Test Report

Product Name	ROS Home Center
Model No	005-02004
FCC ID.	BJM-ROS2000A

Applicant	TATUNG CO.
Address	22, Chungshan N. Rd., 3rd Sec. Taipei, Taiwan, 104, R.O.C.

Date of Receipt	Apr. 01, 2010
Issue Date	May, 10, 2010
Report No.	104111R-RFUSP28V01
Report Version	V1.0

Test Report Certification

Issue Date: May, 10, 2010
Report No.: 104111R-RFUSP28V01

Accredited by NIST (NVLAP)
NVLAP Lab Code: 200533-0

Product Name	ROS Home Center
Applicant	TATUNG CO.
Address	22, Chungshan N. Rd., 3rd Sec. Taipei, Taiwan, 104, R.O.C.
Manufacturer	TATUNG CO.
Model No.	005-02004
EUT Rated Voltage	AC 100-240V, 50-60Hz
EUT Test Voltage	AC 120V/60Hz
Trade Name	Prodea Systems
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2009 ANSI C63.4: 2003
Test Result	Complied

NVLAP Lab Code: 200533-0

The test results relate only to the samples tested.
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This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

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(Adm. Specialist / Joanne Lin)

Tested By : Joe Guo
(Engineer / Joe Guo)

Approved By :
(Manager / Vincent Lin)

Testing Laboratory
0914

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	ROS Home Center
Trade Name	Prodea Systems
Model No.	005-02004
FCC ID.	BJM-ROS2000A
Frequency Range	2412-2462MHz, 5745-5825MHz
Number of Channels	802.11b/g/n-20MHz: 11, n-40MHz: 7 802.11a/n-20MHz: 5, n-40MHz: 2
Data Speed	802.11b: 1-11Mbps, 802.11a/g: 6-54Mbps, 802.11n: 6.5-300Mbps
Channel separation	802.11b/g/n-20MHz: 5 MHz, 802.11a/n-20MHz: 20MHz 802.11n-40MHz: 40MHz
Type of Modulation	802.11b:DSSS DBPSK, DQPSK, CCK 802.11a/g/n: OFDM BPSK, QPSK, 16QAM, 64QAM
Antenna Type	PIFA
Antenna Gain	Refer to the table “Antenna List”
Channel Control	Auto
Power Adapter	MFR: HIPRO, M/N: HP-O2040D43 Input: AC 100-240V, 50-60Hz, 1.5A Output: DC 12V, 3.33A Cable Out: Non-Shielded, 1.6m, with one ferrite core bonded.

Antenna List

No.	Manufacturer	Part No.	Peak Gain
1	FAVORTRON	E773700186 (main) E773700186 (aux) E773700185 (mimo)	6.01dBi in 2.4 GHz
2	FAVORTRON	E773700180 (main) E773700180 (aux) E773700185 (mimo)	5.64dBi in 5.725-5.850GHz

Note: The antenna of EUT is conform to FCC 15.203

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

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 01:	2412 MHz	Channel 02:	2417 MHz	Channel 03:	2422 MHz	Channel 04:	2427 MHz
Channel 05:	2432 MHz	Channel 06:	2437 MHz	Channel 07:	2442 MHz	Channel 08:	2447 MHz
Channel 09:	2452 MHz	Channel 10:	2457 MHz	Channel 11:	2462 MHz		

802.11a/n-20MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 149:	5745 MHz	Channel 153:	5765 MHz	Channel 157:	5785 MHz	Channel 161:	5805 MHz
Channel 165:	5825 MHz						

802.11n-40MHz (2.4G Band) Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 1:	2422 MHz	Channel 2:	2427 MHz	Channel 3:	2432 MHz	Channel 4:	2437 MHz
Channel 5:	2442 MHz	Channel 6:	2447 MHz	Channel 7:	2452 MHz		

802.11n-40MHz (5G Band) Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency
Channel 151:	5755 MHz	Channel 159:	5795 MHz

Note:

1. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
2. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps、802.11g is 6Mbps、802.11n(20M-BW) is 13Mbps and 、802.11n(40M-BW) is 27Mbps)
3. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11a/b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices

1.2. Operational Description

The EUT is a ROS Home Center with a built-in 2.4GHz and 5GHz WLAN card. This device provided four kinds of transmitting speed 1, 2, 5.5 and 11Mbps and the device of RF carrier is DBPSK, DQPSK and CCK (IEEE 802.11b). The device provided of eight kinds of transmitting speed 6, 9, 12, 18, 24, 36, 48 and 54Mbps the device of RF carrier is BPSK, QPSK, 16QAM and 64QAM (IEEE 802.11a/g).

The device provided of eight kinds of transmitting speed 13,26,39,52,78,104,117 and 130Mbps in 802.11n(20BW) mode and 27,54,81,108,162,216,243 and 270Mbps(40BW) the device of RF carrier is BPSK, QPSK, 16QAM and 64QAM (IEEE 802.11n), the IEEE 802.11n is Multiple In, Multiple Out" (MIMO) technology.

The device adapts direct sequence spread spectrum modulation. The antenna provides diversity function to improve the receiving function and the antennas to support 2(Transmit) × 3(Receive) MIMO technology.

This ROS Home Center, compliant with IEEE 802.11b and IEEE 802.11a/g/n, is a high-efficiency Wireless LAN adapter. It allows your computer to connect to a wireless network and to share resources, such as files or printers without being bound to the network wires. Operation in 2.4GHz/5GHz Direst Sequence Spread Spectrum (DSSS) radio transmission, the ROS Home Center Wired Equivalent Protection (WEP) algorithm is used. In addition, its standard compliance ensures that it can communicate with any IEEE 802.11b and IEEE 802.11a/g/n network.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)
	Mode 2: Transmit (802.11g 6Mbps)
	Mode 3: Transmitter - 802.11a 6Mbps
	Mode 4: Transmitter - 802.11n-20BW_13Mbps(2.4G Band)
	Mode 5: Transmitter - 802.11n-40BW_27Mbps(2.4G Band)
	Mode 6: Transmitter - 802.11n-20BW_13Mbps(5G Band)
	Mode 7: Transmitter - 802.11n-40BW_27Mbps(5G Band)

NOTE: 1. 802. 11a/b/g are tested by Chain A.
2. 802.11n-20MHz / n-40MHz are tested by Chain A + Chain B.
3. In n-20 and n-40 mode the power combiner is used, the factor of combiner is 10dB and offset it in test instrument.

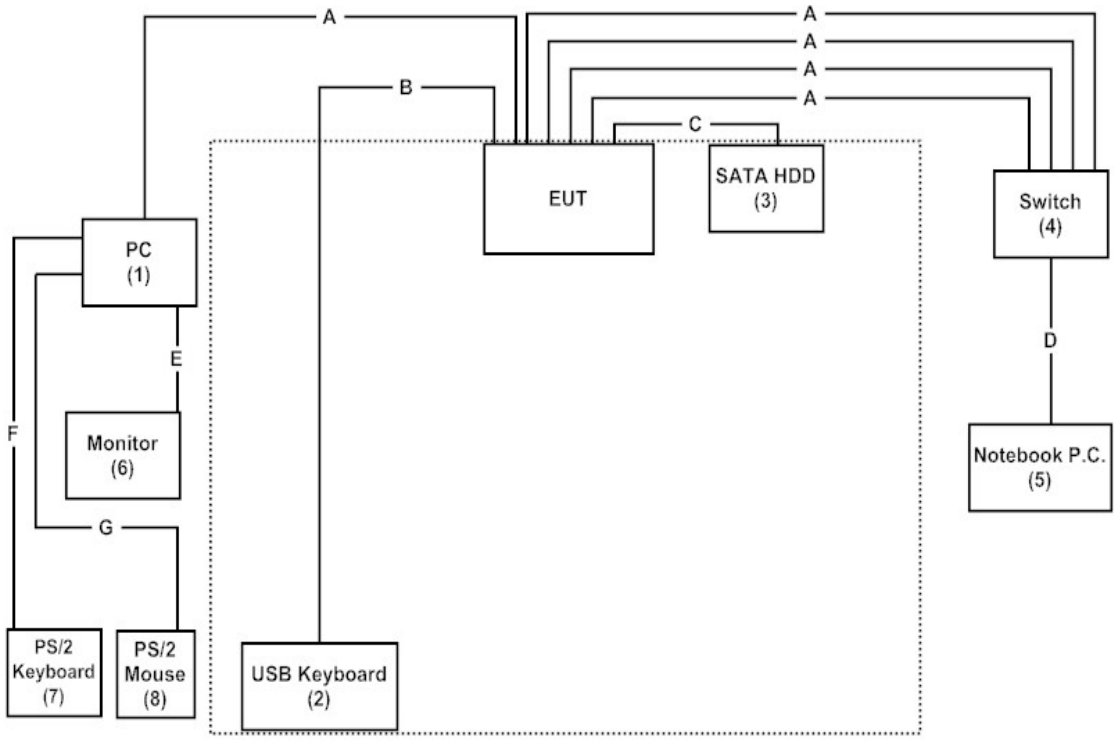
1.3. Tested System Details

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

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	PC	ASUS	CT5430	N/A	Non-Shielded, 1.8m
2	USB Keyboard (for Conduction test)	BTC	5200U	N/A	N/A
	USB Keyboard (for Spurious emission test)	DELL	SK-8115	MY-0DJ325-71619-7 A2-0327	N/A
3	SATA HDD	Onnto	ST-M10	A03521-H3-0004	Non-Shielded, 1.8m,With Core*1
4	Switch	D-Link	DGS-1008D	F37S279000038	N/A
5	Notebook P.C.	DELL	D630	00144-023-351-283	Non-Shielded, 0.8m
6	Monitor	LG	W2261VT	907YHPB07296	Non-Shielded, 1.8m
7	PS/2 Keyboard	Logitech	Y-SAL85	SY917UK	N/A
8	PS/2 Mouse	Logitech	M-SBM96B	810-000440	N/A

Signal Cable Type		Signal cable Description
A	LAN Cable	Non-shielded, 5m,five PCS.
B	USB Keyboard Cable	Shielded, 1.8m, with one ferrite core bonded.
C	E-SATA Cable	Shielded, 1m
D	LAN Cable	Non-Shielded, 3m
E	D-SUB Cable	Shielded, 1.8m, with two ferrite cores bonded.
F	PS/2 Keyboard Cable	Shielded, 1.8m
G	PS/2 Mouse Cable	Shielded, 1.8m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

(1) Setup the EUT as shown in Section 1.4.

(2) Execute Test Software (DUT GUI ver4.4) on the EUT.

(3) Configure the test mode, the test channel, and the data rate.

(4) Press “OK” to start the continuous transmission.

