

TEST REPORT

Product : Digital Photo Frame
Trade mark : N/A
: DGF201, DGF202, DGF207, DGF208,
DGF210, DGF213, DGF214, DGF215,
Model/Type reference DPF101, DPF101, Smart801, DPF701,
Smart141, Phototen DF07 DF09 DF10
MI86, MI706, VI86, VI706 VI106 MI106
Serial Number : N/A
Report Number : EED32L00227301
FCC ID : 2AUKAMCX
Date of Issue : Sep. 11, 2019
Test Standards : 47 CFR Part 15Subpart C
Test result : PASS

Prepared for:

MAI CHUANGXIN ELECTRONIC LIMITED
Floor 6th, A building, RunFeng Industrial Zone,
Gushu, Xixiang, Bao'An, Shenzhen, China

Prepared by:

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Date:

Sep. 11, 2019

Check No.: 4038894478



2 Version

Version No.	Date	Description
00	Sep. 11, 2019	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

Remark:

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

The tested sample(s) and the sample information are provided by the client.

Model No.: DGF201, DGF202, DGF207, DGF208, DGF210, DGF213, DGF214, DGF215, DPF101, DPF101, Smart801, DPF701, Smart141, Phototen DF07 DF09 DF10 MI86, MI706, VI86, VI706 VI106 MI106

Only the model DGF201 was tested, the difference between these product models is only the shell color ,trademark and model name. Similarly, the principle, structure, circuit, and related components of the product models are the same. Does not affect the safety and electromagnetic compatibility of the product.

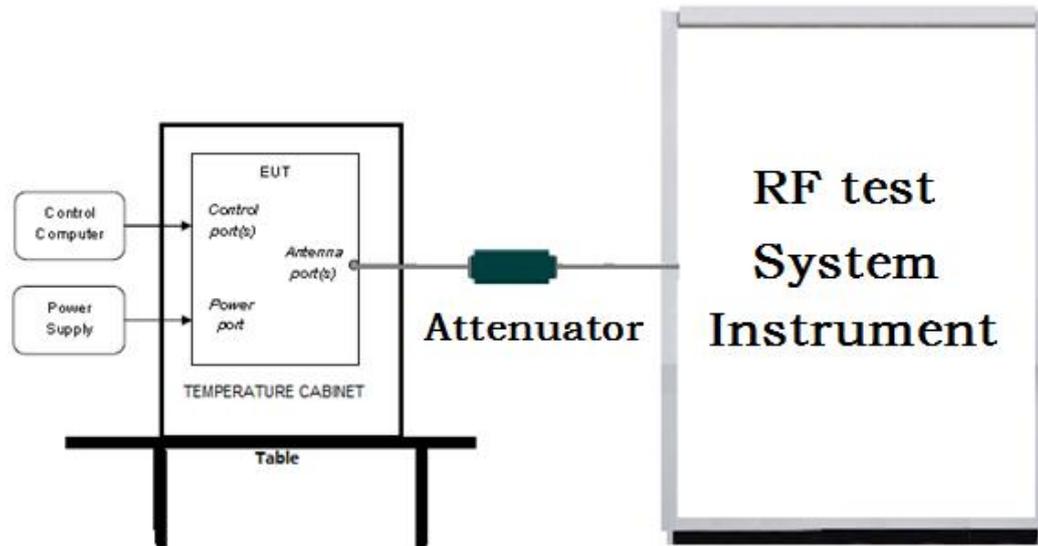
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5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

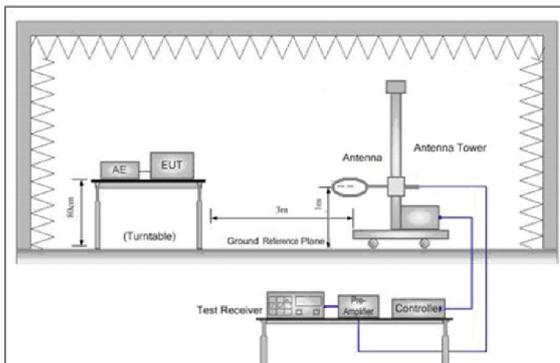


Figure 1. Below 30MHz

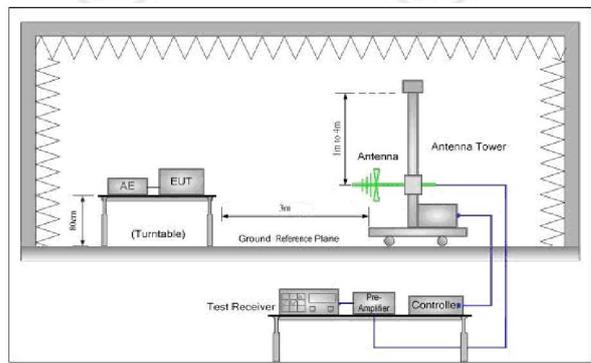


Figure 2. 30MHz to 1GHz

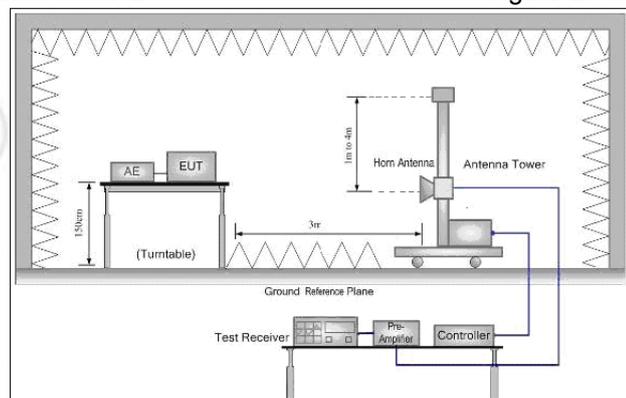
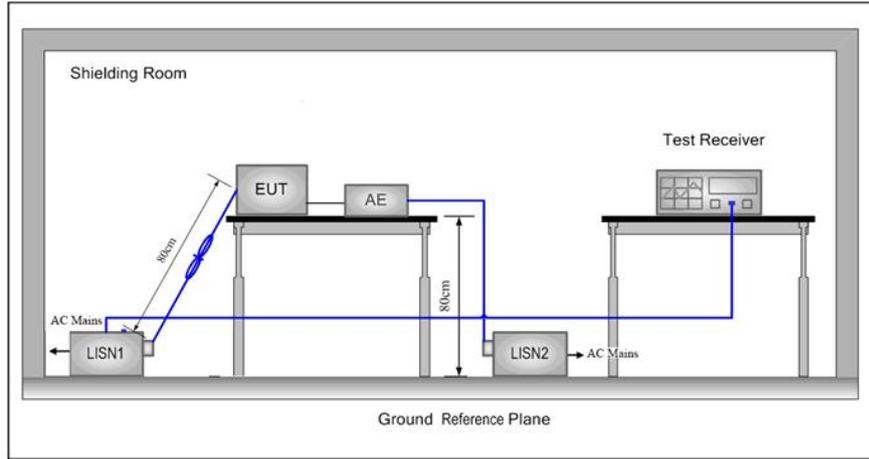


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup
Conducted Emissions setup



5.2 Test Environment

Operating Environment:	
Temperature:	24.0 °C
Humidity:	55 % 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				X				
Data Rate	1Mbps	2Mbps	5.5Mbps	11Mbps					
Power(dBm)	18.05	18.07	18.09	18.11					
Mode	802.11g								
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps	
Power(dBm)	17.28	17.25	17.22	17.20	17.18	17.15	17.13	17.11	
Mode	802.11n (HT20)								
Data Rate	6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps	
Power(dBm)	16.16	16.14	16.13	16.11	16.09	16.07	16.05	16.02	
Mode	802.11n (HT40)								
Data Rate	13.5Mbps	27Mbps	40.5Mbps	54Mbps	81Mbps	108Mbps	121.5Mbps	135Mbps	
Power(dBm)	15.38	15.35	15.33	15.30	15.29	15.28	15.24	15.21	

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

6 General Information

6.1 Client Information

Applicant:	MAI CHUANGXIN ELECTRONIC LIMITED
Address of Applicant:	Floor 6th, A building, RunFeng Industrial Zone, Gushu, Xixiang, Bao'An, Shenzhen, China
Manufacturer:	MAI CHUANGXIN ELECTRONIC LIMITED
Address of Manufacturer:	Floor 6th, A building, RunFeng Industrial Zone, Gushu, Xixiang, Bao'An, Shenzhen, China
Factory:	MAI CHUANGXIN ELECTRONIC LIMITED
Address of Factory:	Floor 6th, A building, RunFeng Industrial Zone, Gushu, Xixiang, Bao'An, Shenzhen, China

6.2 General Description of EUT

Product Name:	Digital Photo Frame	
Model No.(EUT):	DGF201, DGF202, DGF207, DGF208, DGF210, DGF213, DGF214, DGF215, DPF101, DPF101, Smart801, DPF701, Smart141, Phototen DF07 DF09 DF10 MI86, MI706, VI86, VI706 VI106 MI106	
Test Model No.:	DGF201	
Trade Mark:	N/A	
EUT Supports Radios application:	WiFi IEEE 802.11 /b/g/n (HT20) 2412MHz to 2462MHz	
Power Supply:	Adapter:	AC :100-240 V 50/60 Hz 0.2A
Sample Received Date:	Aug. 15, 2019	
Sample tested Date:	Aug. 15, 2019 to Sep. 11, 2019	

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:	DSSS, OFDM						
Test Power Grade:	802.11b:L 63,M 40,H 30 802.11n20:L 39,M 38,H 38 802.11g: L 41,M 40,H 39(manufacturer declare)						
Test Software of EUT:	REALTEK WLAN Test Tool						
Antenna Type and Gain:	Type: PCB antenna Gain:4.69 dBi						
Test Voltage:	DC 5V						
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

6.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd
Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China
Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

6.6 Deviation from Standards

None.

6.7 Abnormalities from Standard Conditions

None.

6.8 Other Information Requested by the Customer

None.

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

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.46dB (30MHz-1GHz)
		0.55dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.3dB (30MHz-1GHz)
		4.5dB (1GHz-12.75GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	3.8%
7	DC power voltages	0.026%

7 Equipment List

RF test system					
Equipment	Manufacturer	Model No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Spectrum Analyzer	Keysight	N9010A	MY54510339	03-01-2019	02-29-2020
High-pass filter	Sinoscite	FL3CX03WG1 8NM12-0398-002	---	01-09-2019	01-08-2020
PC-1	Lenovo	R4960d	---	03-01-2019	02-29-2020
BT&WI-FI Automatic control	R&S	OSP120	101374	03-01-2019	02-29-2020
RF control unit	JS Tonscend	JS0806-2	15860006	03-01-2019	02-29-2020
BT&WI-FI Automatic test software	JS Tonscend	JS1120-2	---	03-01-2019	02-29-2020
Temperature/Humidity Indicator	biaozhi	HM10	1804186	10-12-2018	10-11-2019

Conducted disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Receiver	R&S	ESCI	100435	05-20-2019	05-19-2020
Temperature/Humidity Indicator	Defu	TH128	/	06-14-2019	06-13-2020
LISN	R&S	ENV216	100098	05-08-2019	05-07-2020

3M Semi/full-anechoic Chamber					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
3M Chamber & Accessory Equipment	TDK	SAC-3	---	05-24-2019	05-23-2022
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-618	07-26-2019	07-25-2020
Microwave Preamplifier	Agilent	8449B	3008A02425	07-12-2019	07-11-2020
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1869	04-25-2018	04-24-2021
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	04-25-2018	04-24-2021
Receiver	R&S	ESCI	100435	05-20-2019	05-19-2020
Multi device Controller	maturo	NCD/070/1071 1112	---	01-09-2019	01-08-2020
Temperature/ Humidity Indicator	Shanghai qixiang	HM10	1804298	10-12-2018	10-11-2019
Cable line	Fulai(7M)	SF106	5219/6A	01-09-2019	01-08-2020
Cable line	Fulai(6M)	SF106	5220/6A	01-09-2019	01-08-2020
Cable line	Fulai(3M)	SF106	5216/6A	01-09-2019	01-08-2020
Cable line	Fulai(3M)	SF106	5217/6A	01-09-2019	01-08-2020

3M full-anechoic Chamber					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
RSE Automatic test software	JS Tonscend	JS36-RSE	10166	06-19-2019	06-18-2020
Spectrum Analyzer	Keysight	N9020B	MY5711111 2	03-27-2019	03-26-2020
Spectrum Analyzer	Keysight	N9030B	MY5714087 1	03-27-2019	03-26-2020
Horn Antenna	Schwarzbeck	BBHA 9170	9170-832	04-25-2018	04-24-2021
Horn Antenna	ETS-LINDGREN	3117	00057407	07-10-2018	07-09-2021
Preamplifier	EMCI	EMC184055S E	980596	05-22-2019	05-21-2020
Preamplifier	Agilent	8449B	3008A0242 5	07-12-2019	07-11-2020
Temperature/ Humidity Indicator	biaozhi	GM1360	EE1186631	04-30-2019	04-29-2020
Fully Anechoic Chamber	TDK	FAC-3	---	01-17-2018	01-16-2021
Filter bank	JS Tonscend	JS0806-F	188060094	04-10-2018	04-09-2021
Cable line	Times	SFT205- NMSM-2.50M	394812- 0001	01-09-2019	01-08-2020
Cable line	Times	SFT205- NMSM-2.50M	394812- 0002	01-09-2019	01-08-2020
Cable line	Times	SFT205- NMSM-2.50M	394812- 0003	01-09-2019	01-08-2020
Cable line	Times	SFT205- NMSM-2.50M	393495- 0001	01-09-2019	01-08-2020
Cable line	Times	EMC104- NMNM-1000	SN160710	01-09-2019	01-08-2020
Cable line	Times	SFT205- NMSM-3.00M	394813-0001	01-09-2019	01-08-2020
Cable line	Times	SFT205- NMNM-1.50M	381964-0001	01-09-2019	01-08-2020
Cable line	Times	SFT205- NMSM-7.00M	394815-0001	01-09-2019	01-08-2020
Cable line	Times	HF160- KMKM-3.00M	393493-0001	01-09-2019	01-08-2020

8 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	FCC Part15C	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 15.247	ANSI C63.10	Duty Cycle	PASS	Appendix F)
Part15C Section 15.203/15.247 (c)	ANSI C63.10	Antenna Requirement	PASS	Appendix G)
Part15C Section 15.207	ANSI C63.10	AC Power Line Conducted Emission	PASS	Appendix H)
Part15C Section 15.205/15.209	ANSI C63.10	Restricted bands around fundamental frequency (Radiated Emission)	PASS	Appendix I)
Part15C Section 15.205/15.209	ANSI C63.10	Radiated Spurious Emissions	PASS	Appendix J)

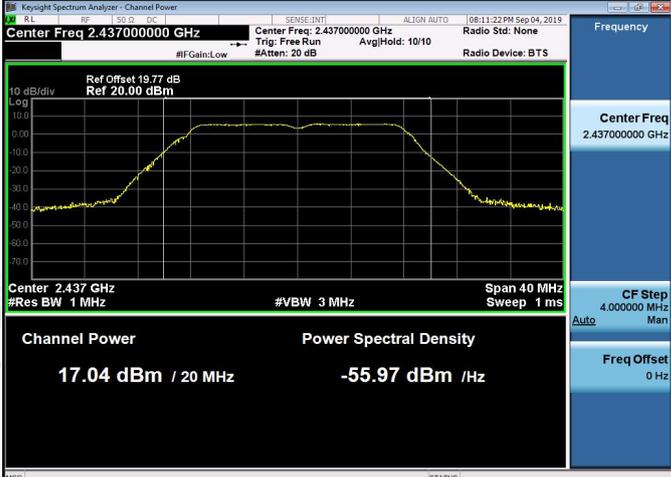
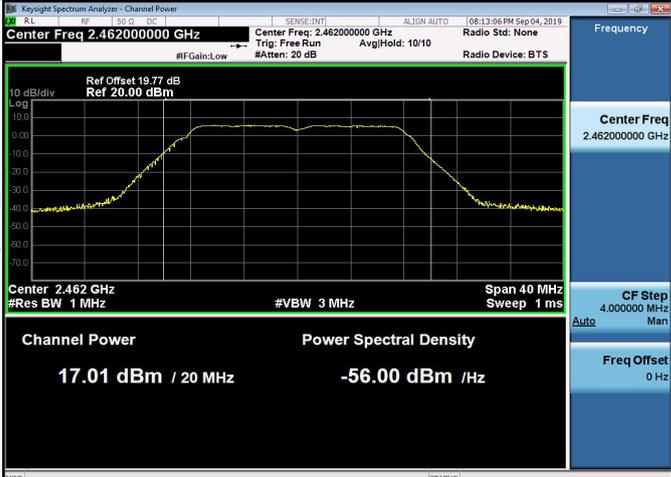
Appendix A): Conducted Peak Output Power

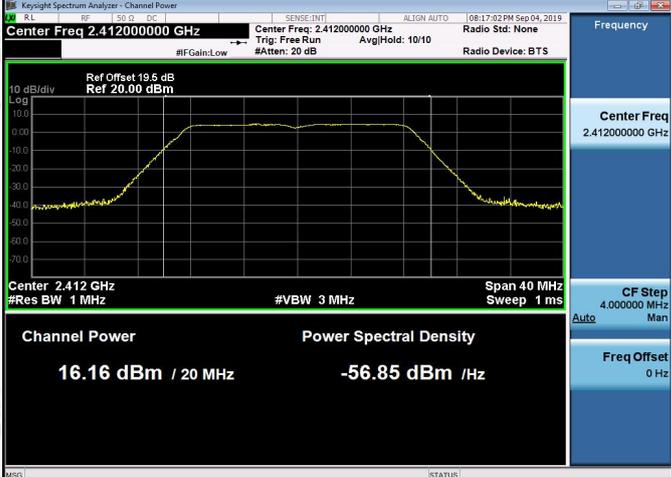
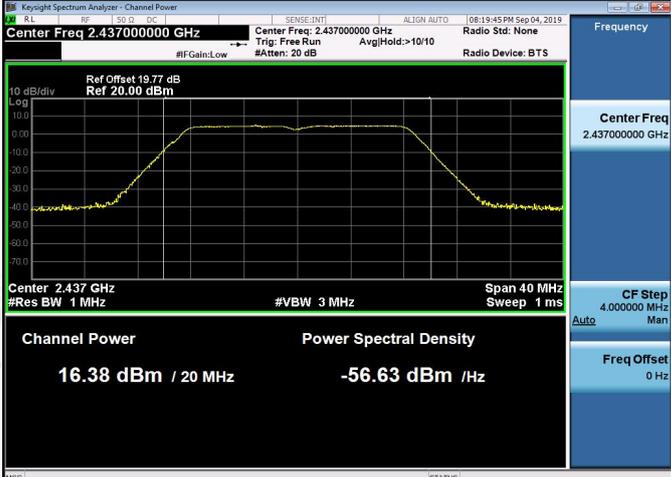
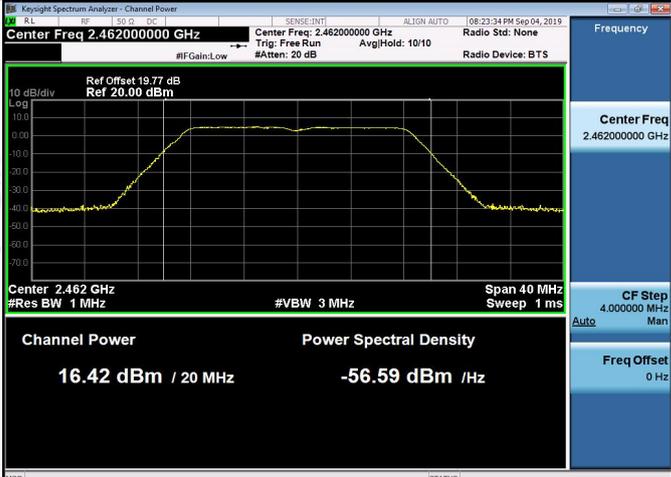
Result Table

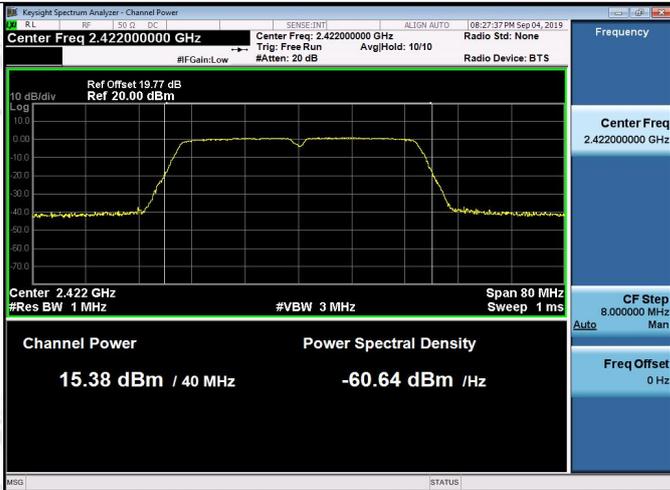
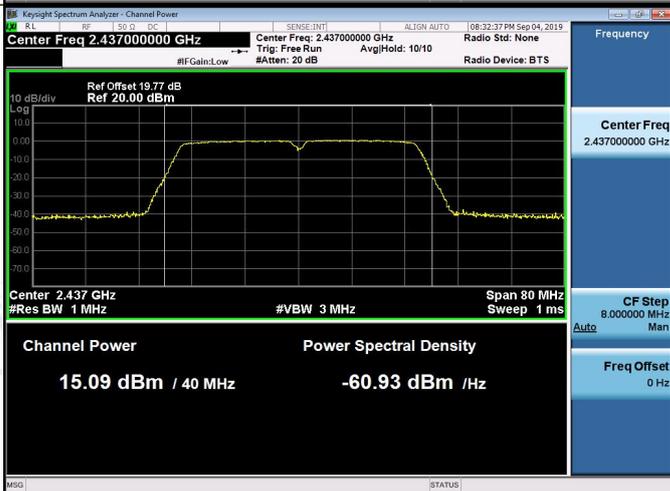
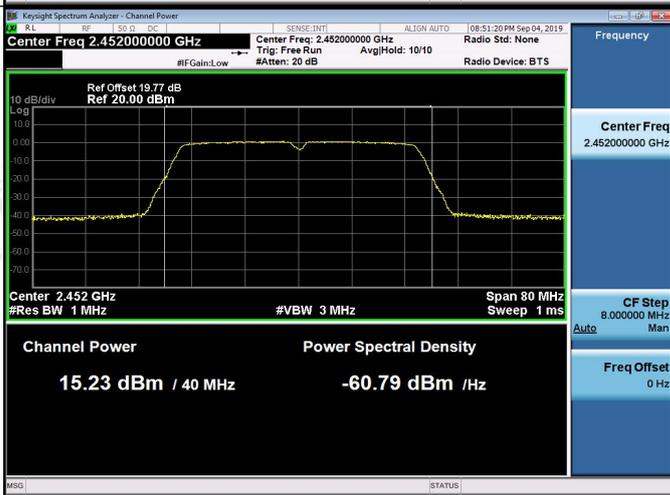
Mode	Channel	Conducted Peak Output Power [dBm]	Verdict
11B	LCH	17.43	PASS
11B	MCH	17.96	PASS
11B	HCH	18.11	PASS
11G	LCH	17.11	PASS
11G	MCH	17.04	PASS
11G	HCH	17.01	PASS
11N20SISO	LCH	16.16	PASS
11N20SISO	MCH	16.38	PASS
11N20SISO	HCH	16.42	PASS
11N40SISO	LCH	15.38	PASS
11N40SISO	MCH	15.09	PASS
11N40SISO	HCH	15.23	PASS

Test Graph



<p>11G/LCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq 2.412000000 GHz</p> <p>Ref Offset 19.5 dB Ref 20.00 dBm</p> <p>Center Freq: 2.412000000 GHz Trig: Free Run #Gain: Low #Atten: 20 dB Avg/Hold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Log</p> <p>Center 2.412 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms</p> <p>Channel Power Power Spectral Density</p> <p>17.11 dBm / 20 MHz -55.90 dBm / Hz</p> <p>MSG STATUS</p>
<p>11G/MCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq 2.437000000 GHz</p> <p>Ref Offset 19.77 dB Ref 20.00 dBm</p> <p>Center Freq: 2.437000000 GHz Trig: Free Run #Gain: Low #Atten: 20 dB Avg/Hold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Log</p> <p>Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms</p> <p>Channel Power Power Spectral Density</p> <p>17.04 dBm / 20 MHz -55.97 dBm / Hz</p> <p>MSG STATUS</p>
<p>11G/HCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq 2.462000000 GHz</p> <p>Ref Offset 19.77 dB Ref 20.00 dBm</p> <p>Center Freq: 2.462000000 GHz Trig: Free Run #Gain: Low #Atten: 20 dB Avg/Hold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Log</p> <p>Center 2.462 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms</p> <p>Channel Power Power Spectral Density</p> <p>17.01 dBm / 20 MHz -56.00 dBm / Hz</p> <p>MSG STATUS</p>

<p>11N20SISO/LCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq 2.412000000 GHz</p> <p>Ref Offset 19.8 dB Ref 20.00 dBm</p> <p>Center Freq: 2.412000000 GHz Trig: Free Run #Gain: Low #Atten: 20 dB Avg/Hold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Log</p> <p>Center 2.412 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms</p> <p>Channel Power Power Spectral Density</p> <p>16.16 dBm / 20 MHz -56.85 dBm / Hz</p> <p>MSG STATUS</p>
<p>11N20SISO/MCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq 2.437000000 GHz</p> <p>Ref Offset 19.77 dB Ref 20.00 dBm</p> <p>Center Freq: 2.437000000 GHz Trig: Free Run #Gain: Low #Atten: 20 dB Avg/Hold: >10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Log</p> <p>Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms</p> <p>Channel Power Power Spectral Density</p> <p>16.38 dBm / 20 MHz -56.63 dBm / Hz</p> <p>MSG STATUS</p>
<p>11N20SISO/HCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq 2.462000000 GHz</p> <p>Ref Offset 19.77 dB Ref 20.00 dBm</p> <p>Center Freq: 2.462000000 GHz Trig: Free Run #Gain: Low #Atten: 20 dB Avg/Hold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Log</p> <p>Center 2.462 GHz #Res BW 1 MHz #VBW 3 MHz Span 40 MHz Sweep 1 ms</p> <p>Channel Power Power Spectral Density</p> <p>16.42 dBm / 20 MHz -56.59 dBm / Hz</p> <p>MSG STATUS</p>

