



SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen,
Guangdong, China 518057

Telephone: +86 (0) 755 2601 2053
Fax: +86 (0) 755 2671 0594
Email: ee.shenzhen@sgs.com

Report No.: SZEM160800727701
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FCC REPORT

Application No. :

SZEM1608007277CR (SGS SZ No.:T51610240114EM)

Applicant:

SHANTOU CHENGHAI GUANHUA IMPORT AND EXPORT TRADE CO., LTD.

Product Name:

AIRCRAFT SERIES / GRAVITY Q10 DRONE /QUADCOPTER SERIES

Model No.(EUT):

W606-5

Add Model No.:

482016029, Q10, 0500580, MH5267056, MH5267057, MH5267058, MH5267606, MH5267062, MH5267605, MH52670609, MH5267608, MH5267076, MH5267077, MH5267078, MH5267079, MH5267080, MH5267081, MH5267082, MH5267083, MH5267084, MH5267085, MH5267088, MH5267090, MH5267092, MH5267096, W608-1, W608-2, W608-3, W608-4, W608-5, W609-10, W609-8, W609-9, W606-6, W606-3, W606-1, W606-2, W609-1, W808-1, W808-2, W808-3, W808-4, W808-5, W808-6, W808-7, W808-8

FCC ID:

2ACUT-482016029-Q10

Standards:

47 CFR Part 15, Subpart C (2015)

Date of Receipt:

2016-08-26

Date of Test:

2016-09-02 to 2016-09-23

Date of Issue:

2016-09-26

Test Result:	PASS *
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* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Jack Zhang
EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

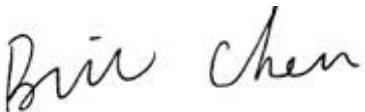
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

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2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00		2016-09-26		Original

Authorized for issue by:			
Tested By		 (Bill Chen) /Project Engineer	2016-09-23
Checked By		 (Eric Fu) /Reviewer	2016-09-26



3 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15, Subpart C Section 15.203	ANSI C63.10 (2009)	PASS
Field Strength of the Fundamental Signal	47 CFR Part 15, Subpart C Section 15.249 (a)	ANSI C63.10 (2013)	PASS
Spurious Emissions	47 CFR Part 15, Subpart C Section 15.249 (a)/15.209	ANSI C63.10 (2013)	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15, Subpart C Section 15.249(a)/15.205	ANSI C63.10 (2013)	PASS
20dB Occupied Bandwidth	47 CFR Part 15, Subpart C Section 15.215 (c)	ANSI C63.10 (2013)	PASS

Remark:

Model No.: 482016029, Q10, 0500580, MH5267056, MH5267057, MH5267058, MH5267606, MH5267062, MH5267605, MH52670609, MH5267608, MH5267076, MH5267077, MH5267078, MH5267079, MH5267080, MH5267081, MH5267082, MH5267083, MH5267084, MH5267085, MH5267088, MH5267090, MH5267092, MH5267096, W608-1, W608-2, W608-3, W608-4, W608-5, W609-10, W609-8, W609-9, W606-6, W606-5, W606-3, W606-1, W606-2, W606-5 W609-1, W808-1, W808-2, W808-3, W808-4, W808-5, W808-6, W808-7, W808-8

Only the model W606-5 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for all above models. Only different on model No.

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5 General Information

5.1.1 Client Information

Applicant:	SHANTOU CHENGHAI GUANHUA IMPORT AND EXPORT TRADE CO., LTD.
Address of Applicant:	RM.202-204, BLOCK 2, YAQIAN, ZHONGSHAN ROAD SOUTH, CHENGHAI, SHANTOU CITY, GUANGDONG, CHINA

5.1.2 General Description of EUT

Product Name:	AIRCRAFT SERIES / GRAVITY Q10 DRONE /QUADCOPTER SERIES
Model No.:	W606-5
Country of Origin:	CHINA
Frequency Range:	2.4G Wireless (2405MHz, 2444MHz, 2470MHz)
Modulation Type:	GFSK
Antenna Type:	Integral
Antenna Gain:	-4.97dBi
Power Supply:	9.0V DC (1.5V x 6" AA " Size Battery)



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Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2405MHz	18	2422MHz	35	2439MHz	52	2456MHz
2	2406MHz	19	2423MHz	36	2440MHz	53	2457MHz
3	2407MHz	20	2424MHz	37	2441MHz	54	2458MHz
4	2408MHz	21	2425MHz	38	2442MHz	55	2459MHz
5	2409MHz	22	2426MHz	39	2443MHz	56	2460MHz
6	2410MHz	23	2427MHz	40	2444MHz	57	2461MHz
7	2411MHz	24	2428MHz	41	2445MHz	58	2462MHz
8	2412MHz	25	2429MHz	42	2446MHz	59	2463MHz
9	2413MHz	26	2430MHz	43	2447MHz	60	2464MHz
10	2414MHz	27	2431MHz	44	2448MHz	61	2465MHz
11	2415MHz	28	2432MHz	45	2449MHz	62	2466MHz
12	2416MHz	29	2433MHz	46	2450MHz	63	2467MHz
13	2417MHz	30	2434MHz	47	2451MHz	64	2468MHz
14	2418MHz	31	2435MHz	48	2452MHz	65	2469MHz
15	2419MHz	32	2436MHz	49	2453MHz	66	2470MHz
16	2420MHz	33	2437MHz	50	2454MHz		
17	2421MHz	34	2438MHz	51	2455MHz		

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(CH1)	2405MHz
The Middle channel(CH40)	2444MHz
The Highest channel(CH66)	2470MHz

5.1.3 Test Environment and Mode

Operating Environment:	
Temperature:	25.0 °C
Humidity:	50 % RH
Atmospheric Pressure:	1005 mbar
Test mode:	
Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.

