

# **FCC Test Report**

Product Name	Mobile Medical Assistant Tablet		
Model No	MP3		
FCC ID.	RZ5-MP3		

Applicant	ONYX Healthcare Inc.
Address	2F,No.135,lane235,Pao Chiao Rd.Hsin-Tien Dist,New
	Taipei City, Taiwan, ROC.

Date of Receipt	May 31, 2017
Issue Date	July 07, 2017
Report No.	1760064R-RFUSP71V00
Report Version	V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.

Report No.: 1760064R-RFUSP71V00



# Test Report

Issue Date: July 07, 2017

Report No.: 1760064R-RFUSP71V00



Product Name	roduct Name Mobile Medical Assistant Tablet		
Applicant	ONYX Healthcare Inc.		
Address	2F,No.135,lane235,Pao Chiao Rd.Hsin-Tien Dist,New Taipei		
	City, Taiwan, ROC.		
Manufacturer	ONYX Healthcare Inc.		
Model No.	MP3		
FCC ID.	RZ5-MP3		
EUT Rated Voltage	AC 100-240V, 50/60Hz		
EUT Test Voltage	AC 120V/60Hz		
Trade Name	medDV		
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2016		
	ANSI C63.4: 2014, ANSI C63.10: 2013		
	KDB 558074 D01 DTS Meas Guidance v04		
Test Result	Complied		

Documented By	:	Gente Chang
		( Senior Adm. Specialist / Genie Chang )
Tested By	:	Kerin Liu
		( Engineer / Kevin Liu )
Approved By	:	Hand S
		( Director / Vincent Lin )

Page: 2 of 93



# TABLE OF CONTENTS

De	scription	Page
1.	GENERAL INFORMATION	5
1.1.	EUT Description.	5
1.2.	Operational Description	7
1.3.	Tested System Details	
1.4.	Configuration of Tested System	
1.5.	EUT Exercise Software	
1.6.	Test Facility	
1.7.	List of Test Item and Equipment	
2.	Conducted Emission	11
2.1.	Test Setup	11
2.2.	Limits	11
2.3.	Test Procedure	
2.4.	Uncertainty	
2.5.	Test Result of Conducted Emission	
3.	Peak Power Output	16
3.1.	Test Setup	16
3.2.	Limits	16
3.3.	Test Procedure	16
3.4.	Uncertainty	16
3.5.	Test Result of Peak Power Output	17
4.	Radiated Emission	21
4.1.	Test Setup	21
4.2.	Limits	22
4.3.	Test Procedure	22
4.4.	Uncertainty	22
4.5.	Test Result of Radiated Emission	23
5.	RF antenna conducted test	40
5.1.	Test Setup	40
5.2.	Limits	
5.3.	Test Procedure	
5.4.	Uncertainty	
5.5.	Test Result of RF antenna conducted test	41
6.	Band Edge	47
6.1.	Test Setup	47
6.2.	Limits	
6.3.	Test Procedure	
6.4.	Uncertainty	48
6.5.	Test Result of Band Edge	49
7.	6dB Bandwidth	65
7.1.	Test Setup	65
7.2.	Limits	65

D	D	E	K	R	4

r		DEIXIXA
7.3.	Test Procedure	65
7.4.	Uncertainty	65
7.5.	Test Result of 6dB Bandwidth	66
8.	Power Density	78
8.1.	Test Setup	78
8.2.	Limits	78
8.3.	Test Procedure	78
8.4.	Uncertainty	78
8.5.	Test Result of Power Density	79
9.	EMI Reduction Method During Compliance Testing	91

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs



# 1. GENERAL INFORMATION

# 1.1. EUT Description

Product Name	Mobile Medical Assistant Tablet
Trade Name	medDV
Model No.	MP3
FCC ID.	RZ5-MP3
Frequency Range	2412-2462MHz for 802.11b/g/n-20BW, 2422-2452MHz for 802.11n-40BW
Number of Channels	802.11b/g/n-20MHz: 11, n-40MHz: 7
Data Speed	802.11b: 1-11Mbps, 802.11g: 6-54Mbps, 802.11n: up to 150Mbps
Type of Modulation	802.11b:DSSS (DBPSK, DQPSK, CCK)
	802.11g/n:OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type	PIFA Antenna
Antenna Gain	Refer to the table "Antenna List"
Channel Control	Auto
Docking No.	OPM-T016
Power Adapter	MFR: APAPTER TECH, M/N: ATM090T-P120
	Input: AC 100-240V, 50-60Hz, 5A
	Output: DC 12V, 7A
	Cable Out: Shielded, 1.8m, with one ferrite core bonded.

# **Antenna List:**

]	No.	Manufacturer	Part No.	Antenna Type	Peak Gain
	1 ARISTOTLE		OTLE RFA-25-AP152-70B340R (Main)		3.93dBi for 2.4 GHz
		ENTERPRISES	RFA-25-AP152-70-285L (Aux)		
		INC.			

# Note:

1. The antenna of EUT conforms to FCC 15.203.



# 802.11b/g/n-20MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 01:	2412 MHz	Channel 02:	2417 MHz	Channel 03:	2422 MHz	Channel 04:	2427 MHz
Channel 05:	2432 MHz	Channel 06:	2437 MHz	Channel 07:	2442 MHz	Channel 08:	2447 MHz
Channel 00.	2452 MHz	Channel 10:	2457 MHz	Channel 11.	2462 MHz		

## 802.11n-40MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 03:	2422 MHz	Channel 04:	2427 MHz	Channel 05:	2432 MHz	Channel 06:	2437 MHz
Channel 07:	2442 MHz	Channel 08:	2447 MHz	Channel 09:	2452 MHz		

### Note:

- 1. The EUT is a Mobile Medical Assistant Tablet with a built-in WLAN transceiver.
- 2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
- 3. At result of pretests, module supports dual-channel transmission, only the worst case is shown in the report.
- 4. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps \ 802.11g is 6Mbps \ 802.11n(20M-BW) is 7.2Mbps and 802.11n(40M-BW) is 15Mbps)
- 5. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)	
	Mode 2: Transmit (802.11g 6Mbps)	
Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)		
	Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)	
	Mode 5: Charger Mode	

Page: 6 of 93



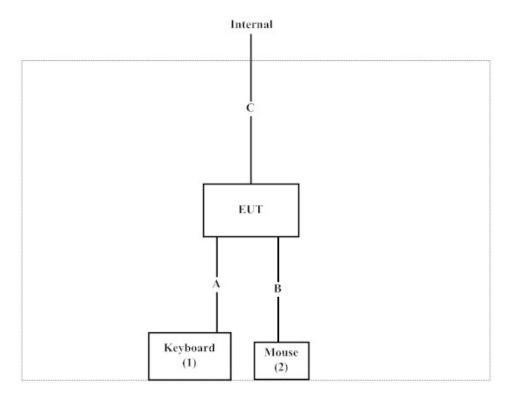
# 1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Keyboard	Logitech	K120	N/A	N/A
2	Mouse	Logitech	U0026	N/A	N/A

Signal Cable Type		Signal cable Description
A	USB Keyboard Cable	Non-shielded, 1.8m
В	USB Mouse Cable	Non-shielded, 1.8m
C	LAN Cable	Non-shielded, 1.8m

# 1.4. Configuration of Tested System



# 1.5. EUT Exercise Software

- 1. Setup the EUT as shown in Section 1.4.
- 2. Execute software "Atheros Radio Test 2 V4.4" on the EUT.
- 3. Configure the test mode, the test channel, and the data rate.
- 4. Press "OK" to start the continuous Transmit.
- 5. Verify that the EUT works properly.



# 1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site:

http://www.dekra.com.tw/english/about/certificates.aspx?bval=5

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: <a href="http://www.dekra.com.tw/index\_en">http://www.dekra.com.tw/index\_en</a>

Site Description: Accredited by TAF

Accredited Number: 3023

Site Name: DEKRA Testing and Certification Co., Ltd.
Site Address: No.159, Sec. 2, Wenhua 1st Rd., Linkou Dist.,

New Taipei City 24457, Taiwan.

TEL: 886-2-2602-7968 / FAX: 866-2-2602-3286

E-Mail: info.tw@dekra.com

FCC Accreditation Number: TW1014



# 1.7. List of Test Item and Equipment

### For Conduction measurements /ASR1

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	EMI Test Receiver	R&S	ESR7	161601	2017.01.06	2018.01.05
X	Two-Line V-Network	R&S	ENV216	101306	2017.02.16	2018.02.15
X	Two-Line V-Network	R&S	ENV216	101307	2017.03.17	2018.03.16
X	Coaxial Cable	Quietek	RG400_BNC	RF001	2017.05.24	2018.05.23

### Note:

- 1. All equipments are calibrated every one year.
- 2. The test instruments marked with "X" are used to measure the final test results.
- 3. Test Software version: QuieTek EMI 2.0 V2.1.113

### For Conducted measurements /ASR4

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Spectrum Analyzer	R&S	FSV30	103464	2017.01.09	2018.01.08
X	Power Meter	Anritsu	ML2496A	1548003	2016.12.15	2017.12.14
X	Power Sensor	Anritsu	MA2411B	1531024	2016.12.15	2017.12.14
X	Power Sensor	Anritsu	MA2411B	1531025	2016.12.15	2017.12.14
	Bluetooth Tester	R&S	CBT	101238	2017.01.03	2018.01.02

#### Note:

- 1. All equipments are calibrated every one year.
- 2. The test instruments marked with "X" are used to measure the final test results.
- 3. Test Software version : QuieTek Conduction Test System V8.0.110

# For Radiated measurements /ACB1

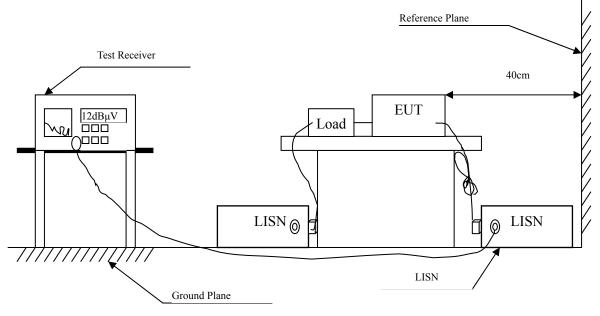
	Equipment	Manufacturer	Model No.	Serial No.	Cali. Data	Due. Data
X	Loop Antenna	A.H.	SAS-562B	272	2016.03.18	2018.03.17
X	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-674	2017.02.09	2018.02.08
X	Horn Antenna	ETS-Lindgren	3117	00203800	2016.10.13	2017.10.12
X	Horn Antenna	Com-Power	AH-840	101087	2017.05.24	2018.05.23
X	Pre-Amplifier	EMCI	EMC001330	980316	2017.05.14	2018.05.13
X	Pre-Amplifier	EMCI	EMC051835SE	980311	2017.05.15	2018.05.14
X	Pre-Amplifier	EMCI	EMC05820SE	980310	2017.05.15	2018.05.14
X	Pre-Amplifier	EMCI	EMC184045SE	980314	2017.05.17	2018.05.16
X	Filter	MICRO TRONICS	BRM50702	G251	2016.08.11	2017.08.10
	Filter	MICRO TRONICS	BRM50716	G188	2016.08.11	2017.08.10
X	EMI Test Receiver	R&S	ESR7	101602	2016.12.15	2017.12.14
X	Spectrum Analyzer	R&S	FSV40	101149	2017.01.24	2018.01.23
X	Coaxial Cable	SUHNER	SUCOFLEX 106	RF002	2017.05.25	2018.05.24
X	Mircoflex Cable	HUBER SUHNER	SUCOFLEX 102	MY3381/2	2016.08.11	2017.08.10

- 1. All equipments are calibrated every one year.
- 2. The test instruments marked with "X" are used to measure the final test results.
- 3. Test Software version : QuieTek EMI 2.0 V2.1.113



## 2. Conducted Emission

# 2.1. Test Setup



## 2.2. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBμV) Limit					
Frequency	Limits				
MHz	QP	AVG			
0.15 - 0.50	66-56	56-46			
0.50-5.0	56	46			
5.0 - 30	60	50			

### 2.3. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

# 2.4. Uncertainty

± 2.35 dB



# 2.5. Test Result of Conducted Emission

Product : Mobile Medical Assistant Tablet

Test Item : Conducted Emission Test

Power Line : Line 1

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Test Date : 2017/06/15

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	$dB\mu V$	dB	dBμV
Line 1					
Quasi-Peak					
0.161	9.704	38.730	48.434	-17.252	65.686
0.406	9.718	11.397	21.115	-37.571	58.686
0.481	9.733	6.259	15.993	-40.550	56.543
4.987	9.893	10.533	20.427	-35.573	56.000
18.253	10.125	18.027	28.152	-31.848	60.000
24.576	10.172	32.440	42.612	-17.388	60.000
Average					
0.161	9.704	14.059	23.763	-31.923	55.686
0.406	9.718	-4.215	5.503	-43.183	48.686
0.481	9.733	5.742	15.476	-31.067	46.543
4.987	9.893	4.802	14.696	-31.304	46.000
18.253	10.125	15.198	25.323	-24.677	50.000
24.576	10.172	31.128	41.300	-8.700	50.000

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor



Test Item : Conducted Emission Test

Power Line : Line 2

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437MHz)

