Page 1 of 72 Report No.: UNI170405078-E

# **FCC TEST REPORT**

Test report
On Behalf of
GSM GLOBE. COM INC
For
Tablet PC

Model No.: TEAM 7, Pro, PLUS+, Super

FCC ID: 2AEJAGOLTEAM7

Prepared for: GSM GLOBE. COM INC

134 N.E 1 Street, Miami, FL 33132, USA

Prepared By: Laboratory of Shenzhen United Testing Technology Co., Ltd

Room 316-319, Block B, Honghualing Industrial Park of the Fifth Zone, Taoyuan

Street, Nanshan District, Shenzhen, Guangdong, China

Date of Test: Apr. 05, 2017 ~ Apr. 12, 2017

Date of Report: Apr. 12, 2017
Report Number: UNI170405078-E

Page 2 of 72 Report No.: UNI170405078-E

# **TEST RESULT CERTIFICATION**

Applicant's name:	GSM GL	OBE. COM INC				
Address:	134 N.E 1	l Street, Miami, FL 33132, USA				
Manufacture's Name:	Shenzhen Forward Technology Co., LTD.					
Address:	5F B-blog, Hengmingzhu Industrial Park, QianjinEr Rd., Xixiang Sub-district, Bao'An Dist., Shenzhen City, China.					
Product description						
Trade Mark:	GOL					
Product name:	Tablet PC					
Model and/or type reference :	TEAM 7,	Pro, PLUS+, Super				
Standards:	FCC Rule	es and Regulations Part 15 Subpart C Section 15.247 3.10: 2013				
the <b>Shenzhen United Testing Tec</b> of the material. <b>Shenzhen Unite</b>	chnology C d Testing les resulti d context.	hole or in part for non-commercial purposes as long as co., Ltd. is acknowledged as copyright owner and source Technology Co., Ltd. takes no responsibility for and will ng from the reader's interpretation of the reproduced				
Date (s) of performance of tests		Apr. 05, 2017 ~ Apr. 12, 2017				
Date of Issue						
Test Result	·····:	Pass				
Testing Engine	eer :	Zm Xie				
		(Eric Xie)				
Technical Man	ager :	Dora Qin				
		(Dora Qin)				
Authorized Sig	natory :	town.				

(Kait Chen)

Table of Contents	Page
1 . TEST SUMMARY	5
2 . GENERAL INFORMATION	6
2.1 GENERAL DESCRIPTION OF EUT	6
Operation of EUT during testing	8
2.2 DESCRIPTION OF TEST SETUP	8
2.3 MEASUREMENT INSTRUMENTS LIST	9
3. CONDUCTED EMISSIONS TEST	10
3.1 Conducted Power Line Emission Limit	10
3.2 Test Setup	10
3.3 Test Procedure	10
3.4 Test Result	10
4 RADIATED EMISSION TEST	13
4.1 Radiation Limit	13
4.2 Test Setup	13
4.3 Test Procedure	14
4.4 Test Result	14
5 BAND EDGE	29
5.1 Limits	29
5.2 Test Procedure	29
5.3 Test Result	29
6 OCCUPIED BANDWIDTH MEASUREMENT	38
6.1 Test Limit	38
6.2 Test Procedure	38
6.3 Measurement Equipment Used	38
6.4 Test Result	38
7 POWER SPECTRAL DENSITY TEST	47
7.1 Test Limit	47
7.2 Test Procedure	47
7.3 Measurement Equipment Used	47
7.4 Test Result	47
8 PEAK OUTPUT POWER TEST	56
8.1 Test Limit	56
8.2 Test Procedure	56
8.3 Measurement Equipment Used	56

Report No.: UNI170405078-E

70

71 71

72

	Table of Contents	Page
8.4 Test Result		56
9 Out of Band Emissions		57
9.1 Test Limit		57
9.2 Test Procedure		57
9.3 Test Setup		57
7.4 Test Result		57

10 ANTENNA REQUIREMENT

11 PHOTOGRAPH OF TEST

11.1 Radiated Emission11.2 Conducted Emission

Page 5 of 72 Report No.: UNI170405078-E

### 1. TEST SUMMARY

### 1.1 TEST PROCEDURES AND RESULTS

DESCRIPTION OF TEST	RESULT
CONDUCTED EMISSIONS TEST	COMPLIANT
RADIATED EMISSION TEST	COMPLIANT
BAND EDGE	COMPLIANT
OCCUPIED BANDWIDTH MEASUREMENT	COMPLIANT
POWER SPECTRAL DENSITY	COMPLIANT
PEAK OUTPUT POWEReak	COMPLIANT
Out of Band Emissions	COMPLIANT
ANTENNA REQUIREMENT	COMPLIANT

#### 1.2 TEST FACILITY

Test Firm : Dongguan Dongdian Testing Service Co., Ltd

Certificated by FCC, Registration No.: 270092

Address No.17 Zongbu road 2, Songshan Lake Sci&Tech Park, DongGuan

City, Guangdong province,523808 China

### 1.3 MEASUREMENT UNCERTAINTY

Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, k=2
Radiated emission expanded uncertainty(9kHz-30MHz) = 3.08dB, k=2
Radiated emission expanded uncertainty(30MHz-1000MHz) = 4.42dB, k=2
Radiated emission expanded uncertainty(Above 1GHz) = 4.06dB, k=2

Page 6 of 72 Report No.: UNI170405078-E

# 2. GENERAL INFORMATION

## 2.1 GENERAL DESCRIPTION OF EUT

Equipment	Tablet PC
Model Name	TEAM 7
Serial No	Pro, PLUS+, Super
Model Difference	All model's the function, software and electric circuit are the same, only with a product color and model named different. Test sample model: TEAM 7.
FCC ID	2AEJAGOLTEAM7
Antenna Type	Integral Antenna
Antenna Gain	1dBi
Operation frequency	802.11b/g/n 20:2412~2462 MHz 802.11n 40: 2422~2452MHz
Number of Channels	802.11b/g/n20: 11CH 802.11n 40: 7CH
Modulation Type	CCK/OFDM/DBPSK/DAPSK
Power Source	N/A
Power Rating	DC3.7V or DC5V from AC adapter with AC 120V/60Hz

Equipment	Tablet PC
Model Name	TEAM 7
Serial No	Pro, PLUS+, Super
Model Difference	All model's the function, software and electric circuit are the same, only with a product color and model named different. Test sample model: TEAM 7.
FCC ID	2AEJAGOLTEAM7
Antenna Type	Integral Antenna
Antenna Gain	1dBi
Operation frequency	2402-2480MHz
Number of Channels	40CH
Modulation Type	GFSK
Power Source	N/A
Power Rating	DC3.7V or DC5V from AC adapter with AC 120V/60Hz

Report No.: UNI170405078-E

Equipment	Tablet PC
Model Name	TEAM 7
Serial No	Pro, PLUS+, Super
Model Difference	All model's the function, software and electric circuit are the same, only with a product color and model named different. Test sample model: TEAM 7.
FCC ID	2AEJAGOLTEAM7
Antenna Type	Integral Antenna
Antenna Gain	1dBi
Operation frequency	2402-2480MHz
Number of Channels	79CH
Modulation Type	GFSK, π/4DQPSK, 8DPSK
Power Source	N/A
Power Rating	DC3.7V or DC5V from AC adapter with AC 120V/60Hz

Note: This report only WIFI test report, BT(40CH) and BT(79CH) transmitters see the other test reports.

Page 8 of 72 Report No.: UNI170405078-E

### 2.1.1 Carrier Frequency of Channels

Channel List for 802.11b/g/n(20MHz)							
Channel	Channel Frequency (MHz) Channel Frequency (MHz) Channel Frequency (MHz) Channel (MHz)						
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	80	2447	11	2462
03	2422	06	2437	09	2452		

Channel List for 802.11n(40MHz)							
Channel	Channel Frequency (MHz) Channel Frequency (MHz) Channel Channel						Frequency (MHz)
03	2422	06	2437	09	2452		
04	2427	07	2442				
05	2432	08	2447				

Operation of EUT during testing

**Operating Mode** 

The mode is used: Transmitting mode for 802.11b/g/n(20MHz)

Low Channel: 2412MHz Middle Channel: 2437MHz High Channel: 2462MHz

### Transmitting mode for 802.11n(40MHz)

Low Channel: 2422MHz Middle Channel: 2437MHz High Channel: 2452MHz

### 2.2 DESCRIPTION OF TEST SETUP

Operation of EUT during conducted testing:



Operation of EUT during Radiation testing:

EUT

### 2.3 MEASUREMENT INSTRUMENTS LIST

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Receiver	Rohde & Schwarz	ESCI	100627	Feb. 19, 2017	1 Year
2.	LISN	SchwarzBeck	NSLK 8126	8126377	Feb. 19, 2017	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Feb. 19, 2017	1 Year
4.	EMI Test Software ES-K1	Rohde & Schwarz	N/A	N/A	N/A	N/A
5.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Feb. 19, 2017	1 Year
6.	Trilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Feb. 19, 2017	1 Year
7.	Pre-amplifier	Compliance Direction	PAP-0203	22008	Feb. 19, 2017	1 Year
8.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A
9.	EMI Receiver	Rohde & Schwarz	ESCI	100627	Feb. 19, 2017	1 Year
10.	LISN	SchwarzBeck	NSLK 8126	8126377	Feb. 19, 2017	1 Year
11.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Feb. 19, 2017	1 Year
12.	EMI Test Software ES-K1	Rohde & Schwarz	N/A	N/A	N/A	N/A
13.	EMI Receiver	Rohde & Schwarz	ESCI	100627	Feb. 19, 2017	1 Year
14.	EMI Receiver	Rohde & Schwarz	ESCI	100627	Feb. 19, 2017	1 Year
15.	LISN	SchwarzBeck	NSLK 8126	8126377	Feb. 19, 2017	1 Year
16.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Feb. 19, 2017	1 Year
17.	EMI Test Software ES-K1	Rohde & Schwarz	N/A	N/A	N/A	N/A
18.	Power Meter	R&S	NRVD	SEL0069	Feb. 19, 2017	1 Year
19.	Power Sensor	R&S	URV5-Z2	SEL0071	Feb. 19, 2017	1 Year
20.	Power Sensor	R&S	URV5-Z2	SEL0072	Feb. 19, 2017	1 Year
21.	Software EMC32	R&S	EMC32-S	SEL0082	N/A	N/A
22.	Log-periodic Antenna	Amplifier Reasearch	APT1.580	SEL0073	N/A	N/A
23.	Antenna Tripod	Amplifier Reasearch	TP1000A	SEL0074	N/A	N/A
24.	High Gain Horn Antenna(0.8-5GHz)	Amplifier Reasearch	AT4002A	SEL0075	N/A	N/A
25.	Spectrum analyzer	Agilent	N9020A	MY499110 048	Feb. 19, 2017	1 Year
26.	Spectrum analyzer	Agilent	E4407B	MY461843 26	Feb. 19, 2017	1 Year

#### 3. CONDUCTED EMISSIONS TEST

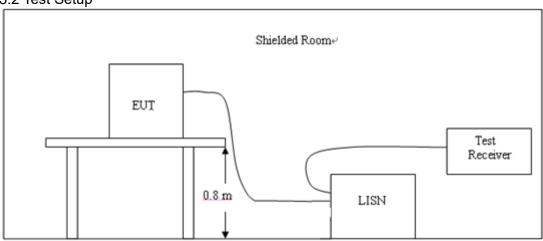
#### 3.1 Conducted Power Line Emission Limit

For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following

Eroguenev	Maximum RF Line Voltage (dBμV)						
Frequency (MHz)	CLAS	SS A	CLASS B				
(11112)	Q.P.	Ave.	Q.P.	Ave.			
0.15 - 0.50	79	66	66-56*	56-46*			
0.50 - 5.00	73	60	56	46			
5.00 - 30.0	73	60	60	50			

\* Decreasing linearly with the logarithm of the frequency
For intentional device, according to §15.207(a) Line Conducted Emission Limit is same as above table.

#### 3.2 Test Setup



### 3.3 Test Procedure

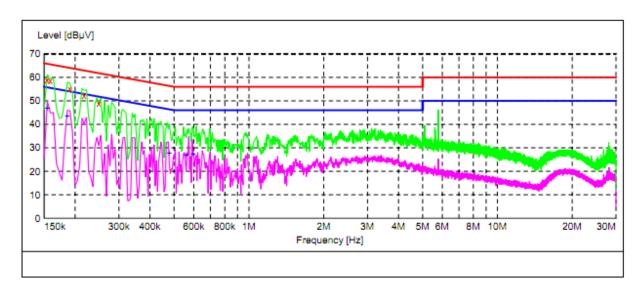
- 1, The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10.
- 2, Support equipment, if needed, was placed as per ANSI C63.10.
- 3, All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4, If a EUT received DC power from the USB Port of Notebook PC, the PC's adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- 5, All support equipments received AC power from a second LISN, if any.
- 6, The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7, Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.

### 3.4 Test Result

#### **PASS**

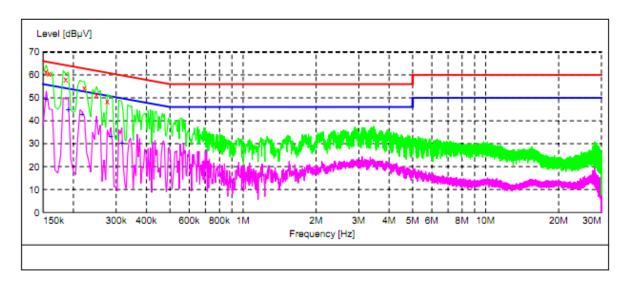
All the test modes completed for test.

## Line



Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.154501 0.159001 0.190501 0.217501 0.249001	58.70 58.40 55.30 52.30 49.10	10.2 10.2 10.2 10.2 10.2	66 66 64 63 62	7.1 7.1 8.7 10.6 12.7	QP QP QP QP QP	L1 L1 L1 L1	GND GND GND GND GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.154501 0.186001 0.478501 0.559501 0.595501	46.70 43.70 27.80 27.00 27.30	10.2 10.2 10.2 10.2 10.2	56 54 46 46 46	9.1 10.5 18.6 19.0 18.7	AV AV AV AV	L1 L1 L1 L1	GND GND GND GND GND

# Neutral



gin	Limit	Transd	Level	Frequency
dB	dBµV	dB	dBµV	MHz
4.6	66 66	10.2	61.20 60.60	0.154501 0.159001
6.0	64	10.2	58.20	0.186001
B.5	63	10.2	54.20	0.222001
D.4	62	10.2	51.40	0.249001
2.5	61	10.2	48.40	0.276001
gin	Limit	Transd	Level	Frequency
dB	dBµV	dB	dBµV	MHz
5.4	56	10.2	49.40	0.154501
9.1	54		44.90	0.190501
0.1 7.5 9.7	53 51 50	10.2 10.2	42.80 33.20 30.10	0.217501 0.285001 0.316501

### **4 RADIATED EMISSION TEST**

### 4.1 Radiation Limit

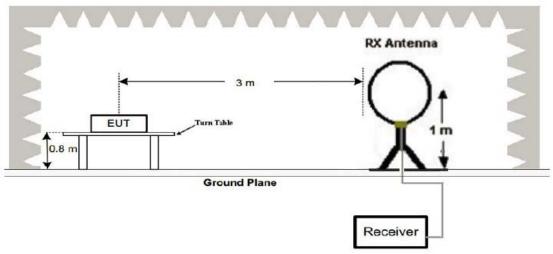
For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Distance (Meters)	Radiated (dBµV/m)	Radiated (µV/m)
30-88	3	40	100
88-216	3	43.5	150
216-960	3	46	200
Above 960	3	54	500

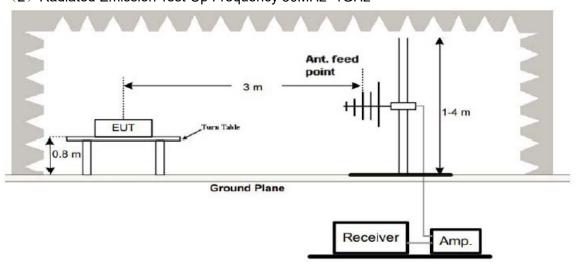
For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

### 4.2 Test Setup

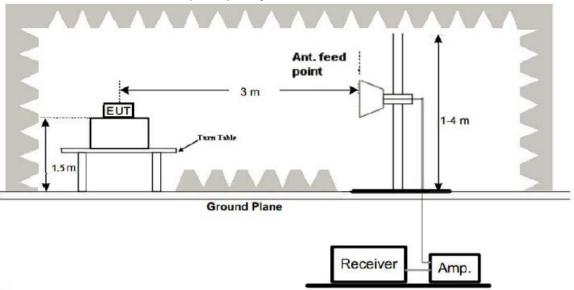
### (1) Radiated Emission Test-Up Frequency Below 30MHz



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



### (3) Radiated Emission Test-Up Frequency Above 1GHz



#### 4.3 Test Procedure

- 1. Below 1GHz measurement the EUT is placed on turntable which is 0.8m above ground plane. And above 1GHz measurement EUT was placed on low permittivity and low tangent turn table which is 1.5m above ground plane.
- 2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
- 4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 6. Repeat above procedures until the measurements for all frequencies are complete.
- 7. The test frequency range from 9KHz to 25GHz per FCC PART 15.33(a).

### Note:

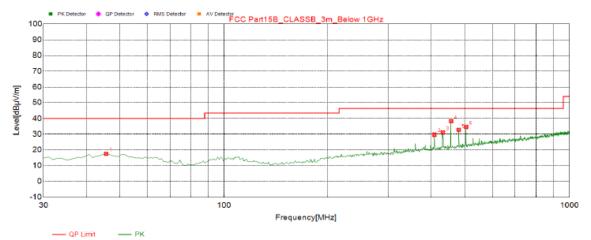
For battery operated equipment, the equipment tests shall be performed using a new battery.

#### 4.4 Test Result

#### **PASS**

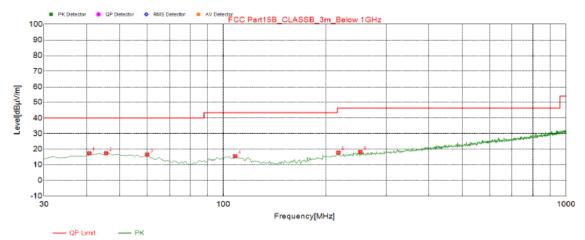
All the test modes completed for test. The worst case of Radiated Emission; the test data of this mode was reported.

