FCC RADIO TEST REPORT
FCC ID: EEX-TINY-W3

Product：	TINY Camera
Trade Name：	SPYPOINT
Model Name：	TINY-W^{3}, TINY-W^{2S}, TINY^{3}, TINY-7, TINY-HD
Serial Model：	N/A
Report No.：	NTEK-2013NT0705027F

Prepared for

G.G.Telecom

120 J-Aurèle-Roux Victoriaville, Quebec Canada, G6T 0N5

Prepared by

Shenzhen NTEK Testing Technology Co., Ltd.

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Website:www.NTEK.org.cn

TEST RESULT CERTIFICATION

Applicant's name ..... :	G.G.Telecom
Address ..... :	120 J-Aurèle-Roux Victoriaville, Quebec Canada, G6T 0N5
Manufacture's Name ..... :	G.G.Telecom
Address ..... :	120 J-Aurèle-Roux Victoriaville, Quebec Canada, G6T 0N5

Product description

Product name ..... :	TINY Camera
Model and/or type reference :	TINY-W^{3}, TINY-W^{2S}, TINY^{3}, TINY-7, TINY-HD
Serial Model :	N/A
Rating(s) ..... :	DC 9V from battery or DC 12V from adapter with AC 120V/60Hz
Standards ..... :	FCC Part15.249
Test procedure	ANSI C63.4-2003

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test ..... :	
Date (s) of performance of tests ..... :	05 July. 2013 ~11 July. 2013
Date of Issue ..... :	12 July. 2013
Test Result ..... :	**Pass**

Testing Engineer : Apple Huang

(Apple Huang)

Technical Manager : Tom Zhang

(Tom Zhang)

Authorized Signatory : Bovey Yang

(Bovey Yang)

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15, Subpart C (15.249)			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	Pass	
15.203	Antenna Requirement	Pass	
15.249	Radiated Spurious Emission	Pass	
15.205	Band Edge Emission	Pass	
15.249	Occupied Bandwidth	Pass	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

1.1 TEST FACILITY

NTEK Testing Technology Co., Ltd
Add. : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China.
FCC Registered No.: 238937 IC Registered No.:9270A-1
CNAS Registration No.:L5516

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ± U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

<table>
<tr><td>Equipment</td><td>TINY Camera</td></tr>
<tr><td>Trade Name</td><td>SPYPOINT</td></tr>
<tr><td>Model Name</td><td>TINY-W^{3}, TINY-W^{2S}, TINY^{3}, TINY-7, TINY-HD</td></tr>
<tr><td>Serial Model</td><td>N/A</td></tr>
<tr><td>Model Difference</td><td>All the model are the same circuit and RF module, except the model name, test mode is TINY-W^{3}.</td></tr>
<tr><td>Product Description</td><td>The EUT is a TINY Camera

<table>
<tr><td>Operation Frequency:</td><td>2402~2477MHz</td></tr>
<tr><td>Modulation Type:</td><td>GFSK</td></tr>
<tr><td>Antenna Designation:</td><td>Reverse SMA connector</td></tr>
<tr><td>Antenna Gain(Peak)</td><td>2.0 dBi</td></tr>
<tr><td>EIRP</td><td>88.39 dbuv/m@3m</td></tr>
<tr><td colspan="2">Note: This test report only 2402~2477MHz transmitter, the other radio test see the other test report.</td></tr>
</table>

<table>
<tr><td>Product Type</td><td>Low Power Communication Device Transmitter</td></tr>
<tr><td>Operation Frequency:</td><td>433.92MHz</td></tr>
<tr><td>Modulation Type:</td><td>ASK</td></tr>
<tr><td>Number Of Channel</td><td>1CH.</td></tr>
<tr><td>Antenna Designation:</td><td>internal Antenna</td></tr>
<tr><td>Antenna Gain(Peak)</td><td>1dBi</td></tr>
<tr><td>Output Power:</td><td>72.65 dBuV/m (AV Max.)</td></tr>
<tr><td colspan="2">Note: This test report only 2402~2477MHz transmitter, the other radio test see the other test report.</td></tr>
</table>

Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.

Note: This radio test report only applies for transmitter 2.4GHz, For other transmitters is tested and reported in another radio test report.</td></tr>
<tr><td>Channel List</td><td>Please refer to the Note 2.</td></tr>
<tr><td>Adapter</td><td>Output: DC 12V</td></tr>
<tr><td>Battery</td><td>DC 9V</td></tr>
</table>

Note:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the User's Manual.

2.

Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2402	09	2442
02	2407	10	2447
03	2412	11	2452
04	2417	12	2457
05	2422	13	2462
06	2427	14	2467
07	2432	15	2472
08	2437	16	2477

3.

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	Reverse SMA connector	NA	2.0	Antenna

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	CH1
Mode 2	CH9
Mode 3	CH16
Mode 4	Link Mode

For Conducted Emission	
Final Test Mode	Description
Mode 4	Link Mode

For Radiated Emission	
Final Test Mode	Description
Mode 1	CH1
Mode 2	CH9
Mode 3	CH16

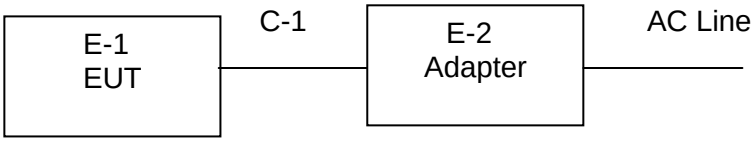
Note:

(1) The measurements are performed at the highest, middle, lowest available channels.

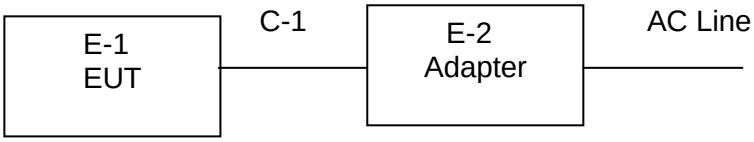
(2) The EUT use new battery.

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted Emission Test



Radiated Spurious Emission Test



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	TINY Camera	N/A	TINY-W^3	N/A	EUT
E-2	Adapter	N/A	TLP-12	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	1.2m	

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4407B	MY45108040	2012.07.06	Jul. 05. 2014	1 year
2	Test Receiver	R&S	ESPI	101318	2012.07.06	Jul. 05. 2014	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2012.07.06	Jul. 05. 2014	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2012.07.06	Jul. 05. 2014	1 year
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	2012.07.06	Jul. 05. 2014	1 year
6	Horn Antenna	EM	EM-AH-10180	2011071402	2012.07.06	Jul. 05. 2014	1 year
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2012.07.06	Jul. 05. 2014	1 year
8	Amplifier	EM	EM-30180	060538	2012.07.06	Jul. 05. 2014	1 year
9	Loop Antenna	ARA	PLA-1030/B	1029	2012.07.06	Jul. 05. 2014	1 year
10	Power Meter	R&S	NRVS	100696	2012.07.06	Jul. 05. 2014	1 year
11	Power Sensor	R&S	URV5-Z4	0395.1619.05	2012.07.06	Jul. 05. 2014	1 year

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2012.07.06	Jul. 05. 2014	1 year
2	LISN	R&S	ENV216	101313	2012.07.06	Jul. 05. 2014	1 year
3	LISN	EMCO	3816/2	00042990	2012.07.06	Jul. 05. 2014	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2012.07.06	Jul. 05. 2014	1 year
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	2012.07.06	Jul. 05. 2014	1 year
6	Absorbing clamp	R&S	MOS-21	100423	2012.07.06	Jul. 05. 2014	1 year

3. ANTENNA REQUIREMENT

3.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: 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.

