

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

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

Report No.: SZEM151100689301
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FCC REPORT

Application No. :

SZEM1511006893CR

Applicant:

Guangdong Cheerson Hobby Technology Co., Ltd.

Manufacturer:

Guangdong Cheerson Hobby Technology Co., Ltd.

Factory:

Guangdong Cheerson Hobby Technology Co., Ltd.

Product Name:

Display camera

Model No.(EUT):

C2

Add Model No.:

C1, C3, C4, C5, CX-32C, CX-32W, CX-32W-TX, CX-32S, CX-33C, CX-33W, CX-33W-TX, CX-33S, CX-35C, CX-35W, CX-35W-TX, CX-35S, CX-22, CX-22B, CX-22C

FCC ID:

2AD6LGC03245807

Standards:

47 CFR Part 15, Subpart C (2014)

Date of Receipt:

2015-11-11

Date of Test:

2015-11-13 to 2015-11-27

Date of Issue:

2015-12-11

Test Result:

PASS *

* 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		2015-12-11		Original

Authorized for issue by:			
Tested By		 (Bill Chen) /Project Engineer	2015-11-27
Prepared By		 (Link Liang) /Clerk	2015-12-11
Checked By		 (Eric Fu) /Reviewer	2015-12-11



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
AC Power Line Conducted Emission	47 CFR Part 15, Subpart C Section 15.207	ANSI C63.10 (2009)	PASS
Field Strength of the Fundamental Signal	47 CFR Part 15, Subpart C Section 15.249 (a)	ANSI C63.10 (2009)	PASS
Spurious Emissions	47 CFR Part 15, Subpart C Section 15.249 (a)/15.209	ANSI C63.10 (2009)	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15, Subpart C Section 15.249(a)/15.205	ANSI C63.10 (2009)	PASS
20dB Occupied Bandwidth	47 CFR Part 15, Subpart C Section 15.215 (c)	ANSI C63.10 (2009)	PASS

Model No.: C1, C2, C3, C4, C5, CX-32C, CX-32W, CX-32W-TX, CX-32S, CX-33C, CX-33W, CX-33W-TX, CX-33S, CX-35C, CX-35W, CX-35W-TX, CX-35S, CX-22, CX-22B, CX-22C

Only the model C2 was tested, since the circuitry design, PCB layout, electrical components used, internal wiring and functions were identical for all above models. Only different on model name.

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5 General Information

5.1 Client Information

Applicant:	Guangdong Cheerson Hobby Technology Co., Ltd.
Address of Applicant:	FENGXIN NO.2 ROAD&LAIMEI ROAD FENGXIN INDUSTRIAL ZONE CHENGHAI SHANTOU GUANGDONG PROVINCE CHINA
Manufacturer:	Guangdong Cheerson Hobby Technology Co., Ltd.
Address of Manufacturer:	FENGXIN NO.2 ROAD&LAIMEI ROAD FENGXIN INDUSTRIAL ZONE CHENGHAI SHANTOU GUANGDONG PROVINCE CHINA
Factory:	Guangdong Cheerson Hobby Technology Co., Ltd.
Address of Factory:	FENGXIN NO.2 ROAD&LAIMEI ROAD FENGXIN INDUSTRIAL ZONE CHENGHAI SHANTOU GUANGDONG PROVINCE CHINA

5.2 General Description of EUT

Name:	Display camera
Model No.:	C2
Frequency Range:	5733MHz
Modulation Type:	FM
Number of Channels:	1 Channel (The manufacturer declare that only one channel was used.)
Sample Type:	Portable production
Antenna Type:	Omni-directional copper pipe antenna
Antenna Gain:	3dBi
Power Supply:	DC 3.7V Rechargeable battery for TX

5.3 Test Environment and Mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1020 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 E&E Lab,
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)**

The 3m Semi-anechoic chambers and the 10m Semi-anechoic chambers 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-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

Conducted Emission						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)
1	Shielding Room	ZhongYu Electron	GB-88	SEL0042	2015-05-13	2016-05-13
2	LISN	Rohde & Schwarz	ENV216	SEL0152	2015-10-09	2016-10-09
3	LISN	ETS-LINDGREN	3816/2	SEL0021	2015-05-13	2016-05-13
4	8 Line ISN	Fischer Custom Communications Inc.	FCC-TLIS N-T8-02	SEL0162	2015-08-30	2016-08-30
5	4 Line ISN	Fischer Custom Communications Inc.	FCC-TLIS N-T4-02	SEL0163	2015-08-30	2016-08-30
6	2 Line ISN	Fischer Custom Communications Inc.	FCC-TLIS N-T2-02	SEL0164	2015-08-30	2016-08-30
7	EMI Test Receiver	Rohde & Schwarz	ESCI	SEL0022	2015-05-13	2016-05-13
8	Coaxial Cable	SGS	N/A	SEL0025	2015-05-13	2016-05-13
9	DC Power Supply	Zhao Xin	RXN-305D	SEL0117	2015-10-09	2016-10-09
10	Humidity/ Temperature Indicator	Shanghai Qixiang	ZJ1-2B	SEL0103	2015-10-24	2016-10-24
11	Barometer	Chang Chun	DYM3	SEL0088	2015-05-13	2016-05-13



