



Report No: FCC 1706169-01 File reference No: 2017-07-10

Applicant: Shenzhen Jingwah Information Technology Co., Ltd.

Product: Tablet PC

Model No: ST7150, P7100, EM795, T7000, M710R

Trademark: Smartab, Polaroid, Emerson, Packard Bell

Test Standards: FCC Part 15.247

Test result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.10, FCC Part 15.247 for the

evaluation of electromagnetic compatibility

Approved By

# Jack Chung

Jack Chung

Manager

Dated: July 10, 2017

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 TESTING LABORATORIES

Room 512-519, 5/F., East Tower, Building 4, Anhua Industrial Zone, Futian District, Shenzhen, Guangdong, China

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Date: 2017-07-10



# **Special Statement:**

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

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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.

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# **Test Report Conclusion**

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### 1.0 General Details

### 1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Room 512-519,5/F., East Tower, Building 4, Anhua Industrial Zone, Futian District, Shenzhen,

Guangdong 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-02

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: -Fax: --

### 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: Smartab, Polaroid, Emerson, Packard Bell

Model Number: ST7150

Additional Model Number: P7100, EM795, T7000, M710R

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

IEEE 802.11g/n (HT20/HT40): OFDM(64QAM, 16QAM, QPSK, BPSK)

Frequency range IEEE 802.11b/g/n (HT20): 2412-2462MHz; IEEE 802.11n (HT40): 2422-2452MHz

Channel Spacing 5MHz for IEEE 802.11b/g/n(HT20/HT40)

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 HT20/40: msc0-msc7

Frequency Selection By software

Channel Number IEEE 802.11b/g/n (HT20) : 11 Channels; IEEE 802.11n (HT40) : 7 Channels

Antenna: Integral Antenna and the maximum Gain of this antenna is 0dBi;

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Submitted Sample: 2 Samples

Test Duration 1.5 2017-06-19 to 2017-07-26

1.6 Test Uncertainty Conducted Emissions Uncertainty = 3.6dB Radiated Emissions Uncertainty =4.7dB

			7
1.7	Test Engineer	(erry	ang
	The sample tested by		

Print Name: Terry Tang

Remark: There are alternative manufacturers for USB cable, DDR and EMMC. EUT are configured as following

Tollowing								
Name	Name Manufacturer							
	Configure a)							
DDR	PSC	P3P2GF3BLF						
EMMC	FORESEE	NCEMBSF9-16G						
USB Cable	USB Cable Shenzhen Xinhuai Ronghui Technology Co,Ltd.							
	DongGuan MinTai Electronic Co.,LTD							
	Configure b)							
DDR	Spectek	PE959-12K						
EMMC	FORESEE	NCEMAD6B-16G						
USB Cable	USB Cable Shenzhen Xinhuai Ronghui Technology Co,Ltd.							
	DongGuan MinTai Electronic Co.,LTD							

Note: Configure a) and b) are tested and only worse case are recorded in the test report

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2.0 Test Equipment					
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date
ESPI Test Receiver	R&S	ESPI 3	100379	2016-08-22	2017-08-21
TWO	R&S	E7112 75	100204	2016-08-22	2017-08-21
Line-V-NETW		EZH3-Z5	100294	2016-08-22	2017-08-21
TWO	R&S	EZH3-Z5	100253	2016-08-22	2017-08-21
Line-V-NETW		EZH3-Z3	100233	2016-08-22	2017-08-21
	R&S				
Ultra Broadband		HL562	100157	2016-08-23	2017-08-22
ANT					
	R&S	ESDV	100008	2016-08-22	2017-08-21
ESDV Test Receiver		LSDV	100000	2010-06-22	2017-00-21
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2016-08-22	2017-08-21
System Controller	CT	SC100	-		
Printer	EPSON	РНОТО ЕХЗ	CFNH234850		
Computer	IBM	8434	1S8434KCE99BLXLO*	-	-
Loop Antenna	EMCO	6502	00042960	2016-08-23	2017-08-22
ESPI Test Receiver	R&S	ESI26	838786/013	2016-08-22	2017-08-21
3m OATS			N/A	2016-08-24	2017-08-23
Horn Antenna	R&S	BBHA 9170	BBHA9170265	2016-08-24	2017-08-23
Horn Antenna	R&S	BBHA 9120D	9120D-631	2016-08-24	2017-08-23
Power meter	Anritsu	ML2487A	6K00003613	2016-08-22	2017-08-21
Power sensor	Anritsu	MA2491A	32263	2016-08-22	2017-08-21
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2016-08-23	2017-08-21
LISN	AFJ	LS16C	10010947251	2016-08-22	2017-08-21
LISN (Three Phase)	Schwarebeck	NSLK 8126	8126453	2016-08-23	2017-08-22
9*6*6 Anechoic			N/A	2016-08-24	2017-08-23
EMI Test Receiver	RS	ESCS30	100139	2016-08-22	2017-08-21
RF Cable	SCHWARZBEC			2016-08-23	2017 09 22
Kr Cable	K			2010-08-23	2017-08-22
Pre-Amplifier	НР	8447D	2727A05017	2016-08-05	2017-08-04
Pre-Amplifier	EM	EM30265		2016-08-05	2017-08-04

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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: 1Mbps 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: msc0 data rate (worst case) were chosen for full testing

### IEEE 802.11n (HT40) mode

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

Channel	Frequency (MHz)
Low	2422
Middle	2437
High	2452

IEEE 802.11n (HT40) mode: msc0 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
CC Part 15, Paragraph 15.107 & 15.207	<b>Conducted Emission Test</b>	PASS	Complies
FCC Part 15 Subpart C	Spectrum bandwidth of a Orthogonal Frequency		Complies
aragraph 15.247(a)(2) Limit	Division Multiplex System Limit: 6dB	PASS	
	bandwidth>500kHz		
FCC Part 15, Paragraph 15.247(b)	Maximum peak output power	PASS	Complies
ECC D 445 D	Limit: max. 30dBm	D. C.C.	
FCC Part 15, Paragraph 15.109,15.205 & 15.209	Transmitter Radiated Emission Limit: Table 15.209	PASS	Complies
FCC Part 15, Paragraph 15.247(e)	Power Spectral Density Limit: max. 8dBm	PASS	Complies
FCC Part 15, Paragraph 15.247(d)	Out of Band Emission and Restricted Band	PASS	Complies
	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

### **EUT Modification** 4.0

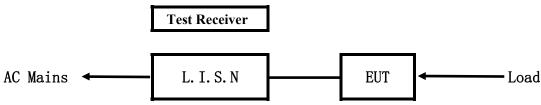
No modification by SHENZHEN TIMEWAY TESTING LABORATORIES.

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### 5.0 Power Line Conducted Emission Test

### 5.1 Schematics of the test

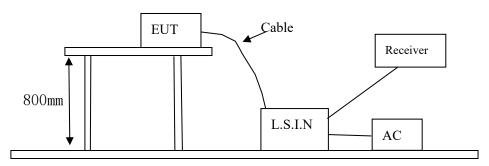


EUT: Equipment Under Test

### 5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.10-2013. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.10 –2013.

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



### 5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.10-2013. All interface ports were connected to the Appropriate peripherals. All peripherals and cables are listed below.

### A. EUT

Device	Manufacturer	Model	FCC ID
Tablet PC	Shenzhen Jingwah Information	P7100, EM795, T7000,	RBD-M710R1
	Technology Co., Ltd.	M710R	

### B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

### C. Peripherals

Device	Manufacturer	Model	FCC ID/DOC	Cable

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### 5.4 EUT Operating Condition

Operating condition is according to ANSI C63.10-2013.

- A Setup the EUT and simulators as shown on follow
- B 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

	0 0 1						
Frequency		Class A Limits (dB µ V)		Class B Limits (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		
	$5.00 \sim 30.00$	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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### Conducted Emission on Live Terminal (150kHz to 30MHz) A:

**EUT Operating Environment** 

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

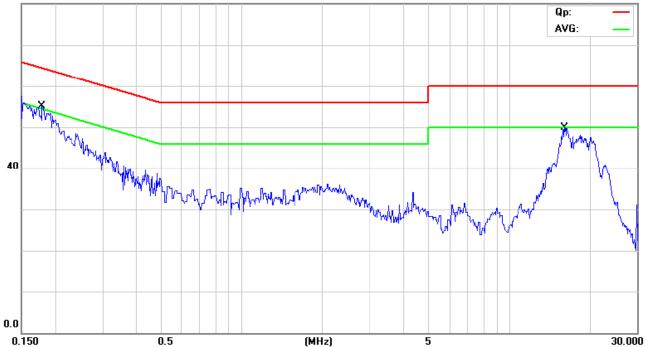
**EUT set Condition: Keep WIFI Transmitting** 

**Equipment Level: Class B** 

**Results: PASS** 

Please refer to following diagram for individual





No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBu∀	dB	Detector	Comment
1	0.1782	38.70	9.88	48.58	64.57	-15.99	QP	
2	0.1782	13.60	9.88	23.48	54.57	-31.09	AVG	
3	16.0421	33.00	11.26	44.26	60.00	-15.74	QP	
4 *	16.0421	25.80	11.26	37.06	50.00	-12.94	AVG	

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

**EUT Operating Environment** 

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

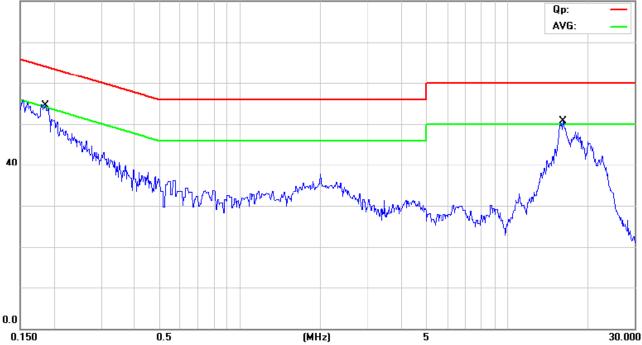
**EUT set Condition: Keep WIFI Transmitting** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual

### 80.0 dBuV



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBu∀	dB	Detector	Comment
1	0.1850	37.70	9.88	47.58	64.26	-16.68	QP	
2	0.1850	17.60	9.88	27.48	54.26	-26.78	AVG	
3	16.1691	32.20	11.25	43.45	60.00	-16.55	QP	
4 *	16.1691	25.00	11.25	36.25	50.00	-13.75	AVG	

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### 6 Radiated Emission Test

- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 8999988
- (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 C63.10-2013.
- (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. F For measurement above 1GHz, peak values with RBW=1MHz VBW=3MHz and PK detector. AV value with RBW=1MHz, VBW=3MHz and RMS 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 EUT Turn-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.

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

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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 $\mu$ 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/Vertical (30MHz----1000MHz)

**EUT set Condition: Keep Transmitting** 

**Results: Pass** 

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB µ V/m)
31.760	31.01	Н	40.00
650.000	40.42	Н	46.00
200.000	37.59	Н	43.50
920.000	40.13	V	46.00
30.200	32.05	V	40.00

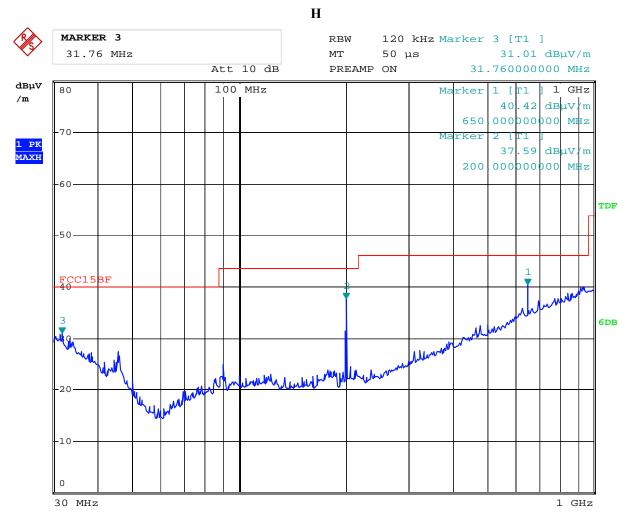
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### Test Figure:



Date: 7.JUL.2017 14:59:12

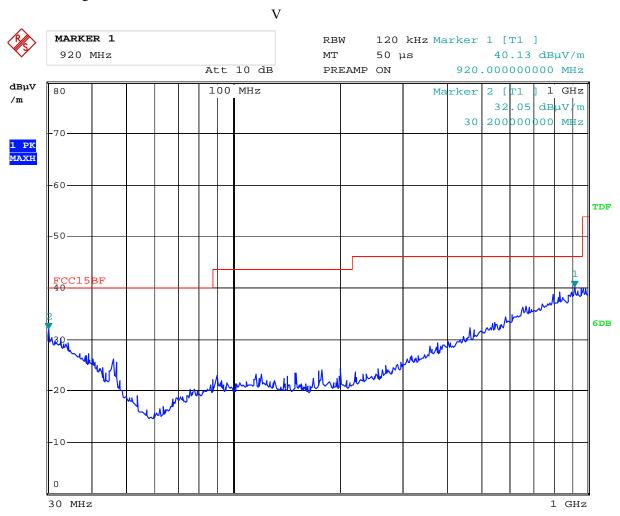
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### Test Figure:



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

	8	0 1	
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \( \mu \text{V/m} \)
4824.00	49.78 (PK)	Н	74(Peak)/ 54(AV)
4824.00	48.82 (PK)	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		H/V	74(Peak)/ 54(AV)

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

<sup>2.</sup> Remark "---" means that the emissions level is too low to be measured

<sup>3.</sup> For 802.11g mode 6Mbps

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

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \( \mu \)V/m)
4874.00	50.20 (PK)	V	74(Peak)/ 54(AV)
4874.00	46.47 (PK)	Н	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		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 6Mbps

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

		8 F	
Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB µ V/m)
4924	49.58 (PK)	Н	74(Peak)/ 54(AV)
4924	49.64 (PK)	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(Peak)/ 54(AV)
22158		H/V	74(Peak)/ 54(AV)
24620		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 at 6Mbps

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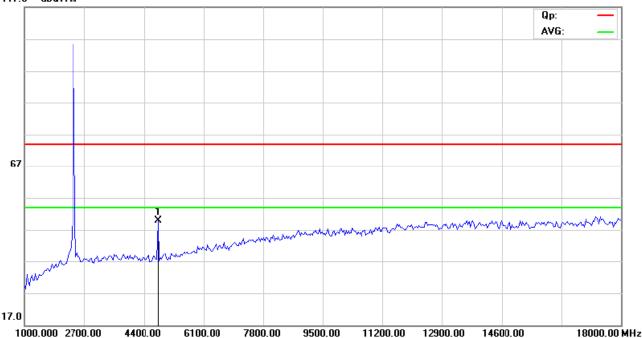
Date: 2017-07-10



Please refer to the following test plots for details:

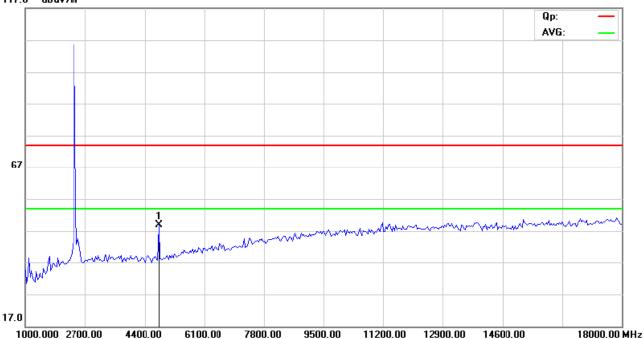
# CH01 for 11g at 6Mbps: Horizontal

### 117.0 dBuV/m



# CH01 for 11g at 6Mbps: Vertical

### 117.0 dBuV/m



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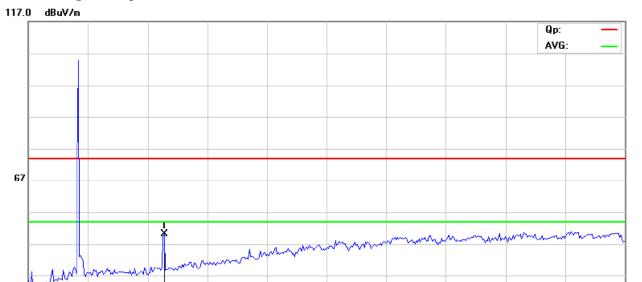
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### CH06 for 11g at 6Mbps: Vertical



