RF TEST REPORT

Applicant	MobiWire SAS
FCC ID	QPN-DAKOTA
Brand	MobiWire
Product	2G Feature phone
Model	Dakota
Report No.	RXA1603-0036RF01
Issue Date	April 22, 2016

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC CFR47 Part 15C (2014)**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Lingling Kang

Reviewed by: lingling Kang/Manager

Kai Xu

Approved by: Kai Xu/Director

TA Technology (Shanghai) Co., Ltd.

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Summary of Measurement Results

Number	Summary of measurements of results	Clause in FCC rules	Verdict
1	Peak Power Output -Conducted	15.247(b)(1)	PASS
2	Occupied Bandwidth (20dB)	15.247(a)(1)	PASS
3	Frequency Separation	15.247(a)(1)	PASS
4	Time of Occupancy (Dwell Time)	15.247(a)(1)(iii)	PASS
5	Band Edge Compliance	15.247(d)	PASS
6	Spurious Radiated Emissions in the restricted band	15.247(d),15.205,15.209	PASS
7	Number of Hopping Frequency	15.247(a)(1)(iii)	PASS
8	Spurious RF Conducted Emissions	15.247(d)	PASS
9	Radiates Emission	15.247(d),15.205,15.209	PASS
10	AC Power Line Conducted Emission	15.207	PASS
Date of Testing: March 15, 2016~ April 11, 2016			

1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of TA technology (shanghai) co., Ltd.The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein .Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above. This report must not be used by the client to claim product certification, approval, or endorsement by CNAS or any government agencies.

1.2 Test facility

CNAS (accreditation number: L2264)

TA Technology (Shanghai) Co., Ltd. has obtained the accreditation of China National Accreditation Service for Conformity Assessment (CNAS).

FCC (recognition number is 428261)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements.

IC (recognition number is 8510A)

TA Technology (Shanghai) Co., Ltd. has been listed by industry Canada to perform electromagnetic emission measurement.

A2LA(Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.

1.3 Testing Location

Company:	TA Technology (Shanghai) Co., Ltd.
Address:	No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China
City:	Shanghai
Post code:	201201
Country:	P. R. China
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E-mail:	xukai@ta-shanghai.com

2 General Description of Equipment under Test

Client Information

Applicant	MobiWire SAS
Applicant address	79 AVENUE FRANCOIS ARAGO 92017 NANTERRE CEDEX France.
Manufacturer	MOBIWIRE MOBILES (NINGBO) CO.,LTD
Manufacturer address	No.999,Dacheng East Road,Fenghua City,Zhejiang

Accessory Equipment Details

Name	Model	Manufacturer	Capacity	S/N
Battery	178102335 (NL11)	Ningbo Veken Battery Co., Ltd.	1400mAh	VK1602000484

General information

Model:	Dakota		
IMEI:	359816061158826		
HW Version:	V01		
SW Version:	V01		
Power Supply:	Battery/AC adapter		
Antenna Type:	Internal Antenna		
Test Mode(s):	Basic Rate	Enhanced Data Rate(EDR)	
Modulation Type:	Frequency Hopping Spread Spectrum (FHSS)		
	GFSK	π/4 DQPSK	8DQPSK
Packet Type: (Maximum Payload)	DH5	2DH5	3DH5
Max. Conducted Power	4.17dBm		
Tested Frequency Range(s):	2400 ~ 2483.5 MHz		
Note：1. The information of the EUT is declared by the manufacturer. Please refer to the specifications or user manual for details.			

2.1 Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards

FCC CFR47 Part 15C (2015) Radio Frequency Devices

ANSI C63.10 (2013)

DA00-705 Filing and Frequency Measurement Guidelines, For Frequency Hopping Spread Spectrum System (2000)

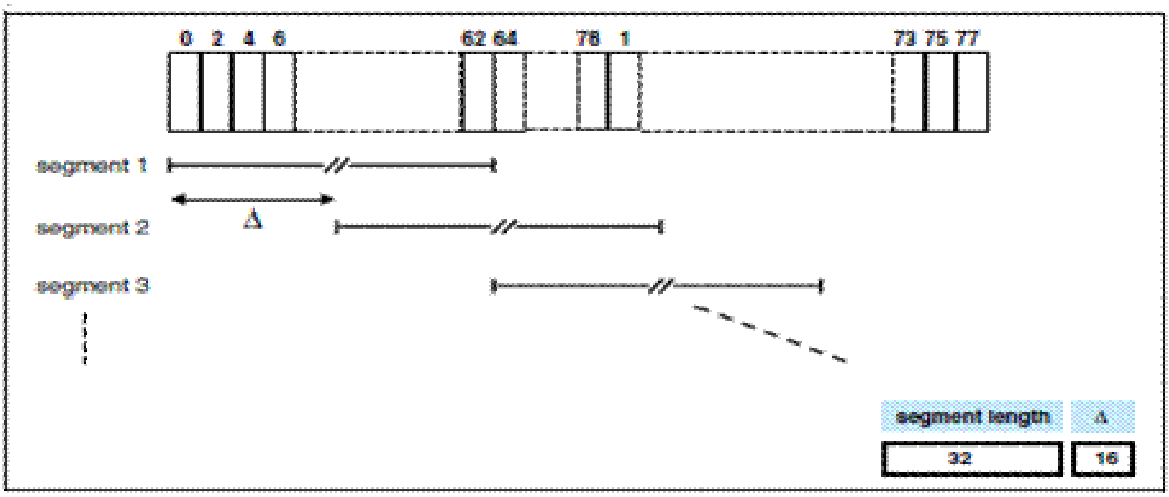
3 Information about the FHSS characteristics

3.1 Pseudorandom Frequency Hopping Sequence

Frequency Hopping Systems: A spread spectrum system in which the carrier is modulated with the coded information in a conventional manner causing a conventional spreading of the RF energy about the frequency carrier. The frequency of the carrier is not fixed but changes at fixed intervals under the direction of a coded sequence. The wide RF bandwidth needed by such a system is not required by spreading of the RF energy about the carrier but rather to accommodate the range of frequencies to which the carrier frequency can hop. The test of a frequency hopping system is that the near term distribution of hops appears random, the long term distribution appears evenly distributed over the hop set, and sequential hops are randomly distributed in both direction and magnitude of change in the hop set.

The selection scheme chooses a segment of 32 hop frequencies spanning about 64 MHz and visits these hops in a pseudo-random order. Next, a different 32-hop segment is chosen, etc. In the page, master page response, slave page response, page scan, inquiry, inquiry response and inquiry scan hopping sequences, the same 32-hop segment is used all the time (the segment is selected by the address; different devices will have different paging segments).

When the basic channel hopping sequence is selected, the output constitutes a pseudo-random sequence that slides through the 79 hops. The principle is depicted in the figure below.



Hop selection scheme in CONNECTION state.

Pseudorandom Frequency Hopping Sequence Table as below:

Channel: 08, 24, 40, 56, 40, 56, 72, 09, 01, 09, 33, 41, 33, 41, 65, 73, 53, 69, 06, 22, 04, 20, 36, 52, 38, 46, 70, 78, 68, 76, 21, 29, 10, 26, 42, 58, 44, 60, 76, 13, 03, 11, 35, 43, 37, 45, 69, 77, 55, 71, 08, 24, 08, 24, 40, 56, 40, 48, 72, 01, 72, 01, 25, 33, 12, 28, 44, 60, 42, 58, 74, 11, 05, 13, 37, 45, etc.

Each frequency used equally on the average by each transmitter.

The system receiver have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.

3.2 Equal Hopping Frequency Use

All Bluetooth units participating in the Pico net are time and hop-synchronized to the channel. Each new transmission event begins on the next channel in the hopping sequence after the final channel used in the previous transmission event.

3.3 System Receiver Input Bandwidth

Each channel bandwidth is 1MHz. The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.

4 Test Information

4.1 Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the worst case was recorded.

Test Modes		
Band	Radiated Test Cases	Conducted Test Cases
BT	3DH5 8DQPSK (Channel 0/39/78)	DH5 GFSK(Channel 0/39/78) 2DH5 π/4-DQPSK(Channel 0/39/78) 3DH5 8DQPSK(Channel 0/39/78)

Note: The maximum RF output power levels are 3DH5 for 8DQPSK modulation, For RSE and CSE, only the maximum RF output power is chosen.

4.2 Peak Power Output –Conducted

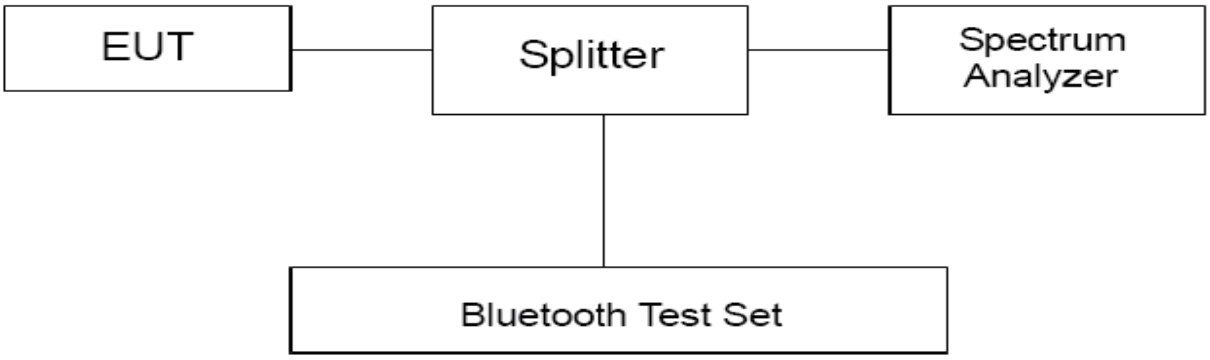
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

During the process of the testing, The EUT was connected to the spectrum analyzer and Bluetooth test set via a power splitter with a known loss. The EUT is controlled by the Bluetooth test set to ensure max power transmission with proper modulation. The peak detector is used. RBW is set to 2 MHz; VBW is set to 6 MHz. These measurements have been tested at following channels: 0, 39, and 78.

Test Setup



Limits

Rule Part 15.247 (b) (1)specifies that " For frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725–5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400–2483.5 MHz band: 0.125 watts."

Peak Output Power	≤ 0.125W (21dBm)

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U=0.44 dB.

Test Results

Channel	Frequency (MHz)	Peak Output Power (dBm)			Conclusion
		DH5	2DH5	3DH5	
0	2402	4.02	3.80	4.11	PASS
39	2441	3.20	2.94	3.24	PASS
78	2480	4.08	3.81	4.17	PASS

Note: The measured power density (dBm) has the offset with cable loss already.

4.3 Occupied Bandwidth (20dB)

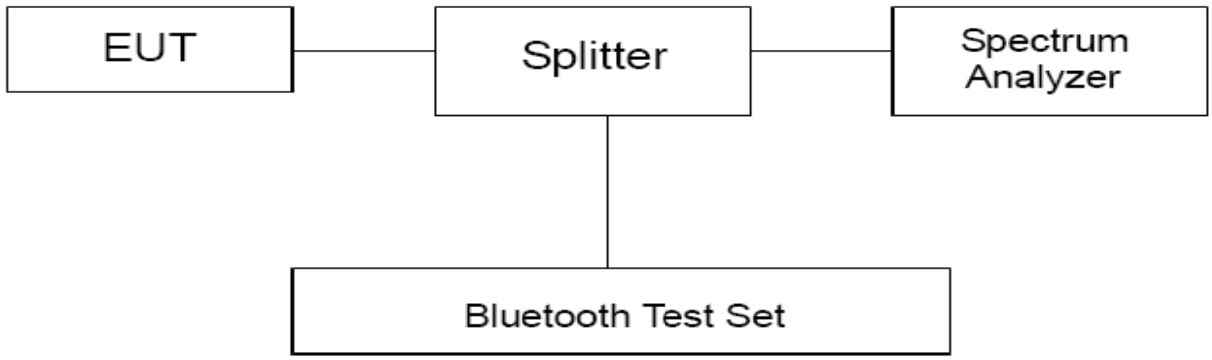
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to the spectrum analyzer and Bluetooth test set via a power splitter with a known loss. The occupied bandwidth is measured using spectrum analyzer. RBW is set to 30 kHz and VBW is set to 100 kHz on spectrum analyzer. -20dB occupied bandwidths are recorded.

Test Setup



Limits

No specific occupied bandwidth requirements in part 15.247(a) (1).

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U=936 Hz.

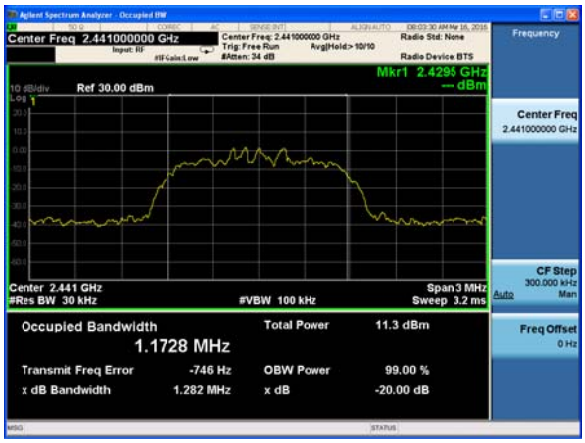
Test Results

Mode	Channel	Frequency (MHz)	20dB Bandwidth(kHz)
DH5	0	2402	1036
DH5	39	2441	953.3
DH5	78	2480	1037
2DH5	0	2402	1282
2DH5	39	2441	1282
2DH5	78	2480	1285
3DH5	0	2402	1288
3DH5	39	2441	1278
3DH5	78	2480	1292

DH5, Carrier frequency (MHz): 2402

2DH5, Carrier frequency (MHz): 2402

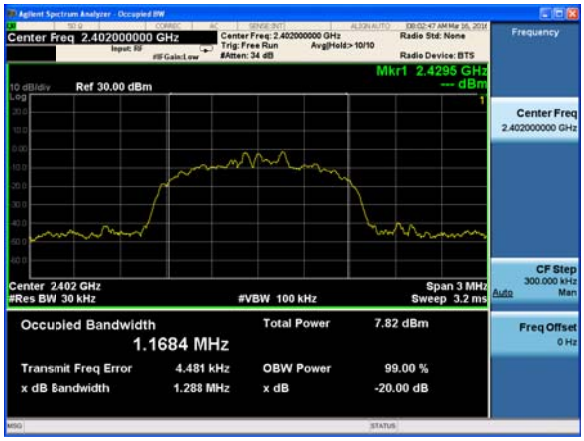
DH5, Carrier frequency (MHz): 2441



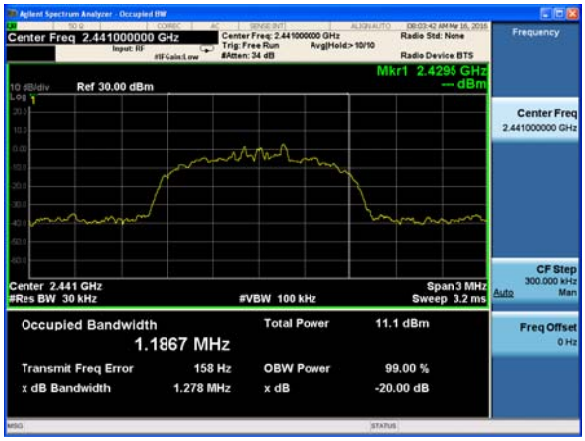
2DH5, Carrier frequency (MHz): 2441

DH5, Carrier frequency (MHz): 2480

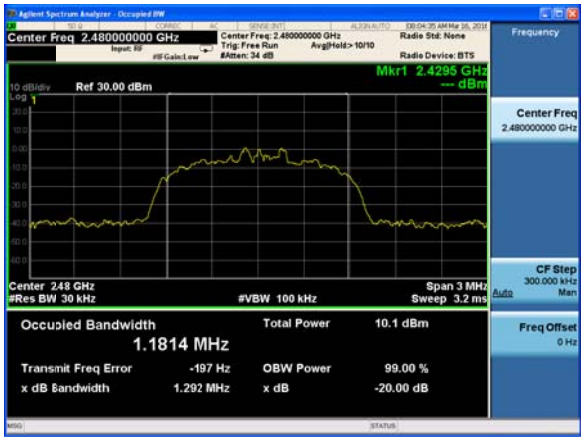
2DH5, Carrier frequency (MHz): 2480



3DH5, Carrier frequency (MHz): 2402



3DH5, Carrier frequency (MHz): 2441



3DH5, Carrier frequency (MHz): 2480

4.4 Frequency Separation

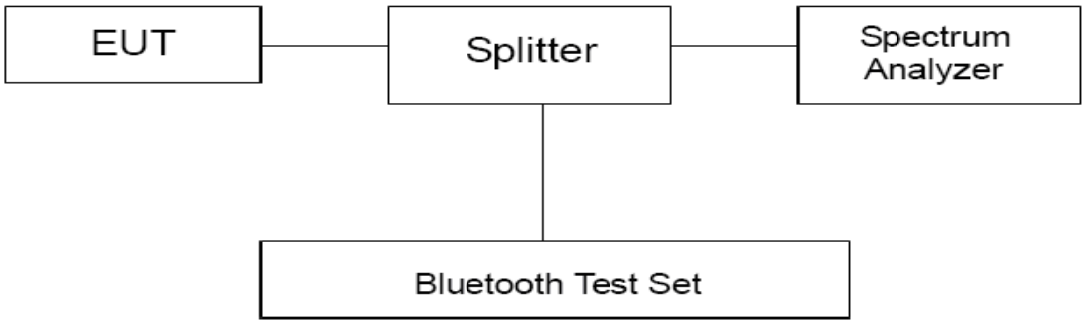
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to the spectrum analyzer and Bluetooth test set via a power splitter with a known loss. RBW is set to 30 kHz and VBW is set to 100 kHz on spectrum analyzer. Set EUT on Hopping on mode.

Test setup



Limits

Rule Part 15.247(a)(1)specifies that “Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. ”

Note: The value of two-thirds of 20 dB bandwidth is always greater than 25 kHz.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U=936 Hz.

Test Results:

Packet type	Carrier frequency (MHz)	Carrier frequency separation(kHz)	20dB Bandwidth(kHz)	Limit (kHz)	Conclusion
DH5	2441	1173	953.3	635.53	PASS
2DH5	2441	1128	1282	854.67	PASS
3DH5	2441	1164	1278	852.00	PASS
Note: The limit is two-thirds of 20 dB bandwidth.					

DH5 Carrier frequency (MHz): 2441

2DH5 Carrier frequency (MHz): 2441

3DH5 Carrier frequency (MHz): 2441

4.5 Time of Occupancy (Dwell Time)

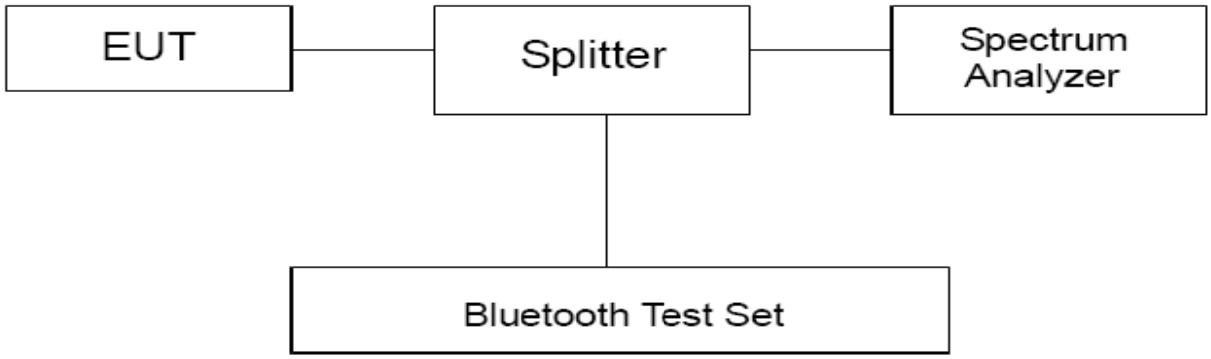
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

The EUT was connected to the spectrum analyzer and Bluetooth test set via a power splitter with a known loss. RBW is set to 1MHz and VBW is set to 1MHz on spectrum analyzer .The time slot length is measured of three different packet types, which are available in the Bluetooth technology. Those are DH1, DH3 and DH5 packets. The dwell time is calculated by:
Dwell time = time slot length * hop rate * 0.4s with:
- hop rate=1600 * 1/s for DH1 packet =1600
- hop rate=1600/3 * 1/s for DH3 packet =533.33
- hop rate=1600/5 * 1/s for DH5 packet =320

Test Setup



Limits

Rule Part 22.913(a) specifies that " Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed."

Dwell time	≤ 400ms

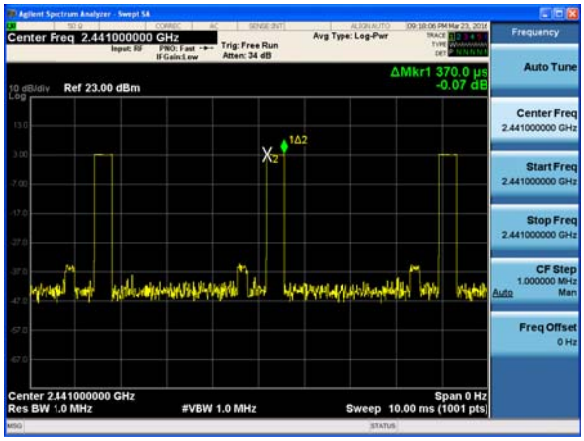
Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 2.