### Below 1GHz Test Results: Antenna polarity: H



Susp	Suspected List									
NO.	Freq.	Result Level [dBµV]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle[°]	Polarity		
1	45.520	17.44	-13.94	40.00	22.56	100	47	Horizontal		
2	408.30	29.67	-9.88	46.50	16.83	100	11	Horizontal		
3	431.58	31.08	-9.41	46.50	15.42	100	7	Horizontal		
4	455.83	38.26	-8.94	46.50	8.24	100	9	Horizontal		
5	480.08	32.67	-8.46	46.50	13.83	100	9	Horizontal		
6	504.33	34.55	-7.95	46.50	11.95	100	19	Horizontal		

### Antenna polarity: V



Susp	Suspected List									
NO.	Freq.	Result Level [dBµV]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle[°]	Polarity		
1	40.670	17.32	-14.55	40.00	22.68	100	88	Vertical		
2	45.520	17.37	-13.94	40.00	22.63	100	247	Vertical		
3	60.070	16.47	-15.67	40.00	23.53	100	352	Vertical		
4	108.57	15.42	-16.01	43.50	28.08	100	238	Vertical		
5	217.21	17.78	-14.90	46.50	28.72	100	240	Vertical		
6	252.13	18.16	-13.83	46.50	28.34	100	105	Vertical		

#### Remark:

- (1) Measuring frequencies from 9 KHz to the 1 GHz, Radiated emission test from 9KHz to 30MHz was verified, and no any emission was found except system noise floor.
- (2) \* denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (3) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.

Page 17 of 72 Report No.: UNI170405078-E

### Above 1 GHz Test Results:

# LOW CH1 (802.11b Mode)/2412

### Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
4824	60.86	-3.64	57.22	74	-16.78	peak
4824	45.12	-3.64	41.48	54	-12.52	AVG
7236	55.37	-0.95	54.42	74	-19.58	peak
7236	42.05	-0.95	41.1	54	-12.9	AVG
Remark: Factor	= Antenna Factor	+ Cable Loss –	Pre-amplifier.			-

### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
4824	60.81	-3.64	57.17	74	-16.83	peak
4824	45.63	-3.64	41.99	54	-12.01	AVG
7236	55.94	-0.95	54.99	74	-19.01	peak
7236	41.17	-0.95	40.22	54	-13.78	AVG

# MID CH6 (802.11b Mode)/2437

### Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
4874	62.02	-3.51	58.51	74	-15.49	peak
4874	46.95	-3.51	43.44	54	-10.56	AVG
7311	56.24	-0.82	55.42	74	-18.58	peak
7311	43.19	-0.82	42.37	54	-11.63	AVG
Remark: Factor	= Antenna Factor	+ Cable Loss –	Pre-amplifier.			

### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Type
4874	60.99	-3.51	57.48	74	-16.52	peak
4874	45.83	-3.51	42.32	54	-11.68	AVG
7311	56.12	-0.82	55.3	74	-18.7	peak
7311	41.76	-0.82	40.94	54	-13.06	AVG

Page 19 of 72 Report No.: UNI170405078-E

#### HIGH CH11 (802.11b Mode)/2462

#### Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
4924	61.22	-3.43	57.79	74	-16.21	peak
4924	46.13	-3.43	42.7	54	-11.3	AVG
7386	56.54	-0.75	55.79	74	-18.21	peak
7386	41.86	-0.75	41.11	54	-12.89	AVG

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

#### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
4924	60.89	-3.43	57.46	74	-16.54	peak
4924	45.71	-3.43	42.28	54	-11.72	AVG
7386	55.45	-0.75	54.7	74	-19.3	peak
7386	41.38	-0.75	40.63	54	-13.37	AVG

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

#### Remark:

- (1) Measuring frequencies from 1 GHz to the 25 GHz.
- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) \* denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (4) Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.
- (6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

# LOW CH1 (802.11g Mode)/2412

### Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
4824	62.14	-3.64	58.5	74	-15.5	peak
4824	45.77	-3.64	42.13	54	-11.87	AVG
7236	56.92	-0.95	55.97	74	-18.03	peak
7236	42.34	-0.95	41.39	54	-12.61	AVG
Remark: Factor	= Antenna Factor	+ Cable Loss –	Pre-amplifier.			

#### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре		
4824	61.67	-3.64	58.03	74	-15.97	peak		
4824	45.25	-3.64	41.61	54	-12.39	AVG		
7236	56.33	-0.95	55.38	74	-18.62	peak		
7236	42.01	-0.95	41.06	54	-12.94	AVG		
Damando Fastan	Pomarky Factor - Antonna Factor - Cable Local Dra amplifier							

# MID CH6 (802.11g Mode)/2437

### Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре		
4874	61.11	-3.51	57.6	74	-16.4	peak		
4874	44.57	-3.51	41.06	54	-12.94	AVG		
7311	55.24	-0.82	54.42	74	-19.58	peak		
7311	42.16	-0.82	41.34	54	-12.66	AVG		
Remark: Factor	Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.							

### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре		
4874	60.82	-3.51	57.31	74	-16.69	peak		
4874	44.95	-3.51	41.44	54	-12.56	AVG		
7311	56.37	-0.82	55.55	74	-18.45	peak		
7311	41.41	-0.82	40.59	54	-13.41	AVG		
Remark: Factor	emark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.							

Page 22 of 72 Report No.: UNI170405078-E

### HIGH CH11 (802.11g Mode)/2462

#### Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
4924	61.23	-3.43	57.8	74	-16.2	peak
4924	45.89	-3.43	42.46	54	-11.54	AVG
7386	56.76	-0.75	56.01	74	-17.99	peak
7386	42.34	-0.75	41.59	54	-12.41	AVG

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

#### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре
4924	61.05	-3.43	57.62	74	-16.38	peak
4924	46.13	-3.43	42.7	54	-11.3	AVG
7386	56.84	-0.75	56.09	74	-17.91	peak
7386	42.46	-0.75	41.71	54	-12.29	AVG

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

### Remark:

- (1) Measuring frequencies from 1 GHz to the 25 GHz.
- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) \* denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (4) Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.
- (6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

# LOW CH1 (802.11n/H20 Mode)/2412

### Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре		
4824	61.45	-3.64	57.81	74	-16.19	peak		
4824	46.83	-3.64	43.19	54	-10.81	AVG		
7236	56.96	-0.95	56.01	74	-17.99	peak		
7236	41.62	-0.95	40.67	54	-13.33	AVG		
Remark: Factor	Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.							

### Vertical:

Meter Reading	Factor	Emission Level	Limits	Margin	Detector
(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Type
60.74	-3.64	57.1	74	-16.9	peak
46.85	-3.64	43.21	54	-10.79	AVG
56.27	-0.95	55.32	74	-18.68	peak
41.93	-0.95	40.98	54	-13.02	AVG
	(dBµV) 60.74 46.85 56.27 41.93	(dBµV) (dB) 60.74 -3.64 46.85 -3.64 56.27 -0.95 41.93 -0.95	(dBμV)     (dB)     (dBμV/m)       60.74     -3.64     57.1       46.85     -3.64     43.21       56.27     -0.95     55.32       41.93     -0.95     40.98	(dBμV)     (dB)     (dBμV/m)     (dBμV/m)       60.74     -3.64     57.1     74       46.85     -3.64     43.21     54       56.27     -0.95     55.32     74       41.93     -0.95     40.98     54	(dBμV)     (dB)     (dBμV/m)     (dBμV/m)     (dBμV/m)       60.74     -3.64     57.1     74     -16.9       46.85     -3.64     43.21     54     -10.79       56.27     -0.95     55.32     74     -18.68       41.93     -0.95     40.98     54     -13.02

# MID CH6 (802.11n/H20 Mode)/2437

### Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре		
4874	61.06	-3.51	57.55	74	-16.45	peak		
4874	45.51	-3.51	42	54	-12	AVG		
7311	55.85	-0.82	55.03	74	-18.97	peak		
7311	41.36	-0.82	40.54	54	-13.46	AVG		
Remark: Factor	Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.							

### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре		
4874	61.08	-3.51	57.57	74	-16.43	peak		
4874	46.12	-3.51	42.61	54	-11.39	AVG		
7311	56.33	-0.82	55.51	74	-18.49	peak		
7311	41.43	-0.82	40.61	54	-13.39	AVG		
Remark: Factor	Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.							

Page 25 of 72 Report No.: UNI170405078-E

### HIGH CH11 (802.11n/H20 Mode)/2462

#### Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type	
4924	60.66	-3.43	57.23	74	-16.77	peak	
4924	44.72	-3.43	41.29	54	-12.71	AVG	
7386	56.13	-0.75	55.38	74	-18.62	peak	
7386	41.05	-0.75	40.3	54	-13.7	AVG	
D . E .							

