FCC RF Test Report

APPLICANT	**:**	**Motorola Solutions, Inc.**
EQUIPMENT	**:**	**Enterprise Digital Assistant (EDA)**
BRAND NAME	**:**	**Motorola**
MODEL NAME	**:**	**MC67NA**
FCC ID	**:**	**UZ7MC67NA**
STANDARD	**:**	**FCC Part 15 Subpart C §15.247**
CLASSIFICATION	**:**	**(DTS) Digital Transmission System**

The product was received on Mar. 03, 2012 and completely tested on Jun. 28, 2012. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown the compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:

Jones Tsai

Jones Tsai / Manager

Testing Laboratory 1190

SPORTON INTERNATIONAL INC.
No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

TABLE OF CONTENTS

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR221518-01B	Rev. 01	Initial issue of report	Jul. 13, 2012

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	A8.2(a)	6dB Bandwidth	≥ 0.5MHz	Pass	-
3.1	-	Gen 4.6.1	99% Bandwidth	-	Pass	-
3.2	15.247(b)	A8.4	Power Output Measurement	≤ 30dBm	Pass	-
3.3	15.247(e)	A8.2(b)	Power Spectral Density	≤ 8dBm/3kHz	Pass	-
3.4	15.247(d)	A8.5	Conducted Band Edges	≤ 20dBc	Pass	-
			Conducted Spurious Emission		Pass	-
3.5	15.247(d)	A8.5	Radiated Band Edges	15.209(a) & 15.247(d)	Pass	Under limit 1.10 dB at 2483.500 MHz
			Radiated Spurious Emission		Pass	
3.6	15.207	Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 10.70 dB at 0.190 MHz
3.7	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Motorola Solutions, Inc.
One Motorola Plaza, Holtsville, NY 11742-1300 USA

1.2 Manufacturer

Motorola Solutions, Inc.
One Motorola Plaza, Holtsville, NY 11742-1300 USA

1.3 Feature of Equipment Under Test

Product Feature	
Equipment	Enterprise Digital Assistant (EDA)
Brand Name	Motorola
Model Name	MC67NA
FCC ID	UZ7MC67NA
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA WLAN 11abgn(BW 20MHz)/Bluetooth 2.1 EDR
HW Version	DV2
SW Version	01.21.0010 (RF Fusion Version : X_2.00.0.0.041E)
FW Version	2.28
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Product Specification subjective to this standard	
Tx/Rx Channel Frequency Range	802.11b/g/n : 2412 MHz ~ 2462 MHz 802.11a/n: 5745 MHz ~5825 MHz
Maximum Output Power to Antenna	**<2412 MHz ~ 2462 MHz>** 802.11b : 18.26 dBm (0.0670 W) 802.11g : 22.11 dBm (0.1626 W) 802.11n (BW 20MHz) : 22.61 dBm (0.1824 W) **<5745 MHz ~5825 MHz>** 802.11a : 17.53 dBm (0.0566 W) 802.11n (BW 20MHz) : 17.81 dBm (0.0604 W)
99% Occupied Bandwidth	**<2412 MHz ~ 2462 MHz>** 802.11b : 13.9996MHz 802.11g : 18.5562MHz 802.11n (BW 20MHz) : 20.5776MHz **<5745 MHz ~5825 MHz>** 802.11a : 19.7378MHz 802.11n (BW 20MHz) : 21.3192MHz
Antenna Type	802.11b/g/n : Fixed Internal Antenna with gain 1.91 dBi 802.11a/n : Fixed Internal Antenna with gain 3.34 dBi
Type of Modulation	802.11b : DSSS (BPSK / QPSK / CCK) 802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC.			
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978			
Test Site No.	**Sporton Site No.**			**FCC/IC Registration No.**
	TH02-HY	CO05-HY	03CH07-HY	722060/4086B-1

1.5 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v01
- FCC TCB Workshop 2012, April
- ANSI C63.4-2003
- IC RSS-210 Issue 8
- IC RSS-Gen Issue 3

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	GPS Station	T&E	GS-50	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
4.	Notebook	DELL	P20G	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	Notebook	DELL	Vostro 1510	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
6.	LCD Monitor	Lenovo	6135-AB1	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
7.	Bluetooth Earphone	Sony Ericsson	MW600	PY70DA2029	N/A	N/A
8.	iPod	Apple	A1199	FCC DoC	Shielded, 1.0 m	N/A
9.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A

2 Test Configuration of Equipment Under Test

2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	8	2447
	2	2417	9	2452
	3	2422	10	2457
	4	2427	11	2462
	5	2432	12	2467
	6	2437	13	2472
	7	2442		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5725-5850 MHz Band 4	149	5745	159	5795
	151	5755	165	5825
	157	5785		

2.2 RF Peak Output Power

Preliminary tests were performed in different data rate and recorded the RF power output in the following table:

The conducted power tables of Sample A are as follows:

Channel	Frequency	2.4GHz 802.11b RF Power (dBm)			
		DSSS Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	17.65	17.56	17.56	17.71
CH 06	2437 MHz	**18.79**	18.74	18.39	18.53
CH 11	2462 MHz	18.56	18.51	18.46	18.64
CH 12	2467 MHz	11.43	12.51	12.16	12.29
CH 13	2472 MHz	9.09	9.02	9.05	9.04

Channel	Frequency	2.4GHz 802.11g RF Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412 MHz	20.63	20.71	21.17	21.00	21.09	20.99	21.16	21.00
CH 06	2437 MHz	22.04	22.12	22.24	22.23	22.42	22.56	22.51	**22.64**
CH 11	2462 MHz	20.03	20.20	20.42	20.59	20.35	20.65	20.60	20.32
CH 12	2467 MHz	14.18	14.26	14.27	14.20	14.28	14.35	14.42	14.28
CH 13	2472 MHz	6.52	6.63	6.33	6.49	6.62	6.73	6.72	6.86

Channel	Frequency	2.4GHz 802.11g/n (BW 20MHz) RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 01	2412 MHz	20.77	20.79	20.82	21.13	21.01	21.11	20.72	21.23
CH 06	2437 MHz	**22.45**	22.44	22.44	22.44	22.16	22.44	22.41	22.40
CH 11	2462 MHz	18.76	18.74	18.93	19.02	19.05	18.73	18.96	19.07
CH 12	2467 MHz	13.90	14.16	14.13	14.36	14.37	14.26	14.30	14.32
CH 13	2472 MHz	6.19	6.26	6.30	6.61	6.56	6.39	6.41	6.35

Channel	Frequency	5GHz 802.11a RF Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH149	5745 MHz	**17.57**	17.26	17.38	17.13	17.31	17.22	17.49	17.47
CH157	5785 MHz	17.46	17.30	17.10	17.13	17.26	17.12	17.15	17.31
CH165	5825 MHz	17.48	17.27	17.35	17.35	17.25	17.23	17.41	17.30

Channel	Frequency	5GHz 802.11a/n (BW 20MHz) RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH149	5745 MHz	17.85	17.77	17.70	17.73	17.47	17.72	17.63	17.56
CH157	5785 MHz	**17.99**	17.70	17.55	17.58	17.49	17.51	17.55	17.60
CH165	5825 MHz	17.75	17.67	17.42	17.47	17.12	17.20	17.35	17.29

Remark: The EUT is programmed to transmit signals continuously for all testing.

The conducted power tables of Sample B are as follows:

Channel	Frequency	2.4GHz 802.11b RF Power (dBm)			
		DSSS Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	17.42	17.38	17.35	17.30
CH 06	2437 MHz	18.13	17.92	17.85	17.84
CH 11	2462 MHz	**18.26**	18.02	17.86	17.91
CH 12	2467 MHz	11.52	11.41	11.22	11.18
CH 13	2472 MHz	8.71	8.64	8.34	8.29

Channel	Frequency	2.4GHz 802.11g RF Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412 MHz	20.57	20.51	20.45	20.49	20.46	20.52	20.44	20.47
CH 06	2437 MHz	**22.11**	22.02	21.96	21.98	21.97	21.95	21.96	21.98
CH 11	2462 MHz	19.98	19.92	19.93	19.89	19.93	19.88	19.82	19.91
CH 12	2467 MHz	14.25	14.33	14.08	14.14	14.2	14	13.98	14.33
CH 13	2472 MHz	6.21	6.11	6.07	6.05	6.15	6.51	6.21	6.2

Channel	Frequency	2.4GHz 802.11n (BW 20MHz) RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 01	2412 MHz	22.37	22.34	22.31	22.36	22.30	22.29	21.79	21.21
CH 06	2437 MHz	**22.61**	22.52	22.57	22.60	22.55	22.59	22.60	22.58
CH 11	2462 MHz	18.57	18.46	18.61	18.92	18.97	18.65	18.99	18.99
CH 12	2467 MHz	14.47	14.19	14.14	14.01	14.03	14.37	14.32	14.25
CH 13	2472 MHz	6.12	6.07	6.21	6.09	6.15	6.07	6.29	6.21

Channel	Frequency	5GHz 802.11a RF Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH149	5745 MHz	**17.53**	17.46	17.49	17.48	17.51	17.49	17.52	17.51
CH157	5785 MHz	17.41	17.25	17.02	16.81	16.78	17.06	17.28	17.23
CH165	5825 MHz	17.26	17.04	16.97	16.92	16.99	17.05	16.88	16.90

Channel	Frequency	5GHz 802.11n (BW 20MHz) RF Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH149	5745 MHz	**17.81**	17.78	17.72	17.74	17.78	17.79	17.80	17.79
CH157	5785 MHz	17.75	17.70	17.57	17.56	17.53	17.51	17.47	17.45
CH165	5825 MHz	17.63	17.60	17.46	17.45	17.57	17.50	17.47	17.49

Remark:

1. The EUT is programmed to transmit signals continuously for all testing.
2. The Sample A and Sample B are electric identical,. The maximum output power levels for two samples are close and met the production target . Thus, Sample A was used for conducted measurement at the antenna terminal, and Sample B was used for radiated measurement.

2.3 Average Conducted Output Power

The conducted power tables of Sample A are as follows:

Channel	Frequency	2.4GHz 802.11b Average Power (dBm)			
		DSSS Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	15.18	15.13	15.25	15.35
CH 06	2437 MHz	**16.42**	16.32	16.11	16.27
CH 11	2462 MHz	16.38	16.37	16.23	16.32
CH 12	2467 MHz	9.05	10.05	9.75	9.95
CH 13	2472 MHz	6.65	6.56	6.7	6.73

Channel	Frequency	2.4GHz 802.11g Average Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412 MHz	14.61	14.92	15.00	14.84	14.84	14.64	14.91	14.60
CH 06	2437 MHz	16.15	16.13	16.11	16.12	15.96	16.14	16.17	**16.20**
CH 11	2462 MHz	14.15	14.17	14.36	14.44	14.05	14.19	14.06	13.81
CH 12	2467 MHz	8.15	8.19	8.13	8.05	7.94	7.98	7.98	7.82
CH 13	2472 MHz	0.51	0.6	0.2	0.32	0.3	0.39	0.27	0.35

Channel	Frequency	2.4GHz 802.11n (BW 20MHz) Average Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 01	2412 MHz	14.82	14.81	14.73	14.82	14.83	14.44	14.69	14.85
CH 06	2437 MHz	**16.49**	16.40	16.36	16.30	16.26	16.13	16.25	16.29
CH 11	2462 MHz	12.70	12.67	12.79	12.77	12.68	12.59	12.79	12.33
CH 12	2467 MHz	7.94	8.00	8.08	8.01	7.96	7.86	7.86	7.95
CH 13	2472 MHz	0.12	0.10	0.12	0.16	0.17	-0.03	0.01	-0.01

Channel	Frequency	5GHz 802.11a Average Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH149	5745 MHz	**14.78**	14.43	14.52	14.32	14.34	14.34	14.62	14.63
CH157	5785 MHz	14.61	14.55	14.11	14.28	14.42	14.22	14.22	14.42
CH165	5825 MHz	14.41	14.40	14.11	14.34	14.37	14.23	14.35	14.40

Channel	Frequency	5GHz 802.11n (BW 20MHz) Average Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH149	5745 MHz	14.99	14.93	14.82	14.95	14.70	15.00	14.78	14.81
CH157	5785 MHz	**15.19**	15.17	14.80	14.87	14.83	14.76	14.73	14.81
CH165	5825 MHz	15.06	14.93	14.63	14.40	14.47	14.61	14.61	14.70

The conducted power tables of Sample B are as follows:

Channel	Frequency	2.4GHz 802.11b Average Power (dBm)			
		DSSS Data Rate			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
CH 01	2412 MHz	15.22	13.31	13.40	13.33
CH 06	2437 MHz	16.01	15.89	15.78	15.76
CH 11	2462 MHz	**16.13**	15.72	15.82	15.87
CH 12	2467 MHz	9.31	9.16	9.18	9.10
CH 13	2472 MHz	6.29	6.22	6.15	6.02

Channel	Frequency	2.4GHz 802.11g Average Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH 01	2412 MHz	13.11	13.52	13.57	13.63	13.55	13.53	13.40	13.49
CH 06	2437 MHz	**16.03**	16.02	16.00	15.99	15.97	15.90	15.89	15.86
CH 11	2462 MHz	14.02	13.89	13.92	13.88	13.74	13.78	13.64	13.71
CH 12	2467 MHz	7.14	6.99	7.26	7.2	8.03	7.89	7.81	7.74
CH 13	2472 MHz	0.38	0.18	0.21	0.17	0.11	0.36	0.31	0.25

Channel	Frequency	2.4GHz 802.11n (BW 20MHz) Average Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 01	2412 MHz	15.33	15.31	15.24	15.36	15.31	14.82	15.02	15.21
CH 06	2437 MHz	**16.29**	16.27	16.25	16.21	16.28	16.20	16.16	16.23
CH 11	2462 MHz	12.48	12.41	12.58	12.44	12.38	12.28	12.39	12.01
CH 12	2467 MHz	7.28	7.16	7.15	7.09	7.07	7.01	7.95	7.91
CH 13	2472 MHz	0.52	0.5	0.59	0.48	0.49	0.41	0.61	0.65

Channel	Frequency	5GHz 802.11a Average Power (dBm)							
		OFDM Data Rate							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
CH149	5745 MHz	**14.72**	14.71	14.70	14.71	14.70	14.68	14.70	14.67
CH157	5785 MHz	14.36	14.21	13.87	13.58	13.21	14.36	14.24	14.02
CH165	5825 MHz	14.28	14.06	13.66	13.47	13.49	13.47	13.34	13.25

Channel	Frequency	5GHz 802.11n (BW 20MHz) Average Power (dBm)							
		OFDM Data Rate							
		MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH149	5745 MHz	**15.02**	14.71	14.69	14.56	14.61	14.45	14.50	14.52
CH157	5785 MHz	15.01	14.81	14.60	14.65	14.57	14.59	14.55	14.57
CH165	5825 MHz	14.99	14.98	14.84	14.80	14.67	14.81	14.76	14.73

2.4 Test Mode

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 KHz to 30 MHz), radiated emission (30 MHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Definition of each configuration about keypad and Camera for EUT

Keypads	Cameras
(1) Qwerty (2) Numeric (3) PIM	(1) With camera (2) Without camera

Pre-scanned tests, X, Y, Z in three orthogonal panels, were conducted to determine the final configuration from all possible combinations.

The following table is showing the total pre-scanned test modes, and the worst cases (Y and Z plane) are recorded in this report only.

Test Modes					
Radiated TCs					
No.	Data Rate	Modulation	Mode	Keypad	Camera
1	802.11b	DSSS	CH01_2412 MHz	1	1
2	802.11b	DSSS	CH06_2437 MHz	1	1
3	802.11b	DSSS	CH11_2462 MHz	1	1
4	802.11b	DSSS	CH12_2467 MHz	1	1
5	802.11b	DSSS	CH13_2472 MHz	1	1
6	802.11g	OFDM	CH01_2412 MHz	1	1
7	802.11g	OFDM	CH06_2437 MHz	1	1
8	802.11g	OFDM	CH11_2462 MHz	1	1
9	802.11g	OFDM	CH12_2467 MHz	1	1
10	802.11g	OFDM	CH13_2472 MHz	1	1
11	802.11g	OFDM	CH11_2462 MHz	2	1
12	802.11g	OFDM	CH11_2462 MHz	3	1
13	802.11g	OFDM	CH11_2462 MHz	1	2

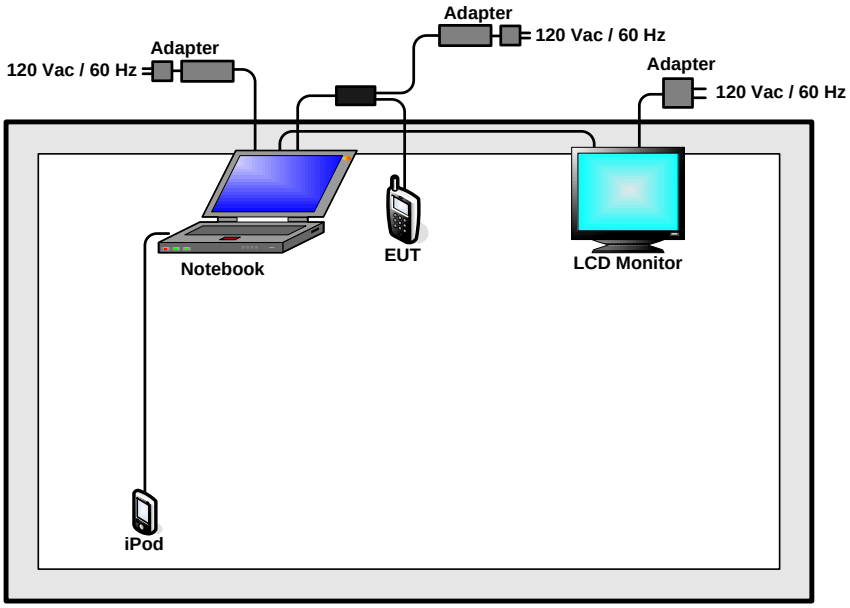
Test Modes					
Radiated TCs					
No.	Data Rate	Modulation	Mode	Keypad	Camera
14	802.11n	OFDM	CH01_2412 MHz (BW 20M)	1	1
15	802.11n	OFDM	CH06_2437 MHz (BW 20M)	1	1
16	802.11n	OFDM	CH11_2462 MHz (BW 20M)	1	1
17	802.11n	OFDM	CH12_2467 MHz (BW 20M)	1	1
18	802.11n	OFDM	CH13_2472 MHz (BW 20M)	1	1
19	802.11a	OFDM	CH149_5745 MHz	1	1
20	802.11a	OFDM	CH157_5785 MHz	1	1
21	802.11a	OFDM	CH165_5825 MHz	1	1
22	802.11n	OFDM	CH149_5745 MHz (BW 20M)	1	1
23	802.11n	OFDM	CH157_5785 MHz (BW 20M)	1	1
24	802.11n	OFDM	CH165_5825 MHz (BW 20M)	1	1
25	802.11n	OFDM	CH149_5745 MHz (BW 20M)	2	1
26	802.11n	OFDM	CH149_5745 MHz (BW 20M)	3	1
27	802.11n	OFDM	CH149_5745 MHz (BW 20M)	1	2
Remark: For radiated TCs, test was performed together with USB charging cable with AC power.					

Test Modes			
Conducted TCs			
No.	Data Rate	Modulation	Mode
1	802.11b	DSSS	CH01_2412 MHz
2	802.11b	DSSS	CH06_2437 MHz
3	802.11b	DSSS	CH11_2462 MHz
4	802.11g	OFDM	CH01_2412 MHz
5	802.11g	OFDM	CH06_2437 MHz
6	802.11g	OFDM	CH11_2462 MHz
7	802.11n	OFDM	CH01_2412 MHz (BW 20M)
8	802.11n	OFDM	CH06_2437 MHz (BW 20M)
9	802.11n	OFDM	CH11_2462 MHz (BW 20M)
10	802.11a	OFDM	CH149_5745 MHz
11	802.11a	OFDM	CH157_5785 MHz
12	802.11a	OFDM	CH165_5825 MHz
13	802.11n	OFDM	CH149_5745 MHz (BW 20M)
14	802.11n	OFDM	CH157_5785 MHz (BW 20M)
15	802.11n	OFDM	CH165_5825 MHz (BW 20M)

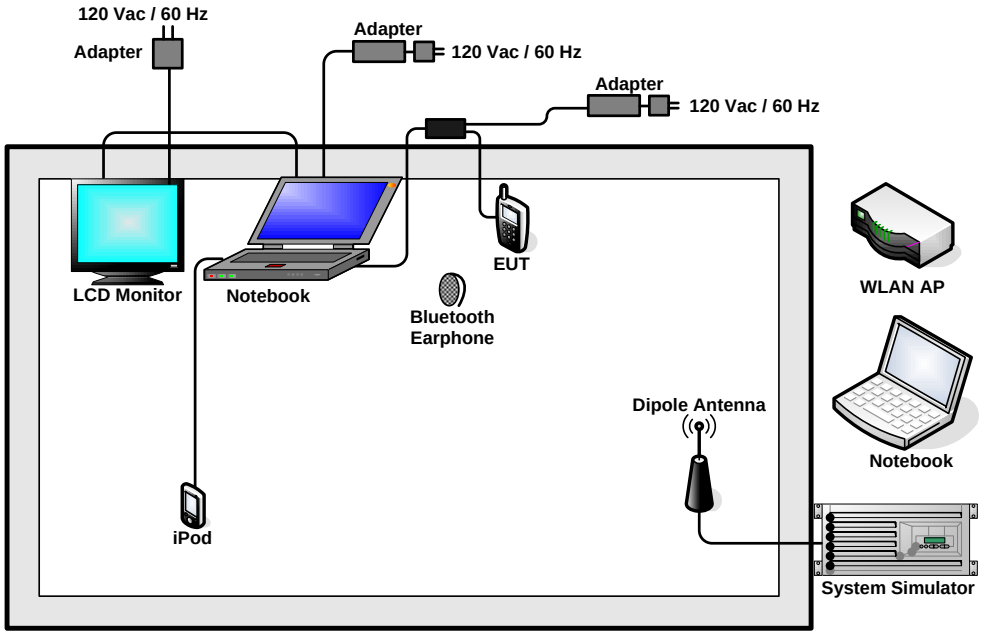
Test Cases
AC Conducted Emission
Mode 1 :GSM850 Idle + WLAN (2.4G) Link + Bluetooth Link + GPS Rx + Qwerty Keypad with Camera + USB Charging Cable with AC Power + USB Link Mode 2 WCDMA Band V Idle + WLAN (2.4G) Link + Bluetooth Link + Camera + Numeric Keypad without Camera + USB Charging Cable with AC Power + USB Link Mode 3 WCDMA Band II Idle + WLAN (2.4G) Link + Bluetooth Link + Scanner + PIM Keypad without Camera + USB Charging Cable with AC Power + USB Link Mode 4 WCDMA Band V Idle + WLAN (5G) Link + Bluetooth Link + Camera + Numeric Keypad without Camera + USB Charging Cable with AC Power + USB Link
Remark: 1. ”BT Link” stands for EUT linked to Bluetooth Earphone by BT function. 2. ”WLAN Link” stands for EUT associated with AP at 2.4GHz or 5GHz band. 3. ”Scanner” stands for scanning and decoding a barcode by scanner. 4. ”Camera” stands for playing camera to capture picture. 5. “USB Link” stands for data file transfer. 6. DSD keypad PCB is the same as Numeric keypad PCB, only difference is printed.

2.5 Connection Diagram of Test System

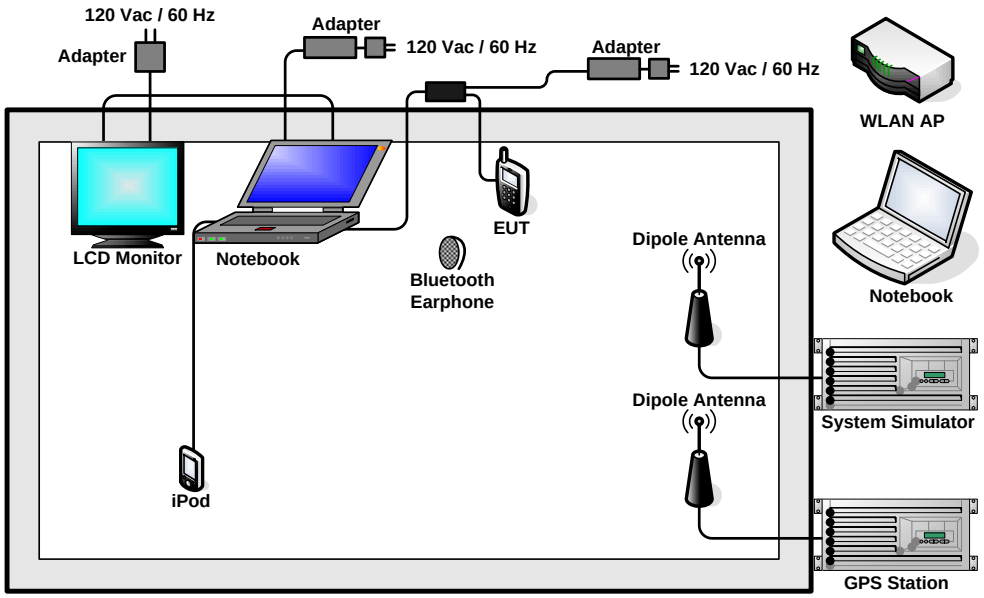
<WLAN Tx Mode>



<AC Conducted Emission Mode>



<AC Conducted Emission with GPS Rx Mode>



2.6 RF Utility

The programmed RF utility “FILE EXPLORER ➔ My Device ➔ Click ticon first then Click XWingcon ➔ Execute the program to change Regulatory and click Enable Manufacturing Test mode ➔ after Enable then change to Scripts ”, is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB Bandwidth

The minimum 6 dB bandwidth shall be at least 500 KHz.

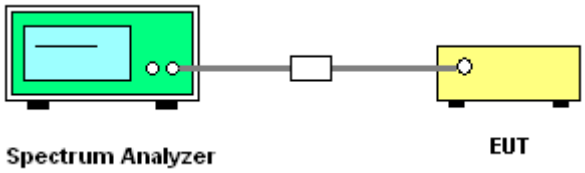
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance and TCB Workshop 2012, April.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable. The path loss was compensated to the results for each measurement.
3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 1-5% of the emission bandwidth (EBW).Set the Video bandwidth (VBW) ≥ 3 * RBW. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 KHz.
4. The marker-delta reading at this point is the 6 dB bandwidth of the emission.

3.1.4 Test Setup



3.1.5 Test Result of 6dB Bandwidth

Test Mode :	802.11b	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	9.173	0.5	Pass
06	2437	9.184	0.5	Pass
11	2462	9.161	0.5	Pass

Test Mode :	802.11g	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	16.518	0.5	Pass
06	2437	16.600	0.5	Pass
11	2462	16.589	0.5	Pass

Test Mode :	802.11n (BW 20MHz)	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	2.4GHz 802.11n (BW 20MHz) 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	17.046	0.5	Pass
06	2437	16.913	0.5	Pass
11	2462	17.368	0.5	Pass

Test Mode :	802.11a	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
149	5745	16.214	0.5	Pass
157	5785	16.095	0.5	Pass
165	5825	16.027	0.5	Pass

Test Mode :	802.11n (BW 20MHz)	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	5GHz 802.11n (BW 20MHz) 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
149	5745	17.183	0.5	Pass
157	5785	17.165	0.5	Pass
165	5825	17.387	0.5	Pass

3.1.6 Test Result of 99% Occupied Bandwidth

Test Mode :	802.11b	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11b 99% Occupied Bandwidth (MHz)	Pass/Fail
01	2412	13.9697	Pass
06	2437	13.9996	Pass
11	2462	13.9971	Pass

Test Mode :	802.11g	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11g 99% Occupied Bandwidth (MHz)	Pass/Fail
01	2412	18.0501	Pass
06	2437	18.5562	Pass
11	2462	17.7125	Pass

Test Mode :	802.11n (BW 20MHz)	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	2.4GHz 802.11n (BW 20MHz) 99% Occupied Bandwidth (MHz)	Pass/Fail
01	2412	19.0688	Pass
06	2437	19.5749	Pass
11	2462	18.7785	Pass

Test Mode :	802.11a	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

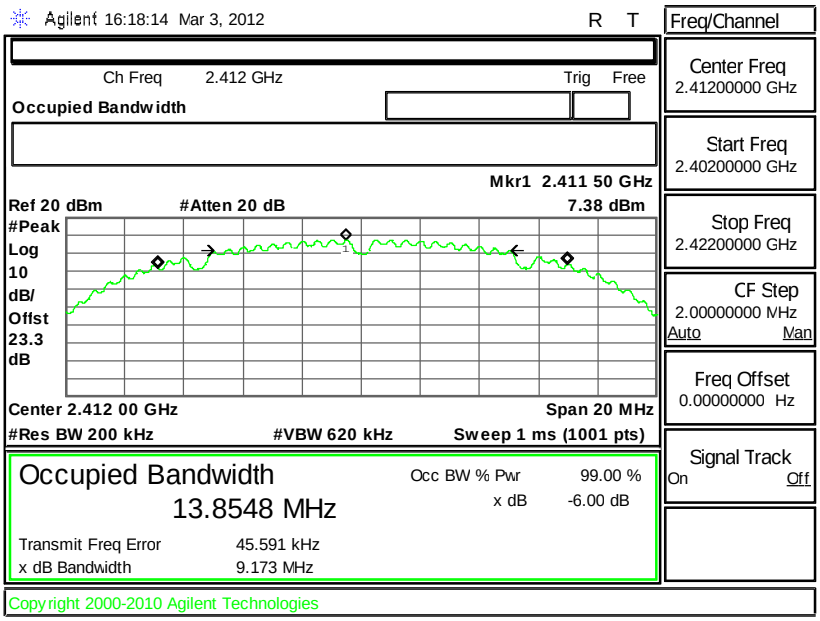
Channel	Frequency (MHz)	802.11a 99% Occupied Bandwidth (MHz)	Pass/Fail
149	5745	19.2589	Pass
157	5785	19.7378	Pass
165	5825	19.3270	Pass

Test Mode :	802.11n (BW 20MHz)	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

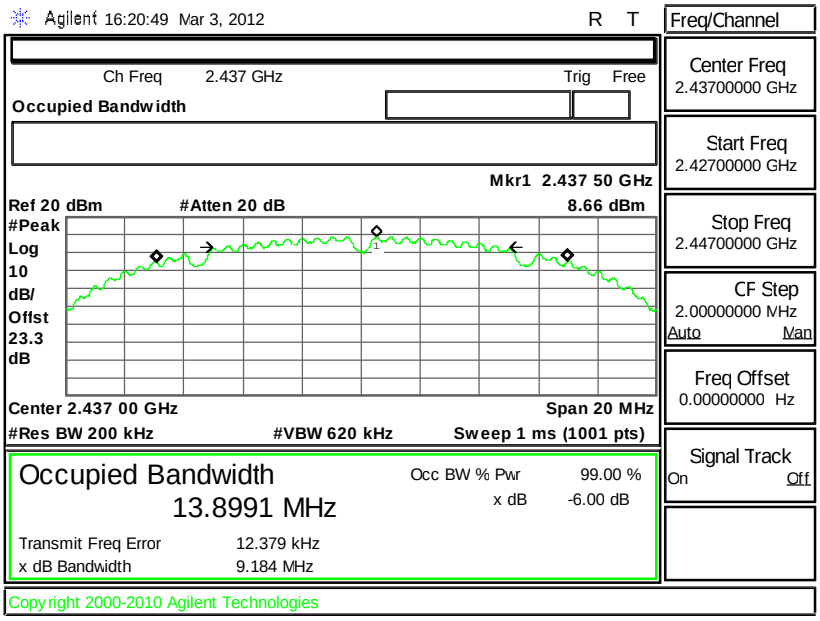
Channel	Frequency (MHz)	5GHz 802.11n (BW 20MHz) 99% Occupied Bandwidth (MHz)	Pass/Fail
149	5745	21.3192	Pass
157	5785	20.7580	Pass
165	5825	20.3761	Pass

3.1.7 Test Result of 6dB Bandwidth Plots

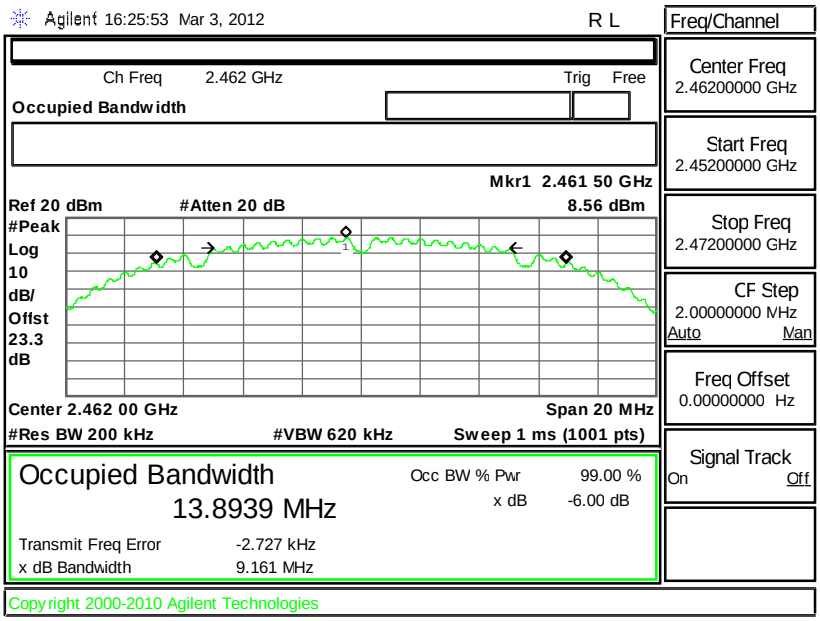
6 dB Bandwidth Plot on 802.11b Channel 01



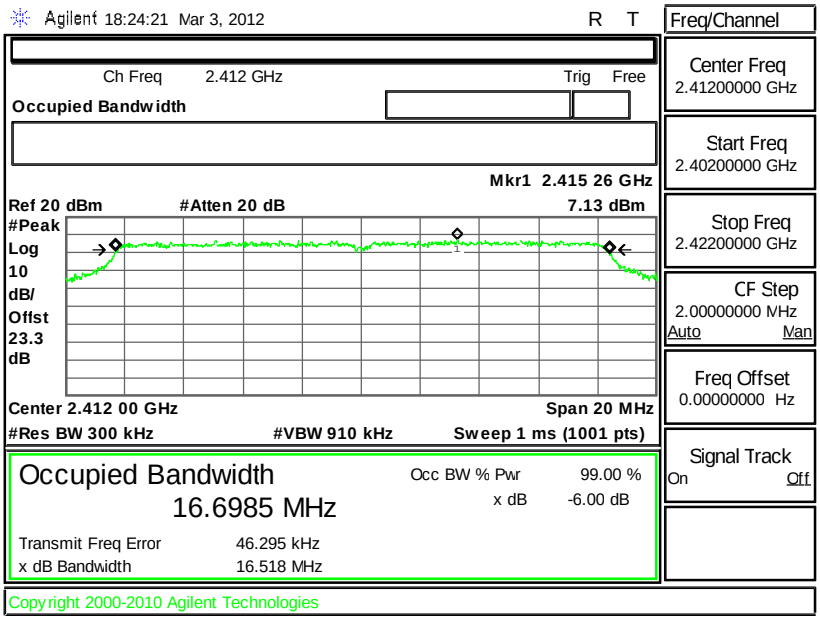
6 dB Bandwidth Plot on 802.11b Channel 06



