



FCC ID: GKR425338
Report No.: T210413W01-RP3

IC: 2533B-425338

Page: 1 / 94
Rev.: 02

RADIO TEST REPORT

FCC 47 CFR PART 15 SUBPART C

INDUSTRY CANADA RSS-247

Test Standard	FCC Part 15.247 IC RSS-247 issue 2 and IC RSS-GEN issue 5
Product name	Tablet
Brand Name	ICON/iFit
Model No.	MP7-ARGON2-C
Test Result	Pass
Statements of Conformity	Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

The test Result was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were given in ANSI C63.10: 2013 and compliance standards.

The test results of this report relate only to the tested sample (EUT) identified in this report.

The test Report of full or partial shall not copy. Without written approval of Compliance Certification Services Inc. (Wugu Laboratory).

Approved by:

Kevin Tsai
Deputy Manager

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部份複製。

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com.tw/Terms-and-Conditions> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com.tw/Terms-and-Conditions>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



Report No.: T210413W01-RP3

Page: 2 / 94

Rev.: 02

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	July 23, 2021	Initial Issue	ALL	Allison Chen
01	August 2, 2021	See the following Note Rev.(01)	P.44, 45	Allison Chen
02	August 3, 2021	See the following Note Rev.(02)	P.43, 45	Allison Chen

Note

Rev.(01)

1. Modified conducted bandedge test plot @HT20 high Ch.and conducted spurious test plot @HT40 Low Ch. in section 5.5.

Rev.(02)

1. Modified conducted bandedge test plot @HT40 Low Ch. and conducted spurious test plot @HT20 Mid Ch. in section 5.5.



Report No.: T210413W01-RP3

Page: 3 / 94

Rev.: 02

Table of contents

1.	GENERAL INFORMATION.....	4
1.1	EUT INFORMATION.....	4
1.2	EUT CHANNEL INFORMATION.....	5
1.3	ANTENNA INFORMATION.....	5
1.4	MEASUREMENT UNCERTAINTY	6
1.5	FACILITIES AND TEST LOCATION.....	7
1.6	INSTRUMENT CALIBRATION	7
1.7	SUPPORT AND EUT ACCESSORIES EQUIPMENT	9
1.8	TEST METHODOLOGY AND APPLIED STANDARDS.....	9
2.	TEST SUMMARY.....	10
3.	DESCRIPTION OF TEST MODES.....	11
3.1	THE WORST MODE OF OPERATING CONDITION	11
3.2	THE WORST MODE OF MEASUREMENT.....	12
4.	EUT DUTY CYCLE	13
5.	TEST RESULT	14
5.1	AC POWER LINE CONDUCTED EMISSION.....	14
5.2	6DB BANDWIDTH AND OCCUPIED BANDWIDTH(99%).....	15
5.3	OUTPUT POWER MEASUREMENT	25
5.4	POWER SPECTRAL DENSITY	29
5.5	CONDUCTED BANDEDGE AND SPURIOUS EMISSION.....	35
5.6	RADIATION BANDEDGE AND SPURIOUS EMISSION.....	48
	APPENDIX 1 - PHOTOGRAPHS OF EUT	



Report No.: T210413W01-RP3

Page: 4 / 94

Rev.: 02

1. GENERAL INFORMATION

1.1 EUT INFORMATION

FCC Applicant	Compal Electronics Inc No.581 & 581-1, Ruiguang Rd., Neihu District, Taipei city, 11492 Taiwan
IC Applicant	COMPAL ELECTRONICS INC. No. 581 & 581-1, Ruiguang Rd., Neihu District Taipei R.O.C. 114 Taiwan
Manufacturer	Compal Electronics Inc No.581 & 581-1, Ruiguang Rd., Neihu District, Taipei city, 11492 Taiwan
Equipment	Tablet
Model No.	MP7-ARGON2-C
Model Discrepancy	N/A
Trade Name	ICON/iFit
Received Date	April 13, 2021
Date of Test	June 29 ~ August 3, 2021
Power Operation	EUT Power from Power Supply. (DC12V)
HW Version	LA-L511P
SW Version	Android 9
EUT Serial #	Conducted Emission: PP41D304791 Radiated Emission: PP41D304792

Remark:

1. For more details, refer to the User's manual of the EUT.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

1.2 EUT CHANNEL INFORMATION

Frequency Range	802.11b/g/n HT 20: 2412MHz ~ 2462MHz 802.11n HT 40: 2422MHz ~ 2452MHz
Modulation Type	1. IEEE 802.11b mode: CCK 2. IEEE 802.11g mode: OFDM 3. IEEE 802.11n HT 20 MHz mode : OFDM 4. IEEE 802.11n HT 40 MHz mode : OFDM
Number of channel	1. IEEE 802.11b mode: 11 Channels 2. IEEE 802.11g mode: 11 Channels 3. IEEE 802.11n HT 20 MHz mode : 11 Channels 4. IEEE 802.11n HT 40 MHz mode : 7 Channels

Remark:

Refer as ANSI C63.10: 2013 clause 5.6.1 Table 4 and RSS-GEN Table A1 for test channels

Number of frequencies to be tested		
Frequency range in which device operates	Number of frequencies	Location in frequency range of operation
<input type="checkbox"/> 1 MHz or less	1	Middle
<input type="checkbox"/> 1 MHz to 10 MHz	2	1 near top and 1 near bottom
<input checked="" type="checkbox"/> More than 10 MHz	3	1 near top, 1 near middle, and 1 near bottom

1.3 ANTENNA INFORMATION

Antenna Type	<input checked="" type="checkbox"/> PIFA <input type="checkbox"/> PCB <input type="checkbox"/> Dipole <input type="checkbox"/> Coils
Antenna Gain	1.95 dBi
Antenna Connector	IPEX

Remark:

1.The antenna(s) of the EUT are permanently attached and there are no provisions for connection to an external antenna. So the EUT complies with the requirements of §15.203.

1.4 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	+/- 1.2575
Emission bandwidth, 20dB bandwidth	+/- 0.0014
RF output power, conducted	+/- 1.14
Power density, conducted	+/- 1.40
3M Semi Anechoic Chamber / 30M~1G (Horizontally)	+/- 3.91
3M Semi Anechoic Chamber / 30M~1G (Vertically)	+/- 4.57
3M Semi Anechoic Chamber / 1G~6G	+/- 5.20
3M Semi Anechoic Chamber / 6G~18G	+/- 5.18
3M Semi Anechoic Chamber / 18G~40G	+/- 3.68

Remark:

1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$
2. ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report.

1.5 FACILITIES AND TEST LOCATION

All measurement facilities used to collect the measurement data are located at

No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan. (R.O.C.)

CAB Identifier: TW1309

Test site	Test Engineer	Remark
AC Conduction Room	N/A	Not applicable, because EUT doesn't connect to AC Main Source direct.
Radiation	Ray Li	-
RF Conducted	Lance Chen	-

Remark: The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

1.6 INSTRUMENT CALIBRATION

3M 966 Chamber Test Site					
Equipment	Manufacturer	Model	S/N	Cal Date	Cal Due
Band Reject Filters	MICRO TRONICS	BRM 50702	120	02/08/2021	02/07/2022
Bilog Antenna	Sunol Sciences	JB3	A030105	07/24/2020	07/23/2021
Horn Antenna	ETS LINDGREN	3116	00026370	12/11/2020	12/10/2021
Coaxial Cable	HUBER SUHNER	SUCOFLEX 104PEA	20995	02/24/2021	02/23/2022
Coaxial Cable	EMCI	EMC105	190914+327109/4	09/19/2020	09/18/2021
K Type Cable	Huber+Suhner	SUCOFLEX 102	29406/2	12/09/2020	12/08/2021
K Type Cable	Huber+Suhner	SUCOFLEX 102	22470/2	12/09/2020	12/08/2021
Digital Thermo-Hygro Meter	WISEWIND	1206	D07	01/06/2021	01/05/2022
double Ridged Guide Horn Antenna	ETC	MCTD 1209	DRH13M02003	09/30/2020	09/29/2021
Loop Ant	COM-POWER	AL-130	121051	04/07/2021	04/06/2022
Pre-Amplifier	EMEC	EM330	060609	02/24/2021	02/23/2022
Pre-Amplifier	HP	8449B	3008A00965	12/25/2020	12/24/2021
Pre-Amplifier	MITEQ	AMF-6F-18004000-37-8P	985646	09/02/2020	09/01/2021
PSA Series Spectrum Analyzer	Agilent	E4446A	MY46180323	07/24/2020	07/23/2021
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Software	e3 6.11-20180419c				

Remark: Each piece of equipment is scheduled for calibration once a year.



Report No.: T210413W01-RP3

Page: 8 / 94

Rev.: 02

RF Conducted Test Site					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
EXA Signal Analyzer	KEYSIGHT	N9010B	MY55460167	09/07/2020	09/06/2021
Coaxial Cable	Woken	WC12	CC003	06/28/2021	06/27/2022
Coaxial Cable	Woken	WC12	CC001	06/28/2021	06/27/2022
Power Meter	Anritsu	ML2487A	6K00003260	05/24/2021	05/23/2022
Power Seneor	Anritsu	MA2490A	032910	05/24/2021	05/23/2022
Software	Radio Test Software				

Remark: Each piece of equipment is scheduled for calibration once a year.



Report No.: T210413W01-RP3

Page: 9 / 94

Rev.: 02

1.7 SUPPORT AND EUT ACCESSORIES EQUIPMENT

EUT Accessories Equipment					
No.	Equipment	Brand	Model	Series No.	FCC ID
	N/A				

Support Equipment					
No.	Equipment	Brand	Model	Series No.	FCC ID
1	Adapter	WEIHAI POWER	HAS060123-EA	N/A	N/A

1.8 TEST METHODOLOGY AND APPLIED STANDARDS

The test methodology, setups and results comply with all requirements in accordance with ANSI C63.10:2013, FCC Part 2, FCC Part 15.247, RSS-247 Issue 2 and RSS-GEN Issue 5.