(5) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

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

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site : http://tw.quietek.com/tw/emc/accreditations/accreditations.htm
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/

Site Description: File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Registration Number: 92195

Accreditation on NVLAP
NVLAP Lab Code: 200533-0

Site Name: Quietek Corporation
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Lin-Kou Shiang, Taipei,
Taiwan, R.O.C.
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E-Mail : service@quietek.com

FCC Accreditation Number: TW1014

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2. Conducted Emission

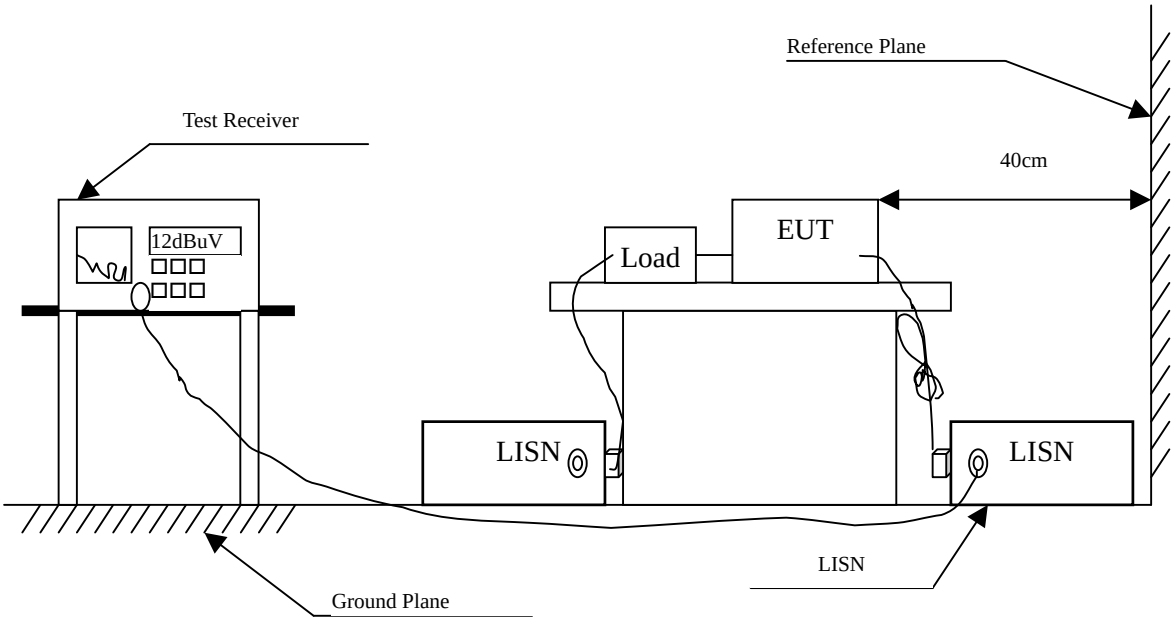
2.1. Test Equipment

The following test equipment are used during the conducted emission test:

Item	Instrument	Manufacturer	Type No./Serial No	Last Cal.	Remark
1	Test Receiver	R & S	ESCS 30/825442/17	May, 2010	
2	L.I.S.N.	R & S	ESH3-Z5/825016/6	May, 2010	EUT
3	L.I.S.N.	Kyoritsu	KNW-407/8-1420-3	May, 2010	Peripherals
4	Pulse Limiter	R & S	ESH3-Z2	May, 2010	
5	No.1 Shielded Room			N/A	

Note: All instruments are calibrated every one year.

2.2. Test Setup



2.3. Limits

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

2.4. Test Procedure

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

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.

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

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

Product : ROS Home Center
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 5: Transmitter - 802.11n-40BW_27Mbps(2.4G Band) (2437MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					
Quasi-Peak					
0.162	9.750	22.760	32.510	-33.147	65.657
0.205	9.703	41.520	51.223	-13.206	64.429
0.310	9.650	32.530	42.180	-19.249	61.429
0.412	9.646	26.000	35.646	-22.868	58.514
3.103	9.690	28.230	37.920	-18.080	56.000
24.603	10.120	27.180	37.300	-22.700	60.000
Average					
0.162	9.750	1.880	11.630	-44.027	55.657
0.205	9.703	31.560	41.263	-13.166	54.429
0.310	9.650	29.740	39.390	-12.039	51.429
0.412	9.646	24.380	34.026	-14.488	48.514
3.103	9.690	17.590	27.280	-18.720	46.000
24.603	10.120	26.800	36.920	-13.080	50.000

Note:

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

Product : ROS Home Center
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 5: Transmitter - 802.11n-40BW_27Mbps(2.4G Band) (2437MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
Line 2					
Quasi-Peak					
0.205	9.713	40.570	50.283	-14.146	64.429
0.310	9.660	32.470	42.130	-19.299	61.429
0.412	9.650	26.100	35.750	-22.764	58.514
0.724	9.652	26.790	36.442	-19.558	56.000
1.138	9.670	23.930	33.600	-22.400	56.000
24.291	10.080	27.530	37.610	-22.390	60.000
Average					
0.205	9.713	34.250	43.963	-10.466	54.429
0.310	9.660	31.810	41.470	-9.959	51.429
0.412	9.650	23.490	33.140	-15.374	48.514
0.724	9.652	26.780	36.432	-9.568	46.000
1.138	9.670	23.920	33.590	-12.410	46.000
24.291	10.080	26.470	36.550	-13.450	50.000

Note:

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

Product : ROS Home Center
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 7: Transmitter - 802.11n-40BW_27Mbps(5G Band) (5755MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					
Quasi-Peak					
0.205	9.703	40.930	50.633	-13.796	64.429
0.310	9.650	31.950	41.600	-19.829	61.429
0.517	9.640	26.670	36.310	-19.690	56.000
0.724	9.632	25.780	35.412	-20.588	56.000
3.412	9.690	34.260	43.950	-12.050	56.000
22.845	9.950	27.450	37.400	-22.600	60.000
Average					
0.205	9.703	34.340	44.043	-10.386	54.429
0.310	9.650	28.440	38.090	-13.339	51.429
0.517	9.640	26.660	36.300	-9.700	46.000
0.724	9.632	25.770	35.402	-10.598	46.000
3.412	9.690	28.610	38.300	-7.700	46.000
22.845	9.950	25.520	35.470	-14.530	50.000

Note:

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

Product : ROS Home Center
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 7: Transmitter - 802.11n-40BW_27Mbps(5G Band) (5755MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV	dB	dBuV
Line 2					
Quasi-Peak					
0.205	9.713	40.150	49.863	-14.566	64.429
0.310	9.660	31.900	41.560	-19.869	61.429
0.724	9.652	26.970	36.622	-19.378	56.000
1.654	9.680	26.780	36.460	-19.540	56.000
3.103	9.690	28.390	38.080	-17.920	56.000
23.259	9.990	27.390	37.380	-22.620	60.000
Average					
0.205	9.713	31.950	41.663	-12.766	54.429
0.310	9.660	31.090	40.750	-10.679	51.429
0.724	9.652	26.200	35.852	-10.148	46.000
1.654	9.680	26.770	36.450	-9.550	46.000
3.103	9.690	23.870	33.560	-12.440	46.000
23.259	9.990	25.310	35.300	-14.700	50.000

Note:

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

3. Peak Power Output

3.1. Test Equipment

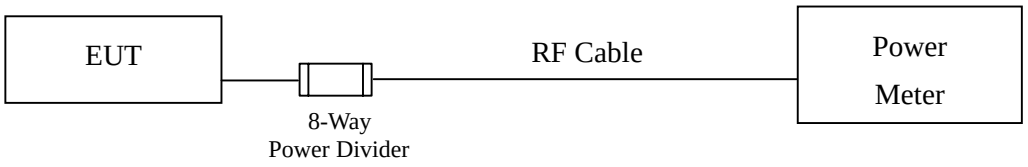
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2010
X	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2009
X	8-WAY Power Divider	JFW	50PD-647 / 526770 0916	Apr., 2010

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.
3. The power combiner is used for measure 11n mode.

3.2. Test Setup

Conducted Measurement



3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Test Procedure

The EUT was tested according to DTS test procedure of Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Peak Power Output

Product : ROS Home Center
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Cable loss=0.5dB		Peak Power Output (dBm)					
Channel No.	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Peak Power	Required Limit
		1	2	5.5	11	1	
1	2412.00	15.93	--	--	--	19.03	1Watt= 30 dBm
6	2437.00	16.03	15.93	15.74	15.6	18.95	1Watt= 30 dBm
11	2462.00	15.65	--	--	--	18.61	1Watt= 30 dBm

Note: 1. Peak Power Output Value =Reading value on peak power meter + cable loss

Product : ROS Home Center
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps)

Cable loss=0.5dB		Peak Power Output (dBm)									
Channel No.	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit
		6	9	12	18	24	36	48	54	6	
1	2412.00	16.45	--	--	--	--	--	--	--	24.78	1Watt= 30 dBm
6	2437.00	15.75	15.65	15.5	15.35	15.25	15.2	15.1	15	24.53	1Watt= 30 dBm
11	2462.00	16.48	--	--	--	--	--	--	--	24.82	1Watt= 30 dBm

Note: 1. Peak Power Output Value =Reading value on peak power meter + cable loss

Product : ROS Home Center
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter - 802.11a 6Mbps

Cable loss=1dB		Peak Power Output (dBm)									
Channel No.	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit
		6	9	12	18	24	36	48	54	6	
149	5745.00	15.62	--	--	--	--	--	--	--	23.81	1Watt= 30 dBm
157	5785.00	15.92	15.9	15.88	15.85	15.83	15.81	15.8	15.78	23.86	1Watt= 30 dBm
165	5825.00	15.75	--	--	--	--	--	--	--	23.87	1Watt= 30 dBm

Note: 1. Peak Power Output Value =Reading value on peak power meter + cable loss

Product : ROS Home Center
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmitter - 802.11n-20BW_13Mbps(2.4G Band)

Cable loss=0.5dB		Peak Power Output (dBm)									
Channel No.	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit
		13	26	39	52	78	104	117	130	13	
1	2412.00	16.46	--	--	--	--	--	--	--	26.3	1Watt= 30 dBm
6	2437.00	16.5	16.3	16.1	15.92	15.8	15.65	15.5	15.3	26.31	1Watt= 30 dBm
11	2462.00	16.45	--	--	--	--	--	--	--	26.36	1Watt= 30 dBm

Note: 1. Peak Power Output Value =Reading value on peak power meter + cable loss

Product : ROS Home Center
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmitter - 802.11n-40BW_27Mbps(2.4G Band)

Cable loss=0.5dB		Peak Power Output (dBm)									
Channel No.	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit
		27	54	81	108	162	216	243	270	27	
1	2422.00	16.05	--	--	--	--	--	--	--	26.2	1Watt= 30 dBm
4	2437.00	16.02	16	15.56	15.45	15.41	15.39	15.35	15.31	26.02	1Watt= 30 dBm
7	2452.00	16.05	--	--	--	--	--	--	--	26.05	1Watt= 30 dBm

Note: 1. Peak Power Output Value =Reading value on peak power meter + cable loss

Product : ROS Home Center
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmitter - 802.11n-20BW_13Mbps(5G Band)

Cable loss=1dB		Peak Power Output (dBm)									
Channel No.	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit (dBm)
		13	26	39	52	78	104	117	130	13	
149	5745	15.96	--	--	--	--	--	--	--	26.57	1Watt= 30
157	5785	15.75	15.72	15.69	15.65	15.63	15.59	15.58	15.51	26.17	1Watt= 30
165	5825	15.8	--	--	--	--	--	--	--	26.40	1Watt= 30

Note: 1. Peak Power Output Value =Reading value on peak power meter + cable loss

Product : ROS Home Center
Test Item : Peak Power Output Data
Test Site : No.3 OATS
Test Mode : Mode 7: Transmitter - 802.11n-40BW_27Mbps(5G Band)

Cable loss=1dB		Peak Power Output (dBm)									
Channel No.	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit (dBm)
		27	54	81	108	162	216	243	270	27	
151	5755	15.62	--	--	--	--	--	--	--	26.3	1Watt= 30
159	5795	15.82	15.8	15.78	15.75	15.72	15.7	15.68	15.66	26.25	1Watt= 30

Note: 1. Peak Power Output Value =Reading value on peak power meter + cable loss

4. Radiated Emission

4.1. Test Equipment

The following test equipment are used during the radiated emission test:

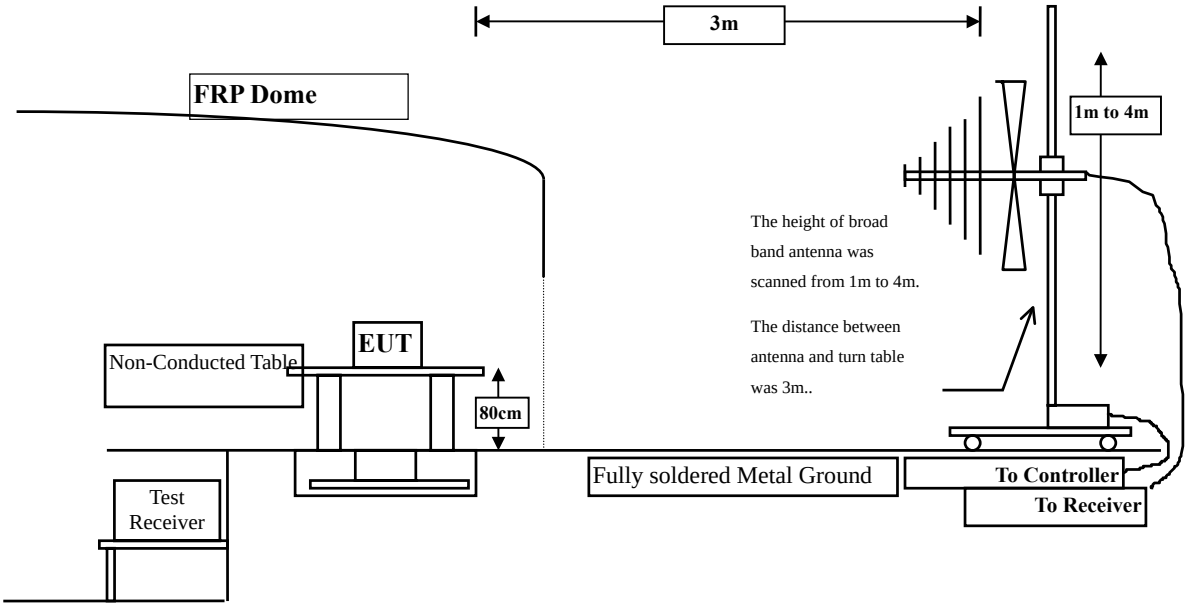
Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒Site # 3	X	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2009
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2009
	X	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2009
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2009
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2010
	X	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2009
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2010
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

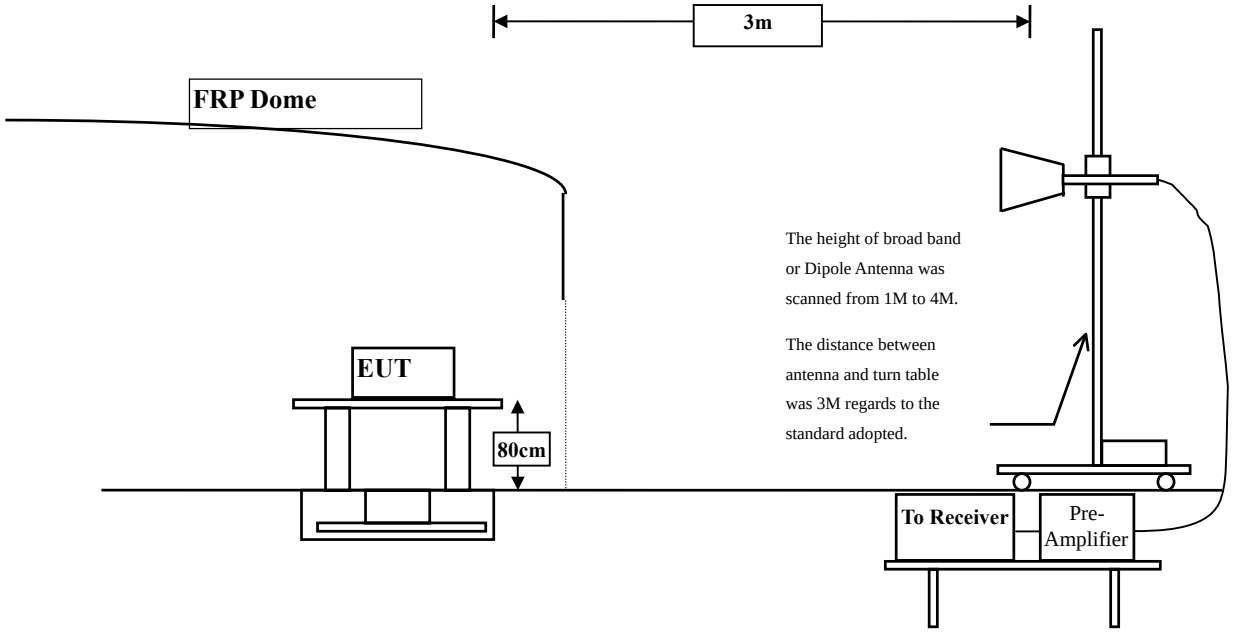
2. The test instruments marked with “X” are used to measure the final test results.

4.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



4.3. Limits

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

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	uV/m @3m	dBuV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks: E field strength (dBuV/m) = 20 log E field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003 and tested according to DTS test procedure of Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2003 on radiated measurement.

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

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

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

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

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The measurement frequency range form 30MHz - 10th Harmonic of fundamental was investigated.

4.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

4.6. Test Result of Radiated Emission

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	0.428	41.480	41.909	-32.091	74.000
7236.000	7.177	39.970	47.147	-26.853	74.000
9648.000	8.019	39.450	47.470	-26.530	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	0.836	42.060	42.897	-31.103	74.000
7236.000	7.676	39.850	47.526	-26.474	74.000
9648.000	8.556	39.830	48.387	-25.613	74.000
Average Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	0.076	42.880	42.957	-31.043	74.000
7311.000	7.512	39.430	46.942	-27.058	74.000
9748.000	7.630	39.340	46.970	-27.030	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	0.532	43.390	43.922	-30.078	74.000
7311.000	8.089	39.690	47.779	-26.221	74.000
9748.000	8.266	39.560	47.827	-26.173	74.000
Average Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	0.191	45.260	45.451	-28.549	74.000
7386.000	8.373	39.200	47.574	-26.426	74.000
9848.000	7.964	40.060	48.024	-25.976	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4924.000	0.805	44.340	45.145	-28.855	74.000
7386.000	9.180	39.320	48.500	-25.500	74.000
9848.000	8.801	39.840	48.641	-25.359	74.000
Average					
Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	0.428	42.710	43.139	-30.861	74.000
7236.000	7.177	42.500	49.677	-24.323	74.000
9648.000	8.019	40.860	48.880	-25.120	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	0.836	42.960	43.797	-30.203	74.000
7236.000	7.676	42.570	50.246	-23.754	74.000
9648.000	8.556	39.690	48.247	-25.753	74.000
Average Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	0.076	41.860	41.937	-32.063	74.000
7311.000	7.512	42.460	49.972	-24.028	74.000
9748.000	7.630	40.080	47.710	-26.290	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4874.000	0.532	42.370	42.902	-31.098	74.000
7311.000	8.089	42.070	50.159	-23.841	74.000
9748.000	8.266	39.810	48.077	-25.923	74.000
Average					
Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal Peak Detector:					
4924.000	0.191	44.700	44.891	-29.109	74.000
7386.000	8.373	39.500	47.874	-26.126	74.000
9848.000	7.964	40.770	48.734	-25.266	74.000
Average Detector:					
--					
Vertical Peak Detector:					
4924.000	0.805	42.030	42.835	-31.165	74.000
7386.000	9.180	39.280	48.460	-25.540	74.000
9848.000	8.801	39.730	48.531	-25.469	74.000
Average Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter - 802.11a 6Mbps (5745 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal Peak Detector:					
11490.000	13.004	39.200	52.204	-21.796	74.000
Average Detector:					
--					
Vertical Peak Detector:					
11490.000	14.520	38.420	52.940	-21.060	74.000
Average Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter - 802.11a 6Mbps (5785 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal Peak Detector:					
11570.000	13.207	39.610	52.817	-21.183	74.000
Average Detector:					
--					
Vertical Peak Detector:					
11570.000	14.573	39.410	53.982	-20.018	74.000
Average Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter - 802.11a 6Mbps (5825 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11650.000	11.504	37.260	48.764	-25.236	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11650.000	12.959	37.680	50.639	-23.361	74.000
Average Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmitter - 802.11n-20BW_13Mbps(2.4G Band) (2412MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	0.428	41.530	41.959	-32.041	74.000
7236.000	7.177	40.340	47.517	-26.483	74.000
9648.000	8.019	40.640	48.660	-25.340	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4824.000	0.836	42.040	42.877	-31.123	74.000
7236.000	7.676	40.540	48.216	-25.784	74.000
9648.000	8.556	39.370	47.927	-26.073	74.000
Average Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmitter - 802.11n-20BW_13Mbps(2.4G Band) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	0.076	41.910	41.987	-32.013	74.000
7311.000	7.512	40.020	47.532	-26.468	74.000
9748.000	7.630	39.690	47.320	-26.680	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4874.000	0.532	42.570	43.102	-30.898	74.000
7311.000	8.089	39.910	47.999	-26.001	74.000
9748.000	8.266	39.580	47.847	-26.153	74.000
Average Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmitter - 802.11n-20BW_13Mbps(2.4G Band) (2462 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4924.000	0.191	44.310	44.501	-29.499	74.000
7386.000	8.373	38.960	47.334	-26.666	74.000
9848.000	7.964	42.610	50.574	-23.426	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4924.000	0.805	41.950	42.755	-31.245	74.000
7386.000	9.180	40.000	49.180	-24.820	74.000
9848.000	8.801	39.780	48.581	-25.419	74.000
Average					
Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmitter - 802.11n-40BW_27Mbps(2.4G Band) (2422MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4844.000	0.280	42.640	42.921	-31.079	74.000
7266.000	7.106	40.400	47.506	-26.494	74.000
9688.000	7.663	39.490	47.153	-26.847	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4844.000	0.707	42.020	42.728	-31.272	74.000
7266.000	7.626	40.440	48.066	-25.934	74.000
9688.000	8.284	39.500	47.784	-26.216	74.000
Average Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmitter - 802.11n-40BW_27Mbps(2.4G Band) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4874.000	0.076	42.000	42.077	-31.923	74.000
7311.000	7.512	39.770	47.282	-26.718	74.000
9748.000	7.630	39.800	47.430	-26.570	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
4874.000	0.532	41.410	41.942	-32.058	74.000
7311.000	8.089	40.170	48.259	-25.741	74.000
9748.000	8.266	39.480	47.747	-26.253	74.000
Average					
Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmitter - 802.11n-40BW_27Mbps(2.4G Band) (2452 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal Peak Detector:					
4904.000	0.000	42.220	42.221	-31.779	74.000
7356.000	8.308	39.110	47.418	-26.582	74.000
9808.000	7.850	39.430	47.280	-26.720	74.000
Average Detector:					
--					
Vertical Peak Detector:					
4904.000	0.513	41.570	42.084	-31.916	74.000
7356.000	9.022	38.890	47.912	-26.088	74.000
9808.000	8.512	39.000	47.512	-26.488	74.000
Average Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmitter - 802.11n-20BW_13Mbps(5G Band) (5745MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11490.000	13.004	37.610	50.614	-23.386	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
11490.000	14.520	37.720	52.240	-21.760	74.000
Average					
Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmitter - 802.11n-20BW_13Mbps(5G Band) (5785 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal Peak Detector:					
11570.000	13.207	37.810	51.017	-22.983	74.000
Average Detector:					
--					
Vertical Peak Detector:					
11570.000	14.573	37.920	52.492	-21.508	74.000
Average Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmitter - 802.11n-20BW_13Mbps(5G Band) (5825 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11650.000	11.802	39.907	51.709	-22.291	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
11650.000	13.257	39.917	53.174	-20.826	74.000
Average					
Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 7: Transmitter - 802.11n-40BW_27Mbps(5G Band) (5755MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
11510.000	13.044	39.750	52.793	-21.207	74.000
Average					
Detector:					
--					
Vertical					
Peak Detector:					
11510.000	14.536	39.320	53.856	-19.594	74.000
Average					
Detector:					
--					