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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	SEL0017	2015-05-13	2016-05-13
2	EMI Test Receiver	Agilent Technologies	N9038A	SEL0312	2015-09-16	2016-09-16
3	EMI Test software	AUDIX	E3	SEL0050	N/A	N/A
4	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0015	2014-11-15	2017-11-15
5	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0006	2015-10-17	2016-10-17
6	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEL0076	2014-11-24	2017-11-24
7	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	2015-05-13	2016-05-13
8	Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEL0168	2015-10-17	2016-10-17
9	Coaxial cable	SGS	N/A	SEL0027	2015-05-13	2016-05-13
10	Coaxial cable	SGS	N/A	SEL0189	2015-05-13	2016-05-13
11	Coaxial cable	SGS	N/A	SEL0121	2015-05-13	2016-05-13
12	Coaxial cable	SGS	N/A	SEL0178	2015-05-13	2016-05-13
13	Band filter	Amindeon	82346	SEL0094	2015-05-13	2016-05-13
14	Barometer	Chang Chun	DYM3	SEL0088	2015-05-13	2016-05-13
15	DC Power Supply	Zhao Xin	RXN-305D	SEL0117	2015-10-09	2016-10-09
16	Humidity/ Temperature Indicator	Shanghai Qixiang	ZJ1-2B	SEL0103	2015-10-24	2016-10-24
17	Signal Generator (10M-27GHz)	Rohde & Schwarz	SMR27	SEL0067	2015-05-13	2016-05-13
18	Loop Antenna	Beijing Daze	ZN30401	SEL0203	2015-05-13	2016-05-13



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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	Zhao Xin	RXN-305D	SEL0117	2015-10-09	2016-10-09
2	Humidity/ Temperature Indicator	HYGRO	ZJ1-2B	SEL0033	2015-10-24	2016-10-24
3	Spectrum Analyzer	Rohde & Schwarz	FSP	SEL0154	2015-10-17	2016-10-17
4	Coaxial cable	SGS	N/A	SEL0178	2015-05-13	2016-05-13
5	Coaxial cable	SGS	N/A	SEL0179	2015-05-13	2016-05-13
6	Barometer	ChangChun	DYM3	SEL0088	2015-05-13	2016-05-13
7	Signal Generator	Rohde & Schwarz	SML03	SEL0068	2015-04-25	2016-04-25
8	POWER METER	R & S	NRVS	SEL0144	2015-10-09	2016-10-09
9	Attenuator	Beijin feihang taida	TST-2-6dB	SEL0205	2015-04-25	2016-04-25

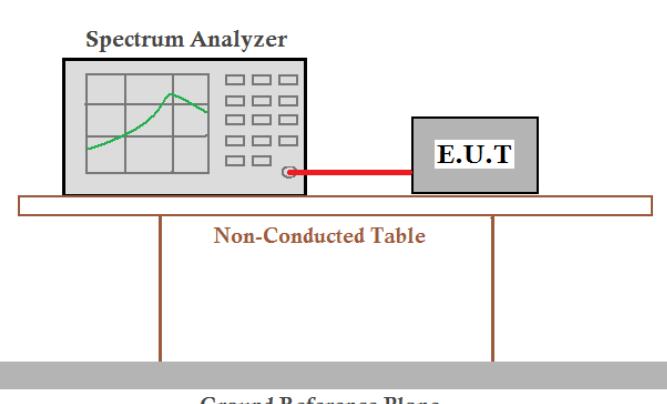
6 Test results and Measurement Data

6.1 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 3dBi.	

