







ISO/IEC17025Accredited Lab.

Report No: FCC 1307001-02 File reference No: 2013-07-10

Applicant: Shenzhen Jingwah Information Technology Co., Ltd.

Product: Tablet PC

Model No: EM10, A10, S10, V10

Trademark: Emerson, Polaroid

Test Standards: FCC Part 15 Subpart C, Paragraph 15.247

Test result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.4,FCC Part 15 Subpart C, Paragraph 15.247 regulations for the evaluation of

electromagnetic compatibility

Approved By

Jack Chung

Jack Chung Manager

Dated: July 10, 2013

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO., LTD

5/F,Block 4, Anhua Industrial Zone.,No.8 TaiRan Rd.CheGongMiao,FuTian District, Shenzhen,CHINA.

Tel (755) 83448688 Fax (755) 83442996

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Special Statement:

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAL. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAL-LAB Code: L2292

The EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:1999 General Requirements) for the Competence of testing Laboratories.

FCC-Registration No.: 899988

The 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.: 899988.

IC- Registration No.: IC5205A-02

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration IC No.: 5205A-02.

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Test Report Conclusion

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1.0 General Details

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO., LTD

Address: 5/F,Block 4, Anhua Industrial Zone.,No.8 TaiRan Rd.CheGongMiao,FuTian District,

Shenzhen, CHINA.

Telephone: (755) 83448688 Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 899988

For 3m & 10 m OATS

Site Listed with Industry Canada of Ottawa, Canada

Registration Number: IC: 5205A-01

For 3m & 10 m OATS

1.2 Applicant Details

Applicant: Shenzhen Jingwah Information Technology Co., Ltd.

Address: 4F, Bldg 4, Jinghua Square, No.1 Huafa North Road, Futian District, Shenzhen, China

Telephone: 0755-83975295 Fax: 0755-83204874

1.3 Description of EUT

Product: Tablet PC

Manufacturer: Shenzhen Jingwah Information Technology Co., Ltd.

Address: 4F, Bldg 4, Jinghua Square, No.1 Huafa North Road, Futian District,

Shenzhen, China

Brand Name: Emerson
Additional Brand Name: Polaroid
Model Number: EM10
Additional Model Number: A10, S10, V10

Type of Modulation IEEE 802.11b : DSSS (CCK, QPSK, DBPSK)

IEEE 802.11g/n (HT20): OFDM(64QAM, 16QAM, QPSK, BPSK)

Frequency range IEEE 802.11b/g/n (HT20) : 2412-2462MHz;

Channel Spacing IEEE 802.11b/g/n (HT20) : 5MHz
Air Data Rate IEEE 802.11b : 11, 5.5, 2, 1 Mbps

IEEE 802.11g: 54, 48,36, 24, 18, 12, 9, 6 Mbps

IEEE 802.11n HT20: 150, 117,104, 78, 65, 58.5, 52, 39, 26, 19.5, 13, 6 Mbps

Frequency Selection By software

Channel Number IEEE 802.11b/g/n (HT20) : 11 Channels Antenna: Integral antenna, the antenna gain is 2dBi

The report refers only to the sample tested and does not apply to the bulk.

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1.4 Submitted Sample: 2 Samples

1.5 Test Duration 2013-06-25 to 2013-07-10

1.6 Test UncertaintyConducted Emissions Uncertainty =3.6dBRadiated Emissions Uncertainty =4.7dB

1.7 Test Engineer

The sample tested by

Print Name: Terry Tang

Terry Tang

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2.0		Test Equip	ments		
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date
ESPI Test Receiver	ROHDE&SCHWARZ	ESPI 3	100379	2012-08-21	2013-08-20
TWO Line-V-NETW	ROHDE&SCHWARZ	EZH3-Z5	100294	2012-08-21	2013-08-20
TWO Line-V-NETW	ROHDE&SCHWARZ	EZH3-Z5	100253	2012-08-21	2013-08-20
Ultra Broadband ANT	ROHDE&SCHWARZ	HL562	100157	2012-08-21	2013-08-20
ESDV Test Receiver	ROHDE&SCHWARZ	ESDV	100008	2012-08-21	2013-08-20
Impuls-Begrenzer	ROHDE&SCHWARZ	ESH3-Z2	100281	2012-08-21	2013-08-20
System Controller	CT	SC100	-		
Printer	EPSON	РНОТО ЕХЗ	CFNH234850		
Computer	IBM	8434	1S8434KCE99BLXL O*	-	-
Loop Antenna	EMCO	6502	00042960	2012-08-21	2013-08-20
ESPI Test Receiver	ROHDE&SCHWARZ	ESI26	838786/013	2012-08-21	2013-08-20
3m OATS			N/A	2012-08-21	2013-08-20
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170265	2012-08-21	2013-08-20
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-631	2012-08-21	2013-08-20
Power meter	Anritsu	ML2487A	6K00003613	2012-08-21	2013-08-20
Power sensor	Anritsu	MA2491A	32263	2012-08-21	2013-08-20
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2012-08-21	2013-08-20
LISN	AFJ	LS16C	10010947251	2012-08-21	2013-08-20
LISN (Three Phase)	Schwarebeck	NSLK 8126	8126453	2012-08-21	2013-08-20
9*6*6 Anechoic			N/A	2012-08-21	2013-08-20
EMI Test Receiver	RS	ESCS30	100139	2012-08-21	2013-08-20
LISN	AFJ	LS16C	10010947251	2012-08-21	2013-08-20
LISN (Three Phase)	Schwarebeck	NSLK 8126	8126453	2012-08-21	2013-08-20

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2.1 **Auxiliary Equipment**

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Name	Model No.	Serial No.	Manufacturer	Cable	FCC ID/DOC
TF Card			Kingston		
Passive Earphone					
Monitor	PH2450		SAMSUNG		DOC

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3. DESCRIPTION OF TEST MODES

IEEE 802.11b, 802.11g, 802.11n (HT20) mode

The EUT had been tested under operating condition. There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2412
Middle	2437
High	2462

IEEE 802.11b mode: 11Mbps data rate (worst case) was chosen for full testing. IEEE 802.11g mode: 6Mbps data rate (worst case) was chosen for full testing. IEEE 802.11n (HT20) mode: 65Mbps data rate (worst case) were chosen for full testing

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3.0 Technical Details

3.1 Summary of test results

Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.107	Conducted Emission Test	PASS	Complies
& 15.207 & RSS-210 Issue 8			
	Spectrum bandwidth of a		Complies
FCC Part 15 Subpart C	Orthogonal Frequency		
Paragraph 15.247(a)(2) Limit &	Division Multiplex System	PASS	
RSS-210 Issue 8	Limit: 6dB		
	bandwidth>500kHz		
FCC Part 15, Paragraph	Maximum peak output		
15.247(b) & RSS-210 Issue 8	power	PASS	Complies
13.247(b) & R35-210 Issue 6	Limit: max. 30dBm		
FCC Part 15, Paragraph	Transmitter Radiated	PASS	Complies
15.109,15.205 & 15.209 &	Emission		
RSS-210 Issue 8	Limit: Table 15.209		
FCC Part 15, Paragraph	Power Spectral Density	PASS	Complies
15.247(e) & RSS-210 Issue 8	Limit: max. 8dBm		
FCC Part 15, Paragraph	Out of Band Emission and	PASS	Complies
15.247(d) & RSS-210 Issue 8	Restricted Band		
	Radiation		
	Limit: 20dB less than		
	peak value of fundamental		
	frequency		
	Restricted band limit:		
	Table 15.209		

3.2 Test Standards

FCC Part 15 Subpart & Subpart C, Paragraph 15.247 & RSS-210 Issue 8

4.0 EUT Modification

No modification by Shenzhen Timeway Technology Consulting Co., Ltd

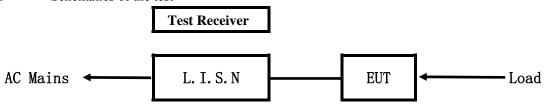
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5. Power Line Conducted Emission Test

5.1 Schematics of the test

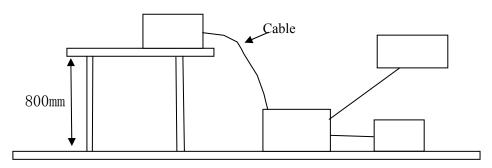


EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2003. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4 –2003.

Test Voltage: 120V~, 60Hz Block diagram of Test setup



5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.4-2003. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

A. EUT

Device	Manufacturer	nufacturer Model	
Tablet PC	Shenzhen Jingwah Information Technology Co., Ltd.	EM10, A10, S10, V10	RBD-V10A20

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Internal Device В.

Device	Manufacturer	Model	Rating
Power	SHENZHEN FUJIA APPLIANCE CO LTD	FJ-SW0502000DU	Input:100-240V~
Adapter			50/60Hz,0.35A;
			Output:DC5V, 2A

C. Peripherals

Device	Manufacturer	Model	Rating

5.4 **EUT Operating Condition**

Operating condition is according to ANSI C63.4 -2003.

