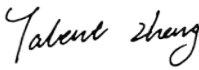


FCC AND ISED CERTIFICATION TEST REPORT

Applicant:	Guangzhou Shikun Electronics Co., Ltd
Address:	NO.6 Liankun Road, Huangpu District, Guangzhou, China
Manufacturer:	Guangzhou Shikun Electronics Co., Ltd
Address:	NO.6 Liankun Road, Huangpu District, Guangzhou, China
Product Description:	IEEE 802.11 a/b/g/n/ac 2T2R USB Wi-Fi Module Integrated Bluetooth 2.1/3.0/4.2/5.0
Brand Name:	N/A
Tested Model:	SKO.WB822CU.15
FCC ID:	2AR82-SKOWB822CU15
IC:	24728-SKOWB822CU1
Report No.:	JCF251225021-001
Received Date:	Dec. 25, 2025
Tested Date:	Dec. 25, 2025 ~ Jan. 27, 2026
Issued Date:	Jan. 27, 2026
Test Standards:	FCC Rules and Regulations Part 15 Subpart C, RSS-247 Issue 4 July 2025
Test Procedure:	ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024, 558074 D01 15.247 Meas Guidance v05r02, 662911 D01 Multiple Transmitter Output v02r01, RSS-Gen Issue 5 A2, Feb. 2021
Test Result:	Pass
Prepared By:  <u>Roger Li/Engineer</u> Date: Jan. 27, 2026	
Reviewed By:  <u>Kennys Zhang/Engineer</u> Date: Jan. 27, 2026	
Approved By:  <u>Talent Zhang/Engineer</u> Date: Jan. 27, 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
--	/	Jan. 27, 2026	Original Report	/

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1. Test Report Declare

Applicant:	Guangzhou Shikun Electronics Co., Ltd
Address:	NO.6 Liankun Road, Huangpu District, Guangzhou, China
Manufacturer:	Guangzhou Shikun Electronics Co., Ltd
Address:	NO.6 Liankun Road, Huangpu District, Guangzhou, China
Product Name:	IEEE 802.11 a/b/g/n/ac 2T2R USB Wi-Fi Module Integrated Bluetooth 2.1/3.0/4.2/5.0
Brand Name:	N/A
Model Name:	SKO.WB822CU.15
Difference Description:	NA

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) RSS-247 Clause 6.2.3.1 (a) RSS-Gen Clause 6.7	Pass
2	Conducted Output Power	FCC 15.247 (b) (1) RSS-247 Clause 6.2.3.2 (a)	Pass
3	Carrier Hopping Channel Separation	FCC 15.247 (a) (1) RSS-247 Clause 6.2.3.1 (a)	Pass
4	Number of Hopping Frequency	15.247 (a) (1) III RSS-247 Clause 6.2.3.1 (b)	Pass
5	Time of Occupancy (Dwell Time)	15.247 (a) (1) III RSS-247 Clause 6.2.3.1 (b)	Pass
6	Conducted Band edge	FCC 15.247 (d) RSS-247 Clause 6.6	Pass
7	Radiated Band edge and Spurious	FCC 15.247 (d) FCC 15.209 FCC 15.205 RSS-247 Clause 6.6 RSS-GEN Clause 8.9 RSS-GEN Clause 8.10	Pass
8	Conducted Emission Test For AC Power Port	FCC 15.207 RSS-GEN Clause 8.8	Pass
9	Antenna Requirement	FCC 15.203 RSS-GEN Clause 6.8	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:	IEEE 802.11 a/b/g/n/ac 2T2R USB Wi-Fi Module Integrated Bluetooth 2.1/3.0/4.2/5.0
Model Number:	SKO.WB822CU.15
EUT Function Description:	Please refer to user manual of this device
Power Supply:	5V+/-0.5
Sample No.:	251225021-01-01
Hardware Version:	NA
Software Version:	NA
Radio Specification:	Bluetooth V5.0
Operation Frequency:	2402 MHz - 2480 MHz
Modulation:	GFSK, $\pi/4$ -DQPSK, 8DPSK
Data Rate:	1Mbps, 2Mbps, 3Mbps
Antenna Type:	PCB Antenna, MAX. Gain: 1.81 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		MP 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

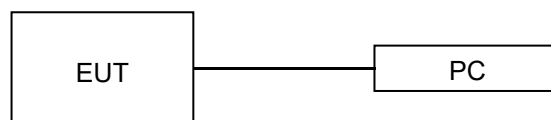
Equipment	Brand Name	Model Name	P/N
PC	Lenovo	T480	/
Adapter	Lenovo	ADL100YDC3A	0000000413972

5.3. Test Setup

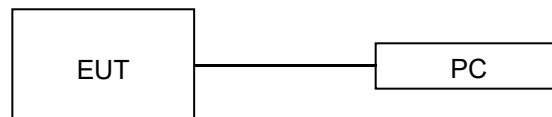
The EUT can work in Fixed Frequency mode.

5.4. Setup Diagram for Tests

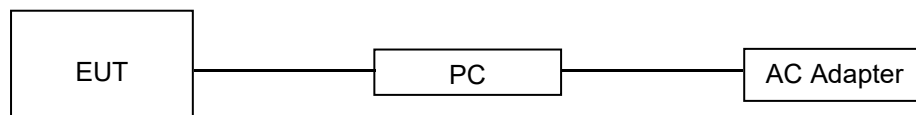
RF Connect Test:



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 $k = 2$.