Test Date : 2017/06/15

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	dΒμV	dB	dΒμV
Line 2					
Quasi-Peak					
0.161	9.696	38.825	48.522	-17.164	65.686
0.391	9.709	25.414	35.123	-23.991	59.114
0.825	9.751	8.198	17.949	-38.051	56.000
4.666	9.874	9.249	19.124	-36.876	56.000
18.105	10.127	13.455	23.582	-36.418	60.000
24.576	10.212	32.918	43.130	-16.870	60.000
Average					
0.161	9.696	11.862	21.559	-34.127	55.686
0.391	9.709	25.112	34.821	-14.293	49.114
0.825	9.751	-3.425	6.327	-39.673	46.000
4.666	9.874	1.715	11.589	-34.411	46.000
18.105	10.127	8.105	18.232	-31.768	50.000
24.576	10.212	31.692	41.904	-8.096	50.000

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. " means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor



Test Item : Conducted Emission Test

Power Line : Line 1

Test Mode : Mode 5: Charger Mode

Test Date : 2017/06/15

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	dΒμV	dB	$dB\mu V$
Line 1					
Quasi-Peak					
0.152	9.707	36.184	45.892	-20.051	65.943
0.393	9.716	23.513	33.228	-25.829	59.057
0.683	9.741	16.182	25.924	-30.076	56.000
5.091	9.882	17.040	26.922	-33.078	60.000
8.187	9.963	18.704	28.668	-31.332	60.000
24.576	10.172	24.559	34.731	-25.269	60.000
Average					
0.152	9.707	20.252	29.959	-25.984	55.943
0.393	9.716	21.929	31.644	-17.413	49.057
0.683	9.741	10.110	19.851	-26.149	46.000
5.091	9.882	10.879	20.761	-29.239	50.000
8.187	9.963	12.551	22.515	-27.485	50.000
24.576	10.172	23.391	33.563	-16.437	50.000

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor



Test Item : Conducted Emission Test

Power Line : Line 2

Test Mode : Mode 5: Charger Mode

Test Date : 2017/06/15

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	dΒμV	dB	$dB\mu V$
Line 2					
Quasi-Peak					
0.152	9.698	39.201	48.899	-17.044	65.943
0.395	9.710	25.342	35.052	-23.948	59.000
0.672	9.738	16.751	26.489	-29.511	56.000
5.215	9.874	19.132	29.006	-30.994	60.000
8.124	9.965	17.984	27.948	-32.052	60.000
24.576	10.212	24.586	34.798	-25.202	60.000
Average					
0.152	9.698	16.802	26.500	-29.443	55.943
0.395	9.710	21.324	31.034	-17.966	49.000
0.672	9.738	10.956	20.694	-25.306	46.000
5.215	9.874	13.474	23.348	-26.652	50.000
8.124	9.965	11.933	21.897	-28.103	50.000
24.576	10.212	23.386	33.598	-16.402	50.000

- 1. All Reading Levels are Quasi-Peak and average value.
- 2. "means the worst emission level.
- 3. Measurement Level = Reading Level + Correct Factor



# 3. Peak Power Output

# 3.1. Test Setup



# 3.2. Limits

The maximum peak power shall be less 1 Watt.

# 3.3. Test Procedure

Tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 section 9.1.3 PKPM1 Peak power meter method.

# 3.4. Uncertainty

±0.86 dB



# 3.5. Test Result of Peak Power Output

Product : Mobile Medical Assistant Tablet

Test Item : Peak Power Output Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Test Date : 2017/06/21

Channal No.	Frequency	For d	•	e Power ata Rate (M	ſbps)	Peak Power	Required	Result	
Channel No (MHz)		1	2	5.5	11	1	Limit	Resuit	
			Measur						
01	2412	15.12	-1	-1	-	17.25	<30dBm	Pass	
06	2437	14.68	14.64	14.57	14.5	17.83	<30dBm	Pass	
11	2462	14.28				17.08	<30dBm	Pass	

Note: Peak Power Output Value = Reading value on power meter + cable loss



Test Item : Peak Power Output Data

Test Mode : Mode 2: Transmit (802.11g 6Mbps)

Test Date : 2017/06/21

Frequen		Average Power Peak For different Data Rate (Mbps) Power								Peak Power	Required	
Channel No	Frequency (MHz)	6	9	12	18	24	36	48	54	6	Limit	Result
		Measurement Level (dBm)										
01	2412	14.28								23.02	<30dBm	Pass
06	2437	14.58	14.51	14.44	14.38	14.31	14.24	14.18	14.11	23.07	<30dBm	Pass
11	2462	14.29		-					!	22.78	<30dBm	Pass

Note: Peak Power Output Value = Reading value on power meter + cable loss



Test Item : Peak Power Output Data

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Test Date : 2017/06/21

### **CHAIN A**

			Average Power									
	Engavener		For different Data Rate (Mbps)							Power	Required	
Channel No	Frequency (MHz)	7.2	14.4	21.7	28.9	43.3	57.8	65	72.2	7.2	Limit	Result
	Measurement Level (dBm)											
01	2412	11.02								21.21	<30dBm	Pass
06	2437	10.65	10.58	10.51	10.44	10.37	10.3	10.23	10.17	20.71	<30dBm	Pass
11	2462	11.87		1	1	1	-		-	21.25	<30dBm	Pass

Note: Peak Power Output Value = Reading value on power meter + cable loss

#### **CHAIN B**

CHAINI												
	Eraguanav	Average Power Peak For different Data Rate (Mbps) Power						Daguirad				
Channel No	Frequency (MHz)	7.2	14.4	21.7	28.9	43.3	57.8	65	72.2	7.2	Required Limit	Result
	Measurement Level (dBm)											
01	2412	12.42								22.54	<30dBm	Pass
06	2437	12.07	12.01	11.94	11.87	11.8	11.74	11.67	11.6	22.01	<30dBm	Pass
11	2462	12.15		1	!				1	22.04	<30dBm	Pass

Note: Peak Power Output Value = Reading value on power meter + cable loss

## **CHAIN A+B**

Channel	Frequency	Data Rata	Chain A Power	Chain B Power	Chain A+B Power	Limit	Result
	(MHz)	(Mbps)	(dBm)	(dBm)	(dBm)	(dBm)	
01	2412	14.4	21.21	22.54	24.94	<30dBm	Pass
06	2437	14.4	20.71	22.01	24.42	<30dBm	Pass
11	2462	14.4	21.25	22.04	24.67	<30dBm	Pass

Note: 1.Peak Power Output Value (dBm) = 10\*LOG (Chain A (mW)+ Chain B (mW))

Page: 19 of 93

<sup>2.</sup> The antennas of the device is less than 4 does not need to calculate directional gain according to document 662911 D01.



Test Item : Peak Power Output Data

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Test Date : 2017/06/21

# **CHAIN A**

		Average Power For different Data Rate (Mbps)							Peak Power	Daguirad		
Channel No	Frequency (MHz)	15	30	45	60	90	120	135	150	15	Required Limit	Result
	Measurement Level (dBm)											
03	2422	10.21	-			-		-	-	21.48	<30dBm	Pass
06	2437	10.77	10.7	10.63	10.57	10.5	10.43	10.38	10.31	21.81	<30dBm	Pass
09	2452	11.02								22.1	<30dBm	Pass

Note: Peak Power Output Value = Reading value on power meter + cable loss

### **CHAIN B**

		Average Power								Peak		
Channel No Frequency (MHz)	For different Data Rate (Mbps)							Power	Required			
	15	30	45	60	90	120	135	150	15	Limit	Result	
		Measurement Level (dBm)										
03	2422	11.68		-			I	I	1	21.57	<30dBm	Pass
06	2437	11.91	11.85	11.78	11.71	11.64	11.57	11.5	11.43	21.87	<30dBm	Pass
09	2452	12.13							-	22.24	<30dBm	Pass

Note: Peak Power Output Value = Reading value on power meter + cable loss

## CHAIN A+B

Channel	Frequency	Data Rata	Chain A Power	Chain B Power	Chain A+B Power	Limit	Result
	(MHz)	(Mbps)	(dBm)	(dBm)	(dBm)	(dBm)	
03	2422	30	21.48	21.57	24.54	<30dBm	Pass
06	2437	30	21.81	21.87	24.85	<30dBm	Pass
09	2452	30	22.10	22.24	25.18	<30dBm	Pass

Note: 1.Peak Power Output Value (dBm) = 10\*LOG (Chain A (mW)+ Chain B (mW))

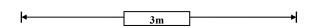
<sup>2.</sup> The antennas of the device is less than 4 does not need to calculate directional gain according to document 662911 D01

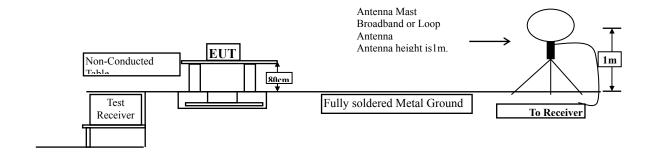


#### 4. **Radiated Emission**

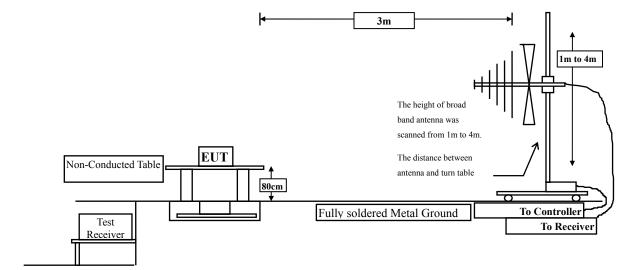
#### 4.1. **Test Setup**

Radiated Emission Under 30MHz

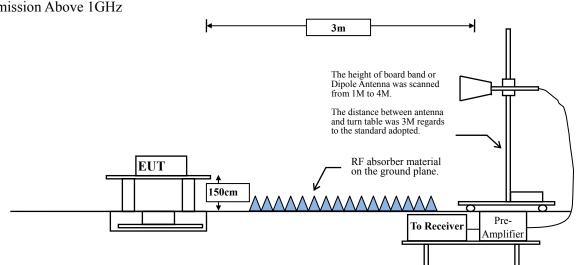




Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



Page: 21 of 93



#### 4.2. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 S	FCC Part 15 Subpart C Paragraph 15.209(a) Limits									
Frequency	Field strength	Measurement distance								
MHz	(microvolts/meter)	(meter)								
0.009-0.490	2400/F(kHz)	300								
0.490-1.705	24000/F(kHz)	30								
1.705-30	30	30								
30-88	100	3								
88-216	150	3								
216-960	200	3								
Above 960	500	3								

Remarks: E field strength  $(dB\mu V/m) = 20 \log E$  field strength (uV/m)

#### 4.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.

## 4.4. Uncertainty

Horizontal:

30-300MHz: ±4.08dB; 300M-1GHz: ±3.86dB; 1-18GHz: ±3.77dB; 18-40GHz: ±3.98dB °

Vertical:

30-300MHz: ±4.81dB; 300M-1GHz: ±3.87dB; 1-18GHz: ±3.83dB; 18-40GHz: ±3.98dB •



### 4.5. Test Result of Radiated Emission

Product : Mobile Medical Assistant Tablet
Test Item : Harmonic Radiated Emission Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Test Date : 2017/06/14

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
<b>Peak Detector:</b>					
4824.000	-6.117	52.750	46.633	-27.367	74.000
7236.000	-3.110	46.850	43.740	-30.260	74.000
9648.000	-0.709	46.390	45.681	-28.319	74.000
Average Detector:					
					54.000
Vertical					
<b>Peak Detector:</b>					
4824.000	-6.117	50.360	44.243	-29.757	74.000
7236.000	-3.110	47.460	44.350	-29.650	74.000
9648.000	-0.709	46.080	45.371	-28.629	74.000
Average Detector:					
					54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)

Test Date : 2017/06/14

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					_
Peak Detector:					
4874.000	-6.080	55.880	49.800	-24.200	74.000
7311.000	-3.045	47.650	44.606	-29.394	74.000
9748.000	-0.536	45.630	45.093	-28.907	74.000
<b>Average Detector:</b>					
					54.000
Vertical					
<b>Peak Detector:</b>					
4874.000	-6.080	52.650	46.570	-27.430	74.000
7311.000	-3.045	46.370	43.326	-30.674	74.000
9748.000	-0.536	45.820	45.283	-28.717	74.000
<b>Average Detector:</b>					
					54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz)

Test Date : 2017/06/14

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	$dB\mu V$	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
Peak Detector:					
4924.000	-6.060	57.580	51.520	-22.480	74.000
7386.000	-2.923	46.320	43.397	-30.603	74.000
9848.000	-0.441	46.170	45.730	-28.270	74.000
Average Detector:					
					54.000
Vertical					
Peak Detector:					
4924.000	-6.060	54.200	48.140	-25.860	74.000
7386.000	-2.923	46.670	43.747	-30.253	74.000
9848.000	-0.441	46.010	45.570	-28.430	74.000
<b>Average Detector:</b>					
					54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Test Date : 2017/06/14

