



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

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Report No.: SZEM160900759202  
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## FCC REPORT

**Application No. :** SZEM1609007592CR  
**Applicant:** DGL Group, Ltd  
**Product Name:** CALL OF DUTY MQ-27 STUNT DRONE  
**Model No.(EUT):** COD-QDR-MQ27  
**Trade Mark:** Call of Duty  
**FCC ID:** 2AANZCODQDRMQ27  
**Standards:** 47 CFR Part 15, Subpart C (2015)  
**Date of Receipt:** 2016-09-06  
**Date of Test:** 2016-09-07 to 2016-09-14  
**Date of Issue:** 2016-09-18

<b>Test Result:</b>	<b>PASS *</b>
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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

<i>Revision Record</i>				
<i>Version</i>	<i>Chapter</i>	<i>Date</i>	<i>Modifier</i>	<i>Remark</i>
00		2016-09-18		Original

<b>Authorized for issue by:</b>				
<b>Tested By</b>		<i>Gebin Sun</i>		
				2016-09-14
		<b>(Gebin Sun) /Project Engineer</b>		<b>Date</b>
<b>Checked By</b>		<i>Eric Fu</i>		
				2016-09-18
		<b>(Eric Fu) /Reviewer</b>		<b>Date</b>



### 3 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15, Subpart C Section 15.203	ANSI C63.10 (2013)	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



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## 5 General Information

### 5.1 Client Information

Applicant:	DGL Group, Ltd
Address of Applicant:	195 Raritan Center Parkway Edison, NJ 08837

### 5.2 General Description of EUT

Product Name:	CALL OF DUTY MQ-27 STUNT DRONE
Model No.:	COD-QDR-MQ27
Trade Mark :	Call of Duty
Frequency Range:	2410MHz~2475MHz
Modulation Type:	GFSK
Sample Type:	Portable production
Antenna Type:	Integral
Antenna Gain:	0dBi
power Supply:	4.5V DC (1.5Vx3 "AA" Size Batteries) for Remote controller



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	2410MHz
The Middle channel	2445MHz
The Highest channel	2475MHz



### 5.3 Test Environment and Mode

Operating Environment:	
Temperature:	25.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1010 mbar
Test mode:	
Transmitting mode:	Keep the EUT in transmitting mode with modulation.

### 5.4 Description of Support Units

The EUT has been tested independently.

### 5.5 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.



## 5.6 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.

## 5.7 Deviation from Standards

None.

## 5.8 Abnormalities from Standard Conditions

None.

## 5.9 Other Information Requested by the Customer

None.





## 5.10 Equipment List

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

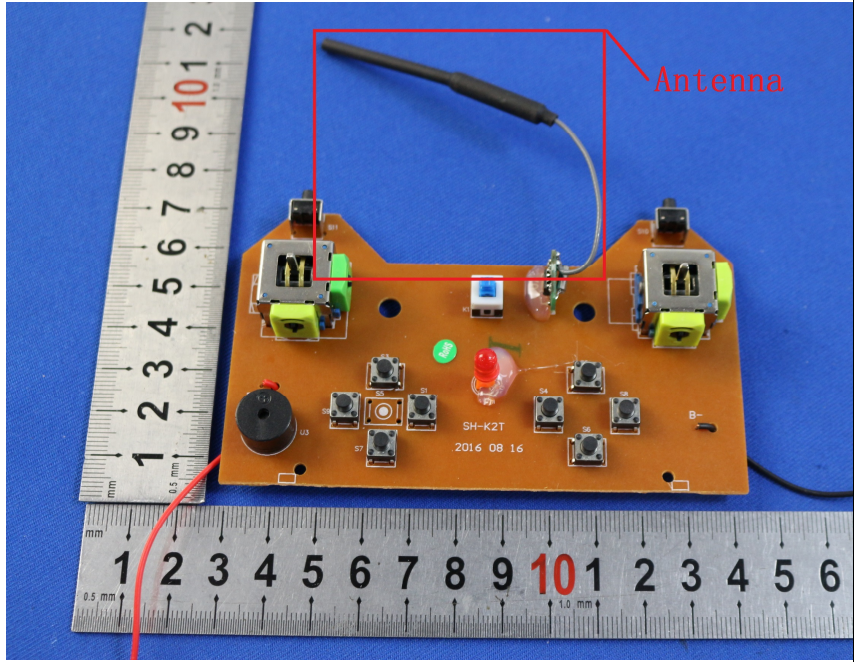
RE in Chamber						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2016-05-13	2017-05-13
2	EMI Test Receiver	Agilent Technologies	N9038A	SEM004-05	2015-09-16	2016-09-16
3	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEM003-01	2014-11-01	2017-11-01
4	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEM003-11	2015-10-17	2018-10-17
5	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEM003-12	2014-11-24	2017-11-24
6	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEM005-01	2016-04-25	2017-04-25
7	Band filter	Amindeon	Asi 3314	SEM023-01	N/A	N/A
8	DC Power Supply	Zhao Xin	RXN-305D	SEM011-02	2015-10-09	2016-10-09
9	Loop Antenna	Beijing Daze	ZN30401	SEM003-09	2015-05-13	2018-05-13



<b>RE in Chamber</b>						
<b>Item</b>	<b>Test Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Inventory No.</b>	<b>Cal. date (yyyy-mm-dd)</b>	<b>Cal.Due date (yyyy-mm-dd)</b>
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

