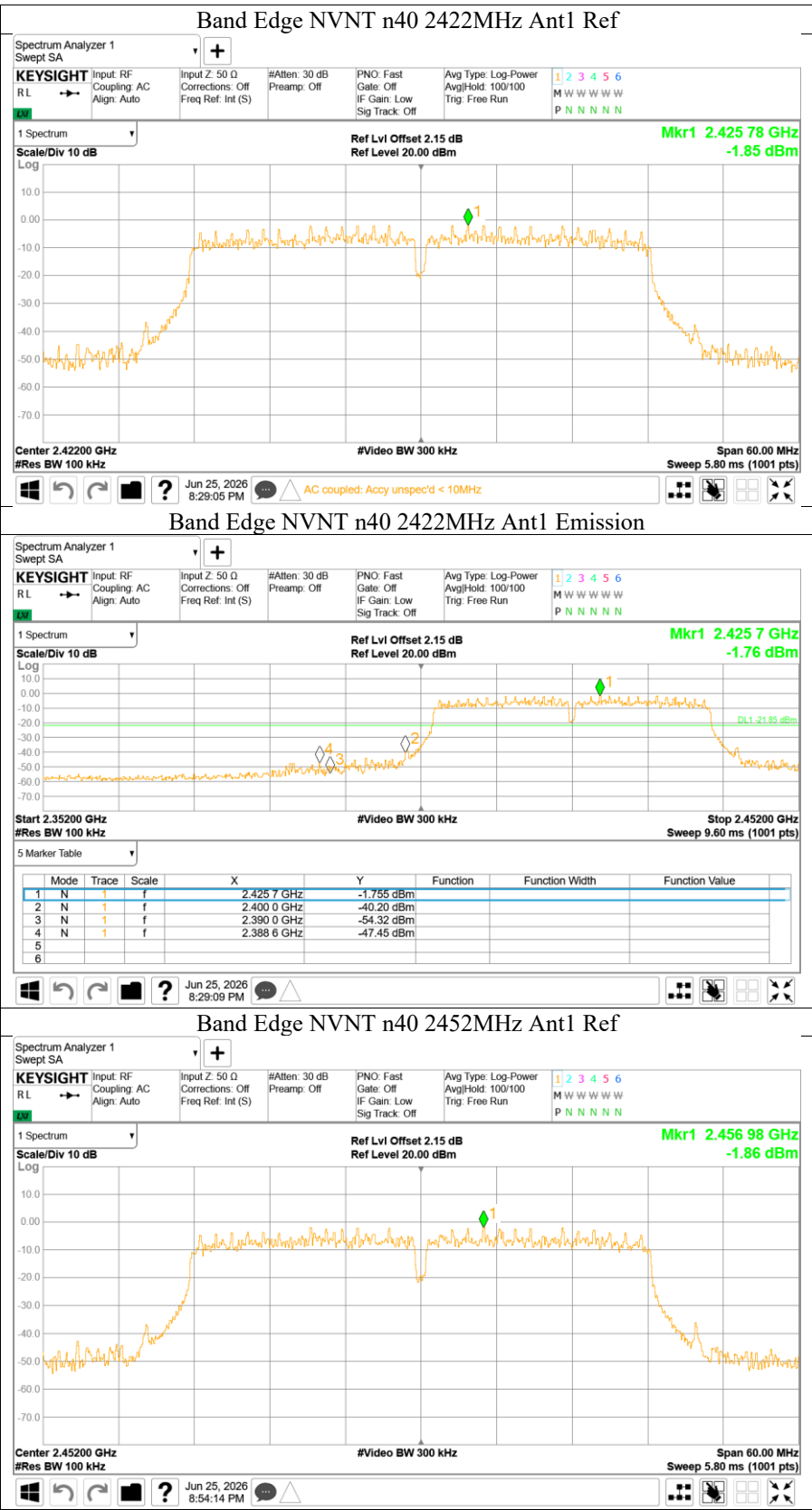
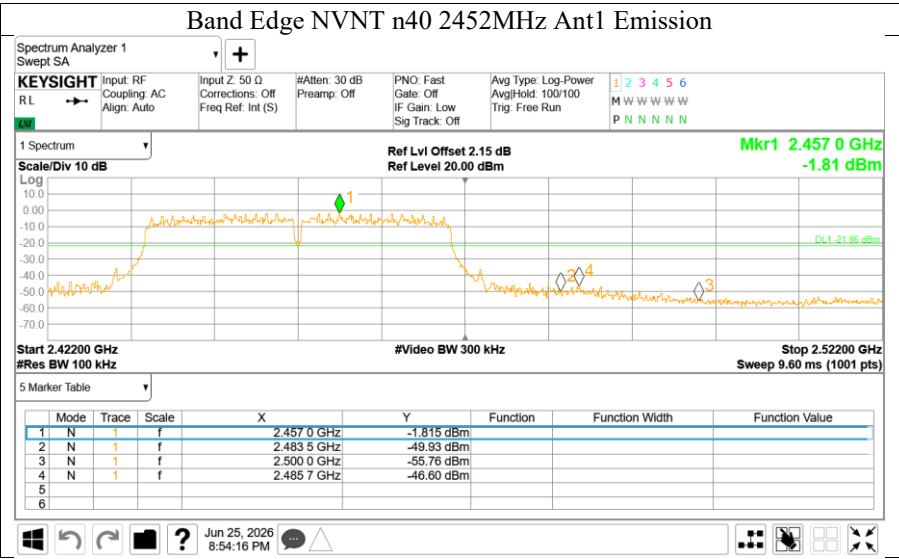






10.7 Spurious radiated emissions for transmitter

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) $VBW \setminus [3 \times RBW]$.
 - c) Detector = RMS (power averaging), if $[\text{span} / (\# \text{ of points in sweep})] \setminus RBW / 2$.
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), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in § 15.209(a) is not required. 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).

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)

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

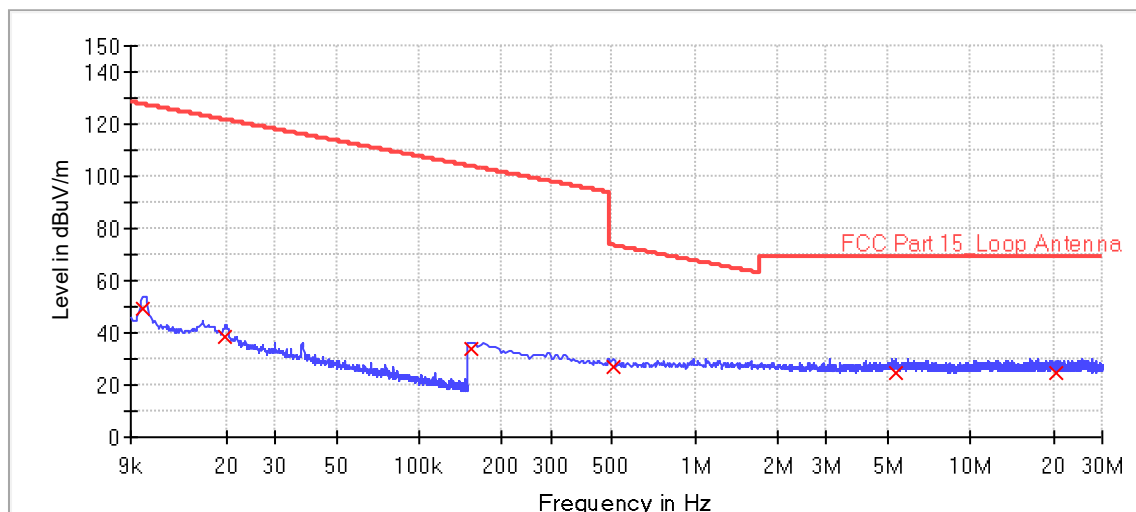
EUT Information

EUT Name:	THERMAL IMAGING SCOPE STORM SERIES
Model:	STORM S3R V2
Client:	Visir Inc.
Op Cond:	Transmit mode, 802.11g Tx_2437MHz (worst case)
Operator:	Chengjie GUO
Test Spec:	FCC Part 15.209(a)
Sample No:	SHA-1039523-1

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

**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)
0.009960	49.4	1000.0	0.200	100.0	X	22.0	19.6	78.279	127.639
0.019800	38.3	1000.0	0.200	100.0	X	12.0	19.1	83.341	121.671
0.154000	34.1	1000.0	9.000	100.0	X	11.0	18.8	69.743	103.853
0.510000	27.2	1000.0	9.000	100.0	X	42.0	18.8	46.213	73.453
5.330000	24.7	1000.0	9.000	100.0	X	153.0	19.0	44.832	69.542
20.262000	24.9	1000.0	9.000	100.0	X	133.0	19.1	44.622	69.542

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

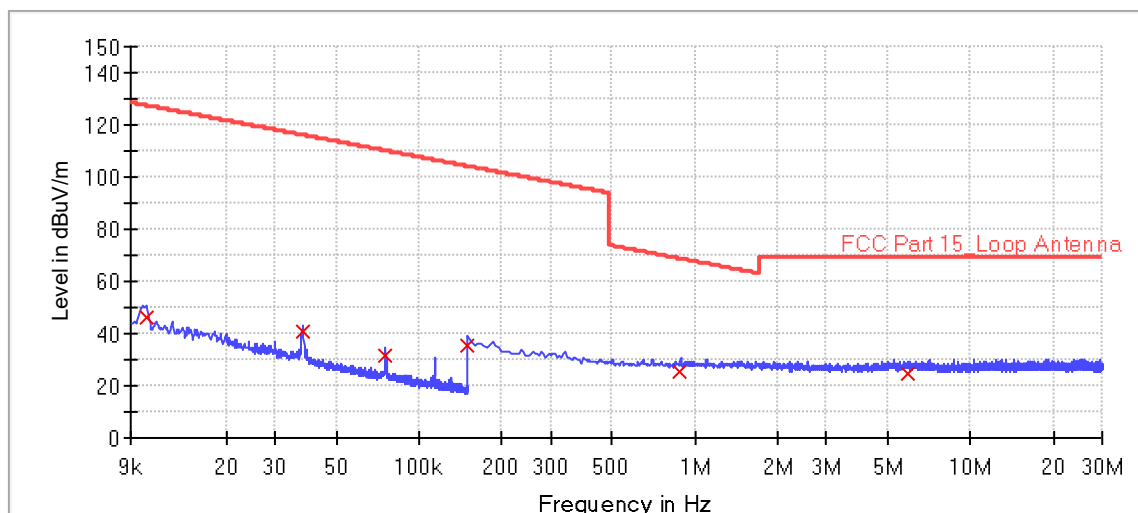
EUT Information

EUT Name: THERMAL IMAGING SCOPE STORM SERIES
 Model: STORM S3R V2
 Client: Visir Inc.
 Op Cond: Transmit mode, 802.11g Tx_2437MHz (worst case)
 Operator: Chengjie GUO
 Test Spec: FCC Part 15.209(a)
 Sample No: SHA-1039523-1

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



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)
0.010360	46.4	1000.0	0.200	100.0	Y	11.0	19.6	80.927	127.297
0.037880	40.7	1000.0	0.200	100.0	Y	240.0	19.0	75.366	116.036
0.075800	31.7	1000.0	0.200	100.0	Y	12.0	18.9	78.331	110.011
0.150000	35.3	1000.0	9.000	100.0	Y	11.0	18.8	68.762	104.082
0.882000	25.3	1000.0	9.000	100.0	Y	16.0	18.9	43.365	68.695
5.930000	24.7	1000.0	9.000	100.0	Y	163.0	18.9	44.832	69.542

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

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



30-1000MHz Radiated Emission

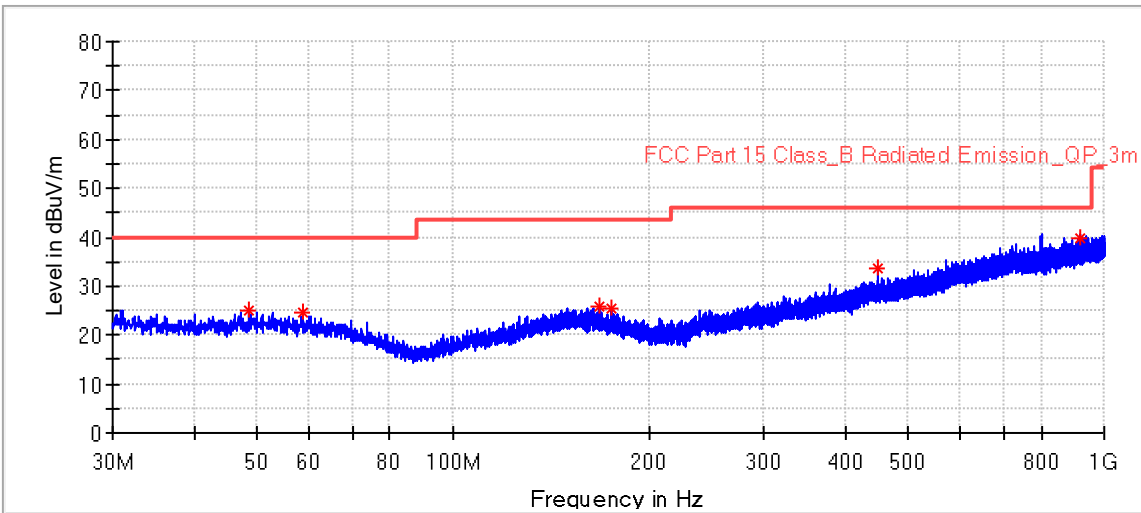
EUT Information

EUT Name: THERMAL IMAGING SCOPE STORM SERIES
 Model: STORM S3R V2
 Client: Visir Inc.
 Op Cond: Transmit mode, 802.11g Tx_2437MHz (worst case)
 Operator: Chengjie GUO
 Test Spec: FCC Part 15.209(a)
 Sample No: SHA-1039523-1