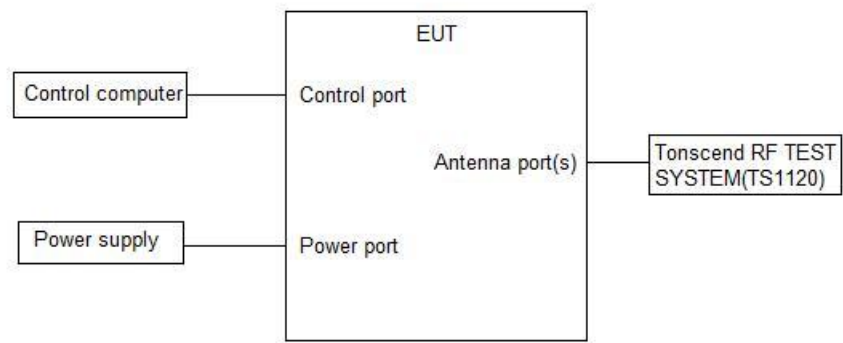
7. Measuring Instrument and Software Used

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	Feb. 24, 2025	Feb. 25, 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	2.86	3.73	76.68	1.15
		2441	2.88	3.72	77.42	1.11
		2480	2.88	3.73	77.21	1.12
2DH5	Ant1	2402	2.89	3.73	77.48	1.11
		2441	2.89	3.73	77.48	1.11
		2480	2.89	3.73	77.48	1.11
3DH5	Ant1	2402	2.89	3.74	77.27	1.12
		2441	2.89	3.74	77.27	1.12
		2480	2.89	3.74	77.27	1.12

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





2DH5_Ant1_2441



2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



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 ISED RSS-247 ISSUE 4			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247 (a) (1) RSS-247 Clause 5.1 (a)	20 dB Occupied Bandwidth	N/A	2400-2483.5
ISED RSS-Gen Clause 6.7	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	0.957	2401.535	2402.492
		2441	0.942	2440.532	2441.474
		2480	0.933	2479.544	2480.477
2DH5	Ant1	2402	1.278	2401.340	2402.618
		2441	1.245	2440.388	2441.633
		2480	1.359	2479.328	2480.687
3DH5	Ant1	2402	1.305	2401.331	2402.636
		2441	1.278	2440.349	2441.627
		2480	1.350	2479.322	2480.672

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	0.87349	2401.5651	2402.4386
		2441	0.87132	2440.5601	2441.4315
		2480	0.90407	2479.5510	2480.4551

2DH5	Ant1	2402	1.1649	2401.4164	2402.5813
		2441	1.1664	2440.4144	2441.5808
		2480	1.1718	2479.4126	2480.5844
3DH5	Ant1	2402	1.1850	2401.4075	2402.5925
		2441	1.1780	2440.4114	2441.5894
		2480	1.1718	2479.4147	2480.5865