5.1.4 Description of Support Units

The EUT has been tested independent unit.

5.1.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China.
518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.



5.1.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- VCCI**

The 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-823, R-4188, T-1153 and C-2383 respectively.

- FCC – Registration No.: 556682**

SGS-CSTC Standards Technical 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 our files. Registration No.: 556682.

- Industry Canada (IC)**

Two 3m Semi-anechoic chambers and the 10m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1, 4620C-2, 4620C-3.

5.1.7 Deviation from Standards

None.

5.1.8 Abnormalities from Standard Conditions

None.

5.1.9 Other Information Requested by the Customer

None.



6 Equipment List

RE in Chamber						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2016-05-13	2017-05-13
2	EMI Test Receiver	Agilent Technologies	N9038A	SEM004-05	2015-10-09	2016-10-09
3	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEM003-01	2014-11-01	2017-11-01
4	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEM005-01	2016-04-25	2017-04-25

RE in Chamber						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)
1	3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2016-05-13	2017-05-13
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEM004-04	2016-04-25	2017-04-25
3	BiConiLog Antenna (26-3000MHz)	ETS-Lindgren	3142C	SEM003-02	2014-11-15	2017-11-15
4	Amplifier (0.1-1300MHz)	HP	8447D	SEM005-02	2015-10-09	2016-10-09
5	Horn Antenna (1-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2015-06-14	2018-06-14
6	Horn Antenna (18-26GHz)	ETS-Lindgren	3160	SEM003-12	2014-11-24	2017-11-24
7	Horn Antenna(26GHz-40GHz)	A.H.Systems, inc.	SAS-573	SEM003-13	2015-02-12	2018-02-12
8	Low Noise Amplifier	Black Diamond Series	BDLNA-0118-352810	SEM005-05	2015-10-09	2016-10-09
9	Band filter	Amindeon	Asi 3314	SEM023-01	N/A	N/A



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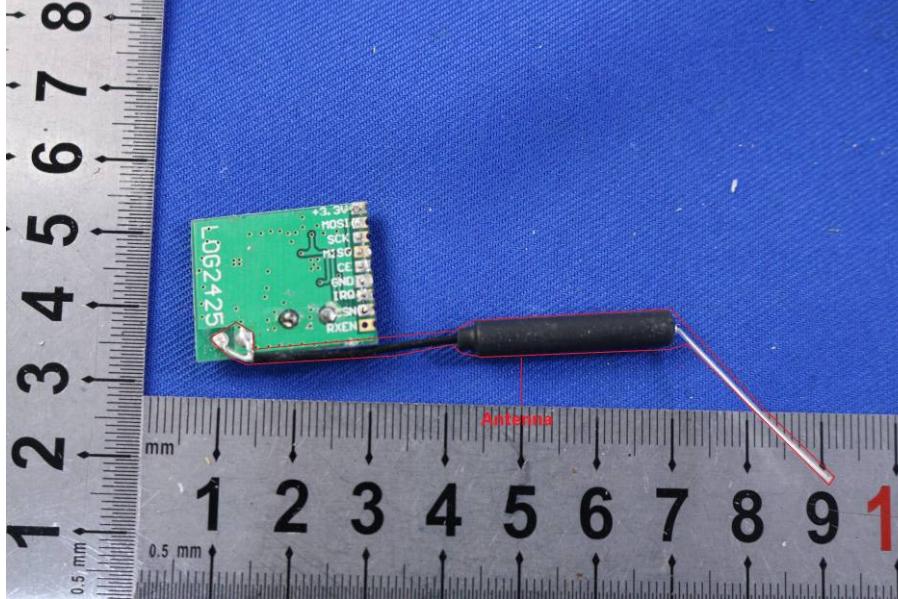
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RF connected test						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)
1	DC Power Supply	ZhaoXin	RXN-305D	SEM011-02	2015-10-09	2016-10-09
2	Spectrum Analyzer	Rohde & Schwarz	FSP	SEM004-06	2015-10-17	2016-10-17
3	Signal Generator	Rohde & Schwarz	SML03	SEM006-02	2016-04-25	2017-04-25
4	Power Meter	Rohde & Schwarz	NRVS	SEM014-02	2015-10-09	2016-10-09

7 Test results and Measurement Data

7.1 Antenna Requirement

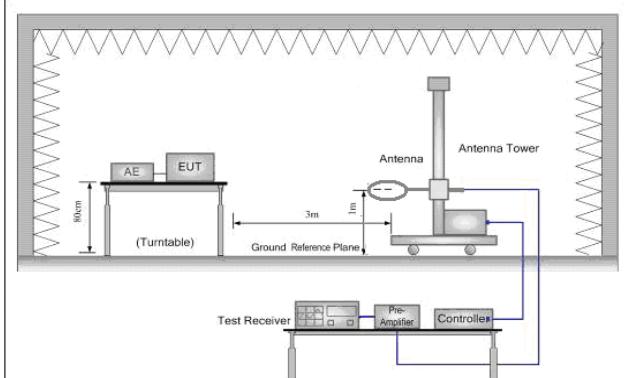
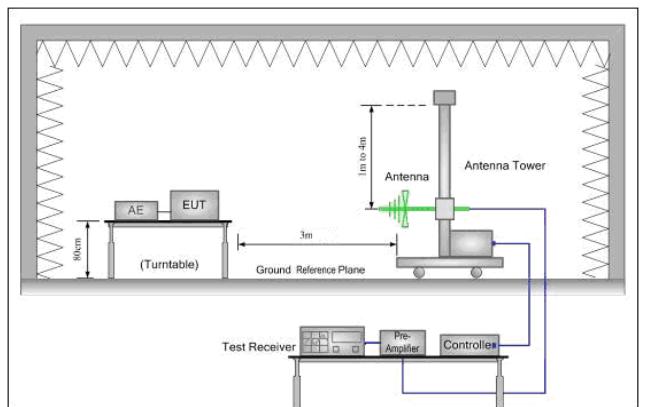
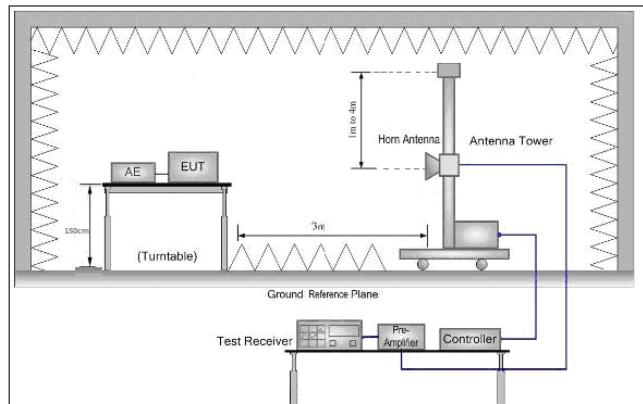
Standard requirement:	47 CFR Part 15C Section 15.203
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique 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.	
EUT Antenna:	
The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is -4.97dBi.	