Report No.: T210413W01-RP3

Page: 10 / 94

Rev.: 02

2. TEST SUMMARY

FCC Standard Section	IC Standard Section	Report Section	Test Item	Result
15.203	RSS-GEN 6.8	1.3	Antenna Requirement	Pass
15.207(a)	RSS-GEN 8.8	4.1	AC Conducted Emission	N/A
15.247(a)(2)	RSS-247(5.2)(a)	4.2	6 dB Bandwidth	Pass
-	RSS-GEN 6.7	4.2	Occupied Bandwidth (99%)	Pass
15.247(b)(3)	RSS-247(5.4)(d)	4.3	Output Power Measurement	Pass
15.247(e)	RSS-247(5.2)(b)	4.4	Power Spectral Density	Pass
15.247(d)	RSS-247(5.5)	4.5	Conducted Band Edge	Pass
15.247(d)	RSS-247(5.5)	4.5	Conducted Emission	Pass
15.247(d)	RSS-GEN 8.9, 8.10	4.6	Radiation Band Edge	Pass
15.247(d)	RSS-GEN 8.9, 8.10	4.6	Radiation Spurious Emission	Pass

3. DESCRIPTION OF TEST MODES

3.1 THE WORST MODE OF OPERATING CONDITION

Operation mode	IEEE 802.11b mode :1Mbps IEEE 802.11g mode :6Mbps IEEE 802.11n HT20 mode :MCS0 IEEE 802.11n HT40 mode :MCS0
Test Channel Frequencies	IEEE 802.11b mode : 1. Lowest Channel : 2412MHz 2. Middle Channel : 2437MHz 3. Highest Channel : 2462MHz IEEE 802.11g mode : 1. Lowest Channel : 2412MHz 2. Middle Channel : 2437MHz 3. Highest Channel : 2462MHz IEEE 802.11n HT20 mode : 1. Lowest Channel : 2412MHz 2. Middle Channel : 2437MHz 3. Highest Channel : 2462MHz IEEE 802.11n HT40 mode : 1. Lowest Channel : 2422MHz 2. Middle Channel : 2437MHz 3. Highest Channel : 2452MHz
Operation Transmitter	IEEE 802.11b mode :1T1R IEEE 802.11g mode :1T1R IEEE 802.11n HT20 mode : 1T1R IEEE 802.11n HT40 mode : 1T1R

Remark:

1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.

3.2 THE WORST MODE OF MEASUREMENT

Radiated Emission Measurement Above 1G	
Test Condition	Radiated Emission Above 1G
Power supply Mode	Mode 1: EUT power by Power Supply
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4
Worst Position	<input type="checkbox"/> Placed in fixed position. <input type="checkbox"/> Placed in fixed position at X-Plane (E2-Plane) <input checked="" type="checkbox"/> Placed in fixed position at Y-Plane (E1-Plane)

Radiated Emission Measurement Below 1G	
Test Condition	Radiated Emission Below 1G
Power supply Mode	Mode 1: EUT power by Power Supply
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4

Remark:

1. The worst mode was record in this test report.
2. EUT pre-scanned in two axis ,X,Y and two polarity, for radiated measurement. The worst case(Y-Plane) were recorded in this report

Report No.: T210413W01-RP3

4. EUT DUTY CYCLE

Temperature: 25.6°C

Tested by:

Lance Chen

Humidity: 48% RH

Test date:

June 29, 2021

Duty Cycle				
Configuration	Duty Cycle (%)	Duty Factor (dB) =10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
802.11b	99.62	0.02	0.12	0.01
802.11g	97.48	0.11	0.72	1.00
802.11n HT20	97.31	0.12	0.77	1.00
802.11n HT40	94.88	0.23	1.54	2.00



5. TEST RESULT

5.1 AC POWER LINE CONDUCTED EMISSION

5.1.1 Test Limit

According to §15.207(a) and RSS-GEN section 8.8,

Frequency Range (MHz)	Limits(dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56*	56 to 46*
0.50 to 5	56	46
5 to 30	60	50

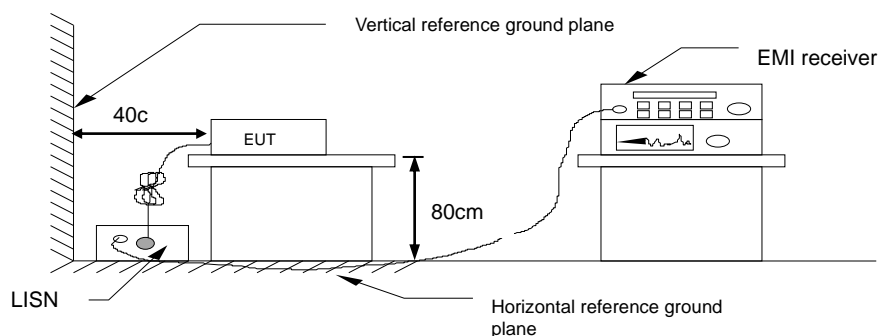
* Decreases with the logarithm of the frequency.

5.1.2 Test Procedure

Test method Refer as ANSI C63.10: 2013 clause 6.2,

1. The EUT was placed on a non-conducted table, which is 0.8m above horizontal ground plane and 0.4m above vertical ground plane.
2. EUT connected to the line impedance stabilization network (LISN)
3. Receiver set RBW of 9kHz and Detector Peak, and note as quasi-peak and average.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. Recorded Line for Neutral and Line.

5.1.3 Test Setup



5.1.4 Test Result

Not applicable, because EUT doesn't connect to AC Main Source direct.

5.2 6dB BANDWIDTH AND OCCUPIED BANDWIDTH(99%)

5.2.1 Test Limit

According to §15.247(a)(2) and RSS-247 section 5.2(a),

6 dB Bandwidth :

Limit	Shall be at least 500kHz
-------	--------------------------

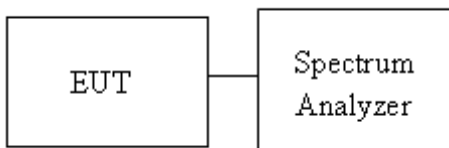
Occupied Bandwidth(99%) : For reporting purposes only.

5.2.2 Test Procedure

Test method Refer as ANSI C63.10: 2013,

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. SA set RBW = 100kHz, VBW = 300kHz and Detector = Peak, to measurement 6 dB Bandwidth.
4. SA set RBW = 1% ~ 5% OBW, VBW = three times the RBW and Detector = Peak, to measurement 99% Bandwidth
5. Measure and record the result of 6 dB Bandwidth and 99% Bandwidth. in the test report.

5.2.3 Test Setup



5.2.4 Test Result

Temperature: 25.6°C

Tested by: Lance Chen

Humidity: 48% RH

Test date: June 29, 2021

Test mode: IEEE 802.11b mode / 2412-2462 MHz						
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (kHz)	Chain 1 6dB BW (kHz)	6dB limit (kHz)
Low	2412	12.321	-	9590.00	-	≥500
Mid	2437	12.426	-	9579.00	-	
High	2462	12.488	-	9587.00	-	

Test mode: IEEE 802.11g mode / 2412-2462 MHz						
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (kHz)	Chain 1 6dB BW (kHz)	6dB limit (kHz)
Low	2412	16.722	-	15330.00	-	≥500
Mid	2437	16.795	-	15160.00	-	
High	2462	16.733	-	15160.00	-	

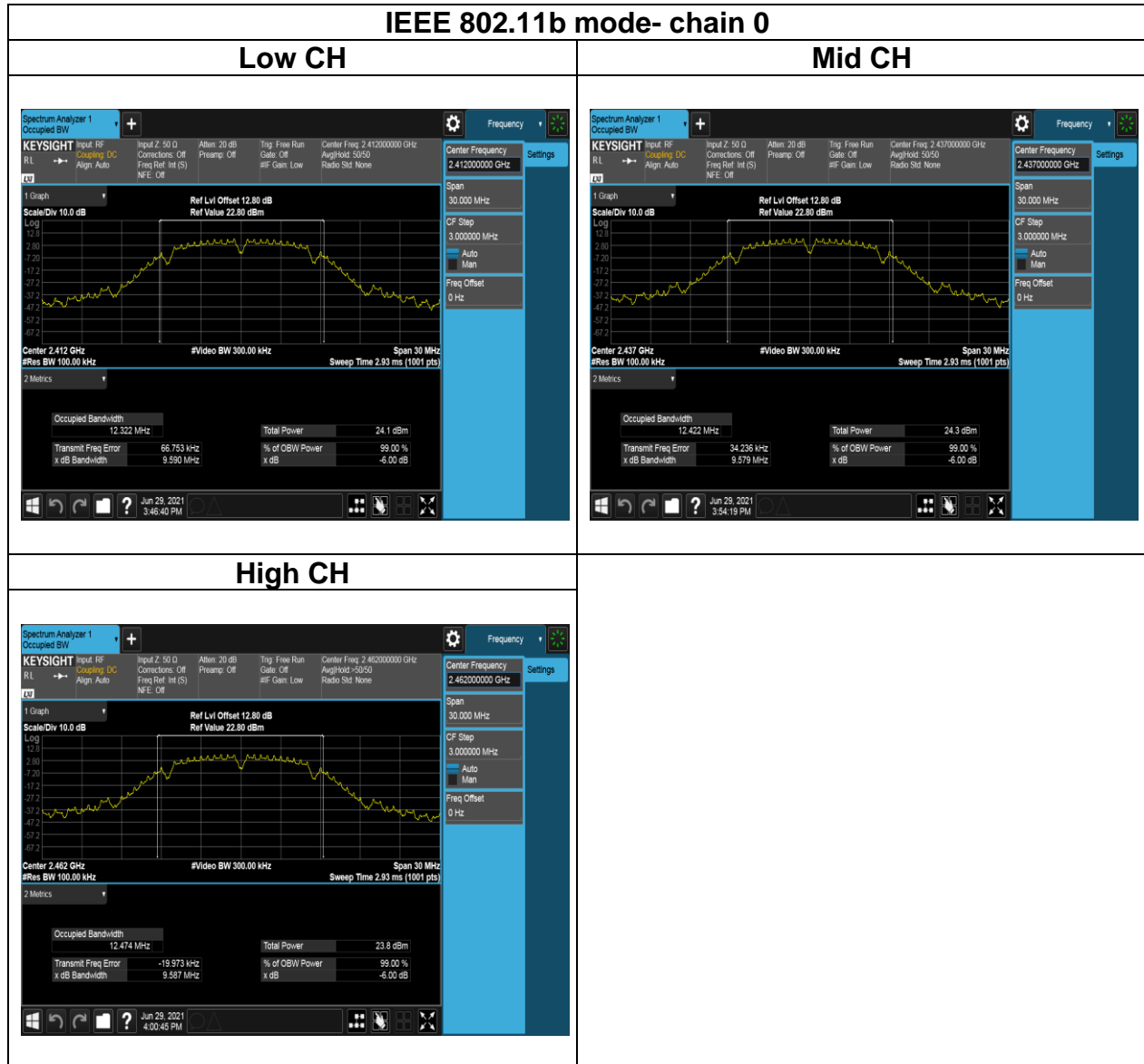
Test mode: IEEE 802.11n HT 20 MHz mode / 2412-2462 MHz						
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (kHz)	Chain 1 6dB BW (kHz)	6dB limit (kHz)
Low	2412	17.669	-	15370.00	-	≥500
Mid	2437	17.745	-	15160.00	-	
High	2462	17.67	-	16110.00	-	

