

# **FCC Test Report**

Product Name	LCD Monitor
Model No	LT1423pwCA
FCC ID.	PU5LT1423PWCA

Applicant	Wistron Corporation
Address	21F., No. 88, Sec. 1, HsinTai 5th Rd., Hsichih
	Dist, New Taipei City 221 Taiwan

Date of Receipt	Jul. 31, 2013
Issue Date	Sep. 14, 2013
Report No.	138069R-RFUSP28V01
Report Version	V1.0



The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation. This report must not be used to claim product endorsement by TAF or any agency of the U.S. Government.

# Test Report Certification

Issue Date: Sep. 14, 2013 Report No.: 138069R-RFUSP28V01



Product Name	LCD Monitor
Applicant	Wistron Corporation
Address	21F., No. 88, Sec. 1, HsinTai 5th Rd., Hsichih Dist, New Taipei City 221
	Taiwan
Manufacturer	1.Wistron Corporation
	2.Wistron InfoComm (Zhongshan) Corporation
	3.Wistron Mexico S.A. DE C.V.
Model No.	LT1423pwCA
EUT Rated Voltage	AC 100-240V, 50/60Hz
EUT Test Voltage	AC 120V/60Hz
Trade Name	lenovo
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2012
	ANSI C63.4: 2003, ANSI C63.10: 2009, FCC KDB 558074
Test Result	Complied

The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation. This report must not be used to claim product endorsement by TAF or any agency of the U.S. Government

)

Documented By	:	Joanne lin
		( Senior Adm. Specialist / Joanne Lin
Tested By	:	Jack Hsu
		(Engineer / Jack Hsu)
Approved By	:	Hund

(Manager / Vincent Lin)

## TABLE OF CONTENTS

De	scription	Page
1.	GENERAL INFORMATION	5
1.1.	EUT Description	
1.2.	Operational Description	
13	Tested System Details	8
1.5.	Configuration of Tested System	8
1.4.	ELIT Exercise Software	
1.5.	Tost Engility	
1.0.		
2.	Conducted Emission	10
2.1.	Test Equipment	
2.2.	Test Setup	
2.3.	Limits	
2.4.	Test Procedure	
2.5.	Uncertainty	
2.6.	Test Result of Conducted Emission	
3.	Peak Power Output	
3.1.	Test Equipment	
3.2.	Test Setup	
33	Limits	16
3.4	Test Procedure	16
3.5	Uncertainty	16
3.6.	Test Result of Peak Power Output	
4.	Radiated Emission	
4.1.	Test Equipment	
4.2.	Test Setup	
43	Limits	26
44	Test Procedure	20 27
4 5	Uncertainty	27
4.5.	Test Result of Radiated Emission	28
-		
5.	<b>RF</b> antenna conducted test	
5.1.	Test Equipment	
5.2.	Test Setup	55
5.3.	Limits	
5.4.	Test Procedure	
5.5.	Uncertainty	
5.6.	Test Result of RF antenna conducted test	
6.	Band Edge	
6.1.	Test Equipment	
6.2.	Test Setup	
6.3.	Limits	
6.4.	Test Procedure	
6.5.	Uncertainty	
6.6.	Test Result of Band Edge	

## 

7.	Occupied Bandwidth	
7.1.	Test Equipment	
7.2.	Test Setup	
7.3.	Limits	
7.4.	Test Procedure	
7.5.	Uncertainty	
7.6.	Test Result of Occupied Bandwidth	
8.	Power Density	
8.1.	Test Equipment	
8.2.	Test Setup	
8.3.	Limits	
8.4.	Test Procedure	
8.5.	Uncertainty	
8.6.	Test Result of Power Density	
9.	EMI Reduction Method During Compliance Testing	140

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs

## 1. GENERAL INFORMATION

## **1.1. EUT Description**

Product Name	LCD Monitor
Trade Name	lenovo
Model No.	LT1423pwCA
FCC ID.	PU5LT1423PWCA
Frequency Range	802.11b/g/n-20MHz:2412-2462MHz,802.11n-40MHz:2422-2452MHz
	802.11a/n-20MHz:5745-5825MHz ,802.11n-40MHz:5755-5795MHz
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: up to 150Mbps
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 / Monopole
Antenna Gain	Refer to the table "Antenna List"
Channel Control	Auto
WIFI Dongle	1 Set
Touch Pen	1 Set
Protective Case	1 Set
USB Cable	Shielded, 1m
USB-Y Cable	Shielded, 0.25m
Power Adapter	MFR: Lenovo, M/N: 51J0249
	Input: AC 100-240V, 50/60Hz, 0.6A
	Output: DC 5V, 4.0A
	Cable Out: Non-Shielded, 2m, with one ferrite core bonded.
Contain Module IC	AzureWave / AW-AH389

Note: LCD Monitor must be paired with Wi-Fi Dongle, the Wi-Fi Dongle certification numbers are as follows: FCC ID: NKR03T8726 and IC: 4441A-03T8726.

#### Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	INNOWAVE	25.90ANE.001/640-INNEP0021-A	PIFA	-2.38 dBi for 2.4GHz
2.	INNOWAVE	25.90ANF.001/640-INNEP0022-A	Monopole	1.05 dBi for 5.725~5.850GHz

Note: The antenna of EUT is conform to FCC 15.203

## QuieTek

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-20M	MHz Center W	Vorking Freque	ency 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 3:	2422 MHz	Channel 4:	2427 MHz	Channel 5:	2432 MHz	Channel 6:	2437 MHz
Channel 7:	2442 MHz	Channel 8:	2447 MHz	Channel 9:	2452 MHz		
802.11n-40MI	Hz (5G Band)	) Center Worki	ng Frequency	of Each Chan	nel:		

Channel Frequency Channel Frequency

Channel 151: 5755 MHz Channel 159: 5795 MHz

- 1. This device is a LCD Monitor with a built-in 2.4GHz and 5GHz Band WLAN transceiver.
- 2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
- 3. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
- 4. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps \$\cdot 802.11g is 6Mbps \$\cdot 802.11n(20M-BW) is 7.2Mbps and \$\cdot 802.11n(40M-BW) is 15Mbps).
- 5. 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.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)				
	Mode 2: Transmit (802.11g 6Mbps)				
	Mode 3: Transmit - 802.11a 6Mbps				
	Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band)				
	Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band)				
	Mode 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band)				
	Mode 7: Transmit - 802.11n-40BW_15Mbps(5G Band)				

## **1.3.** Tested System Details

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

Pro	duct	Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Notebook PC	DELL	PPT	N/A	N/A	Non-Shielded, 1.8m
2	Test Fixture	Wistron	N/A	N/A	N/A	N/A

Signal Cable Type		Signal cable Description
А	USB to RS-232 Cable	Shielded, 1.5m
В	Signal Cable	Non-Shielded, 0.3m
С	USB Cable	Shielded, 1m

## **1.4.** Configuration of Tested System



## **1.5. EUT Exercise Software**

- (1) Setup the EUT as shown in Section 1.4
- (2) Execute program "Tera Term V4.67" on the EUT.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Start transmits continually.
- (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 : <u>http://www.quietek.com/tw/ctg/cts/accreditations.htm</u> The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : <u>http://www.quietek.com/</u>

Site Description:	File on
	Federal Communications Commission
	FCC Engineering Laboratory
	7435 Oakland Mills Road
	Columbia, MD 21046
	Registration Number: 92195
Site Name:	Quietek Corporation
Site Address:	No. 5-22, Ruei-Shu Valley, Ruei-Ping Tsuen,
	Lin-Kou Shiang, Taipei,
	Taiwan, R.O.C.
	TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
	E-Mail : <u>service@quietek.com</u>

FCC Accreditation Number: TW1014

## 2. Conducted Emission

## 2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
Х	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2013	
Х	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2013	Peripherals
Х	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2013	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar., 2013	EUT
Х	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2013	
	No.1 Shielded Room				

Note:

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

## 2.2. Test Setup



## 2.3. Limits

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

## 2.4. 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 C63.10: 2009 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	:	LCD Monitor
Test Item	:	Conducted Emission Test
Power Line	:	Line 1
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band) (2437MHz)

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV	dB	dBuV
Line 1					
Quasi-Peak					
0.189	9.698	46.660	56.358	-8.528	64.886
0.259	9.701	36.960	46.661	-16.225	62.886
0.310	9.704	25.570	35.274	-26.155	61.429
0.384	9.707	28.310	38.017	-21.297	59.314
0.654	9.719	16.950	26.669	-29.331	56.000
3.252	9.820	17.110	26.930	-29.070	56.000
Average					
0.189	9.698	34.430	44.128	-10.758	54.886
0.259	9.701	27.820	37.521	-15.365	52.886
0.310	9.704	9.350	19.054	-32.375	51.429
0.384	9.707	20.470	30.177	-19.137	49.314
0.654	9.719	9.080	18.799	-27.201	46.000
3.252	9.820	9.700	19.520	-26.480	46.000

## 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	: LCD Monitor						
Test Item	: Conducted Emission Test						
Power Line	: Line 2						
Test Mode	: Mode 5: Tr	ansmit - 802.11	n-40BW_15Mbps(2.	4G Band) (2437MH	Hz)		
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV	dB	dBuV		
Line 2							
Quasi-Peak							
0.185	9.678	40.620	50.298	-14.702	65.000		
0.197	9.679	44.880	54.559	-10.098	64.657		
0.259	9.681	36.230	45.911	-16.975	62.886		
0.318	9.684	31.790	41.474	-19.726	61.200		
0.791	9.716	19.530	29.246	-26.754	56.000		
2.732	9.800	20.890	30.690	-25.310	56.000		
Average							
0.185	9.678	25.380	35.058	-19.942	55.000		
0.197	9.679	35.120	44.799	-9.858	54.657		
0.259	9.681	27.940	37.621	-15.265	52.886		
0.318	9.684	24.930	34.614	-16.586	51.200		
0.791	9.716	9.060	18.776	-27.224	46.000		
2.732	9.800	14.150	23.950	-22.050	46.000		

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

Product	: LCD Monitor					
Test Item	: Conducted Emission Test					
Power Line	: Line 1					
Test Mode	: Mode 7: 7	Fransmit - 802.1	1n-40BW_15Mbps(5	G Band) (5795M)	Hz)	
Frequency	Correct	Reading	Measurement	Margin	Limit	
	Factor	Level	Level			
MHz	dB	dBuV	dBuV	dB	dBuV	
Line 1						
Quasi-Peak						
0.154	9.697	38.660	48.357	-17.529	65.886	
0.170	9.697	34.100	43.797	-21.632	65.429	
0.224	9.700	26.510	36.210	-27.676	63.886	
0.259	9.701	22.930	32.631	-30.255	62.886	
0.392	9.707	19.830	29.537	-29.549	59.086	
5.884	9.840	15.100	24.940	-35.060	60.000	
Average						
0.154	9.697	26.930	36.627	-19.259	55.886	
0.170	9.697	21.560	31.257	-24.172	55.429	
0.224	9.700	15.760	25.460	-28.426	53.886	
0.259	9.701	12.770	22.471	-30.415	52.886	
0.392	9.707	14.390	24.097	-24.989	49.086	
5.884	9.840	10.340	20.180	-29.820	50.000	

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

Product	: LCD Monitor						
Test Item	: Conducted Emission Test						
Power Line	: Line 2	: Line 2					
Test Mode	: Mode 7: Tr	ransmit - 802.11	n-40BW_15Mbps(50	G Band) (5795MH	Iz)		
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV	dB	dBuV		
Line 2							
Quasi-Peak							
0.154	9.677	38.380	48.057	-17.829	65.886		
0.220	9.680	28.060	37.740	-26.260	64.000		
0.396	9.688	19.750	29.438	-29.533	58.971		
0.705	9.704	11.660	21.364	-34.636	56.000		
1.849	9.774	9.940	19.714	-36.286	56.000		
6.080	9.840	14.180	24.020	-35.980	60.000		
Average							
0.154	9.677	26.470	36.147	-19.739	55.886		
0.220	9.680	17.600	27.280	-26.720	54.000		
0.396	9.688	13.650	23.338	-25.633	48.971		
0.705	9.704	6.550	16.254	-29.746	46.000		
1.849	9.774	5.530	15.304	-30.696	46.000		
6.080	9.840	9.330	19.170	-30.830	50.000		

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

## **3.** Peak Power Output

## **3.1.** Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Х	Power Meter	Anritsu	ML2495A/6K00003357	May, 2013
Х	Power Sensor	Anritsu	MA2411B/0738448	Jun., 2013
Note:				
1.	All equipments are ca	librated with trace	eable calibrations. Each calibration	on is traceable to the
	national or internation	al standards.		

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

## 3.2. Test Setup



## 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 KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using KDB 558074 section 9.1.3 PKPM1 Peak power meter method.

## 3.5. Uncertainty

± 1.27 dB

## **3.6.** Test Result of Peak Power Output

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

Channel No.	Frequency	For d	Average ifferent Da	e Power ata Rate (N	(lbps)	Peak Power	Required	Result
Channel No	(MHz)	1	2	5.5	11	1	Limit	Result
			Measur					
01	2412	12.54				15.05	<30dBm	Pass
06	2437	12.58	12.41	12.38	12.14	15.11	<30dBm	Pass
11	2462	12.78				15.26	<30dBm	Pass

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

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

			-		Peak							
	Frequency		ŀ	or diffe	erent Da	ata Rate	e (Mbps	s)		Power	Required	
Channel No	(MHz)	6	9	12	18	24	36	48	54	6	Limit	Result
01	2412	12.86								21.55	<30dBm	Pass
06	2437	12.87	12.77	12.62	12.54	12.47	12.36	12.19	12.08	21.21	<30dBm	Pass
11	2462	12.59								20.65	<30dBm	Pass

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

Product	:	LCD Monitor
Test Item	:	Peak Power Output Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit - 802.11a 6Mbps

	Fraguency		F	For diffe	Peak Power	Pequired						
Channel No	(MHz)	6	9	12	18	24	36	48	54	6	Limit	Result
				M	easurer	nent Le	vel (dE	Sm)				
149	5745	9.25								18.81	<30dBm	Pass
157	5785	9.81	9.74	9.62	9.57	9.42	9.35	9.27	9.1	19.39	<30dBm	Pass
165	5825	9.82								19.41	<30dBm	Pass

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

Product	:	LCD Monitor
Test Item	:	Peak Power Output Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band)

			F	for diffe	Peak							
Channel No	Frequency (MHz)	7.2	14.4	21.7	28.9	43.3	57.8	65	72.2	7.2	· Required Limit	Result
01	2412	12.65								21.12	<30dBm	Pass
06	2437	12.68	12.52	12.47	12.36	12.27	12.14	12.09	12	20.72	<30dBm	Pass
11	2462	12.42								20.45	<30dBm	Pass

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

Product	:	LCD Monitor
Test Item	:	Peak Power Output Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band)

	Eraguanay		F	For diffe	Peak Power	Required						
Channel No	(MHz)	15	30	45	60	90	120	135	150	15	Limit	Result
03	2422	13.04								21.15	<30dBm	Pass
06	2437	12.45	12.34	12.28	12.16	12.05	11.92	11.85	11.77	20.68	<30dBm	Pass
09	2452	13.07								20.80	<30dBm	Pass

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

Product	:	LCD Monitor
Test Item	:	Peak Power Output Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band)

			F	For diffe	Average erent Da	e Powe ata Rate	r e (Mbps	5)		Peak Power		
Channel No	Frequency (MHz)	7.2	14.4	21.7	28.9	43.3	57.8	65	72.2	7.2	Required Limit	Result
				M	easurer	nent Le	vel (dB	sm)				
149	5745	9.22								18.06	<30dBm	Pass
157	5785	9.71	9.63	9.48	9.34	9.23	9.10	8.97	8.85	18.43	<30dBm	Pass
165	5825	9.75								18.58	<30dBm	Pass

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

Product	:	LCD Monitor
Test Item	:	Peak Power Output Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 7: Transmit - 802.11n-40BW_15Mbps(5G Band)

Channel No	Frequency		F	For diffe	Average erent Da	e Powe ata Rate	r e (Mbps	s)		Peak Power	Pequired	
	(MHz)	15	30	45	60	90	120	135	150	15	Limit	Result
				Μ	easurer	nent Le	vel (dB	Sm)				
151	5755	9.23	9.14	9.02	8.92	8.82	8.71	8.61	8.50	18.03	<30dBm	Pass
159	5795	9.76								18.44	<30dBm	Pass

Note: Peak Power Output Value = Reading value on 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	Х	Loop Antenna	Teseq	HLA6120 / 26739	Jul., 2013
	Х	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2013
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2013
	Х	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2013
	Х	Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2013
	Х	Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2013
	Х	Pre-Amplifier	MITEQ	AMF-4D-180400-45-6P/ 925975	Mar., 2013
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2013
	Х	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2013
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2013
	X	Controller	QuieTek	QTK-CONTROLLER/ CTRL3	N/A
	Χ	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	Field strength	Measurement distance					
	(microvolts/meter)	(meter)					
0.009-0.490	2400/F(kHz)	300					
0.490-1.705	24000/F(kHz)	30					
1.705-30	30	30					
30-88	100	3					
88-216	150	3					
216-960	200	3					
Above 960	500	3					

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

### 4.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2009 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 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 C63.10:2009 on radiated measurement.

