

FCC CERTIFICATION TEST REPORT

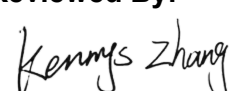
Applicant:	Guangzhou Shirui Electronics Co.,Ltd
Address:	192 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District, Guangzhou,Guangdong,China
Manufacturer:	Guangzhou Shirui Electronics Co.,Ltd
Address:	192 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District, Guangzhou,Guangdong,China
Product Description:	Wifi Module
Brand Name:	N/A
Tested Model:	SI07F
FCC ID:	2AFG6-SI07F
Report No.:	JCF260108011-008
Received Date:	Jan. 08, 2026
Tested Date:	Jan. 08, 2026 ~ Apr. 13, 2026
Issued Date:	Apr. 13, 2026
Test Standards:	FCC Rules and Regulations Part 15 Subpart C,
Test Procedure:	ANSI C63.10-2020 558074 D01 15.247 Meas Guidance v05r02, 662911 D01 Multiple Transmitter Output v02r01
Test Result:	Pass

Prepared By:



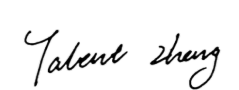
Roger Li/Engineer **Date:** Apr. 13, 2026

Reviewed By:



Kennys Zhang/Engineer **Date:** Apr. 13, 2026

Approved By:



Talent Zhang/Engineer **Date:** Apr. 13, 2026

Note: The test results in this report apply exclusively to the tested model / sample. Without written approval of Guangzhou Jingce Testing Technology Co., Ltd. the test report shall not be reproduced except in full.

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
--	/	Apr. 13, 2026	Original Report	/

Table of Contents

1. Test Report Declare	5
2. Summary of Test Results	6
3. Test Laboratory	6
4. Equipment Under Test	7
4.1. Description of EUT	7
4.2. Channel List	7
4.3. Packet Type Configuration	8
4.4. Test Channel Configuration	8
4.5. Test environment conditions	8
4.6. The Worse Case Power Setting Parameter	8
4.7. Description of Available Antennas	9
5. Description of Test Setup	9
5.1. Accessory	9
5.2. Support Equipment	9
5.3. Test Setup	9
5.4. Setup Diagram for Tests	9
6. Measurement Uncertainty	10
7. Measuring Instrument and Software Used	10
8. On Time and Duty Cycle	12
8.1. Block diagram of test setup	12
8.2. Limits	12
8.3. Results	12
8.4. Original test data	12
9. 20 dB Occupied Bandwidth and 99 % Occupied Bandwidth	16
9.1. Block diagram of test setup	16
9.2. Limit	16
9.3. Test Procedure	16
9.4. Results	16
9.5. Original test data	17
10. Conducted Output Power	24
10.1. Block diagram of test setup	24
10.2. Limits	24
10.3. Test Procedure	24
10.4. Results	24
10.5. Original test data	24
11. Carrier Hopping Channel Separation	28
11.1. Block diagram of test setup	28
11.2. Limits	28
11.3. Test Procedure	28
11.4. Results	28
11.5. Original test data	28
12. Number of Hopping Frequency	30
12.1. Block diagram of test setup	30
12.2. Limits	30
12.3. Test Procedure	30
12.4. Results	30
12.5. Original test data	30
13. Time of Occupancy (Dwell Time)	32
13.1. Block diagram of test setup	32
13.2. Limits	32
13.3. Test Procedure	32
13.4. Results	32

13.5. Original test data	33
14. Conducted Spurious Emission	40
14.1. Block diagram of test setup	40
14.2. Limits	40
14.3. Test Procedure	40
14.4. Results	40
14.5. Original test data	42
15. Radiated Emission	55
15.1. Block diagram of test setup	55
15.2. Limit	56
15.3. Test Procedure	57
15.4. Results	59
15.5. Original test data	59
16. AC Power Line Conducted Emissions	60
16.1. Block diagram of test setup	60
16.2. Limits	60
16.3. Test procedure	60
16.4. Test result	61
16.5. Original test data	61
17. Antenna Requirements	62
17.1. Limits	62
17.2. Result	62
APPENDIX A – Radiated Emission Below 1GHz Test Data	63
APPENDIX B – Radiated Emission Above 1GHz Test Data	65
APPENDIX C – AC Power Line Conducted Emission Test Data	85

1. Test Report Declare

Applicant:	Guangzhou Shirui Electronics Co.,Ltd
Address:	192 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District, Guangzhou,Guangdong,China
Manufacturer:	Guangzhou Shirui Electronics Co.,Ltd
Address:	192 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District, Guangzhou,Guangdong,China
Product Name:	Wifi Module
Brand Name:	N/A
Model Name:	SI07F, SI07***(*=0-9, or A-Z or a-z or "-" or blank, for marketing purpose use only, no technical difference)
Difference Description:	For marketing purpose use only, no technical difference

We Declare:

The equipment described above is tested by Guangzhou Jingce Testing Technology Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangzhou Jingce Testing Technology Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests except as provided information by clients.

2. Summary of Test Results

Summary of Test Results			
Clause	Test Items	FCC/ISED Rules	Test Result
1	20 dB Bandwidth and 99 % Occupied Bandwidth	FCC 15.247 (a) (1)	Pass
2	Conducted Output Power & EIRP	FCC 15.247 (b) (1)	Pass
3	Carrier Hopping Channel Separation	FCC 15.247 (a) (1)	Pass
4	Number of Hopping Frequency	15.247 (a) (1) III	Pass
5	Time of Occupancy (Dwell Time)	15.247 (a) (1) III	Pass
6	Conducted Band edge	FCC 15.247 (d)	Pass
7	Radiated Band edge and Spurious	FCC 15.247 (d) FCC 15.209 FCC 15.205	Pass
8	Conducted Emission Test For AC Power Port	FCC 15.207	Pass
9	Antenna Requirement	FCC 15.203	Pass
Note: This report was tested strictly in accordance with the standards, without any additions, deviations or omissions to the standard content.			

3. Test Laboratory

Guangzhou Jingce Testing Technology Co., Ltd.

Add.: No.10, Hefeng No.1 street, Huangpu District, Guangzhou, Guangdong, People's Republic of China

Association for Laboratory Accreditation(A2LA). Certificate Number: 6594.03

FCC Designation Number: CN1381. Test Firm Registration Number: 486550

IC Test Firm Registration Number: 31808

Conformity Assessment Body identifier: CN0173

4. Equipment Under Test

4.1. Description of EUT

EUT Name:	Wifi Module
Model Number:	SI07F
EUT Function Description:	Please refer to user manual of this device
Power Supply:	5VDC 1A
Sample No.:	260108011-01-01
Hardware Version:	NA
Software Version:	NA
Radio Specification:	Bluetooth V5.4
Operation Frequency:	2402 MHz - 2480 MHz
Modulation:	GFSK, $\pi/4$ -DQPSK, 8DPSK
Data Rate:	1Mbps, 2Mbps, 3Mbps
Antenna Type:	PCB Antenna, MAX. Gain: 1.53 dBi

Note 1: EUT is the ab. of equipment under test.

Note 2: The antenna gain is declared by the customer and the laboratory is not responsible for the accuracy of the antenna gain.