Test mode: IEEE 802.11n HT 40 MHz mode / 2422-2452 MHz						
Channel	Frequency (MHz)	Chain 0 OBW(99%) (MHz)	Chain 1 OBW(99%) (MHz)	Chain 0 6dB BW (kHz)	Chain 1 6dB BW (kHz)	6dB limit (kHz)
Low	2422	35.987	-	35340.00	-	≥500
Mid	2437	36.034	-	35220.00	-	
High	2452	36.22	-	35880.00	-	

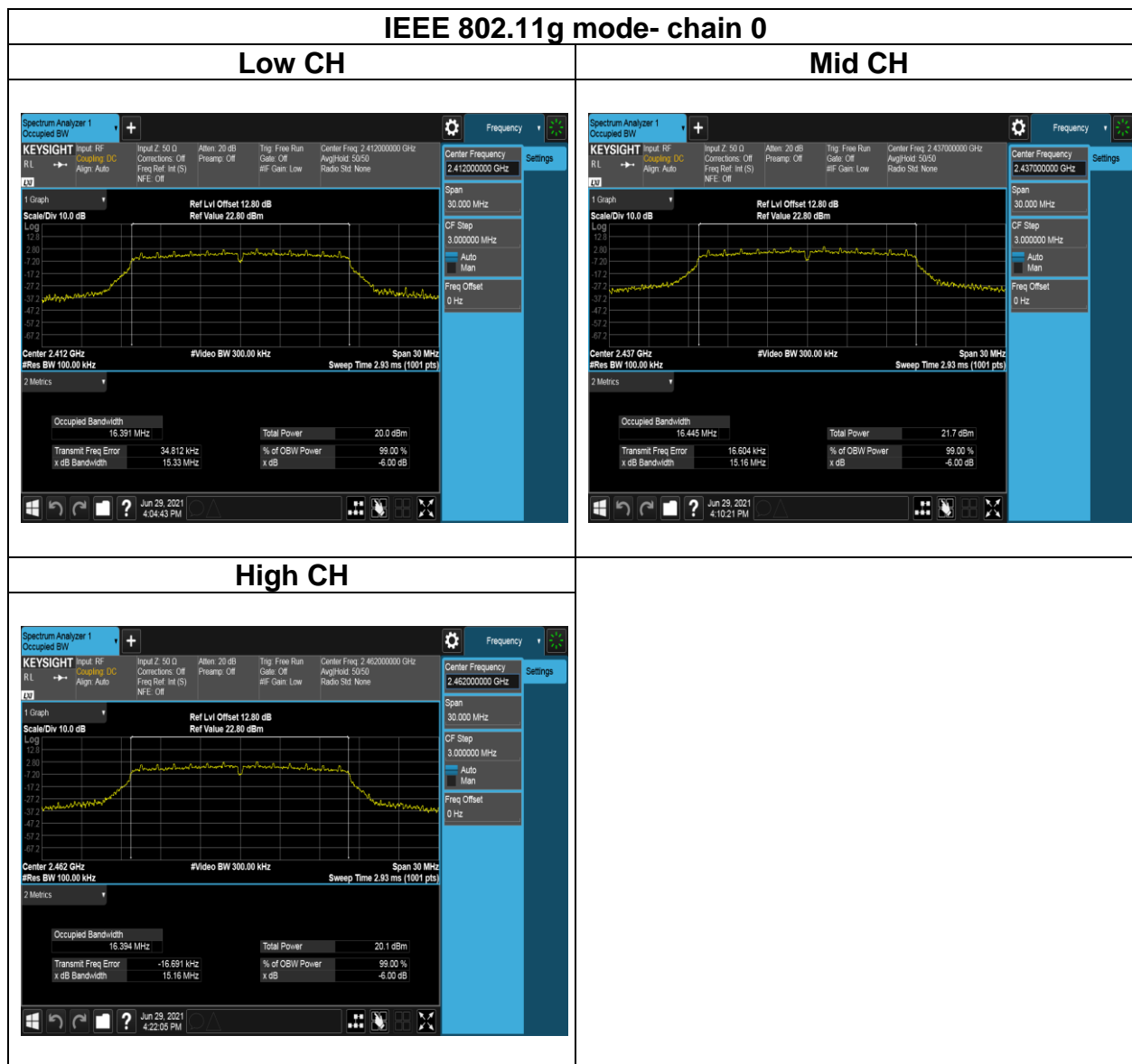
Report No.: T210413W01-RP3

Test Data

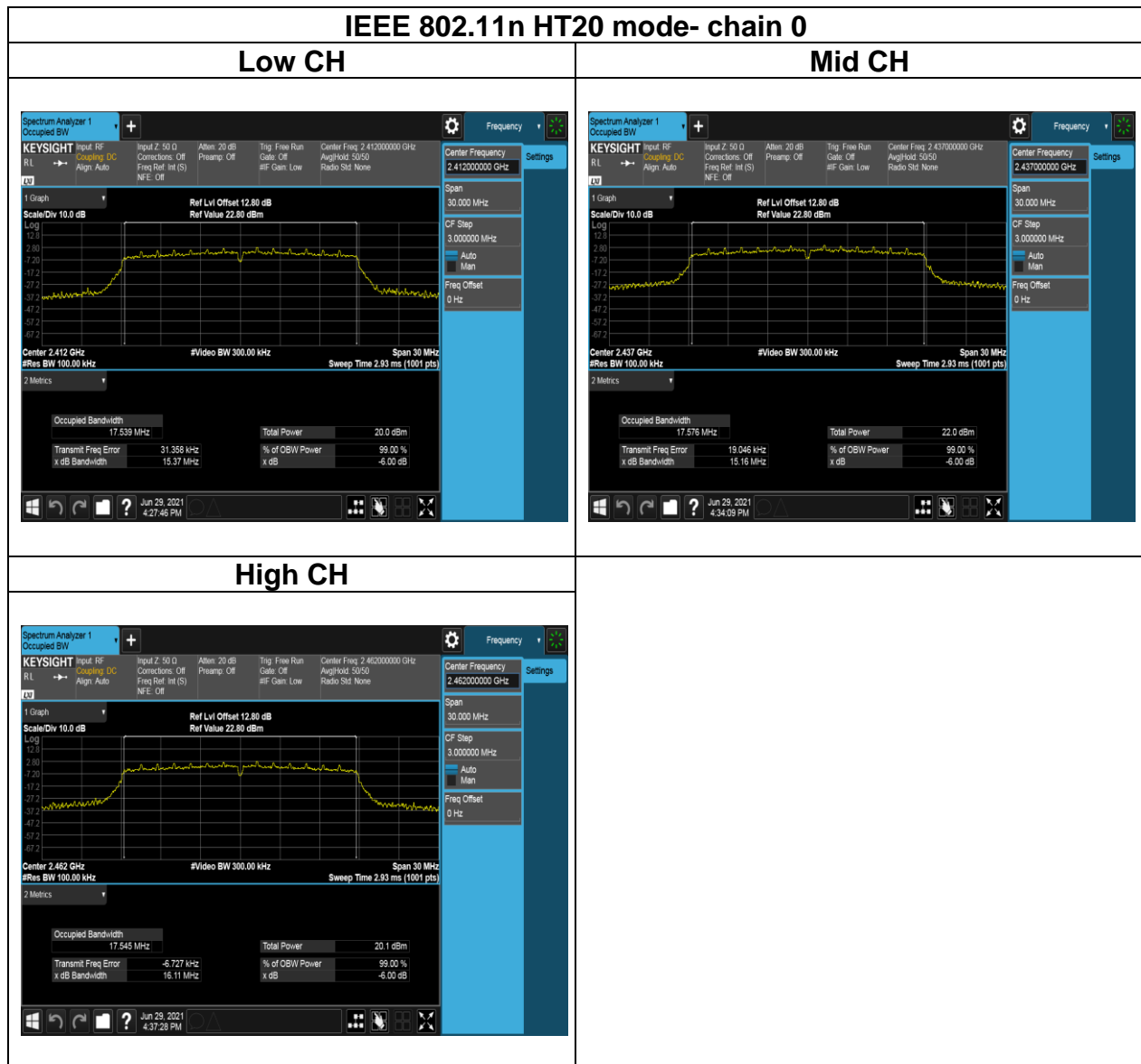
6dB BANDWIDTH



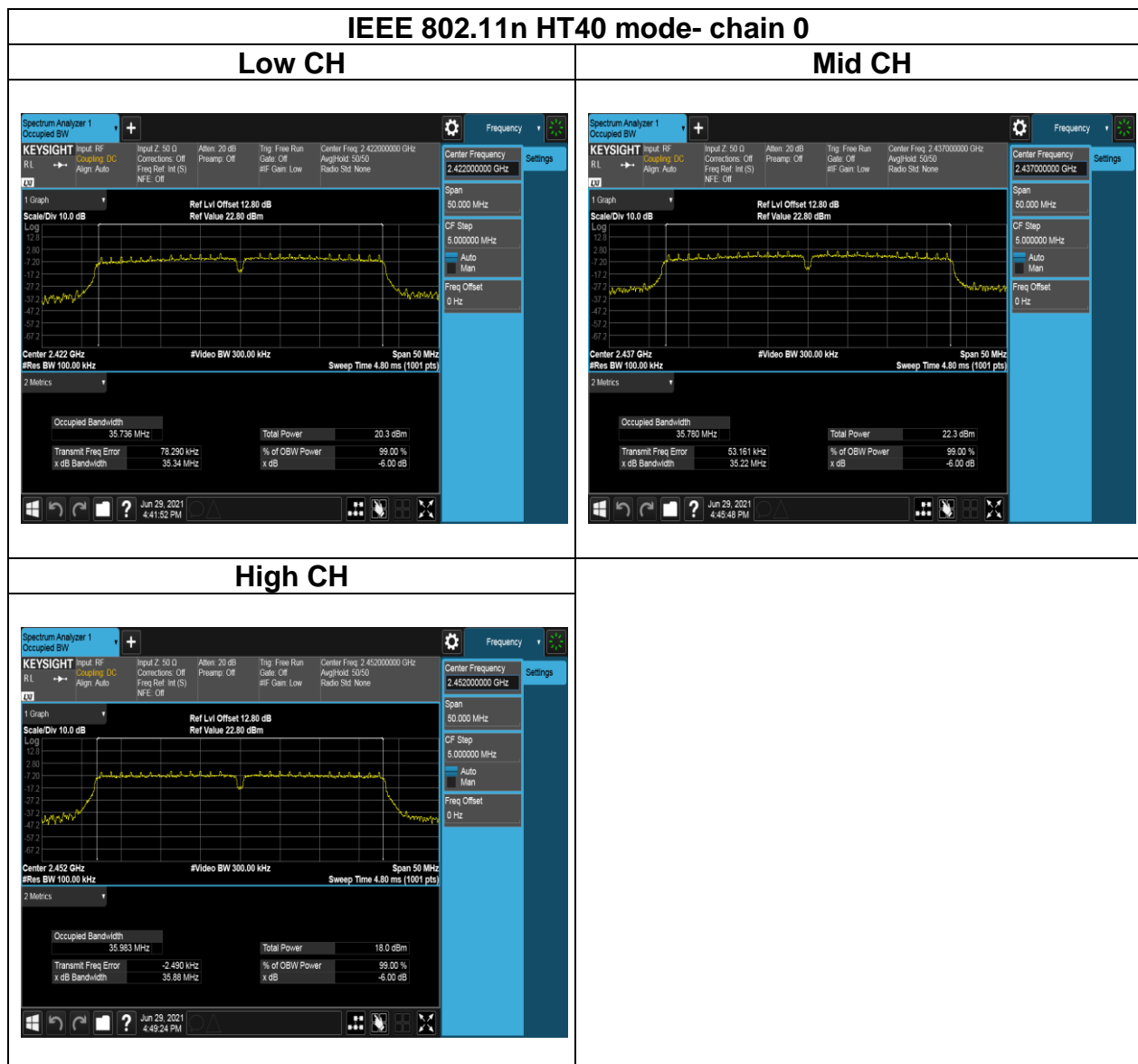
Report No.: T210413W01-RP3



Report No.: T210413W01-RP3



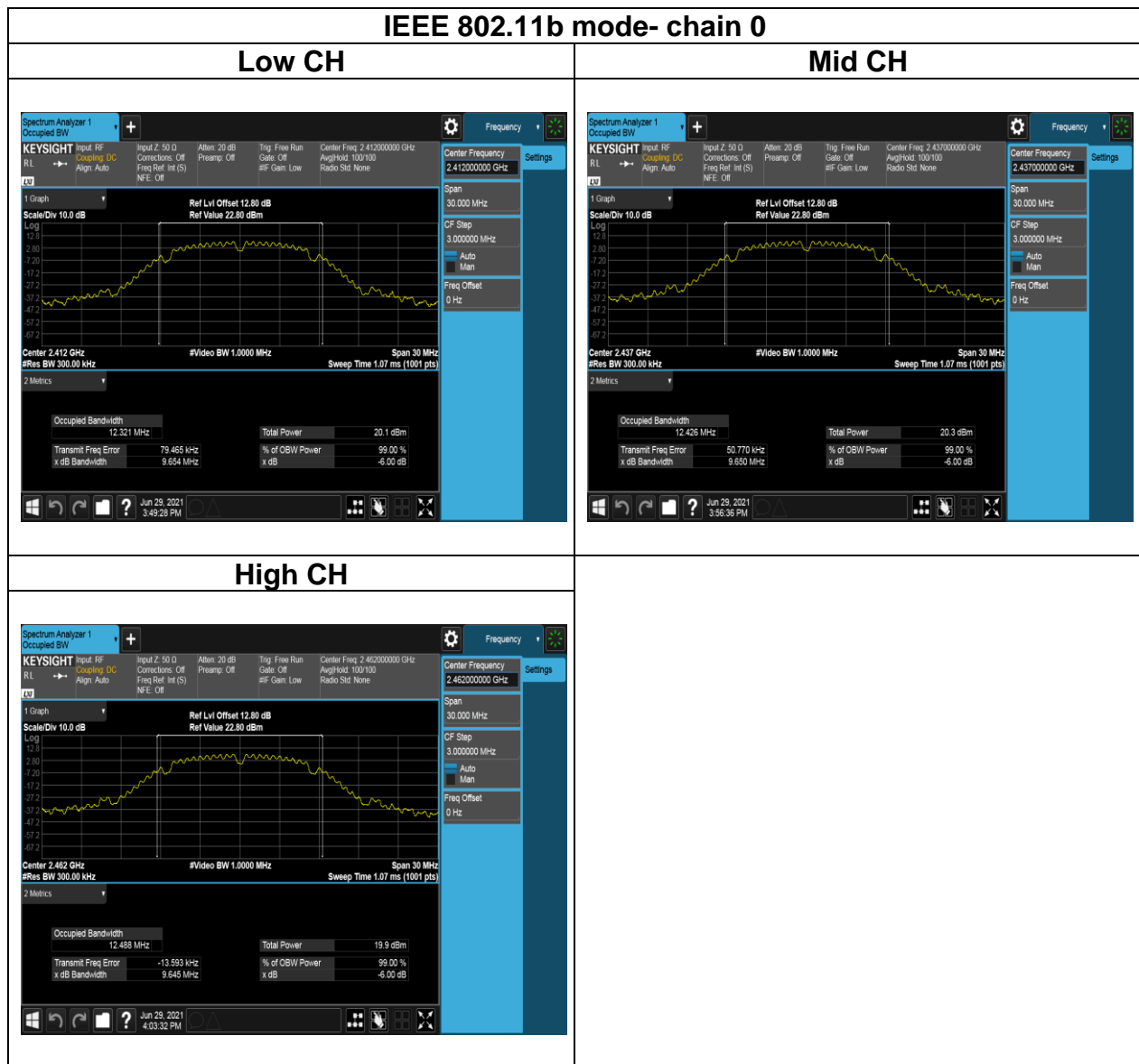
Report No.: T210413W01-RP3



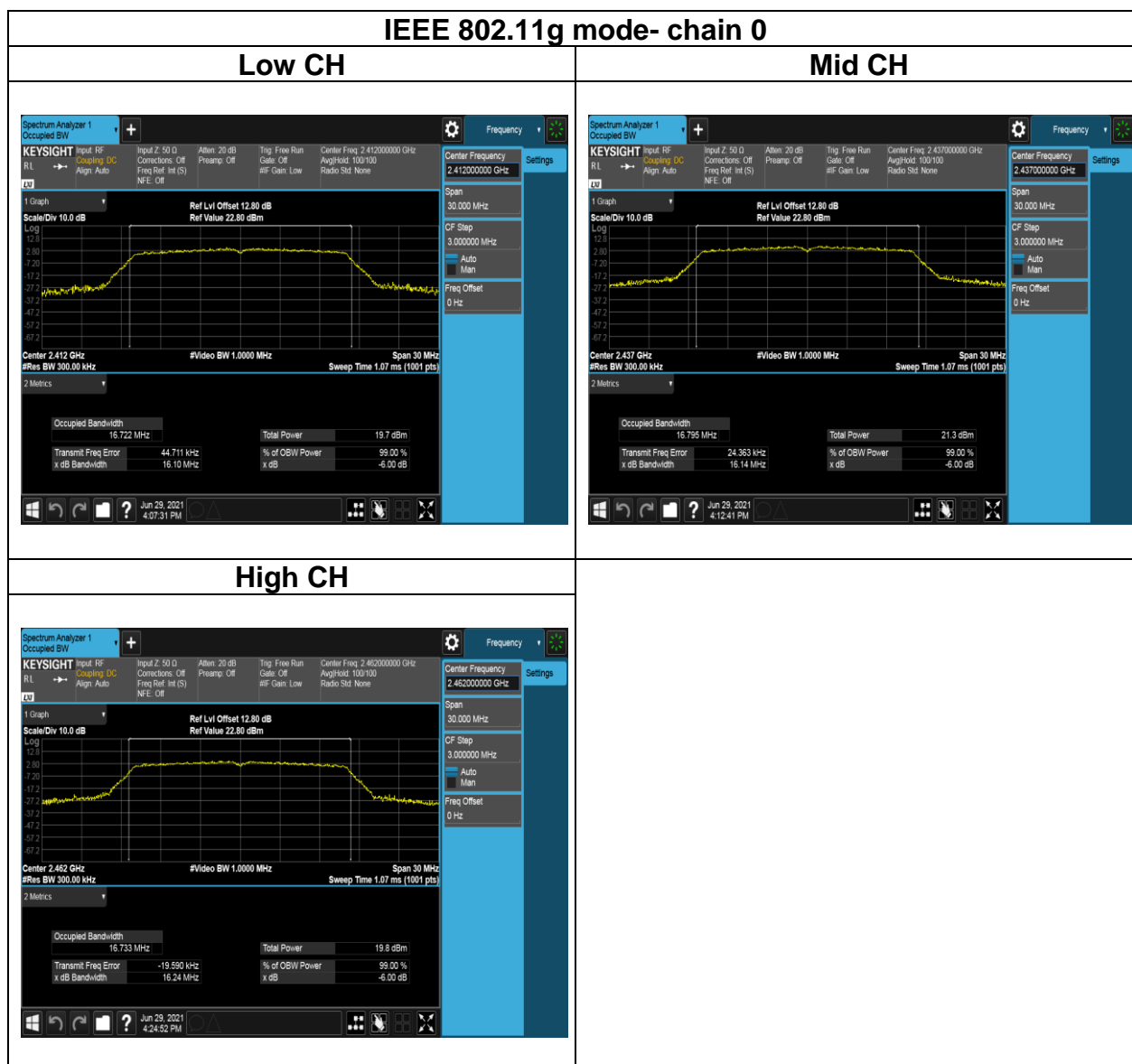
Report No.: T210413W01-RP3

Test Data

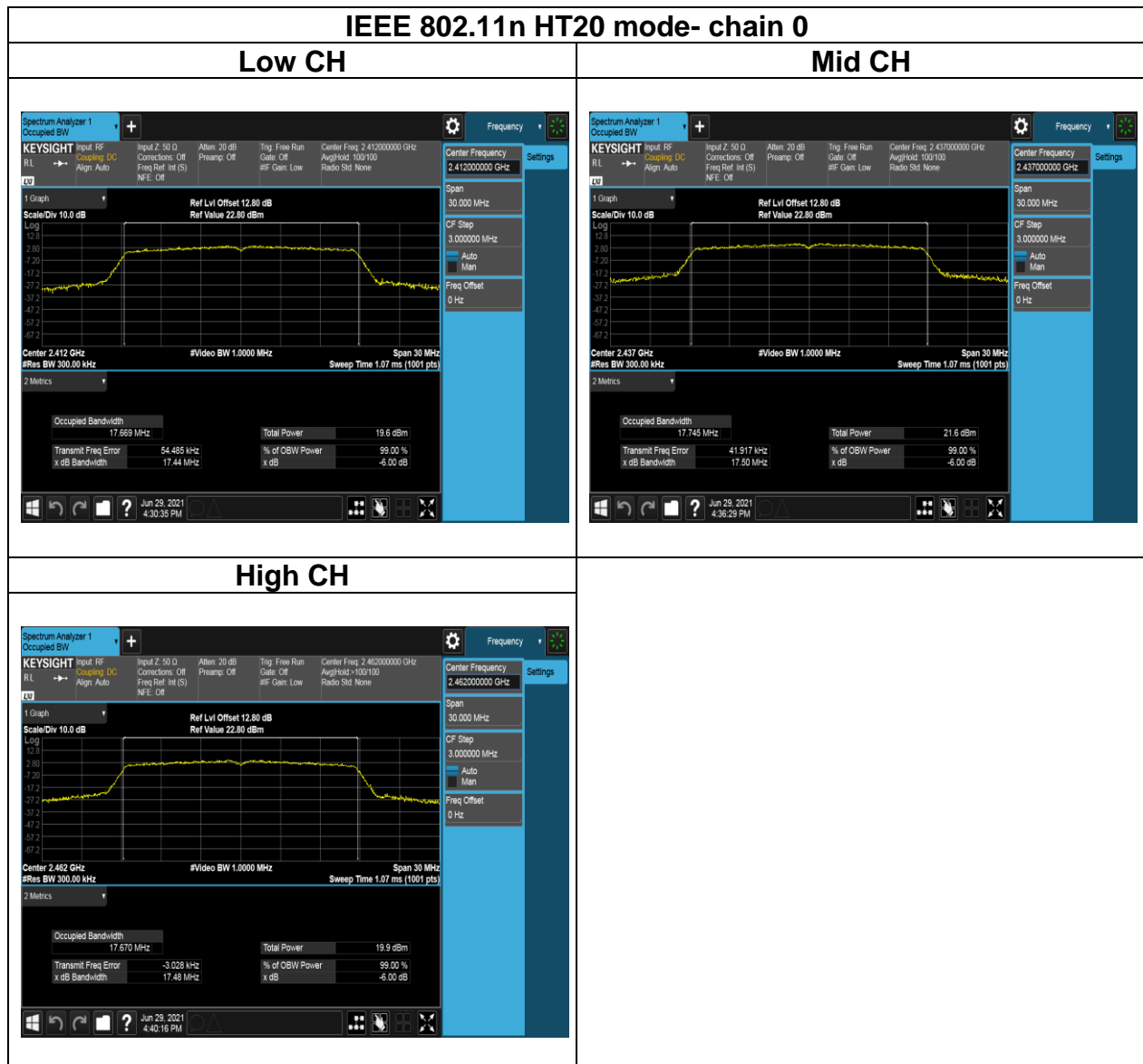
BANDWIDTH 99%



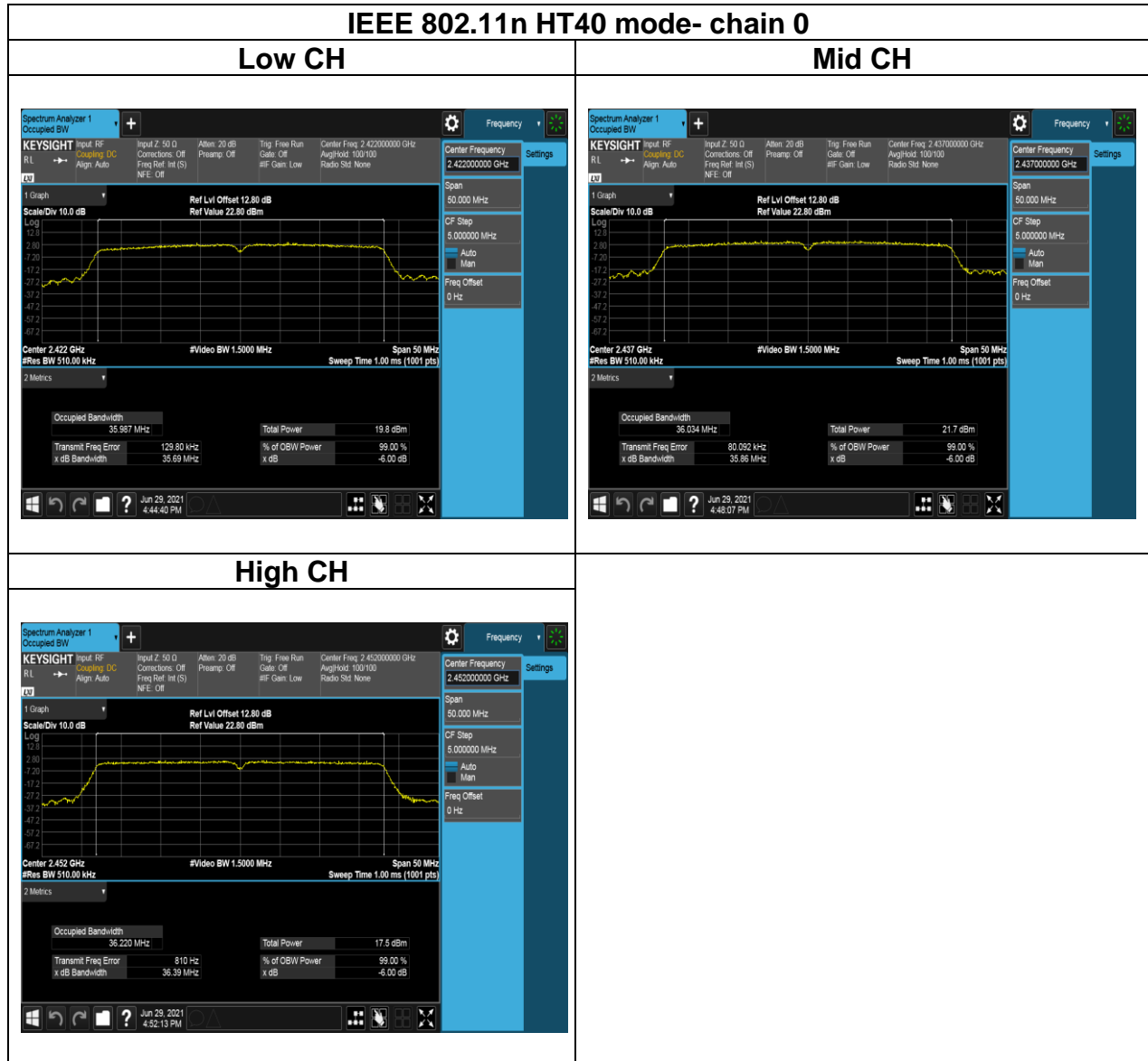
Report No.: T210413W01-RP3



Report No.: T210413W01-RP3



Report No.: T210413W01-RP3



5.3 OUTPUT POWER MEASUREMENT

5.3.1 Test Limit

According to §15.247(b) (3) and RSS-247 section 5.4(d),

Peak output power :

For systems using digital modulation in the 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt(30 dBm) and the e.i.r.p. shall not exceed 4Watt(36 dBm), base on the use of antennas with directional gain not exceed 6 dBi If transmitting antennas of directional gain greater than 6dBi are used the peak output power the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Limit	<input checked="" type="checkbox"/> Antenna not exceed 6 dBi : 30dBm <input type="checkbox"/> Antenna with DG greater than 6 dBi : [Limit = 30 – (DG – 6)] <input type="checkbox"/> Point-to-point operation :
-------	---

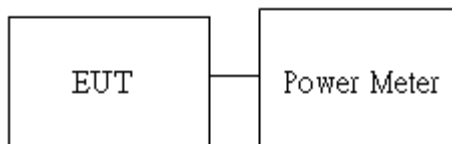
Average output power : For reporting purposes only.

5.3.2 Test Procedure

Test method Refer as ANSI C63.10:2013.

1. The EUT RF output connected to the power meter by RF cable.
2. Setting maximum power transmit of EUT.
3. The path loss was compensated to the results for each measurement.
4. Measure and record the result of Peak output power and Average output power. in the test report.

5.3.3 Test Setup



5.3.4 Test Result

Temperature: 25.6°C

Tested by: Lance Chen

Humidity: 48% RH

Test date: June 29, 2021

Peak output power:

Test Mode: IEEE 802.11b Mode

CH	Freq. (MHz)	Data Rate	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT
1	2412	1	19	20.45	30.00	PASS
6	2437	1	19	20.36	30.00	PASS
11	2462	1	19	20.27	30.00	PASS

Test Mode: IEEE 802.11g Mode

CH	Freq. (MHz)	Data Rate	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT
1	2412	6	17	22.91	30.00	PASS
6	2437	6	17	23.13	30.00	PASS
11	2462	6	17	22.15	30.00	PASS

Test Mode: IEEE 802.11n HT20 Mode

CH	Freq. (MHz)	Data Rate	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT
1	2412	MCS0	17	22.84	30.00	PASS
6	2437	MCS0	17	23.12	30.00	PASS
11	2462	MCS0	17	22.18	30.00	PASS

Test Mode: IEEE 802.11n HT40 Mode

CH	Freq. (MHz)	Data Rate	Power set	Peak Output Power (dBm)	Limit (dBm)	RESULT
3	2422	MCS0	16.5	23.08	30.00	PASS
6	2437	MCS0	16.5	23.42	30.00	PASS
9	2452	MCS0	16.5	21.54	30.00	PASS

Average output power :

Test Mode: IEEE 802.11b Mode

CH	Freq. (MHz)	Data Rate	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Limit (dBm)	RESULT
1	2412	1	19	17.33	30.00	PASS
6	2437	1	19	17.36	30.00	PASS
11	2462	1	19	17.37	30.00	PASS

Test Mode: IEEE 802.11g Mode

CH	Freq. (MHz)	Data Rate	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Limit (dBm)	RESULT
1	2412	6	17	13.63	30.00	PASS
6	2437	6	17	15.51	30.00	PASS
11	2462	6	17	15.38	30.00	PASS

