



World Standardization Certification & Testing CO., LTD
World Standardization Safety and EMC Testing Centre

FCC ID TEST REPORT

for

AOC Tablet

MODEL: MW0821

Trade Mark: N/A

FCC ID: Y5VMW0821

Test Report Number: WSCT11090511E-2

Issued Date: September 07, 2011

Issued for

Fuzhou Smart Digital Science & Technology Co., Ltd.
No.8 Building, Honshan science & Technology Zone, Gulou District,
Fuzhou, Fujian, China

Issued By:

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Issued: September 07, 2011
Revised: None

Revision History Of Report

Rev.	Issue No.	Revisions	Effect Page	Revised By
00	WSCT11090511E-2	Initial Issue	ALL	Kallen Wang



TABLE OF CONTENTS

1 TEST CERTIFICATION	4
2 TEST RESULT SUMMARY	5
Modifications:	5
3 EUT DESCRIPTION	6
4 SETUP OF EQUIPMENT UNDER TEST and Test Equipment USED.....	7
4.1. DESCRIPTION OF SUPPORT UNITS	8
4.2. CONFIGURATION OF SYSTEM UNDER TEST	8
5 FACILITIES AND ACCREDITATIONS	9
5.1. FACILITIES	9
5.2. ACCREDITATIONS	9
5.3. MEASUREMENT UNCERTAINTY	9
§15.203 - ANTENNA REQUIREMENT	10
Standard Applicable	10
Antenna Connector Construction	10
§15.207 - CONDUCTED EMISSIONS	11
Applicable Standard	11
Test Procedure	11
Plot(s) of Test Data	12
§15.209, §15.205, §15.247(d) - SPURIOUS EMISSIONS	14
Test Equipment	14
Test Procedure	14
Radiated Test Setup	14
Radiated Emission Limit	14
Radiated Emission Test Result	15
§15.247(a) (2) - 6dB BANDWIDTH TESTING	25
Test Equipment	25
Test Procedure	25
10.3.Applicable Standard	25
Test Result:Pass	25
§15.247(b) (3) - MAXIMUM PEAK OUTPUT POWER.....	29
Test Equipment	29
Test Procedure	29
Applicable Standard	29
Test Result	29
§ 15.247(d) - 100 kHz BANDWIDTH OF FREQUENCY BAND EDGE	31
Test Equipment	31
Test Procedure	31
Applicable Standard	31
Test Result	31
§15.247(e) - POWER SPECTRAL DENSITY.....	36
Test Equipment	36
Test Procedure	36
Applicable Standard	36
Test Result	36
PHOTOGRAPHS OF THE TEST CONFIGURATION	40
PHOTOGRAPHS OF EUT.....	42



Report reference No.: WSCT11090511E-2
Issued: September 07, 2011
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1 TEST CERTIFICATION

Product:	AOC Tablet
Model:	MW0821
Trade Mark	N/A
Applicant:	Fuzhou Smart Digital Science & Technology Co., Ltd. No.8 Building, Honshan science & Technology Zone, Gulou District, Fuzhou, Fujian, China
Factory:	Fuzhou Smart Digital Science & Technology Co., Ltd. No.8 Building, Honshan science & Technology Zone, Gulou District, Fuzhou, Fujian, China
Tested:	September 02 ~ September 07, 2011
Test Voltage:	AC 120V/60Hz
Applicable Standards:	FCC Part 15 Subpart C: 2010 ANSI C63.4:2003

Deviation from Applicable Standard


None

The above equipment has been tested by World Standardization Certification & Testing Co., Ltd., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.


Tested By: _____

(Davis Zhou)

Date: 2011-09-07


Check By: _____

(Mike Mo)

Date: 2011-09-07


Approved By: _____

(Kallen Wang)

Date: 2011-09-07



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Revised: None

2 TEST RESULT SUMMARY

FCC 15 Subpart C, Paragraph 15.247

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.203	Antenna Requirement	Pass
§15.207 (a)	Conducted Emissions	Pass
§15.247(d)	Spurious Emissions at Antenna Port	Pass
§15.205	Restricted Bands	Pass
§15.209, §15.205, 1§15.247(d)	Spurious Emissions	Pass
§15.247 (a)(2)	6 dB Bandwidth	Pass
§15.247(b)(3)	Maximum Peak Output Power	Pass
§15.247(d)	100kHz Bandwidth of Frequency Band Edge	Pass
§15.247(e)	Power Spectral Density	Pass

Modifications:

No modification was made.



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3 EUT DESCRIPTION

Product	AOC Tablet
Trade Mark	N/A
Model	MW0821
Applicant	Fuzhou Smart Digital Science & Technology Co., Ltd.
Housing material	Plastic
EUT Type	<input checked="" type="checkbox"/> Engineering Sample. <input type="checkbox"/> Product Sample, <input type="checkbox"/> Mass Product Sample.
Serial Number	N/A
Antenna Type	PIFA Antenna
EUT Power Rating	AC 100-240V 50/60Hz 6.5W
Temperature Range(Operating)	-10 ~50°C
Type of the Equipment	Combined Equipment
Operating Frequency (WIFI)	2412MHz - 2462MHz
Number of Channels	11 Channels
Channel Separation	5MHz
Operating Frequency (Bluetooth)	2402MHz to 2480MHz
Modulation type	DSSS for IEEE 802.11b; OFDM For IEEE 802.11g

Note: N/A stand for no applicable.

Model Differences

N/A



Report reference No.:WSCT11090511E-2
Issued: September 07, 2011
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4 SETUP OF EQUIPMENT UNDER TEST and Test Equipment USED

EQUIPMENT/FACILITIES	MANUFACTURER	MODEL #	SERIAL NO.	DATE OF CAL.	CAL. INTERVAL
Cable	Resenberger	N/A	NO.1	Mar 10, 2011	1 Year
Cable	SCHWARZBECK	N/A	NO.2	Mar 10, 2011	1 Year
Cable	SCHWARZBECK	N/A	NO.3	Mar 10, 2011	1 Year
LISN	Rohde & Schwarz	ESH3-Z5	100305	Mar 10, 2011	1 Year
50 Ω Coaxial Switch	ANRITSU CORP	MP59B	6200283933	Mar 10, 2011	1 Year
EMI Test Receiver	Rohde & Schwarz	ESP13	100180	Oct.18,2010	1 Year
Spectrum Analyzer	Rohde & Schwarz	FSP40	100273	Sep.10,2010	1 Year
3m Semi-Anechoic Chamber	Albatross Projects	9m \times 6m \times 6m	N/A	Feb.20,2011	1 Year
Signal Generator	FLUKE	PM5418 + Y/C	LO747012	Feb.20,2011	1 Year
Signal Generator	FLUKE	PM5418TX	LO738007	Feb.20,2011	1 Year
Loop Antenna	SCHWARZBECK	FMZB1516	113	Jan.30,2011	1 Year
Trilog-Super Broadband Antenna	SCHWARZBECK	VULB9161	9161-4079	Sep.22,2010	1 Year
Broad-Band Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-564	Sep.22,2010	1 Year
Ultra Broadband Antenna	Rohde & Schwarz	HL-562	100110	June.15,2011	1 Year
AMN	Rohde & Schwarz	ESH3-Z5	100196	Oct.11,2010	1 Year
AMN	Rohde & Schwarz	ESH3-Z5	100197	Oct.11,2010	1 Year
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	N/A	N/A	N/A
Power Meter	Rohde & Schwarz	NRVD	100041	Feb.20,2011	1 Year
EMI Test Receiver	Rohde & Schwarz	ESCS30	100003	Feb.20,2011	1 Year
Coaxial Cable with N-connectors	SCHWARZBECK	AK9515H	95549	Sep.22,2010	1 Year
Radio Communication Test Set	Rohde & Schwarz	CMS 54	846621/024	Feb.20,2011	1 Year
Modulation Analyzer	Hewlett-Packard	8901B	2303A00362	Feb.20,2011	1 Year
Absorbing clamp	Rohde & Schwarz	MDS-21	N/A	Oct.29,2010	1 Year

4.1. DESCRIPTION OF SUPPORT UNITS

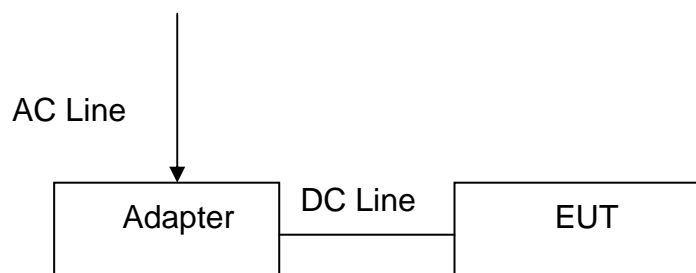
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Equipment	Model No.	Serial No.	FCC ID	Trade Name	Data Cable	Power Cord
1.	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note:

- 1) All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2) Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.2. CONFIGURATION OF SYSTEM UNDER TEST



5 FACILITIES AND ACCREDITATIONS

5.1. FACILITIES

All measurement facilities used to collect the measurement data are located at World Standardization Certification & Testing CO., LTD.

Building A, Baoshi Road, Baoshi Science & Technology Park, Bao'an District, Shenzhen, Guangdong, China

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

5.2. ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	FCC (certificate registration number is 131628) TIMCO (certificate registration number is Q2001)
Japan	VCCI (certificate registration number is C-2912, R-2662)
Germany	TUV Rheinland
Canada	INDUSTRY CANADA (certificated registration number is 46405-7700)

Copies of granted accreditation certificates are available for downloading from our web site, <http://www.wsct.org.cn>

5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency		Uncertainty
Conducted emissions	9kHz~30MHz		+/- 3.59dB
Radiated emissions	Horizontal	30MHz ~ 200MHz	+/- 4.77dB
		200MHz ~1000MHz	+/- 4.93dB
	Vertical	30MHz ~ 200MHz	+/- 5.04dB
		200MHz ~1000MHz	+/- 4.93dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

§15.203 - ANTENNA REQUIREMENT

Standard Applicable

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

- a. Antenna must be permanently attached to the unit.
- b. Antenna must use a unique type of connector to attach to the EUT.

Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.247 (b), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

The EUT uses a unique coupling antenna. The Antenna gain is 0dBi. please refer to the EUT internal photos.



§15.207 - CONDUCTED EMISSIONS

Applicable Standard

The specification used was with the FCC Part 15.207 limits.

Test Procedure

During the conducted emission test, the EUT was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

