

FCC PART 15 SUBPART C ISED RSS-247 ISSUE 2

CERTIFICATION TEST REPORT

For

Wireless Module

MODEL NUMBER: TYWE1S

FCC ID: 2AJCLTYWE1S

IC: 27228-TYWE1S

REPORT NUMBER: 4789692477.1

ISSUE DATE: Mar 24, 2021

Prepared for

TCL Air conditioner (Zhong Shan) Co.,Ltd.
N0.59.Nantou Road West, Nantou Town Zhongshan City, Guangdong P.R. China

Prepared by

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Page 2 of 99

Revision History

Rev.	Issue Date	Revisions	Revised By
	03/24/2021	Initial Issue	





Page 3 of 99

	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:

¹⁾ 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.



TABLE OF CONTENTS

1.	ΑT	TESTATION OF TEST RESULTS	6
2.	TE	ST METHODOLOGY	7
3.	FA	CILITIES AND ACCREDITATION	7
4.	CA	LIBRATION AND UNCERTAINTY	8
4	4.1.	MEASURING INSTRUMENT CALIBRATION	8
4	4.2.	MEASUREMENT UNCERTAINTY	8
5.	EQ	QUIPMENT UNDER TEST	9
	5.1.	DESCRIPTION OF EUT	
	5.2.	MAXIMUM OUTPUT POWER	g
į	5.3.	CHANNEL LIST	g
į	5. <i>4</i> .	TEST CHANNEL CONFIGURATION	10
į	5.5.	THE WORSE CASE CONFIGURATIONS	10
į	5.6.	DESCRIPTION OF AVAILABLE ANTENNAS	10
	5.7.	DESCRIPTION OF TEST SETUP	
6.	ME	EASURING INSTRUMENT AND SOFTWARE USED	12
7.		EASUREMENT METHODS	
8.	ΑN	ITENNA PORT TEST RESULTS	15
8	3.1.	ON TIME AND DUTY CYCLE	
8	3.2.	6 dB DTS BANDWIDTH AND 99% BANDWIDTH	18
		2.1. 802.11b MODE	19
		2.2. 802.11g MODE 2.3. 802.11n HT20 MODE	23 27
8	3.3.	CONDUCTED OUTPUT POWER	
	~ ~	8.1. 802.11b MODE	
	8.3	O Company of the comp	
		3.3. 802.11n HT20 MODE	
ð		POWER SPECTRAL DENSITY	
	_	I.2. 802.11g MODE	
		l.3. 802.11n HT20 MODE	
8		CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS	
	8.5		
		5.2. 802.11g MODE 5.3. 802.11n HT20 MODE	
9.	RA	ADIATED TEST RESULTS	52
g	9.1.	RESTRICTED BANDEDGE	58
	9.2.	SPURIOUS EMISSIONS (30-1GHz)	70



9.3.

9.4.

Report No.: 4789692477.1
Page 5 of 99

10. AC POWER LINE CONDUCTED EMISSIONS......95

11. ANTENNA REQUIREMENTS98



Page 6 of 99

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: TCL Air conditioner (Zhong Shan) Co.,Ltd.

Address: N0.59.Nantou Road West, Nantou Town Zhongshan City,

Guangdong P.R. China

Manufacturer Information

Company Name: TCL Air conditioner (Zhong Shan) Co.,Ltd.

Address: N0.59.Nantou Road West, Nantou Town Zhongshan City,

Guangdong P.R. China

EUT Description

EUT Name: Wireless module

Model: TYWE1S
Brand Name: N/A
Sample Status: Normal
Sample ID: N/A

Sample Received Date: Mar 16, 2021

Date of Tested: Mar 16, 2021 ~ Mar 23, 2021

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

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Stephen Guo

Laboratory Manager



Page 7 of 99

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. FCC (FCC Designation No.: 625569) Shenzhen STS Test Services Co., Ltd. has been recognized to perform compliance testing on equipment subject to the Commission's Delcaration of Conformity (DoC) and Certification rules IC(Company No.: 12108A)
	to the Commission's Delcaration of Conformity (DoC) and Certification rules
	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



Page 8 of 99

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



Page 9 of 99

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

EUT Name	Wireless module
EUT Description	The EUT is a Wi-Fi module.
Model	TYWE1S
PMN	Wireless module
Serial Number	2.01.01.10004
HVIN	TYWE1S
FVIN	V1.1.0
Radio Technology	IEEE802.11b/g/n HT20
Operation frequency	IEEE 802.11b: 2412MHz—2462MHz IEEE 802.11g: 2412MHz—2462MHz IEEE 802.11n HT20: 2412MHz—2462MHz
Modulation	IEEE 802.11b: DSSS(CCK) IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK,BPSK)
Power Supply	Input: DC 5V
Hardware Version	V1.1
Software Version	V1.1.0

5.2. MAXIMUM OUTPUT POWER

Frequency Range (MHz)	Number of Transmit Chains (NTX)	IEE Std. 802.11	Frequency (MHz)	Channel Number	Max Peak Conducted Power (dBm)
2400-2483.5	1	IEEE 802.11b	2412-2462	1-11[11]	15.71
2400-2483.5	1	IEEE 802.11g	2412-2462	1-11[11]	15.69
2400-2483.5	1	IEEE 802.11nHT20	2412-2462	1-11[11]	12.90

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	



Page 10 of 99

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

5.5. THE WORSE CASE CONFIGURATIONS

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band								
Modulation Mode	Transmit		Test Channel					
	Antenna	1	NCB: 20MHz		NCB: 40MHz		Hz	
	Number	CH 1	CH 6	CH 11	CH 3	CH 6	CH 09	
802.11b	1	10	10	10	N/A			
802.11g	1	35	35	35				
802.11n HT20	1	50	50	50				

5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2412-2472	PCB Antenna	0 (Provided by applicant)

Test Mode	Transmit and Receive Mode	Description
IEEE 802.11b	Chain 1 can be used as transmit 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.



5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	P/N
1	1 Notebook Adapter DEL		HSTNN-CA15	N/A
2	Notebook	DELL	500-320cx	N/A

I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(cm)	Remarks
1	DC Cable	N/A	N/A	110cm	N/A

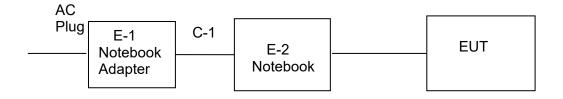
ACCESSORY

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 firmware QRCT from QUALCOMM through a Laptop.

SETUP DIAGRAM FOR TESTS





6. MEASURING INSTRUMENT AND SOFTWARE USED

Radiation Test equipment

Radiation 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	
Signal Analyzer	R&S	FSV 40-N	101823	2020.10.10	2021.10.09	
Active loop Antenna	ZHINAN	ZN30900C	16035	2019.07.11	2021.07.10	
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

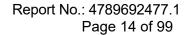
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2020.10.12	2021.10.11
LISN	R&S	ENV216	101242	2020.10.12	2021.10.11
LISN	EMCO	3810/2NM	23625	2020.10.12	2021.10.11
Temperature & Humidity	HH660	Mieo	N/A	2020.10.13	2021.10.12
Test SW	FARAD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



Page 13 of 99

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	
Power Sensor		U2021XA	MY55520005	2020.10.10	2021.10.09	
	Kovojaht		MY55520006	2020.10.10	2021.10.09	
	Keysight		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)				





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	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



Page 15 of 99

8. ANTENNA PORT TEST RESULTS

8.1. ON TIME AND DUTY CYCLE

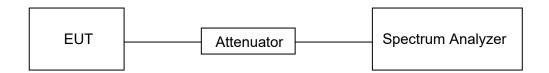
LIMITS

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	DC 5V

RESULTS

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (db)	1/B Minimum VBW (KHz)
11b	0.600	1.113	0.5391	53.91	2.68	3
11g	0.430	0.944	0.4555	45.55	3.42	3
11n20	0.418	0.930	0.4495	44.95	3.47	3

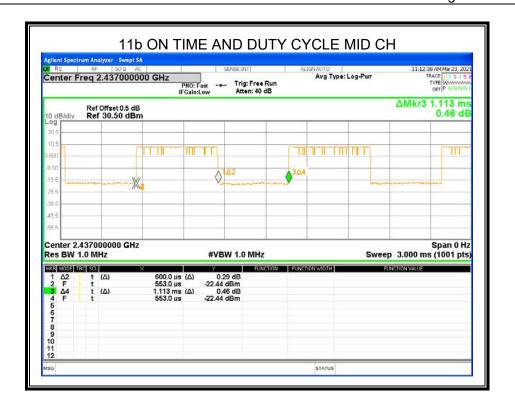
Note: Duty Cycle Correction Factor=10log(1/x).

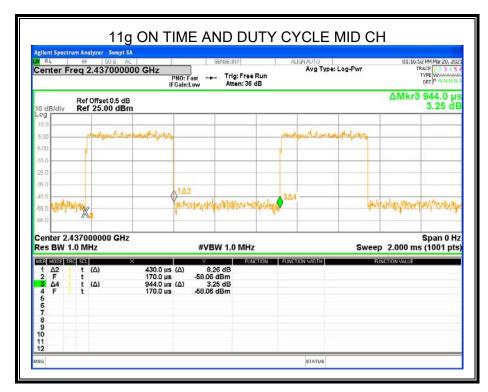
Where: x is Duty Cycle(Linear)

Where: B is On Time

11b/g/11n20 mode Duty Cycle < 98%, set the final test VBW = 3KHz (VBW \geq 1/T)

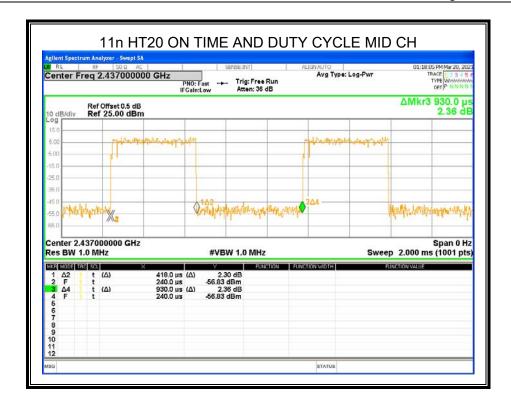








Page 17 of 99





Page 18 of 99

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			

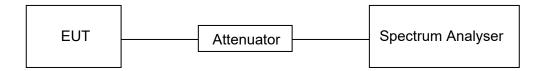
TEST PROCEDURE

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

Center Frequency	The centre frequency of the channel under test
Detector	Peak
	For 6dB Bandwidth :100K For 99% Bandwidth :1% to 5% of the occupied bandwidth
IV/R/M	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





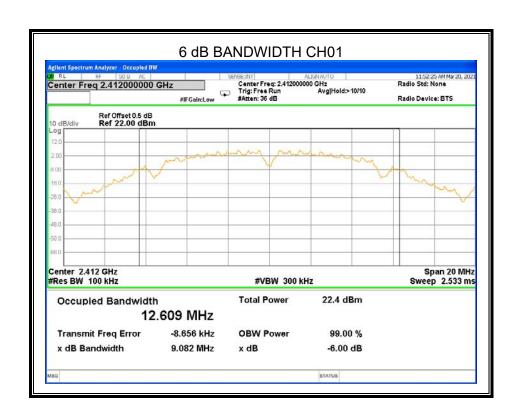
TEST ENVIRONMENT

Temperature	25°C	Relative Humidity	60%
Atmosphere Pressure	101kPa	Test Voltage	DC 5V

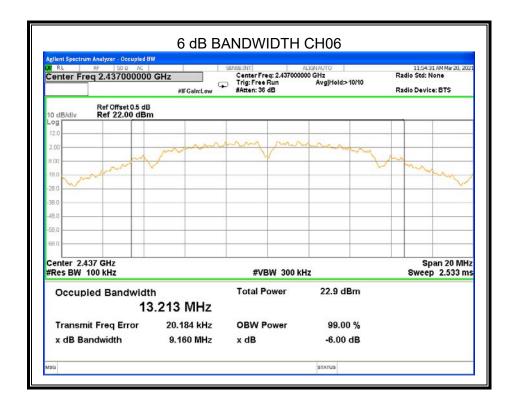
RESULTS

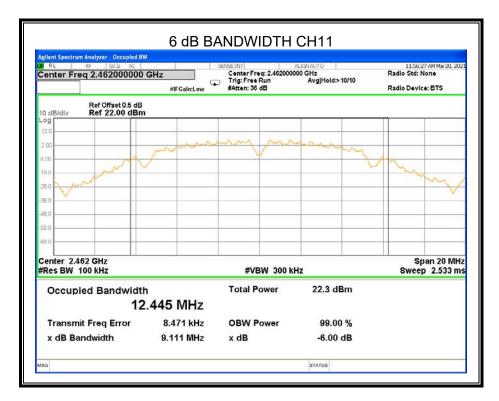
8.2.1. 802.11b MODE

Channel	Frequency (MHz)	6dB bandwidth (MHz)	99% bandwidth (MHz)	Limit (kHz)	Result
CH01	2412	9.082	12.976	≥500KHz	Pass
CH06	2437	9.160	14.949	≥500KHz	Pass
CH11	2462	9.111	13.037	≥500KHz	Pass



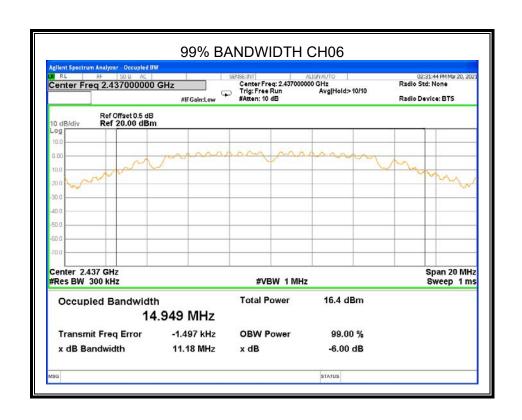








99% BANDWIDTH CH01 Center Freq: 2.462000000 GHz
Trig: Free Run
#Atten: 10 dB 02:31:13 PM Mar 20, 1 Radio Std: None Center Freq 2.462000000 GHz #IFGain:Low Radio Device: BTS Ref Offset 0.5 dB Ref 20.00 dBm Center 2.462 GHz #Res BW 300 kHz Span 20 MHz Sweep 1 ms **#VBW 1 MHz** Occupied Bandwidth **Total Power** 15.8 dBm 12.976 MHz 16.367 kHz **OBW Power** 99.00 % Transmit Freq Error x dB Bandwidth 10.22 MHz -6.00 dB x dB STATUS





99% BANDWIDTH CH11 02:54:05 PM Mar 20, 200 Radio Std: None Center Freq 2.462000000 GHz Radio Device: BTS #IFGain:Low Ref Offset 0.5 dB Ref 20.00 dBm Span 20 MHz Sweep 1 ms Center 2.462 GHz #Res BW 300 kHz #VBW 1 MHz Occupied Bandwidth **Total Power** 15.9 dBm 13.037 MHz Transmit Freq Error 17.254 kHz **OBW Power** 99.00 % x dB Bandwidth 10.22 MHz x dB -6.00 dB STATUS

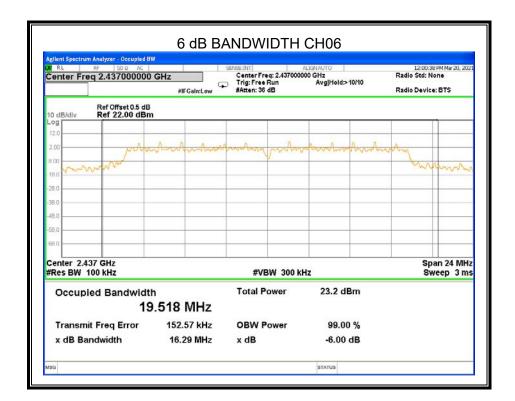


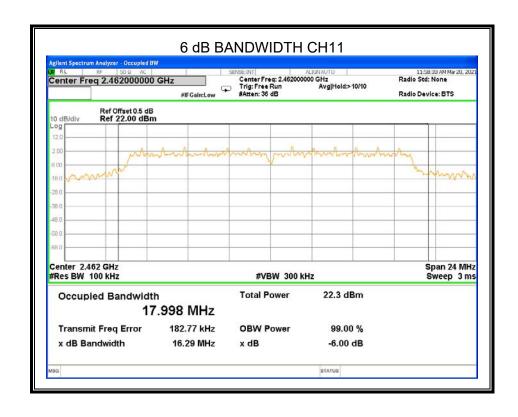
8.2.2. 802.11g MODE

Channel	Frequency (MHz)	6dB bandwidth (MHz)	99% bandwidth (MHz)	Limit (kHz)	Result
CH01	2412	16.30	17.198	≥500KHz	Pass
CH06	2437	16.29	17.108	≥500KHz	Pass
CH11	2462	16.29	17.029	≥500KHz	Pass

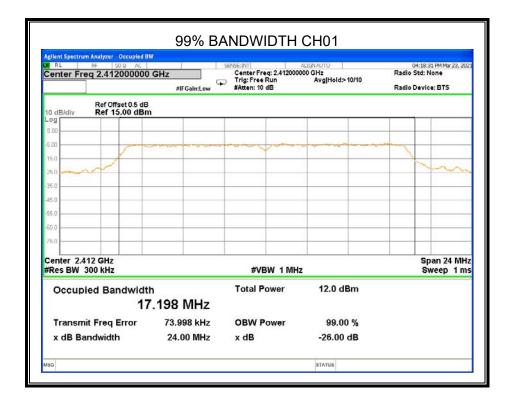


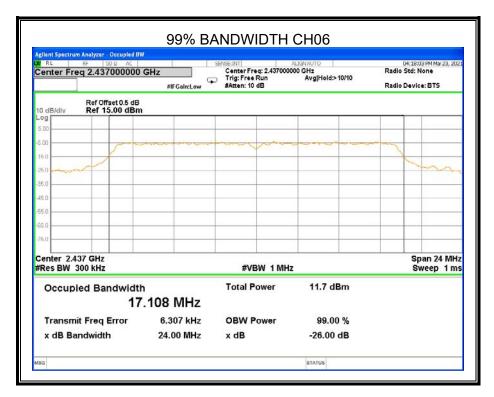












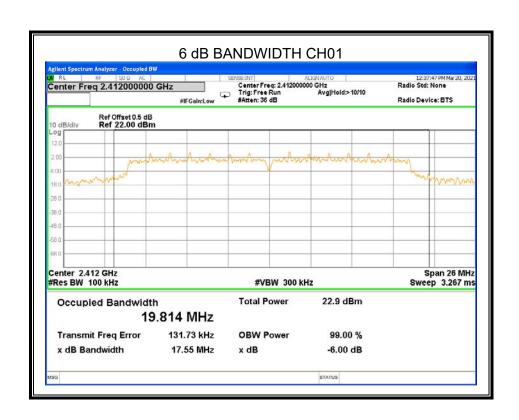


99% BANDWIDTH CH11 Center Freq 2.462000000 GHz Radio Device: BTS #IFGain:Low Ref Offset 0.5 dB Ref 15.00 dBm Span 24 MHz Sweep 1 ms Center 2.462 GHz #Res BW 300 kHz #VBW 1 MHz Occupied Bandwidth **Total Power** 11.2 dBm 17.029 MHz Transmit Freq Error 32.233 kHz **OBW Power** 99.00 % x dB Bandwidth 24.00 MHz x dB -26.00 dB STATUS

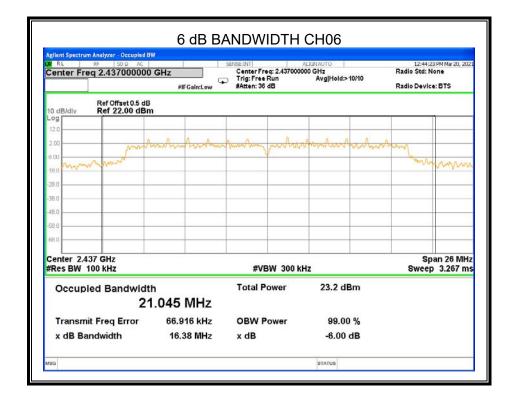


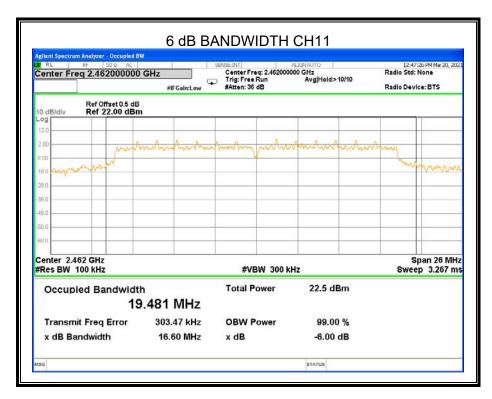
8.2.3. 802.11n HT20 MODE

Channel	Frequency (MHz)	6dB bandwidth (MHz)	99% bandwidth (MHz)	Limit (kHz)	Result
CH01	2412	17.55	18.408	≥500KHz	Pass
CH06	2437	16.38	18.396	≥500KHz	Pass
CH11	2462	16.60	18.355	≥500KHz	Pass

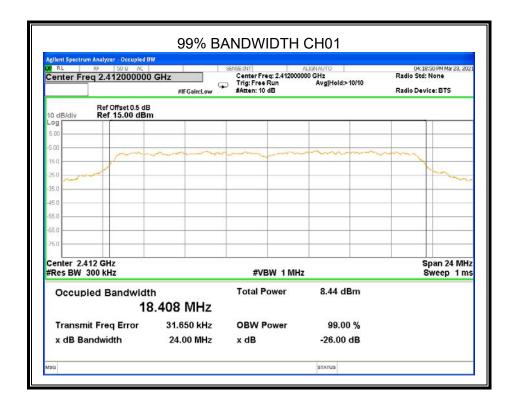


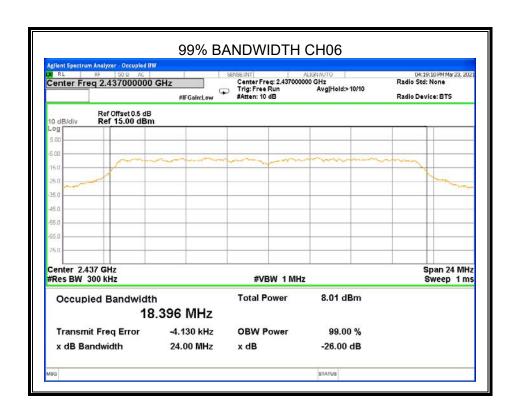














99% BANDWIDTH CH11 | SENSE INT | ALIGNAUTO |
| Center Freq: 2.452000000 GHz |
| Trig: Free Run | Avg|Hold>10/10 |
| #Atten: 10 dB | Center Freq 2.462000000 GHz Radio Device: BTS #IFGain:Low Ref Offset 0.5 dB Ref 15.00 dBm Center 2.462 GHz #Res BW 300 kHz Span 24 MHz Sweep 1 ms #VBW 1 MHz Occupied Bandwidth **Total Power** 7.64 dBm 18.355 MHz Transmit Freq Error 32.018 kHz **OBW Power** 99.00 % x dB Bandwidth 24.00 MHz x dB -26.00 dB STATUS



Page 31 of 99

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)	Output Power	1 watt or 30dBm	2400-2483.5		

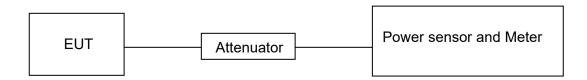
TEST PROCEDURE

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 power each channel.

TEST SETUP



TEST ENVIRONMENT

Temperature	25°C	Relative Humidity	60%
Atmosphere Pressure	101kPa	Test Voltage	DC 5V



RESULTS

8.3.1. 802.11b MODE

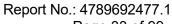
Test Channel	Frequency	Maximum Conducted Output Power (PK) Maximum Conducted Output Power (AVG) (dBm)		LIMIT
	(MHz)			dBm
CH01	2412	15.71	9.79	30
CH06	2437	15.52	9.72	30
CH11	2462	15.05	9.06	30

8.3.2. 802.11g MODE

Test Channel	Frequency	Maximum Maximum Conducted Output Power (PK) Power (AVG) (dBm)		LIMIT
	(MHz)			dBm
CH01	2412	15.69	3.46	30
CH06	2437	15.31	3.12	30
CH11	2462	14.85	2.53	30

8.3.3. 802.11n HT20 MODE

Test Channel	Frequency	Maximum Conducted Output Power (PK) (dBm) Maximum Conducted Output Power (AVG)		LIMIT
	(MHz)			dBm
CH01	2412	12.90	1.16	30
CH06	2437	12.46	1.23	30
CH11	2462	12.15	1.02	30





Page 33 of 99

RSS-247 EIRP Power

NOO-247 LINI 1 OWEI					
		TX 802.1	1b Mode		
Test	Frequency	Peak Power	Antenna Gain	EIRP Power	LIMIT
Channel	(MHz)	(dBm)	(dBi)	(dBm)	dBm
CH01	2412	15.71	0.00	15.71	36.02
CH06	2437	15.52	0.00	15.52	36.02
CH11	2462	15.05	0.00	15.05	36.02
		TX 802.1	1g Mode		
Test	Frequency	Peak Power	Antenna Gain	EIRP Power	LIMIT
Channel	(MHz)	(dBm)	(dBi)	(dBm)	dBm
CH01	2412	15.69	0.00	15.69	36.02
CH06	2437	15.31	0.00	15.31	36.02
CH11	2462	14.85	0.00	14.85	36.02
		TX 802.11	n20 Mode		
Test	Frequency	Peak Power	Antenna Gain	EIRP Power	LIMIT
Channel	(MHz)	(dBm)	(dBi)	(dBm)	dBm
CH01	2412	12.90	0.00	12.90	36.02
CH06	2437	12.46	0.00	12.46	36.02
CH11	2462	12.15	0.00	12.15	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

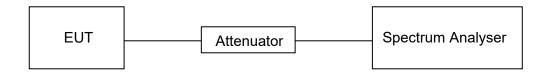
Connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The centre frequency of the channel under test		
Detector	Peak		
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

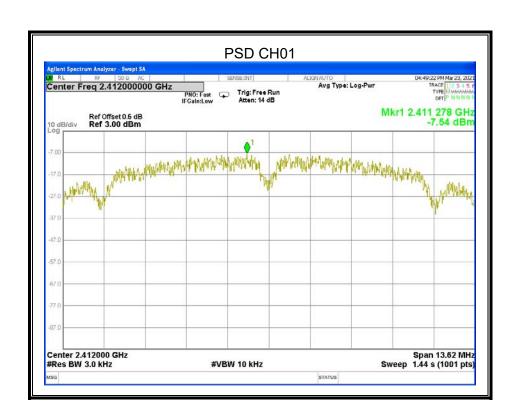
Temperature	25°C	Relative Humidity	60%
Atmosphere Pressure	101kPa	Test Voltage	DC 5V

RESULTS

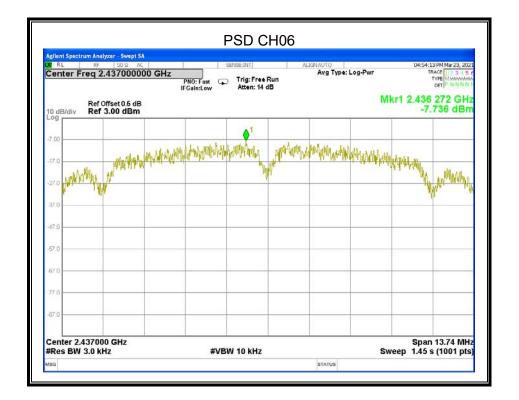


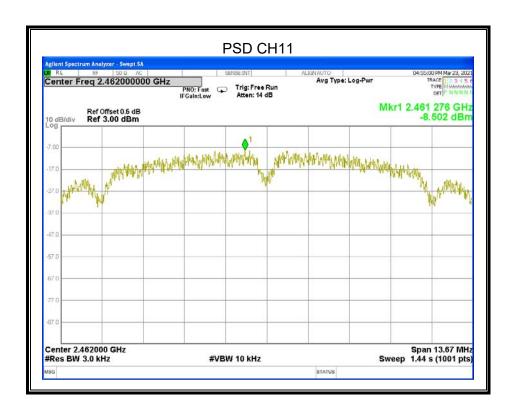
8.4.1. 802.11b MODE

Test Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
CH01	2412	-7.540	≤8	PASS
CH06	2437	-7.736	≤8	PASS
CH11	2462	-8.502	≤8	PASS





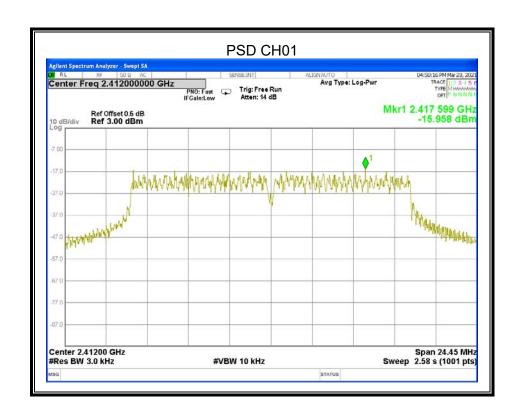






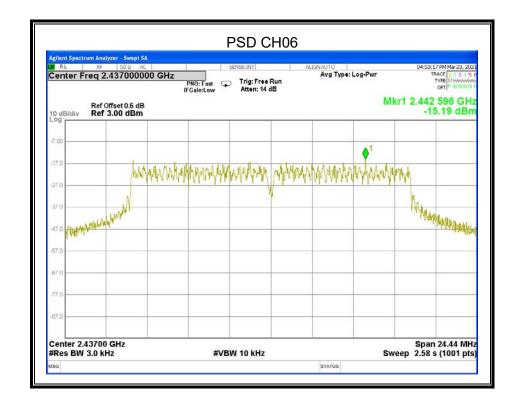
8.4.2. 802.11g MODE

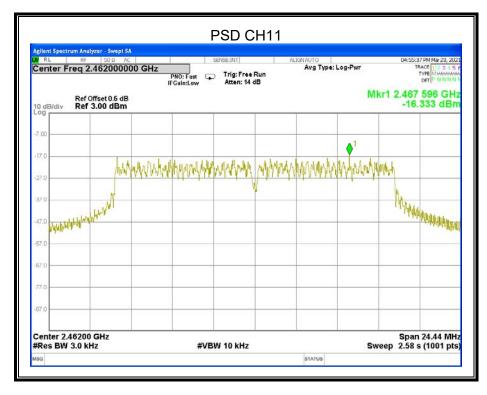
Test Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
CH01	2412	-15.9580	≤8	PASS
CH06	2437	-15.1900	≤8	PASS
CH11	2462	-16.3330	≤8	PASS





