

TEST REPORT

Applicant: ALPHA GROUP CO., LTD.

Address of Applicant: Alpha Animation Industrial Area, Jinhong Road East & Fengxiang Road North, Chenghai District, Shantou, Guangdong 515800, China

Manufacturer/Factory: ALPHA GROUP CO., LTD.

Address of Manufacturer/Factory: Alpha Animation Industrial Area, Jinhong Road East & Fengxiang Road North, Chenghai District, Shantou, Guangdong 515800, China

Equipment Under Test (EUT)

Product Name: Sky Rover KnightForce

Model No.: US858922

FCC ID: 2AIRP-858930

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Date of sample receipt: May 27, 2021

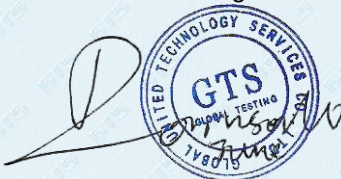
Date of Test: May 28, 2021-June 09, 2021

Date of report issued: June 09, 2021

Test Result : PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Robinson Luo

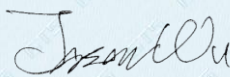
Laboratory Manager

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2 Version

Version No.	Date	Description
00	June 09, 2021	Original

Prepared By:

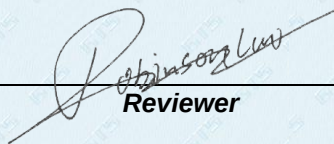


Date:

June 09, 2021

Project Engineer

Check By:


Reviewer

Date:

June 09, 2021

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4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	15.207	N/A
Conducted Output Power	15.247 (b)(3)	Pass
Channel Bandwidth	15.247 (a)(2)	Pass
Power Spectral Density	15.247 (e)	Pass
Band Edge	15.247(d)	Pass
Spurious Emission	15.205/15.209	Pass

Remarks:

1. Pass: The EUT complies with the essential requirements in the standard.
2. Test according to ANSI C63.10:2013

Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	30MHz-200MHz	3.8039dB	(1)
Radiated Emission	200MHz-1GHz	3.9679dB	(1)
Radiated Emission	1GHz-18GHz	4.29dB	(1)
Radiated Emission	18GHz-40GHz	3.30dB	(1)
AC Power Line Conducted Emission	0.15MHz ~ 30MHz	3.44dB	(1)

Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

5 General Information

5.1 General Description of EUT

Product Name:	Sky Rover KnightForce
Model No.:	US858922
Serial No.:	N/A
Hardware version:	JT-858922RX V4.0 JT-858922TX V4.0
Software version:	Rx_858922(531M)_V3.1 Tx_858922(531M)_V3.1
Test sample(s) ID:	GTS202105000239-1
Sample(s) Status:	Engineer sample
Operation Frequency:	2409MHz~2468MHz
Channel Numbers:	36
Modulation Type:	QPSK
Antenna Type:	Wire Antenna
Antenna Gain:	0dBi(Declare by applicant)
Power Supply:	RX: DC 3.7V 250mAh, 0.93Wh Li-ion Battery TX: DC 4.5V (3*1.5V Size "AAA" Battery)

Note: The report is only for TX device

Operation Frequency each of channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
10	2409	20	2429	30	2446	40	2463
11	2412	21	2430	31	2447	41	2464
12	2413	22	2431	32	2448	42	2465
13	2414	23	2432	33	2449	43	2466
14	2415	24	2433	34	2450	44	2467
15	2416	25	2434	35	2451	45	2468
16	2417	26	2435	36	2452		
17	2418	27	2436	37	2460		
18	2419	28	2444	38	2461		
19	2428	29	2445	39	2462		

Note: in section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The lowest channel	2409MHz
The middle channel	2436MHz
The Highest channel	2468MHz

5.2 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode
Remark: New battery is used during all test.	

5.3 Description of Support Units

None.

5.4 Deviation from Standards

None.

5.5 Abnormalities from Standard Conditions

None.

5.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations: • FCC —Registration No.: 381383 Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 381383. • IC —Registration No.: 9079A The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A. • NVLAP (LAB CODE:600179-0) Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). LAB CODE:600179-0
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5.7 Test Location

All tests were performed at:
Global United Technology Services Co., Ltd. Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102 Tel: 0755-27798480 Fax: 0755-27798960

5.8 Additional Instructions

Test Software	Special test command provided by manufacturer
Power level setup	Default

6 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	July. 02 2020	July. 01 2025
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June. 25 2020	June. 24 2021
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 25 2020	June. 24 2021
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 25 2020	June. 24 2021
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 25 2020	June. 24 2021
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	June. 25 2020	June. 24 2021
9	Coaxial Cable	GTS	N/A	GTS211	June. 25 2020	June. 24 2021
10	Coaxial cable	GTS	N/A	GTS210	June. 25 2020	June. 24 2021
11	Coaxial Cable	GTS	N/A	GTS212	June. 25 2020	June. 24 2021
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 25 2020	June. 24 2021
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 25 2020	June. 24 2021
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 25 2020	June. 24 2021
15	Band filter	Amindeon	82346	GTS219	June. 25 2020	June. 24 2021
16	Power Meter	Anritsu	ML2495A	GTS540	June. 25 2020	June. 24 2021
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 25 2020	June. 24 2021
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 25 2020	June. 24 2021
19	Splitter	Agilent	11636B	GTS237	June. 25 2020	June. 24 2021
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 25 2020	June. 24 2021
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 18 2020	Oct. 17 2021
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 18 2020	Oct. 17 2021
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 18 2020	Oct. 17 2021
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 25 2020	June. 24 2021

RF Conducted Test:						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	MXA Signal Analyzer	Agilent	N9020A	GTS566	June. 25 2020	June. 24 2021
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 25 2020	June. 24 2021
3	Spectrum Analyzer	Agilent	E4440A	GTS533	June. 25 2020	June. 24 2021
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	June. 25 2020	June. 24 2021
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	June. 25 2020	June. 24 2021
6	USB RF Power Sensor	DARE	RPR3006W	GTS569	June. 25 2020	June. 24 2021
7	RF Switch Box	Shongyi	RFSW3003328	GTS571	June. 25 2020	June. 24 2021
8	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	June. 25 2020	June. 24 2021

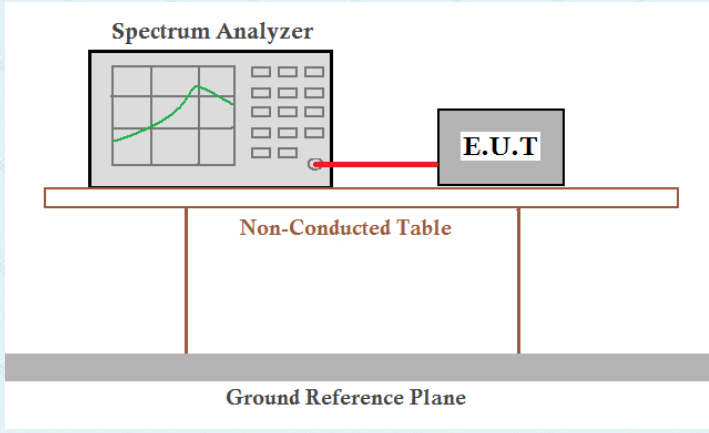
General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Humidity/ Temperature Indicator	KTJ	TA328	GTS243	June. 25 2020	June. 24 2021
2	Barometer	ChangChun	DYM3	GTS255	June. 25 2020	June. 24 2021

7 Test results and Measurement Data

7.1 Antenna requirement

Standard requirement:	FCC Part15 C Section 15.203 /247(c)
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
15.247(c) (1)(i) requirement: (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.	
E.U.T Antenna:	
<i>The antenna is wire antenna, the best case gain of the antenna is 0dBi, reference to the appendix II for details</i>	

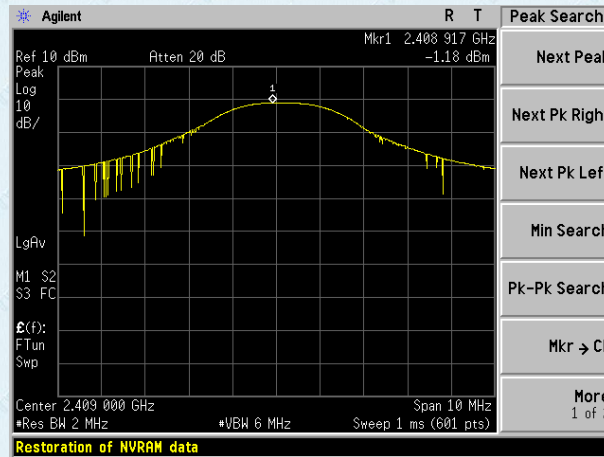
7.2 Conducted Output Power

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 15.247 Meas Guidance v05r02
Limit:	30dBm
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

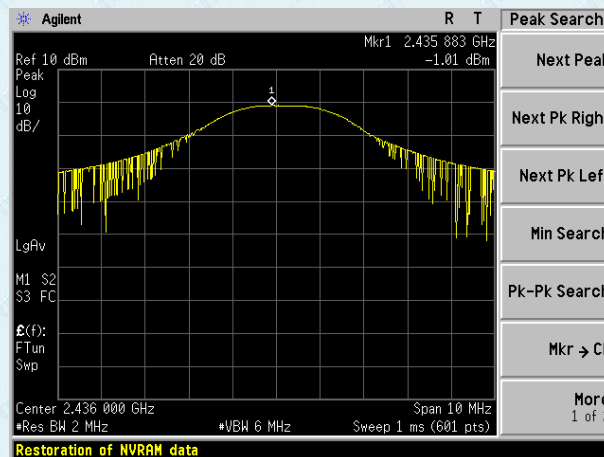
Measurement Data

Test channel	Peak Output Power (dBm)	Limit(dBm)	Result
Lowest	-1.18	30.00	Pass
Middle	-1.01		
Highest	-0.92		

