

1 COVER PAGE

TEST REPORT

Product : Wifi AP
Trade mark : N/A
Model/Type reference : MR2060
Serial Number : N/A
Report Number : EED32H000334-1
FCC ID : 2AFJD-MR2060
Date of Issue : August 13, 2015
Test Standards : 47 CFR Part 15 Subpart C (2014)
Test result : PASS

Prepared for:

XUM YI TECH CO., LTD
8F., NO. 12, LN. 270, SEC. 3, BEI-SHEN RD., SHEN KENG DIST.,
NEW TAIPEI CITY 22205, TAIWAN

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Date:

August 13, 2015

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Check No.: 1727861299



2 Version

Version No.	Date	Description
00	August 13, 2015	Original

3 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203/15.247 (c)	ANSI C63.10-2013	PASS
AC Power Line Conducted Emission	47 CFR Part 15 Subpart C Section 15.207	ANSI C63.10-2013	PASS
Conducted Peak Output Power	47 CFR Part 15 Subpart C Section 15.247 (b)(3)	ANSI C63.10-2013	PASS
6dB Occupied Bandwidth	47 CFR Part 15 Subpart C Section 15.247 (a)(2)	ANSI C63.10-2013	PASS
Power Spectral Density	47 CFR Part 15 Subpart C Section 15.247 (e)	ANSI C63.10-2013	PASS
Band-edge for RF Conducted Emissions	47 CFR Part 15 Subpart C Section 15.247(d)	ANSI C63.10-2013	PASS
RF Conducted Spurious Emissions	47 CFR Part 15 Subpart C Section 15.247(d)	ANSI C63.10-2013	PASS
Radiated Spurious Emissions	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15 Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS

Test according to ANSI C63.4-2014 & ANSI C63.10-2013.

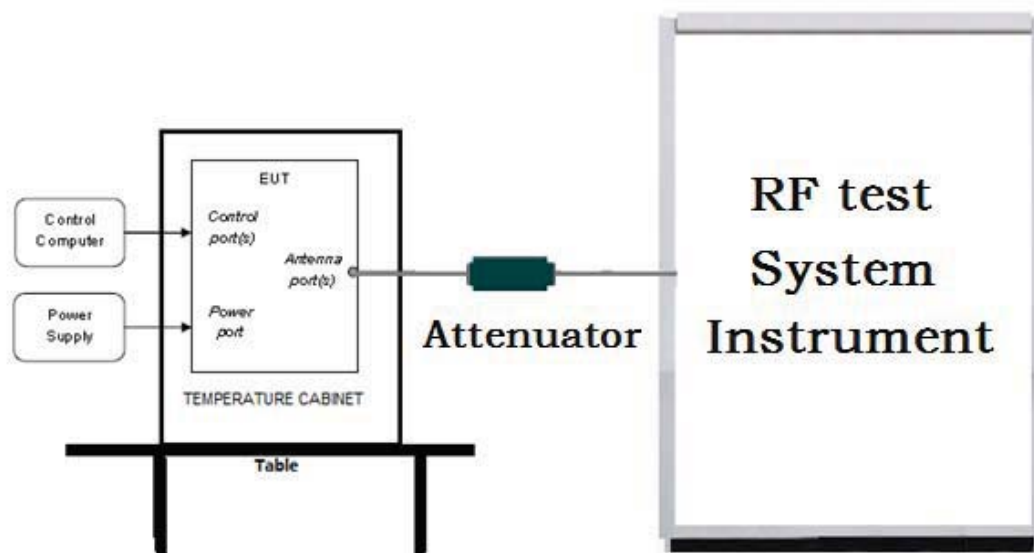
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5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

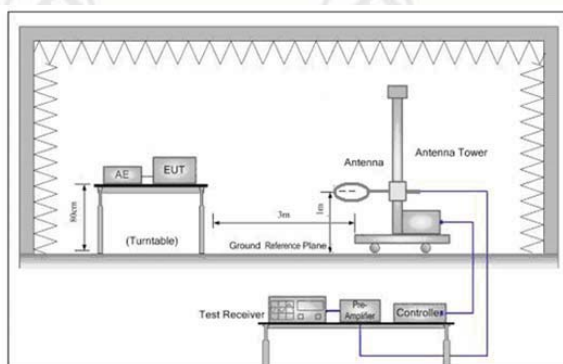


Figure 1. Below 30MHz

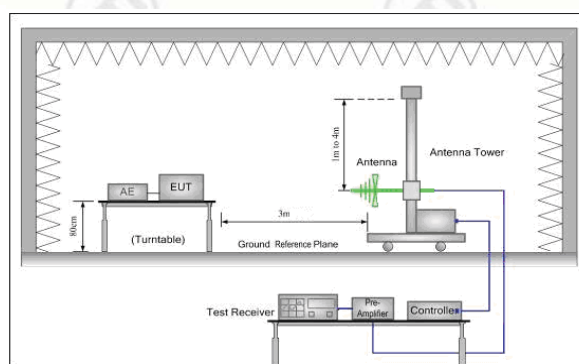


Figure 2. 30MHz to 1GHz

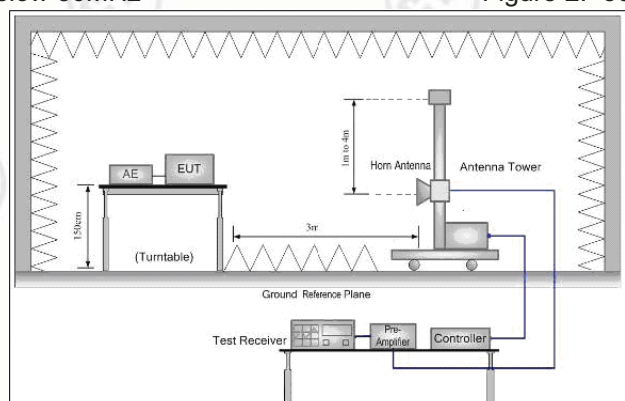
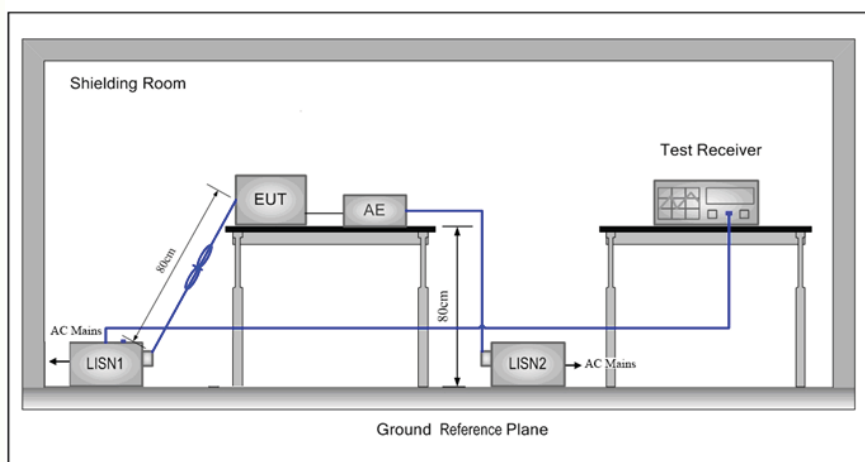


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup

Conducted Emissions setup



5.2 Test Environment

Operating Environment:	
Temperature:	24 °C
Humidity:	53 % RH
Atmospheric Pressure:	1010mbar

5.3 Test Condition

Test channel:

Test Mode	Tx/Rx	RF Channel		
		Low(L)	Middle(M)	High(H)
802.11b/g/n(HT20)	2412MHz ~2462 MHz	Channel 1	Channel 6	Channel11
		2412MHz	2437MHz	2462MHz
802.11n(HT40)	2422MHz ~2452 MHz	Channel 1	Channel 4	Channel7
		2422MHz	2437MHz	2452MHz
Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.			

Test mode:

Pre-scan under all rate at lowest channel 1

Mode	802.11b				
Data Rate	1Mbps	2Mbps	5.5Mbps	11Mbps	
Ant1 (dBm) (SISO)	18.09	18.10	18.12	18.16	
Ant2 (dBm) (SISO)	18.98	19.02	19.08	19.13	

Mode	802.11g							
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Ant1 (dBm) (SISO)	15.62	15.46	15.39	15.33	15.24	15.20	15.19	15.11
Ant2 (dBm) (SISO)	16.17	16.02	15.97	15.93	15.87	15.76	15.58	15.45

Mode	802.11n (HT20)							
Data Rate	6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps
Ant1 (dBm) (SISO)	15.45	15.28	15.19	15.10	15.08	14.89	14.78	14.67
Ant2 (dBm) (SISO)	17.73	17.09	16.88	16.87	16.85	16.65	16.60	16.40
Ant1+Ant2 (dBm) (MIMO)	19.75	19.29	19.13	19.08	19.06	18.87	18.79	18.63

Mode	802.11n (HT40)							
Data Rate	13.5Mbps	27Mbps	40.5Mbps	54Mbps	81Mbps	108Mbps	121.5Mbps	135Mbps
Ant1 (dBm) (SISO)	14.84	14.67	14.53	14.48	14.19	13.78	13.56	13.34
Ant2 (dBm) (SISO)	15.35	15.22	15.09	14.99	14.89	14.76	14.65	14.54
Ant1+Ant2 (dBm) (MIMO)	18.11	17.96	17.83	17.75	17.56	17.31	17.15	16.99

Through Pre-scan, 11Mbps of rate the power is the worst case of 802.11b; 6Mbps of rate the power is the worst case of 802.11g; 6.5Mbps of rate the power is the worst case of 802.11n(HT20); 13.5Mbps of rate the power is the worst case of 802.11n(HT40).

6 General Information

6.1 Client Information

Applicant:	XUM YI TECH CO., LTD
Address of Applicant:	8F., NO. 12, LN. 270, SEC. 3, BEI-SHEN RD., SHEN KENG DIST., NEW TAIPEI CITY 22205, TAIWAN
Manufacturer:	XUM YI TECH CO., LTD
Address of Manufacturer:	8F., NO. 12, LN. 270, SEC. 3, BEI-SHEN RD., SHEN KENG DIST., NEW TAIPEI CITY 22205, TAIWAN

6.2 General Description of EUT

Product Name:	Wifi AP
Model No.(EUT):	MR2060
Trade Mark:	N/A
EUT Supports Radios application:	Wlan 2.4GHz 802.11b/g/n(HT20&HT40)
Power Supply:	AC 100-240V, 50/60Hz
Sample Received Date:	Mar. 19, 2015
Sample tested Date:	Mar. 19, 2015 to August 13, 2015

6.3 Product Specification subjective to this standard

Operation Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz
Channel Numbers:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels IEEE 802.11n HT40: 7 Channels
Channel Separation:	5MHz
Type of Modulation:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20 and HT40) : OFDM (64QAM, 16QAM, QPSK,BPSK)
Sample Type:	fixed production
Antenna Type and Gain:	Type: Integral antenna Antenna 1 gain: 0dBi Antenna 2 gain: 0dBi
Test Voltage:	AC 120V, 50Hz

Operation Frequency each of channel(802.11b/g/n HT20)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		
Operation Frequency each of channel(802.11n HT40)							
Channel	Frequency	Channel	Frequency	Channel	Frequency		
1	2422MHz	4	2437MHz	7	2452MHz		
2	2427MHz	5	2442MHz				
3	2432MHz	6	2447MHz				

6.4 Description of Support Units

The EUT has been tested independently.

6.5 Test Location

All tests were performed at:

Centre Testing International (Shenzhen) Corporation

Building C, Scientific Innovation Park, Tiegang Reservoir, Xixiang, Baoan District, Shenzhen, China

Telephone: +86 (0) 755 3368 3668 Fax: +86 (0) 755 3368 3385

No tests were sub-contracted.

6.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L1910

Centre Testing International Group Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories..

A2LA-Lab Cert. No. 3061.01

Centre Testing International Group Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 565659

Centre Testing International (Shenzhen) Corporation EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 565659.

IC-Registration No.: 7408A

The 3m Alternate Test Site of Centre Testing International Group Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 7408A .

IC-Registration No.: 7408B

The 10m Alternate Test Site of Centre Testing International Group Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 7408B.

NEMKO-Aut. No.: ELA503

Centre Testing International Group Co., Ltd. has been assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025 or equivalent. The laboratory also fulfils the conditions described in Nemko Document NLA-10.