3.2 EUT ANTENNA

The antennas used in this product are detachable antenna, using a reverse SMA connector (Provided by non-manufacturers will use the product can not work), The maximum Gain of the antenna is 2dBi, fulfill the requirement of this section.

3.3 CONDUCTED EMISSION MEASUREMENT

3.3.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5			66 - 56 *	56 - 46 *	CISPR
0.50 -5.0			56.00	46.00	CISPR
5.0 -30.0			60.00	50.00	CISPR

0.15 -0.5			66 - 56 *	56 - 46 *	LP002.
0.50 -5.0			56.00	46.00	LP002.
5.0 -30.0			60.00	50.00	LP002.

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

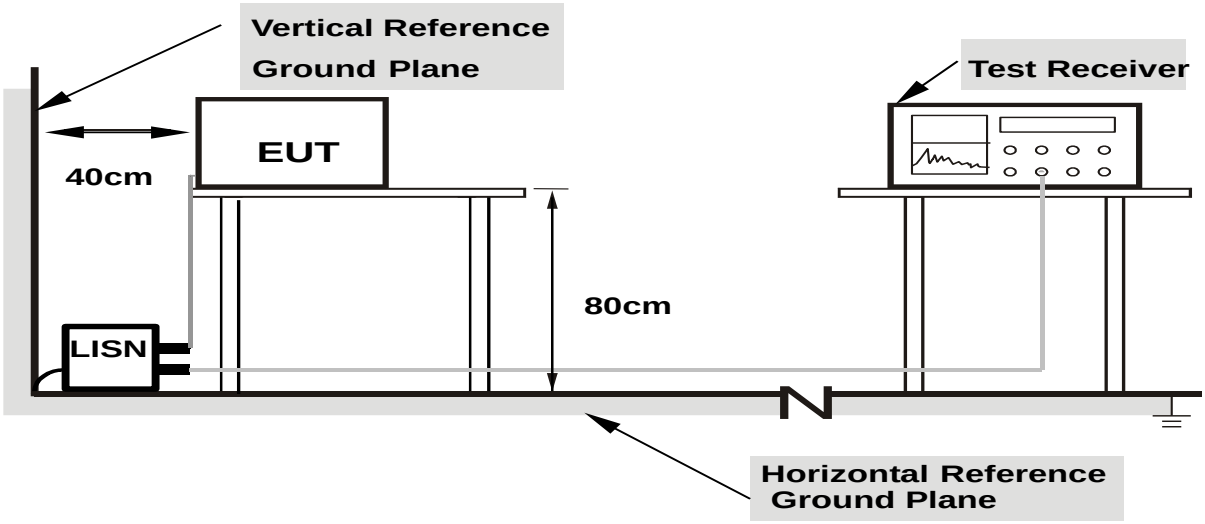
3.3.2 TEST PROCEDURE

a. The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.3.3 DEVIATION FROM TEST STANDARD

No deviation

3.3.4 TEST SETUP



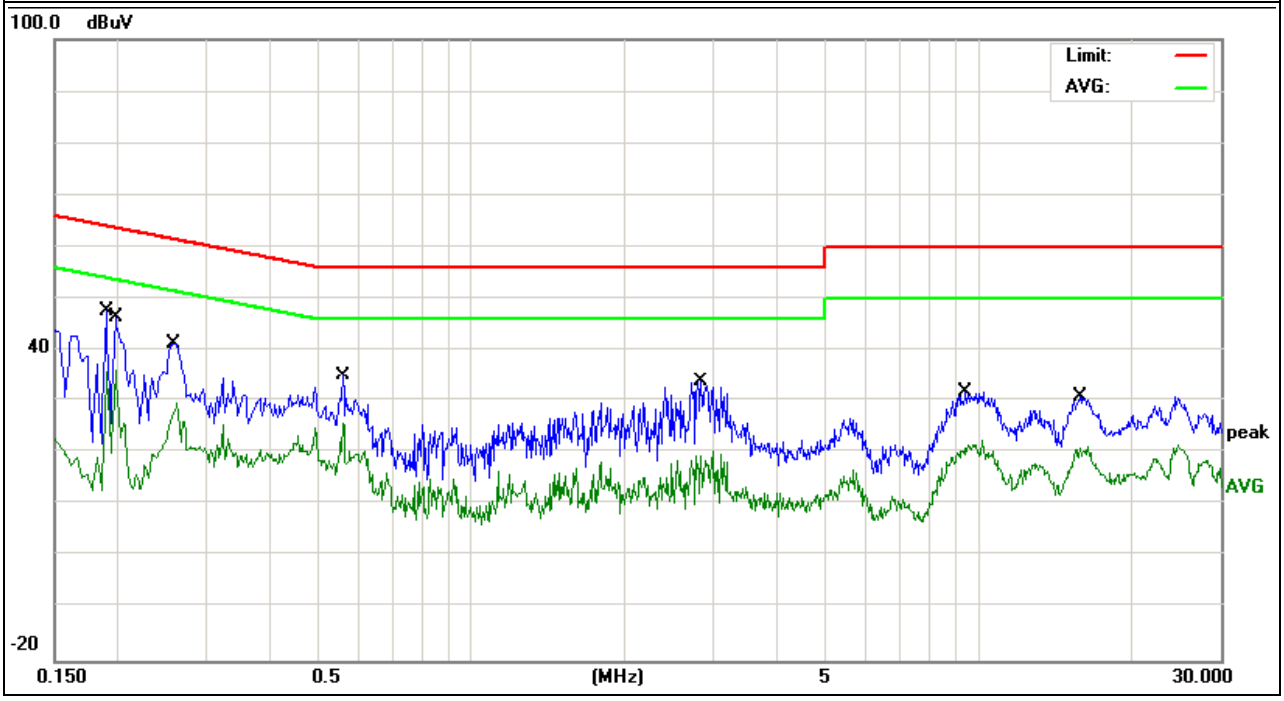
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.2.5 TEST RESULT

EUT：	TINY Camera	Model Name. ：	TINY-W^3
Temperature：	20 ℃	Relative Humidtity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	Mode 4	Phase：	L

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
0.19	36.81	10.83	47.64	64.03	-16.39	QP
0.198	25.52	10.7	36.22	53.69	-17.47	AVG
0.258	30.64	10.83	41.47	61.49	-20.02	QP
0.258	18.69	10.83	29.52	51.49	-21.97	AVG
0.558	24.42	10.56	34.98	56	-21.02	QP
0.558	15.11	10.56	25.67	46	-20.33	AVG
2.834	23.16	10.56	33.72	56	-22.28	QP
2.834	9.77	10.56	20.33	46	-25.67	AVG
9.4458	20.84	10.83	31.67	60	-28.33	QP
9.4458	10.85	10.83	21.68	50	-28.32	AVG
15.8537	19.99	10.94	30.93	60	-29.07	QP
15.8537	10.16	10.94	21.1	50	-28.9	AVG

