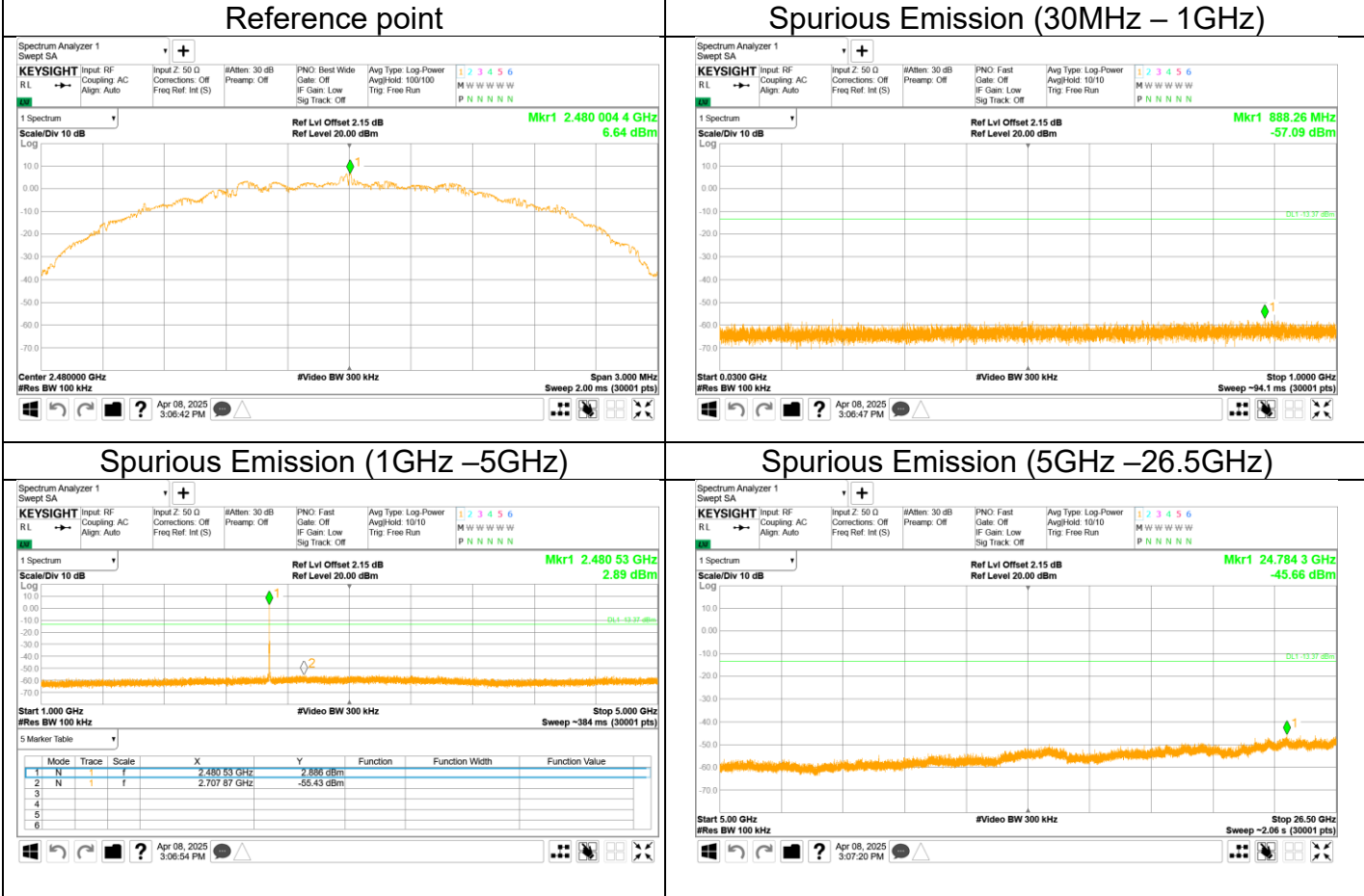




Out-of-Band Emissions (2Mbps)
Channel 39 (2480MHz)



Note: The emission which exceed the limit is the fundamental.



10.6 Band edge

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. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. 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 $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize, use the peak and delta measurement to record the result.
5. The level displayed must comply with the limit specified in this Section.
6. Repeat above procedures until all frequencies measured were complete and submit all the plots.

Limit:

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that 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 § 15.247(b)(3) and RSS-247 section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB.

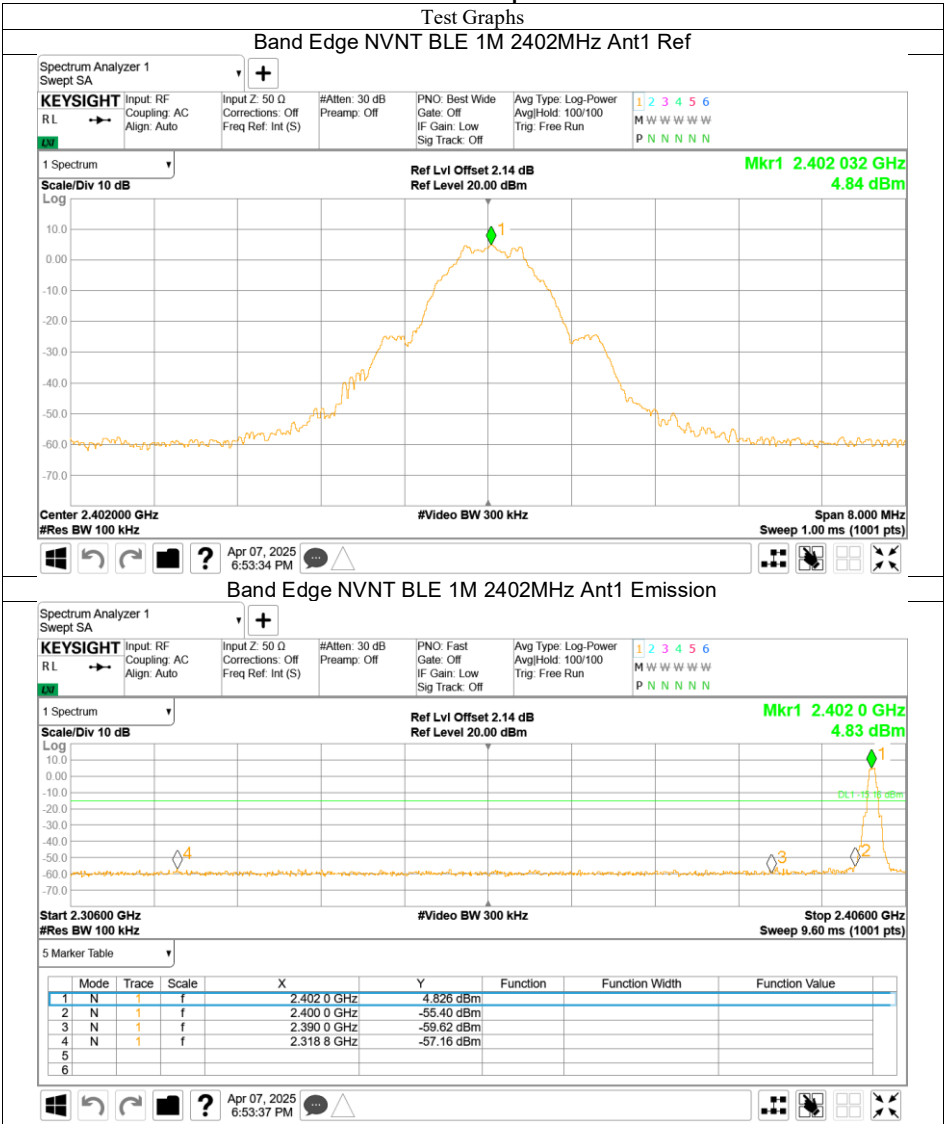
According to §15.247(d), band edge limit as below:

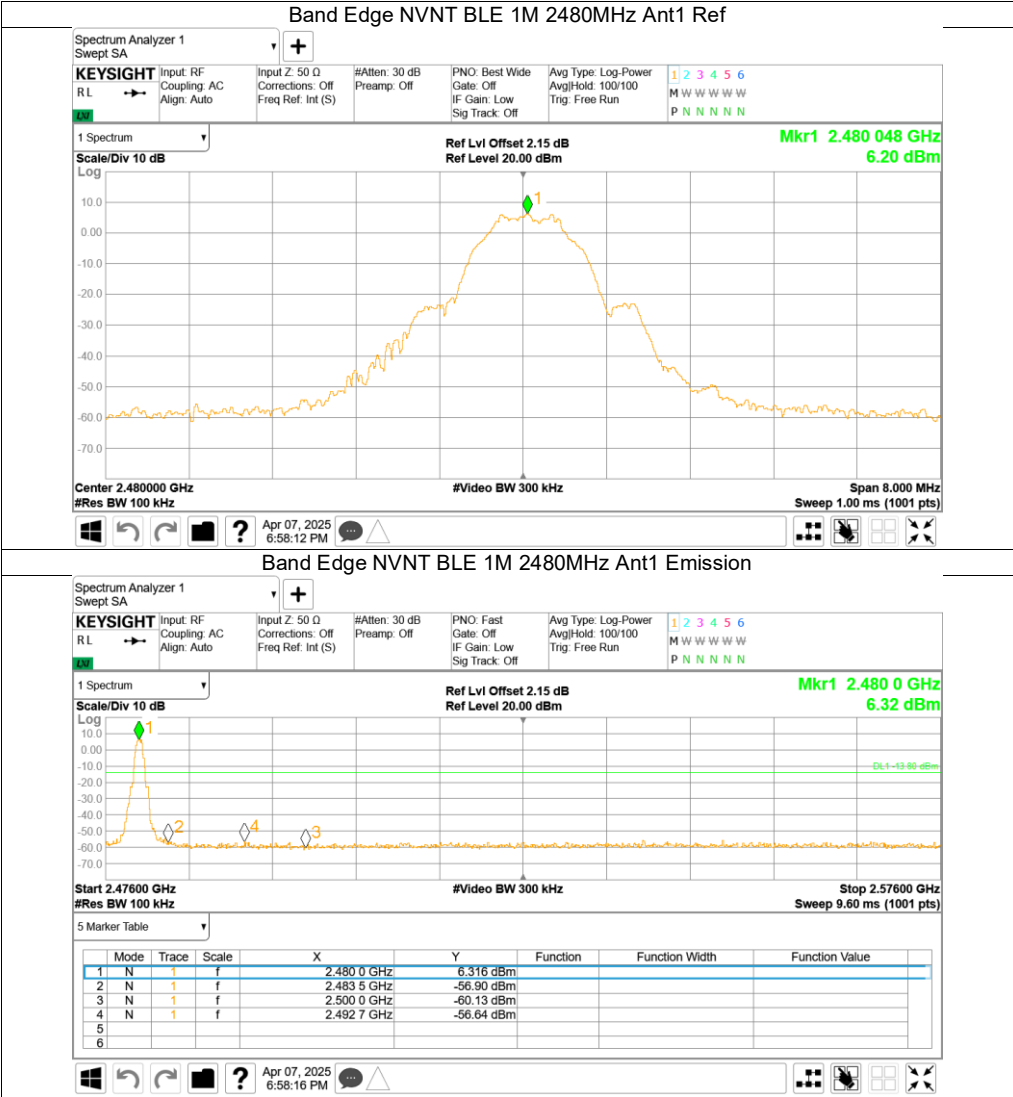
Frequency Range MHz	Limit (dBc)
30-25000	-20



