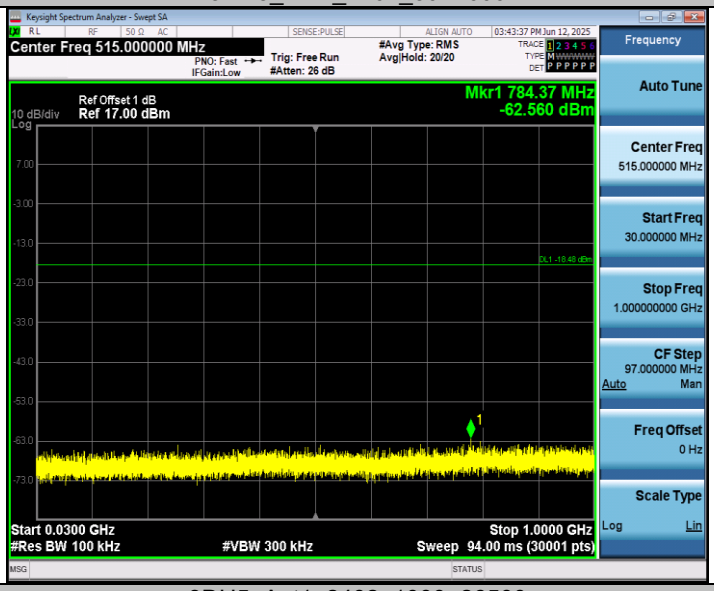
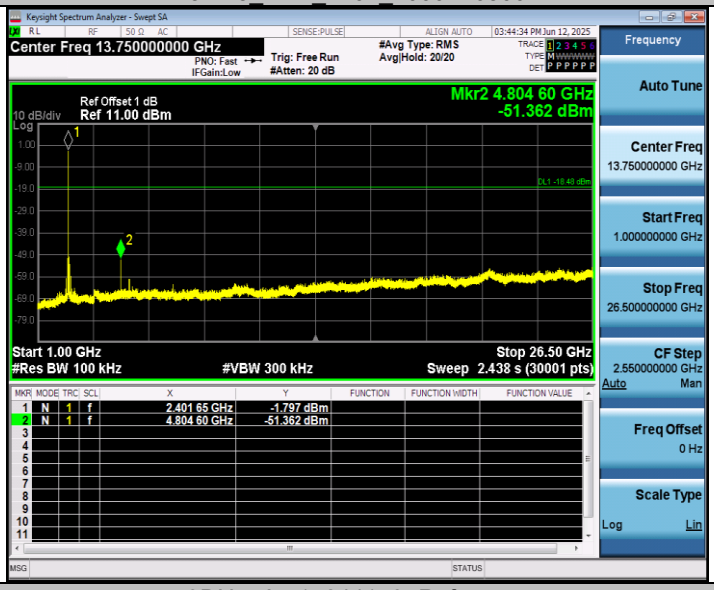
3DH5_Ant1_2402_30~1000