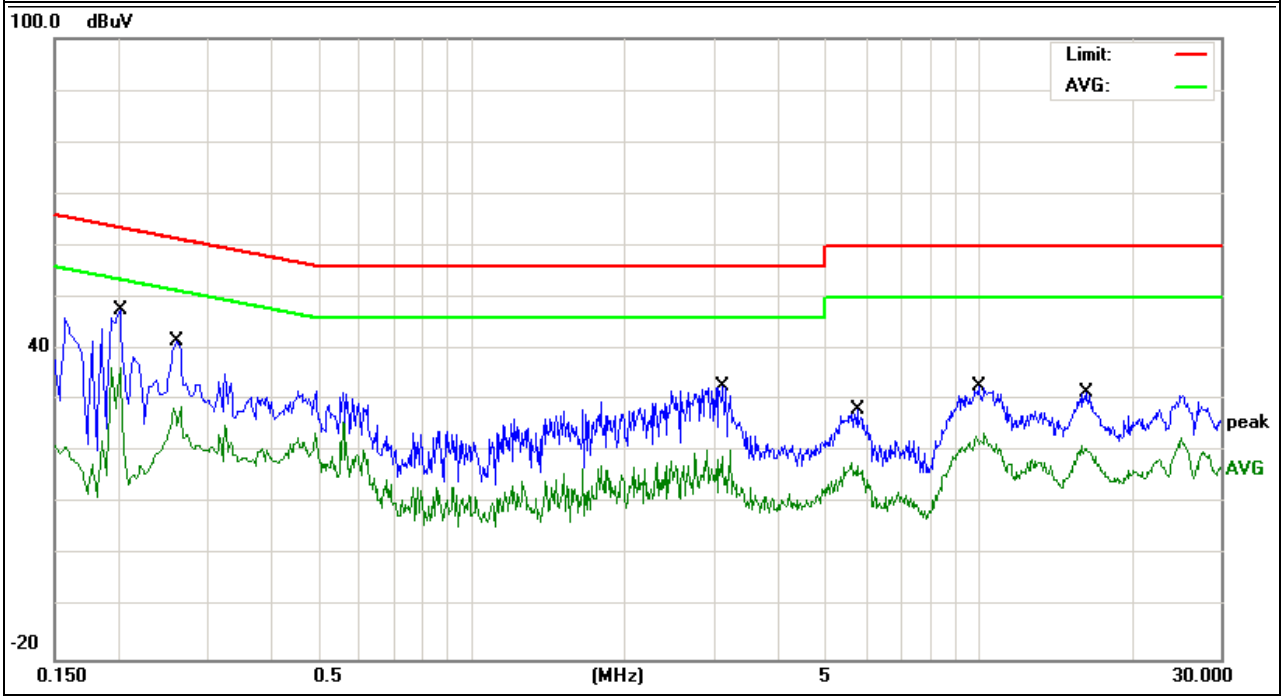
Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	TINY Camera	Model Name. ：	TINY-W^3
Temperature：	20 ℃	Relative Humidtity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	Mode 4	Phase：	N

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
0.202	37.01	10.68	47.69	63.52	-15.83	QP
0.202	25.93	10.68	36.61	53.52	-16.91	AVG
0.262	30.88	10.85	41.73	61.36	-19.63	QP
0.262	17.79	10.85	28.64	51.36	-22.72	AVG
3.138	22.1	10.56	32.66	56	-23.34	QP
3.138	9.74	10.56	20.3	46	-25.7	AVG
5.7738	17.41	10.68	28.09	60	-31.91	QP
5.7738	7.21	10.68	17.89	50	-32.11	AVG
10.0099	21.75	10.84	32.59	60	-27.41	QP
10.0099	12.91	10.84	23.75	50	-26.25	AVG
16.2299	20.42	10.95	31.37	60	-28.63	QP
16.2299	10.19	10.95	21.14	50	-28.86	AVG

Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



3.4 RADIATED EMISSION MEASUREMENT

3.4.1 Radiated Emission Limits (FCC 15.209)

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Note:

(1) The tighter limit applies at the band edges.

(2) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RADIATED EMISSION MEASUREMENT (FCC 15.249)

Frequency of Emission (MHz)	Field Strength of fundamental ((millivolts /meter)	Field Strength of Harmonics (microvolts/meter)
2400 - 2483.5	50	500

Notes:

(1) 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.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.4.2 TEST PROCEDURE

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

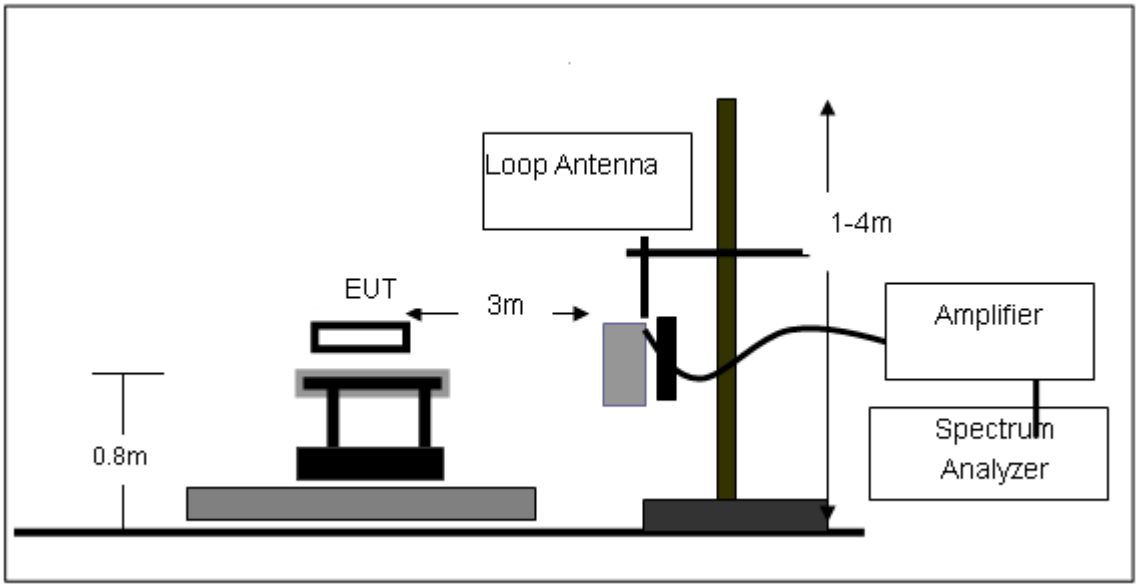
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