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

#### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
4924	60.16	-3.43	56.73	74	-17.27	peak
4924	45.37	-3.43	41.94	54	-12.06	AVG
7386	56.28	-0.75	55.53	74	-18.47	peak
7386	40.92	-0.75	40.17	54	-13.83	AVG

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

#### Remark:

- (1) Measuring frequencies from 1 GHz to the 25 GHz.
- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) \* denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (4) Data of measurement within this frequency range shown "--- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.
- (6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

### LOW CH3 (802.11n/H40 Mode)/2422 Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type		
4924	62.14	-3.63	58.51	74	-15.49	peak		
4924	46.22	-3.63	42.59	54	-11.41	AVG		
7386	55.36	-0.94	54.42	74	-19.58	peak		
7386	41.75	-0.94	40.81	54	-13.19	AVG		
Remark: Factor	Remark: Factor = Antenna Factor + Cable Loss - Pre-amplifier							

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

### Vertical:

Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
61.08	-3.63	57.45	74	-16.55	peak
45.92	-3.63	42.29	54	-11.71	AVG
54.37	-0.94	53.43	74	-20.57	peak
41.51	-0.94	40.57	54	-13.43	AVG
	(dBµV) 61.08 45.92 54.37 41.51	(dBµV) (dB) 61.08 -3.63 45.92 -3.63 54.37 -0.94 41.51 -0.94	(dBμV)     (dB)     (dBμV/m)       61.08     -3.63     57.45       45.92     -3.63     42.29       54.37     -0.94     53.43       41.51     -0.94     40.57	(dBμV)     (dB)     (dBμV/m)     (dBμV/m)       61.08     -3.63     57.45     74       45.92     -3.63     42.29     54       54.37     -0.94     53.43     74       41.51     -0.94     40.57     54	(dBμV)     (dB)     (dBμV/m)     (dBμV/m)     (dBμV/m)       61.08     -3.63     57.45     74     -16.55       45.92     -3.63     42.29     54     -11.71       54.37     -0.94     53.43     74     -20.57       41.51     -0.94     40.57     54     -13.43

MID CH6 (802.11n/H40 Mode)/2437 Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type		
4874	60.89	-3.51	57.38	74	-16.62	peak		
4874	46.47	-3.51	42.96	54	-11.04	AVG		
7311	55.83	-0.82	55.01	74	-18.99	peak		
7311	42.05	-0.82	41.23	54	-12.77	AVG		
				-				
Remark: Factor	Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.							

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### Vertical:

Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
59.64	-3.51	56.13	74	-17.87	peak
45.18	-3.51	41.67	54	-12.33	AVG
56.99	-0.82	56.17	74	-17.83	peak
39.41	-0.82	38.59	54	-15.41	AVG
	(dBµV) 59.64 45.18 56.99 39.41	(dBµV) (dB)  59.64 -3.51  45.18 -3.51  56.99 -0.82  39.41 -0.82	(dBμV)     (dB)     (dBμV/m)       59.64     -3.51     56.13       45.18     -3.51     41.67       56.99     -0.82     56.17       39.41     -0.82     38.59	(dBμV)     (dB)     (dBμV/m)     (dBμV/m)       59.64     -3.51     56.13     74       45.18     -3.51     41.67     54       56.99     -0.82     56.17     74       39.41     -0.82     38.59     54	(dBμV)     (dB)     (dBμV/m)     (dBμV/m)     (dBμV/m)       59.64     -3.51     56.13     74     -17.87       45.18     -3.51     41.67     54     -12.33       56.99     -0.82     56.17     74     -17.83       39.41     -0.82     38.59     54     -15.41

#### HIGH CH9 (802.11n/H40 Mode)/2452 Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
4904	60.28	-3.43	56.85	74	-17.15	peak
4904	46.73	-3.43	43.3	54	-10.7	AVG
7356	55.15	-0.75	54.4	74	-19.6	peak
7356	40.44	-0.75	39.69	54	-14.31	AVG

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

#### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
4904	60.02	-3.43	56.59	74	-17.41	peak
4904	46.81	-3.43	43.38	54	-10.62	AVG
7356	55.66	-0.75	54.91	74	-19.09	peak
7356	38.17	-0.75	37.42	54	-16.58	AVG

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

#### Remark:

- (1) Measuring frequencies from 1 GHz to the 25 GHz。
- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) \* denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (4) Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.
- (6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

Page 29 of 72 Report No.: UNI170405078-E

### **5 BAND EDGE**

#### 5.1 Limits

Please refer section 15.247

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

### 5.2 Test Procedure

The band edge compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW to 100KHz and VBM to 300KHz to measure the peak field strength and set RBW to 1MHz and VBW to 10Hz to measure the average radiated field strength. The conducted RF band edge was measured by using a spectrum analyzer. Set span wide enough to capture the highest in-band emission and the emission at the band edge. Set RBW to 100 KHz and VBW to 300 KHz, to measure the conducted peak band edge.

#### 5.3 Test Result

#### **PASS**

Detailed information please see the following page.

Radiated Band Edge Test: Operation Mode: 802.11b Mode TX CH Low (2412MHz)

### Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type		
2390	54.02	-5.81	48.21	74	-25.79	peak		
2390	1	-5.81	1	54	1	AVG		
2399	62.18	-5.84	56.34	74	-17.66	peak		
2399	47.64	-5.84	41.8	54	-12.2	AVG		
Remark: Factor	Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.							

### Vertical:

Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
53.45	-5.81	47.64	74	-26.36	peak
1	-5.81	1	54	1	AVG
61.27	-5.84	55.43	74	-18.57	peak
45.56	-5.84	39.72	54	-14.28	AVG
	(dBµV) 53.45 / 61.27	(dBµV) (dB) 53.45 -5.81 / -5.81 61.27 -5.84	(dBμV)     (dB)     (dBμV/m)       53.45     -5.81     47.64       /     -5.81     /       61.27     -5.84     55.43	(dBμV)     (dB)     (dBμV/m)     (dBμV/m)       53.45     -5.81     47.64     74       /     -5.81     /     54       61.27     -5.84     55.43     74	(dBμV)     (dB)     (dBμV/m)     (dBμV/m)     (dBμV/m)       53.45     -5.81     47.64     74     -26.36       /     -5.81     /     54     /       61.27     -5.84     55.43     74     -18.57

Operation Mode: TX CH High (2462MHz)

### Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	- Detector Type		
2483.5	55.83	-5.65	50.18	74	-23.82	peak		
2483.5	1	-5.65	1	54	1	AVG		
D . E .								

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

### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotoctor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	- Detector Type
2483.5	53.75	-5.65	48.1	74	-25.9	peak
2483.5	1	-5.65	1	54	1	AVG

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

Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.

# Operation Mode: 802.11g Mode TX CH Low (2412MHz)

# Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type		
2390	54.69	-5.81	48.88	74	-25.12	peak		
2390	1	-5.81	1	54	1	AVG		
2399	60.72	-5.84	54.88	74	-19.12	peak		
2399	45.44	-5.84	39.6	54	-14.4	AVG		
Remark: Factor	Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.							

### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
2390	53.08	-5.81	47.27	74	-26.73	peak
2390	1	-5.81	1	54	1	AVG
2399	62.65	-5.84	56.81	74	-17.19	peak
2399	46.43	-5.84	40.59	54	-13.41	AVG

Operation Mode: TX CH High (2462MHz)

### Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	- Detector Type		
2483.5	54.33	-5.65	48.68	74	-25.32	peak		
2483.5	1	-5.65	1	54	1	AVG		
Remark: Factor	Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier							

### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotootor Typo
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
2483.5	53.16	-5.65	47.51	74	-26.49	peak
2483.5	1	-5.65	1	54	1	AVG

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

Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Operation Mode: 802.11n/H20 Mode TX CH Low (2412MHz)

### Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type	
2390	54.49	-5.81	48.68	74	-25.32	peak	
2390	1	-5.81	1	54	1	AVG	
2399	60.98	-5.84	55.14	74	-18.86	peak	
2399	45.26	-5.84	39.42	54	-14.58	AVG	
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.							

### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type	
2390	52.32	-5.81	46.51	74	-27.49	peak	
2390	1	-5.81	1	54	1	AVG	
2399	61.17	-5.84	55.33	74	-18.67	peak	
2399	46.34	-5.84	40.5	54	-13.5	AVG	
Powersky Forten - Antonino Forten y Cable Loss - Dra complifier							

Operation Mode: TX CH High (2462MHz)

### Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Dotootor Typo		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type		
2483.5	54.64	-5.65	48.99	74	-25.01	peak		
2483.5 / -5.65 / 54 / AVG								
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.								

### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
2483.5	53.19	-5.65	47.54	74	-26.46	peak
2483.5	1	-5.65	1	54	1	AVG

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

Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.

# Operation Mode: 802.11n/H40 Mode TX CH Low (2422MHz)

### Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type	
2390	54.13	-5.81	48.32	74	-25.68	peak	
2390	1	-5.81	1	54	1	AVG	
2399	60.72	-5.84	54.88	74	-19.12	peak	
2399	44.51	-5.84	38.67	54	-15.33	AVG	
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.							

### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
2390	53.21	-5.81	47.4	74	-26.6	peak
2390	1	-5.81	1	54	1	AVG
2399	60.13	-5.84	54.29	74	-19.71	peak
2399	44.95	-5.84	39.11	54	-14.89	AVG

# Operation Mode: TX CH High (2452MHz)

### Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
2483.5	53.67	-5.65	48.02	74	-25.98	peak
2483.5	1	-5.65	1	54	1	AVG
Remark: Factor	Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.					

### Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
2483.5	54.86	-5.65	49.21	74	-24.79	peak
2483.5	1	-5.65	1	54	1	AVG

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

Remark: All the other emissions not reported were too low to read and deemed to comply with FCC limit.

### 6 OCCUPIED BANDWIDTH MEASUREMENT

### 6.1 Test Limit

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

### 6.2 Test Procedure

- 1. The EUT was placed on a turn table which is 0.8m above ground plane.
- 2. Set EUT as normal operation.
- 3. Based on FCC Part15 C Section 15.247: RBW= 100KHz. VBW= 300 KHz.
- 4. The useful radiated emission from the EUT was detected by the spectrum analyser with peak detector.