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

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas. The measurement is divided into the Preliminary Measurement and the Final Measurement. The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna. The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

## 4.5. Uncertainty

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

## 4.6. Test Result of Radiated Emission

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

Frequency	Correct	Reading	Measurement	Margin	Limit
	Factor	Level	Level		
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.261	47.680	50.941	-23.059	74.000
7236.000	10.650	37.190	47.840	-26.160	74.000
9648.000	13.337	37.650	50.986	-23.014	74.000
Average					
<b>Detector:</b>					
Vertical					
Peak Detector:					
4824.000	6.421	48.440	54.861	-19.139	74.000
7236.000	11.495	37.220	48.715	-25.285	74.000
9648.000	13.807	36.710	50.516	-23.484	74.000
Average					
<b>Detector:</b>					
4824.000	6.421	46.480	52.901	-1.099	54.000

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

Product	: LCD M	onitor							
Test Item	: Harmonic Radiated Emission Data								
Test Site	: No.3 OATS								
Test Mode	: Mode 1	: Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)							
Frequency	Correct	Reading	Measurement	Margin	Limit				
	Factor	Level	Level						
MHz	dB	dBuV	dBuV/m	dB	dBuV/m				
Horizontal									
Peak Detector:									
4874.000	3.038	46.310	49.347	-24.653	74.000				
7311.000	11.795	36.390	48.184	-25.816	74.000				
9748.000	12.635	37.530	50.165	-23.835	74.000				
Average									
<b>Detector:</b>									
Vertical									
Peak Detector:									
4874.000	5.812	47.930	53.742	-20.528	74.000				
7311.000	12.630	36.760	49.389	-24.611	74.000				
9748.000	13.126	37.500	50.626	-23.374	74.000				
Average									
<b>Detector:</b>									

---

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

Product	: LCD Monitor						
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 1: Transmit (802.11b 1Mbps) (2462 MHz)						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4924.000	2.858	45.640	48.497	-25.503	74.000		
7386.000	12.127	36.510	48.638	-25.362	74.000		
9848.000	12.852	37.900	50.753	-23.247	74.000		
Average							
<b>Detector:</b>							
Vertical							
Peak Detector:							
4924.000	5.521	41.870	47.390	-26.610	74.000		
7386.000	13.254	36.640	49.894	-24.106	74.000		
9848.000	13.367	37.600	50.967	-23.033	74.000		
Average							
<b>Detector:</b>							

--

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

Product	: LCD Monitor						
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 2: T	ransmit (802.11	g 6Mbps) (2412MHz	:)			
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4824.000	3.261	46.870	50.131	-23.869	74.000		
7236.000	10.650	37.110	47.760	-26.240	74.000		
9648.000	13.337	37.100	50.436	-23.564	74.000		
Average							
Detector:							
Vertical							
Peak Detector:							
4824.000	6.421	48.020	54.441	-19.559	74.000		
7236.000	11.495	36.800	48.295	-25.705	74.000		
9648.000	13.807	36.860	50.666	-23.334	74.000		
Average							
Detector:							
4824.000	6.421	34.290	40.711	-13.289	54.000		

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

Product	: LCD Monitor						
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	est Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4874.000	3.038	43.420	46.457	-27.543	74.000		
7311.000	11.795	36.360	48.154	-25.846	74.000		
9748.000	12.635	37.480	50.115	-23.885	74.000		
Average							
Detector:							
Vertical							
Peak Detector:							
4874.000	5.812	47.290	53.101	-20.899	74.000		
7311.000	12.630	35.840	48.469	-25.531	74.000		
9748.000	13.126	38.100	51.226	-22.774	74.000		
Average							
Detector:							

---

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

Product	: LCD Monitor						
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 2:	Transmit (802.11	g 6Mbps) (2462 MH	z)			
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4924.000	2.858	43.420	46.277	-27.723	74.000		
7386.000	12.127	35.700	47.828	-26.172	74.000		
9848.000	12.852	36.490	49.343	-24.657	74.000		
Average							
<b>Detector:</b>							
Vertical							
Peak Detector:							
4924.000	5.521	47.170	52.690	-21.310	74.000		
7386.000	13.254	36.380	49.634	-24.366	74.000		
9848.000	13.367	37.570	50.937	-23.063	74.000		
Average							
<b>Detector:</b>							

--

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

Product	: LCD M	onitor						
Test Item	: Harmon	: Harmonic Radiated Emission Data						
Test Site	: No.3 OA	: No.3 OATS						
Test Mode	: Mode 3	: Mode 3: Transmit - 802.11a 6Mbps (5745 MHz)						
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
11490.000	17.106	37.100	54.207	-19.793	74.000			
Average								
<b>Detector:</b>								
11490.000	17.106	23.660	40.767	-13.233	54.000			
Vertical								
Peak Detector:								
11490.000	18.034	35.480	53.515	-20.485	74.000			
Average								
<b>Detector:</b>								

=

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

Product	: LCD M	onitor						
Test Item	: Harmon	: Harmonic Radiated Emission Data						
Test Site	: No.3 OA	ATS						
Test Mode	: Mode 3	: Transmit - 802.1	1a 6Mbps (5785 MHz	z)				
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
11570.000	16.809	35.340	52.149	-21.851	74.000			
Average								
<b>Detector:</b>								
Vertical								
Peak Detector:								
11570.000	17.698	34.750	52.448	-21.552	74.000			
Average								
<b>Detector:</b>								

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

Product	: LCD Monitor							
Test Item	: Harmonic Radiated Emission Data							
Test Site	: No.3 OATS							
Test Mode	: Mode 3: Transmit - 802.11a 6Mbps (5825 MHz)							
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
11650.000	16.158	34.300	50.458	-23.542	74.000			
Average								
<b>Detector:</b>								
Vertical								
Peak Detector:								
11650.000	17.274	34.620	51.895	-22.105	74.000			
Average								
<b>Detector:</b>								

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

Product	: LCD Monitor							
Test Item	: Harmonic Radiated Emission Data							
Test Site	: No.3 OATS							
Test Mode	: Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band) (2412MHz)							
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
Peak Detector:								
4824.000	3.261	47.780	51.041	-22.959	74.000			
7236.000	10.650	37.180	47.830	-26.170	74.000			
9648.000	13.337	36.720	50.056	-23.944	74.000			
Average								
<b>Detector:</b>								
Vertical								
Peak Detector:								
4824.000	6.421	48.790	55.211	-18.789	74.000			
7236.000	11.495	37.290	48.785	-25.215	74.000			
9648.000	13.807	36.890	50.696	-23.304	74.000			
Average								
Detector:								
4824.000	6.421	34.290	40.711	-13.289	54.000			

- 1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- 3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
- 4. Measurement Level = Reading Level + Correct Factor.
- 5. Correct Factor = Antenna factor + Cable loss Amplifier gain.
- 6. The average measurement was not performed when the peak measured data under the limit of average detection.
- 7. The emission levels of other frequencies are very lower than the limit and not show in test report.
| Product          | : LCD Monitor                     |         |             |         |        |  |  |
|------------------|-----------------------------------|---------|-------------|---------|--------|--|--|
| Test Item        | : Harmonic Radiated Emission Data |         |             |         |        |  |  |
| Test Site        | : No.3 OATS                       |         |             |         |        |  |  |
| Test Mode        | : Mode 4                          | ' MHz)  |             |         |        |  |  |
|                  |                                   |         |             |         |        |  |  |
| Frequency        | Correct                           | Reading | Measurement | Margin  | Limit  |  |  |
|                  | Factor                            | Level   | Level       |         |        |  |  |
| MHz              | dB                                | dBuV    | dBuV/m      | dB      | dBuV/m |  |  |
| Horizontal       |                                   |         |             |         |        |  |  |
| Peak Detector:   |                                   |         |             |         |        |  |  |
| 4874.000         | 3.038                             | 45.280  | 48.317      | -25.683 | 74.000 |  |  |
| 7311.000         | 11.795                            | 36.110  | 47.904      | -26.096 | 74.000 |  |  |
| 9748.000         | 12.635                            | 36.950  | 49.585      | -24.415 | 74.000 |  |  |
| Average          |                                   |         |             |         |        |  |  |
| <b>Detector:</b> |                                   |         |             |         |        |  |  |
|                  |                                   |         |             |         |        |  |  |
| Vertical         |                                   |         |             |         |        |  |  |
| Peak Detector:   |                                   |         |             |         |        |  |  |
| 4874.000         | 5.812                             | 47.910  | 53.721      | -20.279 | 74.000 |  |  |
| 7311.000         | 12.630                            | 36.390  | 49.019      | -24.981 | 74.000 |  |  |
| 9748.000         | 13.126                            | 37.660  | 50.786      | -23.214 | 74.000 |  |  |
| Average          |                                   |         |             |         |        |  |  |
| Detector:        |                                   |         |             |         |        |  |  |

--

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

Product	: LCD Monitor						
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band) (2462 MHz)						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4924.000	2.858	43.890	46.747	-27.253	74.000		
7386.000	12.127	35.980	48.108	-25.892	74.000		
9848.000	12.852	37.210	50.063	-23.937	74.000		
Average							
<b>Detector:</b>							
Vertical							
<b>Peak Detector:</b>							
4924.000	5.521	47.690	53.210	-20.790	74.000		
7386.000	13.254	36.110	49.364	-24.636	74.000		
9848.000	13.367	36.930	50.297	-23.703	74.000		
Average							
<b>Detector:</b>							

---

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

Product	: LCD Monitor						
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 5:	Transmit - 802.1	1n-40BW_15Mbps(2	.4G Band) (2422)	MHz)		
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4844.000	3.171	42.640	45.811	-28.189	74.000		
7266.000	11.162	36.900	48.062	-25.938	74.000		
9688.000	12.964	37.210	50.175	-23.825	74.000		
Average							
<b>Detector:</b>							
Vertical							
Peak Detector:							
4844.000	6.178	44.020	50.198	-23.802	74.000		
7266.000	11.982	36.760	48.742	-25.258	74.000		
9688.000	13.507	36.730	50.238	-23.762	74.000		
Average							
<b>Detector:</b>							

--

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

Product	: LCD Monitor						
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS de : Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band) (2437 MHz)						
Test Mode							
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4874.000	3.038	42.880	45.917	-28.083	74.000		
7311.000	11.795	36.210	48.004	-25.996	74.000		
9748.000	12.635	37.540	50.175	-23.825	74.000		
Average							
Detector:							
Vertical							
Peak Detector:							
4874.000	5.812	45.630	51.441	-22.559	74.000		
7311.000	12.630	36.780	49.409	-24.591	74.000		
9748.000	13.126	37.740	50.866	-23.134	74.000		
Average							
<b>Detector:</b>							

--

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

Product	: LCD Monitor						
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band) (2452 MHz)						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
4904.000	2.914	40.460	43.375	-30.625	74.000		
7356.000	11.995	36.630	48.624	-25.376	74.000		
9808.000	12.475	36.920	49.395	-24.605	74.000		
Average							
<b>Detector:</b>							
Vertical							
Peak Detector:							
4904.000	5.530	42.620	48.151	-25.849	74.000		
7356.000	13.005	35.920	48.924	-25.076	74.000		
9808.000	12.901	37.090	49.991	-24.009	74.000		
Average							
<b>Detector:</b>							

---

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

Product	: LCD M	onitor					
Test Item	Test Item:Harmonic Radiated Emission DataTest Site:No.3 OATS						
Test Site							
Test Mode	: Mode 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band) (5745MHz)						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
11490.000	17.106	36.430	53.537	-20.463	74.000		
Average							
<b>Detector:</b>							
Vertical							
Peak Detector:							
11490.000	18.034	35.900	53.935	-20.065	74.000		
Average							
Detector:							

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

Product	: LCD Me	onitor					
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band) (5785 MHz)						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
11570.000	16.809	36.270	53.079	-20.921	74.000		
Average							
<b>Detector:</b>							
Vertical							
Peak Detector:							
11570.000	17.698	35.310	53.008	-20.992	74.000		
Average							
Detector:							

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

Product	: LCD M	onitor					
Test Item	: Harmonic Radiated Emission Data						
Test Site	e : No.3 OATS						
Test Mode	: Mode 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band) (5825 MHz)						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
11650.000	16.158	35.890	52.048	-21.952	74.000		
Average							
<b>Detector:</b>							
Vertical							
Peak Detector:							
11650.000	17.274	34.980	52.255	-21.745	74.000		
Average							
<b>Detector:</b>							

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

Product	: LCD M	onitor					
Test Item	: Harmonic Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 7	: Transmit - 802.1	1n-40BW_15Mbps(5	G Band) (5755 M	IHz)		
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
11510.000	17.124	34.700	51.824	-22.176	74.000		
Average							
<b>Detector:</b>							
Vertical							
Peak Detector:							
11510.000	18.081	34.080	52.161	-21.839	74.000		
Average							
<b>Detector:</b>							

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

Product	: LCD M	onitor					
Test Item	Test Item:Harmonic Radiated Emission DataTest Site:No.3 OATSTest Mode:Mode 7: Transmit - 802.11n-40BW_15Mbps(5G Band) (5795 MHz)						
Test Site							
Test Mode							
Frequency	Correct	Reading	Measurement	Margin	Limit		
1	Factor	Level	Level	6			
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
Peak Detector:							
11590.000	16.701	34.530	51.230	-22.770	74.000		
Average							
Detector:							
Vertical							
Peak Detector:							
11590.000	17.567	35.060	52.626	-21.374	74.000		
Average							
Detector:							

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

Product	: LCD M	onitor						
Test Item	: General Radiated Emission Data							
Test Site	: No.3 OATS							
Test Mode	: Mode 1	Transmit (802.11	b 1Mbps) (2437 MH	z)				
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
105.660	-6.673	39.368	32.695	-10.805	43.500			
256.980	-5.073	43.091	38.018	-7.982	46.000			
485.900	-0.804	40.763	39.959	-6.041	46.000			
600.360	3.977	36.560	40.537	-5.463	46.000			
753.620	4.047	30.101	34.148	-11.852	46.000			
961.200	6.450	27.076	33.526	-20.474	54.000			
Vertical								
109.540	-0.418	35.254	34.836	-8.664	43.500			
256.980	-7.573	36.284	28.711	-17.289	46.000			
400.540	-5.156	39.457	34.302	-11.698	46.000			
674.080	-0.501	31.542	31.041	-14.959	46.000			
800.180	2.801	31.206	34.007	-11.993	46.000			
961.200	7.260	26.259	33.519	-20.481	54.000			

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

Product	: LCD Monitor						
Test Item	: General Radiated Emission Data						
Test Site	: No.3 OATS						
Test Mode	: Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)						
Frequency	Correct	Reading	Measurement	Margin	Limit		
	Factor	Level	Level				
MHz	dB	dBuV	dBuV/m	dB	dBuV/m		
Horizontal							
107.600	-7.058	38.005	30.947	-12.553	43.500		
256.980	-5.073	40.802	35.729	-10.271	46.000		
600.360	3.977	35.301	39.278	-6.722	46.000		
674.080	2.799	38.397	41.196	-4.804	46.000		
709.000	3.458	35.099	38.557	-7.443	46.000		
961.200	6.450	27.628	34.078	-19.922	54.000		
Vertical							
127.000	-4.087	35.545	31.458	-12.042	43.500		
256.980	-7.573	39.441	31.868	-14.132	46.000		
600.360	-2.833	36.046	33.213	-12.787	46.000		
753.620	3.187	29.498	32.685	-13.315	46.000		
901.060	3.331	26.955	30.286	-15.714	46.000		
961.200	7.260	26.263	33.523	-20.477	54.000		