6.2 Field Strength of the fundamental signal and Spurious Emissions

6.2.1 Duty Cycle

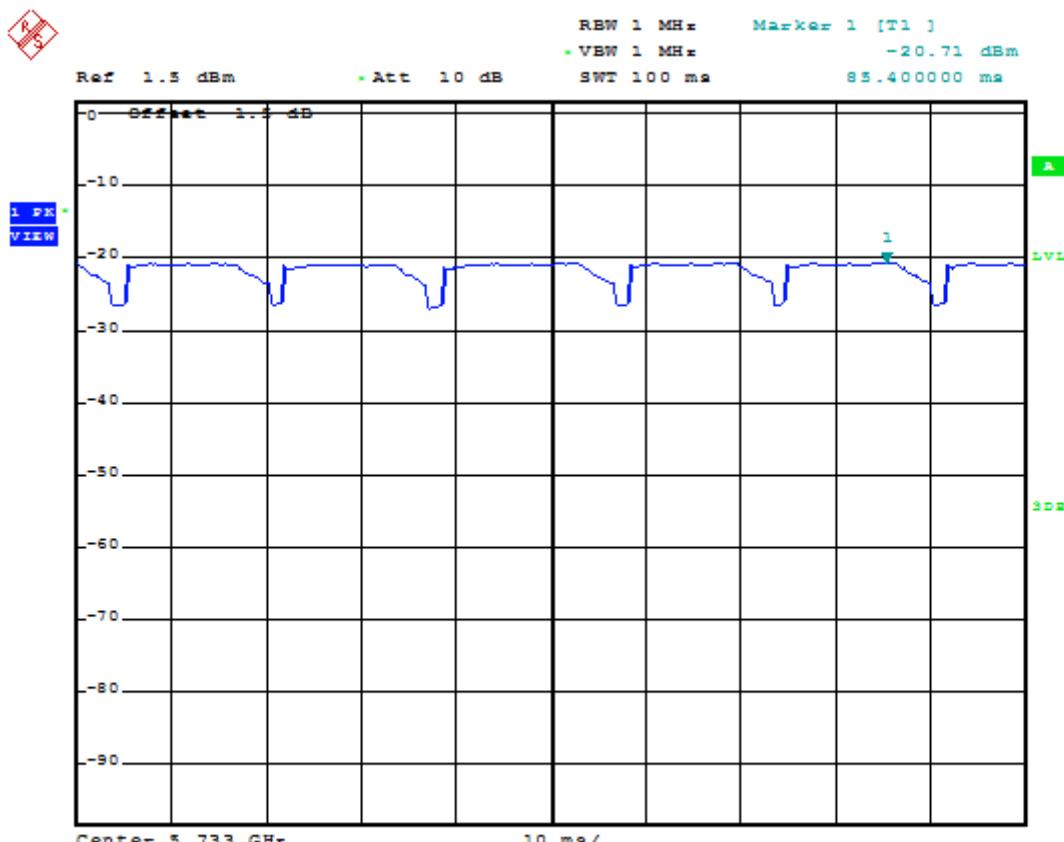
Test Requirement:	47 CFR Part 15C Section 15.35 (c)
Test Method:	ANSI C63.10:2009
Test Setup:	
Instruments Used:	Refer to section 5.10 for details
Limit:	N/A
Test Mode:	Transmitting mode
Test Results:	Pass

Measurement Data

Calculate Formula:	Average factor=20 log(Duty cycle)
	Duty cycle= T on time / T period
Test data:	Ton time =100 ms
	T period =100 ms
	Average value= Peak value+20 log(Duty cycle)



Test plot as follows:
Duty cycle numbers



6.2.2 Field Strength of the fundamental signal

Test Requirement:	47 CFR Part 15C Section 15.249				
Test Method:	ANSI C63.10: 2009				
Test Site:	Measurement Distance: 3m (Fully Anechoic Chamber)				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	Above 1GHz	Peak	10MHz	10MHz	Peak
Limit: (Field strength of the fundamental signal)	Frequency	Limit (dBuV/m @3m)		Remark	
	5725-5875 MHz	94.0		Average Value	
		114.0		Peak Value	
Test Setup:					

Figure 1. Above 1 GHz

Test Procedure:	<ol style="list-style-type: none"> 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. 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. 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.
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	<p>g. Test the EUT in the lowest channel, the middle channel, the Highest channel</p> <p>h. 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.</p> <p>i. Repeat above procedures until all frequencies measured was complete.</p>
Instruments Used:	Refer to section 5.10 for details
Test Mode:	Transmitting mode
Test Results:	Pass

Measurement Data

6.2.2.1 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
5733	12.02	34.03	38.92	102.6	92.93	114	-21.07	Horizontal
5733	12.02	34.23	38.92	92.15	82.15	114	-31.85	Vertical

Remark:

1. Average value= Peak value+20 log(Duty cycle), as the duty cycle is 100% so PK value= Average value.
2. As the peak values are less than average limite, so the average value doesn't recorded in the report.
3. The max 6dB bandwidth is 6.92MHz when the EUT recording with different images, so the bandwidth was used for the test.

6.2.3 Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.249 and 15.209				
Test Method:	ANSI C63.10: 2009				
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.				

