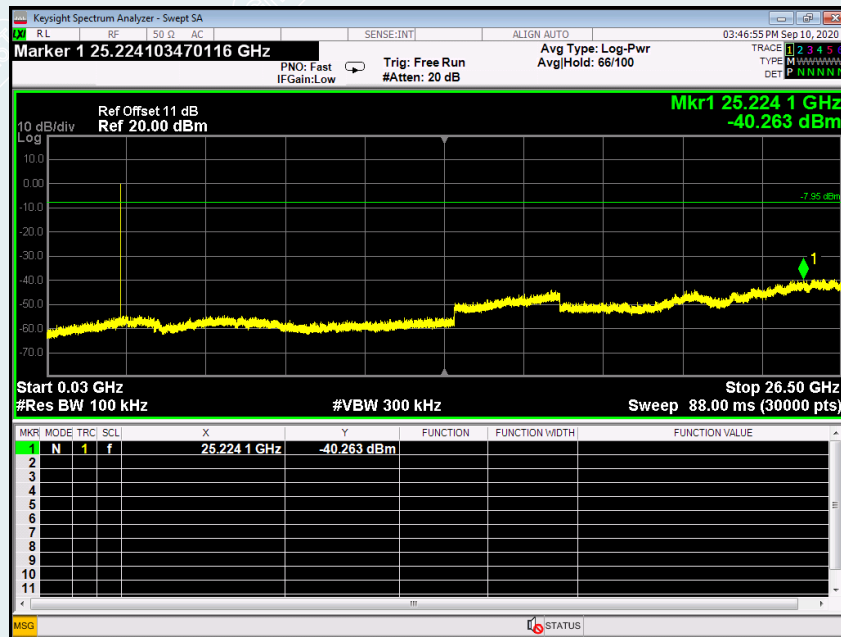
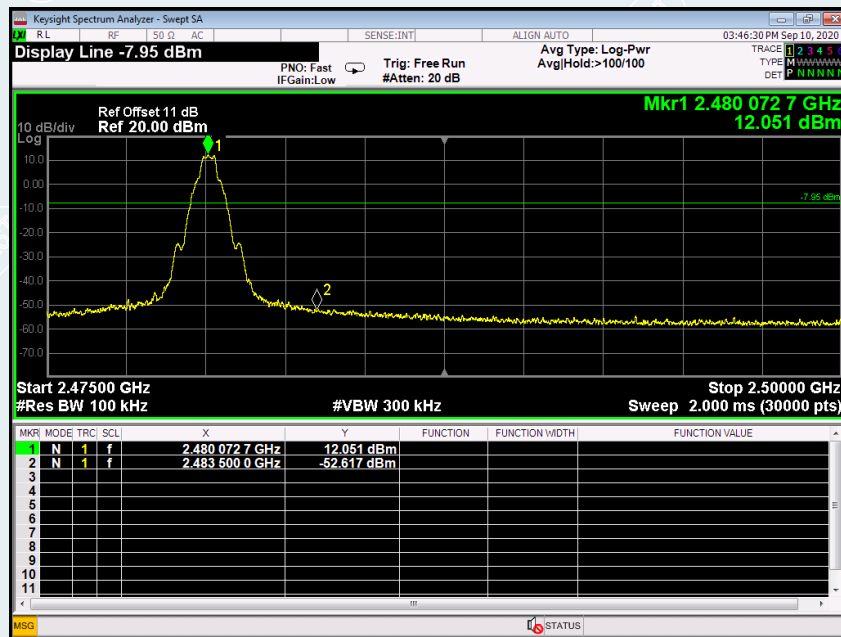


CH High (30MHz ~26.5GHz)

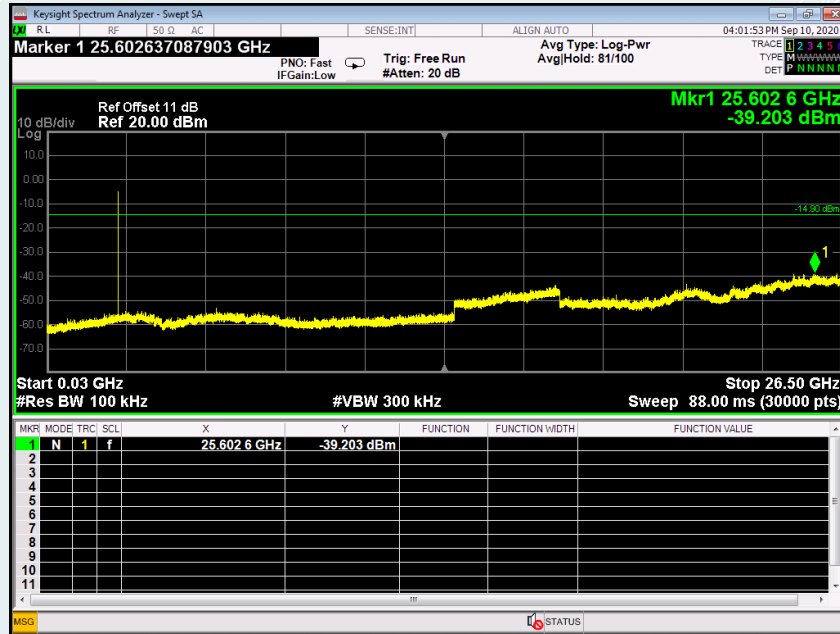


CH High (2.475GHz ~ 2.5GHz)

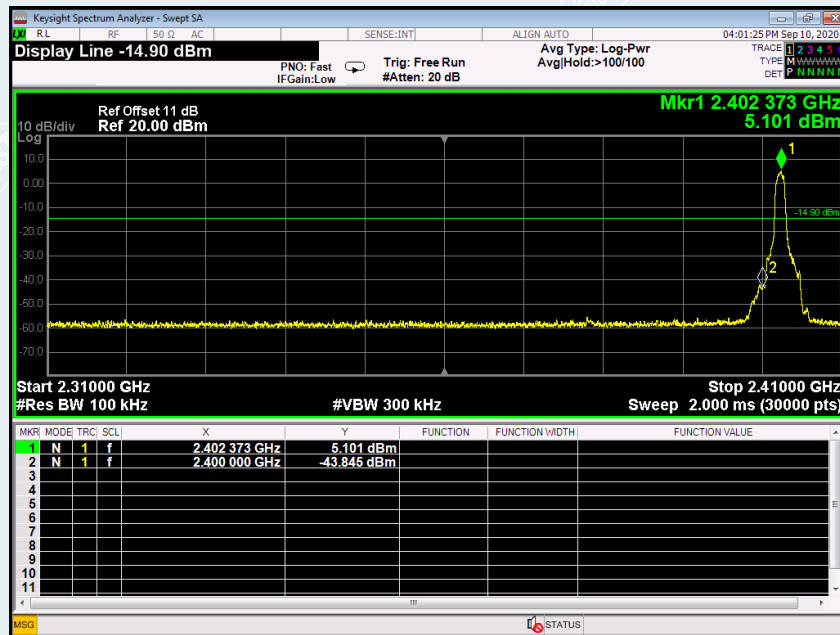


2DH5

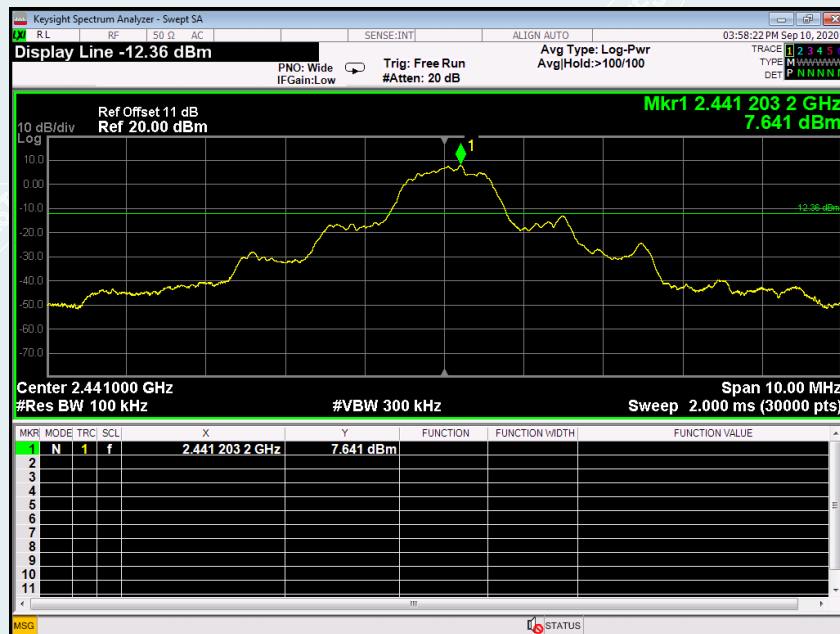
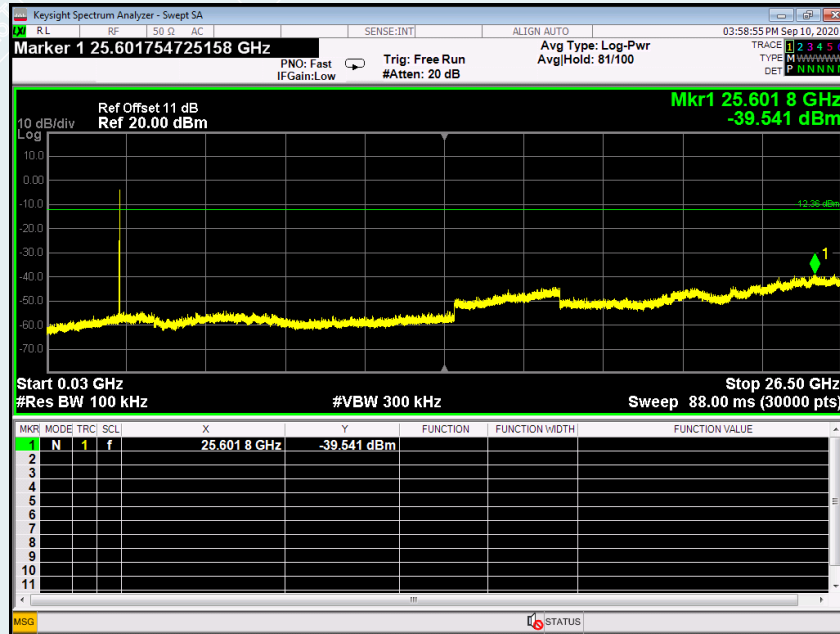
CH Low (30MHz ~26.5GHz)



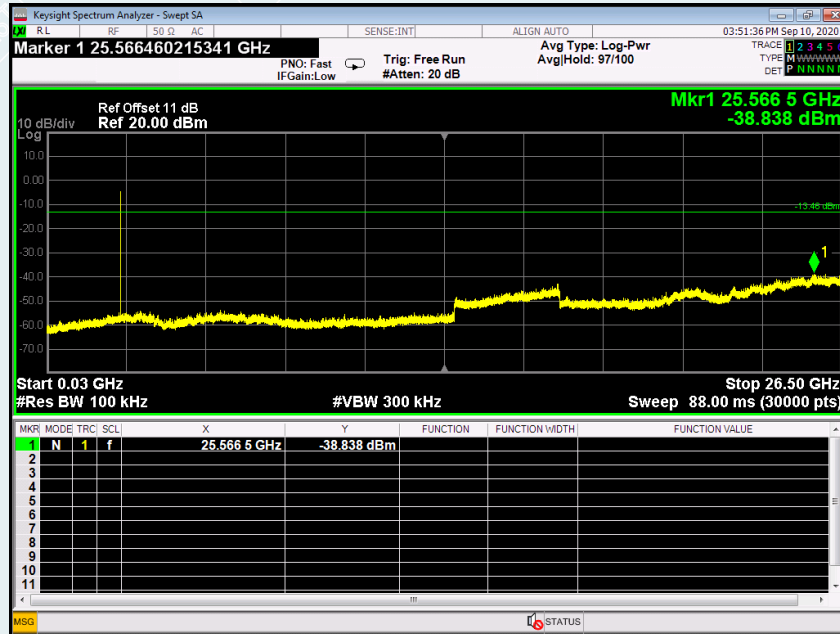
CH Low (2.31GHz ~2.41GHz)