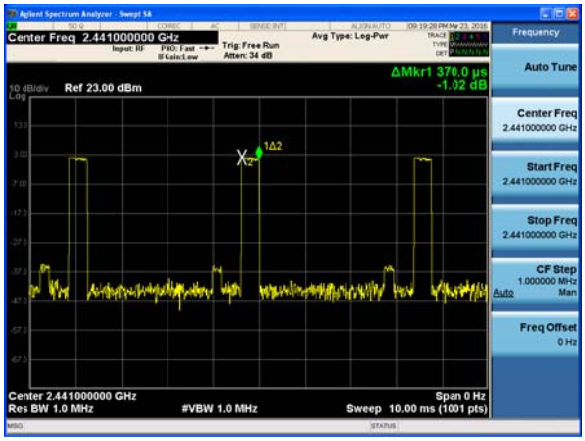
Requirements	Uncertainty	
Dwell Time	DH1	*U*=0.64ms
	DH3	*U*=0.80ms
	DH5	*U*=0.70ms
	2DH1	*U*=0.64ms
	2DH3	*U*=0.80ms
	2DH5	*U*=0.70ms
	3DH1	*U*=0.64ms
	3DH3	*U*=0.80ms
	3DH5	*U*=0.70ms

Test Results:

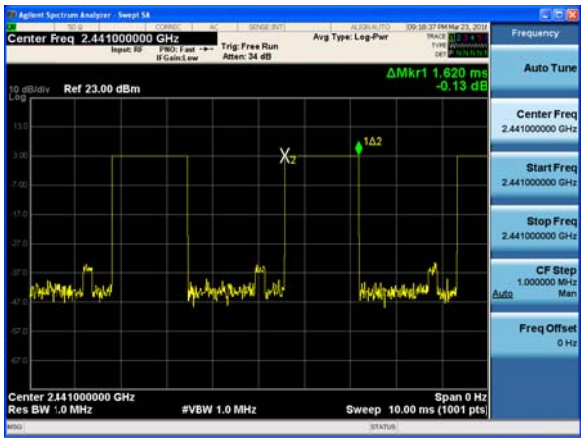
Channel 39					
Packet type	hop rate (1/s)	Time slot length(ms)	Dwell time (ms)	Limit (ms)	Conclusion
DH1	1600	0.37	236.80	400	PASS
DH3	533.33	1.62	345.60	400	PASS
DH5	320	2.87	367.36	400	PASS
2DH1	1600	0.37	236.80	400	PASS
2DH3	533.33	1.63	347.73	400	PASS
2DH5	320	2.88	368.64	400	PASS
3DH1	1600	0.38	243.20	400	PASS
3DH3	533.33	1.62	345.60	400	PASS
3DH5	320	2.88	368.64	400	PASS
Note: Dwell ttime = time slot length * hop rate * 0.4s					



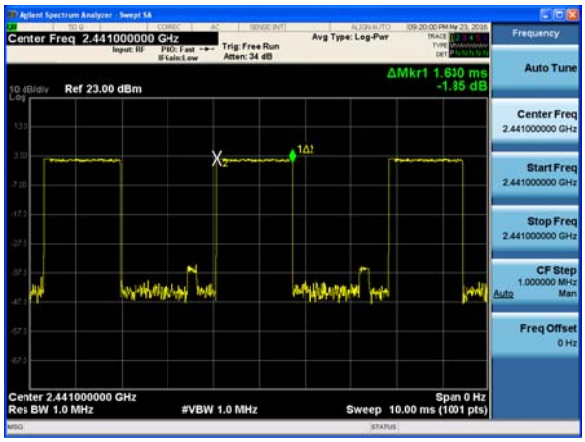
Carrier frequency (MHz): 2441, DH1



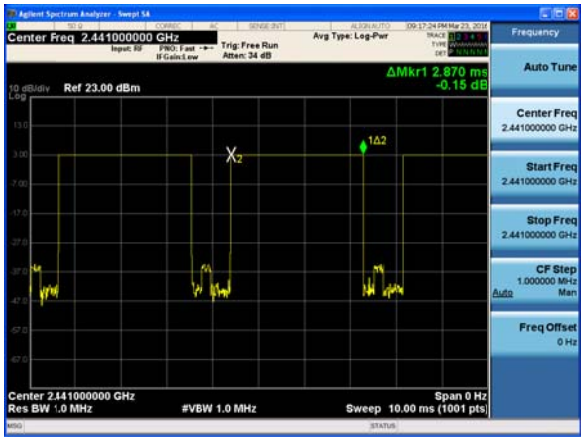
Carrier frequency (MHz): 2441, 2DH1



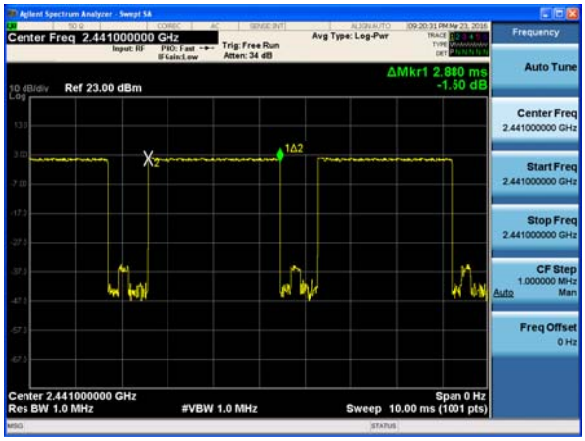
Carrier frequency (MHz): 2441, DH3



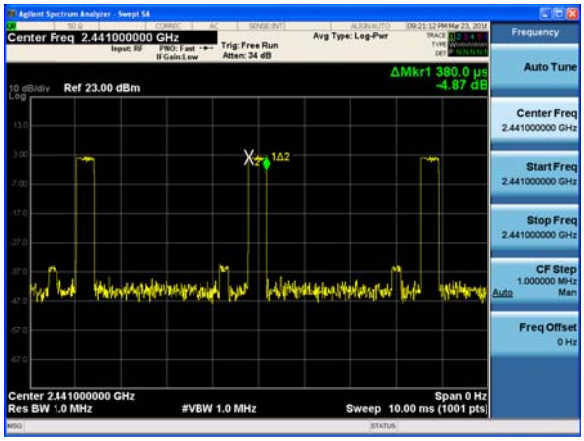
Carrier frequency (MHz): 2441, 2DH3



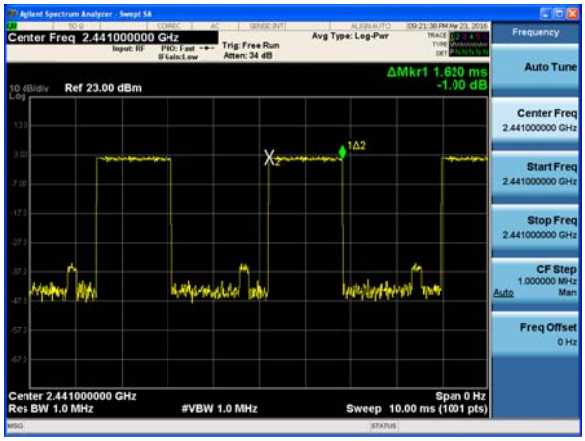
Carrier frequency (MHz): 2441, DH5



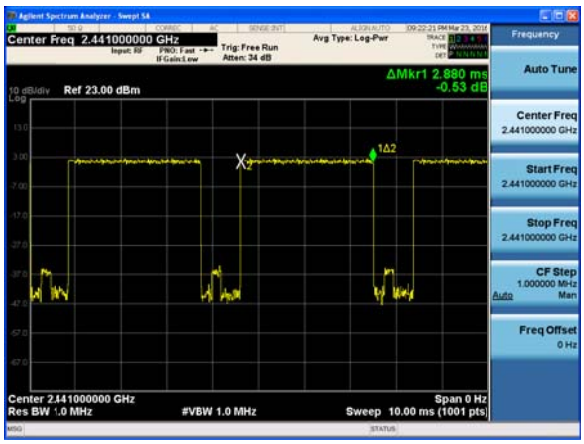
Carrier frequency (MHz): 2441, 2DH5



Carrier frequency (MHz): 2441, 3DH1



Carrier frequency (MHz): 2441, 3DH3



Carrier frequency (MHz): 2441, 3DH5

4.6 Band Edge Compliance

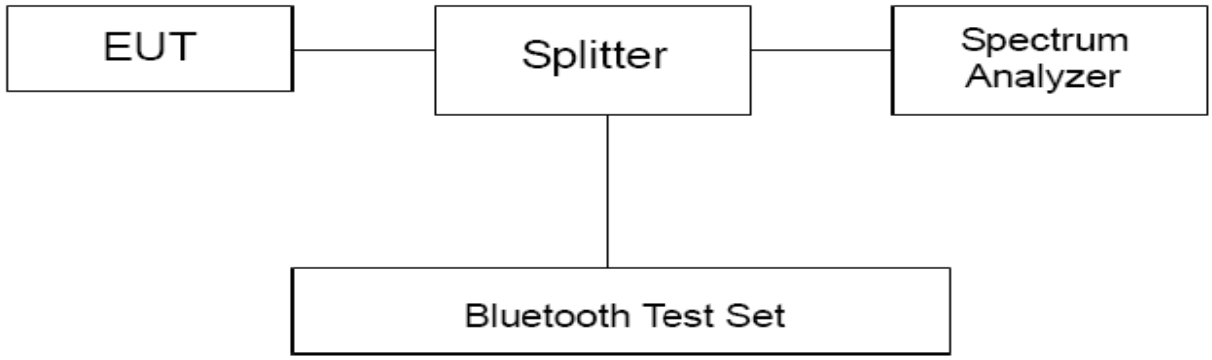
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to the spectrum analyzer and Bluetooth test set via a power splitter with a known loss. The lowest and highest channels were measured. The peak detector is used. RBW is set to 100 kHz and VBW is set to 300 kHz on spectrum analyzer. EUT test for Hopping On mode and Hopping Off mode.

Test Setup



Limits

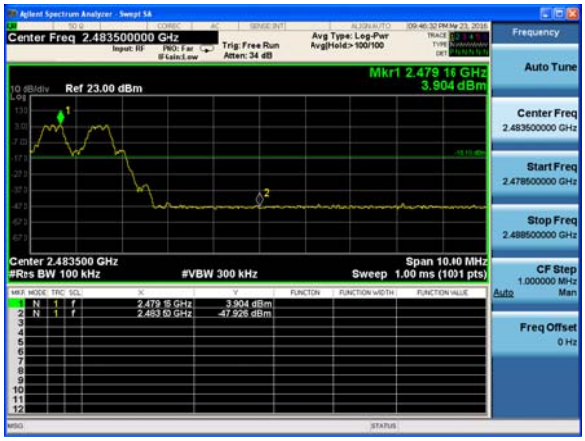
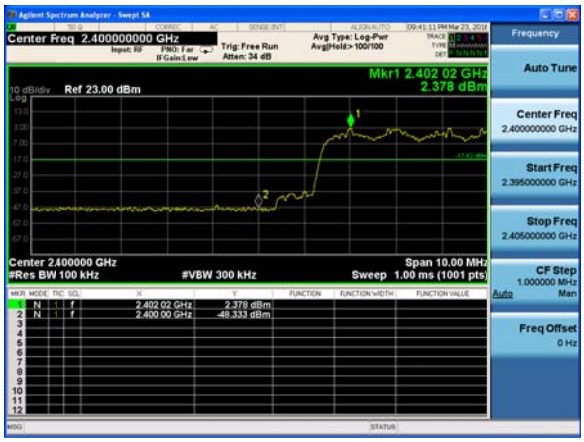
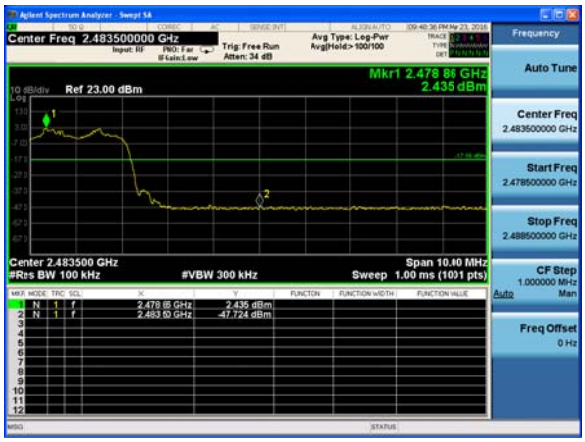
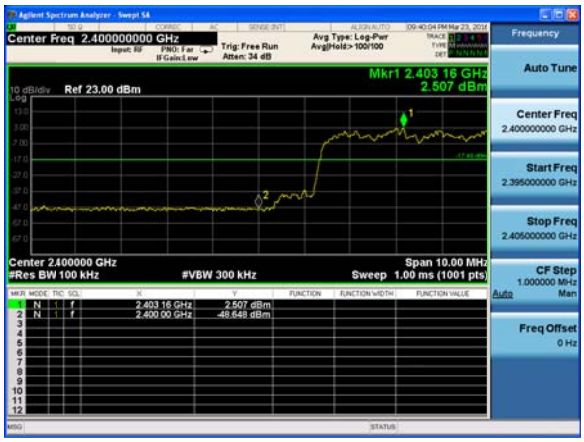
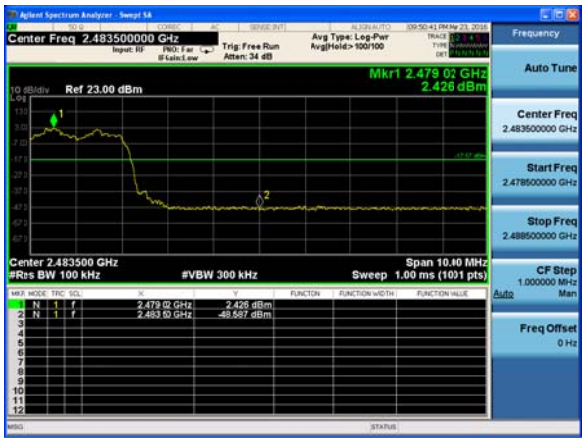
Rule Part 15.247(d) specifies that “In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.”

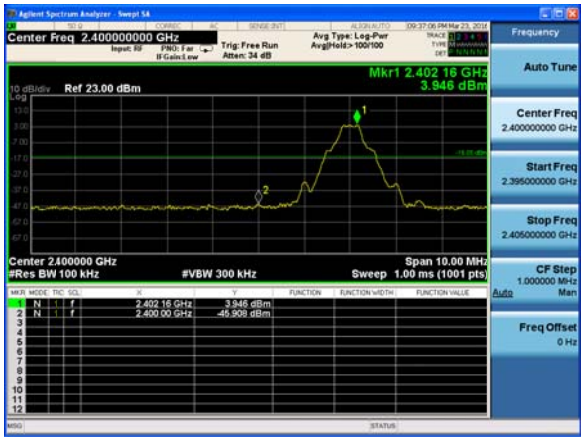
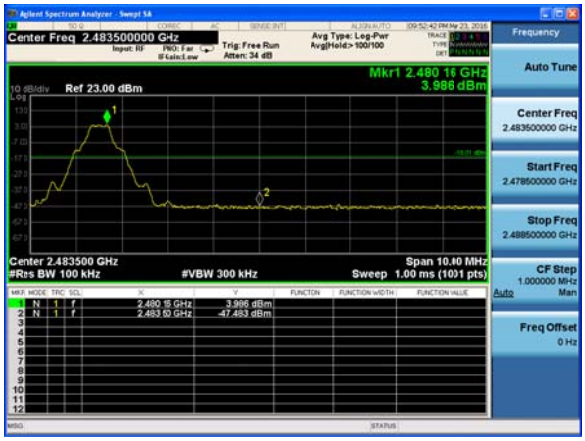
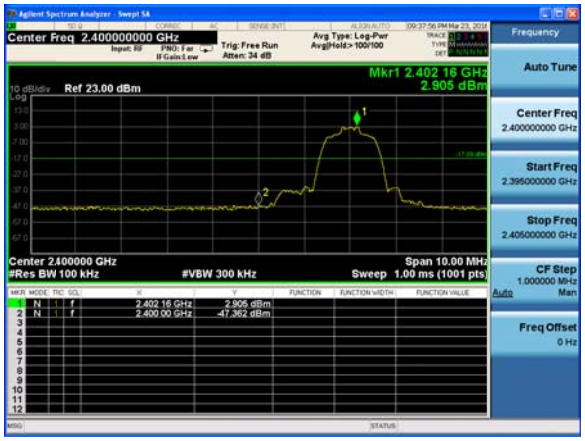
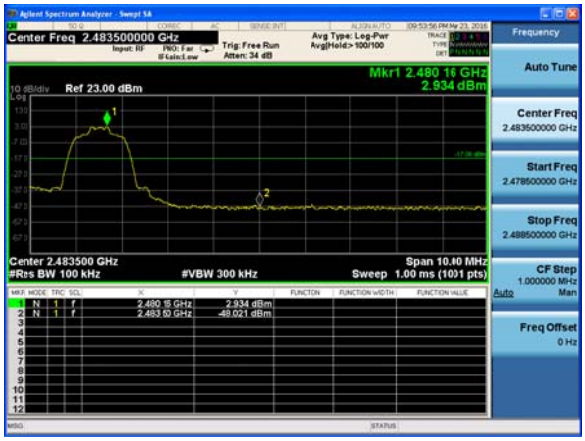
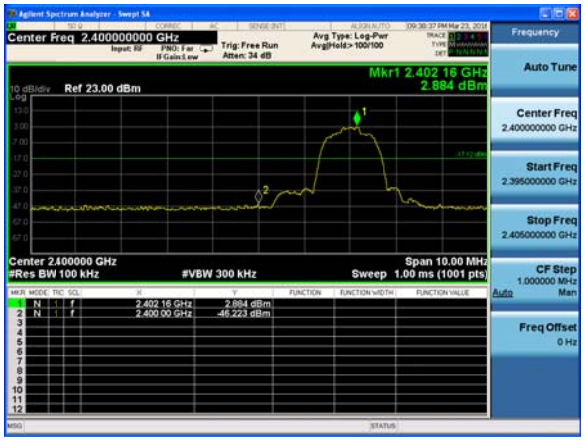
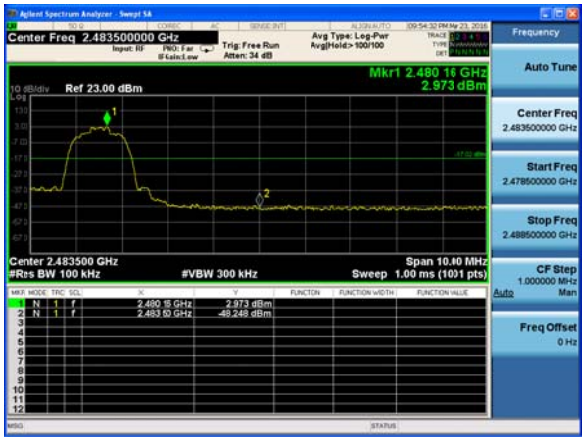
Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96.

Frequency	Uncertainty
2GHz-3GHz	1.407 dB

Test Results

Hopping On-DH5	
	
Carrier frequency (MHz): 2402	Carrier frequency (MHz): 2480
Hopping On-2DH5	
	
Carrier frequency (MHz): 2402	Carrier frequency (MHz): 2480
Hopping On-3DH5	
	
Carrier frequency (MHz): 2402	Carrier frequency (MHz): 2480

Hopping Off-DH5	
	
Carrier frequency (MHz): 2402	Carrier frequency (MHz): 2480
Hopping Off -2DH5	
	
Carrier frequency (MHz): 2402	Carrier frequency (MHz): 2480
Hopping Off -3DH5	
	
Carrier frequency (MHz): 2402	Carrier frequency (MHz): 2480

4.7 Spurious Radiated Emissions in the Restricted Band

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

The Equipment Under Test (EUT) was set up on a non-conductive table in the semi-anechoic chamber. The test was performed at the distance of 3 m between the EUT and the receiving antenna. The turntable shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal Polari-zation of the test antenna. The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.

Set the spectrum analyzer in the following:

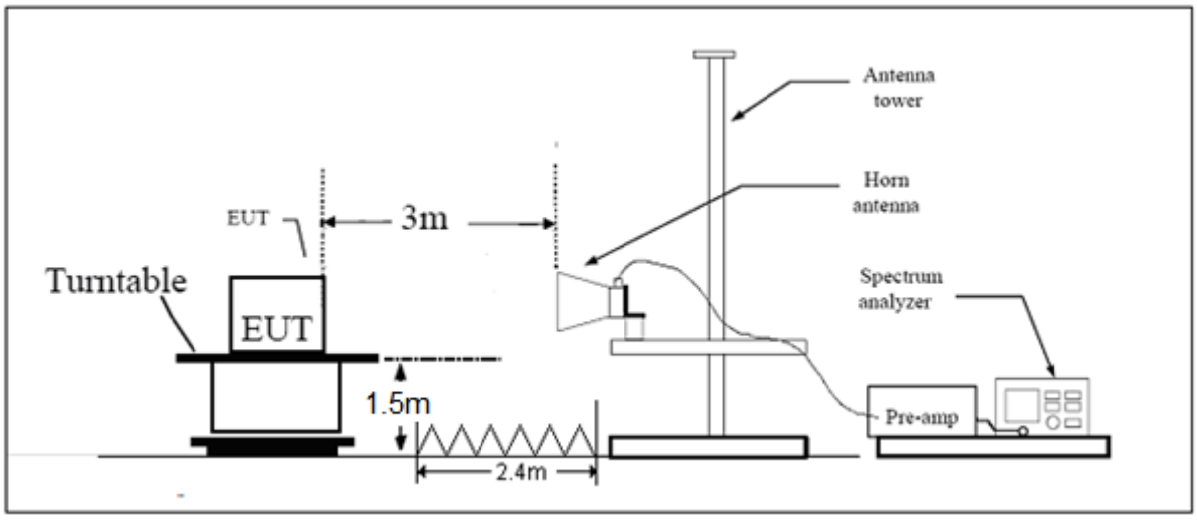
(a) PEAK: RBW=VBW=1MHz / Sweep=AUTO

(b) The dwell time per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a “duty cycle correction factor”, derived from 20log(dwell time/100 ms), in an effort to demonstrate compliance with the 15.209 limit.
If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak- average correction factor, derived form the appropriate duty cycle calculation.

This setting method can refer to **DA00-705.**

The test is in transmitting mode. The field strength of spurious emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis) and docking mode. The worst emission was found in stand-up position (Y axis) and the worst case was recorded.

Test setup



Note: Area side: 2.4mX3.6m

Limits

Spurious Radiated Emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	[2]
13.36 - 13.41			

Limit in restricted band

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above960	500	54

§15.35(b)

There is also a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.

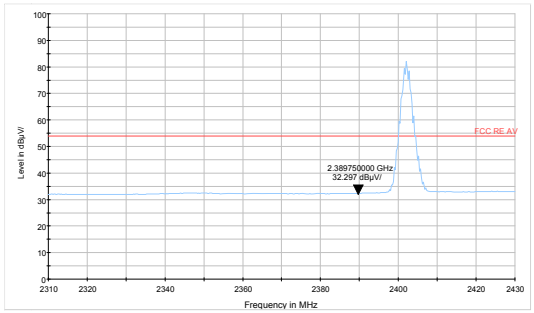
Peak Limit=74dBuV/m

Average Limit=54dBuV/m

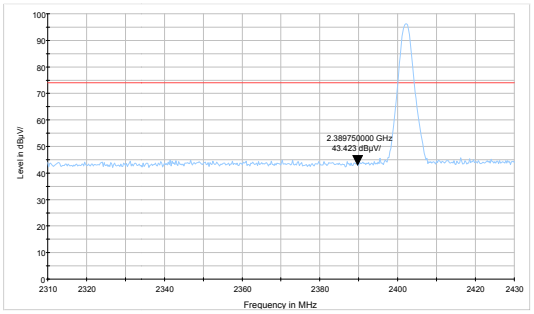
Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96, U= 3.55 dB.

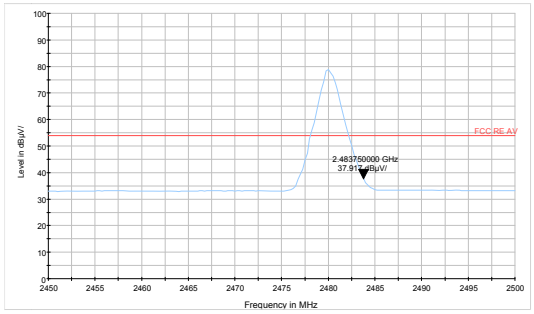
Test Results:



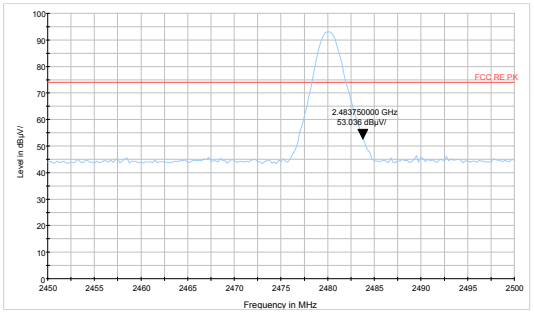
GFSK_CH0_2.31-2.43GHz_AV



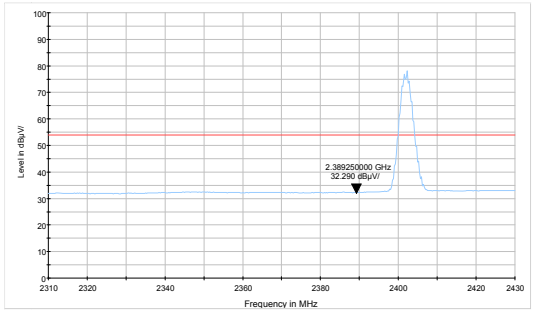
GFSK_CH0_2.31-2.43GHz_PK



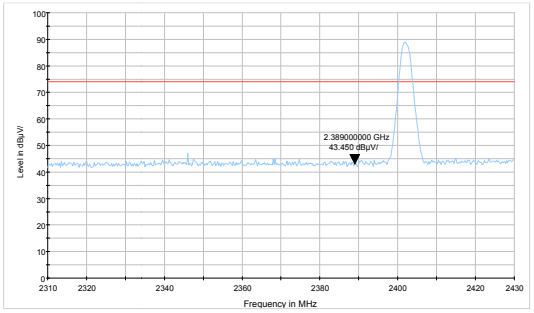
GFSK_CH78_2.45-2.5GHz_AV



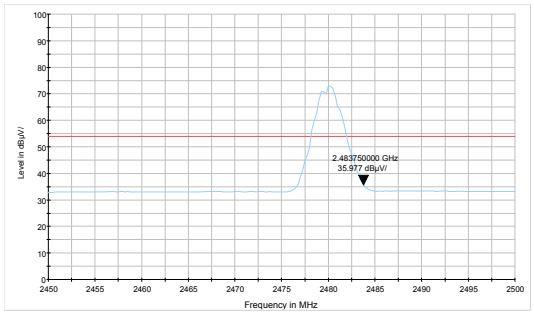
GFSK_CH78_2.45-2.5GHz_PK



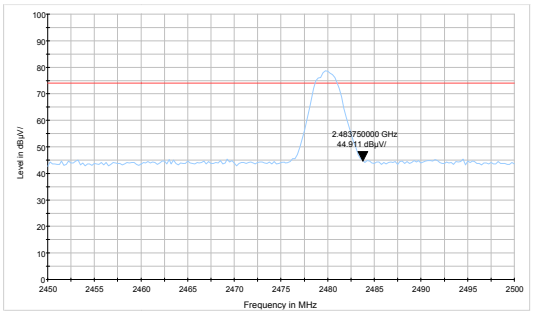
EDR_CH1_2.31-2.43GHz_AV



EDR_CH1_2.31-2.43GHz_PK



EDR_CH78_2.45-2.5GHz_AV



EDR_CH78_2.45-2.5GHz_PK

4.8 Number of hopping Frequency

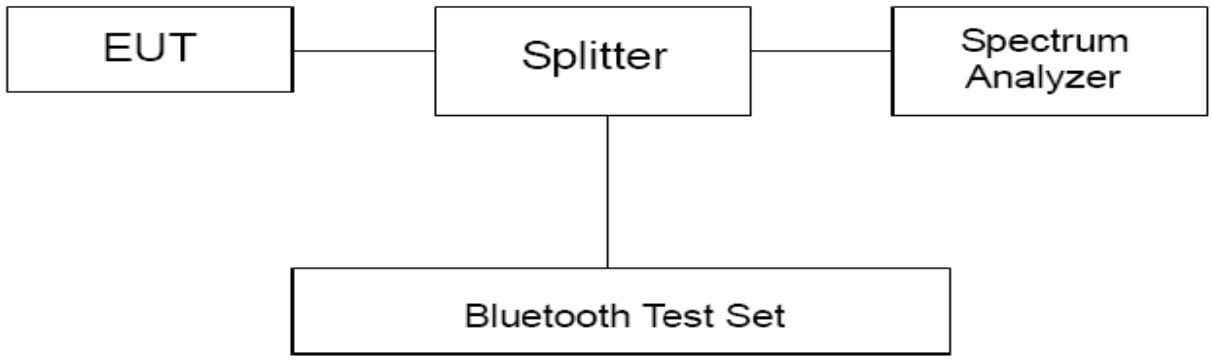
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to the spectrum analyzer and Bluetooth test set via a power splitter with a known loss. RBW is set to 1MHz and VBW is set to 1 MHz on spectrum analyzer. Set EUT on Hopping on mode.