## 6 Test results and Measurement Data

### 6.1 Antenna Requirement

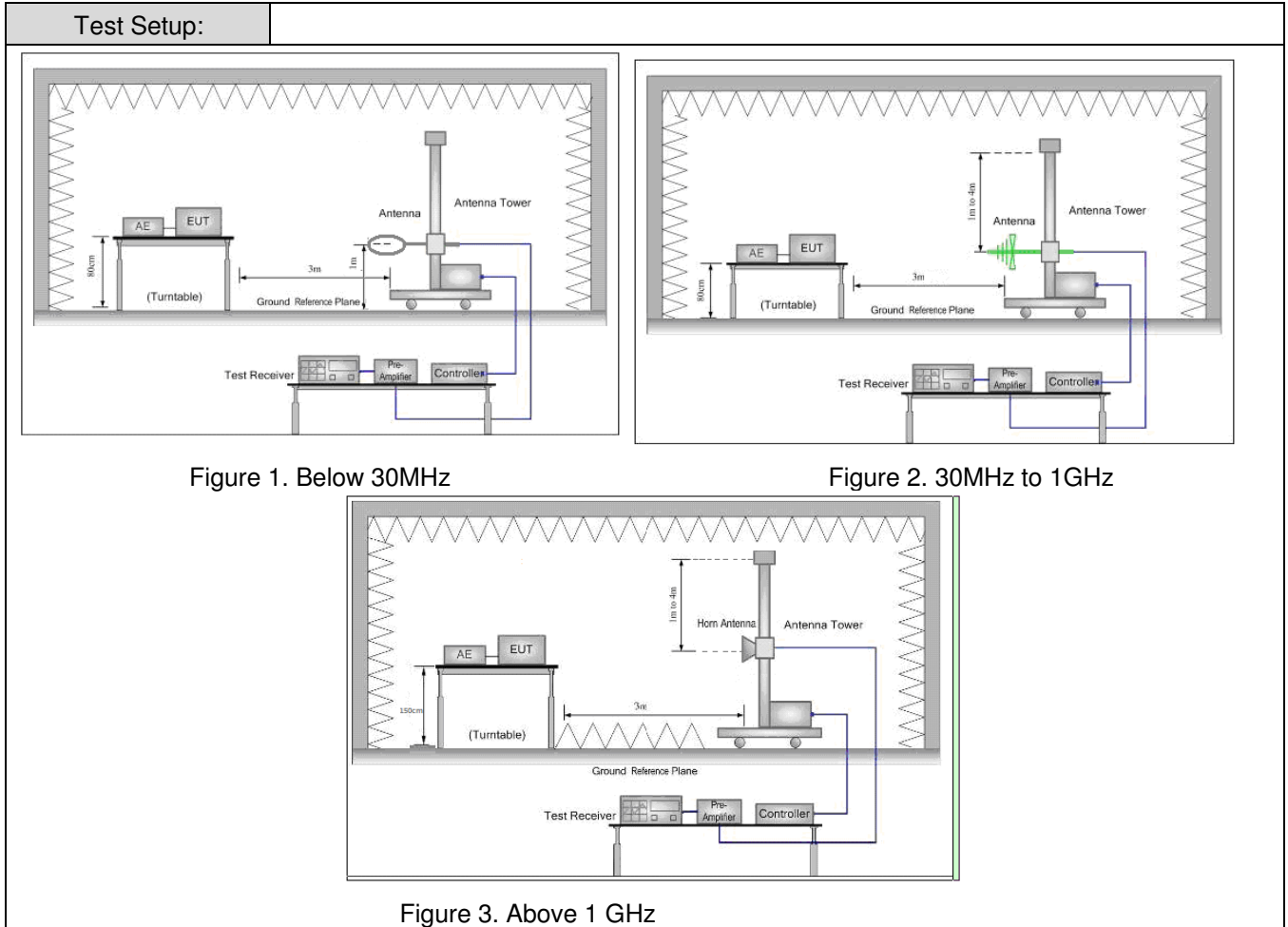
<b>Standard requirement:</b>	47 CFR Part 15C Section 15.203
<p>15.203 requirement:</p> <p>An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that 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>	
<b>EUT Antenna:</b>	
<p>The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 0dBi.</p>	



## 6.2 Spurious Emissions

### 6.2.1 Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.249 and 15.209				
Test Method:	ANSI C63.10: 2013 Clause 6.4,6.5 and 6.6				
Test Site:	Measurement Distance: 3m				
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	



<p><b>Test Procedure:</b></p>	<ol style="list-style-type: none"> <li>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.</li> <li>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</li> <li>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.</li> <li>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.</li> <li>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 (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.</li> <li>f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>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.</li> </ol>
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	<p>h. Test the EUT in the lowest channel, the middle channel, the Highest channel i. 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.</p>
Instruments Used:	Refer to section 5.10 for details
Exploratory Test Mode:	Transmitting mode
Final Test Mode:	Pretest the EUT at Transmitting mode, found the Transmitting mode which it is worse case Only the worst case is recorded in the report.
Test Results:	Pass



**Measurement Data**

**6.2.1.1 Field Strength Of The Fundamental Signal**

Peak value:

Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2410.114	29.14	5.35	38.15	103.29	99.63	114.00	-14.37	Horizontal
2410.114	29.14	5.35	38.15	94.32	90.66	114.00	-23.34	Vertical
2445.126	29.24	5.38	38.15	102.8	99.27	114.00	-14.73	Horizontal
2445.126	29.24	5.38	38.15	96.74	93.21	114.00	-20.79	Vertical
2475.424	29.33	5.4	38.15	101.28	97.86	114.00	-16.14	Horizontal
2475.474	29.33	5.4	38.15	95.75	92.33	114.00	-21.67	Vertical

