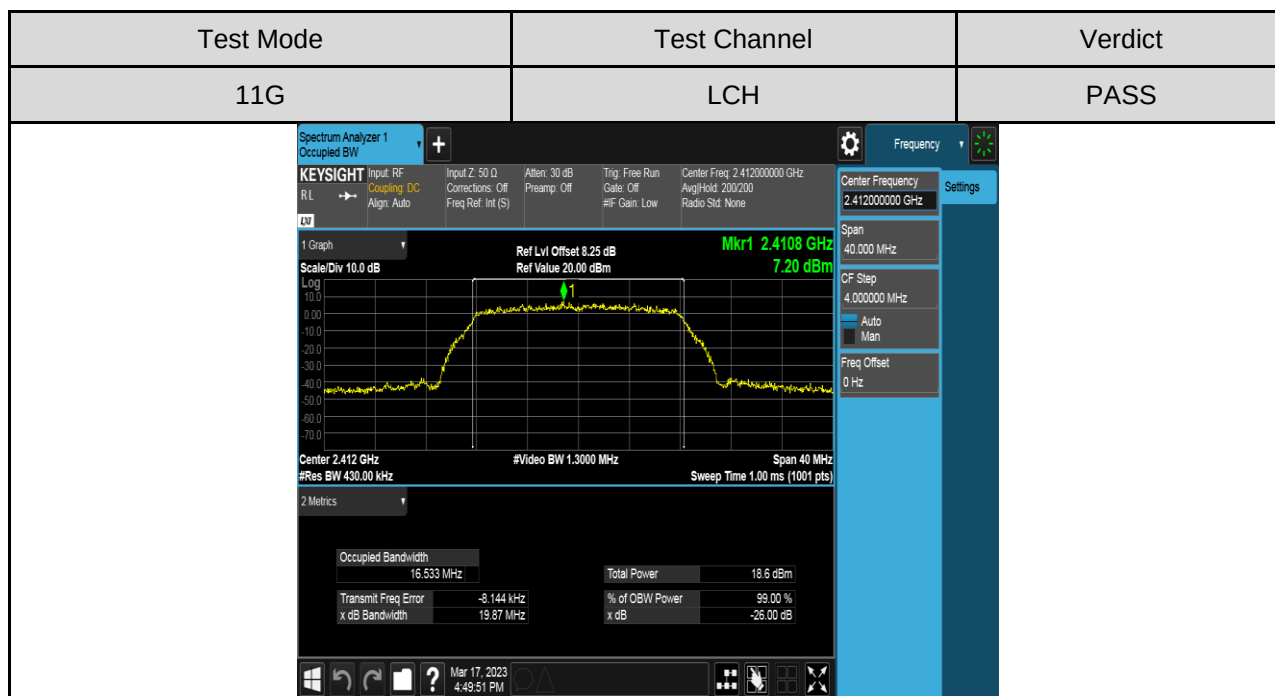
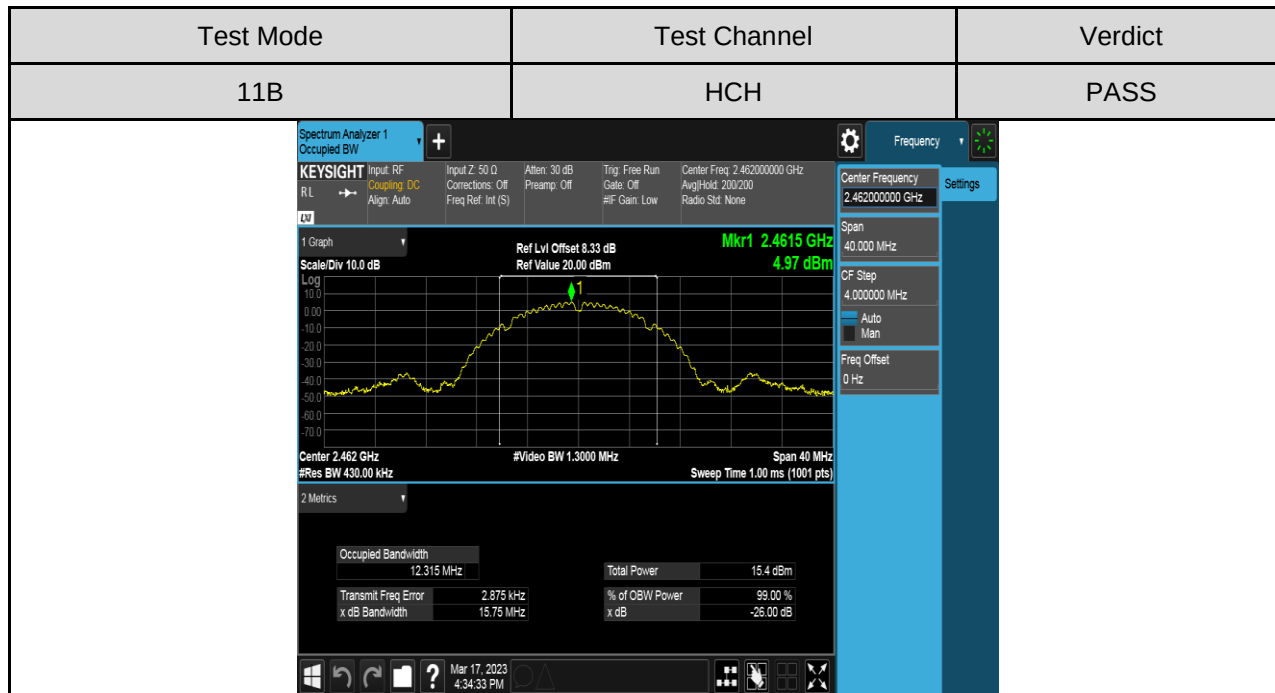
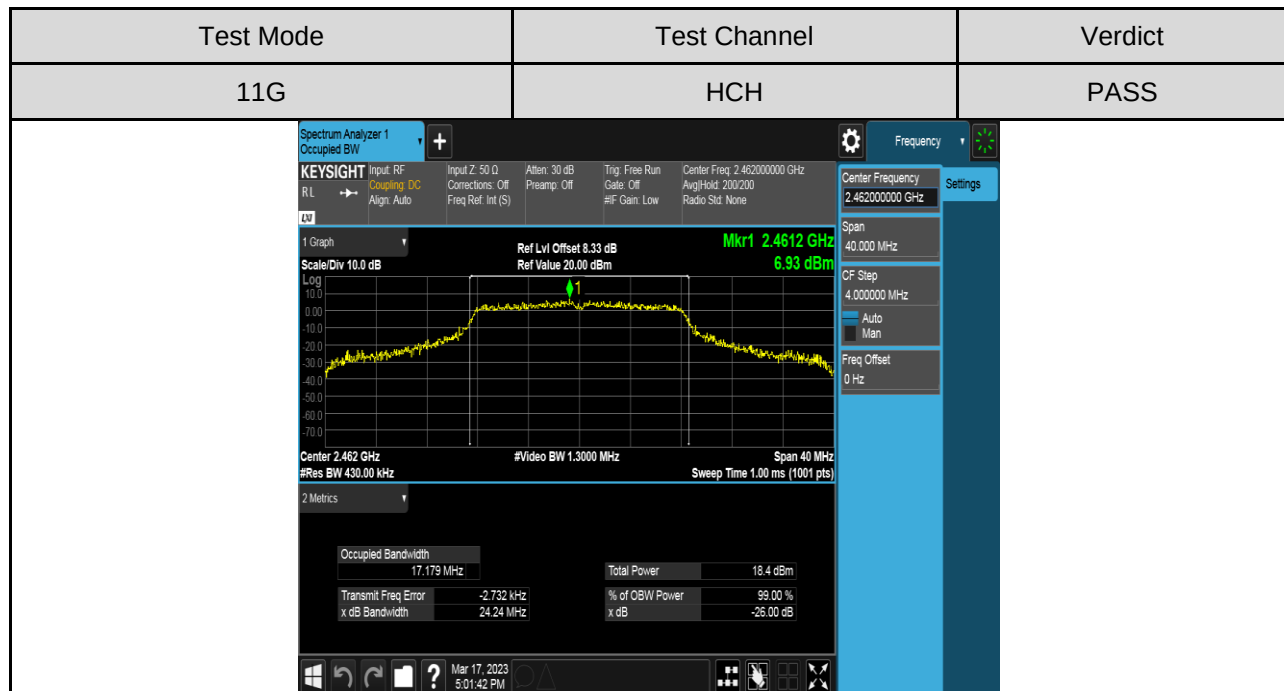
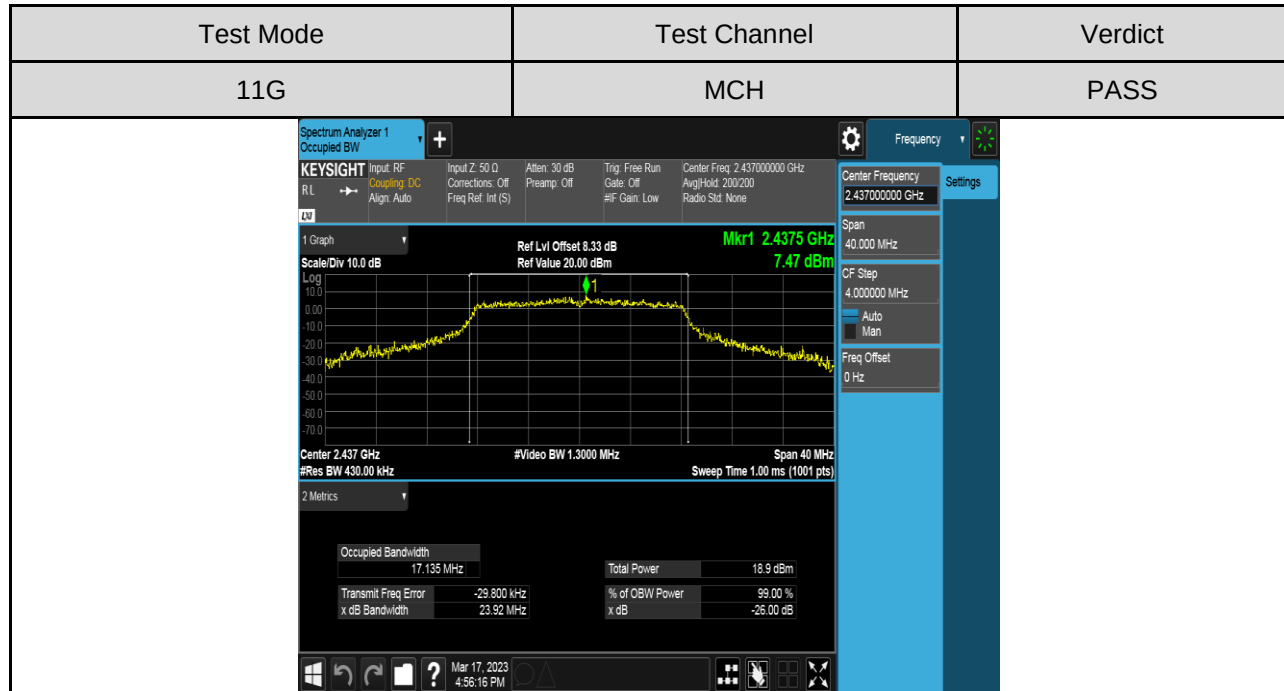
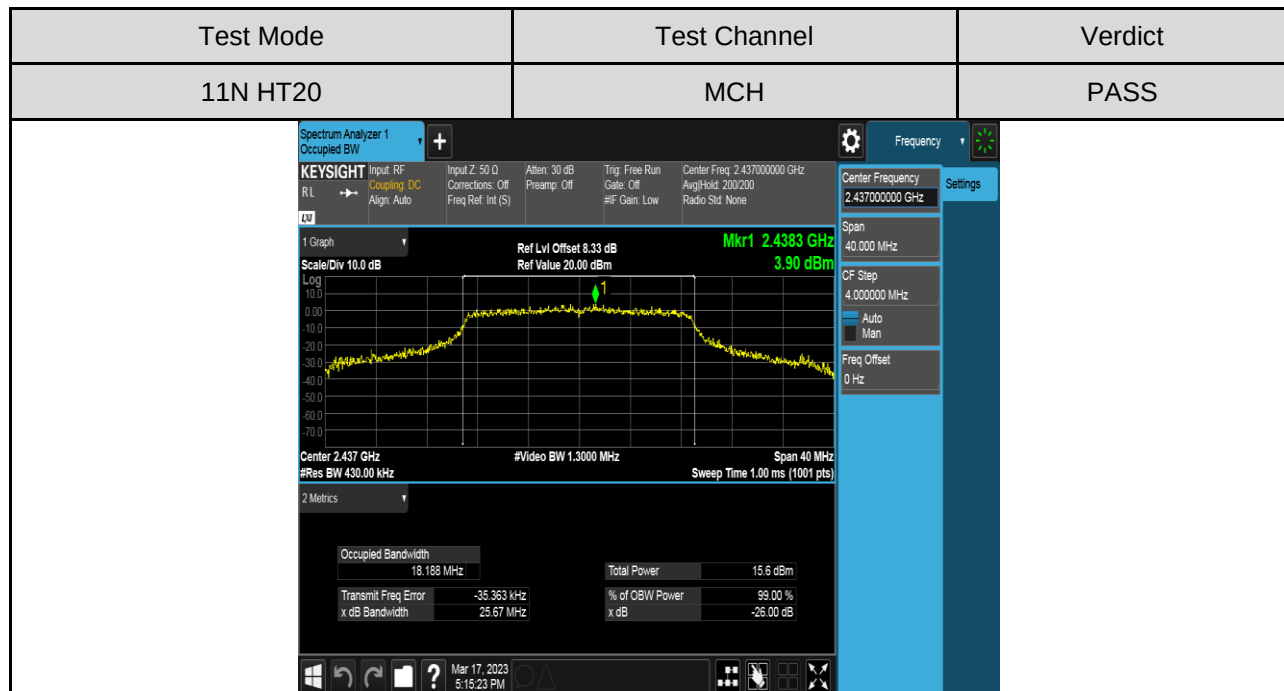
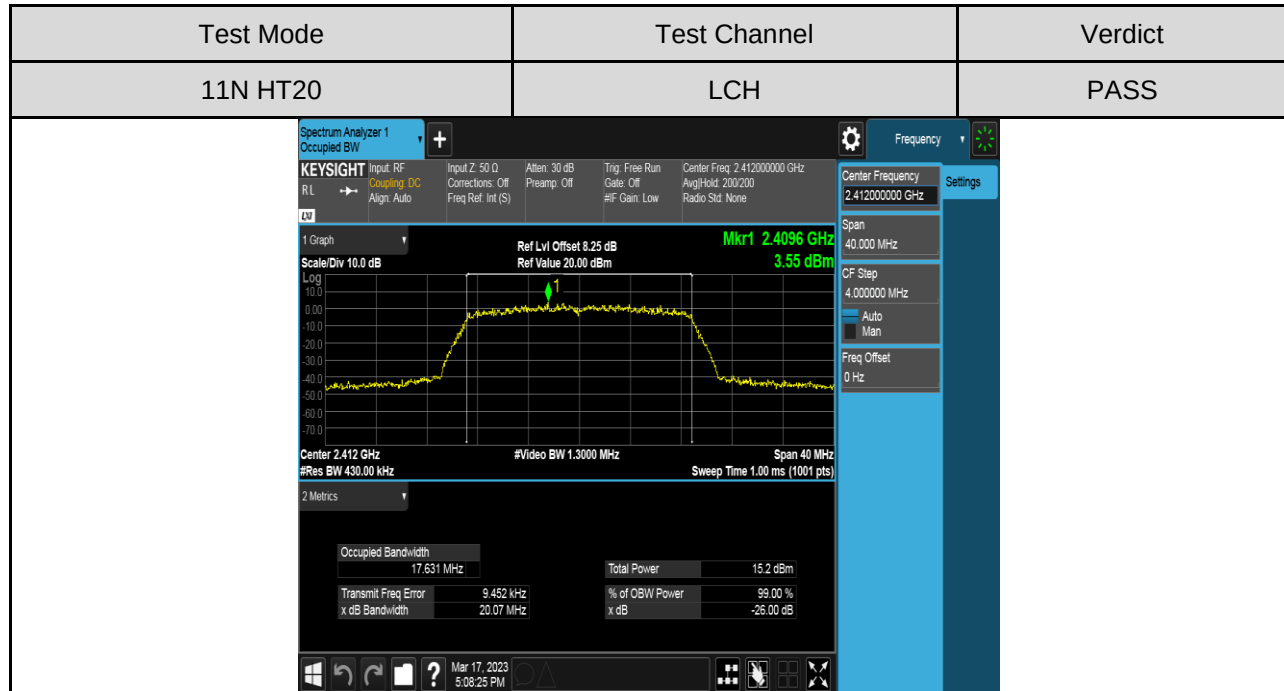
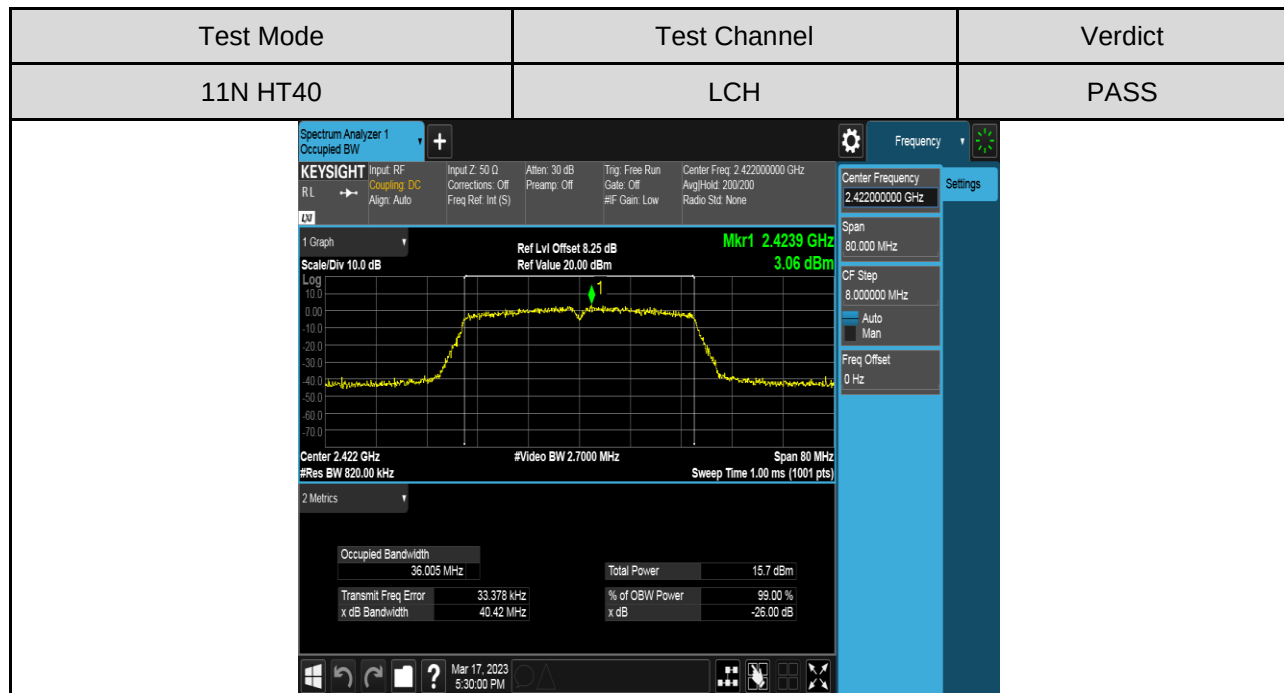
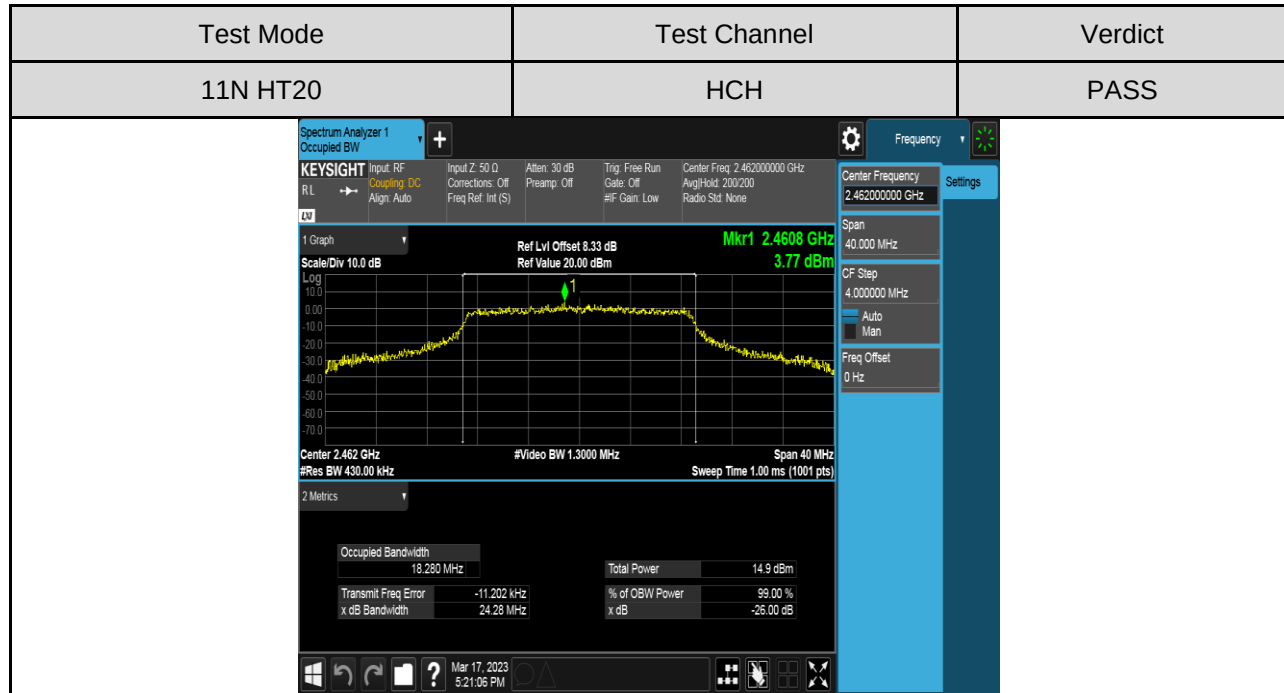
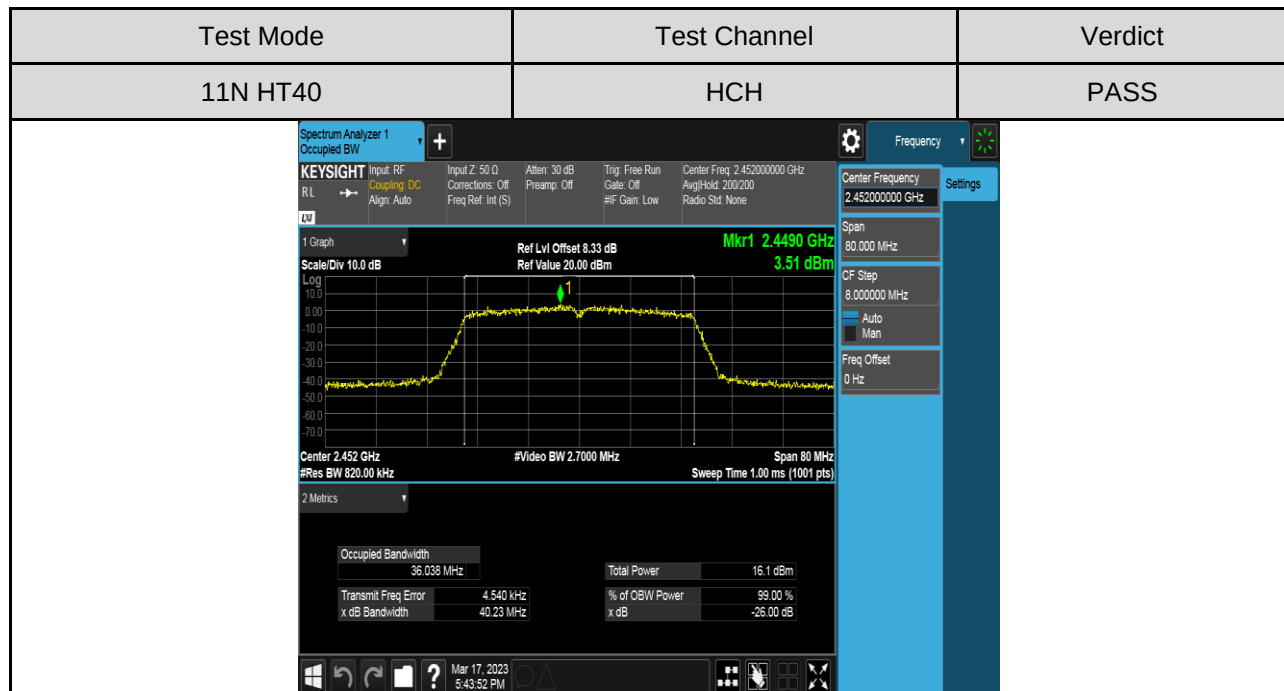
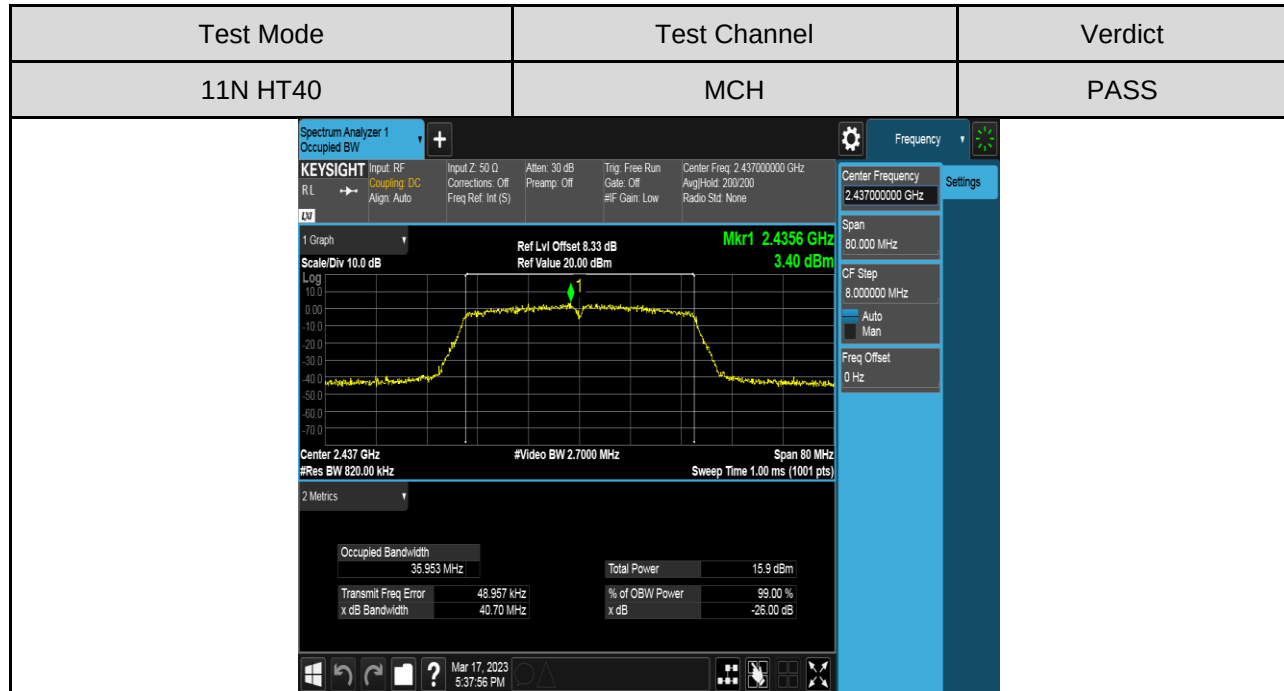