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



3DH5_Ant1_2402



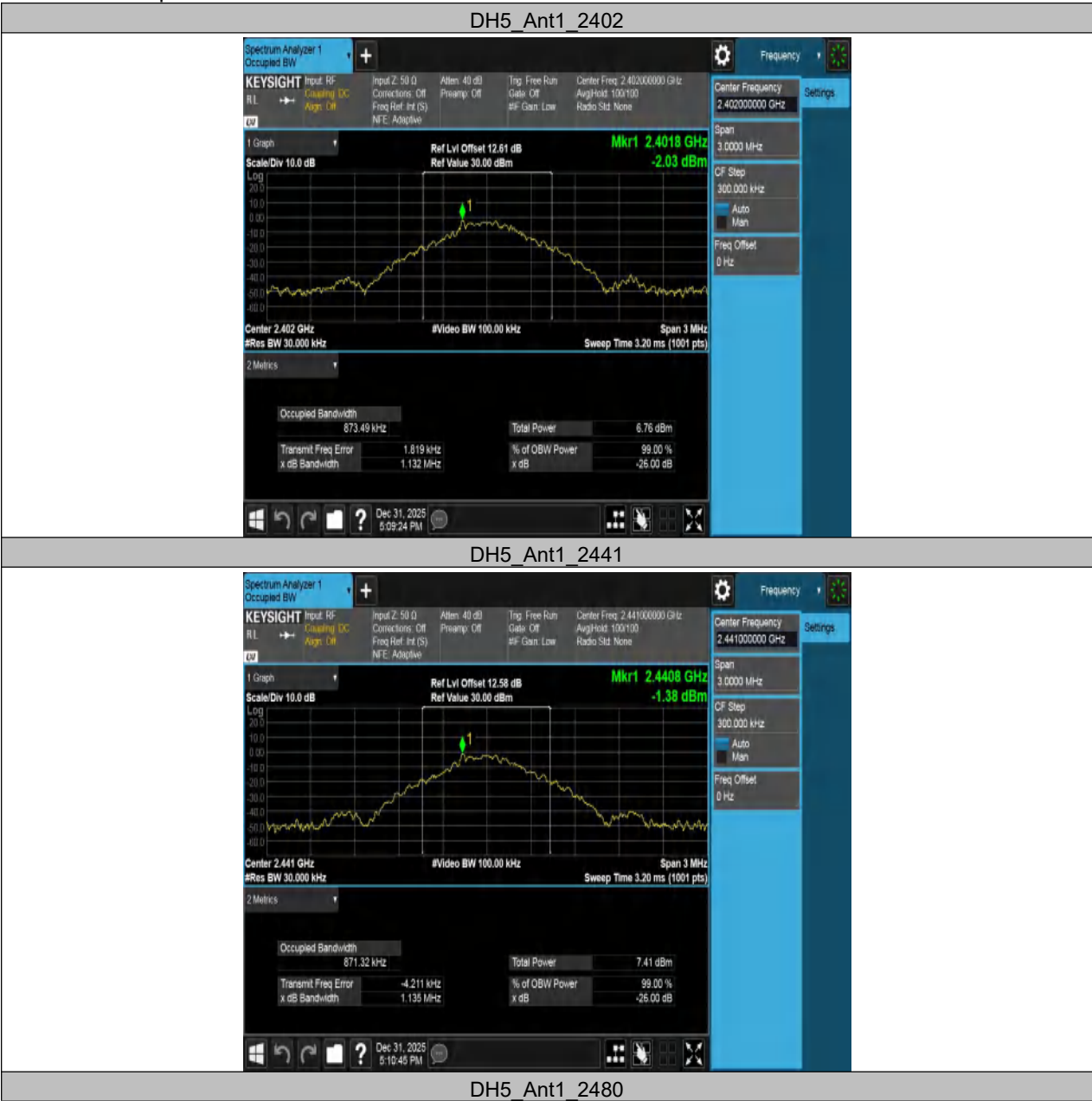
3DH5_Ant1_2441



3DH5_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 ISED RSS-247 ISSUE 4			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247 (b) (1) ISED RSS-247 Clause 5.4 (b)	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

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Measure the maximum output power of EUT by spectrum analyzer with PK detector and RBW=3 MHz (above 20 dB bandwidth of measured signal), VBW=8 MHz

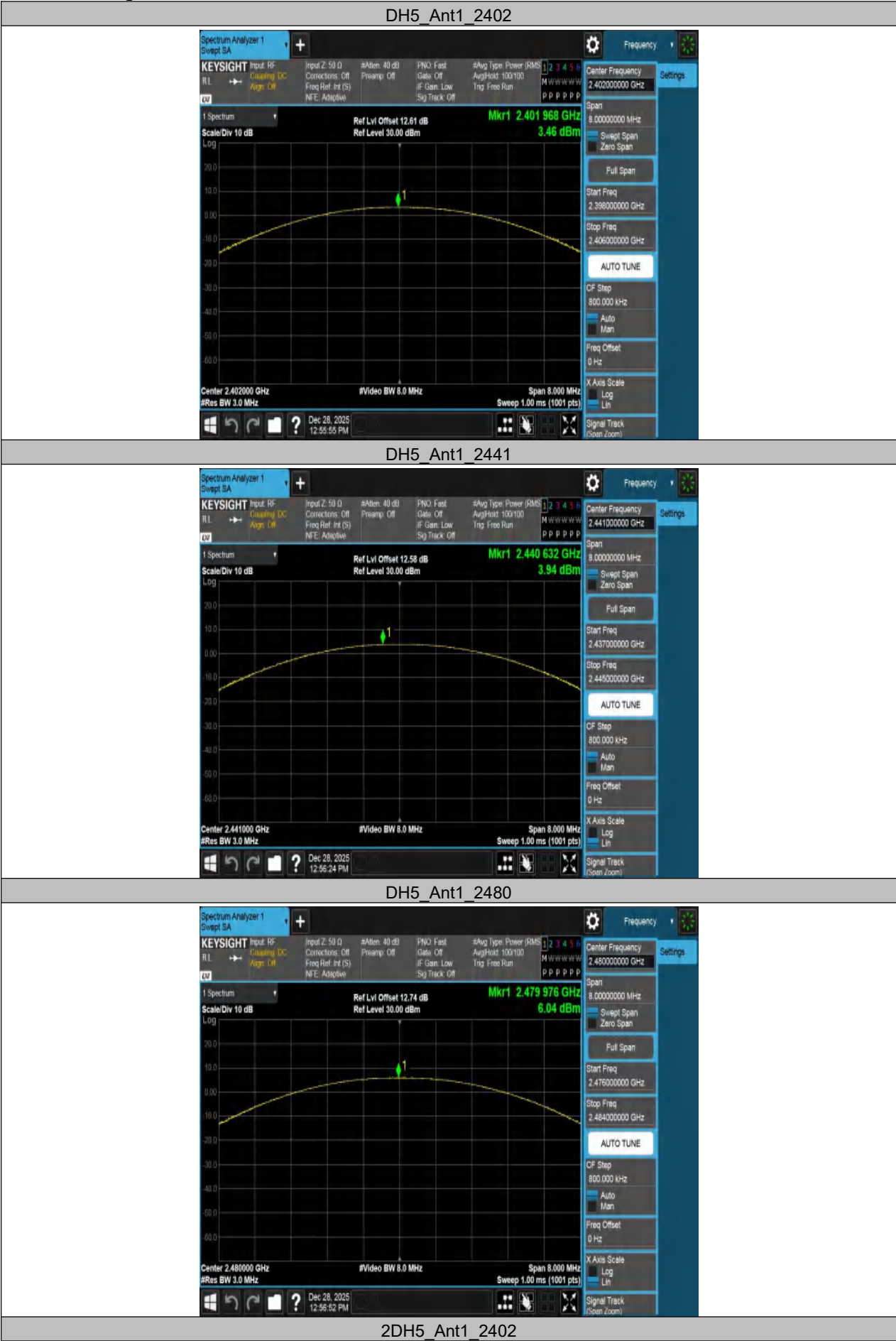
Note: The attenuator loss was inputted into spectrum analyzer as amplitude offset.