7.2 Spurious Emissions

7.2.1 Radiated Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.249 and 15.209				
Test Method:	ANSI C63.10: 2013				
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber) 3m (Fully-Anechoic Chamber)				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	100 kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Limit: (Spurious Emissions)	Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3
	Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.				
Limit: (Field strength of the fundamental signal)	Frequency	Limit (dBuV/m @3m)		Remark	
	2400MHz-2483.5MHz	94.0		Average Value	
		114.0		Peak Value	

Test Setup:

Figure 1. Below 30MHz

Figure 2. 30MHz to 1GHz

Figure 3. Above 1 GHz
Test Procedure:

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter Fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 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.
- 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.



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	<ul style="list-style-type: none">g. 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.h. Test the EUT in the lowest channel, the middle channel, the Highest channeli. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the X axis positioning which it is worse case.j. Repeat above procedures until all frequencies measured was complete.
Test Mode:	Transmitting mode
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass



Measurement Data

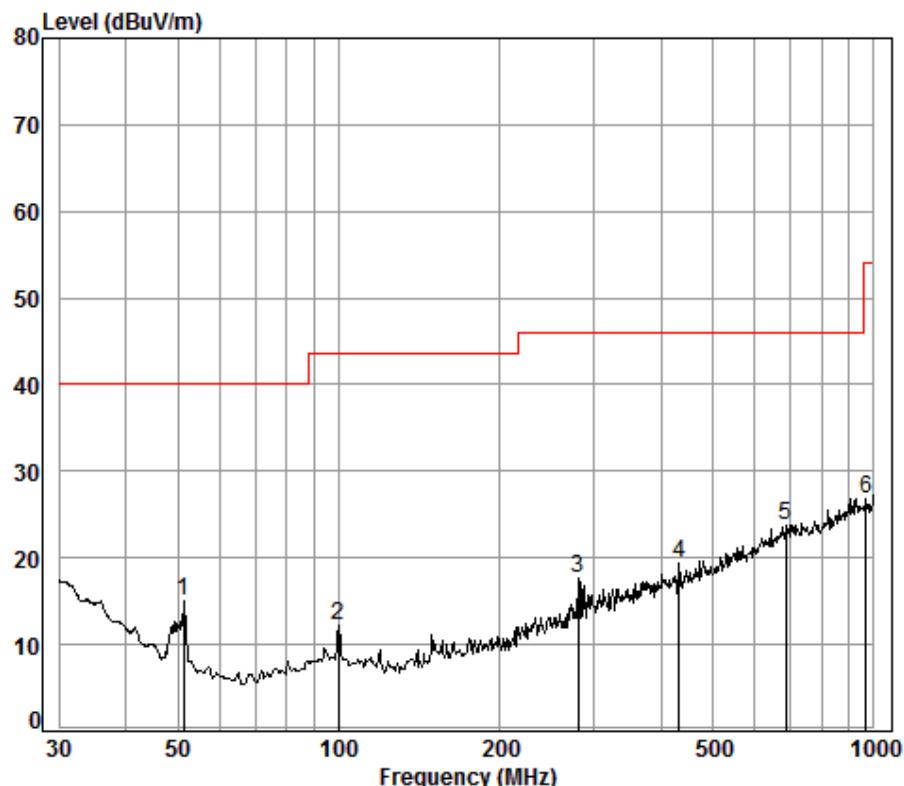
7.2.1.1 Field Strength Of The Fundamental Signal

Peak value:

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2405.001	29.12	5.35	38.15	72.40	68.72	114.00	-45.28	Horizontal
2405.103	29.12	5.35	38.15	75.89	72.21	114.00	-41.79	Vertical
2443.998	29.24	5.38	38.15	77.71	74.18	114.00	-39.82	Horizontal
2443.598	29.24	5.38	38.15	77.04	73.51	114.00	-40.49	Vertical
2470.578	29.32	5.40	38.15	80.28	76.85	114.00	-37.15	Horizontal
2469.979	29.31	5.40	38.15	79.17	75.73	114.00	-38.27	Vertical