Note:

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

Product : ROS Home Center
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 7: Transmitter - 802.11n-40BW_27Mbps(5G Band) (5795 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal Peak Detector:					
11590.000	13.364	41.250	54.614	-19.386	74.000
Average Detector:					
11590.000	13.364	27.050	40.414	-13.586	54.000
Vertical Peak Detector:					
11590.000	14.687	41.170	55.857	-18.143	74.000
Average Detector:					
11590.000	14.687	27.010	41.697	-12.303	54.000

Note:

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

Product : ROS Home Center
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
181.320	-12.152	49.237	37.085	-6.415	43.500
456.800	-0.067	36.075	36.008	-9.992	46.000
586.780	3.436	32.536	35.972	-10.028	46.000
716.760	3.537	35.081	38.618	-7.382	46.000
749.740	3.320	36.865	40.185	-5.815	46.000
1000.000	9.119	29.533	38.652	-15.348	54.000
Vertical					
144.460	-6.257	45.880	39.623	-3.877	43.500
181.320	-9.512	46.507	36.995	-6.505	43.500
499.480	-0.852	32.846	31.994	-14.006	46.000
695.420	1.878	37.107	38.985	-7.015	46.000
800.180	2.801	33.035	35.836	-10.164	46.000
1000.000	4.329	33.520	37.849	-16.151	54.000

Note:

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

Product : ROS Home Center
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
181.320	-12.152	46.342	34.190	-9.310	43.500
218.180	-10.619	44.526	33.906	-12.094	46.000
456.800	-0.067	37.102	37.035	-8.965	46.000
586.780	3.436	32.776	36.212	-9.788	46.000
749.740	3.320	36.884	40.204	-5.796	46.000
1000.000	9.119	31.126	40.245	-13.755	54.000
Vertical					
181.320	-9.512	46.828	37.316	-6.184	43.500
218.180	-8.589	43.115	34.525	-11.475	46.000
699.300	0.695	39.139	39.834	-6.166	46.000
749.740	2.510	34.314	36.824	-9.176	46.000
912.700	1.762	38.782	40.544	-5.456	46.000
1000.000	4.329	31.879	36.208	-17.792	54.000

Note:

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

Product : ROS Home Center
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmitter - 802.11a 6Mbps (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
30.000	2.120	27.435	29.555	-10.445	40.000
456.800	-0.067	36.498	36.431	-9.569	46.000
586.780	3.436	33.844	37.280	-8.720	46.000
749.740	3.320	34.057	37.377	-8.623	46.000
850.620	5.982	34.386	40.368	-5.632	46.000
1000.000	9.119	30.695	39.814	-14.186	54.000
Vertical					
41.640	-1.809	34.699	32.890	-7.110	40.000
144.460	-6.257	40.772	34.515	-8.985	43.500
181.320	-9.512	42.969	33.457	-10.043	43.500
586.780	-5.884	39.009	33.125	-12.875	46.000
749.740	2.510	32.955	35.465	-10.535	46.000
1000.000	4.329	31.413	35.742	-18.258	54.000

Note:

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

Product : ROS Home Center
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmitter - 802.11n-20BW_13Mbps(2.4G Band) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
181.320	-12.152	48.573	36.421	-7.079	43.500
218.180	-10.619	46.207	35.587	-10.413	46.000
586.780	3.436	32.965	36.401	-9.599	46.000
749.740	3.320	33.666	36.986	-9.014	46.000
850.620	5.982	32.205	38.187	-7.813	46.000
1000.000	9.119	30.425	39.544	-14.456	54.000
Vertical					
181.320	-9.512	48.394	38.882	-4.618	43.500
218.180	-8.589	44.287	35.697	-10.303	46.000
586.780	-5.884	36.985	31.101	-14.899	46.000
699.300	0.695	39.956	40.651	-5.349	46.000
749.740	2.510	31.388	33.898	-12.102	46.000
833.160	2.263	37.181	39.444	-6.556	46.000

Note:

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

Product : ROS Home Center
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmitter - 802.11n-40BW_27Mbps(2.4G Band) (2437 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
30.000	2.120	27.770	29.890	-10.110	40.000
181.320	-12.152	47.584	35.432	-8.068	43.500
586.780	3.436	34.337	37.773	-8.227	46.000
699.300	2.875	34.389	37.264	-8.736	46.000
800.180	5.141	31.124	36.265	-9.735	46.000
1000.000	9.119	30.688	39.807	-14.193	54.000
Vertical					
144.460	-6.257	39.691	33.434	-10.066	43.500
181.320	-9.512	47.066	37.554	-5.946	43.500
528.580	-0.462	32.097	31.635	-14.365	46.000
695.420	1.878	35.088	36.966	-9.034	46.000
749.740	2.510	32.522	35.032	-10.968	46.000
800.180	2.801	32.894	35.695	-10.305	46.000

Note:

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

Product : ROS Home Center
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmitter - 802.11n-20BW_13Mbps(5G Band) (5785 MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
30.000	2.120	27.998	30.118	-9.882	40.000
456.800	-0.067	34.143	34.076	-11.924	46.000
586.780	3.436	35.508	38.944	-7.056	46.000
782.720	4.325	32.857	37.182	-8.818	46.000
850.620	5.982	31.172	37.154	-8.846	46.000
1000.000	9.119	31.331	40.450	-13.550	54.000
Vertical					
39.700	-1.056	35.209	34.153	-5.847	40.000
97.900	-1.400	38.309	36.908	-6.592	43.500
181.320	-9.512	43.497	33.985	-9.515	43.500
586.780	-5.884	38.153	32.269	-13.731	46.000
782.720	3.035	32.256	35.291	-10.709	46.000
1000.000	4.329	31.444	35.773	-18.227	54.000

Note:

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

Product : ROS Home Center
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 7: Transmitter - 802.11n-40BW_27Mbps(5G Band) (5755MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
260.860	-5.032	35.584	30.552	-15.448	46.000
456.800	-0.067	36.706	36.639	-9.361	46.000
586.780	3.436	33.366	36.802	-9.198	46.000
782.720	4.325	34.929	39.254	-6.746	46.000
850.620	5.982	34.210	40.192	-5.808	46.000
1000.000	9.119	31.173	40.292	-13.708	54.000
Vertical					
249.220	-7.634	38.501	30.867	-15.133	46.000
499.480	-0.852	31.543	30.691	-15.309	46.000
716.760	-0.653	35.598	34.945	-11.055	46.000
782.720	3.035	32.837	35.872	-10.128	46.000
901.060	3.331	31.992	35.323	-10.677	46.000
1000.000	4.329	31.893	36.222	-17.778	54.000

Note:

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

5. RF antenna conducted test

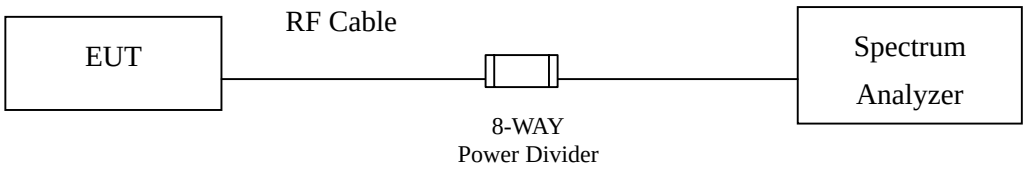
5.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2009
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2009
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2010
X	8-WAY Power Divider	JFW	50PD-647 / 526770 0916	Apr., 2010

Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.
3. The power combiner is used for measure 11n mode.

5.2. Test Setup

RF antenna Conducted Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was tested according to DTS test procedure of Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.5. Uncertainty

The measurement uncertainty
Conducted is defined as ± 1.27dB

5.6. Test Result of RF antenna conducted test

Product : ROS Home Center
Test Item : RF antenna conducted test
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Channel 01 (2412MHz) 30MHz-25GHz

Channel 06 (2437MHz) 30MHz -25GHz

Channel 11 (2462MHz) 30MHz -25GHz

Product : ROS Home Center
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps)

Channel 01 (2412MHz) 30MHz -25GHz

Channel 06 (2437MHz) 30MHz -25GHz

Channel 11 (2462MHz) 30MHz -25GHz

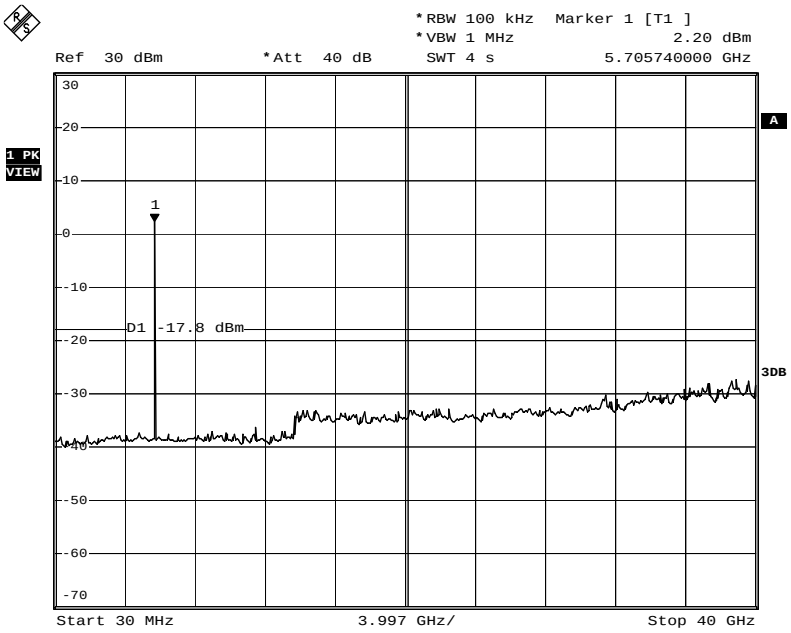
Product : ROS Home Center

Test Item : RF Antenna Conducted Spurious

Test Site : No.3 OATS

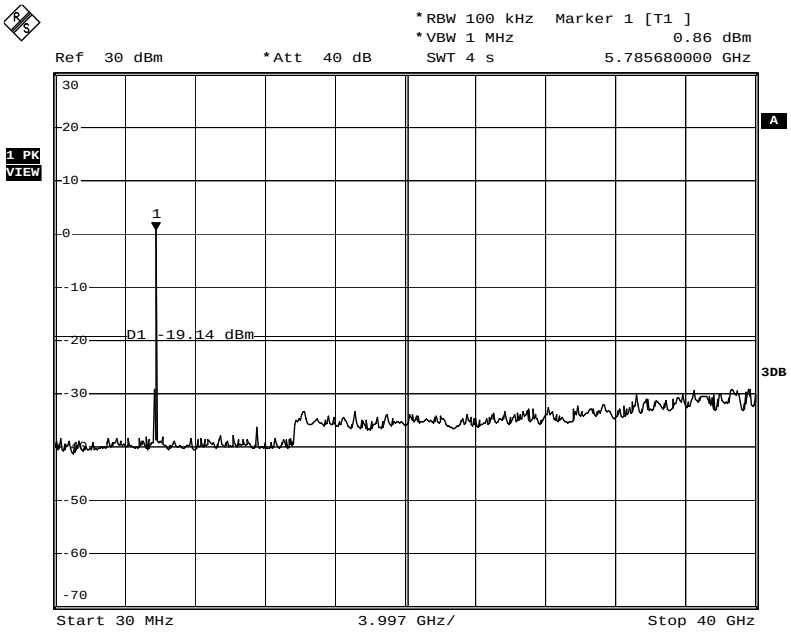
Test Mode : Mode 3: Transmitter - 802.11a 6Mbps