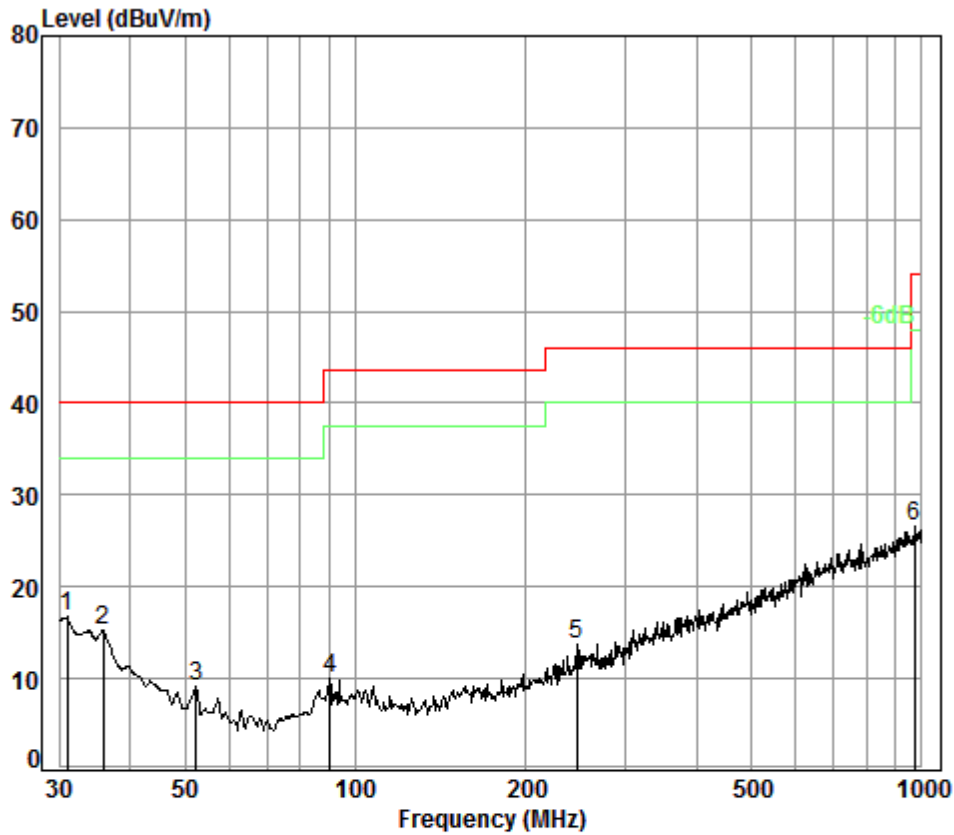
Average value:

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
2410.114	29.14	5.35	38.15	94.56	90.90	94.00	-3.10	Horizontal
2445.126	29.24	5.38	38.15	93.69	90.16	94.00	-3.84	Horizontal
2475.424	29.33	5.40	38.15	94.31	90.89	94.00	-3.11	Horizontal



6.2.1.2 Spurious Emissions

30MHz~1GHz		
Test mode:	Transmitting mode	Vertical



Condition: 3m VERTICAL

Job No. : 7592CR

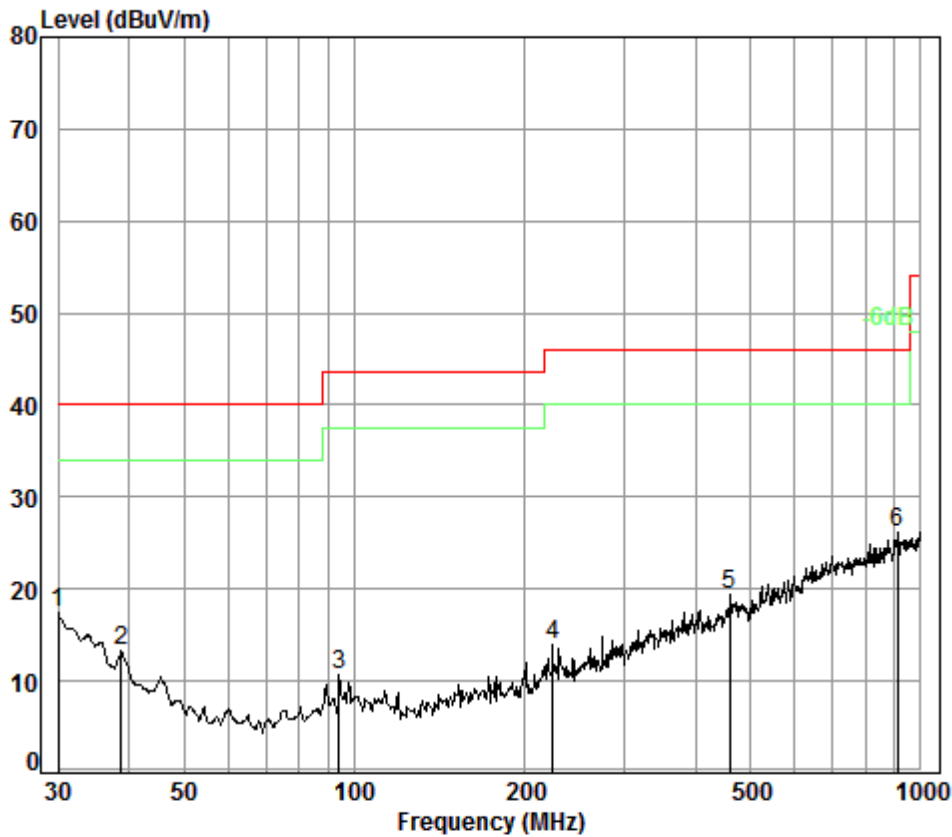
Test mode: TX

	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 pp	30.96	0.60	18.36	27.35	25.09	16.70	40.00	-23.30
2	35.87	0.60	15.39	27.33	26.69	15.35	40.00	-24.65
3	52.39	0.80	8.46	27.28	27.20	9.18	40.00	-30.82
4	90.22	1.10	8.81	27.21	27.30	10.00	43.50	-33.50
5	245.95	1.65	12.08	26.55	26.52	13.70	46.00	-32.30
6	972.34	3.67	23.65	26.44	25.77	26.65	54.00	-27.35





Test mode:	Transmitting mode	Horizontal
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Condition: 3m HORIZONTAL