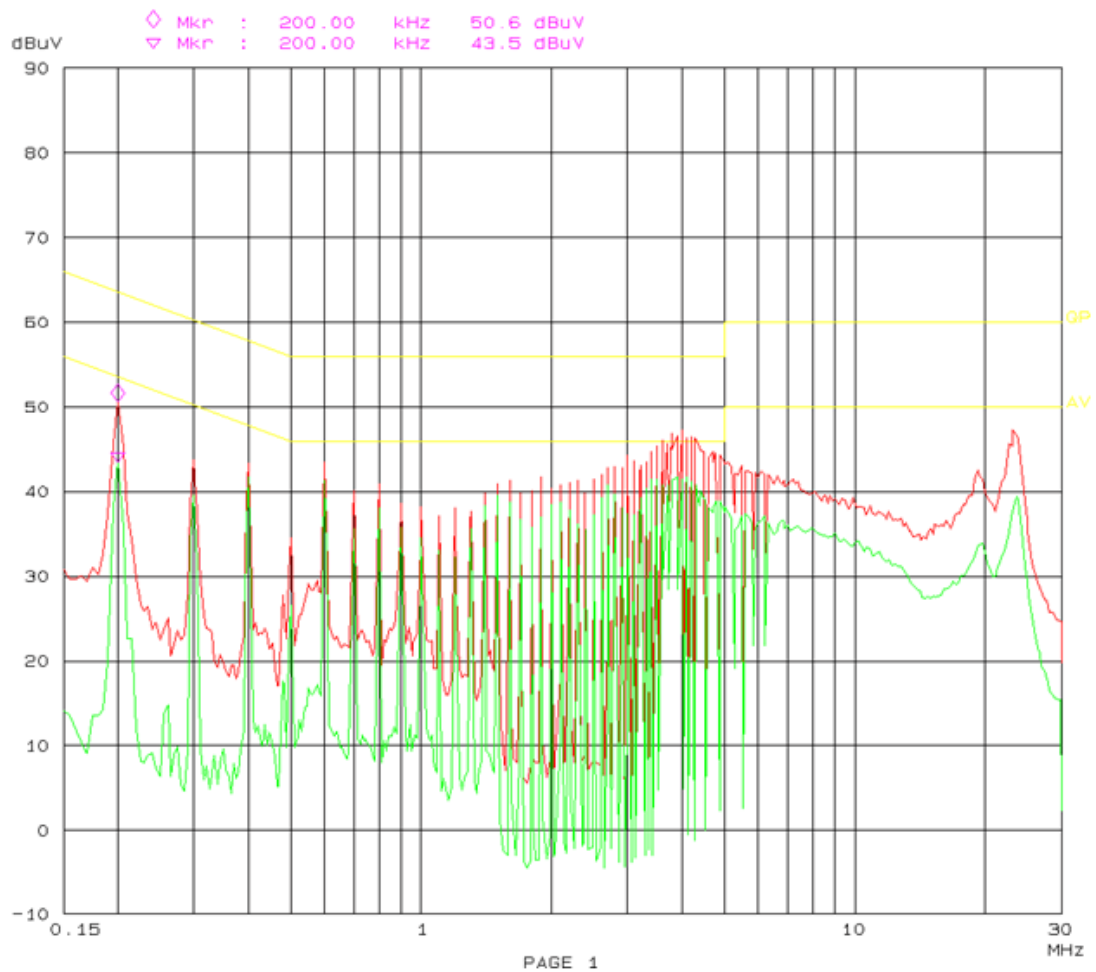
Test Result

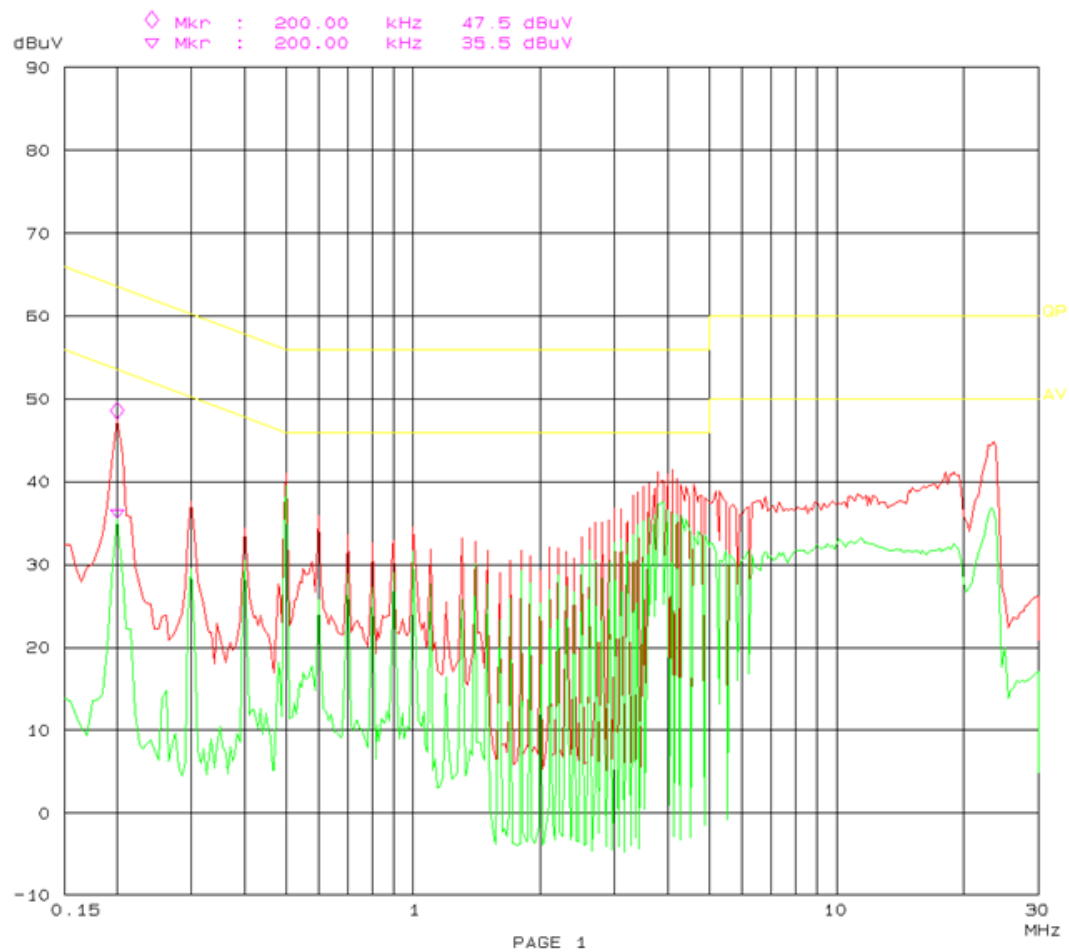
Test Mode: Operating

Line Conducted Emissions				FCC Part 15.207	
Frequency (MHz)	Amplitude (dBμV)	Detector (QP/AV)	Conductor (Hot/Neutral)	Limit (dBμV)	Margin (dB)
3.800	41.20	AV	Hot	46.00	4.80
0.400	41.80	AV	Hot	47.85	6.05
1.500	39.50	AV	Hot	46.00	6.50
3.800	37.20	AV	Neutral	46.00	8.80
0.200	43.50	AV	Hot	53.61	10.11
23.590	39.40	AV	Hot	50.00	10.60
3.800	45.00	QP	Hot	56.00	11.00
0.200	50.60	QP	Hot	63.61	13.01
23.390	36.70	AV	Neutral	50.00	13.30
23.580	46.60	QP	Hot	60.00	13.40
0.200	39.50	AV	Neutral	53.61	14.11
7.490	35.70	AV	Hot	50.00	14.30
1.000	31.50	AV	Neutral	46.00	14.50
0.400	43.30	QP	Hot	57.85	14.55
0.500	41.10	QP	Neutral	56.00	14.90
1.500	40.90	QP	Hot	56.00	15.10
23.480	44.80	QP	Neutral	60.00	15.20
3.800	40.00	QP	Neutral	56.00	16.00
0.200	47.50	QP	Neutral	63.61	16.11
2.200	28.70	AV	Neutral	46.00	17.30
0.200	35.50	AV	Neutral	53.61	18.11
7.490	40.30	QP	Hot	60.00	19.70
1.000	34.60	QP	Neutral	56.00	21.40
2.200	32.00	QP	Neutral	56.00	24.00

Plot(s) of Test Data

Plot(s) of Test Data is presented hereinafter as reference.





§15.209, §15.205, §15.247(d) - SPURIOUS EMISSIONS

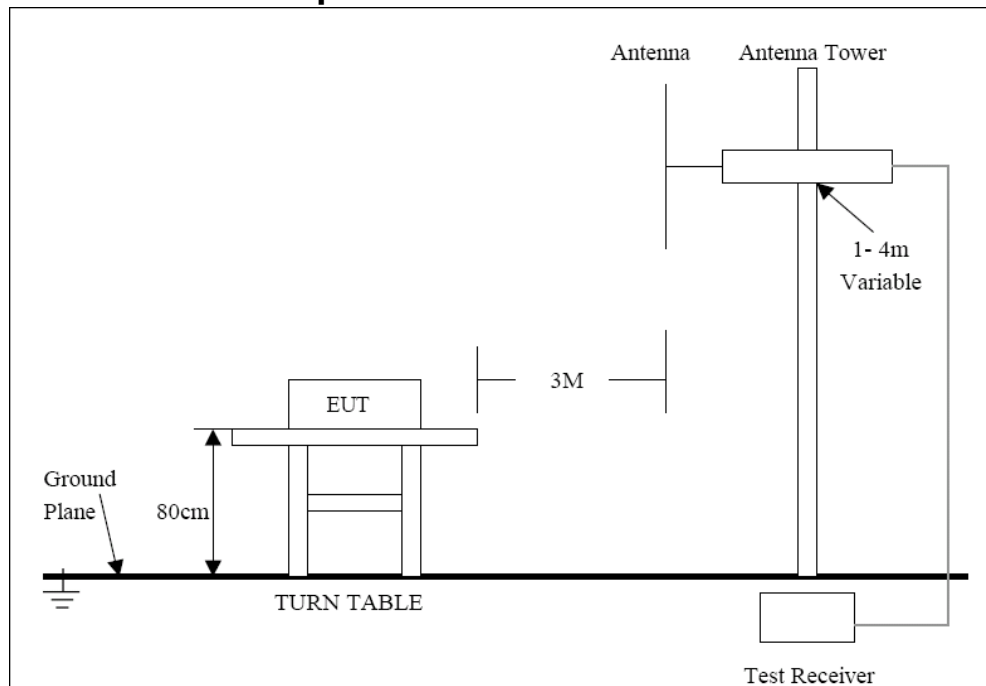
Test Equipment

Please refer to section 4 this report.

Test Procedure

The out of band emission tests were performed in the 3-meter chamber test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC Part Subpart C limits.

Radiated Test Setup



For the accrual test configuration, please refer to the related items-photos of Testing.

Radiated Emission Limit

CARRIER FREQUENCY WILL NOT EXCEEDS 48.0 dBuV/m AT 3M.

OUT-OF-BAND EMISSIONS SHALL NOT EXCEED:

Frequency (MHz)	Distance (m)	Field Strength (dBuV/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
ABOVE 960	3	54.0



Report reference No.:WSCT11090511E-2
Issued: September 07, 2011
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Radiated Emission Test Result

Test Mode: Operating

Radiated Emission Measurement

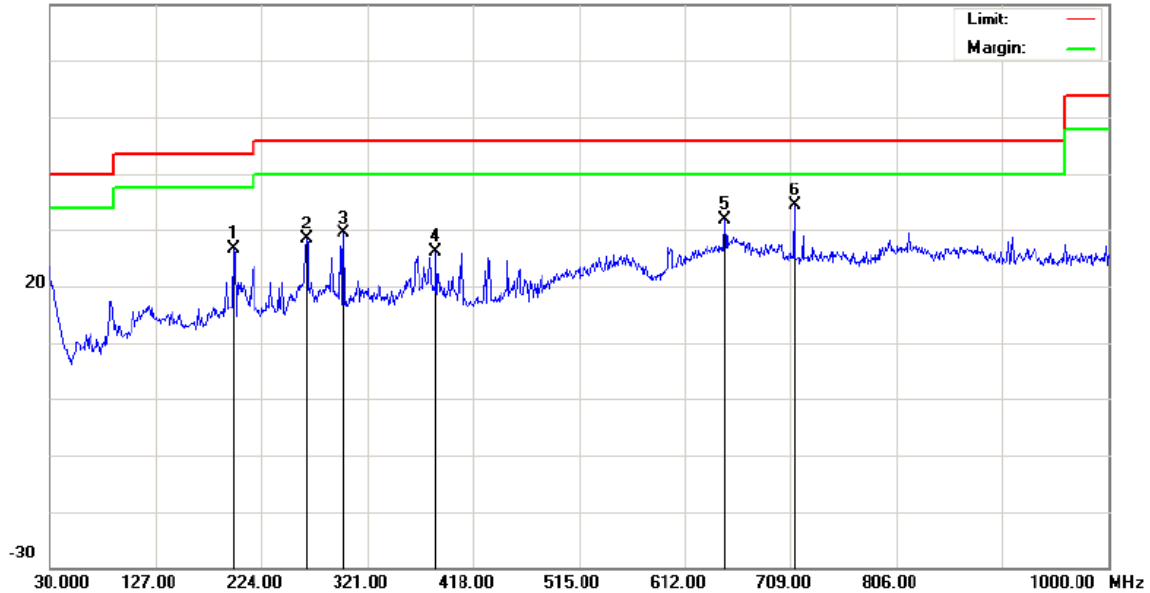
File :Smart

Data :#3

Date: 2011-9-7

Time: 10:30:38

70.0 dBuV/m



Site 966

Polarization: **Horizontal**

Temperature: 26

Limit: FCC Part15B _ RE 3M

Power: AC 120V/60Hz

Humidity: 55 %

EUT: AOC Tabiet

Distance:

M/N: MW0821

Mode: Operating

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		198.7800	35.14	-8.50	26.64	43.50	-16.86	QP		
2		265.7100	34.31	-5.84	28.47	46.00	-17.53	QP		
3		299.6600	35.47	-5.99	29.48	46.00	-16.52	QP		
4		384.0500	31.14	-4.90	26.24	46.00	-19.76	QP		
5		648.8600	28.19	3.69	31.88	46.00	-14.12	QP		
6	*	712.8800	31.87	2.50	34.37	46.00	-11.63	QP		

*:Maximum data x:Over limit !:over margin

⟨Reference Only

Radiated Emission Measurement

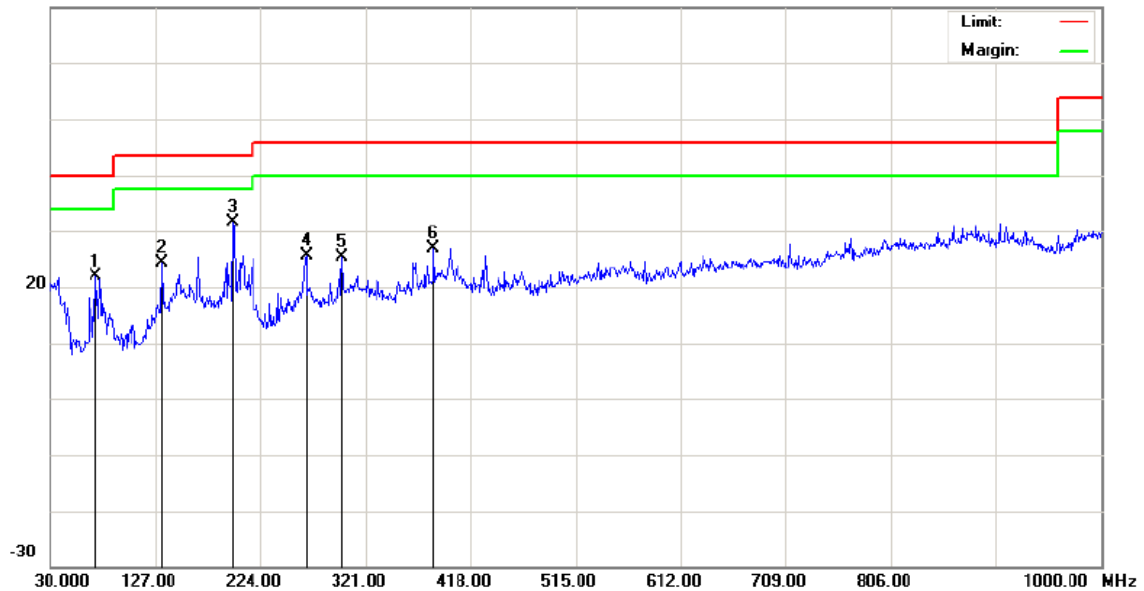
File : Smart

Data : #5

Date: 2011-9-7

Time: 10:31:44

70.0 dBuV/m



Site 966

Limit: FCC Part15B _ RE 3M

EUT: AOC Tabiet

M/N: MW0821

Mode: Operating

Note:

Polarization: **Vertical**

Power: AC 120V/60Hz

Distance:

Temperature: 26

Humidity: 55 %

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		71.7100	35.16	-13.21	21.95	40.00	-18.05	QP		
2		132.8200	31.94	-7.55	24.39	43.50	-19.11	QP		
3	*	198.7800	36.77	-5.25	31.52	43.50	-11.98	QP		
4		266.6800	30.27	-4.66	25.61	46.00	-20.39	QP		
5		299.6600	28.57	-3.25	25.32	46.00	-20.68	QP		
6		384.0500	28.72	-1.74	26.98	46.00	-19.02	QP		