### 6.3 Measurement Equipment Used

Same as Radiated Emission Measurement

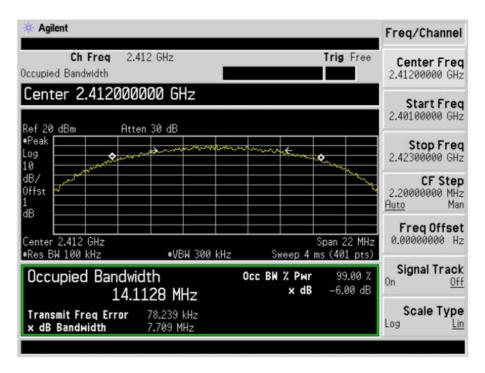
### 6.4 Test Result

#### **PASS**

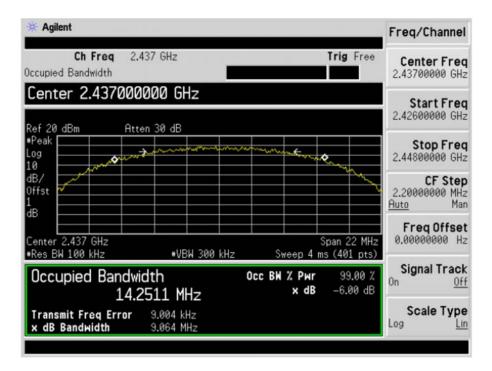
All the test modes completed for test.

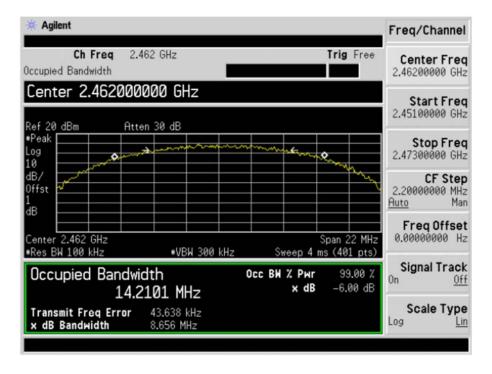
TX 802.11b Mode					
Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result		
2412 MHz	7.709	>=500KHz	PASS		
2437 MHz	9.064	>=500KHz	PASS		
2462 MHz	8.656	>=500KHz	PASS		

CH: 2412MHz



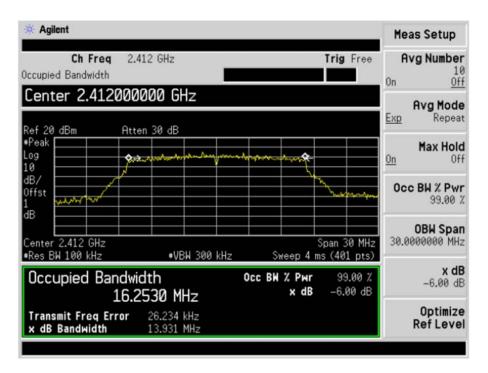
#### CH: 2437MHz



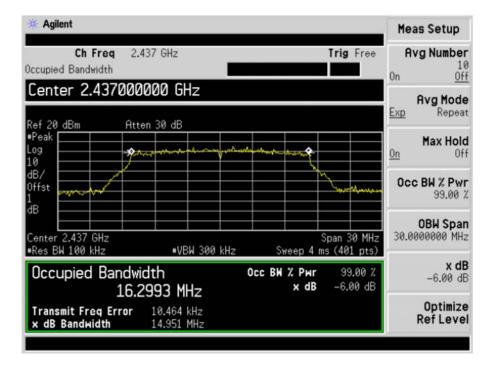


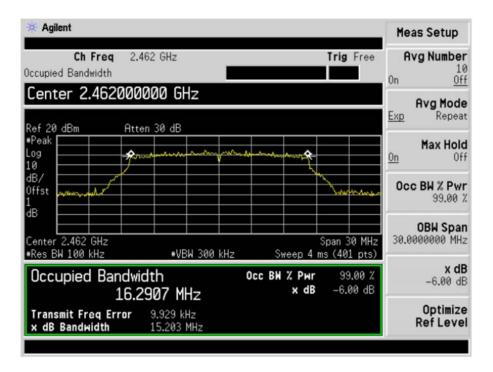
TX 802.11g Mode					
Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result		
2412 MHz	13.931	>=500KHz	PASS		
2437 MHz	14.951	>=500KHz	PASS		
2462 MHz	15.203	>=500KHz	PASS		

CH: 2412MHz



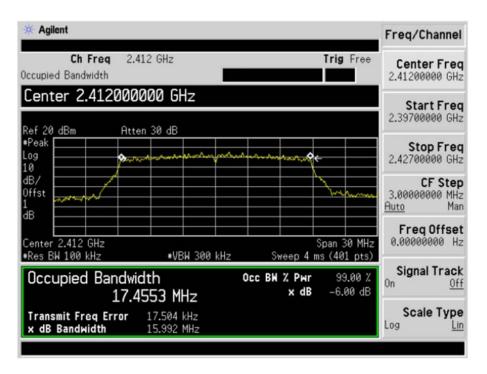
CH: 2437MHz



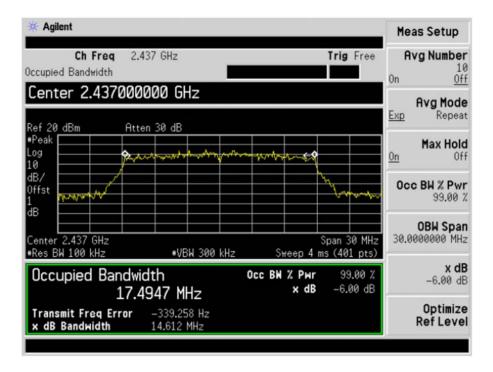


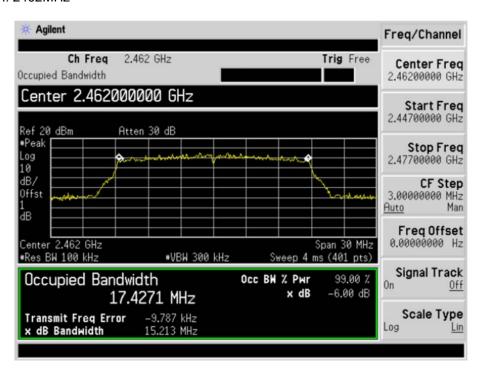
TX 802.11n/HT20 Mode					
Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result		
2412 MHz	15.992	>=500KHz	PASS		
2437 MHz	14,612	>=500KHz	PASS		
2462 MHz	15.213	>=500KHz	PASS		

CH: 2412MHz

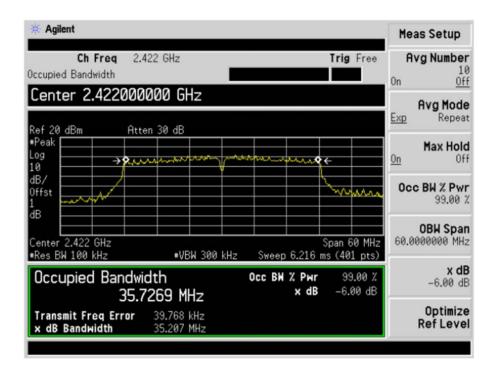


#### CH: 2437MHz

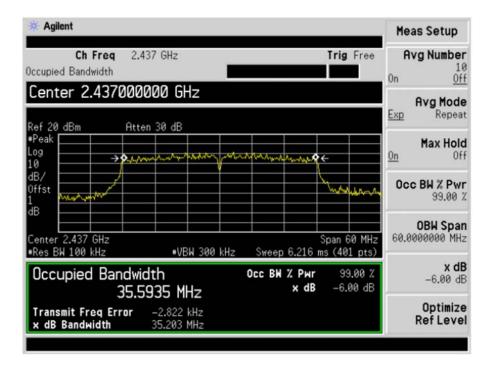


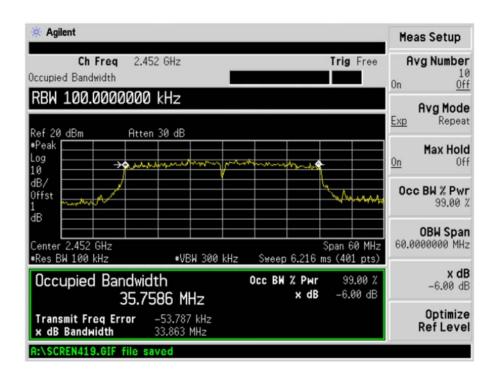


TX 802.11n/HT40 Mode				
Frequency	6dB Bandwidth (MHz)	Channel Separation (MHz)	Result	
2422 MHz	35.207	>=500KHz	PASS	
2437 MHz	35.203	>=500KHz	PASS	
2452 MHz	33.863	>=500KHz	PASS	



CH: 2437MHz





### 7 POWER SPECTRAL DENSITY TEST

### 7.1 Test Limit

FCC Part15 (15.247) , Subpart C					
Section	Test Item	Limit	Frequency Range (MHz)	Result	
15.247	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS	

### 7.2 Test Procedure

- 1. The EUT was placed on a turn table which is 0.8m above ground plane.
- 2. Set EUT as normal operation.
- 3. Based on FCC Part15 C Section 15.247: RBW= 3KHz. VBW= 10 KHz, Span=3MHz.
- 4. The useful radiated emission from the EUT was detected by the spectrum analyser with peak detector.