Job No. : 7592CR

Test mode: TX

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	30.00	0.60	19.00	27.36	25.15	17.39	40.00	-22.61
2	38.75	0.60	13.84	27.32	26.08	13.20	40.00	-26.80
3	94.10	1.14	8.93	27.21	27.79	10.65	43.50	-32.85
4	223.73	1.54	11.34	26.62	27.58	13.84	46.00	-32.16
5	460.73	2.45	17.25	27.50	27.24	19.44	46.00	-26.56
6 pp	909.67	3.61	23.28	26.71	25.88	26.06	46.00	-19.94



Above 1GHz									
Test mode:		Transmitting		Test channel:		Lowest		Remark:	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
3653.574	32.65	7.69	38.54	44.13	45.93	74	-28.07	Vertical	
4820.000	34.19	8.89	39.03	52.65	56.70	74	-17.30	Vertical	
6077.331	34.76	10.46	38.95	45.33	51.60	74	-22.40	Vertical	
7230.000	36.41	10.69	38.16	47.18	56.12	74	-17.88	Vertical	
9640.000	37.53	12.52	36.97	40.28	53.36	74	-20.64	Vertical	
11856.680	38.46	14.41	38.16	38.50	53.21	74	-20.79	Vertical	
3780.095	33.01	7.73	38.60	45.84	47.98	74	-26.02	Horizontal	
4820.000	34.19	8.89	39.03	55.02	59.07	74	-14.93	Horizontal	
6055.591	34.75	10.49	38.96	44.37	50.65	74	-23.35	Horizontal	
7230.000	36.41	10.69	38.16	47.51	56.45	74	-17.55	Horizontal	
9640.000	37.53	12.52	36.97	40.57	53.65	74	-20.35	Horizontal	
11856.680	38.46	14.41	38.16	38.40	53.11	74	-20.89	Horizontal	

Test mode:		Transmitting		Test channel:		Lowest		Remark:	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
4820.000	34.19	8.89	39.03	37.85	41.90	54	-12.10	Vertical	
7230.000	36.41	10.69	38.16	31.74	40.68	54	-13.32	Vertical	
4820.000	34.19	8.89	39.03	34.95	39.00	54	-15.00	Horizontal	
7230.000	36.41	10.69	38.16	31.74	40.68	54	-13.32	Horizontal	



Test mode:		Transmitting		Test channel:		Middle		Remark:		Peak
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
3582.269	32.44	7.66	38.51	44.23	45.82	74	-28.18	Vertical		
4890.000	34.31	8.99	39.06	52.42	56.66	74	-17.34	Vertical		
6077.331	34.76	10.46	38.95	45.01	51.28	74	-22.72	Vertical		
7335.000	36.36	10.73	38.05	44.43	53.47	74	-20.53	Vertical		
9780.000	37.56	12.59	36.91	40.13	53.37	74	-20.63	Vertical		
11439.320	38.05	13.95	37.75	39.04	53.29	74	-20.71	Vertical		
3786.875	33.03	7.74	38.60	45.71	47.88	74	-26.12	Horizontal		
4890.000	34.31	8.99	39.06	53.81	58.05	74	-15.95	Horizontal		
6055.591	34.75	10.49	38.96	44.87	51.15	74	-22.85	Horizontal		
7335.314	36.36	10.73	38.05	44.08	53.12	74	-20.88	Horizontal		
9780.000	37.56	12.59	36.91	40.71	53.95	74	-20.05	Horizontal		
11856.680	38.46	14.41	38.16	38.87	53.58	74	-20.42	Horizontal		

Test mode:		Transmitting		Test channel:		Middle		Remark:		Average
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4890.000	34.31	8.99	39.06	36.62	40.86	54	-13.14	Vertical		
4890.000	34.31	8.99	39.06	37.67	41.91	54	-12.09	Horizontal		



Test mode:		Transmitting		Test channel:		Highest		Remark:		Peak
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
3759.831	32.95	7.73	38.59	44.65	46.74	74	-27.26	Vertical		
4950.000	34.41	9.07	39.08	52.38	56.78	74	-17.22	Vertical		
5779.957	34.57	9.94	39.02	45.11	50.60	74	-23.40	Vertical		
7425.000	36.33	10.76	37.96	43.79	52.92	74	-21.08	Vertical		
9900.000	37.58	12.66	36.85	39.61	53.00	74	-21.00	Vertical		
12136.100	38.68	14.45	38.44	39.04	53.73	74	-20.27	Vertical		
3588.694	32.46	7.66	38.51	45.02	46.63	74	-27.37	Horizontal		
4950.000	34.41	9.07	39.08	54.57	58.97	74	-15.03	Horizontal		
6077.331	34.76	10.46	38.95	45.10	51.37	74	-22.63	Horizontal		
7425.000	36.33	10.76	37.96	43.45	52.58	74	-21.42	Horizontal		
9900.000	37.58	12.66	36.85	39.83	53.22	74	-20.78	Horizontal		
11625.290	38.23	14.16	37.94	39.26	53.71	74	-20.29	Horizontal		

Test mode:		Transmitting		Test channel:		Highest		Remark:		Average
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4950.000	34.41	9.07	39.08	37.40	41.80	54	-12.20	Vertical		
4950.000	34.41	9.07	39.08	35.20	39.60	54	-14.40	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 .
- 3) As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits.