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



Critical_Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
48.672500	25.19	40.00	14.81	100.0	H	20.0	20.5
58.663500	24.64	40.00	15.36	100.0	H	354.0	20.5
167.691500	25.65	43.50	17.85	200.0	H	103.0	20.6
175.015000	25.32	43.50	18.18	100.0	H	131.0	20.0
449.040000	33.72	46.00	12.28	300.0	H	20.0	26.0
920.508500	39.72	46.00	6.28	200.0	H	43.0	33.8

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

30-1000MHz Radiated Emission

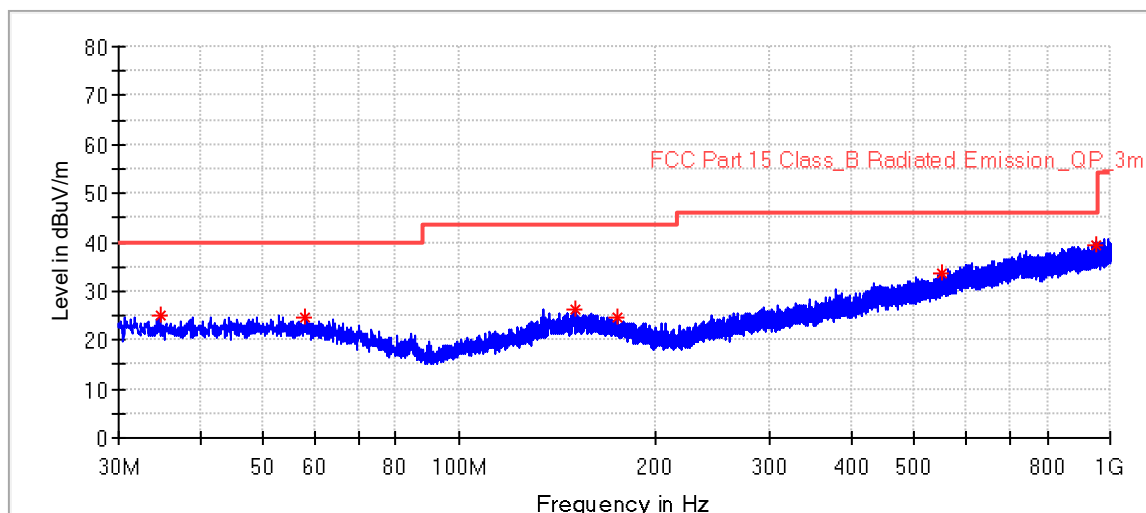
EUT Information

EUT Name: THERMAL IMAGING SCOPE STORM SERIES
 Model: STORM S3R V2
 Client: Visir Inc.
 Op Cond: Transmit mode, 802.11g Tx_2437MHz (worst case)
 Operator: Chengjie GUO
 Test Spec: FCC Part 15.209(a)
 Sample No: SHA-1039523-1

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



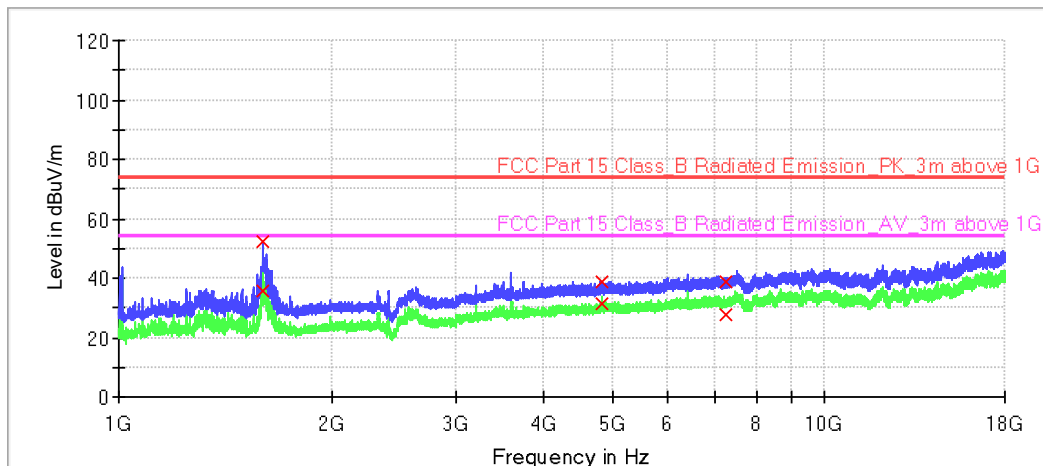
Critical_Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
34.704500	25.06	40.00	14.94	100.0	V	245.0	19.8
58.178500	24.59	40.00	15.41	200.0	V	66.0	20.5
151.201500	26.45	43.50	17.05	300.0	V	99.0	21.0
174.627000	24.66	43.50	18.84	100.0	V	66.0	20.0
552.199500	33.65	46.00	12.35	200.0	V	3.0	27.8
949.075000	39.30	46.00	6.70	100.0	V	29.0	34.2

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

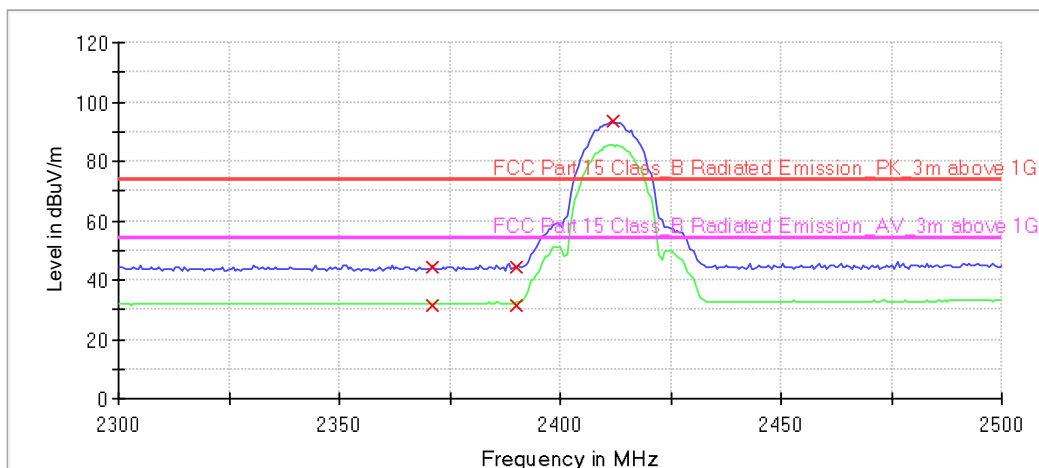
Radiated Emission 1-18GHz

Frequency: 802.11b 2412MHz



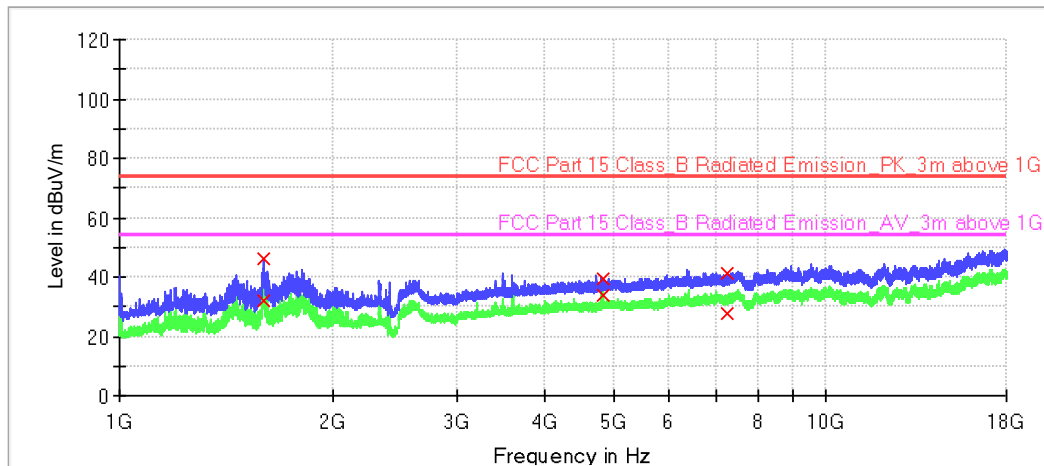
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.700000	52.5	35.4	150.0	H	0.0	-15.3	21.5	74.0	18.6	54.0
4823.937500	38.9	31.1	150.0	H	359.0	-3.8	35.1	74.0	22.9	54.0
7234.687500	39.1	27.8	150.0	H	15.0	-0.5	35.0	74.0	26.2	54.0



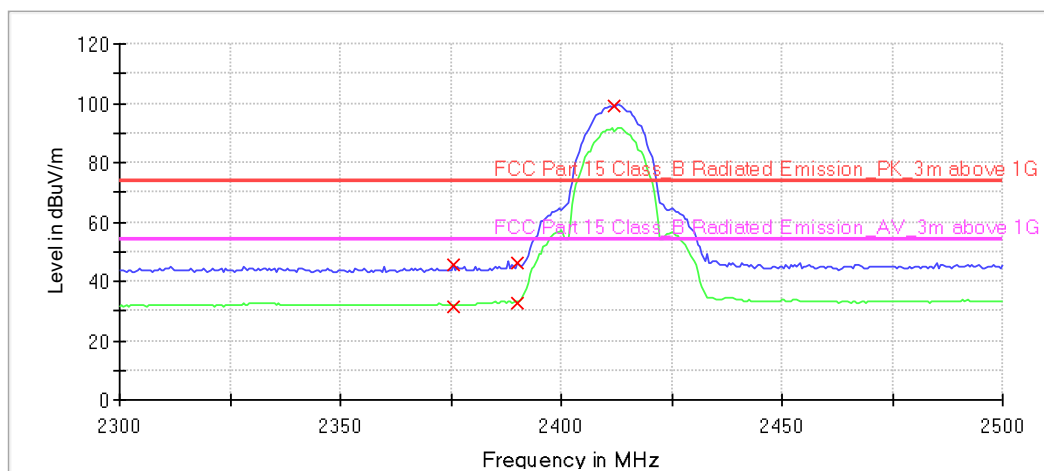
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2371.000000	44.5	31.1	150.0	H	359.0	-12.0	29.5	74.0	22.9	54.0
2390.000000	44.3	31.4	150.0	H	24.0	-11.9	29.7	74.0	22.6	54.0
2412.000000	93.4	--	150.0	H	8.0	-11.8	---	---	---	---



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.700000	46.3	32.2	150.0	V	1.0	-15.3	27.7	74.0	21.8	54.0
4823.937500	39.2	33.9	150.0	V	224.0	-3.8	34.8	74.0	20.1	54.0
7236.000000	41.0	27.9	150.0	V	36.0	-0.5	33.0	74.0	26.1	54.0

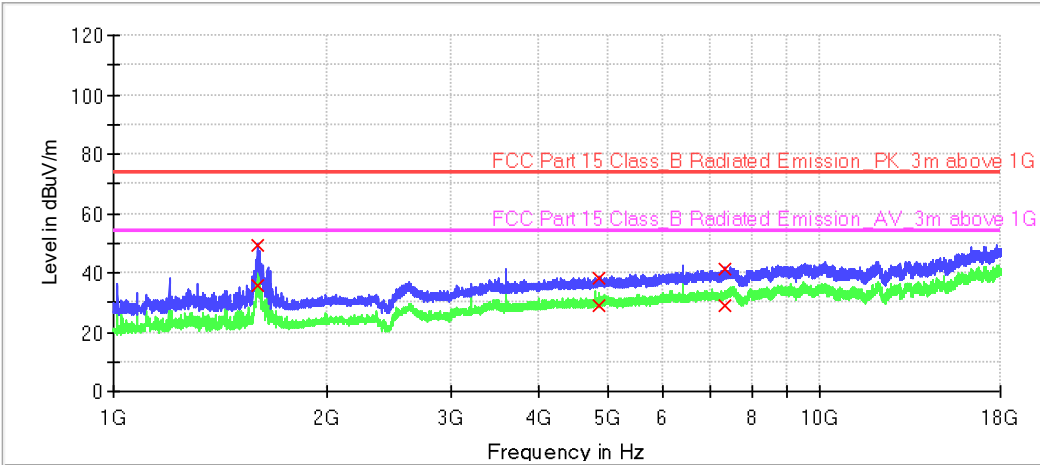


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2375.500000	45.3	31.2	150.0	V	25.0	-12.0	28.7	74.0	22.8	54.0
2390.000000	46.3	32.7	150.0	V	25.0	-11.9	27.7	74.0	21.3	54.0
2412.000000	99.3	--	150.0	V	25.0	-11.8	---	---	---	---