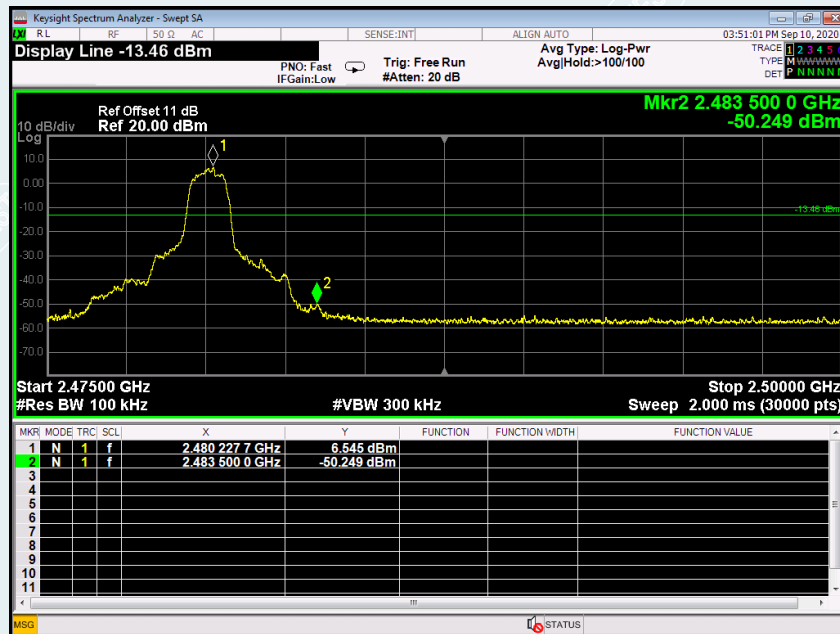
CH Mid (30MHz ~26.5GHz)



CH High (30MHz ~26.5GHz)

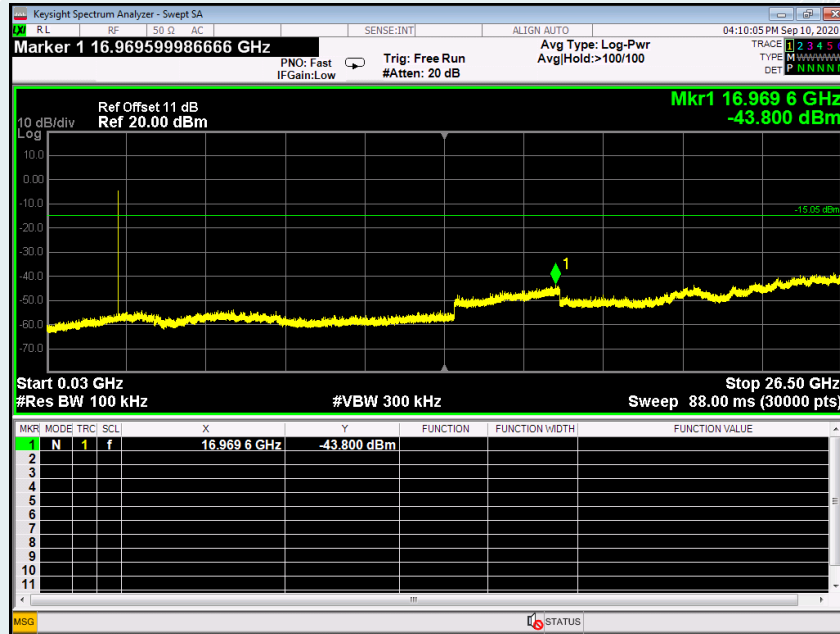


CH High (2.475GHz ~ 2.5GHz)

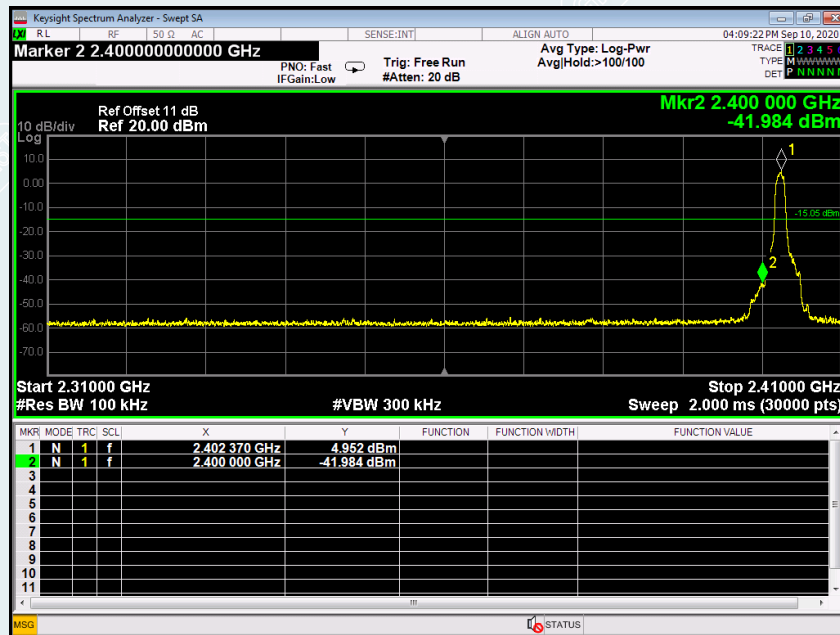


3DH5

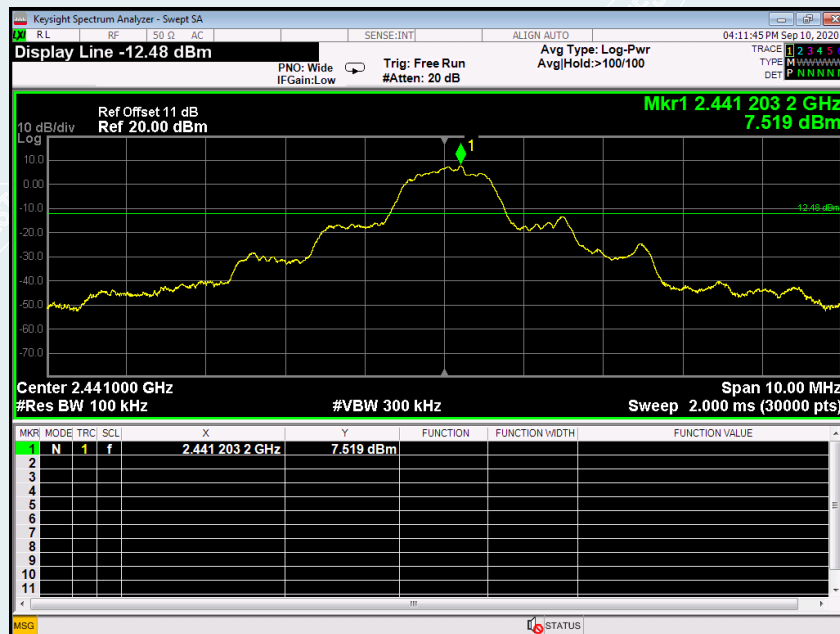
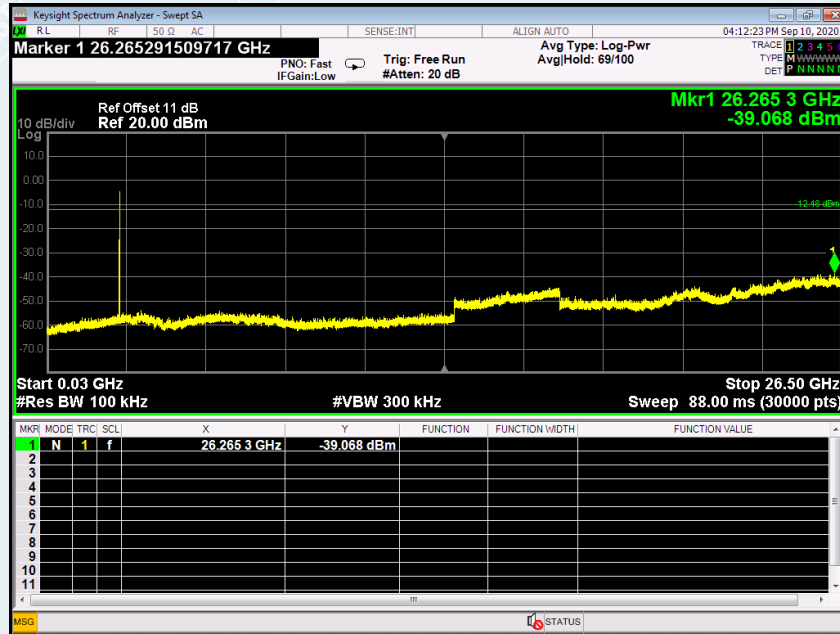
CH Low (30MHz ~26.5GHz)



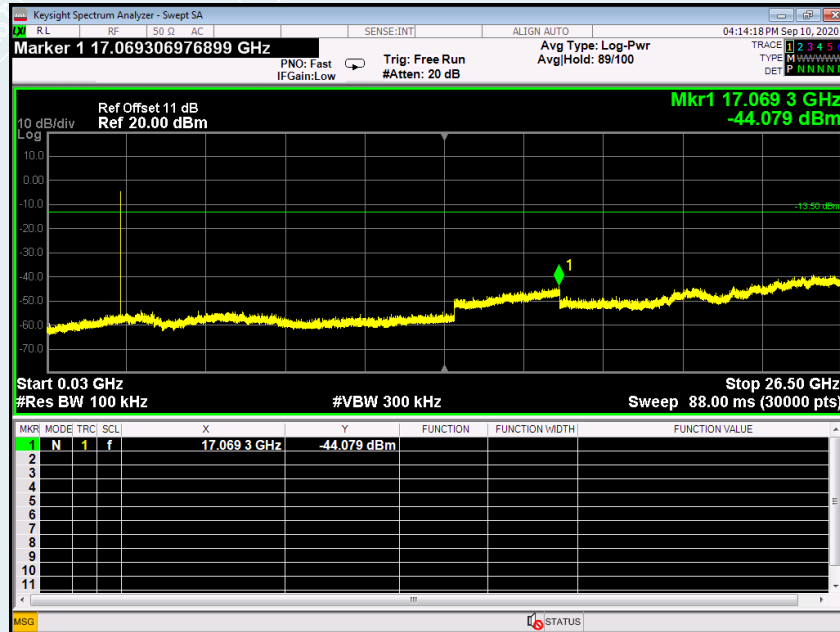
CH Low (2.31GHz ~2.41GHz)



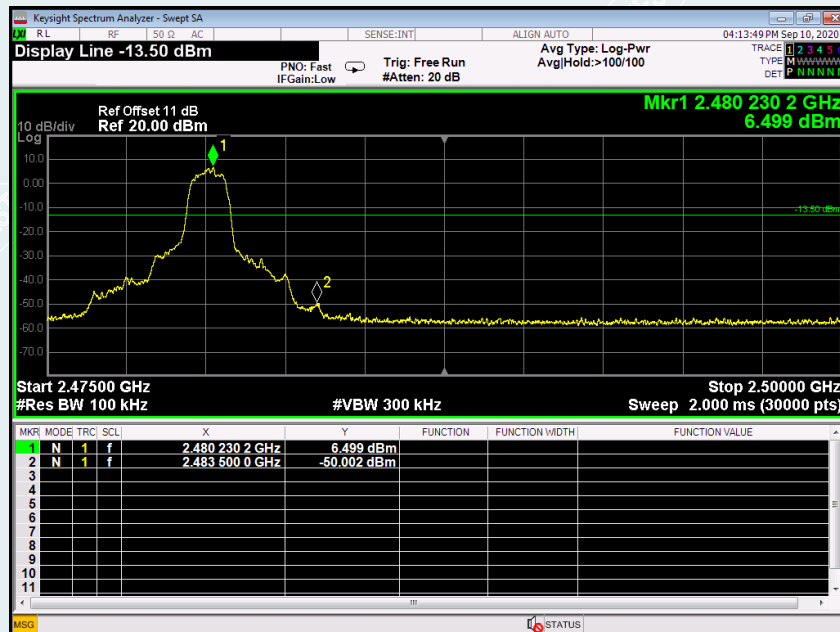
CH Mid (30MHz ~26.5GHz)