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
<b>Peak Detector:</b>					
4824.000	-6.117	52.620	46.503	-27.497	74.000
7236.000	-3.110	64.270	61.160	-12.840	74.000
9648.000	-0.709	46.220	45.511	-28.489	74.000
Average Detector:					
7236.000	-3.110	34.490	31.380	-22.620	54.000
Vertical					
<b>Peak Detector:</b>					
4824.000	-6.117	50.130	44.013	-29.987	74.000
7236.000	-3.110	56.130	53.020	-20.980	74.000
9648.000	-0.709	45.920	45.211	-28.789	74.000
Average Detector:					
					54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)

Test Date : 2017/06/14

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
<b>Peak Detector:</b>					
4874.000	-6.080	55.960	49.880	-24.120	74.000
7311.000	-3.045	64.270	61.226	-12.774	74.000
9748.000	-0.536	45.690	45.153	-28.847	74.000
Average Detector:					
7311.000	-3.045	32.980	29.936	-24.064	54.000
Vertical					
<b>Peak Detector:</b>					
4874.000	38.475	51.640	45.560	-28.440	74.000
7311.000	40.902	61.660	58.616	-15.384	74.000
9748.000	-0.536	45.780	45.243	-28.757	74.000
Average Detector:					
7311.000	-3.045	32.720	29.676	-24.324	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz)

Test Date : 2017/06/14

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
<b>Peak Detector:</b>					
4924.000	-6.060	57.570	51.510	-22.490	74.000
7386.000	-2.923	67.890	64.967	-9.033	74.000
9848.000	-0.441	46.290	45.850	-28.150	74.000
<b>Average Detector:</b>					
7386.000	-2.923	33.270	30.347	-23.653	54.000
Vertical					
<b>Peak Detector:</b>					
4924.000	-6.060	53.540	47.480	-26.520	74.000
7386.000	-2.923	64.320	61.397	-12.603	74.000
9848.000	-0.441	46.350	45.910	-28.090	74.000
<b>Average Detector:</b>					
7386.000	-2.923	32.540	29.617	-24.383	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2412MHz)

Test Date : 2017/06/14

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
Peak Detector:					
4824.000	-6.117	51.460	45.343	-28.657	74.000
7236.000	-3.110	50.610	47.500	-26.500	74.000
9648.000	-0.709	46.980	46.271	-27.729	74.000
Average Detector:					
					54.000
Vertical					
Peak Detector:					
4824.000	-6.117	48.820	42.703	-31.297	74.000
7236.000	-3.110	47.400	44.290	-29.710	74.000
9648.000	-0.709	45.550	44.841	-29.159	74.000
Average Detector:					
					54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437 MHz)

Test Date : 2017/06/14

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	$dB\mu V$	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
<b>Peak Detector:</b>					
4874.000	-6.080	52.480	46.400	-27.600	74.000
7311.000	-3.045	54.350	51.306	-22.694	74.000
9748.000	-0.536	45.790	45.253	-28.747	74.000
Average Detector:					
					54.000
Vertical					
<b>Peak Detector:</b>					
4874.000	-6.080	49.180	43.100	-30.900	74.000
7311.000	-3.045	50.070	47.026	-26.974	74.000
9748.000	-0.536	45.480	44.943	-29.057	74.000
Average Detector:					
					54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Mode: Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462 MHz)

Test Date : 2017/06/14

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
<b>Peak Detector:</b>					
4924.000	-6.060	53.570	47.510	-26.490	74.000
7386.000	-2.923	55.990	53.067	-20.933	74.000
9848.000	-0.441	45.930	45.490	-28.510	74.000
Average Detector:					
					54.000
Vertical					
<b>Peak Detector:</b>					
4924.000	-6.060	50.140	44.080	-29.920	74.000
7386.000	-2.923	52.250	49.327	-24.673	74.000
9848.000	-0.441	46.150	45.710	-28.290	74.000
Average Detector:					
					54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Mode: Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2422MHz)

Test Date : 2017/06/14

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	dBμV/m	dB	dBμV/m
Horizontal					
<b>Peak Detector:</b>					
4844.000	-6.104	49.590	43.486	-30.514	74.000
7266.000	-3.099	52.560	49.461	-24.539	74.000
9688.000	-0.649	46.440	45.791	-28.209	74.000
Average Detector:					
					54.000
Vertical					
Peak Detector:					
4844.000	-6.104	48.370	42.266	-31.734	74.000
7266.000	-3.099	49.420	46.321	-27.679	74.000
9688.000	-0.649	46.070	45.421	-28.579	74.000
Average Detector:					
					54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2437 MHz)

Test Date : 2017/06/14

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	$dB\mu V$	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
<b>Peak Detector:</b>					
4874.000	-6.080	51.750	45.670	-28.330	74.000
7311.000	-3.045	46.860	43.816	-30.184	74.000
9748.000	-0.536	45.820	45.283	-28.717	74.000
<b>Average Detector:</b>					
					54.000
Vertical					
Peak Detector:					
4874.000	-6.080	48.920	42.840	-31.160	74.000
7311.000	-3.045	46.600	43.556	-30.444	74.000
9748.000	-0.536	45.680	45.143	-28.857	74.000
Average Detector:					
					54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2452 MHz)

Test Date : 2017/06/14

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dΒμV	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					_
<b>Peak Detector:</b>					
4904.000	-6.090	52.250	46.160	-27.840	74.000
7356.000	-2.975	54.860	51.886	-22.114	74.000
9808.000	-0.484	46.310	45.827	-28.173	74.000
Average Detector:					
					54.000
Vertical					
<b>Peak Detector:</b>					
4904.000	-6.090	49.000	42.910	-31.090	74.000
7356.000	-2.975	50.790	47.816	-26.184	74.000
9808.000	-0.484	46.020	45.537	-28.463	74.000
<b>Average Detector:</b>					
					54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.



Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz)

Test Date : 2017/06/20

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	$dB\mu V$	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
299.913	-10.364	46.140	35.776	-10.224	46.000
354.739	-9.101	48.279	39.178	-6.822	46.000
387.072	-8.369	44.545	36.177	-9.823	46.000
540.304	-5.392	43.096	37.704	-8.296	46.000
686.507	-3.240	39.727	36.487	-9.513	46.000
960.638	0.360	52.251	52.610	-1.390	54.000
Vertical					
239.464	-12.295	51.002	38.707	-7.293	46.000
274.609	-11.151	46.698	35.546	-10.454	46.000
354.739	-9.101	44.718	35.617	-10.383	46.000
710.406	-2.851	34.875	32.024	-13.976	46.000
848.174	-0.993	32.190	31.197	-14.803	46.000
960.638	0.360	47.259	47.618	-6.382	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.



Test Mode : Mode 2: Transmit (802.11g 6Mbps)(2437 MHz)

Test Date : 2017/06/20

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	$dB\mu V$	$dB\mu V/m \\$	dB	$dB\mu V/m$
Horizontal					
239.464	-12.295	46.196	33.901	-12.099	46.000
299.913	-10.364	45.168	34.804	-11.196	46.000
354.739	-9.101	47.740	38.639	-7.361	46.000
387.072	-8.369	44.940	36.572	-9.428	46.000
564.203	-4.901	36.476	31.574	-14.426	46.000
960.638	0.360	46.984	47.343	-6.657	54.000
Vertical					
239.464	-12.295	45.617	33.322	-12.678	46.000
290.072	-10.687	41.705	31.018	-14.982	46.000
354.739	-9.101	44.886	35.785	-10.215	46.000
451.739	-6.822	36.340	29.519	-16.481	46.000
866.449	-0.753	31.698	30.945	-15.055	46.000
960.638	0.360	47.047	47.406	-6.594	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.



Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2437 MHz)

Test Date : 2017/06/20

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	$dB\mu V$	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
239.464	-12.295	46.657	34.362	-11.638	46.000
299.913	-10.364	45.237	34.873	-11.127	46.000
354.739	-9.101	48.643	39.542	-6.458	46.000
536.087	-5.459	41.388	35.929	-10.071	46.000
685.101	-3.259	38.190	34.931	-11.069	46.000
960.638	0.360	52.018	52.377	-1.623	54.000
Vertical					
239.464	-12.295	50.057	37.762	-8.238	46.000
268.986	-11.417	44.182	32.765	-13.235	46.000
354.739	-9.101	44.137	35.036	-10.964	46.000
387.072	-8.369	40.563	32.195	-13.805	46.000
710.406	-2.851	34.694	31.843	-14.157	46.000
960.638	0.360	44.952	45.311	-8.689	54.000

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.



Product : Mobile Medical Assistant Tablet
Test Item : General Radiated Emission Data

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)(2437 MHz)

Test Date : 2017/06/20

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	$dB\mu V$	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
299.913	-10.364	45.076	34.712	-11.288	46.000
354.739	-9.101	47.860	38.759	-7.241	46.000
387.072	-8.369	44.594	36.226	-9.774	46.000
540.304	-5.392	42.349	36.957	-9.043	46.000
680.884	-3.319	38.376	35.057	-10.943	46.000
960.638	0.360	52.326	52.685	-1.315	54.000
Vertical					
239.464	-12.295	50.648	38.353	-7.647	46.000
278.826	-10.969	46.452	35.483	-10.517	46.000
354.739	-9.101	44.979	35.878	-10.122	46.000
387.072	-8.369	40.574	32.206	-13.794	46.000
710.406	-2.851	34.618	31.767	-14.233	46.000
960.638	0.360	47.709	48.068	-5.932	54.000

#### Note:

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.



Product : Mobile Medical Assistant Tablet Test Item : General Radiated Emission Data

Test Mode : Mode 5: Charger Mode

Test Date : 2017/06/20

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	$dB\mu V$	$dB\mu V/m$	dB	$dB\mu V/m$
Horizontal					
119.971	-13.428	51.757	38.329	-5.171	43.500
193.072	-13.679	53.006	39.327	-4.173	43.500
225.406	-13.141	50.878	37.737	-8.263	46.000
322.406	-9.840	50.040	40.200	-5.800	46.000
524.841	-5.636	38.591	32.955	-13.045	46.000
960.638	0.360	50.821	51.180	-2.820	54.000
Vertical					
122.783	-13.137	50.128	36.991	-6.509	43.500
239.464	-12.295	50.900	38.605	-7.395	46.000
322.406	-9.840	44.733	34.893	-11.107	46.000
543.116	-5.348	43.575	38.227	-7.773	46.000
717.435	-2.714	37.723	35.009	-10.991	46.000
960.638	0.360	46.458	46.817	-7.183	54.000

#### Note:

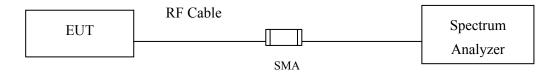
- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 8. No emission found between lowest internal used/generated frequency to 30MHz.



## 5. RF antenna conducted test

## 5.1. Test Setup

RF antenna Conducted Measurement:



## 5.2. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

## **5.3.** Test Procedure

The EUT was tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

## 5.4. Uncertainty

±1.23dB



## 5.5. Test Result of RF antenna conducted test

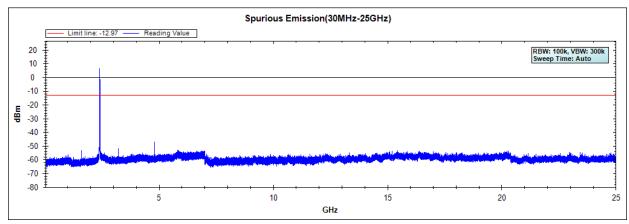
Product : Mobile Medical Assistant Tablet

Test Item : RF antenna conducted test

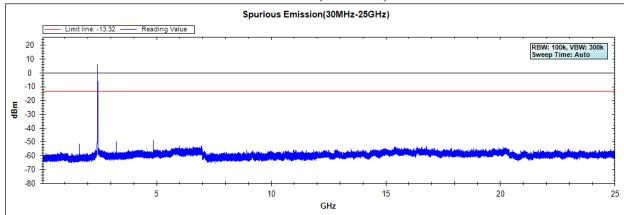
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Test Date : 2017/06/21

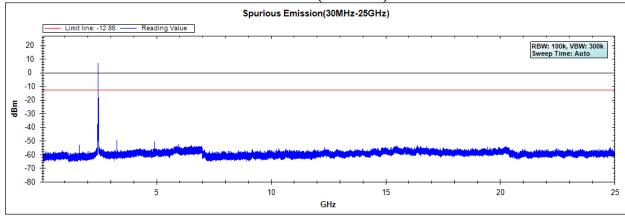
## **Channel 01 (2412MHz)**



## **Channel 06 (2437MHz)**



## **Channel 11 (2462MHz)**

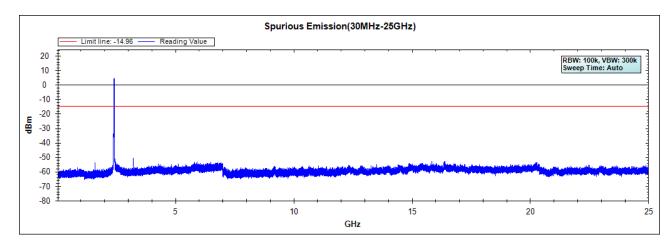




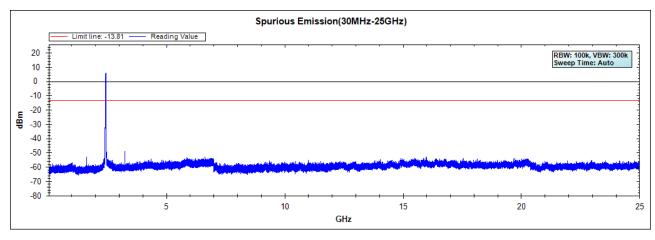
Product : Mobile Medical Assistant Tablet
Test Item : RF Antenna Conducted Spurious
Test Mode : Mode 2: Transmit (802.11g 6Mbps)