Test Mode: IEEE 802.11n HT20 Mode

CH	Freq. (MHz)	Data Rate	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Limit (dBm)	RESULT
1	2412	MCS0	17	13.51	30.00	PASS
6	2437	MCS0	17	15.45	30.00	PASS
11	2462	MCS0	17	13.86	30.00	PASS

Test Mode: IEEE 802.11n HT40 Mode

CH	Freq. (MHz)	Data Rate	Power set	Max. Avg. Output include tune up tolerance Power (dBm)	Limit (dBm)	RESULT
3	2422	MCS0	16.5	13.49	30.00	PASS
6	2437	MCS0	16.5	15.55	30.00	PASS
9	2452	MCS0	16.5	11.19	30.00	PASS

EIRP :**Test Mode: IEEE 802.11b Mode**

CH	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
1	2412	1	17.33	1.95	19.28	36	PASS
6	2437	1	17.36	1.95	19.31	36	PASS
11	2462	1	17.37	1.95	19.32	36	PASS

Test Mode: IEEE 802.11g Mode

CH	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
1	2412	6	13.56	1.95	15.51	36	PASS
6	2437	6	15.36	1.95	17.31	36	PASS
11	2462	6	13.90	1.95	15.85	36	PASS

Test Mode: IEEE 802.11n HT20 Mode

CH	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
1	2412	MCS0	13.51	1.95	15.46	36	PASS
6	2437	MCS0	15.45	1.95	17.40	36	PASS
11	2462	MCS0	13.86	1.95	15.81	36	PASS

Test Mode: IEEE 802.11n HT40 Mode

CH	Freq. (MHz)	Data Rate	Avg. Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	RESULT
3	2422	MCS0	13.49	1.95	15.44	36	PASS
6	2437	MCS0	15.55	1.95	17.50	36	PASS
9	2452	MCS0	11.19	1.95	13.14	36	PASS

5.4 POWER SPECTRAL DENSITY

5.4.1 Test Limit

According to §15.247(e) and RSS-247 section 5.2(b),

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

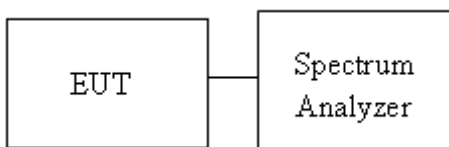
Limit	<input checked="" type="checkbox"/> Antenna not exceed 6 dBi : 8dBm <input type="checkbox"/> Antenna with DG greater than 6 dBi : [Limit = 8 – (DG – 6)] <input type="checkbox"/> Point-to-point operation :
-------	---

5.4.2 Test Procedure

Test method Refer as ANSI C63.10:2013,

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. SA set RBW = 3kHz, VBW = 10kHz, Span = 1.5 times DTS Bandwidth (6 dB BW), Detector = Peak, Sweep Time = Auto and Trace = Max hold.
4. The path loss was compensated to the results for each measurement by SA.
5. Mark the maximum level.
6. Measure and record the result of power spectral density. in the test report.

5.4.3 Test Setup



Report No.: T210413W01-RP3

5.4.4 Test Result

Temperature: 25.6°C

Tested by: Lance Chen

Humidity: 48% RH

Test date: June 29, 2021

Test mode: IEEE 802.11b mode / 2412-2462 MHz					
Channel	Frequency (MHz)	Chain 0 PSD (dBm/3kHz)	Chain 1 PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)
Low	2412	-3.90	-	-3.90	8
Mid	2437	-5.74	-	-5.74	
High	2462	-7.28	-	-7.28	

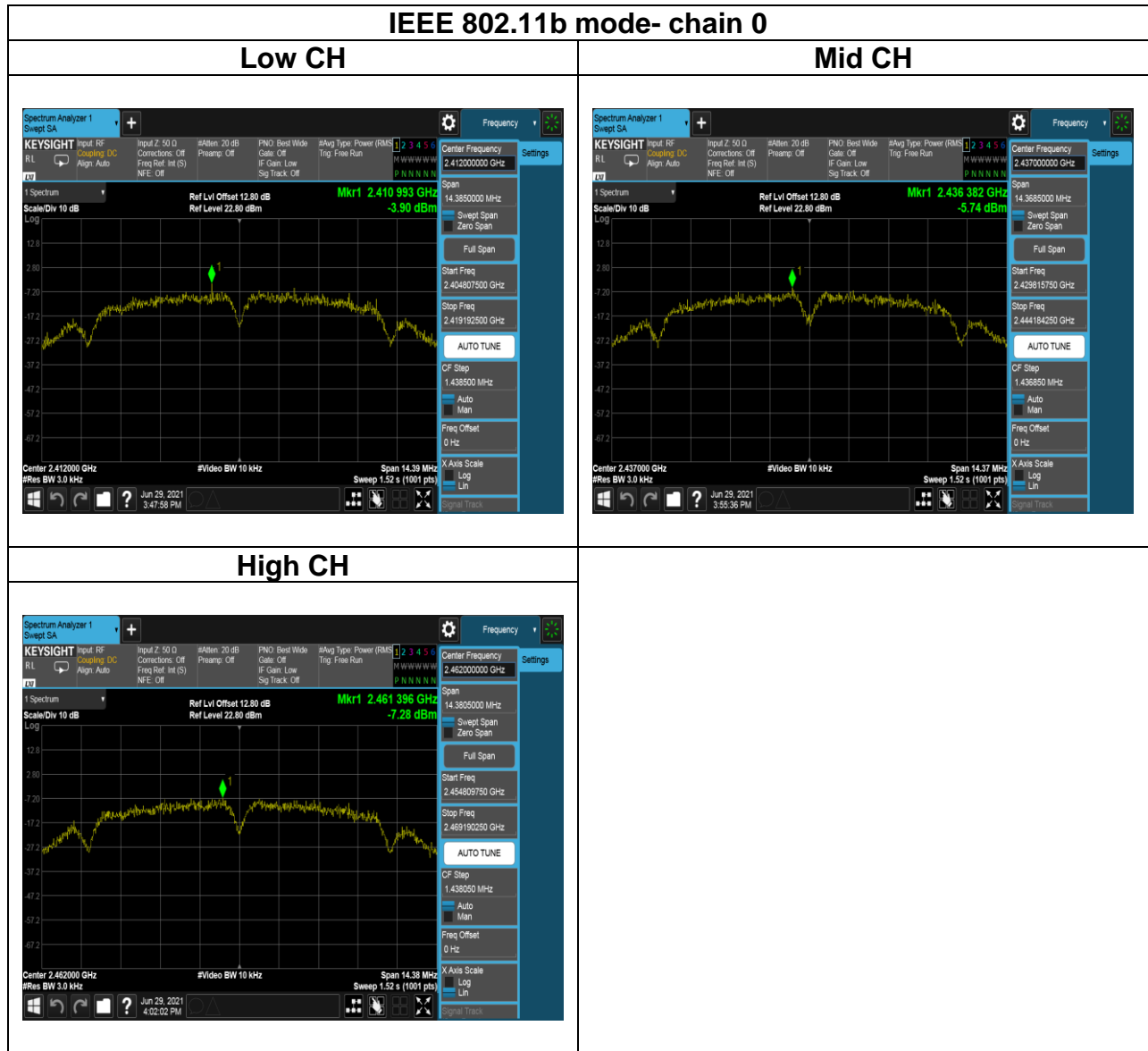
Test mode: IEEE 802.11g mode / 2412-2462 MHz					
Channel	Frequency (MHz)	Chain 0 PSD (dBm/3kHz)	Chain 1 PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)
Low	2412	-11.84	-	-11.84	8
Mid	2437	-10.68	-	-10.68	
High	2462	-11.68	-	-11.68	

Test mode: IEEE 802.11n HT 20 MHz mode / 2412-2462 MHz					
Channel	Frequency (MHz)	Chain 0 PSD (dBm/3kHz)	Chain 1 PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)
Low	2412	-10.88	-	-10.88	8
Mid	2437	-10.18	-	-10.18	
High	2462	-11.33	-	-11.33	

Test mode: IEEE 802.11n HT 40 MHz mode / 2422-2452 MHz					
Channel	Frequency (MHz)	Chain 0 PSD (dBm/3kHz)	Chain 1 PSD (dBm/3kHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)
Low	2412	-14.79	-	-14.79	8
Mid	2437	-13.44	-	-13.44	
High	2462	-17.56	-	-17.56	