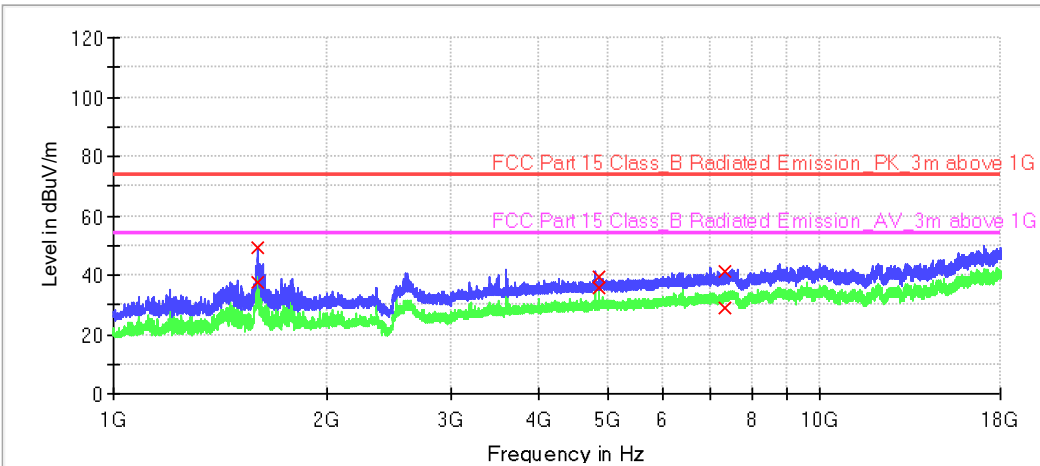


Frequency: 802.11b 2437MHz



Limit and Margin

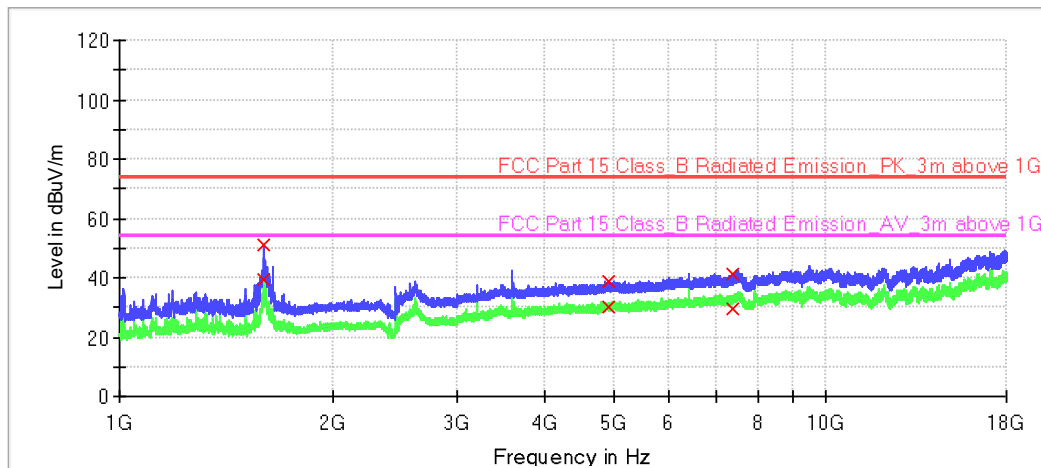
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	49.4	35.6	150.0	H	0.0	-15.3	24.6	74.0	18.4	54.0
4874.000000	38.2	28.6	150.0	H	359.0	-3.7	35.8	74.0	25.4	54.0
7313.600000	41.2	28.8	150.0	H	27.0	-0.6	32.8	74.0	25.2	54.0



Limit and Margin

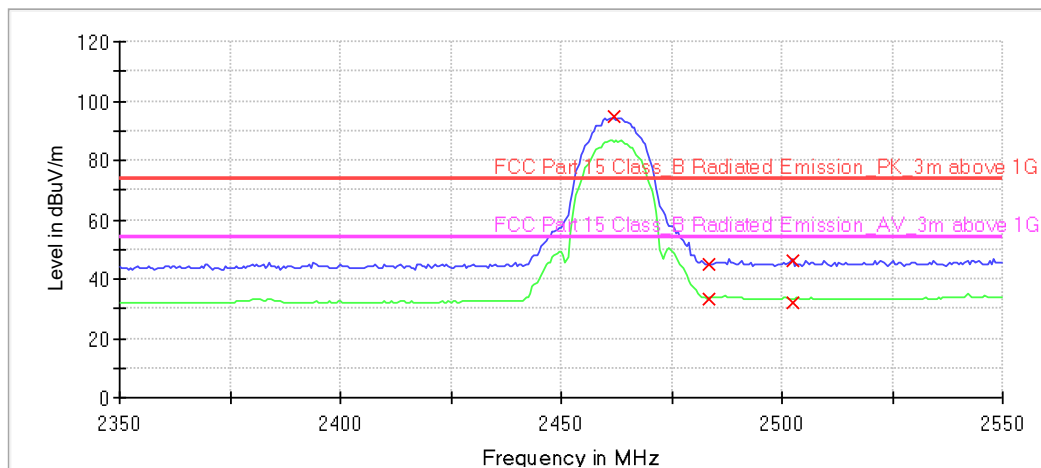
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	49.0	37.5	150.0	V	312.0	-15.3	25.0	74.0	16.5	54.0
4873.900000	35.4	39.2	150.0	V	19.0	-3.7	38.6	74.0	14.8	54.0
7311.000000	41.5	28.8	150.0	V	66.0	-0.6	32.5	74.0	26.2	54.0

Frequency: 802.11b 2462MHz



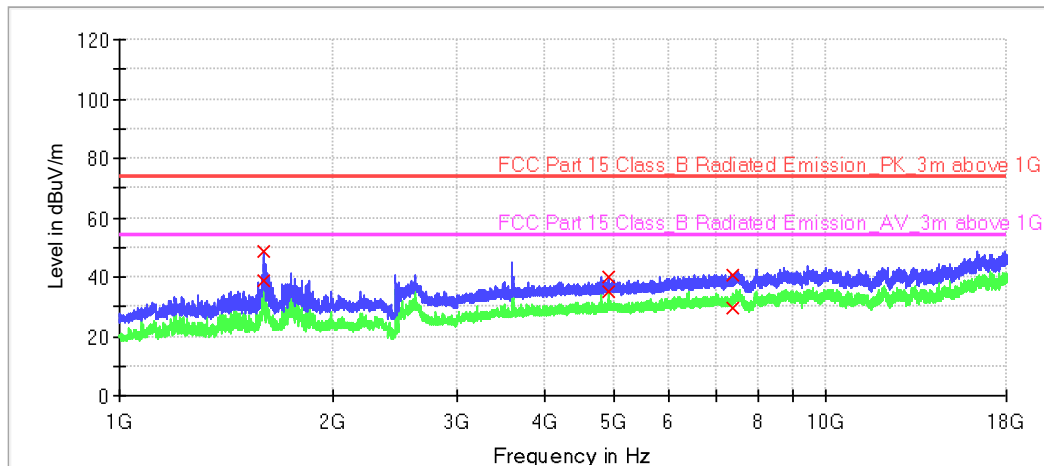
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	50.8	39.1	150.0	H	0.0	-15.3	23.2	74.0	14.9	54.0
4924.000000	38.9	30.2	150.0	H	0.0	-3.5	35.1	74.0	23.8	54.0
7386.000000	41.1	29.6	150.0	H	0.0	-0.6	32.9	74.0	24.4	54.0



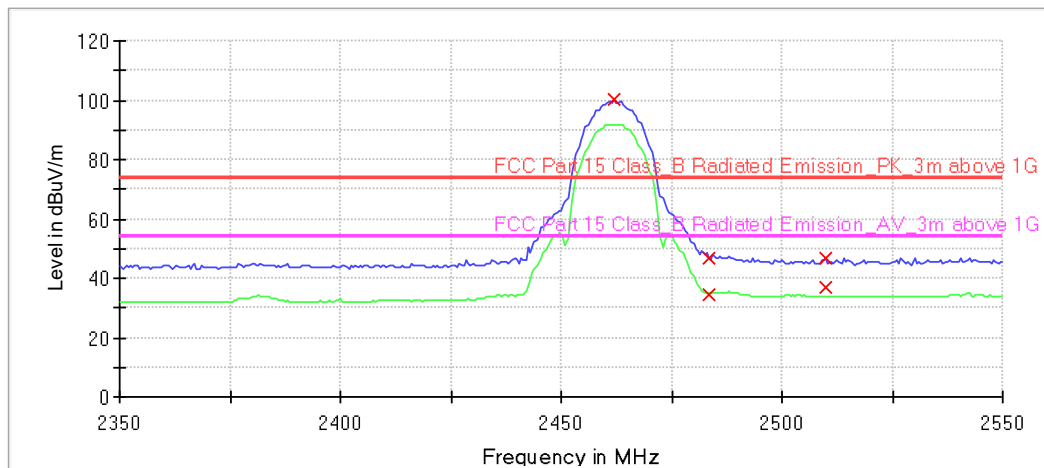
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2462.000000	94.7	--	150.0	H	359.0	-11.5	---	---	---	---
2483.500000	44.9	33.4	150.0	H	359.0	-11.4	29.1	74.0	20.6	54.0
2502.500000	46.0	32.2	150.0	H	23.0	-11.3	28.0	74.0	21.8	54.0



Limit and Margin

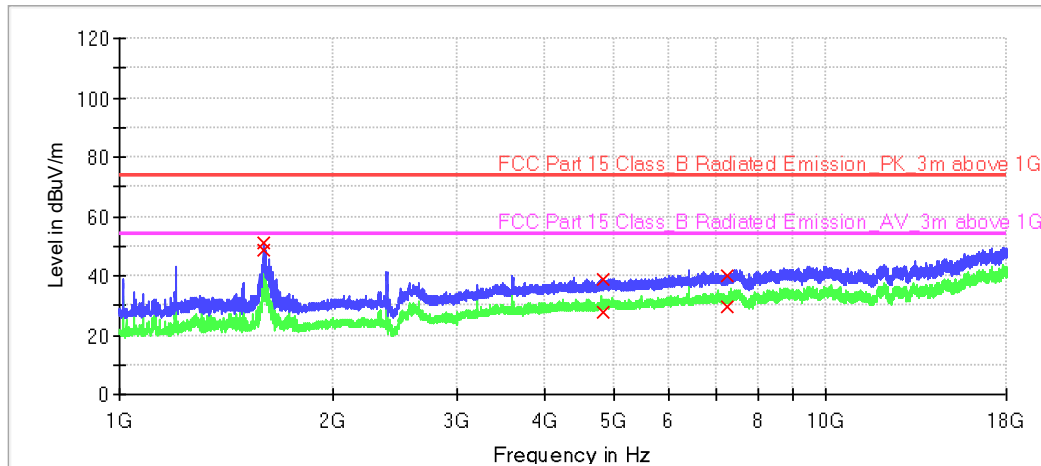
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	48.8	38.6	150.0	V	1.0	-15.3	25.2	74.0	15.4	54.0
4924.000000	39.9	35.2	150.0	V	56.0	-3.5	34.1	74.0	18.8	54.0
7386.000000	40.4	29.4	150.0	V	186.0	-0.6	33.6	74.0	24.6	54.0