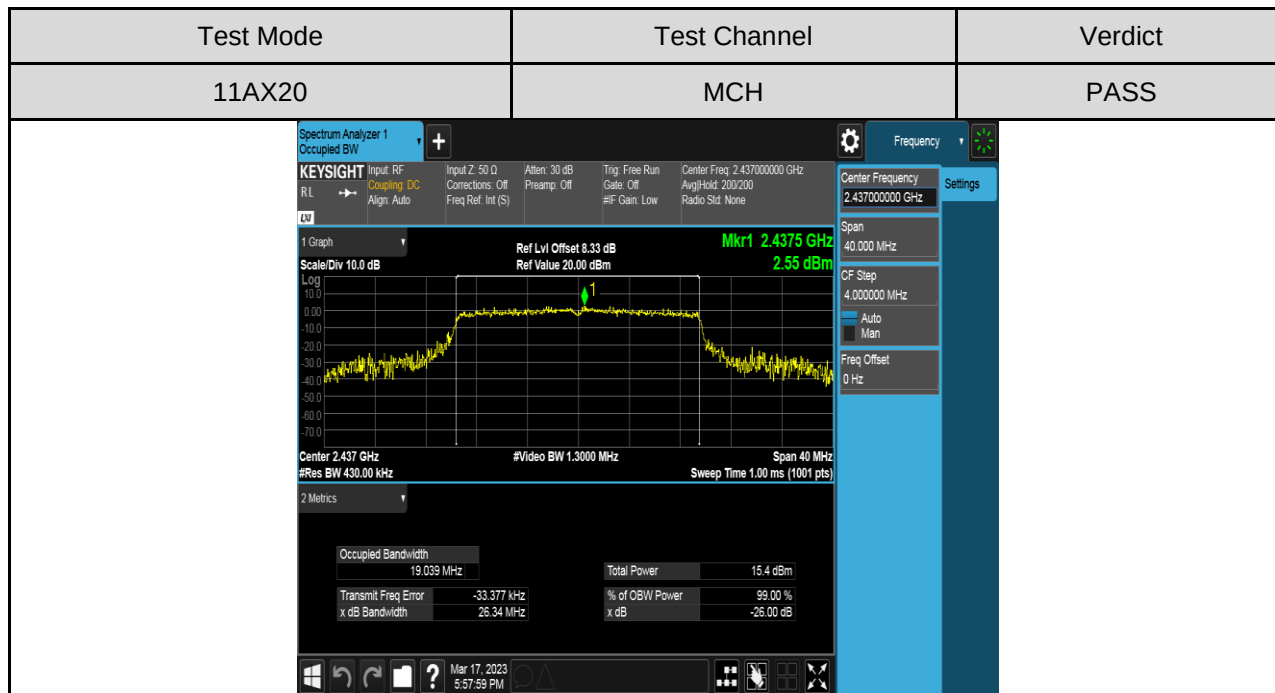
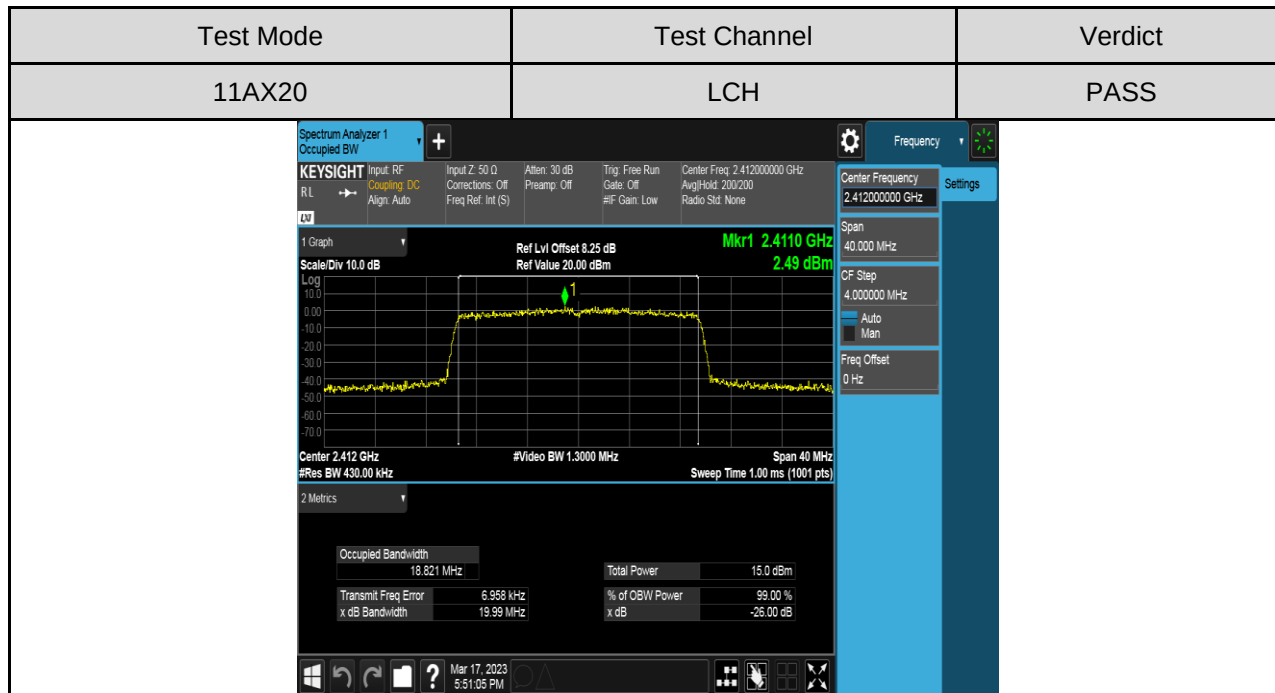


