

TEST REPORT

Applicant: ShenZhen FLYSKY Technology Co.,Ltd
Address of Applicant: 16F, Huafeng Building, No. 6006 Shennan Road, Futian District, Shenzhen, Guangdong, China
Manufacturer: ShenZhen FLYSKY Technology Co.,Ltd
Address of Manufacturer: 16F, Huafeng Building, No. 6006 Shennan Road, Futian District, Shenzhen, Guangdong, China
Factory: Dongguan Flysky RC Model technology Co.,Ltd
Address of Factory: West building 3, HuangjinyuanInd Park, Qiaoli North Gate, Changping Town, Dongguan, China

Equipment Under Test (EUT)

Product Name: 3-Channel Receiver
Model No.: GMr-C3
Trade Mark: FLYSKY
FCC ID: 2A2UNGMR-C300
Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247
Date of sample receipt: September 12, 2024
Date of Test: September 13-27, 2024
Date of report issued: September 27, 2024
Test Result : PASS *

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

Authorized Signature:



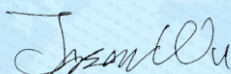
Robinson Luo
Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

2 Version

Version No.	Date	Description
00	September 27, 2024	Original

Prepared By:

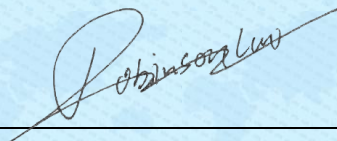


Date:

September 27, 2024

Project Engineer

Check By:



Date:

September 27, 2024

Reviewer

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4 Test Summary

Test Item	Section	Result
Antenna Requirement	15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.247 (b)(1)	Pass
20dB Occupied Bandwidth	15.247 (a)(1)	Pass
Carrier Frequencies Separation	15.247 (a)(1)	Pass
Hopping Channel Number	15.247 (a)(1)(iii)	Pass
Dwell Time	15.247 (a)(1)(iii)	Pass
Radiated Emission	15.205/15.209	Pass
Band Edge	15.247(d)	Pass

Pass: The EUT complies with the essential requirements in the standard.

Remark: Test according to ANSI C63.10:2013 .

4.1 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	$\pm 7.25 \times 10^{-8}$
2	Duty cycle	$\pm 0.37\%$
3	Occupied Bandwidth	$\pm 3\%$
4	RF conducted power	$\pm 0.75\text{dB}$
5	RF power density	$\pm 3\text{dB}$
6	Conducted Spurious emissions	$\pm 2.58\text{dB}$
7	AC Power Line Conducted Emission	$\pm 3.44\text{dB}$ (0.15MHz ~ 30MHz)
8	Radiated Spurious emission test	$\pm 3.1\text{dB}$ (9kHz-30MHz)
		$\pm 3.8039\text{dB}$ (30MHz-200MHz)
		$\pm 3.9679\text{dB}$ (200MHz-1GHz)
		$\pm 4.29\text{dB}$ (1GHz-18GHz)
		$\pm 3.30\text{dB}$ (18GHz-40GHz)
9	Temperature test	$\pm 1^\circ\text{C}$
10	Humidity test	$\pm 3\%$
11	Time	$\pm 3\%$

5 General Information

5.1 General Description of EUT

Product Name:	3-Channel Receiver
Model No.:	GMr-C3
Serial No.:	RD1001642
Test sample(s) ID:	GTS2024090135-1
Sample(s) Status	Engineer sample
Operation Frequency:	2402.6MHz~2479.4MHz
Channel numbers:	43
Modulation method:	FHSS
Modulation technology:	GMSK
Antenna Type:	Integral antenna
Antenna gain:	-1dBi(Declared by applicant)
Power supply:	DC 3.5-9V

Remark:

1. Antenna gain information provided by the customer
2. The relevant information of the sample is provided by the entrusting company, and the laboratory is not responsible for its authenticity.
3. The system works in the frequency range of 2402.6MHz to 2479.4MHz. This band has been divided to 43 independent channels. Each radio system uses 32 different channels; the minimum channel separation is ≥ 1.26 MHz. By using various switch-on times, hopping scheme and channel frequencies, the system can guarantee a jamming free radio transmission. Pre-testing all radio systems, this radio system recorded in the report is the worst mode. The channel list is below.

Operation Frequency each of channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2402.6	12	2422.4	23	2442.2	34	2463.2
2	2404.4	13	2424.2	24	2445.2	35	2465
3	2406.2	14	2426	25	2447	36	2466.8
4	2408	15	2427.8	26	2448.8	37	2468.6
5	2409.8	16	2429.6	27	2450.6	38	2470.4
6	2411.6	17	2431.4	28	2452.4	39	2472.2
7	2413.4	18	2433.2	29	2454.2	40	2474
8	2415.2	19	2435	30	2456	41	2475.8
9	2417	20	2436.8	31	2457.8	42	2477.6
10	2418.8	21	2438.6	32	2459.6	43	2479.4
11	2420.6	22	2440.4	33	2461.4		

The test frequencies are below:

Channel	Frequency
The lowest channel	2402.6MHz
The middle channel	2440.4MHz
The Highest channel	2479.4MHz

5.2 Test mode

Transmitting mode	Keep the EUT in transmitting mode.
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5.3 Test Facility

<p>The test facility is recognized, certified, or accredited by the following organizations:</p> <ul style="list-style-type: none"> ● FCC —Registration No.: 381383 Designation Number: CN5029 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. ● ISED—Registration No.: 9079A CAB identifier: CN0091 The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of ISED for radio equipment testing. ● NVLAP (LAB CODE:600179-0) Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).
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5.4 Test Location

All other tests were performed at:
<p>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</p>

5.5 Description of Support Units

Manufacturer	Description	Model	Serial Number
ShenZhen FLYSKY Technology Co.,Ltd	Remote control	Noble NB4 Pro+	N/A
GW	DC POWER SUPPLY	GPR-6030D	EF924756

5.6 Deviation from Standards

None.

5.7 Abnormalities from Standard Conditions

None.

5.8 Additional Instructions

Software (Used for test) from client
Built-in by manufacturer, power set 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	Jun. 22, 2024	Jun. 21, 2027
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	Apr. 11, 2024	Apr. 10, 2025
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9168	GTS640	Mar. 19, 2023	Mar. 18, 2025
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	Apr. 17, 2023	Apr. 16, 2025
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
7	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	Apr. 11, 2024	Apr. 10, 2025
8	Loop Antenna	ZHINAN	ZN30900A	GTS534	Nov. 13, 2023	Nov.12, 2024
9	Broadband Preamplifier	SCHWARZBECK	BBV9718	GTS535	Apr. 11, 2024	Apr. 10, 2025
10	Amplifier(1GHz-26.5GHz)	HP	8449B	GTS601	Apr. 11, 2024	Apr. 10, 2025
11	Horn Antenna (18-26.5GHz)	/	UG-598A/U	GTS664	Oct. 29, 2023	Oct. 28, 2024
12	Horn Antenna (26.5-40GHz)	A.H Systems	SAS-573	GTS665	Oct. 29, 2023	Oct. 28, 2024
13	FSV·Signal Analyzer (10Hz-40GHz)	Keysight	FSV-40-N	GTS666	Mar. 12, 2024	Mar. 11, 2025
14	Amplifier	/	LNA-1000-30S	GTS650	Apr. 11, 2024	Apr. 10, 2025
15	CDNE M2+M3-16A	HCT	30MHz-300MHz	GTS692	Nov. 08, 2023	Nov. 07, 2024
16	Wideband Amplifier	/	WDA-01004000-15P35	GTS602	Apr. 11, 2024	Apr. 10, 2025
17	Thermo meter	JINCHUANG	GSP-8A	GTS643	Apr. 18, 2024	Apr. 17, 2025
18	RE cable 1	GTS	N/A	GTS675	Jul. 02, 2024	Jul. 01, 2025
19	RE cable 2	GTS	N/A	GTS676	Jul. 02, 2024	Jul. 01, 2025
20	RE cable 3	GTS	N/A	GTS677	Jul. 02, 2024	Jul. 01, 2025
21	RE cable 4	GTS	N/A	GTS678	Jul. 02, 2024	Jul. 01, 2025
22	RE cable 5	GTS	N/A	GTS679	Jul. 02, 2024	Jul. 01, 2025
23	RE cable 6	GTS	N/A	GTS680	Jul. 02, 2024	Jul. 01, 2025
24	RE cable 7	GTS	N/A	GTS681	Jul. 05, 2024	Jul. 04, 2025
25	RE cable 8	GTS	N/A	GTS682	Jul. 05, 2024	Jul. 04, 2025

Conducted Emission						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	Jul. 12, 2022	Jul. 11, 2027
2	EMI Test Receiver	R&S	ESCI 7	GTS552	Apr. 11, 2024	Apr. 10, 2025
3	LISN	ROHDE & SCHWARZ	ENV216	GTS226	Apr. 11, 2024	Apr. 10, 2025
4	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A
5	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
6	Thermo meter	JINCHUANG	GSP-8A	GTS642	Apr. 18, 2024	Apr. 17, 2025
7	Absorbing clamp	Elektronik-Feinmechanik	MDS21	GTS229	Apr. 11, 2024	Apr. 10, 2025
8	ISN	SCHWARZBECK	NTFM 8158	GTS565	Apr. 11, 2024	Apr. 10, 2025
9	High voltage probe	SCHWARZBECK	TK9420	GTS537	Apr. 11, 2024	Apr. 10, 2025
10	Antenna end assembly	Weinschel	1870A	GTS560	Apr. 11, 2024	Apr. 10, 2025

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	Apr. 13, 2024	Apr. 12, 2025
2	EMI Test Receiver	R&S	ESCI 7	GTS552	Apr. 13, 2024	Apr. 12, 2025
3	PSA Series Spectrum Analyzer	Agilent	E4440A	GTS536	Apr. 13, 2024	Apr. 12, 2025
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	Apr. 13, 2024	Apr. 12, 2025
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	Apr. 13, 2024	Apr. 12, 2025
6	USB RF Power Sensor	DARE	RPR3006W	GTS569	Apr. 13, 2024	Apr. 12, 2025
7	RF Switch Box	Shongyi	RFSW3003328	GTS571	Apr. 13, 2024	Apr. 12, 2025
8	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	Apr. 13, 2024	Apr. 12, 2025
9	Thermo meter	JINCHUANG	GSP-8A	GTS641	Apr. 18, 2024	Apr. 17, 2025
10	EXA Signal Analyzer	Keysight	N9010B	MY60241168	Nov. 03, 2023	Nov. 02, 2024

General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Barometer	KUMAO	SF132	GTS647	Apr. 18, 2024	Apr. 17, 2025

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.	
EUT Antenna:	
The antenna is integral antenna, reference to the appendix II for details.	

