

FCC - TEST REPORT

Report Number : **709502310219-01B** Date of Issue: February 26, 2025

Model : SC162-WCE3, SC162-WCE3A, SC162-WCE3B, SC162-WCD3, SC162-WCB3, SC162-WCC3, SC162-WCB3A, SC162-WCC3A, SC162-WCD3A, SC162-WCB4, SC162-WCB4A, SC162-WCC4, SC162-WCC5A, SC162-WCD5, SC162-WCD5A.

Product Type : Smart Battery Doorbell

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 : 48



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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
709502310219-00B	First Issue	03/07/2024
709502310219-01B	Amendment 1: The infrared lamp beads have been changed and added some new models. Additional tests were performed.	02/26/2025

3 Details about the Test Laboratory

Test Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch
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Shanghai 201108,
P.R. China

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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 Battery Doorbell

Model no.: SC162-WCE3, SC162-WCE3A, SC162-WCE3B, SC162-WCD3, SC162-WCB3, SC162-WCC3, SC162-WCB3A, SC162-WCC3A, SC162-WCD3A, SC162-WCB4, SC162-WCB4A, SC162-WCC4, SC162-WCC5A, SC162-WCD5, SC162-WCD5A

FCC ID: 2BEWXSC162

Options and accessories: NA

Rating: AC 8-24V or 5V Input (type C)

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)
433.92MHz (SRD)

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:	V1.0.1
Software Version:	V1.2.80
Antenna Type:	FPC Antenna for 2.4GHz Spring antenna for 433.92MHz
Antenna Gain:	0.45dBi for 2.4GHz; -2.01dBi for 433.92MHz
Description of the EUT:	The EUT was a Smart Battery Doorbell which has Wi-Fi and BLE function, it also can transmit at 433.92MHz. We tested it 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 SC162-WCE3 was chosen to perform all the tests
Test sample no.:	SHA-884460-1 (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	Refer to clause 7	Site 1	☒	☐	☐
§15.247 (b) (3)	Conducted peak output power	13-14	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	Refer to clause 7	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	15-42	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 0.45dBi. 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 709502310219-00B for adding some new models (highlight as below table) and slight changes have been made in some places. Detail refer to below table:

	Existing certified product	New models	
Model	SC162-WCD3	SC162-WCE3, SC162-WCE3A, SC162-WCE3B SC162-WCD3, SC162-WCB3, SC162-WCC3, SC162-WCB3A, SC162-WCC3A, SC162-WCD3A, SC162-WCB4, SC162-WCB4A, SC162-WCC4, SC162-WCC5A, SC162-WCD5, SC162-WCD5A.	
Outside View	Type A	SC162-WCE3, SC162-WCE3A, SC162-WCE3B	SC162-WCD3, SC162-WCB3, SC162-WCC3, SC162-WCB3A, SC162-WCC3A, SC162-WCD3A, SC162-WCB4, SC162-WCB4A, SC162-WCC4, SC162-WCC5A, SC162-WCD5, SC162-WCD5A.
		Type B	Type A
Declaration	All above models are identical to each other, except for different model numbers, sensor, color and tiny enclosure difference, such as different chamfering. These differences are not related to the radio frequency function. The "3" in "SC162-WCD3" could potentially be replaced with "4" or "5", So 3, 4, 5 in model name for different sensor, The "D" in "SC162-WCD3" could potentially be replaced with "A" or "B" or "C" or "E", So A, B, C,D,E in model name for tiny enclosure difference. The "A" in "SC162-WCD3A" could potentially be replaced with "A" or "B", So A, B in model name for different color. Product changes: 1. The light board has not changed (only the welding position of the material has changed), the main board remains unchanged. 2. The infrared lamp beads have been changed 3. The 2.4GHz antenna has been changed. Same type, same gain antenna. (only different shape) 4. The outer shell has been changed.		

So, in this test report only test data of, "Conducted peak output power" and "Spurious radiated emissions for transmitter" were new data, other test data were quoted from report 709502310219-00B and the test data are still effective.

This report is only for 2.4GHz Wi-Fi.

For 2.4GHz BLE report, refer to report no. 709502310219-00C & 709502310219-01C.

For 433.92MHz report, refer to report no. 709502310219-00D.

This submittal(s) (test report) is intended for FCC ID: 2BEWXSC162 complies with Section 15.207, 15.209, 15.247 of the FCC Part 15, Subpart C rules.



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: January 17, 2025

Testing Start Date: January 24, 2025

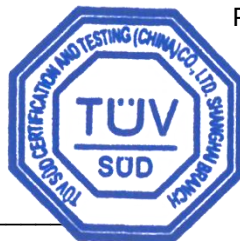
Testing End Date: February 24, 2025

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

Reviewed by:

Jiaxi Xu

Jiaxi XU
Review Engineer



Prepared by:

Hui Tong

Hui TONG
Project Engineer

Tested by:

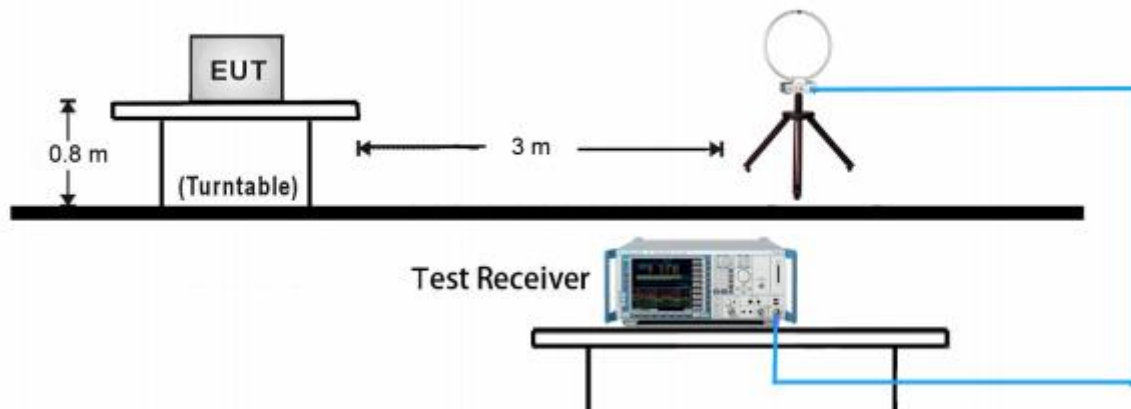
Tianji Xu

Tianji XU
Test Engineer

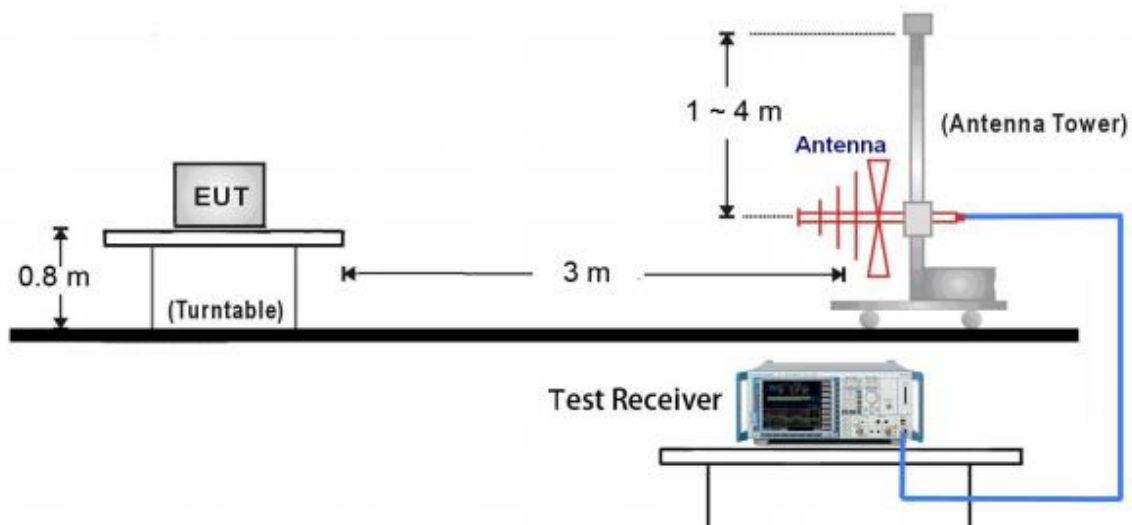
8 Test Setups

8.1 Radiated test setups

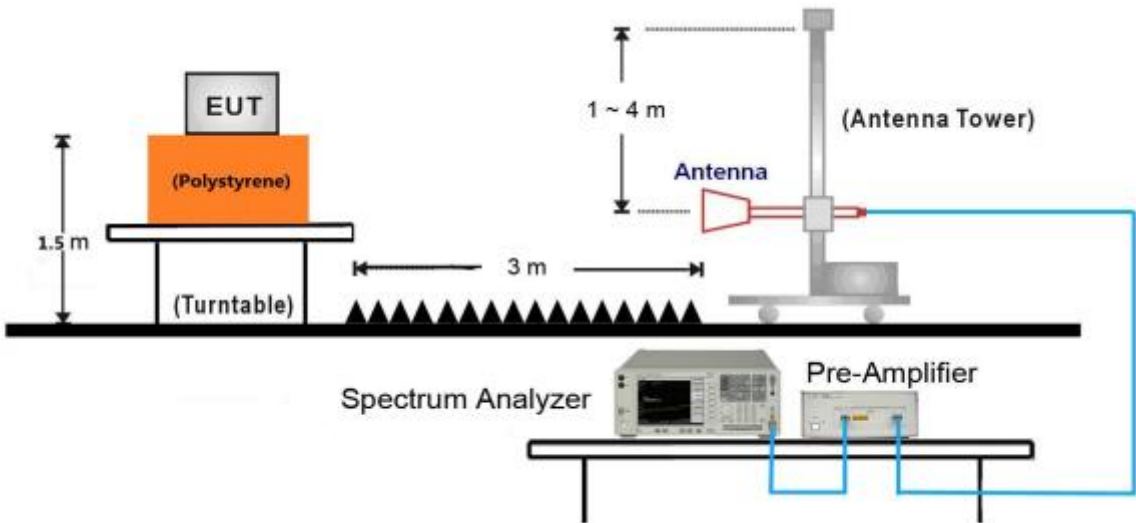
9kHz ~ 30MHz Test Setup:



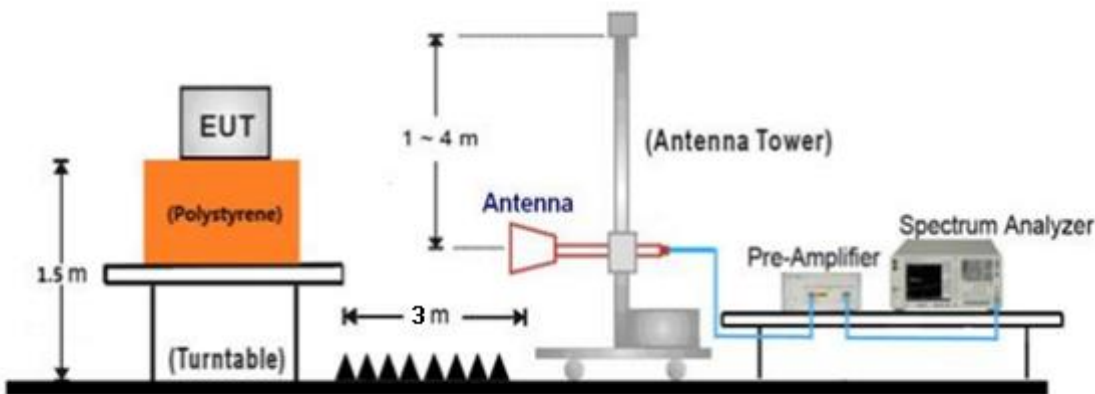
30MHz ~ 1GHz Test Setup:



1GHz ~ 18GHz Test Setup:

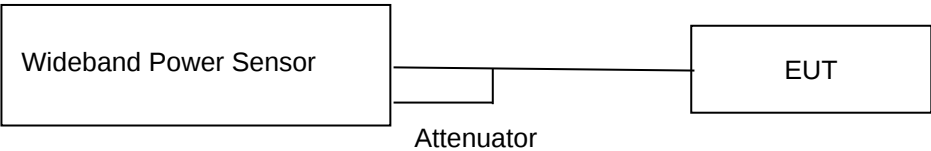


18GHz ~ 25GHz Test Setup:



8.2 Conducted RF test setups

For Conducted peak output power



9 Systems test configuration

Auxiliary Equipment Used during Test:

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

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	106
	6	1	CCK	104
	11	1	CCK	106
802.11g	1	6	OFDM	99
	6	6	OFDM	98
	11	6	OFDM	96
802.11n HT20	1	MCS0	OFDM	99
	6	MCS0	OFDM	98
	11	MCS0	OFDM	96
802.11n HT40	1	MCS0	OFDM	91
	6	MCS0	OFDM	90
	11	MCS0	OFDM	94

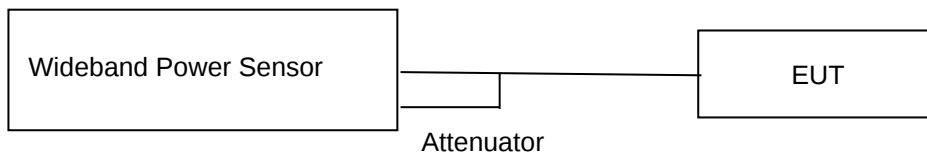
Non-hopping mode: The system was configured to operate at a signal channel transmitting. The test software allows the configuration and operation at the worst-case duty and the highest transmit power.

10 Technical Requirement

10.1 Conducted 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	20.11	Pass
Middle channel 2437MHz	19.89	Pass
High channel 2462MHz	20.16	Pass

802.11g

Frequency (MHz)	Conducted Peak Output Power(dBm)	Result
Low channel 2412MHz	24.03	Pass
Middle channel 2437MHz	24.07	Pass
High channel 2462MHz	24.51	Pass

802.11n(HT20)

Frequency (MHz)	Conducted Peak Output Power(dBm)	Result
Low channel 2412MHz	23.69	Pass
Middle channel 2437MHz	23.95	Pass
High channel 2462MHz	24.32	Pass

802.11n(HT40)

Frequency (MHz)	Conducted Peak Output Power(dBm)	Result
Low channel 2422MHz	23.12	Pass
Middle channel 2437MHz	22.58	Pass
High channel 2452MHz	23.16	Pass

10.2 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) and RSS 247 section 5.4(d), 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.

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.