Test Date : 2017/06/21

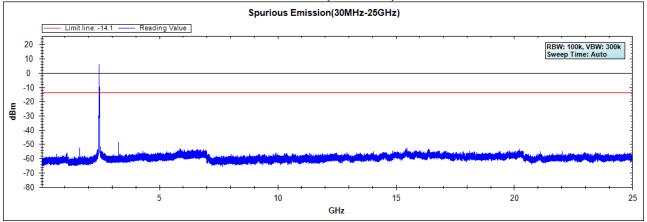
## **Channel 01 (2412MHz)**



## **Channel 06 (2437MHz)**





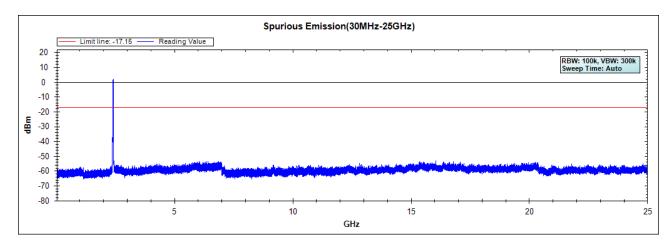




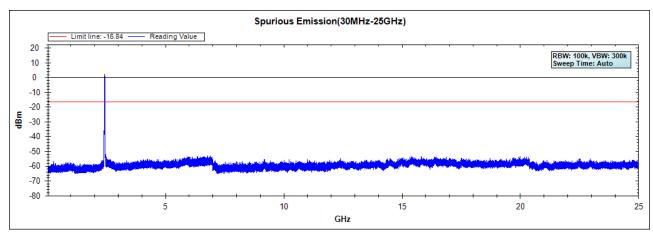
Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

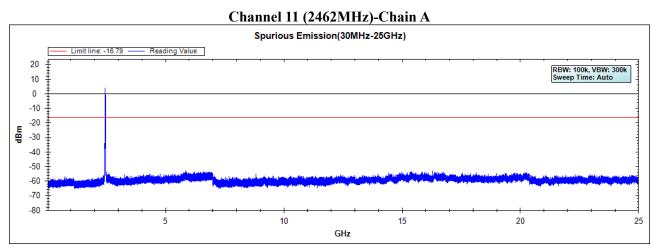
Test Date : 2017/06/21

## Channel 01 (2412MHz)-Chain A



## Channel 06 (2437MHz)-Chain A



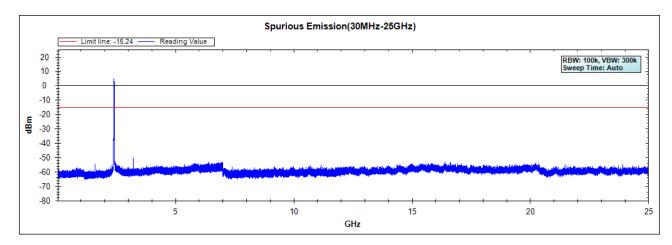




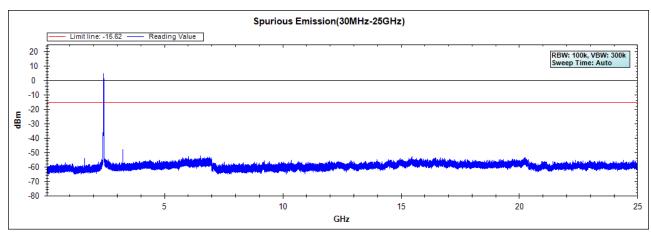
Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

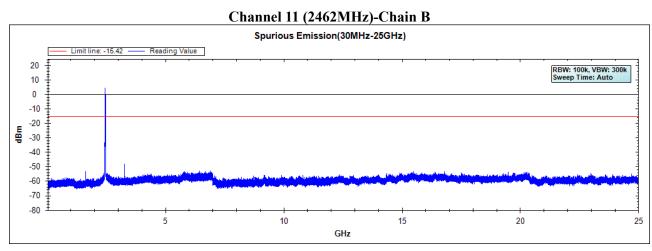
Test Date : 2017/06/21

## Channel 01 (2412MHz)-Chain B



## Channel 06 (2437MHz)-Chain B



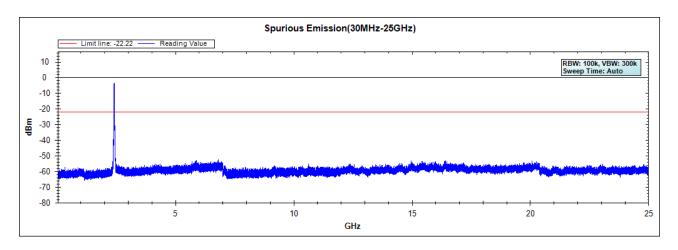




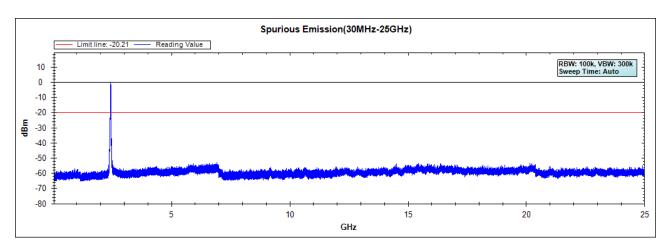
Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Test Date : 2017/06/21

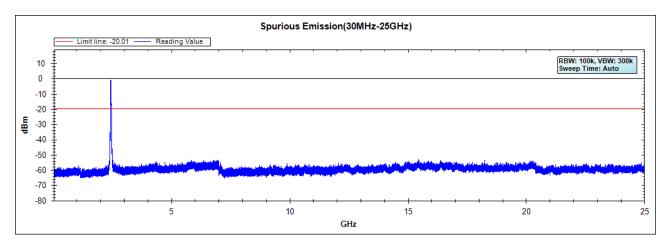
## Channel 01 (2422MHz)-Chain A



## Channel 04 (2437MHz)-Chain A



## Channel 07 (2452MHz)-Chain A

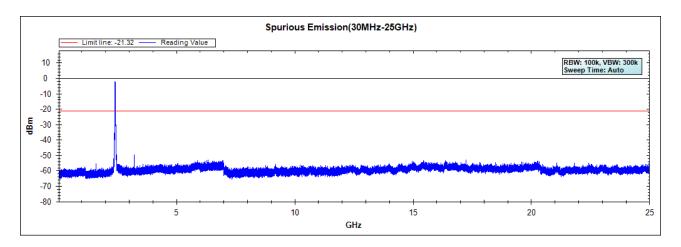




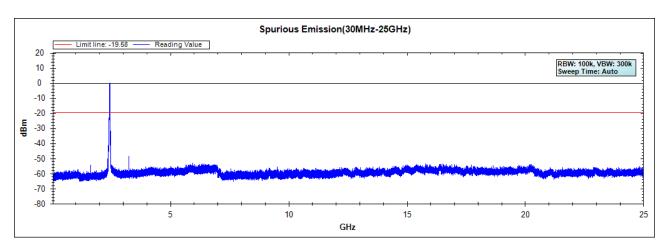
Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Test Date : 2017/06/21

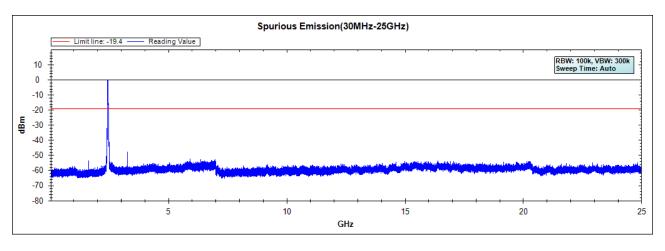
## Channel 01 (2422MHz)-Chain B



## Channel 04 (2437MHz)-Chain B



Channel 07 (2452MHz)-Chain B

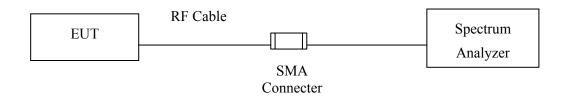




## 6. Band Edge

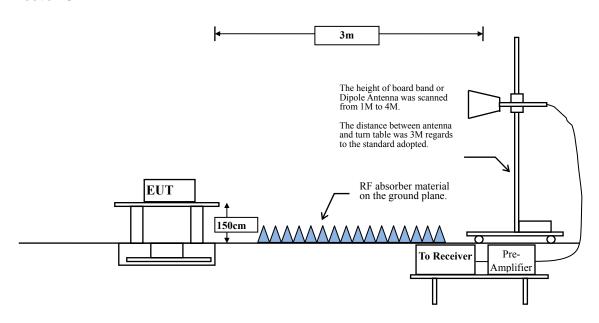
## 6.1. Test Setup

## **RF Conducted Measurement**



#### **RF Radiated Measurement:**

## Above 1GHz





#### 6.2. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

#### **6.3.** Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.

## 6.4. Uncertainty

Conducted: ±1.23dB

Radiated:

Horizontal polarization: 1-18GHz: ±3.77dB Vertical polarization: 1-18GHz: ±3.83dB



## 6.5. Test Result of Band Edge

Product : Mobile Medical Assistant Tablet

Test Item : Band Edge Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

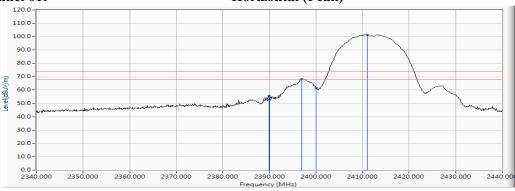
Test Date : 2017/06/07

## RF Radiated Measurement (Horizontal):

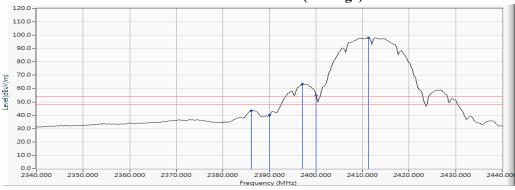
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Chamici No.	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Kesuit
01 (Peak)	2389.900	10.262	45.281	55.543	74.00	54.00	Pass
01 (Peak)	2390.000	10.262	42.466	52.728	74.00	54.00	Pass
01 (Peak)	2396.900	10.290	57.780	68.070	74.00	54.00	Pass
01 (Peak)	2400.000	10.304	51.272	61.575	-		
01 (Peak)	2411.000	10.348	91.011	101.359			
01 (Average)	2386.087	10.245	33.266	43.512	74.00	54.00	Pass
01 (Average)	2390.000	10.262	29.846	40.108	74.00	54.00	Pass
01 (Average)	2397.102	10.291	53.082	63.373	74.00	54.00	Pass
01 (Average)	2400.000	10.304	44.432	54.735			
01 (Average)	2411.304	10.350	87.723	98.072			

#### Figure Channel 01:

## Horizontal (Peak)



## Figure Channel 01:



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Item : Band Edge Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

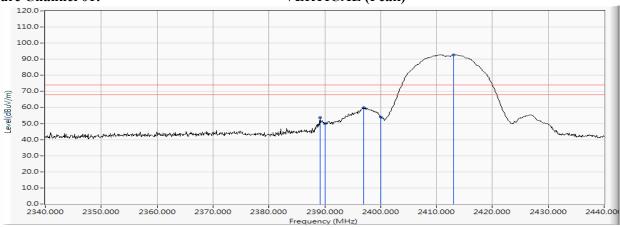
Test Date : 2017/06/07

## **RF Radiated Measurement (VERTICAL):**

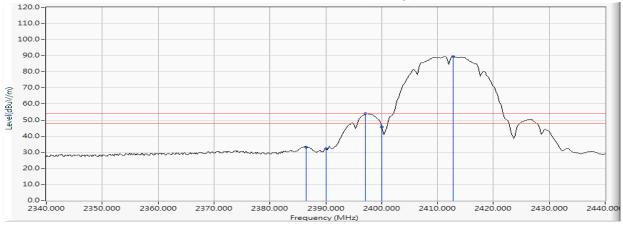
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Chamici No.	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Kesuit
01 (Peak)	2389.200	10.259	43.441	53.700	74.00	54.00	Pass
01 (Peak)	2390.000	10.262	39.527	49.789	74.00	54.00	Pass
01 (Peak)	2396.900	10.290	49.622	59.912	74.00	54.00	Pass
01 (Peak)	2400.000	10.304	43.856	54.159			
01 (Peak)	2413.100	10.357	82.437	92.793			
01 (Average)	2386.522	10.248	22.959	33.206	74.00	54.00	Pass
01 (Average)	2390.000	10.262	21.762	32.024	74.00	54.00	Pass
01 (Average)	2397.102	10.291	43.672	53.963	74.00	54.00	Pass
01 (Average)	2400.000	10.304	35.224	45.527			
01 (Average)	2412.754	10.355	79.163	89.518			

## Figure Channel 01:

## **VERTICAL (Peak)**



## Figure Channel 01:



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Item : Band Edge Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