Limit and Margin

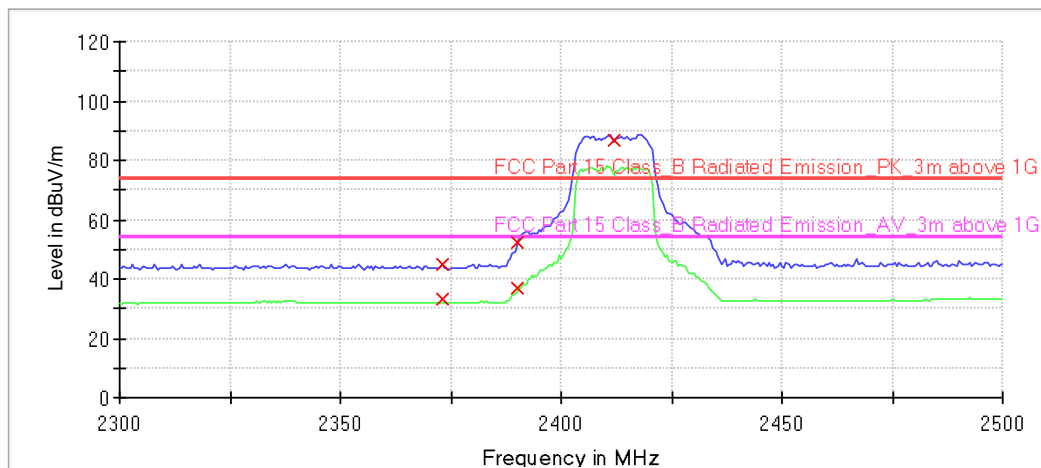
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2462.000000	100.6	--	150.0	V	2.0	-11.5	---	---	---	---
2483.500000	47.0	34.3	150.0	V	32.0	-11.4	27.0	74.0	19.7	54.0
2509.900000	46.8	36.9	150.0	V	147.0	-11.2	27.2	74.0	17.1	54.0

Frequency: 802.11g 2412MHz



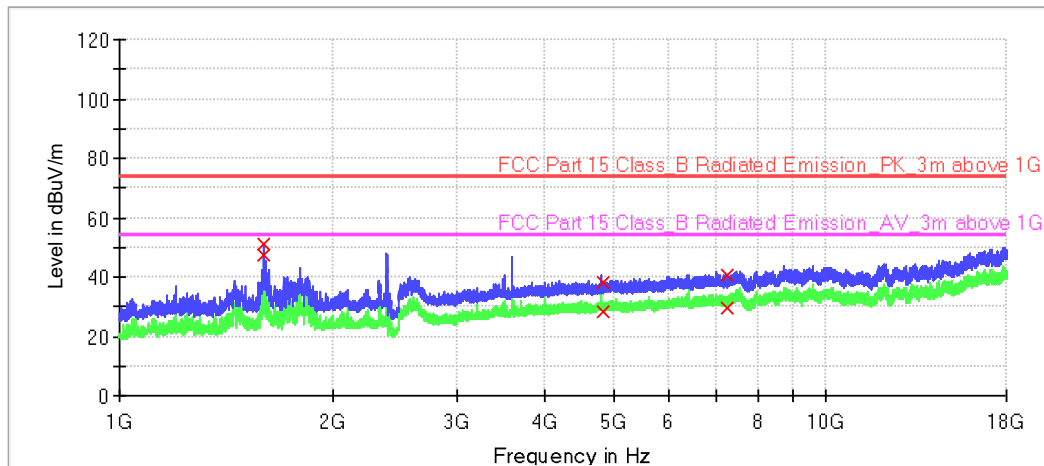
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.700000	51.3	48.8	150.0	H	193.0	-15.3	22.7	74.0	5.2	54.0
4824.000000	38.5	27.6	150.0	H	252.0	-3.8	35.5	74.0	26.4	54.0
7236.000000	40.3	29.4	150.0	H	173.0	-0.5	33.7	74.0	24.6	54.0



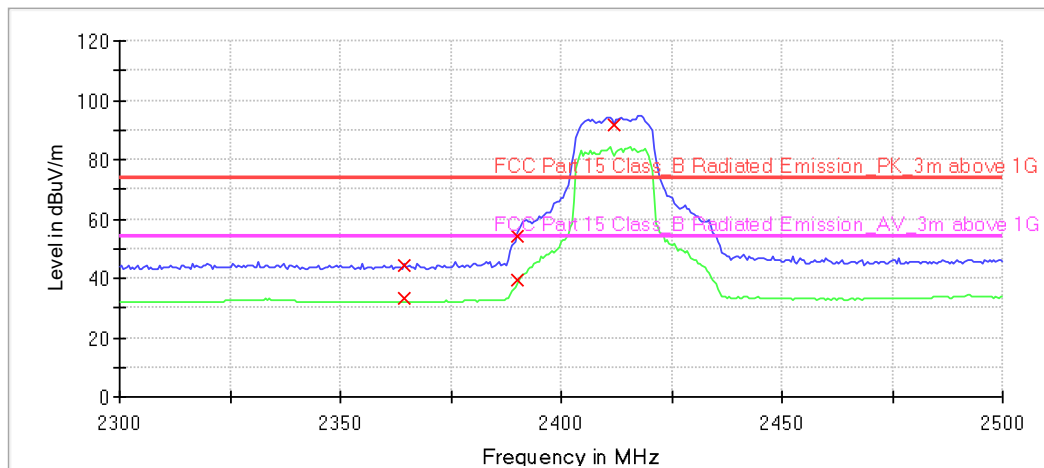
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2373.000000	45.2	33.0	150.0	H	38.0	-12.0	28.8	74.0	21.1	54.0
2390.000000	52.0	36.7	150.0	H	38.0	-11.9	22.0	74.0	17.3	54.0
2412.000000	86.9	--	150.0	H	38.0	-11.8	---	---	---	---



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.700000	51.3	47.2	150.0	V	0.0	-15.3	22.7	74.0	6.8	54.0
4823.800000	38.5	28.4	150.0	V	359.0	-3.8	35.5	74.0	25.6	54.0
7236.000000	40.5	29.3	150.0	V	25.0	-0.5	33.5	74.0	24.7	54.0

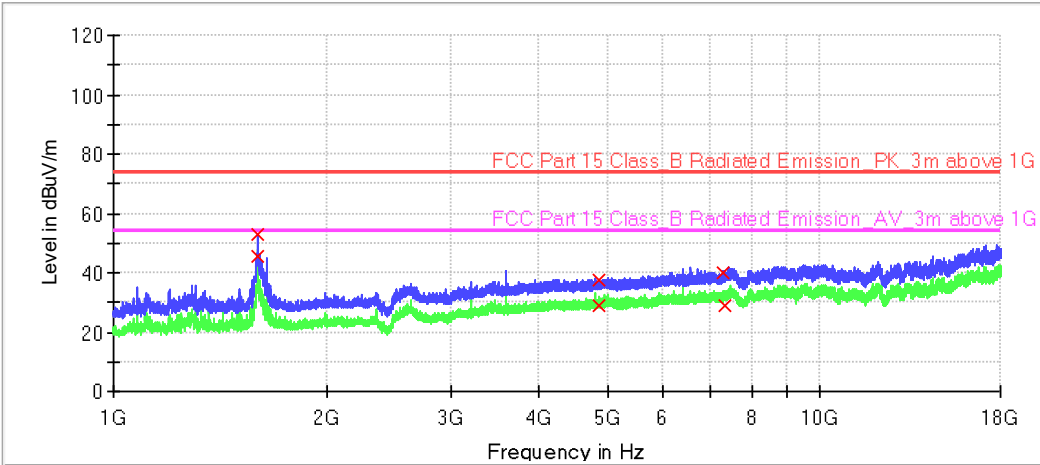


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2364.500000	44.6	33.2	150.0	V	359.0	-12.0	29.4	74.0	20.8	54.0
2390.000000	54.3	39.1	150.0	V	307.0	-11.9	19.7	74.0	14.9	54.0
2412.000000	91.8	--	150.0	V	268.0	-11.8	---	---	---	---

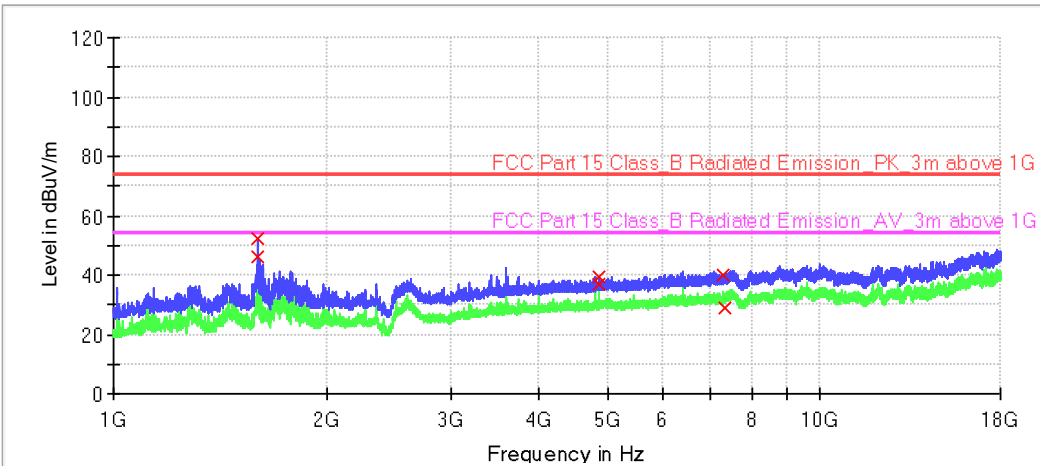


Frequency: 802.11g 2437MHz



Limit and Margin

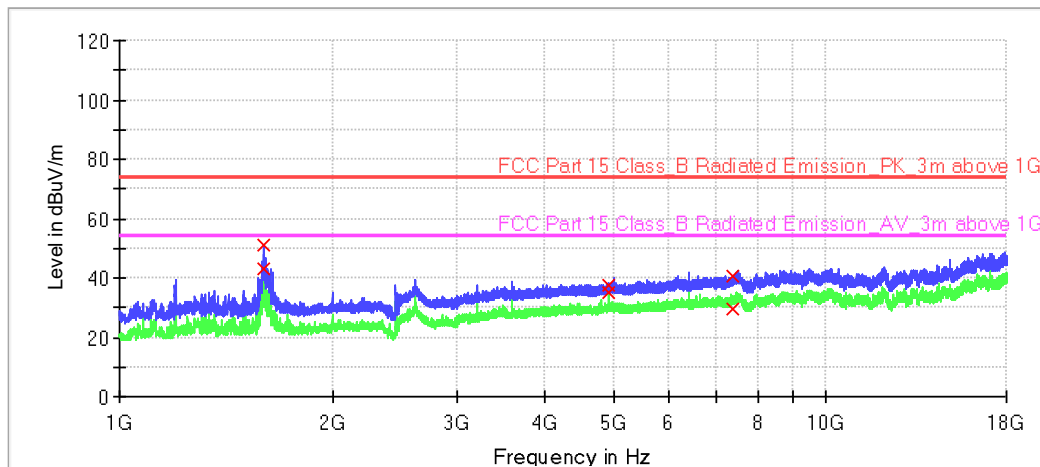
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	53.2	45.3	150.0	H	359.0	-15.3	20.8	74.0	8.7	54.0
4874.000000	37.4	28.9	150.0	H	359.0	-3.7	36.6	74.0	25.2	54.0
7310.800000	40.1	28.8	150.0	H	359.0	-0.6	33.9	74.0	25.2	54.0



Limit and Margin

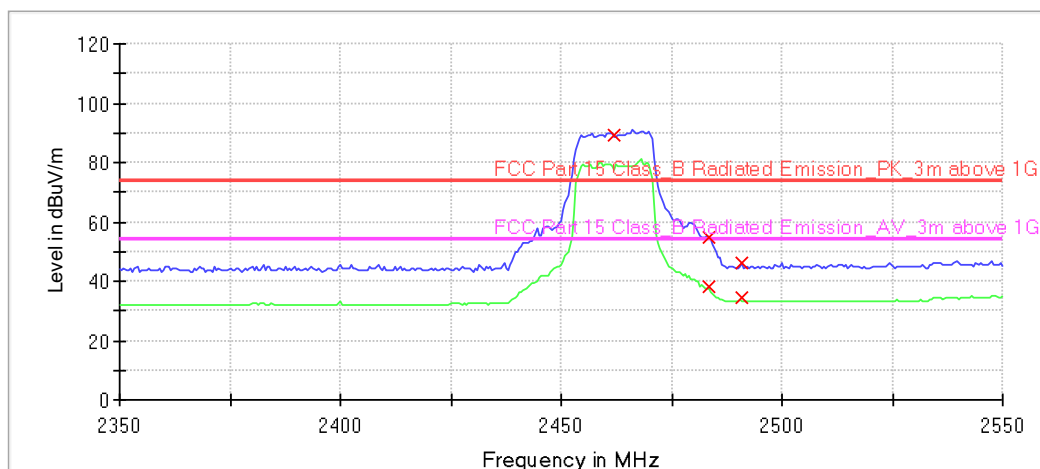
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	52.2	46.1	150.0	V	359.0	-15.3	21.8	74.0	7.9	54.0
4874.000000	39.4	36.7	150.0	V	359.0	-3.7	34.6	74.0	17.3	54.0
7310.800000	40.0	29.2	150.0	V	359.0	-0.6	34.0	74.0	24.8	54.0