VCCI

The Radiation 3 &10 meters site of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-4096.

Main Ports Conducted Interference Measurement of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: C-4563.

Telecommunication Ports Conducted Disturbance Measurement of

Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: T-2146.

The Radiation 3 meters site of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-758

6.7 Deviation from Standards

None.

6.8 Abnormalities from Standard Conditions

None.

6.9 Other Information Requested by the Customer

None.

6.10 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.31dB (30MHz-1GHz)
		0.57dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.5dB (30MHz-1GHz)
		4.8dB (1GHz-12.75GHz)
4	Conduction emission	3.6dB (9kHz to 150kHz)
		3.2dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	2.8%
7	DC power voltages	0.025%

7 Equipment List

RF test system					
Equipment	Manufacturer	Mode No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Signal Generator	Keysight	E8257D	MY53401106	04-14-2014	04-13-2015
Signal Generator	Keysight	E8257D	MY53401106	04-14-2015	04-13-2016
Communication test set test set	Agilent	N4010A	MY47230124	04-02-2014	04-01-2015
Communication test set test set	Agilent	N4010A	MY47230124	04-02-2015	04-01-2016
Spectrum Analyzer	Keysight	N9010A	MY54510339	04-01-2014	03-31-2015
Spectrum Analyzer	Keysight	N9010A	MY54510339	04-01-2015	03-31-2016
Attenuator	HuaXiang	SHX370	15040701	04-01-2014	03-31-2015
Attenuator	HuaXiang	SHX370	15040701	04-01-2015	03-31-2016
Signal Generator	Keysight	N5182B	MY53051549	03-31-2014	03-30-2015
Signal Generator	Keysight	N5182B	MY53051549	03-31-2015	03-30-2016
High-pass filter(3-18GHz)	Sinoscite	FL3CX03WG18 NM12-0398-002	---	01-13-2015	01-12-2016
High-pass filter(5-18GHz)	MICRO-TRONICS	SPA-F-63029-4	---	01-13-2015	01-12-2016
band rejection filter (GSM900)	Sinoscite	FL5CX01CA09C L12-0395-001	---	01-13-2015	01-12-2016
band rejection filter (GSM850)	Sinoscite	FL5CX01CA08C L12-0393-001	---	01-13-2015	01-12-2016
band rejection filter (GSM1800)	Sinoscite	FL5CX02CA04C L12-0396-002	---	01-13-2015	01-12-2016
band rejection filter (GSM1900)	Sinoscite	FL5CX02CA03C L12-0394-001	---	01-13-2015	01-12-2016
DC Power	Keysight	E3642A	MY54436035	03-31-2014	03-30-2015
DC Power	Keysight	E3642A	MY54436035	03-31-2015	03-30-2016
PC-1	Lenovo	R4960d	---	04-01-2014	03-31-2015
PC-1	Lenovo	R4960d	---	04-01-2015	03-31-2016
BT&WI-FI Automatic control	R&S	OSPB157	101374	04-01-2014	03-31-2015
BT&WI-FI Automatic control	R&S	OSPB157	101374	04-01-2015	03-31-2016
RF control unit	JS Tonscend	JS0806-2	2015860006	04-01-2014	03-31-2015
RF control unit	JS Tonscend	JS0806-2	2015860006	04-01-2015	03-31-2016
BT&WI-FI Automatic test software	JS Tonscend	JSTS1120-2	---	04-01-2014	03-31-2015
BT&WI-FI Automatic test software	JS Tonscend	JSTS1120-2	---	04-01-2015	03-31-2016

3M Semi/full-anechoic Chamber					
Equipment	Manufacturer	Mode No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
3M Chamber	TDK	SAC-3	---	06-02-2014	06-01-2015
3M Chamber	TDK	SAC-3	---	06-02-2015	06-01-2016
TRILOG Broadband Antenna	schwarzbeck	VULB9163	9163-617	07-14-2014	07-13-2015
Microwave Preamplifier	Agilent	8449B	3008A02425	02-05-2015	02-04-2016
Horn Antenna	ETS-LINDGREN	3117	00057410	07-08-2014	07-07-2015
Horn Antenna	ETS-LINDGREN	3117	00057410	07-08-2015	07-07-2016
Loop Antenna	ETS	6502	00071730	07-23-2014	07-22-2015
Loop Antenna	ETS	6502	00071730	07-23-2015	07-22-2016
Spectrum Analyzer	R&S	FSP40	100416	07-09-2014	07-08-2015
Spectrum Analyzer	R&S	FSP40	100416	07-09-2015	07-08-2016
Receiver	R&S	ESCI	100435	07-09-2014	07-08-2015
Receiver	R&S	ESCI	100435	07-09-2015	07-08-2016
Multi device Controller	maturio	NCD/070/10711112	---	01-13-2015	01-12-2016
LISN	schwarzbeck	NNBM8125	81251547	07-09-2014	07-08-2015
LISN	schwarzbeck	NNBM8125	81251547	07-09-2015	07-08-2016
LISN	schwarzbeck	NNBM8125	81251546	07-09-2014	07-08-2015
LISN	schwarzbeck	NNBM8125	81251546	07-09-2015	07-08-2016
Signal Generator	Agilent	E4438C	MY45095744	04-19-2014	04-18-2015
Signal Generator	Agilent	E4438C	MY45095744	04-19-2015	04-18-2016
Signal Generator	Keysight	E8257D	MY53401106	04-14-2014	04-13-2015
Signal Generator	Keysight	E8257D	MY53401106	04-14-2015	04-13-2016
Temperature/Humidity Indicator	TAYLOR	1451	5190	07-10-2014	07-09-2015
Temperature/Humidity Indicator	TAYLOR	1451	5190	07-10-2015	07-09-2016
Communication test set	Agilent	E5515C	GB47050533	01-13-2015	01-12-2016
Cable line	Fulai(7M)	SF106	5219/6A	01-13-2015	01-12-2016
Cable line	Fulai(6M)	SF106	5220/6A	01-13-2015	01-12-2016
Cable line	Fulai(3M)	SF106	5216/6A	01-13-2015	01-12-2016
Cable line	Fulai(3M)	SF106	5217/6A	01-13-2015	01-12-2016
Communication test set	R&S	CMW500	152394	04-19-2014	04-18-2015
Communication test set	R&S	CMW500	152394	04-19-2015	04-18-2016
High-pass filter(3-18GHz)	Sinoscite	FL3CX03WG18NM 12-0398-002	---	01-13-2015	01-12-2016
High-pass filter(5-18GHz)	MICRO-TRONICS	SPA-F-63029-4	---	01-13-2015	01-12-2016
band rejection filter	Sinoscite	FL5CX01CA09CL1 2-0395-001	---	01-13-2015	01-12-2016

band rejection filter	Sinoscite	FL5CX01CA08CL1 2-0393-001	---	01-13-2015	01-12-2016
band rejection filter	Sinoscite	FL5CX02CA04CL1 2-0396-002	---	01-13-2015	01-12-2016
band rejection filter	Sinoscite	FL5CX02CA03CL1 2-0394-001	---	01-13-2015	01-12-2016

8 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	FCC Part15C (2014)	Subpart C-Intentional Radiators
2	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

Test Results List:

Test Requirement	Test method	Test item	Verdict	Note
Part15C Section 15.247 (b)(3)	ANSI C63.10	Conducted Peak Output Power	PASS	Appendix A)
Part15C Section 15.247 (a)(2)	ANSI C63.10	6dB Occupied Bandwidth	PASS	Appendix B)
Part15C Section 15.247(d)	ANSI C63.10	Band-edge for RF Conducted Emissions	PASS	Appendix C)
Part15C Section 15.247(d)	ANSI C63.10	RF Conducted Spurious Emissions	PASS	Appendix D)
Part15C Section 15.247 (e)	ANSI C63.10	Power Spectral Density	PASS	Appendix E)
Part15C Section 15.203/15.247 (c)	ANSI C63.10	Antenna Requirement	PASS	Appendix F)
Part15C Section 15.207	ANSI C63.10	AC Power Line Conducted Emission	PASS	Appendix G)
Part15C Section 15.205/15.209	ANSI C63.10	Restricted bands around fundamental frequency (Radiated Emission)	PASS	Appendix H)
Part15C Section 15.205/15.209	ANSI C63.10	Radiated Spurious Emissions	PASS	Appendix H)

Appendix A) Conducted Peak Output Power

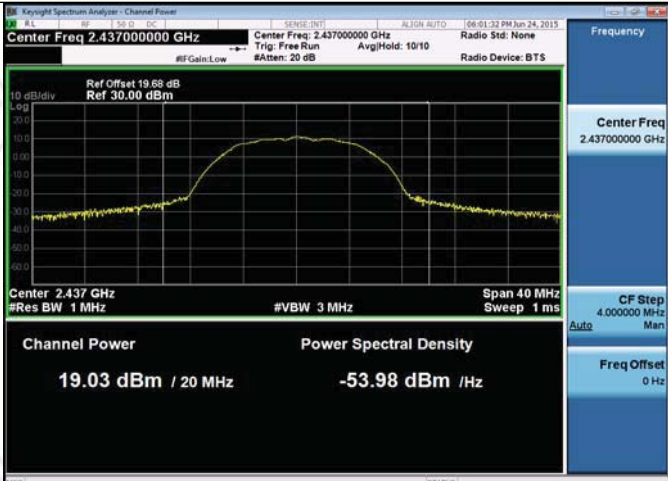
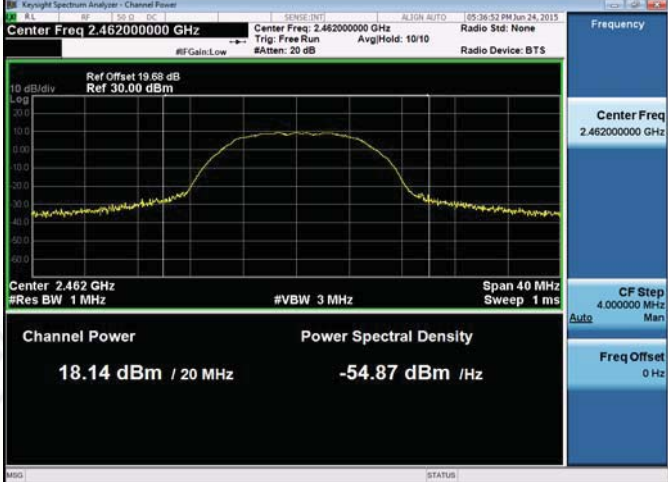
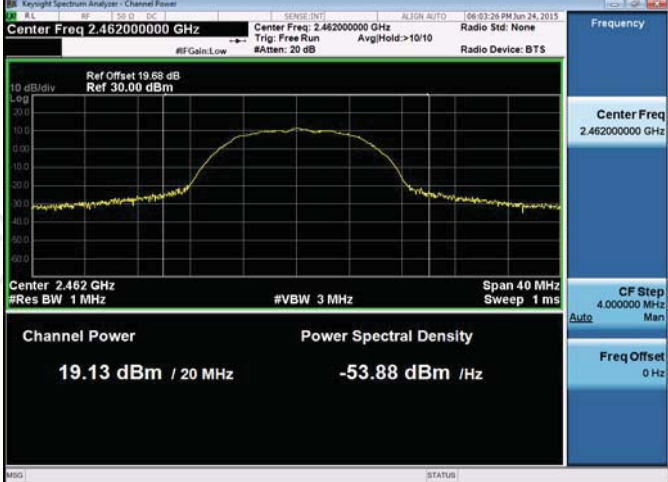
Result Table

