



CFR 47 FCC PART 15 SUBPART C TEST REPORT

For

OREIN Bath Fan OL05S

MODEL NUMBER: OA08004112

REPORT NUMBER: 4791563717-1-RF-3

ISSUE DATE: January 11, 2025

FCC ID: 2AZR9-OA08004112

Prepared for

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Prepared by

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Page 2 of 134

Revision History

Rev.	Issue Date	Revisions	Revised By
V0	January 11, 2025	Initial Issue	



Page 3 of 134

Summary of Test Results

Test Item	Clause	Limit/Requirement	Result
Antenna Requirement	N/A	FCC Part 15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	ANSI C63.10-2013, Clause 6.2	FCC Part 15.207	Pass
Conducted Output Power	ANSI C63.10-2013, Clause 11.9.2.3.1	FCC Part 15.247 (b)(3)	Pass
6dB Bandwidth and 99% Occupied Bandwidth	ANSI C63.10-2013, Clause 11.8.1	FCC Part 15.247 (a)(2)	Pass
Power Spectral Density	ANSI C63.10-2013, Clause 11.10.5	FCC Part 15.247 (e)	Pass
Conducted Band edge and spurious emission	ANSI C63.10-2013, Clause 11.11	FCC Part 15.247(d)	Pass
Radiated Band edge and Spurious Emission	ANSI C63.10-2013, Clause 11.12 & Clause 11.13	FCC Part 15.247 (d) FCC Part 15.205/15.209	Pass
ANSI C63 10-2013 Clause		None; for reporting purposes only.	Pass

^{*}This test report is only published to and used by the applicant, and it is not for evidence purpose in China.

^{*}The measurement result for the sample received is <Pass> according to <CFR 47 FCC PART 15 SUBPART C> when <Simple Acceptance> decision rule is applied.



CONTENTS

1. ATT	ATTESTATION OF TEST RESULTS			
2. TES	T METHODOLOGY	7		
3. FAC	ILITIES AND ACCREDITATION	7		
4. CAL	IBRATION AND UNCERTAINTY	8		
4.1.	MEASURING INSTRUMENT CALIBRATION	8		
4.2.	MEASUREMENT UNCERTAINTY	8		
5. EQU	IPMENT UNDER TEST	9		
5.1.	DESCRIPTION OF EUT	9		
5.2.	CHANNEL LIST	9		
5.3.	MAXIMUM POWER	9		
<i>5.4.</i>	TEST CHANNEL CONFIGURATION	10		
5.5.	THE WORSE CASE POWER SETTING PARAMETER	10		
5.6.	DESCRIPTION OF AVAILABLE ANTENNAS	11		
5.7.	SUPPORT UNITS FOR SYSTEM TEST	12		
6. MEA	SURING EQUIPMENT AND SOFTWARE USED	13		
7. ANT	ENNA PORT TEST RESULTS	16		
7.1.	CONDUCTED OUTPUT POWER	16		
7.2.	6DB BANDWIDTH AND 99% OCCUPIED BANDWIDTH	17		
7.3.	POWER SPECTRAL DENSITY	19		
7.4.	CONDUCTED BAND EDGE AND SPURIOUS EMISSION	21		
7.5.	DUTY CYCLE	23		
8. RAD	IATED TEST RESULTS	24		
8.1.	RESTRICTED BANDEDGE	32		
8.2.	SPURIOUS EMISSIONS(1 GHZ~3 GHZ)	50		
8.3.	SPURIOUS EMISSIONS(3 GHZ~18 GHZ)	56		
<i>8.4.</i>	SPURIOUS EMISSIONS(9 KHZ~30 MHZ)	80		
8.5.	SPURIOUS EMISSIONS(18 GHZ~26 GHZ)	83		
8.6.	SPURIOUS EMISSIONS(30 MHZ~1 GHZ)	85		
8.7.	SPURIOUS EMISSIONS FOR SIMULTANEOUS TRANSMISSION	87		
9. ANT	ENNA REQUIREMENT	93		
10.	AC POWER LINE CONDUCTED EMISSION	94		



1.	TEST DATA	98
11.1. 11.1.1. 11.1.2.	APPENDIX A: DTS BANDWIDTH Test Result Test Graphs	98
11.2. 11.2.1. 11.2.2.	APPENDIX B: OCCUPIED CHANNEL BANDWIDTH Test Result Test Graphs	103
<i>11.3.</i> 11.3.1.	APPENDIX C: MAXIMUM CONDUCTED AVG OUTPUT POWER Test Result	
<i>11.4.</i> 11.4.1. 11.4.2.	APPENDIX D: MAXIMUM POWER SPECTRAL DENSITY Test Result Test Graphs	109
<i>11.5.</i> 11.5.1. 11.5.2.	APPENDIX E: BAND EDGE MEASUREMENTS Test Result Test Graphs	114
<i>11.6.</i> 11.6.1. 11.6.2.	APPENDIX F: CONDUCTED SPURIOUS EMISSIONTest Result	118
11.7. 11.7.1. 11.7.2.	APPENDIX G: DUTY CYCLE Test Result Test Graphs	131



Page 6 of 134

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: Syvio Technology CO., LIMITED

Address: Room A, 8/F,Kwok Cheung Building, 635-637 Shanghai

Street, Mong Kok, Hong Kong

Manufacturer Information

Company Name: Syvio Technology CO., LIMITED

Address: Room A, 8/F,Kwok Cheung Building, 635-637 Shanghai

Street, Mong Kok, Hong Kong

EUT Information

Prepared Ry

EUT Name: OREiN Bath Fan OL05S

Model: OA08004112

Brand: OREIN

Sample Received Date: November 18, 2024

Sample Status: Normal Sample ID: 7847198

Date of Tested: November 18, 2024 to January 11, 2025

APPLICABLE STANDARDS				
STANDARD TEST RESULTS				
CFR 47 FCC PART 15 SUBPART C	Pass			

Troparda by.
Janny Huang
Fanny Huang
Engineer Project Associate
Approved By:
Stephen Emo
Stephen Guo

Kebo Zhang

Checked By:

Senior Project Engineer

Operations Manager



Page 7 of 134

2. TEST METHODOLOGY

All tests were performed in accordance with the standard CFR 47 FCC PART 15 SUBPART C , KDB 558074 D01 15.247 Meas Guidance v05r02, KDB 414788 D01 Radiated Test Site v01r01, CFR 47 FCC Part 2 and ANSI C63.10-2013.

3. FACILITIES AND ACCREDITATION

	A2LA (Certificate No.: 4102.01)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	has been assessed and proved to be in compliance with A2LA.
	FCC (FCC Designation No.: CN1187)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	Has been recognized to perform compliance testing on equipment subject
	to the Commission's Declaration of Conformity (DoC) and Certification
	rules
	ISED (Company No.: 21320)
Accreditation	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
Certificate	has been registered and fully described in a report filed with ISED.
	The Company Number is 21320 and the test lab Conformity Assessment
	Body Identifier (CABID) is CN0046.
	VCCI (Registration No.: G-20192, C-20153, T-20155 and R-20202)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	has been assessed and proved to be in compliance with VCCI, the
	Membership No. is 3793.
	Facility Name:
	Chamber D, the VCCI registration No. is G-20192 and R-20202
	Shielding Room B, the VCCI registration No. is C-20153 and T-20155
	j

Note 1:

All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China.

Note 2:

The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3:

For below 30 MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30 MHz had been correlated to measurements performed on an OFS.



Page 8 of 134

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 recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty				
Conduction emission	3.62 dB				
Radiated Emission (Included Fundamental Emission) (9 kHz ~ 30 MHz)	2.2 dB				
Radiated Emission (Included Fundamental Emission) (30 MHz ~ 1 GHz)	4.00 dB				
Radiated Emission	5.78 dB (1 GHz ~ 18 GHz)				
(Included Fundamental Emission) (1 GHz to 26 GHz)	5.23 dB (18 GHz ~ 26 GHz)				
Duty Cycle	±0.028%				
DTS and 99% Occupied Bandwidth	±0.0196%				
Maximum Conducted Output Power	±0.686 dB				
Maximum Power Spectral Density Level	±0.743 dB				
Conducted Band-edge Compliance	±1.328 dB				
Conducted Unwanted Emissions In Non-restricted	±0.746 dB (9 kHz ~ 1 GHz)				
Frequency Bands	±1.328dB (1 GHz ~ 26 GHz)				
Note: This uncortainty represents an expanded uncortainty expressed at approximately the					

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Page 9 of 134

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name	OREiN Bath Fan OL05S
Model	OA08004112

Frequency Range:	2412 MHz to 2462 MHz		
Type of Modulation:	IEEE 802.11b: DSSS(CCK, DQPSK, DBPSK) IEEE 802.11g/n: OFDM(64-QAM, 16-QAM, QPSK, BPSK)		
Radio Technology:	IEEE 802.11b/g/n HT20/n HT40		
Normal Test Voltage:	AC 120 V, 60 Hz		

5.2. CHANNEL LIST

	Channel List For Bandwidth=20 MHz								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)		
1	2412	4	2427	7	2442	10	2457		
2	2417	5	2432	8	2447	11	2462		
3	2422	6	2437	9	2452	1	1		

Channel List For Bandwidth=40 MHz								
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	
3	2422	5	2432	7	2442	9	2452	
4	2427	6	2437	8	2447	1	1	

5.3. MAXIMUM POWER

IEEE Std. 802.11	Frequency (MHz)	Channel Number	Maximum Conducted AVG Output Power (dBm)
b	2412 ~ 2462	1-11[11]	12.73
g	2412 ~ 2462	1-11[11]	16.88
n HT20	2412 ~ 2462	1-11[11]	16.59
n HT40	2422 ~ 2452	3-9[7]	12.86

Page 10 of 134

5.4. TEST CHANNEL CONFIGURATION

IEEE Std. 802.11	Test Channel Number	Frequency
b	CH 1(Low Channel), CH 6(MID Channel), CH 11(High Channel)	2412 MHz, 2437 MHz, 2462 MHz
g	CH 1(Low Channel), CH 6(MID Channel), CH 11(High Channel)	2412 MHz, 2437 MHz, 2462 MHz
n HT20	CH 1(Low Channel), CH 6(MID Channel), CH 11(High Channel)	2412 MHz, 2437 MHz, 2462 MHz
n HT40	CH 3(Low Channel), CH 6(MID Channel), CH 9(High Channel)	2422 MHz, 2437 MHz, 2452 MHz

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band									
Test Softw	/are		Es	pRFTestTo	ol_v2.7_Manual				
M 1 1 C	Transmit		Test Channel						
Modulation Mode	Antenna	١	NCB: 20MF	lz	NCB: 40MHz				
Wode	Number	CH 1	CH 6	CH 11	CH 3	CH 6	CH 9		
802.11b	1	24	26	24					
802.11g	1	4	2	10	/				
802.11n HT20	1	0 0 5							
802.11n HT40	1		/		14	14	14		

WORST-CASE CONFIGURATIONS

The EUT was tested in the following configuration(s):

Controlled in test mode using a software application on the EUT supplied by customer. The application was used to enable a continuous transmission and to select the mode, test channels, bandwidth, data rates as required.

Test channels referring to section 5.4.

Maximum power setting referring to section 5.5.

Worst-case data rates as provided by the client were:

802.11b mode: 1 Mbps 802.11g mode: 6 Mbps 802.11n HT20 mode: MCS0 802.11n HT40 mode: MCS0

The measured additional path loss was included in any path loss calculations for all RF cable used during tested.



Page 11 of 134

5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency (MHz)	Antenna Type	MAX Antenna Gain (dBi)
1	2412-2462	IFA PCB antenna	6.05

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

1.BT&WLAN 2.4G can transmit simultaneously. (declared by client)

REPORT NO.: 4791563717-1-RF-3 Page 12 of 134

5.7. SUPPORT UNITS FOR SYSTEM TEST

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Remark
1	PC	Lenovo	E42-80	1
2	UART	/	1	1

I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	1	/	1.0	1

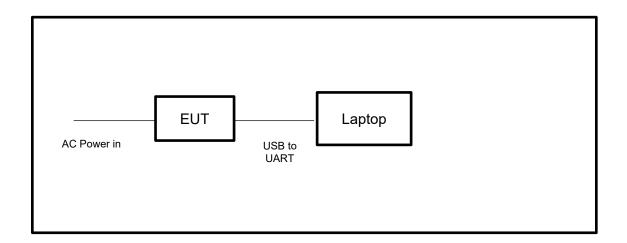
ACCESSORIES

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

TEST SETUP

The EUT can work in engineering mode with a software through a Laptop.

SETUP DIAGRAM FOR TESTS





Page 13 of 134

6. MEASURING EQUIPMENT AND SOFTWARE USED

	R&S TS 8997 Test System										
Equipment	turer	Model	No.	Serial No.	Last C	Cal.	Due. Date				
Power sensor, Power M	leter		R&S	;	OSP1	20	100921	Mar.25,	2024	Mar.24,2025	
Vector Signal Genera	tor		R&S	;	SMBV1	00A	261637	Sep.28,	2024	Sep.27, 2025	
Signal Generator			R&S		SMB10)0A	178553	Sep.28,	2024	Sep.27, 2025	
Signal Analyzer			R&S	3	FSV4	0	101118	Sep.28,	2024	Sep.27, 2025	
					Softwa	re					
Description			N	/lanuf	acturer		Nam	е		Version	
For R&S TS 8997 Test	st System Rohde 8			nde &	Schwar	Z	EMC	32		10.60.10	
		Ť	То	nsen	d RF Te	st S	ystem				
Equipment	Man	ufacturer Mo		Mod	del No.	Serial No.		Last Cal.		Due. Date	
Wireless Connectivity Tester		R&S CI		СМ	1W270 120		1.0002N75- 102	Sep.13,	2024	Sep.12, 2025	
PXA Signal Analyzer	Ke	eysiç	eysight N		030A	MY55410512		Sep.28,	2024	Sep.27, 2025	
MXG Vector Signal Generator	Ke	eysiç	ght	N5	N5182B M		756200284	Sep.28,	2024	Sep.27, 2025	
MXG Vector Signal Generator	Ke	eysiç	ght	N5	172B	MY	756200301	Sep.28,	2024	Sep.27, 2025	
DC power supply	Ke	eysig	ght	E3	642A	MY	55159130	Sep.28,	2024	Sep.27, 2025	
Temperature & Humidity Chamber	SAI	NMC	DOD	SG-8	80-CC-2		2088	Sep.28,	2024	Sep.27, 2025	
Attenuator	Д	glie	nt	84	195B	28	14a12853	Sep.28,	2024	Sep.27, 2025	
RF Control Unit	То	nsce	end	JSC	806-2	23E	380620666	Mar.25,	2024	Mar.24,2025	
					Softwa	re					
Description		Mar	nufact	urer	Name Vers			Version			
Tonsend SRD Test Syst	tem	T	onser	nd	JS1120-3 RF Test System V3.2.22			V3.2.22			



Page 14 of 134

Conducted Emissions								
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date			
EMI Test Receiver	R&S	ESR3	101961	Sep.28, 2024	Sep.27, 2025			
Two-Line V- Network	R&S	ENV216	101983	Sep.28, 2024	Sep.27, 2025			
Artificial Mains Networks	Schwarzbeck	NSLK 8126	8126465	Sep.28, 2024	Sep.27, 2025			
	Software							
ı	Description		Manufacturer	Name	Version			
Test Software	for Conducted	Emissions	Farad	EZ-EMC	Ver. UL-3A1			

	Radiated Emissions								
•	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Due Date			
MXE EMI Receiver	KESIGHT	N9038A	MY56400036	1	Sep.28, 2024	Sep.27, 2025			
Hybrid Log Periodic Antenna	TDK	HLP-3003C	130960	1	June 28, 2024	June.27 2027			
Preamplifier	HP	8447D	2944A09099	/	Sep.28, 2024	Sep.27, 2025			
EMI Measurement Receiver	R&S	ESR26	101377	1	Sep.28, 2024	Sep.27, 2025			
Horn Antenna	TDK	HRN-0118	130939	/	Apr.29, 2022	Apr.28, 2025			
Preamplifier	TDK	PA-02-0118	TRS-305- 00067	1	Sep.28, 2024	Sep.27, 2025			
Horn Antenna	Schwarzbeck	BBHA9170	697	/	Jun 30, 2024	Jun 29, 2027			
Preamplifier	TDK	PA-02-2	TRS-307- 00003	1	Sep.28, 2024	Sep.27, 2025			
Preamplifier	TDK	PA-02-3	TRS-308- 00002	1	Sep.28, 2024	Sep.27, 2025			
Loop antenna	Schwarzbeck	1519B	80000	Dec.14, 2021	Dec.09, 2024	Dec.08, 2027			
High Pass Filter	Wi	WHKX10- 2700-3000- 18000- 40SS	23	1	Sep.28, 2024	Sep.27, 2025			
Band Reject Filter	Wainwright	WRCJV8- 2350-2400- 2483.5- 2533.5- 40SS	4	/	Sep.28, 2024	Sep.27, 2025			
			Software						
С	escription		Manufacturer	1	Name	Version			



Page 15 of 134

Test Software for Radiated Emissions Farad EZ-EMC Ver. UL-3A	UL-3A1
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Other Instrument					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
Temperature humidity probe	OMEGA	ITHX-SD-5	18470007	Oct.8, 2024	Oct.7, 2025
Barometer	Yiyi	Baro	N/A	Oct.10, 2024	Oct.9, 2025
Attenuator	Agilent	8495B	2814a12853	Sep.28, 2024	Sep.27, 2025



Page 16 of 134

7. ANTENNA PORT TEST RESULTS

7.1. CONDUCTED OUTPUT POWER

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C			
Section Test Item Limit Frequency Range (MHz)			
CFR 47 FCC 15.247(b)(3)	AVG Output Power	1 watt or 30 dBm	2400-2483.5

TEST PROCEDURE

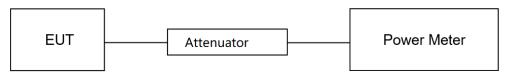
Refer to ANSI C63.10-2013 clause 11.9.2.3.1.

Connect the EUT to a low loss RF cable from the antenna port to the power sensor (video bandwidth is greater than the occupied bandwidth).

Measure peak emission level, the indicated level is the average output power, after any corrections for external attenuators and cables.

The test result in dBm by adding [10 log (1 / D)], where D is the duty cycle.

TEST SETUP



TEST ENVIRONMENT

Temperature	21.7℃	Relative Humidity	53.8%
Atmosphere Pressure	101kPa	Test Voltage	AC 120 V, 60 Hz

TEST DATE / ENGINEER

Test Date December 4, 2024	Test By	Vern Shen
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TEST RESULTS

Please refer to section "Test Data" - Appendix C

Page 17 of 134

7.2. 6DB BANDWIDTH AND 99% OCCUPIED BANDWIDTH

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 3				
Section Test Item Limit Frequency Range (MHz)				
CFR 47 FCC 15.247(a)(2) ISED RSS-247 5.2 (a)	6 dB Bandwidth	≥ 500 kHz	2400-2483.5	
ISED RSS-Gen Clause 6.7	99 % Occupied Bandwidth	For reporting purposes only.	2400-2483.5	

TEST PROCEDURE

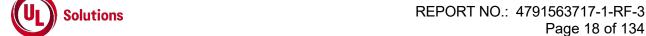
Refer to ANSI C63.10-2013 clause 11.8 for DTS bandwidth and clause 6.9 for Occupied Bandwidth.

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

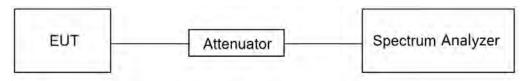
Center Frequency	The center frequency of the channel under test
Frequency Span	For 6 dB Bandwidth: Enough to capture all products of the modulation carrier emission For 99 % Occupied Bandwidth: Between 1.5 times and 5.0 times the OBW
Detector	Peak
IRRW	For 6 dB Bandwidth: 100 kHz For 99 % Occupied Bandwidth: 1 % to 5 % of the occupied bandwidth
IVRW	For 6 dB Bandwidth: ≥3 × RBW For 99 % Occupied Bandwidth: ≥3 × RBW
Trace	Max hold
Sweep	Auto couple

a) Use the 99 % power bandwidth function of the instrument, allow the trace to stabilize and report the measured bandwidth.

b) 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 relative to the maximum level measured in the fundamental emission.



TEST SETUP



TEST ENVIRONMENT

Temperature	21.7℃	Relative Humidity	53.8%
Atmosphere Pressure	101kPa	Test Voltage	AC 120 V, 60 Hz

TEST DATE / ENGINEER

Test Date	December 4, 2024	Test By	Vern Shen
	•	l -	

TEST RESULTS

Please refer to section "Test Data" - Appendix A&B



Page 19 of 134

7.3. POWER SPECTRAL DENSITY

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC §15.247 (e)	Power Spectral Density	8 dBm in any 3 kHz band	2400-2483.5

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.10.5.

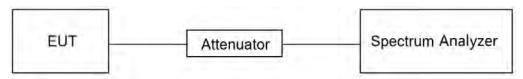
Connect the EUT to the spectrum analyzer and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	power averaging (rms)
RBW	3 kHz ≤ RBW ≤ 100 kHz
VBW	≥3 × RBW
Span	1.5 x OBW bandwidth
Trace	Employ trace averaging(rms)mode over a minimum of 100 traces
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	21.7℃	Relative Humidity	53.8%
Atmosphere Pressure	101kPa	Test Voltage	AC 120 V, 60 Hz

TEST DATE / ENGINEER

Test Date	December 4, 2024	Test By	Vern Shen
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Page 20 of 134

TEST RESULTS

Please refer to section "Test Data" - Appendix D

Page 21 of 134

7.4. CONDUCTED BAND EDGE AND SPURIOUS EMISSION

LIMITS

CFR 47 FCC Part15 (15.247) Subpart C			
Section Test Item Limit			
Conducted CFR 47 FCC §15.247 (d) Bandedge and Spurious Emissions		at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power	

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.11 and 11.13.

Connect the EUT to the spectrum analyzer and use the following settings for reference level measurement:

Center Frequency	The center frequency of the channel under test
Detector	Peak
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 PSD level.

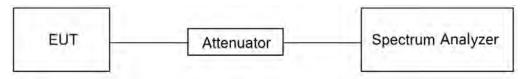
Change the settings for emission level measurement:

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

Allow trace to fully stabilize and use the peak marker function to determine the maximum PSD level. Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11.



TEST SETUP



TEST ENVIRONMENT

Temperature	21.7℃	Relative Humidity	53.8%
Atmosphere Pressure	101kPa	Test Voltage	AC 120 V, 60 Hz

TEST DATE / ENGINEER

Test Date	December 4, 2024	Test By	Vern Shen

TEST RESULTS

Please refer to section "Test Data" - Appendix F



Page 23 of 134

7.5. DUTY CYCLE

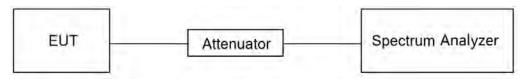
LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.6 Zero – Span Spectrum Analyzer method.

TEST SETUP



TEST ENVIRONMENT

Temperature	21.7℃	Relative Humidity	53.8%
Atmosphere Pressure	101kPa	Test Voltage	AC 120 V, 60 Hz

TEST DATE / ENGINEER

Test Date	December 4, 2024	Test By	Vern Shen
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TEST RESULTS

Please refer to section "Test Data" - Appendix G

Page 24 of 134

8. RADIATED TEST RESULTS

LIMITS

Please refer to CFR 47 FCC §15.205 and §15.209.

Radiation Disturbance Test Limit for FCC (Class B) (9 kHz ~ 1 GHz)

Emissions radiated outside of the specified frequency bands above 30 MHz			
Frequency Range	Field Strength Limit	Field Streng	
(MHz)	(uV/m) at 3 m	(dBuV/m)	
		Quasi-P	eak eak
30 - 88	100	40	
88 - 216	150	43.5	,
216 - 960	200	46	
Above 960	500	54	
Above 1000	500	Peak	Average
Above 1000	500	74	54

FCC Emissions radiated outside of the specified frequency bands below 30 MHz		
Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30

Page 25 of 134

FCC Restricted bands of operation refer to FCC §15.205 (a):

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 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	(²)
13.36-13.41			

Note: ¹Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

TEST PROCEDURE

Below 30 MHz

The setting of the spectrum analyzer

RBW	200 Hz (From 9 kHz to 0.15 MHz)/ 9 kHz (From 0.15 MHz to 30 MHz)
VBW	200 Hz (From 9 kHz to 0.15 MHz)/ 9 kHz (From 0.15 MHz to 30 MHz)
Sweep	Auto

- 1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.4.
- 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, Face-on and Face-off polarizations of the antenna are set to make the measurement.
- 3. The EUT was placed on a turntable with 80 cm above ground.
- 4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1 m height antenna tower.
- 5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz Radiated emission limits in these three bands are based on measurements employing an average detector.
- 6. For measurement below 1 GHz, 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 and average detector mode remeasured. 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 and average detector and reported.

²Above 38.6c



Page 26 of 134

7. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30m open field 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 site based on KDB 414788.

8. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω . For example, the measurement frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to Y-51.5 = Z dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.



Page 27 of 134

Below 1 GHz and above 30 MHz

The setting of the spectrum analyzer

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

- 1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.5.
- 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 80 cm 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 1 GHz, 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.



Page 28 of 134

Above 1 GHz

The setting of the spectrum analyzer

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

- 1. The testing follows the guidelines in ANSI C63.10-2013 clause 6.6.
- 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 1.5 m 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 1 GHz, 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 measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause 7.5. ON TIME AND DUTY CYCLE.

Note 1: The manufacturer has recommended that the EUT only be used in the desktop (horizontal) orientation; therefore, all radiated testing was performed in desktop orientation.



Page 29 of 134

For Restricted Bandedge:

Note:

- 1. Measurement = Reading Level + Correct Factor.
- 2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
- 3. PK=Peak: Peak detector.
- 4. AV=Average: VBW=1/Ton, where: Ton is the transmitting duration.
- 5. For the transmitting duration, please refer to clause 7.5.
- 6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.
- 7. Both horizontal and vertical have been tested, only the worst data was recorded in the report.
- 8. All modes have been tested, but only the worst data was recorded in the report.

For Radiate Spurious emission (9 kHz ~ 30 MHz):

Note:

- 1. Measurement = Reading Level + Correct Factor.
- 2. If the peak values are less than the QP limit, the QP result is deemed to comply with QP limit.
- 3. All 3 polarizations (Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.
- 4. All modes have been tested, but only the worst data was recorded in the report.
- 5. $dBuA/m = dBuV/m 20Log10[120\pi] = dBuV/m 51.5$

For Radiate Spurious Emission (30 MHz ~ 1 GHz):

Note:

- 1. Result Level = Read Level + Correct Factor.
- 2. If the peak values are less than the QP limit, the QP result is deemed to comply with QP limit.
- 3. All modes have been tested, but only the worst data was recorded in the report.

For Radiate Spurious Emission (1 GHz ~ 3 GHz):

Note:

- 1. Measurement = Reading Level + Correct Factor.
- 2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
- 3. Peak: Peak detector.
- 4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 5. For the transmitting duration, please refer to clause 7.5.
- 6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
- 7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 8. All modes have been tested, but only the worst data was recorded in the report.

Page 30 of 134

For Radiate Spurious Emission (3 GHz ~ 18 GHz):

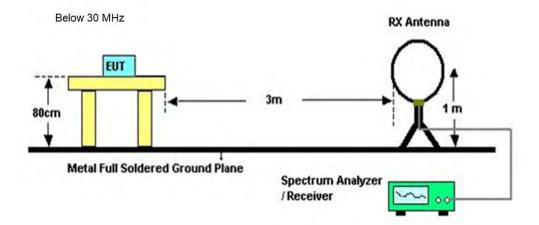
- 1. Peak Result = Reading Level + Correct Factor.
- 2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
- 3. Peak: Peak detector.
- 4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 5. For the transmitting duration, please refer to clause 7.5.
- 6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
- 7. Proper operation of the transmitter prior to adding the filter to the measurement chain.
- 8. All modes have been tested, but only the worst data was recorded in the report.

For Radiate Spurious emission (18 GHz ~ 26 GHz):

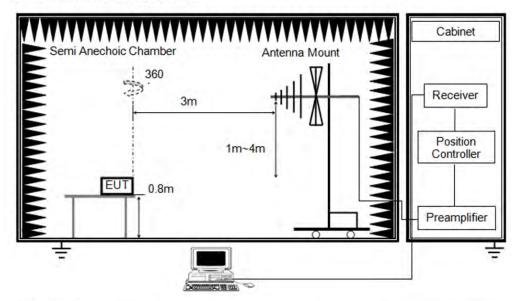
Note:

- 1. Measurement = Reading Level + Correct Factor.
- 2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
- 3. Peak: Peak detector.
- 4. All modes have been tested, but only the worst data was recorded in the report.

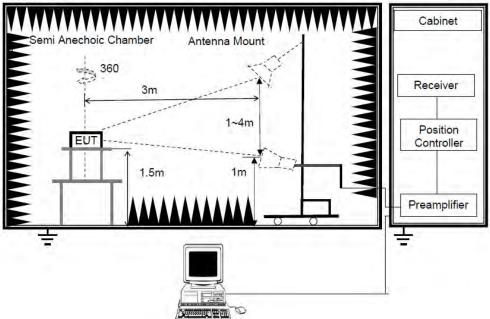
TEST SETUP



Below 1 GHz and above 30 MHz



Above 1GHz



TEST ENVIRONMENT

Temperature	21.6℃	Relative Humidity	59.1%
Atmosphere Pressure	101kPa	Test Voltage	

TEST DATE / ENGINEER

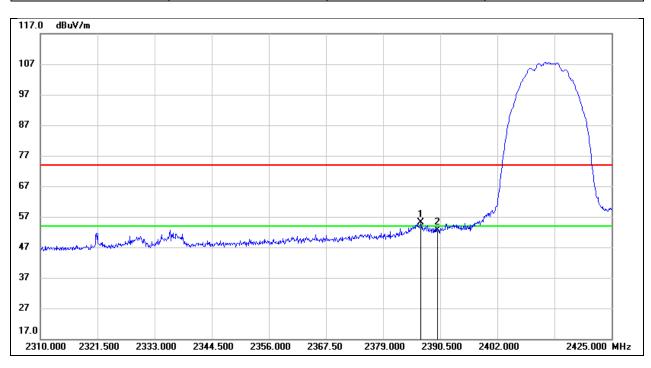
Test Date	January 8, 2025	Test Bv	Mason Wang
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Page 32 of 134

TEST RESULTS

8.1. RESTRICTED BANDEDGE

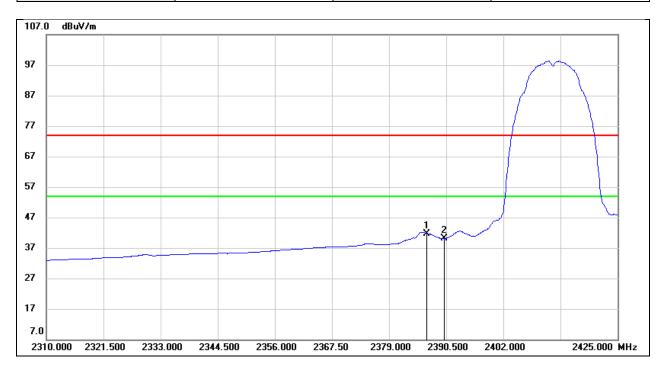
Test Mode:	802.11b PK	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2386.590	23.39	31.72	55.11	74.00	-18.89	peak
2	2390.000	20.92	31.73	52.65	74.00	-21.35	peak



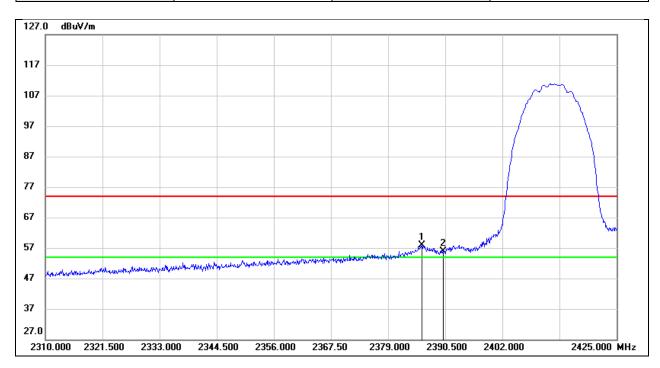
Test Mode:	802.11b AV	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2386.590	9.98	31.72	41.70	54.00	-12.30	AVG
2	2390.000	8.32	31.73	40.05	54.00	-13.95	AVG



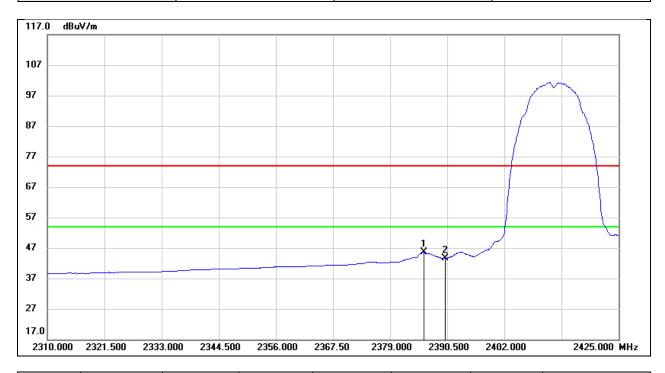
Test Mode:	802.11b PK	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2385.785	25.37	32.53	57.90	74.00	-16.10	peak
2	2390.000	23.33	32.55	55.88	74.00	-18.12	peak



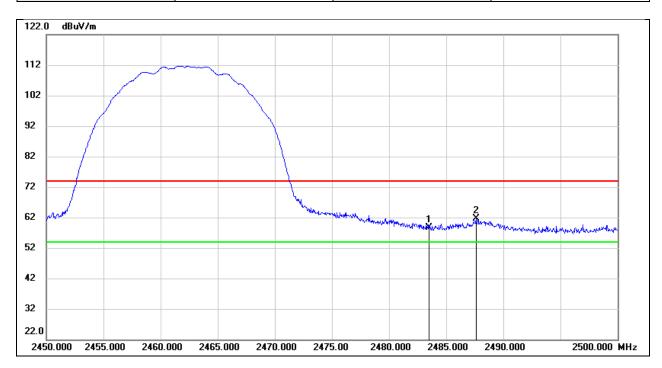
Test Mode:	802.11b AV	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2385.785	12.98	32.53	45.51	54.00	-8.49	AVG
2	2390.000	11.02	32.55	43.57	54.00	-10.43	AVG



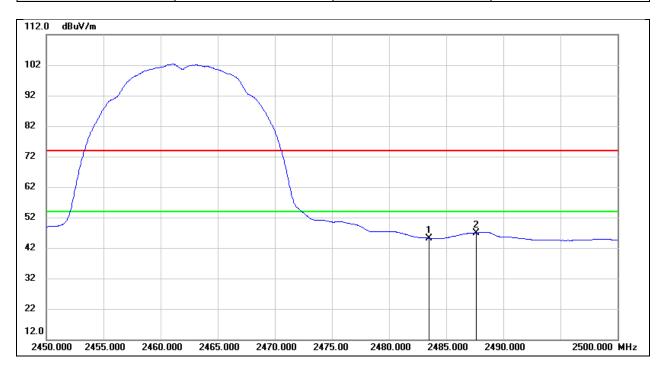
Test Mode:	802.11b PK	Frequency(MHz):	2462
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	25.82	32.80	58.62	74.00	-15.38	peak
2	2487.600	28.83	32.81	61.64	74.00	-12.36	peak



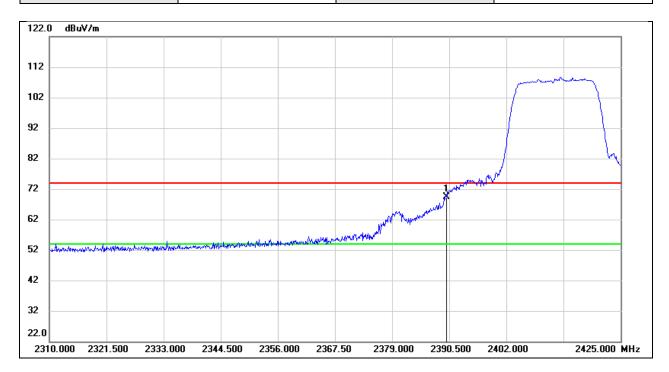
Test Mode:	802.11b AV	Frequency(MHz):	2462
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	12.40	32.80	45.20	54.00	-8.80	AVG
2	2487.600	14.06	32.81	46.87	54.00	-7.13	AVG



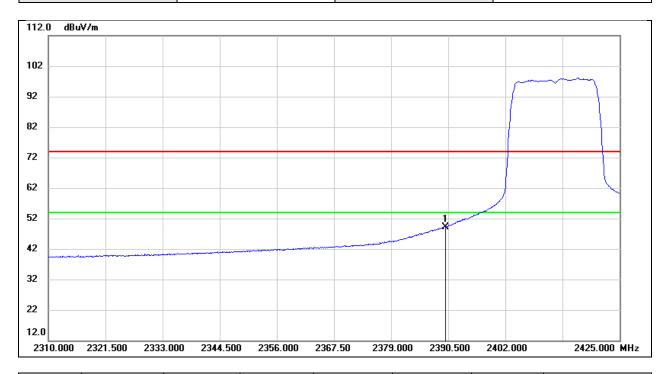
Test Mode:	802.11g PK	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2390.000	36.93	32.55	69.48	74.00	-4.52	peak



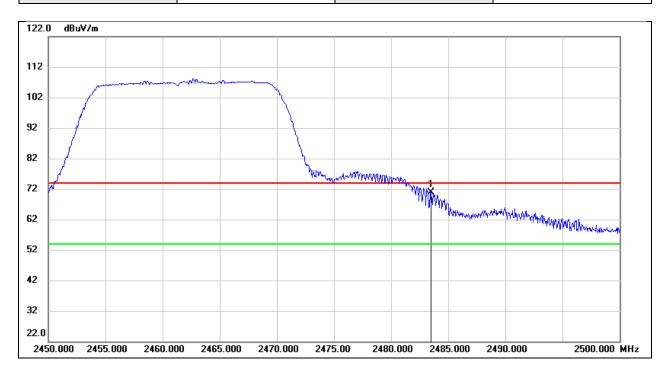
Test Mode:	802.11g AV	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2390.000	16.65	32.55	49.20	54.00	-4.80	AVG



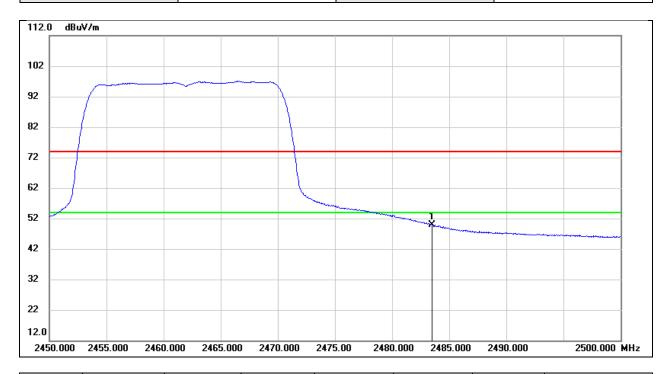
Test Mode:	802.11g PK	Frequency(MHz):	2462
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	38.14	32.80	70.94	74.00	-3.06	peak



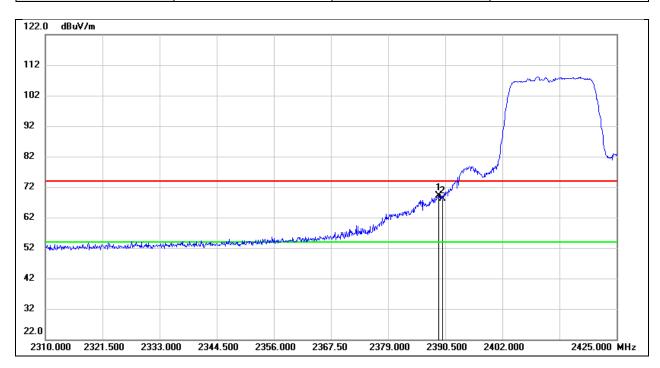
Test Mode:	802.11g AV	Frequency(MHz):	2462
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	17.20	32.80	50.00	54.00	-4.00	AVG



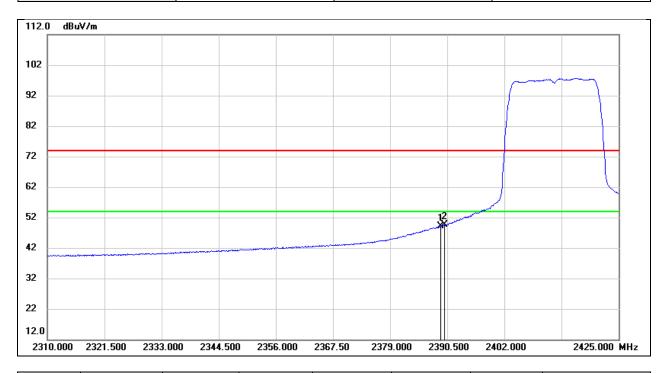
Test Mode:	802.11n HT20 PK	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2389.120	36.65	32.55	69.20	74.00	-4.80	peak
2	2390.000	35.59	32.55	68.14	74.00	-5.86	peak



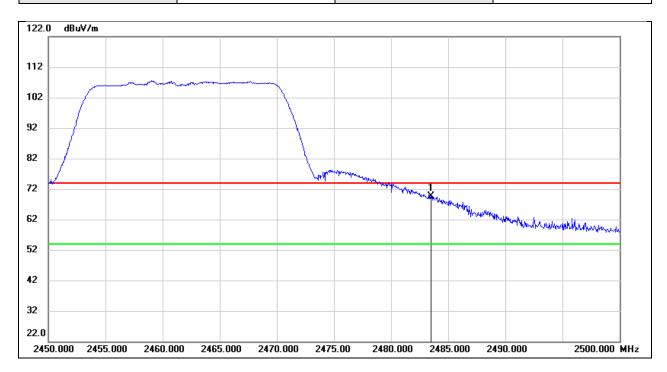
Test Mode:	802.11n HT20 AV	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2389.120	16.59	32.55	49.14	54.00	-4.86	AVG
2	2390.000	16.99	32.55	49.54	54.00	-4.46	AVG



Test Mode:	802.11n HT20 PK	Frequency(MHz):	2462
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz

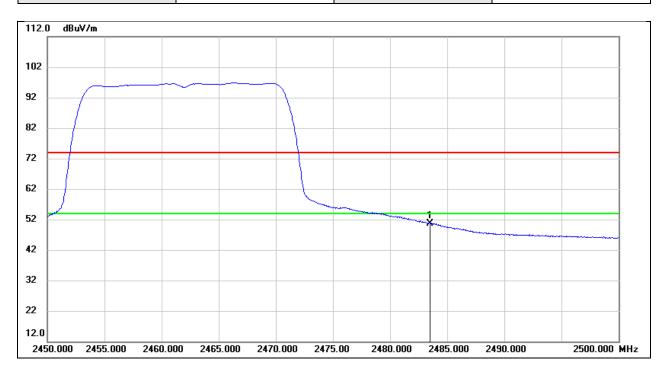


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	36.84	32.80	69.64	74.00	-4.36	peak



Test Mode: 802.11n HT20 AV Frequency(MHz): 2462

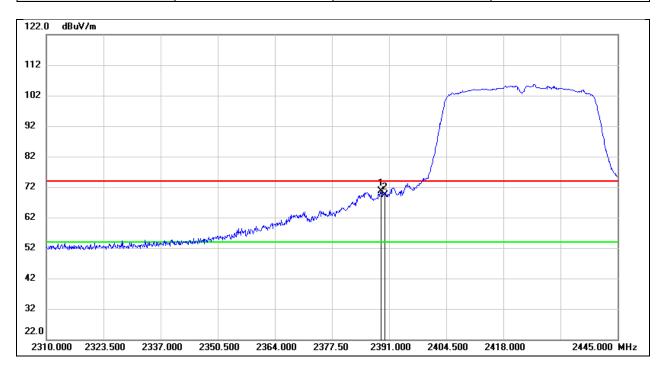
Polarity: Vertical Test Voltage: AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	17.80	32.80	50.60	54.00	-3.40	AVG



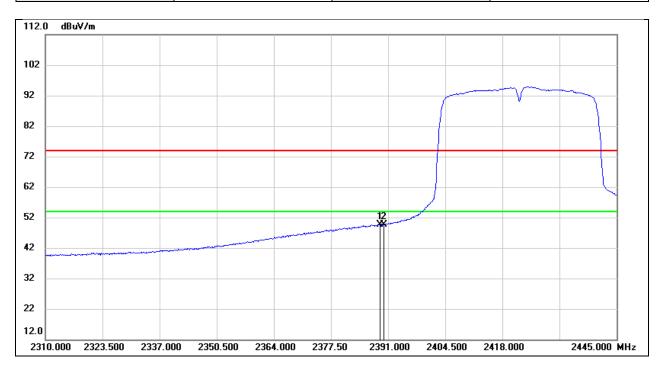
Test Mode:	802.11n HT40 PK	Frequency(MHz):	2422
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2389.110	38.01	32.55	70.56	74.00	-3.44	peak
2	2390.000	36.78	32.55	69.33	74.00	-4.67	peak



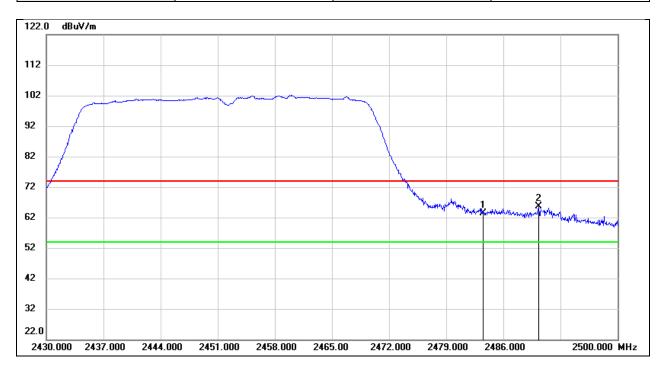
Test Mode:	802.11n HT40 AV	Frequency(MHz):	2422
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2389.110	17.11	32.55	49.66	54.00	-4.34	AVG
2	2390.000	17.14	32.55	49.69	54.00	-4.31	AVG



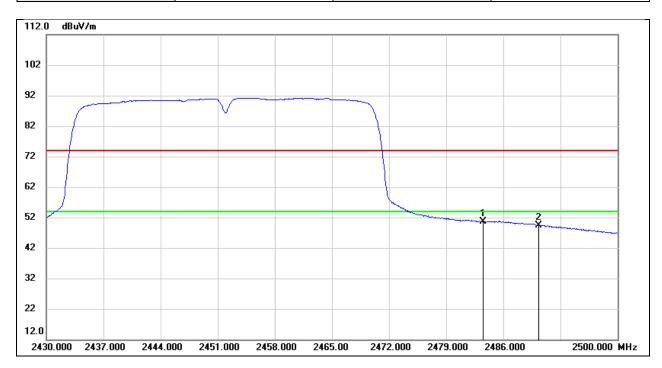
Test Mode:	802.11n HT40 PK	Frequency(MHz):	2452
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	30.68	32.80	63.48	74.00	-10.52	peak
2	2490.340	32.71	32.81	65.52	74.00	-8.48	peak



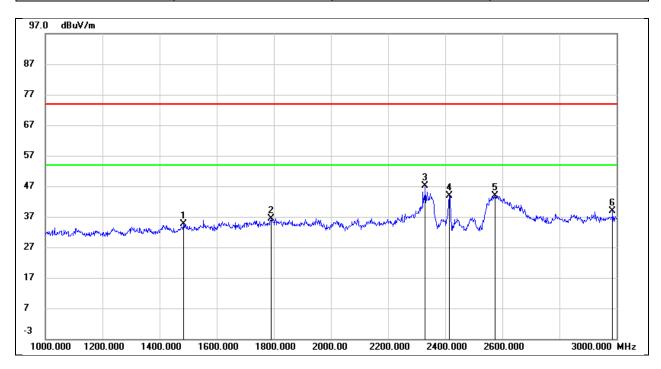
Test Mode:	802.11n HT40 AV	Frequency(MHz):	2452
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	17.85	32.80	50.65	54.00	-3.35	AVG
2	2490.340	16.68	32.81	49.49	54.00	-4.51	AVG

8.2. SPURIOUS EMISSIONS(1 GHZ~3 GHZ)

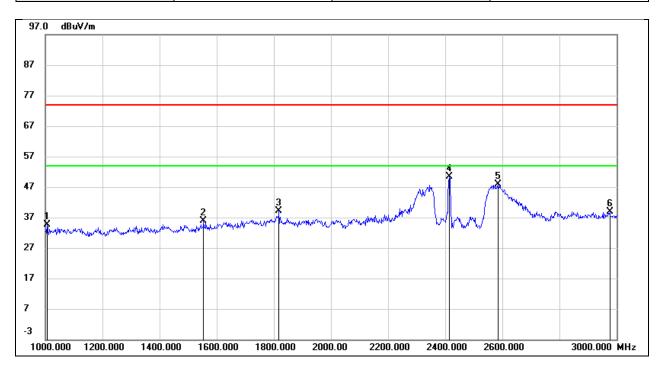
Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1484.000	46.48	-11.97	34.51	74.00	-39.49	peak
2	1790.000	46.33	-10.03	36.30	74.00	-37.70	peak
3	2330.000	56.03	-8.85	47.18	74.00	-26.82	peak
4	2412.000	52.51	-8.53	43.98	/	/	fundamental
5	2574.000	51.78	-7.88	43.90	74.00	-30.10	peak
6	2986.000	44.98	-6.08	38.90	74.00	-35.10	peak



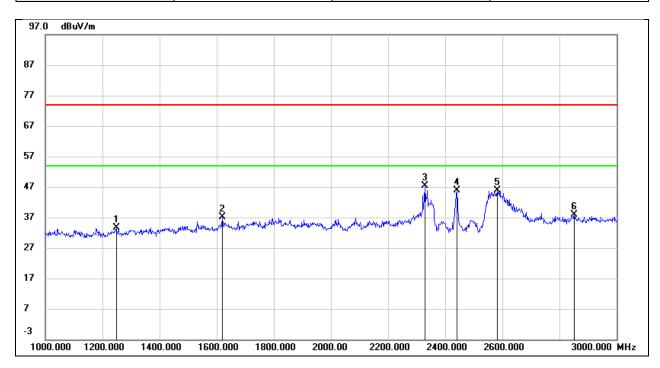
Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1006.000	48.47	-13.72	34.75	74.00	-39.25	peak
2	1554.000	47.34	-11.42	35.92	74.00	-38.08	peak
3	1818.000	48.52	-9.37	39.15	74.00	-34.85	peak
4	2412.000	58.10	-7.71	50.39	/	/	fundamental
5	2584.000	54.79	-6.95	47.84	74.00	-26.16	peak
6	2976.000	43.84	-4.84	39.00	74.00	-35.00	peak



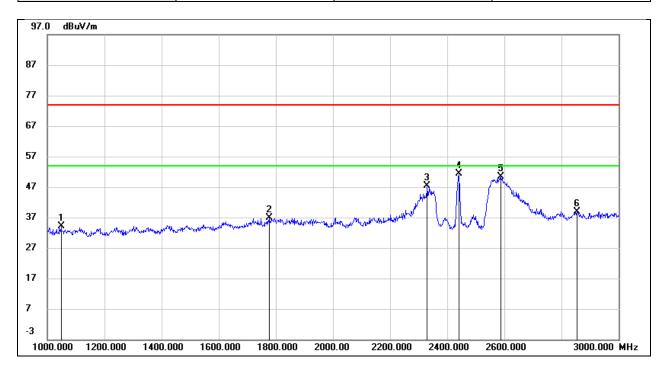
Test Mode:	802.11b	Frequency(MHz):	2437
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1248.000	46.82	-13.23	33.59	74.00	-40.41	peak
2	1620.000	48.27	-11.25	37.02	74.00	-36.98	peak
3	2330.000	56.31	-8.85	47.46	74.00	-26.54	peak
4	2437.000	54.38	-8.43	45.95	/	/	fundamental
5	2582.000	53.60	-7.84	45.76	74.00	-28.24	peak
6	2852.000	44.55	-6.68	37.87	74.00	-36.13	peak



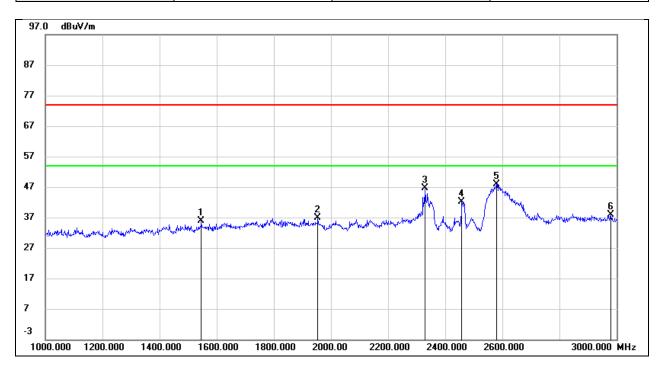
Test Mode:	802.11b	Frequency(MHz):	2437
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1048.000	47.64	-13.56	34.08	74.00	-39.92	peak
2	1778.000	46.32	-9.56	36.76	74.00	-37.24	peak
3	2330.000	55.49	-8.02	47.47	74.00	-26.53	peak
4	2437.000	59.07	-7.63	51.44	/	1	fundamental
5	2588.000	57.20	-6.93	50.27	74.00	-23.73	peak
6	2854.000	44.53	-5.53	39.00	74.00	-35.00	peak



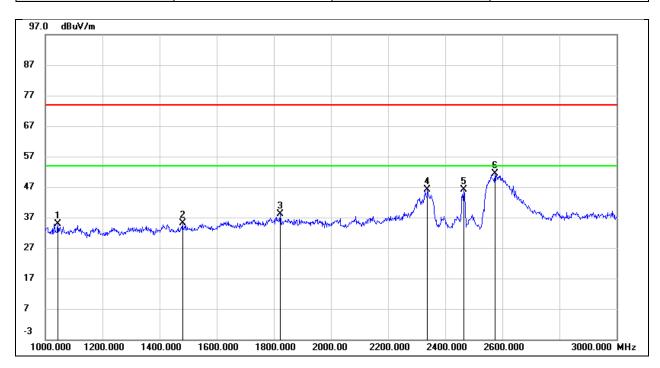
Test Mode:	802.11b	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1546.000	47.43	-11.65	35.78	74.00	-38.22	peak
2	1954.000	46.96	-10.07	36.89	74.00	-37.11	peak
3	2330.000	55.41	-8.85	46.56	74.00	-27.44	peak
4	2462.000	50.43	-8.37	42.06	/	/	fundamental
5	2580.000	55.84	-7.85	47.99	74.00	-26.01	peak
6	2980.000	43.93	-6.10	37.83	74.00	-36.17	peak



Test Mode:	802.11b	Frequency(MHz):	2462
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz

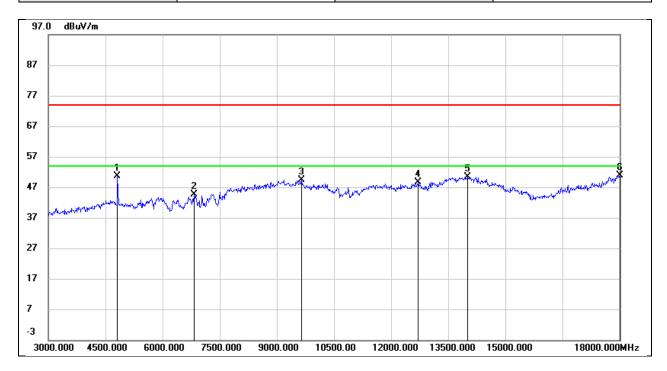


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1044.000	48.51	-13.58	34.93	74.00	-39.07	peak
2	1480.000	46.97	-11.87	35.10	74.00	-38.90	peak
3	1822.000	47.46	-9.37	38.09	74.00	-35.91	peak
4	2338.000	54.07	-7.99	46.08	74.00	-27.92	peak
5	2462.000	53.56	-7.53	46.03	/	/	fundamental
6	2574.000	58.30	-7.00	51.30	74.00	-22.70	peak

REPORT NO.: 4791563717-1-RF-3 Page 56 of 134

8.3. SPURIOUS EMISSIONS(3 GHZ~18 GHZ)

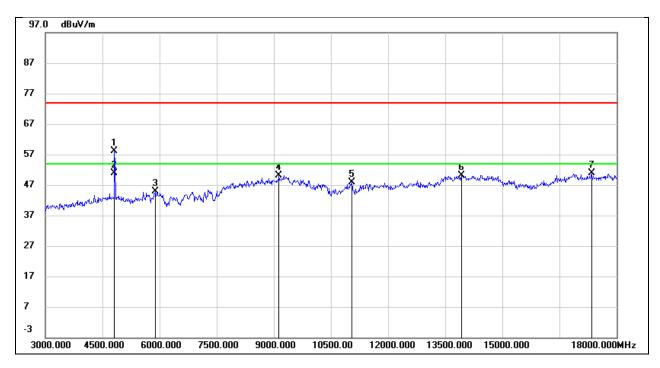
Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4815.000	50.06	0.50	50.56	74.00	-23.44	peak
2	6825.000	38.65	5.94	44.59	74.00	-29.41	peak
3	9645.000	36.54	12.94	49.48	74.00	-24.52	peak
4	12705.000	29.30	19.25	48.55	74.00	-25.45	peak
5	14010.000	26.71	23.78	50.49	74.00	-23.51	peak
6	18000.000	21.14	29.64	50.78	74.00	-23.22	peak



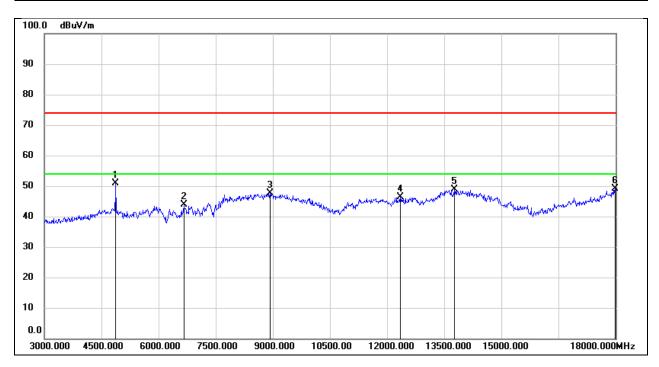
Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4815.000	56.62	1.59	58.21	74.00	-15.79	peak
2	4815.000	49.33	1.59	50.92	54.00	-3.08	AVG
3	5880.000	40.83	3.95	44.78	74.00	-29.22	peak
4	9135.000	39.06	11.09	50.15	74.00	-23.85	peak
5	11055.000	32.50	15.40	47.90	74.00	-26.10	peak
6	13920.000	28.36	21.83	50.19	74.00	-23.81	peak
7	17340.000	25.43	25.37	50.80	74.00	-23.20	peak



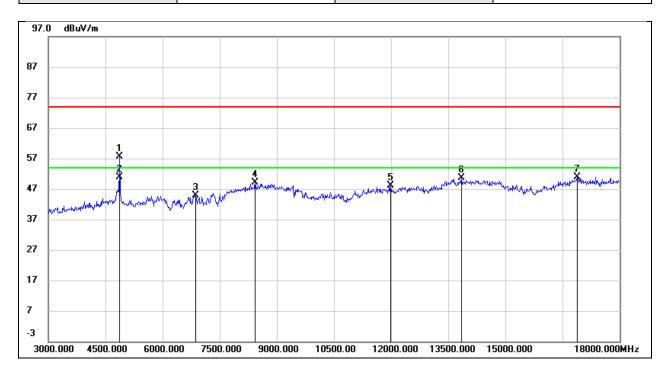
Test Mode:	802.11b	Frequency(MHz):	2437
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4875.000	50.11	0.65	50.76	74.00	-23.24	peak
2	6660.000	38.60	5.31	43.91	74.00	-30.09	peak
3	8925.000	37.65	9.94	47.59	74.00	-26.41	peak
4	12345.000	27.49	18.90	46.39	74.00	-27.61	peak
5	13770.000	25.92	22.88	48.80	74.00	-25.20	peak
6	17985.000	19.74	29.49	49.23	74.00	-24.77	peak



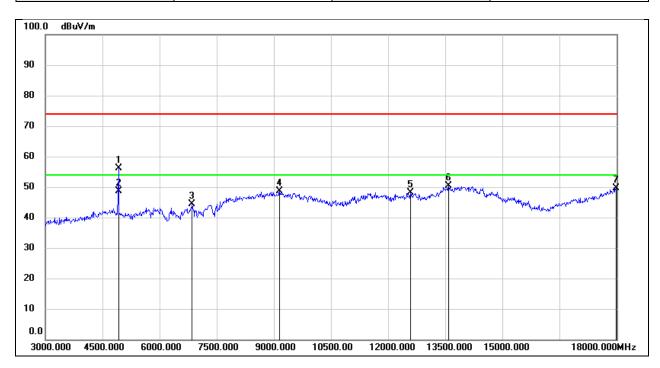
Test Mode:	802.11b	Frequency(MHz):	2437
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4875.000	55.83	1.78	57.61	74.00	-16.39	peak
2	4875.000	49.05	1.78	50.83	54.00	-3.17	AVG
3	6870.000	37.99	6.92	44.91	74.00	-29.09	peak
4	8430.000	39.59	9.51	49.10	74.00	-24.90	peak
5	11985.000	30.56	17.59	48.15	74.00	-25.85	peak
6	13845.000	29.18	21.49	50.67	74.00	-23.33	peak
7	16890.000	25.86	25.05	50.91	74.00	-23.09	peak



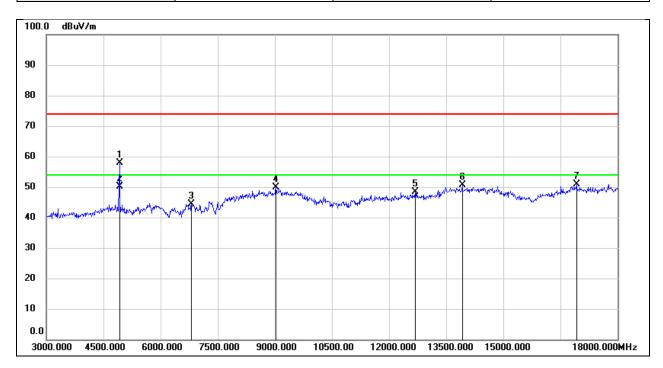
Test Mode:	802.11b	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4920.000	55.35	0.76	56.11	74.00	-17.89	peak
2	4920.000	47.76	0.76	48.52	54.00	-5.48	AVG
3	6855.000	38.27	6.01	44.28	74.00	-29.72	peak
4	9150.000	37.74	10.87	48.61	74.00	-25.39	peak
5	12585.000	29.24	18.96	48.20	74.00	-25.80	peak
6	13590.000	27.77	22.60	50.37	74.00	-23.63	peak
7	17985.000	20.10	29.49	49.59	74.00	-24.41	peak



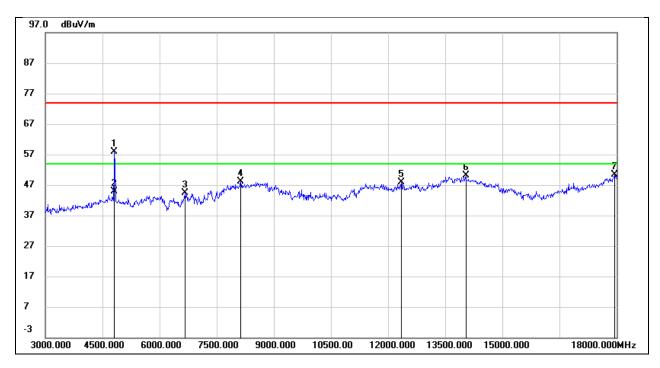
Test Mode:	802.11b	Frequency(MHz):	2462
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4920.000	55.87	1.91	57.78	74.00	-16.22	peak
2	4920.000	48.18	1.91	50.09	54.00	-3.91	AVG
3	6810.000	37.73	6.77	44.50	74.00	-29.50	peak
4	9030.000	39.09	10.68	49.77	74.00	-24.23	peak
5	12690.000	30.31	18.19	48.50	74.00	-25.50	peak
6	13920.000	28.81	21.83	50.64	74.00	-23.36	peak
7	16920.000	25.91	25.08	50.99	74.00	-23.01	peak



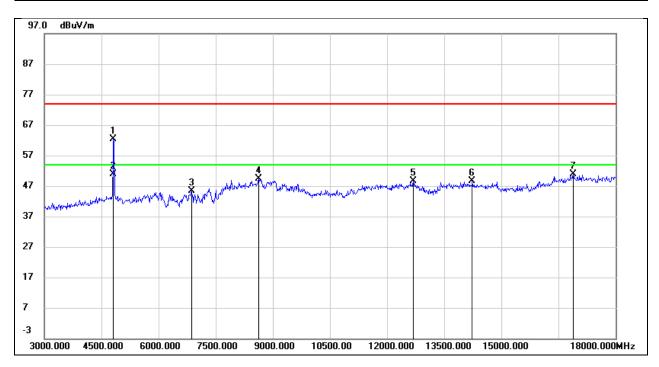
Test Mode:	802.11g	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4815.000	57.45	0.50	57.95	74.00	-16.05	peak
2	4815.000	44.26	0.50	44.76	54.00	-9.24	AVG
3	6660.000	39.10	5.31	44.41	74.00	-29.59	peak
4	8130.000	39.86	8.36	48.22	74.00	-25.78	peak
5	12345.000	29.10	18.90	48.00	74.00	-26.00	peak
6	14040.000	26.50	23.70	50.20	74.00	-23.80	peak
7	17940.000	21.40	29.03	50.43	74.00	-23.57	peak



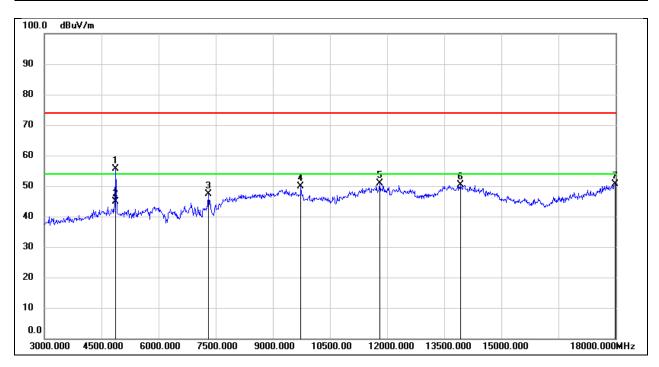
Test Mode:	802.11g	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4815.000	60.74	1.59	62.33	74.00	-11.67	peak
2	4815.000	49.28	1.59	50.87	54.00	-3.13	AVG
3	6870.000	38.38	6.92	45.30	74.00	-28.70	peak
4	8625.000	39.39	9.89	49.28	74.00	-24.72	peak
5	12690.000	30.47	18.19	48.66	74.00	-25.34	peak
6	14235.000	26.50	22.17	48.67	74.00	-25.33	peak
7	16890.000	25.92	25.05	50.97	74.00	-23.03	peak



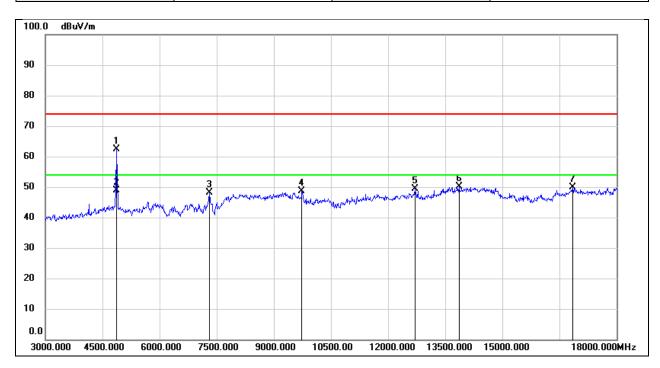
Test Mode:	802.11g	Frequency(MHz):	2437
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4875.000	54.98	0.65	55.63	74.00	-18.37	peak
2	4875.000	44.28	0.65	44.93	54.00	-9.07	AVG
3	7305.000	40.31	7.03	47.34	74.00	-26.66	peak
4	9735.000	36.77	13.15	49.92	74.00	-24.08	peak
5	11805.000	32.30	18.50	50.80	74.00	-23.20	peak
6	13920.000	26.88	23.45	50.33	74.00	-23.67	peak
7	17985.000	21.21	29.49	50.70	74.00	-23.30	peak



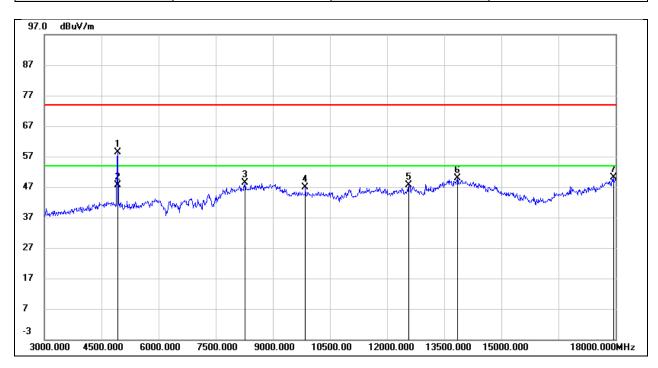
Test Mode:	802.11g	Frequency(MHz):	2437
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4860.000	60.64	1.73	62.37	74.00	-11.63	peak
2	4860.000	47.21	1.73	48.94	54.00	-5.06	AVG
3	7305.000	40.37	7.68	48.05	74.00	-25.95	peak
4	9735.000	35.80	12.82	48.62	74.00	-25.38	peak
5	12705.000	31.13	18.22	49.35	74.00	-24.65	peak
6	13860.000	28.46	21.56	50.02	74.00	-23.98	peak
7	16845.000	24.87	24.99	49.86	74.00	-24.14	peak



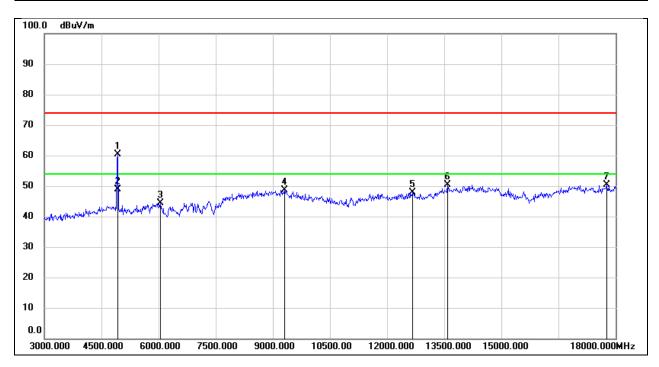
Test Mode:	802.11g	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4920.000	57.69	0.76	58.45	74.00	-15.55	peak
2	4920.000	46.89	0.76	47.65	54.00	-6.35	AVG
3	8265.000	39.61	8.65	48.26	74.00	-25.74	peak
4	9855.000	33.46	13.30	46.76	74.00	-27.24	peak
5	12570.000	28.71	18.94	47.65	74.00	-26.35	peak
6	13845.000	26.65	23.12	49.77	74.00	-24.23	peak
7	17940.000	20.98	29.03	50.01	74.00	-23.99	peak



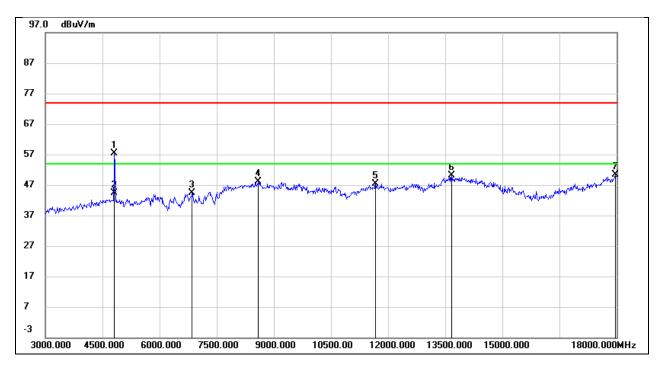
Test Mode:	802.11g	Frequency(MHz):	2462
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4920.000	58.52	1.91	60.43	74.00	-13.57	peak
2	4920.000	47.08	1.91	48.99	54.00	-5.01	AVG
3	6045.000	40.18	4.31	44.49	74.00	-29.51	peak
4	9300.000	37.05	11.68	48.73	74.00	-25.27	peak
5	12675.000	29.70	18.17	47.87	74.00	-26.13	peak
6	13590.000	29.50	20.92	50.42	74.00	-23.58	peak
7	17760.000	24.16	26.16	50.32	74.00	-23.68	peak



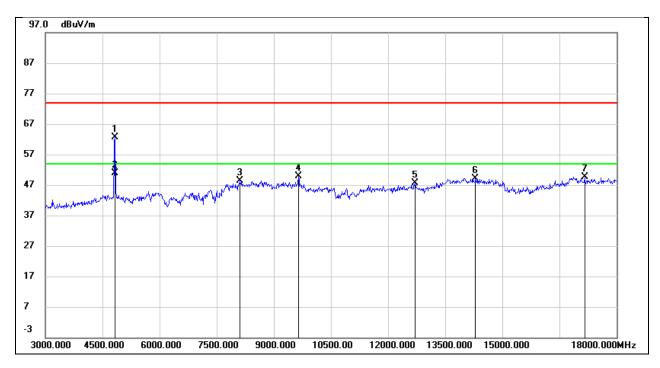
Test Mode:	802.11n HT20	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4815.000	56.84	0.50	57.34	74.00	-16.66	peak
2	4815.000	43.97	0.50	44.47	54.00	-9.53	AVG
3	6855.000	38.25	6.01	44.26	74.00	-29.74	peak
4	8595.000	38.74	9.29	48.03	74.00	-25.97	peak
5	11670.000	29.18	18.27	47.45	74.00	-26.55	peak
6	13665.000	27.42	22.72	50.14	74.00	-23.86	peak
7	17970.000	21.12	29.33	50.45	74.00	-23.55	peak



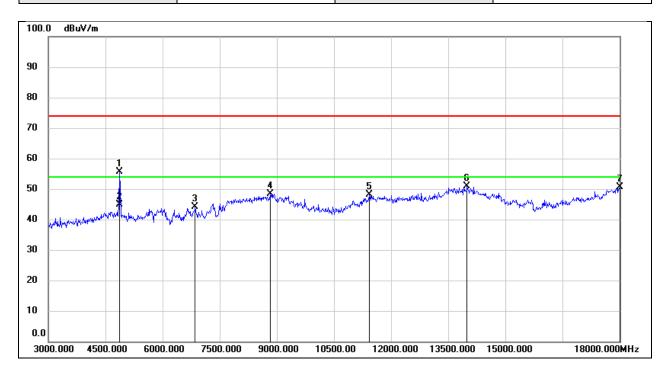
Test Mode:	802.11n HT20	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4830.000	60.91	1.64	62.55	74.00	-11.45	peak
2	4830.000	49.31	1.64	50.95	54.00	-3.05	AVG
3	8115.000	39.46	8.86	48.32	74.00	-25.68	peak
4	9645.000	37.11	12.73	49.84	74.00	-24.16	peak
5	12705.000	29.37	18.22	47.59	74.00	-26.41	peak
6	14295.000	27.17	22.01	49.18	74.00	-24.82	peak
7	17160.000	24.35	25.29	49.64	74.00	-24.36	peak



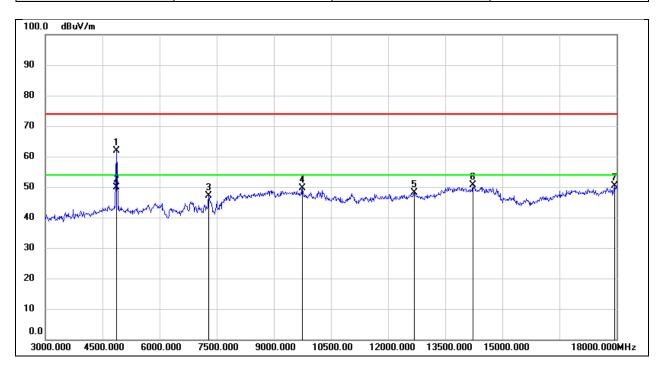
Test Mode:	802.11n HT20	Frequency(MHz):	2437
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4875.000	55.04	0.65	55.69	74.00	-18.31	peak
2	4875.000	44.18	0.65	44.83	54.00	-9.17	AVG
3	6855.000	38.06	6.01	44.07	74.00	-29.93	peak
4	8820.000	38.88	9.62	48.50	74.00	-25.50	peak
5	11430.000	30.35	17.72	48.07	74.00	-25.93	peak
6	13995.000	27.17	23.78	50.95	74.00	-23.05	peak
7	18000.000	21.01	29.64	50.65	74.00	-23.35	peak



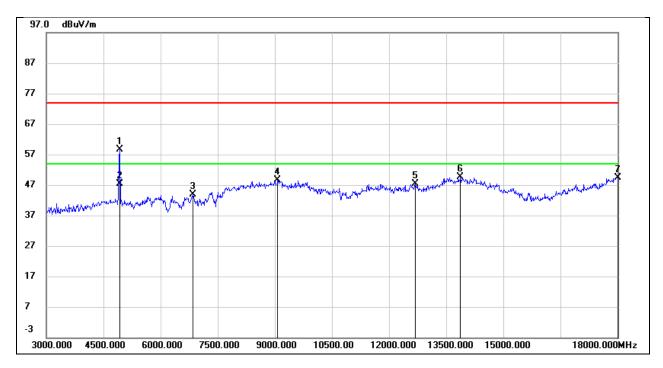
Test Mode:	802.11n HT20	Frequency(MHz):	2437
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4860.000	60.21	1.73	61.94	74.00	-12.06	peak
2	4860.000	48.11	1.73	49.84	54.00	-4.16	AVG
3	7290.000	39.46	7.68	47.14	74.00	-26.86	peak
4	9750.000	36.87	12.83	49.70	74.00	-24.30	peak
5	12690.000	30.04	18.19	48.23	74.00	-25.77	peak
6	14220.000	28.50	22.22	50.72	74.00	-23.28	peak
7	17940.000	23.34	27.10	50.44	74.00	-23.56	peak



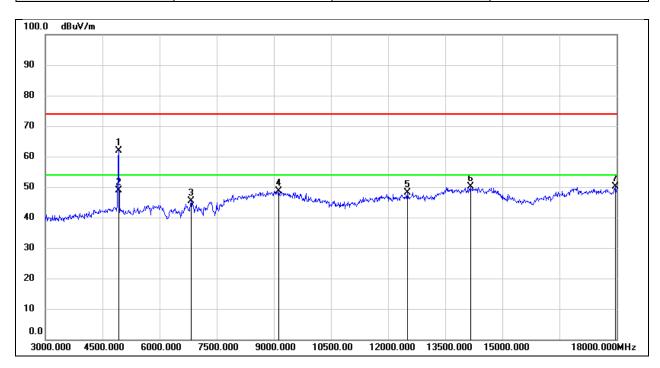
Test Mode:	802.11n HT20	Frequency(MHz):	2462
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4920.000	57.84	0.76	58.60	74.00	-15.40	peak
2	4920.000	46.59	0.76	47.35	54.00	-6.65	AVG
3	6840.000	37.99	5.97	43.96	74.00	-30.04	peak
4	9075.000	38.04	10.52	48.56	74.00	-25.44	peak
5	12690.000	28.10	19.21	47.31	74.00	-26.69	peak
6	13875.000	26.48	23.26	49.74	74.00	-24.26	peak
7	18000.000	19.83	29.64	49.47	74.00	-24.53	peak



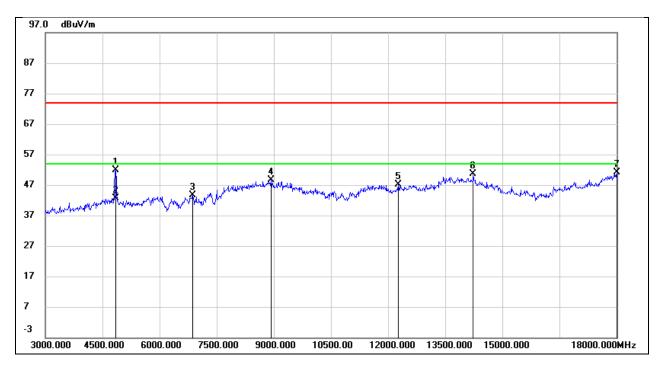
Test Mode:	802.11n HT20	Frequency(MHz):	2462
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4920.000	59.92	1.91	61.83	74.00	-12.17	peak
2	4920.000	47.05	1.91	48.96	54.00	-5.04	AVG
3	6825.000	38.50	6.81	45.31	74.00	-28.69	peak
4	9135.000	37.54	11.09	48.63	74.00	-25.37	peak
5	12510.000	30.24	17.99	48.23	74.00	-25.77	peak
6	14160.000	27.96	22.26	50.22	74.00	-23.78	peak
7	17970.000	22.77	27.26	50.03	74.00	-23.97	peak



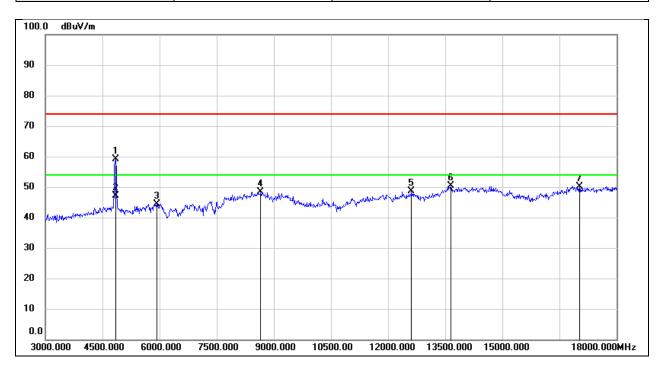
Test Mode:	802.11n HT40	Frequency(MHz):	2422
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4845.000	51.19	0.58	51.77	74.00	-22.23	peak
2	4845.000	42.09	0.58	42.67	54.00	-11.33	AVG
3	6870.000	37.56	6.04	43.60	74.00	-30.40	peak
4	8925.000	38.74	9.94	48.68	74.00	-25.32	peak
5	12270.000	28.36	18.81	47.17	74.00	-26.83	peak
6	14235.000	27.35	23.16	50.51	74.00	-23.49	peak
7	18000.000	21.41	29.64	51.05	74.00	-22.95	peak



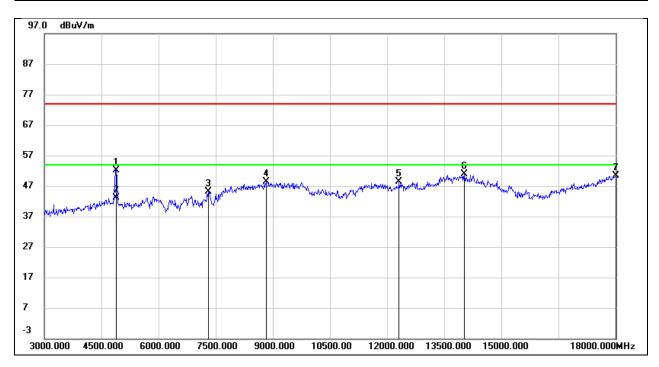
Test Mode:	802.11n HT40	Frequency(MHz):	2422
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4845.000	57.38	1.69	59.07	74.00	-14.93	peak
2	4845.000	45.37	1.69	47.06	54.00	-6.94	AVG
3	5925.000	40.46	4.02	44.48	74.00	-29.52	peak
4	8655.000	38.49	9.91	48.40	74.00	-25.60	peak
5	12615.000	30.48	18.04	48.52	74.00	-25.48	peak
6	13650.000	29.32	21.02	50.34	74.00	-23.66	peak
7	17025.000	24.90	25.19	50.09	74.00	-23.91	peak



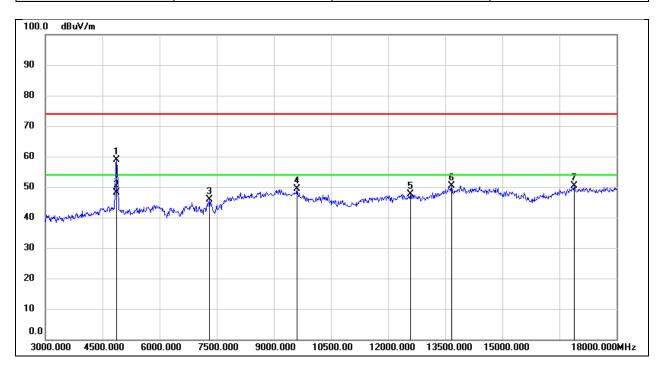
Test Mode:	802.11n HT40	Frequency(MHz):	2437
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4890.000	51.54	0.68	52.22	74.00	-21.78	peak
2	4890.000	42.53	0.68	43.21	54.00	-10.79	AVG
3	7305.000	38.10	7.03	45.13	74.00	-28.87	peak
4	8820.000	38.82	9.62	48.44	74.00	-25.56	peak
5	12315.000	29.53	18.87	48.40	74.00	-25.60	peak
6	14025.000	27.09	23.74	50.83	74.00	-23.17	peak
7	18000.000	20.80	29.64	50.44	74.00	-23.56	peak



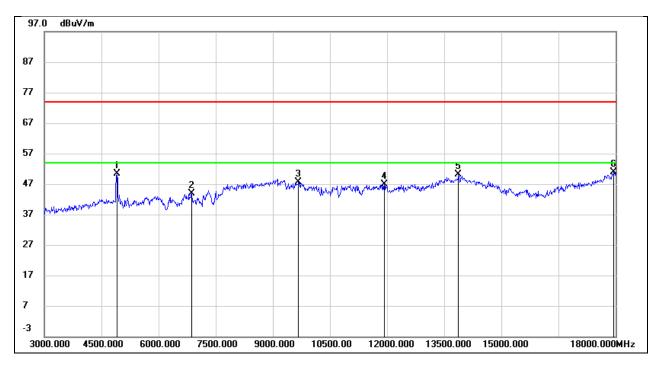
Test Mode:	802.11n HT40	Frequency(MHz):	2437
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4875.000	57.17	1.78	58.95	74.00	-15.05	peak
2	4875.000	46.23	1.78	48.01	54.00	-5.99	AVG
3	7305.000	38.13	7.68	45.81	74.00	-28.19	peak
4	9600.000	36.67	12.69	49.36	74.00	-24.64	peak
5	12585.000	29.62	18.01	47.63	74.00	-26.37	peak
6	13665.000	29.42	21.05	50.47	74.00	-23.53	peak
7	16890.000	25.28	25.05	50.33	74.00	-23.67	peak



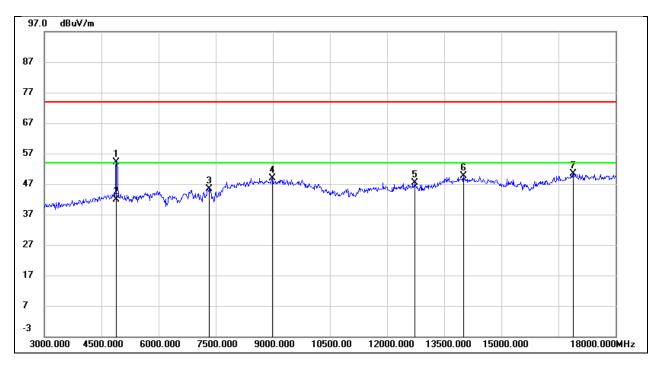
Test Mode:	802.11n HT40	Frequency(MHz):	2452
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4905.000	49.65	0.72	50.37	74.00	-23.63	peak
2	6870.000	37.79	6.04	43.83	74.00	-30.17	peak
3	9675.000	34.57	13.01	47.58	74.00	-26.42	peak
4	11925.000	28.30	18.64	46.94	74.00	-27.06	peak
5	13875.000	26.95	23.26	50.21	74.00	-23.79	peak
6	17955.000	21.60	29.18	50.78	74.00	-23.22	peak



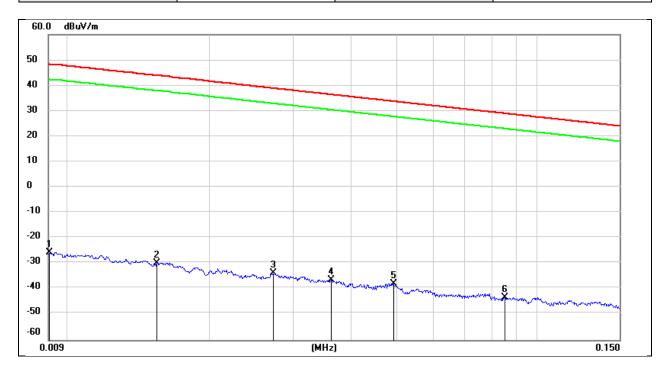
Test Mode:	802.11n HT40	Frequency(MHz):	2452
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4890.000	52.43	1.82	54.25	74.00	-19.75	peak
2	4890.000	40.12	1.82	41.94	54.00	-12.06	AVG
3	7335.000	37.70	7.70	45.40	74.00	-28.60	peak
4	8985.000	38.41	10.53	48.94	74.00	-25.06	peak
5	12720.000	29.11	18.26	47.37	74.00	-26.63	peak
6	14010.000	27.40	22.20	49.60	74.00	-24.40	peak
7	16890.000	25.36	25.05	50.41	74.00	-23.59	peak

8.4. SPURIOUS EMISSIONS(9 KHZ~30 MHZ)

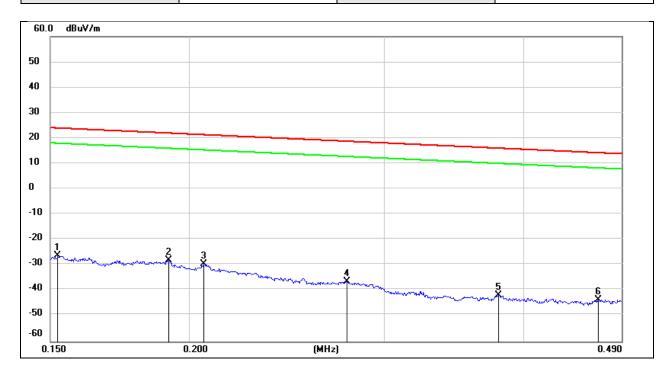
Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	AC 120 V, 60 Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.0091	75.58	-101.33	-25.75	48.28	-74.03	peak
2	0.0154	71.49	-101.37	-29.88	43.85	-73.73	peak
3	0.0273	67.49	-101.38	-33.89	38.88	-72.77	peak
4	0.0362	65.01	-101.42	-36.41	36.43	-72.84	peak
5	0.0492	63.55	-101.47	-37.92	33.76	-71.68	peak
6	0.0854	58.35	-101.68	-43.33	28.97	-72.30	peak



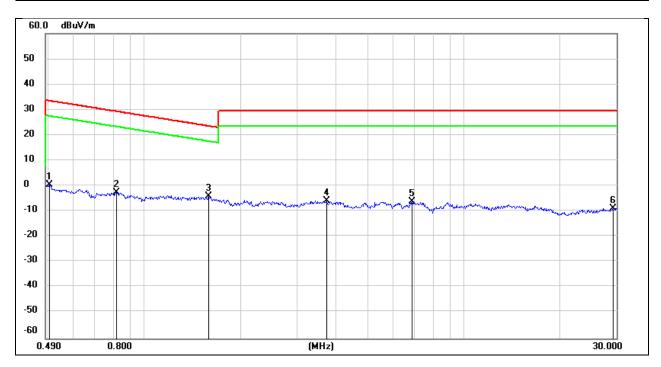
Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	AC 120 V, 60 Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.1524	75.30	-101.63	-26.33	23.94	-50.27	peak
2	0.1917	73.54	-101.70	-28.16	21.95	-50.11	peak
3	0.2061	72.18	-101.73	-29.55	21.32	-50.87	peak
4	0.2775	65.39	-101.83	-36.44	18.74	-55.18	peak
5	0.3800	60.02	-101.94	-41.92	16.01	-57.93	peak
6	0.4667	58.44	-102.03	-43.59	14.22	-57.81	peak



Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	AC 120 V, 60 Hz

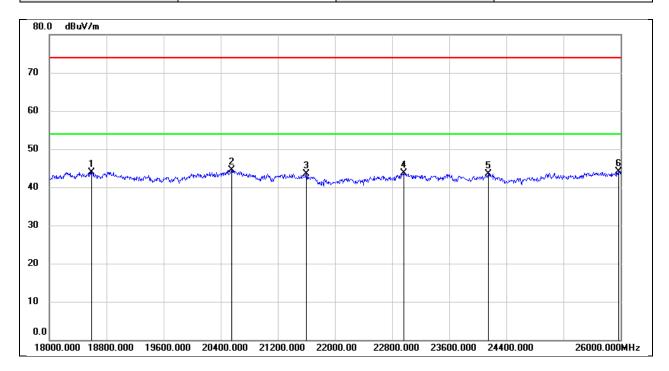


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.5039	62.43	-62.07	0.36	33.56	-33.20	peak
2	0.8162	59.57	-62.16	-2.59	29.37	-31.96	peak
3	1.5887	57.81	-62.00	-4.19	23.58	-27.77	peak
4	3.7100	55.70	-61.41	-5.71	29.54	-35.25	peak
5	6.8936	55.09	-61.22	-6.13	29.54	-35.67	peak
6	29.3213	51.30	-60.02	-8.72	29.54	-38.26	peak

REPORT NO.: 4791563717-1-RF-3 Page 83 of 134

8.5. SPURIOUS EMISSIONS(18 GHZ~26 GHZ)

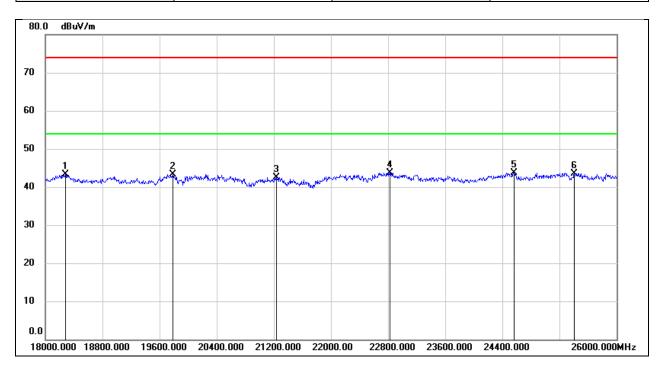
Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	AC 120 V, 60 Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	18592.000	49.25	-5.31	43.94	74.00	-30.06	peak
2	20552.000	49.86	-5.30	44.56	74.00	-29.44	peak
3	21600.000	48.02	-4.54	43.48	74.00	-30.52	peak
4	22960.000	47.09	-3.48	43.61	74.00	-30.39	peak
5	24152.000	46.39	-2.80	43.59	74.00	-30.41	peak
6	25968.000	45.13	-1.00	44.13	74.00	-29.87	peak



Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	AC 120 V, 60 Hz

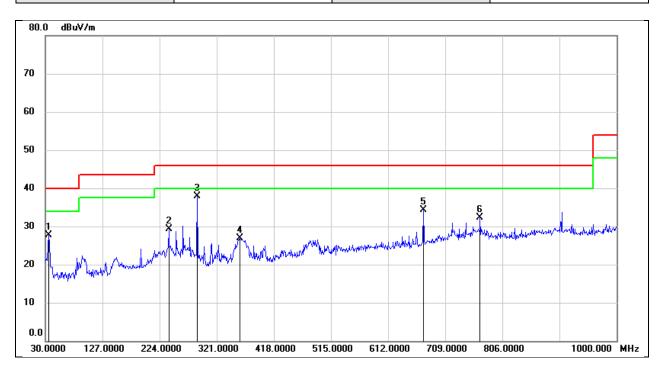


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	18280.000	48.75	-5.52	43.23	74.00	-30.77	peak
2	19784.000	48.57	-5.28	43.29	74.00	-30.71	peak
3	21240.000	47.27	-4.77	42.50	74.00	-31.50	peak
4	22824.000	47.42	-3.62	43.80	74.00	-30.20	peak
5	24568.000	46.10	-2.33	43.77	74.00	-30.23	peak
6	25408.000	45.28	-1.73	43.55	74.00	-30.45	peak

REPORT NO.: 4791563717-1-RF-3 Page 85 of 134

8.6. SPURIOUS EMISSIONS(30 MHZ~1 GHZ)

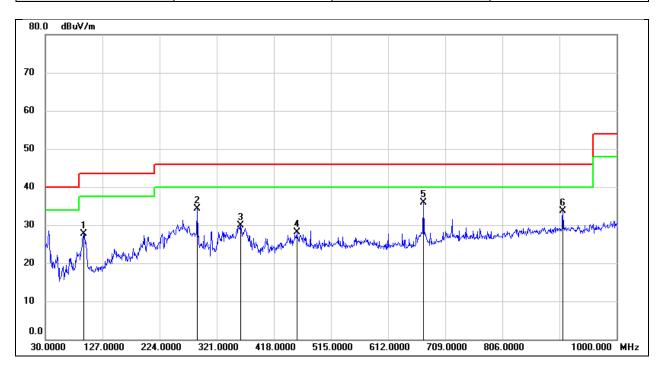
Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Horizontal	Test Voltage:	AC 120V_60Hz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	35.8200	42.01	-14.24	27.77	40.00	-12.23	QP
2	239.5200	42.59	-13.27	29.32	46.00	-16.68	QP
3	288.0200	49.29	-11.46	37.83	46.00	-8.17	QP
4	360.7700	35.37	-8.56	26.81	46.00	-19.19	QP
5	672.1400	38.13	-3.90	34.23	46.00	-11.77	QP
6	768.1700	33.45	-1.20	32.25	46.00	-13.75	QP



Test Mode:	802.11b	Frequency(MHz):	2412
Polarity:	Vertical	Test Voltage:	AC 120V_60Hz



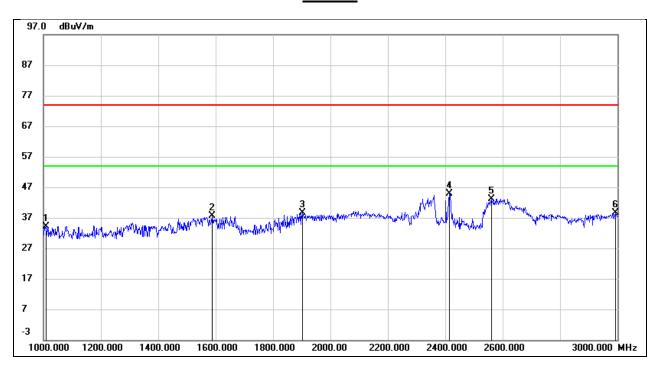
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	94.9900	43.58	-15.95	27.63	43.50	-15.87	QP
2	288.0200	45.82	-11.46	34.36	46.00	-11.64	QP
3	361.7400	38.39	-8.54	29.85	46.00	-16.15	QP
4	456.8000	35.18	-7.08	28.10	46.00	-17.90	QP
5	672.1400	39.72	-3.90	35.82	46.00	-10.18	QP
6	908.8200	33.55	0.08	33.63	46.00	-12.37	QP

REPORT NO.: 4791563717-1-RF-3 Page 87 of 134

8.7. SPURIOUS EMISSIONS FOR SIMULTANEOUS TRANSMISSION

<u>SPURIOUS EMISSIONS (802.11n HT20 2.4GHz LOW CHANNEL & BLE 1M LOW CHANNEL</u> & BT 8DPSK LOW CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)

1-3 GHz

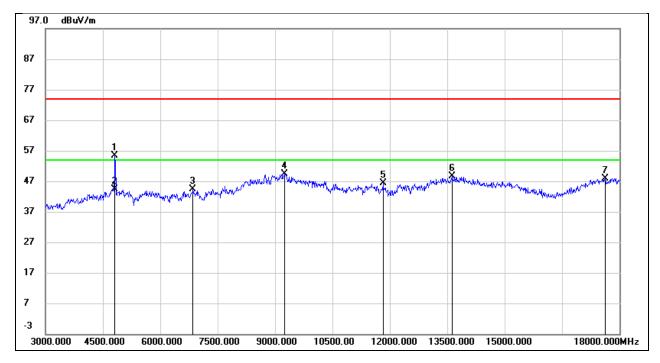


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1008.000	48.54	-14.41	34.13	74.00	-39.87	peak
2	1588.000	48.98	-11.44	37.54	74.00	-36.46	peak
3	1902.000	48.74	-10.04	38.70	74.00	-35.30	peak
4	2412.000	53.51	-8.53	44.98	/	/	fundamental
5	2560.000	51.17	-7.93	43.24	74.00	-30.76	peak
6	2992.000	44.63	-6.04	38.59	74.00	-35.41	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 5. For the transmitting duration, please refer to clause 7.7.
- 6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
 - 7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

REPORT NO.: 4791563717-1-RF-3 Page 88 of 134

3-18 GHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4815.000	54.84	0.50	55.34	74.00	-18.66	peak
2	4815.000	43.97	0.50	44.47	54.00	-9.53	AVG
3	6855.000	38.25	6.01	44.26	74.00	-29.74	peak
4	9255.000	38.13	11.32	49.45	74.00	-24.55	peak
5	11820.000	27.77	18.51	46.28	74.00	-27.72	peak
6	13620.000	25.86	22.65	48.51	74.00	-25.49	peak
7	17625.000	21.56	26.33	47.89	74.00	-26.11	peak

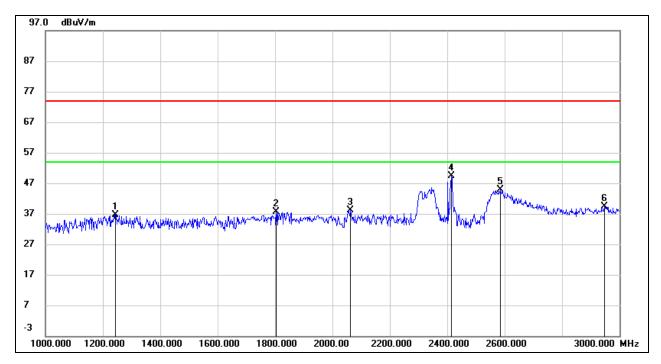
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 5. For the transmitting duration, please refer to clause 7.5.
- 6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
 - 7. Proper operation of the transmitter prior to adding the filter to the measurement chain.



Page 89 of 134

<u>SPURIOUS EMISSIONS (802.11n HT20 2.4GHz LOW CHANNEL & BLE 1M LOW CHANNEL & BT 8DPSK LOW CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)</u>

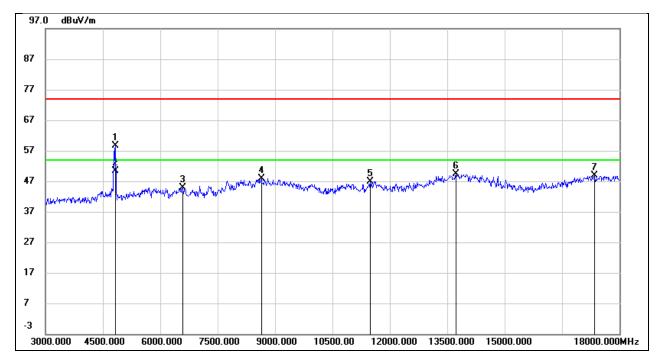
1-3 GHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1244.000	49.51	-12.84	36.67	74.00	-37.33	peak
2	1804.000	47.00	-9.37	37.63	74.00	-36.37	peak
3	2062.000	47.21	-8.98	38.23	74.00	-35.77	peak
4	2412.000	57.11	-7.72	49.39	/	/	fundamental
5	2584.000	51.79	-6.95	44.84	74.00	-29.16	peak
6	2948.000	44.39	-5.00	39.39	74.00	-34.61	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 5. For the transmitting duration, please refer to clause 7.5.
- 6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses.
 - 7. Proper operation of the transmitter prior to adding the filter to the measurement chain.

3-18 GHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4830.000	56.91	1.64	58.55	74.00	-15.45	peak
2	4830.000	48.84	1.64	50.48	54.00	-3.52	AVG
3	6585.000	39.14	5.82	44.96	74.00	-29.04	peak
4	8640.000	38.08	9.90	47.98	74.00	-26.02	peak
5	11490.000	30.53	16.45	46.98	74.00	-27.02	peak
6	13725.000	28.11	21.16	49.27	74.00	-24.73	peak
7	17340.000	23.60	25.37	48.97	74.00	-25.03	peak

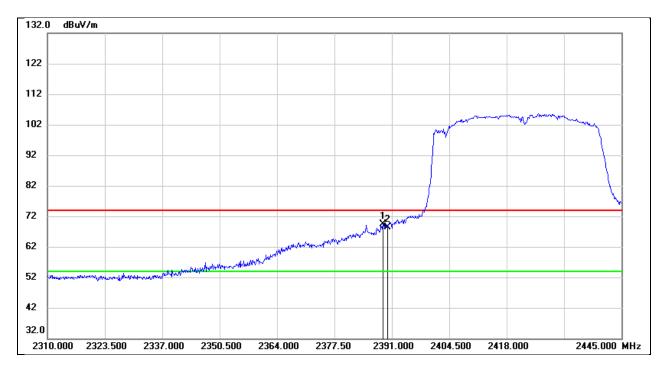
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. AVG: VBW=1/Ton, where: Ton is the transmitting duration.
- 5. For the transmitting duration, please refer to clause 7.5.
- 6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
 - 7. Proper operation of the transmitter prior to adding the filter to the measurement chain.



Page 91 of 134

RESTRICTED BANDEDGE (802.11n HT20 2.4GHz LOW CHANNEL & BLE 1M LOW CHANNEL & BT 8DPSK LOW CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)

<u>Peak</u>



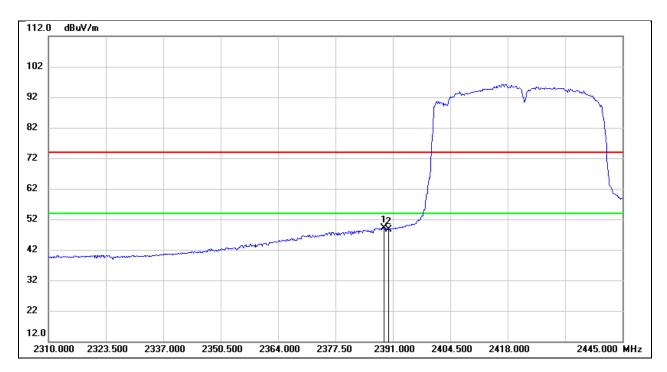
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2388.840	36.77	32.55	69.32	74.00	-4.68	peak
2	2390.000	35.78	32.55	68.33	74.00	-5.67	peak

Note:

- 1. Measurement = Reading Level + Correct Factor.
- 2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
- 3. PK=Peak: Peak detector.
- 4. AV=Average: VBW=1/Ton, where: Ton is the transmitting duration.
- 5. For the transmitting duration, please refer to clause 7.5.
- 6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.
- 7. Both horizontal and vertical have been tested, only the worst data was recorded in the report.
- 8. All modes have been tested, but only the worst data was recorded in the report.



<u>AVG</u>



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2388.840	16.54	32.55	49.09	54.00	-4.91	AVG
2	2390.000	16.14	32.55	48.69	54.00	-5.31	AVG

Note:

- 1. Measurement = Reading Level + Correct Factor.
- 2. If the peak values are less than the average limit of 54 dBuV/m, the average result is deemed to comply with average limit.
- 3. PK=Peak: Peak detector.
- 4. AV=Average: VBW=1/Ton, where: Ton is the transmitting duration.
- 5. For the transmitting duration, please refer to clause 7.7.
- 6. Only the worst data was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.
- 7. Both horizontal and vertical have been tested, only the worst data was recorded in the report.
- 8. All modes have been tested, but only the worst data was recorded in the report.



Page 93 of 134

9. ANTENNA REQUIREMENT

REQUIREMENT

Please refer to FCC part 15.203

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 shall be considered sufficient to comply with the provisions of this section. 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.

Please refer to FCC part 15.247(b)(4)

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.

DESCRIPTION

Pass



10. AC POWER LINE CONDUCTED EMISSION

LIMITS

Please refer to CFR 47 FCC §15.207 (a).

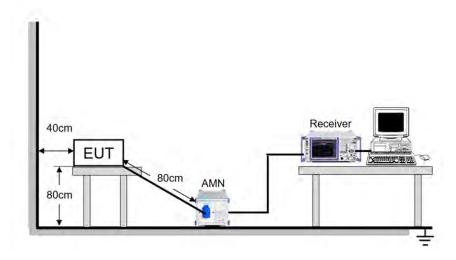
FREQUENCY (MHz)	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

TEST PROCEDURE

The EUT is put on a table of non-conducting material that is 80 cm high. The vertical conducting wall of shielding is located 40 cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10-2013. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9 kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

TEST SETUP





Page 95 of 134

TEST ENVIRONMENT

Temperature	23.4 ℃	Relative Humidity	52%
Atmosphere Pressure	101kPa	Test Voltage	AC 120 V, 60 Hz

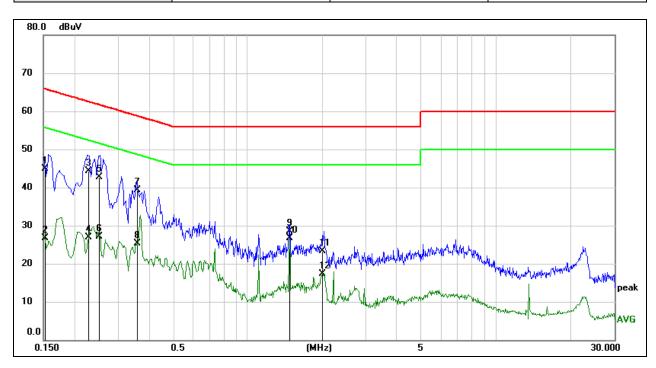
TEST DATE / ENGINEER

Test Date	January 11, 2025	Test Bv	Fannv Huang
1 COL Dato	Juliadi y 11, 2020	1 COL Dy	i ailily i laalig



TEST RESULTS

Test Mode:	802.11b	Frequency(MHz):	2412
Line:	Line		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1526	35.14	9.73	44.87	65.86	-20.99	QP
2	0.1526	16.91	9.73	26.64	55.86	-29.22	AVG
3	0.2289	34.59	9.64	44.23	62.49	-18.26	QP
4	0.2289	17.29	9.64	26.93	52.49	-25.56	AVG
5	0.2516	33.06	9.64	42.70	61.70	-19.00	QP
6	0.2516	17.55	9.64	27.19	51.70	-24.51	AVG
7	0.3585	29.66	9.64	39.30	58.76	-19.46	QP
8	0.3585	15.66	9.64	25.30	48.76	-23.46	AVG
9	1.4745	18.76	9.69	28.45	56.00	-27.55	QP
10	1.4745	17.03	9.69	26.72	46.00	-19.28	AVG
11	2.0212	13.56	9.74	23.30	56.00	-32.70	QP
12	2.0212	7.53	9.74	17.27	46.00	-28.73	AVG

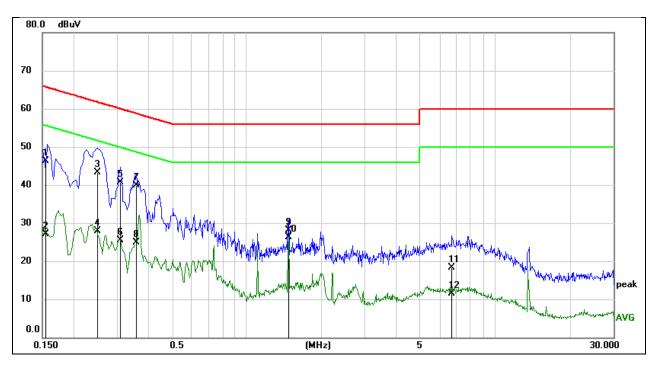
Note:

- 1. Result = Reading + Correct Factor.
- 2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
- 4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Note: All the modes have been tested, only the worst data was recorded in the report.



Test Mode:	802.11b	Frequency(MHz):	2412
Line:	Neutral		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1547	36.75	9.64	46.39	65.74	-19.35	QP
2	0.1547	17.56	9.64	27.20	55.74	-28.54	AVG
3	0.2493	33.76	9.64	43.40	61.78	-18.38	QP
4	0.2493	18.18	9.64	27.82	51.78	-23.96	AVG
5	0.3088	31.14	9.64	40.78	60.00	-19.22	QP
6	0.3088	15.85	9.64	25.49	50.00	-24.51	AVG
7	0.3591	30.17	9.64	39.81	58.75	-18.94	QP
8	0.3591	15.17	9.64	24.81	48.75	-23.94	AVG
9	1.4736	18.50	9.64	28.14	56.00	-27.86	QP
10	1.4736	16.73	9.64	26.37	46.00	-19.63	AVG
11	6.7610	8.55	9.72	18.27	60.00	-41.73	QP
12	6.7610	1.81	9.72	11.53	50.00	-38.47	AVG

Note:

- 1. Result = Reading + Correct Factor.
- 2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 200 Hz (9 kHz ~ 150 kHz), 9 kHz (150 kHz ~ 30 MHz).
- 4. Step size: 80 Hz (0.009 MHz ~ 0.15 MHz), 4 kHz (0.15 MHz ~ 30 MHz), Scan time: auto.

Note: All the modes have been tested, only the worst data was recorded in the report.



Page 98 of 134

11. TEST DATA

11.1. APPENDIX A: DTS BANDWIDTH 11.1.1. Test Result

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
	2412	8.360	2407.480	2415.840	≥0.5	PASS	
11B	Ant1	2437	9.040	2432.480	2441.520	≥0.5	PASS
		2462	9.640	2456.960	2466.600	≥0.5	PASS
	11G Ant1	2412	16.400	2403.800	2420.200	≥0.5	PASS
11G		2437	16.360	2428.800	2445.160	≥0.5	PASS
		2462	16.360	2453.800	2470.160	≥0.5	PASS
		2412	16.920	2403.600	2420.520	≥0.5	PASS
11N20SISO	Ant1	2437	17.600	2428.200	2445.800	≥0.5	PASS
		2462	17.120	2453.400	2470.520	≥0.5	PASS
		2422	35.040	2404.480	2439.520	≥0.5	PASS
11N40SISO	Ant1	2437	35.040	2419.480	2454.520	≥0.5	PASS
		2452	34.400	2434.720	2469.120	≥0.5	PASS



11.1.2. Test Graphs

















Page 103 of 134

11.2. APPENDIX B: OCCUPIED CHANNEL BANDWIDTH 11.2.1. Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]
		2412	13.103	2405.4398	2418.5428
11B	Ant1	2437	13.045	2430.4855	2443.5305
		2462	13.022	2455.4691	2468.4911
	Ant1	2412	16.825	2403.6080	2420.4330
11G		2437	16.871	2428.5853	2445.4563
		2462	16.842	2453.5891	2470.4311
	Ant1	2412	17.597	2403.2081	2420.8051
11N20SISO		2437	17.569	2428.2243	2445.7933
		2462	17.544	2453.2397	2470.7837
		2422	35.855	2404.1116	2439.9666
11N40SISO	Ant1	2437	35.919	2419.1311	2455.0501
		2452	35.917	2434.0919	2470.0089



11.2.2. Test Graphs



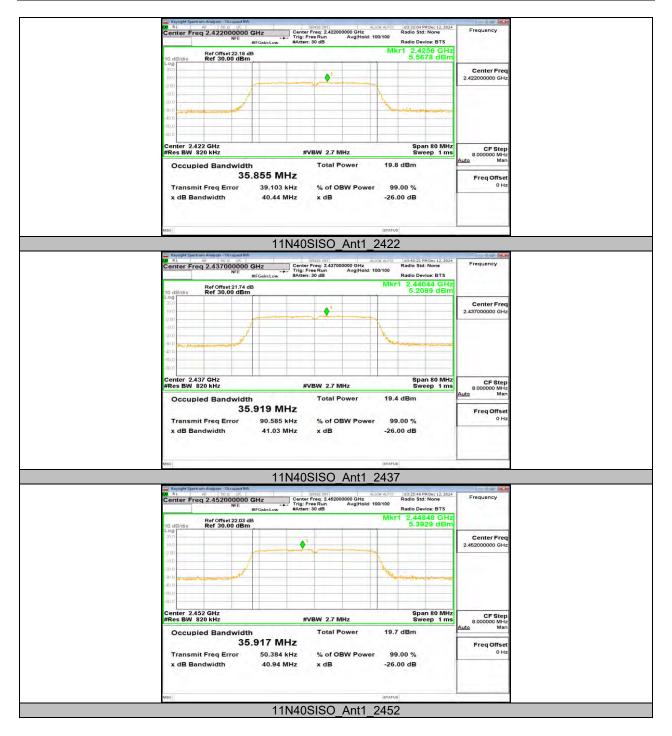












Page 108 of 134

11.3. APPENDIX C: MAXIMUM CONDUCTED AVG OUTPUT POWER 11.3.1. Test Result

Test Mode	Antenna	Frequency[MHz]	Result[dBm]	Limit[dBm]	Verdict
11B		2412	12.73	≤29.00	PASS
	Ant1	2437	12.05	≤29.00	PASS
		2462	12.63	≤29.00	PASS
	Ant1	2412	16.54	≤29.00	PASS
11G		2437	16.88	≤29.00	PASS
		2462	15.57	≤29.00	PASS
	Ant1	2412	16.59	≤29.00	PASS
11N20SISO		2437	16.37	≤29.00	PASS
		2462	15.70	≤29.00	PASS
	Ant1	2422	12.86	≤29.00	PASS
11N40SISO		2437	12.49	≤29.00	PASS
		2452	12.75	≤29.00	PASS

Note: 1. Conducted Power=Meas. Level+ Correction Factor

^{2.} The Duty Cycle Factor (refer to section 7.5) had already compensated to the test data.

Page 109 of 134

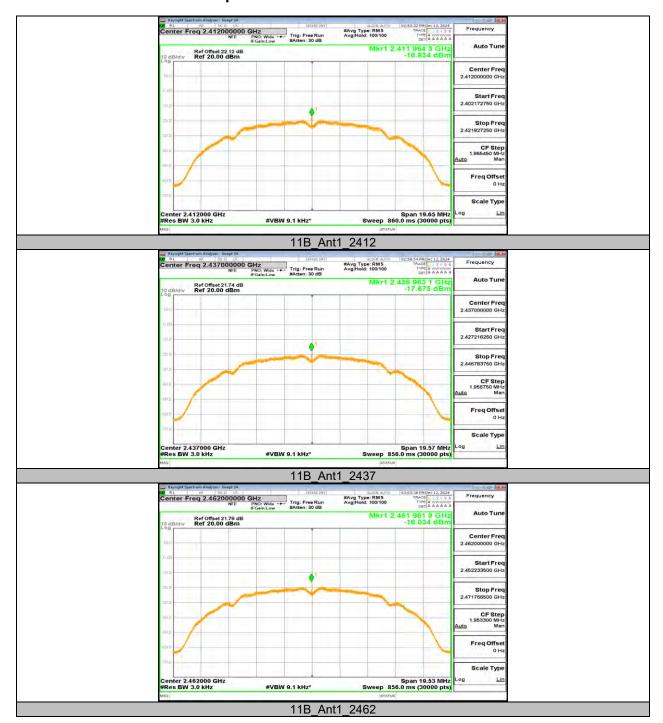
11.4. APPENDIX D: MAXIMUM POWER SPECTRAL DENSITY 11.4.1. Test Result

Test Mode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
	Ant1	2412	-16.83	≤8.00	PASS
11B		2437	-17.68	≤8.00	PASS
		2462	-16.03	≤8.00	PASS
11G	Ant1	2412	-15.09	≤8.00	PASS
		2437	-12.27	≤8.00	PASS
		2462	-14.70	≤8.00	PASS
11N20SISO	Ant1	2412	-12.35	≤8.00	PASS
		2437	-12.02	≤8.00	PASS
		2462	-14.22	≤8.00	PASS
11N40SISO	Ant1	2422	-16.87	≤8.00	PASS
		2437	-17.10	≤8.00	PASS
		2452	-17.62	≤8.00	PASS

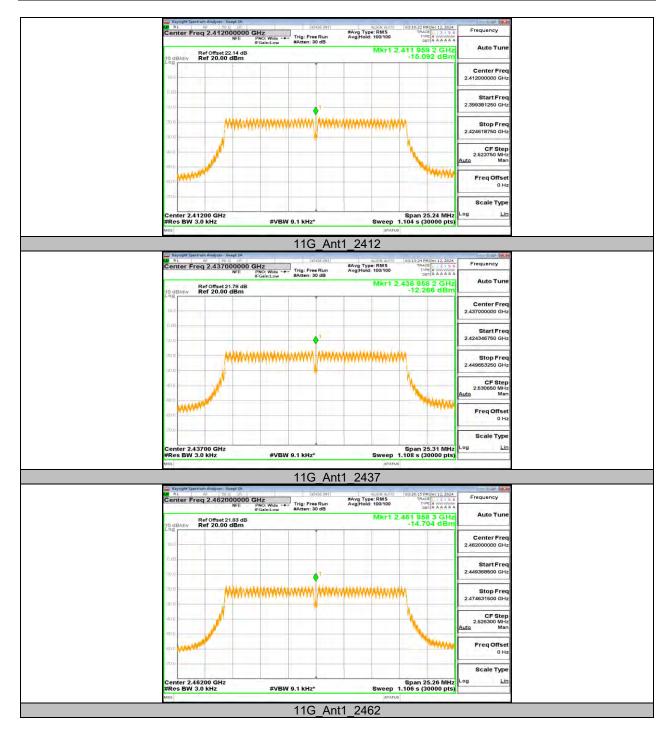
Note: 1. The Duty Cycle Factor (refer to section 7.5) had already compensated to the test data.



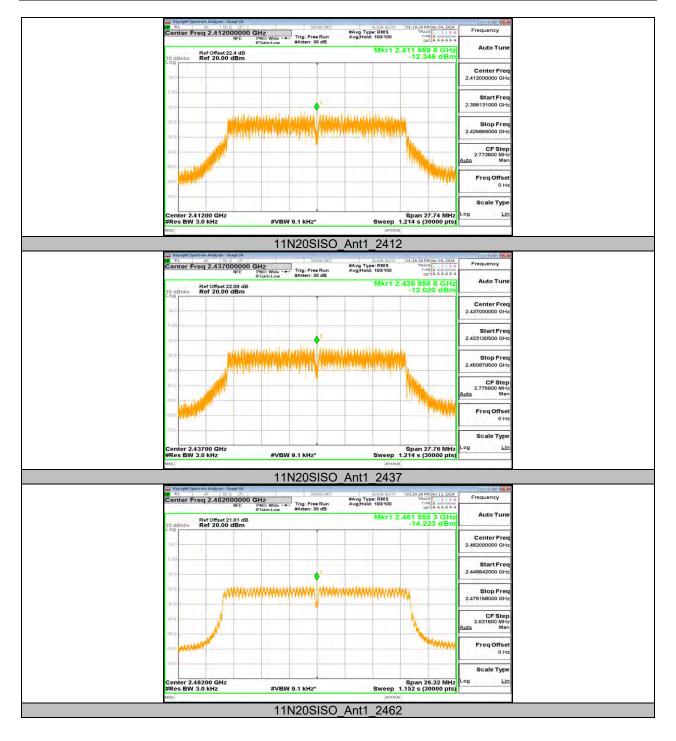
11.4.2. Test Graphs



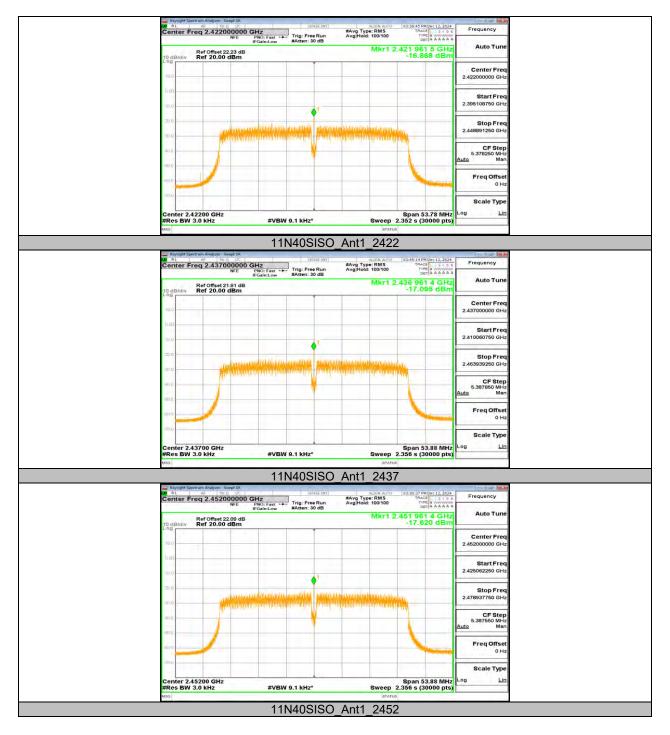














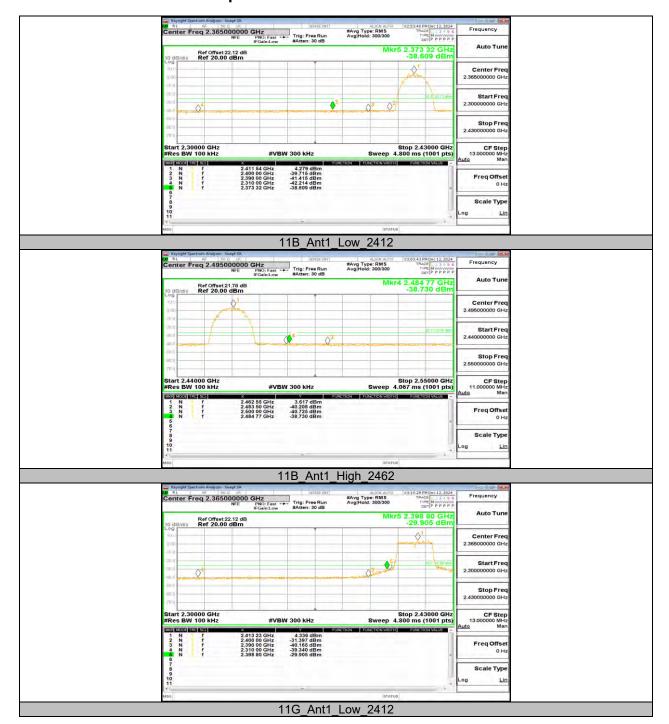
Page 114 of 134

11.5. APPENDIX E: BAND EDGE MEASUREMENTS 11.5.1. Test Result

Test Mode	Antenna	ChName	Frequency [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	4.28	-38.61	≤-25.72	PASS
		High	2462	3.62	-38.73	≤-26.38	PASS
11G	Ant1	Low	2412	4.34	-29.91	≤-25.66	PASS
		High	2462	3.87	-38	≤-26.13	PASS
11N20SISO	Ant1	Low	2412	5.15	-30.22	≤-24.85	PASS
		High	2462	3.37	-37.85	≤-26.63	PASS
11N40SISO	Ant1	Low	2422	-1.15	-37.25	≤-31.15	PASS
		High	2452	-1.72	-37.85	≤-31.72	PASS



