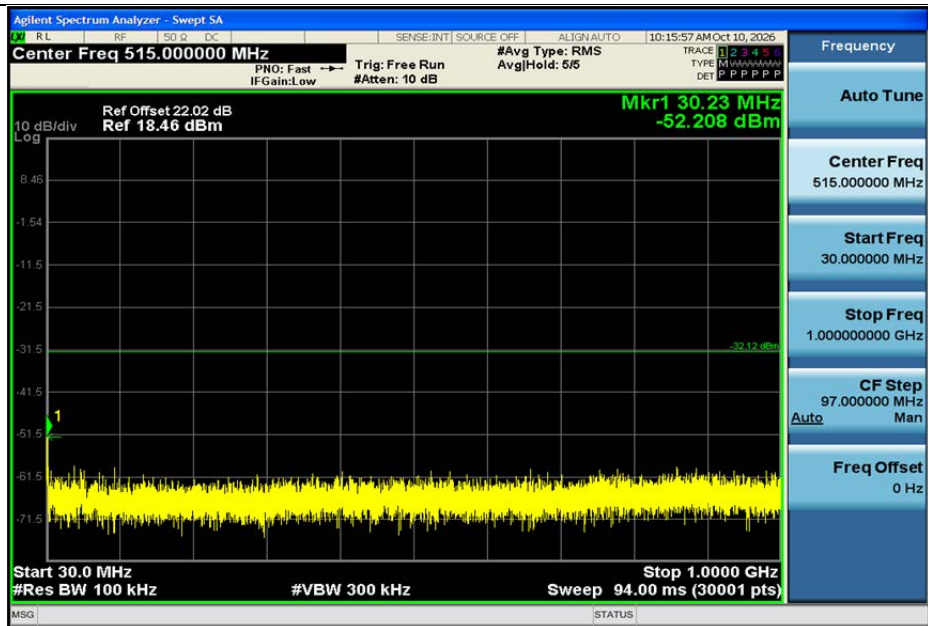
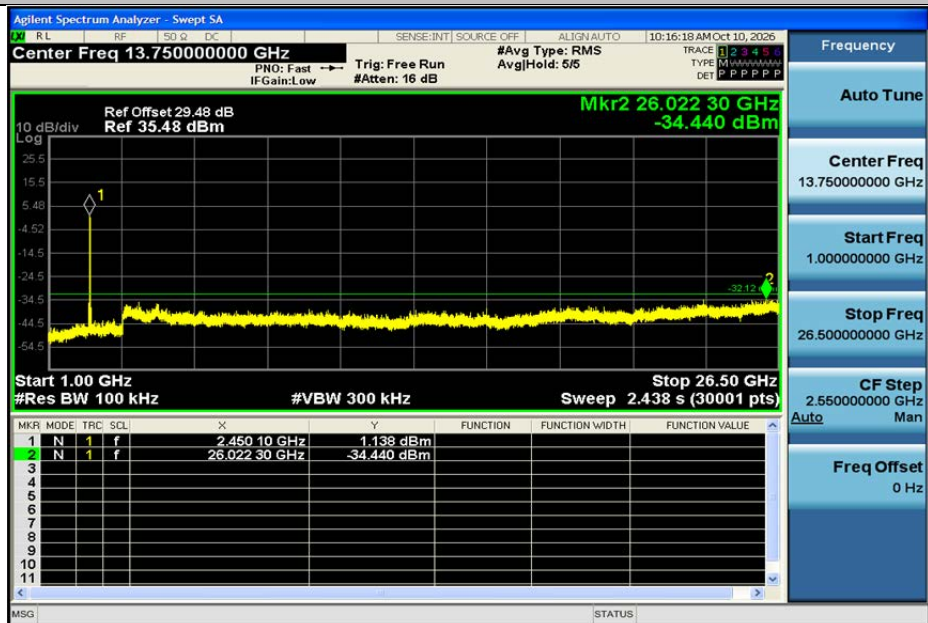