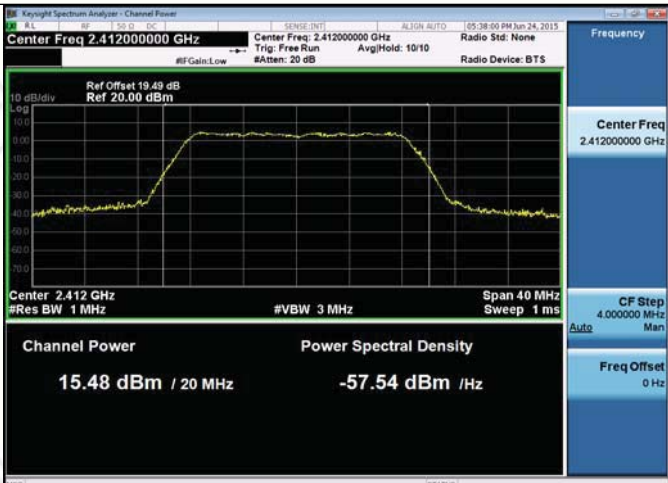
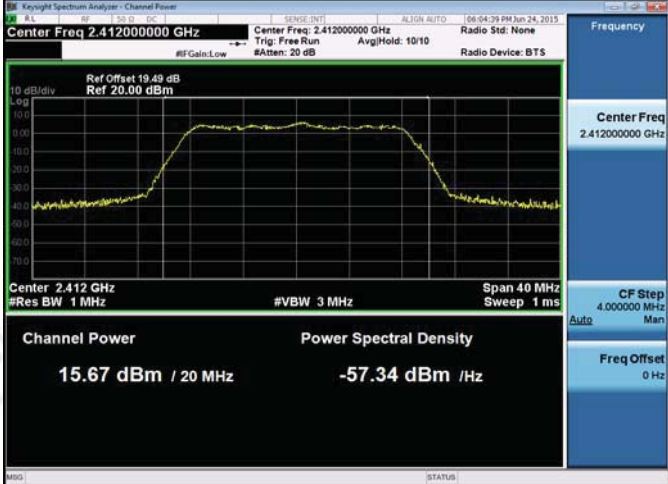
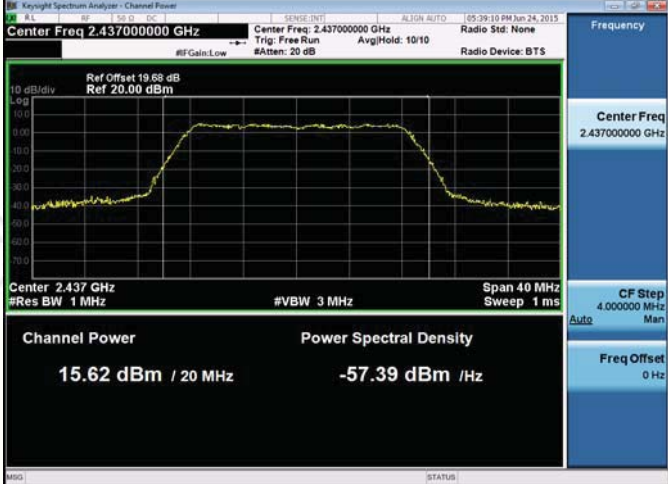
Mode	Antenna	Channel	Conducted Peak Output Power [dBm]	Verdict
11B	Ant1	LCH	17.79	PASS
11B	Ant2	LCH	18.54	PASS
11B	Ant1	MCH	18.16	PASS
11B	Ant2	MCH	19.03	PASS
11B	Ant1	HCH	18.14	PASS
11B	Ant2	HCH	19.13	PASS
11G	Ant1	LCH	15.48	PASS
11G	Ant2	LCH	15.67	PASS
11G	Ant1	MCH	15.62	PASS
11G	Ant2	MCH	16.14	PASS
11G	Ant1	HCH	15.56	PASS
11G	Ant2	HCH	16.17	PASS
11N20SISO	Ant1	LCH	15.20	PASS
11N20SISO	Ant2	LCH	15.53	PASS
11N20SISO	Ant1	MCH	15.45	PASS
11N20SISO	Ant2	MCH	17.73	PASS
11N20SISO	Ant1	HCH	15.31	PASS
11N20SISO	Ant2	HCH	15.99	PASS
11N20MIMO	Ant1+Ant2	LCH	18.38	PASS
11N20MIMO	Ant1+Ant2	MCH	19.75	PASS
11N20MIMO	Ant1+Ant2	HCH	18.67	PASS
11N40SISO	Ant1	LCH	13.39	PASS
11N40SISO	Ant2	LCH	15.14	PASS
11N40SISO	Ant1	MCH	14.78	PASS
11N40SISO	Ant2	MCH	15.31	PASS
11N40SISO	Ant1	HCH	14.84	PASS
11N40SISO	Ant2	HCH	15.35	PASS
11N40MIMO	Ant1+Ant2	LCH	17.36	PASS
11N40MIMO	Ant1+Ant2	MCH	18.06	PASS
11N40MIMO	Ant1+Ant2	HCH	18.11	PASS

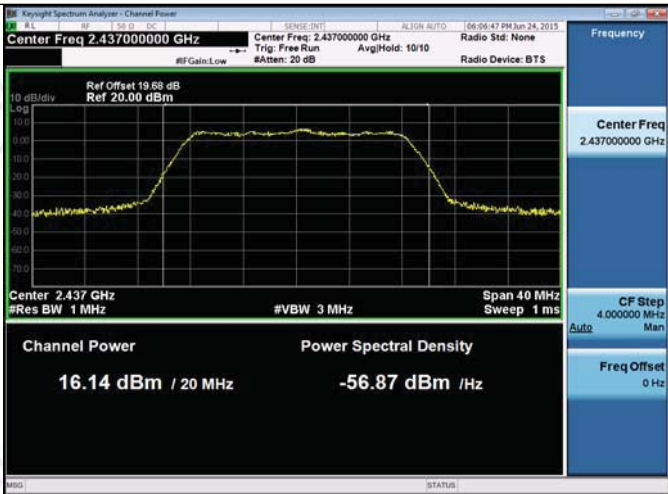
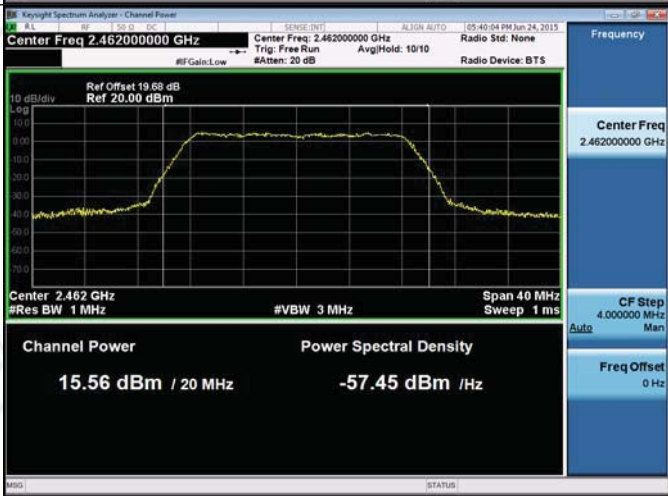
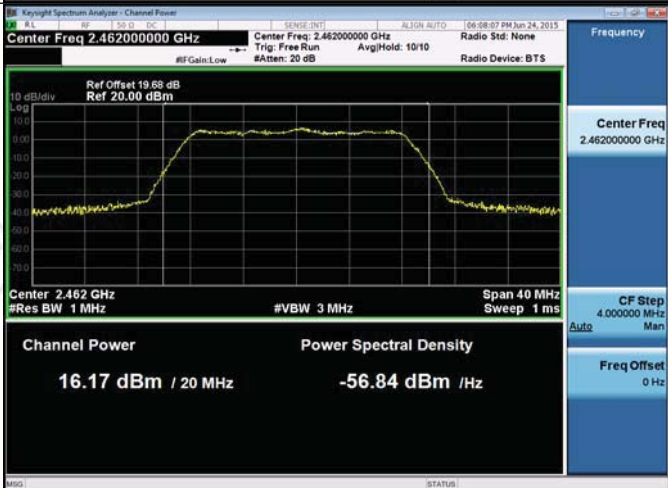
Test Graph

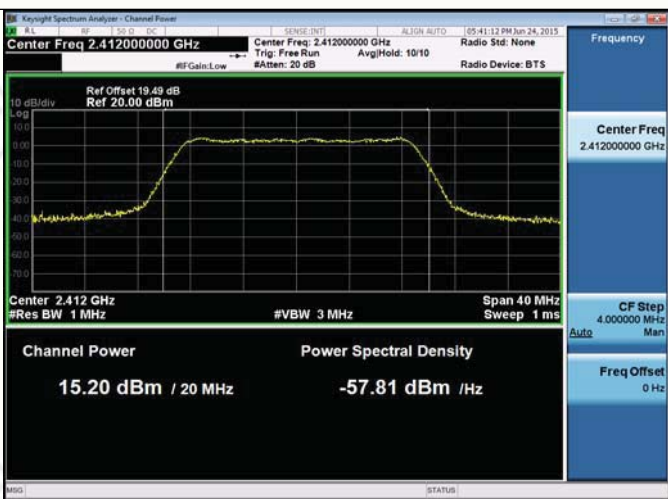
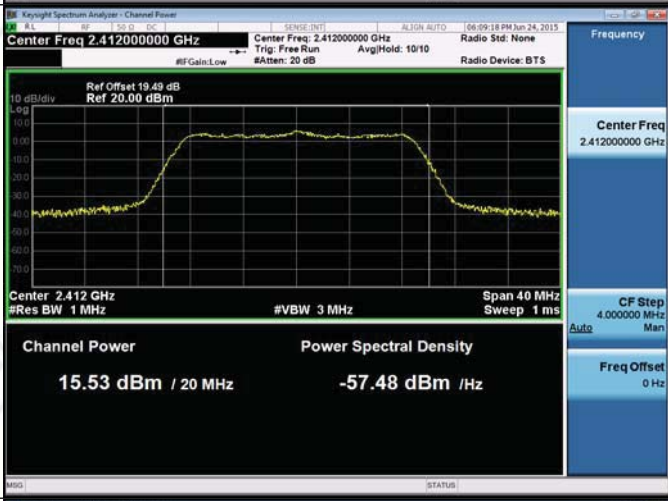
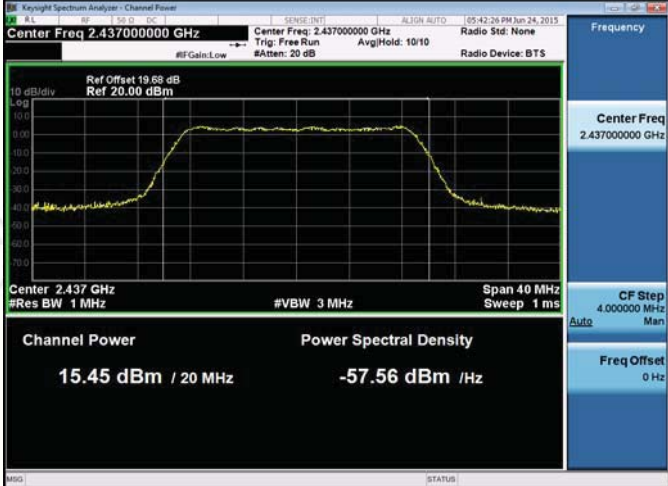
Remark: Detector is Peak

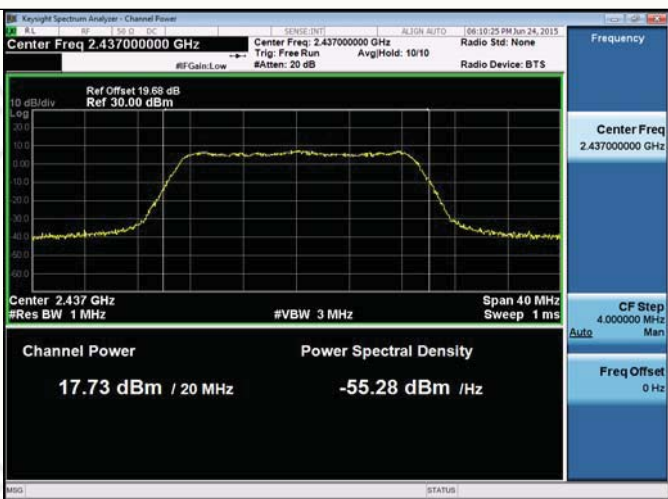
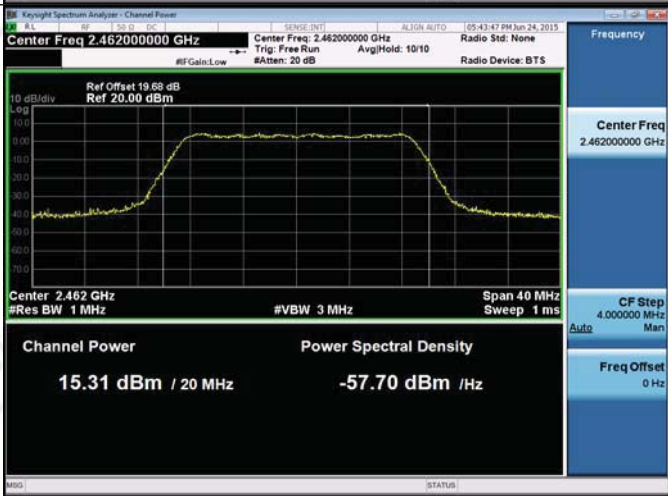
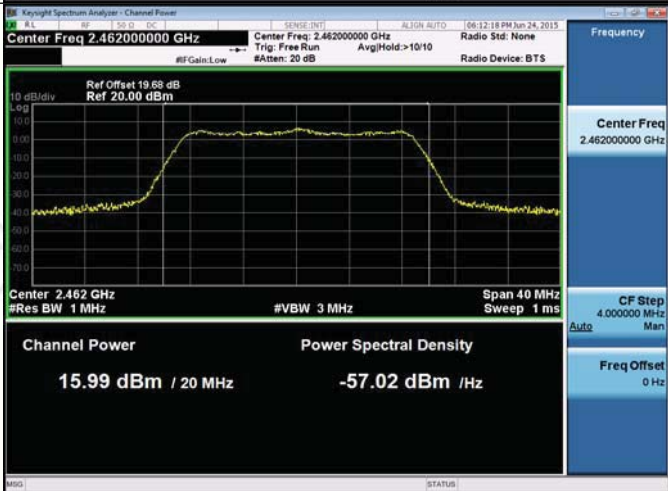


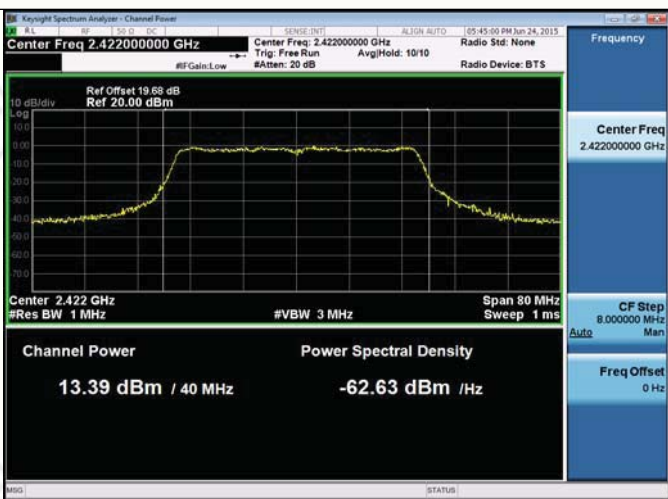
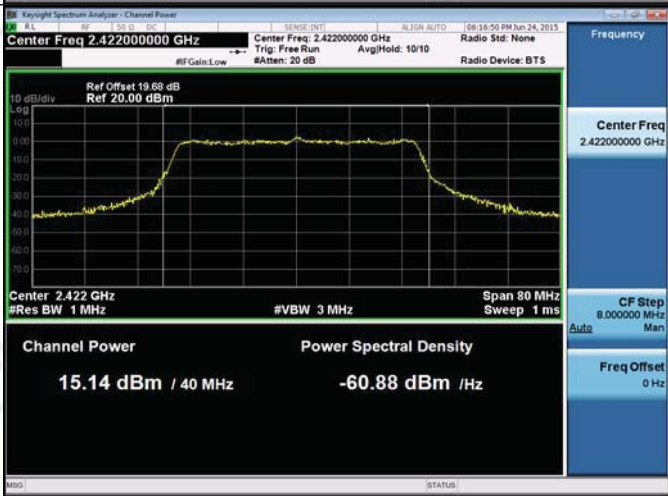
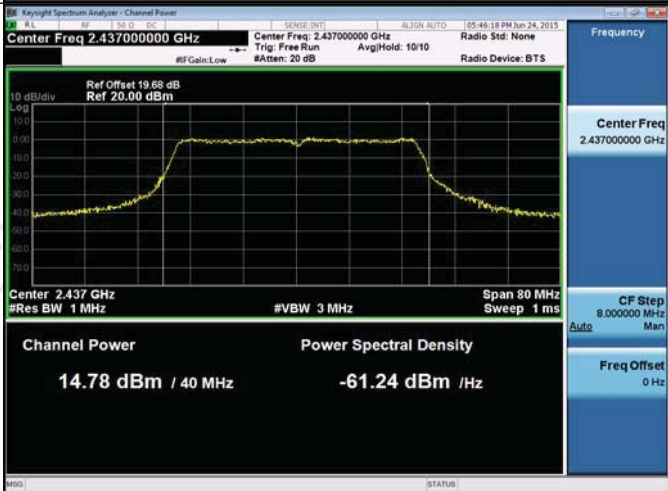
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11B/HCH_Ant1	
11B/HCH_Ant2	

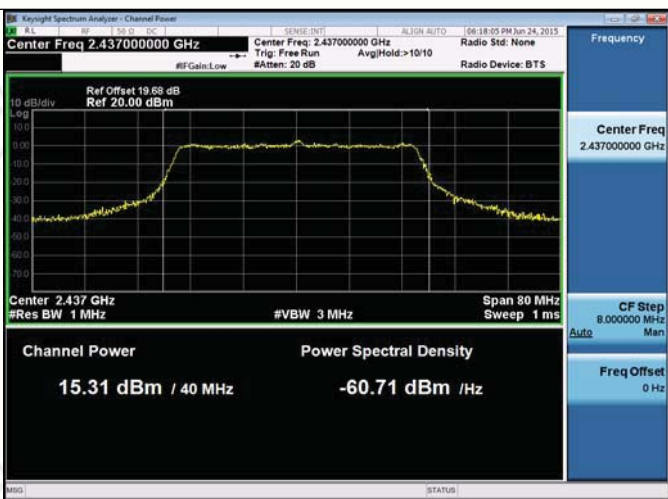
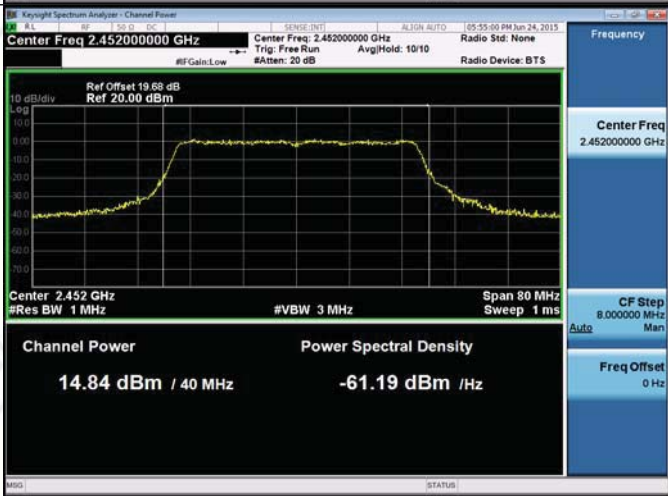
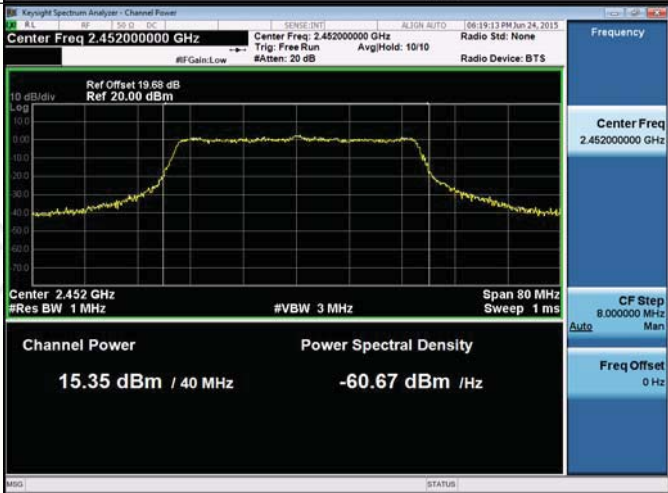
11G/LCH_Ant1	 Keyight Spectrum Analyzer - Channel Power Center Freq 2.412000000 GHz Ref Offset 19.48 dB Ref 20.00 dBm Center 2.412 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power 15.48 dBm / 20 MHz Power Spectral Density -57.54 dBm / Hz Frequency Center Freq 2.412000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz
11G/LCH_Ant2	 Keyight Spectrum Analyzer - Channel Power Center Freq 2.412000000 GHz Ref Offset 19.48 dB Ref 20.00 dBm Center 2.412 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power 15.67 dBm / 20 MHz Power Spectral Density -57.34 dBm / Hz Frequency Center Freq 2.412000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz
11G/MCH_Ant1	 Keyight Spectrum Analyzer - Channel Power Center Freq 2.437000000 GHz Ref Offset 19.68 dB Ref 20.00 dBm Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power 15.62 dBm / 20 MHz Power Spectral Density -57.39 dBm / Hz Frequency Center Freq 2.437000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz

11G/MCH_Ant2	 Keygraph Spectrum Analyzer - Channel Power Center Freq 2.437000000 GHz Ref Offset 19.68 dB Ref 20.00 dBm Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power 16.14 dBm / 20 MHz Power Spectral Density -56.87 dBm / Hz
11G/HCH_Ant1	 Keygraph Spectrum Analyzer - Channel Power Center Freq 2.462000000 GHz Ref Offset 19.68 dB Ref 20.00 dBm Center 2.462 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power 15.56 dBm / 20 MHz Power Spectral Density -57.45 dBm / Hz
11G/HCH_Ant2	 Keygraph Spectrum Analyzer - Channel Power Center Freq 2.462000000 GHz Ref Offset 19.68 dB Ref 20.00 dBm Center 2.462 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power 16.17 dBm / 20 MHz Power Spectral Density -56.84 dBm / Hz

11N20SISO/LCH_Ant1	 Keygraph Spectrum Analyzer - Channel Power Center Freq 2.412000000 GHz Ref Offset 19.48 dB Ref 20.00 dBm Center 2.412 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power 15.20 dBm / 20 MHz Power Spectral Density -57.81 dBm / Hz
11N20SISO/LCH_Ant2	 Keygraph Spectrum Analyzer - Channel Power Center Freq 2.412000000 GHz Ref Offset 19.48 dB Ref 20.00 dBm Center 2.412 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power 15.53 dBm / 20 MHz Power Spectral Density -57.48 dBm / Hz
11N20SISO/MCH_Ant1	 Keygraph Spectrum Analyzer - Channel Power Center Freq 2.437000000 GHz Ref Offset 19.68 dB Ref 20.00 dBm Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms Channel Power 15.45 dBm / 20 MHz Power Spectral Density -57.56 dBm / Hz

11N20SISO/MCH_Ant2	
11N20SISO/HCH_Ant1	
11N20SISO/HCH_Ant2	

11N40SISO/LCH_Ant1	 Keygraph Spectrum Analyzer - Channel Power Center Freq 2.422000000 GHz Ref Offset 19.68 dB Ref 20.00 dBm Center 2.422 GHz #Res BW 1 MHz #VBW 3 MHz Span 80 MHz Sweep 1 ms Channel Power 13.39 dBm / 40 MHz Power Spectral Density -62.63 dBm / Hz
11N40SISO/LCH_Ant2	 Keygraph Spectrum Analyzer - Channel Power Center Freq 2.422000000 GHz Ref Offset 19.68 dB Ref 20.00 dBm Center 2.422 GHz #Res BW 1 MHz #VBW 3 MHz Span 80 MHz Sweep 1 ms Channel Power 15.14 dBm / 40 MHz Power Spectral Density -60.88 dBm / Hz
11N40SISO/MCH_Ant1	 Keygraph Spectrum Analyzer - Channel Power Center Freq 2.437000000 GHz Ref Offset 19.68 dB Ref 20.00 dBm Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Span 80 MHz Sweep 1 ms Channel Power 14.78 dBm / 40 MHz Power Spectral Density -61.24 dBm / Hz

11N40SISO/MCH_Ant2	
11N40SISO/HCH_Ant1	
11N40SISO/HCH_Ant2	

Appendix B) 6dB Occupied Bandwidth

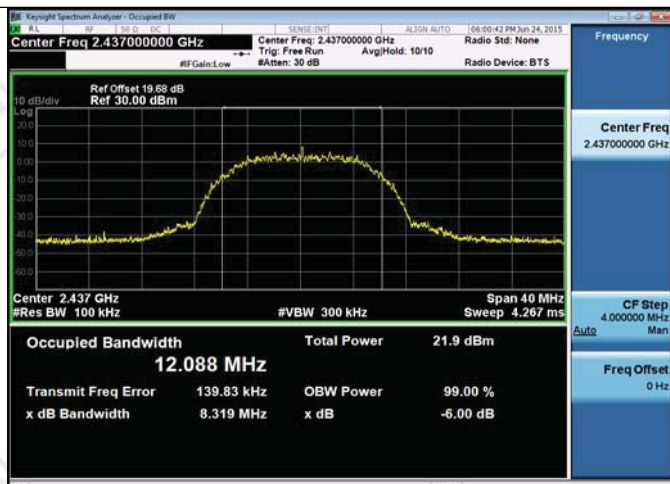
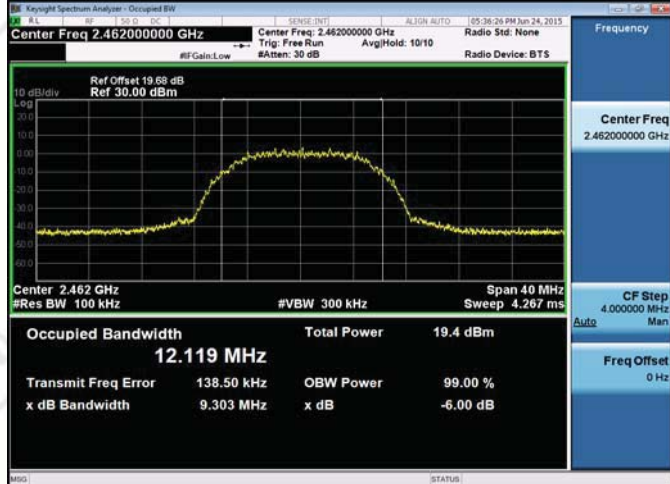
Result Table

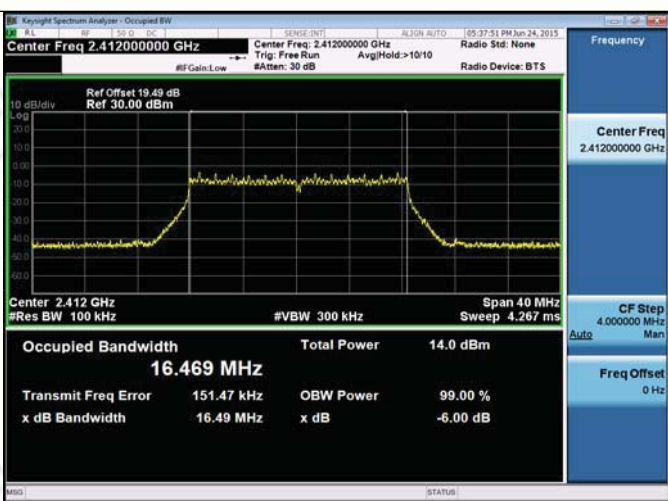
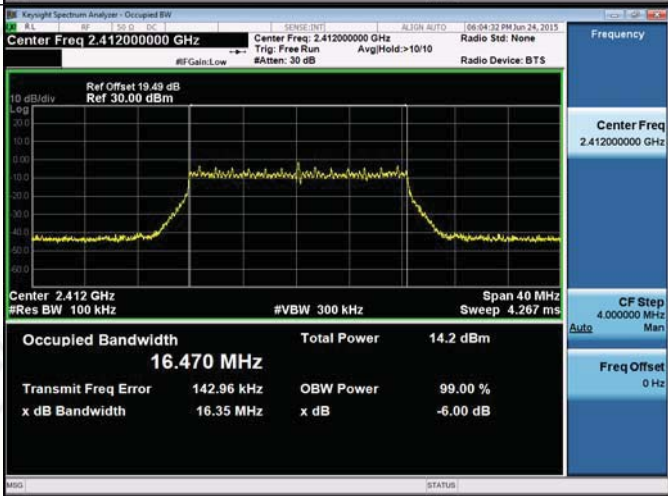
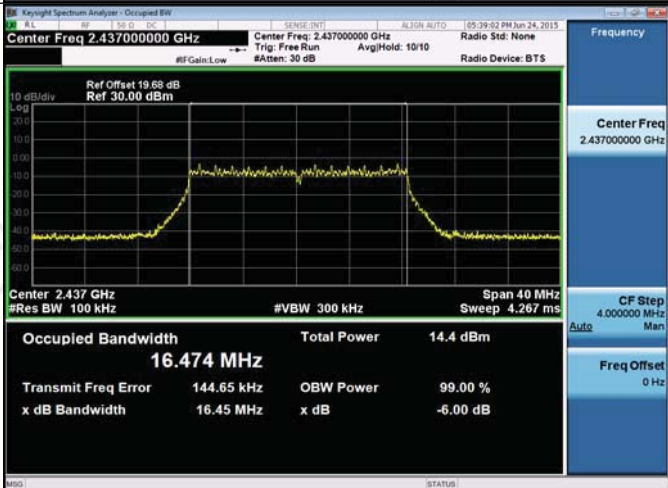
Mode	Antenna	Channel	6dB Bandwidth [MHz]	99% OBW [MHz]	Verdict
11B	Ant1	LCH	9.013	12.106	PASS
11B	Ant2	LCH	8.348	12.092	PASS
11B	Ant1	MCH	8.585	12.082	PASS
11B	Ant2	MCH	8.319	12.088	PASS
11B	Ant1	HCH	9.303	12.119	PASS
11B	Ant2	HCH	8.286	12.052	PASS
11G	Ant1	LCH	16.49	16.469	PASS
11G	Ant2	LCH	16.35	16.470	PASS
11G	Ant1	MCH	16.45	16.474	PASS
11G	Ant2	MCH	16.37	16.457	PASS
11G	Ant1	HCH	16.46	16.459	PASS
11G	Ant2	HCH	16.32	16.455	PASS
11N20SISO	Ant1	LCH	17.62	17.567	PASS
11N20SISO	Ant2	LCH	17.25	17.569	PASS
11N20SISO	Ant1	MCH	17.63	17.576	PASS
11N20SISO	Ant2	MCH	17.63	17.571	PASS
11N20SISO	Ant1	HCH	17.62	17.575	PASS
11N20SISO	Ant2	HCH	16.94	17.574	PASS
11N40SISO	Ant1	LCH	36.40	36.217	PASS
11N40SISO	Ant2	LCH	35.08	36.211	PASS
11N40SISO	Ant1	MCH	36.35	36.193	PASS
11N40SISO	Ant2	MCH	35.06	36.176	PASS
11N40SISO	Ant1	HCH	36.38	36.208	PASS
11N40SISO	Ant2	HCH	35.06	36.112	PASS

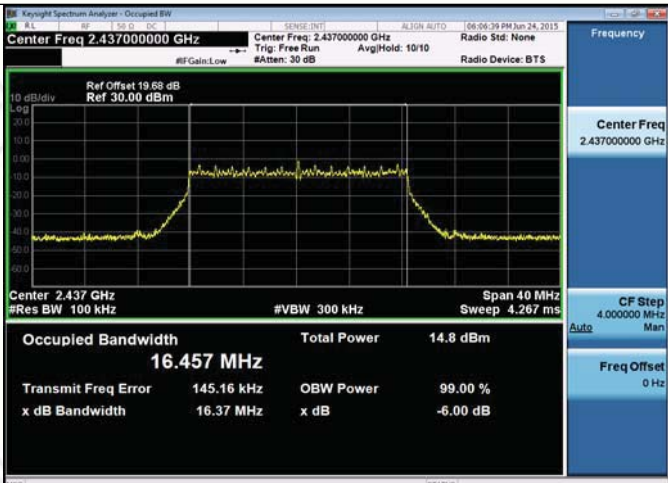
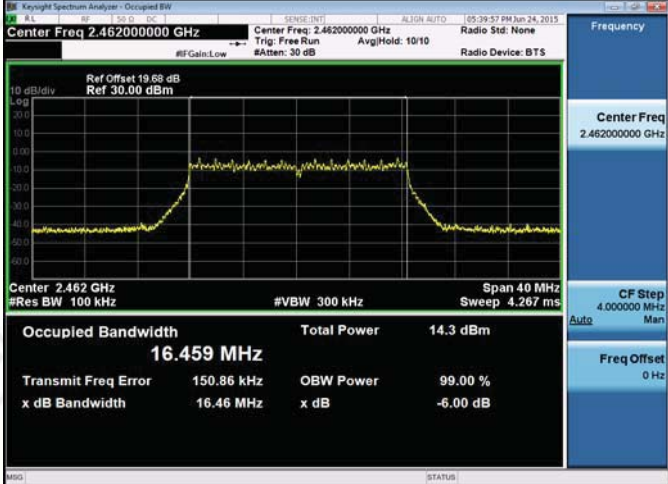
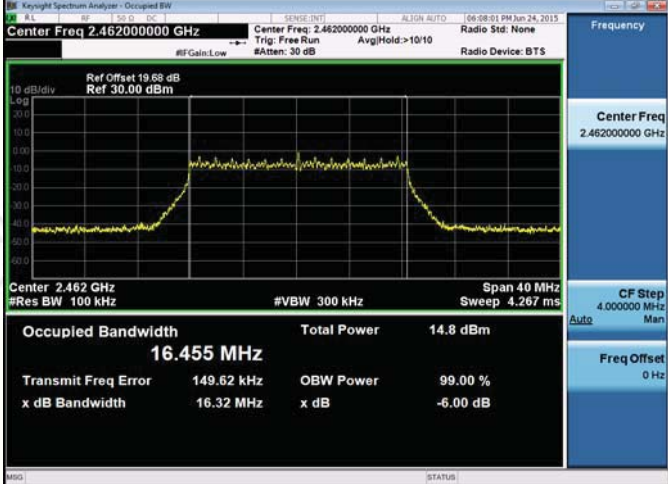
Test Graph

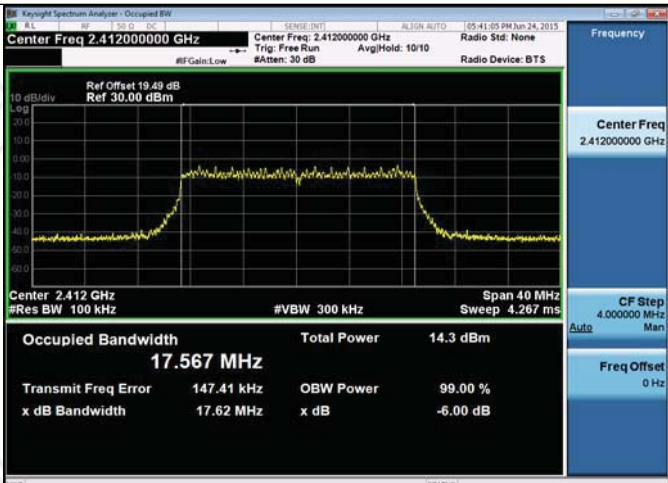
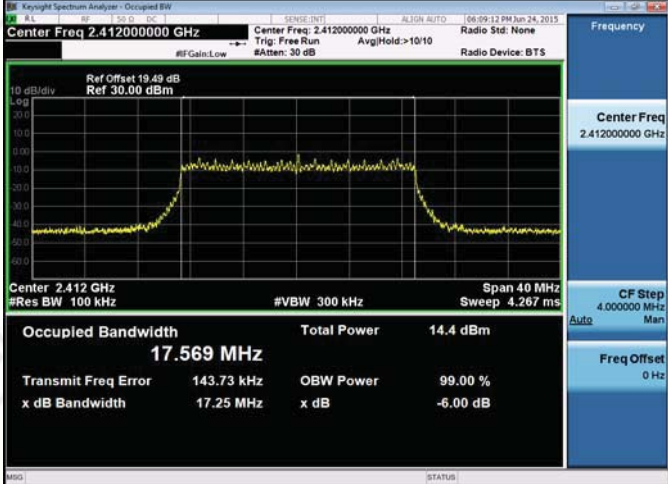
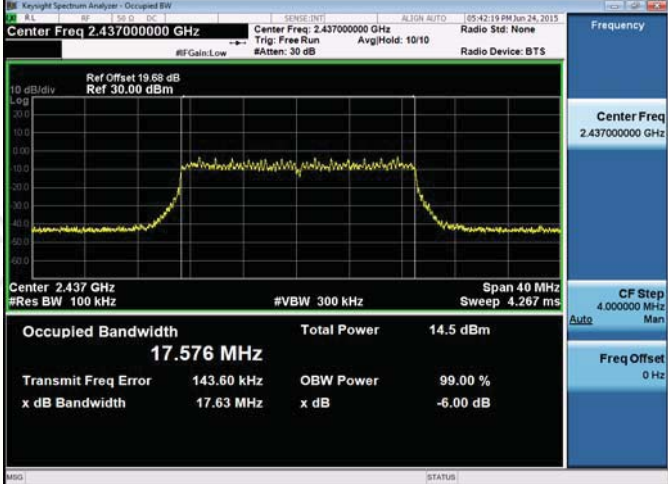
Remark: Detector is Peak

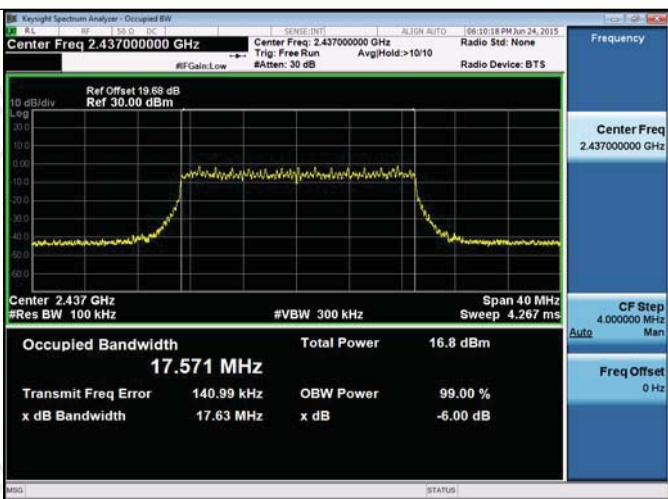
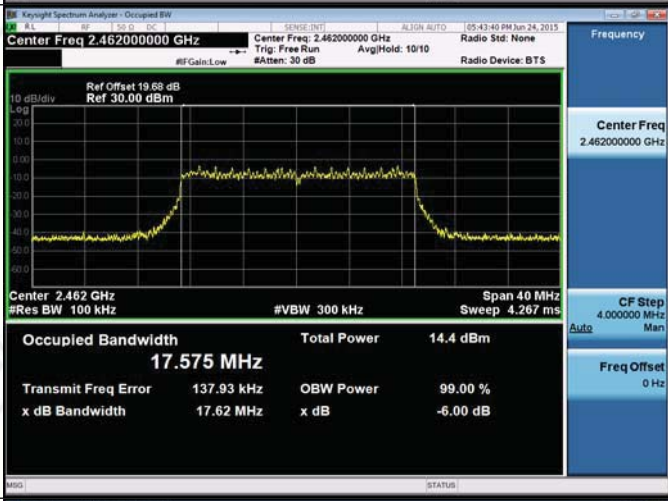
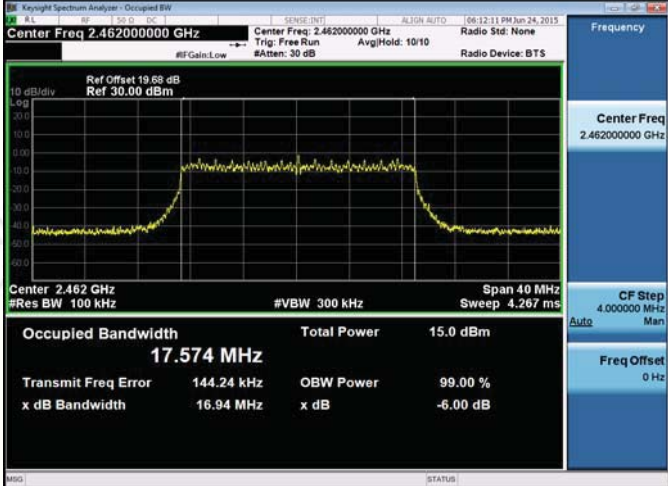


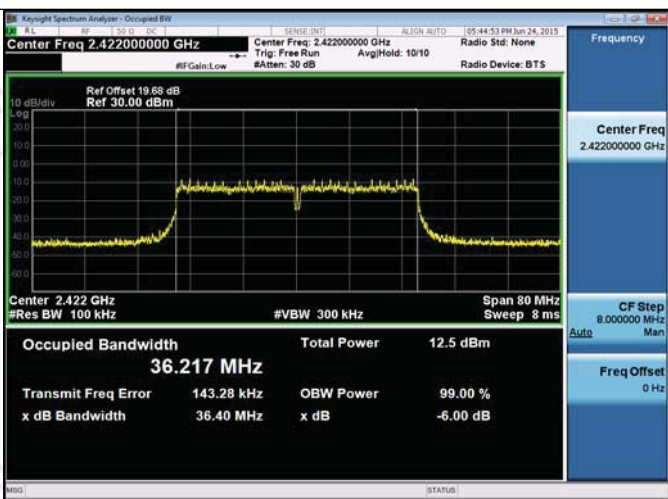
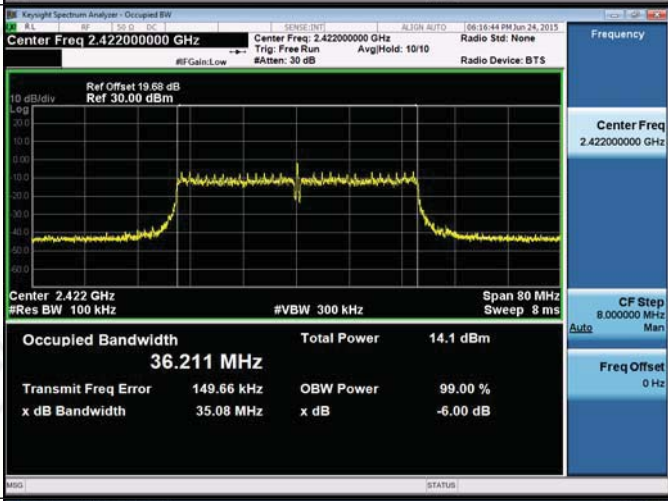
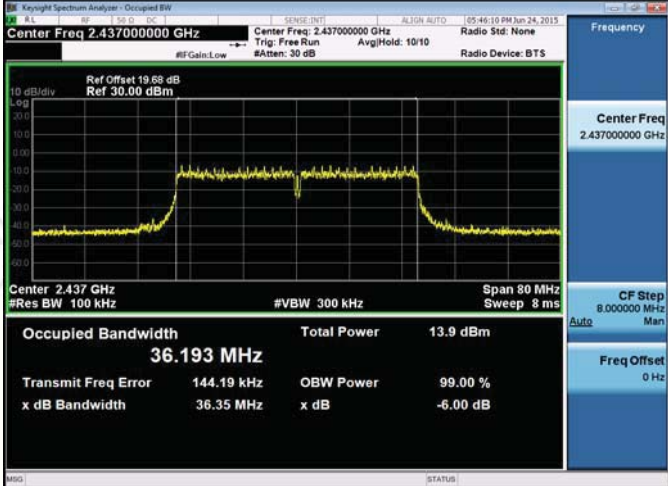
11B/MCH_Ant2	 <table><tr><th colspan="4">Key Screenshot Data for 11B/MCH_Ant2</th></tr><tr><td>Center Freq</td><td>2.437 GHz</td><td>Ref Offset</td><td>19.68 dB</td></tr><tr><td>Res BW</td><td>100 kHz</td><td>Ref</td><td>30.00 dBm</td></tr><tr><td>Occupied Bandwidth</td><td>12.088 MHz</td><td>Total Power</td><td>21.9 dBm</td></tr><tr><td>Transmit Freq Error</td><td>139.83 kHz</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>x dB Bandwidth</td><td>8.319 MHz</td><td>x dB</td><td>-6.00 dB</td></tr></table>	Key Screenshot Data for 11B/MCH_Ant2				Center Freq	2.437 GHz	Ref Offset	19.68 dB	Res BW	100 kHz	Ref	30.00 dBm	Occupied Bandwidth	12.088 MHz	Total Power	21.9 dBm	Transmit Freq Error	139.83 kHz	OBW Power	99.00 %	x dB Bandwidth	8.319 MHz	x dB	-6.00 dB
Key Screenshot Data for 11B/MCH_Ant2																									
Center Freq	2.437 GHz	Ref Offset	19.68 dB																						
Res BW	100 kHz	Ref	30.00 dBm																						
Occupied Bandwidth	12.088 MHz	Total Power	21.9 dBm																						
Transmit Freq Error	139.83 kHz	OBW Power	99.00 %																						
x dB Bandwidth	8.319 MHz	x dB	-6.00 dB																						
11B/HCH_Ant1	 <table><tr><th colspan="4">Key Screenshot Data for 11B/HCH_Ant1</th></tr><tr><td>Center Freq</td><td>2.462 GHz</td><td>Ref Offset</td><td>19.68 dB</td></tr><tr><td>Res BW</td><td>100 kHz</td><td>Ref</td><td>30.00 dBm</td></tr><tr><td>Occupied Bandwidth</td><td>12.119 MHz</td><td>Total Power</td><td>19.4 dBm</td></tr><tr><td>Transmit Freq Error</td><td>138.50 kHz</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>x dB Bandwidth</td><td>9.303 MHz</td><td>x dB</td><td>-6.00 dB</td></tr></table>	Key Screenshot Data for 11B/HCH_Ant1				Center Freq	2.462 GHz	Ref Offset	19.68 dB	Res BW	100 kHz	Ref	30.00 dBm	Occupied Bandwidth	12.119 MHz	Total Power	19.4 dBm	Transmit Freq Error	138.50 kHz	OBW Power	99.00 %	x dB Bandwidth	9.303 MHz	x dB	-6.00 dB
Key Screenshot Data for 11B/HCH_Ant1																									
Center Freq	2.462 GHz	Ref Offset	19.68 dB																						
Res BW	100 kHz	Ref	30.00 dBm																						
Occupied Bandwidth	12.119 MHz	Total Power	19.4 dBm																						
Transmit Freq Error	138.50 kHz	OBW Power	99.00 %																						
x dB Bandwidth	9.303 MHz	x dB	-6.00 dB																						
11B/HCH_Ant2	 <table><tr><th colspan="4">Key Screenshot Data for 11B/HCH_Ant2</th></tr><tr><td>Center Freq</td><td>2.462 GHz</td><td>Ref Offset</td><td>19.68 dB</td></tr><tr><td>Res BW</td><td>100 kHz</td><td>Ref</td><td>30.00 dBm</td></tr><tr><td>Occupied Bandwidth</td><td>12.052 MHz</td><td>Total Power</td><td>20.3 dBm</td></tr><tr><td>Transmit Freq Error</td><td>149.31 kHz</td><td>OBW Power</td><td>99.00 %</td></tr><tr><td>x dB Bandwidth</td><td>8.286 MHz</td><td>x dB</td><td>-6.00 dB</td></tr></table>	Key Screenshot Data for 11B/HCH_Ant2				Center Freq	2.462 GHz	Ref Offset	19.68 dB	Res BW	100 kHz	Ref	30.00 dBm	Occupied Bandwidth	12.052 MHz	Total Power	20.3 dBm	Transmit Freq Error	149.31 kHz	OBW Power	99.00 %	x dB Bandwidth	8.286 MHz	x dB	-6.00 dB
Key Screenshot Data for 11B/HCH_Ant2																									
Center Freq	2.462 GHz	Ref Offset	19.68 dB																						
Res BW	100 kHz	Ref	30.00 dBm																						
Occupied Bandwidth	12.052 MHz	Total Power	20.3 dBm																						
Transmit Freq Error	149.31 kHz	OBW Power	99.00 %																						
x dB Bandwidth	8.286 MHz	x dB	-6.00 dB																						

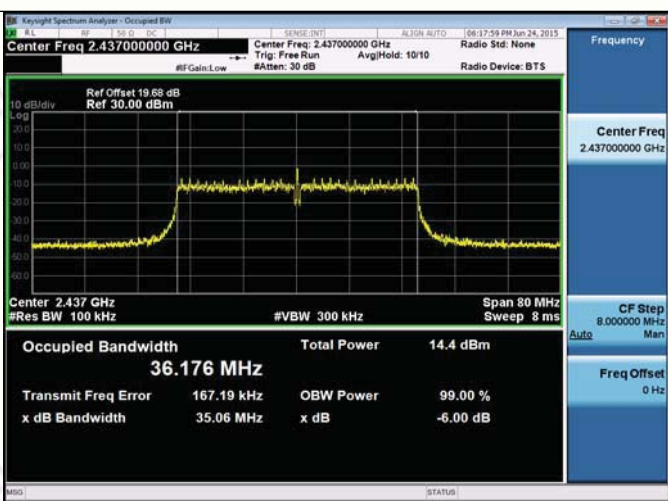
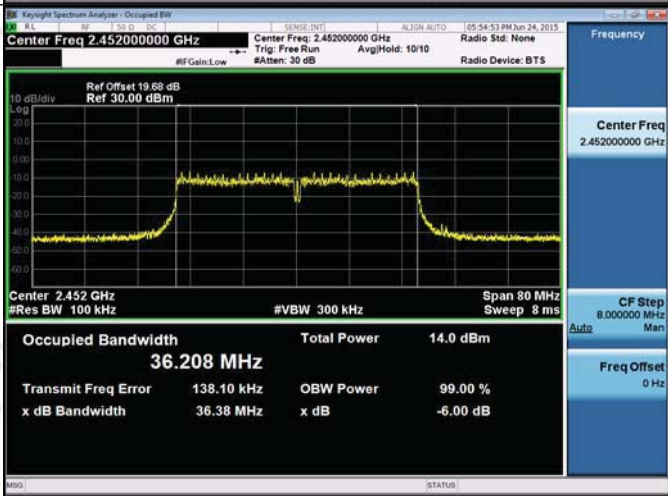
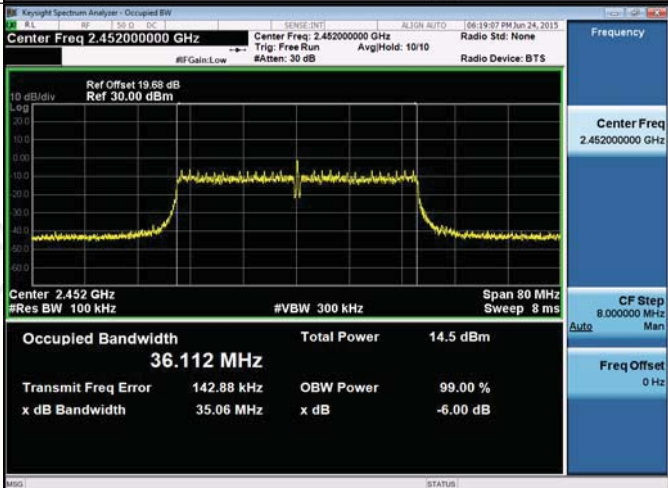
11G/LCH_Ant1	 Keyight Spectrum Analyzer - Occupied BW Center Freq 2.412000000 GHz Ref Offset 19.48 dB Ref 30.00 dBm Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 16.469 MHz Total Power 14.0 dBm Transmit Freq Error 151.47 kHz OBW Power 99.00 % x dB Bandwidth 16.49 MHz x dB -6.00 dB
11G/LCH_Ant2	 Keyight Spectrum Analyzer - Occupied BW Center Freq 2.412000000 GHz Ref Offset 19.48 dB Ref 30.00 dBm Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 16.470 MHz Total Power 14.2 dBm Transmit Freq Error 142.96 kHz OBW Power 99.00 % x dB Bandwidth 16.35 MHz x dB -6.00 dB
11G/MCH_Ant1	 Keyight Spectrum Analyzer - Occupied BW Center Freq 2.437000000 GHz Ref Offset 19.68 dB Ref 30.00 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 16.474 MHz Total Power 14.4 dBm Transmit Freq Error 144.65 kHz OBW Power 99.00 % x dB Bandwidth 16.45 MHz x dB -6.00 dB

11G/MCH_Ant2	
11G/HCH_Ant1	
11G/HCH_Ant2	

11N20SISO/LCH_Ant1	 Center Freq 2.412000000 GHz Ref Offset 19.48 dB Ref 30.00 dBm Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 17.567 MHz Total Power 14.3 dBm Transmit Freq Error 147.41 kHz OBW Power 99.00 % x dB Bandwidth 17.62 MHz x dB -6.00 dB
11N20SISO/LCH_Ant2	 Center Freq 2.412000000 GHz Ref Offset 19.48 dB Ref 30.00 dBm Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 17.569 MHz Total Power 14.4 dBm Transmit Freq Error 143.73 kHz OBW Power 99.00 % x dB Bandwidth 17.25 MHz x dB -6.00 dB
11N20SISO/MCH_Ant1	 Center Freq 2.437000000 GHz Ref Offset 19.68 dB Ref 30.00 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 17.576 MHz Total Power 14.5 dBm Transmit Freq Error 143.60 kHz OBW Power 99.00 % x dB Bandwidth 17.63 MHz x dB -6.00 dB

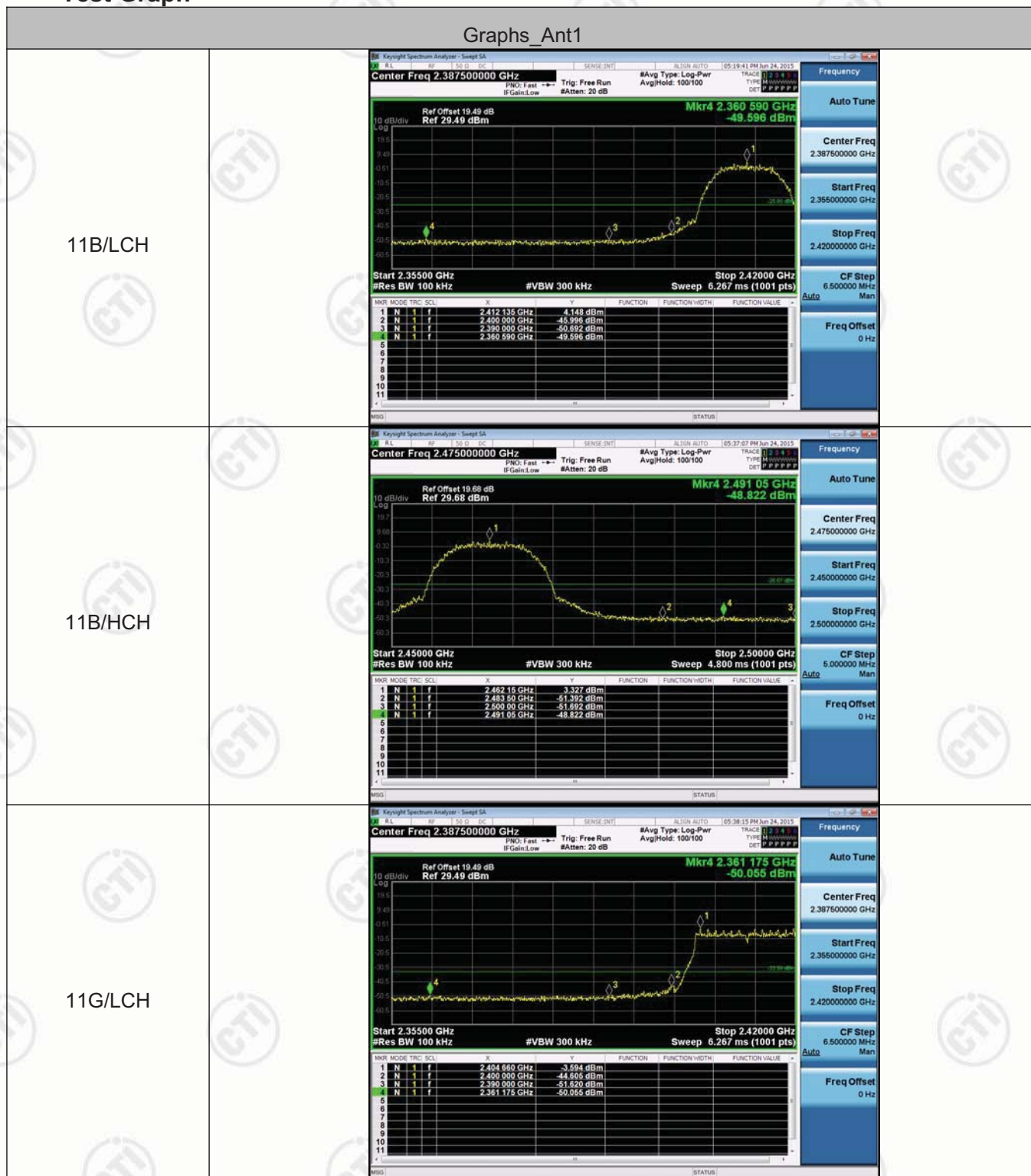
11N20SISO/MCH_Ant2	 Key: Spectrum Analyzer - Occupied BW Center Freq 2.437000000 GHz Ref Offset 19.68 dB Ref 30.00 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 17.571 MHz Total Power 16.8 dBm Transmit Freq Error 140.99 kHz OBW Power 99.00 % x dB Bandwidth 17.63 MHz x dB -6.00 dB
11N20SISO/HCH_Ant1	 Key: Spectrum Analyzer - Occupied BW Center Freq 2.462000000 GHz Ref Offset 19.68 dB Ref 30.00 dBm Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 17.575 MHz Total Power 14.4 dBm Transmit Freq Error 137.93 kHz OBW Power 99.00 % x dB Bandwidth 17.62 MHz x dB -6.00 dB
11N20SISO/HCH_Ant2	 Key: Spectrum Analyzer - Occupied BW Center Freq 2.462000000 GHz Ref Offset 19.68 dB Ref 30.00 dBm Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 4.267 ms Occupied Bandwidth 17.574 MHz Total Power 15.0 dBm Transmit Freq Error 144.24 kHz OBW Power 99.00 % x dB Bandwidth 16.94 MHz x dB -6.00 dB

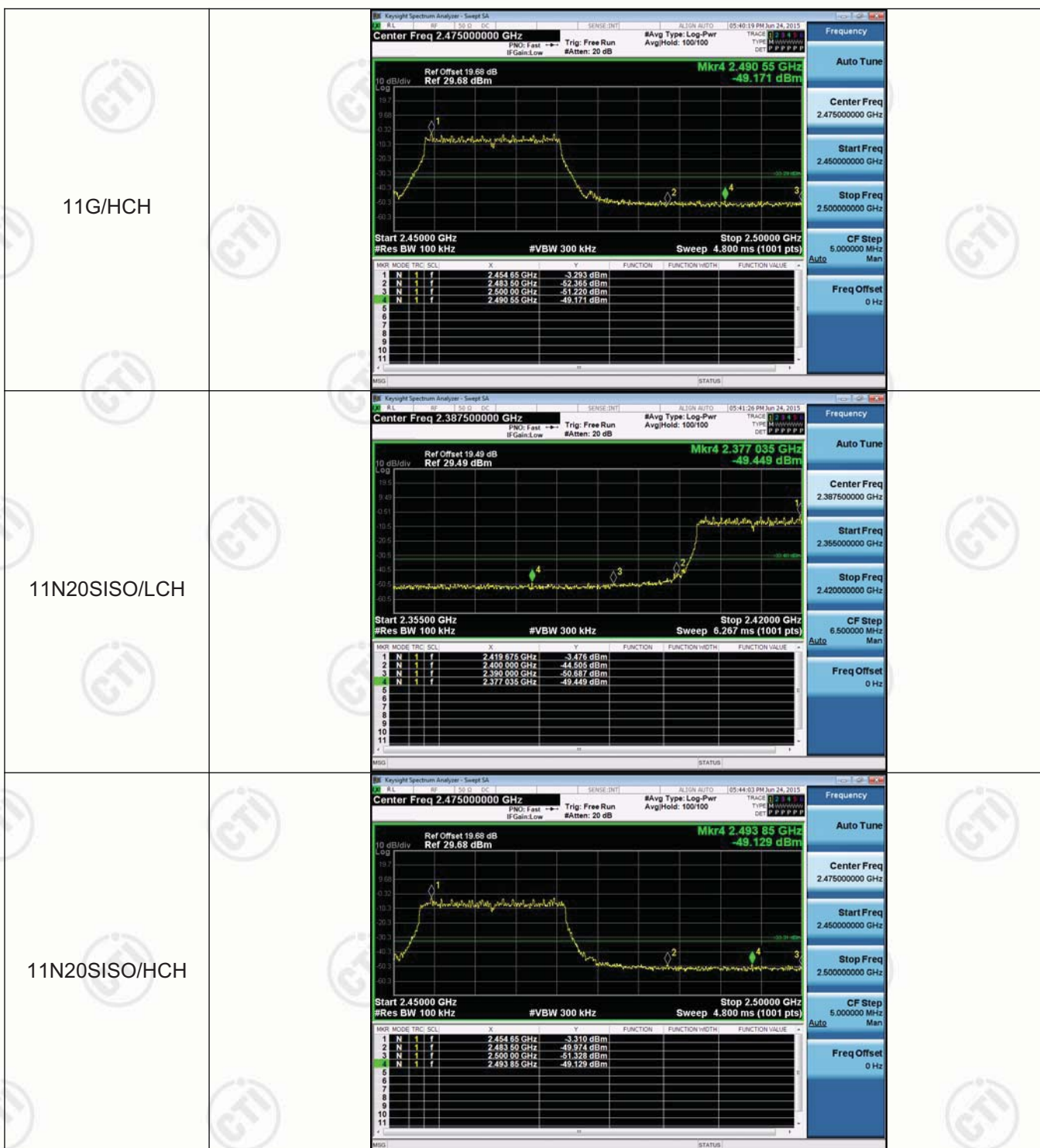
11N40SISO/LCH_Ant1	 Keygraph Spectrum Analyzer - Occupied BW Center Freq 2.422000000 GHz Ref Offset 19.68 dB Ref 30.00 dBm Center 2.422 GHz #Res BW 100 kHz #VBW 300 kHz Span 80 MHz Sweep 8 ms Occupied Bandwidth 36.217 MHz Total Power 12.5 dBm Transmit Freq Error 143.28 kHz OBW Power 99.00 % x dB Bandwidth 36.40 MHz x dB -6.00 dB
11N40SISO/LCH_Ant2	 Keygraph Spectrum Analyzer - Occupied BW Center Freq 2.422000000 GHz Ref Offset 19.68 dB Ref 30.00 dBm Center 2.422 GHz #Res BW 100 kHz #VBW 300 kHz Span 80 MHz Sweep 8 ms Occupied Bandwidth 36.211 MHz Total Power 14.1 dBm Transmit Freq Error 149.66 kHz OBW Power 99.00 % x dB Bandwidth 35.08 MHz x dB -6.00 dB
11N40SISO/MCH_Ant1	 Keygraph Spectrum Analyzer - Occupied BW Center Freq 2.437000000 GHz Ref Offset 19.68 dB Ref 30.00 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 80 MHz Sweep 8 ms Occupied Bandwidth 36.193 MHz Total Power 13.9 dBm Transmit Freq Error 144.19 kHz OBW Power 99.00 % x dB Bandwidth 36.35 MHz x dB -6.00 dB

11N40SISO/MCH_Ant2	 Keygraph Spectrum Analyzer - Occupied BW Center Freq 2.437000000 GHz Ref Offset 19.68 dB Ref 30.00 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 80 MHz Sweep 8 ms Occupied Bandwidth 36.176 MHz Total Power 14.4 dBm Transmit Freq Error 167.19 kHz OBW Power 99.00 % x dB Bandwidth 35.06 MHz x dB -6.00 dB
11N40SISO/HCH_Ant1	 Keygraph Spectrum Analyzer - Occupied BW Center Freq 2.452000000 GHz Ref Offset 19.68 dB Ref 30.00 dBm Center 2.452 GHz #Res BW 100 kHz #VBW 300 kHz Span 80 MHz Sweep 8 ms Occupied Bandwidth 36.208 MHz Total Power 14.0 dBm Transmit Freq Error 138.10 kHz OBW Power 99.00 % x dB Bandwidth 36.38 MHz x dB -6.00 dB
11N40SISO/HCH_Ant2	 Keygraph Spectrum Analyzer - Occupied BW Center Freq 2.452000000 GHz Ref Offset 19.68 dB Ref 30.00 dBm Center 2.452 GHz #Res BW 100 kHz #VBW 300 kHz Span 80 MHz Sweep 8 ms Occupied Bandwidth 36.112 MHz Total Power 14.5 dBm Transmit Freq Error 142.88 kHz OBW Power 99.00 % x dB Bandwidth 35.06 MHz x dB -6.00 dB

Appendix C) Band-edge for RF Conducted Emissions

Test Graph

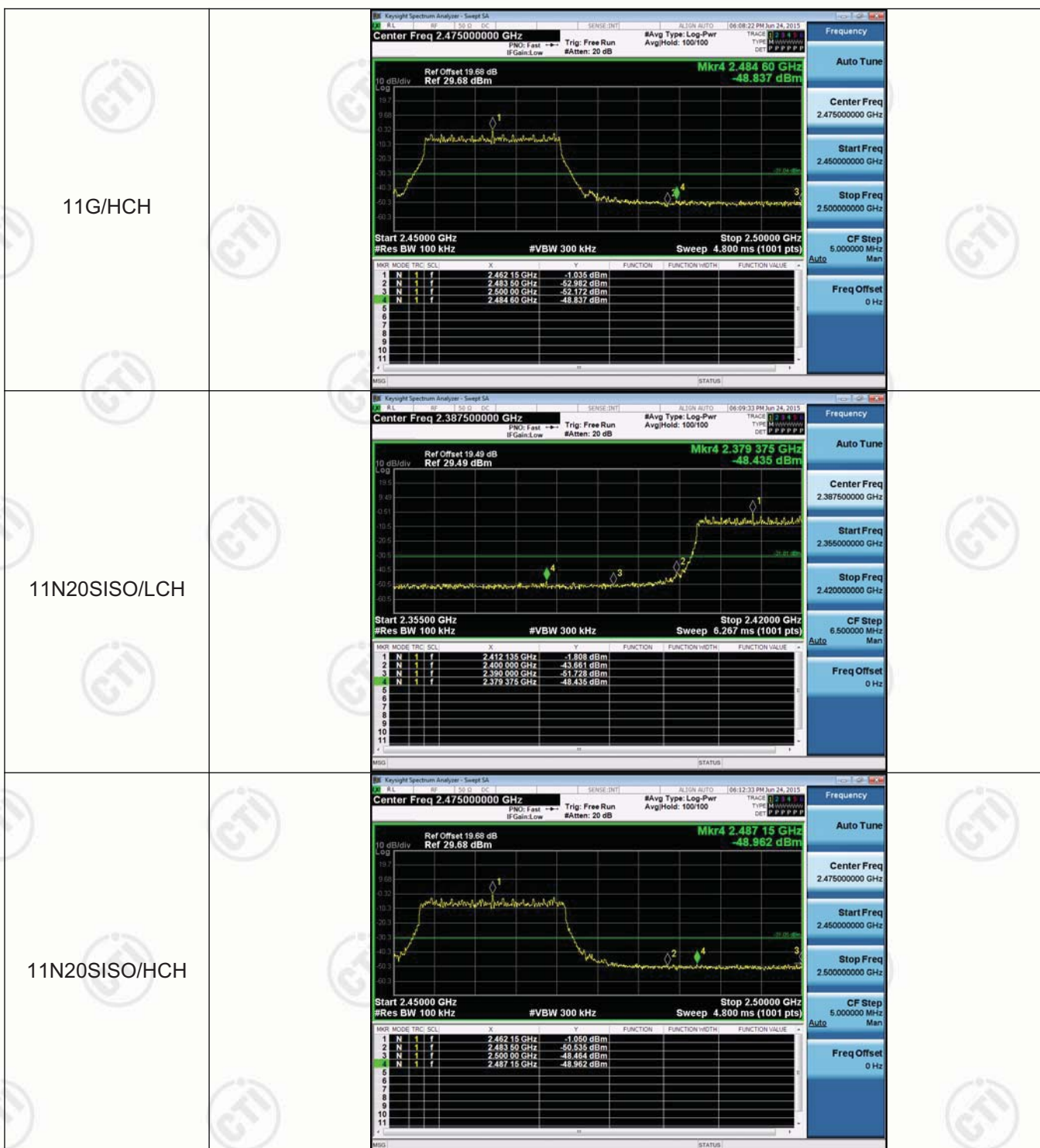


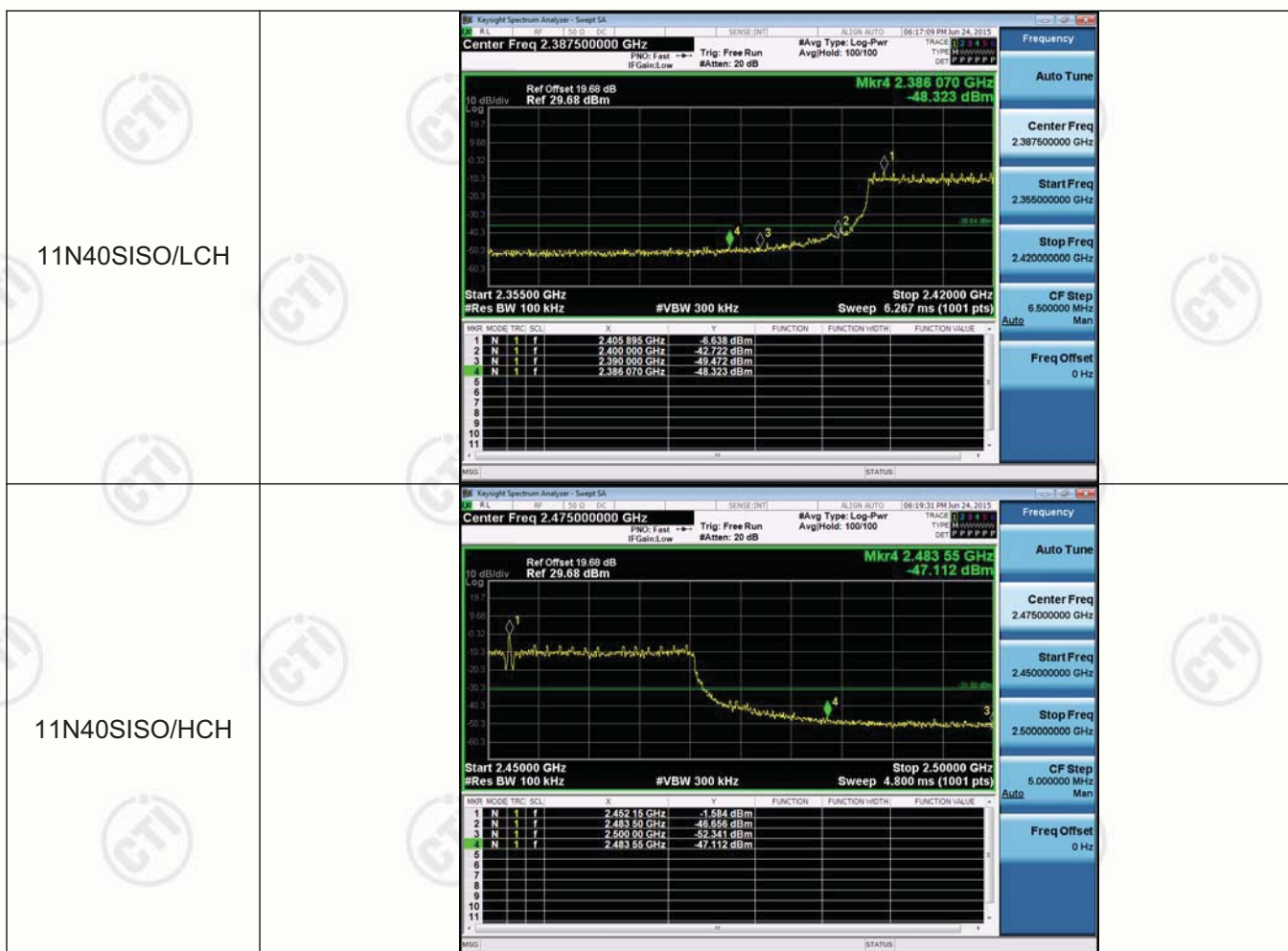




Graphs_Ant2







Appendix D) RF Conducted Spurious Emissions

Test Graph