3.4.3 DEVIATION FROM TEST STANDARD

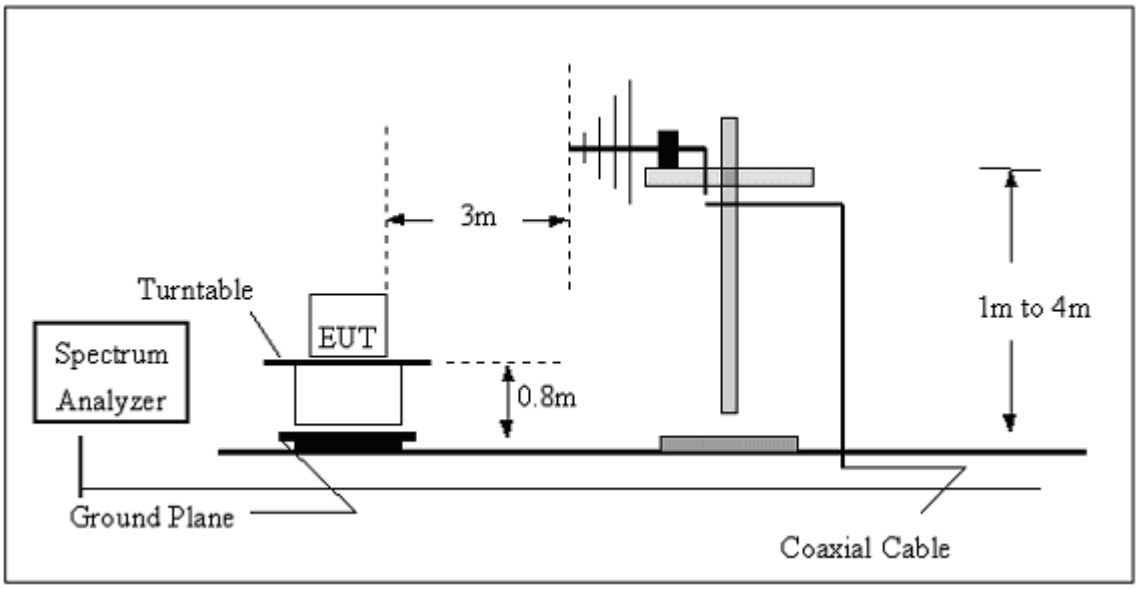
No deviation

3.4.4 TEST SETUP

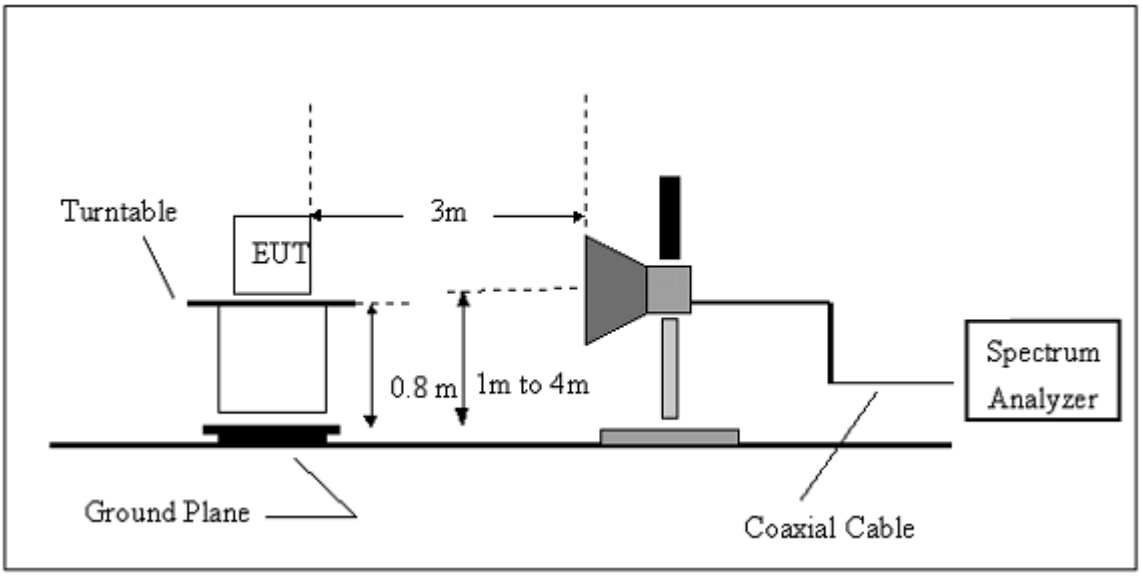
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



3.4.5 TEST RESULTS (BLOW 30MHz)

EUT：	TINY Camera	Model Name. ：	TINY-W^3
Temperature：	20 ℃	Relative Humidtity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	TX	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

NOTE:

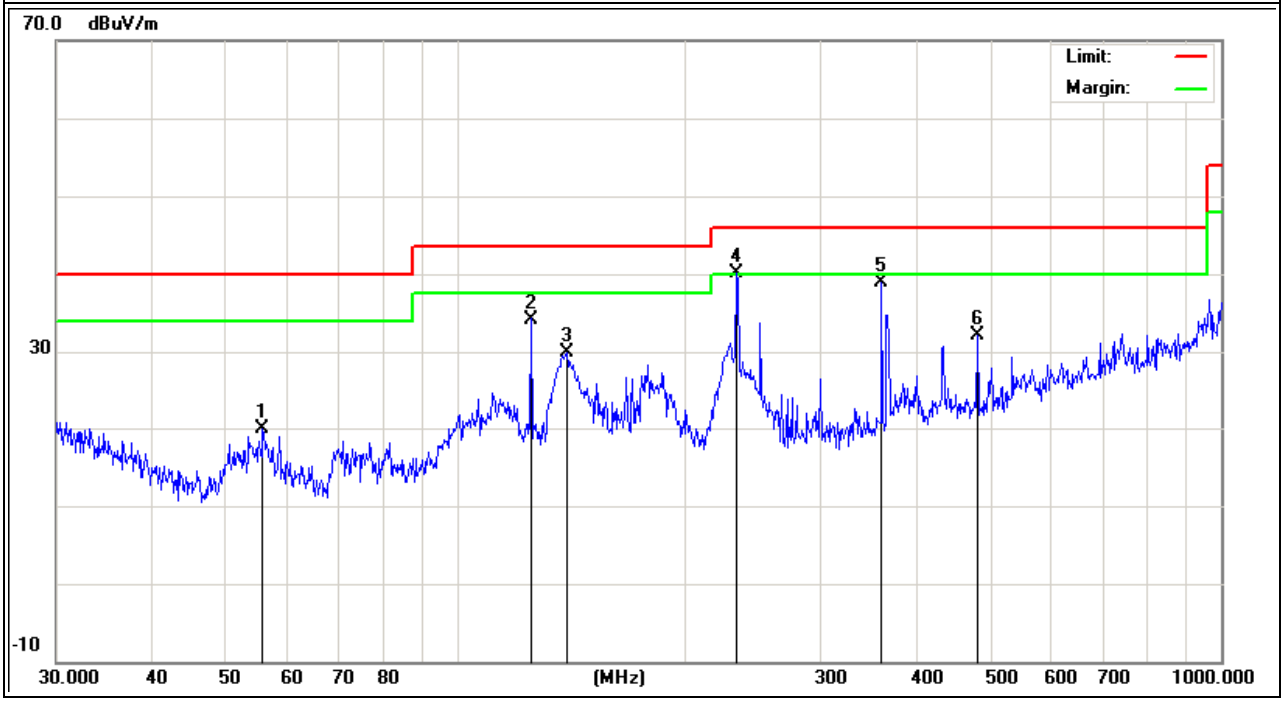
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =20 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

3.4.6 TEST RESULTS (BETWEEN 30 – 1000 MHZ)

EUT：	TINY Camera	Model Name ：	TINY-W^3
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	TX	Polarization：	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
55.8046	13.82	6.04	19.86	40	-20.14	QP
125.0066	21.99	12.21	34.2	43.5	-9.3	QP
139.3611	17.7	12.18	29.88	43.5	-13.62	QP
232.5318	29.21	10.94	40.15	46	-5.85	QP
360.4476	22.51	16.46	38.97	46	-7.03	QP
480.5276	12.15	20.04	32.19	46	-13.81	QP

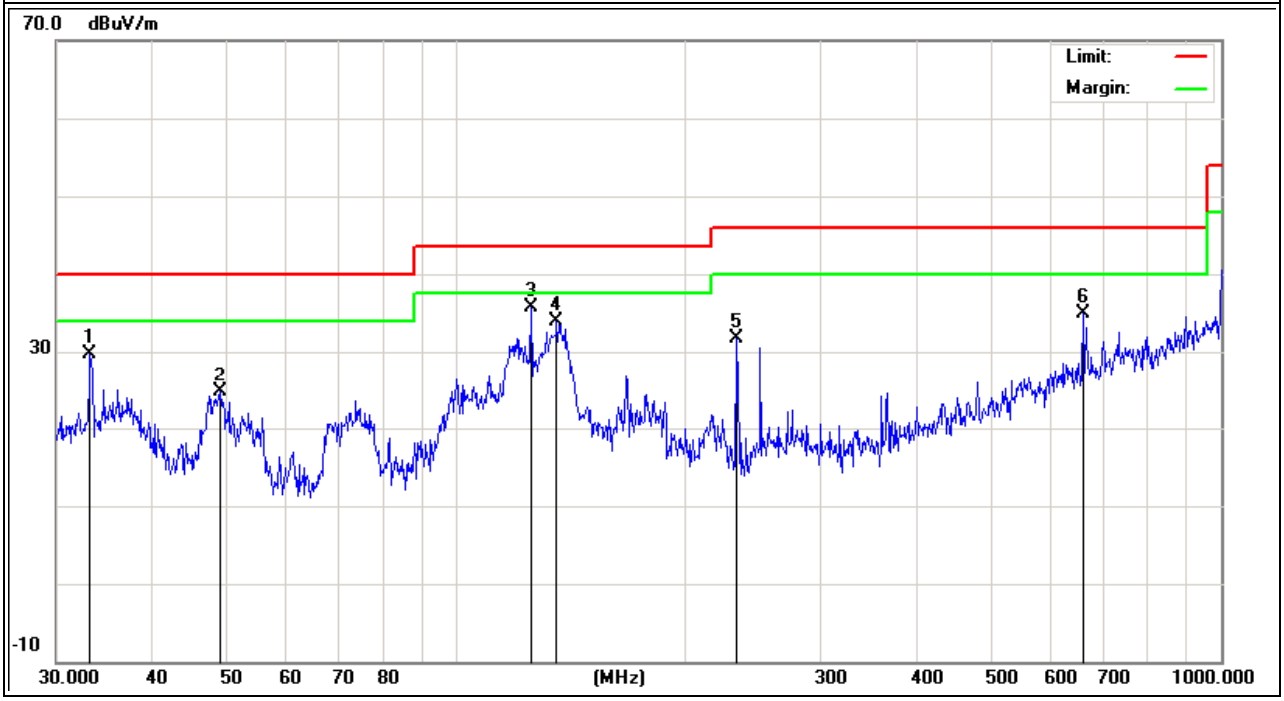
Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



