

FCC - TEST REPORT

Report Number : **709502408362-00B** Date of Issue: October 30, 2024

Model : SC155-WQ2, SC155-WQ3, SC155-WQ2A, SC155-WQ2B,
SC155-WQ2C, SC155-WQ3A, SC155-WQ3B, SC155-WQ3C,
SC155-WQ4, SC155-WQ4A, SC155-WQ4B, SC155-WQ4C,
SC155-WQ2D, SC55-WQ3D, SC155-WQ4D

Product Type : Smart Camera

Applicant : Zhejiang Lingzhu Technology Co., Ltd.

Address : Room 302, No 1 Building Huace Center, Xihu District, Hangzhou
City, Zhejiang Province, China.

Manufacturer : Zhejiang Lingzhu Technology Co., Ltd.

Address : Room 302, No 1 Building Huace Center, Xihu District, Hangzhou
City, Zhejiang Province, China.

Test Result : ☒ Positive ☐ Negative

Total pages including
Appendices : 54



TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch is a subcontractor to TÜV SÜD Product Service GmbH according to the principles outlined in ISO 17025.

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch reports apply only to the specific samples tested under stated test conditions. Construction of the actual test samples has been documented. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. The manufacturer/importer is responsible to the Competent Authorities in Europe for any modifications made to the production units which result in non-compliance to the relevant regulations. TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch shall have no liability for any deductions, inferences or generalizations drawn by the client or others from TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch issued reports.

This report is the confidential property of the client. As a mutual protection to our clients, the public and ourselves, extracts from the test report shall not be reproduced except in full without our written approval.



1 Table of Contents

1	Table of Contents.....	2
2	Report Modification Record.....	3
3	Details about the Test Laboratory	3
4	Description of the Equipment under Test.....	4
5	Summary of Test Standards	6
6	Summary of Test Results.....	7
7	General Remarks.....	8
8	Test Setups	9
9	Systems test configuration	12
10	Technical Requirement	13
10.1	Conducted Emission	13
10.2	Conducted peak output power.....	18
10.3	Power spectral density	20
10.4	Spurious radiated emissions for transmitter	25
11	Test Equipment List.....	51
12	System Measurement Uncertainty	52
13	Photographs of Test Set-ups	53
14	Photographs of EUT	54



2 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
709502408362-00B	First Issue	10/30/2024

3 Details about the Test Laboratory

Test Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch
No.16 Lane, 1951 Du Hui Road,
Shanghai 201108,
P.R. China

Telephone: +86 21 6141 0123

Fax: +86 21 6140 8600

FCC Registration No.: 820234

FCC Designation Number: CN1183

ISED CAB identifier CN0101

IC Registration No.: 31668



4 Description of the Equipment under Test

Product: Smart Camera

Model no.: SC155-WQ2, SC155-WQ3, SC155-WQ2A, SC155-WQ2B, SC155-WQ2C, SC155-WQ3A, SC155-WQ3B, SC155-WQ3C, SC155-WQ4, SC155-WQ4A, SC155-WQ4B, SC155-WQ4C, SC155-WQ2D, SC55-WQ3D, SC155-WQ4D

FCC ID: 2BEWXSC155

Options and accessories: NA

Rating: 5V DC, 1.5A

RF Transmission Frequency: 802.11b/g/n-HT20: 2412~2462 MHz (Wi-Fi)
802.11n-HT40: 2422~2452 MHz (Wi-Fi)
2402~2480 MHz (BLE5.0)

No. of Operated Channel:

802.11b/g/n(HT20)				802.11n(HT40)			
Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)
1	2412	7	2442	3	2422	8	2447MHz
2	2417	8	2447	4	2427	9	2452MHz
3	2422	9	2452	5	2432		
4	2427	10	2457	6	2437		
5	2432	11	2462	7	2442		
6	2437						

Bluetooth Low Energy							
Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480



Modulation:	Direct Sequence Spread Spectrum (DSSS) for 802.11b Orthogonal Frequency Division Multiplexing (OFDM) for 802.11g/n; 2.4GHz BLE: GFSK (1Mbps and 2Mbps)
Hardware Version:	V1.0
Software Version:	V2.1
Antenna Type:	FPC Antenna
Antenna Gain:	0.47dBi
Description of the EUT:	The EUT was a Smart Camera. The Smart Camera has Wi-Fi and BLE function. We tested the Smart Camera and listed the worst data in this report. This report is only for Wi-Fi. According to the client's declaration, all models are identical except for different model name only for differentiate when sold in different regions. So model SC155-WQ3 was chosen to perform all the tests
Test sample no.:	SHA-854517-2 (RF Radiated and Conducted)

The sample's mentioned in this report is/are submitted/ supplied/ manufactured by client. The laboratory therefore assumes no responsibility for accuracy of information on the brand name, model number, origin of manufacture, consignment, antenna gain or any information supplied.



5 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2023 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators

All the test methods were according to KDB 558074 D01 15.247 Meas Guidance v05r02 Measurement Guidance and ANSI C63.10-2020.



6 Summary of Test Results

Technical Requirements						
FCC Part 15 Subpart C						
Test Condition		Pages	Test Site	Test Result		
				Pass	Fail	N/A
§15.207	Conducted emission AC power port	13-17	Site 1	☒	☐	☐
§15.247 (b) (3)	Conducted peak output power	18-19	Site 1	☒	☐	☐
§15.247(a)(1)	20dB bandwidth and 99% Occupied Bandwidth	---	---	☐	☐	☒
§15.247(a)(1)	Carrier frequency separation	---	---	☐	☐	☒
§15.247(a)(1)(iii)	Number of hopping frequencies	---	---	☐	☐	☒
§15.247(a)(1)(iii)	Dwell Time - Average Time of Occupancy	---	---	☐	☐	☒
§15.247(a)(2)	6dB bandwidth	Refer to clause 7	Site 1	☒	☐	☐
§15.247(e)	Power spectral density	20-24	Site 1	☒	☐	☐
§15.247(e)	Spurious RF conducted emissions	Refer to clause 7	Site 1	☒	☐	☐
§15.247(d)	Band edge	Refer to clause 7	Site 1	☒	☐	☐
§15.247(d) & §15.209 & §15.205	Spurious radiated emissions for transmitter	25-50	Site 1	☒	☐	☐
§15.203	Antenna requirement	See note 1		☒	☐	☐

Remark 1: N/A – Not Applicable.

Note 1: The EUT uses a FPC antenna, gain is 0.47dBi. In accordance to §15.203, It is considered sufficiently to comply with the provisions of this section.



7 General Remarks

Remarks

This report was based on the report 709502310205-00A for adding suppliers of charging IC, audio amplifier IC, PIR, antenna etc. (the antenna type remains unchanged, the original gain is changed from 0.48dBi to 0.47dBi) and only made minor adjustments to some non-RF circuits. The RF module TY004 has not made any changes, only gain of the antenna has become smaller than before.

So, in this test report only test data of "Conducted emission AC power port", "Conducted peak output power", "Power spectral density" and "Spurious radiated emissions for transmitter" were new data, other test data were quoted from report 709502310205-00A and the test data are still effective.

This submittal(s) (test report) is intended for FCC ID: 2BEWXSC155 complies with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C rules. This report is only for 2.4GHz Wi-Fi.

SUMMARY:

All tests according to the regulations cited on page 5 were

■ - Performed

□ - **Not** Performed

The Equipment under Test

■ - **Fulfills** the general approval requirements.

□ - **Does not** fulfill the general approval requirements.

Sample Received Date: September 29, 2024

Testing Start Date: October 8, 2024

Testing End Date: October 25, 2024

-TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

Reviewed by:

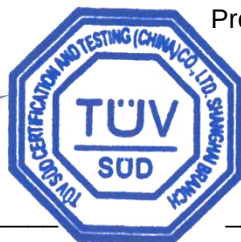
Hui TONG
Review Engineer

Prepared by:

Jiayi XU
Project Engineer

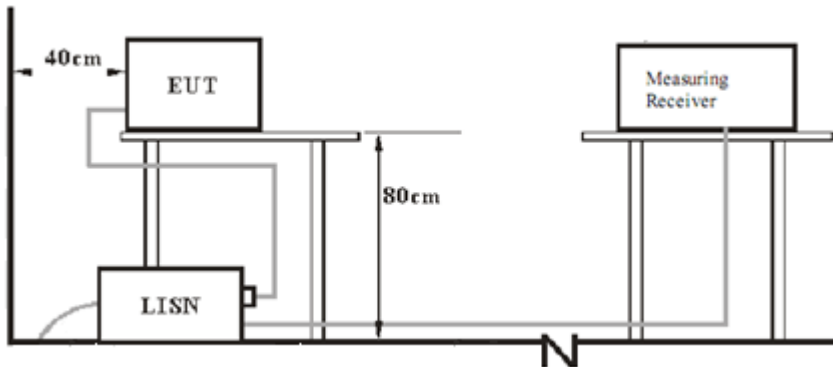
Tested by:

Chengjie GUO
Test Engineer



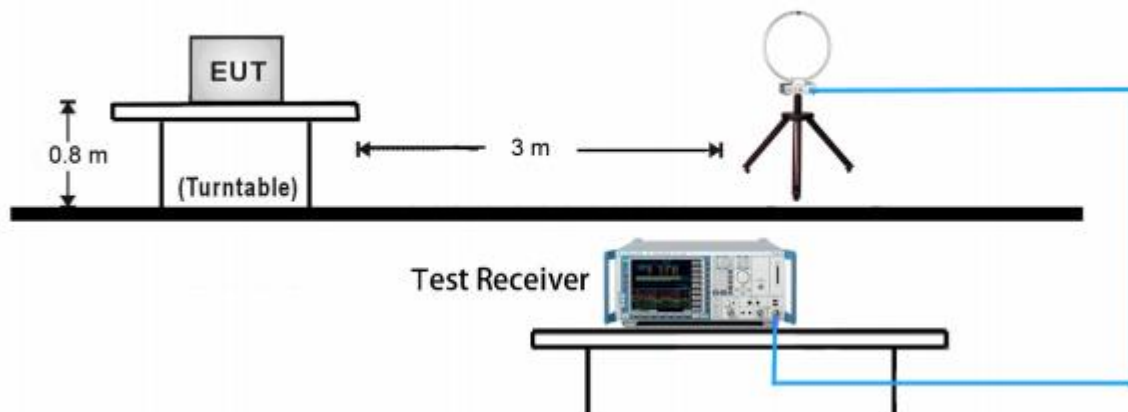
8 Test Setups

7.1 AC Power Line Conducted Emission test setups

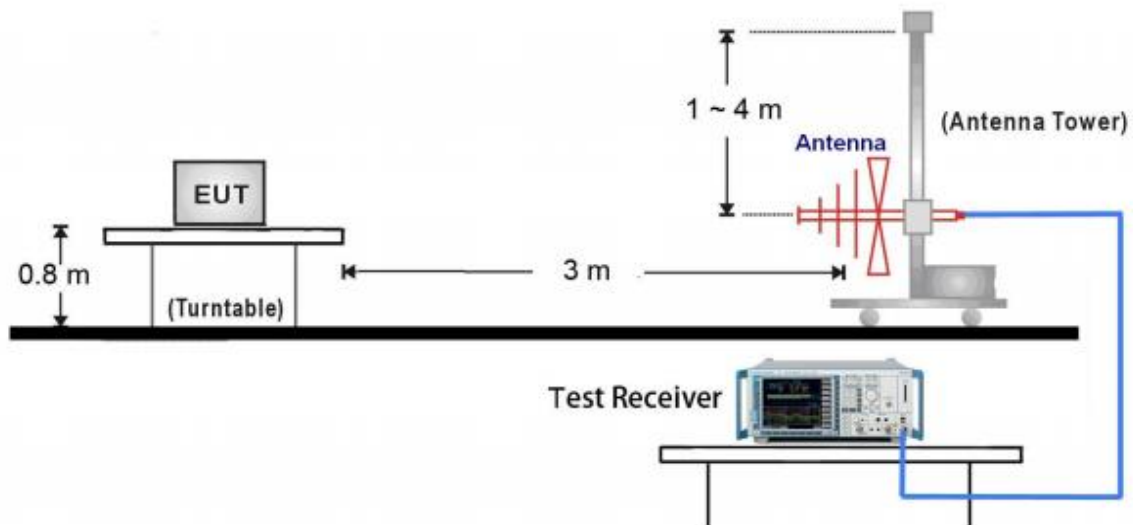


7.2 Radiated test setups

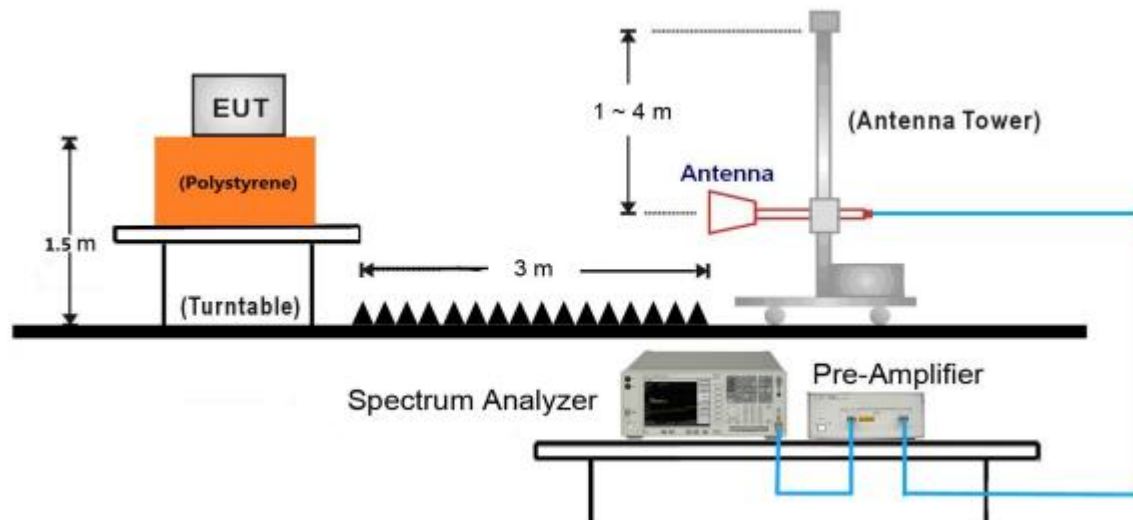
9kHz ~ 30MHz Test Setup:



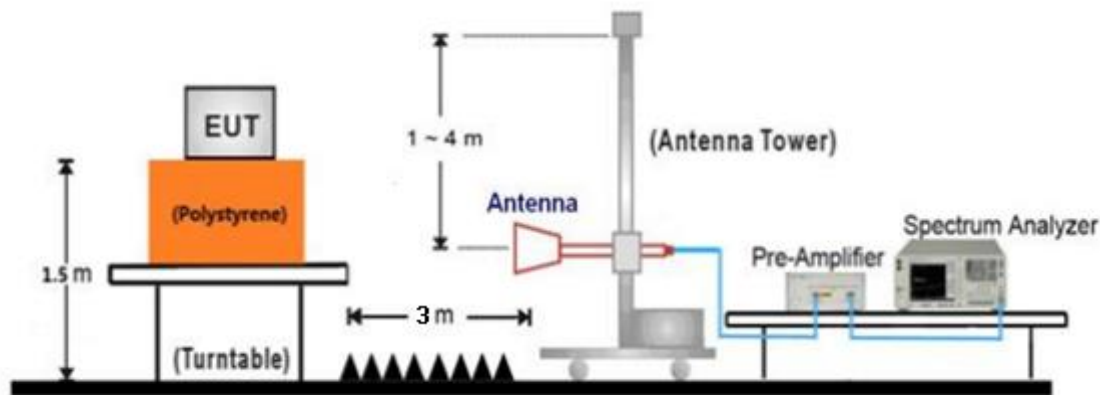
30MHz ~ 1GHz Test Setup:



1GHz ~ 18GHz Test Setup:

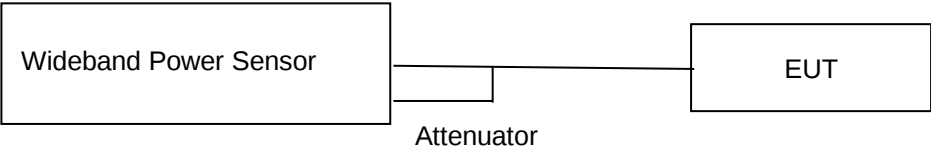


18GHz ~ 25GHz Test Setup:

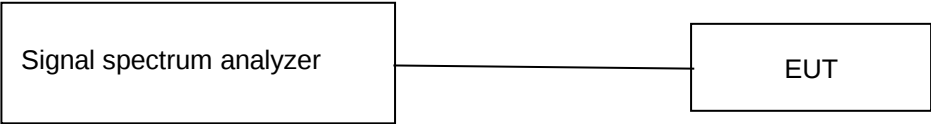


7.3 Conducted RF test setups

For Conducted peak output power



For other test items



9 Systems test configuration

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
Notebook	Lenovo	E470	PF-OU5TS7 17/09
AC/DC adapter	MLF	MLF-A260502000UU	--

Test software: AmebaD_mptool_2V1, which used to control the EUT in continues transmitting mode

The system was configured to channel 1(2412MHz), 6(2437MHz), and 11(2462MHz) for 802.11 b/g/n HT20 test and channel 3(2422MHz), 6(2437MHz), 9(2452MHz) for 802.11n (HT40).

Test Mode Applicability and Tested Channel Detail:

Mode	Tested Channel	Data Rate (Mbps)	Modulation	Index Value (Power level setting)
802.11b	1	1	CCK	95
	6	1	CCK	95
	11	1	CCK	95
802.11g	1	6	OFDM	85
	6	6	OFDM	85
	11	6	OFDM	85
802.11n HT20	1	MCS0	OFDM	80
	6	MCS0	OFDM	80
	11	MCS0	OFDM	80
802.11n HT40	1	MCS0	OFDM	75
	6	MCS0	OFDM	75
	11	MCS0	OFDM	75

Non-hopping mode: The system was configured to operate at a signal channel transmitting. The test software allows the configuration and operation at the worst-case duty and the highest transmit power.