11.5.2. Test Graphs













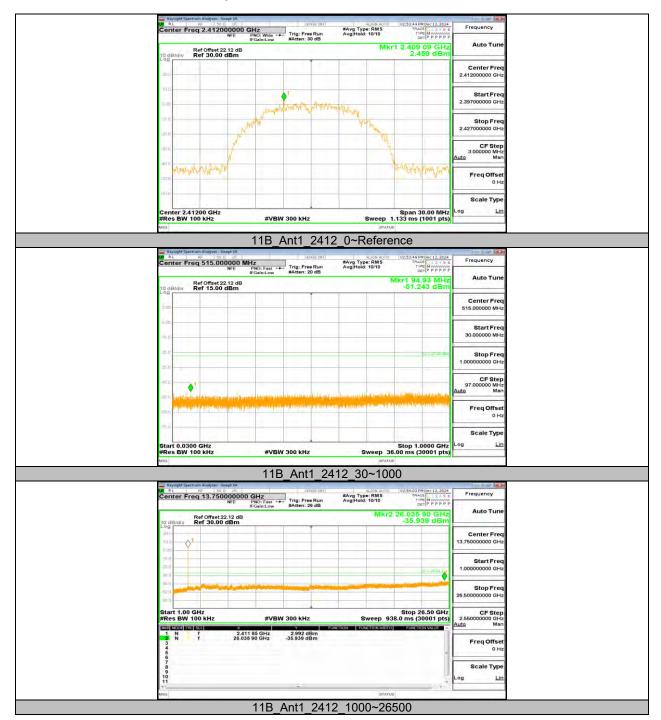
Page 118 of 134

11.6. APPENDIX F: CONDUCTED SPURIOUS EMISSION 11.6.1. Test Result

Test Mode	Antenna	Frequency[MHz]	FreqRange [Mhz]	Result [dBm]	Limit [dBm]	Verdict
11B			Reference	2.46		PASS
		2412	30~1000	-51.24	≤-27.54	PASS
			1000~26500	-35.94	≤-27.54	PASS
	Ant1		Reference	1.73		PASS
		2437	30~1000	-50.93	≤-28.27	PASS
			1000~26500	-36.85	≤-28.27	PASS
			Reference	2.13		PASS
		2462	30~1000	-51.12	≤-27.87	PASS
			1000~26500 -35.82 ≤-27.8	≤-27.87	PASS	
			Reference	2.09		PASS
		2412	30~1000	-50.42	≤-27.91	PASS
			1000~26500	-36.2	≤-27.91	PASS
			Reference	2.53		PASS
11G	Ant1	2437	30~1000	-50.32	≤-27.47	PASS
			1000~26500	-36.68	≤-27.47	PASS
			Reference	2.97		PASS
		2462	30~1000	-50.78	≤-27.03	PASS
		-	1000~26500	-35.72	≤-27.03	PASS
	Ant1	2412 2437 2462	Reference	1.27		PASS
			30~1000	-50.26	≤-28.73	PASS
			1000~26500	-36.37	≤-28.73	PASS
			Reference	1.38		PASS
11N20SISO			30~1000	-50.7	≤-28.62	PASS
			1000~26500	-35.72	≤-28.62	PASS
			Reference	1.39		PASS
			30~1000	-51.04	≤-28.61	PASS
			1000~26500	-35.97	≤-28.61	PASS
	Ant1	2422	Reference	-0.76		PASS
11N40SISO			30~1000	-50.3	≤-30.76	PASS
			1000~26500	-36.07	≤-30.76	PASS
			Reference	-1.97		PASS
		2437	30~1000	-50.75	≤-31.97	PASS
			1000~26500	-36.45	≤-31.97	PASS
			Reference	-4.78		PASS
		2452	30~1000	-49.73	≤-34.78	PASS
			1000~26500	-36	≤-34.78	PASS



11.6.2. Test Graphs



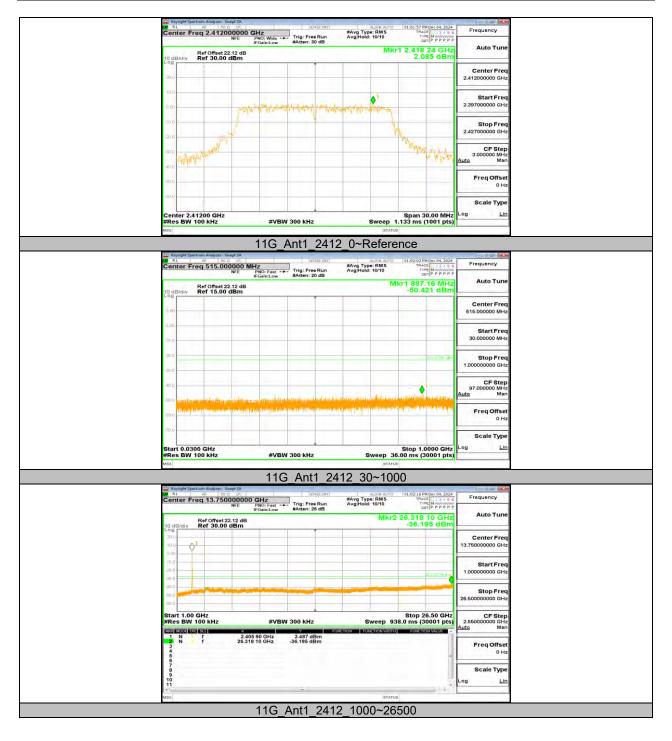




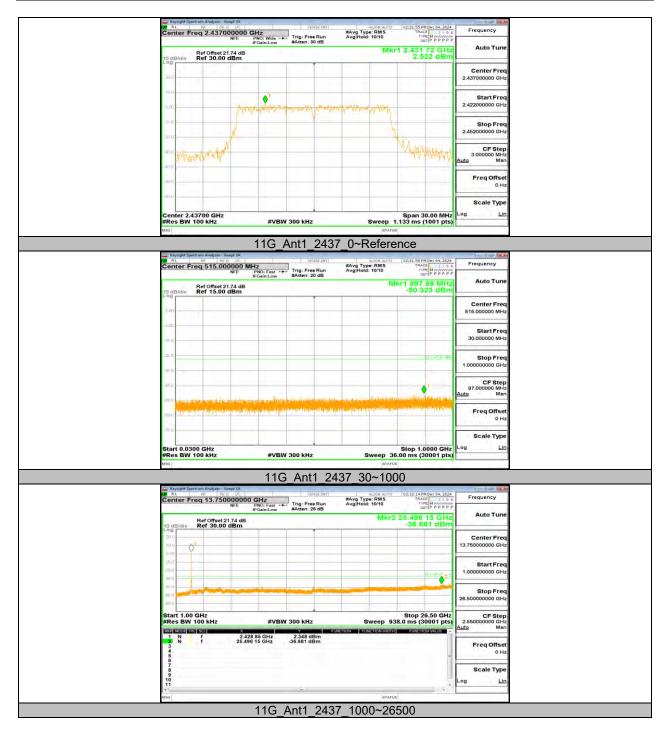




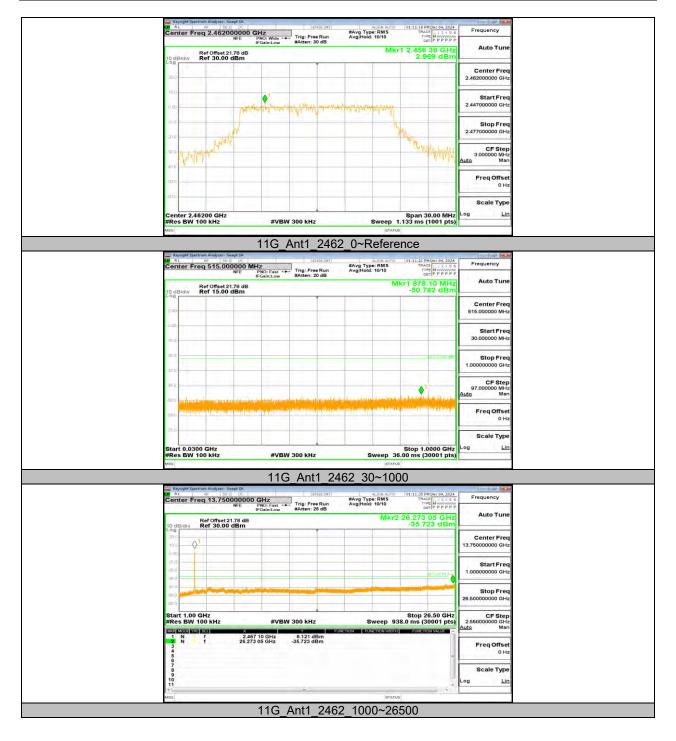




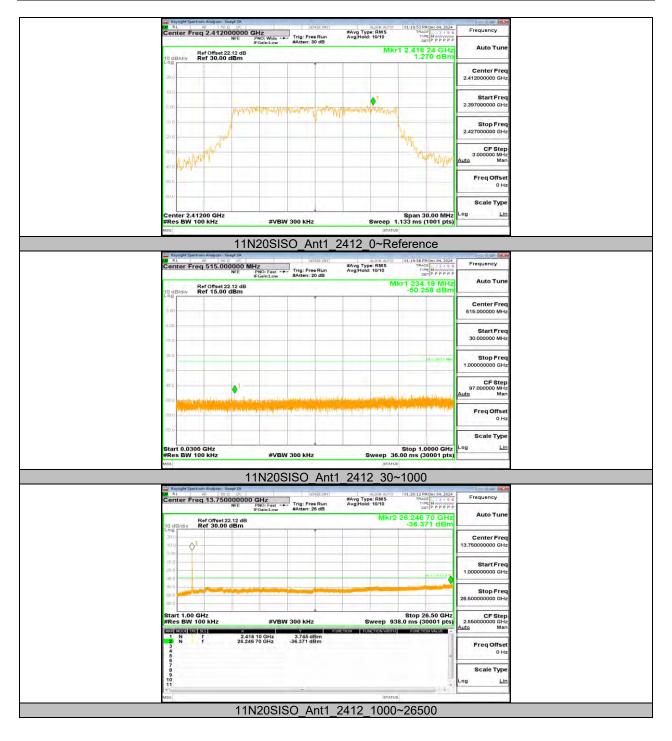




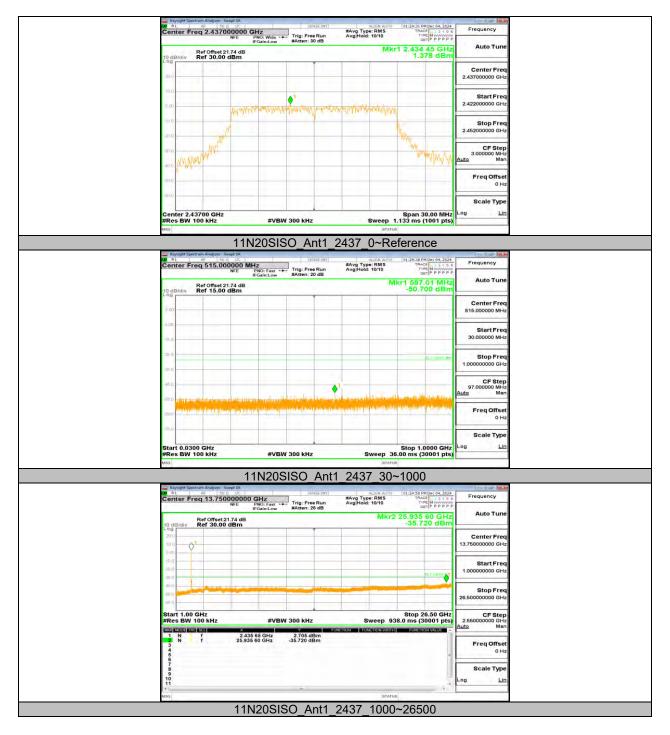




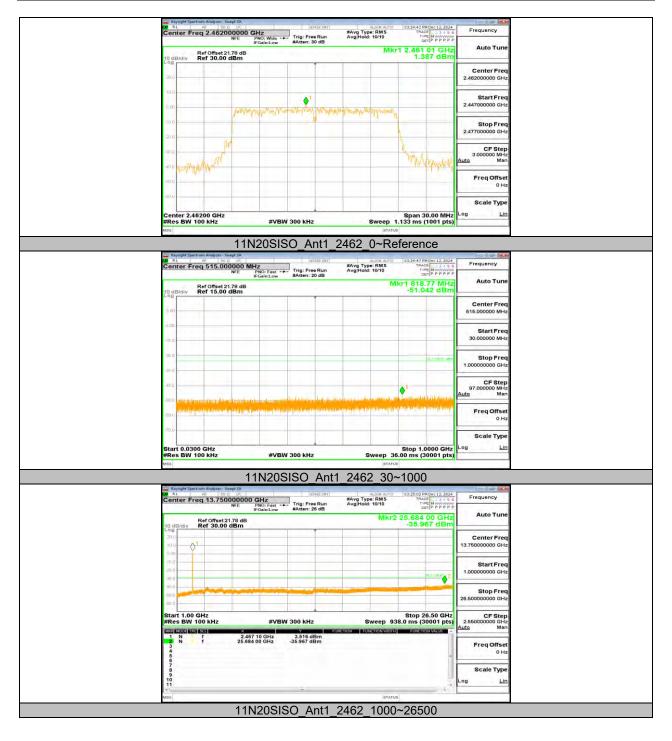




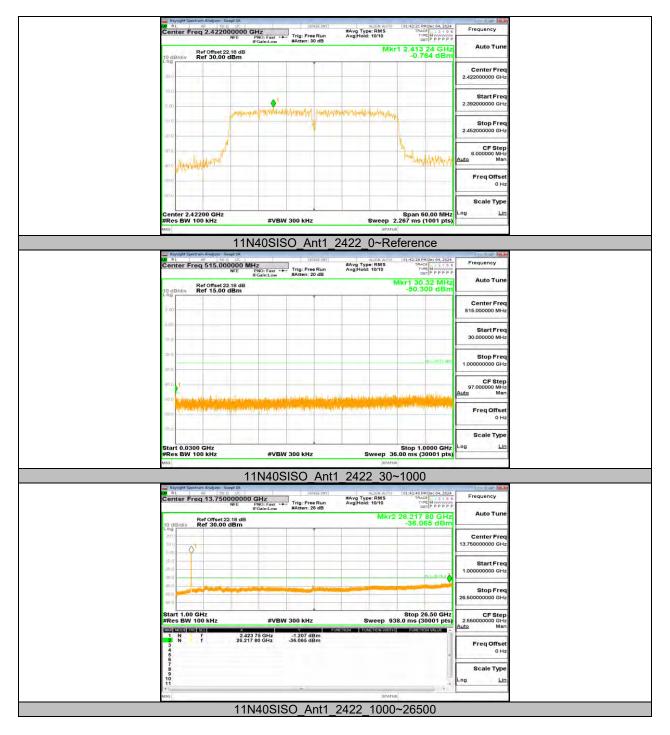




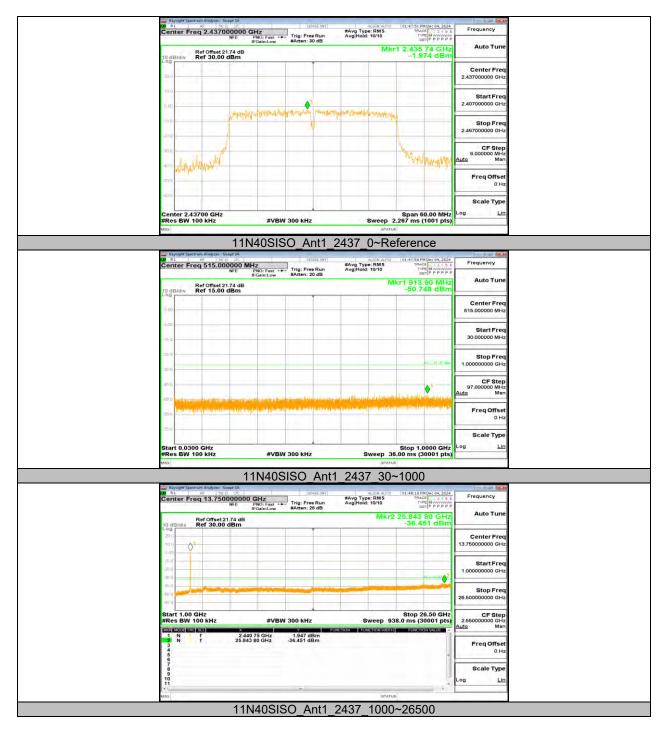




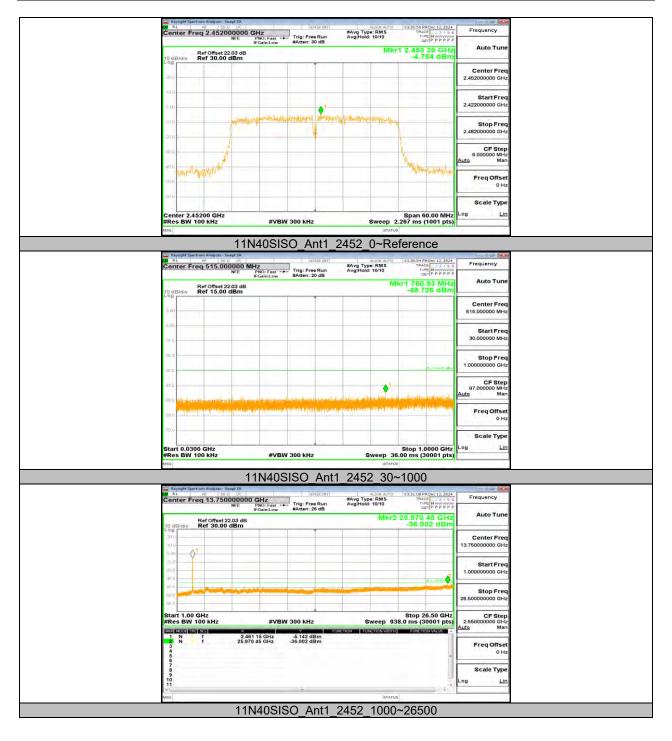














Page 131 of 134

11.7. APPENDIX G: DUTY CYCLE 11.7.1. Test Result

Test Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)	Final setting For VBW (kHz)
11B	32.94	32.97	0.9991	99.91	0.00	N/A	0.01
11G	5.48	5.51	0.9946	99.46	0.02	N/A	0.01
11N20SISO	5.08	5.11	0.9941	99.41	0.03	N/A	0.01
11N40SISO	2.46	2.49	0.9880	98.80	0.05	N/A	0.01

Note:

Duty Cycle Correction Factor=10log (1/x).

Where: x is Duty Cycle (Linear)

Where: T is On Time

If that calculated VBW is not available on the analyzer then the next higher value should be used. If the EUT is configured to transmit with duty cycle \geq 98%, set VBW \leq RBW/100 (i.e., 10 kHz)

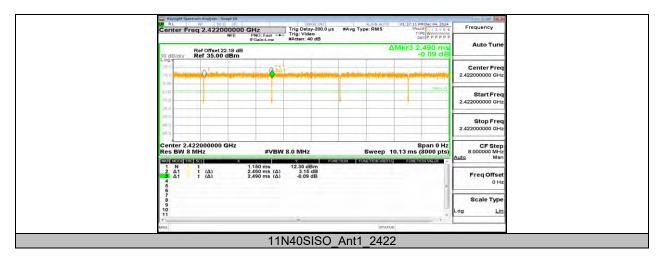
but not less than 10 Hz.



11.7.2. Test Graphs









Page 134 of 134

END OF REPORT