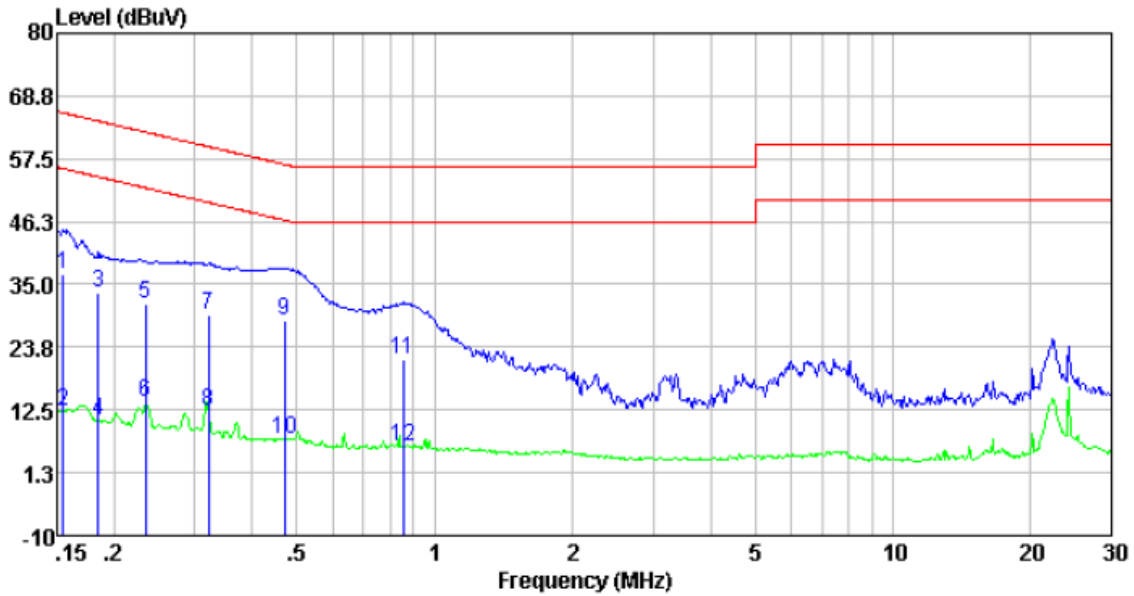
7.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207					
Test Method:	ANSI C63.10:2013					
Test Frequency Range:	150KHz to 30MHz					
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto					
Limit:	Frequency range (MHz)	Limit (dBuV)				
		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.						
Test setup:	<p><i>Remark</i> E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m</p>					
Test procedure:	<ol style="list-style-type: none"> 1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2013 on conducted measurement. 					
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					

Measurement data:

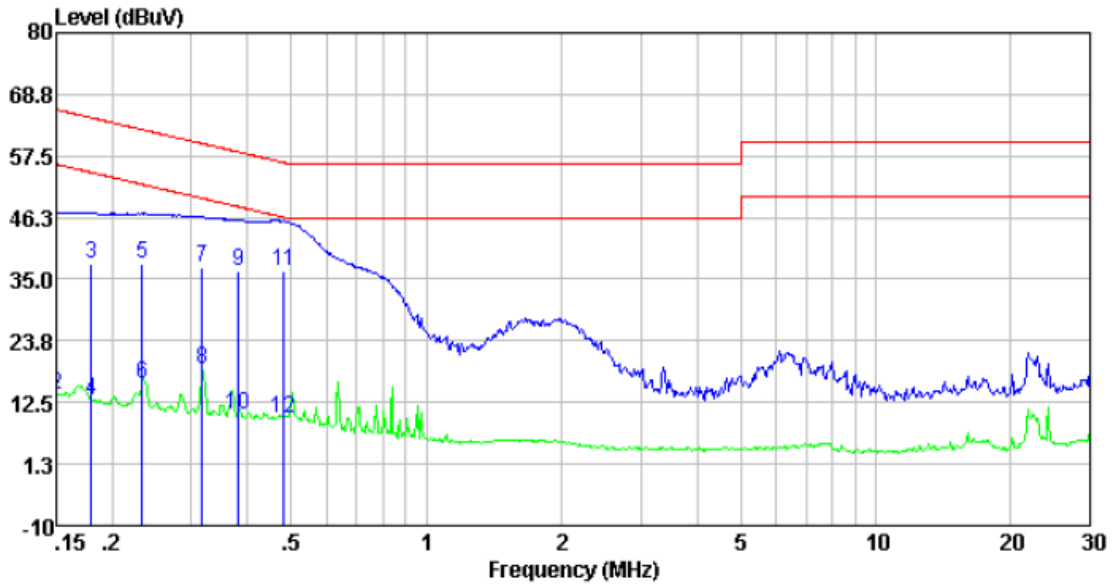
Pre-scan all test modes, found worst case at 2402.6MHz, and so only show the test result of it

Line:



Freq	Reading level	LISN/ISN factor	Cable loss	Level	Limit level	Over limit	Remark
MHz	dBuV	dB	dB	dBuV	dBuV	dB	
0.15	26.89	10.01	0.01	36.91	65.74	-28.83	QP
0.15	2.33	10.01	0.01	12.35	55.74	-43.39	Average
0.18	23.63	9.71	0.01	33.35	64.28	-30.93	QP
0.18	0.93	9.71	0.01	10.65	54.28	-43.63	Average
0.23	21.90	9.58	0.01	31.49	62.30	-30.81	QP
0.23	4.17	9.58	0.01	13.76	52.30	-38.54	Average
0.32	19.73	9.64	0.01	29.38	59.66	-30.28	QP
0.32	2.59	9.64	0.01	12.24	49.66	-37.42	Average
0.47	18.62	9.80	0.01	28.43	56.49	-28.06	QP
0.47	-2.53	9.80	0.01	7.28	46.49	-39.21	Average
0.85	11.80	9.73	0.03	21.56	56.00	-34.44	QP
0.85	-3.79	9.73	0.03	5.97	46.00	-40.03	Average

Neutral:

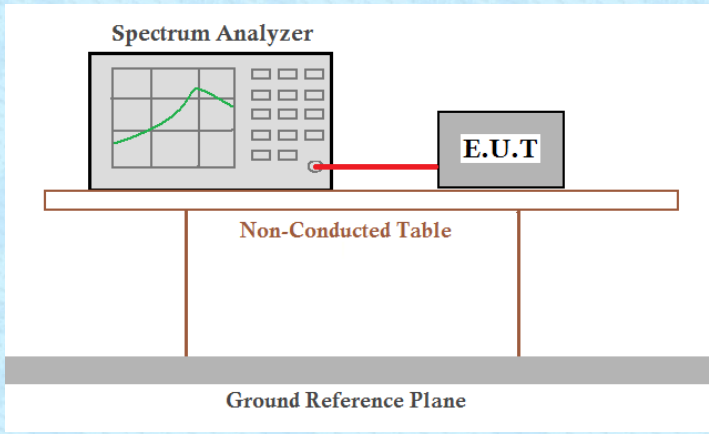


Freq	Reading level	LISN/ISN factor	Cable loss	Limit Level	Over limit	Remark
MHz	dBuV	dB	dB	dBuV	dB	
0.15	28.90	9.85	0.01	38.76	-27.24	QP
0.15	4.02	9.85	0.01	13.88	-42.12	Average
0.18	28.04	9.87	0.01	37.92	-26.58	QP
0.18	3.04	9.87	0.01	12.92	-41.58	Average
0.23	27.82	9.84	0.01	37.67	-24.68	QP
0.23	6.11	9.84	0.01	15.96	-36.39	Average
0.32	27.34	9.78	0.01	37.13	-22.67	QP
0.32	8.67	9.78	0.01	18.46	-31.34	Average
0.38	26.85	9.73	0.01	36.59	-21.66	QP
0.38	0.53	9.73	0.01	10.27	-37.98	Average
0.48	26.69	9.74	0.01	36.44	-19.88	QP
0.48	-0.05	9.74	0.01	9.70	-36.62	Average

Notes:

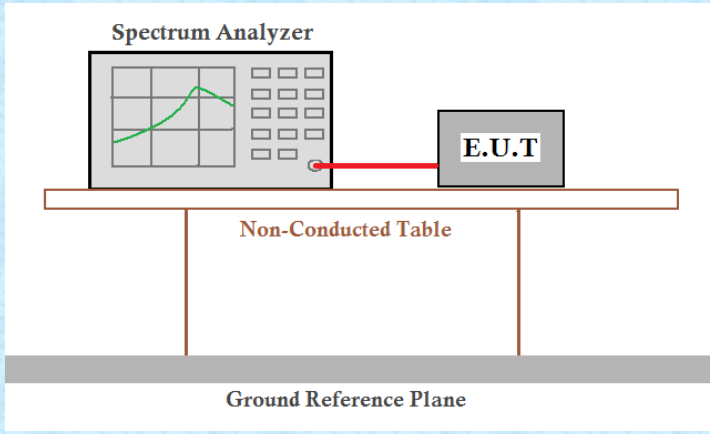
1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss

7.3 Conducted Peak Output Power

Test Requirement:	FCC Part15 C Section 15.247(a)(1)
Test Method:	ANSI C63.10:2013
Limit:	20.97dBm
Test setup:	 <p>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 sits on a Ground Reference Plane.</p>
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

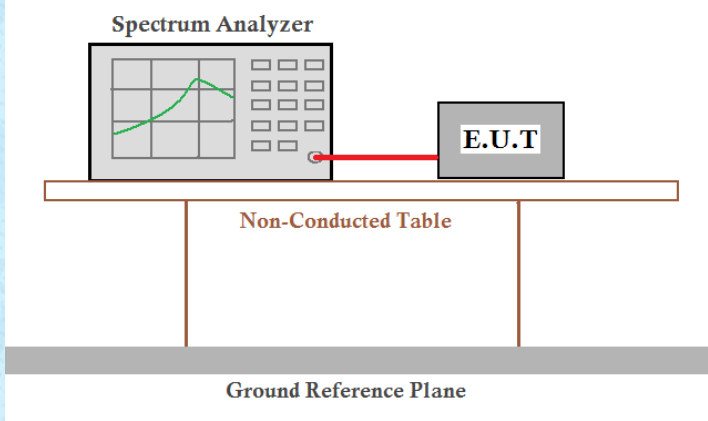
Measurement Data: The detailed test data see Appendix for 2.4G.

7.4 20dB Emission Bandwidth

Test Requirement:	FCC Part15 C Section 15.247 (a)(1)
Test Method:	ANSI C63.10:2013
Limit:	N/A
Test setup:	 <p>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.</p>
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

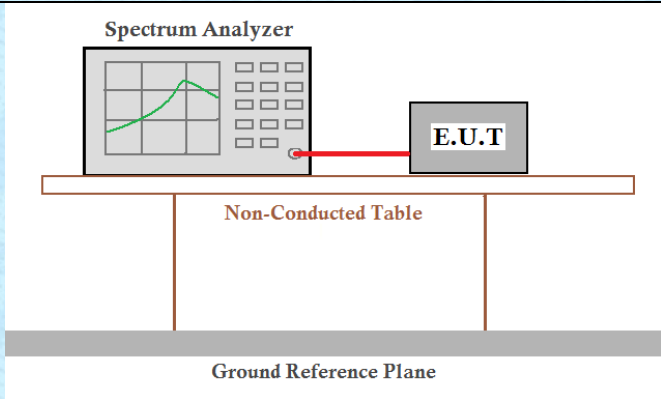
Measurement Data: The detailed test data see Appendix for 2.4G.

7.5 Carrier Frequencies Separation

Test Requirement:	FCC Part15 C Section 15.247 (a)(1)
Test Method:	ANSI C63.10:2013
Receiver setup:	RBW=300KHz, VBW=300KHz, detector=Peak
Limit:	0.025MHz or 2/3 of the 20dB bandwidth (whichever is greater)
Test setup:	 <p>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.</p>
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

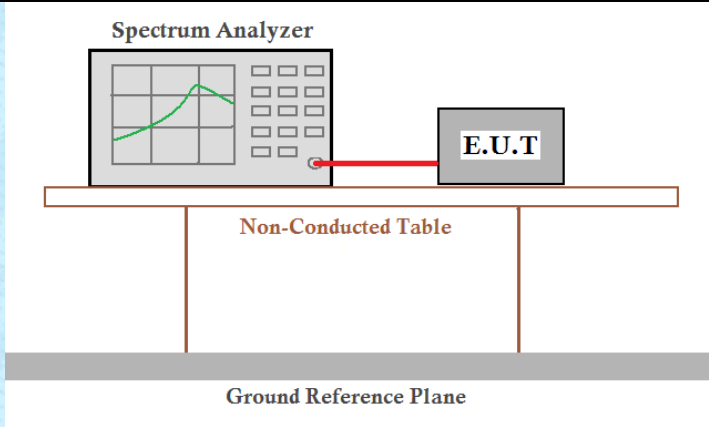
Measurement Data: The detailed test data see Appendix for 2.4G.

7.6 Hopping Channel Number

Test Requirement:	FCC Part15 C Section 15.247 (a)(1)(iii)
Test Method:	ANSI C63.10:2013
Receiver setup:	RBW=300kHz, VBW=300kHz, Frequency range=2400MHz-2483.5MHz, Detector=Peak
Limit:	15 channels
Test setup:	 <p>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 sits on a Ground Reference Plane.</p>
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Data: The detailed test data see Appendix for 2.4G.

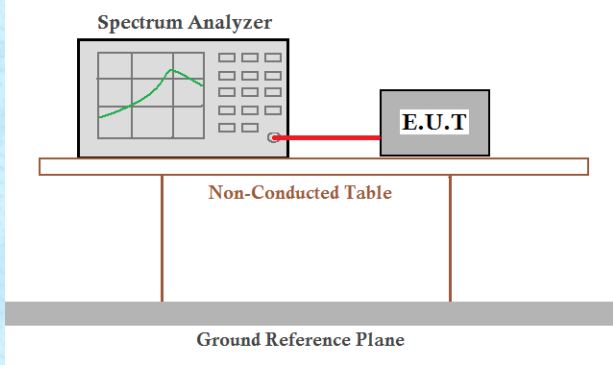
7.7 Dwell Time

Test Requirement:	FCC Part15 C Section 15.247 (a)(1)(iii)
Test Method:	ANSI C63.10:2013
Receiver setup:	RBW=300KHz, VBW=300KHz, Span=0Hz, Detector=Peak
Limit:	0.4 Second
Test setup:	 <p>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.</p>
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Data: The detailed test data see Appendix for 2.4G.

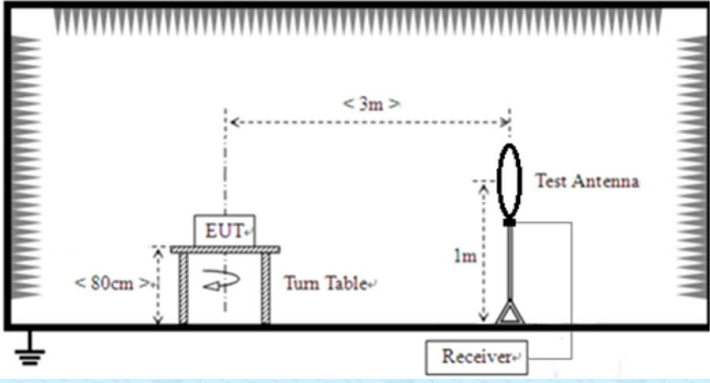
7.8 Spurious Emission in Non-restricted & restricted Bands

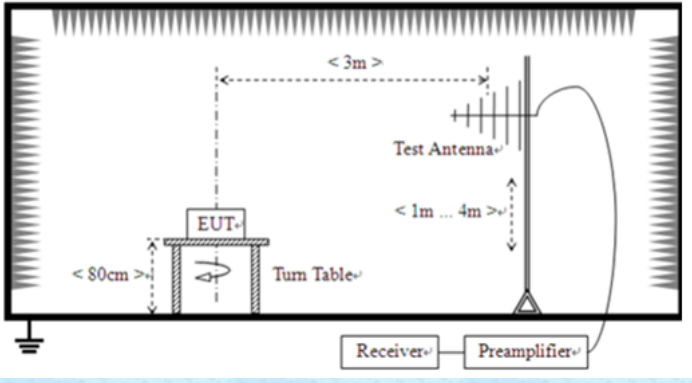
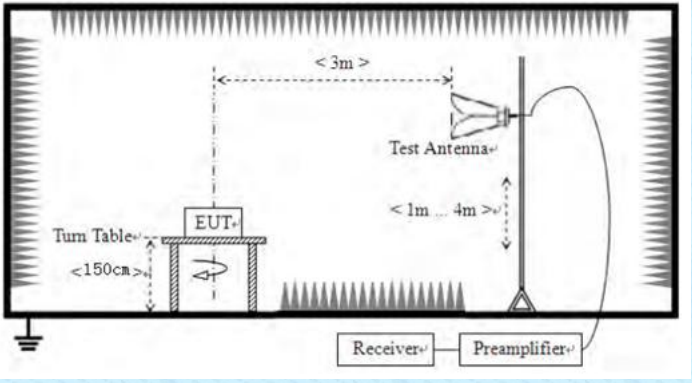
7.8.1 Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013
Receiver setup:	RBW=100kHz, VBW=300kHz, Detector=Peak
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:	 <p>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 sits on a Ground Reference Plane.</p>
Test Instruments:	Refer to section6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

Measurement Data: The detailed test data see Appendix for 2.4G.

7.8.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
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
Note: For Duty cycle $\geq 98\%$, average detector set as above For Duty cycle $< 98\%$, average detector set as below: $VBW \geq 1 / T$					
Limit: (Spurious Emissions)	Frequency	Limit (uV/m)	Value	Measurement Distance	
	0.009MHz-0.490MHz	2400/F(KHz)	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:	Below 30MHz				
					
Below 1GHz					

	 <p>Above 1GHz</p> 						
<p>Test Procedure:</p>	<ol style="list-style-type: none"> 1. The EUT was placed on the top of a rotating table (0.8 meters for below 1GHz and 1.5meters for above 1GHz) 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. 						
<p>Test Instruments:</p>	<p>Refer to section 5.8 for details</p>						
<p>Test mode:</p>	<p>Refer to section 5.2 for details</p>						
<p>Temp. / Hum.</p>	<table border="1"> <tr> <td>Temp.:</td> <td>25 °C</td> <td>Humid.:</td> <td>52%</td> <td>Press.:</td> <td>1 012mbar</td> </tr> </table>	Temp.:	25 °C	Humid.:	52%	Press.:	1 012mbar
Temp.:	25 °C	Humid.:	52%	Press.:	1 012mbar		

Test results:	Pass
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Remark:

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

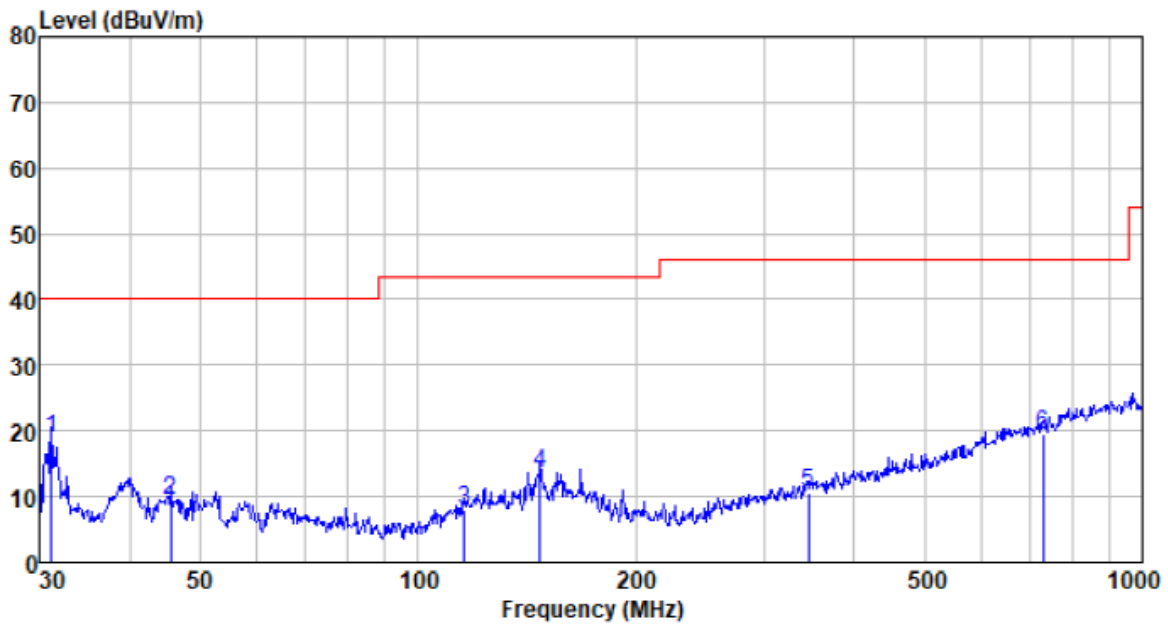
Measurement data:

■ **Below 30MHz**

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.

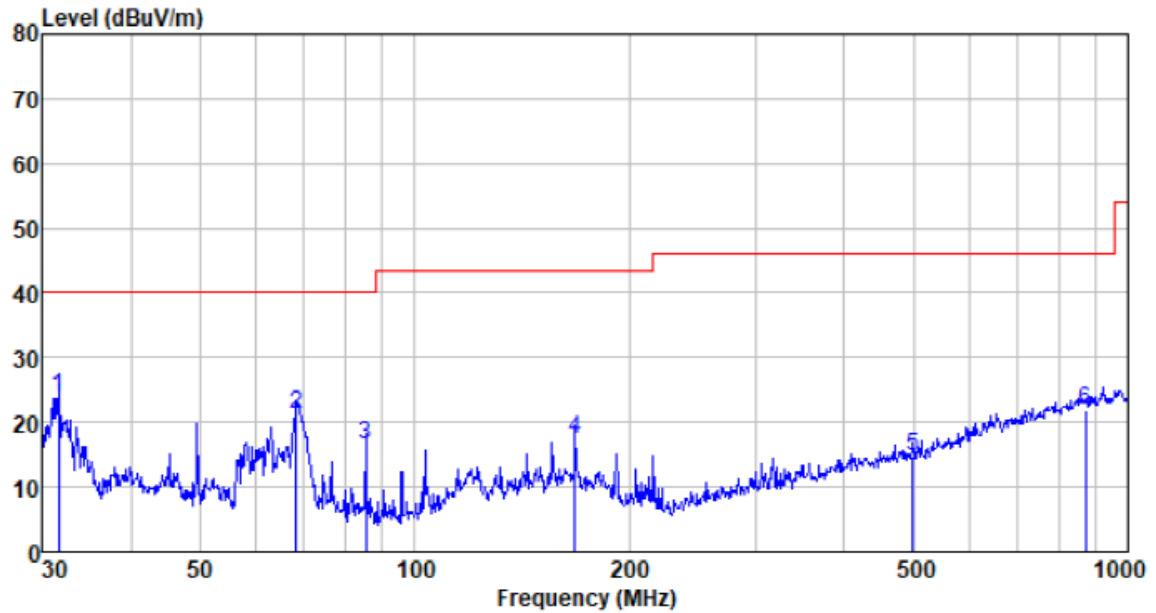
30MHz ~ 1GHz

Test channel:	Lowest	Polarization:	Horizontal
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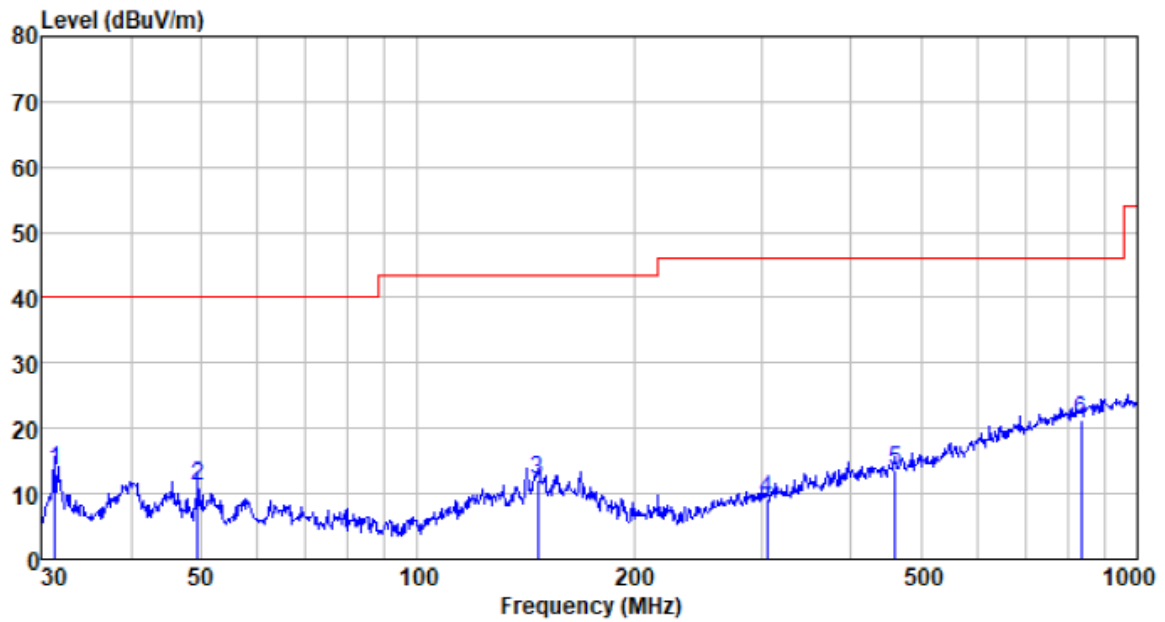
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
31.180	37.43	12.50	1.12	32.30	18.75	40.00	-21.25	QP
45.535	26.98	13.45	1.34	32.30	9.47	40.00	-30.53	QP
115.726	26.33	11.87	2.12	32.48	7.84	43.50	-35.66	QP
147.404	28.87	14.60	2.44	32.45	13.46	43.50	-30.04	QP
345.595	25.63	13.51	3.65	32.28	10.51	46.00	-35.49	QP
729.358	24.86	20.90	5.20	31.36	19.60	46.00	-26.40	QP