10.4. Results

Test Mode	Ant.	Freq. (MHz)	Conducted Peak Power (dBm)	Conducted Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
DH5	Ant1	2402	3.46	≤30	1.81	5.27	≤36	PASS
		2441	3.94	≤30	1.81	5.75	≤36	PASS
		2480	6.04	≤30	1.81	7.85	≤36	PASS
2DH5	Ant1	2402	6.32	≤30	1.81	8.13	≤36	PASS
		2441	6.67	≤30	1.81	8.48	≤36	PASS
		2480	8.41	≤30	1.81	10.22	≤36	PASS
3DH5	Ant1	2402	6.76	≤30	1.81	8.57	≤36	PASS
		2441	7.16	≤30	1.81	8.97	≤36	PASS
		2480	8.80	≤30	1.81	10.61	≤36	PASS

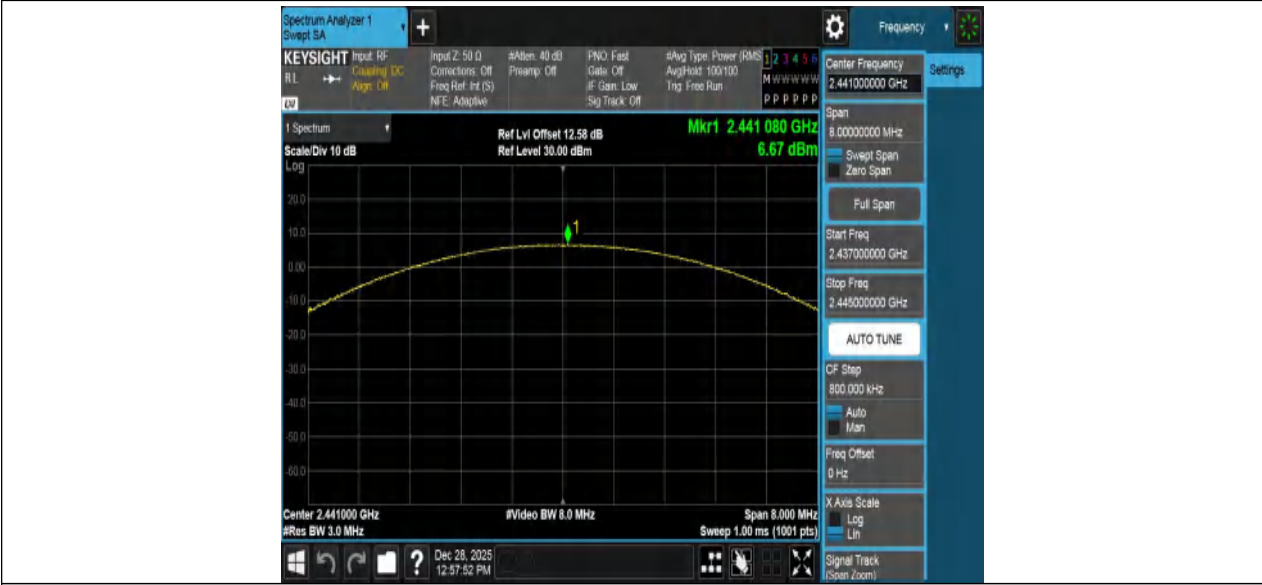
Note: The EIRP = Peak Power + Ant. Gain

10.5. Original test data





2DH5_Ant1_2441



2DH5_Ant1_2480



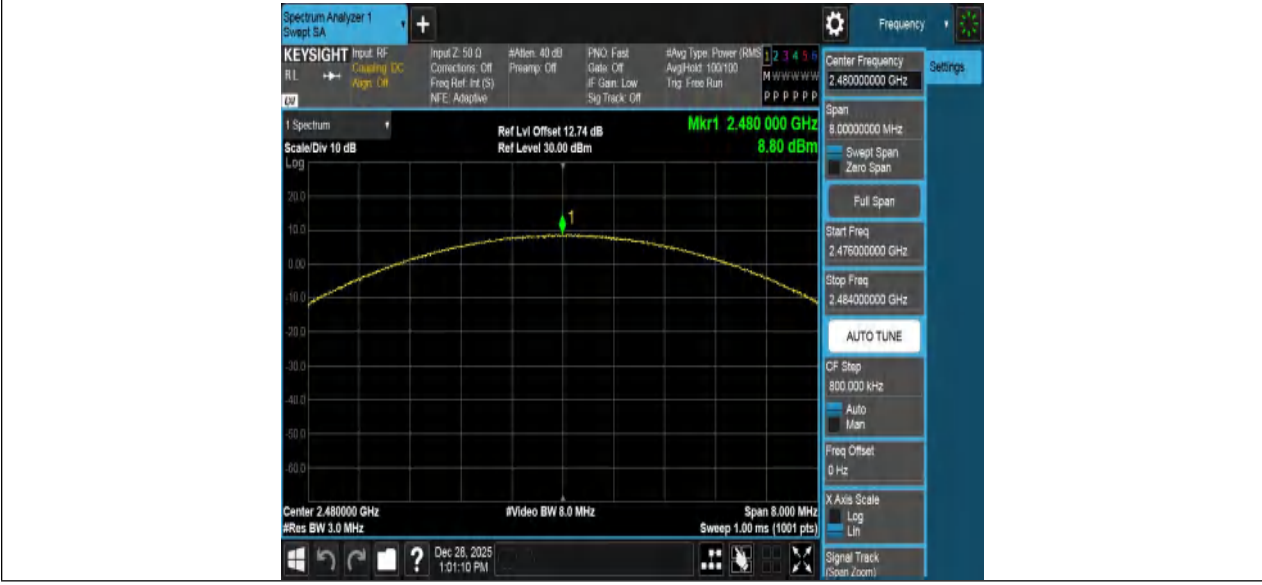
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