### 6.3 Restricted bands around fundamental frequency

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205		
Test Method:	ANSI C63.10: 2013 Clause 6.10		
Test site:	Measurement Distance: 3m		
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)	Remark
	30MHz-88MHz	40.0	Quasi-peak Value
	88MHz-216MHz	43.5	Quasi-peak Value
	216MHz-960MHz	46.0	Quasi-peak Value
	960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	54.0	Average Value	
	74.0	Peak Value	
Test Setup:			

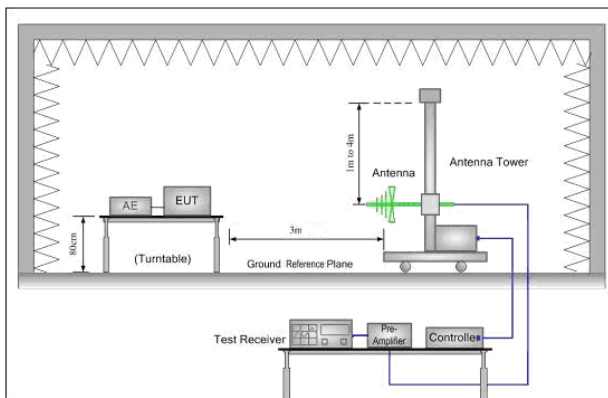


Figure 1. 30MHz to 1GHz

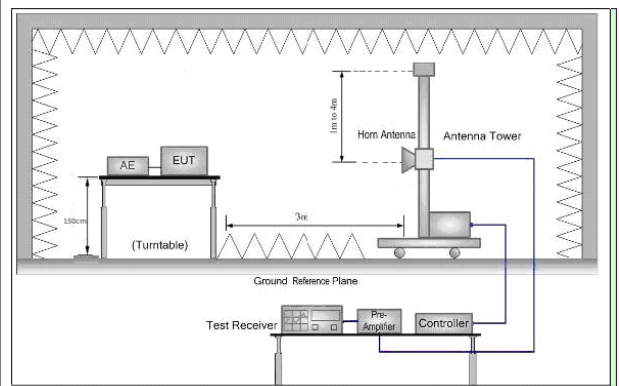


Figure 2. Above 1 GHz

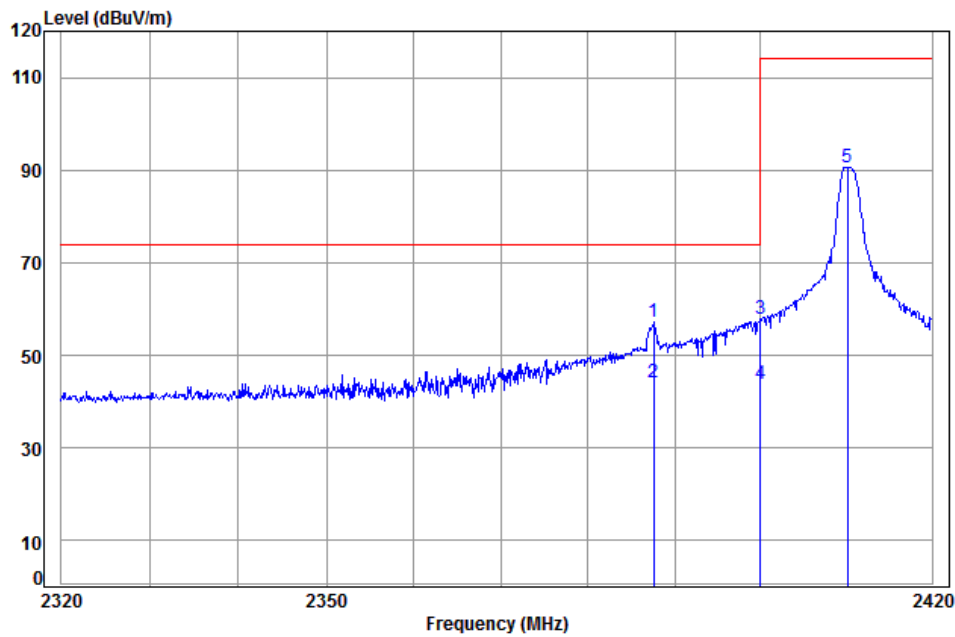


Test Procedure:	<ol style="list-style-type: none"><li>a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</li><li>b. For above 1GHz, the 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.</li><li>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.</li><li>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.</li><li>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.</li><li>f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li><li>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 channel</li><li>h. Test the EUT in the lowest channel , the Highest channel</li><li>i. 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.</li><li>j. Repeat above procedures until all frequencies measured was complete.</li></ol>
Instruments Used:	Refer to section 5.10 for details
Exploratory Test Mode:	Transmitting mode
Final Test Mode:	Pretest the EUT at Transmitting mode, found the Transmitting mode which it is worse case Only the worst case is recorded in the report.
Test Results:	Pass