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

Product	: LCD Monitor							
Test Item	: General Radiated Emission Data							
Test Site	: No.3 OATS							
Test Mode	: Mode 3	: Transmit - 802.1	la 6Mbps (5785MHz	)				
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
95.960	-7.820	47.264	39.444	-4.056	43.500			
284.140	-4.894	40.784	35.890	-10.110	46.000			
522.760	1.786	34.626	36.412	-9.588	46.000			
600.360	3.977	32.349	36.326	-9.674	46.000			
800.180	5.141	31.973	37.114	-8.886	46.000			
961.200	6.450	26.143	32.593	-21.407	54.000			
Vertical								
97.900	-1.400	38.588	37.187	-6.313	43.500			
256.980	-7.573	30.898	23.325	-22.675	46.000			
460.680	-3.221	34.899	31.678	-14.322	46.000			
522.760	-0.334	32.706	32.372	-13.628	46.000			
800.180	2.801	31.948	34.749	-11.251	46.000			
965.080	7.932	22.390	30.322	-23.678	54.000			

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

Product	: LCD Monitor							
Test Item	: General Radiated Emission Data							
Test Site	: No.3 OATS							
Test Mode	: Mode 4	: Transmit - 802.1	1n-20BW_7.2Mbps(2	2.4G Band) (2437	MHz)			
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
107.600	-7.058	39.493	32.435	-11.065	43.500			
256.980	-5.073	39.441	34.368	-11.632	46.000			
328.760	-4.609	38.992	34.383	-11.617	46.000			
520.820	1.762	37.240	39.002	-6.998	46.000			
753.620	4.047	29.498	33.545	-12.455	46.000			
930.160	7.187	26.682	33.869	-12.131	46.000			
Vertical								
107.600	-0.318	34.585	34.267	-9.233	43.500			
353.980	-3.652	38.458	34.806	-11.194	46.000			
400.540	-5.156	39.201	34.046	-11.954	46.000			
674.080	-0.501	33.256	32.755	-13.245	46.000			
800.180	2.801	30.876	33.677	-12.323	46.000			
930.160	6.477	25.840	32.317	-13.683	46.000			

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

: LCD Monitor							
: General Radiated Emission Data							
: No.3 OATS							
: Mode 5:	Transmit - 802.11	In-40BW_15Mbps(2	.4G Band) (2437	MHz)			
Correct	Reading	Measurement	Margin	Limit			
Factor	Level	Level					
dB	dBuV	dBuV/m	dB	dBuV/m			
-6.673	38.296	31.623	-11.877	43.500			
-3.655	36.402	32.747	-13.253	46.000			
3.977	35.841	39.818	-6.182	46.000			
3.458	34.125	37.583	-8.417	46.000			
5.591	28.147	33.738	-12.262	46.000			
6.450	27.360	33.810	-20.190	54.000			
-0.418	34.287	33.869	-9.631	43.500			
-3.652	35.351	31.699	-14.301	46.000			
-0.517	29.632	29.115	-16.885	46.000			
-0.501	31.672	31.171	-14.829	46.000			
2.801	29.820	32.621	-13.379	46.000			
8.191	24.161	32.352	-21.648	54.000			
	<ul> <li>LCD Mo</li> <li>General</li> <li>No.3 OA</li> <li>Mode 5:</li> <li>Correct</li> <li>Factor</li> <li>dB</li> </ul> -6.673 <ul> <li>-3.655</li> </ul> 3.977 <ul> <li>3.458</li> <li>5.591</li> <li>6.450</li> </ul> -0.418 <ul> <li>-3.652</li> <li>-0.517</li> <li>-0.501</li> <li>2.801</li> <li>8.191</li> </ul>	<ul> <li>LCD Monitor</li> <li>General Radiated Emission</li> <li>No.3 OATS</li> <li>Mode 5: Transmit - 802.113</li> <li>Correct Reading</li> <li>Factor Level</li> <li>dB dBuV</li> <li>-6.673 38.296</li> <li>-3.655 36.402</li> <li>3.977 35.841</li> <li>3.458 34.125</li> <li>5.591 28.147</li> <li>6.450 27.360</li> <li>-0.418 34.287</li> <li>-3.652 35.351</li> <li>-0.517 29.632</li> <li>-0.501 31.672</li> <li>2.801 29.820</li> <li>8.191 24.161</li> </ul>	<ul> <li>LCD Monitor</li> <li>General Radiated Emission Data</li> <li>No.3 OATS</li> <li>Mode 5: Transmit - 802.11n-40BW_15Mbps(2</li> <li>Correct Reading Measurement</li> <li>Factor Level Level</li> <li>dB dBuV dBuV/m</li> <li>-6.673 38.296 31.623</li> <li>-3.655 36.402 32.747</li> <li>3.977 35.841 39.818</li> <li>3.458 34.125 37.583</li> <li>5.591 28.147 33.738</li> <li>6.450 27.360 33.810</li> <li>-0.418 34.287 33.869</li> <li>-3.652 35.351 31.699</li> <li>-0.517 29.632 29.115</li> <li>-0.501 31.672 31.171</li> <li>2.801 29.820 32.621</li> <li>8.191 24.161 32.352</li> </ul>	<ul> <li>LCD Monitor</li> <li>General Radiated Emission Data</li> <li>No.3 OATS</li> <li>Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band) (2437</li> <li>Correct Reading Measurement Margin</li> <li>Factor Level Level</li> <li>dB dBuV dBuV/m dB</li> <li>-6.673 38.296 31.623 -11.877</li> <li>-3.655 36.402 32.747 -13.253</li> <li>3.977 35.841 39.818 -6.182</li> <li>3.458 34.125 37.583 -8.417</li> <li>5.591 28.147 33.738 -12.262</li> <li>6.450 27.360 33.810 -20.190</li> <li>-0.418 34.287 33.869 -9.631</li> <li>-3.652 35.351 31.699 -14.301</li> <li>-0.517 29.632 29.115 -16.885</li> <li>-0.501 31.672 31.171 -14.829</li> <li>2.801 29.820 32.621 -13.379</li> <li>8.191 24.161 32.352 -21.648</li> </ul>			

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

Product	: LCD Monitor							
Test Item	: General Radiated Emission Data							
Test Site	: No.3 OATS							
Test Mode	: Mode 6	: Transmit - 802.1	1n-20BW_7.2Mbps(5	5G Band) (5785 N	/IHz)			
			- 1 <	, ,	,			
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
97.900	-7.650	47.333	39.682	-3.818	43.500			
256.980	-5.073	41.237	36.164	-9.836	46.000			
522.760	1.786	33.405	35.191	-10.809	46.000			
600.360	3.977	31.860	35.837	-10.163	46.000			
800.180	5.141	31.376	36.517	-9.483	46.000			
961.200	6.450	25.057	31.507	-22.493	54.000			
Vertical								
97.900	-1.400	38.537	37.136	-6.364	43.500			
256.980	-7.573	31.491	23.918	-22.082	46.000			
522.760	-0.334	32.994	32.660	-13.340	46.000			
617.820	-2.327	33.776	31.449	-14.551	46.000			
800.180	2.801	32.666	35.467	-10.533	46.000			
961.200	7.260	24.385	31.645	-22.355	54.000			

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

Product	: LCD Monitor							
Test Item	: General Radiated Emission Data							
Test Site	: No.3 OATS							
Test Mode	: Mode 7	: Transmit - 802.1	1n-40BW_15Mbps(5	G Band) (5795M	Hz)			
Frequency	Correct	Reading	Measurement	Margin	Limit			
	Factor	Level	Level					
MHz	dB	dBuV	dBuV/m	dB	dBuV/m			
Horizontal								
97.900	-7.650	46.947	39.296	-4.204	43.500			
284.140	-4.894	41.819	36.925	-9.075	46.000			
522.760	1.786	33.732	35.518	-10.482	46.000			
600.360	3.977	32.336	36.313	-9.687	46.000			
800.180	5.141	31.546	36.687	-9.313	46.000			
961.200	6.450	26.713	33.163	-20.837	54.000			
Vertical								
97.900	-1.400	38.536	37.135	-6.365	43.500			
284.140	-8.194	38.295	30.101	-15.899	46.000			
522.760	-0.334	32.384	32.050	-13.950	46.000			
617.820	-2.327	33.736	31.409	-14.591	46.000			
800.180	2.801	32.375	35.176	-10.824	46.000			
961.200	7.260	24.614	31.874	-22.126	54.000			

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

## 5. **RF** antenna conducted test

## 5.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Х	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2013
	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

- 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.

## 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 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

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

Note: The test pattern is synthesized by multiple of the frequency range.

# 5.5. Uncertainty

The measurement uncertainty Conducted is defined as  $\pm 1.27$ dB

# 5.6. Test Result of RF antenna conducted test

Product	:	LCD Monitor
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	:	LCD Monitor
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	:	LCD Monitor
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit - 802.11a 6Mbps

## Channel 149 (5745MHz) 30MHz -25GHz



# Channel 149 (5745MHz) 25GHz -40GHz





## Channel 157 (5785MHz) 30MHz -25GHz

## Channel 157 (5785MHz) 25GHz -40GHz



25



#### Channel 165 (5825MHz) 30MHz -25GHz

#### Channel 165 (5825MHz) 25GHz -40GHz



:	LCD Monitor
:	RF Antenna Conducted Spurious
:	No.3 OATS
:	Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band)
	: : :

## Channel 01 (2412MHz) 30MHz -25GHz



# Channel 06 (2437MHz) 30MHz -25GHz



## Channel 11 (2462MHz) 30MHz -25GHz



Product	:	LCD Monitor
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band)

# Channel 03 (2422MHz) 30MHz -25GHz



# Channel 06 (2437MHz) 30MHz -25GHz



## Channel 09 (2452MHz) 30MHz -25GHz



Product	:	LCD Monitor
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band)

## Channel 49 (5745MHz) 30MHz -25GHz



## Channel 49 (5745MHz) 25GHz -40GHz





# Channel 157 (5785MHz) 30MHz -25GHz

## Channel 157 (5785MHz) 25MHz -40GHz





# Channel 165 (5825MHz) 30MHz -25GHz

## Channel 165 (5825MHz) 25GHz -40GHz



Product	:	LCD Monitor
Test Item	:	RF Antenna Conducted Spurious
Test Site	:	No.3 OATS
Test Mode	:	Mode 7: Transmit - 802.11n-40BW_15Mbps(5G Band)

## Channel 151 (5755MHz) 30MHz -25GHz



## Channel 151 (5755MHz) 25GHz -40GHz





# Channel 159 (5795MHz) 30MHz -25GHz

# Channel 159 (5795MHz) 25GHz -40GHz



## 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., 2013	
Spectrum Analyzer		Agilent	E4407B / US39440758	Jun., 2013	
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013	
	8-WAY Power Divider	JFW	50PD-647 / 526770 0916	Apr., 2013	

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.

#### **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., 2013
	Х	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2013
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2013
		Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2013
	Х	Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2013
		Pre-Amplifier	MITEQ	AMF-4D-180400-45-6P/ 925975	Mar, 2013
	Х	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2013
		Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2013
	Х	Coaxial Cable	QuieTek	QTK-CABLE/ CAB5	Feb., 2013
	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 C63.10, 2009 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 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 C63.10:2009. on radiated measurement.

# 6.5. Uncertainty

- $\pm$  3.9 dB above 1GHz
- ± 3.8 dB below 1GHz

# 6.6. Test Result of Band Edge

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

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

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Docult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2385.400	31.492	25.822	57.313	74.00	54.00	Pass
01 (Peak)	2390.000	31.509	24.555	56.064	74.00	54.00	Pass
01 (Peak)	2413.000	31.646	71.668	103.314			Pass
01 (Average)	2386.600	31.496	15.230	46.726	74.00	54.00	Pass
01 (Average)	2390.000	31.509	13.418	44.927	74.00	54.00	Pass
01 (Average)	2411.200	31.632	67.884	99.516			Pass

**Figure Channel 01:** Horizontal (Peak) 120.0 110.0 100.0 90.0 80.0 70.0 Level(dBuV/m) 60.0 50.0 40.0 30.0 20.0 10.0 0.0 -2350,000 2380.000 2410.000 2360,000 2370,000 2390.000 Frequency (MHz) 2400.000 2420,000 2430,000 2440.00



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

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel No.	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Docult
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2385.200	30.937	24.922	55.859	74.00	54.00	Pass
01 (Peak)	2390.000	30.915	23.868	54.783	74.00	54.00	Pass
01 (Peak)	2413.000	30.956	65.761	96.717			Pass
01 (Average)	2390.000	30.915	12.440	43.355	74.00	54.00	Pass
01 (Average)	2411.200	30.944	62.065	93.009			Pass

## **Figure Channel 01:**

#### Vertical (Peak)



# Figure Channel 01:

#### Vertical (Average)



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

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel No.	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Result
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2462.900	32.026	69.637	101.663			Pass
11 (Peak)	2483.500	32.182	23.991	56.173	74.00	54.00	Pass
11 (Peak)	2518.900	32.220	30.895	63.115	74.00	54.00	
11 (Peak)	2525.700	32.189	28.987	61.175	74.00	54.00	Pass
11 (Average)	2461.100	32.013	66.023	98.036			Pass
11 (Average)	2483.500	32.182	13.165	45.347	74.00	54.00	Pass
11 (Average)	2487.900	32.216	14.116	46.331	74.00	54.00	Pass



#### Horizontal (Peak)





Horizontal (Average)



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

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps)

Channel Na	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Dogult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2460.900	31.283	64.380	95.663			Pass
11 (Peak)	2483.500	31.435	23.571	55.006	74.00	54.00	Pass
11 (Peak)	2509.700	31.546	25.618	57.164	74.00	54.00	Pass
11 (Average)	2461.100	31.285	60.796	92.080			Pass
11 (Average)	2483.500	31.435	12.437	43.872	74.00	54.00	Pass

## Figure Channel 11:

### Vertical (Peak)





## Vertical (Average)



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

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Dogult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	31.509	34.960	66.469	74.00	54.00	Pass
01 (Peak)	2414.400	31.657	72.920	104.577			Pass
01 (Average)	2390.000	31.509	16.364	47.873	74.00	54.00	Pass
01 (Average)	2415.000	31.661	63.820	95.481			Pass

### Figure Channel 01:

## Horizontal (Peak)





Horizontal (Average)



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

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Desult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	30.915	29.856	60.771	74.00	54.00	Pass
01 (Peak)	2405.200	30.926	67.606	98.532			Pass
01 (Average)	2390.000	30.915	14.022	44.937	74.00	54.00	Pass
01 (Average)	2405.200	30.926	58.576	89.502			Pass

### Figure Channel 01:

#### Vertical (Peak)



#### Figure Channel 01:

#### Vertical (Average)



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

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Decult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2464.300	32.037	71.213	103.250			Pass
11 (Peak)	2483.500	32.182	37.538	69.720	74.00	54.00	Pass
11 (Average)	2468.300	32.067	62.096	94.163			Pass
11 (Average)	2483.500	32.182	19.479	51.661	74.00	54.00	Pass

#### **Figure Channel 11:**

### Horizontal (Peak)





## Horizontal (Average)



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

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps)

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Docult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2467.500	31.327	65.722	97.049			Pass
11 (Peak)	2483.500	31.435	33.039	64.474	74.00	54.00	Pass
11 (Average)	2468.500	31.334	56.770	88.104			Pass
11 (Average)	2483.500	31.435	16.026	47.461	74.00	54.00	Pass

### Figure Channel 11:

### Vertical (Peak)





## Vertical (Average)



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

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band)

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Dogult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	31.509	38.708	70.217	74.00	54.00	Pass
01 (Peak)	2415.200	31.662	73.194	104.857			Pass
01 (Average)	2390.000	31.509	17.996	49.505	74.00	54.00	Pass
01 (Average)	2406.400	31.602	63.800	95.401			Pass

### **Figure Channel 01:**

#### Horizontal (Peak)







- 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
- 2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
- Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. 3.
- 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	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band)