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 ISED RSS-247 ISSUE 4			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247 (a) (1) ISED RSS-247 Clause 5.1 (b)	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	1.134	≥0.957	PASS
2DH5	Ant1	Hop	1.11	≥0.906	PASS
3DH5	Ant1	Hop	1.126	≥0.900	PASS

Note: Offset=cable loss + Test system insertion loss

11.5. Original test data



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 ISED RSS-247 ISSUE 4		
Section	Test Item	Limit
CFR 47 15.247 (a) (1) III ISED RSS-247 Clause 5.1 (d)	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.

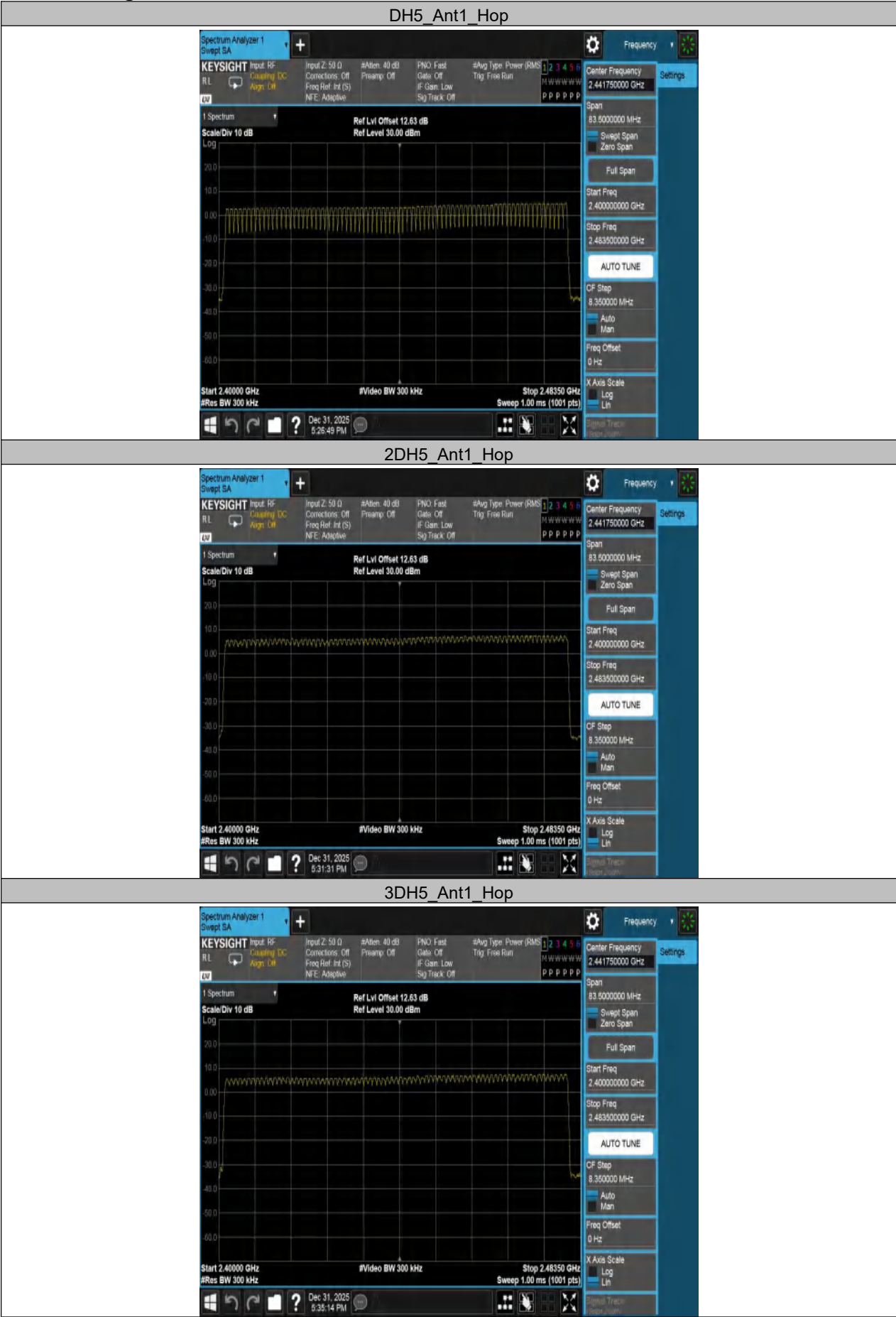
AFHSS Mode: 20 Channels declared.

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



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 ISED RSS-247 ISSUE 4		
Section	Test Item	Limit
CFR 47 15.247 (a) (1) III ISED RSS-247 Clause 5.1 (d)	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	Peak
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.
 - Measure the maximum time duration of one single pulse.
 - Set the EUT for DH5, DH3 and DH1 packet transmitting.
 - 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)

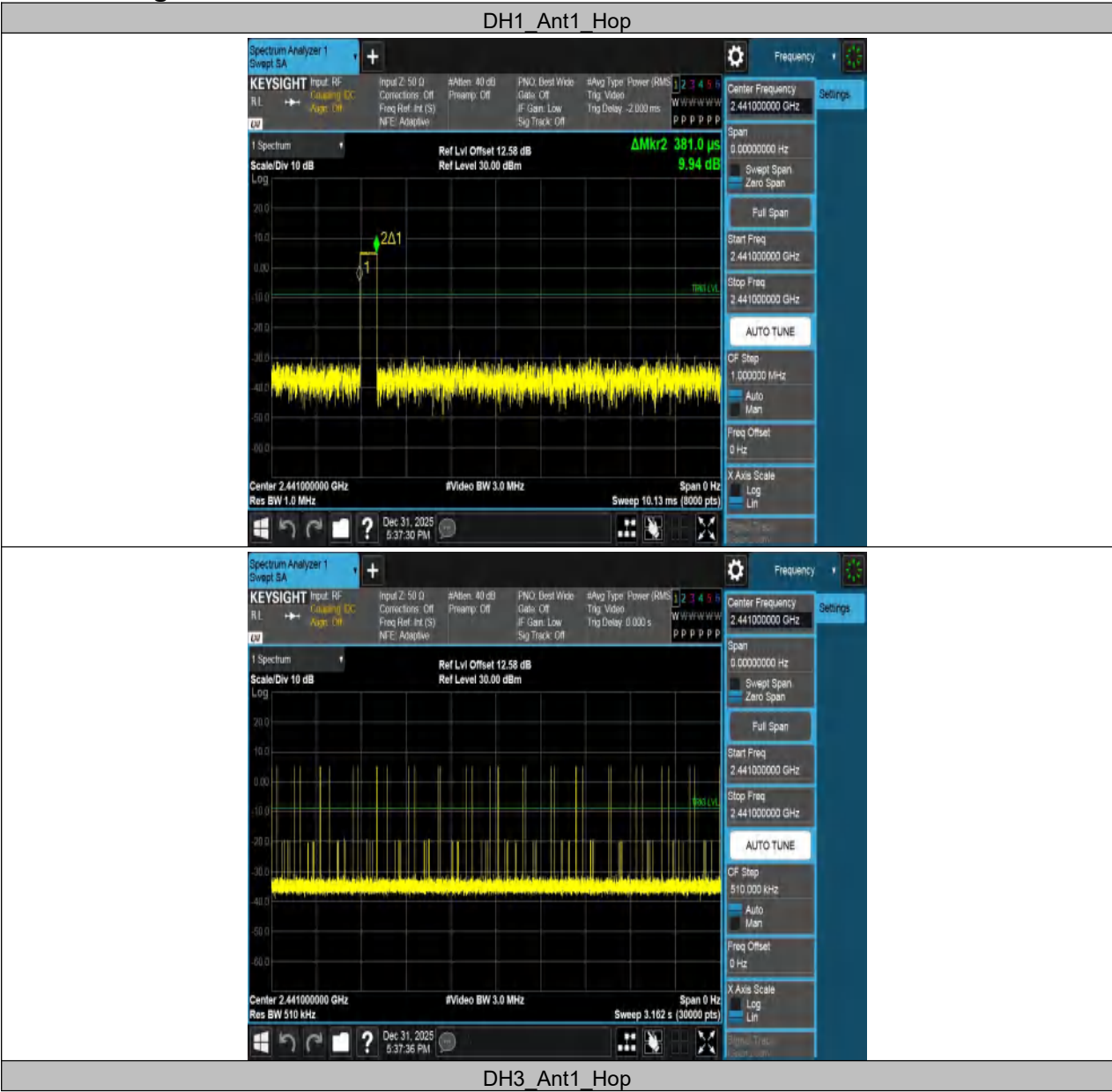
13.4. Results

Test Mode	Ant.	Freq. (MHz)	Burst Width (ms)	Total Hops (Num)	Result (s)	Limit (s)	Verdict
DH1	Ant1	Hop	0.381	330	0.126	≤0.4	PASS
DH3	Ant1	Hop	1.637	140	0.229	≤0.4	PASS
DH5	Ant1	Hop	2.885	100	0.289	≤0.4	PASS
2DH1	Ant1	Hop	0.390	320	0.125	≤0.4	PASS
2DH3	Ant1	Hop	2.891	100	0.289	≤0.4	PASS
2DH5	Ant1	Hop	2.891	110	0.318	≤0.4	PASS
3DH1	Ant1	Hop	0.390	330	0.129	≤0.4	PASS
3DH3	Ant1	Hop	2.893	80	0.231	≤0.4	PASS