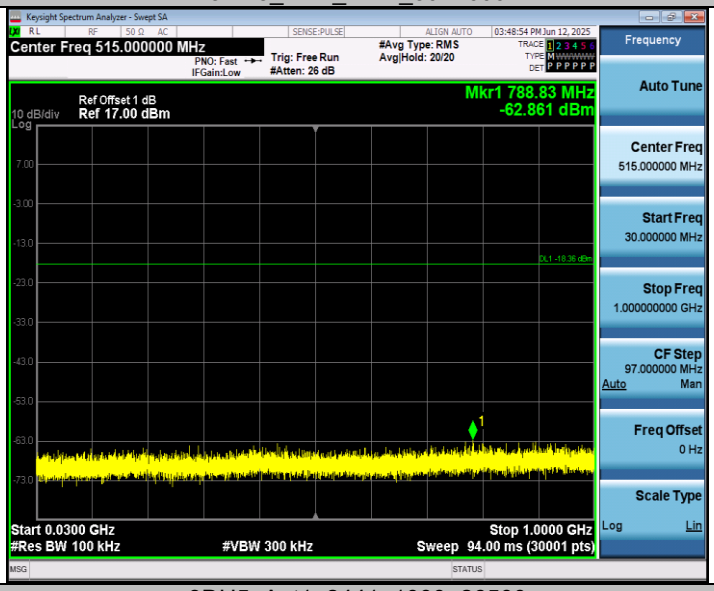


3DH5_Ant1_2402_1000~26500

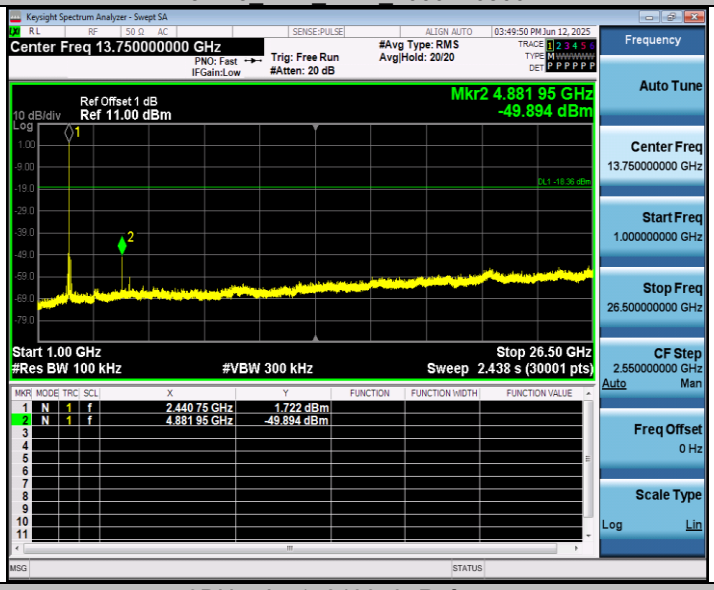


3DH5_Ant1_2441_0~Reference

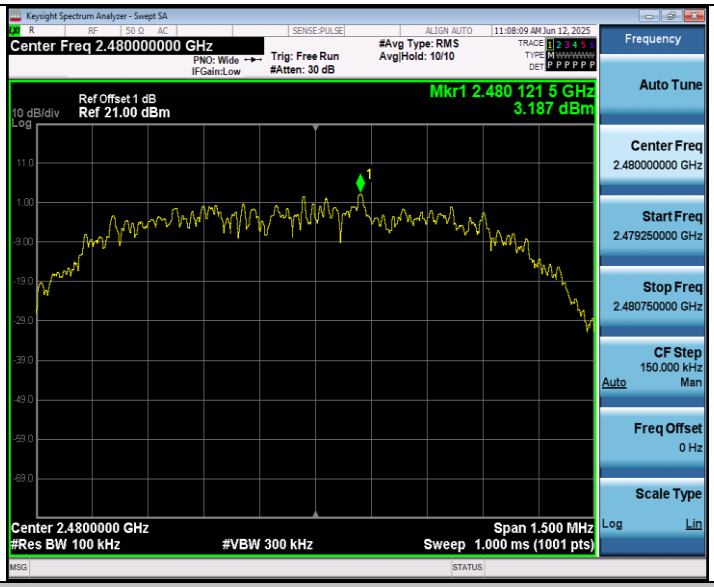
3DH5_Ant1_2441_30~1000



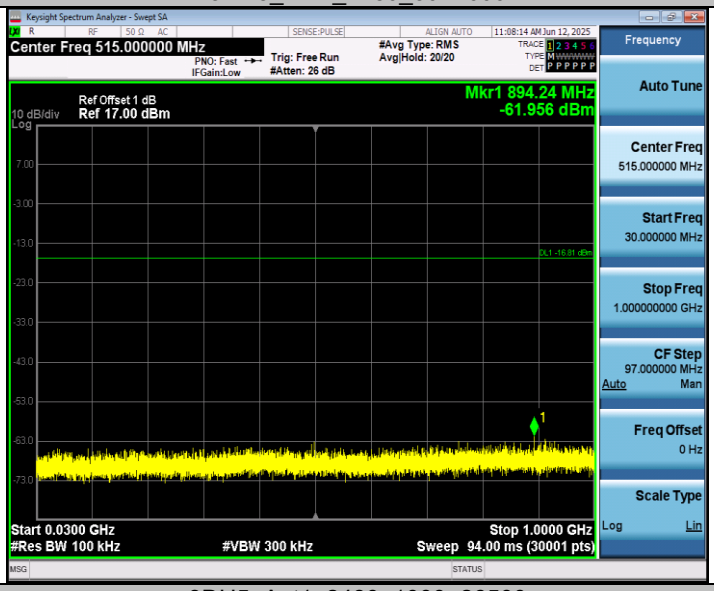
3DH5_Ant1_2441_1000~26500



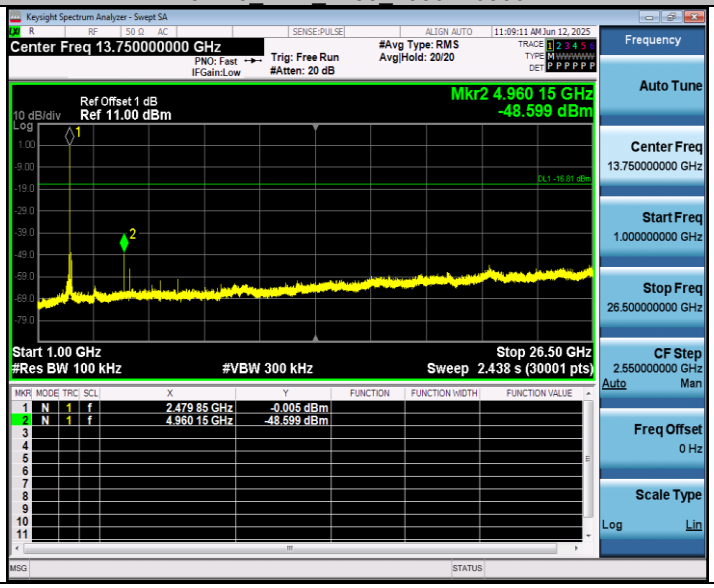
3DH5_Ant1_2480_0~Reference



3DH5_Ant1_2480_30~1000



3DH5_Ant1_2480_1000~26500



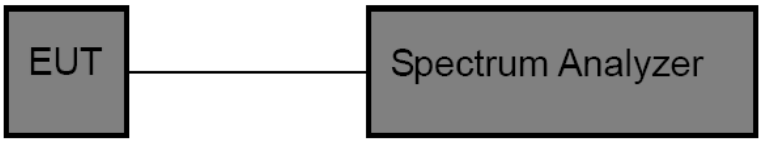
For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com

3.5. 20dB Bandwidth

Limit

N/A

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. OCB and 20dB Spectrum Setting:
   (1) Set RBW = 1% ~ 5% occupied bandwidth.
   (2) Set the video bandwidth (VBW) ≥ 3 RBW.
   (3) Detector = Peak.
   (4) Trace mode = Max hold.
   (5) Sweep = Auto couple.

Note: The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

Test Mode

Please refer to the clause 2.4.

Test Result

Test Mode	Antenna	Freq(MHz)	OCB [MHz]	20dB BW [MHz]	20dB BW*2/3 [MHz]
DH5	Ant1	2402	0.89881	0.957	0.638
		2441	0.86791	0.939	0.626
		2480	0.87325	1.017	0.678
2DH5	Ant1	2402	1.1927	1.293	0.862
		2441	1.1907	1.335	0.890
		2480	1.2129	1.347	0.898
3DH5	Ant1	2402	1.1972	1.308	0.872
		2441	1.1941	1.299	0.866
		2480	1.1972	1.302	0.868

99% Bandwidth:

DH5_Ant1_2402

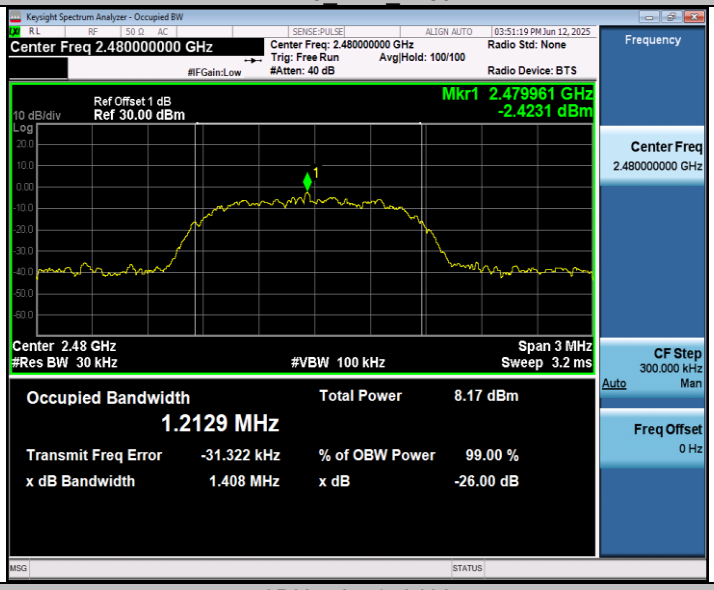
DH5_Ant1_2441

DH5_Ant1_2480

2DH5_Ant1_2402

2DH5_Ant1_2441

2DH5_Ant1_2480



3DH5_Ant1_2402

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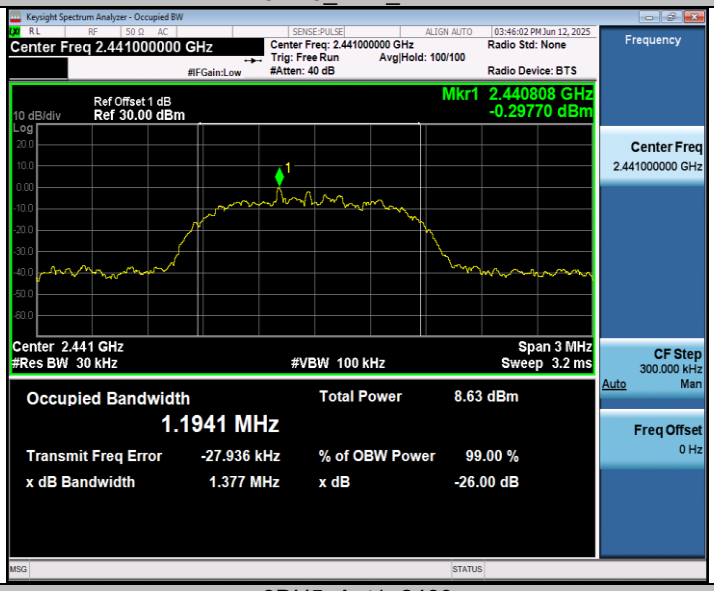
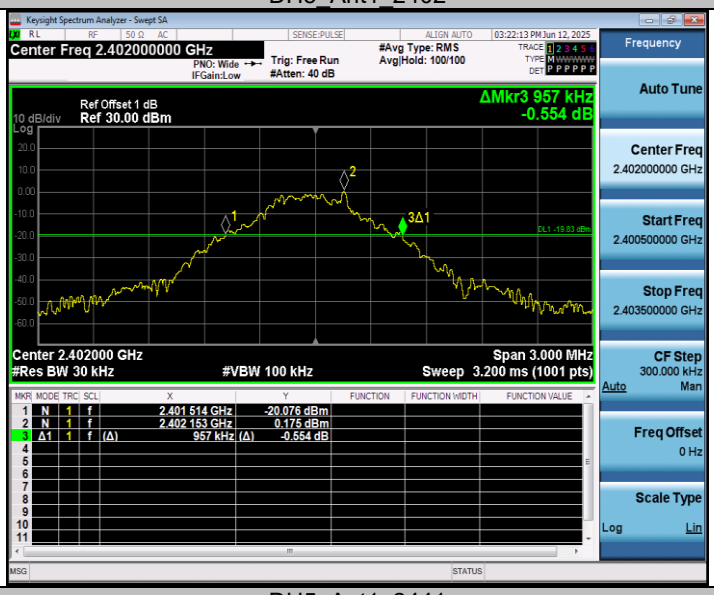
3DH5_Ant1_2441