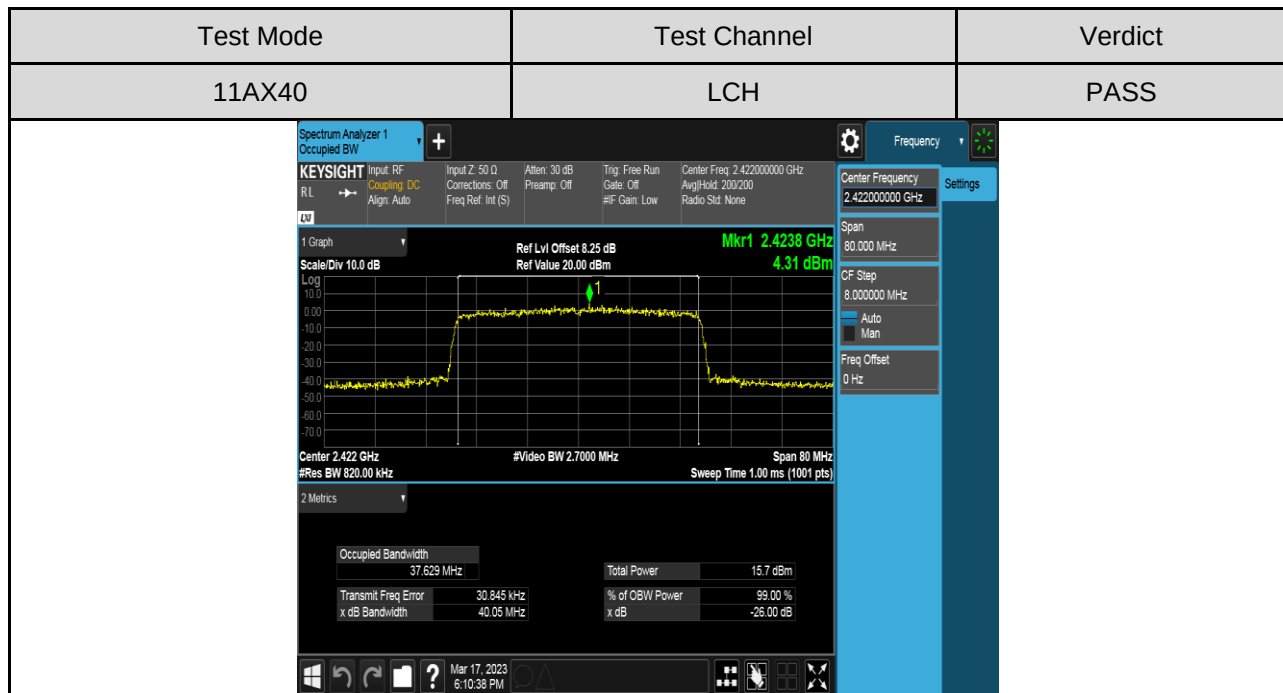
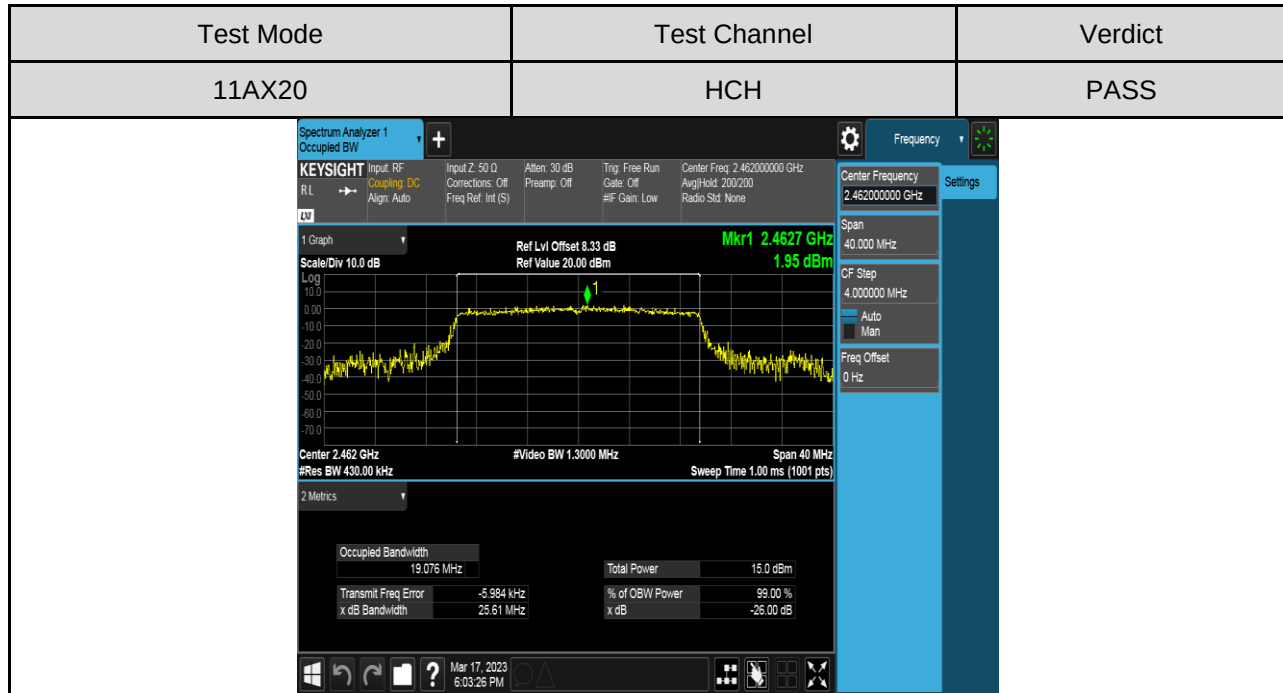


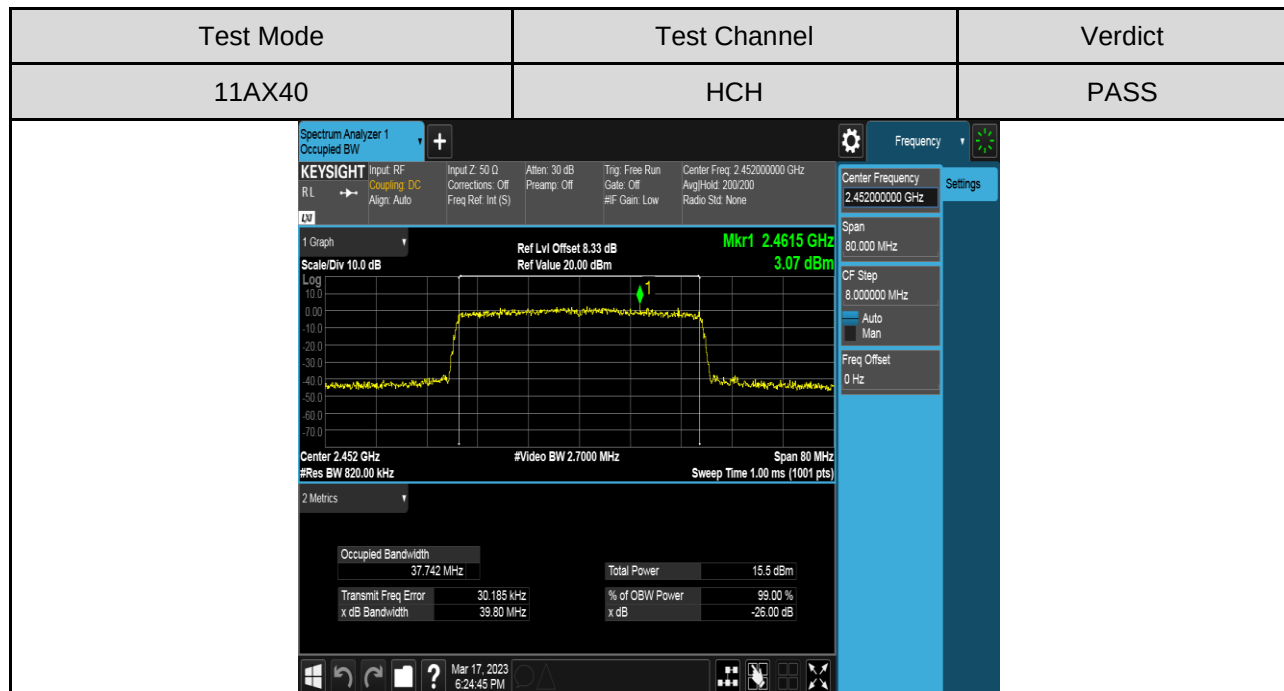
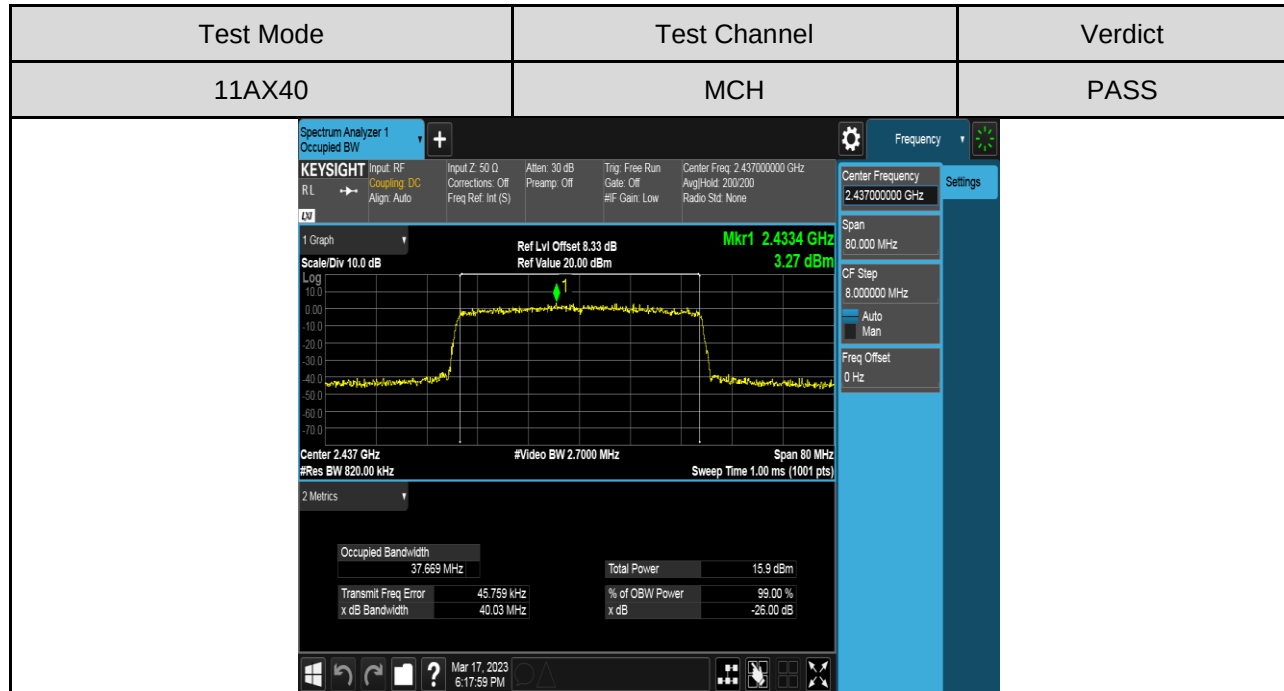






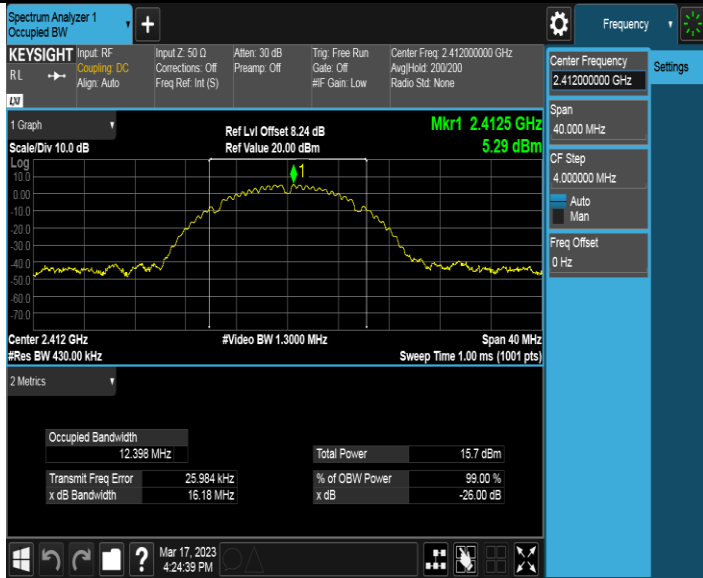




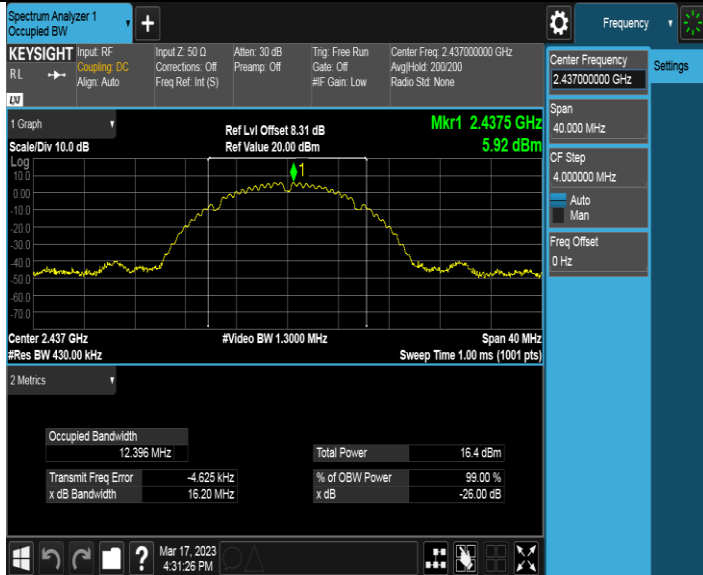


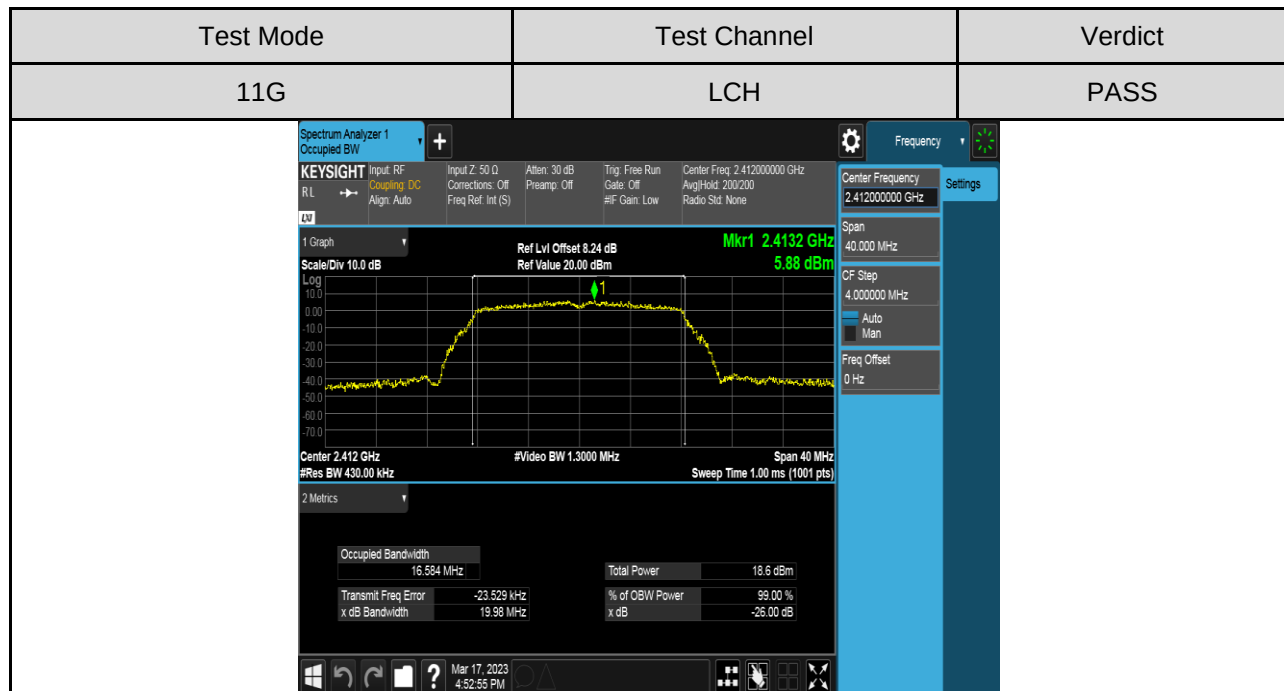
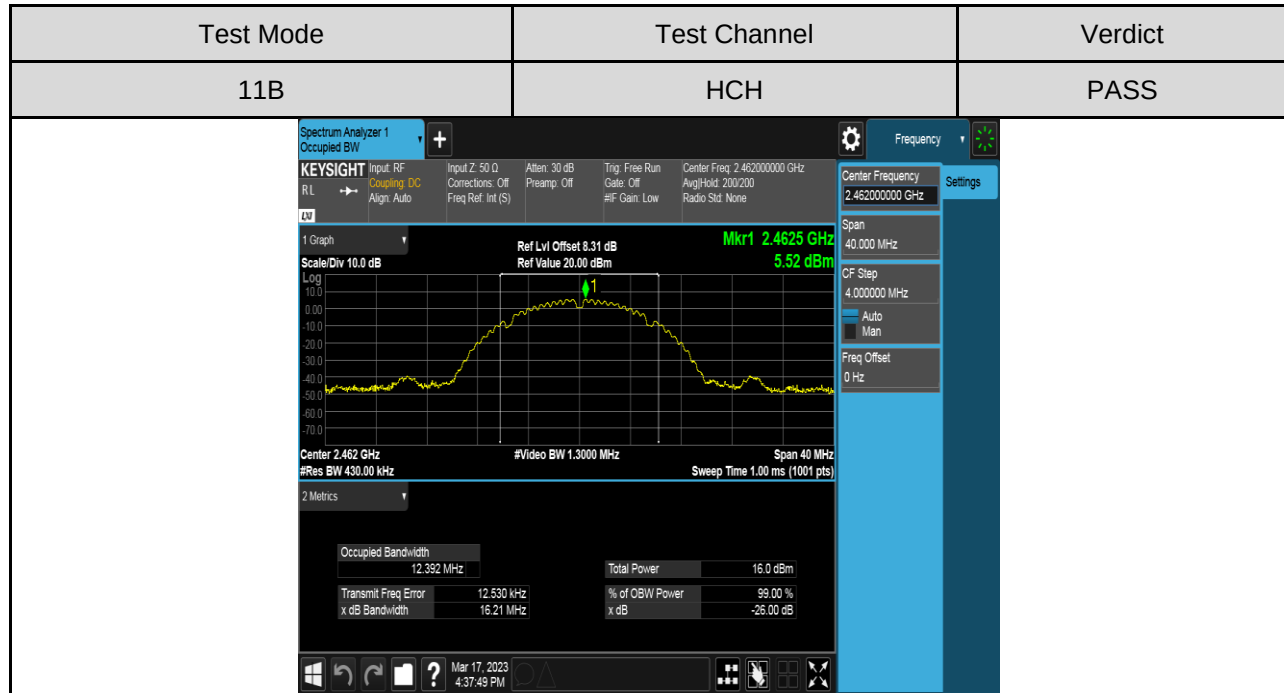
4) For 99% Bandwidth Antenna 2 Part:

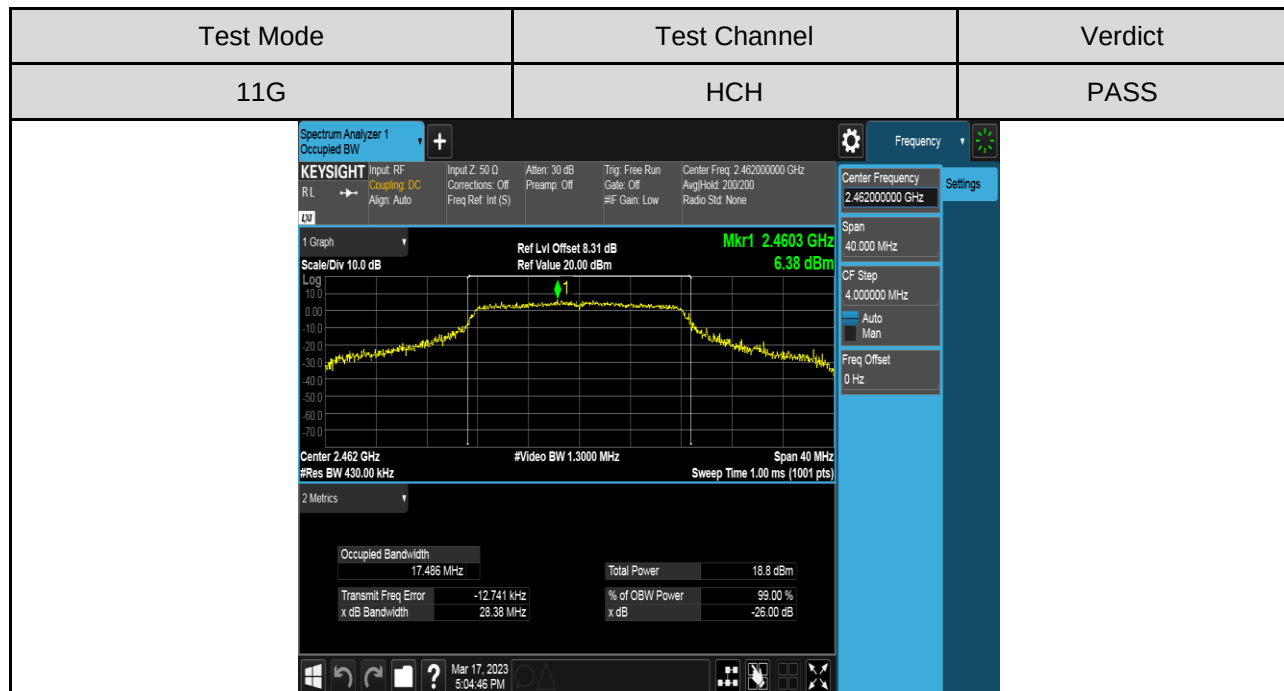
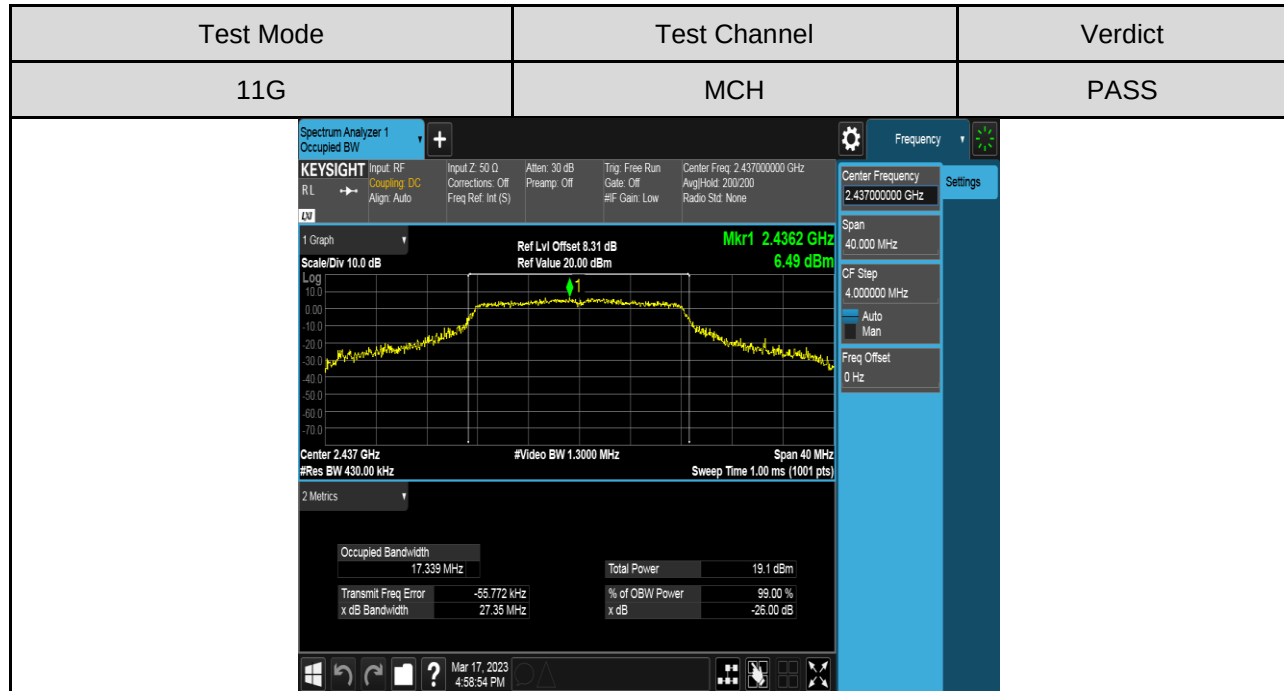
Test Mode	Test Channel	Verdict
11B	LCH	PASS

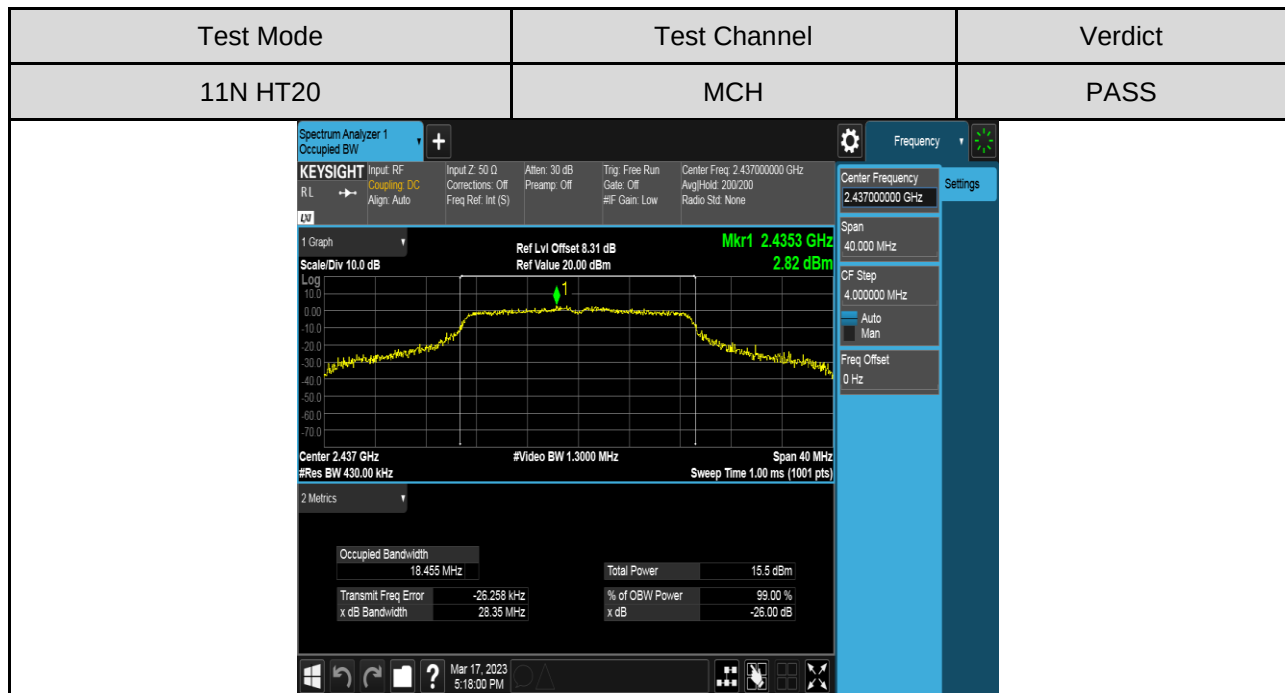
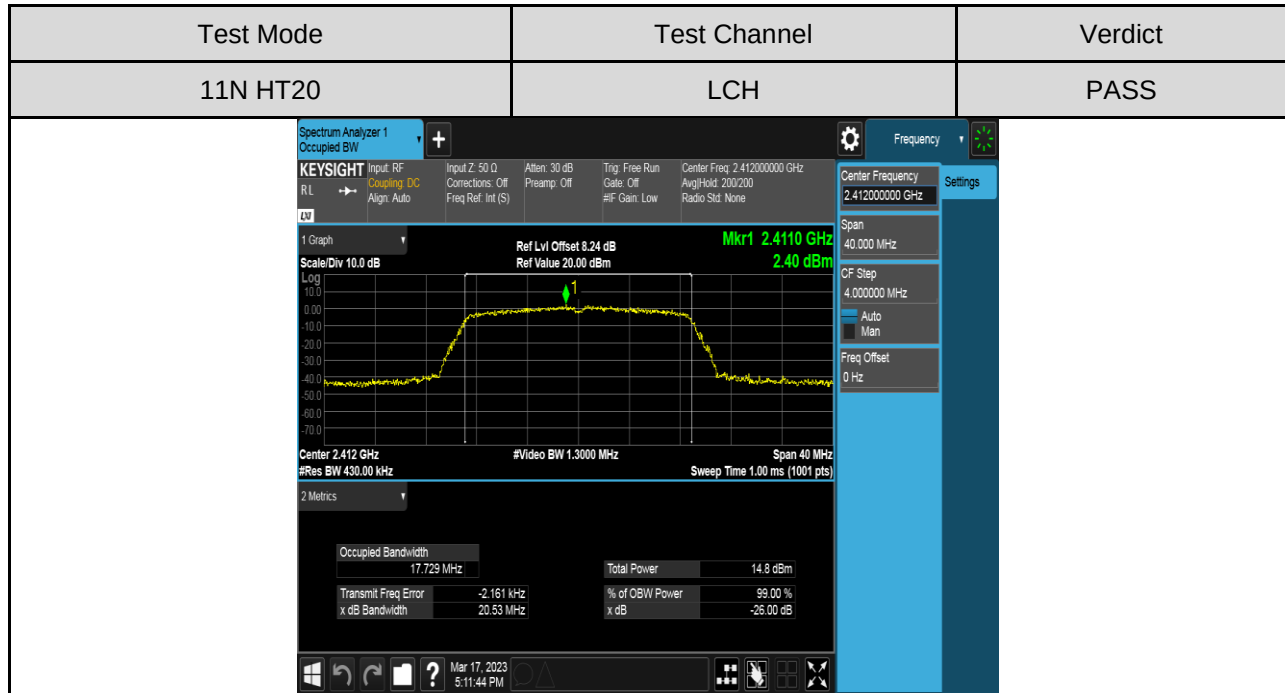


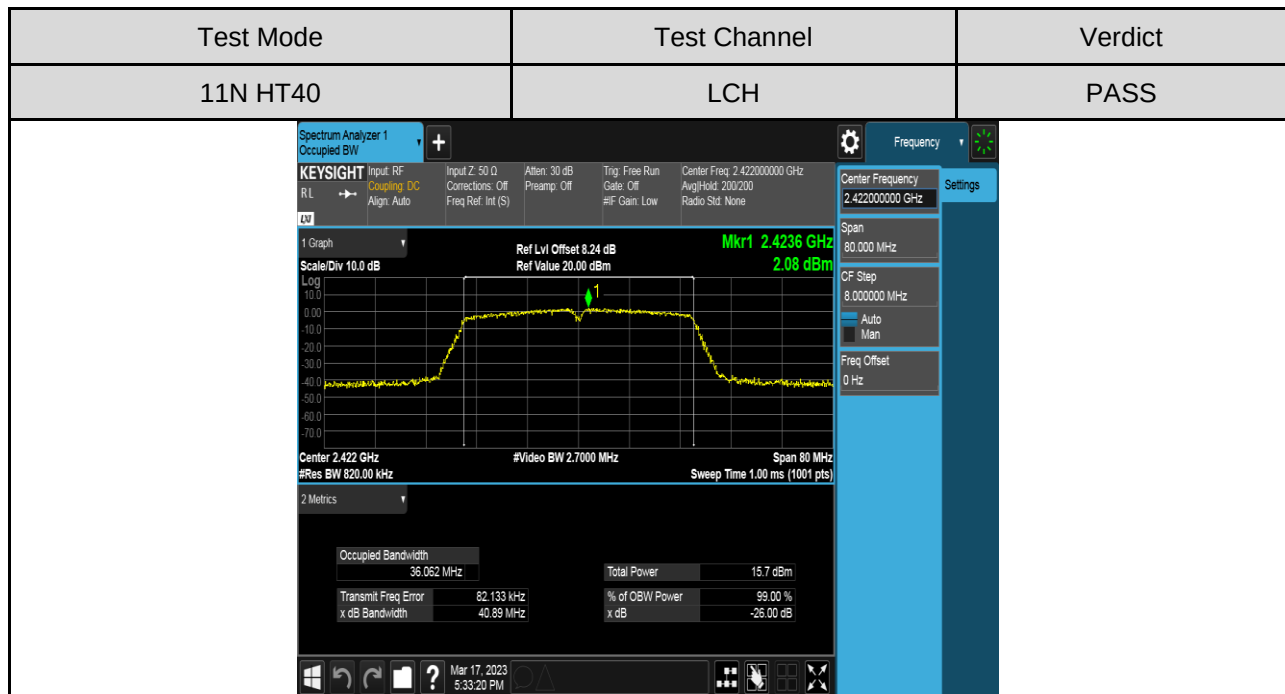
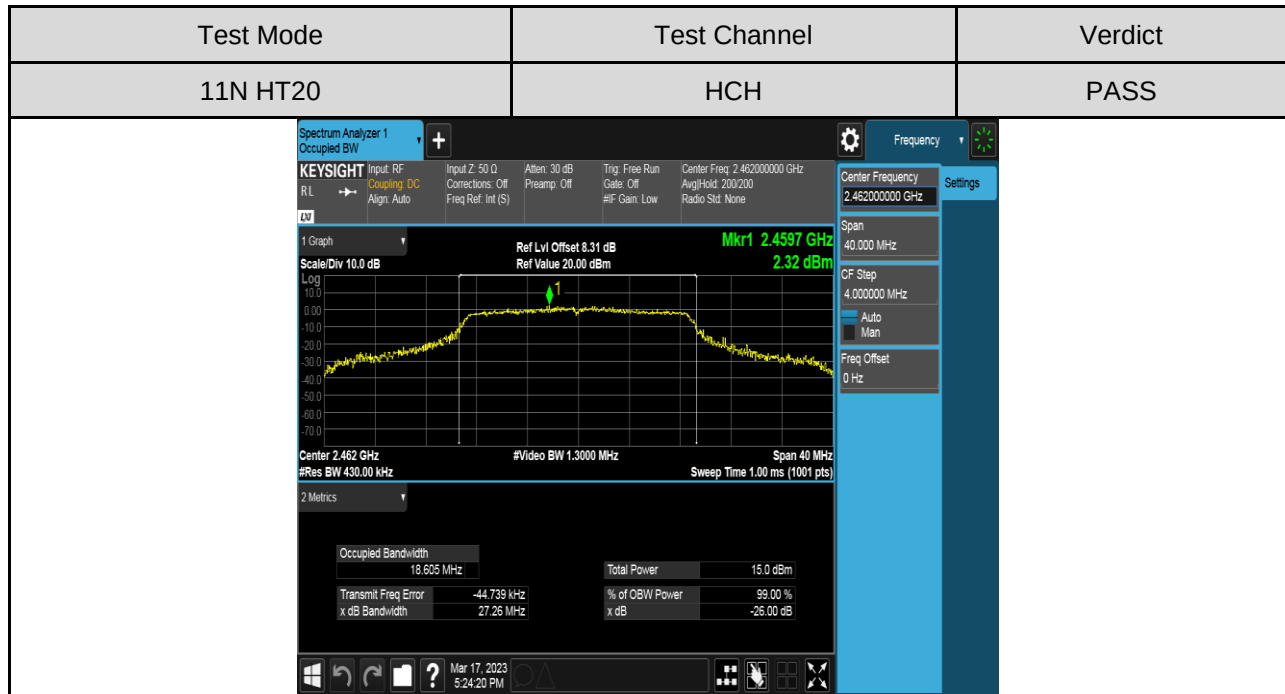
Test Mode	Test Channel	Verdict
11B	MCH	PASS

