

Test Report

Applicant: FLYSKY RC MODEL TECHNOLOGY CO., LTD

Address of Applicant: West building3, Huangjianyuan Ind, Park QIAOLI North Gate Changping Town, Dongguan, China

Manufacturer: ShenZhen FLYSKY Technology Co.,Ltd

Address of Manufacturer: 16F, Huafeng Building, No. 6006 Shennan Road, Futian District, Shenzhen, Guangdong, China

Factory: FLYSKY RC MODEL TECHNOLOGY CO., LTD

Address of Factory: West building3, Huangjianyuan Ind, Park QIAOLI North Gate Changping Town, Dongguan, China

Equipment Under Test (EUT)

Product Name: Digital proportional radio control system

Model No.: FT18, PL18, Paladin

Trade Mark: FLYSKY

FCC ID: N4ZFT1800

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

Date of sample receipt: June 03, 2019

Date of Test: June 04-14, 2019

Date of report issued: June 14, 2019

Test Result : PASS *

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

Authorized Signature:



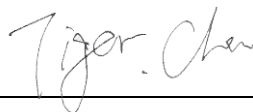
Robinson Lo
Laboratory Manager

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	June 14, 2019	Original

Prepared By:

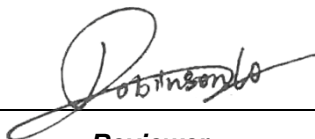


Date:

June 14, 2019

Project Engineer

Check By:



Date:

June 14, 2019

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)(iii)	Pass
Dwell Time	15.247 (a)(iii)	Pass
Pseudorandom Frequency Hopping Sequence	15.247(a)(1)	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

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	9kHz ~ 30MHz	± 4.64dB	(1)
Radiated Emission	30MHz ~ 1000MHz	± 4.64dB	(1)
Radiated Emission	1GHz ~ 26.5GHz	± 3.68dB	(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:	Digital proportional radio control system
Model No.:	FT18, PL18, Paladin
Test model:	FT18
<i>Remark: All above models are identical in the same PCB layout, interior structure and electrical circuits. The only difference is model name for commercial purpose.</i>	
Serial No.:	N/A
Hardware version:	V1 .5
Software version:	V1.0.26
Test sample(s) ID:	GTS201806000215-1
Sample(s) Status	Engineer sample
Operation Frequency:	2402.15-2479.85MHz
Channel numbers:	171
Modulation technology:	FLRC
Antenna Type:	Integral Antenna
Antenna gain:	0dBi
Power supply:	DC 3.8V, 4300mAh, 16.34Wh

Remark: The system works in the frequency range of 2402.15-2479.85MHz. This band has been divided to 171 independent channels. Each radio system uses 32 different channels; the minimum channel separation is 900kHz. By using various switch-on times, hopping scheme and channel frequencies, the system can guarantee a jamming free radio transmission. The channel list is below.

Two antennas can't transmit at the same time. While the ANT 1 (Left ANT) transmitting, the ANT 2(Right ANT) act as a receiver antenna and vice versa.

Operation Frequency each of channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2402.15	44	2421.5	87	2440.85	130	2461.4
2	2402.6	45	2421.95	88	2441.3	131	2461.85
3	2403.05	46	2422.4	89	2441.75	132	2462.3
4	2403.5	47	2422.85	90	2442.2	133	2462.75
5	2403.95	48	2423.3	91	2442.65	134	2463.2
6	2404.4	49	2423.75	92	2443.1	135	2463.65
7	2404.85	50	2424.2	93	2444.75	136	2464.1
8	2405.3	51	2424.65	94	2445.2	137	2464.55
9	2405.75	52	2425.1	95	2445.65	138	2465
10	2406.2	53	2425.55	96	2446.1	139	2465.45
11	2406.65	54	2426	97	2446.55	140	2465.9
12	2407.1	55	2426.45	98	2447	141	2466.35
13	2407.55	56	2426.9	99	2447.45	142	2466.8
14	2408	57	2427.35	100	2447.9	143	2467.25
15	2408.45	58	2427.8	101	2448.35	144	2467.7
16	2408.9	59	2428.25	102	2448.8	145	2468.15
17	2409.35	60	2428.7	103	2449.25	146	2468.6
18	2409.8	61	2429.15	104	2449.7	147	2469.05
19	2410.25	62	2429.6	105	2450.15	148	2469.5
20	2410.7	63	2430.05	106	2450.6	149	2469.95
21	2411.15	64	2430.5	107	2451.05	150	2470.4
22	2411.6	65	2430.95	108	2451.5	151	2470.85
23	2412.05	66	2431.4	109	2451.95	152	2471.3
24	2412.5	67	2431.85	110	2452.4	153	2471.75
25	2412.95	68	2432.3	111	2452.85	154	2472.2
26	2413.4	69	2432.75	112	2453.3	155	2472.65
27	2413.85	70	2433.2	113	2453.75	156	2473.1
28	2414.3	71	2433.65	114	2454.2	157	2473.55
29	2414.75	72	2434.1	115	2454.65	158	2474
30	2415.2	73	2434.55	116	2455.1	159	2474.45
31	2415.65	74	2435	117	2455.55	160	2474.9
32	2416.1	75	2435.45	118	2456	161	2475.35
33	2416.55	76	2435.9	119	2456.45	162	2475.8
34	2417	77	2436.35	120	2456.9	163	2476.25
35	2417.45	78	2436.8	121	2457.35	164	2476.7
36	2417.9	79	2437.25	122	2457.8	165	2477.15
37	2418.35	80	2437.7	123	2458.25	166	2477.6
38	2418.8	81	2438.15	124	2458.7	167	2478.05

39	2419.25	82	2438.6	125	2459.15	168	2478.5
40	2419.7	83	2439.05	126	2459.6	169	2478.95
41	2420.15	84	2439.5	127	2460.05	170	2479.4
42	2420.6	85	2439.95	128	2460.5	171	2479.85
43	2421.05	86	2440.4	129	2460.95		

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	2402.15MHz
The middle channel	2439.95MHz
The Highest channel	2479.85MHz

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 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.● Industry Canada (IC) —Registration No.: 9079A-2 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-2.● 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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5.4 Test Location

All other tests were performed at:
Global United Technology Services Co., Ltd. Address: No. 301-309, 3/F., Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102 Tel: 0755-27798480 Fax: 0755-27798960

5.5 Other Information Requested by the Customer

None.

5.6 Description of Support Units

None

5.7 Additional Instructions

EUT Software Settings:

Special test firmware was pre-built-in by manufacturer, power set default.
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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. 03 2015	July. 02 2020
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. 27 2018	June. 26 2019
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 27 2018	June. 26 2019
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 27 2018	June. 26 2019
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 27 2018	June. 26 2019
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	June. 27 2018	June. 26 2019
9	Coaxial Cable	GTS	N/A	GTS211	June. 27 2018	June. 26 2019
10	Coaxial cable	GTS	N/A	GTS210	June. 27 2018	June. 26 2019
11	Coaxial Cable	GTS	N/A	GTS212	June. 27 2018	June. 26 2019
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 27 2018	June. 26 2019
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 27 2018	June. 26 2019
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 27 2018	June. 26 2019
15	Band filter	Amindeon	82346	GTS219	June. 27 2018	June. 26 2019
16	Power Meter	Anritsu	ML2495A	GTS540	June. 27 2018	June. 26 2019
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 27 2018	June. 26 2019
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 27 2018	June. 26 2019
19	Splitter	Agilent	11636B	GTS237	June. 27 2018	June. 26 2019
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 27 2018	June. 26 2019
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 20 2018	Oct. 19 2019
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 20 2018	Oct. 19 2019
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 20 2018	Oct. 19 2019
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 27 2018	June. 26 2019

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	May.15 2019	May.14 2022
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 27 2018	June. 26 2019
3	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	June. 27 2018	June. 26 2019
4	Artificial Mains Network	SCHWARZBECK MESS	NSLK8127	GTS226	June. 27 2018	June. 26 2019
5	Coaxial Cable	GTS	N/A	GTS227	June. 27 2018	June. 26 2019
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
7	Thermo meter	KTJ	TA328	GTS233	June. 27 2018	June. 26 2019
8	Absorbing clamp	Elektronik-Feinmechanik	MDS21	GTS229	June. 27 2018	June. 26 2019

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. 27 2018	June. 26 2019
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 27 2018	June. 26 2019
3	Spectrum Analyzer	Agilent	E4440A	GTS533	June. 27 2018	June. 26 2019
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	June. 27 2018	June. 26 2019
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	June. 27 2018	June. 26 2019
6	USB RF Power Sensor	DARE	RPR3006W	GTS569	June. 27 2018	June. 26 2019
7	RF Switch Box	Shongyi	RFSW3003328	GTS571	June. 27 2018	June. 26 2019
8	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	June. 27 2018	June. 26 2019

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. 27 2018	June. 26 2019
2	Barometer	ChangChun	DYM3	GTS255	June. 27 2018	June. 26 2019

7 Test results and Measurement Data

7.1 Antenna requirement

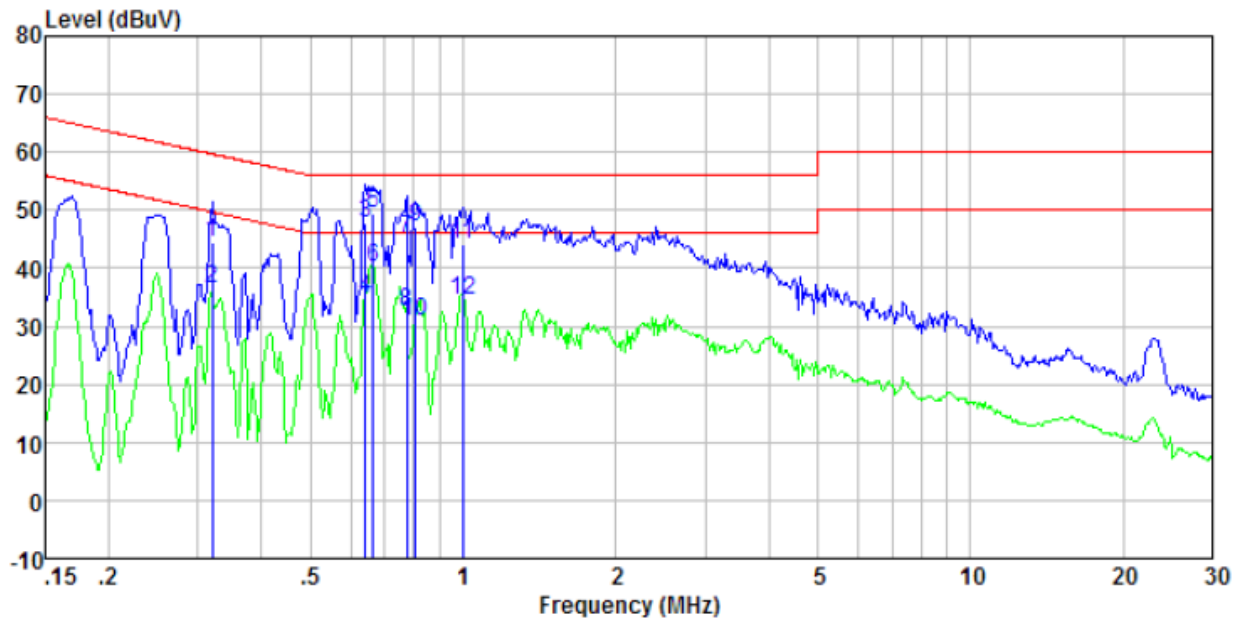
Standard requirement:	FCC Part15 C Section 15.203 /247(c)
<p>15.203 requirement:</p> <p>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that 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.</p> <p>15.247(c) (1)(i) requirement:</p> <p>(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.</p>	
EUT Antenna:	
<i>The antenna is integral Antenna, the best case gain of the antenna is 0dBi</i>	

7.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207					
Test Method:	ANSI C63.10:2013					
Test Frequency Range:	150KHz to 30MHz					
Class / Severity:	Class B					
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 environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1 012mbar
	Refer to section 6.0 for details					
Test Instruments:	Refer to section 6.0 for details					
Test mode:	Refer to section 5.2 for details					
Test results:	Pass					

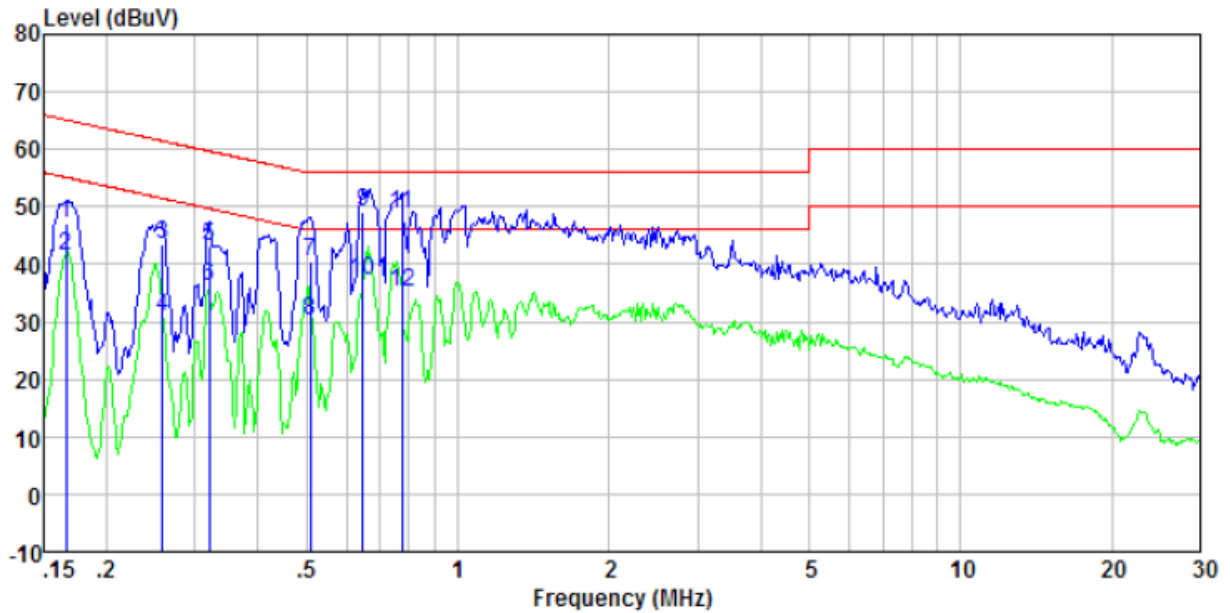
Measurement data:

Test mode:	Transmitting mode	Phase Polarity:	Line
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Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.32	44.08	0.39	0.10	44.57	59.71	-15.14	QP
0.32	35.98	0.39	0.10	36.47	49.71	-13.24	Average
0.64	47.39	0.27	0.12	47.78	56.00	-8.22	QP
0.64	34.56	0.27	0.12	34.95	46.00	-11.05	Average
0.66	48.89	0.27	0.13	49.29	56.00	-6.71	QP
0.66	39.64	0.27	0.13	40.04	46.00	-5.96	Average
0.78	44.63	0.24	0.14	45.01	56.00	-10.99	QP
0.78	32.18	0.24	0.14	32.56	46.00	-13.44	Average
0.80	46.72	0.24	0.14	47.10	56.00	-8.90	QP
0.80	30.59	0.24	0.14	30.97	46.00	-15.03	Average
1.00	43.77	0.20	0.15	44.12	56.00	-11.88	QP
1.00	34.29	0.20	0.15	34.64	46.00	-11.36	Average

Test mode:	Transmitting mode	Phase Polarity:	Neutral
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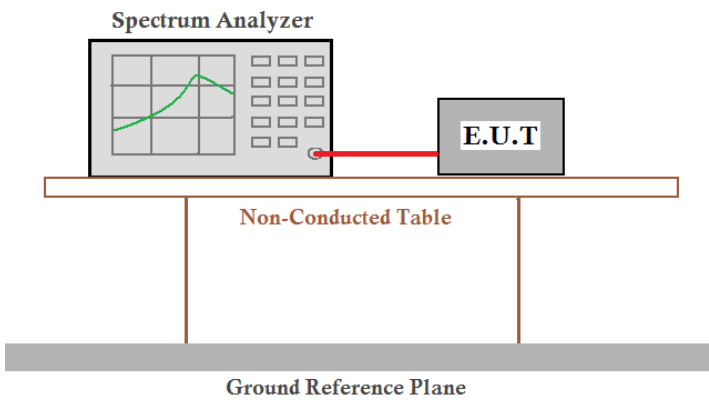


Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.17	46.66	0.40	0.08	47.14	65.16	-18.02	QP
0.17	40.85	0.40	0.08	41.33	55.16	-13.83	Average
0.26	43.07	0.40	0.10	43.57	61.47	-17.90	QP
0.26	30.20	0.40	0.10	30.70	51.47	-20.77	Average
0.32	42.74	0.39	0.10	43.23	59.71	-16.48	QP
0.32	35.73	0.39	0.10	36.22	49.71	-13.49	Average
0.51	40.08	0.31	0.11	40.50	56.00	-15.50	QP
0.51	29.77	0.31	0.11	30.19	46.00	-15.81	Average
0.65	48.58	0.27	0.12	48.97	56.00	-7.03	QP
0.65	36.89	0.27	0.12	37.28	46.00	-8.72	Average
0.78	48.37	0.24	0.14	48.75	56.00	-7.25	QP
0.78	34.76	0.24	0.14	35.14	46.00	-10.86	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