EUT：	TINY Camera	Model Name ：	TINY-W^3
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	TX	Polarization：	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
33.2111	12.94	16.79	29.73	40	-10.27	QP
49.1865	16.07	8.62	24.69	40	-15.31	QP
125.0066	23.52	12.21	35.73	43.5	-7.77	QP
135.0319	21.72	12.25	33.97	43.5	-9.53	QP
233.3487	20.62	10.99	31.61	46	-14.39	QP
661.1504	11.16	23.67	34.83	46	-11.17	QP

Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



3.4.7 TEST RESULTS (ABOVE 1000 MHZ)

EUT：	TINY Camera	Model Name ：	TINY-W^3
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	TX /2402MHz	Polarization：	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2402	99.15	-12.99	86.16	114.0 0	-27.84	peak
2402	91.73	-12.99	78.74	94	-15.26	AVG
4804	61.08	-3.57	57.51	74	-16.49	peak
4804	45.70	-3.57	42.13	54	-11.87	AVG
9608	54.64	1.78	56.42	74	-17.58	peak
9608	40.93	1.78	42.71	54	-11.29	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
No emission detected above 18GHz.

EUT：	TINY Camera	Model Name ：	TINY-W^3
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	TX /2402MHz	Polarization：	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2402	99.16	-12.99	86.17	114.0 0	-27.83	peak
2402	91.23	-12.99	78.24	94	-15.76	AVG
4804	60.11	-3.59	56.52	74	-17.48	peak
4804	45.06	-3.59	41.47	54	-12.53	AVG
7206	56.00	-0.96	55.04	74	-18.96	peak
7206	54.62	-0.96	53.66	54	-11/32	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
No emission detected above 18GHz.

EUT：	TINY Camera	Model Name ：	TINY-W^3
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	TX /2437 MHz	Polarization：	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2437	99.99	-12.93	87.06	114.0 0	-26.94	peak
2437	95.18	-12.93	82.25	94	-11.75	AVG
4874	58.61	-3.55	55.06	74	-18.94	peak
4874	45.20	-3.55	41.65	54	-12.35	AVG
7311	55.04	-0.72	54.32	74	-19.68	peak
7311	41.15	-0.72	40.43	54	-13.57	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
No emission detected above 18GHz.

EUT：	TINY Camera	Model Name ：	TINY-W^3
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	TX /2437 MHz	Polarization：	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2437	99.55	-12.93	86.62	114.0 0	-27.38	peak
2437	95.09	-12.93	82.16	94	-11.84	AVG
4874	60.41	-3.55	56.86	74	-17.14	peak
4874	44.99	-3.55	41.44	54	-12.56	AVG
7311	56.29	-0.72	55.57	74	-18.43	peak
7311	41.40	-0.72	40.68	54	-13.32	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
No emission detected above 18GHz.

EUT：	TINY Camera	Model Name ：	TINY-W^3
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	TX /2472 MHz	Polarization：	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2472	98.05	-12.92	85.13	114.0 0	-28.87	peak
2472	94.41	-12.92	81.49	94	-12.51	AVG
4944	57.59	-3.55	54.04	74	-19.96	peak
4944	43.98	-3.55	40.43	54	-13.57	AVG
7416	56.39	-0.68	55.71	74	-18.29	peak
7416	43.04	-0.68	42.36	54	-11.64	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
No emission detected above 18GHz.

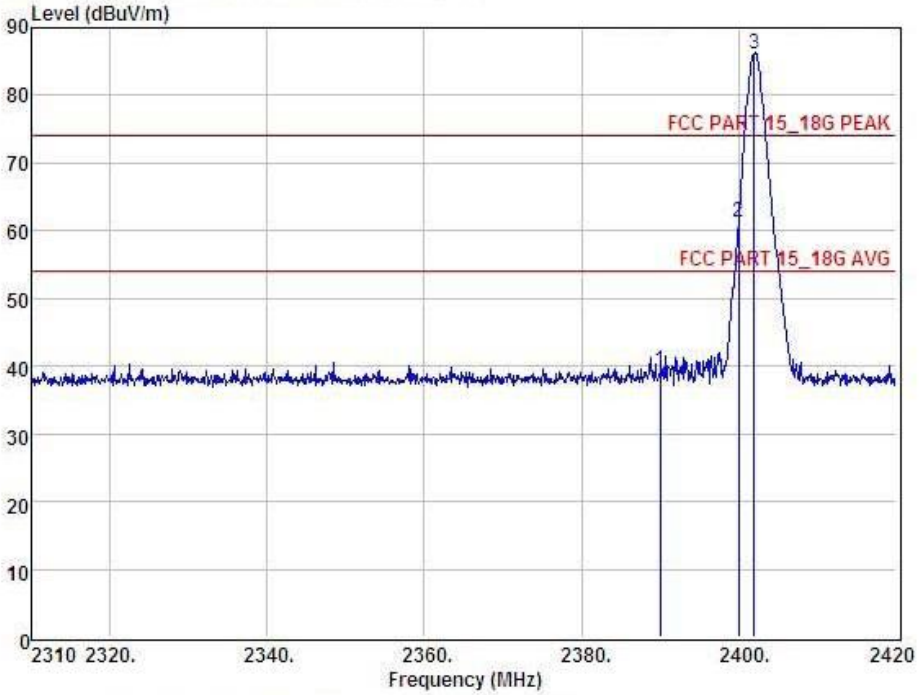
EUT：	TINY Camera	Model Name ：	TINY-W^3
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	TX /2472 MHz	Polarization：	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2472	101.31	-12.92	88.39	114.0 0	-25.61	peak
2472	95.17	-12.92	82.25	94	-11.75	AVG
4944	59.56	-3.8	55.76	74	-18.24	peak
4944	44.23	-3.8	40.43	54	-13.57	AVG
7416	55.62	-0.68	54.94	74	-19.06	peak
7416	-88.16	-0.68	-88.84	54	-142.84	AVG

Remark:
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
No emission detected above 18GHz.