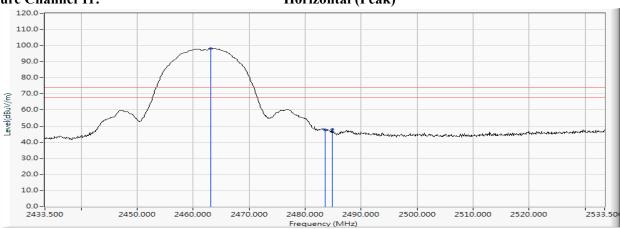
Test Date : 2017/06/07

## RF Radiated Measurement (Horizontal):

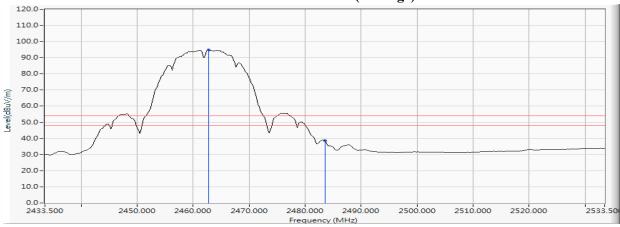
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Result
11 (Peak)	2463.100	10.555	87.702	98.256			
11 (Peak)	2483.500	10.640	36.916	47.557	74.00	54.00	Pass
11 (Peak)	2484.800	10.646	37.238	47.884	74.00	54.00	Pass
11 (Average)	2462.775	10.554	84.412	94.965			
11 (Average)	2483.500	10.640	27.988	38.629	74.00	54.00	Pass

#### Figure Channel 11:

## Horizontal (Peak)



## Figure Channel 11:



- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Item : Band Edge Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

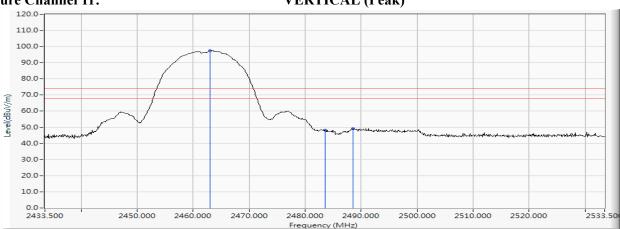
Test Date : 2017/06/07

## **RF Radiated Measurement (VERTICAL):**

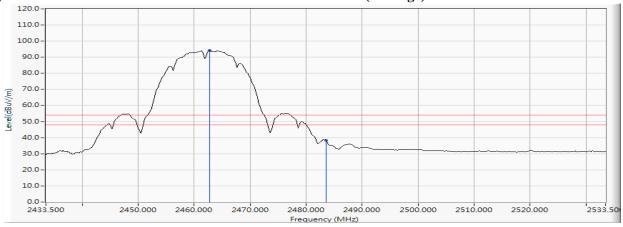
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level		Average Limit	Result
Chamici No.	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Result
11 (Peak)	2463.000	10.554	86.886	97.440			ŀ
11 (Peak)	2483.500	10.640	37.475	48.116	74.00	54.00	Pass
11 (Peak)	2488.600	10.660	38.709	49.370	74.00	54.00	Pass
11 (Average)	2462.775	10.554	83.562	94.115			-
11 (Average)	2483.500	10.640	27.648	38.289	74.00	54.00	Pass

## Figure Channel 11:

## VERTICAL (Peak)



## **Figure Channel 11:**



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW =  $\overline{1}$ MHz, VBW =  $\overline{3}$  MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Item : Band Edge Data

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

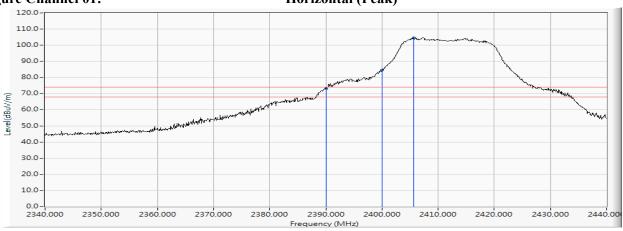
Test Date : 2017/06/07

## RF Radiated Measurement (Horizontal):

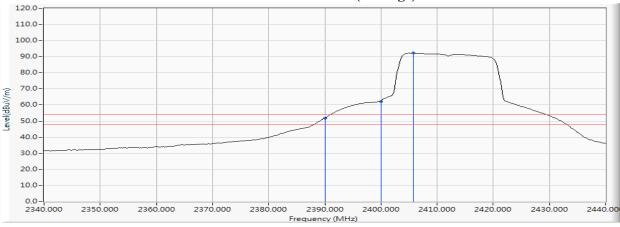
Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Result
Chamilei No.	(MHz)	(dB)	$(dB\mu V)$	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Result
01 (Peak)	2390.000	10.262	62.821	73.083	74.00	54.00	Pass
01 (Peak)	2400.000	10.304	74.331	84.634			-
01 (Peak)	2405.600	10.326	94.311	104.637			
01 (Average)	2390.000	10.262	41.625	51.887	74.00	54.00	Pass
01 (Average)	2400.000	10.304	51.840	62.143			
01 (Average)	2405.797	10.326	81.864	92.191			

## Figure Channel 01:

## Horizontal (Peak)



## Figure Channel 01:



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Item : Band Edge Data

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

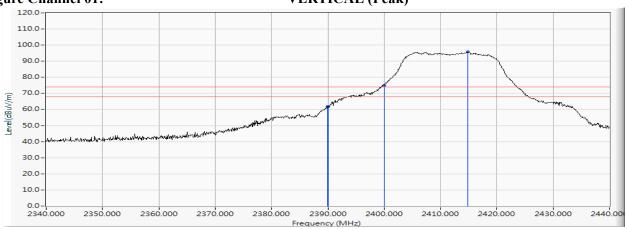
Test Date : 2017/06/07

## **RF Radiated Measurement (VERTICAL):**

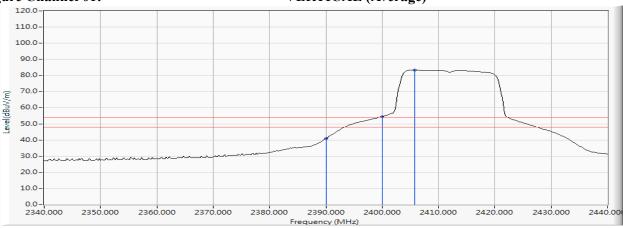
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Average Limit (dBµV/m)	Result
01 (Peak)	2389.900	10.262	51.659	61.921	74.00	54.00	Pass
01 (Peak)	2390.000	10.262	51.645	61.907	74.00	54.00	Pass
01 (Peak)	2400.000	10.304	64.772	75.075			1
01 (Peak)	2414.900	10.364	85.436	95.800			-
01 (Average)	2390.000	10.262	30.685	40.947	74.00	54.00	Pass
01 (Average)	2400.000	10.304	44.198	54.501			ŀ
01 (Average)	2405.797	10.326	72.949	83.276			

#### Figure Channel 01:

## **VERTICAL** (Peak)



#### Figure Channel 01:



- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Item Band Edge Data

Test Mode Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

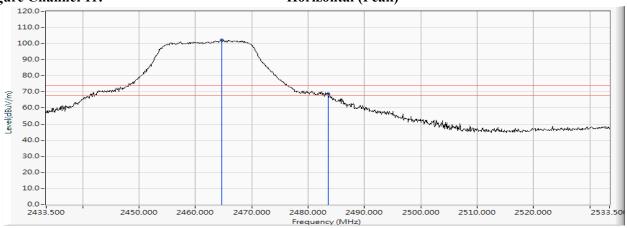
Test Date

## **RF Radiated Measurement (Horizontal):**

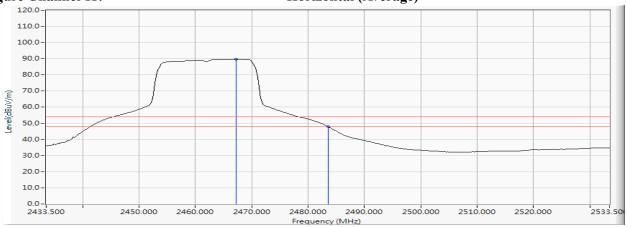
Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Result
	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Kesuit
11 (Peak)	2464.600	10.561	91.753	102.314			
11 (Peak)	2483.500	10.640	58.167	68.808	74.00	54.00	Pass
11 (Average)	2467.268	10.574	79.066	89.639			
11 (Average)	2483.500	10.640	37.358	47.999	74.00	54.00	Pass

## Figure Channel 11:





#### Figure Channel 11:



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - Peak measurements: RBW =  $\hat{1}$ MHz, VBW =  $\hat{3}$  MHz, Sweep: Auto.
  - Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - The average measurement was not performed when the peak measured data under the limit of average detection.



Test Item : Band Edge Data

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

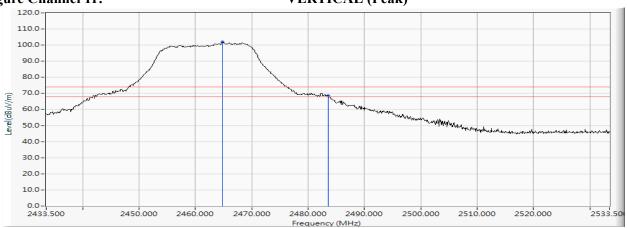
Test Date : 2017/06/07

## **RF Radiated Measurement (VERTICAL):**

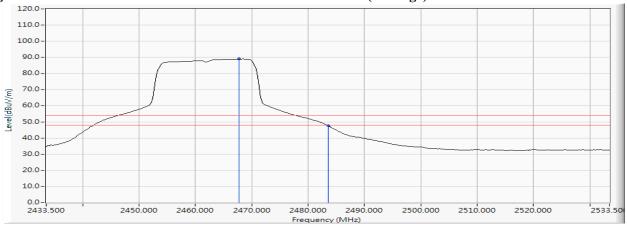
Channel No.			•	Emission Level		~	Result
Chamici No.	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	(dBµV/m)	resurt
11 (Peak)	2464.800	10.562	91.276	101.838			
11 (Peak)	2483.500	10.640	57.919	68.560	74.00	54.00	Pass
11 (Average)	2467.703	10.575	78.385	88.960			
11 (Average)	2483.500	10.640	36.902	47.543	74.00	54.00	Pass

## Figure Channel 11:

## **VERTICAL** (Peak)



#### Figure Channel 11:



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Item : Band Edge Data

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

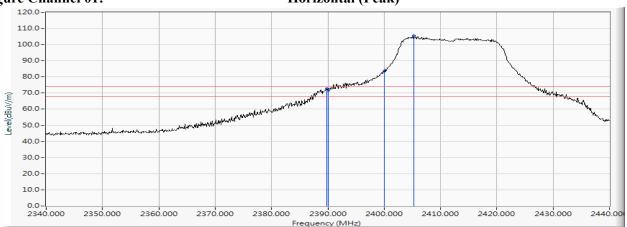
Test Date : 2017/06/07

## RF Radiated Measurement (Horizontal):

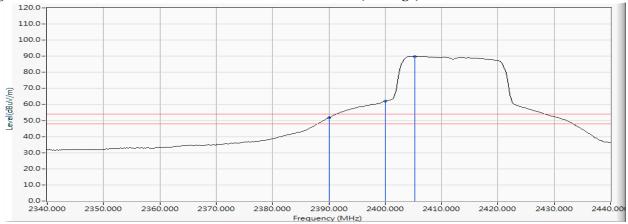
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Chamile No.	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Kesuit
01 (Peak)	2389.800	10.261	62.346	72.607	74.00	54.00	Pass
01 (Peak)	2390.000	10.262	61.546	71.808	74.00	54.00	Pass
01 (Peak)	2400.000	10.304	73.219	83.522			
01 (Peak)	2405.200	10.325	95.328	105.653			
01 (Average)	2390.000	10.262	41.582	51.844	74.00	54.00	Pass
01 (Average)	2400.000	10.304	51.798	62.101			
01 (Average)	2405.217	10.325	79.566	89.891			

## Figure Channel 01:

## Horizontal (Peak)



#### Figure Channel 01:



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Item : Band Edge Data

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

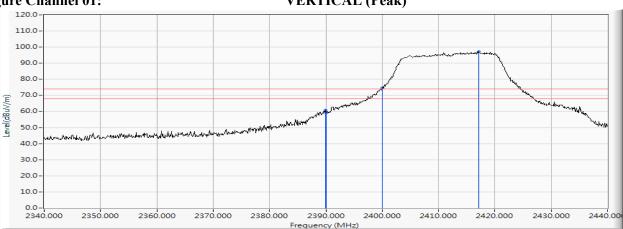
Test Date : 2017/06/07

## **RF Radiated Measurement (VERTICAL):**

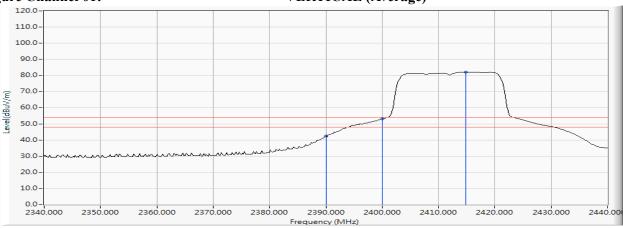
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Average Limit (dBµV/m)	Result
01 (Peak)	2389.900	10.262	50.576	60.838	74.00	54.00	Pass
01 (Peak)	2390.000	10.262	48.804	59.066	74.00	54.00	Pass
01 (Peak)	2400.000	10.304	64.271	74.574			
01 (Peak)	2417.100	10.373	86.675	97.047			-
01 (Average)	2390.000	10.262	32.310	42.572	74.00	54.00	Pass
01 (Average)	2400.000	10.304	42.699	53.002			-
01 (Average)	2414.783	10.363	71.801	82.164			