Test setup



Limits

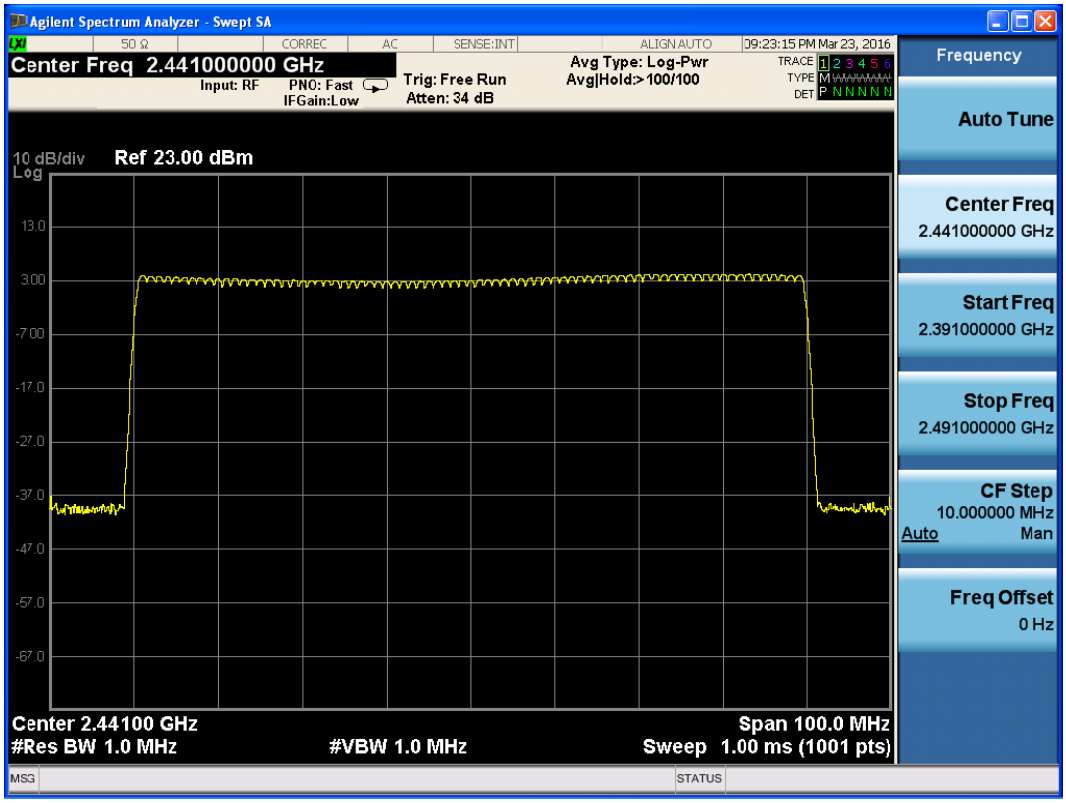
Rule Part 15.247(a) (1) (iii) specifies that" Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels."

Limits	≥ 15 channels

Test Results:

DH5

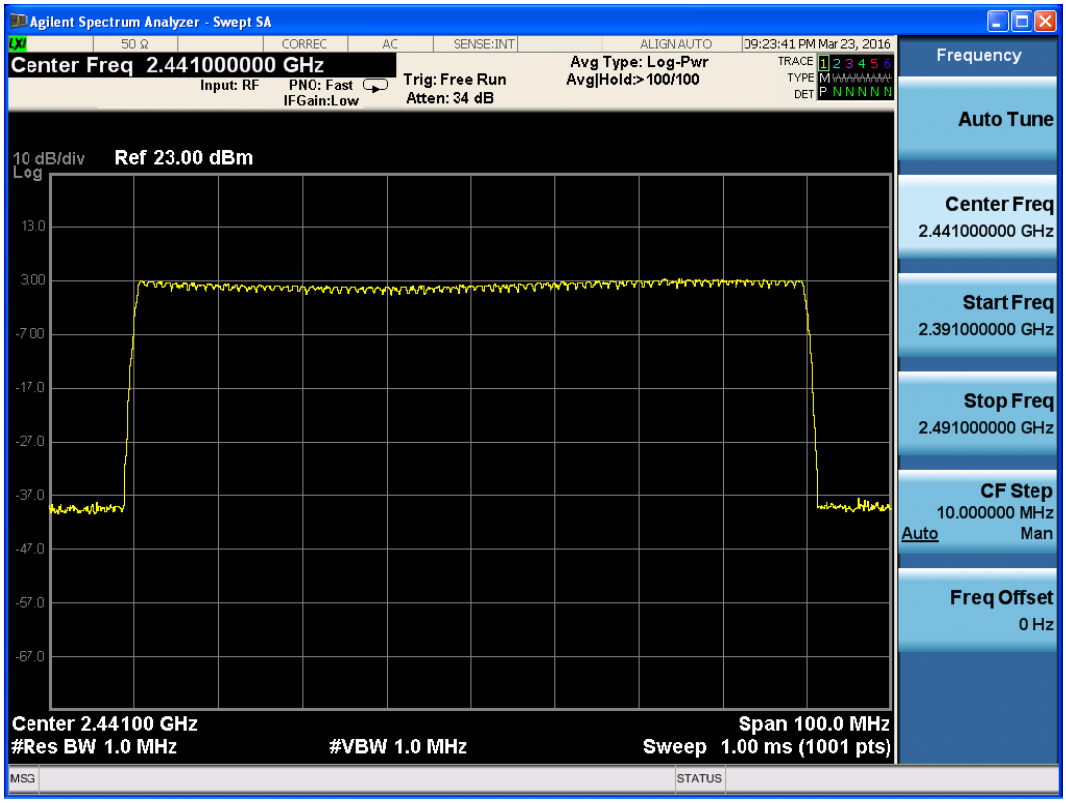
Number of hopping channels	conclusion
79	PASS



2400 MHz – 2483.5 MHz

2DH5

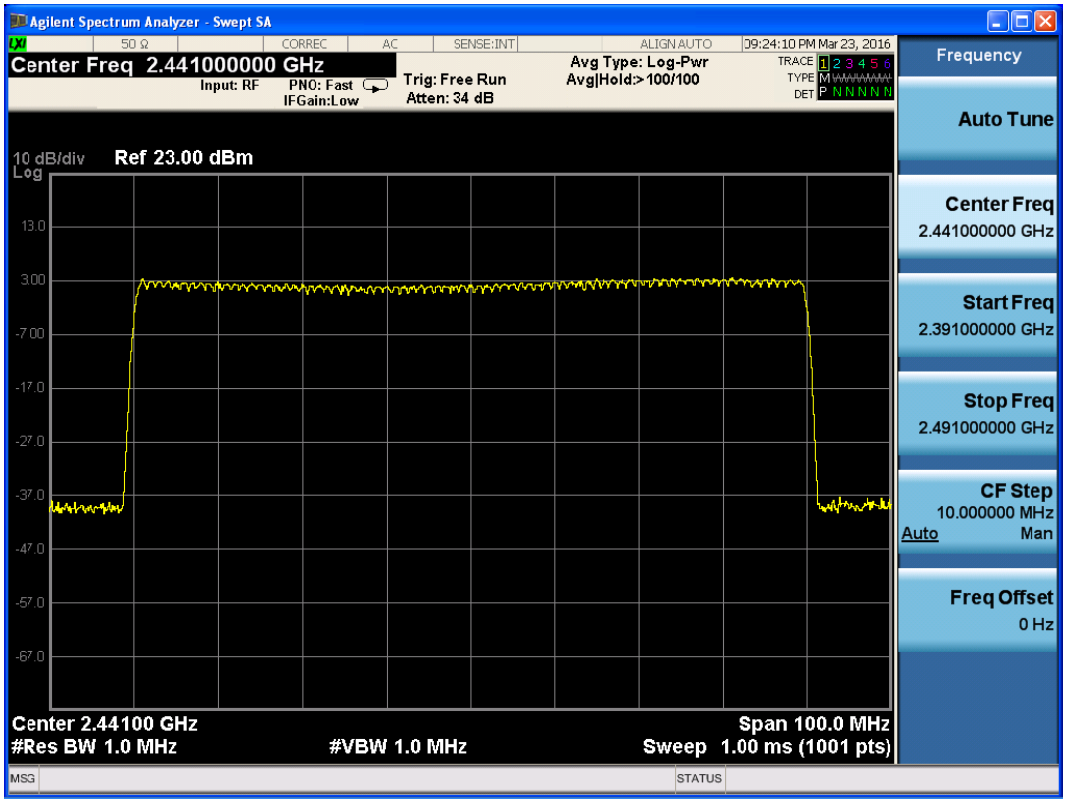
Number of hopping channels	conclusion
79	PASS



2400 MHz – 2483.5 MHz

3DH5

Number of hopping channels	conclusion
79	PASS



2400 MHz – 2483.5 MHz

4.9 Spurious RF Conducted Emissions

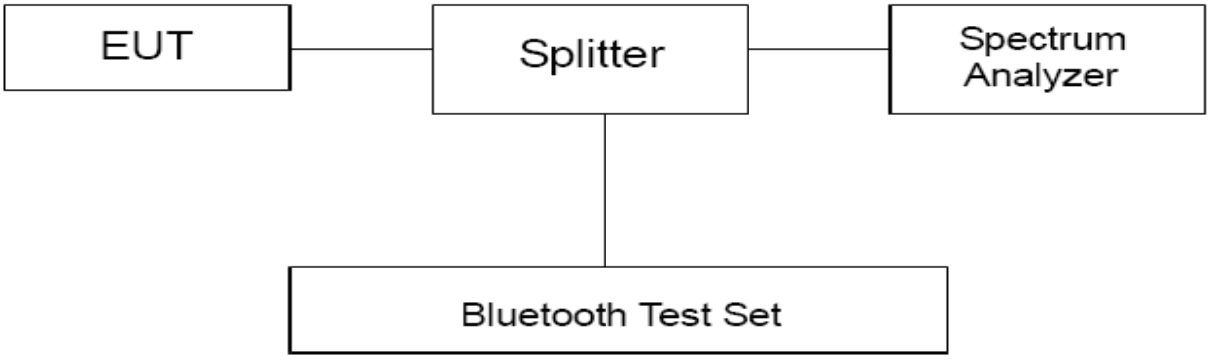
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to the spectrum analyzer and Bluetooth test set via a power splitter with a known loss. The spectrum analyzer scans from 30MHz to the 10th harmonic of the carrier. The peak detector is used. RBW and VBW are set to 100 kHz, Sweep is set to ATUO.
The test is in transmitting mode.

Test setup



Limits

Rule Part 15.247(d) pacifies that “In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.”

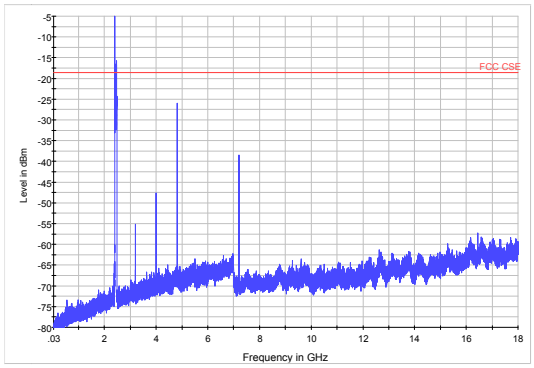
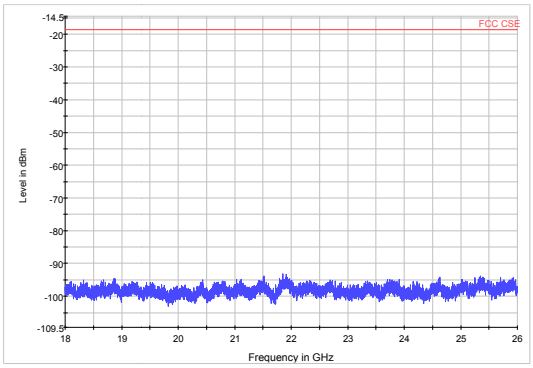
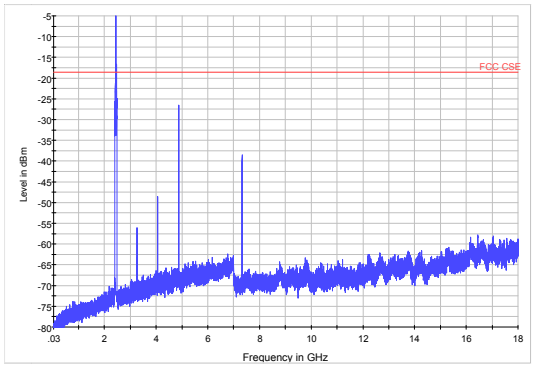
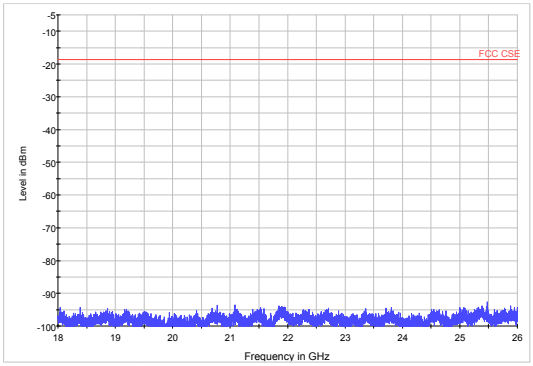
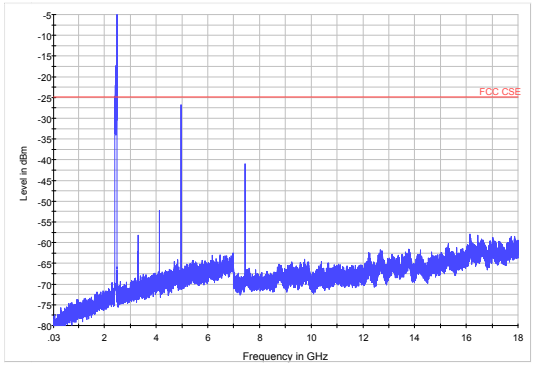
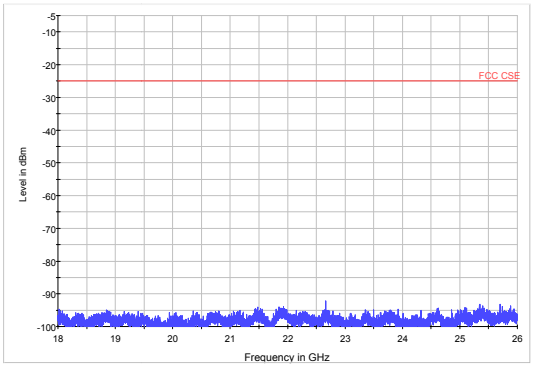
Mode	Carrier frequency (MHz)	Reference value (dBm)	Limit
DH5	2402	1.388	-18.612
	2441	1.428	-18.572
	2480	-4.94	-24.940
EDR (3DH5)	2402	0.831	-19.169
	2441	-5.318	-25.318
	2480	-2.101	-22.101

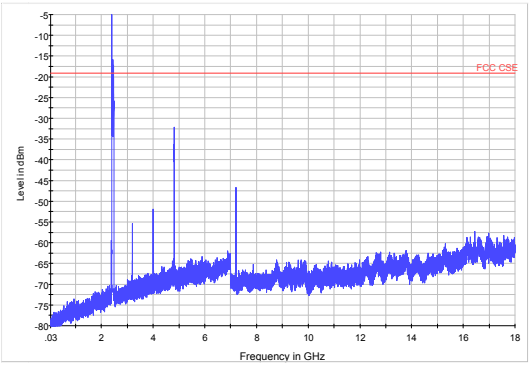
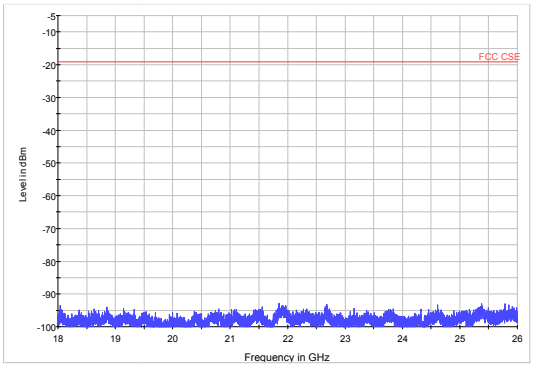
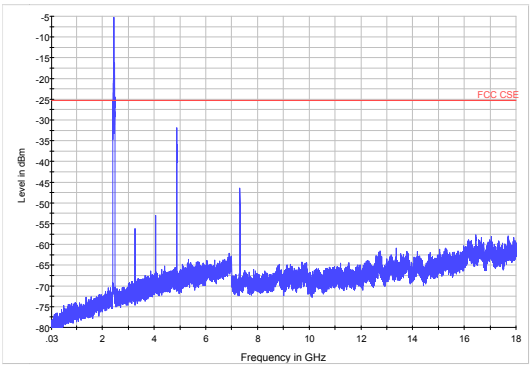
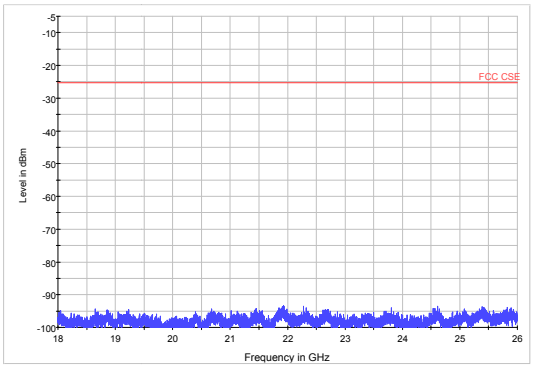
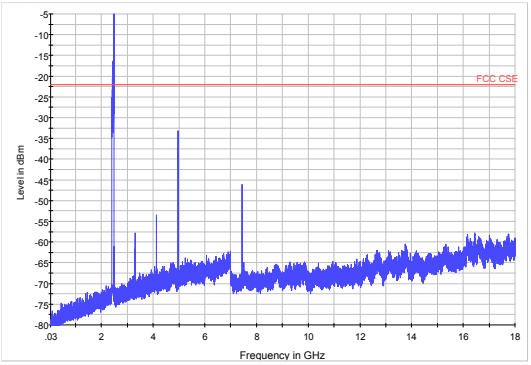
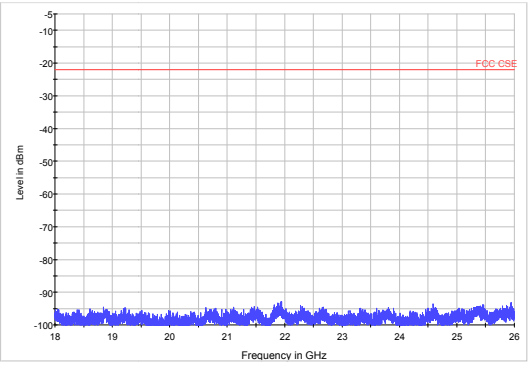
Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor *k* = 1.96.

Frequency	Uncertainty
100kHz-2GHz	0.684 dB
2GHz-26GHz	1.407 dB

Test Data File Name	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)
CSE_Dakota_1#_BT EDR_CH0_0.03-18GHz	4803.8	-32.11	-19.169	12.94
CSE_Dakota_1#_BT EDR_CH39_0.03-18GHz	4881.8	-31.87	-25.318	6.55
CSE_Dakota_1#_BT EDR_CH78_0.03-18GHz	4959.8	-33.22	-22.101	11.12
CSE_Dakota_1#_BT GFSK_CH0_0.03-18GHz	4804.1	-25.94	-18.612	7.32
CSE_Dakota_1#_BT GFSK_CH0_0.03-18GHz	7206.0	-38.49	-18.612	19.88
CSE_Dakota_1#_BT GFSK_CH39_0.03-18GHz	4882.1	-26.51	-18.572	7.94
CSE_Dakota_1#_BT GFSK_CH39_0.03-18GHz	7323.8	-38.40	-18.572	19.83
CSE_Dakota_1#_BT GFSK_CH78_0.03-18GHz	4960.1	-26.72	-24.94	1.78
CSE_Dakota_1#_BT GFSK_CH78_0.03-18GHz	7440.0	-41.02	-24.94	16.08

GFSK-CH0	
	
Spurious RF conducted emissions from 30MHz to 18GHz	Spurious RF conducted emissions from 18GHz to 26.5GHz
GFSK-CH39	
	
Spurious RF conducted emissions from 30MHz to 18GHz	Spurious RF conducted emissions from 18GHz to 26.5GHz
GFSK-CH78	
	
Spurious RF conducted emissions from 30MHz to 18GHz	Spurious RF conducted emissions from 18GHz to 26.5GHz

EDR-CH0：	
	
Spurious RF conducted emissions from 30MHz to 18GHz	Spurious RF conducted emissions from 18GHz to 26.5GHz
EDR-CH39：	
	
Spurious RF conducted emissions from 30MHz to 18GHz	Spurious RF conducted emissions from 18GHz to 26.5GHz
EDR-CH78：	
	
Spurious RF conducted emissions from 30MHz to 18GHz	Spurious RF conducted emissions from 18GHz to 26.5GHz

4.10 Radiates Emission

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	102.5kPa

Method of Measurement

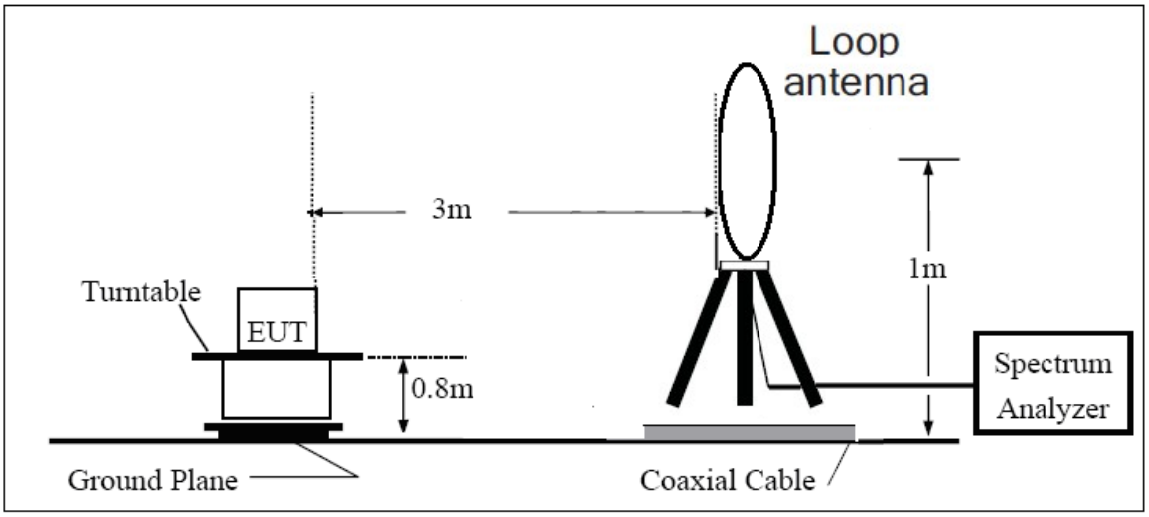
The test set-up was made in accordance to the general provisions of ANSI C63.10-2013.The Equipment Under Test (EUT) was set up on a non-conductive table in the semi-anechoic chamber. The test was performed at the distance of 3 m between the EUT and the receiving antenna. The radiated emissions measurements were made in a typical installation configuration.
Sweep the whole frequency band through the range from 9 kHz to the 10th harmonic of the carrier, and the emissions less than 20 dB below the permissible value are reported.
During the test, below 30MHz, the center of the loop shall be 1 meters; above 30MHz, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical Polari-zation. The turntable shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal Polari-zation of the test antenna. The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.
Set the spectrum analyzer in the following:
Below 1GHz (detector: Peak and Quasi-Peak)
RBW=100kHz / VBW=300kHz / Sweep=AUTO
Above 1GHz(detector: Peak):
(a) PEAK: RBW=1MHz VBW=3MHz/ Sweep=AUTO
(b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the worst case was recorded. Then this mode was measured in the following mode: EUT with cradle and EUT without cradle. The worst emission was found in EUT with cradle mode and the worst case was recorded.