3.4.8 TEST RESULTS (RESTRICTED BANDS REQUIREMENTS)

EUT：	TINY Camera	Model Name ：	TINY-W^3
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	TX /2402MHz	Polarization：	Vertical

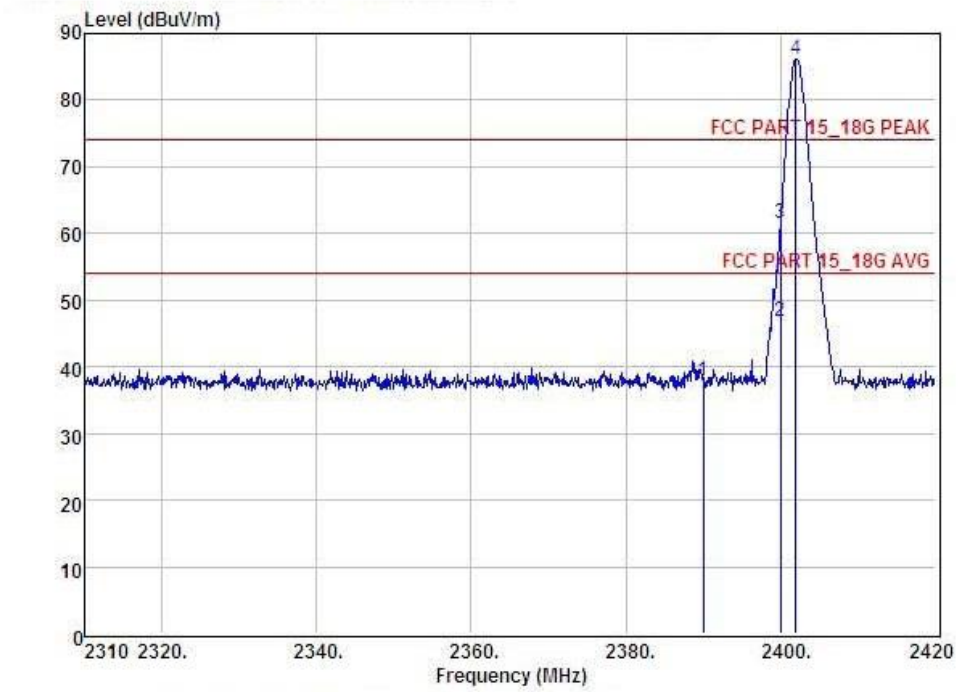


Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL

Item	Freq	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	2390.00	42.69	27.62	34.97	3.92	39.26	74.00	-34.74	Peak
2	2400.00	64.72	27.62	34.97	3.94	61.31	74.00	-12.69	Peak
3	2402.00	89.58	27.62	34.97	3.94	86.17	74.00		

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

EUT：	TINY Camera	Model Name ：	TINY-W^3
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	TX /2402MHz	Polarization：	Horizontal

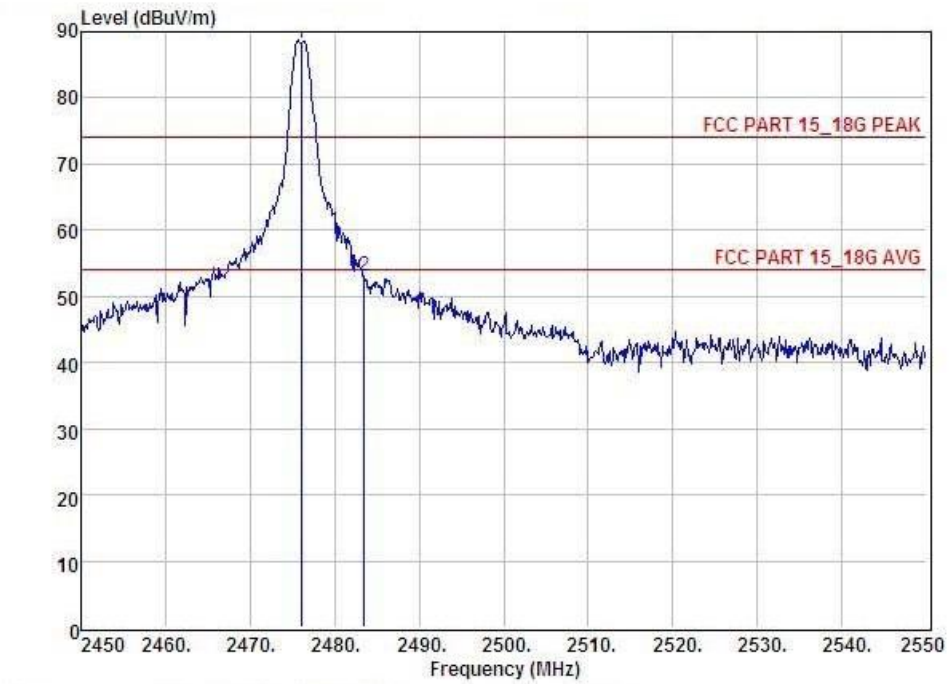


Condition : FCC PART 15_18G PEAK 3m POL: HORIZONTAL

Item	Freq	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	2390.00	41.22	27.62	34.97	3.92	37.79	74.00	-36.21	Peak
2	2400.00	50.26	27.62	34.97	3.94	46.85	54.00	-7.15	Average
3	2400.00	64.97	27.62	34.97	3.94	61.56	74.00	-12.44	Peak
4	2402.00	89.57	27.62	34.97	3.94	86.16	74.00		

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

EUT：	TINY Camera	Model Name ：	TINY-W^3
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	TX /2480MHz	Polarization：	Vertical

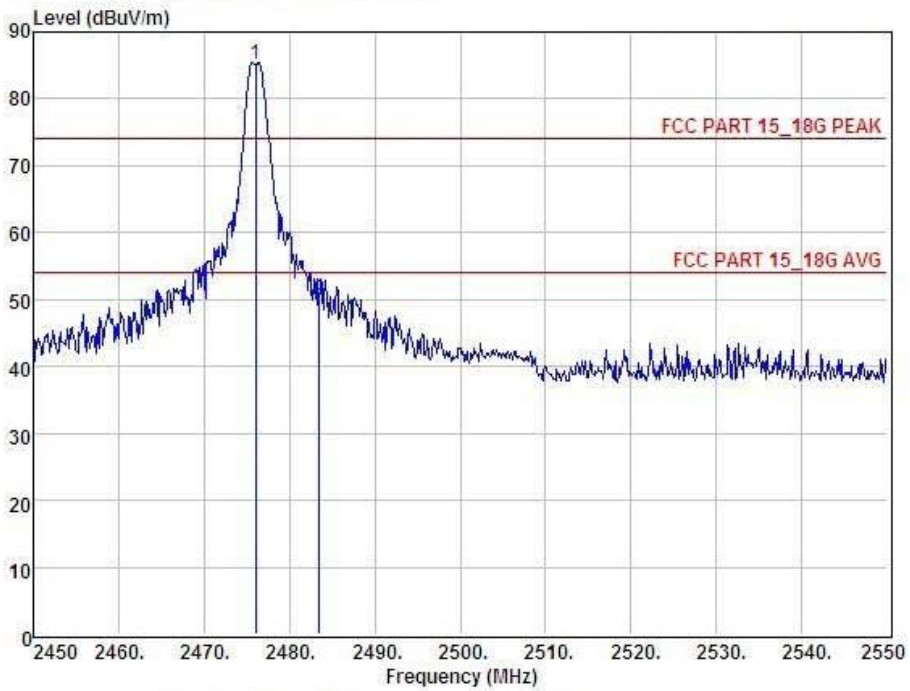


Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL

Item	Freq	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	2477.00	91.77	27.59	34.97	4.00	88.39	74.00		
2	2483.50	56.49	27.59	34.97	4.00	53.11	74.00	-20.89	Peak

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

EUT：	TINY Camera	Model Name ：	TINY-W^3
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	TX /2480MHz	Polarization：	Horizontal



Condition : FCC PART 15_18G PEAK 3m POL: HORIZONTAL

Item	Freq	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	2477.00	88.51	27.59	34.97	4.00	85.13	74.00		
2	2483.50	53.29	27.59	34.97	4.00	49.91	74.00	-24.09	Peak

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

4. BANDWIDTH TEST

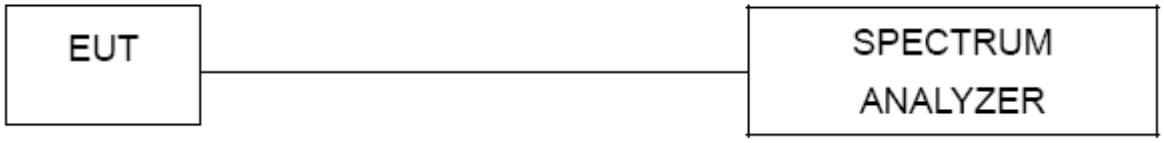
4.1 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
b. Spectrum Setting : RBW= 30KHz, VBW=100KHz, Sweep time = Auto.