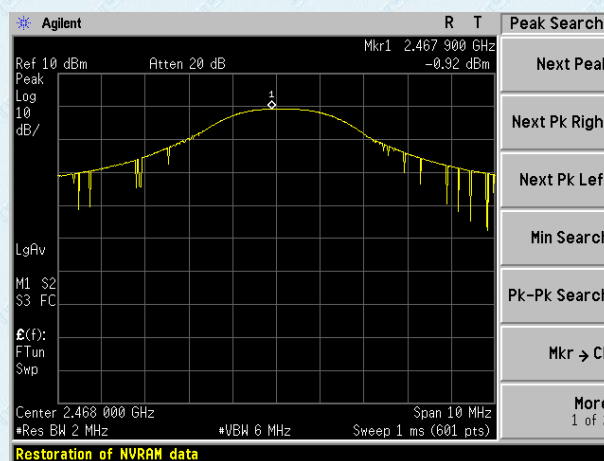
Test plot as follows:



Lowest channel

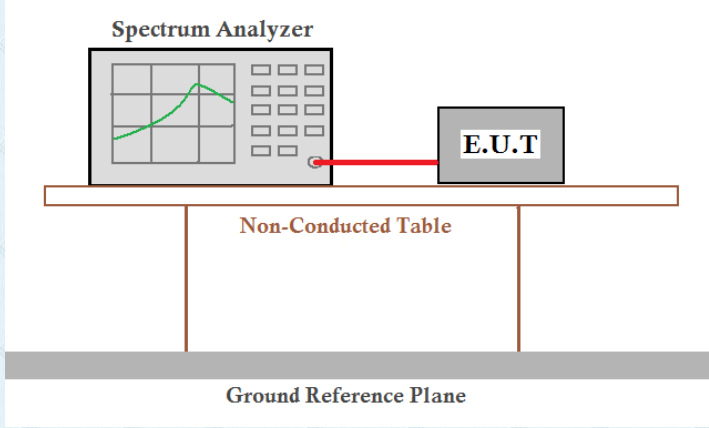


Middle channel



Highest channel

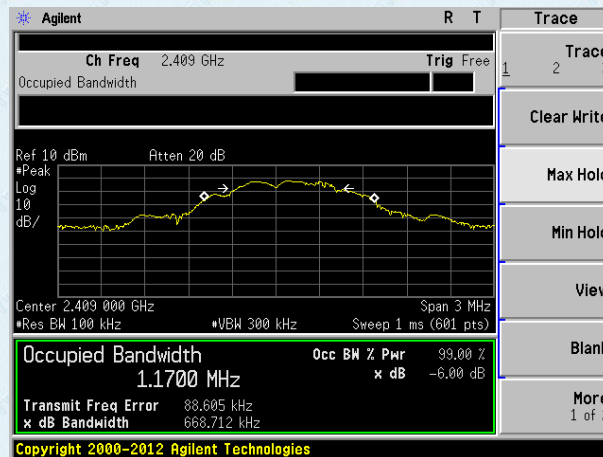
7.3 Channel Bandwidth

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 15.247 Meas Guidance v05r02
Limit:	Channel Bandwidth >500KHz
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

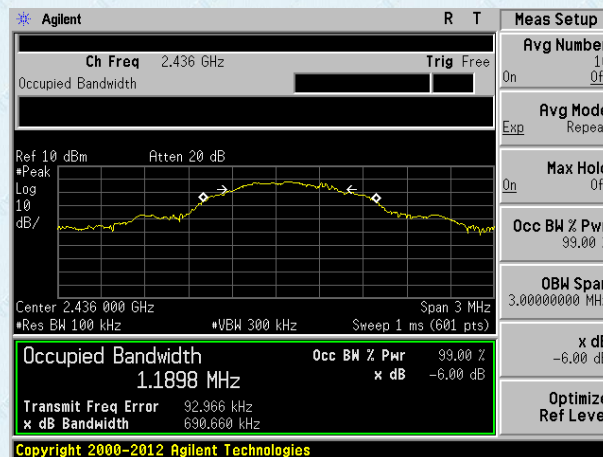
Measurement Data

Test channel	Channel Bandwidth (MHz)	Limit(KHz)	Result
Lowest	0.669	>500	Pass
Middle	0.691		
Highest	0.721		

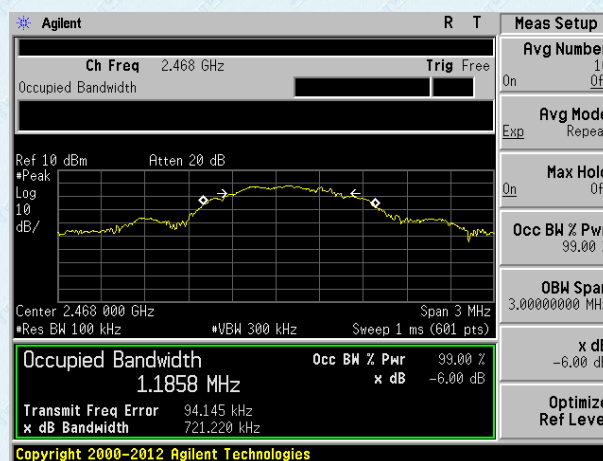
Test plot as follows:



Lowest channel

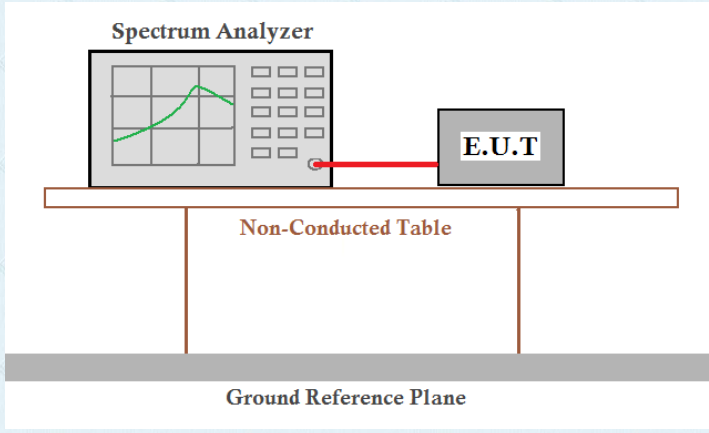


Middle channel



Highest channel

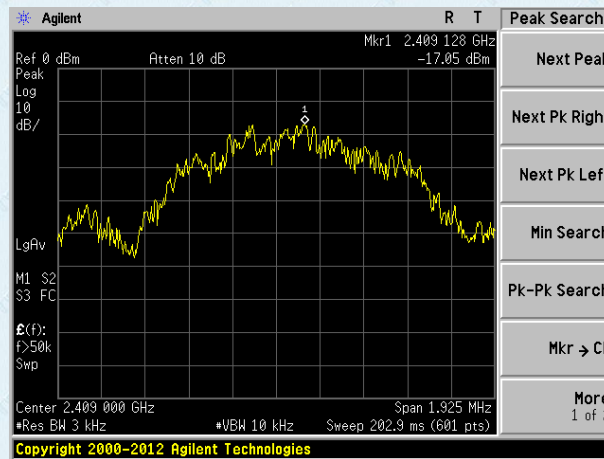
7.4 Power Spectral Density

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 15.247 Meas Guidance v05r02
Limit:	8dBm/3kHz
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

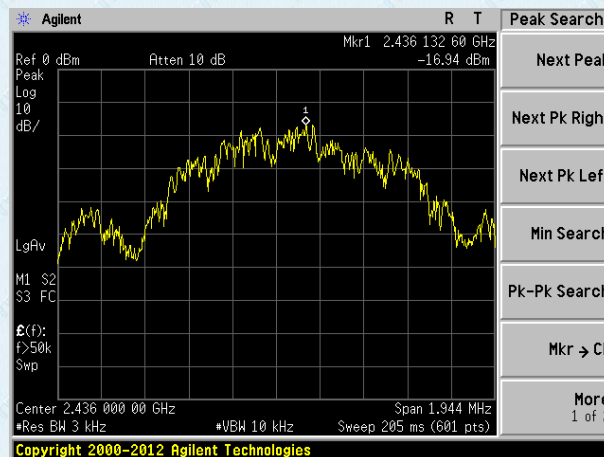
Measurement Data

Test channel	Power Spectral Density (dBm/3kHz)	Limit(dBm/3kHz)	Result
Lowest	-17.05	8.00	Pass
Middle	-16.94		
Highest	-17.80		

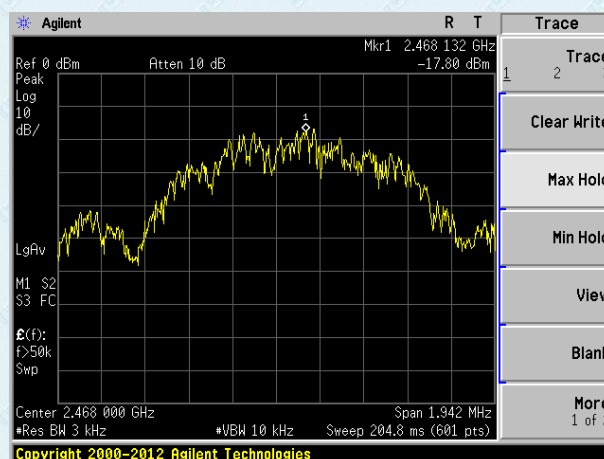
Test plot as follows:



Lowest channel



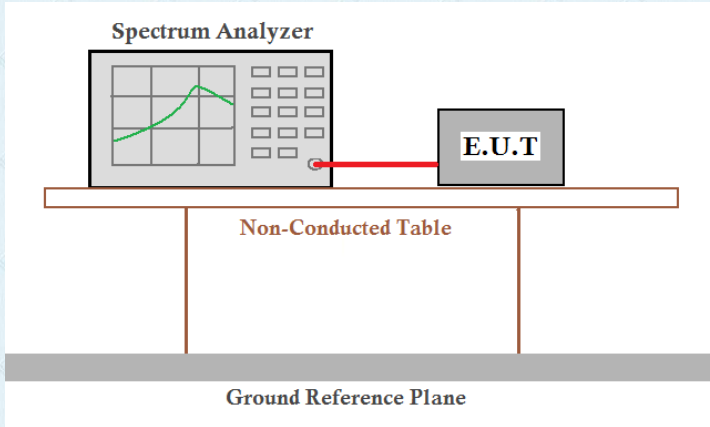
Middle channel



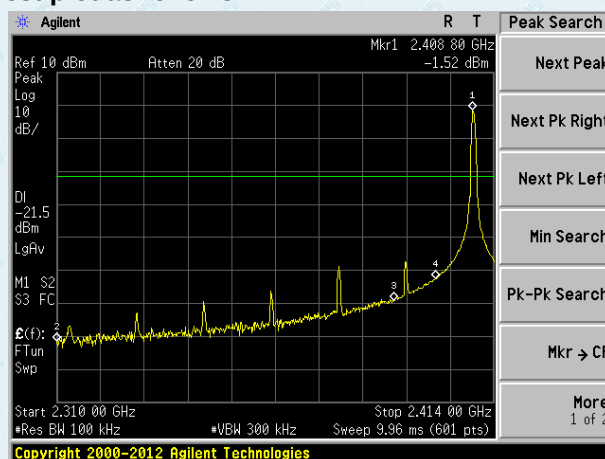
Highest channel

7.5 Band edges

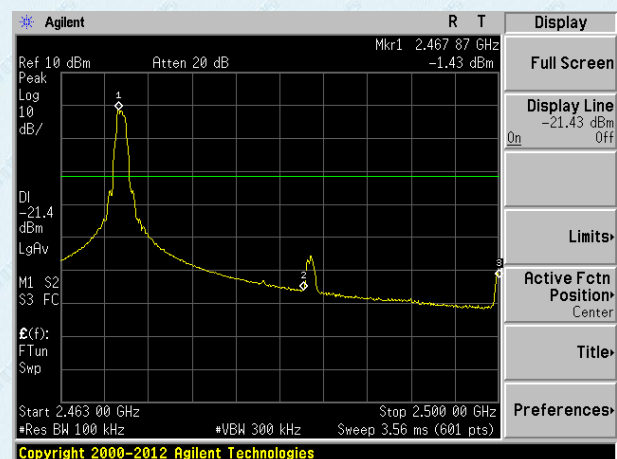
7.5.1 Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 15.247 Meas Guidance v05r02
Limit:	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, based on either an RF conducted or a radiated measurement.
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Test plot as follows:

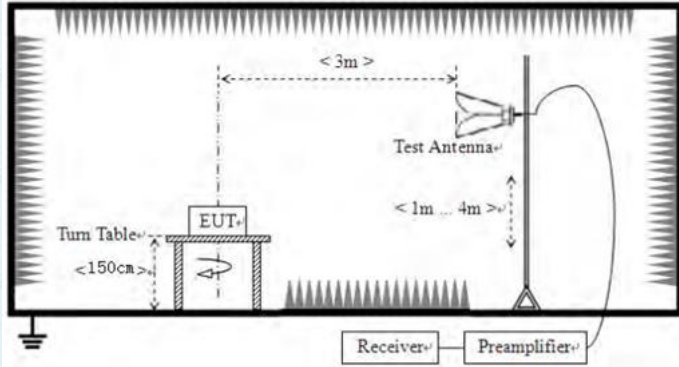


Lowest channel



Highest channel

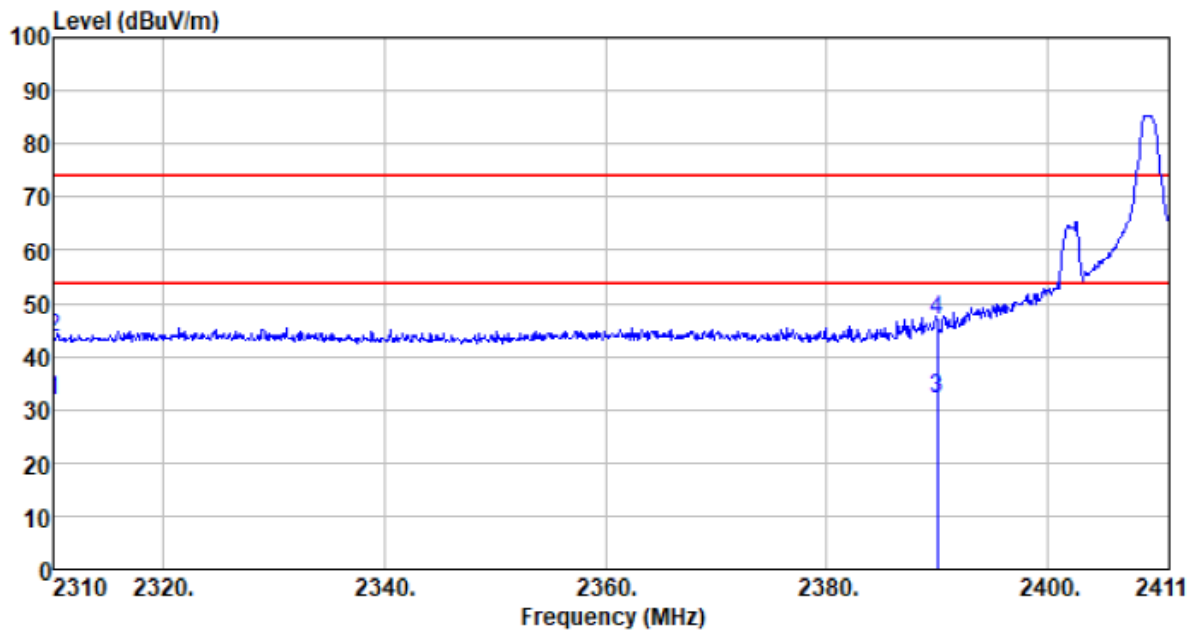
7.5.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.10:2013				
Test Frequency Range:	All of the restrict bands were tested, only the worst band's (2310MHz to 2500MHz) data was showed.				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	Above 1GHz	Peak	1MHz	3MHz	Peak
		RMS	1MHz	3MHz	Average
Limit:	Frequency		Limit (dBuV/m @3m)		Value
	Above 1GHz		54.00		Average
			74.00		Peak
Test setup:					
Test Procedure:	1. The EUT was placed on the top of a rotating table 1.5m above the ground at a 3 meter camber. 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 antenna height 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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. 7. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.				
Test Instruments:	Refer to section 6.0 for details				
Test mode:	Refer to section 5.2 for details				
Test results:	Pass				

Measurement data

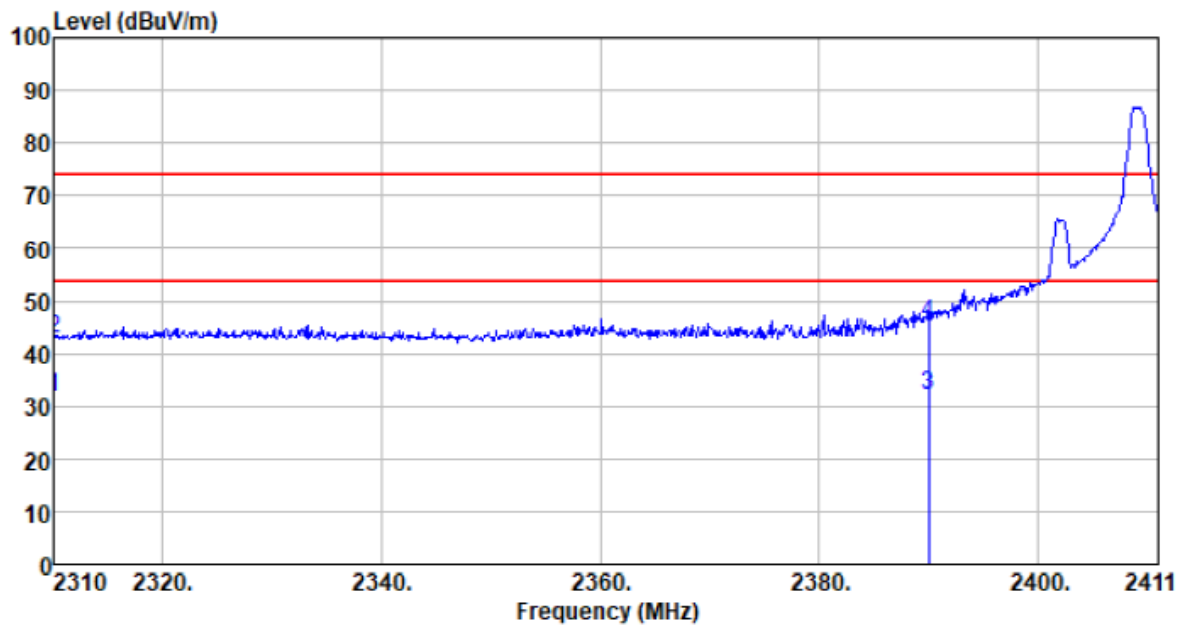
Remark: The pre-test were performed on lowest, middle and highest frequencies, only the worst case's (lowest and highest frequencies) data was showed.

Test channel:	Lowest	Polarization:	Horizontal
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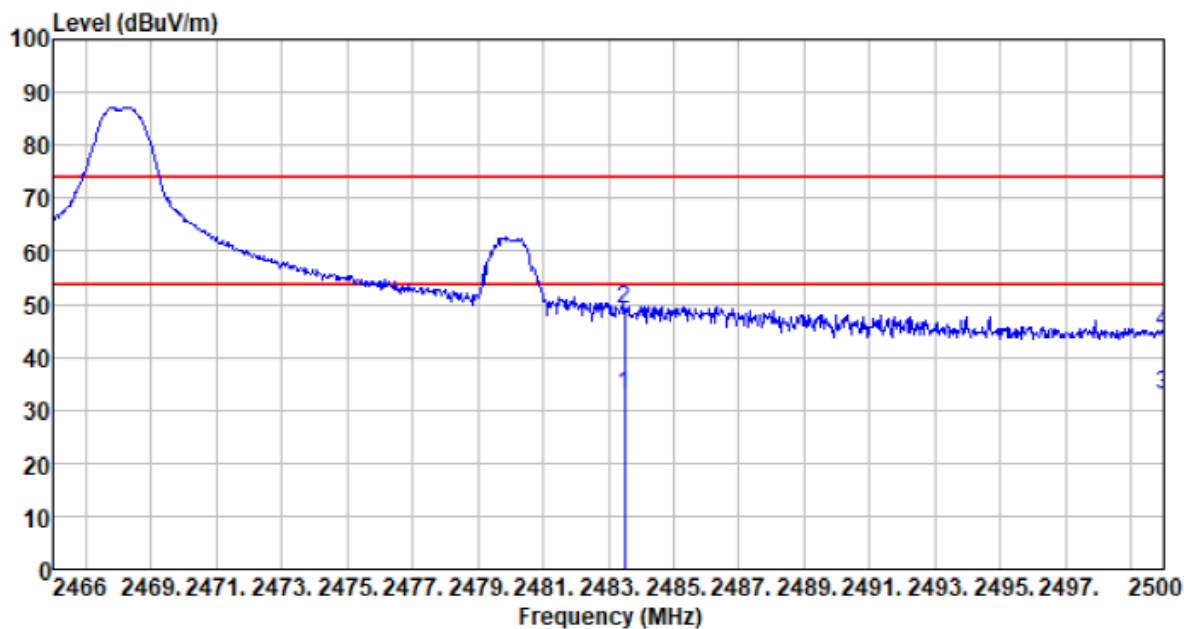
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
2310.000	32.26	27.14	2.81	30.43	31.78	54.00	-22.22	Average
2310.000	44.08	27.14	2.81	30.43	43.60	74.00	-30.40	Peak
2390.000	32.19	27.37	2.91	30.24	32.23	54.00	-21.77	Average
2390.000	46.66	27.37	2.91	30.24	46.70	74.00	-27.30	Peak

Test channel:	Lowest	Polarization:	Vertical
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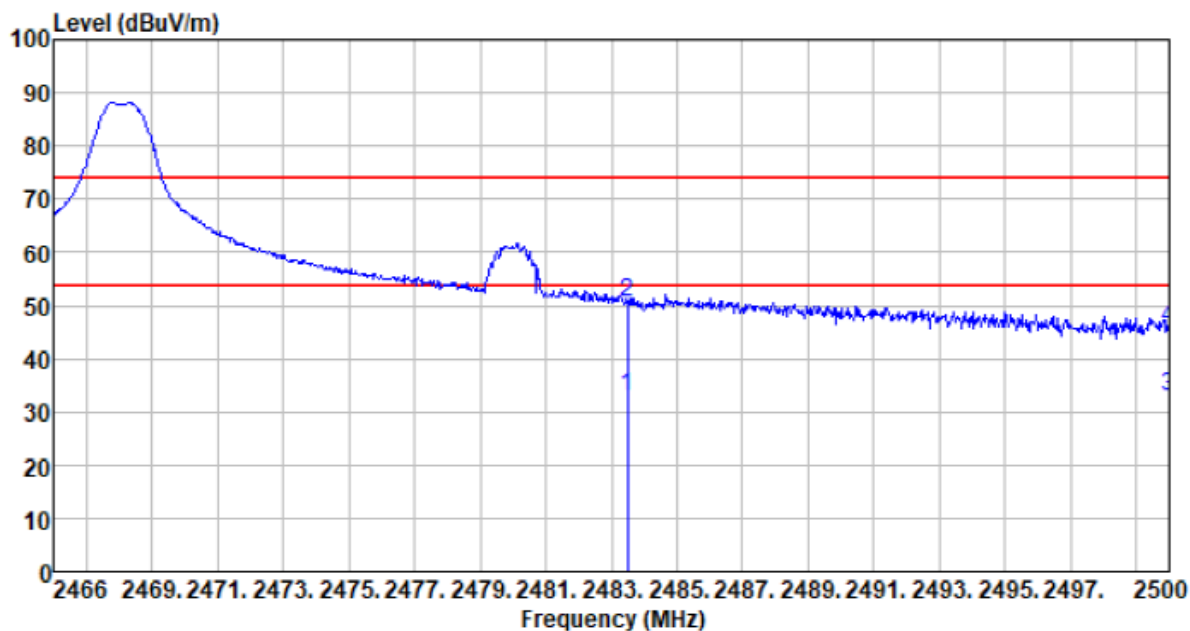
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
2310.000	32.22	27.14	2.81	30.43	31.74	54.00	-22.26	Average
2310.000	43.18	27.14	2.81	30.43	42.70	74.00	-31.30	Peak
2390.000	32.11	27.37	2.91	30.24	32.15	54.00	-21.85	Average
2390.000	45.82	27.37	2.91	30.24	45.86	74.00	-28.14	Peak

Test channel:	Highest	Polarization:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
2483.500	32.22	27.66	2.99	30.12	32.75	54.00	-21.25	Average
2483.500	48.62	27.66	2.99	30.12	49.15	74.00	-24.85	Peak
2500.000	32.13	27.70	3.01	30.13	32.71	54.00	-21.29	Average
2500.000	43.91	27.70	3.01	30.13	44.49	74.00	-29.51	Peak

Test channel:	Highest	Polarization:	Vertical
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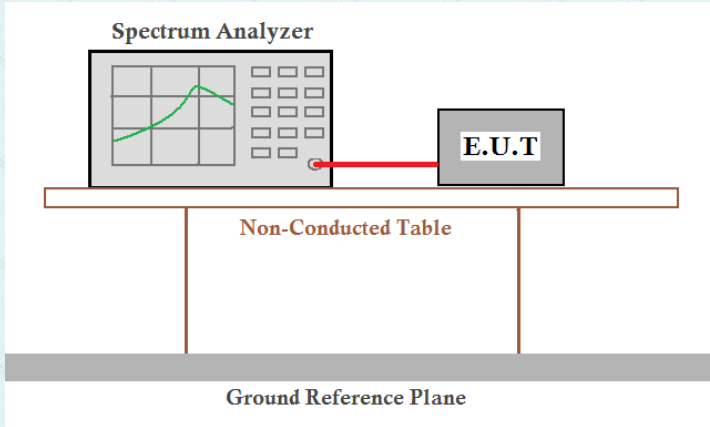
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
2483.500	32.32	27.66	2.99	30.12	32.85	54.00	-21.15	Average
2483.500	49.87	27.66	2.99	30.12	50.40	74.00	-23.60	Peak
2500.000	32.28	27.70	3.01	30.13	32.86	54.00	-21.14	Average
2500.000	45.08	27.70	3.01	30.13	45.66	74.00	-28.34	Peak

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

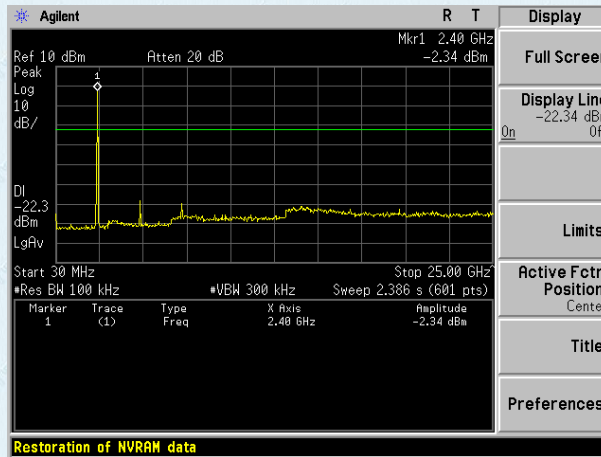
7.6 Spurious Emission

7.6.1 Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 15.247 Meas Guidance v05r02
Limit:	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, based on either an RF conducted or a radiated measurement.
Test setup:	 The diagram illustrates the test setup for conducted emission measurement. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table, which sits on a Ground Reference Plane.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

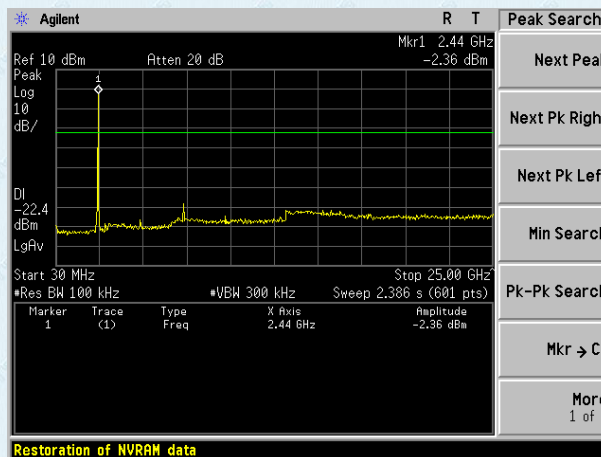
Test plot as follows:

Lowest channel



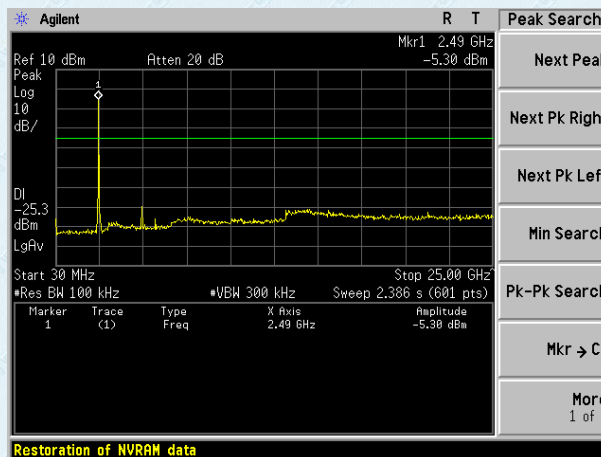
30MHz~25GHz

Middle channel



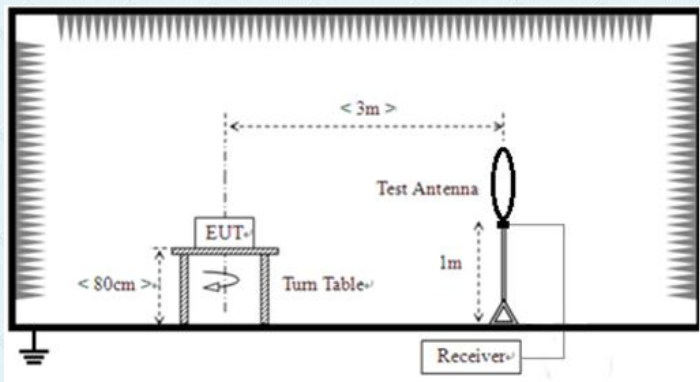
30MHz~25GHz

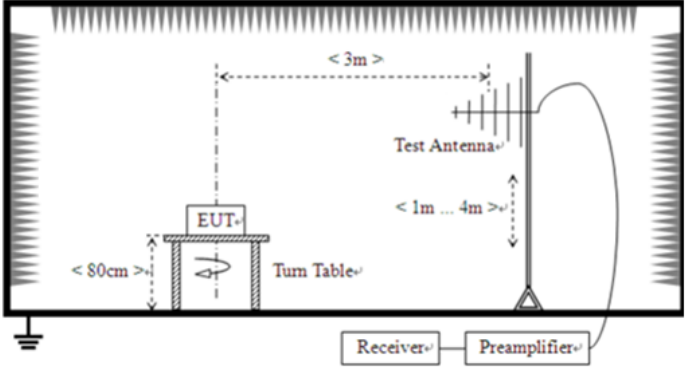
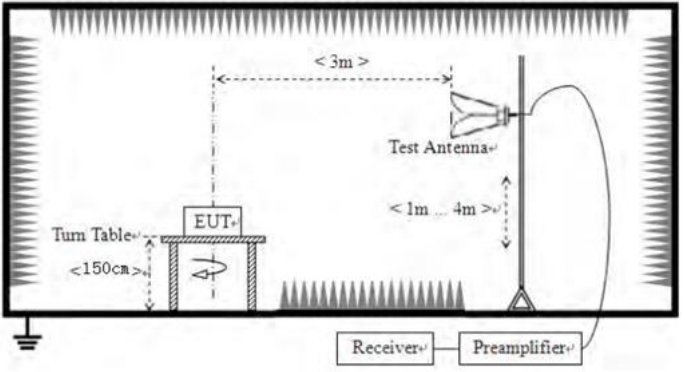
Highest channel



30MHz~25GHz

7.6.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.10:2013				
Test Frequency Range:	9kHz to 25GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
	150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Limit: (Spurious Emissions)	Frequency	Limit (uV/m)	Value	Measurement Distance	
	0.009MHz-0.490MHz	2400/F(KHz)	PK AV QP	300m	
	0.490MHz-1.705MHz	24000/F(KHz)	QP	30m	
	1.705MHz-30MHz	30	QP	30m	
	30MHz-88MHz	100	QP	3m	
	88MHz-216MHz	150	QP		
	216MHz-960MHz	200	QP		
	960MHz-1GHz	500	QP		
	Above 1GHz	500	Average		
		5000	Peak		
Test setup:	For radiated emissions from 9kHz to 30MHz				
					
For radiated emissions from 30MHz to 1GHz					

	 For radiated emissions above 1GHz 
Test Procedure:	1. The EUT was placed on the top of a rotating table (0.8m for below 1G and 1.5m for above 1G) above the ground at a 3 meter camber. 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 antenna height 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 rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details

Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar
Test voltage:	AC 120V, 60Hz					
Test results:	Pass					

Remark:

Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the X-axis which it is worse case.

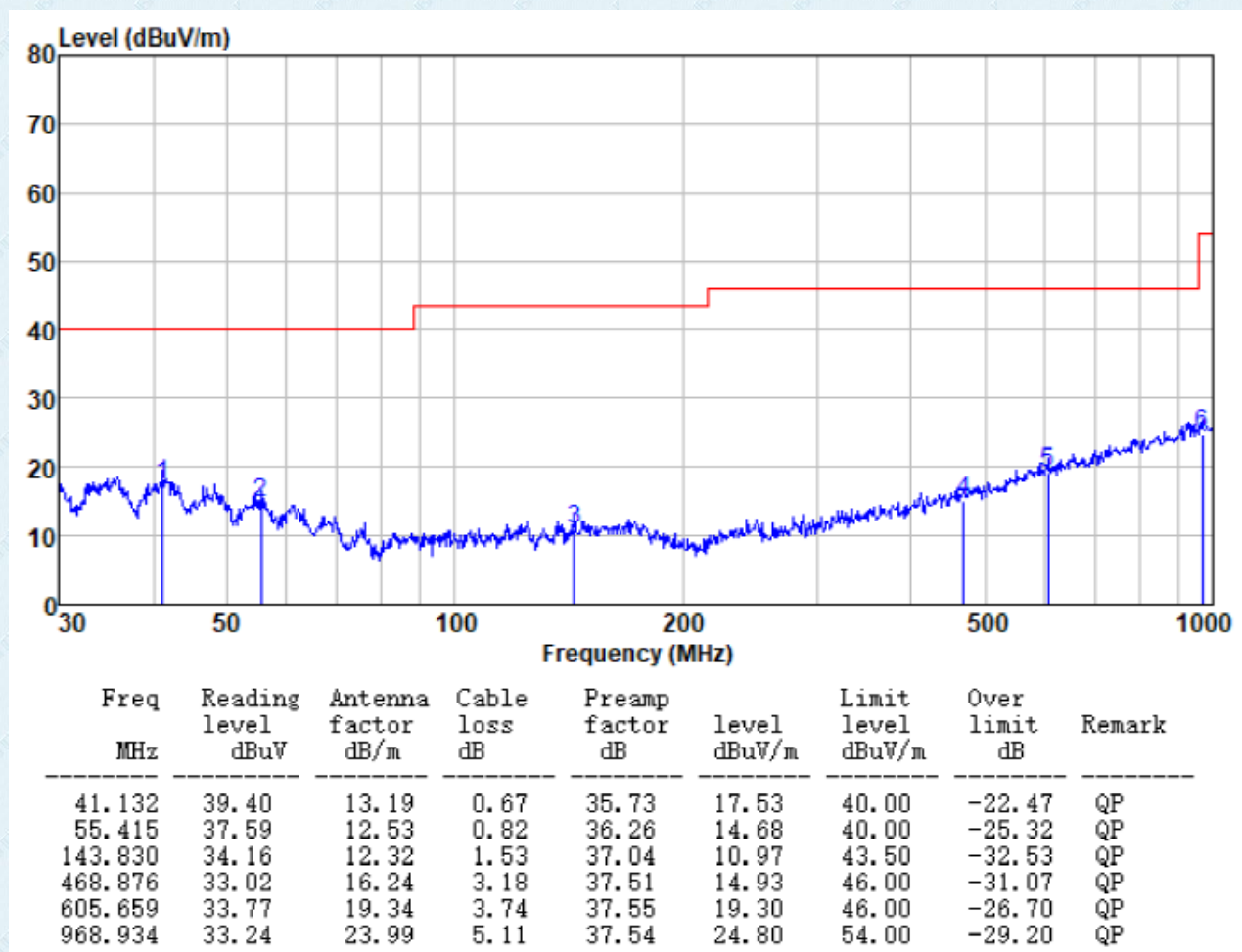
Measurement data:

■ 9 kHz ~ 30 MHz

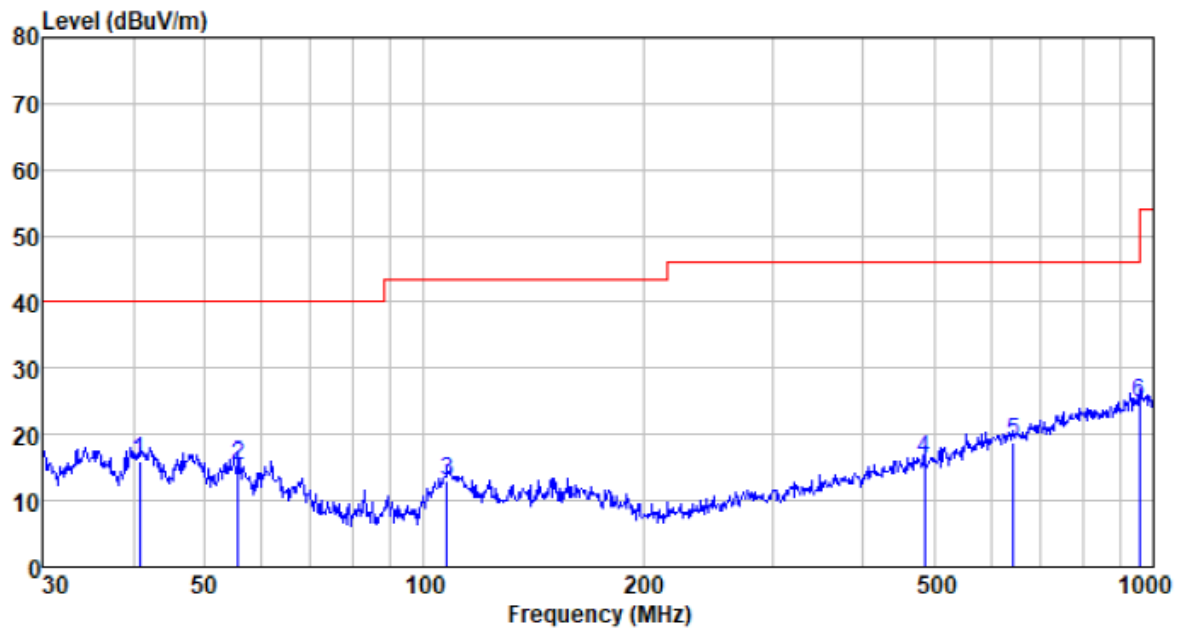
The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