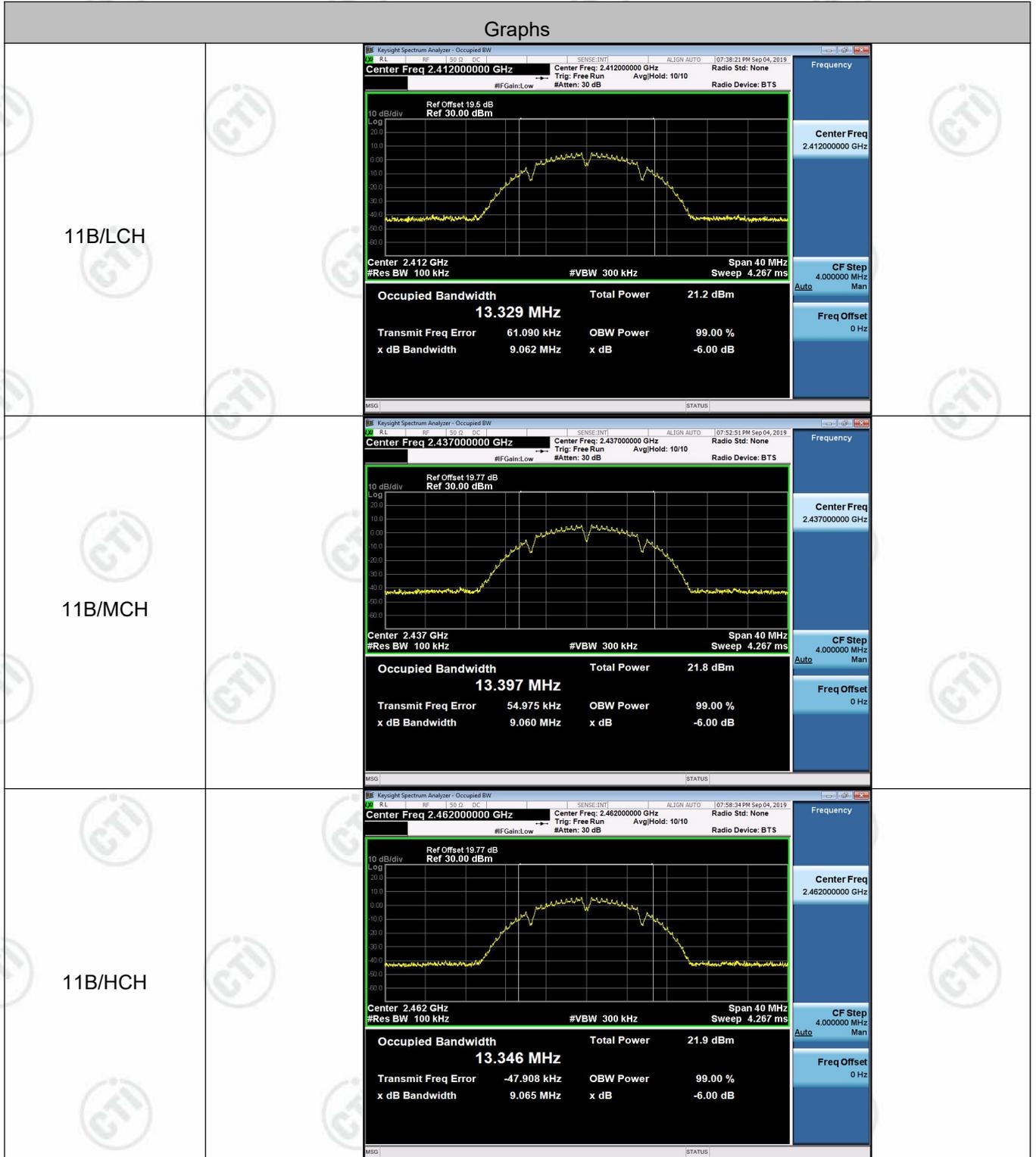
<p>11N40SISO/LCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq 2.422000000 GHz</p> <p>Ref Offset 19.77 dB Ref 20.00 dBm</p> <p>Channel Power: 15.38 dBm / 40 MHz</p> <p>Power Spectral Density: -60.64 dBm / Hz</p> <p>Center 2.422 GHz #Res BW 1 MHz #VBW 3 MHz Span 80 MHz Sweep 1 ms</p>
<p>11N40SISO/MCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq 2.437000000 GHz</p> <p>Ref Offset 19.77 dB Ref 20.00 dBm</p> <p>Channel Power: 15.09 dBm / 40 MHz</p> <p>Power Spectral Density: -60.93 dBm / Hz</p> <p>Center 2.437 GHz #Res BW 1 MHz #VBW 3 MHz Span 80 MHz Sweep 1 ms</p>
<p>11N40SISO/HCH</p>	 <p>Keysight Spectrum Analyzer - Channel Power</p> <p>Center Freq 2.452000000 GHz</p> <p>Ref Offset 19.77 dB Ref 20.00 dBm</p> <p>Channel Power: 15.23 dBm / 40 MHz</p> <p>Power Spectral Density: -60.79 dBm / Hz</p> <p>Center 2.452 GHz #Res BW 1 MHz #VBW 3 MHz Span 80 MHz Sweep 1 ms</p>

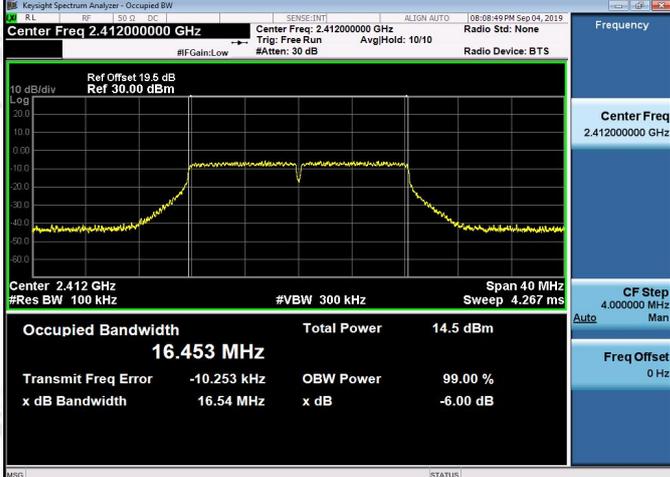
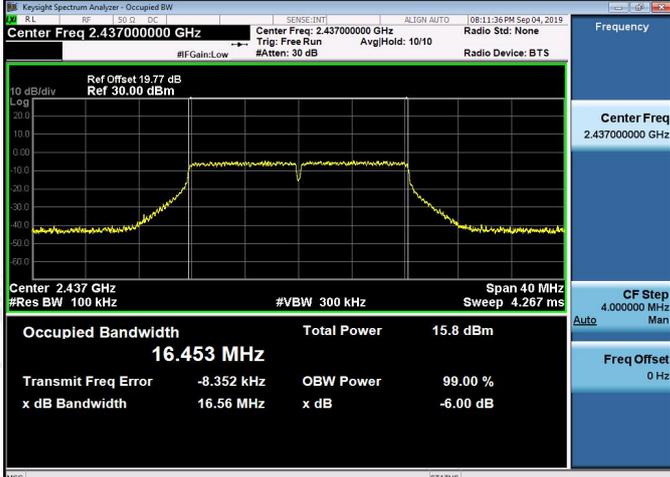
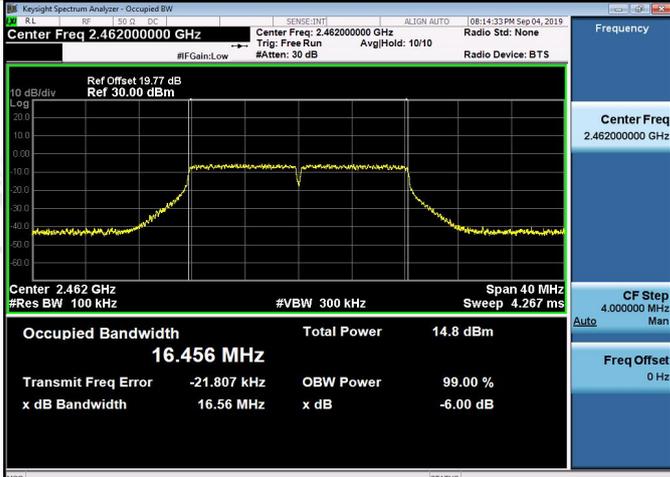
Appendix B): 6dB Occupied Bandwidth

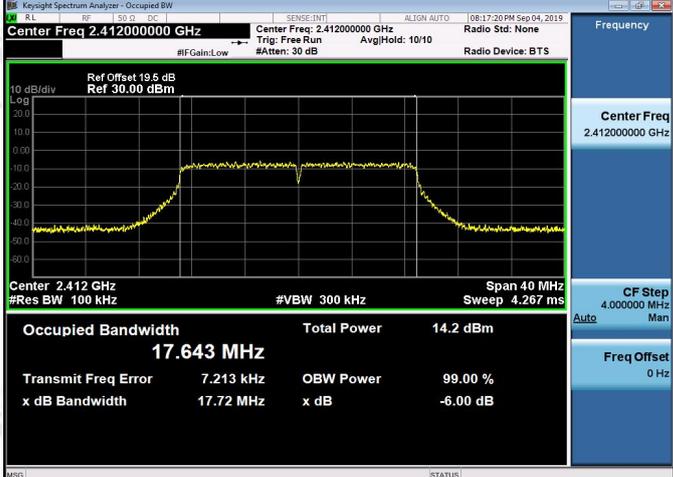
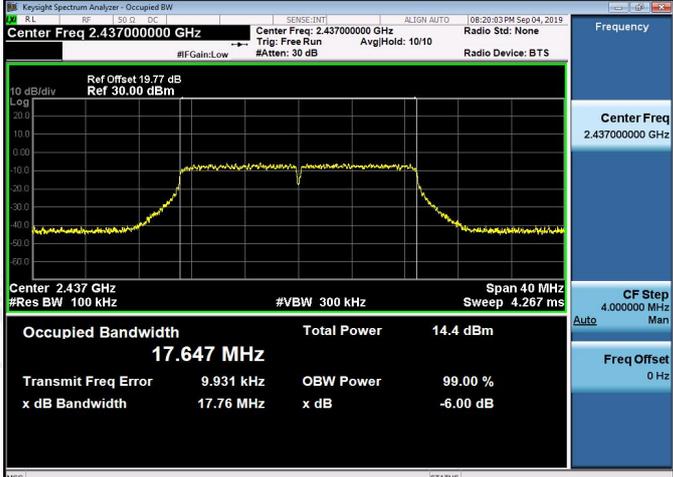
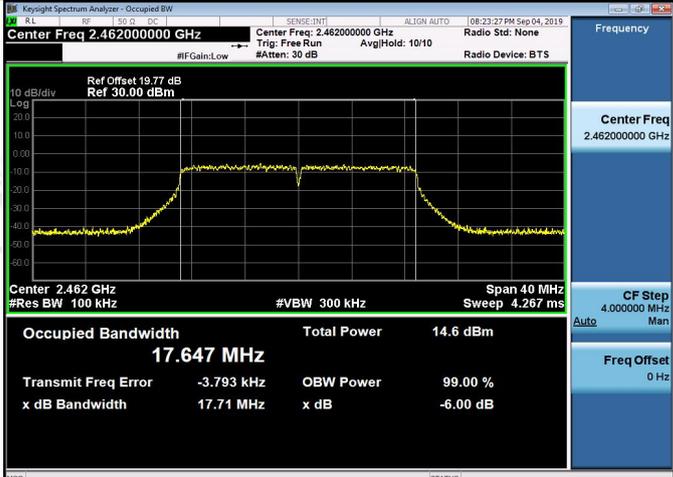
Result Table

Mode	Channel	6dB Bandwidth [MHz]	99% OBW [MHz]	Verdict
11B	LCH	9.062	13.329	PASS
11B	MCH	9.060	13.397	PASS
11B	HCH	9.065	13.346	PASS
11G	LCH	16.54	16.453	PASS
11G	MCH	16.56	16.453	PASS
11G	HCH	16.56	16.456	PASS
11N20SISO	LCH	17.72	17.643	PASS
11N20SISO	MCH	17.76	17.647	PASS
11N20SISO	HCH	17.71	17.647	PASS
11N40SISO	LCH	36.40	36.007	PASS
11N40SISO	MCH	36.39	35.989	PASS
11N40SISO	HCH	36.38	35.962	PASS

Test Graph



<p>11G/LCH</p>	 <p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.412000000 GHz</p> <p>Ref Offset: 19.5 dB Ref: 30.00 dBm</p> <p>Center: 2.412 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 40 MHz Sweep: 4.267 ms</p> <p>Occupied Bandwidth: 16.453 MHz</p> <p>Total Power: 14.5 dBm</p> <p>Transmit Freq Error: -10.253 kHz OBW Power: 99.00 % x dB Bandwidth: 16.54 MHz x dB: -6.00 dB</p>
<p>11G/MCH</p>	 <p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.437000000 GHz</p> <p>Ref Offset: 19.77 dB Ref: 30.00 dBm</p> <p>Center: 2.437 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 40 MHz Sweep: 4.267 ms</p> <p>Occupied Bandwidth: 16.453 MHz</p> <p>Total Power: 15.8 dBm</p> <p>Transmit Freq Error: -8.352 kHz OBW Power: 99.00 % x dB Bandwidth: 16.56 MHz x dB: -6.00 dB</p>
<p>11G/HCH</p>	 <p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.462000000 GHz</p> <p>Ref Offset: 19.77 dB Ref: 30.00 dBm</p> <p>Center: 2.462 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 40 MHz Sweep: 4.267 ms</p> <p>Occupied Bandwidth: 16.456 MHz</p> <p>Total Power: 14.8 dBm</p> <p>Transmit Freq Error: -21.807 kHz OBW Power: 99.00 % x dB Bandwidth: 16.56 MHz x dB: -6.00 dB</p>

<p>11N20SISO/LCH</p>	 <p>Center Freq 2.412000000 GHz</p> <p>Ref Offset 19.8 dB Ref 30.00 dBm</p> <p>Center 2.412 GHz #Res BW 100 kHz</p> <p>Occupied Bandwidth 17.643 MHz</p> <p>Total Power 14.2 dBm</p> <p>Transmit Freq Error 7.213 kHz</p> <p>x dB Bandwidth 17.72 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -6.00 dB</p>
<p>11N20SISO/MCH</p>	 <p>Center Freq 2.437000000 GHz</p> <p>Ref Offset 19.77 dB Ref 30.00 dBm</p> <p>Center 2.437 GHz #Res BW 100 kHz</p> <p>Occupied Bandwidth 17.647 MHz</p> <p>Total Power 14.4 dBm</p> <p>Transmit Freq Error 9.931 kHz</p> <p>x dB Bandwidth 17.76 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -6.00 dB</p>
<p>11N20SISO/HCH</p>	 <p>Center Freq 2.462000000 GHz</p> <p>Ref Offset 19.77 dB Ref 30.00 dBm</p> <p>Center 2.462 GHz #Res BW 100 kHz</p> <p>Occupied Bandwidth 17.647 MHz</p> <p>Total Power 14.6 dBm</p> <p>Transmit Freq Error -3.793 kHz</p> <p>x dB Bandwidth 17.71 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -6.00 dB</p>

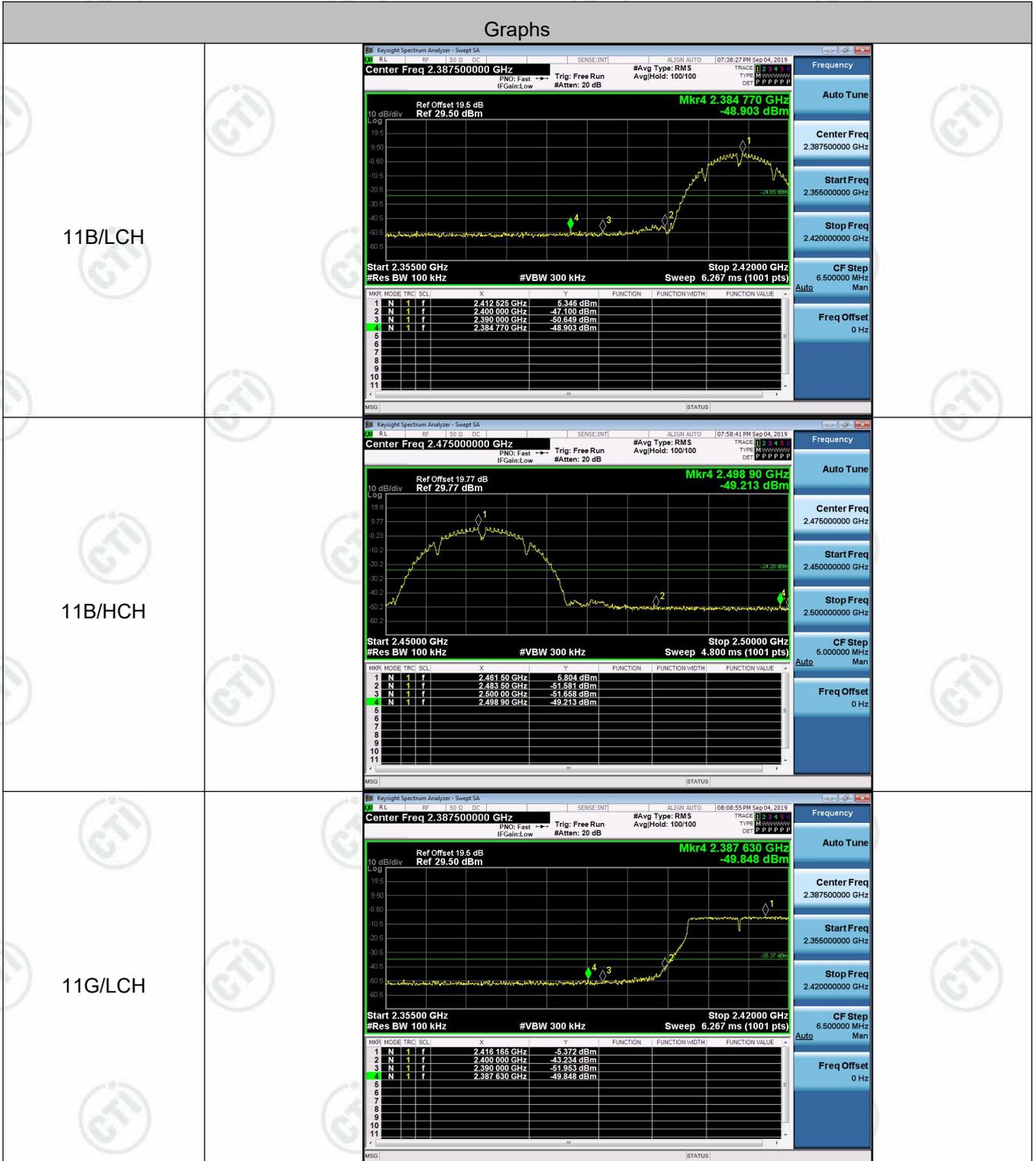
<p>11N40SISO/LCH</p>	<p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.422000000 GHz</p> <p>Ref Offset: 19.77 dB Ref: 30.00 dBm</p> <p>Center: 2.422 GHz #Res BW: 100 kHz</p> <p>Occupied Bandwidth: 36.007 MHz</p> <p>Total Power: 13.5 dBm</p> <p>Transmit Freq Error: 40.362 kHz</p> <p>x dB Bandwidth: 36.40 MHz</p> <p>OBW Power: 99.00 %</p> <p>x dB: -6.00 dB</p>
<p>11N40SISO/MCH</p>	<p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.437000000 GHz</p> <p>Ref Offset: 19.77 dB Ref: 30.00 dBm</p> <p>Center: 2.437 GHz #Res BW: 100 kHz</p> <p>Occupied Bandwidth: 35.989 MHz</p> <p>Total Power: 13.5 dBm</p> <p>Transmit Freq Error: 27.871 kHz</p> <p>x dB Bandwidth: 36.39 MHz</p> <p>OBW Power: 99.00 %</p> <p>x dB: -6.00 dB</p>
<p>11N40SISO/HCH</p>	<p>KeySight Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.452000000 GHz</p> <p>Ref Offset: 19.77 dB Ref: 30.00 dBm</p> <p>Center: 2.452 GHz #Res BW: 100 kHz</p> <p>Occupied Bandwidth: 35.962 MHz</p> <p>Total Power: 13.4 dBm</p> <p>Transmit Freq Error: 13.527 kHz</p> <p>x dB Bandwidth: 36.38 MHz</p> <p>OBW Power: 99.00 %</p> <p>x dB: -6.00 dB</p>

Appendix C): Band-edge for RF Conducted Emissions

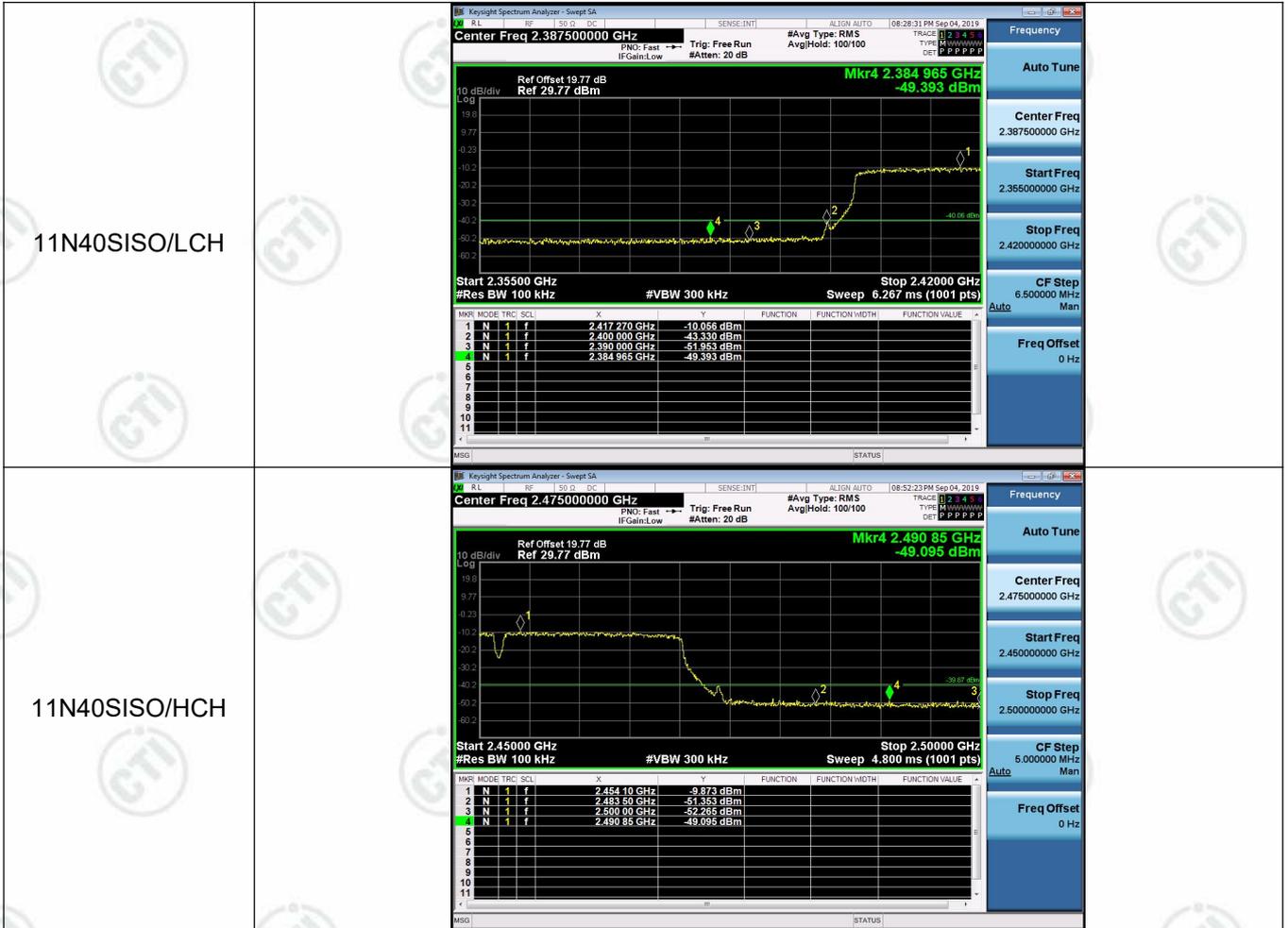
Result Table

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	5.346	-48.903	-24.65	PASS
11B	HCH	5.804	-49.213	-24.2	PASS
11G	LCH	-5.372	-49.848	-35.37	PASS
11G	HCH	-5.379	-49.252	-35.38	PASS
11N20SISO	LCH	-5.956	-49.744	-35.96	PASS
11N20SISO	HCH	-5.569	-49.073	-35.57	PASS
11N40SISO	LCH	-10.056	-49.393	-40.06	PASS
11N40SISO	HCH	-9.873	-49.095	-39.87	PASS

Test Graph



<p>11G/HCH</p>	<table border="1"> <thead> <tr> <th>MKR</th> <th>MODE</th> <th>TRC</th> <th>SCL</th> <th>X</th> <th>Y</th> <th>FUNCTION</th> <th>FUNCTION WIDTH</th> <th>FUNCTION VALUE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>f</td> <td>f</td> <td>2.459 50 GHz</td> <td>-5.379 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>f</td> <td>f</td> <td>2.483 50 GHz</td> <td>-50.888 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>N</td> <td>f</td> <td>f</td> <td>2.500 00 GHz</td> <td>-49.301 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>N</td> <td>f</td> <td>f</td> <td>2.484 00 GHz</td> <td>-49.262 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	f	f	2.459 50 GHz	-5.379 dBm				2	N	f	f	2.483 50 GHz	-50.888 dBm				3	N	f	f	2.500 00 GHz	-49.301 dBm				4	N	f	f	2.484 00 GHz	-49.262 dBm			
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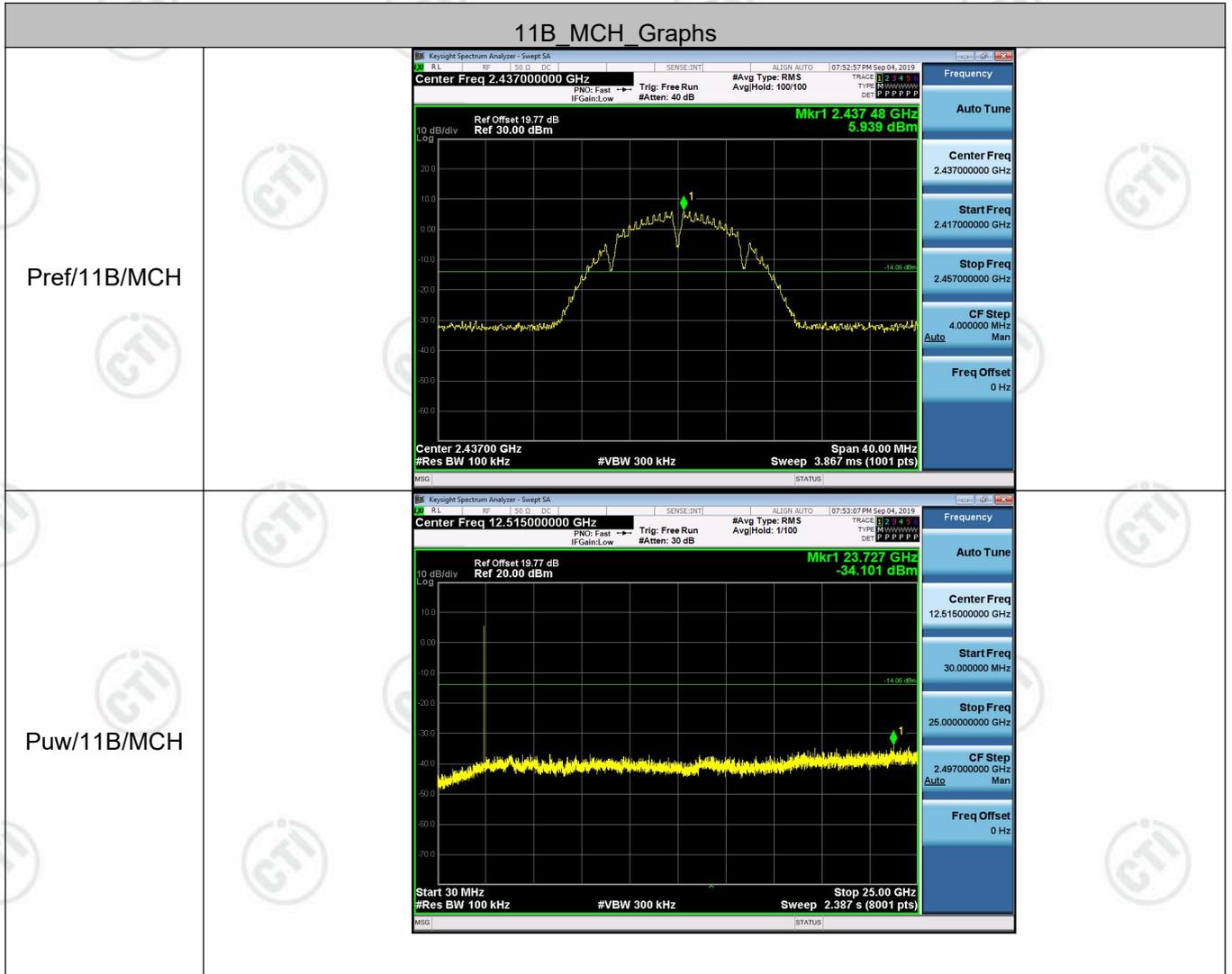
Appendix D): RF Conducted Spurious Emissions

Result Table

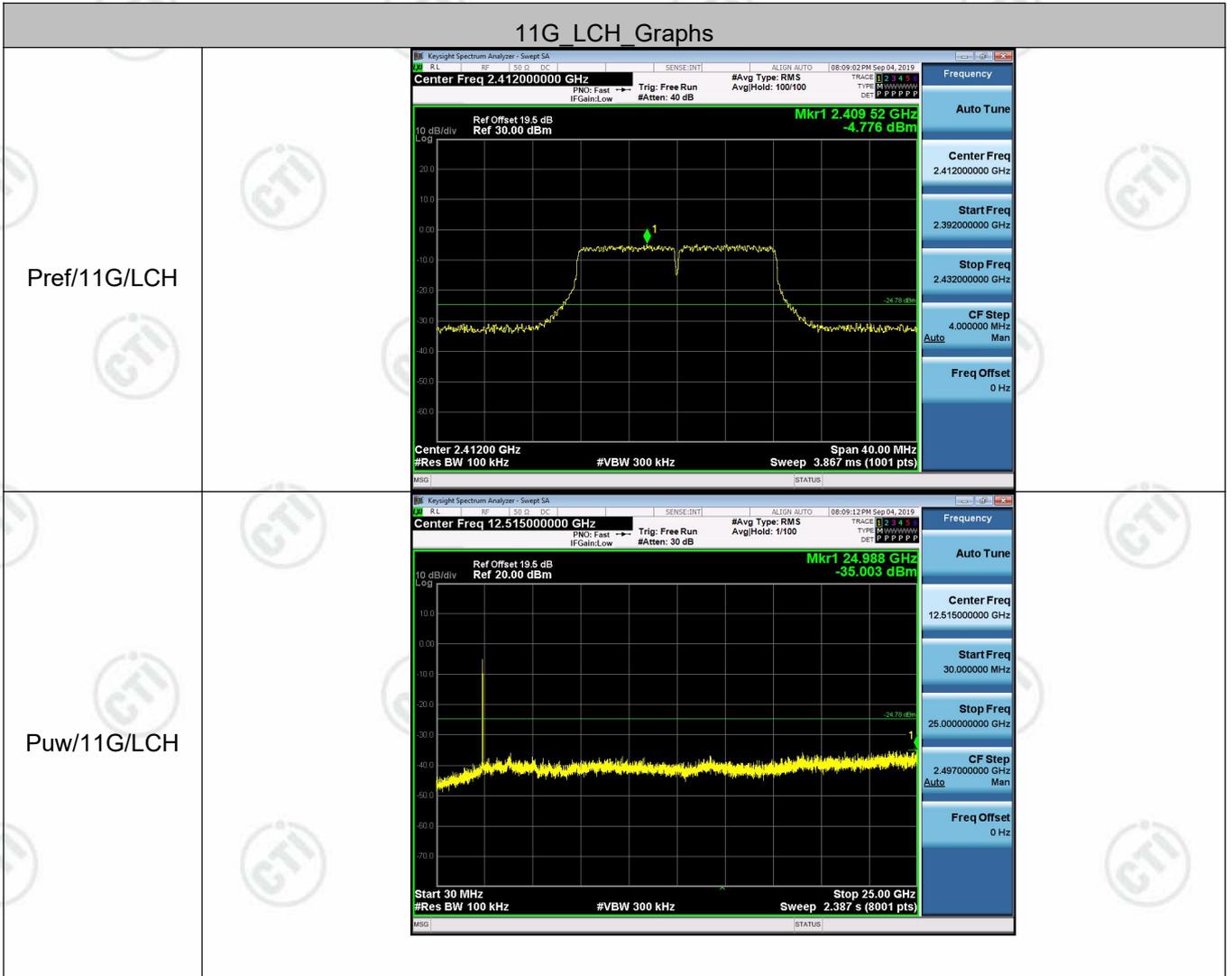
Mode	Channel	Pref [dBm]	Puw[dBm]	Verdict
11B	LCH	5.344	<Limit	PASS
11B	MCH	5.939	<Limit	PASS
11B	HCH	5.833	<Limit	PASS
11G	LCH	-4.776	<Limit	PASS
11G	MCH	-4.702	<Limit	PASS
11G	HCH	-4.968	<Limit	PASS
11N20SISO	LCH	-5.752	<Limit	PASS
11N20SISO	MCH	-5.569	<Limit	PASS
11N20SISO	HCH	-5.174	<Limit	PASS
11N40SISO	LCH	-9.736	<Limit	PASS
11N40SISO	MCH	-9.741	<Limit	PASS
11N40SISO	HCH	-9.551	<Limit	PASS

Test Graph



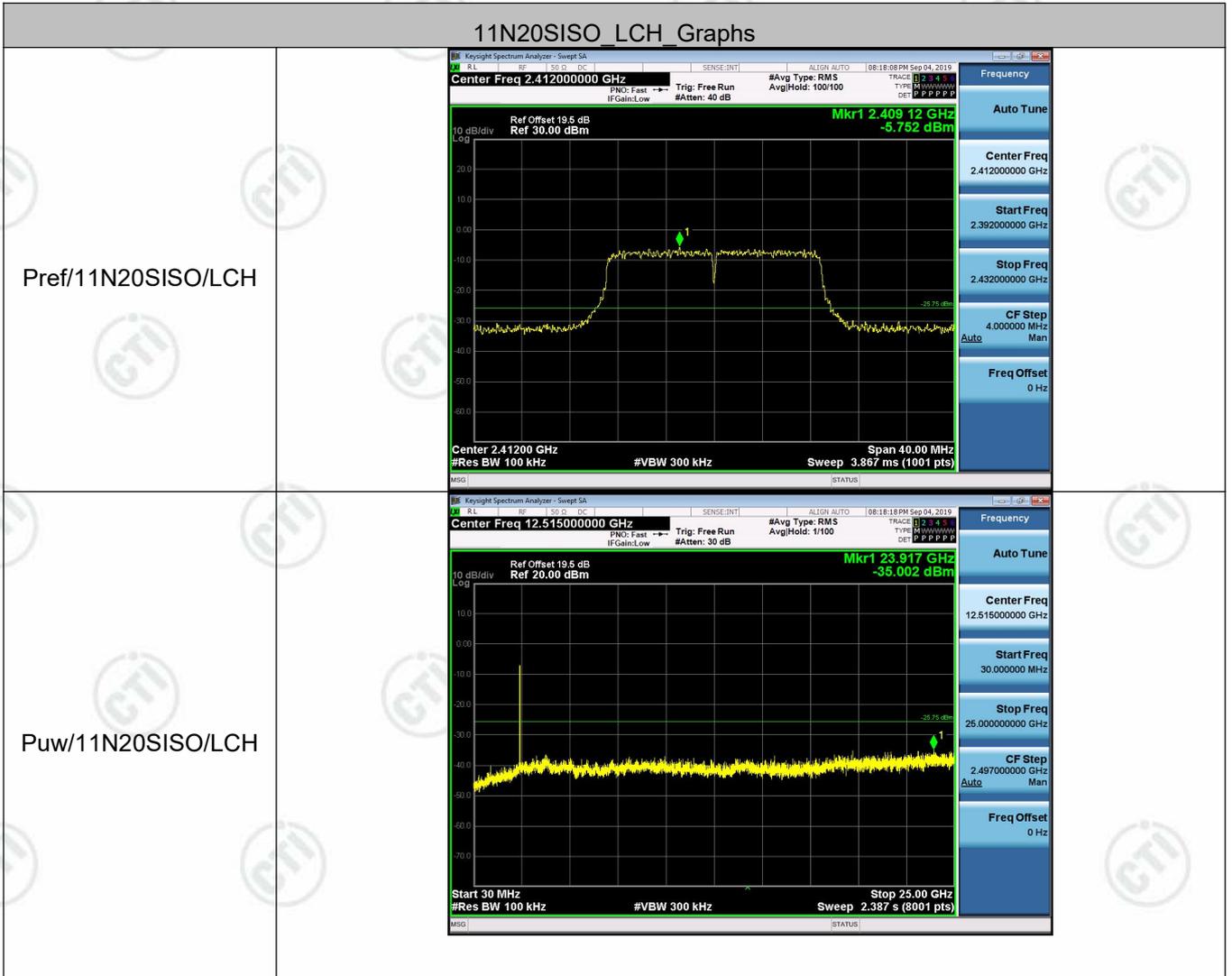


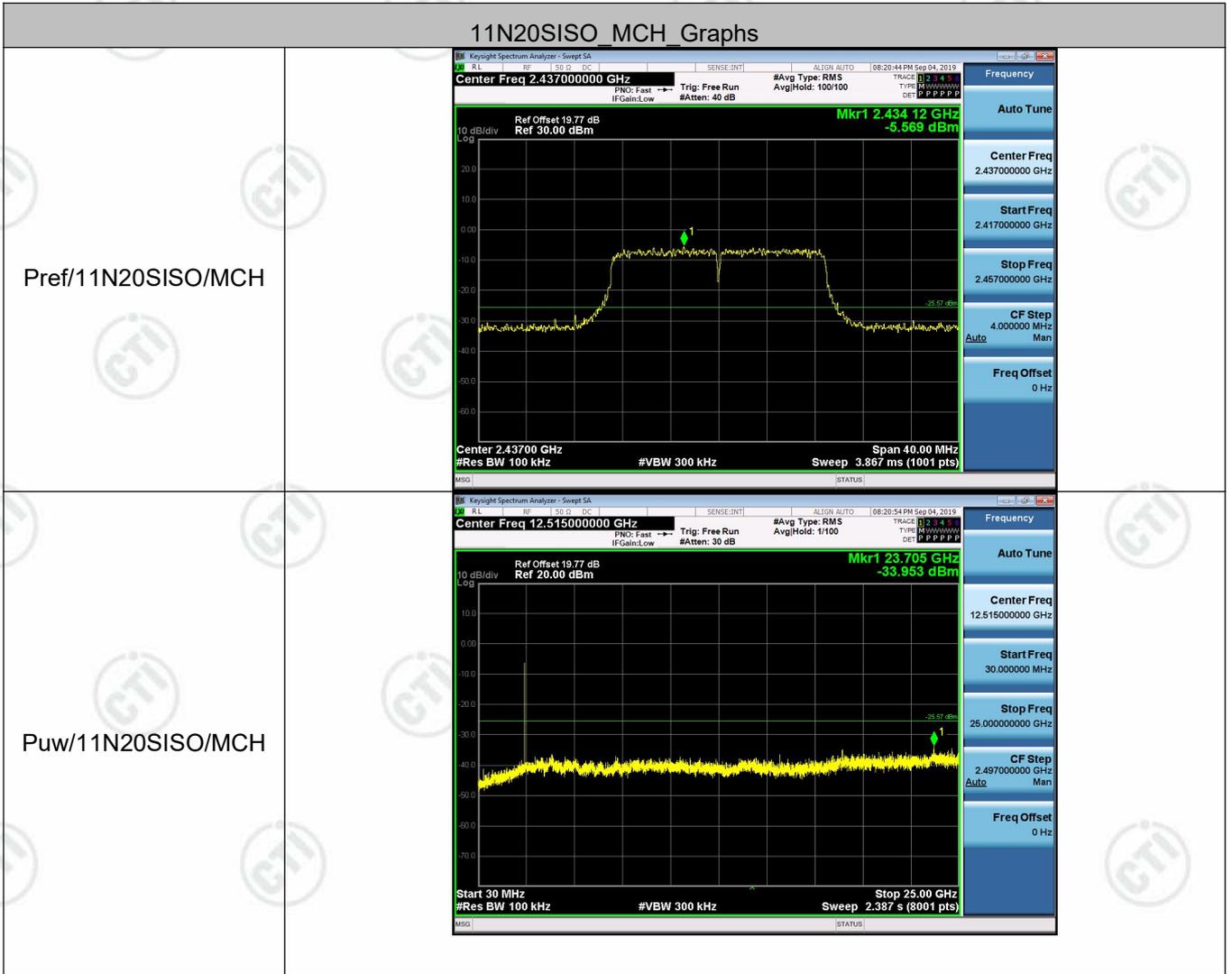


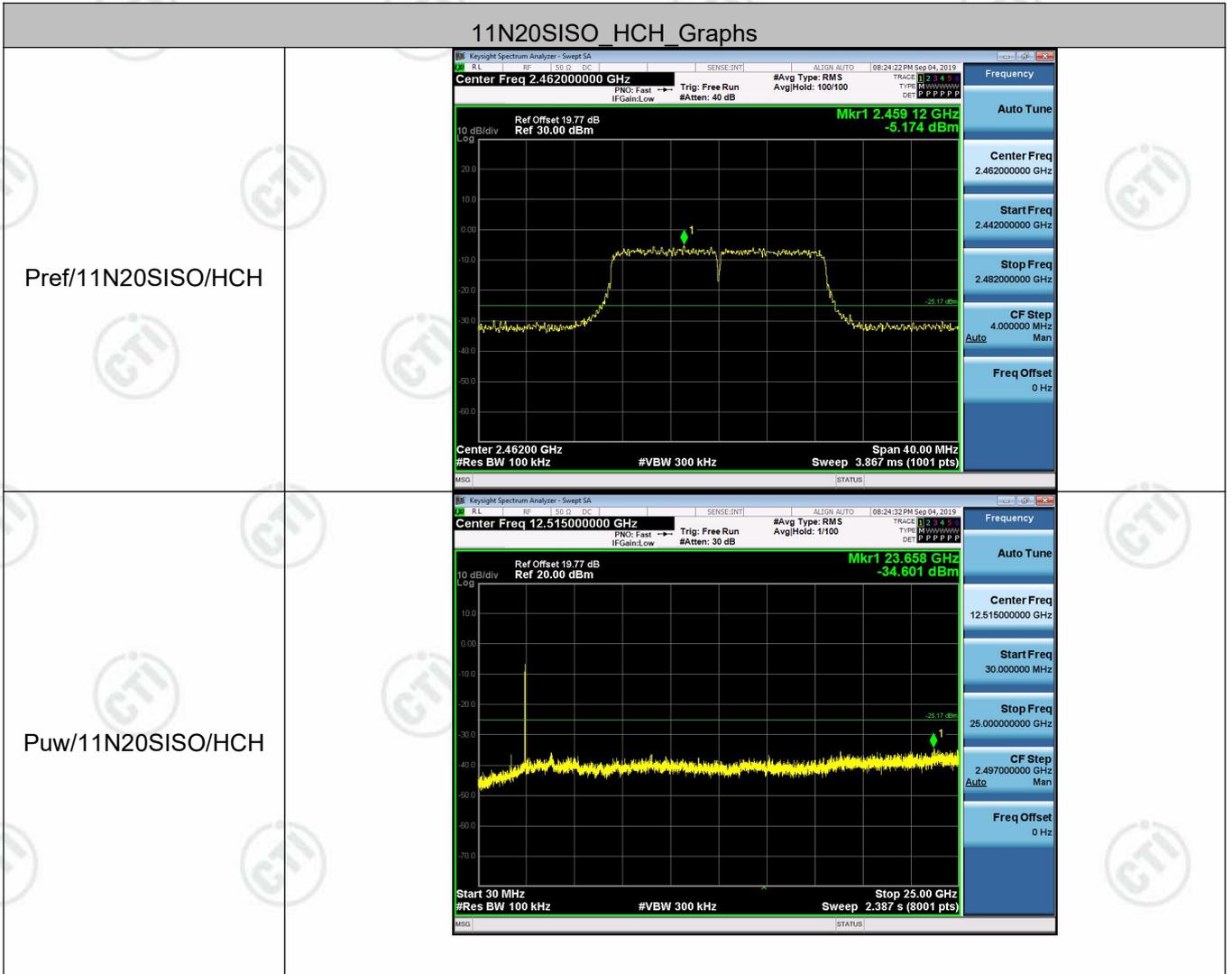


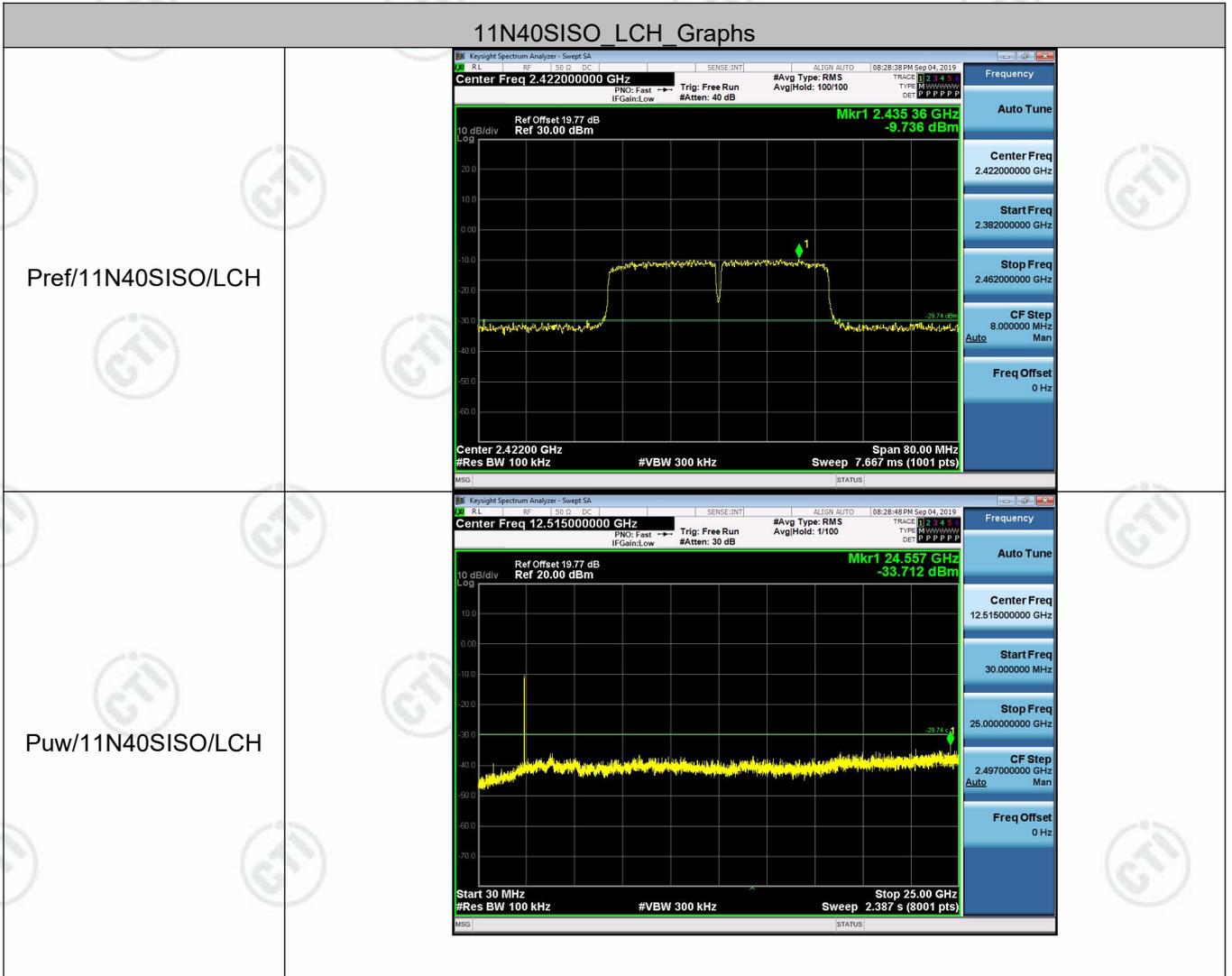


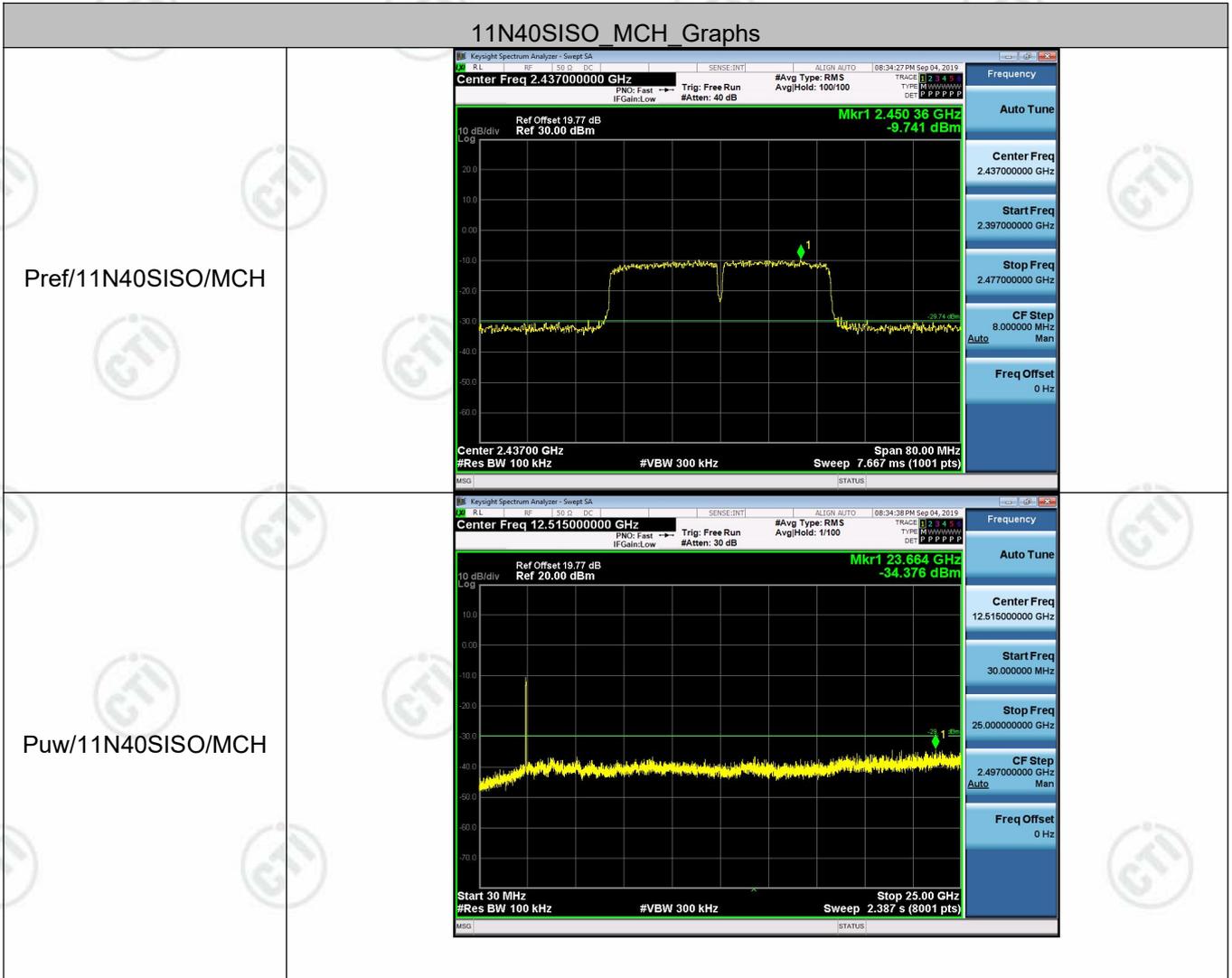


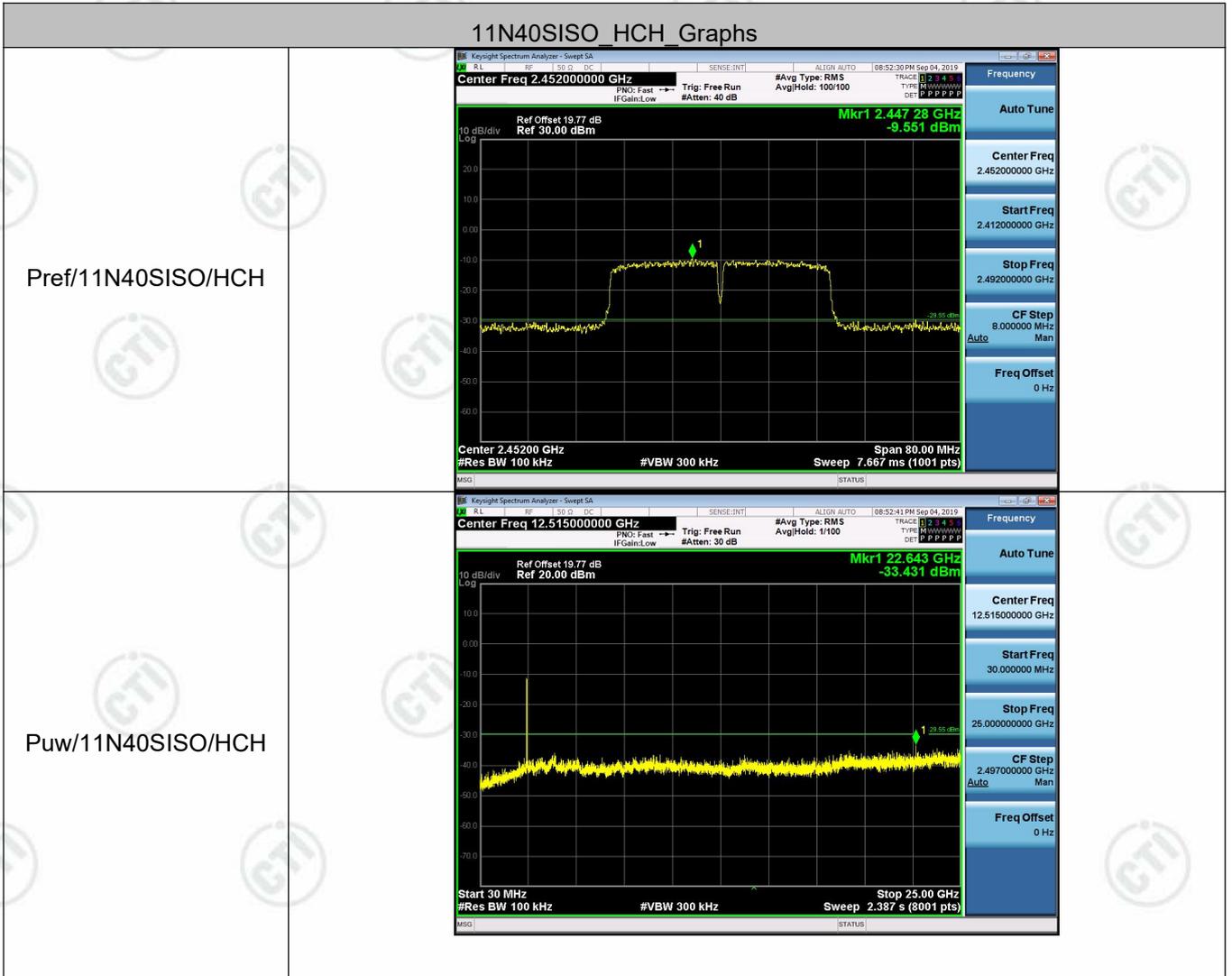












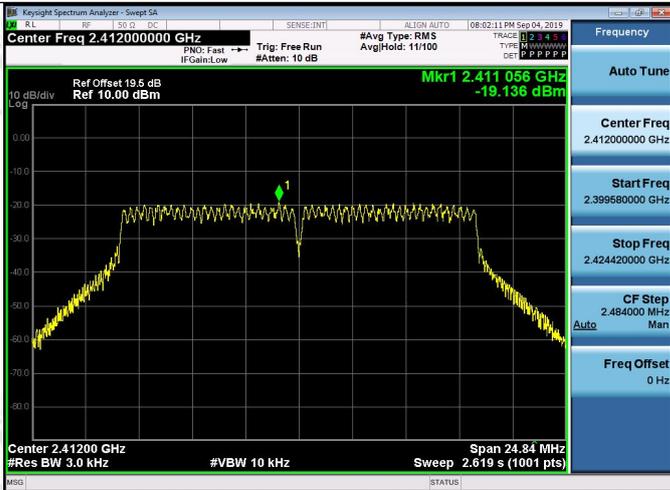
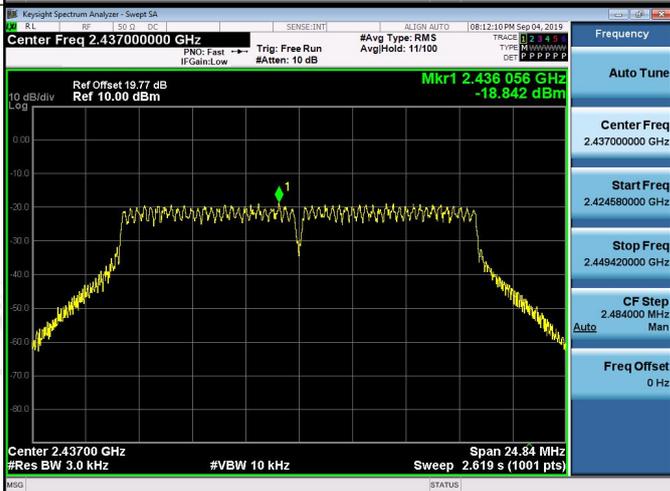
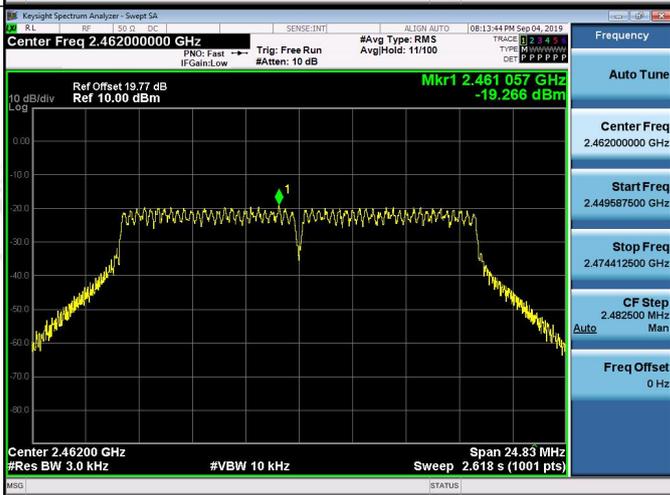
Appendix E): Power Spectral Density

Result Table

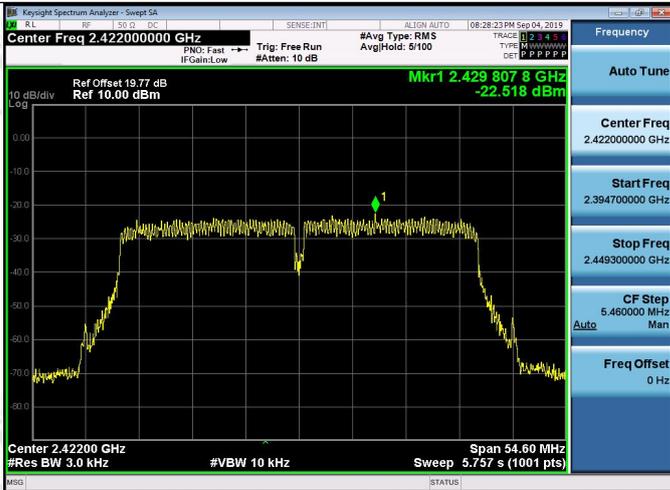
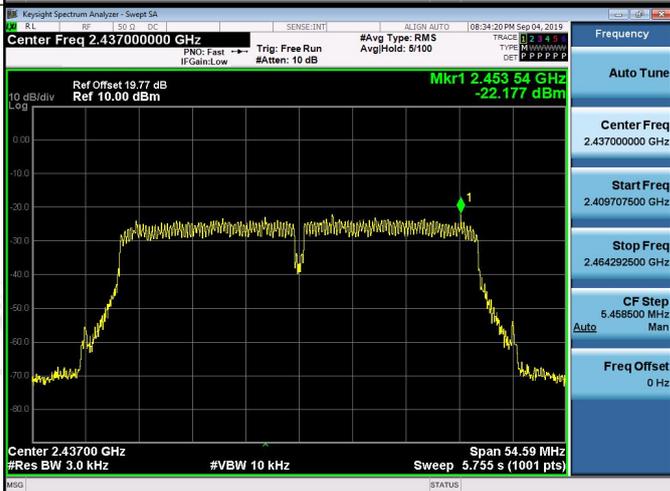
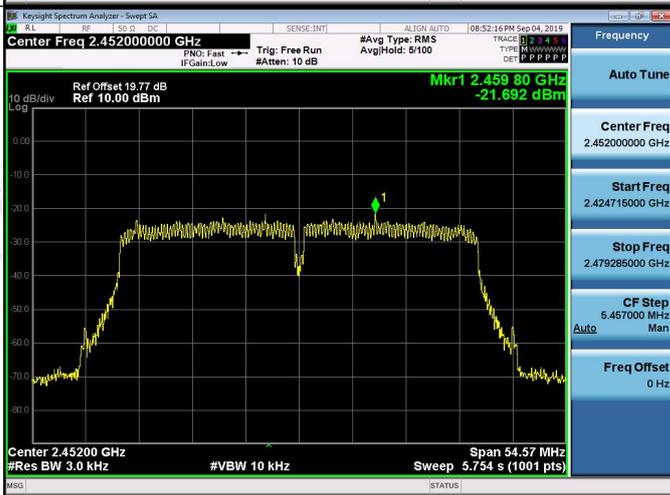
Mode	Channel	Power Spectral Density [dBm/3KHz]	Verdict
11B	LCH	-15.037	PASS
11B	MCH	-13.987	PASS
11B	HCH	-14.254	PASS
11G	LCH	-19.136	PASS
11G	MCH	-18.842	PASS
11G	HCH	-19.266	PASS
11N20SISO	LCH	-19.676	PASS
11N20SISO	MCH	-19.552	PASS
11N20SISO	HCH	-19.105	PASS
11N40SISO	LCH	-22.518	PASS
11N40SISO	MCH	-22.177	PASS
11N40SISO	HCH	-21.692	PASS

Test Graph



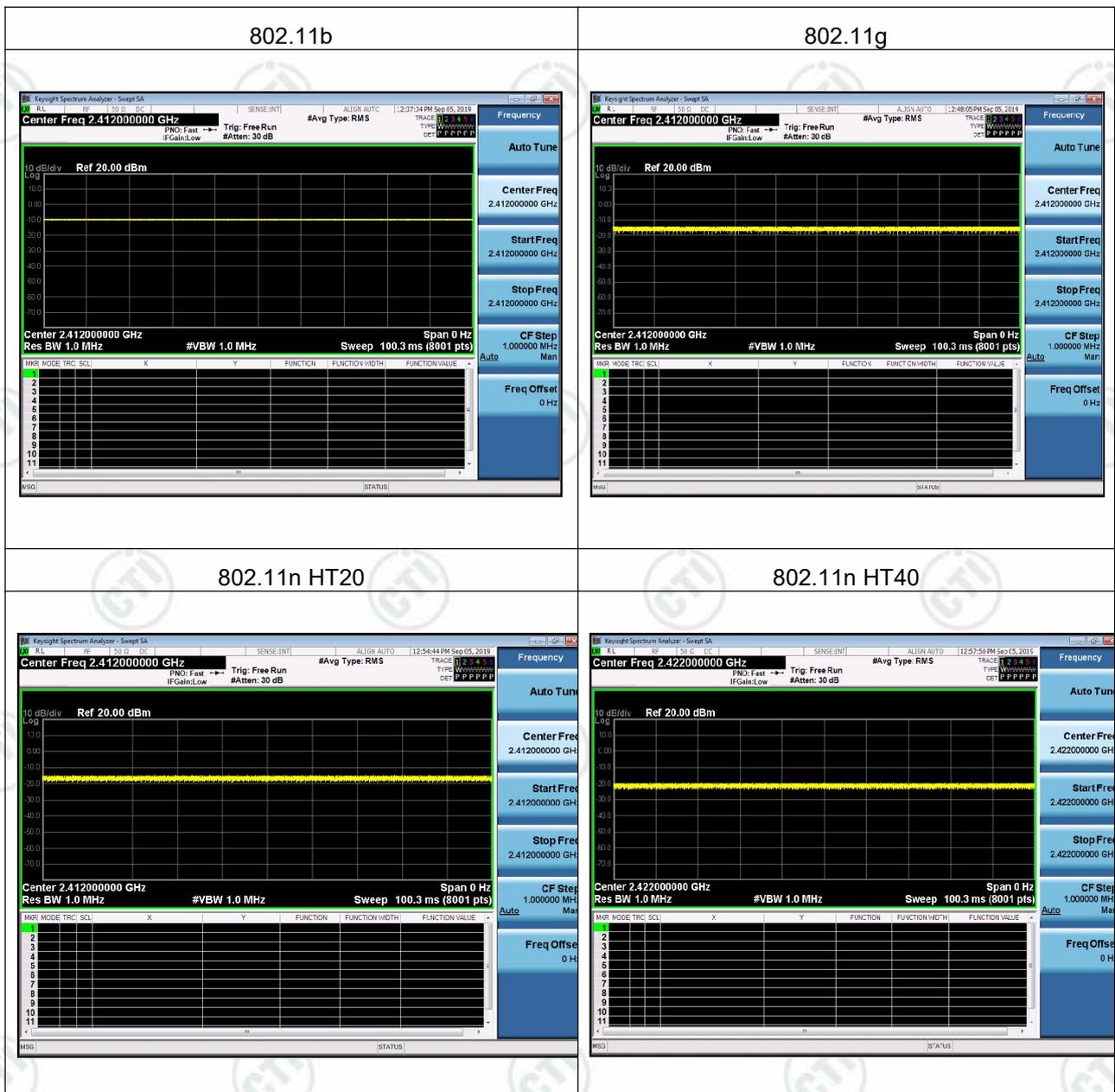
<p>11G/LCH</p>	
<p>11G/MCH</p>	
<p>11G/HCH</p>	

<p>11N20SISO/LCH</p>	<p>Center Freq 2.41200000 GHz</p> <p>Mkr1 2.405 382 GHz -19.676 dBm</p> <p>Center 2.41200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 26.58 MHz Sweep 2.803 s (1001 pts)</p>
<p>11N20SISO/MCH</p>	<p>Center Freq 2.43700000 GHz</p> <p>Mkr1 2.430 420 GHz -19.562 dBm</p> <p>Center 2.43700 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 26.64 MHz Sweep 2.809 s (1001 pts)</p>
<p>11N20SISO/HCH</p>	<p>Center Freq 2.46200000 GHz</p> <p>Mkr1 2.455 359 GHz -19.105 dBm</p> <p>Center 2.46200 GHz #Res BW 3.0 kHz #VBW 10 kHz Span 26.57 MHz Sweep 2.801 s (1001 pts)</p>

<p>11N40SISO/LCH</p>	
<p>11N40SISO/MCH</p>	
<p>11N40SISO/HCH</p>	

Appendix F) Duty Cycle

Duty Cycle			
Configuration	TX ON(ms)	TX ALL(ms)	Duty Cycle(%)
802.11b	1.0000	1.0000	100.00%
802.11g	1.0000	1.0000	100.00%
802.11n HT20	1.0000	1.0000	100.00%
802.11n HT40	1.0000	1.0000	100.00%



Appendix G): Antenna Requirement

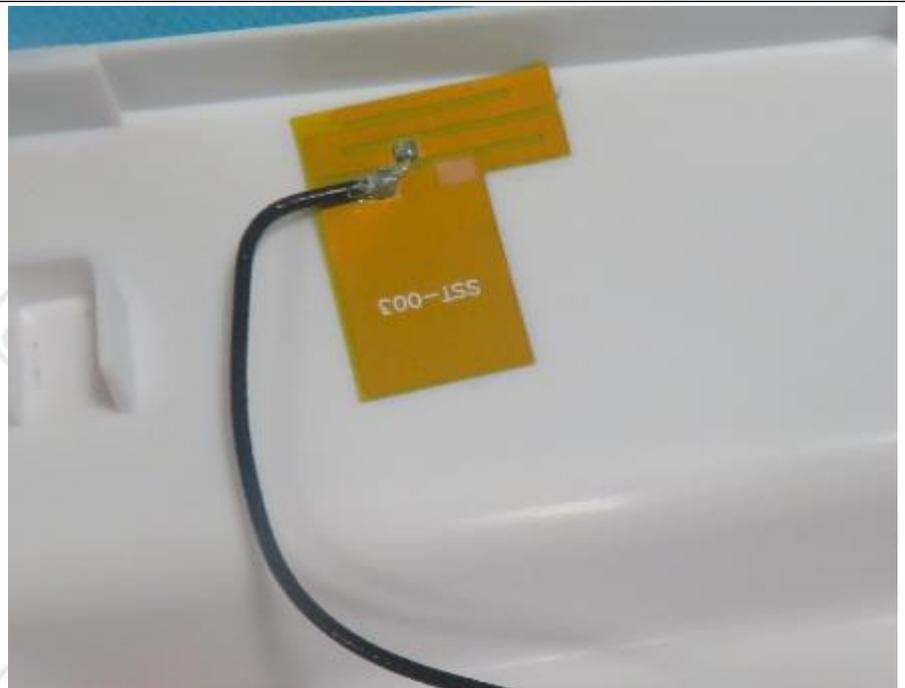
15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:



The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 4.69 dBi.

Appendix H): AC Power Line Conducted Emission

Test Procedure:	<p>Test frequency range :150KHz-30MHz</p> <ol style="list-style-type: none"> 1)The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3)The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. 5) 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 on conducted measurement. 														
Limit:	<table border="1" data-bbox="464 1155 1331 1375"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th> <th colspan="2">Limit (dBμV)</th> </tr> <tr> <th>Quasi-peak</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>0.15-0.5</td> <td>66 to 56*</td> <td>56 to 46*</td> </tr> <tr> <td>0.5-5</td> <td>56</td> <td>46</td> </tr> <tr> <td>5-30</td> <td>60</td> <td>50</td> </tr> </tbody> </table> <p>* The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz. NOTE : The lower limit is applicable at the transition frequency</p>	Frequency range (MHz)	Limit (dB μ V)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dB μ V)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
5-30	60	50													

Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

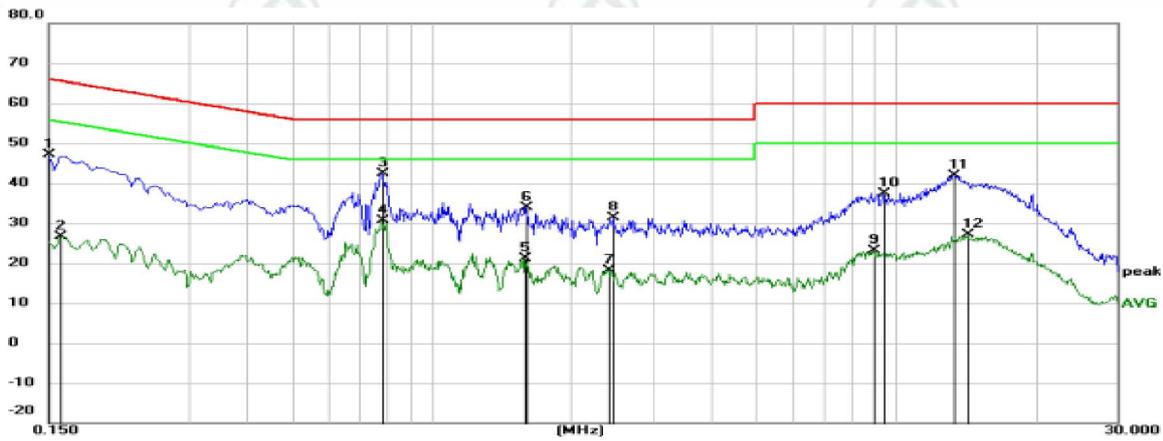
Product : Digital Photo Frame

Model/Type reference : DGF201

Temperature : 21°C

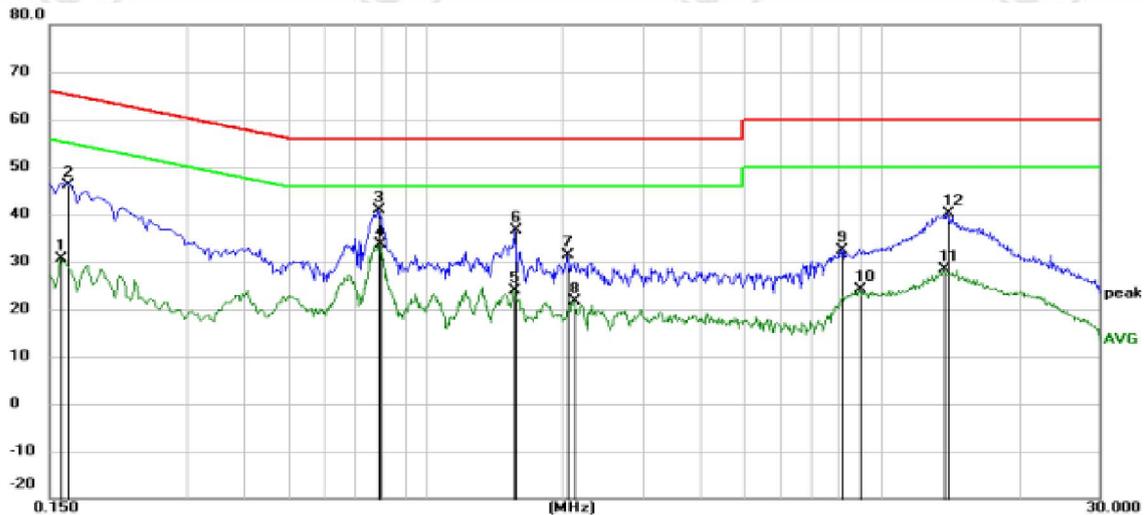
Humidity : 51%

Live line:



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.1500	37.23	9.97	47.20	66.00	-18.80	peak	
2	0.1590	16.71	9.98	26.69	55.52	-28.83	AVG	
3 *	0.7799	32.56	9.86	42.42	56.00	-13.58	peak	
4	0.7799	20.84	9.86	30.70	46.00	-15.30	AVG	
5	1.5855	11.23	9.86	21.09	46.00	-24.91	AVG	
6	1.5945	24.06	9.86	33.92	56.00	-22.08	peak	
7	2.4000	8.18	9.83	18.01	46.00	-27.99	AVG	
8	2.4630	21.45	9.83	31.28	56.00	-24.72	peak	
9	8.9205	13.31	9.92	23.23	50.00	-26.77	AVG	
10	9.4155	27.54	9.94	37.48	60.00	-22.52	peak	
11	13.2720	31.89	9.97	41.86	60.00	-18.14	peak	
12	14.3115	17.15	9.98	27.13	50.00	-22.87	AVG	

Neutral line:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1590	20.62	9.98	30.60	55.52	-24.92	AVG	
2		0.1650	36.26	9.99	46.25	65.21	-18.96	peak	
3		0.7890	30.94	9.88	40.82	56.00	-15.18	peak	
4	*	0.7935	23.67	9.89	33.56	46.00	-12.44	AVG	
5		1.5675	14.11	9.86	23.97	46.00	-22.03	AVG	
6		1.5720	26.87	9.86	36.73	56.00	-19.27	peak	
7		2.0445	21.50	9.83	31.33	56.00	-24.67	peak	
8		2.1120	11.82	9.83	21.65	46.00	-24.35	AVG	
9		8.1555	22.56	9.89	32.45	60.00	-27.55	peak	
10		8.9340	14.20	9.92	24.12	50.00	-25.88	AVG	
11		13.6815	18.40	9.97	28.37	50.00	-21.63	AVG	
12		13.9470	30.17	9.98	40.15	60.00	-19.85	peak	

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.

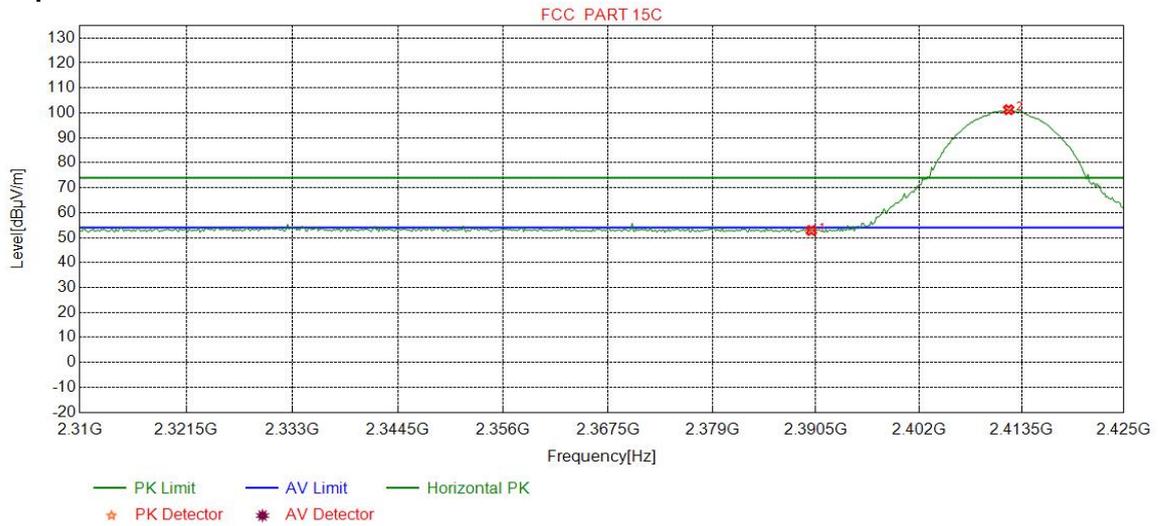
Appendix I): Restricted bands around fundamental frequency (Radiated)

Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Test Procedure:	<p>Below 1GHz test procedure as below:</p> <ol style="list-style-type: none"> The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel <p>Above 1GHz test procedure as below:</p> <ol style="list-style-type: none"> Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter). Test the EUT in the lowest channel , the Highest channel The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case. Repeat above procedures until all frequencies measured was complete. 				
Limit:	Frequency	Limit (dB μ V/m @3m)	Remark		
	30MHz-88MHz	40.0	Quasi-peak Value		
	88MHz-216MHz	43.5	Quasi-peak Value		
	216MHz-960MHz	46.0	Quasi-peak Value		
	960MHz-1GHz	54.0	Quasi-peak Value		
	Above 1GHz	54.0	Average Value		
		74.0	Peak Value		

Test plot as follows:

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2412
Remark:	PK		

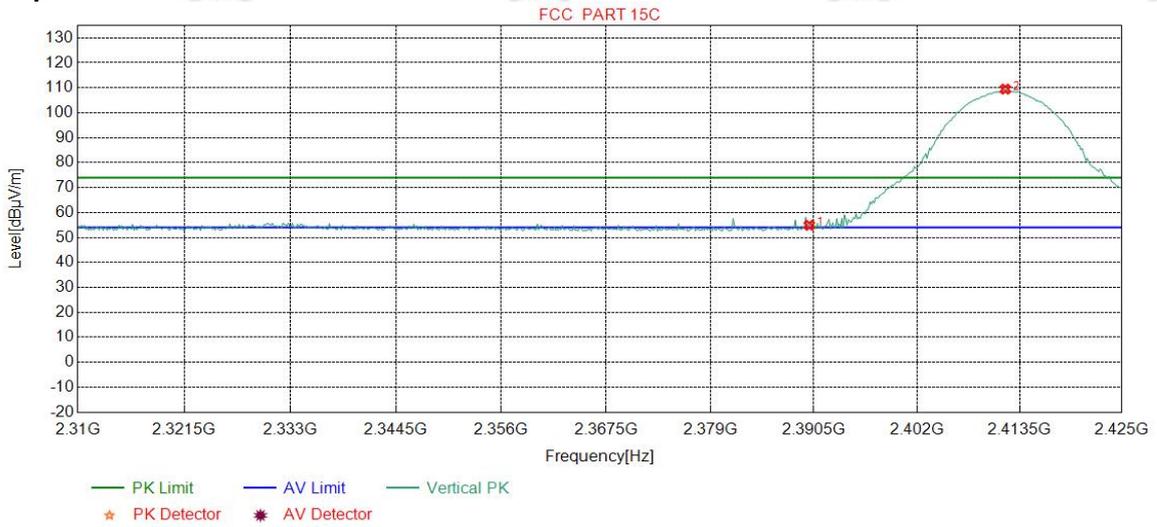
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	49.66	52.84	74.00	21.16	Pass	Horizontal
2	2412.0463	32.28	13.36	-42.44	98.05	101.25	74.00	-27.25	Pass	Horizontal

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2412
Remark:	PK		

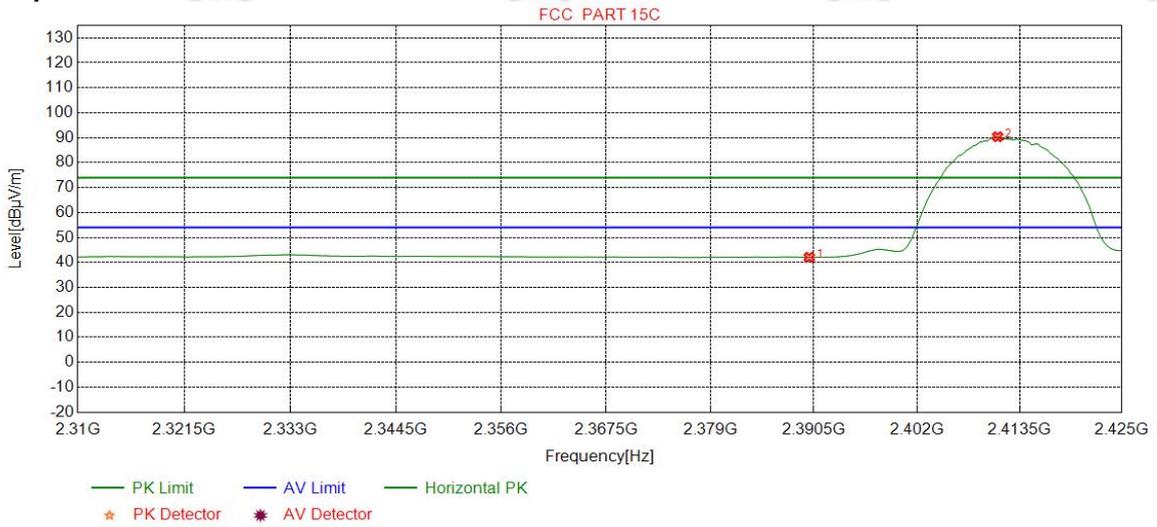
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	51.69	54.87	74.00	19.13	Pass	Vertical
2	2411.9024	32.28	13.35	-42.43	106.26	109.46	74.00	-35.46	Pass	Vertical

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2412
Remark:	AV		

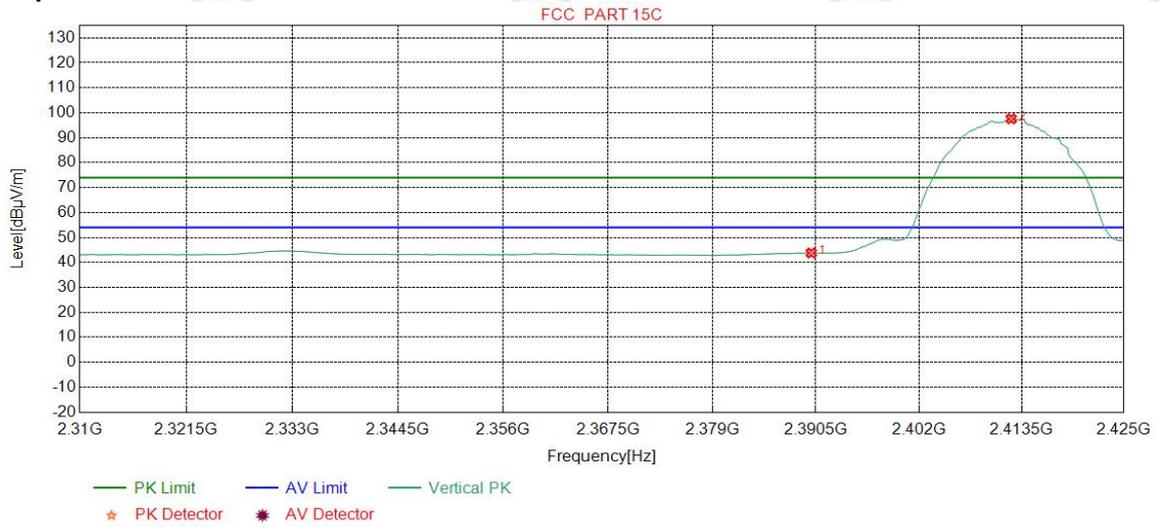
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	38.86	42.04	54.00	11.96	Pass	Horizontal
2	2411.0388	32.28	13.35	-42.43	87.16	90.36	54.00	-36.36	Pass	Horizontal

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2412
Remark:	AV		

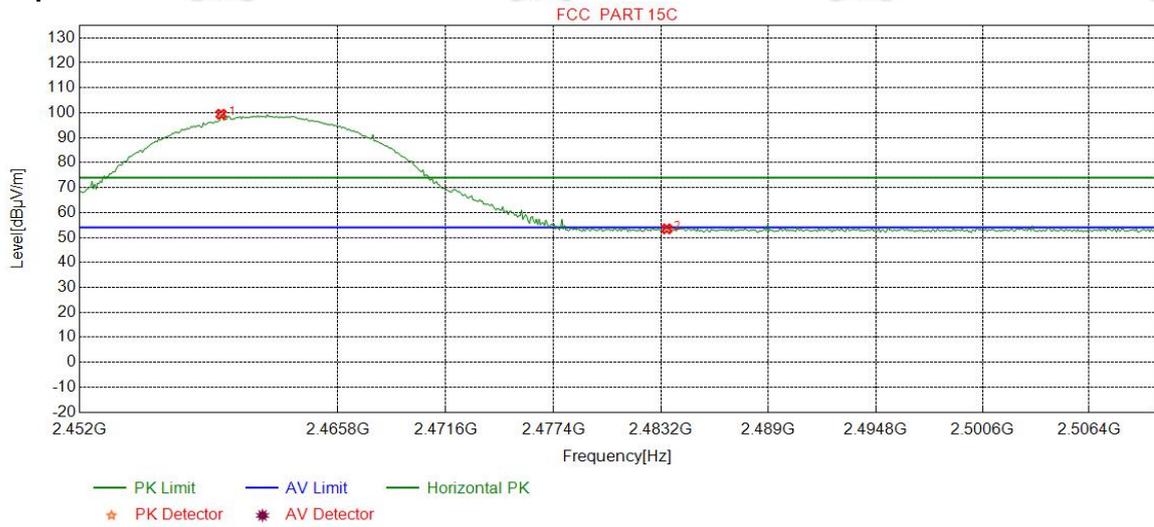
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	40.61	43.79	54.00	10.21	Pass	Vertical
2	2412.3342	32.28	13.36	-42.43	94.35	97.56	54.00	-43.56	Pass	Vertical

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2462
Remark:	PK		

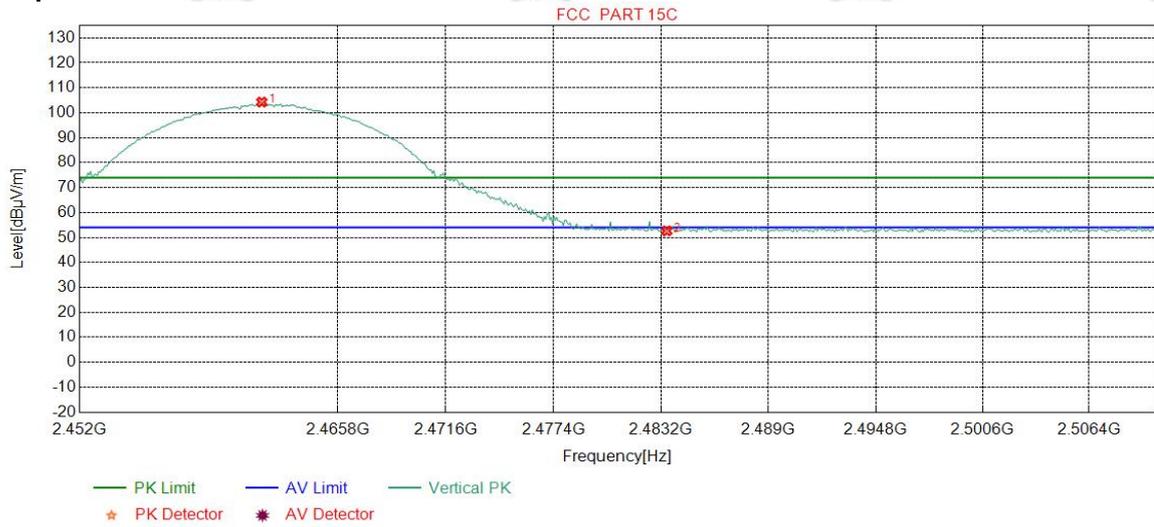
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2459.5494	32.34	13.49	-42.41	95.97	99.39	74.00	-25.39	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	50.10	53.46	74.00	20.54	Pass	Horizontal

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2462
Remark:	PK		

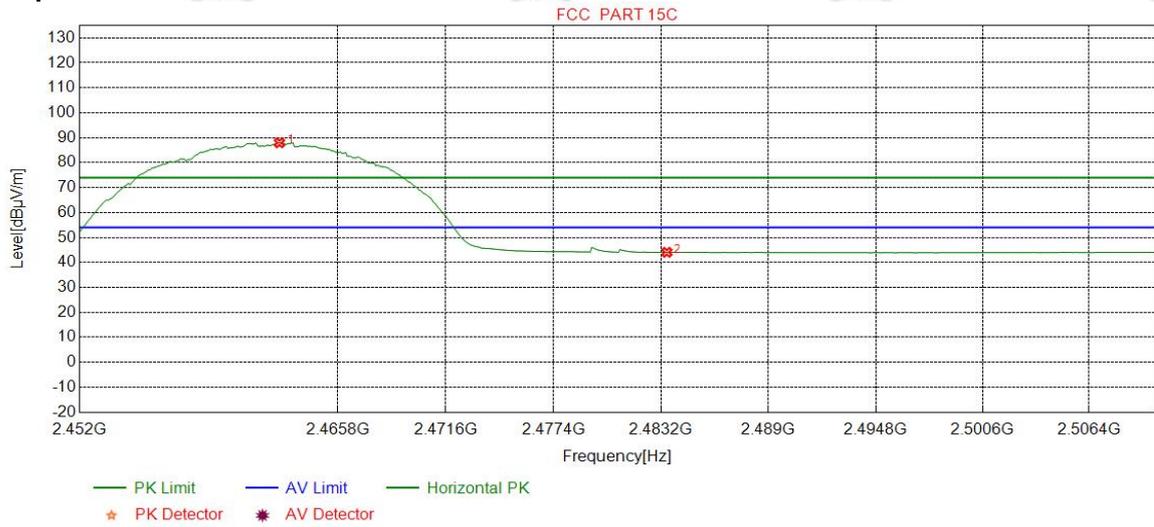
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2461.7272	32.35	13.48	-42.41	100.84	104.26	74.00	-30.26	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	49.26	52.62	74.00	21.38	Pass	Vertical

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2462
Remark:	AV		

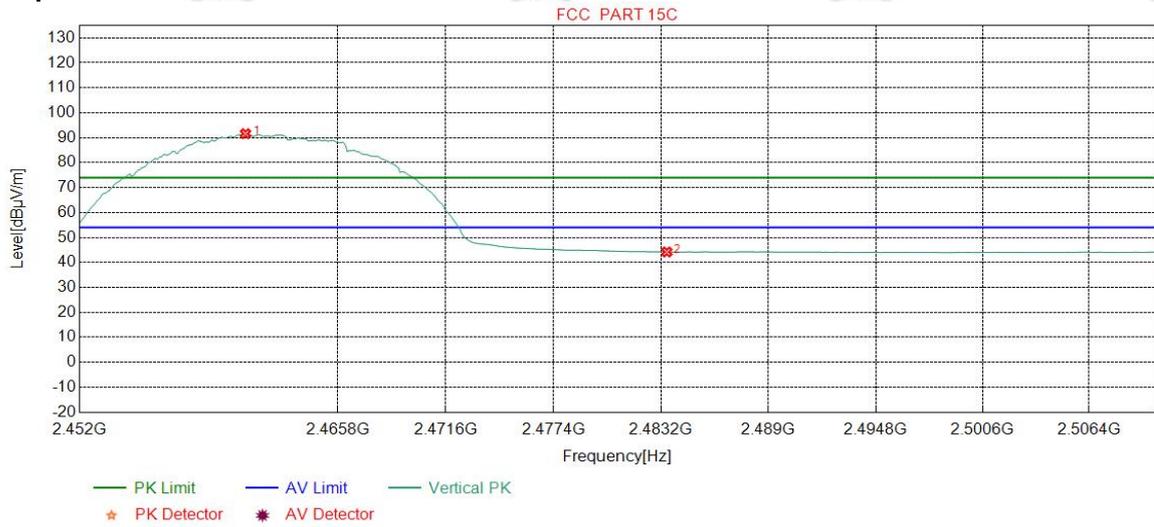
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2462.6708	32.35	13.47	-42.41	84.54	87.95	54.00	-33.95	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	40.70	44.06	54.00	9.94	Pass	Horizontal

Mode:	802.11 b(11Mbps) Transmitting	Channel:	2462
Remark:	AV		

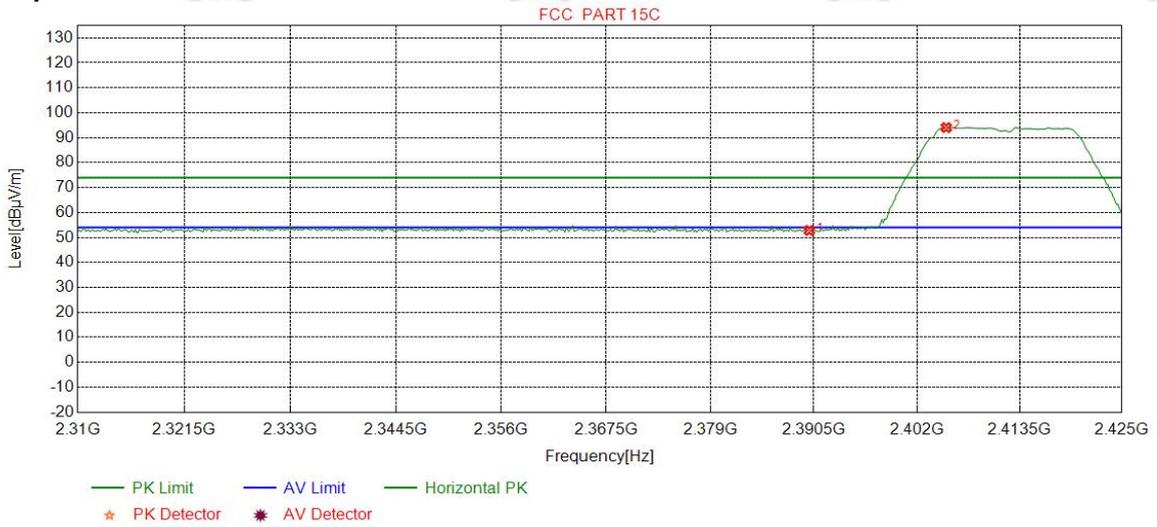
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2460.8561	32.35	13.48	-42.41	88.17	91.59	54.00	-37.59	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	40.83	44.19	54.00	9.81	Pass	Vertical

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2412
Remark:	PK		

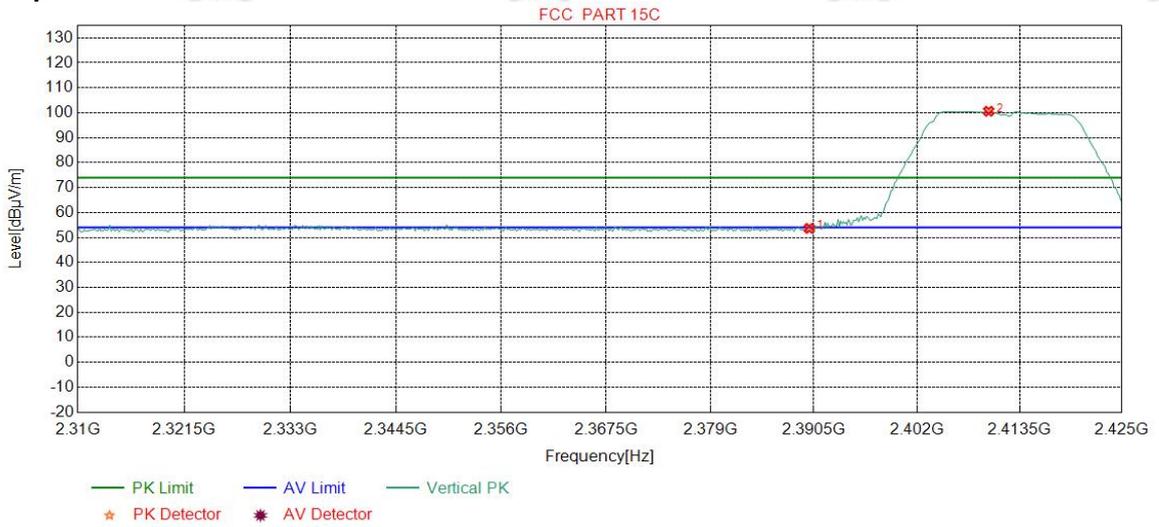
Test Graph



1	2390.0000	32.25	13.37	-42.44	49.64	52.82	74.00	21.18	Pass	Horizontal
2	2405.2816	32.27	13.32	-42.43	90.88	94.04	74.00	-20.04	Pass	Horizontal

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2412
Remark:	PK		

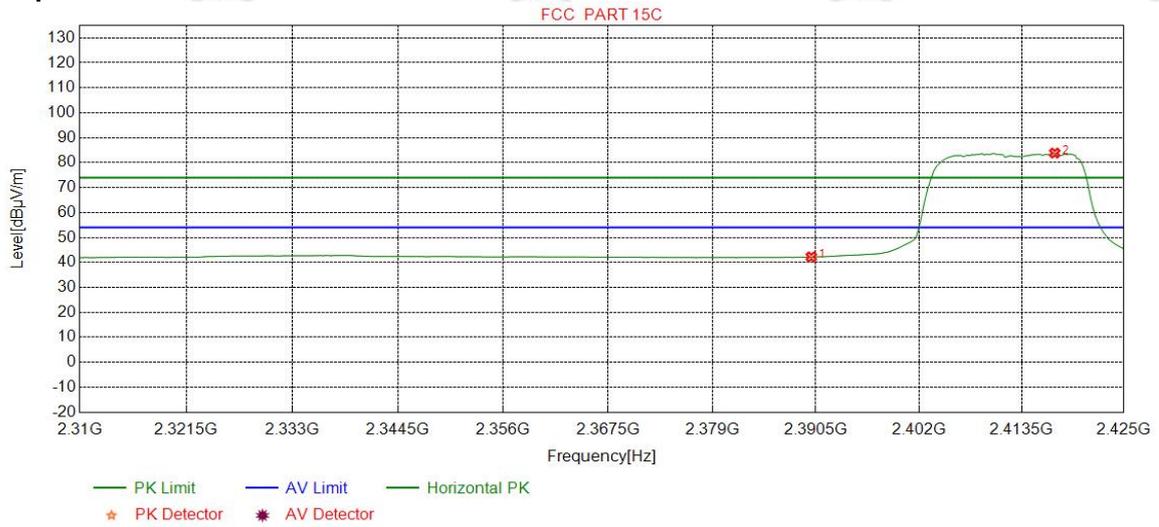
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	50.47	53.65	74.00	20.35	Pass	Vertical
2	2410.0313	32.27	13.35	-42.43	97.39	100.58	74.00	-26.58	Pass	Vertical

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2412
Remark:	AV		

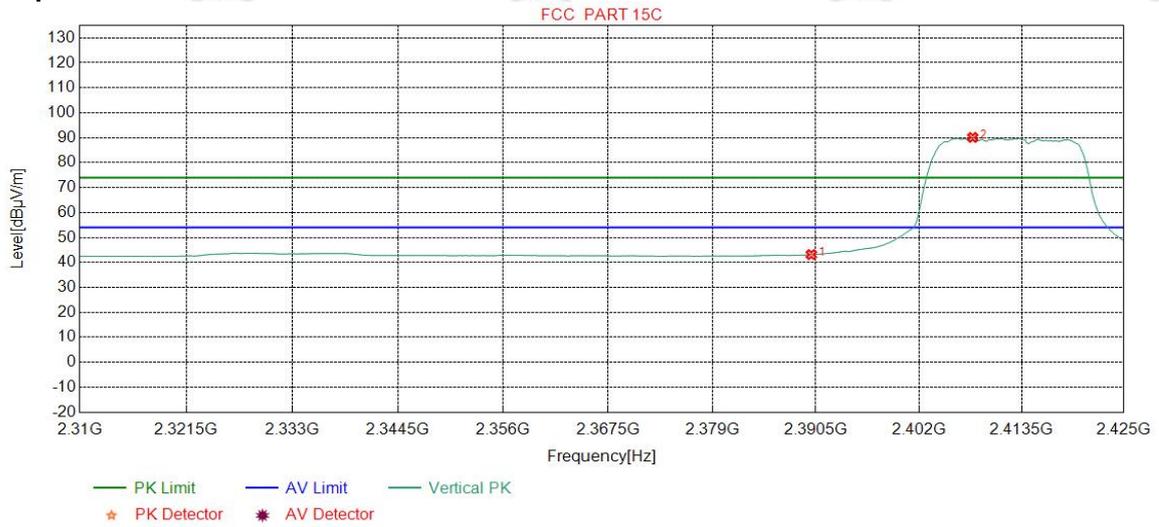
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	39.05	42.23	54.00	11.77	Pass	Horizontal
2	2417.2278	32.28	13.38	-42.42	80.58	83.82	54.00	-29.82	Pass	Horizontal