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Decult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
01 (Peak)	2390.000	30.915	33.002	63.917	74.00	54.00	Pass
01 (Peak)	2406.600	30.930	67.362	98.292			Pass
01 (Average)	2390.000	30.915	14.744	45.659	74.00	54.00	Pass
01 (Average)	2406.800	30.931	57.969	88.900			Pass

#### Figure Channel 01:

## Vertical (Peak)



#### Figure Channel 01:

#### Vertical (Average)



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

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	•	Mode 4: Transmit - 802.11n-20BW 7.2Mbps(2.4G Band)

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Dogult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2465.100	32.043	70.462	102.505			Pass
11 (Peak)	2483.500	32.182	40.875	73.057	74.00	54.00	Pass
11 (Average)	2467.700	32.063	61.172	93.234			Pass
11 (Average)	2483.500	32,182	21.159	53.341	74.00	54.00	Pass

### **Figure Channel 11:**

Horizontal (Peak)





Horizontal (Average)



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

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band)

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Dogult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
11 (Peak)	2465.300	31.313	65.634	96.947			Pass
11 (Peak)	2483.500	31.435	35.919	67.354	74.00	54.00	Pass
11 (Average)	2467.300	31.326	56.362	87.688			Pass
11 (Average)	2483.500	31.435	17.177	48.612	74.00	54.00	Pass

### **Figure Channel 11:**

## Vertical (Peak)



### **Figure Channel 11:**

#### Vertical (Average)



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

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW 15Mbps(2.4G Band)

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Docult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
03 (Peak)	2387.200	31.498	41.508	73.006	74.00	54.00	Pass
03 (Peak)	2389.200	31.506	40.444	71.950	74.00	54.00	Pass
03 (Peak)	2390.000	31.509	37.779	69.288	74.00	54.00	Pass
03 (Peak)	2414.200	31.655	69.894	101.549			Pass
03 (Average)	2390.000	31.509	22.073	53.582	74.00	54.00	Pass
03 (Average)	2416.600	31.674	60.415	92.088			Pass

### Figure Channel 03:

### Horizontal (Peak)





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



Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band)

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Docult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
03 (Peak)	2383.600	30.945	33.633	64.578	74.00	54.00	Pass
03 (Peak)	2388.800	30.921	34.862	65.783	74.00	54.00	Pass
03 (Peak)	2390.000	30.915	33.234	64.149	74.00	54.00	Pass
03 (Peak)	2414.200	30.964	64.413	95.377			Pass
03 (Average)	2390.000	30.915	17.562	48.477	74.00	54.00	Pass
03 (Average)	2406.400	30.930	55.101	86.031			Pass

### Figure Channel 03:

#### Vertical (Peak)



### **Figure Channel 03:**

#### Vertical (Average)



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

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band)

	Frequency	Correct Factor	Reading Level	<b>Emission Level</b>	Peak Limit	Average Limit	Decult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
09 (Peak)	2444.100	31.884	69.203	101.086			Pass
09 (Peak)	2483.500	32.182	33.444	65.626	74.00	54.00	Pass
09 (Peak)	2488.300	32.218	35.623	67.841	74.00	54.00	Pass
09 (Average)	2446.500	31.902	59.657	91.559			Pass
09 (Average)	2483.500	32.182	19.493	51.675	74.00	54.00	Pass

#### Figure Channel 09:

#### Horizontal (Peak)





Horizontal (Average)



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

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW 15Mbps(2.4G Band)

	Frequency	Correct Factor	Reading Level	Emission Level	Peak Limit	Average Limit	Docult
Channel No.	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dBuV/m)	Result
09 (Peak)	2467.900	31.330	63.730	95.060			Pass
09 (Peak)	2483.500	31.435	30.090	61.525	74.00	54.00	Pass
09 (Peak)	2487.900	31.465	32.468	63.933	74.00	54.00	Pass
09 (Average)	2467.300	31.326	54.771	86.097			Pass
09 (Average)	2483.500	31.435	18.170	49.605	74.00	54.00	Pass

Figure Channel 09:

#### Vertical (Peak)



# Figure Channel 09:

### Vertical (Average)



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

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit - 802.11a 6Mbps

Test Frequency	Measurement Level	Limit	Result
(MHz)	$\Delta$ (dB)	$\Delta$ (dB)	
5745	42.92	>20	PASS

Agilent Spec	ctrum Ana	lyzer - Swe	pt SA								
(XI RL Center	Freq 5	50 Ω 5.72500	AC   0000 GH	lz			Avg Typ	ALIGNAUTO E: Log-Pwr	03:04:32F	M Sep 07, 2013 CE 1 2 3 4 5 6	Frequency
			PI IF(	NO: Fast G Gain:Low	#Atten: 30	dB		Mł	(r2 5.72	5 0 GHz	Auto Tune
10 dB/div Log 10.0	Ref	20.00 d	Bm				1		-40.		Center Freq 5.725000000 GHz
-20.0 -30.0 -40.0						2-			Manuel 1	-25.56 dBm	<b>Start Freq</b> 5.675000000 GHz
-50.0 -60.0	Harr barring	meternohi	her heren we	been nation and t	wanneeder					Monoralized	<b>Stop Freq</b> 5.775000000 GHz
Center : #Res BV	5.72500 N 100	) GHz (Hz	×	#VB\	₩ 1.0 MHz	FUNC	TION FUI	#Sweep	Span 1 500 ms (	00.0 MHz (1001 pts) IN VALUE	<b>CF Step</b> 10.000000 MHz <u>Auto</u> Man
1 N 2 N 3 4 5 6 7 8 9 10 14	1 f 1 f		5.725	2 GHz 0 GHz	-5.56 dE -48.48 dE	3m 3m					Freq Offset 0 Hz
12 MSG								STATUS	s		

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit - 802.11a 6Mbps

Test Frequency	Measurement Level	Limit	Result
(MHz)	$\Delta$ (dB)	$\Delta$ (dB)	
5825	49.97	>20	PASS

MRL         RF         SO 2         AC         SENSE:NT         ALIONAUTO         D333PM 5ep07, 2013         Frequency           Center Freq 5.850000000 GHz         Trig: Free Run         Avg Type: Log-Pwr         Trig: SO 0 GHz         Trig: Free Run         Trig: Free Run         Trig: Free Run         Trig: SO 0 GHz         Auto Tune           10 dB/div         Ref 20.00 dBm         -56.01 dBm         -56.01 dBm         -56.01 dBm         Center Freq           10 dB/div         Ref 20.00 dBm         -28.04 dBm         -38.04 dBm         -56.00 0 GHz         Start Freq           200         -300         -40.0         -28.04 dBm         -28.04 dBm         Start Freq           40.0         -40.0         -40.0         -40.0         -28.04 dBm         Start Freq           700         -40.0         -40.0         -40.0         -40.0         -28.04 dBm         Start Freq           60.0         -40.0 <th>Agilent Spe</th> <th>ectrum A</th> <th>nalyzer - Swe</th> <th>ept SA</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	Agilent Spe	ectrum A	nalyzer - Swe	ept SA								
PN0: Fast       Tig: Free Run #Atten: 30 dB       Mkr2 5.850 0 GHz       Auto Tune         10 dB/div       Ref 20.00 dBm       -56.01 dBm       -56.01 dBm       -56.01 dBm         0 dB/div       Ref 20.00 dBm       -56.01 dBm       -56.01 dBm       -56.01 dBm         0 d0       1       -       -       -56.01 dBm       -56.01 dBm         -20.0       -       -       -       -       -56.01 dBm       -56.01 dBm         -20.0       -       -       -       -       -       -56.01 dBm       -56.00 GHz         -20.0       - <td< td=""><td>Center</td><td>Freq</td><td>F 50 Ω 5.85000</td><td>AC   10000 GH</td><td>z</td><td></td><td></td><td>Avg Typ</td><td>ALIGNAUTO e: Log-Pwr</td><td>03:05:33P</td><td>M Sep 07, 2013</td><td>Frequency</td></td<>	Center	Freq	F 50 Ω 5.85000	AC   10000 GH	z			Avg Typ	ALIGNAUTO e: Log-Pwr	03:05:33P	M Sep 07, 2013	Frequency
Log         1         Center Freq           0.00         1	10 dB/div	PNO: Fast C Trig: Free Run IFGain:Low #Atten: 30 dB Mkr2 5.850 0 GHz -56.01 dBm								Auto Tune		
200	Log 10.0		por	1								Center Freq 5.85000000 GHz
Stop Freq 5.90000000 GHz           Center 5.85000 GHz         System 100.0 MHz         Stop Freq 5.90000000 GHz           Res BW 100 KHz         #VBW 1.0 MHz         #Sweep 500 ms (1001 pts)           1         1         f         5.822 2 GHz         6.04 dBm           2         N         1         f         5.8250 0 GHz         Function violation           2         N         1         f         5.822 2 GHz         6.04 dBm         Function violation           3         3         6         6         6         6         6         6         7           8         9         10         10         10	-20.0 -30.0 -40.0					W lab.	2				-26.04 dBm	<b>Start Freq</b> 5.800000000 GHz
Center 5.85000 GHz         #VBW 1.0 MHz         Span 100.0 MHz         CF Step 10.00000 MHz           #Res BW 100 kHz         #VBW 1.0 MHz         #Sweep 500 ms (1001 pts)         10.00000 MHz           1         N         1         f         5.822 2 GHz         -5.04 dBm         10.00000 MHz           2         N         1         f         5.822 2 GHz         -5.04 dBm         10.00000 MHz           3         1         5.850 0 GHz         -5.04 dBm         10.00000 MHz         Function value           4         -         -         -         -         -         -           6         -         -         -         -         -         -         -           7         -         -         -         -         -         -         0 Hz         -           9         -         -         -         -         -         -         -         -         0 Hz         -         -         0 Hz         -         -         -         -         0 Hz         -         0 Hz         -         -         0 Hz         - <td>-50.0 -60.0</td> <td></td> <td></td> <td></td> <td></td> <td>Contraction of the Contraction o</td> <td>Hend Marked Markow</td> <td>รูป-1-1-1-1814 </td> <td>and his and the</td> <td></td> <td>finis on the second</td> <td><b>Stop Freq</b> 5.90000000 GHz</td>	-50.0 -60.0					Contraction of the Contraction o	Hend Marked Markow	รูป-1-1-1-1814 	and his and the		finis on the second	<b>Stop Freq</b> 5.90000000 GHz
INKE         NOUD         INCLOSE         X         Y         FORCHON         FORCHON         FORCHON WOHH         FORCHON VALUE           1         N         1         f         5.8222 GHz         -50.4 dBm         -<	Center 5.85000 GHz Span 100.0 MHz CF Ster #Res BW 100 kHz #VBW 1.0 MHz #Sweep 500 ms (1001 pts)								CF Step 10.000000 MHz			
	Mile         Model           1         N           2         N           3         -           4         -           5         -           6         -           7         -           8         -           9         -           10         -           11         -           12         -			× 5.822 : 5.850 (	2 GHz	-6.04 dE -56.01 dE						Freq Offset 0 Hz

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band)

Test Frequency	Measurement Level	Limit	Result
(MHz)	$\Delta$ (dB)	$\Delta$ (dB)	
5745	40.71	>20	PASS

Mark         RF         S0.Q         AC         SENSE:INT         ALIGNAUTO         0300:19PM Sep07,2013         Freque           Center Freq 5.725000000 GHz         PN0: Fast         Trig: Free Run         Avg Type: Log-Pwr         TRACE 12.3.4.5.6         Freque           PN0: Fast         Trig: Free Run         Mkr2 5.725.0 GHz         Autono         0.00         Autono         Center Freq 5.725.0 GHz         Autono         Center Freq 5.725.0 GHz         Set 5.725.0 GHz	to Tune
PN0: Fast Ing. Free Run Ing.	to Tune er Freq
Log 10.0 0.00 -10.0	: <b>er Freq</b> 000 GHz
-200 -24 93 dBm 5ta -30.0 -40.0 -24 93 dBm 5ta 5.675000	a <b>rt Freq</b> 000 GHz
50.0	o <b>p Freq</b> 000 GHz
Center 5.72500 GHz Span 100.0 MHz #VBW 1.0 MHz #Sweep 500 ms (1001 pts) 10.000	F Step 000 MHz Man
Interference     X     Y     FORCTION     FORCTION     FORCTION VALUE     FERENCE       1     N     1     f     5.742 1 GHz     -4.93 dBm	0 Hz

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band)

Test Frequency	Measurement Level	Limit	Result
(MHz)	$\Delta$ (dB)	$\Delta$ (dB)	
5825	48.88	>20	PASS

UIL         RF         S0.0         Center Freq 5.850000000 GHz         EssEssmin         Augraphie U.g.Pwr         Trace [12:3:5 G         Frequency           Odd         PN0: Fast IF Gain:Low         Trig: Free Run #Atten: 30 dB         Mkr2 5.850 0 GHz         Auto Tune           10 dB/div         Ref 20.00 dBm         -54.87 dBm         -54.87 dBm         Auto Tune           10 dB/div         1         -         -         -54.87 dBm         -56.850000000 GHz           10.0         -         1         -         -         -56.8500 GHz         -56.8500 GHz           20.0         -         1         -         -         -         -         -           30.0         -         1         -         -         -         -         -           40.0         -	Agile	nt Spe	ctrur	m An	alyzer - Swe	ept SA										
Pho: Fast         Ing. Free Run         Mkr2 5.850 0 GHz         Auto Tune           10 dB/div         Ref 20.00 dBm         -54.87 dBm         -54.87 dBm         -55.850 0 GHz         -55.99 dBm         -55.90 0 GHz         -55.99 dBm         -55.90 0 GHz         -55.90 0 GHz         -55.90 0 GHz         -55.99 dBm         -55.90 0 GHz	ιxµ ℝ Cer	L nter	Fre	RF eq (	50 Ω 5.85000	AC   10000 GH	lz		SEN	ISE:INT	Avg	Туре	ALIGNAUTO : Log-Pwr	03:08:53P	M Sep 07, 2013	Frequency
Log         Image: Content Frequencies         Center Frequencies           10.0         1	10 d	PRO: Fast Trig: Free Run Trig: Free Run Der JPNUNN DET PNNNN FREE RUN DET PNNN FREE RUN DET PNN FR								Auto Tune						
20.0	Log 10.0 0.00				person	1	Verlady.									Center Freq 5.85000000 GHz
Stop Freq 5.90000000 GHz           Center 5.85000 GHz         Span 100.0 MHz         CF Step 10.000000 GHz           Res BW 100 kHz         #VBW 1.0 MHz         Eunction         Function value           1         N         1         f         5.822 1 GHz         5.99 dBm           3         1         5.8500 GHz         Function         Function value         Auto           3         1         5.8500 GHz         5.99 dBm         Function value         Auto           4         1         1         5.8500 GHz         5.99 dBm         Function value         Function value           3         1         1         5.8500 GHz         5.99 dBm         Function value         Freq Offset           3         1         1         1         1         1         1         1           10         1         1         1         1         1         1         1           12         1         1         1         1         1         1         1         1	-20.0 -30.0 -40.0			01/1				Will want to		2					-25.99 dBm	Start Freq 5.80000000 GHz
Center 5.85000 GHz #Res BW 100 kHz         #VBW 1.0 MHz         Span 100.0 MHz #Sweep 500 ms (1001 pts)         CF Step 10.000000 MHz           1         N         1         f         5.822 1 GHz         5.99 dBm         Auto         Man           2         N         1         f         5.850 0 GHz         5.99 dBm         FUNCTION WIDTH         FUNCTION VALUE         Auto         Man           3         -	-50.0 -60.0 -70.0	-	with the						an all a subsection of the sub	-hatertyloon	Jurney	enenine.	uh da kapan yang man da	entronendar	and an and a start of the start	<b>Stop Freq</b> 5.90000000 GHz
Instruction         Instruction         Final Control         Final Contro         Final Control         Final Control	Cer #Re	ter sB	5.84 W 1	500 00	0 GHz kHz	~	#VE	3W 1.0	MHz		(A) (O)	EUN	#Sweep	Span 1 500 ms (	00.0 MHz 1001 pts)	CF Step 10.000000 MHz Auto Man
	1 2 3 4 5 6 7 8 9 10 11 12			f		* <u>5.822</u> 5.850	1 GHz 0 GHz	<u></u> 54	5.99 dE 1.87 dB							Freq Offset 0 Hz