9500.00

11200.00

12900.00

14600.00

18000.00 MHz

### CH06 for 11g at 6Mbps: Horizontal

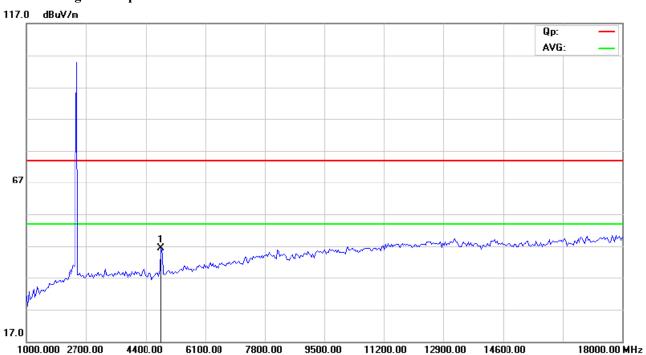
4400.00

6100.00

7800.00

17.0

1000.000 2700.00



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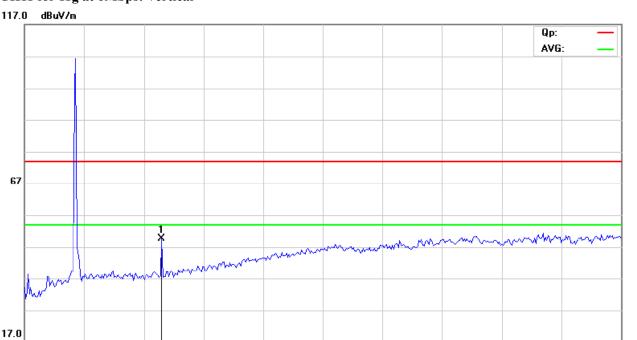
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Report No.: FCC1706169-01

Date: 2017-07-10



### CH11 for 11g at 6Mbps: Vertical



9500.00

11200.00

12900.00

14600.00

18000.00 MHz

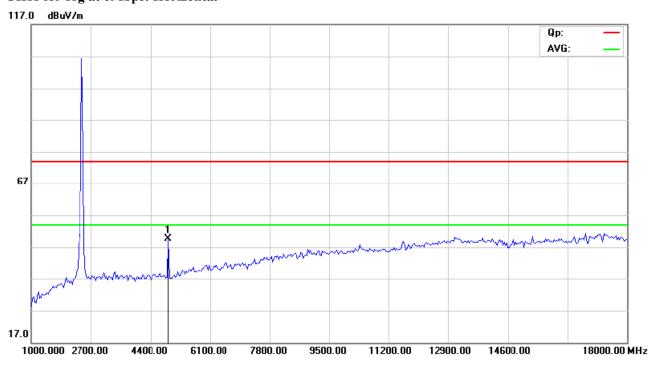
### CH11 for 11g at 6Mbps: Horizontal

4400.00

6100.00

7800.00

1000.000 2700.00



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

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Date: 2017-07-10



### Operation Mode: Transmitting under CH01 for 11b at 1Mbps

		_	
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \( \mu \)V/m)
4824.00	47.82 (PK)	Н	74(Peak)/ 54(AV)
4824.00	49.59 (PK)	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		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 1Mbps

### Operation Mode: Transmitting under CH06 for 11b at 1Mbps

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \( \mu \)V/m)
4874.00	49.01 (PK)	Н	74(Peak)/ 54(AV)
4874.00	48.31 (PK)	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		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 1Mbps

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Date: 2017-07-10



### Operation Mode: Transmitting under CH11 for 11b at 1Mbps

	8		
Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \( \mu \)V/m)
4924	46.79 (PK)	Н	74(Peak)/ 54(AV)
4924	50.63 (PK)	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(Peak)/ 54(AV)
22158		H/V	74(Peak)/ 54(AV)
24620		H/V	74(Peak)/ 54(AV)

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

<sup>2.</sup> Remark "---" means that the emissions level is too low to be measured

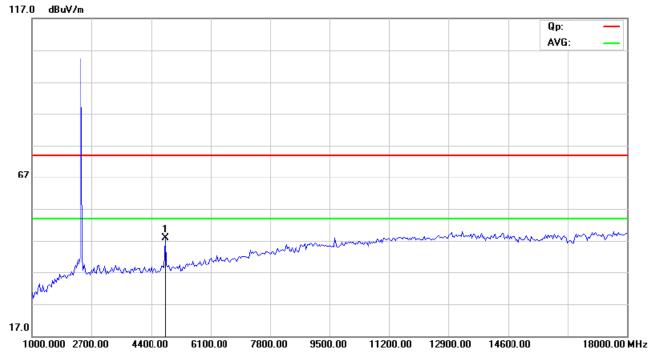
<sup>3.</sup> For 802.11b mode at 1Mbps

Date: 2017-07-10



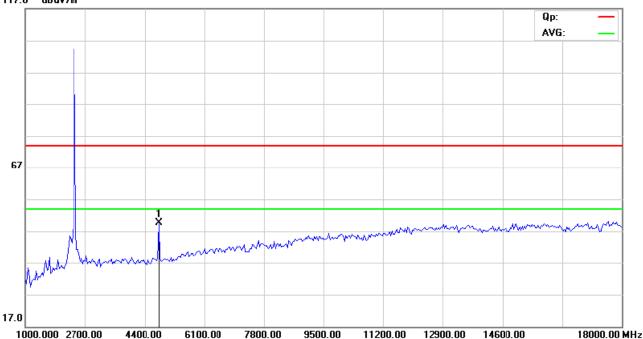
Please refer to the following test plots for details:

# CH01 for 11b at 1Mbps: Horizontal



# CH01 for 11b at 1Mbps: Vertical

### dBuV/m 117.0



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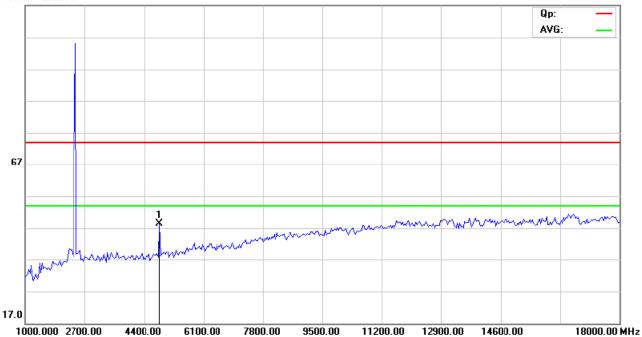
Report No.: FCC1706169-01

Date: 2017-07-10

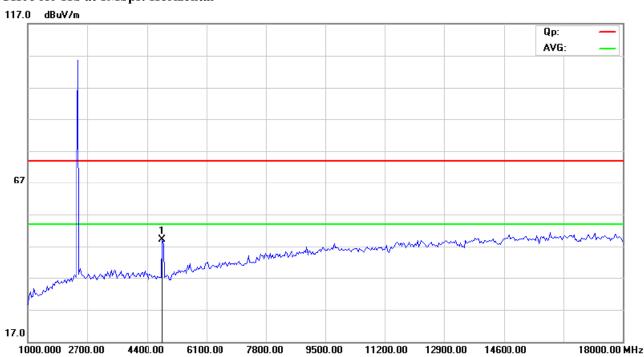


### CH06 for 11b at 1Mbps: Vertical





### CH06 for 11b at 1Mbps: Horizontal



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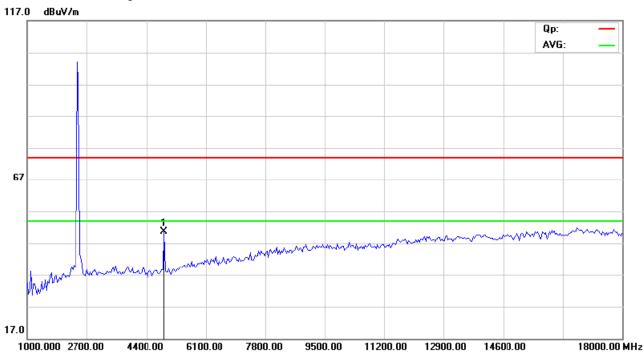
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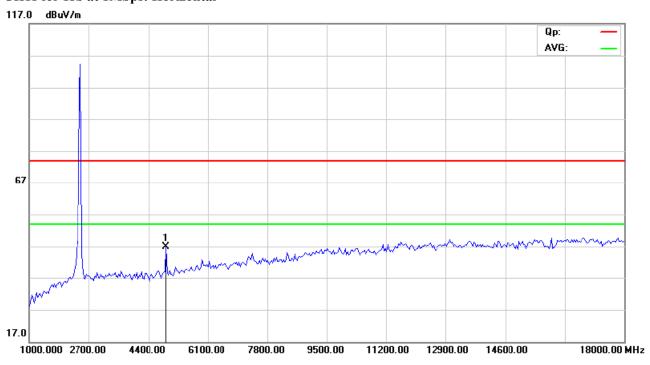
Date: 2017-07-10



### CH11 for 11b at 1Mbps: Vertical



### CH11 for 11b at 1Mbps: Horizontal



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

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Date: 2017-07-10



### Operation Mode: Transmitting under CH01 for 11n HT20 at msc0

	8		
Frequency (MHz)	Level@3m (dB $\mu$ V/m)	Antenna Polarity	Limit@3m (dB µ V/m)
4824.00	49.35 (PK)	Н	74(Peak)/ 54(AV)
4824.00	50.59 (PK)	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		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 msc0

### Operation Mode: Transmitting under CH06 for 11n HT20 at msc0

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB µ V/m)
4874.00	48.04 (PK)	Н	74(Peak)/ 54(AV)
4874.00	50.38 (PK)	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		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 msc0

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Date: 2017-07-10



### Operation Mode: Transmitting under CH11 for 11n HT20 at msc0

<u> </u>	9		
Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB \( \mu \text{V/m} \)
4924	48.69 (PK)	Н	74(Peak)/ 54(AV)
4924	49.64 (PK)	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(Peak)/ 54(AV)
22158		H/V	74(Peak)/ 54(AV)
24620		H/V	74(Peak)/ 54(AV)

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

<sup>2.</sup> Remark "---" means that the emissions level is too low to be measured

<sup>3.</sup> For 802.11n (HT20) mode msc0

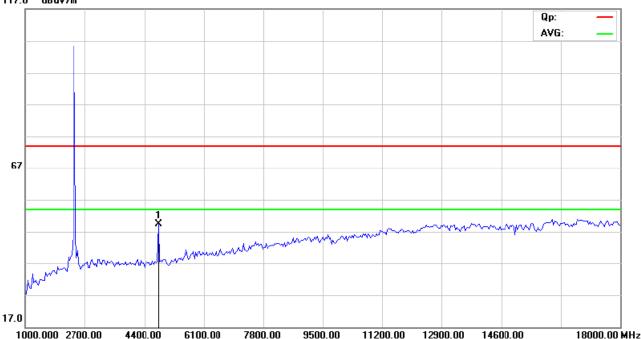
Date: 2017-07-10



Please refer to the following test plots for details:

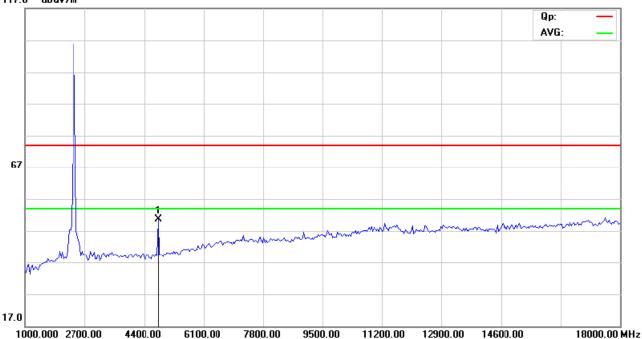
# CH01 for 11n HT20 at msc0: Horizontal

### 117.0 dBuV/m



### CH01 for 11n HT20 at msc0: Vertical





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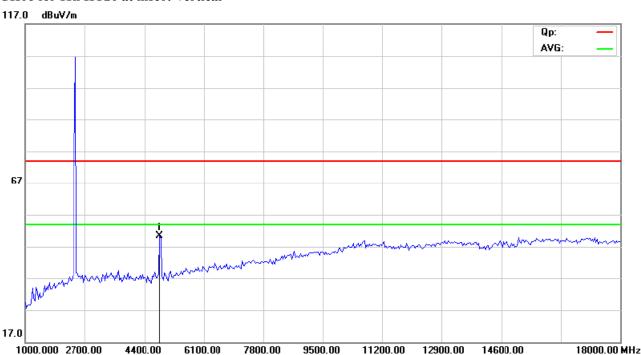
Page 31 of 122

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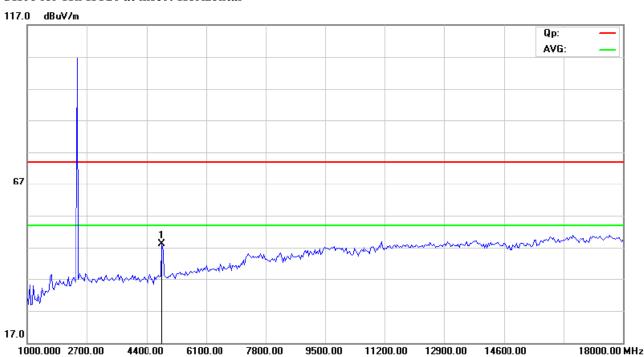
Date: 2017-07-10



### CH06 for 11n HT20 at msc0: Vertical



### CH06 for 11n HT20 at msc0: Horizontal



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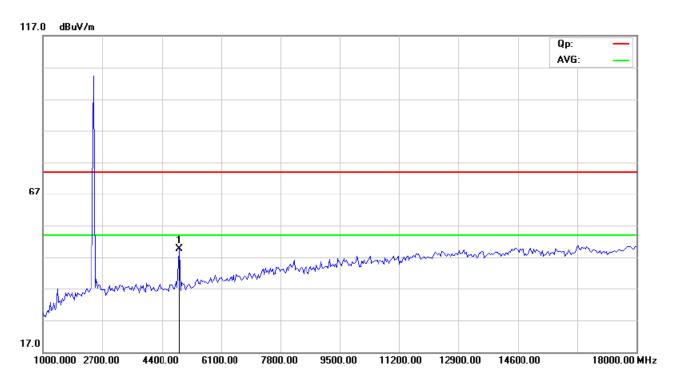
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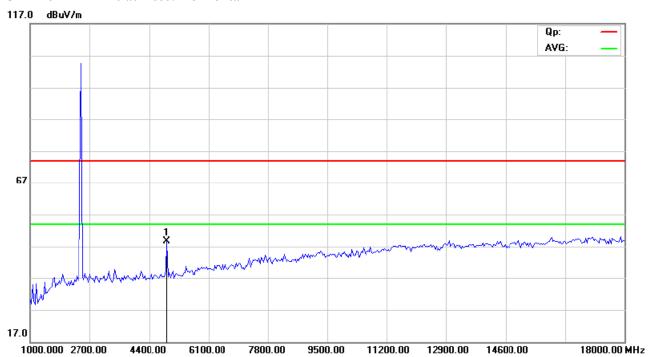
Date: 2017-07-10



### CH11 for 11n HT20 at msc0: Vertical



### CH11 for 11n HT20 at msc0: Horizontal



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

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### Operation Mode: Transmitting under CH03 for 11n HT40 at msc0