Test result

Worst case Radiated Emission 9KHz-30MHz 0.009-30MHz Radiated Emission

EUT Information

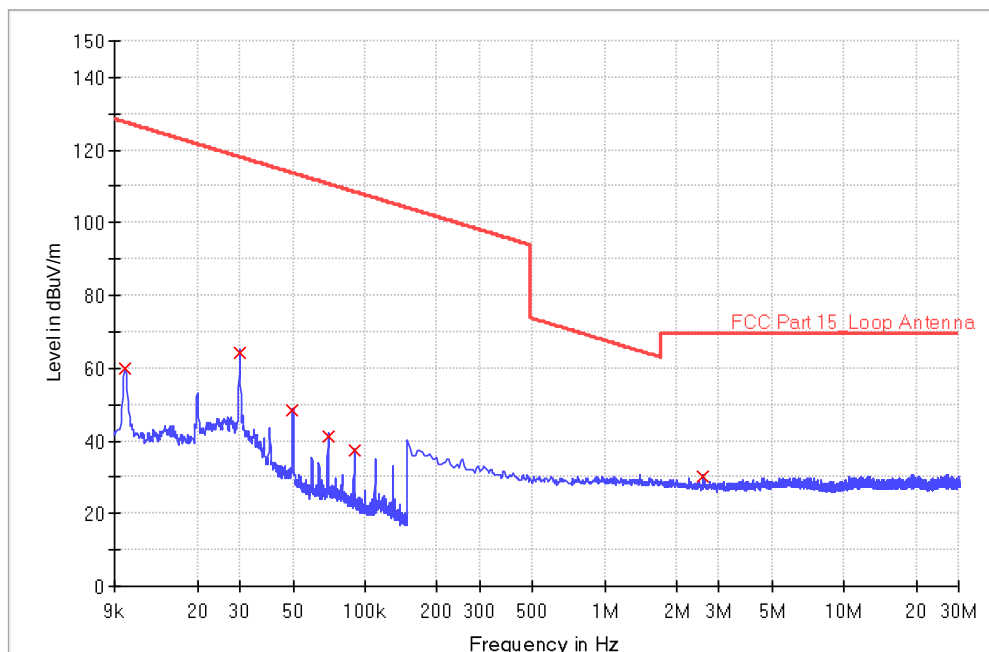
EUT Name: Smart Battery Doorbell
 Model: SC162-WCE3
 Client: Zhejiang Lingzhu Technology Co., Ltd
 Op Cond: Power on and TX_2462MHz at g mode
 Operator: Tianji XU
 Test Spec: FCC Part 15.209(a)
 Comment: Horizontal
 Sample No: SHA-884460-1

Sweep Setup: RE_Loop E_pre [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	70.5 Hz	PK+	200 Hz	0.01 s	0 dB
150 kHz - 30 MHz	3.731 kHz	PK+	9 kHz	0.01 s	0 dB

RE_Loop E_pre

**Limit and Margin**

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
0.009960	59.9	1000.0	0.200	100.0	H	0.0	19.6	67.769	127.639
0.029960	64.0	1000.0	0.200	100.0	H	0.0	18.9	54.025	118.073
0.049960	48.3	1000.0	0.200	100.0	H	0.0	18.9	65.291	113.631
0.069960	41.3	1000.0	0.200	100.0	H	0.0	18.8	69.417	110.707
0.090040	37.2	1000.0	0.200	100.0	H	0.0	18.8	71.315	108.515
2.566000	30.2	1000.0	9.000	100.0	H	0.0	19.0	39.342	69.542

0.009-30MHz Radiated Emission

EUT Information

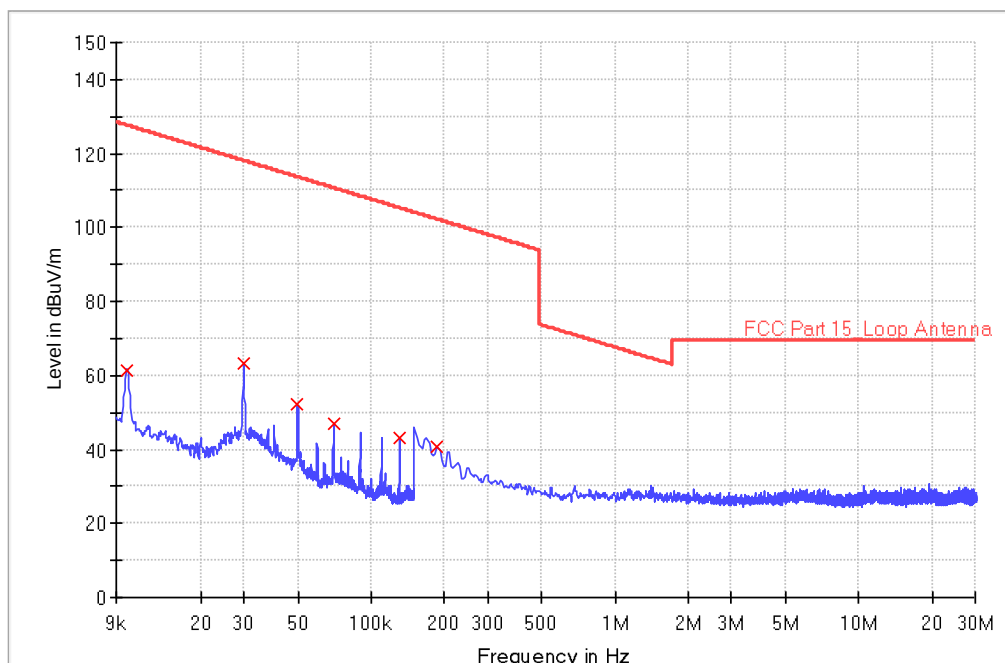
EUT Name: Smart Battery Doorbell
 Model: SC162-WCE3
 Client: Zhejiang Lingzhu Technology Co., Ltd
 Op Cond: Power on and TX_2462MHz at g mode
 Operator: Tianji XU
 Test Spec: FCC Part 15.209(a)
 Comment: Vertical
 Sample No: SHA-884460-1

Sweep Setup: RE_Loop E_pre [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	70.5 Hz	PK+	200 Hz	0.01 s	0 dB
150 kHz - 30 MHz	3.731 kHz	PK+	9 kHz	0.01 s	0 dB

RE_Loop E_pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)
0.009960	61.4	1000.0	0.200	100.0	V	0.0	19.6	66.229	127.639
0.030040	63.1	1000.0	0.200	100.0	V	0.0	18.9	54.950	118.050
0.049960	52.4	1000.0	0.200	100.0	V	0.0	18.9	61.211	113.631
0.069960	47.2	1000.0	0.200	100.0	V	0.0	18.8	63.507	110.707
0.130040	43.3	1000.0	0.200	100.0	V	0.0	18.8	62.022	105.322
0.186000	40.5	1000.0	9.000	100.0	V	0.0	18.7	61.714	102.214

Worst case Radiated Emission 30MHz-1GHz

30-1000MHz Radiated Emission

EUT Information

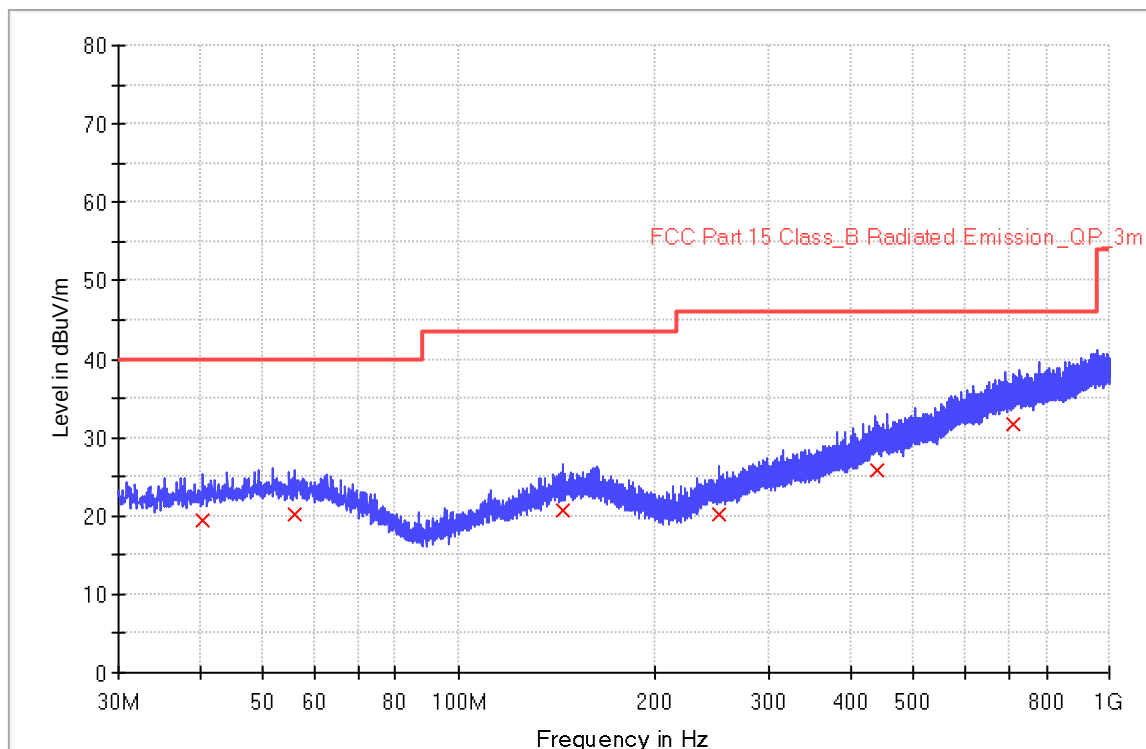
EUT Name: Smart Battery Doorbell
 Model: SC162-WCE3
 Client: Zhejiang Lingzhu Technology Co., Ltd
 Op Cond: Power on and TX_2462MHz at g mode
 Operator: Tianji XU
 Test Spec: FCC Part 15.209(a)
 Comment: Horizontal
 Sample No: SHA-884460-1

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	Preamplifier
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)
40.360000	19.4	1000.0	120.000	150.0	H	221.0	19.9	20.6
55.880000	20.1	1000.0	120.000	125.0	H	135.0	20.9	19.9
145.040000	20.6	1000.0	120.000	100.0	H	287.0	20.9	22.9
251.920000	20.3	1000.0	120.000	220.0	H	114.0	20.2	25.7
438.920000	25.9	1000.0	120.000	180.0	H	331.0	25.7	20.1
713.040000	31.7	1000.0	120.000	200.0	H	177.0	31.1	14.3

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

Frequency (MHz)	Limit - QPK (dBuV/m)	Comment
40.360000	40.0	
55.880000	40.0	
145.040000	43.5	
251.920000	46.0	
438.920000	46.0	
713.040000	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

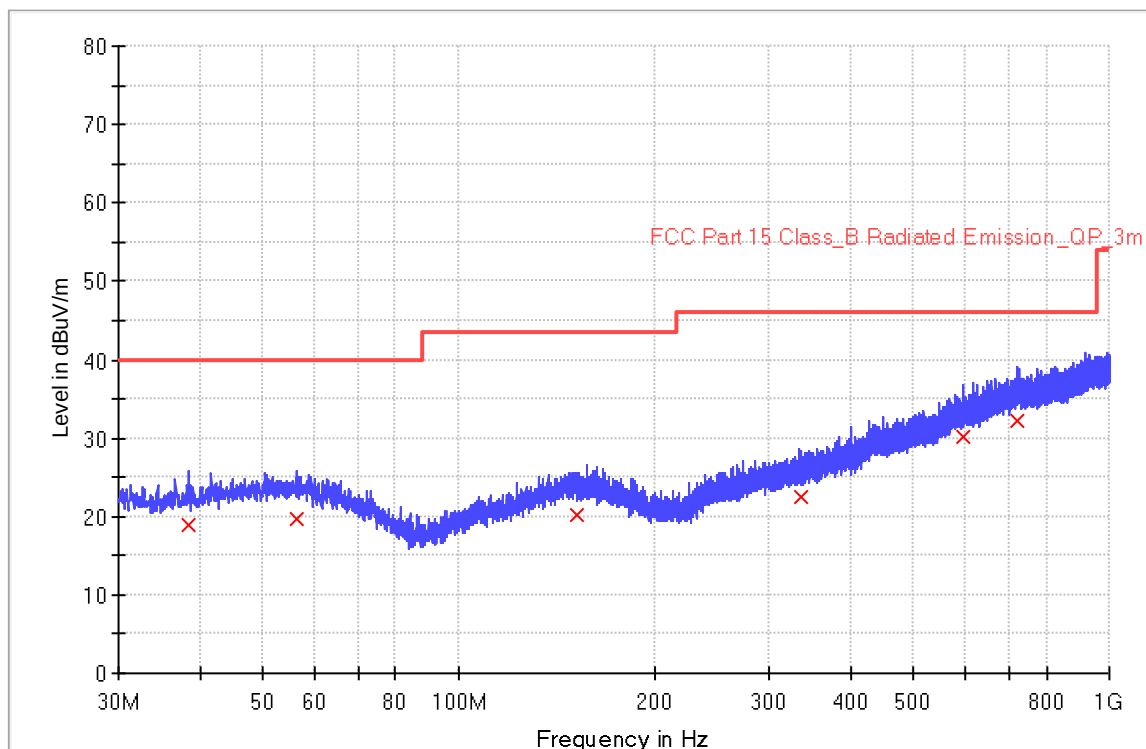
EUT Name: Wi-Fi and Bluetooth Module
Model: TYAUX-J2
Client: Hangzhou Tuya Information Technology Co., Ltd
Op Cond: Power on and TX_2437MHz at g mode
Operator: Chengjie Guo
Test Spec: FCC Part 15.209(a)
Comment: Vertical
Sample No: SHA-881229-1

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	Preamplifier
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)
38.440000	18.8	1000.0	120.000	150.0	V	224.0	19.6	21.2
56.480000	19.7	1000.0	120.000	125.0	V	135.0	20.8	20.3
152.280000	20.2	1000.0	120.000	200.0	V	287.0	21.0	23.3
335.320000	22.4	1000.0	120.000	100.0	V	331.0	22.8	23.6
598.280000	30.1	1000.0	120.000	180.0	V	25.0	29.5	15.9
724.240000	32.2	1000.0	120.000	102.0	V	147.0	31.6	13.8

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

Frequency (MHz)	Limit - QPK (dBuV/m)	Comment
38.440000	40.0	
56.480000	40.0	
152.280000	43.5	
335.320000	46.0	
598.280000	46.0	
724.240000	46.0	

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

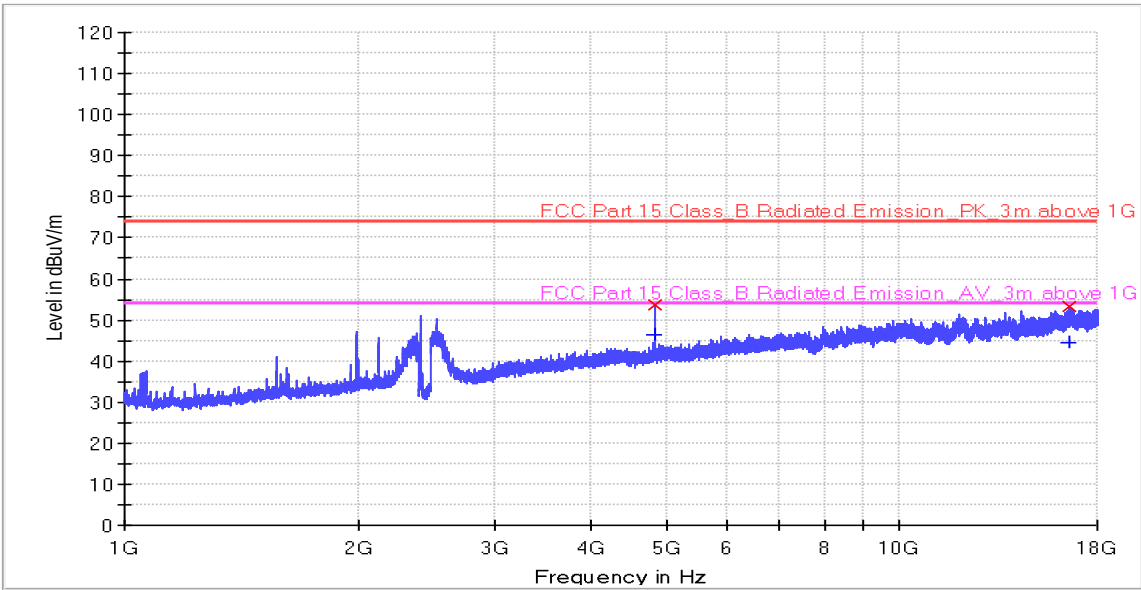
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)



Radiated Emission 1-18 GHz

802.11B:2412MHz

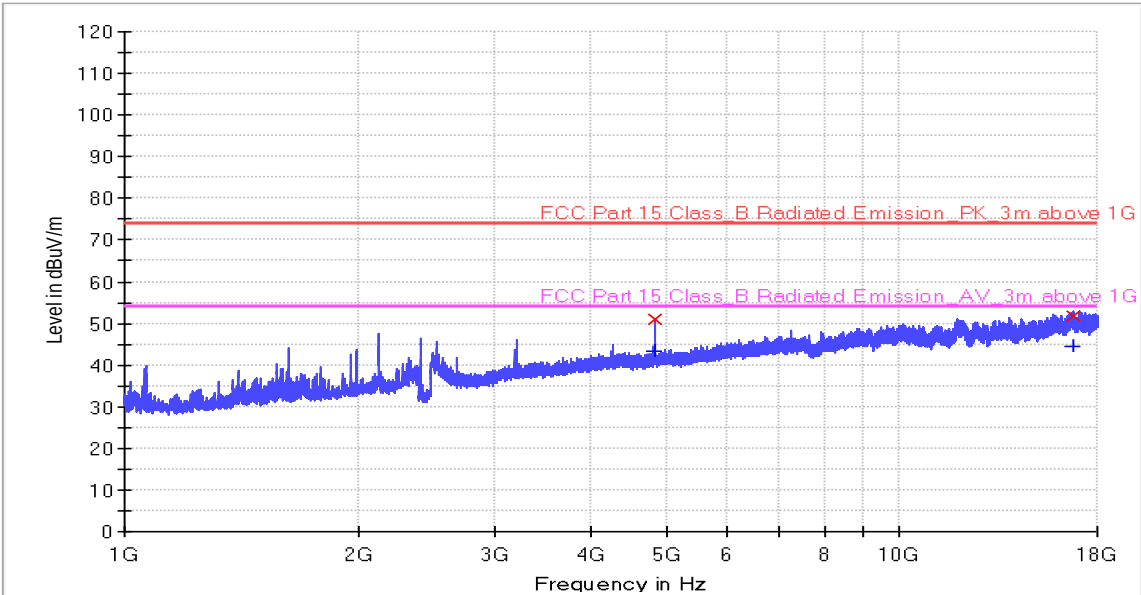
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4823.800000	53.6	46.4	1000.000	253.0	H	0.0	-2.6	20.4	74.0	7.6	54.0
16566.700000	53.1	44.3	1000.000	270.0	H	0.0	11.5	20.9	74.0	9.7	54.0