#### Figure Channel 01:

## **VERTICAL (Peak)**



#### Figure Channel 01:



- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Item : Band Edge Data

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

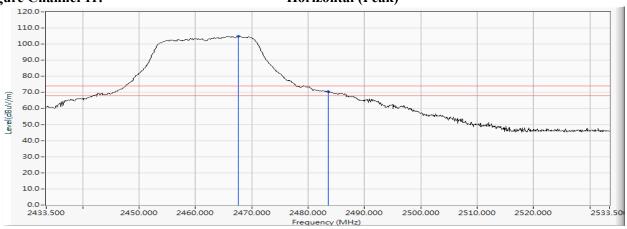
Test Date : 2017/06/07

## RF Radiated Measurement (Horizontal):

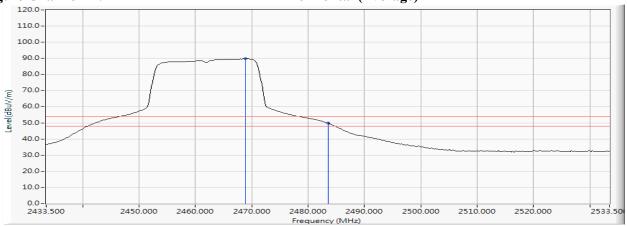
Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Result
Chamilei No.	(MHz)	(dB)	$(dB\mu V)$	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Result
11 (Peak)	2467.600	10.575	94.346	104.921			
11 (Peak)	2483.500	10.640	59.919	70.560	74.00	54.00	Pass
11 (Average)	2468.862	10.580	79.124	89.704			
11 (Average)	2483.500	10.640	39.136	49.777	74.00	54.00	Pass

## **Figure Channel 11:**

## Horizontal (Peak)



#### Figure Channel 11:



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW =  $\hat{1}$ MHz, VBW =  $\hat{3}$  MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Item : Band Edge Data

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

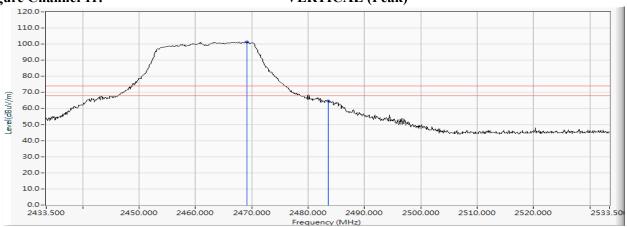
Test Date : 2017/06/07

## **RF Radiated Measurement (VERTICAL):**

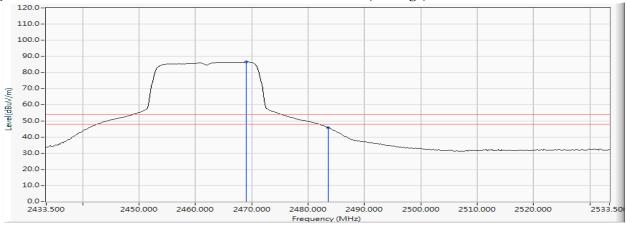
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Average Limit (dBµV/m)	Result
11 (Peak)	2469.100	10.581	90.885	101.467			
11 (Peak)	2483.500	10.640	54.054	64.695	74.00	54.00	Pass
11 (Average)	2469.007	10.581	75.890	86.471			
11 (Average)	2483.500	10.640	35.104	45.745	74.00	54.00	Pass

## Figure Channel 11:

## **VERTICAL** (Peak)



#### Figure Channel 11:



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Item : Band Edge Data

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)

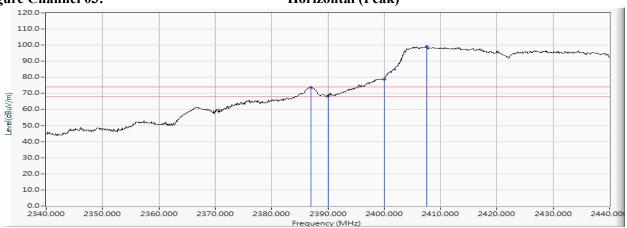
Test Date : 2017/06/07

## RF Radiated Measurement (Horizontal):

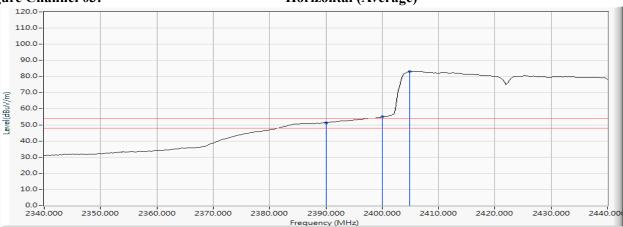
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Average Limit (dBµV/m)	Result
03 (Peak)	2387.000	10.249	63.542	73.792	74.00	54.00	Pass
03 (Peak)	2390.000	10.262	57.814	68.076	74.00	54.00	Pass
03 (Peak)	2400.000	10.304	68.675	78.978			
03 (Peak)	2407.600	10.334	88.678	99.012			
03 (Average)	2390.000	10.262	41.025	51.287	74.00	54.00	Pass
03 (Average)	2400.000	10.304	44.701	55.004			
03 (Average)	2404.928	10.324	72.750	83.073			

#### Figure Channel 03:

## Horizontal (Peak)



## Figure Channel 03:



- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW = 1MHz, VBW = 3MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Item : Band Edge Data

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2422MHz)

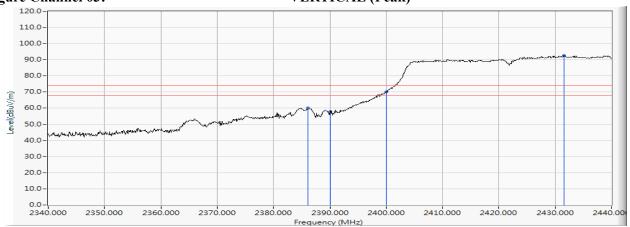
Test Date : 2017/06/07

## RF Radiated Measurement (VERTICAL):

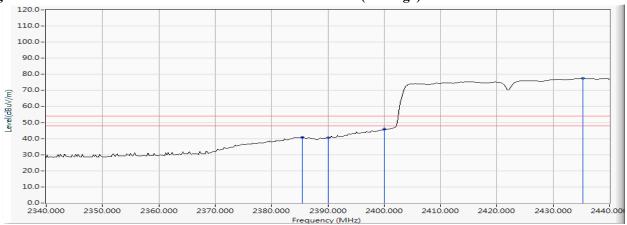
		,	,				
Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Chamilei No.	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Kesuit
03 (Peak)	2386.100	10.245	50.014	60.260	74.00	54.00	Pass
03 (Peak)	2390.000	10.262	47.617	57.879	74.00	54.00	Pass
03 (Peak)	2400.000	10.304	59.774	70.077			
03 (Peak)	2431.600	10.433	82.217	92.650			
03 (Average)	2385.507	10.244	30.620	40.863	74.00	54.00	Pass
03 (Average)	2390.000	10.262	30.246	40.508	74.00	54.00	Pass
03 (Average)	2400.000	10.304	35.790	46.093			
03 (Average)	2435.217	10.449	67.004	77.453			

## Figure Channel 03:

## **VERTICAL** (Peak)



### Figure Channel 03:



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Item : Band Edge Data

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2452MHz)

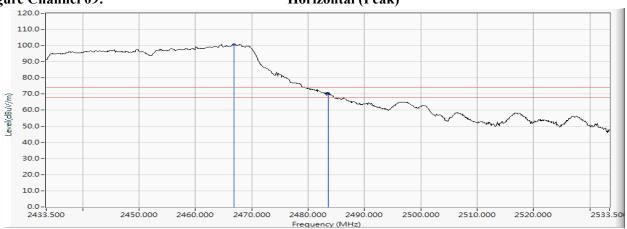
Test Date : 2017/06/07

#### RF Radiated Measurement (Horizontal):

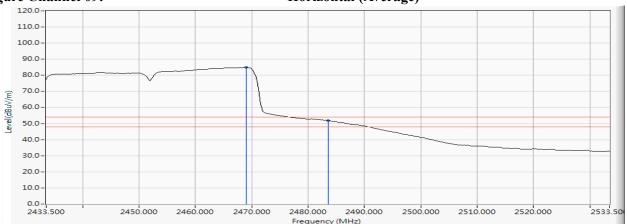
		` /					
Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Result
Channel No.	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	Result
09 (Peak)	2466.800	10.571	90.110	100.681			
09 (Peak)	2483.500	10.640	59.877	70.518	74.00	54.00	Pass
09 (Average)	2469.007	10.581	74.345	84.926			
09 (Average)	2483.500	10.640	41.279	51.920	74.00	54.00	Pass

## Figure Channel 09:

## Horizontal (Peak)



#### Figure Channel 09:



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



Test Item : Band Edge Data

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) (2452MHz)

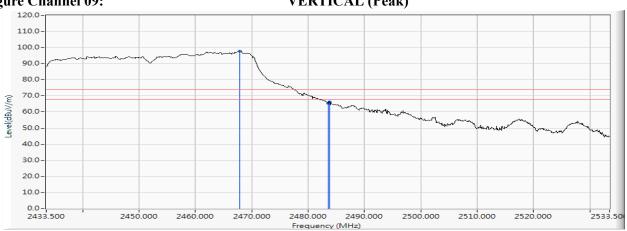
Test Date : 2017/06/07

## RF Radiated Measurement (VERTICAL):

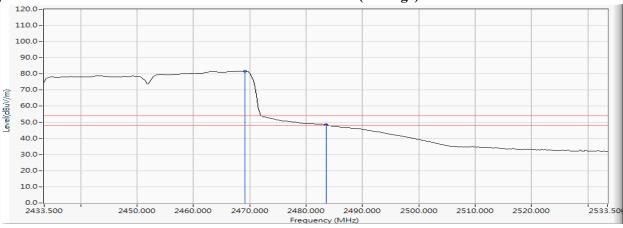
Channel No.	Frequency		_	Emission Level		_	Result
Chamier 140.	(MHz)	(dB)	(dBµV)	$(dB\mu V/m)$	$(dB\mu V/m)$	$(dB\mu V/m)$	resuit
09 (Peak)	2467.900	10.576	87.349	97.925	-		-
09 (Peak)	2483.500	10.640	54.807	65.448	74.00	54.00	Pass
09 (Peak)	2483.800	10.643	55.655	66.297	74.00	54.00	Pass
09 (Average)	2469.152	10.582	71.177	81.759			-
09 (Average)	2483.500	10.640	37.865	48.506	74.00	54.00	Pass

#### Figure Channel 09:

## VERTICAL (Peak)



## Figure Channel 09:

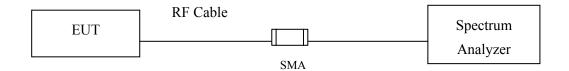


- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
  - 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
  - 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
  - 4. "\*", means this data is the worst emission level.
  - 5. Measurement Level = Reading Level + Correct Factor.
  - 6. The average measurement was not performed when the peak measured data under the limit of average detection.



## 7. 6dB Bandwidth

## 7.1. Test Setup



## 7.2. Limits

The minimum bandwidth shall be at least 500 kHz.

## 7.3. Test Procedure

The EUT was setup according to ANSI C63.4: 2014; tested according to DTS test procedure of Jan KDB558074 for compliance to FCC 47CFR 15.247 requirements.