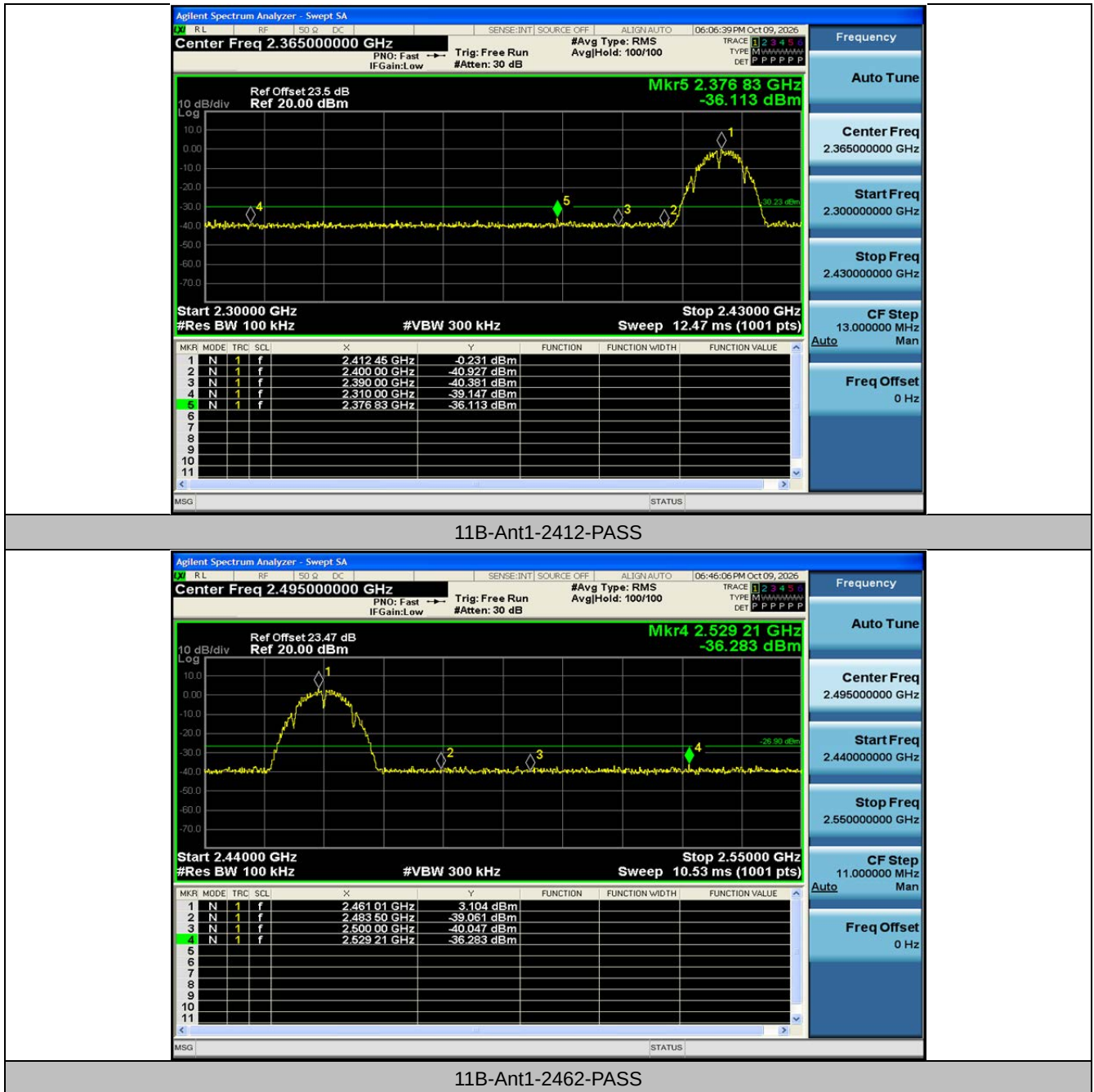


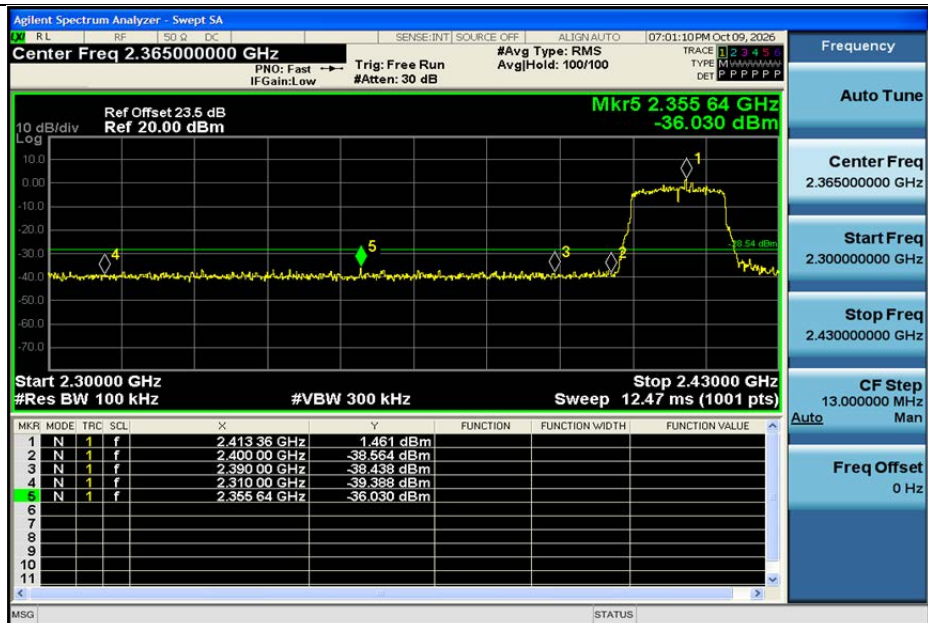
11N40SISO-Ant1-2452-30~1000-PASS



11N40SISO-Ant1-2452-1000~26500-PASS

Band edge





11G-Ant1-2412-PASS



11G-Ant1-2462-PASS



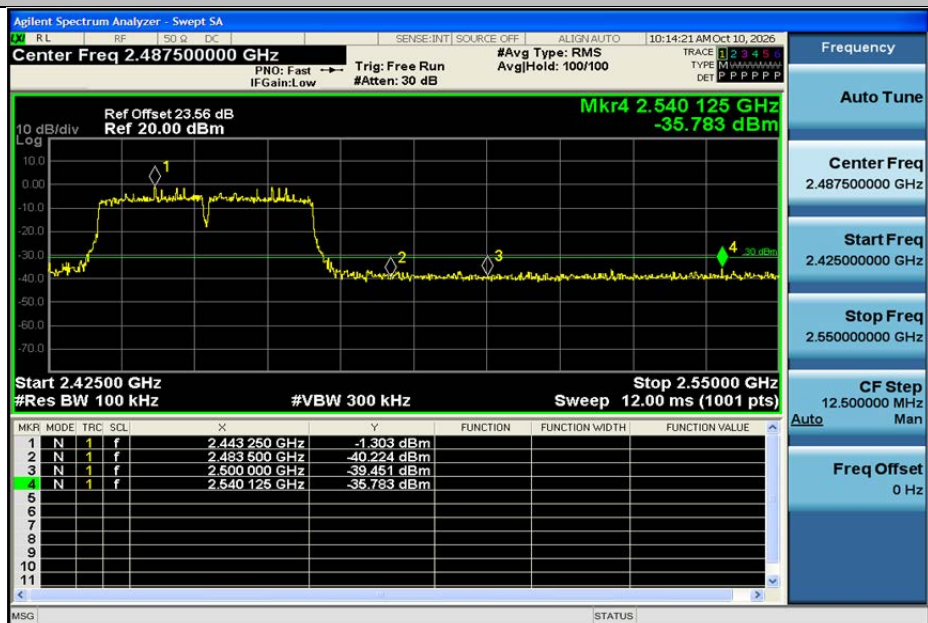
11N20SISO-Ant1-2412-PASS



11N20SISO-Ant1-2462-PASS



11N40SISO-Ant1-2422-PASS



11N40SISO-Ant1-2452-PASS

3.4 6dB Bandwidth

3.4.1 Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

3.4.2 Test Procedure

Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ : Test ☐ : No Test	

a) The EUT was connected to the tonscend test system, and the spectrum analyser is set as follow:

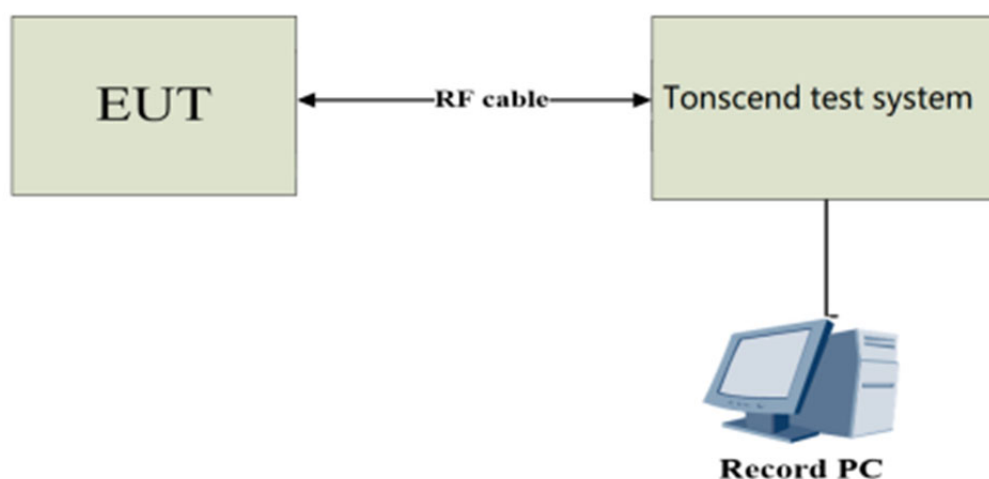
Centre Frequency	The centre frequency of the channel under test
RBW	1%~5% OBW but not less than 100 kHz.
VBW	≥ 3 RBW
Frequency span	2x Nominal Channel Bandwidth
Detector Mode	Peak
Trace Mode	Max Hold
Sweep Time	Auto Couple

b) Wait for the trace to stabilize then find the peak value of the trace and place the analyser marker on this peak.

c) Use the -6dB bandwidth function of the spectrum analyser to measure the 6dB Bandwidth of the EUT. This value shall be recorded.

d) Make sure that the power envelope is sufficiently above the noise floor of the analyser to avoid the noise signals left and right from the power envelope being taken into account by this measurement.

3.4.3 Test Setup



3.4.4 Test Result

DTS Bandwidth

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.160	2407.960	2416.120	0.5	PASS
11B	Ant1	2437	8.160	2432.920	2441.080	0.5	PASS
11B	Ant1	2462	8.160	2457.960	2466.120	0.5	PASS
11G	Ant1	2412	16.320	2403.880	2420.200	0.5	PASS
11G	Ant1	2437	16.320	2428.840	2445.160	0.5	PASS
11G	Ant1	2462	16.280	2453.880	2470.160	0.5	PASS
11N20SISO	Ant1	2412	17.560	2403.240	2420.800	0.5	PASS
11N20SISO	Ant1	2437	17.480	2428.280	2445.760	0.5	PASS
11N20SISO	Ant1	2462	17.560	2453.240	2470.800	0.5	PASS
11N40SISO	Ant1	2422	36.560	2403.760	2440.320	0.5	PASS
11N40SISO	Ant1	2437	36.640	2418.680	2455.320	0.5	PASS
11N40SISO	Ant1	2452	36.640	2433.680	2470.320	0.5	PASS

