

### FCC PART 15 SUBPART C ISED RSS-247 ISSUE 2

#### **CERTIFICATION TEST REPORT**

For

Wyze Light Strip
MODEL NUMBER: WLPSTPR-10, WLPSTG-10, WLPSTG-5, WLPSTPR-5

FCC ID: 2AUIUWLPST4 IC: 25466-WLPST4

REPORT NUMBER: 4790005918-F1

ISSUE DATE: 18 August 2021

Prepared for

Wyze Labs, Inc. 5808 Lake Washington Blvd NE Ste 300, Kirkland, WA, United States

Prepared by

UL-CCIC COMPANY LIMITED

No. 2, Chengwan Road, Suzhou Industrial Park, People's Republic of China

Tel: +86 769 22038881

Fax: +86 769 33244054 Website: www.ul.com



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## **Revision History**

Rev.	Issue Date	Revisions	Revised By
	18/08/2021	Initial Issue	



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	Summary of Test Results					
Clause	Test Items	FCC/IC Rules	Test Results			
1	6 dB Bandwidth and 99% Bandwidth	FCC Part 15.247 (a) (2) RSS-247 Clause 5.2 (a) RSS-Gen Clause 6.7	Pass			
2	Conducted Output Power	FCC Part 15.247 (b) (3) RSS-247 Clause 5.4 (d)	Pass			
3	Power Spectral Density	FCC Part 15.247 (e) RSS-247 Clause 5.2 (b)	Pass			
4	Conducted Bandedge and Spurious Emission	FCC Part 15.247 (d) RSS-247 Clause 5.5	Pass			
5	Radiated Bandedge and Spurious Emission	FCC Part 15.247 (d) FCC Part 15.209 FCC Part 15.205 RSS-247 Clause 5.5 RSS-GEN Clause 8.9	Pass			
6	Conducted Emission Test For AC Power Port	FCC Part 15.207 RSS-GEN Clause 8.8	Pass			
7	Antenna Requirement	FCC Part 15.203 RSS-GEN Clause 6.8	Pass			

#### Remark:

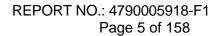
<sup>1)</sup> The measurement result for the sample received is <Pass> according to < CFR 47 FCC PART 15 SUBPART C, when <Accuracy Method> decision rule is applied.

<sup>2)</sup> Model WLPSTPR-10 was performed all tests, Model WLPSTG-10 was only performed conducted emission and radiated spurious emission.



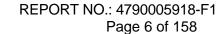
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1. ATTESTATION OF TEST RESULTS

**Applicant Information** 

Company Name: Wyze Labs, Inc.

Address: 5808 Lake Washington Blvd NE Ste 300, Kirkland, WA, United

States

**Manufacturer Information** 

Company Name: Wyze Labs, Inc.

Address: 5808 Lake Washington Blvd NE Ste 300, Kirkland, WA, United

States

**EUT Description** 

EUT Name: Wyze Light Strip

Brand Name: WYZE

Model: WLPSTPR-10, WLPSTG-10, WLPSTG-5, WLPSTPR-5

Sample Status: Normal

Sample ID: 210630006-1, 210630007-1

Sample Received Date: 01 July 2021

Date of Tested: 01 July 2021 ~ 18 August 2021

APPLICABLE STANDARDS				
STANDARD TEST RESULTS				
FCC Part 15 Subpart C	PASS			
ISED RSS-247 Issue 2	PASS			
ISED RSS-GEN Issue 5	PASS			

Prepared By:

Reviewed By:

Joyce Ren Engineer

Authorized By:

Shawn Wen Laboratory Leader

Chris Zhong

Chris Zhong

Laboratory Manager



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### 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with 558074 D01 15.247 Meas Guidance v05r02, 414788 D01 Radiated Test Site v01r01, FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2013, ISED RSS-247 Issue 2 and ISED RSS-GEN Issue 5.

### 3. FACILITIES AND ACCREDITATION

Accreditation Certificate	A2LA (Certificate No.: 4338.01) Shenzhen STS Test Services Co., Ltd. has been assessed and proved to be in compliance with A2LA. CNAS (Registration No.: L7649) Shenzhen STS Test Services Co., Ltd. has been assessed and proved to be in compliance with CNAS. IC(Company No.: 12108A) Shenzhen STS Test Services Co., Ltd.
	Shenzhen STS Test Services Co., Ltd.
	has been registered and fully described in a report filed with
	Industry Canada. The Company Number is 12108A.

Note: All tests measurement facilities use to collect the measurement data are located at A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China



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## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognize national standards.

### 4.2. MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	RF output power, conducted	±0.7dB
2	Unwanted Emissions, conducted	±3.0dB
3	All emissions, radiated 9K-30MHz	±2.7dB
4	All emissions, radiated 30M-1GHz	±4.4dB
5	All emissions, radiated 1G-6GHz	±5.1dB
6	All emissions, radiated>6G	±5.5dB
7	Conducted Emission (9KHz-150KHz)	±2.8dB
8	Conducted Emission (150KHz-30MHz)	±2.8dB



5. EQUIPMENT UNDER TEST

# 5.1. DESCRIPTION OF EUT

EUT Name	Wyze Light Strip	
EUT Description	The EUT is a LED strips	
Model	WLPSTPR-10, WLPSTG-10	
PMN	LED strips	
HVIN	WLPSTPR-10, WLPSTG-10	
FVIN	1.3.1.1	
Serial number	7c78b26e00ca, 7c78b26e01b8	
Serial model	WLPSTG-5, WLPSTPR-5	
Model difference	See below difference list	
Radio Technology	IEEE802.11b/g/n HT20/n HT40	
Operation frequency	IEEE 802.11b: 2412MHz—2462MHz IEEE 802.11g: 2412MHz—2462MHz IEEE 802.11n HT20: 2412MHz—2462MHz IEEE 802.11n HT40: 2422MHz—2452MHz	
Modulation	IEEE 802.11b: DSSS(CCK) IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK,BPSK)	
Power Supply	Adapter Input: WLPSTG-5: GA-1201500: AC 100-240V 50/60Hz 0.6A WLPSTG-10: GA-0361203000: AC 110-240V 50/60Hz 0.8A WLPSTPR-5: GA-1202000: AC 100-240V 50/60Hz 0.6A WLPSTPR-10: GA-0481204000: AC 100-240V 50/60Hz 1.2A Adapter Output: WLPSTG-5: GA-1201500: DC 12.0V 1500mA WLPSTG-10: GA-0361203000: DC 12.0V 3000mA WLPSTPR-5: GA-1202000: DC 12.0V 2000mA WLPSTPR-10: GA-0481204000: DC 12.0V 4000mA	
Hardware Version	0.0.0.0	
Software Version	1.3.1.1	

### Difference list

				Controller		
Model name	Power Adapter	LED strips		Circuit schematic & Layout	PWM output control	
WLPSTG-5	GA-1201500	Como	1pcs 5m strip		Triodo control	
WLPSTG-10	GA-0361203000	Same	2pcs 5m strips	Same	Triode control	
WLPSTPR-5	GA-1202000	Sama	1pcs 5m strip	Same	IC control	
WLPSTPR-10	GA-0481204000	Same	2pcs 5m strips	1	IC control	



**5.2. MAXIMUM OUTPUT POWER** 

Frequency Range (MHz)	Number of Transmit Chains (NTX)	IEE Std. 802.11	Frequency (MHz)	Channel Number	Max average Conducted Power (dBm)
2400-2483.5	1	IEEE 802.11b	2412-2462	1-11[11]	15.19
2400-2483.5	1	IEEE 802.11g	2412-2462	1-11[11]	13.50
2400-2483.5	1	IEEE 802.11nHT20	2412-2462	1-11[11]	13.33
2400-2483.5	1	IEEE 802.11nHT40	2422-2452	3-9[7]	19.51

## 5.3. CHANNEL LIST

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
		802.11b/	g/n(20MHz)		
1	2412	5	2432	9	2452
2	2417	6	2437	10	2457
3	2422	7	2442	11	2462
4	2427	8	2447	N/A	N/A
	802.11n(40MHz)				
3	2422	6	2437	9	2452
4	2427	7	2442	N/A	N/A
5	2432	8	2447	N/A	N/A

## 5.4. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel	Frequency	
WiFi TX(802.11b)	CH 1, CH 6, CH 11	2412MHz, 2437MHz, 2462MHz	
WiFi TX(802.11g)	CH 1, CH 6, CH 11	2412MHz, 2437MHz, 2462MHz	
WiFi TX(802.11n HT20)	CH 1, CH 6, CH 11	2412MHz, 2437MHz, 2462MHz	
WiFi TX(802.11n HT40)	CH 3, CH 6, CH 9	2422MHz, 2437MHz, 2452MHz	

### 5.5. THE WORSE CASE CONFIGURATIONS

-	The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band							
NA - ded - Com	Transmit			Test Cha	annel			
Modulation Mode	Antenna	NCB: 20MHz		NCB: 40MHz		Hz		
Wiode	Number	CH 1	CH 6	CH 11	CH 3	CH 6	CH 09	
802.11b	1	15	0	0				
802.11g	1	15	0	0	N/A			
802.11n HT20	1	15	0	0	- IV/A			



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802.11n HT40	1	N/A	0	0	0	
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### 5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2412-2472	PCB Antenna	0.96 (Provided by applicant)

Test Mode	Transmit and Receive Mode	Description
IEEE 802.11b	⊠1TX, 1RX	Chain 1 can be used as transmitting/receiving antenna.
IEEE 802.11g	⊠1TX, 1RX	Chain 1 can be used as transmitting/receiving antenna.
IEEE 802.11n HT20	⊠1TX, 1RX	Chain 1 can be used as transmitting/receiving antenna.
IEEE 802.11n HT40	⊠1TX, 1RX	Chain 1 can be used as transmitting/receiving antenna.

### 5.7. DESCRIPTION OF TEST SETUP

### **SUPPORT EQUIPMENT**

Item	Equipment	Brand Name	Model Name	Remarks
1	PC	DELL	VOSTRO.3800	Provided by lab

### **I/O CABLES**

Cable No	Port	Connector Type	Cable Type	Cable Length(cm)	Remarks
1	USB Cable	NO	N/A	100cm	Provided by lab

### **ACCESSORY**

Item	Accessory	Brand Name	Model Name	Description
1	N/A	N/A	N/A	N/A

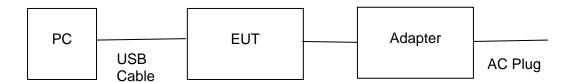
### **TEST SETUP**

The EUT can work in engineering mode with software EspRFTestTool\_v2.8\_Manual through a Laptop.



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### **SETUP DIAGRAM FOR TESTS**





# 6. MEASURING INSTRUMENT AND SOFTWARE USED

Radiation Test equipment

Radiation Test equipr	nent				
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2020.10.12	2021.10.11
Signal Analyzer	R&S	FSV 40-N	101823	2020.10.10	2021.10.09
Active loop Antenna	ZHINAN	ZN30900C	16035	2021.04.11	2022.04.10
Bilog Antenna	TESEQ	CBL6111D	34678	2020.10.12	2022.10.11
Horn Antenna	SCHWARZBECK	BBHA 9120D	02014	2019.10.15	2021.10.14
SHF-EHF Horn Antenna (18G- 40GHz)	A-INFO	LB-180400-KF	J211020657	2020.10.12	2022.10.11
Pre-Amplifier (0.1M- 3GHz)	EM	EM330	060665	2020.10.12	2021.10.11
Pre-Amplifier (1G- 18GHz)	SKET	LNPA-01018G-45	SK2018080901	2020.10.12	2021.10.11
Pre-Amplifier (18G- 40GHz)	SKET	LNPA-1840-50	SK2018101801	2020.10.10	2021.10.09
Temperature & Humidity	HH660	Mieo	N/A	2020.10.12	2021.10.11
Turn table	EM	SC100_1	60531	N/A	N/A
Antenna mast	EM	SC100	N/A	N/A	N/A
Band Reject Filter (2.4-2.5GHz)	COM-MW	ZBSF-2400-2500	N/A	2020.10.12	2021.10.11
Test SW	FARAD	EZ-EMC(Ver.STSLAB-03A1 RE)			

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2020.10.12	2021.10.11
LISN	R&S	ENV216	101242	2020.10.12	2021.10.11
LISN	EMCO	3810/2NM	23625	2020.10.12	2021.10.11
Temperature & Humidity	HH660	Mieo	N/A	2020.10.13	2021.10.12
Test SW	FARAD	E	Z-EMC(Ver.STS	LAB-03A1 RE)	



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## **RF Connected Test**

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
			MY55520005	2020.10.10	2021.10.09
Power Sensor	Kovojaht	112024 V A		2021.10.09	
	Keysight	U2021XA -	MY56120038	2020.10.10	2021.10.09
			MY56280002	2020.10.10	2021.10.09
Signal Analyzer	Agilent	N9020A	MY51110105	2021.03.04	2022.03.03
Temperature & Humidity	HH660	Mieo	N/A	2020.10.13	2021.10.12
MIMO Power measurement test Set	Keysight	U2021XA	MY55520005	2020.10.10	2021.10.09
Test SW	FARAD	EZ-EMC(Ver.STSLAB-03A1 RE)			



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# 7. MEASUREMENT METHODS

No.	Test Item	KDB Name	Section
1	6 dB Bandwidth and 99% Bandwidth	558074 D01 15.247 Meas Guidance v05r02	8.2
2	Conducted Output Power	558074 D01 15.247 Meas Guidance v05r02	8.1.3
3	Power Spectral Density	558074 D01 15.247 Meas Guidance v05r02	8.4
4	Out-of-band emissions in non-restricted bands	558074 D01 15.247 Meas Guidance v05r02	8.5
5	Out-of-band emissions in restricted bands	558074 D01 15.247 Meas Guidance v05r02	8.6
6	Band-edge	558074 D01 15.247 Meas Guidance v05r02	8.7
7	Conducted Emission Test For AC Power Port	ANSI C63.10-2013	6.2



8. ANTENNA PORT TEST RESULTS

## 8.1. ON TIME AND DUTY CYCLE

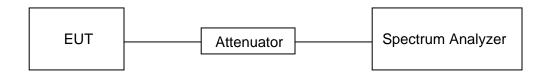
#### **LIMITS**

None; for reporting purposes only

### **PROCEDURE**

KDB 558074 Zero-Span Spectrum Analyzer Method

#### **TEST SETUP**



#### **TEST ENVIRONMENT**

Temperature	25°C	Relative Humidity	60%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V/60Hz

### **RESULTS**

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (db)	1/B Minimum VBW (KHz)
11b	100.000	100.000	1	100.00%	0	0.01
11g	100.000	100.000	1	100.00%	0	0.01
11n20	100.000	100.000	1	100.00%	0	0.01
11n40	100.000	100.000	1	100.00%	0	0.01

Note: Duty Cycle Correction Factor= $10\log(1/x)$ .