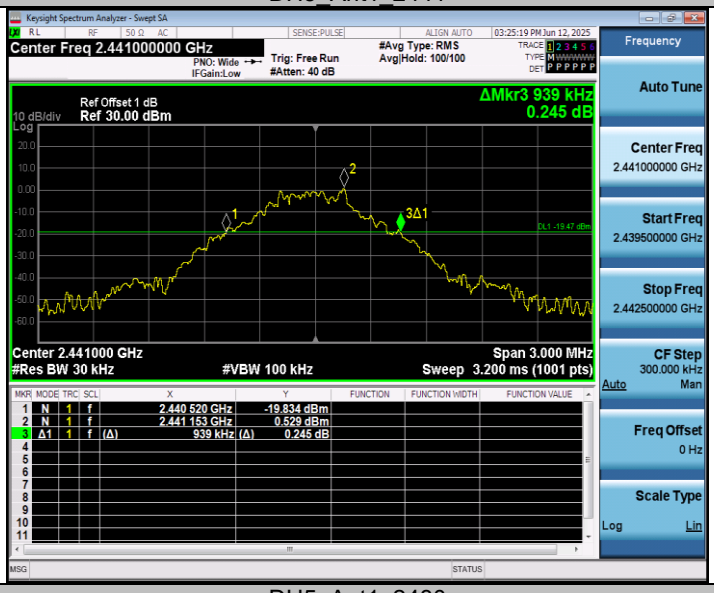
3DH5_Ant1_2480

20dB Bandwidth:

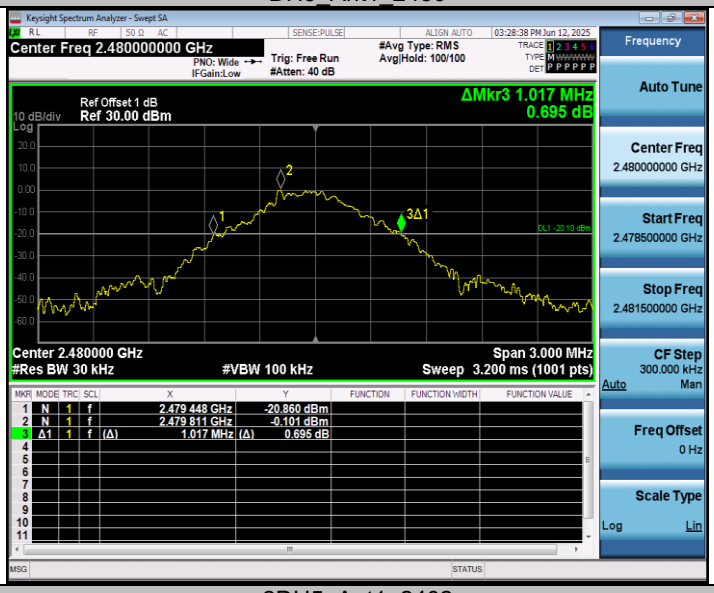
DH5_Ant1_2402



DH5_Ant1_2441

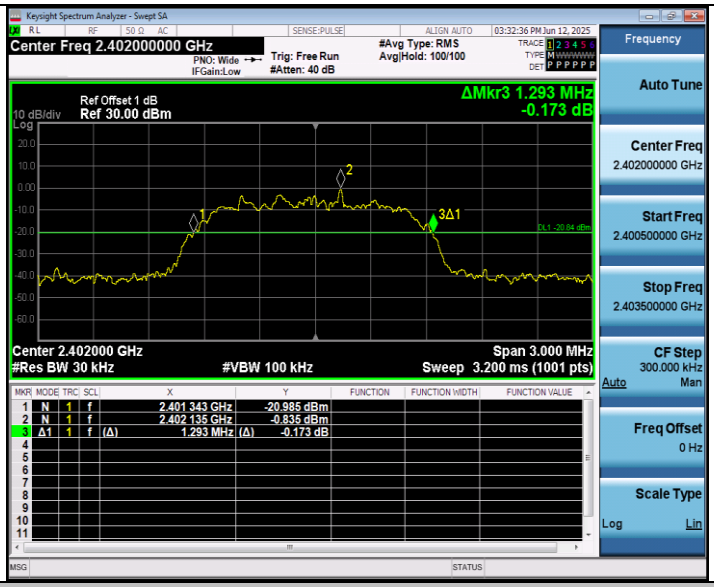


DH5_Ant1_2480

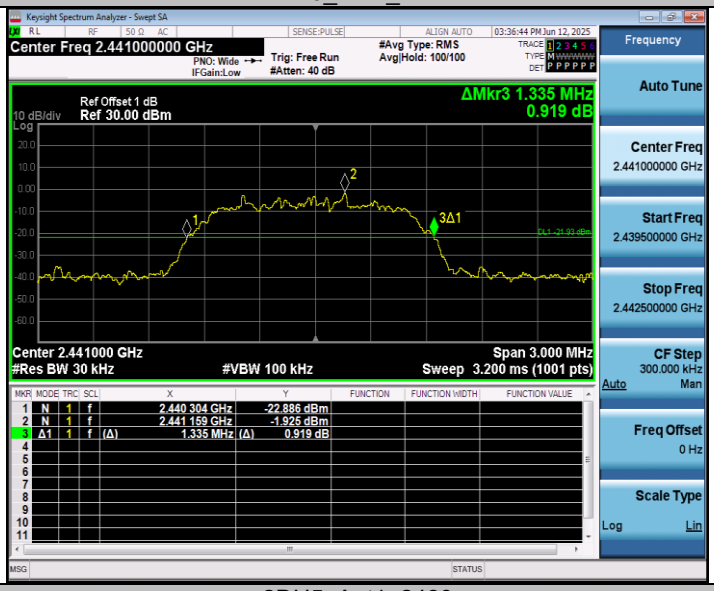


2DH5_Ant1_2402

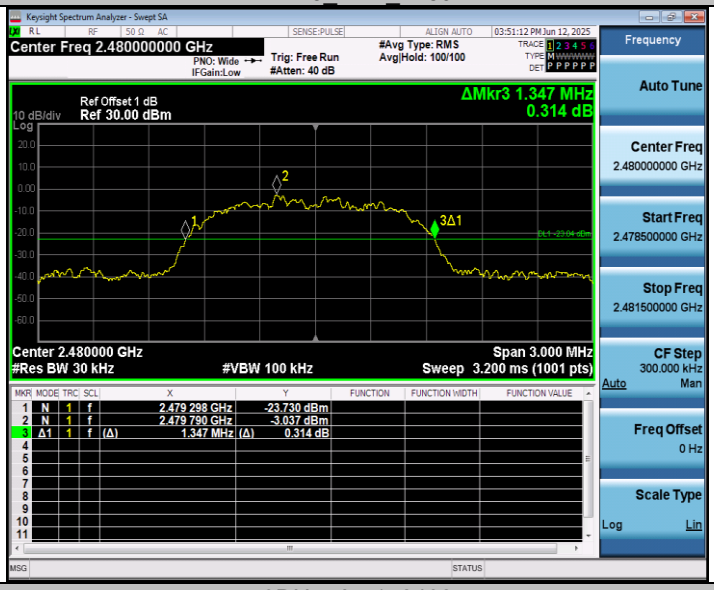
For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



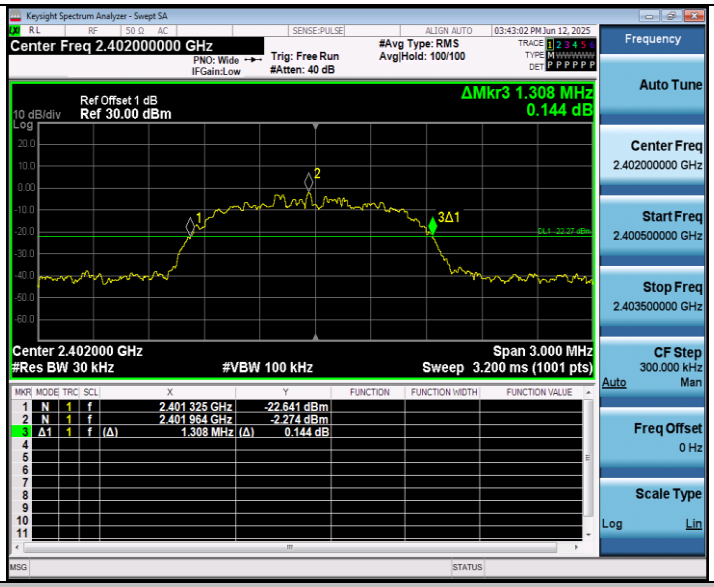
2DH5_Ant1_2441



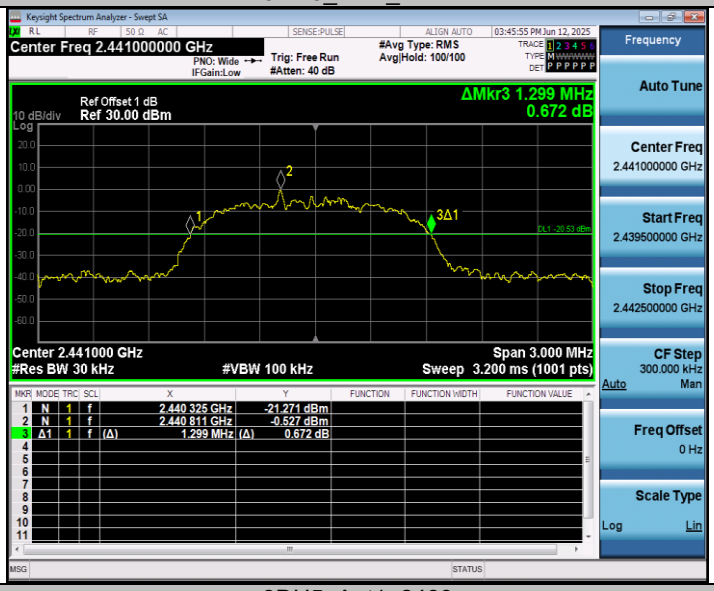
2DH5_Ant1_2480



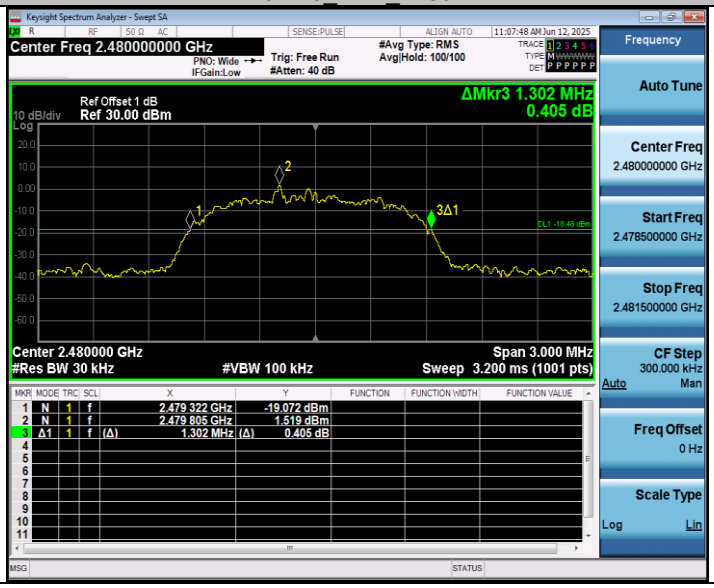
3DH5_Ant1_2402



3DH5_Ant1_2441



3DH5_Ant1_2480



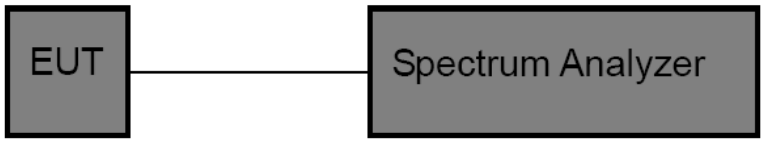
3.6. Channel Separation

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(1) / RSS-247 5.1 b

Test Item	Limit	Frequency Range (MHz)
Channel Separation	>25kHz or >two-thirds of the 20 dB bandwidth Which is greater	2400~2483.5

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. Spectrum Setting:
   (1) Set RBW = 100 kHz.
   (2) Set the video bandwidth (VBW) ≥ 3 RBW.
   (3) Detector = Peak.
   (4) Trace mode = Max hold.
   (5) Sweep = Auto couple.

Test Mode

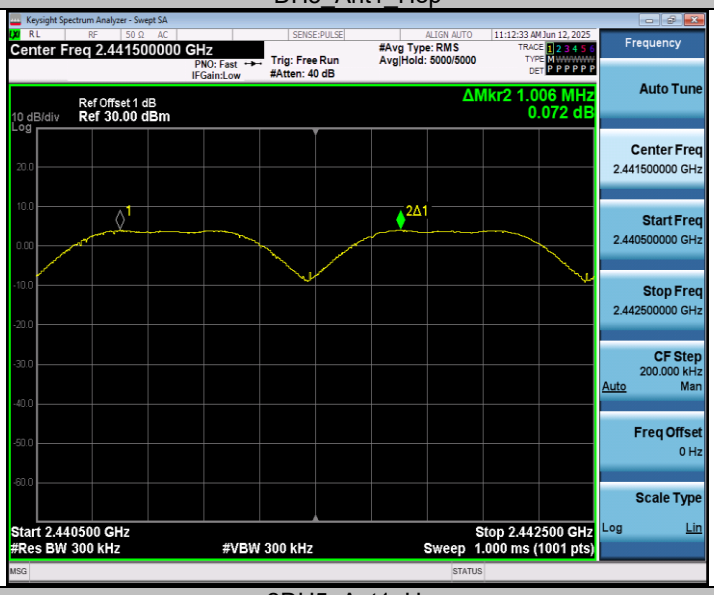
Please refer to the clause 2.4.

Test Result

Test Mode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.006	≥0.69	PASS
2DH5	Ant1	Hop	0.994	≥0.89	PASS
3DH5	Ant1	Hop	0.994	≥0.91	PASS

Test Graphs

DH5_Ant1_Hop



2DH5_Ant1_Hop

3DH5_Ant1_Hop

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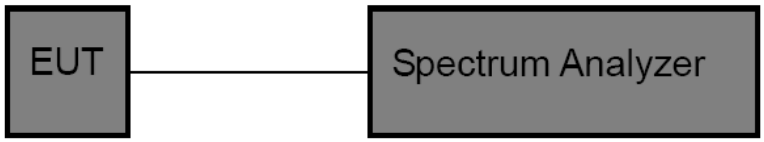
3.7. Number of Hopping Channel

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(iii) / RSS-247 5.1 d

Section	Test Item	Limit
15.247 (a)(iii) RSS-247 5.1 d	Number of Hopping Channel	⩾15

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. Spectrum Setting:
   (1) Peak Detector: RBW=100 kHz, VBW≥RBW, Sweep time= Auto.

Test Mode

Please refer to the clause 2.4.

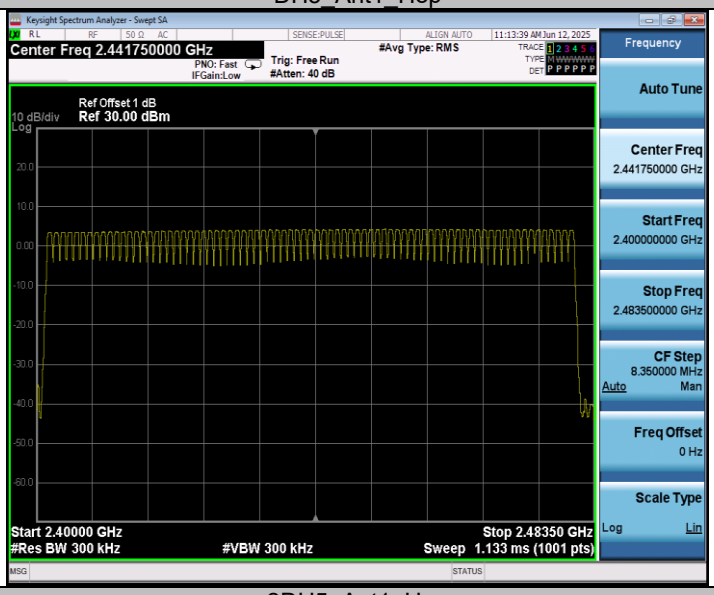
Test Result

Test Mode	Antenna	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

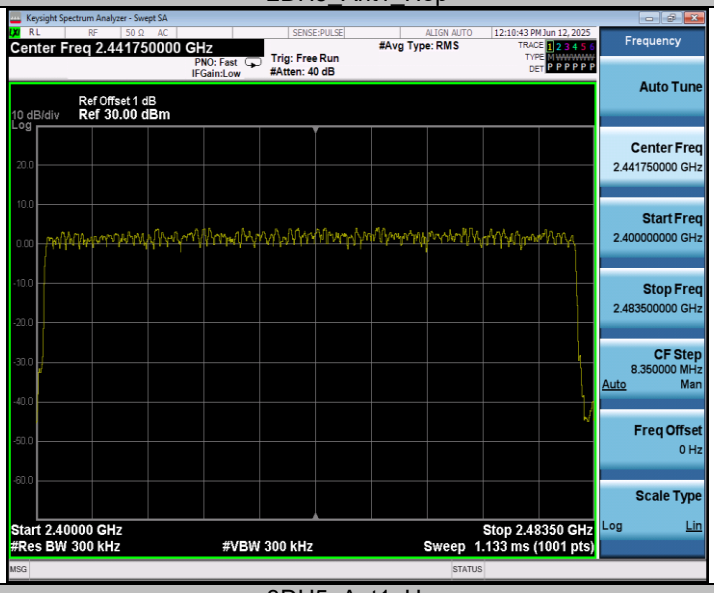
For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com

Test Graphs

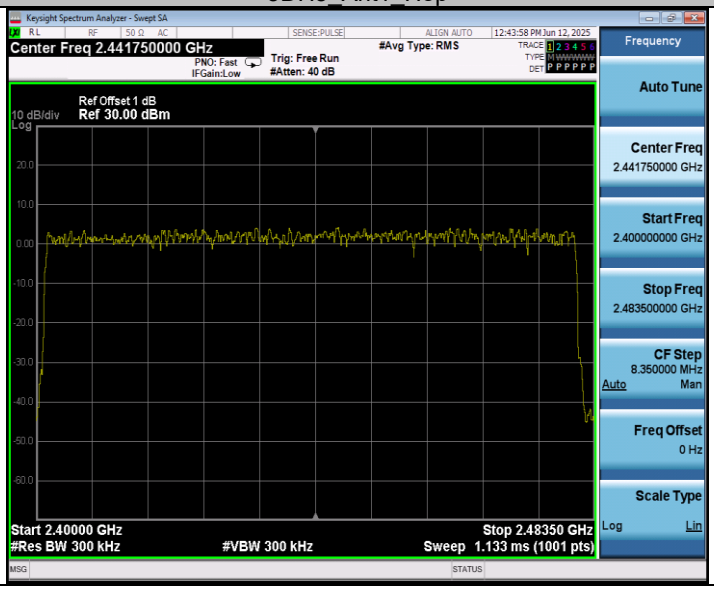
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com

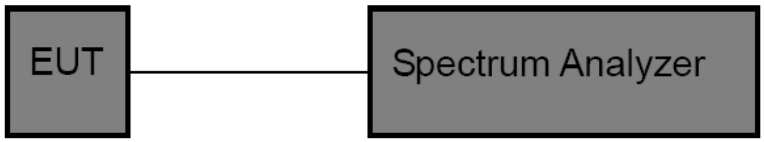
3.8. Dwell Time

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(iii) / RSS-247 5.1 d

Section	Test Item	Limit
15.247 (a)(iii) RSS-247 5.1 d	Average Time of Occupancy	0.4 sec

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. Spectrum Setting:
   (1) Spectrum Setting: RBW=1MHz, VBW≥RBW.
   (2) Use video trigger with the trigger level set to enable triggering only on full pulses.
   (3) Sweep Time is more than once pulse time.
   (4) Set the center frequency on any frequency would be measure and set the frequency span to zero.
   (5) Measure the maximum time duration of one single pulse.
   (6) Set the EUT for packet transmitting.

Test Mode

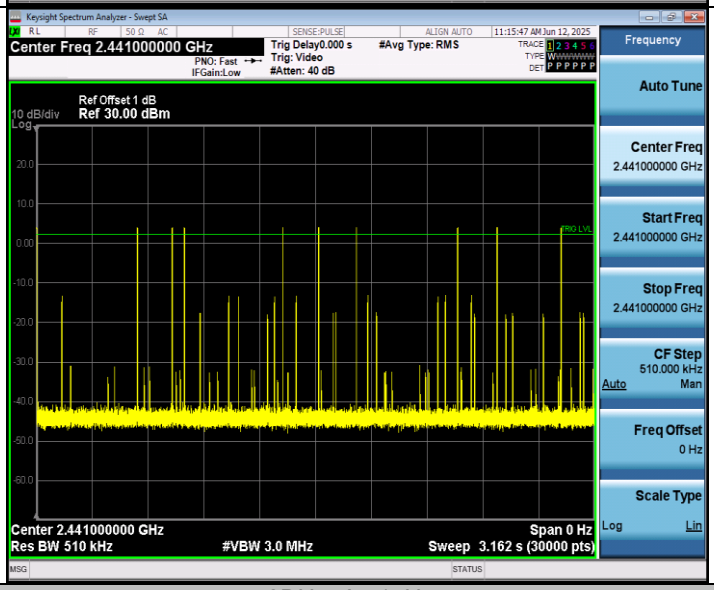
Please refer to the clause 2.4.

Test Result

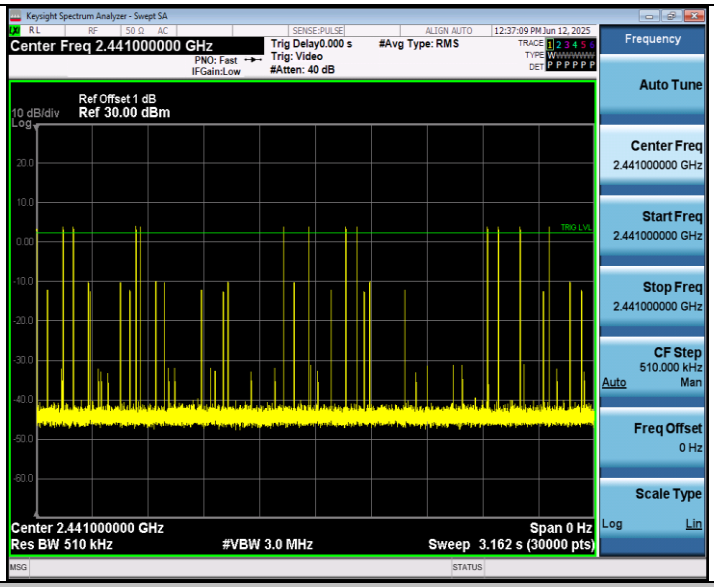
Test Mode	Antenna	Freq(MHz)	Burst Width [ms]	Total Hops [Num]	Result[s]	Limit[s]	Verdict
DH5	Ant1	Hop	2.897	100	0.290	≤0.4	PASS
2DH5	Ant1	Hop	2.903	130	0.377	≤0.4	PASS
3DH5	Ant1	Hop	2.904	130	0.378	≤0.4	PASS

Test Graphs

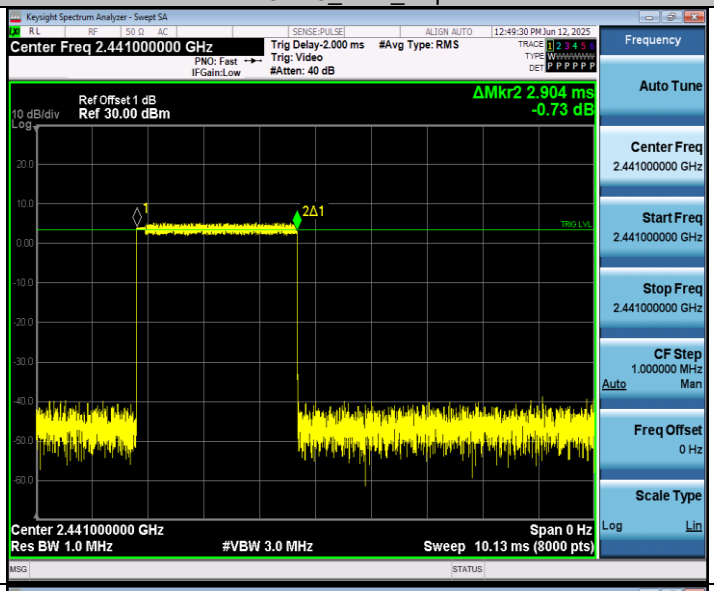
DH5_Ant1_Hop

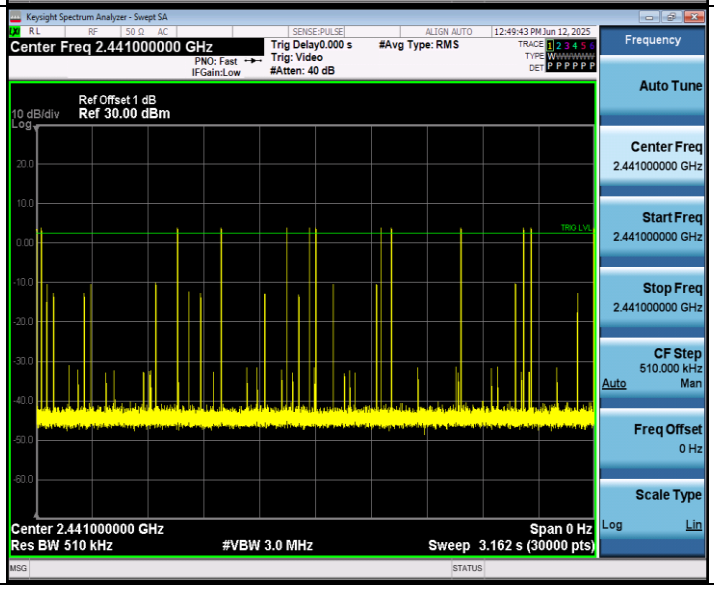

2DH5_Ant1_Hop


For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



3DH5_Ant1_Hop





For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com

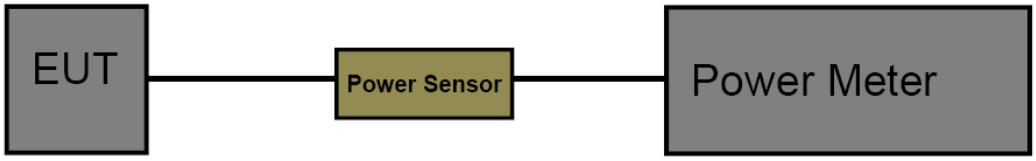
3.9. Maximum Output Power

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(1) / RSS-247 5.4 b

Section	Test Item	Limit	Frequency Range (MHz)
FCC CFR 47 Part15.247 (b)(1)	Maximum Conducted Output Power	Hopping Channels≥75, Power <1W(30dBm); Others <125mW(21dBm)	2400~2483.5
ISED RSS-247 5.4 d	Maximum Conducted Output Power	1 Watt or 30dBm	2400~2483.5
	EIRP	4 Watt or 36dBm	2400~2483.5

Test Configuration



Test Procedure

1. The maximum conducted output power may be measured using a broadband Peak RF power meter.
2. Peak power measurements were performed only when the EUT was transmitting at its peak power control level using a broadband power meter with a pulse sensor.
3. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.
   Record the measurement data.

Test Mode

Please refer to the clause 2.4.