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 7: Transmit - 802.11n-40BW_15Mbps(5G Band)

Test Frequency	Measurement Level	Limit	Result
(MHz)	$\Delta$ (dB)	$\Delta$ (dB)	
5755	36.75	>20	PASS

Agilent Spectrum /	nalyzer - Swept SA						
Center Frec	RF 50Ω AC 5.725000000 GH			ALIGNAUTO g Type: Log-Pwr	03:09:47 Pf TRAC	4 Sep 07, 2013 E 1 2 3 4 5 6	Frequency
10 dB/div R	ef 20.00 dBm	NO: Fast 😱 Trig: Free Gain:Low #Atten: 30	) dB	Mkr	2 5.725 -45.2	00 GHz 26 dBm	Auto Tune
Log 10.0				1			Center Freq 5.725000000 GHz
-20.0 -30.0 -40.0			2 Mur-Mui			-28.51 dBm	Start Freq 5.65000000 GHz
-50.0 -60.0	and and the stand and the second s	And the second sec				Man dan ken ken ken ken ken ken ken ken ken ke	<b>Stop Freq</b> 5.80000000 GHz
Center 5.72500 GHz Span 150.0 MHz CF St #Res BW 100 kHz #VBW 1.0 MHz #Sweep 500 ms (1001 pts)							
Mrk Nubber Hell S         1 <th1< th="">         1         <th1< th=""></th1<></th1<>	5.758 44	5 GHz	FUNCTION 3m m		FUNCTIO	NVALUE	Freq Offset 0 Hz

Product	:	LCD Monitor
Test Item	:	Band Edge
Test Site	:	No.3 OATS
Test Mode	:	Mode 7: Transmit - 802.11n-40BW_15Mbps(5G Band)

Test Frequency	Measurement Level	Limit	Result
(MHz)	$\Delta$ (dB)	$\Delta$ (dB)	
5795	46.14	>20	PASS

Agilent Spectrum Analyzer - S	igilent Spectrum Analyzer - Swept SA									
Center Freq 5.850	Ω AC	SENSE:INT AV	ALIGNAUTO g Type: Log-Pwr	03:10:36 PM Sep 07, 2013 TRACE 1 2 3 4 5 6	Frequency					
10 dB/div <b>Ref 20.0</b> 0	PN0: Fast Ting. Free Run IFGain:Low #Atten: 30 dB Mkr2 5.850 00 GHz -55.76 dBm -55.76 dBm									
10.0 0.00 -10.0					Center Freq 5.85000000 GHz					
-20.0				-29.62 dBm	Start Freq 5.775000000 GHz					
-50.0		Manada Sacada Ingenerada Ingenerada	L.S. 19. A	uliterature and an even	<b>Stop Freq</b> 5.925000000 GHz					
Center 5.85000 GHz #Res BW 100 kHz	#VBW 1.01	MHz	#Sweep	Span 150.0 MHz 500 ms (1001 pts)	CF Step 15.000000 MHz Auto Man					
NR         NUD2         FE         SL           1         N         1         f           2         N         1         f           3         -         -         -           4         -         -         -           5         -         -         -           6         -         -         -           7         -         -         -           9         -         -         -           10         -         -         -           11         -         -         -           12         -         -         -	5.798 40 GHz 9. 5.850 00 GHz -55.	62 dBm 76 dBm			Freq Offset 0 Hz					

# 7. Occupied Bandwidth

# 7.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2013
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

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.

# 7.2. Test Setup



# 7.3. Limits

The minimum bandwidth shall be at least 500 kHz.

# 7.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2009; tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

# 7.5. Uncertainty

 $\pm$  150Hz

# 7.6. Test Result of Occupied Bandwidth

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	10050	>500	Pass

# Figure Channel 1:

Agilent Sp	pectrum A	nalyzer - Swe	ept SA								
Cente	r Freq	F 50 Ω <b>2.41200</b>	AC   10000 GH	z	SEN		Avg Type	ALIGNAUTO : Log-Pwr	02:14:53 F TRAC	M May 30, 2013	Frequency
10 dB(d	PN0: Fast Free Run Ing: Free Run Bree R									Auto Tune	
				2 ml	1 Marine	Munny	3			0.05 dBm	Center Freq 2.412000000 GHz
-20.0		M	hora half	V V			Vy Vy	me Morto	MAN		<b>Start Freq</b> 2.387000000 GHz
-50.0	·Worker Y	V .								What was the	<b>Stop Freq</b> 2.437000000 GHz
Center #Res E	r 2.4120 3W 100 29 1160 50	00 GHz kHz	×	#VBW	7 300 kHz Y	FUNC	TION FUN	Sweep	Span 5 4.80 ms (	0.00 MHz 1001 pts) NVALUE	CF Step 5.000000 MHz <u>Auto</u> Man
1 N 2 N 3 N 4 5 6	1 f 1 f 1 f		2.410 00 2.405 99 2.417 10	D GHz 5 GHz D GHz	6.05 dE -0.66 dE -0.53 dE	3m 3m 3m					Freq Offset 0 Hz
7 8 9 10 11 12											
MSG								STATUS	3		<u></u>

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	10050	>500	Pass

# Figure Channel 6:

Agile	nt Spe	ctru	n An	alyzer - Swe	ept SA								
געו Cer	L nter	Fre	RF Pq 2	<u>  50 ຊ</u> 2.43700	AC   10000 GH	z		NSE:INT	Avg Ty	ALIGNAUTO pe: Log-Pwr	02:20:40 P TRAC	M May 30, 2013 <sup>CE</sup> 1 2 3 4 5 6	Frequency
10 d	PNO: Fast Trig: Free Run IFGain:Low #Atten: 30 dB Mkr2 2.430 95 GHz -0.89 dBm									Auto Tune			
Log 10.0 0.00						pul.	2 married	munny	3			-0.22 dBm	Center Freq 2.437000000 GHz
-20.0 -30.0 -40.0			-	M	Antron with					hy pho	MAR		<b>Start Freq</b> 2.412000000 GHz
-50.0 -60.0 -70.0	by the	w		<u> </u>								and the second	<b>Stop Freq</b> 2.462000000 GHz
Cer #Re	nter s B	2.4: W 1	370 00	0 GHz kHz		#VBV	/ 300 kHz	EUN		Sweep	Span 5 4.80 ms (	0.00 MHz 1001 pts)	CF Step 5.000000 MHz <u>Auto</u> Man
1 3 4 5 6 7 8 9 10 11 12	N N N		f		2.436 00 2.430 99 2.443 09	0 GHz 5 GHz 5 GHz 	5.78 df -0.89 df -0.72 df	3m 3m 3m					Freq Offset 0 Hz
MSG										STATU	3		

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	10050	>500	Pass

# Figure Channel 11:

Automic Spectrum Annuyzer Swept SA         Sense: INT         Automation         Doc:/sd-5PM May 30, 2013         Frequency           Center Freq 2.462000000 GHz IFGaint.ow         Trig: Free Run IFGaint.ow         Trig: Free Run #Atten: 30 dB         Avg Type: Log-Pwr Trace [12:3:45:6]         Frequency           0 dB/div         Ref 20.00 dBm         2         1         Avg Type: Log-Pwr         Auto Tune           10 dB/div         Ref 20.00 dBm         2         1         3         -0.68 dBm         2.462000000 GHz           10 dB/div         Ref 20.00 dBm         2         1         3         -0.68 dBm         2.462000000 GHz           20.0         30.0         40.0 <th>1-11-</th> <th></th> <th>· · · · · · · ·</th> <th> P</th> <th>-1.64</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	1-11-		· · · · · · · ·	P	-1.64								
All L         Louis Au         State Internet         State Internet         Australia         Frequency           Center Freq 2.462000000 GHz         Trig: Free Run         Avg Type: Log-Pwr         Trig: State Internet         Trig: State Internet         Trig: Free Run         Ref 2.428 20 0 GHz         Auto Tune           10 dB/div         Ref 20.00 dBm         -1.26 dBm         -1.26 dBm         Auto Tune         2.46200000 GHz         Auto Tune           10 dB/div         Ref 20.00 dBm         -1.26 dBm         -1.26 dBm         -1.26 dBm         2.46200000 GHz           10 dB/div         Ref 20.00 dBm         -1.26 dBm         -1.26 dBm         2.46200000 GHz         -1.26 dBm           20 d0         -0.00	Agrie	nt Spec		nalyzer - Swe	ept SA		CEA	ICE, IN IT		ALICALALITO	02/26/45 0	MM	1
Trig: Free Run IFGain:Low         Trig: Free Run #Atten: 30 dB         Trig: Free Run #Atten: 30 dB           Mkr2 2.456 90 GHz -1.26 dBm           10 dB/div         Ref 20.00 dBm         -1.26 dBm         Center Freq 2.46200000 GHz           10.0         200         200         300         0.680 dm         Center Freq 2.46200000 GHz           200         300         40.0         40.0         40.0         40.0         40.0           40.0         40.0         40.0         40.0         40.0         40.0         40.0           40.0	Cor	nter F	Fred	2 16200		7			Ava Tvp	e: Loa-Pwr	TRAC	E 1 2 3 4 5 6	Frequency
Mkr2 2.456 90 GHz -1.26 dBm         Auto Tune           100 100 100 100 100 100 100 100 100 100			req	2.40200	PI IFG	12 10: Fast 🕞 Gain:Low	Trig: Free #Atten: 30	eRun )dB			TYI DI		
Constraint       Constraint       Constraint       Constraint       Constraint         100       20       2       1       3       0.060 dtm       2.46200000 GHz         100       200       300       300       400	10 4		Br	£ 20.00 /	1Bm					Mkr	2 2.456	90 GHz 26 dBm	Auto Tune
200	10.00 10.00 -10.0			1 20.00 (			2 marine	A1 Murray	3			-0.68 dBm	Center Freq 2.462000000 GHz
-50.0	-20.0 -30.0 -40.0			, M	MAN	A CU A CU			V V	h www.	W When		<b>Start Freq</b> 2.437000000 GHz
Center 2.46200 GHz         #VBW 300 kHz         Span 50.00 MHz         CF Step 5.00000 MHz           #Res BW 100 kHz         #VBW 300 kHz         Sweep 4.80 ms (1001 pts)         Auto         Auto         Man           1         N         1         f         2.463 00 GHz         5.32 dBm         Function vulue         Auto         Man           3         N         1         f         2.466 90 GHz         -1.26 dBm         Auto         Man           4         1         2.468 05 GHz         -1.14 dBm         1         Auto         Man           6         1         1         1         1         1         1         0 Hz         0 Hz           9         10         1	-50.0 -60.0 -70.0	 	V-Rd ged	<u>.</u>								or normalized	<b>Stop Freq</b> 2.487000000 GHz
MARE         MODE         TEC         SCL         X         Y         FUNCTION         FUNCTION WIDTH         FUNCTION VALUE           1         N         1         f         2.463 00 GHz         5.32 dBm         FUNCTION WIDTH         FUNCTION VALUE         Auto         Man           2         N         1         f         2.466 90 GHz         -1.26 dBm         FUNCTION         FUNCTION VALUE         <	Cer #Re	nter 2 es BM	2.4620 V 100	00 GHz kHz		#VBV	V 300 kHz			Sweep	Span 5 4.80 ms (	0.00 MHz 1001 pts)	CF Step 5.000000 MHz
2         N         1         f         2.456 90 GHz         -1.26 dBm           3         N         1         f         2.468 05 GHz         -1.14 dBm         Freq Offset         0 Hz           4         -         -         -         -         0 Hz         0 Hz         0 Hz         0 Hz           5         -         -         -         -         -         0 Hz         0 Hz         0 Hz         0 Hz           8         -         -         -         -         -         -         0 Hz	MKB 1	MODE	TRC SC 1 f		× 2.463 00	) GHz	5.32 dE	FUN 3m	CTION FU	NCTION WIDTH	FUNCTIO	N VALUE	<u>Auto</u> Man
8	2 3 4 5 6 7	N	1 f		2.456 90	5 GHz	-1.26 dE -1.14 dE	3m 3m					Freq Offset 0 Hz
	8 9 10 11 12												

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	16600	>500	Pass

# Figure Channel 1:

Agilent Spect	rum Analyzer -	Swept SA												
Center F	RF 5 Freq 2.412	<sup>50 Ω</sup> AC   2000000 GH	Hz		SE:INT	Avg Type	ALIGN AUTO :: Log-Pwr	02:32:43 P TRAC	M May 30, 2013	Frequency				
10 dB/div	HUU: Fast Low #Atten: 30 dB #Atten: 30 dB Mkr2 2.403 75 GHz -4.50 dBm -4.50 dBm													
						hulle A			-3.29 dBm	Center Freq 2.412000000 GHz				
-20.0 -30.0 -40.0 <del></del>	antimore	With marker law marker	and the second sec				www.www.	William	Andrewer	<b>Start Freq</b> 2.387000000 GHz				
-50.0 -60.0 -70.0										<b>Stop Freq</b> 2.437000000 GHz				
Center 2. #Res BW	41200 GH 100 kHz	Z	#VBW	300 kHz		71011	Sweep	Span 5 4.80 ms (	0.00 MHz 1001 pts)	CF Step 5.000000 MHz Auto Man				
1 N 2 N 3 N 5 6 7	1 f 1 f 1 f	2.404 5 2.403 7 2.420 2	i0 GHz /5 GHz 20 GHz	2.71 dE -4.50 dE -3.64 dE	im im			FUNCTIO		Freq Offset 0 Hz				
8 9 10 11 12 MSG							STATUS	60						

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	16700	>500	Pass

# Figure Channel 6:

Agile	nt Spe	ctru	m An	alyzer - Swe	pt SA										
K∦ Cei	nter	Fre	RF eq 2	<u>50 Ω</u> 2.43700	AC   0000 G	Hz		SEN	ISE:INT	Avg	, Type	ALIGN AUTO : Log-Pwr	02:40:00 F	M May 30, 2013 CE 1 2 3 4 5 6	Frequency
10 0	B/div		Rei	f 20.00 d	IBm	PNO: Fast -Gain:Lov	v	#Atten: 30	#Atten: 30 dB DET NNNNN Mkr2 2.428 80 GHz -2.09 dBm						Auto Tune
Log 10.0 0.00						2 2	-1	orden the solary		h	3			-1.08 dBm	Center Freq 2.437000000 GHz
-20.0 -30.0 -40.0		why	hun	Win Minute	halemaina						20	Latra Million	hand working	Whenthermont	<b>Start Freq</b> 2.412000000 GHz
-50.0 -60.0 -70.0															<b>Stop Freq</b> 2.462000000 GHz
Cer #Re	nter es B <sup>1</sup>	2.4: W 1	370 00	0 GHz kHz	×	#V	/BW	300 kHz		UNCTION	EUN	Sweep	Span 5 4.80 ms (	0.00 MHz (1001 pts)	CF Step 5.000000 MHz <u>Auto</u> Man
1 2 3 4 5 6 7 8 9 10 11	N N N	1 1 1	f f		2.438 : 2.428 : 2.445 :	25 GHz 80 GHz 20 GHz		4.92 dE -2.09 dE -1.73 dE	3m 3m 3m						Freq Offset
12 MSG												STATUS			