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB µ V/m)
4844.00	48.01 (PK)	Н	74(Peak)/ 54(AV)
4844.00	49.27 (PK)	V	74(Peak)/ 54(AV)
7266.00	1	H/V	74(Peak)/ 54(AV)
9688.00	1	H/V	74(Peak)/ 54(AV)
12110		H/V	74(Peak)/ 54(AV)
14532		H/V	74(Peak)/ 54(AV)
16954		H/V	74(Peak)/ 54(AV)
19376		H/V	74(Peak)/ 54(AV)
21798	-	H/V	74(Peak)/ 54(AV)
24220		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 (HT40) mode msc0

### Operation Mode: Transmitting under CH06 for 11n HT40 at msc0

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB \( \mu \)V/m)
4874.00	50.18 (PK)	Н	74(Peak)/ 54(AV)
4874.00	50.03 (PK)	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		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 (HT40) mode msc0

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Date: 2017-07-10



### Operation Mode: Transmitting under CH09 for 11n HT40 at msc0

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \( \mu \)V/m)
4904	50.23 (PK)	Н	74(Peak)/ 54(AV)
4904	49.08 (PK)	V	74(Peak)/ 54(AV)
7356		H/V	74(Peak)/ 54(AV)
9808		H/V	74(Peak)/ 54(AV)
12260		H/V	74(Peak)/ 54(AV)
14712		H/V	74(Peak)/ 54(AV)
17164		H/V	74(Peak)/ 54(AV)
19616		H/V	74(Peak)/ 54(AV)
22068		H/V	74(Peak)/ 54(AV)
24520		H/V	74(Peak)/ 54(AV)

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

<sup>2.</sup> Remark "---" means that the emissions level is too low to be measured

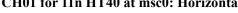
<sup>3.</sup> For 802.11n (HT40) mode msc0

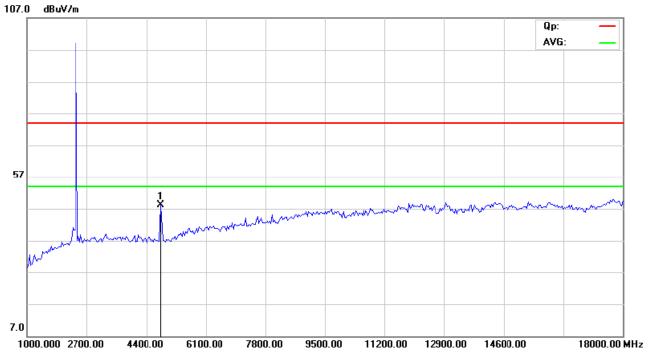
Date: 2017-07-10



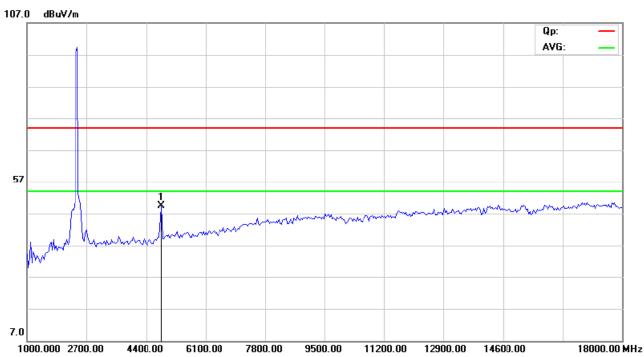
Please refer to the following test plots for details:

# CH01 for 11n HT40 at msc0: Horizontal





### CH01 for 11n HT40 at msc0: Vertical



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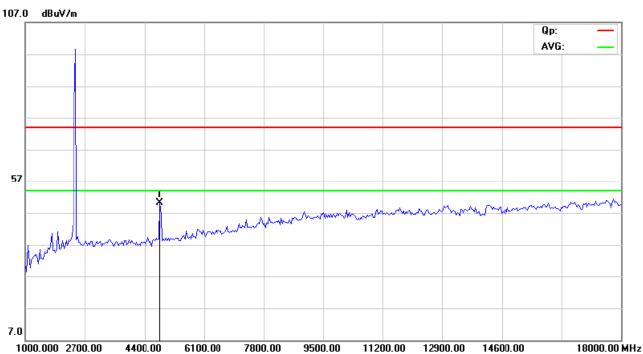
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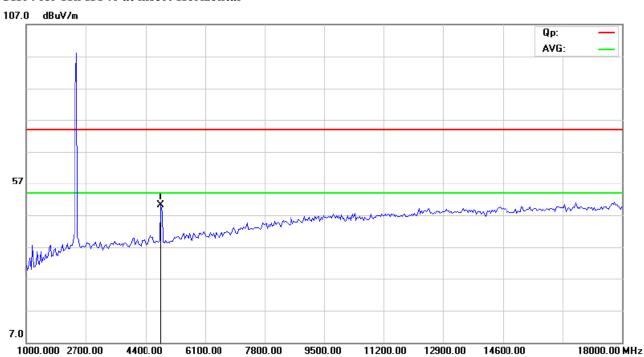
Date: 2017-07-10



### CH04 for 11n HT40 at msc0: Vertical



### CH04 for 11n HT40 at msc0: Horizontal



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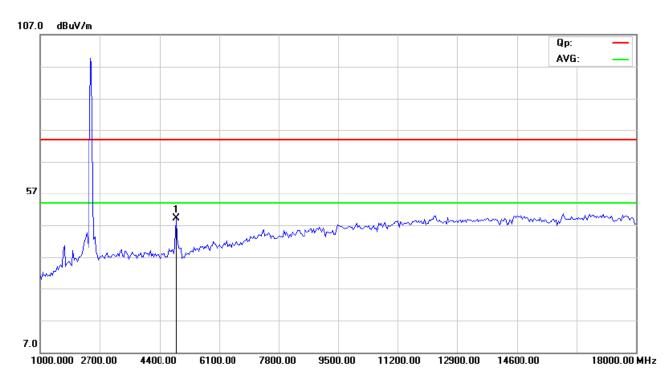
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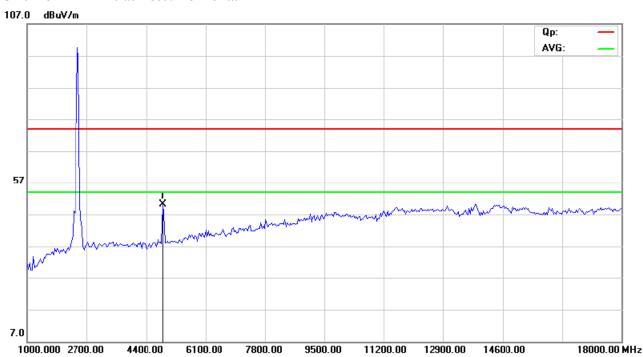
Date: 2017-07-10



### CH07 for 11n HT40 at msc0: Vertical



### CH07 for 11n HT40 at msc0: Horizontal



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

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adopt any other remedies which may be appropriate.

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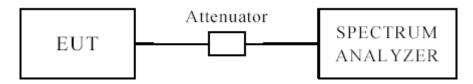
Report No.: FCC1706169-01

Date: 2017-07-10



### 7.0 6dB & 99%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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Date: 2017-07-10



## 6dB Occupied Bandwidth

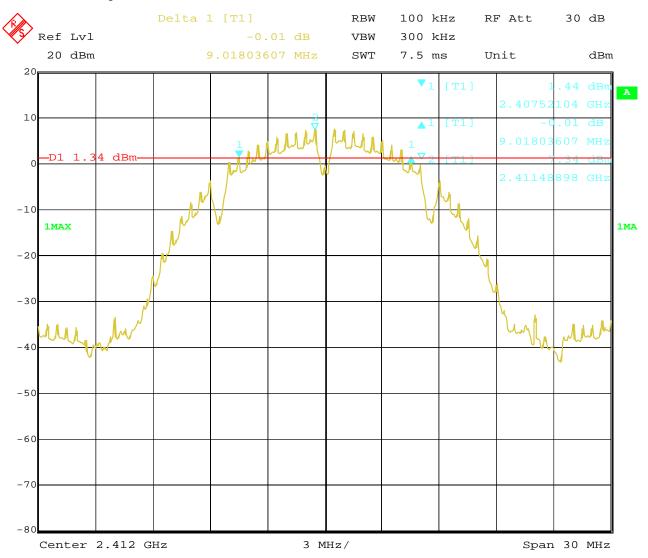
EUT		Ta	Model		P7100					
Mode		802.11b			Input Voltage		DC3.7V			
Temperat	ure	24	4 deg. C,		Humidity	,	56% RH			
Channel	Channel Frequency (MHz)		Data Transfer Rate (Mbps)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)		Pass/ Fail		
1		2412	1	9.02		0.5		Pass		
6		2437	1	8.54			0.5	Pass		
11		2462	1	9.02			0.5	Pass		
1		2412	11	8.54			0.5	Pass		
6		2437	11	8.54		8.54			0.5	Pass
11		2462	11	8.54			0.5	Pass		

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## 1. 802.11b at 1Mbps of CH01

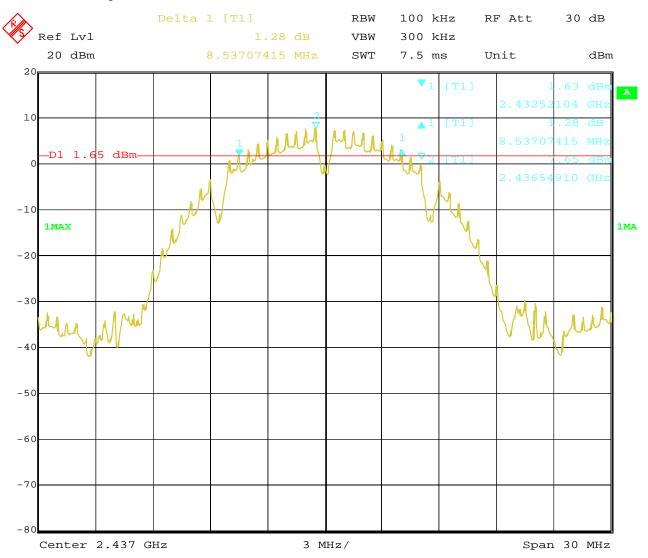


1.JUL.2017 Date: 11:55:10 Report No.: FCC1706169-01 Page 41 of 122

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## 2. 802.11b at 1Mbps of CH06

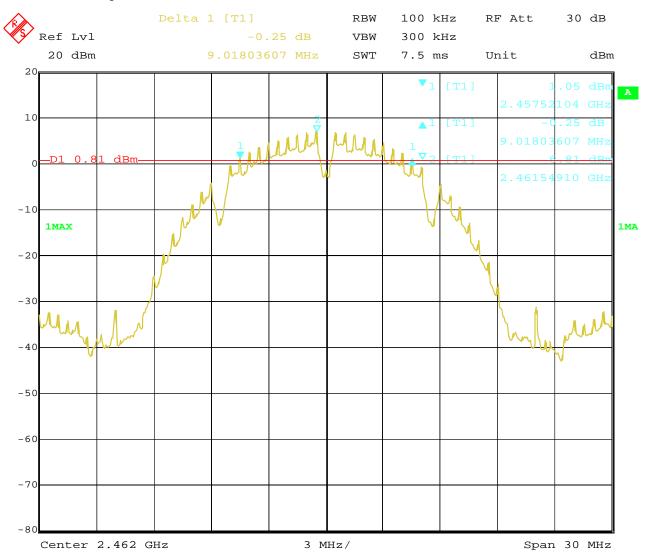


1.JUL.2017 Date: 12:27:22 Report No.: FCC1706169-01 Page 42 of 122

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## 3. 802.11b at 1Mbps of CH11

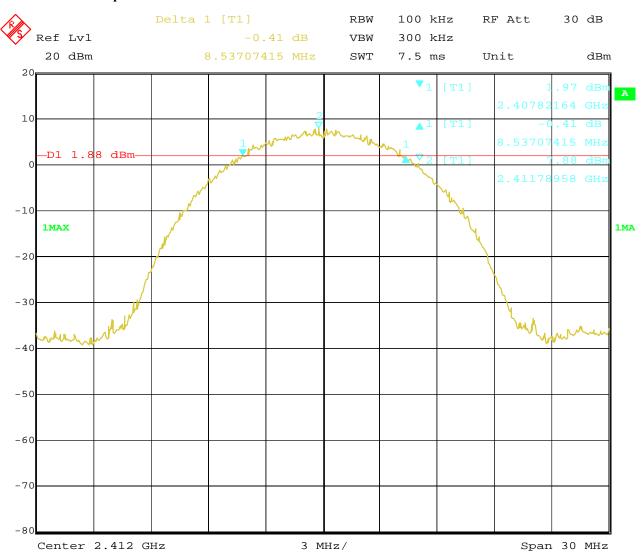


1.JUL.2017 Date: 12:40:51 Report No.: FCC1706169-01 Page 43 of 122

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# 4. 802.11b at 11Mbps of CH01

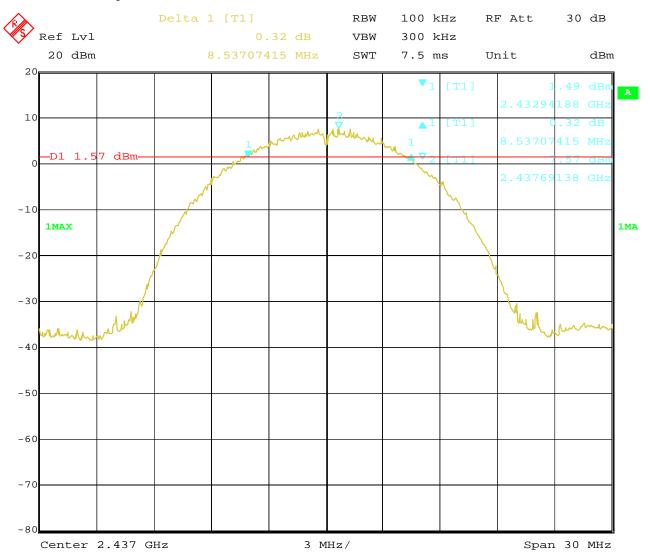


1.JUL.2017 Date: 12:14:17 Report No.: FCC1706169-01 Page 44 of 122

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## 5. 802.11b at 11Mbps of CH06

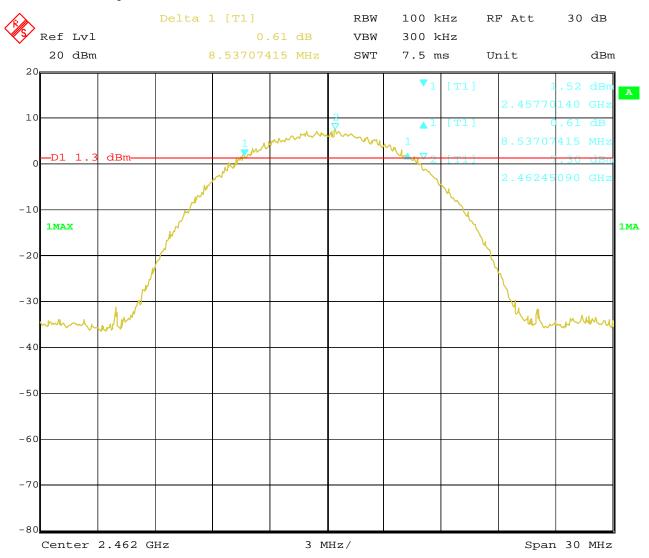


1.JUL.2017 Date: 12:17:39 Report No.: FCC1706169-01 Page 45 of 122

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## 6. 802.11b at 11Mbps of CH11



1.JUL.2017 Date: 12:46:56

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# 6dB Occupied Bandwidth

EUT		Tablet PC			Model		P7100	
Mode		802.11g			Input Voltage		DC3.7V	
Temperat	ure	24 deg. C,			Humidity		5	6% RH
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		ndwidth Hz)		Minimum Limit (MHz)  Pass/ Fa	
1		2412	6	16	.41		0.5	Pass
6		2437	6	16.41			0.5	Pass
11		2462	6	16	16.41		0.5	Pass