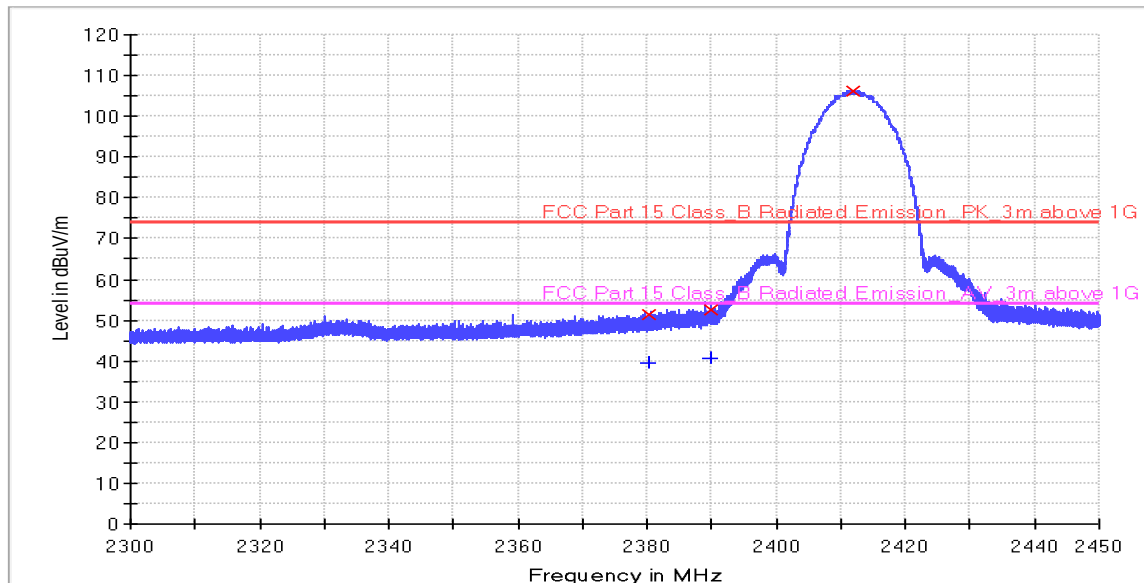
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4823.800000	51.1	43.2	1000.000	219.0	V	0.0	-2.6	22.9	74.0	10.8	54.0
16712.800000	51.9	44.5	1000.000	116.0	V	0.0	11.9	22.1	74.0	9.5	54.0

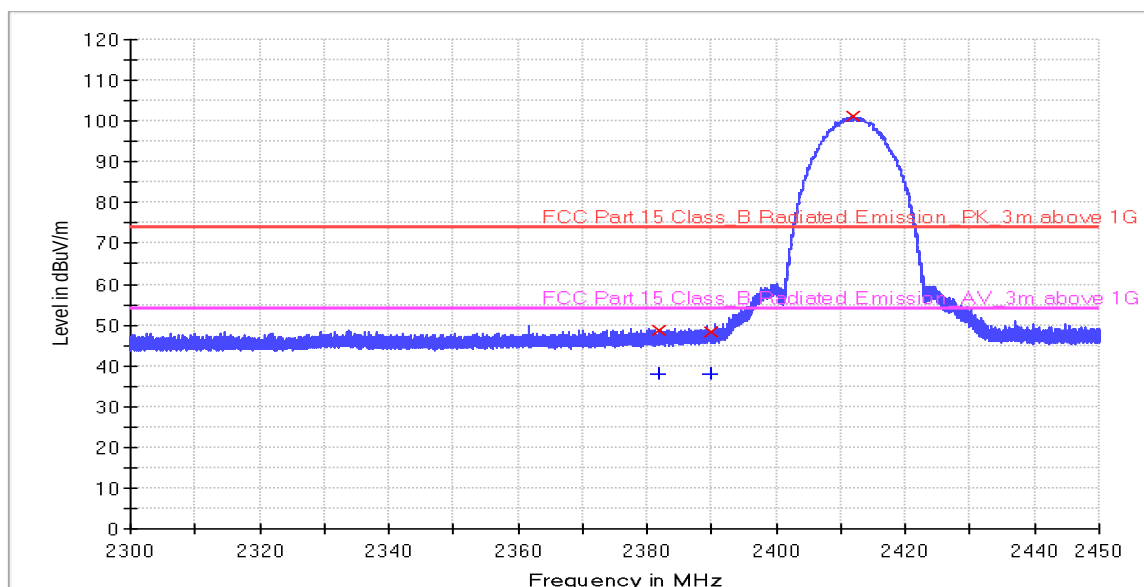
RE_HF907_BRF_Pre



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/)
2380.300000	51.5	39.5	1000.000	282.0	H	0.0	-0.8	22.5	74.0	14.5	54.0
2390.000000	52.5	40.7	1000.000	119.0	H	0.0	-0.8	21.5	74.0	13.3	54.0

RE_HF907_BRF_Pre



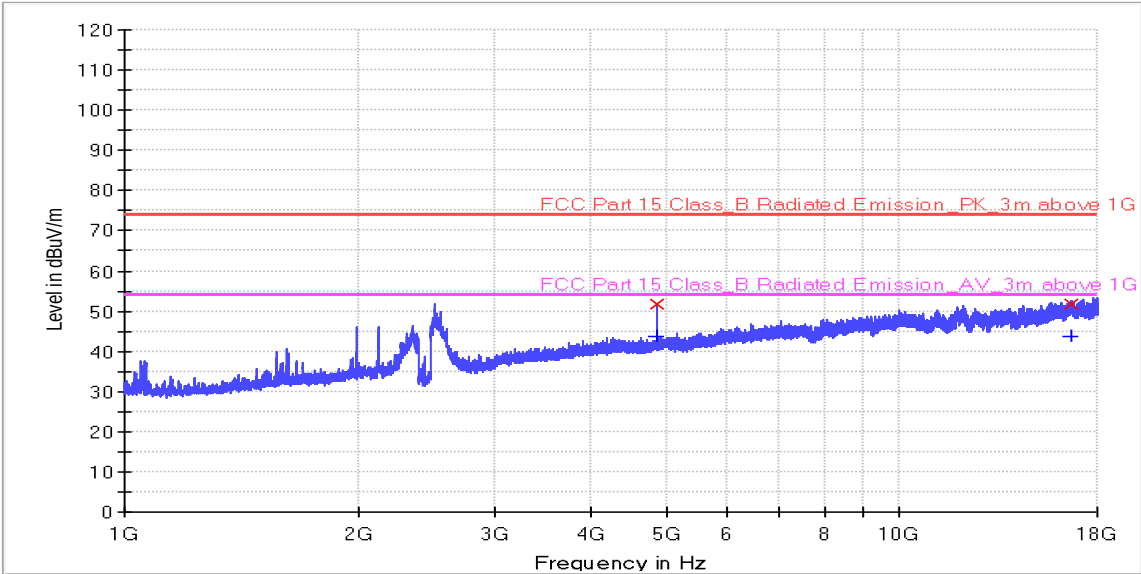
Limit and Margin

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/)
2381.800000	48.5	38.1	1000.000	193.0	V	359.0	-0.8	25.5	74.0	15.9	54.0
2390.000000	48.4	37.8	1000.000	196.0	V	359.0	-0.8	25.6	74.0	16.2	54.0



802.11B:2437MHz

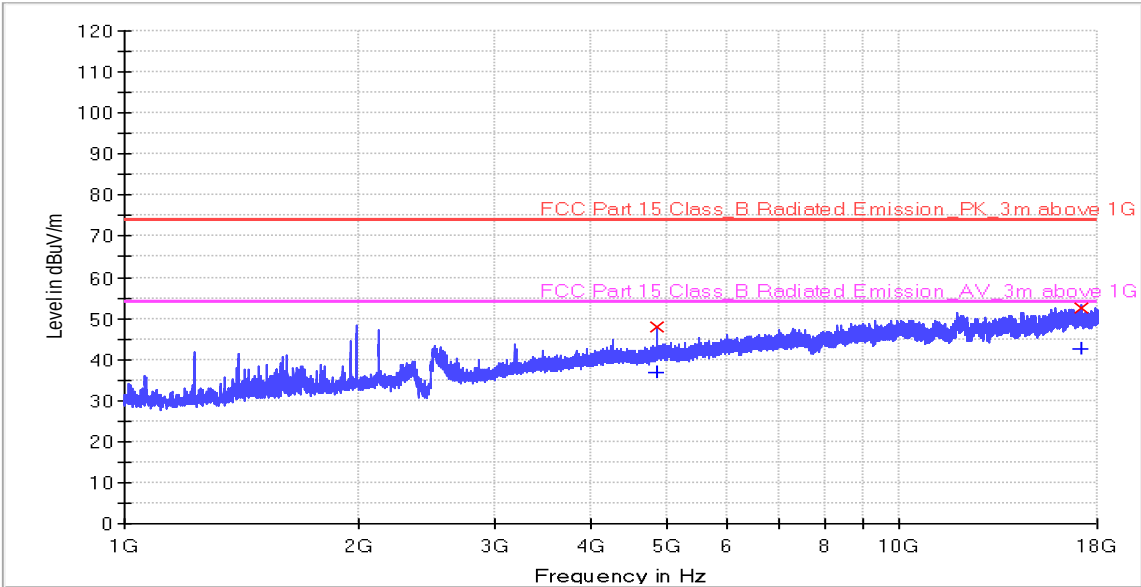
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4873.900000	51.6	43.6	1000.000	152.0	H	0.0	-2.5	22.4	74.0	10.4	54.0
16676.200000	51.9	43.8	1000.000	180.0	H	0.0	11.8	22.1	74.0	10.2	54.0

RE_HF907_BRF_Pre



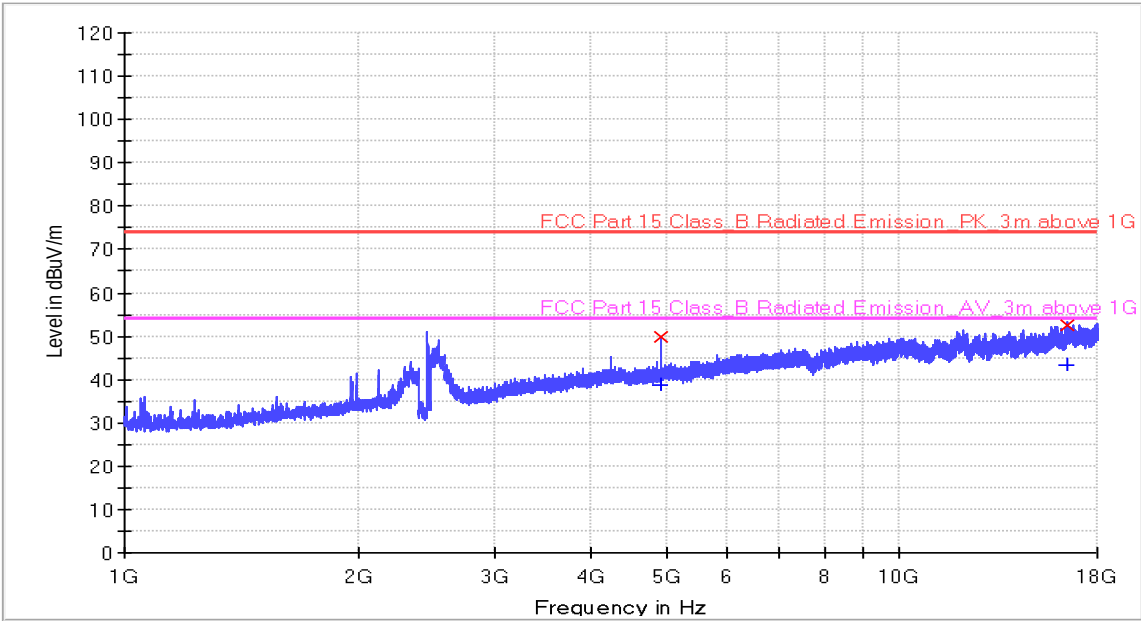
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4873.900000	47.8	36.8	1000.000	227.0	V	0.0	-2.5	26.2	74.0	17.2	54.0
17113.300000	52.7	42.4	1000.000	229.0	V	0.0	12.4	21.3	74.0	11.6	54.0



802.11B:2462MHz

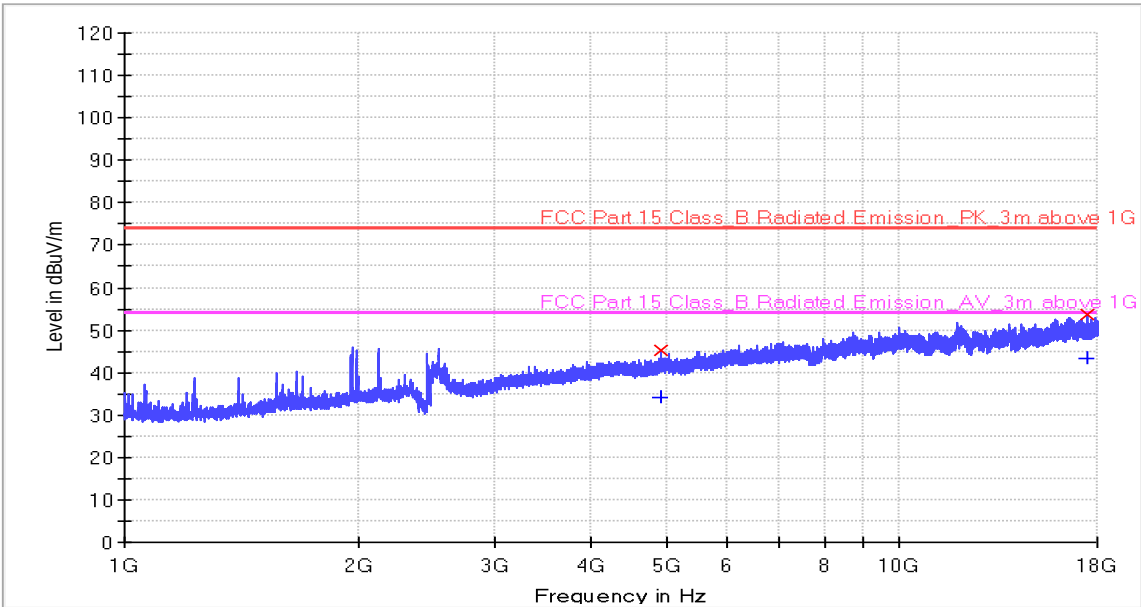
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4923.700000	49.8	38.8	1000.000	243.0	H	0.0	-2.3	24.2	74.0	15.2	54.0
16500.700000	52.7	43.5	1000.000	202.0	H	0.0	11.3	21.3	74.0	10.5	54.0

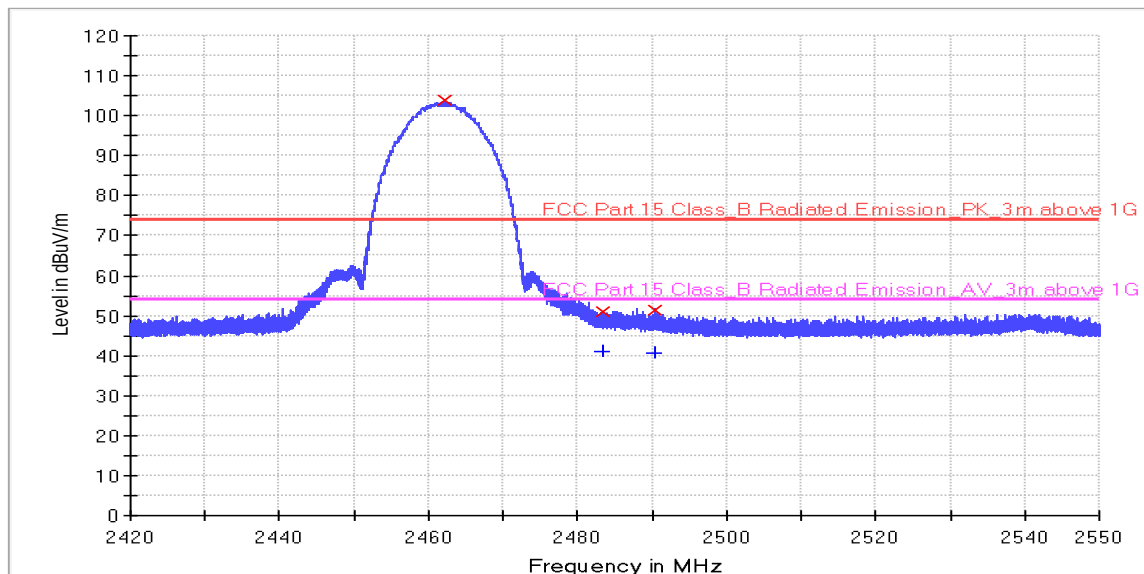
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4923.700000	45.2	34.1	1000.000	180.0	V	0.0	-2.3	28.8	74.0	19.9	54.0
17497.000000	53.8	43.2	1000.000	101.0	V	0.0	12.9	20.2	74.0	10.8	54.0