■ Below 1GHz

Test channel:	Lowest	Polarization:	Horizontal
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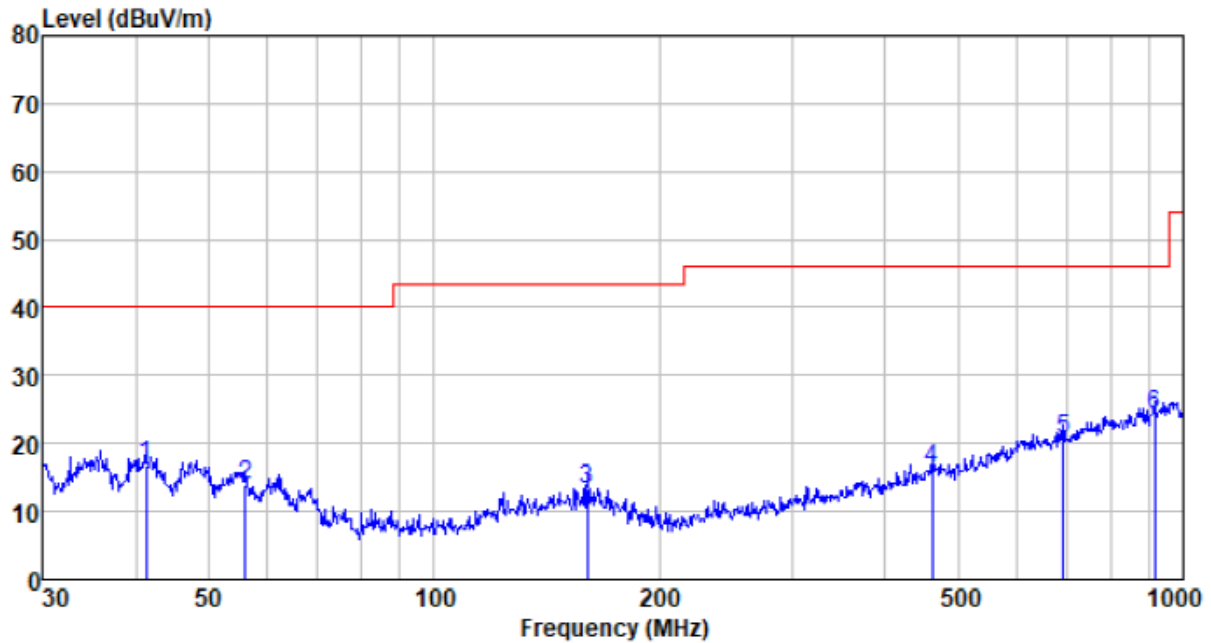


Test channel:	Lowest	Polarization:	Vertical
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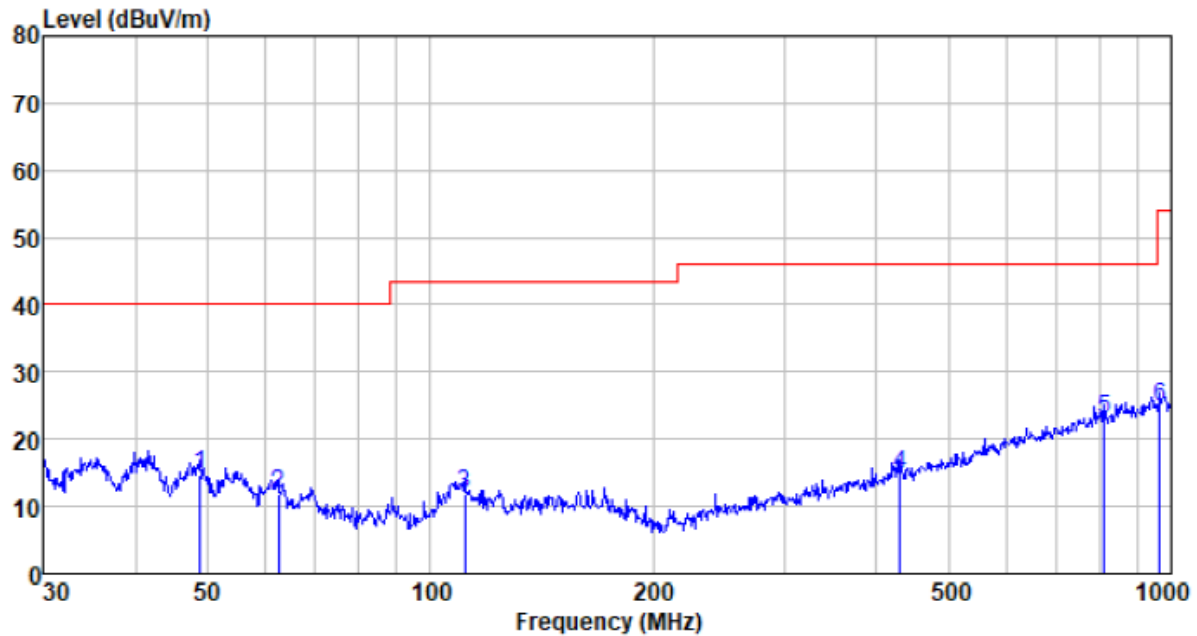
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
40.702	37.81	13.22	0.67	35.70	16.00	40.00	-24.00	QP
55.609	38.26	12.52	0.82	36.26	15.34	40.00	-24.66	QP
107.510	38.70	9.76	1.26	36.78	12.94	43.50	-30.56	QP
485.609	34.15	16.44	3.24	37.51	16.32	46.00	-29.68	QP
642.861	32.61	19.87	3.88	37.58	18.78	46.00	-27.22	QP
955.438	33.42	23.98	5.06	37.55	24.91	46.00	-21.09	QP

Test channel:	Middle	Polarization:	Horizontal
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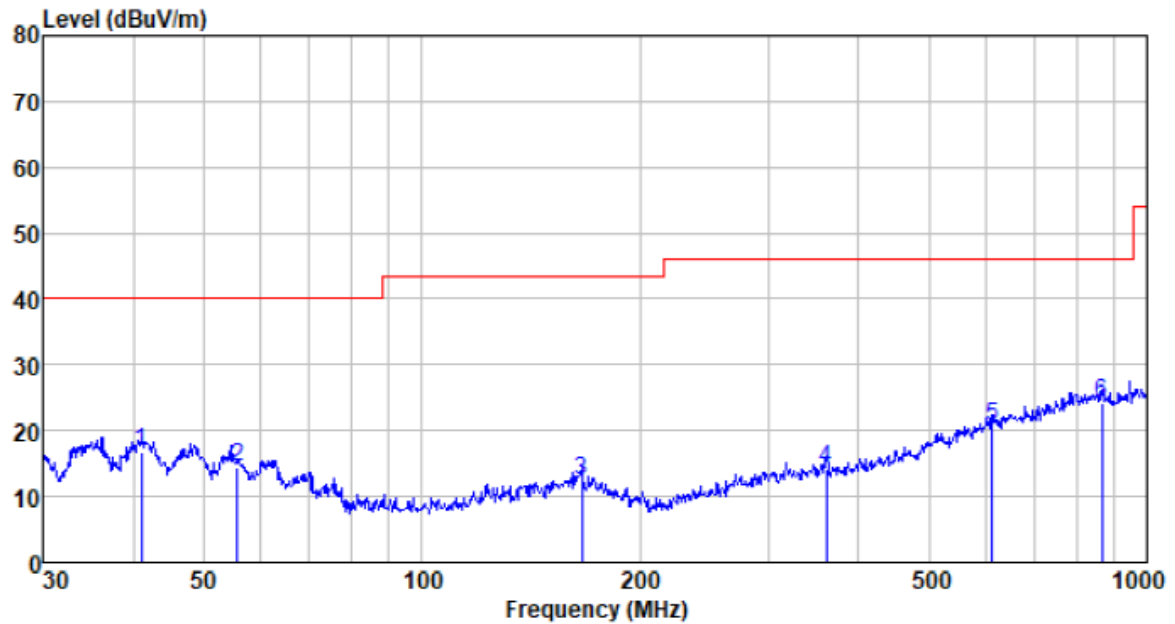
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
41.277	38.77	13.18	0.68	35.74	16.89	40.00	-23.11	QP
56.001	36.92	12.50	0.83	36.27	13.98	40.00	-26.02	QP
160.346	36.13	12.75	1.63	37.14	13.37	43.50	-30.13	QP
462.346	34.43	16.16	3.14	37.51	16.22	46.00	-29.78	QP
691.987	34.03	20.30	4.06	37.62	20.77	46.00	-25.23	QP
916.069	33.71	23.28	4.91	37.58	24.32	46.00	-21.68	QP

Test channel:	Middle	Polarization:	Vertical
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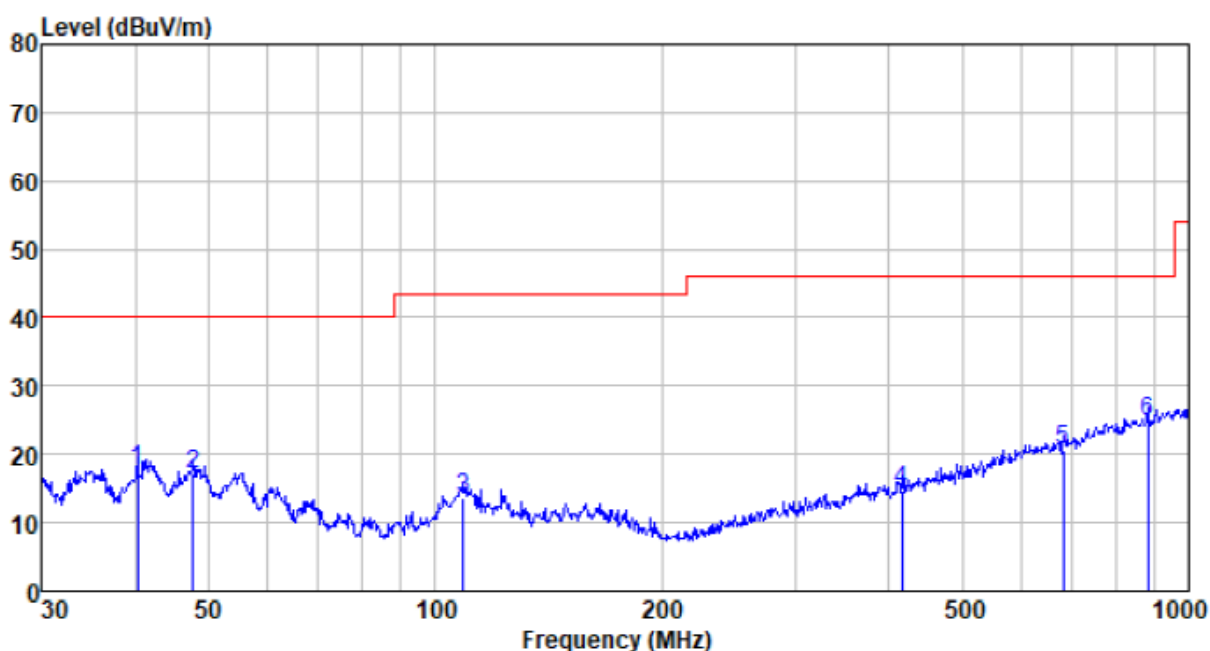
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
48.843	37.10	13.02	0.76	36.13	14.75	40.00	-25.25	QP
62.431	35.53	11.89	0.88	36.35	11.95	40.00	-28.05	QP
111.347	37.18	10.12	1.29	36.81	11.78	43.50	-31.72	QP
431.032	33.80	15.50	3.00	37.52	14.78	46.00	-31.22	QP
813.112	33.90	22.33	4.51	37.62	23.12	46.00	-22.88	QP
965.542	33.32	23.99	5.09	37.54	24.86	54.00	-29.14	QP

Test channel:	Highest	Polarization:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
40.988	38.78	13.20	0.67	35.72	16.93	40.00	-23.07	QP
55.609	37.44	12.52	0.82	36.26	14.52	40.00	-25.48	QP
166.068	35.35	12.57	1.66	37.17	12.41	43.50	-31.09	QP
361.714	35.06	13.85	2.68	37.49	14.10	46.00	-31.90	QP
612.064	34.90	19.46	3.76	37.55	20.57	46.00	-25.43	QP
866.088	34.37	22.71	4.73	37.61	24.20	46.00	-21.80	QP

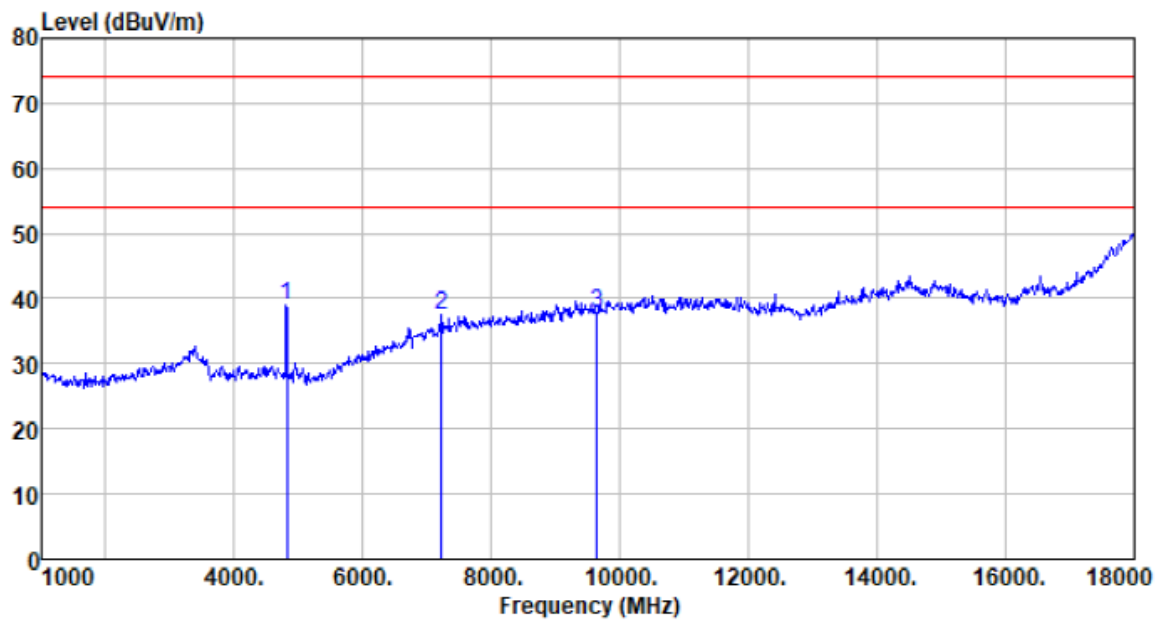
Test channel:	Highest	Polarization:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
40.276	39.35	13.24	0.66	35.68	17.57	40.00	-22.43	QP
47.659	39.54	13.00	0.75	36.07	17.22	40.00	-22.78	QP
109.029	39.21	9.90	1.27	36.80	13.58	43.50	-29.92	QP
416.179	34.25	15.11	2.93	37.52	14.77	46.00	-31.23	QP
682.348	34.05	20.19	4.02	37.62	20.64	46.00	-25.36	QP
881.407	34.83	22.82	4.79	37.60	24.84	46.00	-21.16	QP

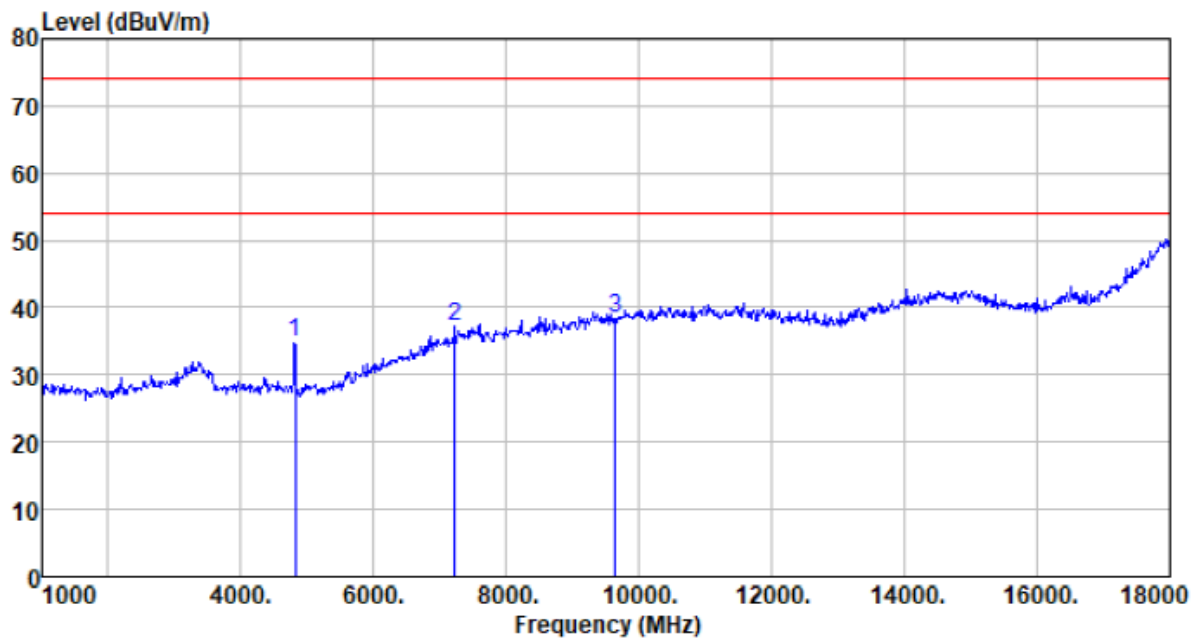
■ Above 1GHz

Test channel:	Lowest	Polarization:	Horizontal
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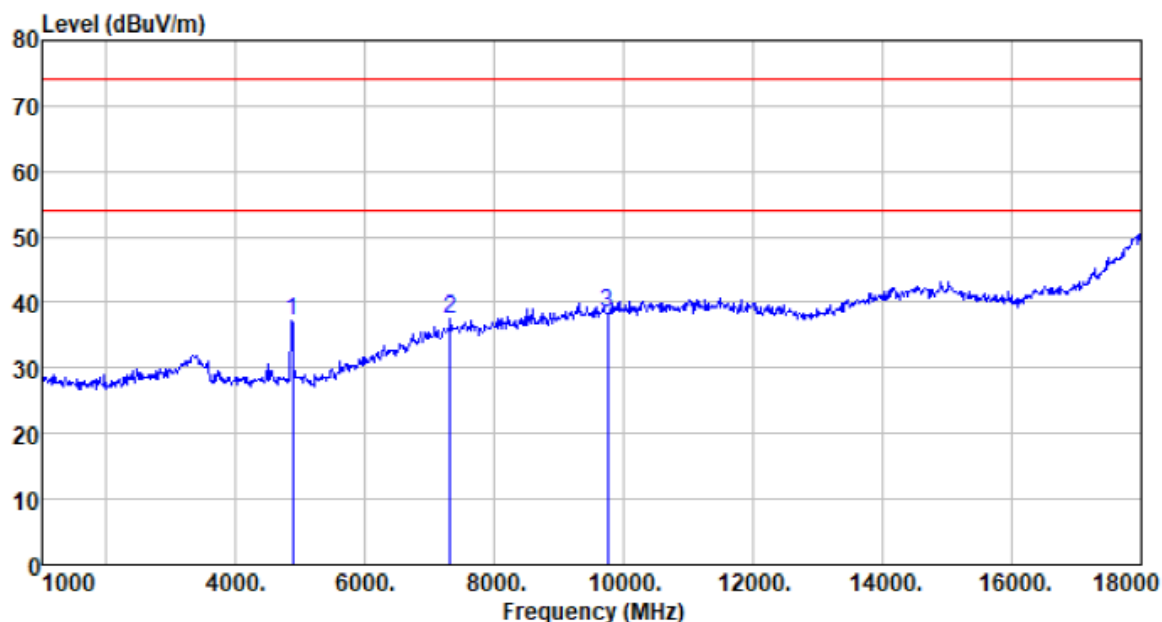
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
4818.000	40.95	31.22	4.63	37.73	39.07	74.00	-34.93	Peak
7227.000	30.30	36.20	6.50	35.63	37.37	74.00	-36.63	Peak
9636.000	26.72	37.97	7.98	34.95	37.72	74.00	-36.28	Peak

Test channel:	Lowest	Polarization:	Vertical
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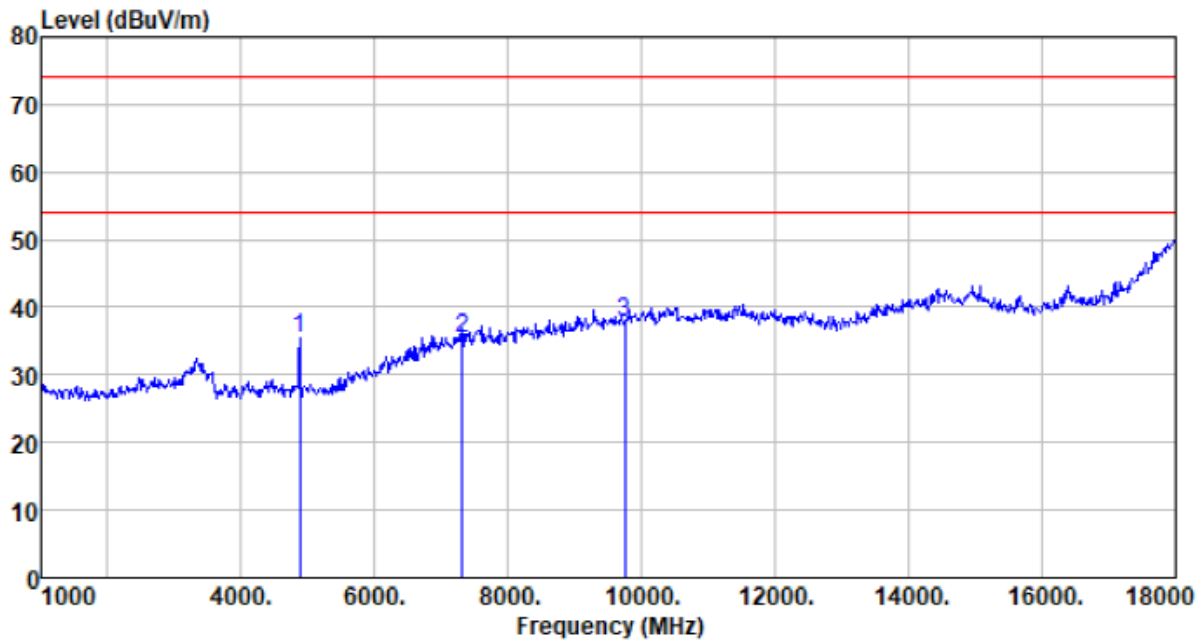
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
4818.000	36.79	31.22	4.63	37.73	34.91	74.00	-39.09	Peak
7227.000	30.13	36.20	6.50	35.63	37.20	74.00	-36.80	Peak
9636.000	27.36	37.97	7.98	34.95	38.36	74.00	-35.64	Peak

Test channel:	Middle	Polarization:	Horizontal
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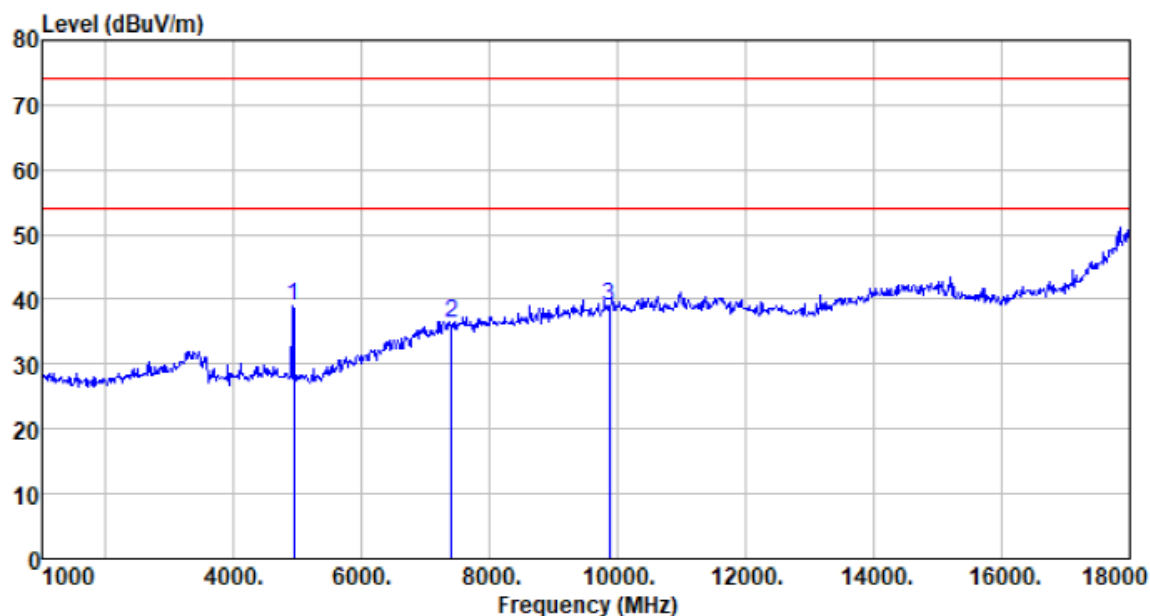
Freq MHz	Reading level dBUV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBUV/m	Limit level dBUV/m	Over limit dB	Remark
4872.000	39.02	31.31	4.69	37.75	37.27	74.00	-36.73	Peak
7308.000	30.15	36.39	6.61	35.60	37.55	74.00	-36.45	Peak
9744.000	27.43	38.10	8.02	35.03	38.52	74.00	-35.48	Peak

Test channel:	Middle	Polarization:	Vertical
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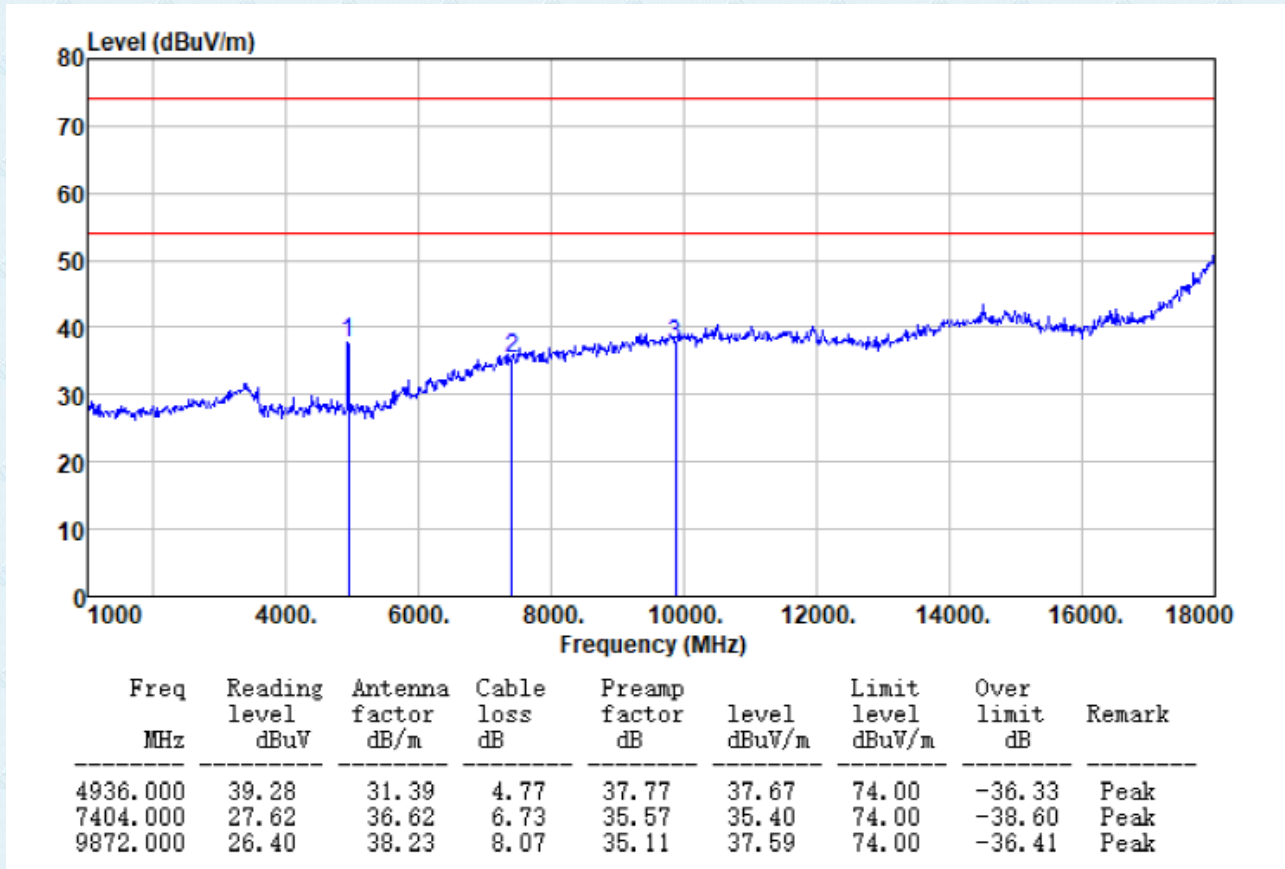
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
4872.000	37.26	31.31	4.69	37.75	35.51	74.00	-38.49	Peak
7308.000	28.00	36.39	6.61	35.60	35.40	74.00	-38.60	Peak
9744.000	26.73	38.10	8.02	35.03	37.82	74.00	-36.18	Peak

Test channel:	Highest	Polarization:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
4936.000	40.63	31.39	4.77	37.77	39.02	74.00	-34.98	Peak
7404.000	28.56	36.62	6.73	35.57	36.34	74.00	-37.66	Peak
9872.000	27.90	38.23	8.07	35.11	39.09	74.00	-34.91	Peak

Test channel:	Highest	Polarization:	Vertical
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Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. “-”, means this data is the too weak instrument of signal is unable to test.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.

8 Test Setup Photo

Reference to the **appendix I** for details.

9 EUT Construcational Details

Reference to the **appendix II** for details.

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