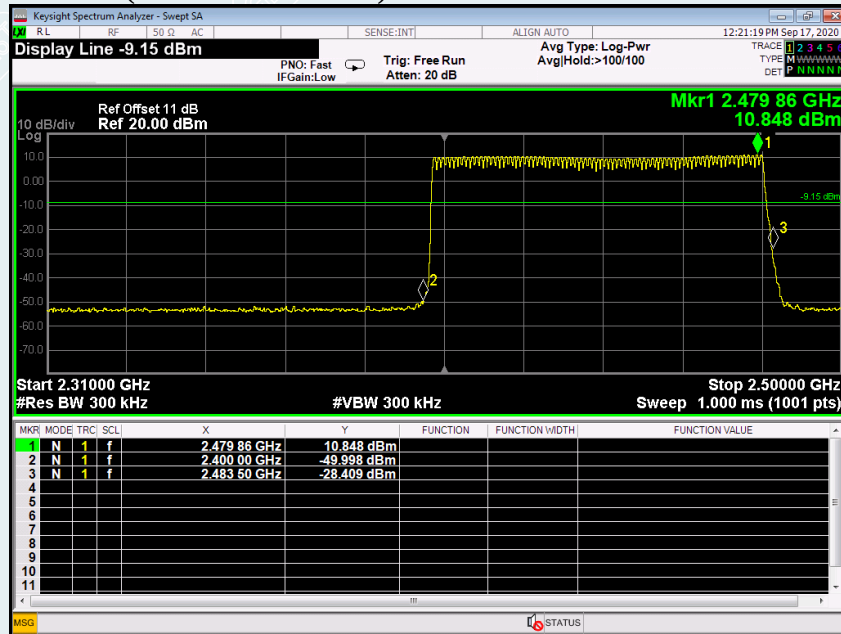
CH High (30MHz ~26.5GHz)



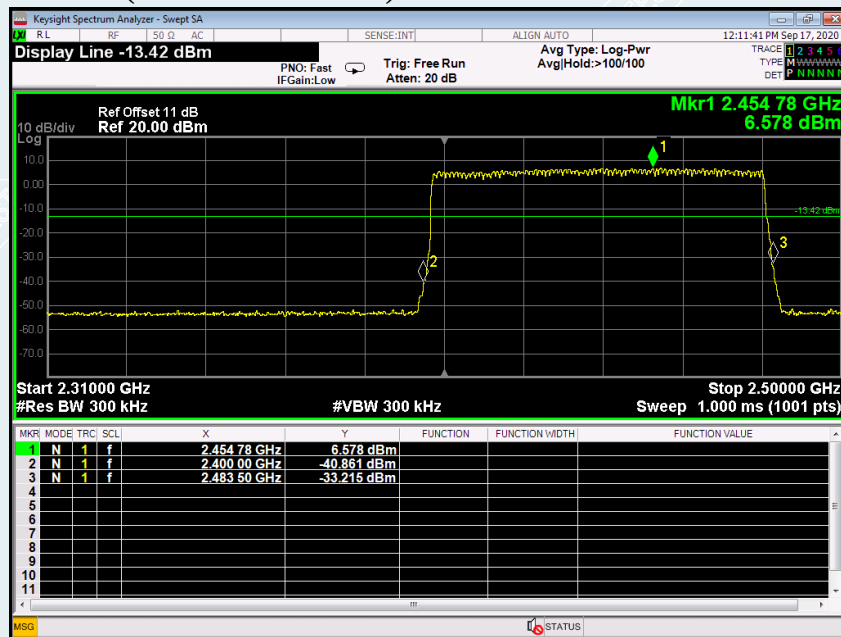
CH High (2.475GHz ~ 2.5GHz)



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

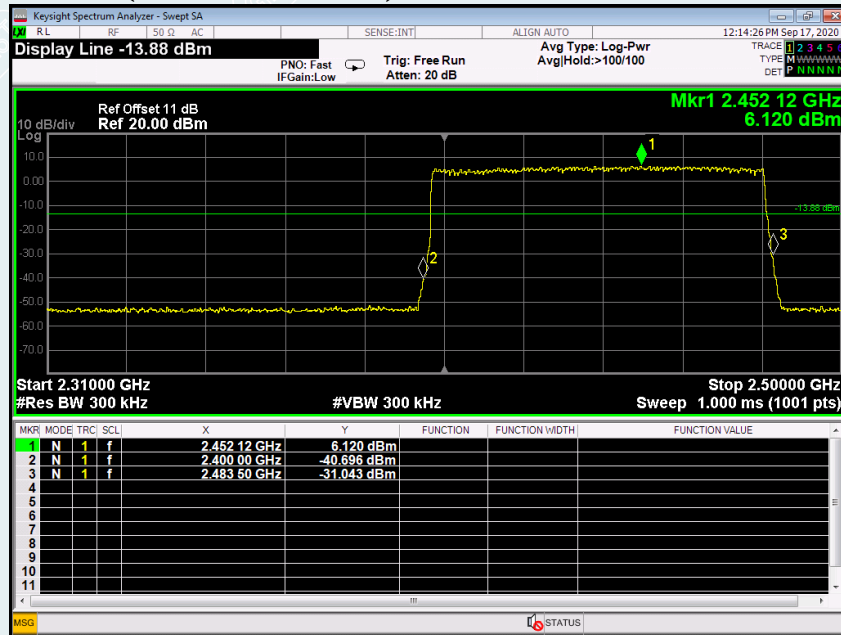
 $\pi/4$ -DQPSK

CH Low (2.31GHz ~2.5GHz)



8DPSK

CH Low (2.31GHz ~2.5GHz)



5.9. RADIATED SPURIOUS EMISSIONS

5.9.1. 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.

5.9.2. 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.

5.9.3. TEST SETUP

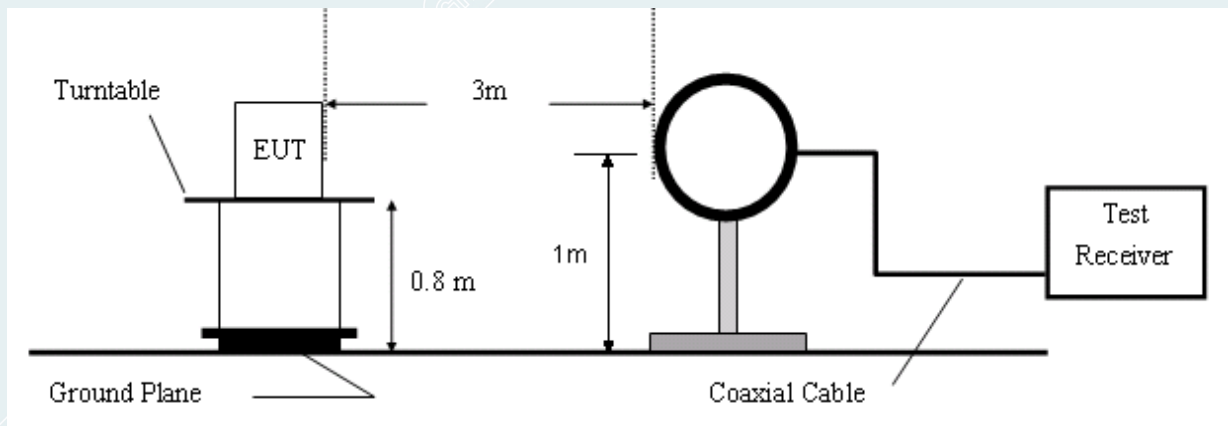


Figure 1. 9 KHz to 30MHz radiated emissions test configuration

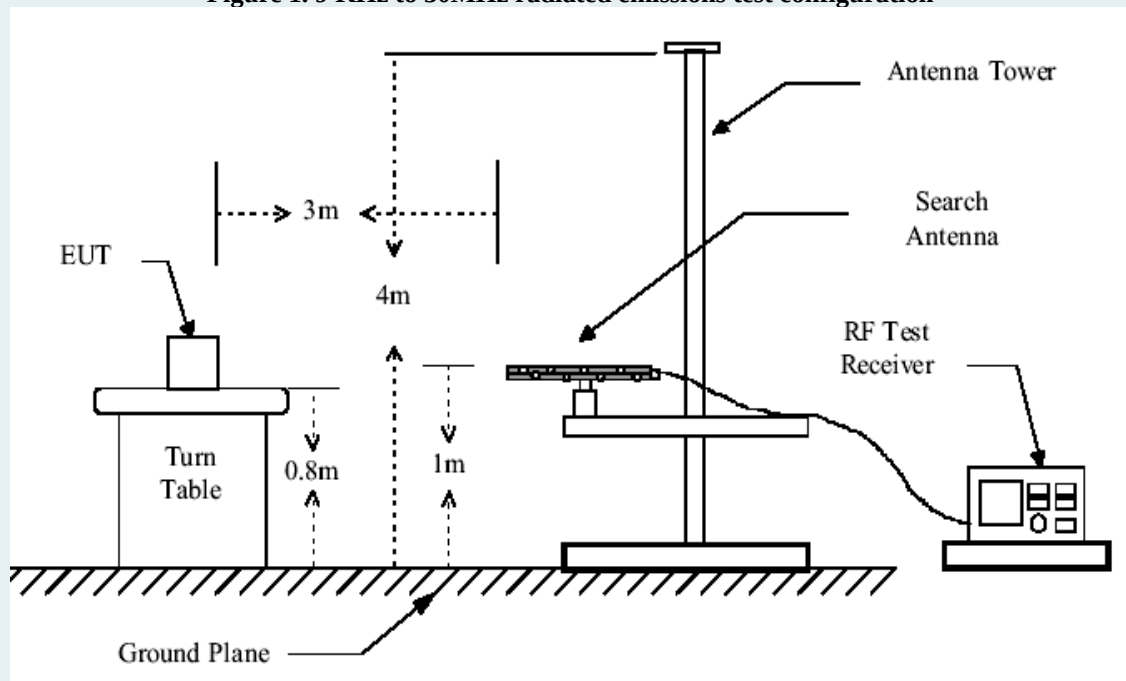


Figure 2. 30MHz to 1GHz radiated emissions test configuration

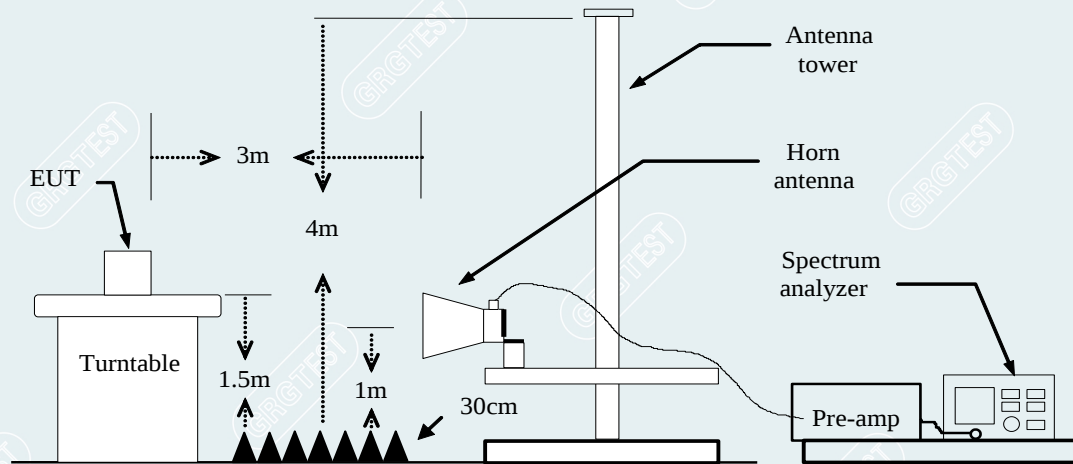


Figure 3. Above 1GHz radiated emissions test configuration

5.9.4. 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

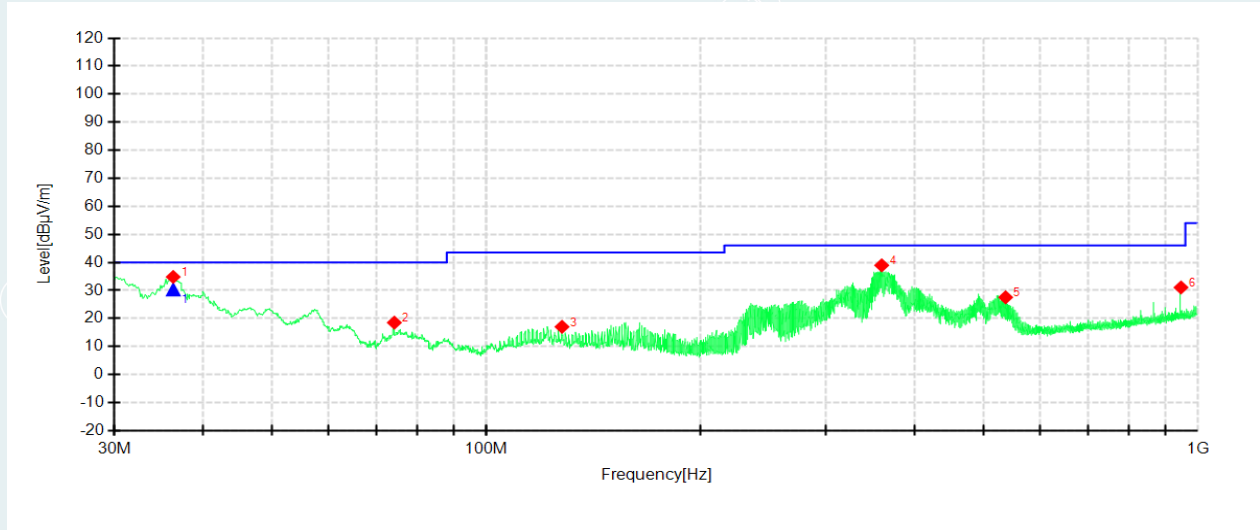
5.9.5. TEST RESULTS

30MHz to 1GHz:

Mode: TX/1Mbps

Lowest channel (2402MHz)

Date: 2020/09/16



Suspected Data List

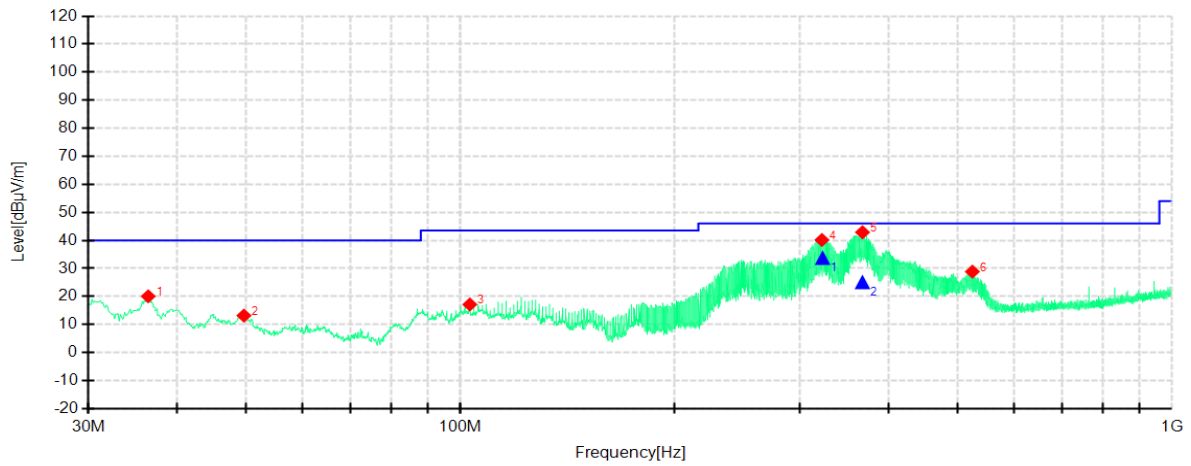
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity
1	36.3050	64.89	34.82	-30.07	40.00	5.18	PK	100	289	Vertical
2	74.2563	50.65	18.53	-32.12	40.00	21.47	PK	100	323	Vertical
3	127.7275	46.58	17.03	-29.55	43.50	26.47	PK	100	78	Vertical
4	359.4363	64.34	38.95	-25.39	46.00	7.05	PK	200	3	Vertical
5	536.7038	49.13	27.55	-21.58	46.00	18.45	PK	100	51	Vertical
6	946.6500	45.22	31.06	-14.16	46.00	14.94	PK	100	6	Vertical

Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBμV/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.3065	-30.07	60.32	30.25	40.00	9.75	100	195.3	Vertical

Mode: TX/1Mbps
Lowest channel (2402MHz)

Date: 2020/09/16

**Suspected Data List**

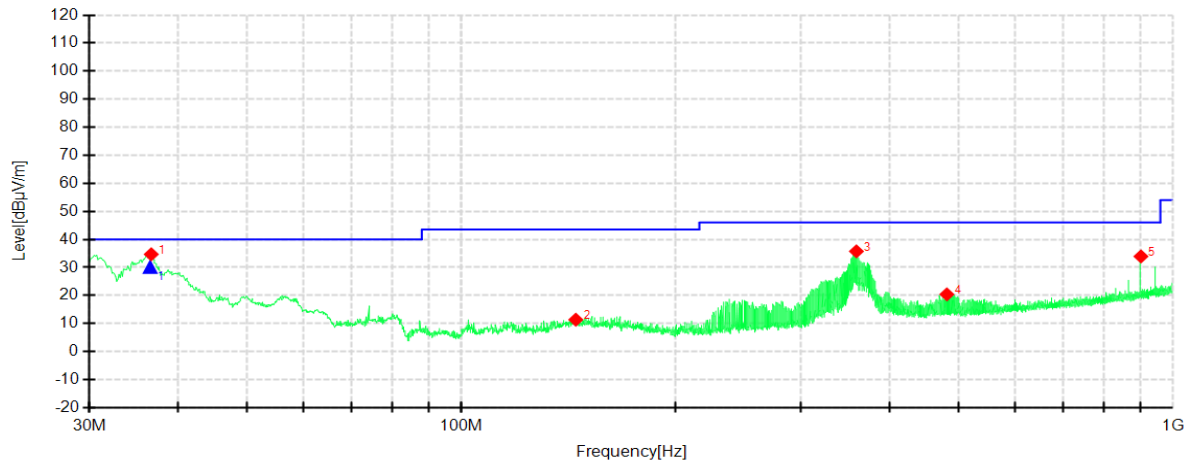
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity
1	36.4263	50.73	20.07	-30.66	40.00	19.93	PK	200	104	Horizontal
2	49.6425	41.95	13.18	-28.77	40.00	26.82	PK	200	313	Horizontal
3	103.1138	47.17	17.15	-30.02	43.50	26.35	PK	200	332	Horizontal
4	322.2125	66.10	40.16	-25.94	46.00	5.84	PK	100	331	Horizontal
5	367.4388	67.83	42.89	-24.94	46.00	3.11	PK	100	349	Horizontal
6	524.3363	50.14	28.86	-21.28	46.00	17.14	PK	200	316	Horizontal

Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBμV/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	322.9214	-25.92	59.56	33.64	46.00	12.36	100	314.9	Horizontal
2	367.3433	-24.94	49.92	24.98	46.00	21.02	100	271.1	Horizontal

Mode: TX/1Mbps
Highest channel (2480MHz)

Date: 2020/09/16

**Suspected Data List**

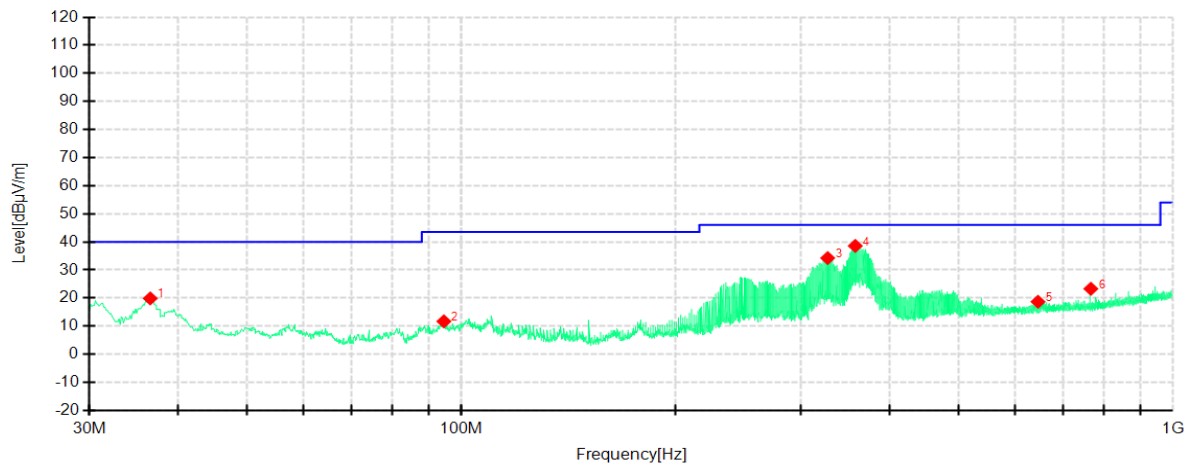
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity
1	36.668	64.74	34.69	-30.05	40.00	5.31	PK	100	75	Vertical
2	144.82	38.33	11.37	-26.96	43.50	32.13	PK	200	319	Vertical
3	359.07	61.13	35.74	-25.39	46.00	10.26	PK	100	33	Vertical
4	481.17	42.72	20.39	-22.33	46.00	25.61	PK	100	26	Vertical
5	901.54	48.54	33.93	-14.61	46.00	12.07	PK	100	316	Vertical

Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBμV/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.5339	-30.05	60.20	30.15	40.00	9.85	100	242.2	Vertical

Mode: TX/1Mbps
Highest channel (2480MHz)

Date: 2020/09/16

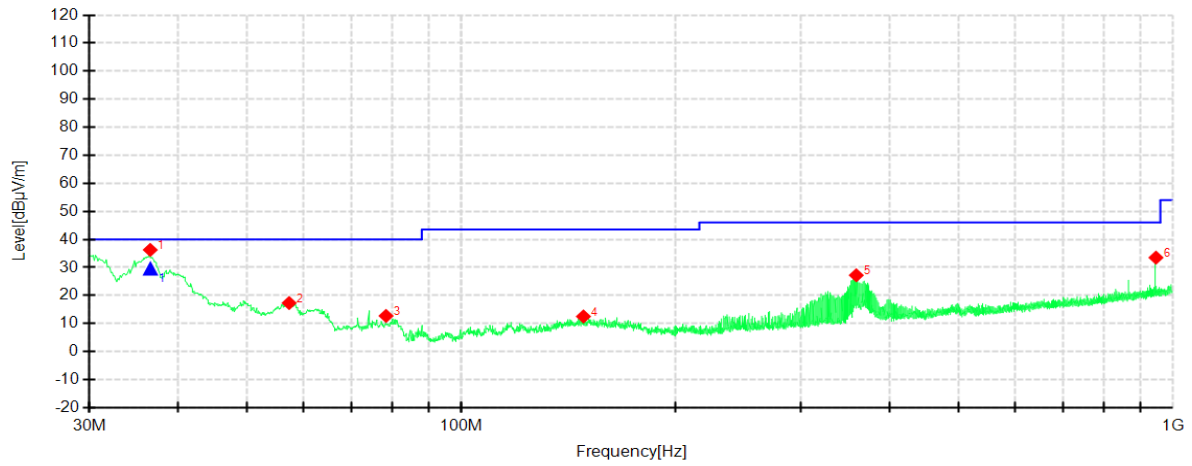


Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity
1	36.5475	50.52	19.88	-30.64	40.00	20.12	PK	200	304	Horizontal
2	94.5050	42.62	11.72	-30.90	43.50	31.78	PK	200	304	Horizontal
3	327.1838	60.00	34.24	-25.76	46.00	11.76	PK	100	332	Horizontal
4	357.7388	63.61	38.56	-25.05	46.00	7.44	PK	100	354	Horizontal
5	646.1925	37.51	18.68	-18.83	46.00	27.32	PK	100	116	Horizontal
6	766.7150	41.17	23.30	-17.87	46.00	22.70	PK	100	290	Horizontal

Mode: TX/3Mbps
Lowest channel (2402MHz)