Page 38 of 99

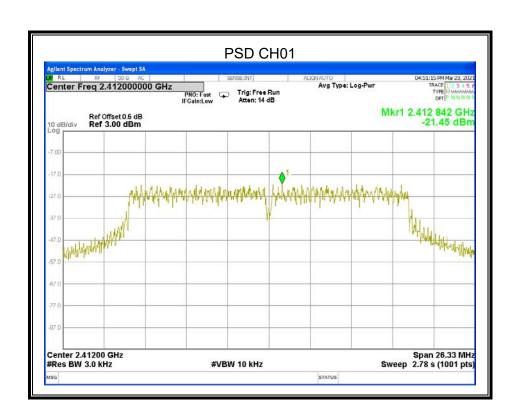




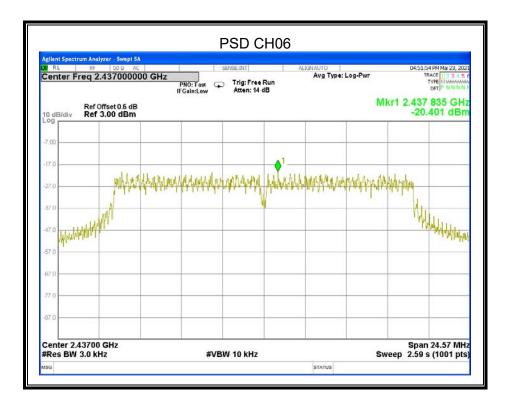


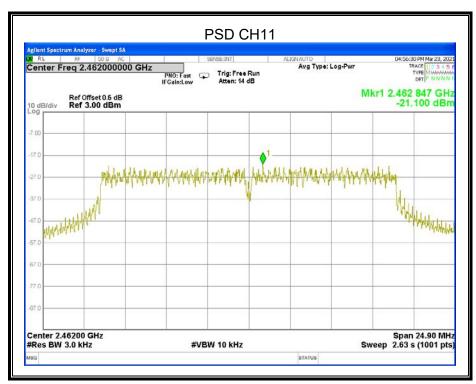
8.4.3. 802.11n HT20 MODE

Test Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
CH01	2412	-21.4500	≤8	PASS
CH06	2437	-20.4010	≤8	PASS
CH11	2462	-21.1000	≤8	PASS











Report No.: 4789692477.1

Page 41 of 99

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	at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power	

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.	

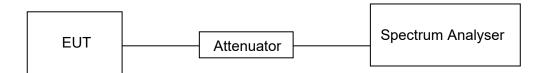
Use the peak marker function to determine the maximum PSD level.

Span	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100K
VBW	≥3 × 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

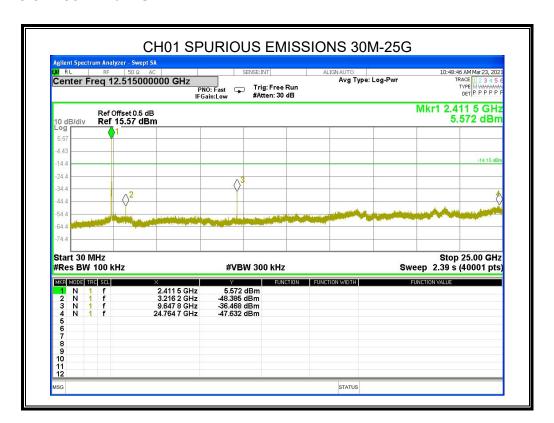


TEST ENVIRONMENT

Temperature	25°C	Relative Humidity	60%
Atmosphere Pressure	101kPa	Test Voltage	DC 5V

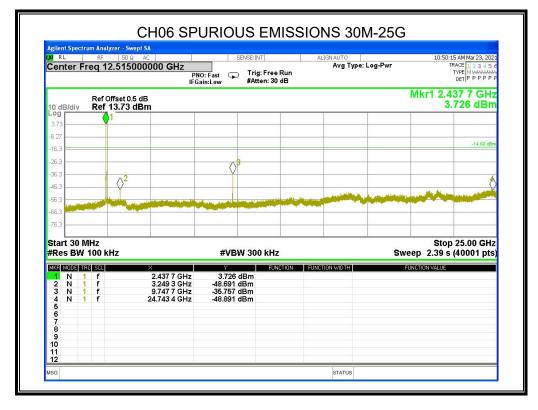
RESULTS

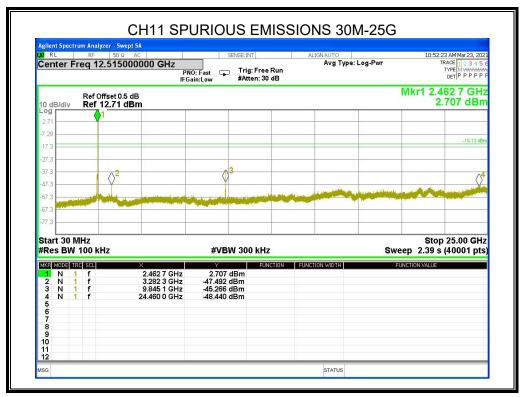
8.5.1. 802.11b MODE





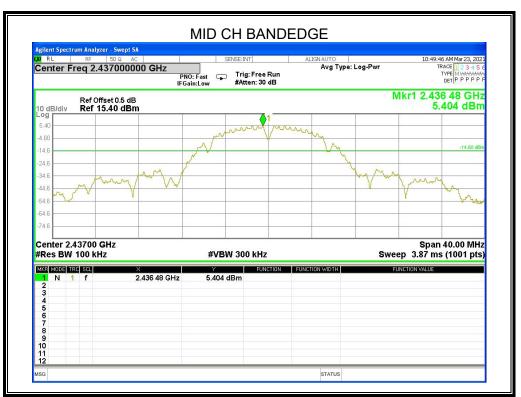
Page 43 of 99







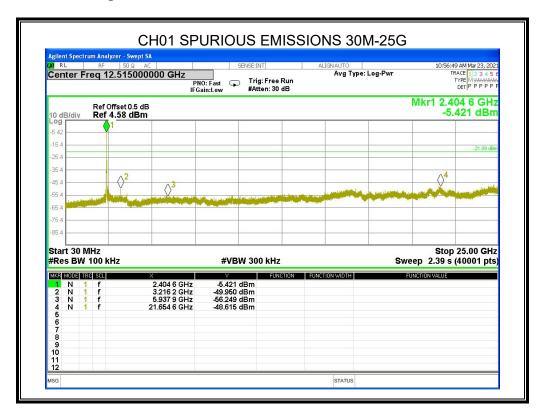


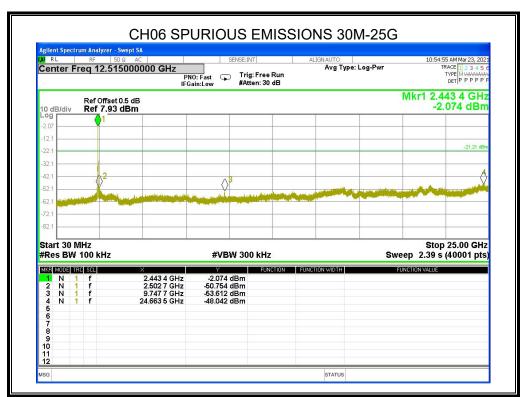






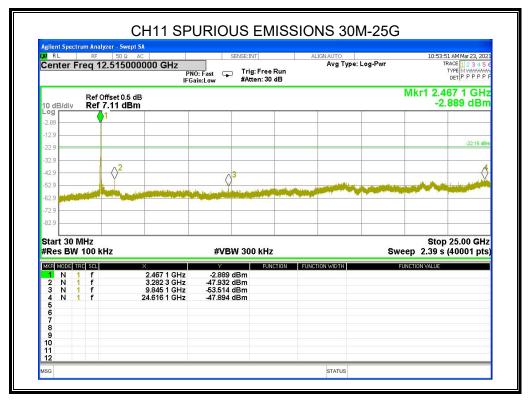
8.5.2. 802.11g MODE







Page 47 of 99





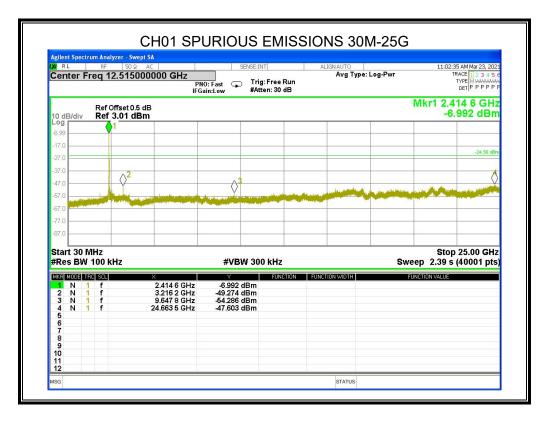


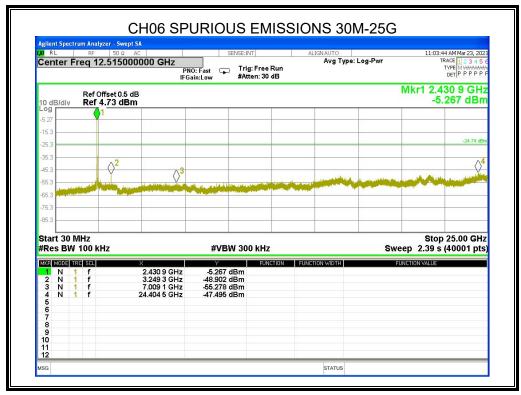






8.5.3. 802.11n HT20 MODE







CH11 SPURIOUS EMISSIONS 30M-25G Center Freq 12.515000000 GHz Avg Type: Log-Pwr PNO: Fast Trig: Free Run DET P P P P Mkr1 2.463 3 GHz -7.553 dBm Ref Offset 0.5 dB Ref 2.45 dBm 10 dB/div Log Stop 25.00 GHz Sweep 2.39 s (40001 pts) Start 30 MHz #Res BW 100 kHz **#VBW** 300 kHz MKR MODE TRC SCL 2.463 3 GHz 2.506 4 GHz 9.847 6 GHz 21.587 8 GHz -7.553 dBm -52.258 dBm -54.822 dBm -48.525 dBm ZZZZ 2 3 4 5 6 7 8 9 10 11 12 STATUS