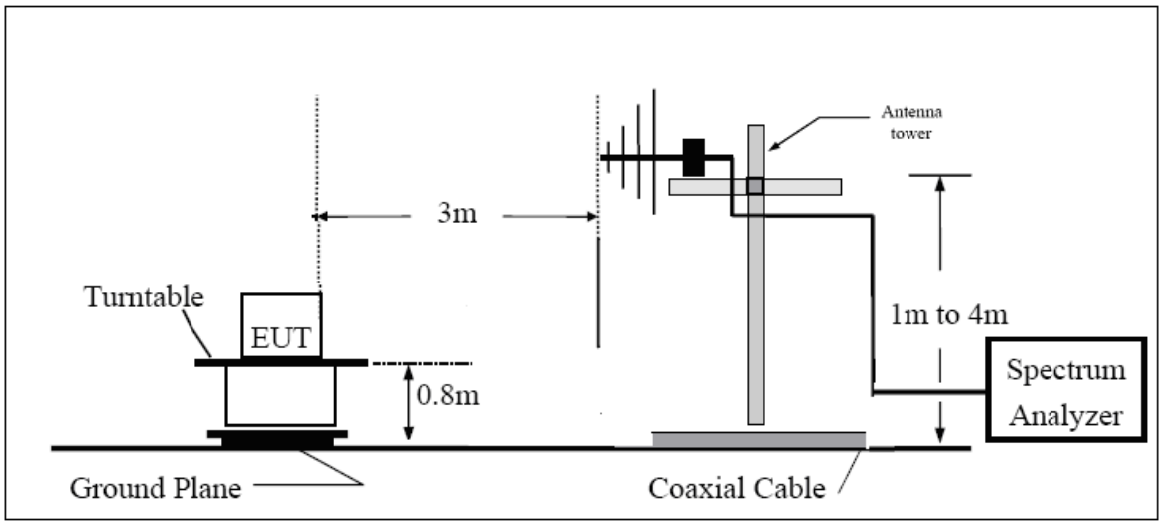
The test is in transmitting mode.

Test setup

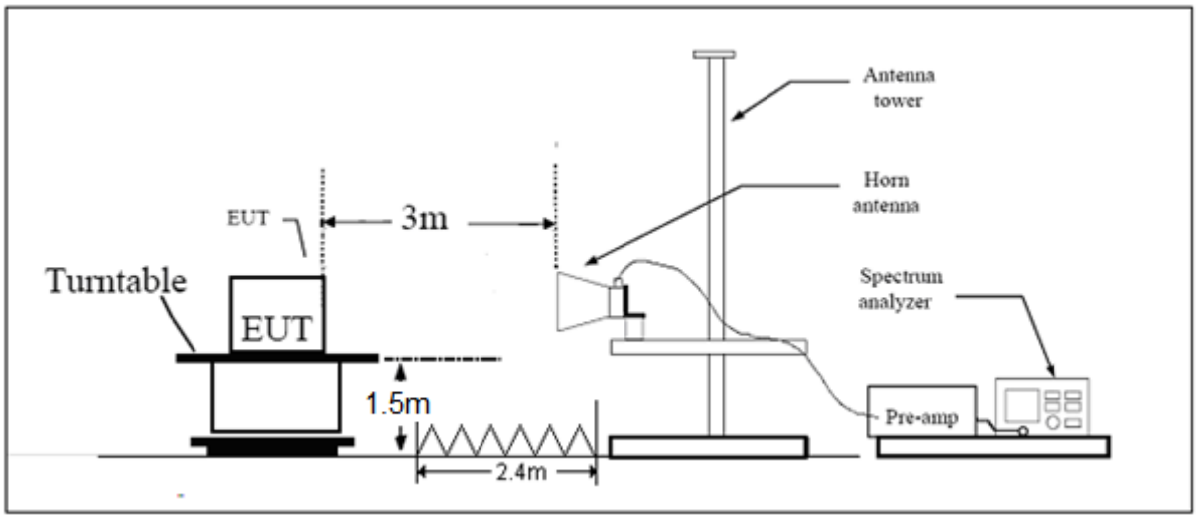
9KHz~~~ 30MHz



30MHz~~~ 1GHz



Above 1GHz



Limits

Rule Part 15.247(d) specifies that “In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).”

Limit in restricted band

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)
0.009–0.490	2400/F(kHz)	/
0.490–1.705	24000/F(kHz)	/
1.705–30.0	30	/
30-88	100	40
88-216	150	43.5
216-960	200	46
Above960	500	54

§15.35(b)

There is also a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96.

Frequency	Uncertainty
9KHz-30MHz	3.55 dB
30MHz-200MHz	4.19 dB
200MHz-1GHz	3.63 dB
Above 1GHz	3.68 dB

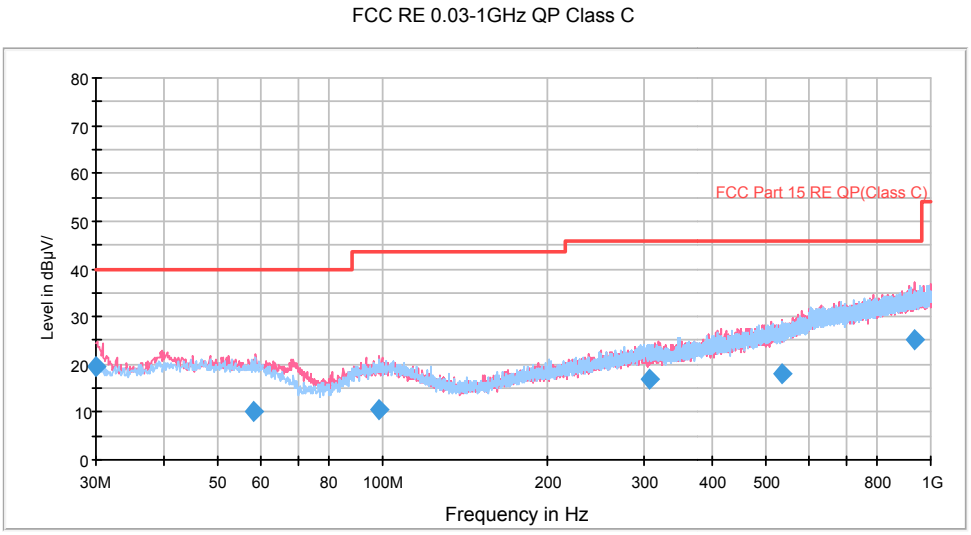
Test result

Sweep from 9 kHz to 30MHz, and the emissions more than 20 dB below the permissible value are not reported.

The following graphs display the maximum values of horizontal and vertical by software.

For above 1GHz, Blue trace uses the peak detection, Green trace uses the average detection.

GFSK-Channel 0

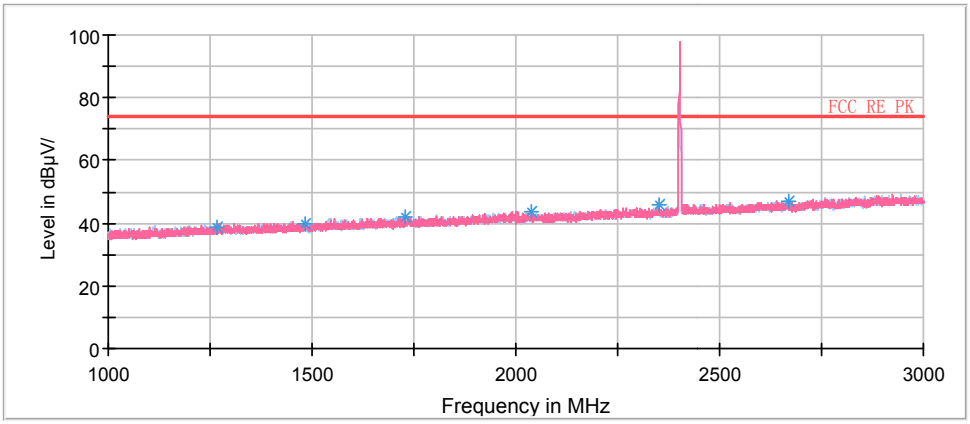


Radiates Emission from 30MHz to 1GHz

Note: This graph displays the maximum values of horizontal and vertical by software

Frequency (MHz)	Quasi-Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
30.000000	19.6	100.0	V	111.0	31.5	11.9	20.4	40.0
58.136250	10.2	125.0	V	248.0	22.8	12.6	29.8	40.0
98.390000	10.7	125.0	V	189.0	23.7	13.0	32.8	43.5
307.668750	17.0	100.0	H	70.0	32.6	15.6	29.0	46.0
537.507500	18.2	114.0	V	0.0	38.9	20.7	27.8	46.0
934.285000	25.0	100.0	V	354.0	50.9	25.9	21.0	46.0

RE 1G-3GHz PK

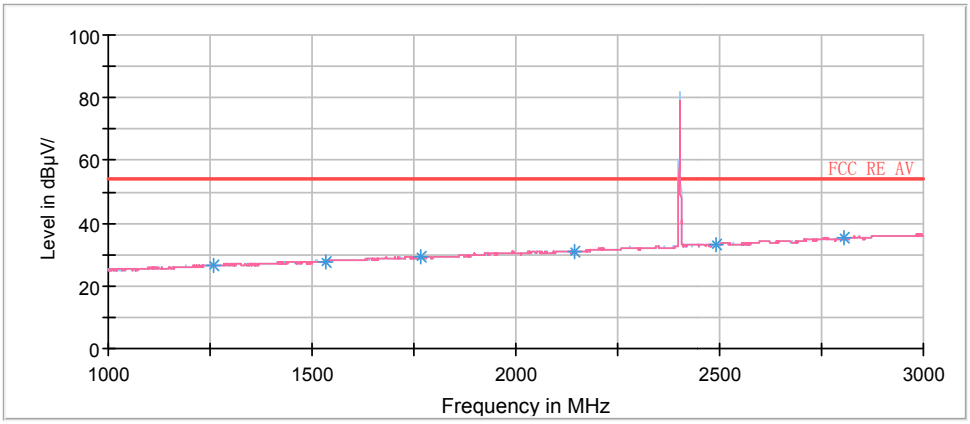


Radiates Emission from 1GHz to 3GHz

Note: The signal beyond the limit is carrier.

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1268.500000	38.7	151.0	H	328.0	46.4	-7.7	35.3	74
1484.000000	39.5	150.0	V	0.0	46.1	-6.6	34.5	74
1729.000000	41.9	151.0	V	265.0	47.0	-5.1	32.1	74
2038.750000	43.7	151.0	H	50.0	46.9	-3.2	30.3	74
2350.250000	45.7	151.0	H	233.0	47.0	-1.3	28.3	74
2670.000000	47.1	151.0	V	0.0	47.4	0.3	26.9	74

RE 1G-3GHz AV

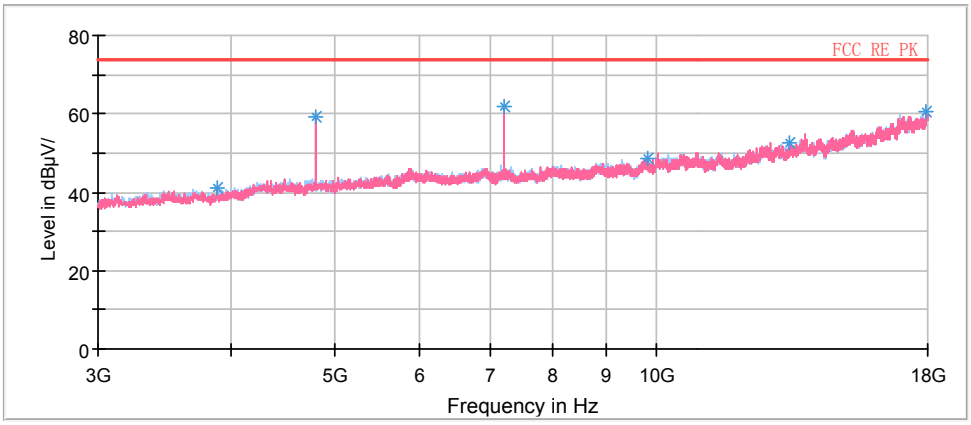


Radiates Emission from 1GHz to 3GHz

Note: The signal beyond the limit is carrier.

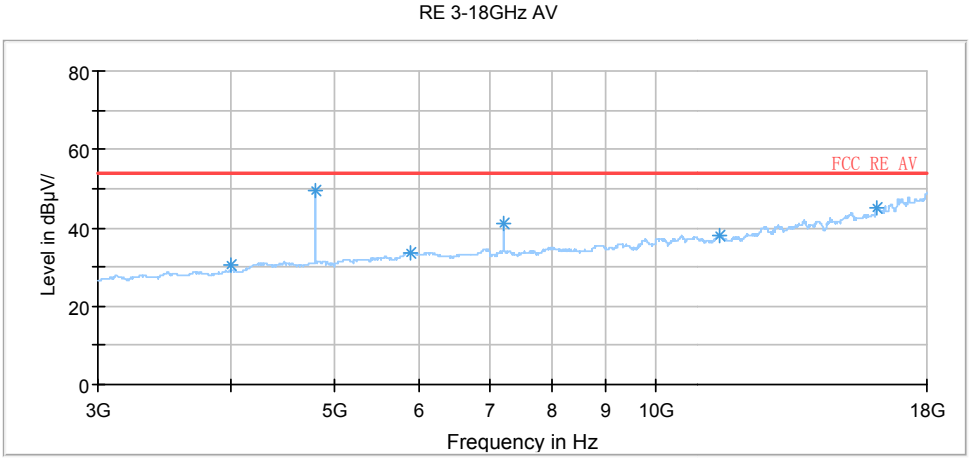
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1257.000000	26.6	151.0	H	0.0	34.4	-7.8	27.4	54
1535.250000	27.9	150.0	H	0.0	34.3	-6.4	26.1	54
1765.750000	29.1	151.0	H	347.0	33.6	-4.5	24.9	54
2144.250000	30.8	151.0	H	0.0	33.3	-2.5	23.2	54
2492.500000	33.3	151.0	H	0.0	33.5	0.2	20.7	54
2804.750000	35.1	151.0	H	174.0	36.3	1.2	18.9	54

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)



Radiates Emission from 3GHz to 18GHz

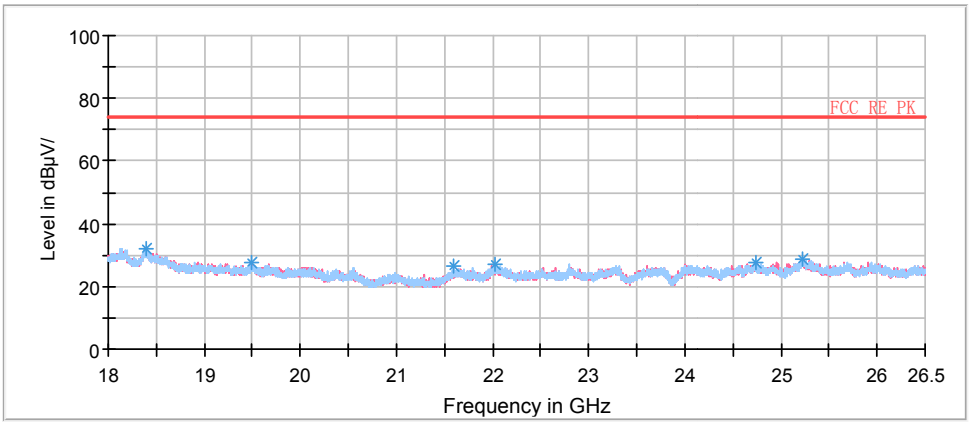
Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3883.125000	41.2	151.0	V	126.0	41.5	-0.3	32.8	74
4803.750000	59.2	150.0	V	0.0	61.9	2.7	14.8	74
7205.625000	61.9	151.0	V	140.0	70.6	8.7	12.1	74
9832.500000	48.5	151.0	H	320.0	60.4	11.9	25.5	74
13340.625000	52.5	151.0	V	112.0	68.2	15.7	21.5	74
17934.375000	60.8	151.0	H	118.0	85.4	24.6	13.2	74



Radiates Emission from 3GHz to 18GHz

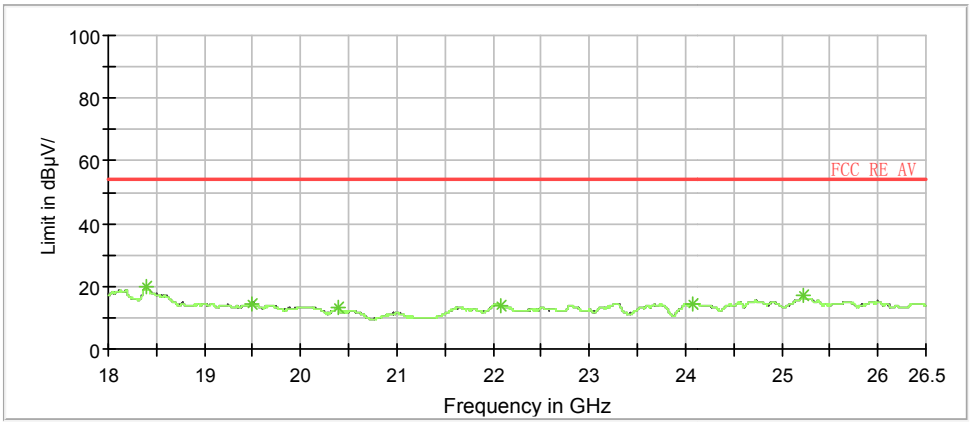
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
4003.125000	30.3	151.0	H	0.0	30.8	0.5	23.7	54
4803.750000	49.7	150.0	H	0.0	52.4	2.7	4.3	54
5895.000000	33.8	151.0	H	0.0	39.9	6.1	20.2	54
7205.625000	41.0	151.0	V	0.0	49.7	8.7	13.0	54
11501.250000	38.2	151.0	V	0.0	52.2	14.0	15.8	54
16151.250000	45.3	151.0	H	0.0	65.5	20.2	8.7	54

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)



Radiates Emission from 18GHz to 26.5GHz

Frequency (MHz)	Peak (dBuV/m)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
18387.812500	32.3	H	209.0	37.2	-4.9	41.7	74
19496.000000	27.5	V	78.0	35.1	-7.6	46.5	74
21597.625000	26.4	H	324.0	35.1	-8.7	47.6	74
22024.750000	27.2	H	0.0	35.2	-8.0	46.8	74
24738.375000	27.4	H	145.0	33.8	-6.4	46.6	74
25217.562500	28.6	H	1.0	34.7	-6.1	45.4	74



Radiates Emission from 18GHz to 26.5GHz

Frequency (MHz)	Average (dBuV/m)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
18387.812500	19.6	V	0.0	24.5	-4.9	34.4	54
19494.937500	14.6	V	0.0	22.2	-7.6	39.4	54
20390.625000	13.2	V	0.0	21.3	-8.1	40.8	54
22074.687500	14.0	V	0.0	22.2	-8.2	40.0	54
24082.812500	14.5	V	0.0	22.3	-7.8	39.5	54
25231.375000	17.0	V	0.0	22.9	-5.9	37.0	54

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

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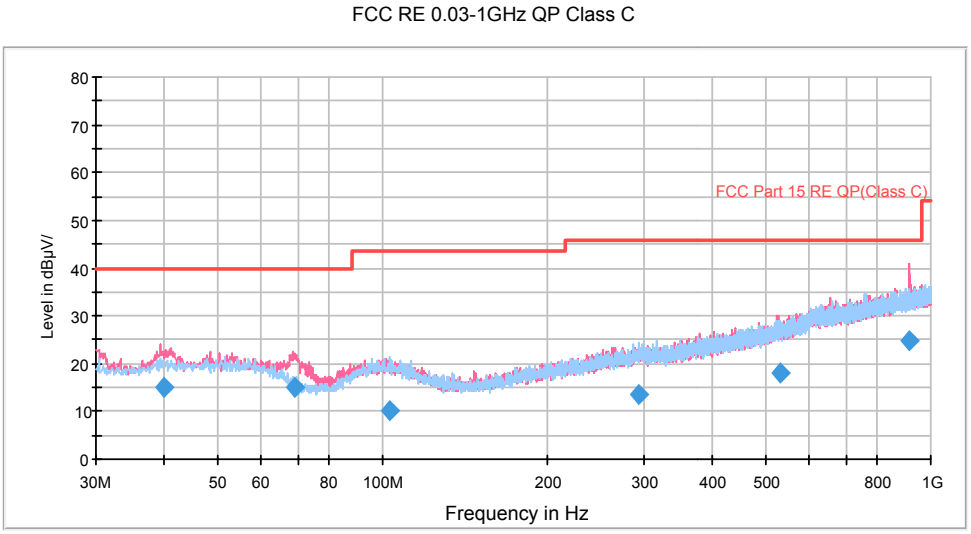
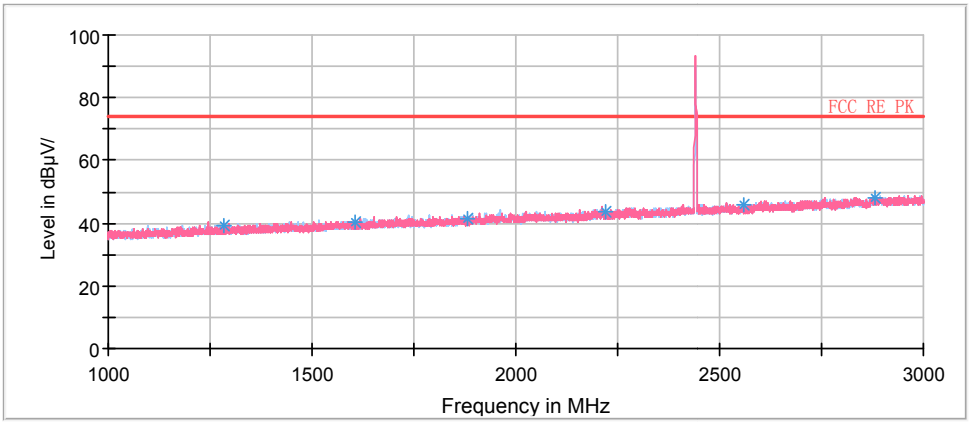


Radiates Emission from 30MHz to 1GHz

Note: This graph displays the maximum values of horizontal and vertical by software

Frequency (MHz)	Quasi-Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
39.896250	15.1	100.0	V	25.0	28.3	13.2	24.9	40.0
69.036250	14.9	100.0	V	128.0	23.9	9.0	25.1	40.0
102.993750	10.2	125.0	H	34.0	23.2	13.0	33.3	43.5
293.672500	13.5	114.0	H	0.0	28.8	15.3	32.5	46.0
529.665000	17.9	100.0	V	342.0	38.5	20.6	28.1	46.0
911.966250	24.7	125.0	V	36.0	50.4	25.7	21.3	46.0

RE 1G-3GHz PK

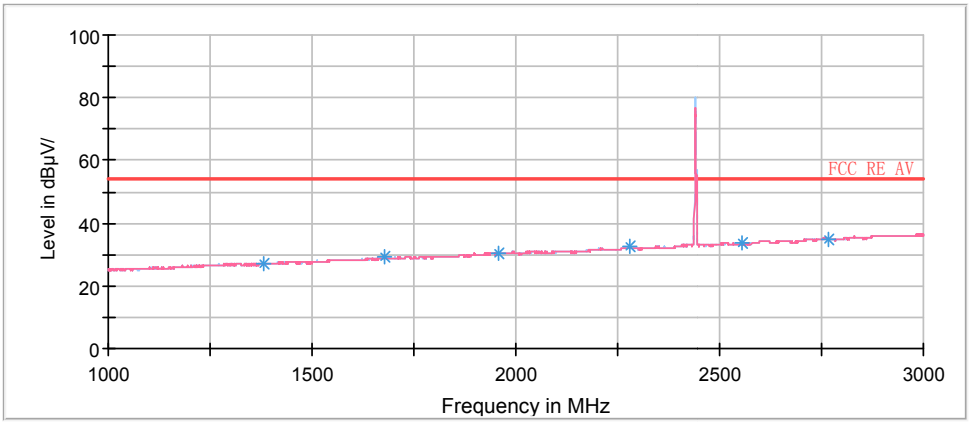


Radiates Emission from 1GHz to 3GHz

Note: The signal beyond the limit is carrier.