10 Technical Requirement

10.1 Conducted Emission

Test Method

1. The EUT was placed on a table, which is 0.8m above ground plane
2. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
3. Maximum procedure was performed to ensure EUT compliance
4. A EMI test receiver is used to test the emissions from both sides of AC line

Limit

According to §15.207, conducted emissions limit as below:

Frequency MHz	QP Limit dB μ V	AV Limit dB μ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

Decreasing linearly with logarithm of the frequency



150k-30MHz Conducted Emission Test

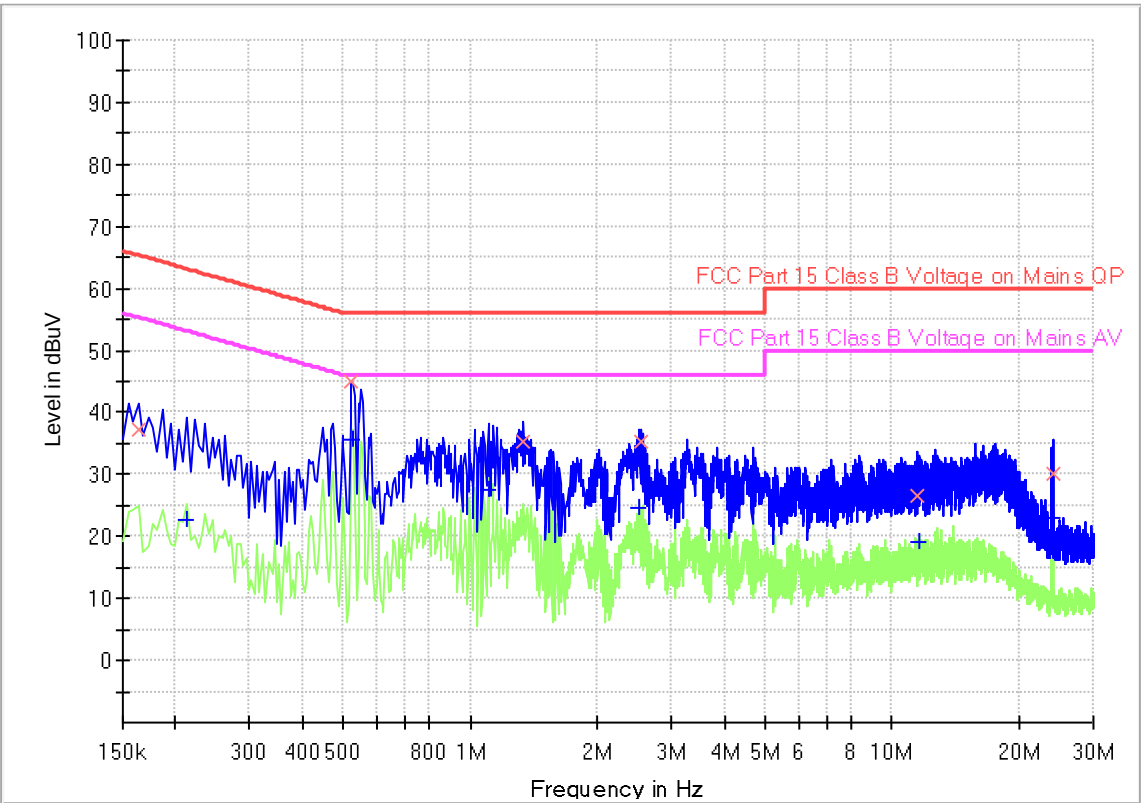
EUT Information

EUT Name:	Smart Camera
Model	SC155-WQ3
Client:	Zhejiang Lingzhu Technology Co., Ltd
Op Cond	Charging and power on,TX at 802.11 g mode_2412MHz
Operator:	Guo Chengjie
Standard	FCC Part 15.207(a)
Comment:	Phase L
Sample No.:	SHA-854517-2

Scan Setup: Voltage with 2-Line-LISN pre [EMI conducted]

Hardware Setup:	Voltage with 2-Line-LISN
Receiver:	[ESR 3]
Level Unit:	dBuV

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0.02 s	0 dB
150 kHz - 30 MHz	4.5 kHz	PK+; AVG	9 kHz	0.01 s	0 dB





Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.163500	37.10	---	65.28	28.18	1000.0	9.000	L1	19.4
0.213000	---	22.64	53.09	30.45	1000.0	9.000	L1	19.4
0.523500	45.04	---	56.00	10.96	1000.0	9.000	L1	19.4
0.528000	---	35.68	46.00	10.32	1000.0	9.000	L1	19.4
1.104000	---	27.43	46.00	18.57	1000.0	9.000	L1	19.5
1.338000	35.37	---	56.00	20.63	1000.0	9.000	L1	19.5
2.517000	---	24.51	46.00	21.49	1000.0	9.000	L1	19.5
2.544000	35.27	---	56.00	20.73	1000.0	9.000	L1	19.5
11.508000	26.46	---	60.00	33.54	1000.0	9.000	L1	19.9
11.598000	---	19.09	50.00	30.91	1000.0	9.000	L1	19.9
24.004500	---	23.16	50.00	26.84	1000.0	9.000	L1	20.9
24.004500	30.15	---	60.00	29.85	1000.0	9.000	L1	20.9



150k-30MHz Conducted Emission Test

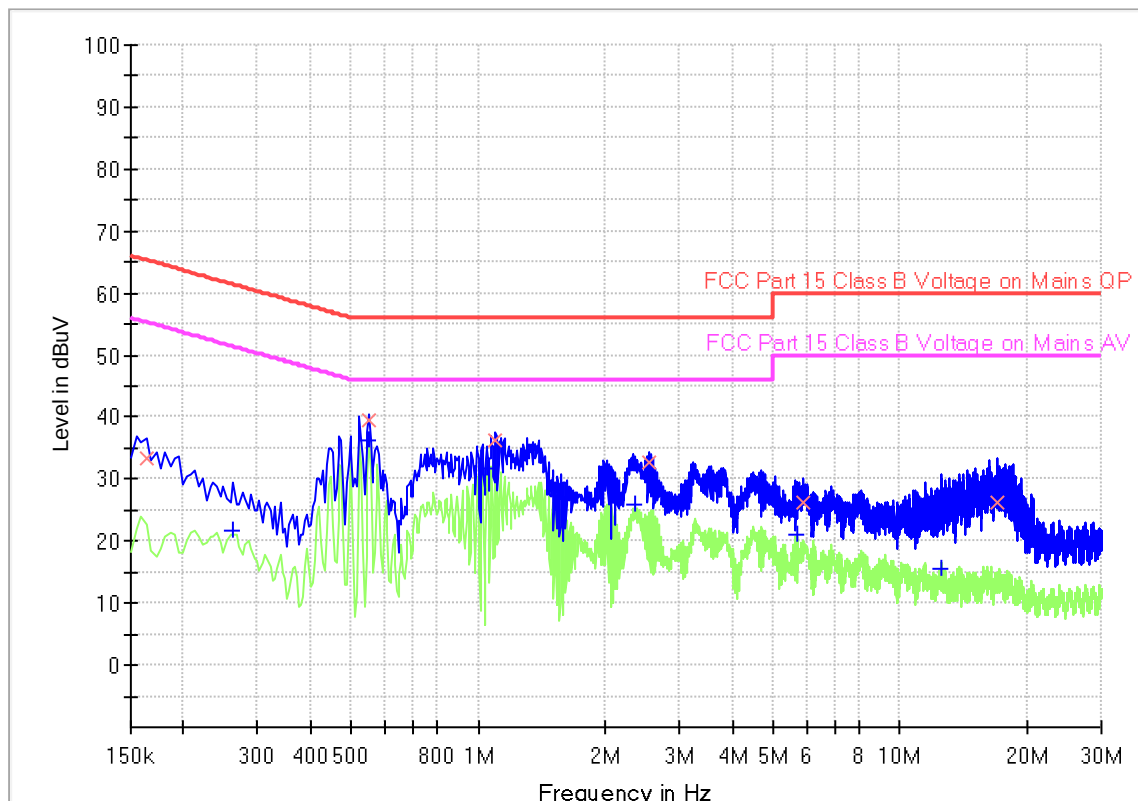
EUT Information

EUT Name: Smart Camera
 Model: SC155-WQ3
 Client: Zhejiang Lingzhu Technology Co., Ltd
 Op Cond: Charging and power on, TX at 802.11 g mode_2412MHz
 Operator: Guo Chengjie
 Standard: FCC Part 15.207(a)
 Comment: Phase N
 Sample No.: SHA-854517-2

Scan Setup: Voltage with 2-Line-LISN pre [EMI conducted]

Hardware Setup: Voltage with 2-Line-LISN
 Receiver: [ESR 3]
 Level Unit: dBuV

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0.02 s	0 dB
150 kHz - 30 MHz	4.5 kHz	PK+; AVG	9 kHz	0.01 s	0 dB





Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.163500	33.29	---	65.28	31.99	1000.0	9.000	N	19.4
0.262500	---	21.58	51.35	29.77	1000.0	9.000	N	19.5
0.550500	---	36.30	46.00	9.70	1000.0	9.000	N	19.5
0.550500	39.56	---	56.00	16.44	1000.0	9.000	N	19.5
1.050000	---	31.83	46.00	14.17	1000.0	9.000	N	19.5
1.099500	36.29	---	56.00	19.71	1000.0	9.000	N	19.5
2.355000	---	25.85	46.00	20.15	1000.0	9.000	N	19.5
2.535000	32.79	---	56.00	23.21	1000.0	9.000	N	19.5
5.676000	---	21.13	50.00	28.87	1000.0	9.000	N	19.6
5.883000	26.37	---	60.00	33.63	1000.0	9.000	N	19.6
12.556500	---	15.56	50.00	34.44	1000.0	9.000	N	19.8
16.966500	26.33	---	60.00	33.67	1000.0	9.000	N	20.0

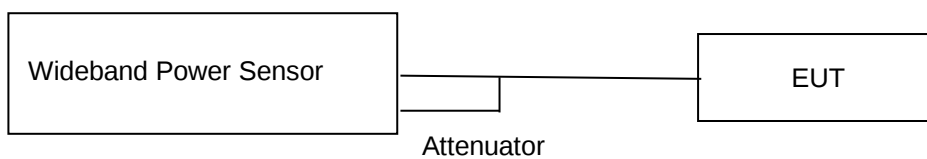
Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB) + 10dB Attenuator

10.2 Conducted peak output power

Test Method

- 1) The EUT is configured to transmit continuously, or to transmit with a constant duty cycle.
- 2) At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
- 3) The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
- 4) Measure the peak power of the transmitter. This measurement is a peak over both the ON and OFF periods of the transmitter.



Wideband Power Sensor conducted test setup

Limits

According to §15.247 (b) (1), conducted peak output power limit as below:

	Frequency Range	Limit	Limit
	MHz	W	dBm
Conducted peak output power	2400-2483.5	≤1	≤30



Test result

802.11b

Frequency (MHz)	Conducted Peak Output Power(dBm)	Result
Low channel 2412MHz	18.85	Pass
Middle channel 2437MHz	18.95	Pass
High channel 2462MHz	19.02	Pass

802.11g

Frequency (MHz)	Conducted Peak Output Power(dBm)	Result
Low channel 2412MHz	24.77	Pass
Middle channel 2437MHz	24.47	Pass
High channel 2462MHz	24.41	Pass

802.11n(HT20)

Frequency (MHz)	Conducted Peak Output Power(dBm)	Result
Low channel 2412MHz	24.68	Pass
Middle channel 2437MHz	24.06	Pass
High channel 2462MHz	24.18	Pass

802.11n(HT40)

Frequency (MHz)	Conducted Peak Output Power(dBm)	Result
Low channel 2422MHz	22.37	Pass
Middle channel 2437MHz	22.12	Pass
High channel 2452MHz	22.45	Pass



10.3 Power spectral density

Test Method

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance:

1. The RF output of EUT was connected to the spectrum analyzer. 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:
4. Set analyzer center frequency to DTS channel center frequency. RBW=3kHz, VBW $\geq$ 3RBW, Span=1.5 times DTS bandwidth, Detector=Peak, Sweep=auto, Trace= max hold.
5. Allow trace to fully stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.
6. Repeat above procedures until other frequencies measured were completed.

Limit

Limit [dBm/3KHz]
 ≤ 8

Test result

802.11 B

Frequency MHz	Power spectral density dBm/3kHz	Result
Low channel 2412MHz	-7.61	Pass
Middle channel 2437MHz	-6.91	Pass
High channel 2462MHz	-7.32	Pass

802.11 G

Frequency MHz	Power spectral density dBm/3kHz	Result
Low channel 2412MHz	-10.7	Pass
Middle channel 2437MHz	-11.77	Pass
High channel 2462MHz	-10.48	Pass

802.11 N20

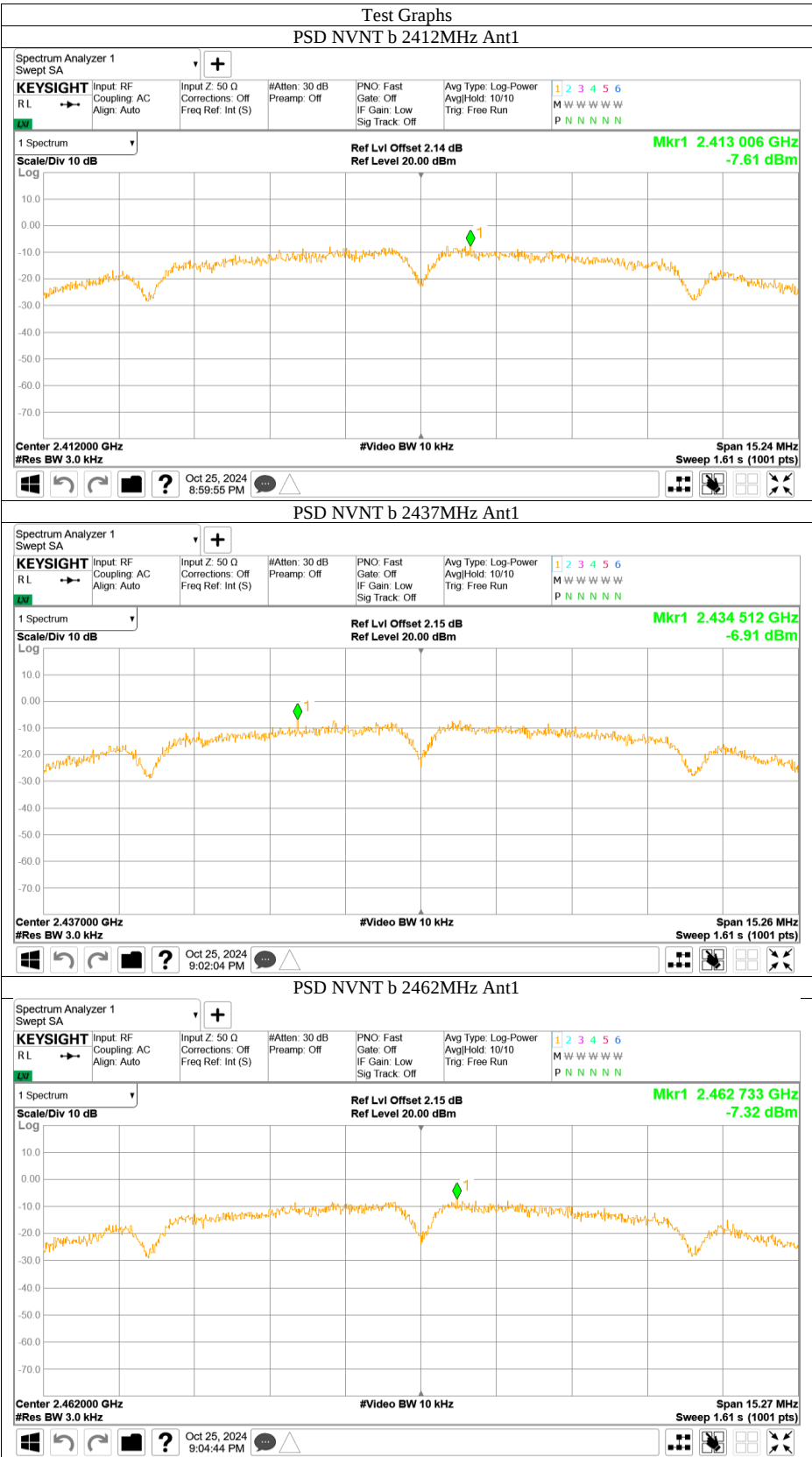
Frequency MHz	Power spectral density dBm/3kHz	Result
Low channel 2412MHz	-12.4	Pass
Middle channel 2437MHz	-11.23	Pass
High channel 2462MHz	-12.92	Pass