- Α Setup the EUT and simulators as shown on follow
- В Enable AF signal and confirm EUT active to normal condition

5.5 Power line conducted Emission Limit according to Paragraph 15.207 and 15.107 and RSS-210

	Frequency	Class A Lim	its (dB µ V)	Class B Lim	nits (dB µ V)
	(MHz)	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level
($0.15 \sim 0.50$	79.0	66.0	66.0~56.0*	56.0~46.0*
($0.50 \sim 5.00$	73.0	60.0	56.0	46.0
4	$5.00 \sim 30.00$	73.0	60.0	60.0	50.0

Notes:

- 1. *Decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

5.6 **Test Results**

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

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A: Conducted Emission on Live Terminal (150kHz to 30MHz)

EUT Operating Environment

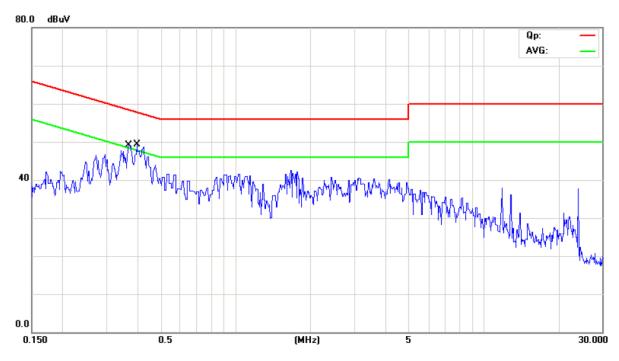
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep Transmitting

Equipment Level: Class B

Results: PASS

Please refer to following diagram for individual



Frequency	Line	Reading(dBµV)		Limit(dBμV)	
(MHz)	Line	Quasi-peak	Average	Quasi-peak	Average
0.368	Live	42.93	6.93	58.53	48.53
0.394	Live	39.46	4.56	57.97	47.97

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B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

EUT Operating Environment

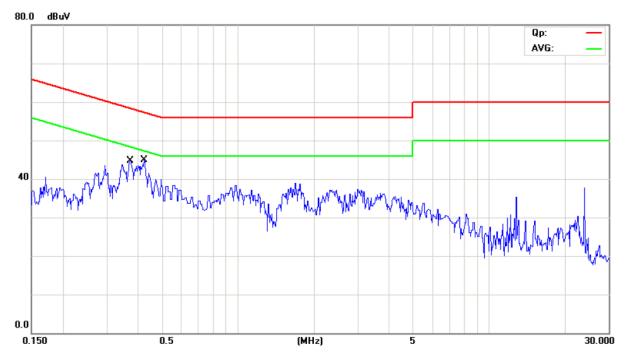
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

EUT set Condition: Keep Transmitting

Equipment Level: Class B

Results: Pass

Please refer to following diagram for individual



Frequency	Line	Reading(dBμV)		Limit(dBμV)	
(MHz)	Line	Quasi-peak	Average	Quasi-peak	Average
0.418	Neutral	38.28	5.18	57.49	47.49
0.372	Neutral	39.54	4.24	58.45	48.45

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6 Radiated Emission Test

- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.4 –2003. The radiated test was performed at Timeway Laboratory. This site is on file with the FCC laboratory division, Registration No.899988
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.4-2003.
- (3) The frequency spectrum from 30 MHz to 25 GHz was investigated. All readings from 30 MHz to 1 GHz are Quasi-peak values with a resolution bandwidth of 120 kHz. For measurement above 1GHz, peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK detector. Measurements were made at 3 meters.
- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "QP" in the data table.
- (6) The antenna polarization : Vertical polarization and Horizontal polarization.

Block diagram of Test setup Distance = 3m Computer Pre -Amplifier Furn-table Receiver

- 6.2 Configuration of The EUT

 Same as section 5.3 of this report
- 6.3 EUT Operating Condition
 Same as section 5.4 of this report.

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6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

Frequencies in restricted band are complied to limit on Paragraph 15.209 and 15.109 and RSS-210

Frequency Range (MHz)	Distance (m)	Field strength (dB µ V/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
- 2. In the Above Table, the higher limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
- 4. This is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.

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Test result

General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Transmitting

Results: Pass

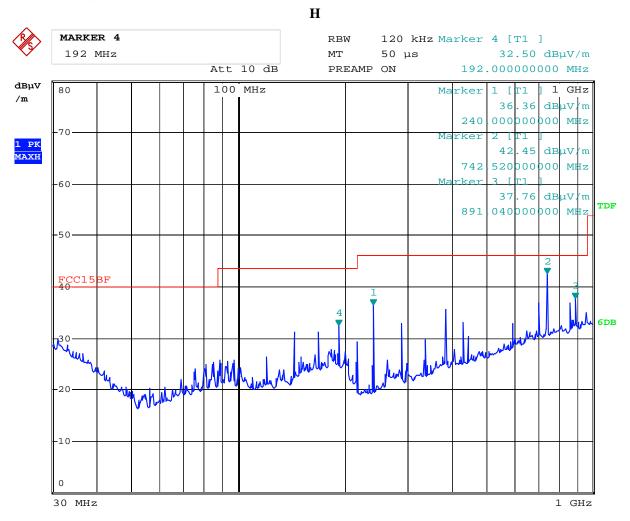
Frequency (MHz)	Frequency (MHz) Level@3m (dB \(\mu \) V/m)		Limit@3m (dB \u03b4 V/m)	
240.000	36.36	Н	46.00	
742.520	742.520 42.45		46.00	
891.040	37.76	Н	46.00	
192.000	32.50	Н 43.50		
384.000	32.76	V	46.00	
742.520	742.520 41.71		46.00	
891.040	891.040 43.54		46.00	
168.000	168.000 31.35		43.50	

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Test Figure:



Date: 2.JUL.2013 15:11:14

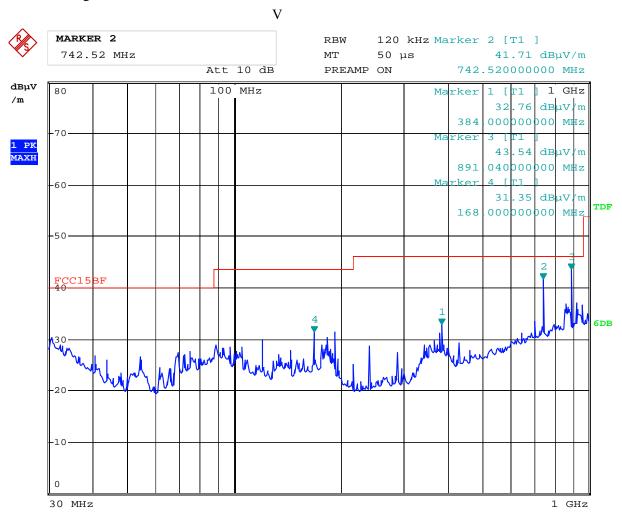
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Test Figure:



Date: 2.JUL.2013 15:08:49

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Operation Mode: Keeping Transmitting under CH01 for 11g at 6Mbps

			_
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
2412.00	90.89 (PK)	Н	Even domental Engagement
2412.00	90.69 (PK)	V	Fundamental Frequency
4824.00		Н	74(Peak)/ 54(AV)
4824.00		V	74(Peak)/ 54(AV)
7236.00		H/V	74(Peak)/ 54(AV)
9648.00		H/V	74(Peak)/ 54(AV)
12060		H/V	74(Peak)/ 54(AV)
14472		H/V	74(Peak)/ 54(AV)
16884		H/V	74(Peak)/ 54(AV)
19296		H/V	74(Peak)/ 54(AV)
21708		H/V	74(Peak)/ 54(AV)
24120	24120		74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode 6Mbps

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Operation Mode: Keeping Transmitting under CH06 for 11g at 6Mbps

	1 0			
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)	
2437.00	91.97 (PK)	Н	Eundamental Eragueney	
2437.00	90.94 (PK)	V	Fundamental Frequency	
4874.00		Н	74(Peak)/ 54(AV)	
4874.00		V	74(Peak)/ 54(AV)	
7311.00		H/V	74(Peak)/ 54(AV)	
9748.00		H/V	74(Peak)/ 54(AV)	
12185		H/V	74(Peak)/ 54(AV)	
14622		H/V	74(Peak)/ 54(AV)	
17059		H/V	74(Peak)/ 54(AV)	
19496	496 H/V		74(Peak)/ 54(AV)	
21933		H/V	74(Peak)/ 54(AV)	
24370		H/V	74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode 6 Mbps

Operation Mode: Transmitting under CH11 for 11g at 6Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \u03b4 V/m)	
2462.00	91.93 (PK)	Н	E d d-1 E	
2462.00	91.36 (PK)	V	Fundamental Frequency	
4924		Н	74(Peak)/ 54(AV)	
4924		V	74(Peak)/ 54(AV)	
7368		H/V	74(Peak)/ 54(AV)	
9848		H/V	74(Peak)/ 54(AV)	
12310		H/V	74(Peak)/ 54(AV)	
14772		H/V	74(Peak)/ 54(AV)	
17234		H/V	74(Peak)/ 54(AV)	
19696	H/V 74(I		74(Peak)/ 54(AV)	
22158		H/V	74(Peak)/ 54(AV)	
24650	24650		74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11g mode at 6 Mbps

The report refers only to the sample tested and does not apply to the bulk.

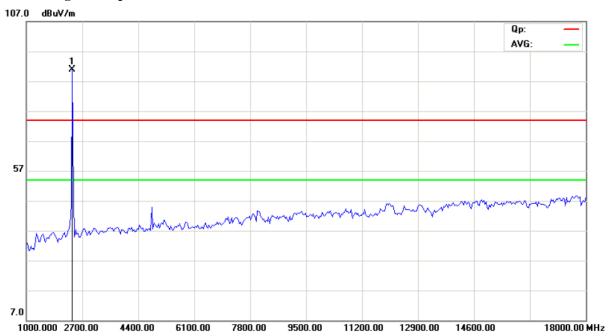
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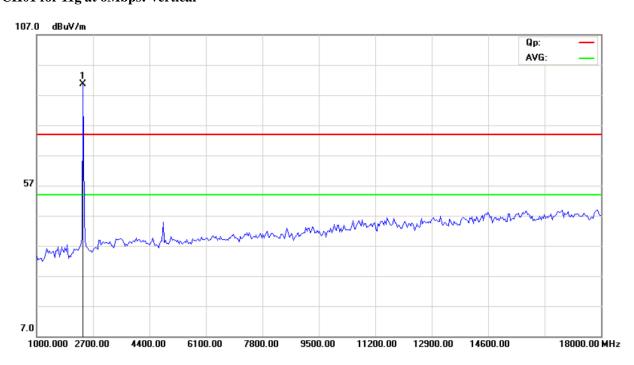


Please refer to the following test plots for details:

CH01 for 11g at 6Mbps: Horizontal



CH01 for 11g at 6Mbps: Vertical



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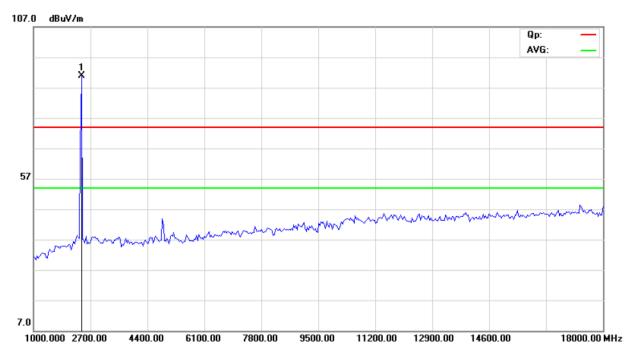
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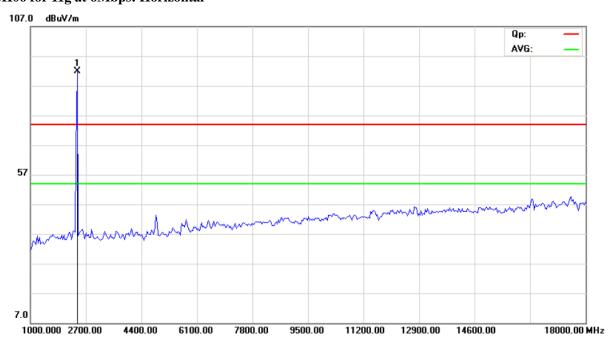
Date: 2013-07-10