Report No.: T210413W01-RP3

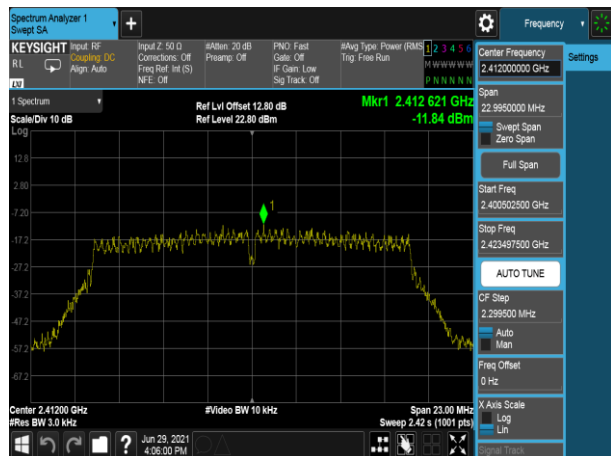
Test Data



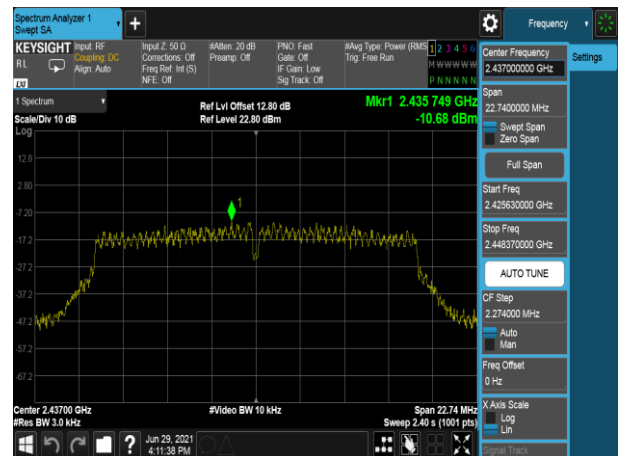
Report No.: T210413W01-RP3

IEEE 802.11g mode- chain 0

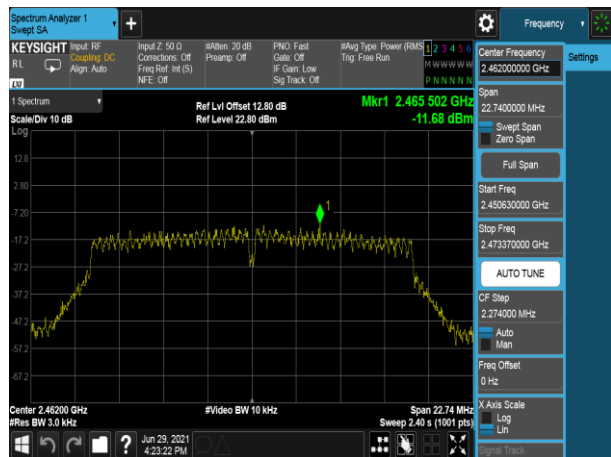
Low CH



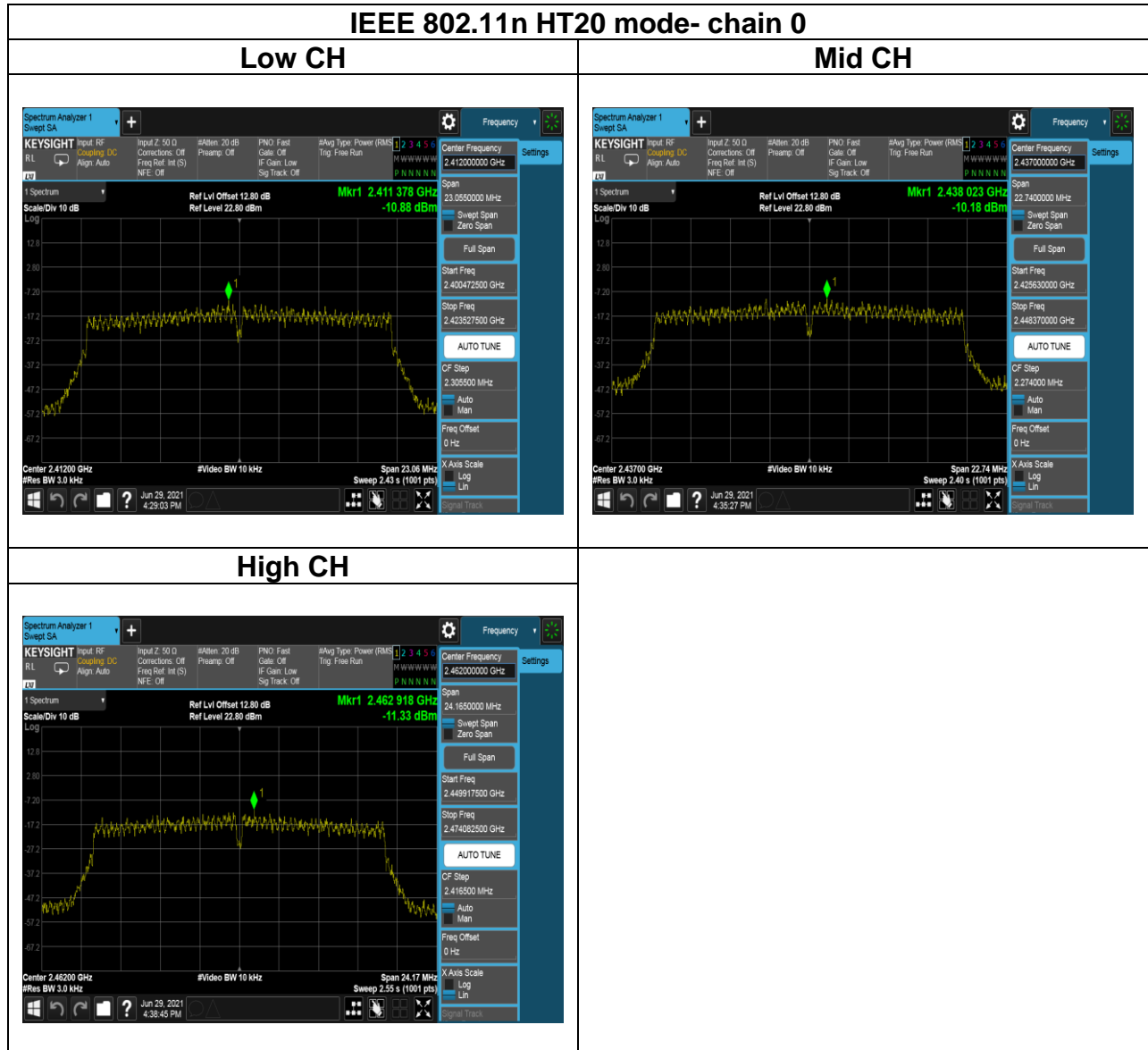
Mid CH



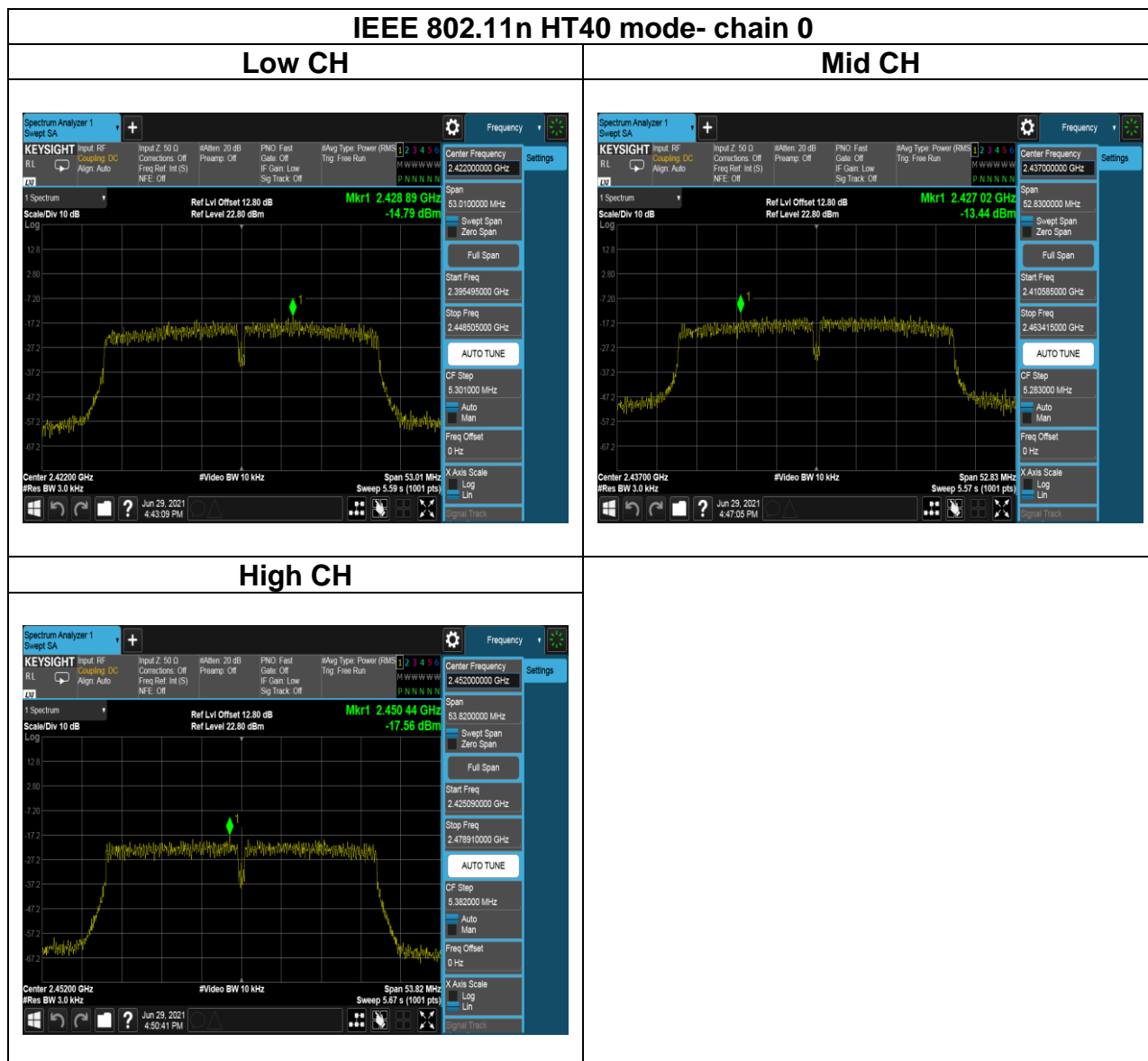
High CH



Report No.: T210413W01-RP3



Report No.: T210413W01-RP3



5.5 CONDUCTED BANDEDGE AND SPURIOUS EMISSION

5.5.1 Test Limit

According to §15.247(d) and RSS-247 section 5.5,

In any 100 kHz bandwidth outside the authorized frequency band,

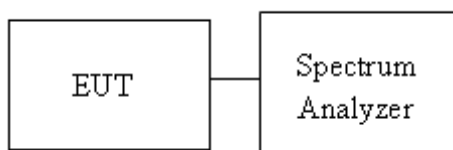
Non-restricted bands shall be attenuated at least 20 dB/30 dB relative to the maximum PSD level in 100 kHz by RF conducted or a radiated measurement which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

5.5.2 Test Procedure

Test method Refer as ANSI C63.10:2013,

1. EUT RF output port connected to the SA by RF cable, and the path loss was compensated to result.
2. SA setting, RBW=100kHz, VBW=300kHz, Detector=Peak, Trace mode = max hold, SWT = Auto.
3. In any 100 kHz bandwidth outside the authorized frequency band, shall be attenuated at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when conducted power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

5.5.3 Test Setup



5.5.4 Test Result

Temperature: 25.6°C

Tested by: Lance Chen

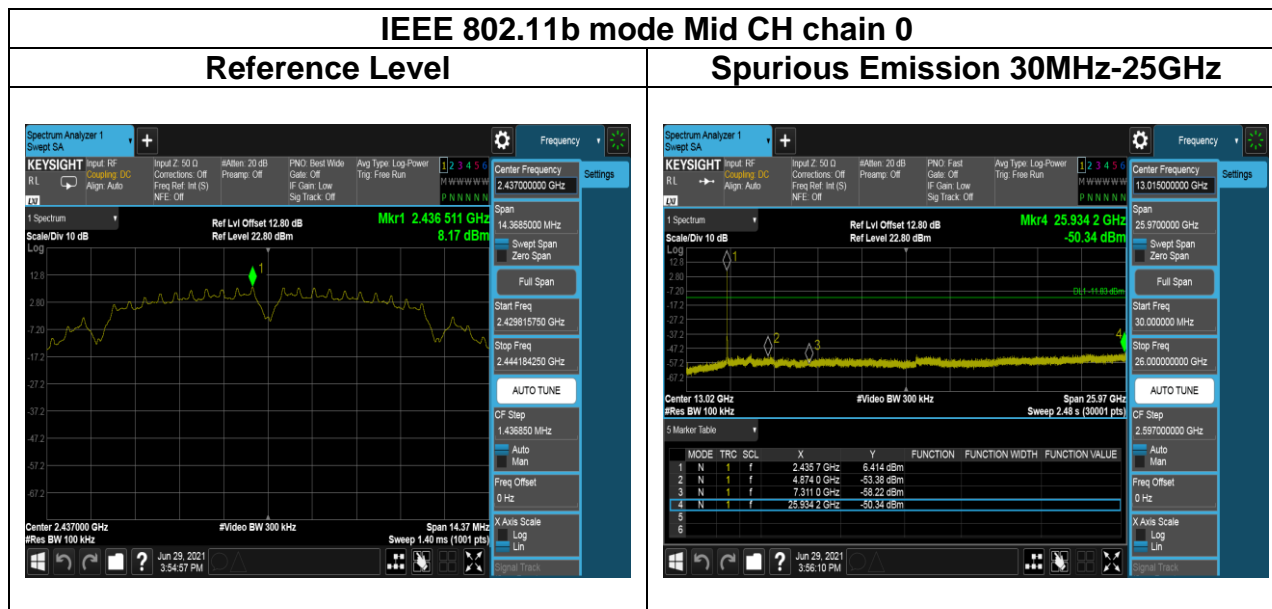
Humidity: 48% RH

Test date: June 29 ~ August 3, 2021

Report No.: T210413W01-RP3

Test Data

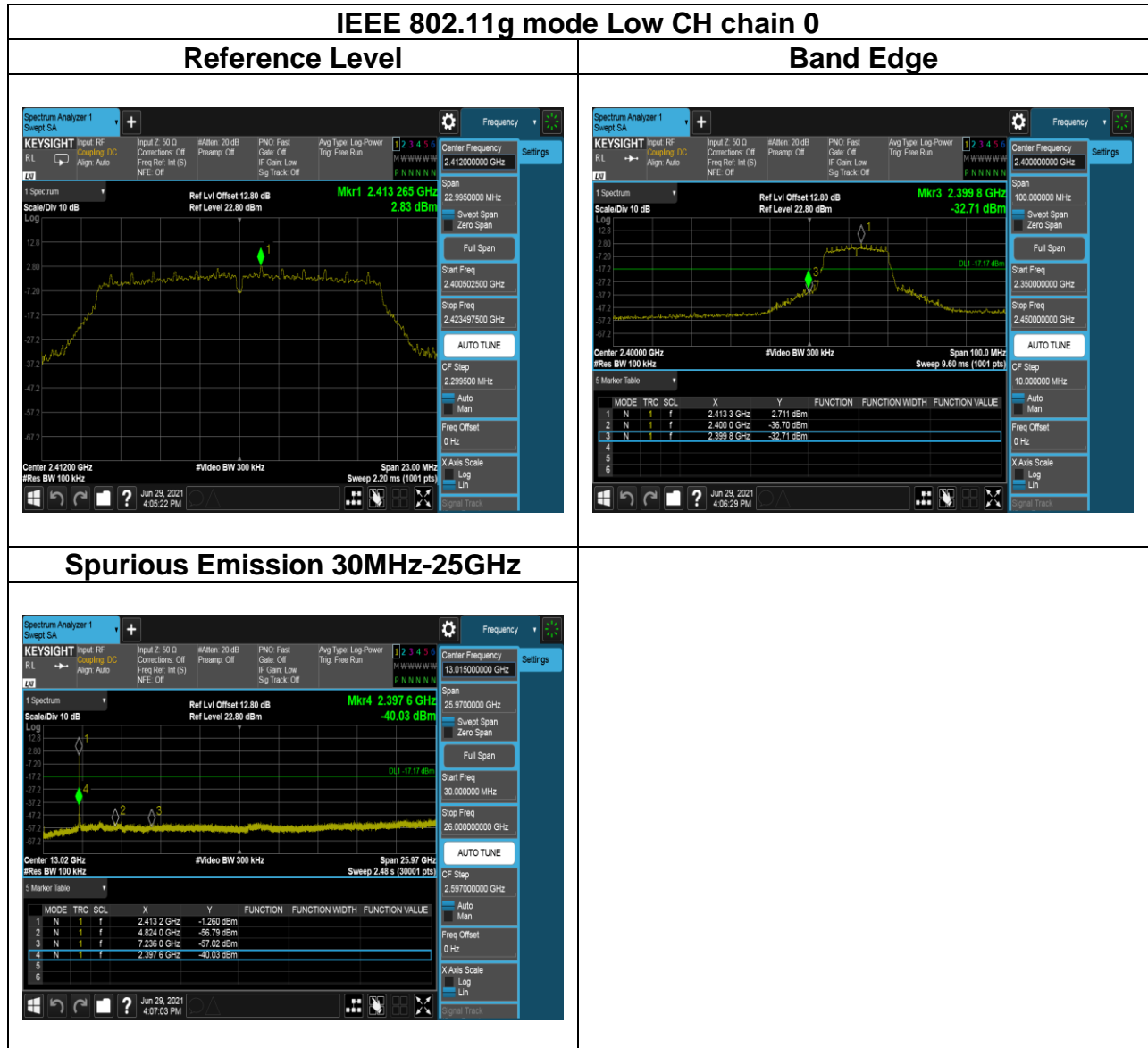




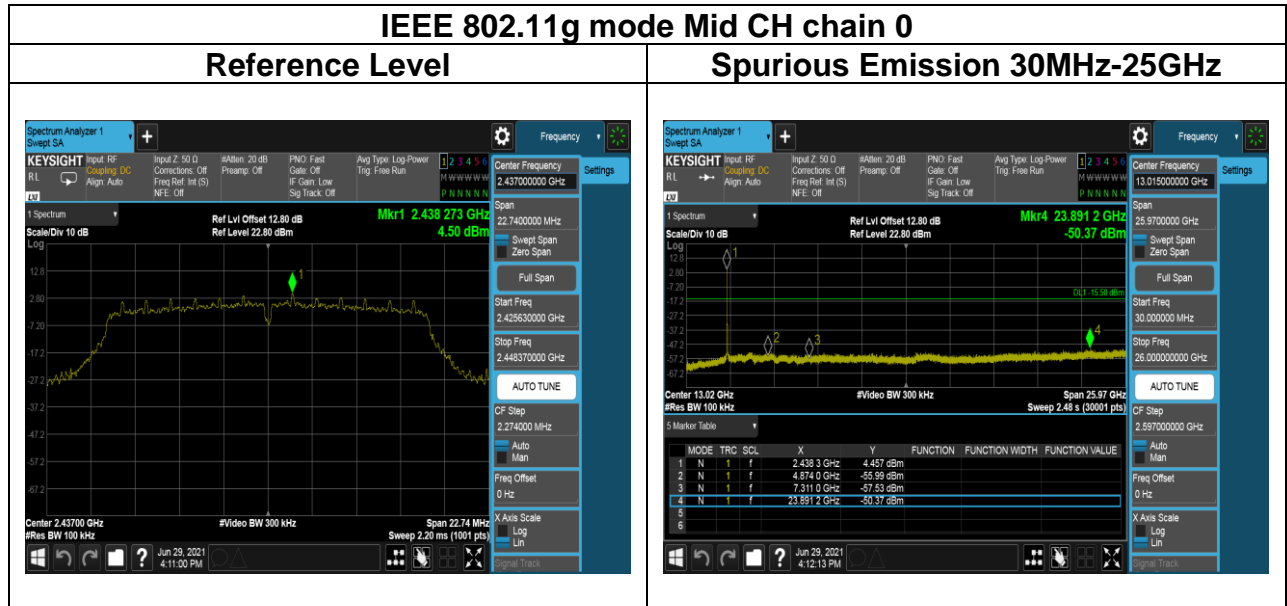
Report No.: T210413W01-RP3



Report No.: T210413W01-RP3



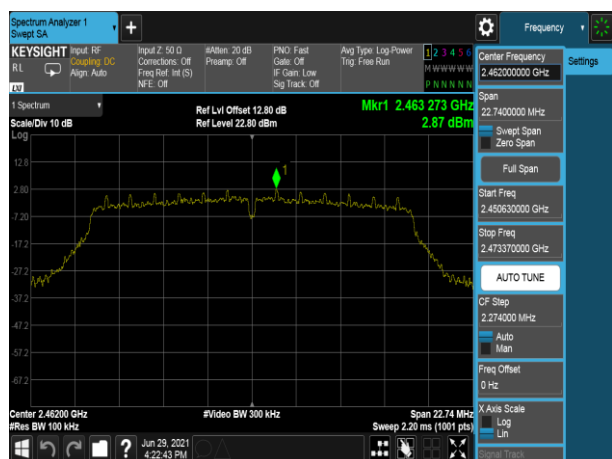
Report No.: T210413W01-RP3



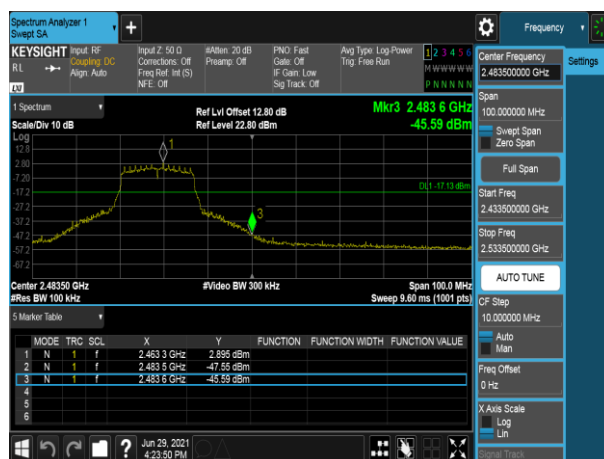
Report No.: T210413W01-RP3

IEEE 802.11g mode High CH chain 0

Reference Level



Band Edge



Spurious Emission 30MHz-25GHz