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1284.500000	39.4	151.0	H	211.0	47.1	-7.7	34.6	74
1607.000000	40.3	150.0	H	284.0	46.3	-6.0	33.7	74
1880.750000	41.5	151.0	V	0.0	45.7	-4.2	32.5	74
2219.000000	43.6	151.0	V	0.0	45.9	-2.3	30.4	74
2558.750000	45.8	151.0	V	69.0	46.3	-0.5	28.2	74
2879.750000	48.1	151.0	V	181.0	50.4	2.3	25.9	74

RE 1G-3GHz AV

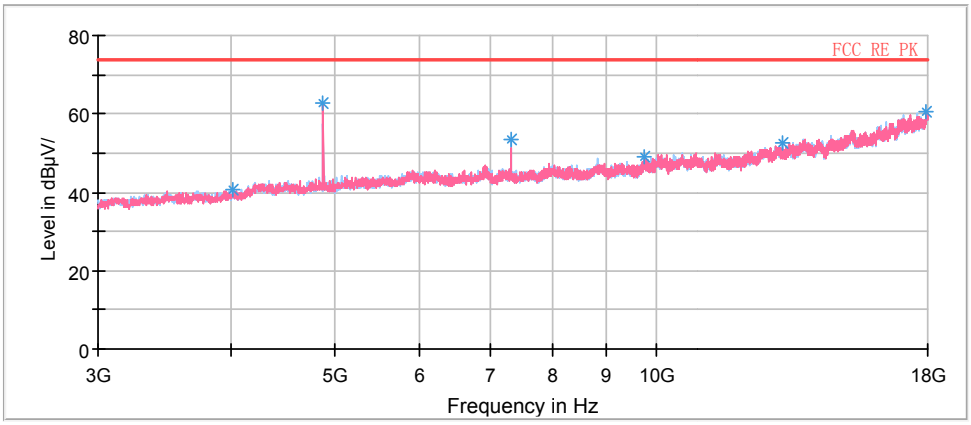


Radiates Emission from 1GHz to 3GHz

Note: The signal beyond the limit is carrier.

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1380.750000	27.0	151.0	H	348.0	34.0	-7.0	27.0	54
1680.000000	29.2	150.0	V	0.0	34.3	-5.1	24.8	54
1958.750000	30.5	151.0	H	0.0	33.7	-3.2	23.5	54
2279.750000	32.4	151.0	V	0.0	33.7	-1.3	21.6	54
2555.500000	33.4	151.0	H	0.0	33.9	-0.5	20.6	54
2766.500000	35.0	151.0	H	0.0	35.8	0.8	19.0	54

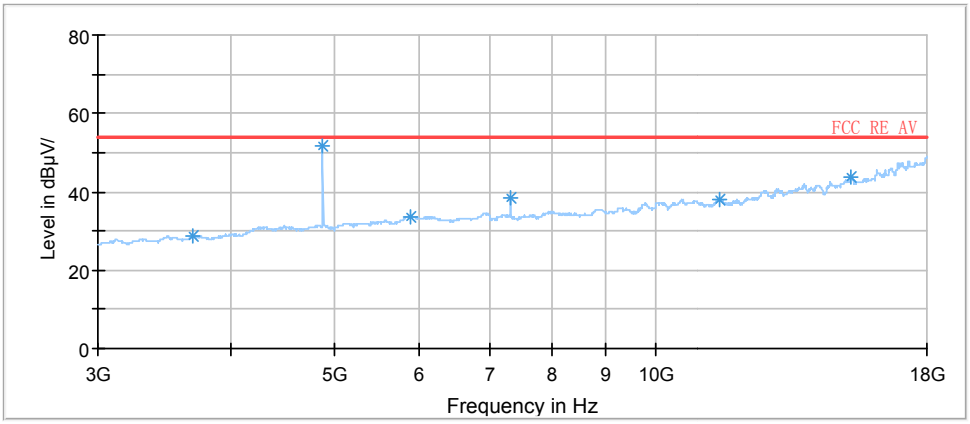
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
4010.625000	40.5	151.0	H	260.0	41.0	0.5	33.5	74
4880.625000	62.7	150.0	V	0.0	65.7	3.0	11.3	74
7321.875000	53.7	150.0	H	319.0	62.2	8.5	20.3	74
9765.000000	49.3	150.0	H	216.0	61.1	11.8	24.7	74
13158.750000	52.5	151.0	H	0.0	68.0	15.5	21.5	74
17962.500000	60.7	151.0	V	189.0	85.7	25.0	13.3	74

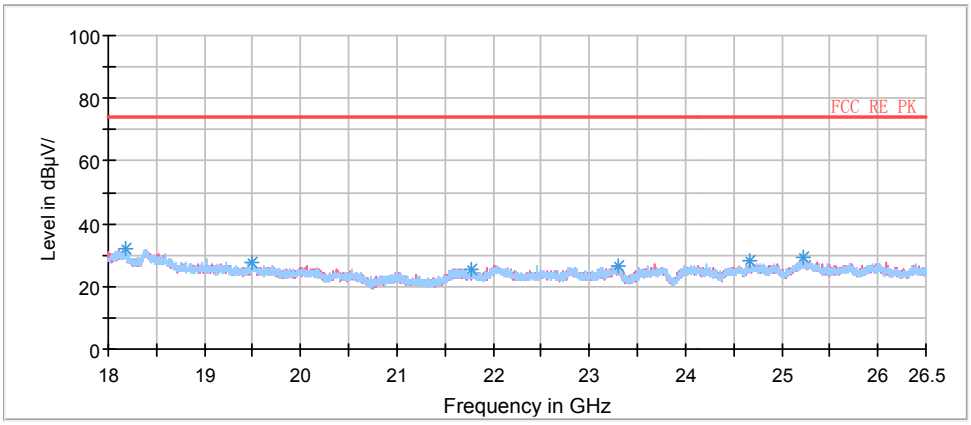
RE 3-18GHz AV



Radiates Emission from 3GHz to 18GHz

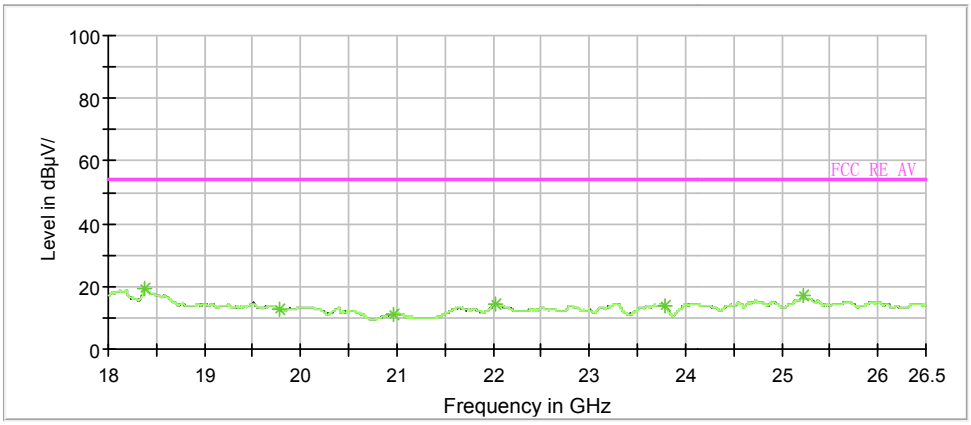
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3690.000000	28.7	151.0	H	0.0	29.0	-0.3	25.3	54
4880.625000	51.8	150.0	V	0.0	54.8	3.0	2.2	54
5895.000000	33.8	150.0	H	0.0	39.9	6.1	20.2	54
7321.875000	38.3	150.0	V	0.0	46.8	8.5	15.7	54
11495.625000	38.2	151.0	V	0.0	52.2	14.0	15.8	54
15253.125000	43.5	151.0	V	0.0	63.2	19.7	10.5	54

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)



Radiates Emission from 18GHz to 26.5GHz

Frequency (MHz)	Peak (dBuV/m)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
18187.000000	31.8	V	185.0	36.7	-4.9	42.2	74
19500.250000	27.7	H	148.0	35.2	-7.5	46.3	74
21769.750000	25.6	H	0.0	34.9	-9.3	48.4	74
23292.312500	26.6	V	285.0	33.6	-7.0	47.4	74
24661.875000	28.2	V	345.0	35.2	-7.0	45.8	74
25226.062500	29.0	H	30.0	34.9	-5.9	45.0	74



Radiates Emission from 18GHz to 26.5GHz

Frequency (MHz)	Average (dBuV/m)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
18374.000000	19.2	V	0.0	23.9	-4.7	34.8	54
19783.937500	12.6	V	0.0	20.5	-7.9	41.4	54
20972.875000	11.3	V	0.0	20.0	-8.7	42.7	54
22022.625000	14.3	V	0.0	22.3	-8.0	39.7	54
23786.375000	13.7	V	0.0	21.4	-7.7	40.3	54
25221.812500	16.9	V	0.0	22.8	-5.9	37.1	54

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

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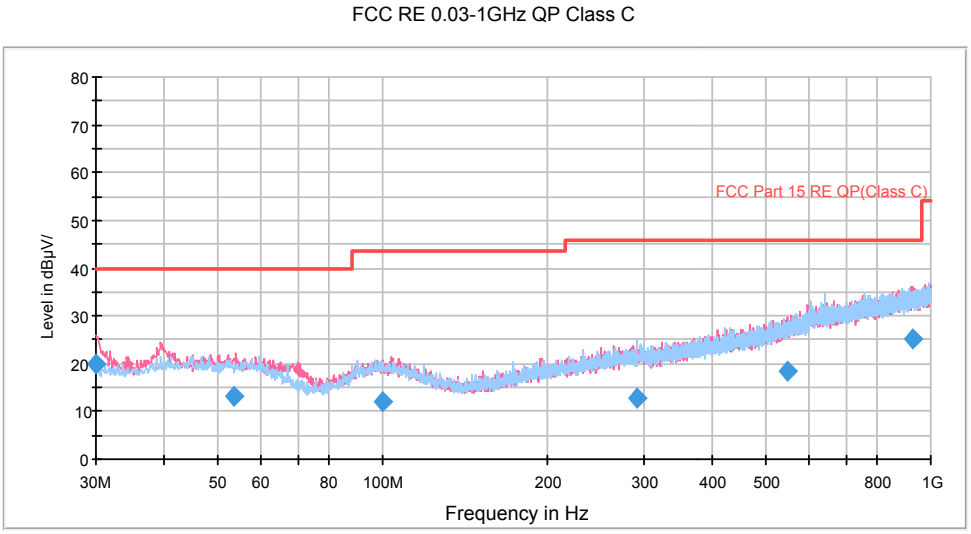


Radiates Emission from 30MHz to 1GHz

Note: This graph displays the maximum values of horizontal and vertical by software

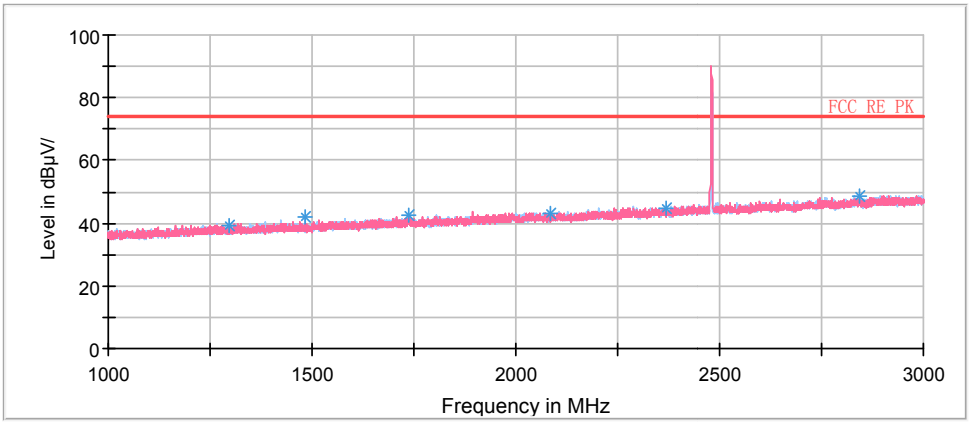
Frequency (MHz)	Quasi-Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
30.000000	19.8	100.0	V	22.0	31.7	11.9	20.2	40.0
53.528750	13.2	100.0	V	28.0	26.0	12.8	26.8	40.0
100.162500	12.2	100.0	V	35.0	25.4	13.2	31.3	43.5
290.086250	12.7	125.0	H	270.0	27.9	15.2	33.3	46.0
548.540000	18.4	114.0	V	213.0	39.4	21.0	27.6	46.0
929.633750	25.0	100.0	V	28.0	50.9	25.9	21.0	46.0

Remark: 1. Quasi-Peak = Reading value + Correction factor

2. Correction Factor = Antenna factor+ Insertion loss(cable loss+amplifier gain)

3. Margin = Limit – Quasi-Peak

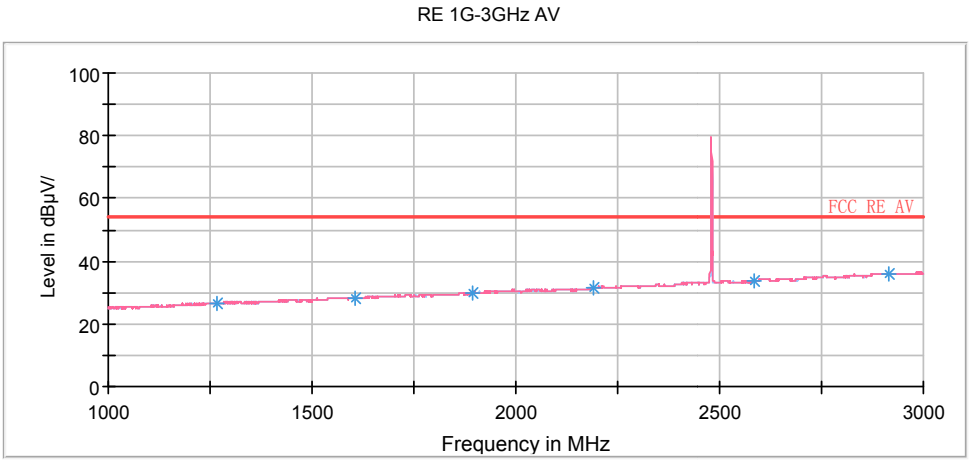
RE 1G-3GHz PK



Radiates Emission from 1GHz to 3GHz

Note: The signal beyond the limit is carrier.

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1298.500000	39.3	151.0	H	245.0	47.1	-7.8	34.7	74
1484.750000	41.7	150.0	H	253.0	48.3	-6.6	32.3	74
1738.250000	42.3	150.0	V	114.0	46.9	-4.6	31.7	74
2083.500000	43.3	150.0	H	169.0	46.3	-3.0	30.7	74
2369.500000	44.9	151.0	V	83.0	46.4	-1.5	29.1	74
2843.750000	48.7	151.0	V	114.0	50.1	1.4	25.3	74

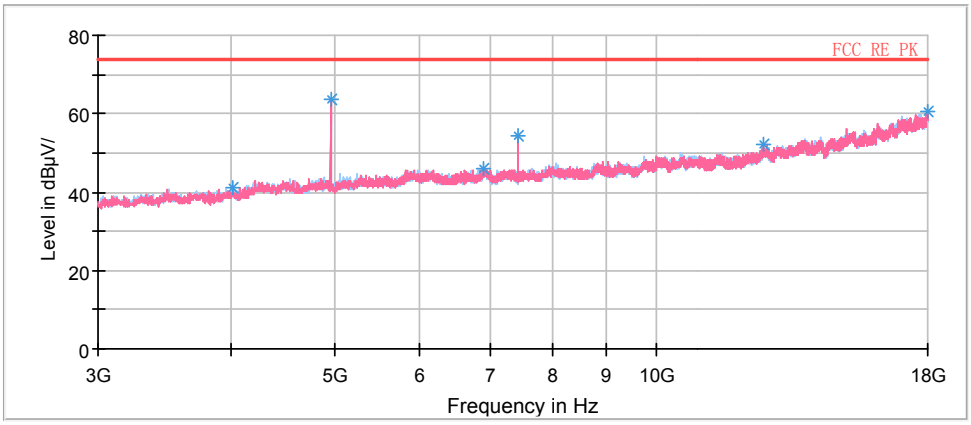


Radiates Emission from 1GHz to 3GHz

Note: The signal beyond the limit is carrier.

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1268.000000	26.6	151.0	H	0.0	34.3	-7.7	27.4	54
1604.250000	28.3	150.0	H	0.0	34.5	-6.2	25.7	54
1895.750000	30.0	150.0	H	0.0	33.9	-3.9	24.0	54
2191.750000	31.6	150.0	H	173.0	33.7	-2.1	22.4	54
2585.250000	33.8	151.0	H	0.0	34.0	-0.2	20.2	54
2914.000000	36.0	151.0	H	347.0	37.8	1.8	18.0	54

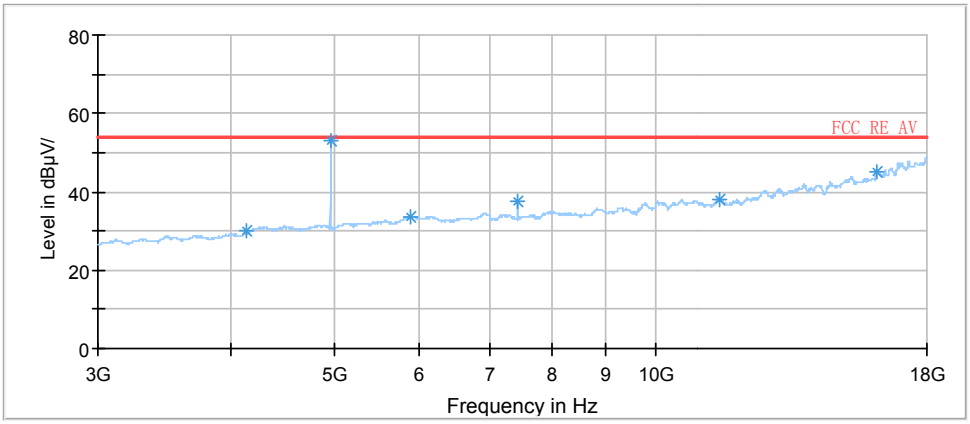
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
4018.125000	41.0	151.0	V	62.0	41.5	0.5	33.0	74
4959.375000	63.8	150.0	V	348.0	66.8	3.0	10.2	74
6900.000000	46.0	150.0	H	91.0	53.0	7.0	28.0	74
7440.000000	54.3	150.0	V	119.0	62.1	7.8	19.7	74
12633.750000	52.3	151.0	V	105.0	67.1	14.8	21.7	74
17994.375000	60.5	151.0	H	106.0	85.8	25.3	13.5	74

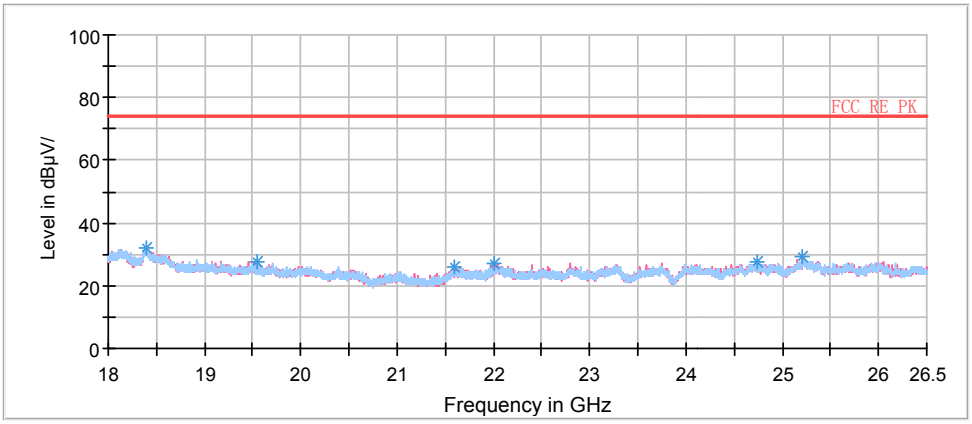
RE 3-18GHz AV



Radiates Emission from 3GHz to 18GHz

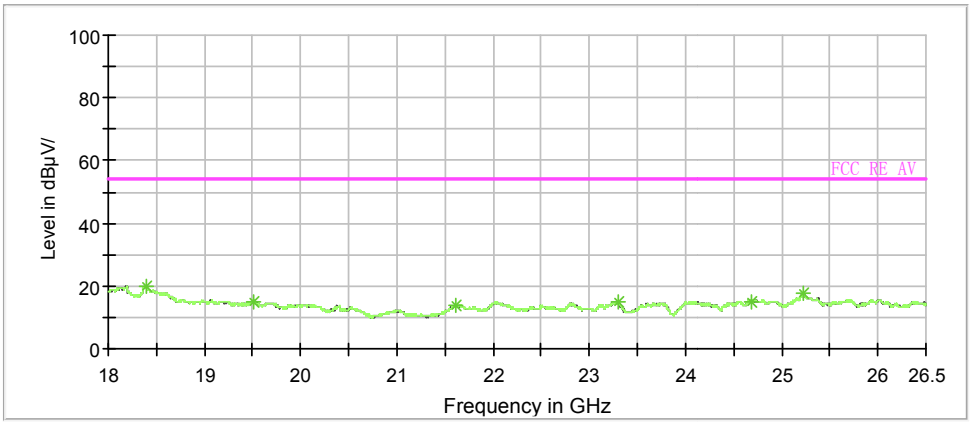
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
4132.500000	29.9	151.0	H	0.0	31.0	1.1	24.1	54
4959.375000	53.2	150.0	V	0.0	56.2	3.0	0.8	54
5895.000000	33.8	150.0	V	0.0	39.9	6.1	20.2	54
7440.000000	37.7	150.0	V	0.0	45.5	7.8	16.3	54
11488.125000	38.2	151.0	H	0.0	52.1	13.9	15.8	54
16170.000000	45.2	151.0	V	0.0	65.6	20.4	8.8	54

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)



Radiates Emission from 18GHz to 26.5GHz

Frequency (MHz)	Peak (dBuV/m)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
18386.750000	32.2	H	24.0	37.0	-4.8	41.8	74
19554.437500	27.5	H	50.0	34.8	-7.3	46.5	74
21588.062500	25.8	V	311.0	34.5	-8.7	48.2	74
22002.437500	27.3	H	41.0	35.6	-8.3	46.7	74
24732.000000	27.8	H	0.0	34.1	-6.3	46.2	74
25213.312500	29.1	V	262.0	35.3	-6.2	44.9	74