CH06 for 11g at 6Mbps: Vertical



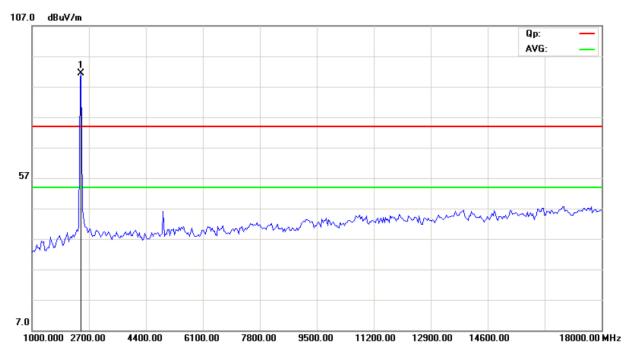
CH06 for 11g at 6Mbps: Horizontal



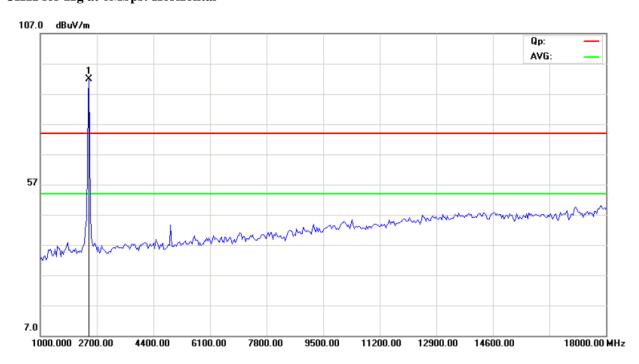
Date: 2013-07-10



CH11 for 11g at 6Mbps: Vertical



CH11 for 11g at 6Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

The report refers only to the sample tested and does not apply to the bulk.

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Date: 2013-07-10



Operation Mode: Keeping Transmitting under CH01 for 11b at 11Mbps

_			_
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
2412.00	92.38 (PK)	V	Fundamental Frequency
2412.00	92.26 (PK)	Н	Fundamental Frequency
4824.00		Н	74(Peak)/ 54(AV)
4824.00		V	74(Peak)/ 54(AV)
7236.00		H/V	74(Peak)/ 54(AV)
9648.00		H/V	74(Peak)/ 54(AV)
12060		H/V	74(Peak)/ 54(AV)
14472		H/V	74(Peak)/ 54(AV)
16684		H/V	74(Peak)/ 54(AV)
19296	H/V		74(Peak)/ 54(AV)
21708		H/V	74(Peak)/ 54(AV)
24120	24120		74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode 11Mbps

Operation Mode: Keeping Transmitting under CH06 for 11b at 11Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)	
2437.00	92.63 (PK)	Н	Fundamental Frequency	
2437.00	92.15 (PK)	V	Fundamental Frequency	
4874.00		Н	74(Peak)/ 54(AV)	
4874.00		V	74(Peak)/ 54(AV)	
7311.00		H/V	74(Peak)/ 54(AV)	
9748.00		H/V	74(Peak)/ 54(AV)	
12185		H/V	74(Peak)/ 54(AV)	
14622		H/V	74(Peak)/ 54(AV)	
17059		H/V	74(Peak)/ 54(AV)	
19496	19496 H/V		74(Peak)/ 54(AV)	
21933		H/V	74(Peak)/ 54(AV)	
24370		H/V	74(Peak)/ 54(AV)	

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode 11Mbps

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Operation Mode: Keeping Transmitting under CH11 for 11b at 11Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
2462.00	91.86 (PK)	Н	Fundamental Frequency
2462.00	91.95 (PK)	V	Fundamental Frequency
4924		Н	74(Peak)/ 54(AV)
4924		V	74(Peak)/ 54(AV)
7368		H/V	74(Peak)/ 54(AV)
9848		H/V	74(Peak)/ 54(AV)
12310		H/V	74(Peak)/ 54(AV)
14772		H/V	74(Peak)/ 54(AV)
17234		H/V	74(Peak)/ 54(AV)
19696	9696 H/V		74(Peak)/ 54(AV)
22158		H/V	74(Peak)/ 54(AV)
24650		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

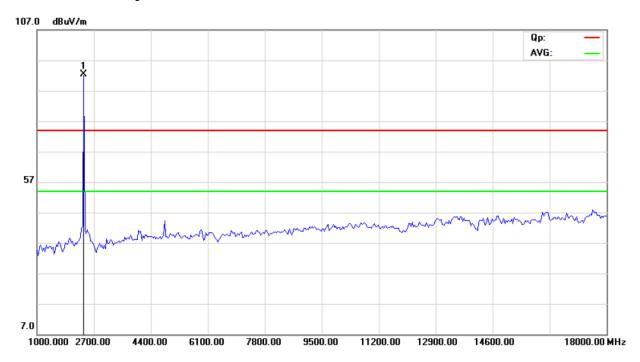
- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11b mode at 11Mbps

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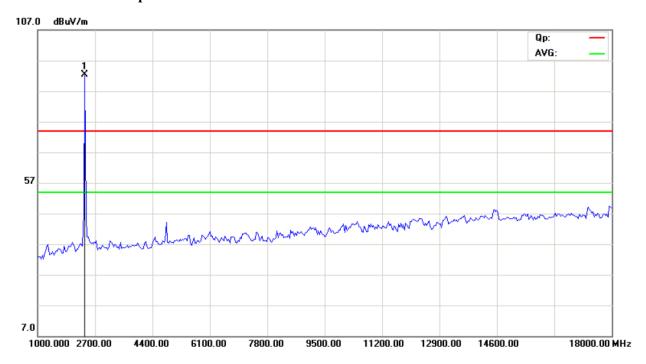


Please refer to the following test plots for details:

CH01 for 11b at 11Mbps: Horizontal



CH01 for 11b at 11Mbps: Vertical



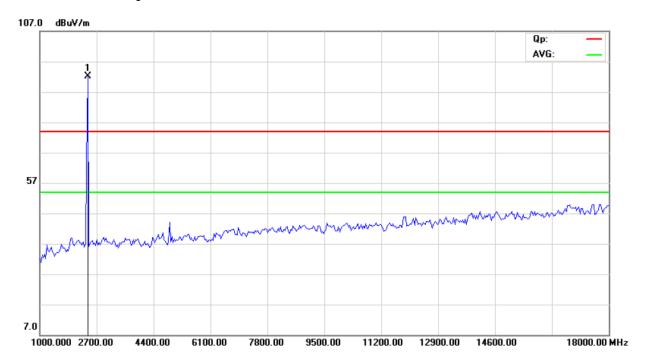
The report refers only to the sample tested and does not apply to the bulk.

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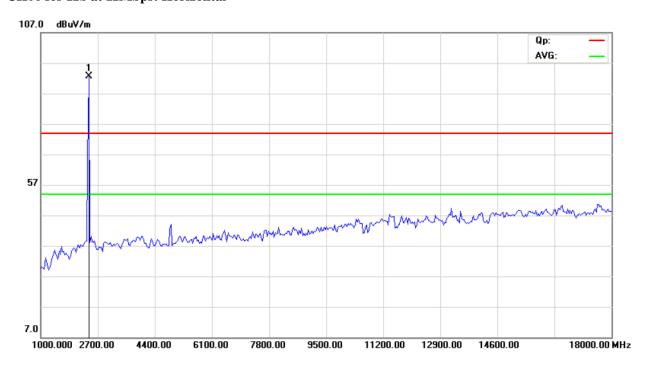
Date: 2013-07-10



CH06 for 11b at 11Mbps: Vertical



CH06 for 11b at 11Mbps: Horizontal



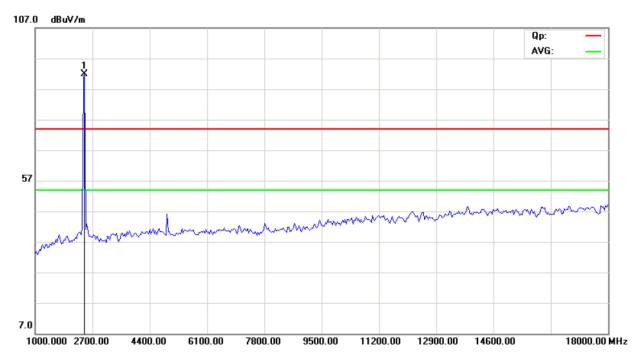
The report refers only to the sample tested and does not apply to the bulk.

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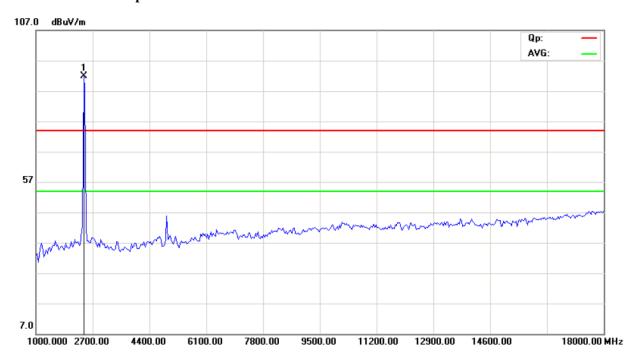
Date: 2013-07-10



CH11 for 11b at 11Mbps: Vertical



CH11 for 11b at 11Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

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Operation Mode: Keeping Transmitting under CH01 for 11n HT20 at 65Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
2412.00	91.36 (PK)	Н	Fundamental Frequency
2412.00	91.40 (PK)	V	Fundamental Frequency
4824.00	1	Н	74(Peak)/ 54(AV)
4824.00	-1	V	74(Peak)/ 54(AV)
7236.00	-	H/V	74(Peak)/ 54(AV)
9648.00	1	H/V	74(Peak)/ 54(AV)
12060	-1	H/V	74(Peak)/ 54(AV)
14472	-1	H/V	74(Peak)/ 54(AV)
16684	1	H/V	74(Peak)/ 54(AV)
19296	1	H/V	74(Peak)/ 54(AV)
21708		H/V	74(Peak)/ 54(AV)
24120		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT20) mode 65Mbps

Operation Mode: Keeping Transmitting under CH06 for 11n HT20 at 65Mbps

Frequency (MHz)	Level@3m (dB \u03bc V/m)	Antenna Polarity	Limit@3m (dB \(\mu \)V/m)
2437.00	91.55 (PK)	Н	Fundamental Frequency
2437.00	90.51 (PK)	V	Fundamental Frequency
4874.00	1	Н	74(Peak)/ 54(AV)
4874.00	1	V	74(Peak)/ 54(AV)
7311.00	-	H/V	74(Peak)/ 54(AV)
9748.00	1	H/V	74(Peak)/ 54(AV)
12185	ı	H/V	74(Peak)/ 54(AV)
14622	-	H/V	74(Peak)/ 54(AV)
17059	1	H/V	74(Peak)/ 54(AV)
19496	1	H/V	74(Peak)/ 54(AV)
21933	-	H/V	74(Peak)/ 54(AV)
24370		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT20) mode 65Mbps

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Operation Mode: Keeping Transmitting under CH11 for 11n HT20 at 65Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
2462.00	91.62 (PK)	Н	Fundamental Frequency
2462.00	91.31 (PK)	V	Fundamental Frequency
4924		Н	74(Peak)/ 54(AV)
4924		V	74(Peak)/ 54(AV)
7368		H/V	74(Peak)/ 54(AV)
9848		H/V	74(Peak)/ 54(AV)
12310		H/V	74(Peak)/ 54(AV)
14772		H/V	74(Peak)/ 54(AV)
17234		H/V	74(Peak)/ 54(AV)
19696	H/V 74(Peal		74(Peak)/ 54(AV)
22158		H/V	74(Peak)/ 54(AV)
24650		H/V	74(Peak)/ 54(AV)

Note: 1. Level = Reading + AF + Cable - Preamp + Filter - Dist, Margin = Level - Limit

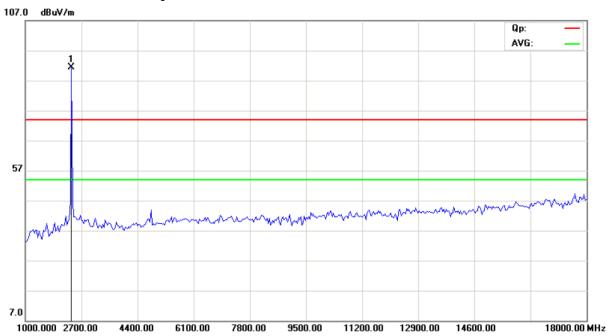
- 2. Remark "---" means that the emissions level is too low to be measured
- 3. For 802.11n (HT20) mode 65Mbps

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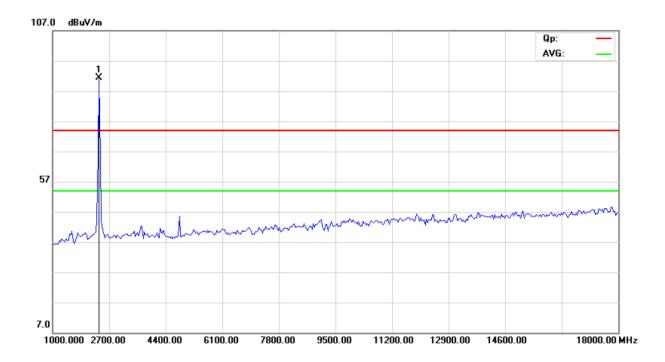


Please refer to the following test plots for details:

CH01 for 11n HT20 at 65Mbps: Horizontal



CH01 for 11n HT20 at 65Mbps: Vertical



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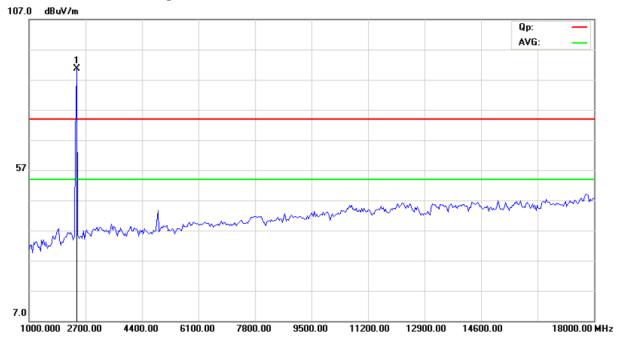
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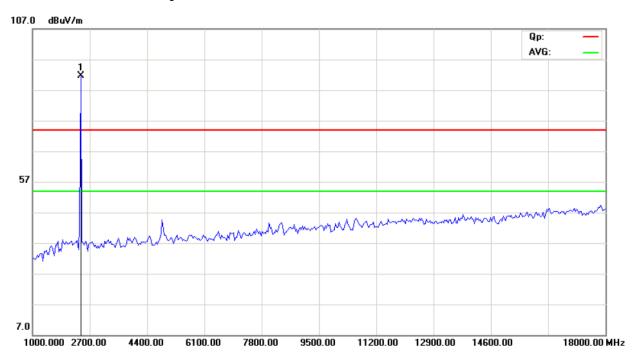
Date: 2013-07-10



CH06 for 11n HT20 at 65Mbps: Vertical



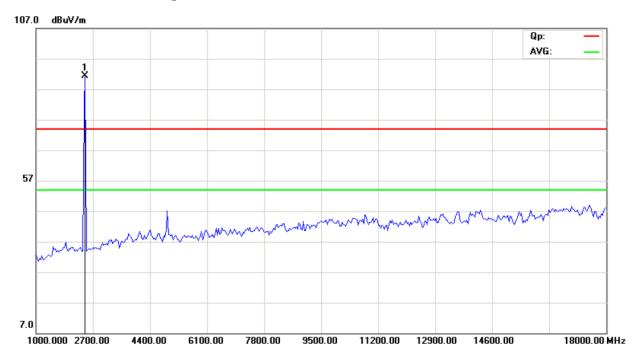
CH06 for 11n HT20 at 65Mbps: Horizontal



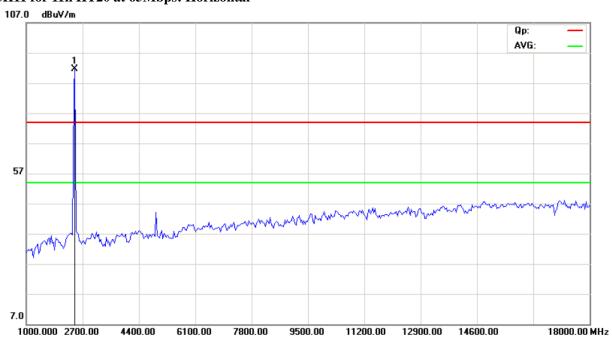
Date: 2013-07-10



CH11 for 11n HT20 at 65Mbps: Vertical



CH11 for 11n HT20 at 65Mbps: Horizontal



Note: For radiated Emissions from 18-25GHz, it is only the floor noise.

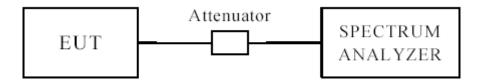
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7.0 6dB Bandwidth Measurement

7.1 Test Setup



7.2 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is >500 kHz

7.3 Test Procedure

- 1. Set resolution bandwidth (RBW) = 100 kHz
- 2. Set the video bandwidth (VBW) \geq 3 x RBW.
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.
- 7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

7.4 Test Result

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6dB Occupied Bandwidth

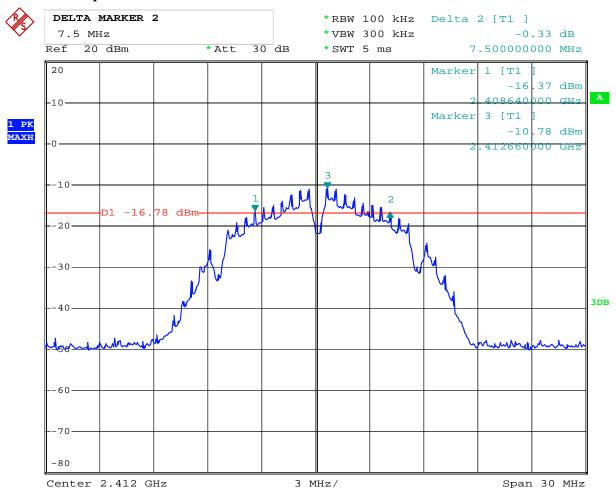
EUT		Tablet PC		Model		EM10, A10, S10, V10			
Mode		802.11b		Input Voltage		DC3.7V			
Temperat	perature 24 deg. C,			Humidity		56%	56% RH		
Channel		el Frequency (MHz)	Data Transfer 6 dB Bandwid Rate (MHz) (Mbps)			h Minimum Limit (MHz)		Pass/ Fail	
1		2412	1	7.50		7.50		0.5	Pass
6		2437	1	7.50			0.5	Pass	
11		2462	1	7.56			0.5	Pass	
1		2412	11	7.38			0.5	Pass	
6		2437	11	7.32			0.5	Pass	
11		2462	11	7.	56		0.5	Pass	

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1. 802.11b at 1Mbps of CH01



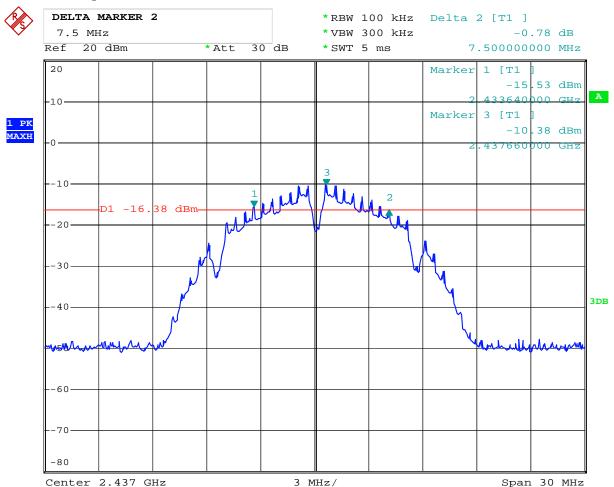
Date: 21.JUN.2013 10:29:37

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2. 802.11b at 1Mbps of CH06



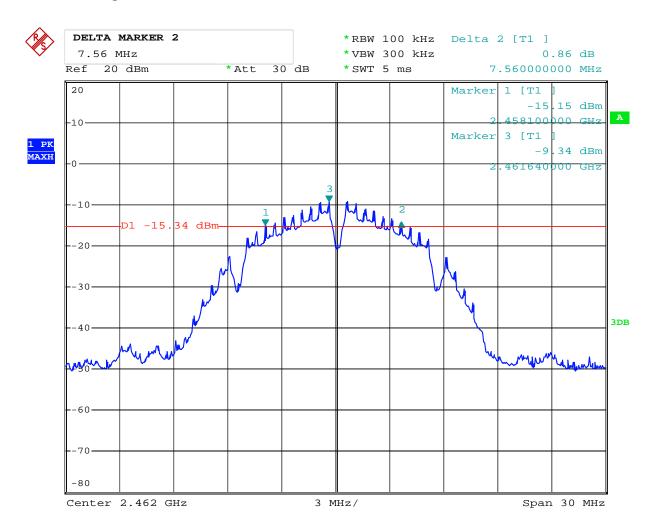
Date: 21.JUN.2013 10:42:53

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3. 802.11b at 1Mbps of CH11



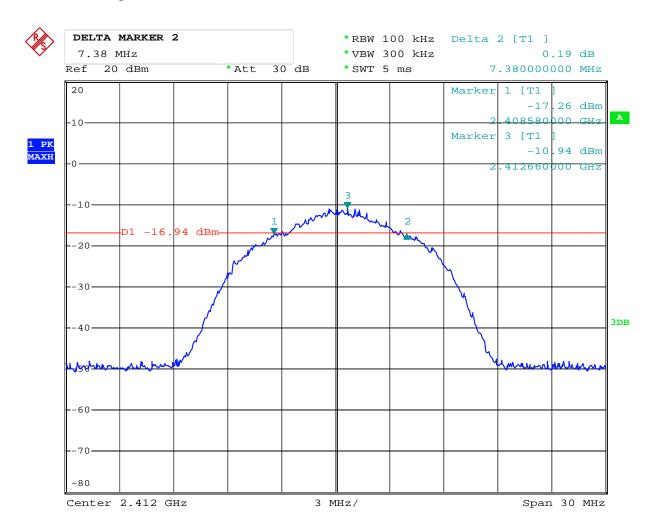
Date: 21.JUN.2013 10:54:50

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4. 802.11b at 11Mbps of CH01



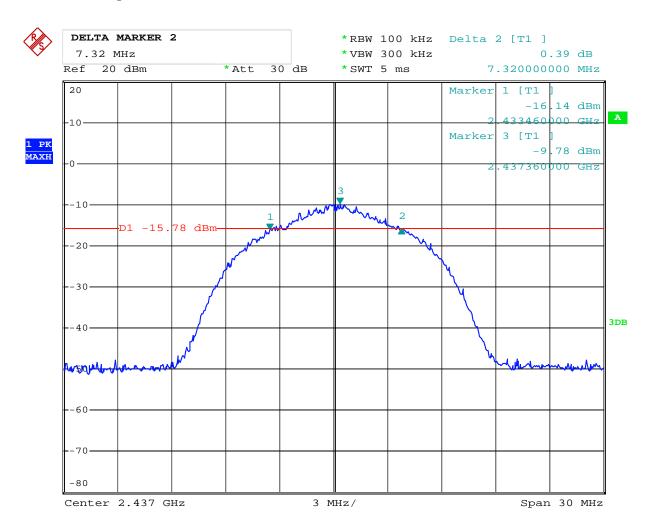
Date: 21.JUN.2013 10:38:06

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5. 802.11b at 11Mbps of CH06



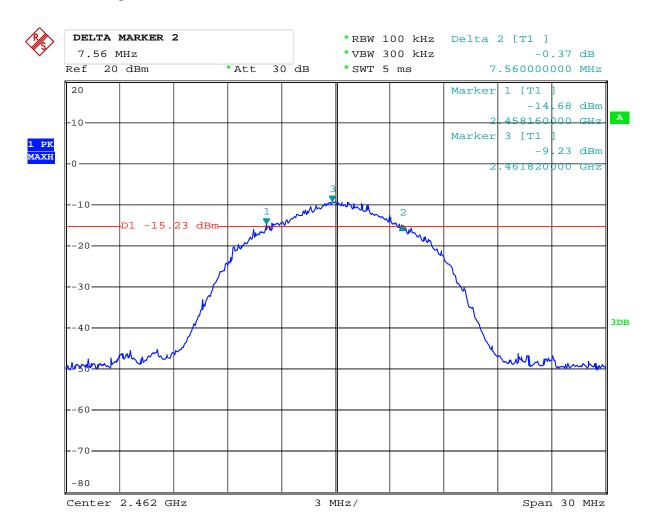
Date: 21.JUN.2013 10:46:39

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6. 802.11b at 11Mbps of CH11



Date: 21.JUN.2013 10:58:38

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6dB Occupied Bandwidth

EUT		Ta	ablet PC		Model		EM10, A10, S10, V10	
Mode		8	302.11g		Input Vol	tage	Ι	DC3.7V
Temperat	ure	24	4 deg. C,		Humidity		5	6% RH
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		andwidth Hz)		num Limit MHz)	Pass/ Fail
1		2412	6	15	.66		0.5	Pass
6		2437	6	15	.24		0.5	Pass
11		2462	6	15	.00		0.5	Pass

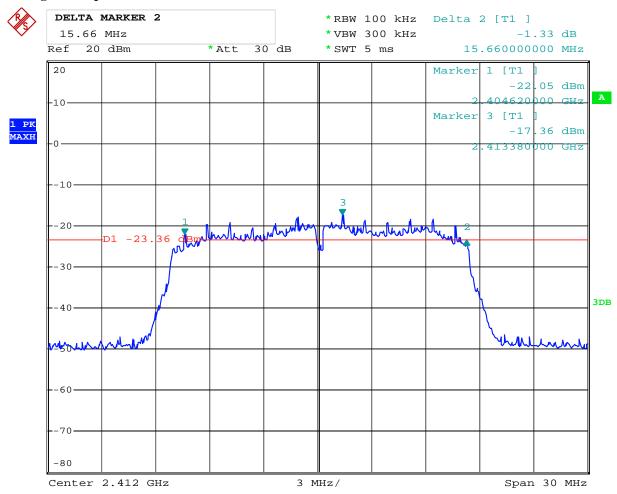
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Test Plots:

1. 802.11g at 6Mbps of CH01



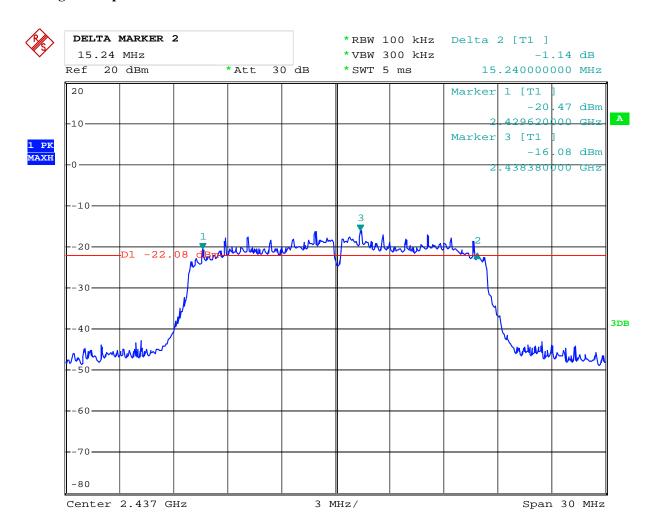
Date: 21.JUN.2013 10:34:43

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2. 802.11g at 6Mbps of CH06



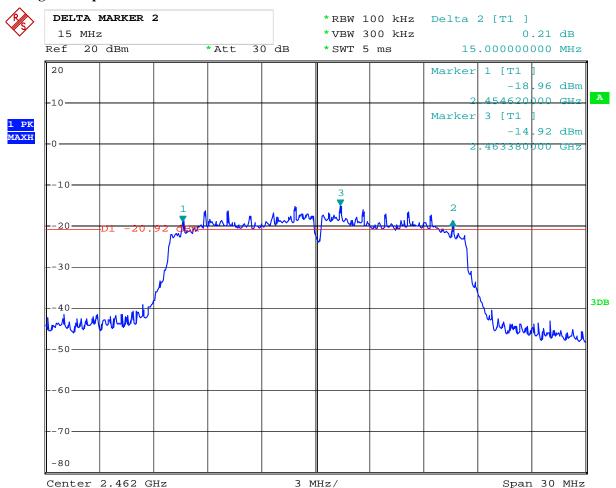
Date: 21.JUN.2013 10:45:02

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3. 802.11g at 6Mbps of CH11



Date: 21.JUN.2013 10:56:36

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6dB Occupied Bandwidth

EUT		T	ablet PC		Model		EM10, A10, S10, V10	
Mode		802	.11n HT20		Input Voltage		DC	3.7V
Temperat	ure	24	deg. C,		Humidity		56%	6 RH
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		ndwidth Hz)		mum Limit MHz)	Pass/ Fail
1		2412	65	17	.52		0.5	Pass
6		2437	65	17	.34		0.5	Pass
11		2462	65	17	.58		0.5	Pass

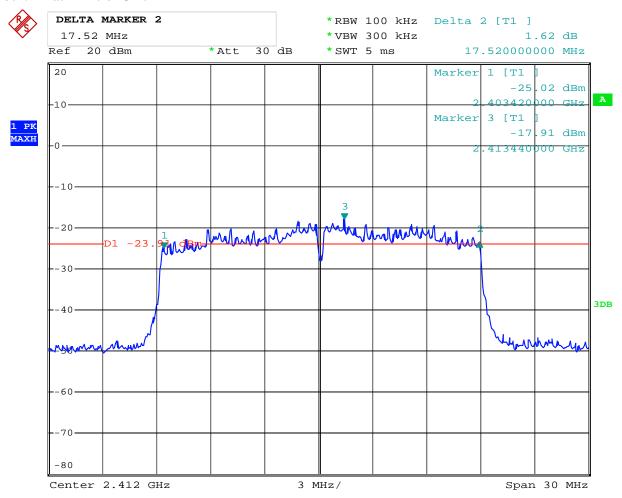
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Test Plots:

1. 802.11n at HT20 of CH01



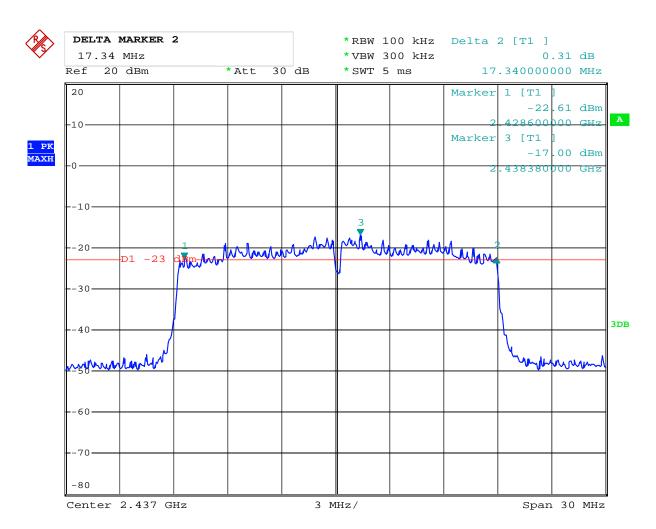
Date: 21.JUN.2013 10:40:59

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2. 802.11n at HT20 of CH06



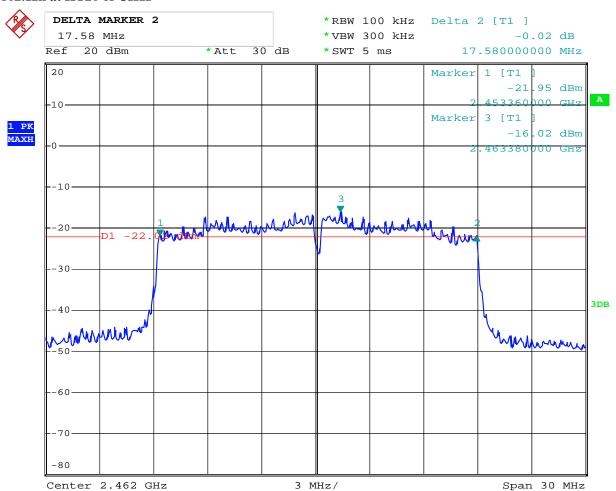
Date: 21.JUN.2013 10:49:19

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3. 802.11n at HT20 of CH11



Date: 21.JUN.2013 11:00:48

Report No: 1307001-02

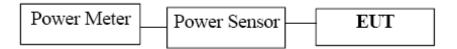
Date: 2013-07-10



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8. Maximum Peak Output Power

8.1 Test Setup



8.2 Limits of Maximum Peak Output Power

The Maximum Peak Output Power Measurement is 30dBm.

8.3 Test Procedure

The RF power output was measured with a Power meter connected to the RF Antenna connector (conducted measurement) while EUT was operating in transmit mode at the appropriate centre frequency.

Note: the peak power was measured

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8.4Test Results

EUT		Tablet	PC Mo		odel EM10,		A10, S10, V10
Mode	Mode 802.11b Input		Input Voltage			DC3.7V	
Temperati	ure	24 deg	24 deg. C, Humidity		nidity	;	56% RH
Channel	Cha	nnnel Frequency (MHz) Peak Power Output (dBm)		Peak Power Limit (dBm)		Pass/ Fail	
1		2412	1.44		30		Pass
6		2437	2.17		30		Pass
11		2462	3.23		30)	Pass

Note: 1. At finial test to get the worst-case emission at 11Mbps for CH01, CH06 and CH11

2. The result basic equation calculation as follow:

Peak Power Output = Peak Power Reading + Cable loss + Attenuator

3. The worse case was recorded

EUT		Tablet	PC Mo		odel EM1		110, A10, S10, V10	
Mode 802.11g		1g	Input Voltage		DC3.7V			
Temperati	ure	24 deg	g. C,	Humidity		:	56% RH	
Channel	Cha	annel Frequency (MHz)	requency Peak Power Output		Peak F Lin (dB	nit	Pass/ Fail	
1		2412	1.36		30		Pass	
6		2437	2.38		30)	Pass	
11		2462	3.01		30)	Pass	

Note: 1. At finial test to get the worst-case emission at 6Mbps for CH01, CH06 and CH11

The result basic equation calculation as follow:
 Peak Power Output = Peak Power Reading + Cable loss + Attenuator

3. The worse case was recorded

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EUT		Tablet PC		Model		EM10, A10, S10, V10	
Mode	Mode 802.11n (HT20) Input		Input Voltage		DC3.7V		
Temperat	ure	24 deg	24 deg. C, Humidity		nidity	56% RH	
Channel	Cha	annel Frequency (MHz)	Peak Power (dBm)	Output	Peak P Lin (dB	nit	Pass/ Fail
1		2412	0.68		30		Pass
6		2437	1.76	1.76)	Pass
11		2462	2.69		30)	Pass

Note: 1. At finial test to get the worst-case emission at 11n HT20 for CH01, CH06 and CH11

- 2. The result basic equation calculation as follow: Peak Power Output = Peak Power Reading + Cable loss + Attenuator
- 3. The worse case was recorded

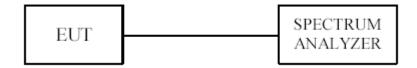
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9. Power Spectral Density Measurement

9.1 Test Setup



9.2 Limits of Power Spectral Density Measurement

The Maximum Power Spectral Density Measurement is 8dBm.

9.3 Test Procedure

- 1. Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance.
- 2. Set the RBW = 10 kHz.
- 3. Set the VBW \geq 30 kHz.
- 4. Set the span to 1.5 times the DTS channel bandwidth.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level.
- 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.
- 11. The resulting peak PSD level must be ≤ 8 dBm.

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9.4Test Result

EUT		Tablet	t PC Mo		odel	EM10, A10, S10, V10	
Mode	Mode 802.11b 1		1Mbps	Input	Input Voltage		DC3.7V
Temperat	emperature 24 deg. C, Humid		midity		56% RH		
Channel	Ch	innel Frequency (MHz) Final Power Spectral Density (dBm)		Maximum Limit (dBm)		Pass/ Fail	
			11Mbps				
1		2412	-20.61		8		Pass
6		2437	-20.50		8		Pass
11		2462	-18.45		8		Pass

EUT		Tablet	t PC Mo		odel	EM10,	EM10, A10, S10, V10	
Mode	Mode 802.11b		1 Mbps	Input Voltage		DC3.7V		
Temperat	perature 24 deg. C, Humidity		midity	56% RH				
Channel			Maximum Limit (dBm)		Pass/ Fail			
			1Mbps					
1		2412	-19.02		8		Pass	
6		2437	-19.78		8		Pass	
11		2462	-18.73		8		Pass	

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EUT		Tablet	t PC Mo		odel EM10,		A10, S10, V10	
Mode	Mode 802.11g 6		6Mbps Input		Voltage]	DC3.7V	
Temperat	nperature 24 deg. C, Humidi		nidity	:	56% RH			
Channel	Channel Frequency (MHz) Final Power Spectral Density (dBm)		Maximum Limit (dBm)		Pass/ Fail			
			6Mbps					
1		2412	-25.95		8		Pass	
6		2437	-24.56		8		Pass	
11		2462	-24.54		8		Pass	

EUT		Tablet	t PC Mo		odel EM10,		A10, S10, V10
Mode		802.11n HT2	20 65Mbps Input V		Voltage	DC3.7V	
Temperat	ure	24 deg	24 deg. C, Humidity		nidity	56% RH	
Channel	Cha	annel Frequency (MHz)	Final Power Sponsity (dBm)		Maximum Limit (dBm)		Pass/ Fail
			HT20				
1		2412	-27.21		8		Pass
6		2437	-25.60		8		Pass
11		2462	-24.68	-24.68			Pass

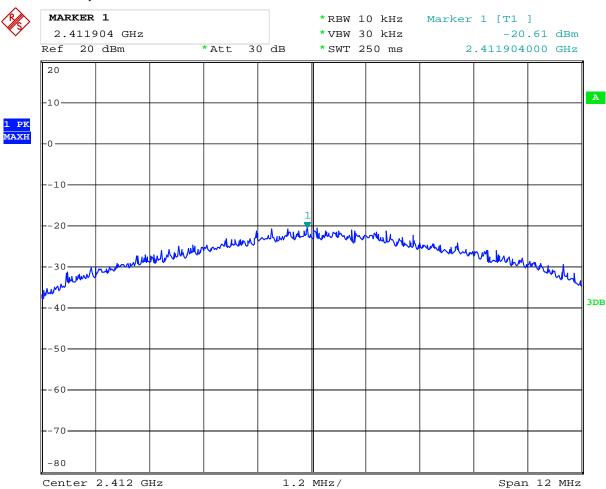
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9.5 Photo of Power Spectral Density Measurement

1.802.11b at 11Mbps of CH01



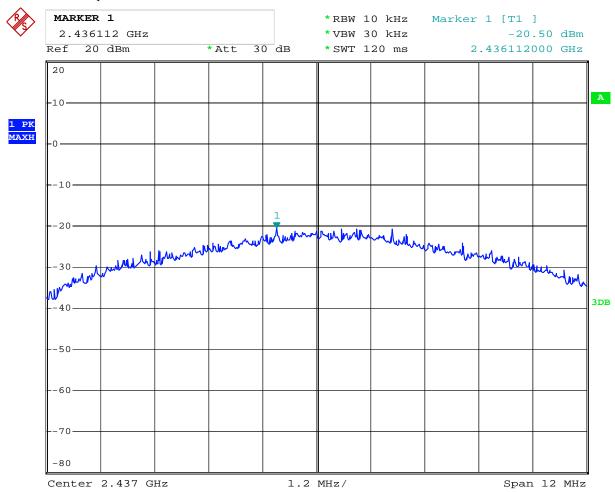
Date: 21.JUN.2013 11:17:41

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2. 802.11b at 11Mbps at CH06



Date: 21.JUN.2013 11:28:11

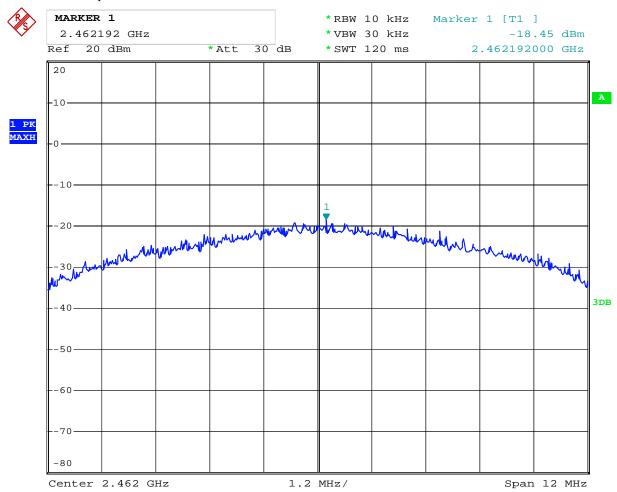
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3. 802.11b at 11Mbps of CH11



Date: 21.JUN.2013 11:33:28

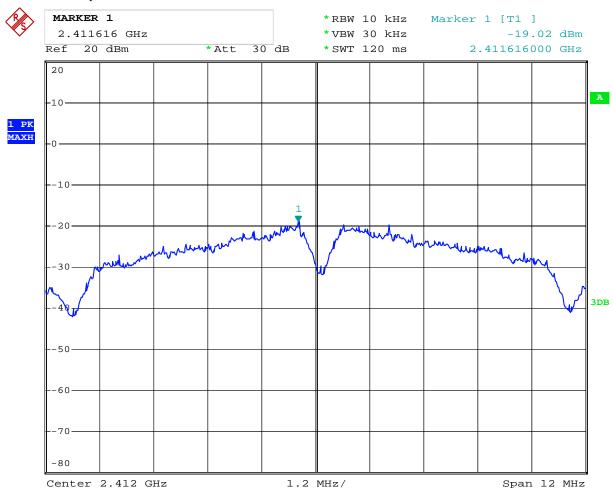
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4. 802.11b at 1Mbps of CH1



Date: 21.JUN.2013 11:11:20

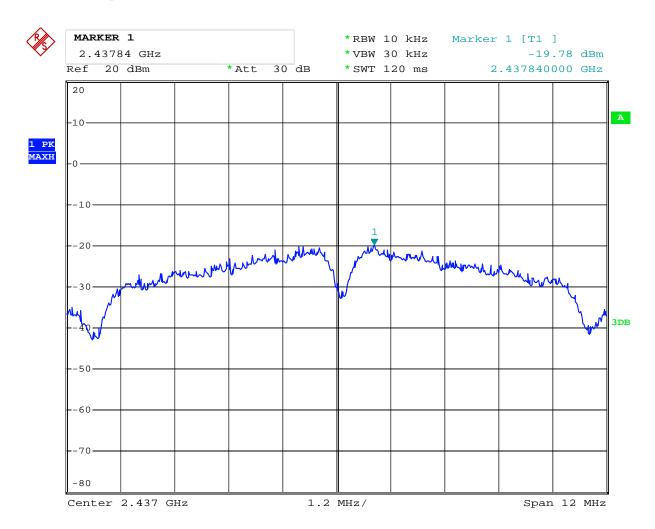
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5. 802.11b at 1Mbps of CH6



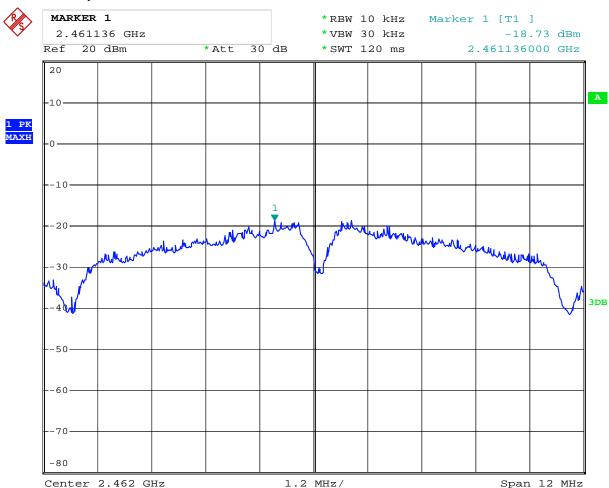
Date: 21.JUN.2013 11:22:39

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6. 802.11b at 1Mbps of CH11



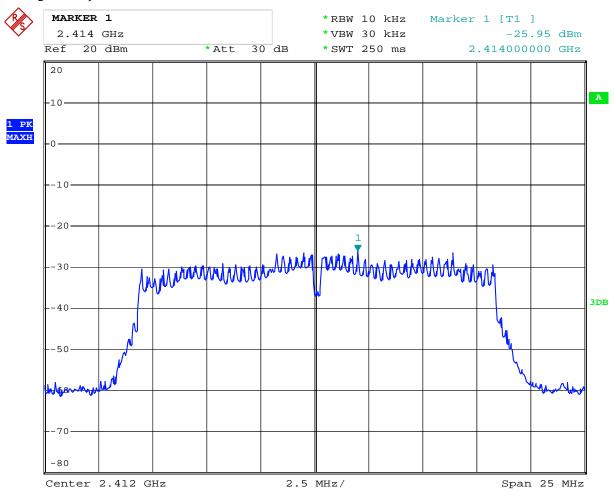
Date: 21.JUN.2013 11:31:06

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7. 802.11g at 6Mbps of CH1



Date: 21.JUN.2013 11:15:59

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8. 802.11g at 6 Mbps of CH6



Date: 21.JUN.2013 11:23:52

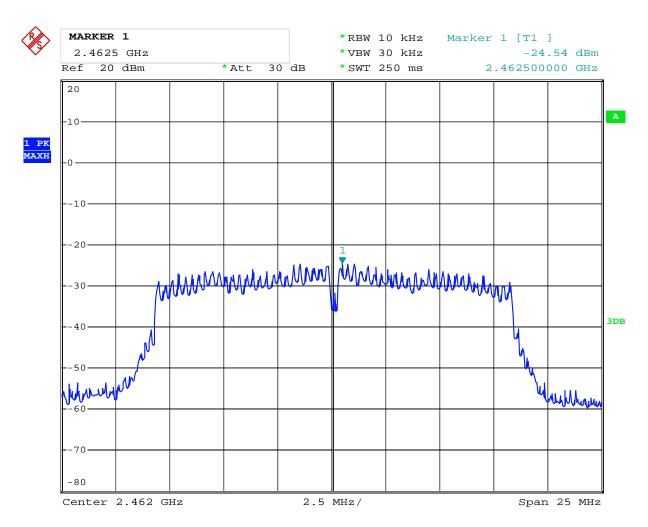
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9. 802.11g at 6 Mbps of CH11



Date: 21.JUN.2013 11:31:59

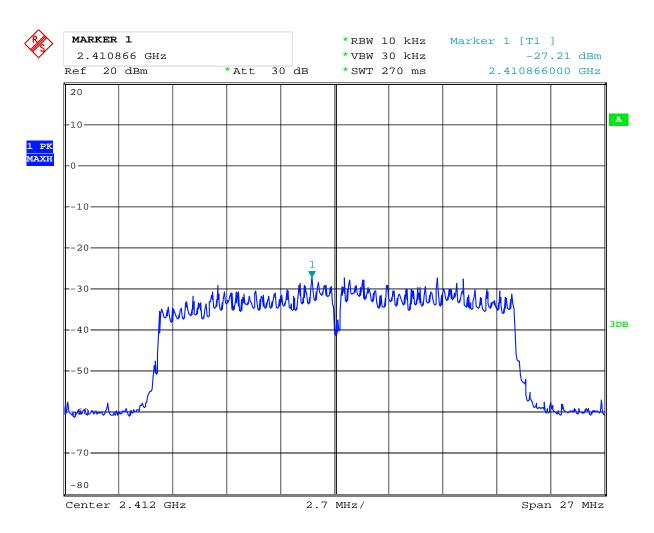
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10. 802.11n at HT20 of CH01



Date: 21.JUN.2013 11:21:03

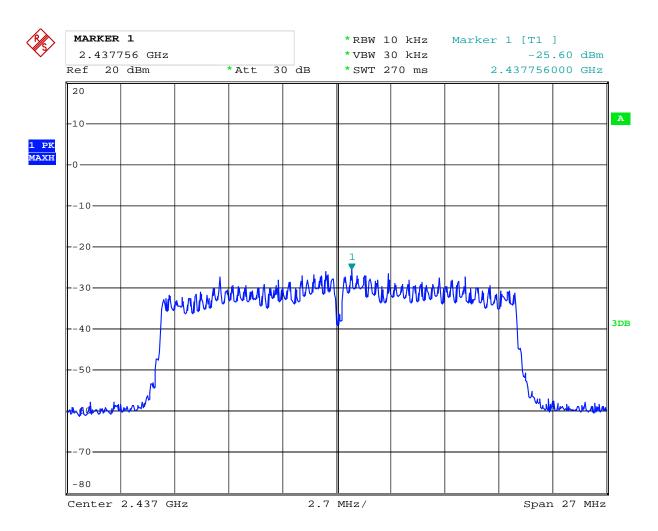
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11. 802.11n at HT20 of CH06



Date: 21.JUN.2013 11:29:43

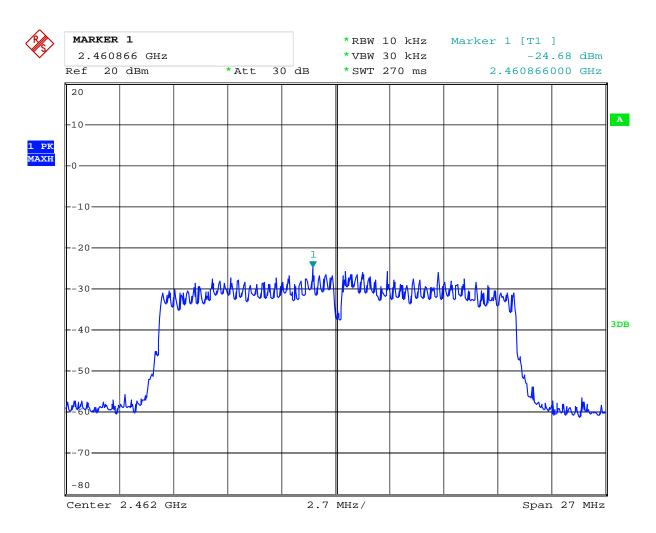
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12. 802.11n at HT20 of CH11



Date: 21.JUN.2013 11:34:41

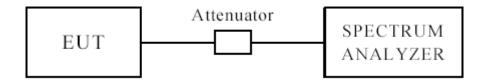
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10 Out of Band Measurement

10.1 Test Setup for band edge



The restricted band requirement based on radiated emission test; please see the clause 6 for the test setup

10.2 Limits of Out of Band Emissions Measurement

- 1. Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).
- 2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.

10.3 Test Procedure

For signals in the restricted bands above and below the 2.4-2.483GHz allocated band a measurement was made of radiated emission test.(Peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK detector)

For bandage test, the spectrum set as follows: RBW=VBW=100 kHz. A conducted measurement used

10.4 Test Result

Please see next pages

Note: 1. this is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), after pre-test. It was found that the worse radiated emission was get at the lying position. the worse case was recorded

2. For band-edge measurement, the frequency from 30MHz-25GHz was tested. And It met the FCC rule.

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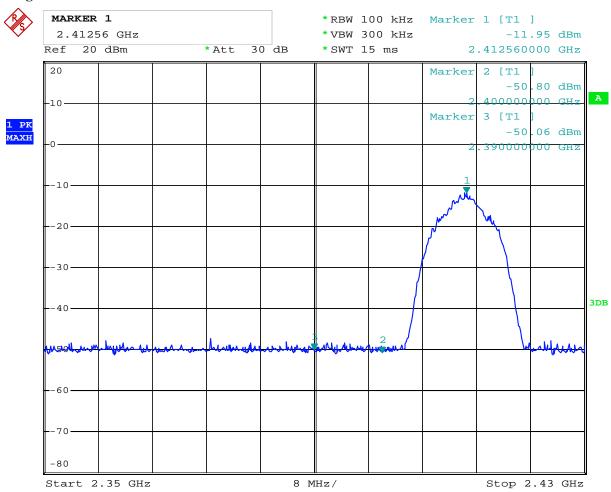
For 802.11b mode

CH01 at 11Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Ta	ablet PC	Model	EM10, A10, S10, V10
Mode	Keeping	g Transmitting	Input Voltage	DC3.7V
Temperature	24	l deg. C,	Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBµV/m)	44.1	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$
2390	PK (dBµV/m)	37.6	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)		Lillit	$54(dB\mu V/m)$

Test Figure:



Date: 21.JUN.2013 11:40:56

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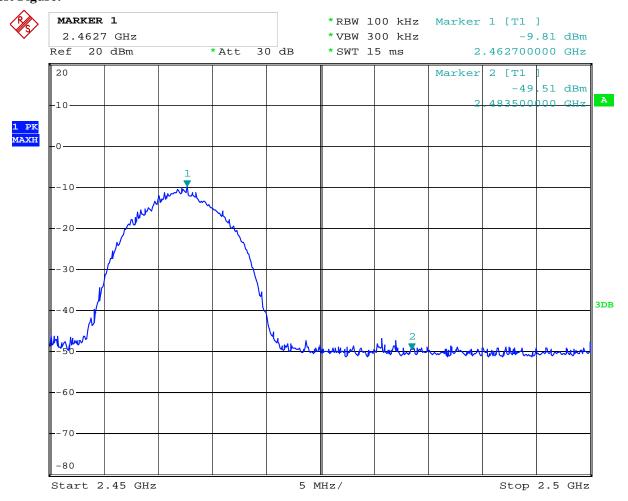


CH11 at 11Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Tablet PC		Model	EM10, A10, S10, V10
Mode	Keepin	g Transmitting	Input Voltage	DC3.7V
Temperature	24	4 deg. C,	Humidity	56% RH
Test Result:		Pass	Detector	PK
2483.5	PK (dBµV/m)	42.6	T ::4	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$

Test Figure:



Date: 21.JUN.2013 11:46:10

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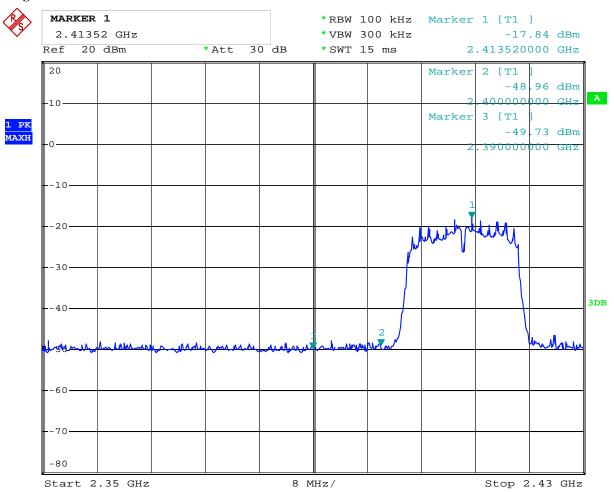
For 802.11g mode

CH01 at 6Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Ta	ablet PC	Model	EM10, A10, S10, V10
Mode	Keeping	g Transmitting	Input Voltage	DC3.7V
Temperature	24	l deg. C,	Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBµV/m)	47.8	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)	-	Limit	$54(dB\mu V/m)$
2390	PK (dBµV/m)	37.6	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)		LIIIII	$54(dB\mu V/m)$

Test Figure:



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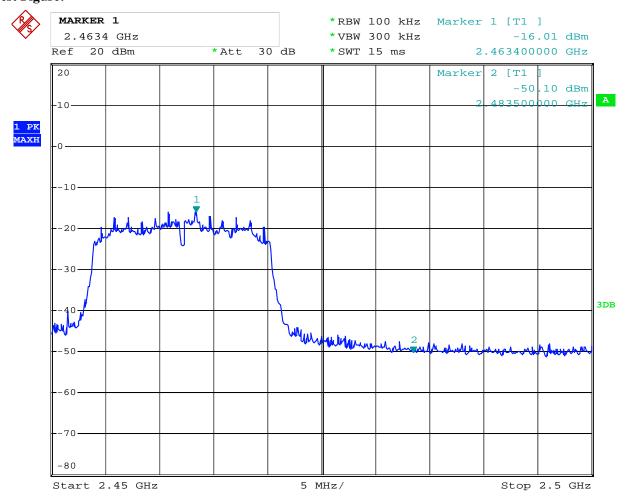


CH11 at 6Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Tablet PC		Model	EM10, A10, S10, V10
Mode	Keeping Transmitting		Input Voltage	DC3.7V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5	PK (dBµV/m)	43.3	T ::4	$74(dB\mu V/m)$
	AV ($dB\mu V/m$)		Limit	$54(dB\mu V/m)$

Test Figure:



Date: 21.JUN.2013 11:45:33

Date: 2013-07-10



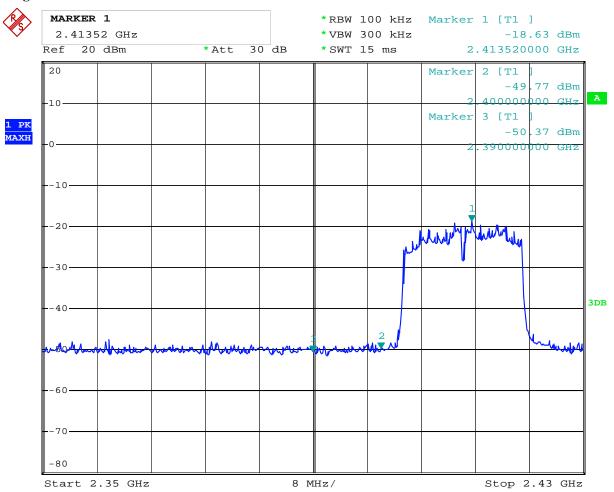
For 802.11n (HT20) mode

CH01 at 65Mbps

10.4 Band-edge and Restricted band Measurement

1011 Build tuge with Iterative count interest of the country of th							
EUT	Tablet PC		Model	EM10, A10, S10, V10			
Mode	Keeping Transmitting		Input Voltage	DC3.7V			
Temperature	24 deg. C,		Humidity	56% RH			
Test Result:	Pass		Detector	PK			
2400	PK (dBµV/m)	44.8	Limit	$74(dB\mu V/m)$			
	AV (dBμV/m)			54(dBµV/m)			
2390	PK (dBμV/m)	38.5	Limit	74(dBμV/m)			
	AV (dBμV/m)			54(dBµV/m)			

Test Figure:



Date: 21.JUN.2013 11:42:59

Note: The Max. FS in Restrict Band are measured in conventional method.

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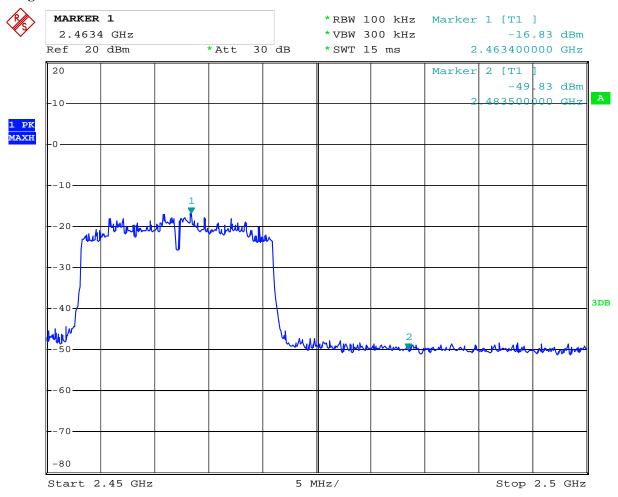


CH11 at 65Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Tablet PC		Model	EM10, A10, S10, V10
Mode	Keeping	g Transmitting	Input Voltage	DC3.7V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5	PK (dBµV/m)	43.6	T ::4	$74(dB\mu V/m)$
	AV ($dB\mu V/m$)		Limit	$54(dB\mu V/m)$

Test Figure:



Date: 21.JUN.2013 11:47:08

Note: The Max. FS in Restrict Band are measured in conventional method.

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11.0 Antenna Requirement

11.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 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.

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

11.2 Antenna Connected construction

Integral antenna used. The maximum Gain of the antennas is 2.0 dBi.

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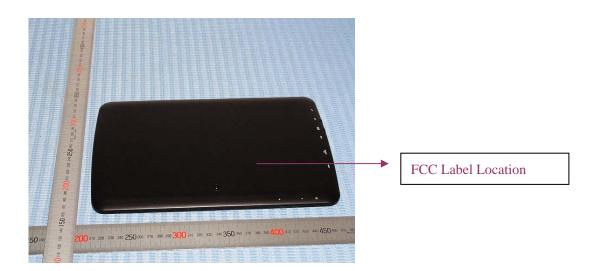
12.0 FCC Label

FCC ID: RBD-V10A20

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:



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13.0 Photo of testing

Conducted Emission Test Setup:



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Radiated Emission Test Setup:





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Photo for the EUT





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Power Supply





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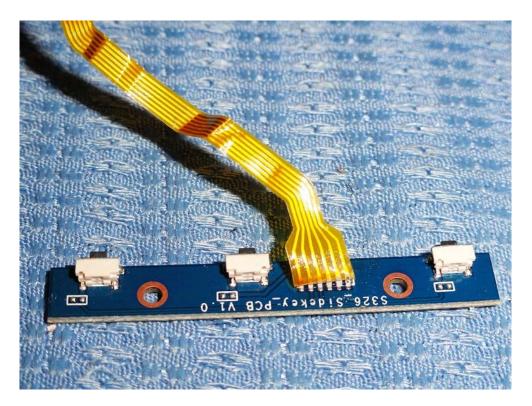
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End of the report