Frequency: 802.11g 2462MHz



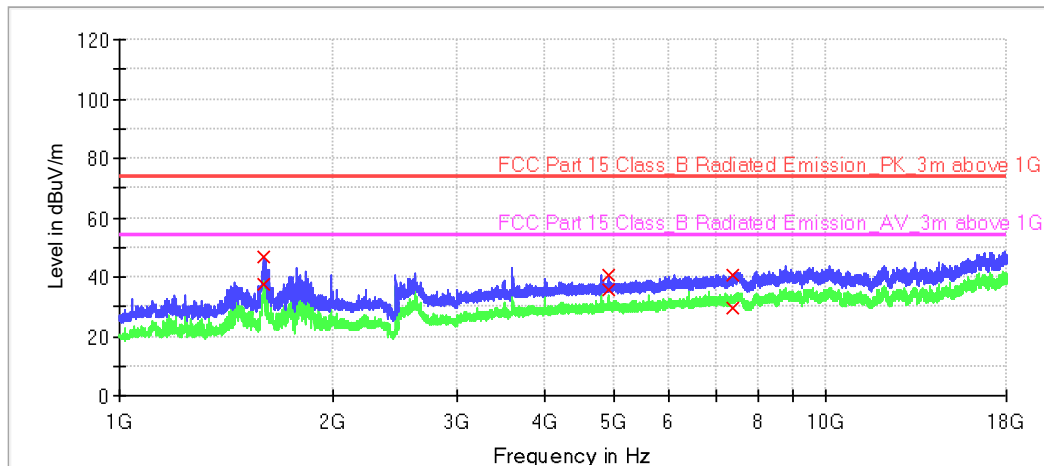
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	51.2	43.0	150.0	H	0.0	-15.3	22.9	74.0	11.0	54.0
4924.000000	37.4	35.2	150.0	H	22.0	-3.5	36.6	74.0	18.8	54.0
7386.000000	40.3	29.5	150.0	H	163.0	-0.6	33.7	74.0	24.5	54.0



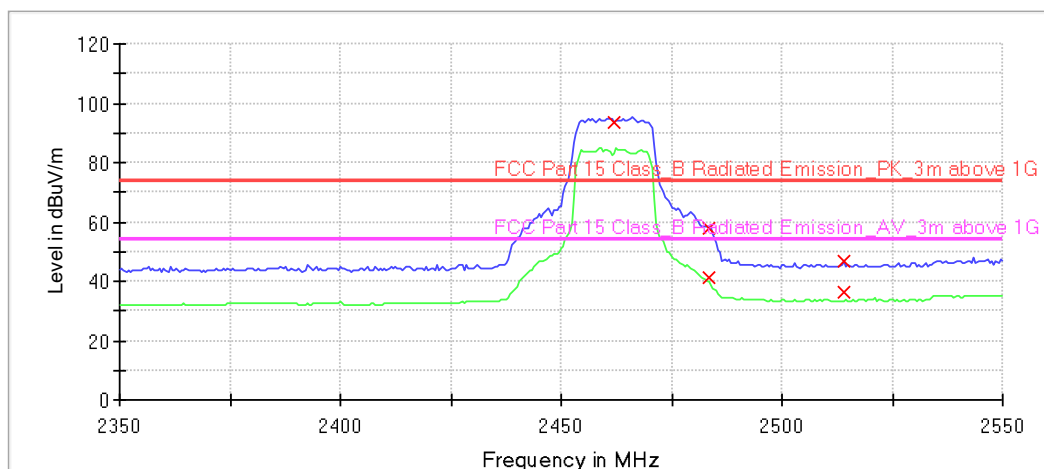
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2462.000000	89.3	--	150.0	H	52.0	-11.5	---	---	---	---
2483.500000	54.8	38.4	150.0	H	359.0	-11.4	19.2	74.0	15.6	54.0
2491.000000	46.1	34.3	150.0	H	68.0	-11.3	27.9	74.0	19.7	54.0



Limit and Margin

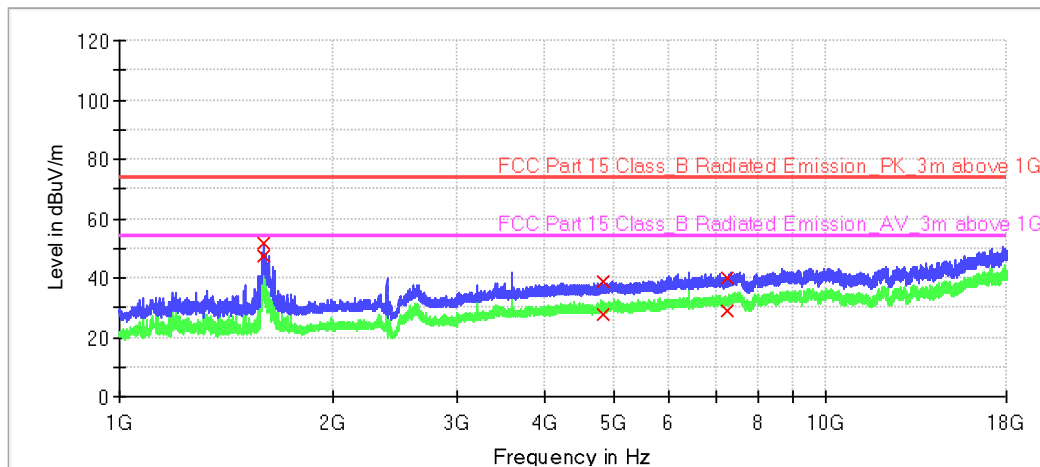
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.700000	46.8	37.6	150.0	V	25.0	-15.3	7.2	54.0	16.4	54.0
4924.000000	40.9	35.9	150.0	V	220.0	-3.5	13.1	54.0	18.2	54.0
7386.100000	40.6	29.5	150.0	V	203.0	-0.6	13.4	54.0	24.5	54.0



Limit and Margin

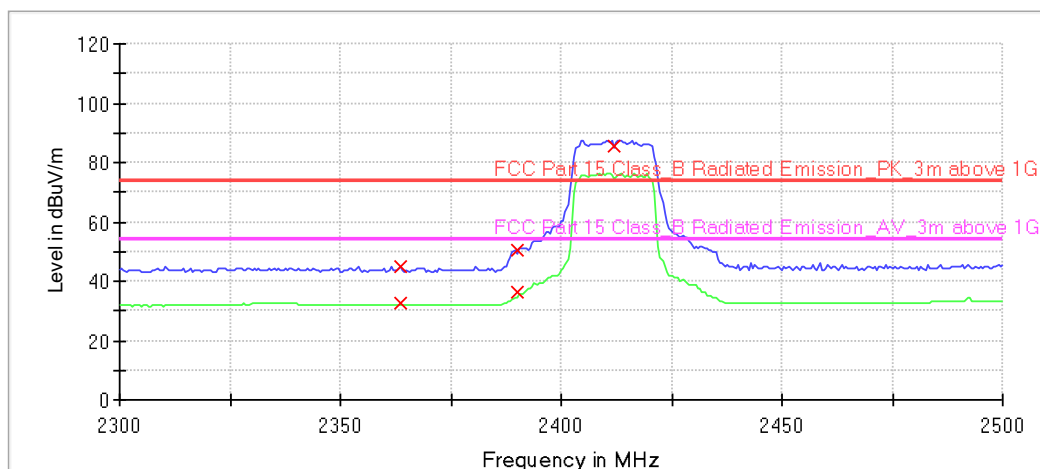
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2462.000000	93.3	--	150.0	V	74.0	-11.5	---	---	---	---
2483.500000	58.1	41.0	150.0	V	152.0	-11.4	15.9	74.0	13.0	54.0
2514.000000	46.5	36.4	150.0	V	1.0	-11.2	27.5	74.0	17.6	54.0

Frequency: 802.11n20 2412MHz



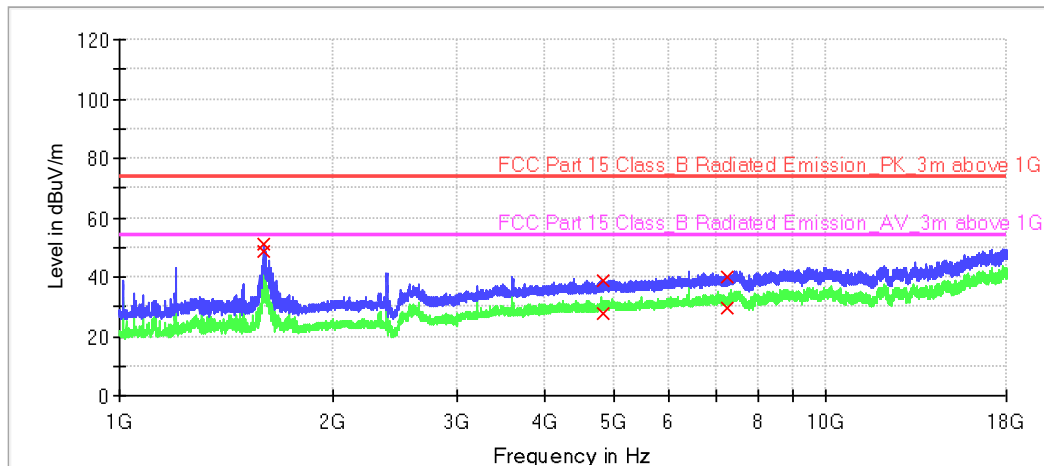
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	51.9	47.1	150.0	H	81.0	-15.3	22.1	74.0	6.9	54.0
4824.000000	38.5	27.8	150.0	H	33.0	-3.8	35.5	74.0	26.2	54.0
7234.000000	40.1	29.2	150.0	H	359.0	-0.5	33.9	74.0	24.8	54.0



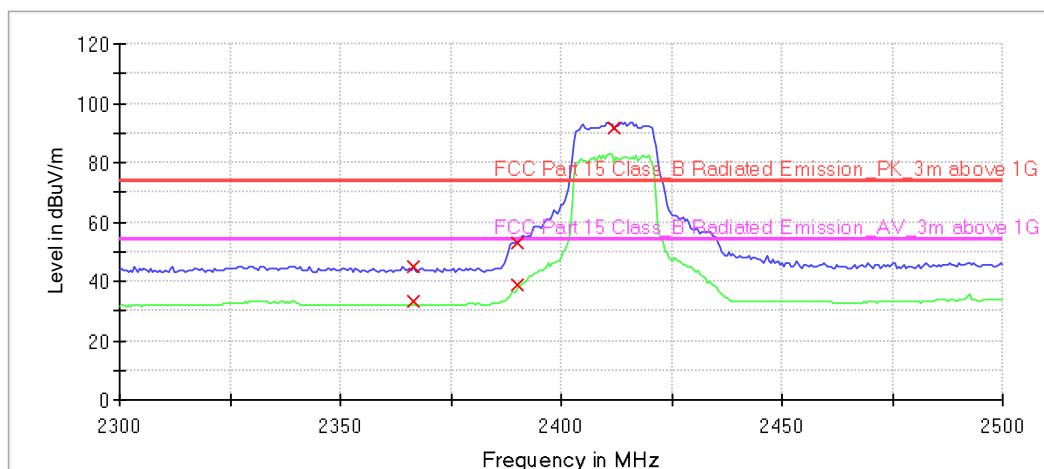
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2363.500000	44.8	32.8	150.0	H	297.0	-12.0	29.2	74.0	21.3	54.0
2390.000000	50.5	36.2	150.0	H	52.0	-11.9	23.5	74.0	17.8	54.0
2412.000000	85.8		150.0	H	297.0	-11.8	---	---	---	---



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	45.8	35.6	150.0	V	1.0	-15.3	28.2	74.0	18.5	54.0
4824.000000	37.7	27.3	150.0	V	25.0	-3.8	36.3	74.0	26.8	54.0
7236.000000	40.2	29.3	150.0	V	17.0	-0.5	33.8	74.0	24.8	54.0

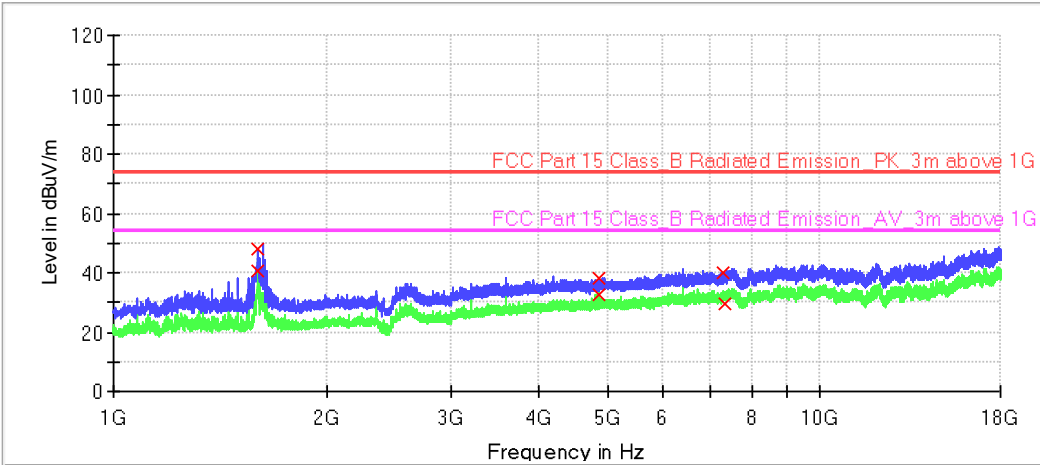


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2366.500000	44.6	33.0	150.0	V	25.0	-12.0	29.4	74.0	21.0	54.0
2390.000000	52.7	38.7	150.0	V	352.0	-11.9	21.3	74.0	15.3	54.0
2412.000000	91.7	--	150.0	V	1.0	-11.8	---	---	---	---