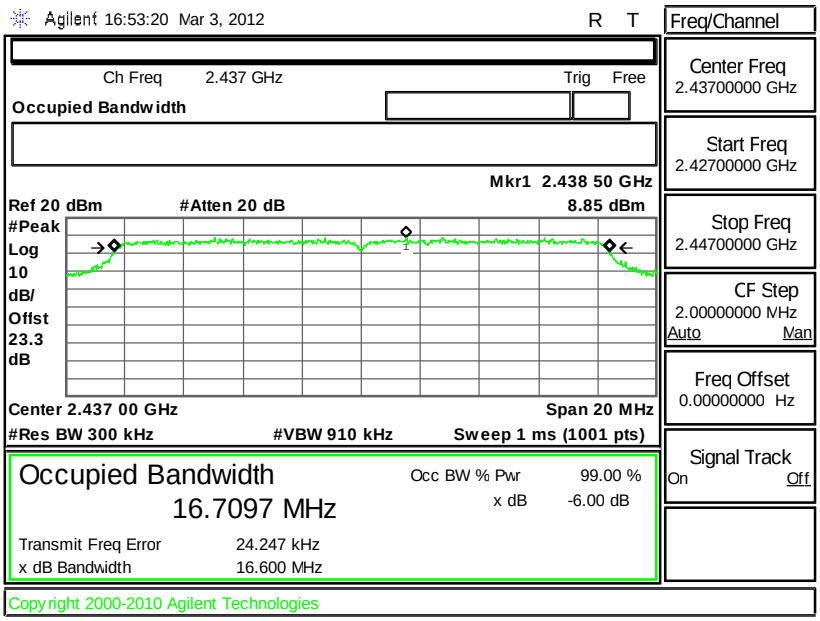
6 dB Bandwidth Plot on 802.11b Channel 11



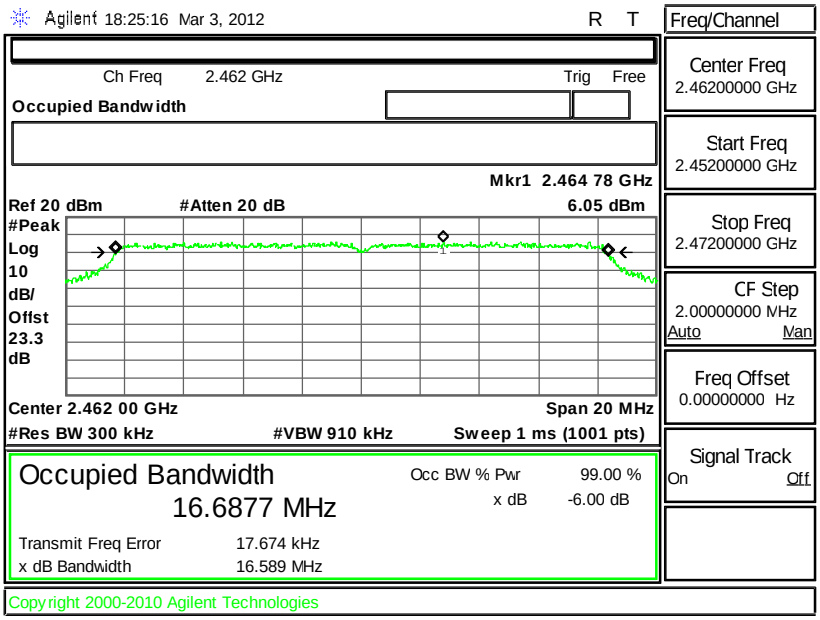
6 dB Bandwidth Plot on 802.11g Channel 01



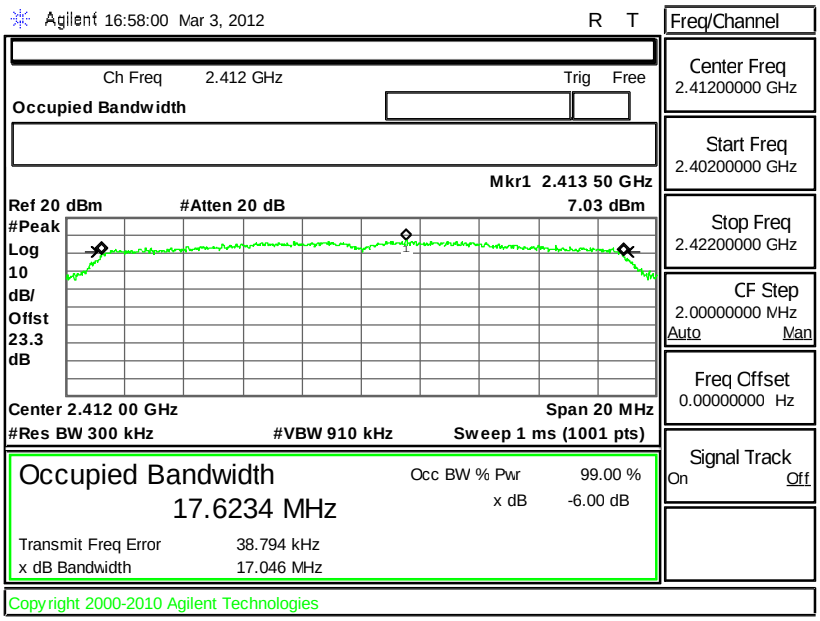
6 dB Bandwidth Plot on 802.11g Channel 06



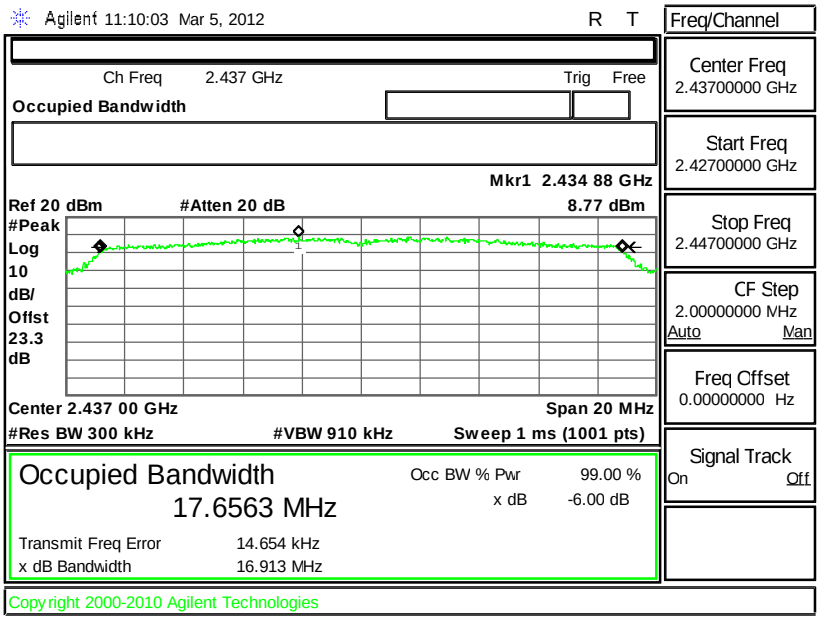
6 dB Bandwidth Plot on 802.11g Channel 11



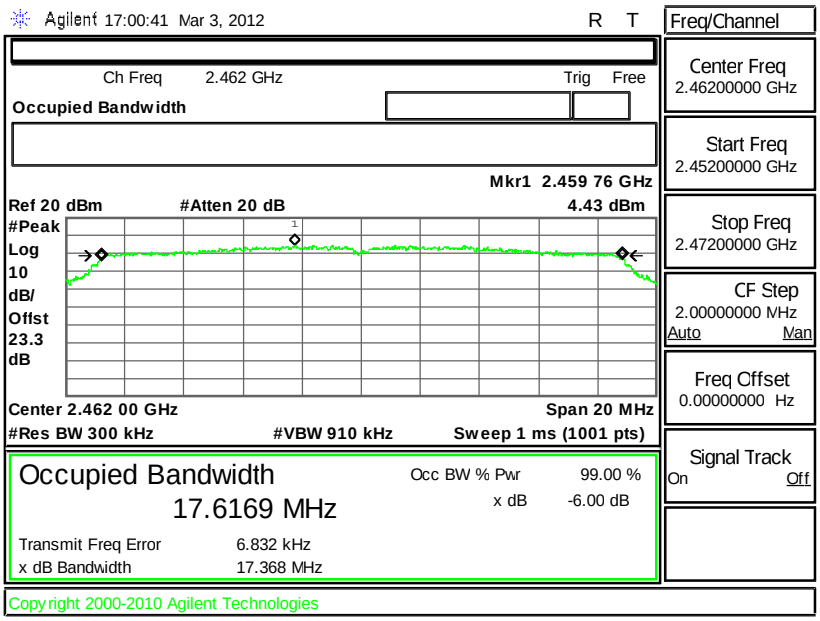
6 dB Bandwidth Plot on 2.4G 802.11n (BW 20MHz) Channel 01



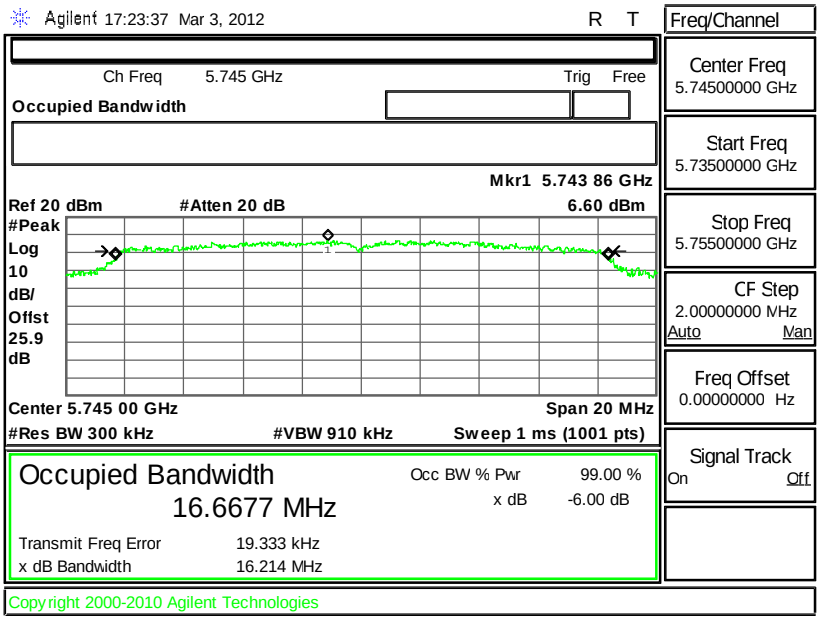
6 dB Bandwidth Plot on 2.4G 802.11n (BW 20MHz) Channel 06



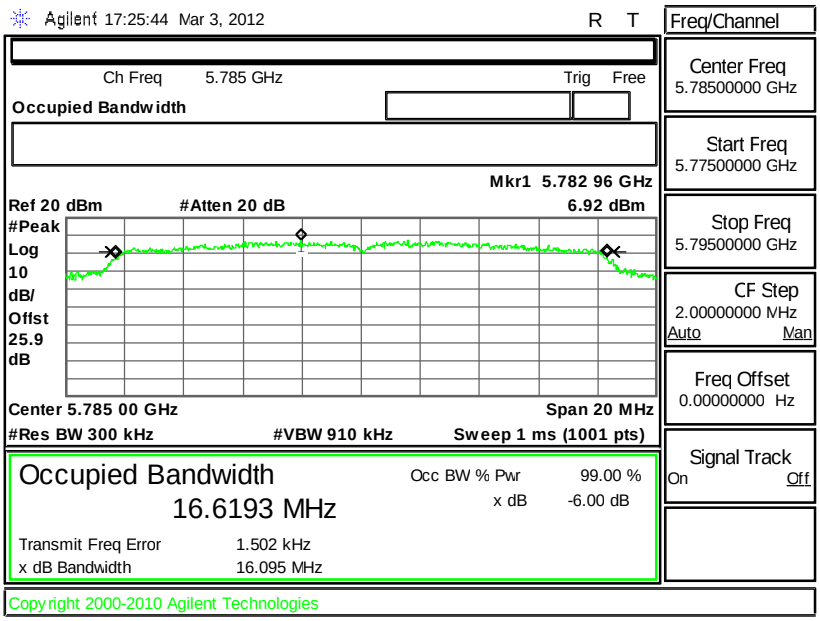
6 dB Bandwidth Plot on 2.4G 802.11n (BW 20MHz) Channel 11



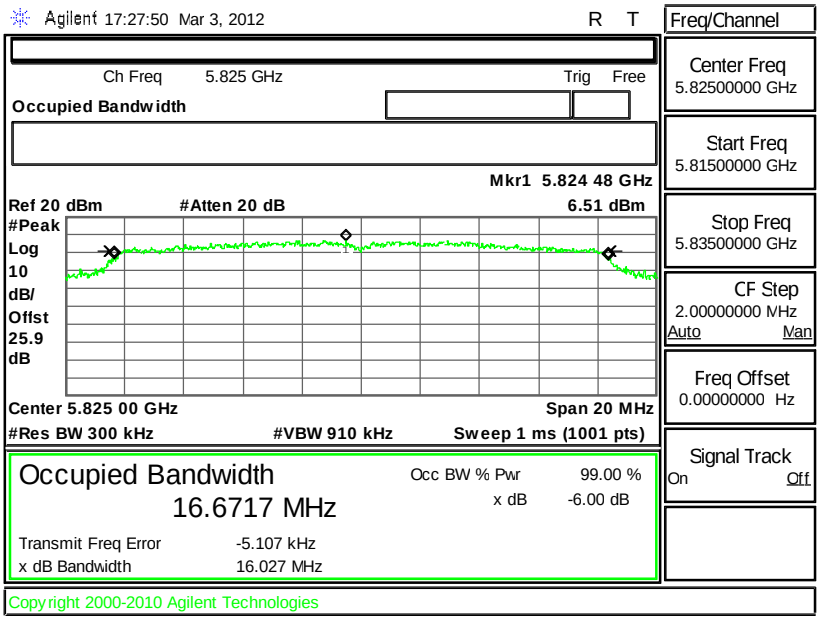
6 dB Bandwidth Plot on 802.11a Channel 149



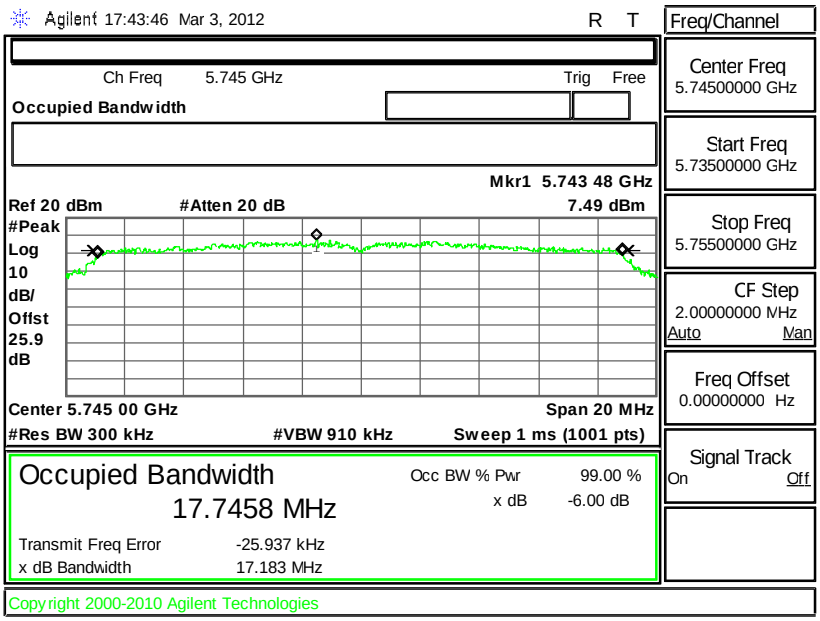
6 dB Bandwidth Plot on 802.11a Channel 157



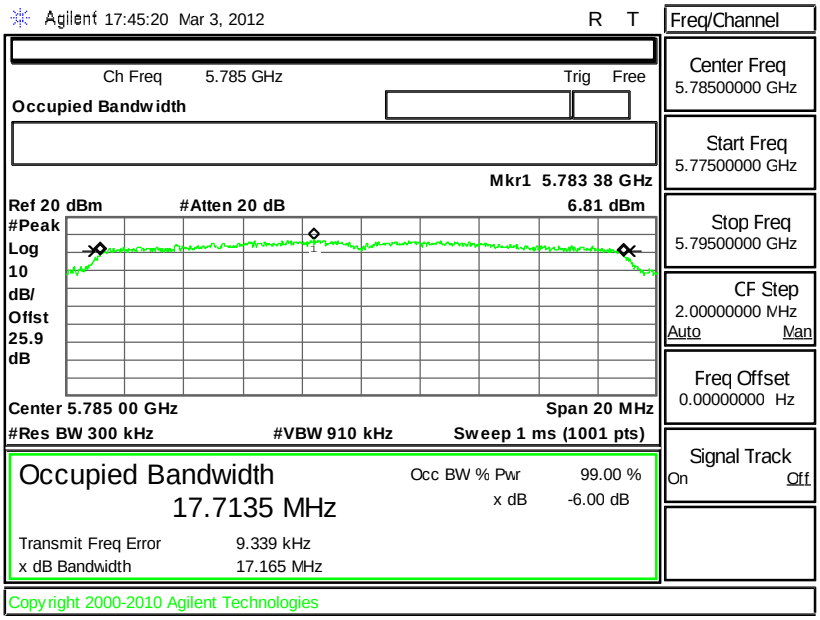
6 dB Bandwidth Plot on 802.11a Channel 165



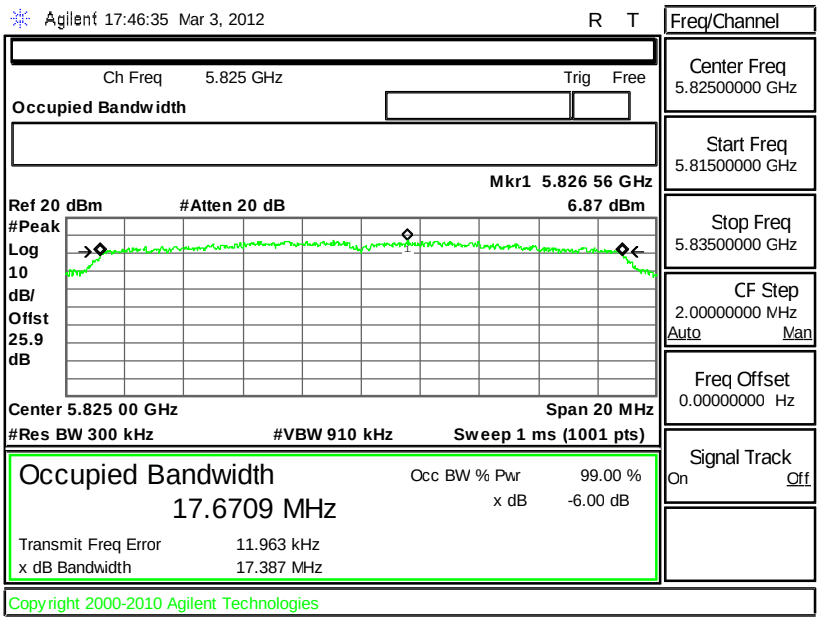
6 dB Bandwidth Plot on 5G 802.11n (BW 20MHz) Channel 149



6 dB Bandwidth Plot on 5G 802.11n (BW 20MHz) Channel 157

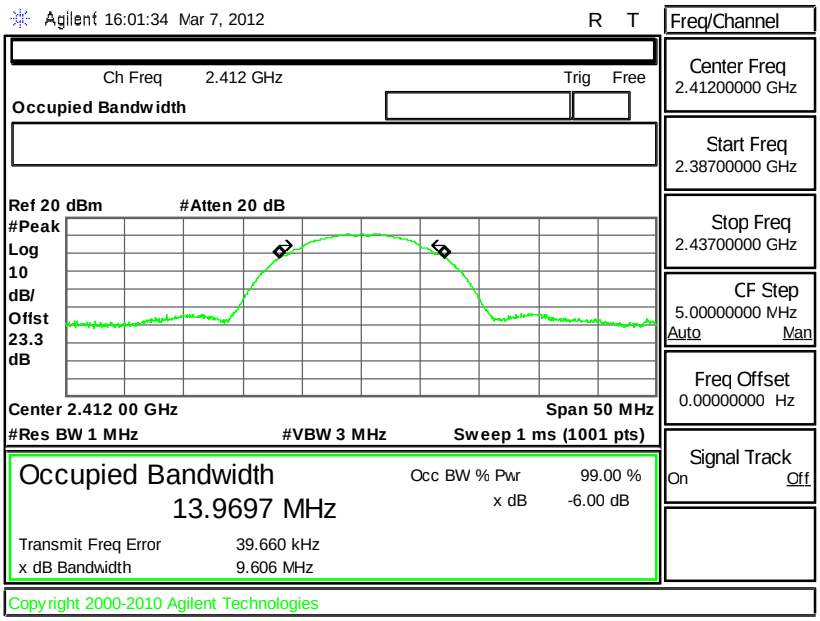


6 dB Bandwidth Plot on 5G 802.11n (BW 20MHz) Channel 165

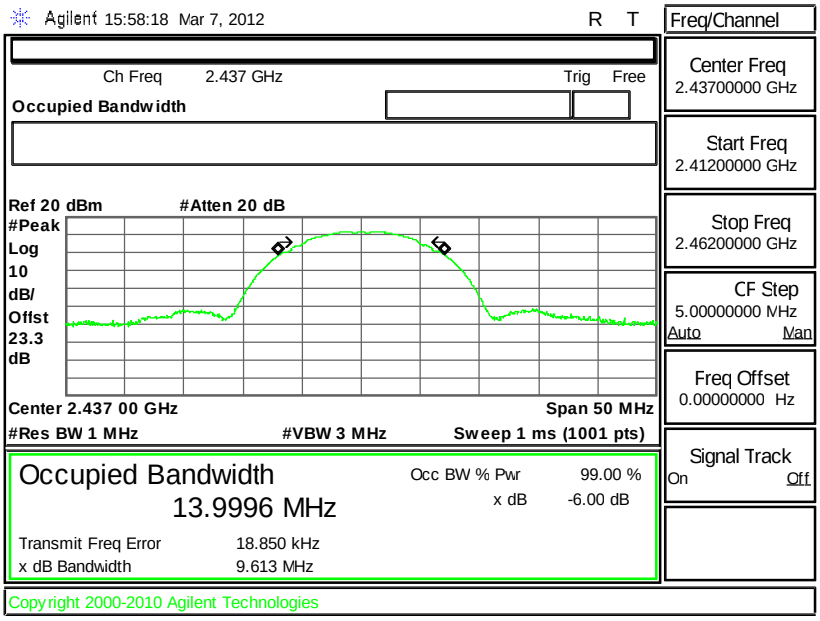


3.1.8 Test Result of 99% Bandwidth Plots

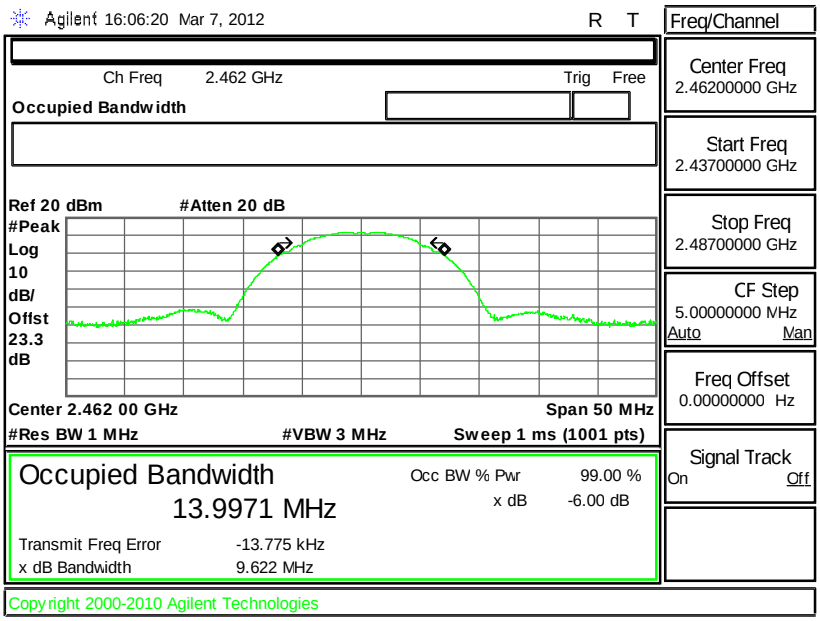
99% Occupied Bandwidth Plot on 802.11b Channel 01



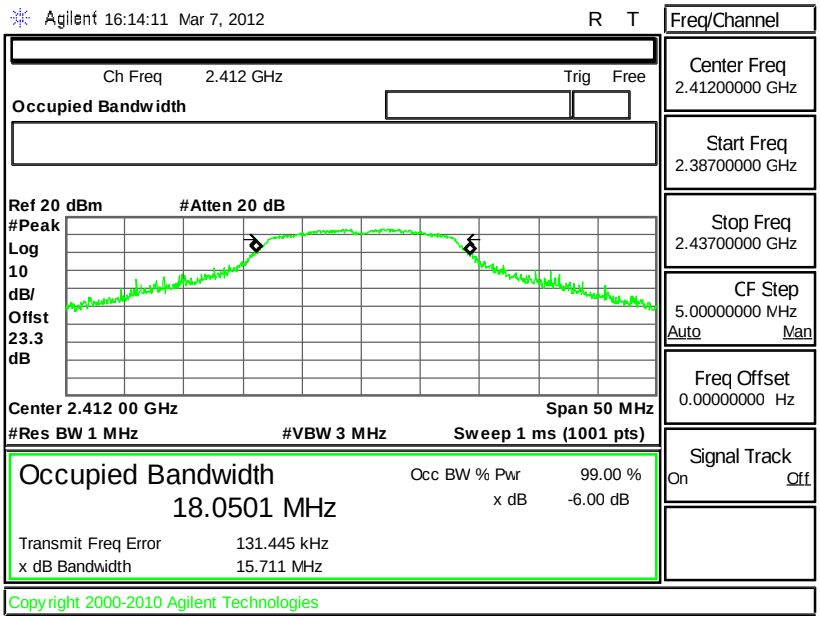
99% Occupied Bandwidth Plot on 802.11b Channel 06



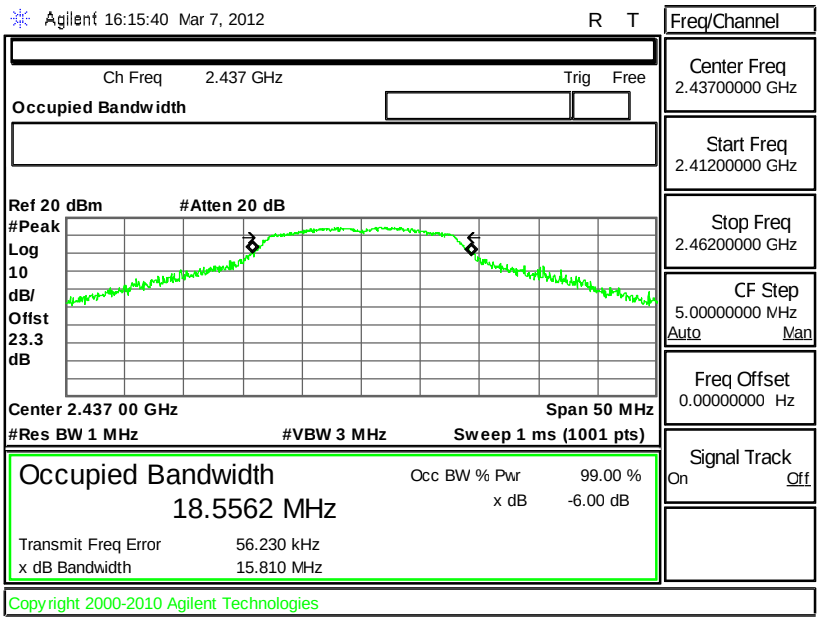
99% Occupied Bandwidth Plot on 802.11b Channel 11



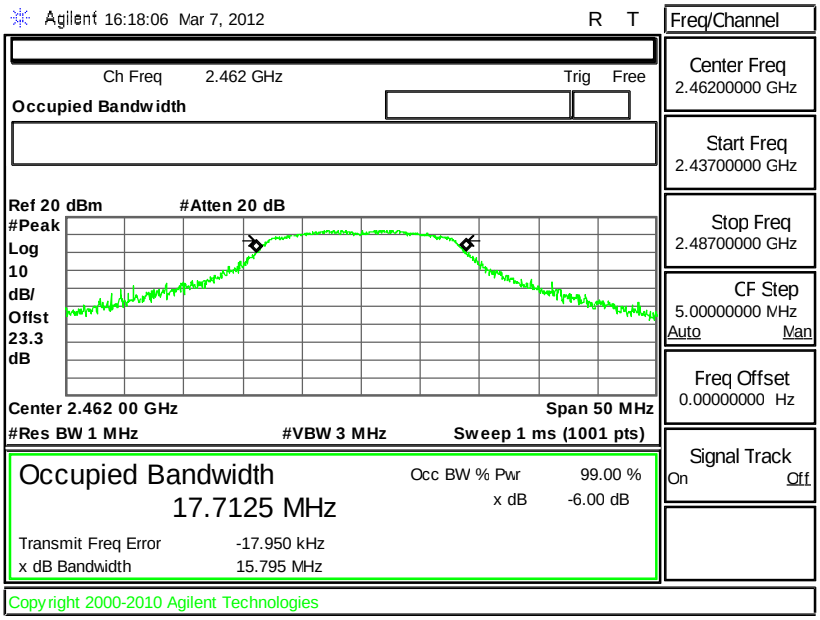
99% Occupied Bandwidth Plot on 802.11g Channel 01



99% Occupied Bandwidth Plot on 802.11g Channel 06

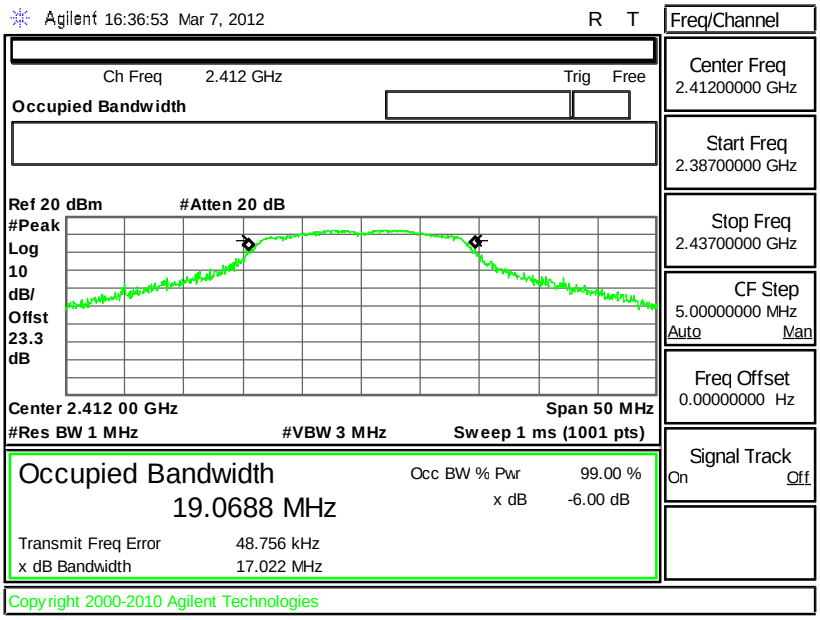


99% Occupied Bandwidth Plot on 802.11g Channel 11



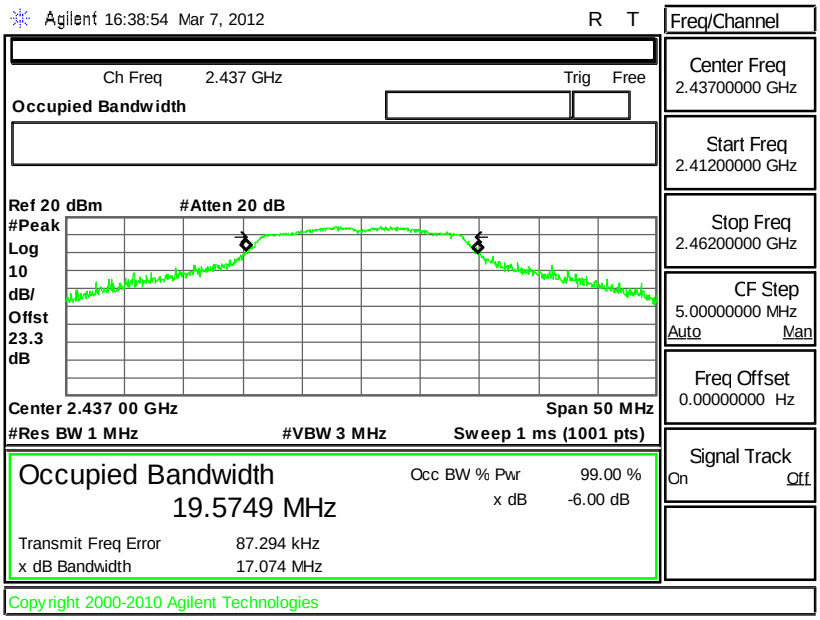
99% Occupied Bandwidth Plot on 2.4G 802.11n (BW 20MHz)

Channel 01



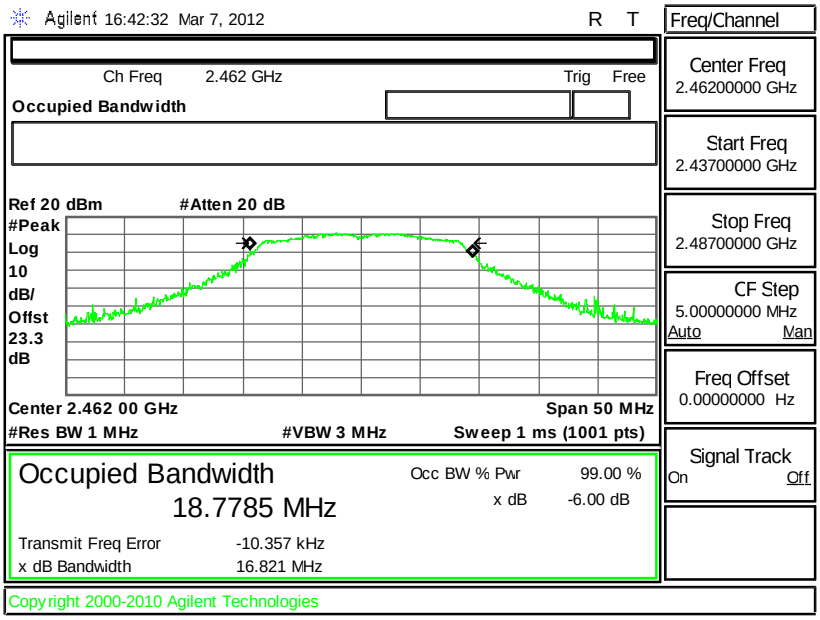
99% Occupied Bandwidth Plot on 2.4G 802.11n (BW 20MHz)