Channel 149 (5745MHz) 30MHz -40GHz



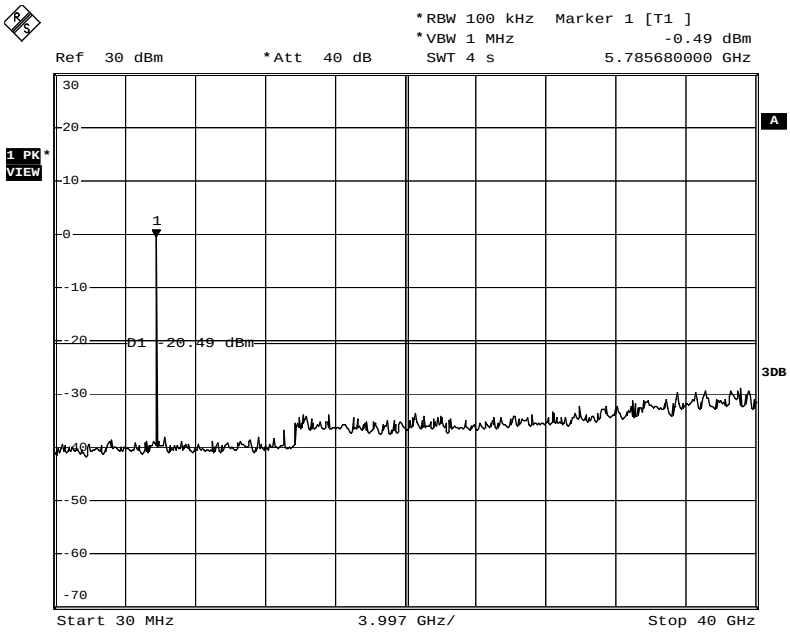
Date: 4.MAY.2010 02:20:38

Channel 157 (5785MHz) 30MHz -40GHz



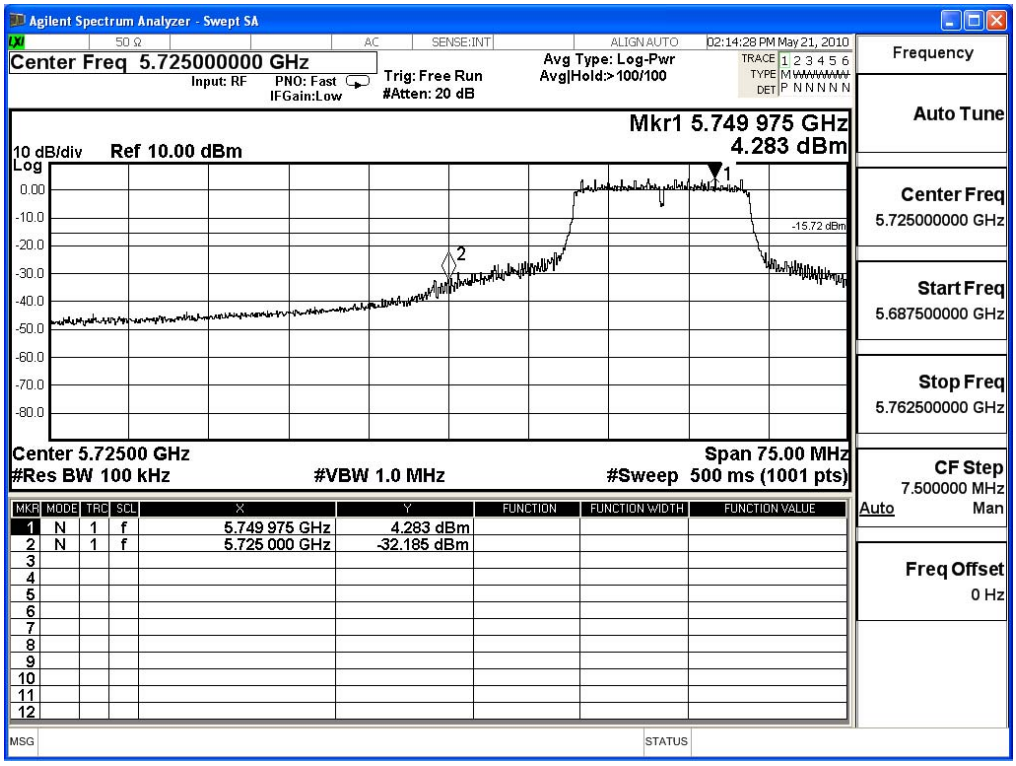
Date: 4.MAY.2010 02:23:51

Channel 165 (5825MHz) 30MHz -40GHz

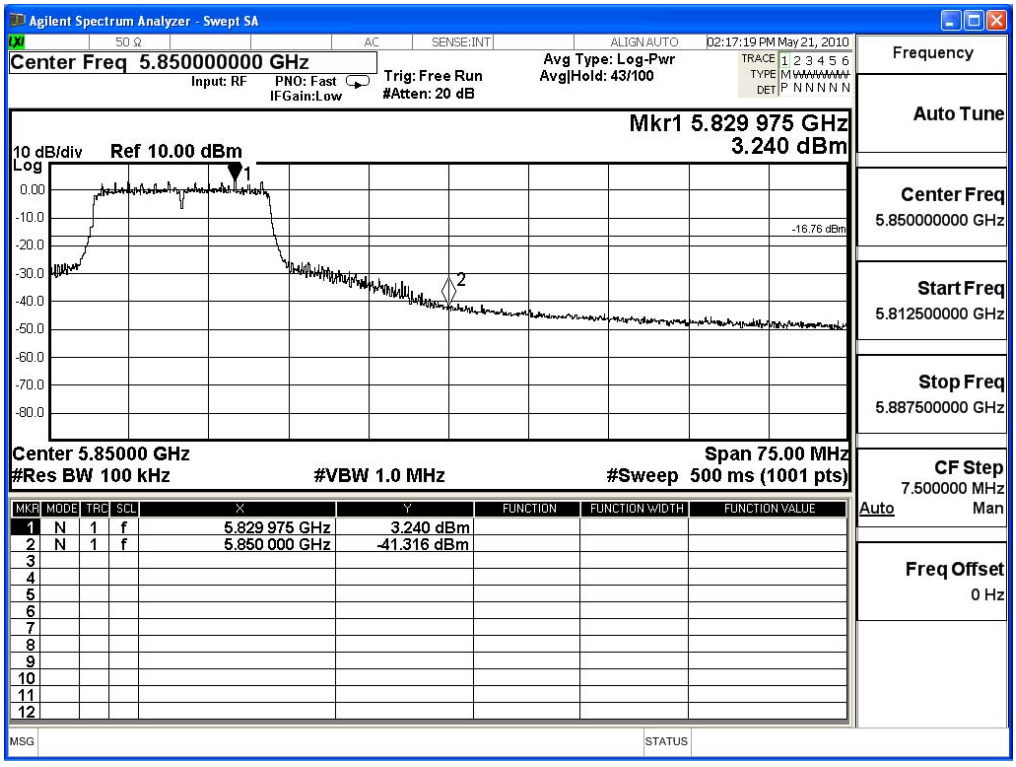


Date: 4.MAY.2010 02:34:07

Channel 149 (5745MHz)



Channel 165 (5825MHz)



Product : ROS Home Center
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 4: Transmitter - 802.11n-20BW_13Mbps(2.4G Band)

Channel 01 (2412MHz) 30MHz -25GHz

Channel 06 (2437MHz) 30MHz -25GHz

Channel 11 (2462MHz) 30MHz -25GHz

Product : ROS Home Center
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 5: Transmitter - 802.11n-40BW_27Mbps(2.4G Band)

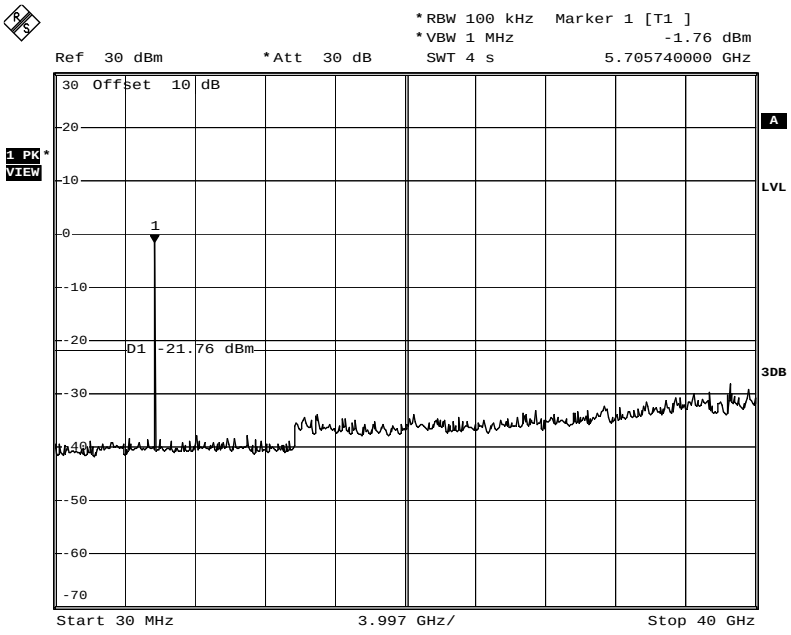
Channel 01 (2422MHz) 30MHz -25GHz

Channel 04 (2437MHz) 30MHz -25GHz

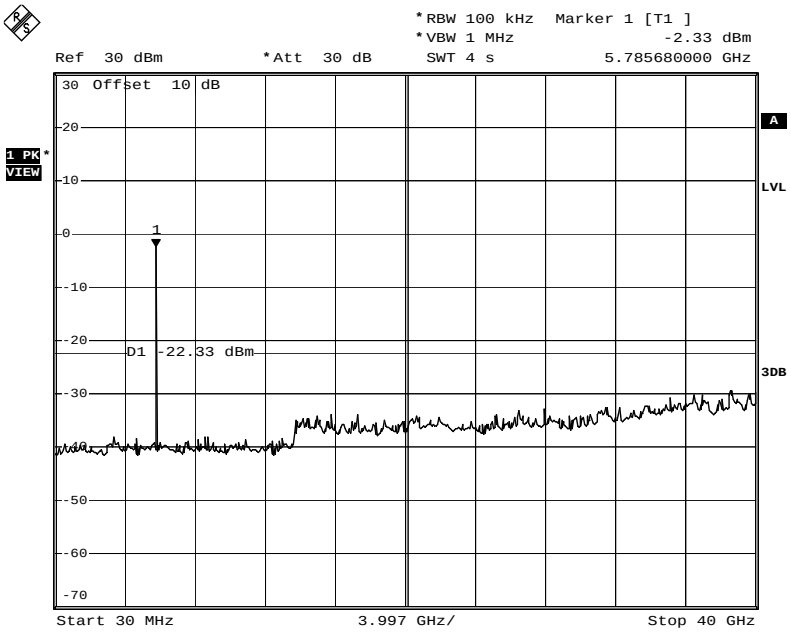
Channel 07 (2452MHz) 30MHz -25GHz

Product : ROS Home Center
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 6: Transmitter - 802.11n-20BW_13Mbps(5G Band)