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	16700	>500	Pass

# Figure Channel 11:

Agiler	nt Spec	trum /	inaly	yzer - Sw	/ept S	A			05		-			LICHAUTO	00.45.40	D1111		
	tor	Frag	- . •	16200	2 A		11-			NSE:IN		Ανα Τυ	/ne:		U2:45:42	PM May 30, 2013	-	Frequency
Cer	ller	riec	Ζ.	4020	000	00 G	PNO: E:	ast 🕞	Trig: Fre	e Run	ı		pe.	Login	1	YPE MWWWW		
						I	FGain:L	.ow	#Atten: 3	0 dB						DET P N N N N N		
														Mkr	2 2 453	3 80 GHz	1	Auto Tune
	<b>D</b> / - P · · ·				40.										-3	42 dBm	11	
Log	Bialv	ĸ	<u>er</u> .	20.00		1				-					<b>`</b>	.42 abm		
10.0											1							Contor From
								2		$  \rangle$			3					Center Freq
0.00			-		-			-	whichout	hand	Alexhad	holwilly	-			-3.26 dBm		2.462000000 GHz
-10.0			+		-					<b>U</b>		$\left  \right $	-					
-20.0							- And					<u> </u>	Se.					
20.0						www	M.						1	the market wards				Start Freq
-30.0					to the	ur.								1 March	WYYNU			2.437000000 GHz
-40.0		-Novell	and a	V-VV-	_								_		. white	Ni Contra		
-50.0	r++W	A														wwwww		
00.0																		Stop Fred
-60.0																		
-70.0			+		_								_					2.487000000 GHZ
Cen	nter 2	2.462	00	GHz											Span	50.00 MHz		CE Sten
#Re	s BV	V 10	0 k	Hz			#	¢VB₩	/ 300 kHz					Sweep	4.80 ms	(1001 pts)	11	5 000000 MHz
<b>DURE</b>	MODEL	TDCI C	en 1			0			~		FUNC				FUNC		A	uto Man
1	N	1 1	5			2 /63	25 CH	7	2.74 d	Bm	FUNC		UNU	TION WIDTH	FUNC	ION VACOE		
2	Ň	1 1	-			2.453	80 GH	z	-3.42 d	Bm								
3	Ν	1 1	-			2.470	20 GH	z	-3.71 d	Bm								Frea Offset
4			_															0 Hz
6			-															0112
7																		
8																		
9			_															
10			-															
12																		
1100														OTAT				
MSG														STATUS	2			

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit - 802.11a 6Mbps (5745MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	16650	>500	Pass

# Figure Channel 149:

Agile	ent Spe	ectru	m An	alyzer - Swe	pt SA									
<mark>الاا</mark> Ce	nter	Fre	RF eq (	50 Ω 5.74500	AC	lz			Avg Type	ALIGN AUTO	12:43:30F TRA	M Sep 07, 2013	Frequency	
10 (	HR: Construction of the second secon													
Log 10. 0.0 -10.1							1					-11.77 dBm	Center Freq 5.745000000 GHz	
-20.1 -30.1 -40.1			_		hundred house					www.www			Start Freq 5.720000000 GHz	
-50.1 -60.1 -70.1		Valend		<u>A</u> UNE -							a (anadina paga paga paga paga paga paga paga pa	hang territory	<b>Stop Freq</b> 5.770000000 GHz	
Cei #R(	nter es B	5.74 W 1	450 00	0 GHz kHz	~	#VB\	N 300 kHz	FUN	TION	Sweep	Span 5 4.80 ms (	0.00 MHz (1001 pts)	CF Step 5.000000 MHz Auto Man	
1 3 4 5 6 7 8 9 10 11 12					5.742 22 5.736 60 5.753 30	5 GHz 5 GHz 0 GHz	5.77 dl -14.26 dl -11.79 dl	3m 3m 3m					Freq Offset 0 Hz	
MSG										STATU	s			

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit - 802.11a 6Mbps (5785MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	16650	>500	Pass

# Figure Channel 157:

XI         RF         50 Ω         AC         SENSE:INT         ALIGN AUTO         01:08:34 PM Sep 07, 2013           Center Freq         5.785000000 GHz         Avg Type: Log-Pwr         TRAct         1/2 3 4 5 6         Freq	
	equency
PN0: Fast IFGain:Low #Atten: 30 dB IFGain:Low #Atten: 30 dB Mkr2 5.776 65 GHz -15.30 dBm -15.30 dBm	Auto Tune
Log 10.0 0.00 10.0 1	<b>enter Freq</b> 000000 GHz
-20.0 -30.0 -40.0	<b>Start Freq</b> 000000 GHz
-50.0 -60.0 -70.0	Stop Freq 000000 GHz
Center 5.78500 GHz Span 50.00 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 4.80 ms (1001 pts) MKR MODE TEC SCI. State S	<b>CF Step</b> 000000 MHz Man
I         N         I         5./9130 GHz         -5.43 dBm           I         f         5.776 65 GHz         -15.30 dBm	req Offset 0 Hz
8	

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit - 802.11a 6Mbps (5825MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	16700	>500	Pass

# Figure Channel 165:

Agil	ent Sp	ectru	m An	alyzer - Swe	ept SA								
ιχι Ce	<sup>RL</sup> nter	· Fre	RF eq :	50 Ω 5.82500	AC   10000 GH	z	SEI		Avg Type	ALIGNAUTO : Log-Pwr	03:26:19F	M Sep 07, 2013	Frequency
10	dB/di	v	Rei	f 20.00 d	IBm	\O: Fast   (₊ Sain:Low	#Atten: 3	0 dB		Mkr	2 5.816 -15.	65 GHz 11 dBm	Auto Tune
Log 10. 0.0 -10.						<b>↓</b> <sup>2</sup> лими	1	mon Arean	muser 3			-12.35 dBm	Center Freq 5.825000000 GHz
-20. -30. -40.	0 0 0				Ano profile					William M.			<b>Start Freq</b> 5.80000000 GHz
-50. -60. -70.			Y. Jango	- Alfred All - Cont -						April 1997	territooria approx.	hat whether for the	<b>Stop Freq</b> 5.85000000 GHz
Ce #R	nter es B	5.8 W 1	250 00	0 GHz kHz	×	#VBV	V 300 kHz	FUNC	CTION FUN	Sweep	Span 5 4.80 ms (	0.00 MHz 1001 pts) N VALUE	<b>CF Step</b> 5.000000 MHz <u>Auto</u> Man
2 3 4 5 6	N N	1	f		5.822 50 5.816 69 5.833 39	5 GHz 5 GHz	-15.11 dE -16.02 dE	3m 3m 3m					Freq Offset 0 Hz
7 8 9 10 11													
MSG										STATUS	6		

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band) (2412MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412.00	17900	>500	Pass

# Figure Channel 1:

Agile	nt Spe	ectrum	Ana	alyzer - Swe	ept SA								
ιxi Cer	nter	Fre	RF q 7	50 Q 2.41200	AC 00000 GH	Hz		NSE:INT	Avg Typ	ALIGN AUTO e: Log-Pwr	11:38:53 AN TRA(	M Sep 07, 2013 E 1 2 3 4 5 6	Frequency
10 c	dB/di	 v I	 Ref	20.00 (	dBm	NO: Fast G Gain:Low	≓ Trig: Fre #Atten: 3	e Run 0 dB		Mkr	<sup>TYP</sup> 2 2.403 -10.	05 GHz 07 dBm	Auto Tune
Log 10.0 0.00			- 			2	1 Nerminan		mannama	3		-8.09 dBm	Center Freq 2.412000000 GHz
-20.0 -30.0 -40.0			-	ANTHING			+	<u> </u>		homen	Non and Agener		Start Freq 2.387000000 GHz
-50.0 -60.0 -70.0	ן אבר אין דיין דיין אין אין אין אין אין אין אין אין אין				<u> </u>	<u> </u>	<u> </u>		<u> </u>	<u> </u>			<b>Stop Freq</b> 2.437000000 GHz
Cer #Re	nter : es B'	2.41 W 1(	200	) GHz kHz		#VB	N 300 kHz	: :		Sweep	Span 5 4.80 ms (	0.00 MHz 1001 pts)	CF Step 5.000000 MHz Auto Man
1 2 3 4 5 6 7 8 9 10 11 12					2.409 11 2.403 0 2.420 9 2.420 9	0 GHz 5 GHz 5 GHz 	-2.09 df -10.07 df -3.95 df	3m 3m 3m 					Freq Offset 0 Hz

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	17850	>500	Pass

# Figure Channel 6:

Agiler	nt Spe	ctrur	n An	alyzer - Swe	pt SA								
(XI R	L	Fre	RF	50Ω 2/13700		17	SE	NSE:INT	Avg Tvp	ALIGNAUTO	11:50:41 A TRA	M Sep 07, 2013	Frequency
			<u>, h</u>	2.43700	P IF	NO: Fast Gain:Low	Trig: Fre #Atten: 3	e Run 0 dB			TY D		Auto Tupo
10 d	B/div	,	Ref	f 20.00 d	IBm					Mkı	2 2.428 -7.	10 GHz 49 dBm	Auto rune
10.0 0.00 -10.0						\$ <sup>2</sup>	1	Constration of the	and the second s	3		-7.16 dBm	Center Freq 2.437000000 GHz
-20.0 -30.0 -40.0					mann	/				humany	Muraphyrow	HW MAN BALL	<b>Start Freq</b> 2.412000000 GHz
-50.0 -60.0 -70.0	× ۳ د	4 50.	_									- 10 TAL	<b>Stop Freq</b> 2.462000000 GHz
Cen #Re	ter s B	2.4: W 1	370 00	0 GHz kHz		#VE	W 300 kH;	!		Sweep	Span 5 4.80 ms (	0.00 MHz 1001 pts)	<b>CF Step</b> 5.000000 MHz
MKB 1	MODE N	TRC 1	SCL f		× 2.431 9	5 GHz	- <u>1.16 d</u>	Bm Bm	NCTION FL	NCTION WIDTH	FUNCTIO	IN VALUE	<u>Auto</u> Man
3 4 5 6	N	1	f		2.445 9	5 GHz	-7.49 d -8.48 d	Bm					Freq Offset 0 Hz
7 8 9 10 11													
<b>12</b> мsg										STATU	s		
Product	:	LCD Monitor											
-----------	---	--											
Test Item	:	Occupied Bandwidth Data											
Test Site	:	No.3 OATS											
Test Mode	:	Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band) (2462MHz)											

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462.00	17900	>500	Pass

## Figure Channel 11:

Agilent Spectrum Analyzer - Swept SA				
LXI RL RF 50Ω AC	SENSE:INT	ALIGN AUTO	11:59:28 AM Sep 07, 2013	_
Center Freg 2.462000000 GHz		Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6	Frequency
PNO: Fast IFGain:Low	Trig: Free Run #Atten: 30 dB		DET P N N N N N	
		Mkr	2 2.453 05 GHz	Auto Tune
10 dB/div Ref 20.00 dBm			-9.49 dBm	
10.0				Contor Fro
	1			CenterFree
0.00	many manual providences	mar and a	-7.88 dBm	2.462000000 GH
-10.0		Y .		
-20.0				
30.0				Start Free
-30.0		www.	endos and	2.437000000 GH
-40.0			Martine and Martine	
-50.0 -50.0			- market	
-60.0				Stop Free
70.0				2.487000000 GH
-70.0				
Center 2 46200 CHz			Spap 50 00 MHz	
#Res BW 100 kHz #VE	W 300 kHz	Sweep	4.80 ms (1001 pts)	CF Step
			, (, p.c.)	5.000000 MH
MKR MODE TRC SCL X	Y FUN	ICTION FUNCTION WIDTH	FUNCTION VALUE	Auto Mai
2 N 1 f 2.459 10 GHz	-1.88 dBm			
3 N 1 f 2.470 95 GHz	-8.79 dBm			Freg Offse
4				
5				
7				
8				
9				
12				

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band) (2422MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
3	2422.00	36700	>500	Pass

## Figure Channel 3:

Anilant Exectsum Analyzer Suppl SA				
Agrent spectrum Anatyzer - Swept SA	CENCE-INIT	ALIGNALITO	12:06:52.0M Sop 07, 2012	[
Cepter Freq 2/22000000 GHz	SENSELINT	Ava Type: Log-Pwr	TRACE 1 2 3 4 5 6	Frequency
PNO: Fa	st 😱 Trig: Free Run			
IFGain:Lo	ow #Atten: 30 dB		DELILI MAMMAN	• • • • •
		Mk	r2 2.403 7 GHz	Auto Tune
10 dB/div Ref 20.00 dBm			-11.34 dBm	
Log				
10.0				Center Freg
				2 422000000 GHz
100 K	man and a state of the second	marshing 3	-9.82 dBm	2.422000000 0112
-10.0	4	1 VI		
-20.0	· · · · ·			Start From
-30.0		<b>\</b>		StartFrey
40.0		Warmathing	A	2.372000000 GHz
-40.0			and all the second and a second and the second	
-50.0 -50.0			and the second sec	
-60.0				Stop Freq
-70.0				2.472000000 GHz
10.0				
Center 2.42200 GHz			Span 100.0 MHz	07.04
#Res BW 100 kHz #	VBW 300 kHz	Sweep	9.60 ms (1001 pts)	
				Auto Man
	3 92 dBm	ICTION FUNCTION WIDTH	FUNCTION VALUE	
2 N 1 f 2.438 3 GHz	-11.34 dBm			
3 N 1 f 2.440 4 GHz	-15.87 dBm			Freq Offset
4				0 Hz
6				
7				
8				
10				
11				
12				
MSG		STATUS	3	4

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437.00	36700	>500	Pass

## Figure Channel 6:

Agiler	nt Spe	ctrur	n An	alyzer - Sw	rept SA															
(X) R Cen	∟ nter	Fre	RF Pr	∣ 50 Ω 2.4370(	e ac 00000	) GH	z		SEI	NSE:IN	IT	Avg	, Гуре	LIGN AUTO		12:17:56 F TRA	M Sep 07	,2013 456	Fr	equency
10 d	B/div	,	Rei	f 20.00 (	dBm	PN IFG	10: Fas Gain:Lov	t 🖵 w	#Atten: 3	o dB	1			М	kr2	2 2.41 -11.	87G 51d	SHz Bm		Auto Tune
Log 10.0 0.00 -10.0							<b>♦</b> <sup>2</sup>		موجود موادر وارد مردور مرد مردور مردور مرد		1	المركبين المركبين	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	}			-11 4	l1_dBm	2.437	<b>enter Freq</b> 7000000 GHz
-20.0 -30.0 -40.0				al to the offer	A Linnard	Allen				P			ľ	Willer Martine	Left of State	Strip of the street of the str	*ris-itunger	mine a	2.387	Start Freq 7000000 GHz
-50.0 -60.0 -70.0	uranda	WAREN	Year															- 1 <sub>44</sub>	2.487	<b>Stop Freq</b> 7000000 GHz
Cen #Re	ter s B	2.4: W 1	370 00	0 GHz kHz			#\	/BW	300 kHz		FUNC		FUN	Sweep	9.6	Span 1 60 ms (	00.0 I 1001	MHz pts)	10 Auto	CF Step .000000 MHz Man
1 2 3 4 5 6 7 8 9 10 11			f f		2222	2.440 <u>8</u> 2.418 7 2.455 4	5 GHz 7 GHz 4 GHz		-5.41 dt -11.51 dt -16.63 dt	Bm Bm Bm	FUNC									Freq Offset 0 Hz
MSG				1										STAT	US					

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band) (2452MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
9	2452.00	36800	>500	Pass

## Figure Channel 9:

Agilon	t Sno	etrur		abrzor S	ium ni	CA.														
	n ope L		RE	11yzer - 3	10	AC				S	ENSE 1	NT				12:3	1·35 P	M Sen 07, 2013		
Cen	ter	Fre	q 2	2.452	000	000	) GH	z		]	_		Avg 1	ype	: Log-Pwr		TRAC	E123456		Frequency
							PI IF(	NO: Fa Gain:L	ast 🕞 .ow	#Atten:	ee Ru 30 dB	n					DI		Ň	
															M	kr2 2.	43:	3 6 GHz	1	Auto Tun
10 di	B/div		Ref	20.00	) dE	3m											17.	04 dBm		
10.0																				Cepter Fre
0.00													1							2 452000000 CH
-10.0								▲2		م استیک مرابع می می ا	mm	***	-V-	1	3			-11.12 dBm		2.452000000 GH
20.0								7			T			Y					┢	
-20.0								1						ł						Start Free
-30.0								1							Wind .					2.402000000 GH
-40.0				half hard	hann,	ALC DR.	Cha <sub>p</sub> ill				-			_	a navalitika (jina)	A Suran and	hidda	Thanks .		
-50.0	-tomato	al and	<u>ምግር</u>		-									_				a nativaly film		
-60.0			_								_					-				Stop Free
-70.0			+								_									2.502000000 GH
<b>~</b> ~~		2 4 4	:00	0.011-															<u>I</u> L	
#Re	s Bl	2.4: N 1	00	и Gпz kHz				#	ŧνв₩	/ 300 kH	z				Sweep	9.60 n	un 1 ns (	1001 pts)		CF Step
MKR	MODE	TRC	SCL			Х				Y		FUNC	TION	FUN	- CTION WIDTH	l FU	NCTIC	N VALUE	A	uto Mai
1	Ν	1	f			2	.465	4 GH	z	-5.12 (	βBm								IL	
2	N	1	f			2	<u>.433 (</u> 470 )	<u>6 GH</u> 4 GH	<u>z</u>	<u>-17.04 c</u>	Bm									Erog Offen
4									-											Frequise
5																				01
7																				
8																				
10																				
11			_						_											
															STATU	s				