Test Setup:	

Figure 1. Below 30MHz

Figure 2. 30MHz to 1GHz

Figure 3. Above 1 GHz

Test Procedure:

- j. 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.
- k. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- l. 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.
- m. 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.
- n. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- o. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- p. Test the EUT in the lowest channel, the middle channel, the Highest channel
- q. The radiation measurements are performed in X, Y, Z axis positioning for



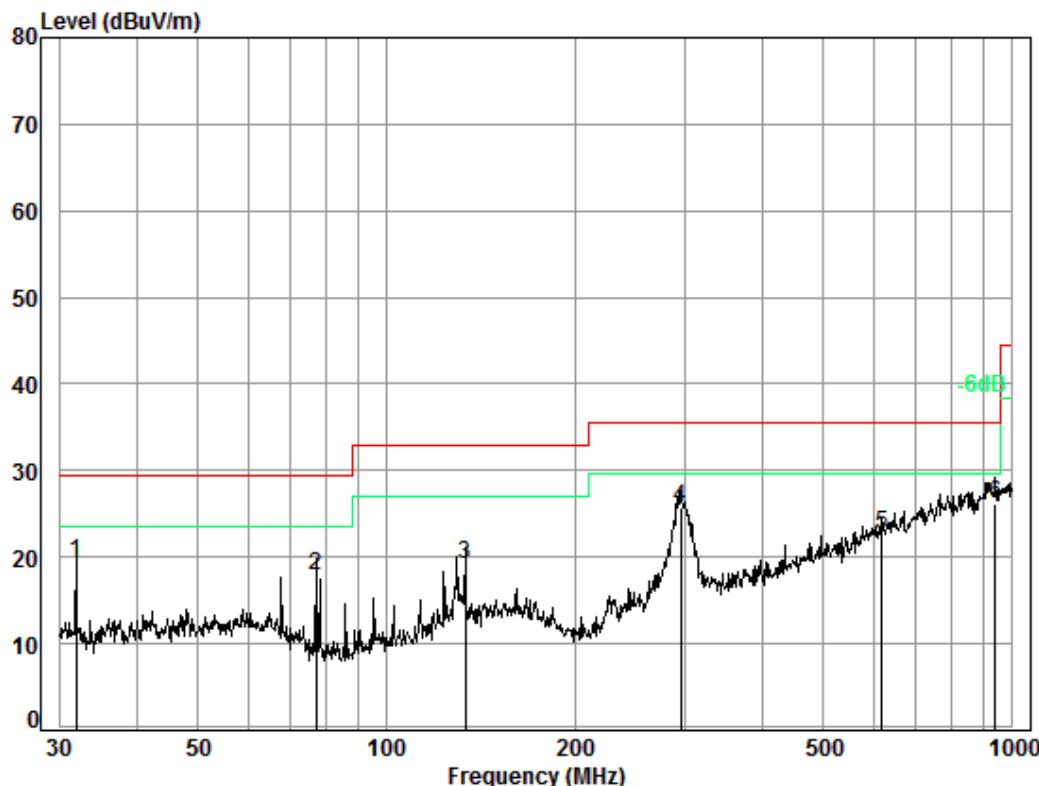
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	Transmitting mode, And found the X axis positioning which it is worse case. r. Repeat above procedures until all frequencies measured was complete.
Instruments Used:	Refer to section 5.10 for details
Test Mode:	Transmitting mode
Test Results:	Pass