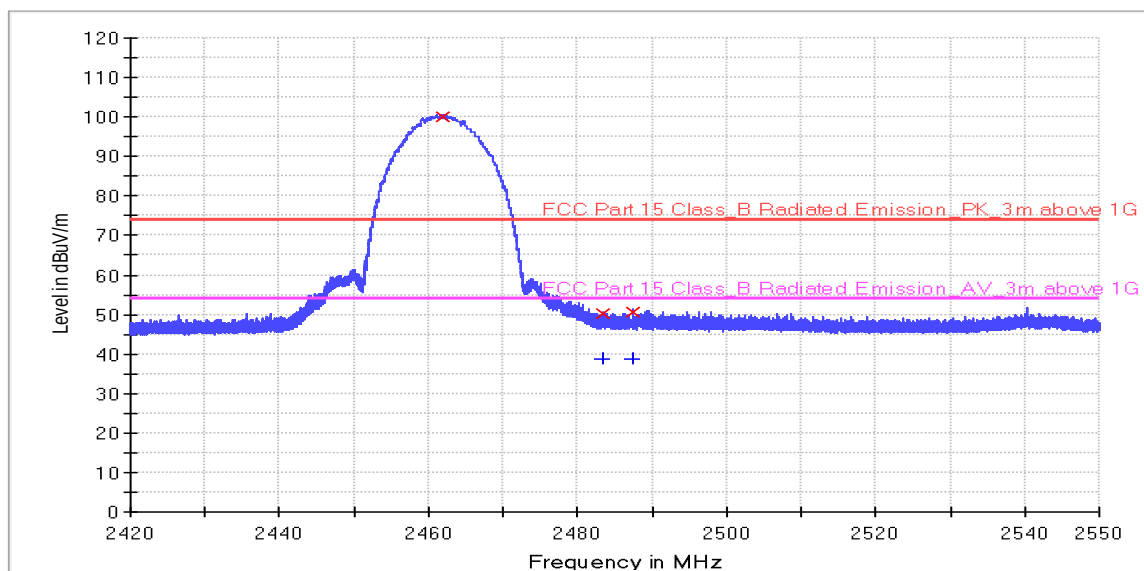
RE_HF907_BRF_Pre



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/)
2483.500000	51.1	40.9	1000.000	215.0	H	325.0	-0.3	22.9	74.0	13.1	54.0
2490.400000	51.3	40.5	1000.000	271.0	H	325.0	-0.3	22.7	74.0	13.5	54.0

RE_HF907_BRF_Pre



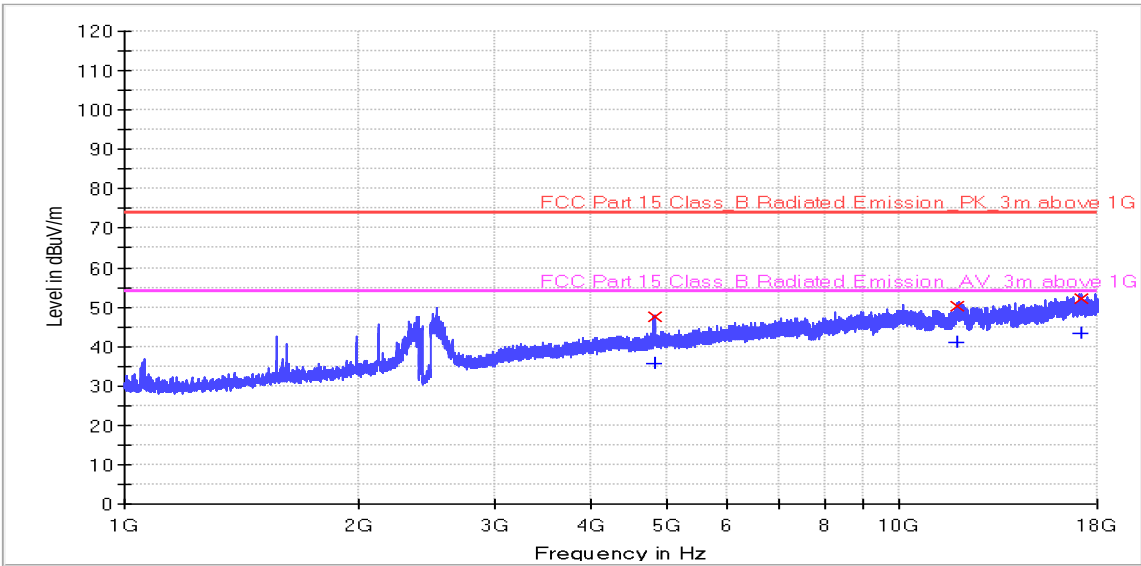
Limit and Margin

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/)
2483.500000	50.4	38.9	1000.000	245.0	V	0.0	-0.3	23.6	74.0	15.1	54.0
2487.400000	50.6	38.9	1000.000	282.0	V	0.0	-0.3	23.4	74.0	15.1	54.0



802.11G:2412MHz

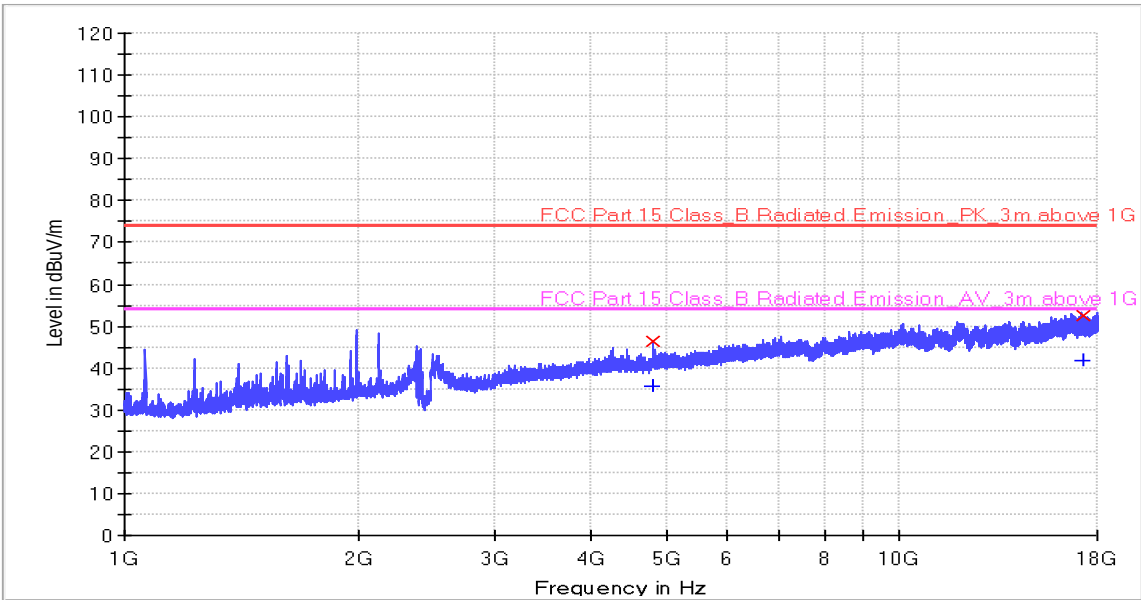
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4830.700000	47.6	35.8	1000.000	134.0	H	0.0	-2.6	26.4	74.0	18.2	54.0
11896.000000	50.2	41.1	1000.000	202.0	H	0.0	5.1	23.8	74.0	12.9	54.0
17115.400000	52.3	43.2	1000.000	196.0	H	0.0	12.4	21.7	74.0	10.8	54.0

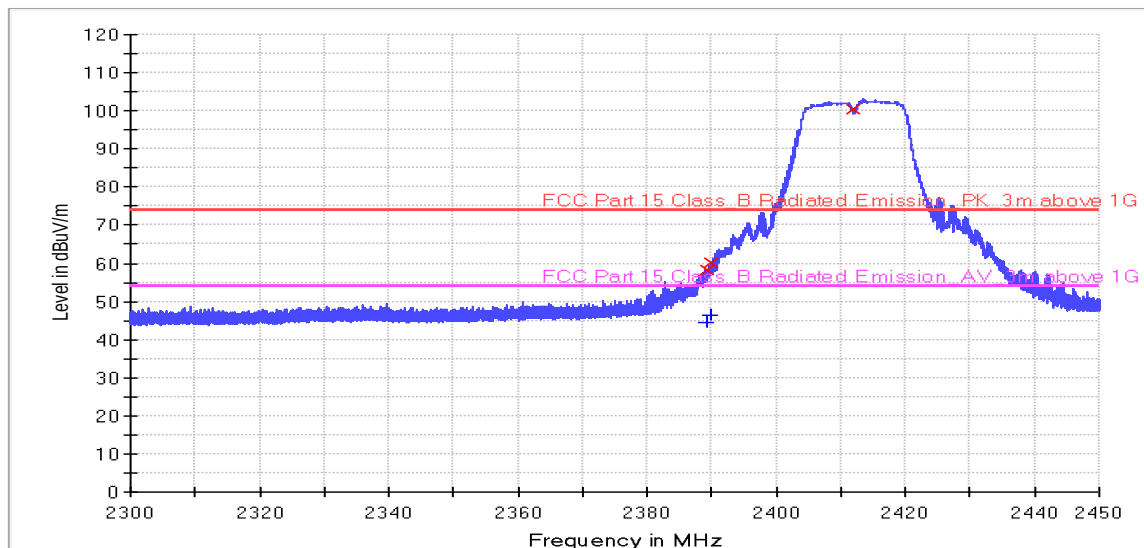
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4817.500000	46.3	35.7	1000.000	102.0	V	0.0	-2.7	27.7	74.0	18.3	54.0
17216.500000	52.5	41.7	1000.000	120.0	V	0.0	12.6	21.5	74.0	12.3	54.0

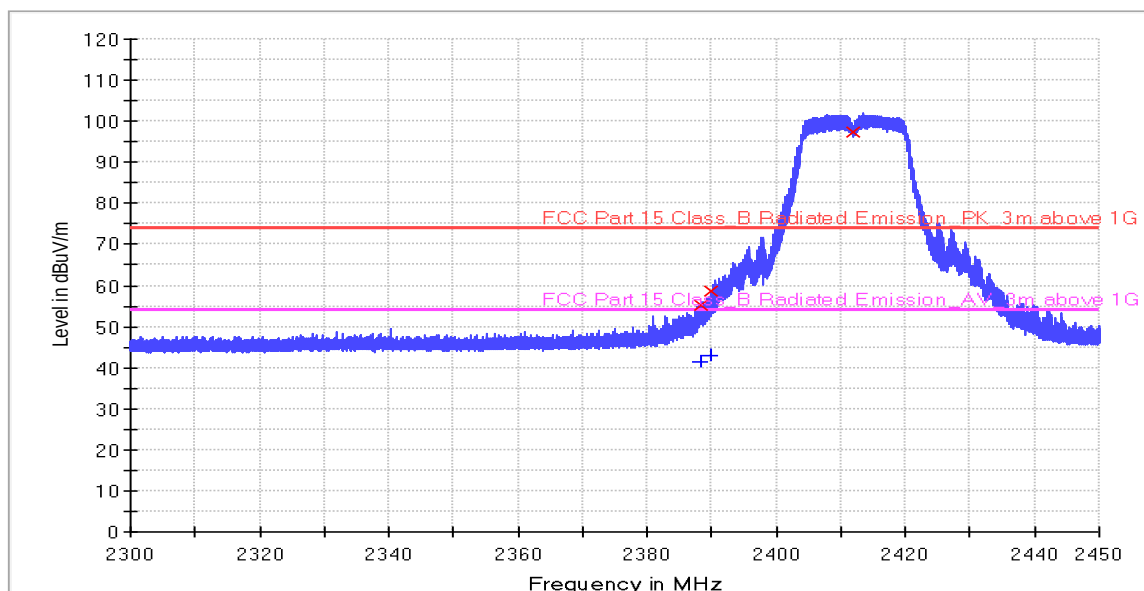
RE_HF907_BRF_Pre



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/)
2389.300000	58.2	44.5	1000.000	264.0	H	0.0	-0.8	15.8	74.0	9.5	54.0
2390.000000	60.2	46.3	1000.000	112.0	H	0.0	-0.8	13.8	74.0	7.7	54.0

RE_HF907_BRF_Pre



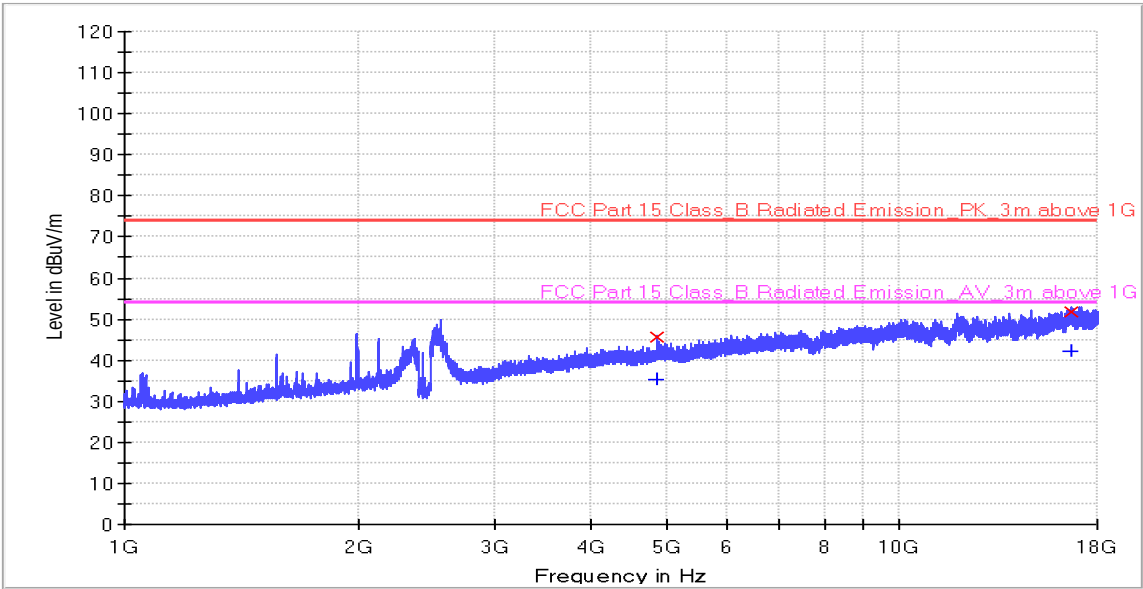
Limit and Margin

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/)
2388.400000	55.1	41.3	1000.000	237.0	V	2.0	-0.8	18.9	74.0	12.7	54.0
2390.000000	58.7	42.9	1000.000	194.0	V	2.0	-0.8	15.3	74.0	11.1	54.0



802.11G:2437MHz

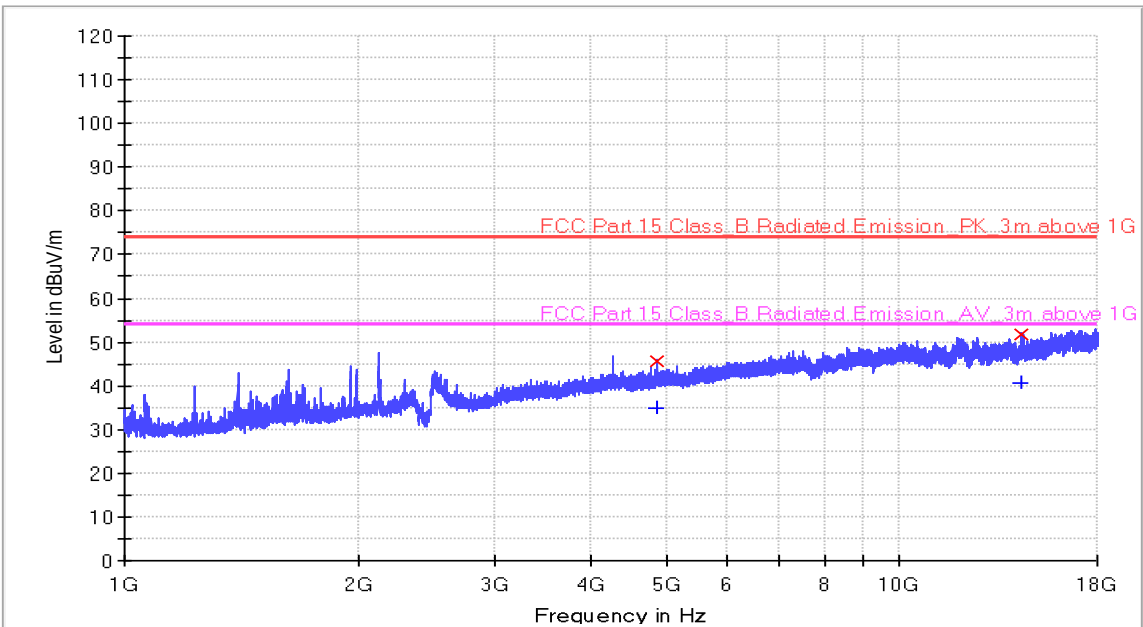
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4872.700000	45.8	35.2	1000.000	298.0	H	0.0	-2.5	28.2	74.0	18.8	54.0
16706.800000	51.7	42.1	1000.000	171.0	H	0.0	11.9	22.3	74.0	11.9	54.0