Channel 06

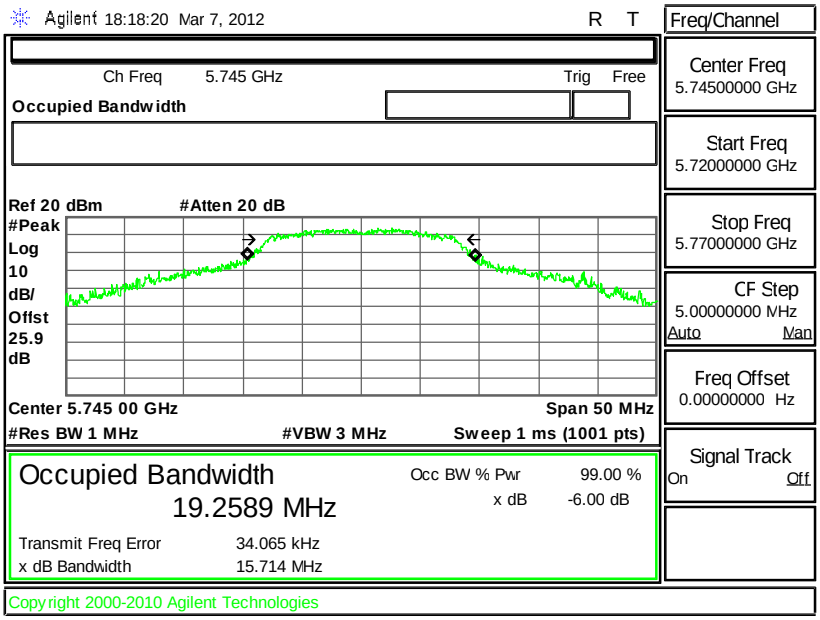


99% Occupied Bandwidth Plot on 2.4G 802.11n (BW 20MHz)

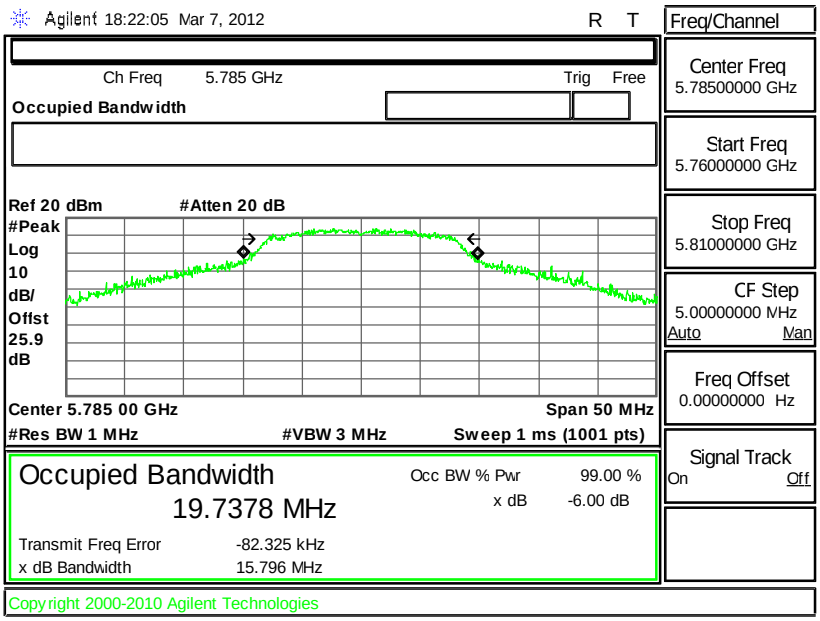
Channel 11



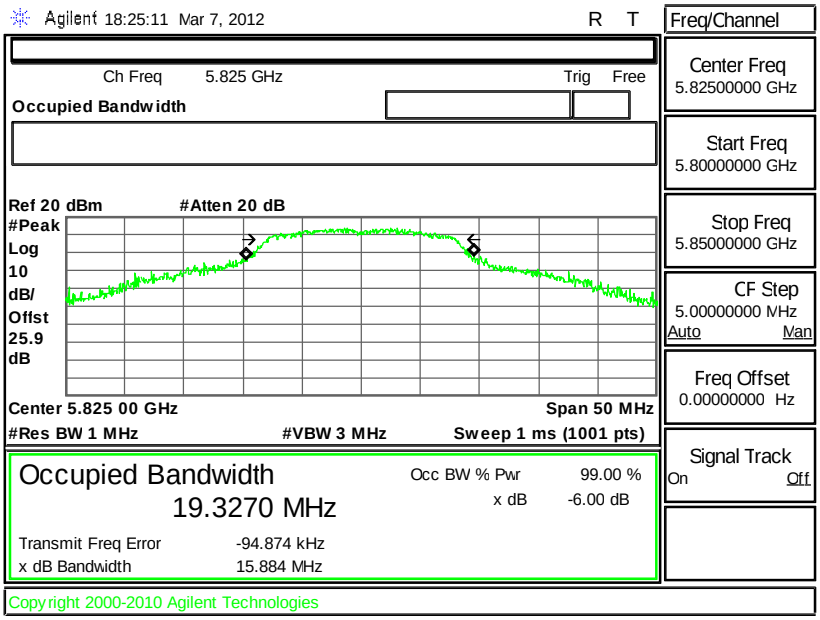
99% Occupied Bandwidth Plot on 802.11a Channel 149



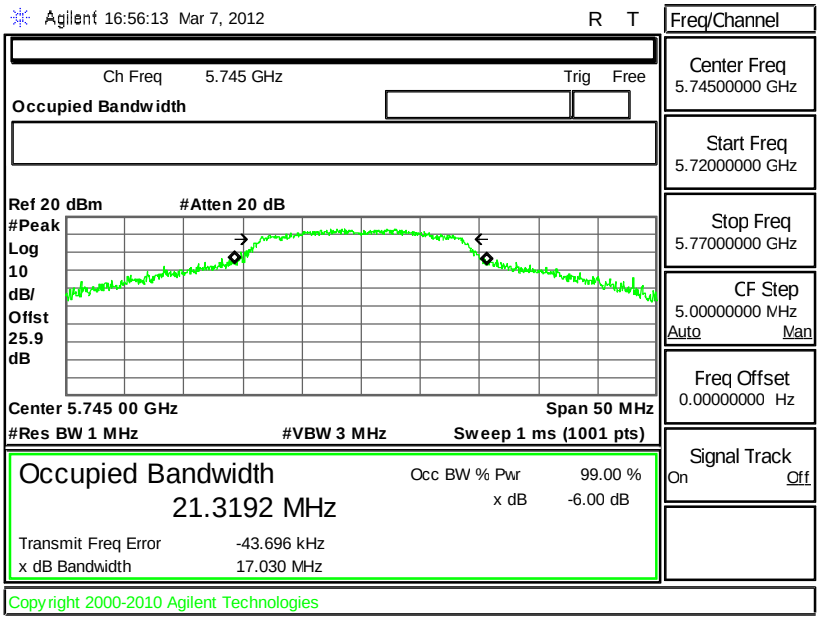
99% Occupied Bandwidth Plot on 802.11a Channel 157



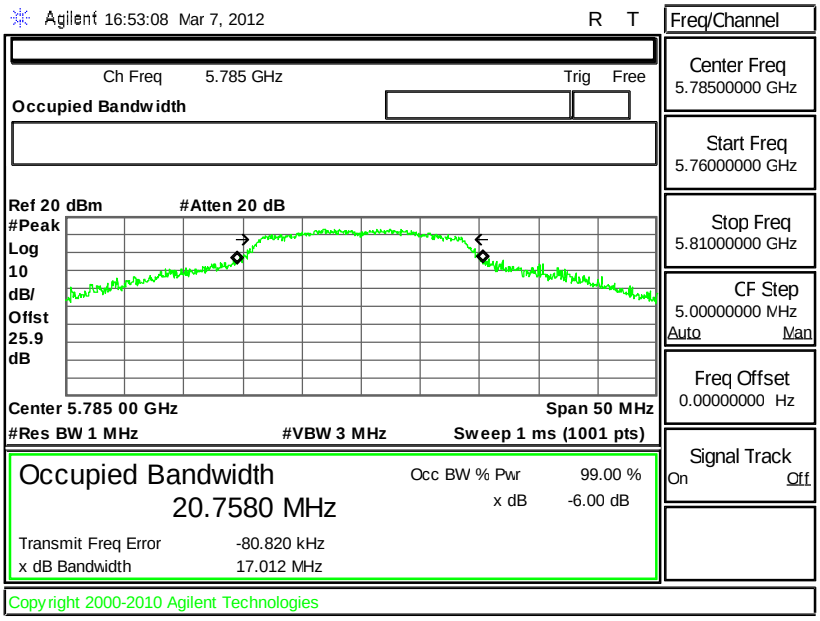
99% Occupied Bandwidth Plot on 802.11a Channel 165



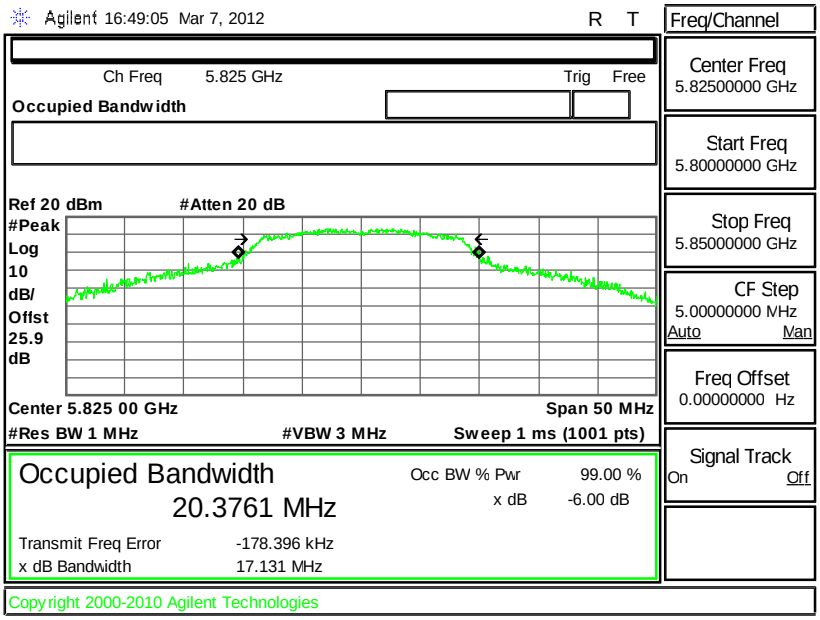
99% Occupied Bandwidth Plot on 5G 802.11n (BW 20MHz) Channel 149



99% Occupied Bandwidth Plot on 5G 802.11n (BW 20MHz) Channel 157



99% Occupied Bandwidth Plot on 5G 802.11n (BW 20MHz) Channel 165



3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz and 5725-5850MHz, the limit for peak output power is 30dBm. If transmitting Antenna of directional gain greater than 6dBi are used the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the Antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the Antenna exceeds 6dBi.

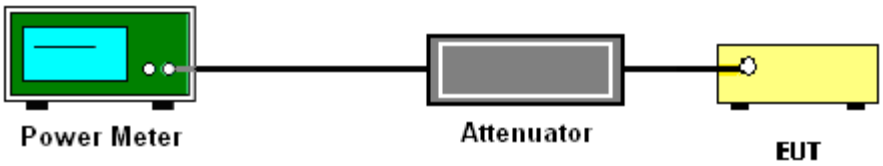
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance and TCB Workshop 2012, April.
2. The RF output of EUT was connected to the power meter by a low loss cable
3. Measure the power by power meter.

3.2.4 Test Setup



3.2.5 Test Result of Peak Output Power

Test Mode :	802.11b	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11b Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	17.65	30	Pass
06	2437	18.79	30	Pass
11	2462	18.56	30	Pass

Test Mode :	802.11g	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11g Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	21.00	30	Pass
06	2437	22.64	30	Pass
11	2462	20.32	30	Pass

Test Mode :	802.11n (BW 20MHz)	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	2.4G 802.11n (BW 20MHz) Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	20.77	30	Pass
06	2437	22.45	30	Pass
11	2462	18.76	30	Pass

Test Mode :	802.11a	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
149	5745	17.57	30	Pass
157	5785	17.46	30	Pass
165	5825	17.48	30	Pass

Test Mode :	802.11n (BW 20MHz)	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	5G 802.11n (BW 20MHz) Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
149	5745	17.85	30	Pass
157	5785	17.99	30	Pass
165	5825	17.75	30	Pass

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3KHz band at any time interval of continuous transmission.

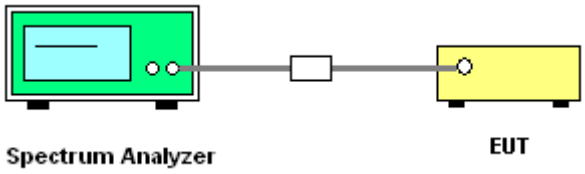
3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test Procedures

1. The testing follows Measurement Procedure 5.3.1 (Peak PSD) of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance and TCB Workshop 2012, April.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable. The path loss was compensated to the results for each measurement.
3. Record the measurement data derived from spectrum analyzer.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 KHz. Video bandwidth (VBW) >= 300 KHz In order to make an accurate measurement, set the span to 5-30% greater than Emission Bandwidth (EBW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.
6. Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log (3 kHz/100 kHz = -15.2 dB).

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Test Mode :	802.11b	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11b Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	7.75	-7.45	8	Pass
06	2437	8.91	-6.29	8	Pass
11	2462	8.84	-6.36	8	Pass

Test Mode :	802.11g	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11g Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	5.49	-9.71	8	Pass
06	2437	7.14	-8.06	8	Pass
11	2462	4.76	-10.44	8	Pass

Test Mode :	802.11n (BW 20MHz)	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	2.4G 802.11n (BW 20MHz) Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	5.48	-9.72	8	Pass
06	2437	7.41	-7.79	8	Pass
11	2462	3.17	-12.03	8	Pass

Test Mode :	802.11a	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
149	5745	6.38	-8.82	8	Pass
157	5785	7.23	-7.97	8	Pass
165	5825	6.31	-8.89	8	Pass

Test Mode :	802.11n (BW 20MHz)	Temperature :	24~26℃
Test Engineer :	Pinkston Tu	Relative Humidity :	50~53%

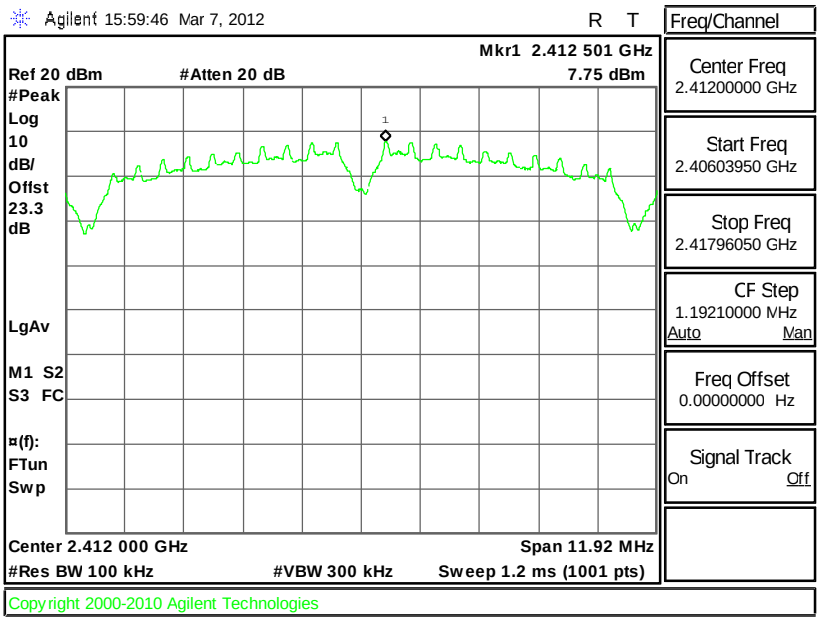
Channel	Frequency (MHz)	5G 802.11n (BW 20MHz) Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
149	5745	6.03	-9.17	8	Pass
157	5785	6.52	-8.68	8	Pass
165	5825	6.11	-9.09	8	Pass

Note:

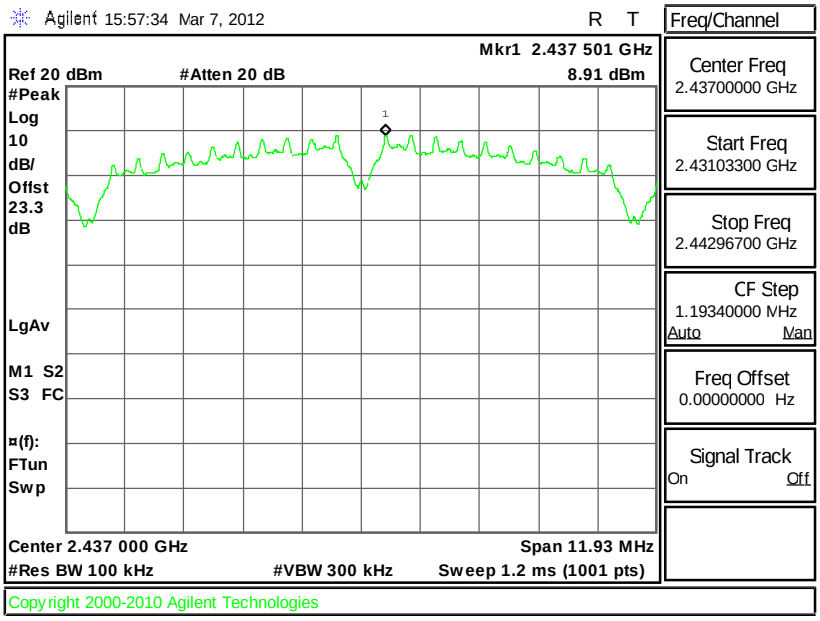
1. *Measured power density (dBm) has offset with cable loss.*
2. *BWCF (dB) = 10 log (3k/100k) = -15.2 dB*
3. *Power Density/ 3kHz (dBm)= Measured power density/ 100KHz (dBm) + BWCF (dB)*

3.3.6 Test Result of Power Spectral Density Plots

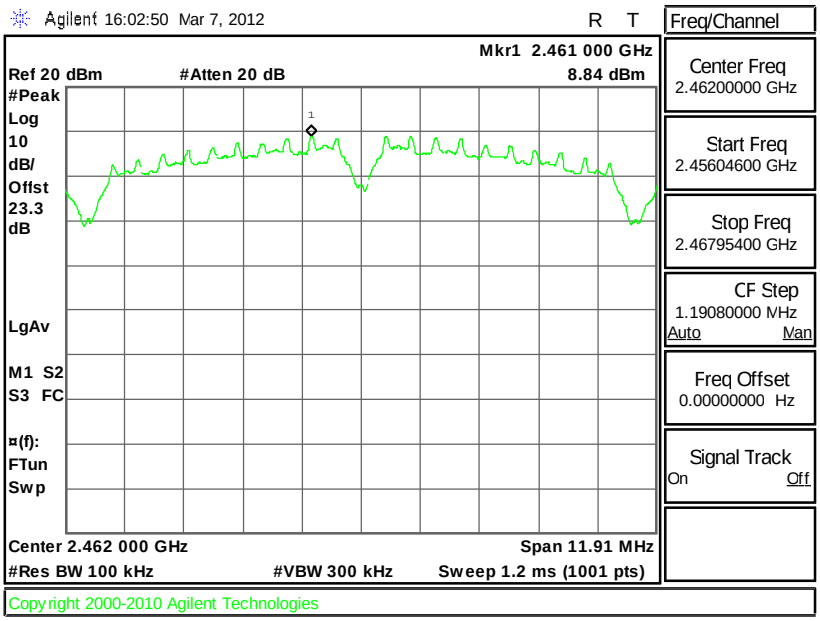
PSD Plot on 802.11b Channel 01



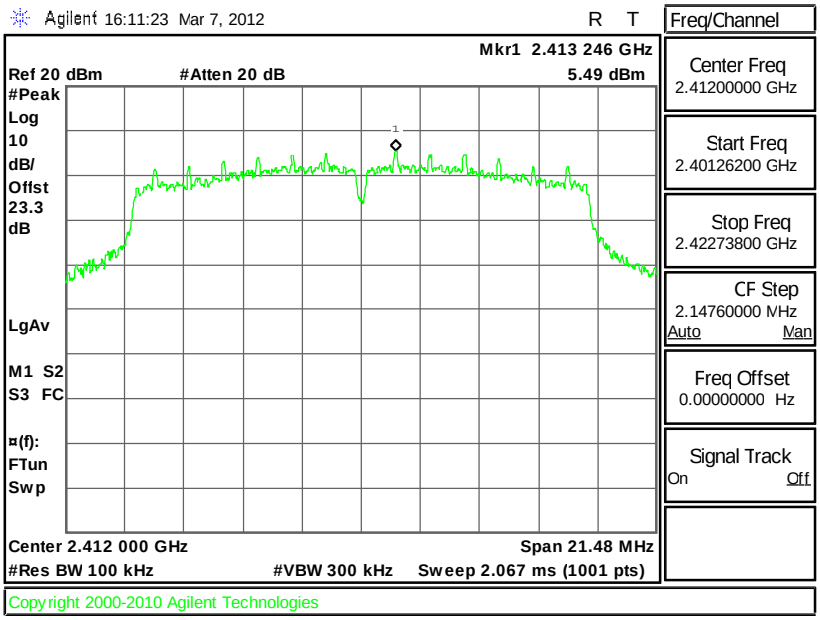
PSD Plot on 802.11b Channel 06



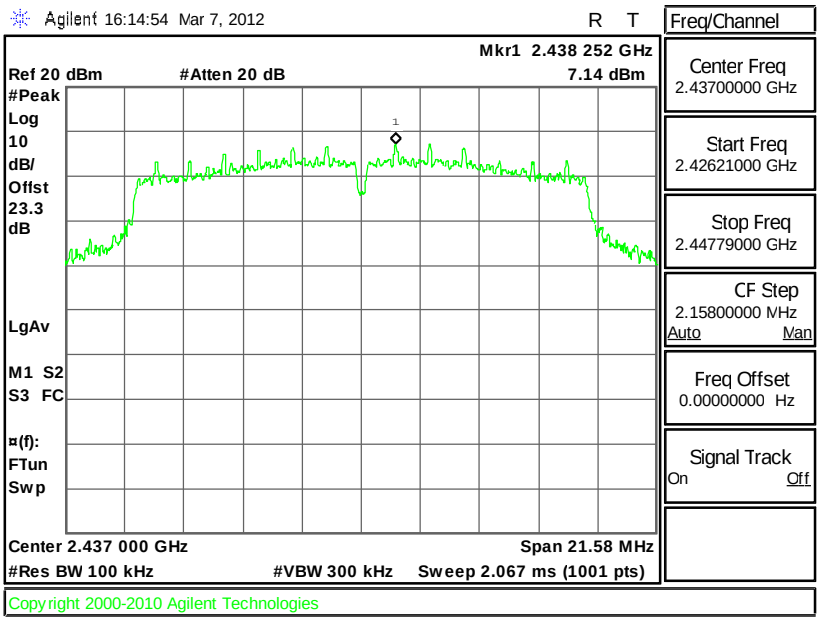
PSD Plot on 802.11b Channel 11



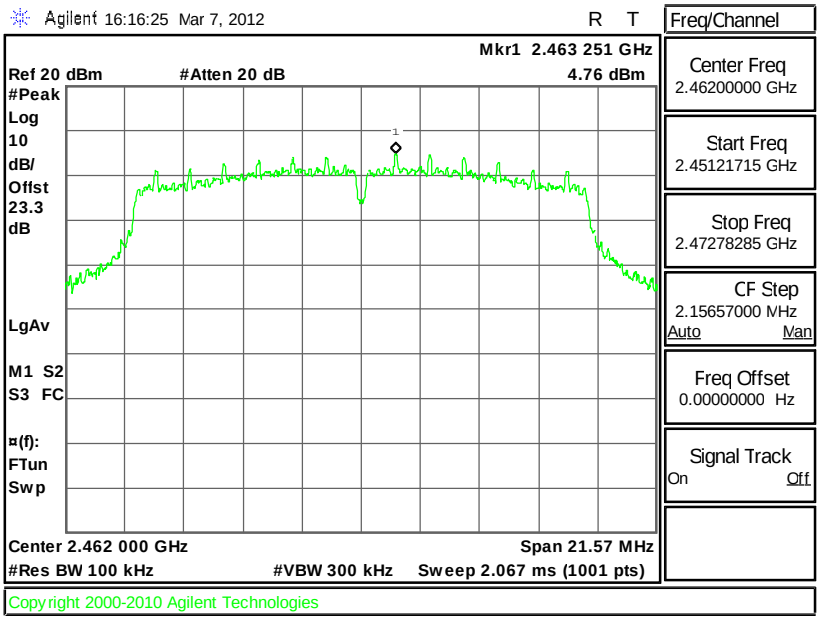
PSD Plot on 802.11g Channel 01



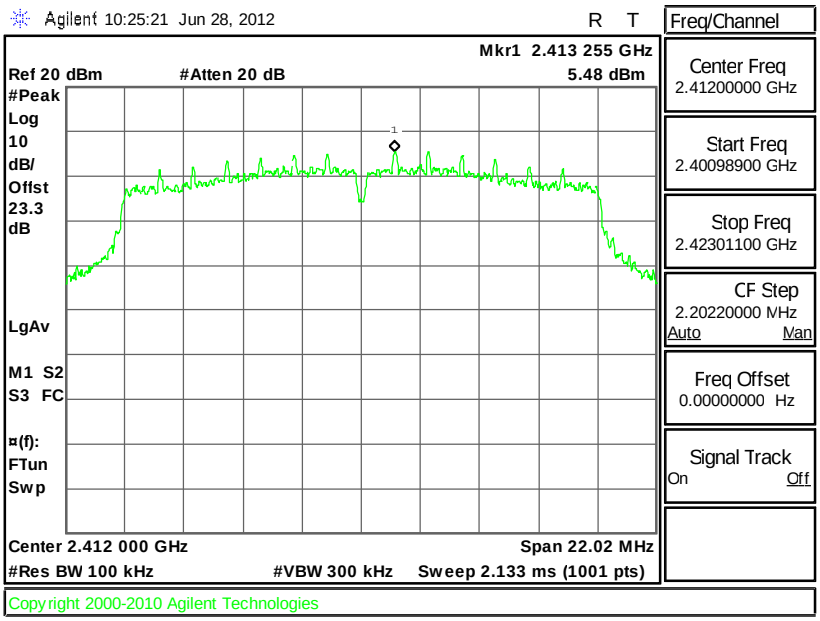
PSD Plot on 802.11g Channel 06



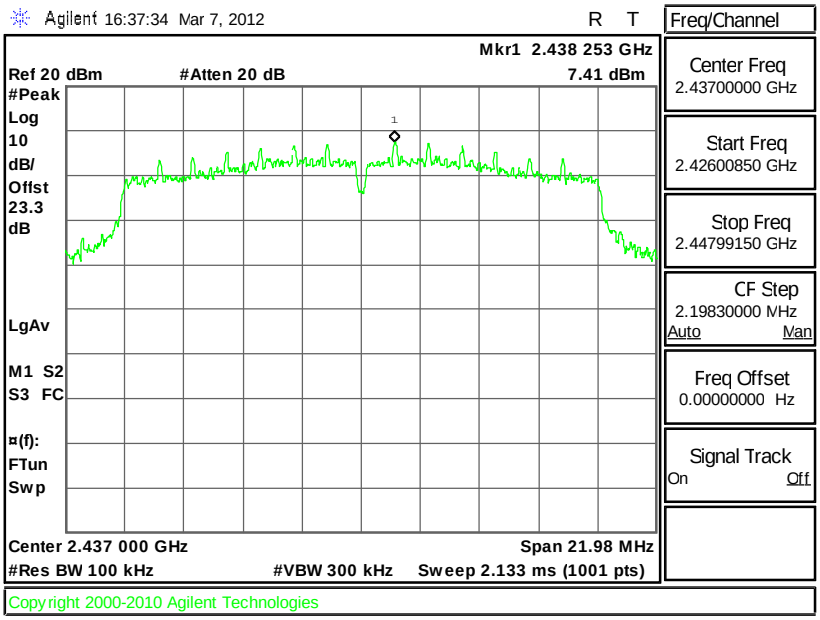
PSD Plot on 802.11g Channel 11



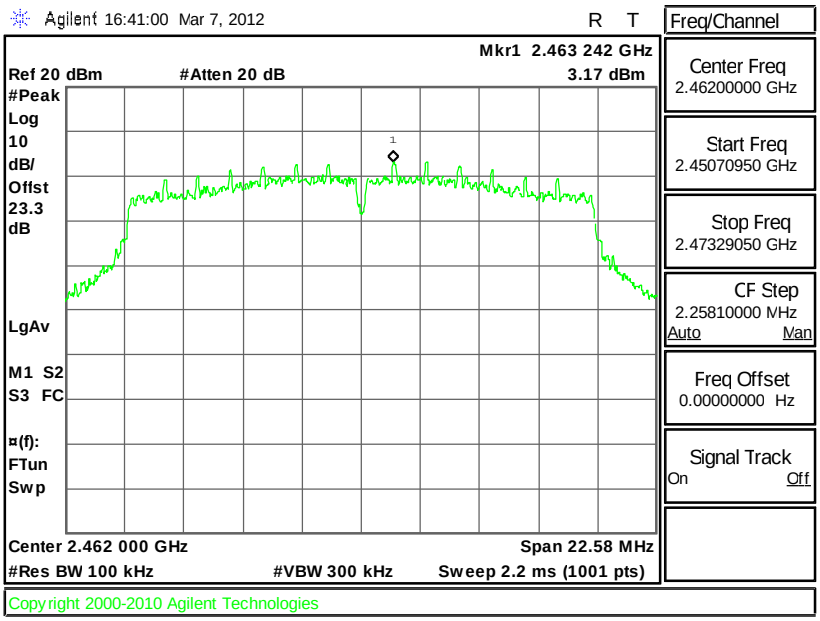
PSD Plot on 2.4G 802.11n (BW 20MHz) Channel 01



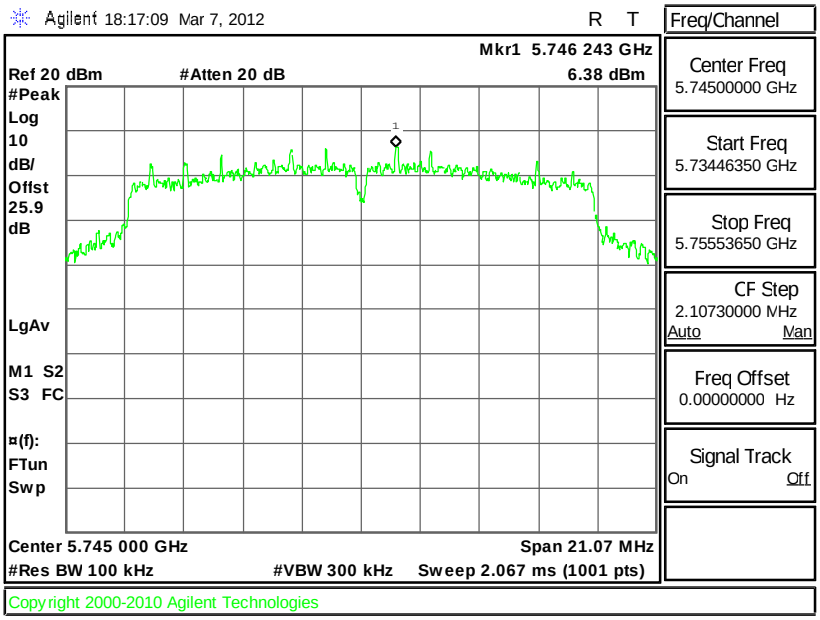
PSD Plot on 2.4G 802.11n (BW 20MHz) Channel 06



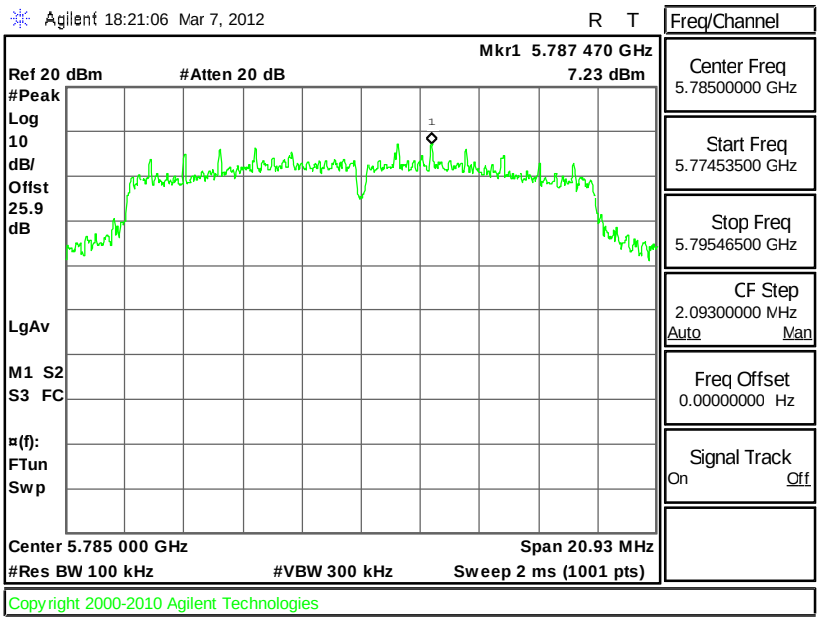
PSD Plot on 2.4G 802.11n (BW 20MHz) Channel 11



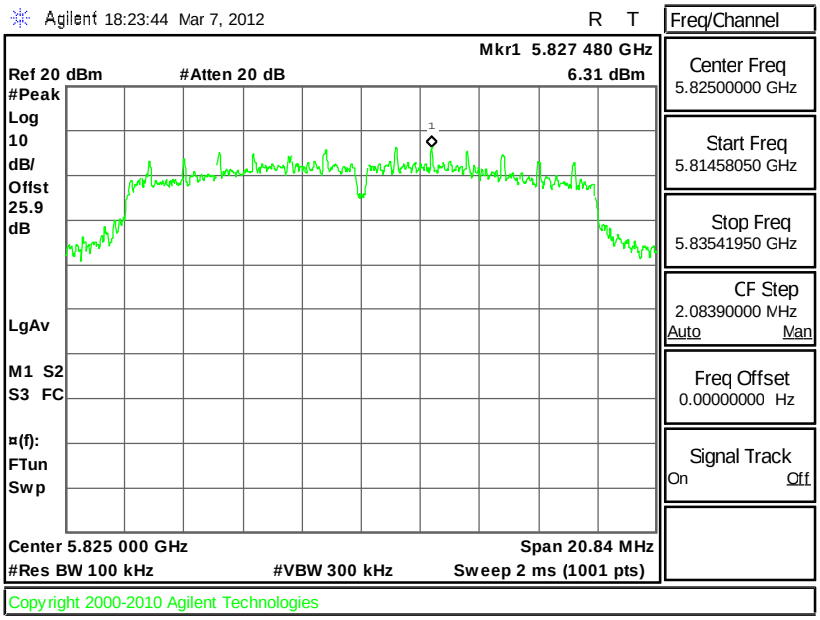
PSD Plot on 802.11a Channel 149



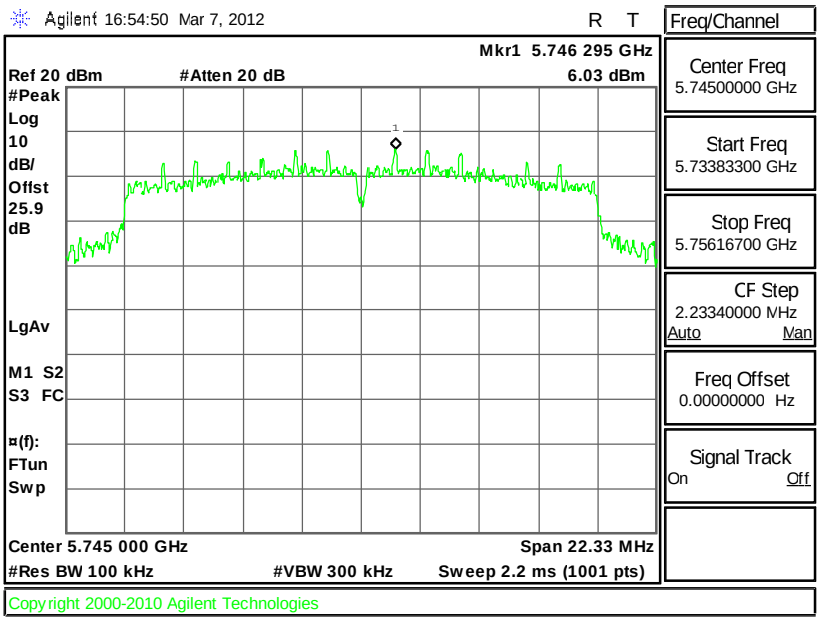
PSD Plot on 802.11a Channel 157



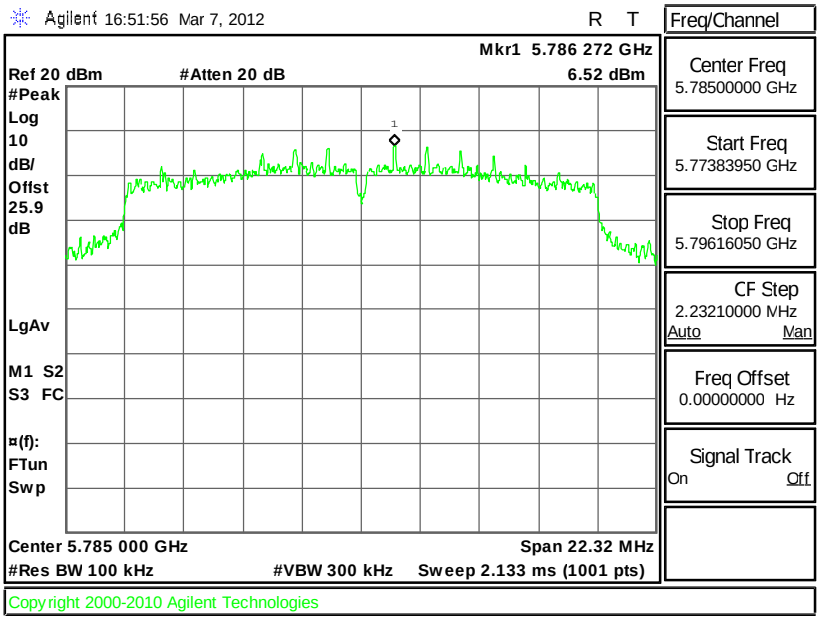
PSD Plot on 802.11a Channel 165



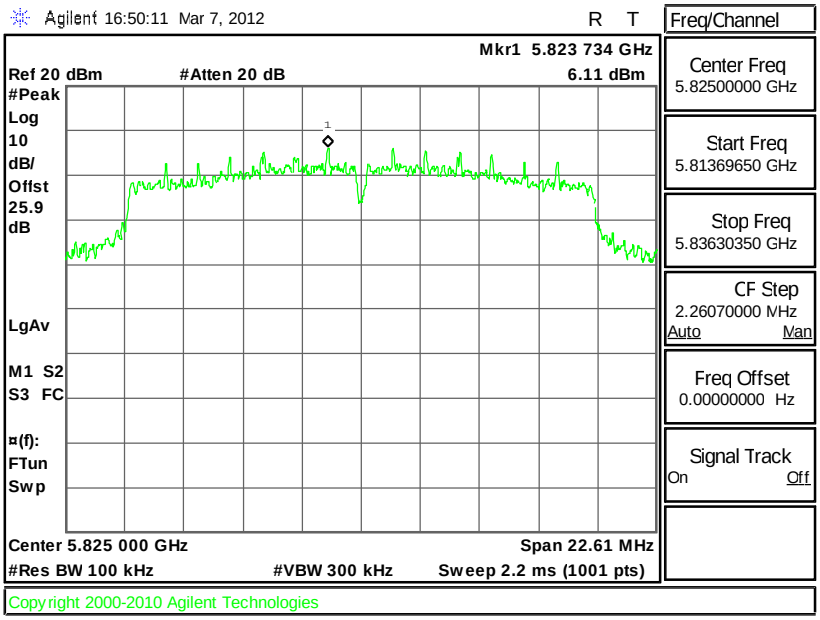
PSD Plot on 5G 802.11n (BW 20MHz) Channel 149



PSD Plot on 5G 802.11n (BW 20MHz) Channel 157



PSD Plot on 5G 802.11n (BW 20MHz) Channel 165



3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and 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).