4.2. Channel List

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461	/	/

4.3. Packet Type Configuration

Test Mode	Packet Type	Setting(Packet Length)
GFSK	DH1	27
	DH3	183
	DH5	339
$\pi/4$ -DQPSK	2-DH1	54
	2-DH3	367
	2-DH5	679
8DPSK	3-DH1	83
	3-DH3	552
	3-DH5	1021

4.4. Test Channel Configuration

Tested mode, channel, information		
Mode	Channel	Frequency (MHz)
GFSK hopping on Tx mode	CH0 to CH78	2402 to 2480
$\pi/4$ -DQPSK hopping on Tx mode	CH0 to CH78	2402 to 2480
8DPSK hopping on Tx mode	CH0 to CH78	2402 to 2480
GFSK hopping off Tx mode	LCH: CH0	2402
	MCH: CH39	2441
	HCH: CH78	2480
$\pi/4$ -DQPSK hopping off Tx mode	LCH: CH0	2402
	MCH: CH39	2441
	HCH: CH78	2480
8DPSK hopping off Tx mode	LCH: CH0	2402
	MCH: CH39	2441
	HCH: CH78	2480

4.5. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-25 °C
Humidity range:	40-75%
Pressure range:	86-106 kPa

4.6. The Worse Case Power Setting Parameter

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band				
Test Software		WCN_Combo_Tool		
Modulation Type	Transmit Antenna Number	Test Software Setting Value		
		CH 0	CH 39	CH 78
GFSK	1	Default	Default	Default
$\pi/4$ -DQPSK	1	Default	Default	Default

8DPSK	1	Default	Default	Default
-------	---	---------	---------	---------

4.7. Description of Available Antennas

Test Mode	Transmit and Receive Mode	Description
GFSK	☒ 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.
$\pi/4$ -DQPSK	☒ 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.
8DPSK	☒ 1TX, 1RX	Antenna 1 can be used as transmitting/receiving antenna.

5. Description of Test Setup

5.1. Accessory

Description of Accessories	Manufacturer	Model Number	Description	Remark
/	/	/	/	/

5.2. Support Equipment

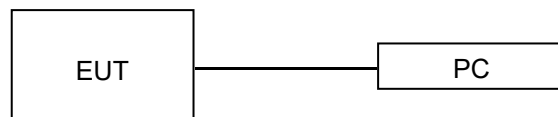
Equipment	Brand Name	Model Name	P/N
PC	Lenovo	T480	/

5.3. Test Setup

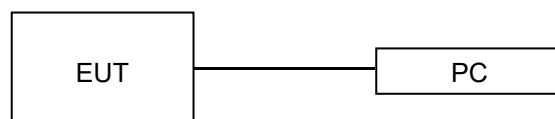
The EUT can work in Fixed Frequency mode.

5.4. Setup Diagram for Tests

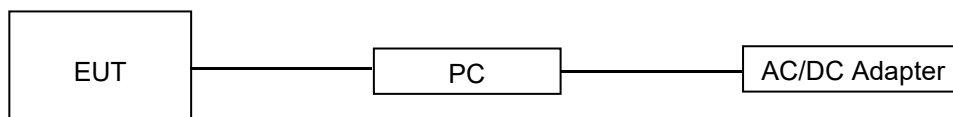
RF Connect Test:



Radiated Emission Test:



AC Power Line Conducted Emissions Test:



6. Measurement Uncertainty

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

Test Item	Uncertainty
AC Power Conduction emission	1.37 dB
All Radiated emissions	5.4dB
Conducted emissions	3.09 dB
Occupied Channel Bandwidth	1.1%
Conducted Output power	0.82dB
Power Spectral Density	0.82dB

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

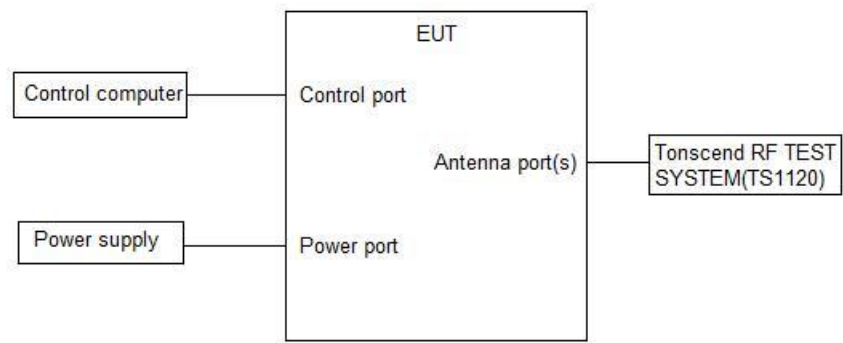
7. Measuring Instrument and Software Used

TS Test System						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☒	Spectrum Analyzer	Keysight	N9030B	MY56320512	Jul. 31, 2025	Jul. 30, 2026
☒	Vector Signal Generator	Keysight	N5182B	MY57300334	Jul. 31, 2025	Jul. 30, 2026
☒	Signal Generator	Keysight	N5171B	MY57280639	Jul. 31, 2025	Jul. 30, 2026
☒	DC POWER	Keysight	E342A	MY59020356	Jul. 31, 2025	Jul. 30, 2026
☒	Incubator thermometer	GWS	EL-02JA	21107288	Jul. 31, 2025	Jul. 30, 2026
☒	Control unit(Power sensor)	Tonscend	JS0806-2	/	Jul. 31, 2025	Jul. 30, 2026
☒	Spectrum Analyzer	Keysight	N9020B	MY60112206	Jul. 31, 2025	Jul. 30, 2026
☒	Control unit(Power sensor)	Tonscend	JS0806-2	21H8060465	Aug. 01, 2025	Jul. 31, 2026
☒	Spectrum Analyzer	Keysight	N9020B	MY60112811	Jul. 31, 2025	Jul. 30, 2026
☒	Signal Generator	Keysight	N5173B	MY62220145	Jul. 31, 2025	Jul. 30, 2026
☒	Vector Signal Generator	Keysight	N5182B	MY61252859	Jul. 31, 2025	Jul. 30, 2026
☒	DC POWER	Keysight	E3642A	MY40005294	Jul. 31, 2025	Jul. 30, 2026
☒	Control unit(Power sensor)	Tonscend	JS0806-2	24F80620865	Aug. 01, 2025	Jul. 31, 2026
Software						
Used	Description	Manufacturer	Name		Version	
☒	Test software	Tonscend	JS1120-3		V3.3.10	
RSE Test System						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☒	EMI Receiver	R&S	ESR26	101424	Nov. 25, 2025	Nov. 24, 2026

☒	Hybrid Antenna	Schwarzbeck	VULB9163	01361	May. 28, 2025	May. 27, 2026
☒	Horn Antenna 1	Schwarzbeck	BBHA 9120 D	02910	Aug. 31, 2025	Aug. 30, 2026
☒	Horn Antenna 2	ETS	BBHA 9170	1090	Aug. 31, 2025	Aug. 30, 2026
☒	loop-antenna	Schwarzbeck	FMZB 1513-60	00030	Jan. 11, 2026	Jan. 10, 2027
☒	Test path	/	Path2: WIFI-2.4G 1-3GHz	/	Jul. 31, 2025	Jul. 30, 2026
☒	Test path	/	Path7: ALL PASS 1-18GHz	/	Jul. 31, 2025	Jul. 30, 2026
☒	Test path	/	Path9: 3GHz High PASS 3-18GHz	/	Jul. 31, 2025	Jul. 30, 2026
☒	Test path	/	Path16: 30MHz-1GHz ALL PASS NO AMP	/	Jul. 31, 2025	Jul. 30, 2026
☒	Signal Pre-Amplifier	ETS	3116C-PA	00217677	Jul. 31, 2025	Jul. 30, 2026
☒	3m Fully-anechoic Chamber	YIHENG	9m*6m*6m	001	Sep. 05, 2023	Sep. 04, 2026
Software						
Used	Description	Manufacturer	Name		Version	
☒	Test software	Tonscend	TS+		V5.0.0.0	
Conducted Emission Test For AC Power Port						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☒	LISN	R&S	ENV216	102509	Aug. 01, 2025	Jul. 31, 2026
☒	EMI Receiver	R&S	ESR	102154	Aug. 01, 2025	Jul. 31, 2026
Software						
Used	Description	Manufacturer	Name		Version	
☒	Test software	EZ	EZ-EMC		EMEC-3A1	
Other Instrument						
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due. Date
☒	Temperature & Humidity	Temperature	HTC-1	/	Sep. 20, 2025	Sep. 21, 2026

8. On Time and Duty Cycle

8.1. Block diagram of test setup



Note: The EUT is connected to the Control unit, and then the signal is transmitted through internal circuits to the Spectrum Analyzer.

8.2. Limits

None; for reporting purposes only

8.3. Results

Test Mode	Ant.	Freq. (MHz)	ON Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Factor(dB)
DH5	Ant1	2402	2.88	3.74	77.01	1.13
		2441	2.89	3.75	77.07	1.13
		2480	2.88	3.75	76.80	1.15
2DH5	Ant1	2402	2.88	3.74	77.01	1.13
		2441	2.89	3.75	77.07	1.13
		2480	2.88	3.76	76.60	1.16
3DH5	Ant1	2402	2.89	3.75	77.07	1.13
		2441	2.88	3.75	76.80	1.15
		2480	2.90	3.76	77.13	1.13

Note1: Duty Cycle Correction Factor = 10log(1/x).
Note2: Offset=cable loss + Test system insertion loss
Where: x is Duty Cycle(Linear)
Where: T is On Time (transmit duration)
If that calculated VBW is not available on the analyzer, then the next higher value should be used.

8.4. Original test data

DH5_Ant1_2402







9. 20 dB Occupied Bandwidth and 99 % Occupied Bandwidth

9.1. Block diagram of test setup

Same as section 8.1

9.2. Limit

CFR 47 FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247 (a) (1)	20 dB Occupied Bandwidth	N/A	2400-2483.5
	99 % Occupied Bandwidth	N/A	2400-2483.5

9.3. Test Procedure

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

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	For 20 dB Occupied Bandwidth: 1 % to 5 % of the 20 dB bandwidth For 99 % Occupied Bandwidth: 1 % to 5 % of the occupied bandwidth
VBW	For 20 dB Occupied Bandwidth: approximately 3×RBW For 99 % Occupied Bandwidth: ≥ 3×RBW
Span	approximately 2 to 3 times the 20 dB bandwidth
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 20 dB and 99 % relative to the maximum level measured in the fundamental emission.

9.4. Results

20 dB Occupied Bandwidth:

Test Mode	Ant.	Freq. (MHz)	20dB EBW (MHz)	FL (MHz)	FH (MHz)
DH5	Ant1	2402	0.951	2401.538	2402.489
		2441	0.963	2440.532	2441.495
		2480	0.954	2479.529	2480.483
2DH5	Ant1	2402	1.245	2401.391	2402.636
		2441	1.317	2440.346	2441.663
		2480	1.329	2479.337	2480.666
3DH5	Ant1	2402	1.281	2401.361	2402.642
		2441	1.281	2440.358	2441.639
		2480	1.257	2479.364	2480.621

Note: Offset=cable loss + Test system insertion loss

99 % Occupied Bandwidth

Test Mode	Ant.	Freq. (MHz)	OCB (MHz)	FL (MHz)	FH (MHz)
DH5	Ant1	2402	0.89205	2401.5605	2402.4525
		2441	0.88580	2440.5579	2441.4437
		2480	0.89405	2479.5556	2480.4496
2DH5	Ant1	2402	1.1716	2401.4130	2402.5846

3DH5	Ant1	2441	1.1606	2440.4194	2441.5800
		2480	1.1586	2479.4198	2480.5784
		2402	1.1573	2401.4243	2402.5816
		2441	1.1691	2440.4178	2441.5869
		2480	1.1665	2479.4196	2480.5861

Note: Offset=cable loss + Test system insertion loss

9.5. Original test data

20 dB Occupied Bandwidth:





2DH5_Ant1_2402



2DH5_Ant1_2441

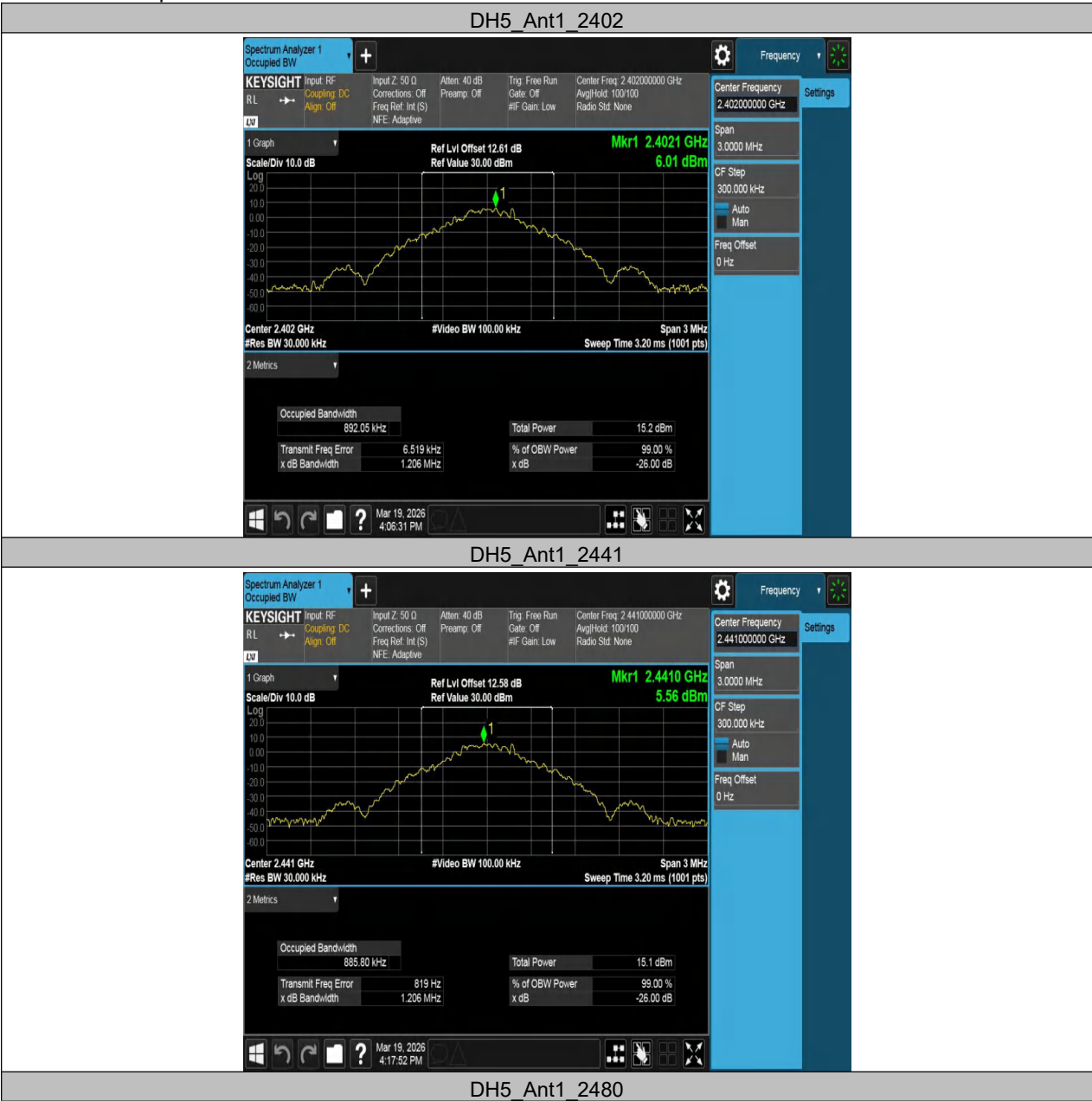


2DH5_Ant1_2480





99 % Occupied bandwidth:





2DH5_Ant1_2402



2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



10. Conducted Output Power

10.1. Block diagram of test setup

Same as section 8.1

10.2. Limits

CFR 47 FCC Part15 (15.247) , Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247 (b) (1)	Peak Conducted Output Power	Hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel: 1 watt or 30dBm; Hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel : 125 mW or 21dBm	2400-2483.5

10.3. Test Procedure

The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is available to perform the measurement:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	$RBW \geq DTS \text{ bandwidth}$
VBW	$VBW \geq 3 \times RBW$
Span	$Span \geq 3 \times RBW$
Trace	Max hold
Sweep	Auto couple

10.4. Results

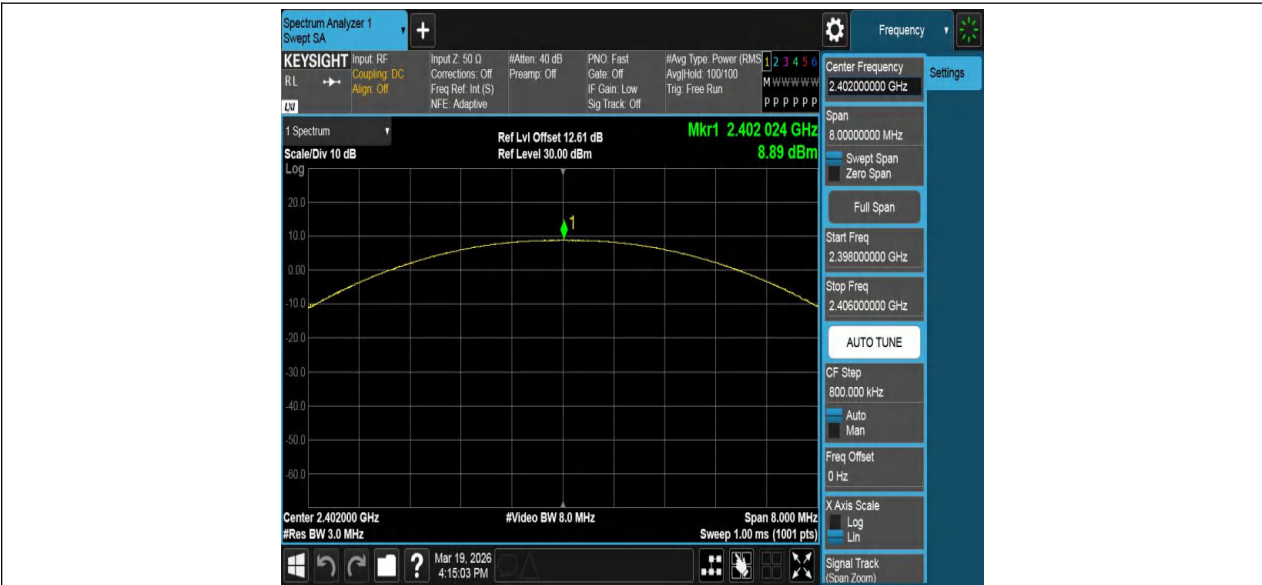
Test Mode	Ant.	Freq.(MHz)	Conducted Peak Power (dBm)	Conducted Limit (dBm)	Verdict
DH5	Ant1	2402	8.89	≤ 20.97	PASS
		2441	9.03	≤ 20.97	PASS
		2480	8.82	≤ 20.97	PASS
2DH5	Ant1	2402	8.87	≤ 30	PASS
		2441	8.91	≤ 30	PASS
		2480	9.12	≤ 30	PASS
3DH5	Ant1	2402	9.07	≤ 30	PASS
		2441	8.20	≤ 30	PASS
		2480	7.85	≤ 30	PASS

Note1: The EIRP = Peak Power + Ant. Gain

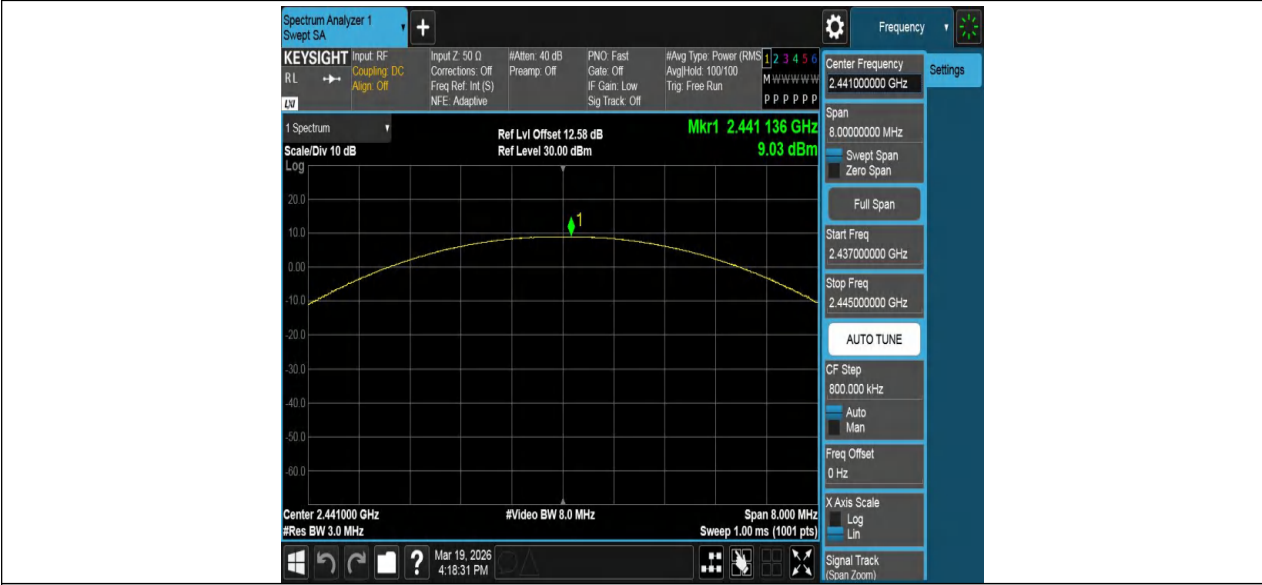
Note2: Offset=cable loss + Test system insertion loss

10.5. Original test data

DH5 Ant1 2402



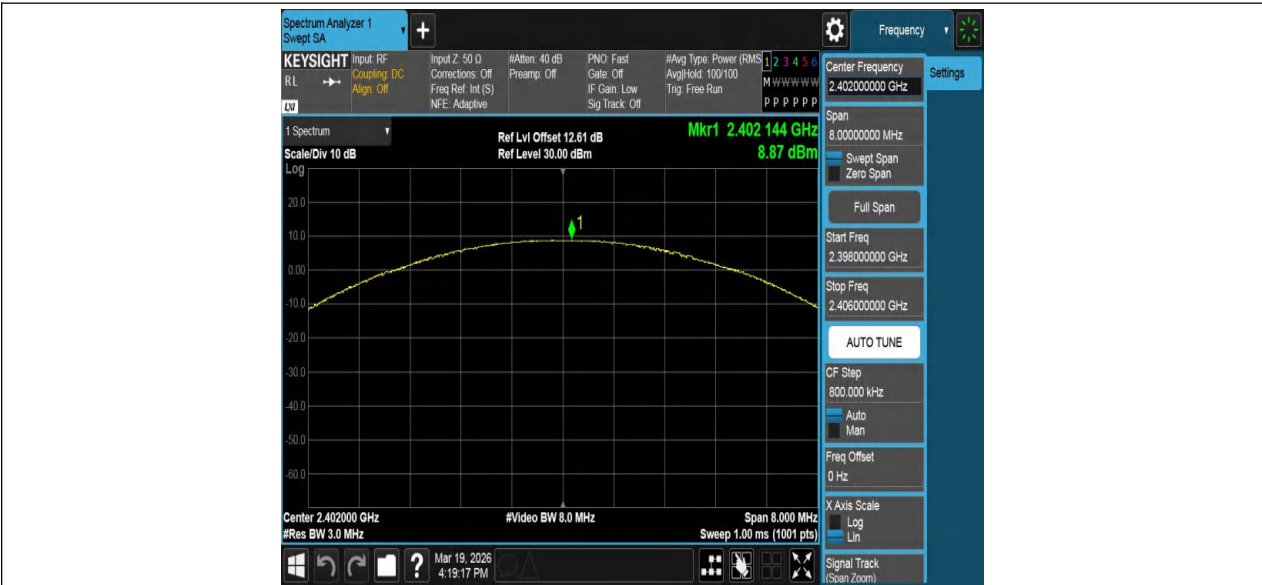
DH5_Ant1_2441



DH5_Ant1_2480



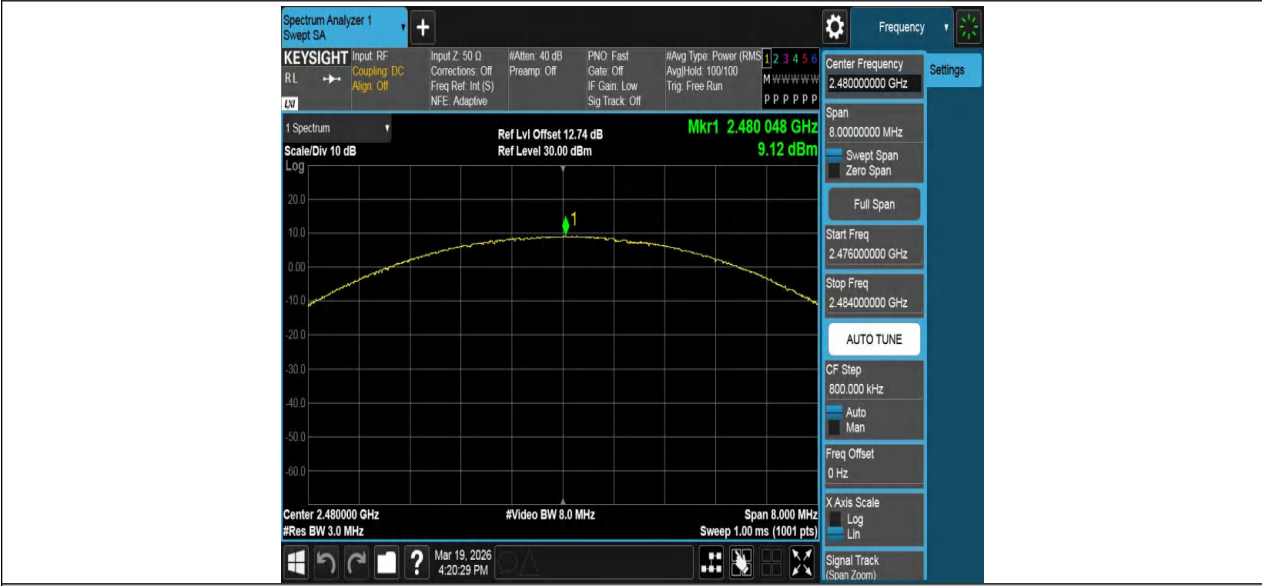
2DH5_Ant1_2402



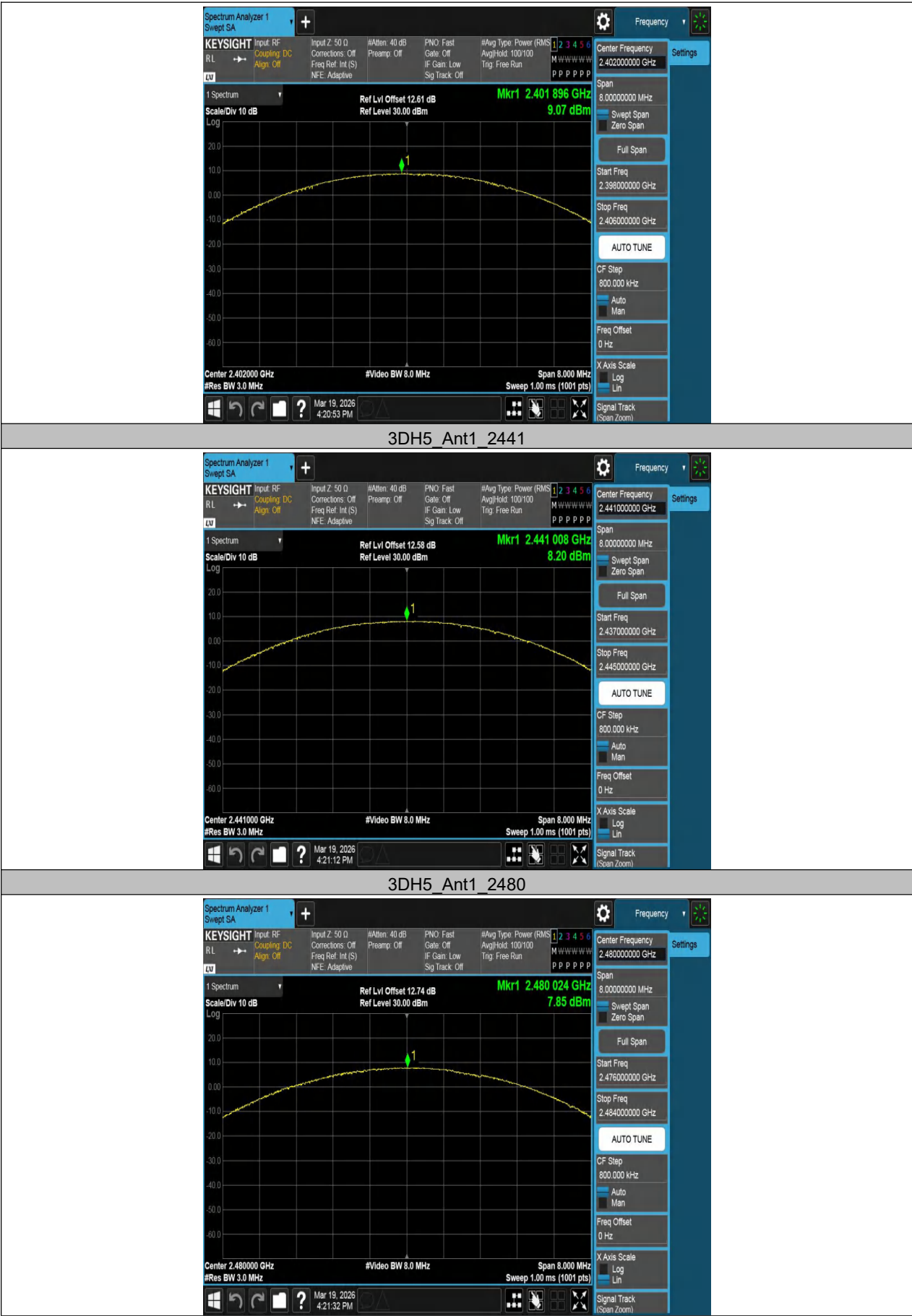
2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



11. Carrier Hopping Channel Separation

11.1. Block diagram of test setup

Same as section 8.1

11.2. Limits

CFR 47 FCC Part15 (15.247) , Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247 (a) (1)	Carrier Hopping Channel Separation	Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel.	2400-2483.5

11.3. Test Procedure

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

Center Frequency	The center frequency of the channel under test
Span	wide enough to capture the peaks of two adjacent channels
Detector	Peak
RBW	Start with the RBW set to approximately 30 % of the channel spacing; adjust as necessary to best identify the center of each individual channel.
VBW	≥ RBW
Trace	Max hold
Sweep time	Auto couple

Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels.

Compliance of an EUT with the appropriate regulatory limit shall be determined.

A plot of the data shall be included in the test report.

11.4. Results

Test Mode	Ant.	Freq. (MHz)	Result (MHz)	Limit (MHz)	Verdict
DH5	Ant1	Hop	1.012	≥0.963	PASS
2DH5	Ant1	Hop	1.32	≥0.886	PASS
3DH5	Ant1	Hop	1.318	≥1.281	PASS

Note: Offset=cable loss + Test system insertion loss

11.5. Original test data

DH5_Ant1_Hop



2DH5 Ant1 Hop



3DH5 Ant1 Hop



12. Number of Hopping Frequency

12.1. Block diagram of test setup

Same as section 8.1

12.2. Limits

CFR 47 FCC Part15 (15.247), Subpart C		
Section	Test Item	Limit
CFR 47 15.247 (a) (1) III	Number of Hopping Frequency	at least 15 hopping channels

12.3. Test Procedure

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

Detector	Peak
RBW	To identify clearly the individual channels, set the RBW to less than 30 % of the channel spacing or the 20 dB bandwidth, whichever is smaller.
VBW	≥RBW
Span	The frequency band of operation
Trace	Max hold
Sweep time	Auto couple

Set EUT to transmit maximum output power and switch on frequency hopping function. then set enough count time (larger than 5000 times) to get all the hopping frequency channel displayed on the screen of spectrum analyzer.

Count the quantity of peaks to get the number of hopping channels.

FHSS Mode: 79 Channels observed.

AFHSS Mode: 20 Channels declared.

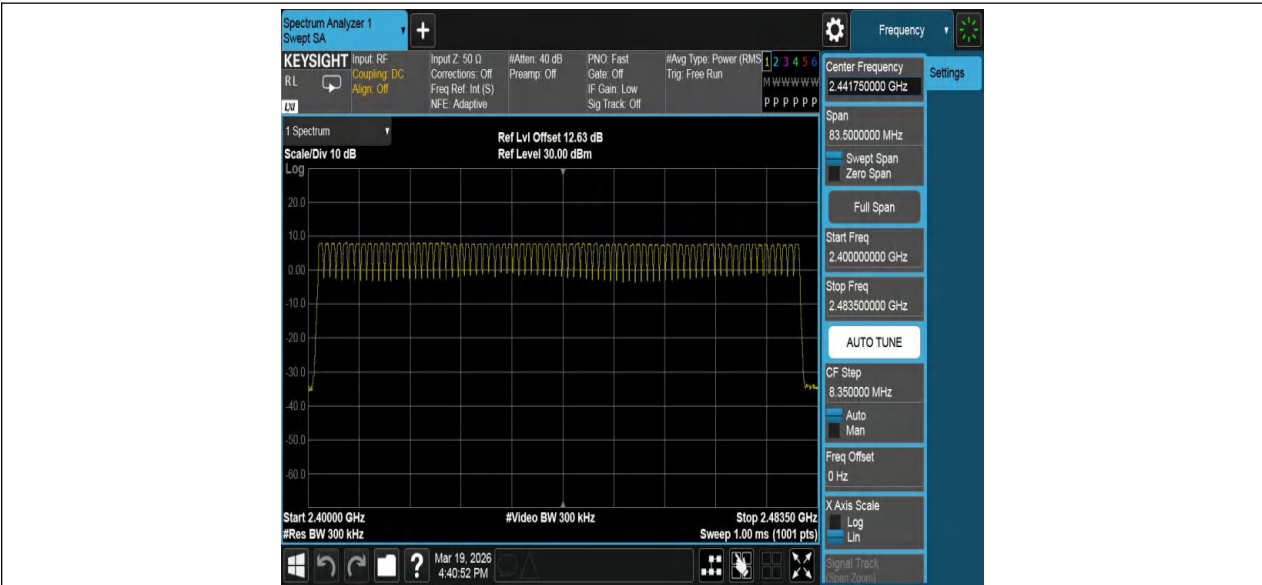
12.4. Results

Test Mode	Ant.	Freq. (MHz)	Result (Num)	Limit (Num)	Verdict
DH5	Ant1	Hop	79	≥15	PASS
2DH5	Ant1	Hop	79	≥15	PASS
3DH5	Ant1	Hop	79	≥15	PASS

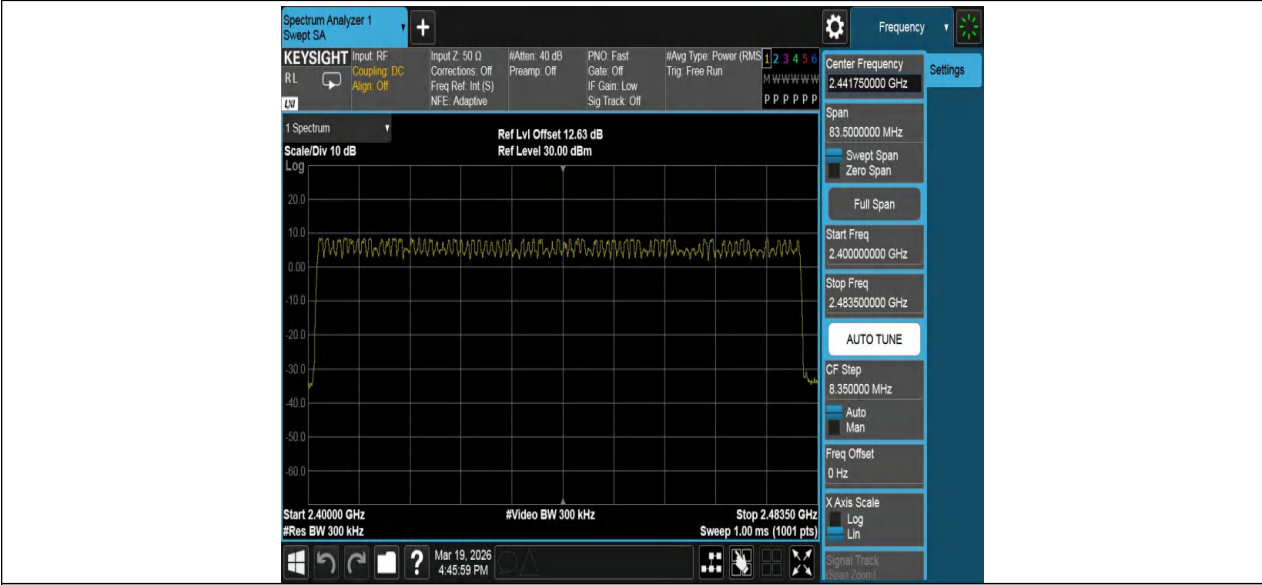
Note: Offset=cable loss + Test system insertion loss

12.5. Original test data

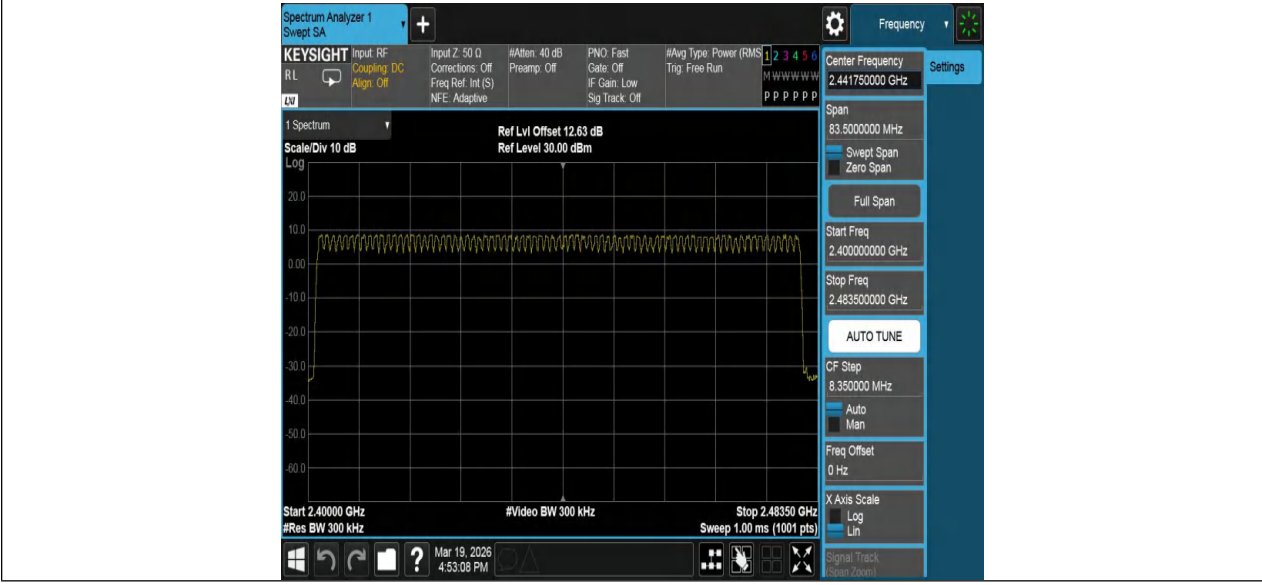
DH5_Ant1_Hop



2DH5 Ant1 Hop



3DH5 Ant1 Hop



13. Time of Occupancy (Dwell Time)

13.1. Block diagram of test setup

Same as section 8.1

13.2. Limits

CFR 47 FCC Part15 (15.247), Subpart C		
Section	Test Item	Limit
CFR 47 15.247 (a) (1) III	Time of Occupancy (Dwell Time)	The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds, multiplied by the number of hopping channels employed.

13.3. Test Procedure

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

Center Frequency	The center frequency of the channel under test
Detector	Average
RBW	1 MHz
VBW	≥ RBW
Span	zero span
Trace	Clear Write
Sweep time	As necessary to capture the entire dwell time per hopping channel

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

- The transmitter output (antenna port) was connected to the spectrum analyzer
- Set RBW of spectrum analyzer to 1 MHz and VBW to 3 MHz.
- Use a video trigger with the trigger level set to enable triggering only on full pulses.
- Sweep Time is more than once pulse time.
- Set the center frequency on any frequency would be measure and set the frequency span to zero span.

f. Measure the maximum time duration of one single pulse.

g. Set the EUT for DH5, DH3 and DH1 packet transmitting.

h. Measure the maximum time duration of one single pulse.

A Period Time = (channel number)*0.4

For FHSS Mode (79 Channel):

DH1 Time Slot: Reading * (1600/2)*31.6/(channel number)

DH3 Time Slot: Reading * (1600/4)*31.6/(channel number)

DH5 Time Slot: Reading * (1600/6)*31.6/(channel number)

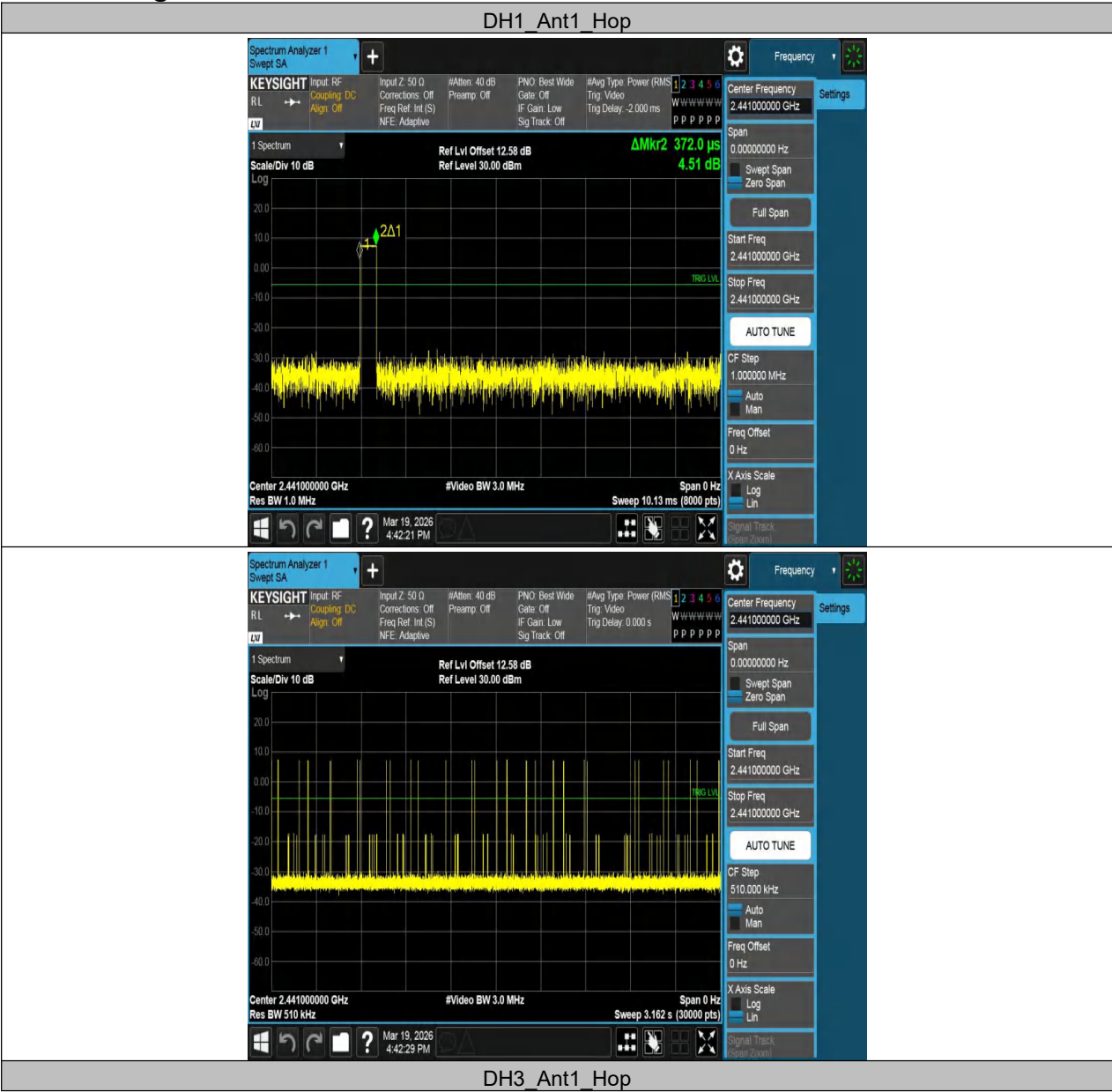
13.4. Results

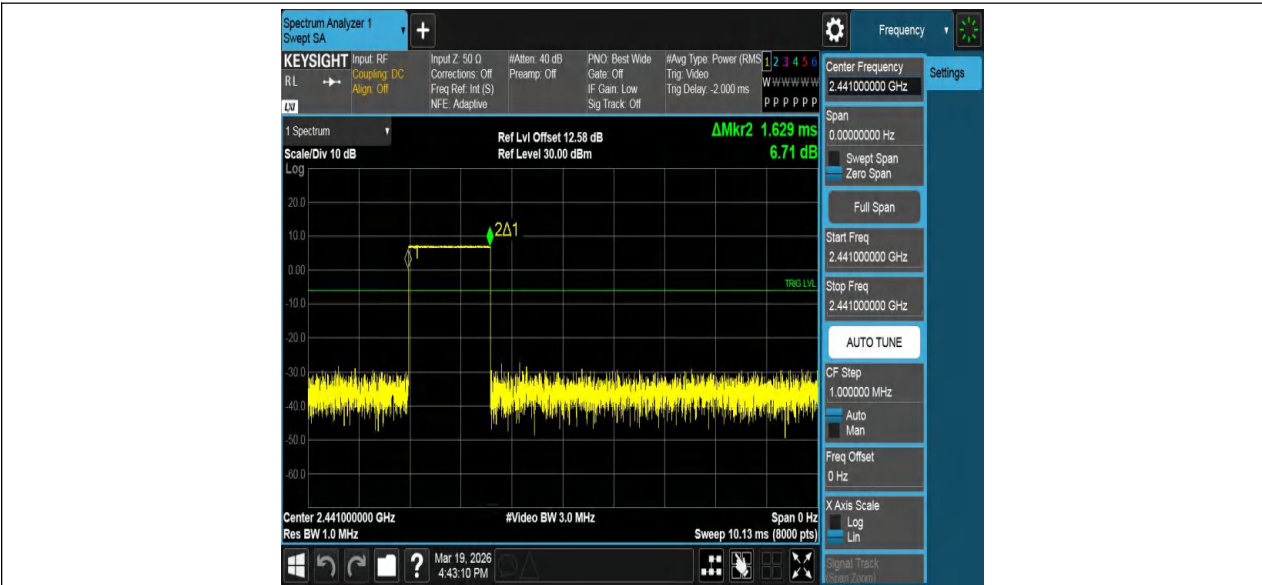
Test Mode	Ant.	Freq. (MHz)	Burst Width (ms)	Total Hops (Num)	Result (s)	Limit (s)	Verdict
DH1	Ant1	Hop	0.372	300	0.112	≤0.4	PASS
DH3	Ant1	Hop	1.629	160	0.261	≤0.4	PASS
DH5	Ant1	Hop	2.878	60	0.173	≤0.4	PASS
2DH1	Ant1	Hop	0.383	330	0.126	≤0.4	PASS
2DH3	Ant1	Hop	1.634	230	0.376	≤0.4	PASS
2DH5	Ant1	Hop	2.882	50	0.144	≤0.4	PASS
3DH1	Ant1	Hop	0.381	320	0.122	≤0.4	PASS
3DH3	Ant1	Hop	1.633	220	0.359	≤0.4	PASS

3DH5	Ant1	Hop	2.884	60	0.173	≤0.4	PASS
------	------	-----	-------	----	-------	------	------

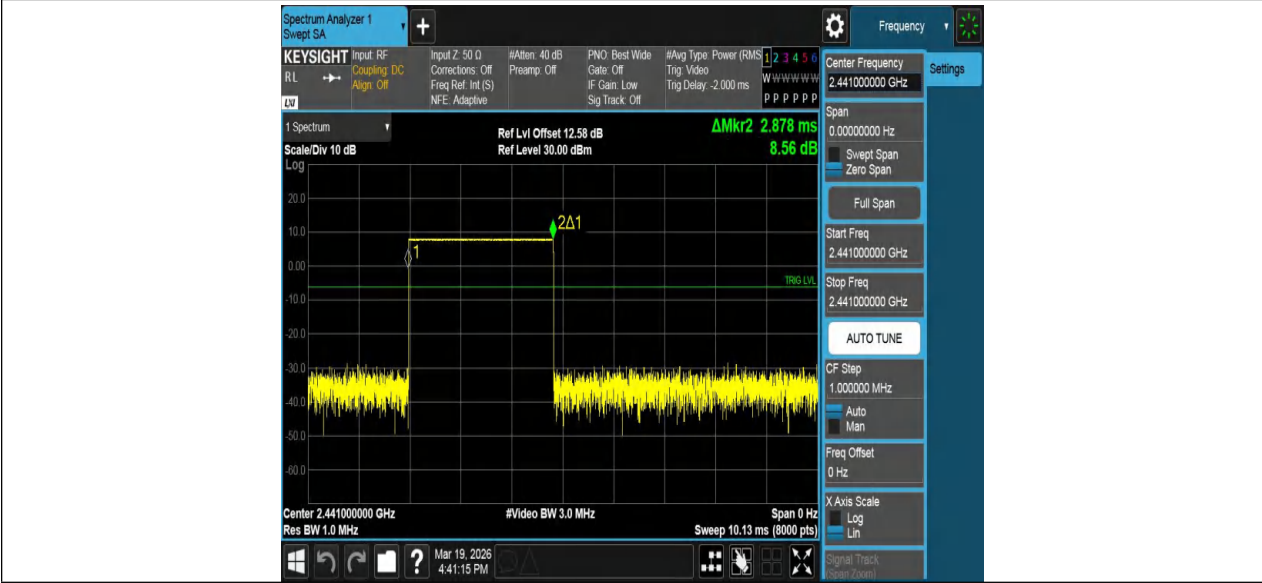
Note: Offset=cable loss + Test system insertion loss

13.5. Original test data



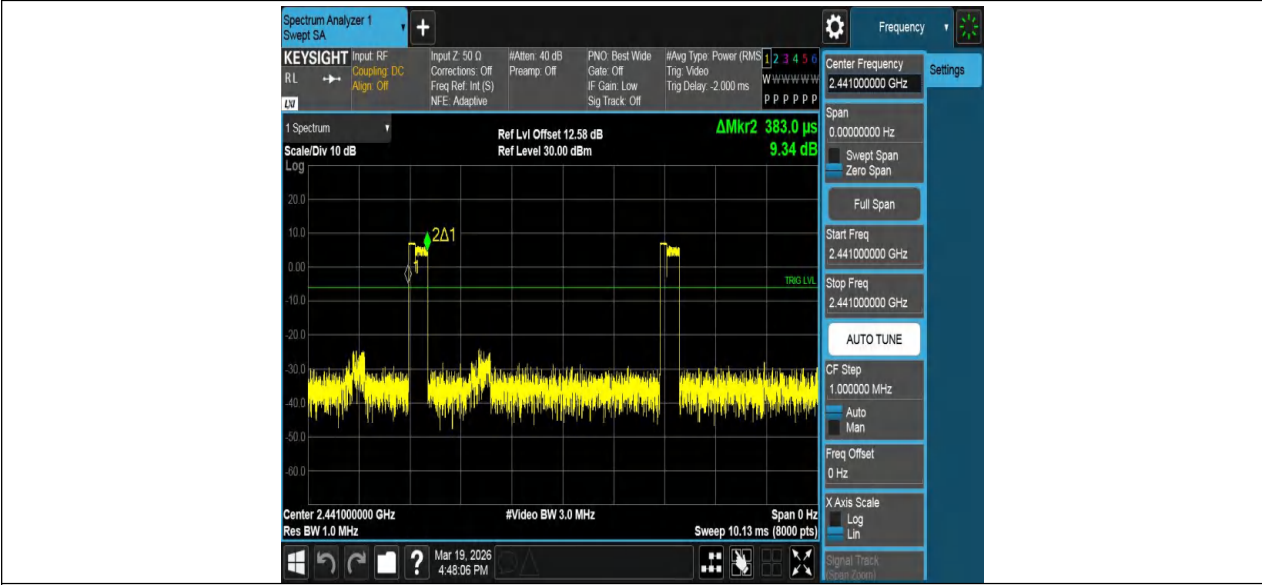


DH5_Ant1_Hop





2DH1_Ant1_Hop



2DH3_Ant1_Hop





3DH1_Ant1_Hop



3DH3_Ant1_Hop