RE_HF907_BRF_Pre



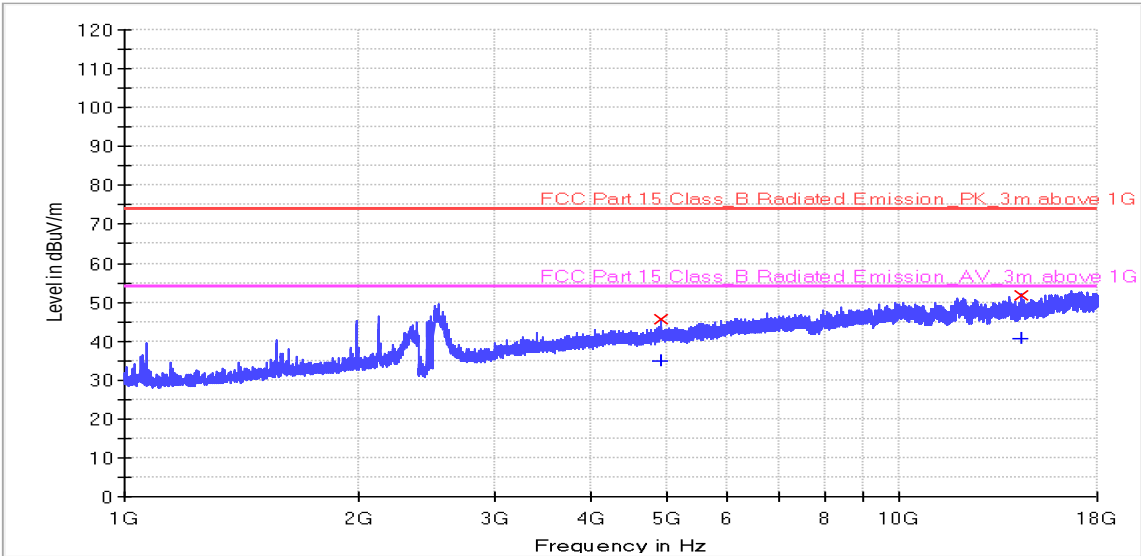
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4874.500000	45.7	34.9	1000.000	114.0	V	0.0	-2.4	28.3	74.0	19.1	54.0
14377.900000	51.6	40.6	1000.000	209.0	V	0.0	7.2	22.4	74.0	13.4	54.0



802.11G:2462MHz

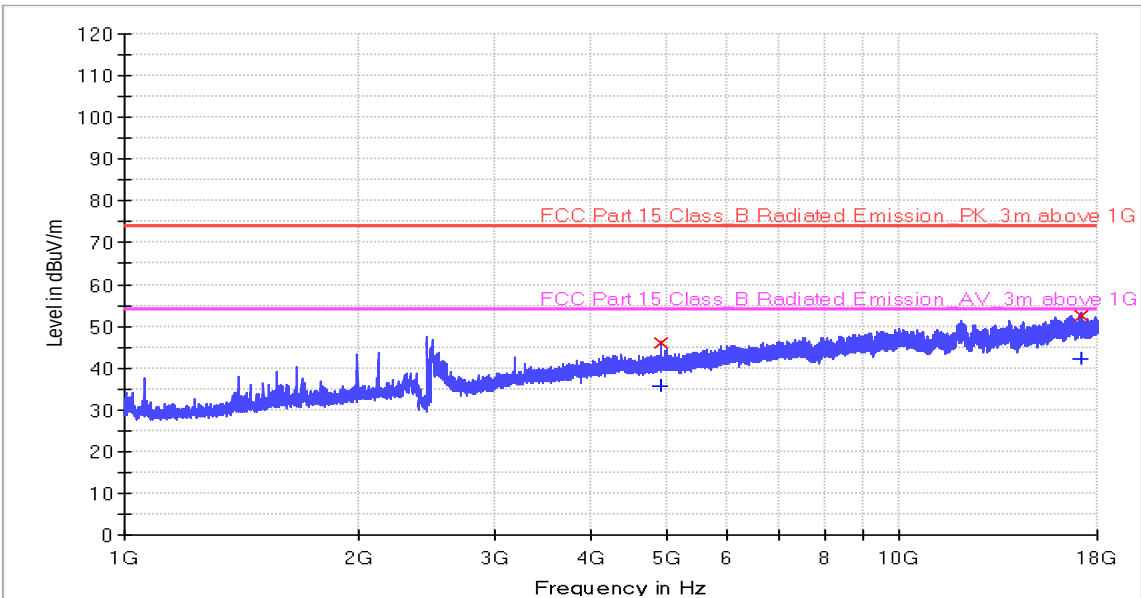
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4924.900000	45.5	34.7	1000.000	286.0	H	0.0	-2.3	28.5	74.0	19.3	54.0
14370.400000	51.9	40.5	1000.000	285.0	H	0.0	7.2	22.1	74.0	13.5	54.0

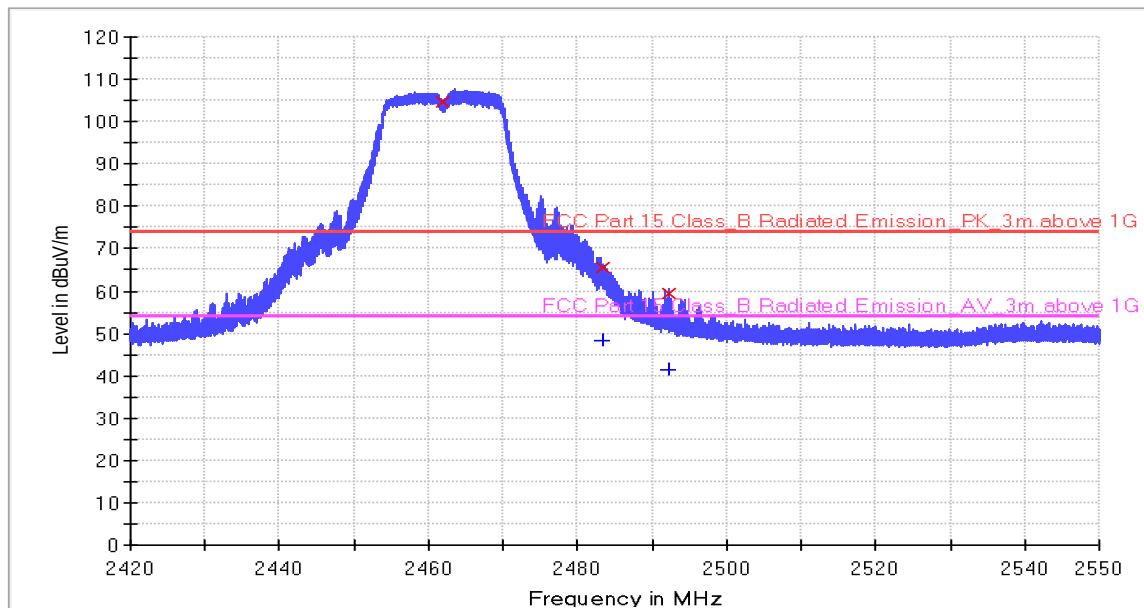
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4924.300000	46.1	35.8	1000.000	284.0	V	0.0	-2.3	27.9	74.0	18.2	54.0
17205.700000	52.4	42.2	1000.000	293.0	V	0.0	12.6	21.6	74.0	11.8	54.0

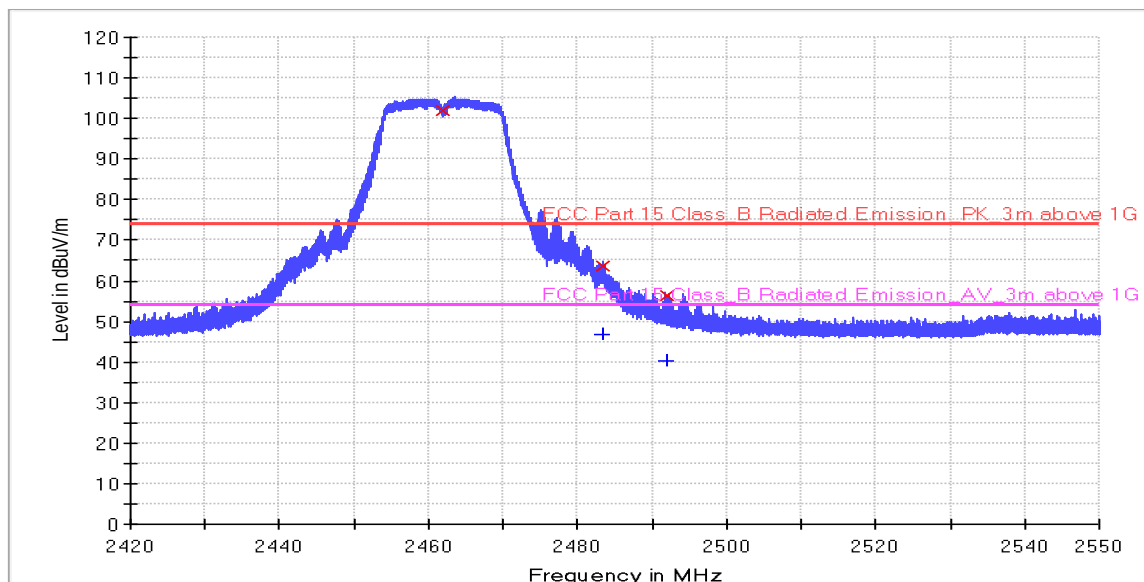
RE_HF907_BRF_Pre



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)
2483.500000	65.7	48.4	1000.000	234.0	H	1.0	-0.3	8.3	74.0	5.6	54.0
2492.200000	59.4	41.5	1000.000	249.0	H	1.0	-0.3	14.6	74.0	12.5	54.0

RE_HF907_BRF_Pre



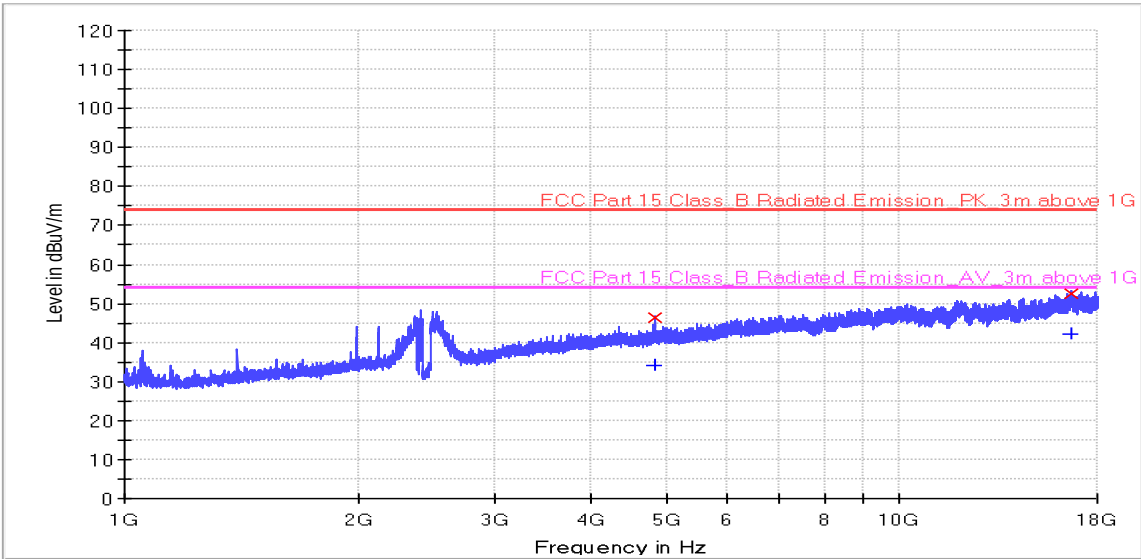
Limit and Margin

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)
2483.500000	63.8	46.9	1000.000	251.0	V	359.0	-0.3	10.2	74.0	7.1	54.0
2491.900000	56.3	40.2	1000.000	152.0	V	359.0	-0.3	17.7	74.0	13.8	54.0



802.11N20:2462MHz

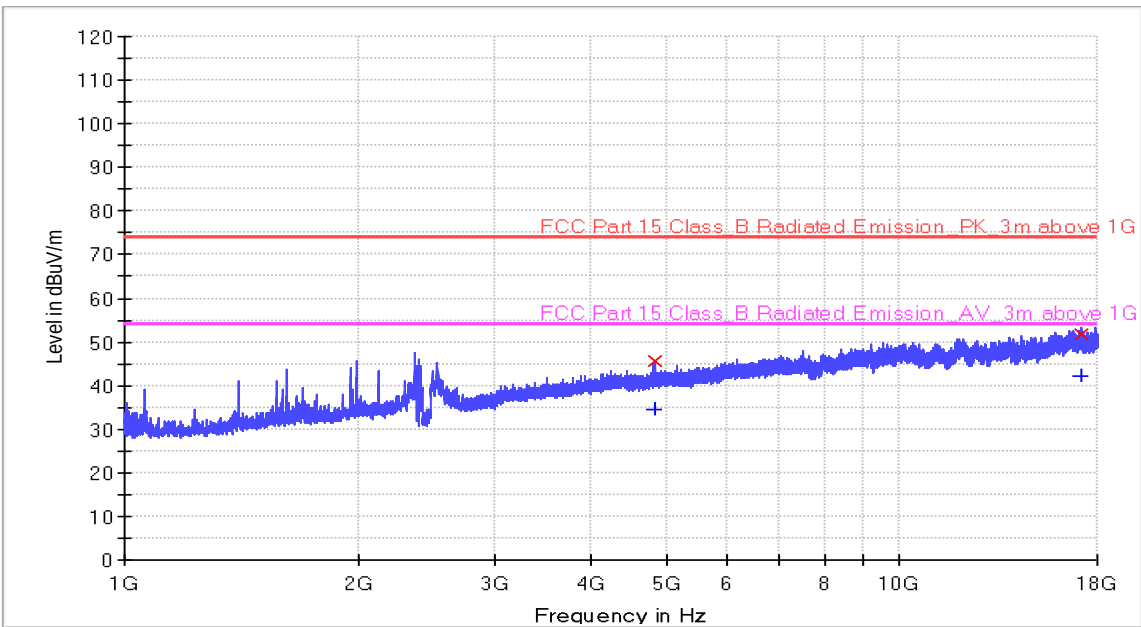
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4827.700000	46.3	34.1	1000.000	203.0	H	0.0	-2.6	27.7	74.0	19.9	54.0
16695.700000	52.5	42.3	1000.000	123.0	H	0.0	11.9	21.5	74.0	11.7	54.0

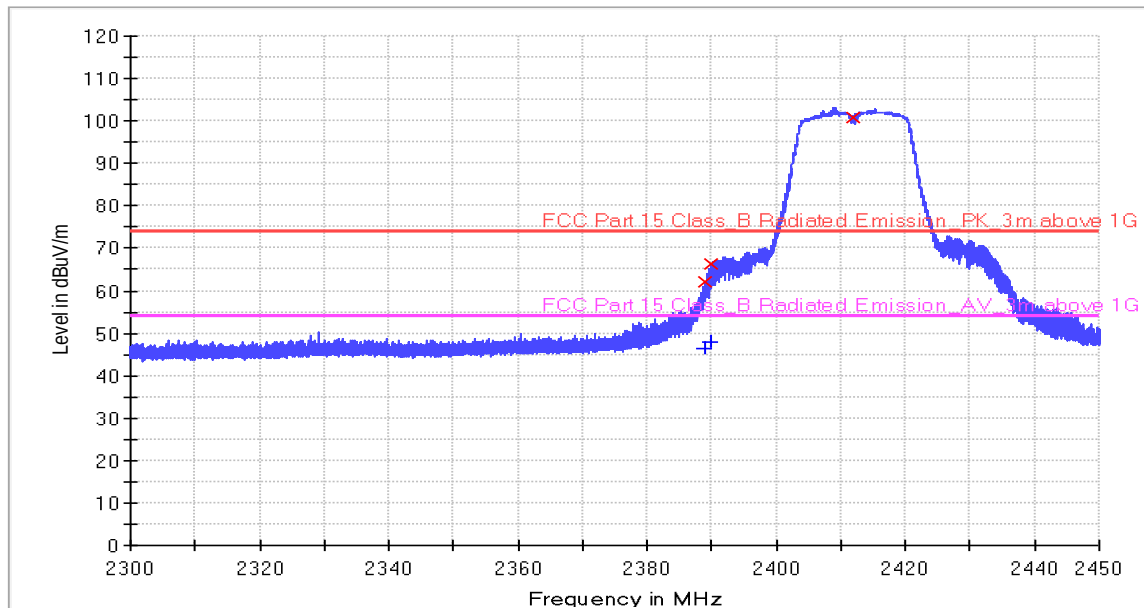
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4826.200000	45.7	34.5	1000.000	166.0	V	0.0	-2.6	28.3	74.0	19.5	54.0
17153.200000	51.8	42.2	1000.000	199.0	V	0.0	12.5	22.2	74.0	11.8	54.0

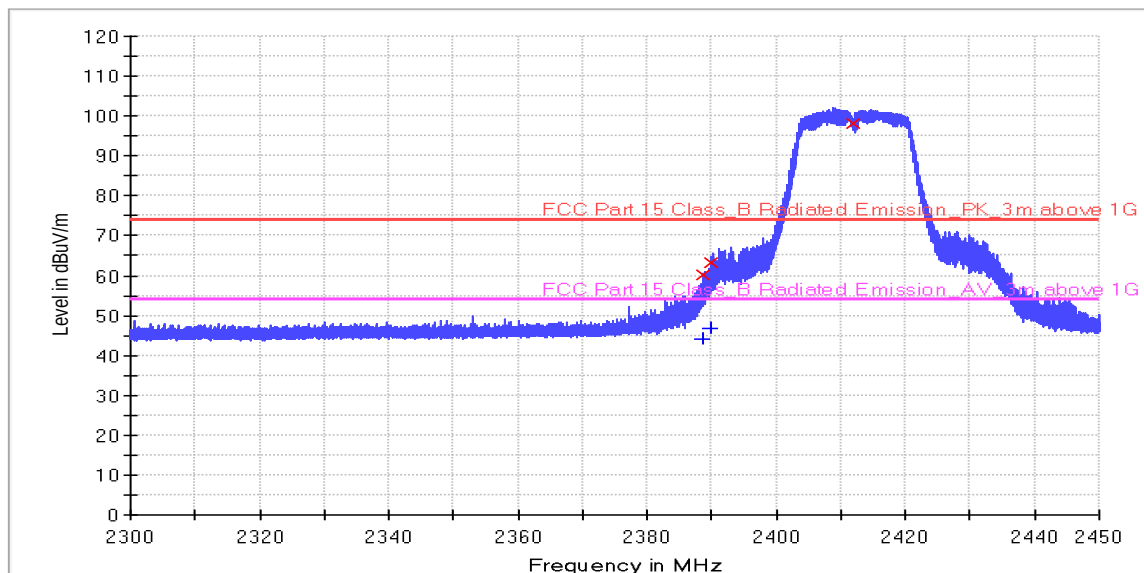
RE_HF907_BRF_Pre



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/)
2389.000000	62.2	46.2	1000.000	173.0	H	0.0	-0.8	11.8	74.0	7.8	54.0
2390.000000	66.5	47.8	1000.000	128.0	H	0.0	-0.8	7.5	74.0	6.2	54.0

RE_HF907_BRF_Pre



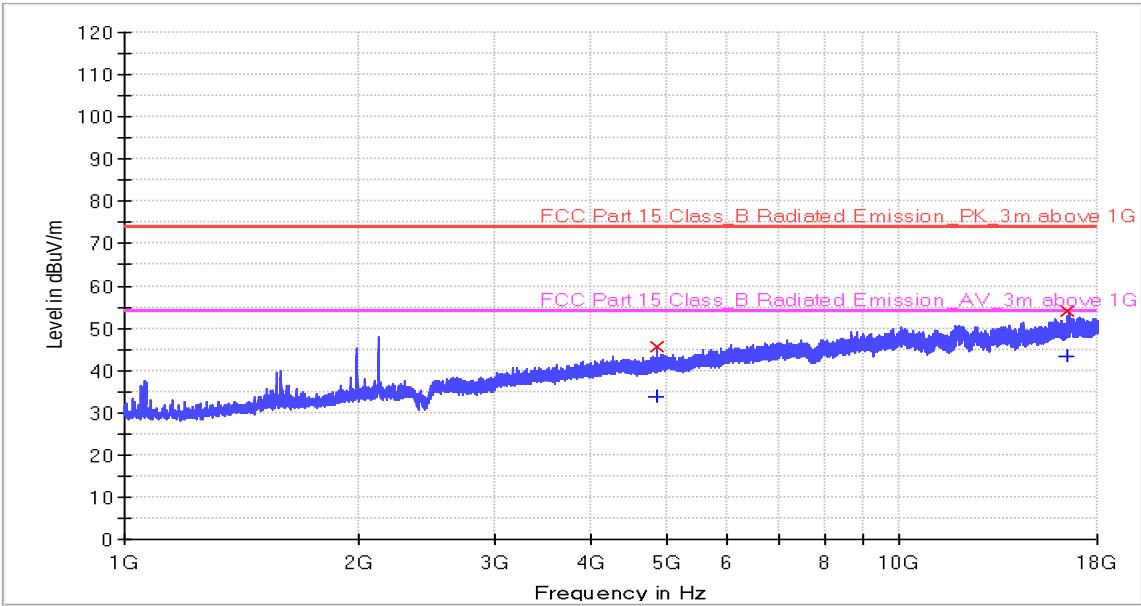
Limit and Margin

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/)
2388.700000	60.1	44.1	1000.000	110.0	V	359.0	-0.8	13.9	74.0	9.9	54.0
2390.000000	63.2	46.9	1000.000	162.0	V	359.0	-0.8	10.8	74.0	7.1	54.0



802.11N20:2437MHz

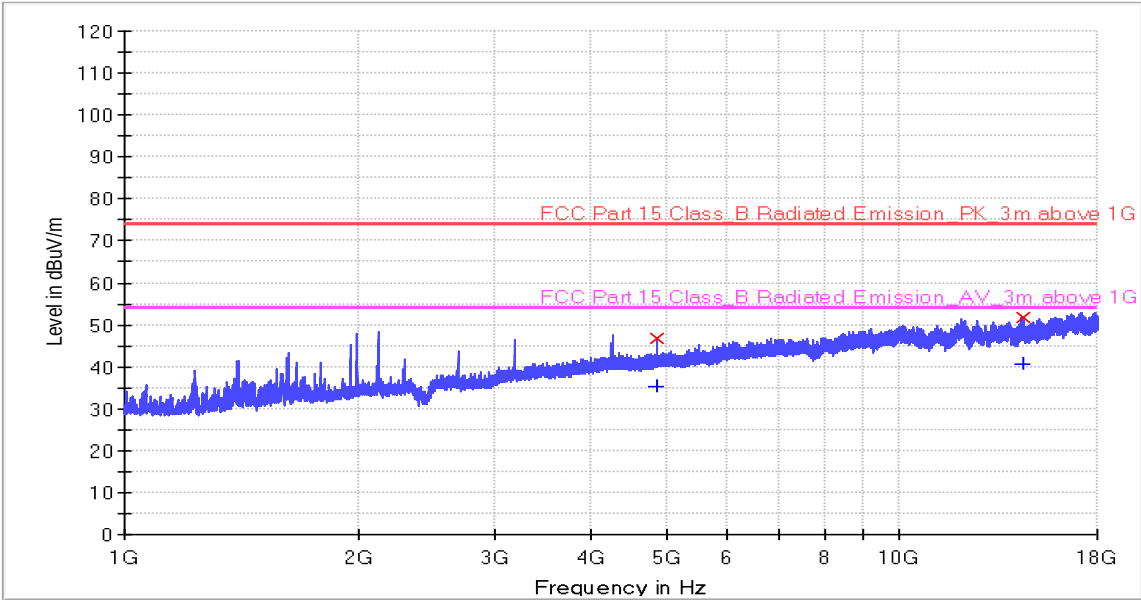
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4874.500000	45.6	33.8	1000.000	149.0	H	0.0	-2.4	28.4	74.0	20.2	54.0
16506.100000	53.9	43.5	1000.000	300.0	H	0.0	11.3	20.1	74.0	10.5	54.0

RE_HF907_BRF_Pre

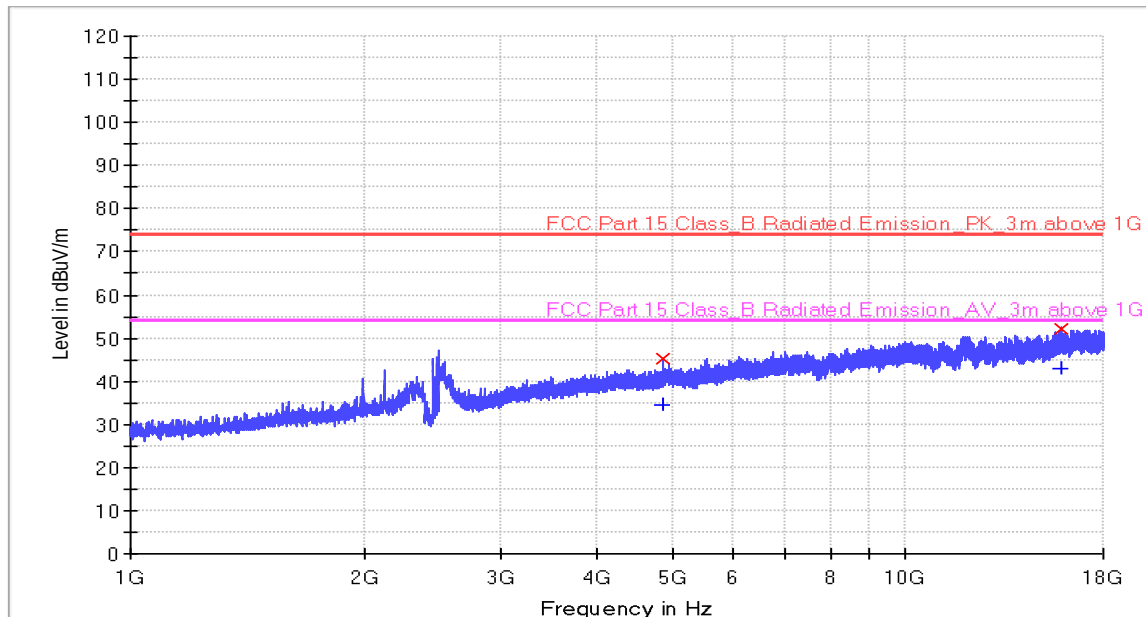


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4874.800000	46.6	35.2	1000.000	269.0	V	0.0	-2.4	27.4	74.0	18.8	54.0
14452.300000	51.6	40.7	1000.000	112.0	V	0.0	7.3	22.4	74.0	13.3	54.0

802.11N20:2462MHz

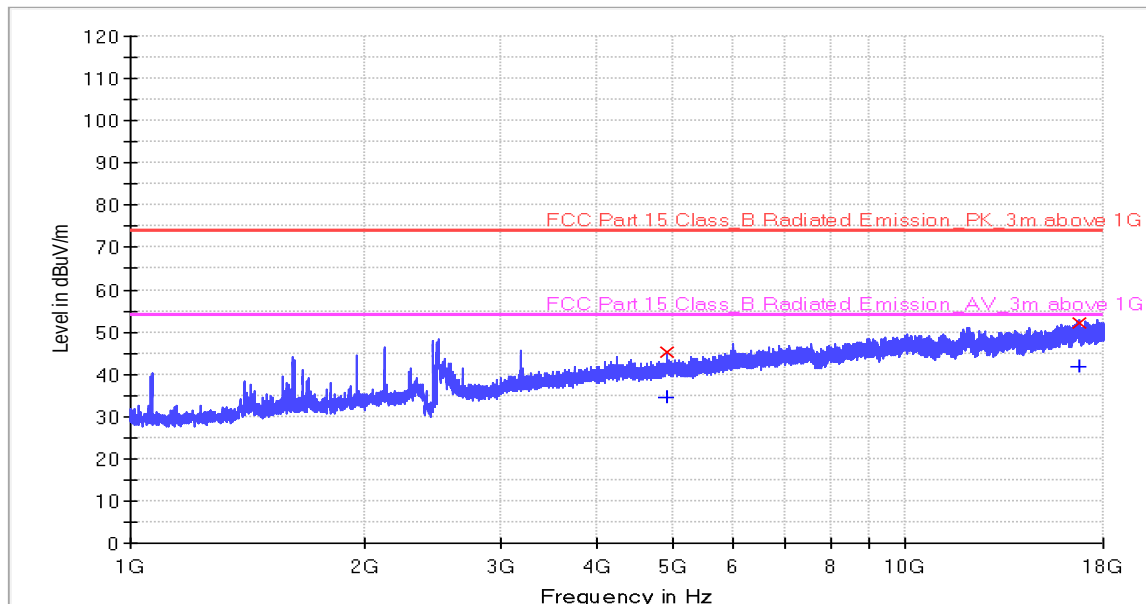
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4874.500000	45.2	34.4	1000.000	201.0	H	0.0	-2.4	28.8	74.0	19.6	54.0
15885.700000	52.3	42.9	1000.000	104.0	H	0.0	9.8	21.7	74.0	11.1	54.0

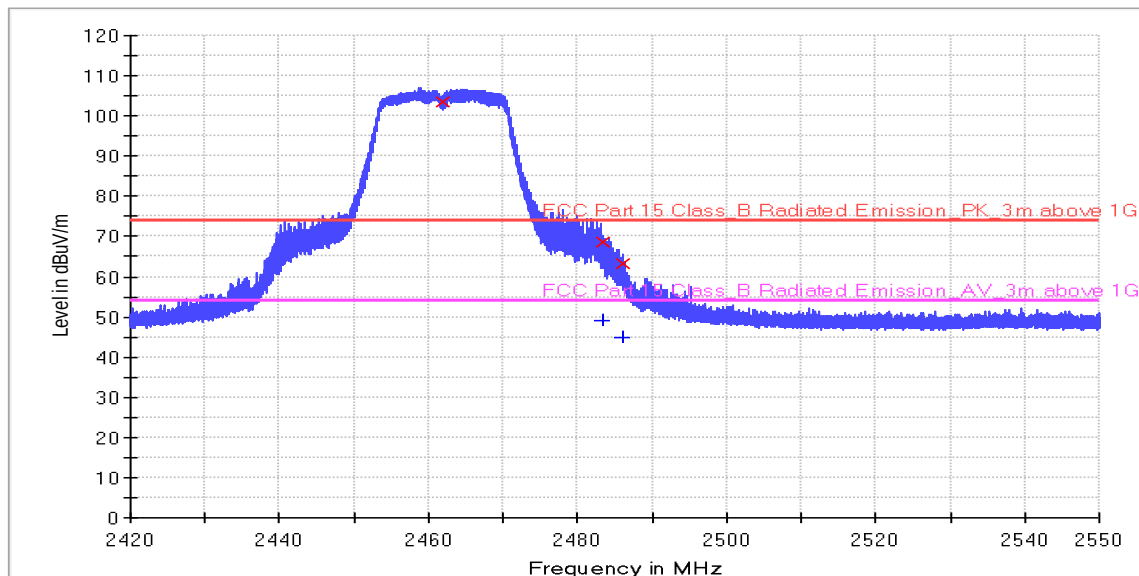
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4924.300000	45.3	34.5	1000.000	278.0	V	0.0	-2.3	28.7	74.0	19.5	54.0
16728.700000	52.3	41.8	1000.000	298.0	V	0.0	11.9	21.7	74.0	12.2	54.0

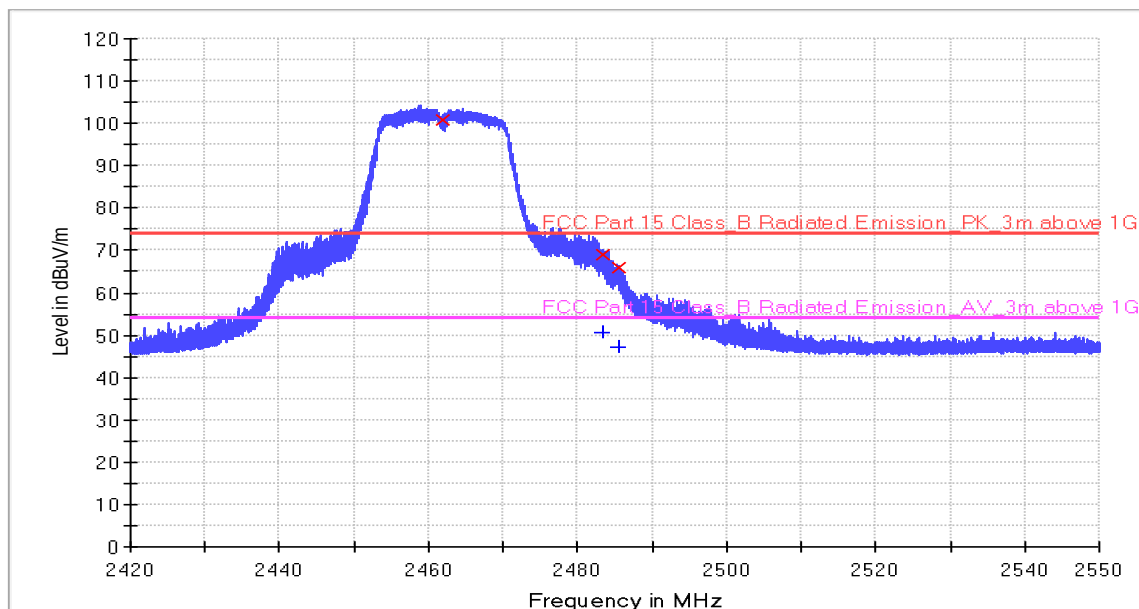
RE_HF907_BRF_Pre



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/)
2483.500000	68.8	49.1	1000.000	244.0	H	1.0	-0.3	5.2	74.0	4.9	54.0
2486.200000	63.2	44.7	1000.000	206.0	H	1.0	-0.3	10.8	74.0	9.3	54.0