### 7.3 Measurement Equipment Used

Same as Radiated Emission Measurement

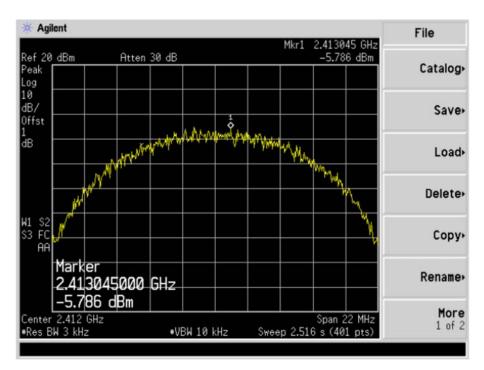
### 7.4 Test Result

#### **PASS**

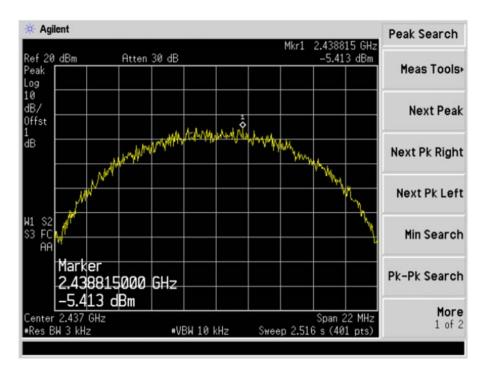
All the test modes completed for test.

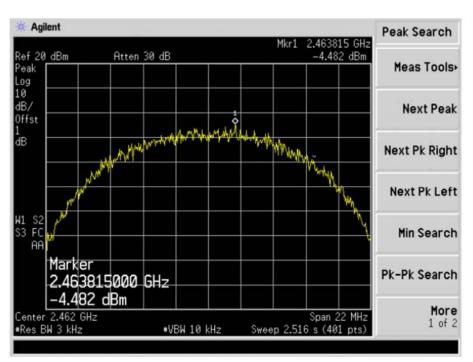
TX 802.11b Mode					
Frequency	Power Density (dBm)	Limit (dBm)	Result		
2412 MHz	-5.786	8	PASS		
2437 MHz	-5.413	8	PASS		
2462 MHz	-4.482	8	PASS		

CH: 2412MHz



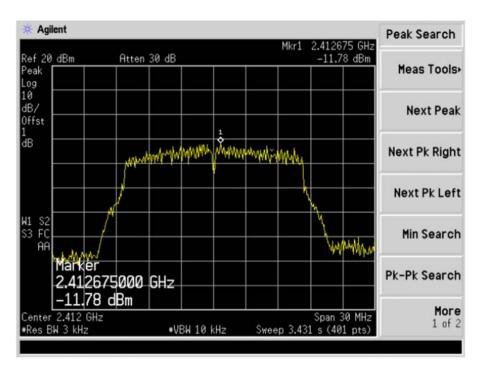
CH: 2437MHz



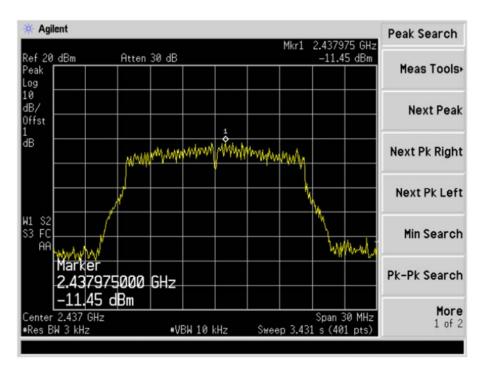


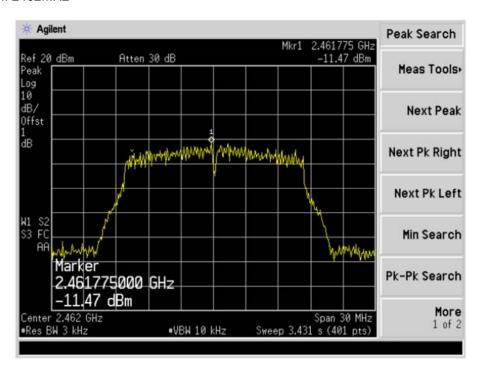
TX 802.11g Mode					
Frequency	Power Density (dBm)	Limit (dBm)	Result		
2412 MHz	-11.78	8	PASS		
2437 MHz	-11.45	8	PASS		
2462 MHz	-11.47	8	PASS		

CH: 2412MHz



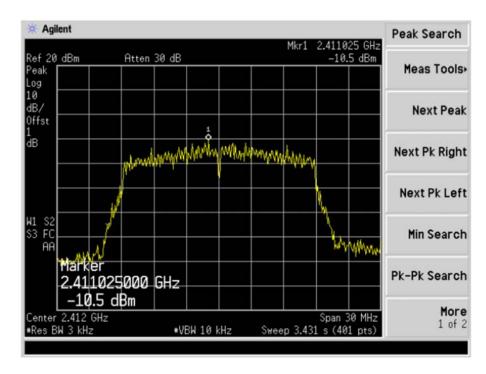
CH: 2437MHz



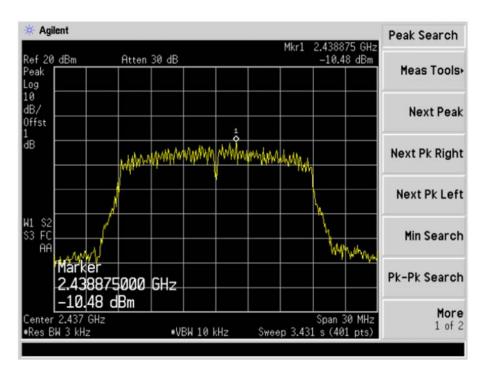


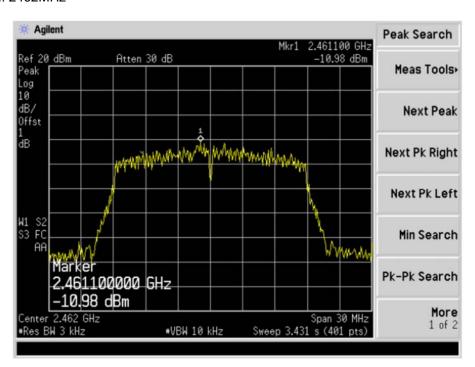
TX 802.11n/HT20 Mode					
Frequency	Power Density (dBm)	Limit (dBm)	Result		
2412 MHz	-10.50	8	PASS		
2437 MHz	-10.48	8	PASS		
2462 MHz	-10.98	8	PASS		

CH: 2412MHz



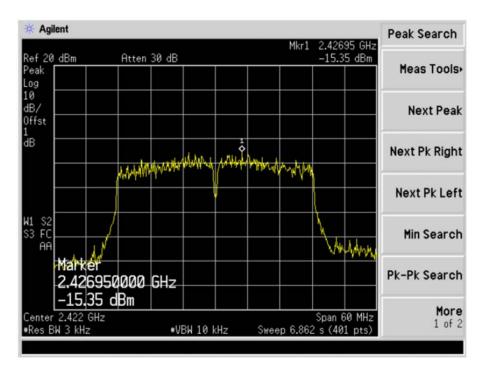
CH: 2437MHz



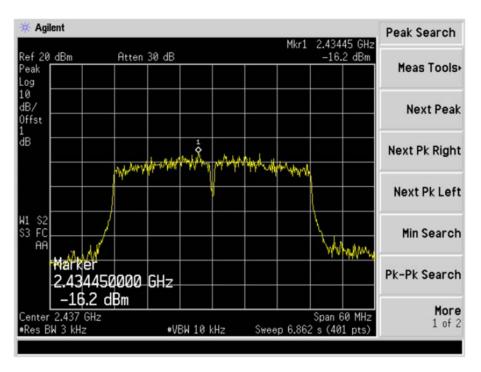


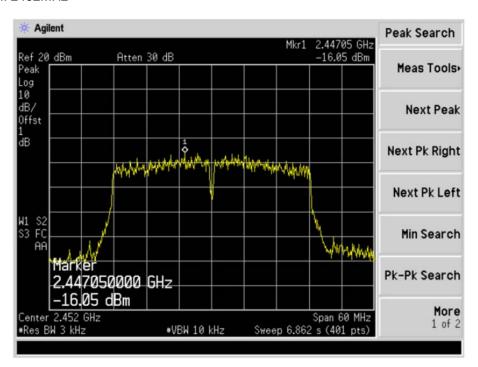
TX 802.11n/HT40 Mode					
Frequency	Power Density (dBm)	Limit (dBm)	Result		
2422 MHz	-15.35	8	PASS		
2437 MHz	-16.20	8	PASS		
2452 MHz	-16.05	8	PASS		

CH: 2422MHz



CH: 2437MHz





### **8 PEAK OUTPUT POWER TEST**

### 8.1 Test Limit

FCC Part15 (15.247) , Subpart C					
Section	Test Item	Limit	Frequency Range (MHz)	Result	
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS	

### 8.2 Test Procedure

- 1. The EUT was placed on a turn table which is 0.8m above ground plane.
- 2. The EUT was directly connected to the Power meter.