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band) (5745MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	17900	>500	Pass

## Figure Channel 149:

Agilent Spectrum Analyzer - Swent SA				
X RL RE 50.9 AC	SENSE:INT	ALIGNAUTO	01:52:37 PM Sen 07, 2013	
Center Freg 5.745000000 GHz	7	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6	Frequency
PNO: Fast G IFGain:Low	☐ Trig: Free Run #Atten: 30 dB		TYPE MWWWWW DET P N N N N N	
		Mkr	2 5.736 05 GHz	Auto Tune
10 dB/div Ref 20.00 dBm			-12. TO UBIII	
10.0				<b>0</b>
10.0	1			Center Freq
0.00		∧3		5.745000000 GHz
-10.0	Caller Charles and a second and a second sec		-10.82 dBm	
-20.0		\		
				Start Freq
-30.0				5.720000000 GHz
-40.0		Vinati u su		
-50.0 July		- and the stall	W mapping and the	
- CO 0			a contraction of the	Stop Frea
-80.0				5 770000000 CHz
-70.0				5.77000000 GHZ
Center 5.74500 GHz #Res BW 100 kHz #VBW	V 300 kHz	Sweep	Span 50.00 MHz 4.80 ms (1001 pts)	CF Step
				5.000000 MHZ
MKR MODE TRC SCL X	Y FUN	ICTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
1 N 1 f 5./4210 GHz	-4.82 dBm			
3 N 1 f 5.753 95 GHz	-12.63 dBm			Fred Offset
4				
5				0 H2
7				
8				
9				
12				
		OTATIO		

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band) (5785MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	17900	>500	Pass

## Figure Channel 157:

Agiler	nt Spe	ctrur	n An	alyzer - Swe	pt SA										
ιхи Cen	L Iter	Fre	RF	່ 50 ຊ 5.78500	AC	łz		SEN	SE:INT	Avg T	⊿ ype:	LIGNAUTO Log-Pwr	02:17:56 F TRA	M Sep 07, 2013 E 1 2 3 4 5 6	Frequency
10 d	B/div	,	Ref	7 20.00 d	P IF	NO: Fast Gain:Low	, Tr , #A	ig: Free tten: 30	Run dB			Mkr	۳ 2 5.776 -13.	05 GHz 35 dBm	Auto Tune
Lõg 10.0 0.00 -10.0							vinderalm	n 1	ps/hower/frystate/these		<b>∂</b> 3			12.07 dBm	Center Freq 5.785000000 GHz
-20.0 -30.0 -40.0				n n and wellow	halvenn							Wellung and a			<b>Start Freq</b> 5.76000000 GHz
-50.0 -60.0 -70.0	M-NM	(Aler),	م وللوط	er Higher										manufacture	<b>Stop Freq</b> 5.810000000 GHz
Cen #Re	iter s Bi	5.78 N 1	350 00	0 GHz kHz	X	#V	BW 30	0 kHz	FUN	ICTION	FUN	Sweep	Span 5 4.80 ms (	0.00 MHz 1001 pts) NVALUE	CF Step 5.000000 MHz <u>Auto</u> Man
1 2 3 4 5 6	N N N	<b>1</b> <b>1</b>	f f		5.782 1 5.776 0 5.793 9	0 GHz 5 GHz 5 GHz	 -1; -1;	6.07 dE 3.35 dB 3.55 dB	Sm m m						Freq Offset 0 Hz
7 8 9 10 11 12															
MSG												STATUS	;		r

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band) (5825MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17900	>500	Pass

## Figure Channel 165:

Agilent Spectrum Analyzer - Swept SA					
LXI RL RF 50 Q AC	SE	ENSE:INT	ALIGNAUTO 02:2	4:38 PM Sep 07, 2013	
Center Freg 5.825000000 G	Hz	Avg Type	e: Log-Pwr	TRACE 1 2 3 4 5 6	Frequency
F IF	NO: Fast Trig: Free Gain:Low #Atten:	ee Run 30 dB		DET P N N N N N	
			Mkr2 5.8	316 05 GHz	Auto Tune
10 dB/div Ref 20.00 dBm				13.16 dBm	
10.0					Center Fred
0.00					5 825000000 CH-
-10.0	2 man monter	a manus marine marine for	8	11.95 dBm	5.825000000 GH2
-20.0					
30.0		۱ ۱	1		Start Freq
-30.0			h l		5.80000000 GHz
-40.0			Manager and and		
-50.0 when when the second			- HU HULWAY	Martin and and and and	
-60.0					Stop Freq
-70.0					5.850000000 GHz
Center 5 92500 CHz			Sn	an 50 00 MHz	
#Res BW 100 kHz	#VBW 300 kH:	z	Sweep 4.80	ms (1001 pts)	CF Step 5.000000 MHz
MKR MODE TRC SCL X	Y	FUNCTION FUI	ICTION WIDTH FL	JNCTION VALUE	<u>Auto</u> Man
1 N 1 f 5.8221	15 GHz -5.95 c	Bm			
2 N 1 f 5.816U	<u>J5 GHz -13.16 d</u> 95 GHz -14 08 d	IBm			Eron Offect
4					Frequise
5					UHZ
7					
8					
9					
11					
12					
MSG			STATUS		

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 7: Transmit - 802.11n-40BW_15Mbps(5G Band) (5755MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	36800	>500	Pass

## Figure Channel 151:

Agilent	t <u>Spectru</u>	m An	alyzer - Swe	ot SA									
LXI RL	-	RF	50 Ω	AC		SEM	NSE:INT		A	LIGNAUTO	02:34:26 F	M Sep 07, 2013	
Cent	ter Fre	eq (	5.75500	0000 GH	z	٦	_	Avg	Type:	Log-Pwr	TRAC	E123456	Frequency
				PI	NO: Fast 🔾	Trig: Free #Atten: 30	a Run ∩⊿B				IY D	ET P N N N N N	
	IFGain:Low #Atten: 30 dB												
	Mkr2 5.736 6 GHz												
10 dE	3/div	Ref	f 20.00 d	Bm							-19.	62 dBm	
LOG													
10.0						1							Center Freq
0.00		-				+	<u>⊢ ∧</u> 1		$\rightarrow$				5.755000000 GHz
-10.0				L	× 2 ~~~~							-14 34 dBm	
20.0					\ <b>\$</b> *	+ 1		·	−ŧĭ			-14.J4 Gom	
-20.0					1				Ĭ				Start Freq
-30.0					V				-\				5 70500000 GHz
-40.0							<u> </u>		<u> </u>				0.100000000
-50.0			Whenter	MAL HUMAN						manner	hindenand		
-00.0	Contraction										for set of the	manundur	Stop Fred
-60.0					+	+							
-70.0		_										——————————————————————————————————————	5.805000000 GHZ
Cent	ter 5.7	550	0 GHz								Span 1	00.0 MHz	CE Step
#Res	5 BW 1	00	kHz		#VBV	V 300 kHz				Sweep	9.60 ms (	1001 pts)	10.000000 MHz
MKBL N	IODE TRO	SCL		×		Y		FUNCTION	FUNC	TION WIDTH	FUNCTIO	IN VALUE	<u>Auto</u> Man
1	N 1	f		5.758	5 GHz	-8.34 dF	3m						
2	N 1	f		5.736	6 GHz	-19.62 dE	3m						
3	N 1	f		5.773	4 GHz	-19.94 dE	3m						Freq Offset
4													0 Hz
6													
7													
8													
10													
11													
12													
MSG										STATUS	6		

Product	:	LCD Monitor
Test Item	:	Occupied Bandwidth Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 7: Transmit - 802.11n-40BW_15Mbps(5G Band) (5795MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	36700	>500	Pass

## Figure Channel 159:

Agilen	nt Spe	ctrur	n An	alyzer - Swe	ept SA										
<mark>IXI</mark> R	L	Err	RF	50 Ω				SEN	SE:INT	Δ.	αΤνρε	ALIGNAUTO	02:46:491 TRA	M Sep 07, 2013	Frequency
Cer	iter	ги	<sup>,</sup> y	5.79500	PI	IZ 10: Fast		g: Free	Run		3 . 764	. Log . A	T\		
_					IFC	jain:Lov	V #A)	tten: 30	ab			541		e e cu-l	Auto Tune
10 d	B/div	,	Rei	f 20.00 c	lBm							1411	-21.	04 dBm	
Log															0
0.00									. 1						Center Freq
10.00						_			_()'		<u></u>	3			5.795000000 GH2
-10.0			-			<b>€</b> <sup>2</sup> <sup>~~</sup>		hund	كالمار ماه كم	, (Marine Construction				-15.09 dBm	
-20.0						7					1				Start Freq
-30.0						/					h				5.745000000 GHz
-40.0				li.e	1. Martin Mart							Vous a c			
-50.0	مالىر	~~~~M	MV	higo alegal and and alegal								. Include working the	and the state of the second	monument when	Stop From
-60.0															5 84500000 GHz
-70.0			-												0.04000000 0112
Cen	ter	5.79	950	0 GHz									Span '	00.0 MHz	
#Re	s Bl	W 1	00	kHz		#V	BW 300	) kHz				Sweep	9.60 ms	(1001 pts)	CF Step
MKB	MODE	TBC	sci		×			Y		FUNCTION	E E I IN	ICTION WIDTH	FUNCT		Auto Man
1	Ν	1	f		5.798	5 GHz	-9	09 dB	m						
2 3	N	1	f		<u>5.776</u> 5.813 (	<u>5 GHz</u> 3 GHz	<u>-21</u> -15	<u>.04 dB</u> .11 dB	m m						Fred Offset
4															0 Hz
6															
7															
9															
10									_						
12															
MSG												STATU	s		

#### 8. **Power Density**

#### 8.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2013
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2013
Х	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2013

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.

#### 8.2. Test Setup



#### 8.3. Limits

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

#### 8.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2009; tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

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

#### 8.5. Uncertainty

 $\pm$  1.27 dB

# 8.6. Test Result of Power Density

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412.00	0.98	< 8dBm	Pass

## Figure Channel 1:

Agilent Spect	rum Analyzer - Swept SA	-				
Center F	RP 50 Ω AC req 2.41200000	0 GHz		ALIGNAUTO Avg Type: Log-Pwr	10:50:28 AM Sep 07, 2013 TRACE 1 2 3 4 5 6	Frequency
10 dB/div	Ref 20.00 dBm	PNO: Fast 🕞 IFGain:Low	#Atten: 30 dB	Mkr1	2.411 487 GHz 0.98 dBm	Auto Tune
10.0			▲1			Center Freq 2.412000000 GHz
-10.0	m	- And -	-	horn	1	Start Freq 2.404462500 GHz
-20.0					<u> </u>	Stop Freq 2.419537500 GHz
-40.0						CF Step 1.507500 MHz <u>Auto</u> Man
-60.0						Freq Offset 0 Hz
-70.0 Center 2. #Res BW	412000 GHz 100 kHz	#VBW	300 kHz	Sween	Span 15.08 MHz 1 47 ms (1001 pts)	
MSG				STATU	s	

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437.000	1.14	< 8dBm	Pass

## Figure Channel 6:

RL	RF 50 Ω A		SENSE/INT	ALIGNAUTO	10:57:56 AM Sep 07, 2013	
Center F	req 2.4370000	00 GHz PN0: Fast	Trig: Free Run	Avg Type: Log-Pwr	TRACE 123456 TYPE MWWWWW	Frequency
10 dB/div	Ref 20.00 dBn	IFGain:Low	#Atten: 30 dB	Mkr1	2.436 487 GHz 1.14 dBm	Auto Tune
10.0						Center Free 2.437000000 GH:
-10.0	m	man	m	there	h	Start Free 2.429462500 GH:
-20.0					<u>×</u>	Stop Free 2.444537500 GH
-40,0						CF Stej 1.507500 MH <u>Auto</u> Ma
-60.0						Freq Offse 0 H
-70.0 Center 2.	437000 GHz				Span 15.08 MHz	
-40.0 -50.0 -60.0 -70.0 Center 2. #Res BW	437000 GHz 100 kHz	#VBW	300 KHz	Sweep	Span 15.08 MHz 1.47 ms (1001 pts)	Auto Free

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462.00	1.45	< 8dBm	Pass

#### Figure Channel 11:

Agilent Spectrum Analyzer - Swept SA				
KL RF 50Ω AC	SENSE:INT	ALIGNAUTO	11:05:54 AM Sep 07, 2013	Frequency
Center Freq 2.462000000 GHZ PNO: Fas	Trig: Free Run	Avg Type: Log-Pwr	TYPE MWWWWW DET P NNNNN	
10 dB/div Ref 20.00 dBm		Mkr1	2.461 487 GHz 1.45 dBm	Auto Tune
10.0	▲ <sup>1</sup>	4 1		Center Fred 2.462000000 GHz
-10.0		Anton	h	Start Fred 2.454462500 GHz
-20.0				Stop Fred 2.469537500 GHz
-40.0				CF Step 1.507500 MH <u>Auto</u> Mar
-60.0				Freq Offse 0 H
-70.0			Spap 15 08 MHz	i.
#Res BW 100 kHz #\	/BW 300 kHz	Sweep	1.47 ms (1001 pts)	
MSG		STATUS		

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412.00	-2.57	< 8dBm	Pass

#### Figure Channel 1:

RL RF 50 Q AC	SENSE:INT	ALIGNAUTO	11:13:45 AM Sep 07, 2013	
enter Freq 2.412000000 GHz PNO: Fast	Trig: Free Run	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW	Frequency
IFGain:Low gB/div Ref 20.00 dBm	#Atten: 30 dB	Mkr1	2.419 545 GHz -2.57 dBm	Auto Tune
				Center Free 2.412000000 GH
00 	apamen proves	Sherry Margania and h	my	Start Free 2.399550000 GH
0.0			Any -	<b>Stop Fre</b> 2.424450000 GH
			maly	CF Ste 2.490000 MH <u>Auto</u> Ma
				Freq Offse 0 H
enter 2.41200 GHZ Res BW 100 kHz #VBI	N 300 kHz	Sweep	Span 24.90 MHz 2.40 ms (1001 pts)	-

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437.000	-1.80	< 8dBm	Pass

## Figure Channel 6:

RL RF 50Ω AC		SENSE: INT	1	LIGNAUTO	11:22:14 A	M Sep 07, 2013	
enter Freq 2.437000000 G	Hz PNO: Fast 😱 Trig:	Free Run	Avg Type	Log-Pwr	TRAC	E 123456 E MWWWWW	Frequency
dB/div Ref 20.00 dBm	IFGain:Low #Atte	n: 30 dB		Mkr1	۵ 2.443 8 -1.	189 GHz 80 dBm	Auto Tune
10							Center Fred 2.437000000 GH;
00	and and the second s	and have not	Mana ana ang pipuna a	montality	M		Start Free 2.424475000 GH:
0.0					J.M.		Stop Free 2.449525000 GH
						MAN	CF Stej 2.505000 MH <u>Auto</u> Ma
0.0				-	-		Freq Offse 0 H
enter 2.43700 GHz	#VBM 300 k	·H7		Sween	Span 2	5.05 MHz	-

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 2: Transmit (802.11g 6Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462.00	-1.82	< 8dBm	Pass

#### Figure Channel 11:

	ALIGNAUTO Avg Type: Log-Pwr	11:29:17 AM Sep 07, 2013 TRACE 1, 2, 3, 4, 5, 6	Frequency
7 Trig: Free Run #Atten: 30 dB	Mkr1	2.455 362 GHz -1.82 dBm	Auto Tune
			Center Fred 2.462000000 GH:
amount house	- Unin- and the synthese flow	<u></u>	Start Free 2.449475000 GH
		And the of the	Stop Fre 2.474525000 GH
		A a Tr Cha A	CF Ste 2.505000 MH Auto Ma
			Freq Offse 0 H
		Span 25.05 MHz	
300 kHz	Sweep	2.40 ms (1001 pts)	
	SENSEJINT	SENSE INT AUGNAUTO Avg Type: Log-Pwr #Atten: 30 dB Mkr1	SENSE:INT  ALIGNAUTO  11:29:17 AM sept7, 2013    1  Avg Type: Log-Pwr  TRACE 1, 2 3 4 5 6    1  Trig: Free Run  Tree Ministration    #Atten: 30 dB  Mkr1 2.455 362 GHz  -1.82 dBm

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit - 802.11a 6Mbps (5745MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
149	5745.000	-5.31	< 8dBm	Pass

## Figure Channel 149:

ilent Spectr	um Analyzer - Swi	ept SA				07.0040 F
enter F	req 5.74500	00000 GHz	SENSEUNI	Avg Type: Log-P	Nr TRACE 1 2	3456 Frequency
) dB/div	Ref 20.00 d	PNO: Fast 😱 IFGain:Low	#Atten: 30 dB	Mk	cr1 5.747 473 -5.31	GHz Auto Tune dBm
0.0						Center Freq 5.745000000 GHz
.00	put	and a second state of the second	ininaning promonal	1	underly	Start Freq 5.732512500 GHz
0.0	armand				how	Stop Freq 5.757487500 GHz
0.0 <mark>Aquino</mark> 0.0					-	CF Step 2.497500 MHz <u>Auto</u> Man
0.0						Freq Offset 0 Hz
enter 5.	74500 GHz	#\/B)A(	300 kHz	Swee	Span 24.98	B MHz
	IVV NIIZ	#*DVV	VVV IIIIZ	JWCC		i heat

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit - 802.11a 6Mbps (5785MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
157	5785.000	-6.44	< 8dBm	Pass

## Figure Channel 157:

Agilent Spec	ctrum Analyzer - Swept S/	V				
Center	Freq 5.7850000	00 GHz	SENSE(IN)	Aug Type: Log-Pwr	TRACE 1 2 3 4 5 6	Frequency
10 dB/div	Ref 20.00 dBm	PNO: Fast 😱 IFGain:Low	#Atten: 30 dB	Mkr1	5.792 118 GHz -6.44 dBm	Auto Tune
10.0						Center Freq 5.785000000 GHz
-10.0	privernite	mannalling	arminer manager	mennomenne	ing	Start Free 5.772512500 GHz
-20.0	and				here and her	Stop Free 5.797487500 GHz
-40,0 MM	nn				the manufacture	CF Step 2.497500 MH: <u>Auto</u> Mar
-60.0						Freq Offse 0 Hi
-70.0 Center (	5.78500 GHz	#VBW	300 kHz	Sween	Span 24.98 MHz 2.40 ms (1001 nts)	·
MSG				STATUS	pro/	<u></u>

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 3: Transmit - 802.11a 6Mbps (5825MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
165	5825.000	-6.60	< 8dBm	Pass

## Figure Channel 165:

Agilent Spectrum Analyzer - Swept SA					
Center Freq 5.825000000	) GHz	SENSE(INT)	ALIGNAUTO Avg Type: Log-Pwr	03:27:25 PM Sep 07, 2013 TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 20.00 dBm	PNO: Fast 🦕 IFGain:Low	Trig: Free Run #Atten: 30 dB	Mkr1	5.818 362 GHz -6.60 dBm	Auto Tune
10.0					Center Freq 5.825000000 GHz
-10.0	- man mar and the	manna marine	mannaminanten anten lon alm		Start Freq 5.812475000 GHz
-20.0				han and a second	Stop Freq 5.837525000 GHz
-40.0 1.00				Mudana	CF Step 2.505000 MHz <u>Auto</u> Mar
-60.0					Freq Offset 0 Hz
-70.0 Center 5.82500 GHz #Res BW 100 kHz	#VBW	300 kHz	Sweep	Span 25.05 MHz 2.40 ms (1001 pts)	
MSG			STATU	5	

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412.00	-0.40	< 8dBm	Pass

## Figure Channel 1:

A BL BE SOO AC	SENSE/INT	ALIGN ALITO	11:39/26 AM Sen 07: 2013	
Center Freq 2.412000000 GHz	Tria: Free Rup	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6	Frequency
PNO: F IFGain: 00 dB/div Ref 20.00 dBm	ast ( Hig. Hee Kan Low #Atten: 30 dB	Mkr1	2.404 509 GHz -0.40 dBm	Auto Tune
10.0				Center Freq 2.412000000 GHz
10.0 10.0	energy warmy warmy	<u>ᡧᡰᢛᡃᡭᠬᡃᠰᡳ᠘ᢛᡎᡣᠼᡗᡬ</u> ᢂᢣᡧ᠋᠆ᡍᠬᡈ᠆ᠬ᠒ᡣᠡ	~~	Start Freq 2.398575000 GHz
30.0			1	Stop Freq 2.425425000 GHz
40.0			hourses	CF Step 2.685000 MHz <u>Auto</u> Mar
60.0				Freq Offsel 0 Ha
70.0 Center 2.41200 GHz			Span 26.85 MHz	

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437.000	-1.68	< 8dBm	Pass

## Figure Channel 6:

RL RP 50Ω AC	SENSE:INT	ALIGNAUTO	11:51:16 AM Sep 07, 2013	English
enter Freq 2.437000000 GHz PNO: F	ast 😱 Trig: Free Run	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWWW DET P N N N N N	Frequency
IFGain:L	ow #Atten: 30 dB	Mkr1	2.434 135 GHz -1.68 dBm	Auto Tune
				Center Fred 2.437000000 GH:
00 00	erent mound window	www.waaranananananananananananananananananan	wy	Start Free 2.423612500 GH:
				Stop Free 2.450387500 GH;
20 mphphela And			MANAMAN	CF Stej 2.677500 MH <u>Auto</u> Ma
				Freq Offse 0 H
2.0		Sween	Span 26.78 MHz	

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 4: Transmit - 802.11n-20BW_7.2Mbps(2.4G Band) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462.00	-1.78	< 8dBm	Pass

#### Figure Channel 11:

Agilent Spe	ctrum Analyzer	Swept SA								
LXI RL	RF	50 Ω AC		SEN	SE(INT		ALIGN AUTO	12:00:01	PM Sep 07, 2013	Frequency
Center	Freq 2.462	2000000 GH	Z	Tria: Free	Run	Avg Type	: Log-Pwr	IRA T)	CE 123456 PE MWWWWW	Trequeriey
		IFG	iu: Fast 🖵 Gain:Low	#Atten: 30	dB			E	PNNNNN	and the second second
							Mkrt	2 150	127 GH7	Auto Tune
							IVINI I	2.400	78 dBm	
10 dB/div	Ref 20.0	JU dBm				· · · · ·		7.85	70 0011	
		11121								Contor From
10.0										CenterFreq
10.0					1					2.462000000 GHz
	to b this			1						
0.00		the second second	and the second second	in more thank						
	1.1	Warnerstand	manar	here have a that	La manager A A. C.	all a Manual	row hard a Ma	Ung	10.00	StartFreq
-10.0					1	-	-	+		2.448575000 GHz
								4	1	
-20.0	1							1		1
								1		Stop Freq
20.0	1							1		2.475425000 GHz
-30.0	and find								Maria	
-VV	M.M.								PLANE POVAN	CEStan
-40.0										2 685000 MHz
										Auto Man
-50.0										
	10 a 11 a 1								1. 1.	10.000.0000
-60.0									· · · · · · ·	Freq Offset
	10.1	1111-1-1							1.000	0 Hz
70.0										
-70.0		. 1				1			1	
1.1				12 1						
Center	2 46200 CH	7						Snap 3	26 85 MHz	
#Res B	N 100 kHz		#VBW	300 kHz			Sweep :	2.60 ms	(1001 pts)	
uno l		_								
MSG				1000			STATUS	( ) · · · · ·		

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band) (2422MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
3	2422.00	-4.93	< 8dBm	Pass

## Figure Channel 3:

gilent Spectrum Analyzer - Swept SA				
RL RF 50Ω AC	SENSE/INT	ALIGN AUTO	12:07:25 PM Sep 07, 2013	E Constant
enter Freq 2.422000000 GHz	Tria: Free Run	Avg Type: Log-Pwr	TRACE 123456	Frequency
ب PNO: Hast IFGain:Low 0 dB/div Ref 20.00 dBm	#Atten: 30 dB	Mkr	<sub>Det</sub> ∣P NNNNN 1 2.425 52 GHz -4.93 dBm	Auto Tune
10.0				Center Freq 2.422000000 GHz
0.00 	ประการกับท <sub>ี่ได้</sub> คราวรับที่ไร่เห	and the second of the second of the second	mm	Start Freq 2.394475000 GHz
20.0				Stop Freq 2.449525000 GHz
			M. Millinger Her	CF Step 5.505000 MHz <u>Auto</u> Man
60,0				Freq Offset 0 Hz
20.0 Center 2.42200 GHz			Span 55.05 MHz	
Res BW 100 KHZ #VBW	300 KHZ	Sweep	5.27 ms (1001 pts)	

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band) (2437MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437.000	-5.30	< 8dBm	Pass

## Figure Channel 6:

XI KL   RF   50 Ω	AC	SENSE(INT)	ALIGNA	UTO 12:18:29 PM Sep 07, 2013	3
Center Freq 2.437000	000 GHz PNO: Fast	Trig: Free Run	Avg Type: Log-	Pwr TRACE 1 2 3 4 5 6 TYPE MWWWW	Frequency
10 dB/div Ref 20.00 dE	IFGain:Low	#Atten: 30 dB	6	Mkr1 2.440 52 GHz -5.30 dBm	Auto Tune
10.0					Center Fred 2.437000000 GH:
0.00	antine of the function of the state of the s	nan management	and a second and a s	inendering (gala) jud	Start Free 2.409475000 GH:
-20.0				1	Stop Free 2.464525000 GH;
-40.0				Willingenwythe	CF Stej 5.505000 MH <u>Auto</u> Ma
-60.0					Freq Offse 0 H
-70.0		200 kHz		Span 55.05 MHz	

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 5: Transmit - 802.11n-40BW_15Mbps(2.4G Band) (2452MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
9	2452.00	-3.04	< 8dBm	Pass

#### Figure Channel 9:

ilent Spectrum Analyzer - Sv	wept SA				
RL RF 50: enter Freg 2.4520	2 AC	SENSE:INT	ALIGNAUTO Avg Type: Log-Pwr	12:32:09 PM Sep 07, 2013 TRACE 1 2 3 4 5 6	Frequency
D dB/div Ref 20.00	PNO: Fast IFGain:Low	∫ Trig: Free Run #Atten: 30 dB	Mkr1 2	2.469 443 2 GHz -3.04 dBm	Auto Tune
0.0					Center Fred 2.452000000 GH:
0.0	walkara mpone and a second a s	adammenting pointantilan	to more than the property of the start	whether the second seco	Start Fre 2.424400000 GH
0.0					Stop Fre 2.479600000 GH
				"White may part	CF Ste 5.520000 MH Auto Ma
o.a			1		Freq Offso 0 H
enter 2.45200 GHz				Span 55.20 MHz	
Res BW 100 kHz	#VBW	300 kHz	Sweep	5.33 ms (1001 pts)	-
G	200000	V. A. T. Street	STATU	s	

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band) (5745MHz)

Channel No.	nnel No. Frequency Measure Level (MHz) (dBm)		Limit (dBm)	Result
149	5745.00	-5.21	< 8dBm	Pass

## Figure Channel 149:

W BL BE 500 AC	SENSE/INT	ALIGNALITO	01:53:11 PM Sen 07, 2013	
Center Freq 5.745000000 GHz	Trig: Free Run	Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE MWWWWW	Frequency
10 dB/div Ref 20.00 dBm	#Atten: 30 dB	Mkr1	5.742 127 GHz -5.21 dBm	Auto Tune
10.0				Center Fred 5.745000000 GH:
0.00	1 monoral warman	utrape ut have a frequencies for a lite	My	Start Free 5.731575000 GH:
20.0			1	Stop Fred 5.758425000 GH
-40.0 mm/////			Monthly	CF Stej 2.685000 MH <u>Auto</u> Mar
60.0				Freq Offse 0 H
-70.0	N 200 kH=	<u> </u>	Span 26.85 MHz	
	N JUU KHZ	Sweep	2.00 ms (1001 pts)	

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band) (5785MHz)

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
157	5785.000	-6.07	< 8dBm	Pass

## Figure Channel 157:

Agilent Spectrum Analyzer - Swept SA				
Center Freq 5.785000000 GHz	SENSE/INT	ALIGNAUTO Avg Type: Log-Pwr	02:18:30 PM Sep 07, 2013 TRACE 1 2 3 4 5 6	Frequency
PNO: Fast C IFGain:Low 10 dB/div Ref 20.00 dBm	#Atten: 30 dB	Mkr1	5.782 127 GHz -6.07 dBm	Auto Tune
10.0				Center Freq 5.785000000 GHz
-10.0	1 monar	www.mo	Non-	Start Freq 5.771575000 GHz
-30.0			A CONTRACT	Stop Freq 5.798425000 GHz
-40.0			trabum	CF Step 2.685000 MHz <u>Auto</u> Man
-60,0				Freq Offset 0 Hz
-70.0	W 200 kHz	Swoon	Span 26.85 MHz	
MSG #VO KIL #VD	W JUU KHZ	STATUS	2.00 ms (1001 pts)	

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 6: Transmit - 802.11n-20BW_7.2Mbps(5G Band) (5825MHz)

Channel No.	Frequency (MHz)	FrequencyMeasurement Level(MHz)(dBm)		Result
165	5825.00	-5.67	< 8dBm	Pass

#### Figure Channel 165:



Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3 OATS
Test Mode	:	Mode 7: Transmit - 802.11n-40BW_15Mbps(5G Band) (5755MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
151	5755.00	-8.45	< 8dBm	Pass

#### Figure Channel 151:

Agilent Spectrum Analyzer - Swept SA					
RL RF 50Ω AC Center Freq 5.755000000 G	Hz	SENSE(INT	ALIGNAUTO Avg Type: Log-Pwr	02:35:00 PM Sep 07, 2013 TRACE 1 2 3 4 5 6	Frequency
10 dB/div Ref 20.00 dBm	PNO: Fast 😱 Gain:Low	#Atten: 30 dB	Mkr1 5	.738 384 8 GHz -8.45 dBm	Auto Tune
10.0					Center Freq 5.755000000 GHz
-10.0 1 -10.0	and a strategy	tore and provident	the grant way - way - any	min	Start Freq 5.727400000 GHz
-20.0					Stop Freq 5.782600000 GHz
-40.0				harmhrought	CF Step 5.520000 MHz Auto Mar
-60.0					Freq Offset 0 Hz
-70.0 Center 5.75500 GHz				Span 55.20 MHz	
#Res BW 100 KHZ	#VBW	300 KHZ	Sweep STATU:	ə.əə ms (1001 pts)	

Product	:	LCD Monitor
Test Item	:	Power Density Data
Test Site	:	No.3OATS
Test Mode	:	Mode 7: Transmit - 802.11n-40BW_15Mbps(5G Band) (5795MHz)

Channel No.	Frequency (MHz)	FrequencyMeasurement Level(MHz)(dBm)		Result
159	5795.000	-9.50	< 8dBm	Pass

## Figure Channel 159:

Agilent Spectrum Analyzer - Swept SA						
Center Freq 5.795000000 C	GHz	SENSE:INT	ALIGN Avg Type: Log	AUTO 02:47:22 -Pwr TR/ T	PM Sep 07, 2013	Frequency
10 dB/div Ref 20.00 dBm	PNO: Fast 😱 IFGain:Low	#Atten: 30 dB	di di	Mkr1 5.787 -9	13 GHz .50 dBm	Auto Tune
10.0						Center Freq 5.79500000 GHz
-10.0	יייייייייייייייייייייייייייייייייייייי	יאוייזיאט איין איין איין איין איין איין איין א	Mut denes with on the second second	TEMANNA		Start Freq 5.767475000 GHz
-20.0						Stop Freq 5.822525000 GHz
-40.0 -50.0				N.	Vinteralis	CF Step 5.505000 MHz <u>Auto</u> Man
-60.0						Freq Offset 0 Hz
-70.0 Center 5.79500 GHz #Res BW 100 kHz	#VBW	300 kHz	Sw	Span eep 5.27 ms	55.05 MHz (1001 pts)	· · · · ·
MSG				STATUS	( p)	J

## 9. EMI Reduction Method During Compliance Testing

No modification was made during testing.