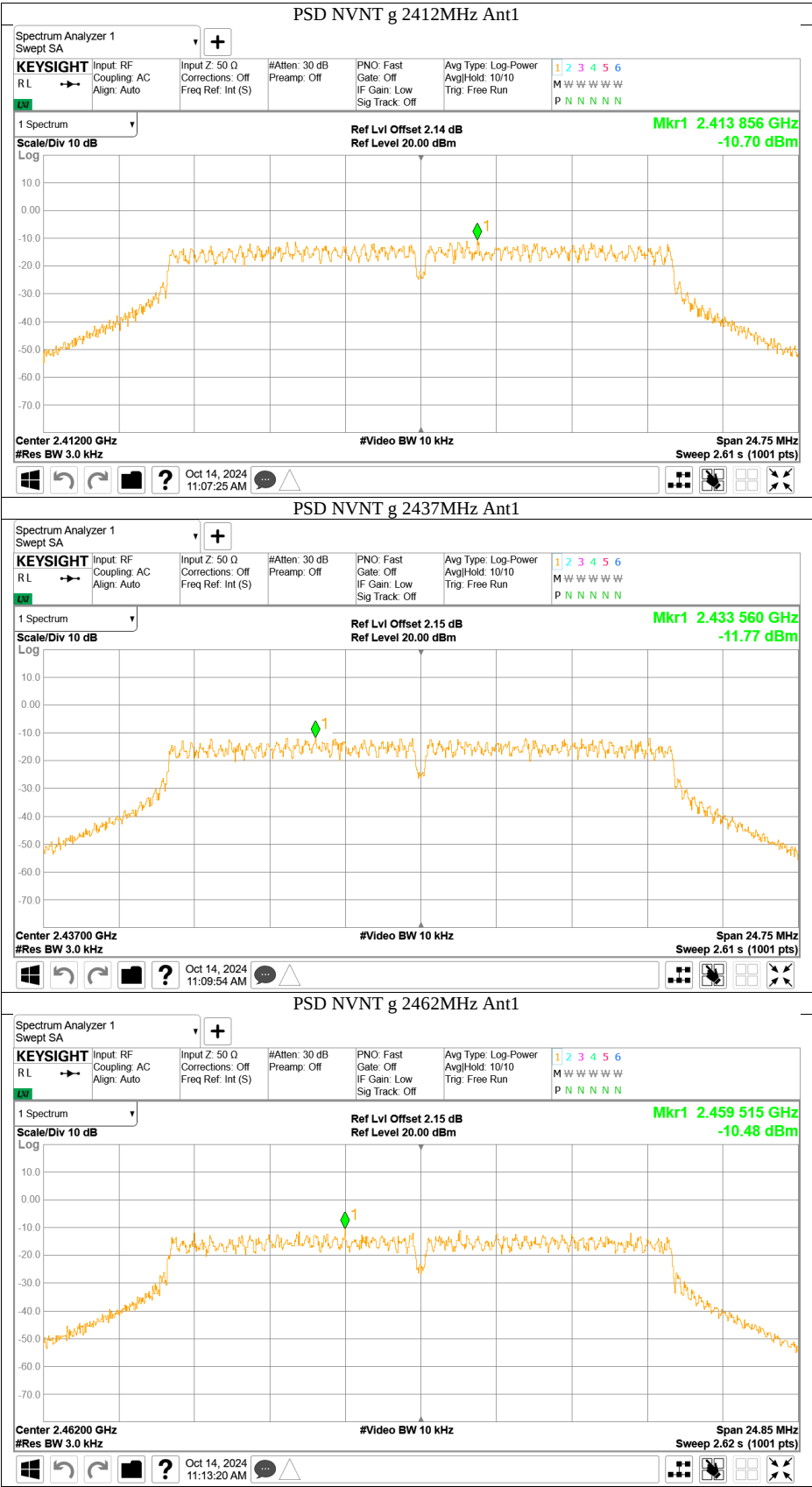
802.11 N40

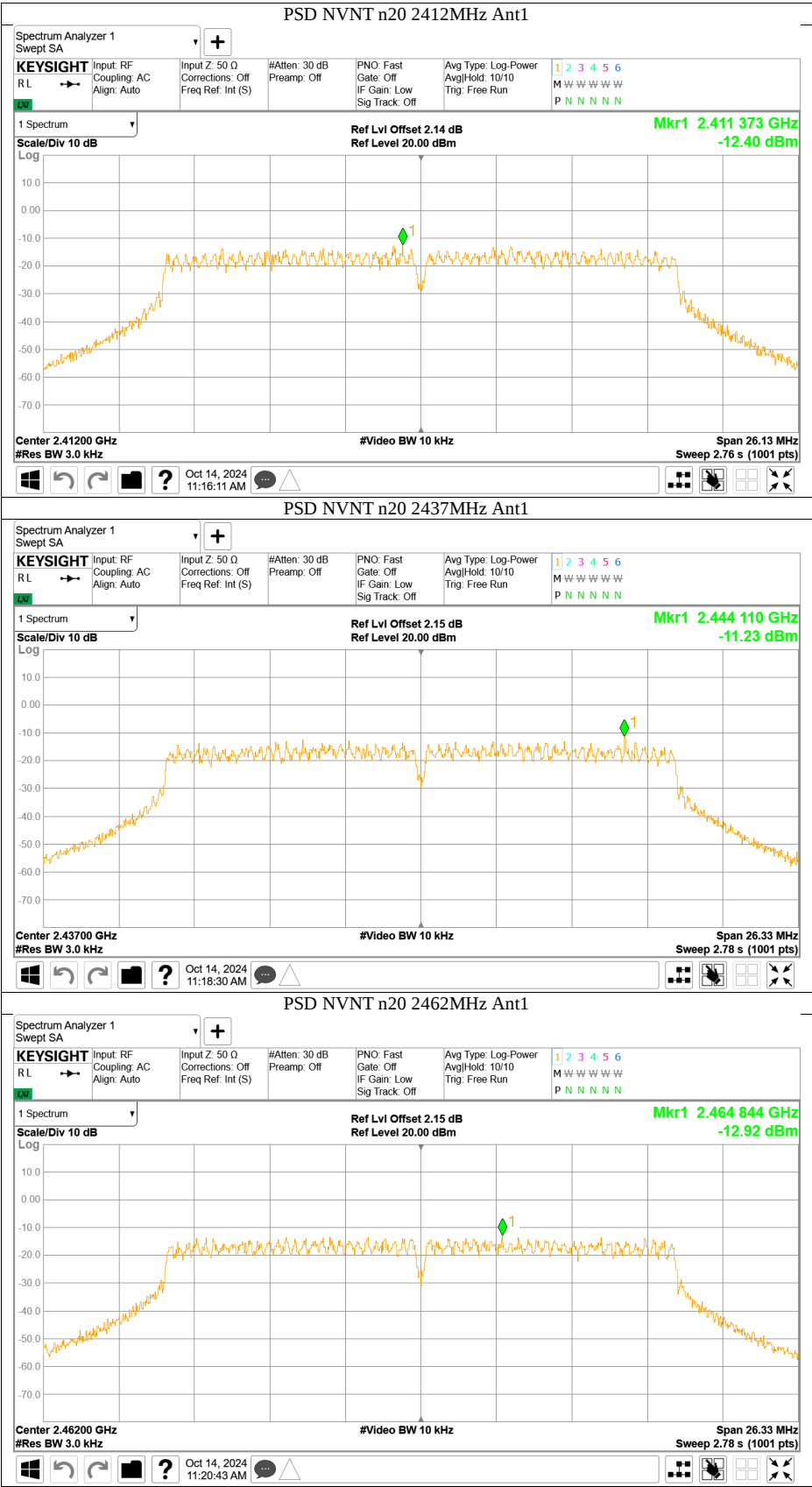
Frequency MHz	Power spectral density dBm/3kHz	Result
Low channel 2422MHz	-14.93	Pass
Middle channel 2437MHz	-17.18	Pass
High channel 2452MHz	-16.56	Pass

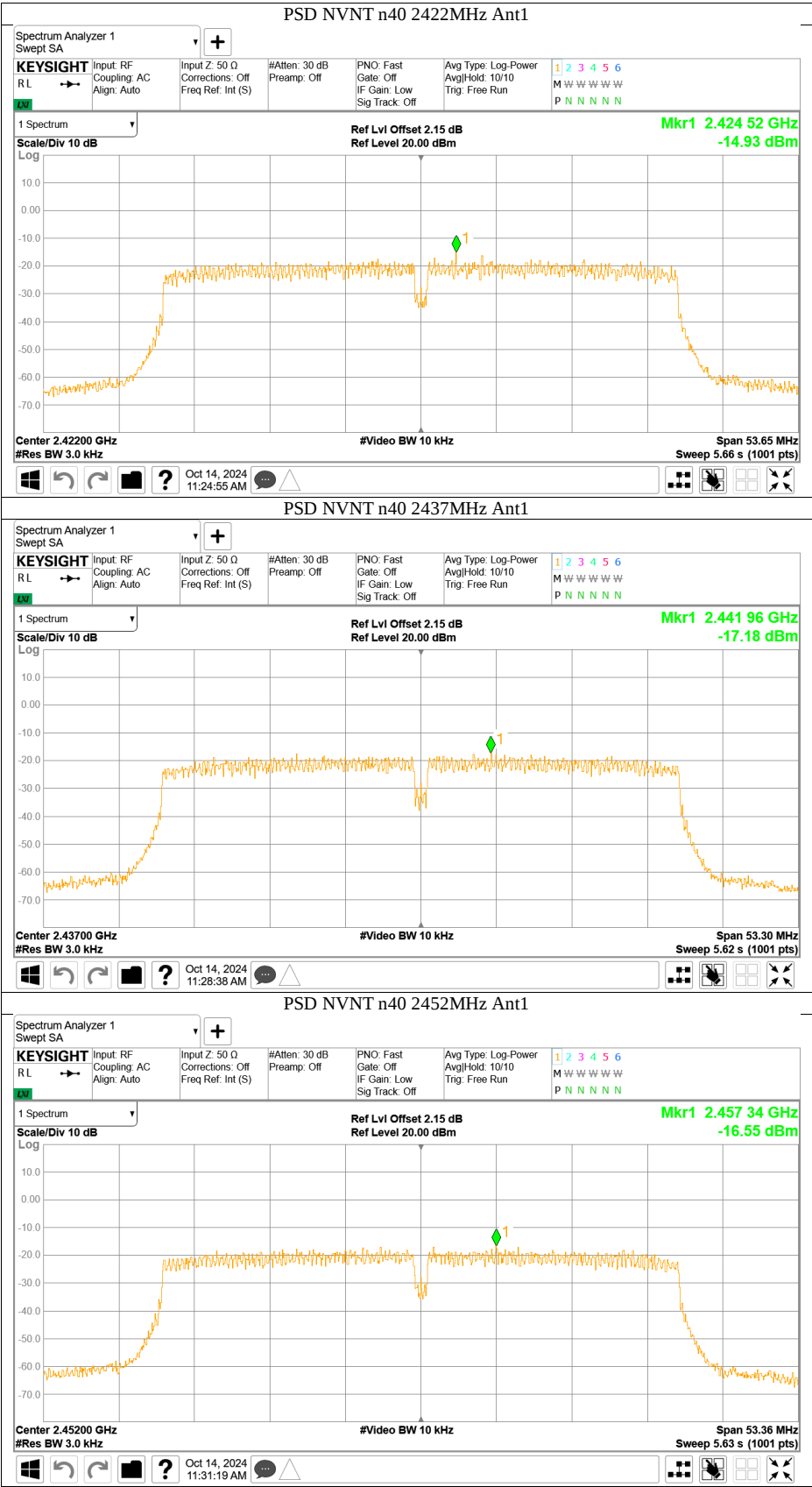


Power Spectral Density Level









10.4 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 = AV (power averaging), if $[span / (\# \text{ of points in sweep})] \setminus RBW / 2$. 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., AV) (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 (AV) 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 AV 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).

Frequency MHz	Field Strength $\mu\text{V/m}$	Field Strength $\text{dB}\mu\text{V/m}$	Detector	Measurement distance meters
0.009-0.490	2400/F(kHz)	48.5-13.8	AV	300
0.490-1.705	24000/F(kHz)	33.8-23.0	QP	30
1.705-30	30	29.5	QP	30
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

Note 1: Limit $3\text{m}(\text{dB}\mu\text{V/m}) = \text{Limit } 300\text{m}(\text{dB}\mu\text{V/m}) + 40\text{Log}(300\text{m}/3\text{m})$ (Below 30MHz)

Note 2: Limit $3\text{m}(\text{dB}\mu\text{V/m}) = \text{Limit } 30\text{m}(\text{dB}\mu\text{V/m}) + 40\text{Log}(30\text{m}/3\text{m})$ (Below 30MHz)

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.

Data of measurement within frequency range 9kHz-30MHz is the noise floor or attenuated more than 20dB below the permissible limits or the field strength is too small to be measured, so test data does not present in this report.



Test result

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

30-1000MHz Radiated Emission

EUT Information

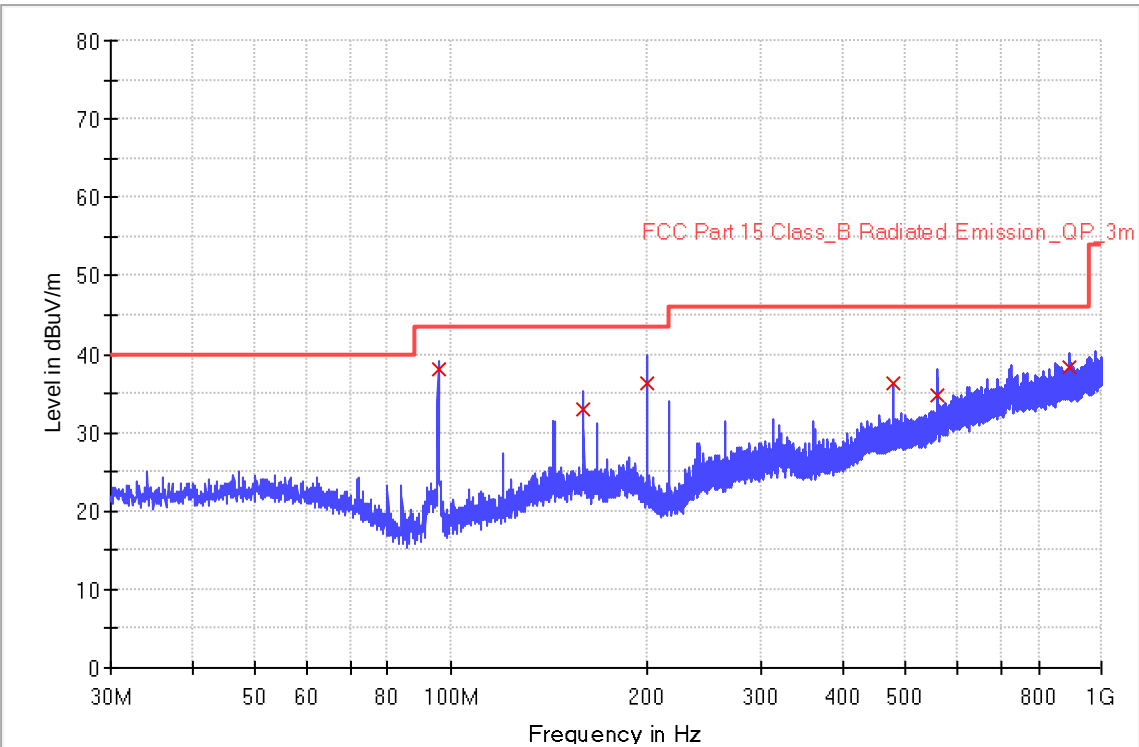
EUT Name:	Smart Camera
Model:	SC155-WQ3
Client:	Zhejiang Lingzhu Technology Co., Ltd
Op Cond:	Power on and TX at 802.11 g mode_2412MHz
Operator:	Guo Chengjie
Test Spec:	FCC Part 15.209(a)
Comment:	Horizontal
Sample No:	SHA-854517-2

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)
95.800000	38.2	1000.0	120.000	132.0	H	113.0	15.6	5.3
159.920000	32.9	1000.0	120.000	152.0	H	114.0	20.9	10.6
200.000000	36.4	1000.0	120.000	145.0	H	156.0	17.6	7.1
480.000000	36.4	1000.0	120.000	100.0	H	128.0	26.2	9.6
559.960000	34.7	1000.0	120.000	194.0	H	176.0	27.7	11.3
891.640000	38.2	1000.0	120.000	180.0	H	168.0	33.1	7.8

(continuation of the "Limit and Margin" table from column 16 ...)

Frequency (MHz)	Limit - QPK (dBuV/m)	Comment
95.800000	43.5	
159.920000	43.5	
200.000000	43.5	
480.000000	46.0	
559.960000	46.0	
891.640000	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

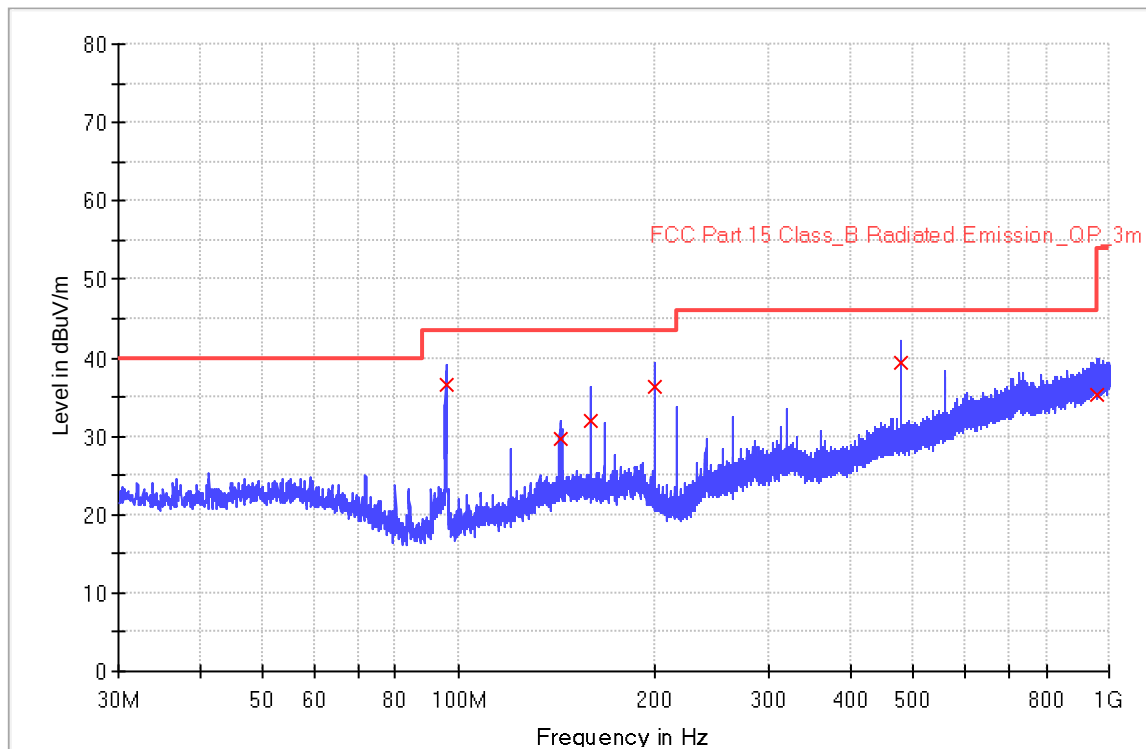
EUT Name: Smart Camera
Model: SC155-WQ3
Client: Zhejiang Lingzhu Technology Co., Ltd
Op Cond: Power on and TX at 802.11 g mode_2412MHz
Operator: Guo Chengjie
Test Spec: FCC Part 15.209(a)
Comment: Vertical
Sample No: SHA-854517-2

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)
96.040000	36.6	1000.0	120.000	100.0	V	135.0	15.7	6.9
143.680000	29.7	1000.0	120.000	126.0	V	157.0	20.6	13.8
159.920000	31.9	1000.0	120.000	153.0	V	196.0	20.9	11.6
200.000000	36.3	1000.0	120.000	172.0	V	240.0	17.6	7.2
480.000000	39.3	1000.0	120.000	150.0	V	268.0	26.2	6.7
957.640000	35.3	1000.0	120.000	155.0	V	215.0	34.1	10.7

(continuation of the "Limit and Margin" table from column 16 ...)

Frequency (MHz)	Limit - QPK (dBuV/m)	Comment
96.040000	43.5	
143.680000	43.5	
159.920000	43.5	
200.000000	43.5	
480.000000	46.0	
957.640000	46.0	

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

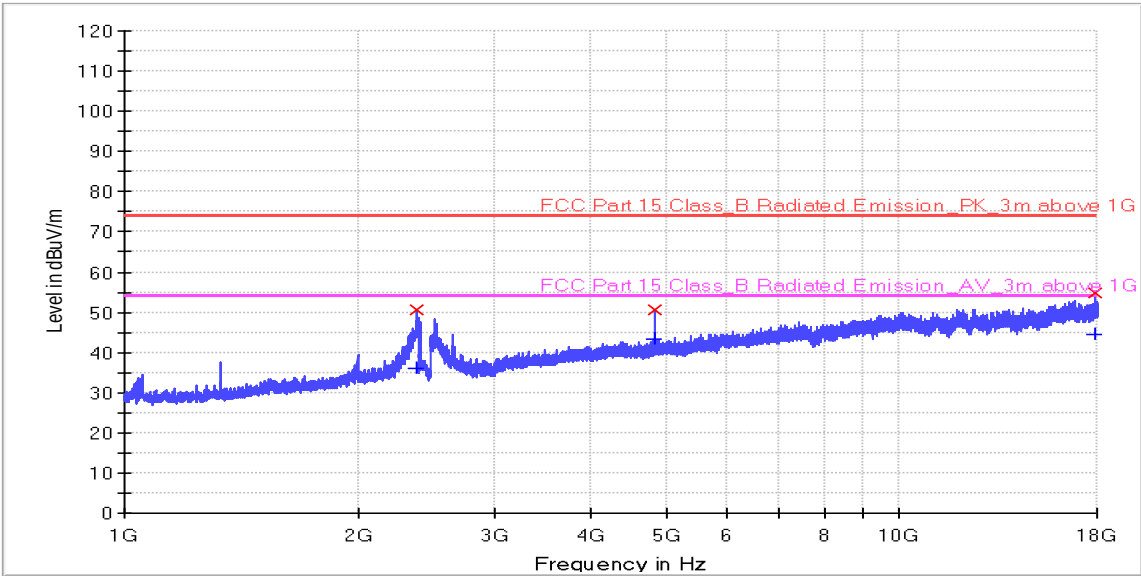
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