3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

3.4.3 Test Procedures

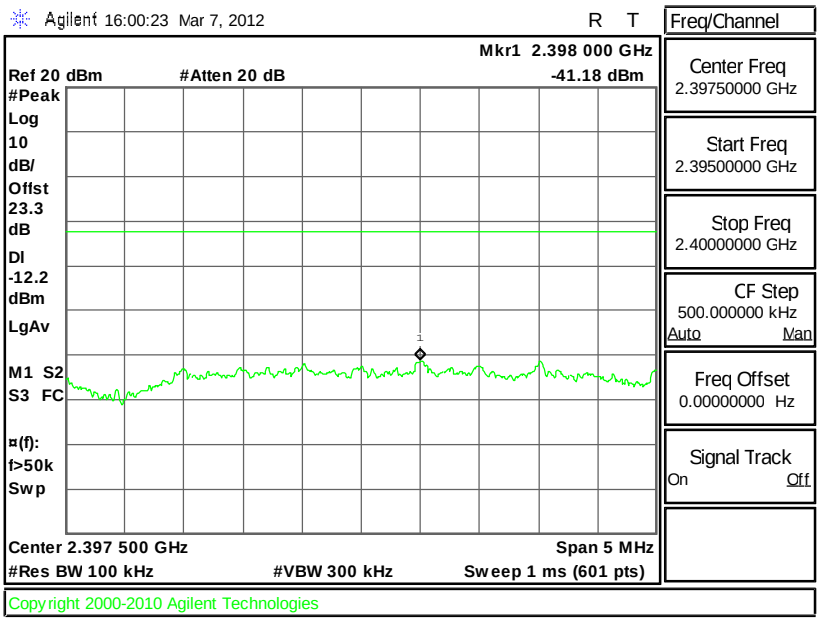
1. The testing follows the guidelines in the Measurement Procedure of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance and TCB Workshop 2012, April.
2. Set RBW = 100 KHz, VBW=300 KHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz, when maximum peak conducted output power procedure is used. The attenuation is set to 30dB, when maximum conducted output power procedure is used.

3.4.4 Test Setup

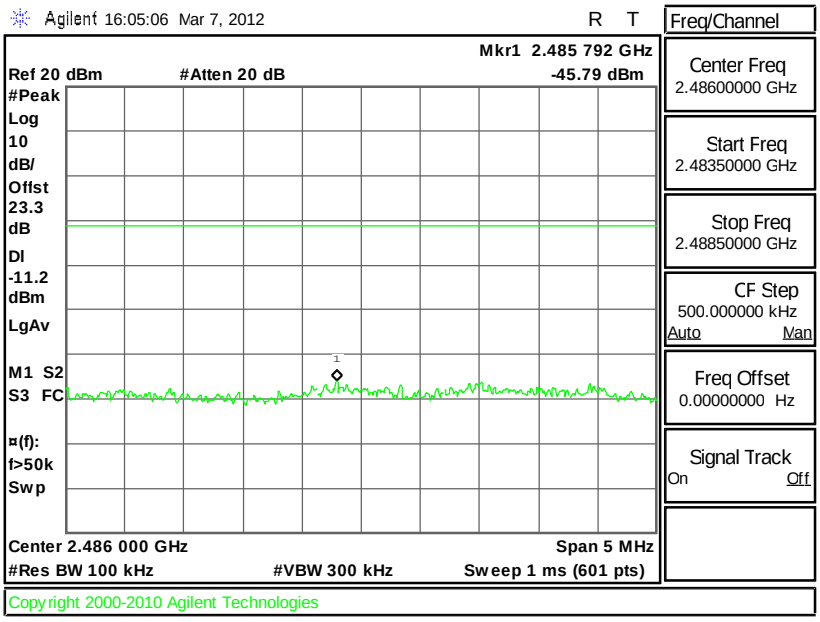
3.4.6 Test Result of Conducted Spurious at Band Edges

Test Mode :	802.11b	Temperature :	24~26℃
Test Band :	Low and High	Relative Humidity :	50~53%
Test Channel :	01 and 11	Test Engineer :	Pinkston Tu

Low Band Edge Plot on 802.11b Channel 01

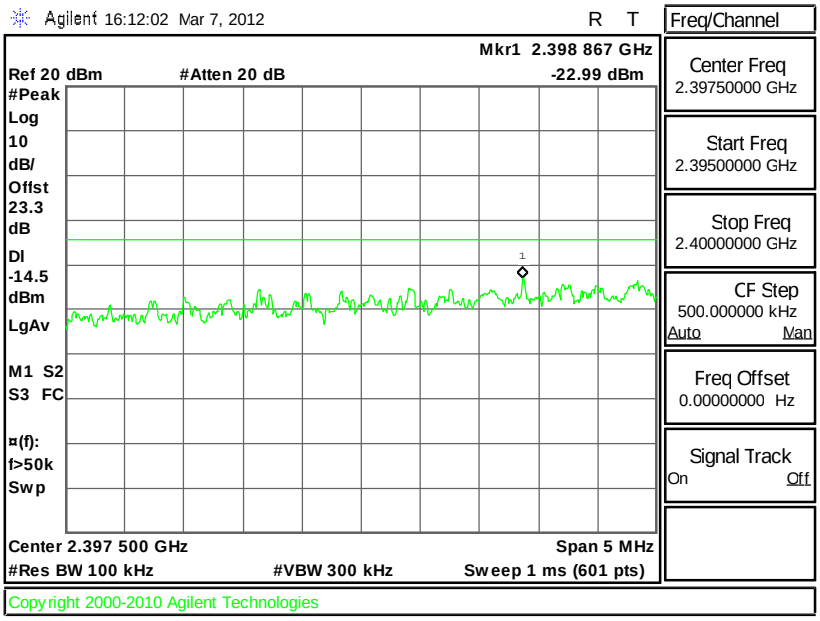


High Band Edge Plot on 802.11b Channel 11

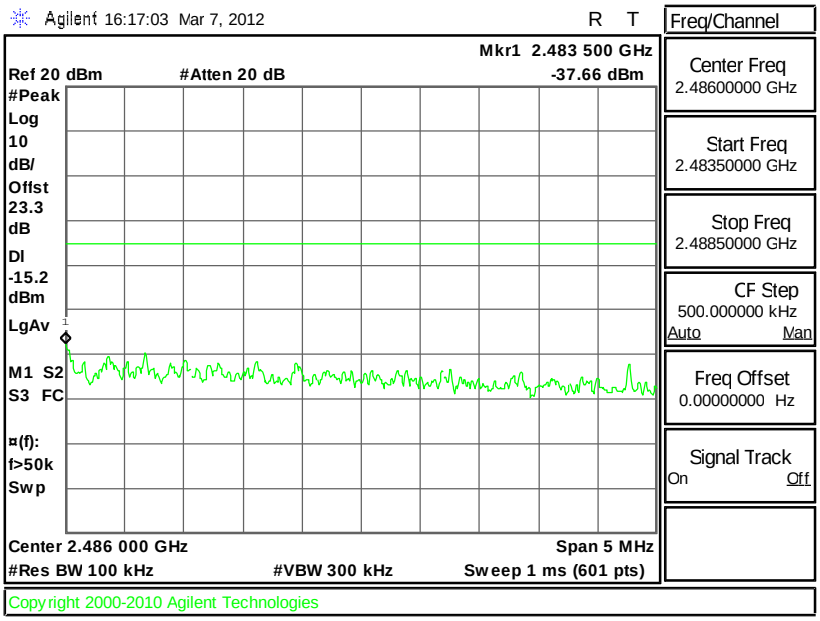


Test Mode :	802.11g	Temperature :	24~26℃
Test Band :	Low and High	Relative Humidity :	50~53%
Test Channel :	01 and 11	Test Engineer :	Pinkston Tu

Low Band Edge Plot on 802.11g Channel 01

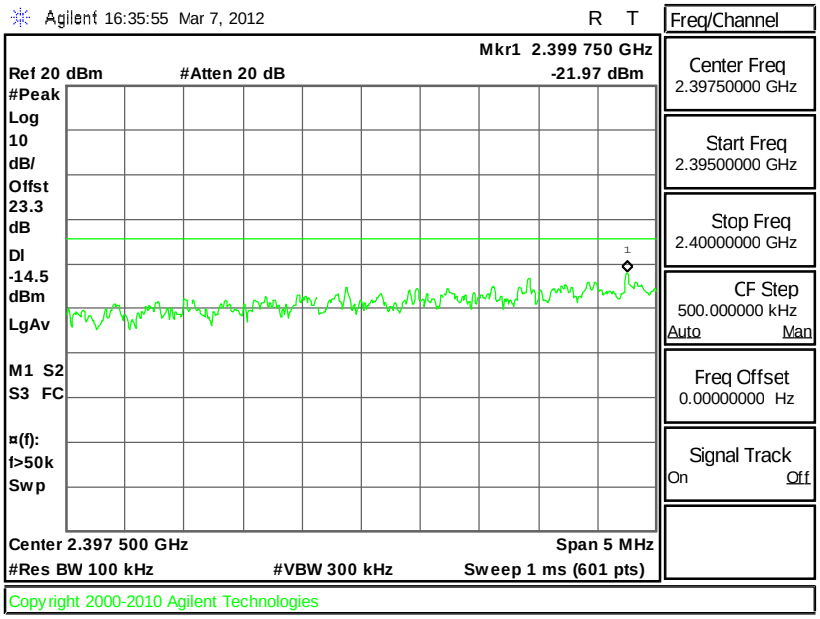


High Band Edge Plot on 802.11g Channel 11

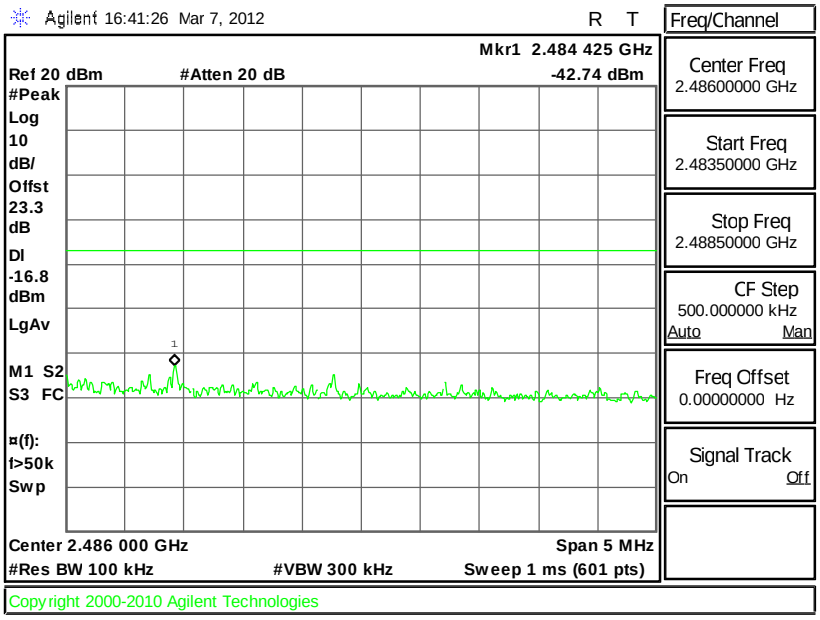


Test Mode :	802.11n (BW 20MHz)	Temperature :	24~26℃
Test Band :	Low and High	Relative Humidity :	50~53%
Test Channel :	01 and 11	Test Engineer :	Pinkston Tu

Low Band Edge Plot on 2.4G 802.11n (BW 20MHz) Channel 01

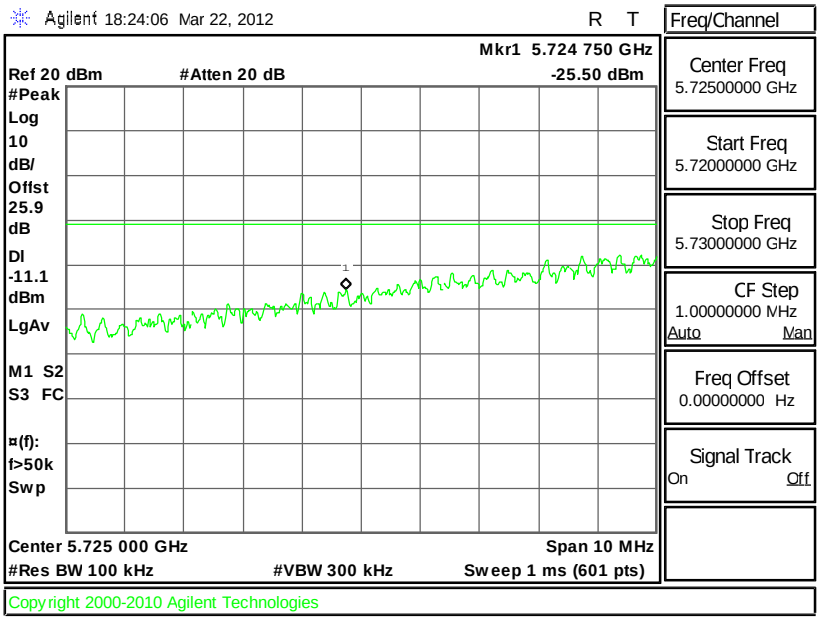


High Band Edge Plot on 2.4G 802.11n (BW 20MHz) Channel 11

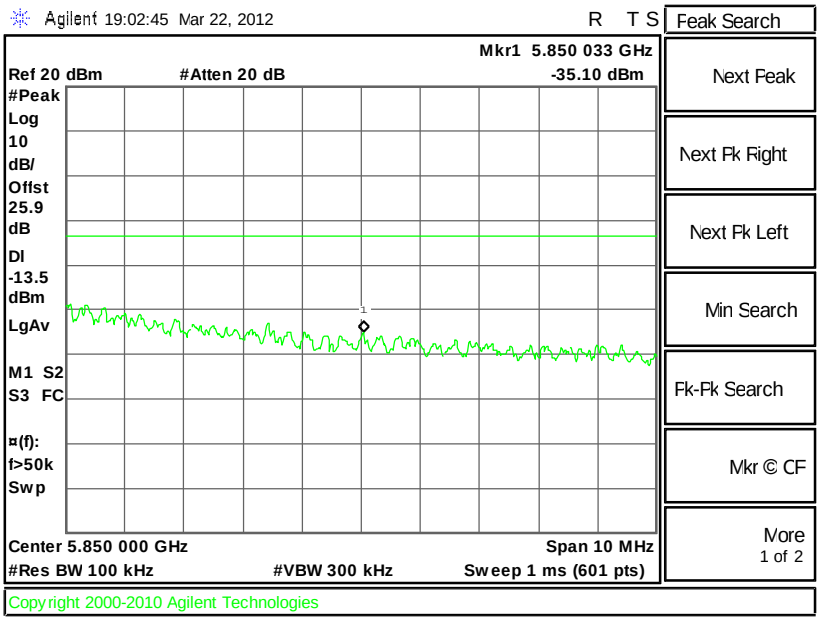


Test Mode :	802.11a	Temperature :	24~26℃
Test Band :	Low and High	Relative Humidity :	50~53%
Test Channel :	149 and 165	Test Engineer :	Pinkston Tu

Low Band Edge Plot on 802.11a Channel 149

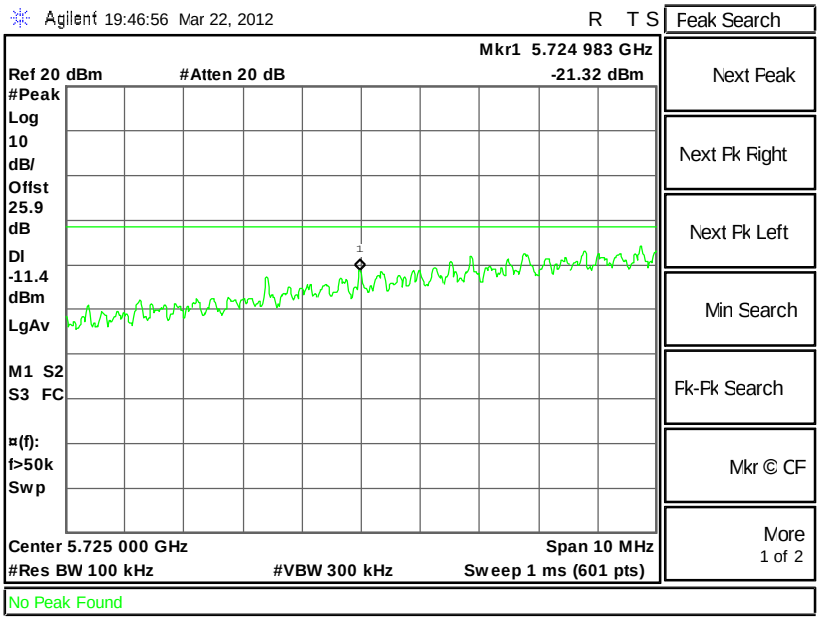


High Band Edge Plot on 802.11a Channel 165

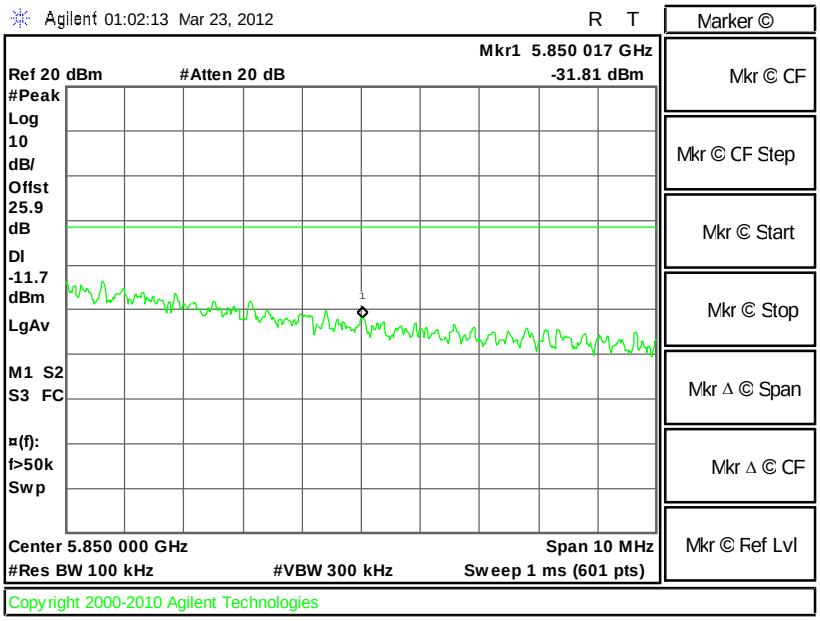


Test Mode :	802.11n (BW 20MHz)	Temperature :	24~26℃
Test Band :	Low and High	Relative Humidity :	50~53%
Test Channel :	149 and 165	Test Engineer :	Pinkston Tu

Low Band Edge Plot on 5G 802.11n (BW 20MHz) Channel 149



High Band Edge Plot on 5G 802.11n (BW 20MHz) Channel 165

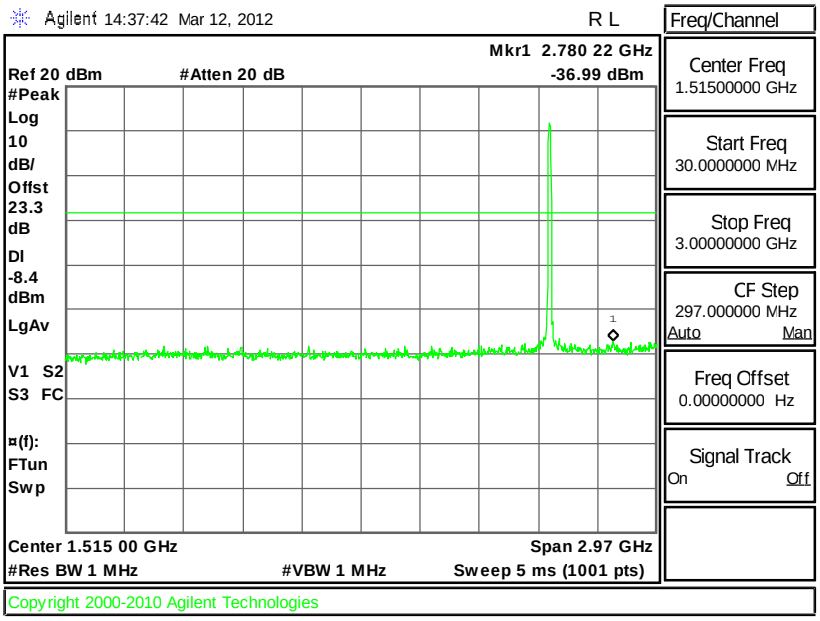


3.4.7 Test Result of Conducted Spurious Emission

Test Mode :	802.11b	Temperature :	24~26℃
Test Band :	30MHz-3GHz and 3G-25GHz	Relative Humidity :	50~53%
Test Channel :	01, 06, 11	Test Engineer :	Pinkston Tu

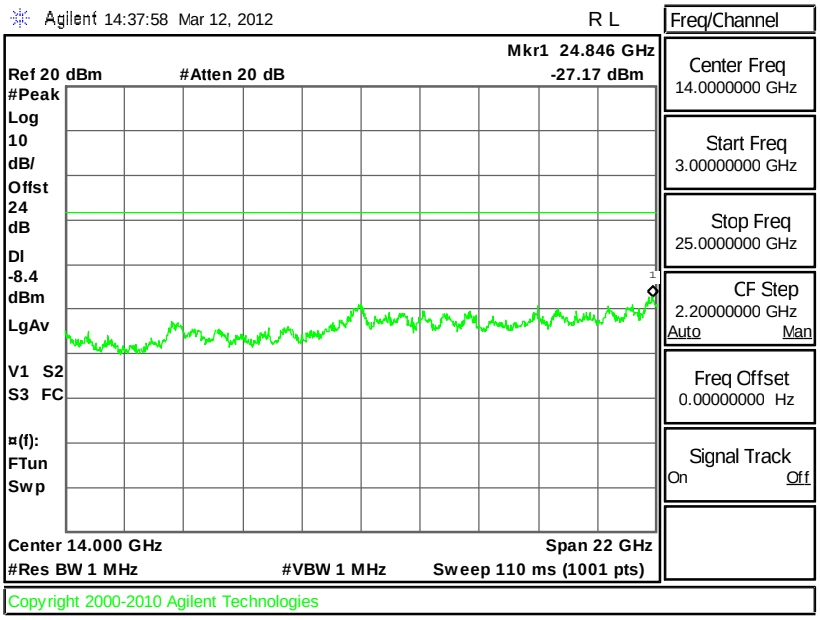
802.11b 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 01



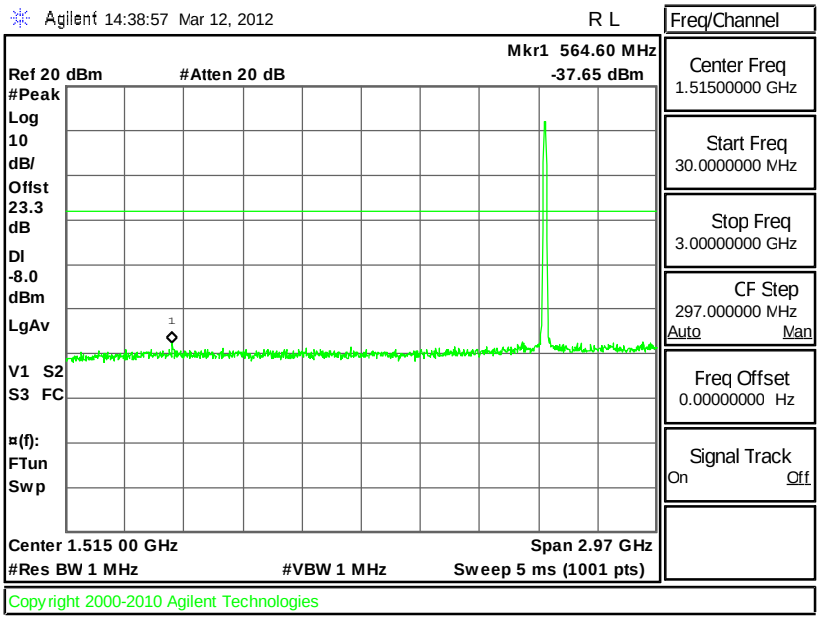
802.11b 3 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 01



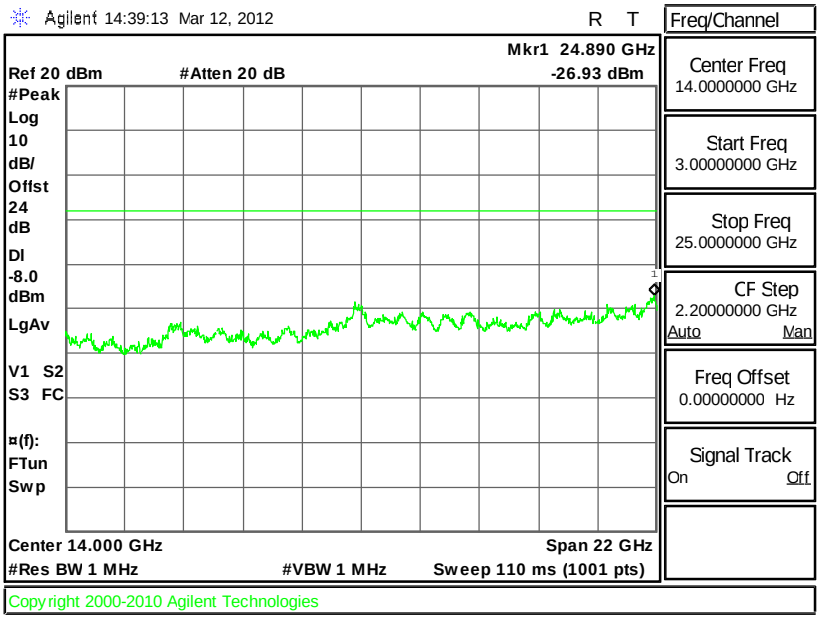
802.11b 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 06



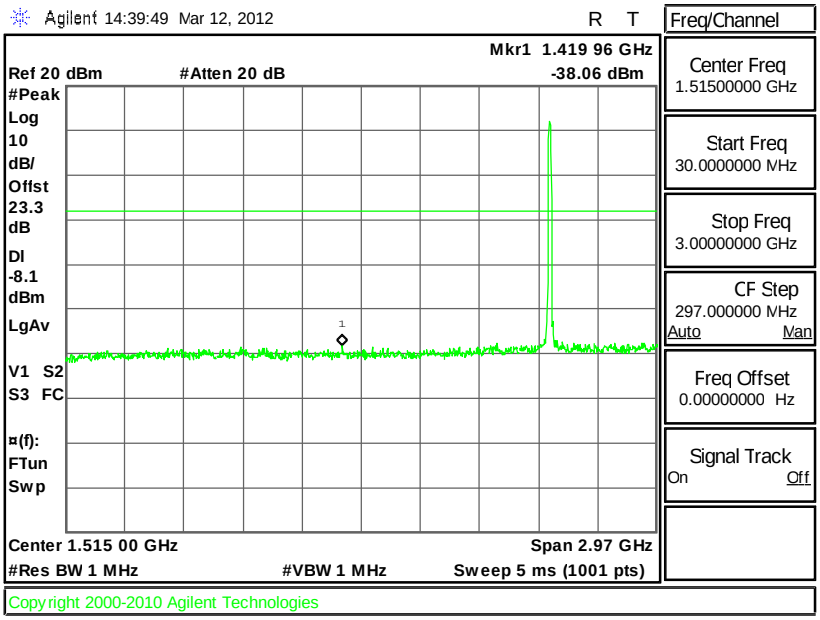
802.11b 3 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 06



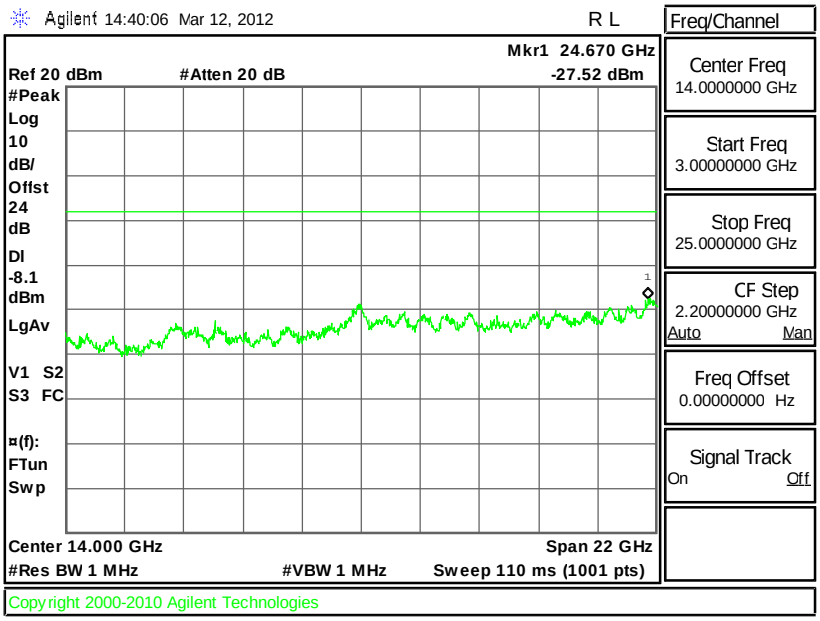
802.11b 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 11



802.11b 3 GHz~25 GHz

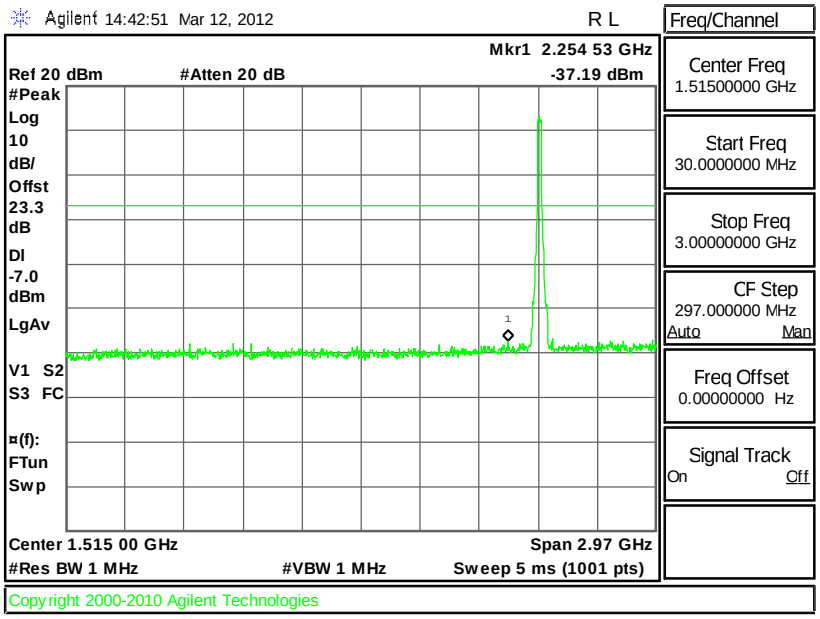
Conducted Spurious Emission Plot on Channel 11