Test result

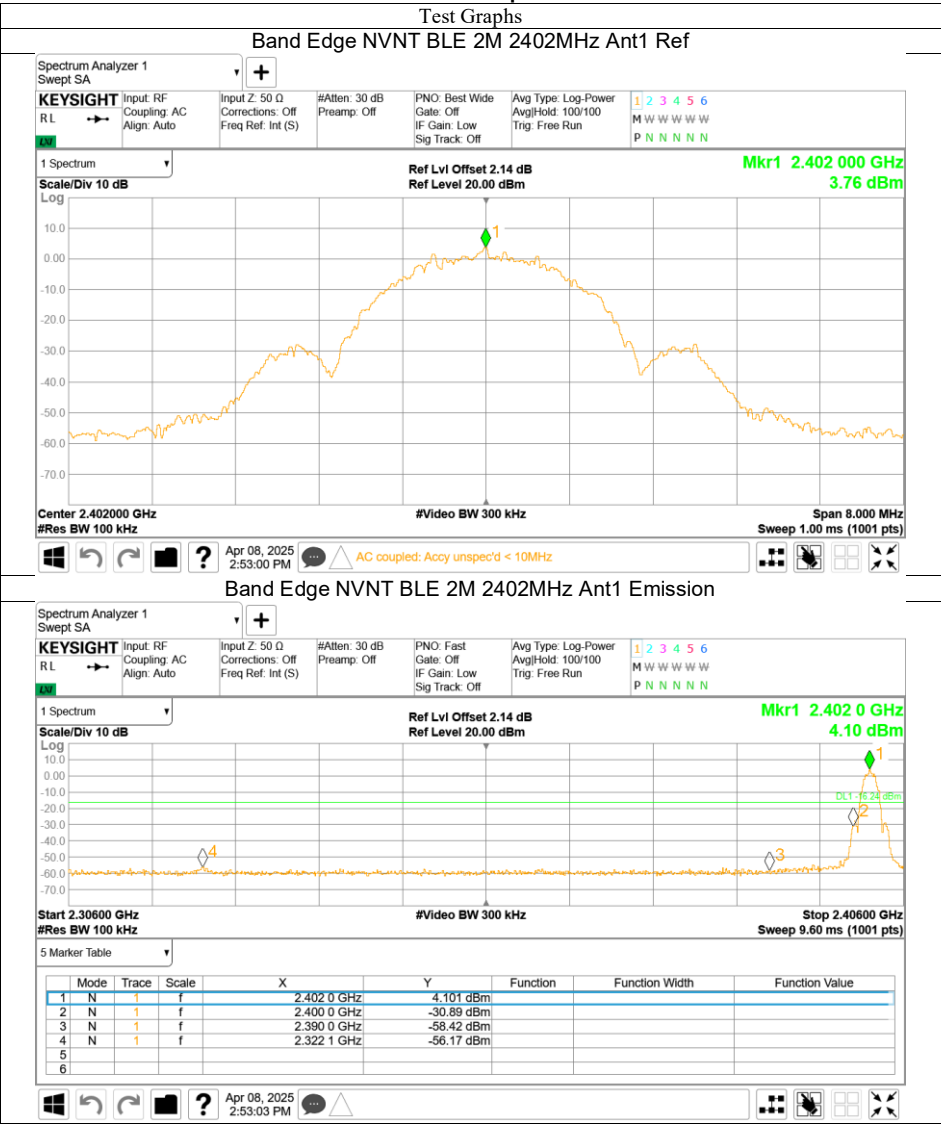
1Mbps

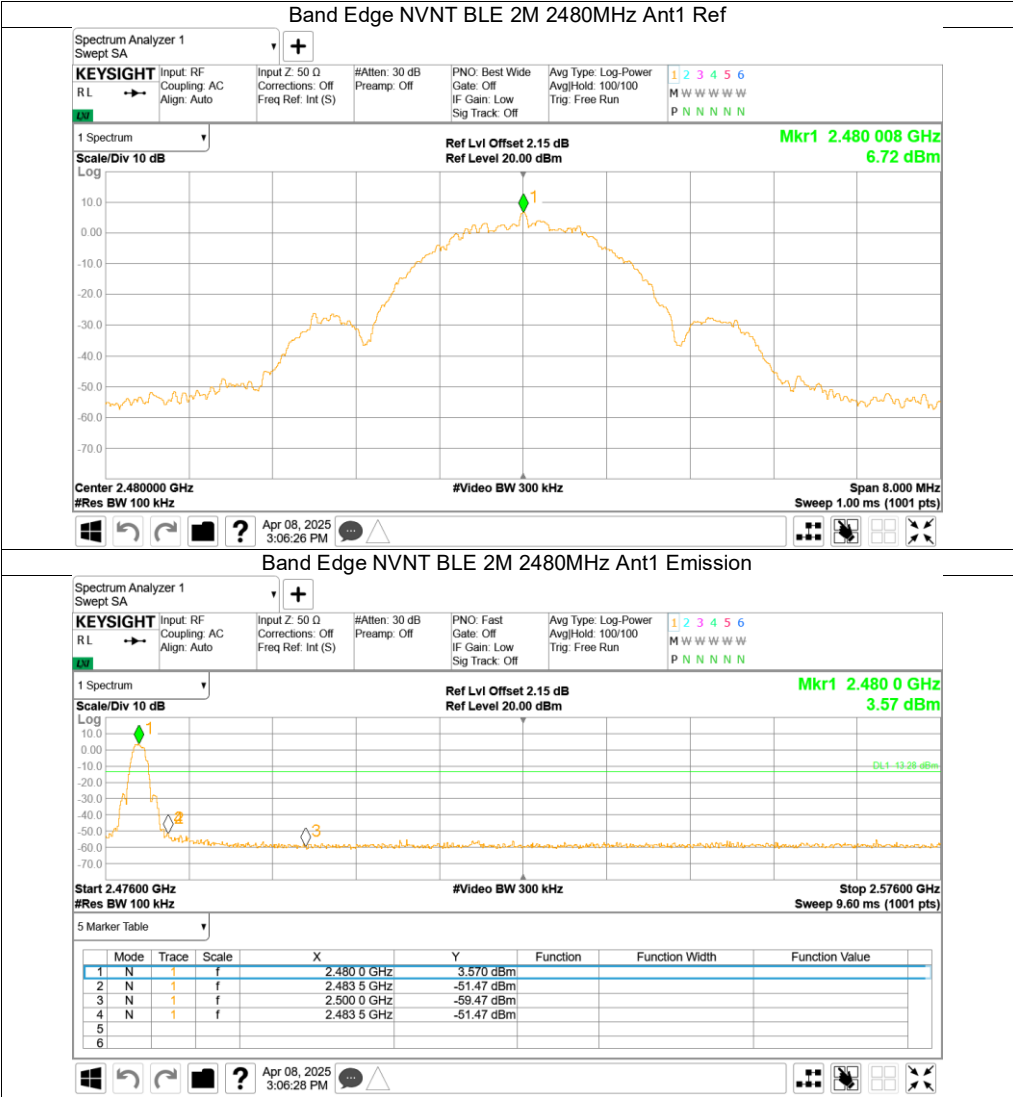






2Mbps







10.7 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 meter chamber room for test. 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. 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.
4. 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.
5. Use the following spectrum analyzer settings According to C63.10
 - 1) Procedure for Unwanted Emissions Measurements Below 1000 MHz
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.
 - 2) 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 1GHz
 - 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 (AV) at frequency above 1GHz.

Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that 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 § 15.247(b)(3) and RSS-247 section 6.3.2, the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in § 15.209(a) and RSS-Gen is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a) and RSS-Gen section 8.9, must also comply with the radiated emission limits specified in § 15.209(a) and RSS-Gen section 8.10.