Channel 49 (5745MHz) 30MHz -40GHz

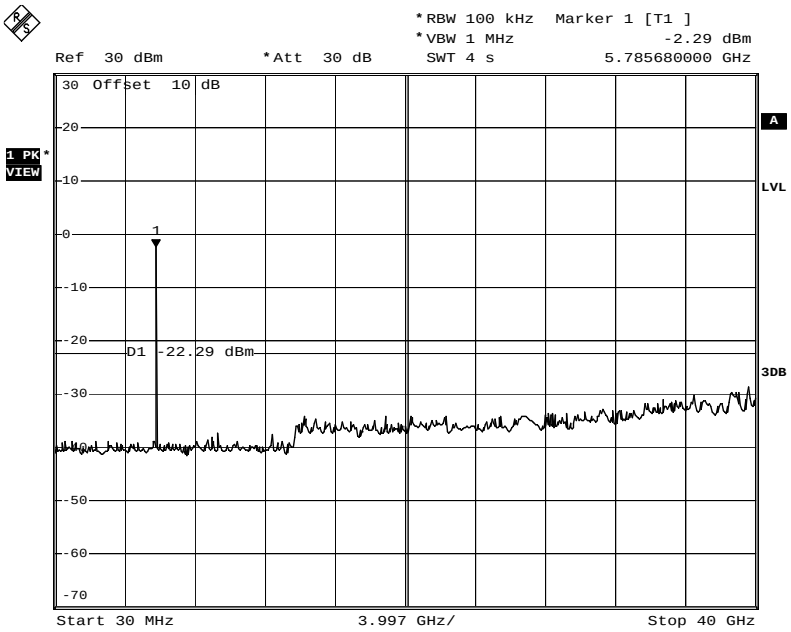


Channel 157 (5785MHz) 30MHz -40GHz



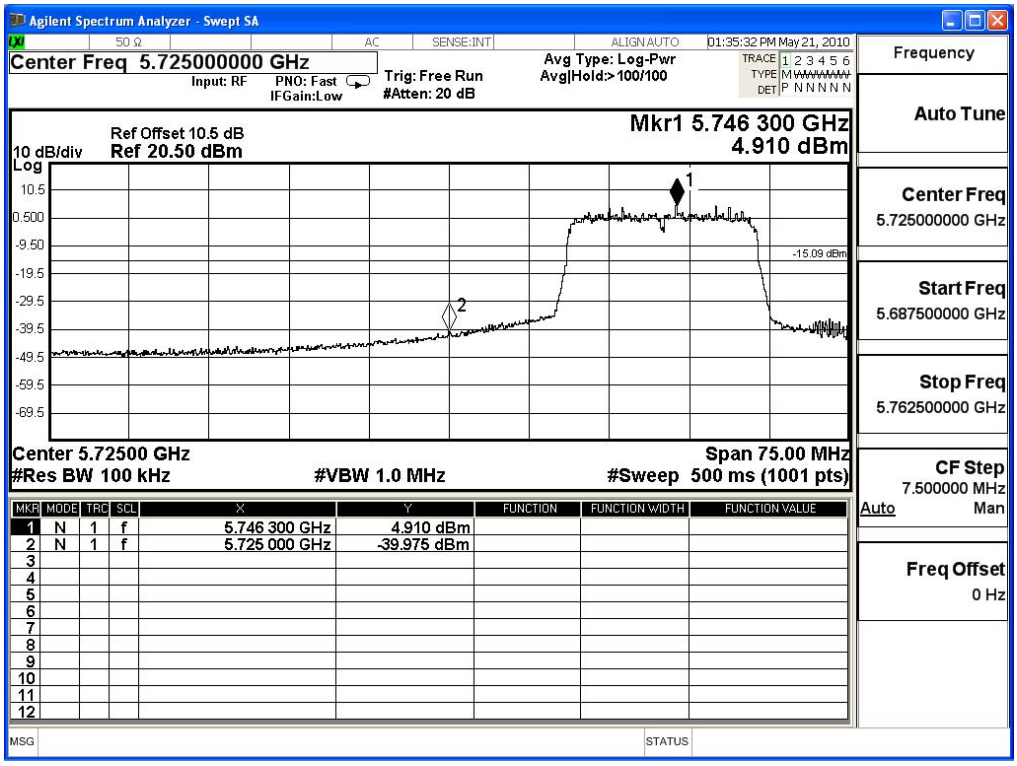
Date: 4.MAY.2010 02:59:06

Channel 165 (5825MHz) 30MHz -40GHz

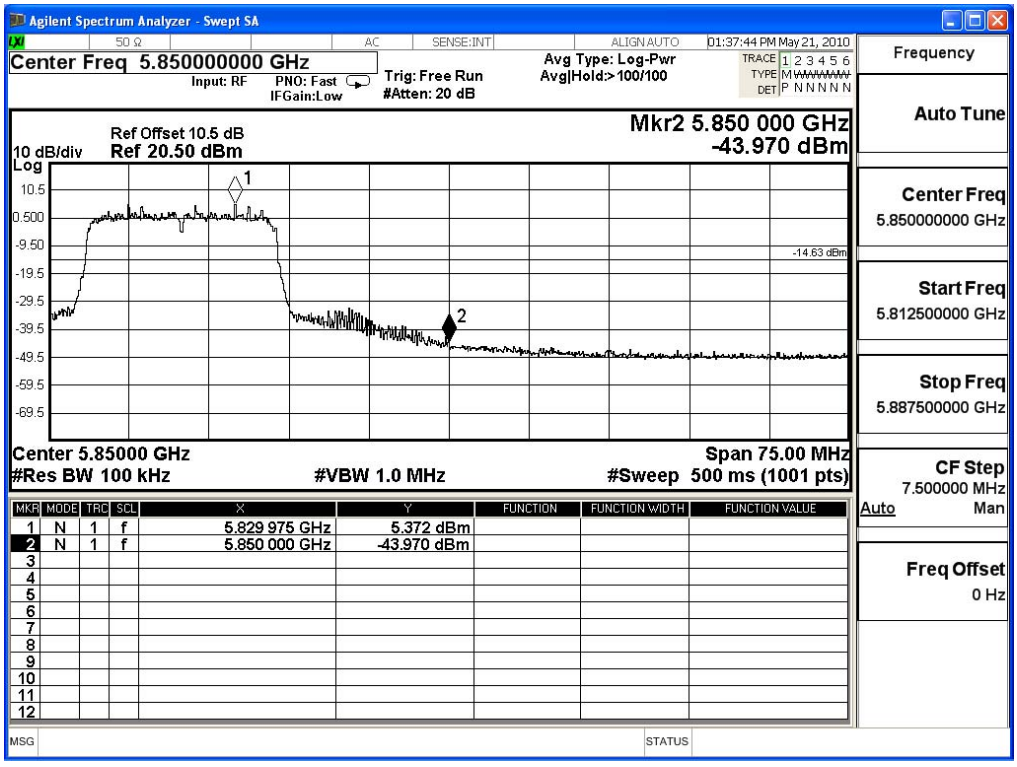


Date: 4.MAY.2010 03:00:55

Channel 49 (5745MHz)

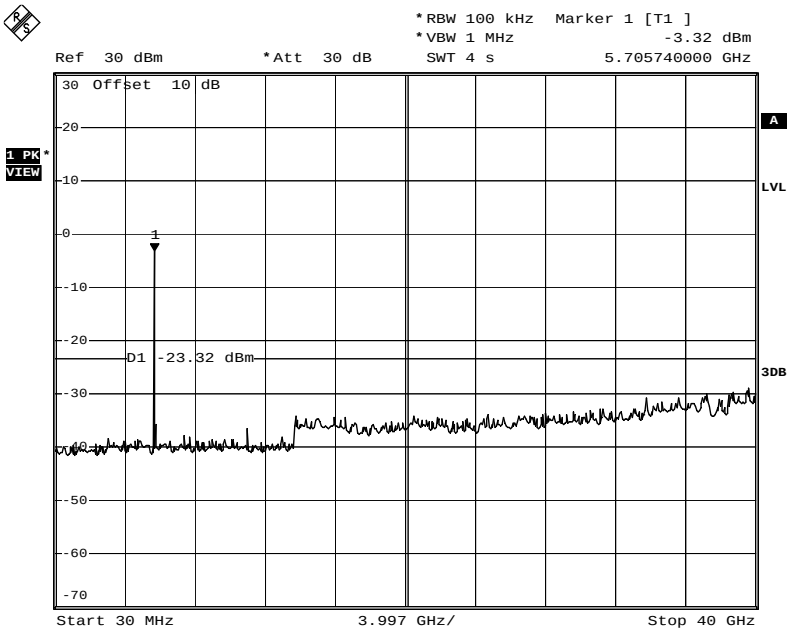


Channel 165 (5825MHz)



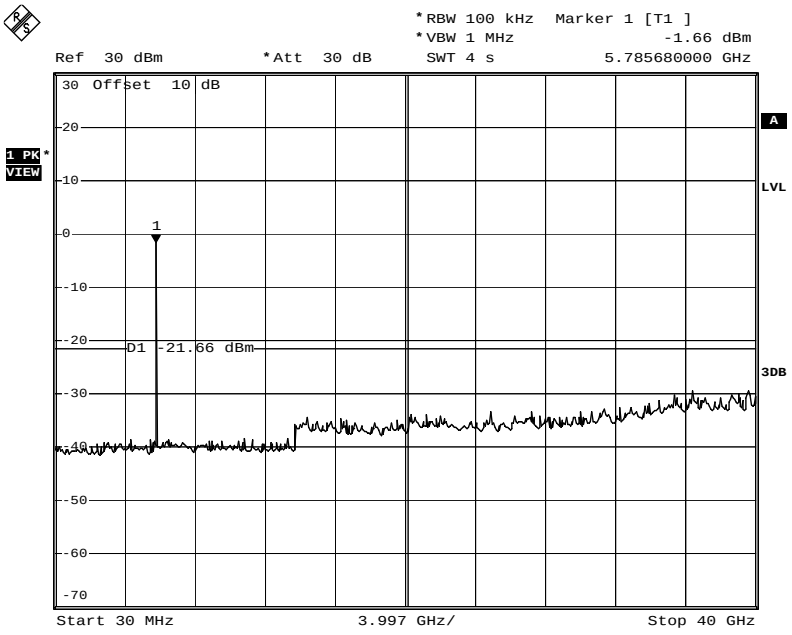
Product : ROS Home Center
Test Item : RF Antenna Conducted Spurious
Test Site : No.3 OATS
Test Mode : Mode 7: Transmitter - 802.11n-40BW_27Mbps(5G Band)