Test Graphs



11B-Ant1-2412-PASS



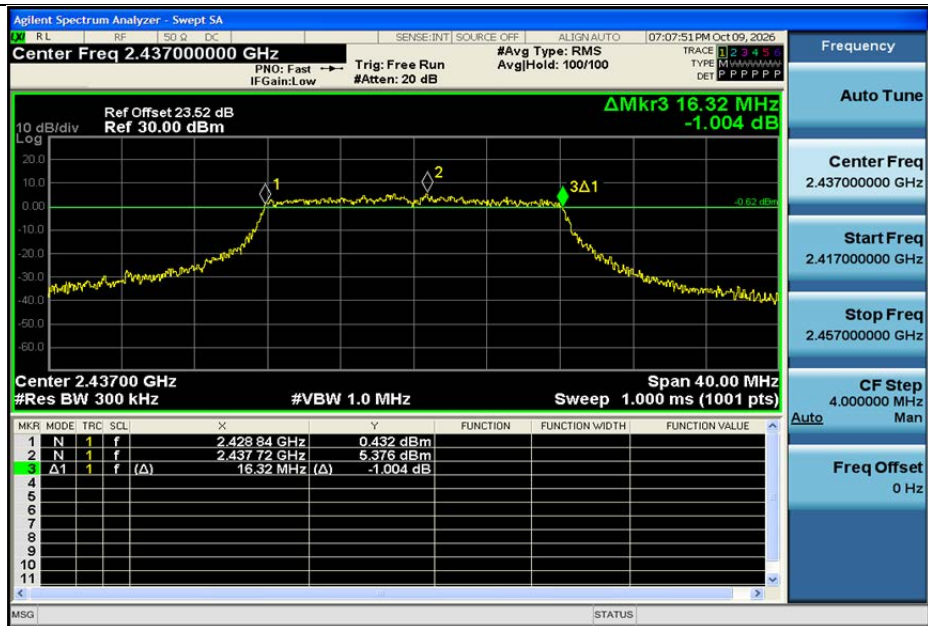
11B-Ant1-2437-PASS



11B-Ant1-2462-PASS



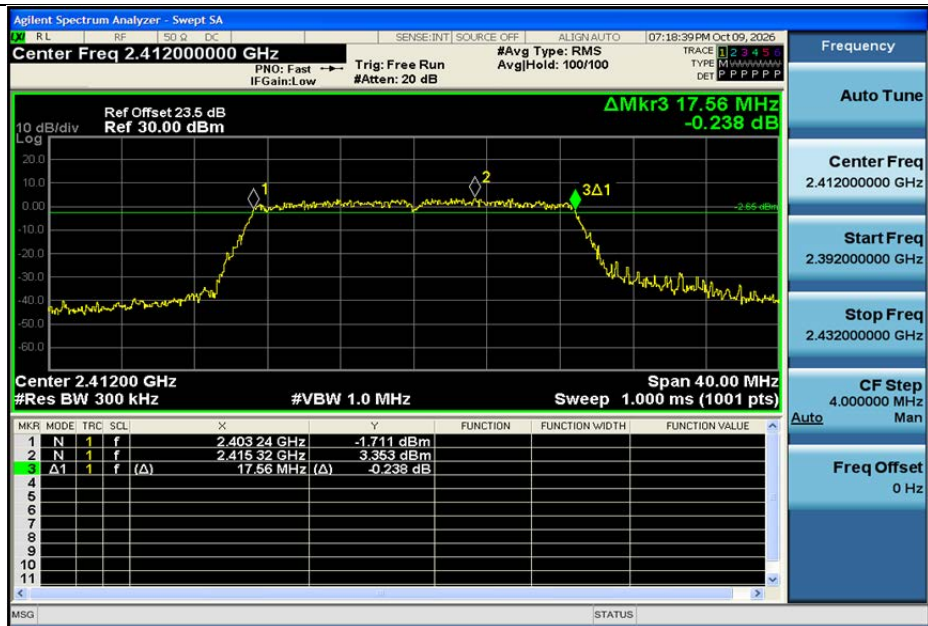
11G-Ant1-2412-PASS



11G-Ant1-2437-PASS



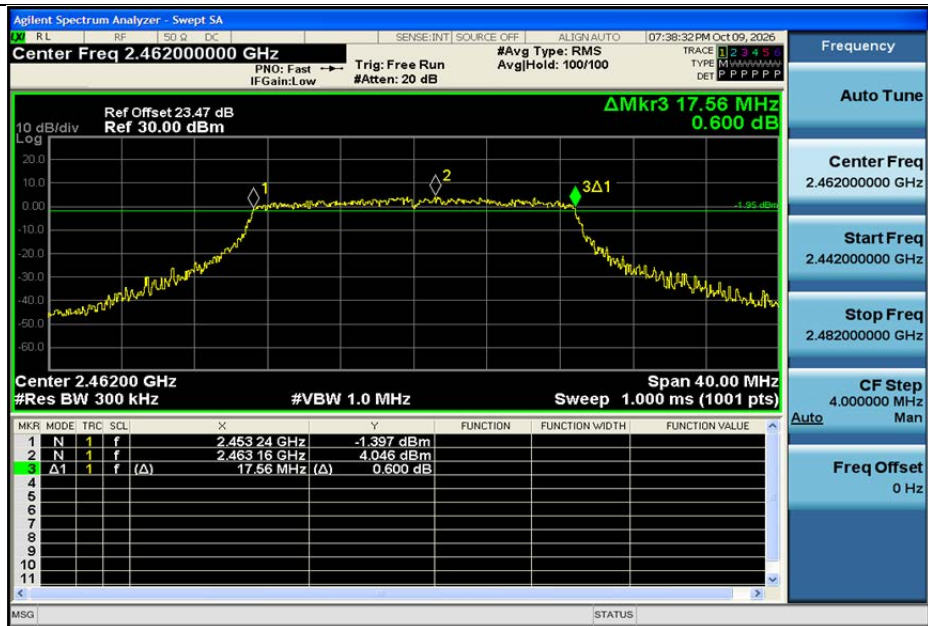
11G-Ant1-2462-PASS



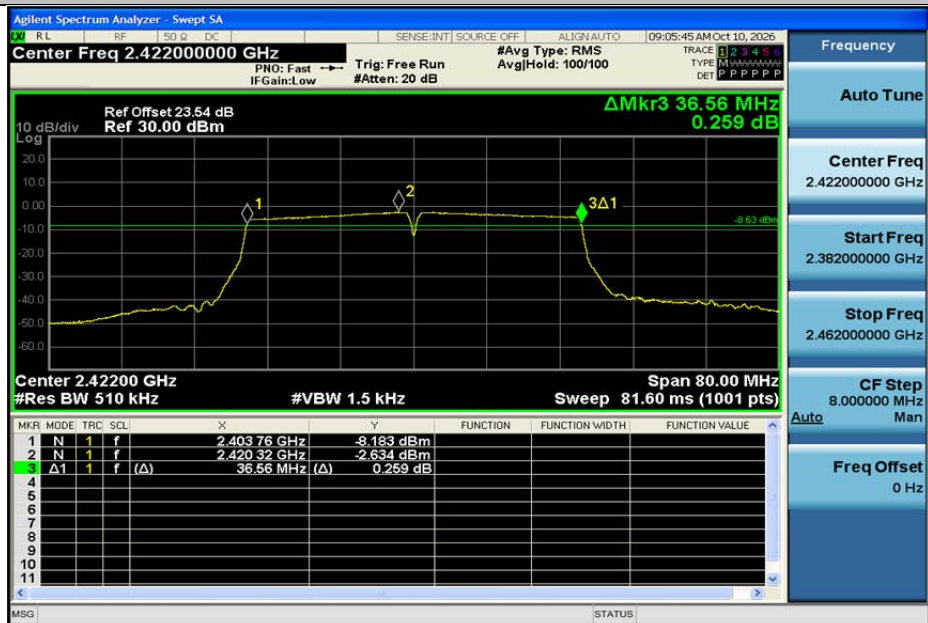
11N20SISO-Ant1-2412-PASS



11N20SISO-Ant1-2437-PASS



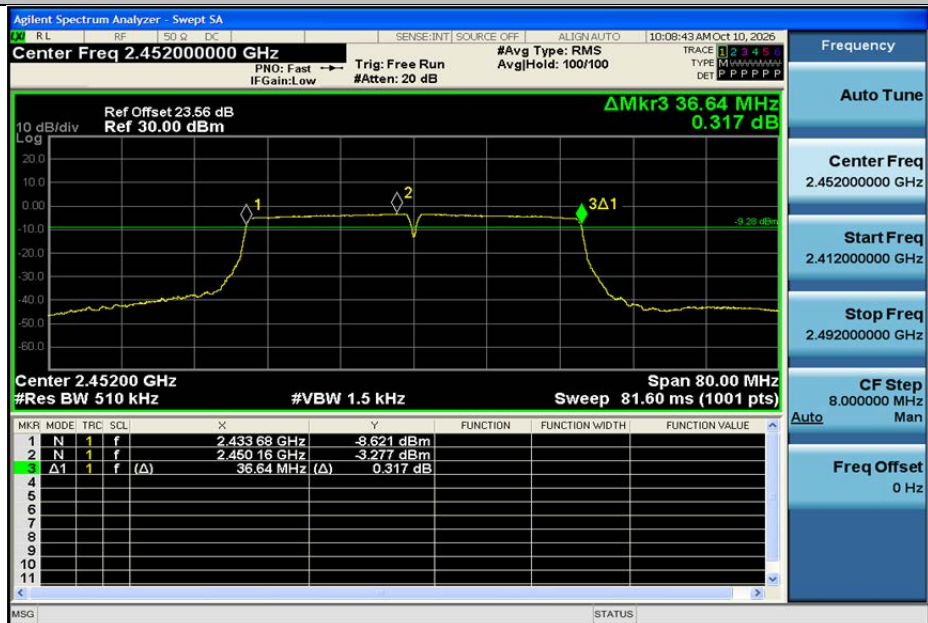
11N20SISO-Ant1-2462-PASS



11N40SISO-Ant1-2422-PASS



11N40SISO-Ant1-2437-PASS



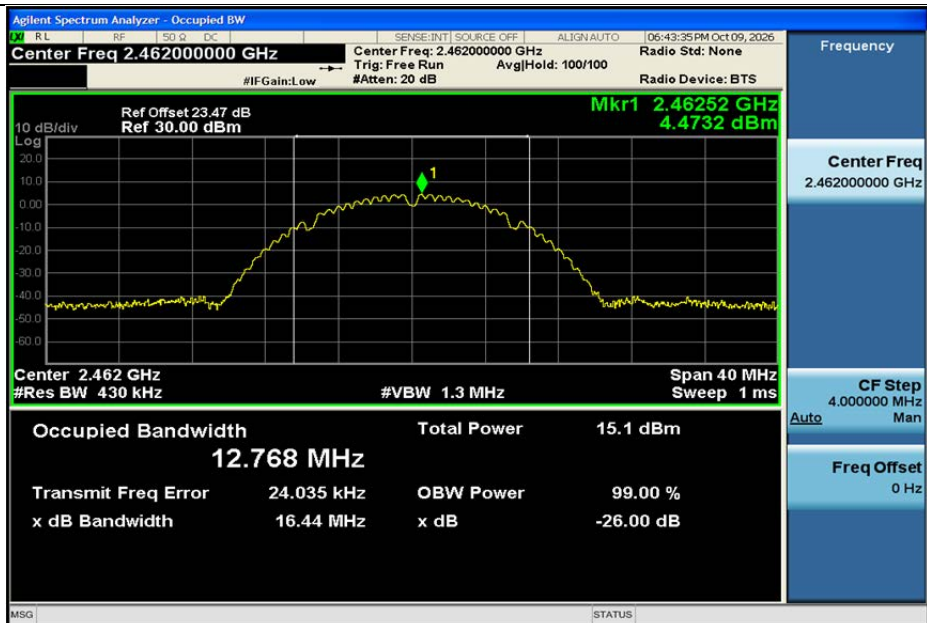
11N40SISO-Ant1-2452-PASS

Occupied Channel Bandwidth

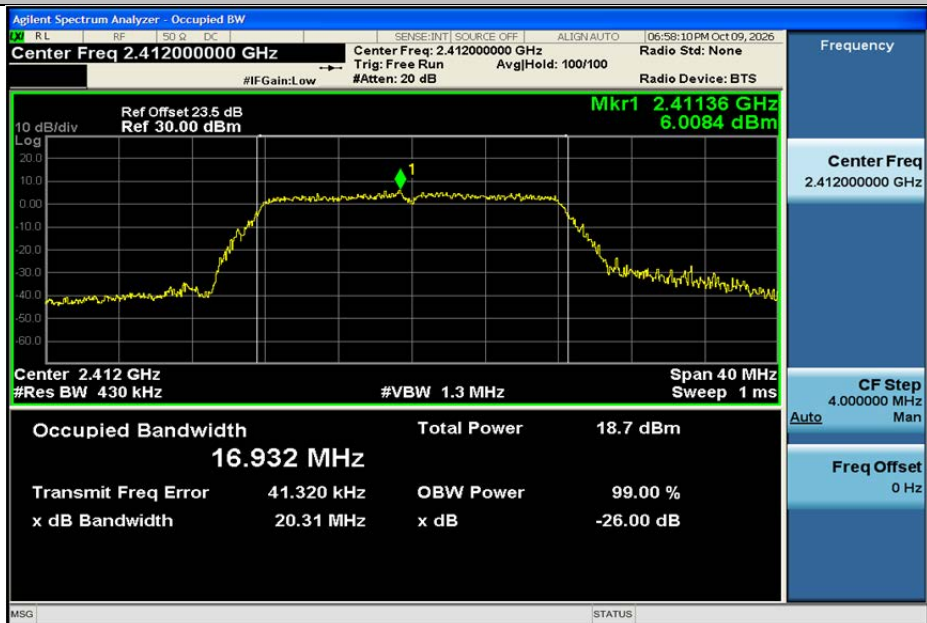
Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.696	2405.7769	2418.4729	---	---
11B	Ant1	2437	12.831	2430.5657	2443.3967	---	---
11B	Ant1	2462	12.768	2455.6400	2468.4080	---	---
11G	Ant1	2412	16.932	2403.5753	2420.5073	---	---
11G	Ant1	2437	16.887	2428.5168	2445.4038	---	---
11G	Ant1	2462	16.871	2453.5936	2470.4646	---	---
11N20SISO	Ant1	2412	17.973	2403.0712	2421.0442	---	---
11N20SISO	Ant1	2437	18.035	2427.9702	2446.0052	---	---
11N20SISO	Ant1	2462	17.942	2453.0505	2470.9925	---	---
11N40SISO	Ant1	2422	36.355	2403.9421	2440.2971	---	---
11N40SISO	Ant1	2437	36.443	2418.8225	2455.2655	---	---
11N40SISO	Ant1	2452	36.361	2433.8176	2470.1786	---	---

Test Graphs





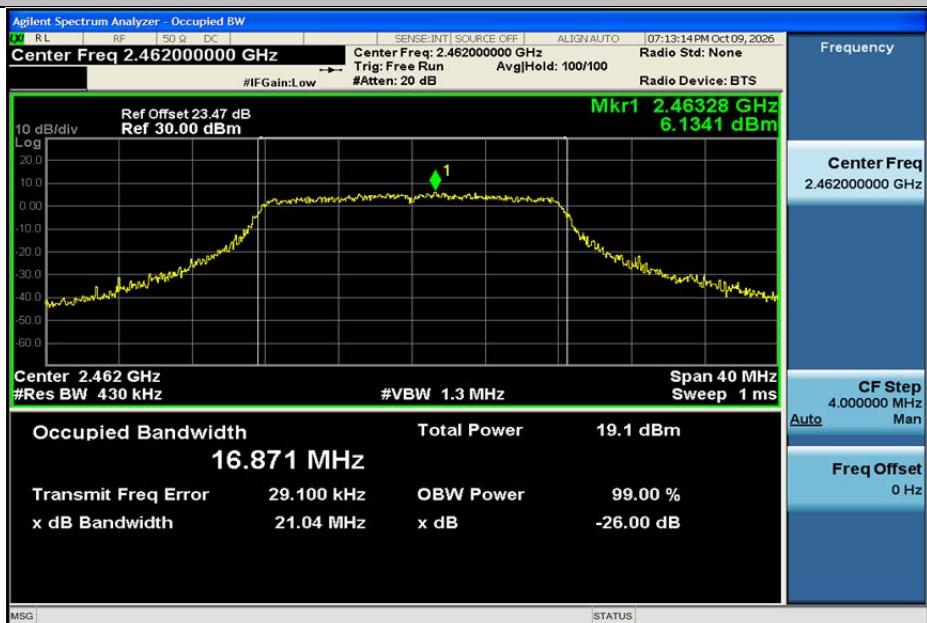
11B-Ant1-2462



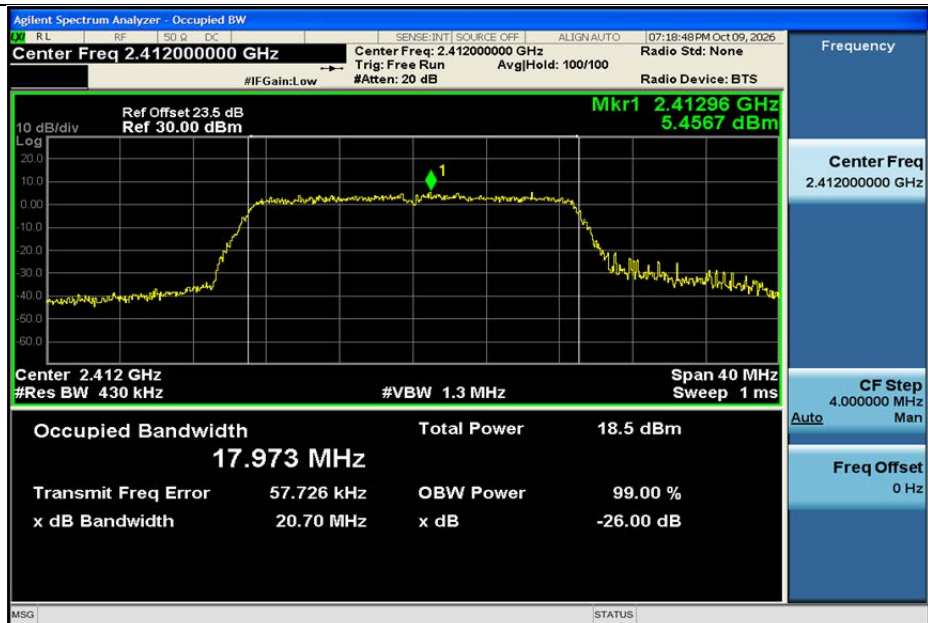
11G-Ant1-2412



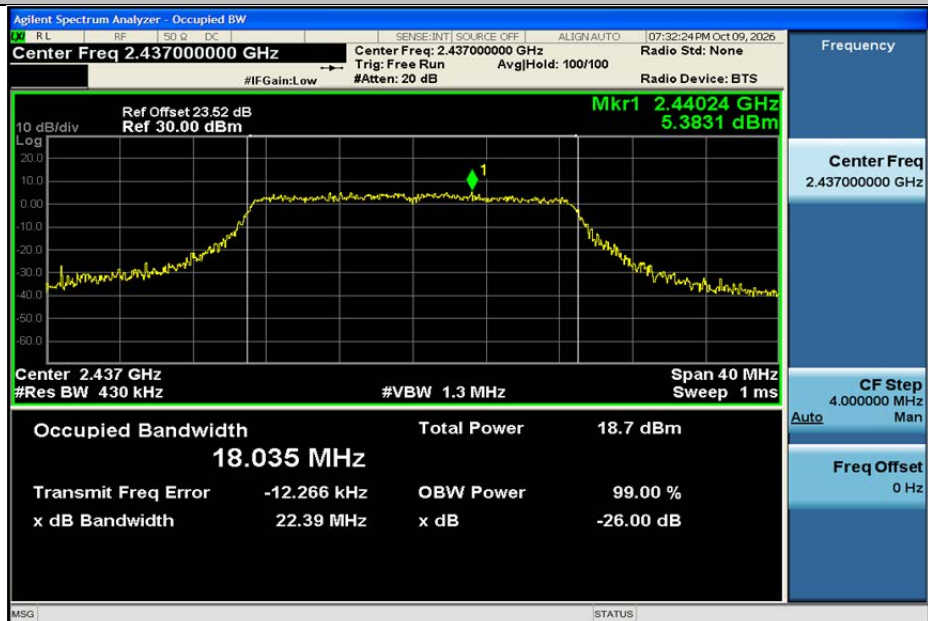
11G-Ant1-2437



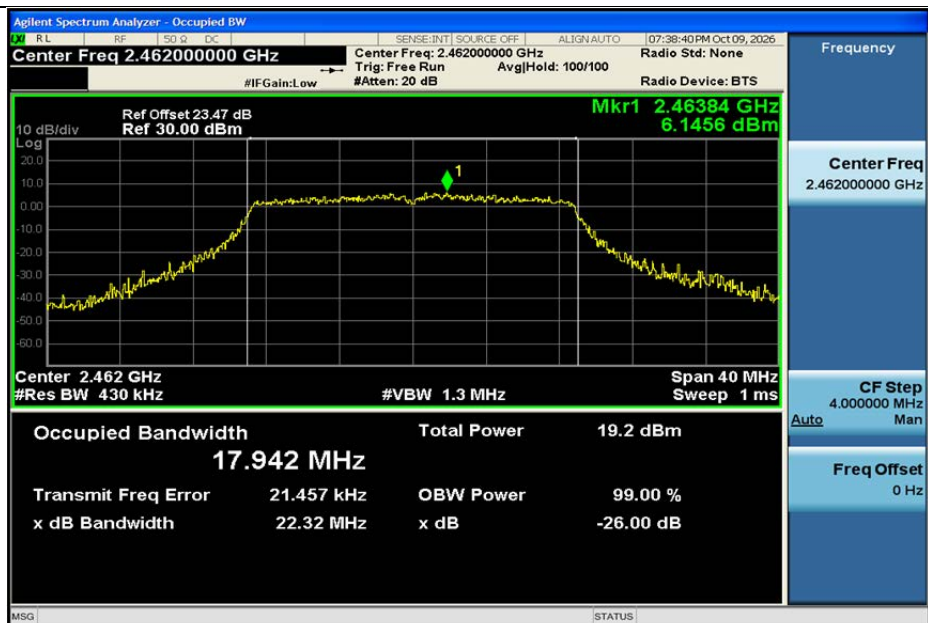
11G-Ant1-2462



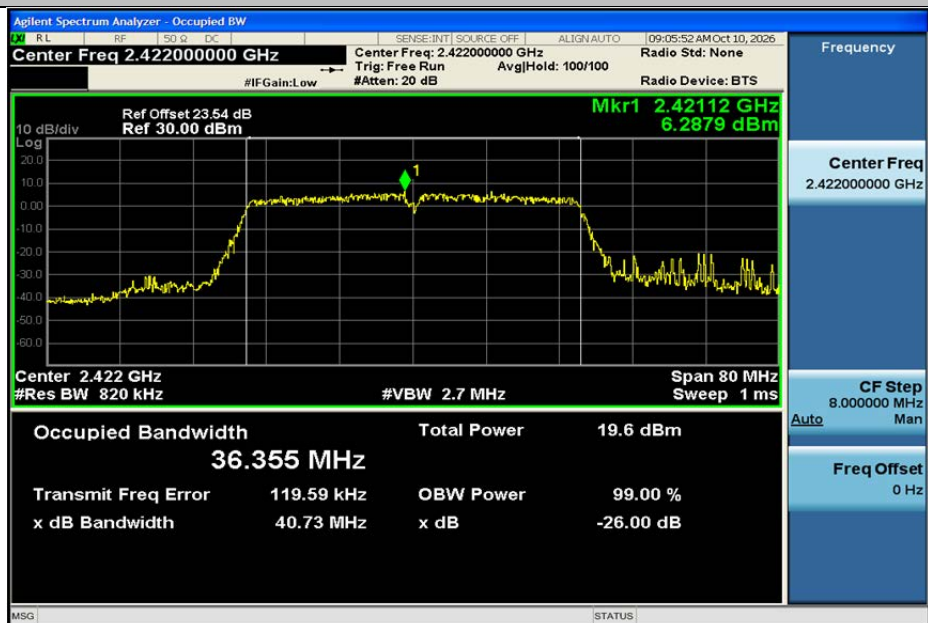
11N20SISO-Ant1-2412



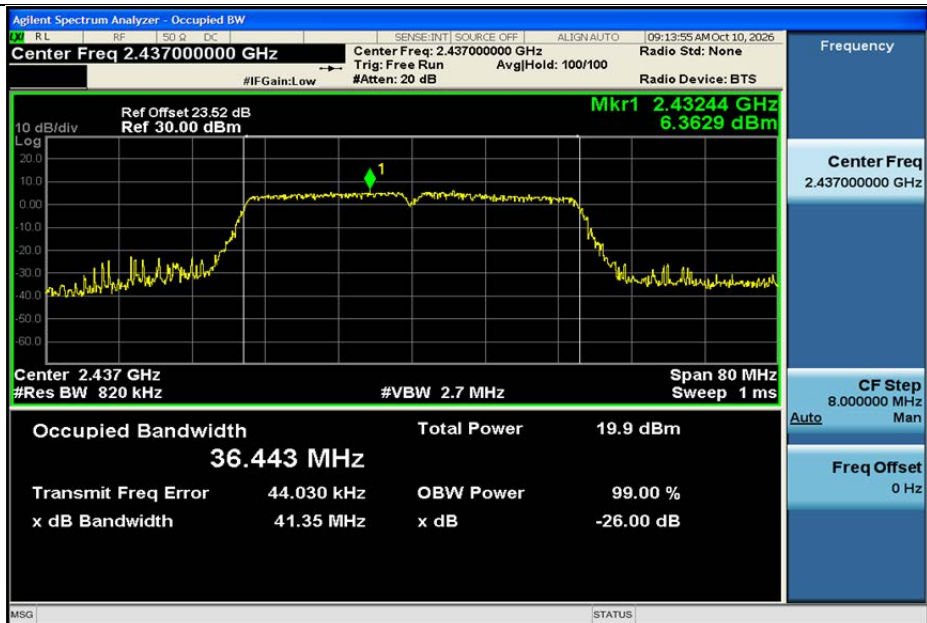
11N20SISO-Ant1-2437



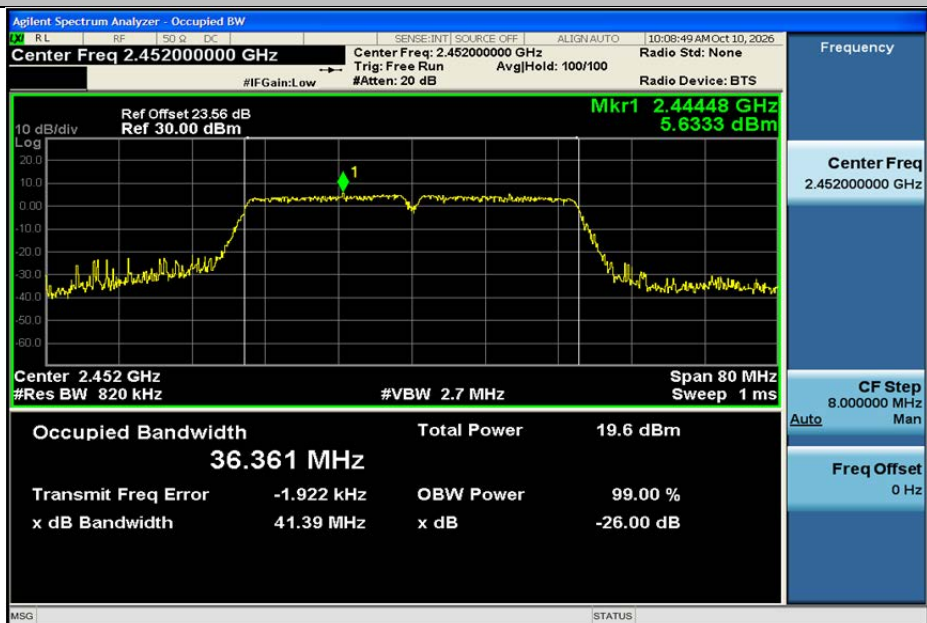
11N20SISO-Ant1-2462



11N40SISO-Ant1-2422



11N40SISO-Ant1-2437



11N40SISO-Ant1-2452

3.5 Maximum conducted output power

3.5.1 Limit

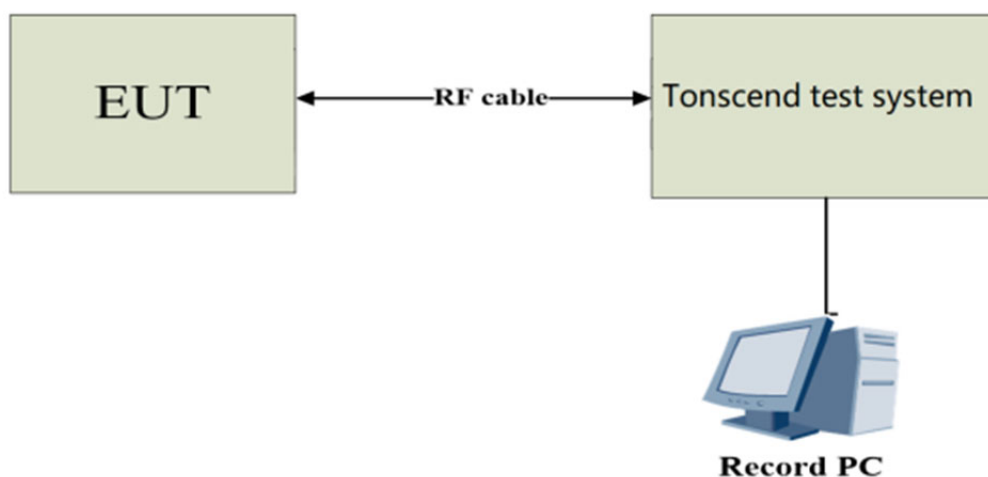
For systems using digital modulation in the 2400~2483.5MHz, The Maximum output Power shall not exceed 1W(30dBm)

3.5.2 Test Procedure

Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ : Test ☐ : No Test	

- The EUT was directly connected to the tonscond test system and antenna output port as show in the block diagram below.
- The maximum conducted output power was performed in accordance with method 11.9.2.3.1 (for average power)of ANSI C63.10-2020.

3.5.3 Test Setup



3.5.4 Table of Parameters of Text Software Setting

Test Mode	Power Level Setting defined by Manufacturer		
Test Software Version	Sscom5.13.1		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	Default	Default	Default
IEEE 802.11g	Default	Default	Default
IEEE 802.11n20	Default	Default	Default
Frequency (MHz)	2422	2437	2452
IEEE 802.11n40	Default	Default	Default

3.5.5 The Result

Test Mode	Antenna	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	13.95	≤30.00	PASS