Radiated Emission 1-18 GHz

802.11B:2412MHz

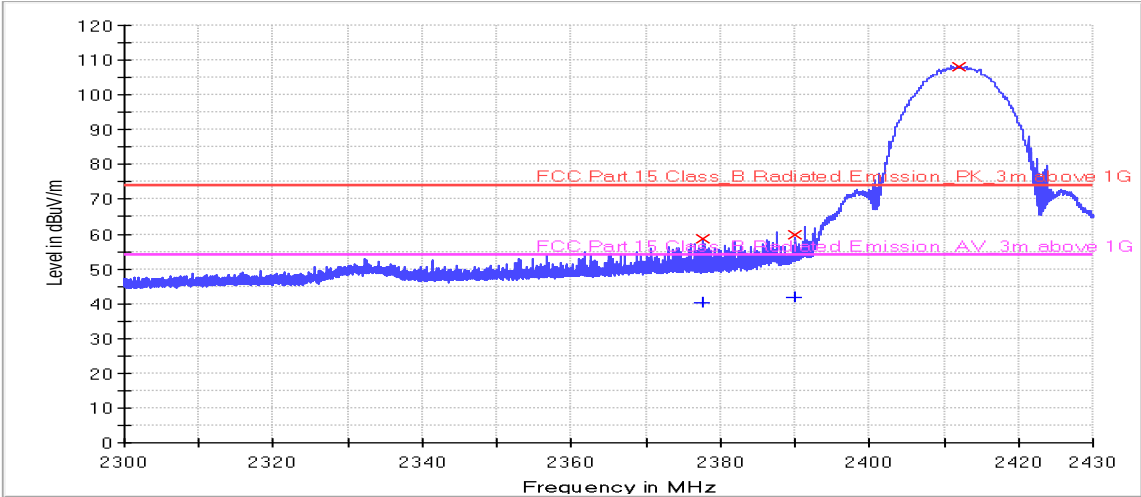
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2386.600000	50.4	36.1	1000.000	160	H	122.0	-5.3	23.6	74.0	17.9	54.0
4823.800000	50.5	43.4	1000.000	250	H	143.0	-2.2	23.5	74.0	10.6	54.0
17841.100000	54.7	44.4	1000.000	100	H	112.0	8.3	19.3	74.0	9.6	54.0

RE_HF907_BRF_Pre

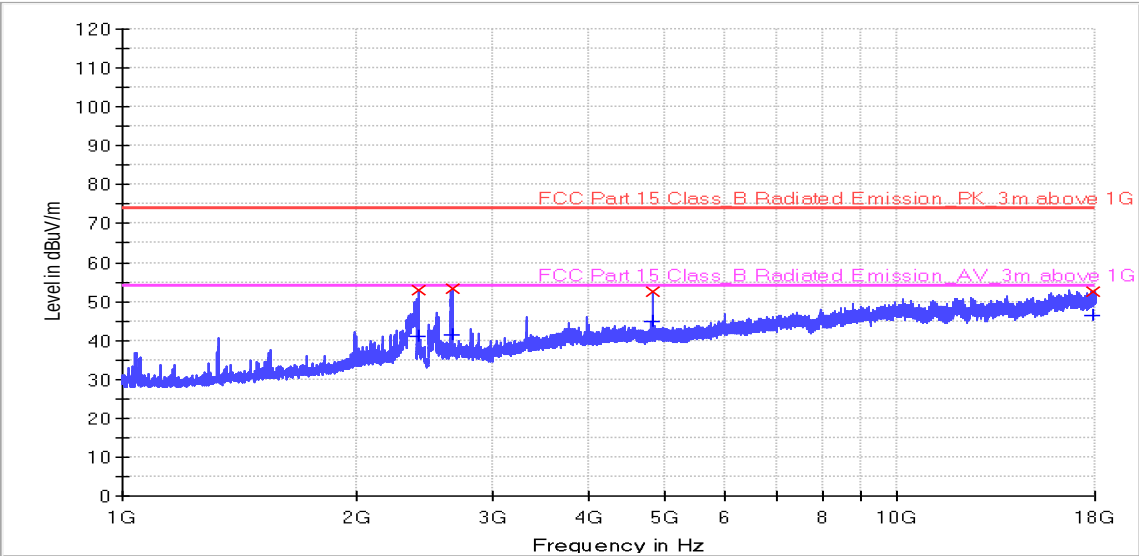


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2377.588000	58.6	40.3	1000.000	250	H	164.0	-0.8	15.4	74.0	13.7	54.0
2390.000000	59.7	41.7	1000.000	110	H	35.0	-0.8	14.3	74.0	12.4	54.0
2412.000000	108.1	---	1000.000	140	H	129.0	-0.7	-34.1	74.0	---	---



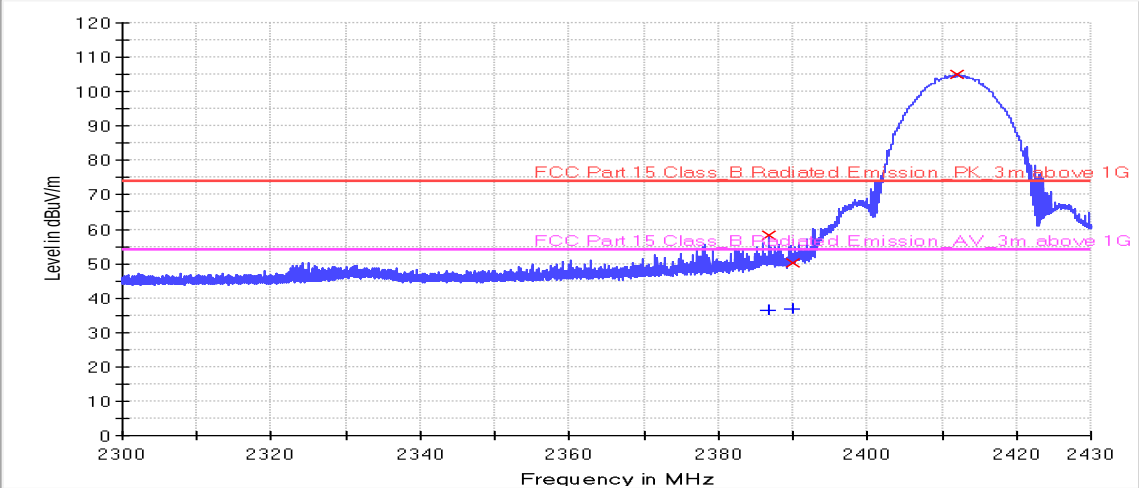
RE_HF 907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2410.900000	53.0	41.1	1000.000	170	V	145.0	-6.2	21.0	74.0	12.9	54.0
2661.100000	53.2	41.2	1000.000	144	V	134.0	-9.5	20.8	74.0	12.8	54.0
4823.800000	52.6	45.0	1000.000	243	V	114.0	-2.2	21.4	74.0	9.0	54.0
17937.700000	52.7	46.4	1000.000	259	V	175.0	8.4	21.3	74.0	7.7	54.0

RE_HF 907_BRF_Pre



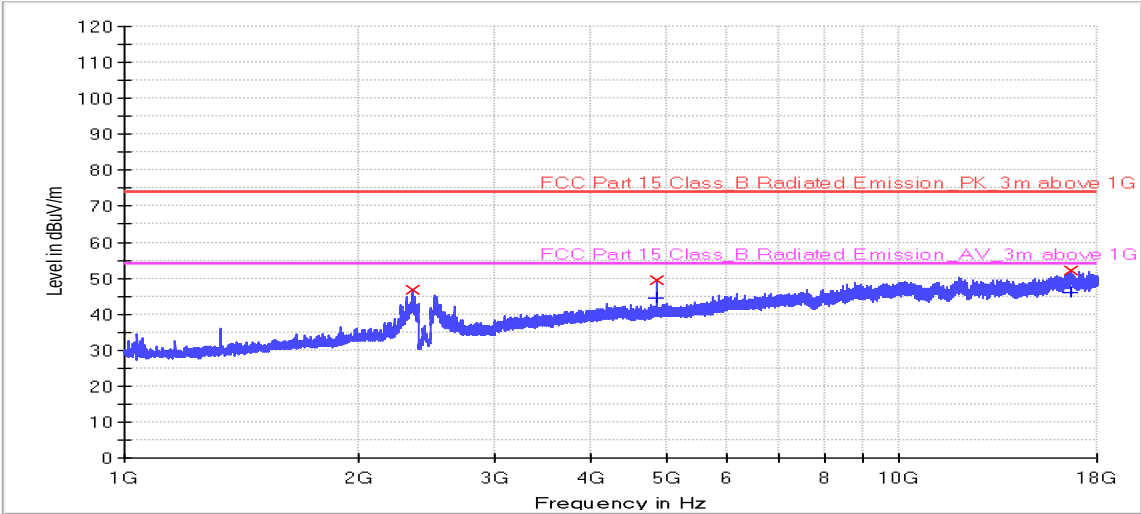
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AV (dB)	Limit - AV (dBuV/)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)
2386.655800	58.2	36.4	1000.000	175	V	243.0	-0.8	17.6	54.0	15.8	74.0
2390.000000	50.4	36.7	1000.000	284	V	135.0	-0.8	17.4	54.0	23.6	74.0
2412.000000	105.0	---	1000.000	300	V	247.0	-0.7	---	---	-31.0	74.0



802.11B:2437MHz

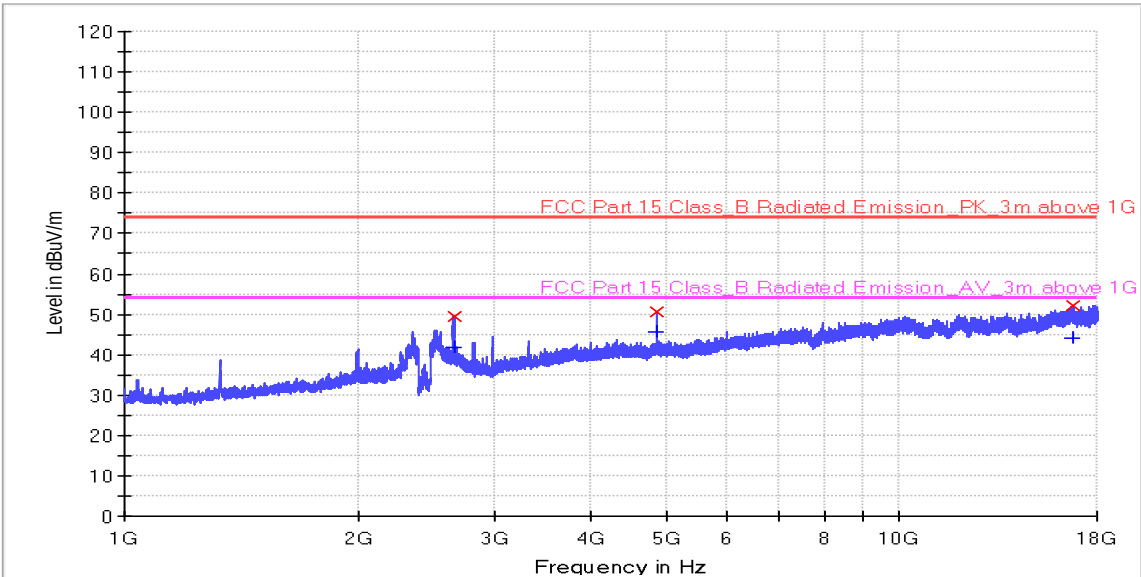
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2357.800000	46.6	---	1000.000	215	H	115.0	-10.9	27.4	74.0	---	---
4873.900000	49.4	44.4	1000.000	193	H	168.0	-2.5	24.6	74.0	9.6	54.0
16695.100000	52.2	46.0	1000.000	219	H	205.0	7.2	21.8	74.0	8.0	54.0

RE_HF907_BRF_Pre



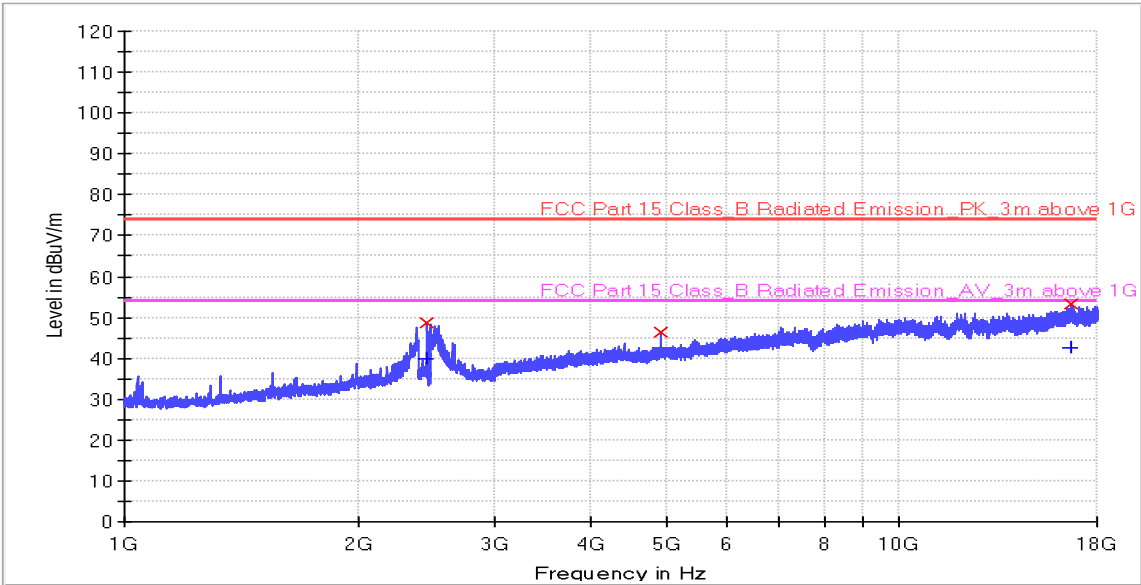
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - AV	Limit - PK+	Margin - AV	Limit - AV
2660.200000	49.6	41.8	1000.000	160	V	115.0	-9.6	24.4	74.0	12.3	54.0
4873.900000	50.5	45.5	1000.000	138	V	128.0	-2.5	23.5	74.0	8.5	54.0
16711.600000	52.2	43.9	1000.000	211	V	139.0	7.2	21.8	74.0	10.1	54.0



802.11B:2462MHz

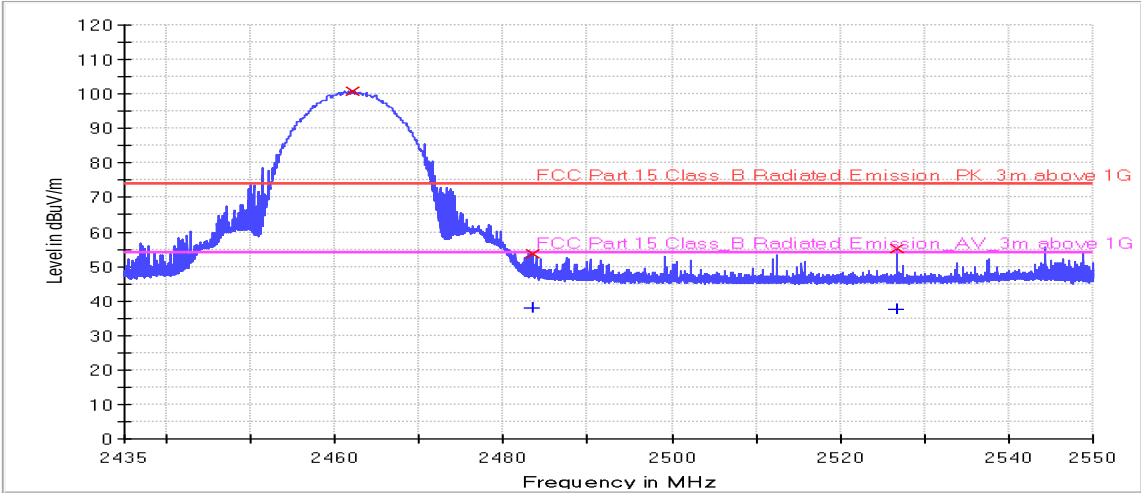
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2460.400000	48.8	39.7	1000.000	295	H	133.0	-7.5	25.2	74.0	14.3	54.0
4923.700000	46.4	---	1000.000	230	H	132.0	-1.9	27.6	74.0	---	---
16672.300000	53.4	42.7	1000.000	243	H	121.0	7.7	20.6	74.0	11.3	54.0

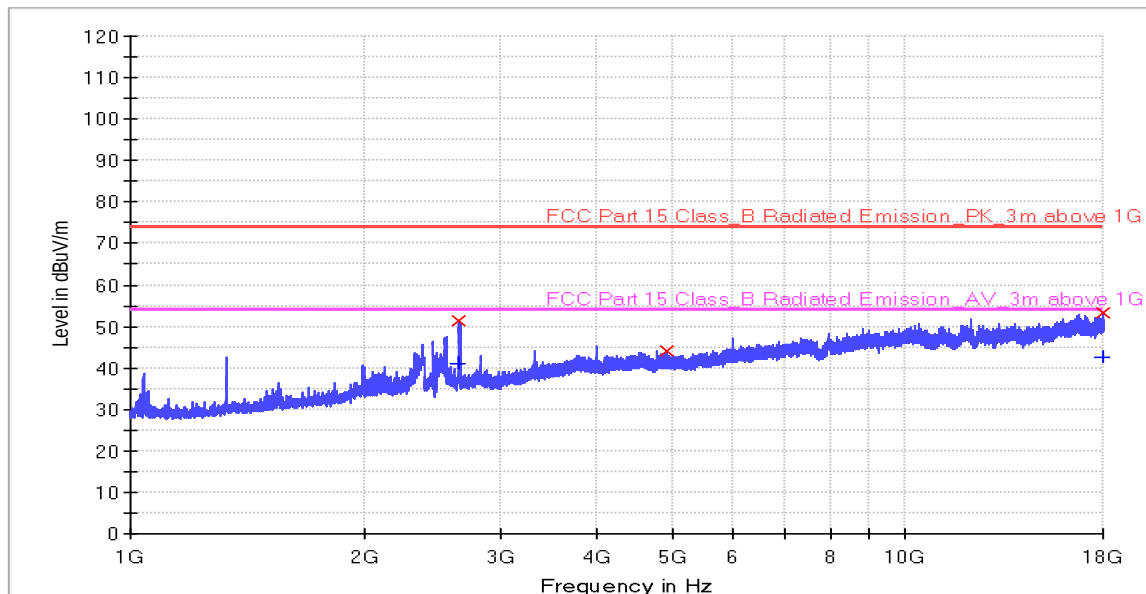
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/	Margin - AV (dB)	Limit - AV (dBuV/
2462.000000	100.7	---	1000.000	224	V	18.0	-0.4	-26.7	74.0	---	---
2483.500000	53.6	38.1	1000.000	168	V	164.0	-0.3	20.4	74.0	15.9	54.0
2526.700000	55.3	37.6	1000.000	248	V	275.0	0.0	18.7	74.0	16.4	54.0

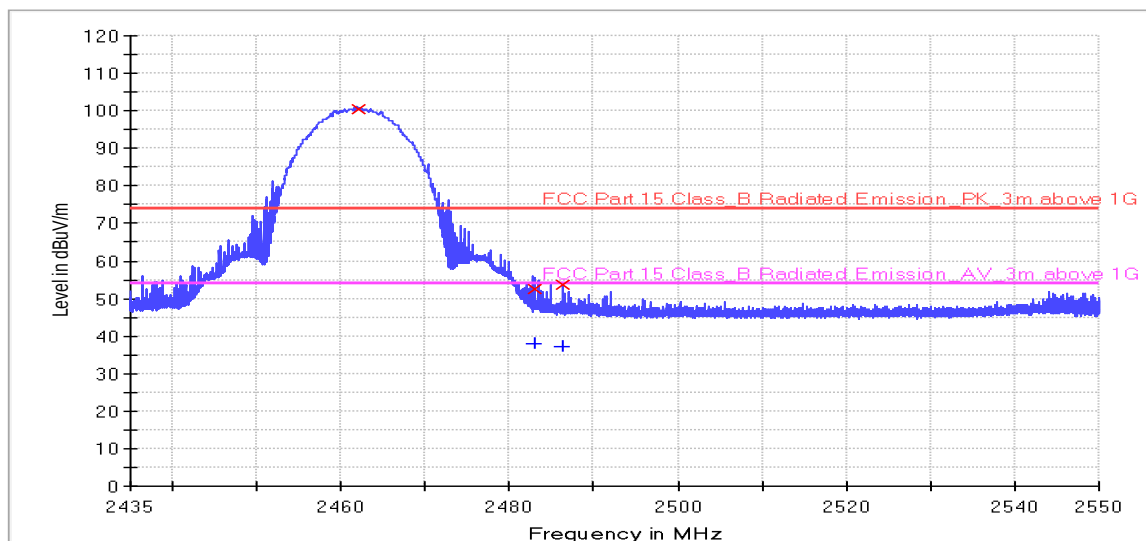
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2656.000000	51.3	41.2	1000.000	225	V	122.0	-9.5	22.7	74.0	12.8	54.0
4924.000000	44.0	---	1000.000	161	V	142.0	-2.5	30.0	74.0	---	---
17982.400000	53.1	42.7	1000.000	192	V	122.0	8.5	20.9	74.0	11.3	54.0

RE_HF907_BRF_Pre



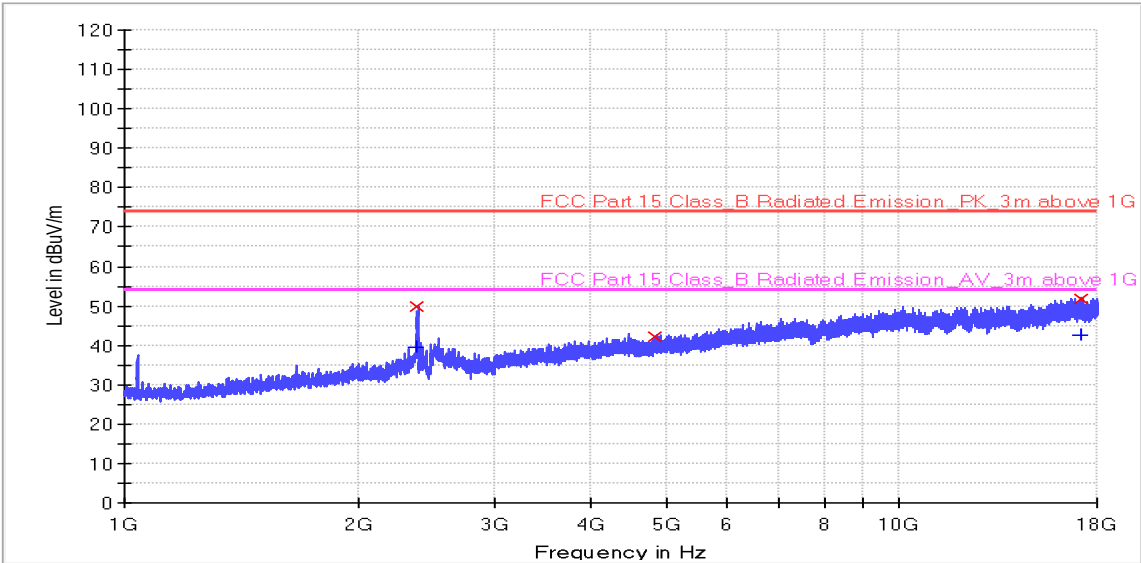
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV)	Margin - AV (dB)	Limit - AV (dBuV)
2462.000000	100.6	---	1000.000	194	V	166.0	-0.4	-26.6	74.0	---	---
2483.500000	52.7	37.9	1000.000	143	V	309.0	-0.3	21.3	74.0	16.2	54.0
2486.260000	53.5	37.3	1000.000	176	V	216.0	-0.3	20.5	74.0	16.7	54.0



802.11G:2412MHz

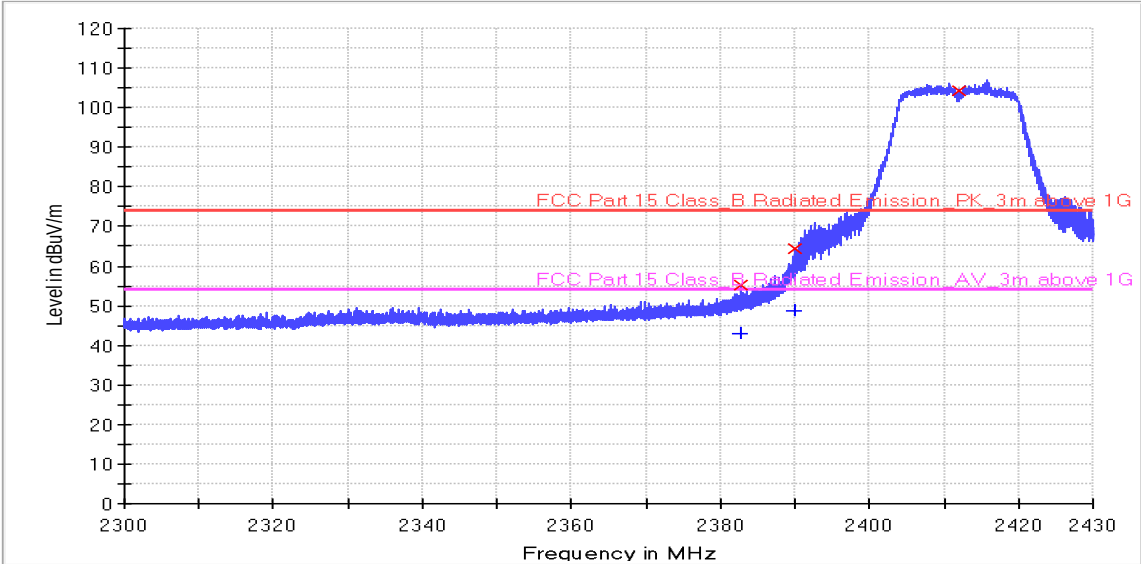
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2389.900000	49.9	39.4	1000.000	297	H	0.0	-5.6	24.1	74.0	14.6	54.0
4824.000000	42.3	---	1000.000	156	H	125.0	-3.1	31.7	74.0	---	---
17134.600000	51.7	42.7	1000.000	195	H	187.0	7.9	22.3	74.0	11.4	54.0

RE_HF907_BRF_Pre

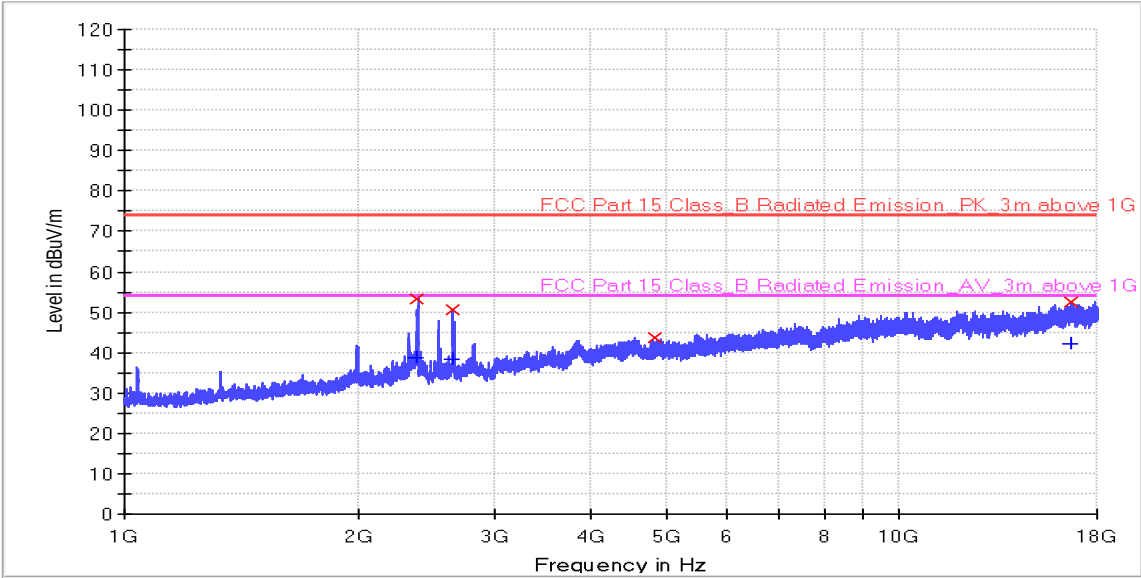


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV)	Margin - AV (dB)	Limit - AV (dBuV)
2382.636670	55.2	43.0	1000.000	135	H	138.0	-0.8	18.8	74.0	11.0	54.0
2390.000000	64.5	48.8	1000.000	247	H	155.0	-0.8	9.5	74.0	5.2	54.0
2412.000000	104.2	---	1000.000	280	H	124.0	-0.7	-30.2	74.0	---	---



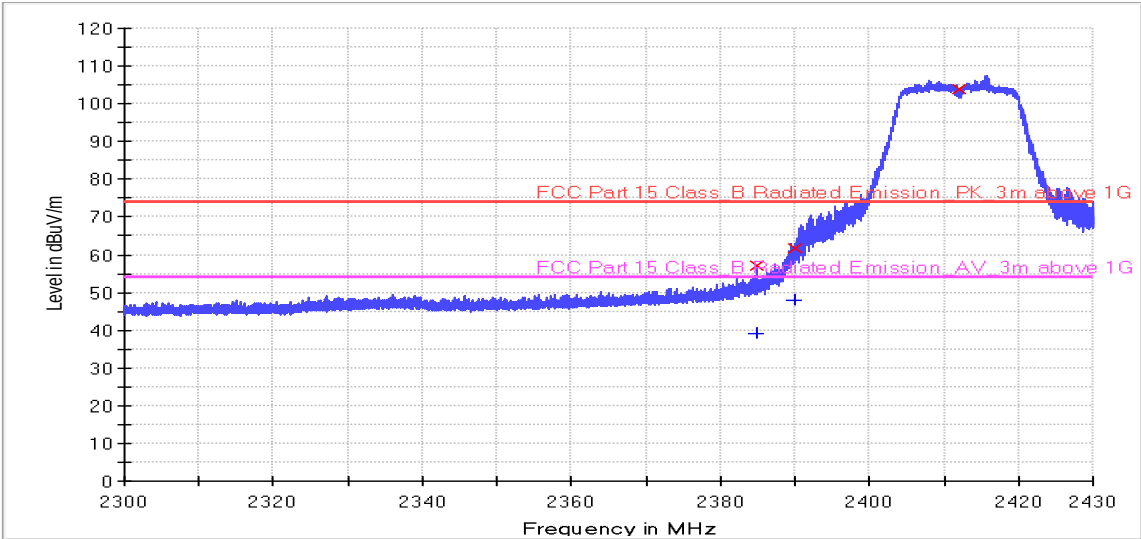
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2389.400000	53.5	38.8	1000.000	105	V	211.0	-5.6	20.5	74.0	15.2	54.0
2656.300000	50.6	38.4	1000.000	239	V	164.0	-9.5	23.4	74.0	15.6	54.0
4824.000000	43.7	---	1000.000	295	V	132.0	-3.2	30.3	74.0	---	---
16647.437500	52.6	42.1	1000.000	293	V	133.0	7.4	21.4	74.0	12.0	54.0

RE_HF907_BRF_Pre



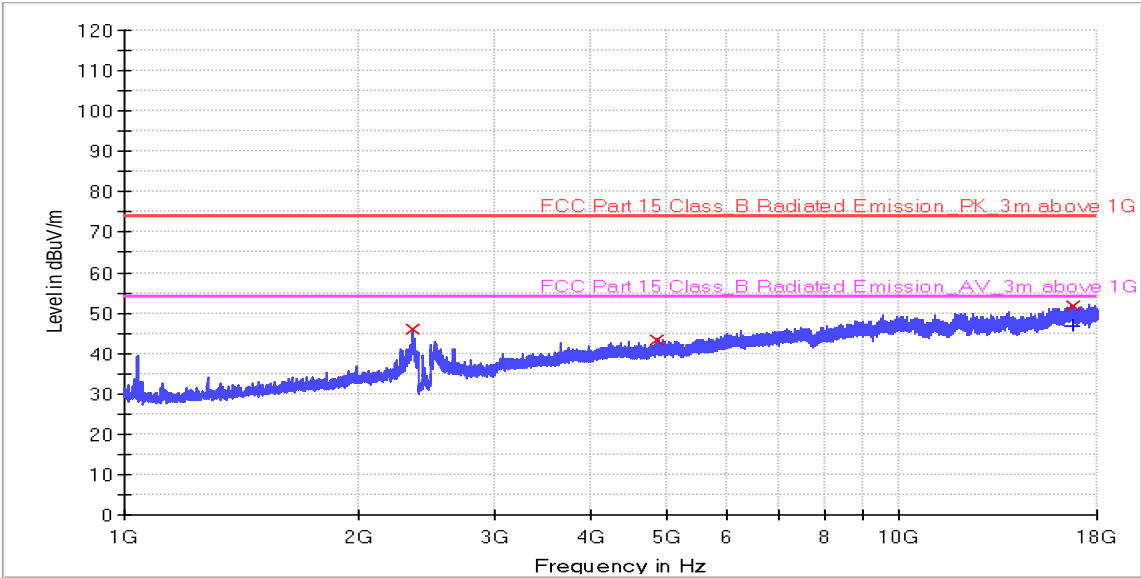
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2384.760000	57.1	39.1	1000.000	265	V	254.0	-0.8	16.9	74.0	14.9	54.0
2390.000000	61.8	48.0	1000.000	295	V	243.0	-0.8	12.2	74.0	6.1	54.0
2412.000000	103.9	---	1000.000	105	V	359.0	-0.7	-29.9	74.0	---	---



802.11G:2437MHz

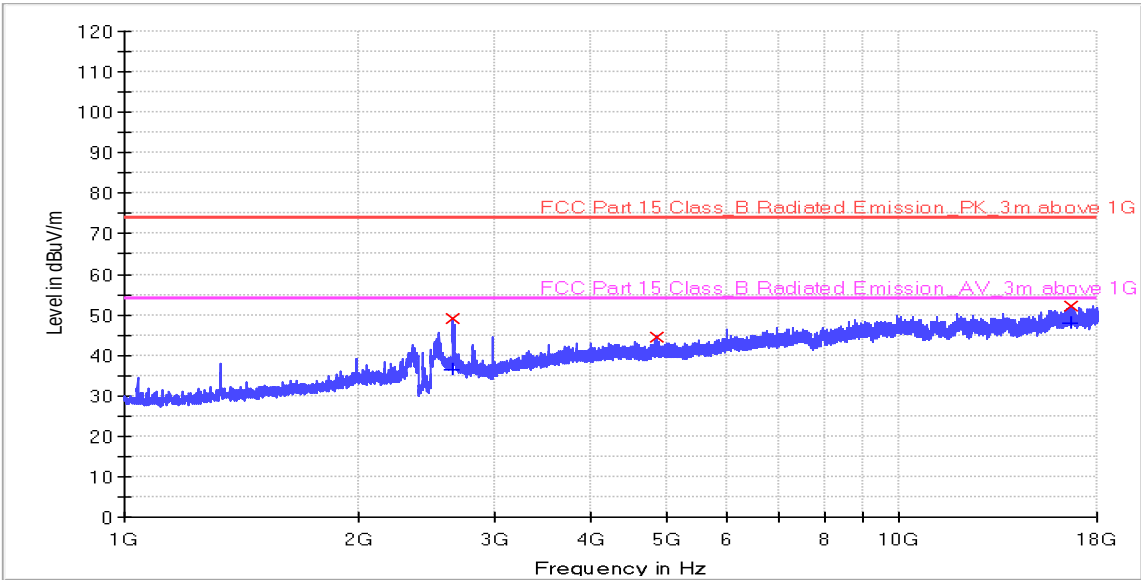
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2356.300000	46.0	---	1000.000	136	H	342.0	-10.9	28.0	74.0	---	---
4874.000000	43.3	---	1000.000	116	H	330.0	2.9	30.7	74.0	---	---
16732.300000	51.8	46.8	1000.000	285	H	264.0	7.2	22.2	74.0	7.2	54.0

RE_HF907_BRF_Pre



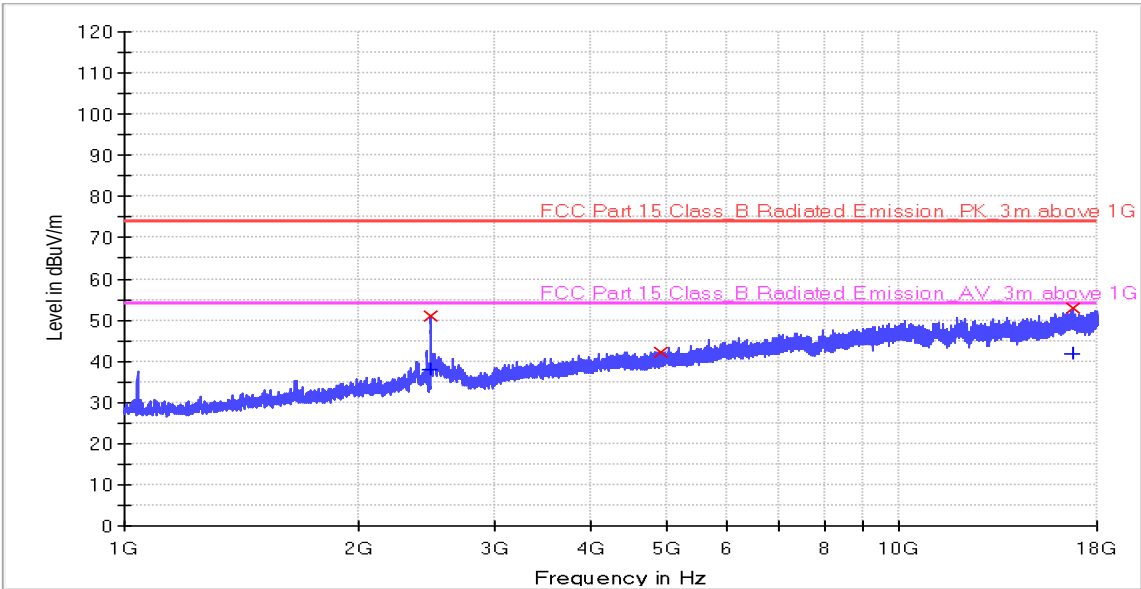
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2654.800000	49.1	36.4	1000.000	285	V	138.0	-9.6	24.9	74.0	17.6	54.0
4874.000000	44.4	---	1000.000	140	V	157.0	3.4	29.6	74.0	---	---
16670.800000	52.0	48.0	1000.000	292	V	166.0	7.2	22.0	74.0	6.0	54.0



802.11G:2462MHz

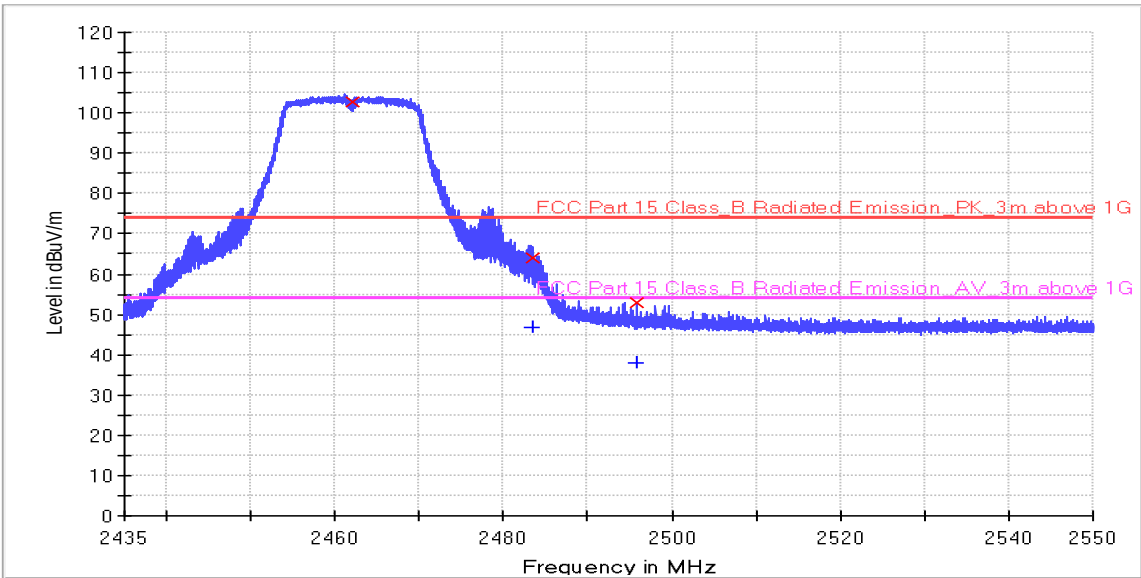
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2483.600000	51.0	38.1	1000.000	226	H	142.0	-8.2	23.0	74.0	16.0	54.0
4924.000000	42.1	---	1000.000	267	H	175.0	-1.7	31.9	74.0	---	54.0
16783.900000	52.9	41.8	1000.000	156	H	342.0	7.7	21.1	74.0	12.2	54.0

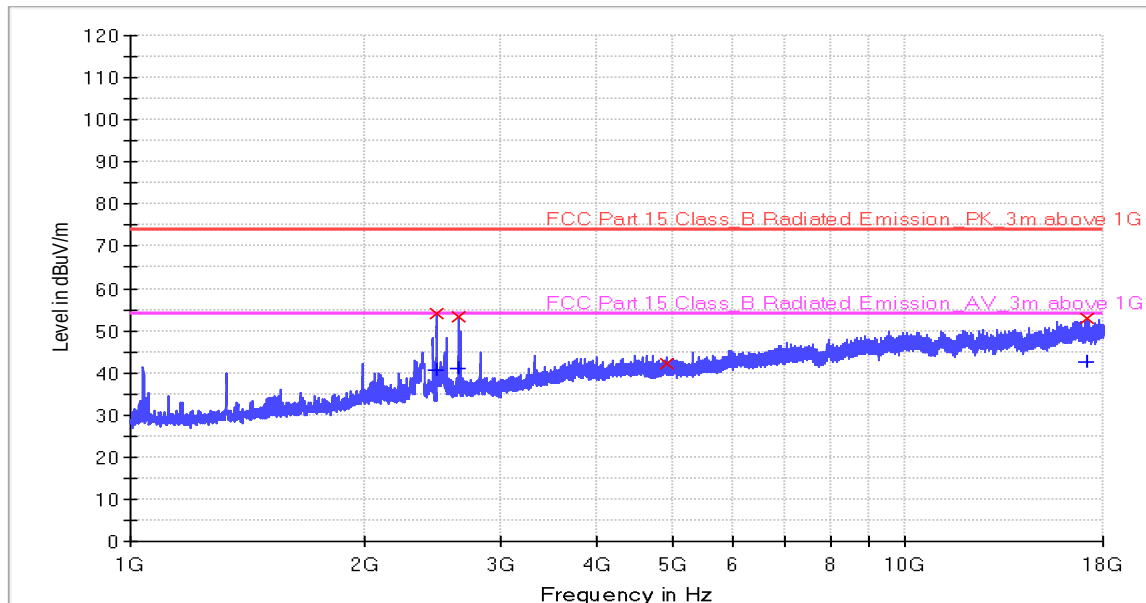
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2462.000000	102.8	---	1000.000	211	H	175.0	-0.4	-28.8	74.0	---	---
2483.500000	64.0	46.8	1000.000	118	H	185.0	-0.3	10.0	74.0	7.2	54.0
2495.930000	53.0	37.8	1000.000	237	H	266.0	-0.3	21.0	74.0	16.2	54.0

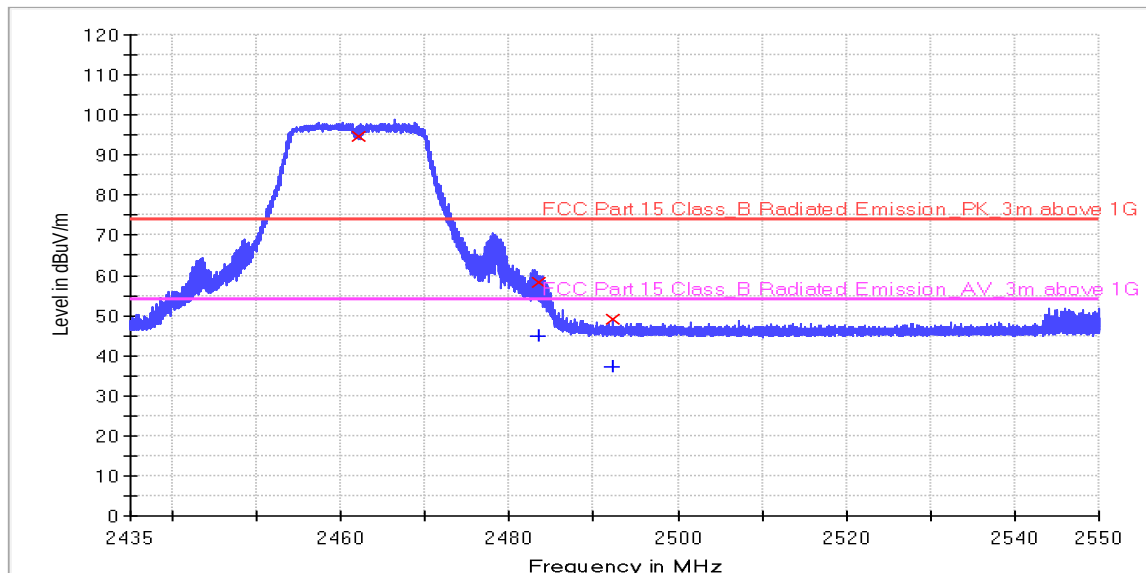
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2483.800000	53.9	40.6	1000.000	291	V	121.0	-8.2	20.1	74.0	13.4	54.0
2655.400000	53.2	41.2	1000.000	249	V	122.0	-9.5	20.8	74.0	12.9	54.0
4924.000000	42.2	---	1000.000	188	V	165.0	-2.7	31.8	74.0	---	---
17151.100000	52.8	42.6	1000.000	204	V	123.0	7.9	21.2	74.0	11.4	54.0

RE_HF907_BRF_Pre



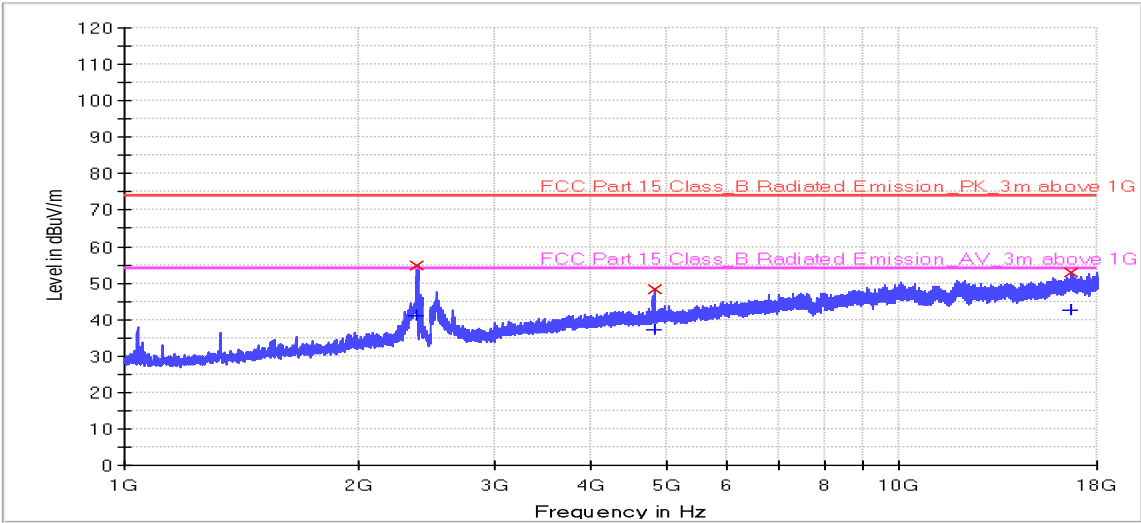
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV)	Margin - AV (dB)	Limit - AV (dBuV)
2462.000000	94.8	---	1000.000	131	V	168.0	-0.4	-20.8	74.0	---	---
2483.500000	58.4	44.9	1000.000	204	V	193.0	-0.3	15.6	74.0	9.1	54.0
2492.365800	49.1	37.2	1000.000	259	V	115.0	-0.3	24.9	74.0	16.8	54.0



802.11N20:2462MHz

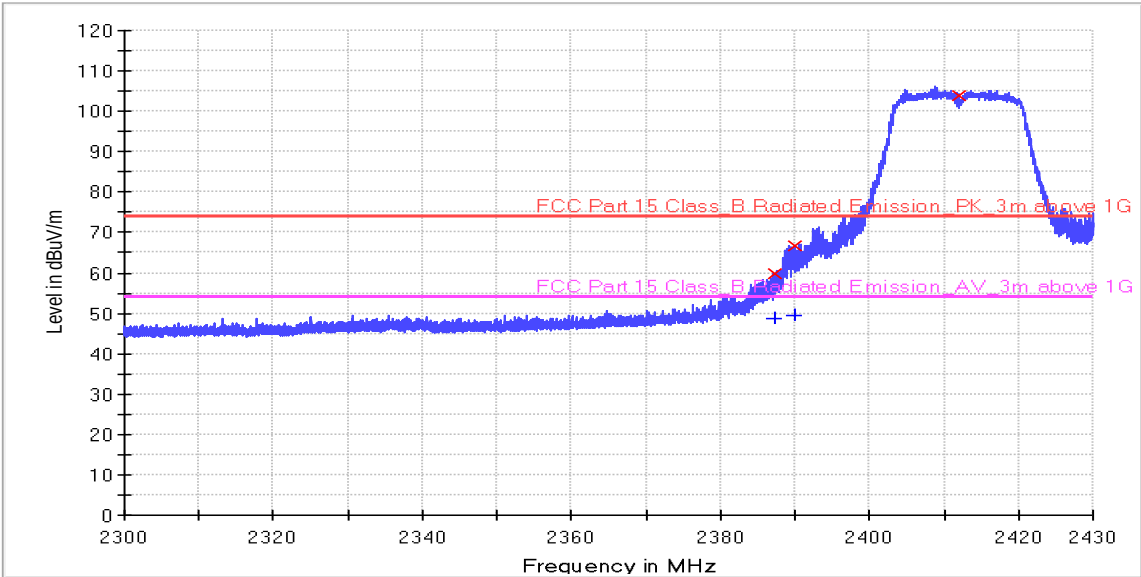
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2389.800000	54.8	41.1	1000.000	177	H	262.0	-5.9	19.2	74.0	12.9	54.0
4824.000000	48.1	37.1	1000.000	118	H	299.0	-2.2	25.9	74.0	16.9	54.0
16650.700000	52.8	42.5	1000.000	139	H	333.0	7.7	21.2	74.0	11.5	54.0

RE_HF907_BRF_Pre

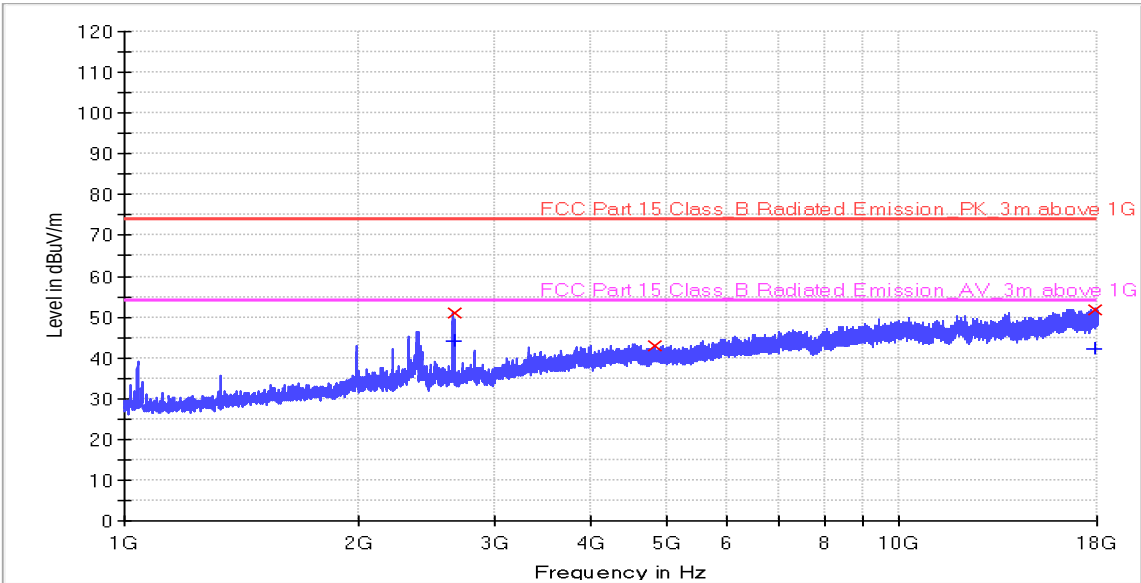


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2387.200000	59.7	48.5	1000.000	276	H	138.0	-0.8	14.3	74.0	5.5	54.0
2390.000000	66.6	49.6	1000.000	273	H	155.0	-0.8	7.4	74.0	4.4	54.0
2412.000000	103.9	---	1000.000	288	H	162.0	-0.7	-29.9	74.0	---	---



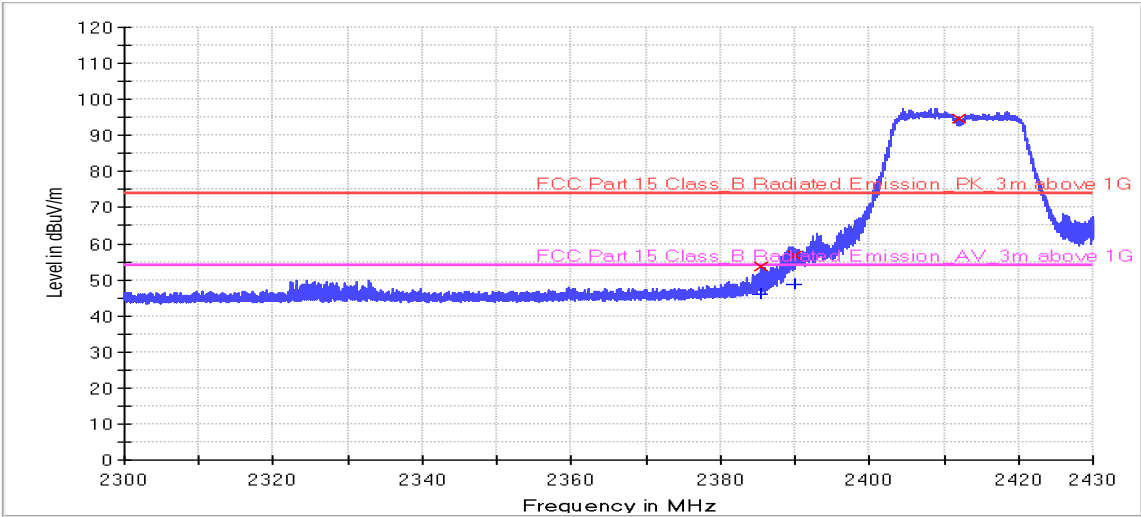
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2665.900000	50.8	44.1	1000.000	280	V	120.0	-9.5	23.2	74.0	9.9	54.0
4824.000000	43.0	---	1000.000	132	V	215.0	-3.5	31.0	74.0	---	---
17854.000000	51.7	42.3	1000.000	236	V	322.0	8.3	22.3	74.0	11.7	54.0

RE_HF907_BRF_Pre



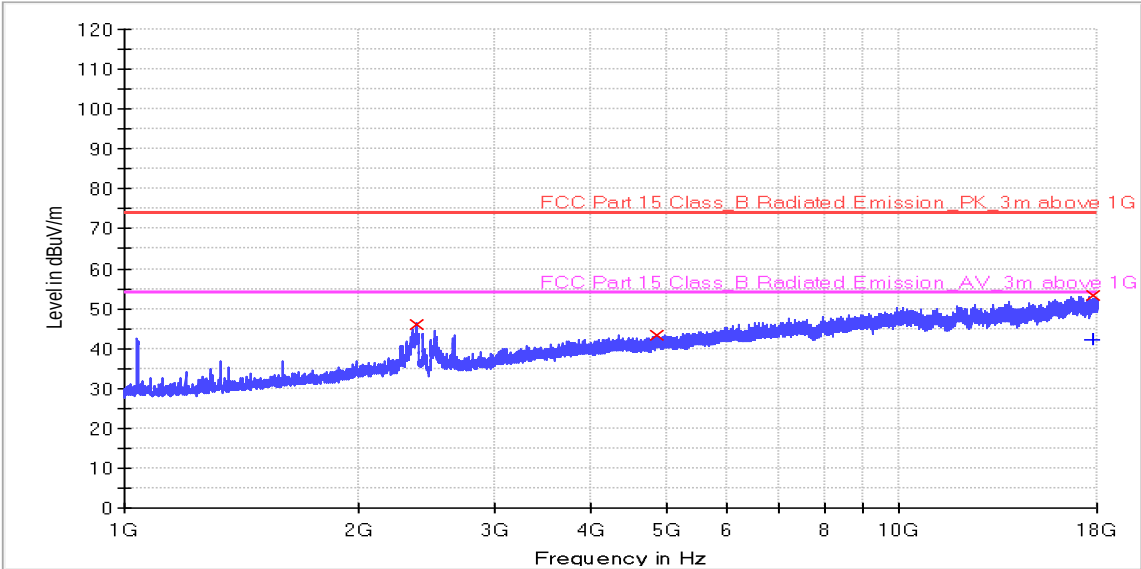
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2385.400000	53.7	46.0	1000.000	231	V	235.0	-0.8	20.3	74.0	8.0	54.0
2390.000000	56.7	48.8	1000.000	104	V	166.0	-0.8	17.3	74.0	5.2	54.0
2412.000000	94.8	---	1000.000	159	V	237.0	-0.7	-20.8	74.0	---	---



802.11N20:2437MHz

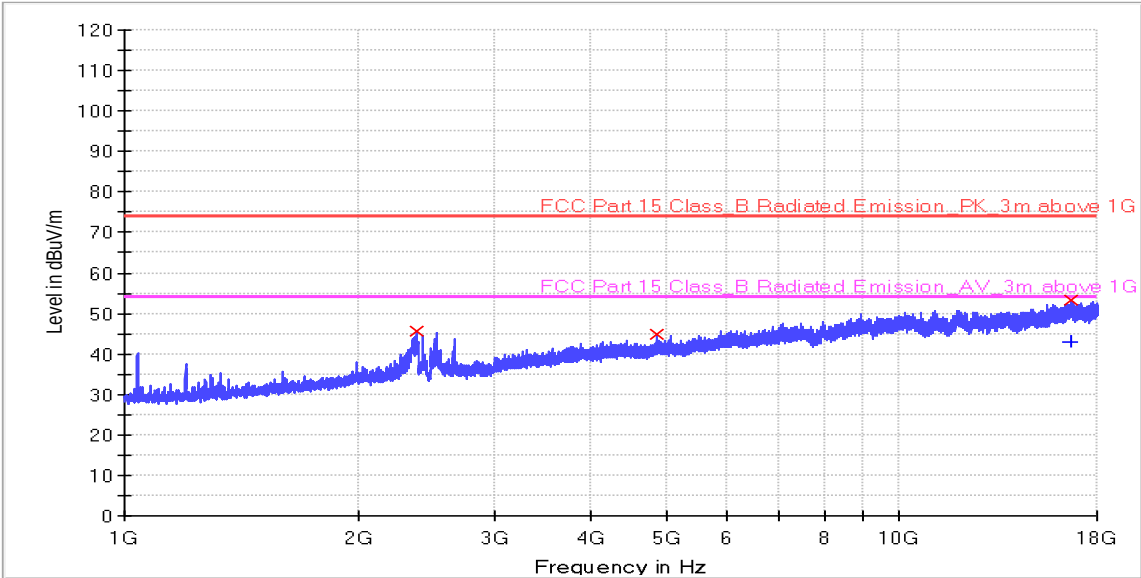
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2384.500000	46.1	---	1000.000	269	H	176.0	-4.7	28.0	74.0	---	---
4874.000000	43.3	---	1000.000	280	H	142.0	-0.2	30.7	74.0	---	---
17799.700000	53.2	42.3	1000.000	198	H	174.0	8.2	20.8	74.0	11.7	54.0

RE_HF907_BRF_Pre



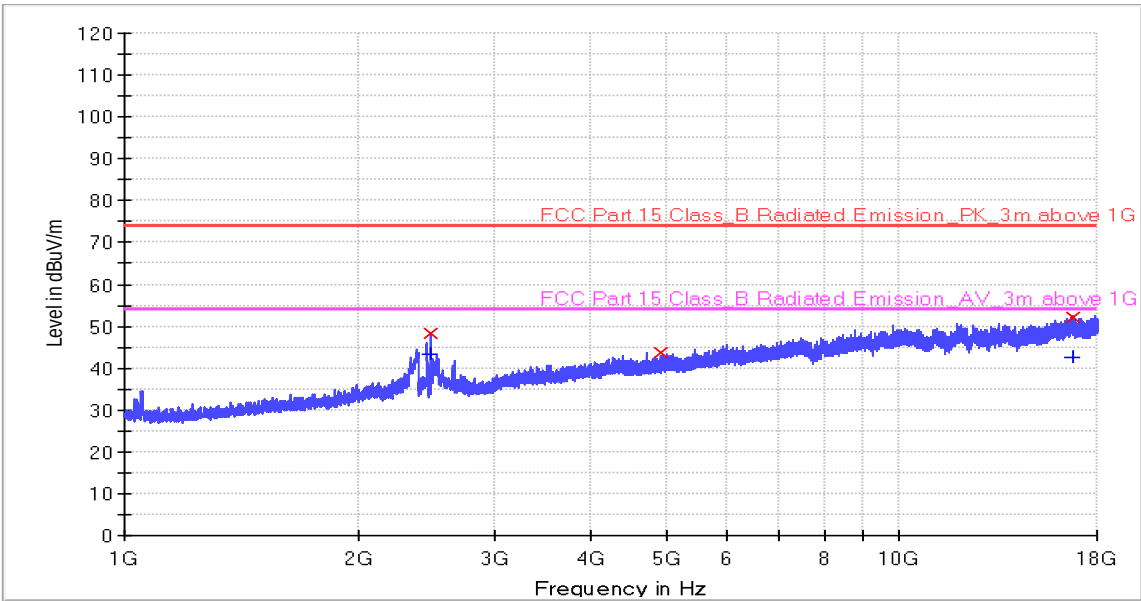
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2383.900000	45.8	---	1000.000	111	H	353.0	-4.7	28.3	74.0	---	---
4874.000000	44.7	---	1000.000	299	H	186.0	-2.1	29.3	74.0	---	---
16658.200000	53.4	43.1	1000.000	125	H	311.0	7.7	20.7	74.0	10.9	54.0



802.11N20:2462MHz

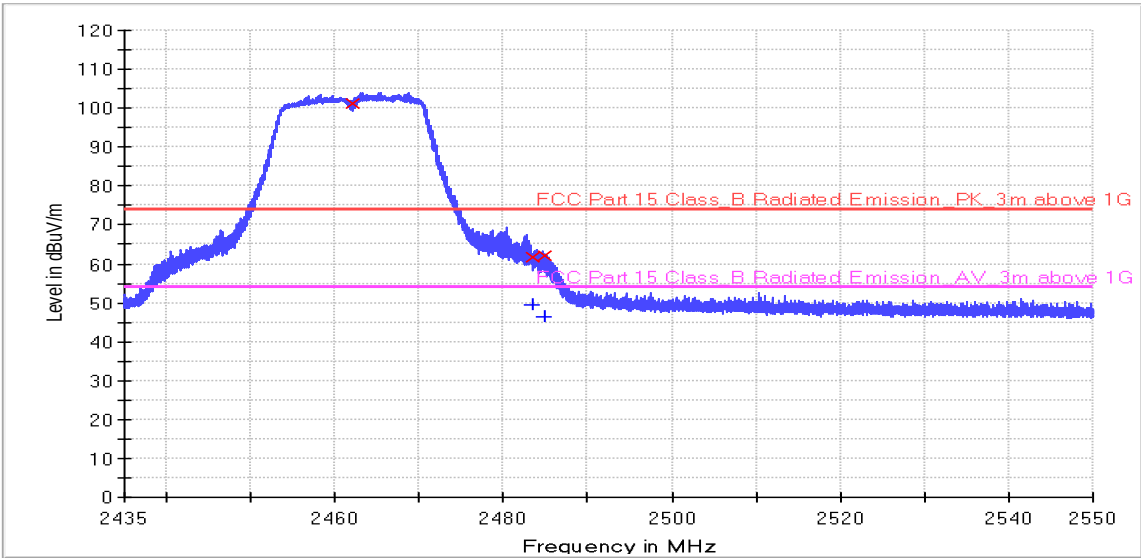
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2483.800000	48.4	43.2	1000.000	104	H	124.0	-8.2	25.7	74.0	10.8	54.0
4924.000000	43.6	---	1000.000	214	H	76.0	-2.7	30.4	74.0	---	---
16712.200000	52.1	42.7	1000.000	133	H	55.0	7.8	21.9	74.0	11.3	54.0

RE_HF907_BRF_Pre

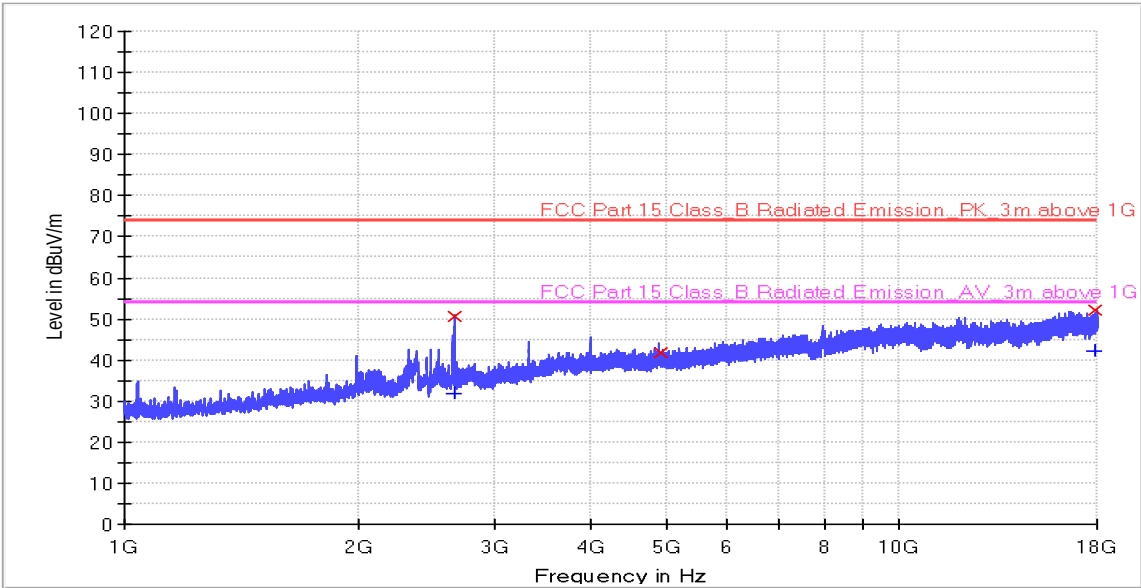


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2462.000000	101.3	---	1000.000	255	H	152.0	-0.4	-27.3	74.0	---	---
2483.500000	61.7	49.5	1000.000	294	H	135.0	-0.3	12.3	74.0	4.5	54.0
2485.000000	62.1	46.3	1000.000	129	H	187.0	-0.3	12.0	74.0	7.7	54.0



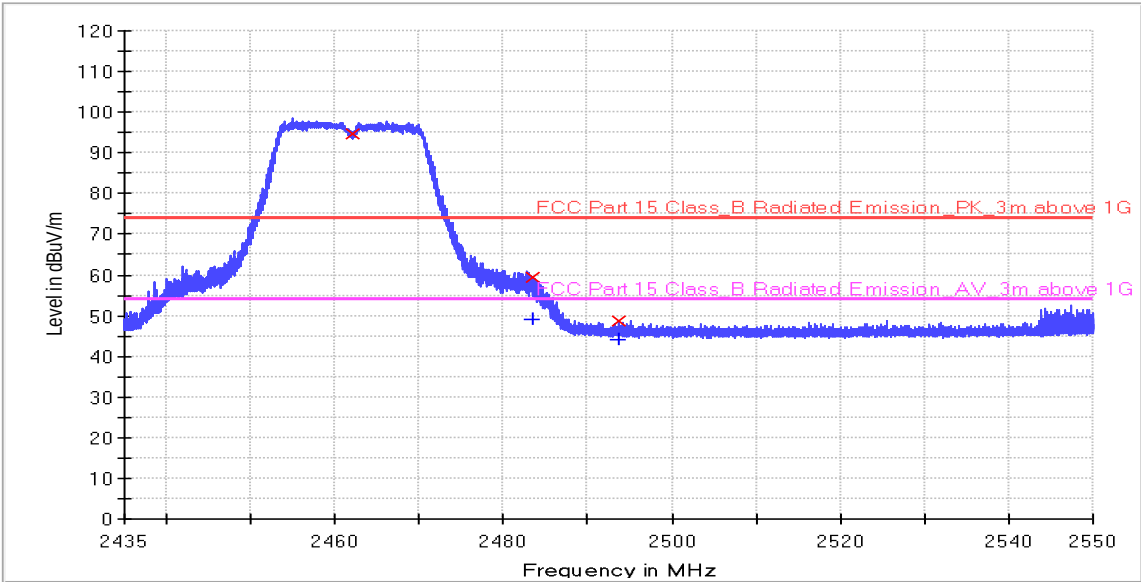
RE_HF 907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2660.800000	50.5	31.6	1000.000	118	V	226.0	-9.5	23.5	74.0	22.4	54.0
4924.000000	41.7	---	1000.000	139	V	255.0	-4.5	32.3	74.0	---	---
17924.500000	52.0	42.1	1000.000	255	V	217.0	8.4	22.0	74.0	12.0	54.0

RE_HF 907_BRF_Pre

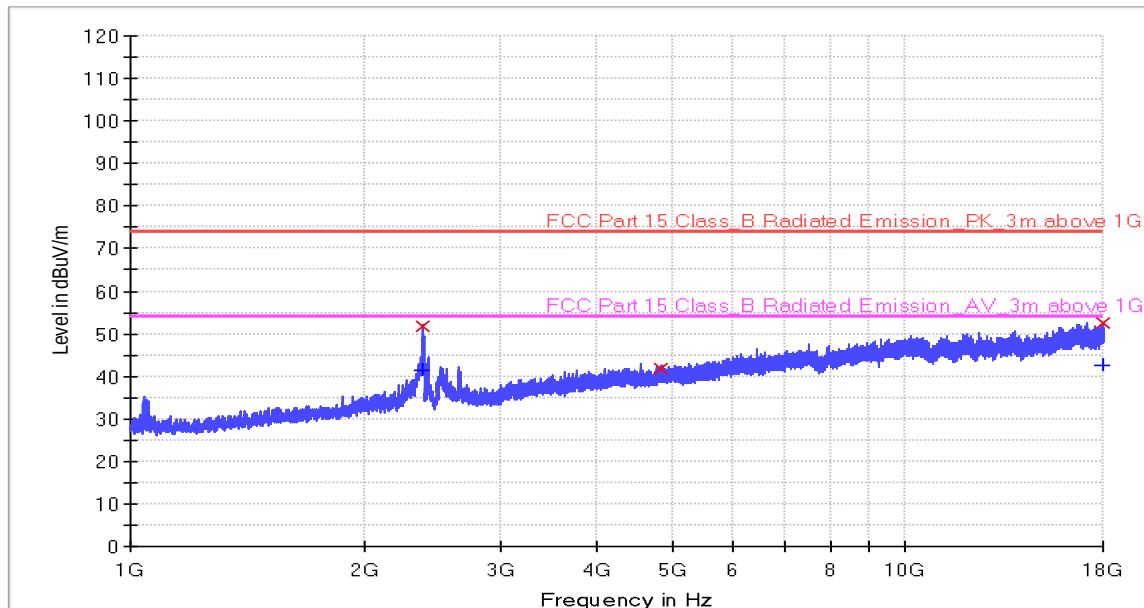


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2462.000000	94.9	---	1000.000	282	V	226.0	-0.4	-20.9	74.0	---	---
2483.500000	59.4	49.0	1000.000	140	V	147.0	-0.3	14.6	74.0	5.0	54.0
2493.700000	48.8	44.2	1000.000	137	V	358.0	-0.3	25.2	74.0	9.8	54.0

802.11N40:2422MHz

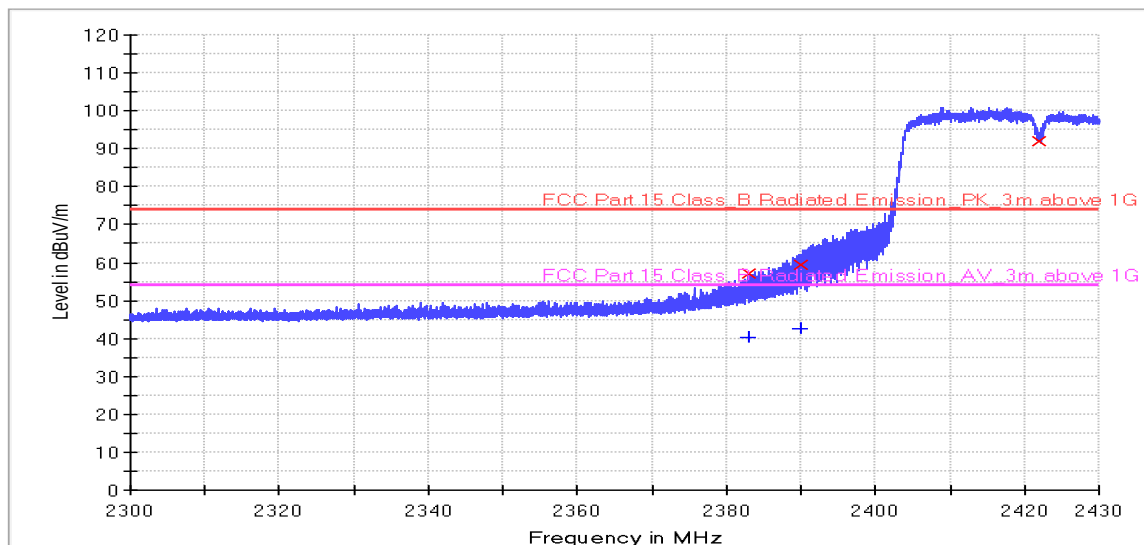
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2388.700000	51.8	41.5	1000.000	169	H	160.0	-6.8	22.2	74.0	12.5	54.0
4844.000000	41.9	---	1000.000	156	H	120.0	-3.2	32.2	74.0	---	---
17976.100000	52.6	42.6	1000.000	295	H	78.0	8.5	21.4	74.0	11.4	54.0

RE_HF907_BRF_Pre

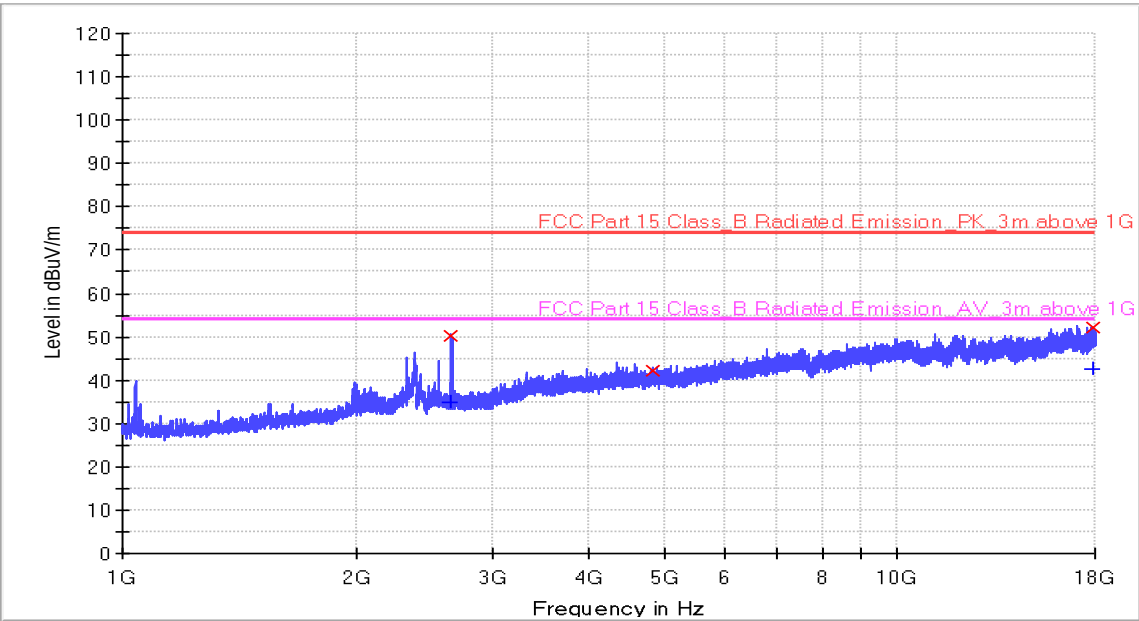


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2382.864167	57.3	40.2	1000.000	162	H	234.0	-0.8	16.7	74.0	13.8	54.0
2390.000000	59.3	42.6	1000.000	206	H	162.0	-0.8	14.8	74.0	11.4	54.0
2422.000000	92.1	---	1000.000	118	H	152.0	-0.7	-18.1	74.0	---	---



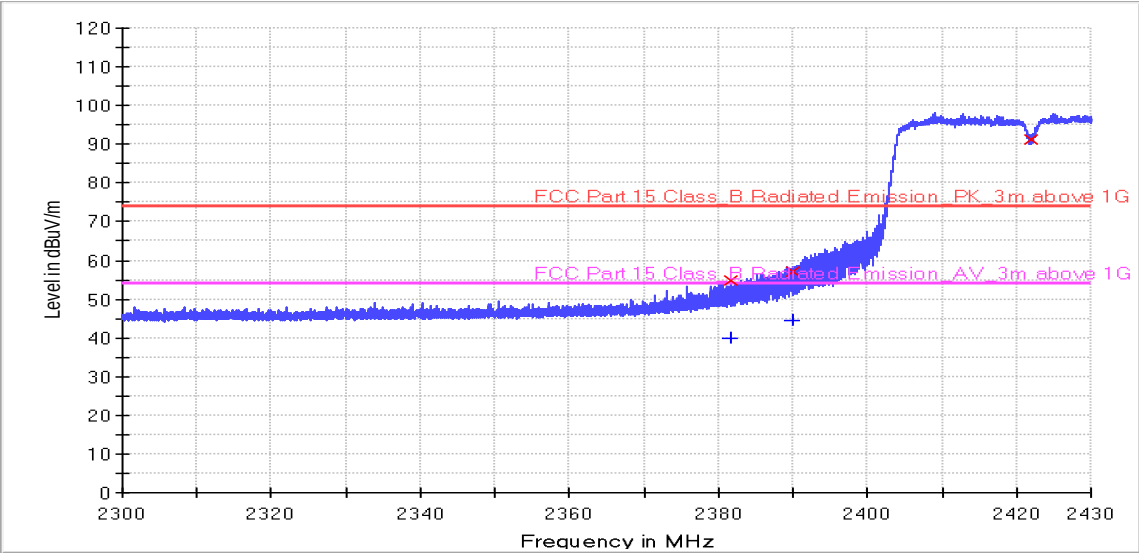
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2657.500000	50.4	34.9	1000.000	174	V	86.0	-9.5	23.6	74.0	19.1	54.0
4844.000000	42.1	---	1000.000	119	V	132.0	-3.1	31.9	74.0	---	---
17909.200000	52.2	42.6	1000.000	226	V	133.0	8.4	21.8	74.0	11.4	54.0

RE_HF907_BRF_Pre

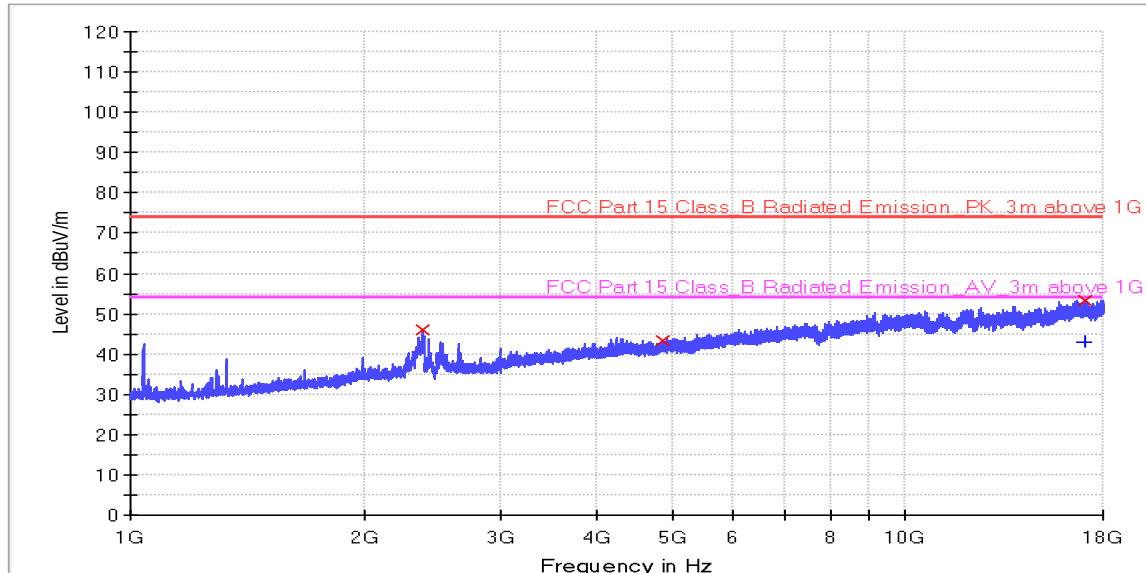


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2381.694167	54.8	39.8	1000.000	203	V	152.0	-0.8	19.2	74.0	14.2	54.0
2390.000000	57.0	44.5	1000.000	230	V	136.0	-0.8	17.0	74.0	9.5	54.0
2422.000000	91.1	---	1000.000	139	V	178.0	-0.7	-17.1	74.0	---	---

802.11N40:2437MHz

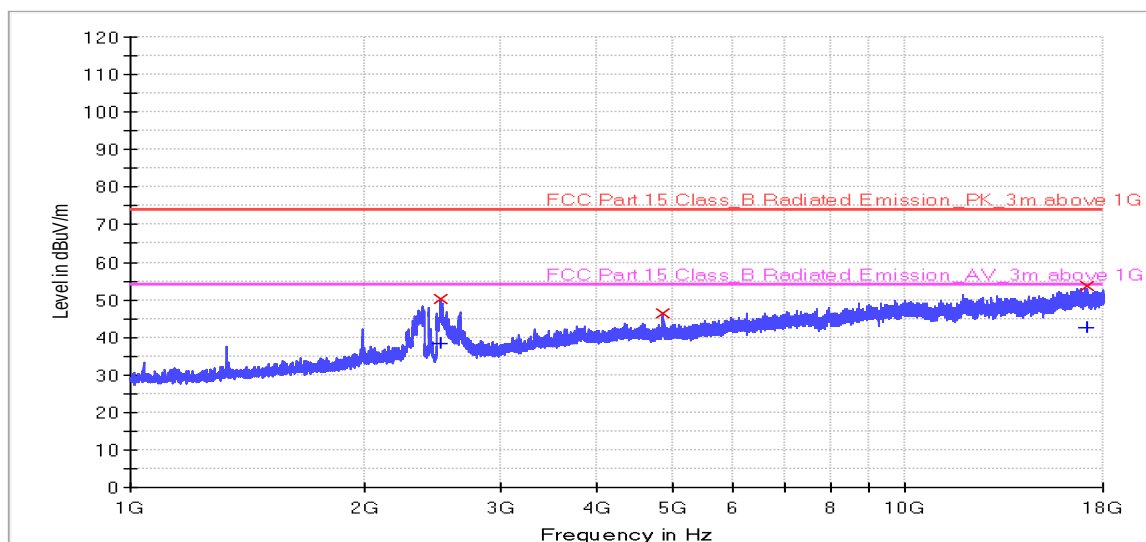
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2381.200000	45.9	---	1000.000	292	H	145.0	-5.1	28.2	74.0	---	---
4874.000000	43.2	---	1000.000	172	H	342.0	-1.4	30.8	74.0	---	---
17106.400000	53.2	43.1	1000.000	253	H	245.0	7.8	20.8	74.0	10.9	54.0

RE_HF907_BRF_Pre

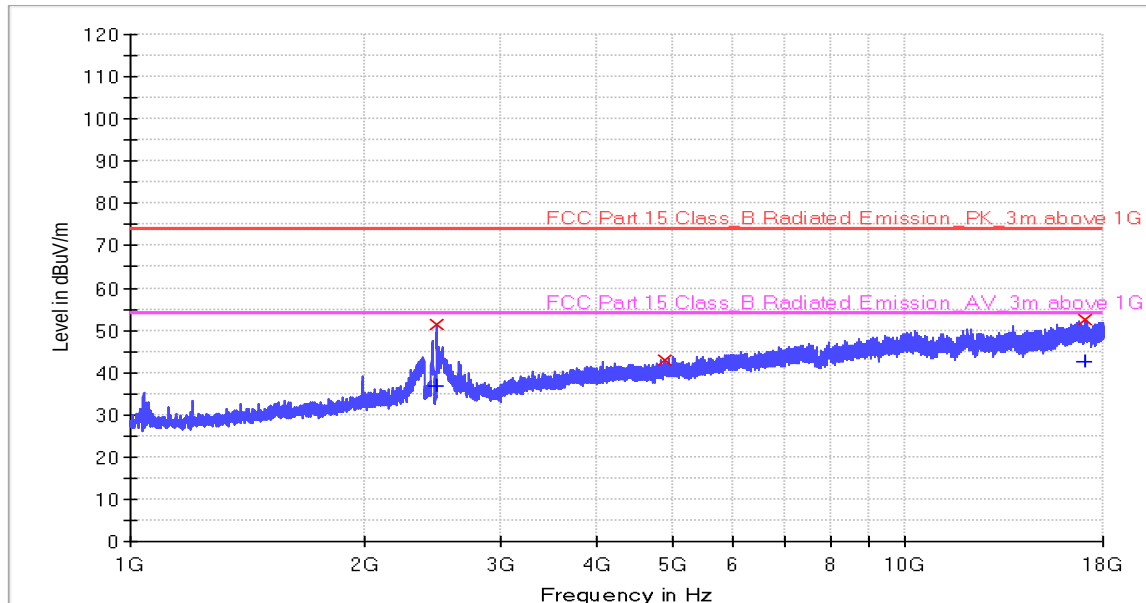


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2512.900000	50.4	38.2	1000.000	102	V	29.0	-9.1	23.6	74.0	15.8	54.0
4874.000000	46.6	---	1000.000	245	V	186.0	-2.1	27.5	74.0	---	---
17169.700000	53.5	42.6	1000.000	277	V	1.0	7.9	20.5	74.0	11.4	54.0

802.11N40:2452MHz

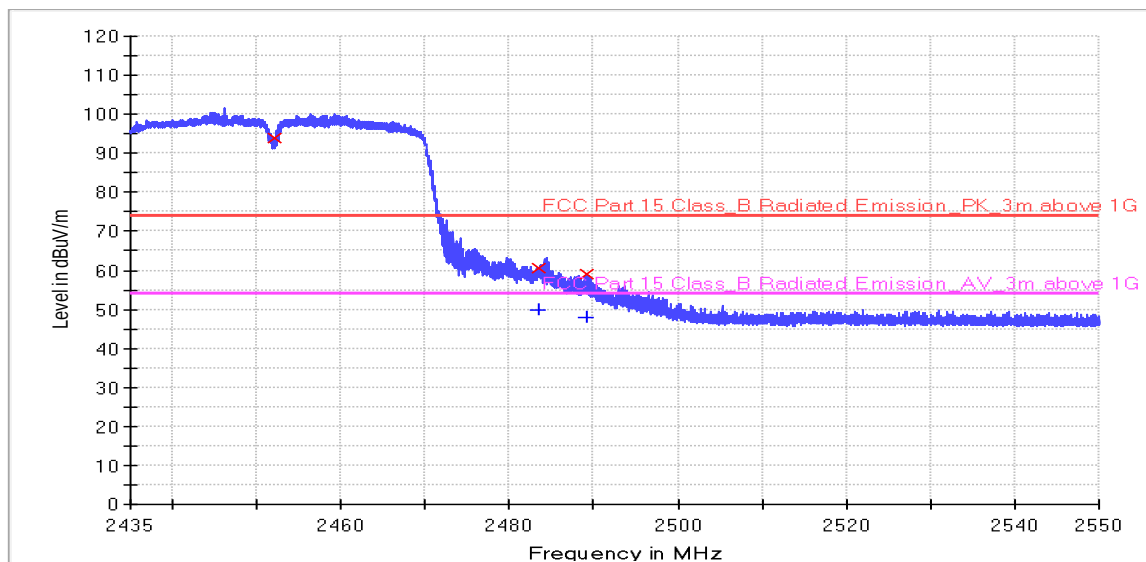
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
-2485.300000	51.4	36.8	1000.000	267	H	274.0	-8.3	22.6	74.0	17.2	54.0
4904.000000	43.0	---	1000.000	105	H	310.0	-1.9	31.0	74.0	---	---
17095.900000	52.6	42.7	1000.000	220	H	346.0	7.8	21.4	74.0	11.3	54.0

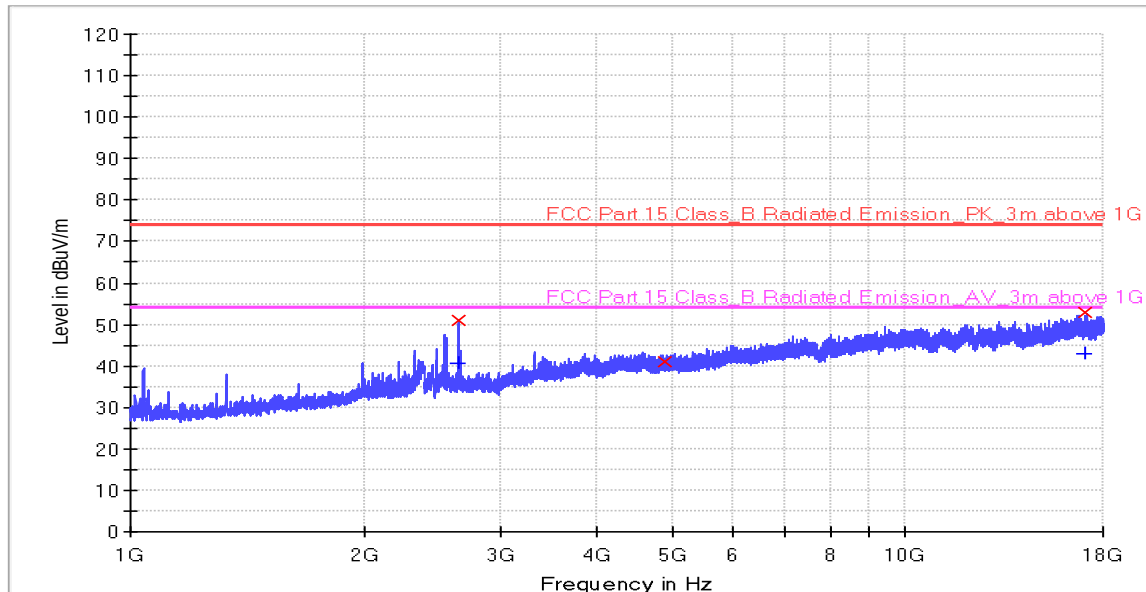
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2452.000000	93.8	---	1000.000	190	H	235.0	-0.4	-19.8	74.0	---	---
2483.500000	60.7	49.9	1000.000	232	H	228.0	-0.3	13.3	74.0	4.1	54.0
2489.145800	58.9	48.0	1000.000	249	H	164.0	-0.3	15.1	74.0	6.0	54.0

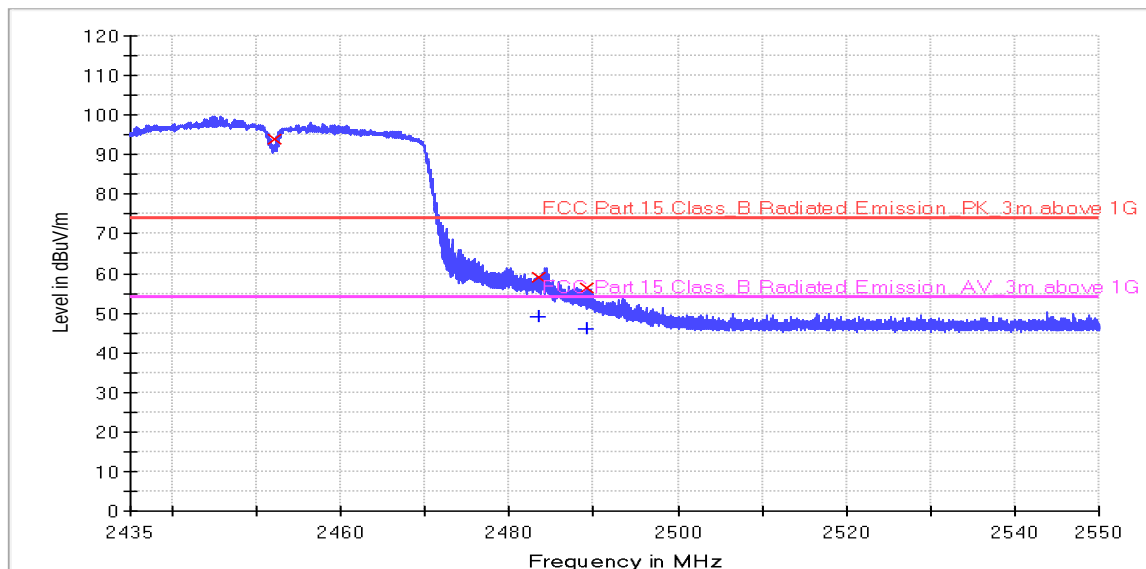
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+	Limit - PK+	Margin - AV	Limit - AV
2658.100000	51.1	40.6	1000.000	102	V	112.0	-9.5	22.9	74.0	13.4	54.0
4904.000000	41.1	---	1000.000	245	V	0.0	-3.2	32.9	74.0	---	---
17103.100000	52.8	42.8	1000.000	271	V	40.0	7.8	21.2	74.0	11.2	54.0

RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2452.000000	93.8	---	1000.000	268	V	147.0	-0.4	-19.8	74.0	---	---
2483.500000	58.9	49.3	1000.000	141	V	139.0	-0.3	15.1	74.0	4.8	54.0
2489.200000	56.5	46.0	1000.000	198	V	204.0	-0.3	17.5	74.0	8.0	54.0



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	2024-2-19	2025-2-18
	Wideband power sensor	Rohde & Schwarz	NRP-Z81	105903	2024-2-10	2025-2-9
	10dB Attenuator	Aeroflex Weinschel	CG-4689	93459	2024-2-10	2025-2-9
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	102868	2024-4-14	2025-4-13
	Pre-amplifier	Shenzhen HzEMC	HPA-081843	HYP A23026	2024-4-16	2025-4-15
	Loop antenna	Rohde & Schwarz	HFH2-Z2	100443	2024-6-26	2025-6-25
	Double Ridged Horn Antenna	ETS-Lindgren	3116C	00246076	2023-7-7	2026-7-6
	3m Semi-anechoic chamber	TDK	9X6X6	----	2024-5-8	2027-5-7
CE	EMI Test Receiver	Rohde & Schwarz	ESR3	101907	2024-8-1	2025-7-31
	LISN	Rohde & Schwarz	ENV216	101924	2024-8-1	2025-7-31

Measurement Software Information			
Test Item	Software	Manufacturer	Version
C	MTS 8310	MWRFTtest	3.0.0.0
	Power Viewer	Rohde & Schwarz	V 11.0
RE	EMC 32	Rohde & Schwarz	V10.50.40
CE	EMC 32	Rohde & Schwarz	V9.15.03

C - Conducted RF tests

- Conducted peak output power
- Power spectral density*

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: 2021, clause 4.4.3 and 4.5.1.



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-----