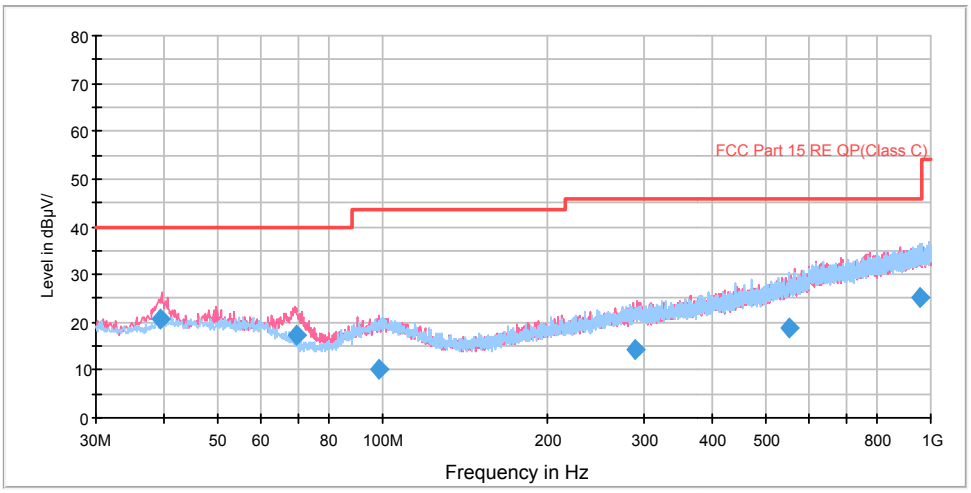
Radiates Emission from 18GHz to 26.5GHz

Frequency (MHz)	Average (dBuV/m)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
18392.062500	19.8	V	334.0	24.7	-4.9	34.2	54
19518.312500	15.1	V	0.0	22.5	-7.4	38.9	54
21619.937500	13.8	V	292.0	22.8	-9.0	40.2	54
23294.437500	14.9	V	334.0	21.9	-7.0	39.1	54
24688.437500	15.0	V	0.0	22.0	-7.0	39.0	54
25226.062500	17.5	H	111.0	23.4	-5.9	36.5	54

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

EDR-Channel 0

FCC RE 0.03-1GHz QP Class C

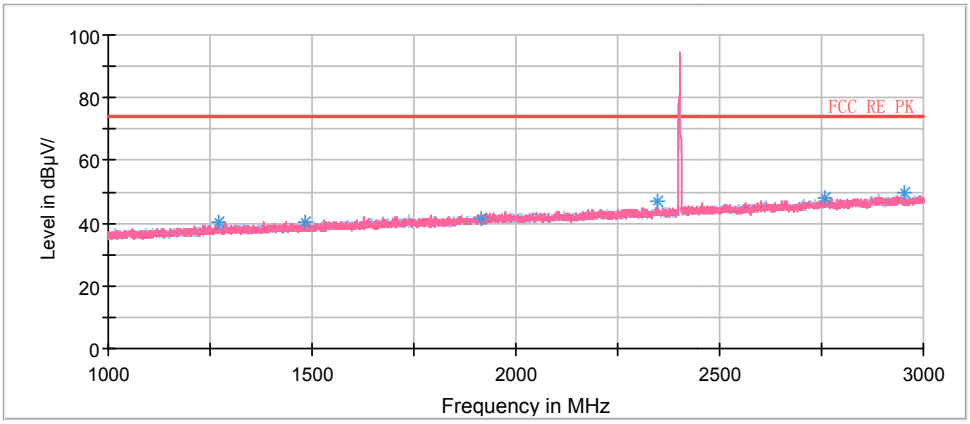


Radiates Emission from 30MHz to 1GHz

Note: This graph displays the maximum values of horizontal and vertical by software

Frequency (MHz)	Quasi-Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
39.218750	20.7	100.0	V	27.0	33.7	13.0	19.3	40.0
69.765000	17.3	100.0	V	24.0	26.0	8.7	22.7	40.0
98.388750	10.1	125.0	V	49.0	23.1	13.0	33.4	43.5
289.966250	14.3	100.0	V	0.0	29.5	15.2	31.7	46.0
553.676250	18.6	125.0	H	272.0	39.8	21.2	27.4	46.0
955.418750	25.2	114.0	H	6.0	51.3	26.1	20.8	46.0

RE 1G-3GHz PK

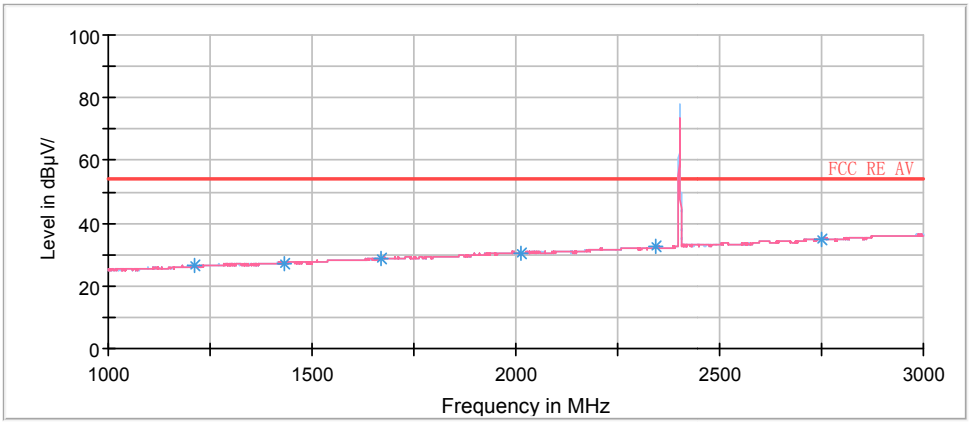


Radiates Emission from 1GHz to 3GHz

Note: The signal beyond the limit is carrier.

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1271.500000	40.1	151.0	V	89.0	47.8	-7.7	33.9	74
1483.250000	40.1	150.0	H	28.0	46.7	-6.6	33.9	74
1915.750000	41.7	150.0	H	172.0	45.6	-3.9	32.3	74
2346.000000	47.0	150.0	H	351.0	48.3	-1.3	27.0	74
2757.250000	48.2	151.0	V	0.0	49.1	0.9	25.8	74
2953.750000	49.9	151.0	V	0.0	52.0	2.1	24.1	74

RE 1G-3GHz AV

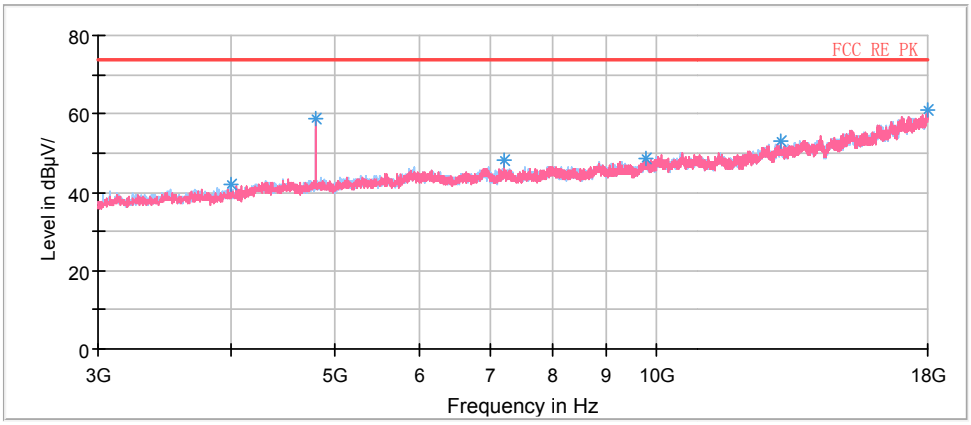


Radiates Emission from 1GHz to 3GHz

Note: The signal beyond the limit is carrier.

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1210.250000	26.3	151.0	H	0.0	34.4	-8.1	27.7	54
1432.500000	27.3	150.0	H	0.0	34.2	-6.9	26.7	54
1668.000000	28.6	150.0	H	346.0	33.7	-5.1	25.4	54
2011.500000	30.3	150.0	H	173.0	33.8	-3.5	23.7	54
2344.500000	32.4	151.0	H	346.0	33.7	-1.3	21.6	54
2752.000000	35.0	151.0	H	173.0	35.9	0.9	19.0	54

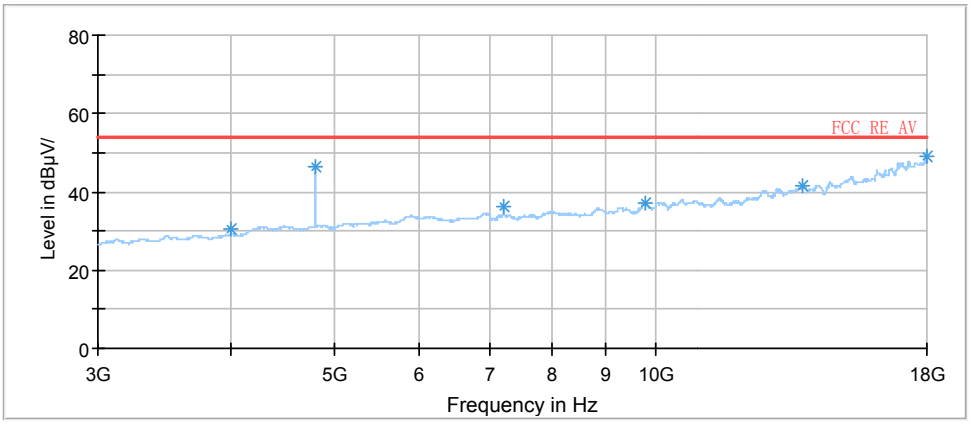
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
4001.250000	41.8	151.0	H	226.0	42.3	0.5	32.2	74
4803.750000	59.0	150.0	V	156.0	61.7	2.7	15.0	74
7205.625000	48.3	150.0	V	170.0	57.0	8.7	25.7	74
9787.500000	48.7	150.0	H	136.0	60.8	12.1	25.3	74
13113.750000	53.1	151.0	V	6.0	69.1	16.0	20.9	74
17973.750000	61.0	151.0	V	65.0	86.1	25.1	13.0	74

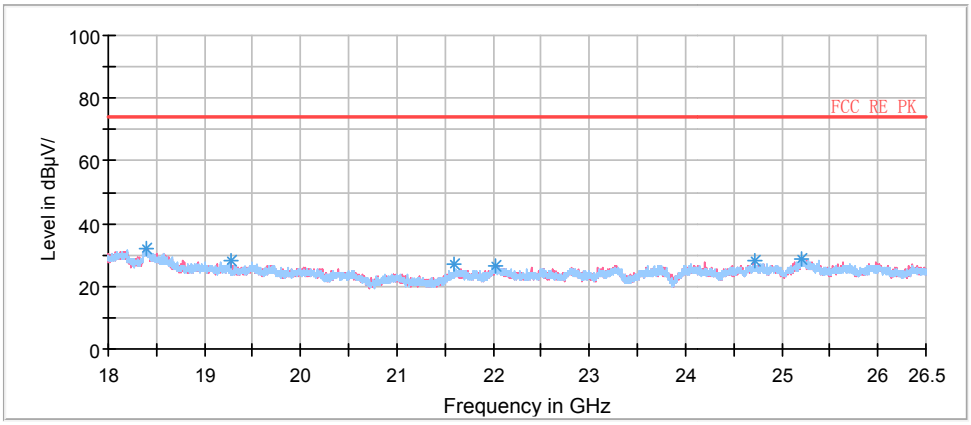
RE 3-18GHz AV



Radiates Emission from 3GHz to 18GHz

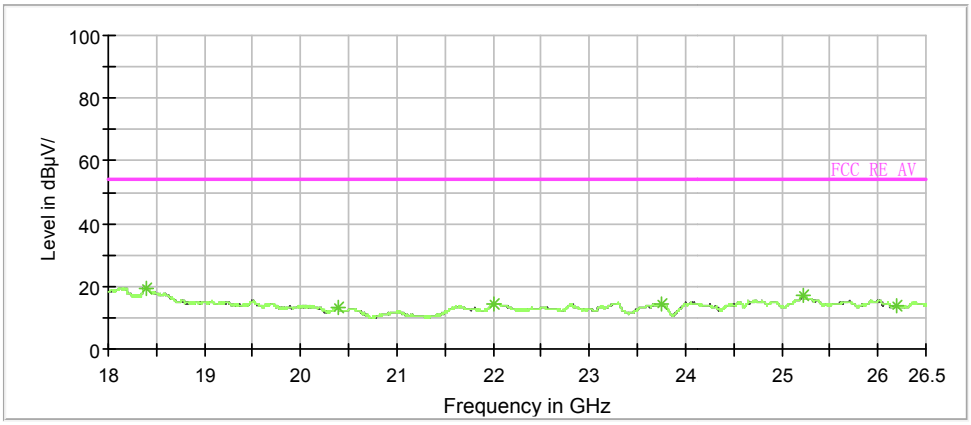
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
4003.125000	30.4	151.0	H	0.0	30.9	0.5	23.6	54
4803.750000	46.3	150.0	V	0.0	49.0	2.7	7.7	54
7205.625000	36.0	150.0	V	0.0	44.7	8.7	18.0	54
9800.625000	37.1	150.0	H	0.0	49.4	12.3	16.9	54
13783.125000	41.7	151.0	V	0.0	58.3	16.6	12.3	54
18000.000000	49.3	151.0	V	0.0	74.7	25.4	4.7	54

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)



Radiates Emission from 18GHz to 26.5GHz

Frequency (MHz)	Peak (dBuV/m)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
18395.250000	32.2	H	7.0	37.1	-4.9	41.8	74
19268.625000	27.9	V	287.0	35.0	-7.1	46.1	74
21600.812500	26.9	H	214.0	35.7	-8.8	47.1	74
22027.937500	26.8	V	244.0	34.7	-7.9	47.2	74
24725.625000	28.3	H	241.0	34.5	-6.2	45.7	74
25212.250000	28.7	H	164.0	34.9	-6.2	45.3	74



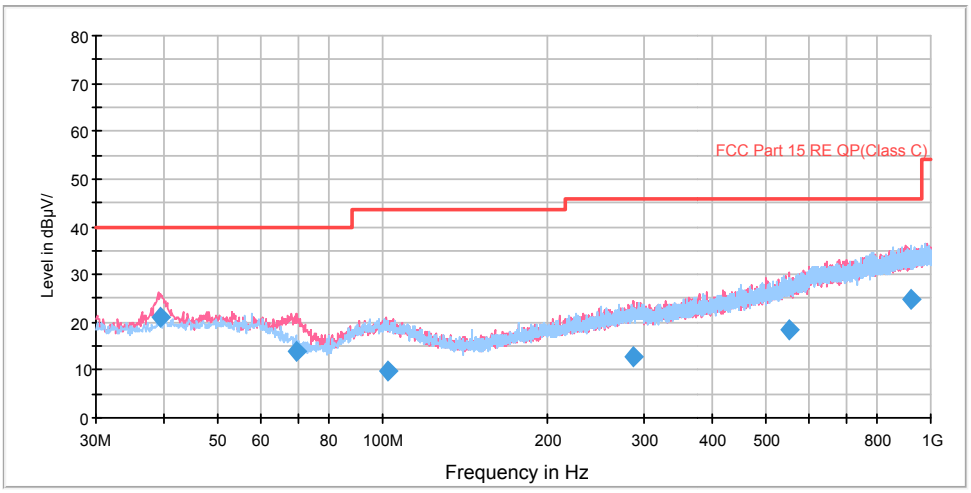
Radiates Emission from 18GHz to 26.5GHz

Frequency (MHz)	Average (dBuV/m)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
18399.500000	19.5	V	115.0	24.4	-4.9	34.5	54
20394.875000	13.4	V	0.0	21.5	-8.1	40.6	54
22015.187500	14.5	V	0.0	22.6	-8.1	39.5	54
23746.000000	14.5	H	0.0	22.3	-7.8	39.5	54
25230.312500	17.2	V	348.0	23.1	-5.9	36.8	54
26197.187500	14.0	V	115.0	21.2	-7.2	40.0	54

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

EDR-Channel 39

FCC RE 0.03-1GHz QP Class C

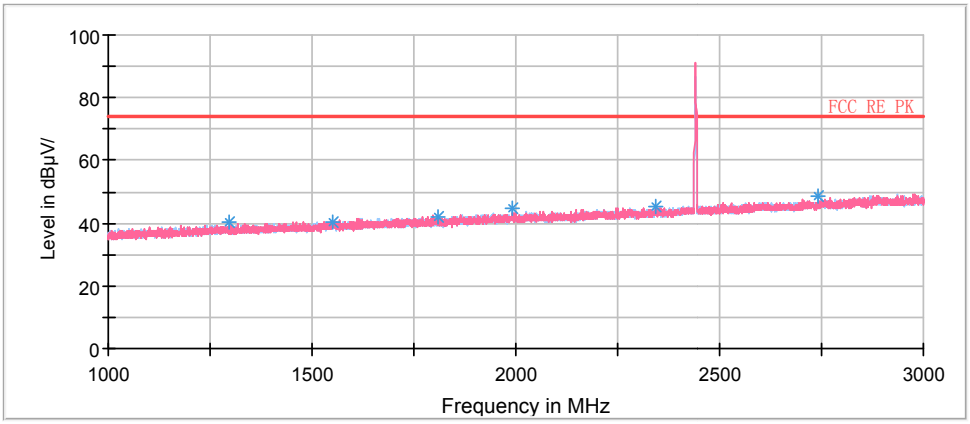


Radiates Emission from 30MHz to 1GHz

Note: This graph displays the maximum values of horizontal and vertical by software

Frequency (MHz)	Quasi-Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
39.252500	20.9	100.0	V	25.0	33.9	13.0	19.1	40.0
69.851250	13.9	100.0	V	36.0	22.5	8.6	26.1	40.0
102.380000	9.7	114.0	V	314.0	22.7	13.0	33.8	43.5
286.688750	12.9	100.0	V	0.0	27.9	15.0	33.1	46.0
551.975000	18.5	100.0	V	67.0	39.6	21.1	27.5	46.0
920.582500	24.8	125.0	H	336.0	50.6	25.8	21.2	46.0

RE 1G-3GHz PK

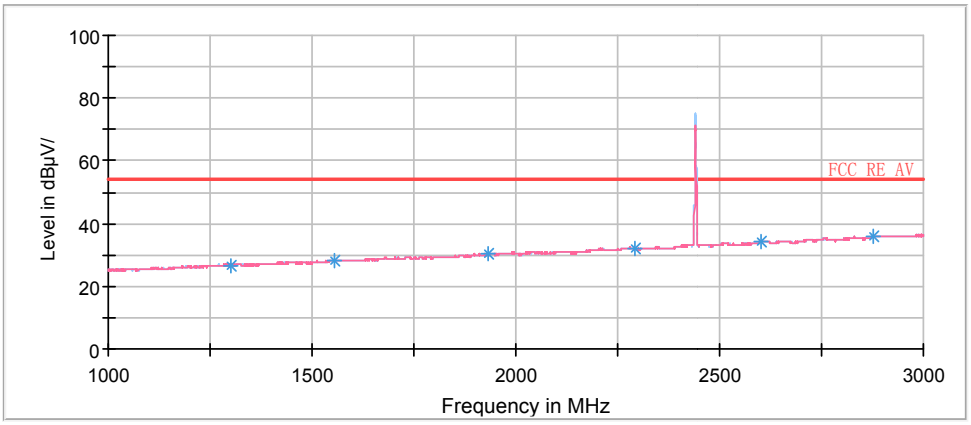


Radiates Emission from 1GHz to 3GHz

Note: The signal beyond the limit is carrier.

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1298.250000	40.2	151.0	H	302.0	48.0	-7.8	33.8	74
1552.250000	40.4	150.0	H	348.0	46.7	-6.3	33.6	74
1807.500000	41.9	150.0	V	6.0	46.0	-4.1	32.1	74
1990.500000	44.8	150.0	H	106.0	48.1	-3.3	29.2	74
2342.500000	45.3	151.0	V	34.0	46.6	-1.3	28.7	74
2742.250000	48.5	151.0	H	98.0	49.3	0.8	25.5	74

RE 1G-3GHz AV

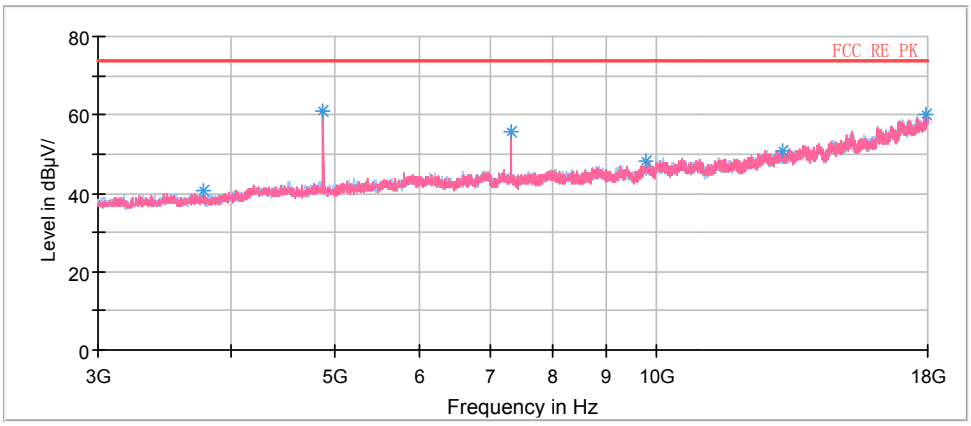


Radiates Emission from 1GHz to 3GHz

Note: The signal beyond the limit is carrier.

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1299.500000	26.7	151.0	H	0.0	34.6	-7.9	27.3	54
1554.250000	28.0	150.0	V	185.0	34.4	-6.4	26.0	54
1930.250000	30.2	150.0	V	10.0	33.9	-3.7	23.8	54
2291.000000	32.2	150.0	H	0.0	34.0	-1.8	21.8	54
2600.500000	34.2	151.0	H	0.0	34.6	0.4	19.8	54
2877.250000	35.9	151.0	H	0.0	38.2	2.3	18.1	54

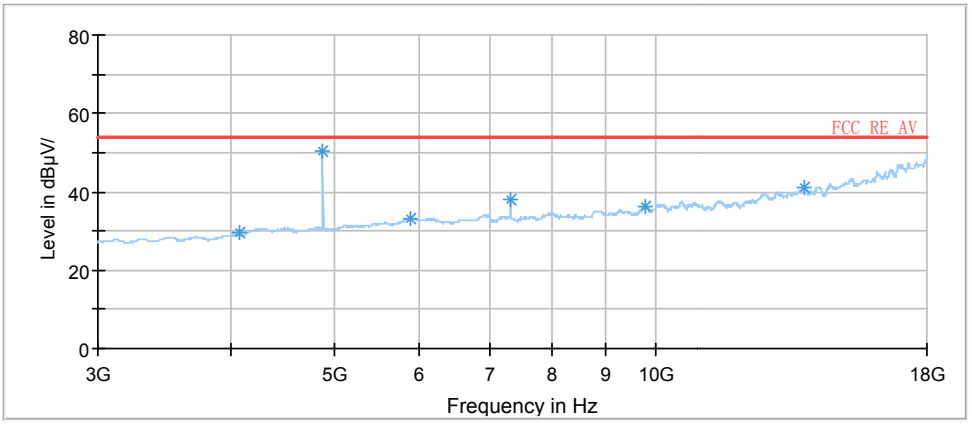
Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
3763.125000	40.6	151.0	H	183.0	41.0	-0.4	33.4	74
4880.625000	60.8	150.0	V	0.0	63.8	3.0	13.2	74
7321.875000	55.7	150.0	V	0.0	64.2	8.5	18.3	74
9789.375000	48.1	150.0	H	0.0	60.2	12.1	25.9	74
13153.125000	51.0	151.0	V	48.0	66.5	15.5	23.0	74
17962.500000	60.0	151.0	H	341.0	85.0	25.0	14.0	74