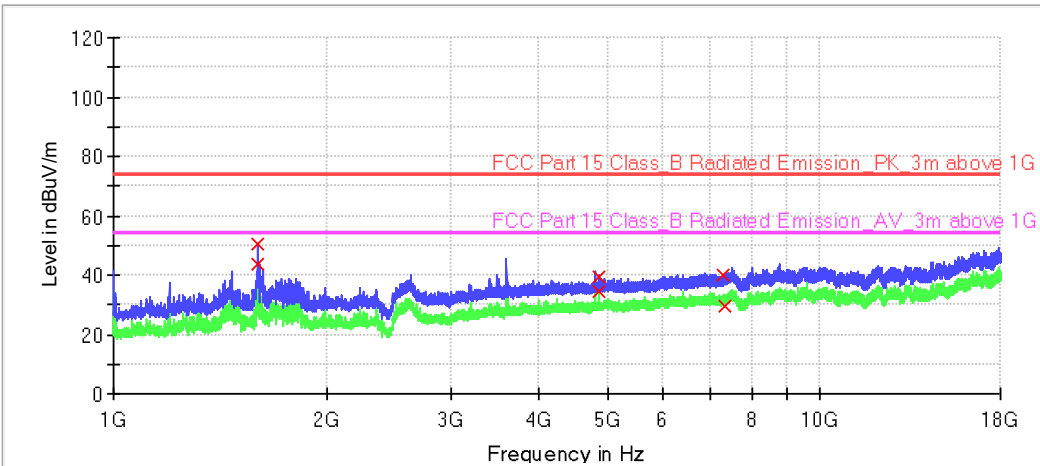


Frequency: 802.11n20 2437MHz



Limit and Margin

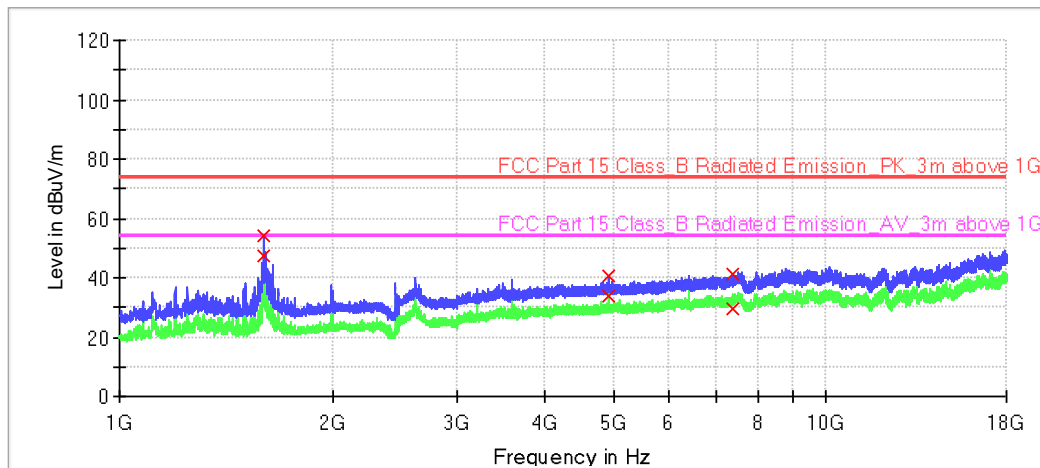
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	48.1	40.7	150.0	H	1.0	-15.3	5.9	54.0	13.3	54.0
4874.000000	38.1	32.7	150.0	H	28.0	-3.7	16.0	54.0	21.4	54.0
7310.800000	40.1	29.4	150.0	H	331.0	-0.6	13.9	54.0	24.7	54.0



Limit and Margin

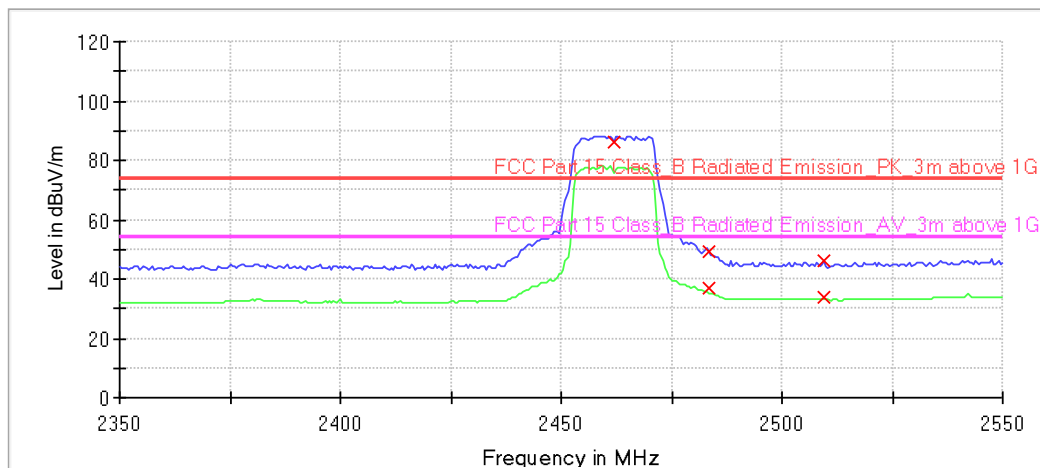
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	50.5	43.7	150.0	V	306.0	-15.3	23.5	74.0	10.3	54.0
4874.000000	39.6	34.2	150.0	V	197.0	-3.7	34.5	74.0	19.8	54.0
7310.800000	39.8	29.4	150.0	V	289.0	-0.6	34.2	74.0	24.6	54.0

Frequency: 802.11n20 2462MHz



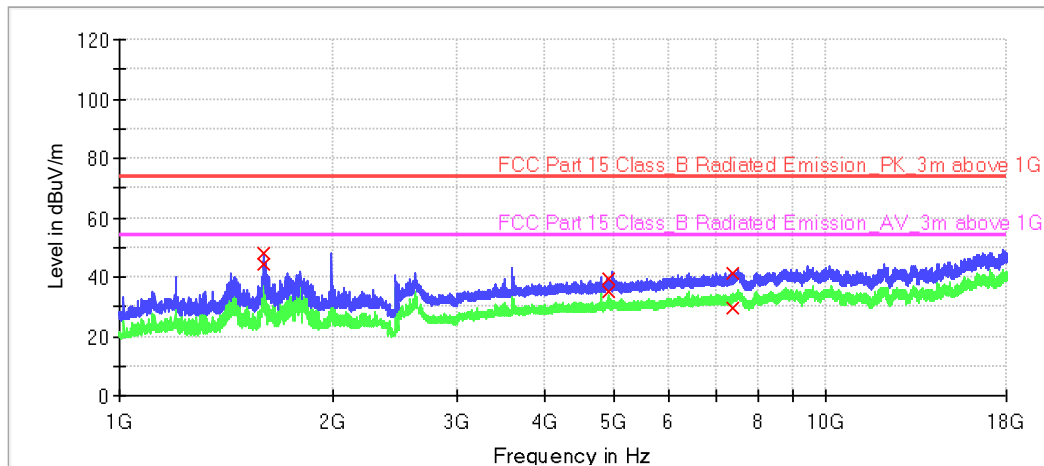
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	53.9	47.7	150.0	H	1.0	-15.5	0.1	54.0	6.3	54.0
4924.000000	40.5	33.9	150.0	H	14.0	-3.5	13.5	54.0	20.1	54.0
7386.000000	41.2	29.5	150.0	H	236.0	-0.6	12.8	54.0	24.5	54.0



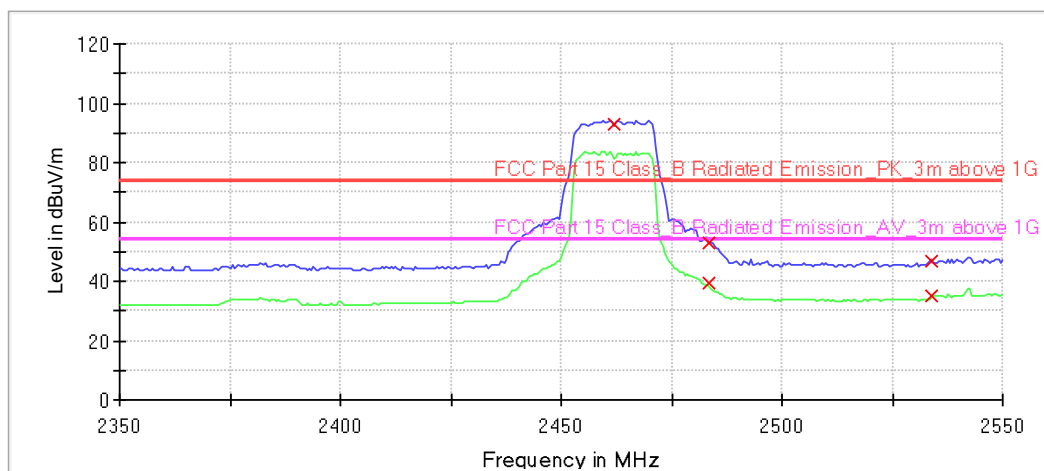
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2462.000000	86.0	--	150.0	H	12.0	-11.5	---	---	---	---
2483.500000	49.1	37.2	150.0	H	175.0	-11.4	24.9	74.0	16.8	54.0
2509.500000	46.1	33.9	150.0	H	25.0	-11.2	27.9	74.0	20.1	54.0



Limit and Margin

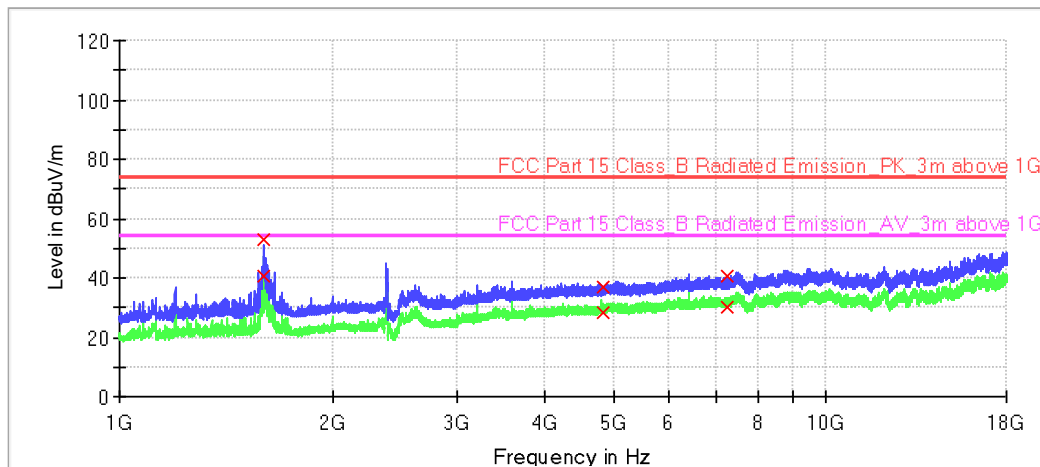
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	47.8	44.1	150.0	V	2.0	-15.3	26.2	74.0	9.9	54.0
4924.000000	39.6	35.0	150.0	V	55.0	-3.5	34.4	74.0	19.0	54.0
7386.000000	41.1	29.6	150.0	V	147.0	-0.6	33.0	74.0	24.4	54.0