3DH5	Ant1	Hop	2.892	100	0.289	≤0.4	PASS
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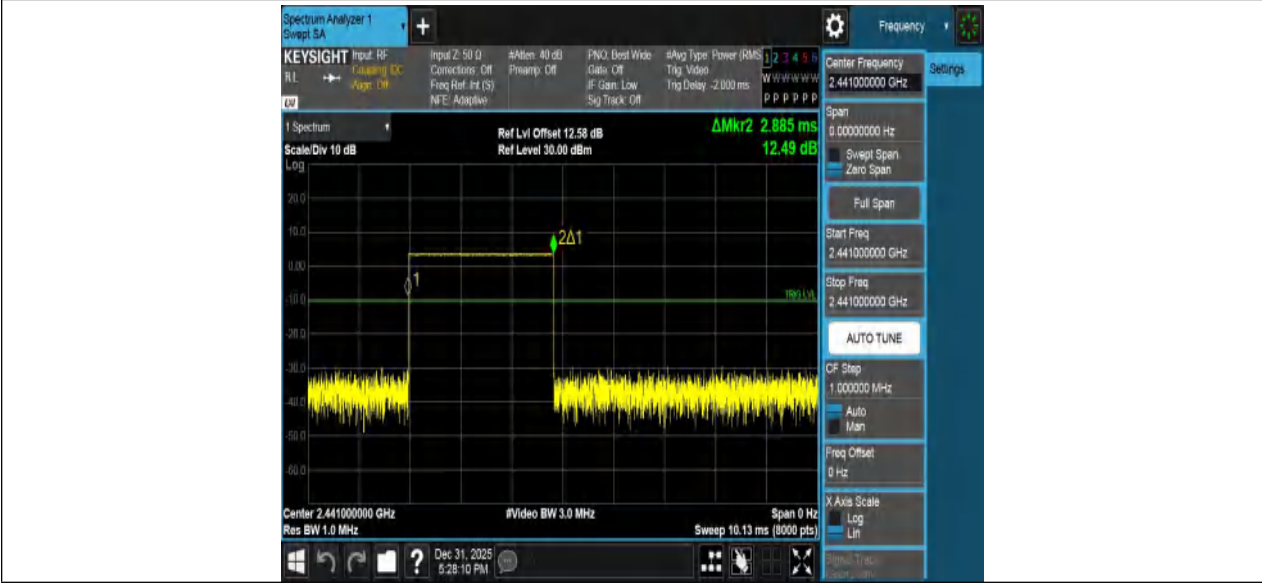
Note: Offset=cable loss + Test system insertion loss