### 8.3 Measurement Equipment Used

Same as Radiated Emission Measurement

### 8.4 Test Result

**PASS**All the test modes completed for test.

TX 802.11b Mode					
Test	Frequency	Maximum Peak Conducted Output Power	LIMIT		
Channe	(MHz)	(dBm)	dBm		
CH01	2412	17.27	30		
CH06	2437	17.13	30		
CH11	2462	17.05	30		
TX 802.11g Mode					
CH01	2412	16.84	30		
CH06	2437	16.61	30		
CH11	2462	16.36	30		
TX 802.11n20 Mode					
CH01	2412	14.75	30		
CH06	2437	14.32	30		
CH11	2462	14.19	30		
TX 802.11n40 Mode					
CH03	2422	12.31	30		
CH06	2437	12.08	30		
CH09	2452	11.43	30		

Page 57 of 72 Report No.: UNI170405078-E

#### 9 Out of Band Emissions

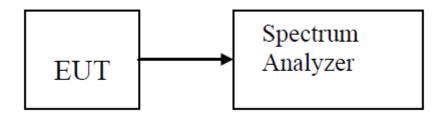
#### 9.1 Test Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

#### 9.2 Test Procedure

- 1. The EUT was placed on a turn table which is 0.8m above ground plane.
- 2. Set EUT as TX operation and connect directly to the spectrum analyzer.
- 3. Set spectrum analyzer RBW= 100KHz. VBW= 300 KHz
- 4. Set detected by the spectrum analyser with peak detector.

#### 9.3 Test Setup

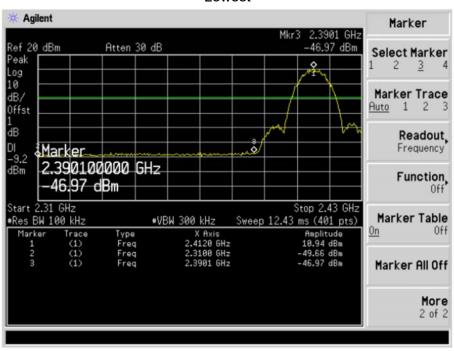


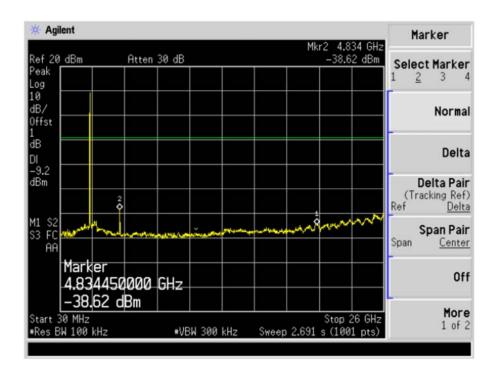
### 7.4 Test Result

#### **PASS**

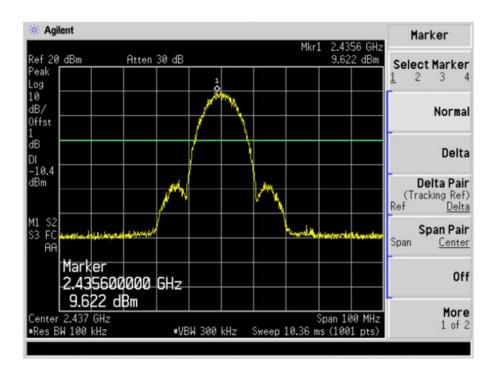
All the test modes completed for test.