Measurement Data**6.2.3.1 Spurious Emissions**

30MHz~1GHz (QP)		
Test mode:	Transmitting	Vertical



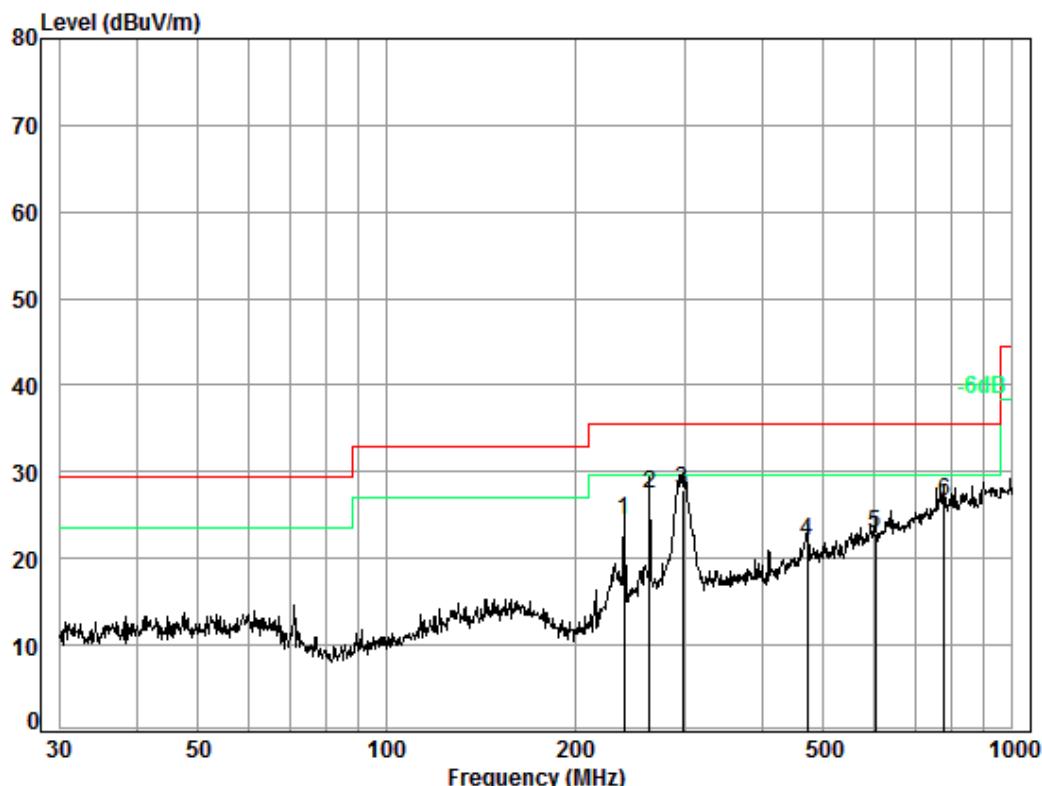
Condition: 10m Vertical

Job No. : 6893CR

Test Mode: Tx

Freq	Cable	Ant	Preamp	Read	Limit	Over		
	Loss	Factor	Factor	Level				
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	31.84	6.70	11.50	32.97	34.11	19.34	29.50	-10.16
2	77.05	7.04	8.68	32.88	35.10	17.94	29.50	-11.56
3	133.62	7.37	12.17	32.76	32.37	19.15	33.00	-13.85
4	295.15	8.04	12.97	32.60	37.25	25.66	35.60	-9.94
5	620.71	8.95	19.62	32.60	26.70	22.67	35.60	-12.93
6 pp	942.13	9.56	23.87	32.50	25.18	26.11	35.60	-9.49

Test mode:	Transmitting	Horizontal
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Condition: 10m Horizontal

Job No. : 6893CR

Test Mode: Tx

Freq	Cable	Ant	Preamp	Read	Limit	Over	Over	
	Loss	Factor	Factor	Level				
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	239.99	7.80	11.35	32.66	37.87	24.36	35.60	-11.24
2	263.82	7.92	12.02	32.63	40.06	27.37	35.60	-8.23
3 pp	297.22	8.04	13.01	32.60	39.41	27.86	35.60	-7.74
4	470.52	8.48	16.96	32.60	29.12	21.96	35.60	-13.64
5	605.66	8.91	19.57	32.60	27.00	22.88	35.60	-12.72
6	779.61	9.25	22.00	32.60	28.00	26.65	35.60	-8.95

Above 1GHz								
Test mode:	Transmitting		Test channel:	5733		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
7678.832	16.11	36.04	37.44	32.97	47.68	74	-26.32	Vertical
8328.564	15.86	36.40	37.27	33.33	48.32	74	-25.68	Vertical
9899.929	17.70	37.20	35.96	32.73	51.67	74	-22.33	Vertical
11466.000	19.72	37.44	36.66	33.03	53.53	74	-20.47	Vertical
13700.360	22.89	38.90	39.20	28.27	50.86	74	-23.14	Vertical
17199.000	29.00	43.00	37.03	18.97	53.94	74	-20.06	Horizontal
7664.340	16.13	36.03	37.44	32.68	47.40	74	-26.60	Horizontal
8328.564	15.86	36.40	37.27	32.25	47.24	74	-26.76	Horizontal
10031.700	17.98	37.25	35.84	31.83	51.22	74	-22.78	Horizontal
11466.000	19.71	37.43	36.65	33.46	53.95	74	-20.05	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 40GHz, 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) Average value= Peak value+20 log(Duty cycle), as the duty cycle is 100% so PK value= Average value.
- 4) As the peak values are less than average limite, so the average value doesn't recorded in the report.
- 5) The max 6dB bandwidth is 6.92MHz when the EUT recording with different images, so the bandwidth was used for the test.



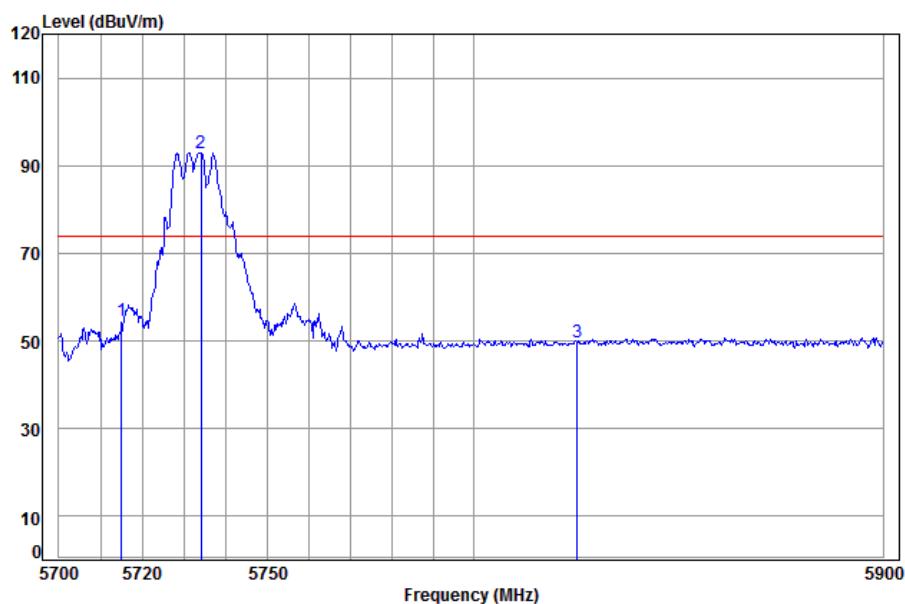
6.3 Restricted bands around fundamental frequency