Channel 151 (5755MHz) 30MHz -40GHz



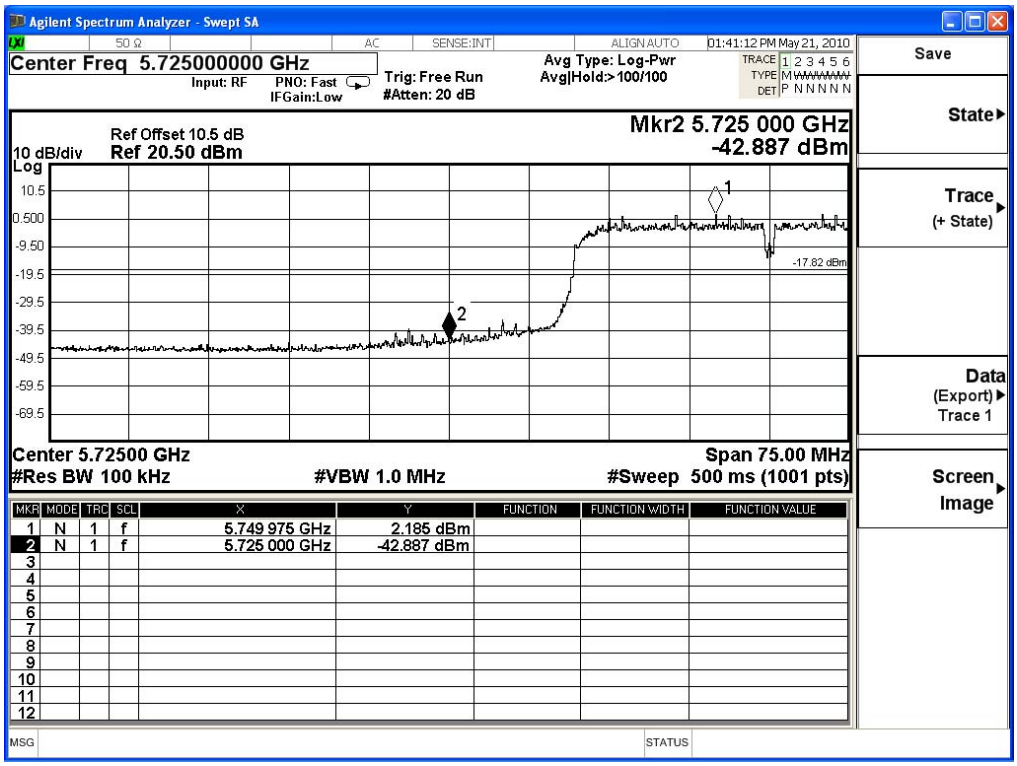
Date: 4.MAY.2010 03:03:36

Channel 159 (5795MHz) 30MHz -40GHz

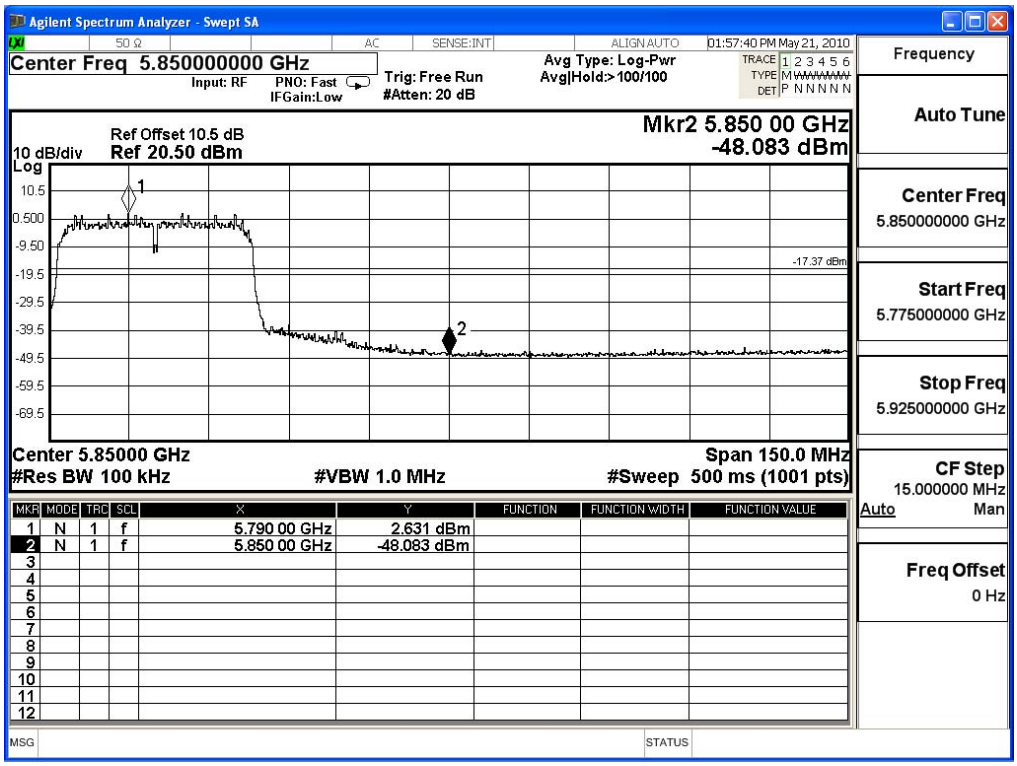


Date: 4.MAY.2010 03:06:17

Channel 151 (5755MHz)



Channel 159 (5795MHz)



6. Band Edge

6.1. Test Equipment

RF Conducted Measurement

The following test equipments are used during the band edge tests:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2009
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2009
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2010
X	8-WAY Power Divider	JFW	50PD-647 / 526770 0916	Apr., 2010

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.
3. The power combiner is used for measure 11n mode.

RF Radiated Measurement:

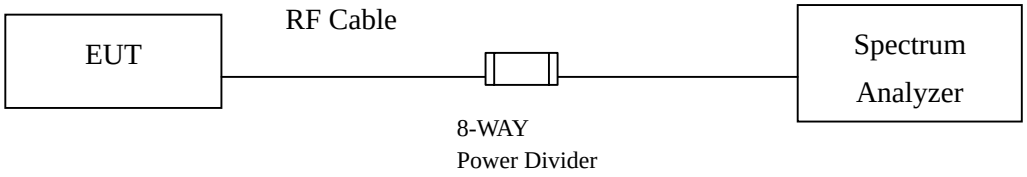
The following test equipments are used during the band edge tests:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2009
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2009
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2009
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2009
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2010
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2009
	X	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2010
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

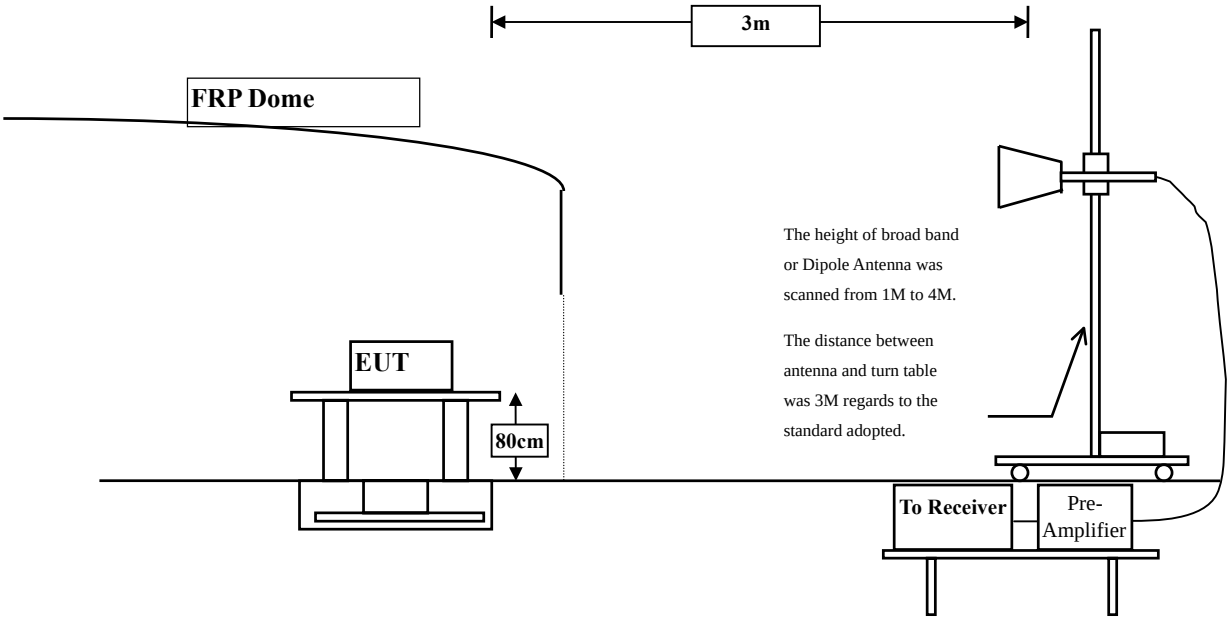
Note: 1. All instruments are calibrated every one year.
2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup

RF Conducted Measurement



RF Radiated Measurement:



6.3. Limits

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

6.4. Test Procedure

The EUT was setup according to ANSI C63.4, 2003 and tested according to DTS test procedure of Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4:2003 on radiated measurement.

6.5. Uncertainty

± 3.9 dB above 1GHz
± 3.8 dB below 1GHz

6.6. Test Result of Band Edge

Product : ROS Home Center
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dBuV]	Emission Level [dBuV/m]	Detector
Horizontal	2412	31.771	76.72	108.492	Peak
Horizontal	2412	31.771	68.08	99.852	Average
Vertical	2412	30.248	78.2	108.449	Peak
Vertical	2412	30.248	69.56	99.809	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Detector
Horizontal	2390	108.492	35.197	73.295	Peak
Horizontal	2390	99.852	51.759	48.093	Average
Vertical	2390	108.449	35.197	73.252	Peak
Vertical	2390	99.809	51.759	48.05	Average

Note:

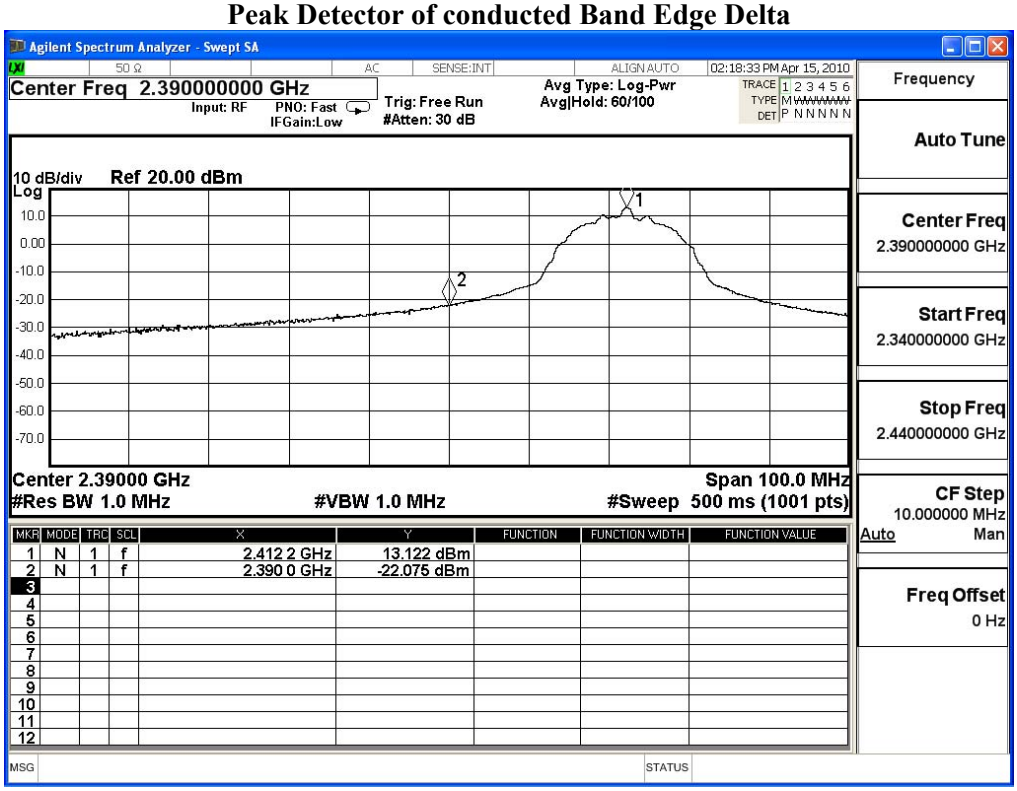
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = F - Δ