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2412
Remark:	AV		

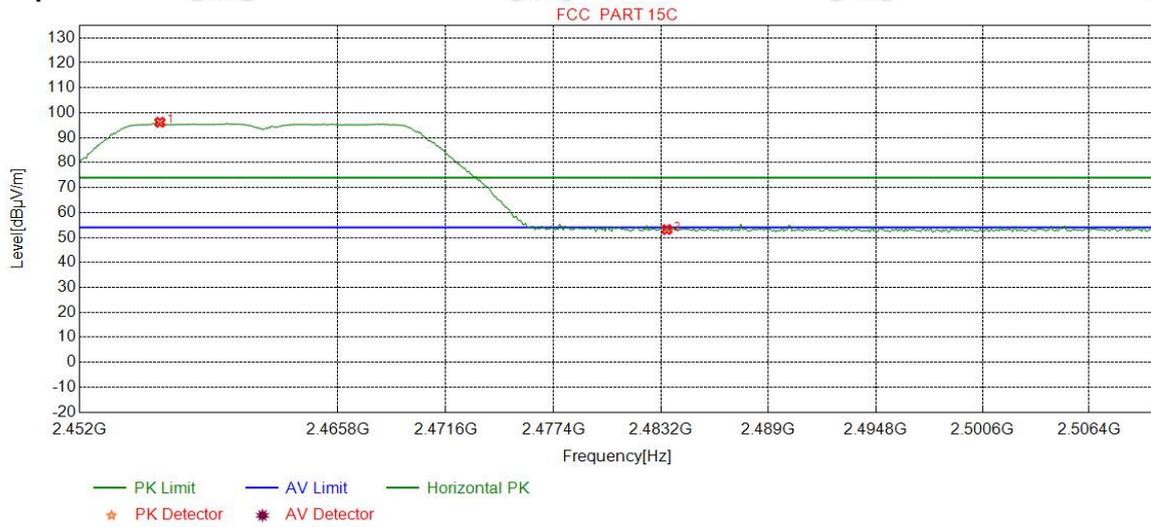
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	39.95	43.13	54.00	10.87	Pass	Vertical
2	2408.0163	32.27	13.34	-42.43	86.92	90.10	54.00	-36.10	Pass	Vertical

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2462
Remark:	PK		

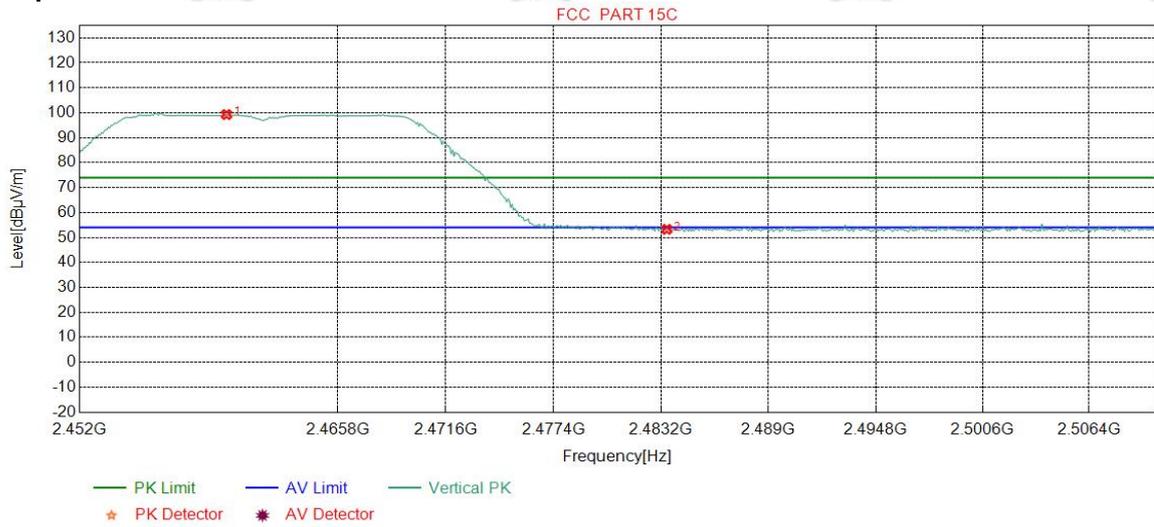
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2456.2829	32.34	13.50	-42.41	92.74	96.17	74.00	-22.17	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	49.80	53.16	74.00	20.84	Pass	Horizontal

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2462
Remark:	PK		

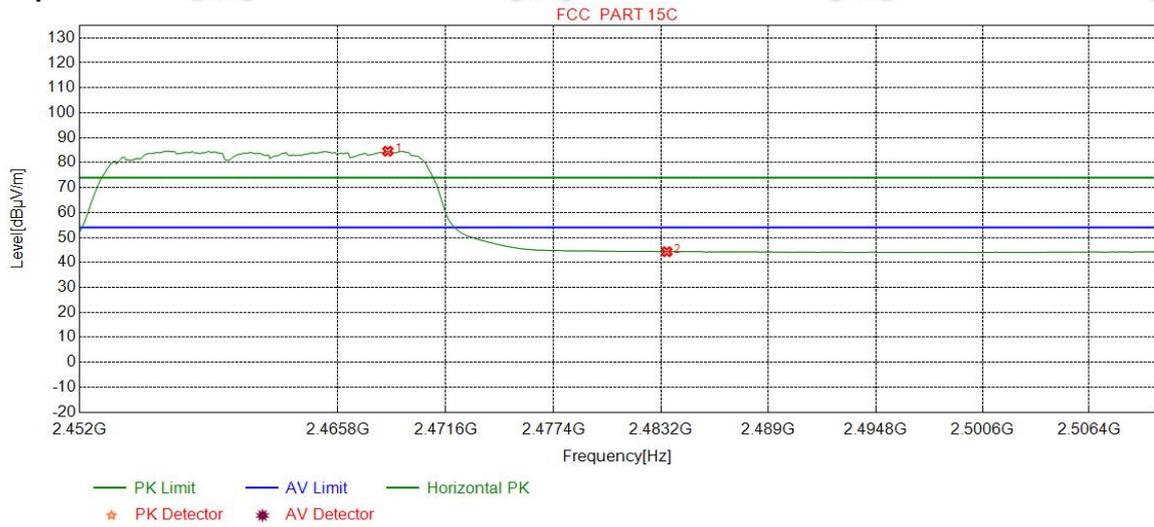
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2459.8398	32.34	13.48	-42.40	95.85	99.27	74.00	-25.27	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	49.89	53.25	74.00	20.75	Pass	Vertical

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2462
Remark:	AV		

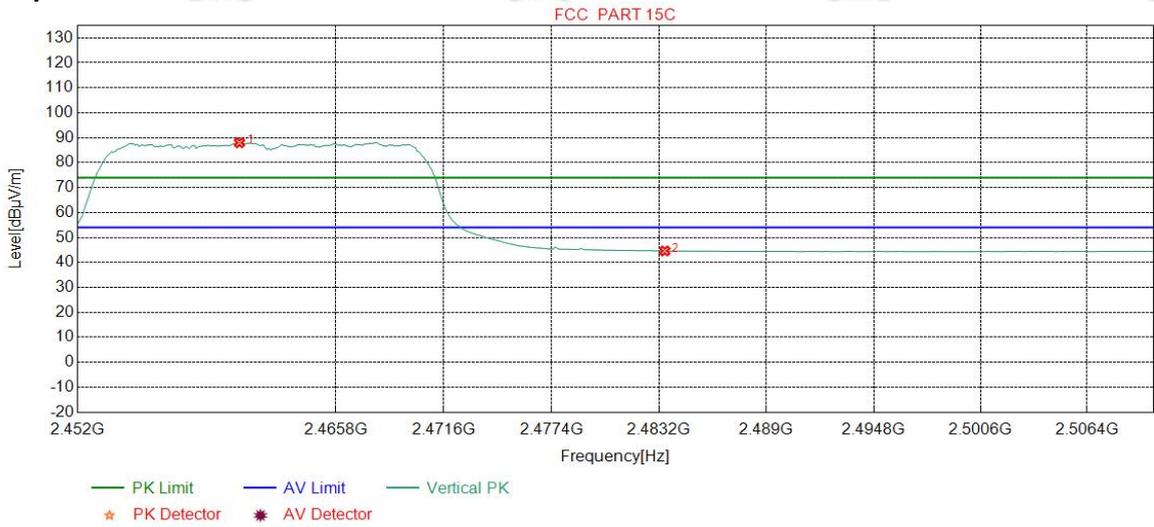
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2468.4781	32.36	13.45	-42.41	81.17	84.57	54.00	-30.57	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	40.94	44.30	54.00	9.70	Pass	Horizontal

Mode:	802.11 g(6Mbps) Transmitting	Channel:	2462
Remark:	AV		

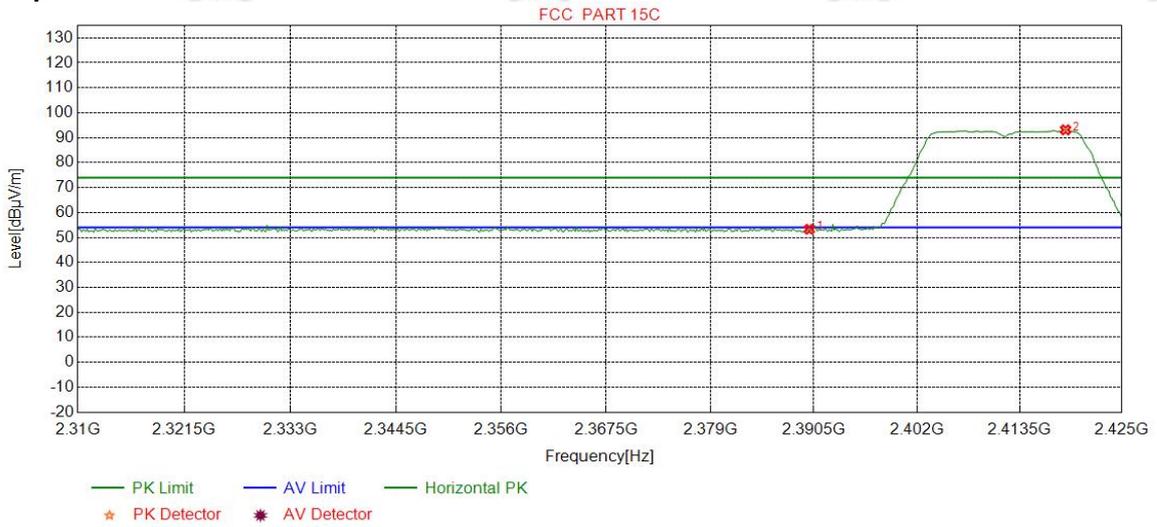
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2460.6383	32.34	13.48	-42.40	84.55	87.97	54.00	-33.97	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	41.25	44.61	54.00	9.39	Pass	Vertical

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2412
Remark:	PK		

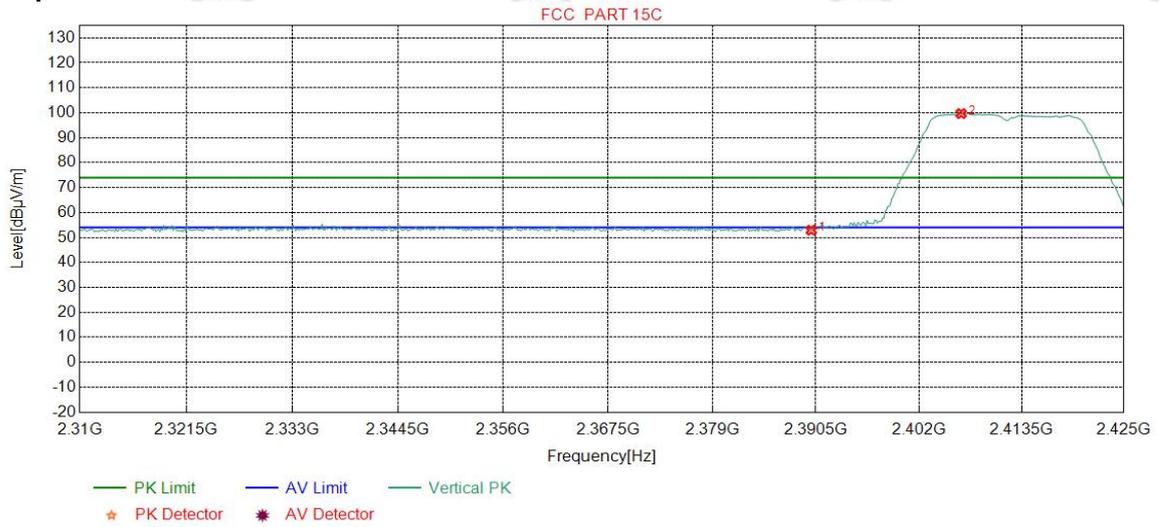
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	50.12	53.30	74.00	20.70	Pass	Horizontal
2	2418.6671	32.29	13.39	-42.43	89.87	93.12	74.00	-19.12	Pass	Horizontal

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2412
Remark:	PK		

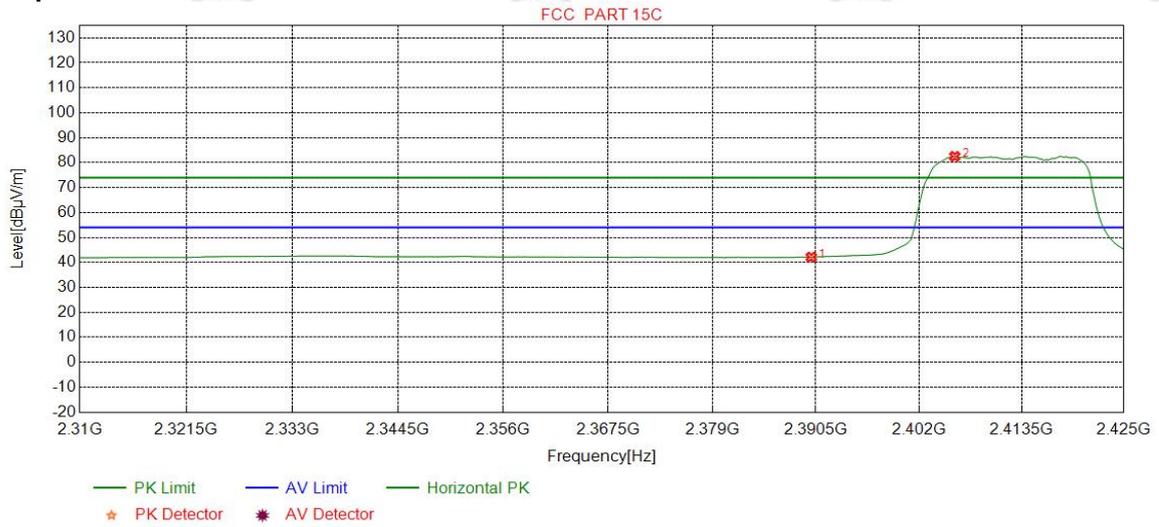
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	49.71	52.89	74.00	21.11	Pass	Vertical
2	2406.7209	32.27	13.33	-42.43	96.49	99.66	74.00	-25.66	Pass	Vertical

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2412
Remark:	AV		

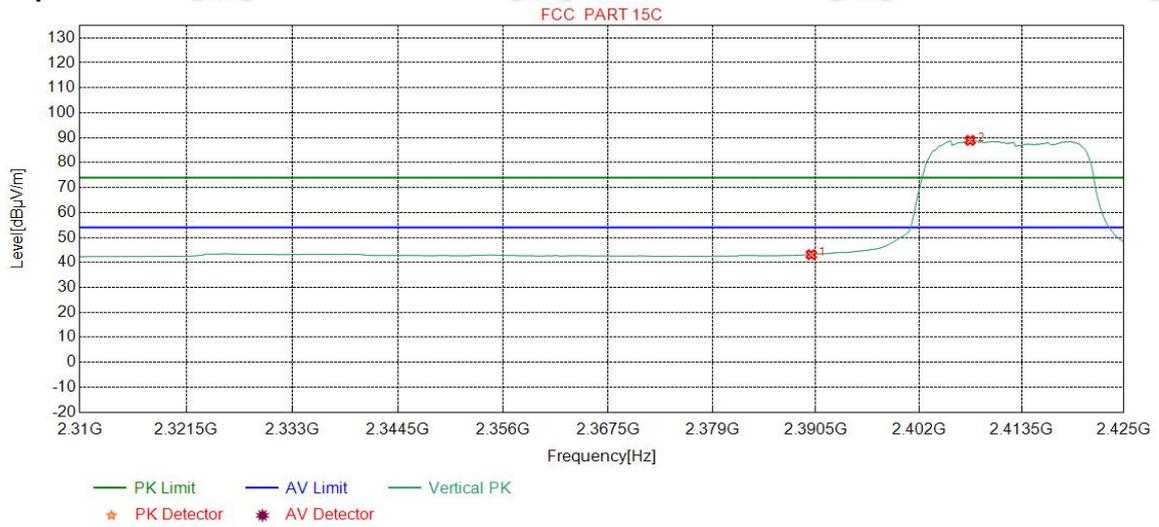
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	38.96	42.14	54.00	11.86	Pass	Horizontal
2	2406.0013	32.27	13.33	-42.44	79.34	82.50	54.00	-28.50	Pass	Horizontal

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2412
Remark:	AV		

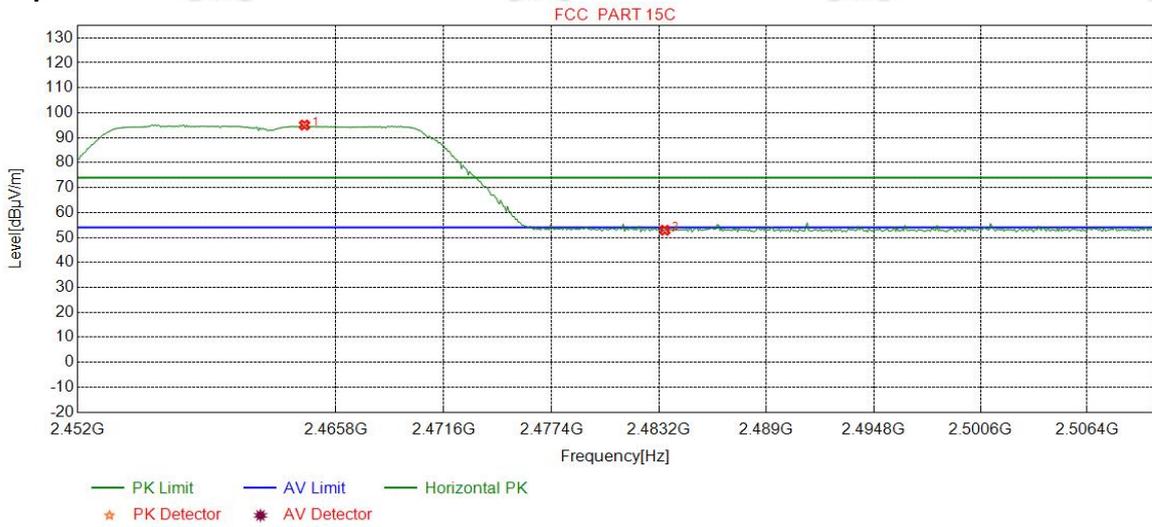
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	39.93	43.11	54.00	10.89	Pass	Vertical
2	2407.7284	32.27	13.34	-42.43	85.72	88.90	54.00	-34.90	Pass	Vertical

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2462
Remark:	PK		

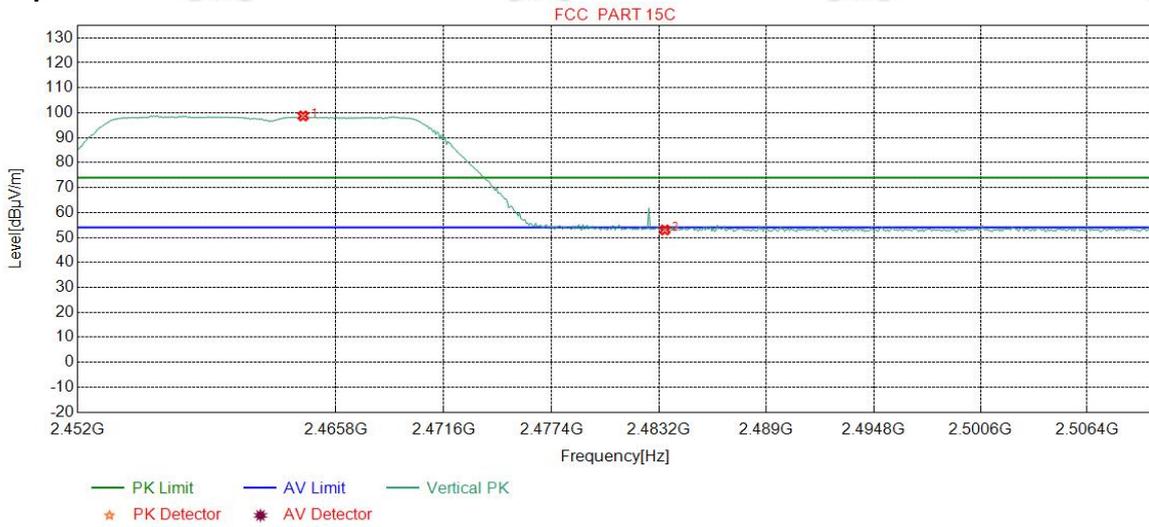
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2464.1227	32.35	13.47	-42.41	91.64	95.05	74.00	-21.05	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	49.53	52.89	74.00	21.11	Pass	Horizontal

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2462
Remark:	PK		

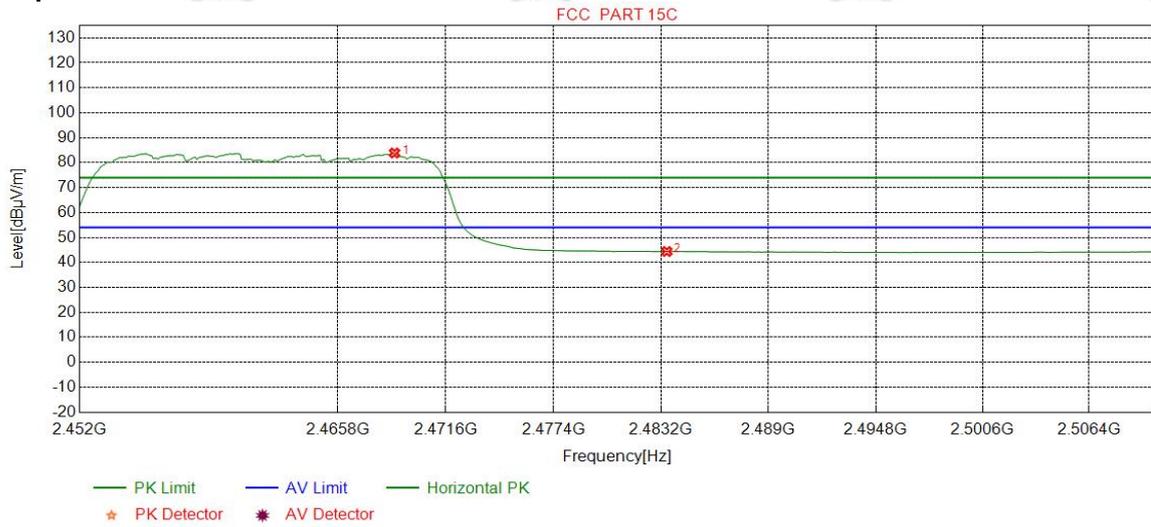
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2464.0501	32.35	13.47	-42.41	95.29	98.70	74.00	-24.70	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	49.66	53.02	74.00	20.98	Pass	Vertical

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2462
Remark:	AV		

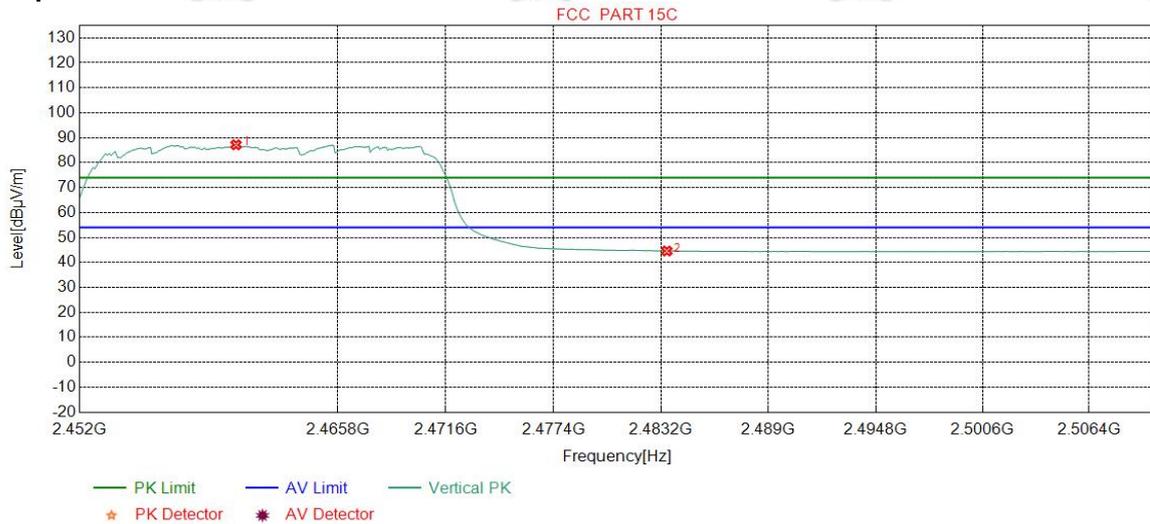
Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2468.8411	32.36	13.44	-42.40	80.46	83.86	54.00	-29.86	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	41.02	44.38	54.00	9.62	Pass	Horizontal

Mode:	802.11 n(HT20) (6.5Mbps)	Channel:	2462
Remark:	AV		

Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2460.3479	32.34	13.48	-42.40	83.72	87.14	54.00	-33.14	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	41.23	44.59	54.00	9.41	Pass	Vertical

Note:

1) Through Pre-scan transmitting mode and charge+transmitter mode with all kind of modulation and data rate, find the 11Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20) ; 13.5Mbps of rate is the worst case of 802.11n(HT40),and then Only the worst case is recorded in the report.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

Appendix J): Radiated Spurious Emissions

Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
Peak		1MHz	10Hz	Average	

Test Procedure:
<p>Below 1GHz test procedure as below:</p> <p>a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</p> <p>b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</p> <p>c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</p> <p>d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading.</p> <p>e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</p> <p>f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</p> <p>Above 1GHz test procedure as below:</p> <p>g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter)..</p> <p>h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel</p> <p>i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.</p> <p>j. Repeat above procedures until all frequencies measured was complete.</p>

Limit:	Frequency	Field strength (microvolt/meter)	Limit (dB μ V/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

Radiated Spurious Emissions test Data: Radiated Emission below 1GHz

Mode:		802.11 b (11Mbps) Transmitting				Channel:		2412		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	35.7236	10.93	0.66	-32.11	46.61	26.09	40.00	13.91	Pass	H
2	122.2562	8.86	1.31	-32.06	53.09	31.20	43.50	12.30	Pass	H
3	240.0260	11.94	1.84	-31.90	47.15	29.03	46.00	16.97	Pass	H
4	454.7085	16.28	2.53	-31.86	40.62	27.57	46.00	18.43	Pass	H
5	819.9500	21.14	3.44	-31.93	42.28	34.93	46.00	11.07	Pass	H
6	984.0904	22.60	3.76	-30.82	42.53	38.07	54.00	15.93	Pass	H
7	33.9774	10.66	0.65	-32.12	48.85	28.04	40.00	11.96	Pass	V
8	121.6742	8.95	1.31	-32.07	49.71	27.90	43.50	15.60	Pass	V
9	208.8859	11.13	1.71	-31.94	50.02	30.92	43.50	12.58	Pass	V
10	328.0138	13.82	2.15	-31.78	42.50	26.69	46.00	19.31	Pass	V
11	649.9890	19.40	3.10	-32.07	39.52	29.95	46.00	16.05	Pass	V
12	892.9013	22.01	3.59	-31.61	43.61	37.60	46.00	8.40	Pass	V

Mode:		802.11 b (11Mbps) Transmitting				Channel:		2437		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	35.5296	10.87	0.66	-32.12	47.34	26.75	40.00	13.25	Pass	H
2	122.3532	8.85	1.31	-32.06	54.10	32.20	43.50	11.30	Pass	H
3	240.0260	11.94	1.84	-31.90	45.76	27.64	46.00	18.36	Pass	H
4	491.6692	16.87	2.65	-31.89	41.39	29.02	46.00	16.98	Pass	H
5	819.9500	21.14	3.44	-31.93	40.72	33.37	46.00	12.63	Pass	H
6	988.0678	22.63	3.77	-30.80	39.14	34.74	54.00	19.26	Pass	H
7	35.0445	10.71	0.65	-32.11	49.24	28.49	40.00	11.51	Pass	V
8	121.6742	8.95	1.31	-32.07	50.48	28.67	43.50	14.83	Pass	V
9	145.9266	7.41	1.43	-32.01	48.51	25.34	43.50	18.16	Pass	V
10	208.8859	11.13	1.71	-31.94	49.84	30.74	43.50	12.76	Pass	V
11	240.0260	11.94	1.84	-31.90	47.29	29.17	46.00	16.83	Pass	V
12	649.9890	19.40	3.10	-32.07	39.23	29.66	46.00	16.34	Pass	V

Mode:		802.11 b (11Mbps) Transmitting				Channel:		2462		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	35.5296	10.87	0.66	-32.12	45.39	24.80	40.00	15.20	Pass	H
2	192.0062	10.14	1.62	-31.96	43.68	23.48	43.50	20.02	Pass	H
3	240.0260	11.94	1.84	-31.90	45.99	27.87	46.00	18.13	Pass	H
4	649.9890	19.40	3.10	-32.07	39.01	29.44	46.00	16.56	Pass	H
5	819.9500	21.14	3.44	-31.93	39.97	32.62	46.00	13.38	Pass	H
6	983.9934	22.60	3.76	-30.83	40.05	35.58	54.00	18.42	Pass	H
7	35.6266	10.90	0.66	-32.12	46.33	25.77	40.00	14.23	Pass	V
8	208.8859	11.13	1.71	-31.94	48.41	29.31	43.50	14.19	Pass	V
9	240.0260	11.94	1.84	-31.90	44.57	26.45	46.00	19.55	Pass	V
10	327.9168	13.81	2.15	-31.77	48.32	32.51	46.00	13.49	Pass	V
11	531.4431	17.63	2.76	-31.91	43.54	32.02	46.00	13.98	Pass	V
12	983.9934	22.60	3.76	-30.83	42.28	37.81	54.00	16.19	Pass	V

Mode:		802.11 g (6Mbps) Transmitting				Channel:		2412		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	35.5296	10.87	0.66	-32.12	45.82	25.23	40.00	14.77	Pass	H
2	208.8859	11.13	1.71	-31.94	41.85	22.75	43.50	20.75	Pass	H
3	240.0260	11.94	1.84	-31.90	46.41	28.29	46.00	17.71	Pass	H
4	649.9890	19.40	3.10	-32.07	39.36	29.79	46.00	16.21	Pass	H
5	895.9086	22.05	3.59	-31.59	39.44	33.49	46.00	12.51	Pass	H
6	983.9934	22.60	3.76	-30.83	39.91	35.44	54.00	18.56	Pass	H
7	35.5296	10.87	0.66	-32.12	46.63	26.04	40.00	13.96	Pass	V
8	208.8859	11.13	1.71	-31.94	50.55	31.45	43.50	12.05	Pass	V
9	240.0260	11.94	1.84	-31.90	45.53	27.41	46.00	18.59	Pass	V
10	532.5103	17.65	2.77	-31.92	40.63	29.13	46.00	16.87	Pass	V
11	649.9890	19.40	3.10	-32.07	39.11	29.54	46.00	16.46	Pass	V
12	983.8964	22.60	3.76	-30.83	40.56	36.09	54.00	17.91	Pass	V

Mode:		802.11 g (6Mbps) Transmitting				Channel:		2437		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	35.5296	10.87	0.66	-32.12	45.59	25.00	40.00	15.00	Pass	H
2	240.0260	11.94	1.84	-31.90	45.85	27.73	46.00	18.27	Pass	H
3	450.8281	16.21	2.51	-31.88	39.26	26.10	46.00	19.90	Pass	H
4	649.9890	19.40	3.10	-32.07	39.85	30.28	46.00	15.72	Pass	H
5	819.9500	21.14	3.44	-31.93	42.53	35.18	46.00	10.82	Pass	H
6	906.4826	22.14	3.60	-31.52	44.42	38.64	46.00	7.36	Pass	H
7	54.9315	12.41	0.84	-32.08	41.67	22.84	40.00	17.16	Pass	V
8	208.8859	11.13	1.71	-31.94	50.02	30.92	43.50	12.58	Pass	V
9	240.0260	11.94	1.84	-31.90	45.05	26.93	46.00	19.07	Pass	V
10	328.0138	13.82	2.15	-31.78	42.97	27.16	46.00	18.84	Pass	V
11	649.9890	19.40	3.10	-32.07	40.18	30.61	46.00	15.39	Pass	V
12	983.9934	22.60	3.76	-30.83	41.05	36.58	54.00	17.42	Pass	V

Mode:		802.11 g (6Mbps) Transmitting				Channel:		2462		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	35.5296	10.87	0.66	-32.12	45.12	24.53	40.00	15.47	Pass	H
2	240.0260	11.94	1.84	-31.90	47.72	29.60	46.00	16.40	Pass	H
3	455.0965	16.28	2.54	-31.86	39.47	26.43	46.00	19.57	Pass	H
4	649.9890	19.40	3.10	-32.07	39.03	29.46	46.00	16.54	Pass	H
5	819.9500	21.14	3.44	-31.93	40.88	33.53	46.00	12.47	Pass	H
6	983.9934	22.60	3.76	-30.83	40.59	36.12	54.00	17.88	Pass	H
7	35.6266	10.90	0.66	-32.12	47.22	26.66	40.00	13.34	Pass	V
8	208.8859	11.13	1.71	-31.94	49.95	30.85	43.50	12.65	Pass	V
9	240.0260	11.94	1.84	-31.90	44.75	26.63	46.00	19.37	Pass	V
10	649.9890	19.40	3.10	-32.07	40.39	30.82	46.00	15.18	Pass	V
11	907.9378	22.15	3.60	-31.50	48.58	42.83	46.00	3.17	Pass	V
12	983.9934	22.60	3.76	-30.83	40.42	35.95	54.00	18.05	Pass	V

Mode:		802.11 n (HT20) (6.5Mbps)				Channel:		2412		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	35.5296	10.87	0.66	-32.12	47.29	26.70	40.00	13.30	Pass	H
2	192.0062	10.14	1.62	-31.96	42.60	22.40	43.50	21.10	Pass	H
3	239.9290	11.94	1.84	-31.90	45.29	27.17	46.00	18.83	Pass	H
4	327.9168	13.81	2.15	-31.77	41.70	25.89	46.00	20.11	Pass	H
5	819.9500	21.14	3.44	-31.93	42.05	34.70	46.00	11.30	Pass	H
6	983.8964	22.60	3.76	-30.83	41.50	37.03	54.00	16.97	Pass	H
7	35.5296	10.87	0.66	-32.12	46.63	26.04	40.00	13.96	Pass	V
8	208.8859	11.13	1.71	-31.94	50.06	30.96	43.50	12.54	Pass	V
9	328.0138	13.82	2.15	-31.78	42.74	26.93	46.00	19.07	Pass	V
10	531.7342	17.63	2.77	-31.92	42.57	31.05	46.00	14.95	Pass	V
11	649.9890	19.40	3.10	-32.07	39.28	29.71	46.00	16.29	Pass	V
12	819.9500	21.14	3.44	-31.93	39.87	32.52	46.00	13.48	Pass	V

Mode:		802.11 n (HT20) (6.5Mbps)				Channel:		2437		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	35.6266	10.90	0.66	-32.12	46.29	25.73	40.00	14.27	Pass	H
2	240.0260	11.94	1.84	-31.90	43.71	25.59	46.00	20.41	Pass	H
3	531.4431	17.63	2.76	-31.91	39.76	28.24	46.00	17.76	Pass	H
4	649.9890	19.40	3.10	-32.07	39.62	30.05	46.00	15.95	Pass	H
5	819.9500	21.14	3.44	-31.93	39.69	32.34	46.00	13.66	Pass	H
6	983.9934	22.60	3.76	-30.83	40.31	35.84	54.00	18.16	Pass	H
7	54.8345	12.43	0.84	-32.09	40.70	21.88	40.00	18.12	Pass	V
8	208.8859	11.13	1.71	-31.94	50.04	30.94	43.50	12.56	Pass	V
9	240.0260	11.94	1.84	-31.90	45.45	27.33	46.00	18.67	Pass	V
10	328.0138	13.82	2.15	-31.78	42.84	27.03	46.00	18.97	Pass	V
11	531.9282	17.64	2.77	-31.92	43.54	32.03	46.00	13.97	Pass	V
12	819.9500	21.14	3.44	-31.93	39.53	32.18	46.00	13.82	Pass	V

Mode:		802.11 n (HT20) (6.5Mbps)				Channel:		2462		
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dB μ V]	Level [dB μ V/m]	Limit [dB μ V/m]	Margin [dB]	Result	Polarity
1	35.5296	10.87	0.66	-32.12	46.43	25.84	40.00	14.16	Pass	H
2	192.0062	10.14	1.62	-31.96	42.21	22.01	43.50	21.49	Pass	H
3	240.0260	11.94	1.84	-31.90	44.33	26.21	46.00	19.79	Pass	H
4	649.9890	19.40	3.10	-32.07	38.27	28.70	46.00	17.30	Pass	H
5	896.0056	22.05	3.59	-31.59	46.64	40.69	46.00	5.31	Pass	H
6	983.8964	22.60	3.76	-30.83	40.11	35.64	54.00	18.36	Pass	H
7	54.6405	12.46	0.84	-32.09	40.43	21.64	40.00	18.36	Pass	V
8	208.8859	11.13	1.71	-31.94	50.34	31.24	43.50	12.26	Pass	V
9	328.0138	13.82	2.15	-31.78	43.64	27.83	46.00	18.17	Pass	V
10	532.2192	17.64	2.77	-31.92	39.81	28.30	46.00	17.70	Pass	V
11	819.9500	21.14	3.44	-31.93	39.83	32.48	46.00	13.52	Pass	V
12	984.0904	22.60	3.76	-30.82	39.42	34.96	54.00	19.04	Pass	V

Transmitter Emission above 1GHz

Mode:		802.11 b (11Mbps) Transmitting				Channel:		2412			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	4822.1215	34.50	4.60	-40.64	54.23	52.69	74.00	21.31	Pass	H	Peak
2	7236.0000	36.34	5.79	-40.99	52.33	53.47	74.00	20.53	Pass	H	Peak
3	9648.0000	37.66	6.72	-40.73	42.91	46.56	74.00	27.44	Pass	H	Peak
4	11891.5928	39.21	7.43	-41.24	44.65	50.05	74.00	23.95	Pass	H	Peak
5	14306.7538	40.01	8.62	-41.88	45.52	52.27	74.00	21.73	Pass	H	Peak
6	15918.8613	41.74	10.14	-43.31	44.62	53.19	74.00	20.81	Pass	H	Peak
7	3457.0305	33.38	4.44	-41.84	51.56	47.54	74.00	26.46	Pass	V	Peak
8	4823.1215	34.50	4.60	-40.64	54.13	52.59	74.00	21.41	Pass	V	Peak
9	7236.0000	36.34	5.79	-40.99	46.93	48.07	74.00	25.93	Pass	V	Peak
10	9648.0000	37.66	6.72	-40.73	41.95	45.60	74.00	28.40	Pass	V	Peak
11	11984.5990	39.29	7.57	-41.22	45.15	50.79	74.00	23.21	Pass	V	Peak
12	14185.7457	39.89	8.61	-41.65	46.52	53.37	74.00	20.63	Pass	V	Peak

Mode:		802.11 b (11Mbps) Transmitting				Channel:		2437			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	4874.0000	34.50	4.78	-40.61	53.94	52.61	74.00	21.39	Pass	H	Peak
2	6083.2055	35.82	5.24	-41.11	45.26	45.21	74.00	28.79	Pass	H	Peak
3	7311.0000	36.41	5.85	-40.93	48.48	49.81	74.00	24.19	Pass	H	Peak
4	9748.0000	37.70	6.77	-40.63	42.52	46.36	74.00	27.64	Pass	H	Peak
5	12442.6295	39.57	7.68	-41.12	45.21	51.34	74.00	22.66	Pass	H	Peak
6	13733.7156	39.54	8.32	-41.21	45.88	52.53	74.00	21.47	Pass	H	Peak
7	4874.0000	34.50	4.78	-40.61	52.29	50.96	74.00	23.04	Pass	V	Peak
8	7311.0000	36.41	5.85	-40.93	45.12	46.45	74.00	27.55	Pass	V	Peak
9	9748.0000	37.70	6.77	-40.63	42.40	46.24	74.00	27.76	Pass	V	Peak
10	11664.5776	39.03	7.45	-41.32	46.25	51.41	74.00	22.59	Pass	V	Peak
11	14196.7465	39.90	8.65	-41.67	45.49	52.37	74.00	21.63	Pass	V	Peak
12	16279.8853	42.12	10.11	-43.52	45.28	53.99	74.00	20.01	Pass	V	Peak

Mode:		802.11 b (11Mbps) Transmitting				Channel:		2462			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	2662.5663	32.66	4.10	-42.30	54.58	49.04	74.00	24.96	Pass	H	Peak
2	4924.0000	34.50	4.85	-40.56	52.43	51.22	74.00	22.78	Pass	H	Peak
3	7354.2903	36.45	5.85	-40.89	45.05	46.46	74.00	27.54	Pass	H	Peak
4	9848.0000	37.74	6.83	-40.54	42.52	46.55	74.00	27.45	Pass	H	Peak
5	12426.6284	39.56	7.75	-41.12	45.50	51.69	74.00	22.31	Pass	H	Peak
6	14898.7933	40.36	9.19	-42.31	45.50	52.74	74.00	21.26	Pass	H	Peak
7	4924.0000	34.50	4.85	-40.56	51.82	50.61	74.00	23.39	Pass	V	Peak
8	7386.0000	36.49	5.85	-40.87	42.76	44.23	74.00	29.77	Pass	V	Peak
9	9848.0000	37.74	6.83	-40.54	41.41	45.44	74.00	28.56	Pass	V	Peak
10	11743.5829	39.09	7.47	-41.29	46.86	52.13	74.00	21.87	Pass	V	Peak
11	13075.6717	39.57	8.05	-41.65	45.63	51.60	74.00	22.40	Pass	V	Peak
12	15478.8319	40.88	9.16	-42.96	45.88	52.96	74.00	21.04	Pass	V	Peak

Mode:		802.11 g (6Mbps) Transmitting				Channel:		2412			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	2903.3903	33.05	4.38	-42.18	51.75	47.00	74.00	27.00	Pass	H	Peak
2	4824.0000	34.50	4.61	-40.65	50.72	49.18	74.00	24.82	Pass	H	Peak
3	7236.0000	36.34	5.79	-40.99	43.82	44.96	74.00	29.04	Pass	H	Peak
4	9648.0000	37.66	6.72	-40.73	42.48	46.13	74.00	27.87	Pass	H	Peak
5	11674.5783	39.04	7.46	-41.32	46.45	51.63	74.00	22.37	Pass	H	Peak
6	14458.7639	40.16	9.01	-42.18	45.95	52.94	74.00	21.06	Pass	H	Peak
7	4824.0000	34.50	4.61	-40.65	53.62	52.08	74.00	21.92	Pass	V	Peak
8	7236.0000	36.34	5.79	-40.99	42.72	43.86	74.00	30.14	Pass	V	Peak
9	9648.0000	37.66	6.72	-40.73	42.21	45.86	74.00	28.14	Pass	V	Peak
10	11686.5791	39.05	7.48	-41.32	46.30	51.51	74.00	22.49	Pass	V	Peak
11	14180.7454	39.88	8.59	-41.63	45.16	52.00	74.00	22.00	Pass	V	Peak
12	15614.8410	41.13	9.73	-43.08	45.93	53.71	74.00	20.29	Pass	V	Peak

Mode:		802.11 g (6Mbps) Transmitting				Channel:		2437			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	4874.0000	34.50	4.78	-40.61	51.58	50.25	74.00	23.75	Pass	H	Peak
2	7311.0000	36.41	5.85	-40.93	42.50	43.83	74.00	30.17	Pass	H	Peak
3	9748.0000	37.70	6.77	-40.63	41.63	45.47	74.00	28.53	Pass	H	Peak
4	11723.5816	39.08	7.48	-41.30	45.75	51.01	74.00	22.99	Pass	H	Peak
5	13587.7058	39.45	8.14	-41.18	44.39	50.80	74.00	23.20	Pass	H	Peak
6	15156.8105	40.56	9.36	-42.53	44.94	52.33	74.00	21.67	Pass	H	Peak
7	4874.0000	34.50	4.78	-40.61	51.71	50.38	74.00	23.62	Pass	V	Peak
8	6781.2521	36.01	5.66	-41.18	45.04	45.53	74.00	28.47	Pass	V	Peak
9	7311.0000	36.41	5.85	-40.93	43.34	44.67	74.00	29.33	Pass	V	Peak
10	9748.0000	37.70	6.77	-40.63	43.44	47.28	74.00	26.72	Pass	V	Peak
11	12202.6135	39.42	7.67	-41.16	44.98	50.91	74.00	23.09	Pass	V	Peak
12	14216.7478	39.92	8.63	-41.70	46.88	53.73	74.00	20.27	Pass	V	Peak

Mode:		802.11 g (6Mbps) Transmitting				Channel:		2462			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	2960.9961	33.14	4.43	-42.14	54.01	49.44	74.00	24.56	Pass	H	Peak
2	4924.0000	34.50	4.85	-40.56	51.79	50.58	74.00	23.42	Pass	H	Peak
3	7113.2742	36.21	5.73	-41.09	45.43	46.28	74.00	27.72	Pass	H	Peak
4	7386.0000	36.49	5.85	-40.87	42.71	44.18	74.00	29.82	Pass	H	Peak
5	9848.0000	37.74	6.83	-40.54	41.65	45.68	74.00	28.32	Pass	H	Peak
6	11407.5605	38.84	7.44	-41.33	44.48	49.43	74.00	24.57	Pass	H	Peak
7	4924.0000	34.50	4.85	-40.56	49.88	48.67	74.00	25.33	Pass	V	Peak
8	7386.0000	36.49	5.85	-40.87	43.51	44.98	74.00	29.02	Pass	V	Peak
9	9848.0000	37.74	6.83	-40.54	41.25	45.28	74.00	28.72	Pass	V	Peak
10	11762.5842	39.11	7.47	-41.29	45.58	50.87	74.00	23.13	Pass	V	Peak
11	12985.6657	39.60	8.29	-41.72	44.71	50.88	74.00	23.12	Pass	V	Peak
12	14954.7970	40.38	9.06	-42.32	46.03	53.15	74.00	20.85	Pass	V	Peak

Mode:		802.11 n (HT20) (6.5Mbps)				Channel:		2412			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	2961.1961	33.14	4.43	-42.14	52.91	48.34	74.00	25.66	Pass	H	Peak
2	4824.0000	34.50	4.61	-40.65	54.01	52.47	74.00	21.53	Pass	H	Peak
3	7236.0000	36.34	5.79	-40.99	43.43	44.57	74.00	29.43	Pass	H	Peak
4	9648.0000	37.66	6.72	-40.73	42.16	45.81	74.00	28.19	Pass	H	Peak
5	11287.5525	38.77	7.32	-41.27	44.68	49.50	74.00	24.50	Pass	H	Peak
6	13647.7098	39.49	8.13	-41.20	45.57	51.99	74.00	22.01	Pass	H	Peak
7	4824.0000	34.50	4.61	-40.65	52.07	50.53	74.00	23.47	Pass	V	Peak
8	7236.0000	36.34	5.79	-40.99	42.88	44.02	74.00	29.98	Pass	V	Peak
9	9648.0000	37.66	6.72	-40.73	41.85	45.50	74.00	28.50	Pass	V	Peak
10	11683.5789	39.05	7.47	-41.32	45.58	50.78	74.00	23.22	Pass	V	Peak
11	14196.7465	39.90	8.65	-41.67	44.53	51.41	74.00	22.59	Pass	V	Peak
12	15869.8580	41.64	10.23	-43.27	44.40	53.00	74.00	21.00	Pass	V	Peak

Mode:		802.11 n (HT20) (6.5Mbps)				Channel:		2437			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	2951.7952	33.12	4.41	-42.15	55.64	51.02	74.00	22.98	Pass	H	Peak
2	3362.0241	33.34	4.53	-41.90	49.49	45.46	74.00	28.54	Pass	H	Peak
3	4874.0000	34.50	4.78	-40.61	51.47	50.14	74.00	23.86	Pass	H	Peak
4	7311.0000	36.41	5.85	-40.93	43.27	44.60	74.00	29.40	Pass	H	Peak
5	9748.0000	37.70	6.77	-40.63	41.16	45.00	74.00	29.00	Pass	H	Peak
6	11673.5782	39.04	7.46	-41.32	45.25	50.43	74.00	23.57	Pass	H	Peak
7	2961.7962	33.14	4.44	-42.15	51.72	47.15	74.00	26.85	Pass	V	Peak
8	4874.0000	34.50	4.78	-40.61	50.59	49.26	74.00	24.74	Pass	V	Peak
9	7311.0000	36.41	5.85	-40.93	44.25	45.58	74.00	28.42	Pass	V	Peak
10	9748.0000	37.70	6.77	-40.63	43.25	47.09	74.00	26.91	Pass	V	Peak
11	12840.6560	39.60	7.89	-41.53	46.51	52.47	74.00	21.53	Pass	V	Peak
12	15664.8443	41.23	9.79	-43.11	45.72	53.63	74.00	20.37	Pass	V	Peak

Mode:		802.11 n (HT20) (6.5Mbps)				Channel:		2462			
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	4924.0000	34.50	4.85	-40.56	50.64	49.43	74.00	24.57	Pass	H	Peak
2	7386.0000	36.49	5.85	-40.87	43.34	44.81	74.00	29.19	Pass	H	Peak
3	9848.0000	37.74	6.83	-40.54	41.14	45.17	74.00	28.83	Pass	H	Peak
4	11703.5802	39.06	7.49	-41.31	46.36	51.60	74.00	22.40	Pass	H	Peak
5	13862.7242	39.62	8.35	-41.25	45.65	52.37	74.00	21.63	Pass	H	Peak
6	16012.8675	41.91	10.09	-43.38	44.60	53.22	74.00	20.78	Pass	H	Peak
7	4924.0000	34.50	4.85	-40.56	50.44	49.23	74.00	24.77	Pass	V	Peak
8	7386.0000	36.49	5.85	-40.87	42.17	43.64	74.00	30.36	Pass	V	Peak
9	9848.0000	37.74	6.83	-40.54	42.01	46.04	74.00	27.96	Pass	V	Peak
10	11596.5731	38.98	7.47	-41.35	44.88	49.98	74.00	24.02	Pass	V	Peak
11	13400.6934	39.44	8.19	-41.27	44.50	50.86	74.00	23.14	Pass	V	Peak
12	15523.8349	40.95	9.37	-43.01	45.74	53.05	74.00	20.95	Pass	V	Peak

Note:

1) Through Pre-scan transmitting mode and charge+transmitter mode with all kind of modulation and data rate, find the 11Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20) ; 13.5Mbps of rate is the worst case of 802.11n(HT40),and then Only the worst case is recorded in the report.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor- Antenna Factor-Cable Factor

3) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

PHOTOGRAPHS OF TEST SETUP

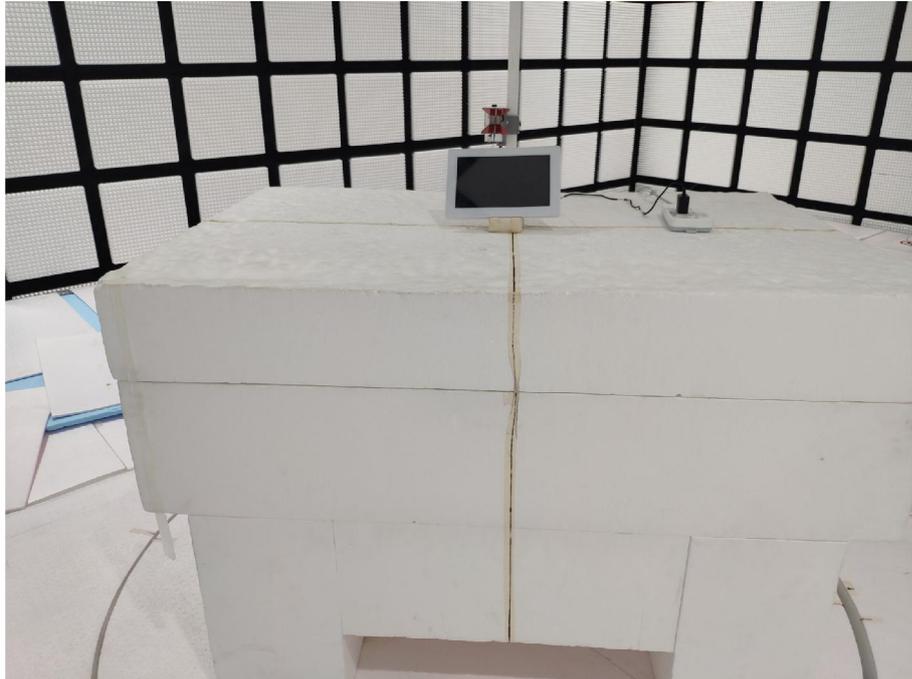
Test Model No.: DGF201



Radiated spurious emission Test Setup-1(Below 30MHz)



Radiated spurious emission Test Setup-2(Below 1GHz)



Radiated spurious emission Test Setup-3(Above 1GHz)



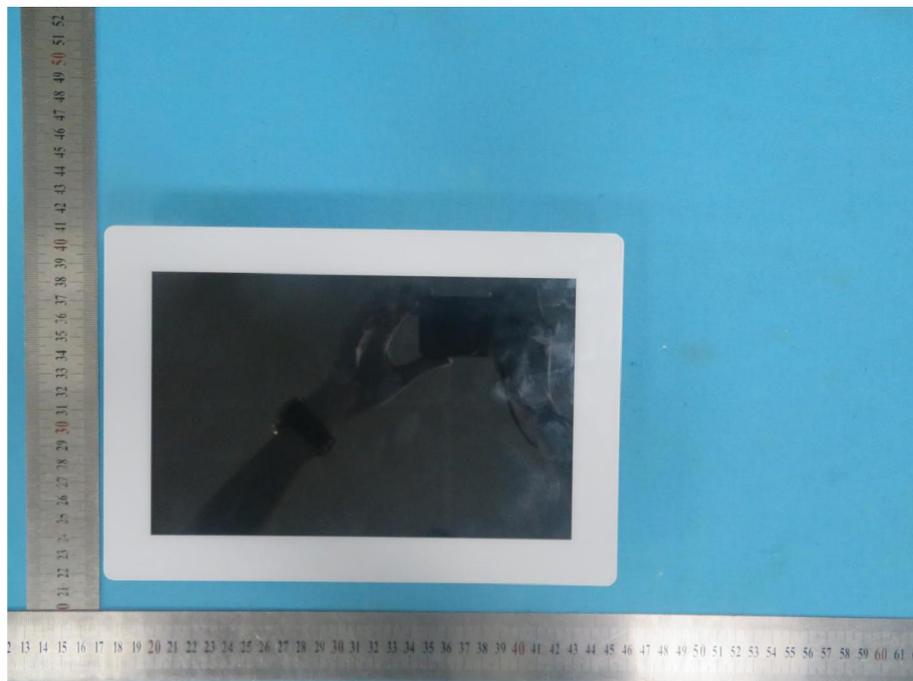
Conducted Emissions Test Setup

PHOTOGRAPHS OF EUT Constructional Details

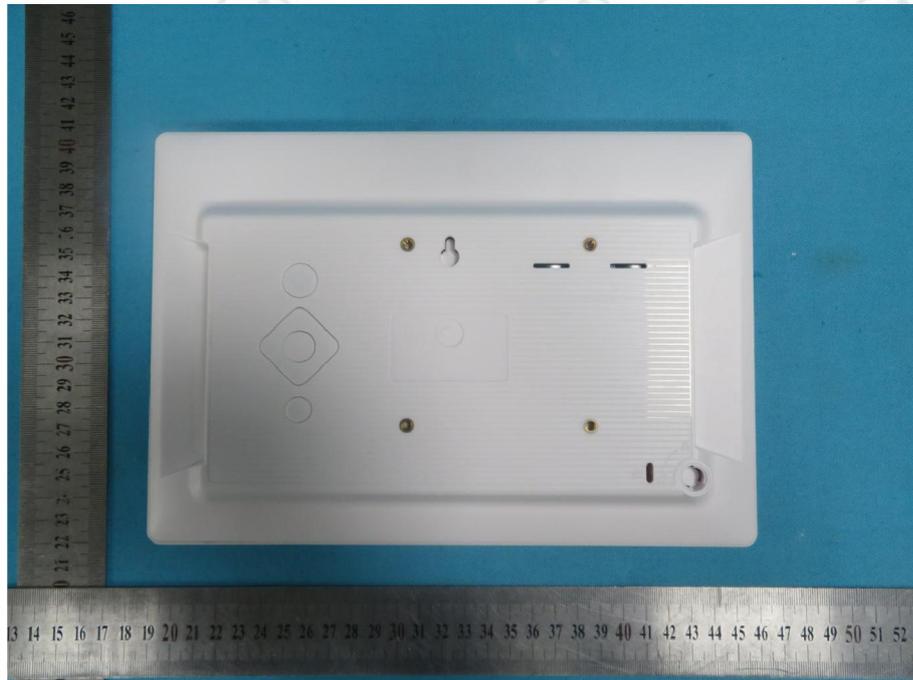
Test model No.: DGF201



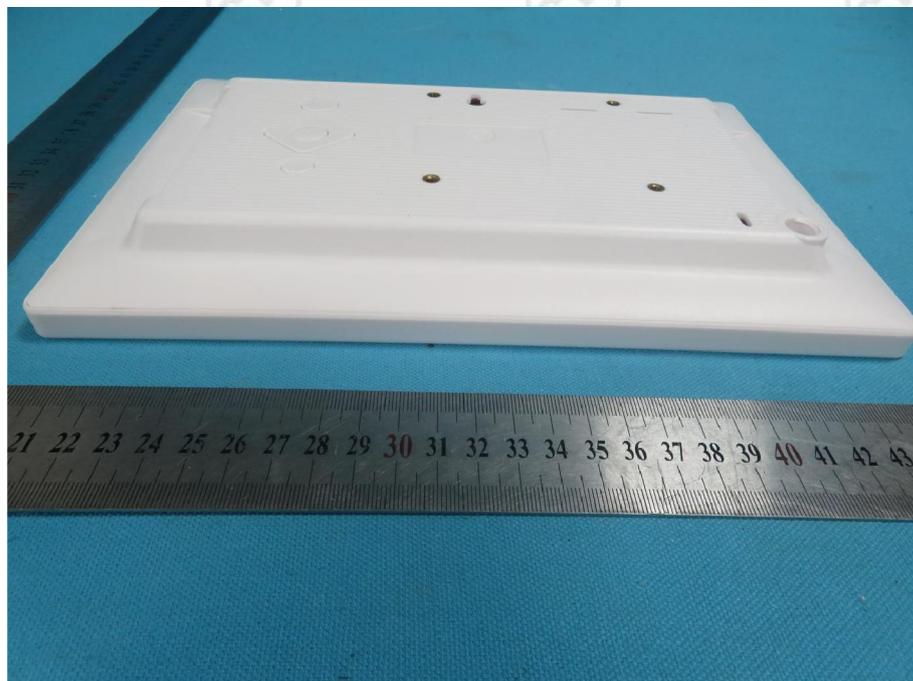
View of Product-1



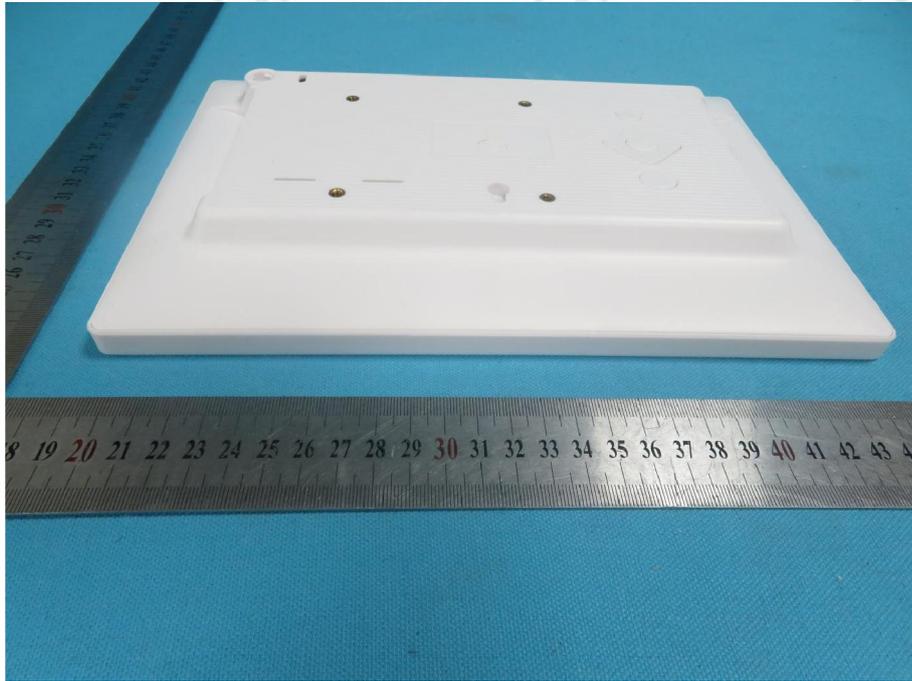
View of Product-2



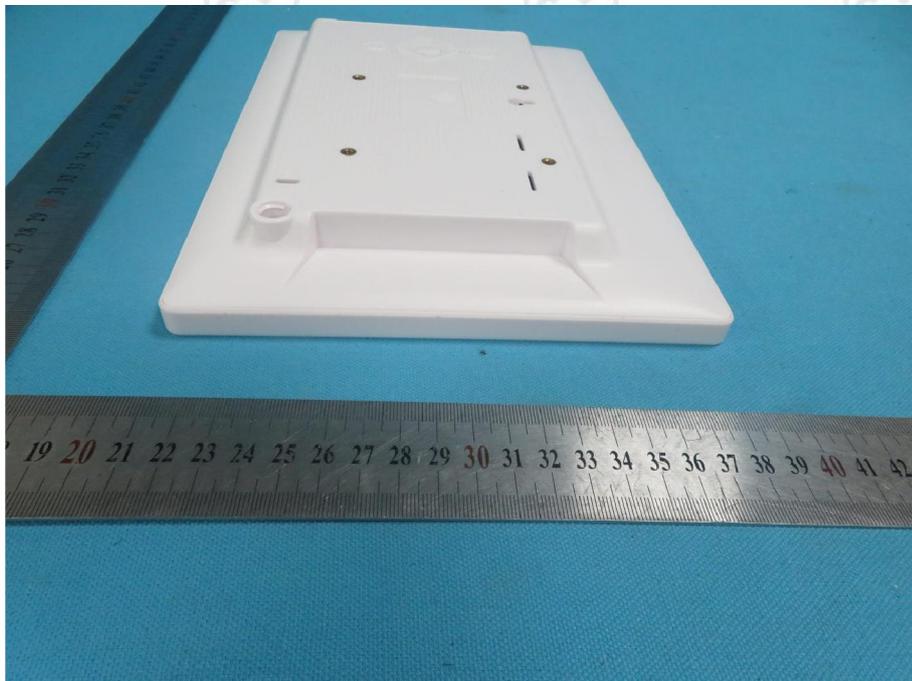
View of Product-3



View of Product-4



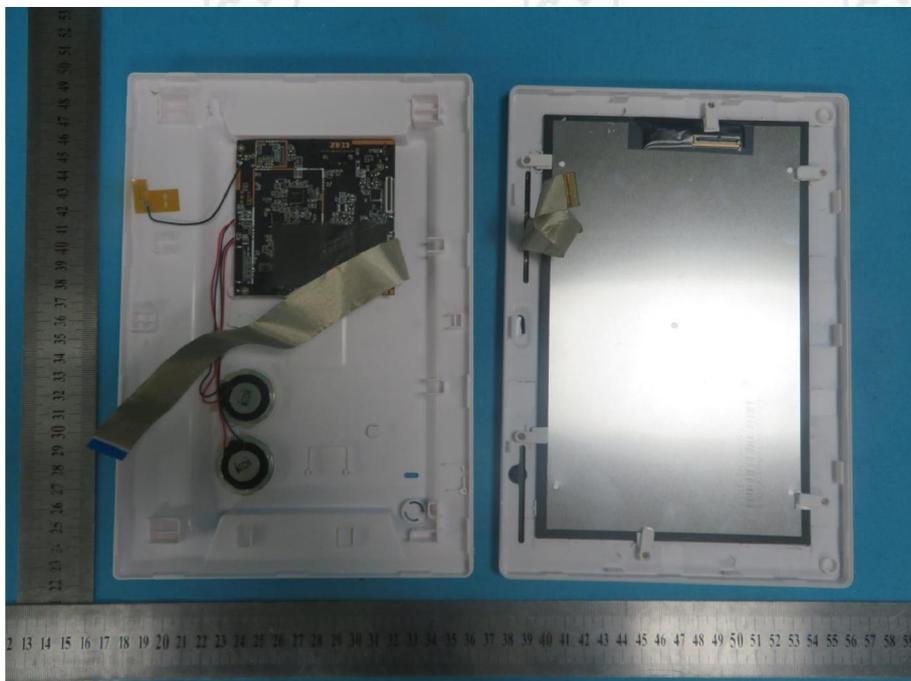
View of Product-5



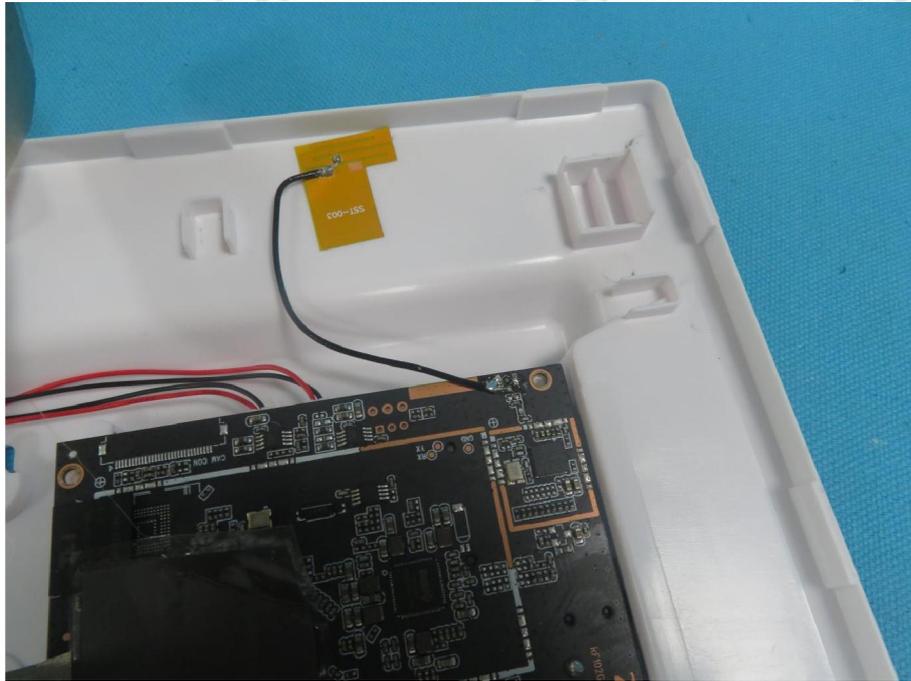
View of Product-6



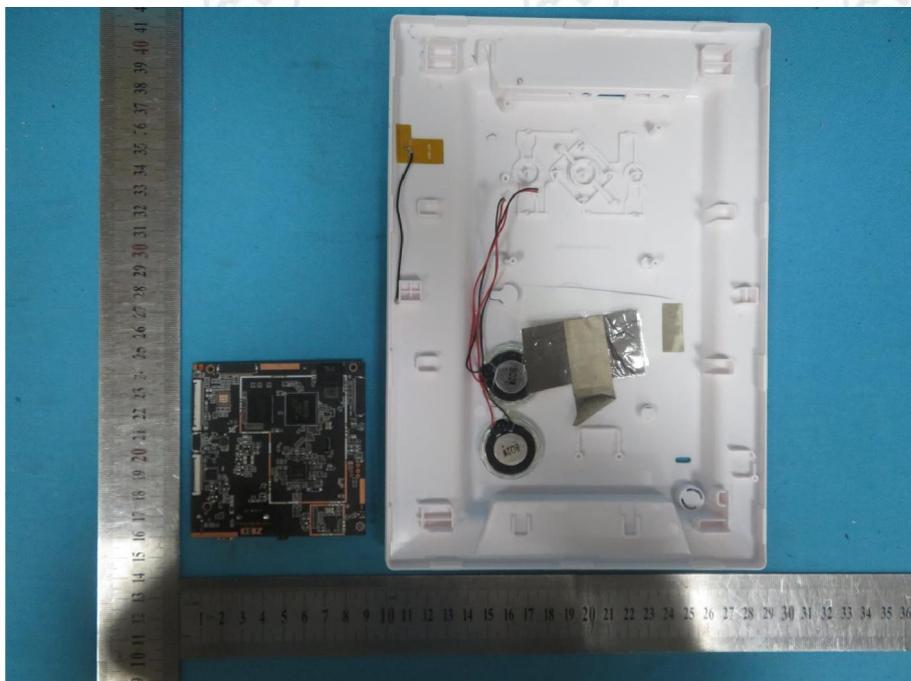
View of Product-7



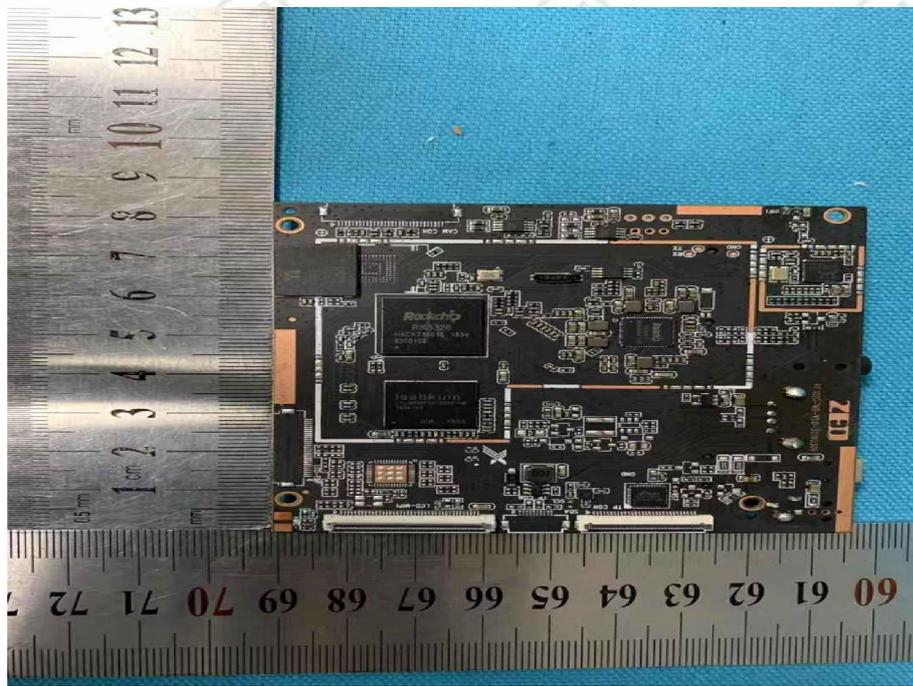
View of Product-8



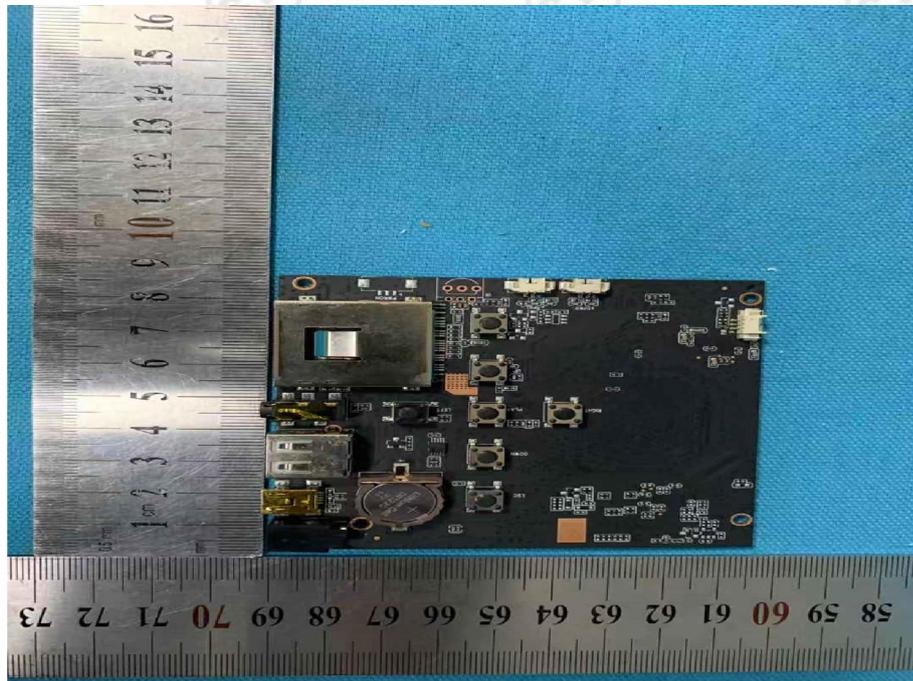
View of Product-9



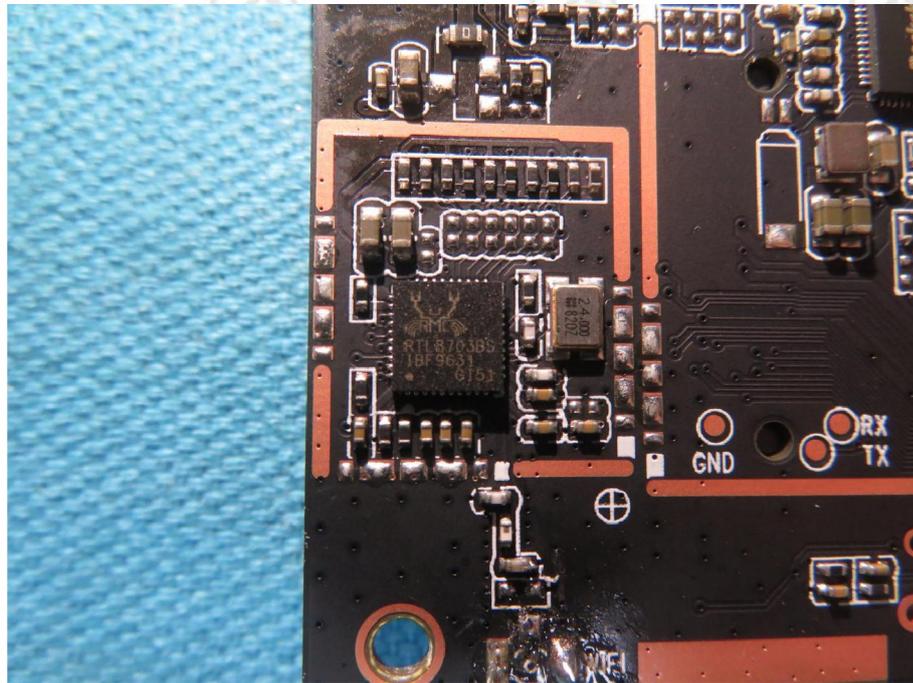
View of Product-10



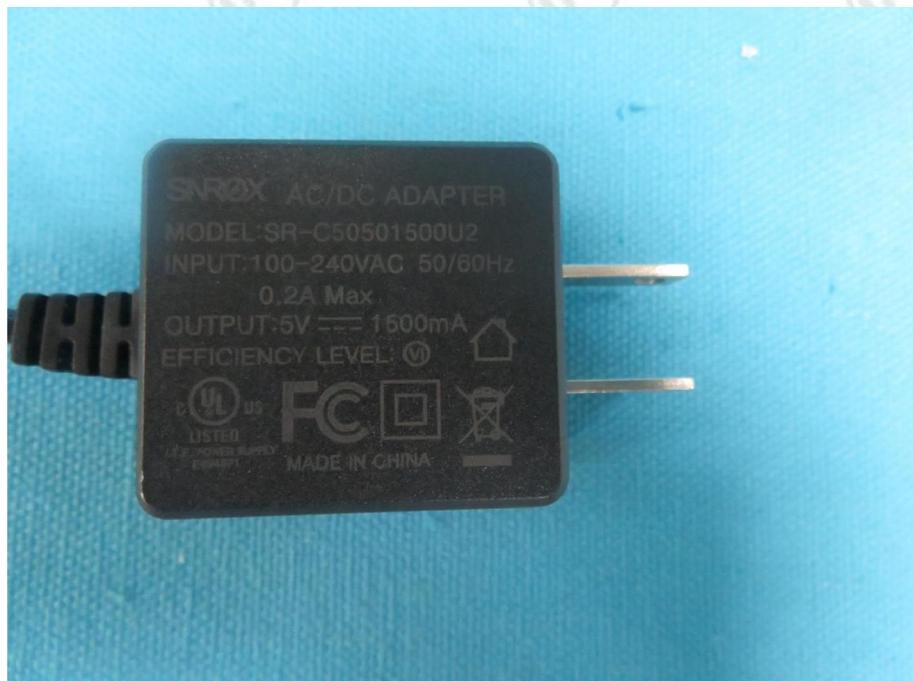
View of Product-11



View of Product-12



View of Product-13



View of Product-14

*** End of Report ***

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