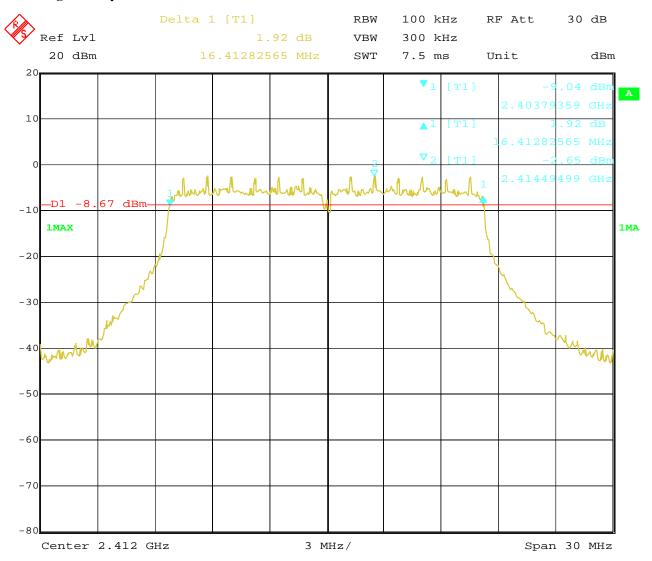
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### **Test Plots:**

## 1. 802.11g at 6Mbps of CH01

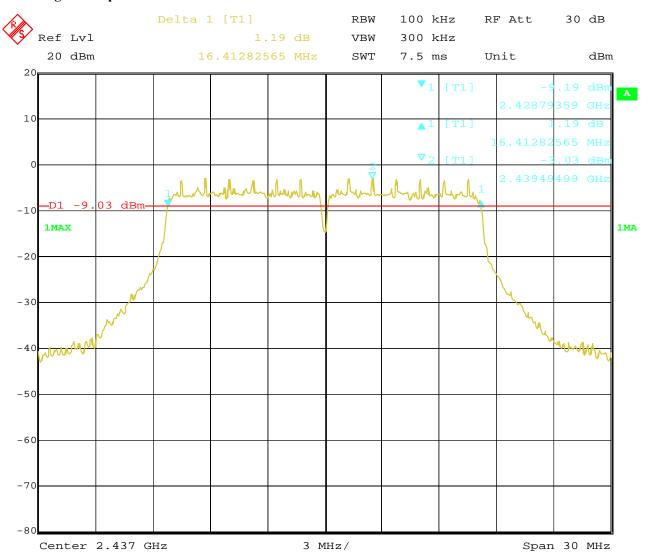


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# 2. 802.11g at 6Mbps of CH06

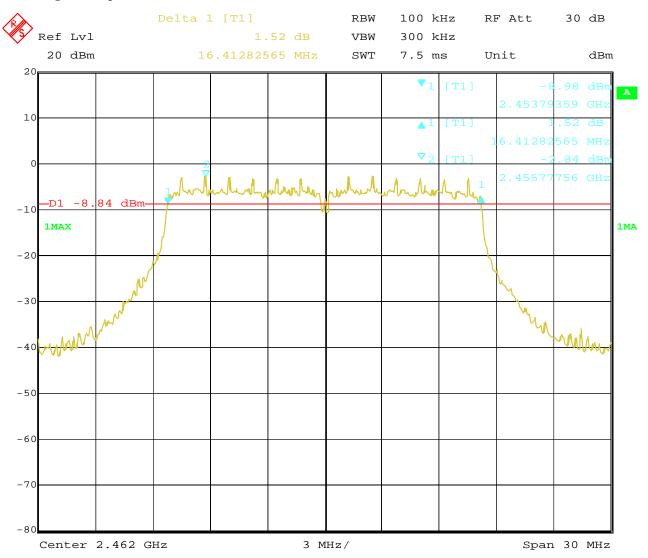


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## 3. 802.11g at 6Mbps of CH11



1.JUL.2017 Date: 12:43:03

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# 6dB Occupied Bandwidth

EUT		Tablet PC			Model		P7100		
Mode		802	.11n HT20		Input Vol	out Voltage DC3		3.7V	
Temperat	ure	24	4 deg. C,		Humidity		56% RH		
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)	-	ndwidth Hz)		num Limit MHz)	Pass/ Fail	
1		2412	mcs0	17	.56	0.5		Pass	
6		2437	mcs0	17	17.56		0.5	Pass	
11		2462	mcs0	17	.56		0.5	Pass	

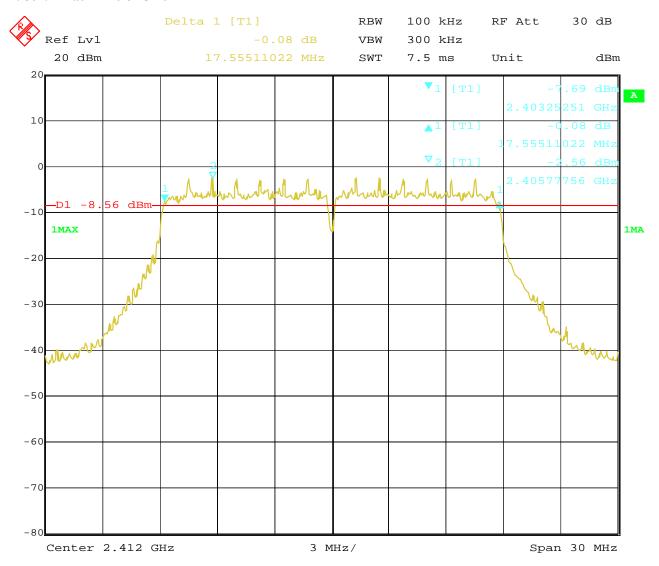
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#### **Test Plots:**

## 1. 802.11n at HT20 of CH01

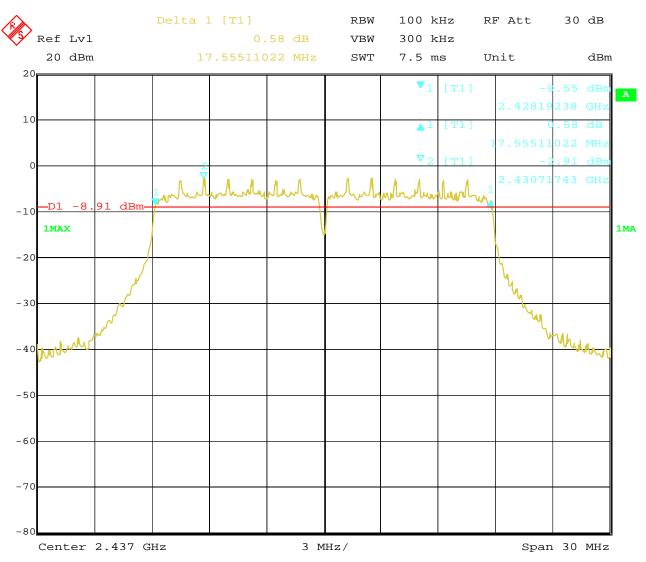


Date: 1.JUL.2017 12:56:48 Report No.: FCC1706169-01 Page 52 of 122

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### 2. 802.11n at HT20 of CH06

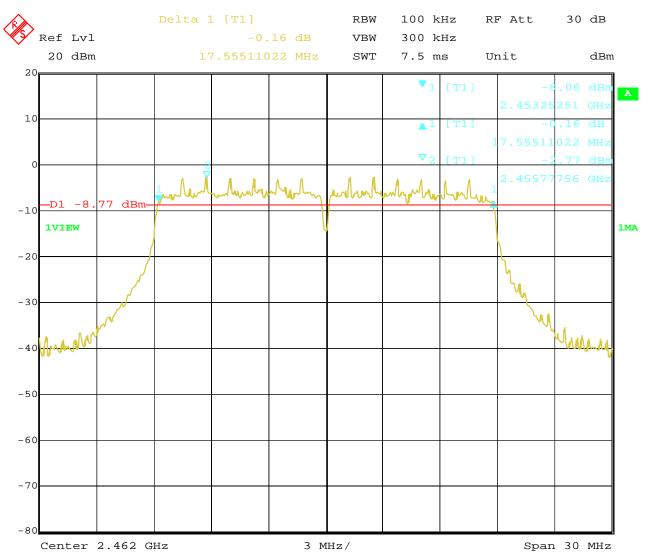


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### 3. 802.11n at HT20 of CH11



1.JUL.2017 Date: 12:52:16

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# 6dB Occupied Bandwidth

EUT		Tablet PC			Model		P7100	
Mode		802.11n HT40 Input Voltage DC3		3.7V				
Temperat	ure	24	4 deg. C,		Humidity		56% RH	
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)	-	ndwidth Hz)		num Limit MHz)	Pass/ Fail
3		2422	mcs0	35	.45	0.5		Pass
6		2437	mcs0	35	35.45		0.5	Pass
9		2452	mcs0	35	.45		0.5	Pass

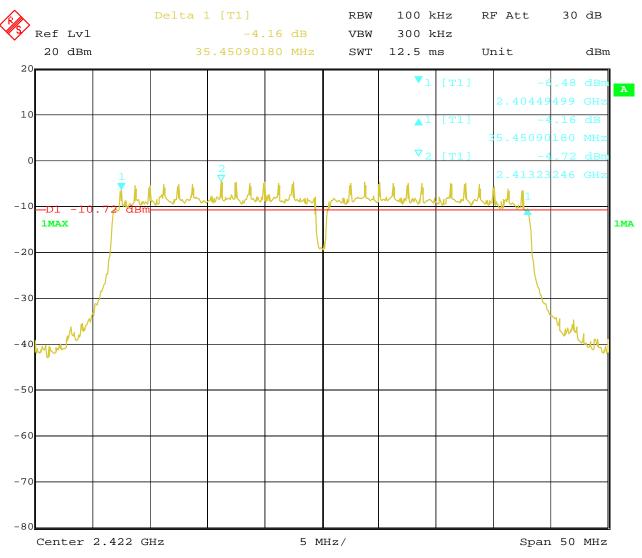
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#### **Test Plots:**

## 1. 802.11n at HT40 of CH03

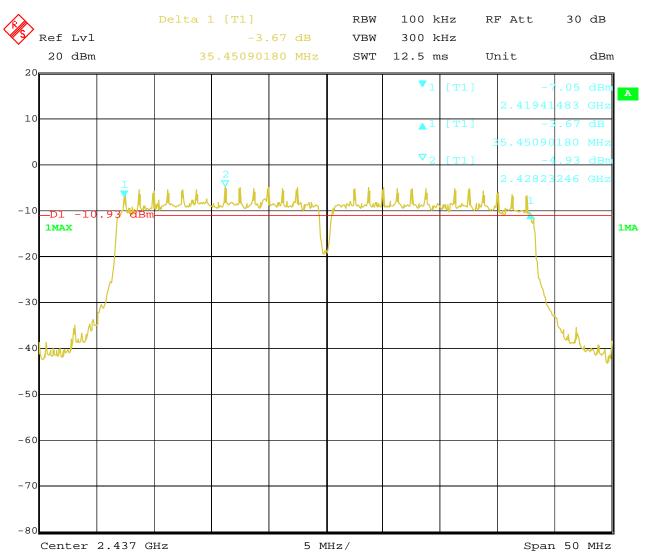


Date: 1.JUL.2017 14:37:25 Report No.: FCC1706169-01 Page 56 of 122

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### 2. 802.11n at HT40 of CH06

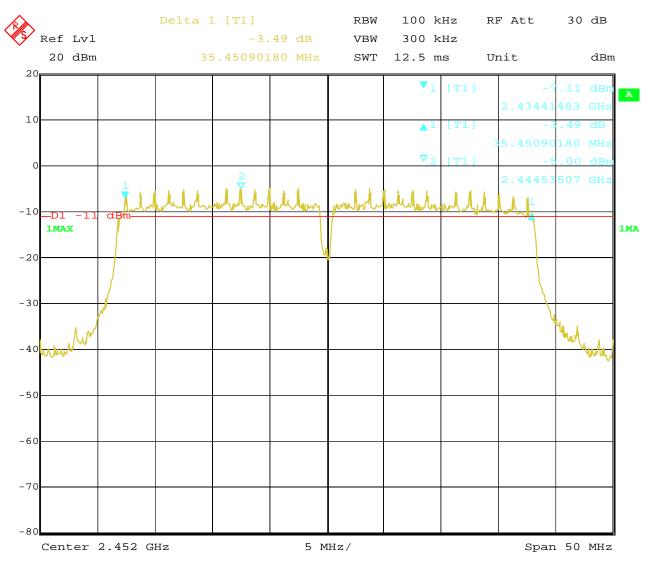


1.JUL.2017 Date: 14:40:36 Report No.: FCC1706169-01 Page 57 of 122

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### 3. 802.11n at HT40 of CH09



1.JUL.2017 Date: 15:04:22

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## 99% Occupied Bandwidth

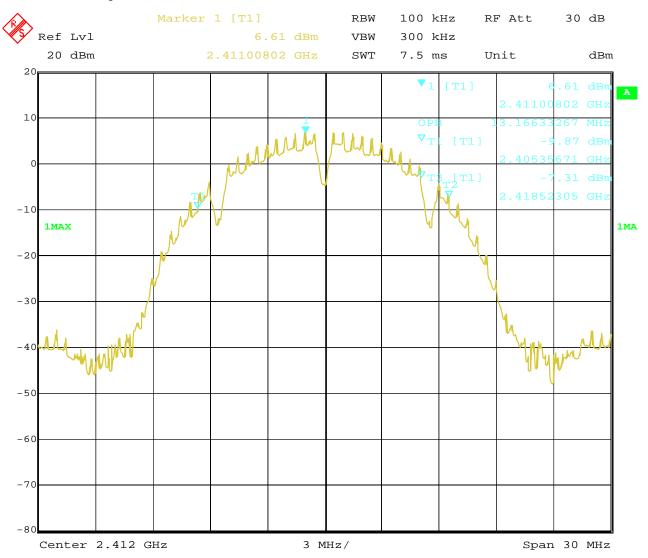
EUT		Tablet PC			Model		P7100	
Mode		8	Input Voltage		DC3.7V			
Temperat	ure	24		Humidity		56% RH		
Channel		1 7		99% Bandwidth (MHz)			mum Limit MHz)	Pass/ Fail
1		2412	1	13.17				Pass
6		2437	1	13.11				Pass
11		2462	1	13.11				Pass
1		2412	11	13.23				Pass
6		2437	11	13.29				Pass
11		2462	11	13	.29			Pass

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## 1. 802.11b at 1Mbps of CH01

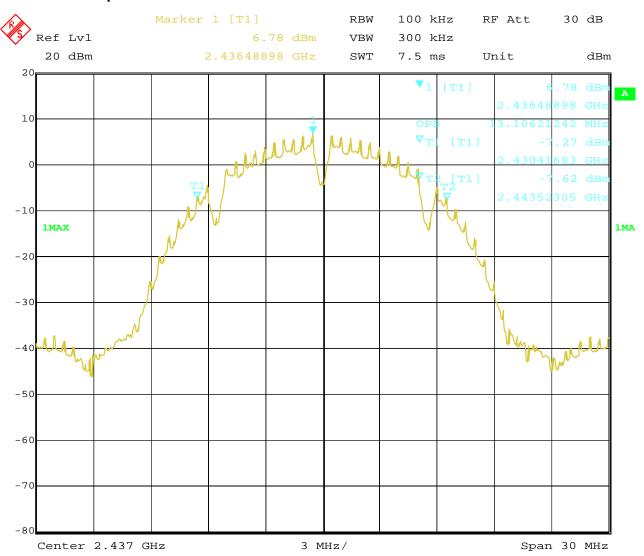


4.JUL.2017 Date: 18:42:39 Report No.: FCC1706169-01 Page 60 of 122

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# 2. 802.11b at 1Mbps of CH06

