FCC 47 CFR PART 15 SUBPART C

CERTIFICATION TEST REPORT

For

Enrollment Station

MODEL NUMBER: DS-K1F600U-D6E-F

ADDITIONAL MODEL NUMBER:
DS-K1F600U-D6E, DS-K1F600U-D6E-FUHK, DS-K1F600U-D6E-FCKV, DS-K1F600U-D6E-FUVS, DS-K1F600U-D6E-FKVO, DS-K1F600U-D6E-FHUN, DS-K1F600U-D6EUHK, DS-K1F600U-D6ECKV,DS-K1F600U-D6EUVS, DS-K1F600U-D6EKVO, DS-K1F600U-D6EHUN

PROJECT NUMBER: 4789684577

REPORT NUMBER: 4789684577-4

FCC ID: 2ADTD-K1F600UD6EF

ISSUE DATE: Nov. 10, 2020

Prepared for

HANGZHOU HIKVISION DIGITAL TECHNOLOGY CO., LTD.

Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	11/10/2020	Initial Issue	

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	HANGZHOU HIKVISION DIGITAL TECHNOLOGY CO., LTD.
Address:	No.555 Qianmo Road,Binjiang District Hangzhou 310052,China

Manufacturer Information

Company Name:	HANGZHOU HIKVISION DIGITAL TECHNOLOGY CO., LTD.
Address:	No.555 Qianmo Road,Binjiang District Hangzhou 310052,China

Factory Information-1

Company Name:	Hangzhou Hikvision Technology Co., Ltd.
Address:	No.700,DongliuRoad, Binjiang District, Hangzhou Ctiy,Zhejiang, 310052, China.

Factory Information-2

Company Name:	Hangzhou Hikvision Technology Co., Ltd.
Address:	No.700,DongliuRoad, Binjiang District, Hangzhou Ctiy,Zhejiang, 310052, China.

Factory Information-3

Company Name:	Hangzhou Hikvision Technology Co., Ltd.
Address:	No.700,DongliuRoad, Binjiang District, Hangzhou Ctiy,Zhejiang, 310052, China.

EUT Description

Product Name	Enrollment Station
Model Name	DS-K1F600U-D6E-F
Additional No.	DS-K1F600U-D6E, DS-K1F600U-D6E-FUHK, DS-K1F600U-D6E-FCKV, DS-K1F600U-D6E-FUVS, DS-K1F600U-D6E-FKVO, DS-K1F600U-D6E-FHUN, DS-K1F600U-D6EUHK, DS-K1F600U-D6ECKV, DS-K1F600U-D6EUVS, DS-K1F600U-D6EKVO, DS-K1F600U-D6EHUN
Sample Number	3393879
Data of Receipt Sample	Oct. 26, 2020
Date Tested	Oct. 26, 2020 ~ Nov. 10, 2020

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	PASS

Summary of Test Results			
Clause	Test Items	FCC Rules	Test Results
1	6db DTS Bandwidth	FCC 15.247 (a) (2)	PASS
2	Conducted Power	FCC 15.247 (b) (3)	PASS
3	Power Spectral Density	FCC 15.247 (e)	PASS
4	Conducted Band edge And Spurious emission	FCC 15.247 (d)	PASS
5	Radiated Band edges and Spurious emission	FCC 15.247 (d) FCC 15.209 FCC 15.205	PASS
6	Conducted Emission Test For AC Power Port	FCC 15.207	PASS
7	Antenna Requirement	FCC 15.203	PASS
Remark: 1) The measurement result for the sample received is <Pass> according to < ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15C> when <Accuracy Method> decision rule is applied.			

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Chris Zhong
Laboratory Leader

2. TEST METHODOLOGY

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

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 4829.01)** **UL-CCIC COMPANY LIMITED has been assessed and proved to be in compliance with A2LA.** **FCC (FCC Designation No.: CN1247)** **UL-CCIC COMPANY LIMITED has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules.** **IC (IC Designation No.: 25056)** **UL-CCIC COMPANY LIMITED has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules.**

Note 1: All tests measurement facilities use to collect the measurement data are located at No. 2, Chengwan Road, Suzhou Industrial Park, Suzhou 215122, People's Republic of China

Note 2: For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. These measurements below 30MHz had been correlated to measurements performed on an OFS.

Note 3: The test anechoic chamber in UL-CCIC COMPANY LIMITED 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.

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	3.1dB
Radiation Emission test(include Fundamental emission) (9KHz-30MHz)	3.3dB
Radiation Emission test(include Fundamental emission) (30MHz-1GHz)	3.3dB
Radiation Emission test (1GHz to 26GHz)(include Fundamental emission)	3.9dB (1GHz-18Gz)
	4.2dB (18GHz-26.5Gz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

Product Name:	Enrollment Station
Model No.:	DS-K1F600U-D6E-F
Operating Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz
Type of Modulation:	IEEE for 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE for 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n (HT20 and HT40): OFDM (64QAM, 16QAM, QPSK, BPSK)
Channels Step:	Channels with 5MHz step
Sample Type:	Fixed production
Test power grade:	40
Test software of EUT:	Secure CRT (manufacturer declare)
Antenna Type:	Patch Antenna
Antenna Gain:	4.6 dBi

Remark:
Model No.:

No.:	Name:	No.:	Name:	No.:	Name:
1	DS-K1F600U-D6E	2	DS-K1F600U-D6E-FUHK	3	DS-K1F600U-D6E-FCKV
4	DS-K1F600U-D6E-FUVS	5	DS-K1F600U-D6E-FKVO	6	DS-K1F600U-D6E-FHUN
7	DS-K1F600U-D6EUHK	8	DS-K1F600U-D6ECKV	9	DS-K1F600U-D6EUVS
10	DS-K1F600U-D6EKVO	11	DS-K1F600U-D6EHUN		

Only the main model DS-K1F600U-D6E-F was tested and only the data of this model is shown in this test report. Since Their electrical circuit design, layout, components used and internal wiring are identical, only the model name and software are different.

5.2. MAXIMUM OUTPUT POWER

Number of Transmit Chains (NTX)	IEE Std. 802.11	Channel Number	Max Peak Conducted Power (dBm)	Max AVG Conducted Power (dBm)
1	IEEE 802.11B	1-11[11]	18.50	15.78
1	IEEE 802.11G	1-11[11]	18.24	10.45
1	IEEE 802.11nHT20	1-11[11]	18.06	10.25
1	IEEE 802.11nHT40	3-9[7]	N/A	8.09

5.3. CHANNEL LIST

Channel List for 802.11b/g/n (20 MHz)							
Channel	Frequency (MHz)	Channel	Frequenc y(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		

Channel List for 802.11n (40 MHz)							
Channel	Frequency (MHz)	Channel	Frequenc y(MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
3	2422	5	2432	7	2442	9	2452
4	2427	6	2437	8	2447		

5.4. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel (MHz)
IEEE 802.11B	LCH :CH01 2412
	MCH: CH06 2437
	HCH: CH11 2462
IEEE 802.11G	LCH :CH01 2412
	MCH: CH06 2437
	HCH: CH11 2462
IEEE 802.11n HT20	LCH :CH01 2412
	MCH: CH06 2437
	HCH: CH11 2462
IEEE 802.11n HT40	LCH :CH03 2422
	MCH: CH06 2437
	HCH: CH09 2452

5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band							
Test Software		SecureCRT					
Modulation Mode	Transmit Antenna Number	Test Channel					
		NCB: 20MHz			NCB: 40MHz		
		CH 1	CH 6	CH 11	CH 3	CH 6	CH 9
802.11b	1	40	40	40	/		
802.11g	1	40	40	40			
802.11n HT20	1	40	40	40			
802.11n HT40	1	/			40	40	40

5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2400-2483.5	Patch Antenna	4.6

Test Mode	Transmit and Receive Mode	Description
IEEE 802.11b	☒1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.
IEEE 802.11g	☒1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.
IEEE 802.11N (HT20)	☒1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.
IEEE 802.11N (HT40)	☒1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.

5.7. THE WORSE CASE CONFIGURATIONS

For the product, the NFC and WIFI module can transmit simultaneously, and this work mode was the worse mode, only the worse data of this mode was recorded in the report.

For WIFI module, the worst-case data rates as provided by the client were:

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

5.8. TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests	
Relative Humidity	55 ~ 65%	
Atmospheric Pressure:	1025Pa	
Temperature	TN	23 ~ 28°C
Voltage :	VL	N/A
	VN	AC 120V
	VH	N/A

Note: VL= Lower Extreme Test Voltage
VN= Nominal Voltage
VH= Upper Extreme Test Voltage
TN= Normal Temperature

5.9. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Description
1	Laptop	ThinkPad	E590	N/A
2	Fixed Frequency Board	N/A	N/A	Supply by UL Lab
3	USB Flash Disk	SanDisk	N/A	N/A
4	PSAM1 Card	N/A	N/A	Supply by customer
5	PSAM2 Card	N/A	N/A	Supply by customer
6	PSAM3 Card	N/A	N/A	Supply by customer
7	PSAM4 Card	N/A	N/A	Supply by customer

I/O PORT

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	USB to TTL	USB	100cm Length	N/A
2	LAN	LAN	LAN	100cm Length	N/A
3	USB	USB	USB	100cm Length	N/A

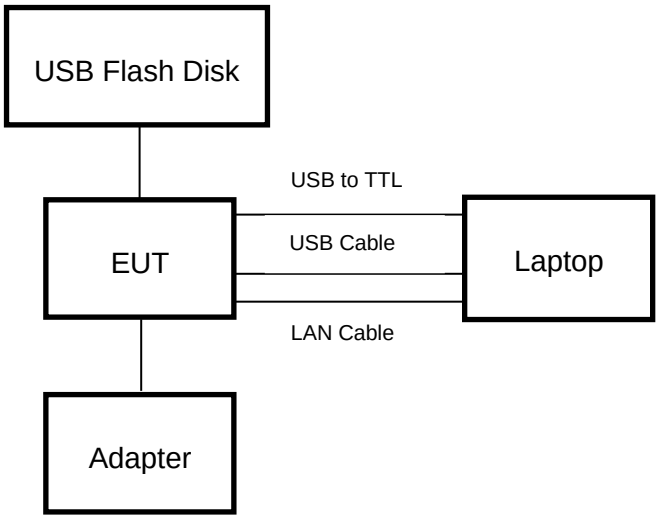
ACCESSORY

Item	Accessory	Brand Name	Model Name	Description
1	DC Adapter	HONOTO	ADS-26FSG-12 12018EPG	INPUT:100-240V~50/60Hz 0.7A Max OUTPUT:12.0V⎓1.5A 18.0W

TEST SETUP

The EUT can work in an engineer mode with a software through a table PC.

SETUP DIAGRAM FOR TESTS



5.10. MEASURING INSTRUMENT AND SOFTWARE USED

Conducted Emissions (Instrument**)**							
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.
☑	EMI Test Receiver	R&S	ESR3	126700	2018-12-13	2019-12-12	2020-12-11
☑	Two-Line V-Network	R&S	ENV216	126701	2018-12-13	2019-12-12	2020-12-11
☑	Artificial Mains Networks	R&S	ENY81	126711	2018-12-13	2019-12-12	2020-12-11
Software							
Used	Description		Manufacturer	Name	Version		
☑	Test Software for Conducted disturbance		R&S	EMC32	Ver. 9.25		
Radiated Emissions (Instrument**)**							
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.
☑	Spectrum Analyzer	Keysight	N9010B	MY57110128	2019-05-29	2020-05-28	2021-05-27
☑	EMI test receiver	R&S	ESR26	1267603	2018-12-13	2019-12-22	2020-12-21
☑	Receiver Antenna (9kHz-30MHz)	Schwarzbeck	FMZB 1513	513-265	2019-06-16	2020-06-15	2021-06-14
☑	Receiver Antenna (30MHz-1GHz)	SunAR RF Motion	JB1	126704	N/A	2019-01-28	2022-01-27
☑	Receiver Antenna (1GHz-18GHz)	R&S	HF907	126705	2019-01-26	2020-01-26	2021-01-25
☑	Receiver Antenna (18GHz-26.5GHz)	Schwarzbeck	BBHA9170	126706	2019-02-06	2020-02-05	2021-02-04
☑	Receiver Antenna (26.5GHz-40GHz)	TOYO	HAP 26-40W	00000012	2019-07-23	2020-07-22	2021-07-21
☑	Pre-amplification (To 1GHz)	R&S	SCU-03D	134666	2019-02-06	2020-02-05	2021-02-04
☑	Pre-amplification (To 18GHz)	Compliance Direction System Inc.	PAP-1G18-50	14140-13467	2019-03-18	2020-03-17	2021-03-16
☑	Pre-amplification (To 26.5GHz)	R&S	SCU-26D	134668	2019-02-06	2020-02-05	2021-02-04
☑	Band Reject Filter	Wainwright	WRCJV8-2350-2400-2483.5-2533.5-40SS	1	2019-05-29	2020-05-28	2021-05-27
☑	Highpass Filter	Wainwright	WHKX10-2700-3000-18000-40SS	2	2019-05-29	2020-05-28	2021-05-27
Software							
Used	Description		Manufacturer	Name	Version		
☑	Test Software for Radiated disturbance		Tonscend	JS32	V1.0		
Other instruments							
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.
☑	Spectrum Analyzer	Keysight	N9010B	MY57110128	2019-05-29	2020-05-28	2021-05-27
☑	Power Meter	Keysight	U2021XA	MY57110002	2019-06-12	2020-06-11	2021-06-10

6. MEASUREMENT METHODS

No.	Test Item	KDB Name	Section
1	6dB Bandwidth	KDB 558074 D01 15.247 Meas Guidance v05r02	8.2
2	Output Power	KDB 558074 D01 15.247 Meas Guidance v05r02	8.3.1.3/8.3.2.3
3	Power Spectral Density	KDB 558074 D01 15.247 Meas Guidance v05r02	8.4
4	Out-of-band emissions in non-restricted bands	KDB 558074 D01 15.247 Meas Guidance v05r02	8.5
5	Out-of-band emissions in restricted bands	KDB 558074 D01 15.247 Meas Guidance v05r02	8.6
6	Band-edge	KDB 558074 D01 15.247 Meas Guidance v05r02	8.7
7	Conducted Emission Test For AC Power Port	ANSI C63.10-2013	6.2