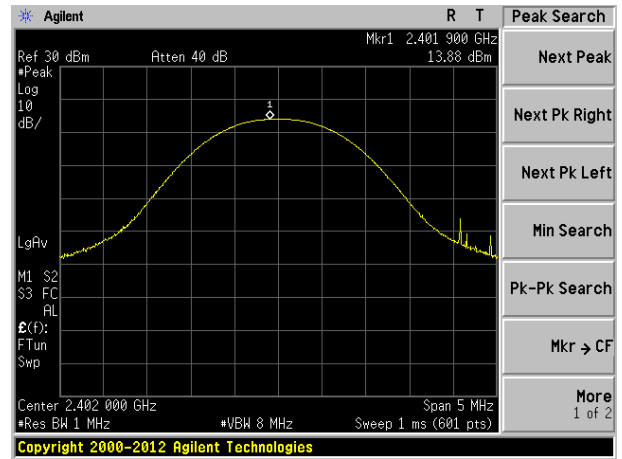
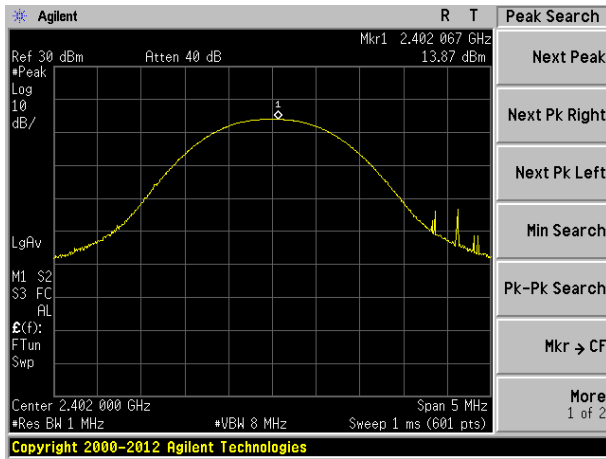
Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.10:2013
Limit:	20.97dBm
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported 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

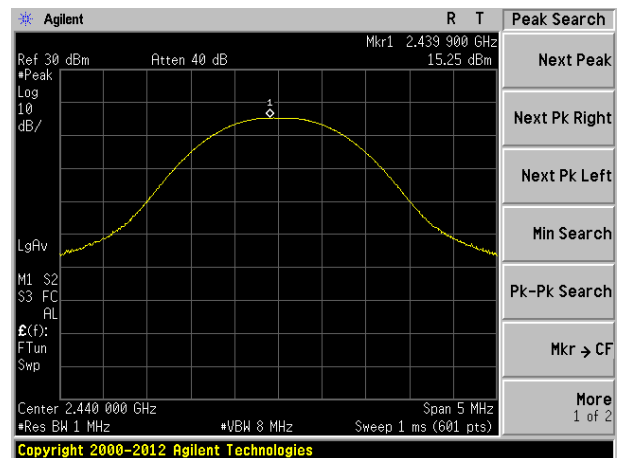
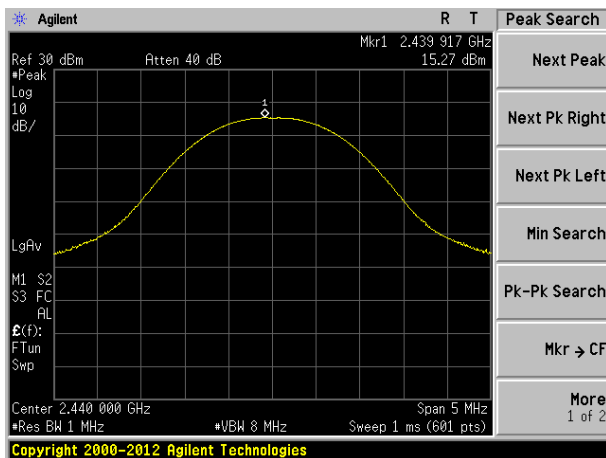
Test channel	cable loss	Peak Output Power (dBm)		PK power value(dBm)		Limit (dBm)	Result
		ANT 1	ANT 2	ANT 1	ANT 2		
Lowest	1.5dB	13.87	13.88	15.37	15.38	20.97	Pass
Middle	1.5dB	15.27	15.25	16.77	16.75		
Highest	1.5dB	14.68	14.70	16.18	16.20		

Test plot as follows:

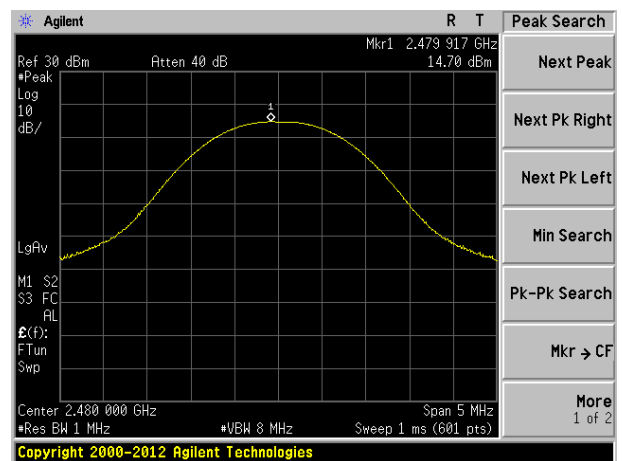
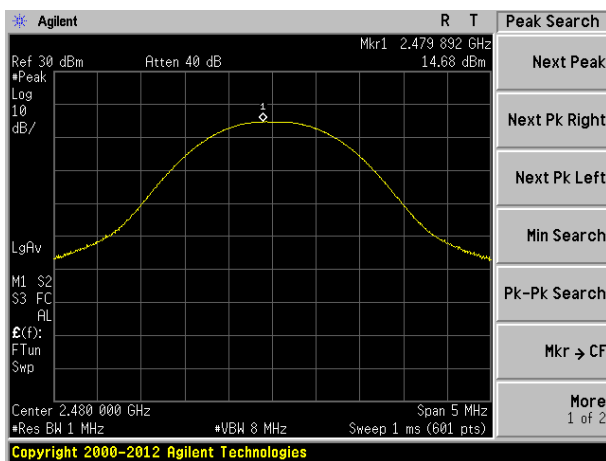
Antenna 1	Antenna 2
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Lowest channel

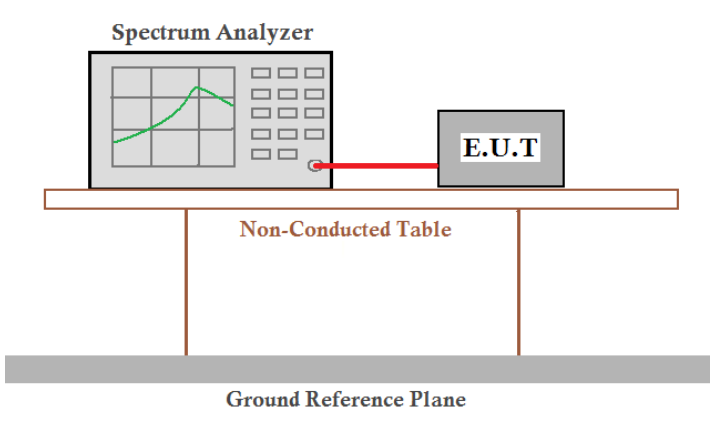


Middle channel



Highest channel

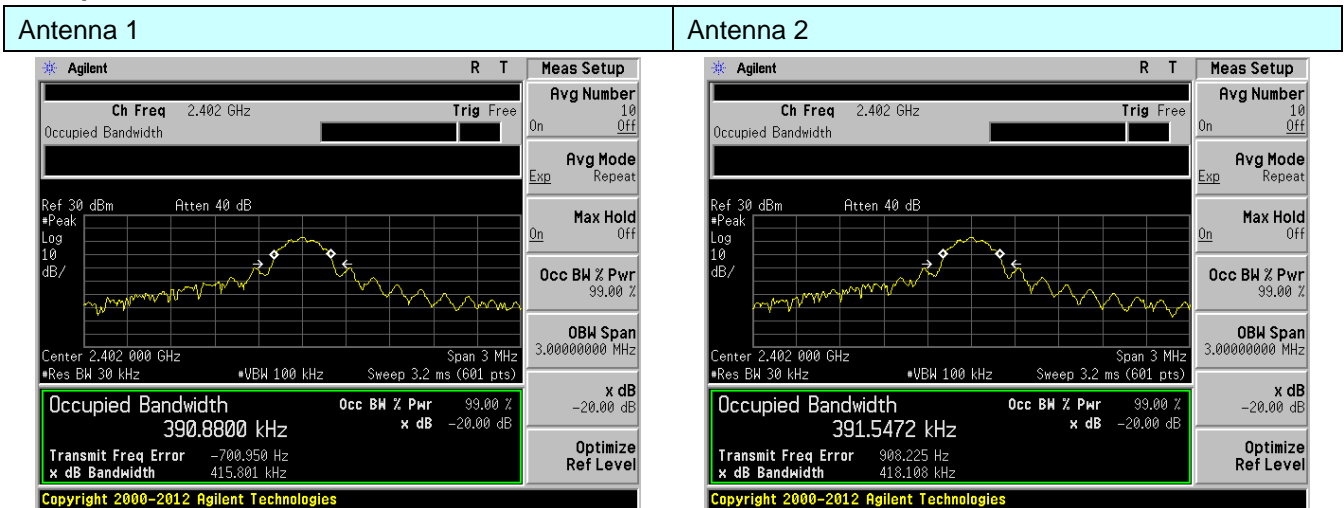
7.4 20dB Emission Bandwidth

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
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 two legs. Below the table is 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

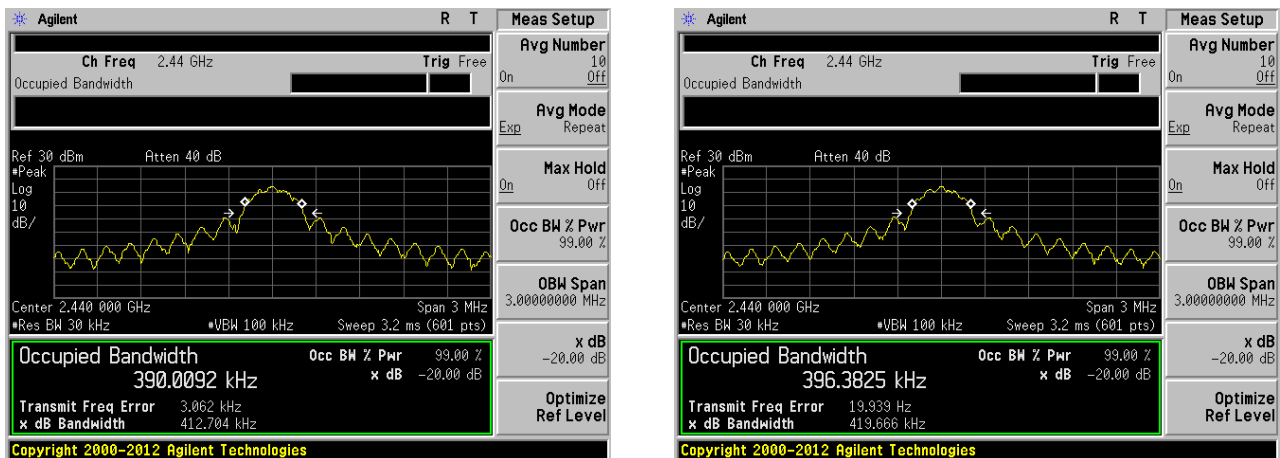
Measurement Data

Test channel	20dB Emission Bandwidth (kHz)		Result
	ANT 1	ANT 2	
Lowest	415.801	418.108	Pass
Middle	412.704	419.666	
Highest	414.578	416.598	

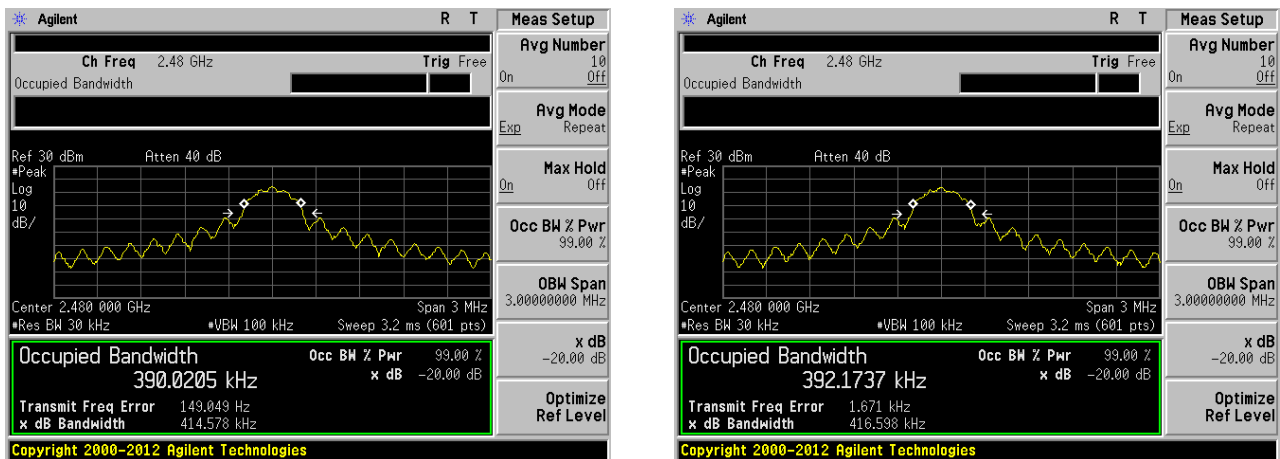
Test plot as follows:



Lowest channel

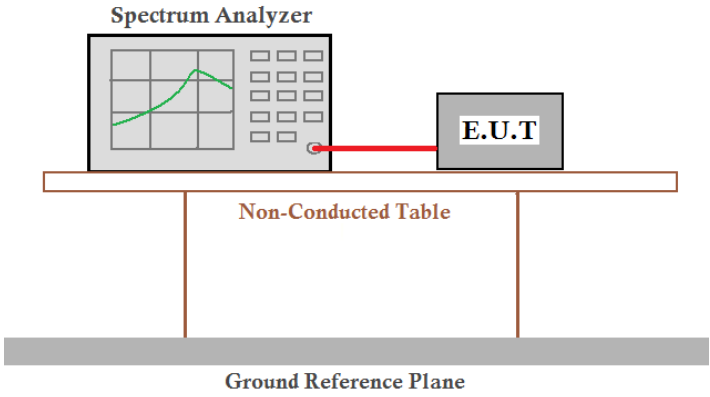


Middle channel



Highest channel

7.5 Carrier Frequencies Separation

Test Requirement:	FCC Part15 C Section 15.247 (a)(iii)
Test Method:	ANSI C63.10:2013
Receiver setup:	RBW=100KHz, 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

Antenna 1:

Test channel	Carrier Frequencies Separation (kHz)	Limit (kHz)	Result
Lowest	1357	275.136	Pass
Middle	1357	275.136	Pass
Highest	890	275.136	Pass

Note: According to section 7.4

Mode	20dB bandwidth (kHz) (worse case)	Limit (kHz) (Carrier Frequencies Separation)
GFSK	412.704	275.136

Antenna 2:

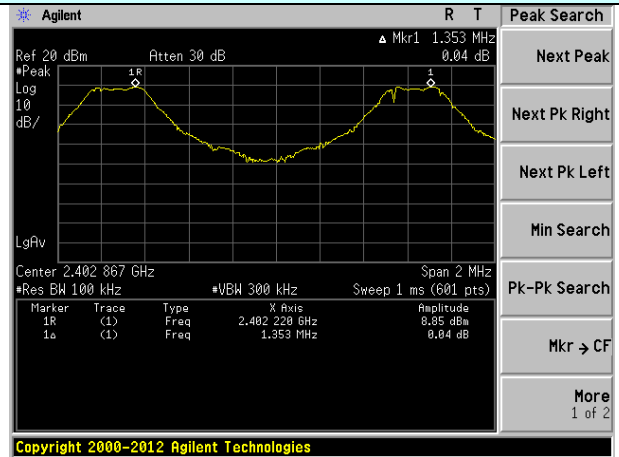
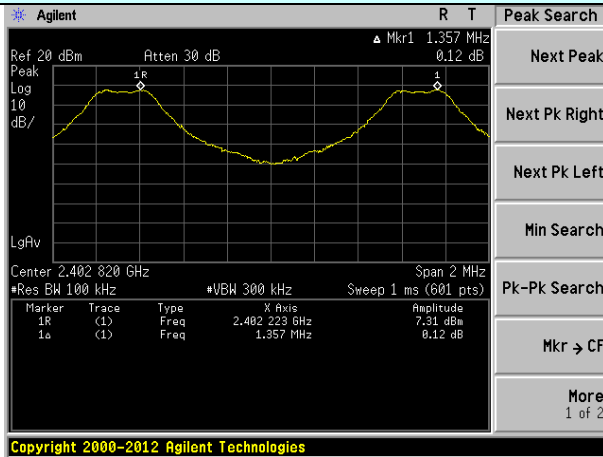
Test channel	Carrier Frequencies Separation (kHz)	Limit (kHz)	Result
Lowest	1353	277.732	Pass
Middle	1347	277.732	Pass
Highest	897	277.732	Pass

Note: According to section 7.4

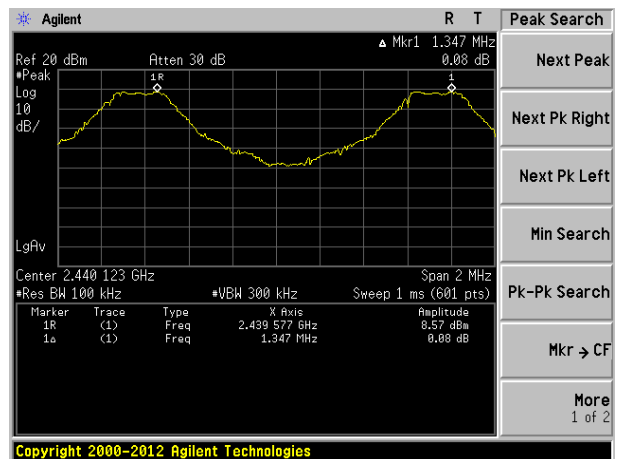
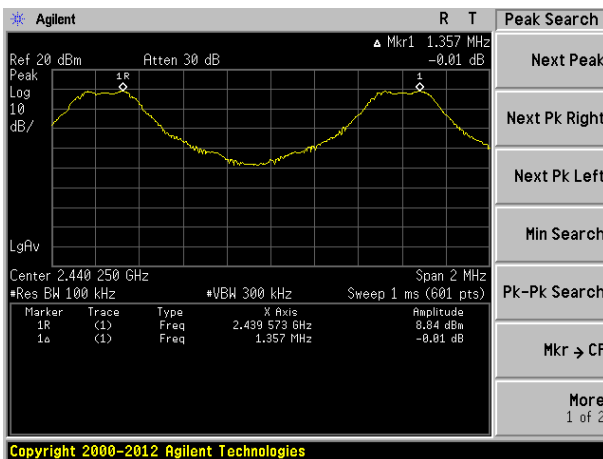
Mode	20dB bandwidth (kHz) (worse case)	Limit (kHz) (Carrier Frequencies Separation)
GFSK	416.598	277.732

Test plot as follows:

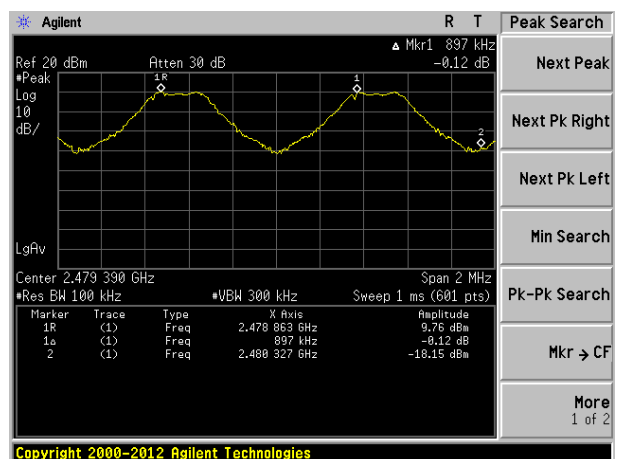
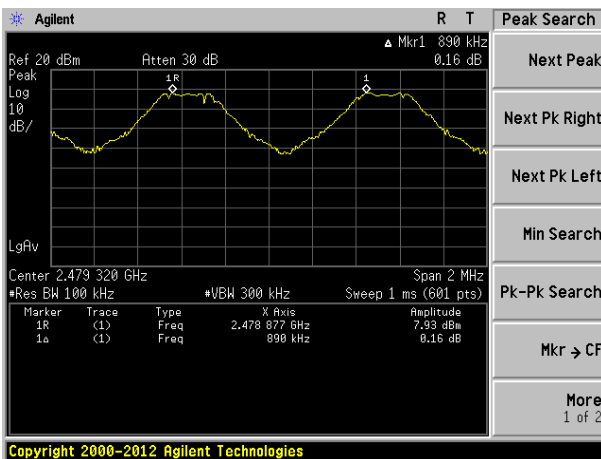
Antenna 1 Antenna 2



Lowest channel

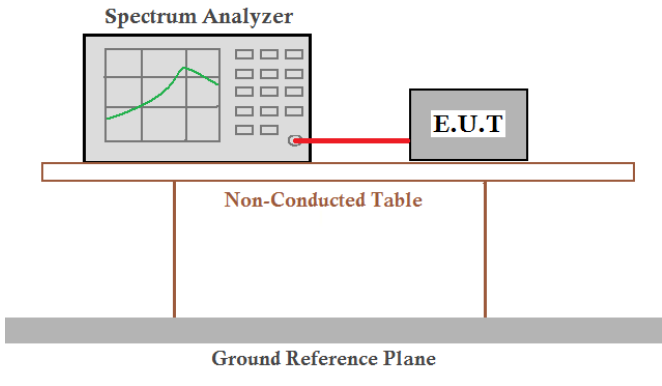


Middle channel



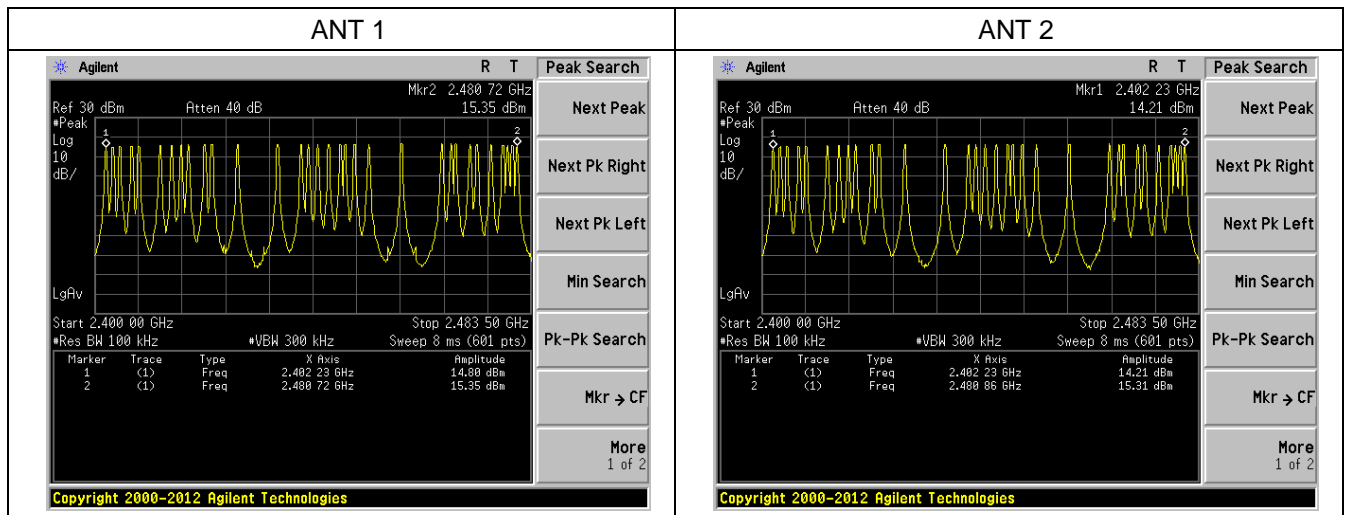
Highest channel

7.6 Hopping Channel Number

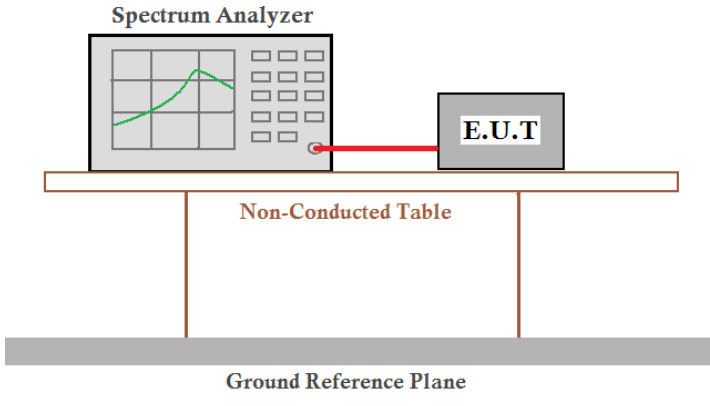
Test Requirement:	FCC Part15 C Section 15.247 (a)(1)
Test Method:	ANSI C63.10:2013
Receiver setup:	RBW=100kHz, VBW=300kHz, Frequency range=2400MHz-2483.5MHz, Detector=Peak
Limit:	15 channels
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which 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:

Hopping channel numbers		Limit	Result
ANT 1	32	15	Pass
ANT 2	32		



7.7 Dwell Time

Test Requirement:	FCC Part15 C Section 15.247 (a)(iii)
Test Method:	ANSI C63.10:2013
Receiver setup:	RBW=1MHz, VBW=1MHz, 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 the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. Below the table is 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

Antenna 1:

Channel	Ton (ms)	Dwell time(ms)	Limit(ms)	Result
Lowest	2.5	96	400	Pass
Middle	2.483	190.69	400	Pass
Highest	2.5	352	400	Pass

The formula as below:

Lowest: Dwell time = Ton * Ton times in 1s * 0.4s * channel numbers=2.5ms*3*0.4*32=96ms

Middle: Dwell time = Ton * Ton times in 1s * 0.4s * channel numbers=2.483ms*6*0.4*32=190.69ms

Highest: Dwell time = Ton * Ton times in 1s * 0.4s * channel numbers=2.5ms*11*0.4*32=352ms

Antenna 2:

Channel	Ton (ms)	Dwell time(ms)	Limit(ms)	Result
Lowest	2.5	128	400	Pass
Middle	2.5	256	400	Pass
Highest	2.483	317.82	400	Pass

The formula as below:

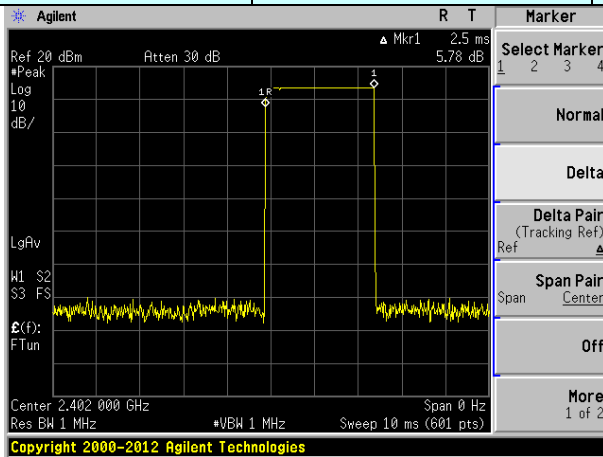
Lowest: Dwell time = Ton * Ton times in 1s * 0.4s * channel numbers=2.5ms*4*0.4*32=128ms

Middle: Dwell time = Ton * Ton times in 1s * 0.4s * channel numbers=2.5ms*8*0.4*32=256ms

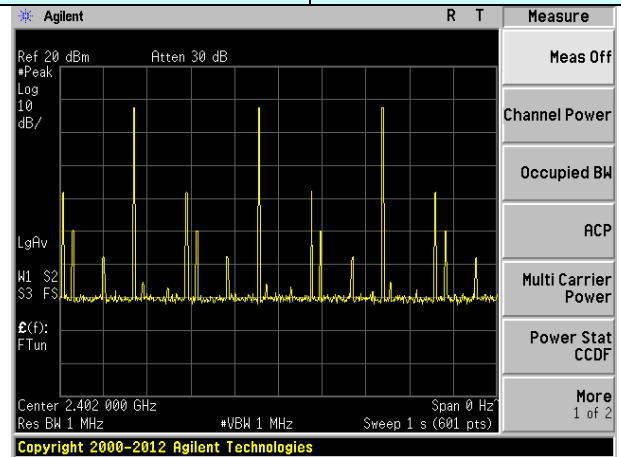
Highest: Dwell time = Ton * Ton times in 1s * 0.4s * channel numbers=2.483ms*10*0.4*32=317.82ms

Test plot as follows:

Channel	Lowest	Antenna:	Antenna 1
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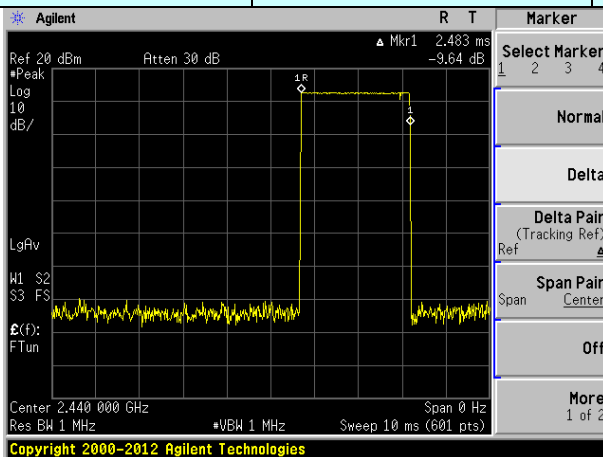


Ton

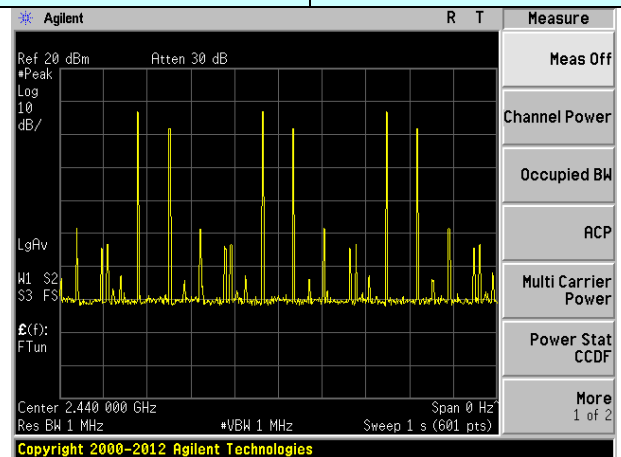


Ton times in 1s

Channel	Middle	Antenna:	Antenna 1
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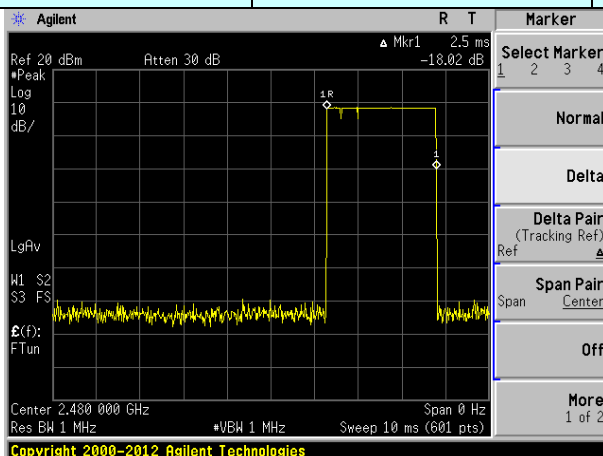


Ton

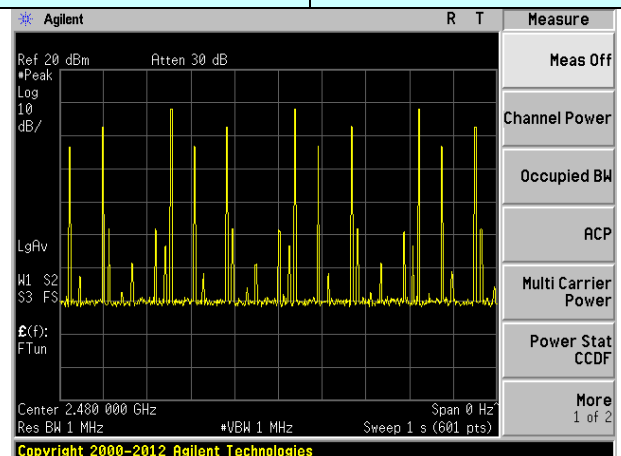


Ton times in 1s

Channel	Highest	Antenna:	Antenna 1
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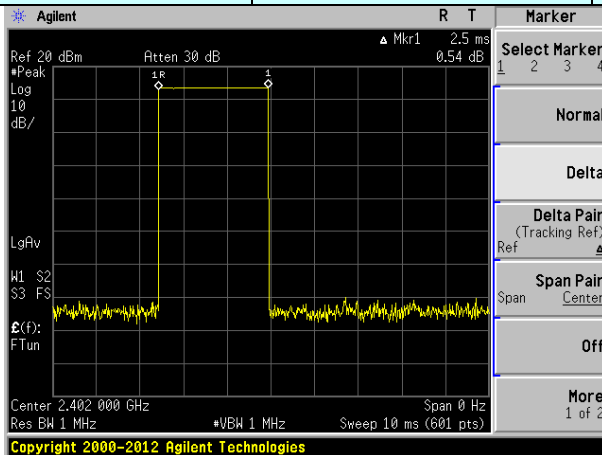


Ton

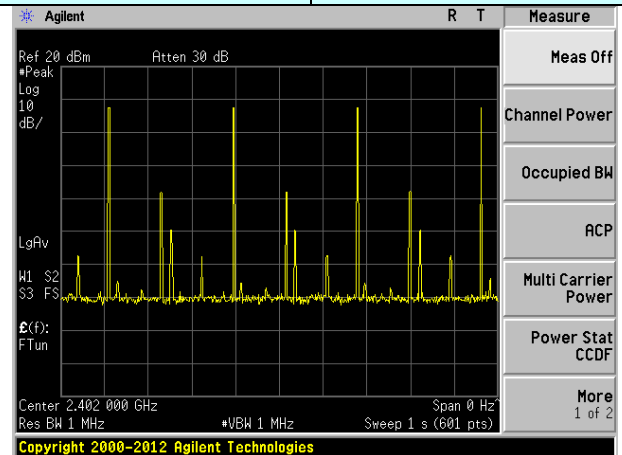


Ton times in 1s

Channel	Lowest	Antenna:	Antenna 2
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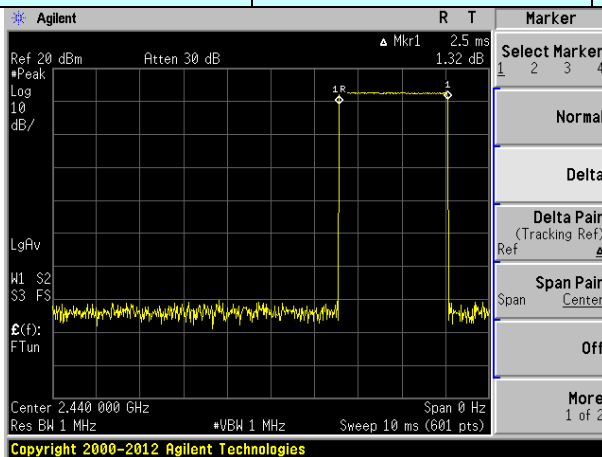


Ton

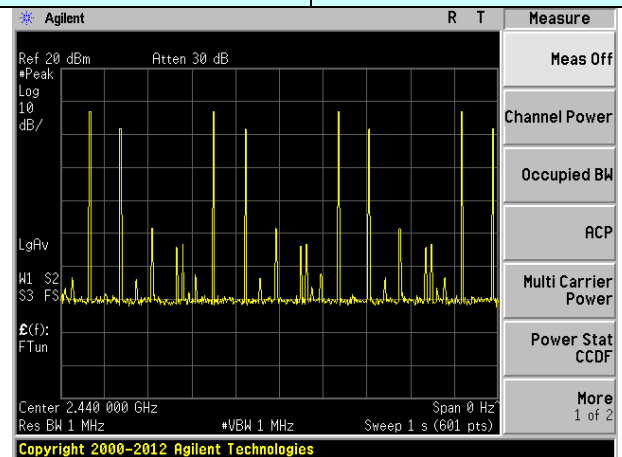


Ton times in 1s

Channel	Middle	Antenna:	Antenna 2
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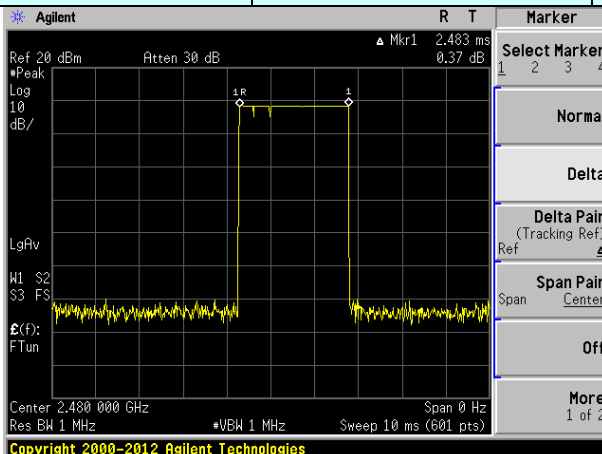