Below 30MHz

§15.247(d) & §15.209 & §15.205

Frequency MHz	Field Strength uV/m	Detector	Measured Distance Meters
0.009~0.090	2400/F (kHz)	AV	300
0.090~0.110	2400/F (kHz)	QP	300
0.110~0.490	2400/F (kHz)	AV	300
0.490~1.705	24000/F (kHz)	QP	30
1.705~30	30	QP	30

Note 1: Limit 3m(dBµV/m)=Limit 300m(dBµV/m)+40Log(300m/3m) (Below 30MHz)

Note 2: Limit 3m(dBµV/m)=Limit 30m(dBµV/m)+40Log(30m/3m) (Below 30MHz)

Note 3: dBµV/m = 20log(µV/m)

RSS-247 & RSS-Gen 8.9

Frequency MHz	Field Strength uA/m	Detector	Measured Distance Meters
0.009~0.090	6.37/F (kHz)	AV	300
0.090~0.110	6.37/F (kHz)	QP	300
0.110~0.490	6.37/F (kHz)	AV	300
0.490~1.705	63.7/F (kHz)	QP	30
1.705~30	0.08	QP	30

Note 1: Limit 3m(dBµV/m)=Limit 300m(dBµV/m)+40Log(300m/3m) (Below 30MHz)

Note 2: Limit 3m(dBµV/m)=Limit 30m(dBµV/m)+40Log(30m/3m) (Below 30MHz)

Note 3: dBµV/m = 20log(µV/m), dBµA/m = 20log(µA/m)

When the limit is in terms of magnetic field, the following equation applies:

$$H[\text{dB}(\mu\text{A/m})] = V[\text{dB}(\mu\text{V})] + L_c [\text{dB}] - G_{PA} [\text{dB}] + A F^E [\text{dB}(\text{m}^{-1})] - 51.5 [\text{dB}\Omega]$$

When the limit is in terms of electric field, the following equation applies:



$$E[\text{dB}(\mu\text{V/m})] = V[\text{dB}(\mu\text{V})] + L_c[\text{dB}] - G_{PA}[\text{dB}] + A_F^E [\text{dB}(\text{m}^{-1})]$$

The magnetic field limit is converted to the electric field limit by the equation:

$$E_{\text{limit}}[\text{dB}(\mu\text{V/m})] = H_{\text{limit}} [\text{dB}(\mu\text{A/m})] + 51.5 [\text{dB}\Omega]$$

where

H is the magnetic field strength (to be compared with the limit),

V is the voltage level measured by the receiver or spectrum analyzer.

L_c is the cable loss.

G_{PA} is the gain of the preamplifier (if used), and A_{FE} is the magnetic antenna factor.

Above 30MHz

§15.247(d) & §15.209 & §15.205

RSS-247 & RSS-Gen 8.9 & 8.10

Frequency MHz	Field Strength uV/m	Field Strength dBμV/m	Detector	Measured Distance Meters
30-88	100	40	QP	3
88-216	150	43.5	QP	3
216-960	200	46	QP	3
960-1000	500	54	QP	3
Above 1000	500	54	AV	3
Above 1000	5000	74	PK	3

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.



Test result

The worst case of Radiated Emission below 1GHz: Only the worst case listed as below.

0.009-30MHz Radiated Emission

EUT Information

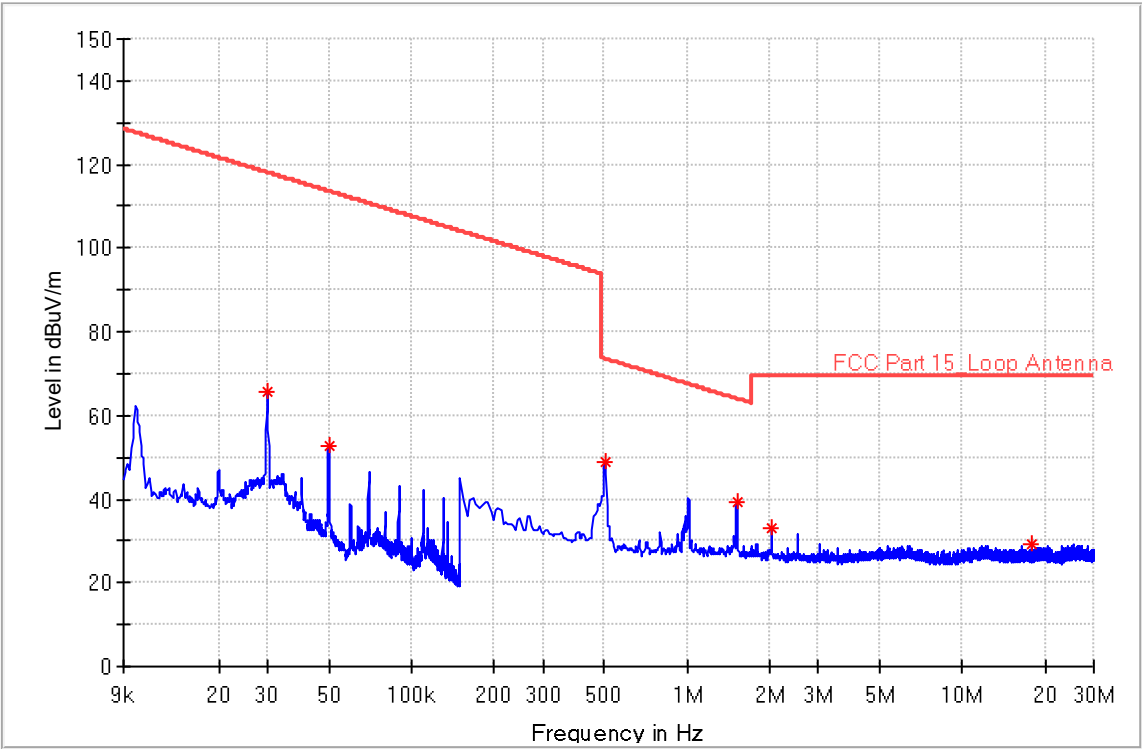
EUT Name:	Intelligent Lawn Mower
Model:	S1 Ultra
Client:	Kunshan Lantuo Intelligent Robot Co., Ltd
Op Cond:	Transmit mode and TX at 2480MHz, 1Mbps (worst case)
Operator:	Doujun XU
Test Spec:	FCC Part 15.209(a)
Sample No:	SHA-938885-3

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup:	RE_Loop Antenna V
Receiver:	[ESR 3]
Level Unit:	dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 150 kHz	88.125 Hz	PK+	200 Hz	0.01 s	0 dB
150 kHz - 30 MHz	4.39 kHz	PK+	9 kHz	0.01 s	0 dB

Full Spectrum





Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.029974	65.63	118.07	52.43	100.0	X	79.0	18.9
0.049978	52.65	113.63	60.98	100.0	X	102.0	18.9
0.505566	48.66	73.53	24.87	100.0	X	239.0	18.7
1.519588	39.28	63.97	24.69	100.0	X	239.0	18.8
2.028794	33.14	69.54	36.40	100.0	X	278.0	18.9
17.735162	29.29	69.54	40.25	100.0	X	342.0	19.0

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

0.009-30MHz Radiated Emission

EUT Information

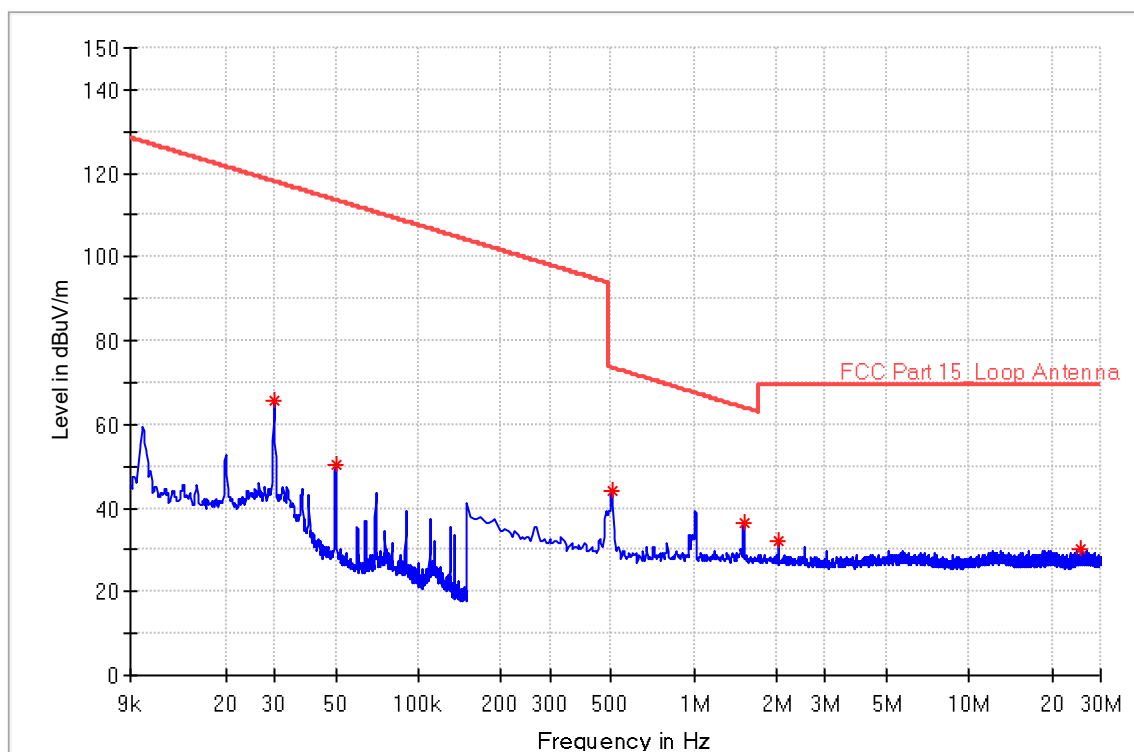
EUT Name: Intelligent Lawn Mower
 Model: S1 Ultra
 Client: Kunshan Lantuo Intelligent Robot Co., Ltd
 Op Cond: Transmit mode and TX at 2480MHz, 1Mbps (worst case)
 Operator: Doujun XU
 Test Spec: FCC Part 15.209(a)
 Sample No: SHA-938885-3

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup: RE_Loop Antenna V
 Receiver: [ESR 3]
 Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 150 kHz	88.125 Hz	PK+	200 Hz	0.01 s	0 dB
150 kHz - 30 MHz	4.39 kHz	PK+	9 kHz	0.01 s	0 dB

Full Spectrum





Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
0.029974	65.56	118.07	52.51	100.0	Y	245.0	18.9
0.049978	50.10	113.63	63.53	100.0	Y	194.0	18.9
0.505566	44.21	73.53	29.31	100.0	Y	305.0	18.7
1.519588	36.32	63.97	27.65	100.0	Y	293.0	18.8
2.024405	32.27	69.54	37.27	100.0	Y	203.0	18.9
25.175713	30.01	69.54	39.53	100.0	Y	59.0	19.5

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



30-1000MHz Radiated Emission

EUT Information

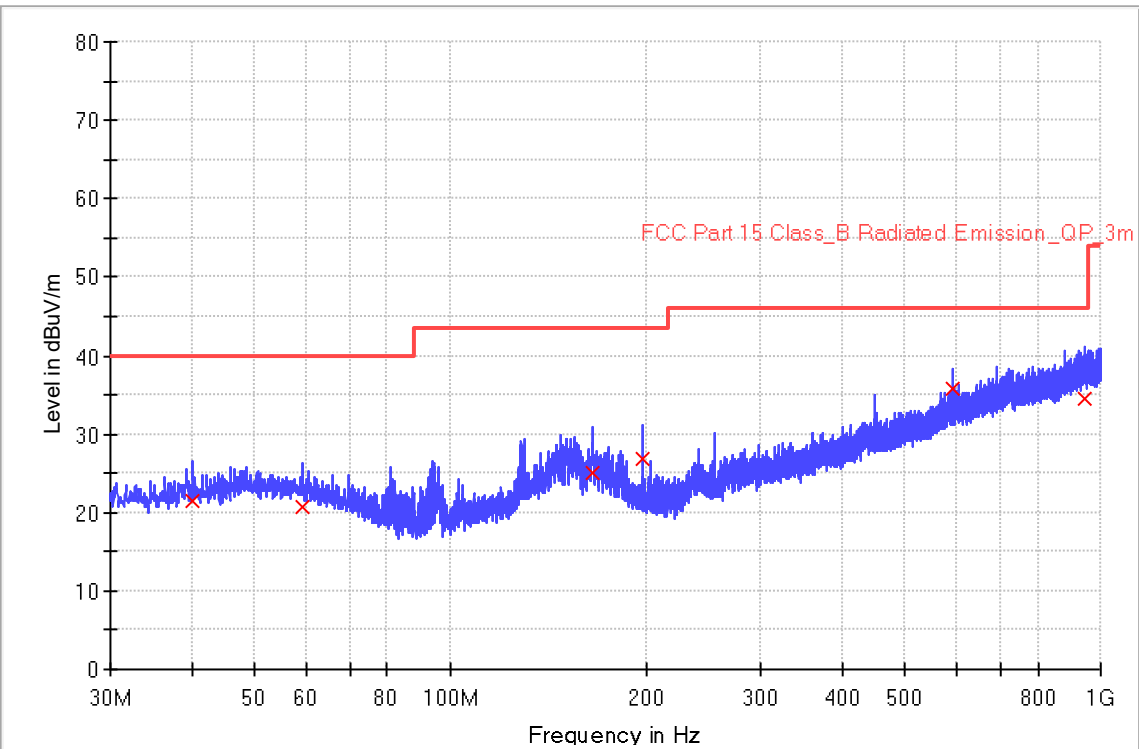
EUT Name: Intelligent Lawn Mower
Model: S1 Ultra
Client: Kunshan Lantuo Intelligent Robot Co., Ltd
Op Cond: Transmit mode and TX at 2480MHz, 1Mbps (worst case)
Operator: Doujun XU
Test Spec: FCC Part 15.209(a)
Sample No: SHA-938885-3

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup: RE_VULB9168
Receiver: [ESR 3]
Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	48.5 kHz	PK+	120 kHz	0.2 s	20 dB

RE_VULB9168_pre_Cont_30-1000





Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBuV/m)
40.200000	21.4	1000.0	120.000	200.0	H	142.0	19.9	18.6	40.0
59.200000	20.6	1000.0	120.000	150.0	H	256.0	20.6	19.4	40.0
165.200000	25.1	1000.0	120.000	250.0	H	312.0	20.7	18.4	43.5
197.960000	26.9	1000.0	120.000	100.0	H	119.0	18.0	16.6	43.5
594.000000	35.8	1000.0	120.000	100.0	H	247.0	29.3	10.2	46.0
943.320000	34.6	1000.0	120.000	300.0	H	118.0	34.8	11.4	46.0

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



30-1000MHz Radiated Emission

EUT Information

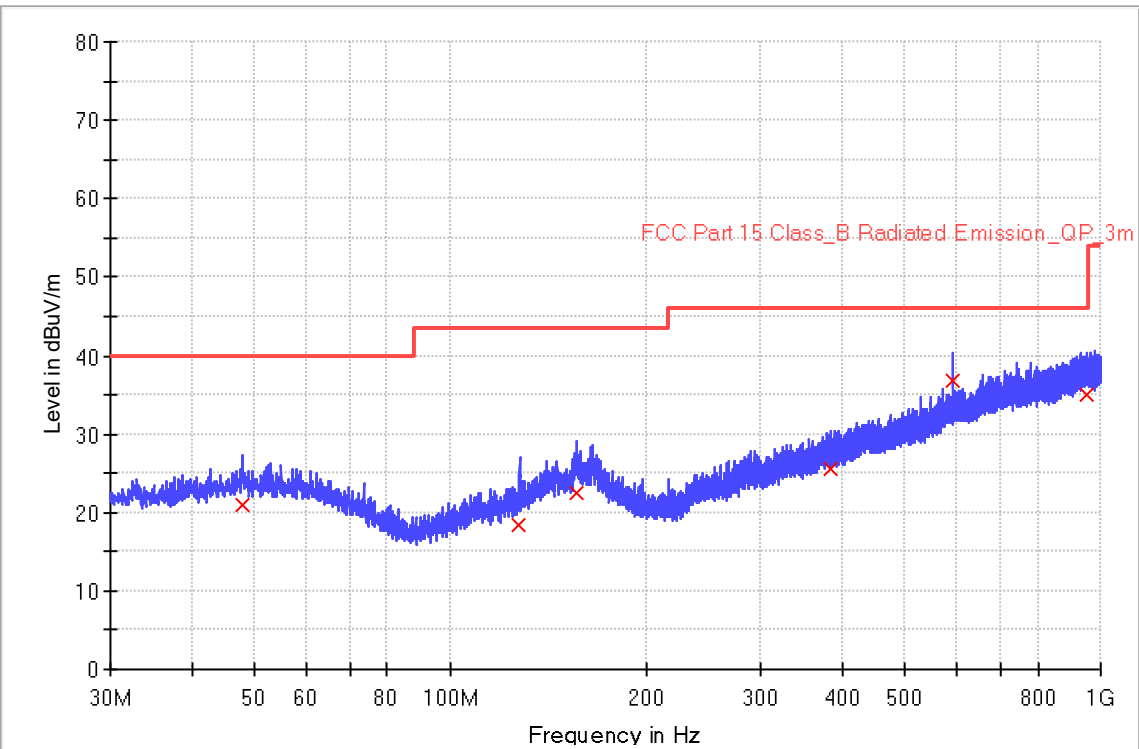
EUT Name: Intelligent Lawn Mower
Model: S1 Ultra
Client: Kunshan Lantuo Intelligent Robot Co., Ltd
Op Cond: Transmit mode and TX at 2480MHz, 1Mbps (worst case)
Operator: Doujun XU
Test Spec: FCC Part 15.209(a)
Sample No: SHA-938885-3

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup: RE_VULB9168
Receiver: [ESR 3]
Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	48.5 kHz	PK+	120 kHz	0.2 s	20 dB

RE_VULB9168_pre_Cont_30-1000





Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBuV/m)
47.960000	21.0	1000.0	120.000	150.0	V	236.0	20.7	19.0	40.0
127.720000	18.4	1000.0	120.000	200.0	V	324.0	19.3	25.1	43.5
156.240000	22.5	1000.0	120.000	250.0	V	157.0	21.1	21.0	43.5
383.120000	25.5	1000.0	120.000	250.0	V	339.0	24.0	20.5	46.0
594.000000	36.8	1000.0	120.000	200.0	V	187.0	29.3	9.2	46.0
954.440000	35.1	1000.0	120.000	100.0	V	148.0	34.7	10.9	46.0

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

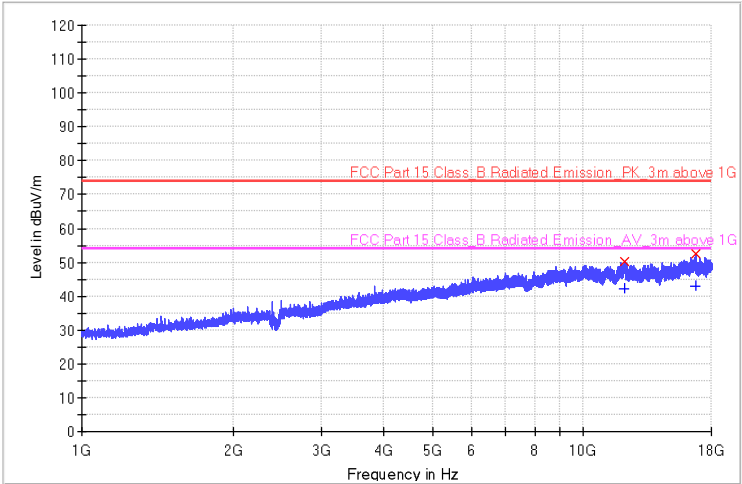
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