Test channel:	Lowest	Polarization:	Vertical
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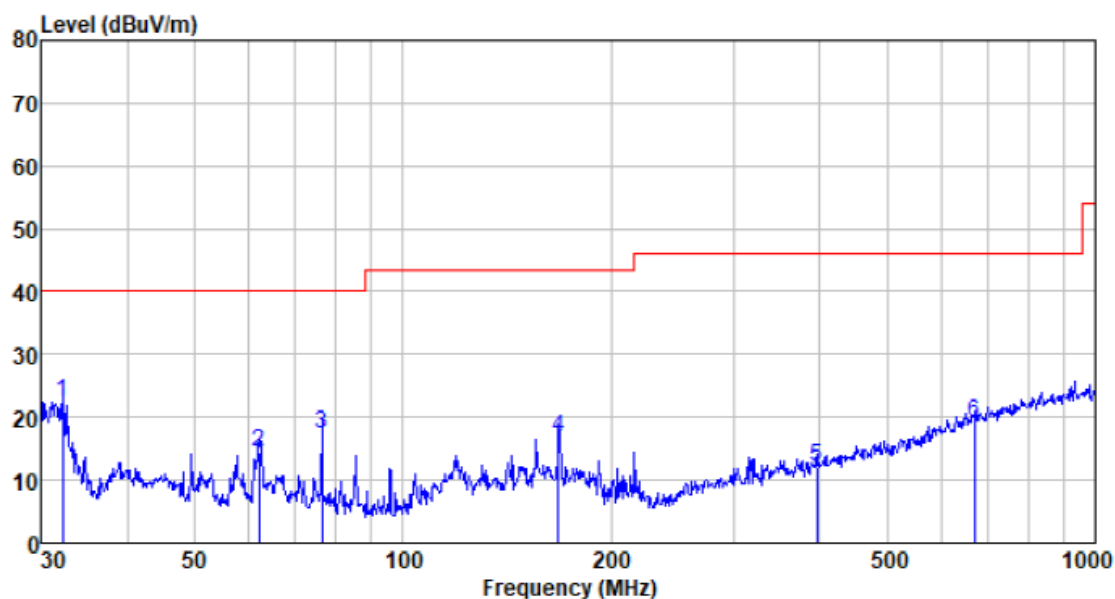
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
31.620	42.69	12.50	1.13	32.30	24.02	40.00	-15.98	QP
68.151	41.17	10.98	1.62	32.37	21.40	40.00	-18.60	QP
85.298	37.99	9.17	1.72	32.44	16.44	40.00	-23.56	QP
167.824	33.60	13.62	2.62	32.43	17.41	43.50	-26.09	QP
499.425	26.00	16.79	4.19	32.20	14.78	46.00	-31.22	QP
872.183	24.37	22.80	5.66	31.10	21.73	46.00	-24.27	QP

Test channel:	Middle	Polarization:	Horizontal
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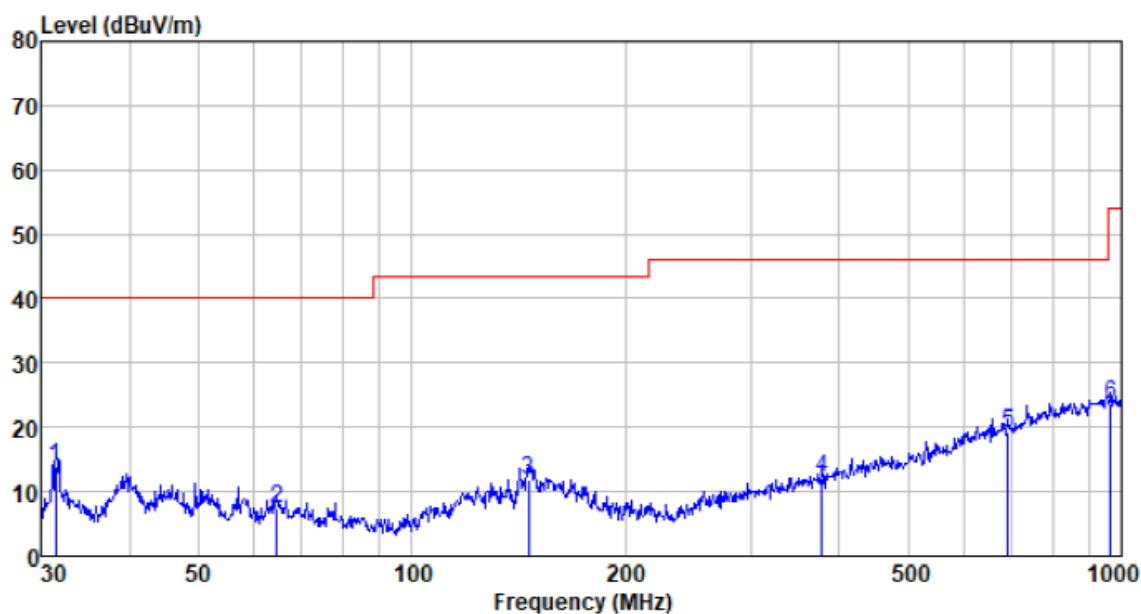
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
31.399	32.28	12.50	1.13	32.30	13.61	40.00	-26.39	QP
49.533	29.59	12.69	1.38	32.30	11.36	40.00	-28.64	QP
146.888	27.38	14.60	2.44	32.45	11.97	43.50	-31.53	QP
305.680	25.35	12.51	3.45	32.30	9.01	46.00	-36.99	QP
460.727	25.69	16.11	4.08	32.22	13.66	46.00	-32.34	QP
836.244	24.26	22.42	5.57	31.10	21.15	46.00	-24.85	QP

Test channel:	Middle	Polarization:	Vertical
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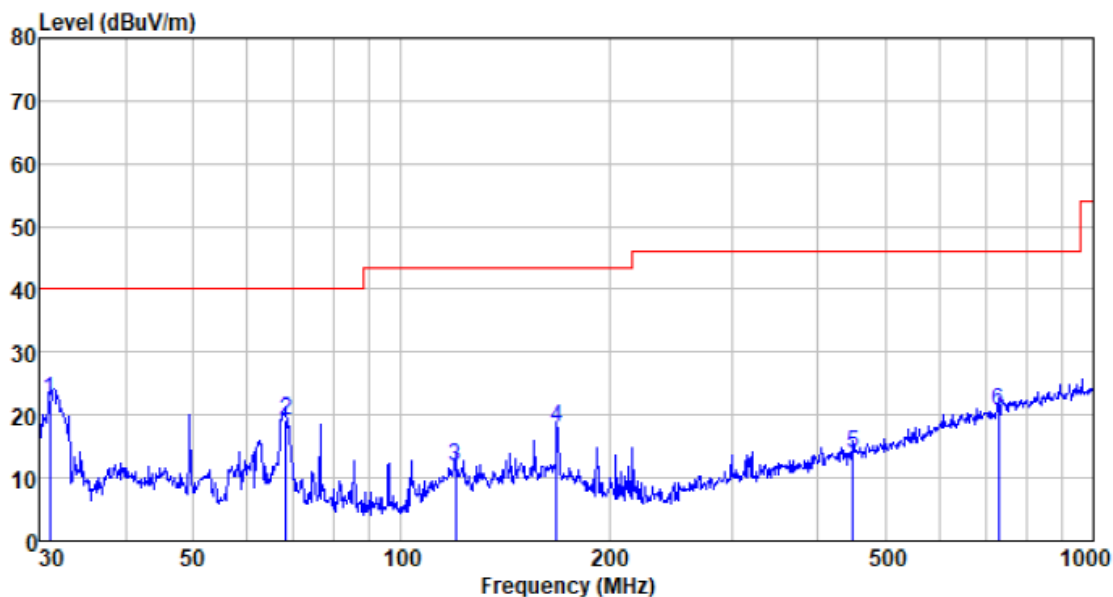
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
32.293	41.12	12.53	1.14	32.30	22.49	40.00	-17.51	QP
61.995	33.42	11.90	1.52	32.35	14.49	40.00	-25.51	QP
76.512	38.14	10.15	1.65	32.41	17.53	40.00	-22.47	QP
167.824	33.05	13.62	2.62	32.43	16.86	43.50	-26.64	QP
396.242	25.79	14.72	3.86	32.25	12.12	46.00	-33.88	QP
668.142	25.58	20.16	4.94	31.58	19.10	46.00	-26.90	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
31.510	32.64	12.50	1.13	32.30	13.97	40.00	-26.03	QP
64.433	26.81	11.36	1.56	32.36	7.37	40.00	-32.63	QP
145.861	27.21	14.59	2.43	32.45	11.78	43.50	-31.72	QP
378.584	26.40	14.27	3.79	32.26	12.20	46.00	-33.80	QP
691.987	25.31	20.44	5.05	31.50	19.30	46.00	-26.70	QP
965.542	25.00	23.71	5.92	31.10	23.53	54.00	-30.47	QP

