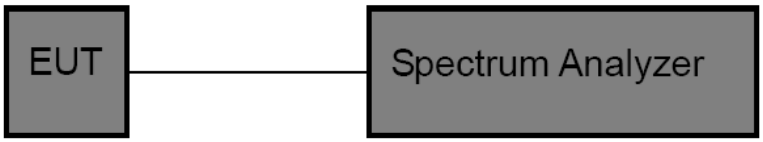
3.8. Dwell Time

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(iii)

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.

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

Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.379	320	0.121	≤0.4	PASS
DH3	Ant1	Hop	1.635	140	0.229	≤0.4	PASS
DH5	Ant1	Hop	2.883	90	0.259	≤0.4	PASS
2DH1	Ant1	Hop	0.384	330	0.127	≤0.4	PASS
2DH3	Ant1	Hop	1.636	170	0.278	≤0.4	PASS
2DH5	Ant1	Hop	2.885	130	0.375	≤0.4	PASS
3DH1	Ant1	Hop	0.385	320	0.123	≤0.4	PASS
3DH3	Ant1	Hop	1.635	140	0.229	≤0.4	PASS
3DH5	Ant1	Hop	2.887	130	0.375	≤0.4	PASS

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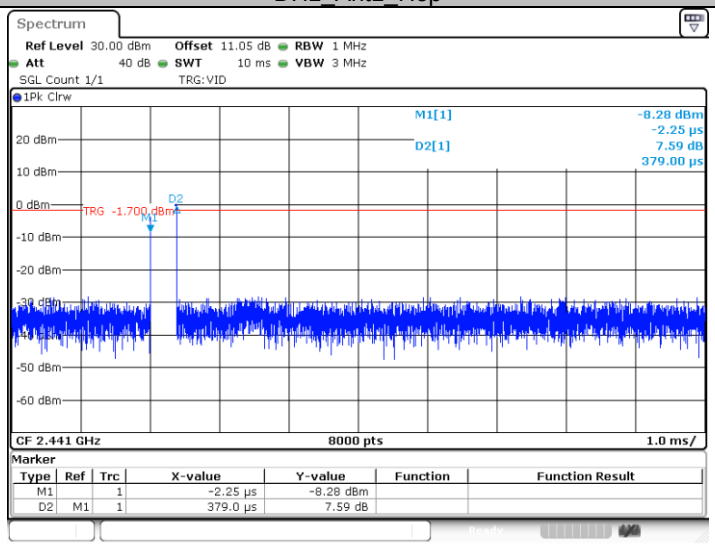
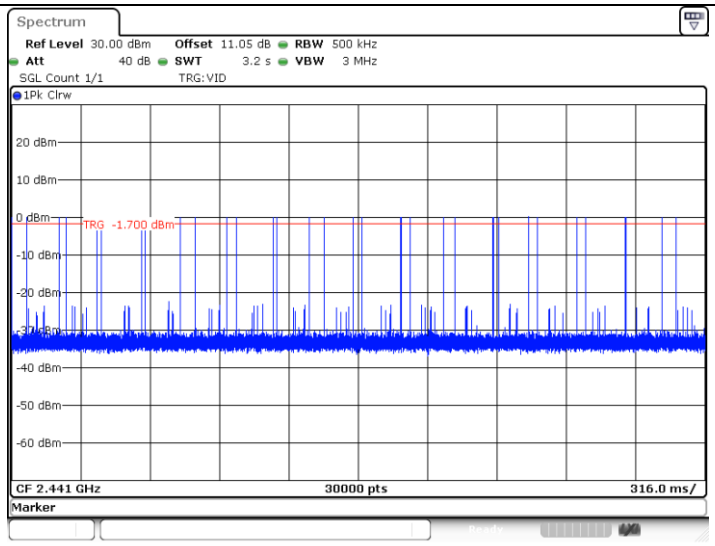
Test plot as follows:

DH1_Ant1_Hop



Date: 24.FEB.2025 09:27:09



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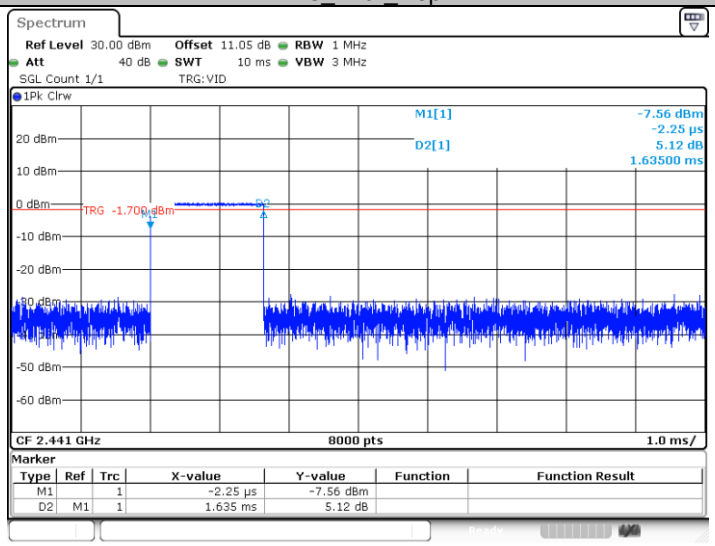
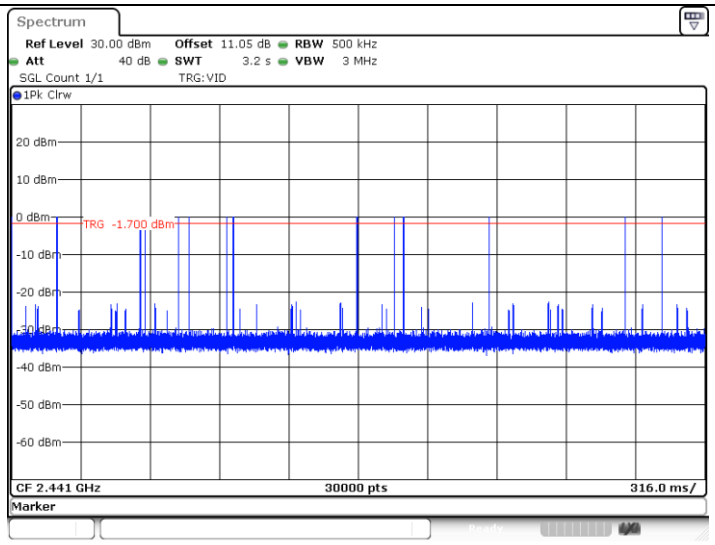
DH3_Ant1_Hop