7.2.1.2 Spurious Emissions

30MHz~1GHz		
Test mode:	Transmitting	Vertical



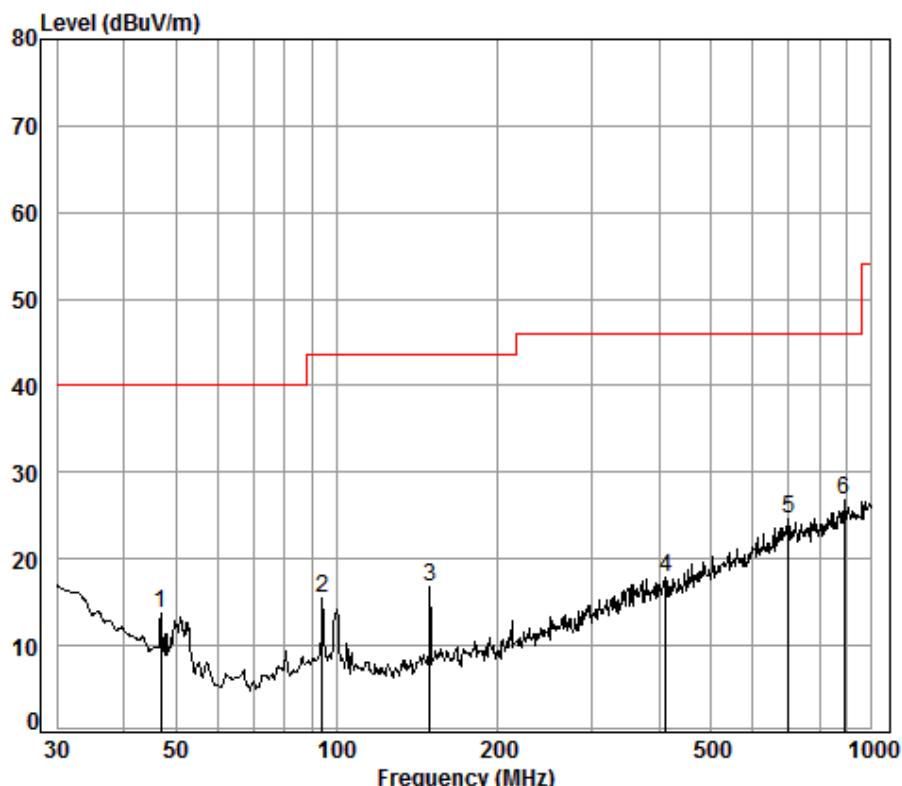
Condition: 3m Horizontal

Job No. : 7277CR

Mode : TX

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	51.30	0.80	8.66	27.29	32.95	15.12	40.00	-24.88
2	99.88	1.20	9.10	27.20	29.14	12.24	43.50	-31.26
3	280.02	1.81	12.89	26.45	29.37	17.62	46.00	-28.38
4	432.55	2.34	16.48	27.33	27.83	19.32	46.00	-26.68
5 pp	684.75	2.87	21.46	27.43	26.90	23.80	46.00	-22.20
6	968.93	3.67	23.58	26.44	26.04	26.85	54.00	-27.15

Test mode:	Transmitting	Horizontal
------------	--------------	------------



Condition: 3m Vertical

Job No. : 7277CR

Mode : TX

Freq	Cable	Ant	Preamp	Read	Limit	Line	Over	
	Loss	Factor	Factor	Level				
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	46.99	0.75	10.09	27.30	30.18	13.72	40.00	-26.28
2	94.10	1.14	8.93	27.21	32.70	15.56	43.50	-27.94
3	149.49	1.32	9.26	26.91	33.14	16.81	43.50	-26.69
4	411.82	2.25	16.35	27.21	26.47	17.86	46.00	-28.14
5	699.30	2.90	21.69	27.41	27.54	24.72	46.00	-21.28
6 pp	887.61	3.56	23.00	26.85	27.16	26.87	46.00	-19.13



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Above 1GHz								
Test mode:	Transmitting		Test channel:		Lowest	Remark:		Peak
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
3553.389	32.36	7.65	38.49	44.69	46.21	74.00	-27.79	Vertical
4773.469	34.10	8.82	39.02	49.57	53.47	74.00	-20.53	Vertical
4808.000	34.17	8.87	39.03	44.61	48.62	74.00	-25.38	Vertical
7178.601	36.43	10.67	38.21	44.48	53.37	74.00	-20.63	Vertical
7212.000	36.41	10.68	38.18	42.37	51.28	74.00	-22.72	Vertical
9616.000	37.52	12.50	36.99	40.21	53.24	74.00	-20.76	Horizontal
3765.116	32.97	7.73	38.59	44.18	46.29	74.00	-27.71	Horizontal
4773.469	34.10	8.82	39.02	49.13	53.03	74.00	-20.97	Horizontal
4808.000	34.17	8.87	39.03	42.47	46.48	74.00	-27.52	Horizontal
7178.601	36.43	10.67	38.21	44.28	53.17	74.00	-20.83	Horizontal

Test mode:	Transmitting		Test channel:		Middle	Remark:		Peak
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4766.567	34.09	8.81	39.01	48.24	52.13	74.00	-21.87	Vertical
4888.000	34.31	8.99	39.06	44.36	48.60	74.00	-25.40	Vertical
7147.507	36.44	10.66	38.24	44.70	53.56	74.00	-20.44	Vertical
7209.829	36.41	10.68	38.18	44.84	53.75	74.00	-20.25	Vertical
7332.000	36.37	10.73	38.05	42.27	51.32	74.00	-22.68	Vertical
9776.000	37.56	12.59	36.91	40.28	53.52	74.00	-20.48	Horizontal
4766.567	34.09	8.81	39.01	50.07	53.96	74.00	-20.04	Horizontal
4888.000	34.31	8.99	39.06	42.63	46.87	74.00	-27.13	Horizontal
7147.507	36.44	10.66	38.24	44.81	53.67	74.00	-20.33	Horizontal
7209.829	36.41	10.68	38.18	44.35	53.26	74.00	-20.74	Horizontal



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Test mode:	Transmitting	Test channel:		Highest	Remark:		Peak	
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4766.567	34.09	8.81	39.01	49.82	53.71	74.00	-20.29	Vertical
4857.075	34.25	8.94	39.05	49.18	53.32	74.00	-20.68	Vertical
4940.000	34.40	9.06	39.08	45.59	49.97	74.00	-24.03	Vertical
7147.507	36.44	10.66	38.24	44.94	53.80	74.00	-20.20	Vertical
7410.000	36.33	10.76	37.97	42.11	51.23	74.00	-22.77	Vertical
9880.000	37.58	12.65	36.86	40.37	53.74	74.00	-20.26	Horizontal
4767.000	34.09	8.81	39.01	49.68	53.57	74.00	-20.43	Horizontal
4940.000	34.40	9.06	39.08	43.98	48.36	74.00	-25.64	Horizontal
7151.000	36.44	10.66	38.24	44.18	53.04	74.00	-20.96	Horizontal
7237.000	36.40	10.69	38.15	44.43	53.37	74.00	-20.63	Horizontal

Remark:

- 1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
- 2) Scan from 9kHz to 25GHz, The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

7.3 Restricted bands around fundamental frequency

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205		
Test Method:	ANSI C63.10: 2013		
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber) 3m (Fully-Anechoic Chamber)		
Limit(band edge):	Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.		
		Frequency	Limit (dBuV/m @3m)
		30MHz-88MHz	40.0
		88MHz-216MHz	43.5
		216MHz-960MHz	46.0
		960MHz-1GHz	54.0
		Above 1GHz	54.0
			Average Value
			74.0
			Peak Value

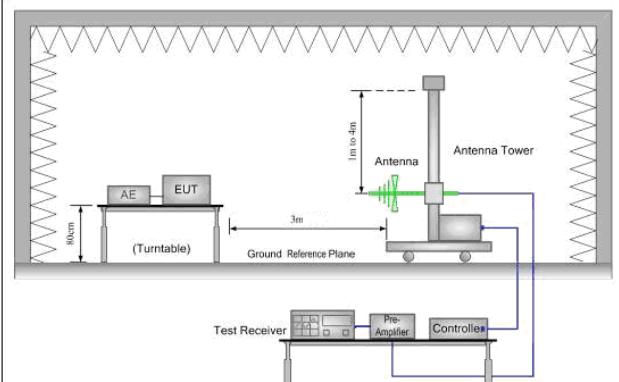
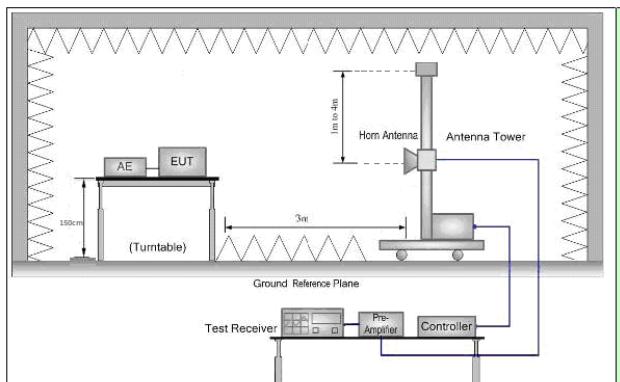
Test Setup:		
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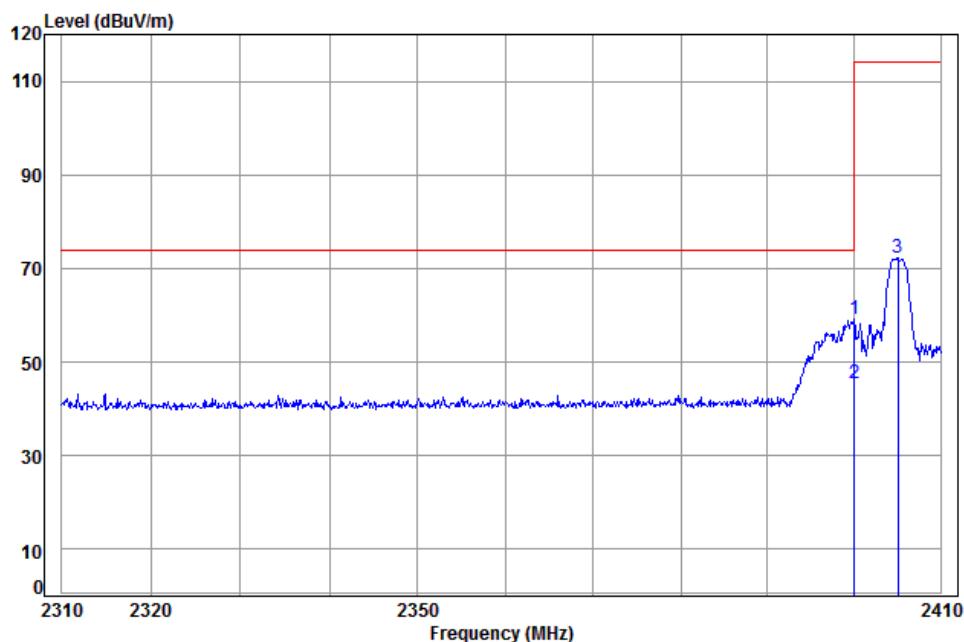
Figure 1. 30MHz to 1GHz

Figure 2. Above 1 GHz

Test Procedure:	<ol style="list-style-type: none">a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.c. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.d. 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.e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.g. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channelh. Test the EUT in the lowest channel , the Highest channeli. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the X axis positioning which it is worse case.j. Repeat above procedures until all frequencies measured was complete.
Exploratory Test Mode:	Transmitting mode
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass

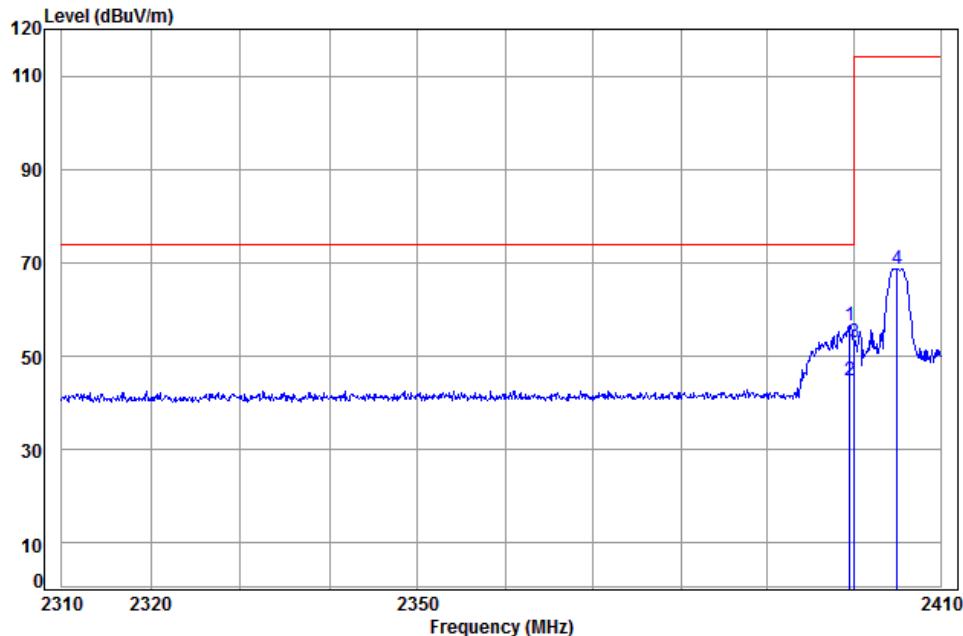
Test plot as follows:

Test mode:	Transmitting	Test channel:	Lowest	Remark:	Peak	Vertical
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Condition: 3m Vertical
Job No: : 7277CR
Mode: : 2404 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2400.000	5.34	29.11	38.14	62.95	59.26	74.00	-14.74
2 pp	2400.000	5.34	29.11	38.14	49.01	45.32	54.00	-8.68
3	2405.103	5.35	29.12	38.15	75.89	72.21	114.00	-41.79

Test mode:	Transmitting	Test channel:	Lowest	Remark:	Peak	Horizontal
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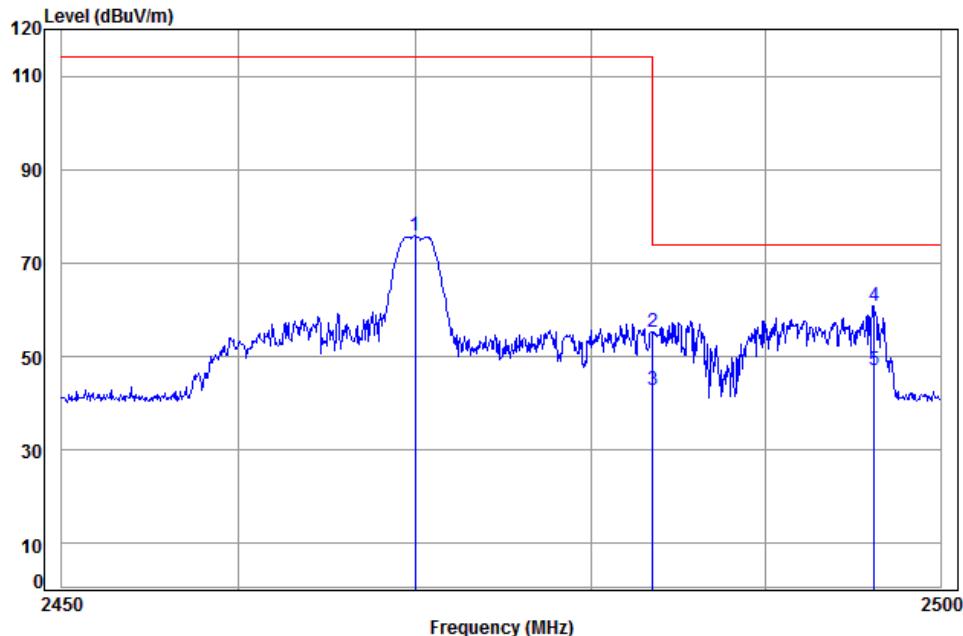
Condition: 3m Horizontal

Job No: : 7277CR

Mode: : 2404 Band edge

		Cable Freq	Ant Loss	Preamp Factor	Read Level	Limit Level	Over Line	Over Limit	
		MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2399.503	5.34	29.11	38.14	60.41	56.72	74.00	-17.28	
2 pp	2399.503	5.34	29.11	38.14	48.59	44.90	54.00	-9.10	
3	2400.000	5.35	29.11	38.14	56.49	52.81	74.00	-21.19	
4	2405.001	5.35	29.12	38.15	72.40	68.72	114.00	-45.28	