Date: 2020/09/16

**Suspected Data List**

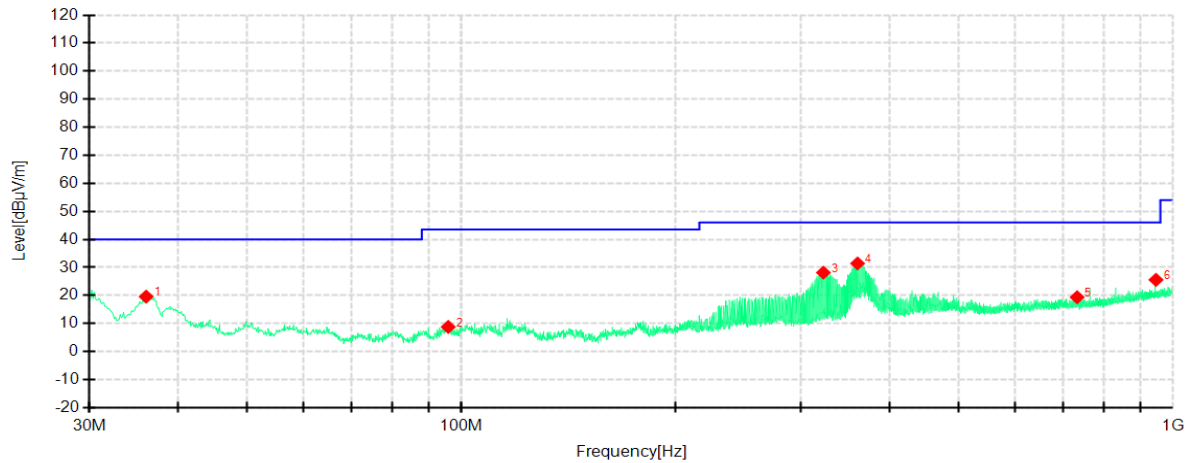
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity
1	36.5475	66.31	36.26	-30.05	40.00	3.74	PK	100	278	Vertical
2	57.2813	47.84	17.32	-30.52	40.00	22.68	PK	100	15	Vertical
3	78.3788	45.15	12.71	-32.44	40.00	27.29	PK	100	56	Vertical
4	148.4613	39.25	12.51	-26.74	43.50	30.99	PK	100	147	Vertical
5	358.9513	52.60	27.21	-25.39	46.00	18.79	PK	200	26	Vertical
6	946.5288	47.66	33.50	-14.16	46.00	12.50	PK	100	8	Vertical

Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBμV/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.5636	-30.05	59.57	29.52	40.00	10.48	106	221.4	Vertical

Mode: TX/3Mbps
Lowest channel (2402MHz)

Date: 2020/09/16

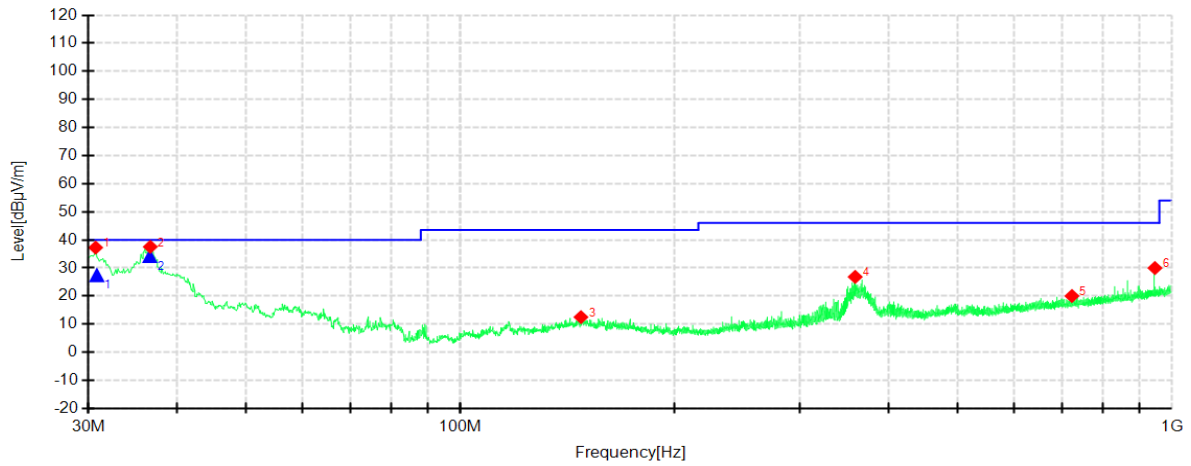


Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity
1	36.0625	50.33	19.59	-30.74	40.00	20.41	PK	200	22	Horizontal
2	95.8388	39.46	8.79	-30.67	43.50	34.71	PK	100	312	Horizontal
3	322.6975	54.08	28.16	-25.92	46.00	17.84	PK	100	320	Horizontal
4	360.4063	56.46	31.43	-25.03	46.00	14.57	PK	100	0	Horizontal
5	733.3713	37.45	19.37	-18.08	46.00	26.63	PK	100	154	Horizontal
6	946.5288	40.42	25.57	-14.85	46.00	20.43	PK	100	102	Horizontal

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

Date: 2020/09/16

**Suspected Data List**

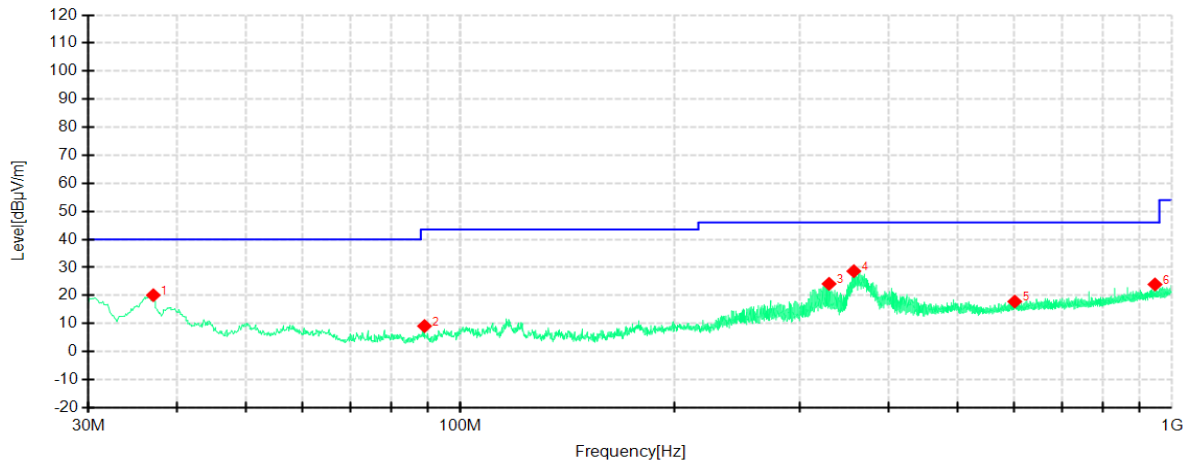
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity
1	30.7275	67.69	37.26	-30.43	40.00	2.74	PK	100	297	Vertical
2	36.6688	67.58	37.53	-30.05	40.00	2.47	PK	100	0	Vertical
3	147.7338	39.30	12.51	-26.79	43.50	30.99	PK	200	154	Vertical
4	358.8300	52.22	26.83	-25.39	46.00	19.17	PK	200	14	Vertical
5	723.5500	37.69	20.03	-17.66	46.00	25.97	PK	200	164	Vertical
6	946.5288	44.14	29.98	-14.16	46.00	16.02	PK	100	44	Vertical

Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBμV/m]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	30.8449	-30.43	57.80	27.37	40.00	12.63	137	298.2	Vertical
2	36.6079	-30.05	64.19	34.14	40.00	5.86	100	252.9	Vertical

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

Date: 2020/09/16



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Height [cm]	Angle [°]	Polarity
1	37.0325	50.65	20.11	-30.54	40.00	19.89	PK	200	52	Horizontal
2	89.0488	40.90	9.09	-31.81	43.50	34.41	PK	200	108	Horizontal
3	329.7300	49.83	24.16	-25.67	46.00	21.84	PK	100	342	Horizontal
4	357.2538	53.72	28.67	-25.05	46.00	17.33	PK	100	350	Horizontal
5	601.3300	37.07	17.84	-19.23	46.00	28.16	PK	100	68	Horizontal
6	946.6500	38.80	23.94	-14.86	46.00	22.06	PK	200	288	Horizontal

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:

Mode: TX/ 1Mbps

Lowest channel (2402MHz)

Date: 2020/09/16

Suspected Data List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2444.6806	25.85	-5.07	74.00	48.15	150	17	Vertical
2	3923.4952	38.20	-13.55	74.00	35.80	150	6	Vertical
3	5927.9955	40.89	-8.17	74.00	33.11	150	137	Vertical
4	9385.7116	45.76	1.03	74.00	28.24	150	104	Vertical
5	14492.5933	50.09	9.99	74.00	23.91	150	148	Vertical
6	17987.8117	56.69	21.03	74.00	17.31	150	280	Vertical

Final Data List											
NO	Freq. [MHz]	Factor [dB]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	14492.5933	9.99	50.09	74.00	23.91	40.17	54.00	13.83	150	148	Vertical
2	17987.8117	21.03	56.69	74.00	17.31	42.01	54.00	11.99	150	280	Vertical

Suspected Data List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2373.4217	22.66	-5.23	74.00	51.34	150	68	Horizontal
2	3556.9098	38.51	-14.55	74.00	35.49	150	312	Horizontal
3	4981.0613	41.01	-8.73	74.00	32.99	150	357	Horizontal
4	7459.9662	45.47	-2.60	74.00	28.53	150	247	Horizontal
5	14592.9121	49.01	10.57	74.00	24.99	150	137	Horizontal
6	17986.8742	59.41	21.01	74.00	14.59	150	126	Horizontal

Final Data List											
NO	Freq. [MHz]	Factor [dB]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	14592.9121	10.57	49.01	74.00	24.99	41.65	54.00	12.35	150	137	Horizontal
2	17986.8742	21.01	59.41	74.00	14.59	42.83	54.00	11.17	150	126	Horizontal

Mode: TX/ 1Mbps
Middle channel (2441MHz)

Date: 2020/09/16

Suspected Data List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1825.8532	17.90	-8.12	74.00	56.10	150	309	Vertical
2	3979.7487	38.58	-13.45	74.00	35.42	150	314	Vertical
3	6873.0546	43.56	-4.99	74.00	30.44	150	282	Vertical
4	12205.8879	50.25	6.49	74.00	23.75	150	52	Vertical
5	14054.7534	49.07	9.75	74.00	24.93	150	84	Vertical
6	17987.8117	57.00	21.03	74.00	17.00	150	282	Vertical

Final Data List											
NO	Freq. [MHz]	Factor [dB]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	12205.8879	6.49	50.25	74.00	23.75	39.00	54.00	15.00	150	52	Vertical
2	14054.7534	9.75	49.07	74.00	24.93	40.80	54.00	13.20	150	84	Vertical
3	17987.8117	21.03	57.00	74.00	17.00	41.68	54.00	12.32	150	282	Vertical

Suspected Data List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2067.6335	20.08	-7.10	74.00	53.92	150	285	Horizontal
2	3714.4197	38.83	-14.76	74.00	35.17	150	39	Horizontal
3	6212.0758	42.60	-6.80	74.00	31.40	150	28	Horizontal
4	10297.0186	47.21	3.86	74.00	26.79	150	248	Horizontal
5	12973.7484	46.95	7.17	74.00	27.05	150	150	Horizontal
6	17986.8742	58.56	21.01	74.00	15.44	150	171	Horizontal

Final Data List											
NO	Freq. [MHz]	Factor [dB]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	17986.8742	21.01	58.56	74.00	15.44	40.63	54.00	13.37	150	171	Horizontal

Mode: TX/ 1Mbps
Highest channel (2480MHz)

Date: 2020/09/16

Suspected Data List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2415.4269	24.91	-5.04	74.00	49.09	150	334	Vertical
2	5092.6308	42.14	-7.99	74.00	31.86	150	225	Vertical
3	7030.5644	45.09	-3.52	74.00	28.91	150	357	Vertical
4	9085.6929	46.72	1.10	74.00	27.28	150	126	Vertical
5	14446.6529	48.25	9.26	74.00	25.75	150	346	Vertical
6	17976.5610	57.87	20.78	74.00	16.13	150	314	Vertical