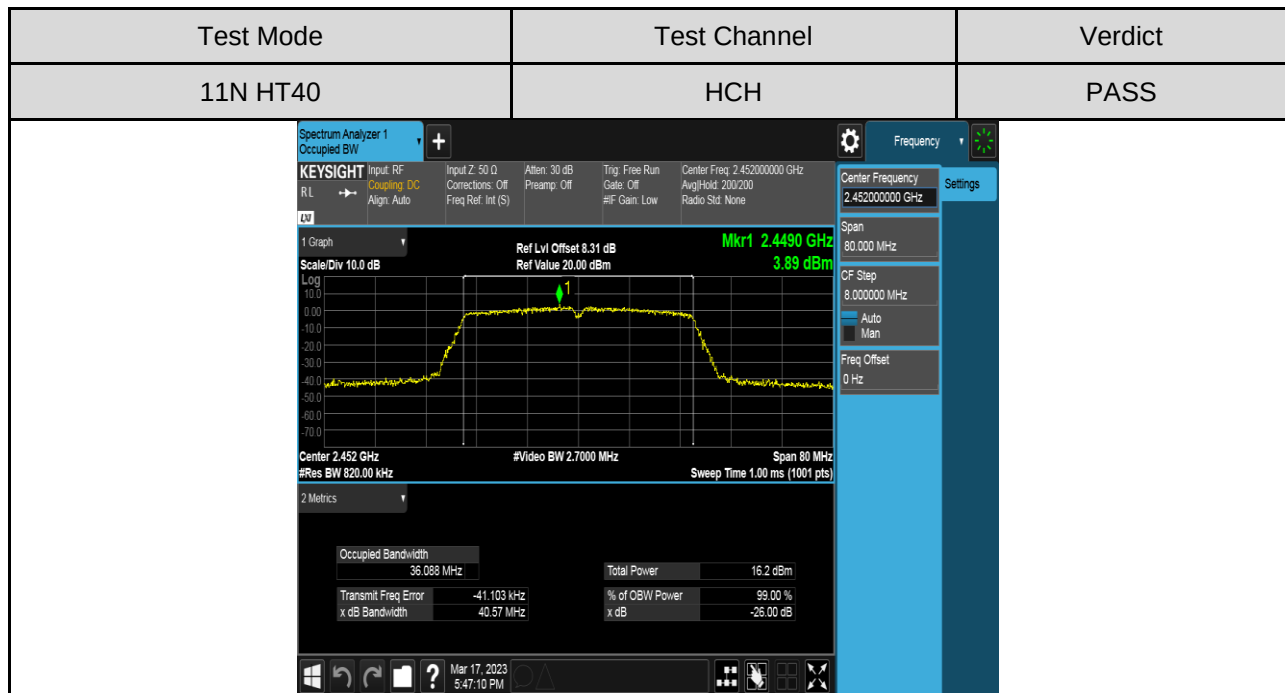
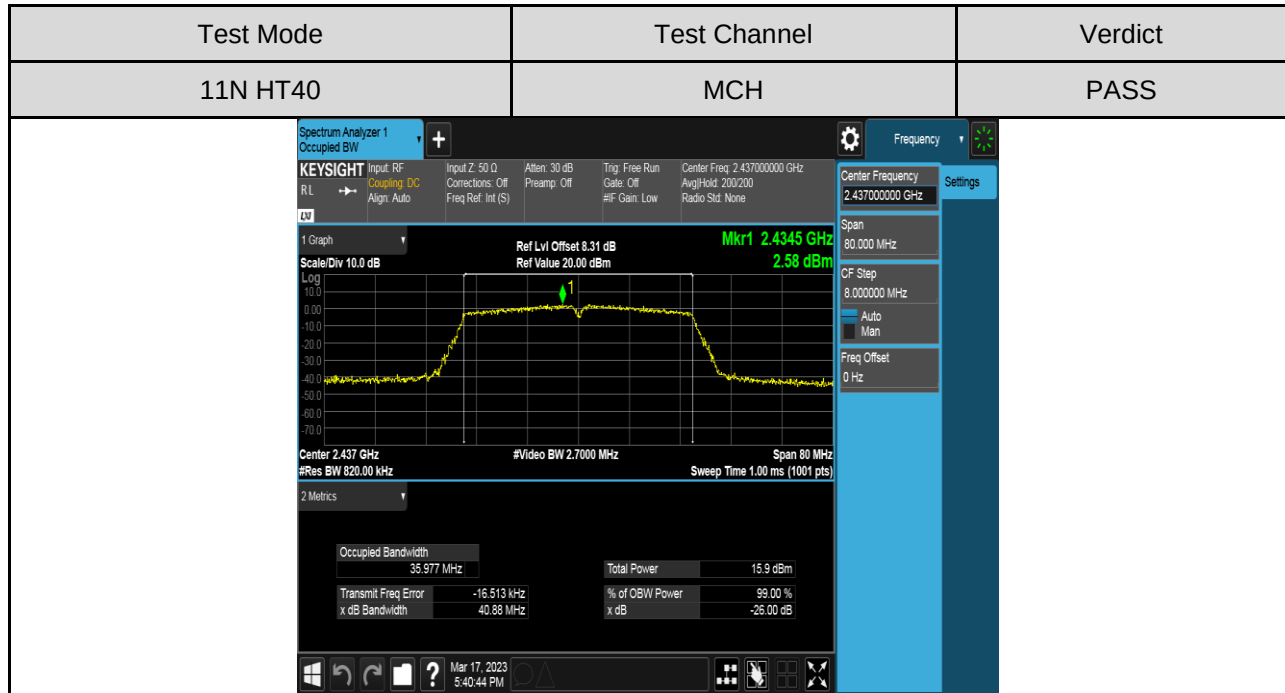


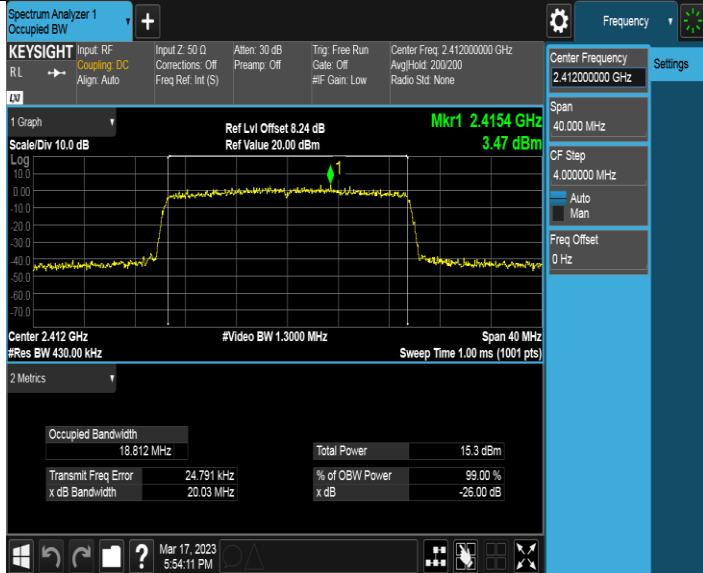


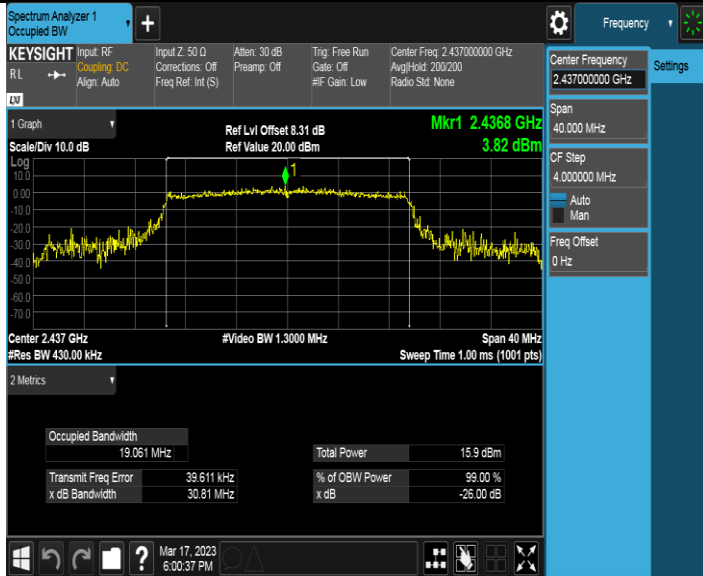


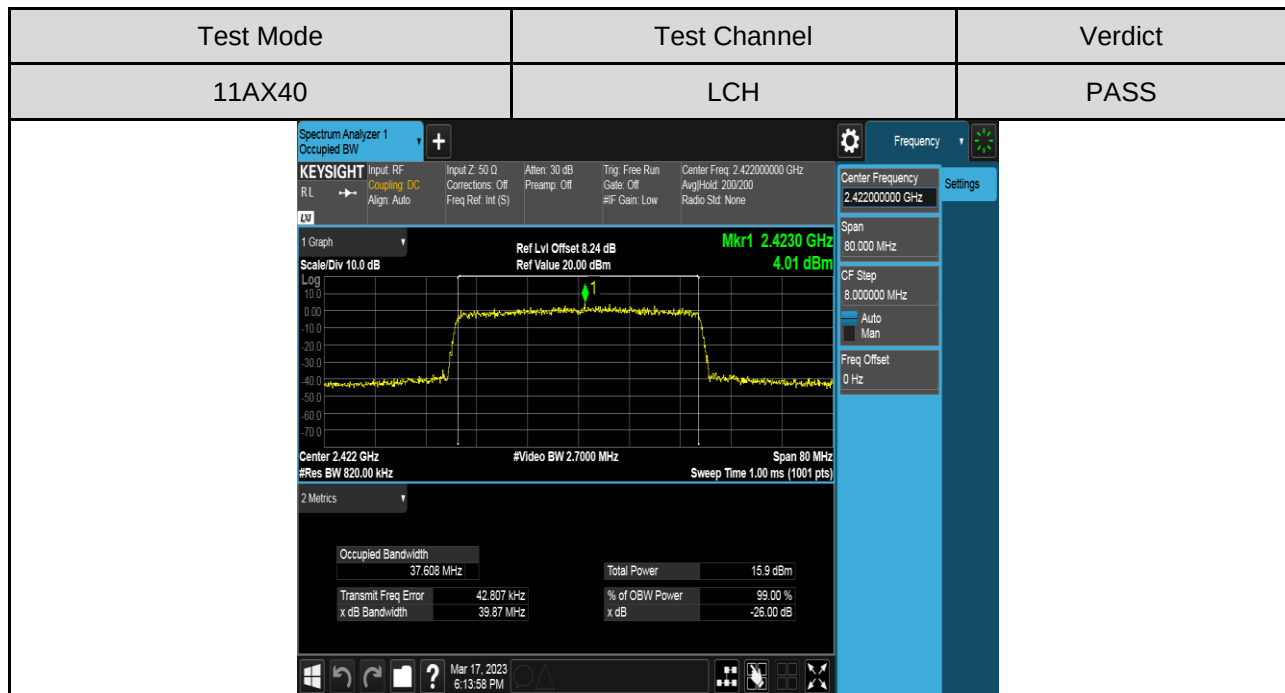
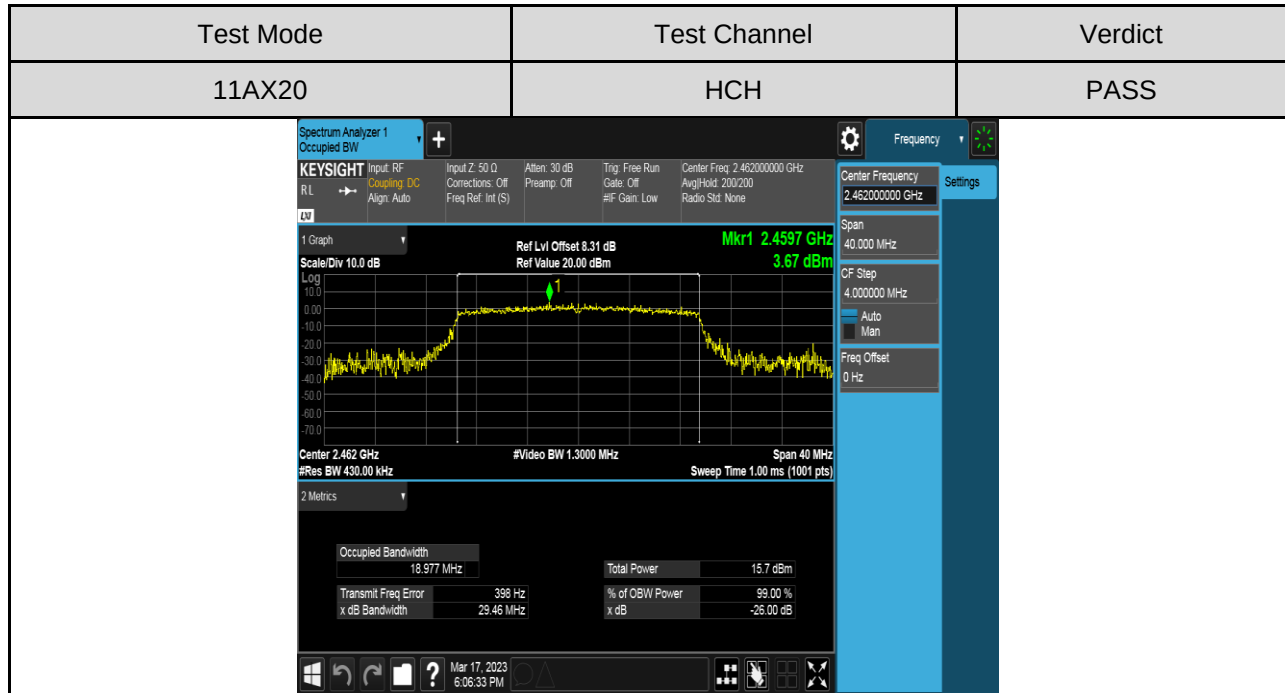


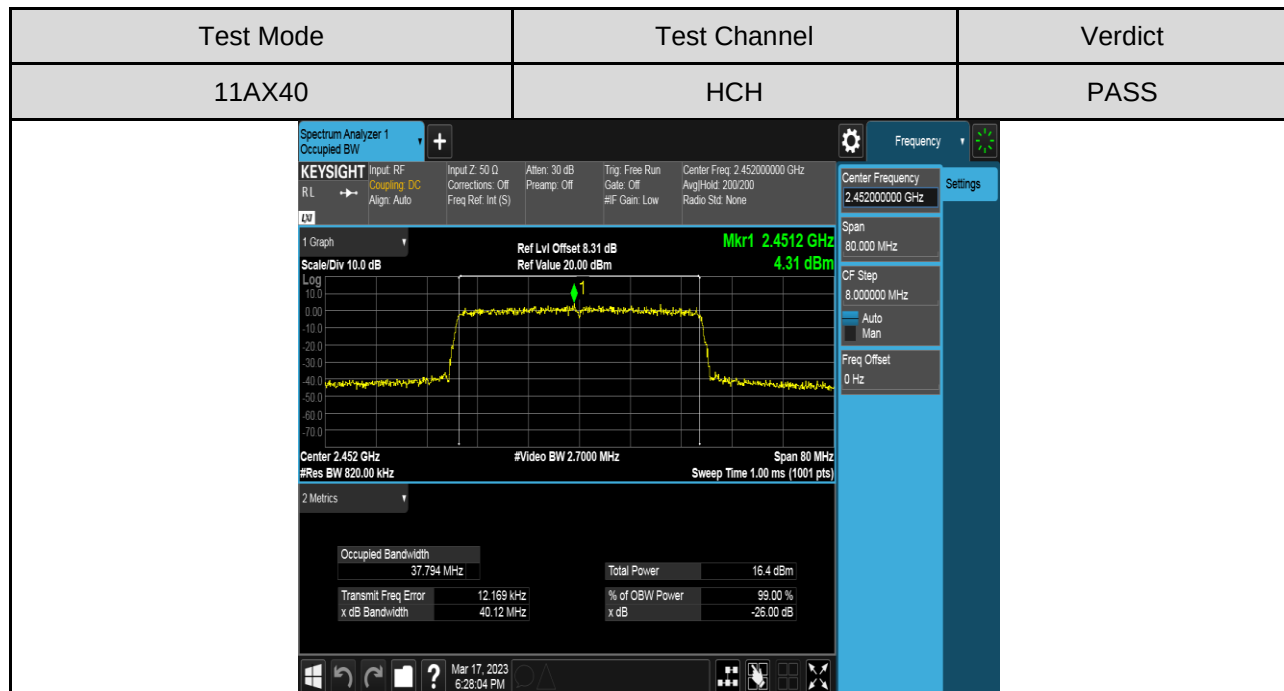
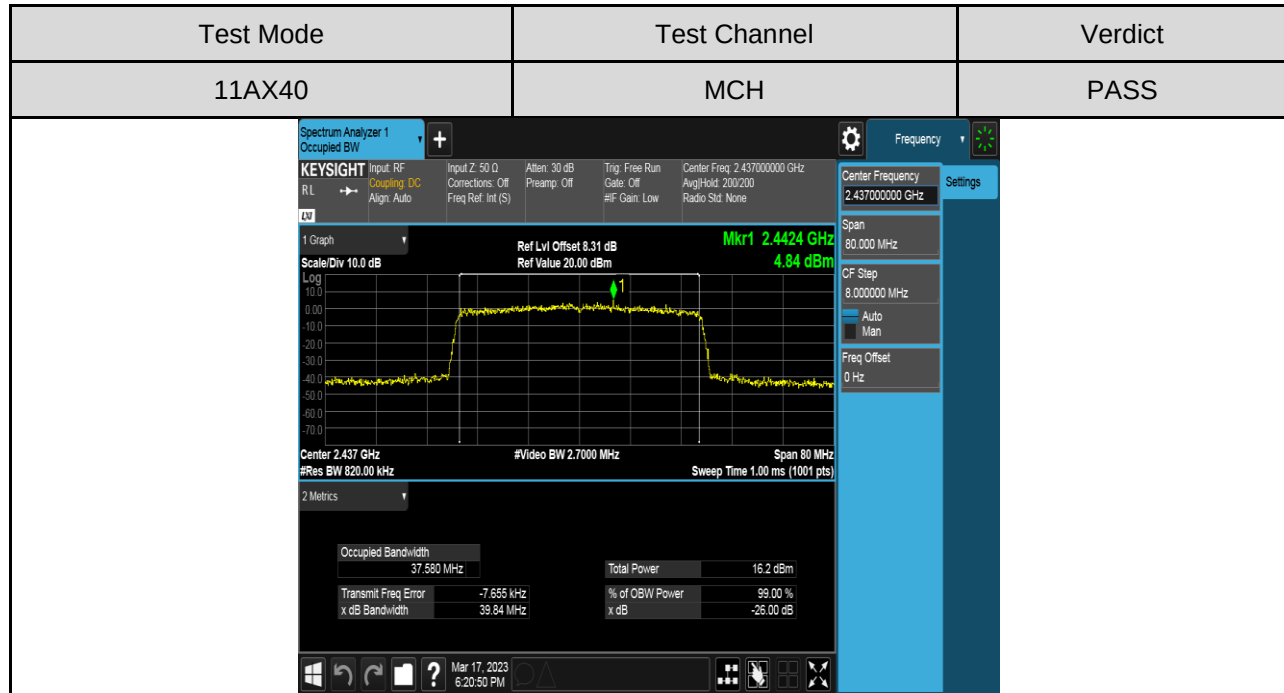




Test Mode	Test Channel	Verdict
11AX20	LCH	PASS
		

Test Mode	Test Channel	Verdict
11AX20	MCH	PASS
		





7.3. CONDUCTED OUTPUT POWER

LIMITS

FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.247(b)(3)	Output Power	1 watt or 30dBm	2400-2483.5
1. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi. 2. Limit=30dBm – (Directional gain -6)dBi Directional gain = $10\log [(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 6.05 > 6\text{dBi}$, where the NANT is the numbers of antenna. So, the power limit shall be reduced to $30 - (6.05-6) = 29.95 \text{ dBm}$			

TEST PROCEDURE

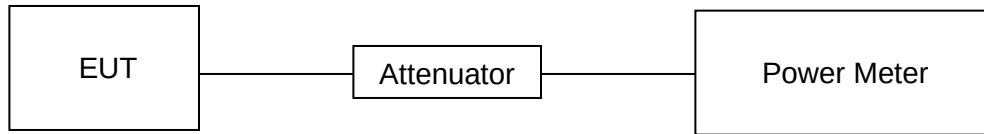
Place the EUT on the table and set it in the transmitting mode.

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Power sensor.

Measure the power of each channel.

AVG Detector use for AVG result.

TEST SETUP



TEST ENVIRONMENT

Temperature	24.2°C	Relative Humidity	52.5%
Atmosphere Pressure	102.1kpa	Test Voltage	DC5V

TEST RESULTS TABLE

Test Mode	Antenna	Frequency [MHz]	Average Power[dBm]	Verdict
11B	Ant1	2412	12.65	PASS
	Ant2	2412	12.95	PASS
	Ant1	2437	13.11	PASS
	Ant2	2437	13.60	PASS
	Ant1	2462	12.65	PASS
	Ant2	2462	13.22	PASS
11G	Ant1	2412	13.00	PASS
	Ant2	2412	13.13	PASS
	Ant1	2437	13.35	PASS
	Ant2	2437	13.79	PASS
	Ant1	2462	12.72	PASS
	Ant2	2462	13.44	PASS
11N20 MIMO	Ant1	2412	9.05	PASS
	Ant2	2412	9.11	PASS
	total	2412	12.09	PASS
	Ant1	2437	9.40	PASS
	Ant2	2437	9.77	PASS
	total	2437	12.60	PASS
	Ant1	2462	8.81	PASS
	Ant2	2462	9.31	PASS
	total	2462	12.08	PASS
11N40 MIMO	Ant1	2422	9.17	PASS
	Ant2	2422	10.45	PASS
	total	2422	12.87	PASS
	Ant1	2437	9.41	PASS
	Ant2	2437	10.68	PASS
	total	2437	13.10	PASS
	Ant1	2452	9.52	PASS
	Ant2	2452	10.84	PASS
	total	2452	13.24	PASS
11AX20 MIMO	Ant1	2412	9.10	PASS
	Ant2	2412	9.29	PASS
	total	2412	12.21	PASS
	Ant1	2437	9.37	PASS
	Ant2	2437	9.94	PASS
	total	2437	12.67	PASS
	Ant1	2462	9.16	PASS
	Ant2	2462	9.65	PASS
	total	2462	12.42	PASS
11AX40 MIMO	Ant1	2422	9.60	PASS
	Ant2	2422	9.93	PASS
	total	2422	12.78	PASS
	Ant1	2437	9.73	PASS

	Ant2	2437	10.15	PASS
	total	2437	12.96	PASS
	Ant1	2452	9.40	PASS
	Ant2	2452	10.35	PASS
	total	2452	12.91	PASS

Remark:

- 1) For all the test results has been adjusted the duty cycle factor.
- 2) For Correction Factor is refer to the result in section 7.1

7.4. POWER SPECTRAL DENSITY

LIMITS

FCC Part15 (15.247) Subpart C			
Section	Test Item	Limit	Frequency Range (MHz)
FCC §15.247 (e)	Power Spectral Density	8 dBm/3 kHz	2400-2483.5
1. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi. 2. Limit=30dBm – (Directional gain -6)dBi Directional gain = $10\log [(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 6.05 > 6\text{dBi}$, where the N_{ANT} is the numbers of antenna. So, the power limit shall be reduced to $8 - (6.05-6) = 7.95 \text{ dBm}$			

TEST PROCEDURE

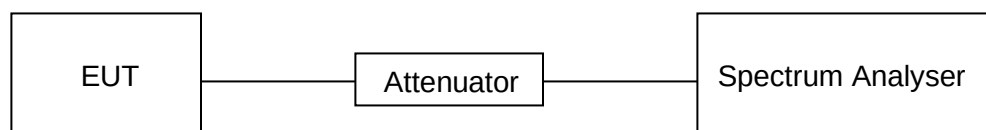
Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	$3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$
VBW	$\geq 3 \times \text{RBW}$
Span	$1.5 \times \text{DTS bandwidth}$
Trace	Max hold
Sweep time	Auto couple.

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

TEST SETUP



TEST ENVIRONMENT

Temperature	24.2°C	Relative Humidity	52.5%
Atmosphere Pressure	102.1kpa	Test Voltage	DC5V

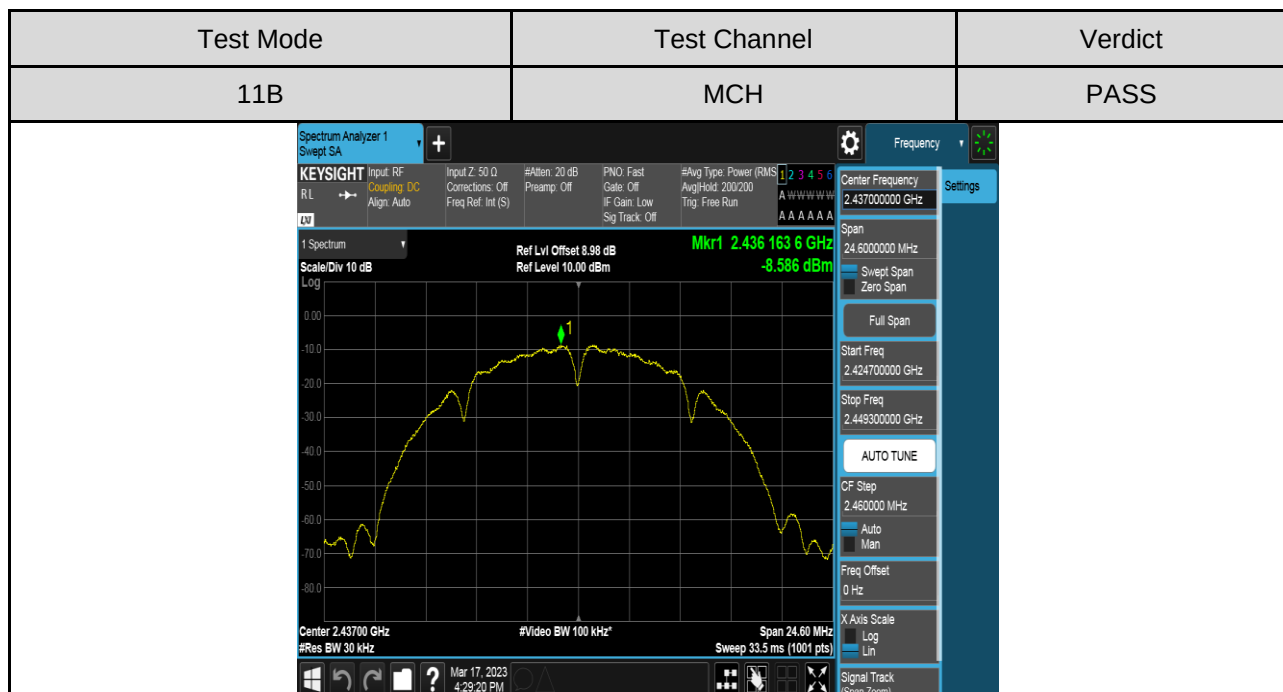
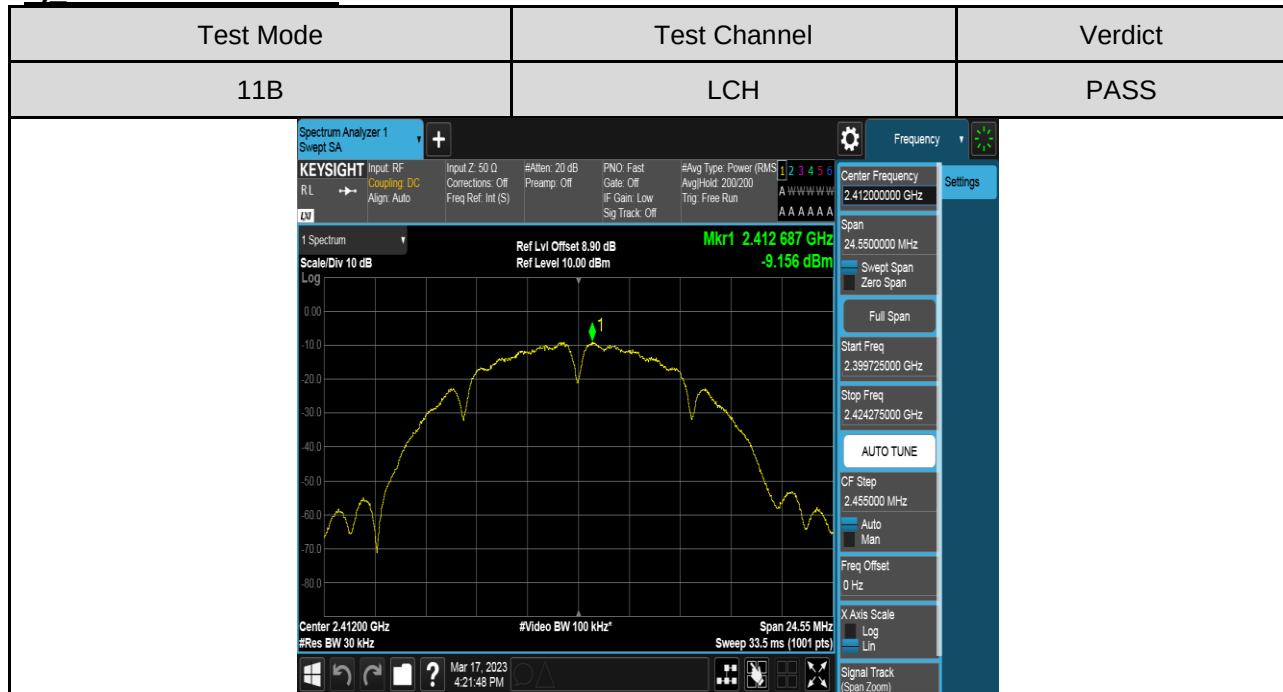
TEST RESULTS TABLE

TestMode	Antenna	Test Channel	Maximum Peak power spectral density (dBm/30kHz)	Verdict
11B	Ant1	LCH	-9.16	PASS
	Ant2	LCH	-8.45	PASS
	Ant1	MCH	-8.59	PASS
	Ant2	MCH	-8.15	PASS
	Ant1	HCH	-8.87	PASS
	Ant2	HCH	-8.4	PASS
11G	Ant1	LCH	-10.68	PASS
	Ant2	LCH	-10.4	PASS
	Ant1	MCH	-9.94	PASS
	Ant2	MCH	-9.87	PASS
	Ant1	HCH	-10.83	PASS
	Ant2	HCH	-9.49	PASS
11N20MIMO	Ant1	LCH	-14.82	PASS
	Ant2	LCH	-14.73	PASS
	total	LCH	-11.76	PASS
	Ant1	MCH	-14.86	PASS
	Ant2	MCH	-14.06	PASS
	total	MCH	-11.43	PASS
	Ant1	HCH	-15.51	PASS
	Ant2	HCH	-14.81	PASS
11N40MIMO	total	HCH	-12.14	PASS
	Ant1	LCH	-17.93	PASS
	Ant2	LCH	-16.79	PASS
	total	LCH	-14.31	PASS
	Ant1	MCH	-17.51	PASS
	Ant2	MCH	-16.19	PASS
	total	MCH	-13.79	PASS
	Ant1	HCH	-17.45	PASS
11AX20MIMO	Ant2	HCH	-16.45	PASS
	total	HCH	-13.91	PASS
	Ant1	LCH	-13.72	PASS
	Ant2	LCH	-13.33	PASS
	total	LCH	-10.51	PASS
	Ant1	MCH	-13.75	PASS
	Ant2	MCH	-12.1	PASS
	total	MCH	-9.84	PASS
11AX40MIMO	Ant1	HCH	-14.64	PASS
	Ant2	HCH	-12.74	PASS
	total	HCH	-10.58	PASS
	Ant1	LCH	-16.8	PASS
	Ant2	LCH	-16.96	PASS

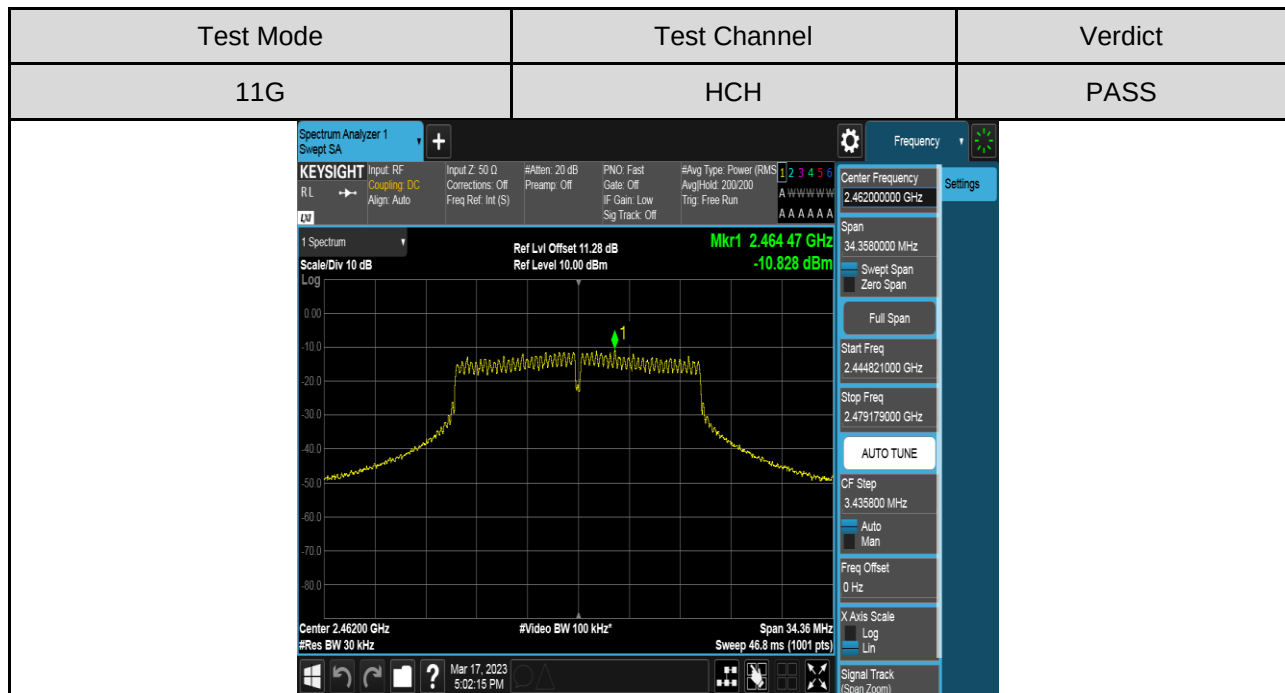
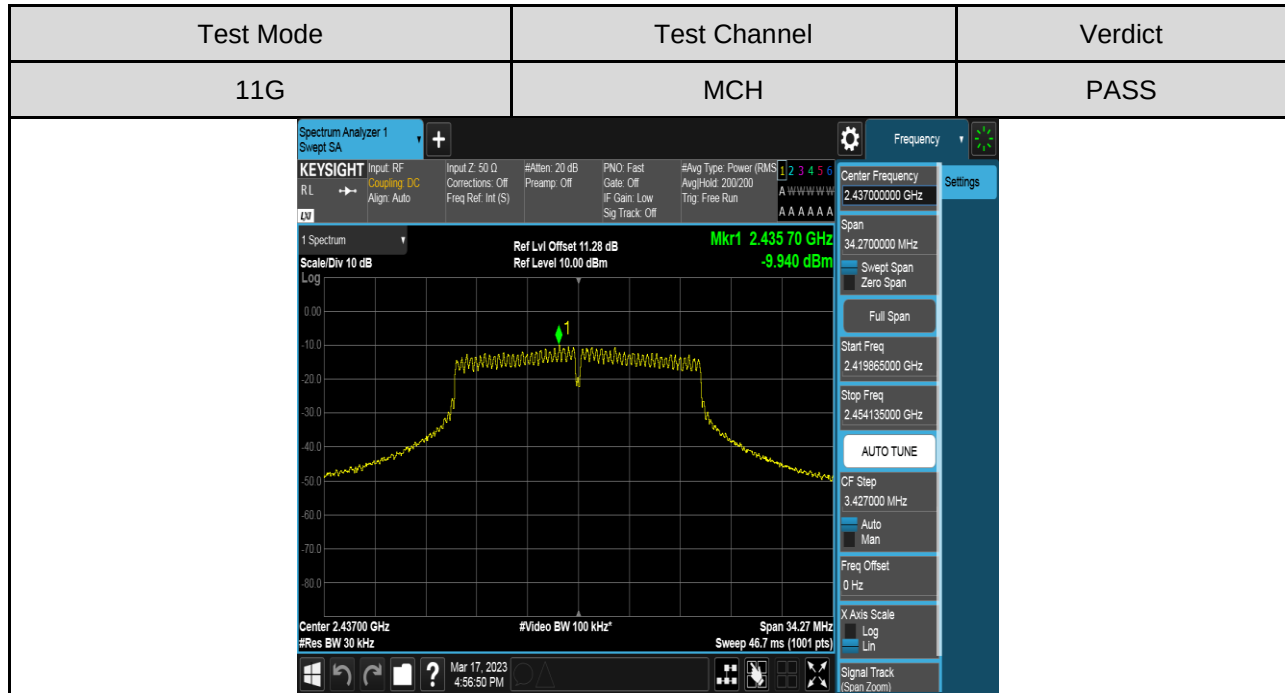
	total	LCH	-13.87	PASS
	Ant1	MCH	-16.9	PASS
	Ant2	MCH	-16.35	PASS
	total	MCH	-13.61	PASS
	Ant1	HCH	-17.51	PASS
	Ant2	HCH	-16.42	PASS
	total	HCH	-13.92	PASS