Limit and Margin

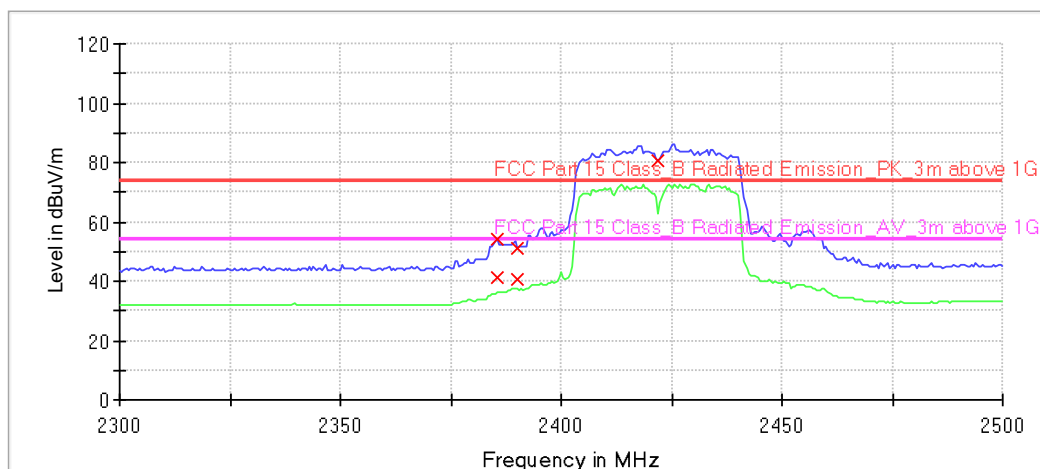
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2462.000000	92.8	--	150.0	V	94.0	-11.5	---	---	---	---
2483.500000	53.2	39.3	150.0	V	188.0	-11.4	20.8	74.0	14.8	54.0
2533.900000	46.9	34.8	150.0	V	102.0	-11.1	27.1	74.0	19.2	54.0

Frequency: 802.11n40 2422MHz



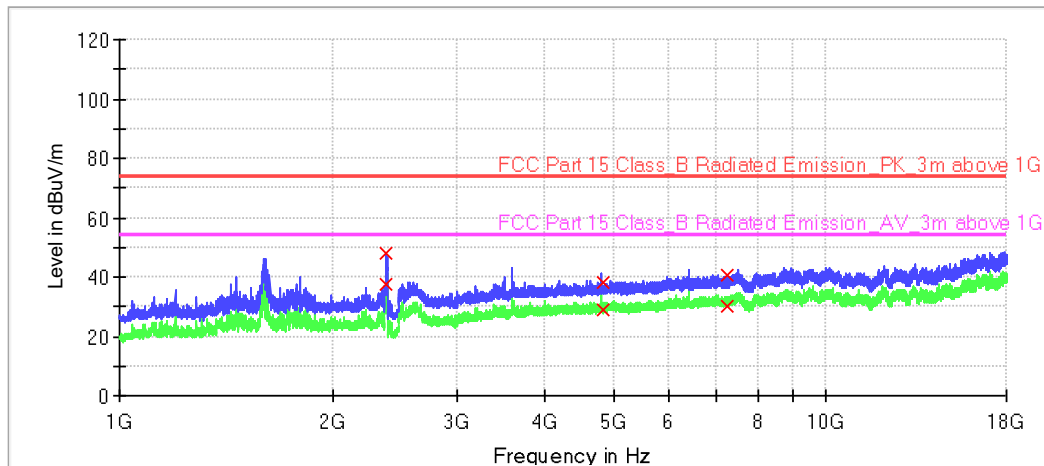
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	52.8	40.5	150.0	H	246.0	-15.3	21.2	74.0	13.5	54.0
4844.000000	37.2	28.2	150.0	H	72.0	-3.8	36.8	74.0	25.8	54.0
7266.000000	40.4	30.2	150.0	H	233.0	-0.6	33.6	74.0	23.8	54.0



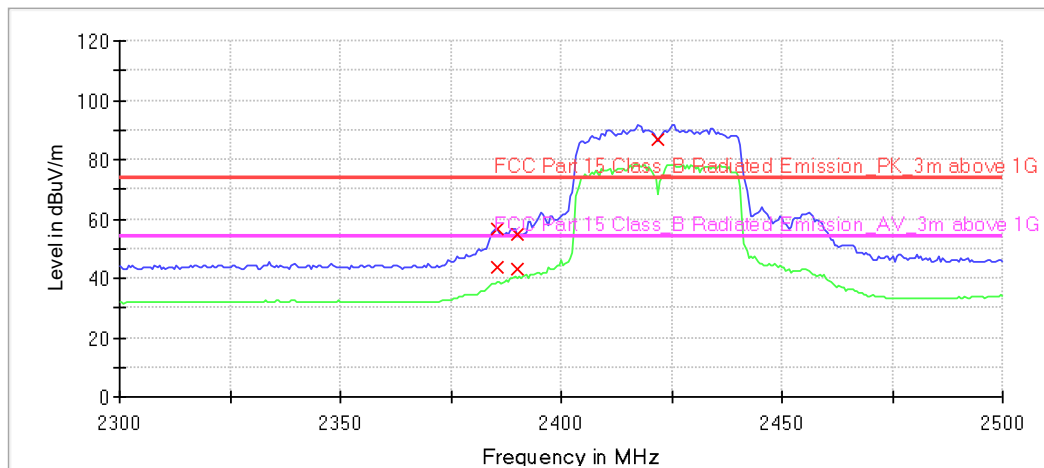
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2385.500000	53.9	41.1	150.0	H	359.0	-11.9	20.1	74.0	12.9	54.0
2390.000000	51.3	40.7	150.0	H	0.0	-11.9	22.7	74.0	13.3	54.0
2422.000000	80.7	--	150.0	H	16.0	-11.7	---	---	---	---



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2389.600000	48.0	37.7	150.0	V	1.0	-12.3	26.1	74.0	16.3	54.0
4844.000000	38.1	28.9	150.0	V	312.0	-3.8	35.9	74.0	25.1	54.0
7267.200000	40.4	30.0	150.0	V	349.0	-0.6	33.6	74.0	24.0	54.0

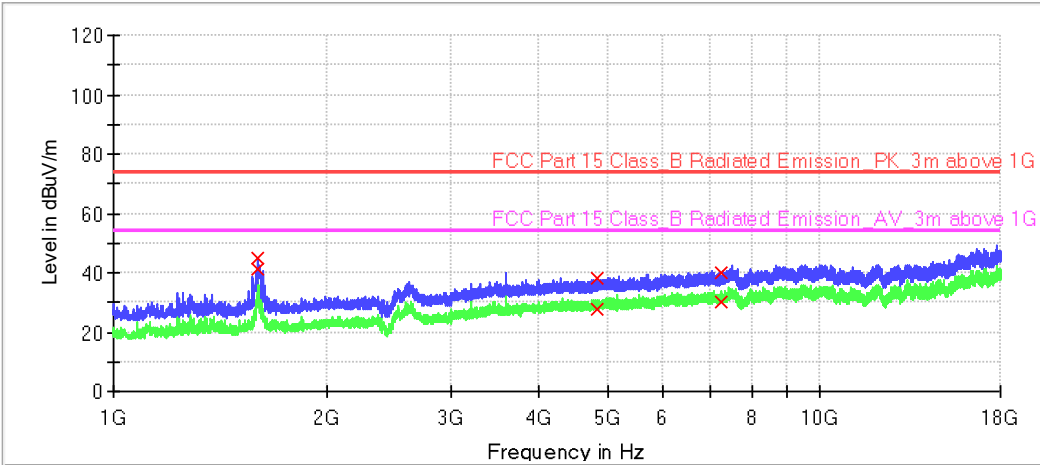


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2385.500000	56.7	43.5	150.0	V	24.0	-11.9	17.3	74.0	10.5	54.0
2390.000000	55.0	43.4	150.0	V	359.0	-11.9	19.0	74.0	10.6	54.0
2422.000000	86.6	--	150.0	V	1.0	-11.7	---	---	---	---

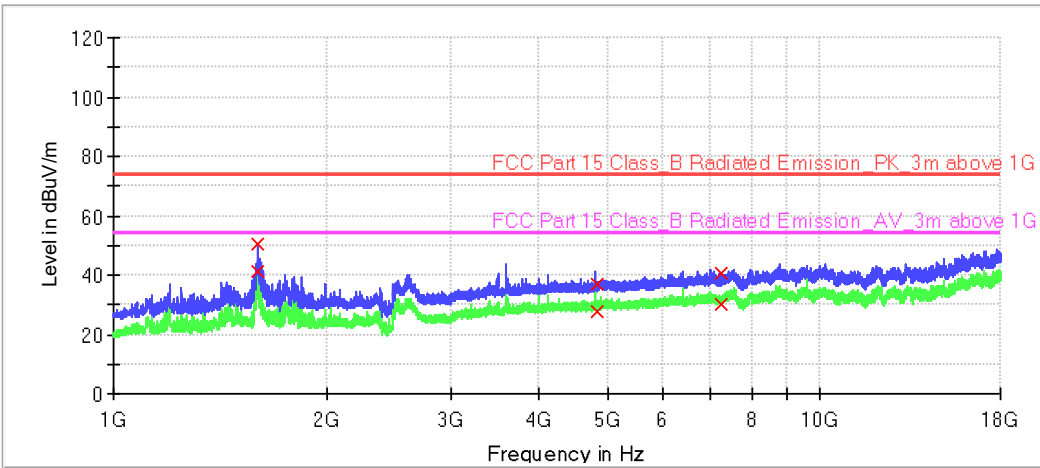


Frequency: 802.11n40 2437MHz



Limit and Margin

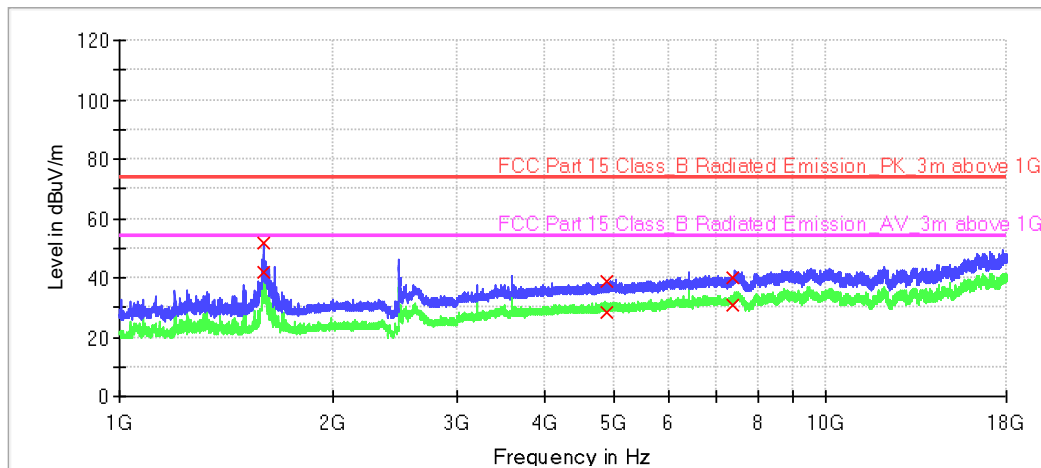
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	44.7	41.1	150.0	H	0.0	-15.3	29.4	74.0	12.9	54.0
4844.000000	38.1	27.9	150.0	H	44.0	-3.8	35.9	74.0	26.1	54.0
7266.000000	40.0	30.4	150.0	H	185.0	-0.6	34.0	74.0	23.6	54.0



Limit and Margin

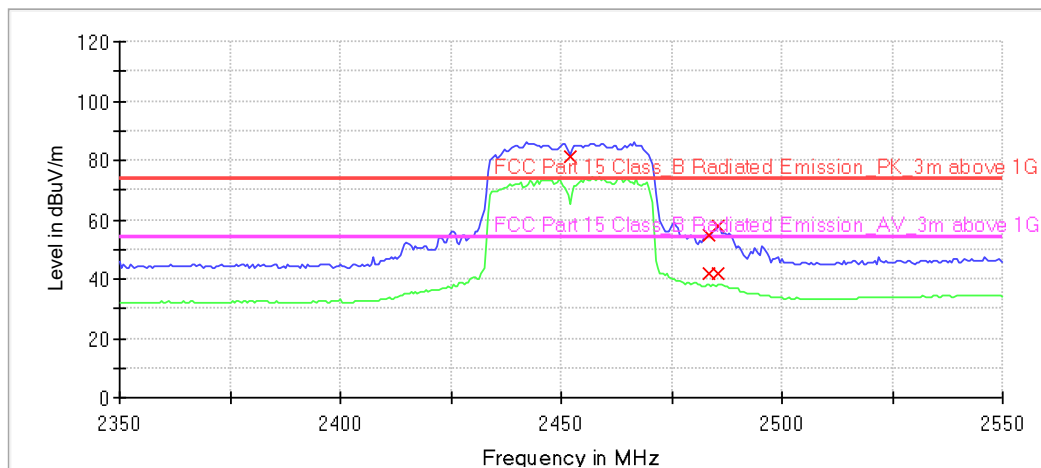
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	50.4	41.3	150.0	V	359.0	-15.3	23.7	74.0	12.8	54.0
4844.000000	36.9	27.9	150.0	V	59.0	-3.8	37.1	74.0	26.1	54.0
7266.000000	40.4	30.4	150.0	V	153.0	-0.6	33.6	74.0	23.6	54.0