Final Data List											
NO	Freq. [MHz]	Factor [dB]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	14446.6529	9.26	48.25	74.00	25.75	39.47	54.00	14.53	150	346	Vertical
2	17976.5610	20.78	57.87	74.00	16.13	42.43	54.00	11.57	150	314	Vertical

Suspected Data List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1963.3704	20.07	-7.58	74.00	53.93	150	220	Horizontal
2	5091.6932	42.33	-8.00	74.00	31.67	150	116	Horizontal
3	7793.7371	45.18	-1.53	74.00	28.82	150	204	Horizontal
4	10597.0373	47.59	5.05	74.00	26.41	150	193	Horizontal
5	12856.5535	48.49	7.31	74.00	25.51	150	204	Horizontal
6	17992.4995	58.05	21.14	74.00	15.95	150	226	Horizontal

Final Data List											
NO	Freq. [MHz]	Factor [dB]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	12856.5535	7.31	48.49	74.00	25.51	38.36	54.00	15.64	150	204	Horizontal
2	17992.4995	21.14	58.05	74.00	15.95	42.53	54.00	11.47	150	226	Horizontal

Mode: TX/ 3Mbps
Lowest channel (2402MHz)

Date: 2020/09/16

Suspected Data List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1651.8315	16.78	-8.41	74.00	57.22	150	329	Vertical
2	2474.4343	22.88	-5.11	74.00	51.12	150	250	Vertical
3	4927.6205	39.31	-8.91	74.00	34.69	150	102	Vertical
4	8797.8624	44.04	-0.65	74.00	29.96	150	80	Vertical
5	11954.6222	46.46	6.75	74.00	27.54	150	123	Vertical
6	17982.1864	53.38	20.91	74.00	20.62	150	145	Vertical

Final Data List											
NO	Freq. [MHz]	Factor [dB]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	17982.1864	20.91	53.38	74.00	20.62	41.33	54.00	12.67	150	145	Vertical

Suspected Data List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1748.3435	18.84	-8.29	74.00	55.16	150	284	Horizontal
2	2233.1541	20.23	-6.81	74.00	53.77	150	97	Horizontal
3	3567.2230	38.13	-14.35	74.00	35.87	150	302	Horizontal
4	4433.5271	39.04	-11.57	74.00	34.96	150	269	Horizontal
5	5394.5247	40.48	-9.11	74.00	33.52	150	312	Horizontal
6	17983.1239	57.46	20.93	74.00	16.54	150	61	Horizontal

Final Data List											
NO	Freq. [MHz]	Factor [dB]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	17983.1239	20.93	57.46	74.00	16.54	42.39	54.00	11.61	150	61	Horizontal

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

Date: 2020/09/16

Suspected Data List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3516.5948	36.91	-15.31	74.00	37.09	150	125	Vertical
2	4003.1877	37.96	-13.39	74.00	36.04	150	322	Vertical
3	5275.4547	40.07	-8.57	74.00	33.93	150	57	Vertical
4	7865.9291	44.20	-1.85	74.00	29.80	150	191	Vertical
5	10915.8072	45.97	5.80	74.00	28.03	150	57	Vertical
6	17986.8742	53.27	21.01	74.00	20.73	150	245	Vertical

Final Data List											
NO	Freq. [MHz]	Factor [dB]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	17986.8742	21.01	53.27	74.00	20.73	41.03	54.00	12.97	150	245	Vertical

Suspected Data List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3559.7225	37.71	-14.50	74.00	36.29	150	137	Horizontal
2	5468.5918	40.38	-9.23	74.00	33.62	150	268	Horizontal
3	6747.4217	42.22	-4.99	74.00	31.78	150	268	Horizontal
4	8660.0413	44.15	-0.38	74.00	29.85	150	0	Horizontal
5	11948.0593	45.89	6.82	74.00	28.11	150	191	Horizontal
6	17994.3746	55.04	21.18	74.00	18.96	150	357	Horizontal

Final Data List											
NO	Freq. [MHz]	Factor [dB]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	17994.3746	21.18	55.04	74.00	18.96	42.14	54.00	11.86	150	357	Horizontal

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

Date: 2020/09/16

Suspected Data List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3643.1652	37.86	-14.28	74.00	36.14	150	346	Vertical
2	5206.0754	40.43	-8.63	74.00	33.57	150	313	Vertical
3	7043.6902	43.36	-3.64	74.00	30.64	150	180	Vertical
4	9290.0806	44.75	1.02	74.00	29.25	150	82	Vertical
5	13905.6816	47.41	9.66	74.00	26.59	150	280	Vertical
6	17987.8117	53.65	21.03	74.00	20.35	150	313	Vertical

Final Data List											
NO	Freq. [MHz]	Factor [dB]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	17987.8117	21.03	53.65	74.00	20.35	42.82	54.00	11.18	150	313	Vertical

Suspected Data List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	3713.4821	37.53	-14.78	74.00	36.47	150	162	Horizontal
2	4175.6985	39.05	-11.86	74.00	34.95	150	249	Horizontal
3	5184.5115	40.60	-8.53	74.00	33.40	150	205	Horizontal
4	9583.5365	45.82	2.35	74.00	28.18	150	270	Horizontal
5	13561.5976	46.88	8.89	74.00	27.12	150	107	Horizontal
6	17989.6869	53.28	21.08	74.00	20.72	150	303	Horizontal

Final Data List											
NO	Freq. [MHz]	Factor [dB]	PK Value [dBμV/m]	PK Limit [dBμV/m]	PK Margin [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	17989.6869	21.08	53.28	74.00	20.72	42.49	54.00	11.51	150	303	Horizontal

Remark:

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- The amplitude of 18GHz to 25GHz spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.
- Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- Spectrum setting:
 - Peak Setting 1GHz - 26GHz, RBW = 1MHz, VBW = 1MHz, Sweep time = auto.
 - AV Setting 1GHz - 26GHz, RBW = 1MHz, VBW = 10Hz, Sweep time = auto.

Test result: The unit does meet the requirements.

5.10. RESTRICTED BANDS OF OPERATION

5.10.1. LIMITS

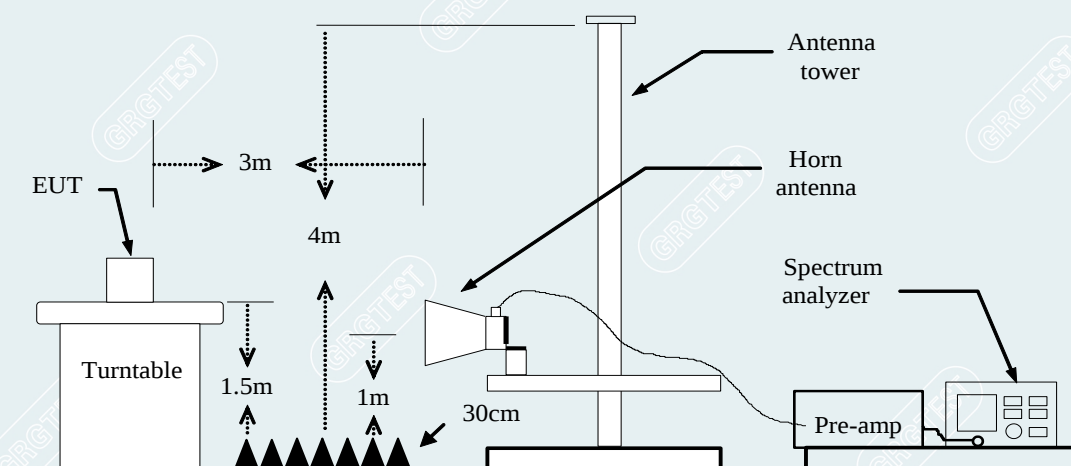
Section 15.247(d) In addition, Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

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		

5.10.2. 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.

5.10.3. TEST SETUP



5.10.4. TEST RESULTS

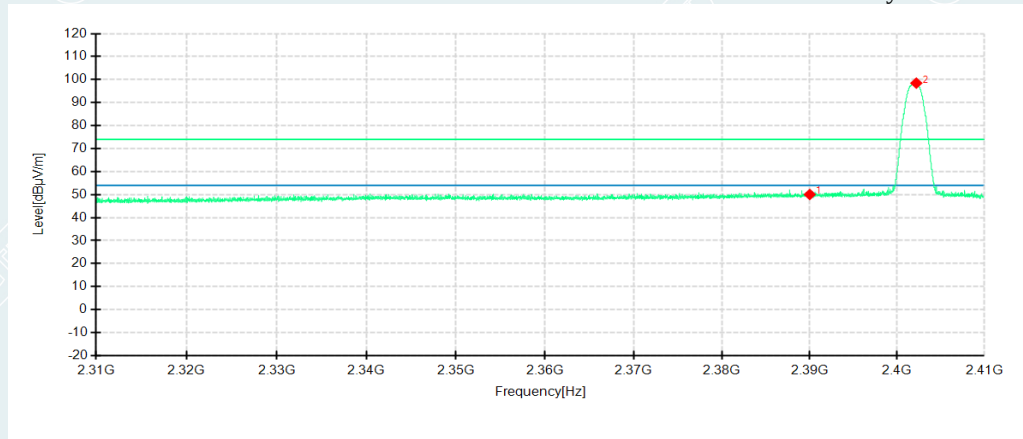
GFSK

Lowest Channel

Channel 2402MHz

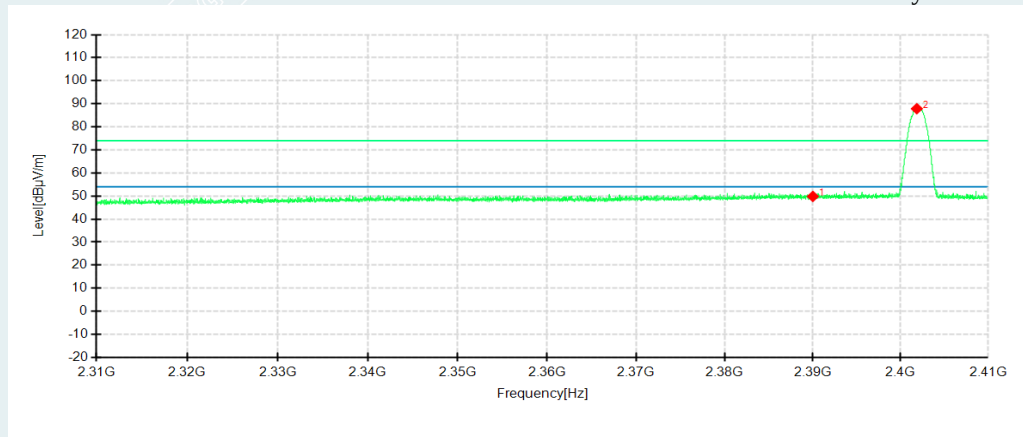
Detector mode: Peak

Polarity: Horizontal



Detector mode: Peak

Polarity: Vertical



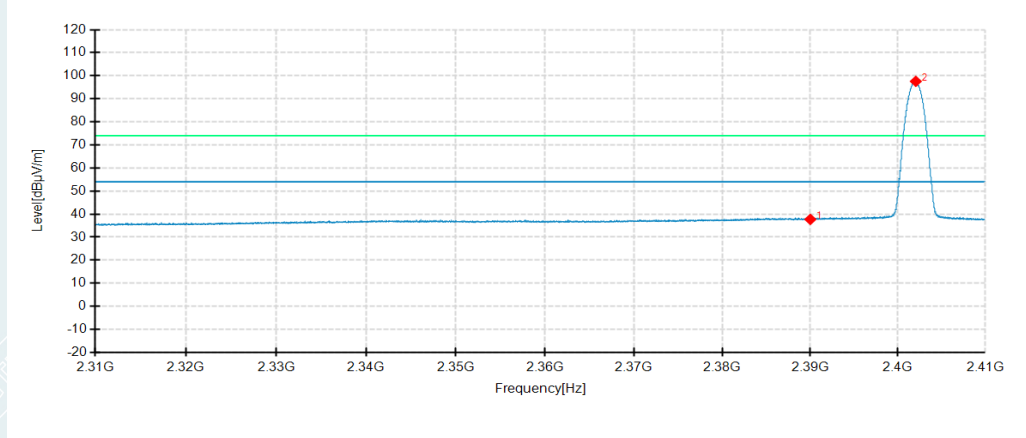
No.	Frequency MHz	Reading dBμV/m	Level dBμV/ m	Factor dB	Limit dBuV/m	Margin dB	Height cm	Angle °	Pole
1	2390.0133	43.20	50.05	6.85	74.00	23.95	150	316	Horizontal
2	2402.1987	91.44	98.46	7.02	74.00	-24.46	150	326	Horizontal
1	2390.0133	42.98	49.83	6.85	74.00	24.17	150	228	Vertical
2	2401.8486	80.84	87.87	7.03	74.00	-13.87	150	174	Vertical

Lowest Channel

Channel 2402MHz

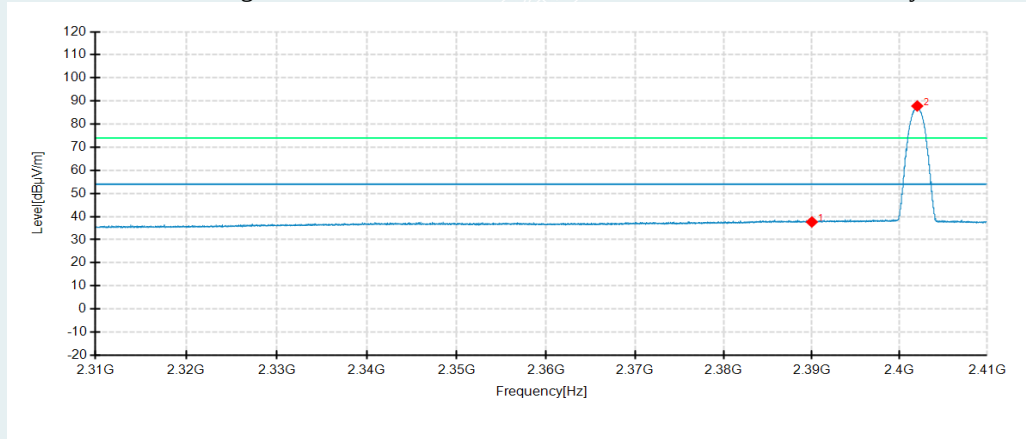
Detector mode: Average

Polarity: Horizontal



Detector mode: Average

Polarity: Vertical



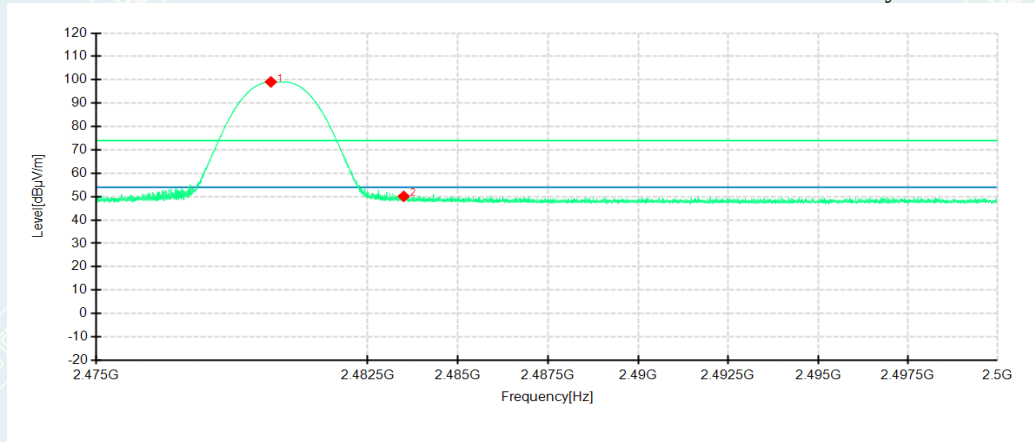
No.	Frequency MHz	Reading dBμV/m	Level dBμV/ m	Factor dB	Limit dBuV/m	Margin dB	Height cm	Angle °	Pole
1	2390.0133	30.85	37.70	6.85	54.00	16.30	150	124	Horizontal
2	2402.0487	90.56	97.58	7.02	54.00	-43.58	150	322	Horizontal
1	2390.0133	30.82	37.67	6.85	54.00	16.33	150	107	Vertical
2	2402.0153	80.82	87.84	7.02	54.00	-33.84	150	174	Vertical

Highest Channel

Channel 2480MHz

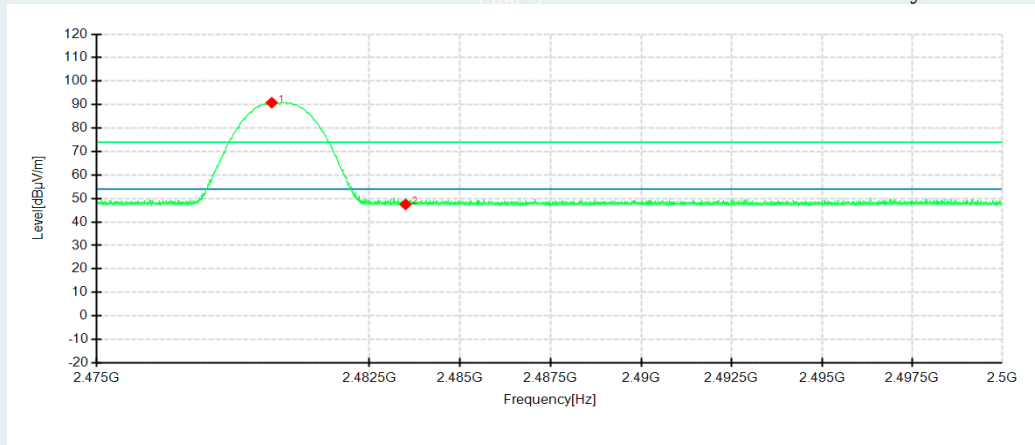
Detector mode: Peak

Polarity: Horizontal



Detector mode: Peak

Polarity: Vertical



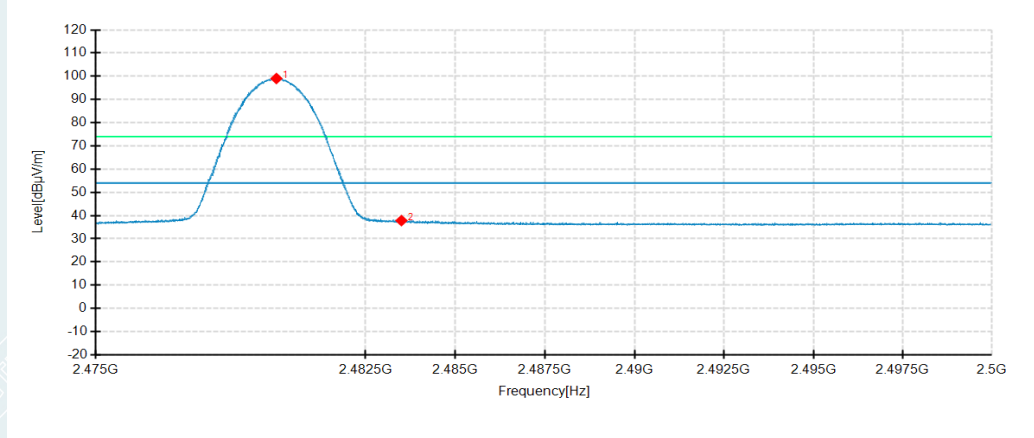
No.	Frequency MHz	Reading dBμV/m	Level dBμV/ m	Factor dB	Limit dBμV/m	Margin dB	Height cm	Angle °	Pole
1	2479.8258	93.47	99.09	5.62	74.00	-25.09	150	128	Horizontal
2	2483.5014	44.55	50.11	5.56	74.00	23.89	150	267	Horizontal
1	2479.8133	85.20	90.82	5.62	74.00	-16.82	150	62	Vertical
2	2483.5014	41.92	47.48	5.56	74.00	26.52	150	77	Vertical

Highest Channel

Channel 2480MHz

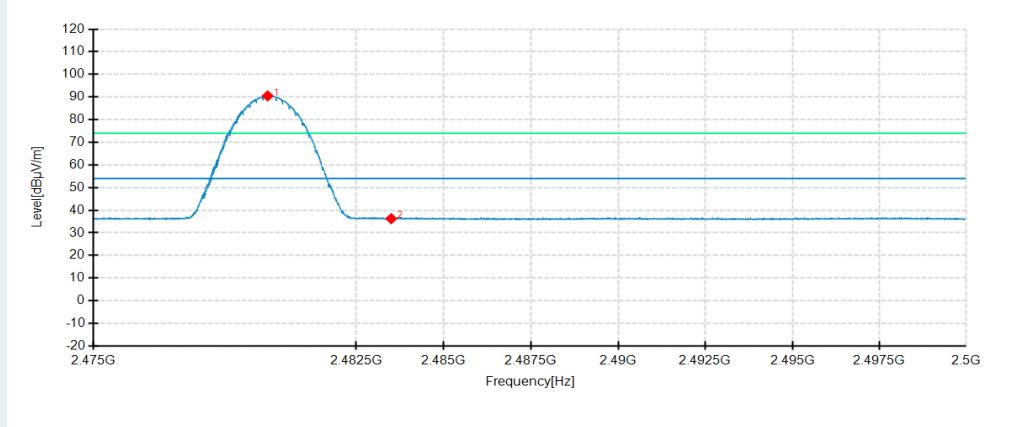
Detector mode: Average

Polarity: Horizontal



Detector mode: Average

Polarity: Vertical



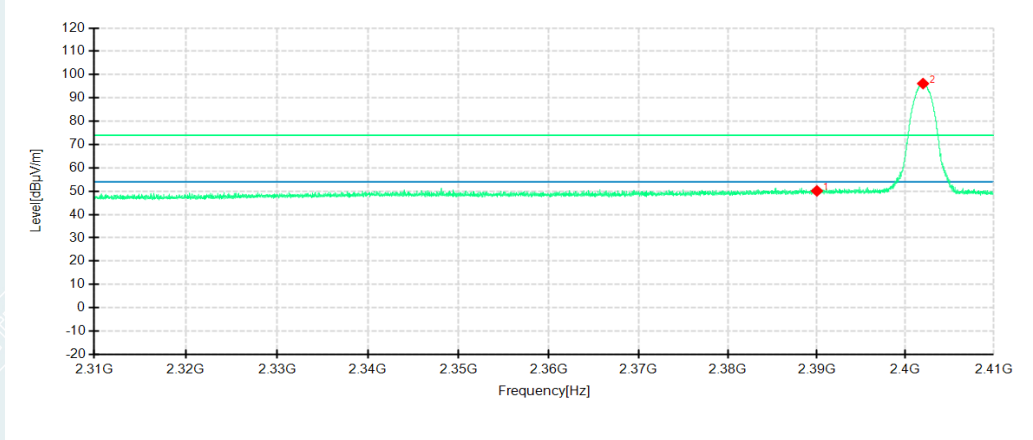
No.	Frequency MHz	Reading dBμV/m	Level dBμV/ m	Factor dB	Limit dBμV/m	Margin dB	Height cm	Angle °	Pole
1	2480.0217	93.42	99.04	5.62	54.00	-45.04	150	137	Horizontal
2	2483.5014	32.26	37.82	5.56	54.00	16.18	150	117	Horizontal
1	2479.9717	84.84	90.46	5.62	54.00	-36.46	150	53	Vertical
2	2483.5014	30.69	36.25	5.56	54.00	17.75	150	313	Vertical