4.2 DEVIATION FROM STANDARD

No deviation.

4.3 TEST SETUP

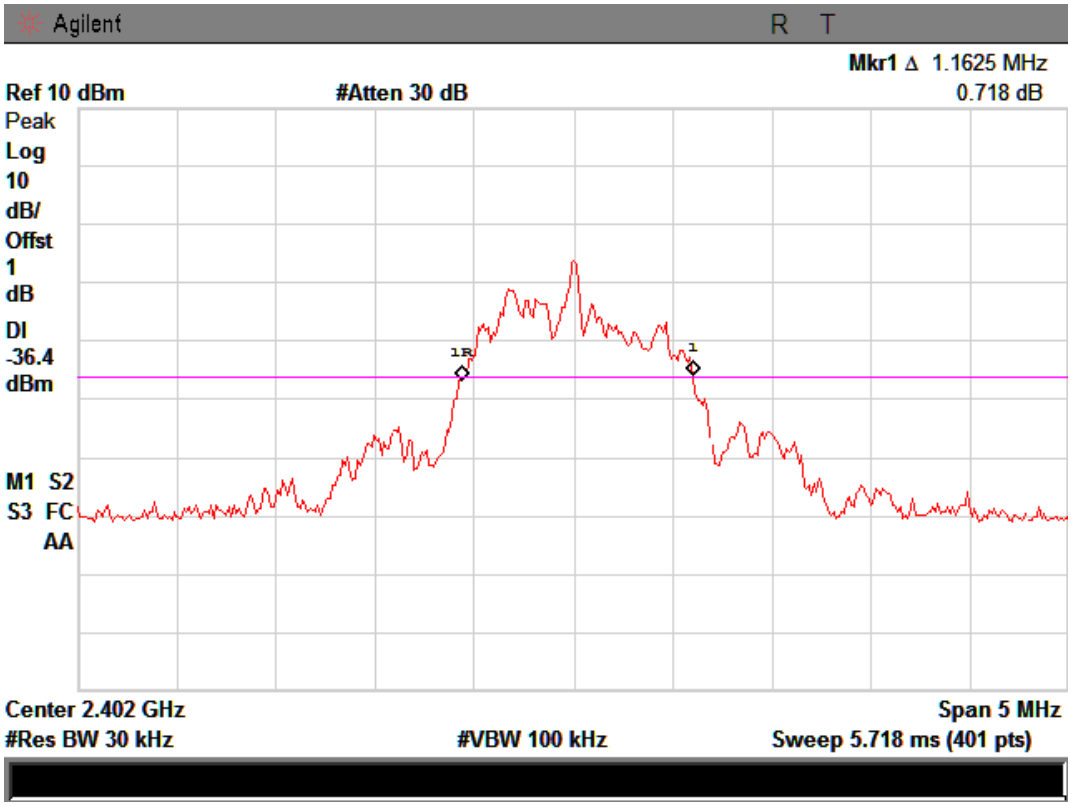


4.4 TEST RESULTS

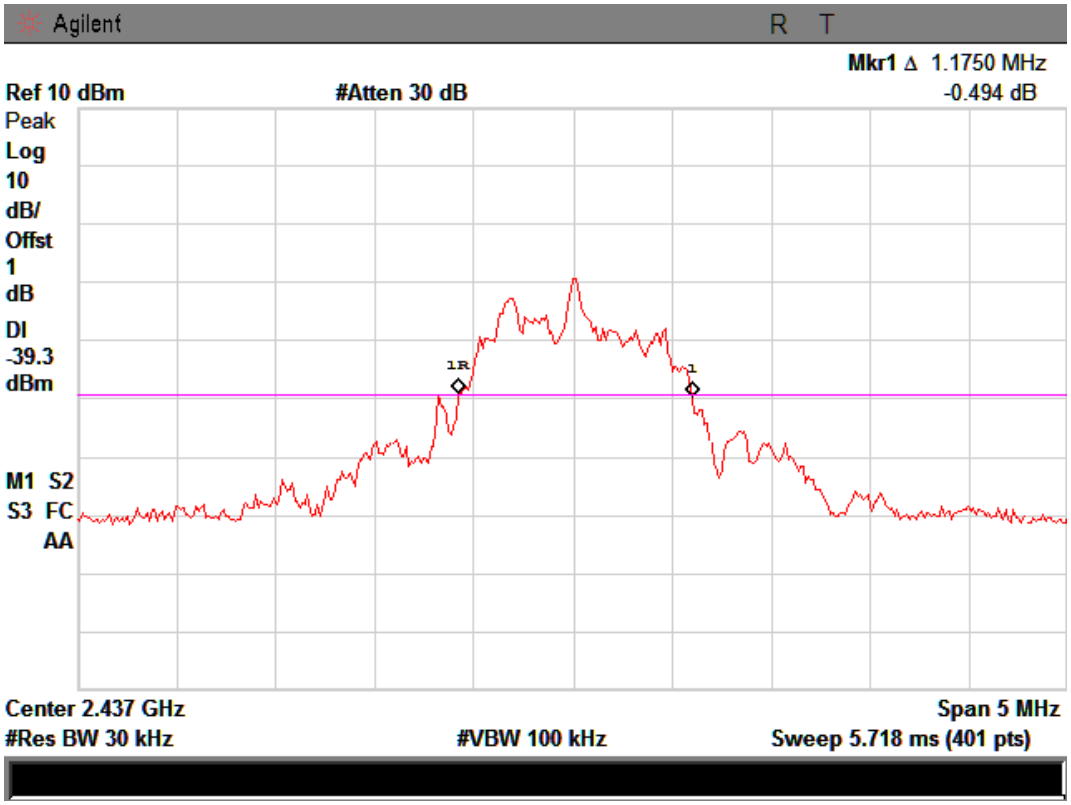
EUT：	TINY Camera	Model Name ：	TINY-W^3
Temperature：	26 ℃	Relative Humidity：	53%
Pressure：	1020 hPa	Test Power ：	DC 12 from adapter with AC 120V/60Hz
Test Mode ：	TX CH 1/40/79		

Test Channel	Frequency (MHz)	20 dBc Bandwidth (MHz)
CH01	2402	1.1625
CH40	2437	1.1750
CH79	2477	1.1625