Ton

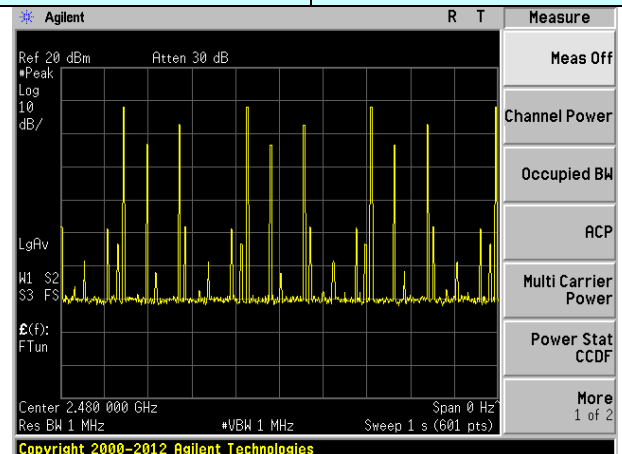


Ton times in 1s

Channel	Highest	Antenna:	Antenna 2
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Ton



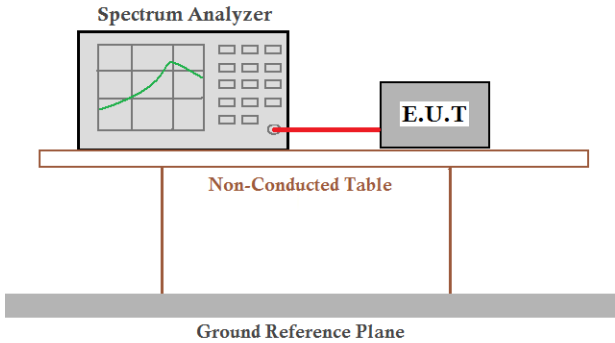
Ton times in 1s

7.8 Pseudorandom Frequency Hopping Sequence

Test Requirement:	FCC Part15 C Section 15.247 (a)(1) requirement:
	<p><i>a(1): 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.</i></p> <p><i>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. The system shall hop to channel frequencies that are selected at the system hopping rate from a Pseudorandom ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.</i></p> <p><i>(g) Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission. However, the system, consisting of both the transmitter and the receiver, must be designed to comply with all of the regulations in this section should the transmitter be presented with a continuous data (or information) stream. In addition, a system employing short transmission bursts must comply with the definition of a frequency hopping system and must distribute its transmissions over the minimum number of hopping channels specified in this section.</i></p> <p><i>(h) The incorporation of intelligence within a frequency hopping spread spectrum system that permits the system to recognize other users within the spectrum band so that it individually and independently chooses and adapts its hop sets to avoid hopping on occupied channels is permitted. The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.</i></p>

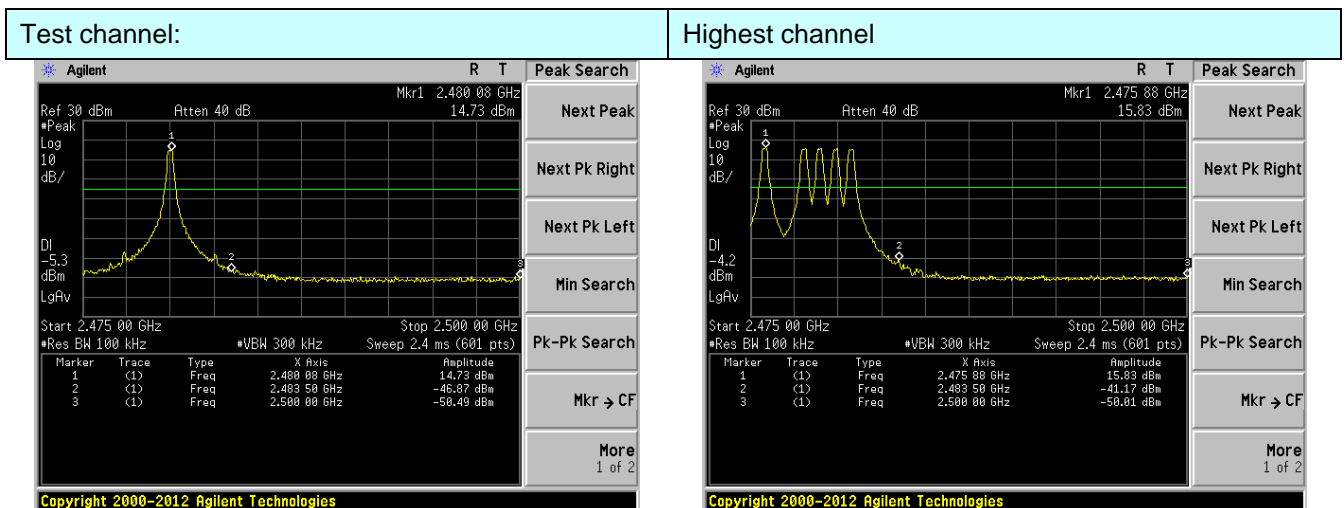
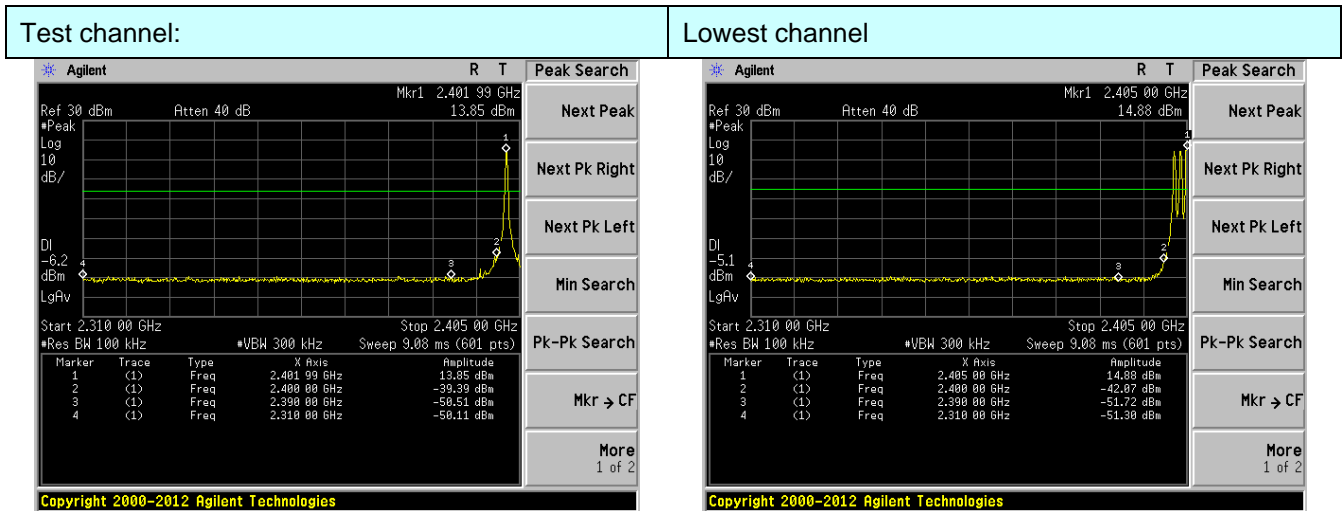
7.9 Band Edge

7.9.1 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 is supported by 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

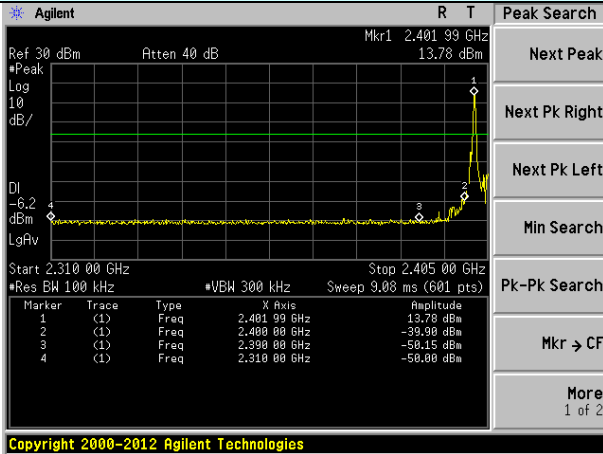
Test plot as follows:

Antenna 1:

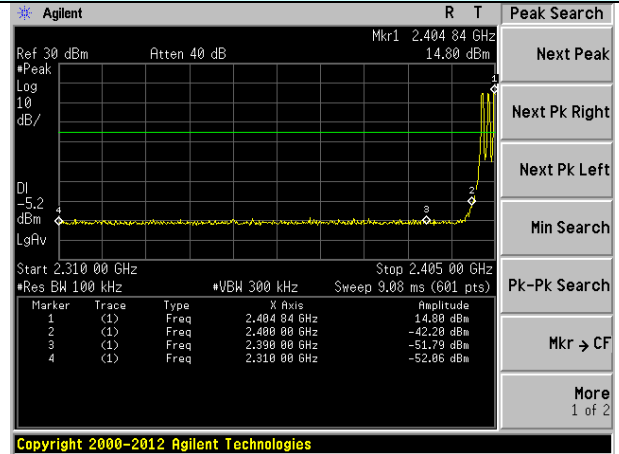


Antenna 2:

Test channel: Lowest channel

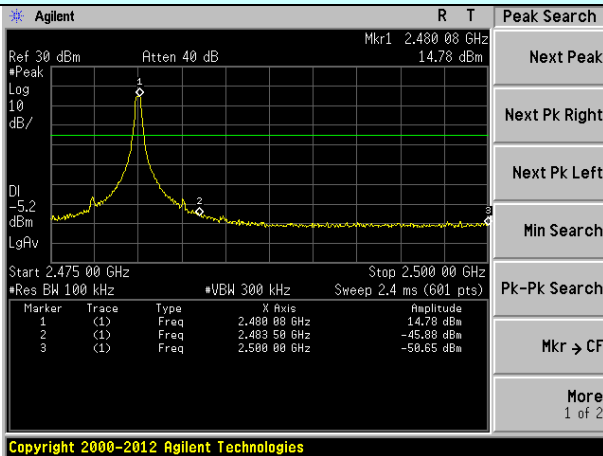


No-hopping mode

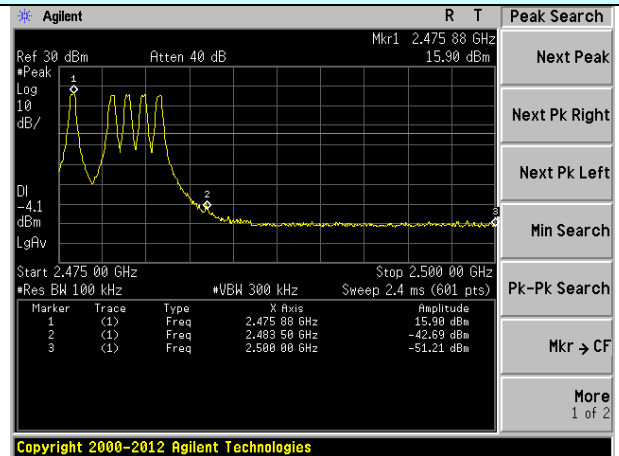


Hopping mode

Test channel: Highest channel

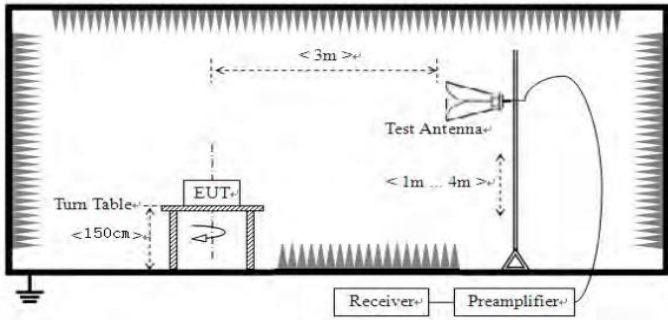


No-hopping mode



Hopping mode

7.9.2 Radiated Emission Method

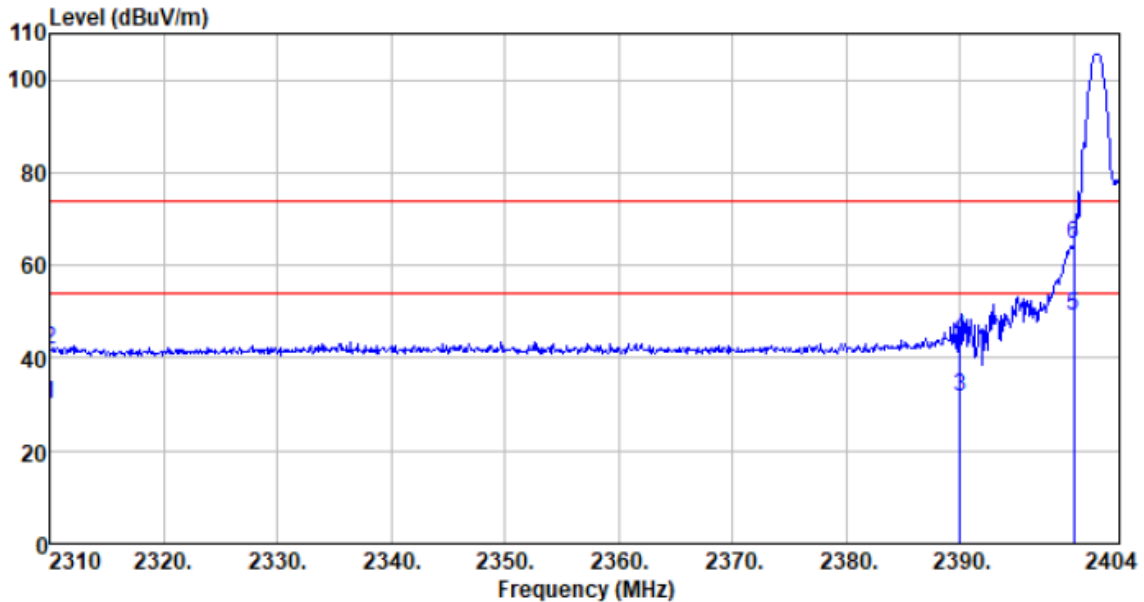
Test Requirement:	FCC Part15 C Section 15.209 and 15.205					
Test Method:	ANSI C63.10:2013					
Test Frequency Range:	All restriction band have been tested, and 2.3GHz to 2.5GHz band is the worst case					
Test site:	Measurement Distance: 3m					
Receiver setup:	Frequency	Detector	RBW	VBW	Remark	
	Above 1GHz	Peak	1MHz	3MHz	Peak Value	
		Peak	1MHz	10Hz	Average Value	
Limit:	Frequency		Limit (dBuV/m @3m)		Remark	
	Above 1GHz		54.00		Average Value	
			74.00		Peak Value	
Test setup:						
Test Instruments:	Refer to section 6.0 for details					
Test mode:	Refer to section 5.2 for details					
Temp. / Hum.	Temp.:	25 °C	Humid.:	52%	Press.:	1 012mbar
Test results:	Pass					

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.

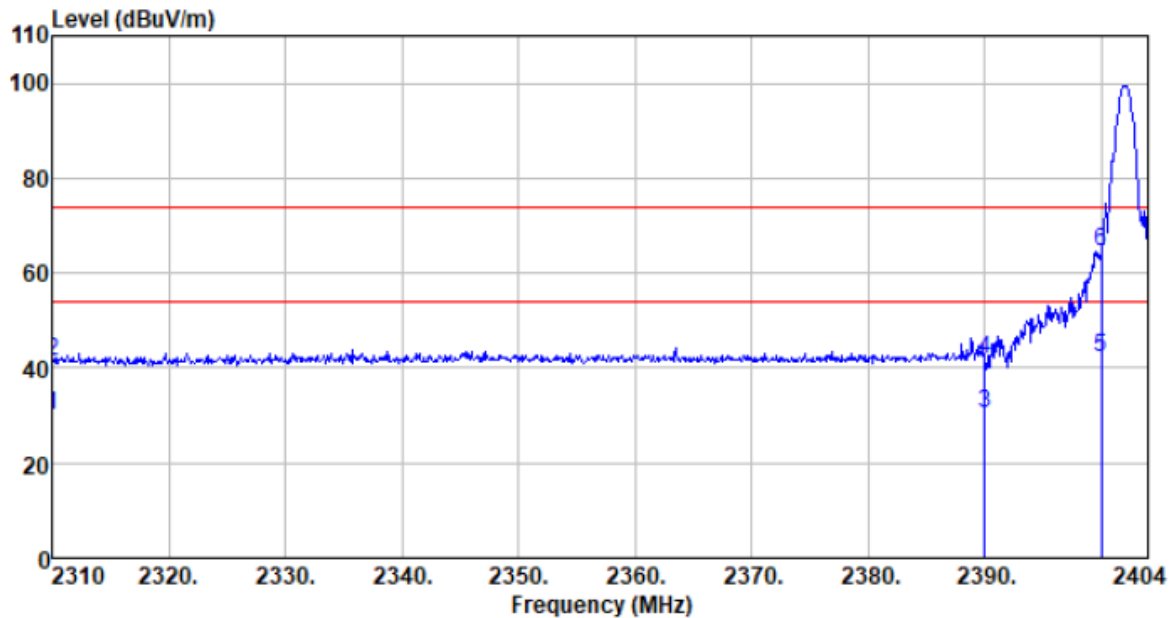
Antenna 1:

Test channel:	Lowest	Polarization:	Vertical
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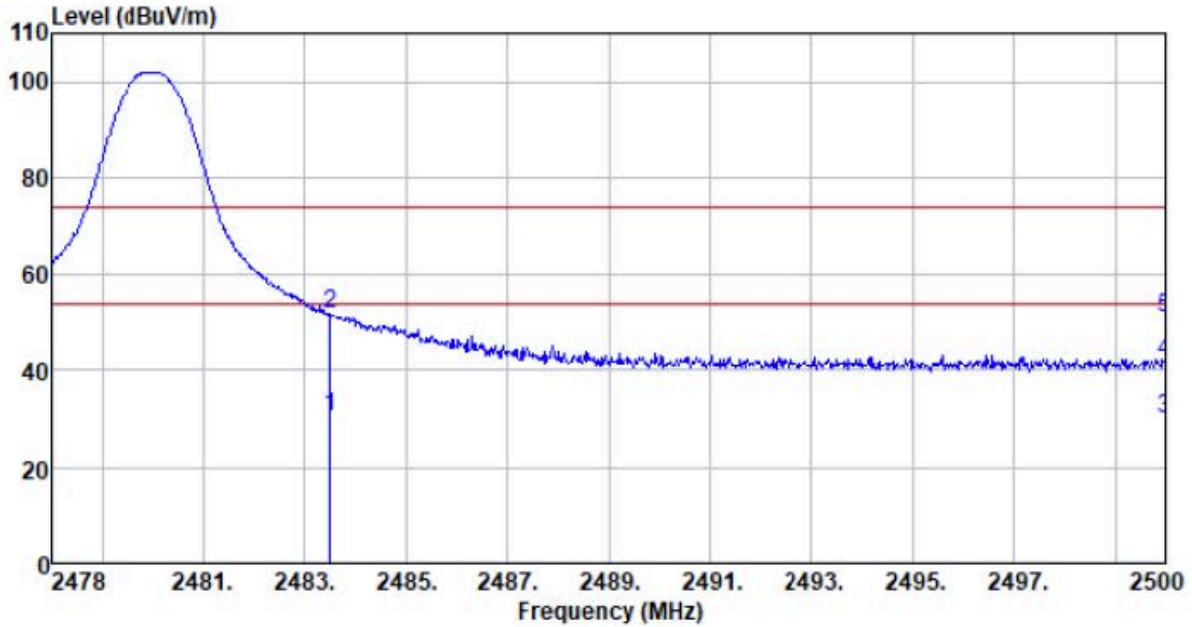
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
2310.000	30.31	27.21	2.81	30.43	29.90	54.00	-24.10	Average
2310.000	42.22	27.21	2.81	30.43	41.81	74.00	-32.19	Peak
2390.000	31.57	27.41	2.91	30.24	31.65	54.00	-22.35	Average
2390.000	44.26	27.41	2.91	30.24	44.34	74.00	-29.66	Peak
2400.000	49.21	27.44	2.91	30.26	49.30	54.00	-4.70	Average
2400.000	64.40	27.44	2.91	30.26	64.49	74.00	-9.51	Peak

Test channel:	Lowest	Polarization:	Horizontal
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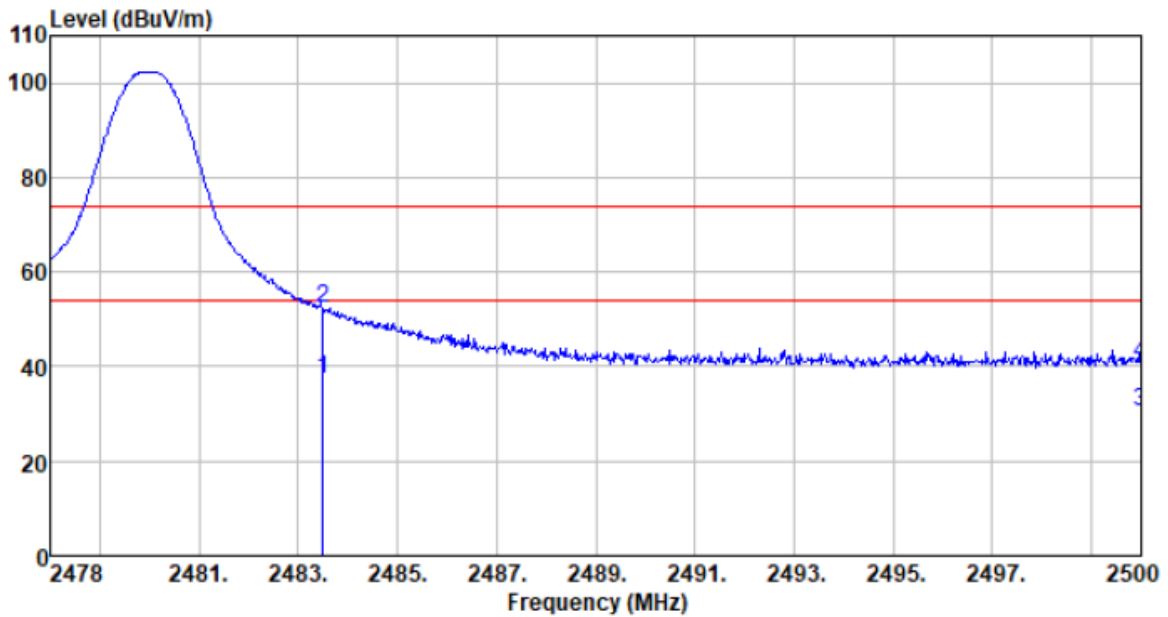
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
2310.000	30.44	27.21	2.81	30.43	30.03	54.00	-23.97	Average
2310.000	41.91	27.21	2.81	30.43	41.50	74.00	-32.50	Peak
2390.000	30.35	27.41	2.91	30.24	30.43	54.00	-23.57	Average
2390.000	41.82	27.41	2.91	30.24	41.90	74.00	-32.10	Peak
2400.000	42.21	27.44	2.91	30.26	42.30	54.00	-11.70	Average
2400.000	64.32	27.44	2.91	30.26	64.41	74.00	-9.59	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	Limit level dBuV/m	Over limit dB	Remark
2483.500	29.77	27.66	2.99	30.12	30.30	54.00	-23.70	Average
2483.500	51.47	27.66	2.99	30.12	52.00	74.00	-22.00	Peak
2500.000	29.26	27.70	3.01	30.13	29.84	54.00	-24.16	Average
2500.000	50.69	27.70	3.01	30.13	51.27	74.00	-22.73	Peak

Test channel:	Highest	Polarization:	Horizontal
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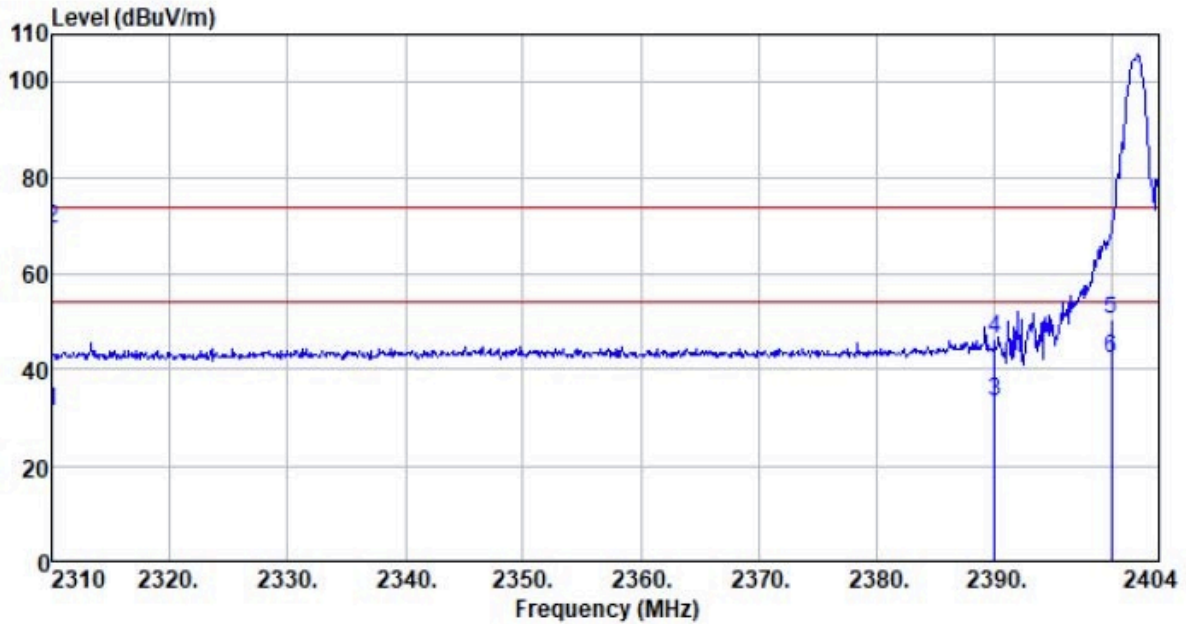
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
2483.500	36.85	27.66	2.99	30.12	37.38	54.00	-16.62	Average
2483.500	51.65	27.66	2.99	30.12	52.18	74.00	-21.82	Peak
2500.000	29.73	27.70	3.01	30.13	30.31	54.00	-23.69	Average
2500.000	40.14	27.70	3.01	30.13	40.72	74.00	-33.28	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.

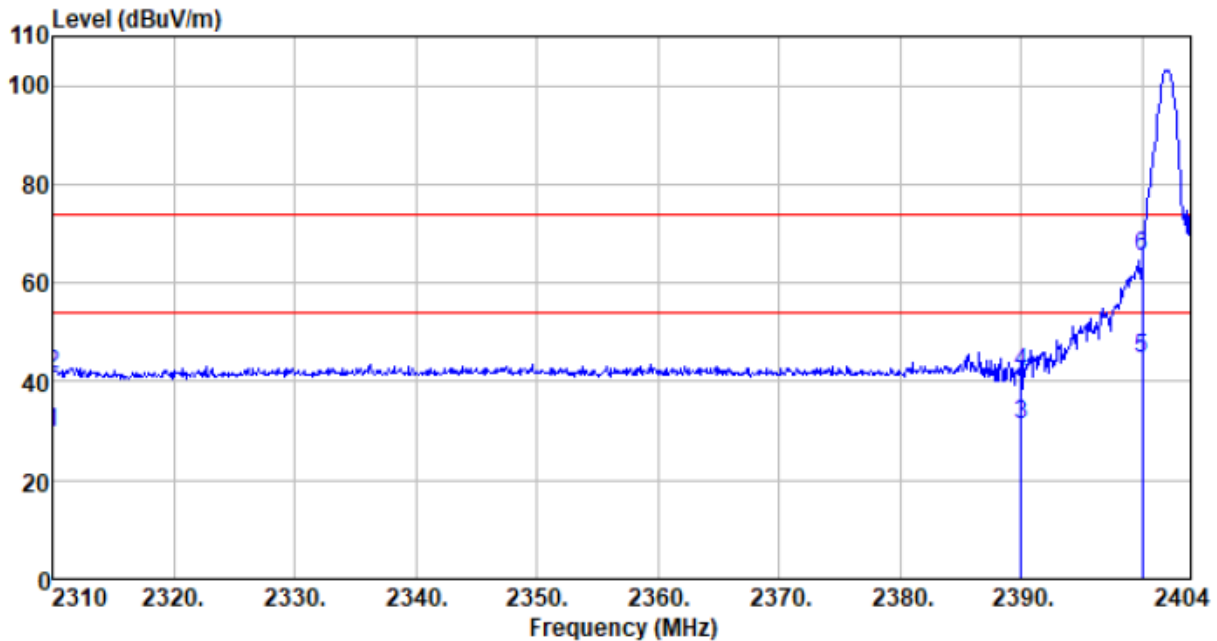
Antenna 2:

Test channel:	Lowest	Polarization:	Vertical
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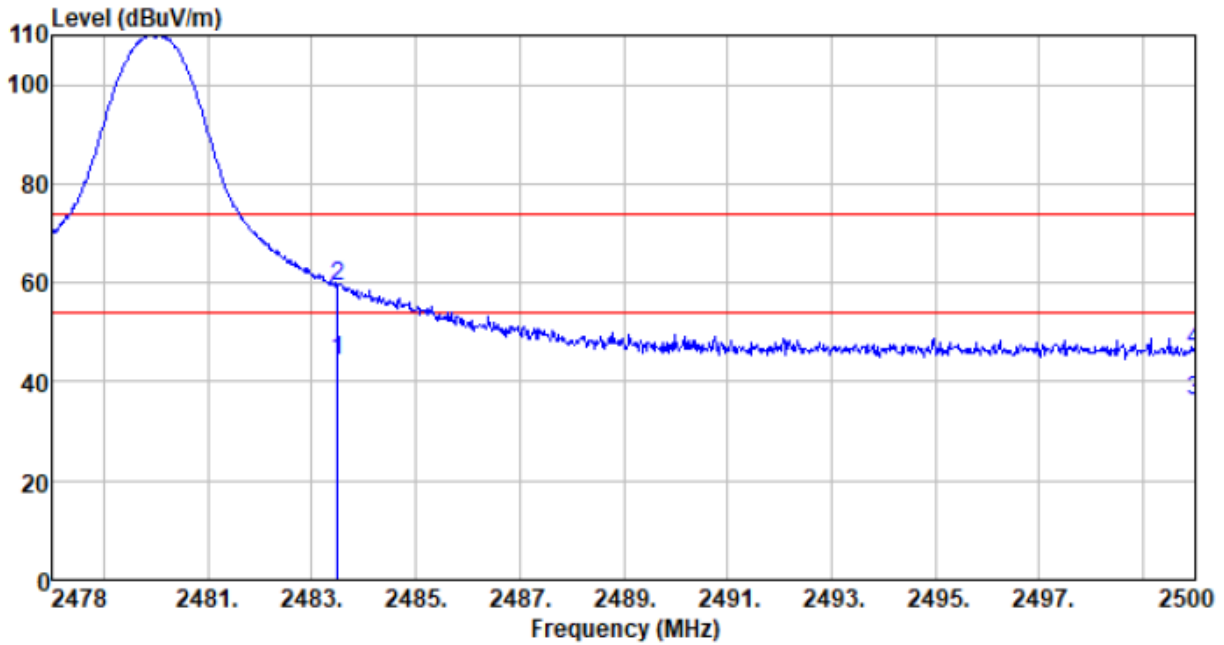
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
2310.000	31.63	27.21	2.81	30.43	31.22	54.00	-22.78	Average
2310.000	69.68	27.21	2.81	30.43	69.27	74.00	-4.73	Peak
2390.000	33.16	27.41	2.91	30.24	33.24	54.00	-20.76	Average
2390.000	46.10	27.41	2.91	30.24	46.18	74.00	-27.82	Peak
2400.000	50.11	27.44	2.91	30.26	50.20	74.00	-23.80	Peak
2400.000	42.21	27.44	2.91	30.26	42.30	54.00	-11.70	Average

Test channel:	Lowest	Polarization:	Horizontal
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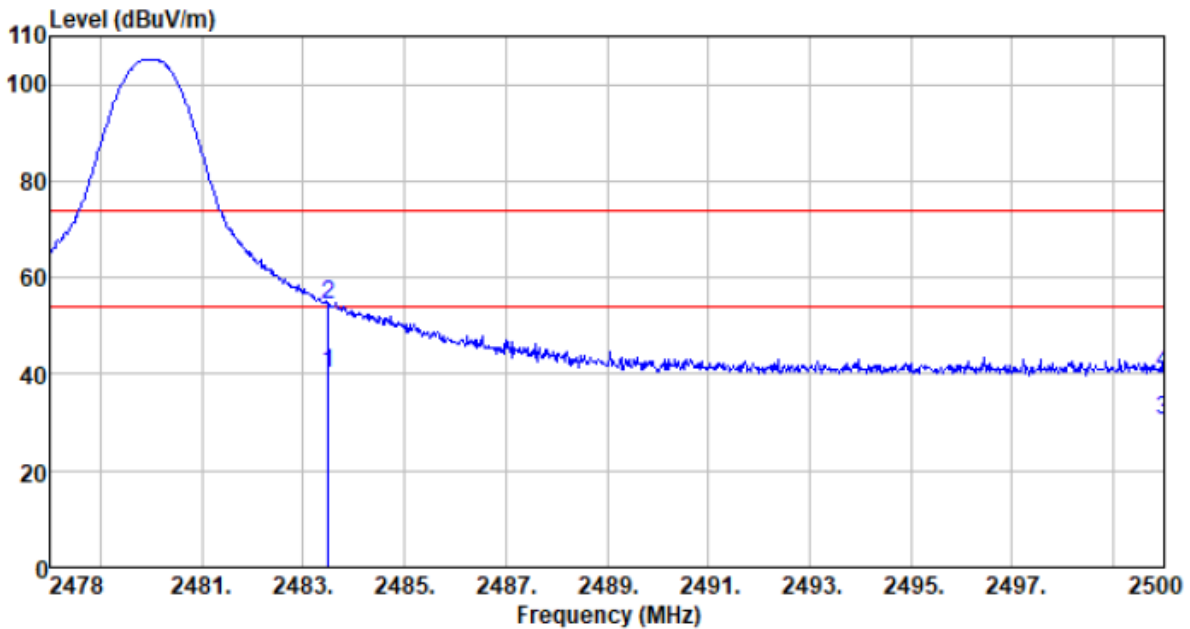
Freq MHz	Reading level dBUV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBUV	Limit level dBUV/m	Over limit dB	Remark
2310.000	30.01	27.21	2.81	30.43	29.60	54.00	-24.40	Average
2310.000	41.71	27.21	2.81	30.43	41.30	74.00	-32.70	Peak
2390.000	31.06	27.41	2.91	30.24	31.14	54.00	-22.86	Average
2390.000	41.60	27.41	2.91	30.24	41.68	74.00	-32.32	Peak
2400.000	44.70	27.44	2.91	30.26	44.79	54.00	-9.21	Average
2400.000	65.13	27.44	2.91	30.26	65.22	74.00	-8.78	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	Limit level dBuV/m	Over limit dB	Remark
2483.500	43.66	27.66	2.99	30.12	44.19	54.00	-9.81	Average
2483.500	58.66	27.66	2.99	30.12	59.19	74.00	-14.81	Peak
2500.000	35.74	27.70	3.01	30.13	36.32	54.00	-17.68	Average
2500.000	45.54	27.70	3.01	30.13	46.12	74.00	-27.88	Peak

Test channel:	Highest	Polarization:	Horizontal
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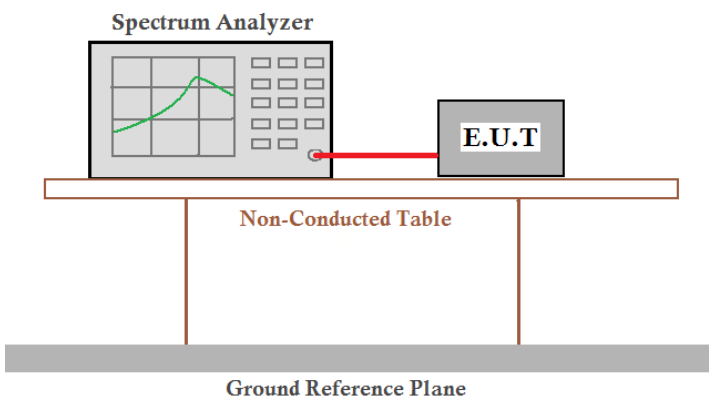
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
2483.500	39.70	27.66	2.99	30.12	40.23	54.00	-13.77	Average
2483.500	53.89	27.66	2.99	30.12	54.42	74.00	-19.58	Peak
2500.000	29.78	27.70	3.01	30.13	30.36	54.00	-23.64	Average
2500.000	39.46	27.70	3.01	30.13	40.04	74.00	-33.96	Peak

Remark:

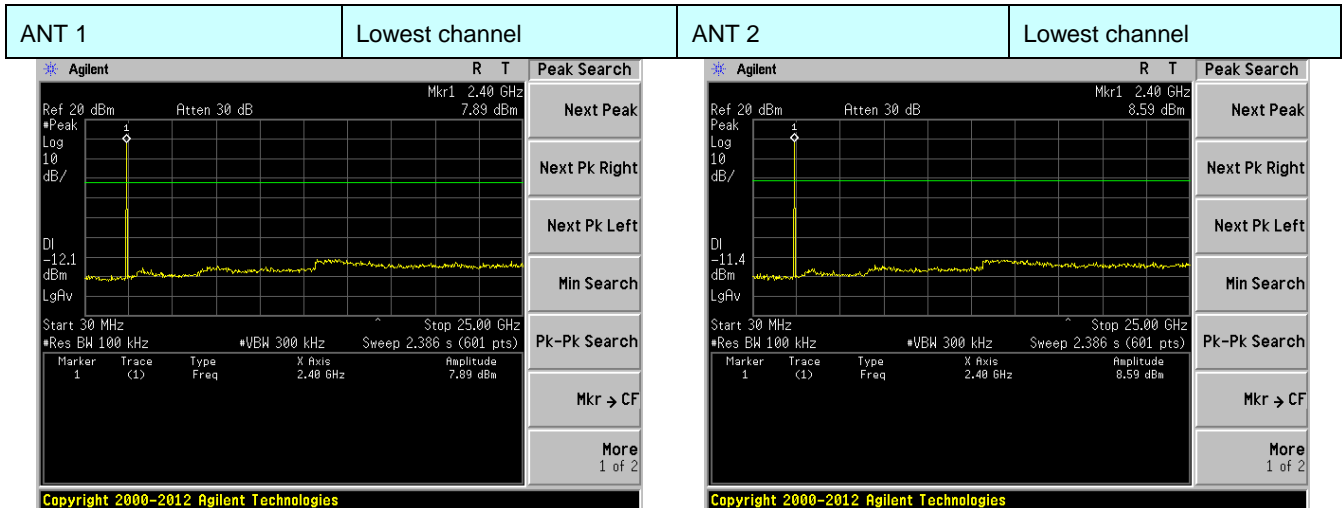
1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*

7.10 Spurious Emission

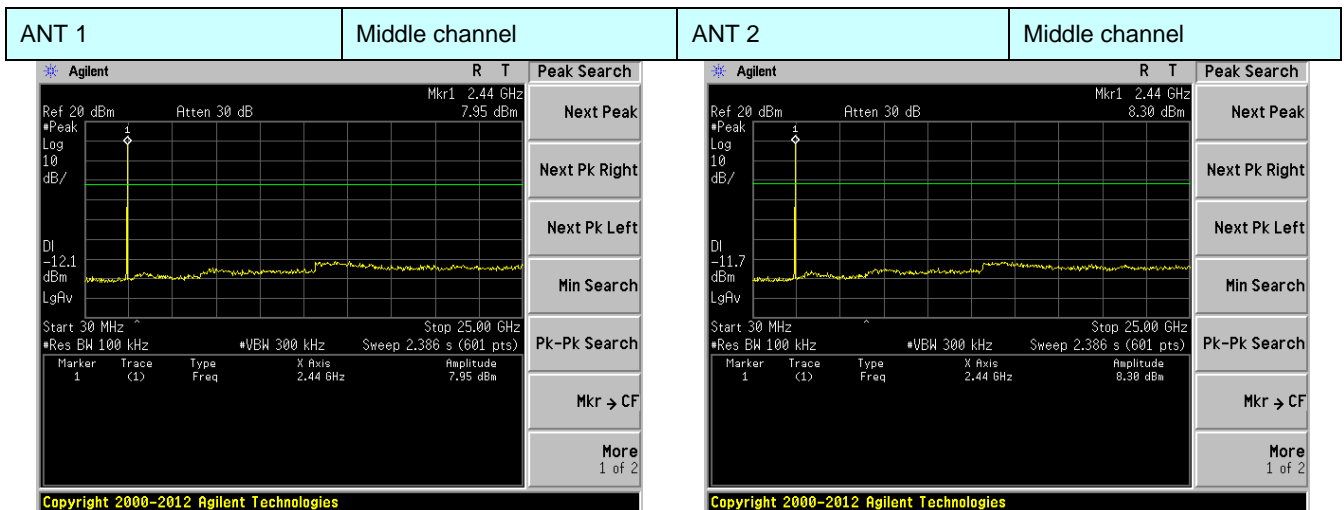
7.10.1 Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 Meas Guidance V04
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 is supported by two legs. Below the table is 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

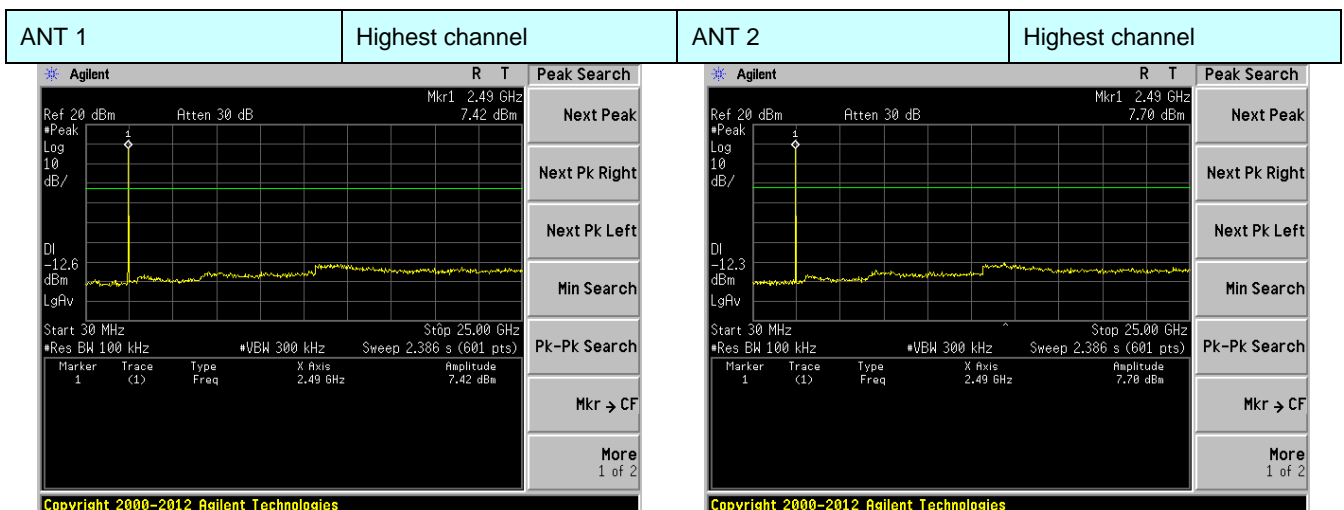
Antenna 1:



30MHz~25GHz

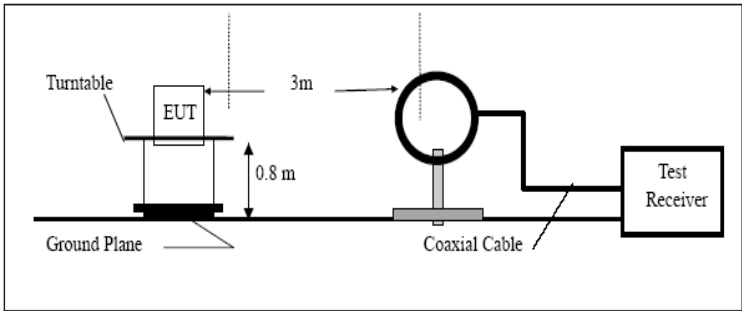


30MHz~25GHz



30MHz~25GHz

7.10.2 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)	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>						
Test Instruments:	Refer to section 5.8 for details						
Test mode:	Refer to section 5.2 for details						
Temp. / Hum.	<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						

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.
2. The measured field strength at frequencies below 30MHz are lower than the limit over 30dB. So the data isn't reported.

Measurement data:

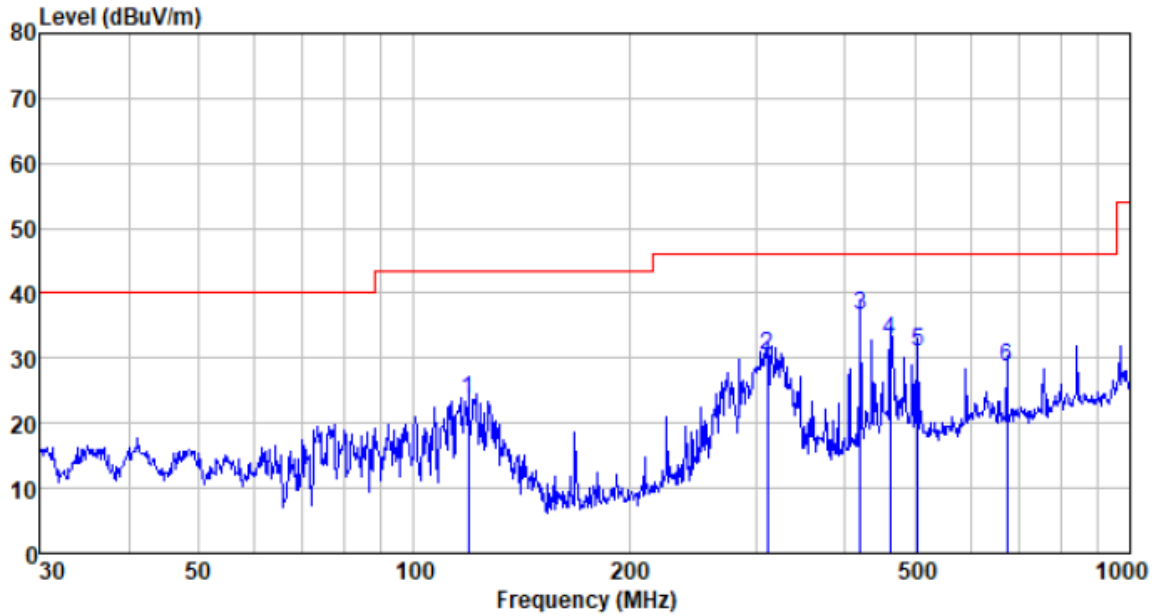
■ **Below 30MHz**

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

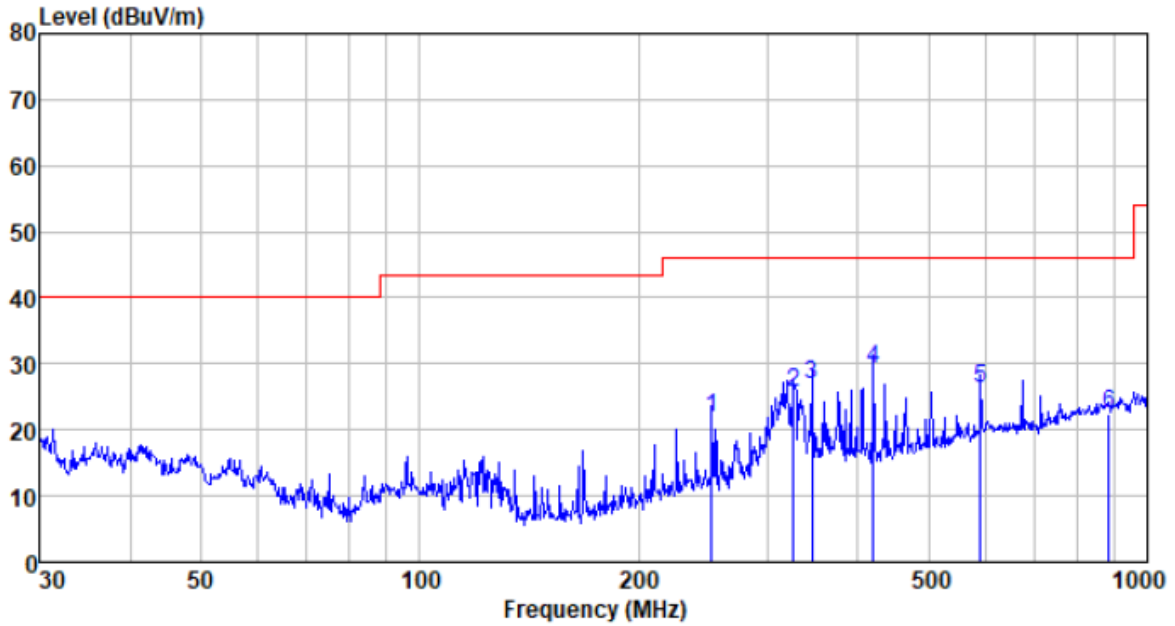
Note: Ant 1 mode is worse case and only reported

Horizontal:



Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
119.018	49.35	9.67	1.35	36.87	23.50	43.50	-20.00	QP
311.087	51.67	13.82	2.42	37.43	30.48	46.00	-15.52	QP
420.580	55.53	15.75	2.95	37.52	36.71	46.00	-9.29	QP
462.346	50.48	16.61	3.14	37.51	32.72	46.00	-13.28	QP
504.706	47.91	17.41	3.33	37.51	31.14	46.00	-14.86	QP
672.845	42.59	19.57	3.99	37.61	28.54	46.00	-17.46	QP

Vertical:

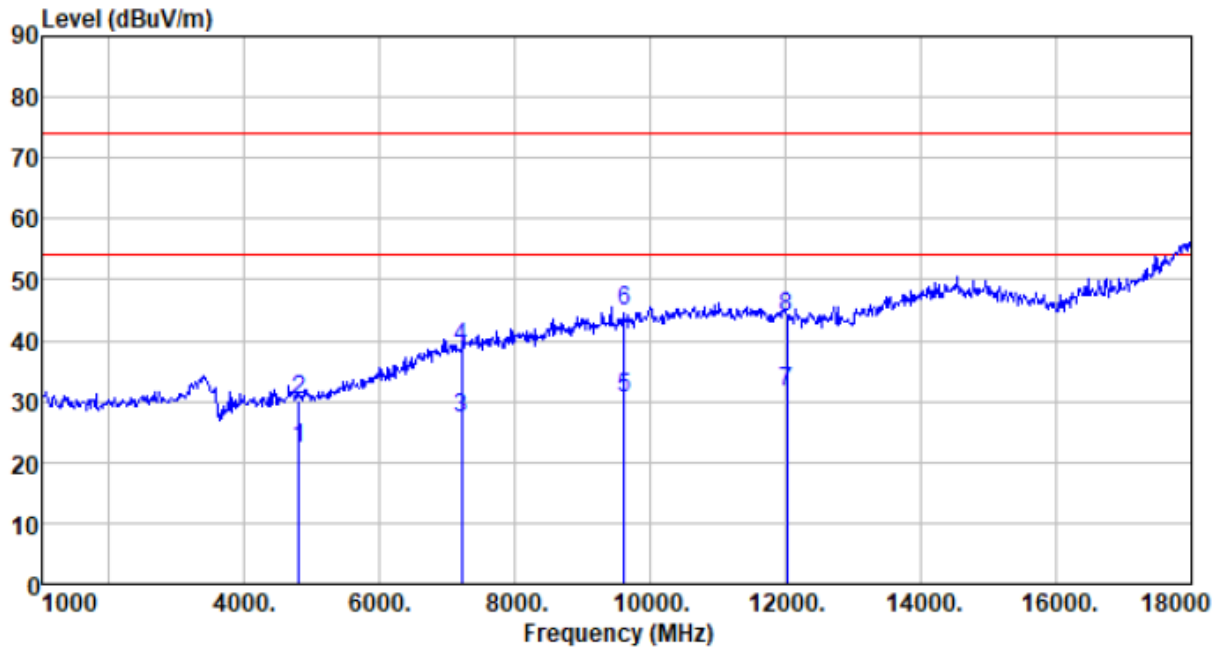


Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
252.063	44.78	12.22	2.14	37.38	21.76	46.00	-24.24	QP
326.740	46.37	14.12	2.50	37.45	25.54	46.00	-20.46	QP
345.595	47.23	14.45	2.60	37.47	26.81	46.00	-19.19	QP
420.580	48.07	15.75	2.95	37.52	29.25	46.00	-16.75	QP
588.905	40.86	19.23	3.68	37.54	26.23	46.00	-19.77	QP
884.503	32.96	22.16	4.79	37.60	22.31	46.00	-23.69	QP