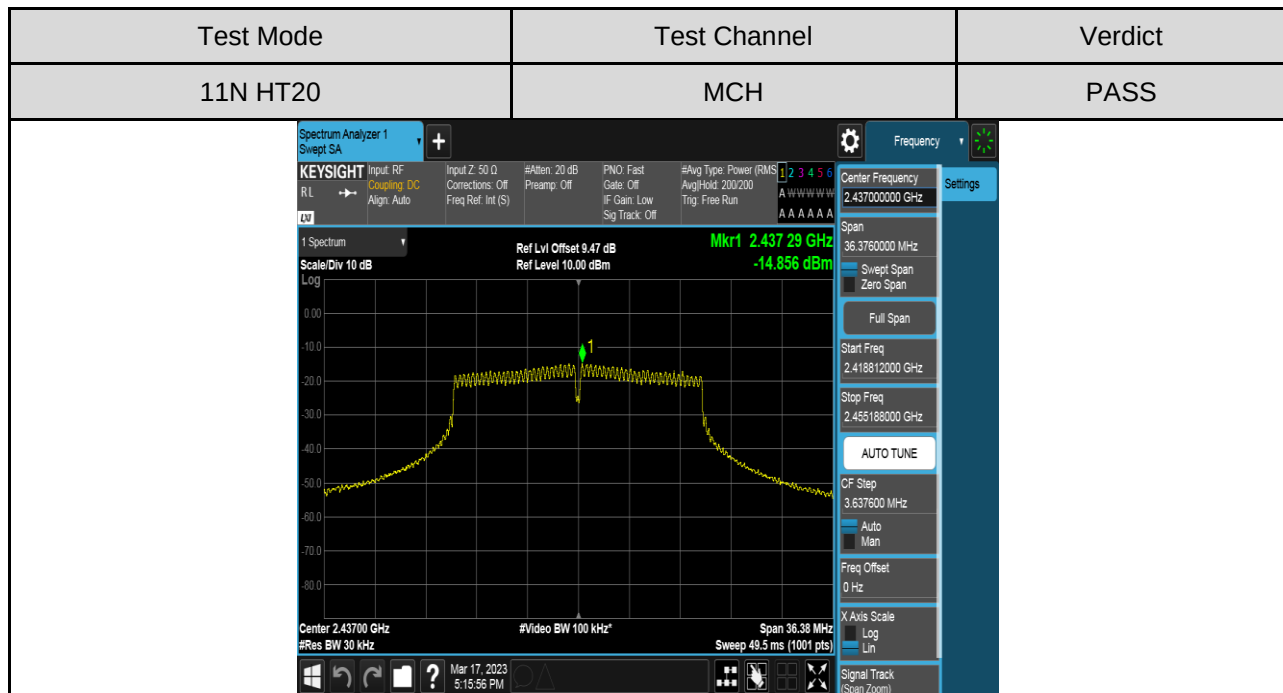
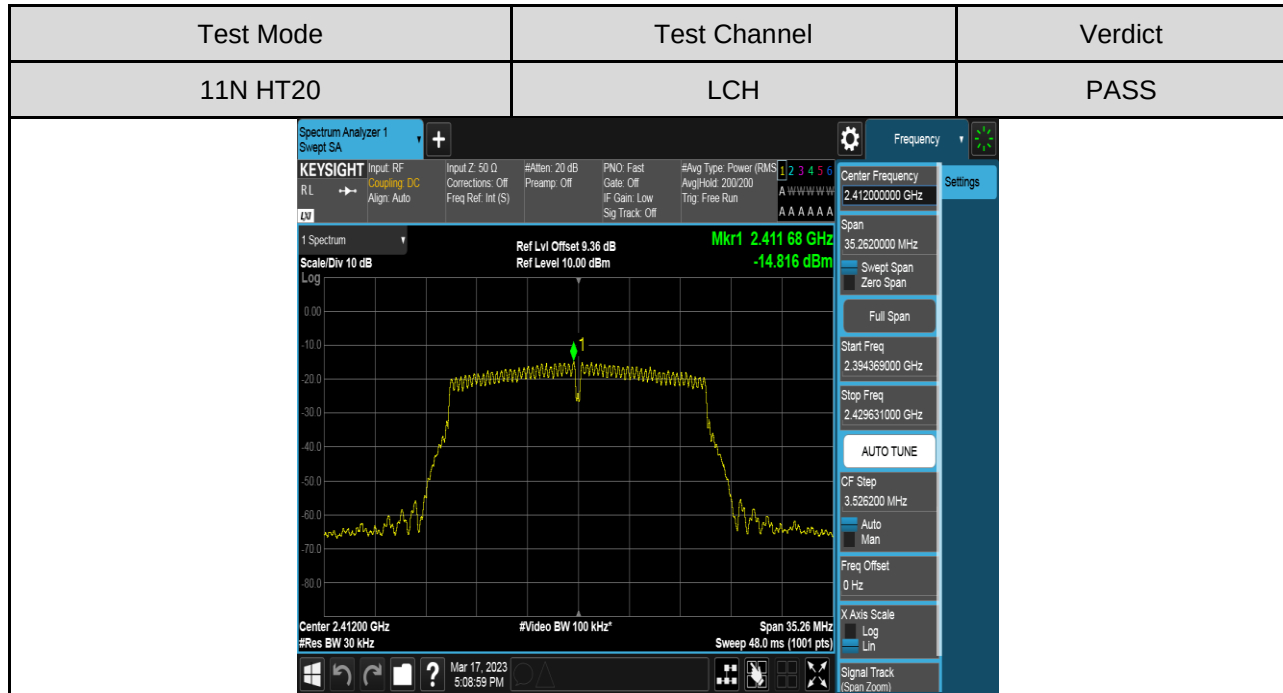
TEST GRAPHS

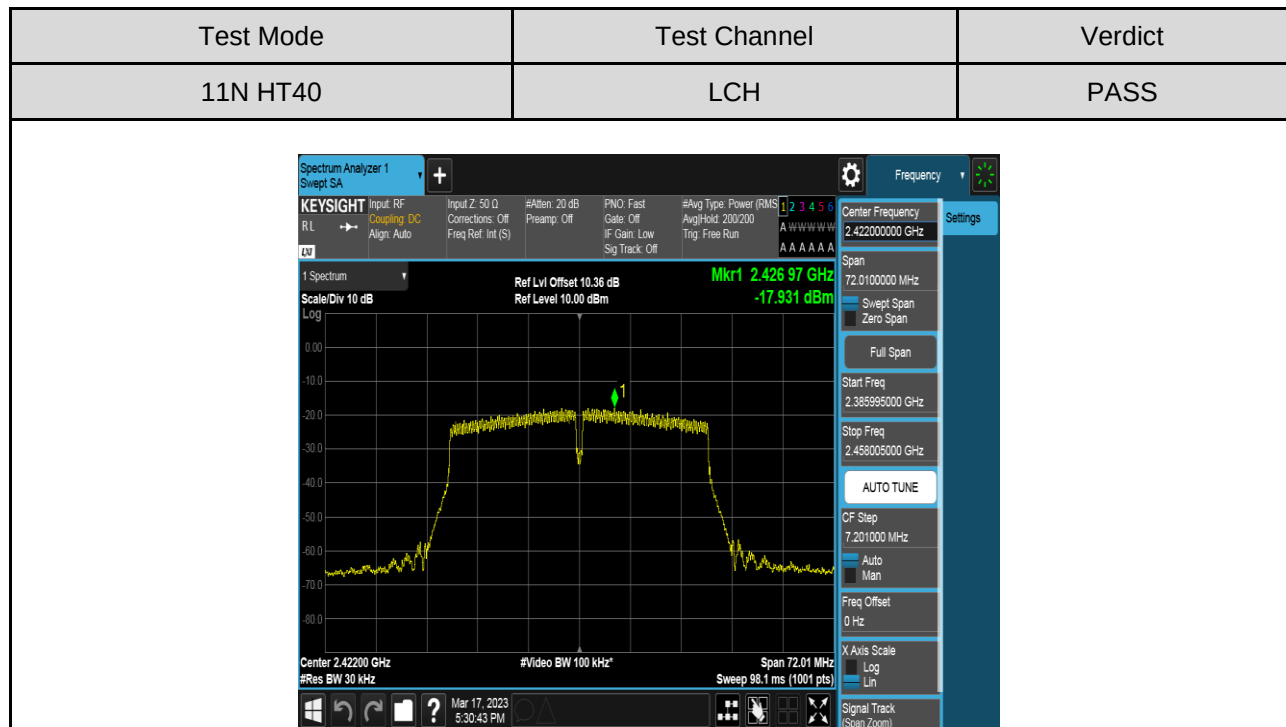
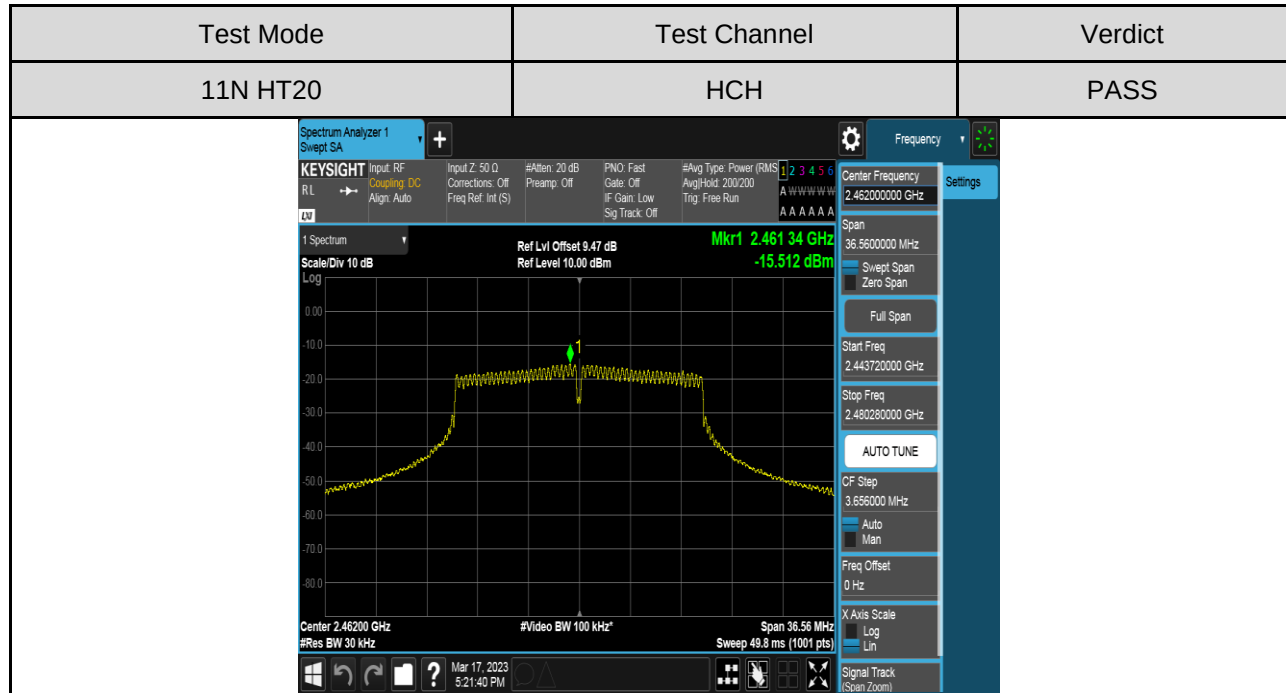
1) For Antenna 1 Part:

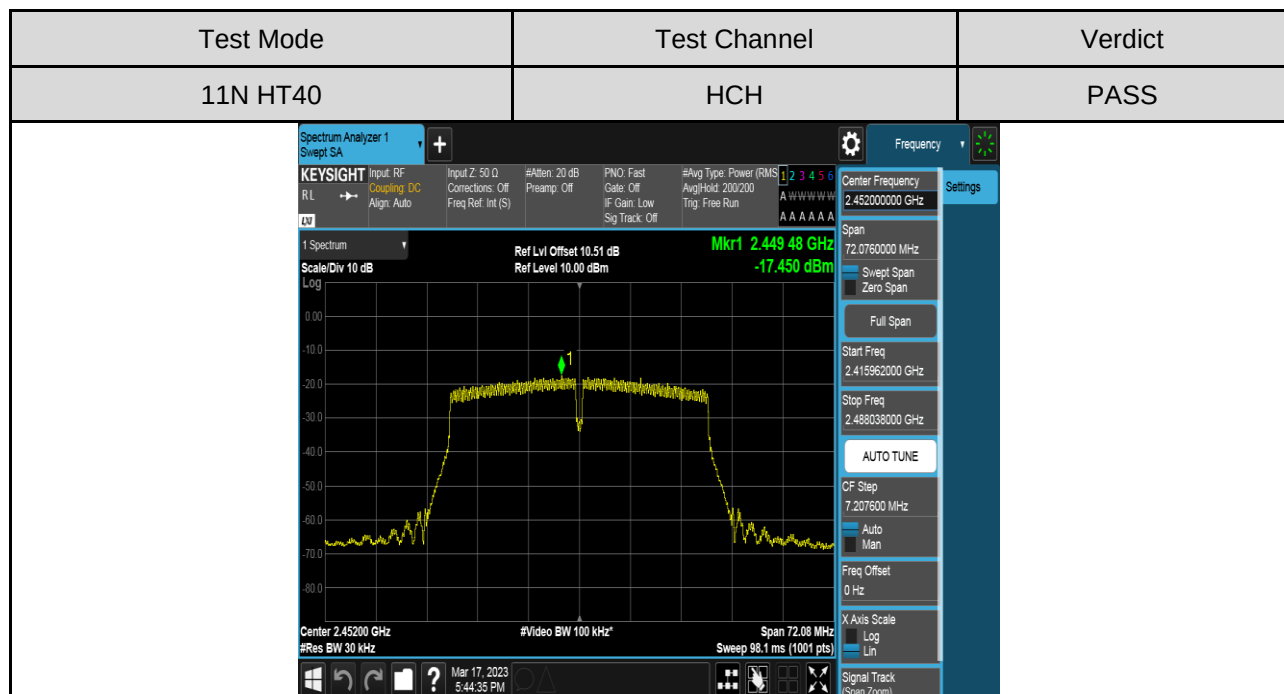
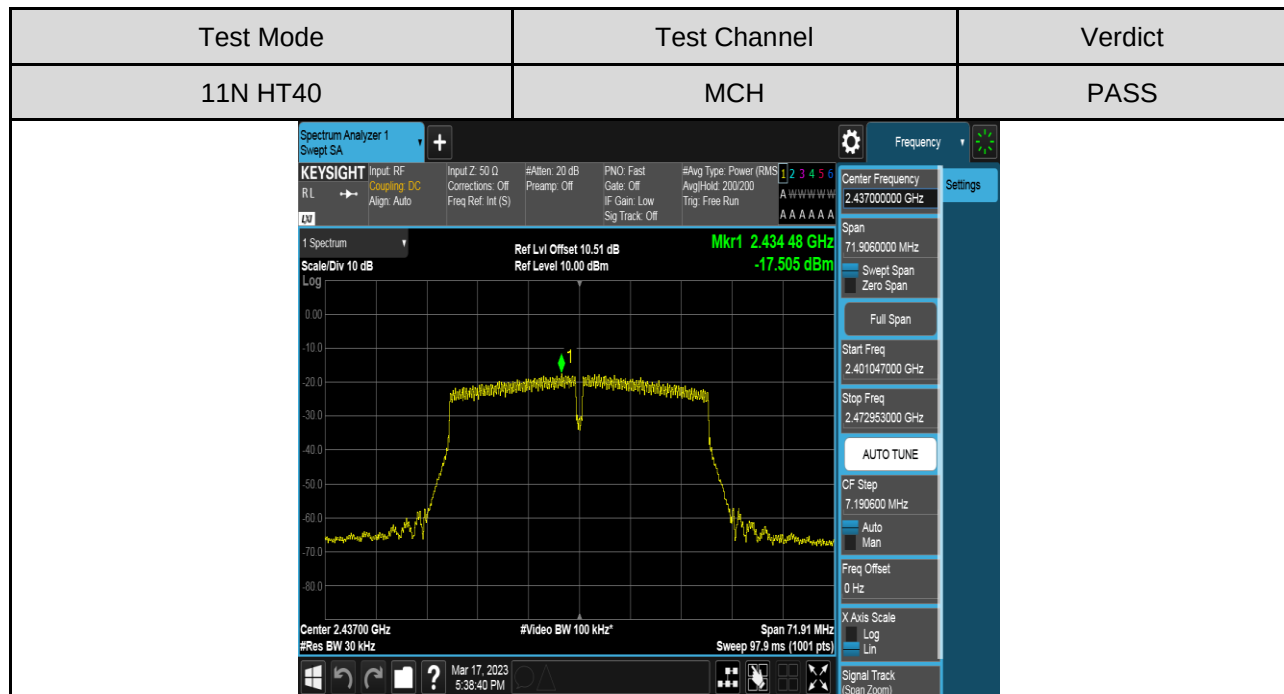


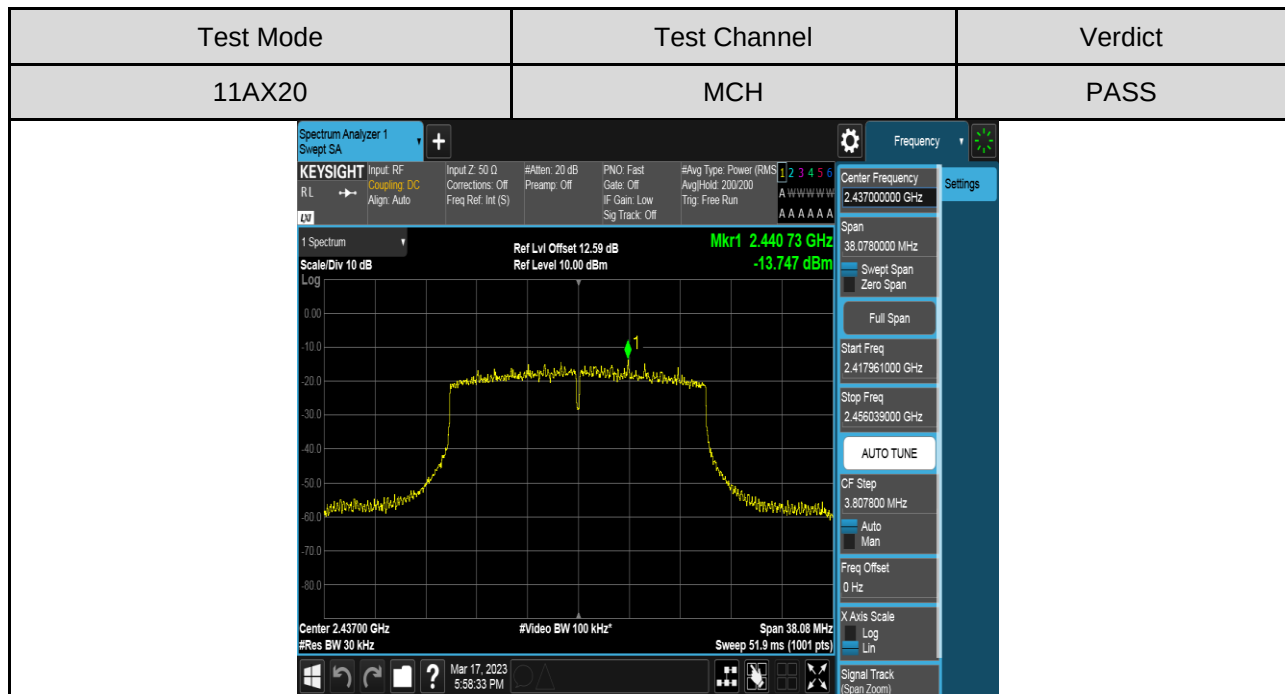
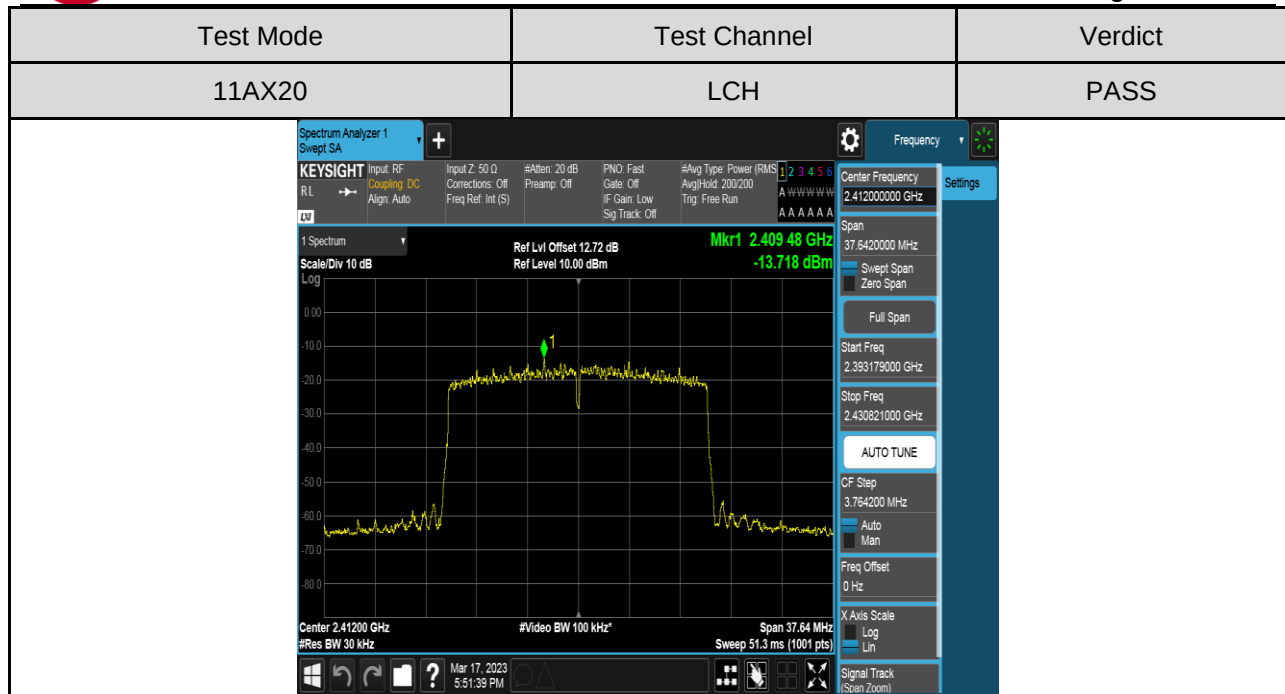
Test Mode	Test Channel	Verdict
11G	LCH	PASS

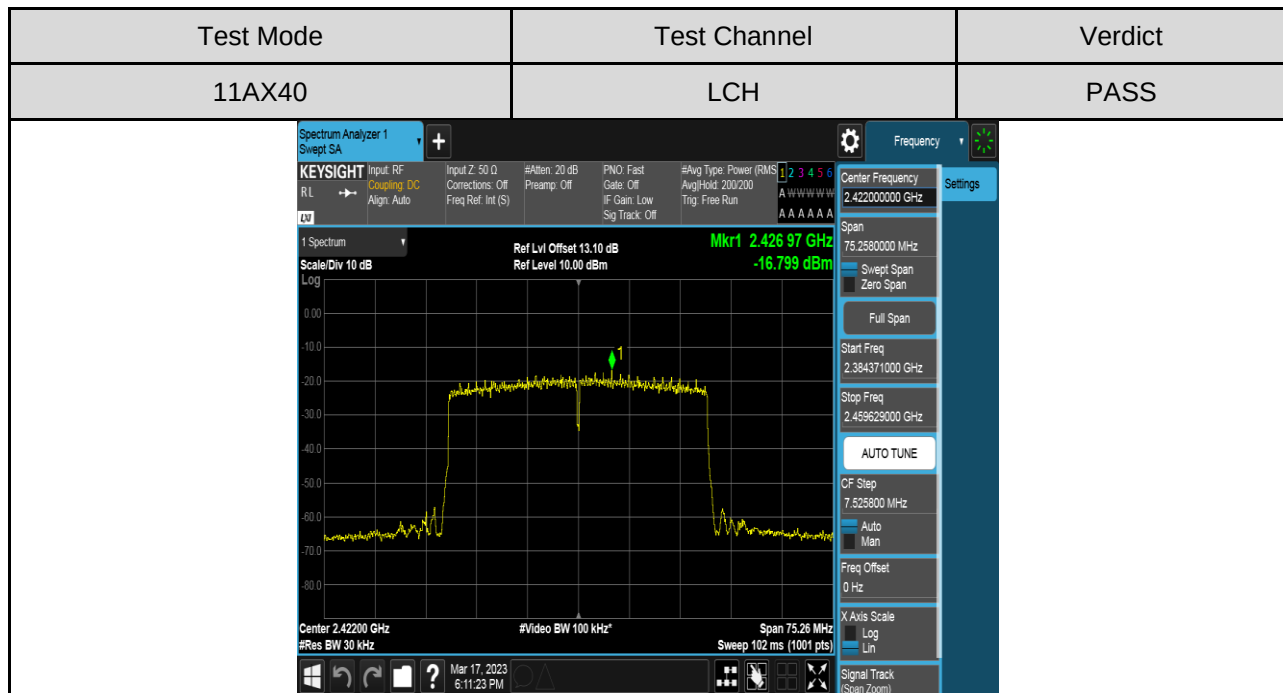
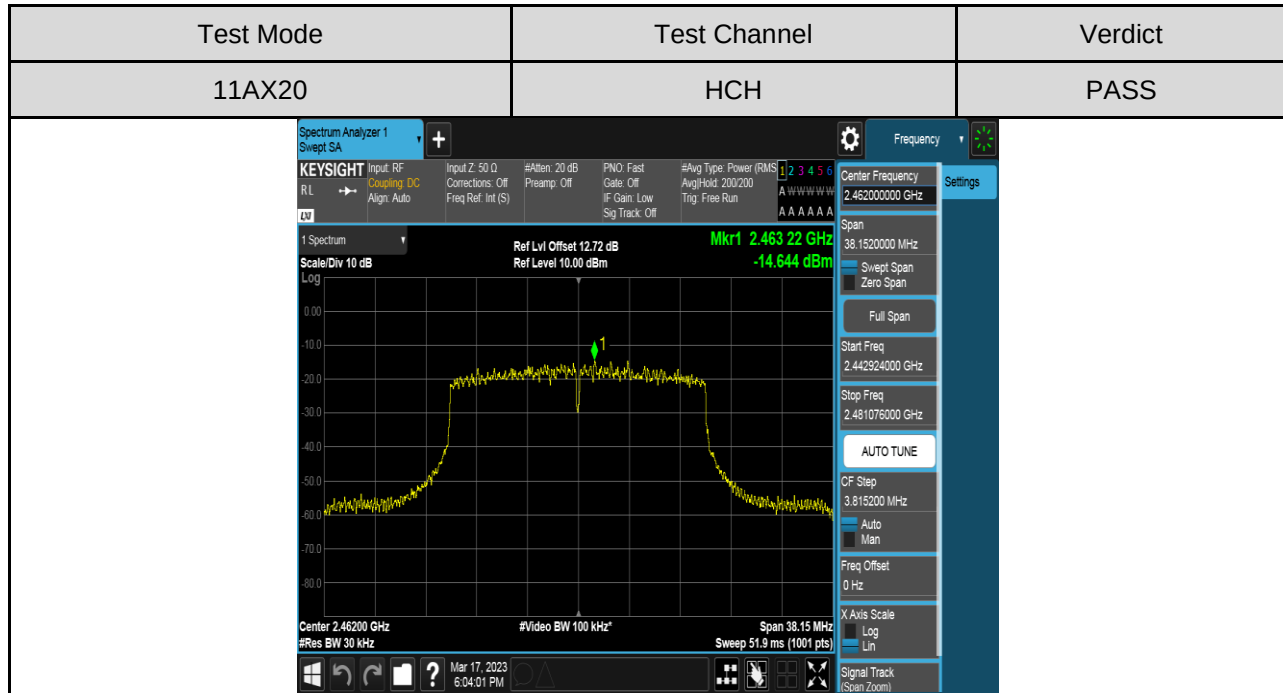


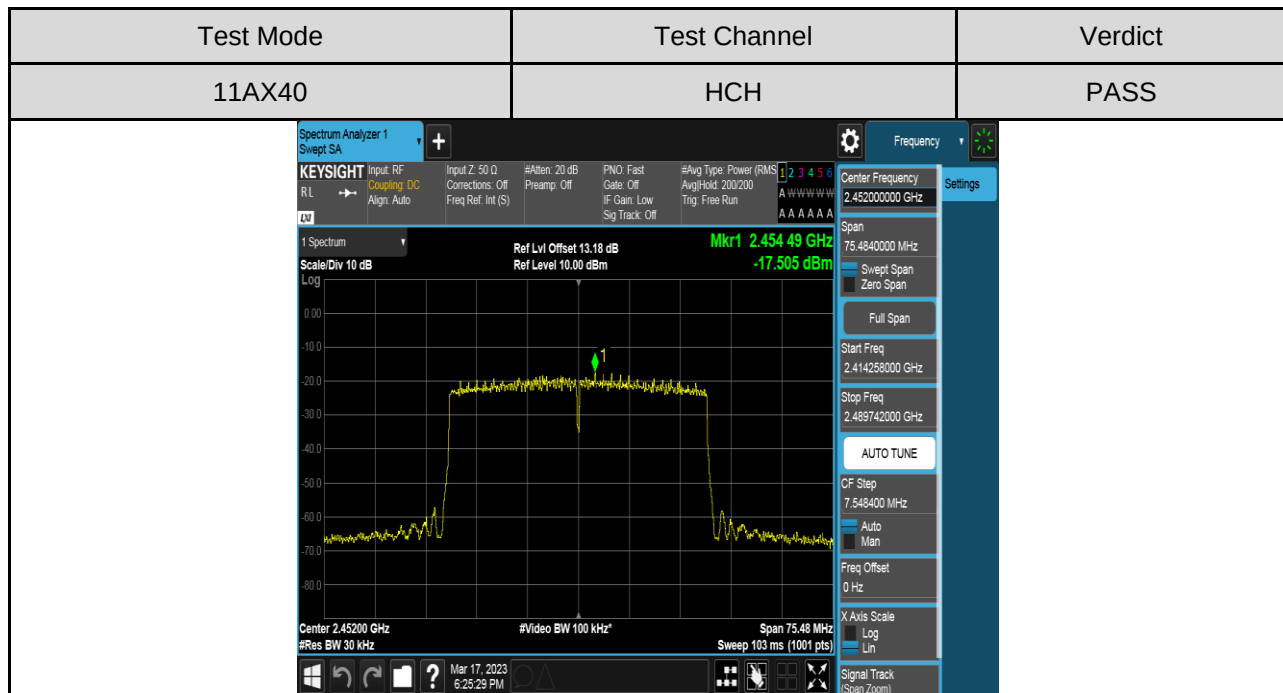
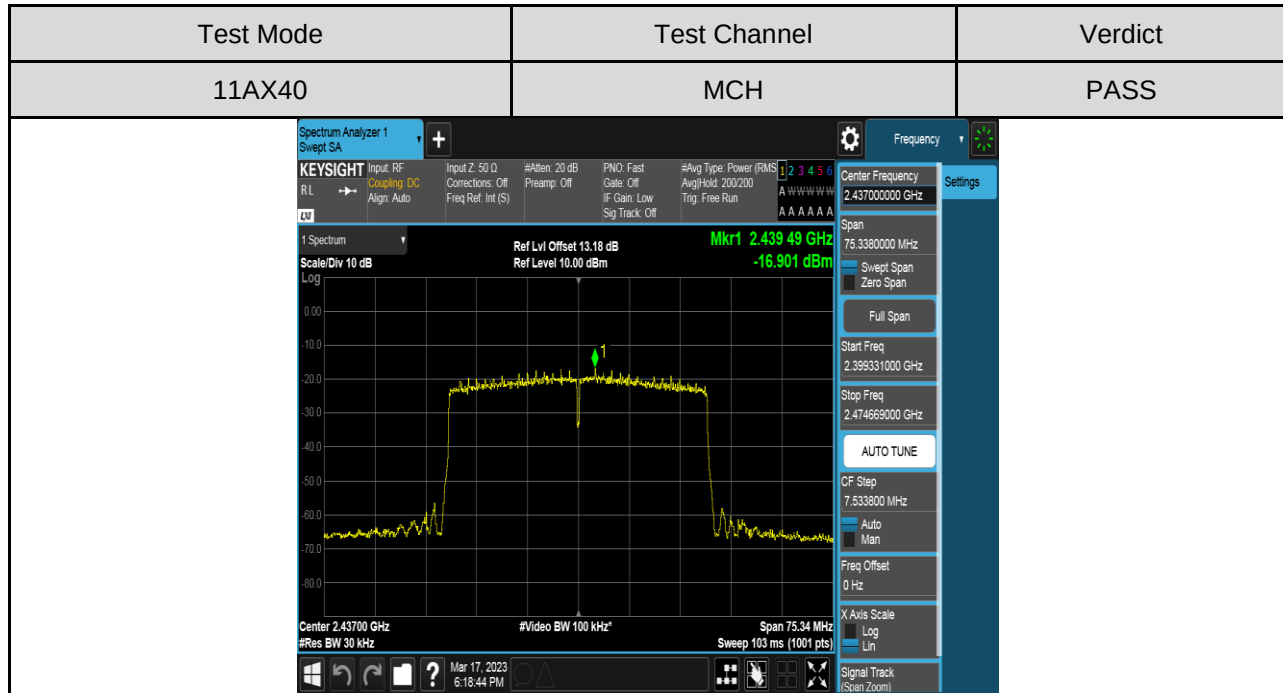












2) For Antenna 2 Part:

