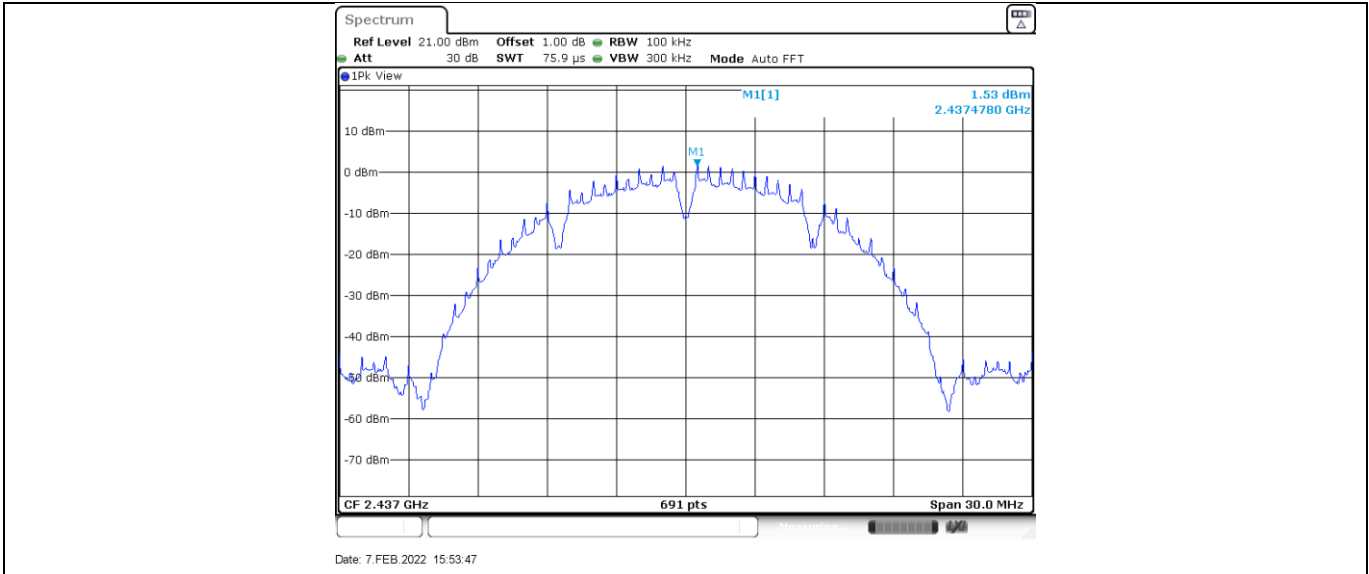
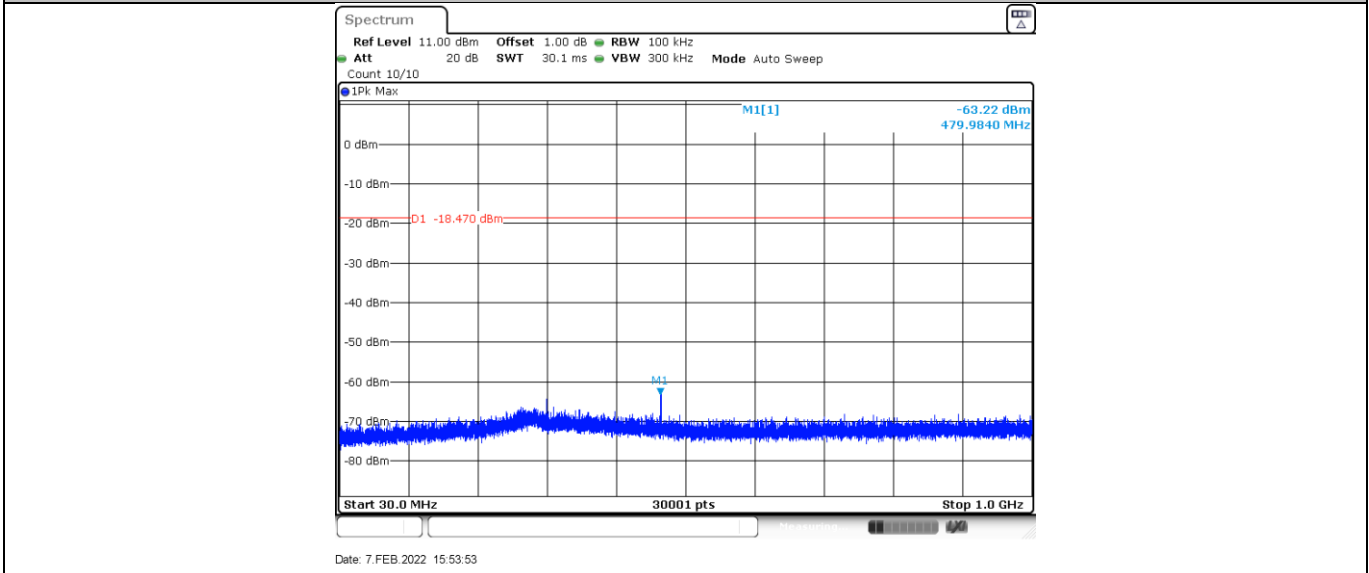


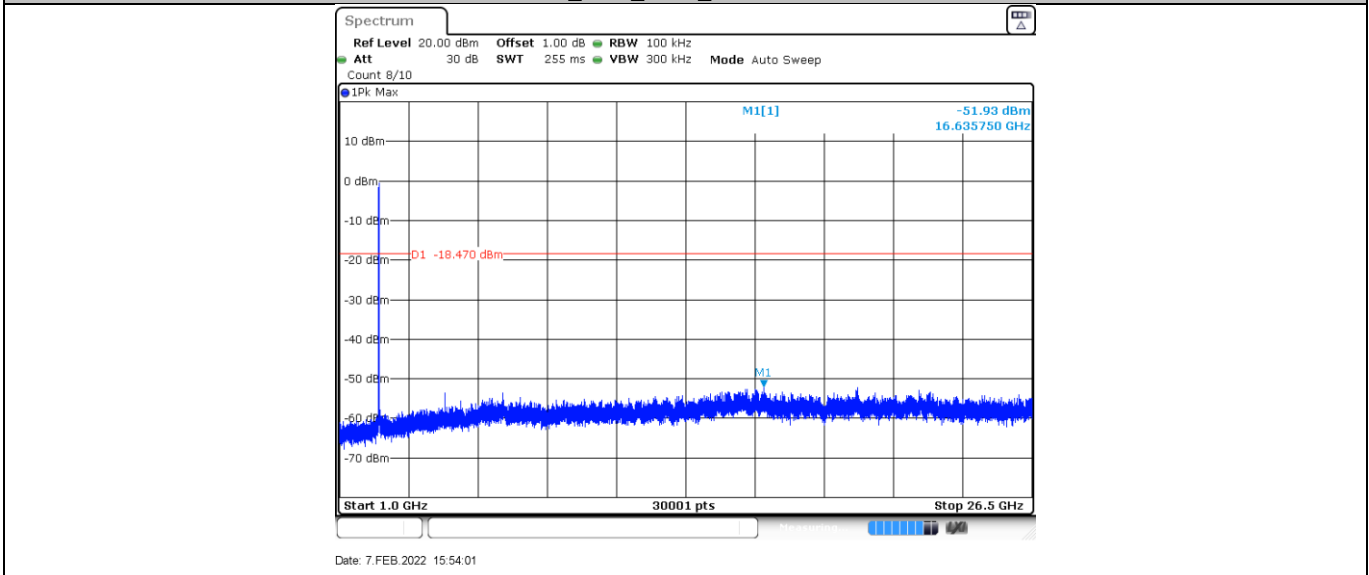
11B_Ant2_2437_0~Reference



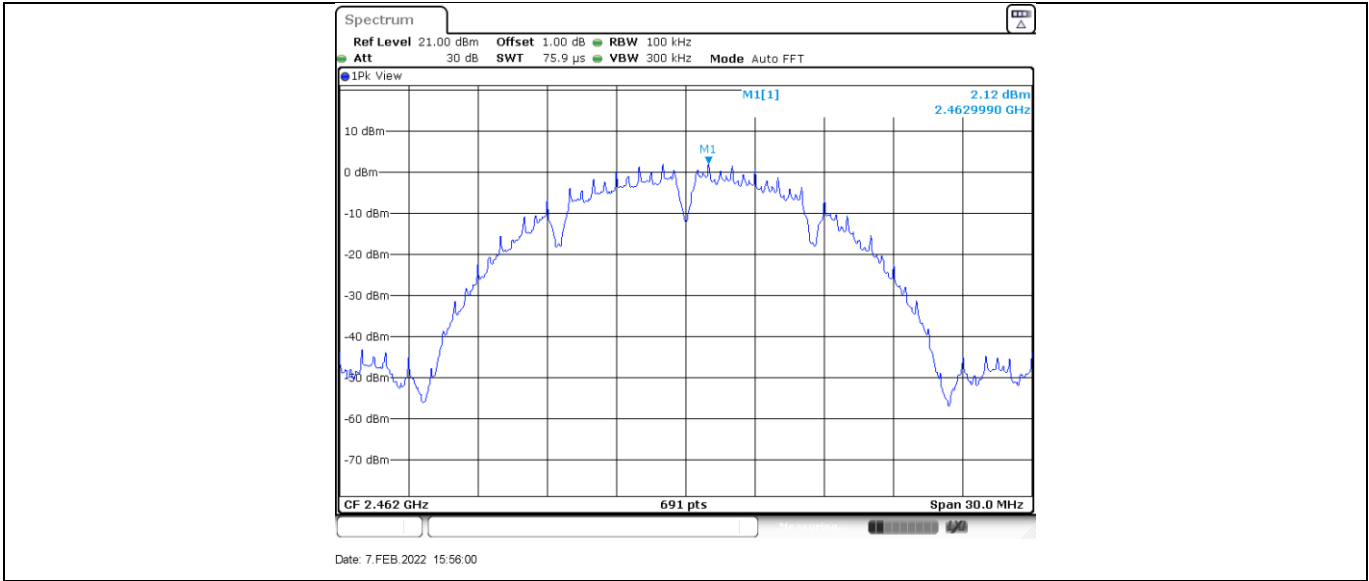
11B_Ant2_2437_30~1000



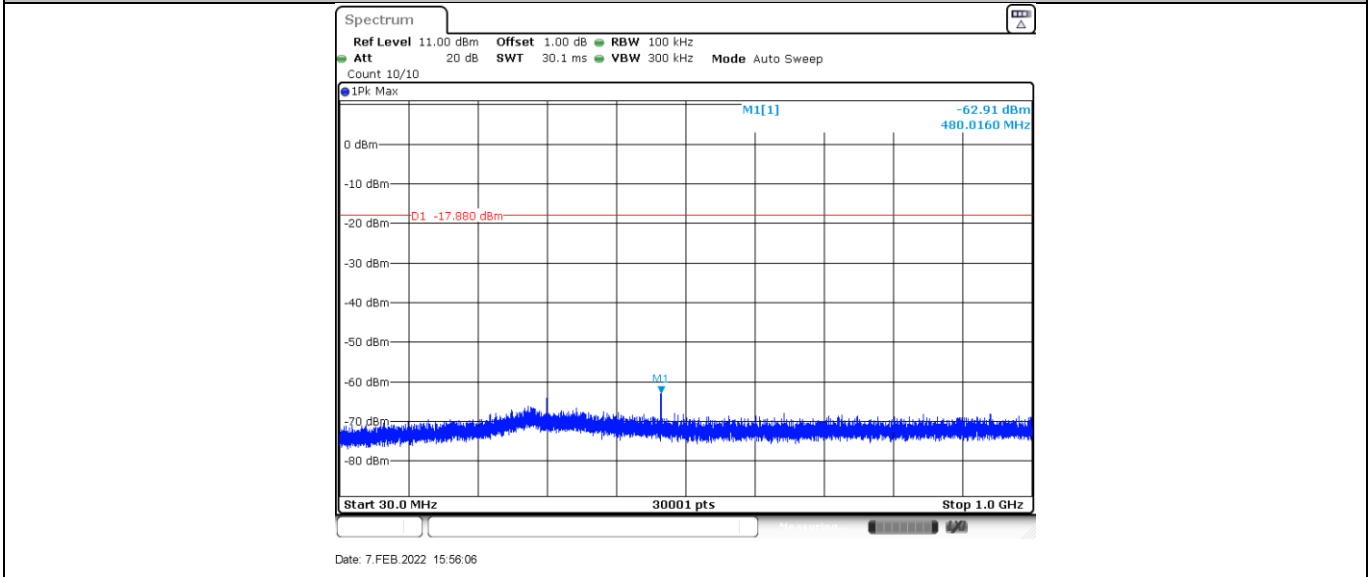
11B_Ant2_2437_1000~26500



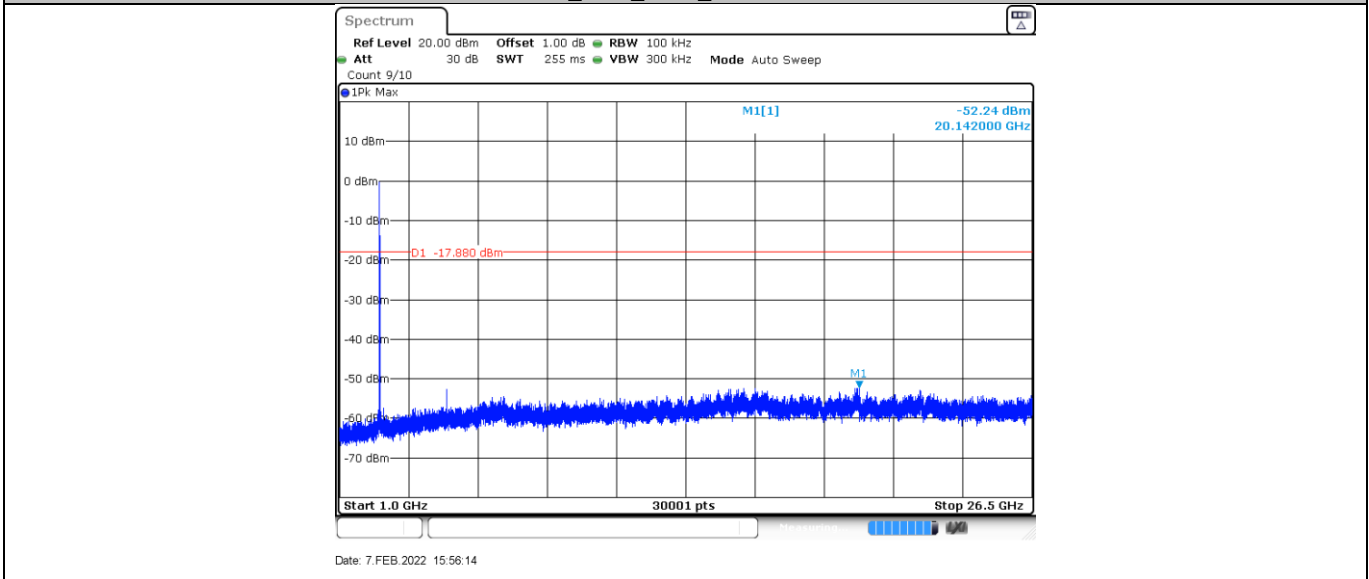
11B_Ant2_2462_0~Reference



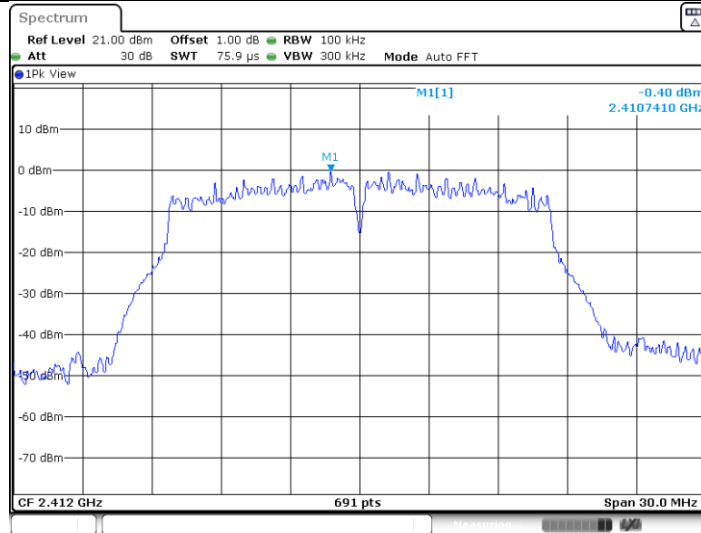
11B_Ant2_2462_30~1000



11B_Ant2_2462_1000~26500

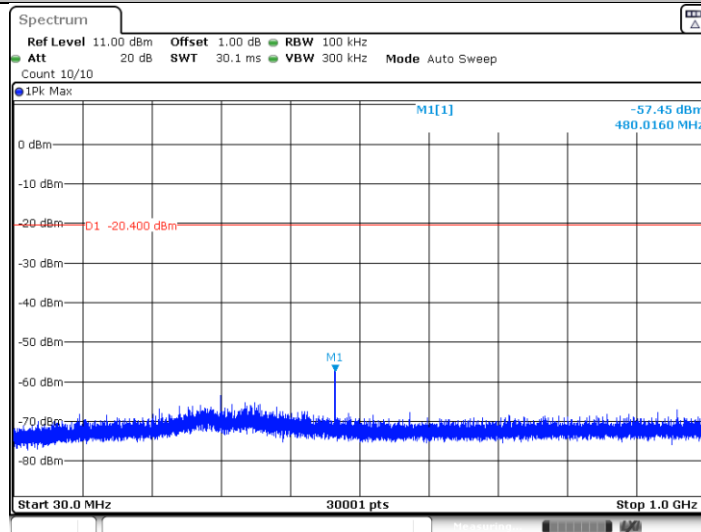


11G_Ant2_2412_0~Reference



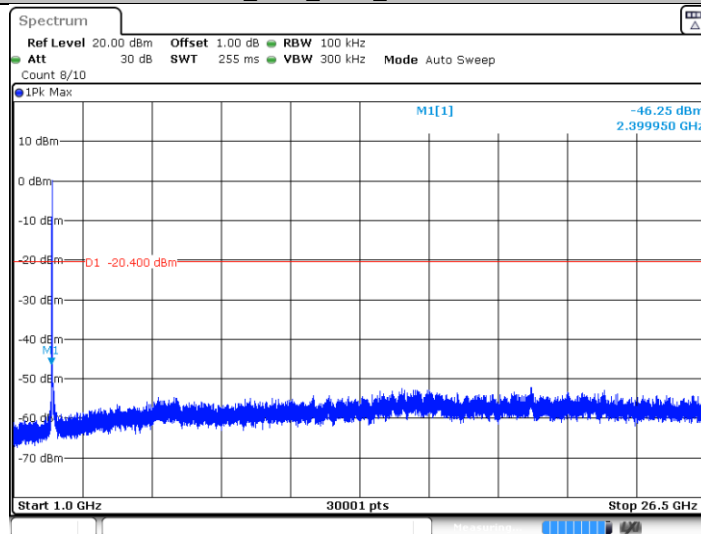
Date: 7.FEB.2022 16:03:15

11G_Ant2_2412_30~1000



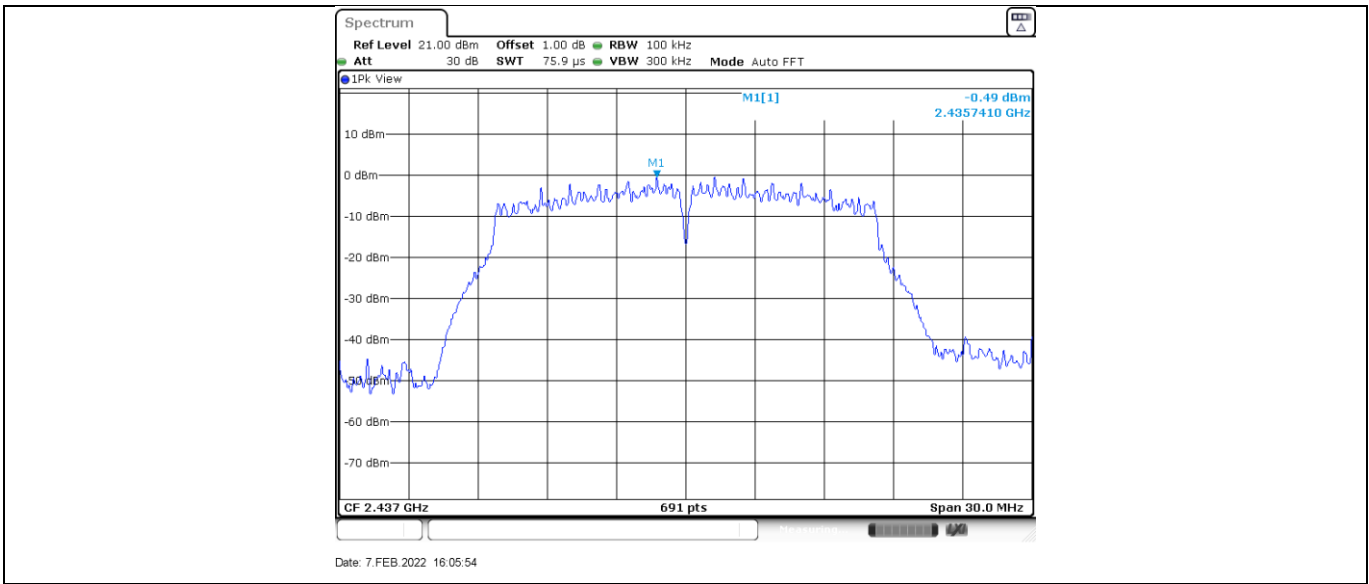
Date: 7.FEB.2022 16:03:21

11G_Ant2_2412_1000~26500

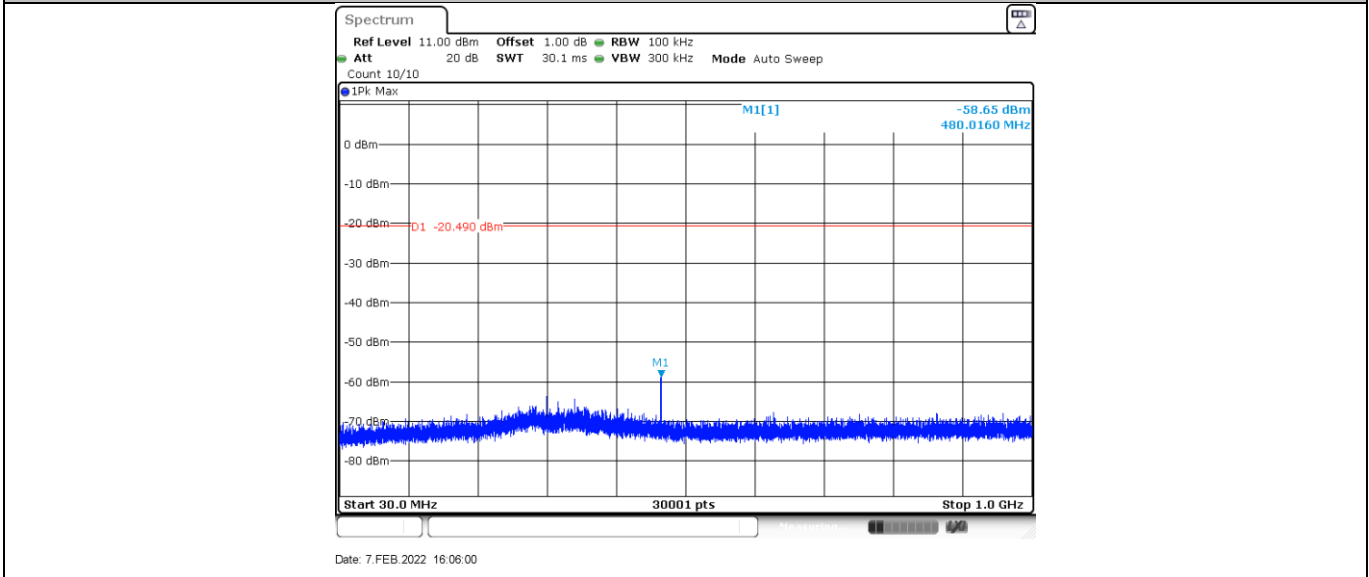


Date: 7.FEB.2022 16:03:29

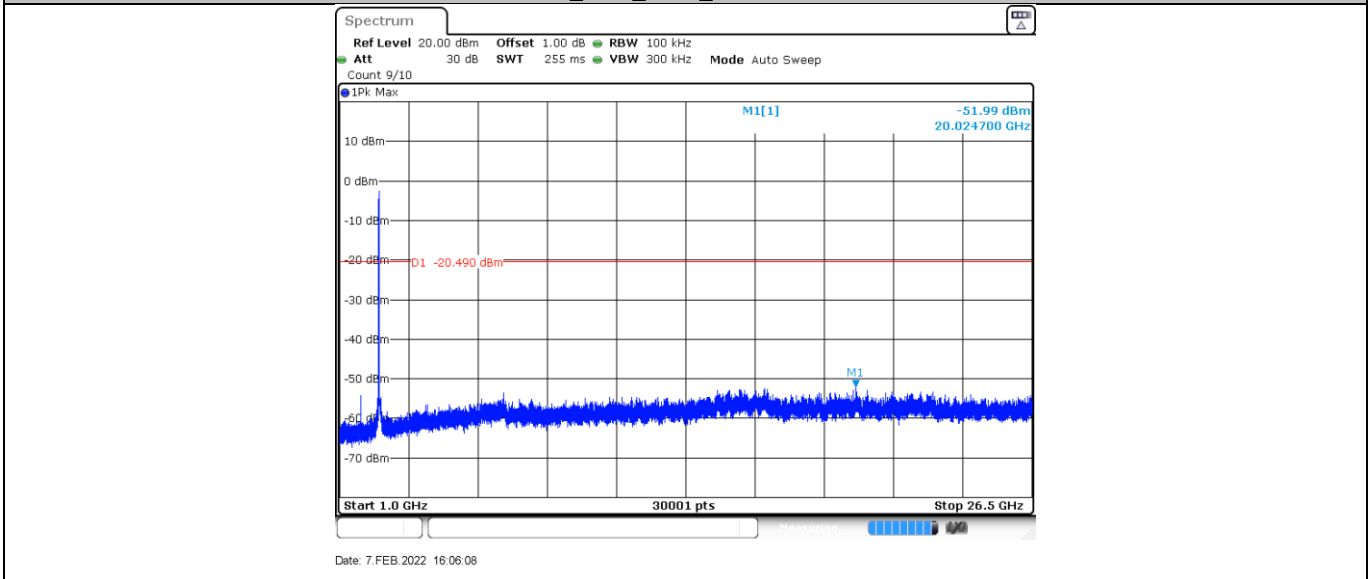
11G_Ant2_2437_0~Reference



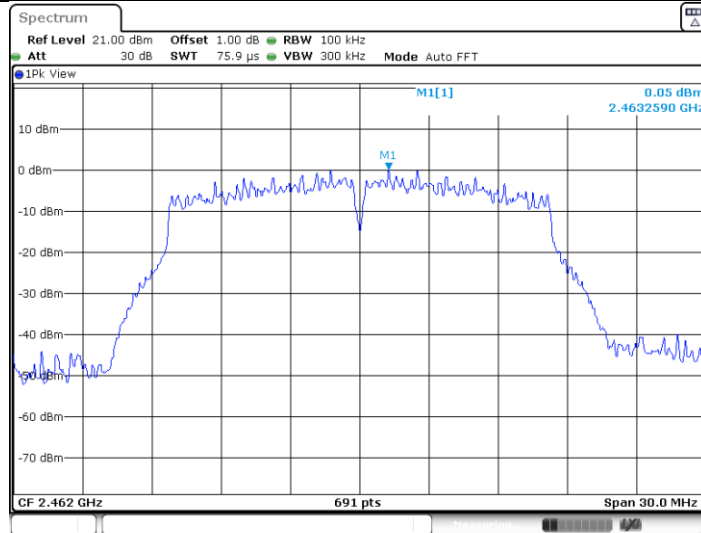
11G_Ant2_2437_30~1000



11G_Ant2_2437_1000~26500

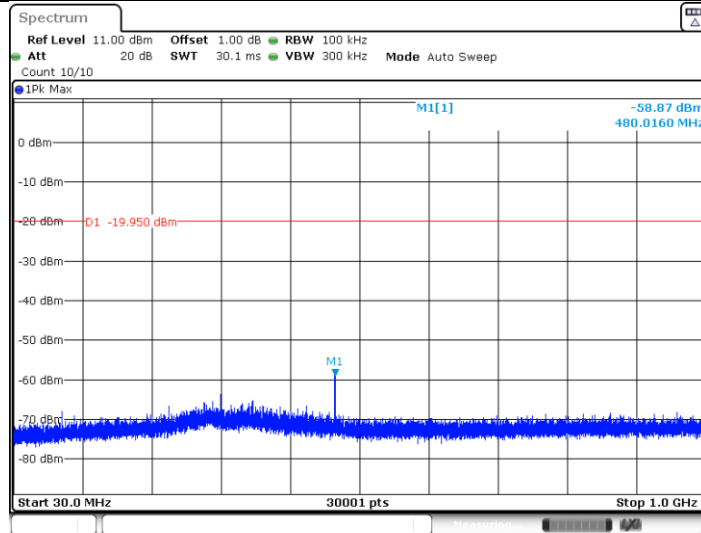


11G_Ant2_2462_0~Reference



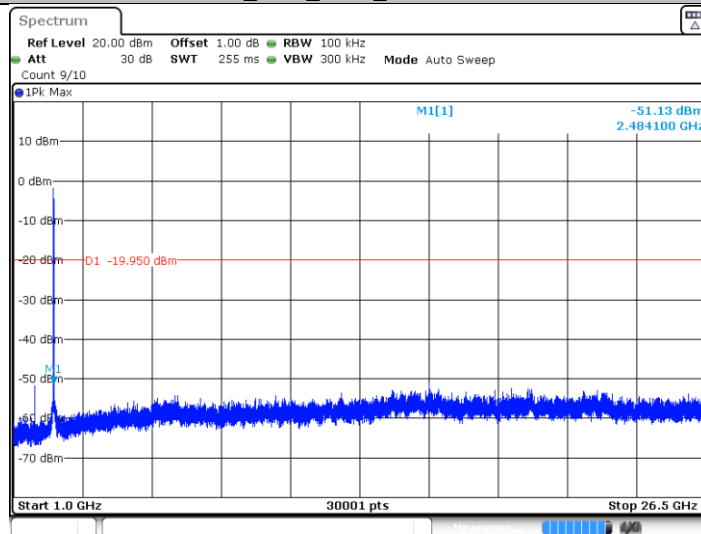
Date: 7.FEB.2022 16:08:01

11G_Ant2_2462_30~1000



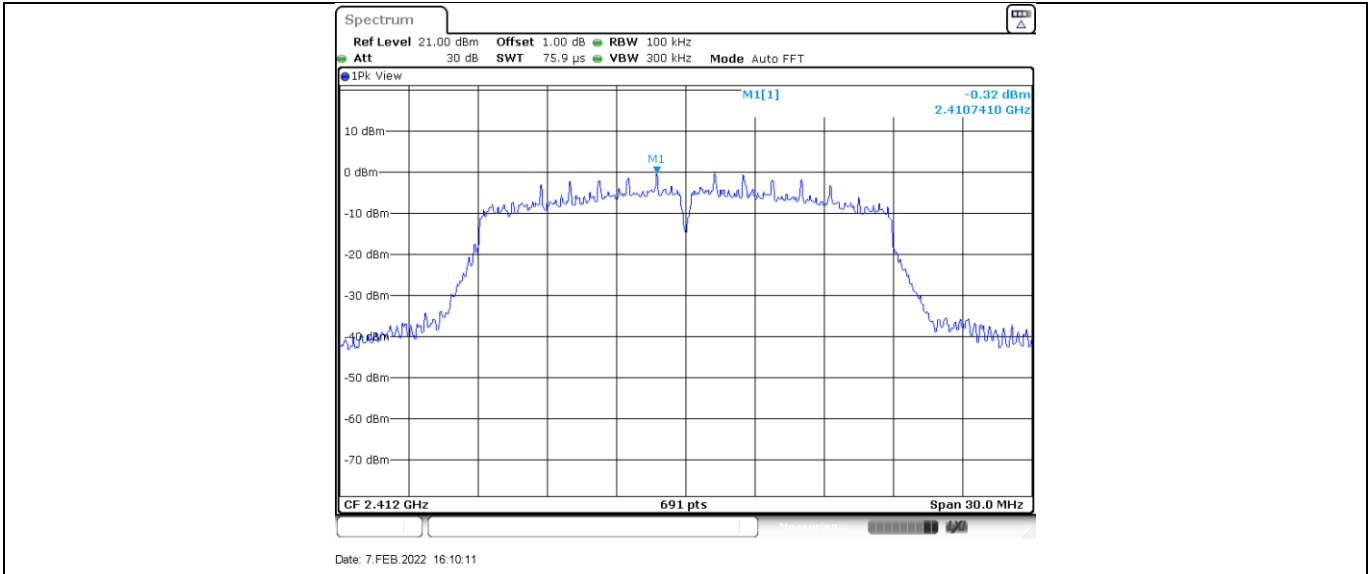
Date: 7.FEB.2022 16:08:07

11G_Ant2_2462_1000~26500

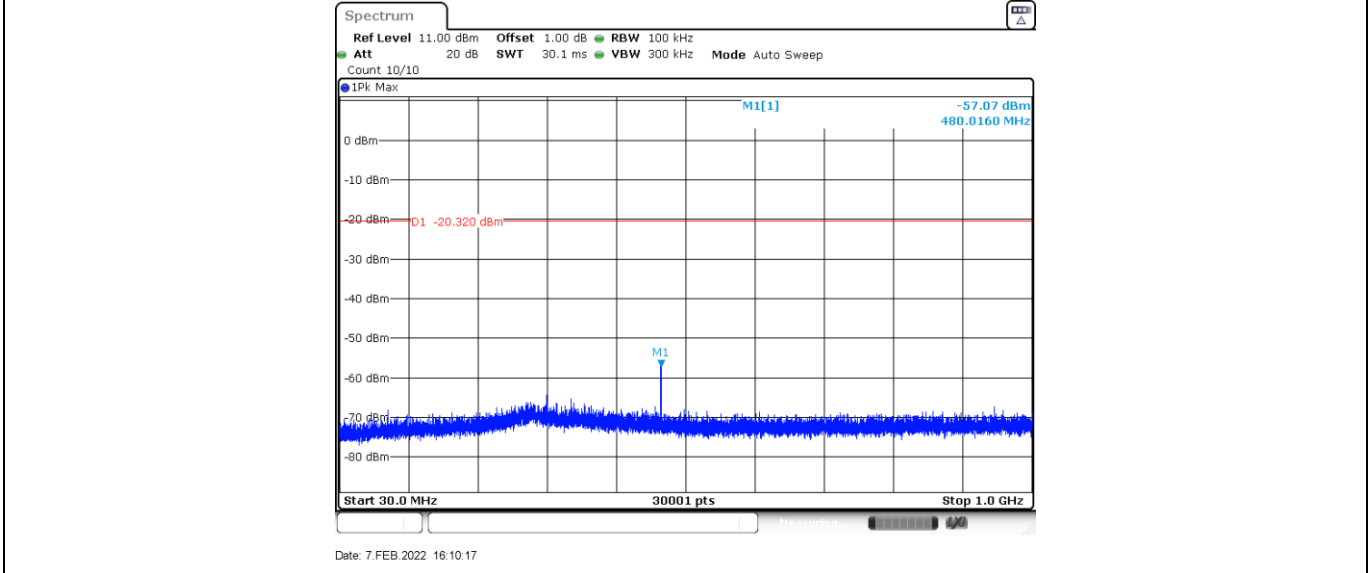


Date: 7.FEB.2022 16:08:15

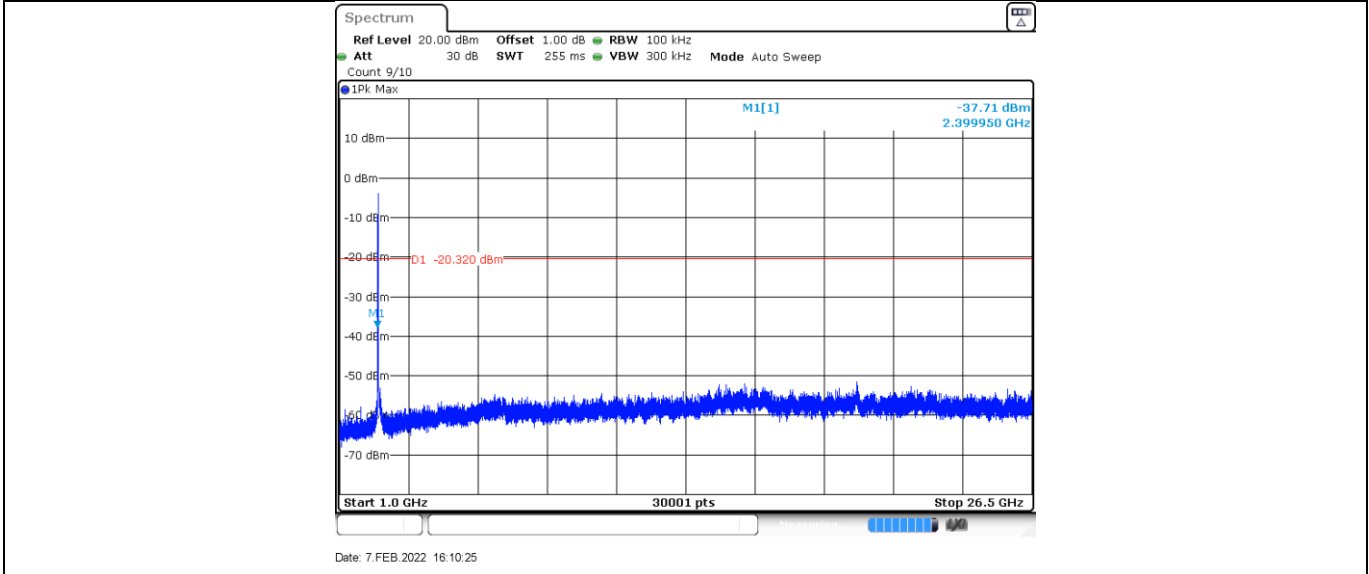
11N20SISO_Ant2_2412_0~Reference



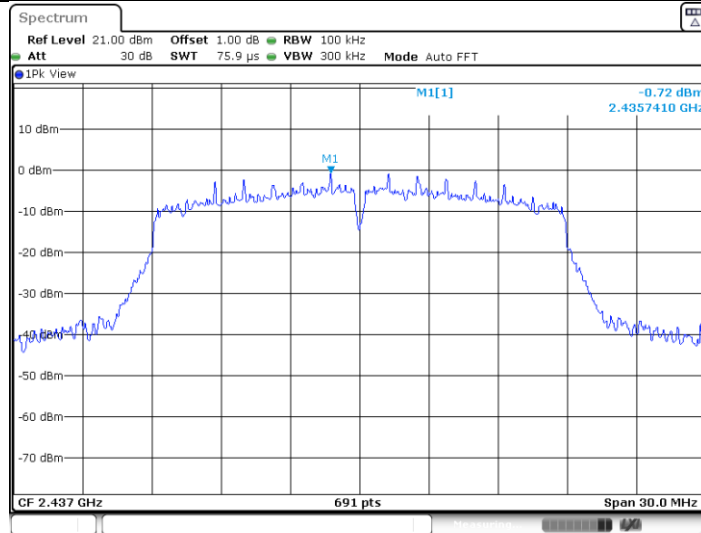
11N20SISO_Ant2_2412_30~1000



11N20SISO_Ant2_2412_1000~26500

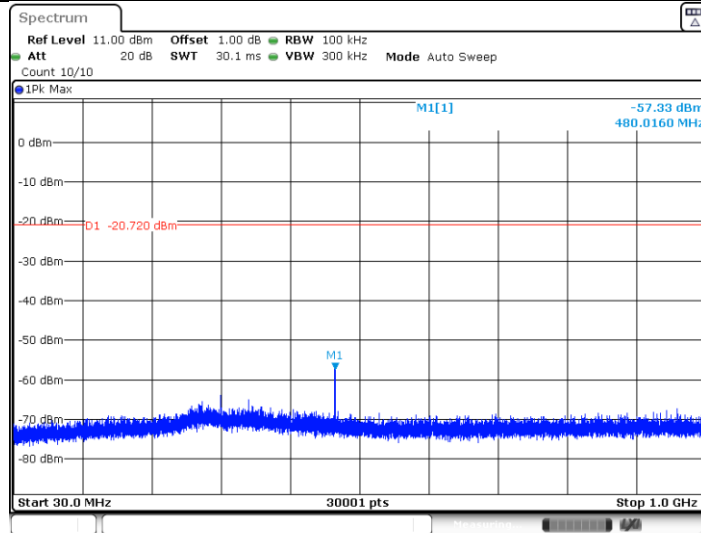


11N20SISO_Ant2_2437_0~Reference



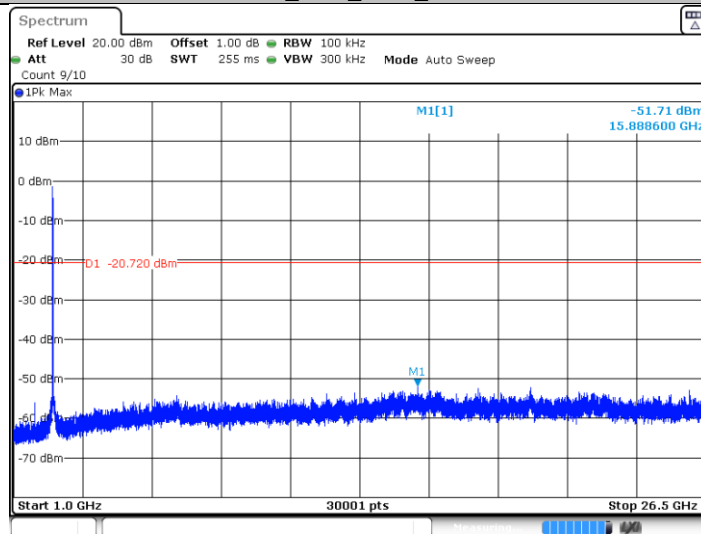
Date: 7.FEB.2022 16:12:00

11N20SISO_Ant2_2437_30~1000



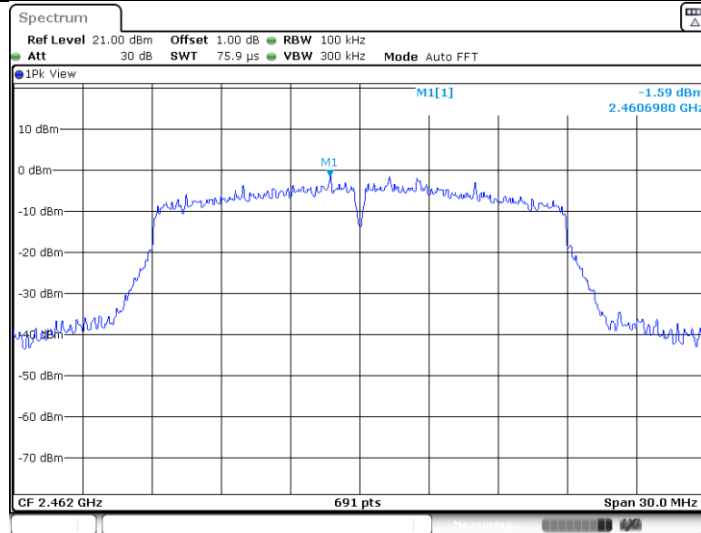
Date: 7.FEB.2022 16:12:06

11N20SISO_Ant2_2437_1000~26500



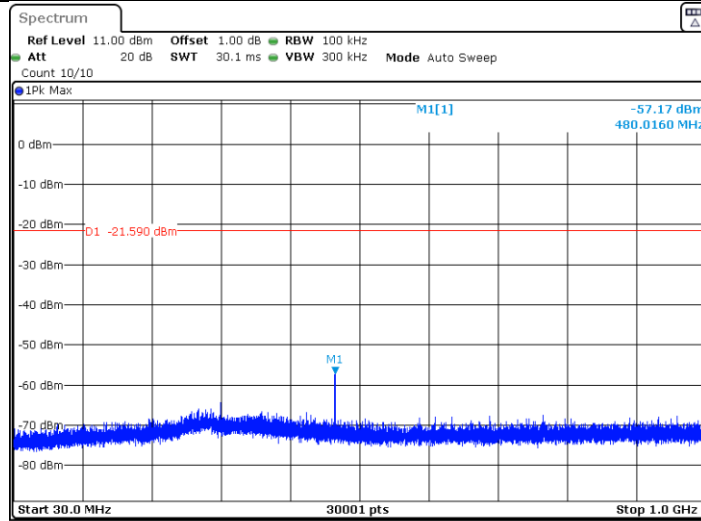
Date: 7.FEB.2022 16:12:14

11N20SISO_Ant2_2462_0~Reference



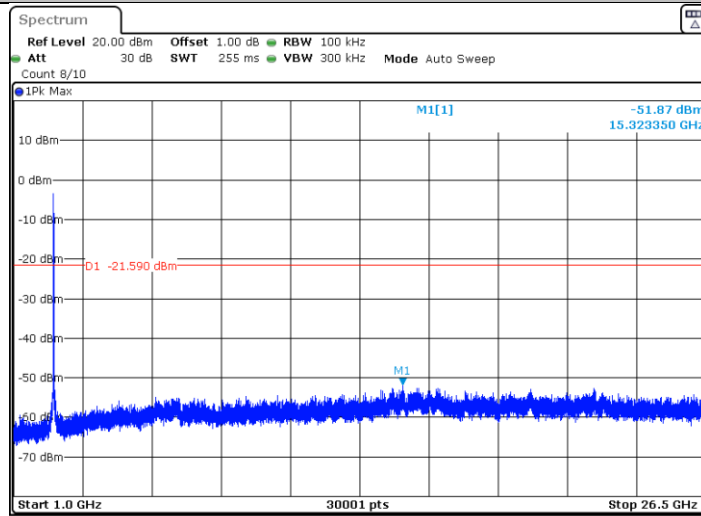
Date: 7.FEB.2022 16:13:48

11N20SISO_Ant2_2462_30~1000



Date: 7.FEB.2022 16:13:54

11N20SISO_Ant2_2462_1000~26500



Date: 7.FEB.2022 16:14:02

9.6 Band edge testing

Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 kHz, VBW \geq RBW, Sweep = auto, Detector function = peak, Trace = max hold
3. Allow the trace to stabilize, use the peak and delta measurement to record the result.
4. The level displayed must comply with the limit specified in this Section.
5. Repeat the test at the hopping off and hopping on mode, submit all the plots.

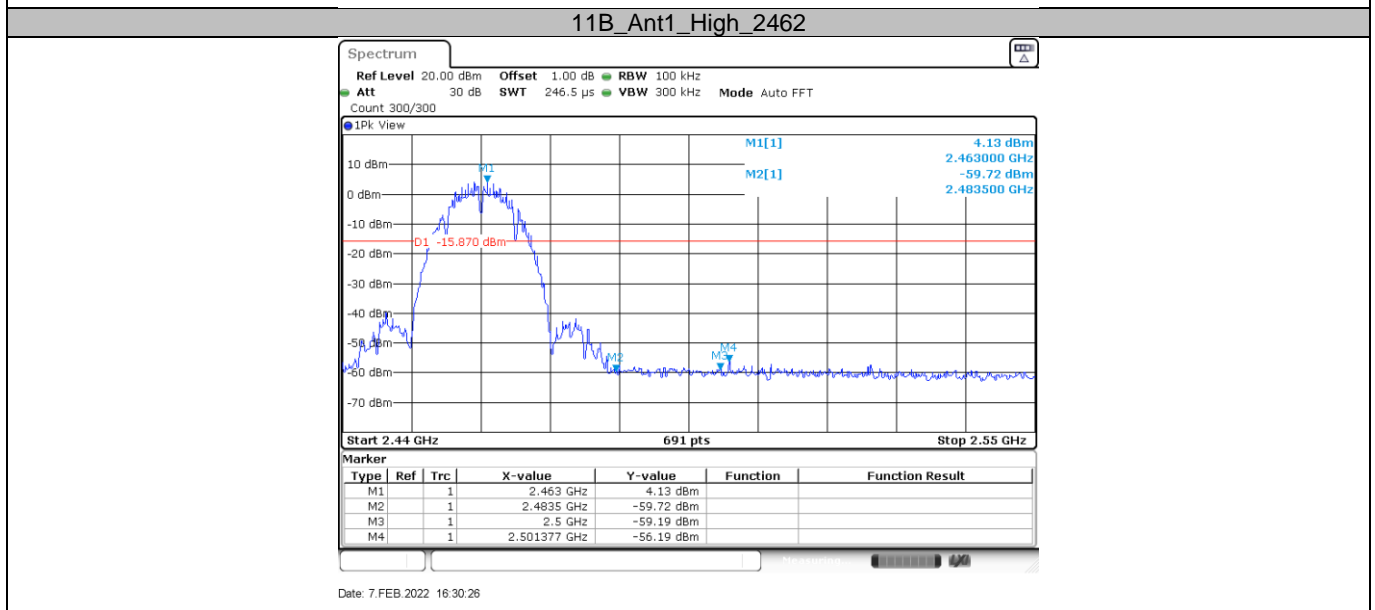
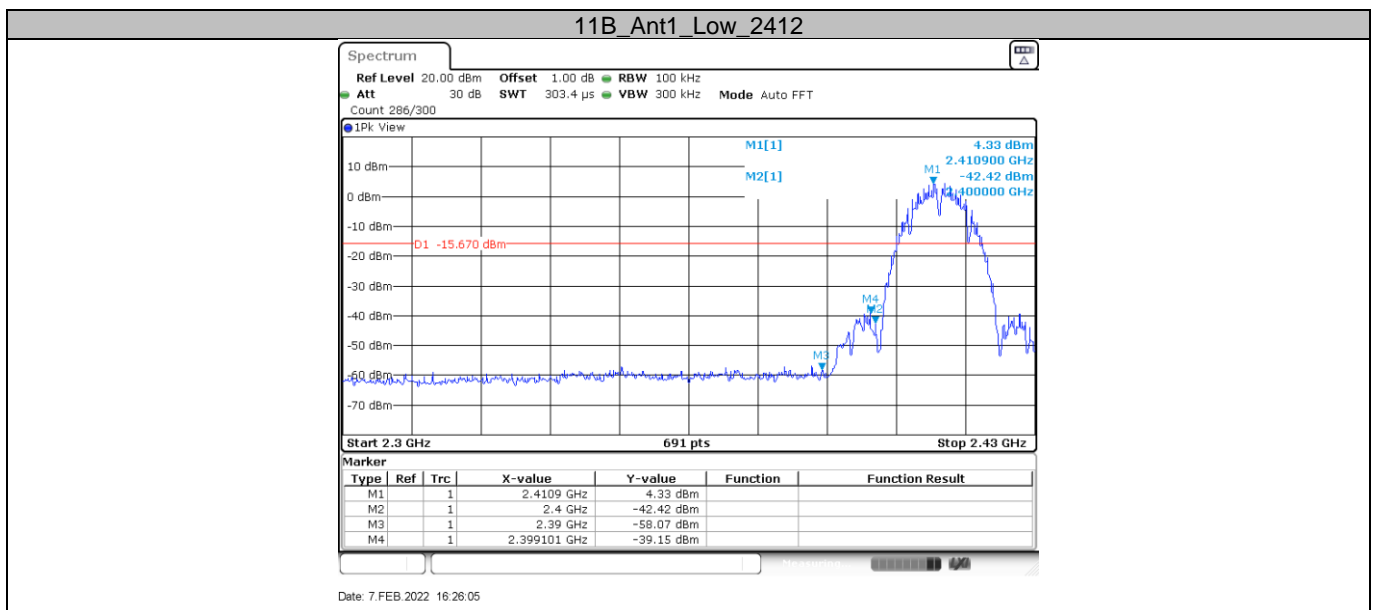
Limit:

According to §15.247(d), 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 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. 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 Section 15.205(c)).

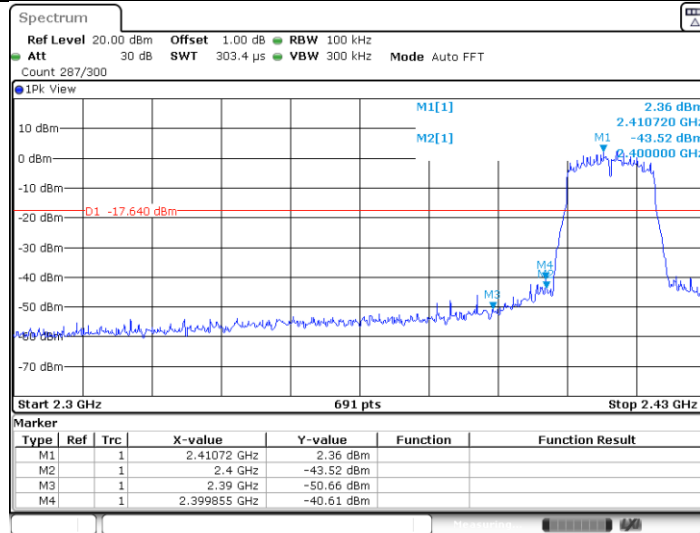
Frequency Range MHz	Limit (dBc)
30-25000	-20

Band edge testing

TestMode	Antenna	ChName	Channel (MHz)	RefLevel (dBm)	Result (dBm)	Limit (dBm)	Verdict
11B	Ant1	Low	2412	4.33	-39.15	<=-15.67	PASS
	Ant1	High	2462	4.13	-56.19	<=-15.87	PASS
11G	Ant1	Low	2412	2.36	-40.61	<=-17.64	PASS
	Ant1	High	2462	1.19	-49.45	<=-18.81	PASS
11N20	Ant1	Low	2412	0.27	-34.59	<=-19.73	PASS
	Ant1	Low	2462	2.28	-49.6	<=-17.72	PASS
TestMode	Antenna	ChName	Channel (MHz)	RefLevel (dBm)	Result (dBm)	Limit (dBm)	Verdict
11B	Ant2	Low	2412	1.73	-46.04	<=-18.27	PASS
	Ant2	High	2462	2.00	-56.35	<=-18	PASS
11G	Ant2	Low	2412	-0.23	-45.79	<=-20.23	PASS
	Ant2	High	2462	-0.09	-49.09	<=-20.09	PASS
11N20	Ant2	Low	2412	-0.77	-37.22	<=-20.77	PASS
	Ant2	Low	2462	-1.72	-49.35	<=-21.72	PASS

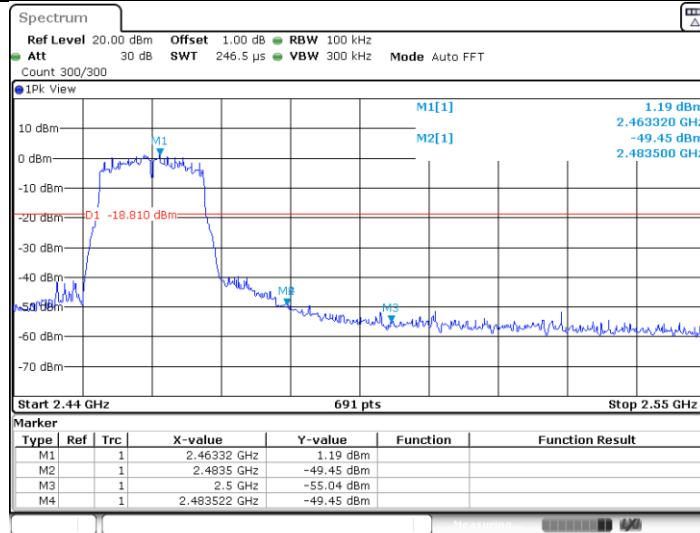


11G_Ant1_Low_2412



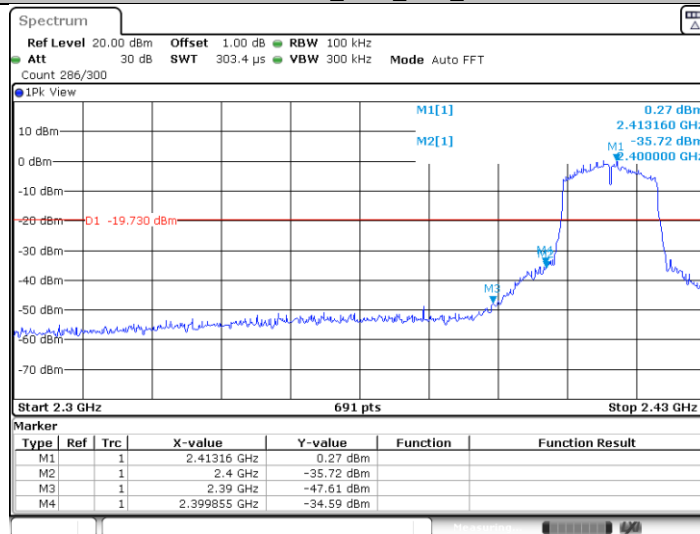
Date: 7.FEB.2022 16:32:37

11G_Ant1_High_2462



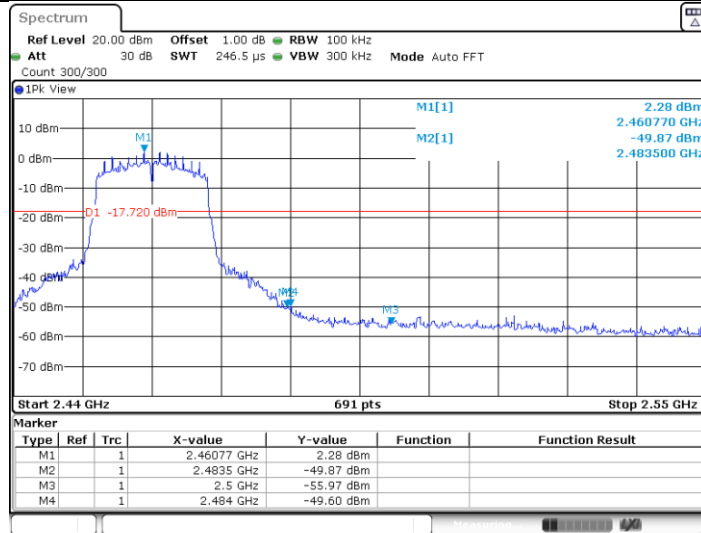
Date: 7.FEB.2022 16:38:52

11N20SISO_Ant1_Low_2412



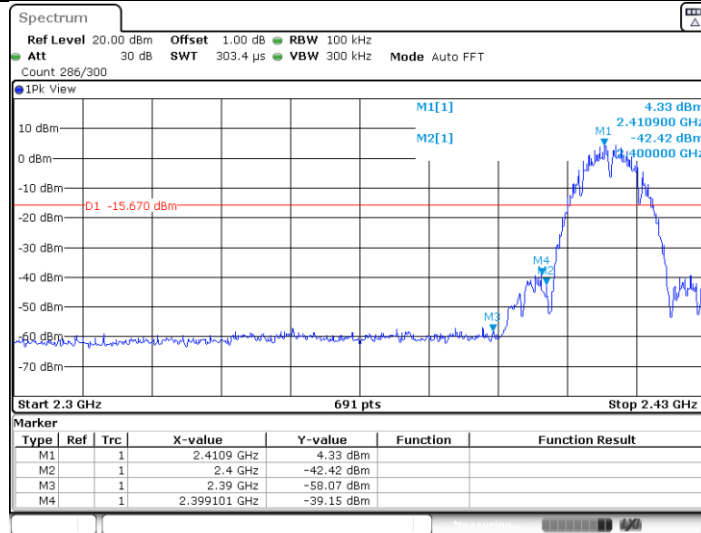
Date: 7.FEB.2022 16:41:23

11N20SISO_Ant1_High_2462



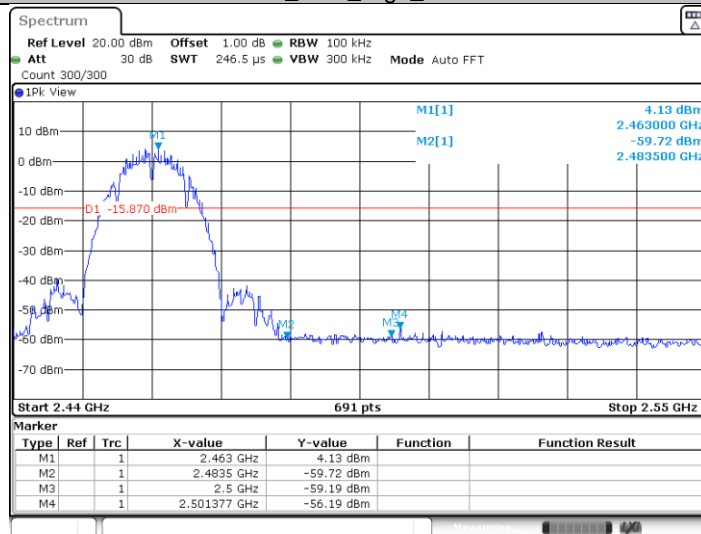
Date: 7.FEB.2022 16:47:44

11B_Ant2_Low_2412



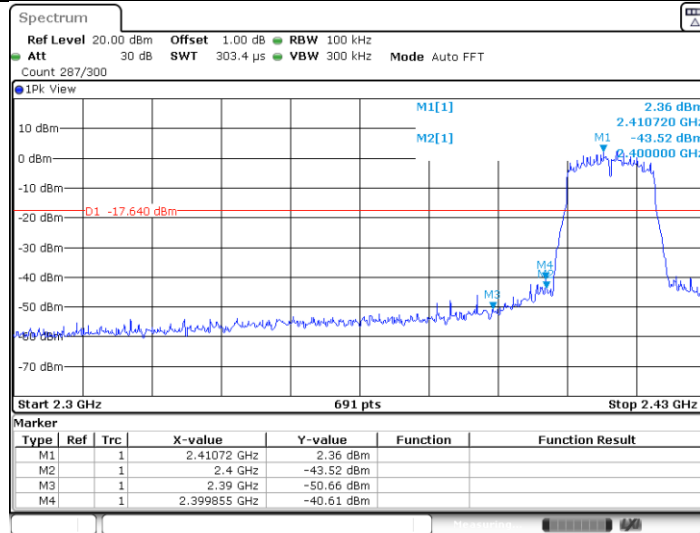
Date: 7.FEB.2022 16:26:05

11B_Ant2_High_2462



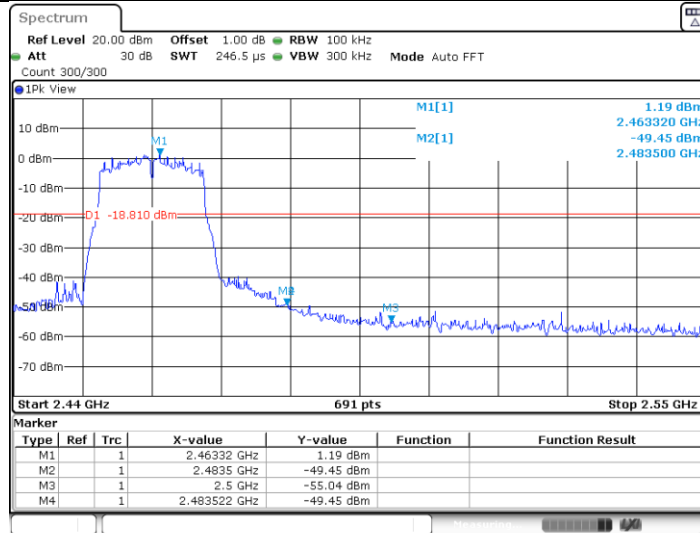
Date: 7.FEB.2022 16:30:26

11G_Ant2_Low_2412



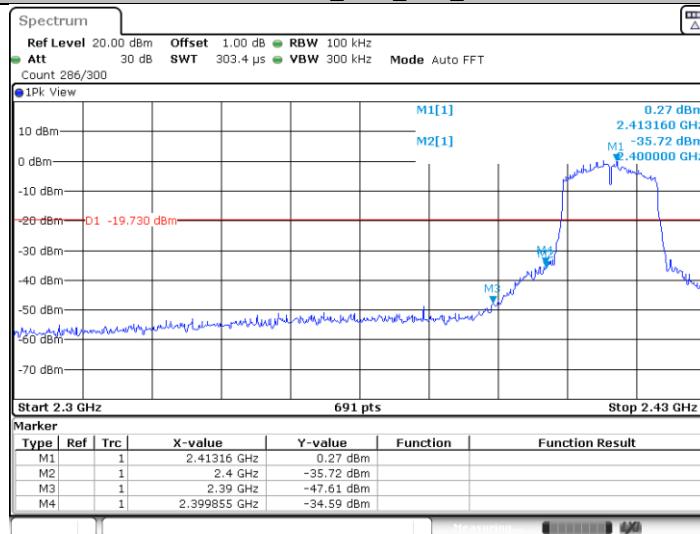
Date: 7.FEB.2022 16:32:37

11G_Ant2_High_2462



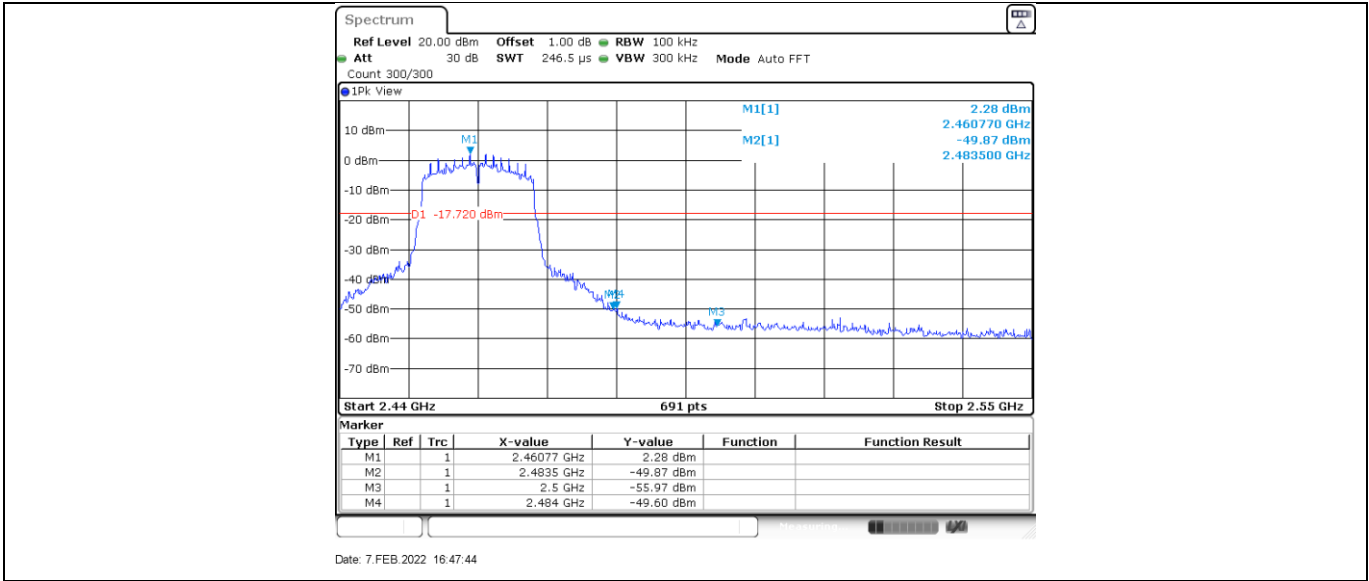
Date: 7.FEB.2022 16:38:52

11N20SISO_Ant2_Low_2412



Date: 7.FEB.2022 16:41:23

11N20SISO_Ant2_High_2462



9.7 Spurious radiated emissions for transmitter

Test Method

1. The EUT was placed on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3 meters chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2. Set to the maximum power setting and enable the EUT transmit continuously
3. The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.
4. The height of 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.
5. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
6. Use the following spectrum analyzer settings According to C63.10:
For Below 1GHz
Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 KHz to 120KHz, VBW ≥ RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.

For Peak unwanted emissions Above 1GHz:

Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 1MHz, VBW ≥ RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.

Procedures for average unwanted emissions measurements above 1000 MHz

a) RBW = 1MHz.

b) VBW \ [3 × RBW].

c) Detector = RMS (power averaging), if [span / (# of points in sweep)] \ RBW / 2.

Satisfying this condition can require increasing the number of points in the sweep or reducing the span. If the condition is not satisfied, then the detector mode shall be set to peak.

d) Averaging type = power (i.e., rms) (As an alternative, the detector and averaging type may be set for linear voltage averaging. Some instruments require linear display mode to use linear voltage averaging. Log or dB averaging shall not be used.)

e) Sweep time = auto.

f) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, then the number of traces shall be increased by a factor of 1 / D, where D is the duty cycle. For example, with 50% duty cycle, at least 200 traces shall be averaged. (If a specific emission is demonstrated to be continuous—i.e., 100% duty cycle—then rather than turning ON and OFF with the transmit cycle, at least 100 traces shall be averaged.)

g) If tests are performed with the EUT transmitting at a duty cycle less than 98%, then a correction factor shall be added to the measurement results prior to comparing with the emission limit, to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:

1) If power averaging (rms) mode was used in the preceding step e), then the correction factor is [10 log (1 / D)], where D is the duty cycle. For example, if the transmit duty

cycle was 50%, then 3 dB shall be added to the measured emission levels.

2) If linear voltage averaging mode was used in the preceding step e), then the correction factor is $[20 \log (1 / D)]$, where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB shall be added to the measured emission levels.

3) If a specific emission is demonstrated to be continuous (100% duty cycle) rather than turning ON and OFF with the transmit cycle, then no duty cycle correction is required for that emission.

Limit

The radio emission outside the operating frequency band 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. Radiated emissions which fall in the restricted bands, as defined in section 15.205, must comply with the radiated emission limits specified in section 15.209.

Frequency MHz	Field Strength $\mu\text{V/m}$	Field Strength $\text{dB}\mu\text{V/m}$	Detector
30-88	100	40	QP
88-216	150	43.5	QP
216-960	200	46	QP
960-1000	500	54	QP
Above 1000	500	54	AV
Above 1000	5000	74	PK

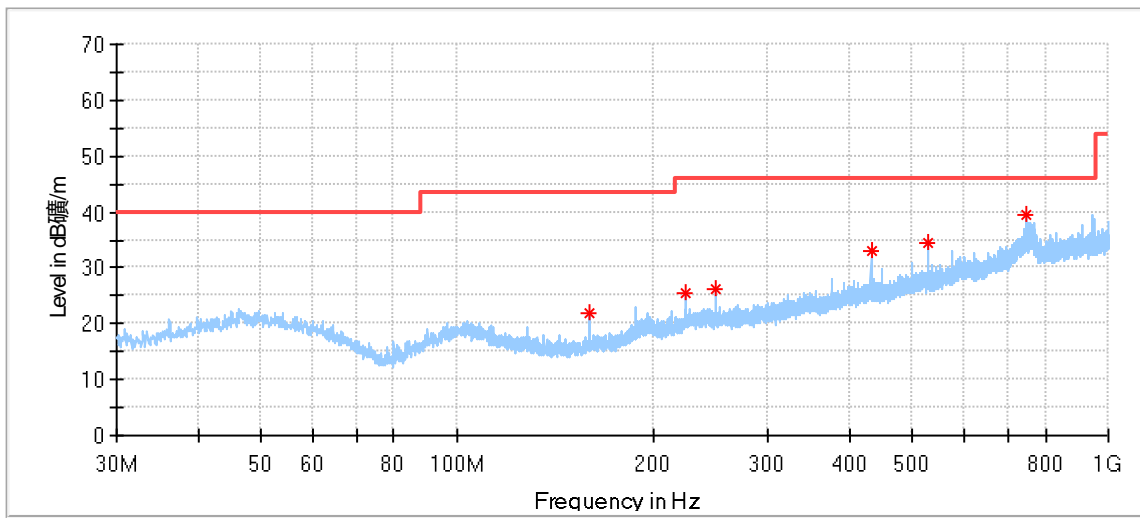
Spurious radiated emissions for transmitter

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

Transmitting spurious emission test result as below:

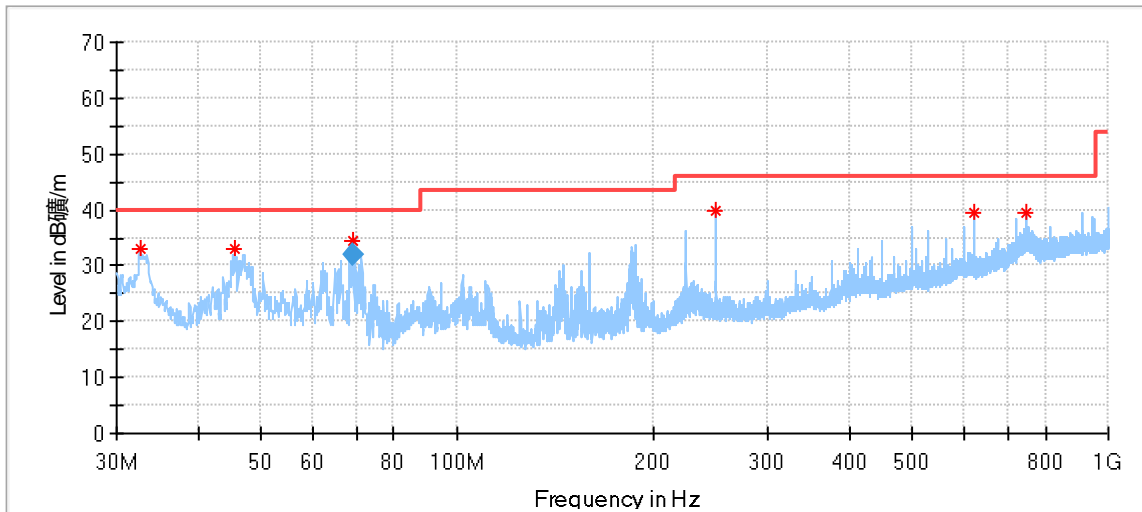
30MHz to 1000MHz:

Adapter: ADS-10RH-06 05010EPB



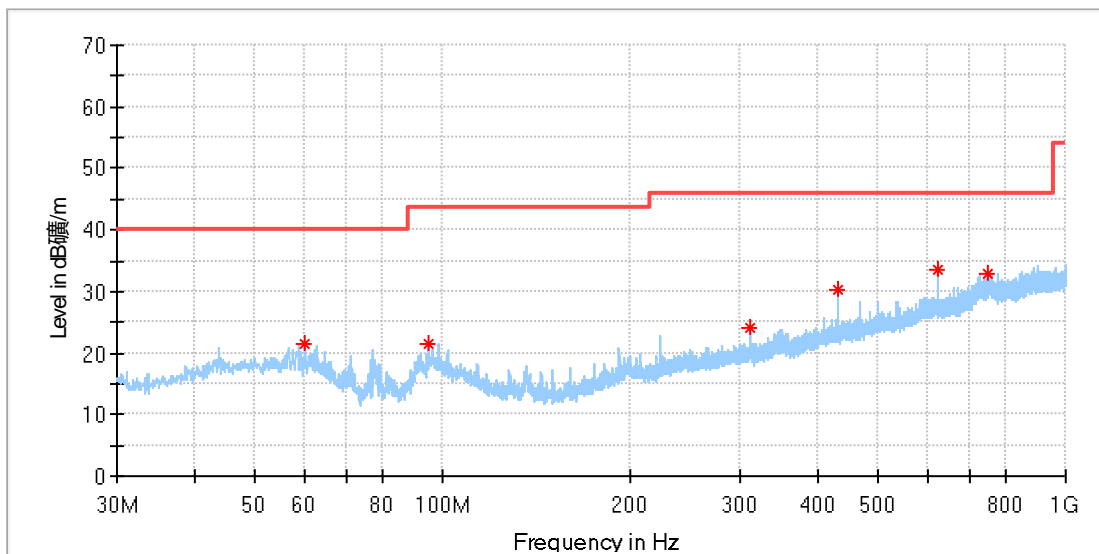
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
159.980000	21.85	43.50	21.65	200.0	H	48.0	15.73
224.000000	25.59	46.00	20.41	200.0	H	247.0	18.82
249.974444	26.23	46.00	19.77	200.0	H	349.0	19.97
432.011111	32.97	46.00	13.03	200.0	H	40.0	24.11
528.041111	34.57	46.00	11.44	200.0	H	76.0	25.66
750.009444	39.64	46.00	6.36	200.0	H	61.0	29.80

Adapter: ADS-10RH-06 05010EPB



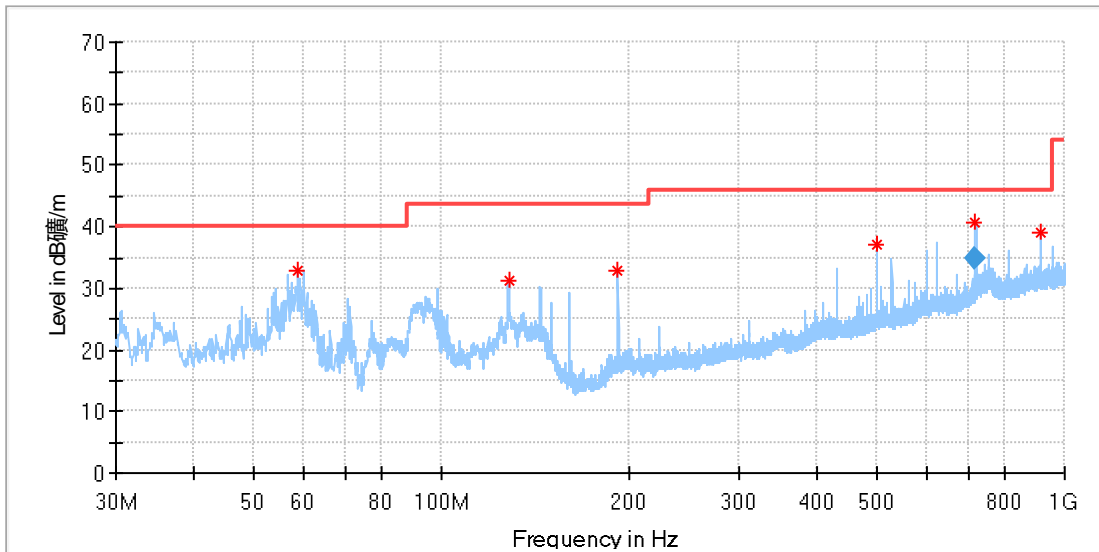
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
32.586667	33.15	40.00	6.85	100.0	V	185.0	16.76
45.520000	32.88	40.00	7.12	100.0	V	323.0	20.86
69.015556	34.31	40.00	5.69	100.0	V	206.0	16.74
250.028333	39.89	46.00	6.11	100.0	V	192.0	19.97
624.017222	39.37	46.00	6.63	100.0	V	139.0	27.52
750.009444	39.52	46.00	6.48	100.0	V	252.0	29.80

Adapter: DYS05200CQ-E



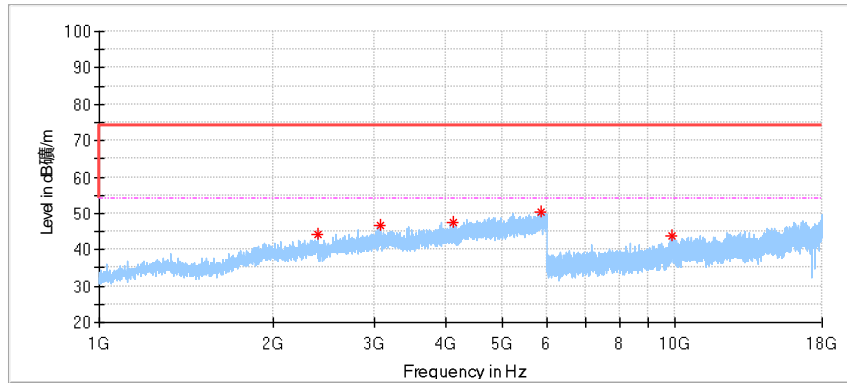
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
60.191250	21.62	40.00	18.38	200.0	H	267.0	19.78
94.990000	21.38	43.50	22.12	200.0	H	54.0	18.29
312.451875	23.96	46.00	22.04	100.0	H	80.0	21.81
432.004375	30.36	46.00	15.64	100.0	H	33.0	24.92
624.003750	33.44	46.00	12.56	100.0	H	33.0	28.65
752.589375	32.88	46.00	13.12	100.0	H	182.0	30.73

Adapter: DYS05200CQ-E



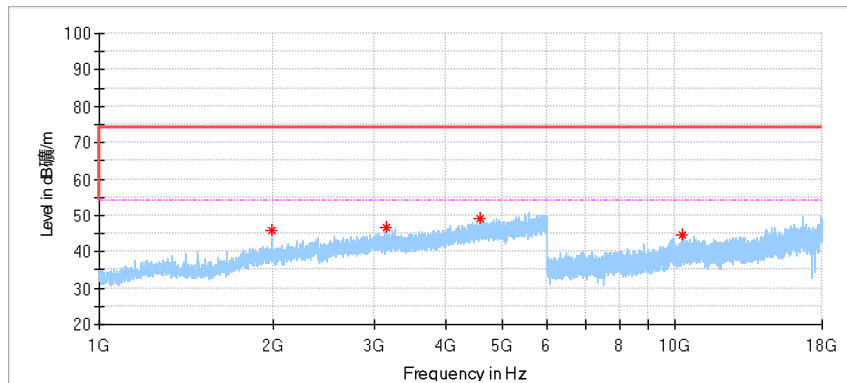
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
58.736250	32.95	40.00	7.05	100.0	V	5.0	20.18
128.030625	31.36	43.50	12.14	100.0	V	104.0	15.98
191.990000	32.82	43.50	10.68	100.0	V	229.0	18.56
499.965000	37.11	46.00	8.89	100.0	V	163.0	26.13
717.890000	40.57	46.00	5.43	113.0	V	323.0	29.63
912.033125	39.14	46.00	6.86	100.0	V	0.0	32.61
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
717.890000	34.79	46.00	11.21	113.0	V	323.0	29.54

1GHz -18GHz:
 11B-Ant1_2412MHz
 Horizontal:



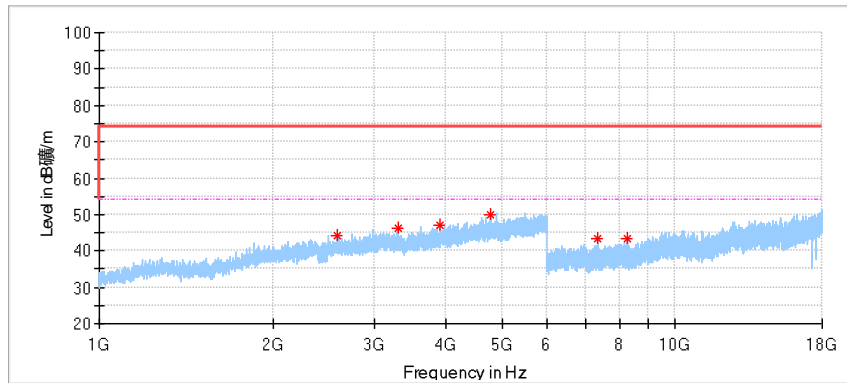
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2394.000000	44.15	74.00	29.85	150.0	H	42.0	-2.21
3079.000000	46.57	74.00	27.43	150.0	H	345.0	0.25
4122.000000	47.60	74.00	26.40	150.0	H	75.0	2.41
5860.500000	50.24	74.00	23.76	150.0	H	4.0	6.80
9851.000000	43.82	74.00	30.18	150.0	H	227.0	11.65

Vertical



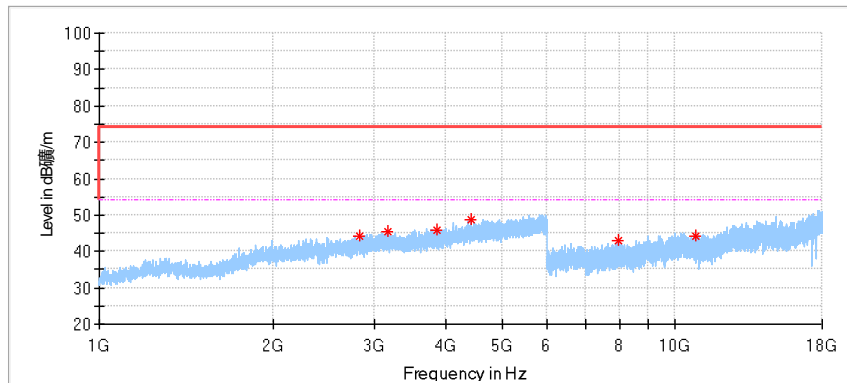
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1994.500000	45.95	74.00	28.05	150.0	V	174.0	-3.71
3160.000000	46.49	74.00	27.51	150.0	V	162.0	0.30
4580.000000	48.94	74.00	25.06	150.0	V	22.0	3.81
10306.500000	44.58	74.00	29.42	150.0	V	333.0	10.72

11B-Ant1_2437MHz
Horizontal:



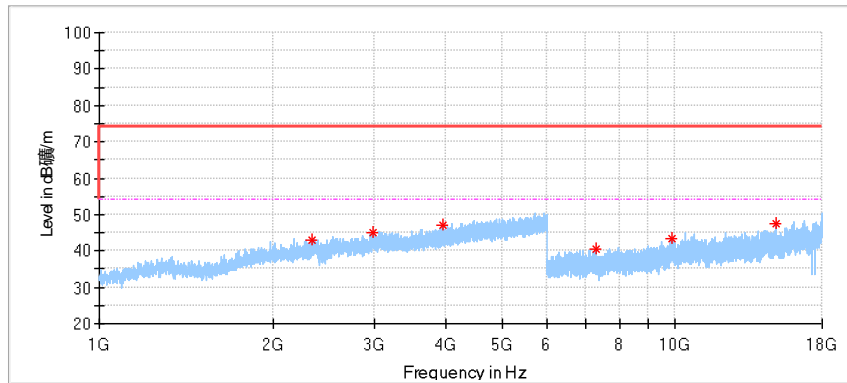
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2594.500000	44.35	74.00	29.65	150.0	H	231.0	-1.51
3302.000000	46.26	74.00	27.74	150.0	H	130.0	0.20
3898.500000	46.98	74.00	27.02	150.0	H	262.0	1.49
4770.500000	49.89	74.00	24.11	150.0	H	313.0	4.36
7324.500000	43.20	74.00	30.80	150.0	H	356.0	8.84
8240.500000	43.41	74.00	30.59	150.0	H	236.0	9.72

Vertical



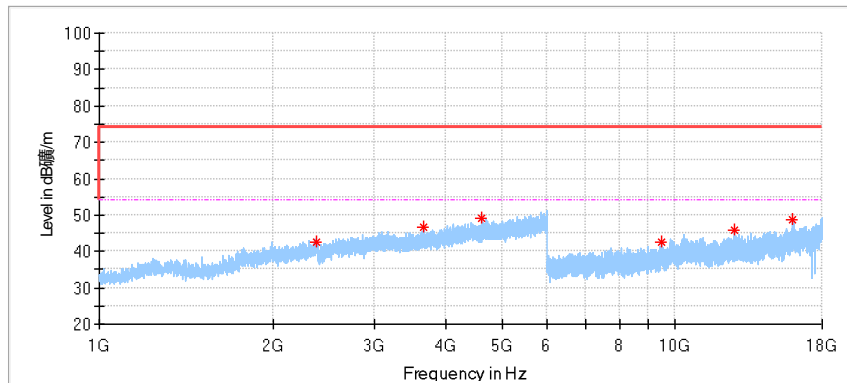
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2839.500000	44.37	74.00	29.63	150.0	V	31.0	-1.06
3171.000000	45.46	74.00	28.54	150.0	V	124.0	0.35
3866.500000	45.99	74.00	28.01	150.0	V	131.0	1.34
4412.500000	48.76	74.00	25.24	150.0	V	60.0	3.43
7968.000000	43.10	74.00	30.90	150.0	V	3.0	9.92
10861.500000	44.31	74.00	29.69	150.0	V	21.0	12.37

11B-Ant1_2462MHz
Horizontal:



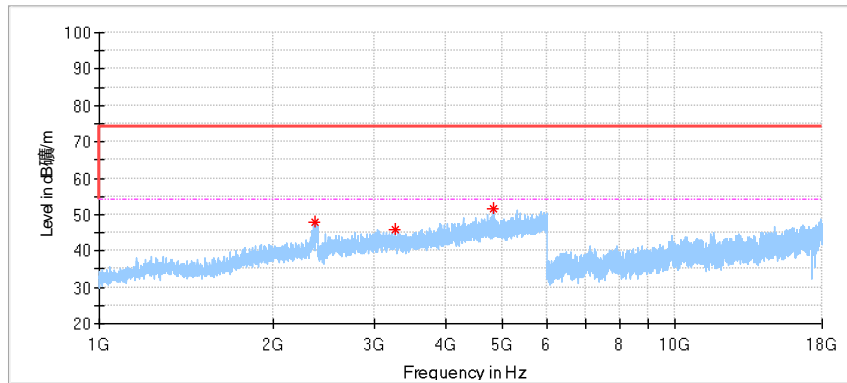
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2341.500000	42.99	74.00	31.01	150.0	H	325.0	-2.33
2981.000000	45.05	74.00	28.95	150.0	H	15.0	-0.41
3953.000000	46.91	74.00	27.09	150.0	H	71.0	1.80
7300.500000	40.50	74.00	33.50	150.0	H	162.0	7.50
9864.500000	43.50	74.00	30.50	150.0	H	269.0	11.78
14946.000000	47.66	74.00	26.34	150.0	H	23.0	14.68

Vertical



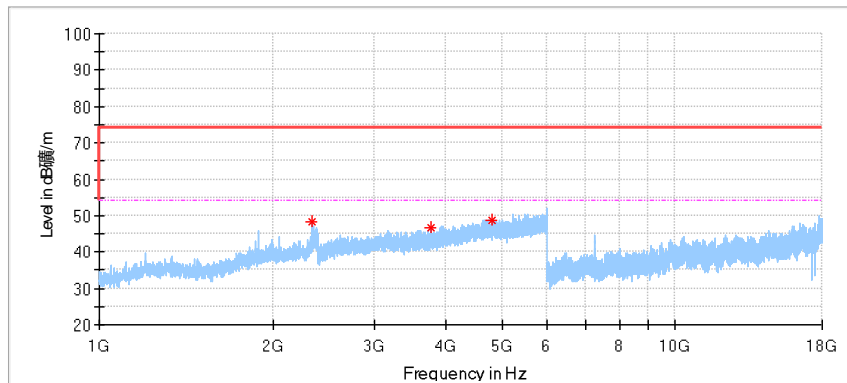
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2389.000000	42.39	74.00	31.61	150.0	V	158.0	-2.23
3657.500000	46.56	74.00	27.44	150.0	V	17.0	0.81
4623.000000	49.23	74.00	24.77	150.0	V	191.0	4.01
9455.000000	42.69	74.00	31.31	150.0	V	295.0	10.00
12646.000000	45.77	74.00	28.23	150.0	V	70.0	12.70
16022.500000	48.85	74.00	25.15	150.0	V	133.0	17.69

11G-Ant1_2412MHz
Horizontal:



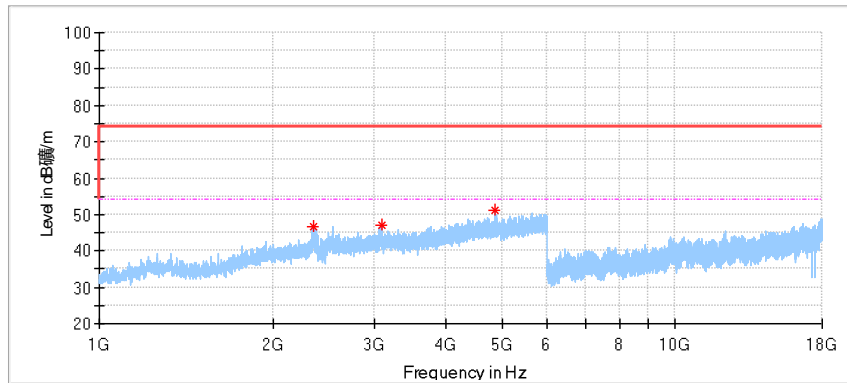
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2366.500000	47.95	74.00	26.05	150.0	H	14.0	-2.33
3268.000000	46.01	74.00	27.99	150.0	H	138.0	0.27
4830.000000	51.59	74.00	22.41	150.0	H	164.0	4.45

Vertical



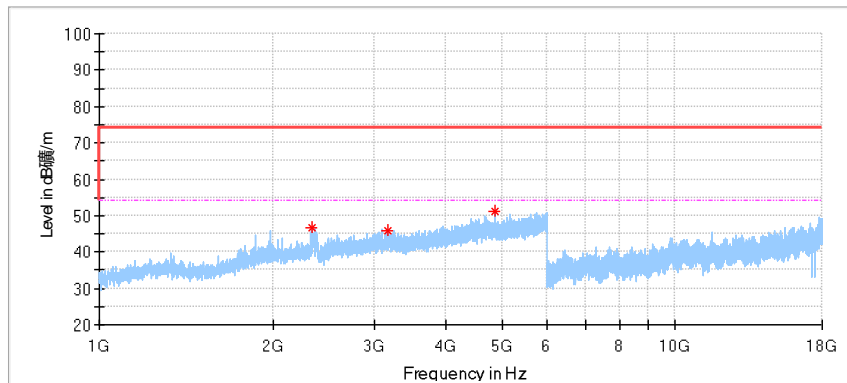
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2341.000000	48.26	74.00	25.74	150.0	V	1.0	-2.32
3773.000000	46.68	74.00	27.32	150.0	V	342.0	1.34
4816.000000	48.87	74.00	25.13	150.0	V	272.0	4.36

11G-Ant1_2437MHz
Horizontal:



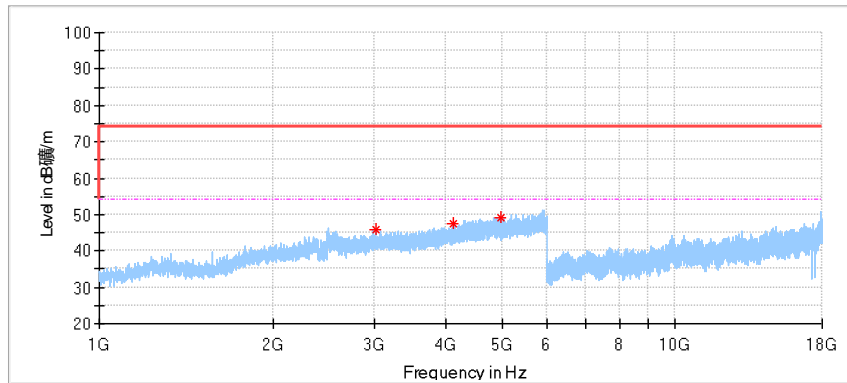
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2348.000000	46.84	74.00	27.16	150.0	H	69.0	-2.36
3093.500000	47.14	74.00	26.86	150.0	H	221.0	0.23
4875.000000	51.22	74.00	22.78	150.0	H	159.0	4.62

Vertical



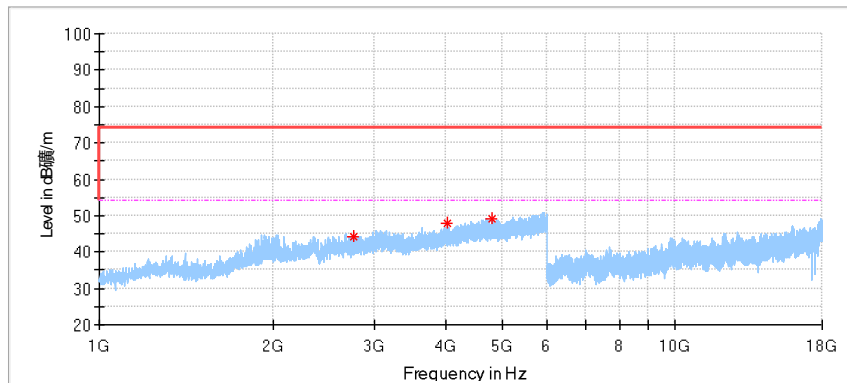
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2339.000000	46.49	74.00	27.51	150.0	V	0.0	-2.31
3165.000000	45.89	74.00	28.11	150.0	V	356.0	0.32
4875.500000	51.00	74.00	23.00	150.0	V	87.0	4.62

11G-Ant1_2462MHz
Horizontal:



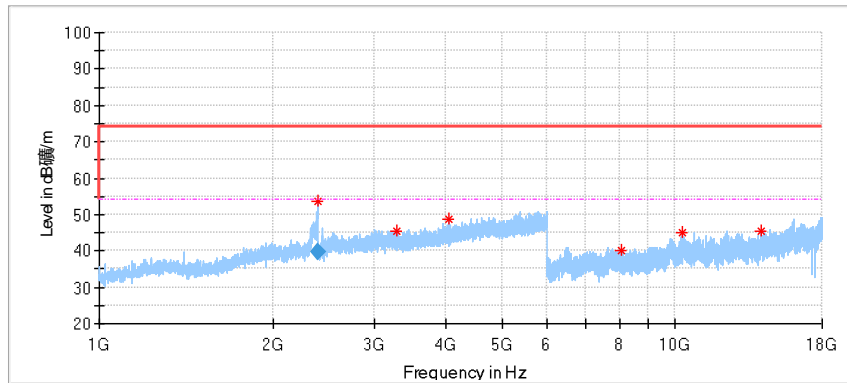
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3014.500000	45.90	74.00	28.10	150.0	H	266.0	-0.05
4116.500000	47.58	74.00	26.42	150.0	H	284.0	2.40
4993.000000	49.09	74.00	24.91	150.0	H	1.0	4.67

Vertical



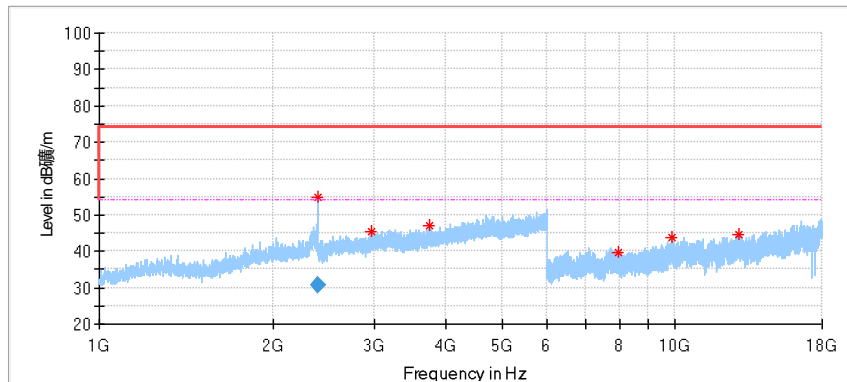
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2758.500000	44.30	74.00	29.70	150.0	V	31.0	-1.19
4030.500000	47.76	74.00	26.24	150.0	V	356.0	1.90
4797.000000	49.11	74.00	24.89	150.0	V	221.0	4.36

11N-HT20-Ant1_2412MHz
Horizontal:



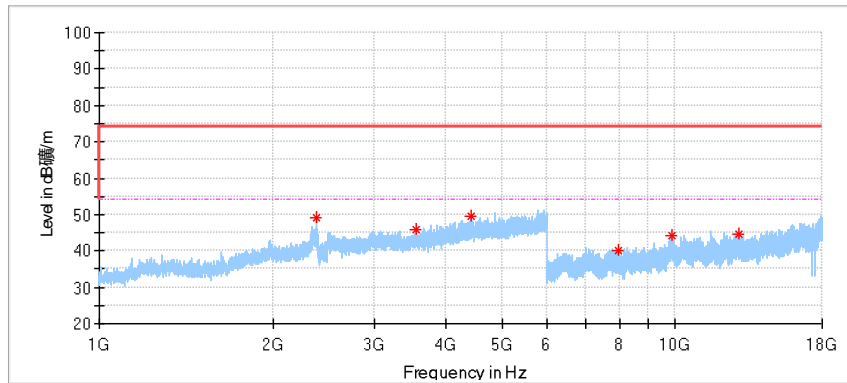
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2393.500000	53.84	74.00	20.16	150.0	H	62.0	-2.21
3288.000000	45.38	74.00	28.62	150.0	H	309.0	0.23
4049.500000	48.64	74.00	25.36	150.0	H	358.0	2.02
8079.000000	39.94	74.00	34.06	150.0	H	356.0	7.96
10285.000000	44.93	74.00	29.07	150.0	H	66.0	10.69
14133.000000	45.24	74.00	28.76	150.0	H	27.0	12.61
Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2393.500000	39.87	54.00	14.13	150.0	H	62.0	-2.21

Vertical



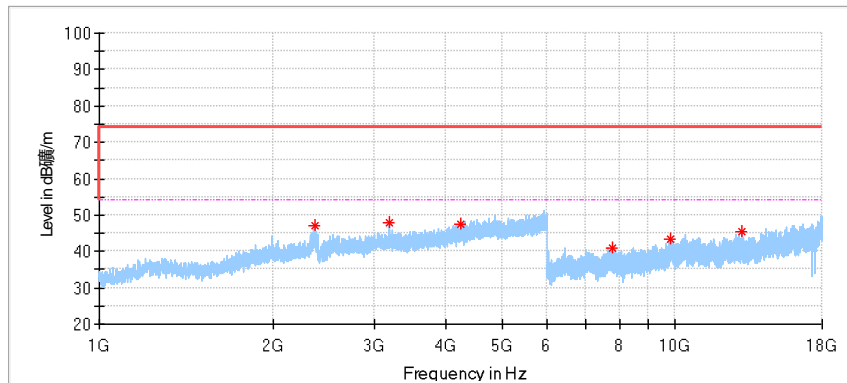
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2393.500000	54.99	74.00	19.01	150.0	V	338.0	-2.21
2964.500000	45.56	74.00	28.44	150.0	V	95.0	-0.41
3745.500000	47.04	74.00	26.96	150.0	V	28.0	1.26
7949.000000	39.86	74.00	34.14	150.0	V	273.0	8.13
9900.000000	43.63	74.00	30.37	150.0	V	91.0	11.14
12887.500000	44.64	74.00	29.36	150.0	V	174.0	12.79
Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2393.500000	30.69	54.00	23.31	150.0	V	338.0	-2.21

11N-HT20-Ant1_2437MHz
Horizontal:



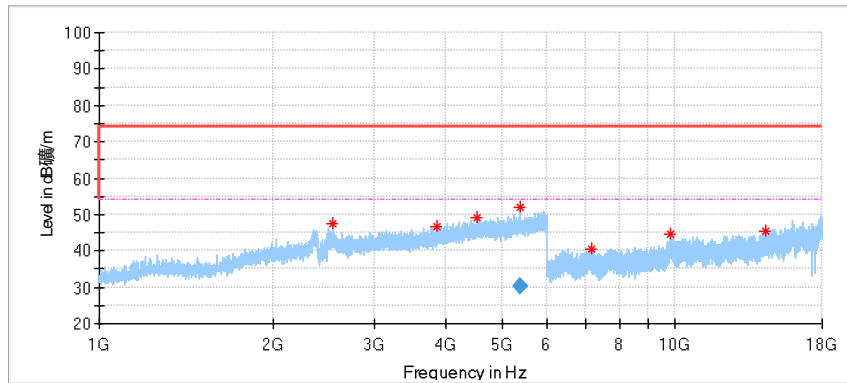
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2387.000000	48.97	74.00	25.03	150.0	H	75.0	-2.24
3543.500000	45.97	74.00	28.03	150.0	H	0.0	0.53
4426.500000	49.52	74.00	24.48	150.0	H	202.0	3.44
7960.500000	39.94	74.00	34.06	150.0	H	147.0	8.12
9865.000000	44.06	74.00	29.94	150.0	H	290.0	11.77
12870.000000	44.78	74.00	29.22	150.0	H	0.0	12.81

Vertical



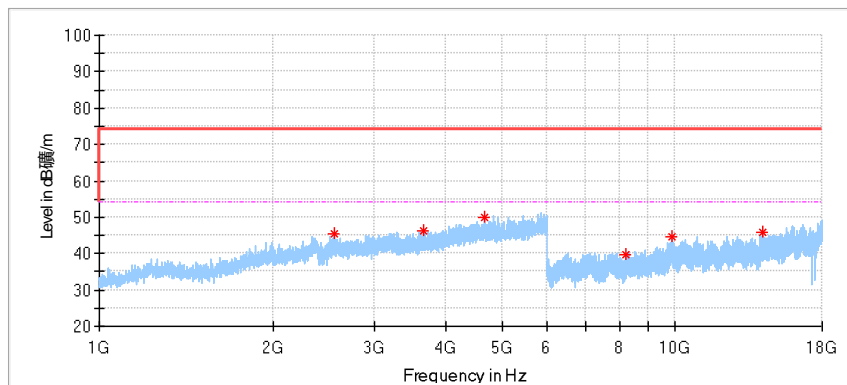
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2365.500000	47.12	74.00	26.88	150.0	V	0.0	-2.33
3193.500000	47.75	74.00	26.25	150.0	V	269.0	0.24
4231.500000	47.45	74.00	26.55	150.0	V	182.0	2.57
7802.000000	40.78	74.00	33.22	150.0	V	107.0	8.15
9830.000000	43.28	74.00	30.72	150.0	V	147.0	11.30
13042.500000	45.44	74.00	28.56	150.0	V	68.0	12.87

11N-HT20-Ant1_2462MHz
Horizontal:



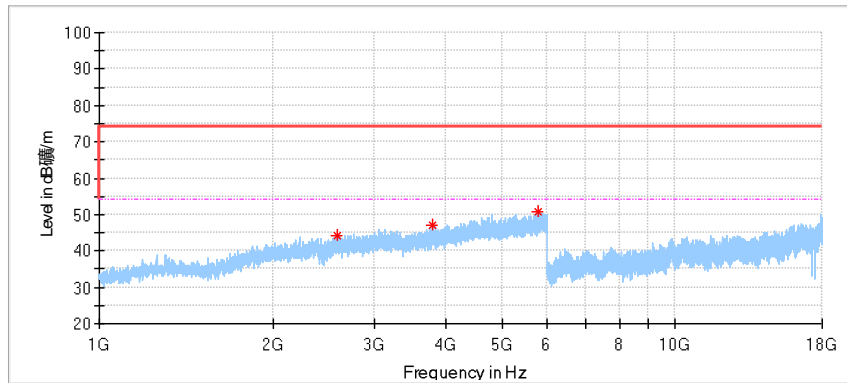
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2539.000000	47.61	74.00	26.39	150.0	H	48.0	-1.62
3852.000000	46.58	74.00	27.42	150.0	H	135.0	1.27
4542.500000	49.11	74.00	24.89	150.0	H	332.0	3.70
5387.000000	52.05	74.00	21.95	150.0	H	258.0	5.75
7181.500000	40.60	74.00	33.40	150.0	H	83.0	7.25
9837.500000	44.79	74.00	29.21	150.0	H	83.0	11.42
14401.500000	45.50	74.00	28.50	150.0	H	269.0	13.61

Vertical



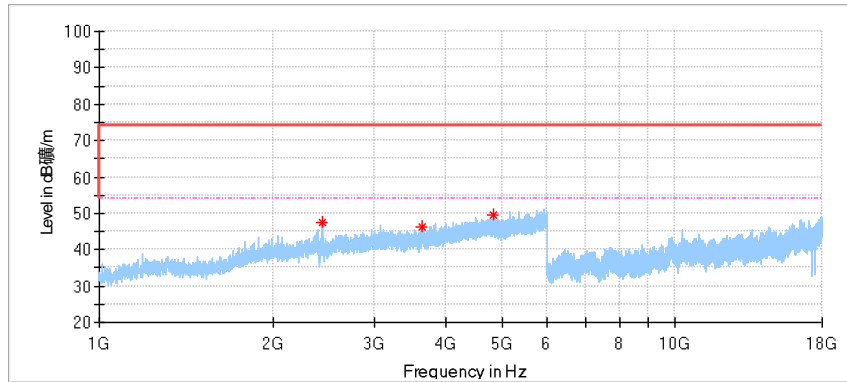
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2558.000000	45.59	74.00	28.41	150.0	V	2.0	-1.55
3647.000000	46.20	74.00	27.80	150.0	V	80.0	0.77
4673.000000	49.76	74.00	24.24	150.0	V	88.0	4.22
8207.000000	39.50	74.00	34.50	150.0	V	343.0	8.22
9879.500000	44.80	74.00	29.20	150.0	V	343.0	11.51
14214.000000	45.95	74.00	28.05	150.0	V	29.0	12.84

11B-Ant2_2412MHz
Horizontal:



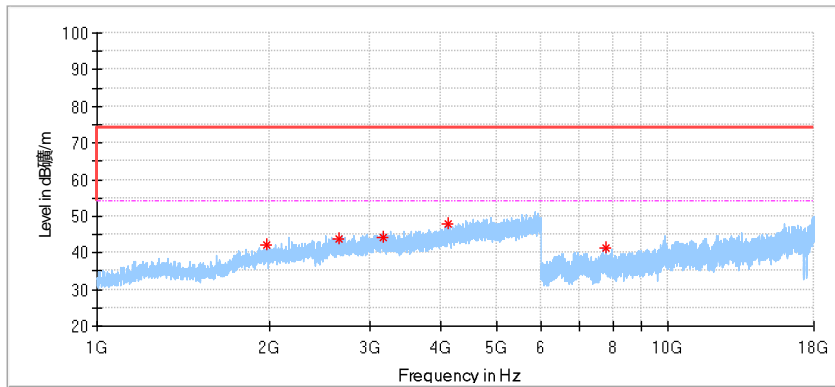
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2590.000000	44.22	74.00	29.78	150.0	H	266.0	-1.52
3797.000000	46.87	74.00	27.13	150.0	H	78.0	1.34
5774.500000	50.78	74.00	23.22	150.0	H	212.0	6.48

Vertical



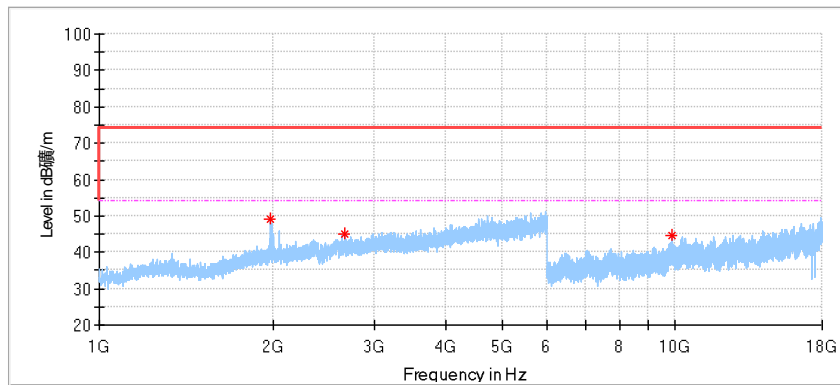
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2446.000000	47.50	74.00	26.50	150.0	V	123.0	-1.98
3632.000000	46.14	74.00	27.86	150.0	V	43.0	0.77
4828.500000	49.37	74.00	24.63	150.0	V	159.0	4.44

11B-Ant2_2437MHz
Horizontal:



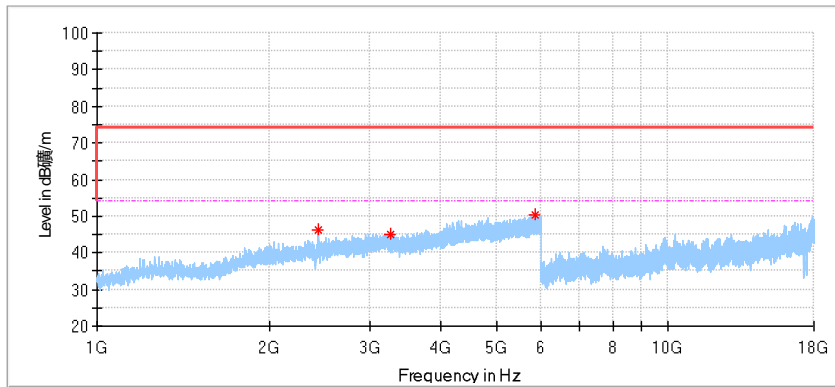
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1981.000000	42.31	74.00	31.69	150.0	H	298.0	-3.69
2648.500000	43.79	74.00	30.21	150.0	H	111.0	-1.37
3177.000000	44.32	74.00	29.68	150.0	H	263.0	0.32
4126.000000	47.72	74.00	26.28	150.0	H	236.0	2.42
7767.000000	41.21	74.00	32.79	150.0	H	286.0	8.05

Vertical



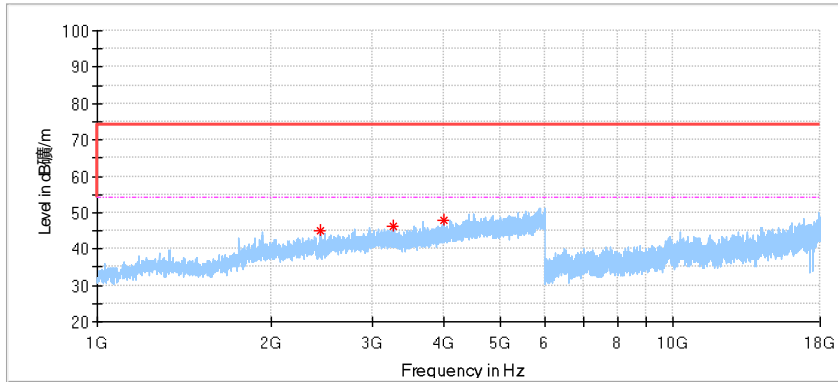
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1985.500000	49.14	74.00	24.86	150.0	V	123.0	-3.62
2671.000000	44.94	74.00	29.06	150.0	V	78.0	-1.36
9864.500000	44.79	74.00	29.21	150.0	V	117.0	11.78

11B-Ant2_2462MHz
Horizontal:



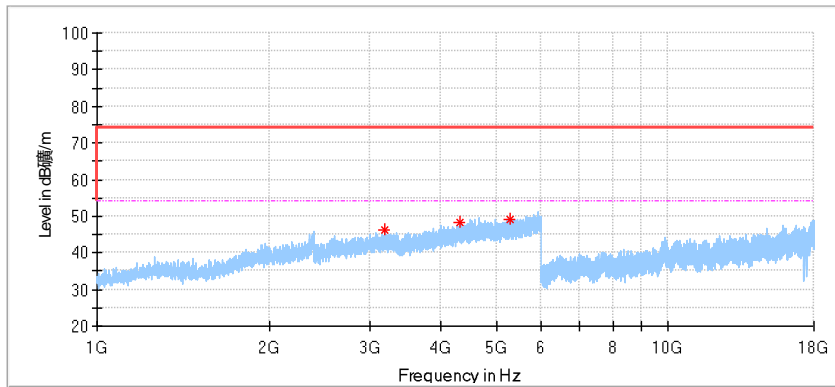
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2438.000000	46.43	74.00	27.57	150.0	H	325.0	-2.03
3266.500000	44.94	74.00	29.06	150.0	H	245.0	0.27
5862.000000	50.41	74.00	23.59	150.0	H	191.0	6.81

Vertical



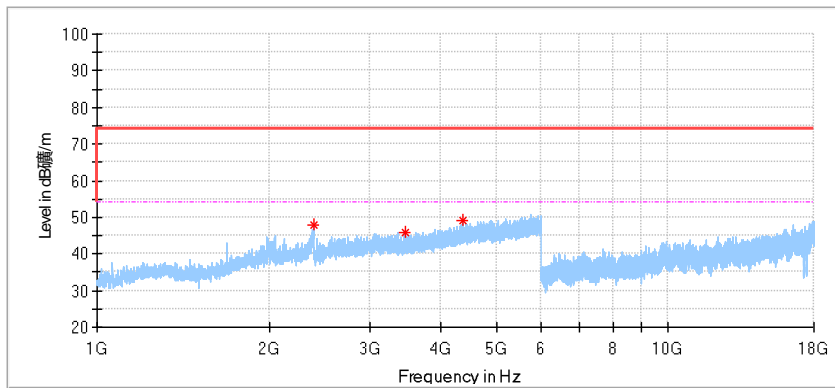
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2441.500000	45.03	74.00	28.97	150.0	V	132.0	-2.01
3275.000000	46.15	74.00	27.85	150.0	V	239.0	0.26
3992.500000	48.08	74.00	25.92	150.0	V	337.0	1.97

11G-Ant2_2412MHz
Horizontal:



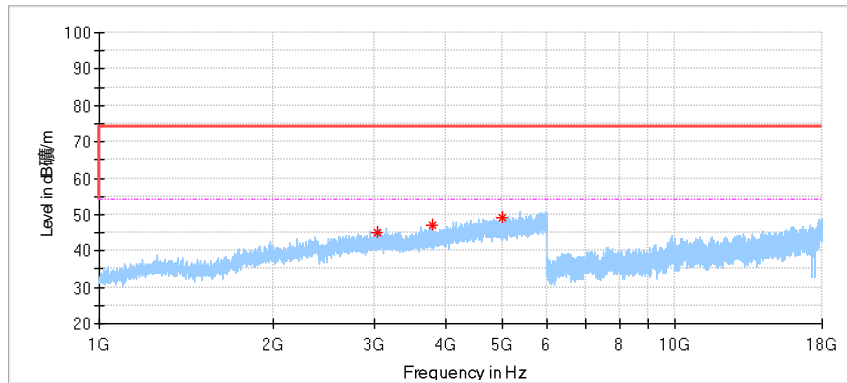
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3191.500000	46.18	74.00	27.82	150.0	H	229.0	0.25
4314.000000	48.48	74.00	25.52	150.0	H	193.0	3.02
5280.000000	49.33	74.00	24.67	150.0	H	175.0	5.45

Vertical



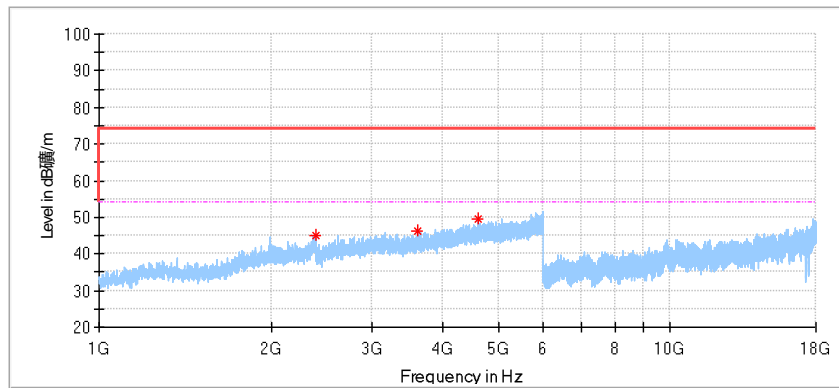
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2390.500000	47.84	74.00	26.16	150.0	V	168.0	-2.22
3460.500000	45.87	74.00	28.13	150.0	V	22.0	0.22
4359.000000	49.16	74.00	24.84	150.0	V	257.0	3.20

11G-Ant2_2437MHz
Horizontal:



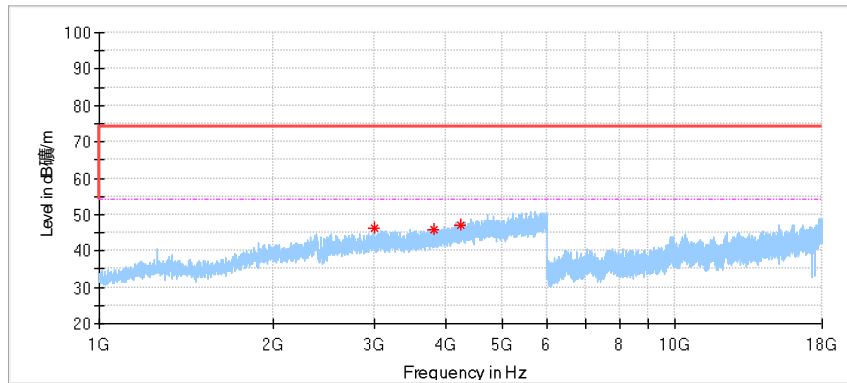
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3036.500000	44.87	74.00	29.13	150.0	H	78.0	0.06
3785.000000	47.19	74.00	26.81	150.0	H	141.0	1.35
5003.500000	49.02	74.00	24.98	150.0	H	177.0	4.72

Vertical



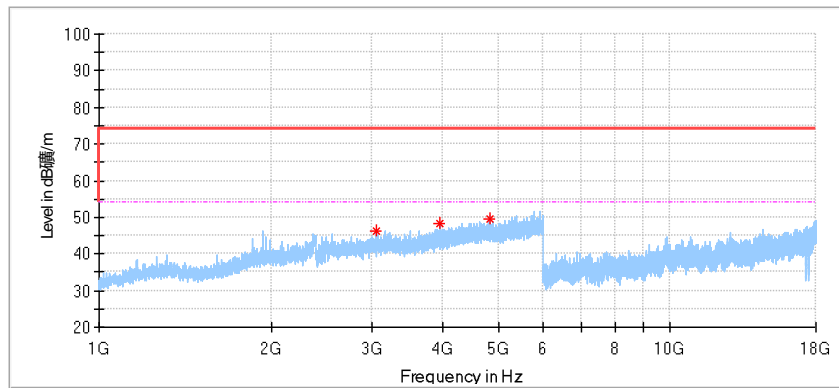
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2390.000000	45.05	74.00	28.95	150.0	V	7.0	-2.23
3608.000000	46.40	74.00	27.60	150.0	V	211.0	0.78
4617.500000	49.58	74.00	24.42	150.0	V	229.0	3.99

11G-Ant2_2462MHz
Horizontal:



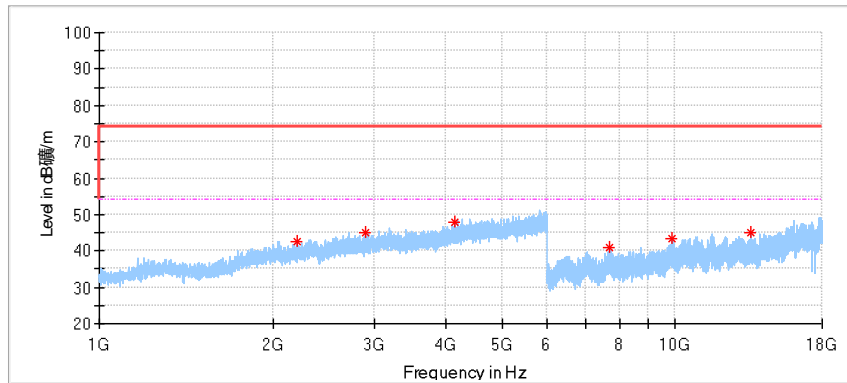
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3013.000000	46.44	74.00	27.56	150.0	H	159.0	-0.07
3806.000000	45.76	74.00	28.24	150.0	H	34.0	1.30
4234.000000	47.26	74.00	26.74	150.0	H	266.0	2.58

Vertical



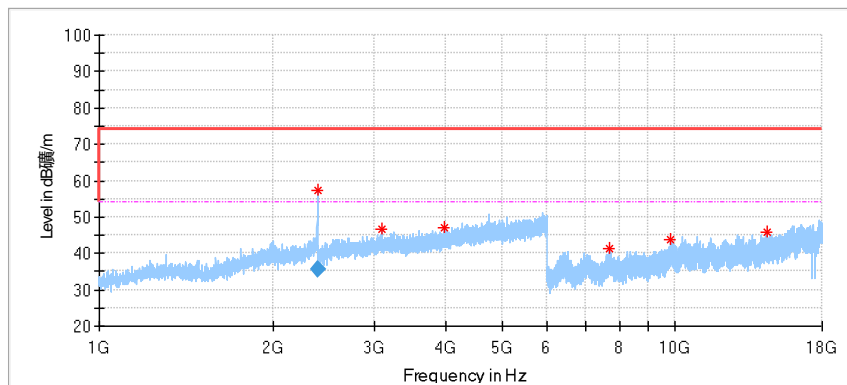
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
3057.500000	46.20	74.00	27.80	150.0	V	0.0	0.14
3941.500000	48.20	74.00	25.80	150.0	V	257.0	1.73
4845.000000	49.70	74.00	24.30	150.0	V	2.0	4.55

11N-HT20-Ant2_2412MHz
Horizontal:



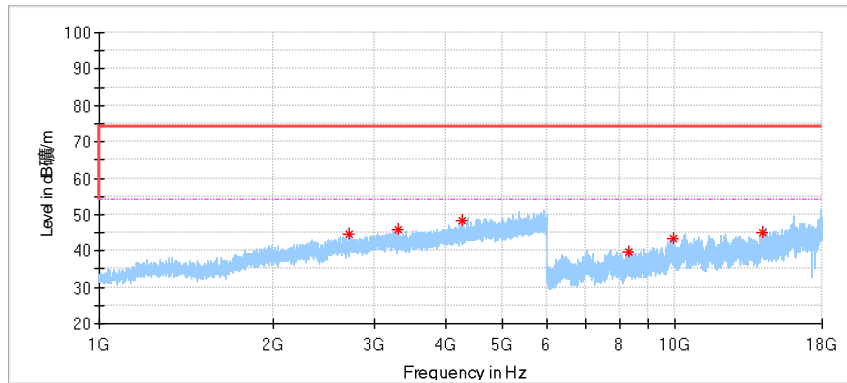
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2200.000000	42.49	74.00	31.51	150.0	H	192.0	-2.98
2898.500000	45.23	74.00	28.77	150.0	H	264.0	-0.91
4140.000000	47.84	74.00	26.16	150.0	H	4.0	2.45
7684.000000	41.06	74.00	32.94	150.0	H	105.0	8.28
9868.000000	43.38	74.00	30.62	150.0	H	356.0	11.71
13544.500000	44.98	74.00	29.02	150.0	H	300.0	12.42

Vertical



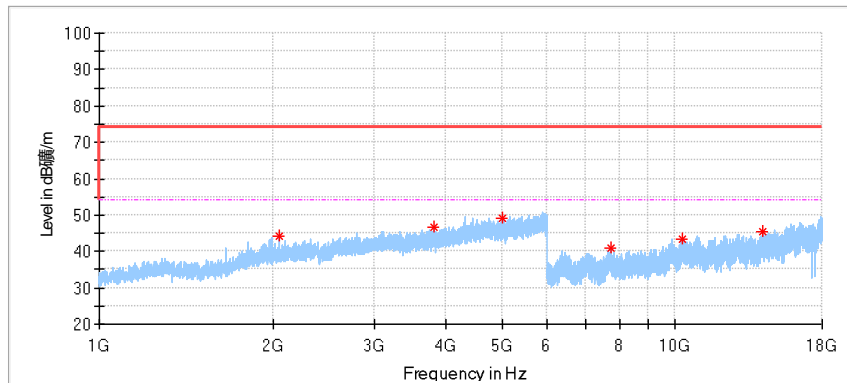
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2392.500000	57.34	74.00	16.66	150.0	V	329.0	-2.21
3097.000000	46.48	74.00	27.52	150.0	V	276.0	0.22
3981.500000	47.19	74.00	26.81	150.0	V	240.0	1.96
7673.500000	41.40	74.00	32.60	150.0	V	4.0	8.20
9827.500000	43.82	74.00	30.18	150.0	V	4.0	11.25
14468.000000	45.91	74.00	28.09	150.0	V	106.0	13.80
Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2392.500000	35.68	54.00	18.32	150.0	V	329.0	-2.21

11N-HT20-Ant2_2437MHz
Horizontal:



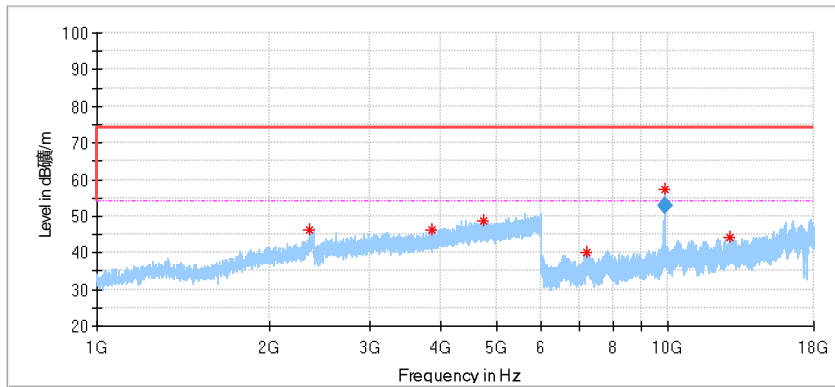
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2713.000000	44.60	74.00	29.40	150.0	H	192.0	-1.31
3302.000000	45.92	74.00	28.08	150.0	H	237.0	0.20
4280.500000	48.37	74.00	25.63	150.0	H	355.0	3.01
8296.500000	39.62	74.00	34.38	150.0	H	185.0	8.41
9907.500000	43.59	74.00	30.41	150.0	H	4.0	11.01
14185.500000	44.89	74.00	29.11	150.0	H	356.0	12.75

Vertical



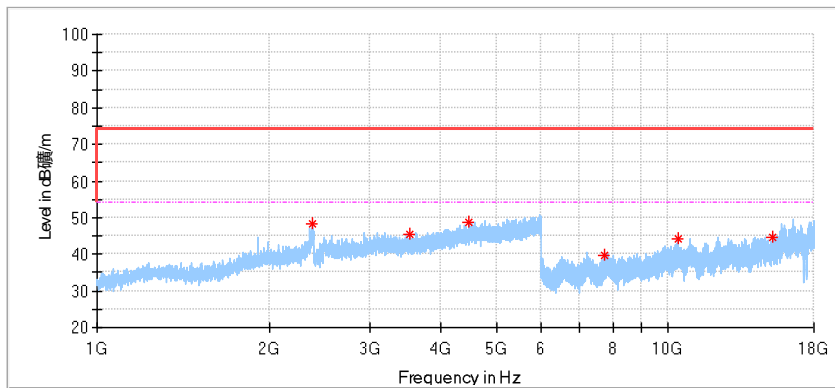
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2048.500000	44.39	74.00	29.61	150.0	V	183.0	-3.67
3822.500000	46.81	74.00	27.19	150.0	V	0.0	1.23
5011.000000	48.96	74.00	25.04	150.0	V	352.0	4.78
7737.500000	40.87	74.00	33.13	150.0	V	133.0	8.15
10286.000000	43.36	74.00	30.64	150.0	V	216.0	10.69
14230.500000	45.50	74.00	28.50	150.0	V	6.0	12.90

11N-HT20-Ant2_2462MHz
Horizontal:



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2539.000000	47.61	74.00	26.39	150.0	H	48.0	-1.62
3852.000000	46.58	74.00	27.42	150.0	H	135.0	1.27
4542.500000	49.11	74.00	24.89	150.0	H	332.0	3.70
5387.000000	52.05	74.00	21.95	150.0	H	258.0	5.75
7181.500000	40.60	74.00	33.40	150.0	H	83.0	7.25
9837.500000	44.79	74.00	29.21	150.0	H	83.0	11.42
14401.500000	45.50	74.00	28.50	150.0	H	269.0	13.61
Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
9852.500000	53.01	54.00	0.99	150.0	H	336.0	11.68

Vertical

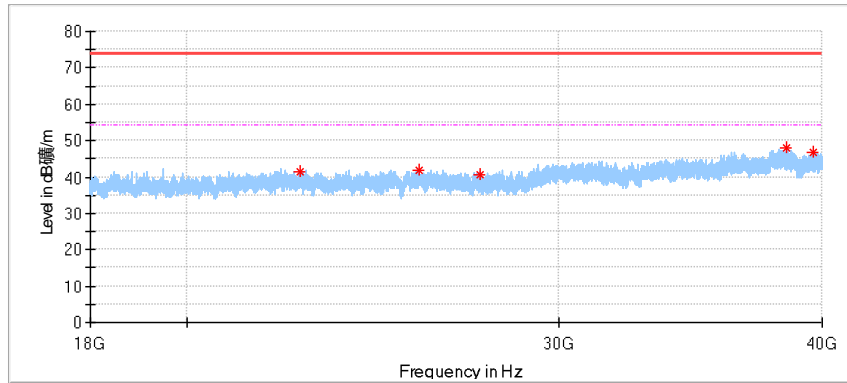


Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2387.000000	48.23	74.00	25.78	150.0	V	0.0	-2.24
3534.500000	45.34	74.00	28.66	150.0	V	200.0	0.51
4479.500000	48.64	74.00	25.36	150.0	V	272.0	3.61
7740.500000	39.85	74.00	34.15	150.0	V	254.0	8.14
10410.000000	44.09	74.00	29.91	150.0	V	172.0	10.81
15208.000000	44.65	74.00	29.35	150.0	V	226.0	14.87

Above 18GHz:

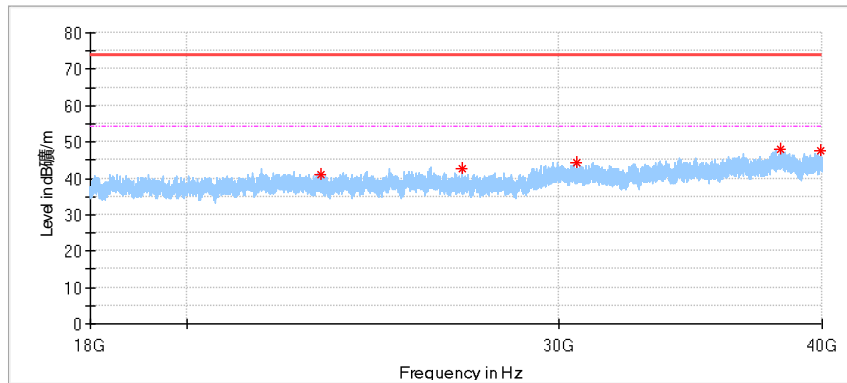
11B_Ant1_2412MHz

Horizontal:



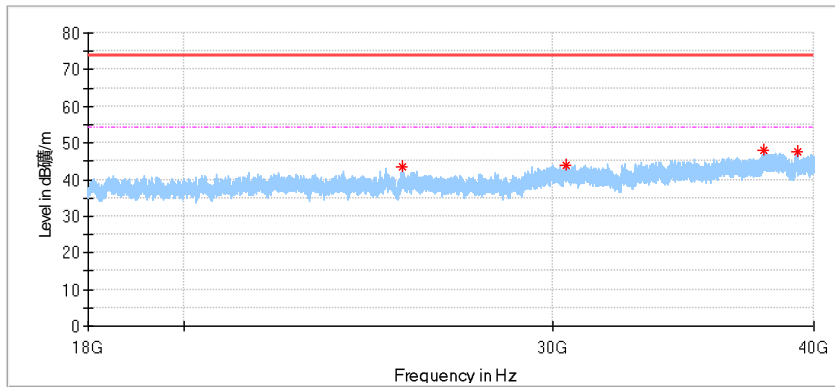
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
22622.750000	41.41	74.00	32.59	150.0	H	129.0	0.33
25748.125000	41.77	74.00	32.23	150.0	H	51.0	1.72
27526.687500	40.81	74.00	33.19	150.0	H	0.0	1.53
38487.500000	48.03	74.00	25.97	150.0	H	18.0	6.57
39601.250000	46.79	74.00	27.21	150.0	H	18.0	7.40

Vertical



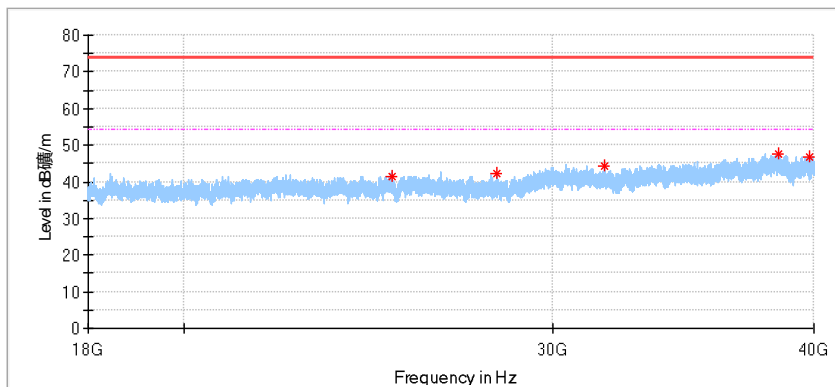
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
23142.500000	40.97	74.00	33.03	150.0	V	139.0	0.44
26993.187500	42.65	74.00	31.35	150.0	V	0.0	1.63
30594.312500	44.38	74.00	29.62	150.0	V	32.0	1.96
38228.312500	48.00	74.00	26.00	150.0	V	185.0	6.11
39931.250000	47.46	74.00	26.54	150.0	V	63.0	8.09

11B_Ant1 _2437MHz
Horizontal:



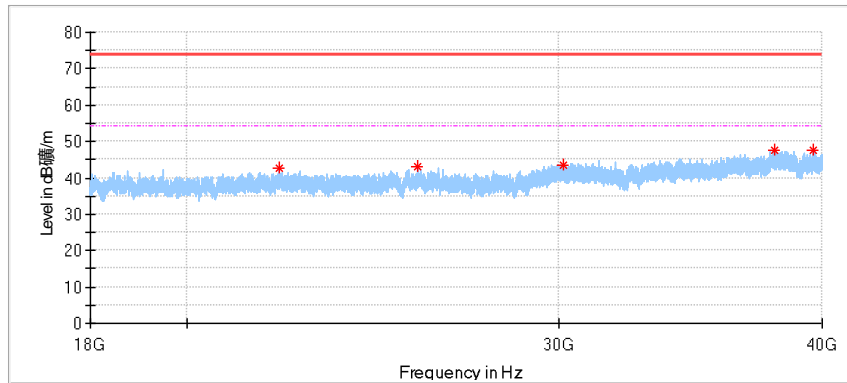
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
25422.250000	43.30	74.00	30.70	150.0	H	355.0	1.38
30449.937500	43.89	74.00	30.11	150.0	H	285.0	2.03
37859.812500	47.96	74.00	26.04	150.0	H	331.0	4.81
39296.687500	47.77	74.00	26.23	150.0	H	345.0	6.12

Vertical



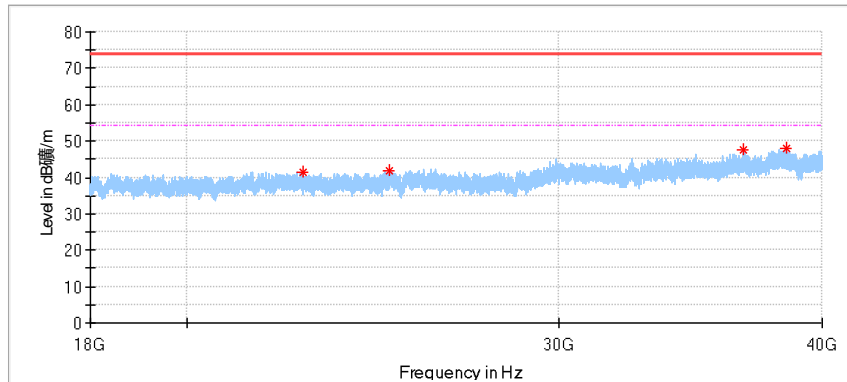
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
25136.937500	41.32	74.00	32.68	150.0	V	187.0	1.25
28206.625000	42.38	74.00	31.62	150.0	V	312.0	1.13
31762.375000	44.17	74.00	29.83	150.0	V	329.0	1.73
38456.562500	47.47	74.00	26.53	150.0	V	345.0	6.57
39788.250000	46.76	74.00	27.24	150.0	V	39.0	7.89

11B_Ant1 _2462MHz
Horizontal:



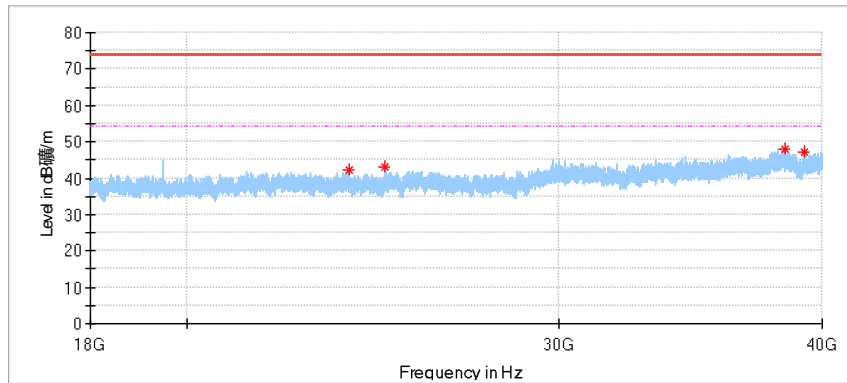
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
22109.875000	42.61	74.00	31.39	150.0	H	339.0	0.13
25715.812500	42.89	74.00	31.11	150.0	H	96.0	1.69
30139.187500	43.46	74.00	30.54	150.0	H	0.0	2.07
38002.125000	47.73	74.00	26.27	150.0	H	80.0	5.34
39611.562500	47.48	74.00	26.52	150.0	H	96.0	7.42

Vertical



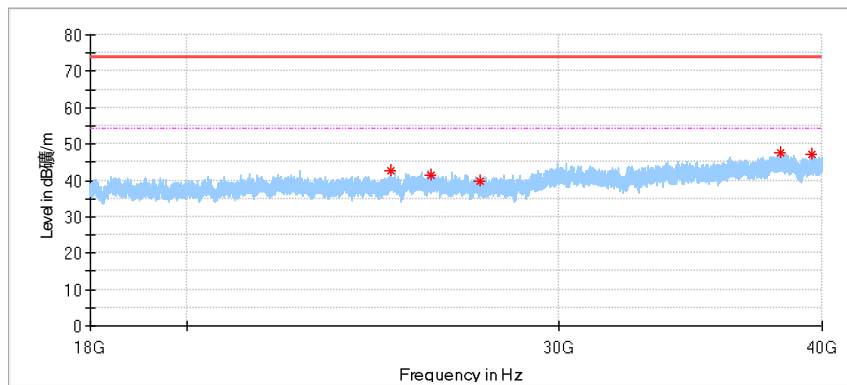
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
22683.937500	41.23	74.00	32.77	150.0	V	78.0	0.36
24943.750000	41.87	74.00	32.13	150.0	V	155.0	1.12
36711.000000	47.48	74.00	26.52	150.0	V	1.0	4.42
38470.312500	48.11	74.00	25.89	150.0	V	18.0	6.57

11B_Ant2_2412MHz
Horizontal:



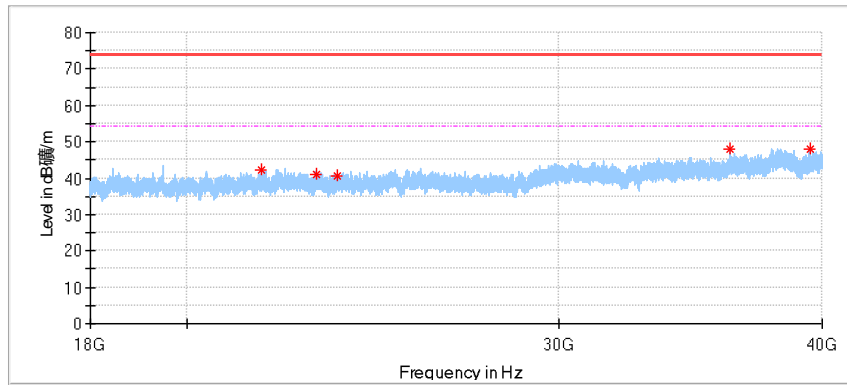
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
23867.125000	42.22	74.00	31.78	150.0	H	342.0	0.63
24839.937500	42.96	74.00	31.04	150.0	H	15.0	0.87
38383.000000	47.95	74.00	26.05	150.0	H	15.0	6.56
39253.375000	47.18	74.00	26.82	150.0	H	267.0	5.92

Vertical



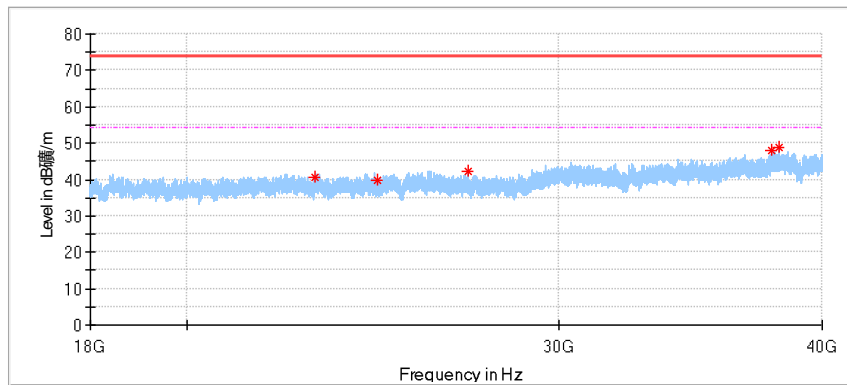
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
24993.937500	42.70	74.00	31.30	150.0	V	109.0	1.27
26097.375000	41.46	74.00	32.54	150.0	V	18.0	1.55
27525.312500	39.81	74.00	34.19	150.0	V	0.0	1.54
38245.500000	47.77	74.00	26.23	150.0	V	124.0	6.19
39524.250000	47.28	74.00	26.72	150.0	V	170.0	6.97

11B_Ant2_2437MHz
Horizontal:



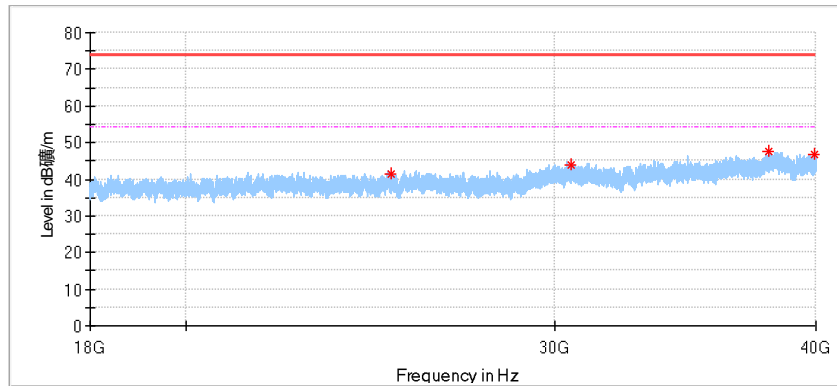
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
21681.562500	42.29	74.00	31.71	150.0	H	204.0	-0.23
23041.437500	41.21	74.00	32.79	150.0	H	31.0	0.51
23554.312500	40.65	74.00	33.35	150.0	H	0.0	0.28
36143.125000	48.17	74.00	25.83	150.0	H	0.0	4.15
39472.000000	48.04	74.00	25.96	150.0	H	314.0	6.73

Vertical



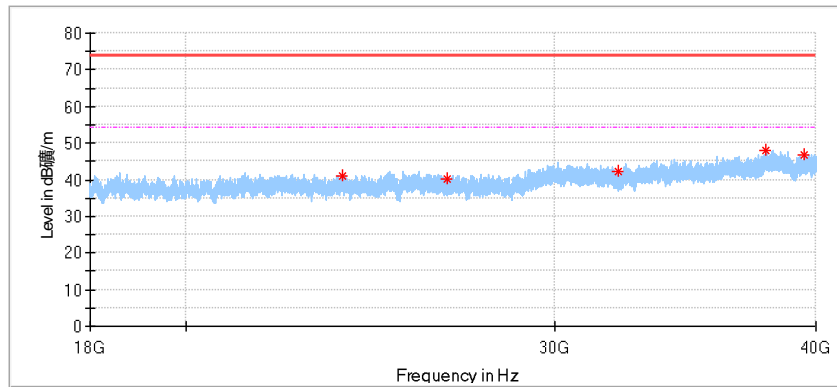
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
22984.375000	40.79	74.00	33.21	150.0	V	141.0	0.45
24603.437500	39.86	74.00	34.14	150.0	V	0.0	0.69
27175.375000	42.06	74.00	31.94	150.0	V	356.0	1.67
37840.562500	48.08	74.00	25.92	150.0	V	126.0	4.76
38176.750000	48.63	74.00	25.37	150.0	V	19.0	5.87

11B_Ant2_2462MHz
Horizontal:



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
25066.125000	41.61	74.00	32.39	150.0	H	202.0	1.24
30565.437500	43.77	74.00	30.23	150.0	H	294.0	1.97
37976.000000	47.42	74.00	26.58	150.0	H	15.0	5.27
39955.312500	46.76	74.00	27.24	150.0	H	0.0	8.01

Vertical



Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
23763.312500	40.84	74.00	33.16	150.0	V	109.0	0.55
26650.812500	40.25	74.00	33.75	150.0	V	18.0	1.55
32184.500000	42.11	74.00	31.89	150.0	V	127.0	1.69
37878.375000	48.01	74.00	25.99	150.0	V	7.0	4.86
39487.812500	46.96	74.00	27.04	150.0	V	234.0	6.79

10 Test Equipment List

Radiated Emission Test

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 26	68-4-74-14-002	101269	1	2022-6-4
Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9162	68-4-80-19-003	284	1	2022-2-2
Wave Guide Antenna	ETS	3117	68-4-80-19-001	00218954	1	2022-5-24
Pre-amplifier	Rohde & Schwarz	SCU 18F	68-4-29-19-001	100745	1	2022-10-24
Pre-amplifier	Rohde & Schwarz	SCU 08F2	68-4-29-19-004	08400018	1	2022-10-24
Sideband Horn Antenna	Q-PAR	QWH-SL-18-40-K-SG	68-4-80-14-008	12827	1	2022-7-21
Pre-amplifier	Rohde & Schwarz	SCU 40A	68-4-29-14-002	100432	1	2022-7-27
3m Semi-anechoic chamber	TDK	SAC-3 #2	68-4-90-19-006	----	2	2023-5-28
Test software	Rohde & Schwarz	EMC32	68-4-90-19-006-A01	Version10.3 5.02	N/A	N/A

Conducted Emission Test

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 3	68-4-74-19-002	102590	1	2022-6-4
LISN	Rohde & Schwarz	ENV216	68-4-87-19-001	102472	1	2022-6-5
ISN	Rohde & Schwarz	ENY81	68-4-87-14-003	100177	1	2022-6-5
ISN	Rohde & Schwarz	ENY81-CA6	68-4-87-14-004	101664	1	2022-6-5
High Voltage Probe	Schwarzbeck	TK9420(VT 9420)	68-4-27-14-001	9420-584	1	2022-6-5
RF Current Probe	Rohde & Schwarz	EZ-17	68-4-27-14-002	100816	1	2022-6-5
Attenuator	Shanghai Huaxiang	TS2-26-3	68-4-81-16-003	080928189	1	2022-6-3
Test software	Rohde & Schwarz	EMC32	68-4-90-19-005-A01	Version10.3 5.02	N/A	N/A
Shielding Room	TDK	CSR #2	68-4-90-19-005	----	1	2022-11-07

Conducted RF Test System

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
Signal Analyzer	Rohde & Schwarz	FSV40	68-4-74-14-004	101030	1	2022-6-3
RF Switch Module	Rohde & Schwarz	OSP120/OS P-B157	68-4-93-14-003	101226/100 851	1	2022-6-3
Power Splitter	Weinschel	1580	68-4-85-14-001	SC319	1	2022-6-3
10dB Attenuator	Weinschel	4M-10	68-4-81-14-003	43152	1	2022-6-3
10dB Attenuator	R&S	DNF	68-4-81-14-004	DNF-001	1	2022-6-3
10dB Attenuator	R&S	DNF	68-4-81-14-005	DNF-002	1	2022-6-3
10dB Attenuator	R&S	DNF	68-4-81-14-006	DNF-003	1	2022-6-3
10dB Attenuator	R&S	DNF	68-4-81-14-007	DNF-004	1	2022-6-3
Test software	Tonscend	System for BT/WIFI	68-4-74-14-006-A13	Version 2.6.77.0518	N/A	N/A
Shielding Room	TDK	TS8997	68-4-90-19-003	----	1	2022-11-07

11 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty	
Test Items	Extended Uncertainty
Uncertainty for Conducted Emission 150kHz-30MHz (for test using AMN ENV432 or ENV4200)	3.62dB
Uncertainty for Radiated Spurious Emission 25MHz-3000MHz	Horizontal: 4.70dB; Vertical: 4.67dB;
Uncertainty for Radiated Spurious Emission 3000MHz-18000MHz	Horizontal: 4.65dB; Vertical: 4.63dB;
Uncertainty for Radiated Spurious Emission 18000MHz-40000MHz	Horizontal: 5.05dB; Vertical: 5.04dB;
Uncertainty for Conducted RF test with TS 8997	RF Power Conducted: 1.16dB Frequency test involved: 0.6×10^{-7} or 1%
Uncertainty Evaluation for Humidity	0.936%
Uncertainty Evaluation for Temperature	0.195 °C