Test Result

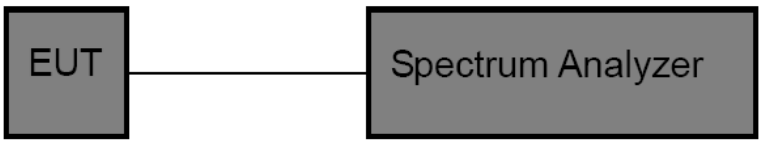
Test Mode	Antenna	Freq(MHz)	Peak Output Power[dBm]	Output Power Limit[dBm]	Verdict
DH5	Ant1	2402	1.87	≤30	PASS
		2441	2.27	≤30	PASS
		2480	2.52	≤30	PASS
2DH5	Ant1	2402	3.25	≤30	PASS
		2441	3.54	≤30	PASS
		2480	3.78	≤30	PASS
3DH5	Ant1	2402	3.64	≤30	PASS
		2441	3.76	≤30	PASS
		2480	3.84	≤30	PASS

3.10. Duty Cycle

Limit

None, for report purposes only.

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.
3. Spectrum Setting:

Set analyzer center frequency to test channel center frequency.
Set the span to 0Hz.
Set the RBW to 10MHz.
Set the VBW to 10MHz.
Detector: Peak.
Sweep time: Auto.
Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

Test Mode

Please refer to the clause 2.4.

Test Result

Test Mode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	Duty Cycle [%]	1/T Minimum VBW (kHz)	Final Setting for VBW (kHz)
DH5	Ant1	2402	2.86	3.76	76.06	0.35	1
		2441	2.86	3.76	76.06	0.35	1
		2480	2.86	3.76	76.06	0.35	1
2DH5	Ant1	2402	2.88	3.78	76.19	0.35	1
		2441	2.88	3.78	76.19	0.35	1
		2480	2.88	3.78	76.19	0.35	1
3DH5	Ant1	2402	2.88	3.78	76.19	0.35	1
		2441	2.88	3.78	76.19	0.35	1
		2480	2.88	3.78	76.19	0.35	1

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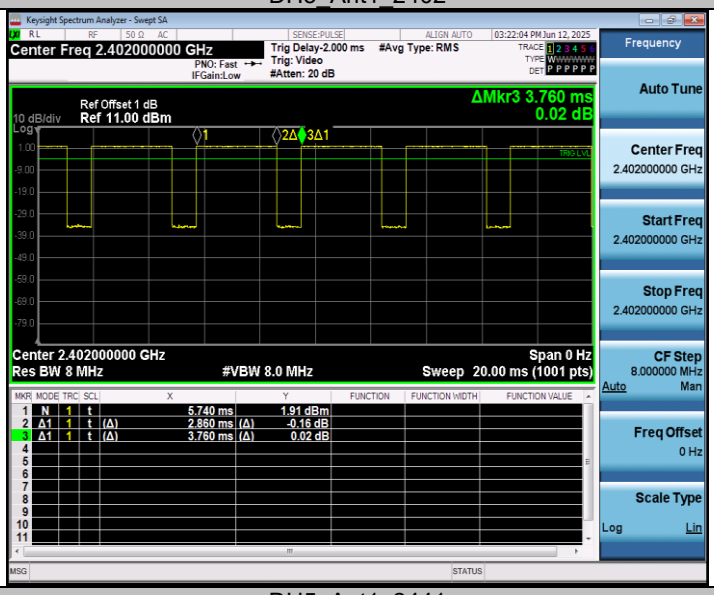
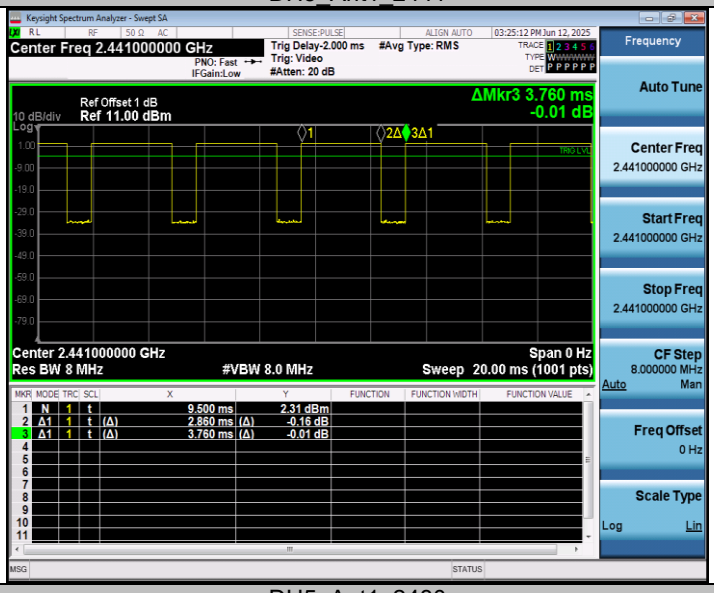
Test Graphs