7. ANTENNA PORT TEST RESULTS

7.1. ON TIME AND DUTY CYCLE

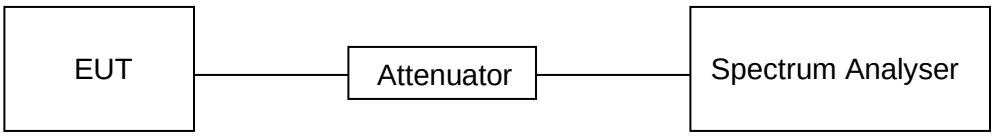
LIMITS

None; for reporting purposes only

PROCEDURE

FCC KDB 558074 Zero-Span Spectrum Analyzer Method

TEST SETUP



TEST ENVIRONMENT

Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

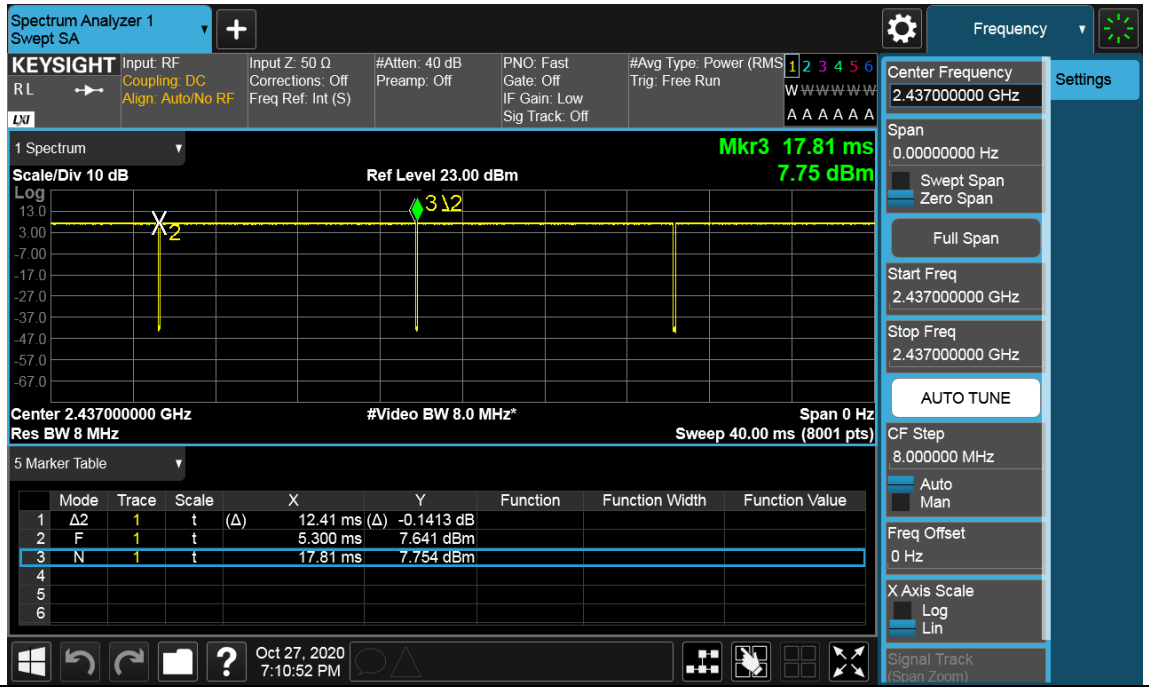
TEST RESULTS TABLE

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (db)	1/T Minimum VBW (kHz)	Final VBW (kHz)
11B	12.41	12.51	0.9920	99.20%	0.03	0.08	0.1
11G	1.919	2.074	0.9253	92.53%	0.34	0.52	1
802.11n HT20	1.919	2.046	0.9379	93.79%	0.28	0.52	1
802.11n HT40	1.095	1.2475	0.8778	87.78%	0.57	0.91	1

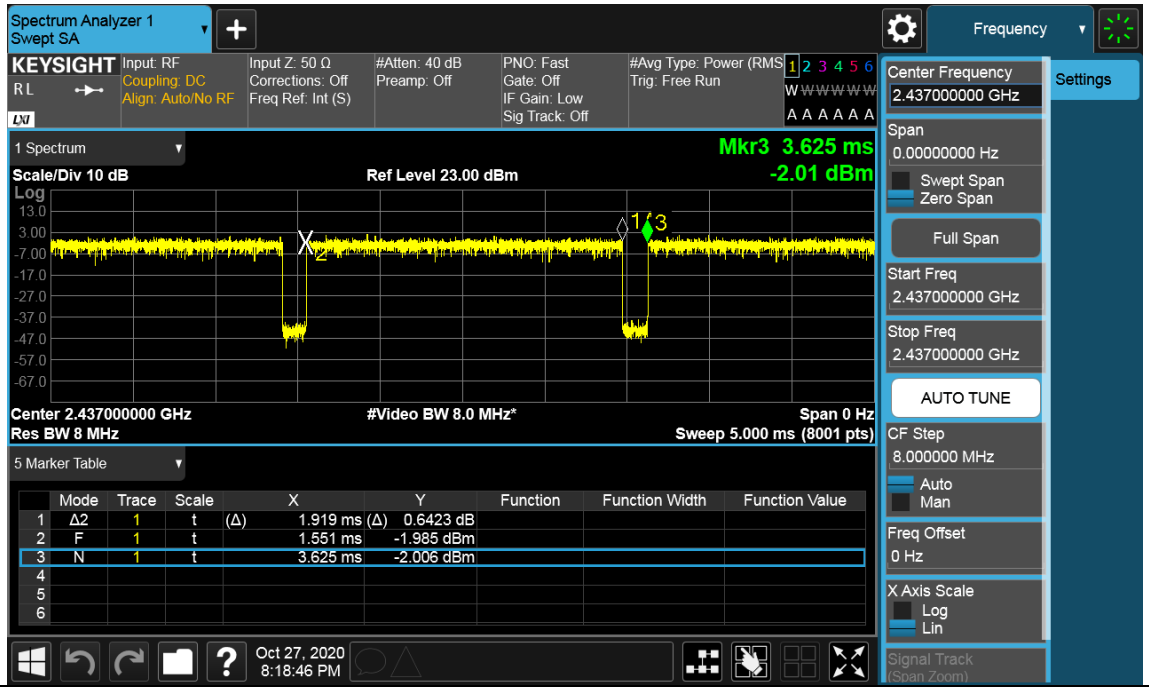
Note: 1) Duty Cycle Correction Factor=10log(1/x).
2) Where: x is Duty Cycle(Linear)
3) Where: T is On Time (transmit duration)

TEST GRAPHS

11B ON TIME AND DUTY CYCLE MID CH (WORSE CASE)

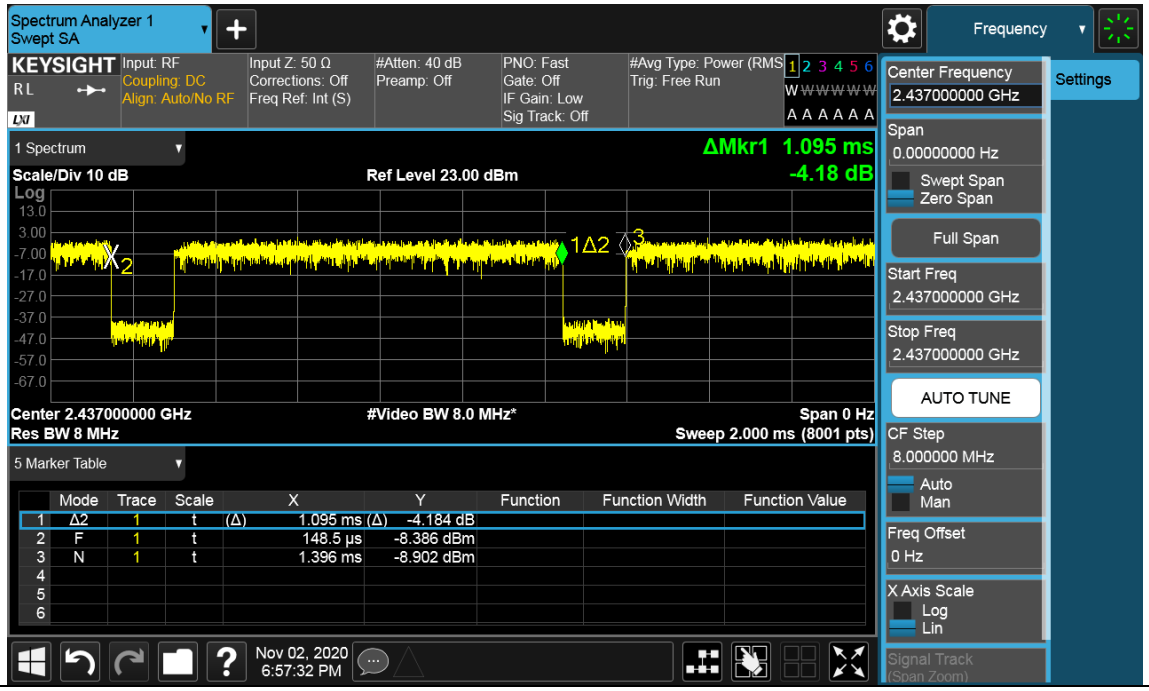


11G ON TIME AND DUTY CYCLE MID CH (WORSE CASE)



11N (HT20) ON TIME AND DUTY CYCLE MID CH (WORSE CASE)

11N (HT40) ON TIME AND DUTY CYCLE MID CH (WORSE CASE)



7.2. 6 dB BANDWIDTH

LIMITS

FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.247(a)(2)	6dB Bandwidth	>= 500KHz	2400-2483.5

TEST PROCEDURE

Refer to FCC KDB 558074, 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	For 6 dB Bandwidth :100K
VBW	For 6dB Bandwidth : ≥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 relative to the maximum level measured in the fundamental emission.

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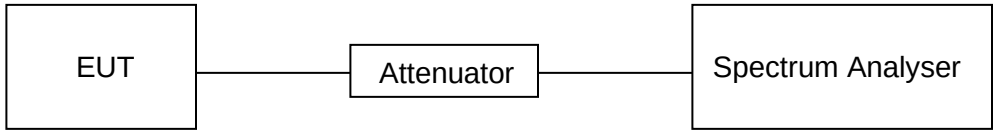
TEST SETUP



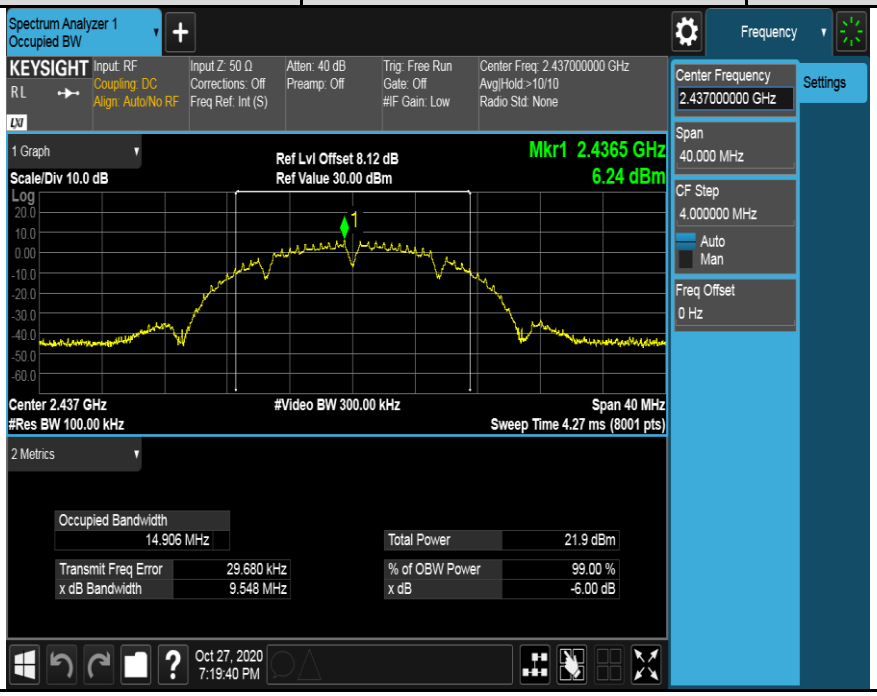
TEST RESULTS TABLE

Test Mode	Test Channel	6dB bandwidth (MHz)	Result
11B	LCH	9.572	Pass
	MCH	9.548	Pass
	HCH	10.02	Pass
11G	LCH	16.35	Pass
	MCH	16.36	Pass
	HCH	16.35	Pass
11N HT20	LCH	17.42	Pass
	MCH	17.56	Pass
	HCH	17.42	Pass
11N HT40	LCH	35.14	Pass
	MCH	35.13	Pass
	HCH	35.35	Pass

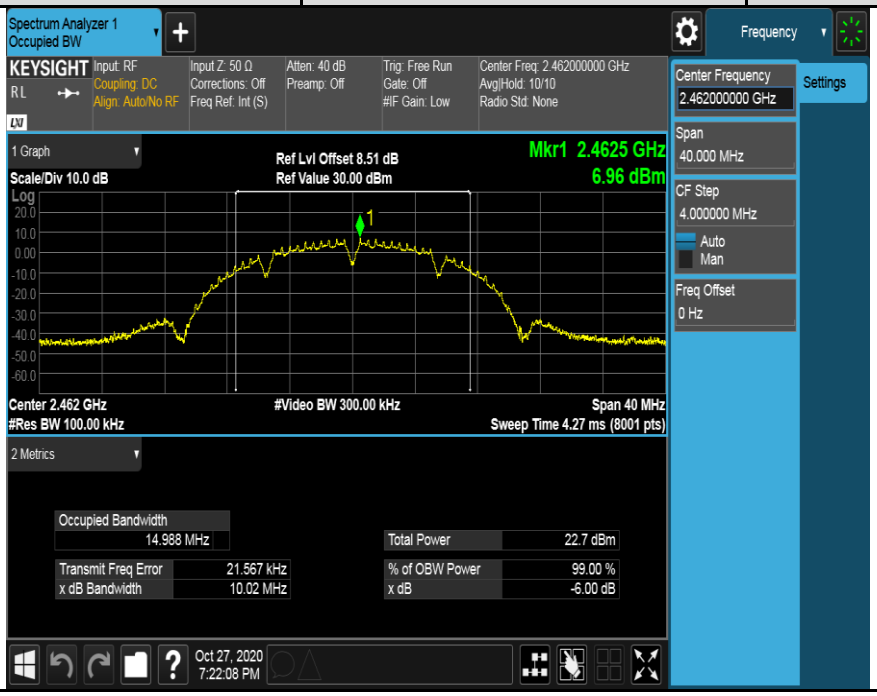
TEST GRAPHS

Test Mode	Test Channel	Verdict
11B	LCH	PASS

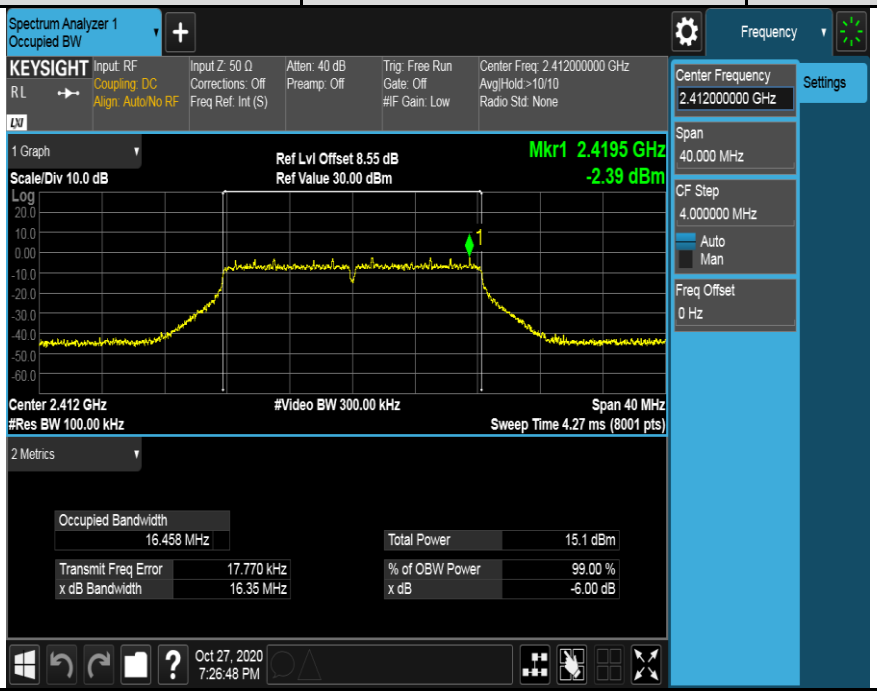
Test Mode	Test Channel	Verdict
11B	MCH	PASS



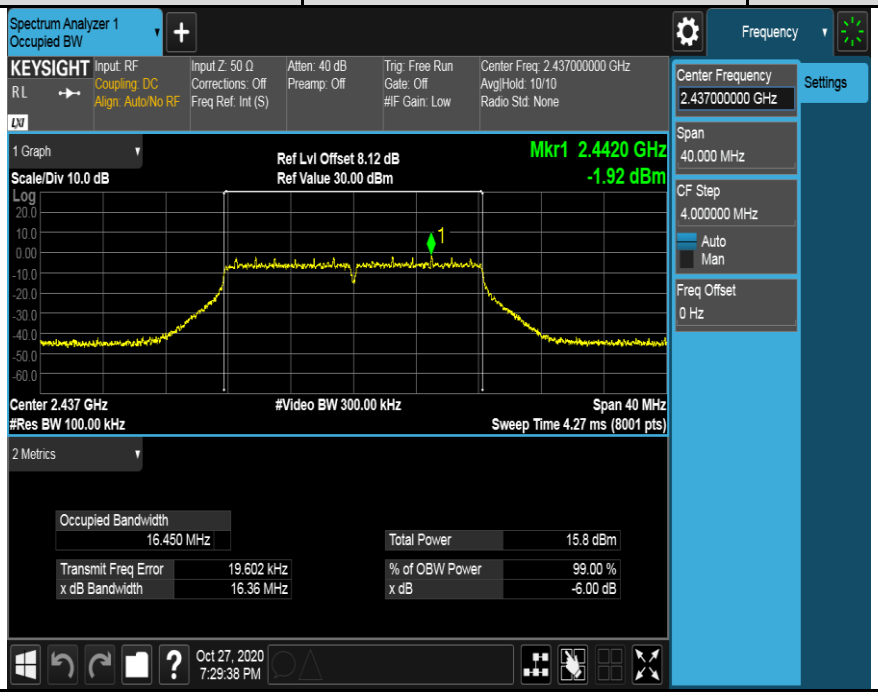
Test Mode	Test Channel	Verdict
11B	HCH	PASS



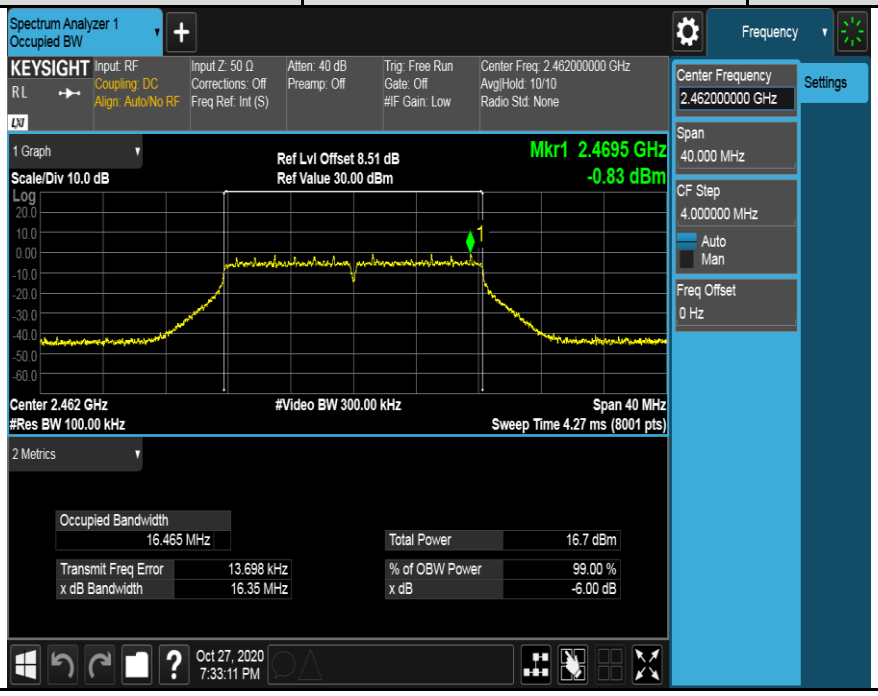
Test Mode	Test Channel	Verdict
11G	LCH	PASS



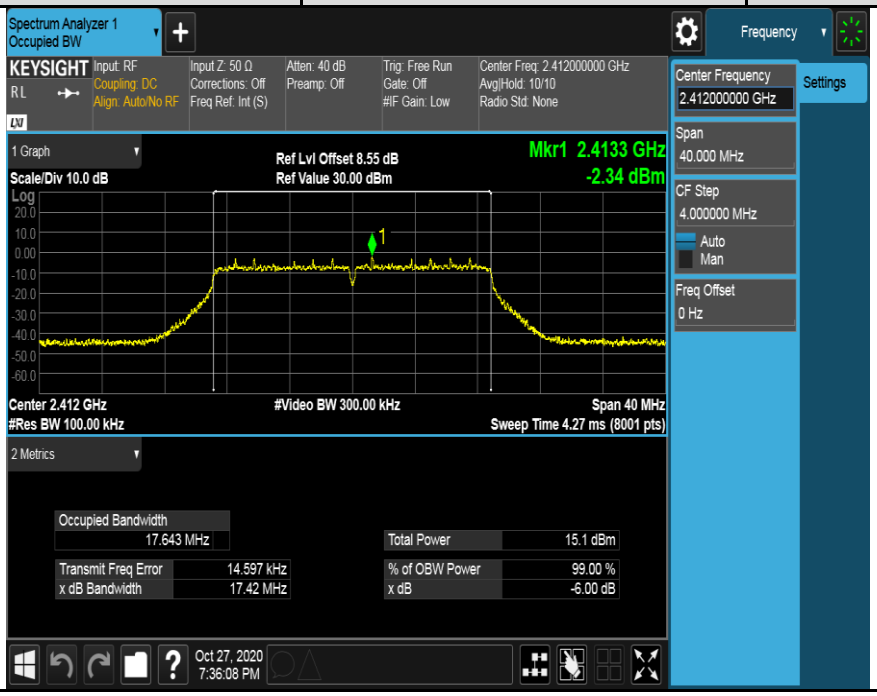
Test Mode	Test Channel	Verdict
11G	MCH	PASS



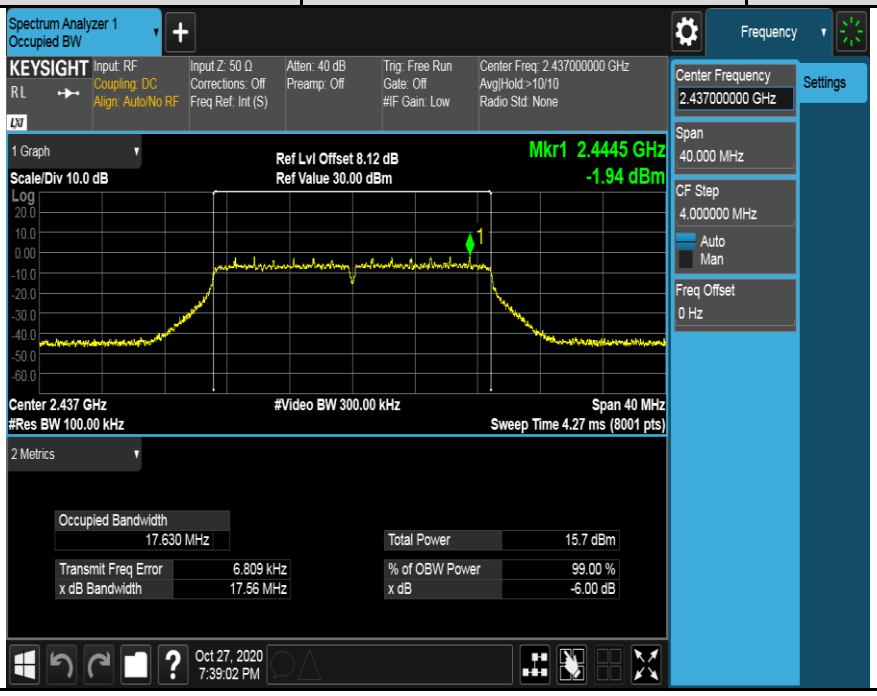
Test Mode	Test Channel	Verdict
11G	HCH	PASS



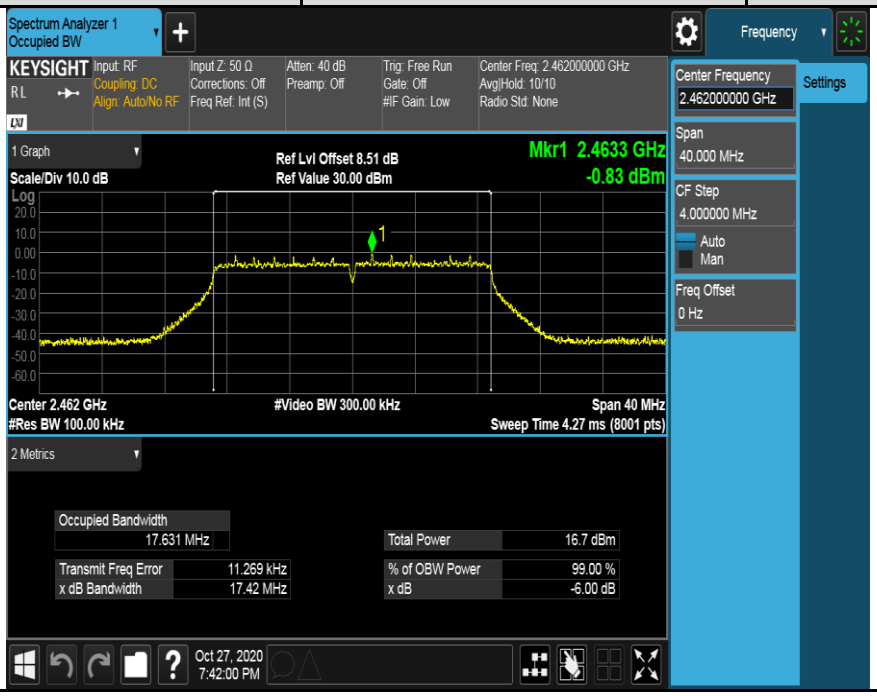
Test Mode	Test Channel	Verdict
11N HT20	LCH	PASS



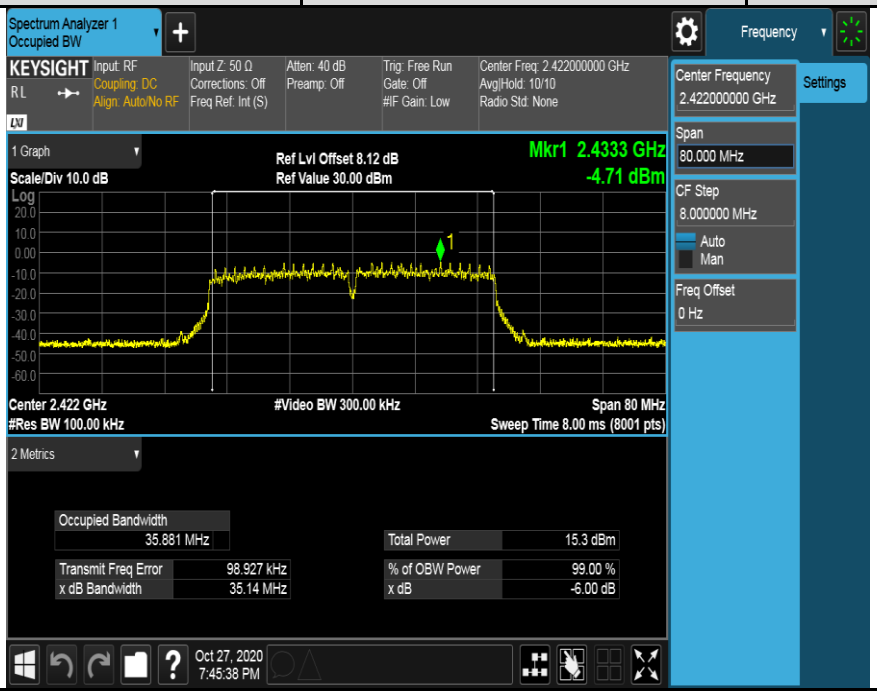
Test Mode	Test Channel	Verdict
11N HT20	MCH	PASS



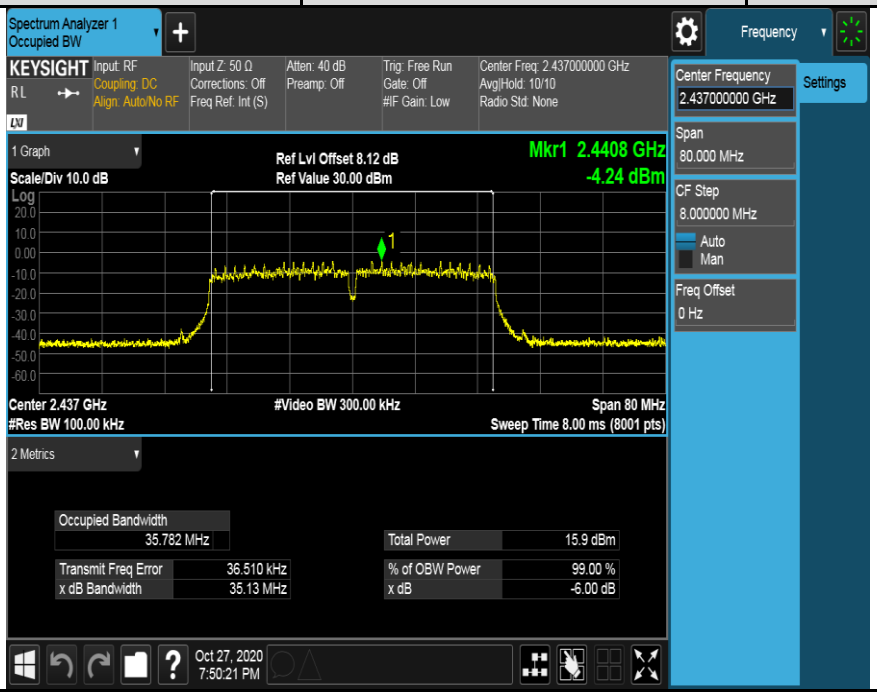
Test Mode	Test Channel	Verdict
11N HT20	HCH	PASS



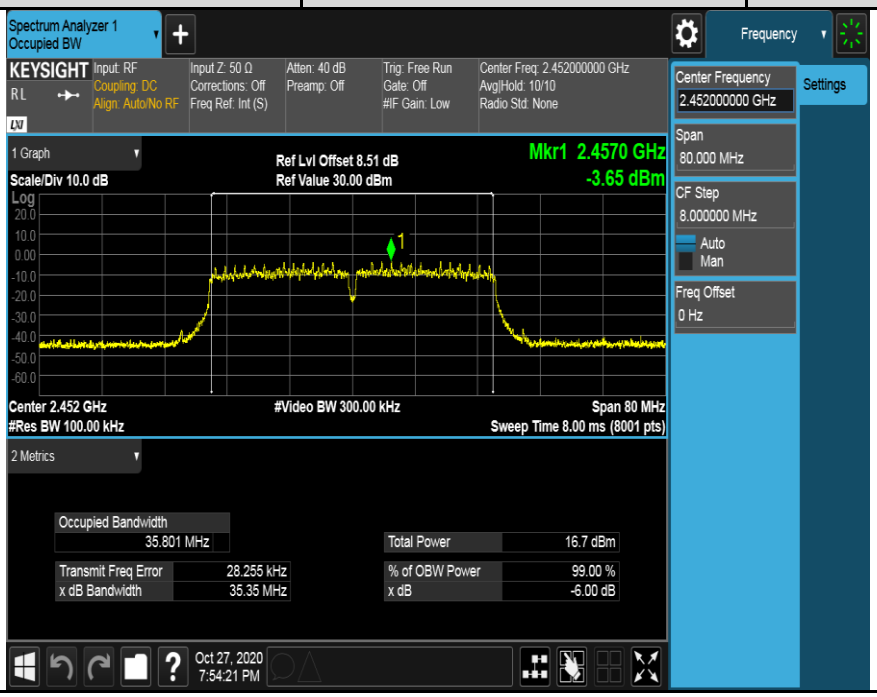
Test Mode	Test Channel	Verdict
11N HT40	LCH	PASS



Test Mode	Test Channel	Verdict
11N HT40	MCH	PASS



Test Mode	Test Channel	Verdict
11N HT40	HCH	PASS



7.3. CONDUCTED OUTPUT POWER

LIMITS

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

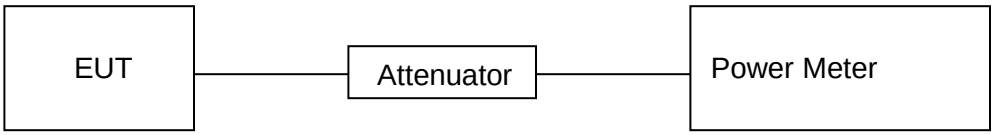
TEST PROCEDURE

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 the power of each channel.
Peak Detector use for Peak result.
AVG Detector use for AVG result.

TEST ENVIRONMENT

Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

TEST SETUP



TEST RESULTS TABLE

Test Mode	Test Channel	Maximum Conducted Output Power (PK)	Maximum Conducted Output Power (AV)	LIMIT
		dBm	dBm	dBm
11B	LCH	17.13	14.34	30
	MCH	17.56	14.91	30
	HCH	18.50	15.78	30
11G	LCH	16.62	8.80	30
	MCH	17.30	9.49	30
	HCH	18.24	10.45	30
11n HT20	LCH	16.46	8.61	30
	MCH	17.13	9.30	30
	HCH	18.06	10.25	30
11n HT40	LCH	N/A	6.76	30
	MCH	N/A	7.35	30
	HCH	N/A	8.09	30

7.4. POWER SPECTRAL DENSITY

LIMITS

FCC Part15 (15.247) , Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC §15.247 (e)	Power Spectral Density	8 dBm/3 kHz	2400-2483.5

TEST PROCEDURE

Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following settings:

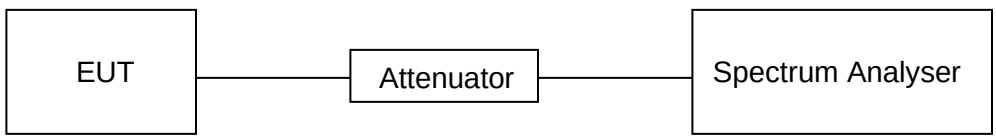
Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	3 kHz ≤ RBW ≤100 kHz
VBW	≥3 × RBW
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

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 ENVIRONMENT

Temperature	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

TEST SETUP



TEST RESULTS TABLE

Test Mode	Test Channel	Maximum Peak power spectral density (dBm/30kHz)	Result
11B	LCH	0.76	Pass
	MCH	2.43	Pass
	HCH	2.59	Pass
11G	LCH	-7.01	Pass
	MCH	-6.19	Pass
	HCH	-5.46	Pass
11n HT20	LCH	-7.45	Pass
	MCH	-6.80	Pass
	HCH	-5.78	Pass
11n HT40	LCH	-9.59	Pass
	MCH	-9.18	Pass
	HCH	-8.45	Pass

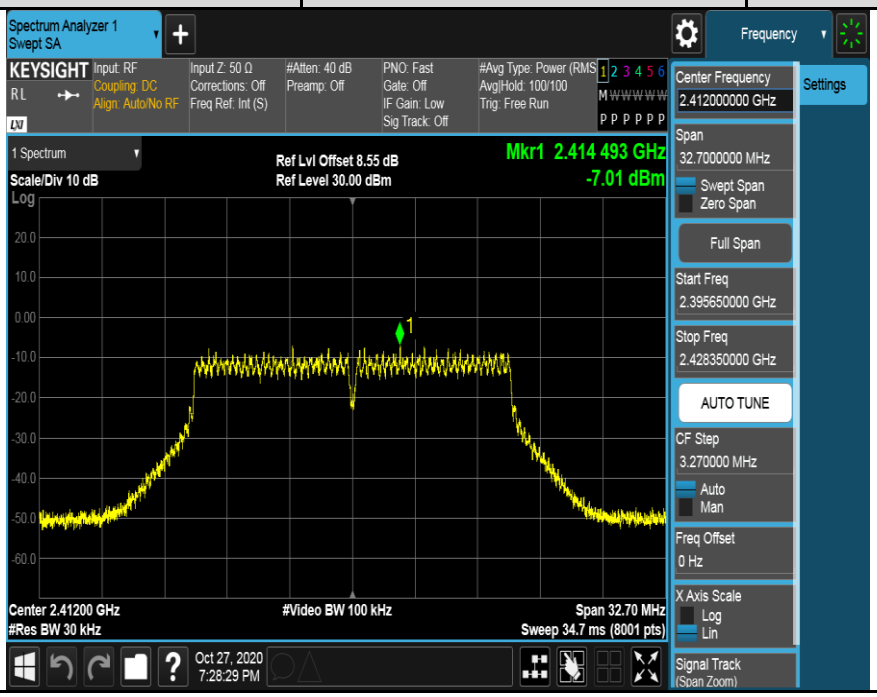
TEST GRAPHS

Test Mode	Test Channel	Verdict
11B	LCH	PASS

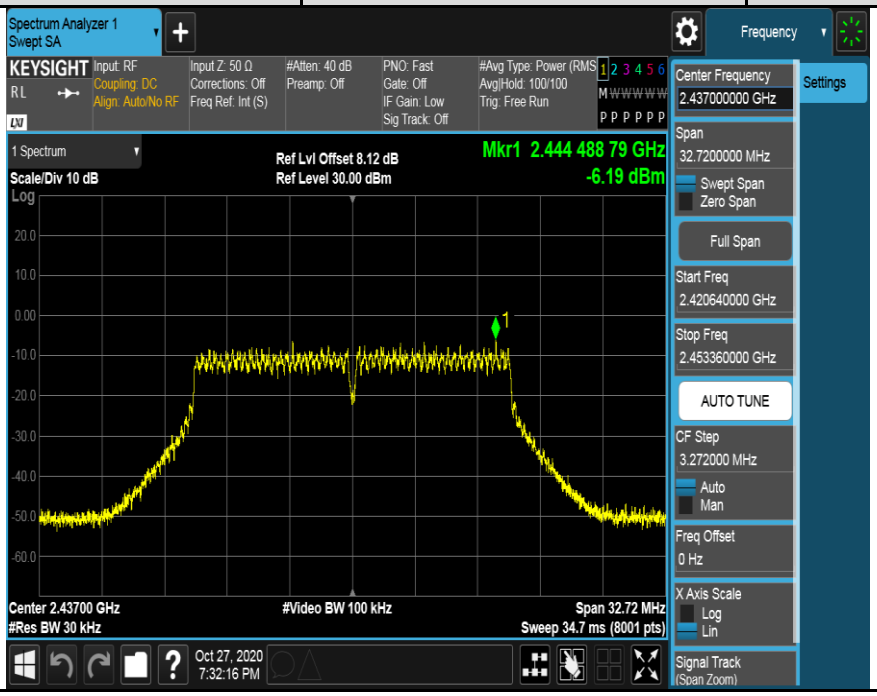
Test Mode	Test Channel	Verdict
11B	MCH	PASS

Test Mode	Test Channel	Verdict
11B	HCH	PASS

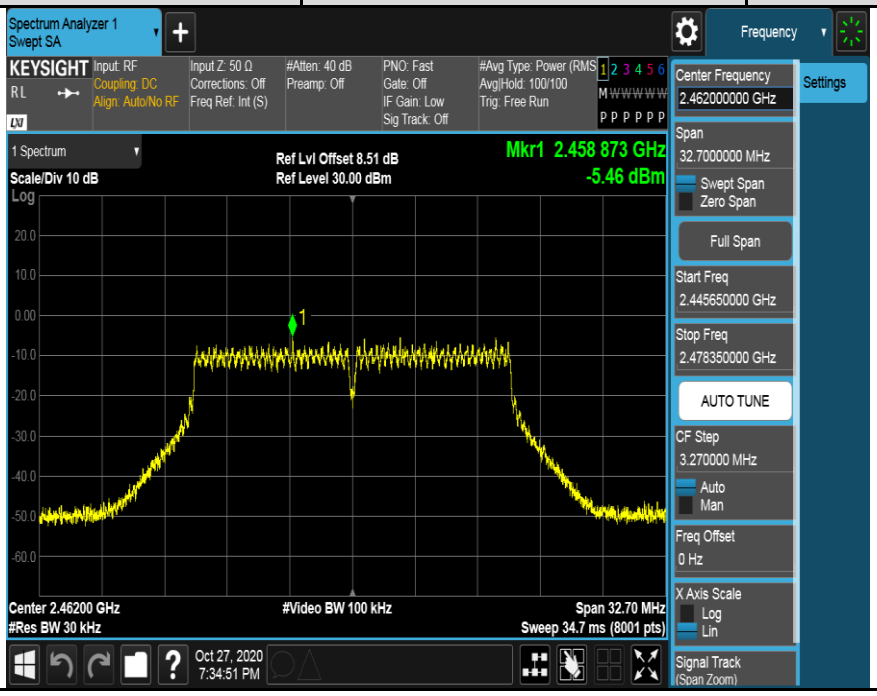
Test Mode	Test Channel	Verdict
11G	LCH	PASS



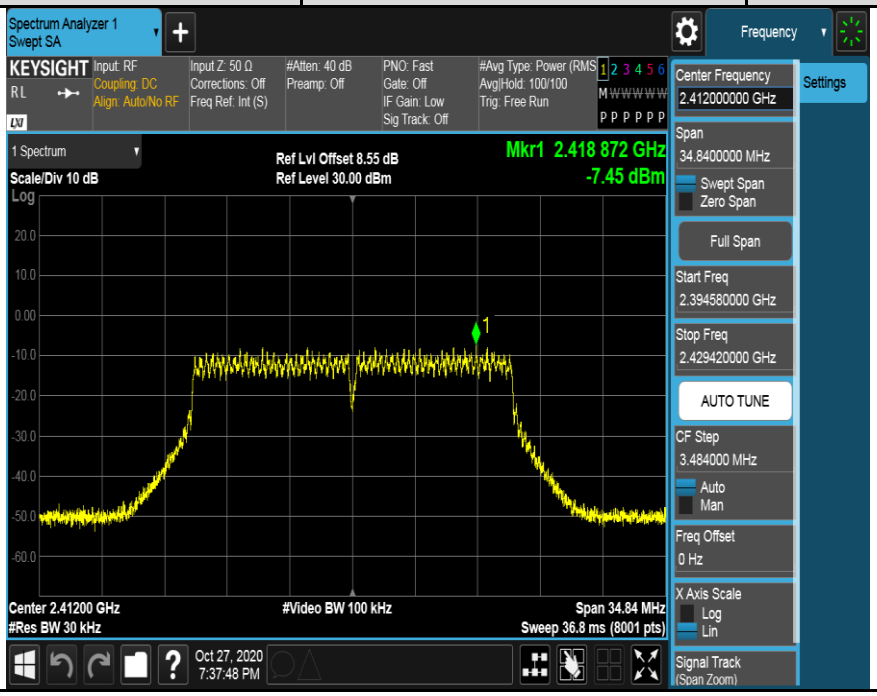
Test Mode	Test Channel	Verdict
11G	MCH	PASS



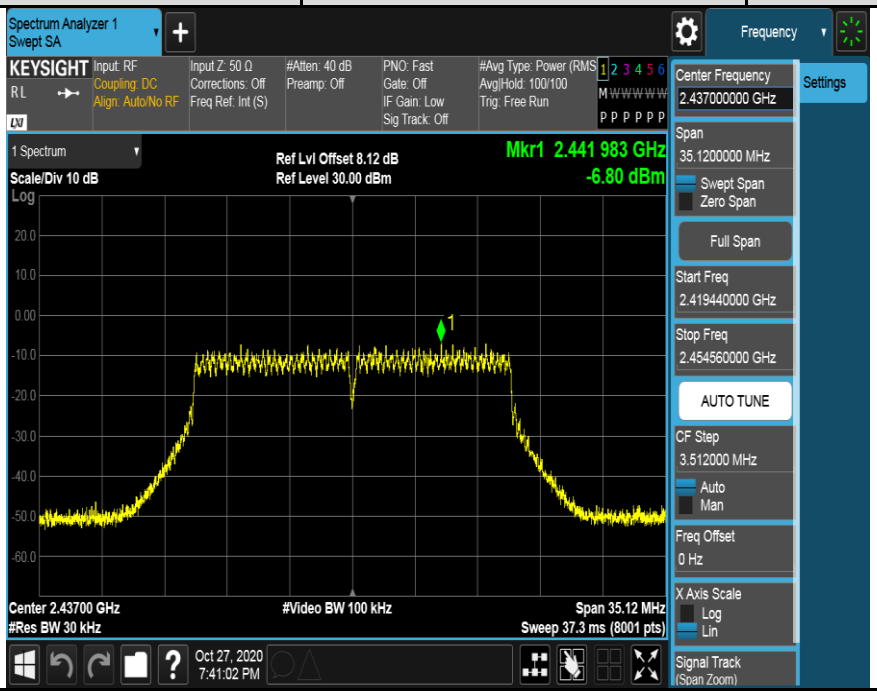
Test Mode	Test Channel	Verdict
11G	HCH	PASS



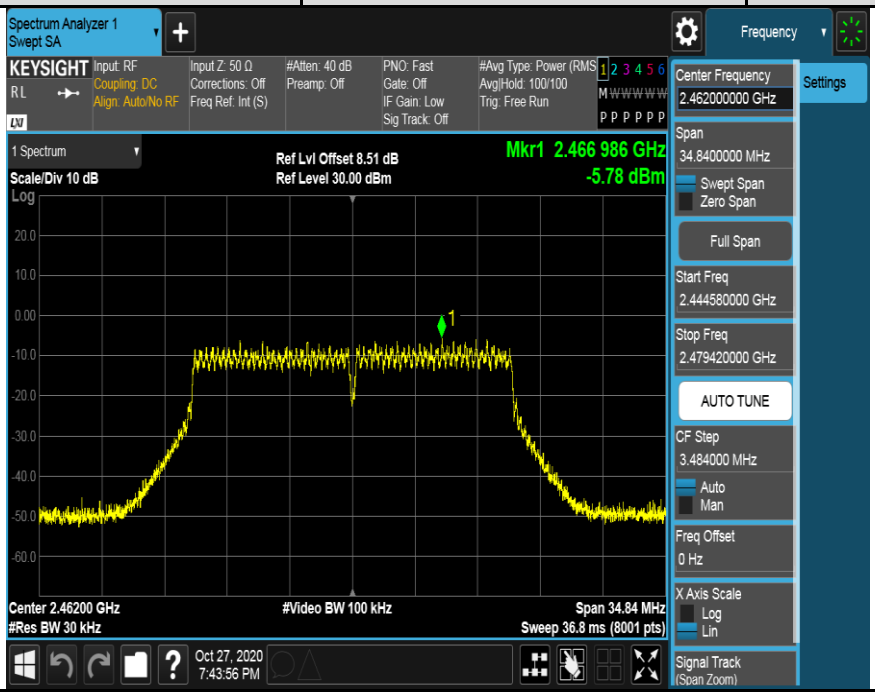
Test Mode	Test Channel	Verdict
11N HT20	LCH	PASS



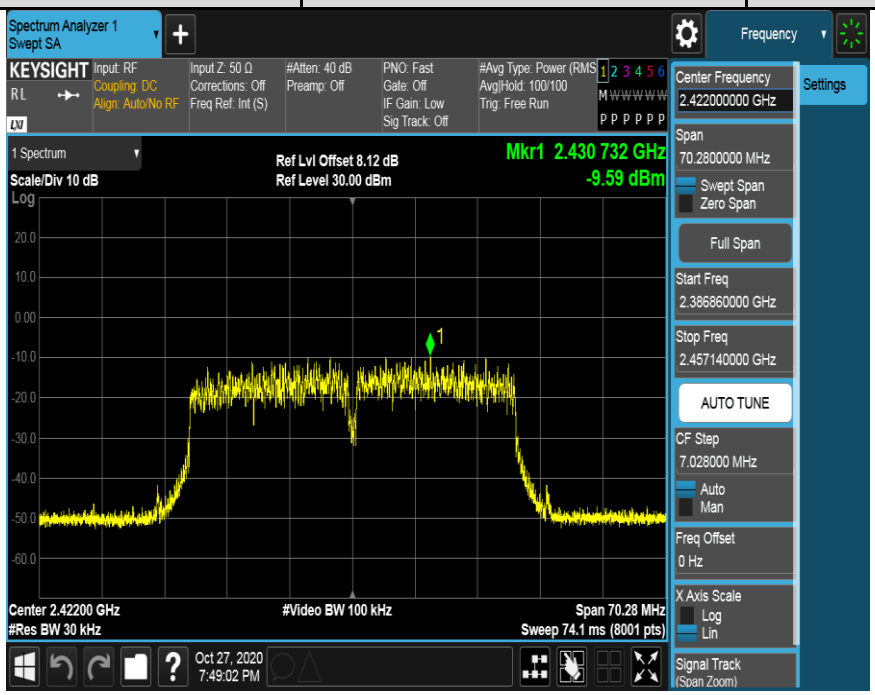
Test Mode	Test Channel	Verdict
11N HT20	MCH	PASS



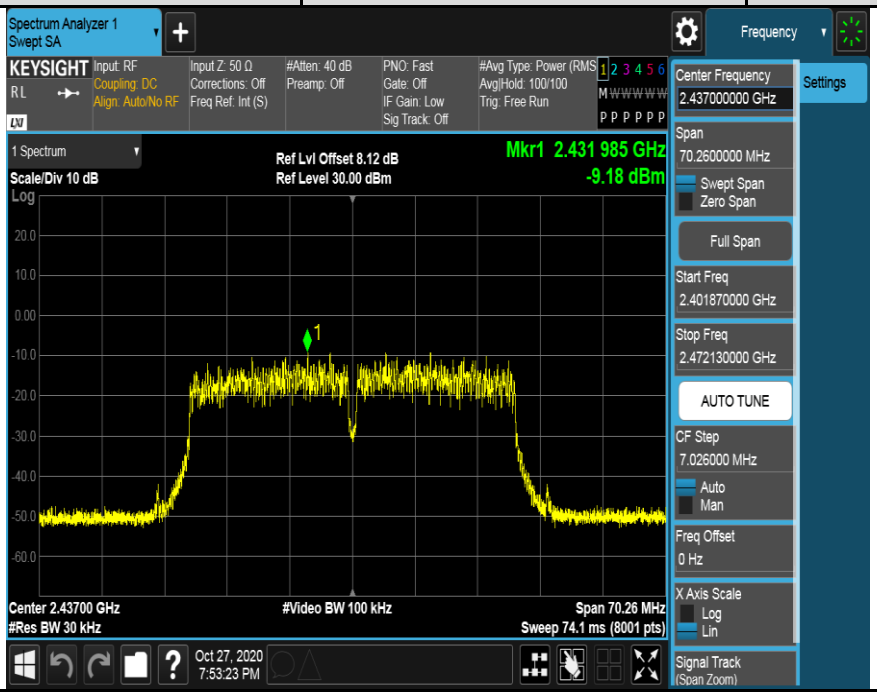
Test Mode	Test Channel	Verdict
11N HT20	HCH	PASS



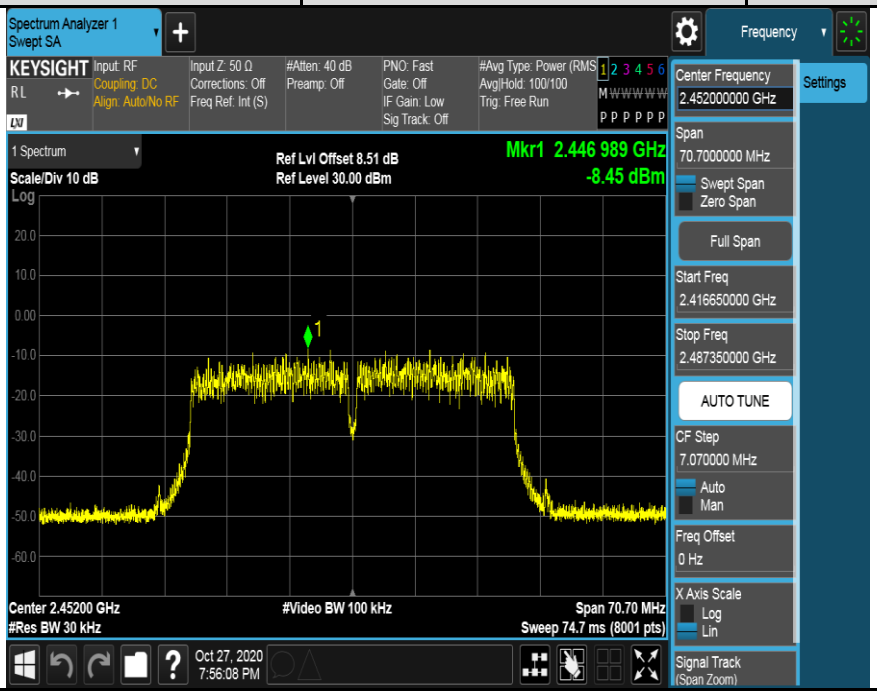
Test Mode	Test Channel	Verdict
11N HT40	LCH	PASS



Test Mode	Test Channel	Verdict
11N HT40	MCH	PASS



Test Mode	Test Channel	Verdict
11N HT40	HCH	PASS



7.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

FCC Part15 (15.247) , Subpart C		
Section	Test Item	Limit
FCC §15.247 (d)	Conducted Bandedge and Spurious Emissions	For b/g/n HT20 modes: at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power; For HT40 mode: 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 FCC KDB 558074, connect the UUT to the spectrum analyser and use the following

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.

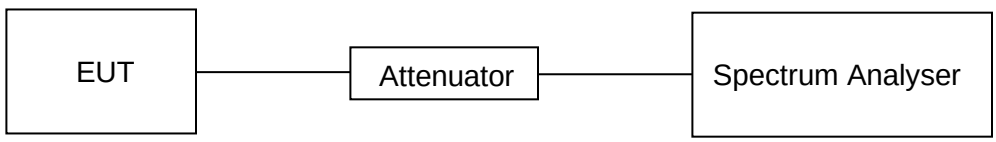
settings:

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	22°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

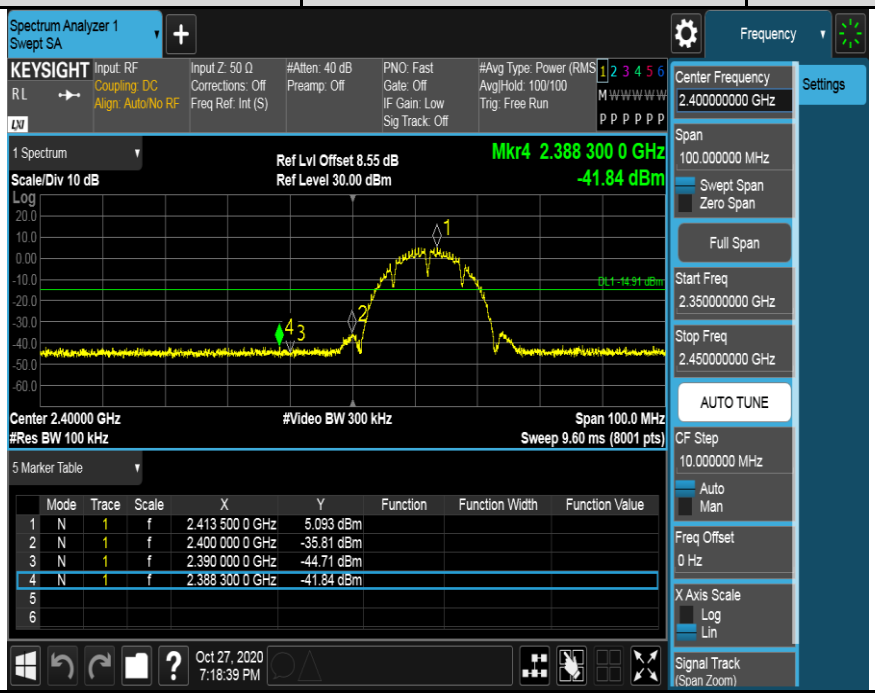
PART I :CONDUCTED BANDEDGE

TEST RESULTS TABLE

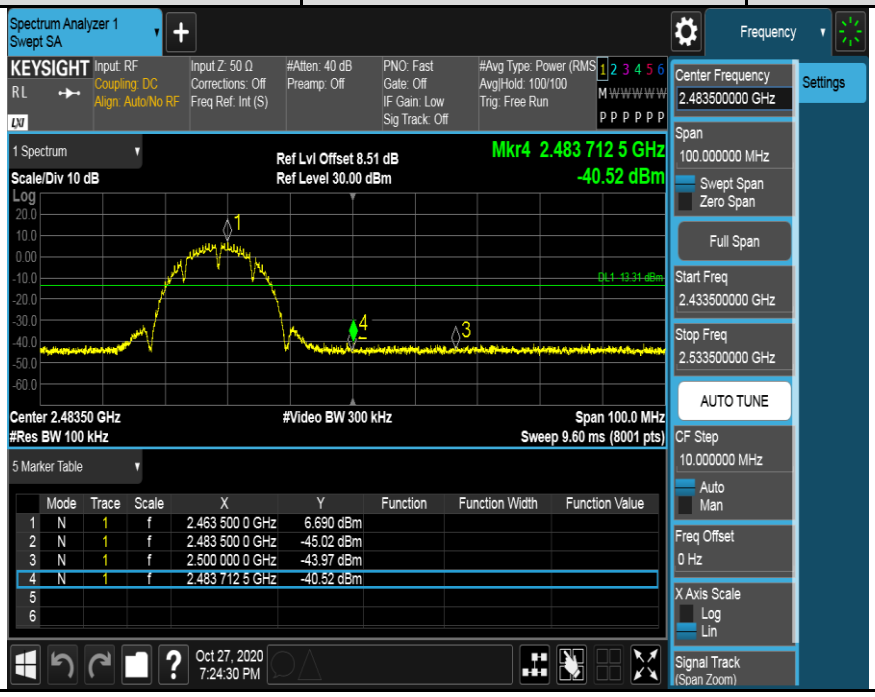
Test Mode	Test Channel	Carrier Power[dBm]	Max. Spurious Level [dBm]	Limit [dBm]	Verdict
11B	LCH	5.093	-41.84	-14.91	PASS
	HCH	6.690	-40.52	-13.31	PASS
11G	LCH	-2.185	-41.21	-22.19	PASS
	HCH	-1.039	-41.72	-21.04	PASS
11N HT20	LCH	-2.584	-41.18	-22.58	PASS
	HCH	-1.307	-39.86	-21.31	PASS
11N HT40	LCH	-4.759	-42.29	-34.76	PASS
	HCH	-3.592	-41.28	-33.59	PASS

TEST GRAPHS

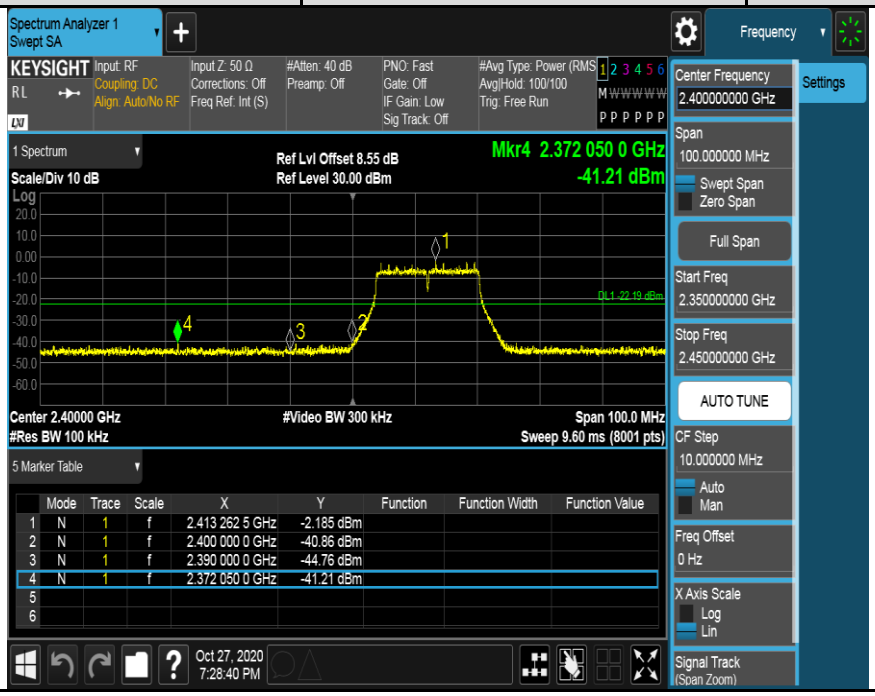
Test Mode	Test Channel	Verdict
11B	LCH	PASS



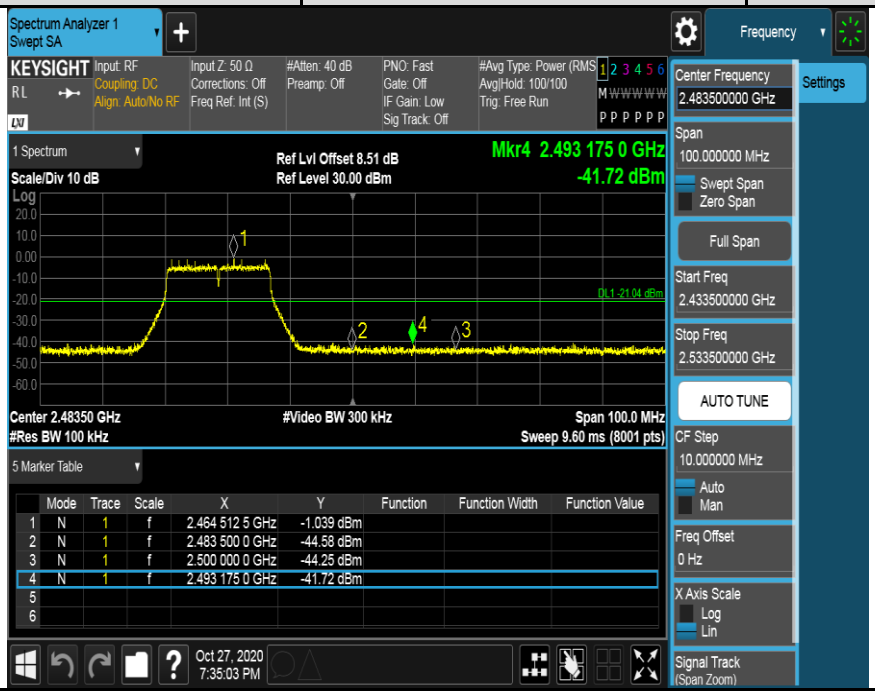
Test Mode	Test Channel	Verdict
11B	HCH	PASS



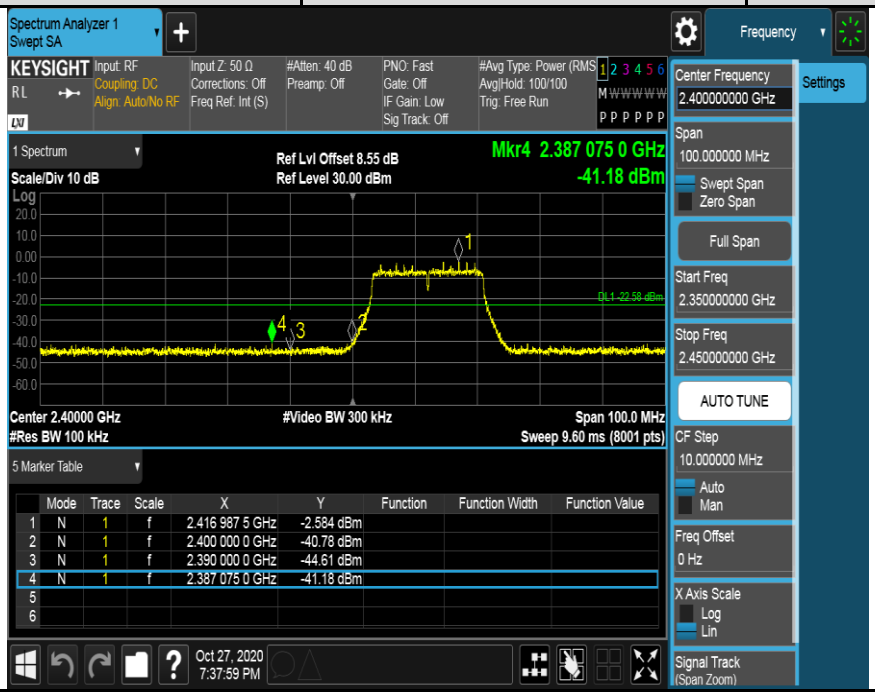
Test Mode	Test Channel	Verdict
11G	LCH	PASS



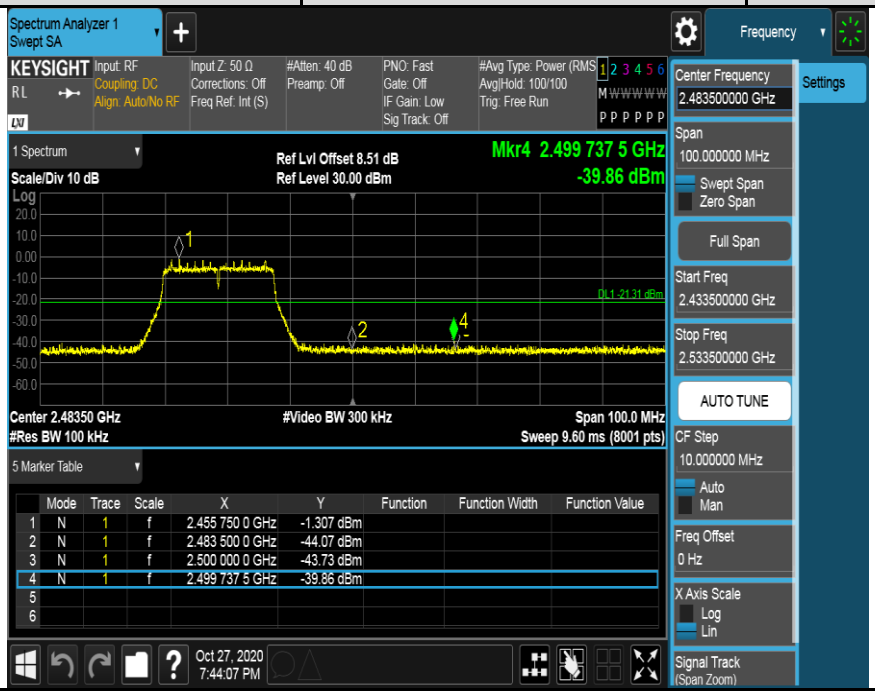
Test Mode	Test Channel	Verdict
11G	HCH	PASS



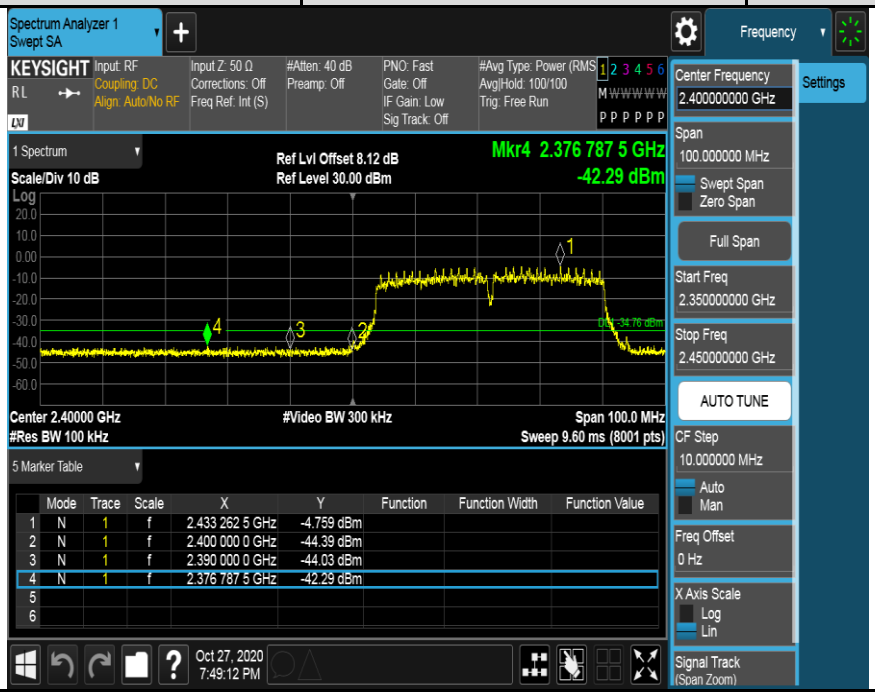
Test Mode	Test Channel	Verdict
11N HT20	LCH	PASS



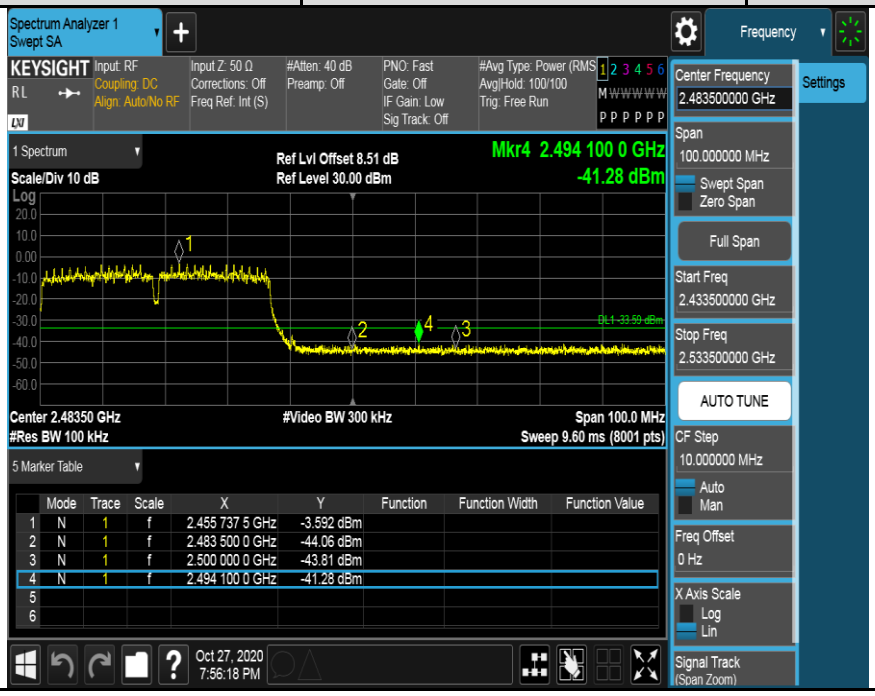
Test Mode	Test Channel	Verdict
11N HT20	HCH	PASS



Test Mode	Test Channel	Verdict
11N HT40	LCH	PASS



Test Mode	Test Channel	Verdict
11N HT40	HCH	PASS



PART II :CONDUCTED EMISSION

TEST RESULTS TABLE

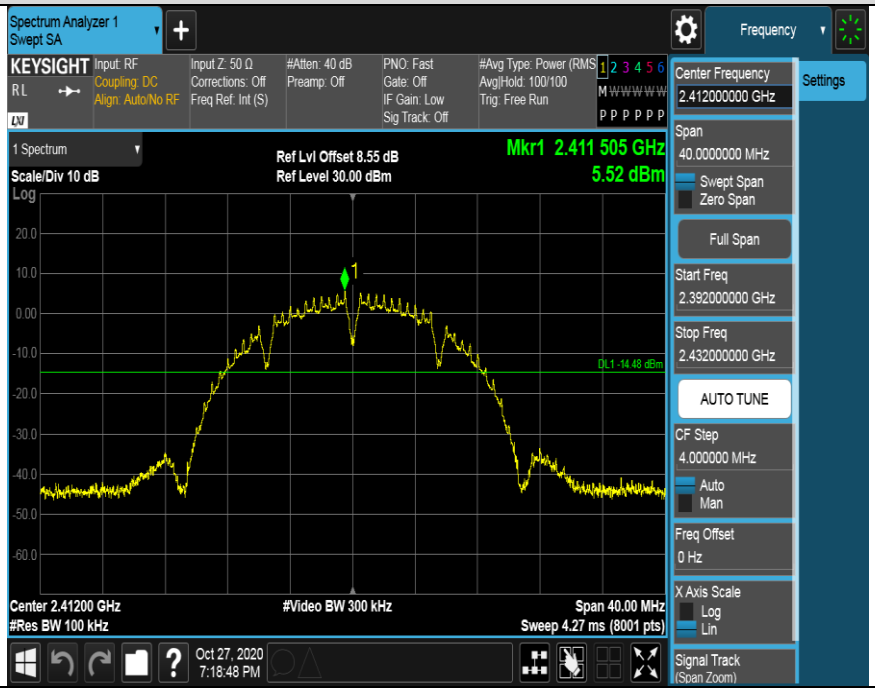
Test Mode	Channel	Pref(dBm)	Puw(dBm)	Verdict
11B	LCH	5.52	<Limit	PASS
	MCH	6.20	<Limit	PASS
	HCH	6.50	<Limit	PASS
11G	LCH	-2.71	<Limit	PASS
	MCH	-1.77	<Limit	PASS
	HCH	-0.85	<Limit	PASS
11N HT20	LCH	-2.59	<Limit	PASS
	MCH	-1.87	<Limit	PASS
	HCH	-0.82	<Limit	PASS
11N HT40	LCH	-4.78	<Limit	PASS
	MCH	-4.24	<Limit	PASS
	HCH	-3.57	<Limit	PASS

TEST GRAPHS

Test Mode	Channel	Verdict
11B	LCH	PASS

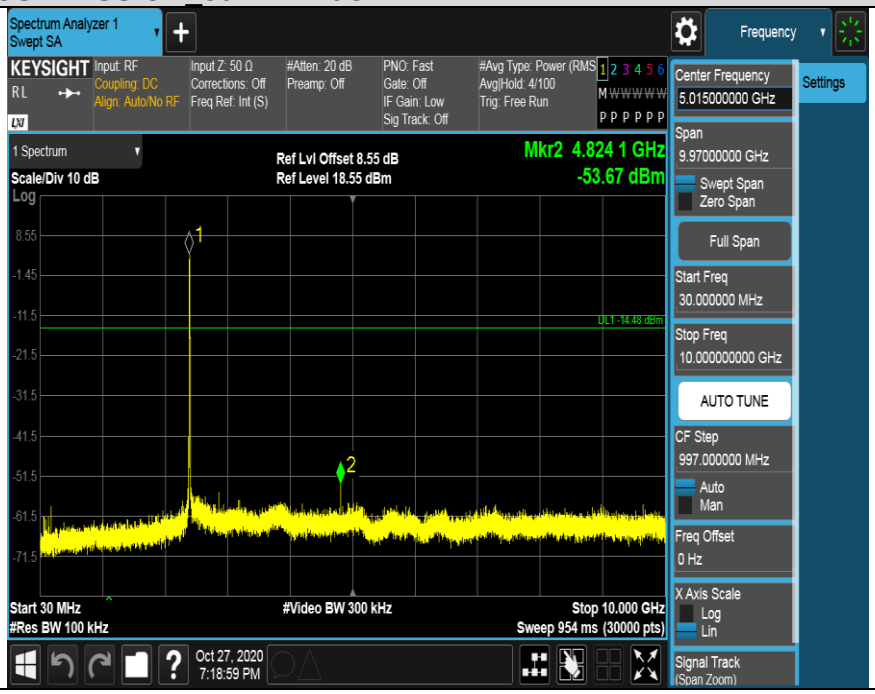
Pref test Plot

LCH SPURIOUS EMISSION

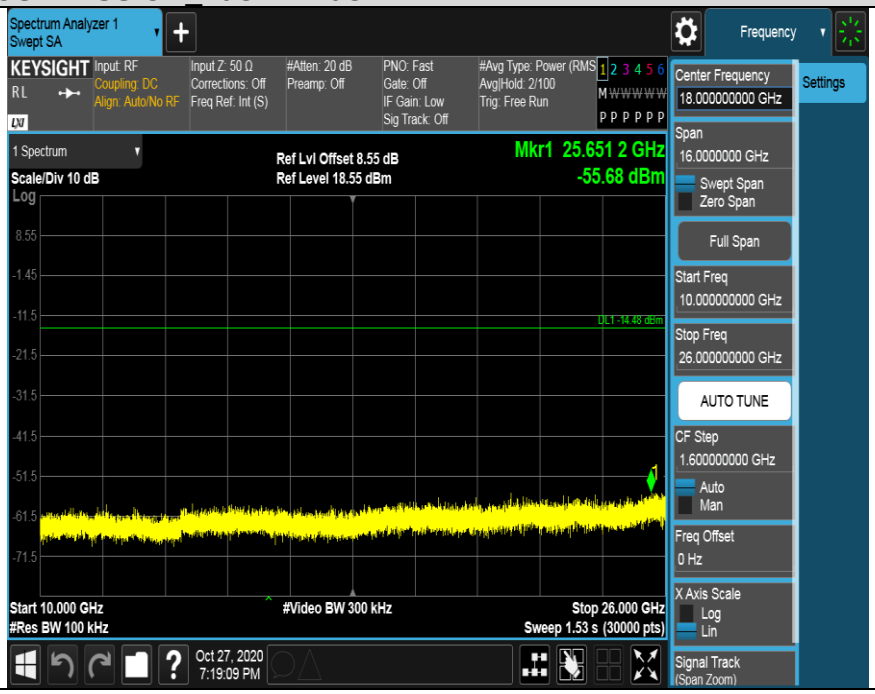


Puw test Plot

LCH SPURIOUS EMISSION_30MHz~10GHz



LCH SPURIOUS EMISSION_10GHz~26GHz



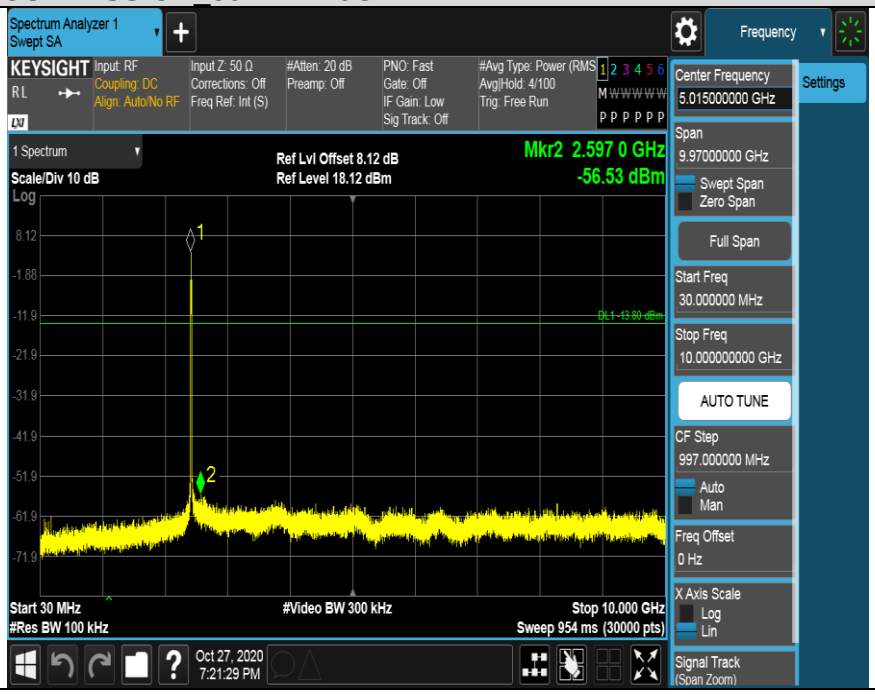
Test Mode	Channel	Verdict
11B	MCH	PASS

Pref test Plot

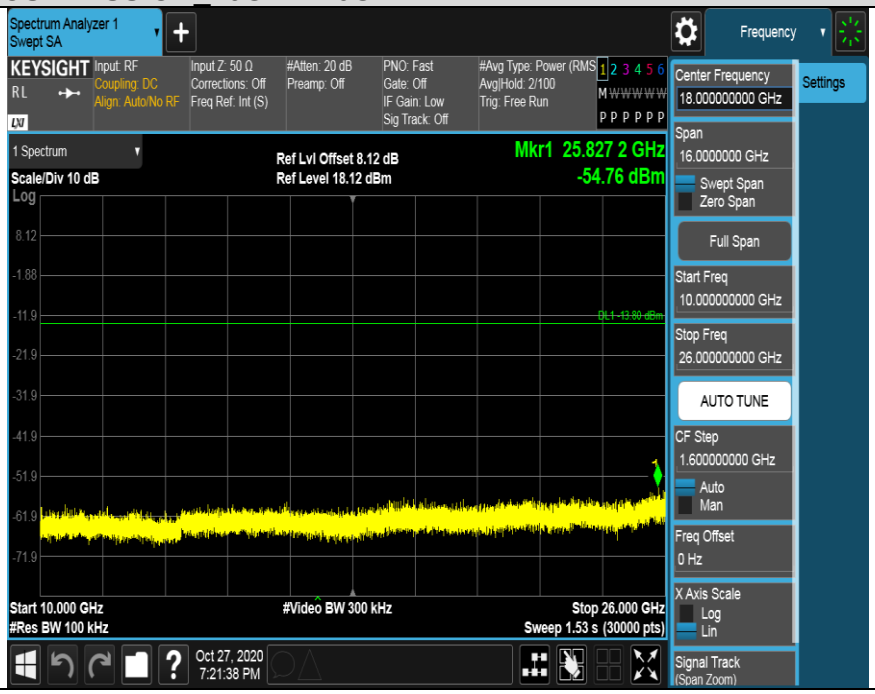
MCH SPURIOUS EMISSION

Puw test Plot

MCH SPURIOUS EMISSION_30MHz~10GHz



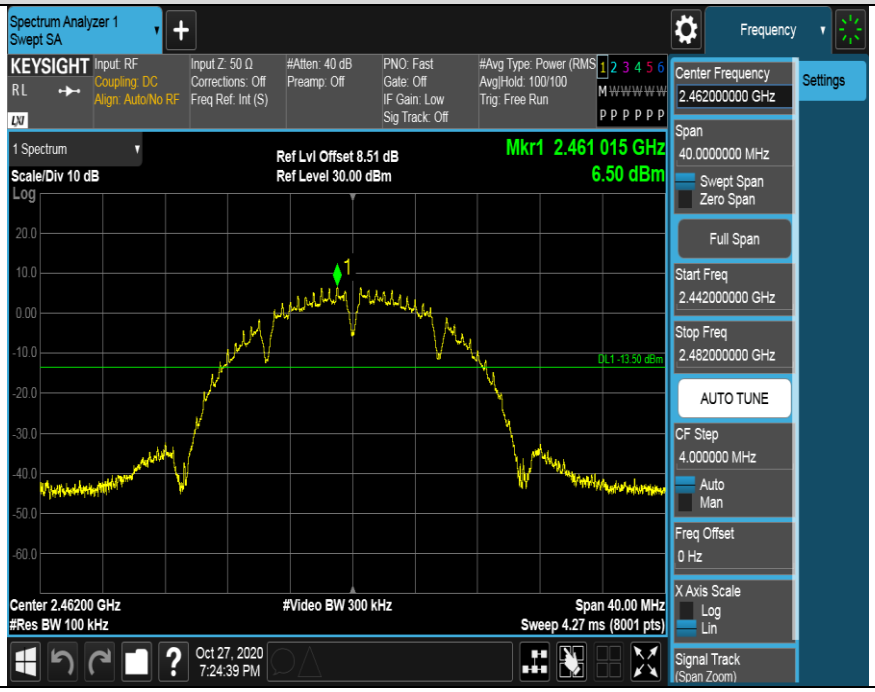
MCH SPURIOUS EMISSION_10GHz~26GHz



Test Mode	Channel	Verdict
11B	HCH	PASS

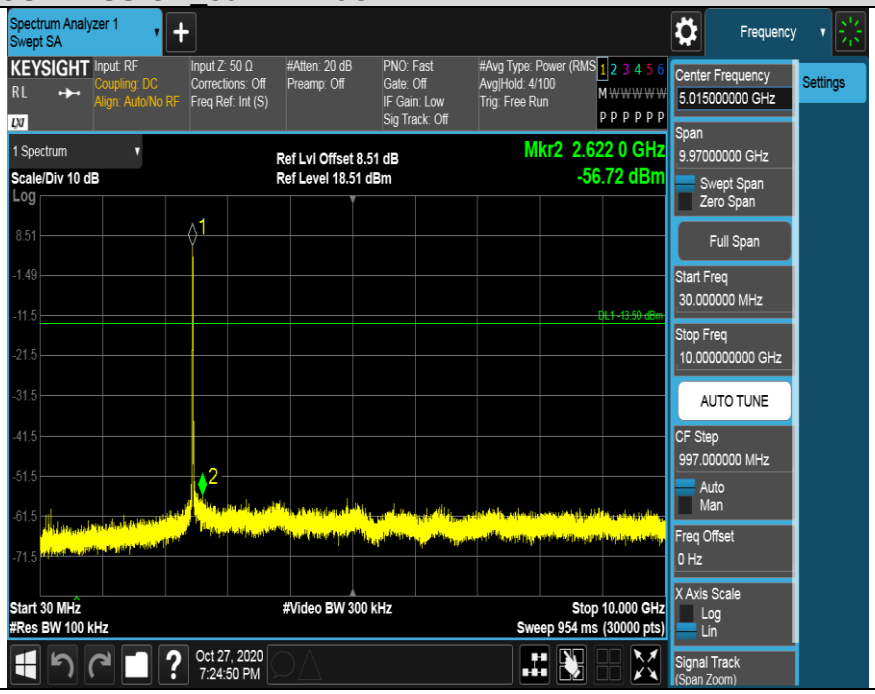
Pref test Plot

HCH SPURIOUS EMISSION

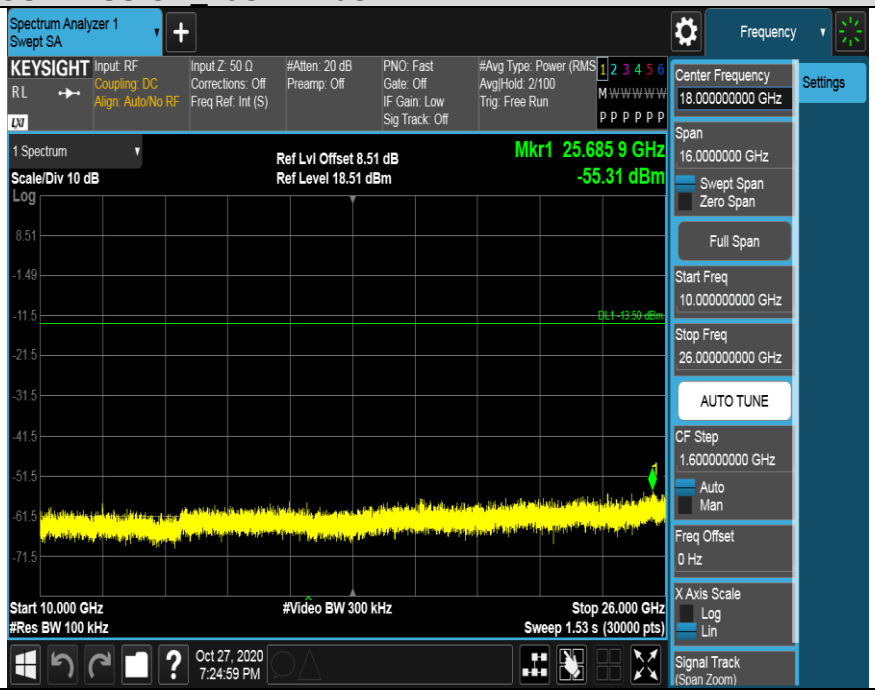


Puw test Plot

HCH SPURIOUS EMISSION_30MHz~10GHz

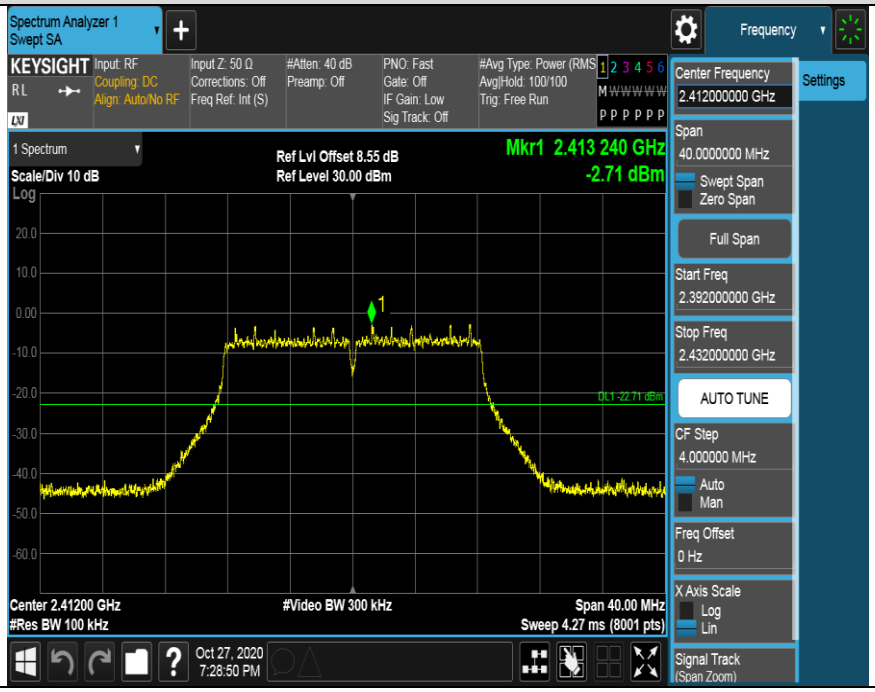


HCH SPURIOUS EMISSION_10GHz~26GHz



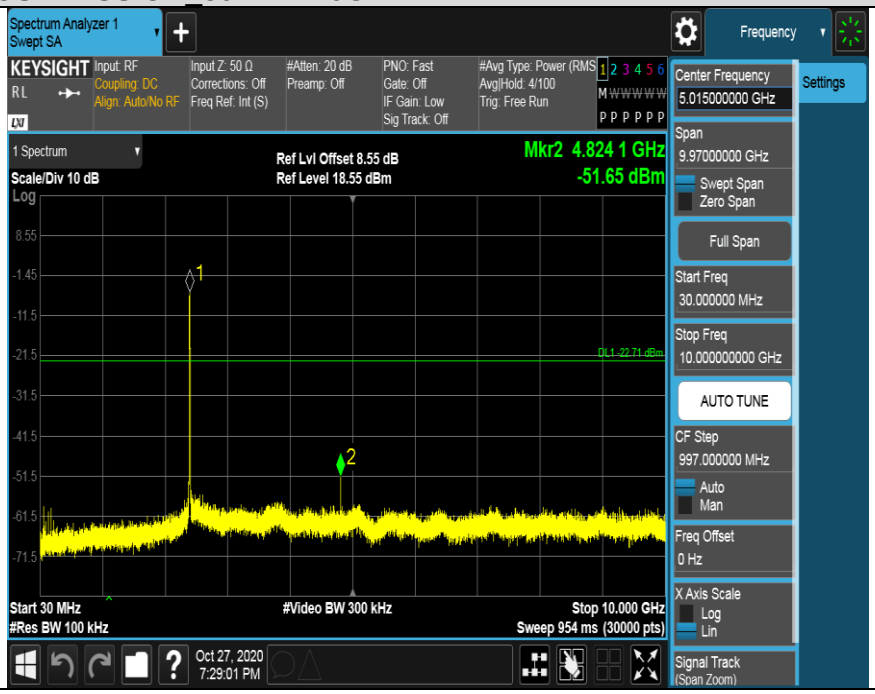
Test Mode	Channel	Verdict
11G	LCH	PASS

Pref test Plot

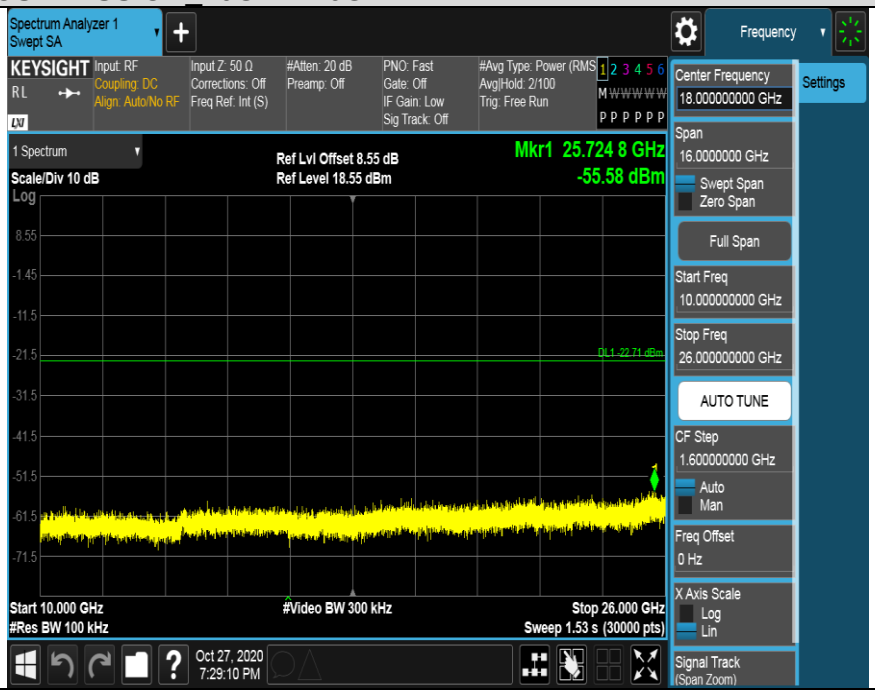
LCH SPURIOUS EMISSION


Puw test Plot

LCH SPURIOUS EMISSION_30MHz~10GHz



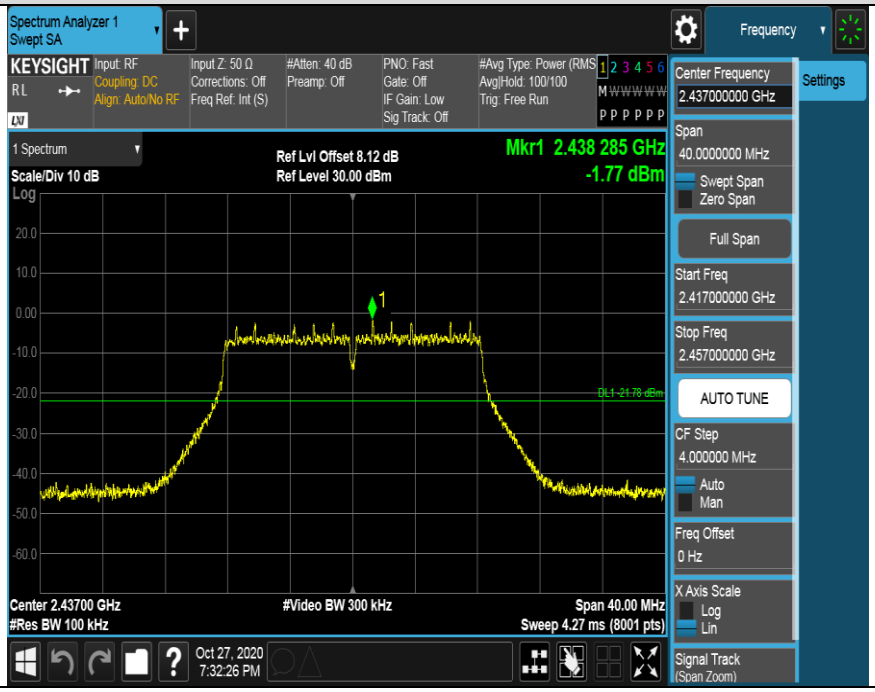
LCH SPURIOUS EMISSION_10GHz~26GHz



Test Mode	Channel	Verdict
11G	MCH	PASS

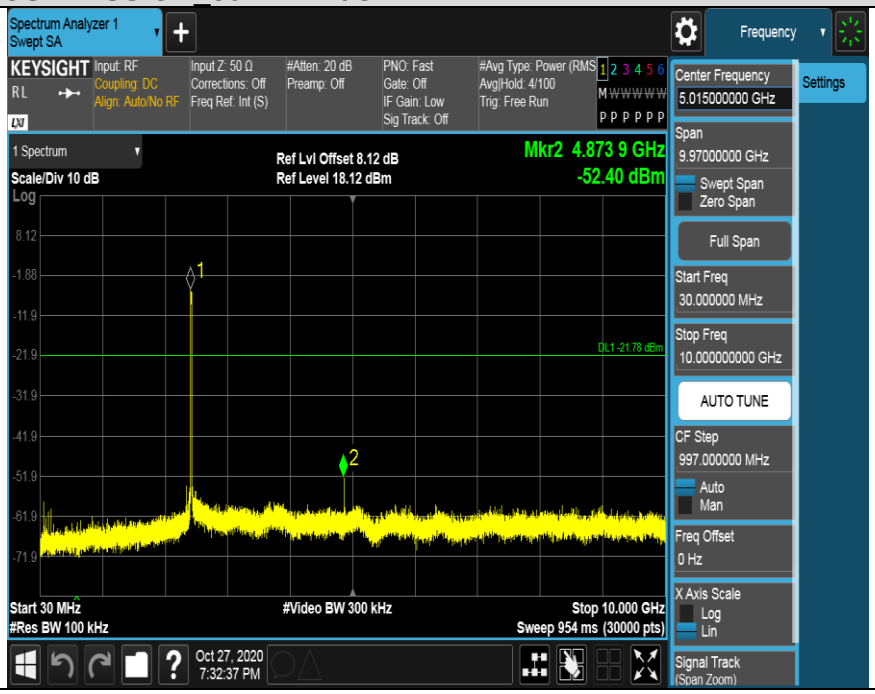
Pref test Plot

MCH SPURIOUS EMISSION

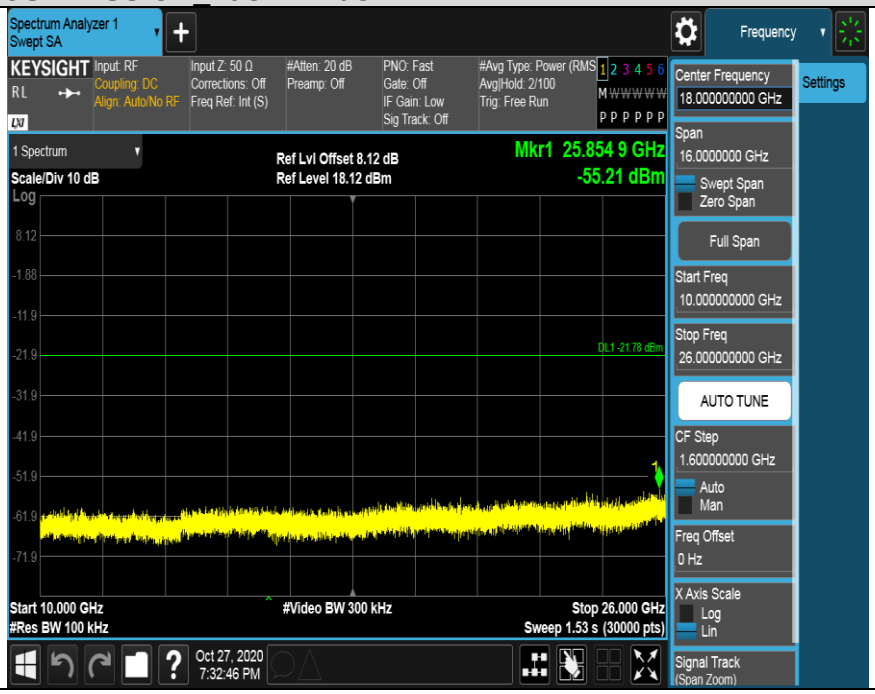


Puw test Plot

MCH SPURIOUS EMISSION_30MHz~10GHz



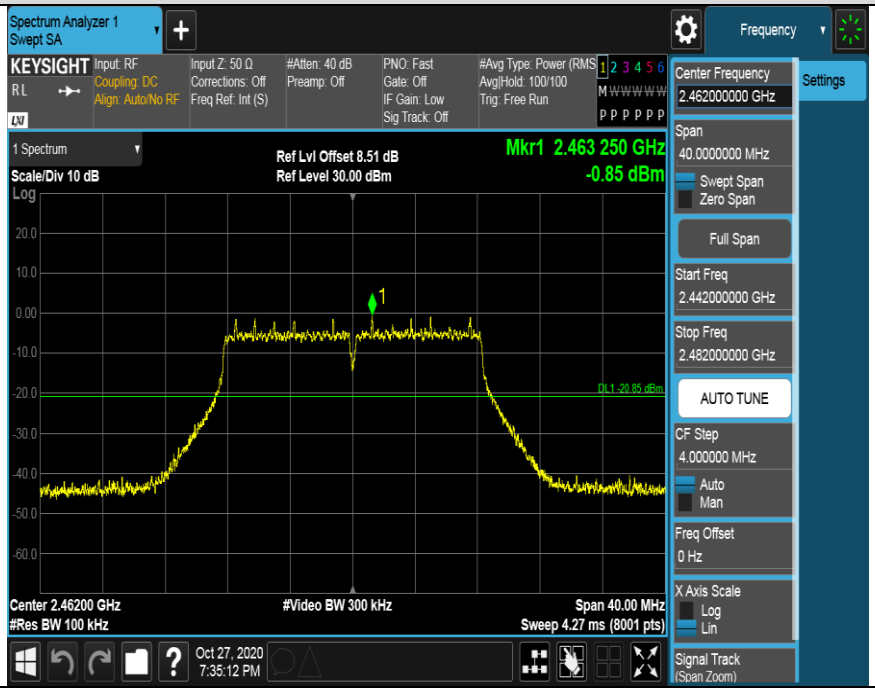
MCH SPURIOUS EMISSION_10GHz~26GHz



Test Mode	Channel	Verdict
11G	HCH	PASS

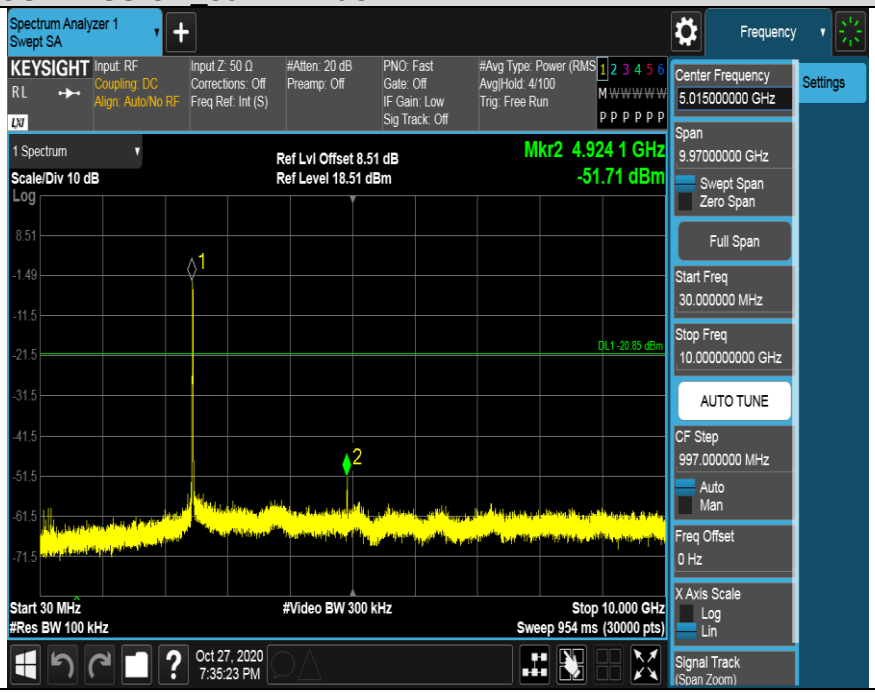
Pref test Plot

HCH SPURIOUS EMISSION

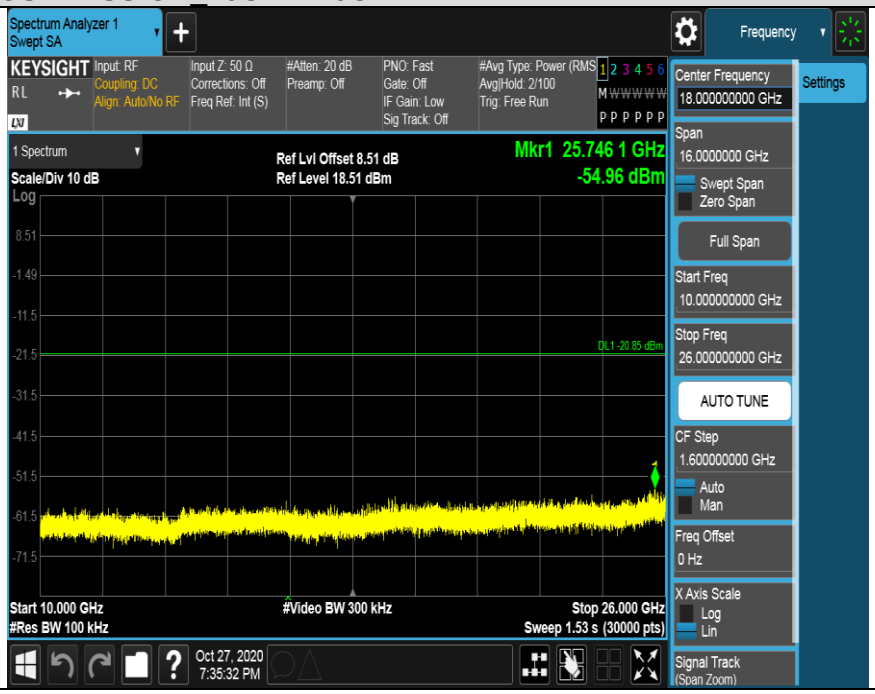


Puw test Plot

HCH SPURIOUS EMISSION_30MHz~10GHz

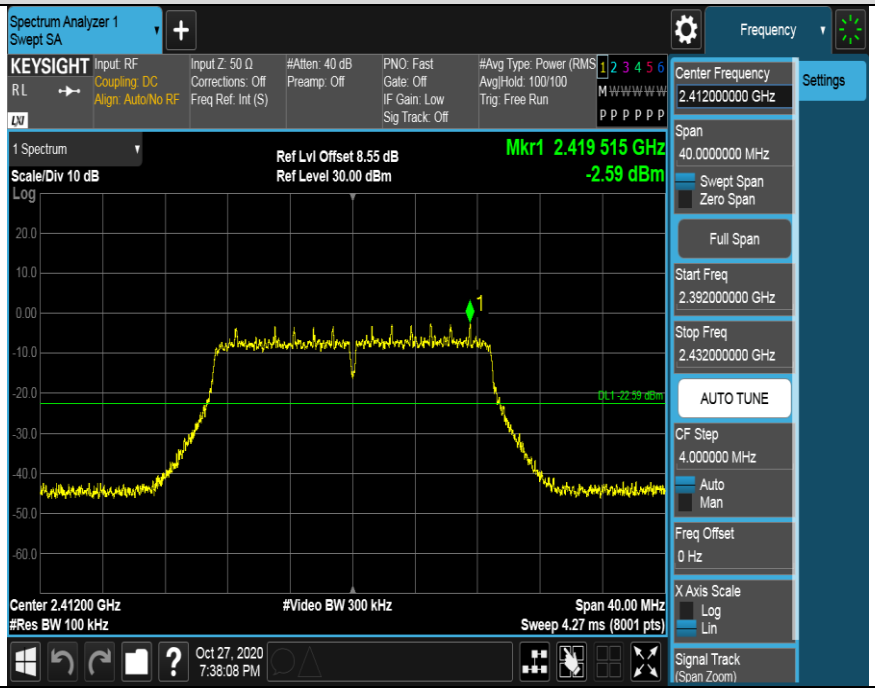


HCH SPURIOUS EMISSION_10GHz~26GHz



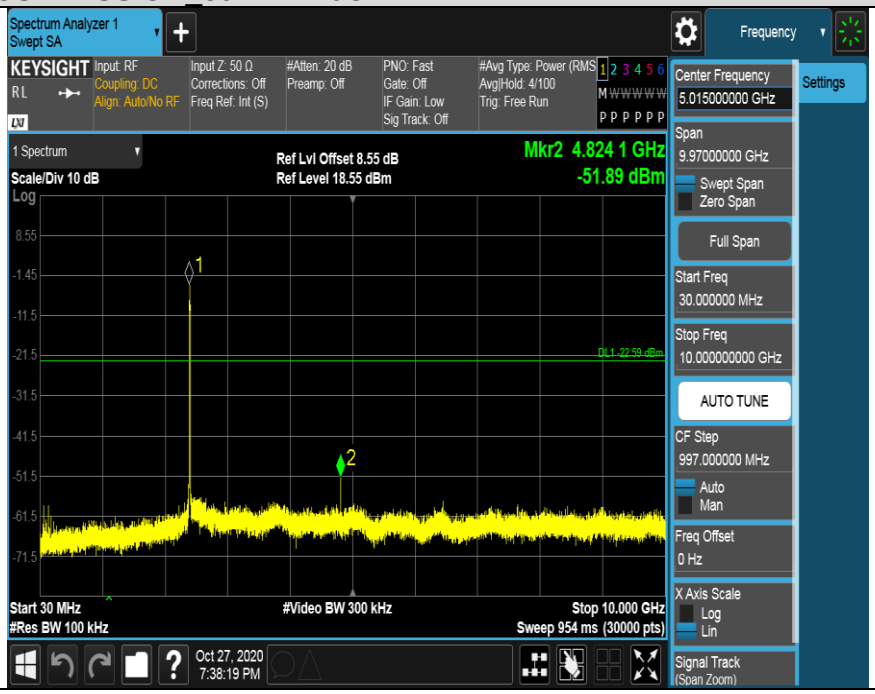
Test Mode	Channel	Verdict
11N HT20	LCH	PASS

Pref test Plot

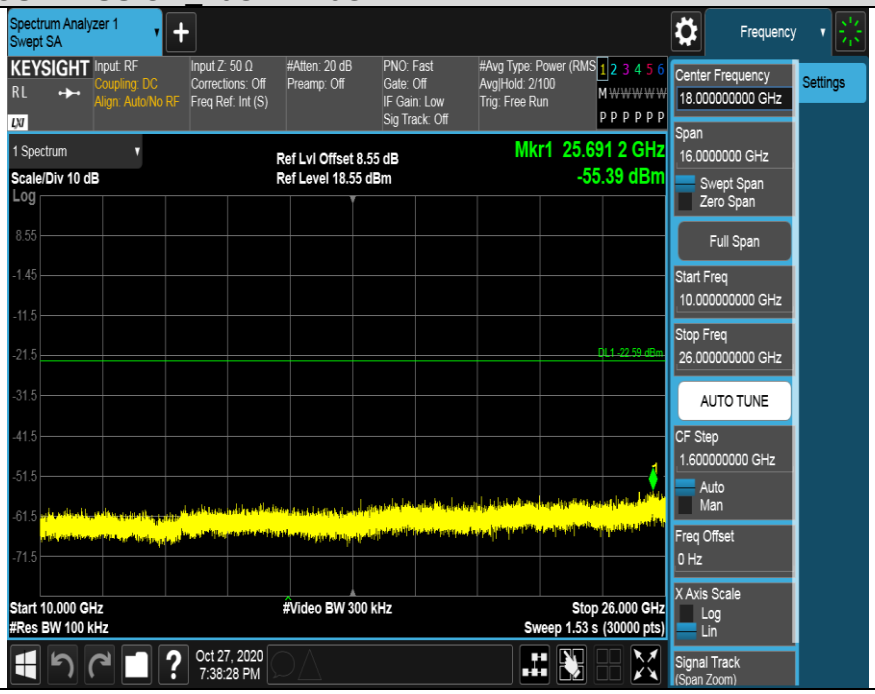
LCH SPURIOUS EMISSION


Puw test Plot

LCH SPURIOUS EMISSION_30MHz~10GHz



LCH SPURIOUS EMISSION_10GHz~26GHz



Test Mode	Channel	Verdict
11N HT20	MCH	PASS

Pref test Plot

MCH SPURIOUS EMISSION