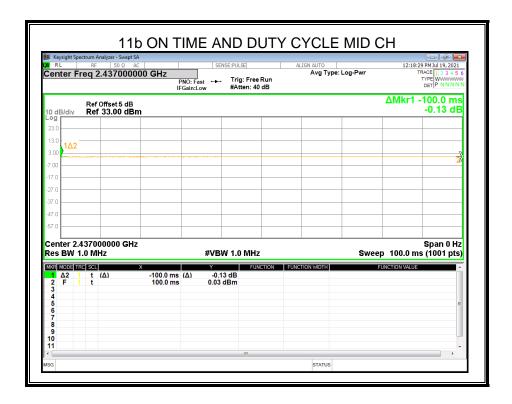
Where: x is Duty Cycle(Linear)

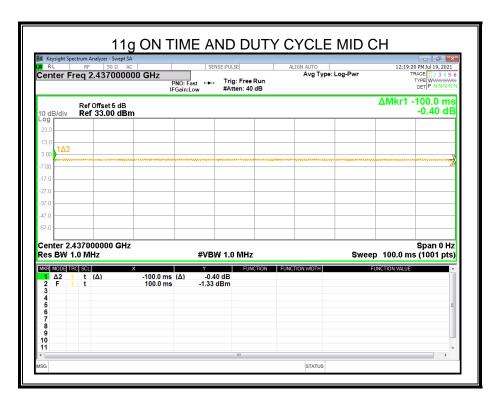
Where: B is On Time

When Duty Cycle > 98%, VBW ≤ RBW/100; When Duty Cycle < 98%, VBW ≥ 1/B;

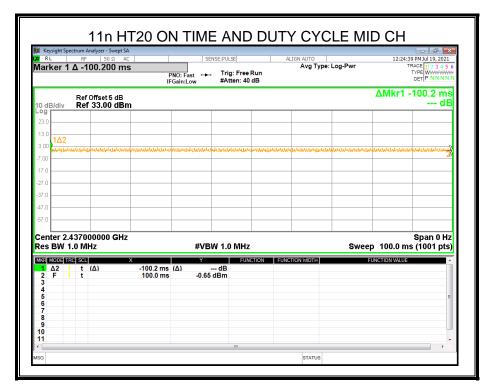
Set the final test VBW = 10Hz;

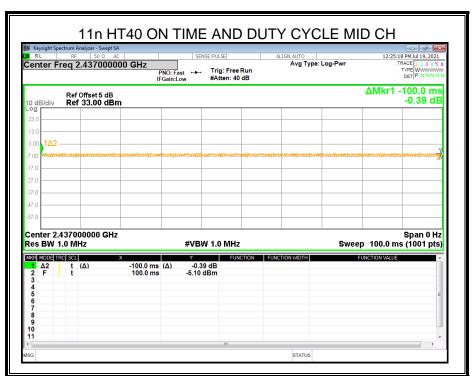














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### 8.2. 6 dB DTS BANDWIDTH AND 99% BANDWIDTH

### **LIMITS**

FCC Part15 (15.247) Subpart C RSS-247 ISSUE 2						
Section	Frequency Range (MHz)					
FCC 15.247(a)(2) RSS-247 5.2 (a)	6 dB Bandwidth	>= 500KHz	2400-2483.5			
RSS-Gen Clause 6.7	99% Bandwidth	For reporting purposes only.	2400-2483.5			

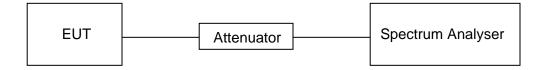
#### **TEST PROCEDURE**

Connect the UUT to the spectrum analyzer and use the following settings:

Center Frequency The centre frequency of the channel under test	
Detector	Peak
RBW	For 6dB Bandwidth :100K For 99% Bandwidth :1% to 5% of the occupied bandwidth
VBW	For 6dB Bandwidth : ≥3 × RBW For 99% Bandwidth : approximately 3×RBW
Trace	Max hold
Sweep	Auto couple

Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB and 99% relative to the maximum level measured in the fundamental emission.

### **TEST SETUP**





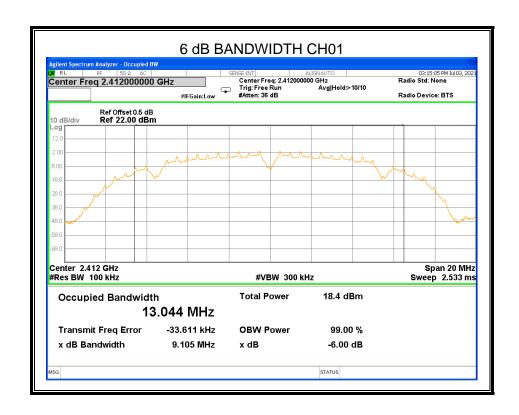
**TEST ENVIRONMENT** 

Temperature	25°C	Relative Humidity	60%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V/60Hz

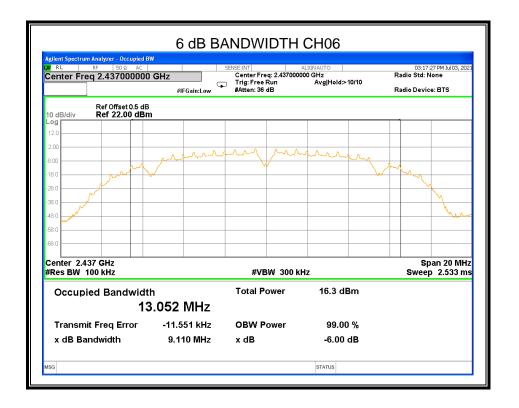
### **RESULTS**

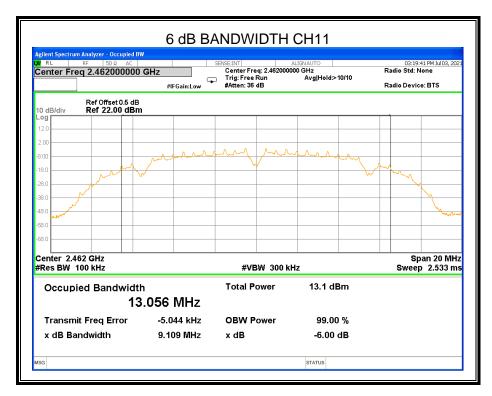
### 8.2.1. 802.11b MODE

Channel	Frequency (MHz)	6dB bandwidth (MHz)	99% bandwidth (MHz)	Limit (kHz)	Result
CH01	2412	9.105	13.210	≥500KHz	Pass
CH06	2437	9.110	13.216	≥500KHz	Pass
CH11	2462	9.109	13.234	≥500KHz	Pass

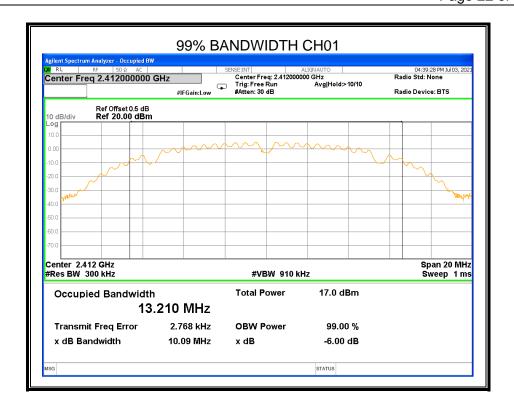


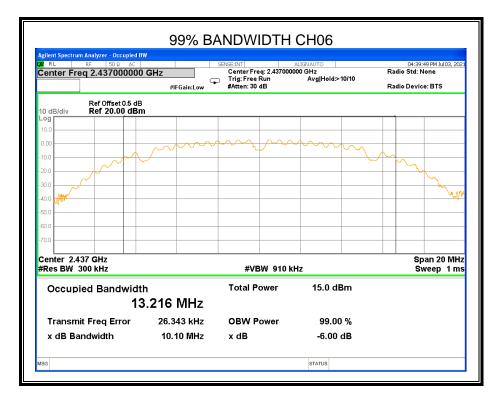




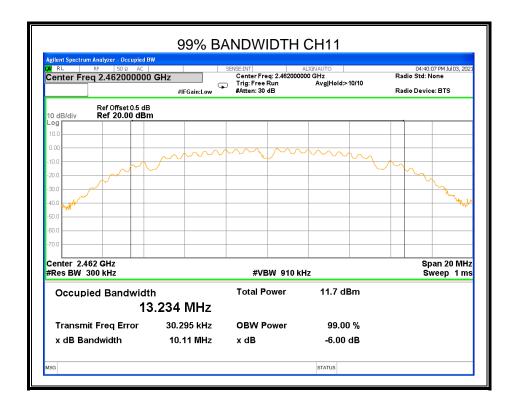








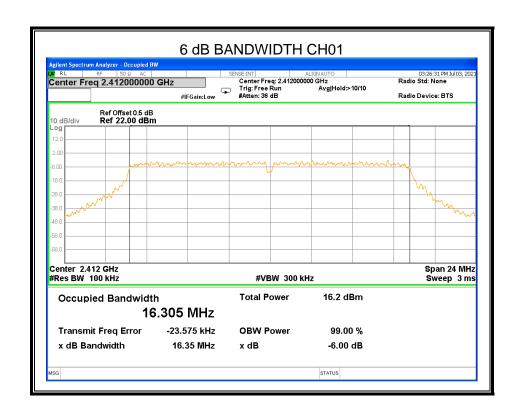




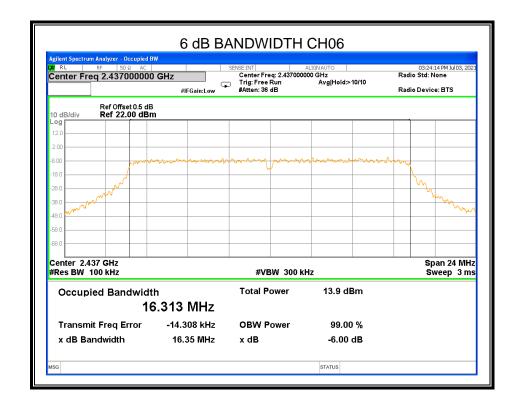


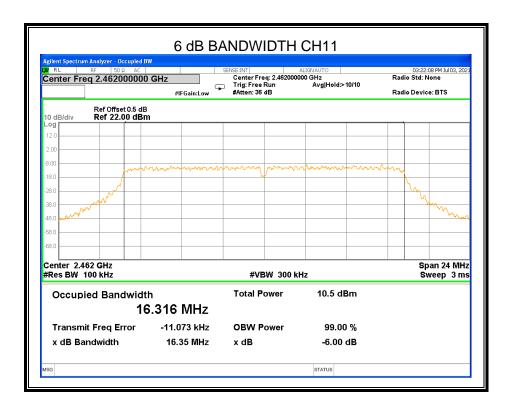
8.2.2. 802.11g MODE

Channel	Frequency (MHz)	6dB bandwidth (MHz)	99% bandwidth (MHz)	Limit (kHz)	Result
CH01	2412	16.35	17.416	≥500KHz	Pass
CH06	2437	16.35	17.404	≥500KHz	Pass
CH11	2462	16.35	17.447	≥500KHz	Pass

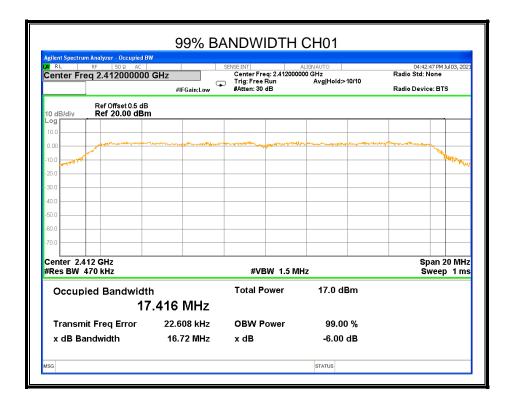


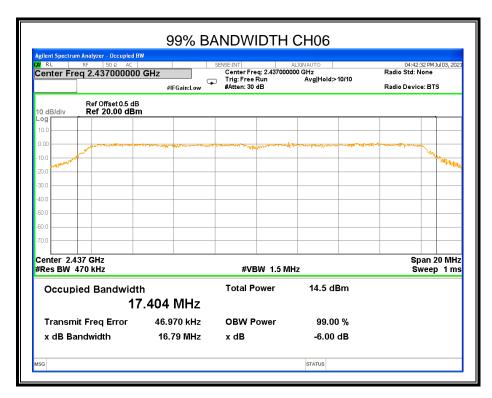




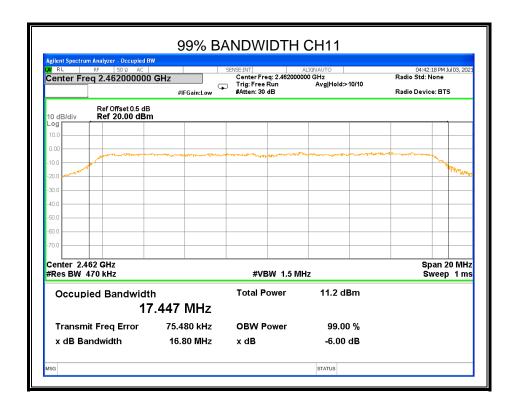








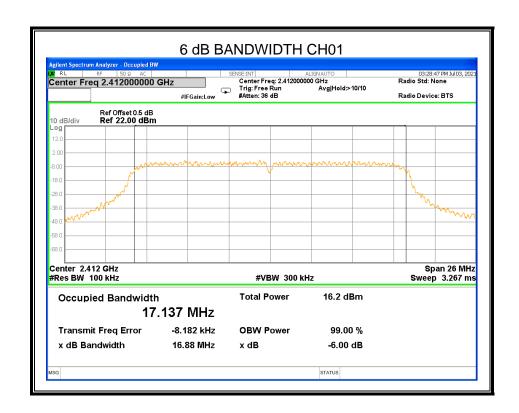




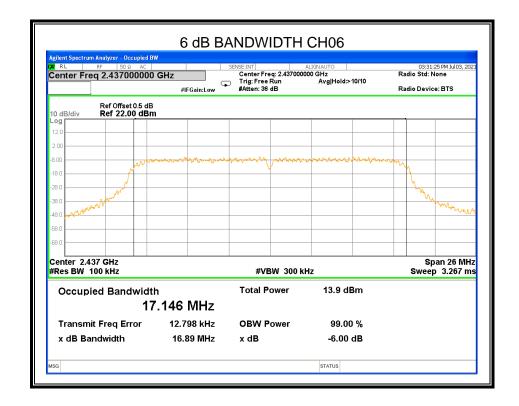


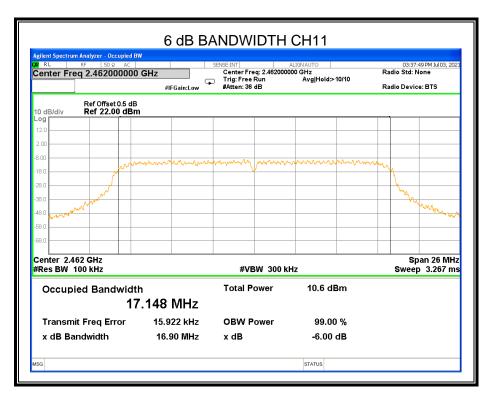
### 8.2.3. 802.11n HT20 MODE

Channel	Frequency (MHz)	6dB bandwidth (MHz)	99% bandwidth (MHz)	Limit (kHz)	Result
CH01	2412	16.88	18.291	≥500KHz	Pass
CH06	2437	16.89	18.259	≥500KHz	Pass
CH11	2462	16.90	18.293	≥500KHz	Pass

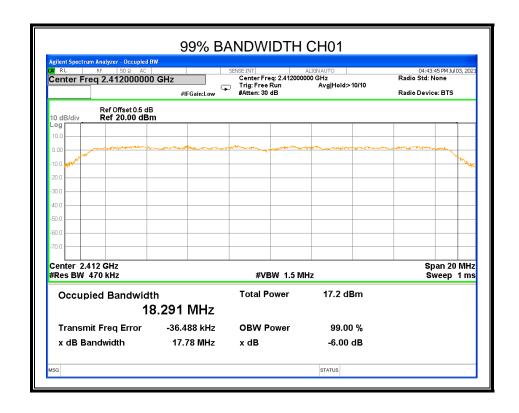


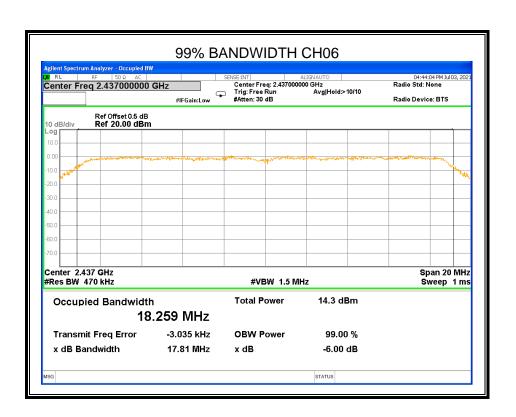




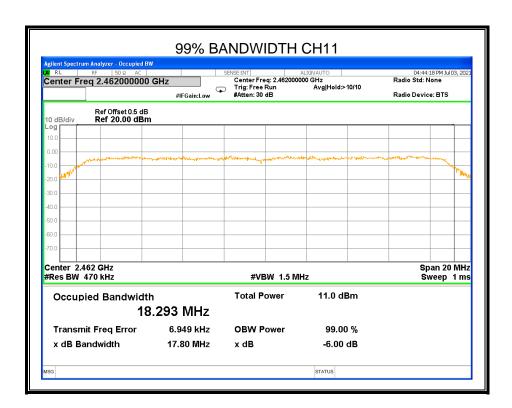








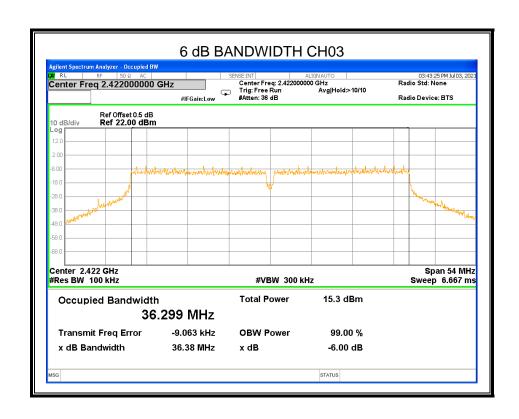




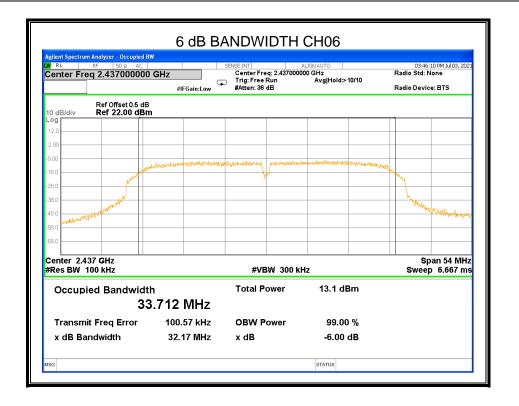


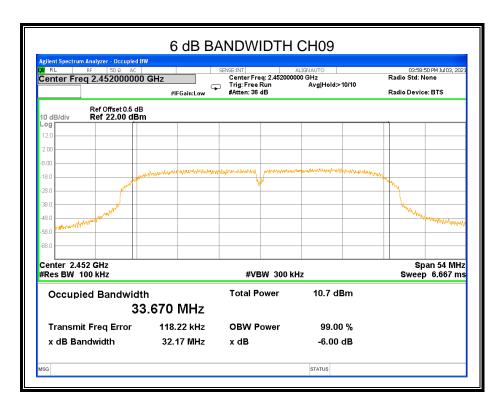
8.2.4. 802.11n HT40 MODE

Channel	Frequency (MHz)	6dB bandwidth (MHz)	99% bandwidth (MHz)	Limit (kHz)	Result
CH03	2422	36.38	37.243	≥500KHz	Pass
CH06	2437	32.17	37.139	≥500KHz	Pass
CH09	2452	32.17	37.039	≥500KHz	Pass

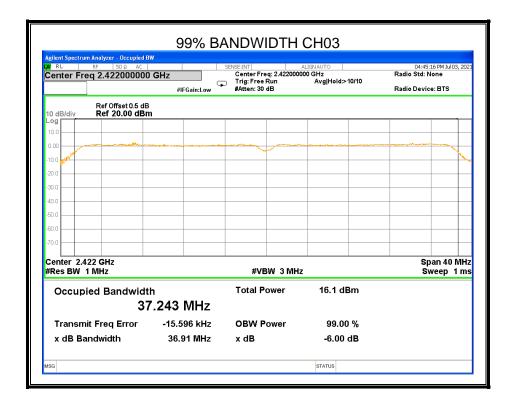


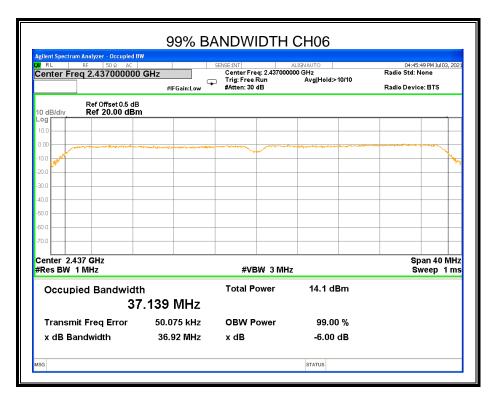




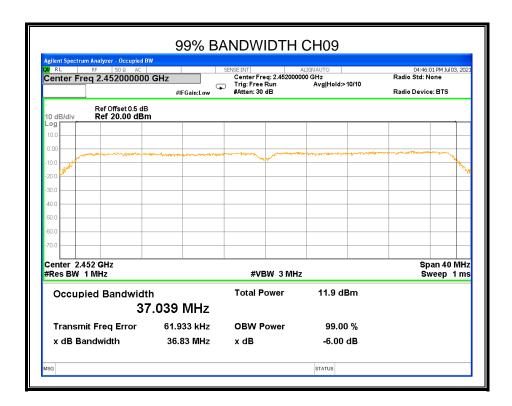


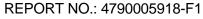














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### 8.3. CONDUCTED OUTPUT POWER

#### **LIMITS**

FCC Part15 (15.247) Subpart C RSS-247 ISSUE 2						
Section Test Item Limit Frequency Range (MHz)						
FCC 15.247(b)(3) RSS-247 5.4 (d)	Conducted Output Power	1 watt or 30dBm	2400-2483.5			

#### **TEST PROCEDURE**

#### 802.11 b,g,n20:

Place the EUT on the table and set it in the transmitting mode.

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Power sensor.

Measure peak and average power each channel.

#### 802.11 n40:

Maximum conducted (average) output power:

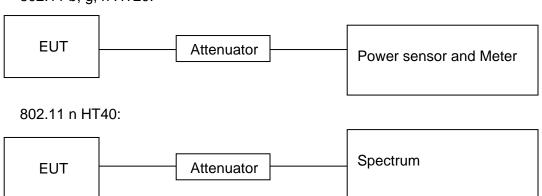
The procedure for this method is as follows:

- a) Set span to at least 1.5 times the OBW.
- b) Set RBW = 1% to 5% of the OBW, not to exceed 1 MHz.
- c) Set VBW  $\square$  [3  $\times$  RBW].
- d) Number of points in sweep  $\Box$  [2  $\times$  span / RBW]. (This gives bin-to-bin spacing  $\Box$  RBW / 2, so that narrowband signals are not lost between frequency bins.)
- e) Sweep time = auto.
- f) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- g) If transmit duty cycle < 98%, use a sweep trigger with the level set to enable triggering only on full power pulses. The transmitter shall operate at the maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no OFF intervals) or at duty cycle  $\square$  98%, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run."
- h) Trace average at least 100 traces in power averaging (rms) mode.
- i) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function, with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.



TEST SETUP

802.11 b, g, n HT20:



# **TEST ENVIRONMENT**

Temperature	25°C	Relative Humidity	60%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V/60Hz



## **RESULTS**

# 8.3.1. 802.11b MODE

Test Channel	Frequency	Maximum Maximum Conducted Output Power (PK) Power (AVG)		LIMIT
	(MHz)	(dE	Bm)	dBm
CH01	2412	18.76	15.19	30
CH06	2437	18.04	14.82	30
CH11	2462	18.14	14.86	30

# 8.3.2. 802.11g MODE

Test Channel	Frequency	Maximum Conducted Output Power (PK)	Maximum Conducted Output Power (AVG)	LIMIT
	(MHz)	(dE	Bm)	dBm
CH01	2412	19.05	13.50	30
CH06	2437	19.04	13.49	30
CH11	2462	18.95	13.33	30

# 8.3.3. 802.11n HT20 MODE

Test Channel	Frequency	Maximum Maximum Conducted Output Power (PK) Power (AVG)		LIMIT
	(MHz)	(dE	Bm)	dBm
CH01	2412	19.64	13.33	30
CH06	2437	19.45	13.19	30
CH11	2462	19.51	13.10	30

# 8.3.4. 802.11 n HT40 MODE

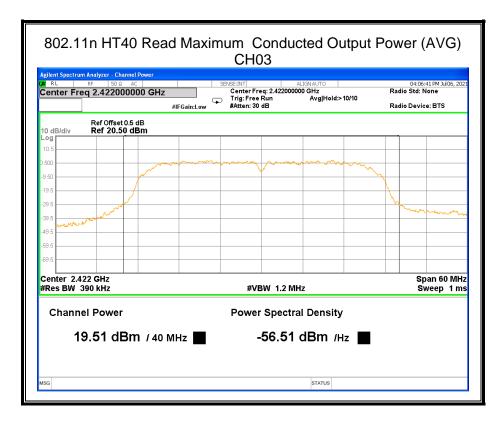
Test Channel	Frequency	Maximum Conducted Output Power (PK)	Maximum Conducted Output Power (AVG)	LIMIT
	(MHz)	(dE	Bm)	dBm
CH01	2422	/	19.51	30
CH06	2437	/	19.26	30
CH11	2452	/	19.13	30

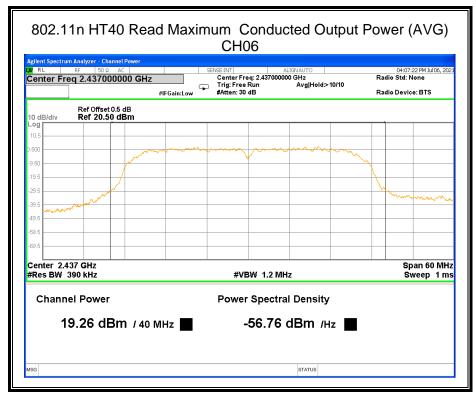


RSS-247 FIRP Power

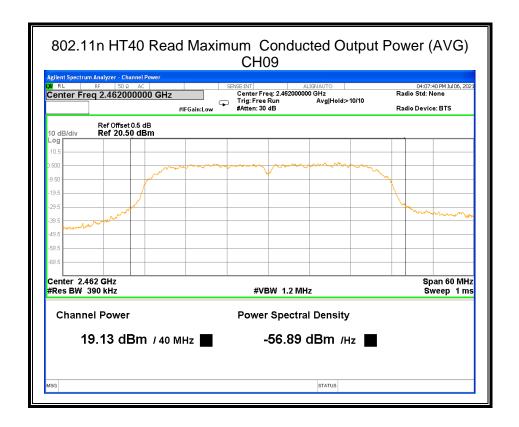
	RSS-247 EIRP Power					
		TX 802.1	1b Mode			
Test	Frequency	Peak Power	Antenna Gain	EIRP Power	LIMIT	
Channel	(MHz)	(dBm)	(dBi)	(dBm)	dBm	
CH01	2412	18.76	0.96	19.72	36.02	
CH06	2437	18.04	0.96	19.00	36.02	
CH11	2462	18.14	0.96	19.10	36.02	
		TX 802.1	1g Mode			
Test	Frequency	Peak Power	Antenna Gain	EIRP Power	LIMIT	
Channel	(MHz)	(dBm)	(dBi)	(dBm)	dBm	
CH01	2412	19.05	0.96	20.01	36.02	
CH06	2437	19.04	0.96	20.00	36.02	
CH11	2462	18.95	0.96	19.91	36.02	
		TX 802.11	n20 Mode			
Test	Frequency	Peak Power	Antenna Gain	EIRP Power	LIMIT	
Channel	(MHz)	(dBm)	(dBi)	(dBm)	dBm	
CH01	2412	19.64	0.96	20.60	36.02	
CH06	2437	19.45	0.96	20.41	36.02	
CH11	2462	19.51	0.96	20.47	36.02	
		TX 802.11	n40 Mode			
Test Channel	Frequency	Average Power	Antenna Gain	EIRP Power	LIMIT	
Chamer	(MHz)	(dBm)	(dBi)	(dBm)	dBm	
CH03	2422	19.51	0.96	20.47	36.02	
CH06	2437	19.26	0.96	20.22	36.02	
CH09	2452	19.13	0.96	20.09	36.02	













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## 8.4. POWER SPECTRAL DENSITY

## **LIMITS**

FCC Part15 (15.247) Subpart C RSS-247 ISSUE 2				
Section Test Item Limit Frequency Range (MHz)				
FCC §15.247 (e) RSS-247 5.2 (b)	Power Spectral Density	8 dBm in any 3 kHz band	2400-2483.5	

#### **TEST PROCEDURE**

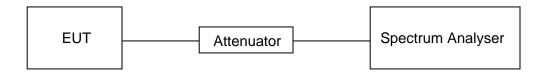
Connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The centre frequency of the channel under test
	Peak for b,g,n20 RMS for n40
RBW	3 kHz ≤ RBW 100 ≤ kHz
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

## **TEST SETUP**



#### **TEST ENVIRONMENT**

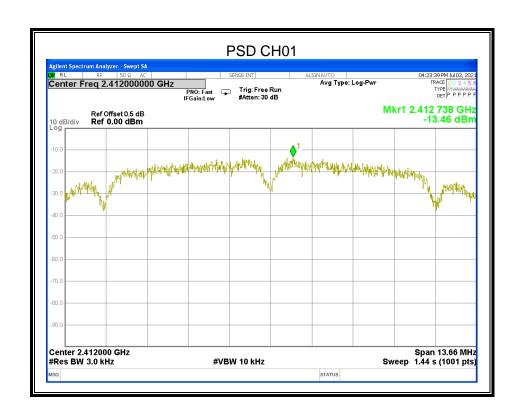
Temperature	25°C	Relative Humidity	60%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V/60Hz



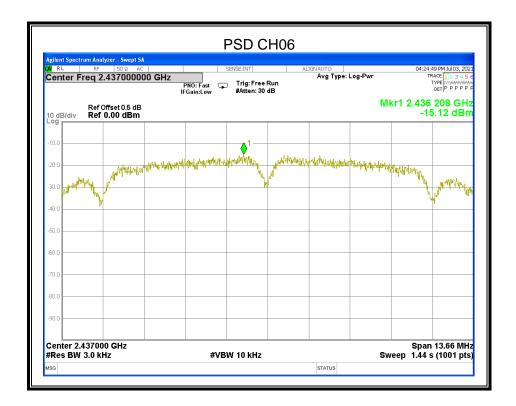
#### **RESULTS**

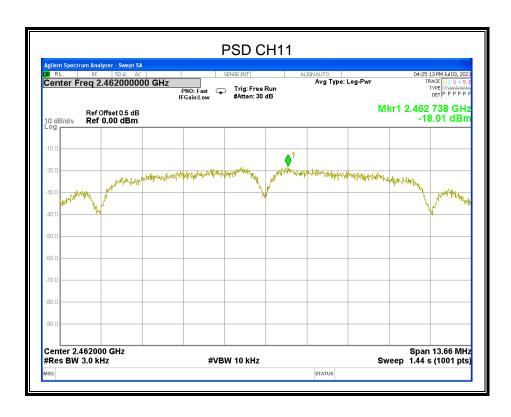
# 8.4.1. 802.11b MODE

Test Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
CH01	2412	-13.460	≤8	PASS
CH06	2437	-15.120	≤8	PASS
CH11	2462	-18.010	≤8	PASS





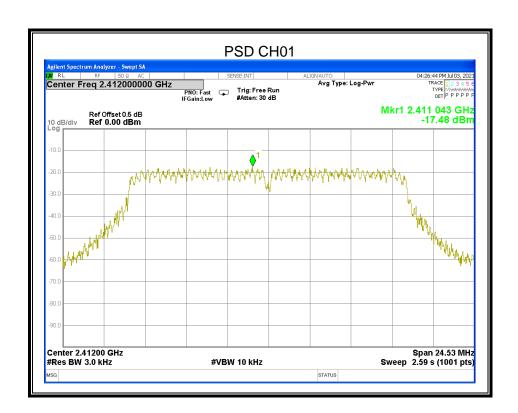




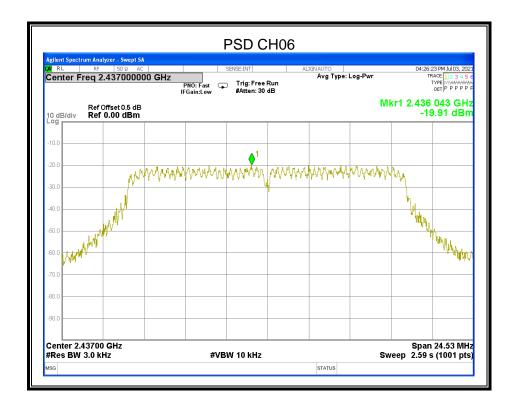


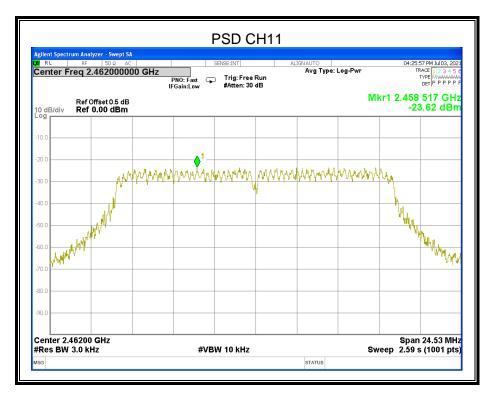
8.4.2. 802.11g MODE

Test Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
CH01	2412	-17.4800	≤8	PASS
CH06	2437	-19.9100	≤8	PASS
CH11	2462	-23.6200	≤8	PASS





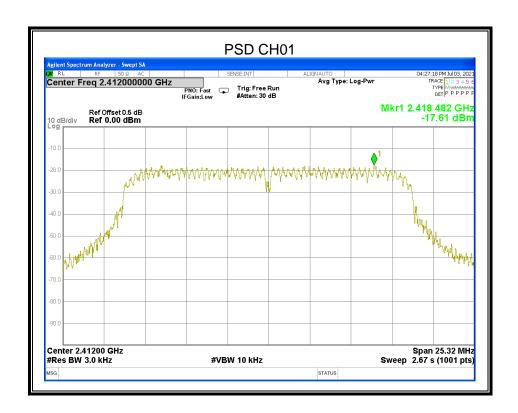




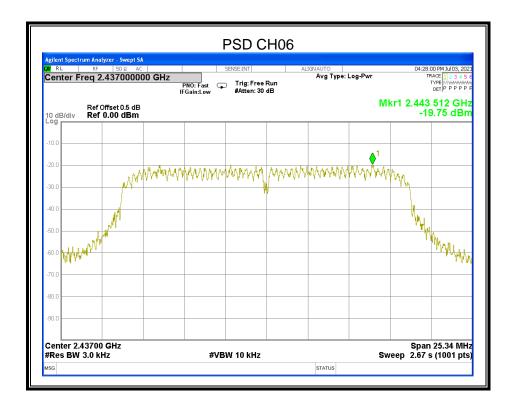


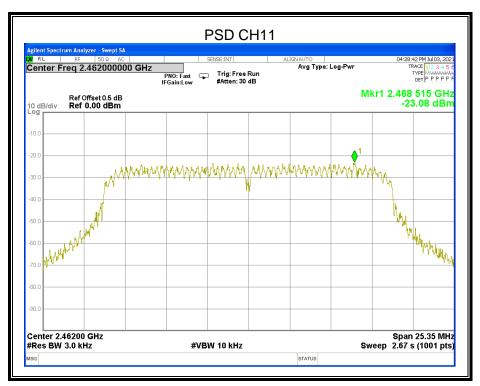
8.4.3. 802.11n HT20 MODE

Test Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
CH01	2412	-17.6100	≤8	PASS
CH06	2437	-19.7500	≤8	PASS
CH11	2462	-23.0800	≤8	PASS





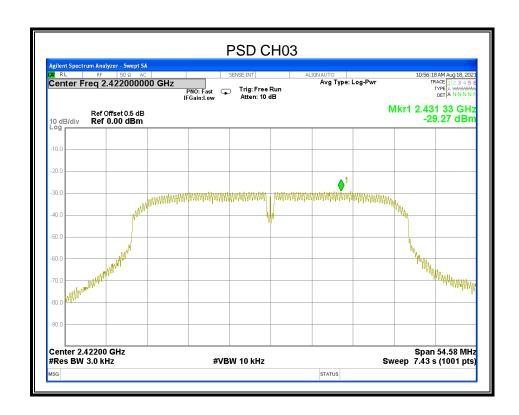




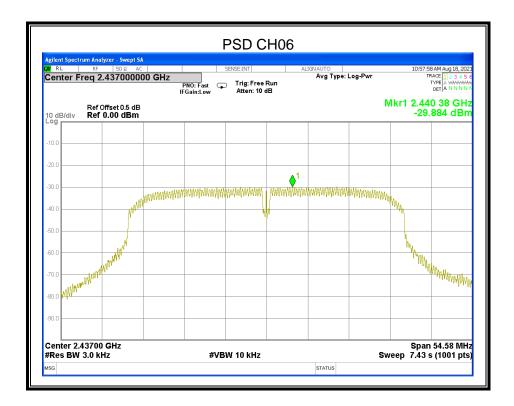


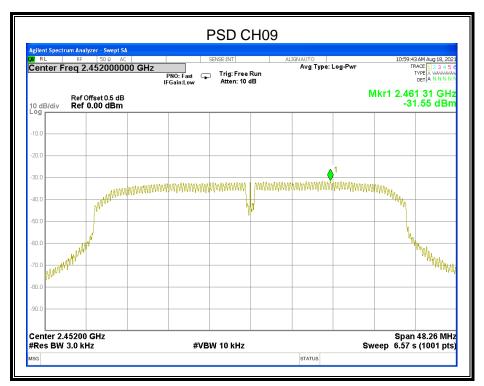
8.4.4. 802.11n HT40 MODE

Test Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
CH03	2422	-29.27	≤8	PASS
CH06	2437	-29.884	≤8	PASS
CH09	2452	-31.55	≤8	PASS











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# 8.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

## **LIMITS**

FCC Part15 (15.247) Subpart C RSS-247 ISSUE 2		
Section	Test Item	Limit
FCC §15.247 (d) RSS-247 5.5	Conducted Bandedge and Spurious Emissions	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

# **TEST PROCEDURE**

Connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	100K
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

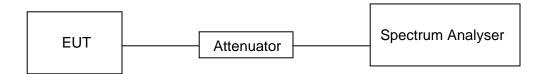
Use the peak marker function to determine the maximum PSD level.

12090	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100K
VBW	≥3 x RBW
measurement points	≥span/RBW
Trace	Max hold
Sweep time	Auto couple.

Use the peak marker function to determine the maximum amplitude level.



# **TEST SETUP**

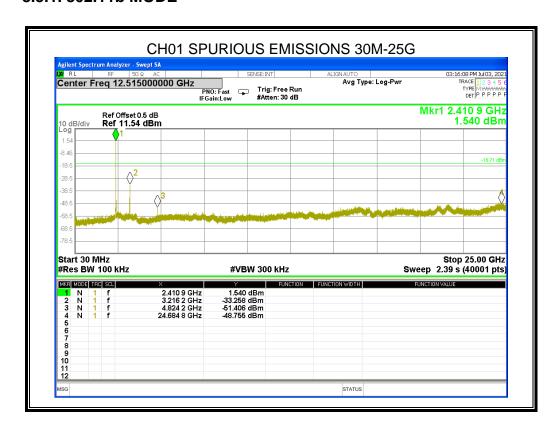


### **TEST ENVIRONMENT**

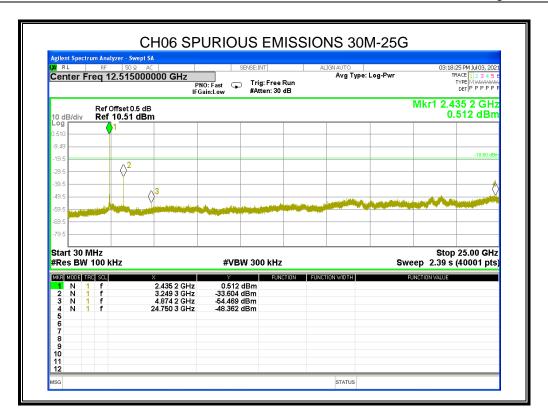
Temperature	25°C	Relative Humidity	60%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V/60Hz

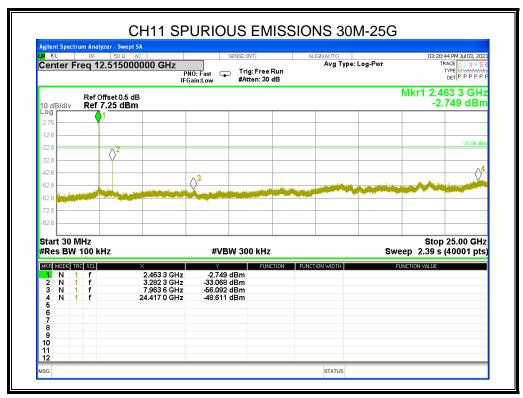
## **RESULTS**

## 8.5.1. 802.11b MODE

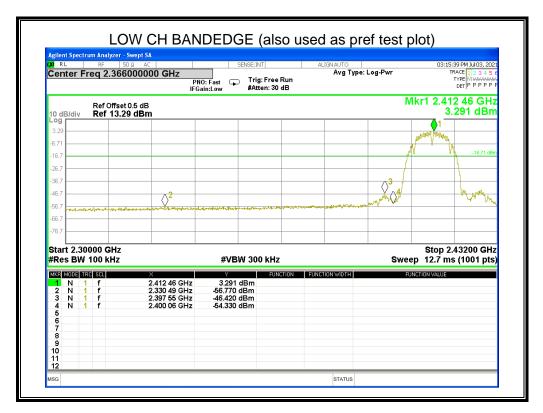


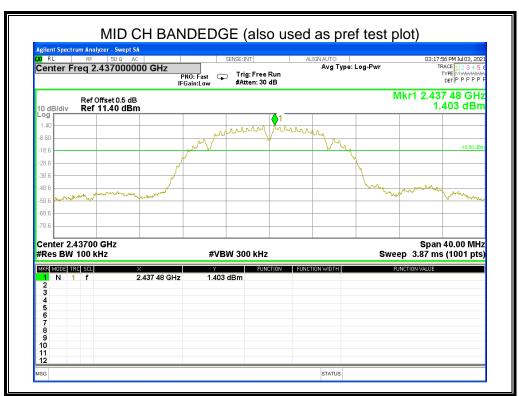




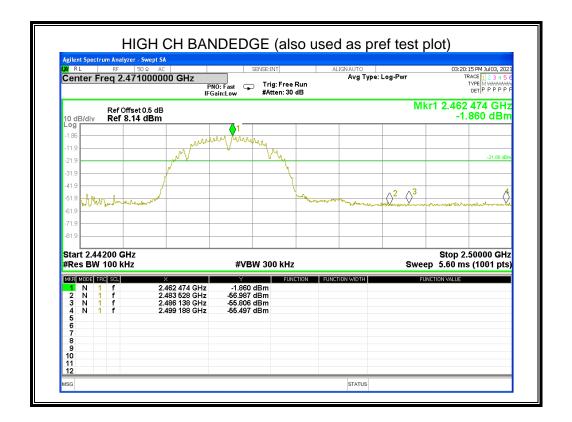






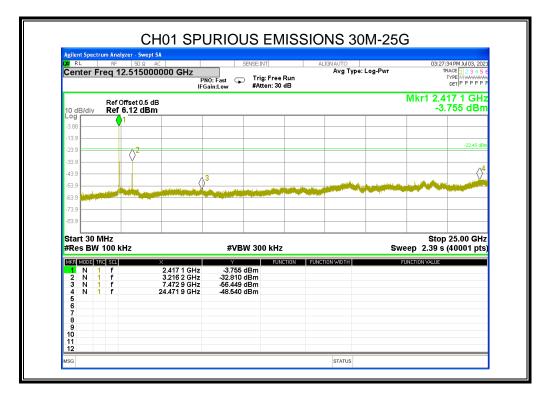


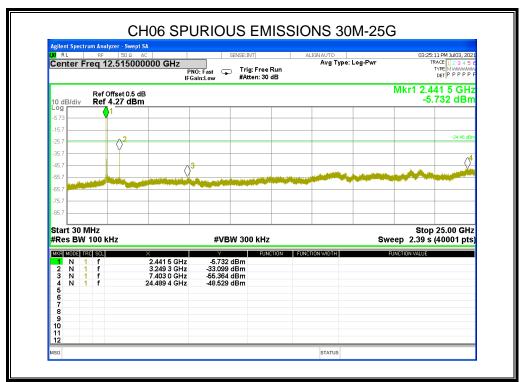




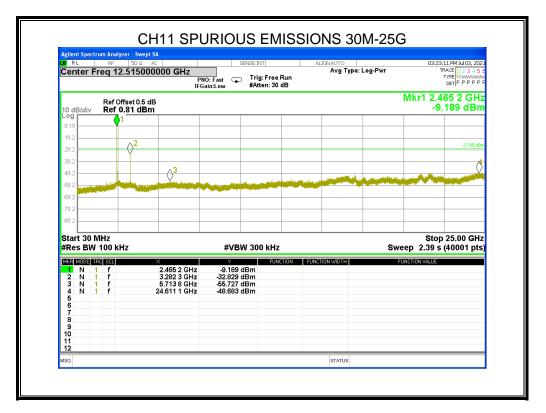


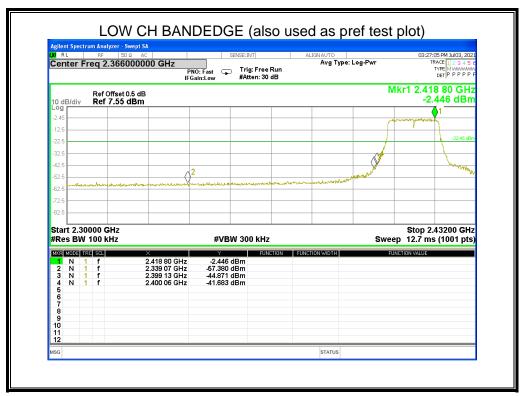
# 8.5.2. 802.11g MODE



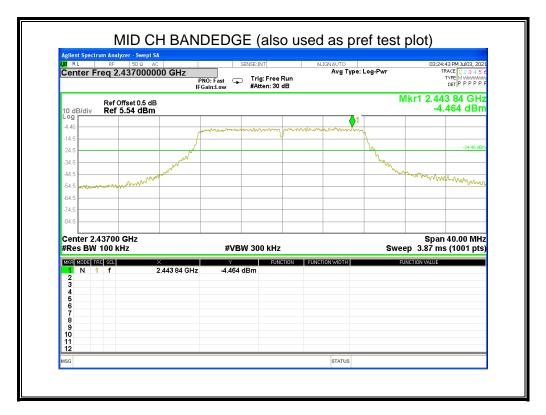


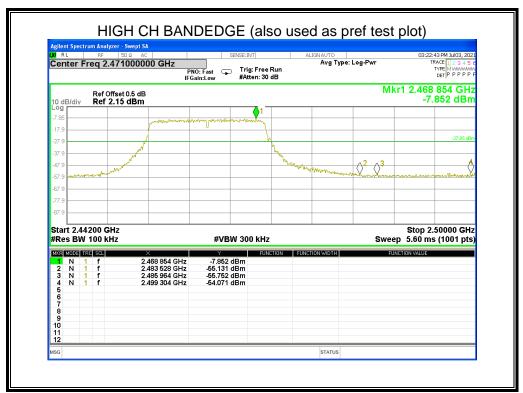






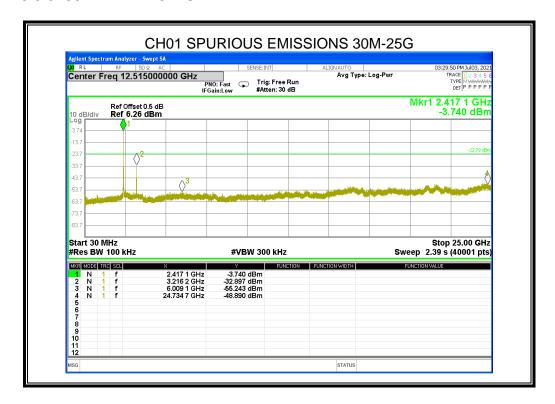


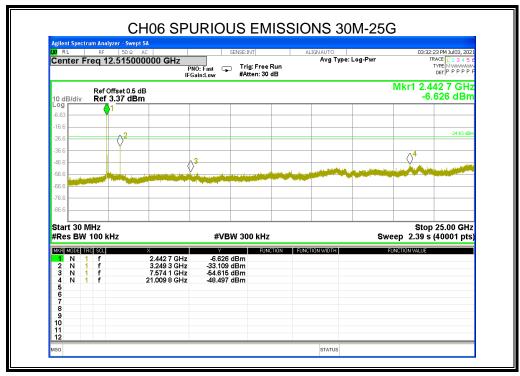




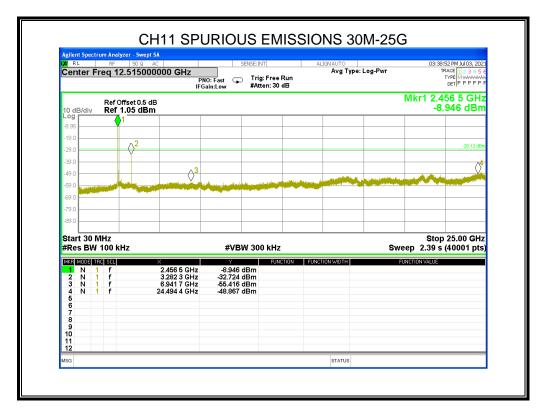


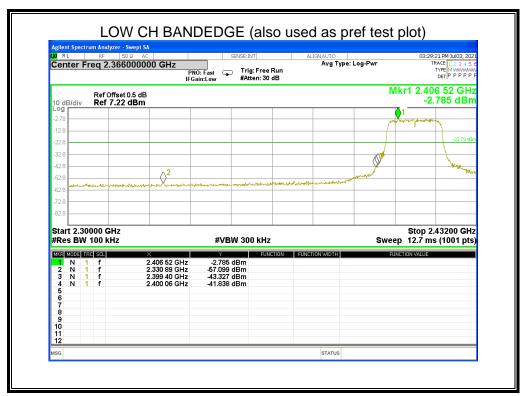
## 8.5.3. 802.11n HT20 MODE



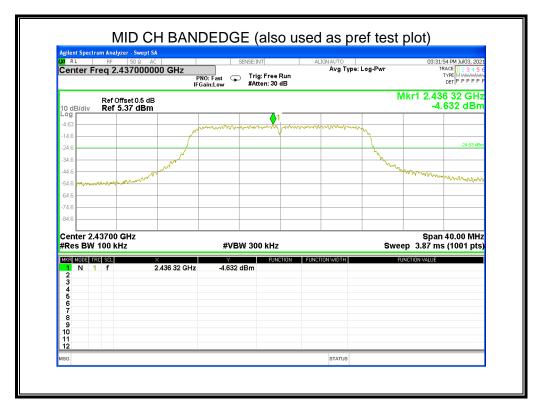


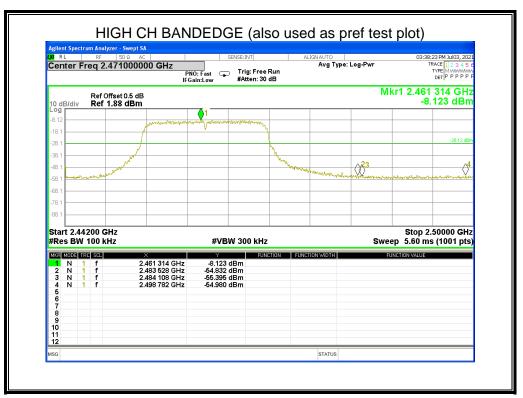






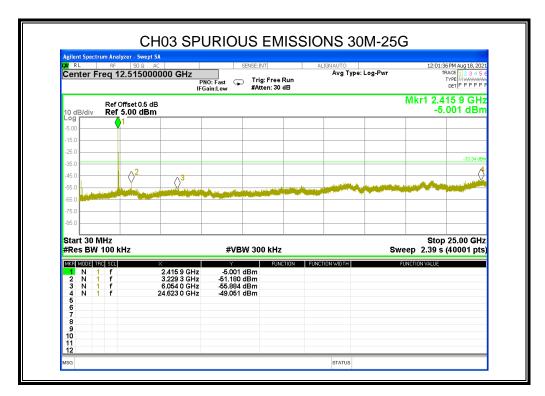


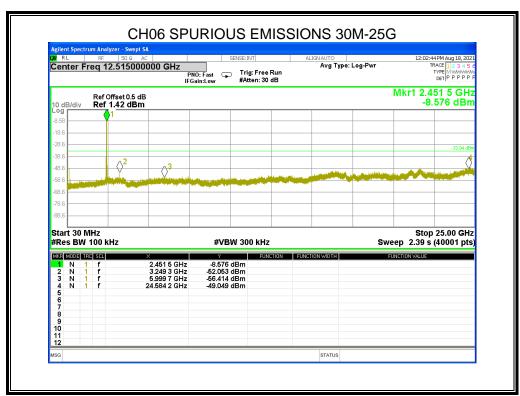




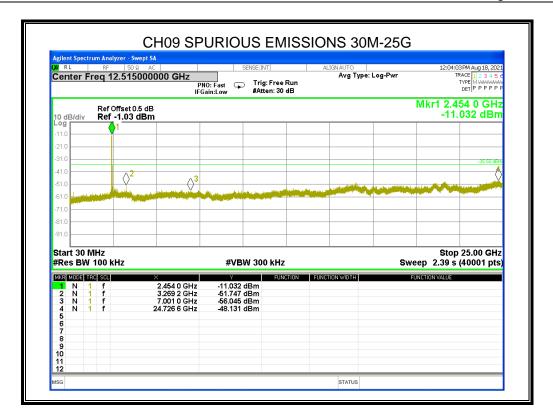


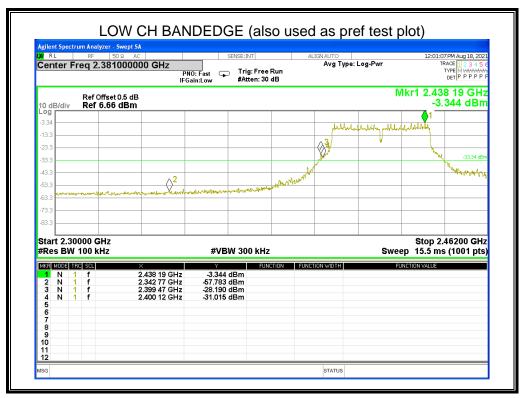
## 8.5.4. 802.11n HT40 MODE



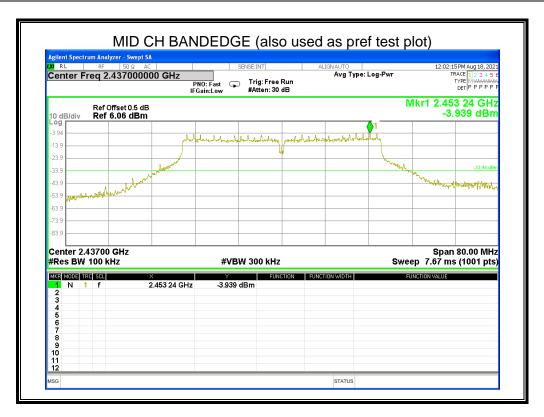


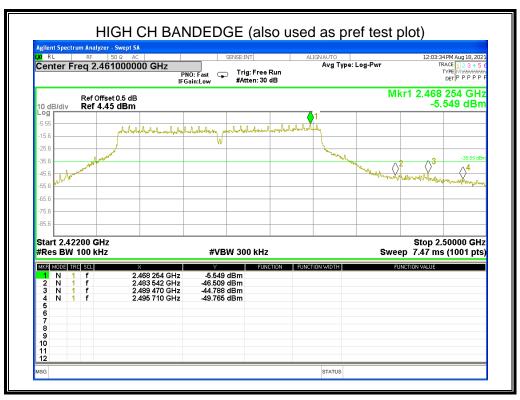














9. RADIATED TEST RESULTS

#### **LIMITS**

Please refer to FCC §15.205 and §15.209

Please refer to RSS-GEN Clause 8.9 (Transmitter)

Radiation Disturbance Test Limit for FCC (Class B)(9KHz-1GHz)

Frequency	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

Note: 1) At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

(2) At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). This paragraph (f) shall not apply to Access BPL devices operating below 30 MHz.