*:Maximum data x:Over limit !:over margin

<Reference Only



Report reference No.:WSCT11090511E-2
 Issued: September 07, 2011
 Revised: None

Above 1GHz:
 802.11b

Indicated		Detector (PK/AV)	Table Angle Degree	Antenna		Correction Factor			FCC Part 15.247		
Frequency (MHz)	Receiver Reading (dBμV/m)			Height (m)	Polar (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Low Channel (2412MHz)											
7236	37.5	AV	360	1.5	V	35.4	4.51	33.7	43.71	54	10.29
4824	39.3	AV	250	1.2	V	31.3	4.64	33.4	41.84	54	12.16
7236	35.2	AV	45	1.4	H	35.4	4.51	33.7	41.41	54	12.59
4824	38.6	AV	60	1.6	H	31.3	4.64	33.4	41.14	54	12.86
4824	53.6	PK	180	1.3	V	31.3	4.64	33.4	56.14	74	17.86
7236	48.6	PK	300	1.5	V	35.4	4.51	33.7	54.81	74	19.19
7236	47.7	PK	100	1.5	H	35.4	4.51	33.7	53.91	74	20.09
4824	49.9	PK	210	1.1	H	31.3	4.64	33.4	52.44	74	21.56
Middle Channel (2437MHz)											
7311	40.6	AV	180	1.5	V	35.4	4.75	33.7	47.05	54	6.95
7311	39.1	AV	185	1.3	H	35.4	4.75	33.7	45.55	54	8.45
4874	41.7	AV	200	1.5	V	31.3	4.64	33.4	44.24	54	9.76
4874	40.5	AV	360	1.5	H	31.3	4.64	33.4	43.04	54	10.96
7311	53.8	PK	120	1.2	V	35.4	4.75	33.7	60.25	74	13.75
4874	55.6	PK	75	1.5	V	31.3	4.64	33.4	58.14	74	15.86
7311	50.4	PK	220	1.4	H	35.4	4.75	33.7	56.85	74	17.15
4874	52.6	PK	0	1.1	H	31.3	4.64	33.4	55.14	74	18.86
HighChannel (2462MHz)											
7386	42.0	AV	160	1.3	V	35.3	4.75	33.7	48.35	54	5.65
7386	41.9	AV	245	1.4	H	35.3	4.75	33.7	48.25	54	5.75
4924	43.8	AV	360	1.5	V	32.0	4.64	33.4	47.04	54	6.96
4924	42.4	AV	45	1.5	H	32.0	4.64	33.4	45.64	54	8.36
7386	52.2	PK	90	1.2	V	35.3	4.75	33.7	58.55	74	15.45
4924	55.1	PK	0	1.4	V	32.0	4.64	33.4	58.34	74	15.66
4924	54.6	PK	200	1.4	H	32.0	4.64	33.4	57.84	74	16.16
7386	51.3	PK	180	1.2	H	35.3	4.75	33.7	57.65	74	16.35



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 Revised: None

802.11g

Indicated		Detector (PK/AV)	Table Angle Degree	Antenna		Correction Factor			FCC Part 15.247		
Frequency (MHz)	Receiver Reading (dBμV/m)			Height (m)	Polar (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Low Channel (2412MHz)											
7236	38.6	AV	1.24	1.3	V	35.4	4.51	33.7	44.81	54	9.19
7236	37.8	AV	200	1.4	H	35.4	4.51	33.7	44.01	54	9.99
4824	40.7	AV	90	1.5	V	31.3	4.64	33.4	43.24	54	10.76
4824	39.1	AV	45	1.5	H	31.3	4.64	33.4	41.64	54	12.36
7236	46.5	PK	165	1.4	V	35.4	4.51	33.7	52.71	74	21.29
4824	49.8	PK	320	1.2	V	31.3	4.64	33.4	52.34	74	21.66
4824	47.5	PK	0	1.5	H	31.3	4.64	33.4	50.04	74	23.96
7236	42.7	PK	120	1.2	H	35.4	4.51	33.7	48.91	74	25.09
Middle Channel (2437MHz)											
7311	38.6	AV	200	1.5	H	35.4	4.75	33.7	45.05	54	8.95
4874	40.5	AV	120	1.4	H	31.3	4.64	33.4	43.04	54	10.96
7311	35.9	AV	320	1.3	V	35.4	4.75	33.7	42.35	54	11.65
4874	36.7	AV	190	1.3	V	31.3	4.64	33.4	39.24	54	14.76
7311	44.2	PK	45	1.5	H	35.4	4.75	33.7	50.65	74	23.35
7311	43.2	PK	360	1.4	V	35.4	4.75	33.7	49.65	74	24.35
4874	46.8	PK	0	1.4	V	31.3	4.64	33.4	49.34	74	24.66
4874	45.3	PK	60	1.2	H	31.3	4.64	33.4	47.84	74	26.16
HighChannel (2462MHz)											
7386	38.2	AV	160	1.3	V	35.3	4.75	33.7	44.55	54	9.45
4924	41.3	AV	360	1.5	V	32.0	4.55	33.4	44.45	54	9.55
4924	40.5	AV	45	1.5	H	32.0	4.55	33.4	43.65	54	10.35
7386	37.1	AV	245	1.4	H	35.3	4.75	33.7	43.45	54	10.55
4924	54.7	PK	0	1.4	V	32.0	4.55	33.4	57.85	74	16.15
7386	50.6	PK	90	1.2	V	35.3	4.75	33.7	56.95	74	17.05
7386	47.6	PK	180	1.2	H	35.3	4.75	33.7	53.95	74	20.05
4924	49.4	PK	200	1.4	H	32.0	4.55	33.4	52.55	74	21.45

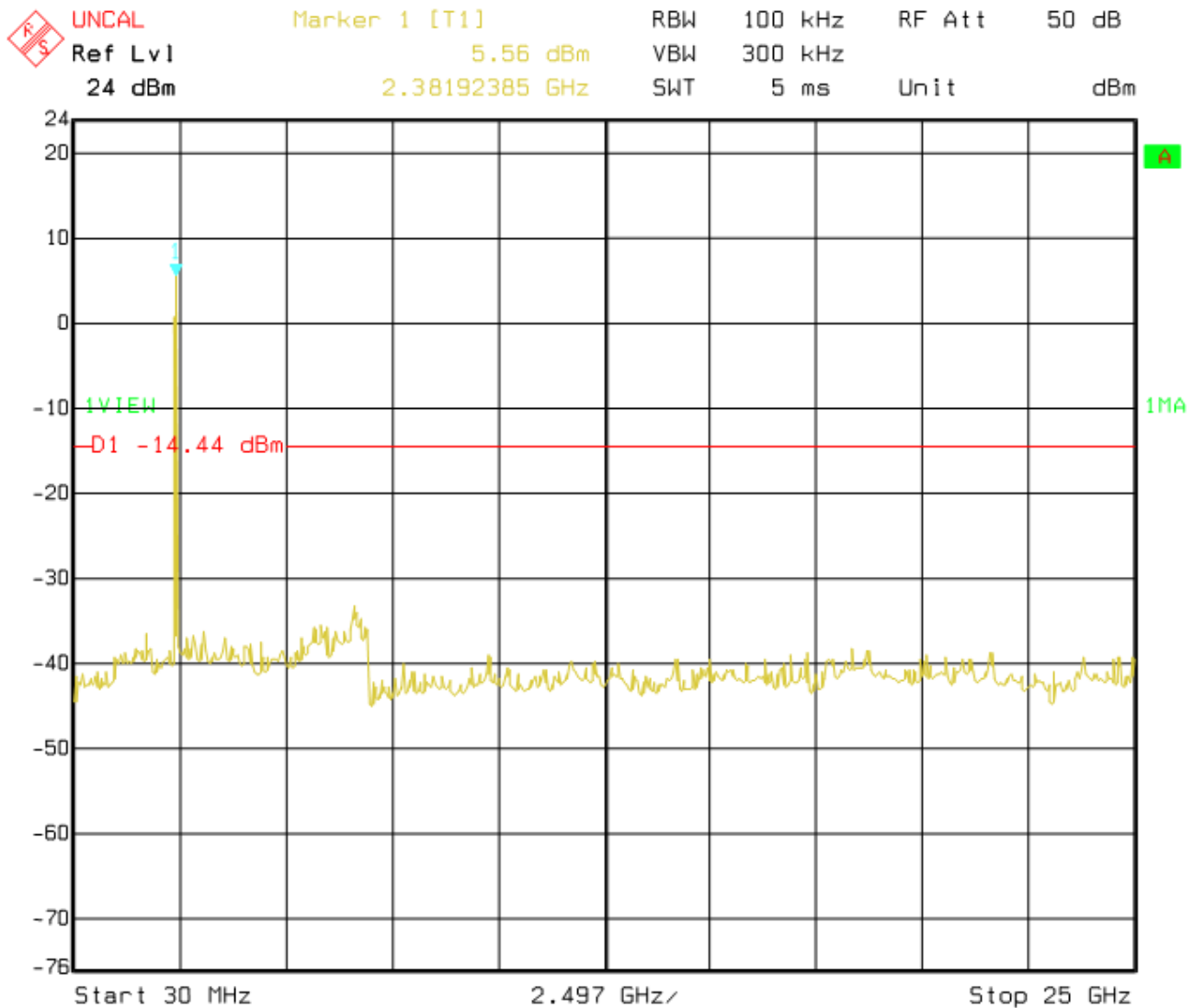


Report reference No.: WSCT11090511E-2
Issued: September 07, 2011
Revised: None

Antenna port conducted spurious emissions

802.11b mode:

Low channel





Report reference No.: WSCT11090511E-2
Issued: September 07, 2011
Revised: None

Middle channel



UNCAL

Marker 1 [T1]

RBW 100 kHz RF Att 50 dB

Ref Lvl

4.65 dBm

VBW 300 kHz

24 dBm

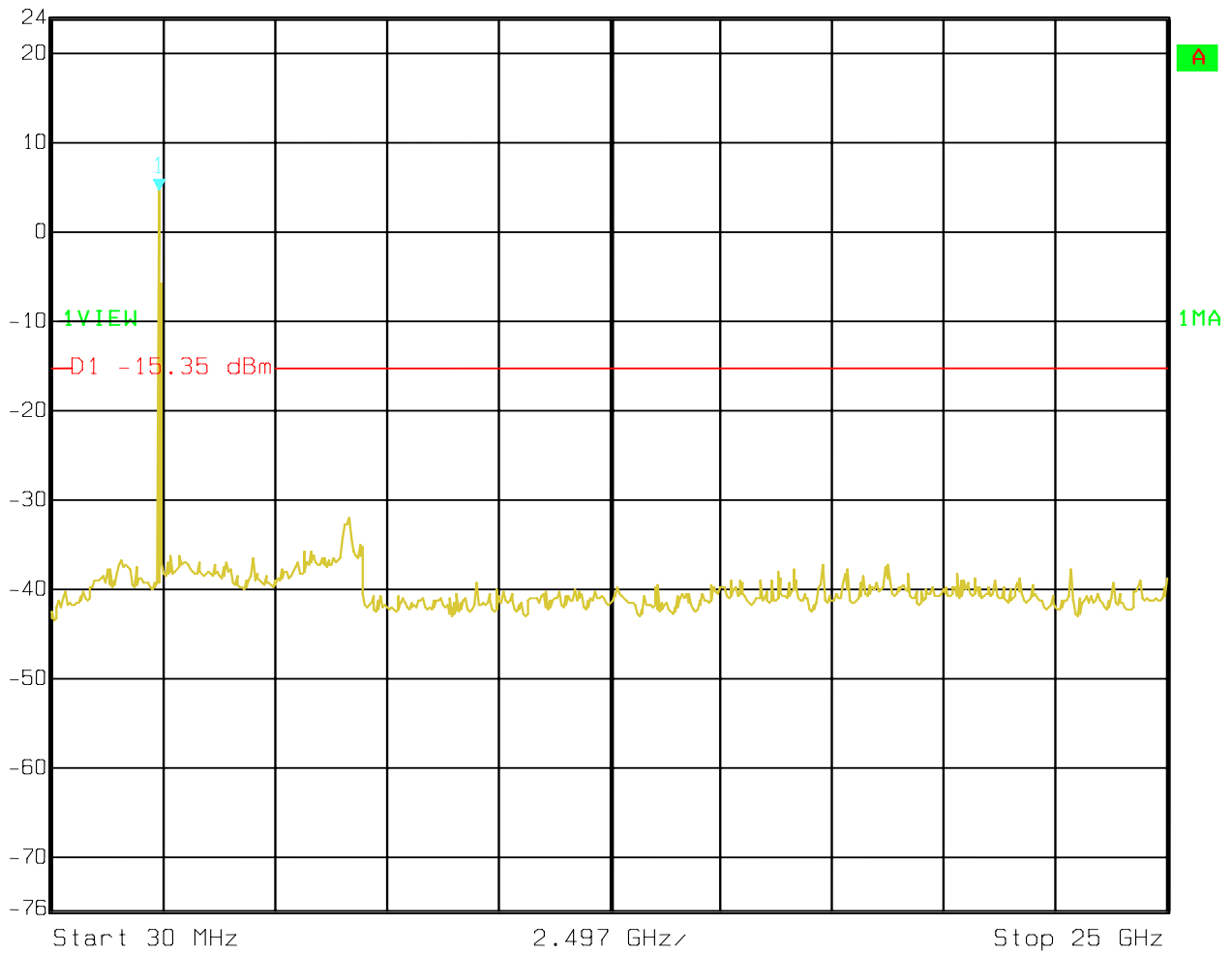
2.43192385 GHz

SWT

5 ms

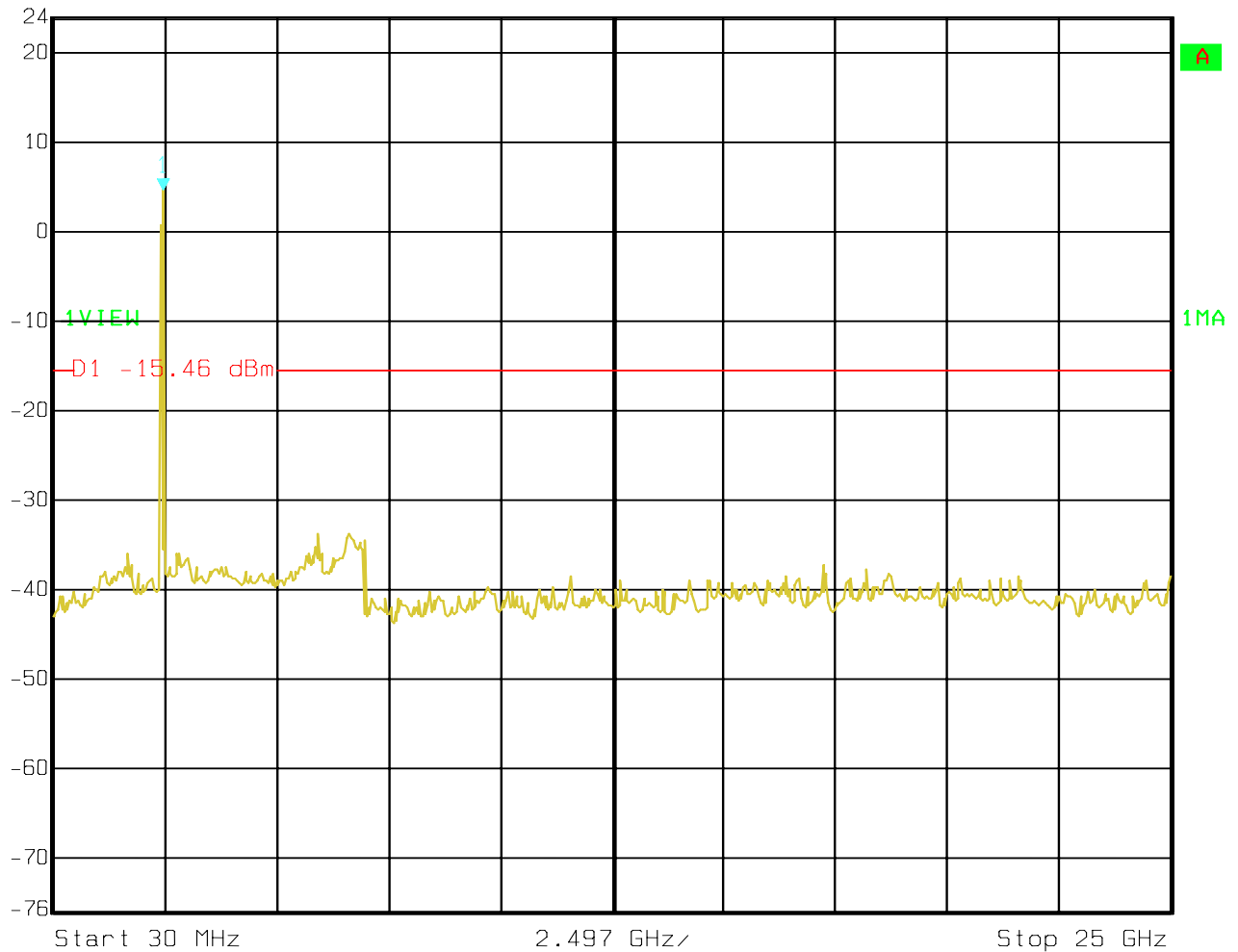
Unit

dBm



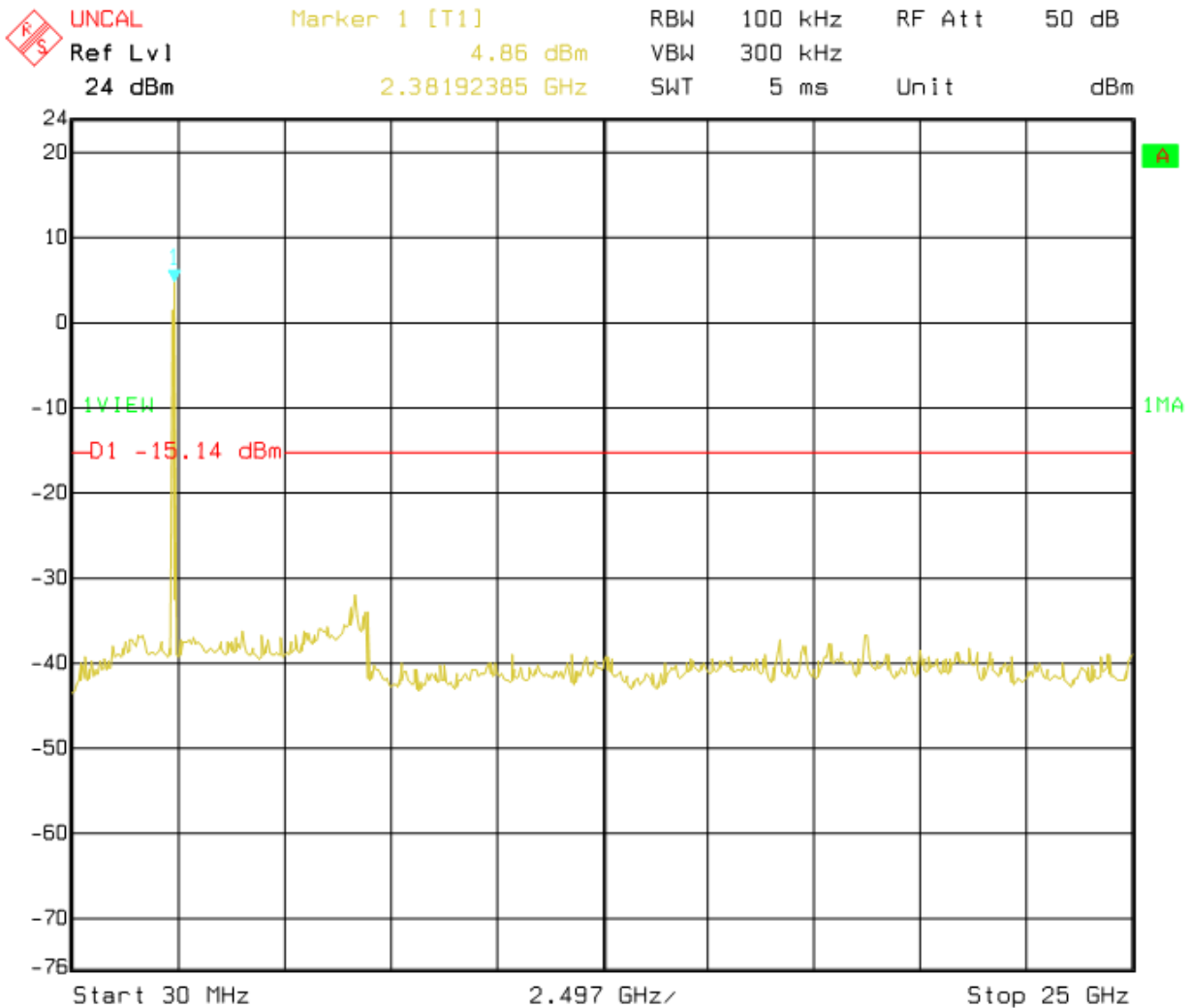
High channel

⚠ **UNCAL** Marker 1 [T1] RBW 100 kHz RF Att 50 dB
 Ref Lvl 24 dBm 4.54 dBm VBW 300 kHz
 2.48196393 GHz SWT 5 ms Unit dBm



802.11g mode:

Low channel





Report reference No.: WSCT11090511E-2
Issued: September 07, 2011
Revised: None

Middle channel



UNCAL

Marker 1 [T1]

RBW 100 kHz RF Att 50 dB

Ref Lvl

5.19 dBm

VBW 300 kHz

24 dBm

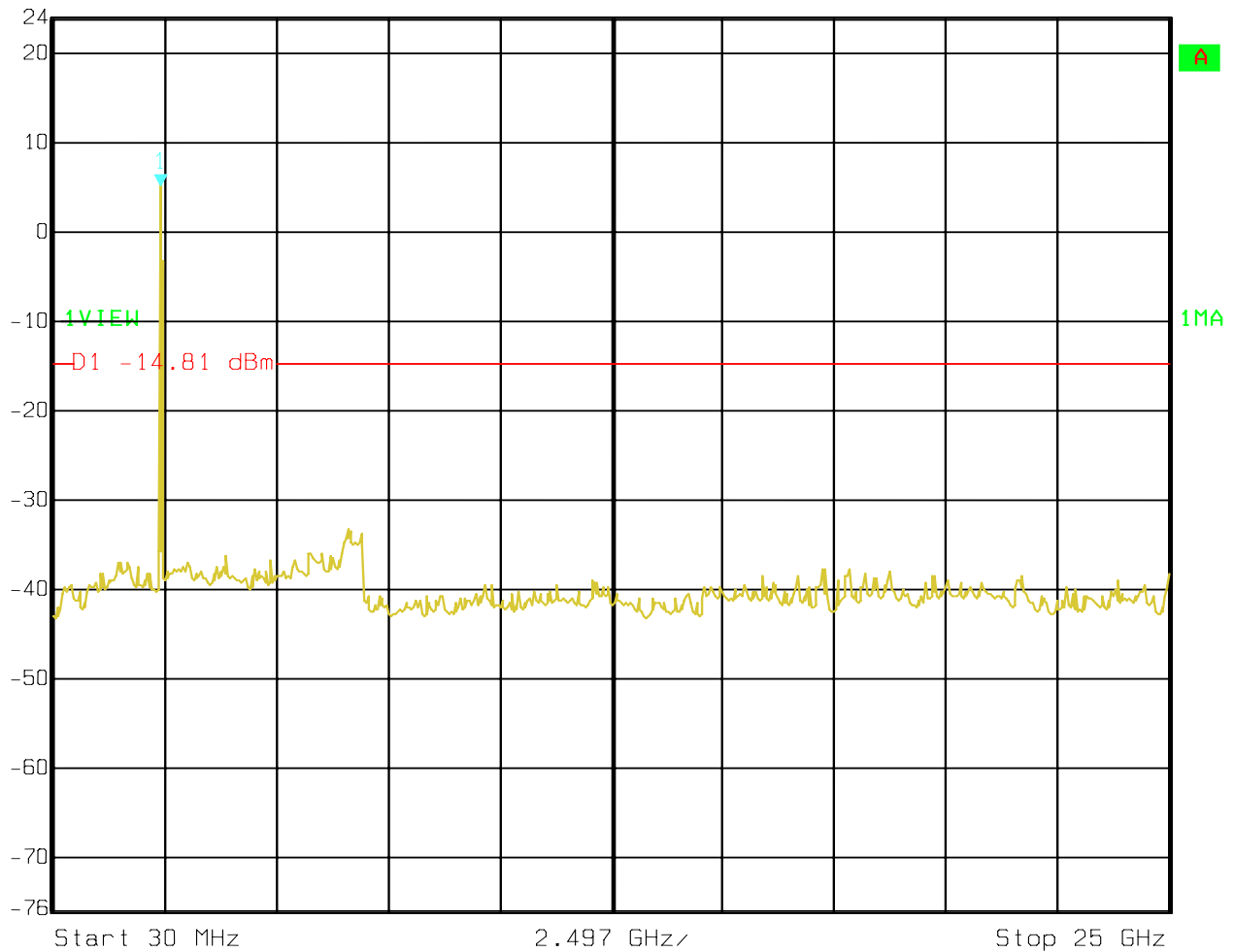
2.43192385 GHz

SWT

5 ms

Unit

dBm





Report reference No.: WSCT11090511E-2
Issued: September 07, 2011
Revised: None

High channel



UNCAL

Marker 1 [T1]

RBW 100 kHz RF Att 50 dB

Ref Lvl

4.94 dBm

VBW 300 kHz

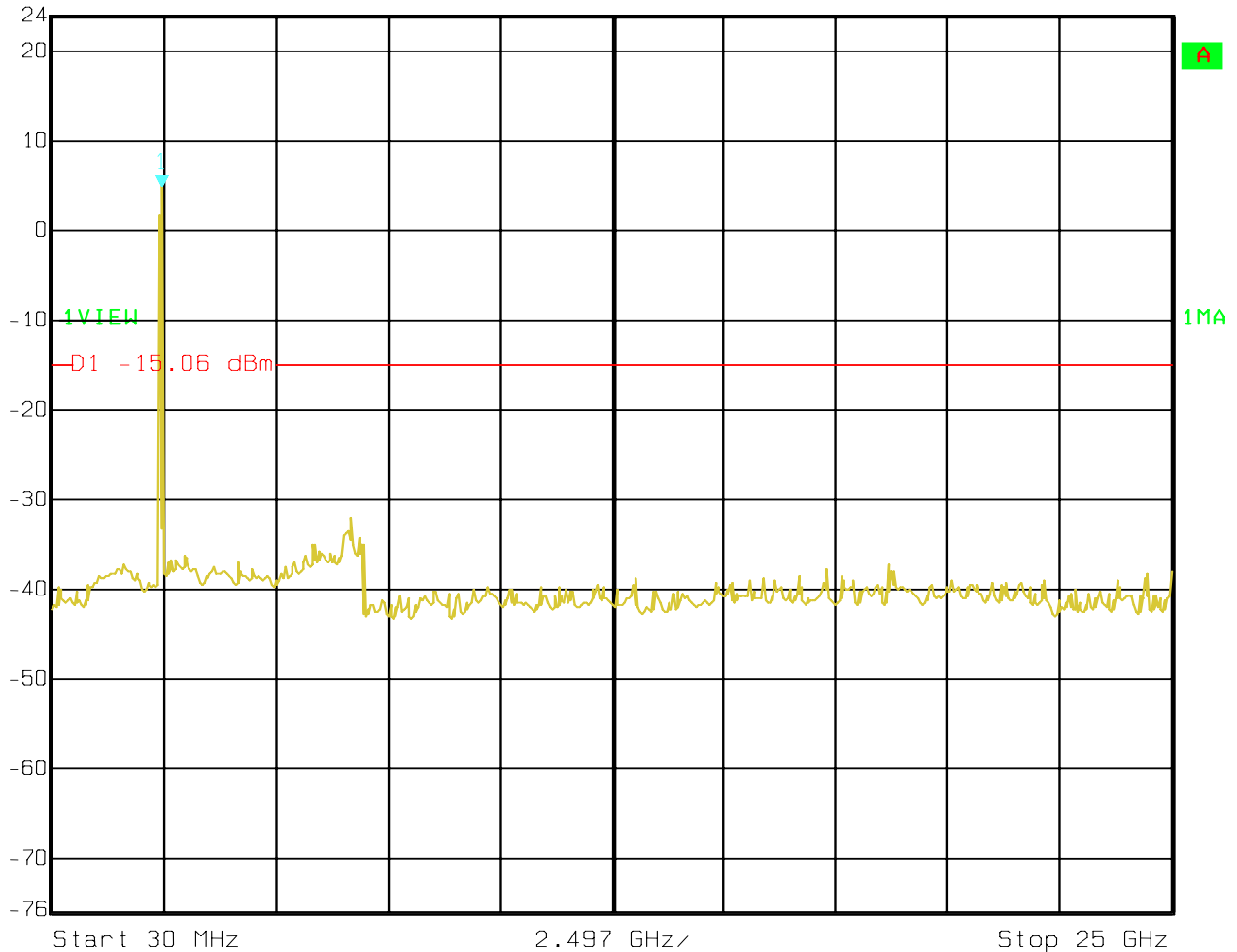
24 dBm

2.48196393 GHz

SWT 5 ms

Unit

dBm





§15.247(a) (2) – 6dB BANDWIDTH TESTING

Test Equipment

Please refer to Section 4 this report.

Test Procedure

1. Set EUT in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW=100KHz, VBW \geq RBW, Span=40MHz, Sweep=auto.
4. Mark the peak frequency and -6dB(upper and lower)frequency.
5. Repeat until all the rest channels are investigated.

10.3.Applicable Standard

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

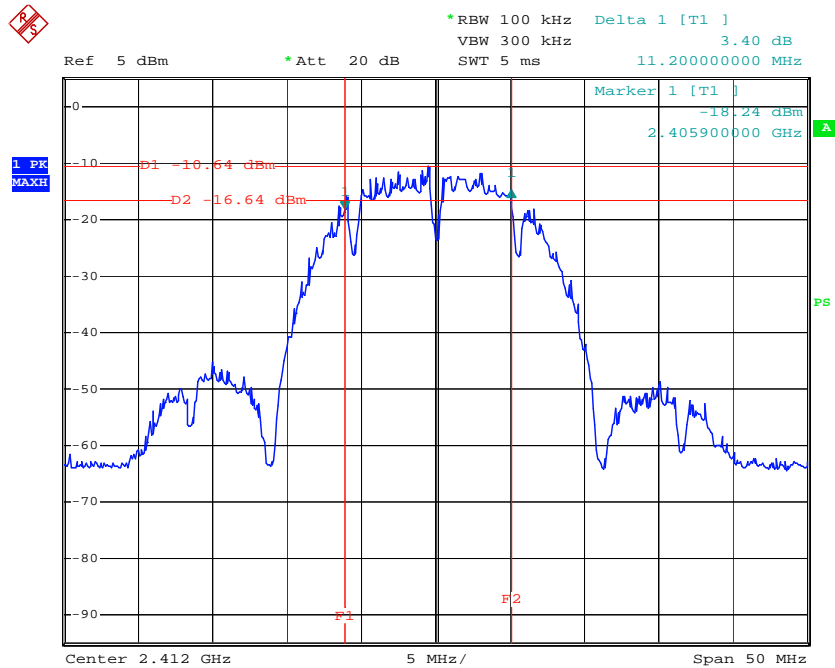
Test Result:Pass.

Please refer to the following tables

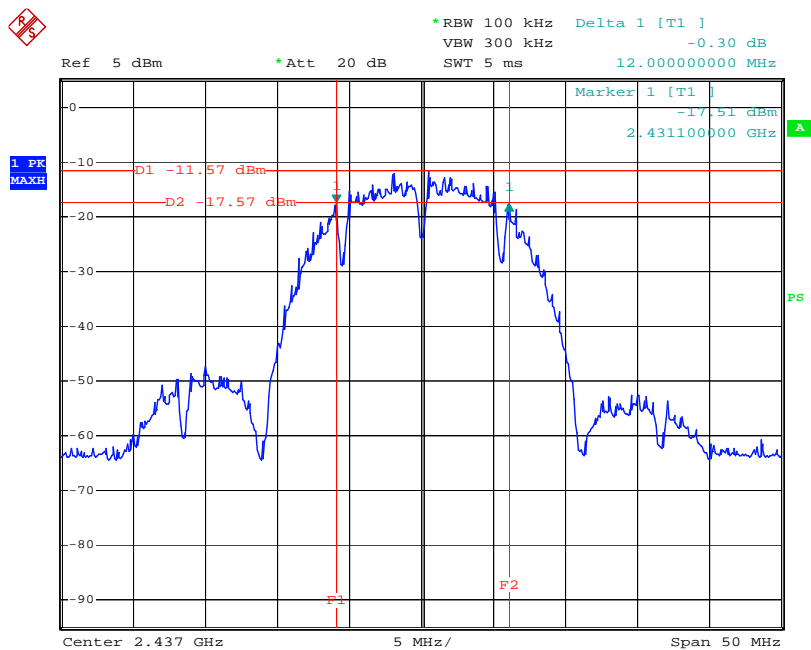
Channel Frequency (MHz)	Data Rate (Mbps)	6dB Bandwidth (kHz)	Limit (kHz)	Ref. Plot
802.11b Mode				
2412	1	11200	> 500	PLOT 1
2437	1	12000	> 500	PLOT 2
2462	1	11900	> 500	PLOT 3
802.11g Mode				
2412	6	16400	> 500	PLOT 4
2437	6	16500	> 500	PLOT 5
2462	6	16400	> 500	PLOT 6

802.11b Mode:

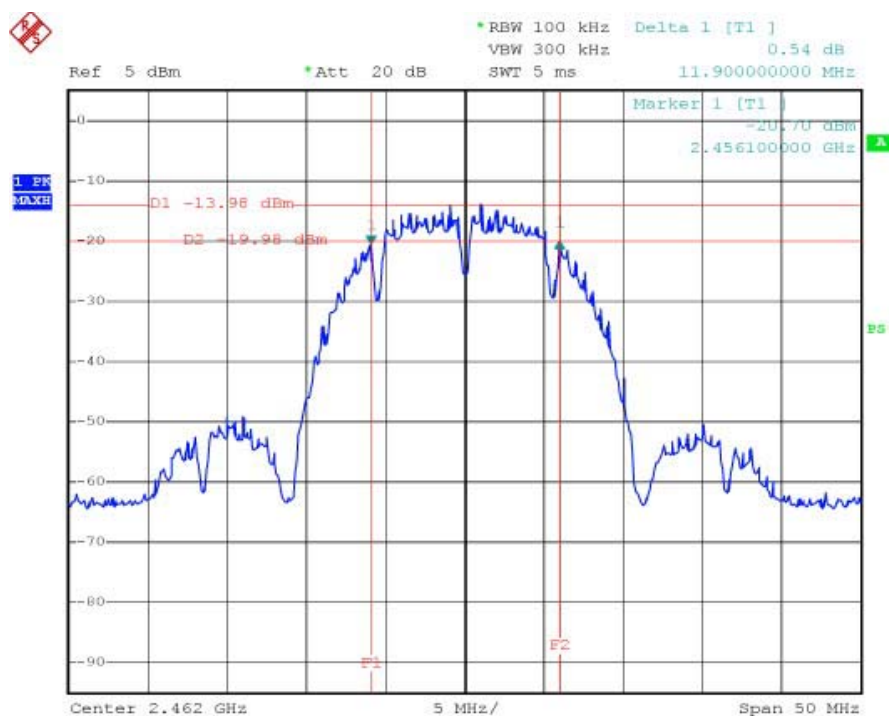
Low Channel



Middle Channel

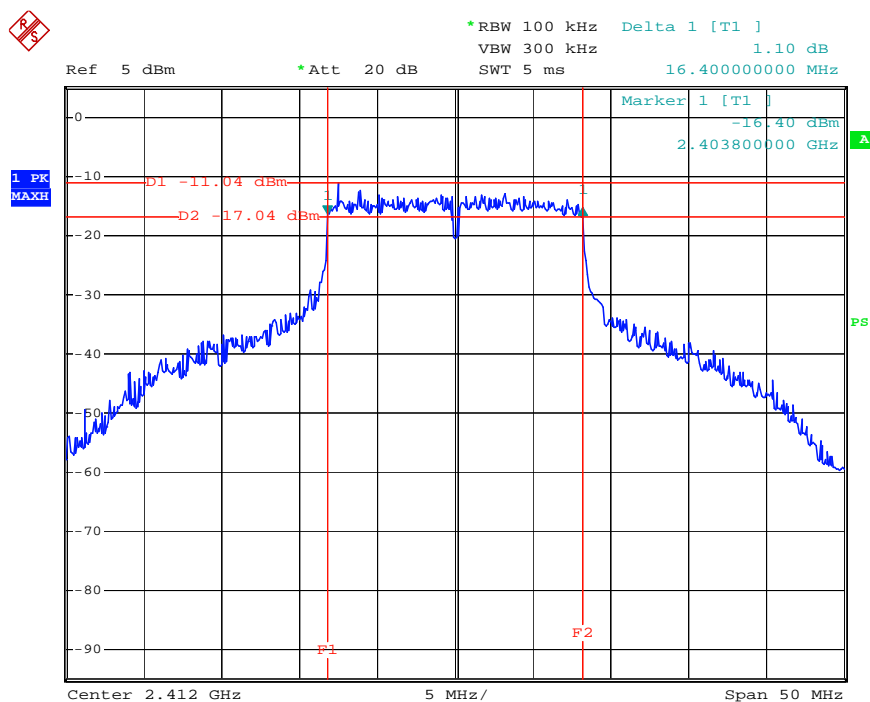


High Channel

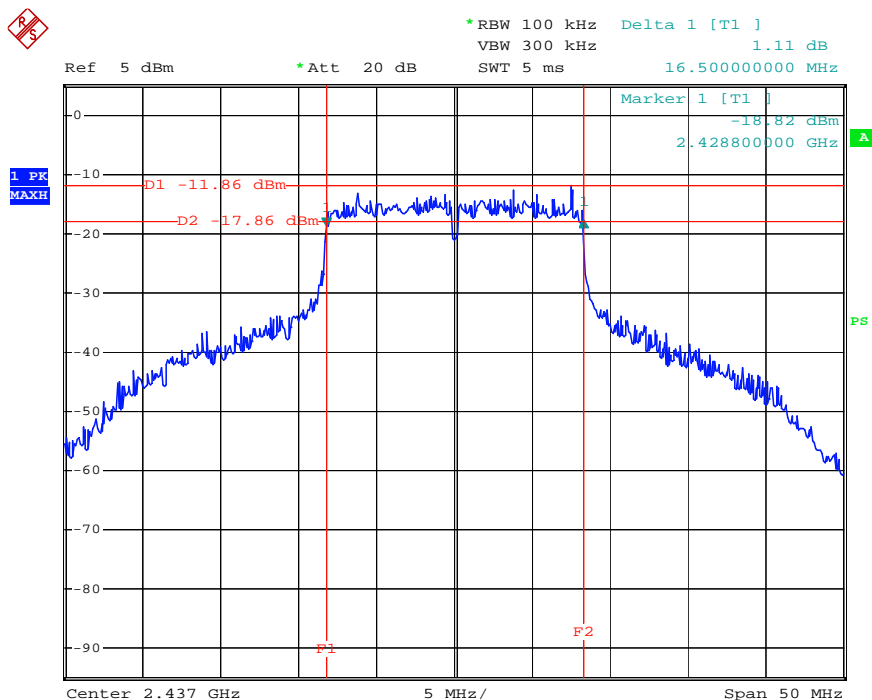


802.11g Mode:

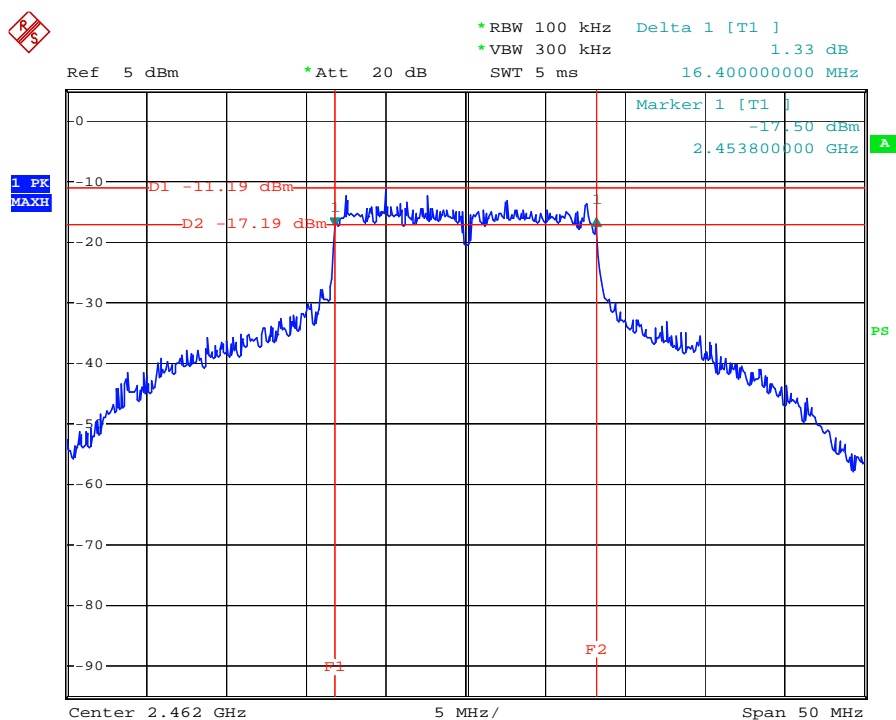
Low Channel



Middle Channel



High Channel



§15.247(b) (3) - MAXIMUM PEAK OUTPUT POWER

Test Equipment

Please refer to Section 4 this report.

Test Procedure

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz.
3. Set VBW \geq 3 MHz.
4. Use sample detector mode if bin width (i.e., span/number of points in spectrum display) $<$ 0.5 RBW. Otherwise use peak detector mode.
5. Use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at full control power for entire sweep of every sweep. If the device transmits continuously, with no off intervals or reduced power intervals, the trigger may be set to "free run".
6. Trace average 100 traces in power averaging mode.
7. Compute power by integrating the spectrum across the 26 dB EBW of the signal. The integration can be performed using the spectrum analyzer's band power measurement function with band limits set equal to the EBW band edges or by summing power levels in each 1 MHz band in linear power terms. The 1 MHz band power levels to be summed can be obtained by averaging, in linear power terms, power levels in each frequency bin across the 1 MHz.

Applicable Standard

According to §15.247(b) (3), for systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

Test Result

Pass



Report reference No.: WSCT11090511E-2
Issued: September 07, 2011
Revised: None

802.11b Mode:

Channel	Frequency (MHz)	Data Rate (Mbps)	Conducted Power (dBm)	Limit (dBm)
Low	2412	1	13.47	30
Mid	2437	1	13.23	30
High	2462	1	13.26	30

802.11g Mode:

Channel	Frequency (MHz)	Data Rate (Mbps)	Conducted Power (dBm)	Limit (dBm)
Low	2412	6	13.41	30
Mid	2437	6	13.22	30
High	2462	6	13.17	30



§15.247(d) – 100 kHz BANDWIDTH OF FREQUENCY BAND EDGE

Test Equipment

Please refer to Section 4 this report.

Test Procedure

The out of band emission tests were performed in the 3-meter chamber test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC Part Subpart C limits.

Applicable Standard

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

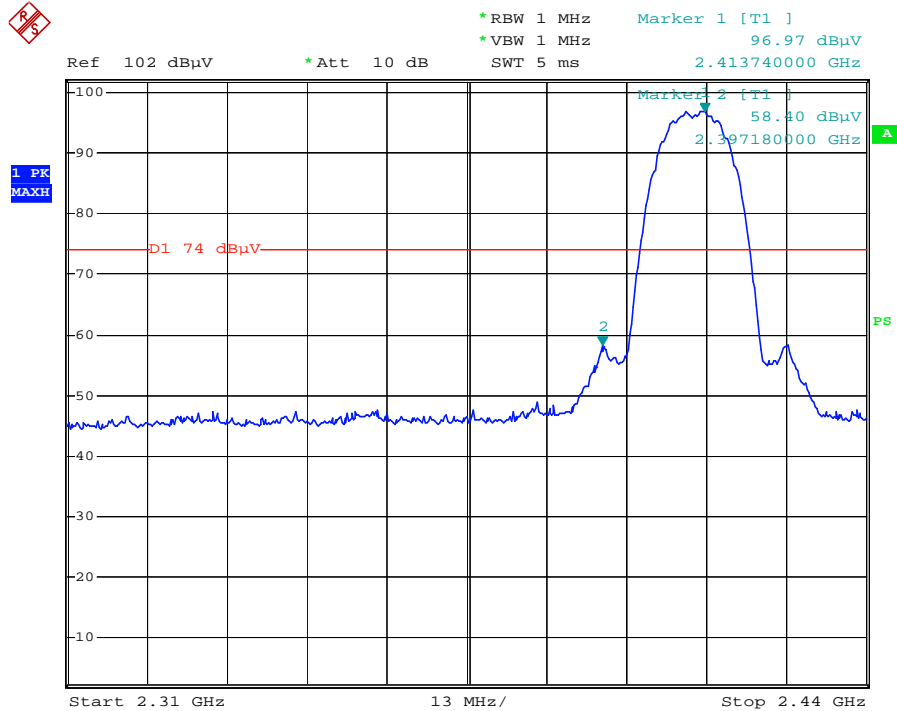
Test Result

PASS

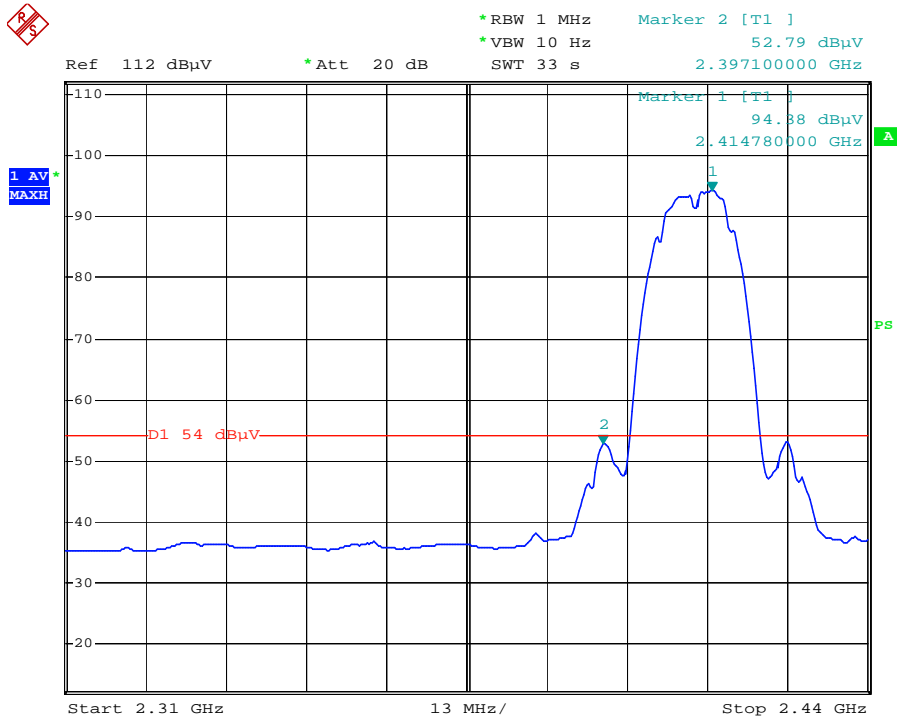
802.11b Mode:

Lowest channel

PK detector:

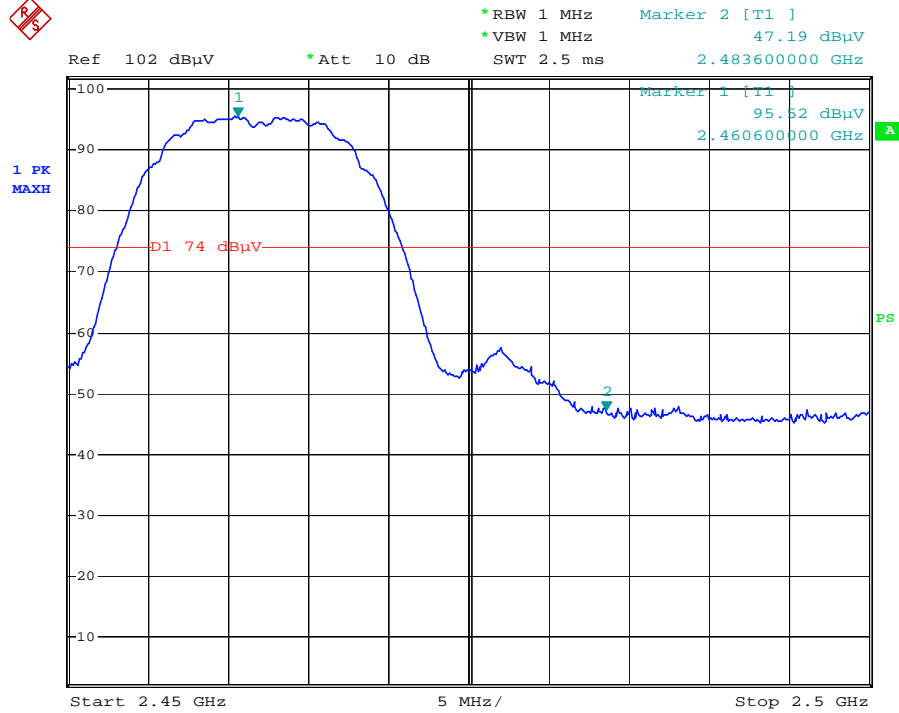


AV detector:

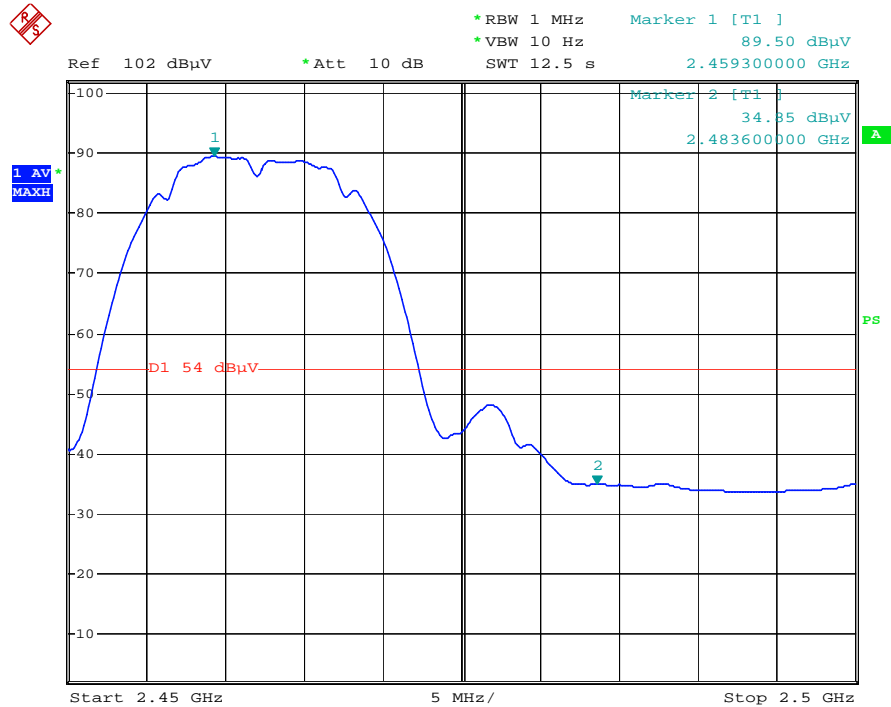


Highest Channel

PK detector:



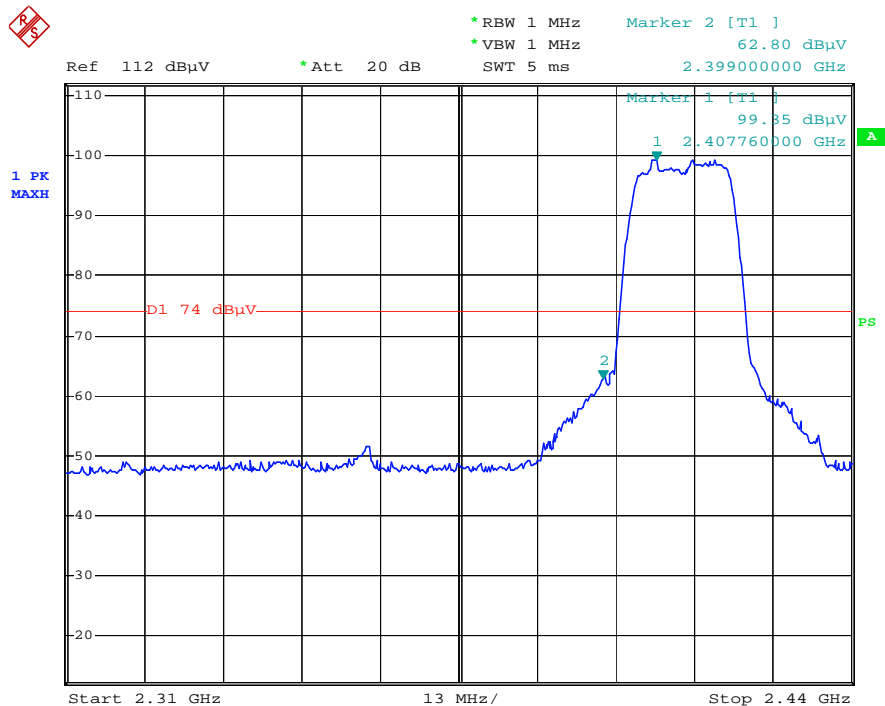
AV detector:



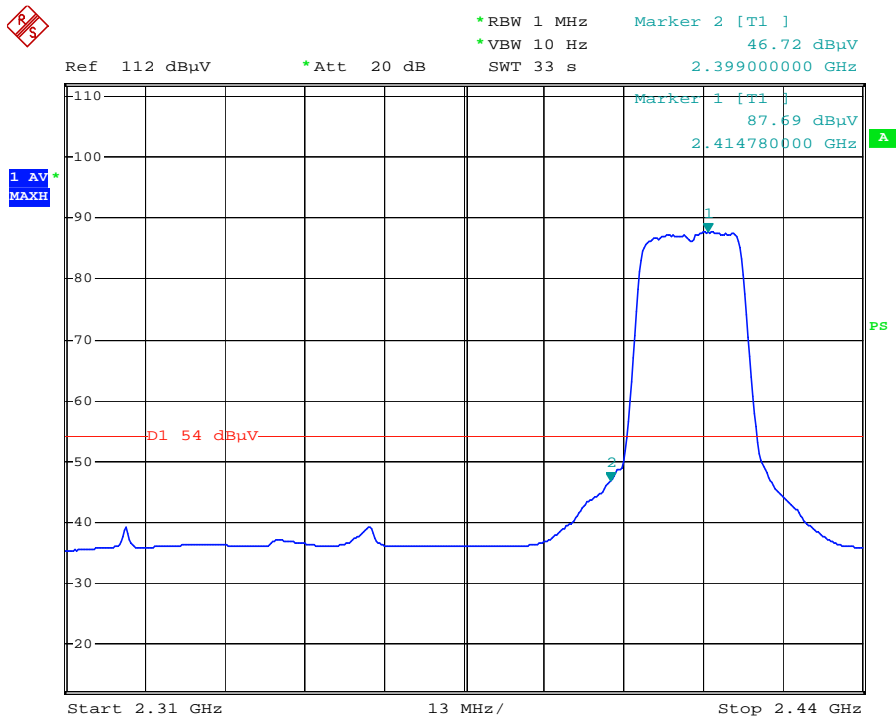
802.11g Mode:

Lowest Channel

PK detector:

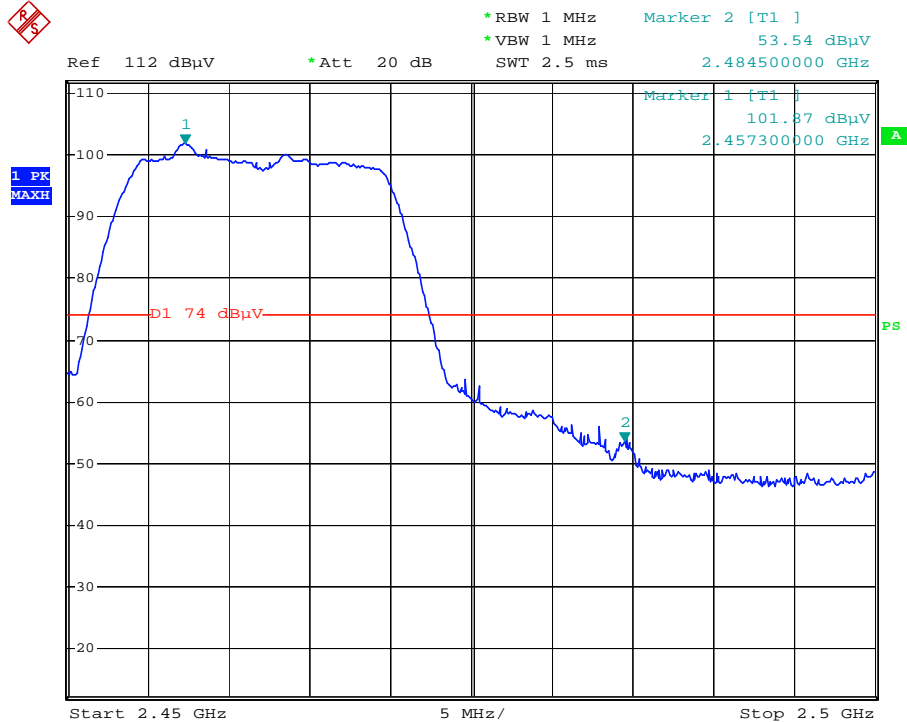


AV detector:

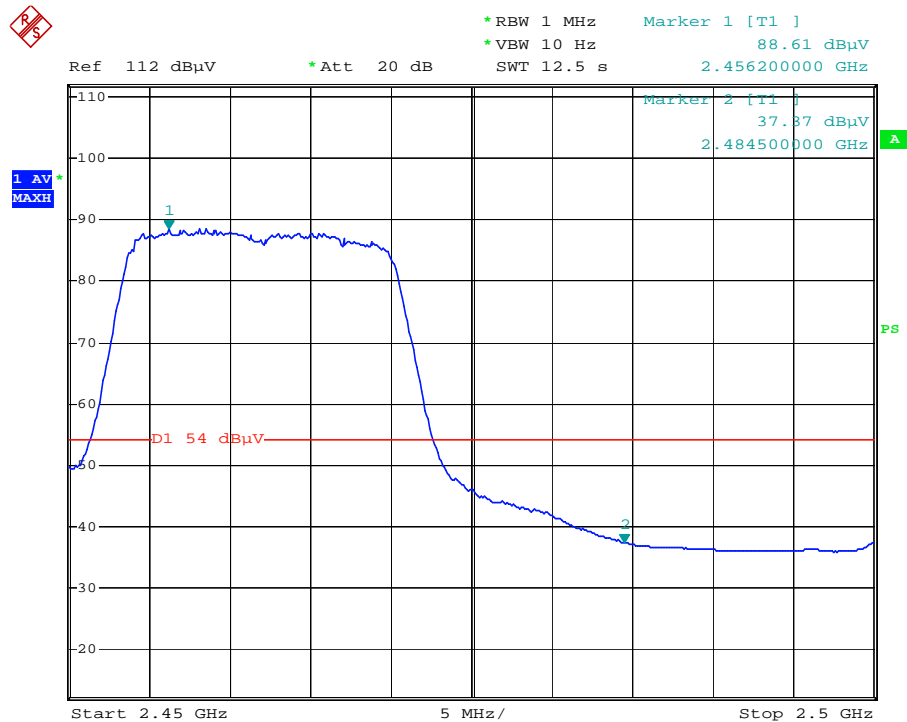


Highest Channel

PK detector:



AV detector:



§15.247(e) - POWER SPECTRAL DENSITY

Test Equipment

Please refer to Section 4 this report.

Test Procedure

- 1, Set EUT in the transmitting mode.
- 2, Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- 3, Set the spectrum analyzer as RBW=3KHz, VBW=10KHz, Span=1.5MHz, Sweep=500S.
- 4, Record the max. reading
- 5, Repeat the above procedure until the measurements for all frequencies are completed.

Applicable Standard

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

Test Result

PASS

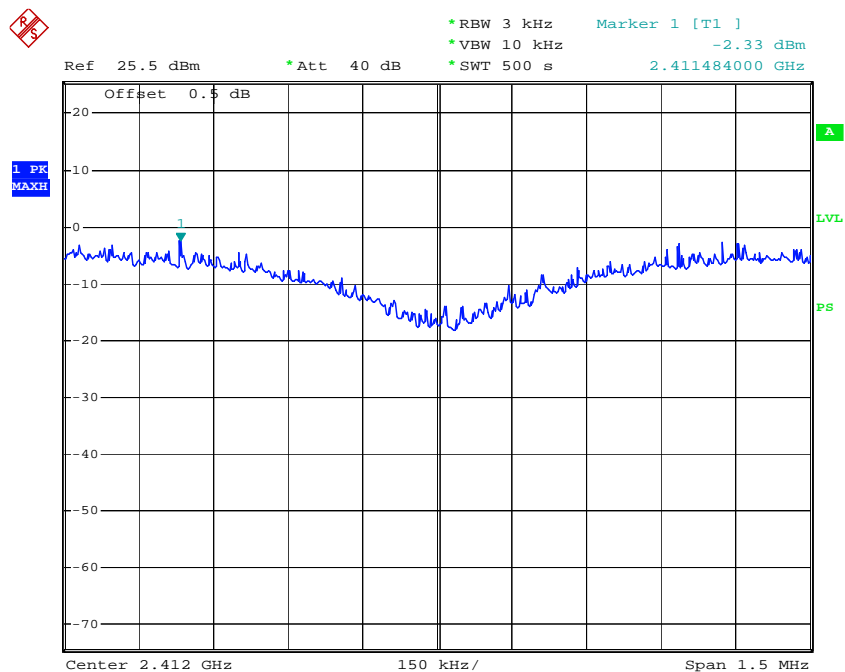
Channel Frequency (MHz)	Data Rate (Mbps)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	RESULT
802.11b Mode				
2412	1	-2.33	8	Compliant
2437	1	-2.40	8	Compliant
2462	1	-3.40	8	Compliant
802.11g Mode				
2412	6	-3.95	8	Compliant
2437	6	-4.07	8	Compliant
2462	6	-3.60	8	Compliant



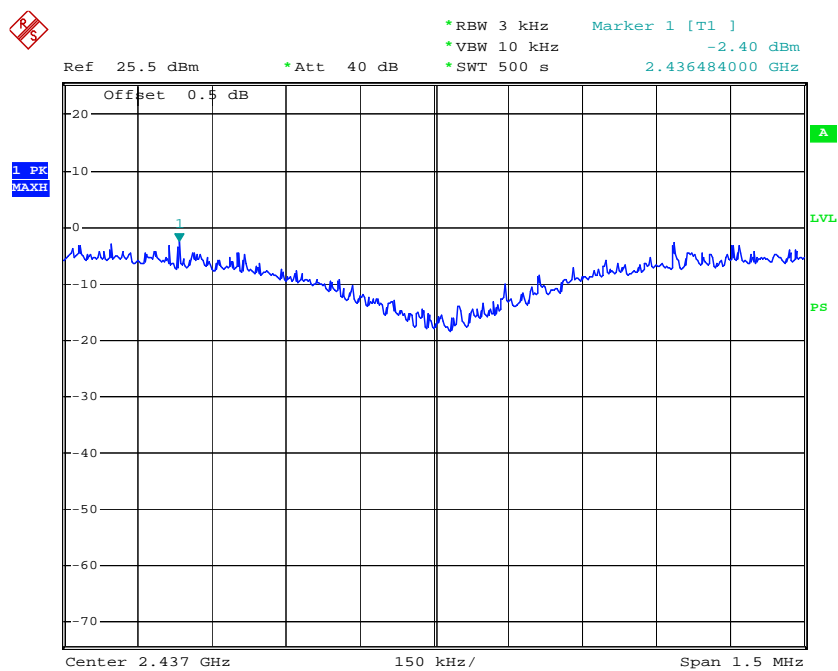
Report reference No.: WSCT11090511E-2
Issued: September 07, 2011
Revised: None

802.11b Mode:

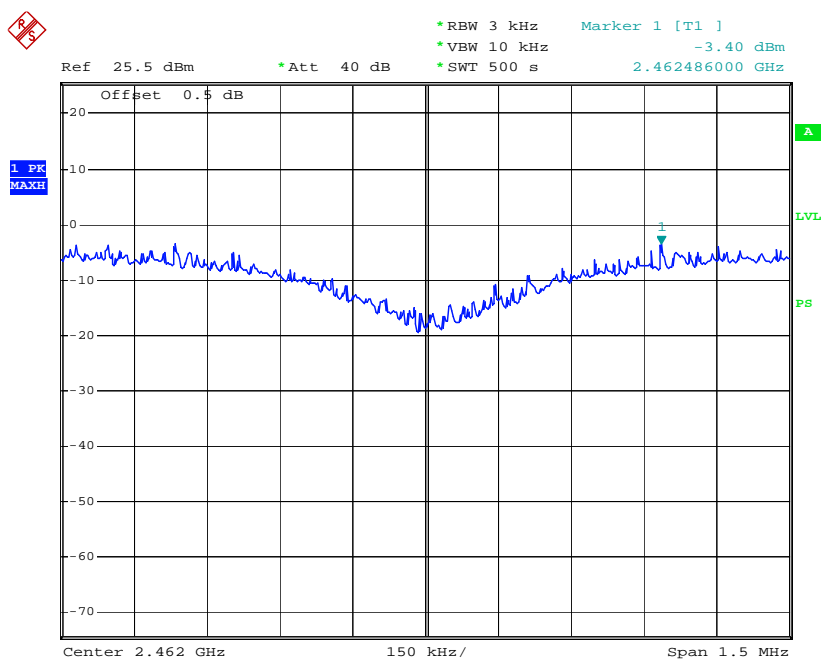
Low Channel



Middle Channel

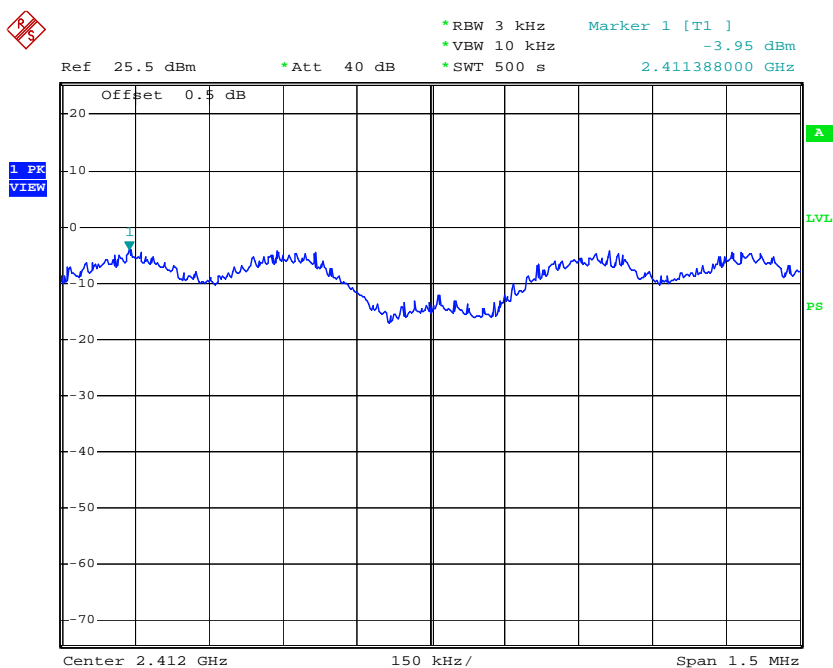


High Channel

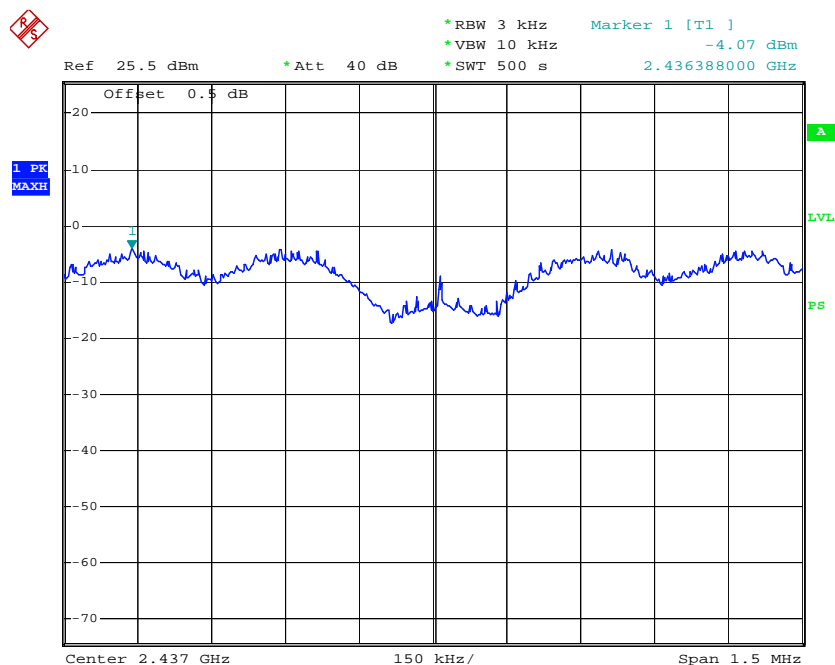


802.11g Mode:

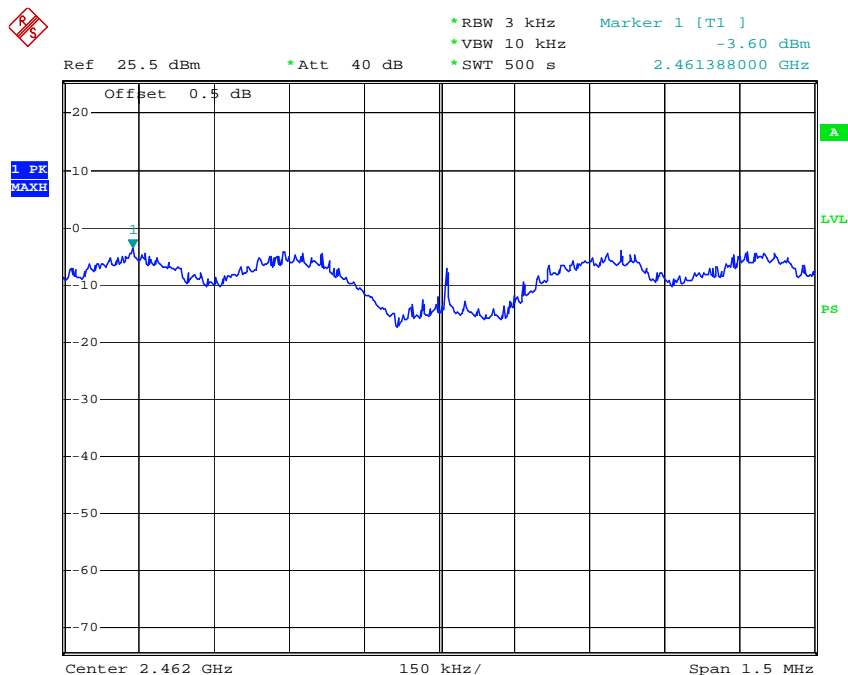
Low Channel



Middle Channel



High Channel

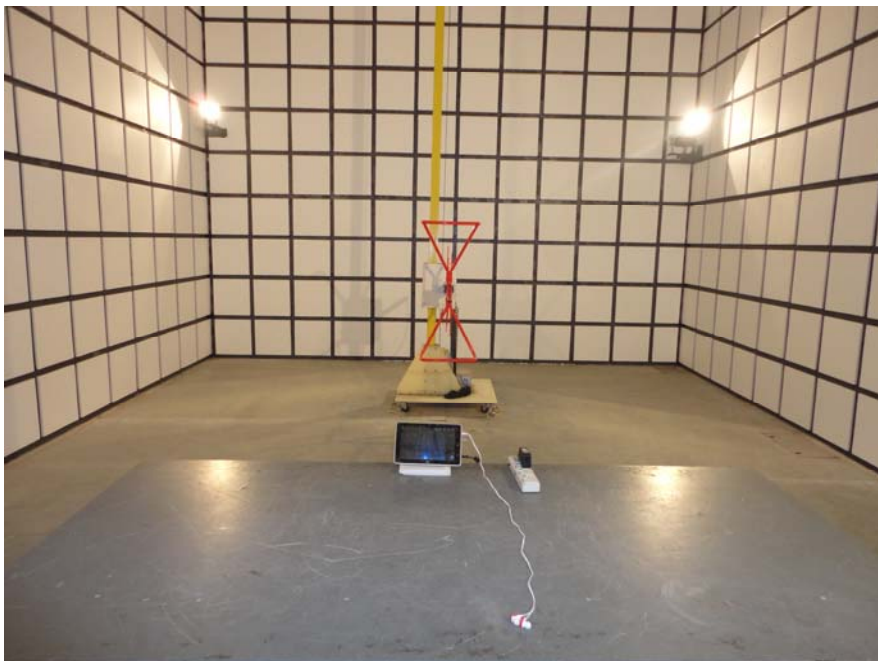


PHOTOGRAPHS OF THE TEST CONFIGURATION

CONDUCTED EMISSION TEST

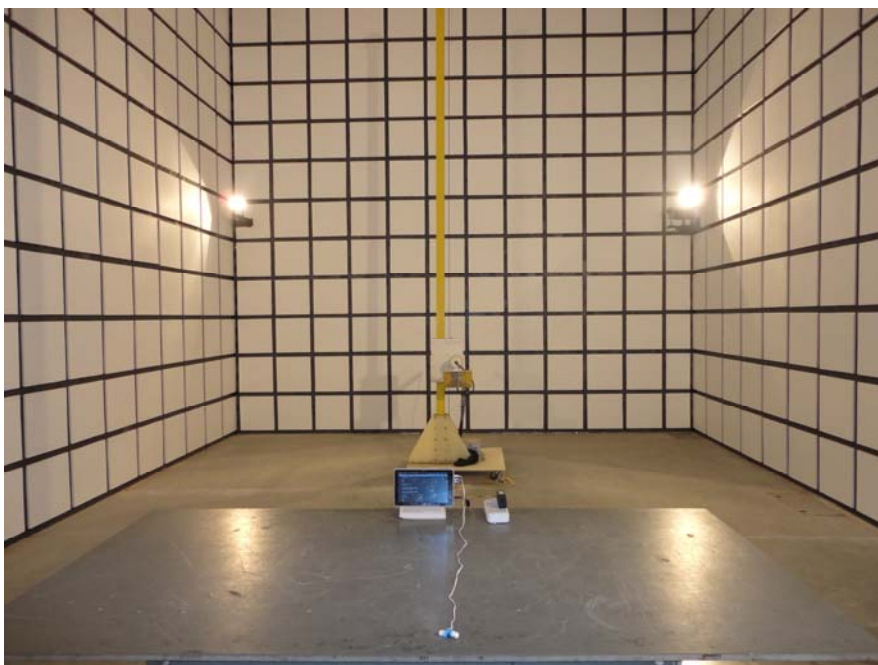


RADIATED EMISSION TEST BELOW 1GHz





RADIATED EMISSION TEST ABOVE 1GHz



PHOTOGRAPHS OF EUT

Appearance photograph of EUT



Appearance photograph of EUT



Appearance photograph of EUT



Appearance photograph of EUT



Appearance photograph of Adapter



Appearance photograph of Adapter



Internal photograph of EUT



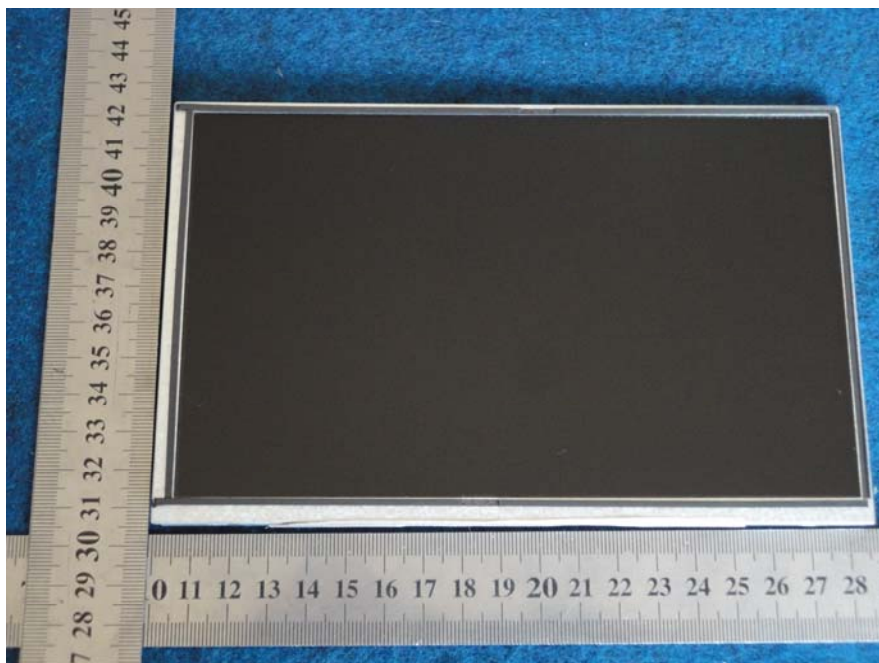
Internal photograph of EUT



Internal photograph of EUT



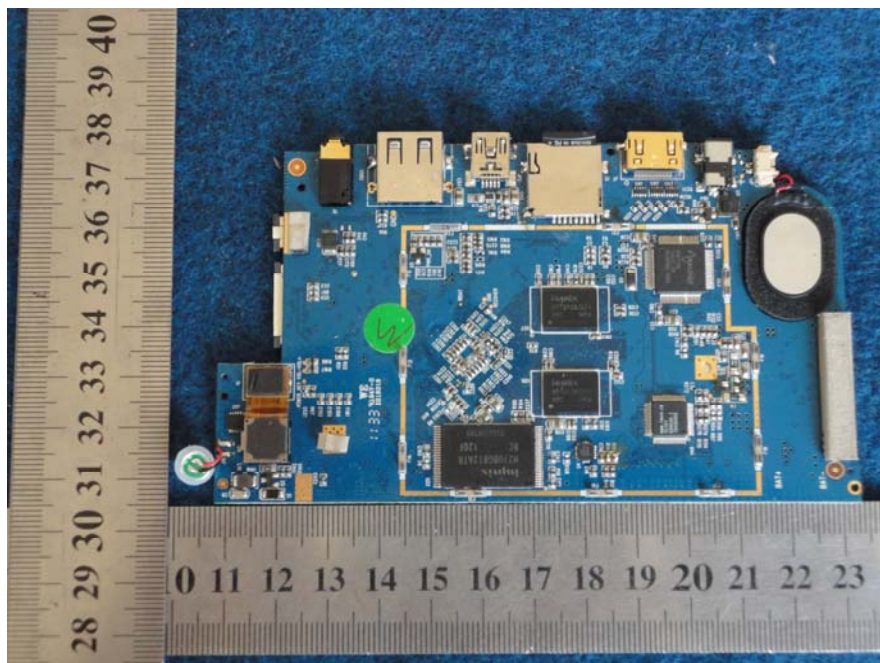
Internal photograph of EUT



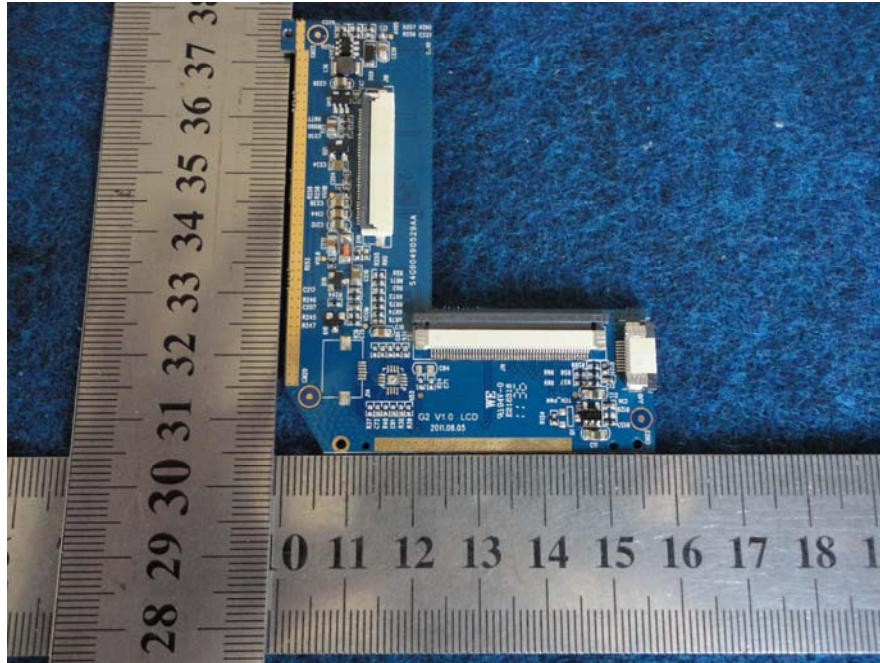
PCB photograph of EUT



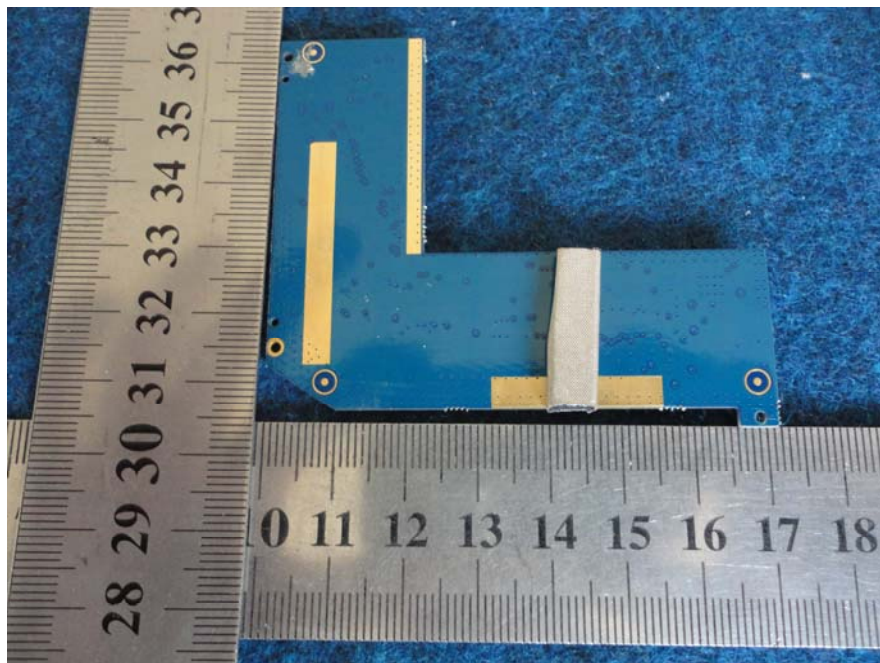
PCB photograph of EUT



PCB photograph of EUT



PCB photograph of EUT



Internal photograph of Battery