Radiated Emission 1-18GHz

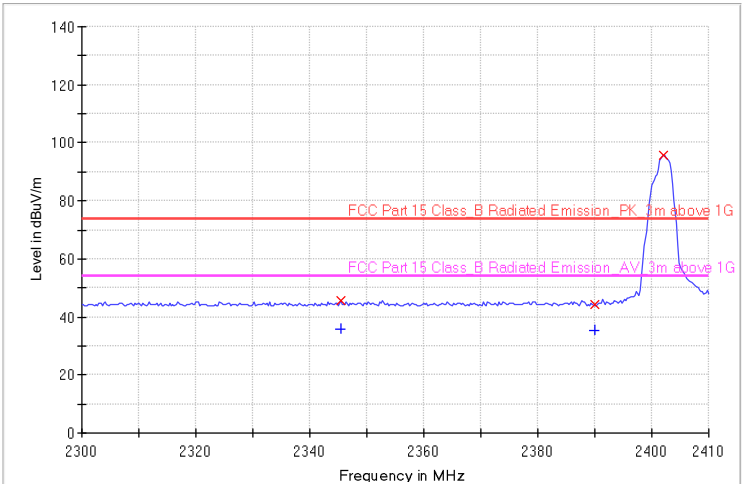
Frequency:2402MHz, 1Mbps

RE_HF907_BRF_Pre



Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
12113.200000	50.1	42.3	200.0	H	241.0	5.2	23.9	74.0	11.7	54.0
16716.100000	52.4	43.1	150.0	H	153.0	6.7	21.6	74.0	10.9	54.0

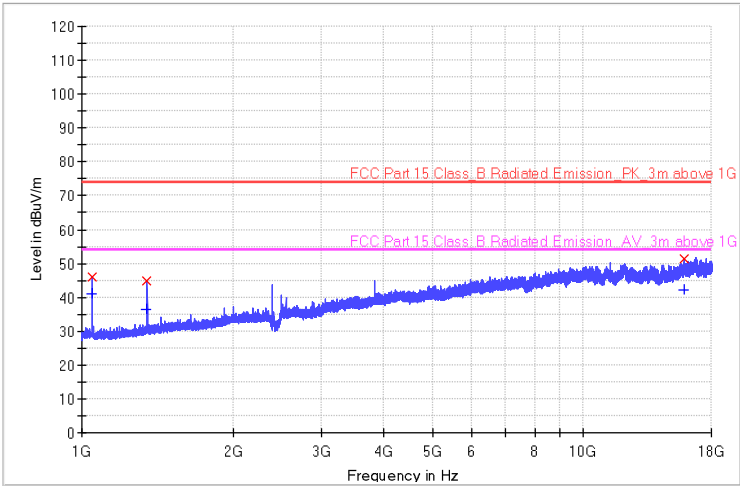
RE_HF907_BRF_Pre



Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2345.375000	45.4	35.6	250.0	H	146.0	-1.9	28.6	74.0	18.4	54.0
2390.000000	44.2	35.2	100.0	H	289.0	-1.9	29.8	74.0	18.8	54.0
2402.000000	95.6	---	200.0	H	314.0	-1.8	-21.6	74.0	---	---

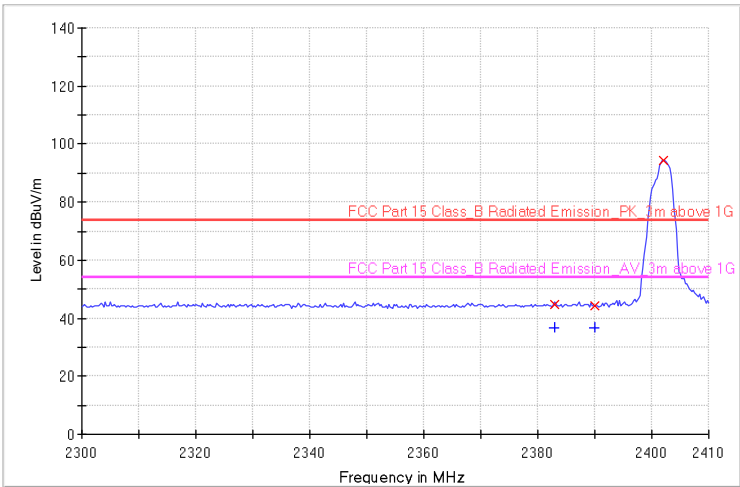


RE_HF907_BRF_Pre



Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
1049.800000	46.2	41.2	250.0	V	99.0	-16.7	27.8	74.0	12.8	54.0
1349.500000	44.8	36.5	150.0	V	260.0	-15.8	29.3	74.0	17.5	54.0
15907.300000	51.5	42.3	100.0	V	118.0	5.4	22.5	74.0	11.7	54.0

RE_HF907_BRF_Pre

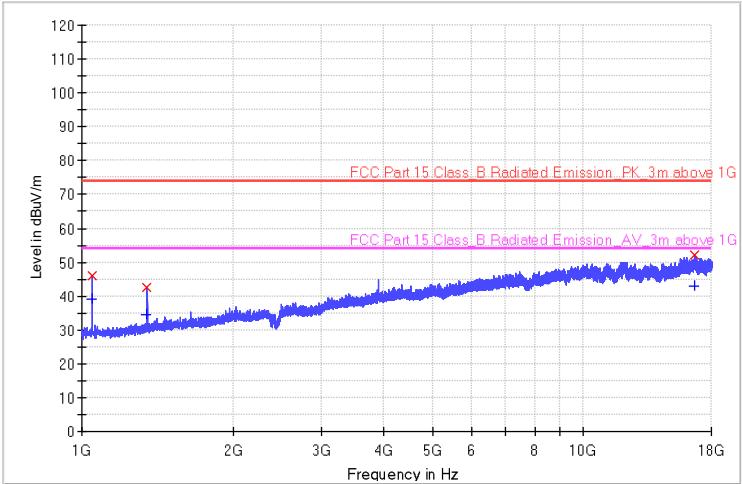


Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2383.000000	44.8	36.5	250.0	V	219.0	-1.9	29.2	74.0	17.5	54.0
2390.000000	44.1	36.7	100.0	V	315.0	-1.9	29.9	74.0	17.3	54.0
2402.000000	94.4	---	300.0	V	274.0	-1.8	-20.4	74.0	---	---



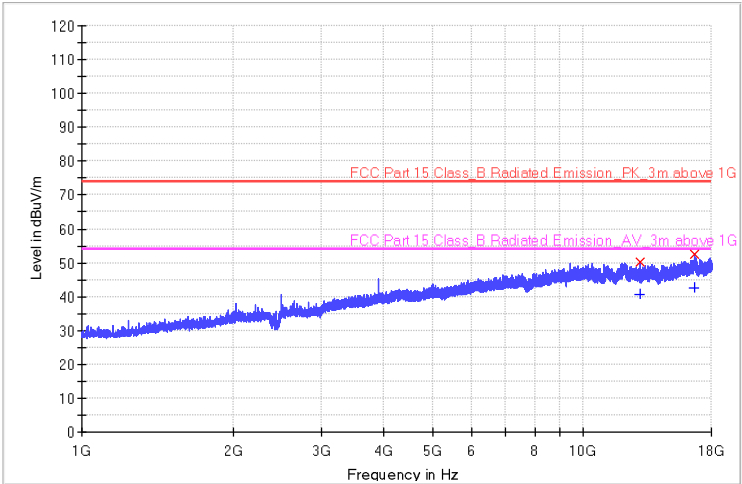
Frequency:2440MHz, 1Mbps

RE_HF907_BRF_Pre



Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
1049.800000	46.0	39.0	300.0	H	173.0	-16.7	28.0	74.0	15.0	54.0
1350.100000	42.4	34.6	150.0	H	224.0	-15.8	31.6	74.0	19.4	54.0
16703.800000	52.1	42.8	200.0	H	316.0	6.7	21.9	74.0	11.2	54.0

RE_HF907_BRF_Pre

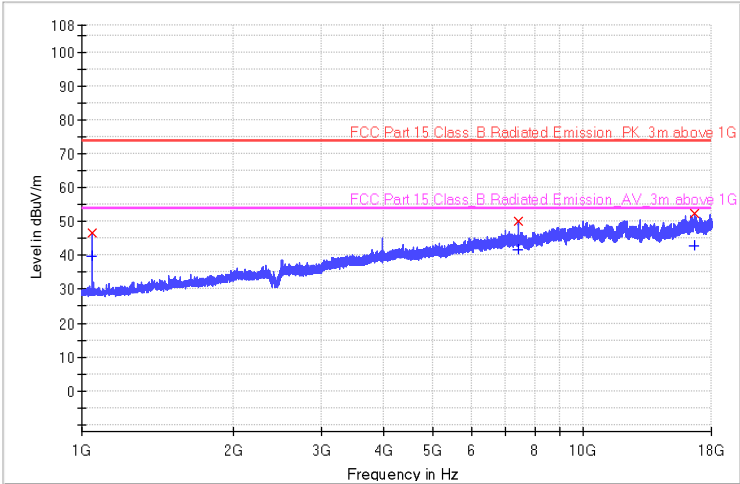


Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
12946.300000	50.1	40.5	300.0	V	165.0	3.9	23.9	74.0	13.5	54.0
16690.600000	52.6	42.7	150.0	V	349.0	6.7	21.4	74.0	11.3	54.0



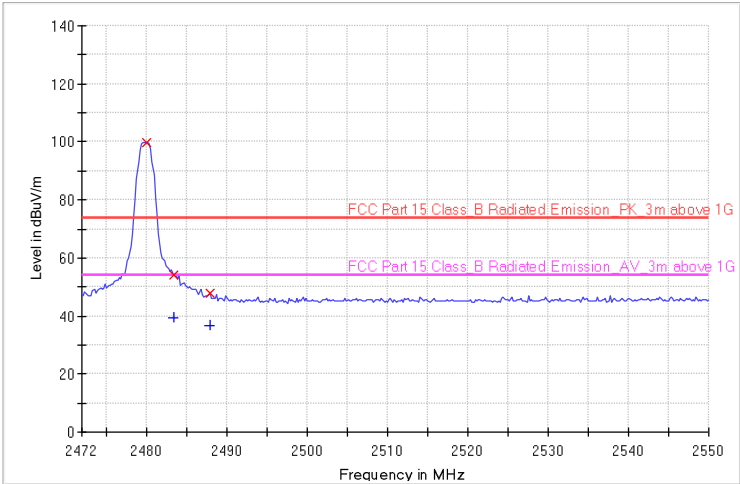
Frequency:2480MHz, 1Mbps

RE_HF907_BRF_Pre



Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
1049.800000	46.5	39.8	200.0	H	142.0	-16.7	27.5	74.0	14.2	54.0
7441.000000	50.3	41.5	150.0	H	317.0	0.8	23.7	74.0	12.5	54.0
16685.200000	52.3	42.8	300.0	H	96.0	6.7	21.7	74.0	11.2	54.0

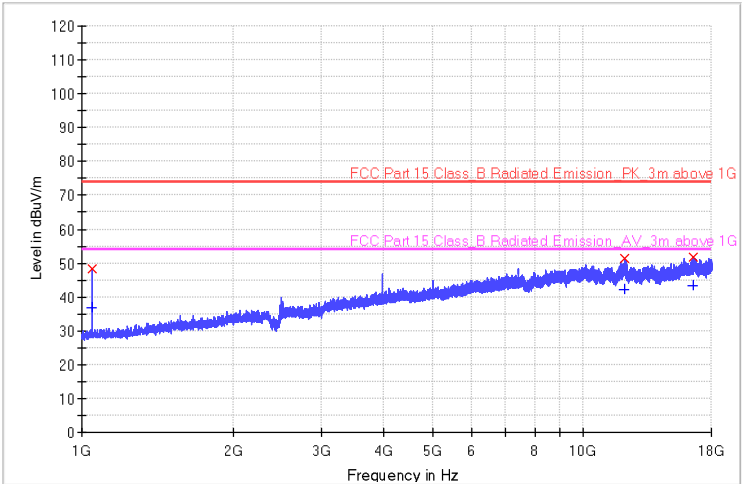
RE_HF907_BRF_Pre



Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2480.000000	99.8	---	200.0	H	213.0	-1.4	-25.8	74.0	---	---
2483.500000	54.2	39.4	250.0	H	284.0	-1.3	19.8	74.0	14.6	54.0
2487.900000	47.9	36.6	150.0	H	192.0	-1.3	26.1	74.0	17.4	54.0

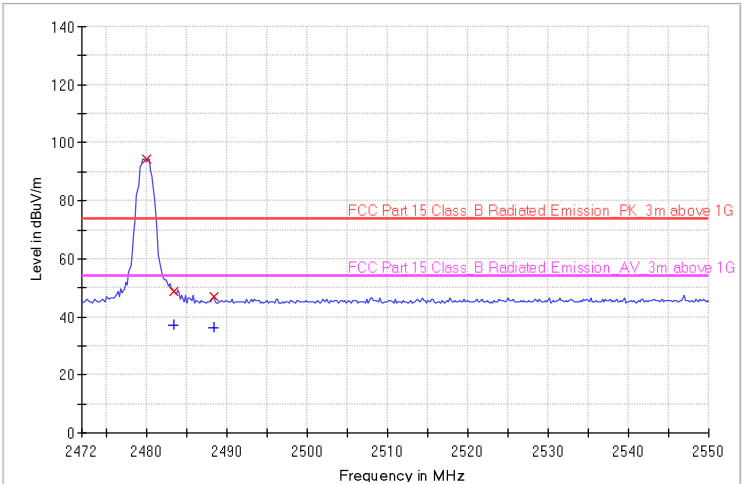


RE_HF907_BRF_Pre



Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
1049.800000	48.3	36.7	150.0	V	241.0	-16.7	25.7	74.0	17.3	54.0
12111.700000	51.2	42.1	250.0	V	183.0	5.2	22.8	74.0	11.9	54.0
16590.700000	51.8	43.5	150.0	V	249.0	6.5	22.2	74.0	10.5	54.0

RE_HF907_BRF_Pre

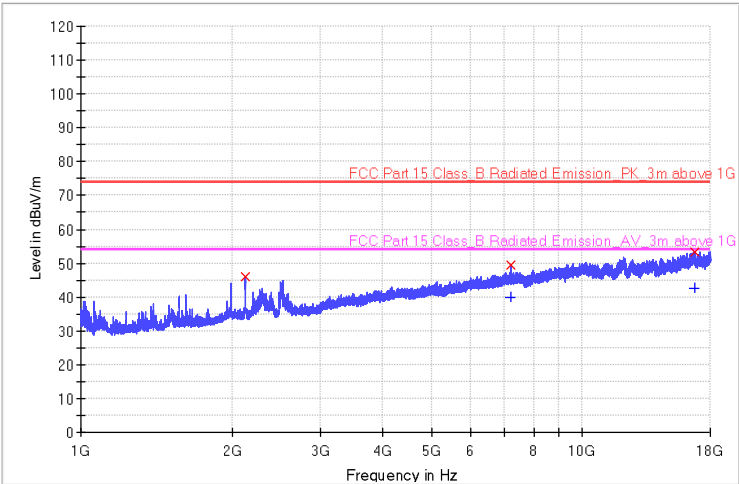


Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2480.000000	94.6	---	300.0	V	149.0	-1.4	-20.6	74.0	---	---
2483.500000	48.9	37.3	250.0	V	264.0	-1.3	25.1	74.0	16.7	54.0
2488.380000	46.8	36.2	150.0	V	237.0	-1.3	27.2	74.0	17.8	54.0



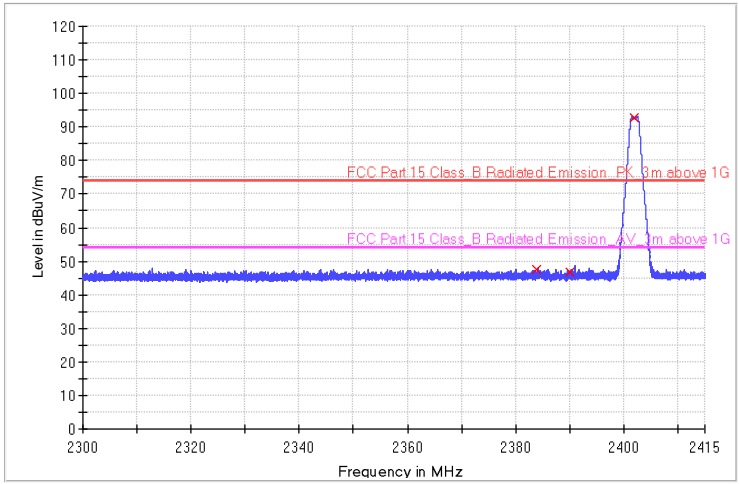
Frequency:2402MHz, 2Mbps

RE_HF907_BRF_Pre



Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
1049.800000	45.8	---	200.0	H	214.0	-11.2	28.2	74.0	---	---
7441.000000	49.4	39.9	150.0	H	153.0	1.4	24.6	74.0	14.1	54.0
16685.200000	53.2	42.6	300.0	H	133.0	7.7	20.8	74.0	11.4	54.0

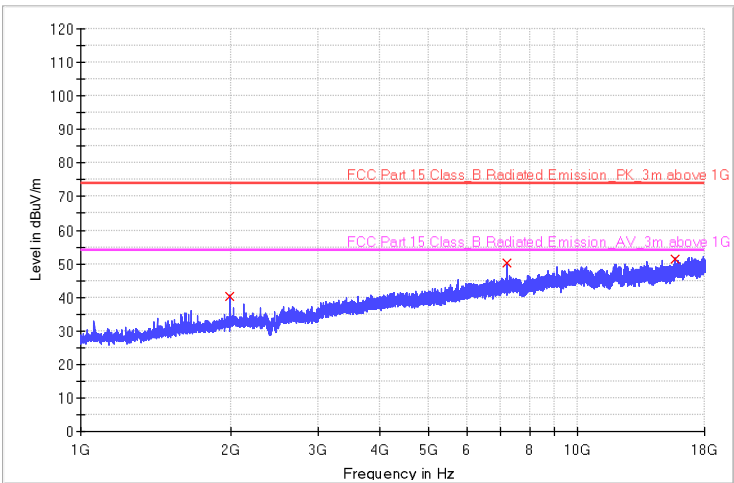
RE_HF907_BRF_Pre



Frequency (MHz)	MaxPeak (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2383.900000	47.6	151.0	H	24.0	-0.8	26.4	74.0
2390.000000	46.9	156.0	H	176.0	-0.8	27.1	74.0
2401.900000	92.9	154.3	H	22.0	-0.8	--	--

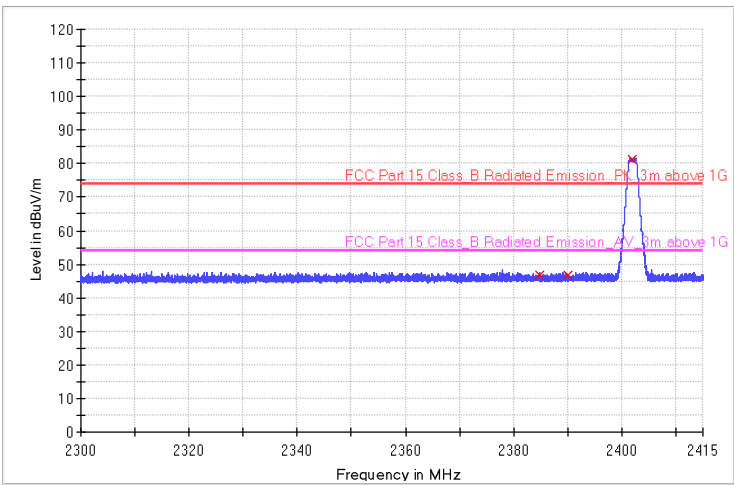


RE_HF907_BRF_Pre



Frequency (MHz)	MaxPeak (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
1991.800000	40.3	201.0	V	331.0	-11.9	33.7	74.0
7206.700000	50.1	136.0	V	15.0	0.8	23.9	74.0
15696.400000	51.2	106.0	V	227.0	5.8	22.8	74.0

RE_HF907_BRF_Pre

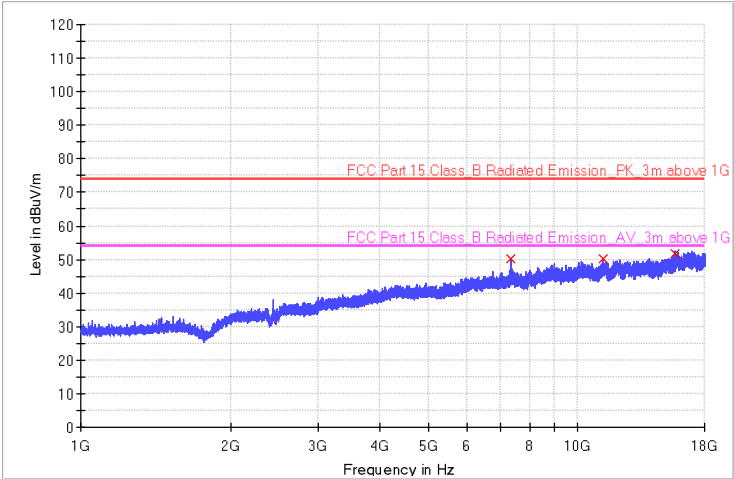


Frequency (MHz)	MaxPeak (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2384.800000	46.8	169.0	V	231.0	-0.8	27.2	74.0
2390.000000	46.6	173.0	V	231.0	-0.8	27.4	74.0
2402.000000	81.2	174.3	V	231.0	-0.8	--	--



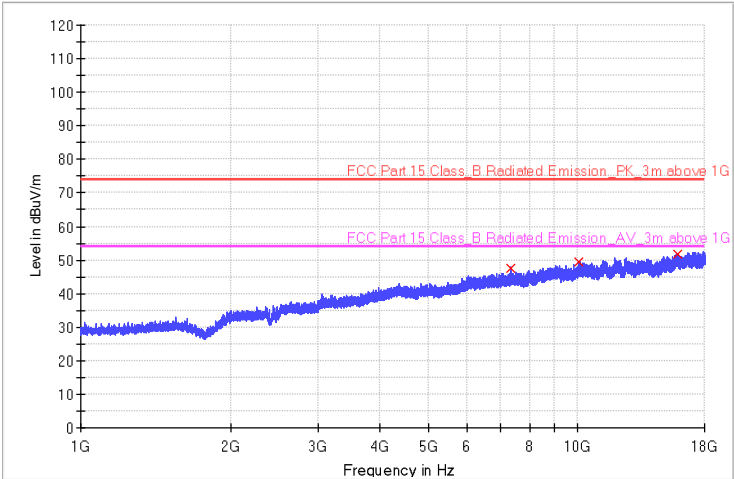
Frequency:2440MHz, 2Mbps

RE_HF907_BRF_Pre



Frequency (MHz)	MaxPeak (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
7319.200000	50.1	137.0	V	321.0	0.8	23.9	74.0
11241.400000	50.3	116.0	V	137.0	4.5	23.7	74.0
15723.700000	51.9	220.0	V	287.0	5.8	22.1	74.0

RE_HF907_BRF_Pre

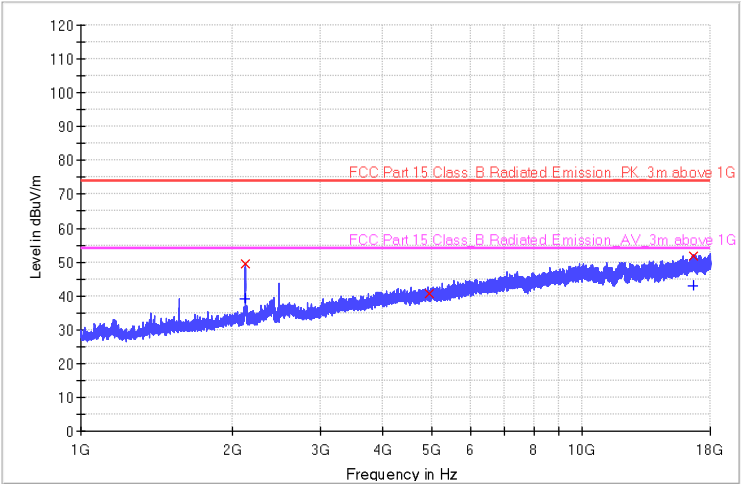


Frequency (MHz)	MaxPeak (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
7320.400000	47.6	122.0	V	311.0	0.8	26.4	74.0
10053.100000	49.5	149.0	V	258.0	3.6	24.5	74.0
15881.800000	51.6	206.0	V	96.0	5.9	22.4	74.0



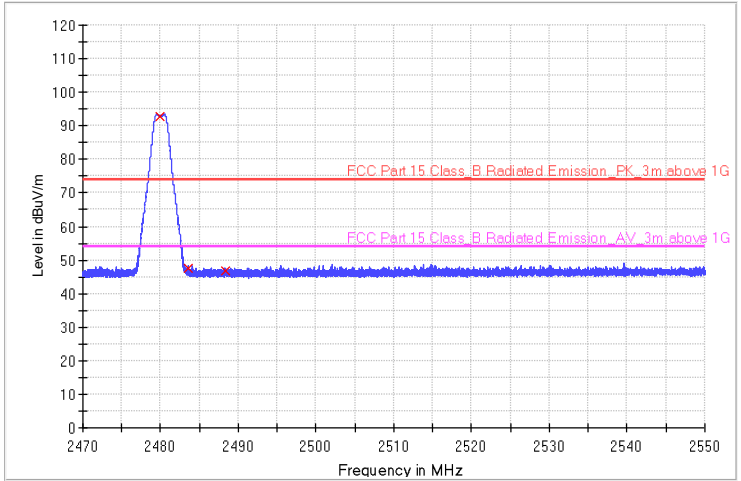
Frequency:2480MHz, 2Mbps

RE_HF907_BRF_Pre



Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
2133.100000	49.5	39.1	200.0	H	326.0	-11.2	14.9	54.0	24.5	74.0
4960.000000	40.6	---	150.0	H	145.0	-0.9	---	---	33.4	74.0
16681.000000	52.9	43.0	300.0	H	123.0	7.7	11.0	54.0	22.1	74.0

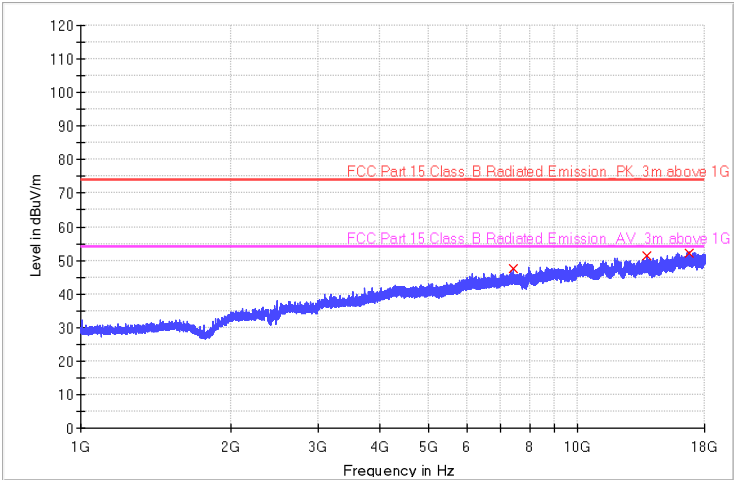
RE_HF907_BRF_Pre



Frequency (MHz)	MaxPeak (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2480.000000	92.9	176.1	H	12.0	-0.3	--	--
2483.500000	47.6	207.0	H	133.0	-0.3	26.4	74.0
2488.300000	46.8	130.0	H	47.0	-0.3	27.2	74.0

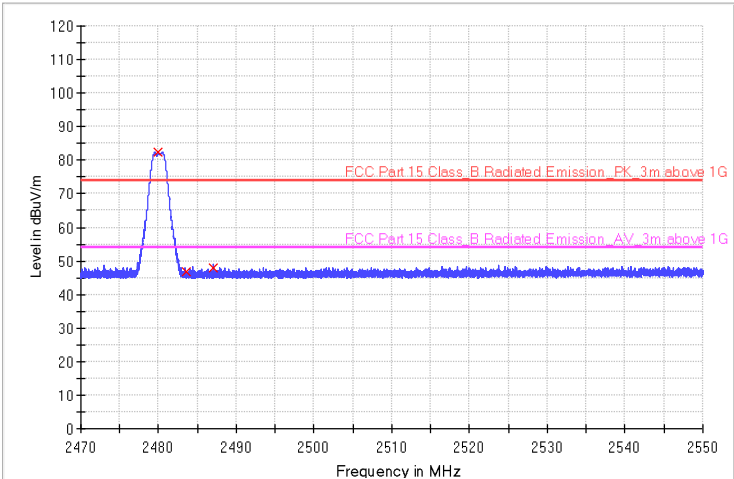


RE_HF907_BRF_Pre



Frequency (MHz)	MaxPeak (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
7438.600000	47.5	100.0	V	53.0	0.8	26.5	74.0
13813.600000	51.2	181.0	V	117.0	4.7	22.8	74.0
16772.200000	52.3	171.0	V	287.0	7.1	21.7	74.0

RE_HF907_BRF_Pre



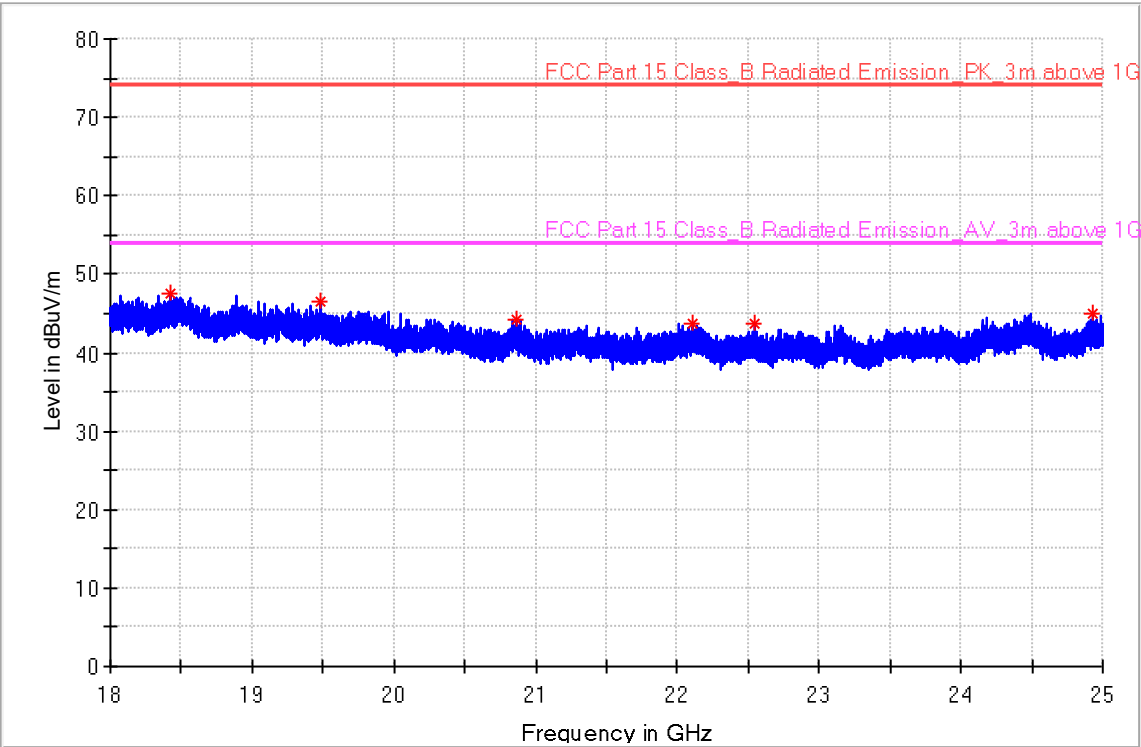
Frequency (MHz)	MaxPeak (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
2480.000000	82.3	153.2	V	1.0	-0.3	--	--
2483.500000	46.8	111.0	V	21.0	-0.3	27.2	74.0
2487.100000	47.9	217.0	V	314.0	-0.3	26.1	74.0



The worst case of Radiated Emission Above 18GHz

Frequency:2480MHz, 1Mbps

Full Spectrum

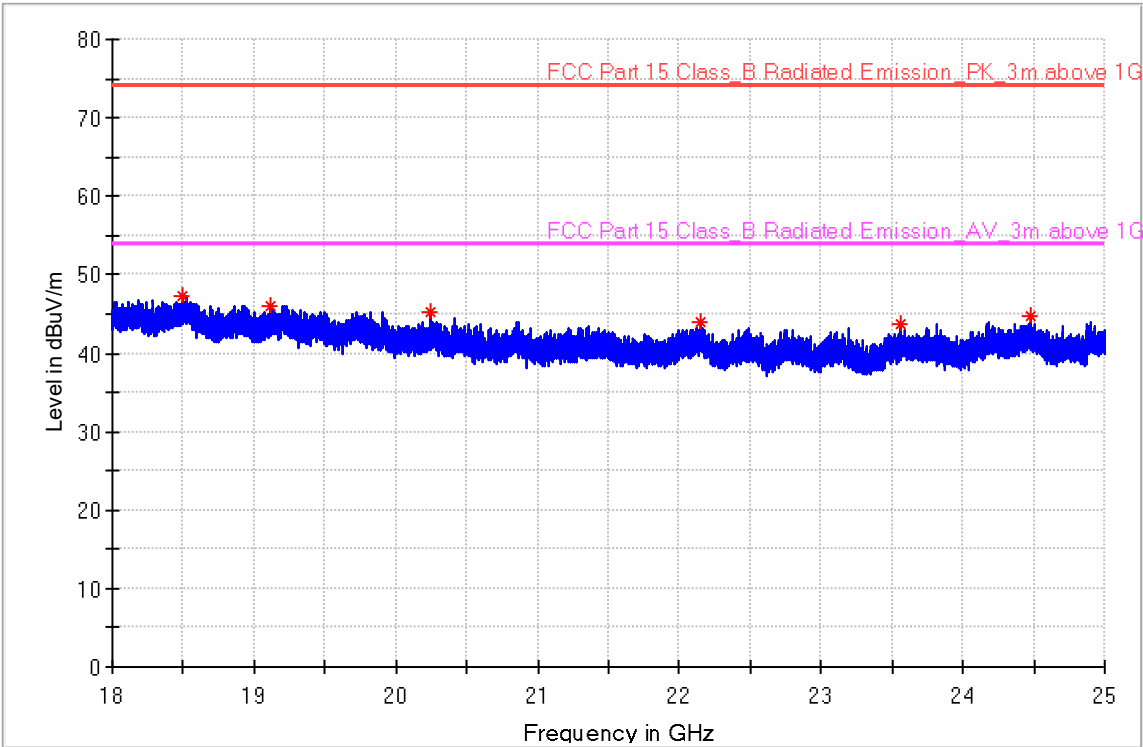


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18423.062500	47.51	74.00	26.49	100.0	H	15.0	8.1
19476.343750	46.49	74.00	27.51	100.0	H	334.0	8.4
20867.156250	44.32	74.00	29.68	100.0	H	304.0	8.5
22109.875000	43.61	74.00	30.39	100.0	H	180.0	8.8
22539.937500	43.58	74.00	30.42	100.0	H	292.0	8.9
24931.531250	44.95	74.00	29.05	100.0	H	108.0	9.0



Full Spectrum



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18500.718750	47.28	74.00	26.72	100.0	V	268.0	8.1
19108.843750	46.10	74.00	27.90	100.0	V	0.0	8.1
20247.875000	45.13	74.00	28.87	100.0	V	130.0	8.3
22155.593750	43.87	74.00	30.13	100.0	V	57.0	8.8
23566.750000	43.62	74.00	30.38	100.0	V	21.0	8.9
24477.406250	44.65	74.00	29.35	100.0	V	64.0	9.0

Remark:

- (1) Emission level= Original Receiver Reading + Correct Factor
- (2) Correct Factor = Antenna Factor + Cable Loss -Amplifier gain
- (3) Margin = limit – Corrected Reading



11 Test Equipment List

List of Test Instruments
Test Site1

	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DATE	CAL. DUE DATE
C	Signal spectrum analyzer	Agilent	N9020B	MY59050168	2025-2-19	2026-2-18
	RF automatic control unit	MWRFTtest	MW100-RFCB	MW211122-28	2024-10-8	2025-10-7
	RF_Cable	UCWAVE ELECTRONIC	UCA500-NJWSM-1.5M	---	2024-8-1	2025-7-31
RE	EMI Test Receiver	Rohde & Schwarz	ESR3	101906	2024-8-1	2025-7-31
	Signal Analyzer	Rohde & Schwarz	FSV40	101091	2024-8-1	2025-7-31
	Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9168	961	2024-8-30	2025-8-29
	Double-ridged waveguide horn antenna	Rohde & Schwarz	HF907	102393	2025-4-14	2026-4-13
	Pre-amplifier	Shenzhen HzEMC	HPA-081843	HYP A23026	2025-4-14	2026-4-13
	Loop antenna	Rohde & Schwarz	HFH2-Z2	100443	2024-6-26	2025-6-25
	Double Ridged Horn Antenna	ETS-Lindgren	3116C	00222727	2023-7-7	2026-7-6
	RE_Cable_01 Coaxial Cable	JUNFLON	MWX221	1906S057	2024-8-1	2025-7-31
	RE_Cable_02 Coaxial Cable	HUBER+SUHNER	RG214	1358176	2024-8-1	2025-7-31
	RE_Cable_03 Coaxial Cable	JUNFLON	MWX221	J12J102482	2024-8-1	2025-7-31
	RE_Cable_04 Coaxial Cable	PASTERNAK	PE360	2233	2024-8-1	2025-7-31
	3m Semi-anechoic chamber	TDK	9X6X6	----	2024-5-8	2027-5-7
CE	EMI Test Receiver	Rohde & Schwarz	ESR3	101907	2025-8-1	2026-7-31
	LISN	Rohde & Schwarz	ENV216	101924	2025-8-1	2026-7-31
	CE_Cable_01 Coaxial Cable	HUBER+SUHNER	RG400	1002115055	2025-8-1	2026-7-31



Measurement Software Information			
Test Item	Software	Manufacturer	Version
C	MTS 8310	MWRFTtest	3.0.0.0
RE	EMC 32	Rohde & Schwarz	V10.50.40
CE	EMC 32	Rohde & Schwarz	V9.15.03

C - Conducted RF tests

- Conducted peak output power
- 6dB bandwidth and 99% Occupied Bandwidth
- Power spectral density*
- Spurious RF conducted emissions
- Band edge



12 System Measurement Uncertainty

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

Items	Extended Uncertainty
Conducted Disturbance at Mains Terminals	150kHz to 30MHz, LISN, 3.16dB
Radiated Disturbance	9kHz to 30MHz, 3.52dB 30MHz to 1GHz, 5.03dB (Horizontal) 5.12dB (Vertical) 1GHz to 18GHz, 5.49dB 18GHz to 40GHz, 5.63dB
RF Conducted Measurement	Power related: 1.16dB Frequency related: 6.00×10 ⁻⁸

Measurement Uncertainty Decision Rule:

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2023, clause 4.3.3.



13 Photographs of Test Set-ups

Refer to the < Test Setup photos >.



14 Photographs of EUT

Refer to the < External Photos > & < Internal Photos >.

THE END