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Radiation Disturbance Test Limit for RSS-Gen (9KHz-1GHz)

Frequencies (MHz)	Magnetic field strength (H- Field) (μΑ/m)	Measurement Distance (meters)
0.009~0.490	6.37/F(KHz)	300
0.490~1.705	63.7/F(KHz)	30
1.705~30.0	0.08	30

Frequencies (MHz)	Field strength (μV/m at 3 m)
30~88	100
88~216	150
216~960	200
Above 960	500

Note 1: The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

# Radiation Disturbance Test Limit for (Above 1G)

Frequency (MHz)	dB(uV/m) (at 3 meters)	
Frequency (Minz)	Peak	Average
Above 1000	74	54

# Restricted bands of operation

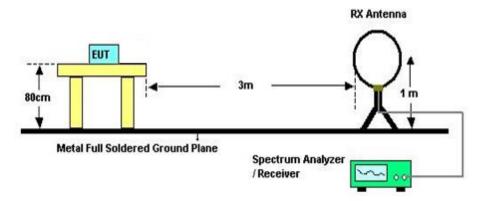
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
<sup>1</sup> 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	( <sup>2</sup> )
13.36-13.41			

Note: <sup>1</sup>Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz. <sup>2</sup>Above 38.6c



**TEST SETUP AND PROCEDURE** 

#### Below 30MHz



### The setting of the spectrum analyser

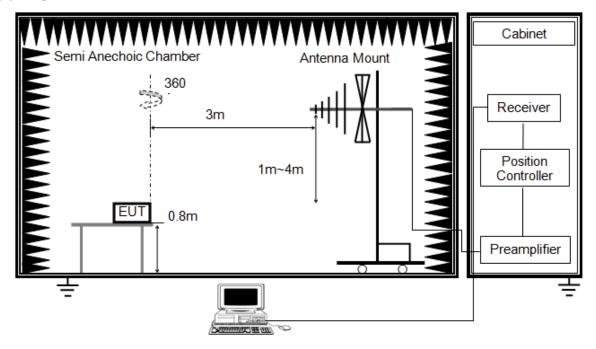
RBW	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)
VBW	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)
Sweep	Auto
Detector	Peak/QP/ Average
Trace	Max hold

- 1. The testing follows the guidelines in ANSI C63.10-2013
- 2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 3. The EUT was placed on a turntable with 0.8 meter above ground.
- 4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 5. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
- 6. For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)

Note: Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.



Below 1G



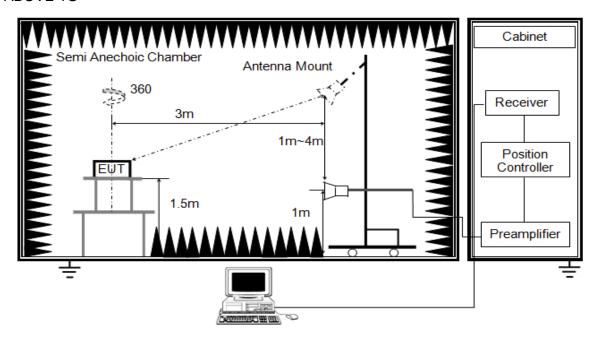
The setting of the spectrum analyser

RBW	120K
VBW	300K
Sweep	Auto
Detector	Peak/QP
Trace	Max hold

- 1. The testing follows the guidelines in ANSI C63.10-2013.
- 2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 3. The EUT was placed on a turntable with 0.8 meter above ground.
- 4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 5. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
- 6. For the actual test configuration, please refer to the related Item in this test report (Photographs of the Test Configuration)



**ABOVE 1G** 



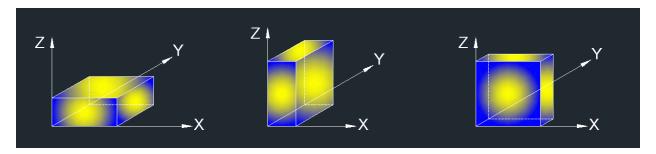
The setting of the spectrum analyser

RBW	1M
VBW	PEAK: 3M AVG: see note 6
Sweep	Auto
Detector	Peak
Trace	Max hold

- 1. The testing follows the guidelines in ANSI C63.10-2013.
- 2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 3. The EUT was placed on a turntable with 1.5m above ground.
- 4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 5. For measurement above 1GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.
- 6. For peak measurements, the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz with peak detector; For average measurements, the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 10Hz with peak detector.
- 7. For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)



X axis, Y axis, Z axis positions:



# **TEST ENVIRONMENT**

Temperature	25°C	Relative Humidity	60%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V/60Hz

Note: Pre-test X-axis, Y-axis, and Z-axis positions, find the worst case in X-axis and record it in this report.

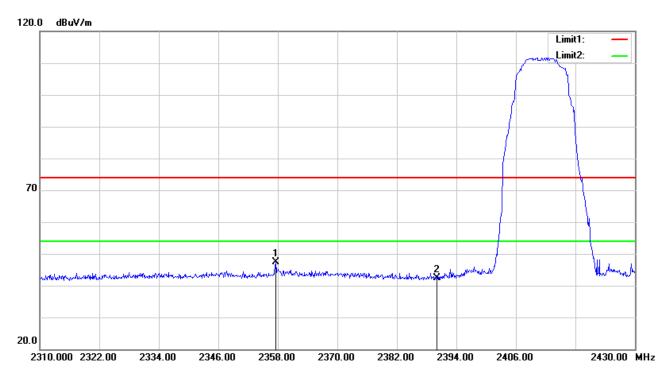


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# 9.1. RESTRICTED BANDEDGE

## 802.11 b mode

# **RESTRICTED BANDEDGE (01 CHANNEL, HORIZONTAL)**

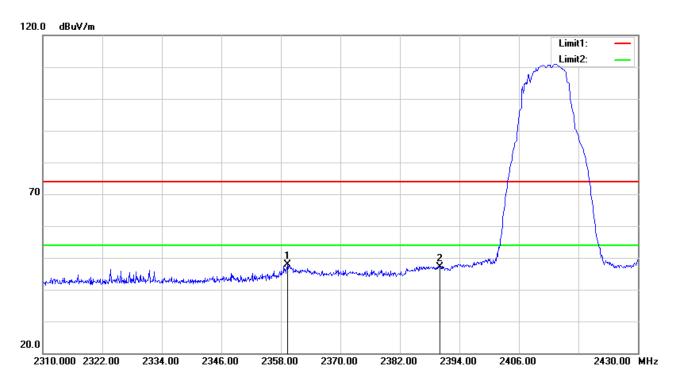


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2357.640	43.43	3.86	47.29	74.00	-26.71	peak
2	2390.000	37.93	4.34	42.27	74.00	-31.73	peak

Note: Measurement = Reading Level + Correct Factor.



**RESTRICTED BANDEDGE (01 CHANNEL, VERTICAL)** 

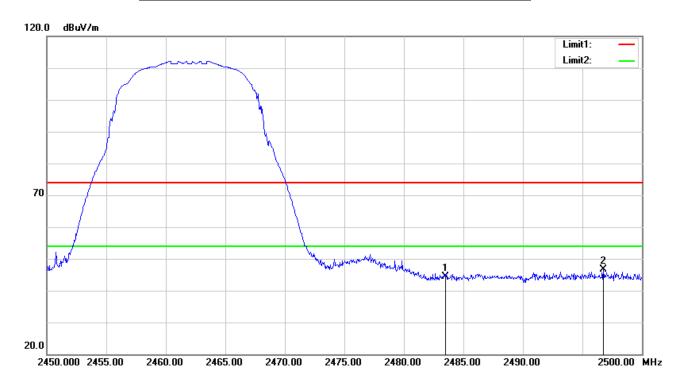


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2359.320	43.90	3.88	47.78	74.00	-26.22	peak
2	2390.000	42.74	4.34	47.08	74.00	-26.92	peak

Note: Measurement = Reading Level + Correct Factor.



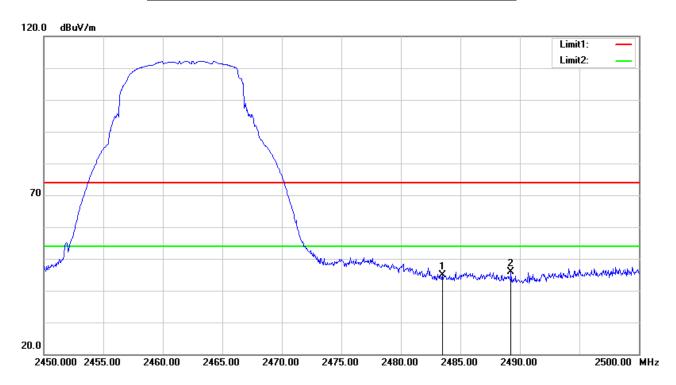
# **RESTRICTED BANDEDGE (11 CHANNEL, HORIZONTAL)**



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	39.75	4.60	44.35	74.00	-29.65	peak
2	2496.750	41.89	4.64	46.53	74.00	-27.47	peak



**RESTRICTED BANDEDGE (11 CHANNEL, VERTICAL)** 



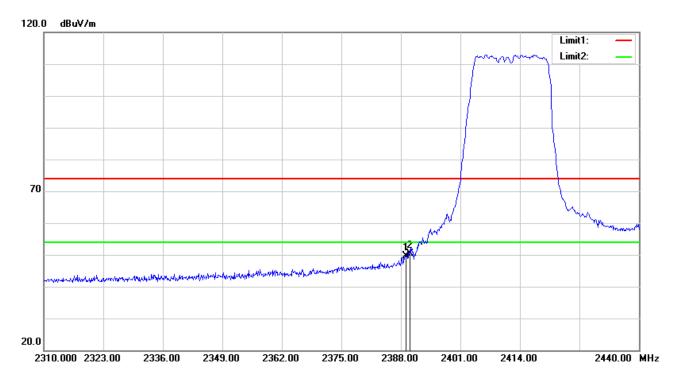
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	40.30	4.60	44.90	74.00	-29.10	peak
2	2489.250	41.15	4.62	45.77	74.00	-28.23	peak



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## 802.11 g mode

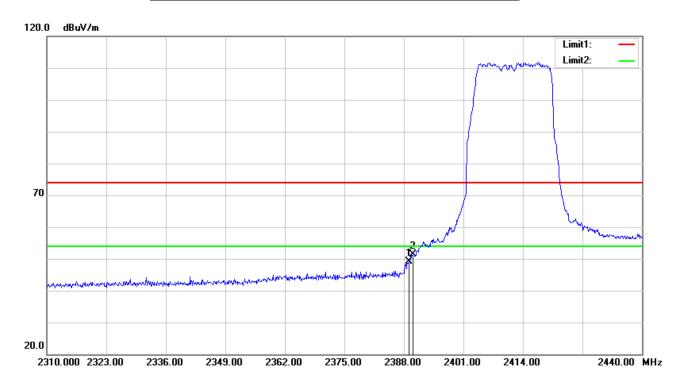
### **RESTRICTED BANDEDGE (01 CHANNEL, HORIZONTAL)**



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2389.040	45.37	4.32	49.69	74.00	-24.31	peak
2	2390.000	45.99	4.34	50.33	74.00	-23.67	peak



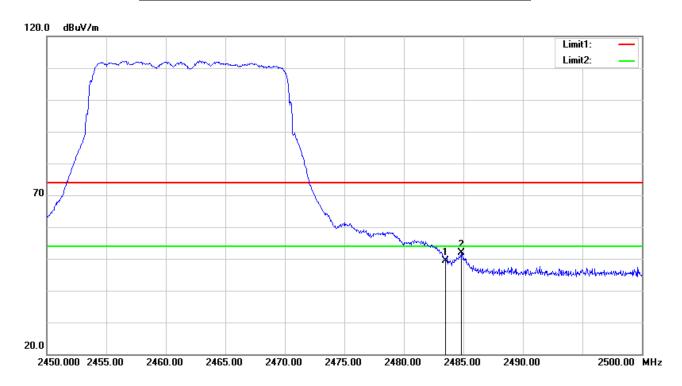
# **RESTRICTED BANDEDGE (01 CHANNEL, VERTICAL)**



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2389.170	44.70	4.32	49.02	74.00	-24.98	peak
2	2390.000	47.06	4.34	51.40	74.00	-22.60	peak



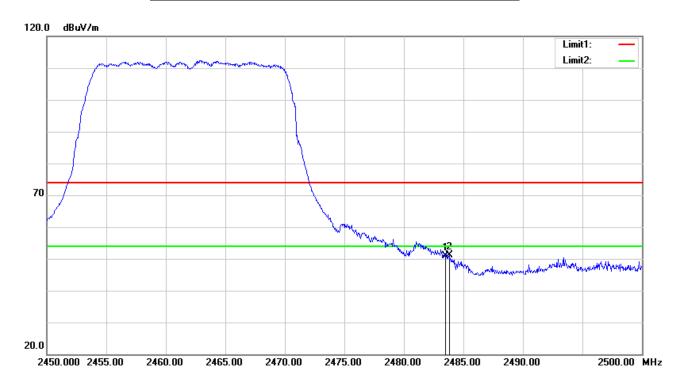
# **RESTRICTED BANDEDGE (11 CHANNEL, HORIZONTAL)**



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	44.79	4.60	49.39	74.00	-24.61	peak
2	2484.800	47.37	4.61	51.98	74.00	-22.02	peak



# **RESTRICTED BANDEDGE (11 CHANNEL, VERTICAL)**



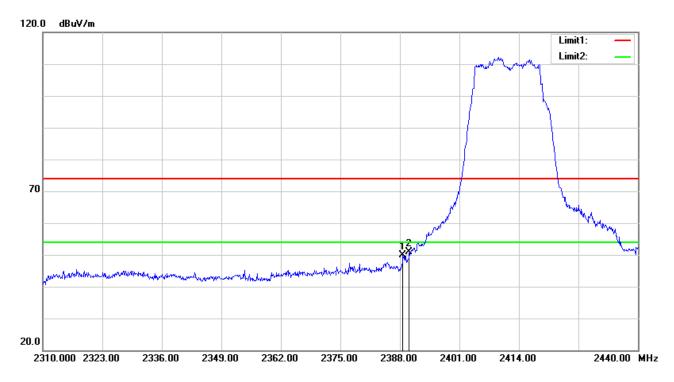
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	46.20	4.60	50.80	74.00	-23.20	peak
2	2483.800	46.47	4.60	51.07	74.00	-22.93	peak



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#### 802.11 n20 mode

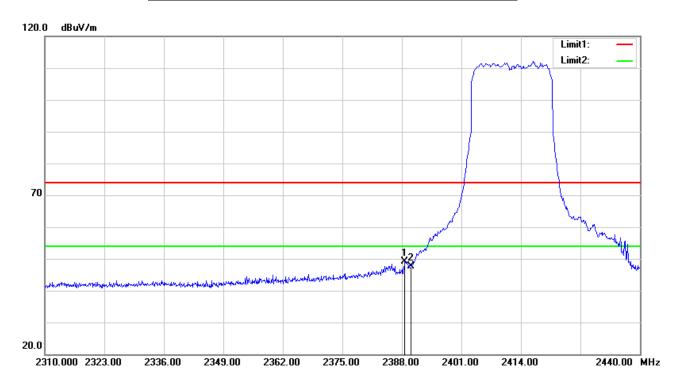
### **RESTRICTED BANDEDGE (01 CHANNEL, HORIZONTAL)**



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2388.650	45.51	4.32	49.83	74.00	-24.17	peak
2	2390.000	46.56	4.34	50.90	74.00	-23.10	peak



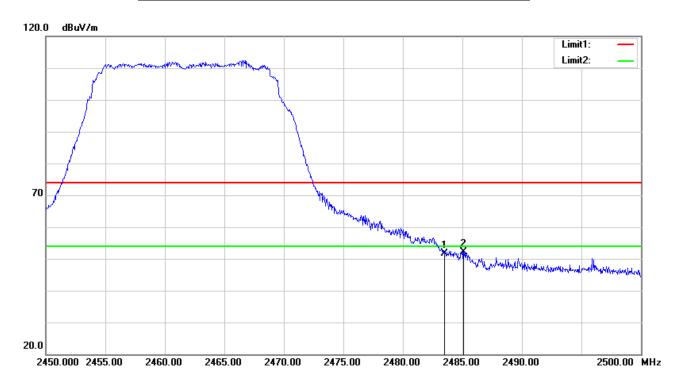
**RESTRICTED BANDEDGE (01 CHANNEL, VERTICAL)** 



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2388.650	44.78	4.32	49.10	74.00	-24.90	peak
2	2390.000	43.40	4.34	47.74	74.00	-26.26	peak



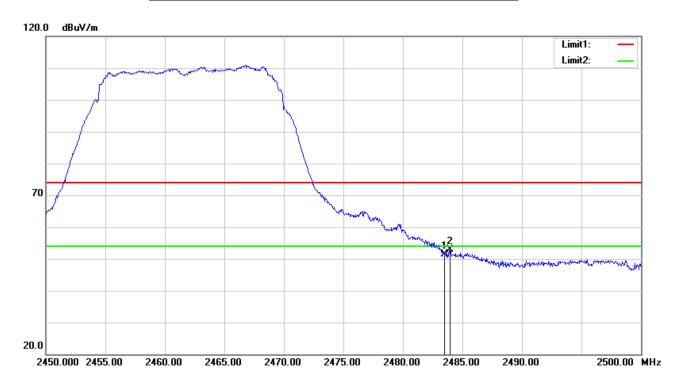
# **RESTRICTED BANDEDGE (11 CHANNEL, HORIZONTAL)**



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	47.14	4.60	51.74	74.00	-22.26	peak
2	2485.100	47.63	4.61	52.24	74.00	-21.76	peak



# **RESTRICTED BANDEDGE (11 CHANNEL, VERTICAL)**



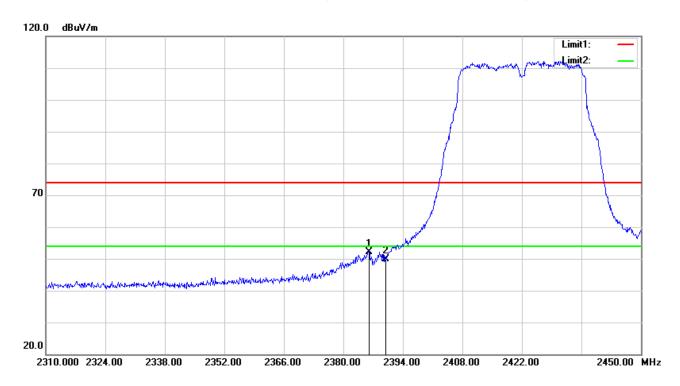
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	46.81	4.60	51.41	74.00	-22.59	peak
2	2483.950	48.26	4.61	52.87	74.00	-21.13	peak



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#### 802.11 n40 mode

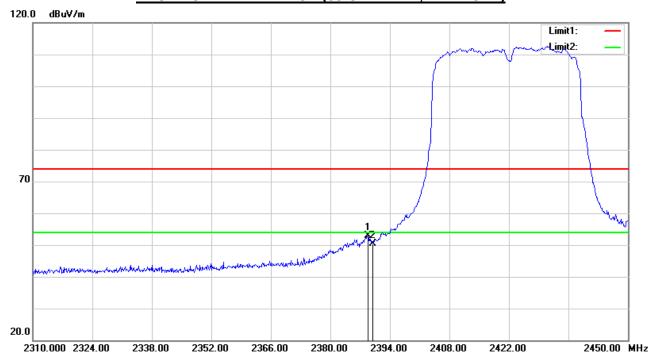
### **RESTRICTED BANDEDGE (03 CHANNEL, HORIZONTAL)**



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2386.020	47.97	4.28	52.25	74.00	-21.75	peak
2	2390.000	45.63	4.34	49.97	74.00	-24.03	peak



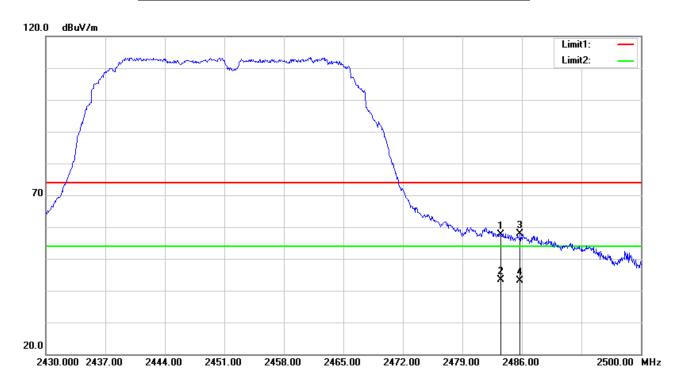
# **RESTRICTED BANDEDGE (03 CHANNEL, VERTICAL)**



No.	Frequency	Reading	Correct	Result	Limit	Margin	
							Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2388.820	48.66	4.32	52.98	74.00	-21.02	peak
2	2390.000	46.11	4.34	50.45	74.00	-23.55	peak



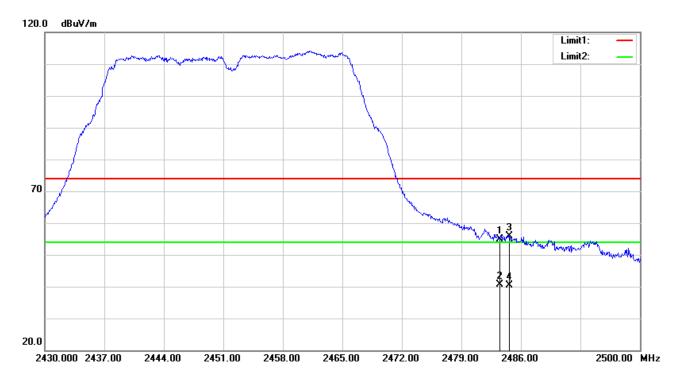
**RESTRICTED BANDEDGE (09 CHANNEL, HORIZONTAL)** 



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	52.97	4.60	57.57	74.00	-16.43	peak
2	2483.500	38.66	4.60	43.26	54.00	-10.74	AVG
3	2485.790	53.27	4.61	57.88	74.00	-16.12	peak
4	2485.790	38.41	4.61	43.02	54.00	-10.98	AVG



**RESTRICTED BANDEDGE (09 CHANNEL, VERTICAL)** 



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	50.17	4.60	54.77	74.00	-19.23	peak
2	2483.500	35.96	4.60	40.56	54.00	-13.44	AVG
3	2484.600	51.39	4.61	56.00	74.00	-18.00	peak
4	2484.600	35.76	4.61	40.37	54.00	-13.63	AVG



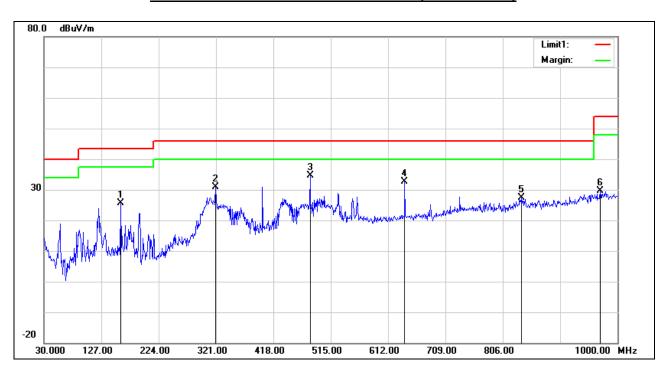
9.2. SPURIOUS EMISSIONS (30-1GHz)

Note: All the channels had been tested, but only the worst data recorded in the report.

**Test Model: WLPSTPR-10** 

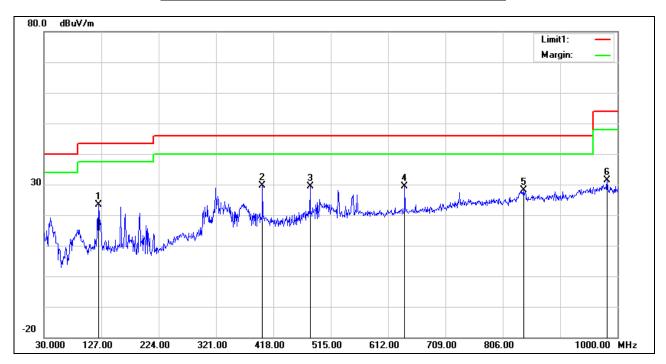
802.11 b mode CH01

#### **HARMONICS AND SPURIOUS EMISSIONS (HORIZONTAL)**



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	159.9800	44.49	-18.81	25.68	43.50	-17.82	QP
2	320.0300	44.95	-14.00	30.95	46.00	-15.05	QP
3	480.0800	43.40	-8.65	34.75	46.00	-11.25	QP
4	640.1300	37.37	-4.84	32.53	46.00	-13.47	QP
5	838.0100	27.72	-0.42	27.30	46.00	-18.70	QP
6	970.9000	27.66	2.06	29.72	54.00	-24.28	QP





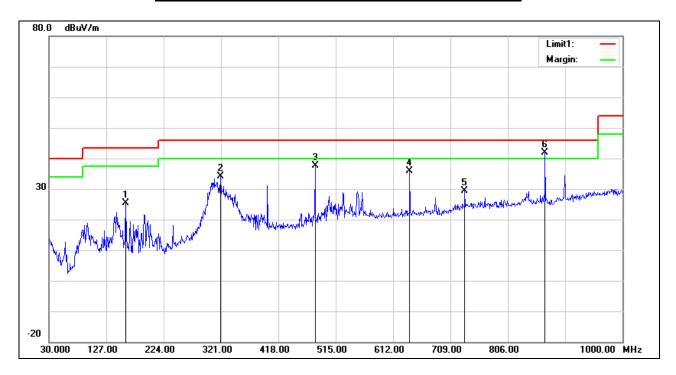
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	122.1500	41.68	-18.29	23.39	43.50	-20.11	QP
2	399.5700	40.89	-11.16	29.73	46.00	-16.27	QP
3	480.0800	37.91	-8.65	29.26	46.00	-16.74	QP
4	640.1300	34.15	-4.84	29.31	46.00	-16.69	QP
5	840.9200	28.52	-0.38	28.14	46.00	-17.86	QP
6	982.5400	28.83	2.52	31.35	54.00	-22.65	QP



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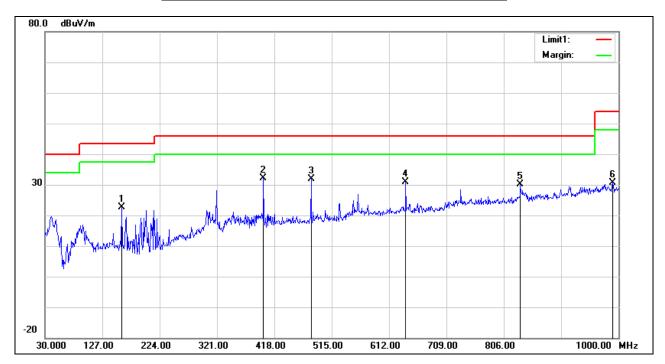
## 802.11 g mode CH01

#### HARMONICS AND SPURIOUS EMISSIONS (HORIZONTAL)



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	159.9800	44.12	-18.81	25.31	43.50	-18.19	QP
2	320.0300	48.19	-14.00	34.19	46.00	-11.81	QP
3	480.0800	46.24	-8.65	37.59	46.00	-8.41	QP
4	640.1300	40.71	-4.84	35.87	46.00	-10.13	QP
5	733.2500	31.72	-2.35	29.37	46.00	-16.63	QP
6	869.0500	42.31	-0.52	41.79	46.00	-4.21	QP