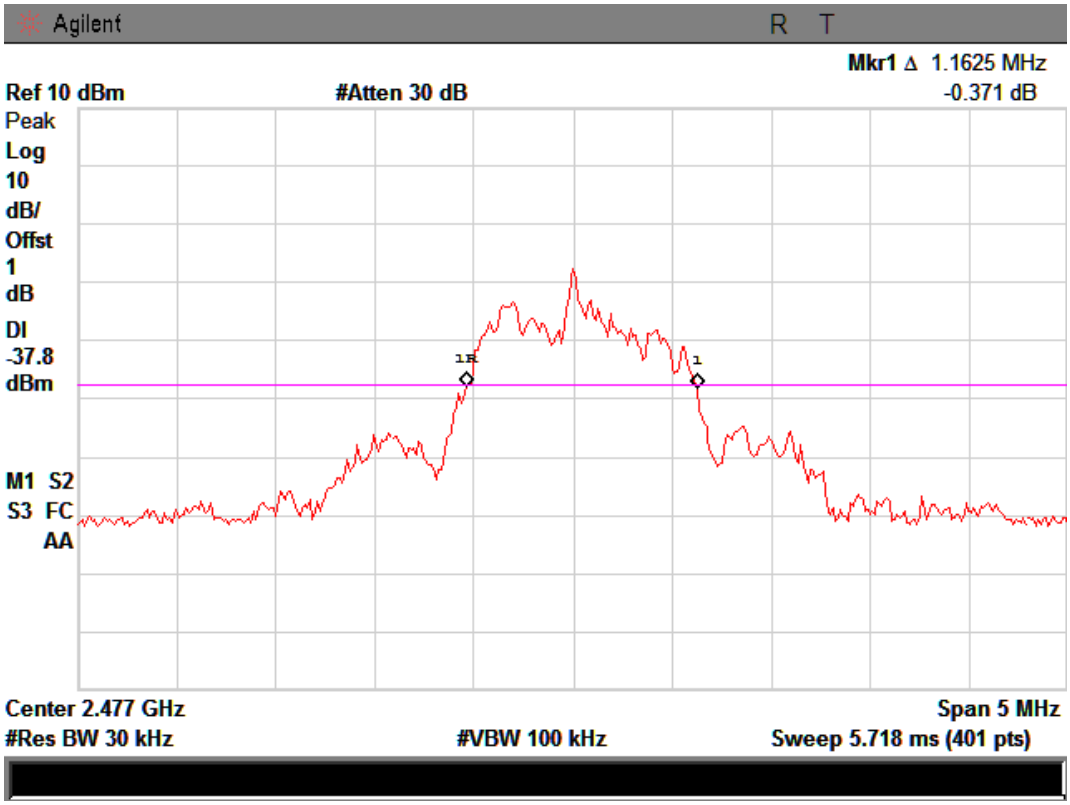
The Lowest Channel:2402MHz



The Middle Channel: 2437MHz

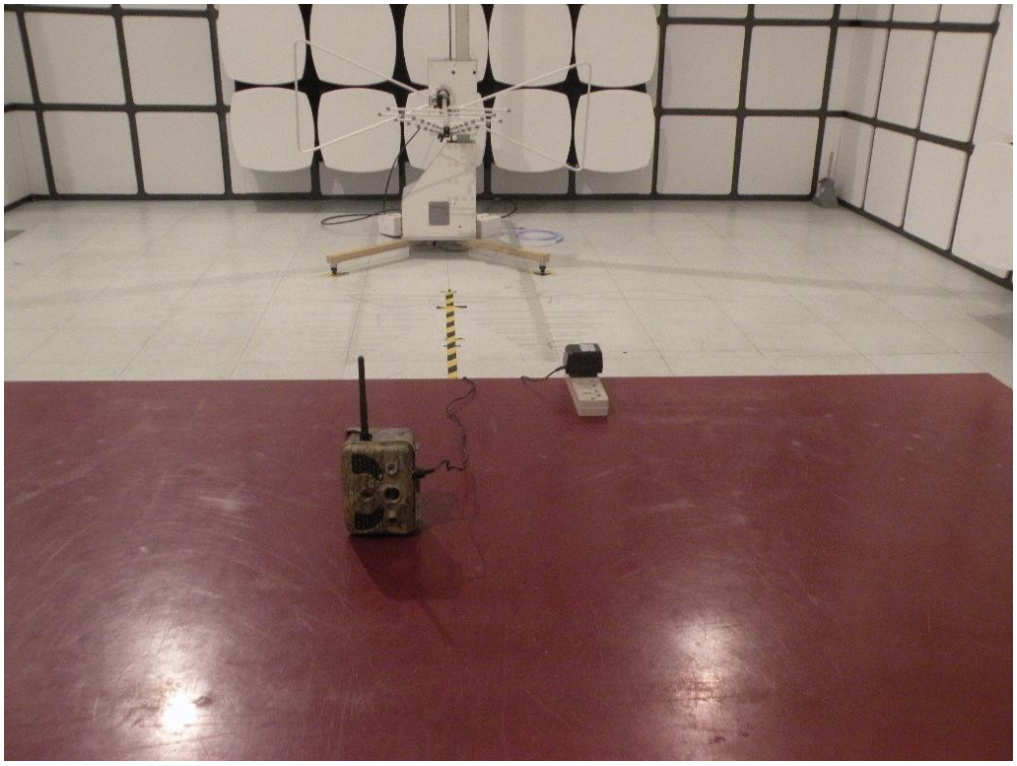


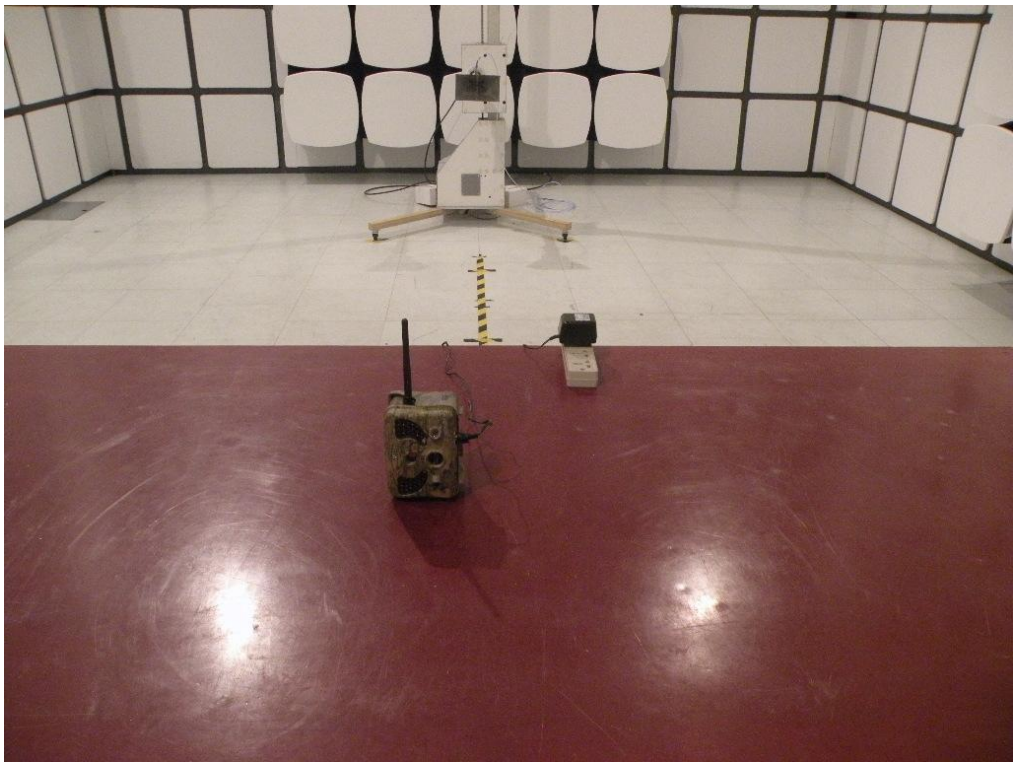
The High Channel:2477MHz



5. EUT TEST PHOTO

Radiated Measurement Photos(worst case position)





Comducted Measurement Photos(worst case position)