FCC Report

Application Purpose	:	Original grant
Applicant Name:	:	AMobile Intelligent Corp.
FCC ID	:	2ACC5-HM800
Equipment Type	:	8 Risc-based Panel PC
Model Name	:	IOT-800
Report Number	:	FCC16023446-6
Standard(S)	:	FCC Part 15 Subpart B
Date Of Receipt	:	February 01, 2016
Date Of Issue	:	June 14, 2016

Test By : Fall Ma

(Fall Ma)

Reviewed By : Robie Chen

(Robie Chen)

Authorized by :

(Michal Ling)

Prepared by :

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(Registration Number: 939433)

REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	May 30, 2016	Valid	Original Report
V1.1	20160614	June 14, 2016	Valid	Revised Report
V1.2	20160624	June 24, 2016	Valid	Revised Report

Table of Contents **Page**

1. GENERAL INFORMATION

Test Model	IOT-800
Applicant	AMobile Intelligent Corp.
Address	8F-1., No.700, Zhongzheng Rd., Zhonghe Dist., New Taipei City 235, Taiwan
Manufacturer	Shenzhen JOYHONG Technology Co., Ltd.
Address	Building A2, Zhengfeng Industrial Park, Fengtang Road, Fuyong, Baoan, Shenzhen, China.
Equipment Type	8 Risc-based Panel PC
Brand Name	AMobile
Hardware	MB.HMI8_ REV 0.3
Software	1.0.0
Battery information:	N/A
Adapter Information:	DC:12V, 2A
Data of receipt	February 01, 2016
Date of test	February 05, 2016 to March 11, 2016
Deviation	None
Condition of Test Sample	Normal

We hereby certify that:

All measurement facilities used to collect the measurement data are located at 1F,No.9 Building,TGK Science & Technology ParkYangtian Rd., NO.72 Bao'an Dist., GuangDong, China
The data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C 63.4:2009. The sample tested as described in this report is in compliance with the FCC Rules Part15 Subpart B.
The test results of this report relate only to the tested sample identified in this report.

2. TEST DESCRIPTION

2.1 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	±3.2dB
2	RF power, conducted	±0.16dB
3	Spurious emissions, conducted	±0.21dB
4	All emissions, radiated(<1G)	±4.7dB
5	All emissions, radiated(>1G)	±4.7dB
6	Temperature	±0.5°C
7	Humidity	±2%

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.

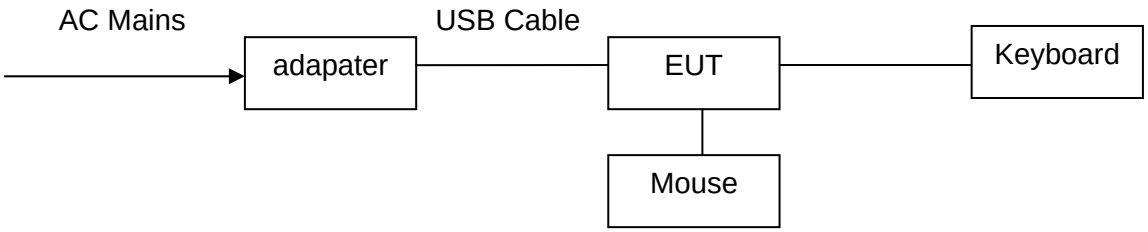
Pretest Mode	Description
Mode 1	Test with Keyboard and Mouse
Mode 2	Exchange data with U disk

For Conducted Emission	
Final Test Mode	Test with Keyboard and Mouse
Mode 1	Test with Keyboard and Mouse
Mode 2	Exchange data with U disk

For Radiated Emission	
Final Test Mode	Test with Keyboard and Mouse
Mode 1	Test with Keyboard and Mouse
Mode 2	Exchange data with U disk

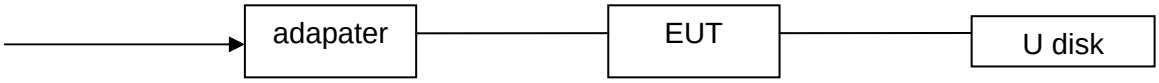
2.3 CONFIGURATION OF SYSTEM UNDER TEST

Mode 1:



(EUT: 8 Risc-based Panel PC)

Mode 2:



(EUT: 8 Risc-based Panel PC)

I/O Port of EUT			
I/O Port Type	**Q'TY**	**Cable**	**Tested with**
USB port	2	1m USB cable, unshielded	1

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
1	Adapater	/	XY-AP120200	/	/
2	Keyboard	HP	SK-2880	435302-AA-	/
3	Mouse	DELL	MS111-1	/	/
4	U disk	/	/	/	/

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.

3. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 , Subpart B			
Standard Section	Test Item	Judgment	Remark
15.107	CONDUCTED EMISSION	PASS	
15.109	RADIATED EMISSION	PASS	

NOTE:

(1)” N/A” denotes test is not applicable in this test report.

4. MEASUREMENT INSTRUMENTS

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibrated	Calibrated until
ESCI Test Receiver	R&S	ESCI	100005	08/19/2015	08/18/2016
LISN	AFJ	LS16	16010222119	08/19/2015	08/18/2016
LISN(EUT)	Mestec	AN3016	04/10040	08/19/2015	08/18/2016
pre-amplifier	CDSI	PAP-1G18-38	--	08/19/2015	08/18/2016
System Controller	CT	SC100	-	08/19/2015	08/18/2016
Bi-log Antenna	Chase	CBL6111C	2576	08/19/2015	08/18/2016
Spectrum analyzer	R&S	FSU26	200409	08/19/2015	08/18/2016
Horn Antenna	SCHWARZBECK	9120D	1141	08/19/2015	08/18/2016
Bi-log Antenna	SCHWAREBECK	VULB9163	9163/340	08/19/2015	08/18/2016
Pre Amplifier	H.P.	HP8447E	2945A02715	10/13/2014	10/12/2016
9*6*6 Anechoic	--	--	--	08/21/2015	08/20/2016

5. EMC EMISSION TEST

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 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	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

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

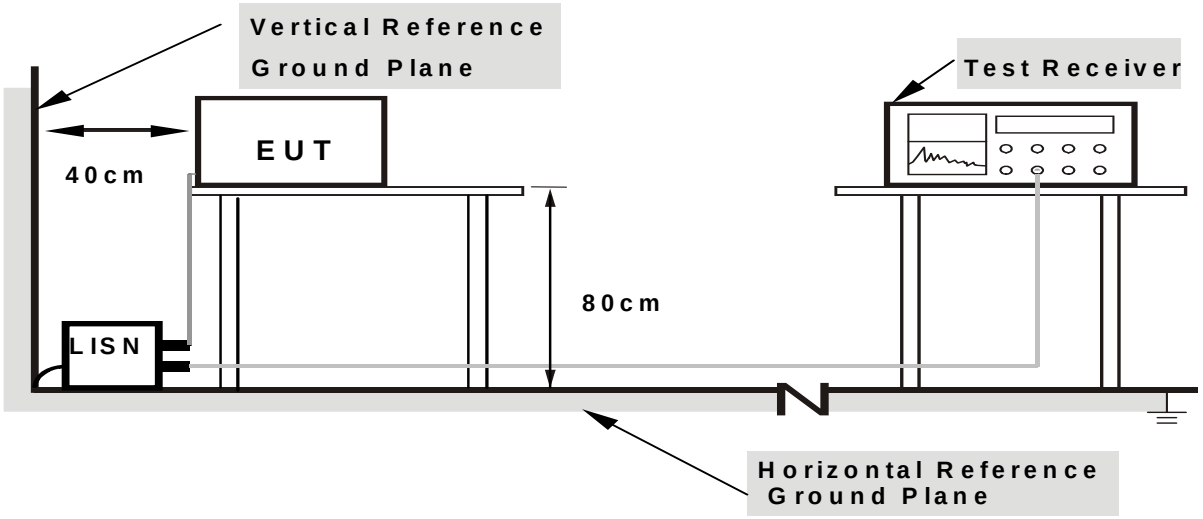
5.1.2 TEST PROCEDURE

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.

5.1.3 DEVIATION FROM TEST STANDARD

No deviation

5.1.4 TEST SETUP



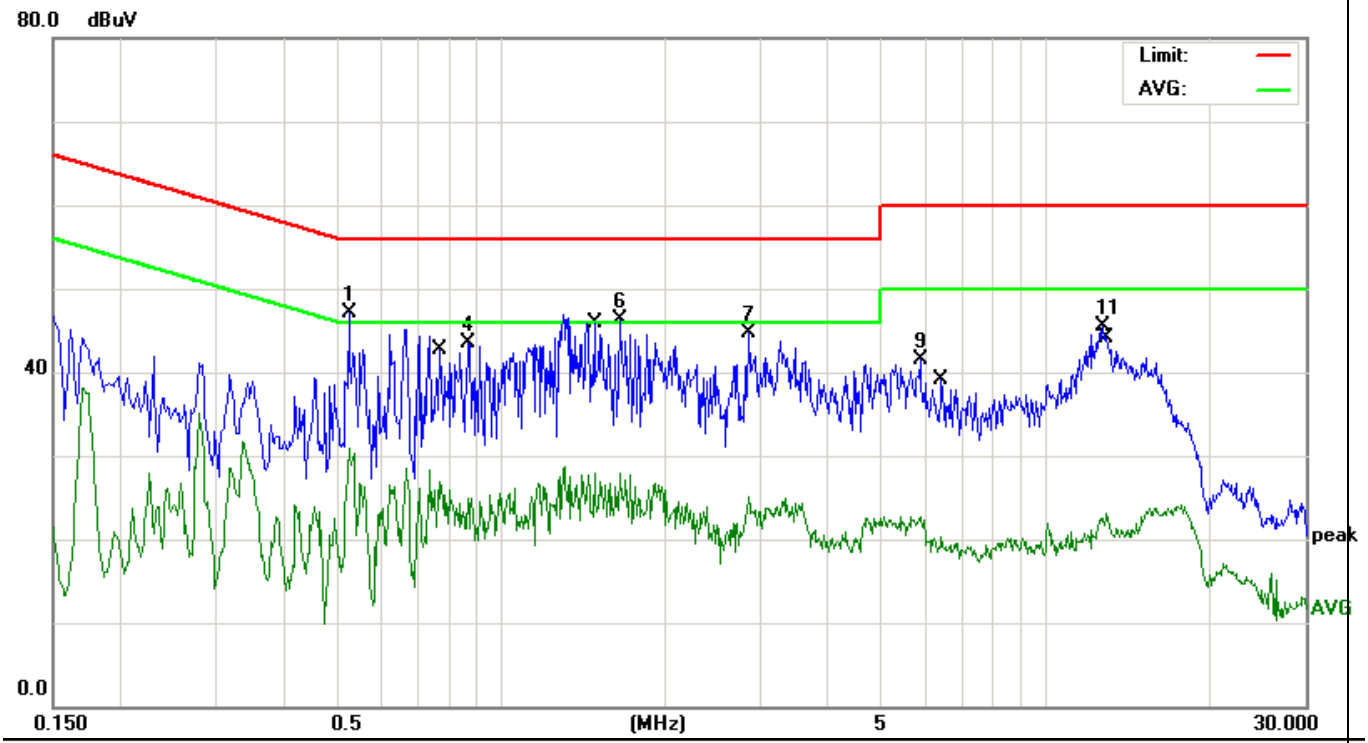
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