■ Above 1GHz

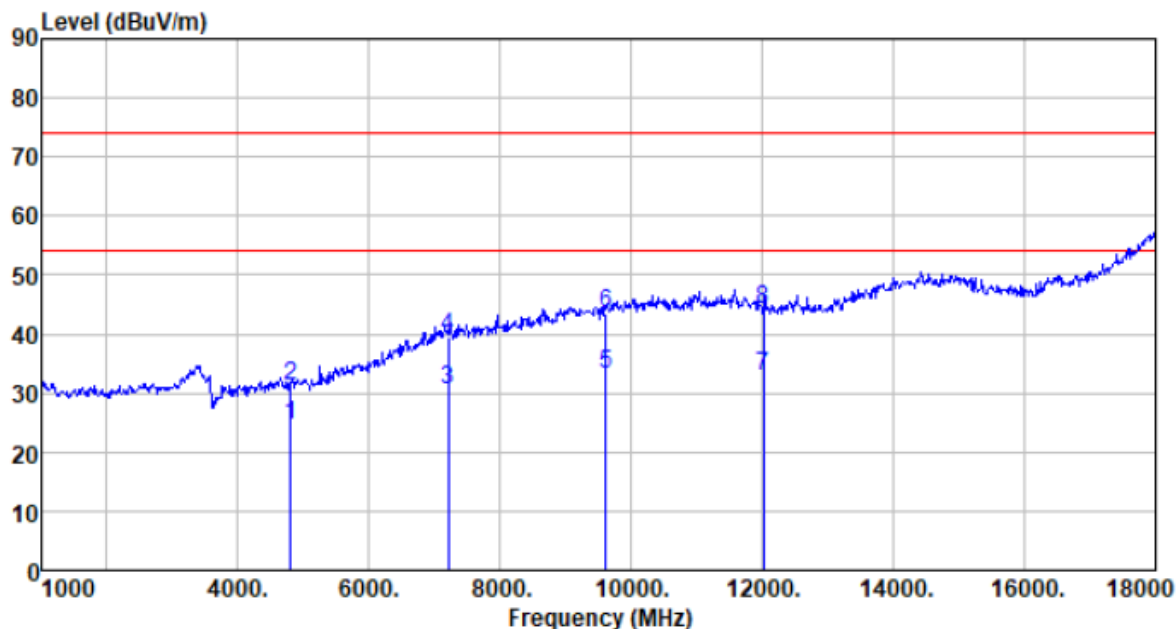
Antenna 1:

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	Limit level dBuV/m	Over limit dB	Remark
4804.000	20.14	31.20	8.60	37.73	22.21	54.00	-31.79	Average
4804.000	28.02	31.20	8.60	37.73	30.09	74.00	-43.91	Peak
7206.000	15.08	36.16	11.65	35.63	27.26	54.00	-26.74	Average
7206.000	26.67	36.16	11.65	35.63	38.85	74.00	-35.15	Peak
9608.000	13.48	37.93	14.14	34.94	30.61	54.00	-23.39	Average
9608.000	27.55	37.93	14.14	34.94	44.68	74.00	-29.32	Peak
12010.000	14.36	38.50	15.03	36.20	31.69	54.00	-22.31	Average
12010.000	26.49	38.50	15.03	36.20	43.82	74.00	-30.18	Peak

Test channel:	Lowest	Polarization:	Horizontal
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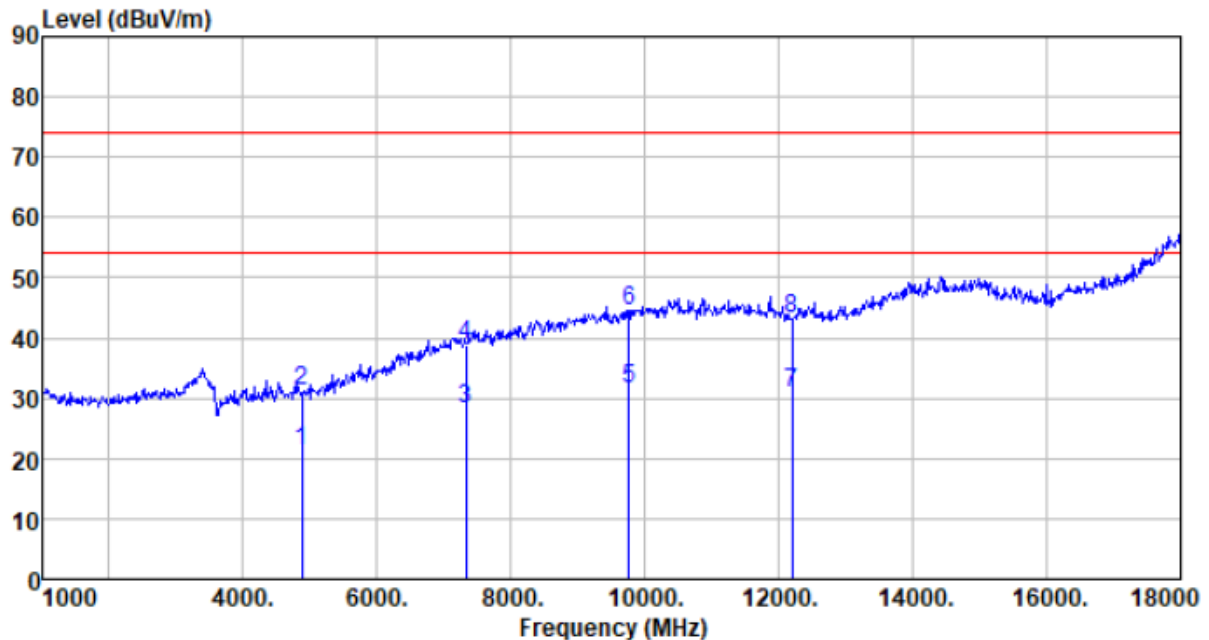


Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
4804.000	22.37	31.20	8.60	37.73	24.44	54.00	-29.56	Average
4804.000	29.05	31.20	8.60	37.73	31.12	74.00	-42.88	Peak
7206.000	18.31	36.16	11.65	35.63	30.49	54.00	-23.51	Average
7206.000	27.19	36.16	11.65	35.63	39.37	74.00	-34.63	Peak
9608.000	16.19	37.93	14.14	34.94	33.32	54.00	-20.68	Average
9608.000	26.49	37.93	14.14	34.94	43.62	74.00	-30.38	Peak
12010.000	15.46	38.50	15.03	36.20	32.79	54.00	-21.21	Average
12010.000	26.75	38.50	15.03	36.20	44.08	74.00	-29.92	Peak

Remark:

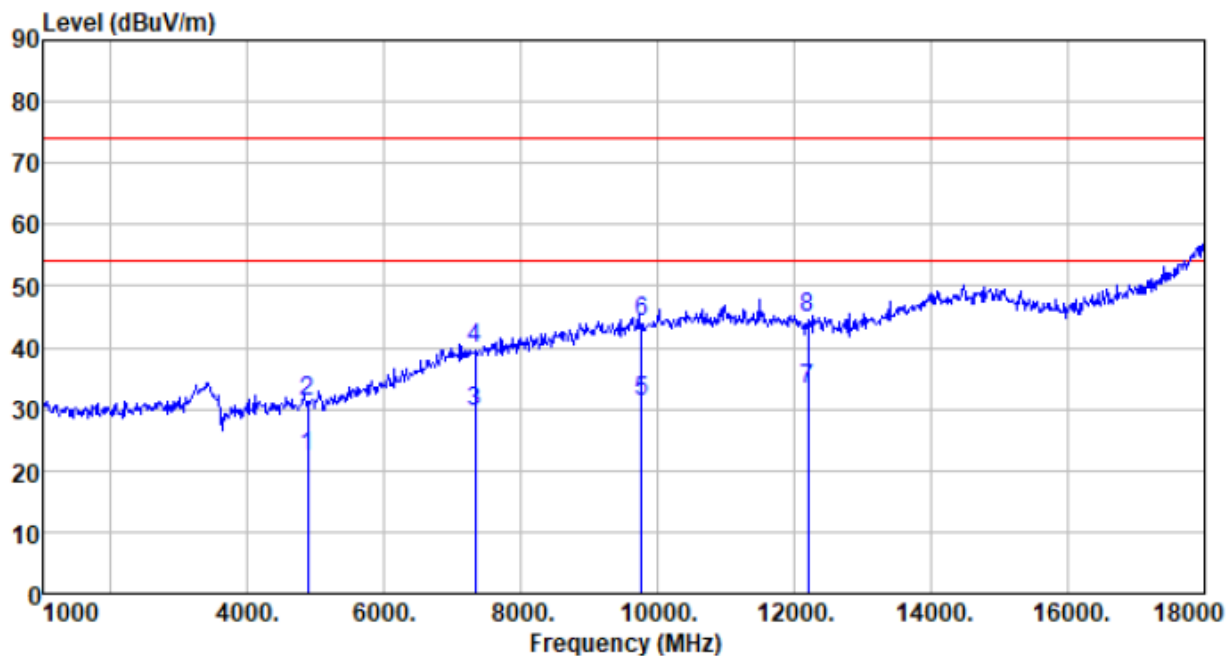
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

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	Limit level dBuV/m	Over limit dB	Remark
4880.000	19.14	31.31	8.66	37.75	21.36	54.00	-32.64	Average
4880.000	28.88	31.31	8.66	37.75	31.10	74.00	-42.90	Peak
7320.000	15.67	36.43	11.72	35.60	28.22	54.00	-25.78	Average
7320.000	26.24	36.43	11.72	35.60	38.79	74.00	-35.21	Peak
9760.000	14.16	38.10	14.25	35.03	31.48	54.00	-22.52	Average
9760.000	27.25	38.10	14.25	35.03	44.57	74.00	-29.43	Peak
12200.000	13.49	38.57	15.14	36.31	30.89	54.00	-23.11	Average
12200.000	25.75	38.57	15.14	36.31	43.15	74.00	-30.85	Peak

Test channel:	Middle	Polarization:	Horizontal
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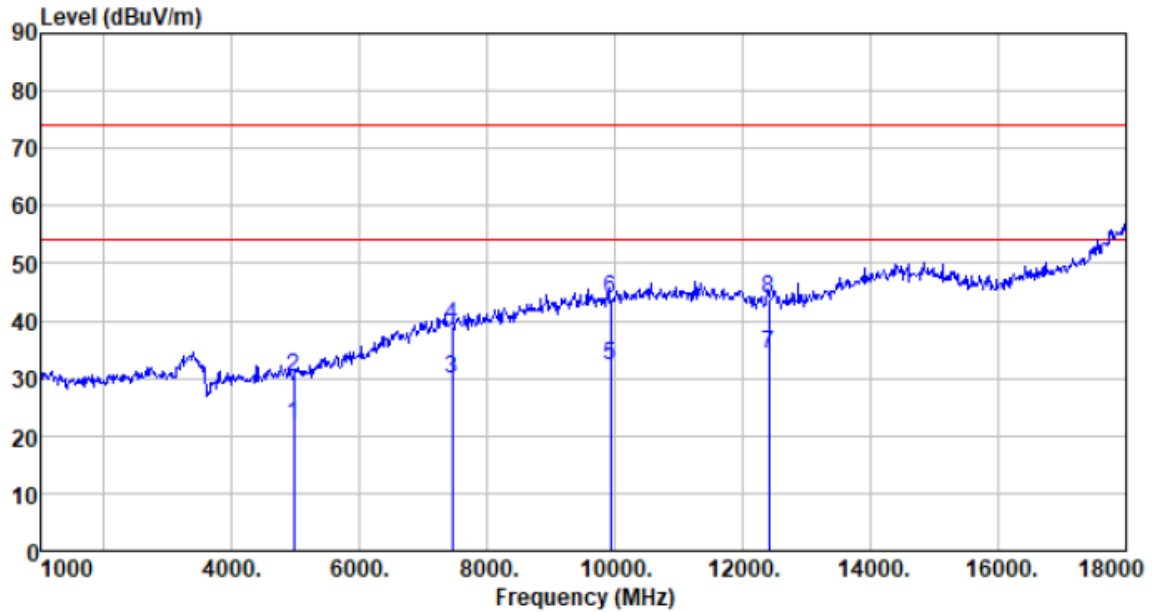


Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
4880.000	20.19	31.31	8.66	37.75	22.41	54.00	-31.59	Average
4880.000	28.98	31.31	8.66	37.75	31.20	74.00	-42.80	Peak
7320.000	17.16	36.43	11.72	35.60	29.71	54.00	-24.29	Average
7320.000	27.42	36.43	11.72	35.60	39.97	74.00	-34.03	Peak
9760.000	13.78	38.10	14.25	35.03	31.10	54.00	-22.90	Average
9760.000	26.73	38.10	14.25	35.03	44.05	74.00	-29.95	Peak
12200.000	15.87	38.57	15.14	36.31	33.27	54.00	-20.73	Average
12200.000	27.42	38.57	15.14	36.31	44.82	74.00	-29.18	Peak

Remark:

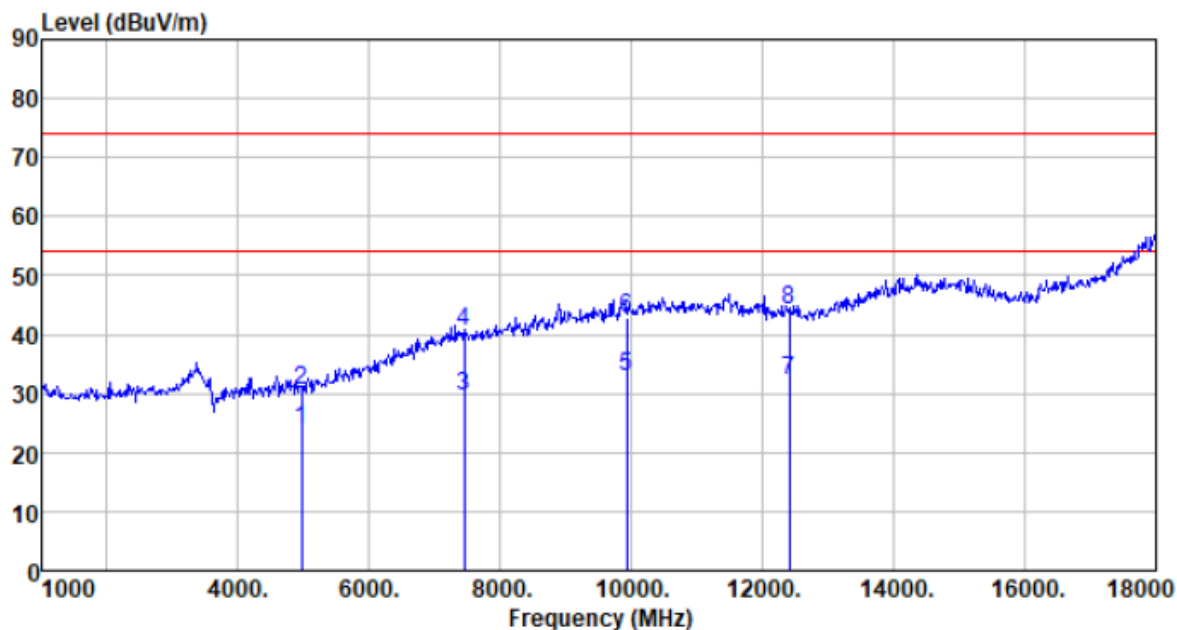
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

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	Limit level dBuV/m	Over limit dB	Remark
4960.000	19.53	31.44	8.73	37.78	21.92	54.00	-32.08	Average
4960.000	27.84	31.44	8.73	37.78	30.23	74.00	-43.77	Peak
7440.000	17.16	36.66	11.79	35.56	30.05	54.00	-23.95	Average
7440.000	26.34	36.66	11.79	35.56	39.23	74.00	-34.77	Peak
9920.000	14.77	38.30	14.38	35.14	32.31	54.00	-21.69	Average
9920.000	26.42	38.30	14.38	35.14	43.96	74.00	-30.04	Peak
12400.000	16.74	38.66	15.27	36.44	34.23	54.00	-19.77	Average
12400.000	26.32	38.66	15.27	36.44	43.81	74.00	-30.19	Peak

Test channel:	Highest	Polarization:	Horizontal
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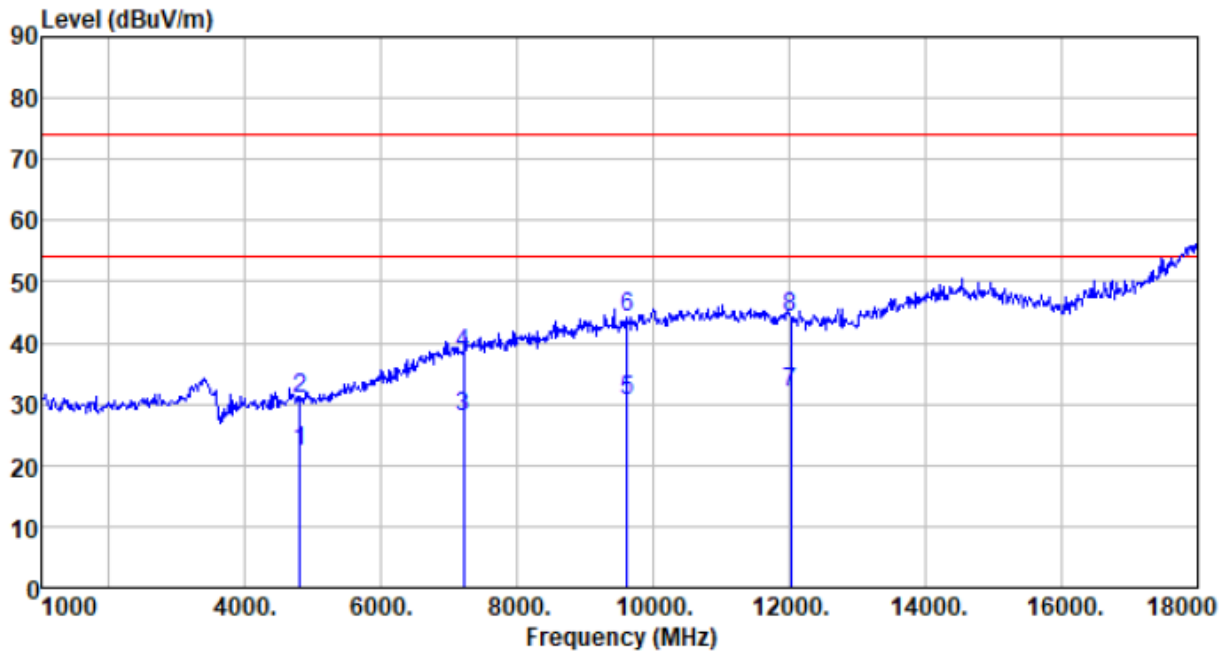
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
4960.000	21.52	31.44	8.73	37.78	23.91	54.00	-30.09	Average
4960.000	28.31	31.44	8.73	37.78	30.70	74.00	-43.30	Peak
7440.000	16.73	36.66	11.79	35.56	29.62	54.00	-24.38	Average
7440.000	27.54	36.66	11.79	35.56	40.43	74.00	-33.57	Peak
9920.000	15.36	38.30	14.38	35.14	32.90	54.00	-21.10	Average
9920.000	25.37	38.30	14.38	35.14	42.91	74.00	-31.09	Peak
12400.000	14.73	38.66	15.27	36.44	32.22	54.00	-21.78	Average
12400.000	26.75	38.66	15.27	36.44	44.24	74.00	-29.76	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.

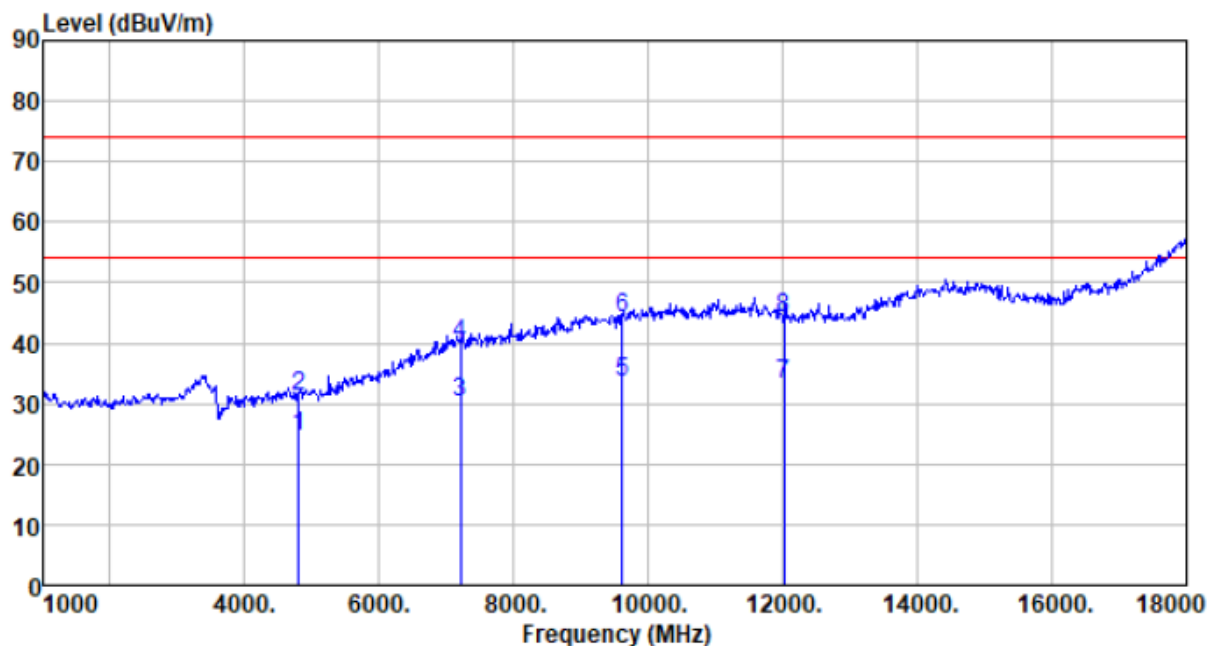
Antenna 2:

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	Limit level dBuV/m	Over limit dB	Remark
4804.000	20.02	31.20	8.60	37.73	22.09	54.00	-31.91	Average
4804.000	28.78	31.20	8.60	37.73	30.85	74.00	-43.15	Peak
7206.000	15.67	36.16	11.65	35.63	27.85	54.00	-26.15	Average
7206.000	26.13	36.16	11.65	35.63	38.31	74.00	-35.69	Peak
9608.000	13.55	37.93	14.14	34.94	30.68	54.00	-23.32	Average
9608.000	27.07	37.93	14.14	34.94	44.20	74.00	-29.80	Peak
12010.000	14.49	38.50	15.03	36.20	31.82	54.00	-22.18	Average
12010.000	26.80	38.50	15.03	36.20	44.13	74.00	-29.87	Peak

Test channel:	Lowest	Polarization:	Horizontal
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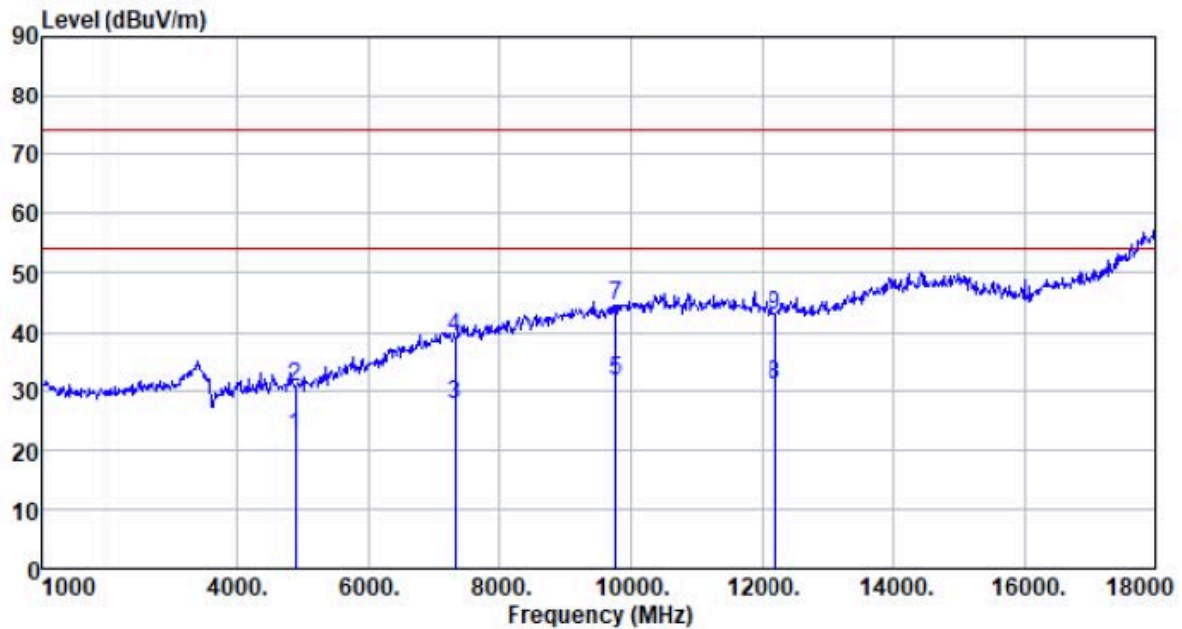


Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
4804.000	22.50	31.20	8.60	37.73	24.57	54.00	-29.43	Average
4804.000	29.11	31.20	8.60	37.73	31.18	74.00	-42.82	Peak
7206.000	18.19	36.16	11.65	35.63	30.37	54.00	-23.63	Average
7206.000	27.77	36.16	11.65	35.63	39.95	74.00	-34.05	Peak
9608.000	16.49	37.93	14.14	34.94	33.62	54.00	-20.38	Average
9608.000	26.88	37.93	14.14	34.94	44.01	74.00	-29.99	Peak
12010.000	15.75	38.50	15.03	36.20	33.08	54.00	-20.92	Average
12010.000	26.95	38.50	15.03	36.20	44.28	74.00	-29.72	Peak

Remark:

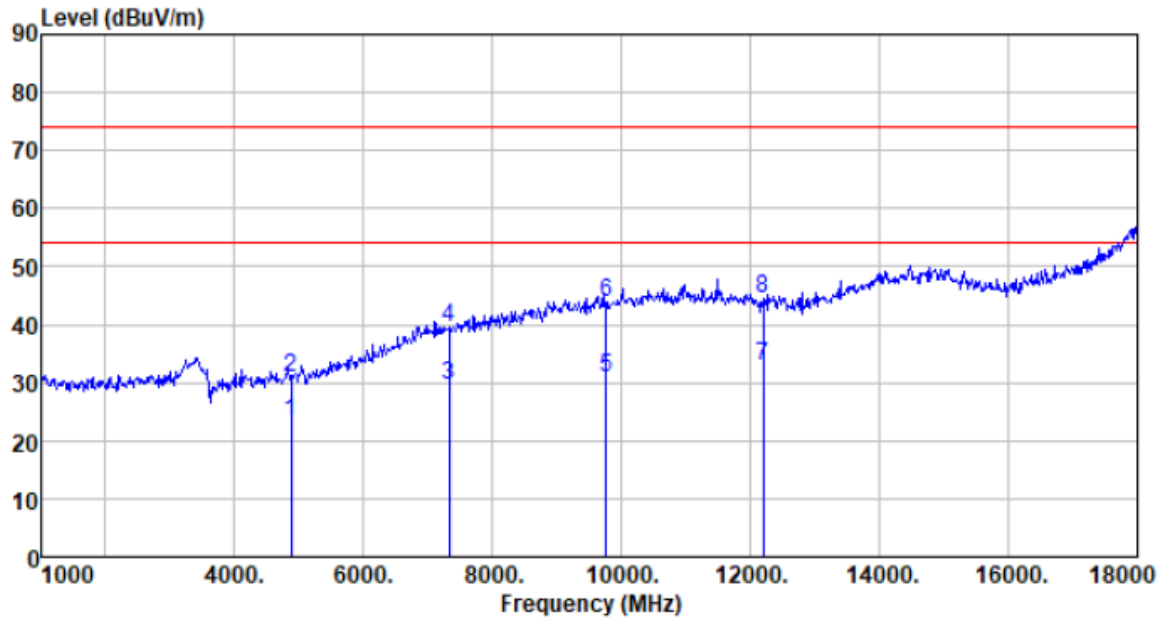
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

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	Limit level dBuV/m	Over limit dB	Remark
4880.000	19.88	31.31	8.66	37.75	22.10	54.00	-31.90	Average
4880.000	28.37	31.31	8.66	37.75	30.59	74.00	-43.41	Peak
7320.000	15.14	36.43	11.72	35.60	27.69	54.00	-26.31	Average
7320.000	26.78	36.43	11.72	35.60	39.33	74.00	-34.67	Peak
9760.000	14.25	38.10	14.25	35.03	31.57	54.00	-22.43	Average
9760.000	27.33	38.10	14.25	35.03	44.65	74.00	-29.35	Peak
12200.000	13.54	38.57	15.14	36.31	30.94	54.00	-23.06	Average
12200.000	25.40	38.57	15.14	36.31	42.80	74.00	-31.20	Peak

Test channel:	Middle	Polarization:	Horizontal
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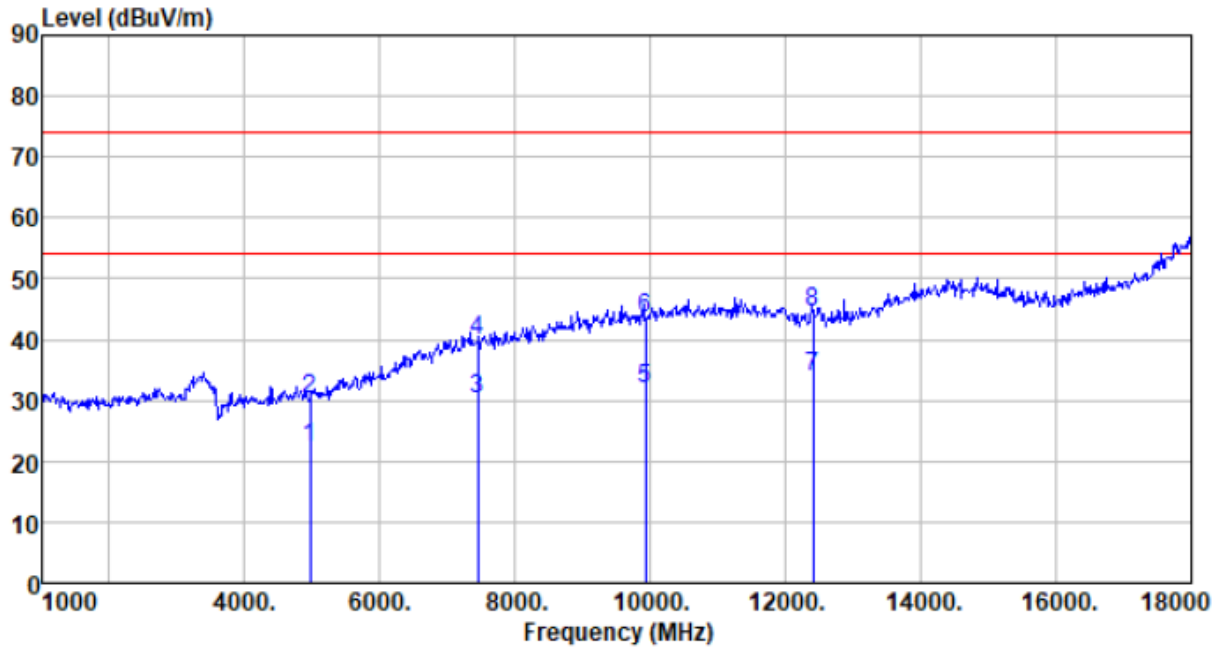


Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV	Limit level dBuV/m	Over limit dB	Remark
4880.000	20.98	31.31	8.66	37.75	23.20	54.00	-30.80	Average
4880.000	28.56	31.31	8.66	37.75	30.78	74.00	-43.22	Peak
7320.000	17.10	36.43	11.72	35.60	29.65	54.00	-24.35	Average
7320.000	27.12	36.43	11.72	35.60	39.67	74.00	-34.33	Peak
9760.000	13.73	38.10	14.25	35.03	31.05	54.00	-22.95	Average
9760.000	26.45	38.10	14.25	35.03	43.77	74.00	-30.23	Peak
12200.000	15.42	38.57	15.14	36.31	32.82	54.00	-21.18	Average
12200.000	27.07	38.57	15.14	36.31	44.47	74.00	-29.53	Peak

Remark:

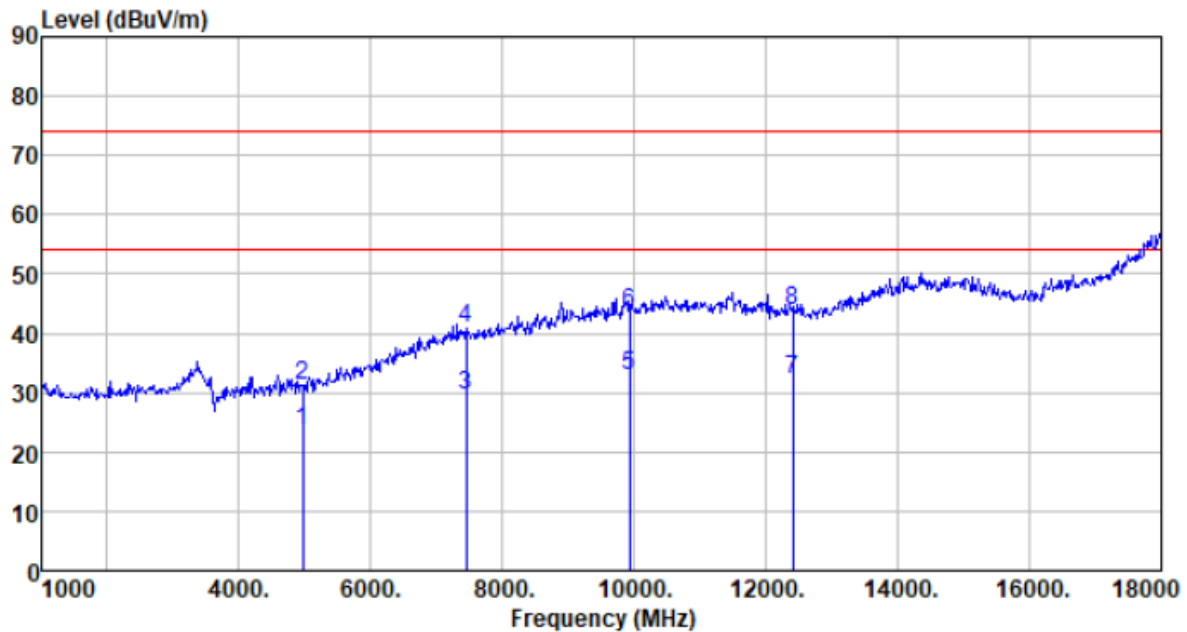
1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

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	Limit level dBuV/m	Over limit dB	Remark
4960.000	19.77	31.44	8.73	37.78	22.16	54.00	-31.84	Average
4960.000	27.83	31.44	8.73	37.78	30.22	74.00	-43.78	Peak
7440.000	17.48	36.66	11.79	35.56	30.37	54.00	-23.63	Average
7440.000	26.84	36.66	11.79	35.56	39.73	74.00	-34.27	Peak
9920.000	14.42	38.30	14.38	35.14	31.96	54.00	-22.04	Average
9920.000	26.04	38.30	14.38	35.14	43.58	74.00	-30.42	Peak
12400.000	16.32	38.66	15.27	36.44	33.81	54.00	-20.19	Average
12400.000	26.86	38.66	15.27	36.44	44.35	74.00	-29.65	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	Limit level dBuV/m	Over limit dB	Remark
4960.000	21.31	31.44	8.73	37.78	23.70	54.00	-30.30	Average
4960.000	28.91	31.44	8.73	37.78	31.30	74.00	-42.70	Peak
7440.000	16.54	36.66	11.79	35.56	29.43	54.00	-24.57	Average
7440.000	27.87	36.66	11.79	35.56	40.76	74.00	-33.24	Peak
9920.000	15.37	38.30	14.38	35.14	32.91	54.00	-21.09	Average
9920.000	25.90	38.30	14.38	35.14	43.44	74.00	-30.56	Peak
12400.000	14.75	38.66	15.27	36.44	32.24	54.00	-21.76	Average
12400.000	26.29	38.66	15.27	36.44	43.78	74.00	-30.22	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.

8 Test Setup Photo

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

9 EUT Constructional Details

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

---End---