RE_HF907_BRF_Pre



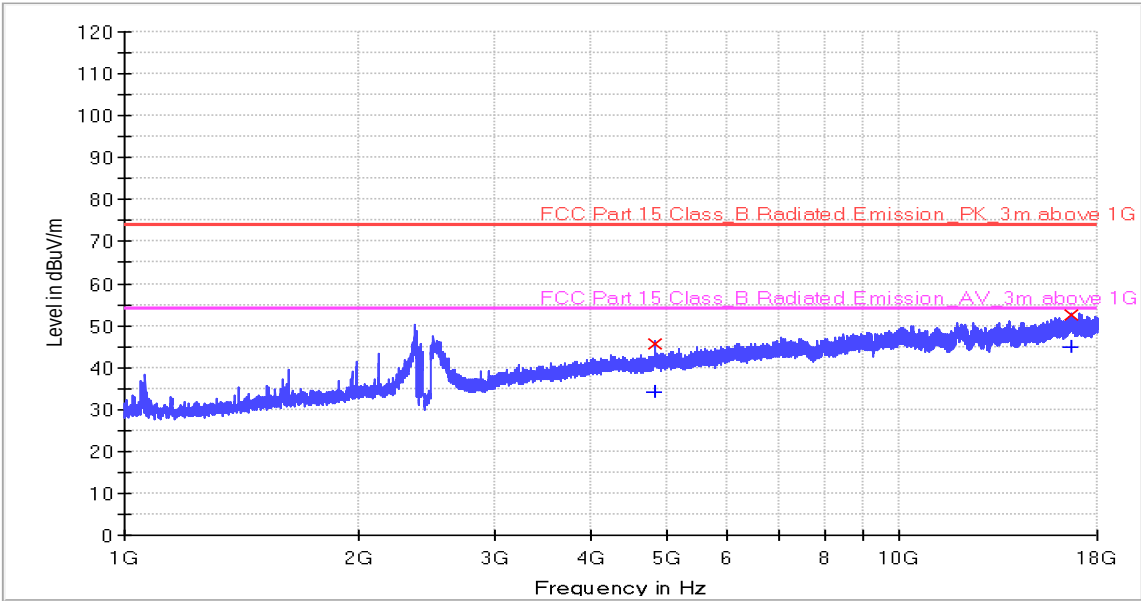
Limit and Margin

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/)
2483.500000	69.2	50.7	1000.000	289.0	V	359.0	-0.3	4.8	74.0	3.3	54.0
2485.600000	66.1	47.2	1000.000	125.0	V	210.0	-0.3	7.9	74.0	6.8	54.0



802.11N40:2422MHz

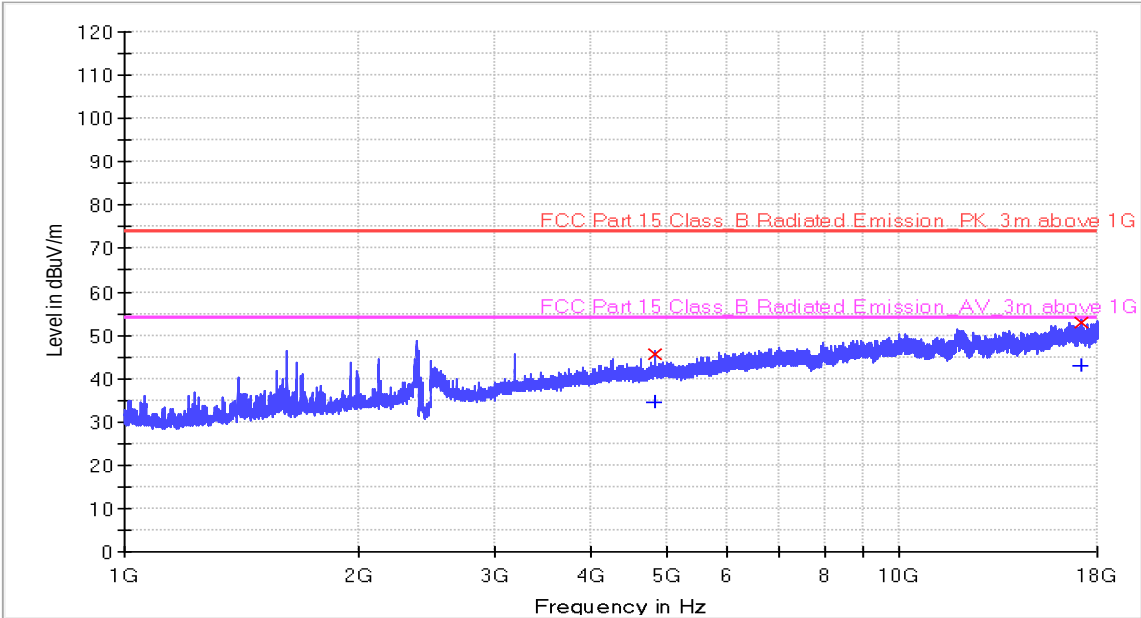
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4844.800000	45.8	34.1	1000.000	127.0	H	0.0	-2.6	28.2	74.0	19.9	54.0
16676.200000	52.7	44.8	1000.000	278.0	H	0.0	11.8	21.3	74.0	9.2	54.0

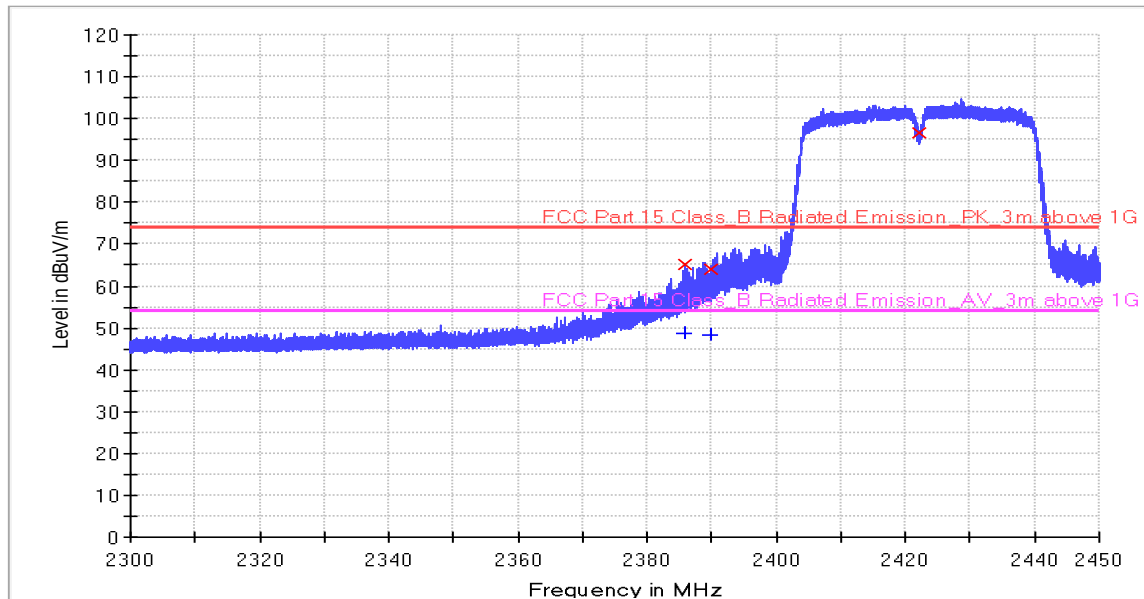
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK (dBuV/m)	Margin - AV (dB)	Limit - AV (dBuV/m)
4843.600000	45.7	34.4	1000.000	170.0	V	0.0	-2.6	28.2	74.0	19.6	54.0
17149.900000	52.8	43.1	1000.000	272.0	V	0.0	12.5	21.3	74.0	10.9	54.0

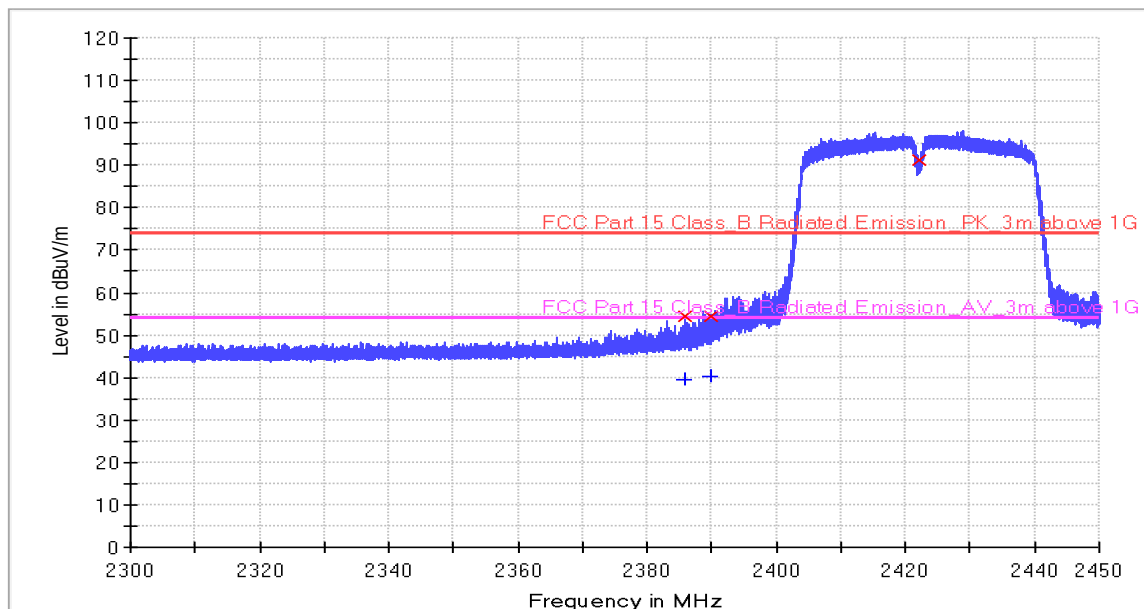
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV)	Margin - AV (dB)	Limit - AV (dBuV)
2386.000000	65.1	48.7	1000.000	129.0	H	359.0	-0.8	8.9	74.0	5.3	54.0
2390.000000	64.2	48.3	1000.000	175.0	H	359.0	-0.8	9.8	74.0	5.7	54.0

RE_HF907_BRF_Pre



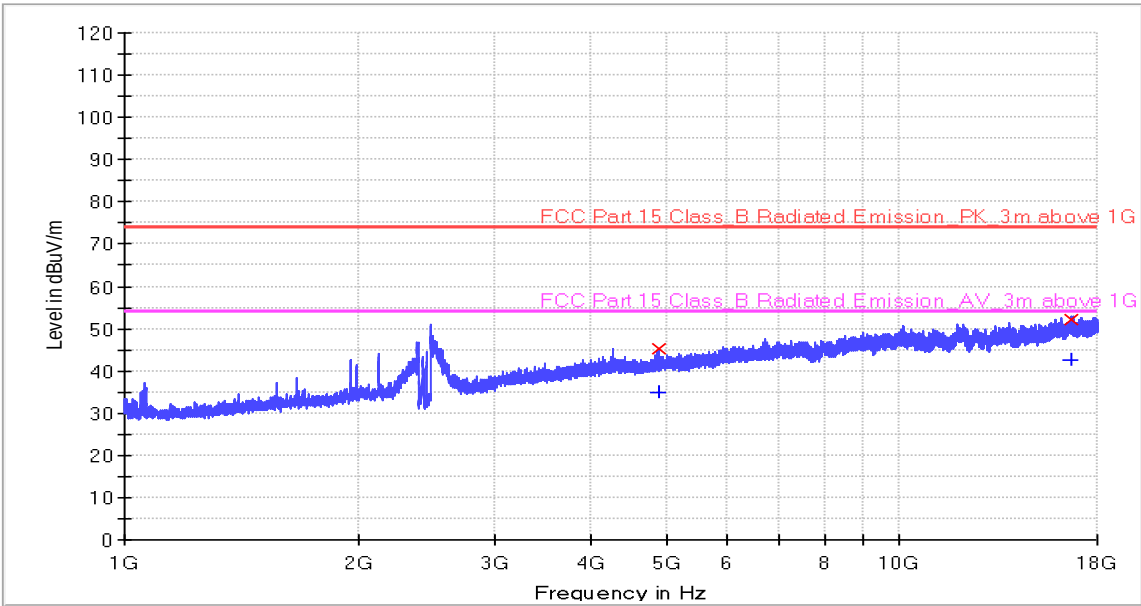
Limit and Margin

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)
2385.720000	54.3	39.6	1000.000	199.0	V	1.0	-0.8	19.7	74.0	14.4	54.0
2390.000000	54.5	40.3	1000.000	194.0	V	1.0	-0.8	19.5	74.0	13.7	54.0



802.11N40:2437MHz

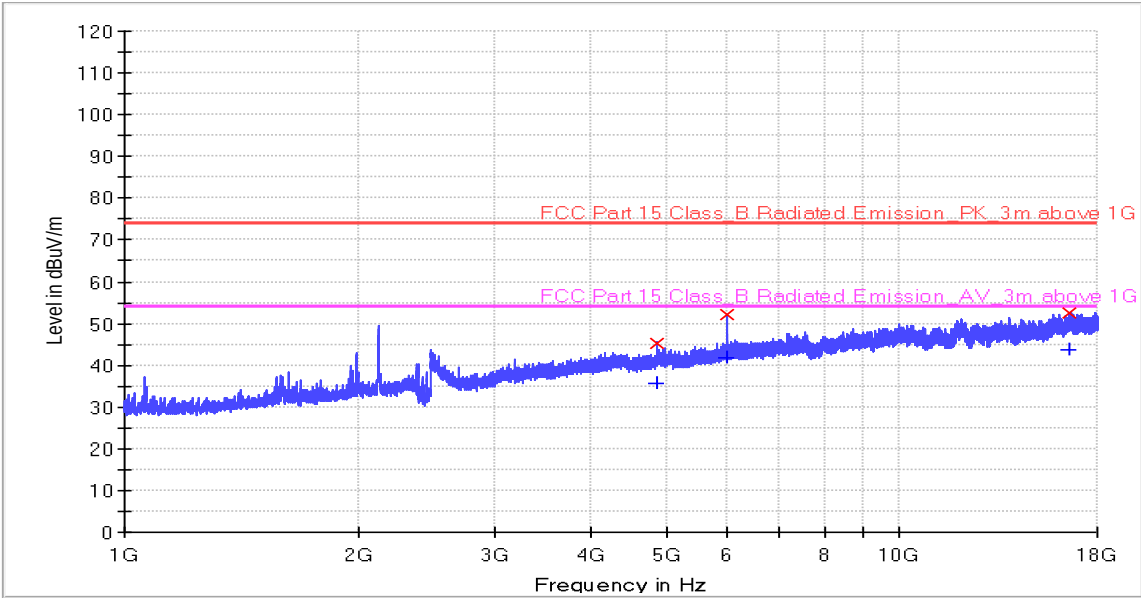
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4879.300000	45.3	34.7	1000.000	155.0	H	0.0	-2.4	28.7	74.0	19.3	54.0
16624.600000	52.2	42.5	1000.000	287.0	H	0.0	11.7	21.8	74.0	11.5	54.0