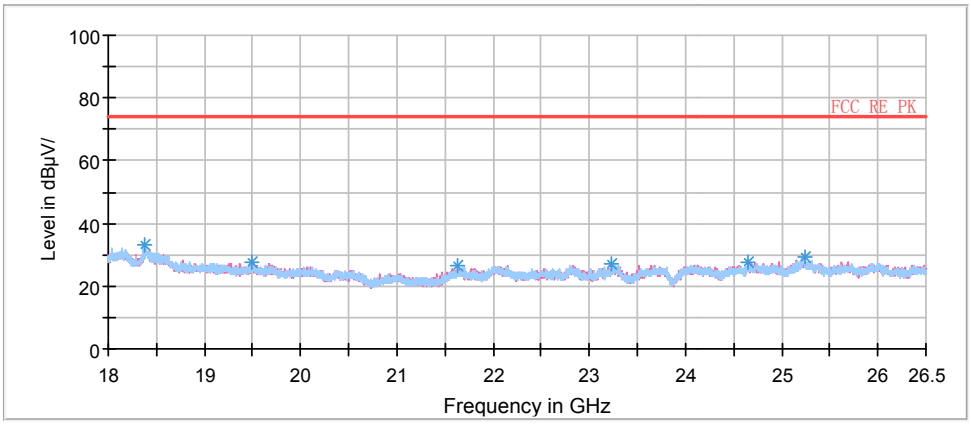
RE 3-18GHz AV



Radiates Emission from 3GHz to 18GHz

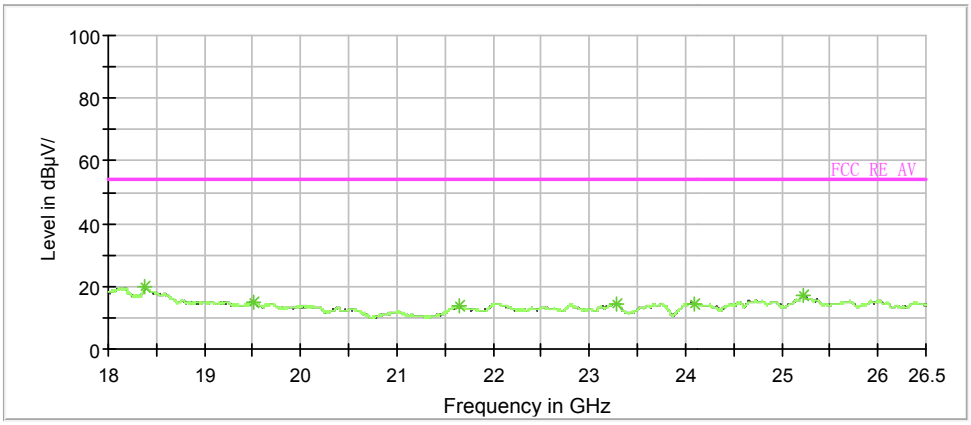
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
4066.875000	29.8	151.0	V	0.0	30.4	0.6	24.2	54
4880.625000	50.5	150.0	V	0.0	53.5	3.0	3.5	54
5891.250000	33.3	150.0	H	0.0	39.4	6.1	20.7	54
7321.875000	38.0	150.0	V	0.0	46.5	8.5	16.0	54
9802.500000	36.2	151.0	H	0.0	48.5	12.3	17.8	54
13786.875000	41.1	151.0	V	0.0	57.7	16.6	12.9	54

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)



Radiates Emission from 18GHz to 26.5GHz

Frequency (MHz)	Peak (dBuV/m)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
18378.250000	33.0	H	169.0	37.8	-4.8	41.0	74
19496.000000	27.6	H	152.0	35.2	-7.6	46.4	74
21626.312500	26.3	H	344.0	35.4	-9.1	47.7	74
23237.062500	27.2	V	172.0	35.1	-7.9	46.8	74
24652.312500	27.4	V	281.0	34.4	-7.0	46.6	74
25238.812500	29.2	V	197.0	35.4	-6.2	44.8	74



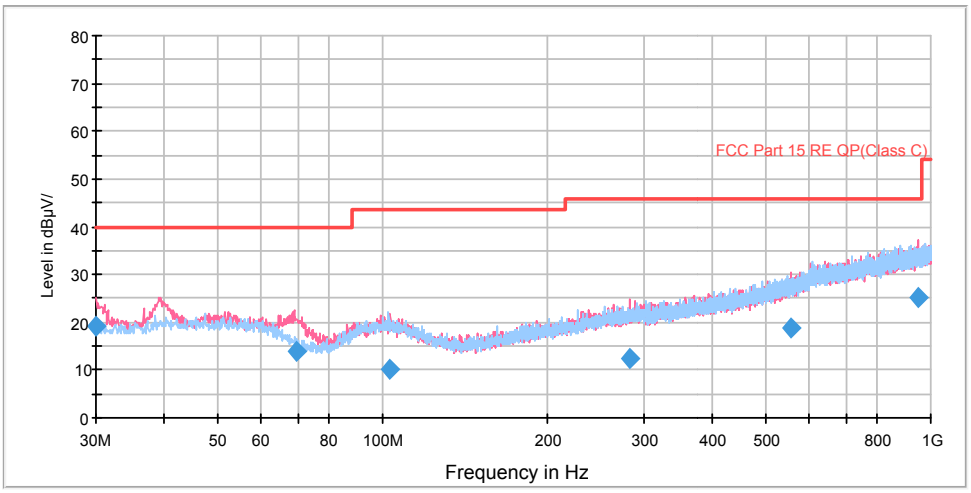
Radiates Emission from 18GHz to 26.5GHz

Frequency (MHz)	Average (dBuV/m)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
18379.312500	19.7	V	115.0	24.5	-4.8	34.3	54
19503.437500	15.1	V	349.0	22.6	-7.5	38.9	54
21649.687500	13.5	V	0.0	22.7	-9.2	40.5	54
23283.812500	14.6	V	0.0	21.7	-7.1	39.4	54
24093.437500	14.5	V	0.0	22.3	-7.8	39.5	54
25230.312500	17.2	V	349.0	23.1	-5.9	36.8	54

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

EDR-Channel 78

FCC RE 0.03-1GHz QP Class C

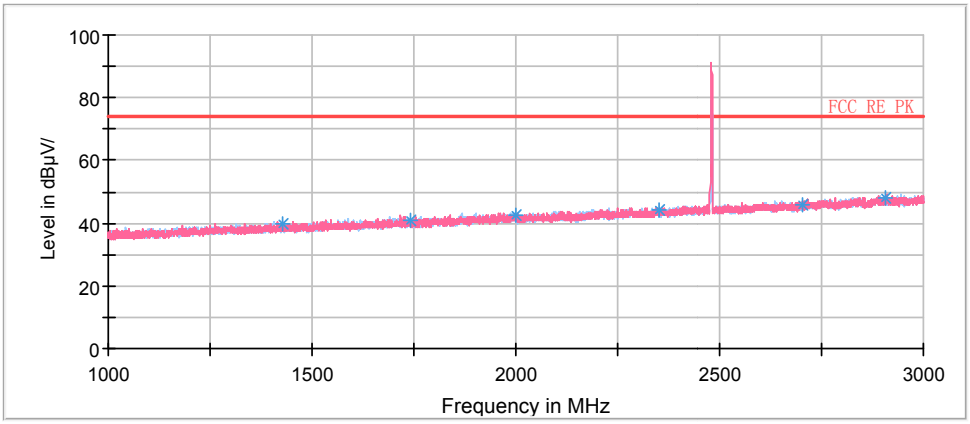


Radiates Emission from 30MHz to 1GHz

Note: This graph displays the maximum values of horizontal and vertical by software

Frequency (MHz)	Quasi-Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
30.000000	19.3	100.0	V	117.0	31.2	11.9	20.7	40.0
69.522500	13.8	100.0	V	28.0	22.6	8.8	26.2	40.0
103.188750	10.3	125.0	H	76.0	23.2	12.9	33.2	43.5
283.172500	12.3	100.0	V	161.0	27.2	14.9	33.7	46.0
556.796250	18.7	100.0	V	232.0	39.9	21.2	27.3	46.0
945.281250	25.1	100.0	V	353.0	51.1	26.0	20.9	46.0

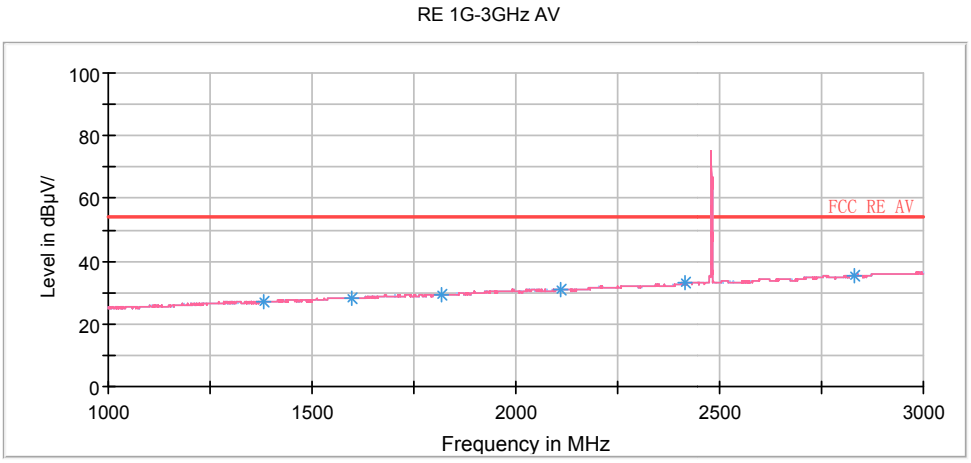
RE 1G-3GHz PK



Radiates Emission from 1GHz to 3GHz

Note: The signal beyond the limit is carrier.

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1426.500000	39.9	151.0	H	283.0	46.8	-6.9	34.1	74
1743.250000	40.8	150.0	V	119.0	45.7	-4.9	33.2	74
2001.250000	42.3	150.0	H	183.0	45.7	-3.4	31.7	74
2350.000000	44.3	150.0	V	335.0	45.6	-1.3	29.7	74
2702.750000	46.0	151.0	V	335.0	46.0	0.0	28.0	74
2906.000000	48.2	151.0	H	0.0	50.2	2.0	25.8	74



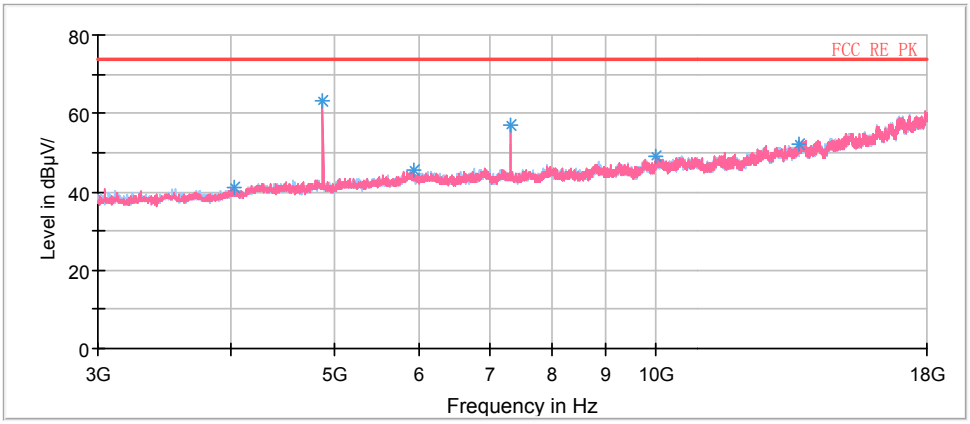
Radiates Emission from 1GHz to 3GHz

Note: The signal beyond the limit is carrier.

Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
1382.250000	27.0	151.0	H	0.0	34.0	-7.0	27.0	54
1595.500000	28.1	150.0	H	0.0	34.5	-6.4	25.9	54
1819.500000	29.1	150.0	H	0.0	33.5	-4.4	24.9	54
2111.750000	31.0	150.0	H	0.0	33.3	-2.3	23.0	54
2417.250000	32.9	151.0	V	0.0	33.5	-0.6	21.1	54
2831.500000	35.6	151.0	H	174.0	37.2	1.6	18.4	54

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

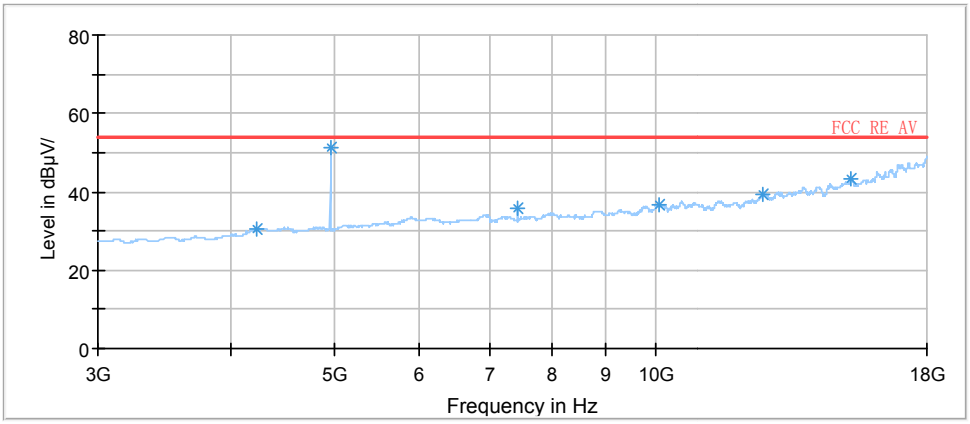
RE 3-18GHz PK



Radiates Emission from 3GHz to 18GHz

Frequency (MHz)	Peak (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
4023.750000	37.8	151.0	V	24.0	38.4	0.6	36.2	74
4880.625000	61.3	150.0	V	8.0	64.3	3.0	12.7	74
5930.625000	42.5	150.0	V	223.0	48.6	6.1	31.5	74
7323.750000	39.6	150.0	V	317.0	48.1	8.5	34.4	74
10021.875000	44.1	151.0	V	130.0	57.4	13.3	29.9	74
13655.625000	47.9	151.0	V	352.0	63.9	16.0	26.1	74

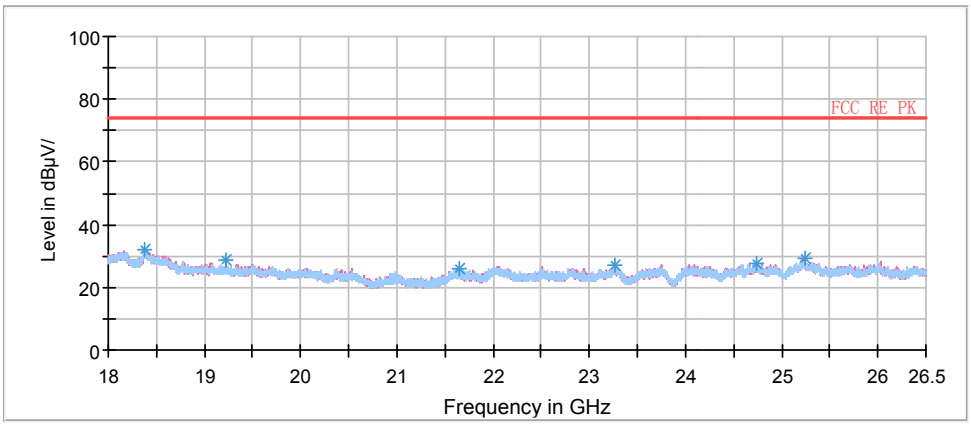
RE 3-18GHz AV



Radiates Emission from 3GHz to 18GHz

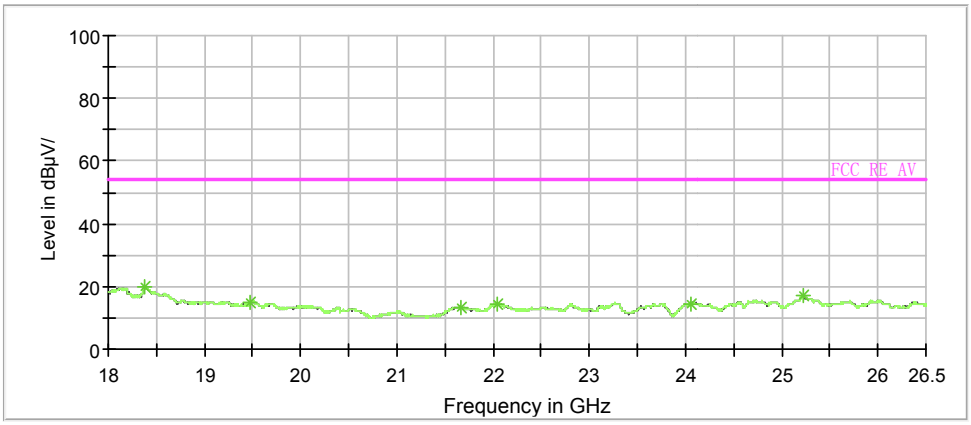
Frequency (MHz)	Average (dBuV/m)	Height (cm)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
4222.500000	30.4	151.0	V	0.0	32.2	1.8	23.6	54
4959.375000	51.2	150.0	V	0.0	54.2	3.0	2.8	54
7440.000000	35.6	150.0	V	0.0	43.4	7.8	18.4	54
10080.000000	36.6	150.0	V	0.0	50.3	13.7	17.4	54
12622.500000	39.3	151.0	V	0.0	54.0	14.7	14.7	54
15266.250000	43.1	151.0	V	0.0	62.8	19.7	10.9	54

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)



Radiates Emission from 18GHz to 26.5GHz

Frequency (MHz)	Peak (dBuV/m)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
18374.000000	31.8	H	0.0	36.5	-4.7	42.2	74
19217.625000	28.5	V	293.0	35.4	-6.9	45.5	74
21647.562500	26.2	H	144.0	35.4	-9.2	47.8	74
23261.500000	26.9	V	302.0	34.3	-7.4	47.1	74
24732.000000	27.5	V	45.0	33.8	-6.3	46.5	74
25248.375000	29.3	V	0.0	35.9	-6.6	44.7	74



Radiates Emission from 18GHz to 26.5GHz

Frequency (MHz)	Average (dBuV/m)	Polari-zation	Azimuth (deg)	Reading value (dBuV/m)	Correct Factor (dB)	Margin (dB)	Limit (dBuV/m)
18379.312500	19.6	V	0.0	24.4	-4.8	34.4	54
19479.000000	15.0	V	231.0	22.8	-7.8	39.0	54
21660.312500	13.5	V	0.0	22.7	-9.2	40.5	54
22036.437500	14.6	V	0.0	22.6	-8.0	39.4	54
24053.062500	14.6	V	0.0	22.4	-7.8	39.4	54
25225.000000	17.1	V	0.0	23.0	-5.9	36.9	54

Remark: 1. Correction Factor = Antenna factor+ Insertion loss (cable loss + amplifier gain)

4.11 Conducted Emission

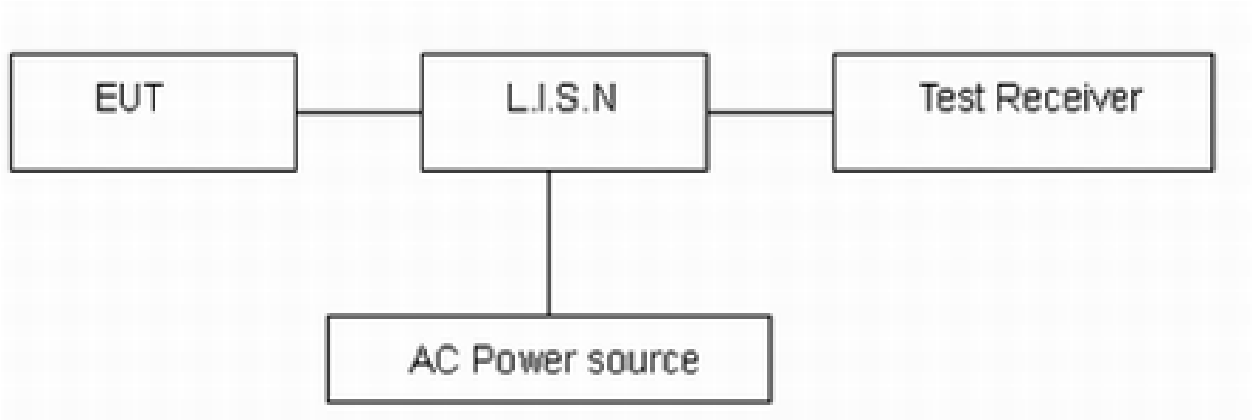
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

The EUT is placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.10-2013. Connect the AC power line of the EUT to the L.I.S.N. Use EMI receiver to detect the average and Quasi-peak value. RBW is set to 9 kHz, VBW is set to 30kHz.The measurement result should include both L line and N line.
The test is in transmitting mode.

Test Setup



Note: AC Power source is used to change the voltage from 220V/50Hz to 110V/60Hz.

Limits

Frequency (MHz)	Conducted Limits(dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46*
0.5 - 5	56	46
5 - 30	60	50
*: Decreases with the logarithm of the frequency.		

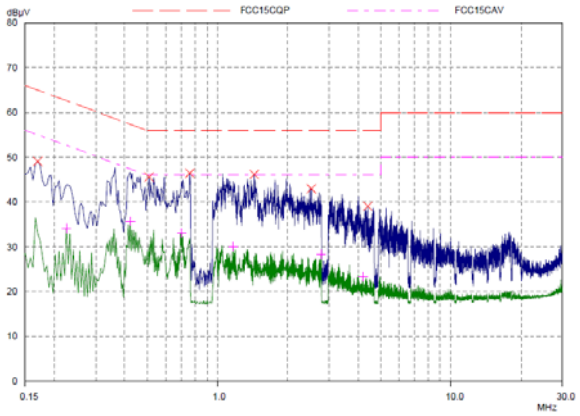
Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96, U=2.69 dB.

Test Results:

Following plots, Blue trace uses the peak detection, Green trace uses the average detection.

Basic Rate-CH0, L Line

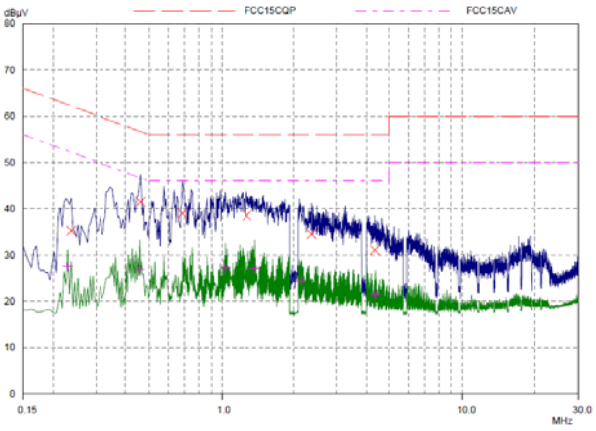


Peak Search Results

Frequency MHz	PK Level dBµV	PK Limit dBµV	PK Delta dB	Phase -	PE -
0.16953	49.04	64.98	15.94	L1	gnd
0.50937	45.58	56.00	10.42	L1	gnd
0.75937	46.43	56.00	9.57	L1	gnd
1.44296	46.17	56.00	9.83	L1	gnd
2.525	42.99	56.00	13.01	L1	gnd
4.38437	39.03	56.00	16.97	L1	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
0.22421	34.13	52.66	18.53	L1	gnd
0.42343	35.67	47.38	11.71	L1	gnd
0.70078	33.05	46.00	12.95	L1	gnd
1.16171	30.02	46.00	15.98	L1	gnd
2.775	28.35	46.00	17.65	L1	gnd
4.18125	23.34	46.00	22.66	L1	gnd

Basic Rate-CH0, N Line

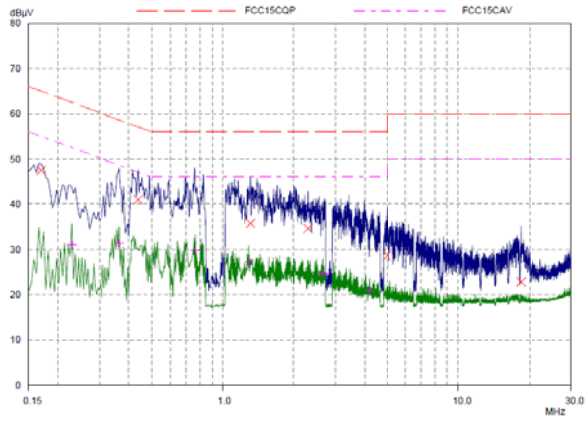


Final Measurement Results

Frequency MHz	QP Level dBµV	QP Limit dBµV	QP Delta dB	Phase -	PE -
0.23593	35.24	62.24	27.00	N	gnd
0.4625	41.49	56.65	15.16	N	gnd
0.68515	39.03	56.00	16.97	N	gnd
1.27109	38.54	56.00	17.46	N	gnd
2.36875	34.50	56.00	21.50	N	gnd
4.32578	31.07	56.00	24.93	N	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
0.22812	27.62	52.52	24.90	N	gnd
0.45859	26.82	46.72	19.90	N	gnd
1.02889	27.20	46.00	18.80	N	gnd
1.38046	27.03	46.00	18.97	N	gnd
2.14609	24.41	46.00	21.59	N	gnd
4.35312	21.42	46.00	24.58	N	gnd