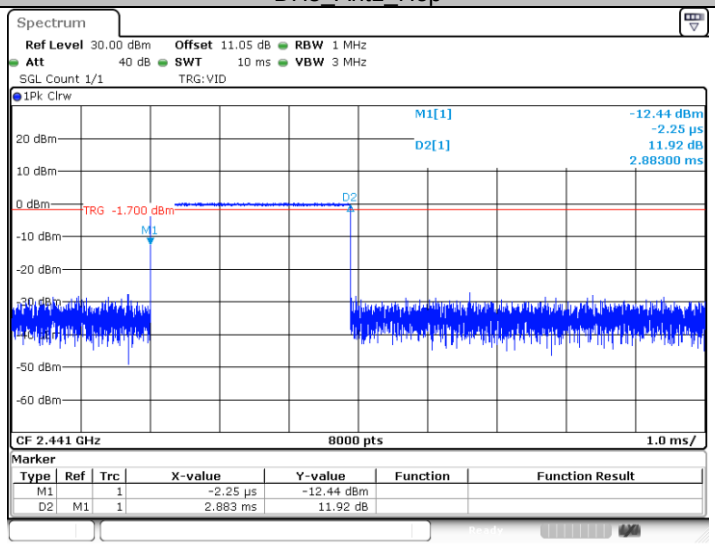


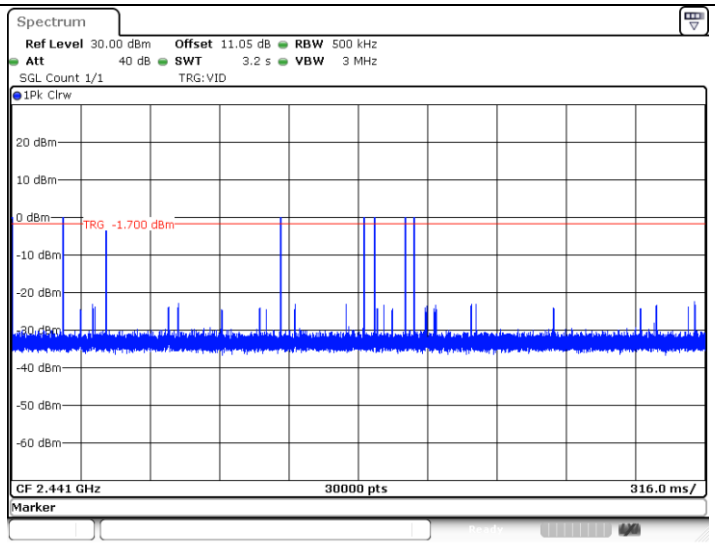
Date: 24.FEB.2025 09:28:17

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



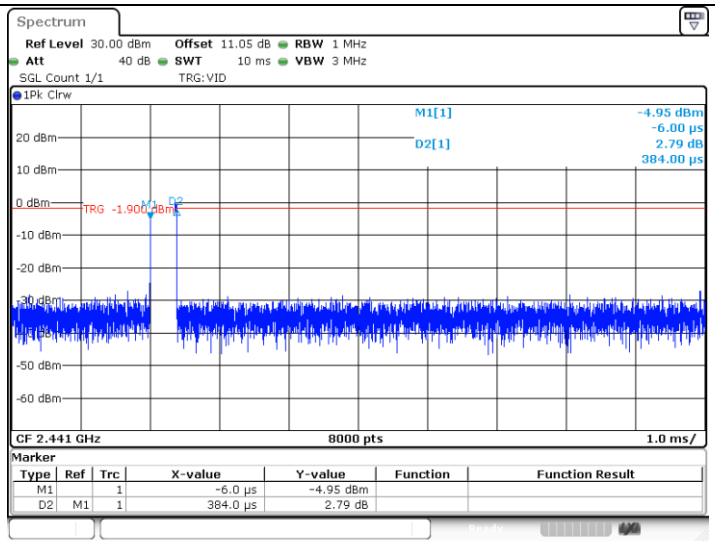
DH5_Ant1_Hop

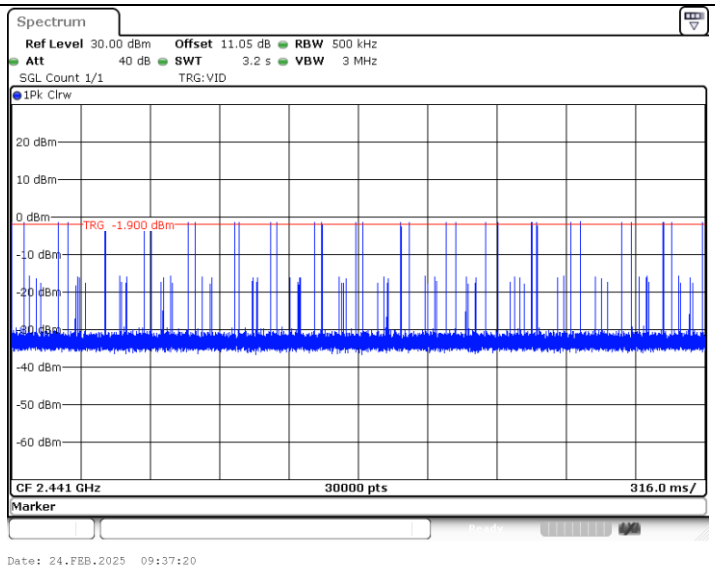




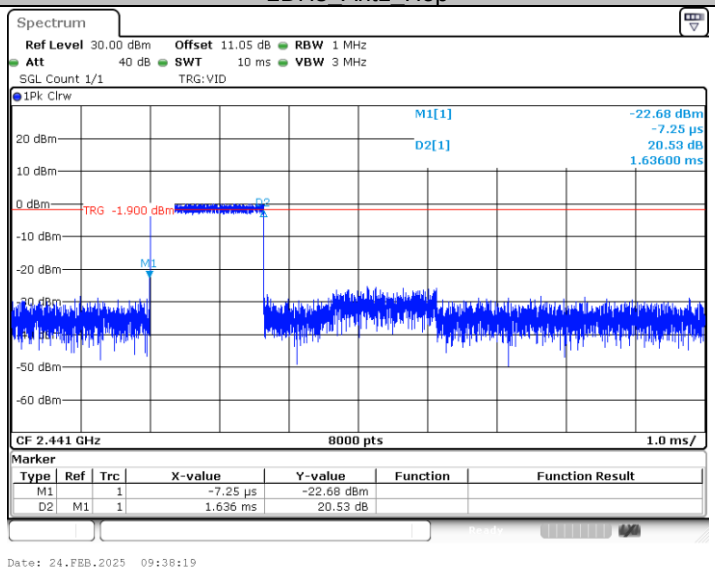
2DH1_Ant1_Hop

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

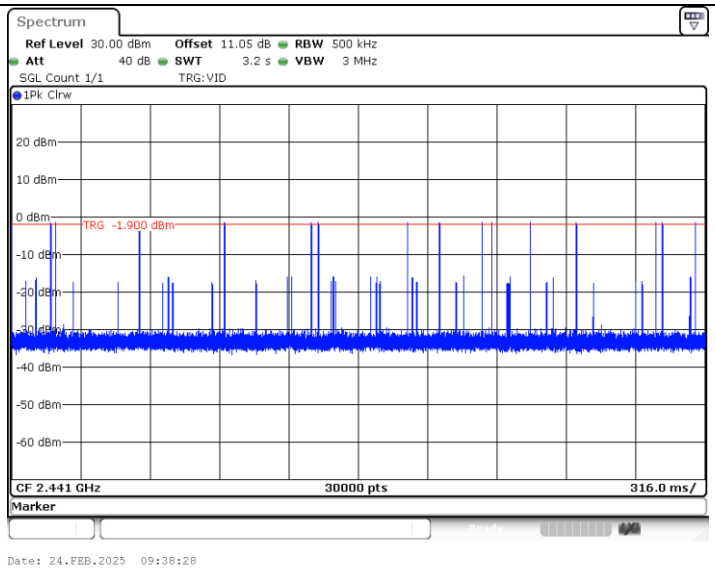