Test Mode :	802.11g	Temperature :	24~26℃
Test Band :	30MHz-3GHz and 3G-25GHz	Relative Humidity :	50~53%
Test Channel :	01, 06, 11	Test Engineer :	Pinkston Tu

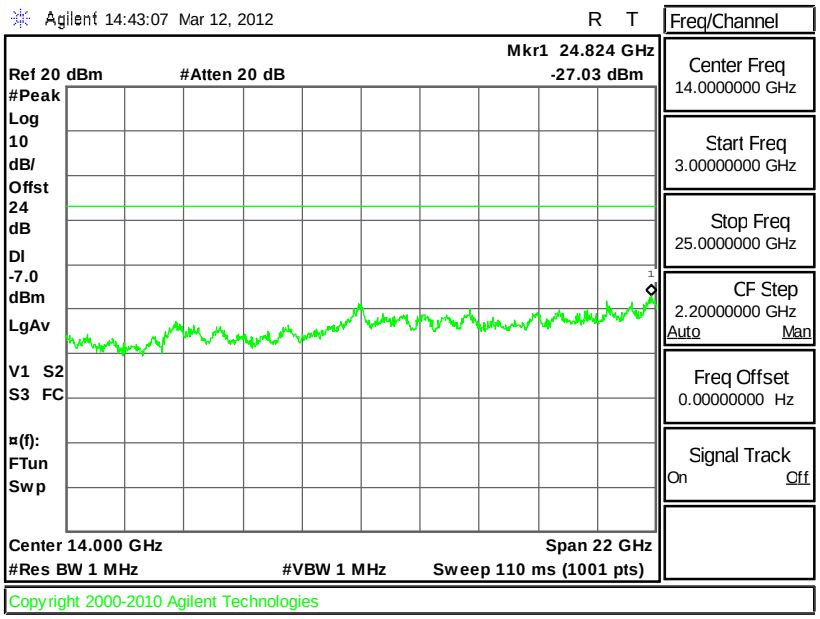
802.11g 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 01



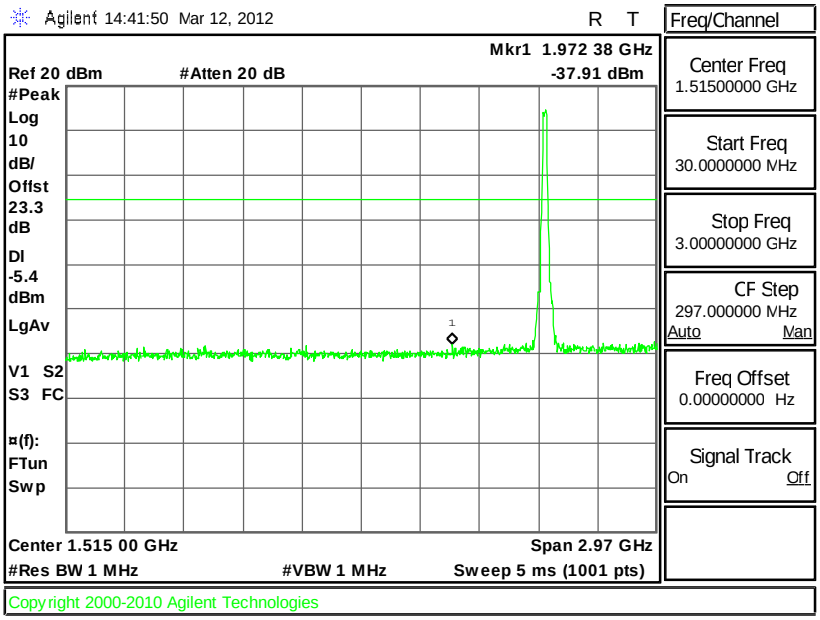
802.11g 3 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 01



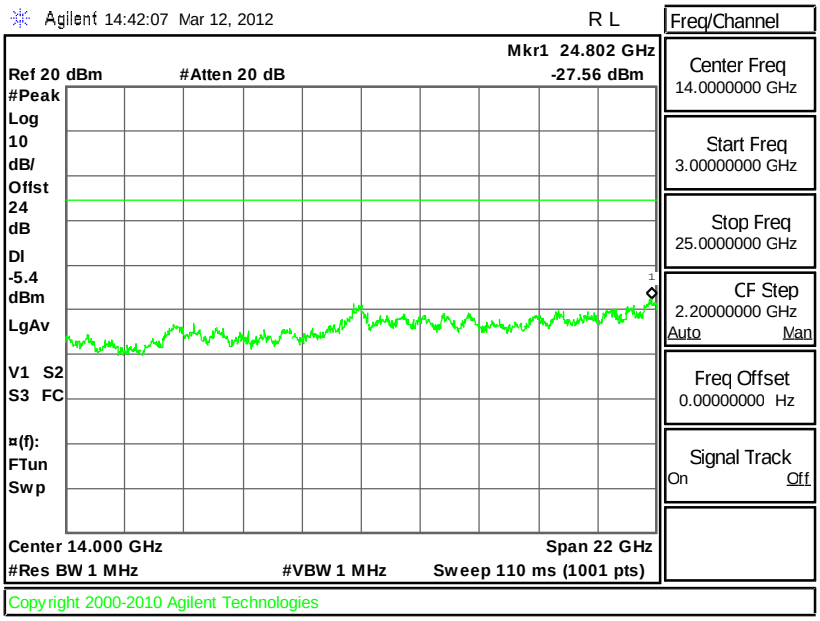
802.11g 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 06



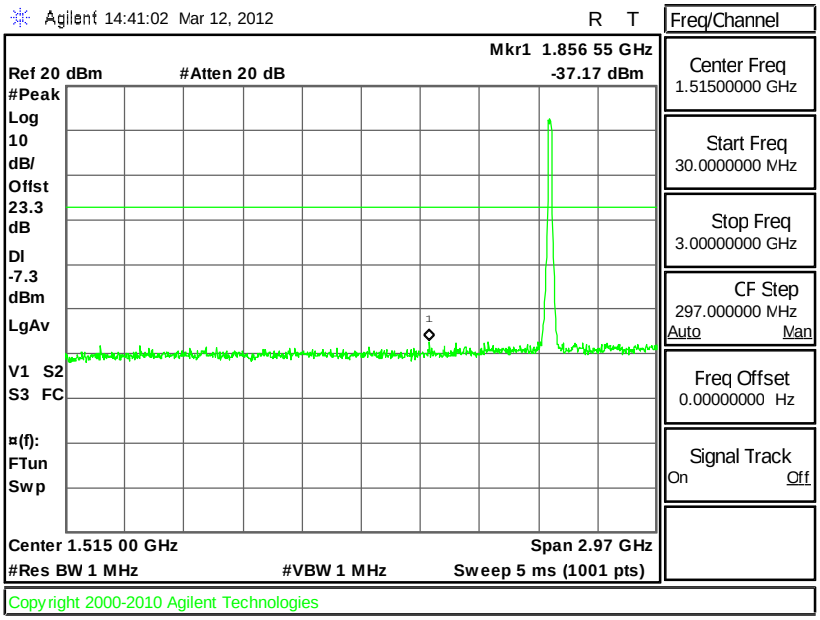
802.11g 3 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 06



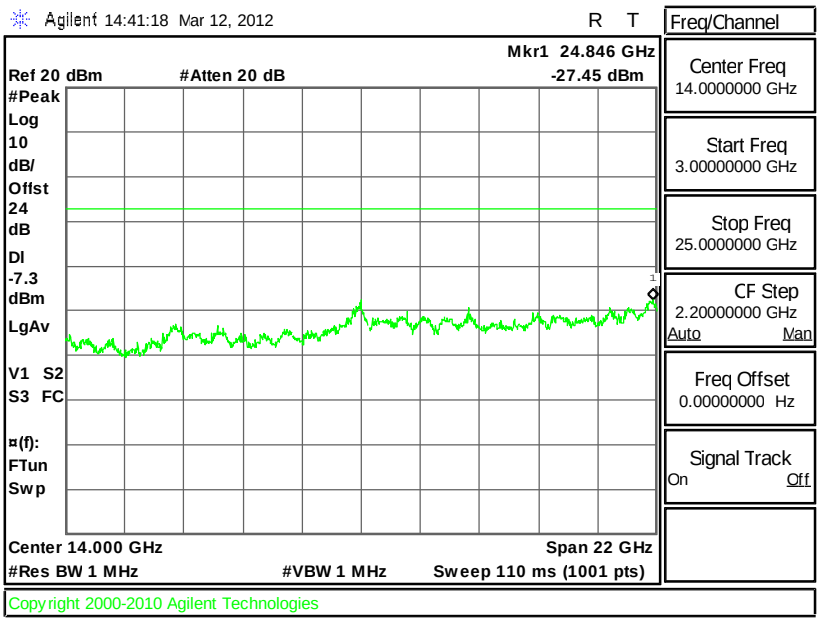
802.11g 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 11



802.11g 3 GHz~25 GHz

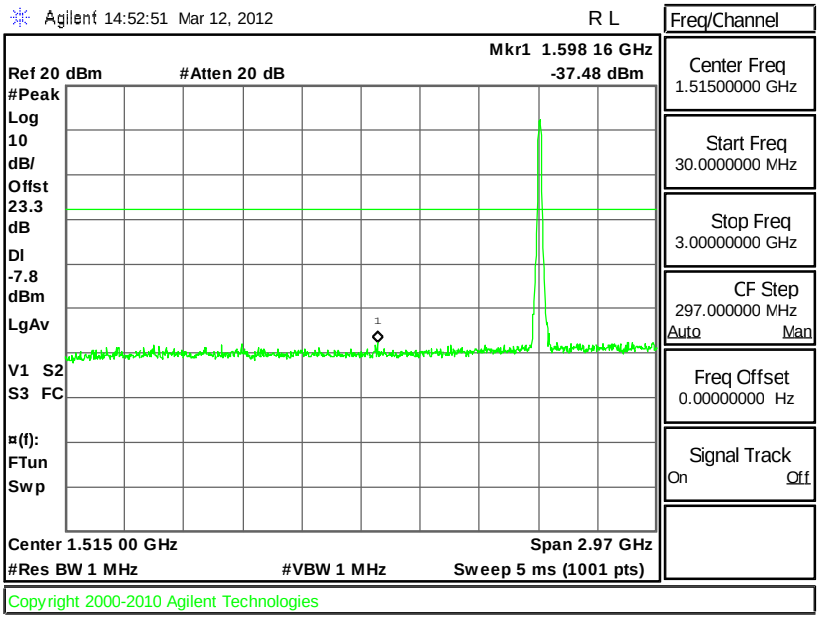
Conducted Spurious Emission Plot on Channel 11



Test Mode :	802.11n (BW 20MHz)	Temperature :	24~26℃
Test Band :	30MHz-3GHz and 3G-25GHz	Relative Humidity :	50~53%
Test Channel :	01, 06, 11	Test Engineer :	Pinkston Tu

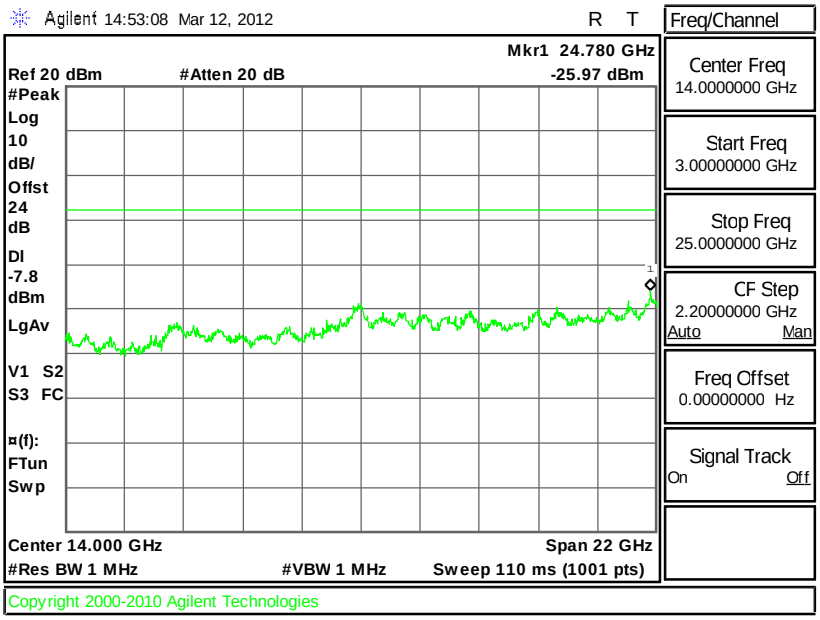
2.4G 802.11n (BW 20MHz) 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 01



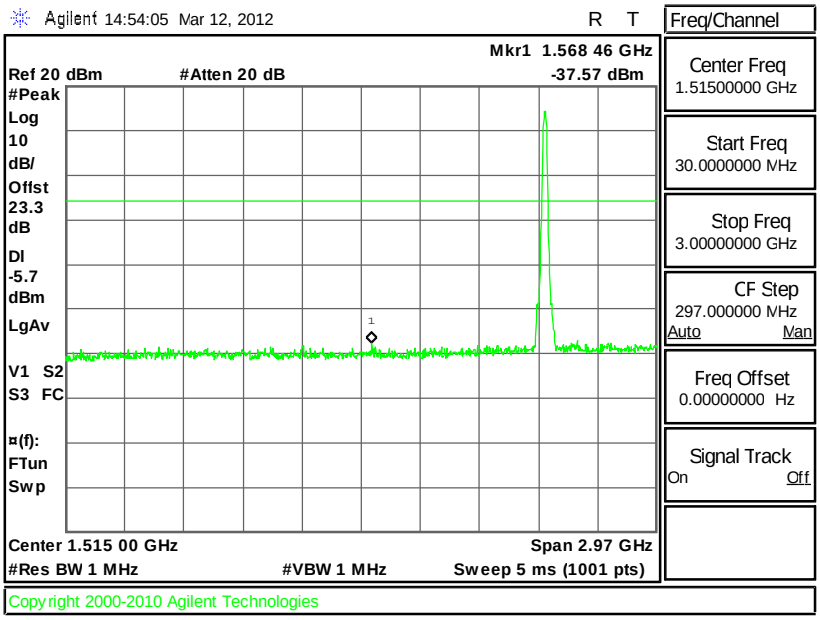
2.4G 802.11n (BW 20MHz) 3 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 01



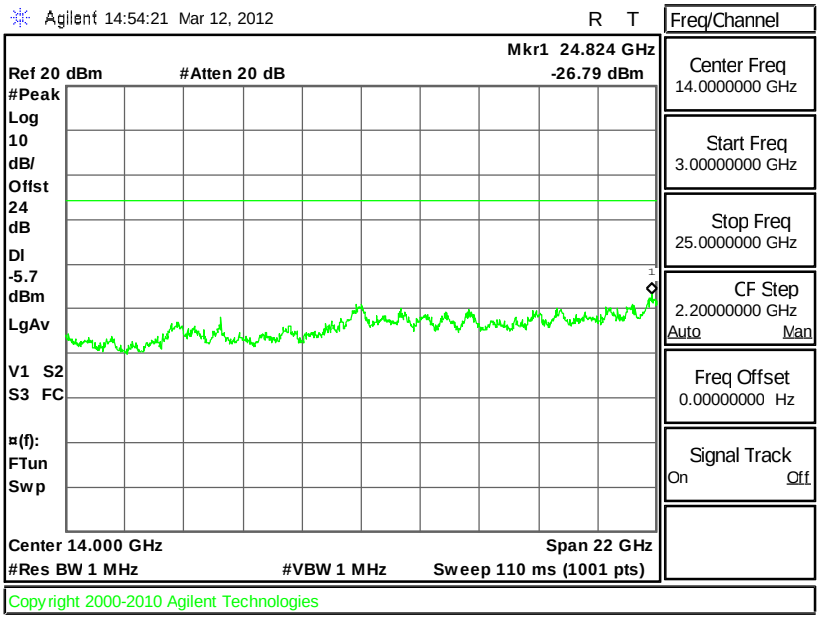
2.4G 802.11n (BW 20MHz) 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 06



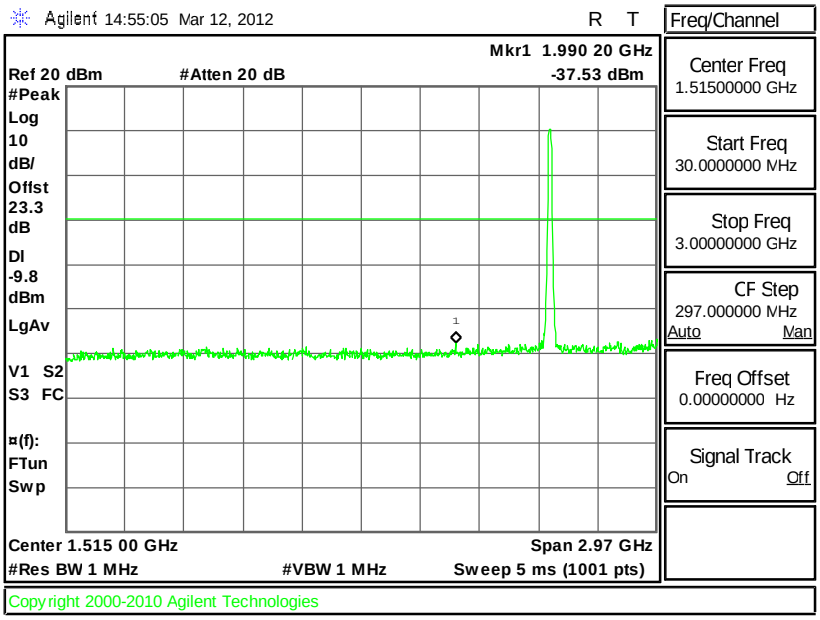
2.4G 802.11n (BW 20MHz) 3 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 06



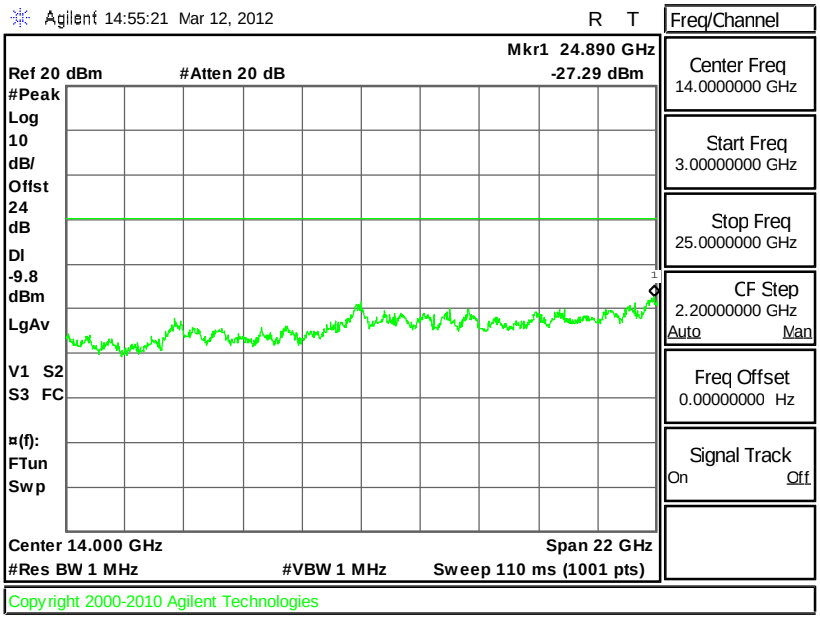
2.4G 802.11n (BW 20MHz) 30 MHz~3 GHz

Conducted Spurious Emission Plot on Channel 11



2.4G 802.11n (BW 20MHz) 3 GHz~25 GHz

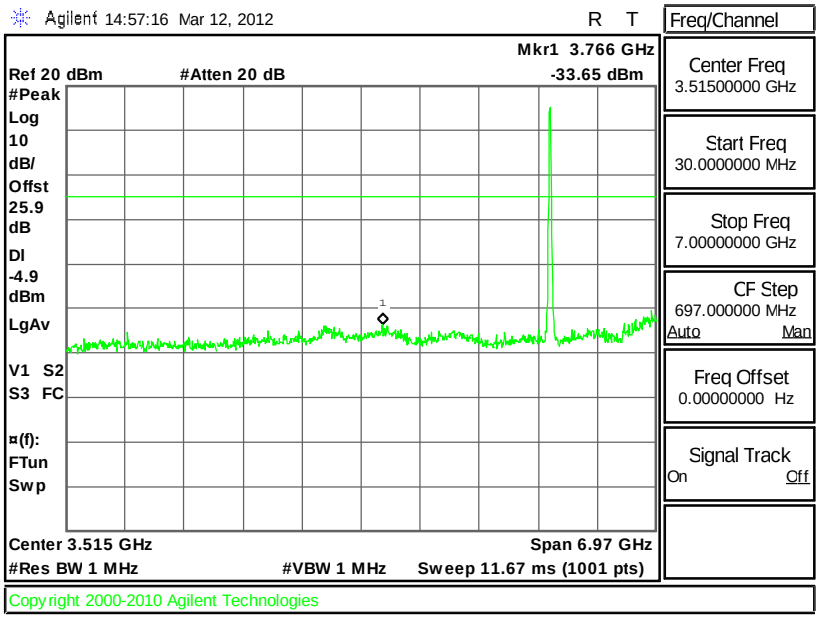
Conducted Spurious Emission Plot on Channel 11



Test Mode :	802.11a	Temperature :	24~26℃
Test Band :	30MHz-7GHz and 7G-40GHz	Relative Humidity :	50~53%
Test Channel :	149, 157, 165	Test Engineer :	Pinkston Tu

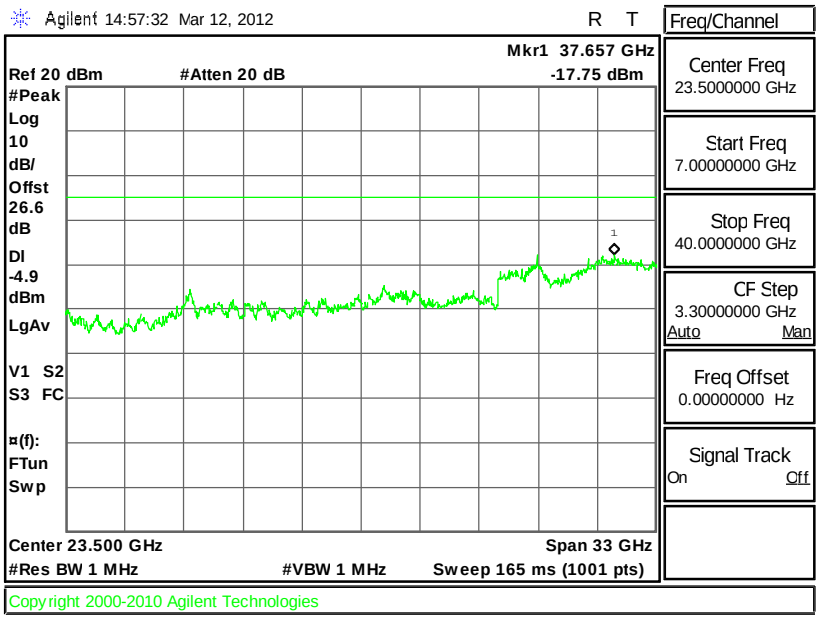
802.11a 30 MHz~7 GHz

Conducted Spurious Emission Plot on Channel 149



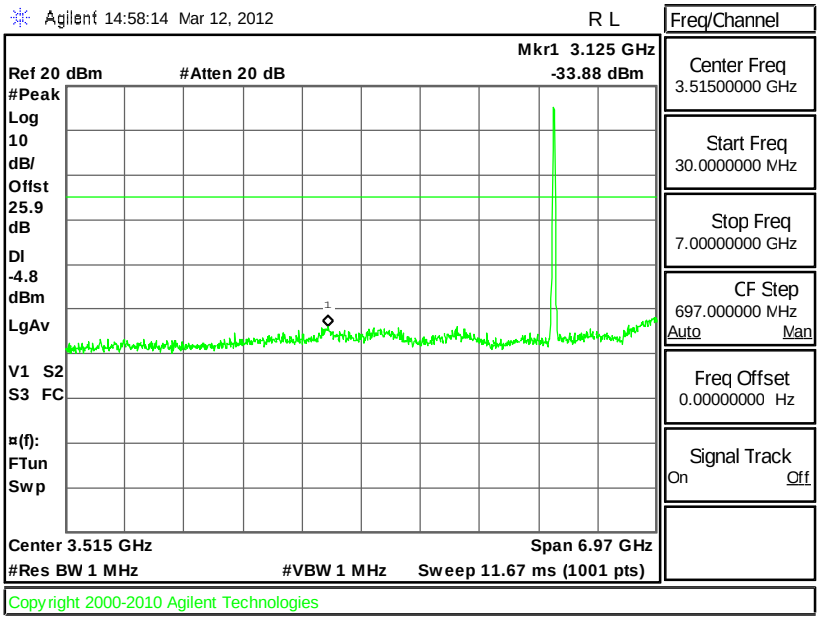
802.11a 7 GHz~40 GHz

Conducted Spurious Emission Plot on Channel 149



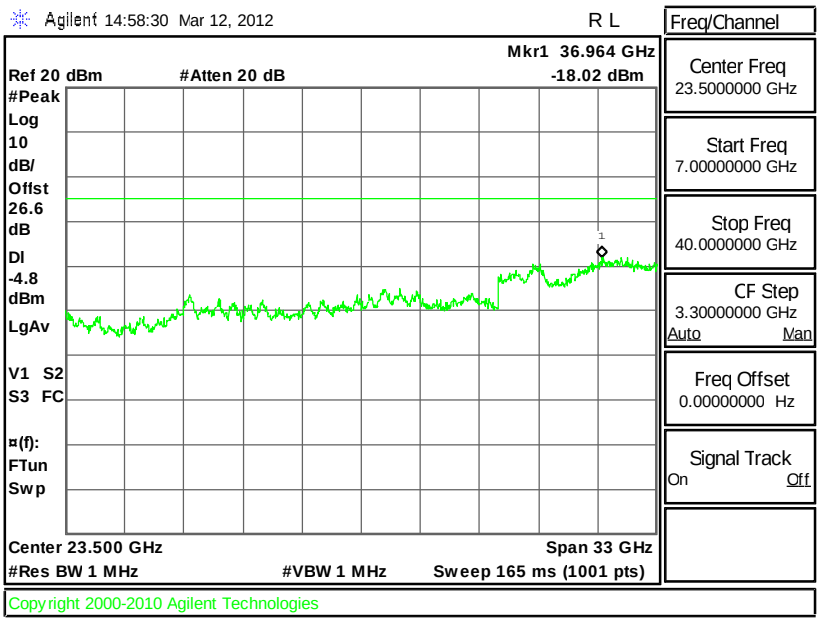
802.11a 30 MHz~7 GHz

Conducted Spurious Emission Plot on Channel 157



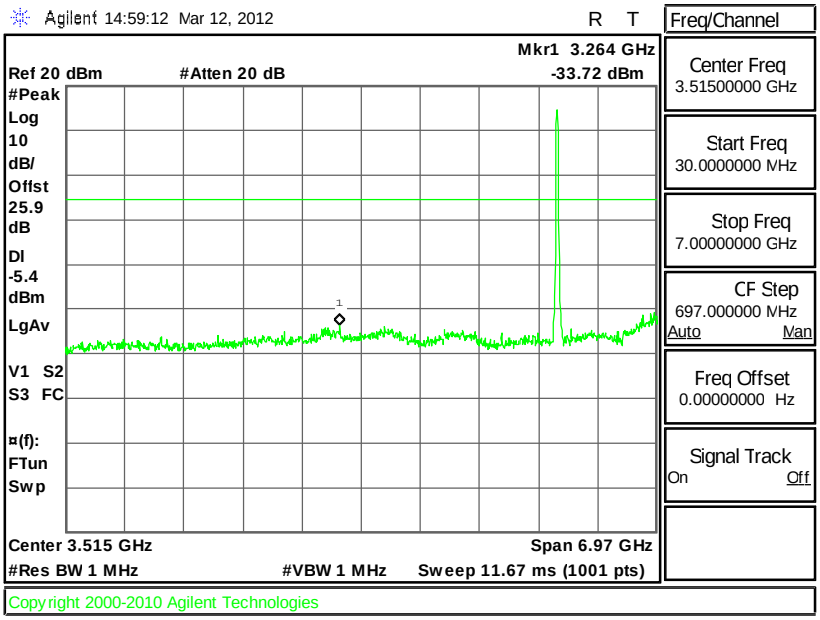
802.11a 7 GHz~40 GHz

Conducted Spurious Emission Plot on Channel 157



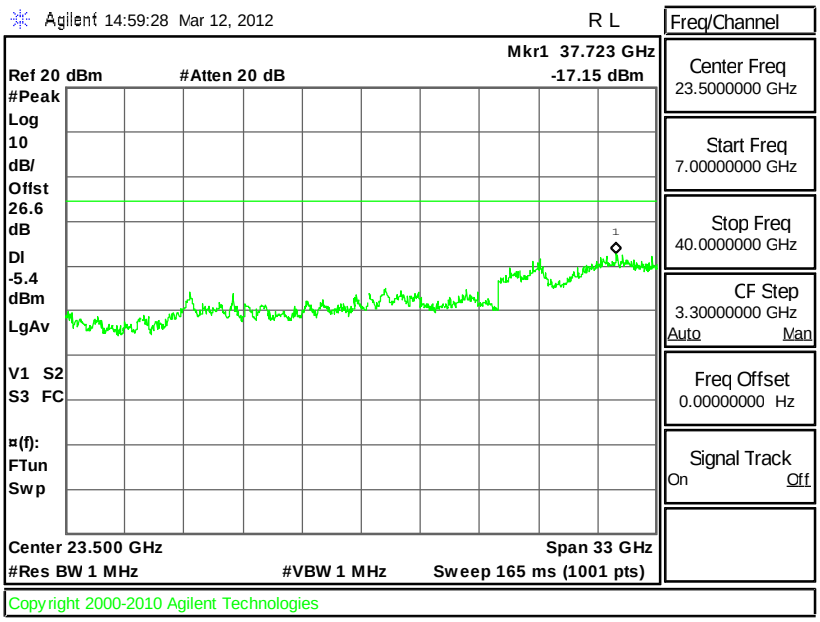
802.11a 30 MHz~7 GHz

Conducted Spurious Emission Plot on Channel 165



802.11a 7 GHz~40 GHz

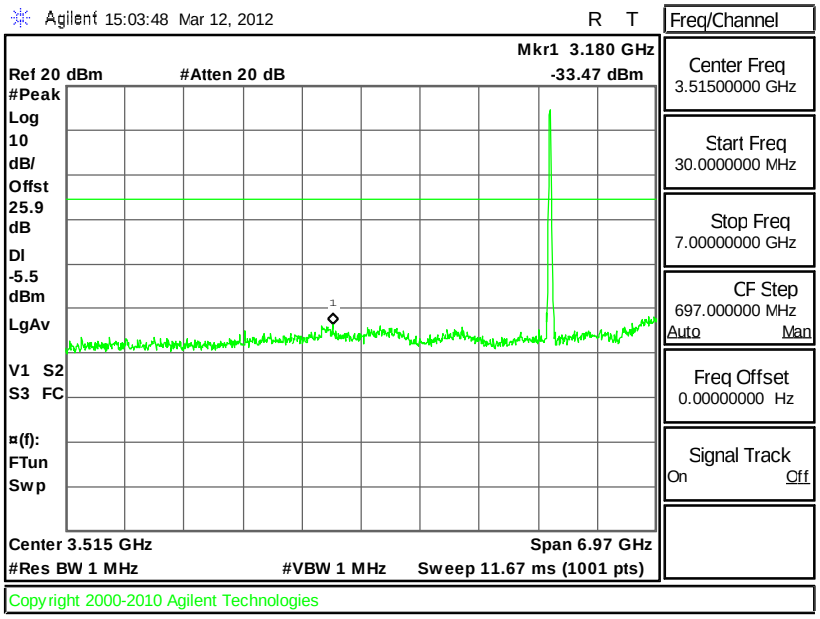
Conducted Spurious Emission Plot on Channel 165



Test Mode :	802.11n (BW 20MHz)	Temperature :	24~26℃
Test Band :	30MHz-7GHz and 7G-40GHz	Relative Humidity :	50~53%
Test Channel :	149, 157, 165	Test Engineer :	Pinkston Tu

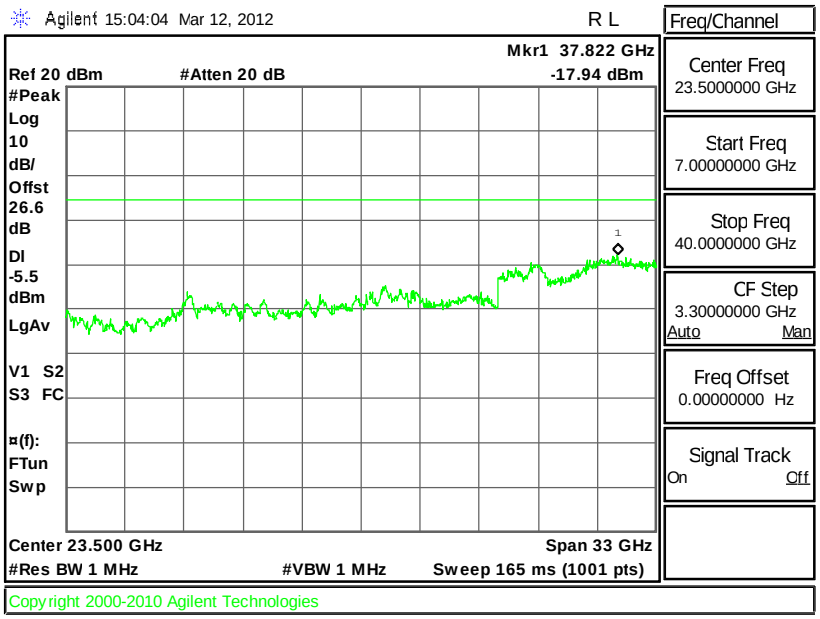
5G 802.11n (BW 20MHz) 30 MHz~7 GHz

Conducted Spurious Emission Plot on Channel 149



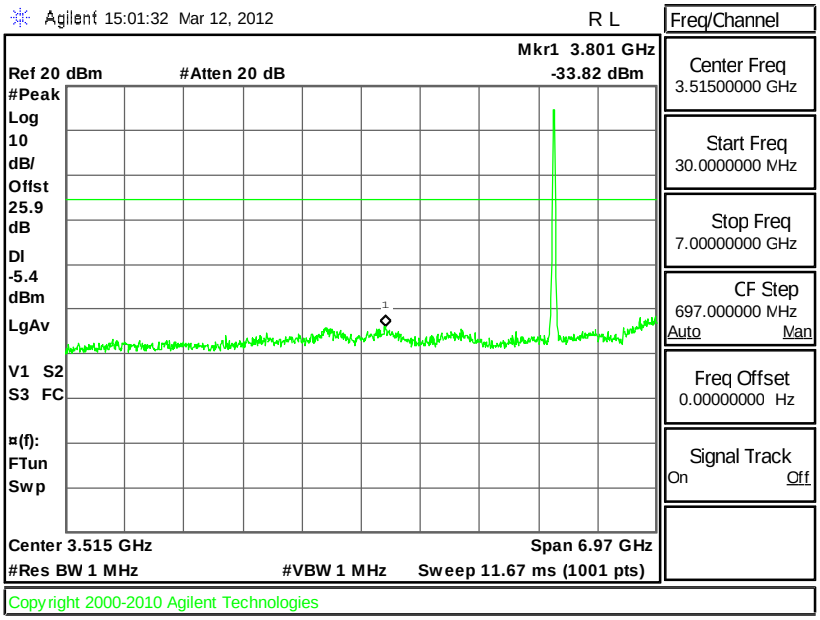
5G 802.11n (BW 20MHz) 7 GHz~40 GHz

Conducted Spurious Emission Plot on Channel 149



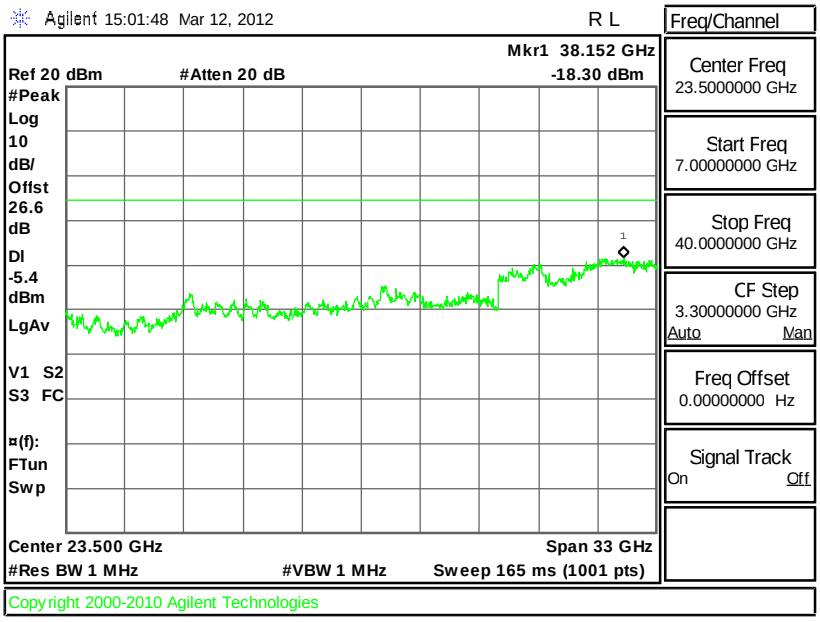
5G 802.11n (BW 20MHz) 30 MHz~7 GHz

Conducted Spurious Emission Plot on Channel 157



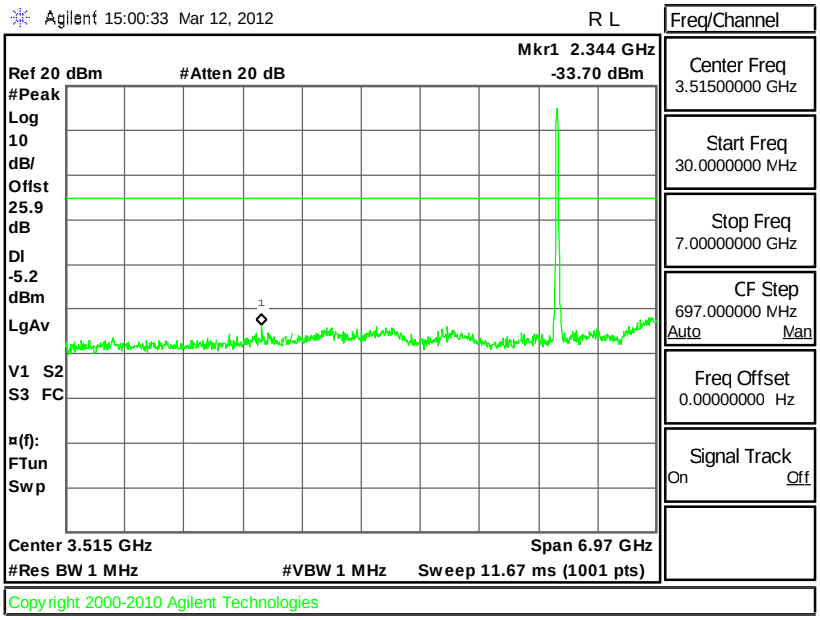
5G 802.11n (BW 20MHz) 7 GHz~40 GHz

Conducted Spurious Emission Plot on Channel 157



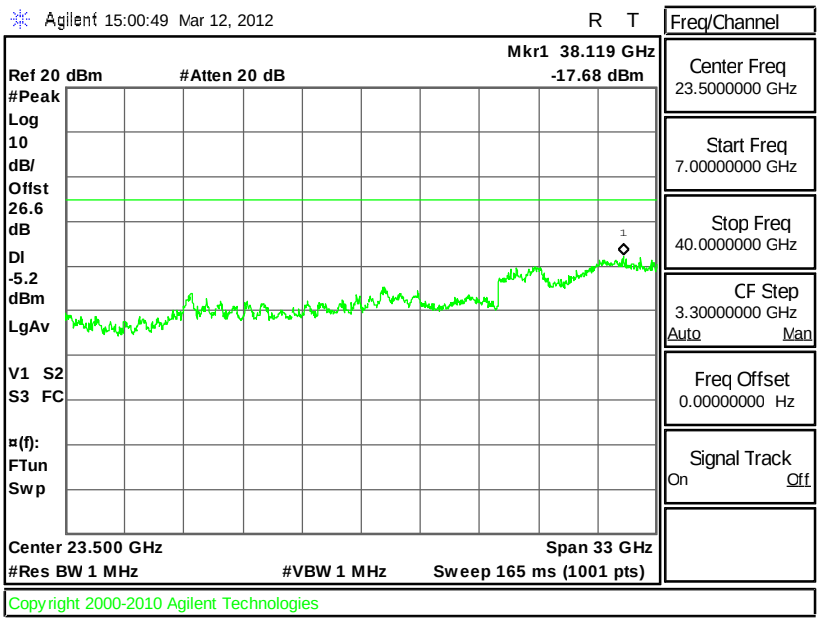
5G 802.11n (BW 20MHz) 30 MHz~7 GHz

Conducted Spurious Emission Plot on Channel 165



5G 802.11n (BW 20MHz) 7 GHz~40 GHz

Conducted Spurious Emission Plot on Channel 165



3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 KHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(KHz)	300
0.490 – 1.705	24000/F(KHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.5.2 Measuring Instruments

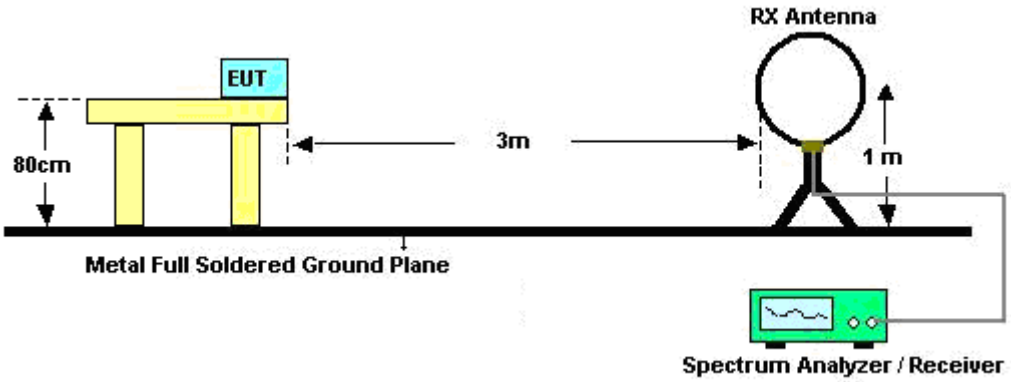
See list of measuring instruments of this test report.

3.5.3 Test Procedures

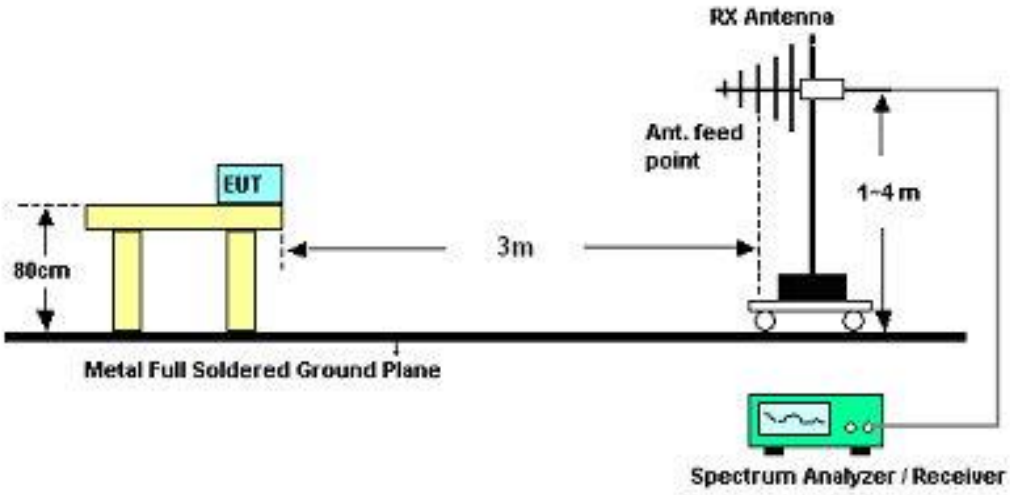
1. The testing follows TCB Workshop 2012, April and fulfills ANSI C63.4-2003 test site requirement. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
2. The EUT was placed on a turntable with 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving Antenna, which was mounted on the top of a variable height Antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest radiation.
5. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Set RBW=100 KHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for Peak measurement, and then set VBW=10Hz, while maintaining all of the other instrument settings for Average measurement.
6. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
7. If the emission level of the EUT measured by the peak detector is more than 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

3.5.4 Test Setup

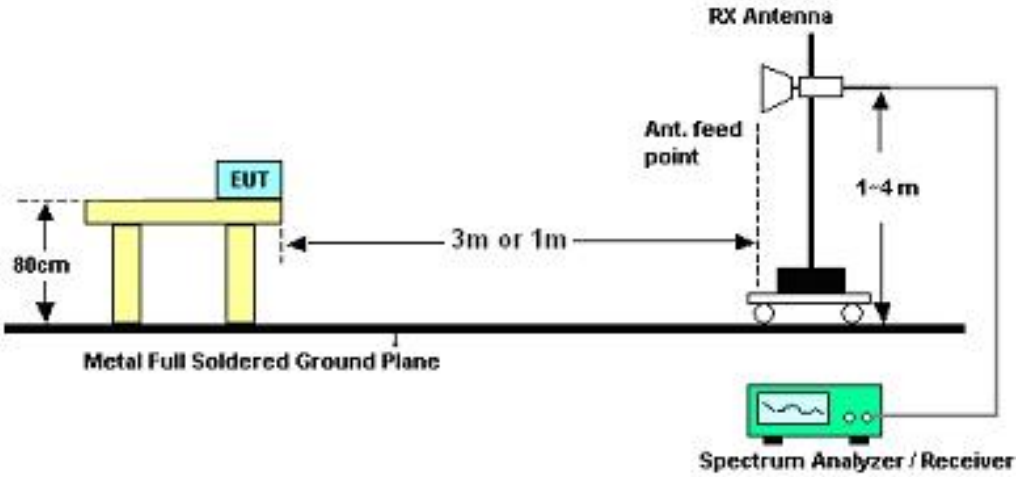
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.5.5 Test Results of Radiated Emissions (9KHz ~ 30MHz)

The low frequency, which started from 9 KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

3.5.6 Test Result of Radiated Band Edges

<Qwerty Keypad with Camera>

Test Mode :	Mode 1	**Temperature :**	24~25°C
Test Band :	802.11b	**Relative Humidity :**	42~43%
Test Channel :	01	**Test Engineer :**	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2385.81	51.96	-22.04	74	47.83	32.06	6.03	33.96	100	270	Peak
2385.81	40.38	-13.62	54	36.25	32.06	6.03	33.96	100	270	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388.85	49.86	-24.14	74	45.73	32.06	6.03	33.96	100	61	Peak
2388.85	37.1	-16.9	54	32.97	32.06	6.03	33.96	100	61	Average

Test Mode :	Mode 3	**Temperature :**	24~25°C
Test Band :	802.11b	**Relative Humidity :**	42~43%
Test Channel :	11	**Test Engineer :**	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2491.61	51.61	-22.39	74	47.23	32.2	6.18	34	166	214	Peak
2491.61	40.81	-13.19	54	36.43	32.2	6.18	34	166	214	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2491.26	49.1	-24.9	74	44.72	32.2	6.18	34	100	272	Peak
2491.26	37.56	-16.44	54	33.18	32.2	6.18	34	100	272	Average

Test Mode :	Mode 4	Temperature :	24~25°C
Test Band :	802.11b	Relative Humidity :	42~43%
Test Channel :	12	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	53.56	-20.44	74	49.2	32.18	6.18	34	112	28	Peak
2483.5	44.37	-9.63	54	40.01	32.18	6.18	34	112	28	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.66	52.58	-21.42	74	48.22	32.18	6.18	34	100	65	Peak
2483.66	43.23	-10.77	54	38.87	32.18	6.18	34	100	65	Average

Test Mode :	Mode 5	Temperature :	24~25°C
Test Band :	802.11b	Relative Humidity :	42~43%
Test Channel :	13	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	50.97	-23.03	74	46.61	32.18	6.18	34	197	352	Peak
2483.5	43.03	-10.97	54	38.67	32.18	6.18	34	197	352	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2486.7	51.18	-22.82	74	46.82	32.18	6.18	34	100	61	Peak
2486.7	42.35	-11.65	54	37.99	32.18	6.18	34	100	61	Average

Test Mode :	Mode 6	Temperature :	24~25°C
Test Band :	802.11g	Relative Humidity :	42~43%
Test Channel :	01	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.99	72.01	-1.99	74	67.88	32.06	6.03	33.96	100	136	Peak
2389.99	43.7	-10.3	54	39.57	32.06	6.03	33.96	100	136	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.8	64.99	-9.01	74	60.86	32.06	6.03	33.96	128	268	Peak
2389.8	39.61	-14.39	54	35.48	32.06	6.03	33.96	128	268	Average

Test Mode :	Mode 8	Temperature :	24~25°C
Test Band :	802.11g	Relative Humidity :	42~43%
Test Channel :	11	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	72.9	-1.1	74	68.54	32.18	6.18	34	100	215	Peak
2483.5	50.38	-3.62	54	46.02	32.18	6.18	34	100	215	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.85	72.11	-1.89	74	67.75	32.18	6.18	34	100	210	Peak
2483.85	47.14	-6.86	54	42.78	32.18	6.18	34	100	210	Average

Test Mode :	Mode 9	Temperature :	24~25°C
Test Band :	802.11g	Relative Humidity :	42~43%
Test Channel :	12	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	66.49	-7.51	74	62.13	32.18	6.18	34	199	148	Peak
2483.5	45.52	-8.48	54	41.16	32.18	6.18	34	199	148	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.66	67.71	-6.29	74	63.35	32.18	6.18	34	100	65	Peak
2483.66	47.09	-6.91	54	42.73	32.18	6.18	34	100	65	Average

Test Mode :	Mode 10	Temperature :	24~25°C
Test Band :	802.11g	Relative Humidity :	42~43%
Test Channel :	13	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	72.59	-1.41	74	68.23	32.18	6.18	34	199	354	Peak
2483.5	44.14	-9.86	54	39.78	32.18	6.18	34	199	354	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.66	70.77	-3.23	74	66.41	32.18	6.18	34	100	67	Peak
2483.66	42.75	-11.25	54	38.39	32.18	6.18	34	100	67	Average

<Numeric Keypad with Camera>

Test Mode :	Mode 11	**Temperature :**	24~25°C
Test Band :	802.11g	**Relative Humidity :**	42~43%
Test Channel :	11	**Test Engineer :**	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	72	-2	74	67.64	32.18	6.18	34	110	219	Peak
2483.5	50.83	-3.17	54	46.47	32.18	6.18	34	110	219	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.85	70.21	-3.79	74	65.85	32.18	6.18	34	110	223	Peak
2483.85	46.24	-7.76	54	41.88	32.18	6.18	34	110	223	Average

<PIM Keypad with Camera>

Test Mode :	Mode 12	**Temperature :**	24~25°C
Test Band :	802.11g	**Relative Humidity :**	42~43%
Test Channel :	11	**Test Engineer :**	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.66	70.29	-3.71	74	65.93	32.18	6.18	34	100	218	Peak
2483.66	41.08	-12.92	54	36.72	32.18	6.18	34	100	218	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	62.64	-11.36	74	58.28	32.18	6.18	34	100	49	Peak
2483.5	38.69	-15.31	54	34.33	32.18	6.18	34	100	49	Average

<Qwerty Keypad without Camera>

Test Mode :	Mode 13	**Temperature :**	24~25°C
Test Band :	802.11g	**Relative Humidity :**	42~43%
Test Channel :	11	**Test Engineer :**	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.66	69.17	-4.83	74	64.81	32.18	6.18	34	121	94	Peak
2483.66	45.66	-8.34	54	41.3	32.18	6.18	34	121	94	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.85	66.59	-7.41	74	62.23	32.18	6.18	34	100	70	Peak
2483.85	42.9	-11.1	54	38.54	32.18	6.18	34	100	70	Average

<Qwerty Keypad with Camera>

Test Mode :	Mode 14	**Temperature :**	24~25°C
Test Band :	802.11n (BW 20MHz)	**Relative Humidity :**	42~43%
Test Channel :	01	**Test Engineer :**	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.99	71.8	-2.2	74	67.67	32.06	6.03	33.96	100	270	Peak
2389.99	48.89	-5.11	54	44.76	32.06	6.03	33.96	100	270	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.99	66.67	-7.33	74	62.54	32.06	6.03	33.96	100	60	Peak
2389.99	43.75	-10.25	54	39.62	32.06	6.03	33.96	100	60	Average

Test Mode :	Mode 16	**Temperature :**	24~25°C
Test Band :	802.11n (BW 20MHz)	**Relative Humidity :**	42~43%
Test Channel :	11	**Test Engineer :**	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	66.43	-7.57	74	62.07	32.18	6.18	34	200	224	Peak
2483.5	45.48	-8.52	54	41.12	32.18	6.18	34	200	224	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	64.87	-9.13	74	60.51	32.18	6.18	34	100	274	Peak
2483.5	43.77	-10.23	54	39.41	32.18	6.18	34	100	274	Average

Test Mode :	Mode 17	Temperature :	24~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	42~43%
Test Channel :	12	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	68.67	-5.33	74	64.31	32.18	6.18	34	120	90	Peak
2483.5	49.16	-4.84	54	44.8	32.18	6.18	34	120	90	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	66.6	-7.4	74	62.24	32.18	6.18	34	100	66	Peak
2483.5	46.5	-7.5	54	42.14	32.18	6.18	34	100	66	Average

Test Mode :	Mode 18	Temperature :	24~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	42~43%
Test Channel :	13	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.5	70.65	-3.35	74	66.29	32.18	6.18	34	198	351	Peak
2483.5	45.28	-8.72	54	40.92	32.18	6.18	34	198	351	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.85	65.6	-8.4	74	61.24	32.18	6.18	34	100	68	Peak
2483.85	41.18	-12.82	54	36.82	32.18	6.18	34	100	68	Average

Test Mode :	Mode 19	Temperature :	24~25°C
Test Band :	802.11a	Relative Humidity :	42~43%
Test Channel :	149	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	80.45	-11.02	91.47	68.98	34.81	9.92	33.26	100	57	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	88.46	-4.6	93.06	76.99	34.81	9.92	33.26	100	57	Peak

Test Mode :	Mode 21	Temperature :	24~25°C
Test Band :	802.11a	Relative Humidity :	42~43%
Test Channel :	165	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5850	69.78	-17.5	87.28	58.36	34.96	9.88	33.42	100	342	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5850	75.62	-17.39	93.01	64.23	34.98	9.87	33.46	127	11	Peak

Test Mode :	Mode 22	Temperature :	24~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	42~43%
Test Channel :	149	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	83.27	-4.45	87.72	71.8	34.81	9.92	33.26	101	343	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	91.99	-2.15	94.14	80.52	34.81	9.92	33.26	129	5	Peak

Test Mode :	Mode 24	Temperature :	24~25°C
Test Band :	802.11n (BW 20MHz)	Relative Humidity :	42~43%
Test Channel :	165	Test Engineer :	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5850	80.27	-8.88	89.15	68.88	34.98	9.87	33.46	103	307	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5850	83.48	-9.9	93.38	72.09	34.98	9.87	33.46	139	1	Peak

<Numeric Keypad with Camera>

Test Mode :	Mode 25	**Temperature :**	24~25°C
Test Band :	802.11n (BW 20MHz)	**Relative Humidity :**	42~43%
Test Channel :	149	**Test Engineer :**	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	84.87	-3.31	88.18	73.4	34.81	9.92	33.26	107	206	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	90.34	-2.02	92.36	78.87	34.81	9.92	33.26	115	3	Peak

<PIM Keypad with Camera>

Test Mode :	Mode 26	**Temperature :**	24~25°C
Test Band :	802.11n (BW 20MHz)	**Relative Humidity :**	42~43%
Test Channel :	149	**Test Engineer :**	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	81.08	-5.57	86.65	69.61	34.81	9.92	33.26	100	314	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	85.52	-3.31	88.83	74.05	34.81	9.92	33.26	156	22	Peak

<Qwerty Keypad without Camera>

Test Mode :	Mode 27	**Temperature :**	24~25°C
Test Band :	802.11n (BW 20MHz)	**Relative Humidity :**	42~43%
Test Channel :	149	**Test Engineer :**	Gavin Wu

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	81.22	-5.74	86.96	69.75	34.81	9.92	33.26	103	323	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	86.06	-2.9	88.96	74.59	34.81	9.92	33.26	158	20	Peak

3.5.7 Test Result of Radiated Emission (30MHz ~ 10th Harmonic)

<Qwerty Keypad with Camera>

Test Mode :	Mode 1	**Temperature :**	24~25°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Gavin Wu	**Polarization :**	Horizontal
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	22.87	-17.13	40	34.21	20	0.53	31.87	-	-	Peak
180.66	30.93	-12.57	43.5	51.97	8.9	1.25	31.19	100	25	Peak
245.73	22.01	-23.99	46	39.4	12.26	1.53	31.18	-	-	Peak
318.9	19.91	-26.09	46	35.41	13.82	1.81	31.13	-	-	Peak
532.4	20.44	-25.56	46	30.42	18.64	2.51	31.13	-	-	Peak
780.9	25.12	-20.88	46	30.5	21.81	3.11	30.3	-	-	Peak
2385.81	40.38	-13.62	54	36.25	32.06	6.03	33.96	100	270	Average
2385.81	51.96	-22.04	74	47.83	32.06	6.03	33.96	100	270	Peak
2412	103.96	-	-	99.78	32.08	6.07	33.97	100	270	Average
2412	107.94	-	-	103.76	32.08	6.07	33.97	100	270	Peak
2490	35.21	-18.79	54	30.83	32.2	6.18	34	100	270	Average
2490	48.63	-25.37	74	44.25	32.2	6.18	34	100	270	Peak

Test Mode :	Mode 1	Temperature :	24~25°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	32.06	-7.94	40	43.4	20	0.53	31.87	100	12	Peak
180.66	31.55	-11.95	43.5	52.59	8.9	1.25	31.19	-	-	Peak
226.56	24.66	-21.34	46	43.43	10.98	1.46	31.21	-	-	Peak
511.4	20.35	-25.65	46	30.57	18.28	2.47	30.97	-	-	Peak
633.2	22.01	-23.99	46	29.57	20.06	2.79	30.41	-	-	Peak
897.8	31.85	-14.15	46	36.25	23.08	3.34	30.82	-	-	Peak
2388.85	37.1	-16.9	54	32.97	32.06	6.03	33.96	100	61	Average
2388.85	49.86	-24.14	74	45.73	32.06	6.03	33.96	100	61	Peak
2412	99.4	-	-	95.22	32.08	6.07	33.97	100	61	Average
2412	103.17	-	-	98.99	32.08	6.07	33.97	100	61	Peak
2492	34.54	-19.46	54	30.16	32.2	6.18	34	100	61	Average
2492	46.8	-27.2	74	42.42	32.2	6.18	34	100	61	Peak

Test Mode :	Mode 2	Temperature :	24~25°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	22.83	-17.17	40	34.17	20	0.53	31.87	-	-	Peak
181.2	30.84	-12.66	43.5	51.87	8.91	1.25	31.19	100	71	Peak
246.27	22.18	-23.82	46	39.5	12.33	1.53	31.18	-	-	Peak
316.8	20.52	-25.48	46	36.09	13.77	1.8	31.14	-	-	Peak
531	19.69	-26.31	46	29.69	18.61	2.51	31.12	-	-	Peak
714.4	23.36	-22.64	46	30.06	20.82	2.98	30.5	-	-	Peak
2390	37.08	-16.92	54	32.95	32.06	6.03	33.96	112	334	Average
2390	49.25	-24.75	74	45.12	32.06	6.03	33.96	112	334	Peak
2437	104.31	-	-	100.05	32.13	6.11	33.98	112	334	Average
2437	108.84	-	-	104.58	32.13	6.11	33.98	112	334	Peak
2494	38.59	-15.41	54	34.21	32.2	6.18	34	112	334	Average
2494	50.14	-23.86	74	45.76	32.2	6.18	34	112	334	Peak

Test Mode :	Mode 2	Temperature :	24~25°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	32.78	-7.22	40	44.12	20	0.53	31.87	100	57	Peak
139.89	30.97	-12.53	43.5	49.83	11.4	1.2	31.46	-	-	Peak
181.2	31.51	-11.99	43.5	52.54	8.91	1.25	31.19	-	-	Peak
301.4	19.54	-26.46	46	35.68	13.35	1.77	31.26	-	-	Peak
525.4	20.8	-25.2	46	30.85	18.53	2.5	31.08	-	-	Peak
587.7	21.29	-24.71	46	29.76	19.59	2.65	30.71	-	-	Peak
2390	35.89	-18.11	54	31.76	32.06	6.03	33.96	100	69	Average
2390	48.43	-25.57	74	44.3	32.06	6.03	33.96	100	69	Peak
2437	101.75	-	-	97.49	32.13	6.11	33.98	100	69	Average
2437	105.75	-	-	101.49	32.13	6.11	33.98	100	69	Peak
2498	37.53	-16.47	54	33.15	32.2	6.18	34	100	69	Average
2498	50.6	-23.4	74	46.22	32.2	6.18	34	100	69	Peak

Test Mode :	Mode 3	Temperature :	24~25°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.54	22.03	-17.97	40	34.08	19.28	0.54	31.87	-	-	Peak
180.66	30.82	-12.68	43.5	51.86	8.9	1.25	31.19	100	29	Peak
266.25	21.67	-24.33	46	38.5	12.83	1.62	31.28	-	-	Peak
318.9	20.27	-25.73	46	35.77	13.82	1.81	31.13	-	-	Peak
630.4	22.3	-23.7	46	29.91	20.04	2.78	30.43	-	-	Peak
837.6	26.77	-19.23	46	31.5	22.48	3.24	30.45	-	-	Peak
2356	33.33	-20.67	54	29.31	32.01	5.95	33.94	166	214	Average
2356	44.76	-29.24	74	40.74	32.01	5.95	33.94	166	214	Peak
2462	105.9	-	-	101.6	32.15	6.14	33.99	166	214	Average
2462	109.86	-	-	105.56	32.15	6.14	33.99	166	214	Peak
2491.61	40.81	-13.19	54	36.43	32.2	6.18	34	166	214	Average
2491.61	51.61	-22.39	74	47.23	32.2	6.18	34	166	214	Peak

Test Mode :	Mode 3	Temperature :	24~25°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	33.01	-6.99	40	44.35	20	0.53	31.87	100	58	Peak
181.2	31.67	-11.83	43.5	52.7	8.91	1.25	31.19	-	-	Peak
226.83	24.26	-21.74	46	43.03	10.98	1.46	31.21	-	-	Peak
318.2	19.71	-26.29	46	35.24	13.8	1.81	31.14	-	-	Peak
743.1	23.65	-22.35	46	29.89	21.24	3.04	30.52	-	-	Peak
897.8	27.49	-18.51	46	31.89	23.08	3.34	30.82	-	-	Peak
2354	32.93	-21.07	54	28.91	32.01	5.95	33.94	100	272	Average
2354	45.18	-28.82	74	41.16	32.01	5.95	33.94	100	272	Peak
2462	100.36	-	-	96.06	32.15	6.14	33.99	100	272	Average
2462	104.28	-	-	99.98	32.15	6.14	33.99	100	272	Peak
2491.26	37.56	-16.44	54	33.18	32.2	6.18	34	100	272	Average
2491.26	49.1	-24.9	74	44.72	32.2	6.18	34	100	272	Peak

Test Mode :	Mode 4	Temperature :	24~25°C
Test Channel :	12	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	2467 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2336	32.86	-21.14	54	28.87	31.98	5.95	33.94	112	28	Average
2336	46.15	-27.85	74	42.16	31.98	5.95	33.94	112	28	Peak
2467	99.12	-	-	94.82	32.15	6.14	33.99	112	28	Average
2467	102.97	-	-	98.67	32.15	6.14	33.99	112	28	Peak
2483.5	44.37	-9.63	54	40.01	32.18	6.18	34	112	28	Average
2483.5	53.56	-20.44	74	49.2	32.18	6.18	34	112	28	Peak

Test Mode :	Mode 4	Temperature :	24~25°C
Test Channel :	12	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2467 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2338	32.71	-21.29	54	28.72	31.98	5.95	33.94	100	65	Average
2338	44.36	-29.64	74	40.37	31.98	5.95	33.94	100	65	Peak
2467	95.73	-	-	91.43	32.15	6.14	33.99	100	65	Average
2467	99.68	-	-	95.38	32.15	6.14	33.99	100	65	Peak
2483.66	43.23	-10.77	54	38.87	32.18	6.18	34	100	65	Average
2483.66	52.58	-21.42	74	48.22	32.18	6.18	34	100	65	Peak

Test Mode :	Mode 5	Temperature :	24~25°C
Test Channel :	13	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	2472 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388	32.61	-21.39	54	28.48	32.06	6.03	33.96	197	352	Average
2388	44.01	-29.99	74	39.88	32.06	6.03	33.96	197	352	Peak
2472	95.18	-	-	90.85	32.18	6.14	33.99	197	352	Average
2472	99.71	-	-	95.38	32.18	6.14	33.99	197	352	Peak
2483.5	43.03	-10.97	54	38.67	32.18	6.18	34	197	352	Average
2483.5	50.97	-23.03	74	46.61	32.18	6.18	34	197	352	Peak

Test Mode :	Mode 5	Temperature :	24~25°C
Test Channel :	13	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2472 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2384	32.89	-21.11	54	28.79	32.03	6.03	33.96	100	61	Average
2384	44.41	-29.59	74	40.31	32.03	6.03	33.96	100	61	Peak
2472	93.22	-	-	88.89	32.18	6.14	33.99	100	61	Average
2472	97.02	-	-	92.69	32.18	6.14	33.99	100	61	Peak
2486.7	42.35	-11.65	54	37.99	32.18	6.18	34	100	61	Average
2486.7	51.18	-22.82	74	46.82	32.18	6.18	34	100	61	Peak

Test Mode :	Mode 6	Temperature :	24~25°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
31.08	21.36	-18.64	40	33.41	19.28	0.54	31.87	-	-	Peak
180.66	30.97	-12.53	43.5	52.01	8.9	1.25	31.19	100	47	Peak
248.97	21.38	-24.62	46	38.48	12.53	1.53	31.16	-	-	Peak
320.3	20.02	-25.98	46	35.48	13.85	1.81	31.12	-	-	Peak
594.7	21.62	-24.38	46	29.86	19.7	2.67	30.61	-	-	Peak
785.8	24.46	-21.54	46	29.72	21.88	3.12	30.26	-	-	Peak
2389.99	43.7	-10.3	54	39.57	32.06	6.03	33.96	100	136	Average
2389.99	72.01	-1.99	74	67.88	32.06	6.03	33.96	100	136	Peak
2412	90.38	-	-	86.2	32.08	6.07	33.97	100	136	Average
2412	107.29	-	-	103.11	32.08	6.07	33.97	100	136	Peak
2486	34.49	-19.51	54	30.13	32.18	6.18	34	100	136	Average
2486	48	-26	74	43.64	32.18	6.18	34	100	136	Peak

Test Mode :	Mode 6	Temperature :	24~25°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.81	32.52	-7.48	40	44.57	19.28	0.54	31.87	100	71	Peak
138	30.06	-13.44	43.5	48.91	11.44	1.19	31.48	-	-	Peak
180.66	31.49	-12.01	43.5	52.53	8.9	1.25	31.19	-	-	Peak
300.7	20.2	-25.8	46	36.36	13.33	1.77	31.26	-	-	Peak
680.8	22.74	-23.26	46	29.84	20.44	2.9	30.44	-	-	Peak
897.8	32.93	-13.07	46	37.33	23.08	3.34	30.82	-	-	Peak
2389.8	39.61	-14.39	54	35.48	32.06	6.03	33.96	128	268	Average
2389.8	64.99	-9.01	74	60.86	32.06	6.03	33.96	128	268	Peak
2412	87.73	-	-	83.55	32.08	6.07	33.97	128	268	Average
2412	103.28	-	-	99.1	32.08	6.07	33.97	128	268	Peak
2496	34.65	-19.35	54	30.27	32.2	6.18	34	128	268	Average
2496	46.6	-27.4	74	42.22	32.2	6.18	34	128	268	Peak

Test Mode :	Mode 7	Temperature :	24~25°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	23.42	-16.58	40	34.76	20	0.53	31.87	-	-	Peak
180.66	30.9	-12.6	43.5	51.94	8.9	1.25	31.19	100	87	Peak
246.27	21.7	-24.3	46	39.02	12.33	1.53	31.18	-	-	Peak
319.6	20.41	-25.59	46	35.87	13.85	1.81	31.12	-	-	Peak
731.2	24.68	-21.32	46	31.1	21.07	3.02	30.51	-	-	Peak
818.7	24.93	-21.07	46	29.76	22.28	3.19	30.3	-	-	Peak
1918	48.38	-25.62	74	46.03	30.87	5.28	33.8	-	-	Peak
2386	40.02	-13.98	54	35.89	32.06	6.03	33.96	100	225	Average
2386	60.39	-13.61	74	56.26	32.06	6.03	33.96	100	225	Peak
2437	96.36	-	-	92.1	32.13	6.11	33.98	100	225	Average
2437	112.29	-	-	108.03	32.13	6.11	33.98	100	225	Peak
2486	42.01	-11.99	54	37.65	32.18	6.18	34	100	225	Average
2486	62.98	-11.02	74	58.62	32.18	6.18	34	100	225	Peak

Test Mode :	Mode 7	Temperature :	24~25°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	32.8	-7.2	40	44.14	20	0.53	31.87	100	47	Peak
99.66	33.87	-9.63	43.5	54.74	9.8	0.99	31.66	-	-	Peak
181.2	31.65	-11.85	43.5	52.68	8.91	1.25	31.19	-	-	Peak
318.9	18.96	-27.04	46	34.46	13.82	1.81	31.13	-	-	Peak
750.8	23.76	-22.24	46	29.86	21.36	3.06	30.52	-	-	Peak
920.2	25.52	-20.48	46	29.55	23.41	3.39	30.83	-	-	Peak
2390	37.55	-16.45	54	33.42	32.06	6.03	33.96	102	280	Average
2390	58.5	-15.5	74	54.37	32.06	6.03	33.96	102	280	Peak
2437	93.02	-	-	88.76	32.13	6.11	33.98	102	280	Average
2437	109.17	-	-	104.91	32.13	6.11	33.98	102	280	Peak
2484	40.04	-13.96	54	35.68	32.18	6.18	34	102	280	Average
2484	58.89	-15.11	74	54.53	32.18	6.18	34	102	280	Peak