8DPSK**Lowest Channel**

Channel 2402MHz

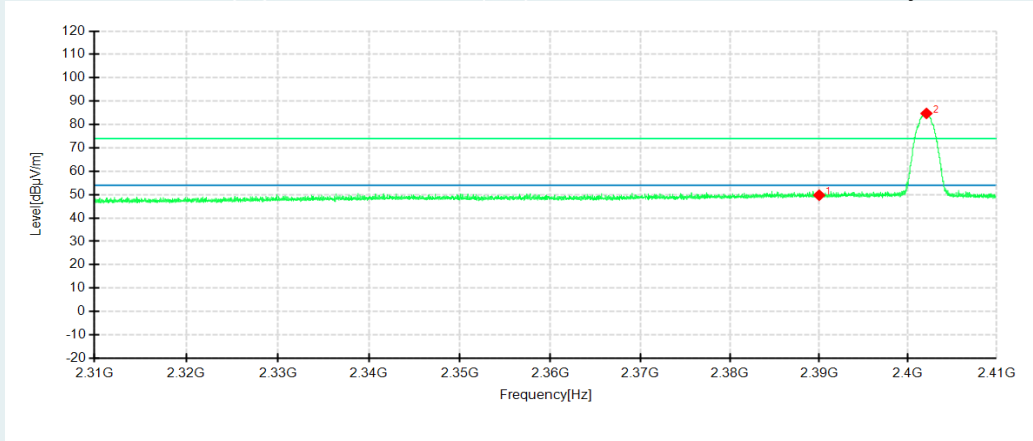
Detector mode: Peak

Polarity: Horizontal



Detector mode: Peak

Polarity: Vertical



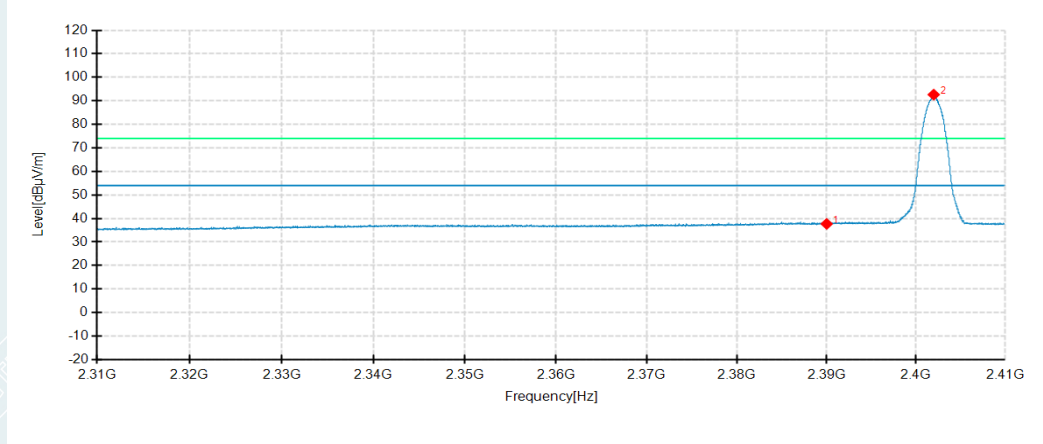
No.	Frequency MHz	Reading dBμV/m	Level dBμV/ m	Factor dB	Limit dBuV/m	Margin dB	Height cm	Angle °	Pole
1	2390.0133	43.27	50.12	6.85	74.00	23.88	150	77	Horizontal
2	2401.9987	89.13	96.15	7.02	74.00	-22.15	150	325	Horizontal
1	2390.0133	42.90	49.75	6.85	74.00	24.25	150	267	Vertical
2	2402.0820	77.73	84.75	7.02	74.00	-10.75	150	162	Vertical

Lowest Channel

Channel 2402MHz

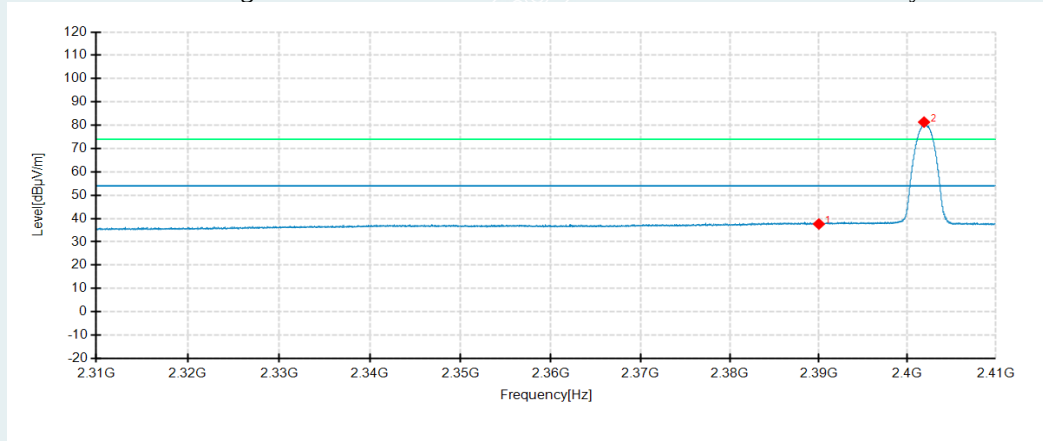
Detector mode: Average

Polarity: Horizontal



Detector mode: Average

Polarity: Vertical



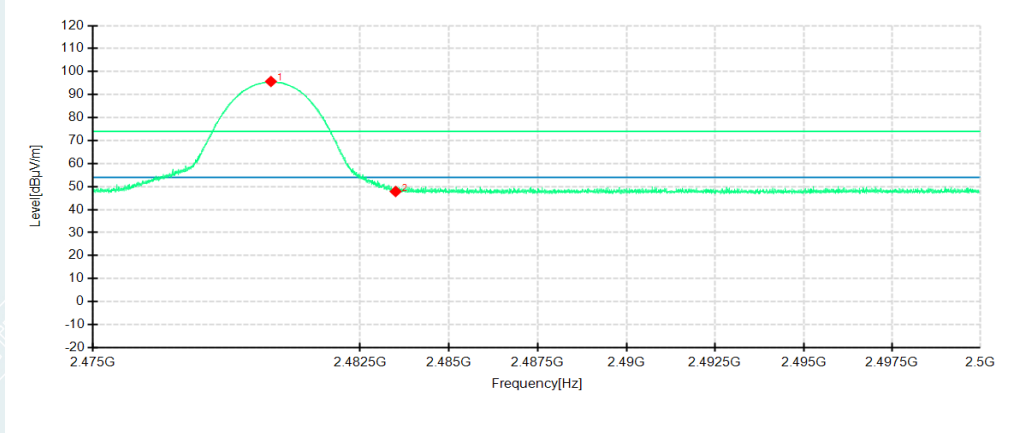
No.	Frequency MHz	Reading dBμV/m	Level dBμV/ m	Factor dB	Limit dBuV/m	Margin dB	Height cm	Angle °	Pole
1	2390.0133	30.83	37.68	6.85	54.00	16.32	150	85	Horizontal
2	2401.9820	85.63	92.65	7.02	54.00	-38.65	150	317	Horizontal
1	2390.0133	30.79	37.64	6.85	54.00	16.36	150	151	Vertical
2	2401.8820	74.32	81.35	7.03	54.00	-27.35	150	52	Vertical

Highest Channel

Channel 2480MHz

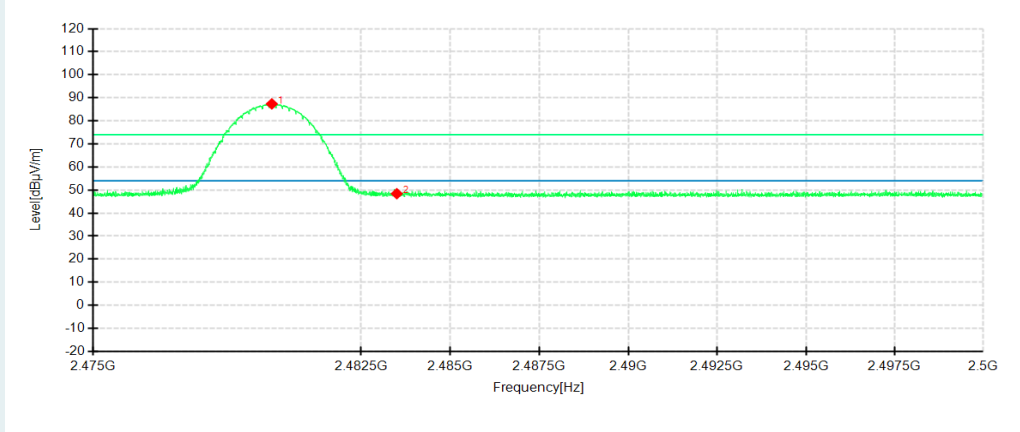
Detector mode: Peak

Polarity: Horizontal



Detector mode: Peak

Polarity: Vertical



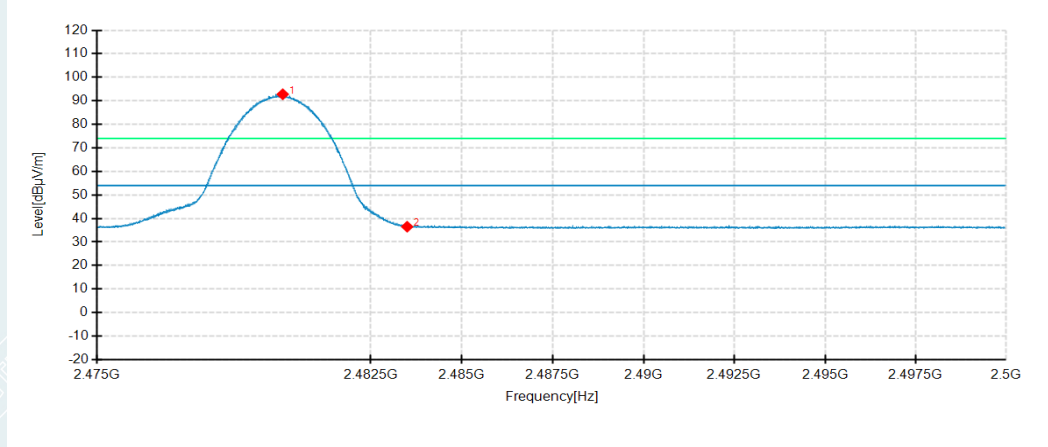
No.	Frequency MHz	Reading dBμV/m	Level dBμV/m	Factor dB	Limit dBuV/m	Margin dB	Height cm	Angle °	Pole
1	2479.9967	90.08	95.70	5.62	74.00	-21.70	150	127	Horizontal
2	2483.5014	42.30	47.86	5.56	74.00	26.14	150	122	Horizontal
1	2480.0008	81.74	87.36	5.62	74.00	-13.36	150	62	Vertical
2	2483.5014	42.85	48.41	5.56	74.00	25.59	150	62	Vertical

Highest Channel

Channel 2480MHz

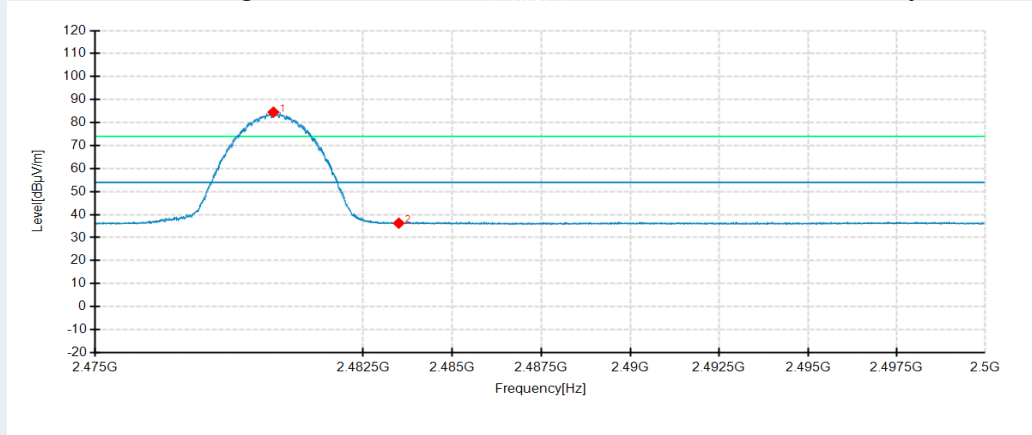
Detector mode: Average

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
1	2480.0883	87.18	92.80	5.62	54.00	-38.80	150	133	Horizontal
2	2483.5014	30.94	36.50	5.56	54.00	17.50	150	118	Horizontal
1	2479.9883	78.91	84.53	5.62	54.00	-30.53	150	56	Vertical
2	2483.5014	30.70	36.26	5.56	54.00	17.74	150	60	Vertical

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

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