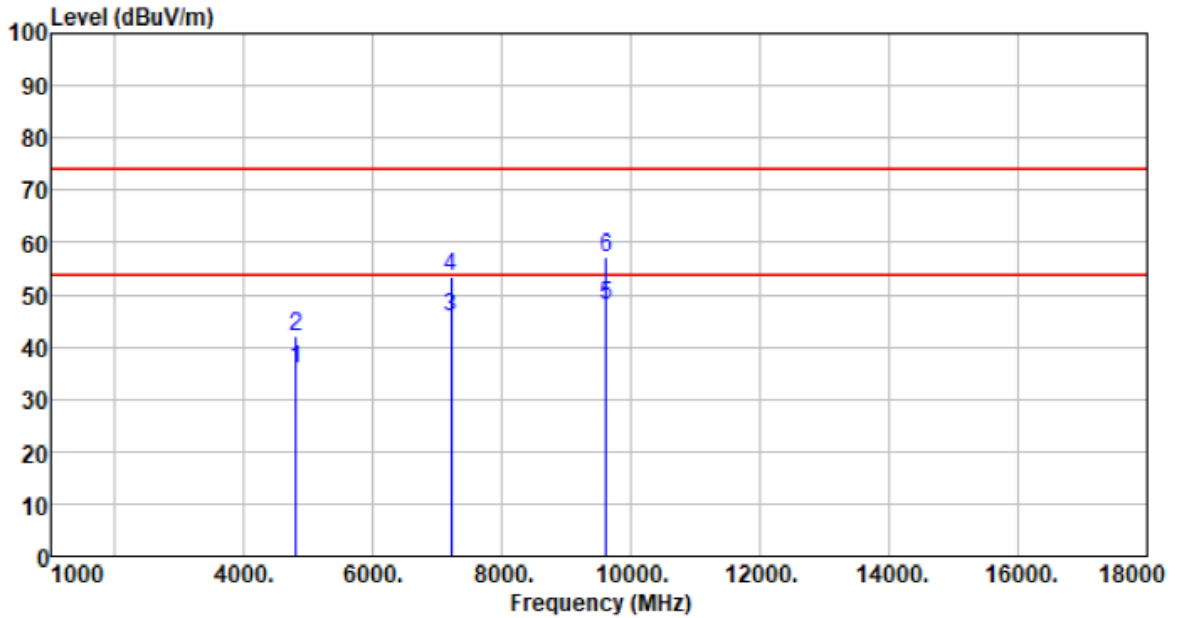
Test channel:	Highest	Polarization:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
31.071	41.13	12.50	1.12	32.30	22.45	40.00	-17.55	QP
68.151	38.91	10.98	1.62	32.37	19.14	40.00	-20.86	QP
119.856	29.55	12.59	2.17	32.48	11.83	43.50	-31.67	QP
167.824	34.15	13.62	2.62	32.43	17.96	43.50	-25.54	QP
449.556	26.13	15.98	4.04	32.23	13.92	46.00	-32.08	QP
729.358	26.04	20.90	5.20	31.36	20.78	46.00	-25.22	QP

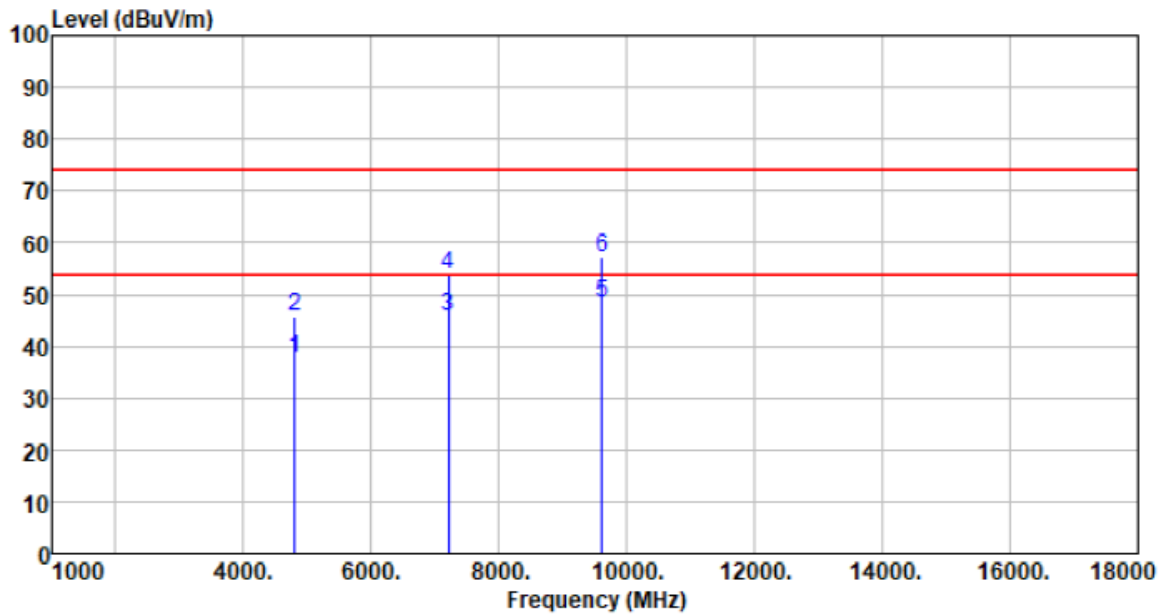
- Above 1GHz
- Unwanted Emissions in Non-restricted Frequency Bands

Test channel:	Lowest	Polarization:	Horizontal
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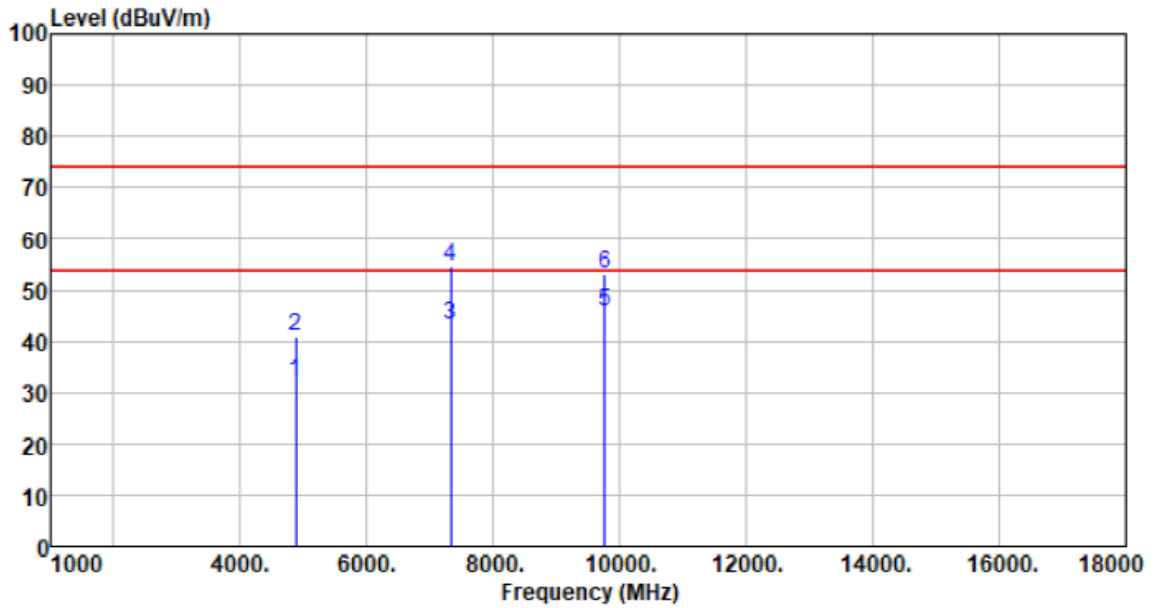
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
4805.200	36.43	32.01	6.01	38.54	35.91	54.00	-18.09	Average
4805.200	42.63	32.01	6.01	38.54	42.11	74.00	-31.89	Peak
7207.800	40.70	36.22	7.92	39.15	45.69	54.00	-8.31	Average
7207.800	48.52	36.22	7.92	39.15	53.51	74.00	-20.49	Peak
9610.400	35.20	38.20	14.82	40.22	48.00	54.00	-6.00	Average
9610.400	44.34	38.20	14.82	40.22	57.14	74.00	-16.86	Peak

Test channel:	Lowest	Polarization:	Vertical
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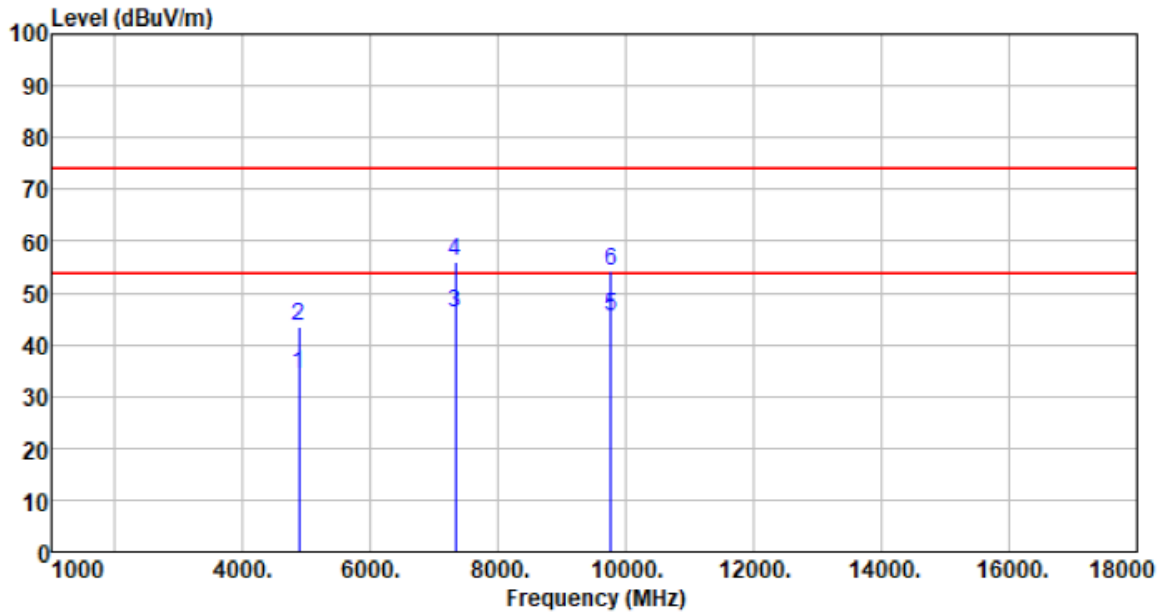
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
4805.200	38.29	32.01	6.01	38.54	37.77	54.00	-16.23	Average
4805.200	46.38	32.01	6.01	38.54	45.86	74.00	-28.14	Peak
7207.800	40.85	36.22	7.92	39.15	45.84	54.00	-8.16	Average
7207.800	48.80	36.22	7.92	39.15	53.79	74.00	-20.21	Peak
9610.400	35.61	38.20	14.82	40.22	48.41	54.00	-5.59	Average
9610.400	44.45	38.20	14.82	40.22	57.25	74.00	-16.75	Peak

Test channel:	Middle	Polarization:	Horizontal
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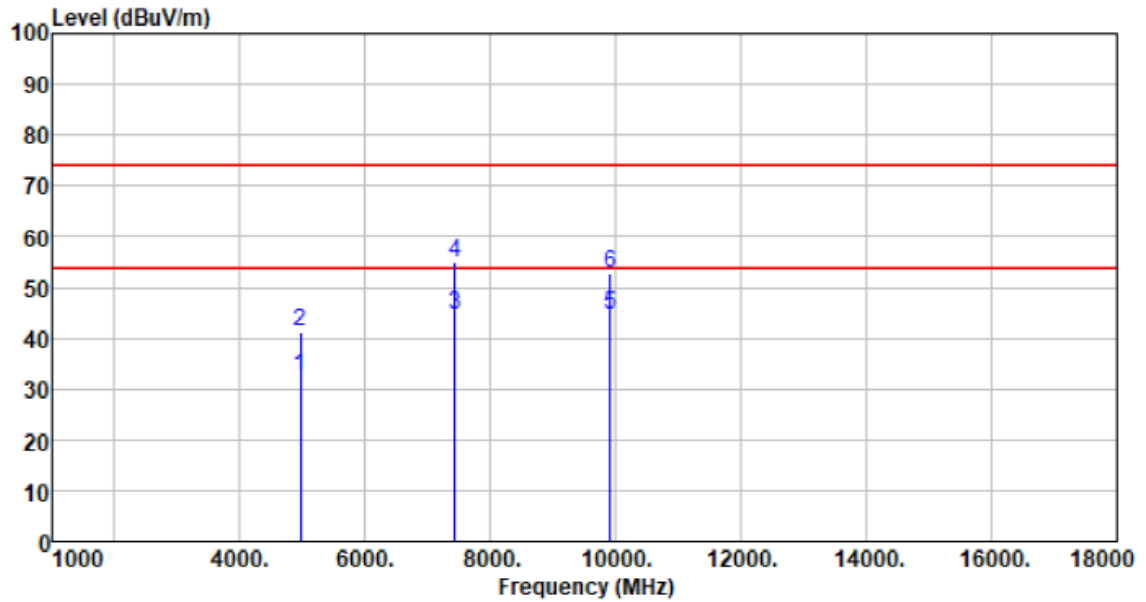
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
4880.800	32.36	32.10	6.03	38.52	31.97	54.00	-22.03	Average
4880.800	41.51	32.10	6.03	38.52	41.12	74.00	-32.88	Peak
7321.200	38.23	36.30	8.04	39.22	43.35	54.00	-10.65	Average
7321.200	49.51	36.30	8.04	39.22	54.63	74.00	-19.37	Peak
9761.600	36.54	38.20	11.31	40.25	45.80	54.00	-8.20	Average
9761.600	43.70	38.20	11.31	40.25	52.96	74.00	-21.04	Peak

Test channel:	Middle	Polarization:	Vertical
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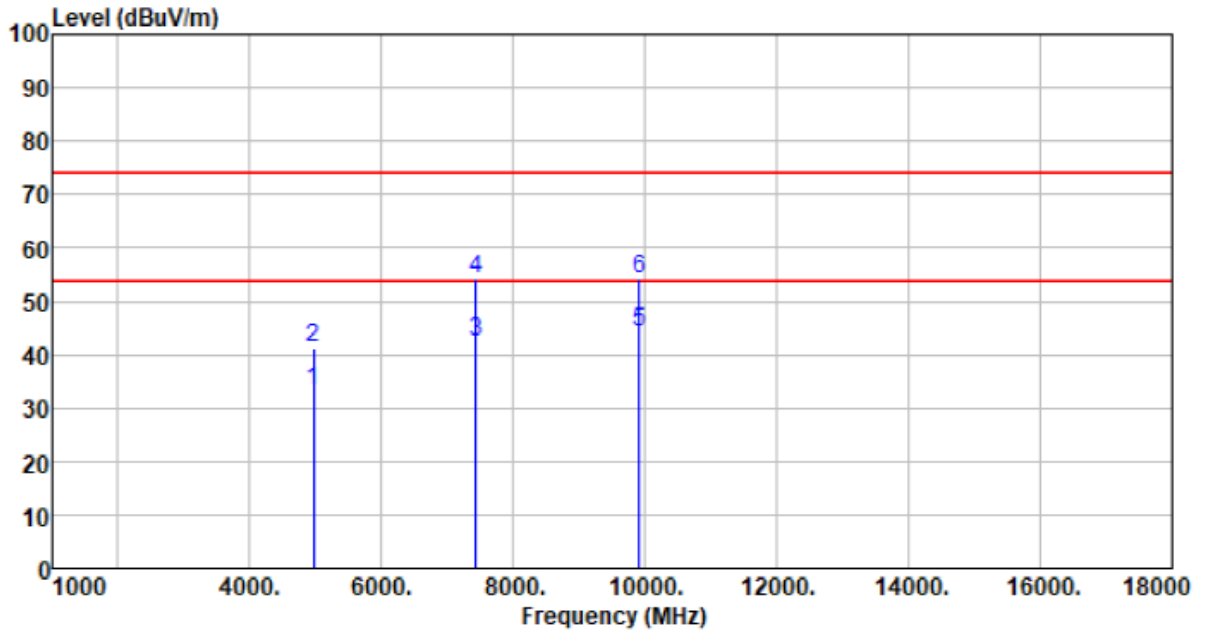
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
4880.800	34.72	32.10	6.03	38.52	34.33	54.00	-19.67	Average
4880.800	43.95	32.10	6.03	38.52	43.56	74.00	-30.44	Peak
7321.200	40.92	36.30	8.04	39.22	46.04	54.00	-7.96	Average
7321.200	50.87	36.30	8.04	39.22	55.99	74.00	-18.01	Peak
9755.000	35.97	38.20	11.46	40.25	45.38	54.00	-8.62	Average
9755.000	44.76	38.20	11.46	40.25	54.17	74.00	-19.83	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
4958.800	32.62	32.20	6.05	38.51	32.36	54.00	-21.64	Average
4958.800	41.76	32.20	6.05	38.51	41.50	74.00	-32.50	Peak
7438.200	39.56	36.30	8.15	39.31	44.70	54.00	-9.30	Average
7438.200	49.70	36.30	8.15	39.31	54.84	74.00	-19.16	Peak
9917.600	35.81	38.24	10.76	40.28	44.53	54.00	-9.47	Average
9917.600	43.98	38.24	10.76	40.28	52.70	74.00	-21.30	Peak

Test channel:	Highest	Polarization:	Vertical
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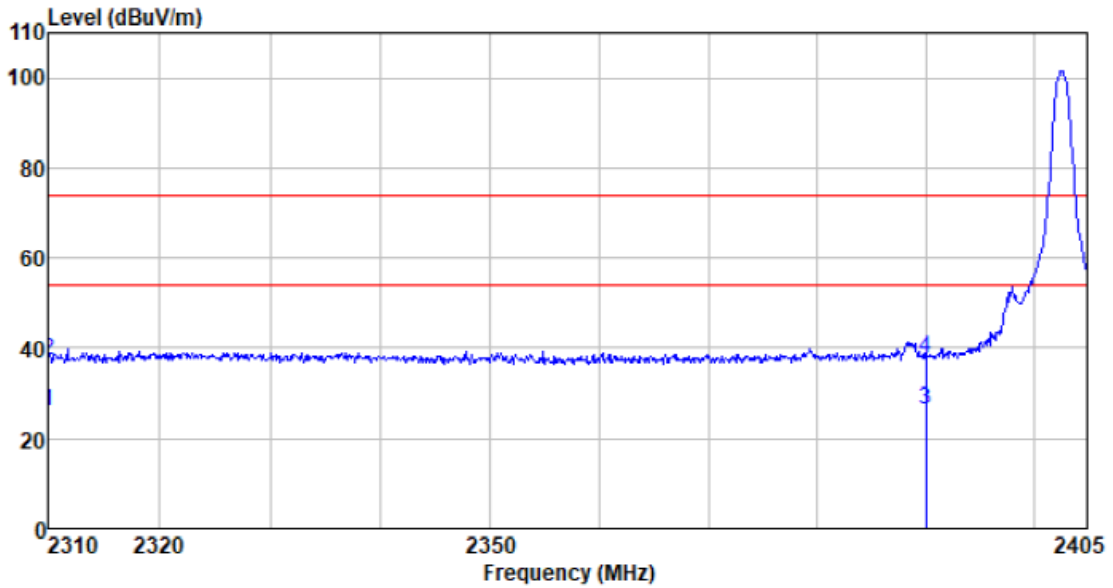
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
4958.800	33.41	32.20	6.05	38.51	33.15	54.00	-20.85	Average
4958.800	41.65	32.20	6.05	38.51	41.39	74.00	-32.61	Peak
7438.200	37.39	36.30	8.15	39.31	42.53	54.00	-11.47	Average
7438.200	49.25	36.30	8.15	39.31	54.39	74.00	-19.61	Peak
9917.600	35.61	38.24	10.76	40.28	44.33	54.00	-9.67	Average
9917.600	45.44	38.24	10.76	40.28	54.16	74.00	-19.84	Peak

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. For above 18GHz, no emission found.

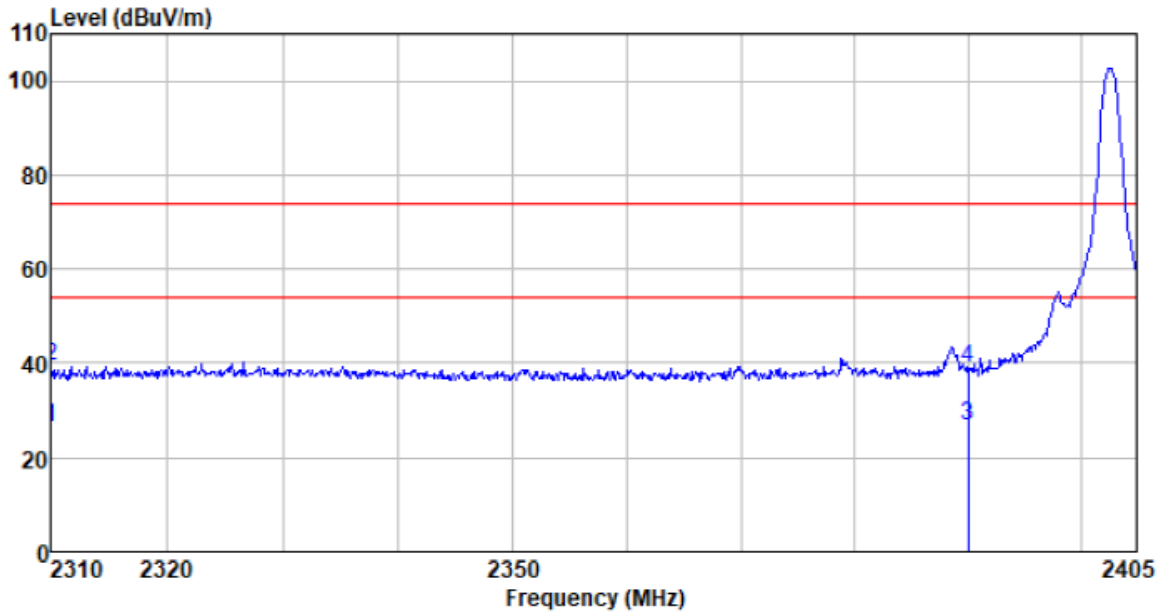
■ **Unwanted Emissions in Restricted Frequency Bands**

Test channel:	Lowest	Polarization:	Horizontal
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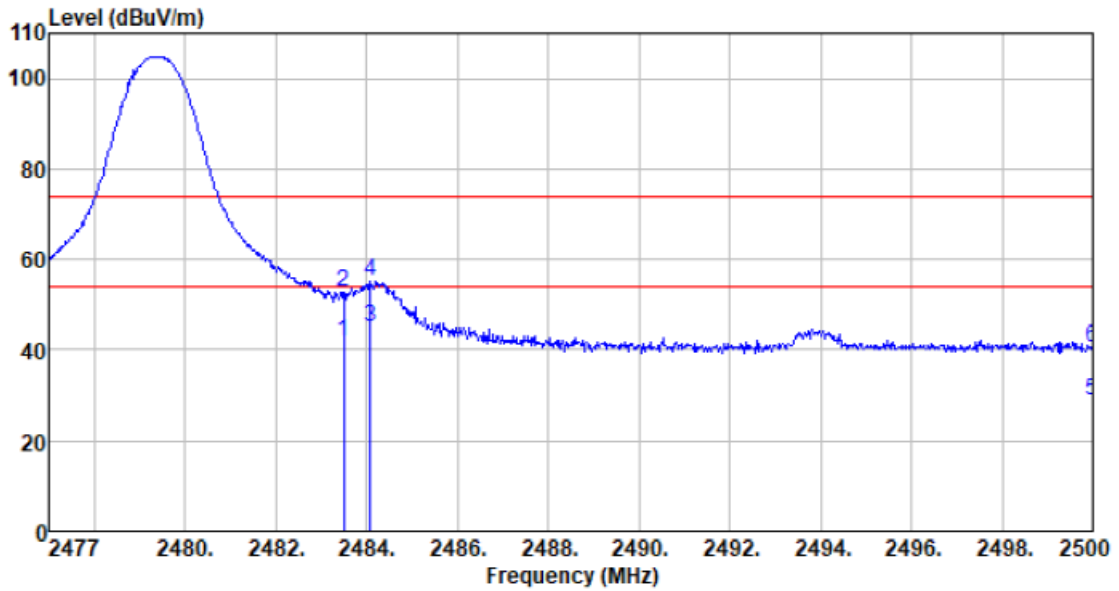
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
2310.000	34.16	27.00	4.13	39.14	26.15	54.00	-27.85	Average
2310.000	45.38	27.00	4.13	39.14	37.37	74.00	-36.63	Peak
2390.000	34.63	27.08	4.17	39.34	26.54	54.00	-27.46	Average
2390.000	45.80	27.08	4.17	39.34	37.71	74.00	-36.29	Peak

Test channel:	Lowest	Polarization:	Vertical
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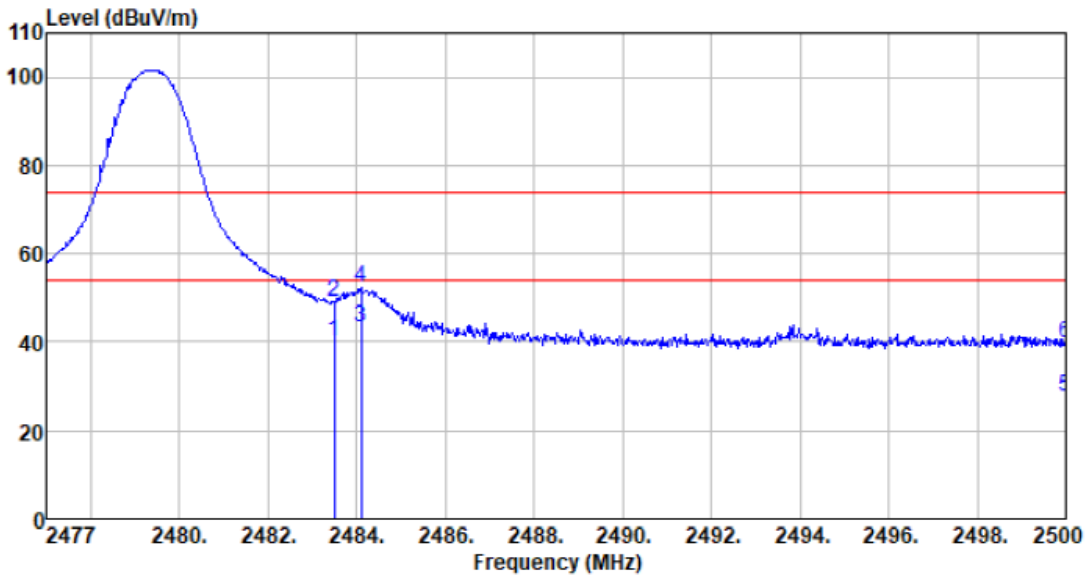
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
2310.000	34.46	27.00	4.13	39.14	26.45	54.00	-27.55	Average
2310.000	47.40	27.00	4.13	39.14	39.39	74.00	-34.61	Peak
2390.000	34.72	27.08	4.17	39.34	26.63	54.00	-27.37	Average
2390.000	46.94	27.08	4.17	39.34	38.85	74.00	-35.15	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	50.16	27.27	4.08	39.56	41.95	54.00	-12.05	Average
2483.500	61.05	27.27	4.08	39.56	52.84	74.00	-21.16	Peak
2484.084	53.38	27.27	4.08	39.56	45.17	54.00	-8.83	Average
2484.084	63.58	27.27	4.08	39.56	55.37	74.00	-18.63	Peak
2500.000	36.98	27.30	4.06	39.60	28.74	54.00	-25.26	Average
2500.000	48.77	27.30	4.06	39.60	40.53	74.00	-33.47	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	48.28	27.27	4.08	39.56	40.07	54.00	-13.93	Average
2483.500	57.43	27.27	4.08	39.56	49.22	74.00	-24.78	Peak
2484.107	51.72	27.27	4.08	39.56	43.51	54.00	-10.49	Average
2484.107	60.50	27.27	4.08	39.56	52.29	74.00	-21.71	Peak
2500.000	35.81	27.30	4.06	39.60	27.57	54.00	-26.43	Average
2500.000	47.96	27.30	4.06	39.60	39.72	74.00	-34.28	Peak

Remarks:

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.

8 Test Setup Photo

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

9 EUT Constructional Details

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

---End---