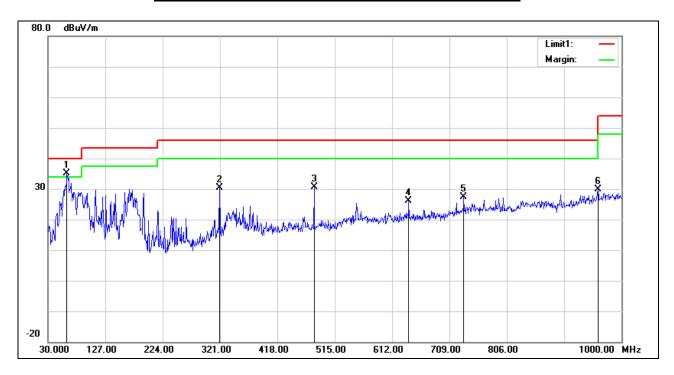
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	159.9800	41.32	-18.81	22.51	43.50	-20.99	QP
2	399.5700	43.19	-11.16	32.03	46.00	-13.97	QP
3	480.0800	40.59	-8.65	31.94	46.00	-14.06	QP
4	640.1300	35.82	-4.84	30.98	46.00	-15.02	QP
5	834.1300	30.69	-0.59	30.10	46.00	-15.90	QP
6	990.3000	28.70	2.05	30.75	54.00	-23.25	QP



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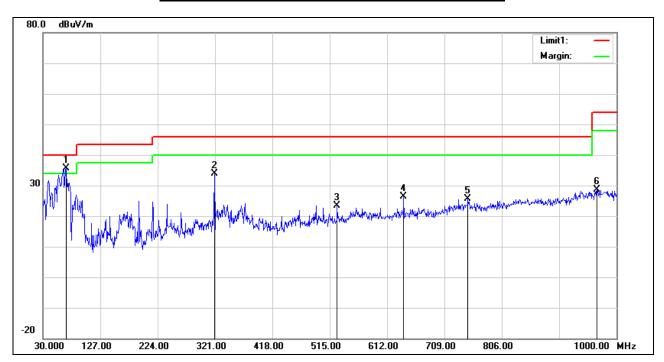
#### 802.11 n20 mode CH01

### **HARMONICS AND SPURIOUS EMISSIONS (HORIZONTAL)**



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	62.0100	60.99	-25.76	35.23	40.00	-4.77	QP
2	320.0300	44.43	-14.00	30.43	46.00	-15.57	QP
3	480.0800	39.33	-8.65	30.68	46.00	-15.32	QP
4	640.1300	30.89	-4.84	26.05	46.00	-19.95	QP
5	733.2500	29.77	-2.35	27.42	46.00	-18.58	QP
6	960.2300	28.07	1.76	29.83	54.00	-24.17	QP





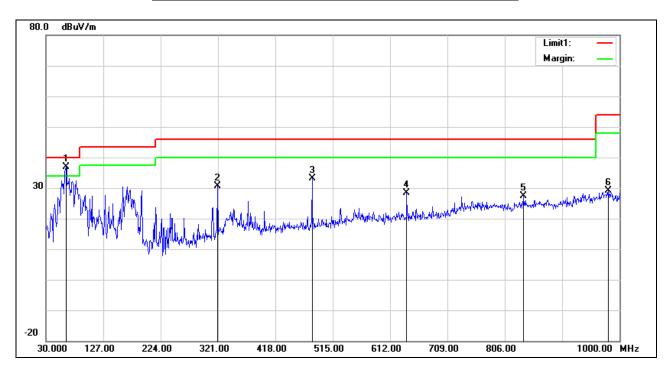
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	68.8000	60.83	-25.09	35.74	40.00	-4.26	QP
2	320.0300	47.85	-14.00	33.85	46.00	-12.15	QP
3	527.6100	31.03	-7.54	23.49	46.00	-22.51	QP
4	640.1300	31.34	-4.84	26.50	46.00	-19.50	QP
5	748.7700	27.70	-2.15	25.55	46.00	-20.45	QP
6	967.0200	26.58	1.93	28.51	54.00	-25.49	QP



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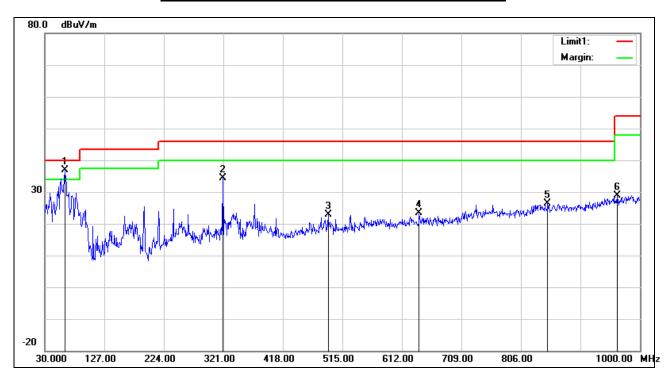
#### 802.11 n40 mode CH03

#### **HARMONICS AND SPURIOUS EMISSIONS (HORIZONTAL)**



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	63.9500	62.43	-25.64	36.79	40.00	-3.21	QP
2	320.0300	44.53	-14.00	30.53	46.00	-15.47	QP
3	480.0800	41.72	-8.65	33.07	46.00	-12.93	QP
4	640.1300	33.28	-4.84	28.44	46.00	-17.56	QP
5	838.0100	27.79	-0.42	27.37	46.00	-18.63	QP
6	981.5700	26.44	2.57	29.01	54.00	-24.99	QP





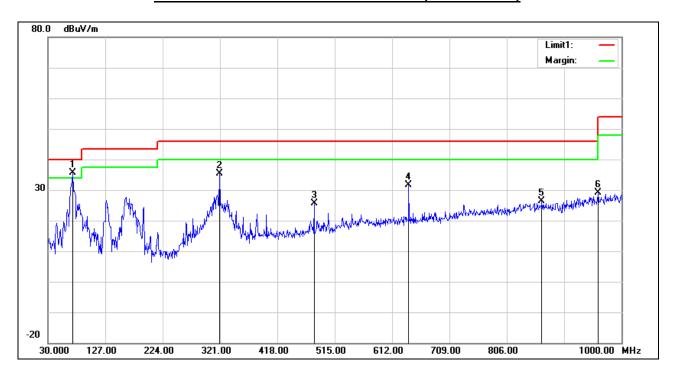
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	62.9800	62.54	-25.70	36.84	40.00	-3.16	QP
2	320.0300	48.34	-14.00	34.34	46.00	-11.66	QP
3	491.7200	31.11	-8.18	22.93	46.00	-23.07	QP
4	640.1300	28.21	-4.84	23.37	46.00	-22.63	QP
5	849.6500	27.23	-0.73	26.50	46.00	-19.50	QP
6	963.1400	27.16	1.84	29.00	54.00	-25.00	QP



**Test Model: WLPSTG-10** 

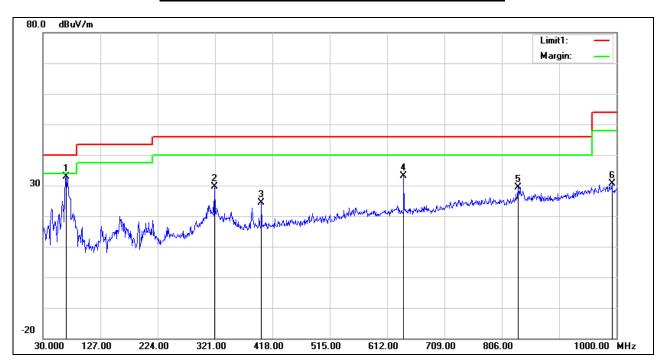
#### 802.11 b mode CH01

### **HARMONICS AND SPURIOUS EMISSIONS (HORIZONTAL)**



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	71.7100	60.30	-24.56	35.74	40.00	-4.26	QP
2	320.0300	49.35	-14.00	35.35	46.00	-10.65	QP
3	480.0800	34.38	-8.65	25.73	46.00	-20.27	QP
4	640.1300	36.49	-4.84	31.65	46.00	-14.35	QP
5	865.1700	26.82	-0.48	26.34	46.00	-19.66	QP
6	960.2300	27.38	1.76	29.14	54.00	-24.86	QP





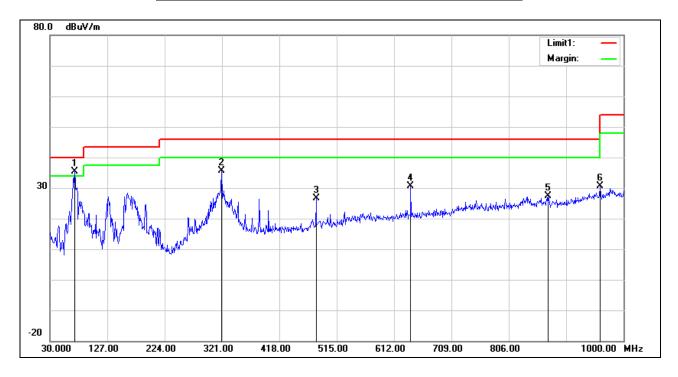
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	68.8000	58.07	-25.09	32.98	40.00	-7.02	QP
2	320.0300	43.51	-14.00	29.51	46.00	-16.49	QP
3	399.5700	35.47	-11.16	24.31	46.00	-21.69	QP
4	640.1300	38.02	-4.84	33.18	46.00	-12.82	QP
5	833.1600	29.93	-0.62	29.31	46.00	-16.69	QP
6	992.2400	28.61	2.05	30.66	54.00	-23.34	QP



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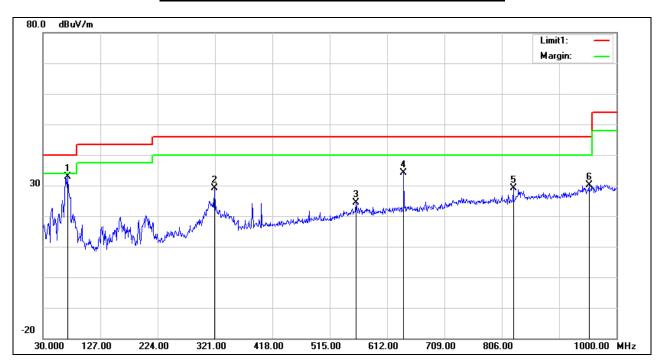
## 802.11 g mode CH01

### **HARMONICS AND SPURIOUS EMISSIONS (HORIZONTAL)**



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	71.7100	59.87	-24.56	35.31	40.00	-4.69	QP
2	320.0300	49.66	-14.00	35.66	46.00	-10.34	QP
3	480.0800	35.29	-8.65	26.64	46.00	-19.36	QP
4	640.1300	35.35	-4.84	30.51	46.00	-15.49	QP
5	872.9300	27.87	-0.57	27.30	46.00	-18.70	QP
6	960.2300	28.78	1.76	30.54	54.00	-23.46	QP





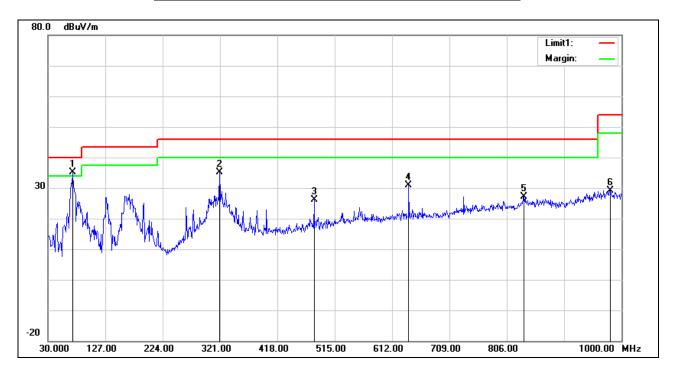
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	71.7100	57.44	-24.56	32.88	40.00	-7.12	QP
2	320.0300	43.21	-14.00	29.21	46.00	-16.79	QP
3	559.6200	29.90	-5.50	24.40	46.00	-21.60	QP
4	640.1300	38.89	-4.84	34.05	46.00	-11.95	QP
5	825.4000	30.35	-1.31	29.04	46.00	-16.96	QP
6	953.4400	28.54	1.65	30.19	46.00	-15.81	QP



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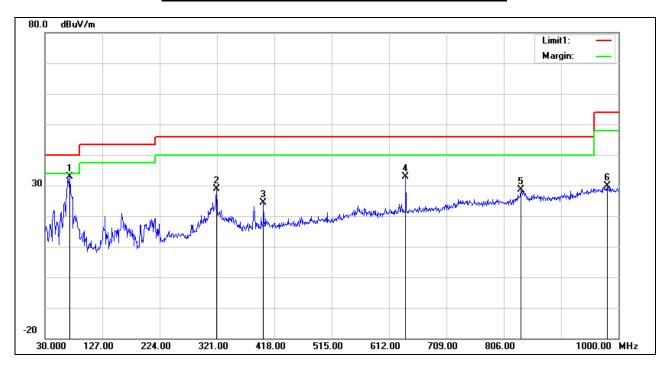
#### 802.11 n20 mode CH01

### **HARMONICS AND SPURIOUS EMISSIONS (HORIZONTAL)**



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	71.7100	59.77	-24.56	35.21	40.00	-4.79	QP
2	320.0300	49.15	-14.00	35.15	46.00	-10.85	QP
3	480.0800	34.67	-8.65	26.02	46.00	-19.98	QP
4	640.1300	35.74	-4.84	30.90	46.00	-15.10	QP
5	835.1000	27.60	-0.54	27.06	46.00	-18.94	QP
6	980.6000	26.56	2.63	29.19	54.00	-24.81	QP





No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	
1	71.7100	57.38	-24.56	32.82	40.00	-7.18	QP
2	320.0300	42.82	-14.00	28.82	46.00	-17.18	QP
3	399.5700	35.44	-11.16	24.28	46.00	-21.72	QP
4	640.1300	37.82	-4.84	32.98	46.00	-13.02	QP
5	835.1000	29.15	-0.54	28.61	46.00	-17.39	QP
6	981.5700	27.29	2.57	29.86	54.00	-24.14	QP