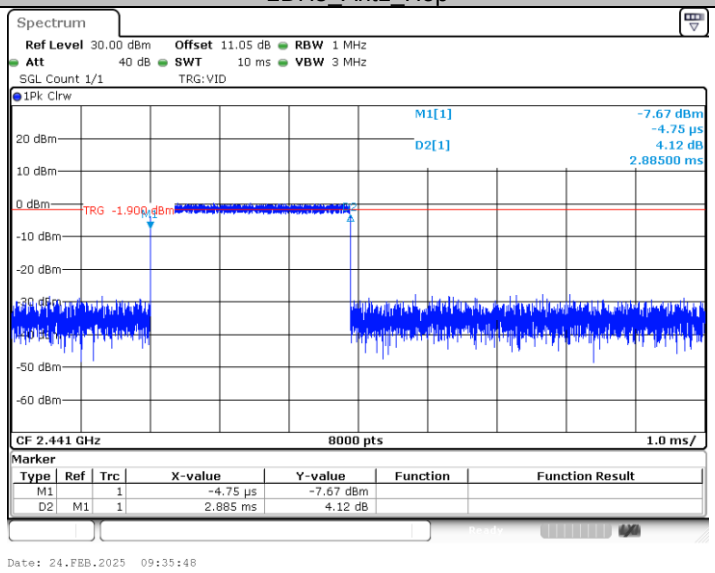
2DH3_Ant1_Hop

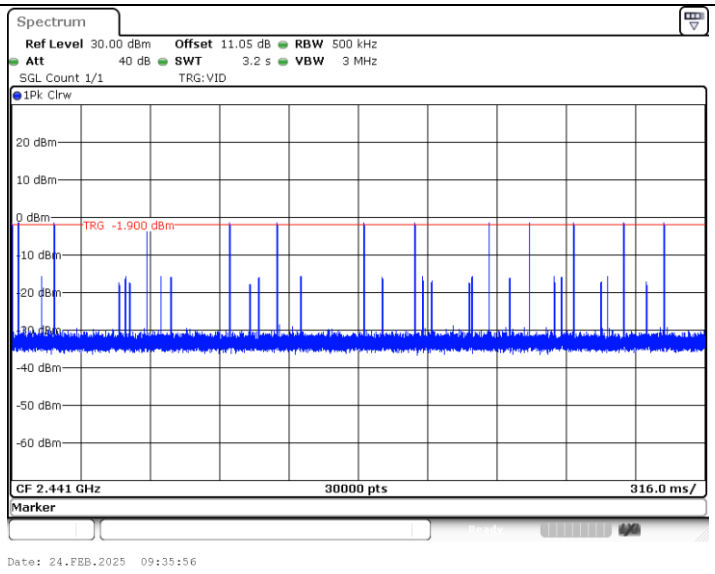


For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cnca.cn



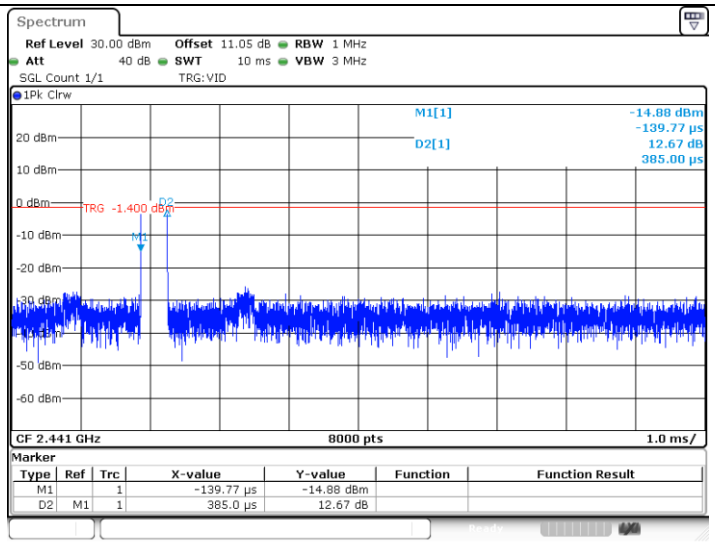
2DH5_Ant1_Hop



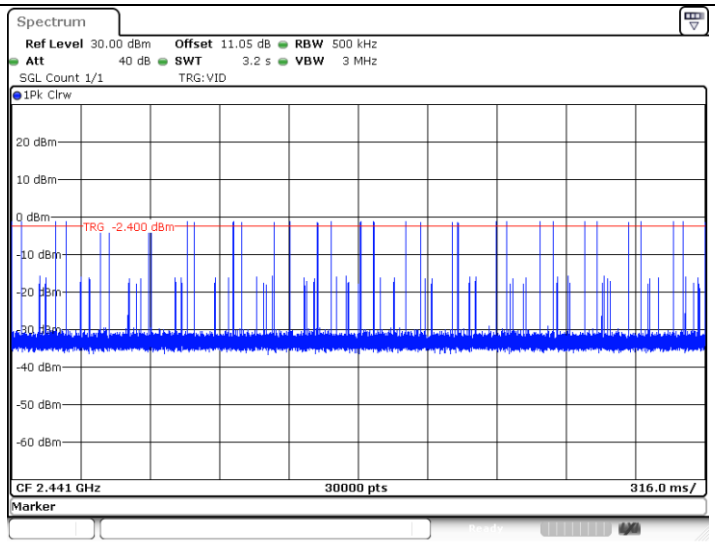


3DH1_Ant1_Hop

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

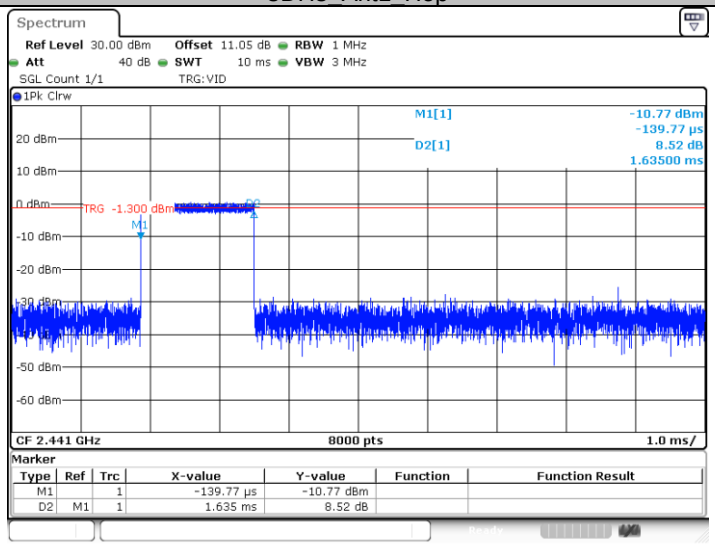


Date: 24.FEB.2025 09:59:52



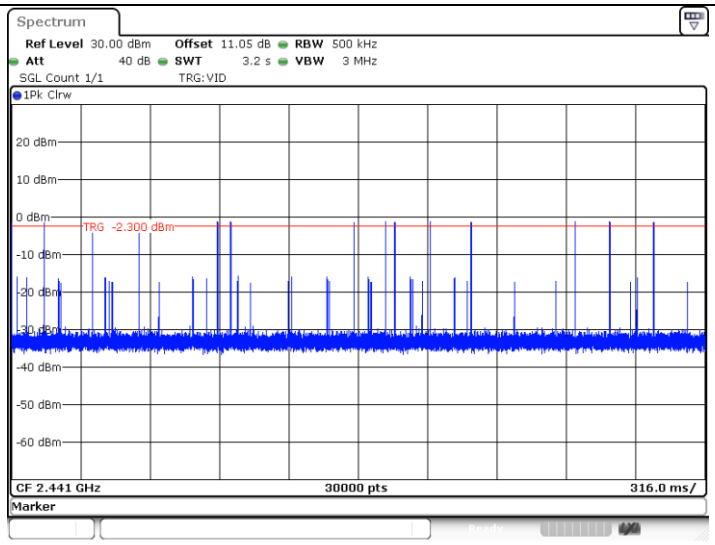