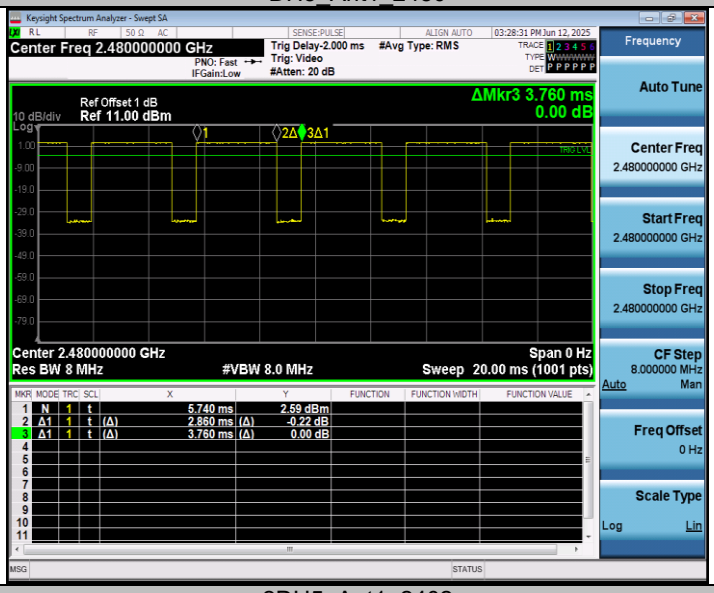
DH5_Ant1_2402



DH5_Ant1_2441

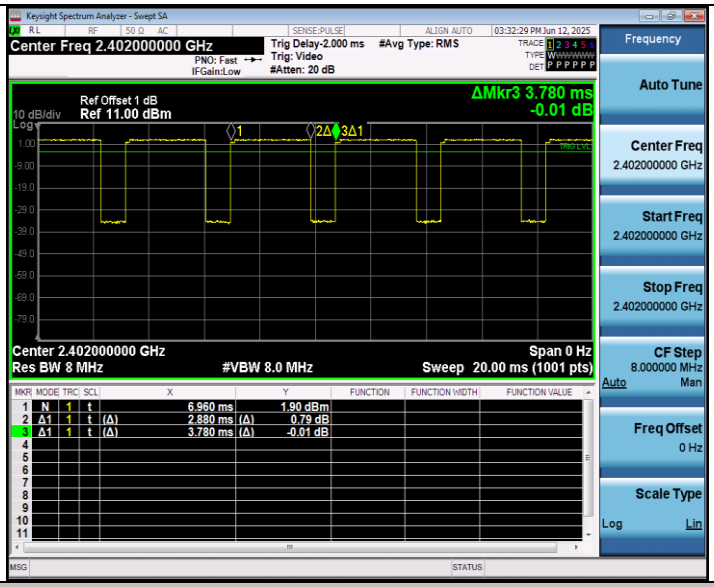


DH5_Ant1_2480

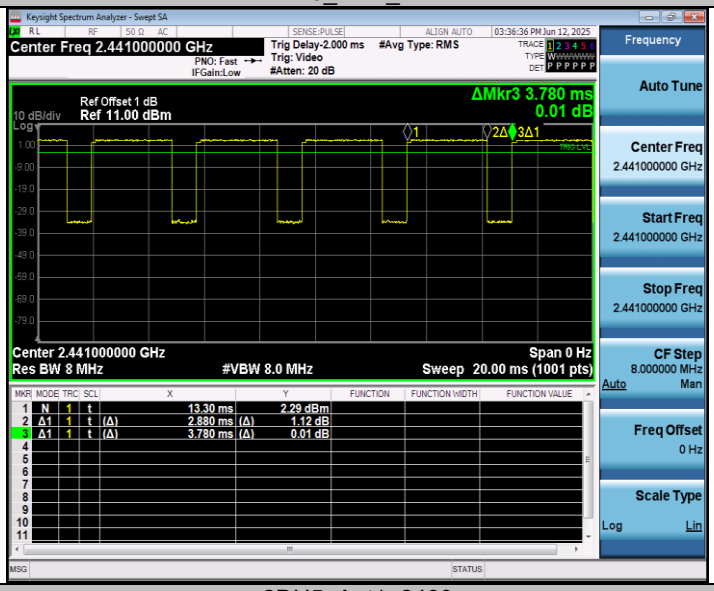


2DH5_Ant1_2402

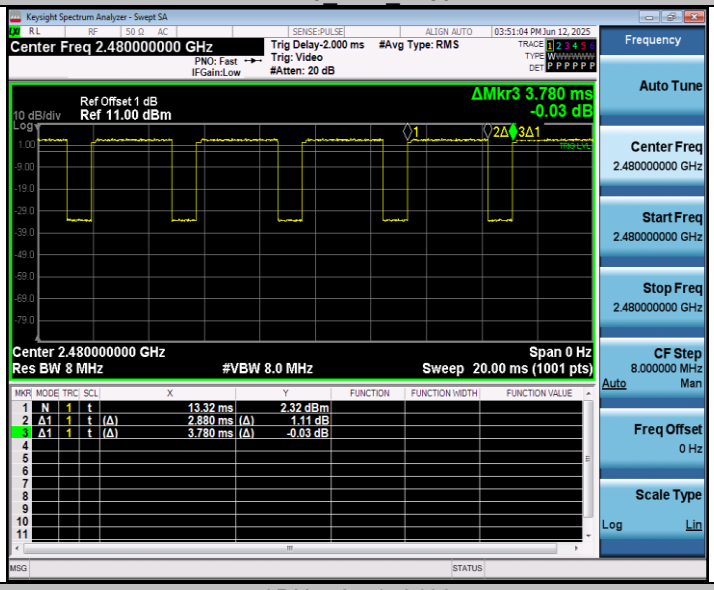
For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



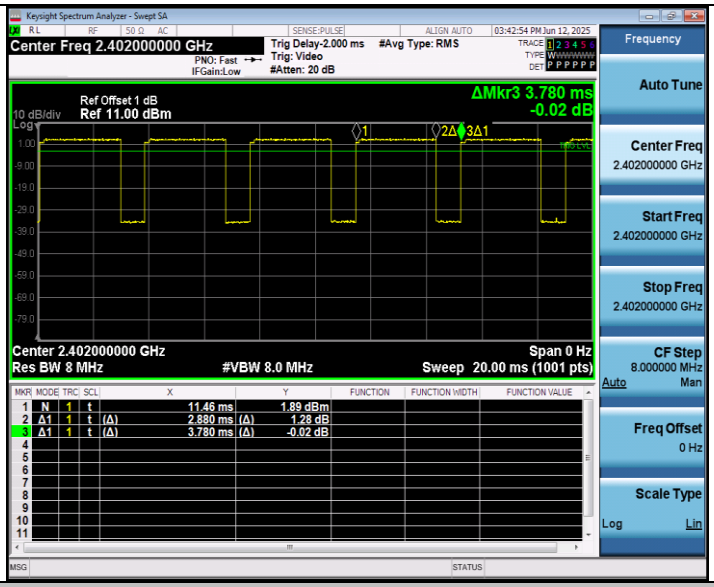
2DH5_Ant1_2441



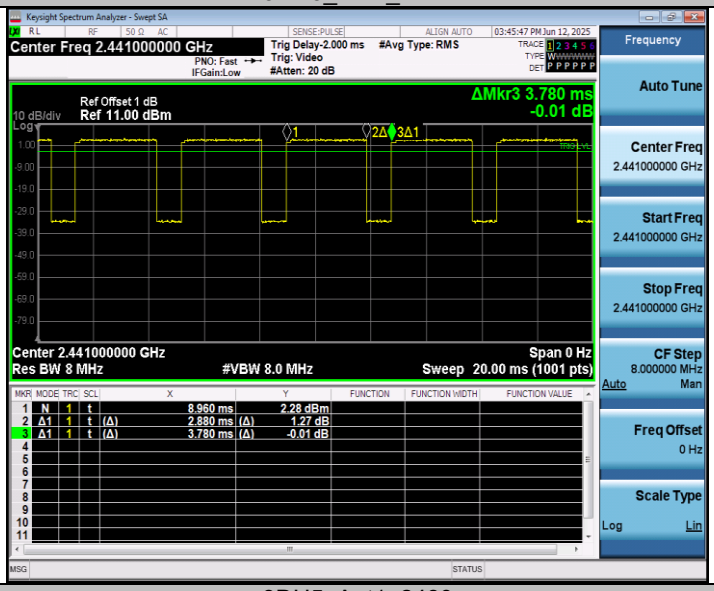
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2441



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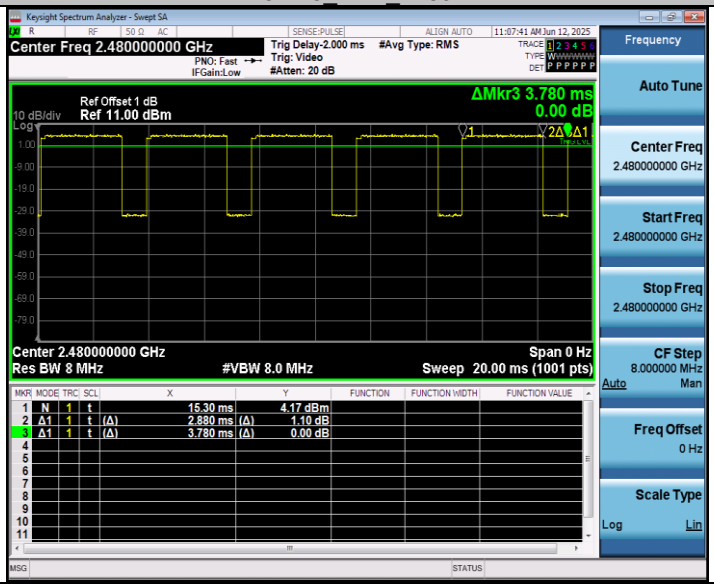

For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com

3.11. Antenna Requirement

Requirement

FCC CFR Title 47 Part 15 Subpart C Section 15.203
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.
FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i)
(i) Systems operating in the 2400~2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

Test Result

The directional gain of the antenna is less than 6dBi, please refer to the EUT internal photographs antenna photo.

**********THE END**********