Basic Rate-CH39, L Line

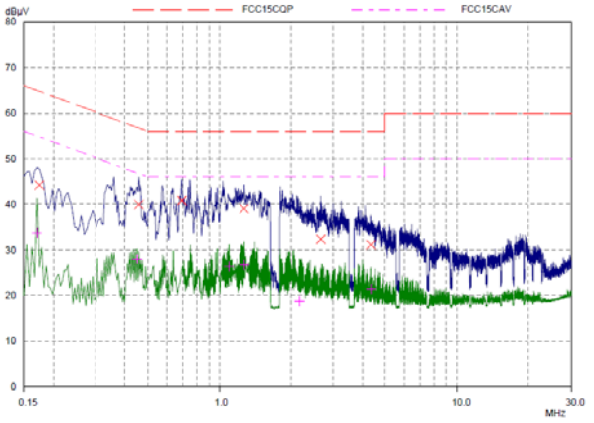


Final Measurement Results

Frequency MHz	QP Level dBµV	QP Limit dBµV	QP Delta dB	Phase -	PE -
0.16953	47.50	64.98	17.48	L1	gnd
0.43906	40.97	57.08	16.11	L1	gnd
1.31796	35.78	56.00	20.22	L1	gnd
2.30234	34.68	56.00	21.32	L1	gnd
4.98593	28.60	56.00	27.40	L1	gnd
18.3414	22.82	60.00	37.18	L1	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
0.22812	30.96	52.52	21.56	L1	gnd
0.36484	31.28	48.62	17.34	L1	gnd
0.76328	29.76	46.00	16.24	L1	gnd
1.29453	27.20	46.00	18.80	L1	gnd
2.65781	24.73	46.00	21.27	L1	gnd
4.18515	21.01	46.00	24.99	L1	gnd

Basic Rate-CH39, N Line

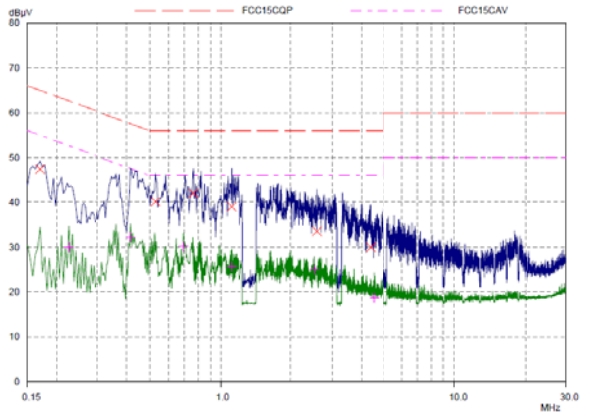


Final Measurement Results

Frequency MHz	QP Level dBµV	QP Limit dBµV	QP Delta dB	Phase -	PE -
0.17343	44.22	64.79	20.57	N	gnd
0.45859	39.95	56.72	16.77	N	gnd
0.69296	40.81	56.00	15.19	N	gnd
1.26718	39.06	56.00	16.94	N	gnd
2.66562	32.35	56.00	23.65	N	gnd
4.32578	31.13	56.00	24.87	N	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
0.16953	33.73	54.98	21.25	N	gnd
0.45078	27.99	46.86	18.87	N	gnd
1.0914	26.42	46.00	19.58	N	gnd
1.26718	26.73	46.00	19.27	N	gnd
2.16953	18.70	46.00	27.30	N	gnd
4.32968	21.42	46.00	24.58	N	gnd

Basic Rate-CH78, L Line

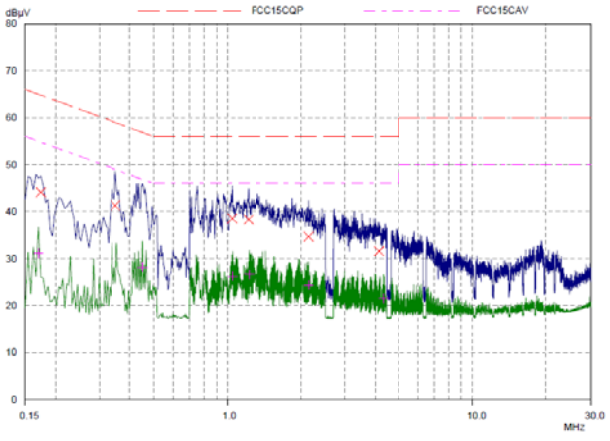


Final Measurement Results

Frequency MHz	QP Level dBµV	QP Limit dBµV	QP Delta dB	Phase -	PE -
0.16953	47.42	64.98	17.56	L1	gnd
0.5289	40.14	56.00	15.86	L1	gnd
0.76328	42.03	56.00	13.97	L1	gnd
1.10703	39.00	56.00	17.00	L1	gnd
2.5875	33.51	56.00	22.49	L1	gnd
4.37265	29.93	56.00	26.07	L1	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
0.22421	30.01	52.66	22.65	L1	gnd
0.41562	32.22	47.54	15.32	L1	gnd
0.69296	30.18	46.00	15.82	L1	gnd
1.10703	25.70	46.00	20.30	L1	gnd
2.51718	24.94	46.00	21.06	L1	gnd
4.525	18.67	46.00	27.33	L1	gnd

Basic Rate-CH78, N Line

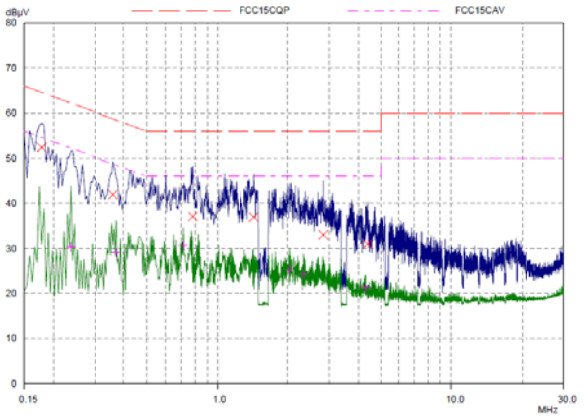


Final Measurement Results

Frequency MHz	QP Level dBµV	QP Limit dBµV	QP Delta dB	Phase -	PE -
0.17343	44.12	64.79	20.67	N	gnd
0.34921	41.29	58.98	17.69	N	gnd
1.04062	38.56	56.00	17.44	N	gnd
1.2125	38.32	56.00	17.68	N	gnd
2.14609	34.70	56.00	21.30	N	gnd
4.13046	31.58	56.00	24.42	N	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
0.16953	31.21	54.98	23.77	N	gnd
0.45078	28.20	46.86	18.66	N	gnd
1.04453	26.29	46.00	19.71	N	gnd
1.22031	26.67	46.00	19.33	N	gnd
2.14609	24.41	46.00	21.59	N	gnd
4.31406	21.53	46.00	24.47	N	gnd

EDR-CH0, L Line

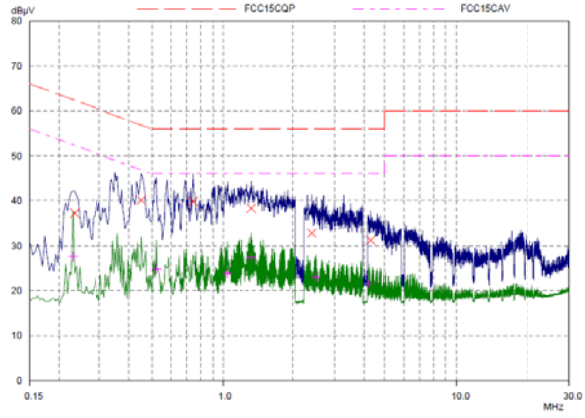


Final Measurement Results

Frequency MHz	QP Level dBµV	QP Limit dBµV	QP Delta dB	Phase -	PE -
0.17734	52.36	64.61	12.25	L1	gnd
0.36093	41.92	58.71	16.79	L1	gnd
0.78281	37.07	56.00	18.93	L1	gnd
1.43906	36.95	56.00	19.05	L1	gnd
2.8375	33.05	56.00	22.95	L1	gnd
4.36875	30.99	56.00	25.01	L1	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
0.23593	30.33	52.24	21.91	L1	gnd
0.37265	29.08	48.44	19.36	L1	gnd
0.7125	30.65	46.00	15.35	L1	gnd
2.0367	25.38	46.00	20.62	L1	gnd
2.3414	24.33	46.00	21.67	L1	gnd
4.2789	21.19	46.00	24.81	L1	gnd

EDR-CH0, N Line

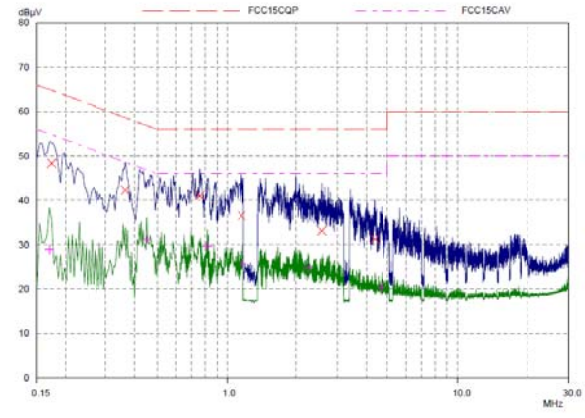


Final Measurement Results

Frequency MHz	QP Level dBµV	QP Limit dBµV	QP Delta dB	Phase -	PE -
0.23203	37.24	62.38	25.14	N	gnd
0.45078	40.13	56.86	16.73	N	gnd
0.74375	39.81	56.00	16.19	N	gnd
1.33359	38.33	56.00	17.67	N	gnd
2.4039	32.86	56.00	23.14	N	gnd
4.26328	31.25	56.00	24.75	N	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
0.22812	27.62	52.52	24.90	N	gnd
0.52109	24.87	46.00	21.13	N	gnd
1.03671	23.90	46.00	22.10	N	gnd
1.33359	27.49	46.00	18.51	N	gnd
2.49765	22.95	46.00	23.05	N	gnd
4.20078	21.57	46.00	24.43	N	gnd

EDR-CH39, L Line

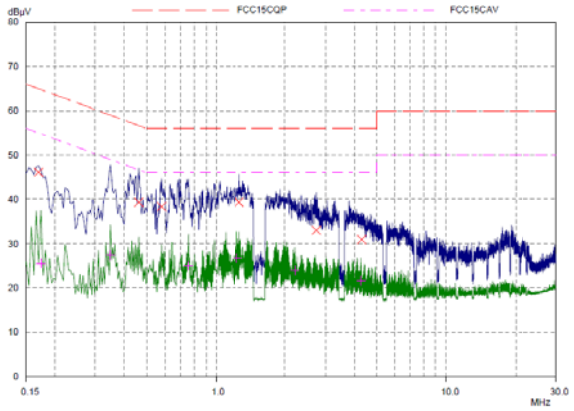


Final Measurement Results

Frequency MHz	QP Level dBµV	QP Limit dBµV	QP Delta dB	Phase -	PE -
0.17343	48.36	64.79	16.43	L1	gnd
0.36484	42.32	58.62	16.30	L1	gnd
0.75937	41.03	56.00	14.97	L1	gnd
1.15781	36.58	56.00	19.42	L1	gnd
2.57578	33.15	56.00	22.85	L1	gnd
4.3414	31.23	56.00	24.77	L1	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
0.16953	28.88	54.98	26.10	L1	gnd
0.45078	31.27	46.86	15.59	L1	gnd
0.81796	29.68	46.00	16.32	L1	gnd
1.17343	25.77	46.00	20.23	L1	gnd
2.24765	24.87	46.00	21.13	L1	gnd
4.66562	20.42	46.00	25.58	L1	gnd

EDR-CH39, N Line

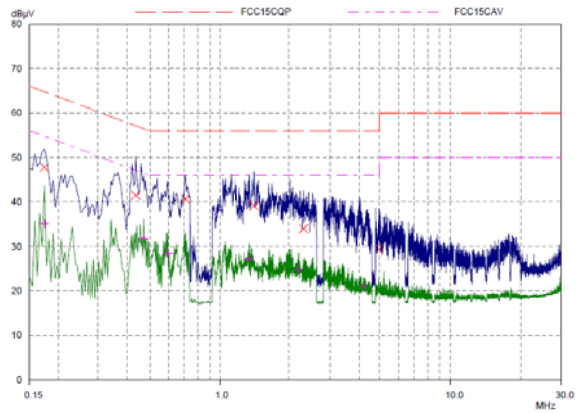


Final Measurement Results

Frequency MHz	QP Level dBµV	QP Limit dBµV	QP Delta dB	Phase -	PE -
0.16953	46.12	64.98	18.86	N	gnd
0.4625	39.35	56.65	17.30	N	gnd
0.57968	38.34	56.00	17.66	N	gnd
1.27109	39.36	56.00	16.64	N	gnd
2.73593	33.01	56.00	22.99	N	gnd
4.28281	30.93	56.00	25.07	N	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
0.17343	25.55	54.79	29.24	N	gnd
0.34921	27.47	48.98	21.51	N	gnd
0.75546	25.08	46.00	20.92	N	gnd
1.23984	26.73	46.00	19.27	N	gnd
2.2125	24.00	46.00	22.00	N	gnd
4.25937	21.64	46.00	24.36	N	gnd

EDR-CH78,L Line

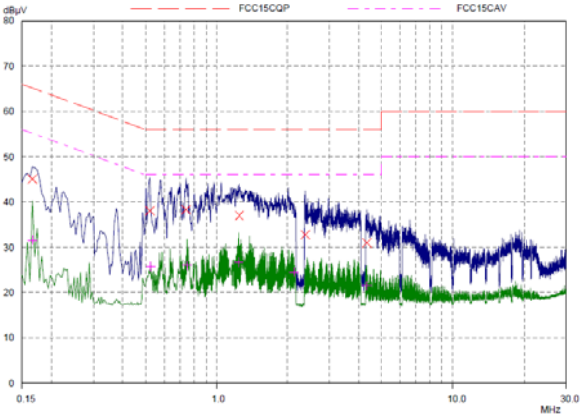


Final Measurement Results

Frequency MHz	QP Level dBµV	QP Limit dBµV	QP Delta dB	Phase -	PE -
0.17343	47.80	64.79	16.99	L1	gnd
0.43515	41.51	57.15	15.64	L1	gnd
0.70859	40.71	56.00	15.29	L1	gnd
1.41953	39.15	56.00	16.85	L1	gnd
2.31015	34.00	56.00	22.00	L1	gnd
4.94296	29.40	56.00	26.60	L1	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
0.17343	35.14	54.79	19.65	L1	gnd
0.47031	31.75	46.51	14.76	L1	gnd
0.59531	28.49	46.00	17.51	L1	gnd
1.35312	27.32	46.00	18.68	L1	gnd
2.20468	24.79	46.00	21.21	L1	gnd
4.17342	20.89	46.00	25.11	L1	gnd

EDR-CH78, N Line



Final Measurement Results

Frequency MHz	QP Level dBµV	QP Limit dBµV	QP Delta dB	Phase -	PE -
0.16562	45.07	65.18	20.11	N	gnd
0.52109	38.08	56.00	17.92	N	gnd
0.73984	38.31	56.00	17.69	N	gnd
1.24765	36.98	56.00	19.02	N	gnd
2.38046	32.80	56.00	23.20	N	gnd
4.32187	30.99	56.00	25.01	N	gnd

Frequency MHz	AV Level dBµV	AV Limit dBµV	AV Delta dB	Phase -	PE -
0.16562	31.58	55.18	23.60	N	gnd
0.525	25.72	46.00	20.28	N	gnd
0.74765	25.98	46.00	20.02	N	gnd
1.23984	26.73	46.00	19.27	N	gnd
2.13046	24.56	46.00	21.44	N	gnd
4.31406	21.53	46.00	24.47	N	gnd

5 Main Test Instruments

Name	Type	Manufacturer	Serial Number	Calibration Date	Expiration Time
BT Base Station Simulator	CBT	R&S	100271	2015-05-25	2016-05-24
Loop Antenna	FMZB1519	SCHWARZBECK	1519-047	2014-02-29	2017-02-28
EMI Test Receiver	ESCS30	R&S	100138	2015-12-16	2016-12-15
LISN	ENV216	R&S	101171	2015-12-16	2016-12-15
EMI Test Receiver	ESCI	R&S	100948	2015-05-25	2016-05-24
TRILOG Broadband Antenna	VULB 9163	Schwarzbeck	9163-201	2013-11-25	2016-11-24
Double Ridged Waveguide Horn Antenna	HF907	R&S	100126	2015-07-01	2018-06-30
Power Splitter	SHX-GF2-2-13	Hua Xiang	10120101	NA	NA
Spectrum Analyzer	FSV30	R&S	100815	2015-12-16	2016-12-15
Spectrum Analyzer	N9010A	Agilent	MY47191109	2015-05-22	2016-05-21
Standard Gain Horn	3160-09	ETS-Lindgren	00102644	2015-05-19	2018-05-18
RF Cable	SMA 15cm	Agilent	0001	2016-03-08	2016-05-07

*******END OF REPORT *******

ANNEX A: EUT Appearance and Test Setup

A.1 EUT Appearance

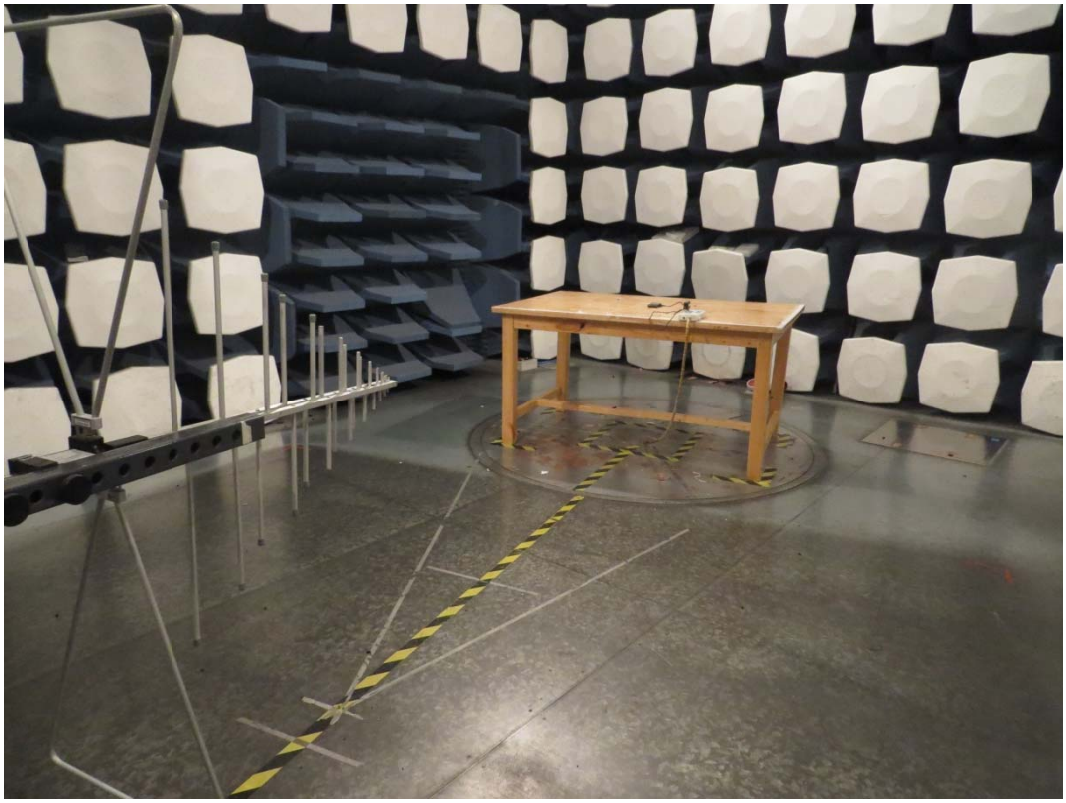
Front Side

Back Side

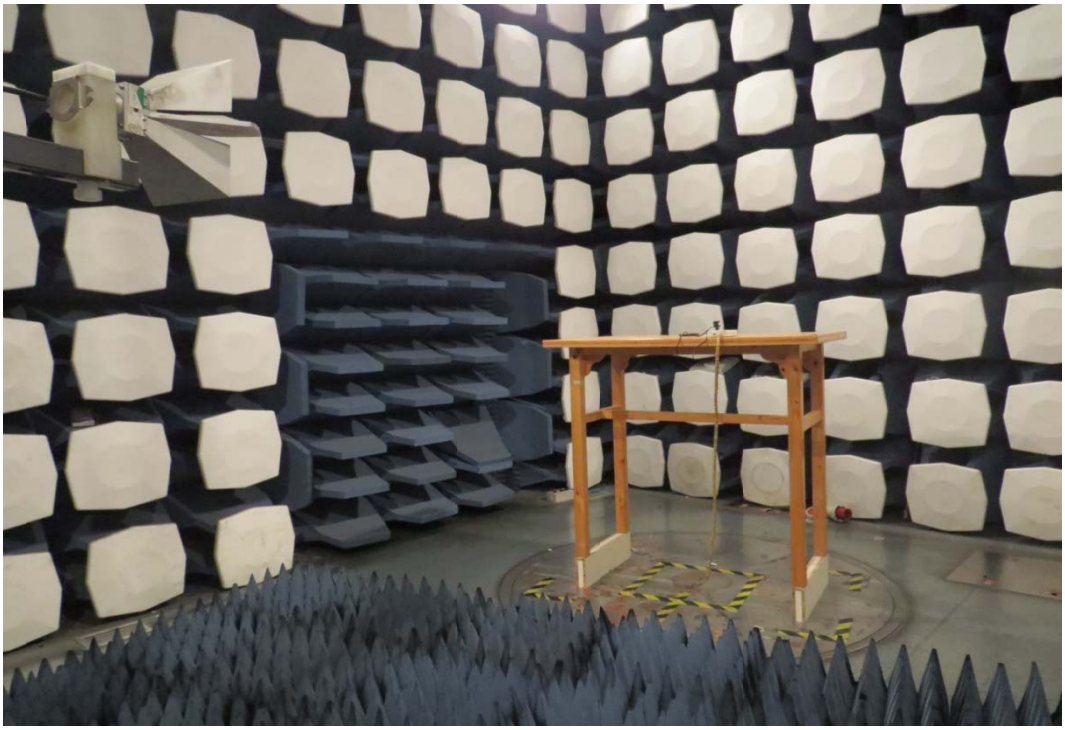
a: EUT

Picture 1 EUT

A.2 Test Setup

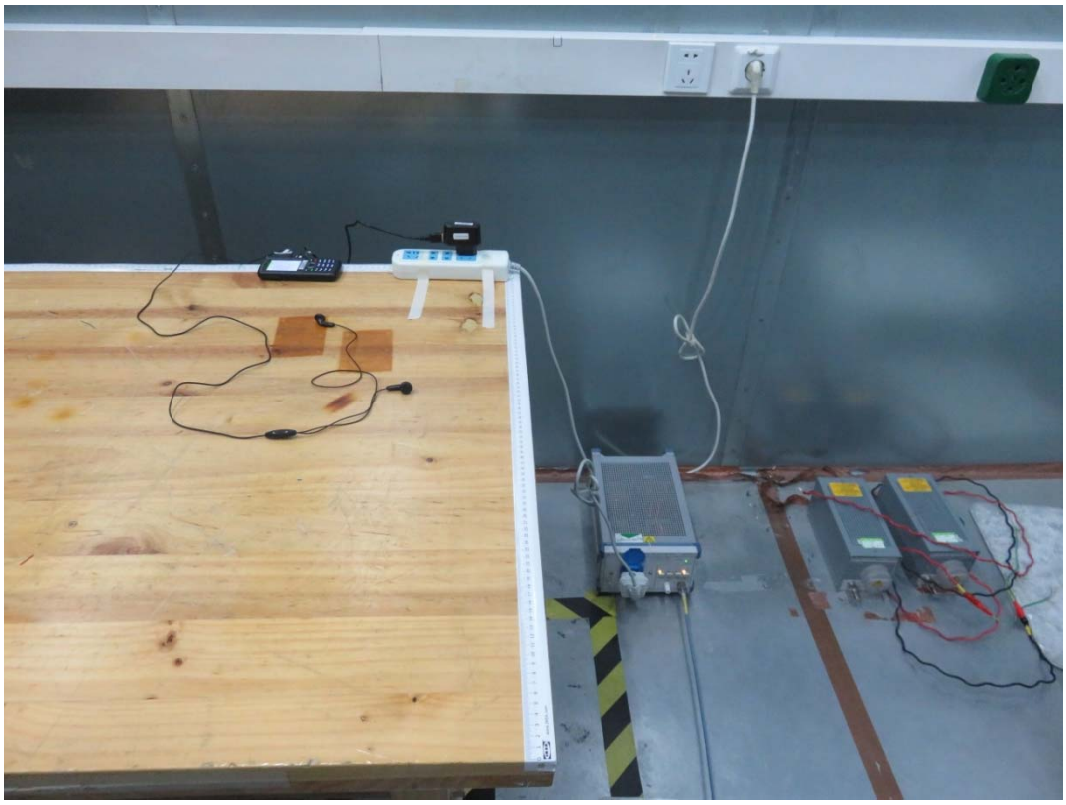


Below 1GHz



Above 1GHz

Picture 2 Radiated Emission Test Setup



Picture 3 Conducted Emission Test Setup