11B	Ant1	2437	13.09	≤30.00	PASS
11B	Ant1	2462	13.24	≤30.00	PASS
11G	Ant1	2412	13.57	≤30.00	PASS
11G	Ant1	2437	14.06	≤30.00	PASS
11G	Ant1	2462	13.48	≤30.00	PASS
11N20SISO	Ant1	2412	13.98	≤30.00	PASS
11N20SISO	Ant1	2437	14.44	≤30.00	PASS
11N20SISO	Ant1	2462	13.58	≤30.00	PASS
11N40SISO	Ant1	2422	13.12	≤30.00	PASS
11N40SISO	Ant1	2437	13.48	≤30.00	PASS
11N40SISO	Ant1	2452	12.97	≤30.00	PASS

Note: The duty cycle factor is compensated in the average conducted output power.

3.6 Power Spectral Density

3.6.1 Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmitting.

3.6.2 Test Procedure

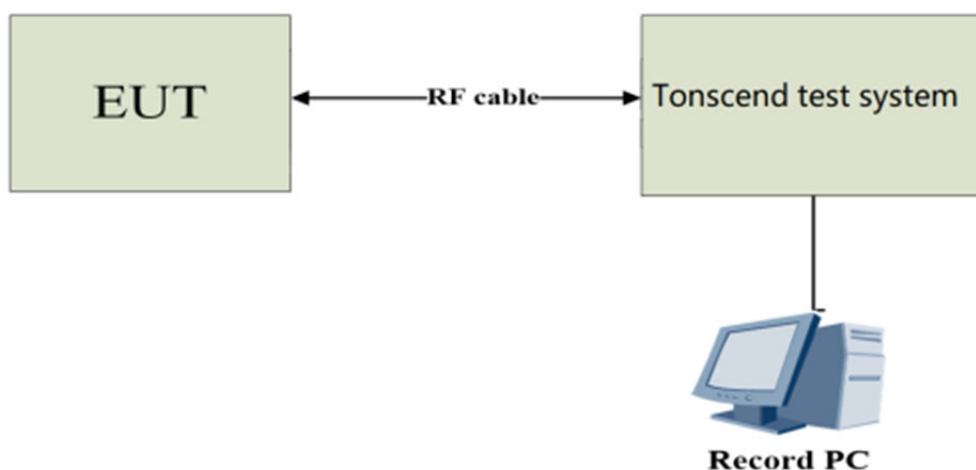
Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ : Test ☐ : No Test	

a) The EUT was directly connected to the tonscond test system and antenna output port as show in the block diagram below.

b) Spectrum analyser settings as following:

Spectrum Parameters	Setting
Span Frequency	>1.5 times the OBW bandwidth
RBW	3 kHz
VBW	10 kHz
Detector	RMS
Trace	RMS
Sweep Time	Auto

3.6.3 Test Setup



3.6.4 The Result

Test Mode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-16.16	≤8.00	PASS
11B	Ant1	2437	-16.62	≤8.00	PASS
11B	Ant1	2462	-16.58	≤8.00	PASS
11G	Ant1	2412	-18.33	≤8.00	PASS
11G	Ant1	2437	-18.07	≤8.00	PASS
11G	Ant1	2462	-18.52	≤8.00	PASS
11N20SISO	Ant1	2412	-18.48	≤8.00	PASS
11N20SISO	Ant1	2437	-18.43	≤8.00	PASS
11N20SISO	Ant1	2462	-19.15	≤8.00	PASS
11N40SISO	Ant1	2422	-20.28	≤8.00	PASS
11N40SISO	Ant1	2437	-21.43	≤8.00	PASS
11N40SISO	Ant1	2452	-20.60	≤8.00	PASS

Note: The duty cycle factor has been included in the test diagram.

Test Graphs



11B-Ant1-2412-PASS



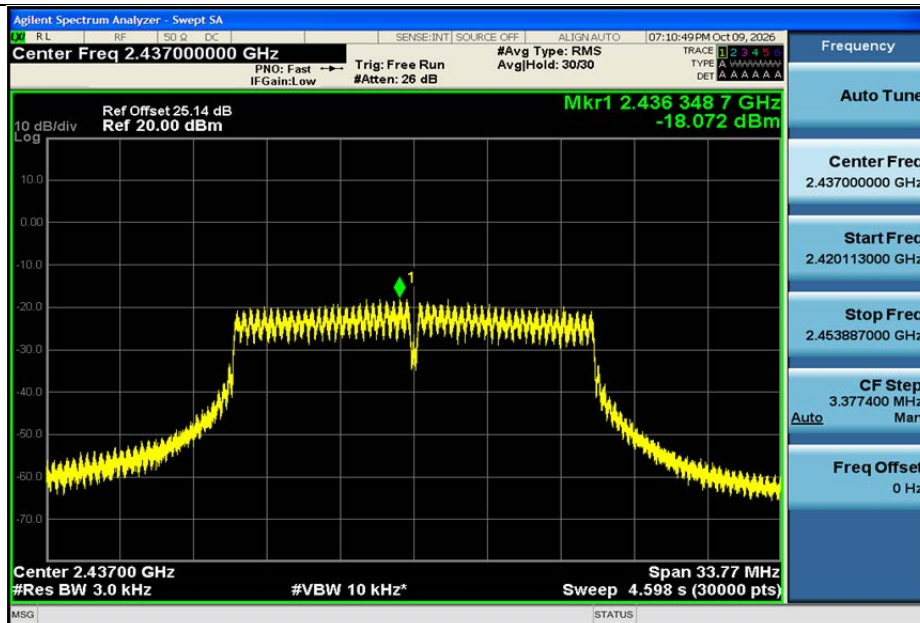
11B-Ant1-2437-PASS



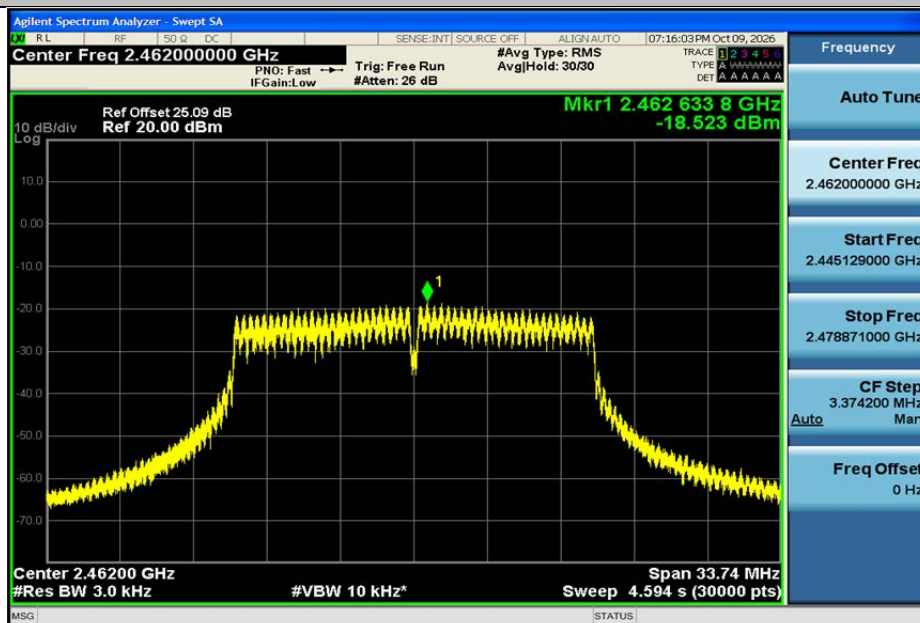
11B-Ant1-2462-PASS



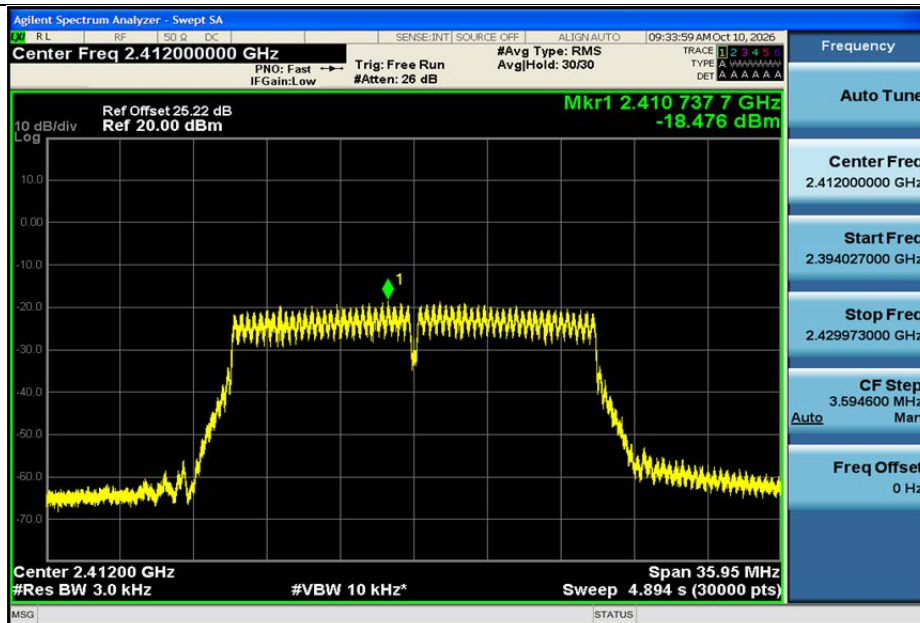
11G-Ant1-2412-PASS



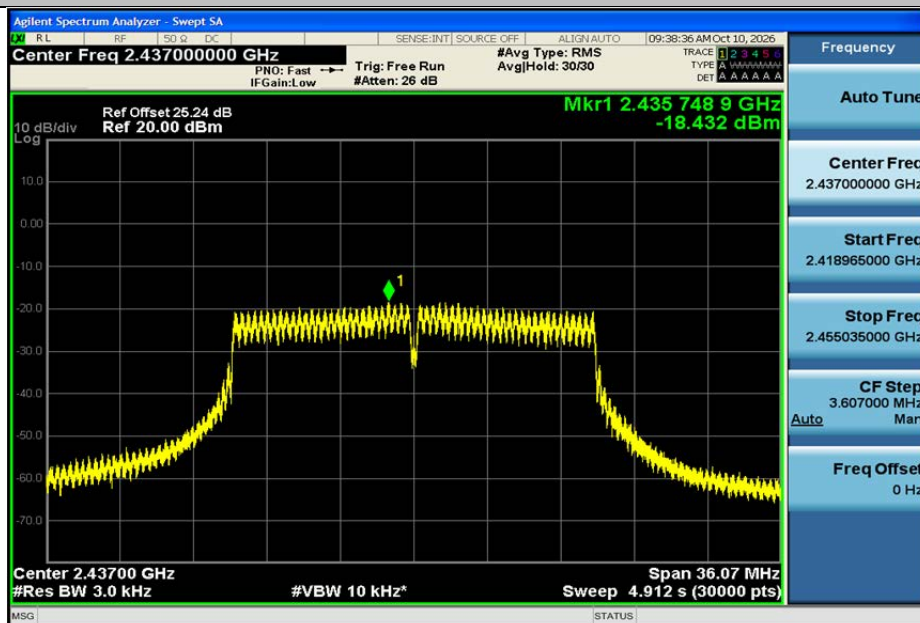
11G-Ant1-2437-PASS



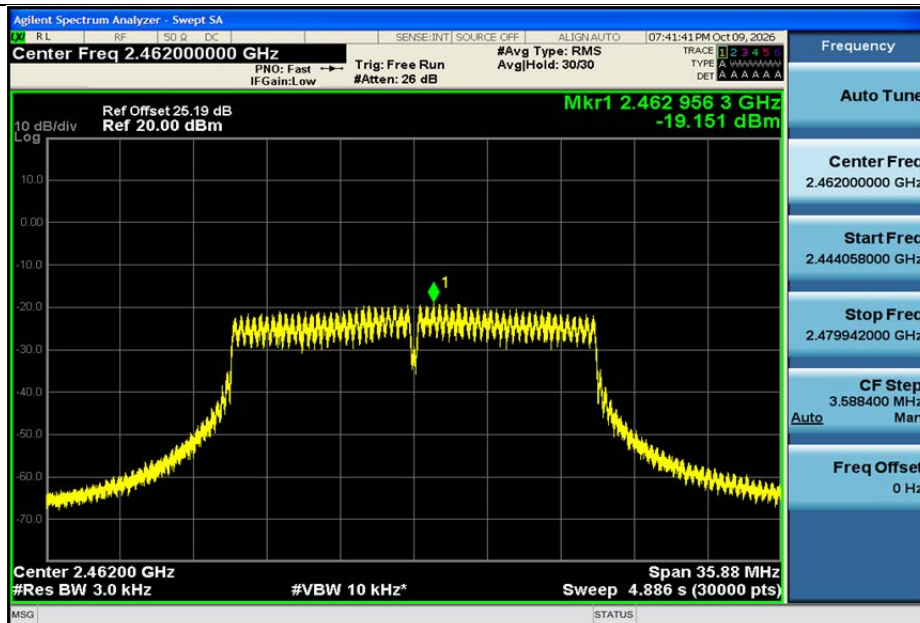
11G-Ant1-2462-PASS



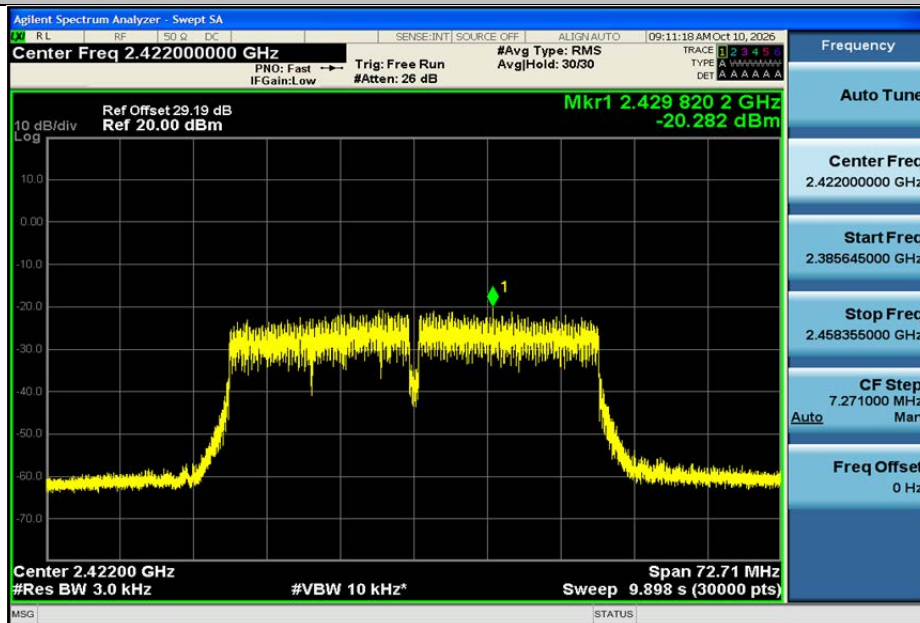
11N20SISO-Ant1-2412-PASS



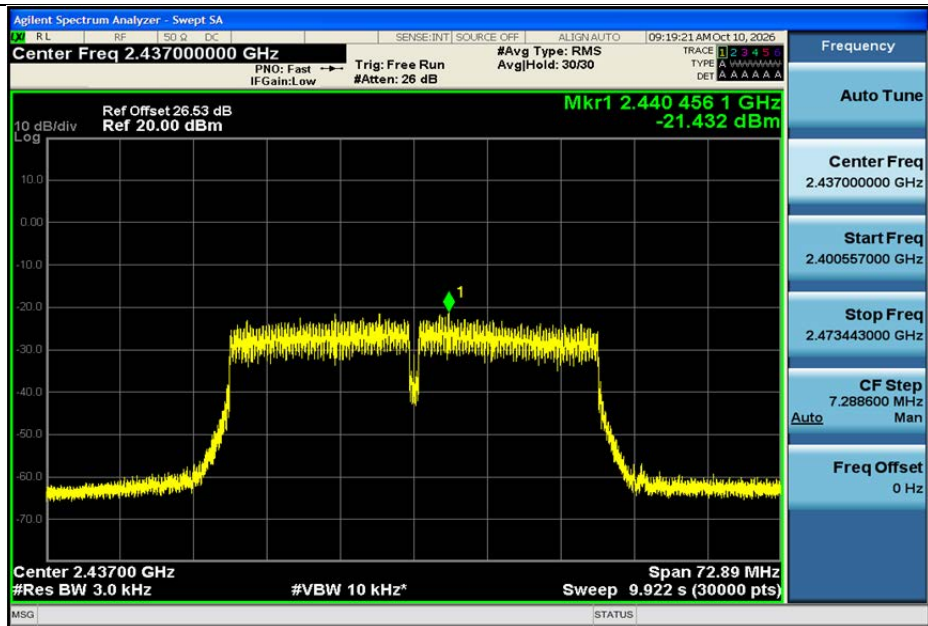
11N20SISO-Ant1-2437-PASS



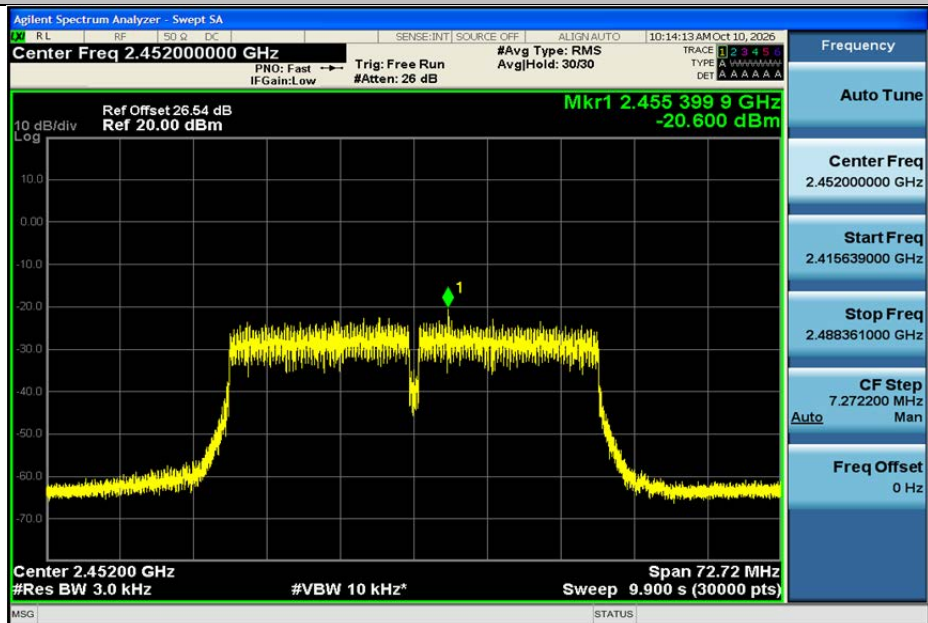
11N20SISO-Ant1-2462-PASS



11N40SISO-Ant1-2422-PASS



11N40SISO-Ant1-2437-PASS



11N40SISO-Ant1-2452-PASS

Statement

1. The report is invalid without the official seal or special seal of Shenzhen Haiyun Standard Technical Co., Ltd. (hereinafter referred to as the unit).
2. The report is invalid without the signature of the approver.
3. The report is invalid if altered arbitrarily.
4. The report shall not be partially copied without the written approval of the unit.
5. The reported test results are only valid for the tested samples.
6. If there is any objection to the test report, it shall be submitted to the test unit within 15 days from the date of receiving the report, and the overdue shall not be accepted.

Shenzhen Haiyun Standard Technical Co., Ltd.

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End of Test Report