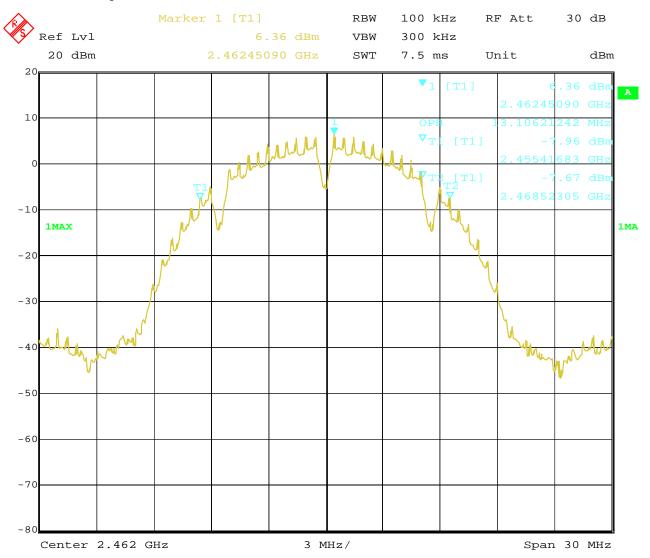


5.JUL.2017 Date: 10:44:53 Report No.: FCC1706169-01 Page 61 of 122

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## 3. 802.11b at 1Mbps of CH11

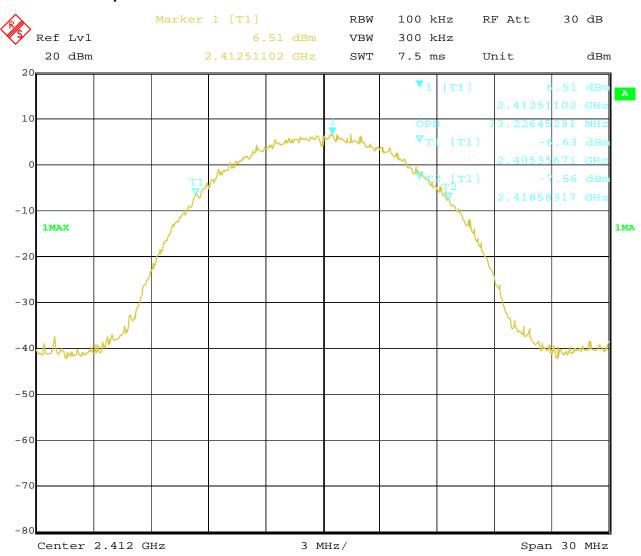


5.JUL.2017 Date: 10:48:47 Report No.: FCC1706169-01 Page 62 of 122

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# 4. 802.11b at 11Mbps of CH01

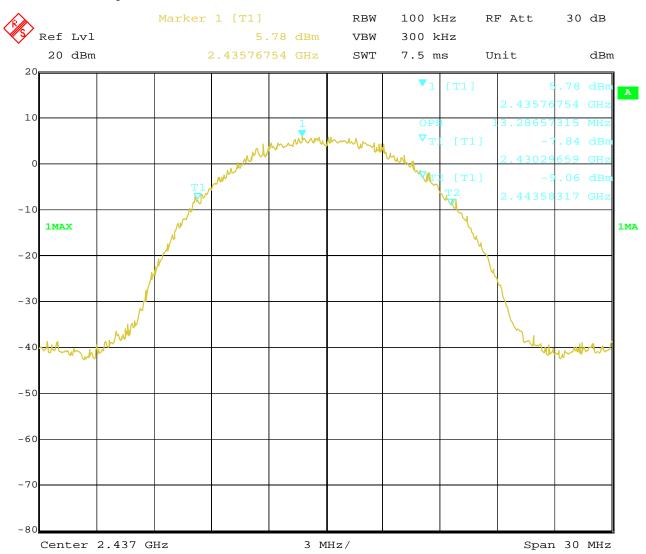


4.JUL.2017 Date: 18:54:50 Report No.: FCC1706169-01 Page 63 of 122

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## 5. 802.11b at 11Mbps of CH06

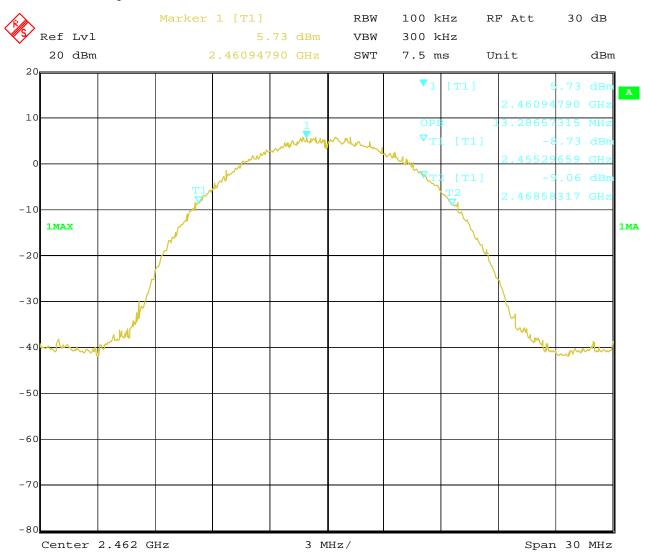


4.JUL.2017 Date: 19:01:10 Report No.: FCC1706169-01 Page 64 of 122

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## 6. 802.11b at 11Mbps of CH11



5.JUL.2017 11:00:55 Date:

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## 99% Occupied Bandwidth

EUT		Tablet PC			Model		P7100	
Mode		8		Input Voltage		DC3.7V		
Temperature		24		Humidity		56% RH		
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		ndwidth Hz)		num Limit MHz)	Pass/ Fail
1		2412	6	16	.47			Pass
6		2437	6	16	5.53			Pass
11		2462	6	16	5.47			Pass

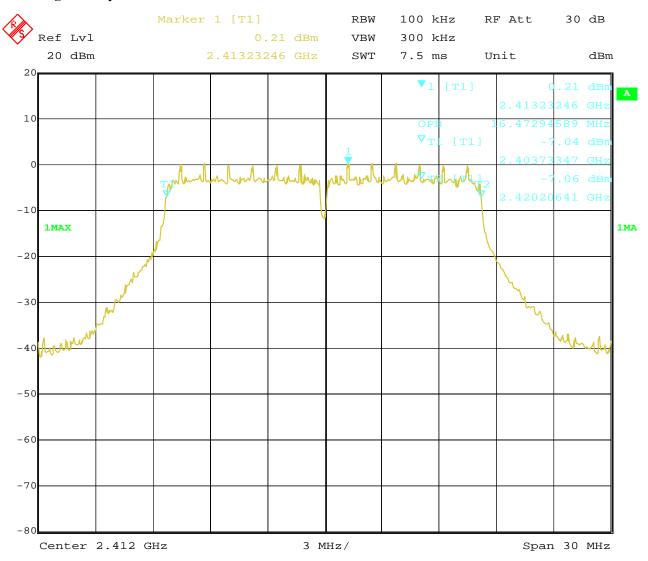
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### **Test Plots:**

## 1. 802.11g at 6Mbps of CH01

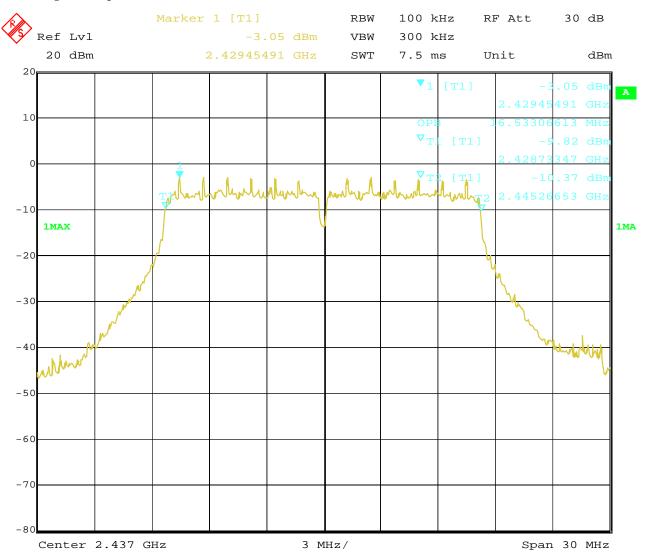


Date: 4.JUL.2017 18:52:07 Report No.: FCC1706169-01 Page 67 of 122

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## 2. 802.11g at 6Mbps of CH06

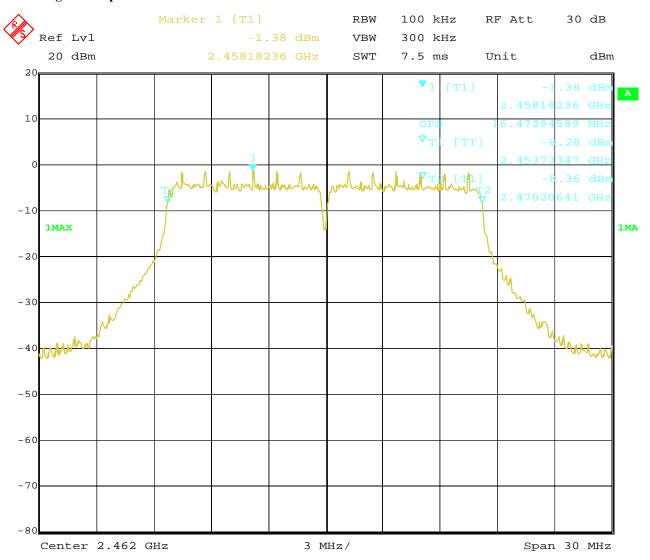


5.JUL.2017 Date: 10:34:40 Report No.: FCC1706169-01 Page 68 of 122

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# 3. 802.11g at 6Mbps of CH11



5.JUL.2017 Date: 10:55:15

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## 99% Occupied Bandwidth

EUT		Tablet PC			Model		P7100	
Mode		802		Input Voltage		DC3.7V		
Temperat	ure	24	4 deg. C,	eg. C, Humidity 56% RH		% RH		
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)	,,	ndwidth Hz)	Minimum Limit (MHz)		Pass/ Fail
1		2412	mcs0	17	.68			Pass
6		2437	mcs0	17	17.68			Pass
11		2462	mcs0	17	7.68			Pass

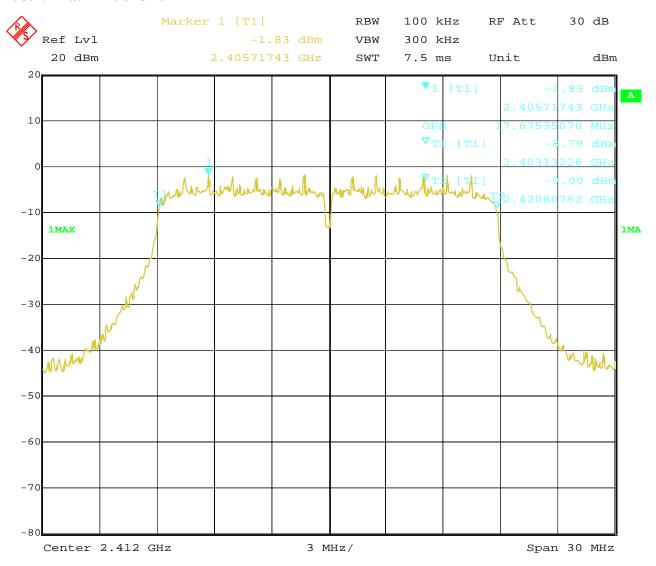
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#### **Test Plots:**

## 1. 802.11n at HT20 of CH01

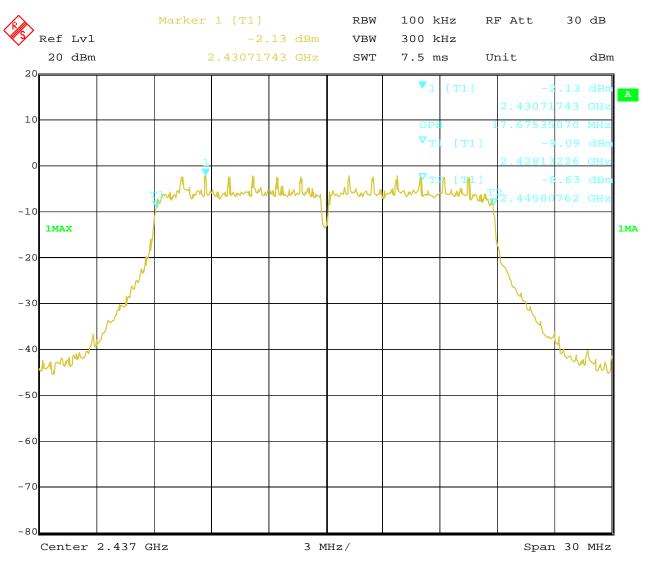


Date: 5.JUL.2017 11:20:58 Report No.: FCC1706169-01 Page 71 of 122

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### 2. 802.11n at HT20 of CH06

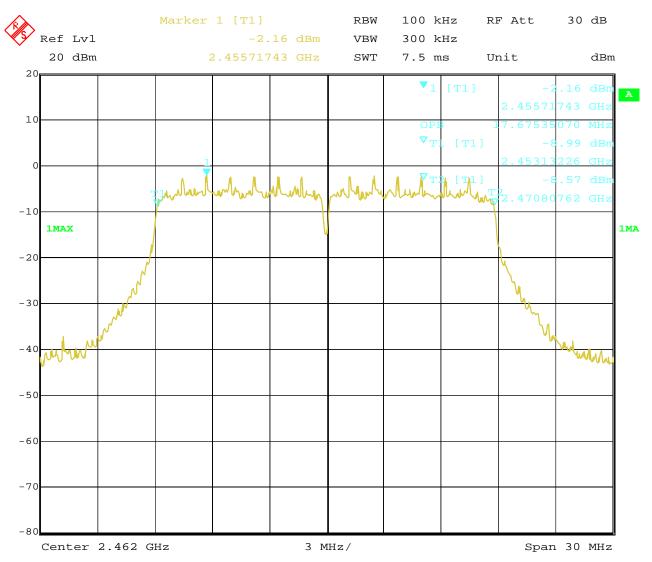


5.JUL.2017 Date: 11:17:20 Report No.: FCC1706169-01 Page 72 of 122

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### 3. 802.11n at HT20 of CH11



5.JUL.2017 Date: 11:15:08

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## 99% Occupied Bandwidth

EUT		Т	ablet PC		Model		P7	100
Mode		802	.11n HT40		Input Vol	tage	DC	3.7V
Temperat	ure	24	4 deg. C,		Humidity		56% RH	
Channel		el Frequency (MHz)	Data Transfer Rate (Mbps)		ndwidth Hz)	Minimum Limit (MHz)		Pass/ Fail
3		2422	mcs0	35	.97			Pass
6		2437	mcs0	36	.07			Pass
9		2452	mcs0	35	.87			Pass

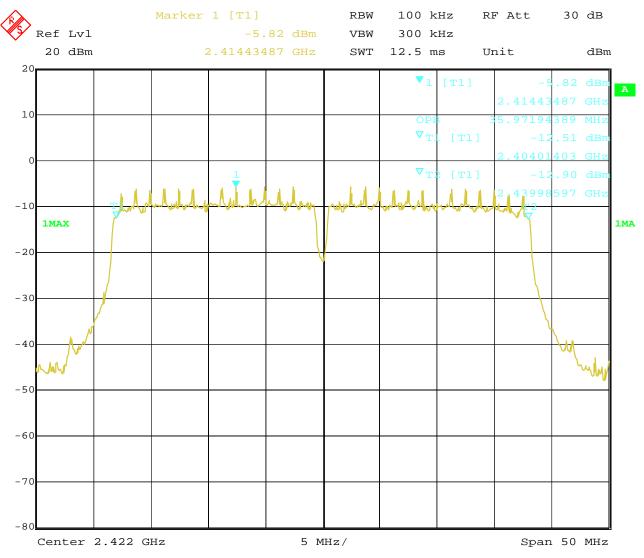
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### **Test Plots:**

## 1. 802.11n at HT40 of CH03

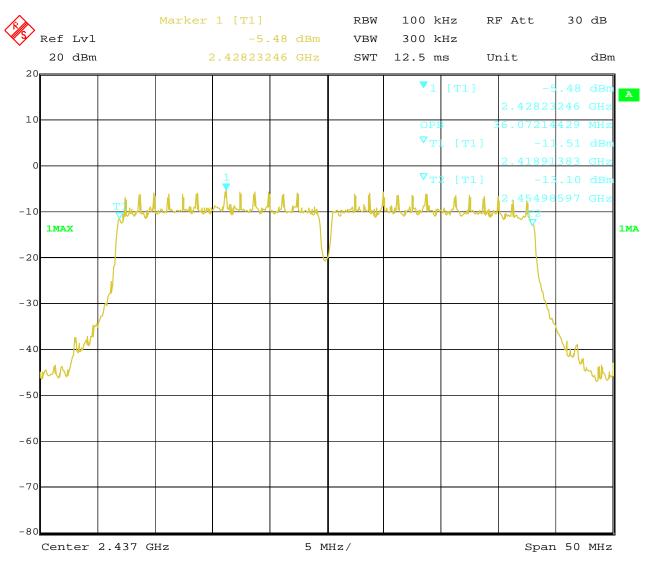


Date: 5.JUL.2017 11:24:13 Report No.: FCC1706169-01 Page 75 of 122

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## 2. 802.11n at HT40 of CH06

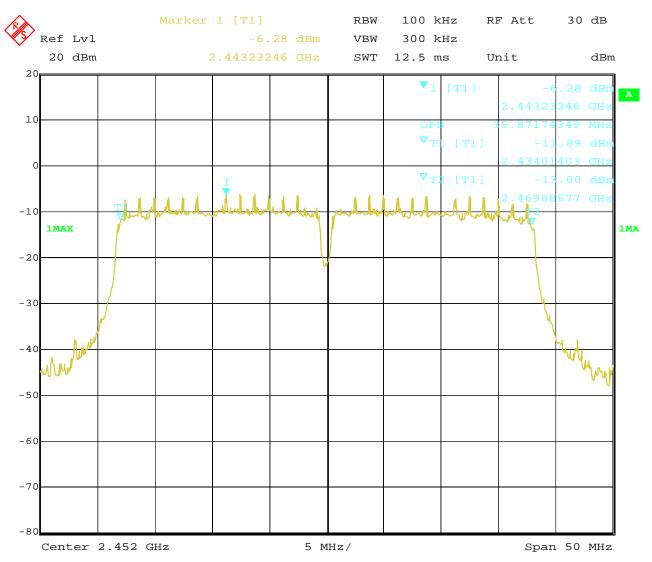


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## 3. 802.11n at HT40 of CH09



5.JUL.2017 Date: 11:35:10 Report No.: FCC1706169-01

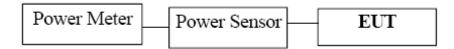
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## 8. Maximum Output Power

## 8.1 Test Setup



## 8.2 Limits of Maximum Output Power

The Maximum 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: Average power was measured

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### **8.4Test Results**

EUT		Tablet	t PC Mo		odel		P7100
Mode	Mode 802.1		1b Inp		Input Voltage		DC3.7V
Temperat	ure	24 deg	g. C, Hum		nidity	y 56% RH	
Channel	Cha	annel Frequency (MHz)	Max. Power (dBm)	Max. Power Output (dBm)		Limit m)	Pass/ Fail
		, ,	Average		, ,		
1		2412	15.59	15.59		)	Pass
6		2437	15.16		30		Pass
11		2462	15.07		30	)	Pass

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

2. The result basic equation calculation as follow:

Max. Power Output = Power Reading + Cable loss + Attenuator

3. The worse case was recorded

EUT	EUT Tablet		PC Mo		odel		P7100
Mode	Mode 802.1		1g	Input Voltage			DC3.7V
Temperat	ure	24 deg	24 deg. C, Humidity		nidity	56% RH	
Channel			Max. Power (dBm)	Output	Power Limit (dBm)		Pass/ Fail
		(MHz)	Average				
1		2412	9.38		30		Pass
6		2437	9.18		30	)	Pass
11		2462	8.72		30	)	Pass

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

2. The result basic equation calculation as follow:

Max. Power Output = Power Reading + Cable loss + Attenuator

3. The worse case was recorded

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EUT	EUT Tablet		PC Mo		odel		P7100
Mode	Mode 802.11n (		(HT20) Input		ıt Voltage		DC3.7V
Temperati	ure	24 deg	g. C,	Hur	Humidity		56% RH
Channel	nel Channel Frequency (MHz)		Max. Power Output (dBm)		Power (dB		Pass/ Fail
		(WILLE)	Average	:	(dBiii)		
1		2412	8.73		30		Pass
6		2437	8.86		30		Pass
11		2462	8.34			)	Pass

Note: 1. At finial test to get the worst-case emission at msc0 of 11n HT20 for CH01, CH06 and CH11

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

3. The worse case was recorded

EUT	EUT Tablet		PC Mo		odel		P7100	
Mode	Mode 802.11n (		(HT40) Input		ut Voltage		DC3.7V	
Temperati	ure	24 deg	g. C,	Hur	Humidity		56% RH	
Channel	nnel Channel Frequency (MHz)		Max. Power (dBm)	Power			Pass/ Fail	
		(WITIZ)	Average		(dBm)			
1		2422	8.78		30		Pass	
4		2437	8.71		30		Pass	
7		2452	8.41		30		Pass	

Note: 1. At finial test to get the worst-case emission at msc0 of 11n HT40 for CH01, CH04 and CH07

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

3. The worse case was recorded

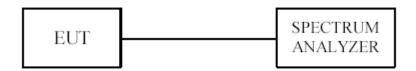
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## 9. Power Spectral Density Measurement

# 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  $\leq 8$  dBm.

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## 9.4Test Result

EUT	EUT Tablet		t PC Mo		odel		P7100
Mode	Mode 802.11b 11Mbps Inpu		Input	Input Voltage		DC3.7V	
Temperat	ure	24 deg	g. C,	Humidity			56% RH
Channel	Cha	annel Frequency (MHz)			Maximum (dB:		
			11Mbps	S			
1		2412 -8.88		8			Pass
6		2437 -9.16		8			Pass
11		2462	-9.82	8			Pass

		I					
EUT	EUT Tablet		: PC Mo		odel		P7100
Mode		802.11b	1Mbps	Input Voltage			DC3.7V
Temperat	ure	24 deg	g. C,	Hur	Humidity		56% RH
Channel	Ch	annel Frequency	requency Final RF Power		Maximum Limit		Pass/ Fail
Chamilei		(MHz)	Level in (dBm)		(dBm)		
			1Mbps	3			
1		2412 -7.30			8		Pass
6		2437	-7.31		8		Pass
11		2462	-8.23		8		Pass

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EUT	EUT Tablet		t PC Mo		odel		P7100	
Mode 802.11g 6		6Mbps	Input Voltage		DC3.7V			
Temperat	ure	24 deg	g. C,	Hur	midity		56% RH	
Channel			1 11101 111 1 0	Final RF Power Level in (dBm)		m Limit m)	Pass/ Fail	
		(11112)	6Mbps		(uD	···· <i>)</i>		
1	1 2412		-17.34		8		Pass	
6		2437 -17.58			8		Pass	
11		2462	-18.04		8		Pass	

EUT	EUT Tablet		t PC Mo		odel		P7100	
Mode	Mode 802.11n HT20		720 msc0	Input Voltage			DC3.7V	
Temperati	ure	24 deg	g. C,	Hur	ımidity		56% RH	
Channel	Channel Frequency		Final RF Power		Maximum Limit		Pass/ Fail	
Chamiei		(MHz)	Level (dBm)		(dBm)			
			HT20					
1	2412 -18.58		8			Pass		
6		2437	-18.84		8		Pass	
11		2462	-19.06		8		Pass	

EUT	EUT Tablet		t PC Mod		odel		P7100
Mode	Mode 802.11n HT		Г40 msc0	Input Voltage		DC3.7V	
Temperat	ure	24 deg	g. C,	Hur	midity 5		56% RH
Channel	Channel Frequency		Final RF Power		Maximum Limit		Pass/ Fail
		(MHz)	Level (dBm)		(dBm)		
			HT40				
1		2422 -20.77		8			Pass
4		2437	-20.89		8		Pass
7		2452	-21.25	8		Pass	

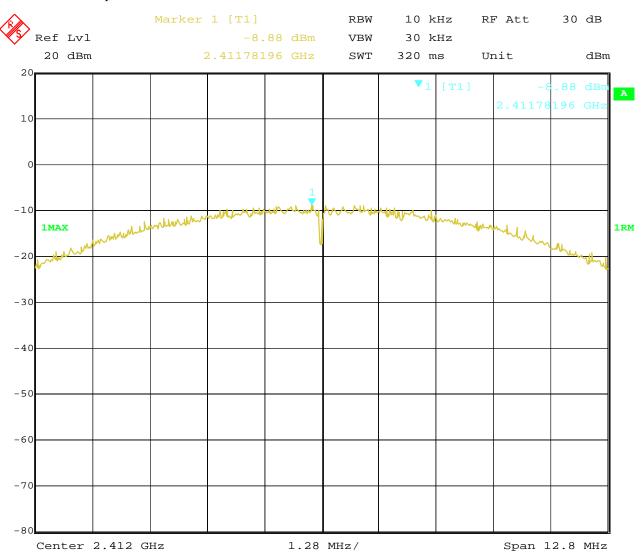
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## 9.5 Photo of Power Spectral Density Measurement

1.802.11b at 11Mbps of CH01

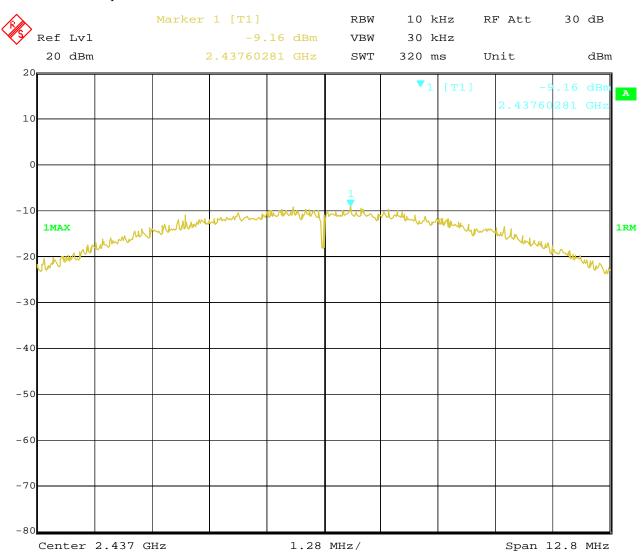


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# 2. 802.11b at 11Mbps at CH06



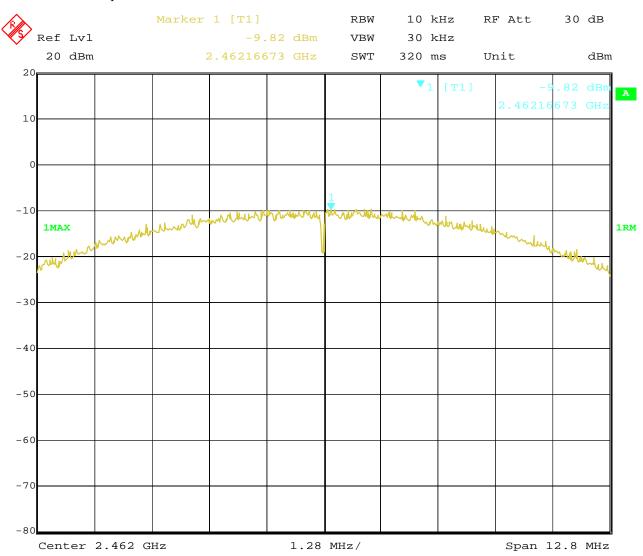
3.JUL.2017 19:00:12 Date:

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# 3. 802.11b at 11Mbps of CH11



3.JUL.2017 Date: 18:59:40

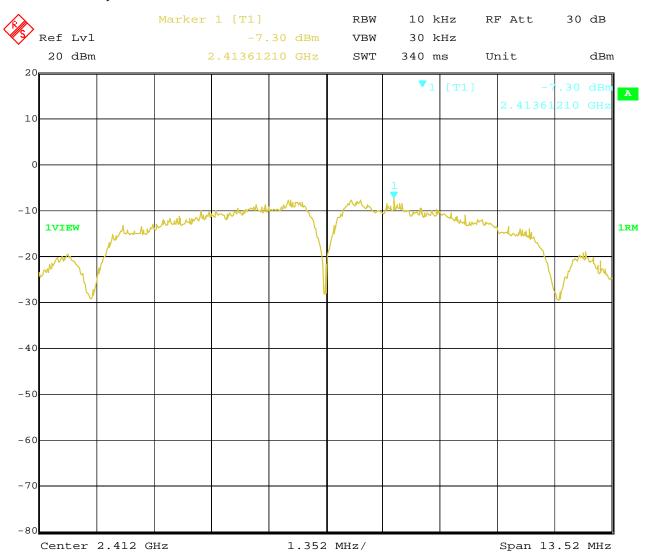
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## 4. 802.11b at 1Mbps of CH1



3.JUL.2017 18:50:42 Date:

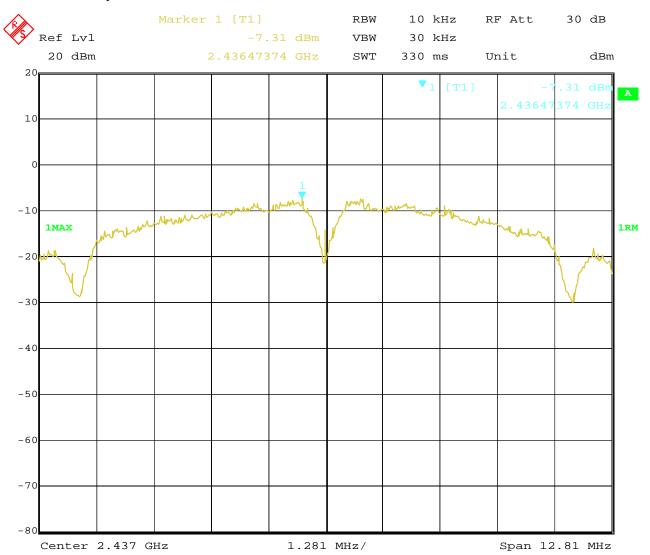
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## 5. 802.11b at 1Mbps of CH6



3.JUL.2017 Date: 18:54:13

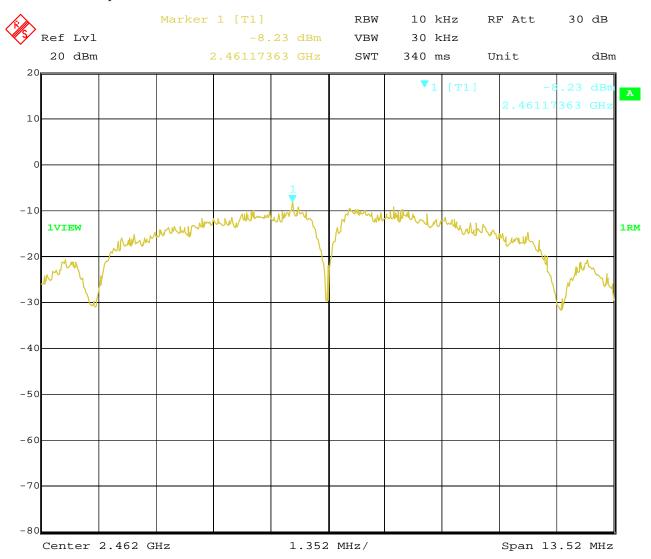
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## 6. 802.11b at 1Mbps of CH11



3.JUL.2017 Date: 18:48:51

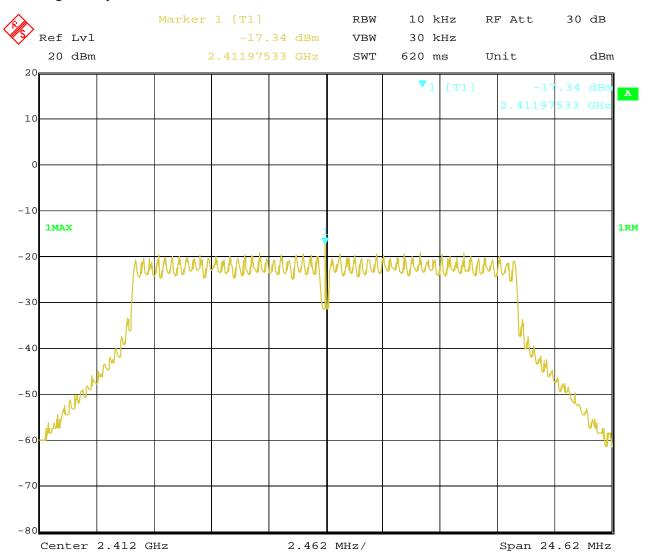
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# 7. 802.11g at 6Mbps of CH1

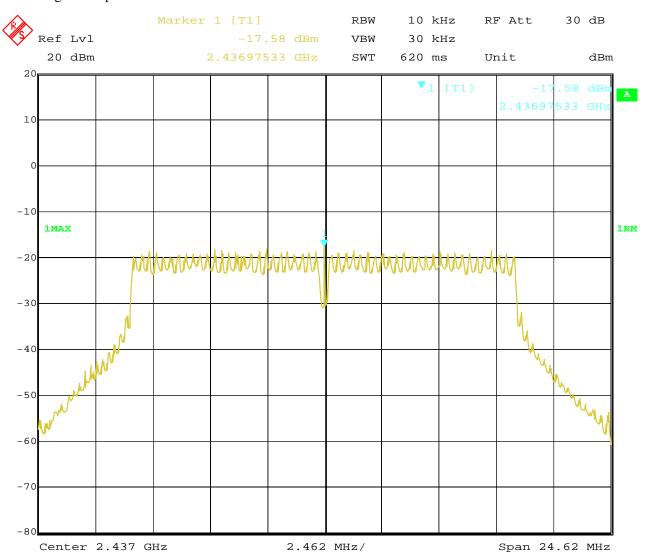


3.JUL.2017 Date: 18:56:36 Report No.: FCC1706169-01 Page 90 of 122

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# 8. 802.11g at 6Mbps of CH6

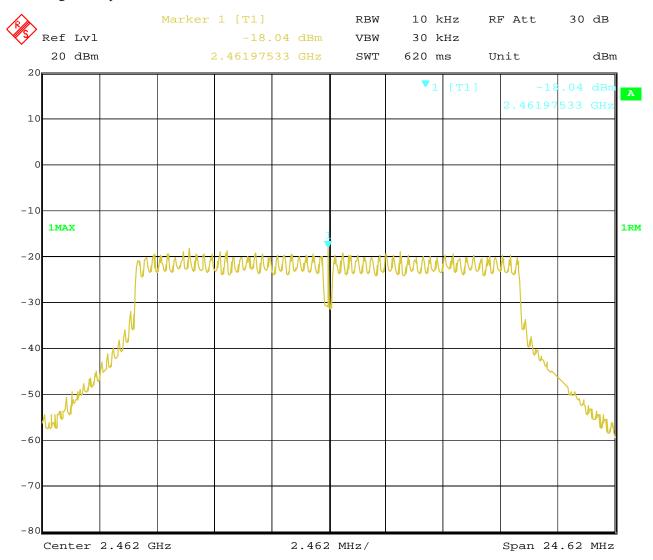


3.JUL.2017 Date: 18:55:56 Report No.: FCC1706169-01 Page 91 of 122

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# 9. 802.11g at 6Mbps of CH11

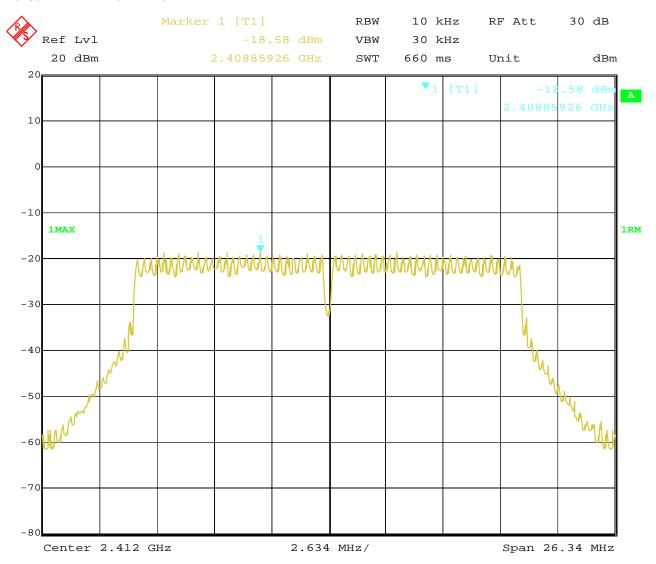


3.JUL.2017 Date: 18:58:32 Report No.: FCC1706169-01 Page 92 of 122

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### 10. 802.11n at HT20 of CH01

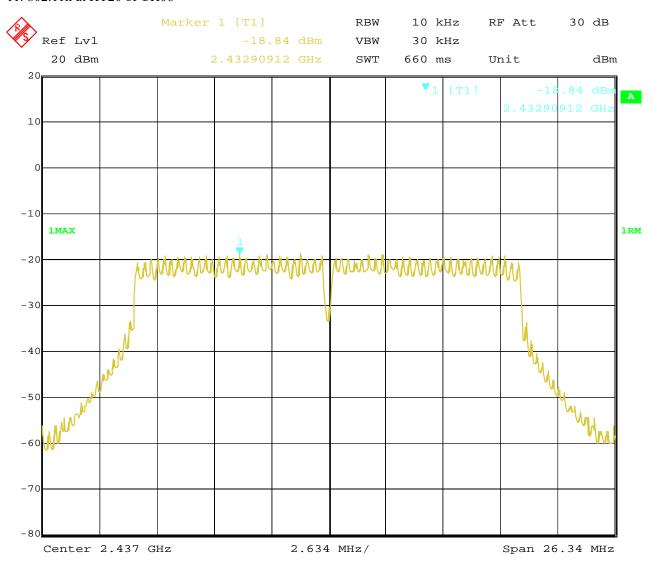


3.JUL.2017 Date: 18:42:01 Report No.: FCC1706169-01 Page 93 of 122

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### 11. 802.11n at HT20 of CH06

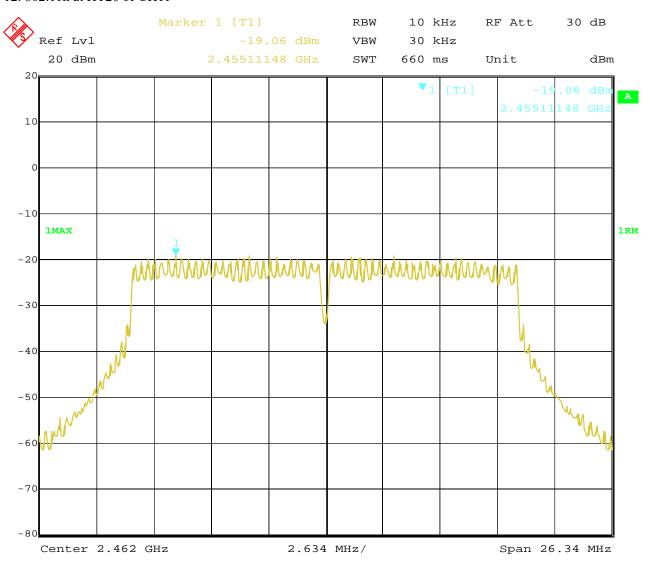


3.JUL.2017 Date: 18:47:01 Report No.: FCC1706169-01 Page 94 of 122

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### 12. 802.11n at HT20 of CH11



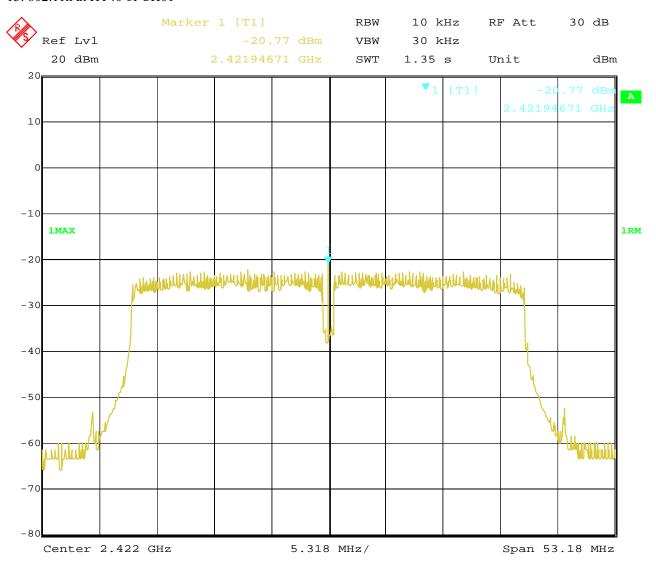
3.JUL.2017 18:48:09 Date:

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### 13. 802.11n at HT40 of CH01

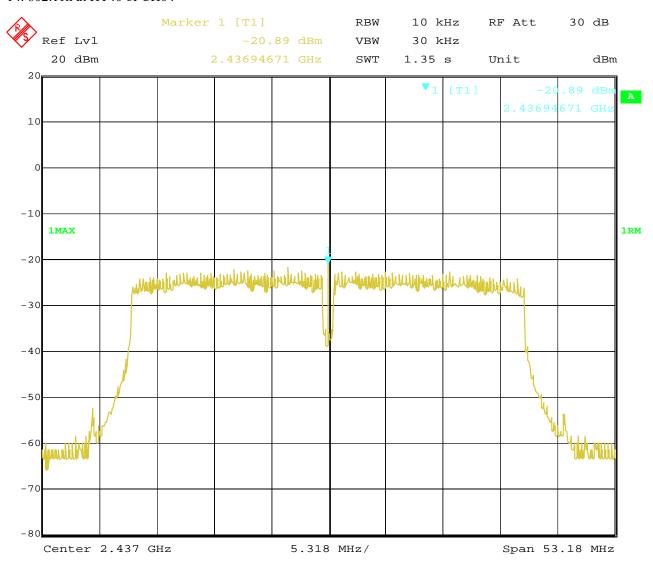


3.JUL.2017 Date: 18:38:08 Report No.: FCC1706169-01 Page 96 of 122

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### 14. 802.11n at HT40 of CH04

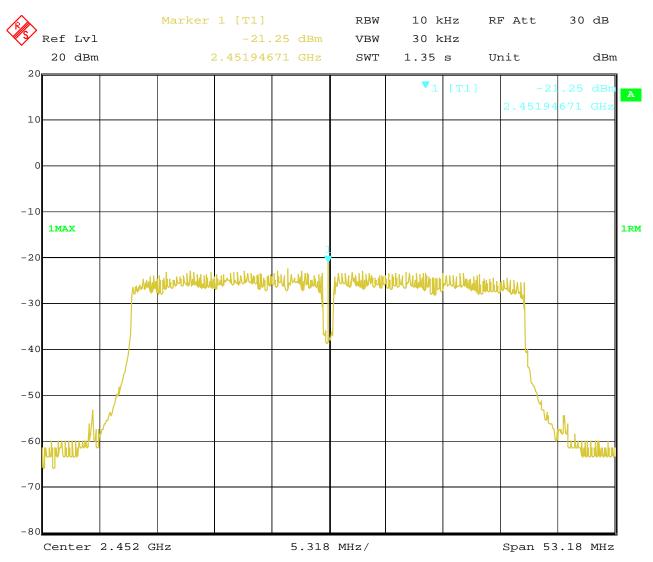


3.JUL.2017 Date: 18:34:17 Report No.: FCC1706169-01 Page 97 of 122

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### 15. 802.11n at HT40 of CH07

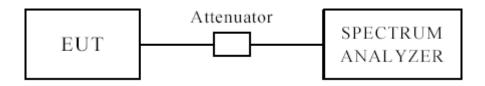


3.JUL.2017 Date: 18:30:43 Report No.: FCC1706169-01 Page 98 of 122

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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=100, VBW=300 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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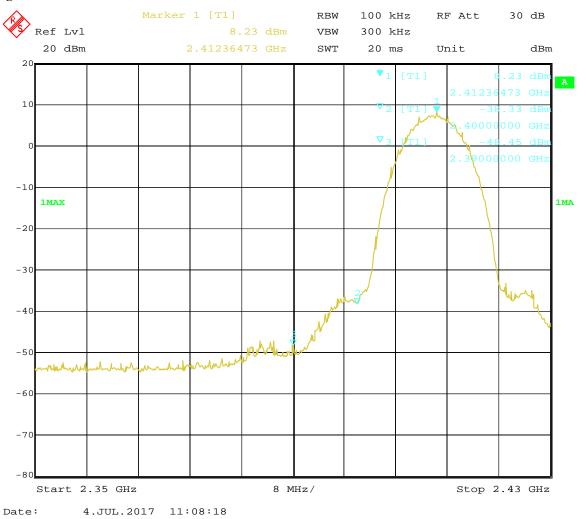
## For 802.11b mode

## CH01 at 11Mbps

#### Band-edge and Restricted band Measurement 10.4

EUT	Tablet PC		Model	P7100
Mode	Keeping Transmitting		Input Voltage	DC3.7V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBµV/m)	60.5	T ' '4	$74(dB\mu V/m)$
	AV (dBμV/m)	44.1	Limit	$54(dB\mu V/m)$
2390	PK (dBµV/m)	46.8	Limit	$74(dB\mu V/m)$
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$

# **Test Figure:**



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

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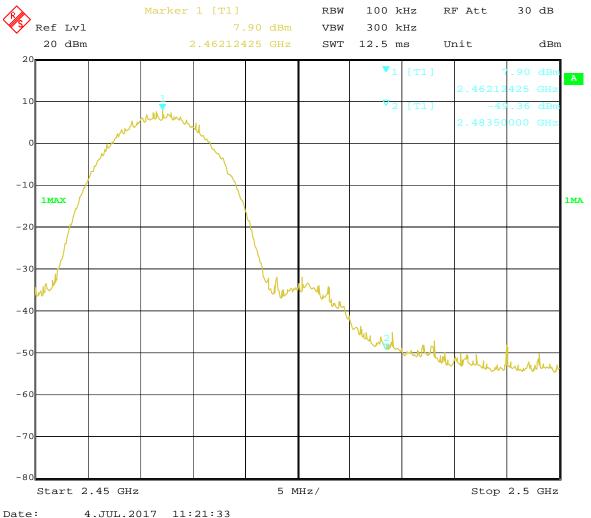


## CH11 at 11Mbps

10.4 Band-edge and Restricted band Measurement

EUT	Tablet PC		Model	P7100
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)	47.2	T,	74(dBμV/m)
	AV (dBμV/m)		Limit	54(dBμV/m)

# **Test Figure:**



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

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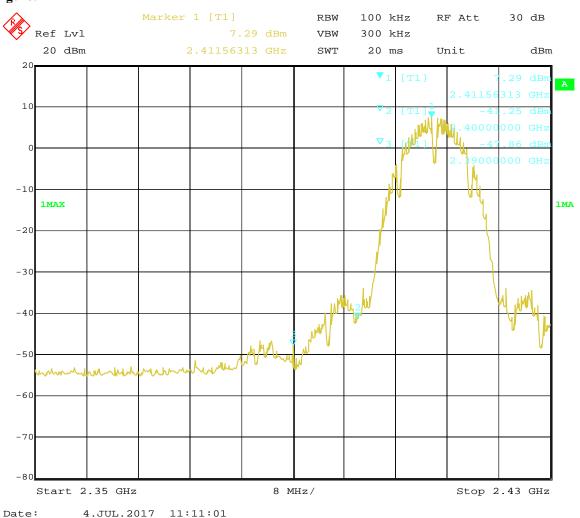
## For 802.11b mode

CH01 at 1Mbps

#### Band-edge and Restricted band Measurement 10.4

EUT	Tablet PC		Model	P7100
Mode	Keeping Transmitting		Input Voltage	DC3.7V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBµV/m)	62.3	T ' '4	$74(dB\mu V/m)$
	AV (dBμV/m)	41.6	Limit	$54(dB\mu V/m)$
2390	PK (dBµV/m)	45.7	Limit	74(dBµV/m)
	AV (dBμV/m)		Limit	$54(dB\mu V/m)$

# **Test Figure:**



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

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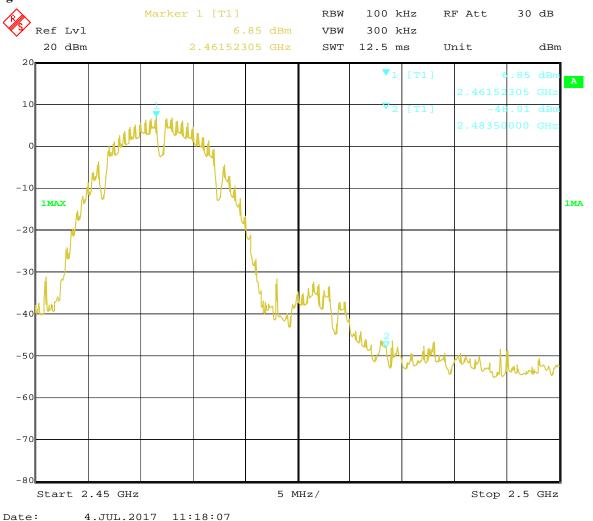


## CH11 at 1Mbps

#### 10.4 Band-edge and Restricted band Measurement

EUT	Tablet PC		Model	P7100
Mode	Keeping Transmitting		Input Voltage	DC3.7V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5		T,	74(dBμV/m)	
	AV (dBμV/m)		Limit	54(dBμV/m)

# **Test Figure:**



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

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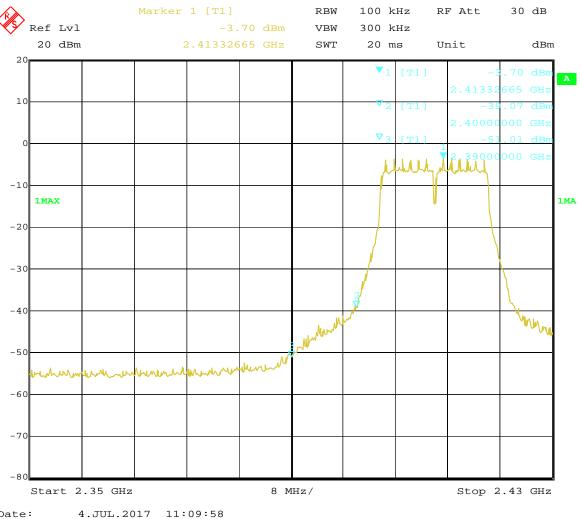
## For 802.11g mode

CH01 at 6Mbps

#### Band-edge and Restricted band Measurement 10.4

EUT	Tablet PC		Model	P7100
Mode	Keeping Transmitting		Input Voltage	DC3.7V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:		Pass	Detector	PK
2400	PK (dBμV/m)	68.5	T ::4	$74(dB\mu V/m)$
	AV (dBμV/m)	47.3	Limit	54(dBμV/m)
2390	PK (dBµV/m)	51.2	Limit	74(dBμV/m)
	AV (dBμV/m)	32.7	Limit	54(dBμV/m)

# **Test Figure:**



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

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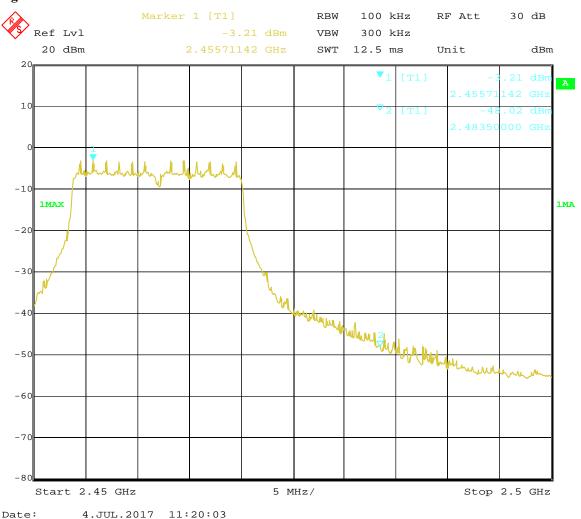


## CH11 at 6Mbps

#### 10.4 Band-edge and Restricted band Measurement

EUT	Tablet PC		Mod	lel	P7100
Mode	Keeping Transmitting		Input V	oltage	DC3.7V
Temperature	24 deg. C,		Humi	dity	56% RH
Test Result:	Pass		Detec	ctor	PK
2483.5	PK (dBµV/m)	56.9	T ' '	$74(dB\mu V/m)$ $54(dB\mu V/m)$	
	AV (dBμV/m)	37.5	Limit		

# **Test Figure:**



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

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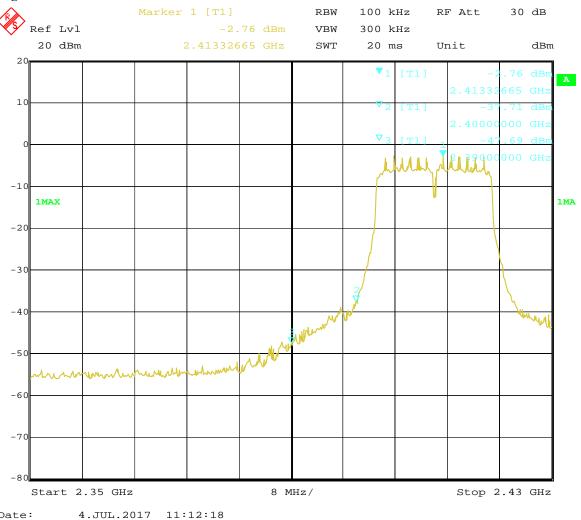
## For 802.11n (HT20) mode

CH01 at msc0

#### 10.4 Band-edge and Restricted band Measurement

EUT	Tablet PC		Model	P7100
Mode	Keeping Transmitting		Input Voltage	DC3.7V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBμV/m)	66.2	T ::4	$74(dB\mu V/m)$
	AV (dBμV/m)	48.7	Limit	54(dBμV/m)
2390	PK (dBμV/m)	50.3	Limit	74(dBμV/m)
	AV (dBμV/m)	32.5	Lillit	54(dBμV/m)

# **Test Figure:**



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

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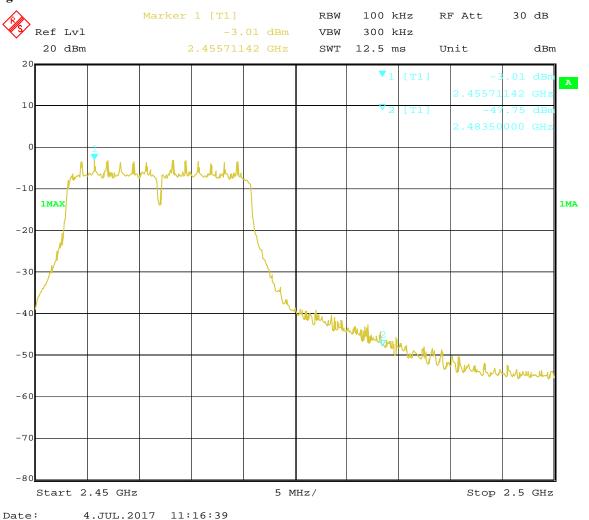


### CH11 at msc0

#### 10.4 Band-edge and Restricted band Measurement

EUT	Tablet PC		Model	P7100
Mode	Keeping Transmitting		Input Voltage	DC3.7V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5	PK (dBμV/m)	59.0	T: ',	$74(dB\mu V/m)$
	AV (dBμV/m)	39.6	Limit	$54(dB\mu V/m)$

# **Test Figure:**



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

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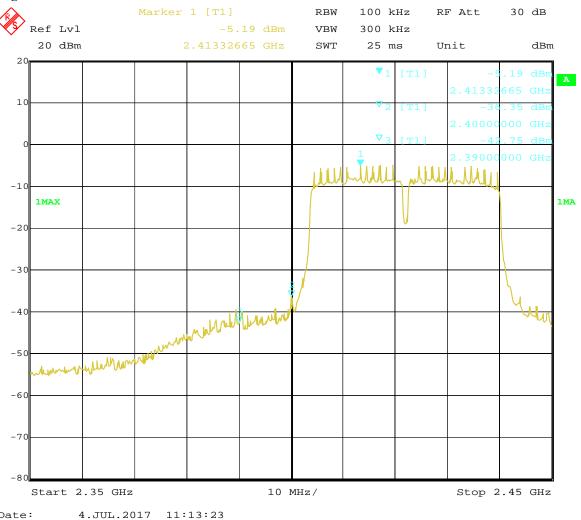
## For 802.11n (HT40) mode

CH03 at msc0

#### 10.4 Band-edge and Restricted band Measurement

EUT	Tablet PC		Model	P7100
Mode	Keeping Transmitting		Input Voltage	DC3.7V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2400	PK (dBµV/m)	64.3	T ::4	$74(dB\mu V/m)$
	AV (dBμV/m)	45.5	Limit	54(dBμV/m)
2390	PK (dBμV/m)	56.1	Limit	74(dBμV/m)
	AV (dBμV/m)	39.6	Lillit	$54(dB\mu V/m)$

# **Test Figure:**



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

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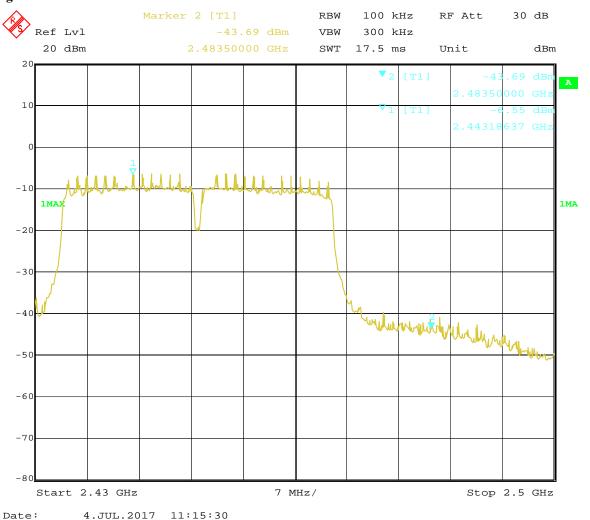


### CH09 at msc0

#### 10.4 Band-edge and Restricted band Measurement

EUT	Tablet PC		Model	P7100
Mode	Keeping Transmitting		Input Voltage	DC3.7V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
2483.5	PK (dBμV/m)	60.2	T ' '4	$74(dB\mu V/m)$
	AV (dBμV/m)	41.8	Limit	54(dBµV/m)

# **Test Figure:**



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 0dBi.

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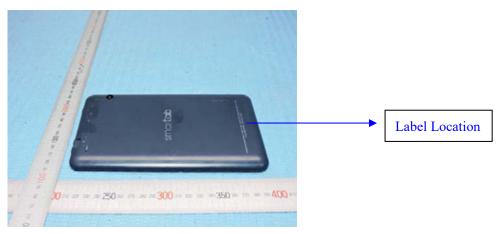


#### FCC ID Label 12.0

## FCC ID: RBD-M710R1

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:



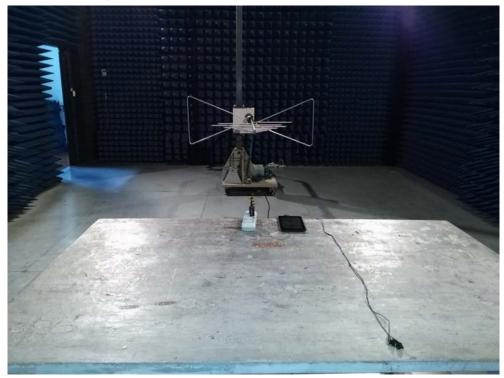
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## Radiated Emission Test Setup:





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# Photographs - EUT

## Outside view





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Outside view





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Outside view





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Outside view





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Outside view





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Inside view





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

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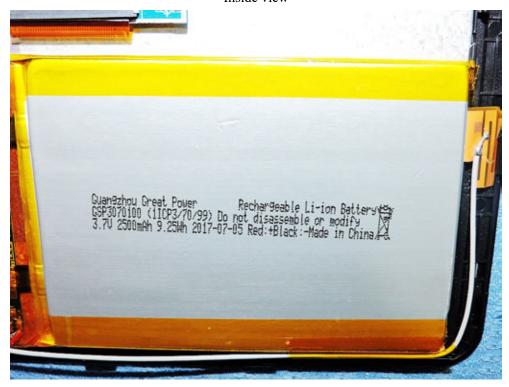
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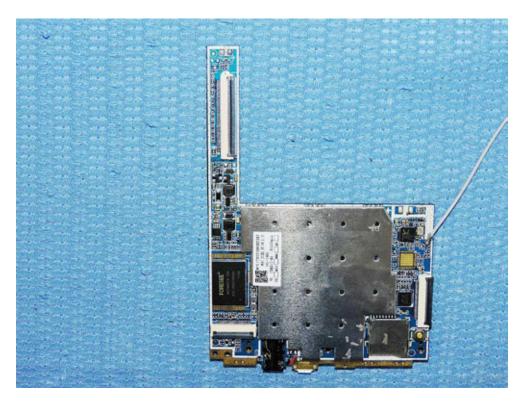
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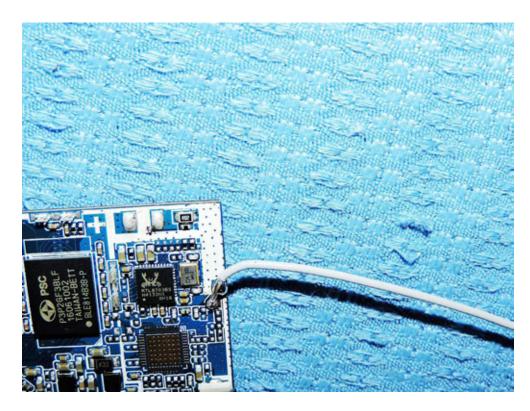
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Inside view-- Configure a)





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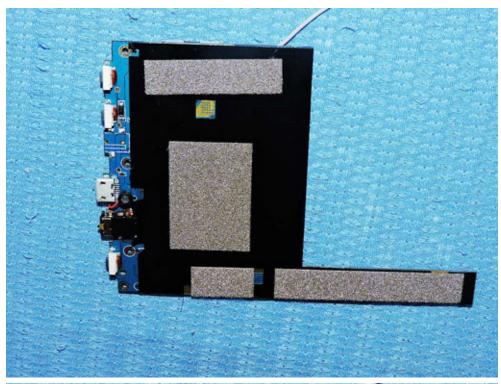
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## Inside view-- Configure b)





**End of Report** 

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