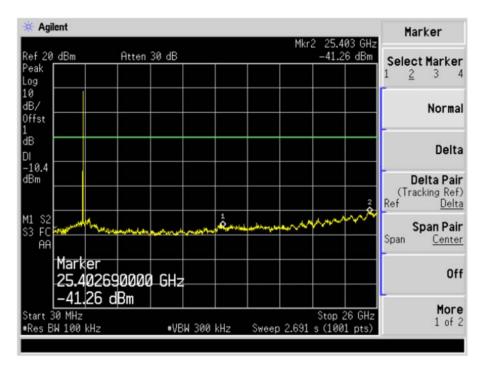
#### Lowest



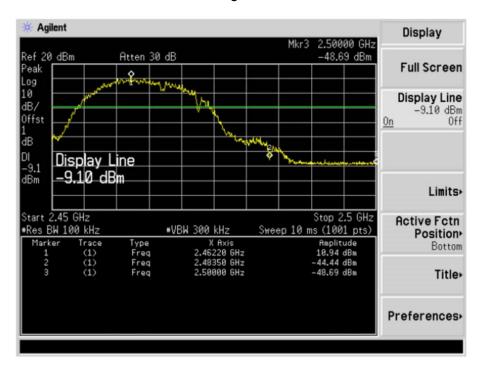


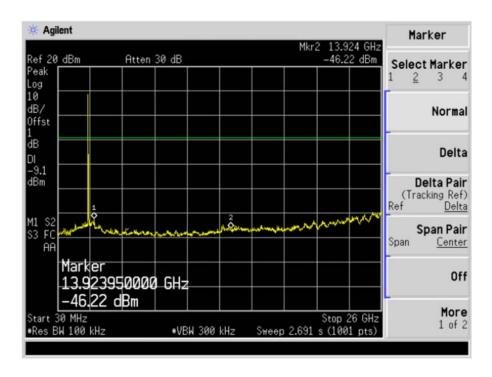
Middle



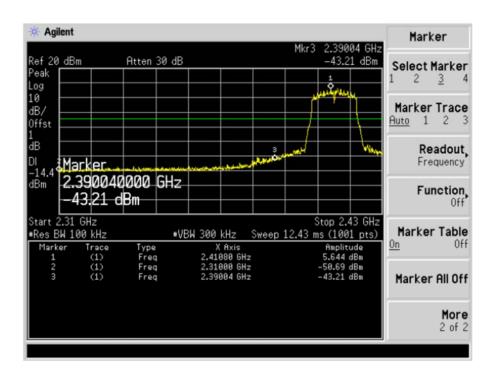


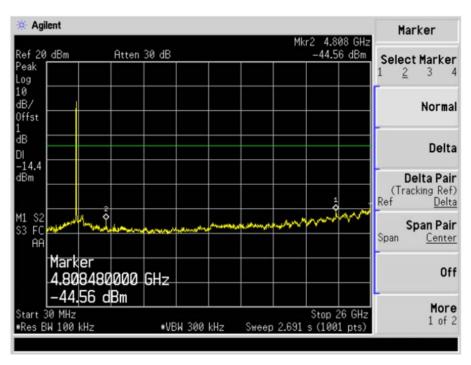
Highest



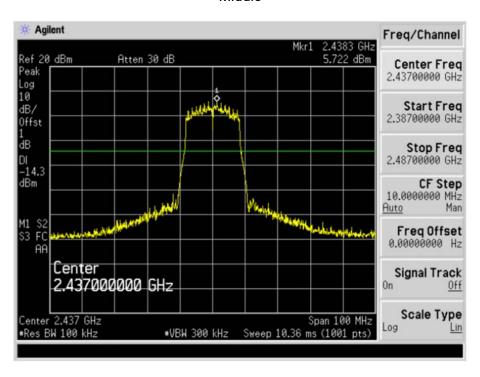


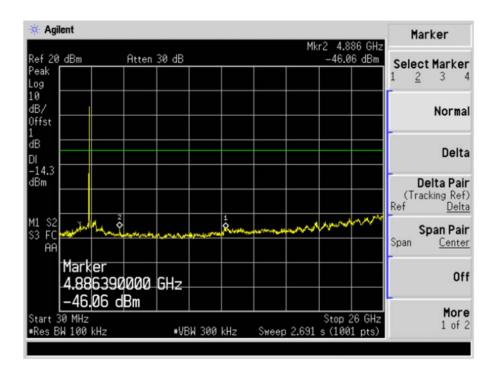
#### Lowest



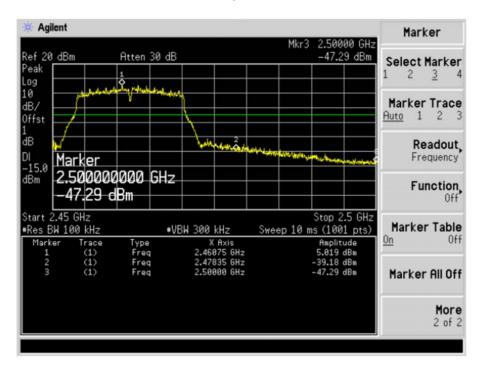


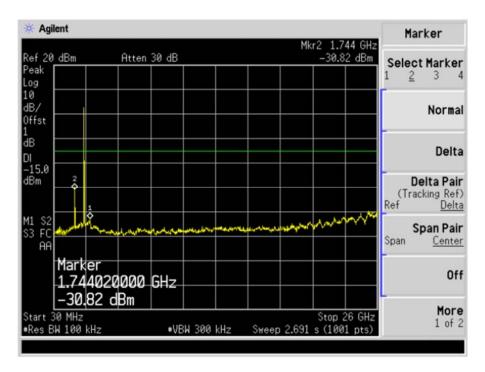
#### Middle





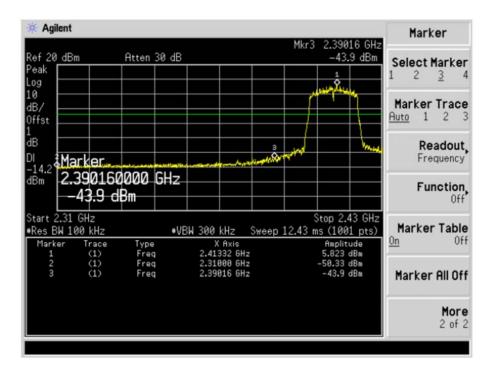
Highest

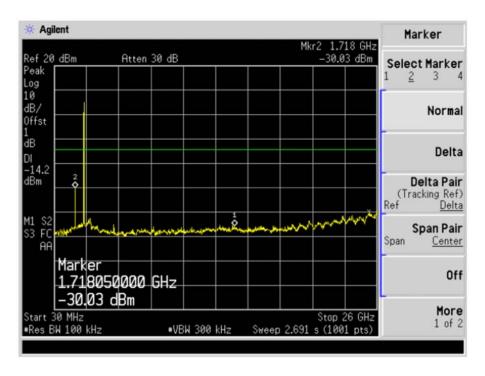




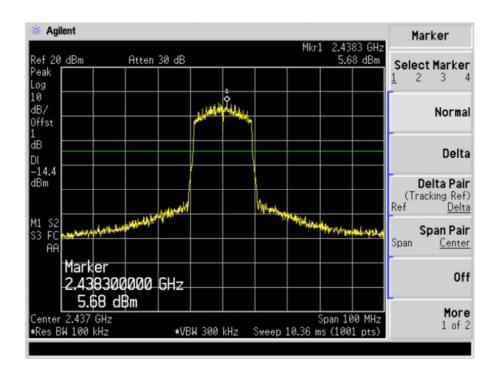
#### 802.11n-HT20

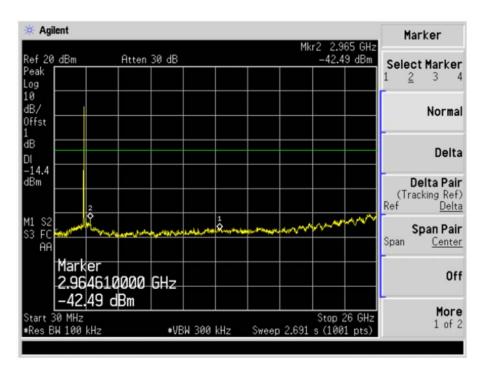
#### Lowest



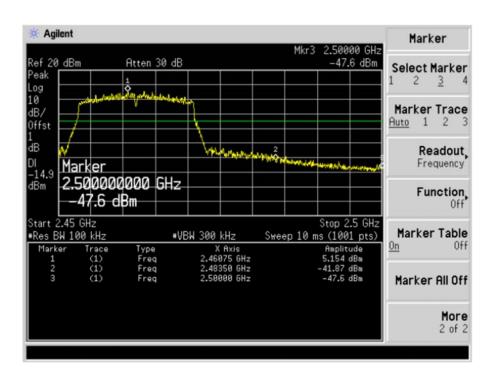


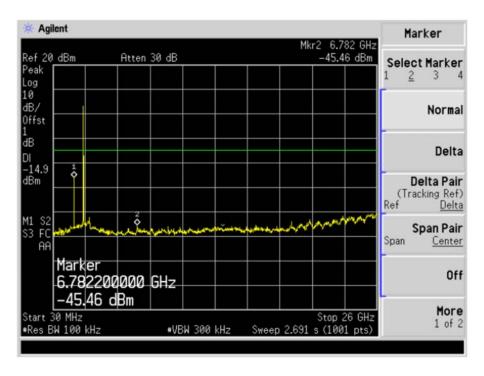
Middle





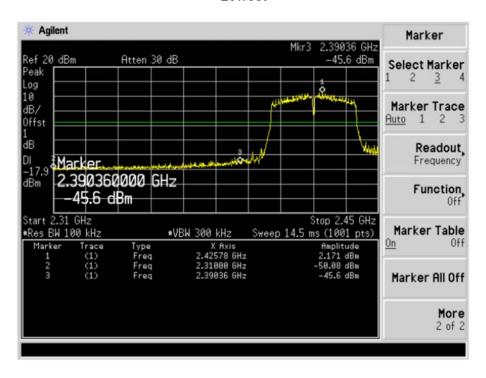
Highest

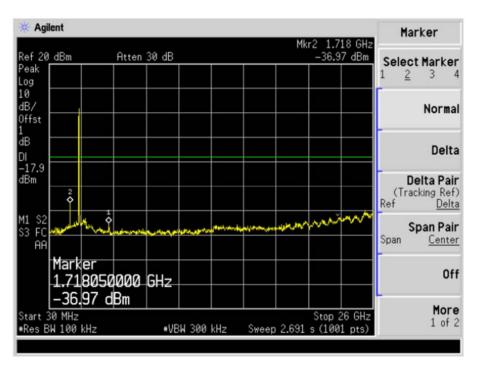




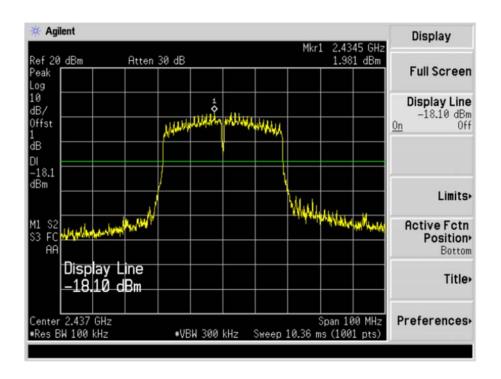
### 802.11n-HT40

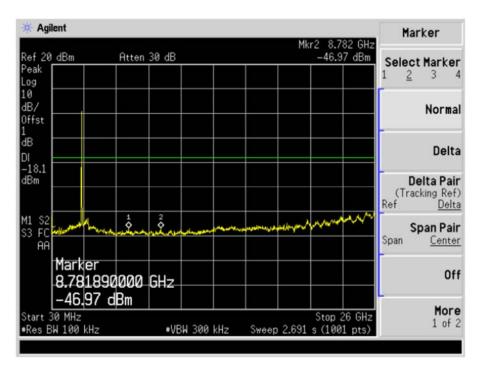
#### Lowest



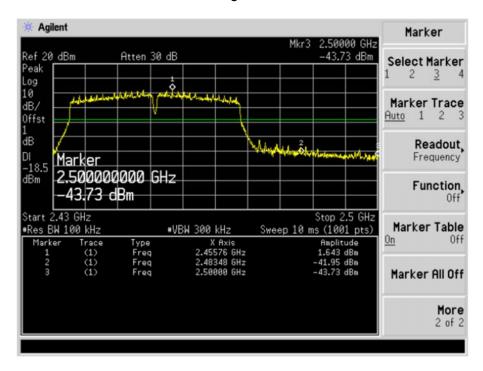


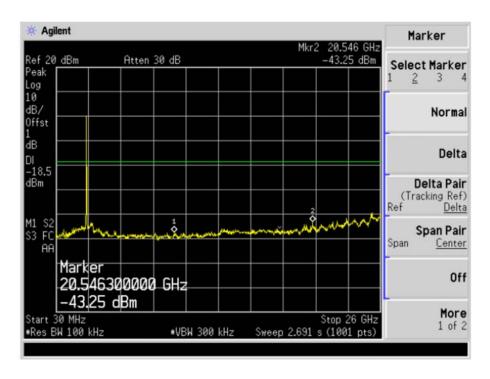
Middle





Highest





### 10 ANTENNA REQUIREMENT

### **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 15.249, if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

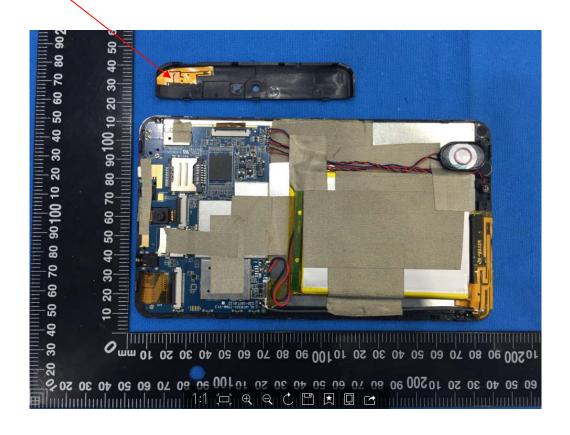
### Refer to statement below for compliance.

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

#### **Antenna Connected Construction**

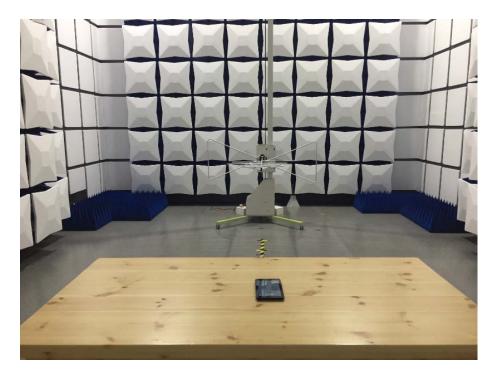
The antenna used in this product is a Integral Antenna, The directional gains of antenna used for transmitting is 1dBi.

### **ANTENNA**



# 11 PHOTOGRAPH OF TEST

# 11.1 Radiated Emission





# 11.2 Conducted Emission