## 7.4. Uncertainty

± 279.2Hz



## 7.5. Test Result of 6dB Bandwidth

Product : Mobile Medical Assistant Tablet

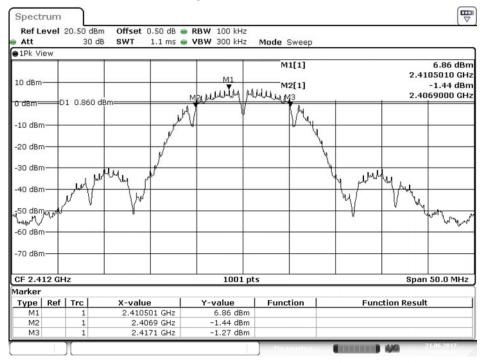
Test Item : 6dB Bandwidth Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Test Date : 2017/06/21

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	10200	>500	Pass
06	2437	10200	>500	Pass
11	2462	10200	>500	Pass

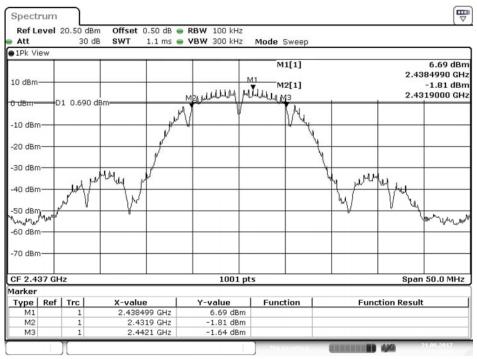
## **Figure Channel 01:**



Date: 21.JUN.2017 11:24:43

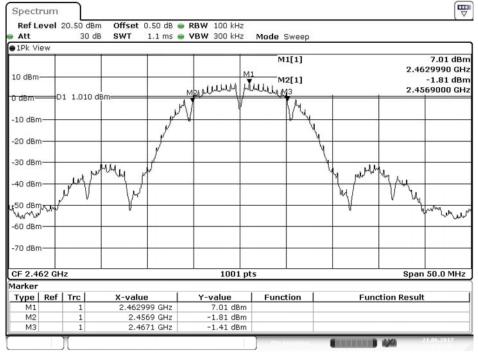


## Figure Channel 06:



Date: 21.JUN.2017 11:28:25

# Figure Channel 11:



Date: 21.JUN.2017 11:32:22



Test Item : 6dB Bandwidth Data

Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

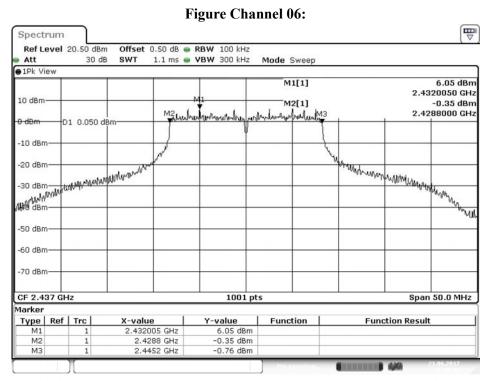
Test Date : 2017/06/21

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	16400	>500	Pass
06	2437	16400	>500	Pass
11	2462	16400	>500	Pass

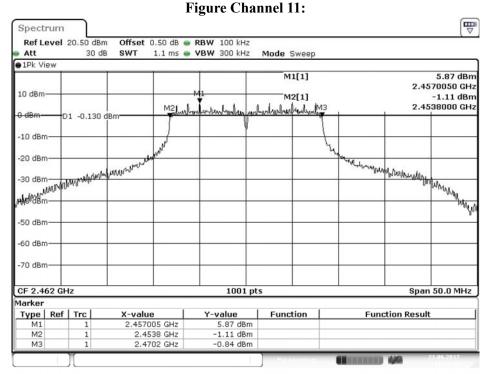
#### **Figure Channel 01:** Spectrum Offset 0.50 dB · RBW 100 kHz Ref Level 20.50 dBm Att 30 dB SWT 1.1 ms 🌞 **VBW** 300 kHz Mode Sweep ●1Pk View 4.91 dBm 2.4070050 GHz M1[1] 10 dBm -2.21 dBm 2.4038000 GHz M2[1] D1 -1.090 dBm -10 dBm -20 dBm towhilly waspatrather for the market from the same of the same -50 dBm -60 dBm CF 2.412 GHz 1001 pts Span 50.0 MHz Marker Type Ref Trc M1 1 M2 1 Function **Function Result** X-value Y-value 4.91 dBm -2.21 dBm -1.91 dBm 2.407005 GHz 2.4038 GHz 2.4202 GHz МЗ

Date: 21.JUN.2017 11:36:28





Date: 21.JUN.2017 11:40:51



Date: 21.JUN.2017 11:44:39



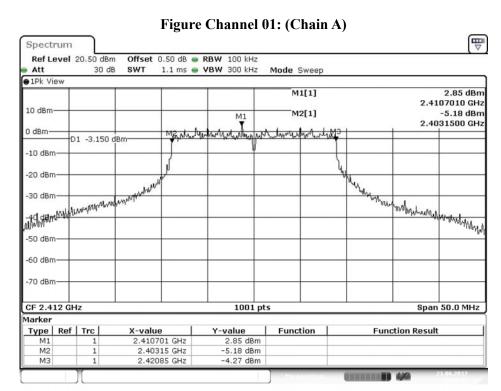
Test Item : 6dB Bandwidth Data

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Test Date : 2017/06/21

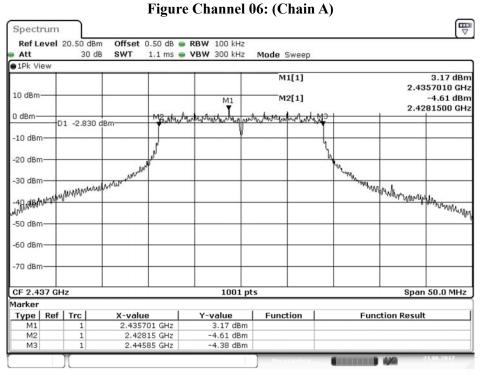
## Chain A

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	17700	>500	Pass
06	2437	17700	>500	Pass
11	2462	17700	>500	Pass

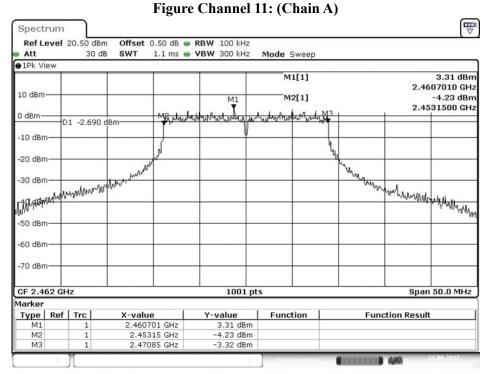


Date: 21.JUN.2017 12:15:39





Date: 21.JUN.2017 12:19:24



Date: 21.JUN.2017 12:25:09



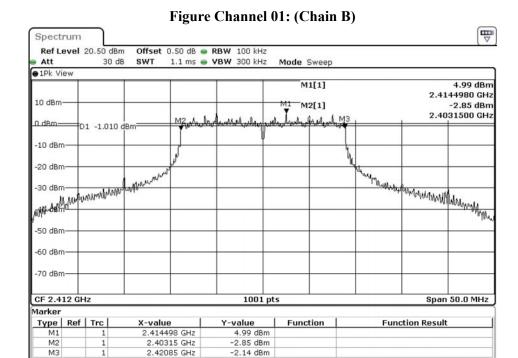
Test Item : 6dB Bandwidth Data

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Test Date : 2017/06/21

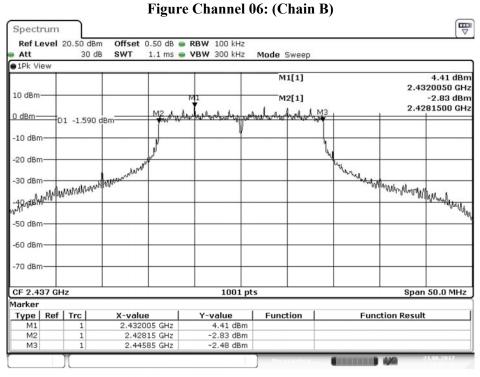
## Chain B

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	17700	>500	Pass
06	2437	17700	>500	Pass
11	2462	17700	>500	Pass

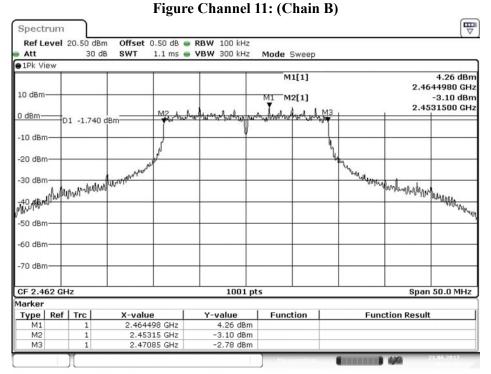


Date: 21.JUN.2017 11:48:55





Date: 21.JUN.2017 11:52:47



Date: 21.JUN.2017 11:56:39



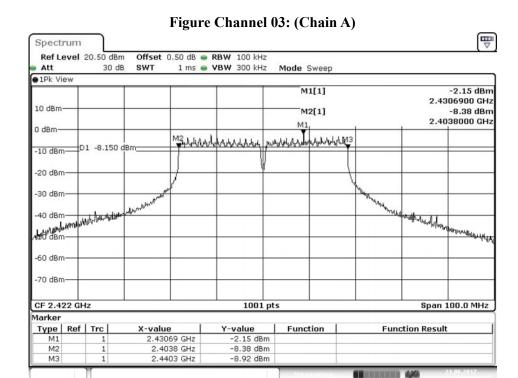
Test Item : 6dB Bandwidth Data

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Test Date : 2017/06/21

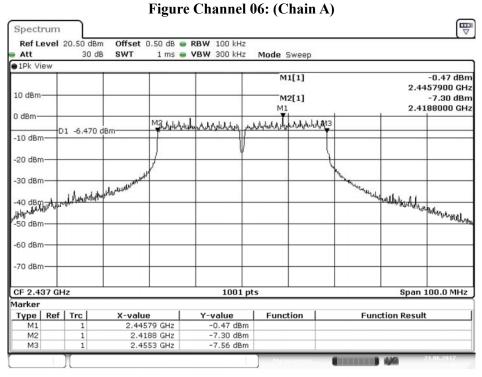
#### Chain A

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
03	2422	36500	>500	Pass
06	2437	36500	>500	Pass
09	2452	36500	>500	Pass

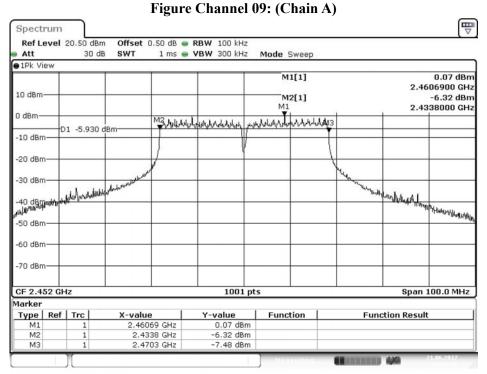


Date: 21.JUN.2017 12:29:55





Date: 21.JUN.2017 12:33:48



Date: 21.JUN.2017 12:37:45



Mobile Medical Assistant Tablet Product

Test Item 6dB Bandwidth Data

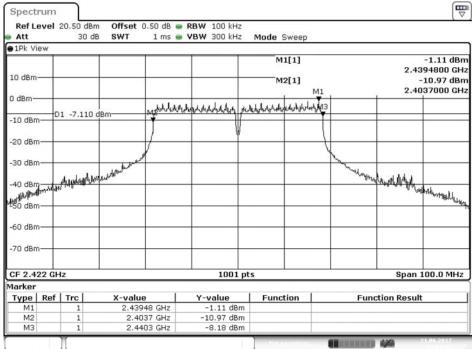
Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW) Test Mode

2017/06/21 Test Date

#### Chain B

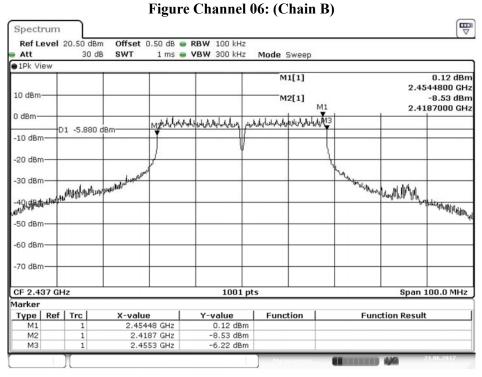
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
03	2422	36600	>500	Pass
06	2437	36600	>500	Pass
09	2452	36600	>500	Pass



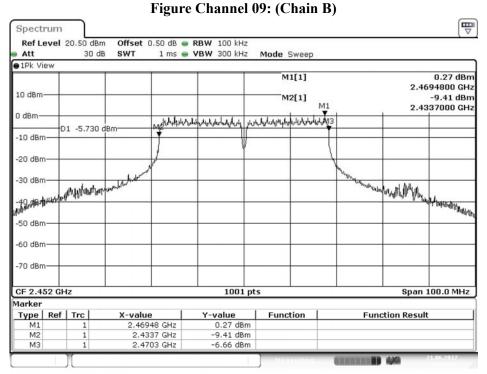


Date: 21.JUN.2017 12:01:02





Date: 21.JUN.2017 12:05:03

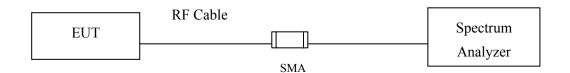


Date: 21.JUN.2017 12:09:03



## 8. Power Density

## 8.1. Test Setup



### 8.2. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

### **8.3.** Test Procedure

The EUT was setup according to ANSI C63.10, 2013; tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

The maximum power spectral density using KDB 558074 section 10.2 PKPSD (peak PSD) method.