Frequency: 802.11n40 2452MHz



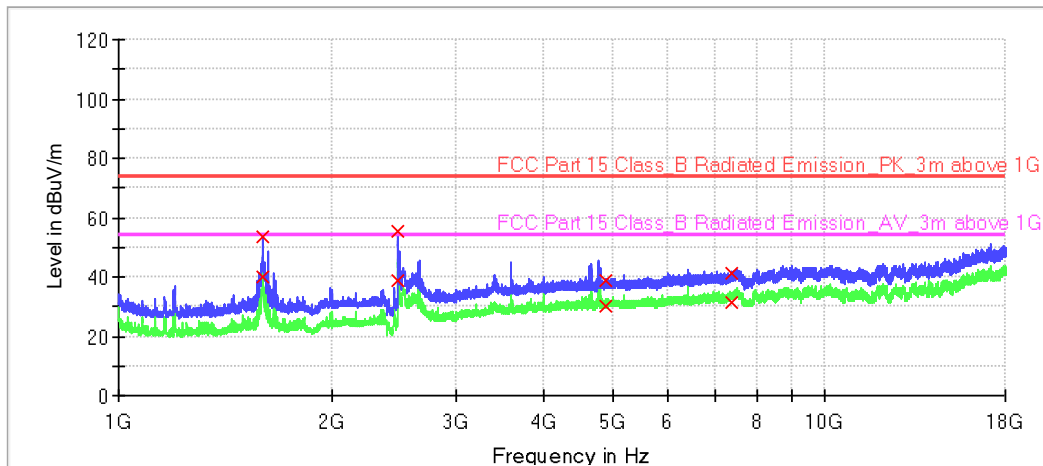
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.600000	51.5	41.8	150.0	H	12.0	-15.3	22.5	74.0	12.2	54.0
4904.000000	38.6	28.1	150.0	H	53.0	-3.6	35.4	74.0	26.0	54.0
7356.000000	40.1	30.7	150.0	H	233.0	-0.6	33.9	74.0	23.3	54.0



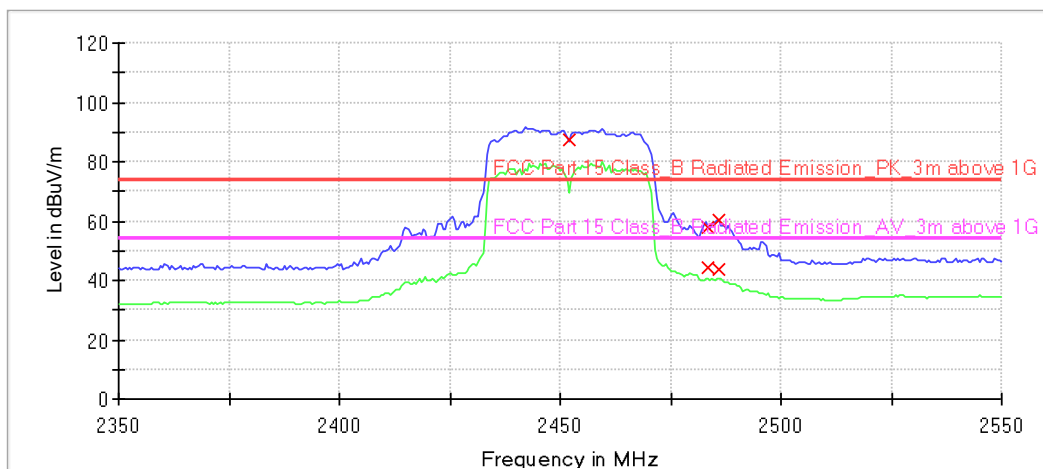
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2452.000000	81.2	--	150.0	H	358.0	-11.6	---	---	---	---
2483.500000	54.7	41.7	150.0	H	27.0	-11.4	19.3	74.0	12.3	54.0
2485.500000	57.9	41.9	150.0	H	13.0	-11.3	16.1	74.0	12.1	54.0



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
1599.700000	53.7	40.0	150.0	V	6.0	-15.1	20.3	74.0	14.0	54.0
2484.700000	55.5	39.0	150.0	V	23.0	-11.3	18.5	74.0	15.0	54.0
4904.000000	39.0	30.3	150.0	V	193.0	-3.0	35.0	74.0	23.7	54.0
7356.000000	41.2	31.6	150.0	V	43.0	0.2	32.8	74.0	22.4	54.0

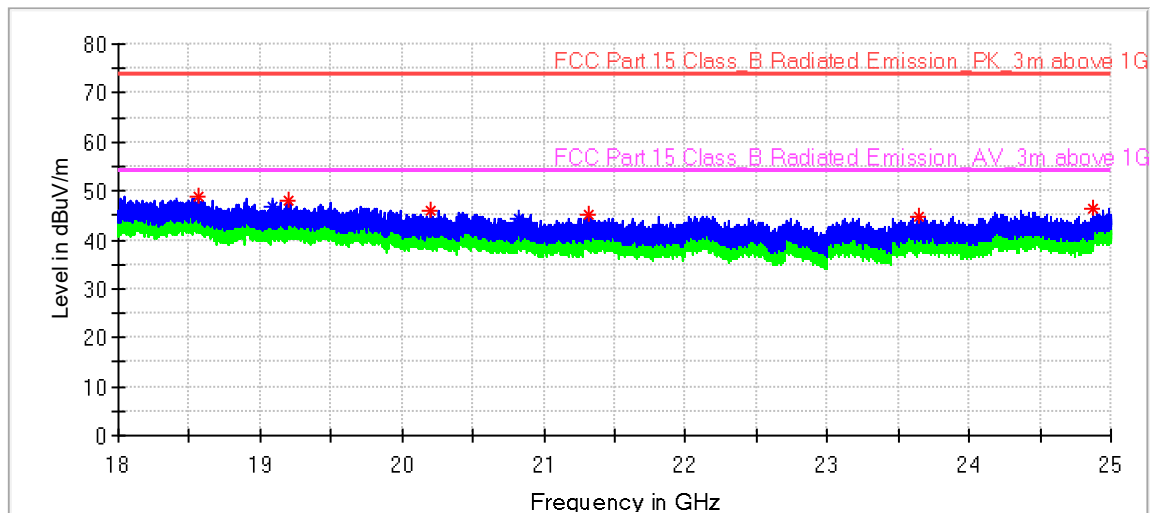


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - AVG (dB)	Limit - AVG (dBuV/m)
2452.000000	87.1	---	150.0	V	359.0	-11.6	---	---	---	---
2483.500000	57.6	44.1	150.0	V	24.0	-11.4	16.4	74.0	9.9	54.0
2486.000000	60.2	43.8	150.0	V	12.0	-11.3	13.8	74.0	10.2	54.0

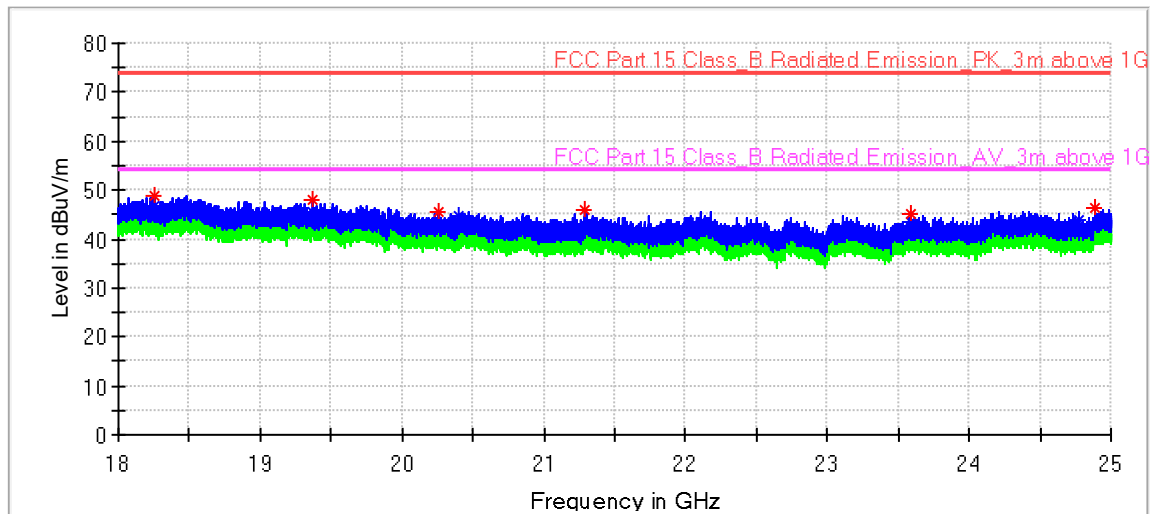
The worst case of Radiated Emission Above 18GHz

Frequency: 802.11g 2437MHz



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18405.125000	---	46.91	54.00	7.09	100.0	H	239.0	8.1
18563.718750	48.77	---	74.00	25.23	100.0	H	137.0	8.1
19090.687500	---	46.93	54.00	7.07	100.0	H	39.0	8.1
19202.031250	48.17	---	74.00	25.83	100.0	H	214.0	8.2
20194.937500	45.83	---	74.00	28.17	100.0	H	0.0	8.3
20828.656250	---	44.25	54.00	9.75	100.0	H	336.0	8.5
21313.406250	45.00	---	74.00	29.00	100.0	H	331.0	8.6
22144.218750	---	43.23	54.00	10.77	100.0	H	19.0	8.8
23638.937500	44.65	---	74.00	29.35	100.0	H	89.0	8.9
23663.000000	---	43.07	54.00	10.93	100.0	H	239.0	8.9
24875.531250	46.44	---	74.00	27.56	100.0	H	128.0	9.0
24940.937500	---	44.19	54.00	9.81	100.0	H	348.0	9.0



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18247.406250	---	46.71	54.00	7.29	100.0	V	154.0	8.1
18249.156250	48.87	---	74.00	25.13	100.0	V	335.0	8.1
19369.375000	48.00	---	74.00	26.00	100.0	V	353.0	8.3
19369.375000	---	45.67	54.00	8.33	100.0	V	353.0	8.3
20264.937500	45.56	---	74.00	28.44	100.0	V	268.0	8.3
20404.062500	---	44.68	54.00	9.32	100.0	V	268.0	8.4
21288.468750	45.75	---	74.00	28.25	100.0	V	13.0	8.6
22103.312500	---	43.49	54.00	10.51	100.0	V	330.0	8.8
23594.093750	---	43.46	54.00	10.54	100.0	V	111.0	8.9
23594.093750	44.95	---	74.00	29.05	100.0	V	111.0	8.9
24779.281250	---	43.82	54.00	10.18	100.0	V	76.0	9.0
24893.468750	46.28	---	74.00	27.72	100.0	V	297.0	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	2026-2-24	2027-2-23
	RF automatic control unit	MWRFTest	MW100-RFCB	MW211122-28	2025-10-9	2026-10-8
	RF_Cable	UCWAVE ELECTRONIC	UCA500-NJWSM-1.5M	---	2025-8-1	2026-7-31
	Wideband power sensor	Rohde & Schwarz	NRP-Z81	105903	2026-2-24	2027-2-23
	10dB Attenuator	Aeroflex Weinschel	CG-4689	93459	2026-2-24	2027-2-23
RE	EMI Test Receiver	Rohde & Schwarz	ESR3	101906	2025-8-1	2026-7-31
	Signal Analyzer	Rohde & Schwarz	FSV40	101091	2025-8-1	2026-7-31
	Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9168	961	2025-6-25	2026-6-24
					2026-6-25	2027-6-24
	Double-ridged waveguide horn antenna	Rohde & Schwarz	HF907	102393	2026-4-14	2027-4-13
	Pre-amplifier	Shenzhen HzEMC	HPA-081843	HYP A23026	2026-4-14	2027-4-13
	Loop antenna	Rohde & Schwarz	HFH2-Z2	100443	2025-7-4	2026-7-3
	Double Ridged Horn Antenna	ETS-Lindgren	3116C	00222727	2023-7-7	2026-7-6
	RE_Cable_01 Coaxial Cable	JUNFLON	MWX221	1906S057	2025-8-1	2026-7-31
	RE_Cable_02 Coaxial Cable	HUBER+SUHNER	RG214	1358176	2025-8-1	2026-7-31
	RE_Cable_03 Coaxial Cable	JUNFLON	MWX221	J12J102482	2025-8-1	2026-7-31
	RE_Cable_04 Coaxial Cable	PASTERNAK	PE360	2233	2025-8-1	2026-7-31
	3m Semi-anechoic chamber	TDK	9X6X6	----	2024-5-8	2027-5-7

Measurement Software Information			
Test Item	Software	Manufacturer	Version
C	MTS 8310	MWRFTest	3.0.0.0
	Power Viewer	Rohde & Schwarz	V 11.0
RE	EMC 32	Rohde & Schwarz	V10.50.40

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 >.

-----End of Test Report-----