13.5. Original test data





DH5_Ant1_Hop

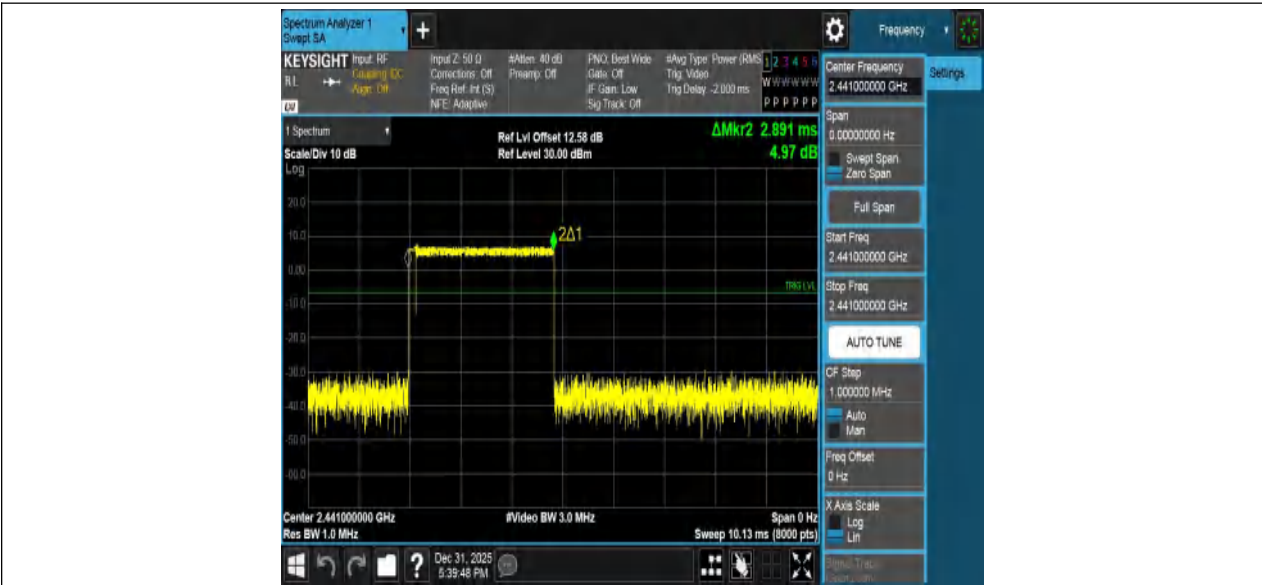




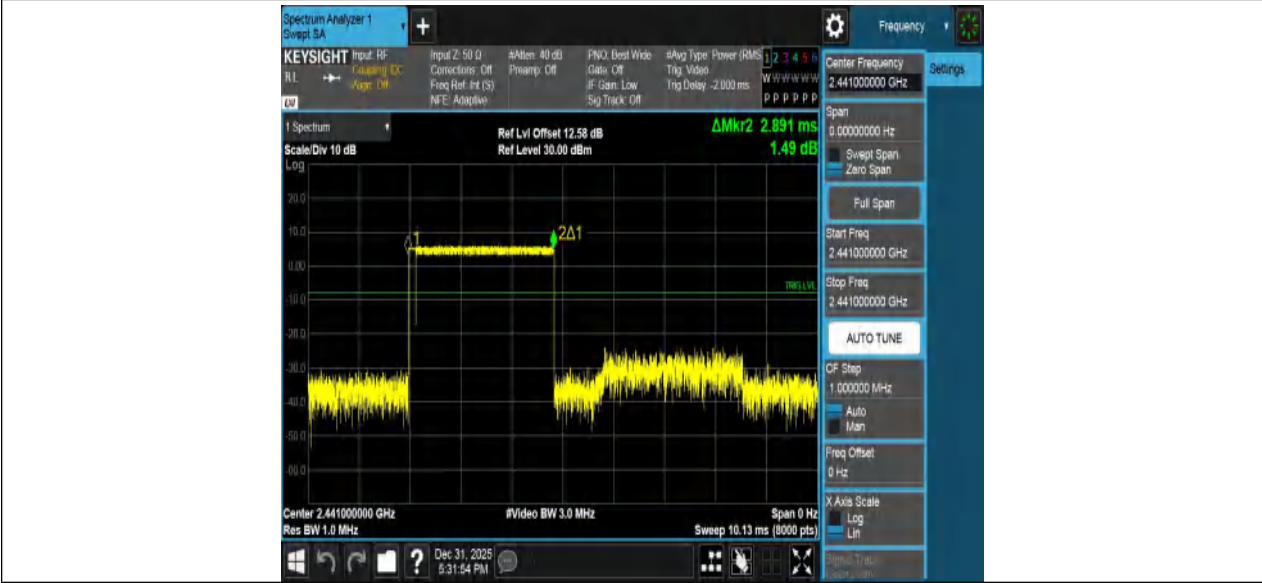
2DH1_Ant1_Hop



2DH3_Ant1_Hop



2DH5_Ant1_Hop





3DH1_Ant1_Hop



3DH3_Ant1_Hop



3DH5_Ant1_Hop





14. Conducted Spurious Emission

14.1. Block diagram of test setup

Same as section 8.1

14.2. Limits

CFR 47 FCC Part15 (15.247), Subpart C ISED RSS-247 ISSUE 4		
Section	Test Item	Limit
CFR 47 FCC §15.247 (d) ISED RSS-247 5.5	Conducted Spurious Emission	at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

14.3. Test Procedure

Please refer to the ANSI C63.10 section 6.10.

For Band edge use the following settings:

Detector	Peak
RBW	100 kHz
VBW	300 kHz
Span	wide enough to fully capture the emission being measured
Trace	Max hold
Sweep time	Auto couple.

For Spurious Emission use the following settings:

Detector	Peak
RBW	100 kHz
VBW	300 kHz
Span	wide enough to fully capture the emission being measured
Trace	Max hold
Sweep time	Auto couple.

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

14.4. Results

Band edge:

Test Mode	Ant.	Ch Name	Freq. (MHz)	Ref Level (dBm)	Result (dBm)	Limit (dBm)	Verdict
DH5	Ant1	Low	2402	1.91	-47.38	≤-18.09	PASS
		High	2480	5.05	-48.13	≤-14.95	PASS
		Low	Hop_2402	3.38	-47.53	≤-16.62	PASS
		High	Hop_2480	6.57	-47.63	≤-13.43	PASS
2DH5	Ant1	Low	2402	1.92	-48.76	≤-18.08	PASS
		High	2480	5.97	-47.69	≤-14.03	PASS
		Low	Hop_2402	1.79	-48.06	≤-18.21	PASS
		High	Hop_2480	2.68	-48.56	≤-17.32	PASS
3DH5	Ant1	Low	2402	2.56	-48.34	≤-17.44	PASS
		High	2480	4.12	-48.67	≤-15.88	PASS
		Low	Hop_2402	4.13	-48.31	≤-15.87	PASS
		High	Hop_2480	4.13	-48.37	≤-15.87	PASS

Note: Offset=cable loss + Test system insertion loss

Spurious Emission:

Test Mode	Ant.	Freq. (MHz)	Freq. Range (MHz)	Ref Level (dBm)	Result (dBm)	Limit (dBm)	Verdict
DH5	Ant1	2402	Reference	1.73	1.73	---	PASS
			30~1000	1.73	-61.9	≤-18.27	PASS
			1000~26500	1.73	-41.32	≤-18.27	PASS
		2441	Reference	2.38	2.38	---	PASS
			30~1000	2.38	-62.12	≤-17.62	PASS
			1000~26500	2.38	-41.91	≤-17.62	PASS
		2480	Reference	4.01	4.01	---	PASS
			30~1000	4.01	-62.78	≤-15.99	PASS
			1000~26500	4.01	-42.18	≤-15.99	PASS
2DH5	Ant1	2402	Reference	2.41	2.41	---	PASS
			30~1000	2.41	-62.83	≤-17.59	PASS
			1000~26500	2.41	-41.54	≤-17.59	PASS
		2441	Reference	3.30	3.30	---	PASS
			30~1000	3.30	-62.56	≤-16.7	PASS
			1000~26500	3.30	-42.19	≤-16.7	PASS
		2480	Reference	4.68	4.68	---	PASS
			30~1000	4.68	-62.18	≤-15.32	PASS
			1000~26500	4.68	-42.41	≤-15.32	PASS
3DH5	Ant1	2402	Reference	0.17	0.17	---	PASS
			30~1000	0.17	-62.64	≤-19.83	PASS
			1000~26500	0.17	-42.03	≤-19.83	PASS
		2441	Reference	4.01	4.01	---	PASS
			30~1000	4.01	-61.58	≤-15.99	PASS
			1000~26500	4.01	-42	≤-15.99	PASS
		2480	Reference	1.76	1.76	---	PASS
			30~1000	1.76	-61.98	≤-18.24	PASS
			1000~26500	1.76	-42.27	≤-18.24	PASS

Note: Offset=cable loss + Test system insertion loss

14.5. Original test data

Band edge:



