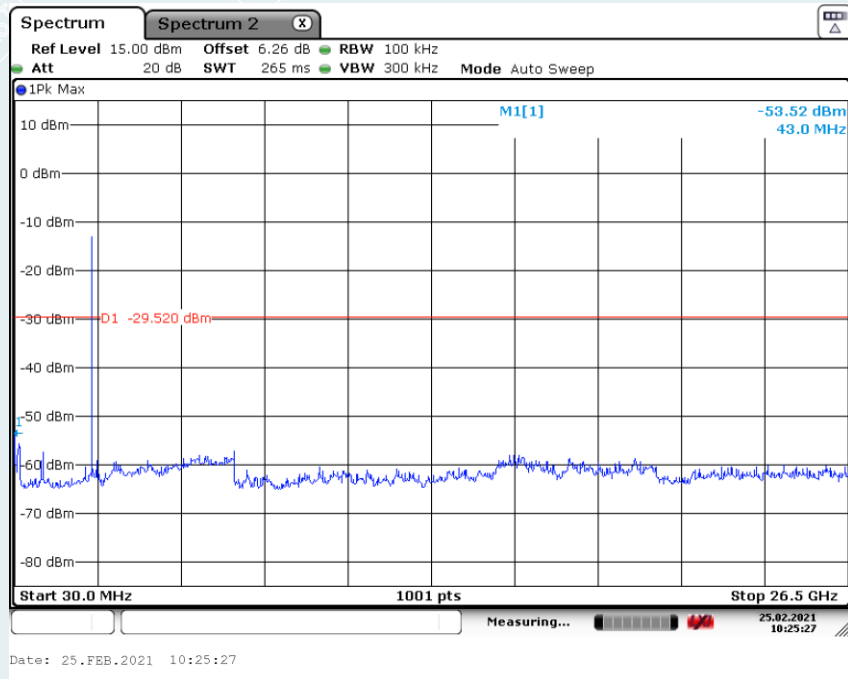
CH Low (2.31GHz ~2.41GHz)



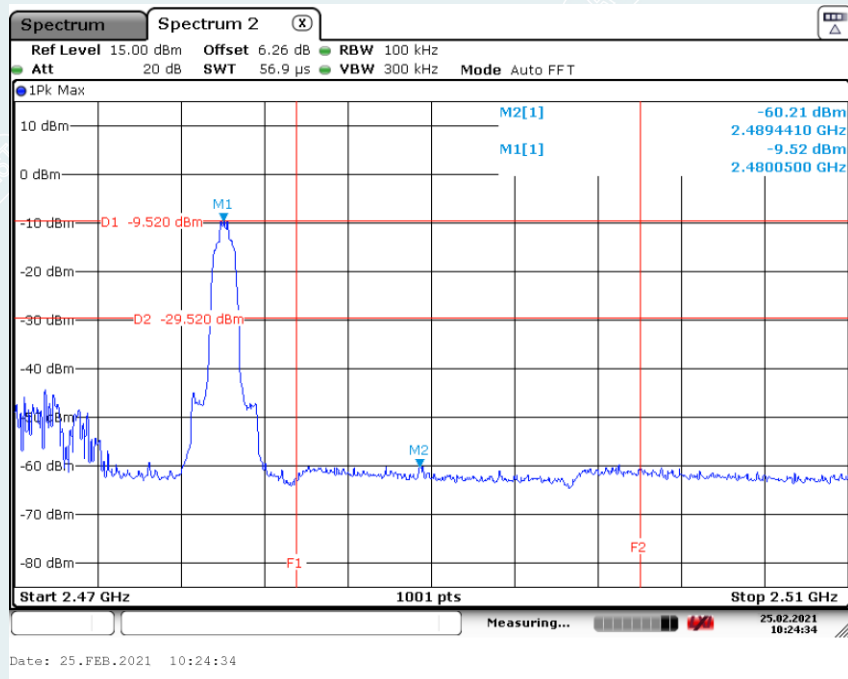
CH Mid (30MHz ~26.5GHz)

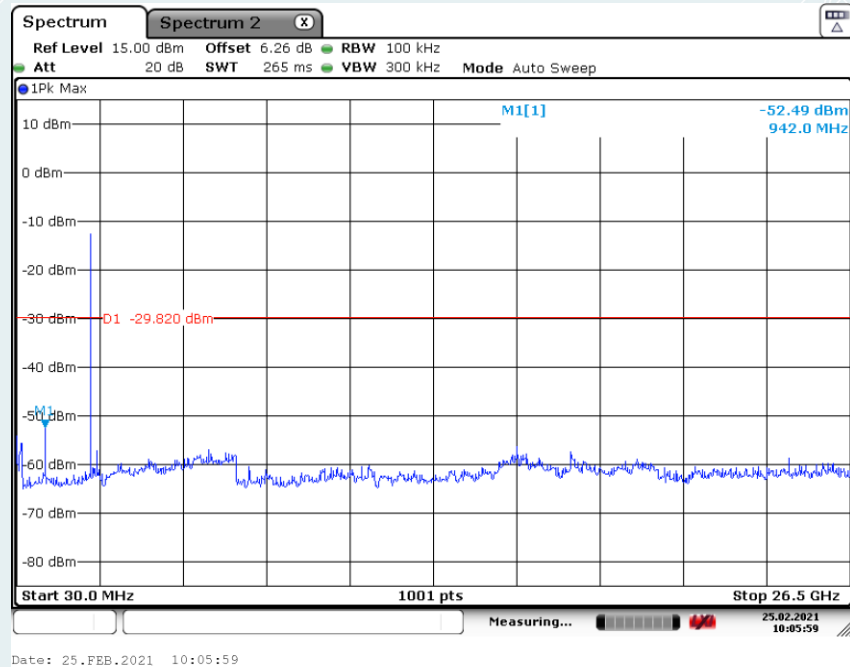
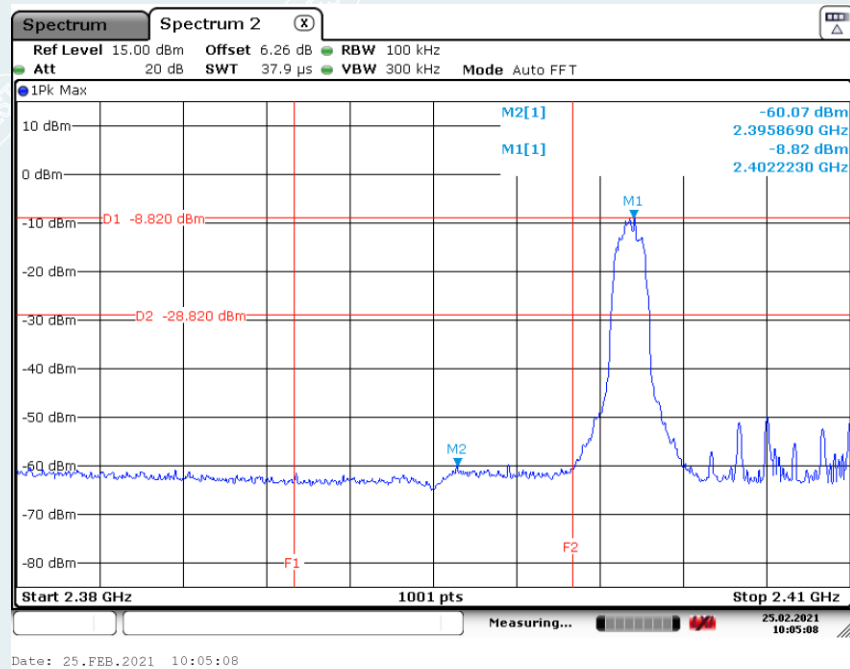


CH High (30MHz ~26.5GHz)

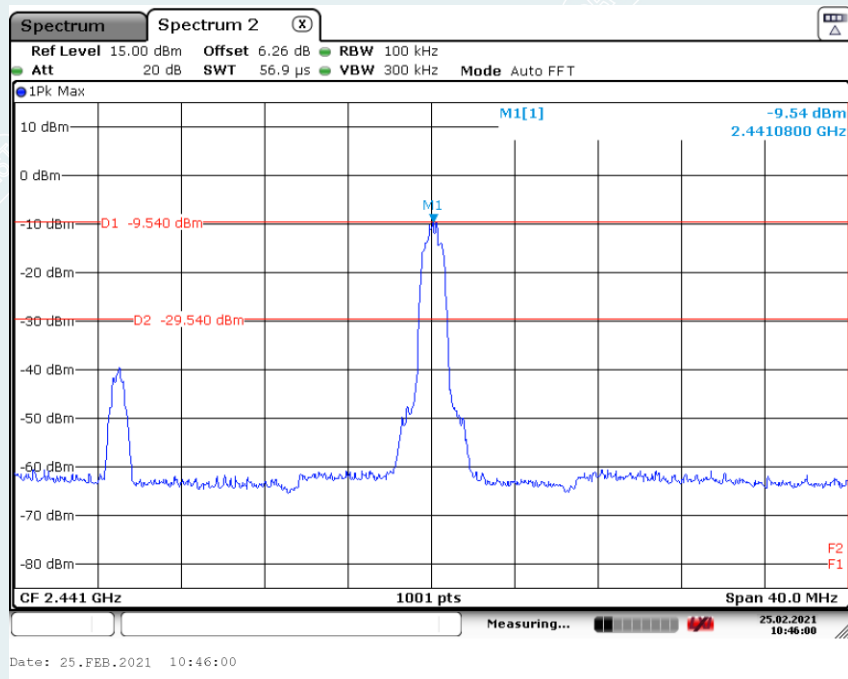
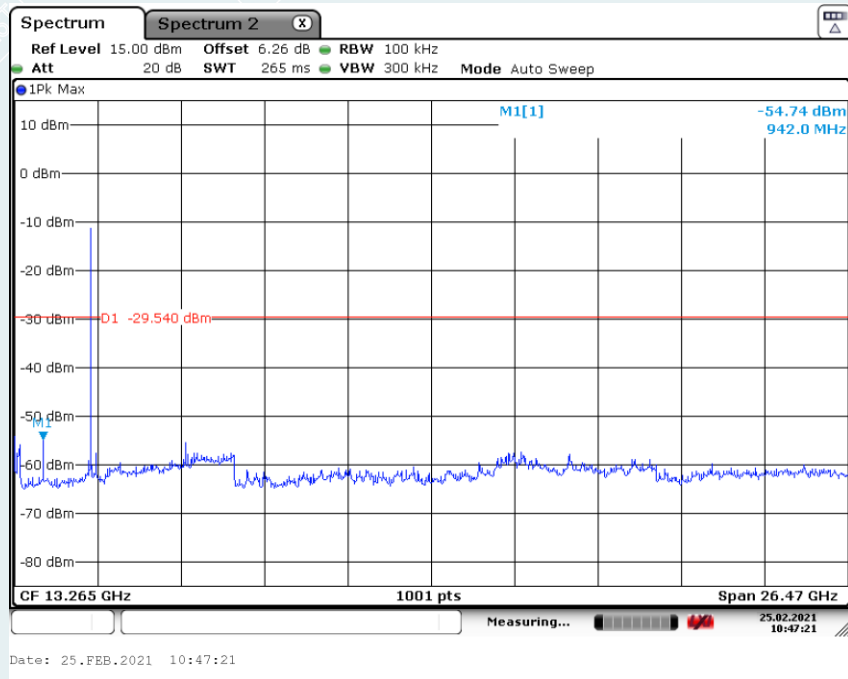


CH High (2.475GHz ~ 2.5GHz)

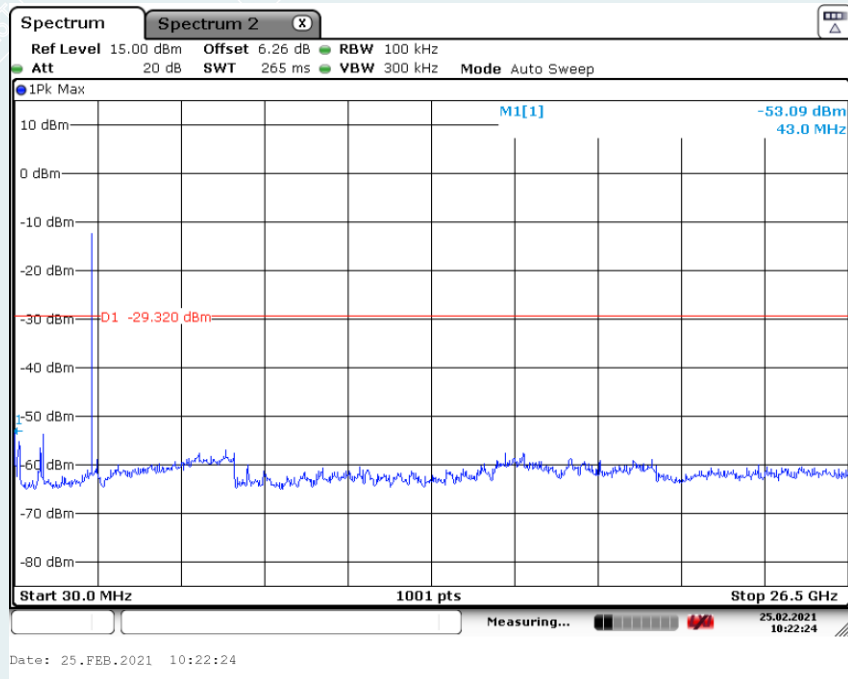


3DH5**CH Low (30MHz ~26.5GHz)****CH Low (2.31GHz ~2.41GHz)**

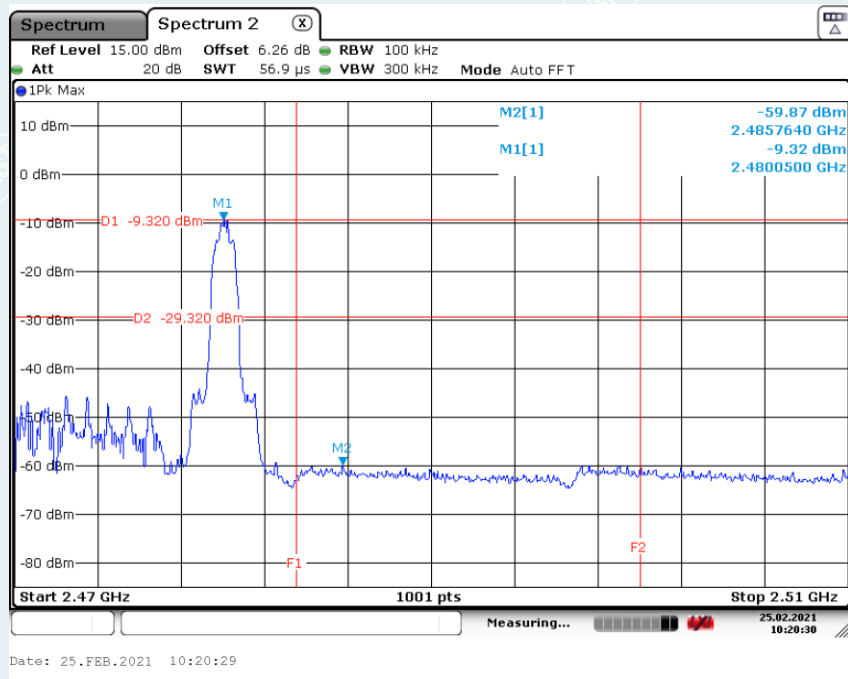
CH Mid (30MHz ~26.5GHz)



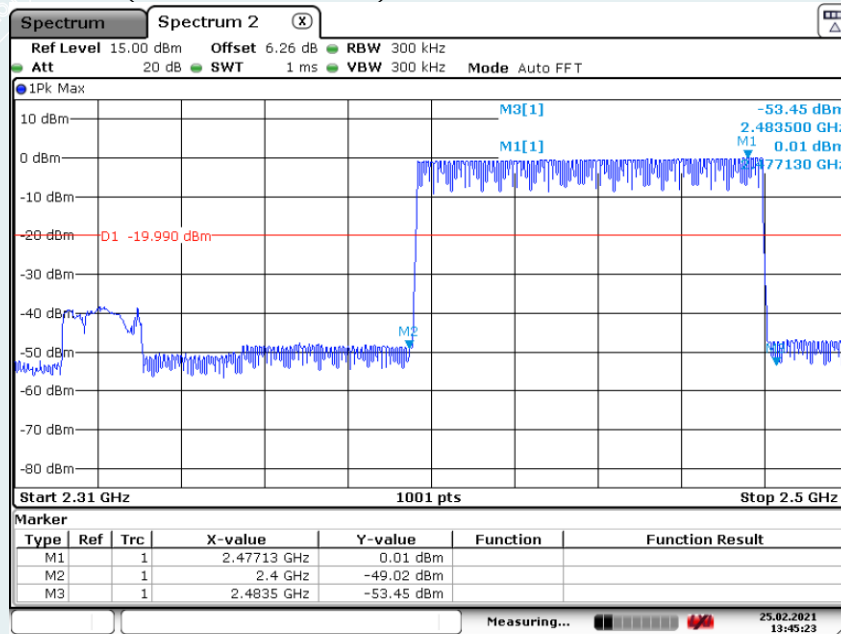
CH High (30MHz ~26.5GHz)



CH High (2.475GHz ~ 2.5GHz)

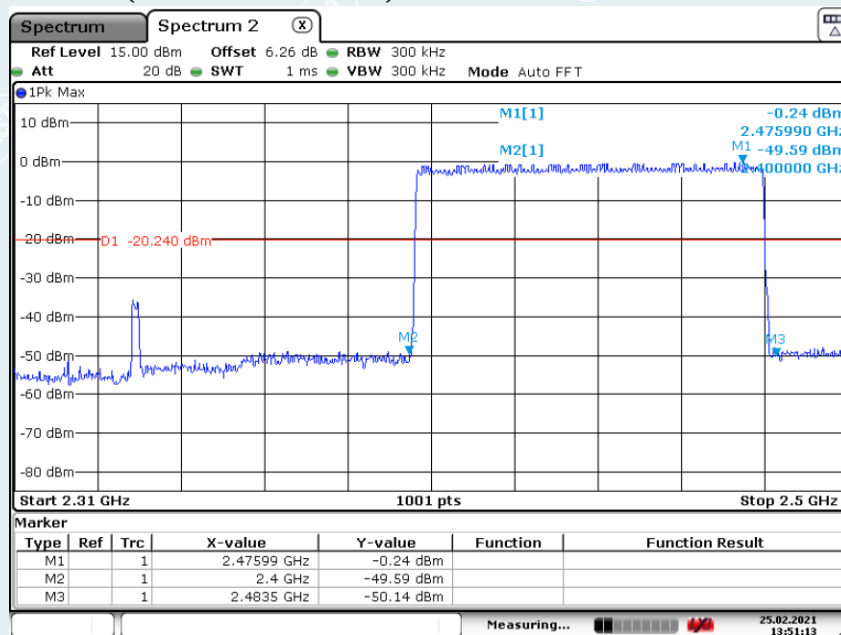


Hopping On GFSK CH Low (2.31GHz ~2.5GHz)



Date: 25.FEB.2021 13:45:23

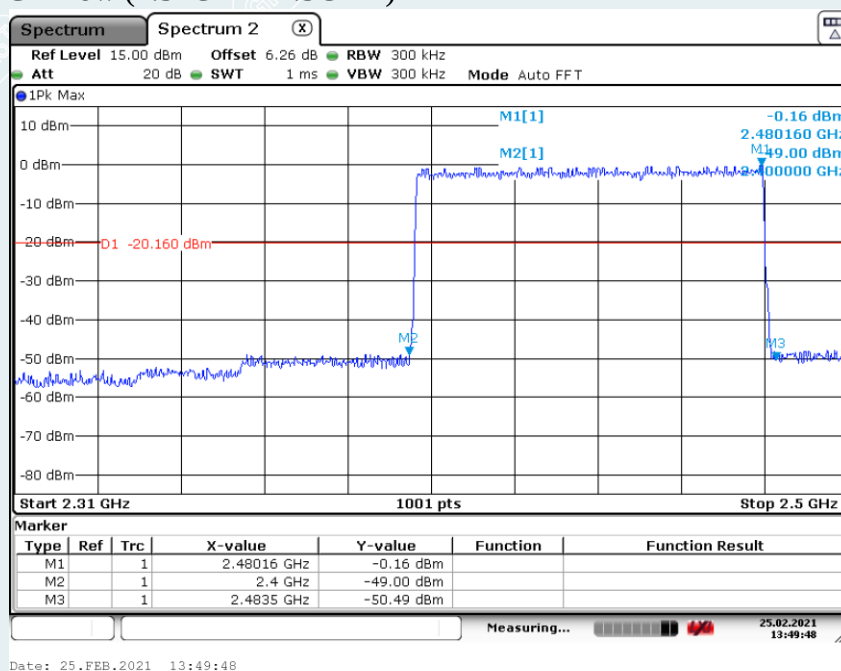
$\pi/4$ -DQPSK CH Low (2.31GHz ~2.5GHz)



Date: 25.FEB.2021 13:51:13

8DPSK

CH Low (2.31GHz ~2.5GHz)



5.8. RADIATED SPURIOUS EMISSIONS

5.8.1. LIMITS

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

Frequency (MHz)	Quasi-peak($\mu\text{V/m}$)	Measurement distance(m)	Quasi-peak($\text{dB}\mu\text{V/m}$)@distance 3m
0.009-0.490	2400/F(kHz)	300	53.8~88.5
0.490-1.705	24000/F(kHz)	30	43~53.8
1.705-30.0	30	30	49.5
30 ~ 88	100	3	40
88~216	150	3	43.5
216 ~ 960	200	3	46
Above 960	500	3	54

NOTE: (1) The lower limit shall apply at the transition frequencies.

NOTE: (2) Above 18G Limit= $74+20\log(3/1)=83.54$ ($\text{dB}\mu\text{V/m}$).

5.8.2. TEST PROCEDURES

- 1) The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- 2) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 3) Height of receiving antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 4) The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 5) The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 6) If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported.
Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

5.8.3. TEST SETUP

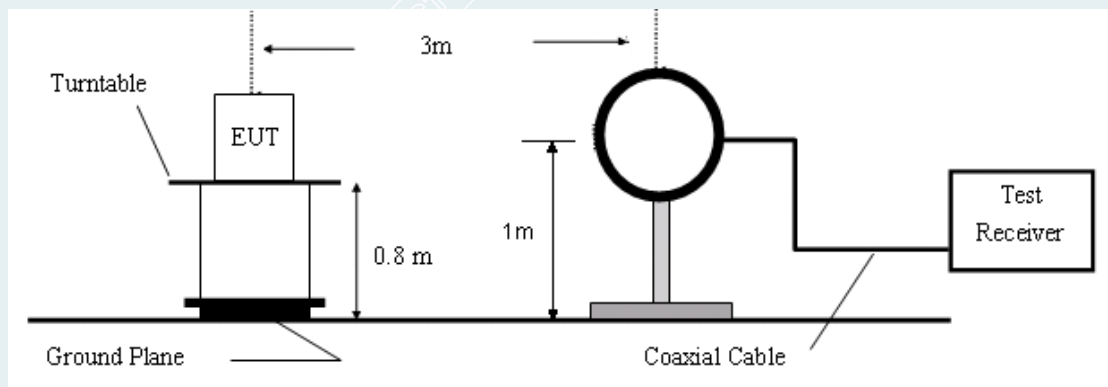


Figure 1. 9 KHz to 30MHz radiated emissions test configuration

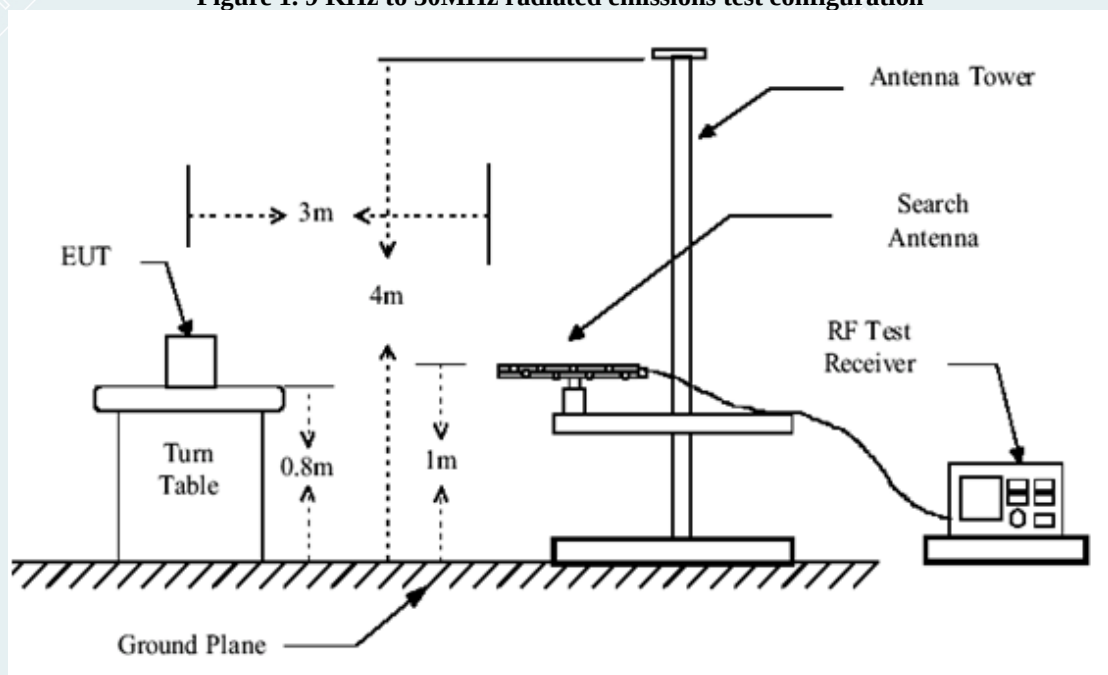


Figure 2. 30MHz to 1GHz radiated emissions test configuration

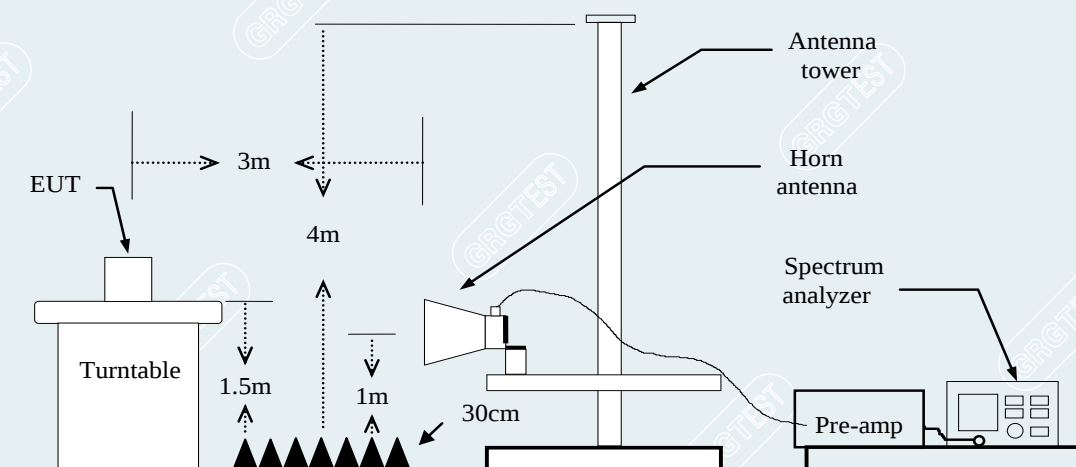


Figure 3. Above 1GHz radiated emissions test configuration

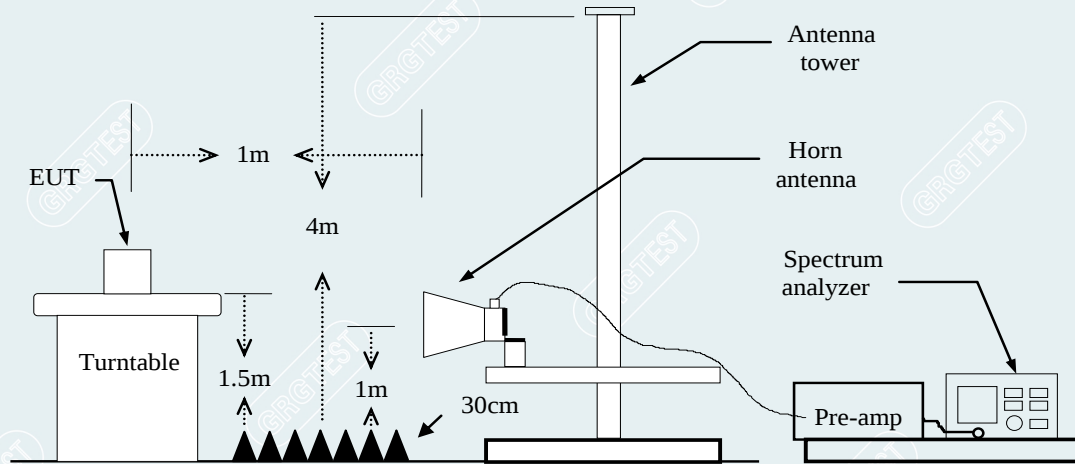


Figure 4. Above 18GHz radiated emissions test configuration

5.8.4. DATA SAMPLE

30MHz to 1GHz

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Pole
xxx	xxx	37.06	-15.48	21.58	40.00	-18.42	QP	Vertical

Above 1 GHz

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Pole
xxx	xxx	65.45	-11.12	54.33	74.00	-19.67	peak	Vertical
xxx	xxx	63.00	-11.12	51.88	54.00	-2.12	AVG	Vertical

Frequency (MHz)

= Emission frequency in MHz

Ant.Pol. (H/V)

= Antenna polarization

Reading (dBuV)

= Uncorrected Analyzer / Receiver reading

Correction Factor (dB/m)

= Antenna factor + Cable loss – Amplifier gain

Result (dBuV/m)

= Reading (dBuV) + Correction Factor (dB/m)

Limit (dBuV/m)

= Limit stated in standard

Margin (dB)

= Remark Result (dBuV/m) – Limit (dBuV/m)

Peak

= Peak Reading

QP

= Quasi-peak Reading

AVG

= Average Reading

5.8.5. TEST RESULTS

30MHz to 1GHz:

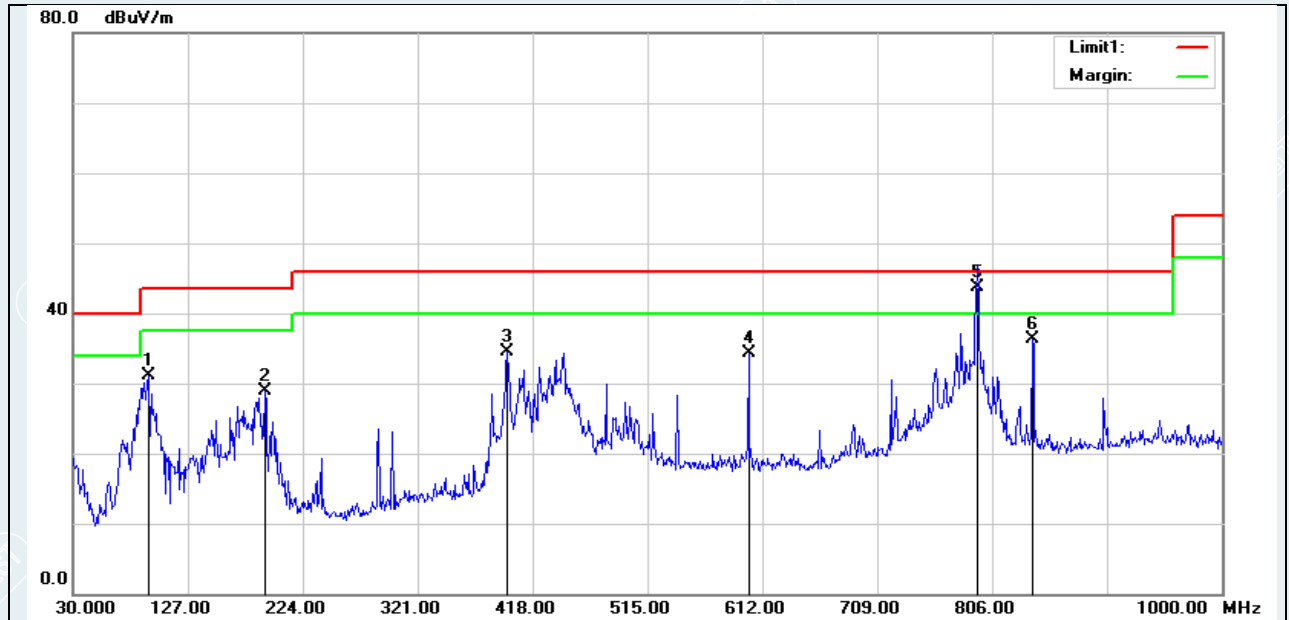
Mode: TX

Lowest channel (2402MHz)

Polarity

Date: 2021-03-08

Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg)	Remark
1	94.0200	61.25	-30.16	31.09	43.50	-12.41	199	93	QP
2	191.9900	56.42	-27.45	28.97	43.50	-14.53	100	359	QP
3	396.6600	55.65	-21.05	34.60	46.00	-11.40	100	162	QP
4	600.3600	51.96	-17.60	34.36	46.00	-11.64	100	3	QP
5*	793.3900	59.44	-15.64	43.80	46.00	-2.20	106	0	QP
6	839.9500	51.30	-15.07	36.23	46.00	-9.77	127	0	QP

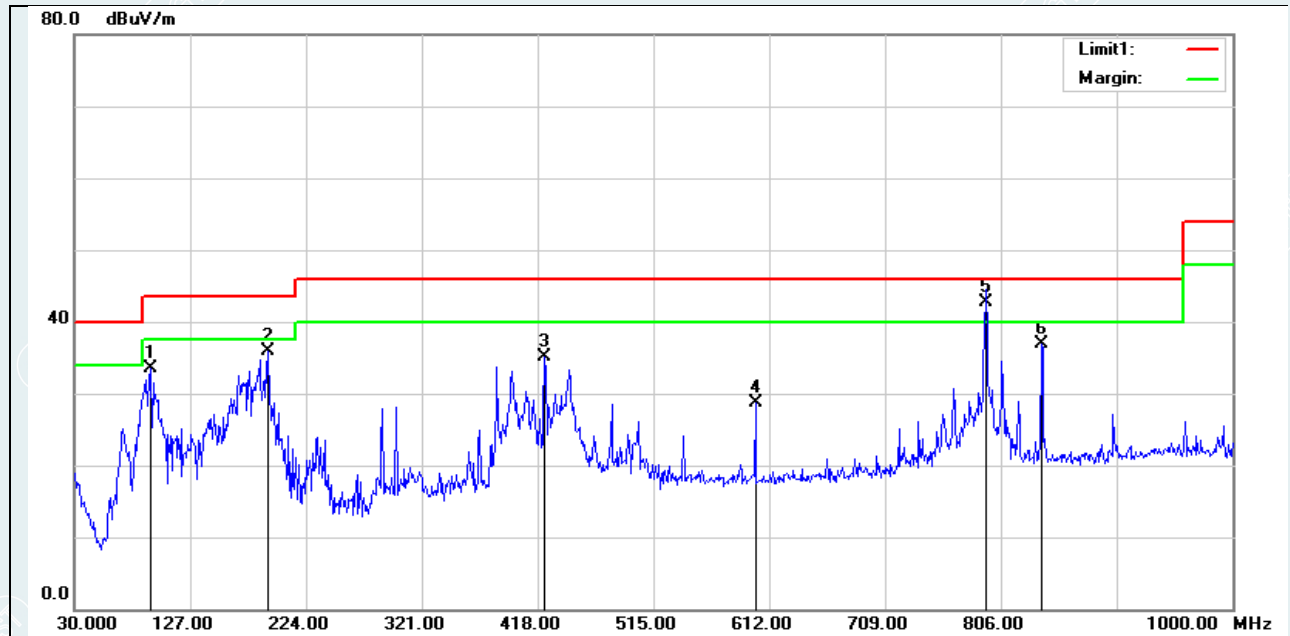
Mode: TX

Lowest channel (2402MHz)

Polarity

Date: 2021-03-08

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg)	Remark
1	94.0200	63.57	-30.16	33.41	43.50	-10.09	299	342	QP
2	191.9900	63.39	-27.45	35.94	43.50	-7.56	199	185	QP
3	423.8200	55.72	-20.67	35.05	46.00	-10.95	199	61	QP
4	600.3600	46.39	-17.60	28.79	46.00	-17.21	299	105	QP
5*	793.3900	58.34	-15.64	42.70	46.00	-3.30	100	0	QP
6	839.9500	52.07	-15.07	37.00	46.00	-9.00	100	330	QP

Remark:

- 1 No emission found between lowest internal used/generated frequency to 30MHz.
- 2 Pre-scan all mode and recorded the worst case results in this report (TX-High Channel(1Mbps)
- 3 Measuring frequencies from 9kHz to the 1GHz.
- 4 Radiated emissions measured in frequency range from 30MHz to 1GHz were made with an instrument using Peak/Quasi-peak detector mode.
- 5 Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 6 The IF bandwidth of SPA between 30MHz to 1GHz was 120kHz.

Above 1GHz-18GHz:

Mode: TX/ DH5

Lowest channel (2402MHz)

Date: 2021-03-12

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1189.3649	80.34	55.72	-24.62	74.00	18.28	150	338	Horizontal
2	1982.1637	76.00	54.30	-21.70	74.00	19.70	150	105	Horizontal
3	2593.9323	75.62	55.56	-20.06	74.00	18.44	150	105	Horizontal
4	3965.0536	67.53	52.18	-15.35	74.00	21.82	150	255	Horizontal
5	5550.9751	53.66	43.30	-10.36	74.00	30.70	150	246	Horizontal
6	7206.9004	61.06	56.47	-4.59	74.00	17.53	150	255	Horizontal

PK Final Data List					
NO.	Freq. [MHz]	Factor [dB]	Height [cm]	Angle [°]	Polarity
1	1189.3649	-24.62	150	338	Horizontal
2	1982.1637	-21.70	150	105	Horizontal
3	3965.0536	-15.35	150	255	Horizontal
4	7206.1797	-4.59	150	357	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1189.3649	-24.62	54.13	29.51	54.00	24.49	150	338	Horizontal
2	1982.1637	-21.70	54.02	32.32	54.00	21.68	150	105	Horizontal
3	3965.0536	-15.35	43.98	28.63	54.00	25.37	150	255	Horizontal
4	7206.1797	-4.59	57.73	53.14	54.00	0.86	150	357	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1189.3649	82.52	57.90	-24.62	74.00	16.10	150	255	Vertical
2	2593.9323	73.90	53.84	-20.06	74.00	20.16	150	0	Vertical
3	3965.0536	68.55	53.20	-15.35	74.00	20.80	150	105	Vertical
4	5550.9751	53.81	43.45	-10.36	74.00	30.55	150	105	Vertical
5	7205.2336	55.93	51.36	-4.57	74.00	22.64	150	105	Vertical
6	17866.6593	42.00	52.05	10.05	74.00	21.95	150	105	Vertical

PK Final Data List					
NO.	Freq. [MHz]	Factor [dB]	Height [cm]	Angle [°]	Polarity
1	1189.3649	-24.62	150	255	Vertical
2	3965.0536	-15.35	150	105	Vertical
3	7205.2336	-4.57	150	105	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dB μ V/m]	AV Value [dB μ V/m]	AV Limit [dB μ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1189.3649	-24.62	53.93	29.31	54.00	24.69	150	255	Vertical
2	3965.0536	-15.35	43.97	28.62	54.00	25.38	150	105	Vertical
3	7205.2336	-4.57	51.45	46.88	54.00	7.12	150	105	Vertical

Mode: TX/ DH5
Middle channel (2441MHz)

Date: 2021-03-12

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1189.6983	80.42	55.80	-24.62	74.00	18.20	150	255	Horizontal
2	1982.4971	77.53	55.84	-21.69	74.00	18.16	150	255	Horizontal
3	2632.9388	74.36	54.73	-19.63	74.00	19.27	150	33	Horizontal
4	3965.0536	68.79	53.44	-15.35	74.00	20.56	150	353	Horizontal
5	7323.5735	60.76	55.37	-5.39	74.00	18.63	150	358	Horizontal
6	12205.5114	47.31	50.51	3.20	74.00	23.49	150	105	Horizontal

PK Final Data List					
NO.	Freq. [MHz]	Factor [dB]	Height [cm]	Angle [°]	Polarity
1	7323.1707	-5.39	150	356	Horizontal
2	7323.2073	-5.39	150	357	Horizontal
3	1982.5764	-21.70	138	2	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	7323.1707	-5.39	58.60	53.21	54.00	0.79	150	356	Horizontal
2	7323.2073	-5.39	58.39	53.00	54.00	1.00	150	357	Horizontal
3	1982.5764	-21.70	54.88	33.18	54.00	20.82	138	2	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1189.6983	81.82	57.20	-24.62	74.00	16.80	150	255	Vertical
2	1982.4971	73.15	51.46	-21.69	74.00	22.54	150	152	Vertical
3	3965.0536	69.81	54.46	-15.35	74.00	19.54	150	105	Vertical
4	7323.5735	54.48	49.09	-5.39	74.00	24.91	150	358	Vertical
5	12204.6780	47.81	51.02	3.21	74.00	22.98	150	105	Vertical
6	14902.3279	42.83	50.50	7.67	74.00	23.50	150	360	Vertical

PK Final Data List					
NO.	Freq. [MHz]	Factor [dB]	Height [cm]	Angle [°]	Polarity
1	1189.4663	-24.62	130	319	Vertical
2	1982.8539	-21.70	103	302	Vertical
3	3965.2915	-15.35	147	28	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dB μ V/m]	AV Value [dB μ V/m]	AV Limit [dB μ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1189.4663	-24.62	54.05	29.43	54.00	24.57	130	319	Vertical
2	1982.8539	-21.70	49.76	28.06	54.00	25.94	103	302	Vertical
3	3965.2915	-15.35	43.88	28.53	54.00	25.47	147	28	Vertical

Mode: TX/ DH5
Highest channel (2480MHz)

Date: 2021-03-12

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1189.3649	81.76	57.14	-24.62	74.00	16.86	150	332	Horizontal
2	1982.4971	75.74	54.05	-21.69	74.00	19.95	150	291	Horizontal
3	3965.0536	68.52	53.17	-15.35	74.00	20.83	150	255	Horizontal
4	4960.1089	56.43	45.52	-10.91	74.00	28.48	150	87	Horizontal
5	7439.4133	60.22	55.36	-4.86	74.00	18.64	150	255	Horizontal
6	12401.3556	49.46	53.38	3.92	74.00	20.62	150	255	Horizontal

PK Final Data List					
NO.	Freq. [MHz]	Factor [dB]	Height [cm]	Angle [°]	Polarity
1	1189.3649	-24.62	150	332	Horizontal
2	7440.1572	-4.86	150	356	Horizontal
3	7440.2688	-4.86	150	359	Horizontal
4	12400.2395	3.92	145	307	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1189.3649	-24.62	52.74	28.12	54.00	25.88	150	332	Horizontal
2	7440.1572	-4.86	57.93	53.07	54.00	0.93	150	356	Horizontal
3	7440.2688	-4.86	57.01	52.15	54.00	1.85	150	359	Horizontal
4	12400.2395	3.92	41.08	45.00	54.00	9.00	145	307	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1189.6983	83.22	58.60	-24.62	74.00	15.40	150	318	Vertical
2	1982.4971	74.39	52.70	-21.69	74.00	21.30	150	105	Vertical
3	3568.3649	65.94	49.64	-16.30	74.00	24.36	150	255	Vertical
4	3965.0536	67.55	52.20	-15.35	74.00	21.80	150	33	Vertical
5	7439.4133	54.98	50.12	-4.86	74.00	23.88	150	16	Vertical
6	12400.5223	49.99	53.90	3.91	74.00	20.10	150	87	Vertical

PK Final Data List					
NO.	Freq. [MHz]	Factor [dB]	Height [cm]	Angle [°]	Polarity
1	12400.5223	3.91	150	87	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	12400.5223	3.91	42.46	46.37	54.00	7.63	150	87	Vertical

Mode: TX/ 3DH5

Lowest channel (2402MHz)

Date: 2021-03-12

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1189.6983	79.85	55.23	-24.62	74.00	18.77	150	331	Horizontal
2	1982.4971	75.87	54.18	-21.69	74.00	19.82	150	105	Horizontal
3	3965.0536	68.46	53.11	-15.35	74.00	20.89	150	255	Horizontal
4	5550.1417	54.20	43.84	-10.36	74.00	30.16	150	255	Horizontal
5	7206.0670	60.21	55.63	-4.58	74.00	18.37	150	255	Horizontal
6	10402.0779	46.04	47.88	1.84	74.00	26.12	150	7	Horizontal

PK Final Data List					
NO.	Freq. [MHz]	Factor [dB]	Height [cm]	Angle [°]	Polarity
1	7206.2111	-4.58	140	355	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	7206.2111	-4.58	58.19	53.61	54.00	0.39	140	355	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1189.3649	81.59	56.97	-24.62	74.00	17.03	150	312	Vertical
2	1982.1637	71.98	50.28	-21.70	74.00	23.72	150	147	Vertical
3	3965.8870	68.42	53.06	-15.36	74.00	20.94	150	32	Vertical
4	5550.9751	53.70	43.34	-10.36	74.00	30.66	150	255	Vertical
5	7206.0670	55.20	50.62	-4.58	74.00	23.38	150	0	Vertical
6	12011.3340	48.64	51.88	3.24	74.00	22.12	150	255	Vertical

PK Final Data List					
NO.	Freq. [MHz]	Factor [dB]	Height [cm]	Angle [°]	Polarity
1	7206.0670	-4.58	150	0	Vertical

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	7206.0670	-4.58	52.10	47.52	54.00	6.48	150	0	Vertical

Mode: TX/ 3DH5
Middle channel (2441MHz)

Date: 2021-03-12

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1189.3649	81.37	56.75	-24.62	74.00	17.25	150	256	Horizontal
2	1982.4971	76.91	55.22	-21.69	74.00	18.78	150	256	Horizontal
3	3965.8870	65.95	50.59	-15.36	74.00	23.41	150	358	Horizontal
4	5550.9751	54.50	44.14	-10.36	74.00	29.86	150	274	Horizontal
5	7323.5735	60.08	54.69	-5.39	74.00	19.31	150	358	Horizontal
6	12203.8447	46.60	49.81	3.21	74.00	24.19	150	310	Horizontal

PK Final Data List					
NO.	Freq. [MHz]	Factor [dB]	Height [cm]	Angle [°]	Polarity
1	7323.2806	-5.39	150	356	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	7323.2806	-5.39	58.32	52.93	54.00	1.07	150	356	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1190.0317	80.96	56.34	-24.62	74.00	17.66	150	255	Vertical
2	1982.1637	71.76	50.06	-21.70	74.00	23.94	150	255	Vertical
3	3569.1983	65.05	48.78	-16.27	74.00	25.22	150	338	Vertical
4	3965.0536	66.37	51.02	-15.35	74.00	22.98	150	105	Vertical
5	4881.7712	55.49	44.66	-10.83	74.00	29.34	150	319	Vertical
6	7323.5735	54.62	49.23	-5.39	74.00	24.77	150	358	Vertical

Mode: TX/ 3DH5
Highest channel (2480MHz)

Date: 2021-03-12

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1190.0317	79.69	55.07	-24.62	74.00	18.93	150	255	Horizontal
2	1981.8303	75.40	53.70	-21.70	74.00	20.30	150	255	Horizontal
3	3965.0536	67.30	51.95	-15.35	74.00	22.05	150	345	Horizontal
4	5550.9751	53.74	43.38	-10.36	74.00	30.62	150	283	Horizontal
5	7440.2467	59.44	54.58	-4.86	74.00	19.42	150	358	Horizontal
6	12400.5223	47.94	51.85	3.91	74.00	22.15	150	345	Horizontal

PK Final Data List					
NO.	Freq. [MHz]	Factor [dB]	Height [cm]	Angle [°]	Polarity
1	1982.4645	-21.70	150	34	Horizontal
2	3965.0536	-15.35	140	354	Horizontal
3	7440.2839	-4.87	150	356	Horizontal

AV Final Data List									
NO.	Freq. [MHz]	Factor [dB]	AV Reading [dBμV/m]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1982.4645	-21.70	54.83	33.13	54.00	20.87	150	34	Horizontal
2	3965.0536	-15.35	43.34	27.99	54.00	26.01	140	354	Horizontal
3	7440.2839	-4.87	57.74	52.87	54.00	1.13	150	356	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1189.3649	81.83	57.21	-24.62	74.00	16.79	150	255	Vertical
2	1982.8305	72.95	51.26	-21.69	74.00	22.74	150	255	Vertical
3	3965.0536	65.71	50.36	-15.35	74.00	23.64	150	105	Vertical
4	5550.9751	54.21	43.85	-10.36	74.00	30.15	150	105	Vertical
5	7440.2467	54.62	49.76	-4.86	74.00	24.24	150	360	Vertical
6	12400.5223	49.12	53.03	3.91	74.00	20.97	150	357	Vertical

PK Final Data List					
NO.	Freq. [MHz]	Factor [dB]	Height [cm]	Angle [°]	Polarity
1	1189.3649	-24.62	150	255	Vertical
2	1982.8305	-21.69	150	255	Vertical
3	3965.0536	-15.35	150	105	Vertical
4	7440.2467	-4.86	150	360	Vertical
5	12400.5223	3.91	150	357	Vertical

AV Final Data List

NO.	Freq. [MHz]	Factor [dB]	AV Reading [dB μ V/m]	AV Value [dB μ V/m]	AV Limit [dB μ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1189.3649	-24.62	53.16	28.54	54.00	25.46	150	255	Vertical
2	1982.8305	-21.69	55.61	33.92	54.00	20.08	150	255	Vertical
3	3965.0536	-15.35	44.53	29.18	54.00	24.82	150	105	Vertical
4	7440.2467	-4.86	51.39	46.53	54.00	7.47	150	360	Vertical
5	12400.5223	3.91	43.17	47.08	54.00	6.92	150	357	Vertical

Above 18GHz-26.5GHz:

Recorded the worst case results in this report (DH5)

Mode: TX/ DH5

Lowest channel (2402MHz)

Date: 2021-03-12

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18888.6750	57.79	46.59	-11.20	83.50	36.91	100	77	Horizontal
2	19853.0000	57.39	46.53	-10.86	83.50	36.97	100	228	Horizontal
3	21808.0000	55.57	45.62	-9.95	83.50	37.88	100	26	Horizontal
4	22975.4750	55.66	46.71	-8.95	83.50	36.79	100	89	Horizontal
5	23679.2750	55.22	46.63	-8.59	83.50	36.87	100	314	Horizontal
6	26425.2000	54.75	47.27	-7.48	83.50	36.23	100	52	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18910.3500	57.87	46.69	-11.18	83.50	36.81	100	179	Vertical
2	19830.9000	57.23	46.37	-10.86	83.50	37.13	100	79	Vertical
3	21635.4500	56.42	46.50	-9.92	83.50	37.00	100	342	Vertical
4	23143.7750	55.16	46.29	-8.87	83.50	37.21	100	153	Vertical
5	24454.4750	55.60	47.45	-8.15	83.50	36.05	100	79	Vertical
6	25753.7000	55.71	47.64	-8.07	83.50	35.86	100	42	Vertical

Mode: TX/ DH5

Lowest channel (2441MHz)

Date: 2021-03-12

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18331.5000	58.38	46.83	-11.55	83.50	36.67	100	30	Horizontal
2	19882.7500	57.33	46.47	-10.86	83.50	37.03	100	205	Horizontal
3	20556.8000	57.18	46.72	-10.46	83.50	36.78	100	242	Horizontal
4	22902.8000	55.18	46.18	-9.00	83.50	37.32	100	306	Horizontal
5	24411.1250	55.31	47.15	-8.16	83.50	36.35	100	359	Horizontal
6	26446.8750	55.28	47.78	-7.50	83.50	35.72	100	43	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18314.5000	57.81	46.25	-11.56	83.50	37.25	100	103	Vertical
2	19490.0500	56.80	45.87	-10.93	83.50	37.63	100	353	Vertical
3	21186.6500	55.84	45.56	-10.28	83.50	37.94	100	265	Vertical
4	23290.4000	55.52	46.72	-8.80	83.50	36.78	100	128	Vertical
5	23882.8500	55.69	47.31	-8.38	83.50	36.19	100	253	Vertical
6	26478.3250	54.77	47.25	-7.52	83.50	36.25	100	115	Vertical

Mode: TX/ DH5

Lowest channel (2480MHz)

Date: 2021-03-12

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18834.7000	57.32	46.06	-11.26	83.50	37.44	100	127	Horizontal
2	19897.6250	56.58	45.72	-10.86	83.50	37.78	100	217	Horizontal
3	20492.2000	56.69	46.20	-10.49	83.50	37.30	100	217	Horizontal
4	22322.2500	57.86	48.28	-9.58	83.50	35.22	100	328	Horizontal
5	23836.1000	55.75	47.32	-8.43	83.50	36.18	100	176	Horizontal
6	26429.8750	54.77	47.28	-7.49	83.50	36.22	100	26	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18306.0000	58.75	47.19	-11.56	83.50	36.31	100	107	Vertical
2	19943.1000	57.05	46.19	-10.86	83.50	37.31	100	132	Vertical
3	20516.0000	57.09	46.61	-10.48	83.50	36.89	100	281	Vertical
4	22322.2500	57.93	48.35	-9.58	83.50	35.15	100	18	Vertical
5	23939.3750	55.28	46.96	-8.32	83.50	36.54	100	243	Vertical
6	25660.2000	55.31	47.35	-7.96	83.50	36.15	100	193	Vertical

Mode: TX/3DH5

Lowest channel (2402MHz)

Date: 2021-03-12

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18412.6750	58.09	46.57	-11.52	83.50	36.93	100	18	Horizontal
2	19745.0500	56.89	46.02	-10.87	83.50	37.48	100	282	Horizontal
3	20484.9750	56.27	45.77	-10.50	83.50	37.73	100	1	Horizontal
4	22856.9000	55.07	46.04	-9.03	83.50	37.46	100	106	Horizontal
5	24422.6000	55.14	46.98	-8.16	83.50	36.52	100	168	Horizontal
6	26432.0000	55.24	47.75	-7.49	83.50	35.75	100	43	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18205.2750	58.16	46.57	-11.59	83.50	36.93	100	248	Vertical
2	19250.7750	56.90	45.85	-11.05	83.50	37.65	100	108	Vertical
3	21155.6250	56.23	45.94	-10.29	83.50	37.56	100	310	Vertical
4	23216.8750	56.26	47.43	-8.83	83.50	36.07	100	260	Vertical
5	23569.2000	55.78	47.10	-8.68	83.50	36.40	100	273	Vertical
6	26412.4500	54.85	47.37	-7.48	83.50	36.13	100	297	Vertical

Mode: TX/ 3DH5

Lowest channel (2441MHz)

Date: 2021-03-12

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18985.5750	58.54	47.43	-11.11	83.50	36.07	100	192	Horizontal
2	20362.1500	56.42	45.84	-10.58	83.50	37.66	100	54	Horizontal
3	21675.8250	55.64	45.71	-9.93	83.50	37.79	100	291	Horizontal
4	23239.4000	55.42	46.60	-8.82	83.50	36.90	100	1	Horizontal
5	24762.6000	54.89	46.80	-8.09	83.50	36.70	100	204	Horizontal
6	25411.1500	55.17	47.40	-7.77	83.50	36.10	100	116	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18415.2250	57.82	46.30	-11.52	83.50	37.20	100	169	Vertical
2	19703.8250	57.07	46.20	-10.87	83.50	37.30	100	30	Vertical
3	20549.1500	56.05	45.59	-10.46	83.50	37.91	100	294	Vertical
4	23211.3500	55.38	46.54	-8.84	83.50	36.96	100	144	Vertical
5	23356.7000	55.85	47.08	-8.77	83.50	36.42	100	30	Vertical
6	26434.9750	55.67	48.18	-7.49	83.50	35.32	100	318	Vertical

Mode: TX/ 3DH5

Lowest channel (2480MHz)

Date: 2021-03-12

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18697.8500	57.53	46.18	-11.35	83.50	37.32	100	55	Horizontal
2	19882.3250	56.95	46.09	-10.86	83.50	37.41	100	67	Horizontal
3	21646.9250	55.39	45.46	-9.93	83.50	38.04	100	354	Horizontal
4	22322.2500	56.10	46.52	-9.58	83.50	36.98	100	344	Horizontal
5	23928.7500	55.51	47.18	-8.33	83.50	36.32	100	359	Horizontal
6	25986.6000	55.33	46.98	-8.35	83.50	36.52	100	193	Horizontal

Suspected Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	18918.8500	57.96	46.79	-11.17	83.50	36.71	100	303	Vertical
2	19506.2000	57.01	46.09	-10.92	83.50	37.41	100	128	Vertical
3	20548.7250	56.26	45.80	-10.46	83.50	37.70	100	254	Vertical
4	22321.8250	57.37	47.79	-9.58	83.50	35.71	100	328	Vertical
5	23854.3750	55.38	46.97	-8.41	83.50	36.53	100	54	Vertical
6	25613.0250	55.45	47.54	-7.91	83.50	35.96	100	103	Vertical

Test result: The unit does meet the requirements.

5.9. RESTRICTED BANDS OF OPERATION

5.9.1. LIMITS

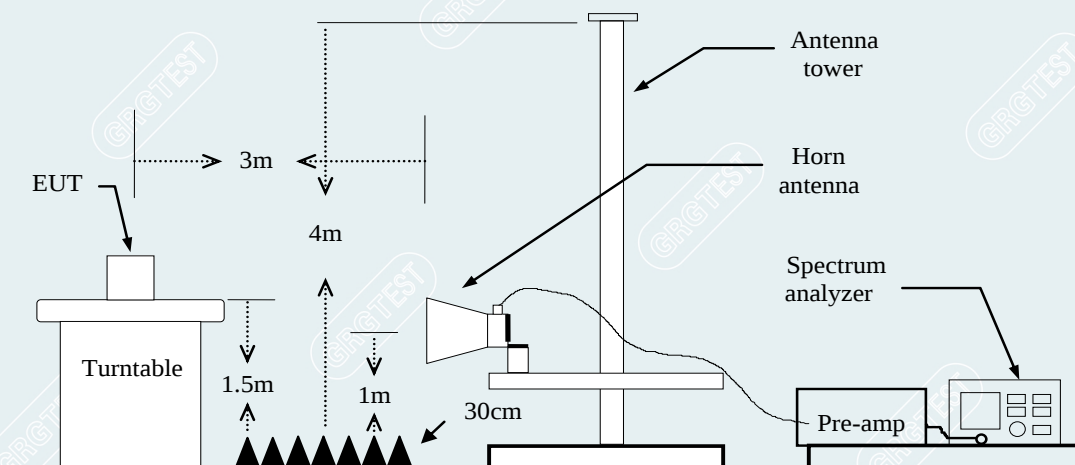
Section 15.247(d) In addition, Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

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 -	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.69525	960 - 1240	7.25 - 7.75
4.125 - 4.128	16.80425 -	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	16.80475	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	25.5 - 25.67	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	37.5 - 38.25	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	73 - 74.6	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	74.8 - 75.2	2200 - 2300	14.47 - 14.5
8.291 - 8.294	108 - 121.94	2310 - 2390	15.35 - 16.2
8.362 - 8.366	123 - 138	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	149.9 - 150.05	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.52475 -	3260 - 3267	23.6 - 24.0
12.29 - 12.293	156.52525	3332 - 3339	31.2 - 31.8
12.51975 -	156.7 - 156.9	3345.8 - 3358	36.43 - 36.5
12.52025	162.0125 - 167.17	3600 - 4400	
12.57675 -	167.72 - 173.2		
12.57725	240 - 285		
13.36 - 13.41	322 - 335.4		

5.9.2. TEST PROCEDURES

- 1) The EUT is placed on a turntable, which is 1.5m above the ground plane.
- 2) The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
- 3) EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
- 4) Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
 - a) PEAK: RBW=1MHz / VBW=1MHz / Sweep=AUTO
 - b) AVERAGE: RBW=1MHz / VBW=1/T / Sweep=AUTO
- 5) Repeat the procedures until all the PEAK and AVERAGE versus POLARIZATION are measured.

5.9.3. TEST SETUP



5.9.4. TEST RESULTS

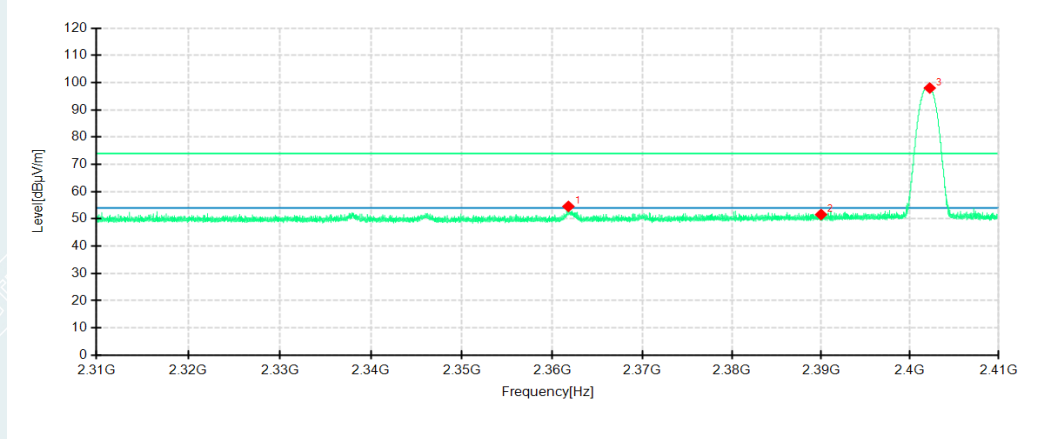
DH5

Lowest Channel

Channel 2402MHz

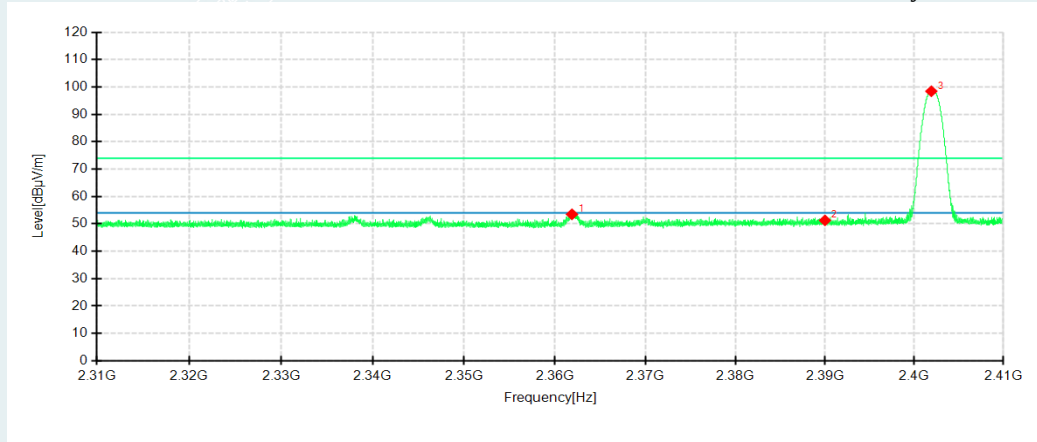
Detector mode: Peak

Polarity: Horizontal



Detector mode: Peak

Polarity: Vertical



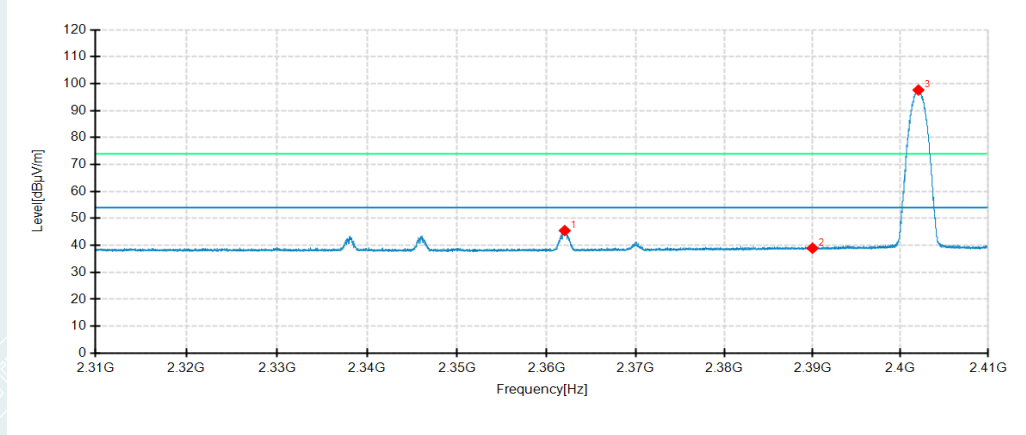
No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBμV/m	Margin dB	Height cm	Angle °	Pole	Comment
1	2361.8000	51.82	54.57	2.75	74.00	19.43	150	41	Horizontal	/
2	2390.0000	48.40	51.59	3.19	74.00	22.41	150	108	Horizontal	/
3	2402.2300	94.66	98.01	3.35	74.00	-24.01	150	12	Horizontal	No limit
1	2361.9000	50.75	53.50	2.75	74.00	20.50	150	0	Vertical	/
2	2390.0000	48.09	51.28	3.19	74.00	22.72	150	297	Vertical	/
3	2401.9100	95.08	98.43	3.35	74.00	-24.43	150	5	Vertical	No limit

Lowest Channel

Channel 2402MHz

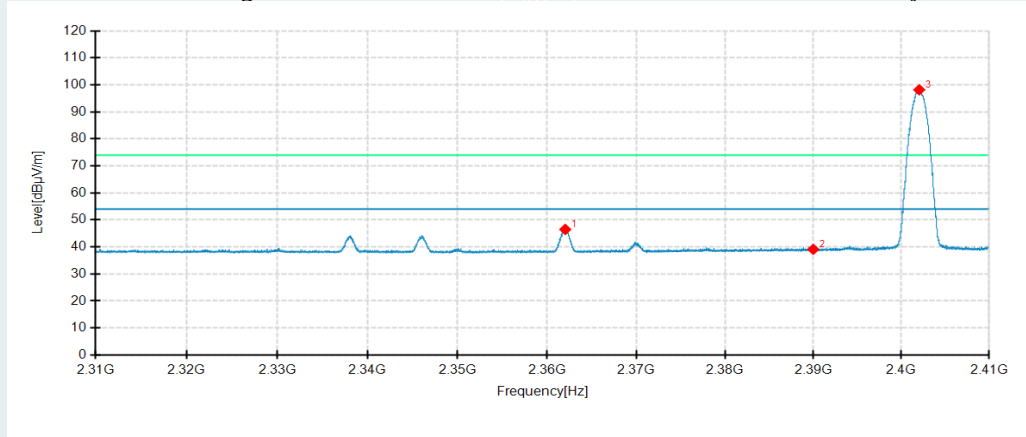
Detector mode: Average

Polarity: Horizontal



Detector mode: Average

Polarity: Vertical



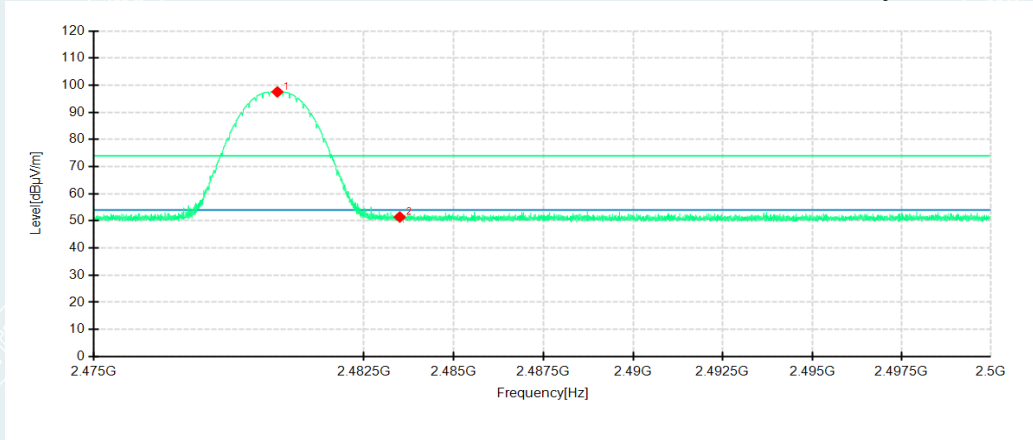
No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBμV/m	Margin dB	Height cm	Angle °	Pole	Comment
1	2362.0500	42.72	45.48	2.76	54.00	8.52	150	11	Horizontal	/
2	2390.0000	35.75	38.94	3.19	54.00	15.06	150	130	Horizontal	/
3	2402.0500	94.27	97.62	3.35	54.00	-43.62	150	11	Horizontal	No limit
1	2362.0500	43.72	46.48	2.76	54.00	7.52	150	3	Vertical	/
2	2390.0000	35.91	39.10	3.19	54.00	14.90	150	237	Vertical	/
3	2402.0400	94.80	98.15	3.35	54.00	-44.15	150	7	Vertical	No limit

Highest Channel

Channel 2480MHz

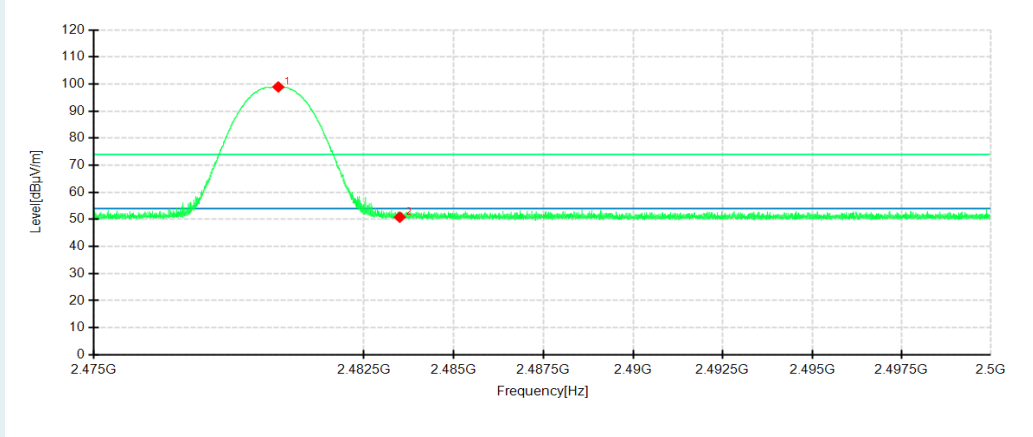
Detector mode: Peak

Polarity: Horizontal



Detector mode: Peak

Polarity: Vertical



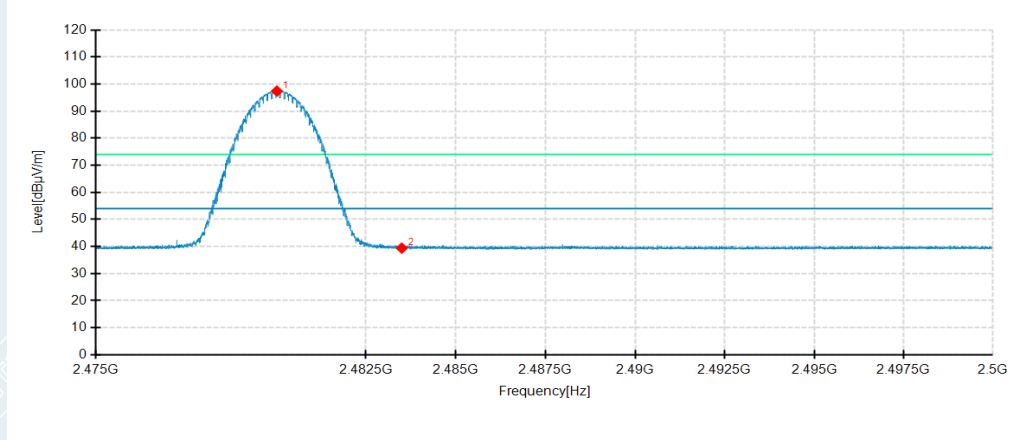
No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBμV/m	Margin dB	Height cm	Angle °	Pole	Comment
1	2480.0975	93.98	97.53	3.55	74.00	-23.53	150	4	Horizontal	No limit
2	2483.5000	47.86	51.42	3.56	74.00	22.58	150	222	Horizontal	/
1	2480.1225	95.36	98.91	3.55	74.00	-24.91	150	11	Vertical	No limit
2	2483.5000	47.24	50.80	3.56	74.00	23.20	150	63	Vertical	/

Highest Channel

Channel 2480MHz

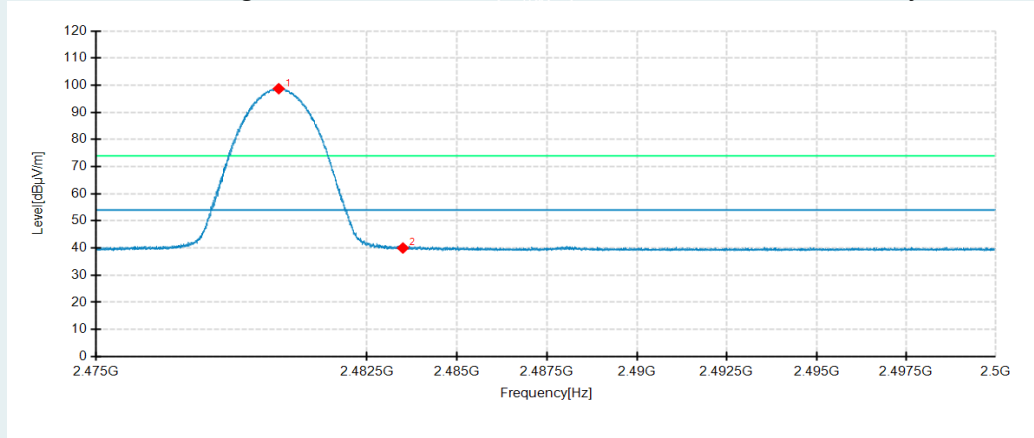
Detector mode: Average

Polarity: Horizontal



Detector mode: Average

Polarity: Vertical



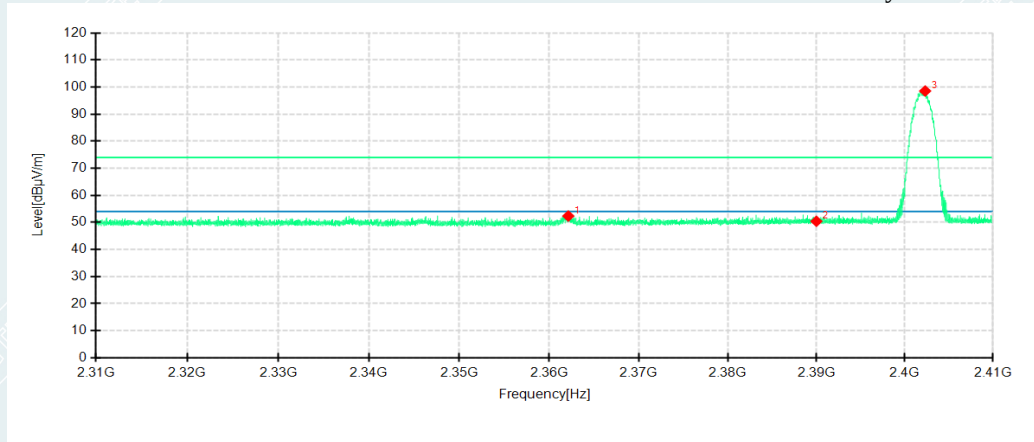
No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBuV/m	Margin dB	Height cm	Angle °	Pole	Comment
1	2480.0275	93.82	97.37	3.55	54.00	-43.37	150	4	Horizontal	No limit
2	2483.5000	35.84	39.40	3.56	54.00	14.60	150	68	Horizontal	/
1	2480.0575	95.16	98.71	3.55	54.00	-44.71	150	12	Vertical	No limit
2	2483.5000	36.44	40.00	3.56	54.00	14.00	150	12	Vertical	/

3DH5**Lowest Channel**

Channel 2402MHz

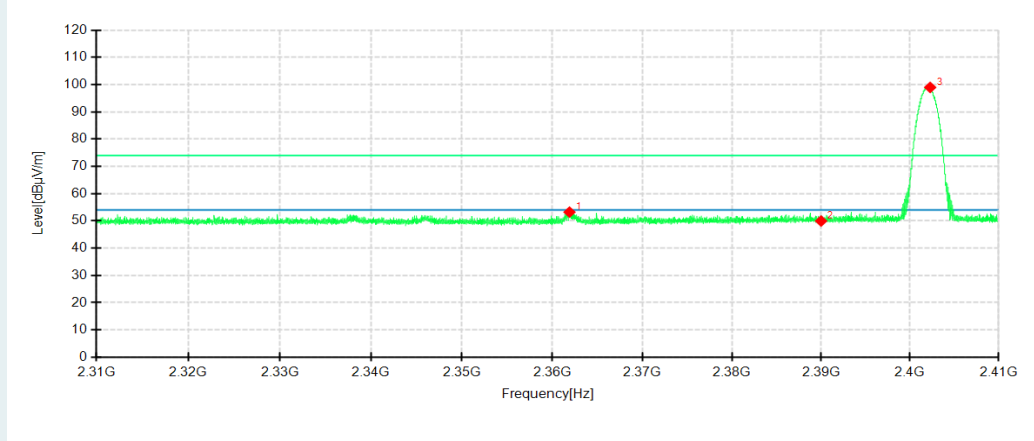
Detector mode: Peak

Polarity: Horizontal



Detector mode: Peak

Polarity: Vertical



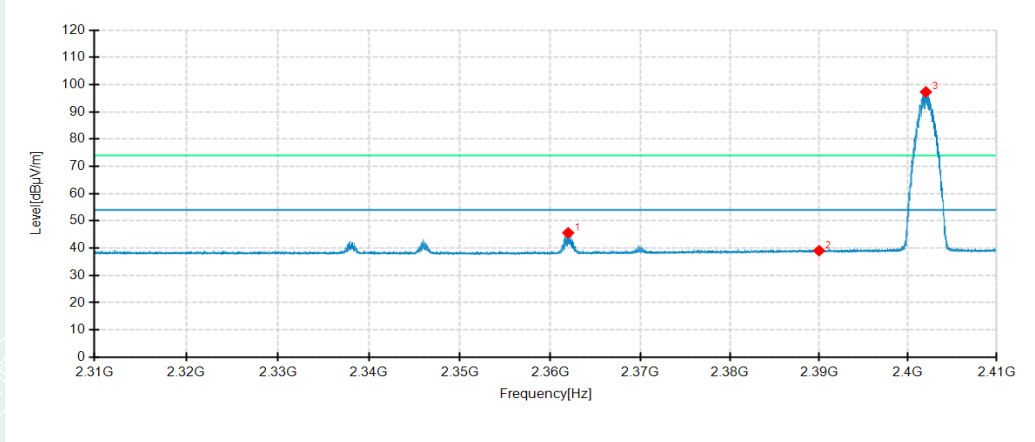
No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBuV/m	Margin dB	Height cm	Angle °	Pole	Comment
1	2362.1500	49.59	52.35	2.76	74.00	21.65	150	6	Horizontal	/
2	2390.0000	47.23	50.42	3.19	74.00	23.58	150	19	Horizontal	/
3	2402.3100	95.17	98.52	3.35	74.00	-24.52	150	6	Horizontal	No limit
1	2361.9200	50.47	53.22	2.75	74.00	20.78	150	12	Vertical	/
2	2390.0000	46.77	49.96	3.19	74.00	24.04	150	174	Vertical	/
3	2402.2800	95.61	98.96	3.35	74.00	-24.96	150	12	Vertical	No limit

Lowest Channel

Channel 2402MHz

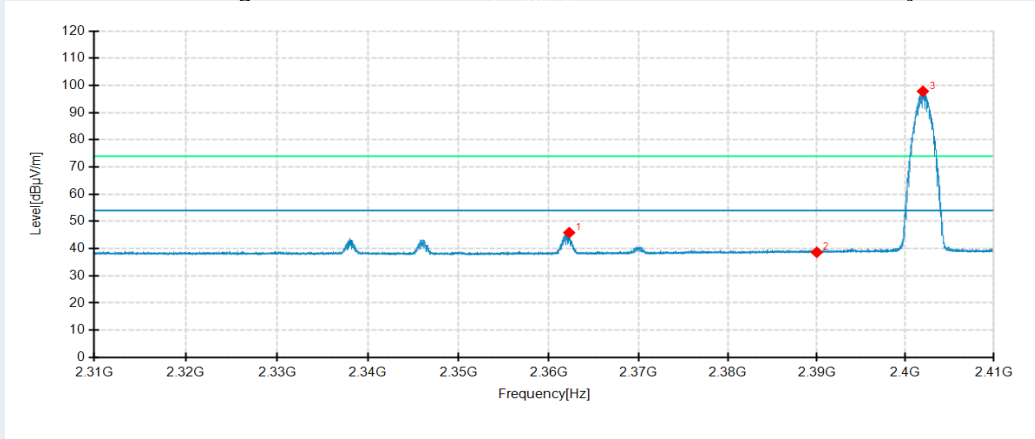
Detector mode: Average

Polarity: Horizontal



Detector mode: Average

Polarity: Vertical



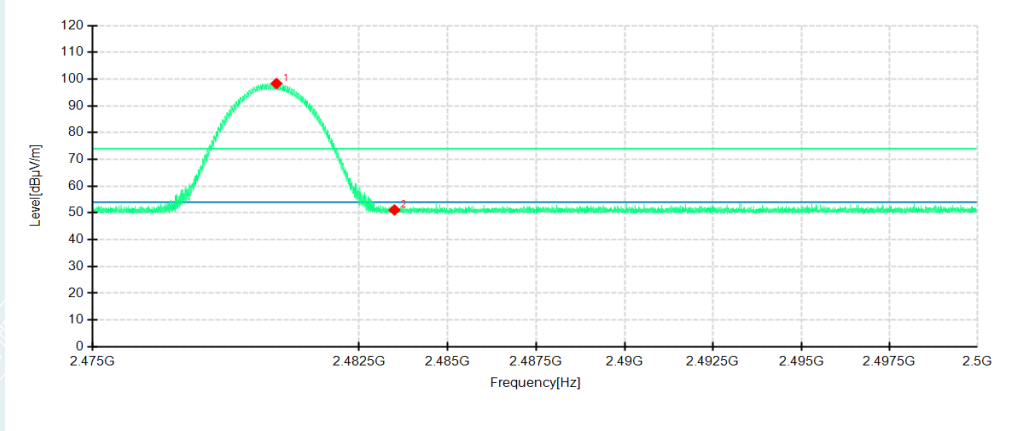
No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBμV/m	Margin dB	Height cm	Angle °	Pole	Comment
1	2362.0000	42.87	45.62	2.75	54.00	8.38	150	40	Horizontal	/
2	2390.0000	35.88	39.07	3.19	54.00	14.93	150	5	Horizontal	/
3	2402.0200	93.94	97.29	3.35	54.00	-43.29	150	11	Horizontal	No limit
1	2362.2900	43.10	45.86	2.76	54.00	8.14	150	12	Vertical	/
2	2390.0000	35.45	38.64	3.19	54.00	15.36	150	322	Vertical	/
3	2401.9800	94.47	97.82	3.35	54.00	-43.82	150	12	Vertical	No limit

Highest Channel

Channel 2480MHz

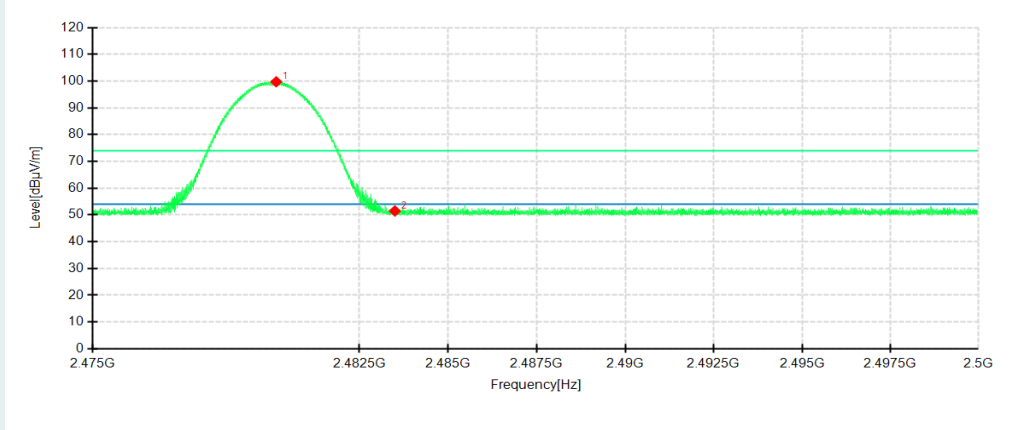
Detector mode: Peak

Polarity: Horizontal



Detector mode: Peak

Polarity: Vertical



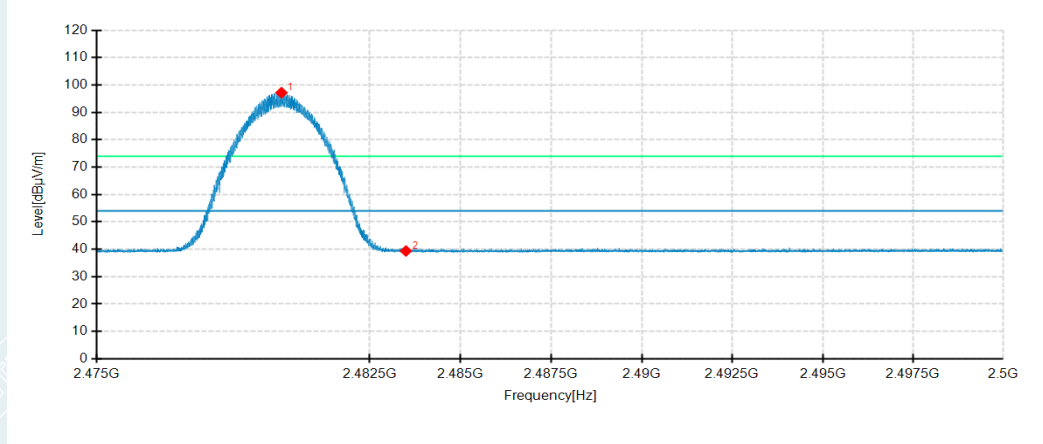
No. v	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBμV/m	Margin dB	Height cm	Angle °	Pole	Comment
1	2480.1750	94.78	98.33	3.55	74.00	-24.33	150	4	Horizontal	No limit
2	2483.5000	47.54	51.10	3.56	74.00	22.90	150	194	Horizontal	/
1	2480.1600	96.18	99.73	3.55	74.00	-25.73	150	12	Vertical	No limit
2	2483.5000	47.90	51.46	3.56	74.00	22.54	150	337	Vertical	/

Highest Channel

Channel 2480MHz

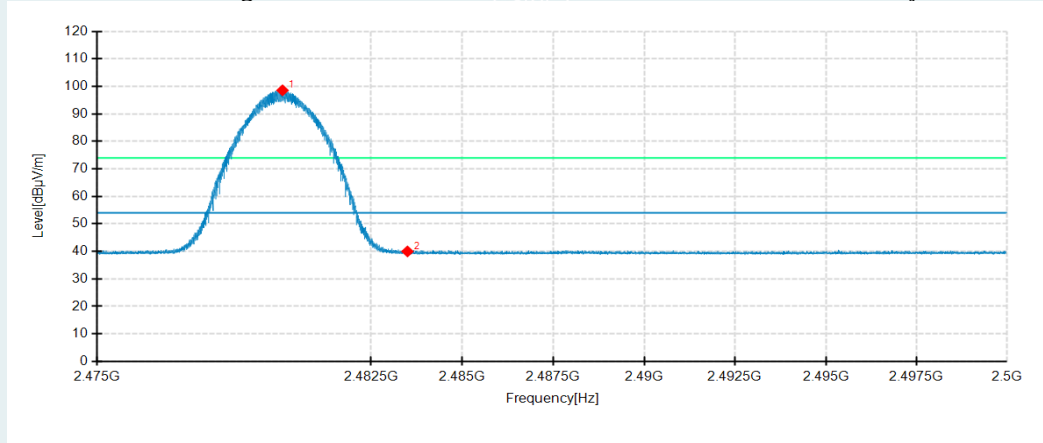
Detector mode: Average

Polarity: Horizontal



Detector mode: Average

Polarity: Vertical



No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBμV/m	Margin dB	Height cm	Angle °	Pole	Comment
1	2480.0750	93.63	97.18	3.55	54.00	-43.18	150	8	Horizontal	No limit
2	2483.5000	35.82	39.38	3.56	54.00	14.62	150	15	Horizontal	/
1	2480.0750	95.01	98.56	3.55	54.00	-44.56	150	11	Vertical	No limit
2	2483.5000	36.43	39.99	3.56	54.00	14.01	150	328	Vertical	/

Remark: Max field strength in 3m distance. No any other emission which falls in restricted bands can be detected and be reported.

-----This is the last page of the report. -----