RE_HF907_BRF_Pre



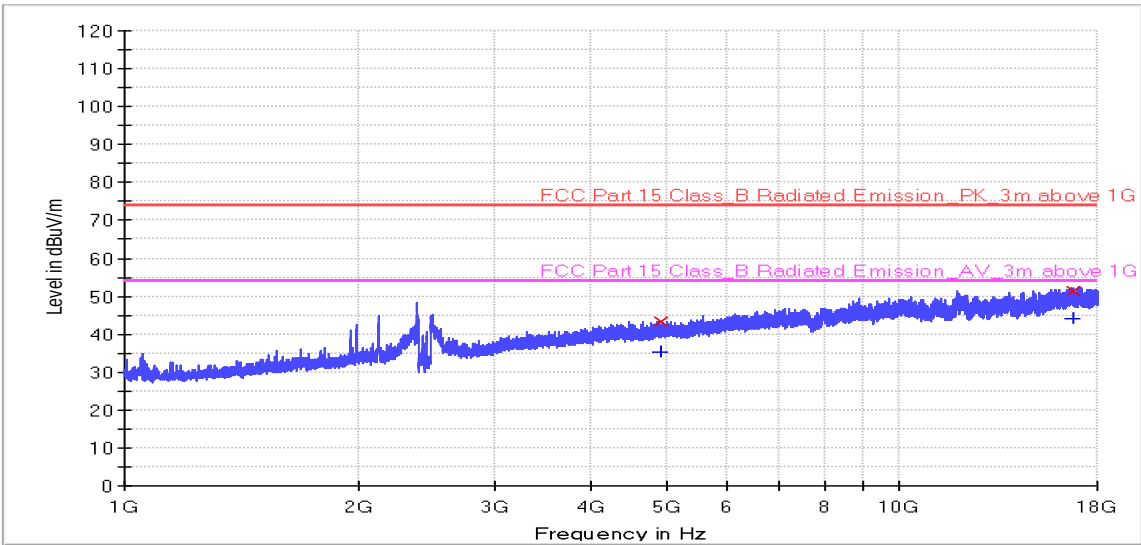
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4874.500000	45.3	35.7	1000.000	117.0	V	0.0	-2.4	28.7	74.0	18.3	54.0
5977.900000	52.2	41.9	1000.000	223.0	V	0.0	-0.8	21.8	74.0	12.1	54.0
16599.100000	52.7	43.6	1000.000	275.0	V	0.0	11.6	21.3	74.0	10.4	54.0



802.11N40:2452MHz

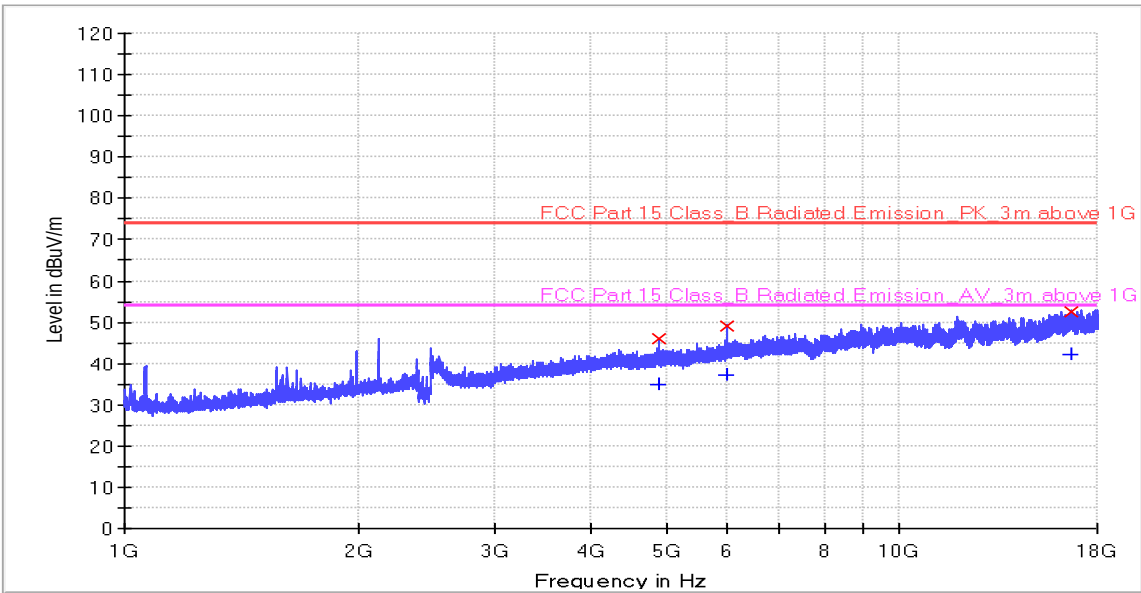
RE_HF907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4908.400000	43.2	35.4	1000.000	173.0	H	0.0	-2.3	30.8	74.0	18.6	54.0
16772.200000	51.4	44.2	1000.000	103.0	H	0.0	11.9	22.6	74.0	9.8	54.0

RE_HF907_BRF_Pre

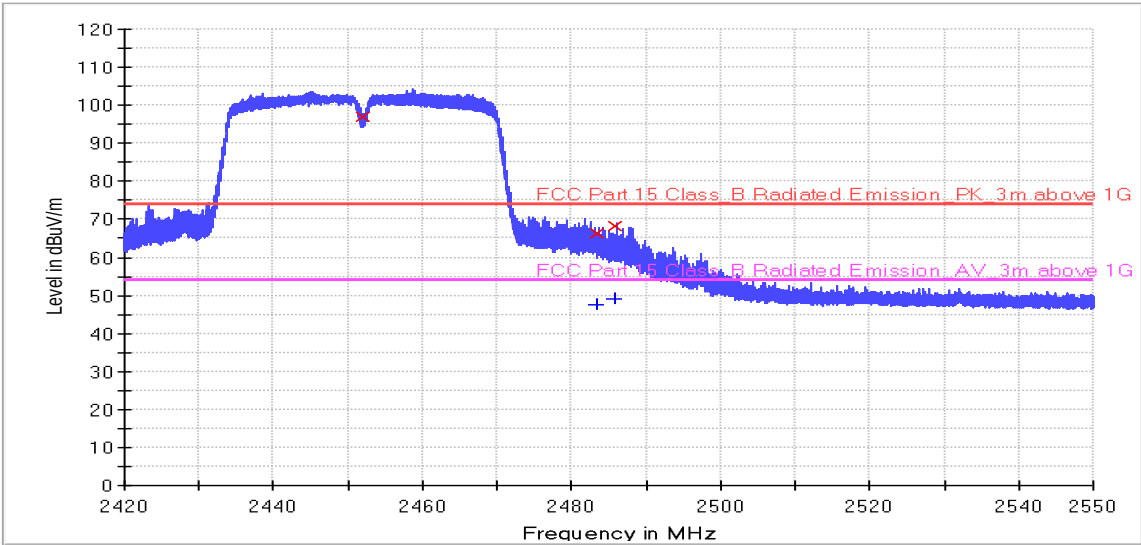


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - PK (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
4904.200000	46.1	34.8	1000.000	285.0	V	0.0	-2.3	27.9	74.0	19.2	54.0
5994.700000	48.9	37.3	1000.000	121.0	V	0.0	-0.8	25.1	74.0	16.7	54.0
16653.700000	52.7	42.3	1000.000	255.0	V	0.0	11.8	21.3	74.0	11.7	54.0



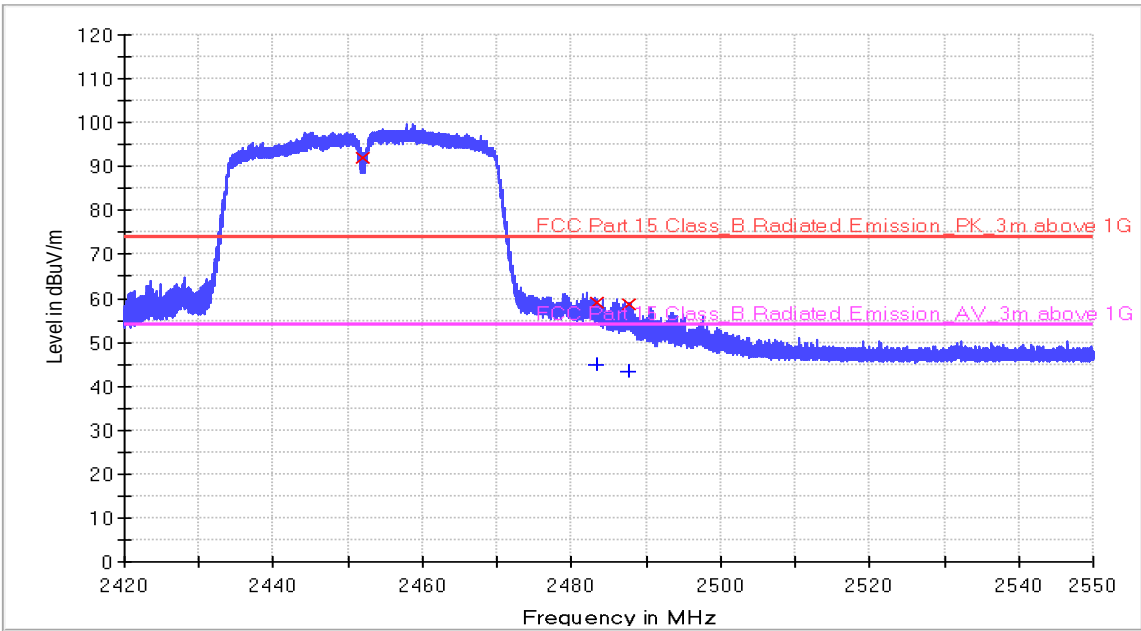
RE_HF 907_BRF_Pre



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	AV (dBuV/m)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/)	Margin - AV (dB)	Limit - AV (dBuV/)
2483.500000	66.4	47.5	1000.000	263.0	H	359.0	-0.3	7.6	74.0	6.5	54.0
2485.900000	68.2	48.9	1000.000	172.0	H	359.0	-0.3	5.8	74.0	5.1	54.0

RE_HF 907_BRF_Pre



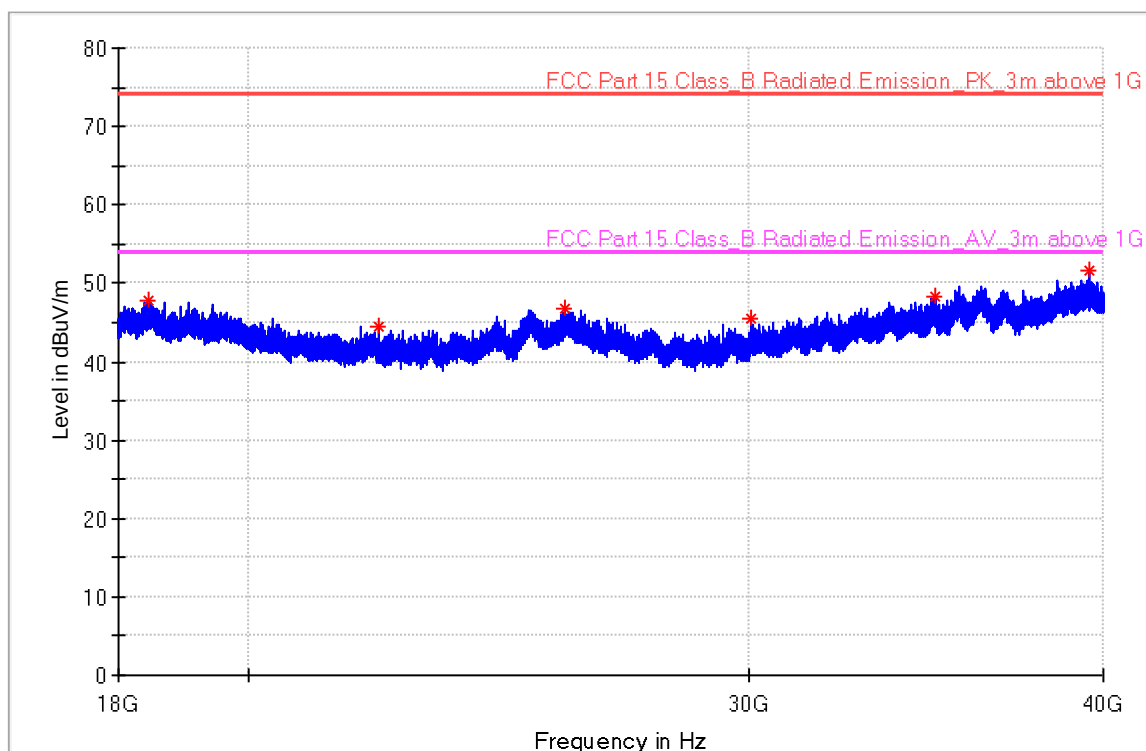
Limit and Margin

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/)
2483.500000	58.9	44.7	1000.000	263.0	V	1.0	-0.3	15.1	74.0	9.3	54.0
2487.700000	58.6	43.2	1000.000	248.0	V	1.0	-0.3	15.4	74.0	10.8	54.0

Worst case Radiated Emission 18MHz-25GHz

EUT Name: Smart Battery Doorbell
 Model: SC162-WCE3
 Client: Zhejiang Lingzhu Technology Co., Ltd
 Op Cond: Power on and TX_2462MHz at g mode
 Operator: Tianji XU
 Test Spec: FCC Part 15.209(a)
 Comment: Horizontal
 Sample No: SHA-884460-1

Full Spectrum



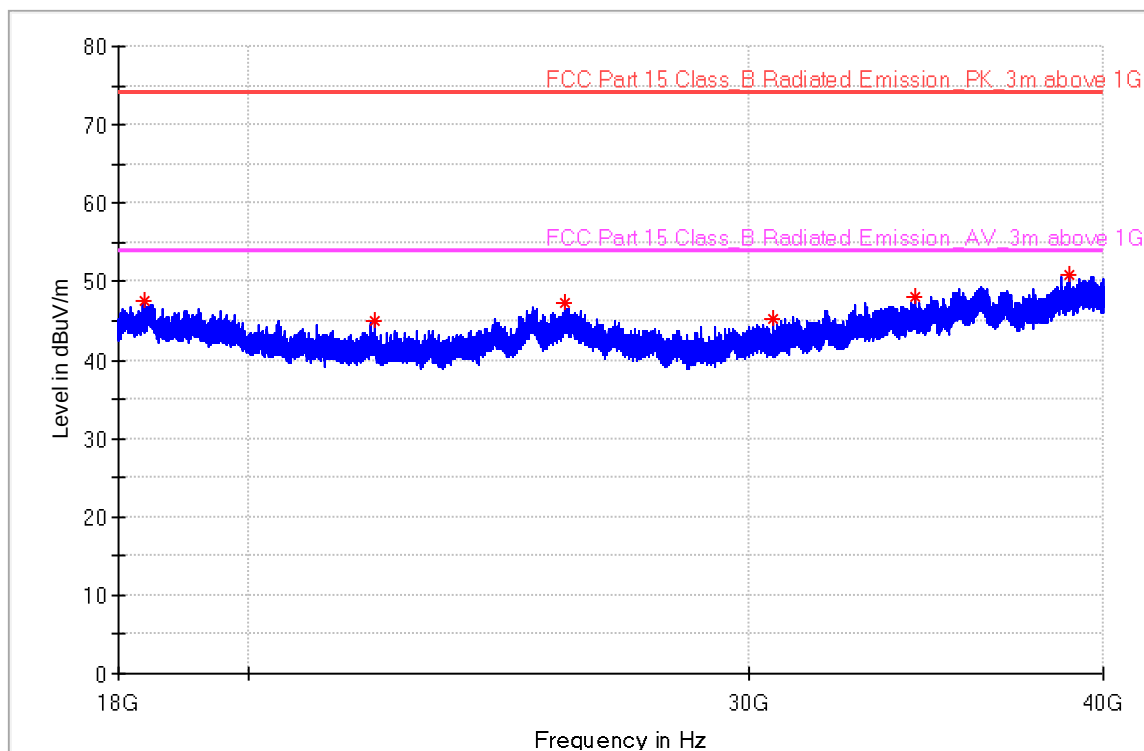
Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18426.250000	---	43.26	54.00	10.74	100.0	H	0.0	8.1
18437.250000	47.82	---	74.00	26.18	100.0	H	1.0	8.1
21382.500000	---	39.15	54.00	14.85	100.0	H	188.0	8.6
22224.000000	44.50	---	74.00	29.50	100.0	H	263.0	8.8
25121.812500	---	41.78	54.00	12.22	100.0	H	126.0	9.1
25850.562500	46.81	---	74.00	27.19	100.0	H	0.0	9.6
26967.750000	---	40.23	54.00	13.77	100.0	H	112.0	9.1
30040.187500	45.40	---	74.00	28.60	100.0	H	92.0	10.1
34824.500000	---	43.01	54.00	10.99	100.0	H	98.0	12.2
34894.625000	48.20	---	74.00	25.80	100.0	H	316.0	12.2
39527.687500	51.53	---	74.00	22.47	100.0	H	92.0	13.7
39662.437500	---	45.48	54.00	8.52	100.0	H	85.0	13.8

Worst case Radiated Emission 18MHz-25GHz

EUT Name: Smart Battery Doorbell
Model: SC162-WCE3
Client: Zhejiang Lingzhu Technology Co., Ltd
Op Cond: Power on and TX_2462MHz at g mode
Operator: Tianji XU
Test Spec: FCC Part 15.209(a)
Comment: Vertical
Sample No: SHA-884460-1

Full Spectrum



11 Test Equipment List

List of Test Instruments
Test Site1

	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DATE	CAL. DUE DATE
C	Wideband power sensor	Rohde & Schwarz	NRP-Z81	105903	2025-2-19	2026-2-18
	10dB Attenuator	Aeroflex Weinschel	CG-4689	93459	2025-2-19	2026-2-18
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

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
CE	EMC 32	Rohde & Schwarz	V9.15.03

C - Conducted RF tests

- Conducted peak output power

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 4.3.3.



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-----