Test mode:	Transmitting	Test channel:	Highest	Remark:	Peak	Vertical
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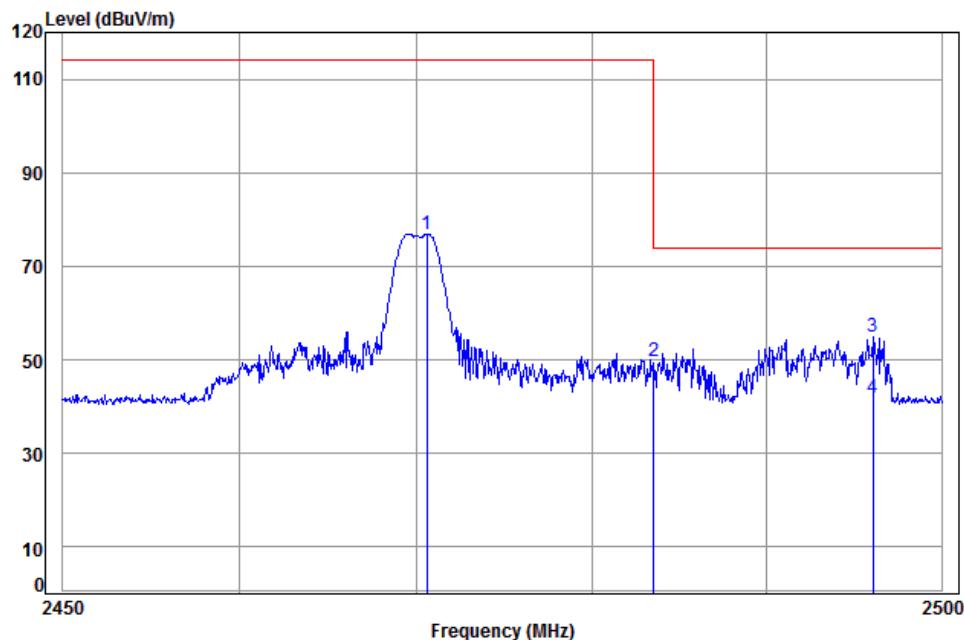
Condition: 3m VERTICAL

Job No: : 7277CR

Mode: : 2470 Band edge

	Cable Freq	Ant Loss	Preamp Factor	Read Level	Limit Level	Line Limit	Over Limit	
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2469.979	5.40	29.31	38.15	79.17	75.73	114.00	-38.27
2	2483.500	5.41	29.35	38.15	58.57	55.18	74.00	-18.82
3	2483.500	5.41	29.35	38.15	46.25	42.86	54.00	-11.14
4	2496.215	5.42	29.39	38.15	64.06	60.72	74.00	-13.28
5 pp	2496.215	5.42	29.39	38.15	50.40	47.06	54.00	-6.94

Test mode:	Transmitting	Test channel:	Highest	Remark:	Peak	Horizontal
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Condition: 3m Horizontal

Job No: : 7277CR

Mode: : 2470 Band edge

	Cable	Ant	Preamp	Read	Limit	Over	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2470.578	5.40	29.32	38.15	80.28	76.85	114.00
2	2483.500	5.41	29.35	38.15	53.18	49.79	74.00
3	2496.063	5.42	29.39	38.15	58.31	54.97	74.00
4 pp	2496.063	5.42	29.39	38.15	45.11	41.77	54.00
							-37.15
							-24.21
							-19.03
							-12.23

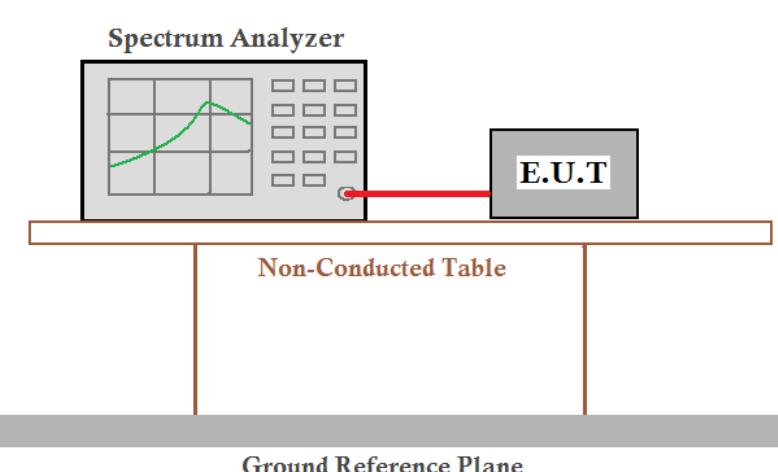
Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation

with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor

7.4 20dB Bandwidth

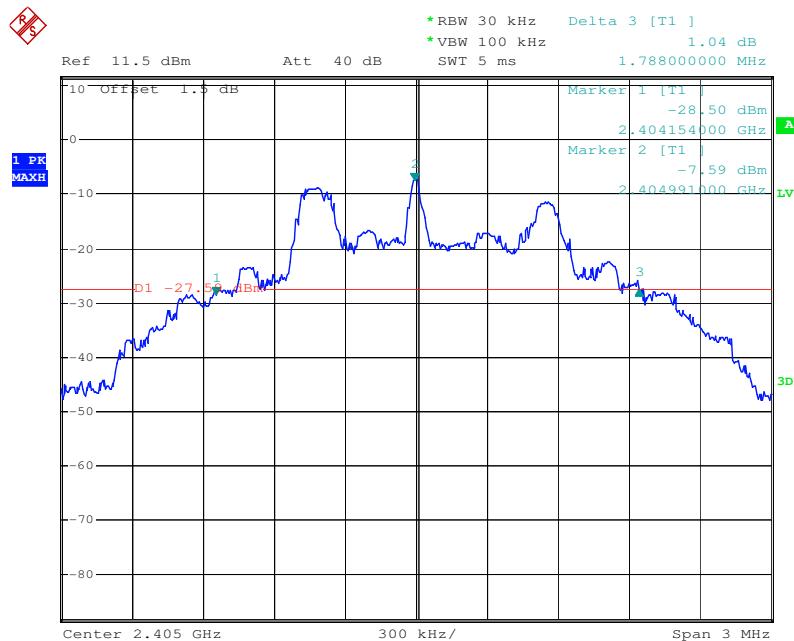
Test Requirement:	47 CFR Part 15C Section 15.215
Test Method:	ANSI C63.10:2013
Test Setup:	
Limit:	N/A
Exploratory Test Mode:	Transmitter mode
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass

Measurement Data

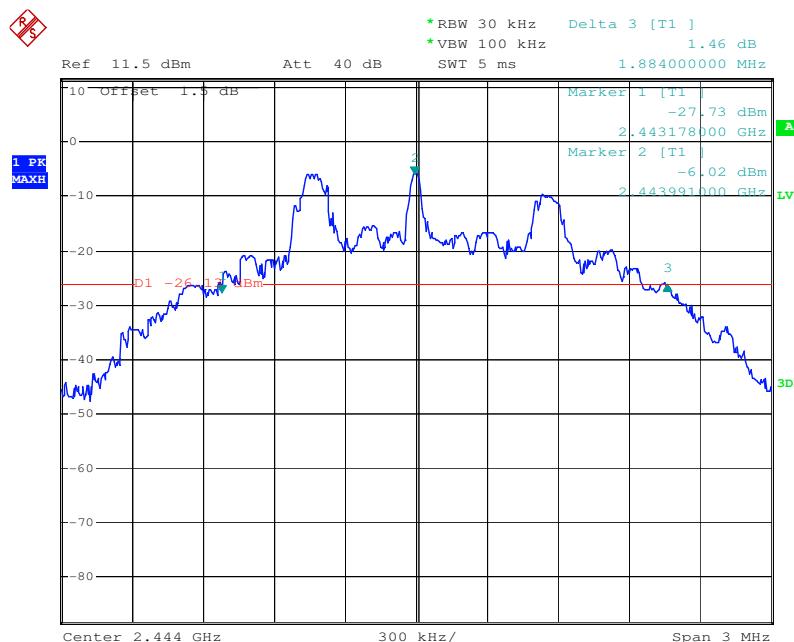
Test Channel	20dB bandwidth (MHz)	Results
Lowest	1.788	Pass
Middle	1.884	Pass
Highest	1.902	Pass

Test plot as follows:

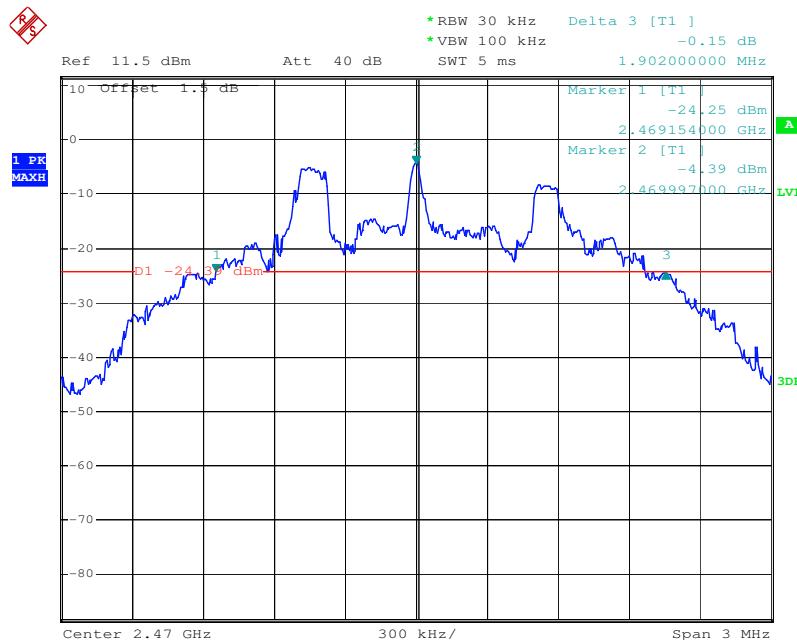
Test channel:	Lowest
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Test channel:	Middle
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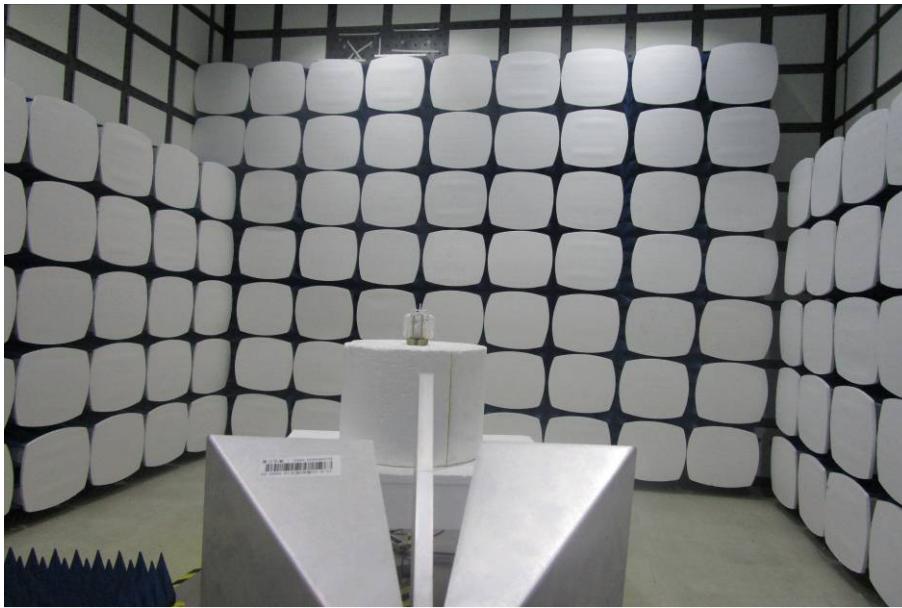
Test channel:	Highest
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8 Photographs - EUT Test Setup

Test model No.: W606-5

8.1.1 Radiated Emission



9 Photographs - EUT Constructional Details

Refer to Appendix A - Photographs of EUT Constructional Details for SZEM1608007277CR.