Test Mode :	Mode 8	Temperature :	24~25°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	22.49	-1	40	33.83	20	0.53	31.87	-	-	Peak
142.59	20.22	-23.28	43.5	39.11	11.35	1.2	31.44	-	-	Peak
180.12	30.92	-12.58	43.5	51.95	8.9	1.25	31.18	100	55	Peak
318.9	20.12	-25.88	46	35.62	13.82	1.81	31.13	-	-	Peak
524	20.37	-25.63	46	30.44	18.5	2.5	31.07	-	-	Peak
925.8	25.44	-20.56	46	29.39	23.49	3.4	30.84	-	-	Peak
2374	34.59	-19.41	54	30.52	32.03	5.99	33.95	100	215	Average
2374	45.99	-28.01	74	41.92	32.03	5.99	33.95	100	215	Peak
2462	94.41	-	-	90.11	32.15	6.14	33.99	100	215	Average
2462	111.6	-	-	107.3	32.15	6.14	33.99	100	215	Peak
2483.5	50.38	-3.62	54	46.02	32.18	6.18	34	100	215	Average
2483.5	72.9	-1.1	74	68.54	32.18	6.18	34	100	215	Peak

Test Mode :	Mode 8	Temperature :	24~25°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	32.44	-7.56	40	43.78	20	0.53	31.87	100	28	Peak
138.27	30.3	-13.2	43.5	49.16	11.42	1.2	31.48	-	-	Peak
181.74	31.86	-11.64	43.5	52.91	8.91	1.25	31.21	-	-	Peak
511.4	20.46	-25.54	46	30.68	18.28	2.47	30.97	-	-	Peak
729.1	23.56	-22.44	46	30.02	21.04	3.01	30.51	-	-	Peak
880.3	25.43	-20.57	46	29.92	22.91	3.31	30.71	-	-	Peak
2324	33.12	-20.88	54	29.17	31.96	5.92	33.93	100	210	Average
2324	44.84	-29.16	74	40.89	31.96	5.92	33.93	100	210	Peak
2462	90.94	-	-	86.64	32.15	6.14	33.99	100	210	Average
2462	106.42	-	-	102.12	32.15	6.14	33.99	100	210	Peak
2483.85	47.14	-6.86	54	42.78	32.18	6.18	34	100	210	Average
2483.85	72.11	-1.89	74	67.75	32.18	6.18	34	100	210	Peak

Test Mode :	Mode 9	Temperature :	24~25°C
Test Channel :	12	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	2467 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2336	32.75	-21.25	54	28.76	31.98	5.95	33.94	199	148	Average
2336	45.3	-28.7	74	41.31	31.98	5.95	33.94	199	148	Peak
2467	88.32	-	-	84.02	32.15	6.14	33.99	199	148	Average
2467	103.66	-	-	99.33	32.18	6.14	33.99	199	148	Peak
2483.5	45.52	-8.48	54	41.16	32.18	6.18	34	199	148	Average
2483.5	66.49	-7.51	74	62.13	32.18	6.18	34	199	148	Peak

Test Mode :	Mode 9	Temperature :	24~25°C
Test Channel :	12	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2467 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2318	27.83	-26.17	54	23.88	31.96	5.92	33.93	100	65	Average
2318	44.29	-29.71	74	40.34	31.96	5.92	33.93	100	65	Peak
2467	85.85	-	-	81.55	32.15	6.14	33.99	100	65	Average
2467	101.22	-	-	96.89	32.18	6.14	33.99	100	65	Peak
2483.66	47.09	-6.91	54	42.73	32.18	6.18	34	100	65	Average
2483.66	67.71	-6.29	74	63.35	32.18	6.18	34	100	65	Peak

Test Mode :	Mode 10	Temperature :	24~25°C
Test Channel :	13	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	2472 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2352	32.71	-21.29	54	28.69	32.01	5.95	33.94	199	354	Average
2352	44.89	-29.11	74	40.87	32.01	5.95	33.94	199	354	Peak
2472	79.15	-	-	74.82	32.18	6.14	33.99	199	354	Average
2472	93.81	-	-	89.48	32.18	6.14	33.99	199	354	Peak
2483.5	44.14	-9.86	54	39.78	32.18	6.18	34	199	354	Average
2483.5	72.59	-1.41	74	68.23	32.18	6.18	34	199	354	Peak

Test Mode :	Mode 10	Temperature :	24~25°C
Test Channel :	13	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2472 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2376	32.93	-21.07	54	28.86	32.03	5.99	33.95	100	67	Average
2376	44.74	-29.26	74	40.67	32.03	5.99	33.95	100	67	Peak
2472	76.81	-	-	72.48	32.18	6.14	33.99	100	67	Average
2472	91.54	-	-	87.21	32.18	6.14	33.99	100	67	Peak
2483.66	42.75	-11.25	54	38.39	32.18	6.18	34	100	67	Average
2483.66	70.77	-3.23	74	66.41	32.18	6.18	34	100	67	Peak

<Numeric Keypad with Camera>

Test Mode :	Mode 11	**Temperature :**	24~25°C
Test Channel :	11	**Relative Humidity :**	42~43%
Test Engineer :	Gavin Wu	**Polarization :**	Horizontal
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
31.08	21.01	-18.99	40	33.06	19.28	0.54	31.87	-	-	Peak
172.56	25.75	-17.75	43.5	46.47	9.29	1.24	31.25	-	-	Peak
181.2	30.85	-12.65	43.5	51.88	8.91	1.25	31.19	114	172	Peak
647.2	22.64	-23.36	46	30	20.17	2.83	30.36	-	-	Peak
735.4	22.43	-23.57	46	28.81	21.12	3.02	30.52	-	-	Peak
786.5	23.38	-22.62	46	28.62	21.9	3.12	30.26	-	-	Peak
2384	34.59	-19.41	54	30.52	32.03	5.99	33.95	110	219	Average
2384	45.99	-28.01	74	41.92	32.03	5.99	33.95	110	219	Peak
2462	92.41	-	-	88.11	32.15	6.14	33.99	110	219	Average
2462	109.6	-	-	105.3	32.15	6.14	33.99	110	219	Peak
2483.5	50.83	-3.17	54	46.47	32.18	6.18	34	110	219	Average
2483.5	72	-2	74	67.64	32.18	6.18	34	110	219	Peak

Test Mode :	Mode 11	Temperature :	24~25°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	33.37	-6.63	40	44.71	20	0.53	31.87	105	181	Peak
131.52	30.19	-13.31	43.5	49.02	11.56	1.16	31.55	-	-	Peak
180.66	31.57	-11.93	43.5	52.61	8.9	1.25	31.19	-	-	Peak
647.9	23.24	-22.76	46	30.59	20.18	2.83	30.36	-	-	Peak
708.8	22.74	-23.26	46	29.55	20.73	2.96	30.5	-	-	Peak
806.1	24.39	-21.61	46	29.28	22.16	3.16	30.21	-	-	Peak
2335	33.26	-20.74	54	29.31	31.96	5.92	33.93	110	223	Average
2335	43.35	-30.65	74	39.4	31.96	5.92	33.93	110	223	Peak
2462	90.64	-	-	86.34	32.15	6.14	33.99	110	223	Average
2462	106.88	-	-	102.58	32.15	6.14	33.99	110	223	Peak
2483.85	46.24	-7.76	54	41.88	32.18	6.18	34	110	223	Average
2483.85	70.21	-3.79	74	65.85	32.18	6.18	34	110	223	Peak

<PIM Keypad with Camera>

Test Mode :	Mode 12	**Temperature :**	24~25°C
Test Channel :	11	**Relative Humidity :**	42~43%
Test Engineer :	Gavin Wu	**Polarization :**	Horizontal
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.81	20.89	-19.11	40	32.94	19.28	0.54	31.87	-	-	Peak
172.56	25.67	-17.83	43.5	46.39	9.29	1.24	31.25	-	-	Peak
181.2	31.03	-12.47	43.5	52.06	8.91	1.25	31.19	105	204	Peak
682.9	22.4	-23.6	46	29.47	20.46	2.91	30.44	-	-	Peak
744.5	23.06	-22.94	46	29.27	21.27	3.05	30.53	-	-	Peak
807.5	24.12	-21.88	46	28.99	22.18	3.16	30.21	-	-	Peak
2390	33.49	-20.51	54	29.36	32.06	6.03	33.96	100	218	Average
2390	45.61	-28.39	74	41.48	32.06	6.03	33.96	100	218	Peak
2462	97.58	-	-	93.28	32.15	6.14	33.99	100	218	Average
2462	108.51	-	-	104.21	32.15	6.14	33.99	100	218	Peak
2483.66	41.08	-12.92	54	36.72	32.18	6.18	34	100	218	Average
2483.66	70.29	-3.71	74	65.93	32.18	6.18	34	100	218	Peak

Test Mode :	Mode 12	Temperature :	24~25°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	33.81	-6.19	40	45.15	20	0.53	31.87	111	156	Peak
131.25	30.58	-12.92	43.5	49.41	11.58	1.15	31.56	-	-	Peak
181.2	31.51	-11.99	43.5	52.54	8.91	1.25	31.19	-	-	Peak
614.3	21.88	-24.12	46	29.73	19.91	2.73	30.49	-	-	Peak
645.8	22.74	-23.26	46	30.11	20.17	2.83	30.37	-	-	Peak
777.4	24.1	-21.9	46	29.56	21.77	3.1	30.33	-	-	Peak
2344	28.87	-25.13	54	24.88	31.98	5.95	33.94	100	49	Average
2344	44.77	-29.23	74	40.78	31.98	5.95	33.94	100	49	Peak
2462	93.69	-	-	89.39	32.15	6.14	33.99	100	49	Average
2462	104.45	-	-	100.15	32.15	6.14	33.99	100	49	Peak
2483.5	38.69	-15.31	54	34.33	32.18	6.18	34	100	49	Average
2483.5	62.64	-11.36	74	58.28	32.18	6.18	34	100	49	Peak

<Qwerty Keypad without Camera>

Test Mode :	Mode 13	**Temperature :**	24~25°C
Test Channel :	11	**Relative Humidity :**	42~43%
Test Engineer :	Gavin Wu	**Polarization :**	Horizontal
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.54	20.87	-19.13	40	32.92	19.28	0.54	31.87	-	-	Peak
172.83	25.69	-17.81	43.5	46.41	9.29	1.24	31.25	-	-	Peak
180.12	30.82	-12.68	43.5	51.85	8.9	1.25	31.18	115	199	Peak
636.7	21.79	-24.21	46	29.3	20.09	2.8	30.4	-	-	Peak
691.3	22.7	-23.3	46	29.71	20.53	2.92	30.46	-	-	Peak
752.9	23.19	-22.81	46	29.25	21.39	3.06	30.51	-	-	Peak
2378	33.36	-20.64	54	29.29	32.03	5.99	33.95	121	94	Average
2378	45.54	-28.46	74	41.47	32.03	5.99	33.95	121	94	Peak
2462	98.75	-	-	94.45	32.15	6.14	33.99	121	94	Average
2462	109.09	-	-	104.79	32.15	6.14	33.99	121	94	Peak
2483.66	45.66	-8.34	54	41.3	32.18	6.18	34	121	94	Average
2483.66	69.17	-4.83	74	64.81	32.18	6.18	34	121	94	Peak

Test Mode :	Mode 13	Temperature :	24~25°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	33.75	-6.25	40	45.09	20	0.53	31.87	105	136	Peak
66.99	32.02	-7.98	40	56.74	6.24	0.82	31.78	-	-	Peak
180.66	31.4	-12.1	43.5	52.44	8.9	1.25	31.19	-	-	Peak
500.9	19.23	-26.77	46	29.58	18.1	2.45	30.9	-	-	Peak
682.9	23.24	-22.76	46	30.31	20.46	2.91	30.44	-	-	Peak
780.9	24.72	-21.28	46	30.1	21.81	3.11	30.3	-	-	Peak
2336	32.83	-21.17	54	28.84	31.98	5.95	33.94	100	70	Average
2336	44.87	-29.13	74	40.88	31.98	5.95	33.94	100	70	Peak
2462	94.94	-	-	90.64	32.15	6.14	33.99	100	70	Average
2462	105.3	-	-	101	32.15	6.14	33.99	100	70	Peak
2483.85	42.9	-11.1	54	38.54	32.18	6.18	34	100	70	Average
2483.85	66.59	-7.41	74	62.23	32.18	6.18	34	100	70	Peak

<Qwerty Keypad with Camera>

Test Mode :	Mode 14	**Temperature :**	24~25°C
Test Channel :	01	**Relative Humidity :**	42~43%
Test Engineer :	Gavin Wu	**Polarization :**	Horizontal
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.81	23.09	-16.91	40	35.14	19.28	0.54	31.87	-	-	Peak
181.2	31	-12.5	43.5	52.03	8.91	1.25	31.19	100	96	Peak
246.81	21.52	-24.48	46	38.76	12.4	1.53	31.17	-	-	Peak
395.2	20.21	-25.79	46	33.68	15.87	2.13	31.47	-	-	Peak
740.3	23.52	-22.48	46	29.8	21.2	3.04	30.52	-	-	Peak
897.8	29.23	-16.77	46	33.63	23.08	3.34	30.82	-	-	Peak
2389.99	48.89	-5.11	54	44.76	32.06	6.03	33.96	100	270	Average
2389.99	71.8	-2.2	74	67.67	32.06	6.03	33.96	100	270	Peak
2412	97.51	-	-	93.33	32.08	6.07	33.97	100	270	Average
2412	108.02	-	-	103.84	32.08	6.07	33.97	100	270	Peak
2486	34.7	-19.3	54	30.34	32.18	6.18	34	100	270	Average
2486	47.26	-26.74	74	42.9	32.18	6.18	34	100	270	Peak

Test Mode :	Mode 14	Temperature :	24~25°C
Test Channel :	01	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2412 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	32.48	-7.52	40	43.82	20	0.53	31.87	100	51	Peak
180.66	31.68	-11.82	43.5	52.72	8.9	1.25	31.19	-	-	Peak
229.8	23.84	-22.16	46	42.38	11.19	1.48	31.21	-	-	Peak
324.5	18.64	-27.36	46	34.01	13.98	1.83	31.18	-	-	Peak
659.1	22.76	-23.24	46	30.01	20.27	2.86	30.38	-	-	Peak
904.8	25.22	-20.78	46	29.53	23.17	3.35	30.83	-	-	Peak
2389.99	43.75	-10.25	54	39.62	32.06	6.03	33.96	100	60	Average
2389.99	66.67	-7.33	74	62.54	32.06	6.03	33.96	100	60	Peak
2412	88.55	-	-	84.37	32.08	6.07	33.97	100	60	Average
2412	103.7	-	-	99.52	32.08	6.07	33.97	100	60	Peak
2484	33.9	-20.1	54	29.54	32.18	6.18	34	100	60	Average
2484	46.19	-27.81	74	41.83	32.18	6.18	34	100	60	Peak

Test Mode :	Mode 15	Temperature :	24~25°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.81	24.16	-15.84	40	36.21	19.28	0.54	31.87	-	-	Peak
181.2	30.88	-12.62	43.5	51.91	8.91	1.25	31.19	100	58	Peak
246.27	21.38	-24.62	46	38.7	12.33	1.53	31.18	-	-	Peak
319.6	19.57	-26.43	46	35.03	13.85	1.81	31.12	-	-	Peak
676.6	22.19	-23.81	46	29.32	20.41	2.89	30.43	-	-	Peak
780.2	24.47	-21.53	46	29.88	21.79	3.11	30.31	-	-	Peak
1918	50.47	-23.53	74	48.12	30.87	5.28	33.8	121	91	Peak
2388	39.3	-14.7	54	35.17	32.06	6.03	33.96	121	91	Average
2388	59.82	-14.18	74	55.69	32.06	6.03	33.96	121	91	Peak
2437	102.75	-	-	98.49	32.13	6.11	33.98	121	91	Average
2437	113.15	-	-	108.89	32.13	6.11	33.98	121	91	Peak
2484	41.07	-12.93	54	36.71	32.18	6.18	34	121	91	Average
2484	58.48	-15.52	74	54.12	32.18	6.18	34	121	91	Peak

Test Mode :	Mode 15	Temperature :	24~25°C
Test Channel :	06	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2437 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	32.79	-7.21	40	44.13	20	0.53	31.87	100	18	Peak
138.27	30.03	-13.47	43.5	48.89	11.42	1.2	31.48	-	-	Peak
181.2	31.43	-12.07	43.5	52.46	8.91	1.25	31.19	-	-	Peak
320.3	19.08	-26.92	46	34.54	13.85	1.81	31.12	-	-	Peak
715.8	22.87	-23.13	46	29.56	20.83	2.98	30.5	-	-	Peak
956.6	25.47	-20.53	46	28.84	23.94	3.47	30.78	-	-	Peak
2390	38.9	-15.1	54	34.77	32.06	6.03	33.96	100	67	Average
2390	54.58	-19.42	74	50.45	32.06	6.03	33.96	100	67	Peak
2437	98.75	-	-	94.49	32.13	6.11	33.98	100	67	Average
2437	109.06	-	-	104.83	32.1	6.11	33.98	100	67	Peak
2484	39.15	-14.85	54	34.79	32.18	6.18	34	100	67	Average
2484	57.01	-16.99	74	52.65	32.18	6.18	34	100	67	Peak

Test Mode :	Mode 16	Temperature :	24~25°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	24.01	-15.99	40	35.35	20	0.53	31.87	-	-	Peak
181.2	30.88	-12.62	43.5	51.91	8.91	1.25	31.19	100	71	Peak
246.27	21.88	-24.12	46	39.2	12.33	1.53	31.18	-	-	Peak
385.4	19.03	-26.97	46	32.66	15.61	2.11	31.35	-	-	Peak
700.4	24.3	-21.7	46	31.25	20.6	2.94	30.49	-	-	Peak
845.3	24.64	-21.36	46	29.32	22.56	3.26	30.5	-	-	Peak
2378	33.1	-20.9	54	29.03	32.03	5.99	33.95	200	224	Average
2378	44.88	-29.12	74	40.81	32.03	5.99	33.95	200	224	Peak
2462	97.43	-	-	93.13	32.15	6.14	33.99	200	224	Average
2462	107.88	-	-	103.58	32.15	6.14	33.99	200	224	Peak
2483.5	45.48	-8.52	54	41.12	32.18	6.18	34	200	224	Average
2483.5	66.43	-7.57	74	62.07	32.18	6.18	34	200	224	Peak

Test Mode :	Mode 16	Temperature :	24~25°C
Test Channel :	11	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2462 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.81	32.63	-7.37	40	44.68	19.28	0.54	31.87	100	55	Peak
108.84	30.73	-12.77	43.5	50.82	10.61	1.04	31.74	-	-	Peak
181.2	31.6	-11.9	43.5	52.63	8.91	1.25	31.19	-	-	Peak
485.5	19.28	-26.72	46	30.02	17.8	2.4	30.94	-	-	Peak
636.7	22.41	-23.59	46	29.92	20.09	2.8	30.4	-	-	Peak
821.5	25.04	-20.96	46	29.85	22.31	3.2	30.32	-	-	Peak
2352	32.83	-21.17	54	28.81	32.01	5.95	33.94	100	274	Average
2352	44.51	-29.49	74	40.49	32.01	5.95	33.94	100	274	Peak
2462	94.34	-	-	90.04	32.15	6.14	33.99	100	274	Average
2462	104.73	-	-	100.43	32.15	6.14	33.99	100	274	Peak
2483.5	43.77	-10.23	54	39.41	32.18	6.18	34	100	274	Average
2483.5	64.87	-9.13	74	60.51	32.18	6.18	34	100	274	Peak

Test Mode :	Mode 17	Temperature :	24~25°C
Test Channel :	12	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	2467 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2356	33.57	-20.43	54	29.55	32.01	5.95	33.94	120	90	Average
2356	45.24	-28.76	74	41.22	32.01	5.95	33.94	120	90	Peak
2467	94.19	-	-	89.89	32.15	6.14	33.99	120	90	Average
2467	104.14	-	-	99.84	32.15	6.14	33.99	120	90	Peak
2483.5	49.16	-4.84	54	44.8	32.18	6.18	34	120	90	Average
2483.5	68.67	-5.33	74	64.31	32.18	6.18	34	120	90	Peak

Test Mode :	Mode 17	Temperature :	24~25°C
Test Channel :	12	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2467 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2330	33.04	-20.96	54	29.09	31.96	5.92	33.93	100	66	Average
2330	44.85	-29.15	74	40.9	31.96	5.92	33.93	100	66	Peak
2467	90.81	-	-	86.51	32.15	6.14	33.99	100	66	Average
2467	101.01	-	-	96.71	32.15	6.14	33.99	100	66	Peak
2483.5	46.5	-7.5	54	42.14	32.18	6.18	34	100	66	Average
2483.5	66.6	-7.4	74	62.24	32.18	6.18	34	100	66	Peak

Test Mode :	Mode 18	Temperature :	24~25°C
Test Channel :	13	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	2472 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2382	33.04	-20.96	54	28.94	32.03	6.03	33.96	198	351	Average
2382	45.45	-28.55	74	41.35	32.03	6.03	33.96	198	351	Peak
2472	80.71	-	-	76.38	32.18	6.14	33.99	198	351	Average
2472	91.37	-	-	87.04	32.18	6.14	33.99	198	351	Peak
2483.5	45.28	-8.72	54	40.92	32.18	6.18	34	198	351	Average
2483.5	70.65	-3.35	74	66.29	32.18	6.18	34	198	351	Peak

Test Mode :	Mode 18	Temperature :	24~25°C
Test Channel :	13	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	2472 MHz is fundamental signal which can be ignored.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2344	32.95	-21.05	54	28.96	31.98	5.95	33.94	100	68	Average
2344	44.74	-29.26	74	40.75	31.98	5.95	33.94	100	68	Peak
2472	76.91	-	-	72.58	32.18	6.14	33.99	100	68	Average
2472	87.15	-	-	82.82	32.18	6.14	33.99	100	68	Peak
2483.85	41.18	-12.82	54	36.82	32.18	6.18	34	100	68	Average
2483.85	65.6	-8.4	74	61.24	32.18	6.18	34	100	68	Peak

Test Mode :	Mode 19	Temperature :	24~25°C
Test Channel :	149	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands, and its limit line is 20dB below the highest emission level. For example, 111.47 dBuV/m - 20dB = 91.47 dBuV/m.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	23.34	-16.66	40	34.68	20	0.53	31.87	-	-	Peak
180.66	31.09	-12.41	43.5	52.13	8.9	1.25	31.19	100	29	Peak
246.27	21.78	-24.22	46	39.1	12.33	1.53	31.18	-	-	Peak
320.3	19.96	-26.04	46	35.42	13.85	1.81	31.12	-	-	Peak
681.5	22.44	-23.56	46	29.53	20.45	2.9	30.44	-	-	Peak
792.8	24.45	-21.55	46	29.55	21.98	3.13	30.21	-	-	Peak
5725	80.45	-11.02	91.47	68.98	34.81	9.92	33.26	100	57	Peak
5745	101.9	-	-	90.45	34.84	9.91	33.3	100	57	Average
5745	111.47	-	-	100.02	34.84	9.91	33.3	100	57	Peak
5850	51.68	-39.79	91.47	40.29	34.98	9.87	33.46	100	57	Peak

Test Mode :	Mode 19	Temperature :	24~25°C
Test Channel :	149	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	32.94	-7.06	40	44.28	20	0.53	31.87	100	28	Peak
181.74	31.57	-11.93	43.5	52.62	8.91	1.25	31.21	-	-	Peak
228.72	23.77	-22.23	46	42.39	11.12	1.47	31.21	-	-	Peak
486.9	19.86	-26.14	46	30.57	17.82	2.4	30.93	-	-	Peak
639.5	22.03	-23.97	46	29.5	20.11	2.81	30.39	-	-	Peak
796.3	25.42	-20.58	46	30.44	22.04	3.13	30.19	-	-	Peak
5725	88.46	-4.6	93.06	76.99	34.81	9.92	33.26	100	57	Peak
5745	101.97	-	-	90.52	34.84	9.91	33.3	100	57	Average
5745	113.06	-	-	101.61	34.84	9.91	33.3	100	57	Peak
5850	52.73	-40.33	93.06	41.34	34.98	9.87	33.46	100	57	Peak

Test Mode :	Mode 20	Temperature :	24~25°C
Test Channel :	157	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5785 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
48.36	33.14	-6.86	40	55.21	8.9	0.68	31.65	100	85	Peak
180.66	30.78	-12.72	43.5	51.82	8.9	1.25	31.19	-	-	Peak
247.89	21.57	-24.43	46	38.74	12.47	1.53	31.17	-	-	Peak
319.6	20.24	-25.76	46	35.7	13.85	1.81	31.12	-	-	Peak
611.5	21.96	-24.04	46	29.85	19.89	2.72	30.5	-	-	Peak
841.1	25.11	-20.89	46	29.82	22.51	3.25	30.47	-	-	Peak
5725	55.05	-33.01	88.06	43.58	34.81	9.92	33.26	100	342	Peak
5785	97.86	-	-	86.41	34.89	9.9	33.34	100	342	Average
5785	108.06	-	-	96.61	34.89	9.9	33.34	100	342	Peak
5850	53.78	-34.28	88.06	42.39	34.98	9.87	33.46	100	342	Peak

Test Mode :	Mode 20	Temperature :	24~25°C
Test Channel :	157	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5785 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.54	33.35	-6.65	40	45.4	19.28	0.54	31.87	105	168	Peak
181.2	31.77	-11.73	43.5	52.8	8.91	1.25	31.19	-	-	Peak
229.53	23.89	-22.11	46	42.43	11.19	1.48	31.21	-	-	Peak
314.7	18.38	-27.62	46	34.02	13.72	1.8	31.16	-	-	Peak
755	23.93	-22.07	46	29.93	21.42	3.07	30.49	-	-	Peak
865.6	24.9	-21.1	46	29.49	22.75	3.29	30.63	-	-	Peak
5725	56.25	-37.16	93.41	44.78	34.81	9.92	33.26	128	347	Peak
5785	103.01	-	-	91.56	34.89	9.9	33.34	128	347	Average
5785	113.41	-	-	101.96	34.89	9.9	33.34	128	347	Peak
5850	56.81	-36.6	93.41	45.42	34.98	9.87	33.46	128	347	Peak

Test Mode :	Mode 21	Temperature :	24~25°C
Test Channel :	165	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5825 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.81	21.09	-18.91	40	33.14	19.28	0.54	31.87	-	-	Peak
145.02	19.73	-23.77	43.5	38.65	11.29	1.21	31.42	-	-	Peak
180.66	30.92	-12.58	43.5	51.96	8.9	1.25	31.19	100	58	Peak
319.6	20.68	-25.32	46	36.14	13.85	1.81	31.12	-	-	Peak
609.4	22.09	-23.91	46	30.01	19.87	2.72	30.51	-	-	Peak
804	24.5	-21.5	46	29.4	22.14	3.15	30.19	-	-	Peak
5725	52.46	-34.82	87.28	40.99	34.81	9.92	33.26	100	342	Peak
5825	96.81	-	-	85.39	34.96	9.88	33.42	100	342	Average
5825	107.28	-	-	95.86	34.96	9.88	33.42	100	342	Peak
5850	69.78	-17.5	87.28	58.36	34.96	9.88	33.42	100	342	Peak

Test Mode :	Mode 21	Temperature :	24~25°C
Test Channel :	165	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5825 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.54	32.71	-7.29	40	44.76	19.28	0.54	31.87	105	185	Peak
137.19	30.43	-13.07	43.5	49.29	11.44	1.19	31.49	-	-	Peak
180.66	31.73	-11.77	43.5	52.77	8.9	1.25	31.19	-	-	Peak
442.1	18.61	-27.39	46	30.57	16.89	2.28	31.13	-	-	Peak
589.8	22.23	-23.77	46	30.63	19.62	2.66	30.68	-	-	Peak
703.9	22.74	-23.26	46	29.62	20.66	2.95	30.49	-	-	Peak
5725	53.61	-39.4	93.01	42.14	34.81	9.92	33.26	127	11	Peak
5825	103	-	-	91.58	34.96	9.88	33.42	127	11	Average
5825	113.01	-	-	101.59	34.96	9.88	33.42	127	11	Peak
5850	75.62	-17.39	93.01	64.23	34.98	9.87	33.46	127	11	Peak

Test Mode :	Mode 22	Temperature :	24~25°C
Test Channel :	149	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	20.73	-19.27	40	32.07	20	0.53	31.87	-	-	Peak
181.2	30.87	-12.63	43.5	51.9	8.91	1.25	31.19	100	58	Peak
248.16	21.95	-24.05	46	39.12	12.47	1.53	31.17	-	-	Peak
318.9	20	-26	46	35.5	13.82	1.81	31.13	-	-	Peak
476.4	20.24	-25.76	46	31.26	17.6	2.37	30.99	-	-	Peak
720.7	22.65	-23.35	46	29.26	20.91	2.99	30.51	-	-	Peak
5725	83.27	-4.45	87.72	71.8	34.81	9.92	33.26	101	343	Peak
5745	97.56	-	-	86.11	34.84	9.91	33.3	101	343	Average
5745	107.72	-	-	96.27	34.84	9.91	33.3	101	343	Peak
5850	52.17	-35.55	87.72	40.78	34.98	9.87	33.46	101	343	Peak

Test Mode :	Mode 22	Temperature :	24~25°C
Test Channel :	149	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	33.37	-6.63	40	44.71	20	0.53	31.87	106	167	Peak
137.46	30.75	-12.75	43.5	49.61	11.44	1.19	31.49	-	-	Peak
181.2	31.57	-11.93	43.5	52.6	8.91	1.25	31.19	-	-	Peak
436.5	18.24	-27.76	46	30.35	16.77	2.27	31.15	-	-	Peak
680.8	22.41	-23.59	46	29.51	20.44	2.9	30.44	-	-	Peak
864.2	25.21	-20.79	46	29.8	22.74	3.29	30.62	-	-	Peak
5725	91.99	-2.15	94.14	80.52	34.81	9.92	33.26	129	5	Peak
5745	103.61	-	-	92.16	34.84	9.91	33.3	129	5	Average
5745	114.14	-	-	102.69	34.84	9.91	33.3	129	5	Peak
5850	53.03	-41.11	94.14	41.64	34.98	9.87	33.46	129	5	Peak

Test Mode :	Mode 23	Temperature :	24~25°C
Test Channel :	157	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5785 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.54	21.51	-18.49	40	33.56	19.28	0.54	31.87	-	-	Peak
180.66	30.91	-12.59	43.5	51.95	8.9	1.25	31.19	100	52	Peak
247.35	22.22	-23.78	46	39.46	12.4	1.53	31.17	-	-	Peak
320.3	20.02	-25.98	46	35.48	13.85	1.81	31.12	-	-	Peak
594.7	21.71	-24.29	46	29.95	19.7	2.67	30.61	-	-	Peak
897.8	28.12	-17.88	46	32.52	23.08	3.34	30.82	-	-	Peak
5725	55.5	-33.07	88.57	44.03	34.81	9.92	33.26	112	341	Peak
5785	98.37	-	-	86.92	34.89	9.9	33.34	112	341	Average
5785	108.57	-	-	97.12	34.89	9.9	33.34	112	341	Peak
5850	53.49	-35.08	88.57	42.1	34.98	9.87	33.46	112	341	Peak

Test Mode :	Mode 23	Temperature :	24~25°C
Test Channel :	157	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5785 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	33.24	-6.76	40	44.58	20	0.53	31.87	100	87	Peak
132.33	30.68	-12.82	43.5	49.51	11.56	1.16	31.55	-	-	Peak
181.2	31.82	-11.68	43.5	52.85	8.91	1.25	31.19	-	-	Peak
479.9	19.14	-26.86	46	30.03	17.68	2.38	30.95	-	-	Peak
666.8	22.39	-23.61	46	29.59	20.33	2.87	30.4	-	-	Peak
885.2	25.61	-20.39	46	30.08	22.95	3.32	30.74	-	-	Peak
5725	60.51	-33.1	93.61	49.04	34.81	9.92	33.26	128	347	Peak
5785	103.08	-	-	91.63	34.89	9.9	33.34	128	347	Average
5785	113.61	-	-	102.16	34.89	9.9	33.34	128	347	Peak
5850	57.65	-35.96	93.61	46.26	34.98	9.87	33.46	128	347	Peak

Test Mode :	Mode 24	Temperature :	24~25°C
Test Channel :	165	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Horizontal
Remark :	1. 5825 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.54	21.31	-18.69	40	33.36	19.28	0.54	31.87	-	-	Peak
143.94	19.06	-24.44	43.5	37.96	11.33	1.2	31.43	-	-	Peak
181.2	31	-12.5	43.5	52.03	8.91	1.25	31.19	115	187	Peak
607.3	21.96	-24.04	46	29.91	19.85	2.71	30.51	-	-	Peak
645.8	22.9	-23.1	46	30.27	20.17	2.83	30.37	-	-	Peak
748	23.8	-22.2	46	29.96	21.31	3.06	30.53	-	-	Peak
5725	54.2	-34.95	89.15	42.73	34.81	9.92	33.26	103	307	Peak
5825	98.75	-	-	87.33	34.96	9.88	33.42	103	307	Average
5825	109.15	-	-	97.73	34.96	9.88	33.42	103	307	Peak
5850	80.27	-8.88	89.15	68.88	34.98	9.87	33.46	103	307	Peak

Test Mode :	Mode 24	Temperature :	24~25°C
Test Channel :	165	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5825 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	33.52	-6.48	40	44.86	20	0.53	31.87	105	204	Peak
131.79	30.39	-13.11	43.5	49.22	11.56	1.16	31.55	-	-	Peak
181.74	31.57	-11.93	43.5	52.62	8.91	1.25	31.21	-	-	Peak
618.5	21.43	-24.57	46	29.2	19.95	2.75	30.47	-	-	Peak
686.4	22.37	-23.63	46	29.42	20.49	2.91	30.45	-	-	Peak
785.8	23.93	-22.07	46	29.19	21.88	3.12	30.26	-	-	Peak
5725	54.16	-39.22	93.38	42.69	34.81	9.92	33.26	139	1	Peak
5825	103.01	-	-	91.59	34.96	9.88	33.42	139	1	Average
5825	113.38	-	-	101.96	34.96	9.88	33.42	139	1	Peak
5850	83.48	-9.9	93.38	72.09	34.98	9.87	33.46	139	1	Peak

<Numeric Keypad with Camera>

Test Mode :	Mode 25	**Temperature :**	24~25°C
Test Channel :	149	**Relative Humidity :**	42~43%
Test Engineer :	Gavin Wu	**Polarization :**	Horizontal
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	21.52	-18.48	40	32.86	20	0.53	31.87	-	-	Peak
172.56	25.89	-17.61	43.5	46.61	9.29	1.24	31.25	-	-	Peak
181.2	30.95	-12.55	43.5	51.98	8.91	1.25	31.19	106	145	Peak
652.8	22.12	-23.88	46	29.41	20.22	2.85	30.36	-	-	Peak
709.5	23.48	-22.52	46	30.27	20.75	2.96	30.5	-	-	Peak
782.3	24.14	-21.86	46	29.48	21.84	3.11	30.29	-	-	Peak
5725	84.87	-3.31	88.18	73.4	34.81	9.92	33.26	107	206	Peak
5745	97.59	-	-	86.14	34.84	9.91	33.3	107	206	Average
5745	108.18	-	-	96.73	34.84	9.91	33.3	107	206	Peak
5850	52.33	-35.85	88.18	40.94	34.98	9.87	33.46	107	206	Peak

Test Mode :	Mode 25	Temperature :	24~25°C
Test Channel :	151	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	33.9	-6.1	40	45.24	20	0.53	31.87	103	211	Peak
132.33	30.53	-12.97	43.5	49.36	11.56	1.16	31.55	-	-	Peak
181.2	31.67	-11.83	43.5	52.7	8.91	1.25	31.19	-	-	Peak
647.9	22.08	-23.92	46	29.43	20.18	2.83	30.36	-	-	Peak
746.6	22.84	-23.16	46	29.02	21.3	3.05	30.53	-	-	Peak
793.5	24.61	-21.39	46	29.69	22	3.13	30.21	-	-	Peak
5725	90.34	-2.02	92.36	78.87	34.81	9.92	33.26	115	3	Peak
5745	101.47	-	-	90.02	34.84	9.91	33.3	115	3	Average
5745	112.36	-	-	100.91	34.84	9.91	33.3	115	3	Peak
5850	52.5	-39.86	92.36	41.11	34.98	9.87	33.46	115	3	Peak

<PIM Keypad with Camera>

Test Mode :	Mode 26	**Temperature :**	24~25°C
Test Channel :	149	**Relative Humidity :**	42~43%
Test Engineer :	Gavin Wu	**Polarization :**	Horizontal
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.54	20.26	-19.74	40	32.31	19.28	0.54	31.87	-	-	Peak
172.02	25.76	-17.74	43.5	46.41	9.38	1.23	31.26	-	-	Peak
181.2	30.88	-12.62	43.5	51.91	8.91	1.25	31.19	112	168	Peak
619.2	22.1	-23.9	46	29.87	19.95	2.75	30.47	-	-	Peak
711.6	22.64	-23.36	46	29.4	20.77	2.97	30.5	-	-	Peak
786.5	23.69	-22.31	46	28.93	21.9	3.12	30.26	-	-	Peak
5725	81.08	-5.57	86.65	69.61	34.81	9.92	33.26	100	314	Peak
5745	96.4	-	-	84.95	34.84	9.91	33.3	100	314	Average
5745	106.65	-	-	95.2	34.84	9.91	33.3	100	314	Peak
5850	51.87	-34.78	86.65	40.48	34.98	9.87	33.46	100	314	Peak

Test Mode :	Mode 26	Temperature :	24~25°C
Test Channel :	149	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30	33.79	-6.21	40	45.13	20	0.53	31.87	106	224	Peak
106.68	27.8	-15.7	43.5	48.06	10.43	1.03	31.72	-	-	Peak
180.66	31.47	-12.03	43.5	52.51	8.9	1.25	31.19	-	-	Peak
698.3	22.45	-23.55	46	29.41	20.58	2.94	30.48	-	-	Peak
769	23.14	-22.86	46	28.81	21.63	3.09	30.39	-	-	Peak
801.9	24.28	-21.72	46	29.19	22.12	3.15	30.18	-	-	Peak
5725	85.52	-3.31	88.83	74.05	34.81	9.92	33.26	156	22	Peak
5745	97.75	-	-	86.3	34.84	9.91	33.3	156	22	Average
5745	108.83	-	-	97.38	34.84	9.91	33.3	156	22	Peak
5850	50.89	-37.94	88.83	39.5	34.98	9.87	33.46	156	22	Peak

<Qwerty Keypad without Camera>

Test Mode :	Mode 27	**Temperature :**	24~25°C
Test Channel :	149	**Relative Humidity :**	42~43%
Test Engineer :	Gavin Wu	**Polarization :**	Horizontal
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
31.62	20.6	-19.4	40	33.36	18.56	0.55	31.87	-	-	Peak
172.29	25.61	-17.89	43.5	46.34	9.29	1.24	31.26	-	-	Peak
181.2	31.01	-12.49	43.5	52.04	8.91	1.25	31.19	101	209	Peak
616.4	22.45	-23.55	46	30.26	19.93	2.74	30.48	-	-	Peak
701.8	23.01	-22.99	46	29.93	20.63	2.94	30.49	-	-	Peak
770.4	23.25	-22.75	46	28.89	21.65	3.09	30.38	-	-	Peak
5725	81.22	-5.74	86.96	69.75	34.81	9.92	33.26	103	323	Peak
5745	95.96	-	-	84.51	34.84	9.91	33.3	103	323	Average
5745	106.96	-	-	95.51	34.84	9.91	33.3	103	323	Peak
5850	51.24	-35.72	86.96	39.85	34.98	9.87	33.46	103	323	Peak

Test Mode :	Mode 27	Temperature :	24~25°C
Test Channel :	149	Relative Humidity :	42~43%
Test Engineer :	Gavin Wu	Polarization :	Vertical
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. 5725 MHz and 5850 MHz are not within the restricted bands.		