5.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

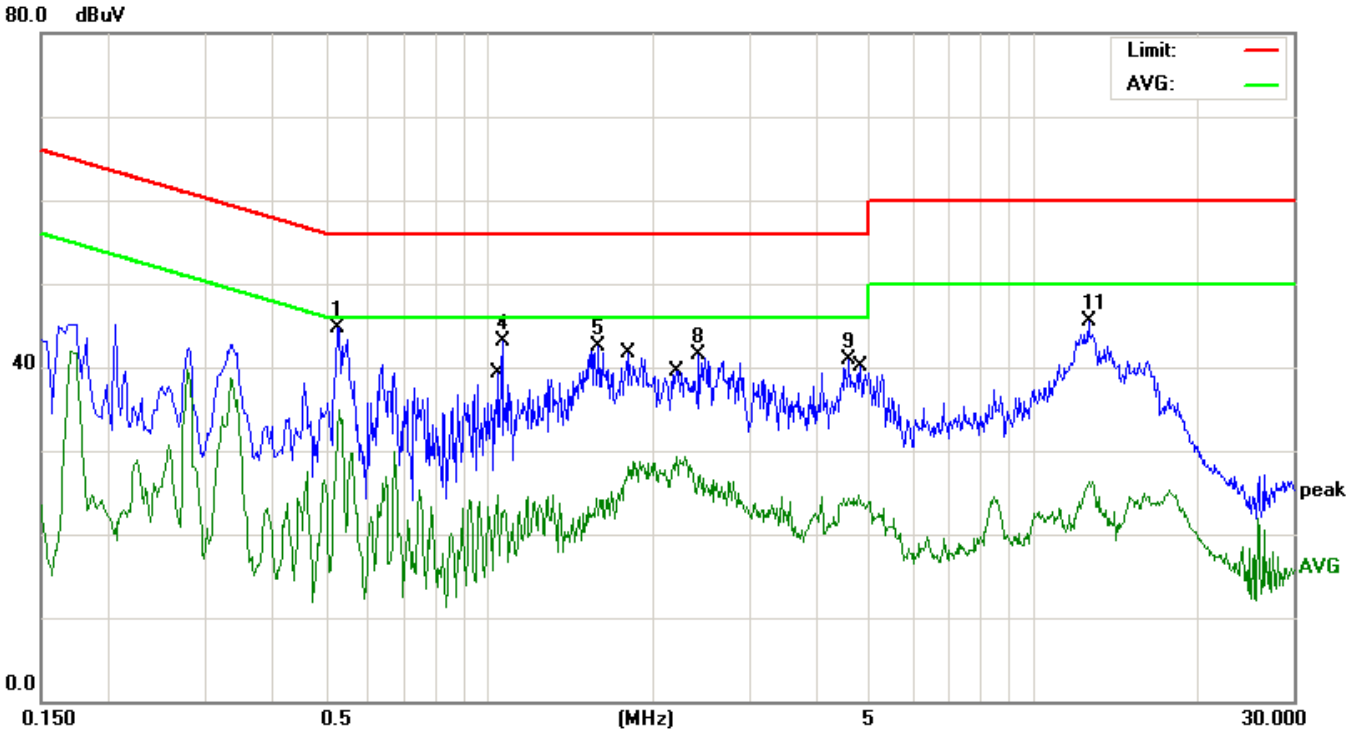
5.1.6 TEST RESULTS

EUT	8 Risc-based Panel PC	Model Name	IOT-800
Temperature	26 ℃	Relative Humidity	54%
Pressure	1010hPa	Phase	L
Test Date	February 25, 2016	Test Mode	Mode 1



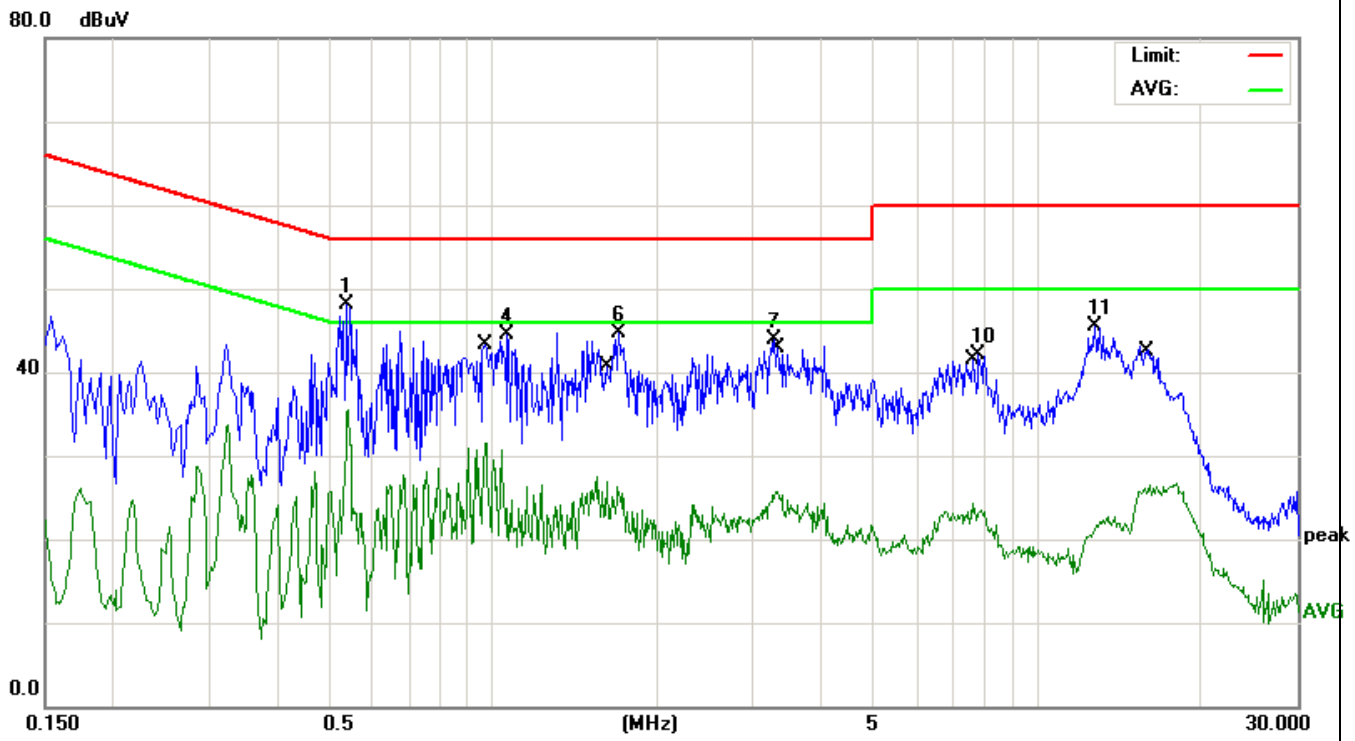
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1	*	0.5260	36.66	10.40	47.06	56.00	-8.94	peak
2		0.5260	20.40	10.40	30.80	46.00	-15.20	AVG
3		0.7700	16.58	10.37	26.95	46.00	-19.05	AVG
4		0.8699	33.05	10.36	43.41	56.00	-12.59	peak
5		1.4818	17.61	10.32	27.93	46.00	-18.07	AVG
6		1.6500	35.98	10.31	46.29	56.00	-9.71	peak
7		2.8420	34.38	10.27	44.65	56.00	-11.35	peak
8		2.8420	14.85	10.27	25.12	46.00	-20.88	AVG
9		5.8738	31.23	10.22	41.45	60.00	-18.55	peak
10		6.4298	10.15	10.22	20.37	50.00	-29.63	AVG
11		12.7378	35.31	10.17	45.48	60.00	-14.52	peak
12		12.9458	12.90	10.17	23.07	50.00	-26.93	AVG

EUT	8 Risc-based Panel PC	Model Name	IOT-800
Temperature	26 ℃	Relative Humidity	54%
Pressure	1010hPa	Phase	N
Test Date	February 25, 2016	Test Mode	Mode 1