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205																					
Test Method:	ANSI C63.10: 2009																					
Test site:	Measurement Distance: 3m (Fully Anechoic Chamber)																					
Limit(band edge):	<p>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.</p> <table border="1"> <thead> <tr> <th>Frequency</th> <th>Limit (dB_{UV}/m @3m)</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>30MHz-88MHz</td> <td>40.0</td> <td>Quasi-peak Value</td> </tr> <tr> <td>88MHz-216MHz</td> <td>43.5</td> <td>Quasi-peak Value</td> </tr> <tr> <td>216MHz-960MHz</td> <td>46.0</td> <td>Quasi-peak Value</td> </tr> <tr> <td>960MHz-1GHz</td> <td>54.0</td> <td>Quasi-peak Value</td> </tr> <tr> <td rowspan="2">Above 1GHz</td><td>54.0</td><td>Average Value</td> </tr> <tr> <td>74.0</td><td>Peak Value</td> </tr> </tbody> </table>		Frequency	Limit (dB _{UV} /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
Frequency	Limit (dB _{UV} /m @3m)	Remark																				
30MHz-88MHz	40.0	Quasi-peak Value																				
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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:	<ul style="list-style-type: none">a. 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. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.c. 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.d. 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.e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.f. 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 channelg. Test the EUT in the lowest channel , the Highest channelh. 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..i. Repeat above procedures until all frequencies measured was complete.
Instruments Used:	Refer to section 5.10 for details
Test Mode:	Transmitting mode (Normal mode,white image,black image we have tested , the test results did not change)
Test Results:	Pass

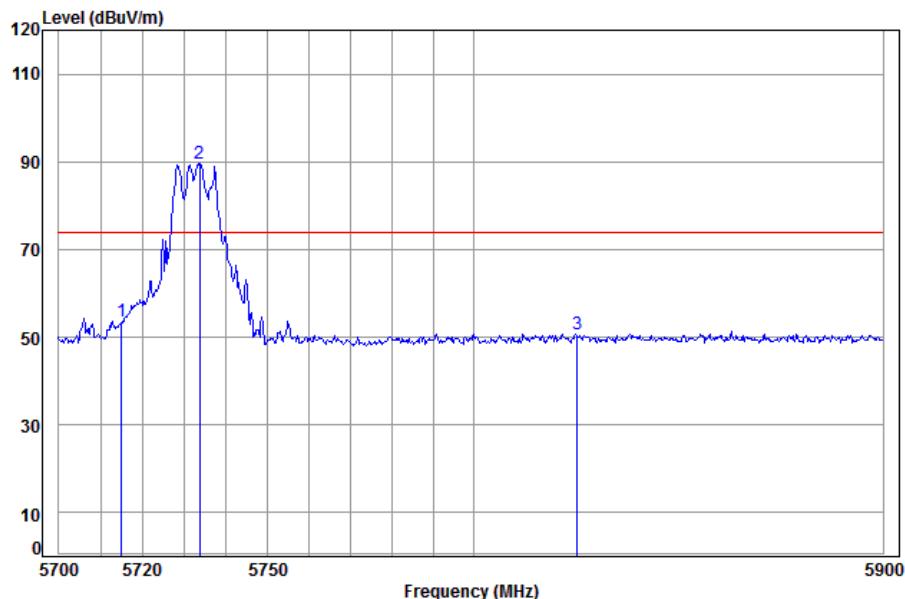
Band edge (Radiated Emission)

Condition: FCC PART C 249 PK 3m Horizontal

Job No: : 6893CR

Mode: : Band edge

		Cable Freq	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		5715.00	12.01	34.24	38.91	36.88	54.71	74.00	-19.29
2	pp	5734.11	12.02	34.23	38.92	75.17	92.93	74.00	18.93
3		5825.00	12.09	34.26	38.93	32.07	49.64	74.00	-24.36



Condition: FCC PART C 249 PK 3m Vertical

Job No: : 6893CR

Mode: : Band edge

Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level		Limit Line	Over Limit	
				dB	dB/m	dB	dBuV	dBuV/m
1 pk	5715.00	12.01	34.24	38.91	46.13	53.47	74.00	-20.53
2 pp	5733.71	12.02	34.23	38.92	82.15	89.48	74.00	15.48
3	5825.00	12.09	34.26	38.93	43.34	50.76	74.00	-23.24

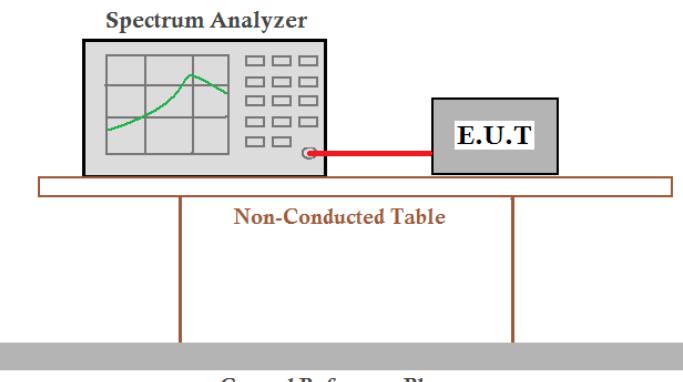
Note:

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) Average value= Peak value+20 log(Duty cycle), as the duty cycle is 100% so PK value= Average value.
- 3) As the peak values are less than average limit, so the average value doesn't recorded in the report.
- 4) The max 6dB bandwidth is 6.92MHz when the EUT recording with different images, so the bandwidth was used for the test.

6.4 20dB Bandwidth & 6dB Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.215
Test Method:	ANSI C63.10:2009
Test Setup:	
Instruments Used:	Refer to section 5.10 for details
Test mode:	Transmitting mode (Normal mode, white image, black image we have tested, the test results did not change)
Limit:	N/A
Test Results:	Pass

Measurement Data

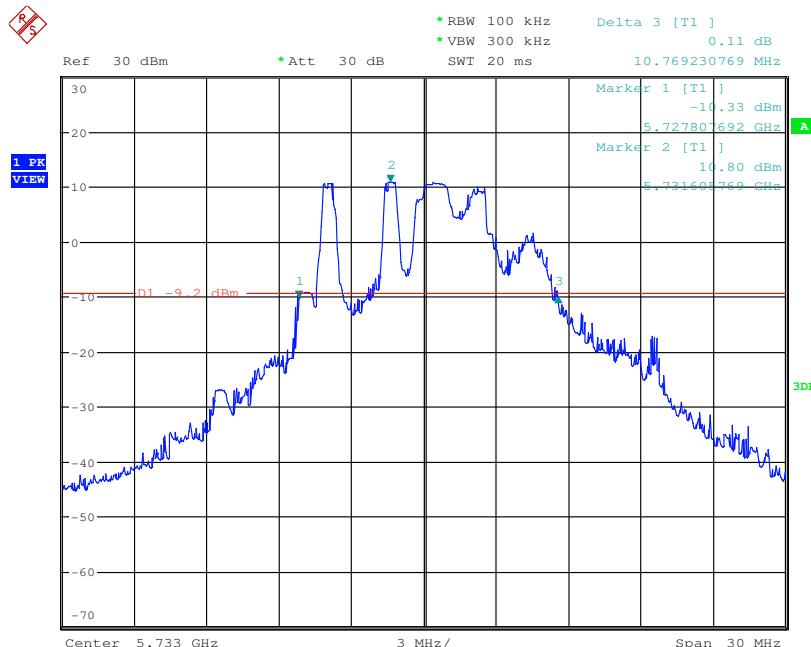
Test channel	20dB bandwidth (MHz)	6dB bandwidth (MHz)	Results
5773	10.769	6.92	Pass

Remark:

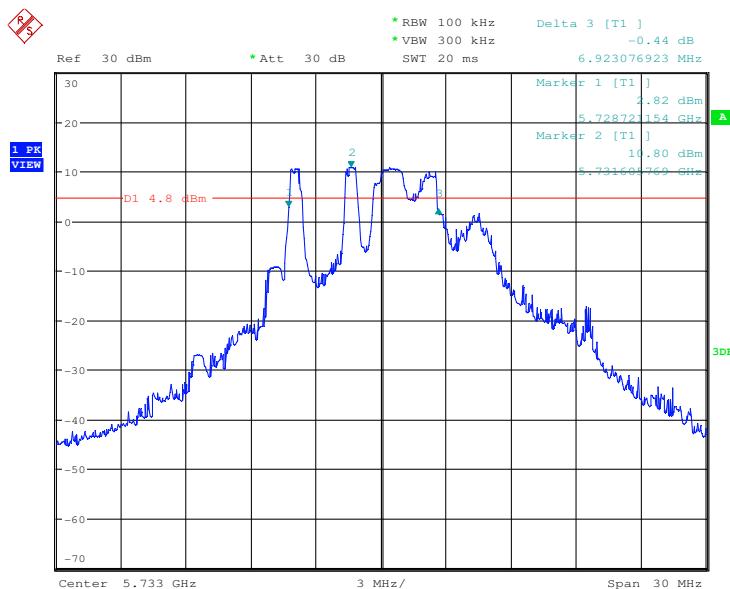
- 1) The max 20dB bandwidth is 10.769MHz when the EUT recording with different images, so only the bandwidth was recorded in the report.
- 2) The max 6dB bandwidth is 6.92MHz when the EUT recording with different images, so only the bandwidth was recorded in the report.

Test plot as follows:

20dB bandwidth



6dB bandwidth

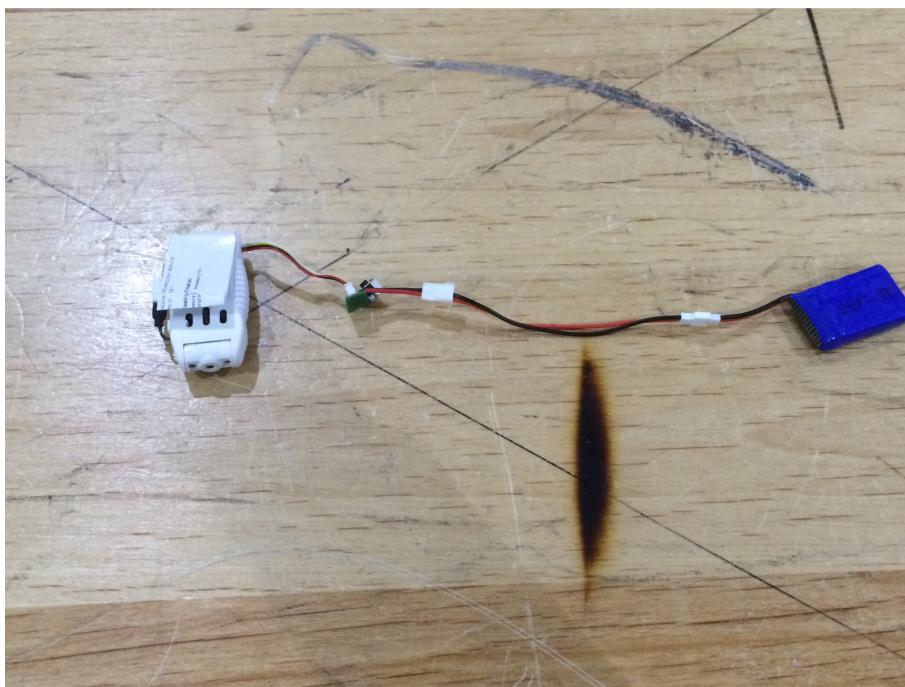


7 Photographs

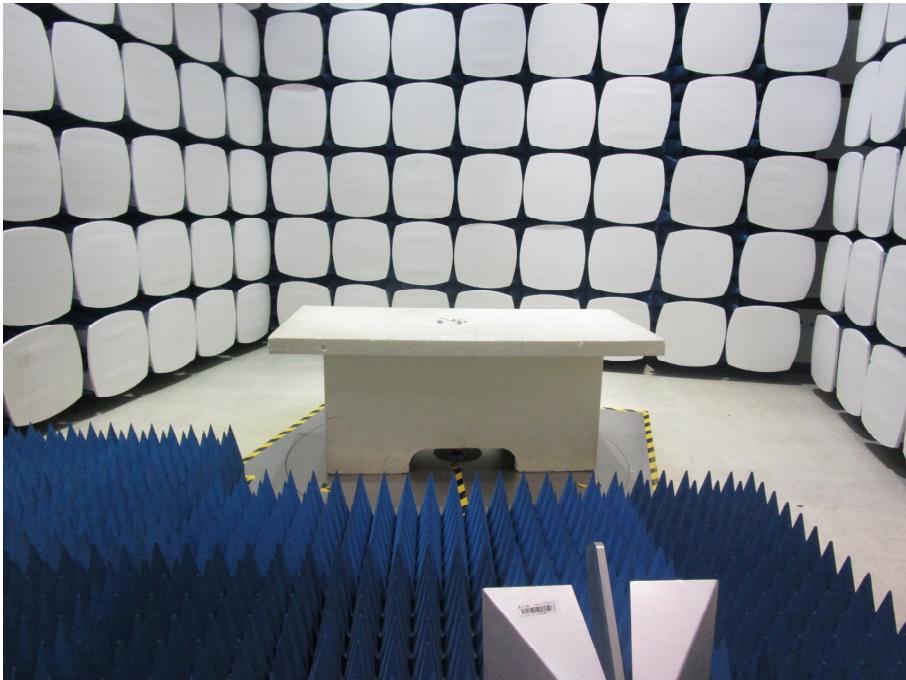
Test model No.: C2

7.1 Radiated Emission Test Setup

Tx SE L



Tx SE H



7.2 EUT Constructional Details

Refer to Appendix A - Photographs of EUT Constructional Details for SZEM1511006893CR.