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.27	33.51	-6.49	40	44.85	20	0.53	31.87	108	225	Peak
131.25	30.27	-13.23	43.5	49.1	11.58	1.15	31.56	-	-	Peak
181.2	31.47	-12.03	43.5	52.5	8.91	1.25	31.19	-	-	Peak
628.3	22.07	-23.93	46	29.69	20.03	2.78	30.43	-	-	Peak
679.4	22.13	-23.87	46	29.23	20.43	2.9	30.43	-	-	Peak
752.9	23.84	-22.16	46	29.9	21.39	3.06	30.51	-	-	Peak
5725	86.06	-2.9	88.96	74.59	34.81	9.92	33.26	158	20	Peak
5745	98.62	-	-	87.17	34.84	9.91	33.3	158	20	Average
5745	108.96	-	-	97.51	34.84	9.91	33.3	158	20	Peak
5850	51.12	-37.84	88.96	39.73	34.98	9.87	33.46	158	20	Peak

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 KHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

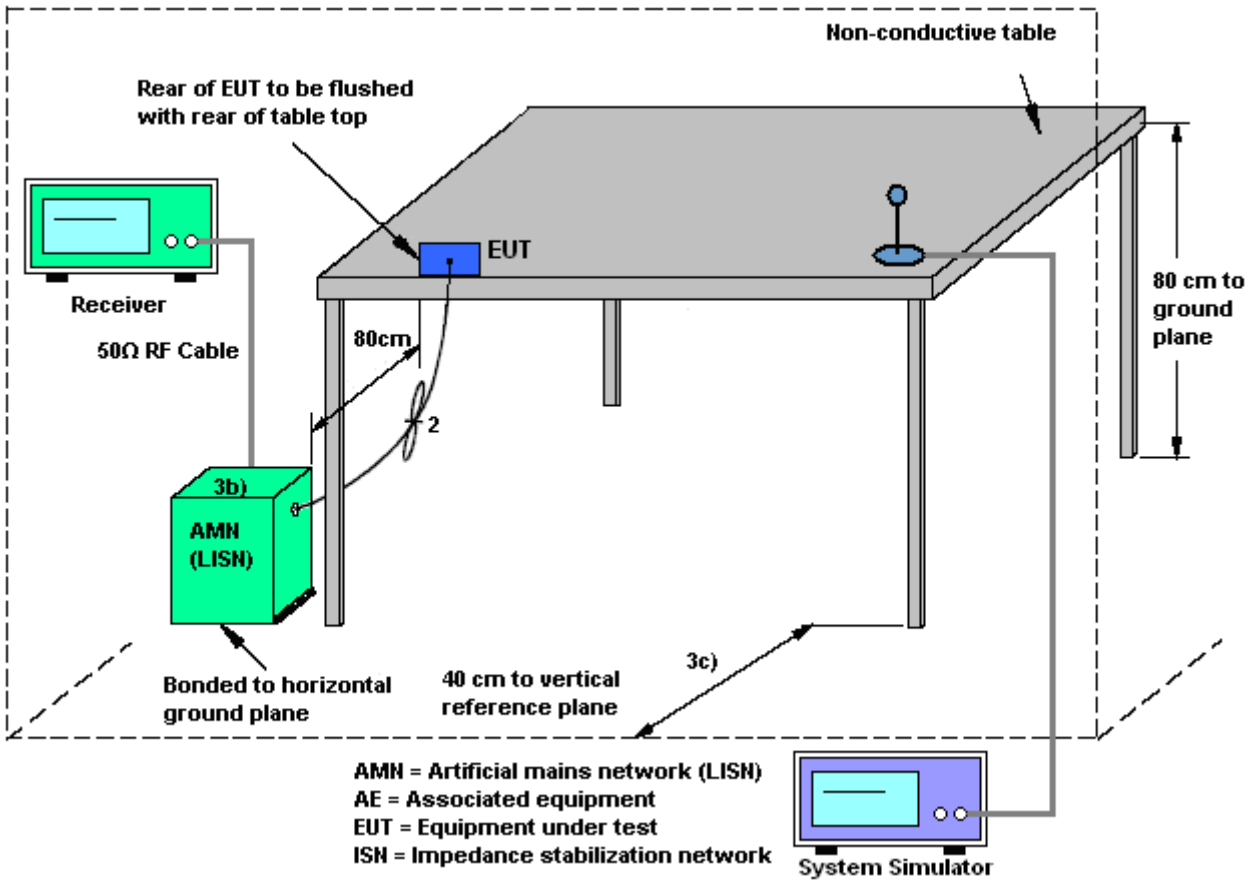
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

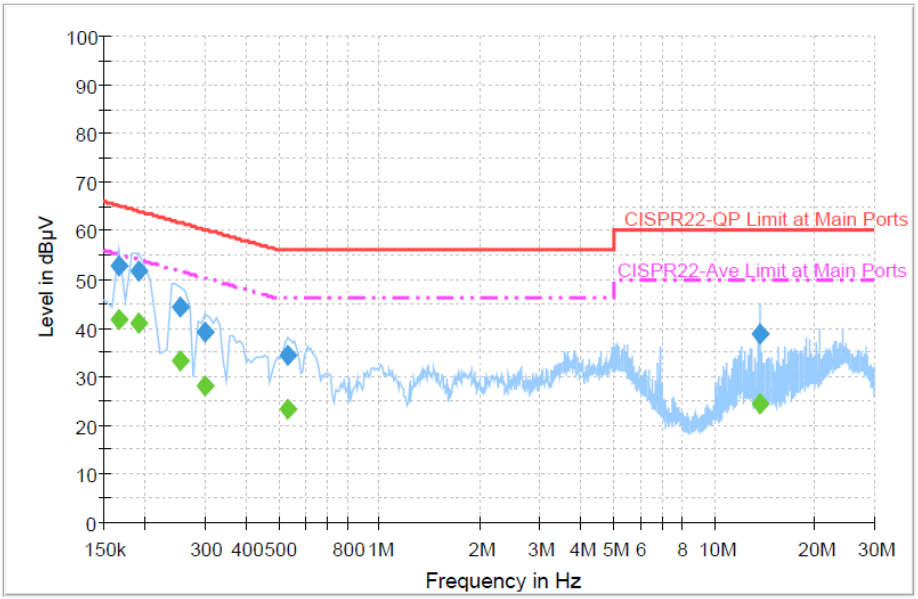
1. The testing follows the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connecting to the other LISN.
5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
7. Both sides of AC line were checked for maximum conducted interference.
8. The frequency range from 150 KHz to 30 MHz was searched.
9. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	21~23℃
Test Engineer :	Kai Chun Chu	Relative Humidity :	50~52%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + WLAN (2.4G) Link + Bluetooth Link + GPS Rx + Qwerty Keypad with Camera + USB Charging Cable with AC Power + USB Link		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



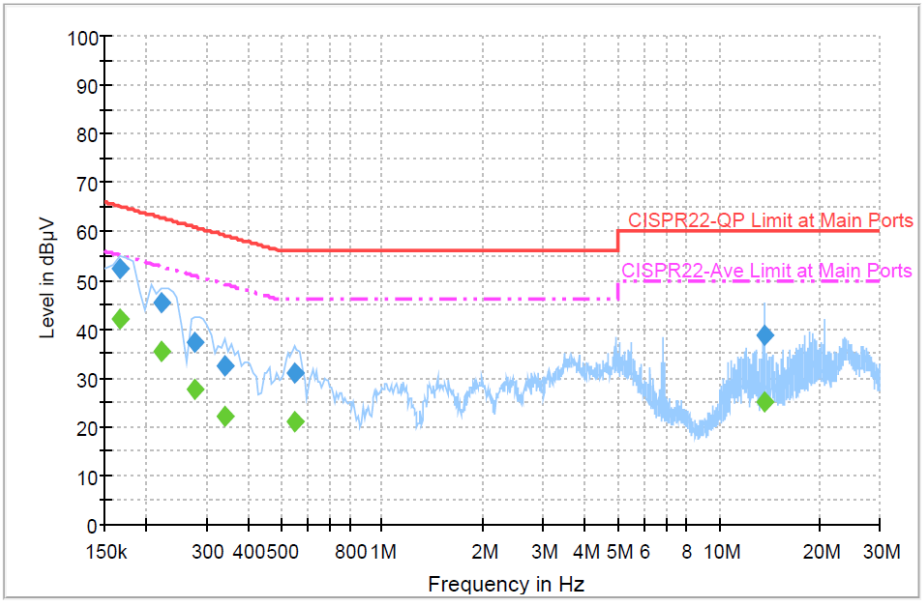
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	52.8	Off	L1	19.3	12.4	65.2
0.190000	51.7	Off	L1	19.4	12.3	64.0
0.254000	44.3	Off	L1	19.3	17.3	61.6
0.302000	39.0	Off	L1	19.3	21.2	60.2
0.534000	34.4	Off	L1	19.3	21.6	56.0
13.678000	38.6	Off	L1	19.7	21.4	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	41.7	Off	L1	19.3	13.5	55.2
0.190000	40.8	Off	L1	19.4	13.2	54.0
0.254000	33.2	Off	L1	19.3	18.4	51.6
0.302000	27.9	Off	L1	19.3	22.3	50.2
0.534000	23.3	Off	L1	19.3	22.7	46.0
13.678000	24.5	Off	L1	19.7	25.5	50.0

Test Mode :	Mode 1	Temperature :	21~23℃
Test Engineer :	Kai Chun Chu	Relative Humidity :	50~52%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + WLAN (2.4G) Link + Bluetooth Link + GPS Rx + Qwerty Keypad with Camera + USB Charging Cable with AC Power + USB Link		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



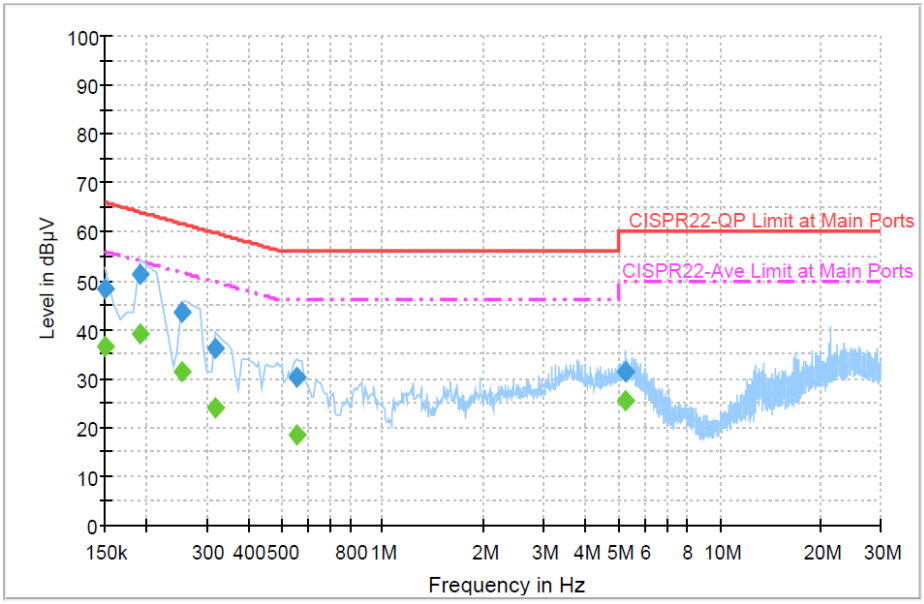
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	52.4	Off	N	19.3	12.8	65.2
0.222000	45.4	Off	N	19.3	17.3	62.7
0.278000	37.4	Off	N	19.3	23.5	60.9
0.342000	32.4	Off	N	19.3	26.8	59.2
0.550000	31.1	Off	N	19.3	24.9	56.0
13.678000	38.9	Off	N	19.7	21.1	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	42.2	Off	N	19.3	13.0	55.2
0.222000	35.3	Off	N	19.3	17.4	52.7
0.278000	27.5	Off	N	19.3	23.4	50.9
0.342000	22.3	Off	N	19.3	26.9	49.2
0.550000	21.0	Off	N	19.3	25.0	46.0
13.678000	25.0	Off	N	19.7	25.0	50.0

Test Mode :	Mode 2	Temperature :	21~23℃
Test Engineer :	Kai Chun Chu	Relative Humidity :	50~52%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WCDMA Band V Idle + WLAN (2.4G) Link + Bluetooth Link + Camera + Numeric Keypad without Camera + USB Charging Cable with AC Power + USB Link		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



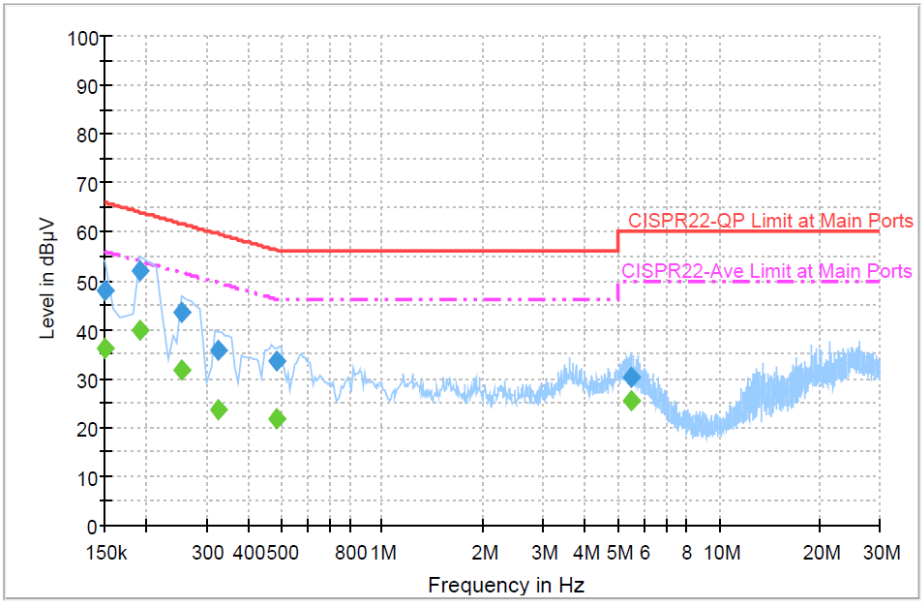
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	48.3	Off	L1	19.4	17.7	66.0
0.190000	51.4	Off	L1	19.4	12.6	64.0
0.254000	43.5	Off	L1	19.3	18.1	61.6
0.318000	36.2	Off	L1	19.3	23.6	59.8
0.558000	30.2	Off	L1	19.3	25.8	56.0
5.270000	31.2	Off	L1	19.4	28.8	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	36.5	Off	L1	19.4	19.5	56.0
0.190000	39.2	Off	L1	19.4	14.8	54.0
0.254000	31.4	Off	L1	19.3	20.2	51.6
0.318000	24.0	Off	L1	19.3	25.8	49.8
0.558000	18.3	Off	L1	19.3	27.7	46.0
5.270000	25.4	Off	L1	19.4	24.6	50.0

Test Mode :	Mode 2	**Temperature :**	21~23℃
Test Engineer :	Kai Chun Chu	**Relative Humidity :**	50~52%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Function Type :	WCDMA Band V Idle + WLAN (2.4G) Link + Bluetooth Link + Camera + Numeric Keypad without Camera + USB Charging Cable with AC Power + USB Link		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



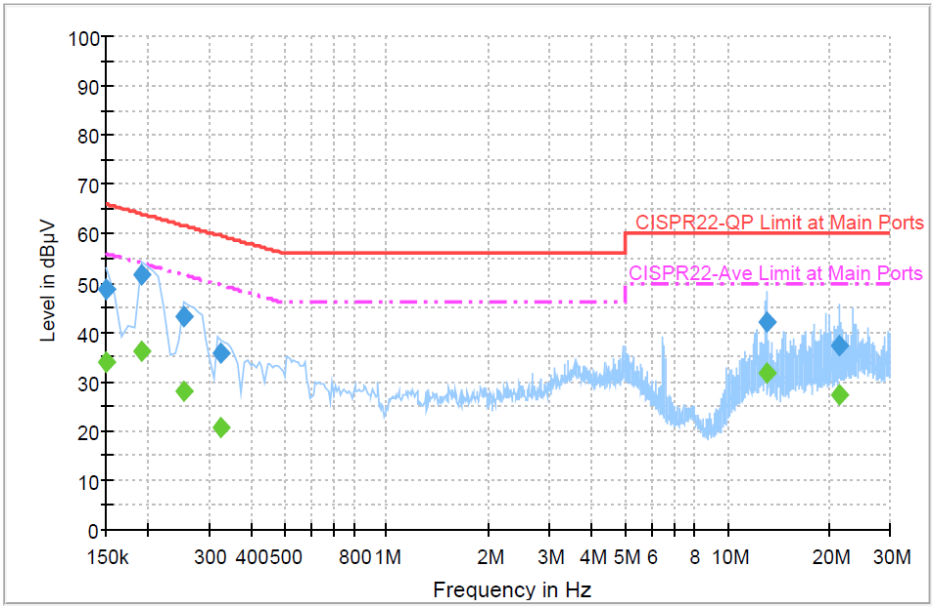
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	48.1	Off	N	19.4	17.9	66.0
0.190000	52.0	Off	N	19.4	12.0	64.0
0.254000	43.7	Off	N	19.4	17.9	61.6
0.326000	35.7	Off	N	19.3	23.9	59.6
0.486000	33.6	Off	N	19.4	22.6	56.2
5.462000	30.3	Off	N	19.5	29.7	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	36.3	Off	N	19.4	19.7	56.0
0.190000	39.9	Off	N	19.4	14.1	54.0
0.254000	31.6	Off	N	19.4	20.0	51.6
0.326000	23.5	Off	N	19.3	26.1	49.6
0.486000	21.8	Off	N	19.4	24.4	46.2
5.462000	25.4	Off	N	19.5	24.6	50.0

Test Mode :	Mode 3	**Temperature :**	21~23℃
Test Engineer :	Kai Chun Chu	**Relative Humidity :**	50~52%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	WCDMA Band II Idle + WLAN (2.4G) Link + Bluetooth Link + Scanner + PIM Keypad without Camera + USB Charging Cable with AC Power + USB Link		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



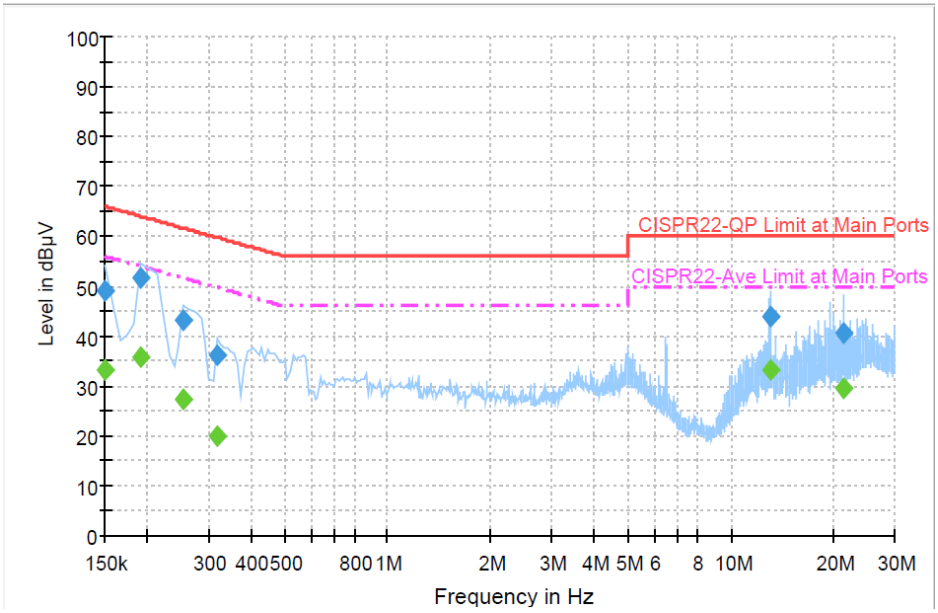
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	48.6	Off	L1	19.4	17.4	66.0
0.190000	51.5	Off	L1	19.4	12.5	64.0
0.254000	43.1	Off	L1	19.3	18.5	61.6
0.326000	35.8	Off	L1	19.3	23.8	59.6
13.006000	42.0	Off	L1	19.7	18.0	60.0
21.222000	37.3	Off	L1	19.8	22.7	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	33.8	Off	L1	19.4	22.2	56.0
0.190000	36.3	Off	L1	19.4	17.7	54.0
0.254000	28.0	Off	L1	19.3	23.6	51.6
0.326000	20.6	Off	L1	19.3	29.0	49.6
13.006000	31.9	Off	L1	19.7	18.1	50.0
21.222000	27.4	Off	L1	19.8	22.6	50.0

Test Mode :	Mode 3	**Temperature :**	21~23℃
Test Engineer :	Kai Chun Chu	**Relative Humidity :**	50~52%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Function Type :	WCDMA Band II Idle + WLAN (2.4G) Link + Bluetooth Link + Scanner + PIM Keypad without Camera + USB Charging Cable with AC Power + USB Link		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



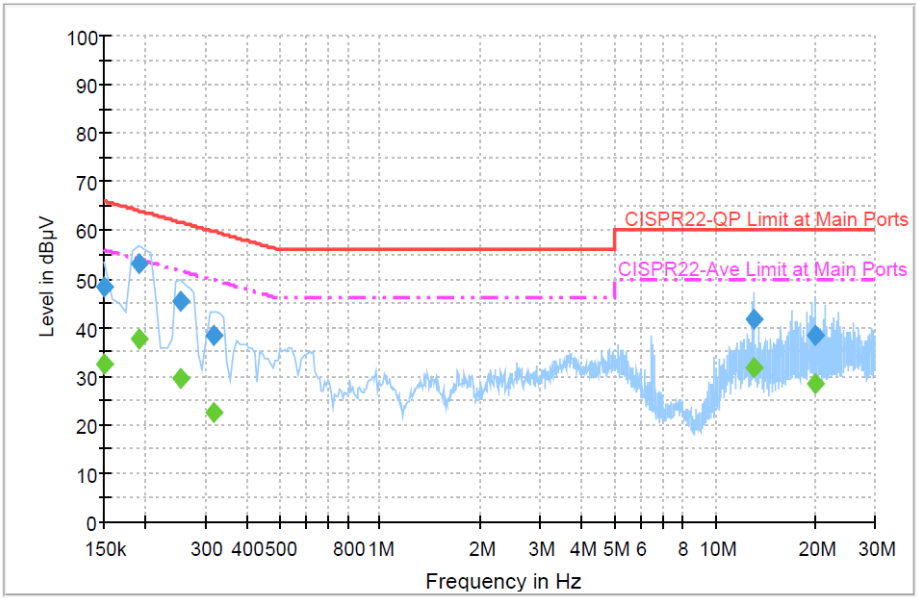
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	49.0	Off	N	19.4	17.0	66.0
0.190000	51.6	Off	N	19.4	12.4	64.0
0.254000	43.2	Off	N	19.4	18.4	61.6
0.318000	36.0	Off	N	19.3	23.8	59.8
13.006000	44.0	Off	N	19.7	16.0	60.0
21.222000	40.6	Off	N	19.9	19.4	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	33.1	Off	N	19.4	22.9	56.0
0.190000	35.7	Off	N	19.4	18.3	54.0
0.254000	27.4	Off	N	19.4	24.2	51.6
0.318000	20.1	Off	N	19.3	29.7	49.8
13.006000	33.2	Off	N	19.7	16.8	50.0
21.222000	29.6	Off	N	19.9	20.4	50.0

Test Mode :	Mode 4	**Temperature :**	21~23℃
Test Engineer :	Kai Chun Chu	**Relative Humidity :**	50~52%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Function Type :	WCDMA Band V Idle + WLAN (5G) Link + Bluetooth Link + Camera + Numeric Keypad without Camera + USB Charging Cable with AC Power + USB Link		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



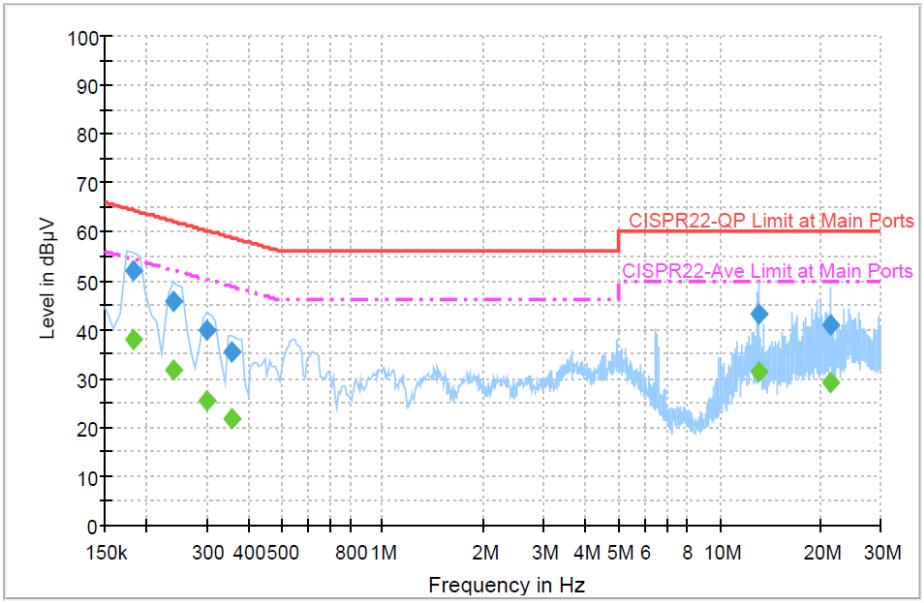
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	48.4	Off	L1	19.4	17.6	66.0
0.190000	53.3	Off	L1	19.4	10.7	64.0
0.254000	45.4	Off	L1	19.3	16.2	61.6
0.318000	38.4	Off	L1	19.3	21.4	59.8
13.006000	41.7	Off	L1	19.7	18.3	60.0
19.870000	38.2	Off	L1	19.8	21.8	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	32.3	Off	L1	19.4	23.7	56.0
0.190000	37.5	Off	L1	19.4	16.5	54.0
0.254000	29.6	Off	L1	19.3	22.0	51.6
0.318000	22.4	Off	L1	19.3	27.4	49.8
13.006000	31.6	Off	L1	19.7	18.4	50.0
19.870000	28.3	Off	L1	19.8	21.7	50.0

Test Mode :	Mode 4	Temperature :	21~23℃
Test Engineer :	Kai Chun Chu	Relative Humidity :	50~52%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WCDMA Band V Idle + WLAN (5G) Link + Bluetooth Link + Camera + Numeric Keypad without Camera + USB Charging Cable with AC Power + USB Link		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.182000	52.2	Off	N	19.4	12.2	64.4
0.238000	45.8	Off	N	19.4	16.4	62.2
0.302000	39.7	Off	N	19.3	20.5	60.2
0.358000	35.4	Off	N	19.3	23.4	58.8
13.006000	43.1	Off	N	19.7	16.9	60.0
21.222000	41.1	Off	N	19.9	18.9	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.182000	38.0	Off	N	19.4	16.4	54.4
0.238000	31.6	Off	N	19.4	20.6	52.2
0.302000	25.5	Off	N	19.3	24.7	50.2
0.358000	21.6	Off	N	19.3	27.2	48.8
13.006000	31.3	Off	N	19.7	18.7	50.0
21.222000	29.2	Off	N	19.9	20.8	50.0

3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

3.7.2 Antenna Connected Construction

Non-standard connector used.

3.7.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Agilent	E4446A	MY50180136	3Hz~44GHz	Apr. 03, 2011	Mar. 03, 2012~ Apr. 02, 2012	Apr. 02, 2012	Conducted (TH02-HY)
Spectrum Analyzer	Agilent	E4446A	MY50180136	3Hz~44GHz	Apr. 17, 2012	Apr. 17, 2012~ Jun. 28, 2012	Apr. 16, 2013	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	0932001	N/A	Sep. 18, 2011	Mar. 03, 2012~ Jun. 28, 2012	Sep. 17, 2012	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	0846202	N/A	Sep. 18, 2011	Mar. 03, 2012~ Jun. 28, 2012	Sep. 17, 2012	Conducted (TH02-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2726	30MHz ~ 1GHz	Oct. 22, 2011	Jun. 23, 2012 ~ Jun. 28, 2012	Oct. 21, 2012	Radiation (03CH07-HY)
Spectrum Analyzer	R&S	FSP30	101067	9KHz ~ 30GHz	Dec. 06, 2011	Jun. 23, 2012 ~ Jun. 28, 2012	Dec. 05, 2012	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 10, 2011	Jun. 23, 2012 ~ Jun. 28, 2012	Aug. 09, 2012	Radiation (03CH07-HY)
Pre Amplifier	Agilent	8449B	3008A02362	1GHz ~ 26.5GHz	Dec. 05, 2011	Jun. 23, 2012 ~ Jun. 28, 2012	Dec. 04, 2012	Radiation (03CH07-HY)
Pre Amplifier	COM-POWER	PA-103A	161241	10-1000MHz.32 dB.GAIN	Feb. 27, 2012	Jun. 23, 2012 ~ Jun. 28, 2012	Feb. 26, 2013	Radiation (03CH07-HY)
EMI TEST RECEIVER	R&S	ESCI 7	100724	9kHz ~ 7GHz	Aug. 22, 2011	Jun. 23, 2012 ~ Jun. 28, 2012	Aug. 21, 2012	Radiation (03CH07-HY)
Pre Amplifier	MITEQ	AMF-7D-00101800-30-10P	159088	1GHz ~ 18GHz	Mar. 10, 2012	Jun. 23, 2012 ~ Jun. 28, 2012	Mar. 09, 2013	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz ~ 40GHz	Oct. 21, 2011	Jun. 23, 2012 ~ Jun. 28, 2012	Oct. 20, 2012	Radiation (03CH07-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz~30 MHz	Jul. 29, 2010	Jun. 23, 2012 ~ Jun. 28, 2012	Jul. 28, 2012	Radiation (03CH07-HY)
EMI Test Receive	R&S	ESCS 30	100356	9KHz ~ 2.75GHz	Oct. 27, 2011	Mar. 09, 2012~ Mar. 17, 2012	Oct. 26, 2012	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9KHz ~ 30MHz	Dec. 09, 2011	Mar. 09, 2012~ Mar. 17, 2012	Dec. 08, 2012	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9KHz ~ 30MHz	Dec. 06, 2011	Mar. 09, 2012~ Mar. 17, 2012	Dec. 05, 2012	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	Mar. 09, 2012~ Mar. 17, 2012	N/A	Conduction (CO05-HY)
System Simulator	R&S	CMU200	117997	N/A	Aug. 22, 2011	Mar. 09, 2012~ Mar. 17, 2012	Aug. 21, 2012	Conduction (CO05-HY)
GPS Station	T&E	GS-50	N/A	N/A	N/A	Mar. 09, 2012~ Mar. 17, 2012	N/A	Conduction (CO05-HY)

5 Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150KHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.26**

Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.54**

Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.72**

Appendix A. Photographs of EUT

Please refer to Sporton report number EP221518-01 as below.