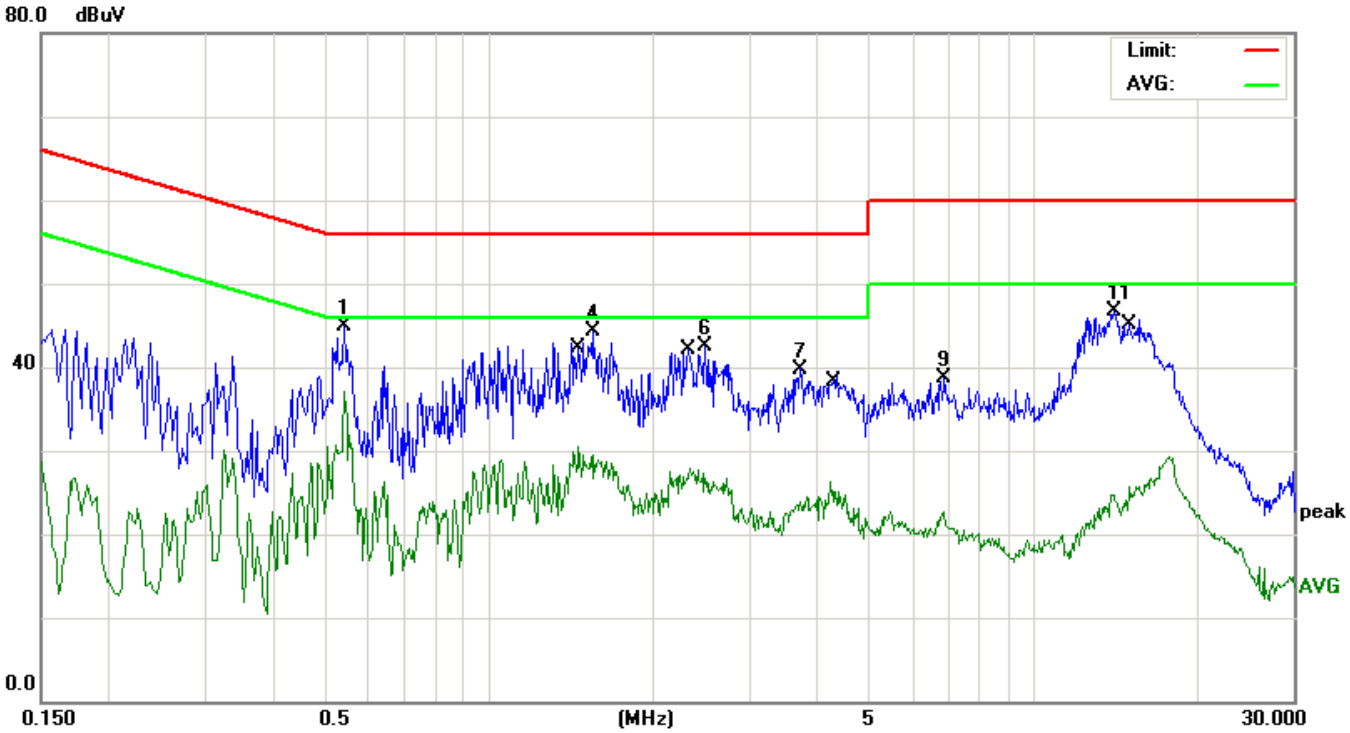
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.5260	34.38	10.40	44.78	56.00	-11.22	peak
2	*	0.5299	24.50	10.40	34.90	46.00	-11.10	AVG
3		1.0339	14.31	10.34	24.65	46.00	-21.35	AVG
4		1.0580	32.67	10.34	43.01	56.00	-12.99	peak
5		1.5900	32.22	10.31	42.53	56.00	-13.47	peak
6		1.8060	17.77	10.30	28.07	46.00	-17.93	AVG
7		2.2019	19.08	10.29	29.37	46.00	-16.63	AVG
8		2.4219	31.16	10.28	41.44	56.00	-14.56	peak
9		4.5858	30.62	10.24	40.86	56.00	-15.14	peak
10		4.7538	14.53	10.23	24.76	46.00	-21.24	AVG
11		12.6259	35.38	10.17	45.55	60.00	-14.45	peak
12		12.6259	16.17	10.17	26.34	50.00	-23.66	AVG

EUT	8 Risc-based Panel PC	Model Name	IOT-800
Temperature	26 ℃	Relative Humidity	54%
Pressure	1010hPa	Phase	L
Test Date	February 25, 2016	Test Mode	Mode 2



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1	*	0.5380	37.78	10.40	48.18	56.00	-7.82	peak
2		0.5420	25.04	10.39	35.43	46.00	-10.57	AVG
3		0.9700	21.16	10.34	31.50	46.00	-14.50	AVG
4		1.0620	34.17	10.34	44.51	56.00	-11.49	peak
5		1.6180	16.65	10.31	26.96	46.00	-19.04	AVG
6		1.7020	34.34	10.30	44.64	56.00	-11.36	peak
7		3.2900	33.64	10.26	43.90	56.00	-12.10	peak
8		3.3340	15.54	10.26	25.80	46.00	-20.20	AVG
9		7.5819	14.06	10.21	24.27	50.00	-25.73	AVG
10		7.7899	31.85	10.21	42.06	60.00	-17.94	peak
11		12.7259	35.35	10.17	45.52	60.00	-14.48	peak
12		15.7699	15.87	10.15	26.02	50.00	-23.98	AVG

EUT	8 Risc-based Panel PC	Model Name	IOT-800
Temperature	26 ℃	Relative Humidity	54%
Pressure	1010hPa	Phase	N
Test Date	February 25, 2016	Test Mode	Mode 2



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.5420	34.52	10.39	44.91	56.00	-11.09	peak
2	*	0.5420	26.65	10.39	37.04	46.00	-8.96	AVG
3		1.4576	20.13	10.32	30.45	46.00	-15.55	AVG
4		1.5460	33.90	10.31	44.21	56.00	-11.79	peak
5		2.3420	17.65	10.28	27.93	46.00	-18.07	AVG
6		2.4980	32.13	10.28	42.41	56.00	-13.59	peak
7		3.7259	29.54	10.26	39.80	56.00	-16.20	peak
8		4.2458	16.08	10.25	26.33	46.00	-19.67	AVG
9		6.8578	28.47	10.22	38.69	60.00	-21.31	peak
10		6.8578	12.57	10.22	22.79	50.00	-27.21	AVG
11		14.0619	36.64	10.16	46.80	60.00	-13.20	peak
12		14.9899	15.64	10.15	25.79	50.00	-24.21	AVG

5.2 RADIATED EMISSION MEASUREMENT

5.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

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

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

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

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

5.2.2 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 3 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. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
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:

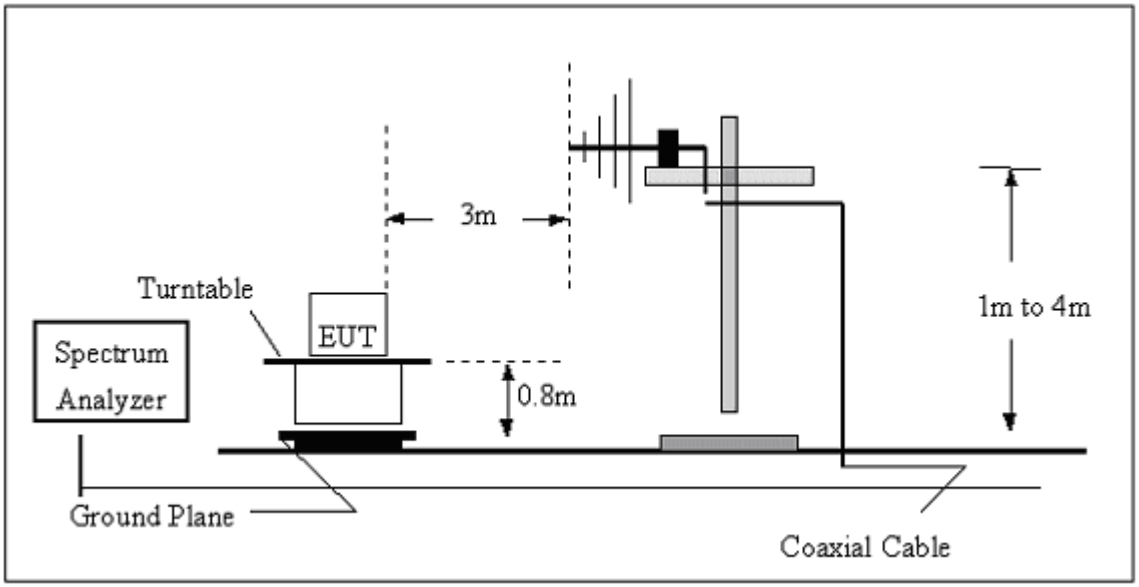
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

5.2.3 DEVIATION FROM TEST STANDARD

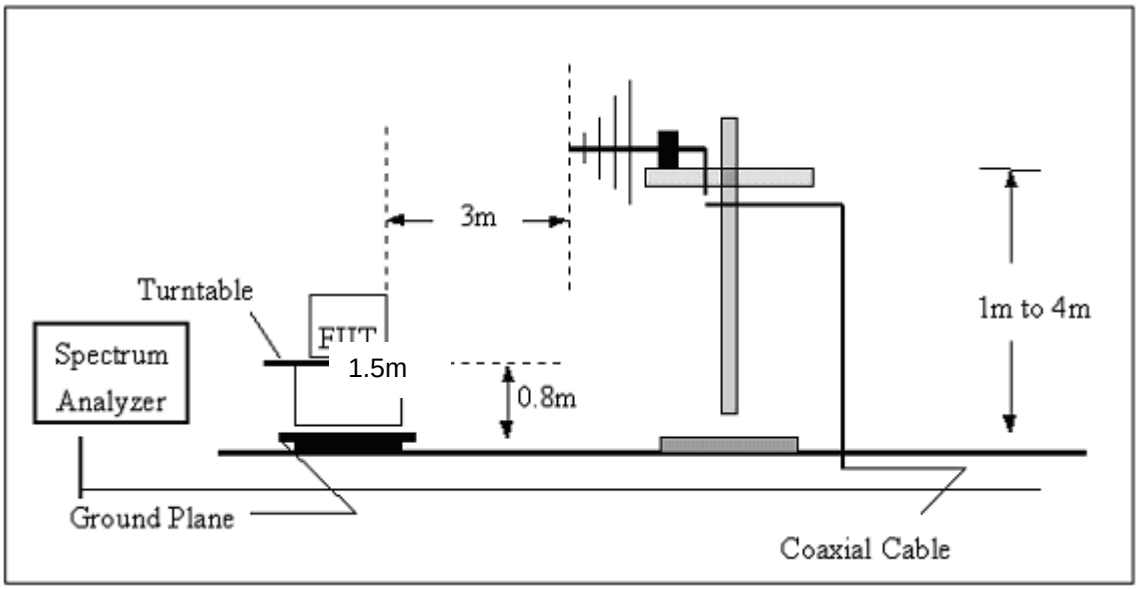
No deviation

5.2.4 TEST SETUP

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



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

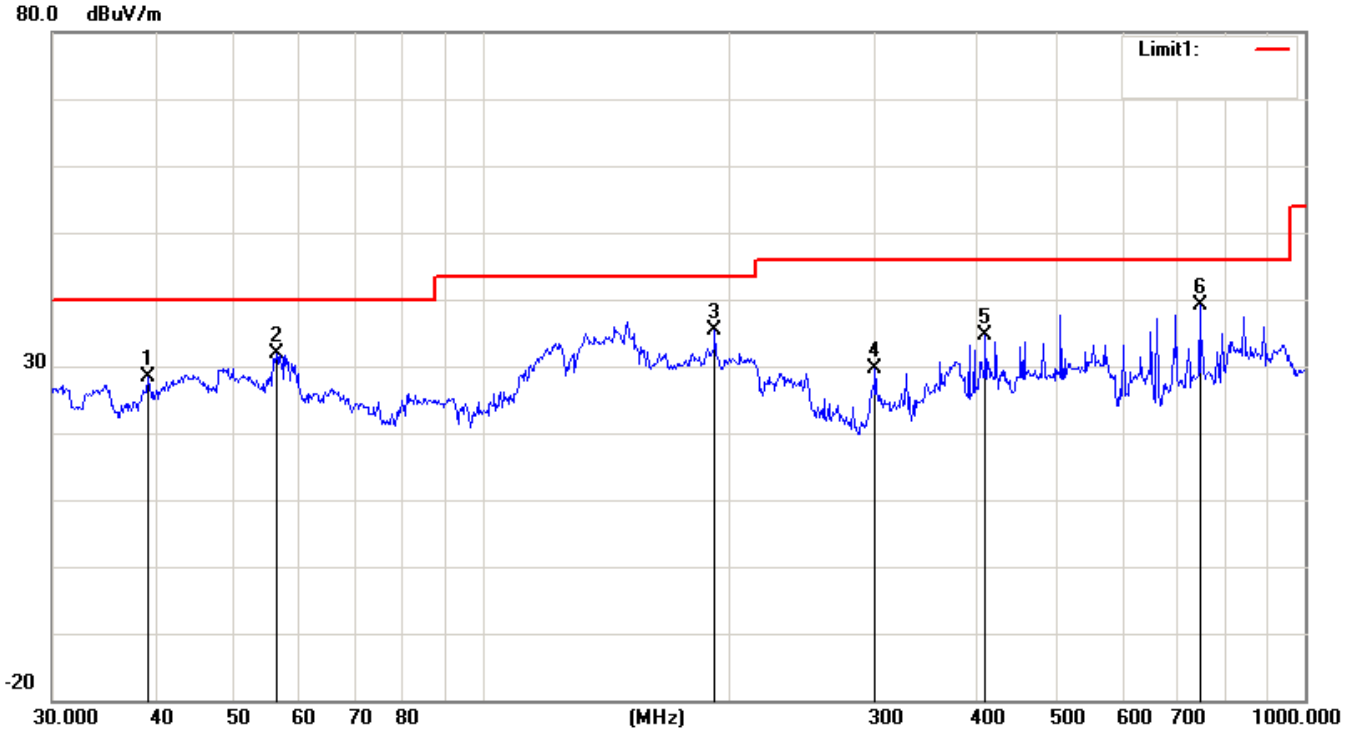


5.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

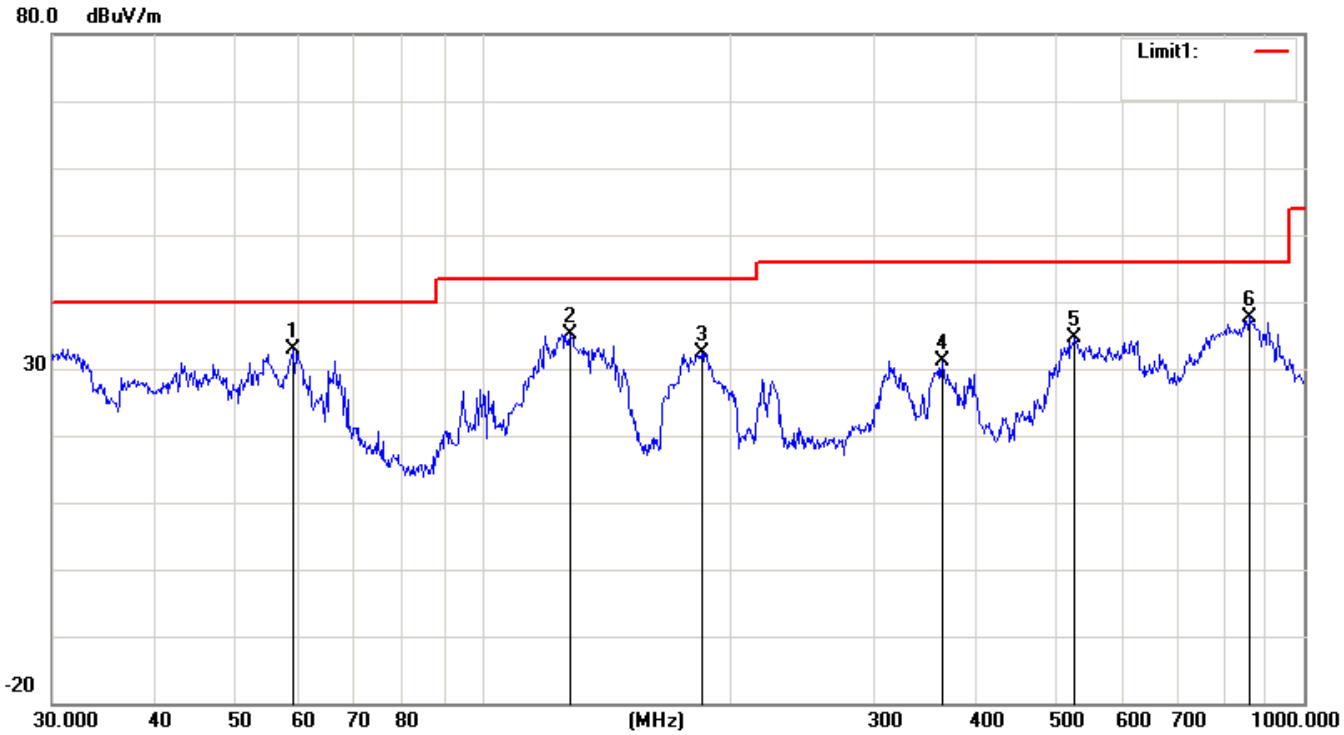
5.2.5.1 TEST RESULTS (BETWEEN 30M – 1000 MHZ)

EUT	8 Risc-based Panel PC	Model Name	IOT-800
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Polarization :	Horizontal
Test Mode	Mode 1	Test Date	February 25, 2016



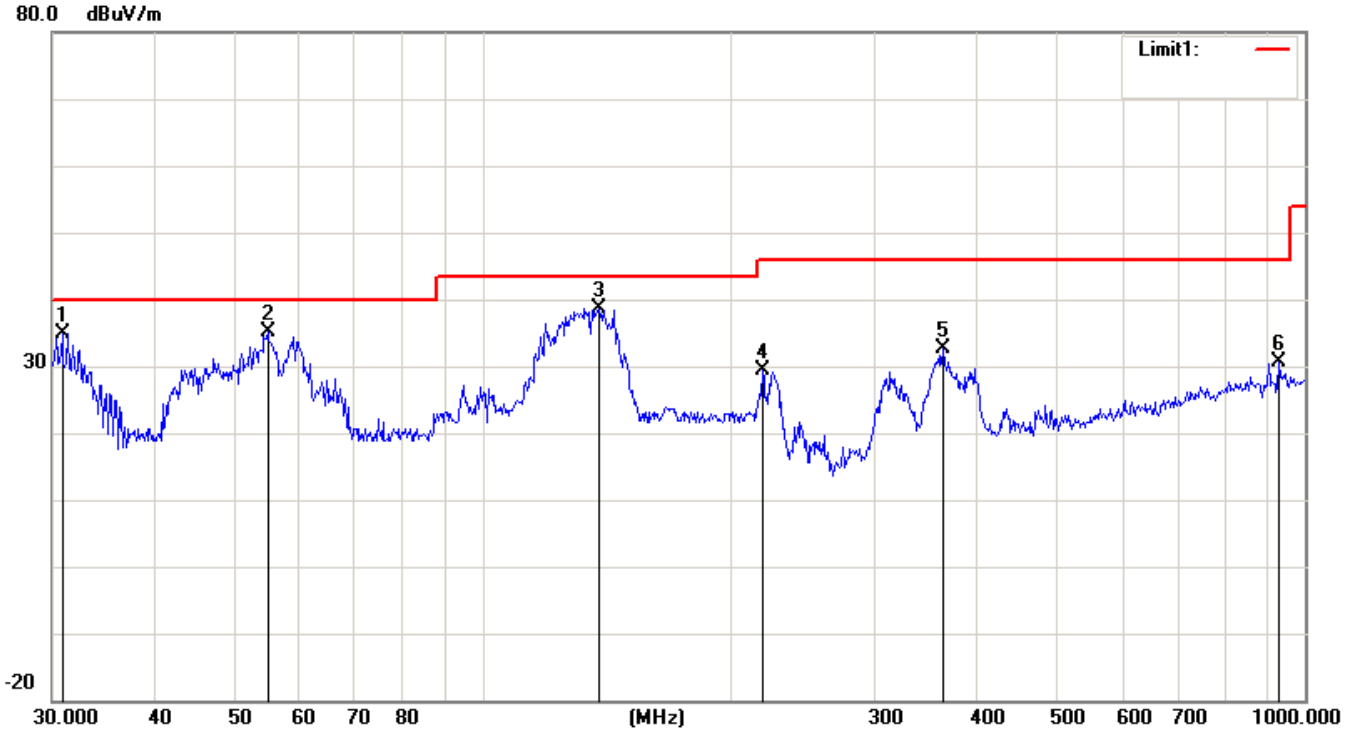
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		39.1613	31.21	-2.89	28.32	40.00	-11.68	peak
2		56.1974	41.41	-9.48	31.93	40.00	-8.07	peak
3		191.7450	40.78	-5.29	35.49	43.50	-8.01	peak
4		300.3672	35.40	-5.69	29.71	46.00	-16.29	peak
5		408.9460	36.52	-1.98	34.54	46.00	-11.46	peak
6	*	744.8659	35.43	3.58	39.01	46.00	-6.99	peak

EUT	8 Risc-based Panel PC	Model Name	IOT-800
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Polarization :	Vertical
Test Mode	Mode 1	Test Date	February 25, 2016



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	*	58.8185	42.17	-9.41	32.76	40.00	-7.24	peak
2		128.1125	37.38	-2.17	35.21	43.50	-8.29	peak
3		185.1379	37.75	-5.27	32.48	43.50	-11.02	peak
4		362.9844	35.01	-3.83	31.18	46.00	-14.82	peak
5		526.3967	35.03	-0.44	34.59	46.00	-11.41	peak
6		860.0352	32.90	4.85	37.75	46.00	-8.25	peak

EUT	8 Risc-based Panel PC	Model Name	IOT-800
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Polarization :	Horizontal
Test Mode	Mode 2	Test Date	February 25, 2016



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		30.8535	32.05	2.92	34.97	40.00	-5.03	peak
2		54.8348	44.60	-9.48	35.12	40.00	-4.88	peak
3	*	138.3873	41.74	-3.06	38.68	43.50	-4.82	peak
4		219.0750	34.81	-5.50	29.31	46.00	-16.69	peak
5		362.9844	36.51	-3.83	32.68	46.00	-13.32	peak
6		929.0081	23.82	6.87	30.69	46.00	-15.31	peak

EUT	8 Risc-based Panel PC	Model Name	IOT-800
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Polarization :	Vertical
Test Mode	Mode 2	Test Date	February 25, 2016

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		30.3170	31.05	3.27	34.32	40.00	-5.68	peak
2	*	59.0251	44.40	-9.41	34.99	40.00	-5.01	peak
3		145.3505	39.90	-3.42	36.48	43.50	-7.02	peak
4		209.3129	40.48	-5.15	35.33	43.50	-8.17	peak
5		357.9286	35.65	-3.98	31.67	46.00	-14.33	peak
6		903.3093	26.33	5.91	32.24	46.00	-13.76	peak

5.2.5.2 TEST RESULTS(1GHZ TO 6GHZ)

EUT	8 Risc-based Panel PC	Model Name	IOT-800
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 1
Test Date	February 25, 2016		

Freq. (MHz)	Ant. Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
1672.55	V	58.17	39.80	74	54	-15.83	-14.20
2839.55	V	58.71	40.83	74	54	-15.29	-13.17
1694.48	H	59.81	40.14	74	54	-14.19	-13.86
2833.56	H	59.99	40.99	74	54	-14.01	-13.01

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

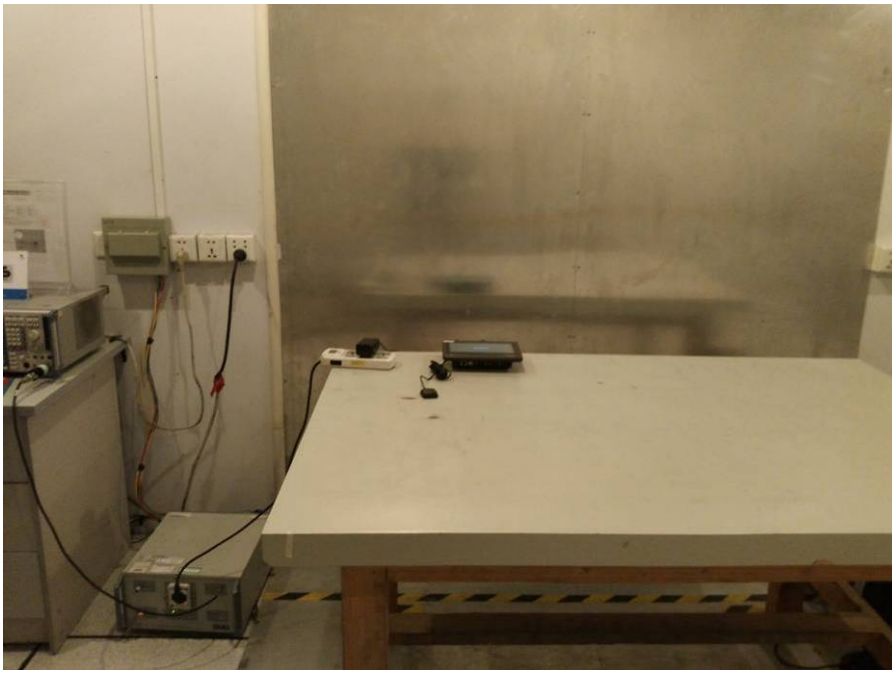
EUT	8 Risc-based Panel PC	Model Name	IOT-800
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 2
Test Date	February 25, 2016		

Freq. (MHz)	Ant. Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
1558.41	V	60.55	40.48	74	54	-13.45	-13.52
2651.52	V	58.11	39.74	74	54	-15.89	-14.26
1638.42	H	58.48	40.96	74	54	-15.52	-13.04
2835.51	H	58.15	39.15	74	54	-15.85	-14.85

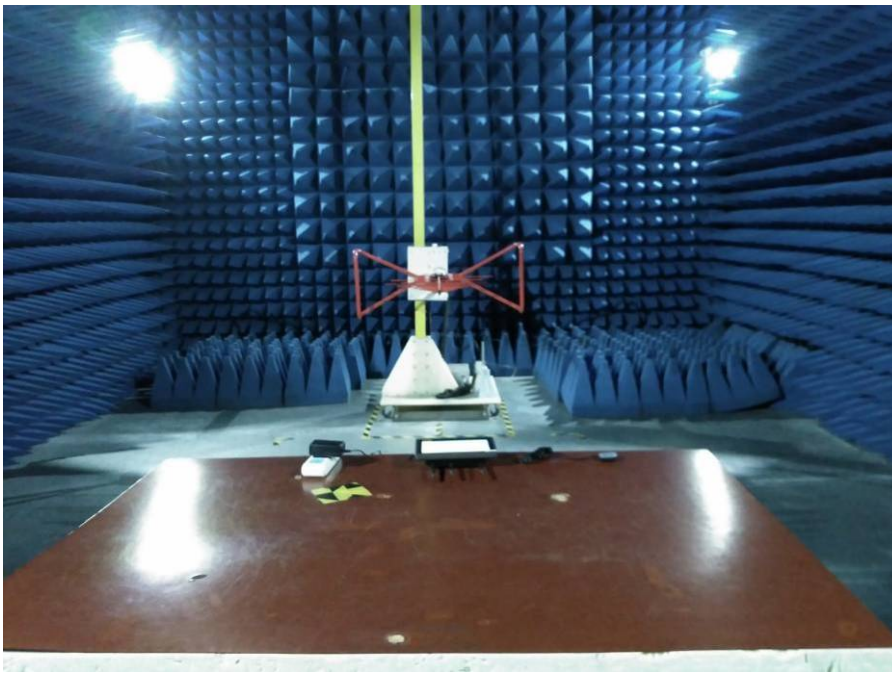
Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

6. EUT TEST PHOTO

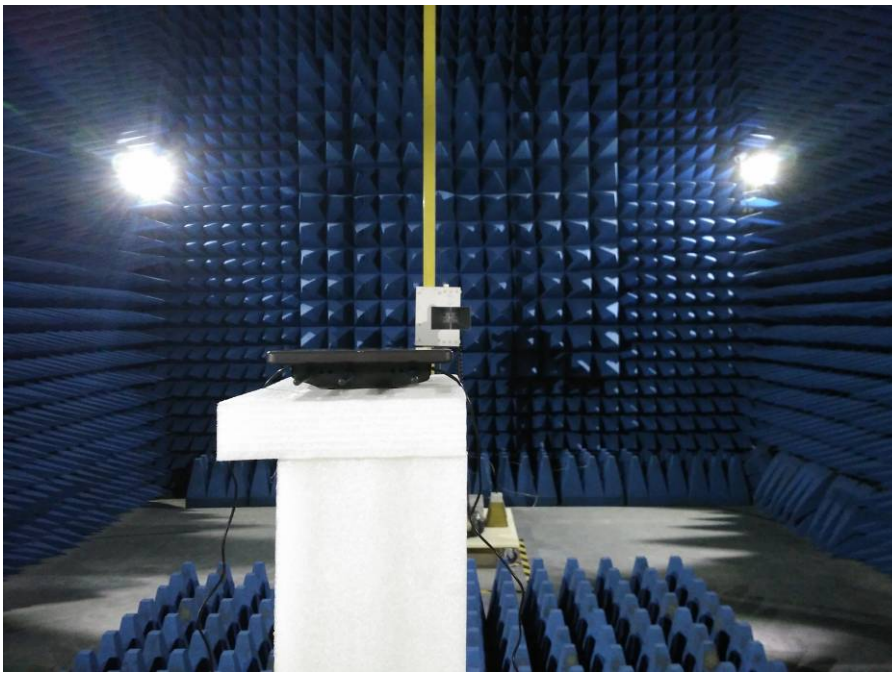
CONDUCTED EMISSION TEST



RADIATED EMISSION TEST



RADIATED EMISSION TEST



7. PHOTOGRAPHS OF EUT

Appearance photograph of EUT

Appearance photograph of EUT

Appearance photograph of EUT

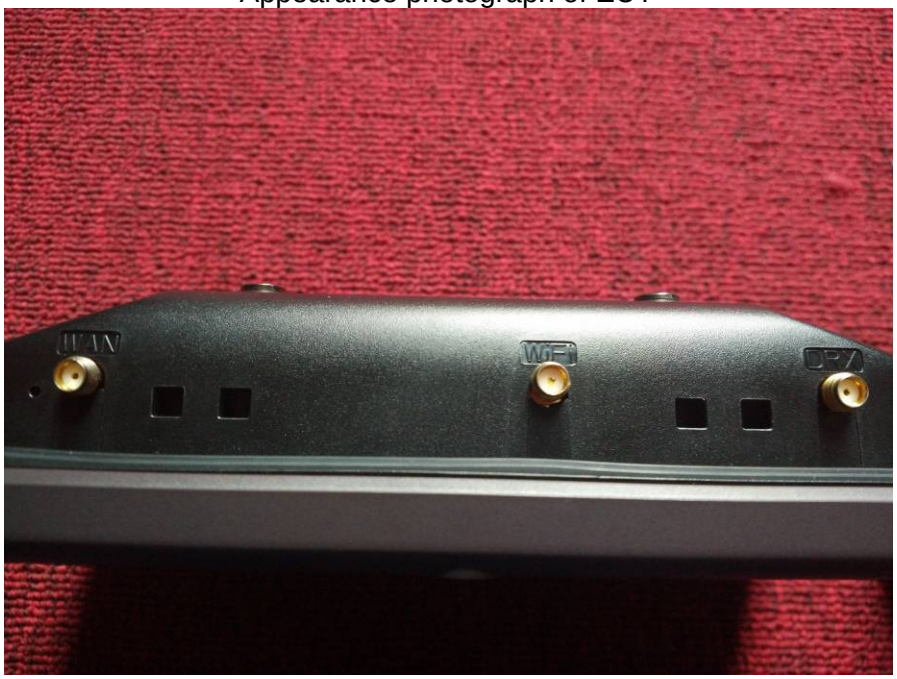
Appearance photograph of EUT

Appearance photograph of EUT

Appearance photograph of EUT

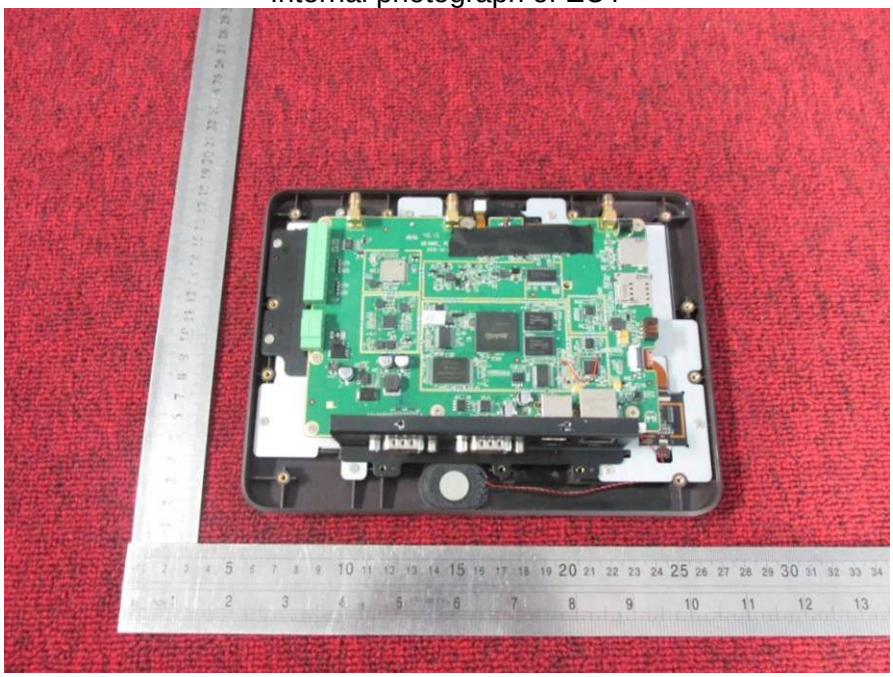
Appearance photograph of EUT

Appearance photograph of EUT



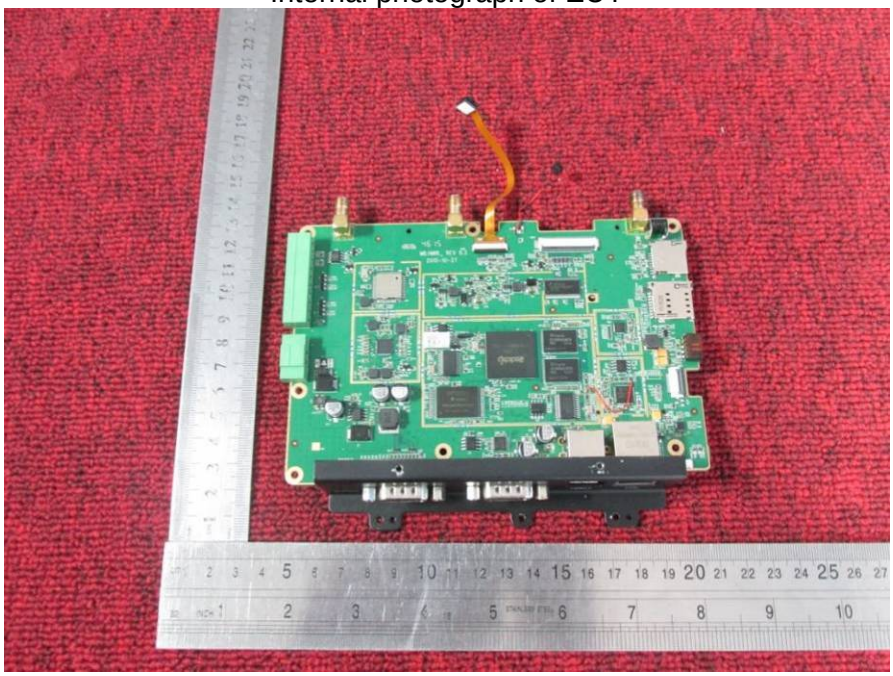
Internal photograph of EUT

Internal photograph of EUT

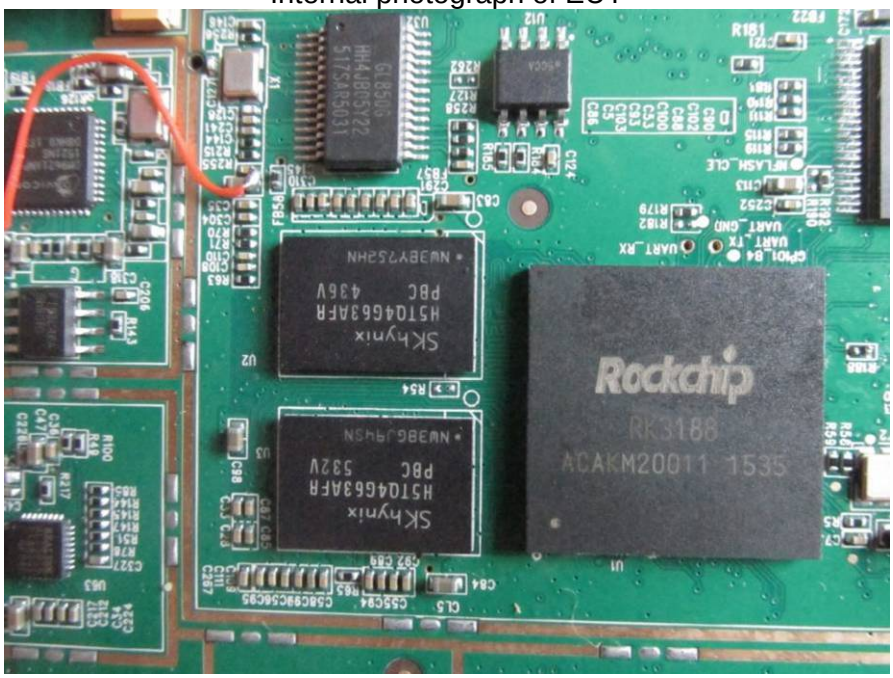


Internal photograph of EUT

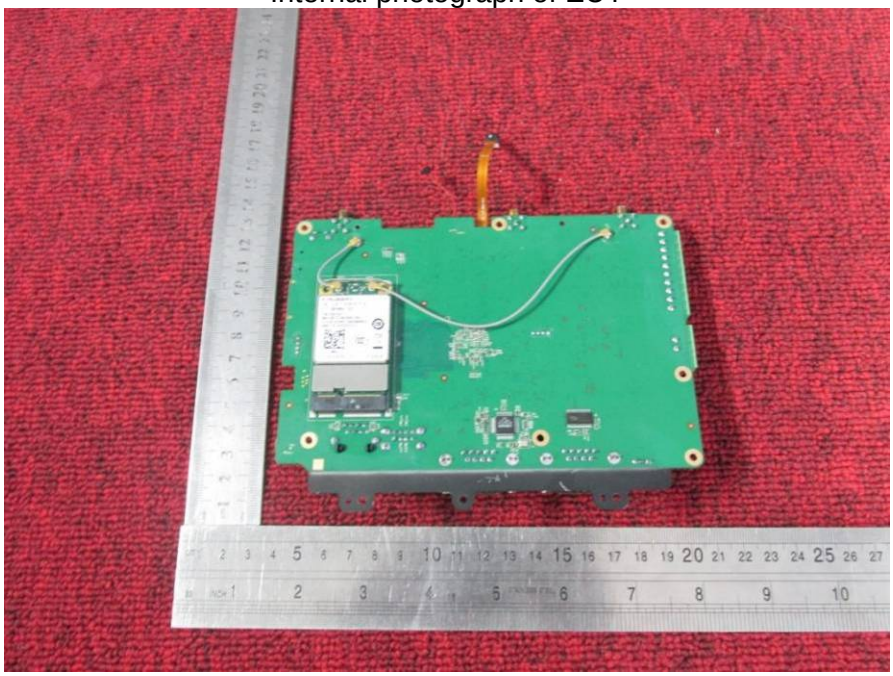
Internal photograph of EUT



Internal photograph of EUT



Internal photograph of EUT



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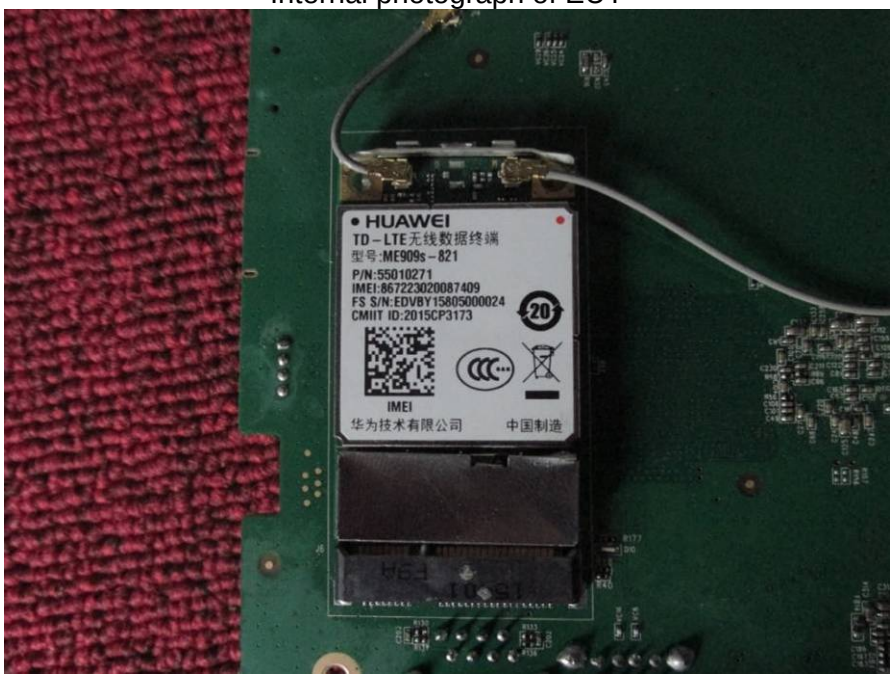

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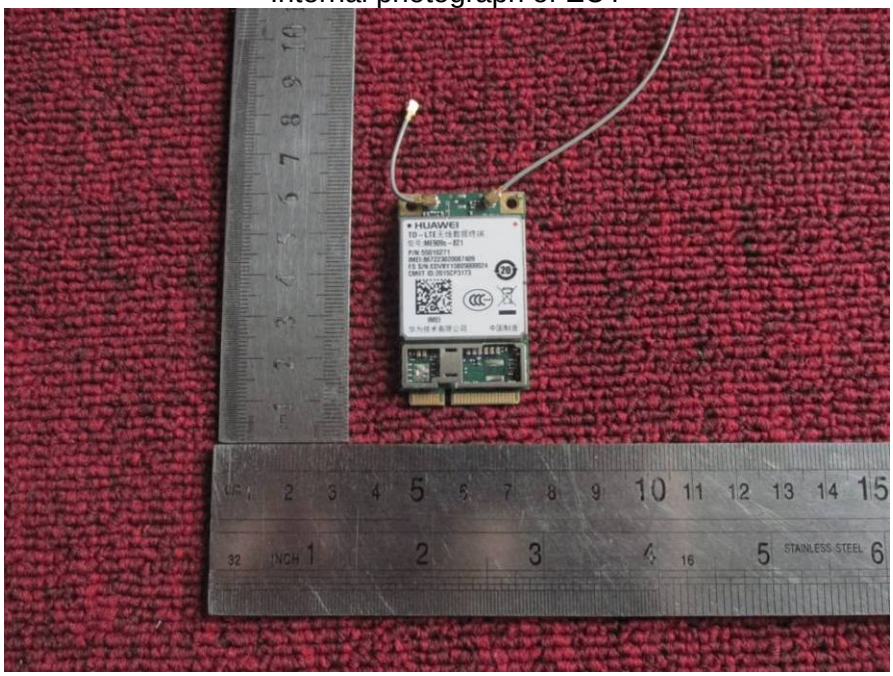

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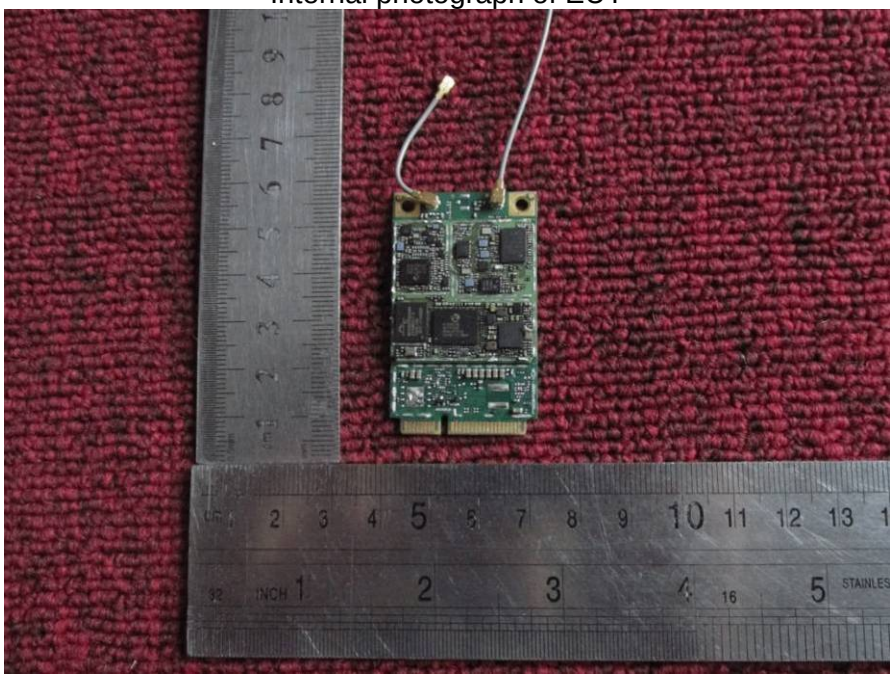
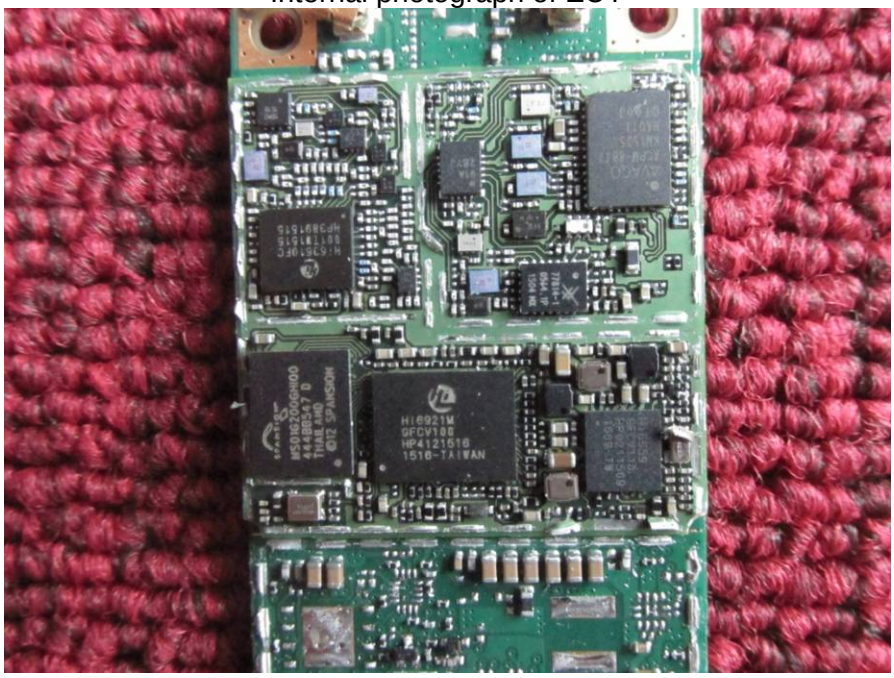
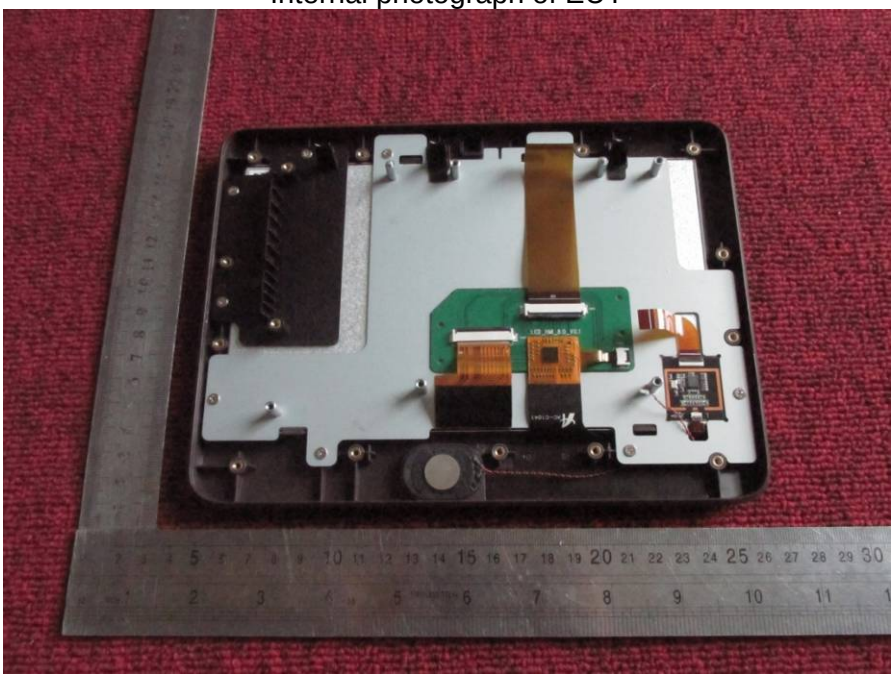


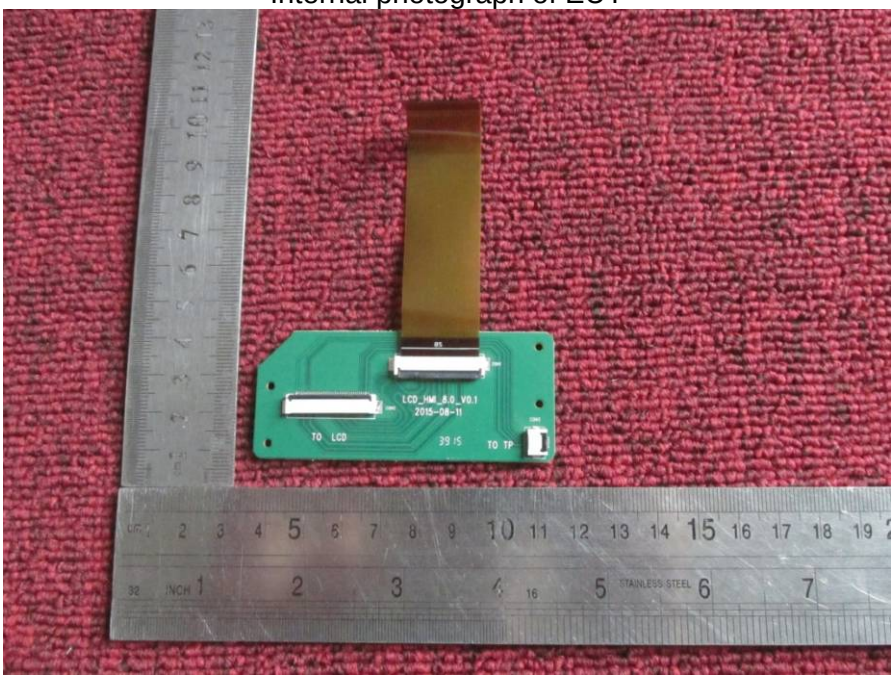
Internal photograph of EUT



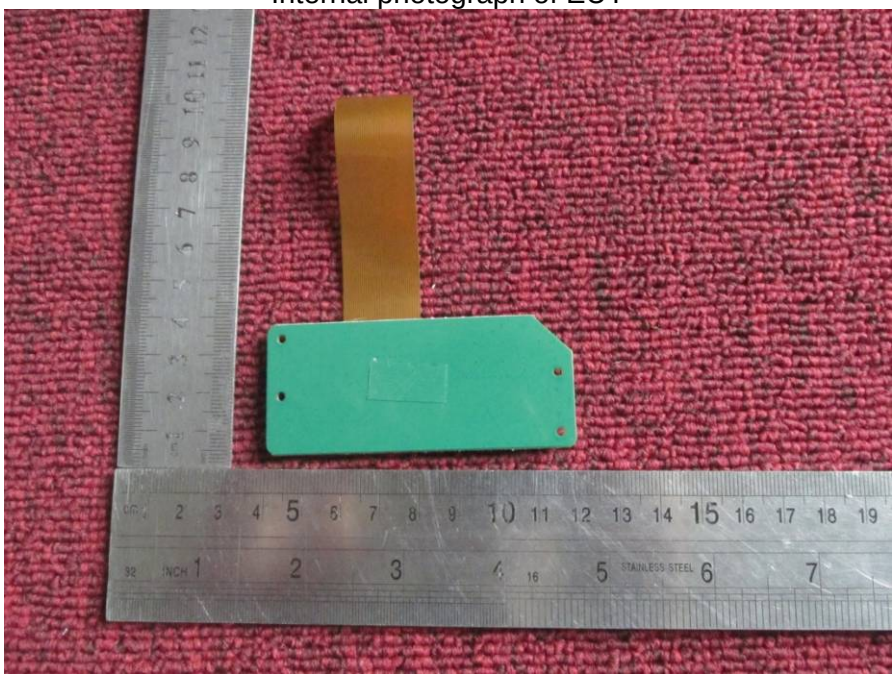
Internal photograph of EUT



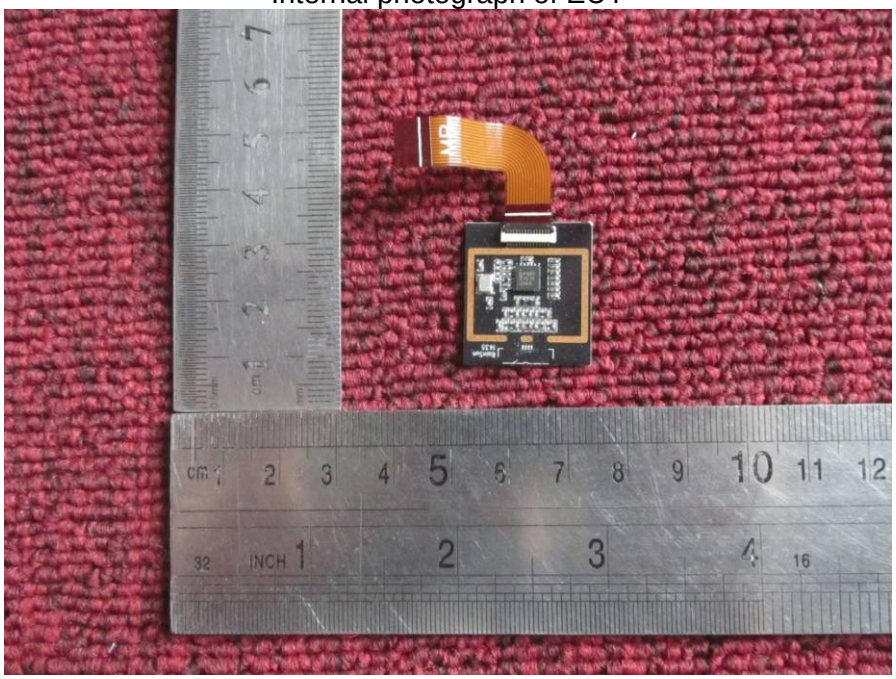
Internal photograph of EUT



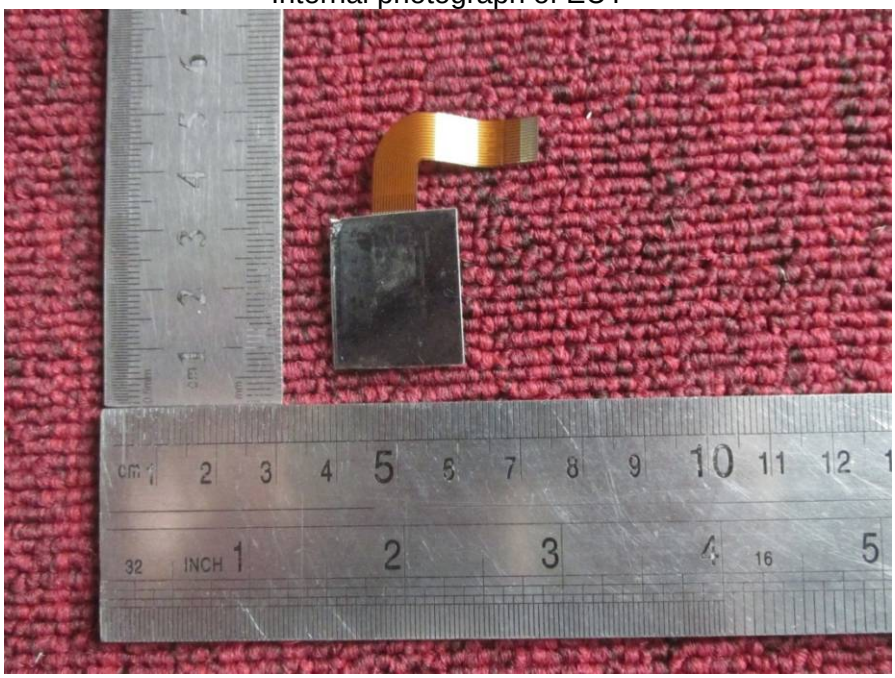
Internal photograph of EUT



Internal photograph of EUT



Internal photograph of EUT



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