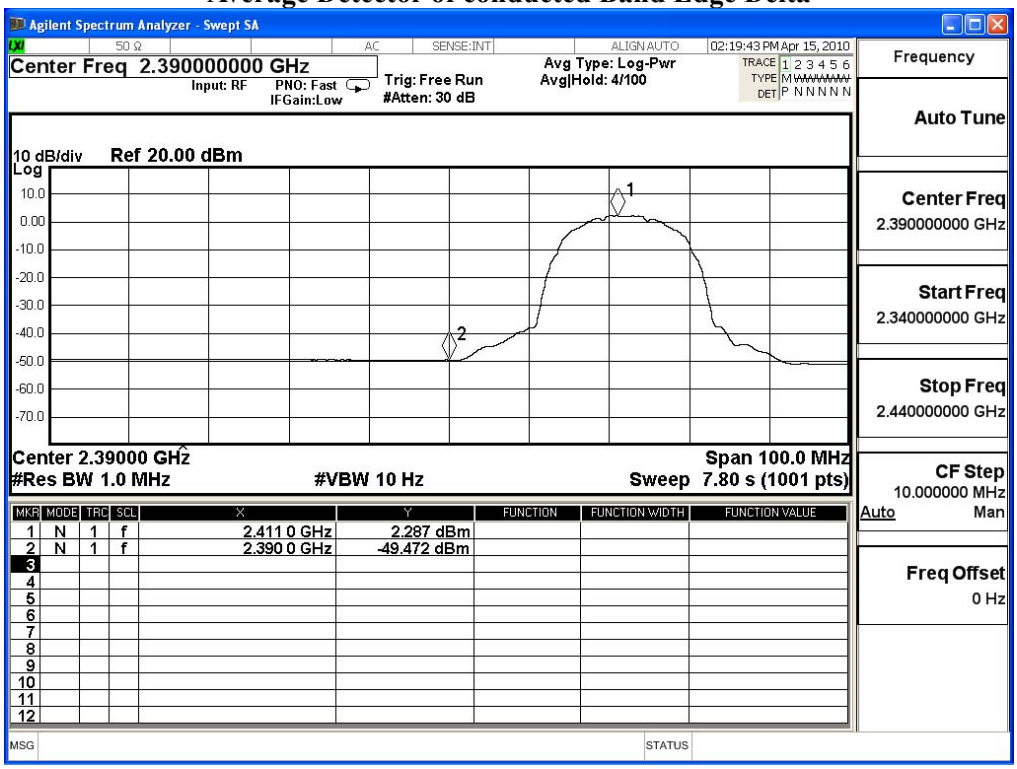
F = Fundamental field Strength (Peak or Average)

Δ = Conducted Band Edge Delta (Peak or Average)

Peak Detector of conducted Band Edge Delta



Average Detector of conducted Band Edge Delta



Product : ROS Home Center
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dBuV]	Emission Level [dBuV/m]	Detector
Horizontal	2462	31.892	76.21	108.102	Peak
Horizontal	2462	31.892	67.6	99.492	Average
Vertical	2462	30.48	78.18	108.66	Peak
Vertical	2462	30.48	69.6	100.08	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Detector
Horizontal	2483.5	108.102	37.042	71.06	Peak
Horizontal	2483.5	99.492	52.999	46.493	Average
Vertical	2483.5	108.66	37.042	71.618	Peak
Vertical	2483.5	100.08	52.999	47.081	Average

Note:

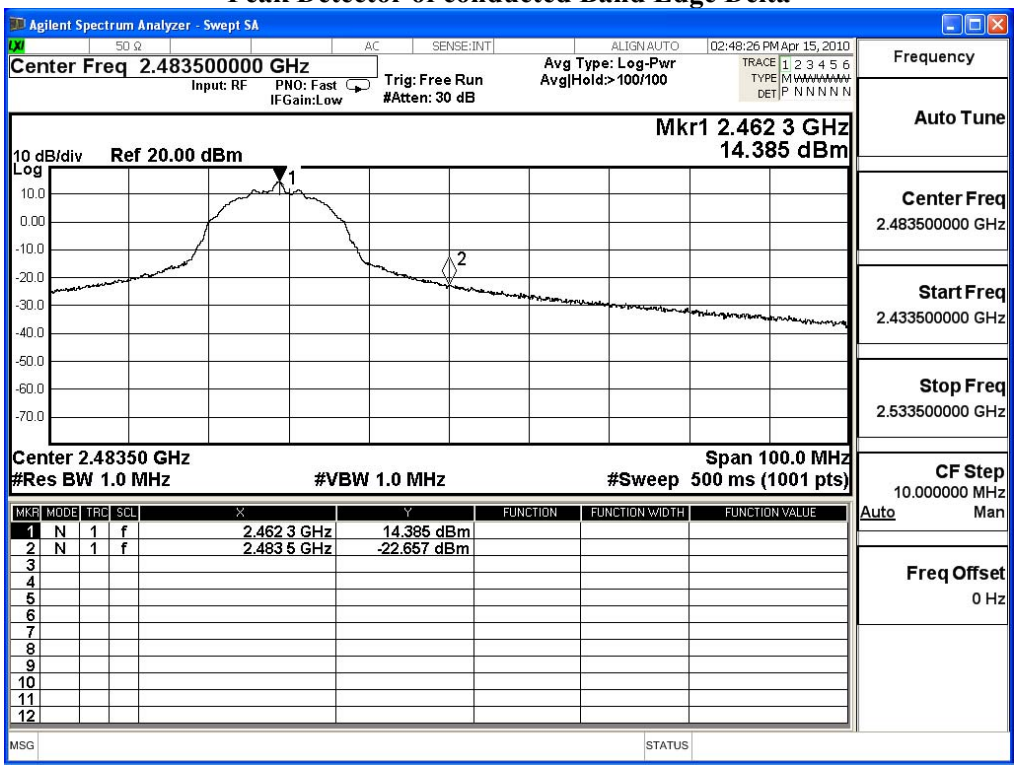
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = F - Δ

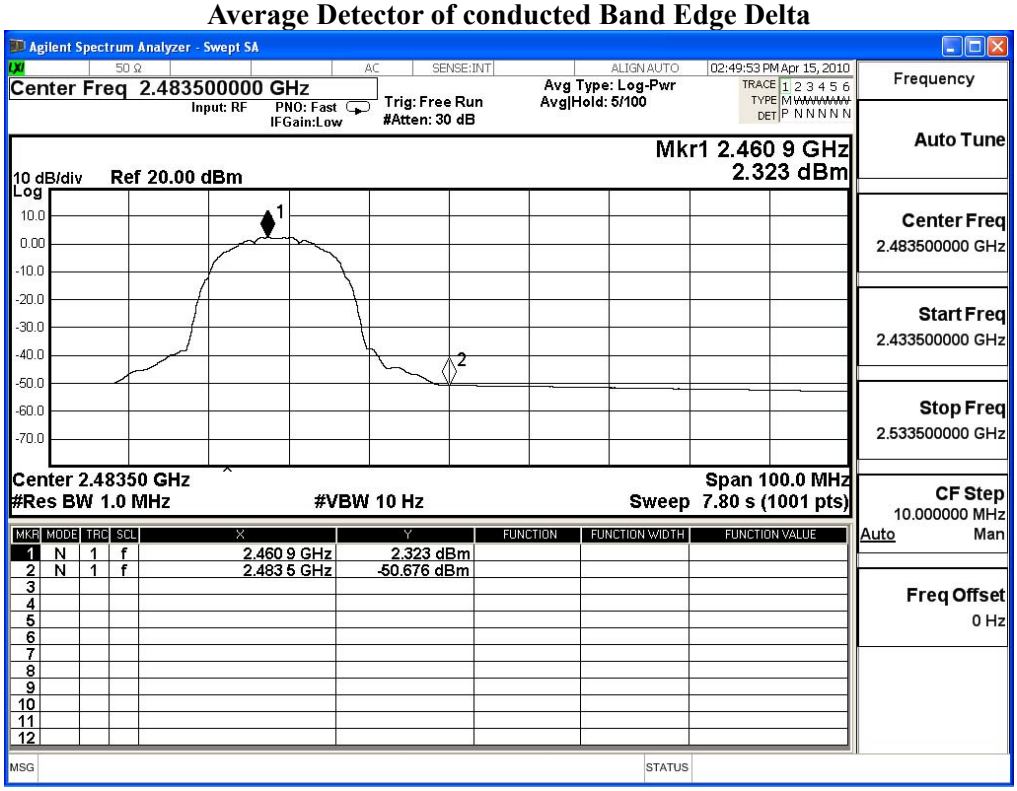
F = Fundamental field Strength (Peak or Average)

Δ = Conducted Band Edge Delta (Peak or Average)

Peak Detector of conducted Band Edge Delta



Average Detector of conducted Band Edge Delta



Product : ROS Home Center
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11g 6Mbps)

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dBuV]	Emission Level [dBuV/m]	Detector
Horizontal	2412	31.771	76.98	108.752	Peak
Horizontal	2412	31.771	64.7	96.472	Average
Vertical	2412	30.248	77.6	107.849	Peak
Vertical	2412	30.248	65.92	96.169	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Detector
Horizontal	2390	108.752	41.867	66.885	Peak
Horizontal	2390	96.472	45.873	50.599	Average
Vertical	2390	107.849	41.867	65.982	Peak
Vertical	2390	96.169	45.873	50.296	Average

Note:

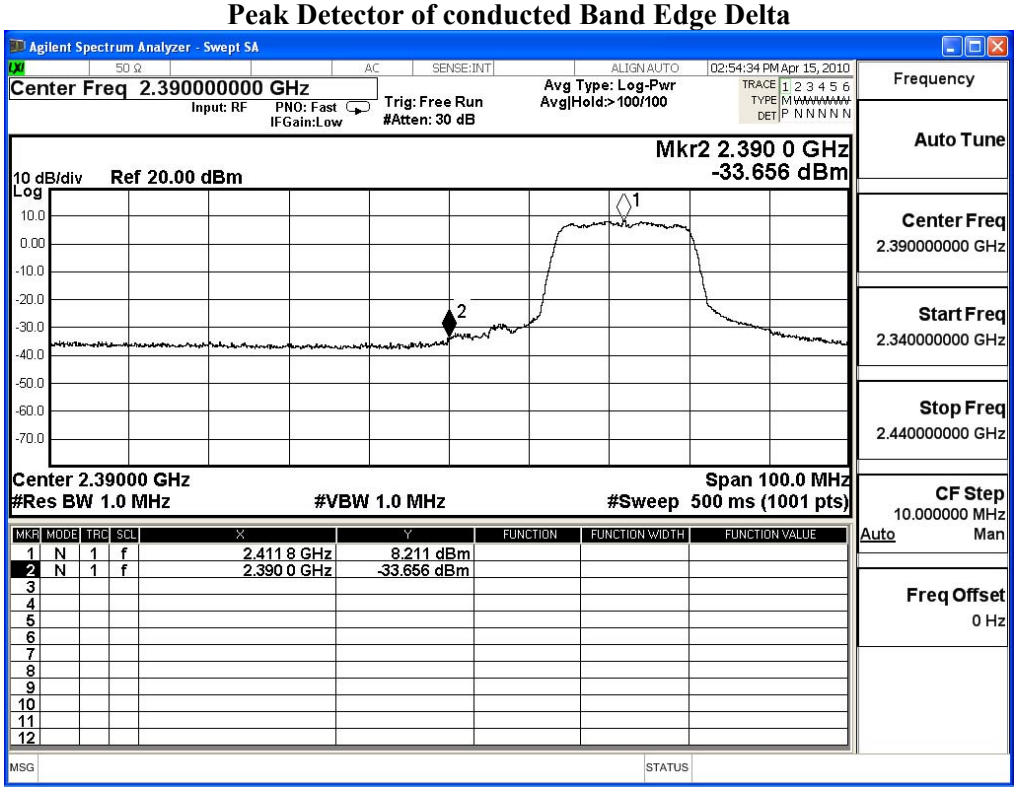
The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = F - Δ

F = Fundamental field Strength (Peak or Average)

Δ = Conducted Band Edge Delta (Peak or Average)

Peak Detector of conducted Band Edge Delta



Average Detector of conducted Band Edge Delta