## 8.4. Uncertainty

 $\pm$  1.23 dB



## 8.5. Test Result of Power Density

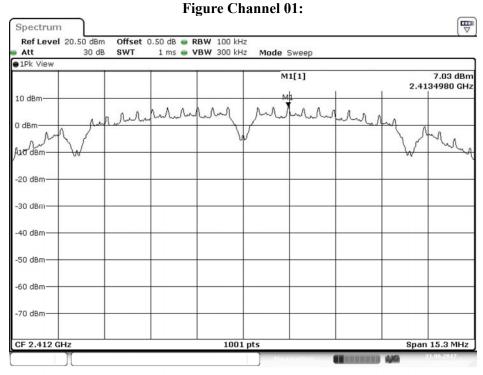
Product : Mobile Medical Assistant Tablet

Test Item : Power Density Data

Test Mode : Mode 1: Transmit (802.11b 1Mbps)

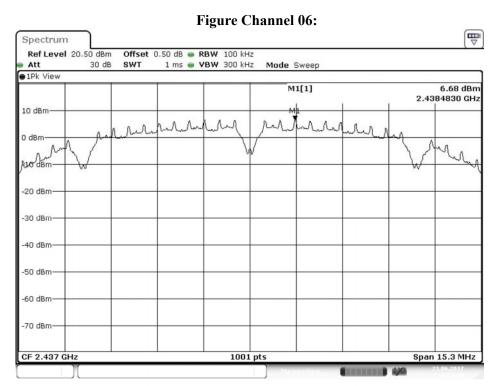
Test Date : 2017/06/21

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	7.030	≦8dBm	Pass
06	2437	6.680	≦8dBm	Pass
11	2462	7.140	≦8dBm	Pass

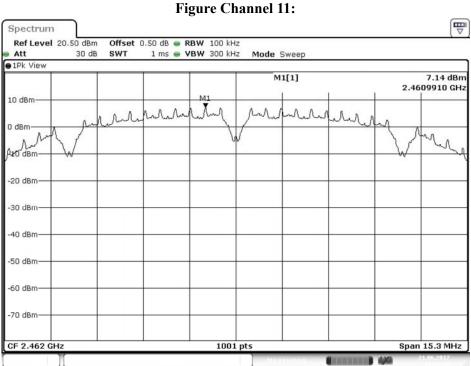


Date: 21.JUN.2017 11:25:04





Date: 21.JUN.2017 11:28:46



Date: 21.JUN.2017 11:32:44

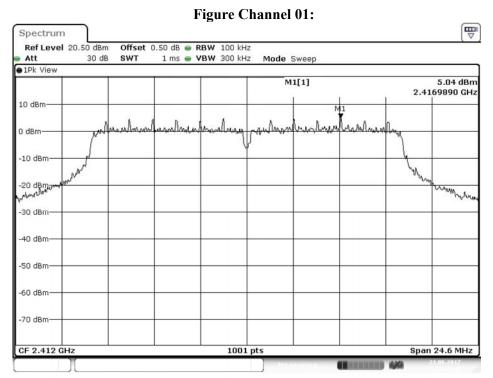


Test Item : Power Density Data

Test Mode : Mode 2: Transmit (802.11g 6Mbps)

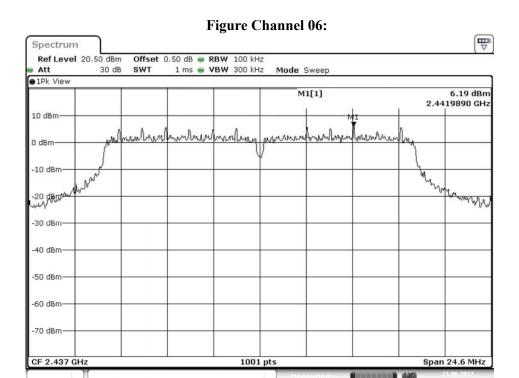
Test Date : 2017/06/21

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
01	2412	5.040	≦8dBm	Pass
06	2437	6.190	≦8dBm	Pass
11	2462	5.900	≦8dBm	Pass

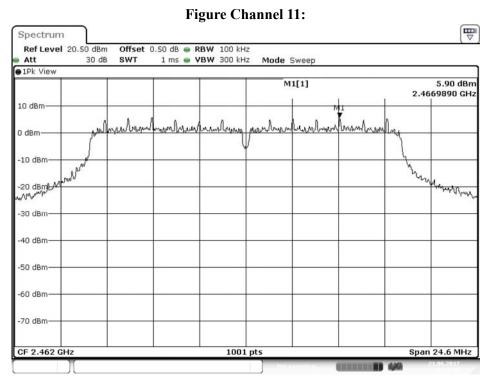


Date: 21.JUN.2017 11:36:49





Date: 21.JUN.2017 11:41:13



Date: 21.JUN.2017 11:45:00



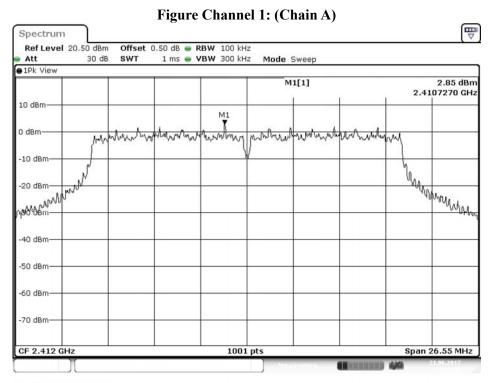
Test Item : Power Density Data

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Test Date : 2017/06/21

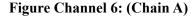
Channel No.	Frequency (MHz)	Chain	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)	Limit (dBm)	Result
01	2412.000	A	2.850	5.860	≦8dBm	Pass
		В	4.760	7.770	≦8dBm	Pass
06	2437.000	A	3.160	6.170	≦8dBm	Pass
		В	4.380	7.390	≦8dBm	Pass
11	2462.000	A	3.210	6.220	≦8dBm	Pass
		В	4.580	7.590	≦8dBm	Pass

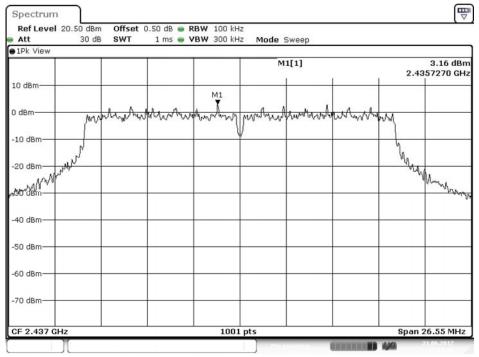
Note 1: The quantity 10\*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.



Date: 21.JUN.2017 12:16:01

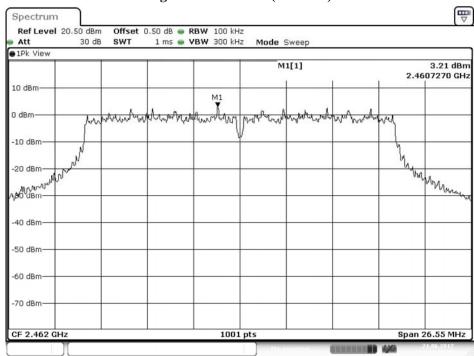






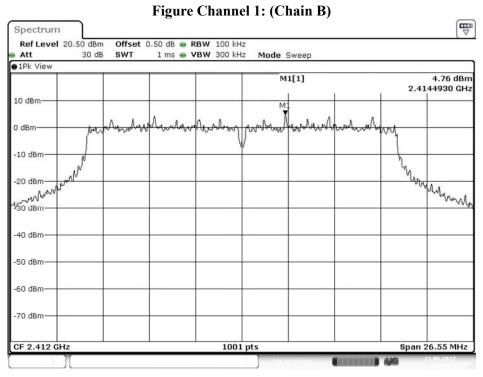
Date: 21.JUN.2017 12:19:45

### Figure Channel 11: (Chain A)



Date: 21.JUN.2017 12:25:31





Date: 21.JUN.2017 11:49:16

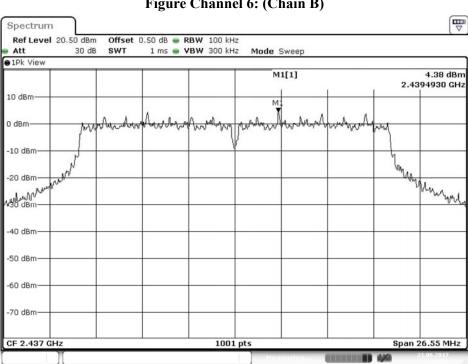
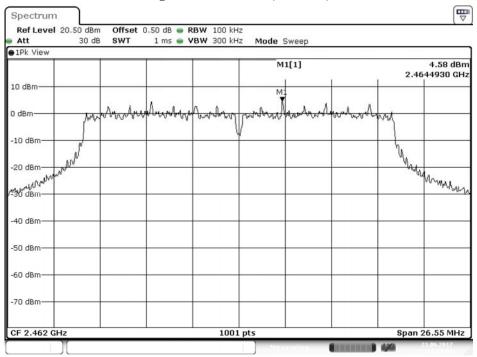


Figure Channel 6: (Chain B)

Date: 21.JUN.2017 11:53:08



## Figure Channel 11: (Chain B)



Date: 21.JUN.2017 11:57:01



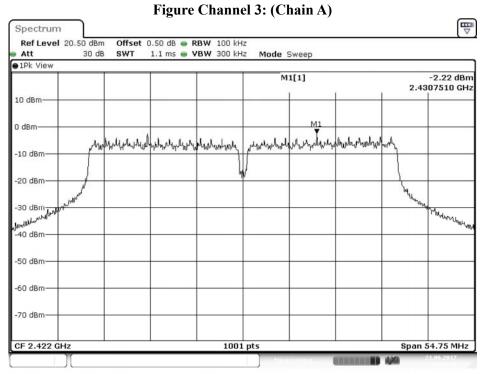
Test Item : Power Density Data

Test Mode : Mode 4: Transmit (802.11n MCS0 15Mbps 40M-BW)

Test Date : 2017/06/21

Channel No.	Frequency (MHz)	Chain	PPSD/MHz (dBm)	Total PPSD/MHz (dBm)	Limit (dBm)	Result
03	2422.000	A	-2.220	0.790	≦8dBm	Pass
		В	-1.320	1.690	≦8dBm	Pass
06	2437.000	A	-0.210	2.800	≦8dBm	Pass
		В	0.420	3.430	≦8dBm	Pass
09	2452.000	A	-0.010	3.000	≦8dBm	Pass
		В	0.600	3.610	≦8dBm	Pass

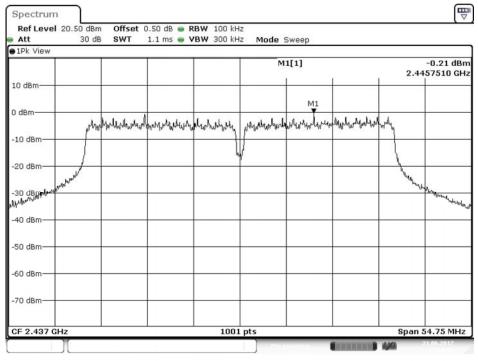
Note 1: The quantity 10\*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.



Date: 21.JUN.2017 12:30:17

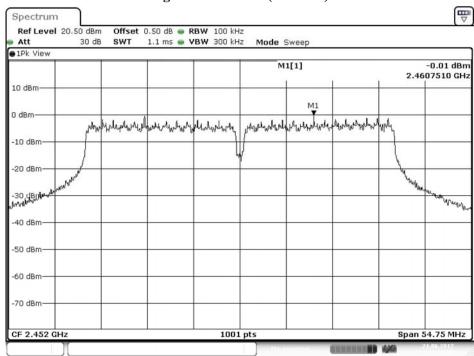






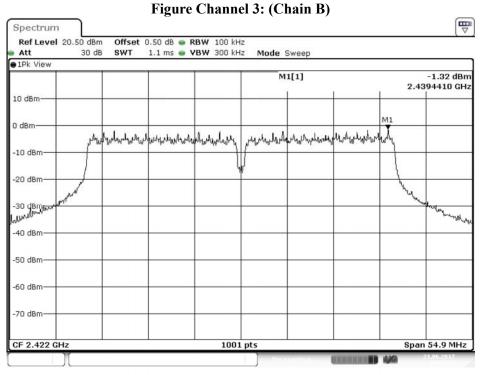
Date: 21.JUN.2017 12:34:09

### Figure Channel 9: (Chain A)



Date: 21.JUN.2017 12:38:06





Date: 21.JUN.2017 12:01:24

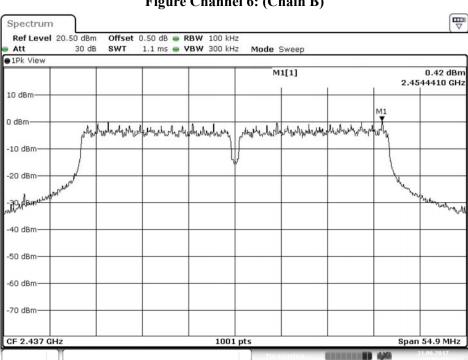
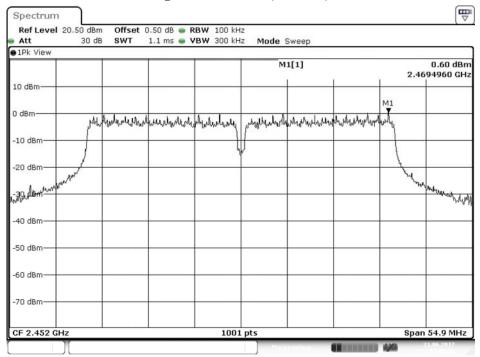


Figure Channel 6: (Chain B)

Date: 21.JUN.2017 12:05:25



## Figure Channel 9: (Chain B)



Date: 21.JUN.2017 12:09:24



# 9. EMI Reduction Method During Compliance Testing

No modification was made during testing.

Page: 91 of 93



Attachment 1: EUT Test Photographs

Page: 92 of 93



Attachment 2: EUT Detailed Photographs

Page: 93 of 93