**Band edge (Radiated Emission)**

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

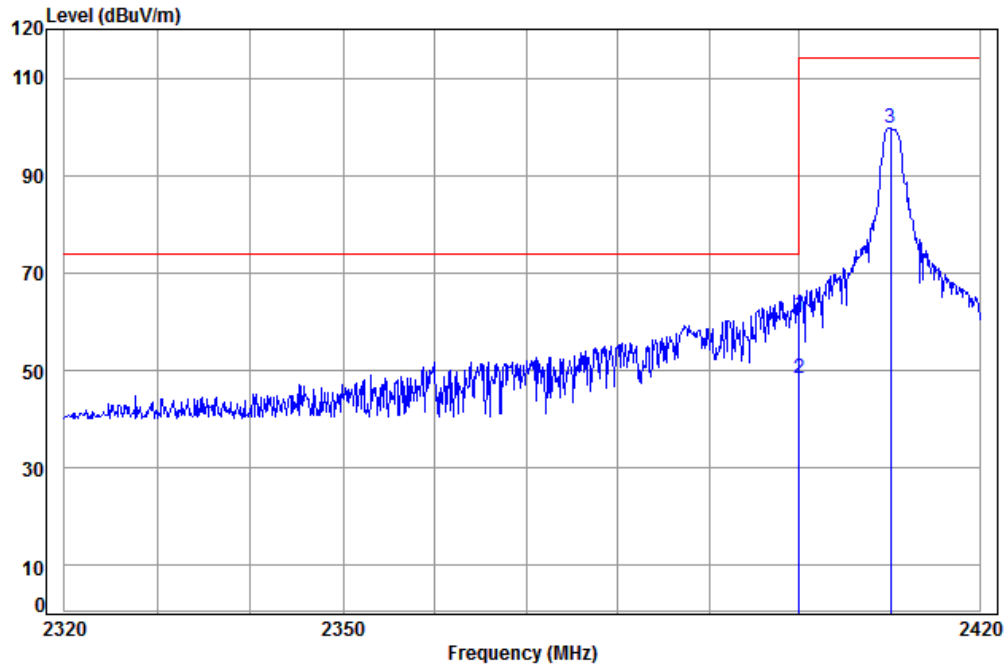
Job No: : 7592CR

Mode: : 2410 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2387.540	5.34	29.07	38.14	60.87	57.14	74.00	-16.86	
2	pp 2387.540	5.34	29.07	38.14	47.74	44.01	54.00	-9.99	Average
3	2400.000	5.34	29.11	38.14	61.43	57.74	74.00	-16.26	
4	2400.000	5.34	29.11	38.14	47.57	43.88	54.00	-10.12	Average
5	2410.114	5.35	29.14	38.15	94.32	90.66	114.00	-23.34	



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

Job No: : 7592CR

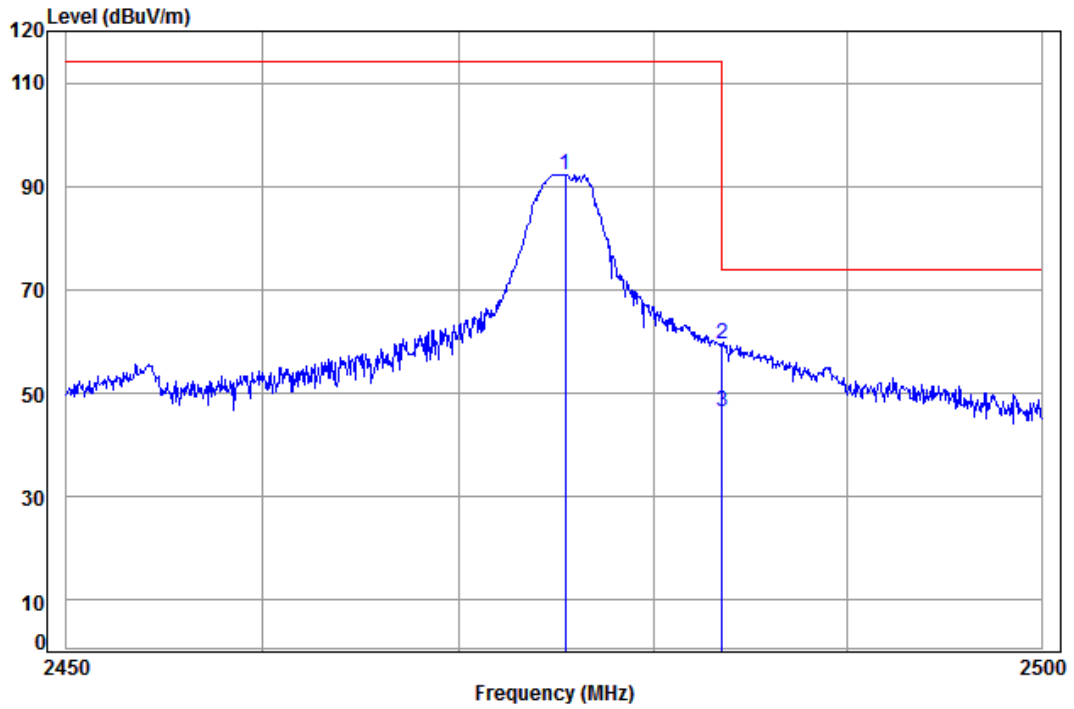
Mode: : 2410 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2400.000	5.34	29.11	38.14	65.13	61.44	74.00	-12.56	
2	pp 2400.000	5.34	29.11	38.14	51.93	48.24	54.00	-5.76	Average
3	2410.114	5.35	29.14	38.15	103.29	99.63	114.00	-14.37	





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

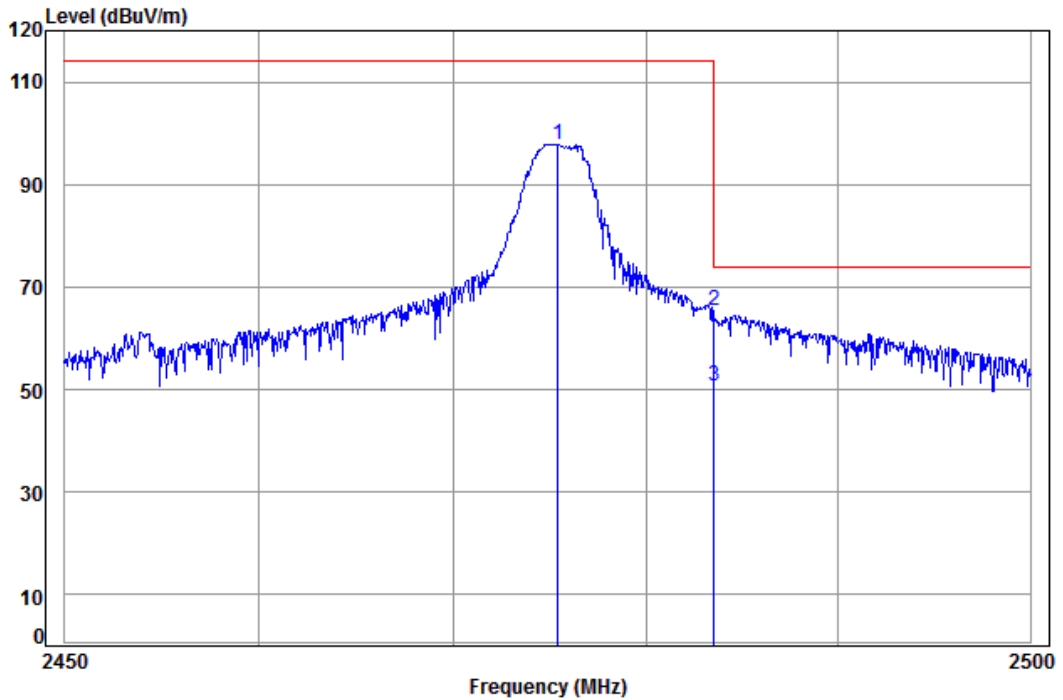
Job No: : 7592CR

Mode: : 2475 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2475.474	5.40	29.33	38.15	95.75	92.33	114.00	-21.67	
2	2483.500	5.41	29.35	38.15	63.01	59.62	74.00	-14.38	
3	pp 2483.500	5.41	29.35	38.15	49.96	46.57	54.00	-7.43	Average



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

Job No: : 7592CR

Mode: : 2475 Band edge

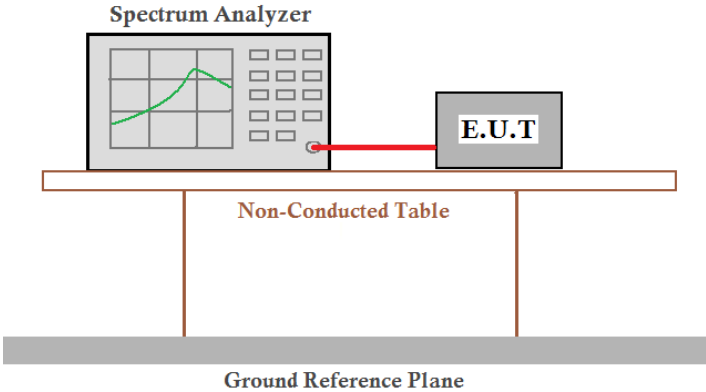
	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	2475.424	5.40	29.33	38.15	101.28	97.86	114.00	-16.14
2	2483.500	5.41	29.35	38.15	68.72	65.33	74.00	-8.67
3 pp	2483.500	5.41	29.35	38.15	54.12	50.73	54.00	-3.27 Average

**Note:**

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

$$\text{Final Test Level} = \text{Receiver Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Preamplifier Factor}$$

### 6.4 20dB Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.215
Test Method:	ANSI C63.10:2013 Clause 6.9
Test Setup:	
Instruments Used:	Refer to section 5.10 for details
Test mode:	Transmitting mode
Limit:	N/A
Test Results:	Pass

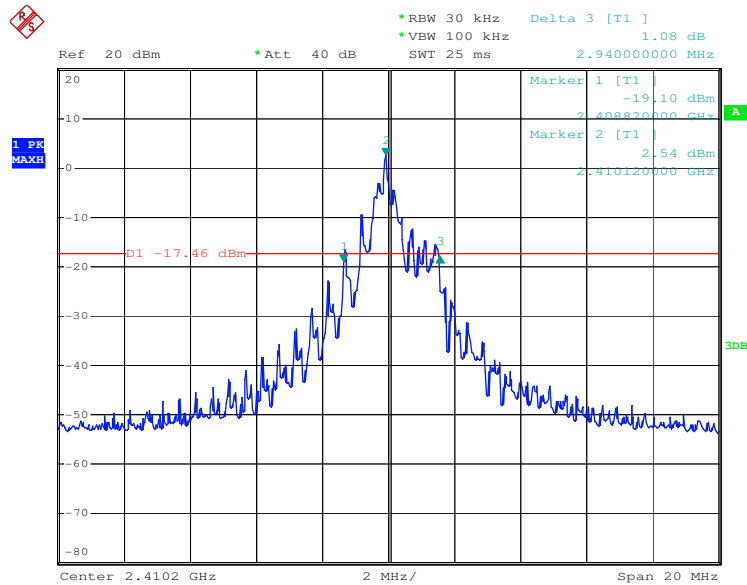
### Measurement Data

Test channel	20dB bandwidth (MHz)	Results
Lowest	2.94	Pass
Middle	2.28	Pass
Highest	2.08	Pass

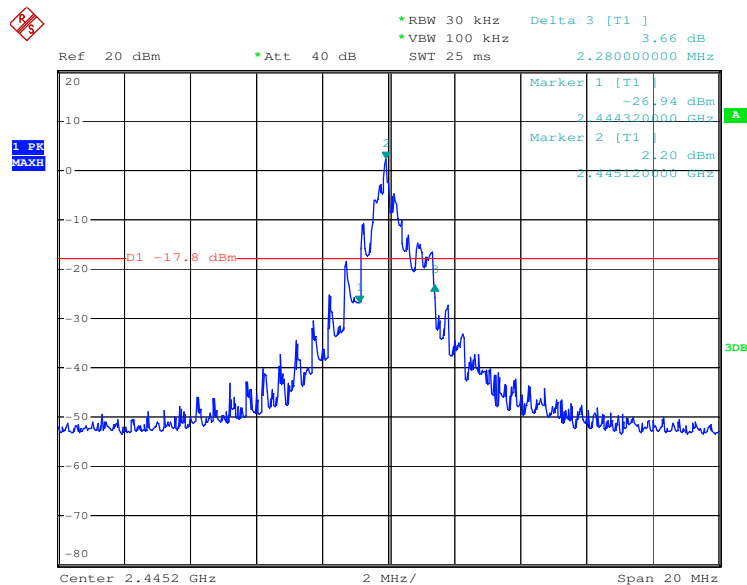


Test plot as follows:

Test channel:	Lowest
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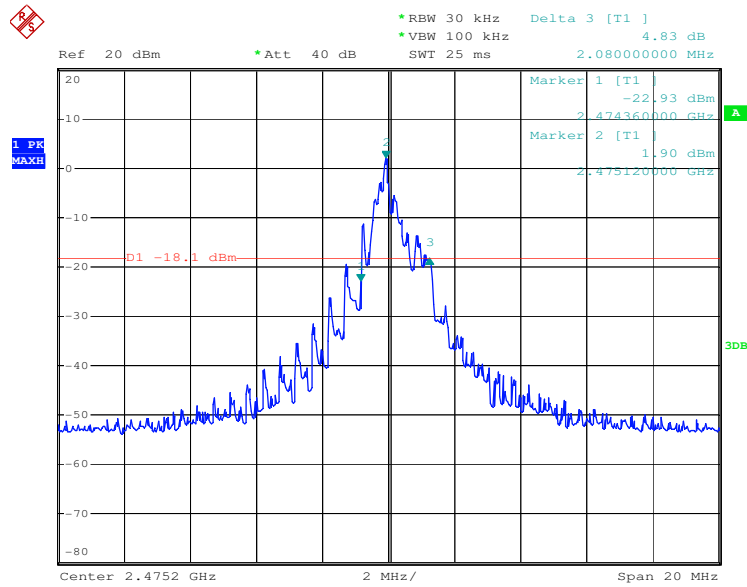


Test channel:	Middle
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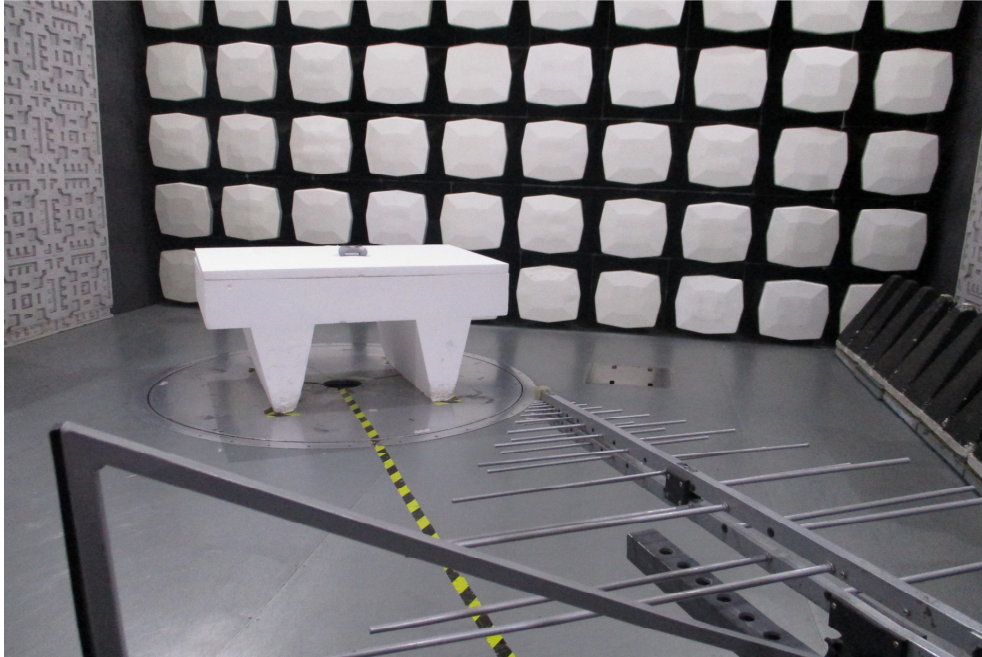
Test channel: Highest



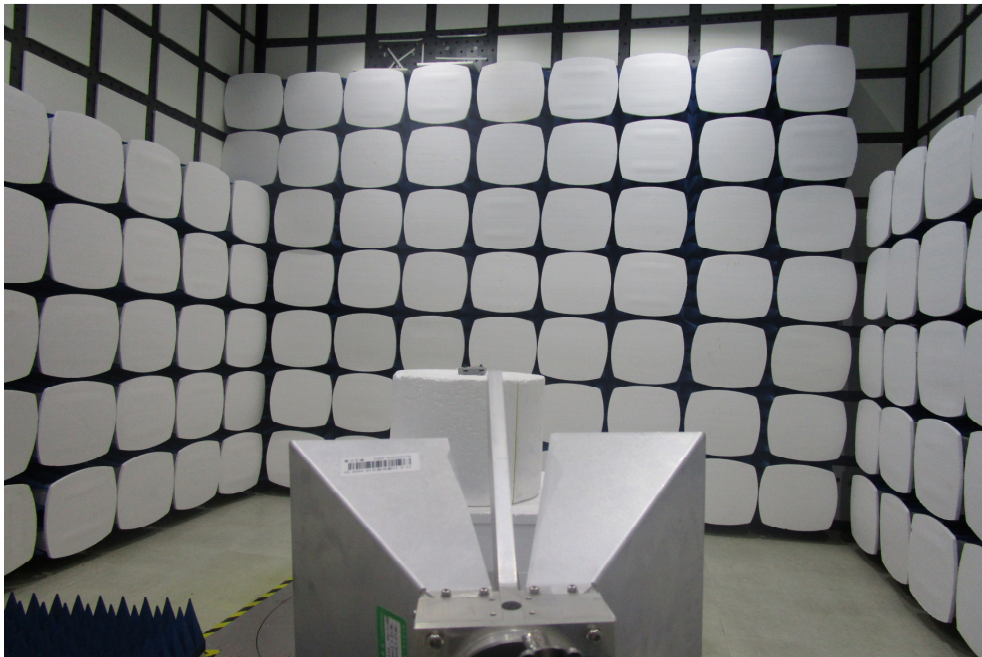
## 7 Photographs

(Test model No.:COD-QDR-MQ27)

### 7.1 Radiated Emission Test Setup



### 7.2 Radiated Spurious Emission



### 7.3 EUT Constructional Details

Refer to Appendix A - Photographs of EUT Constructional Details for SZEM1609007592CR.