Date: 24.FEB.2025 10:00:06

3DH3_Ant1_Hop

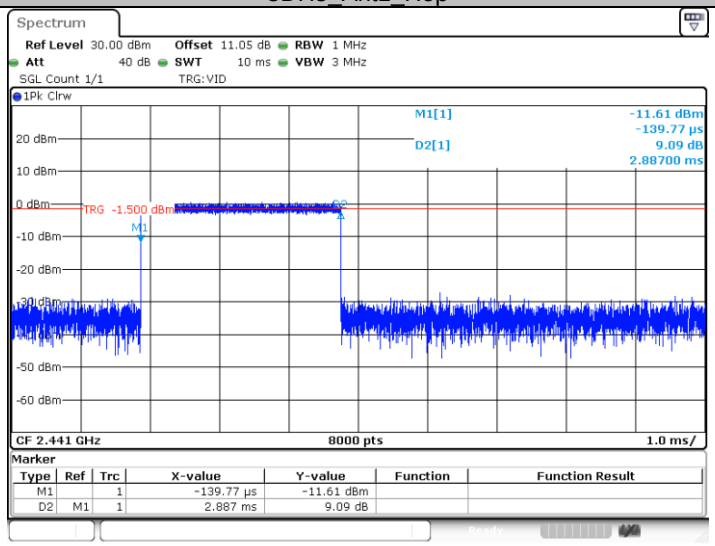


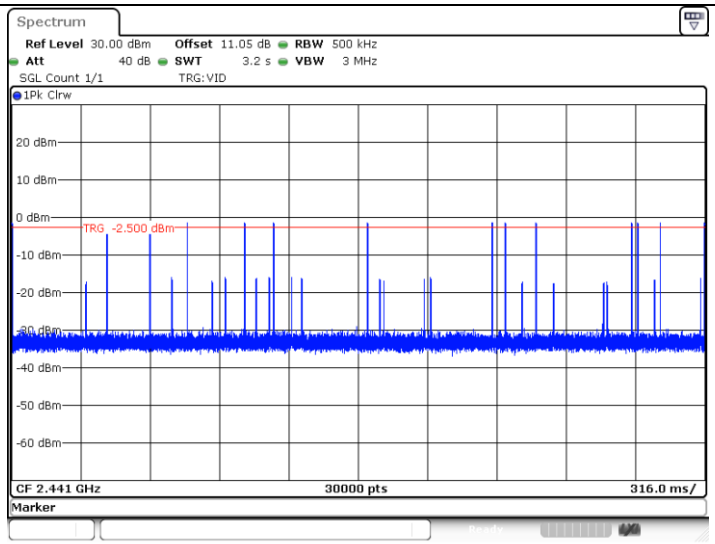
Date: 24.FEB.2025 10:01:09

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



3DH5_Ant1_Hop





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

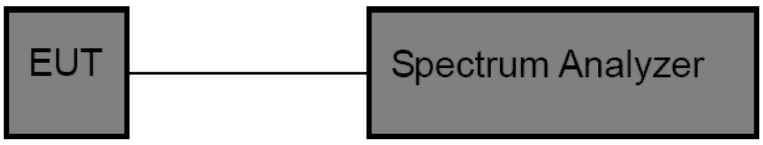
3.9. Peak Output Power

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(1)

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

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 > 20dB Bandwidth.
   (2) Set VBW ≥ RBW.
   (3) Detector = Peak.
   (4) Trace mode = Max hold.
   (5) Sweep = Auto couple.
   (6) Span = Approximately five times the 20dB bandwidth, centered on a hopping channel.

Test Mode

Please refer to the clause 2.4.

Test Result

Test Mode	Frequency (MHz)	Conducted Output Power (dBm)	FCC Limit (dBm)	Verdict
GFSK	2402	-0.34	≤30	Pass
	2441	0.15	≤30	Pass
	2480	0.24	≤30	Pass
π/4-DQPSK	2402	-0.67	≤30	Pass
	2441	0.29	≤30	Pass
	2480	0.18	≤30	Pass
8-DPSK	2402	-0.23	≤30	Pass
	2441	0.63	≤30	Pass
	2480	0.42	≤30	Pass

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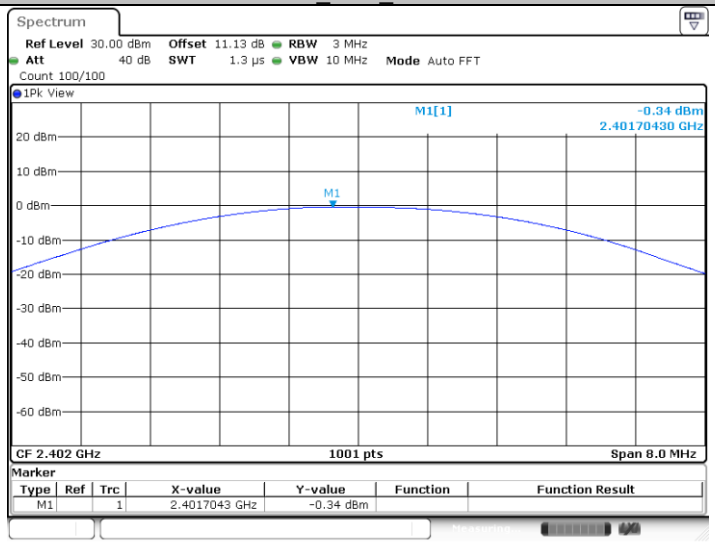
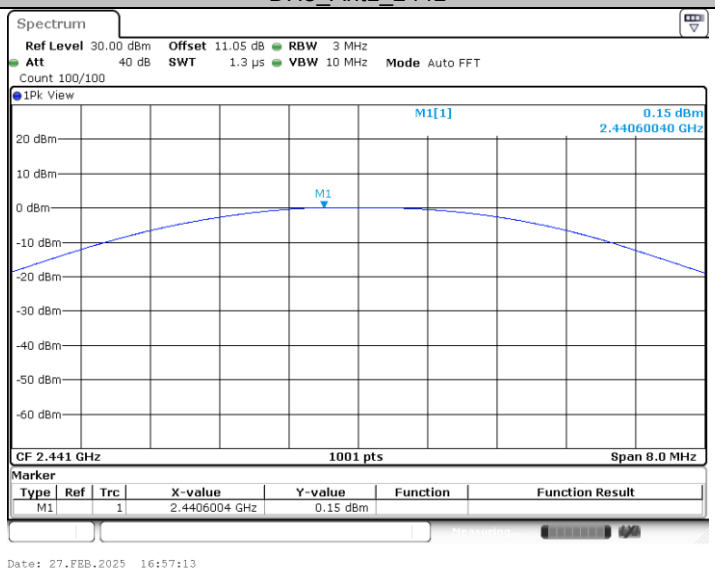
Test plot as follows:

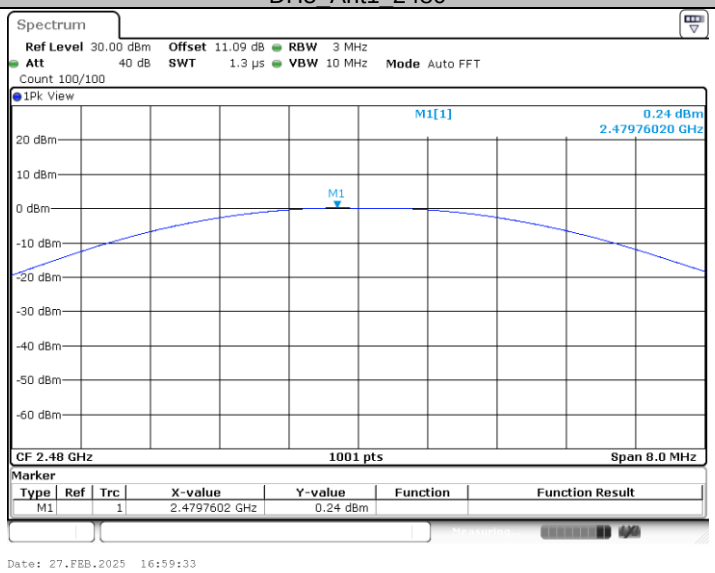
DH5_Ant1_2402



DH5_Ant1_2441

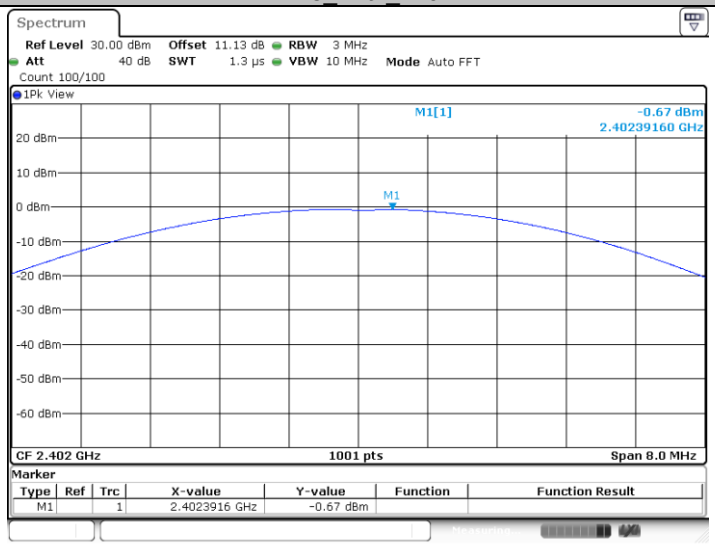


DH5_Ant1_2480

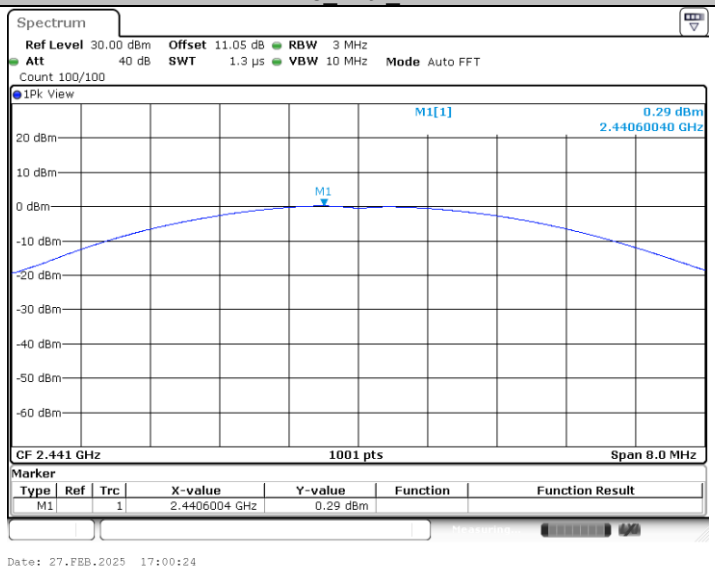


For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cnca.cn

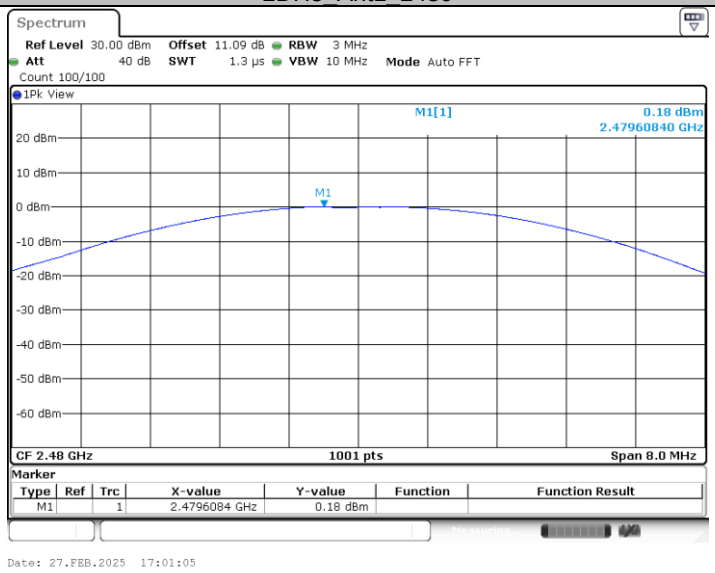
2DH5_Ant1_2402



2DH5_Ant1_2441

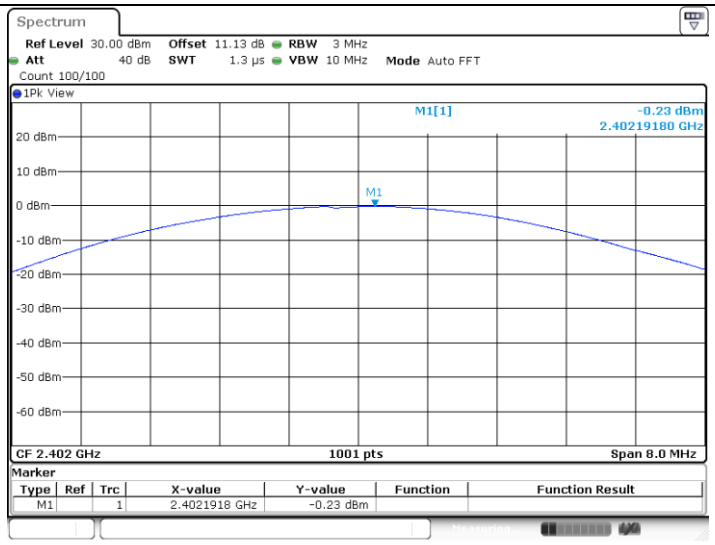


2DH5_Ant1_2480

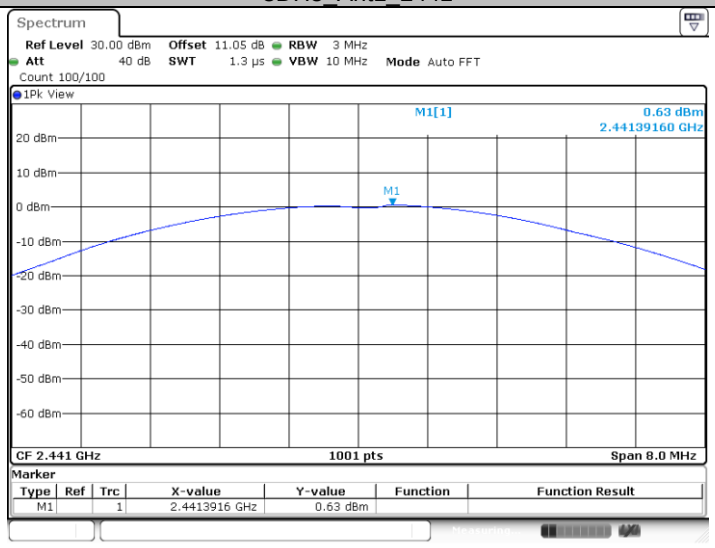


3DH5_Ant1_2402

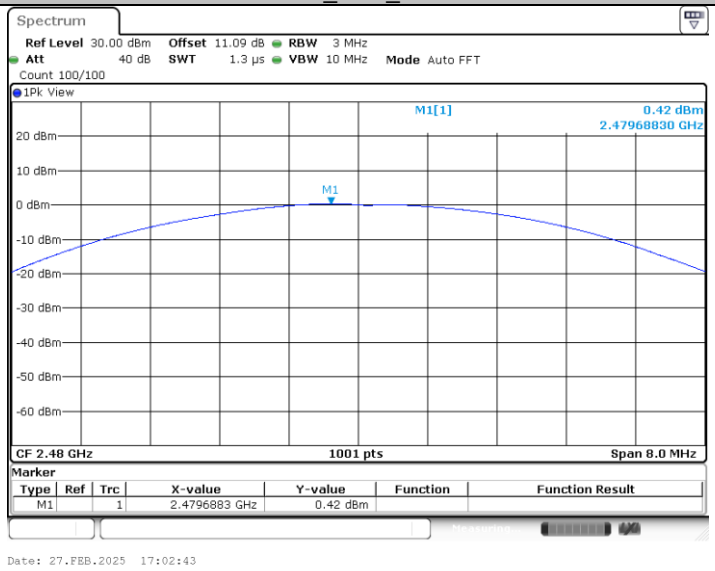
For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cnca.cn



3DH5_Ant1_2441



3DH5_Ant1_2480



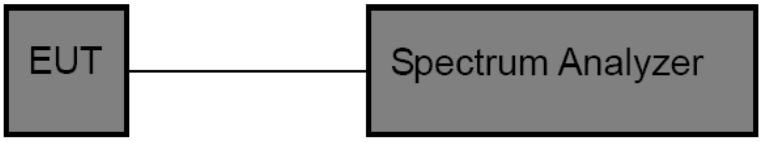
For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cnca.cn

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	Frequency (MHz)	Transmission Duration (ms)	Transmission Period (ms)	Duty Cycle (%)	1/T Minimum VBW (kHz)	Final Setting for VBW (kHz)
GFSK	2402	2.88	3.75	76.80	0.35	1
	2441	2.89	3.76	76.86	0.35	1
	2480	2.89	3.75	77.07	0.35	1
π/4-DQPSK	2402	2.89	3.75	77.07	0.35	1
	2441	2.88	3.75	76.80	0.35	1
	2480	2.89	3.76	76.86	0.35	1
8-DPSK	2402	2.89	3.75	77.07	0.35	1
	2441	2.89	3.75	77.07	0.35	1
	2480	2.89	3.76	76.86	0.35	1

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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 OF REPORT**********

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