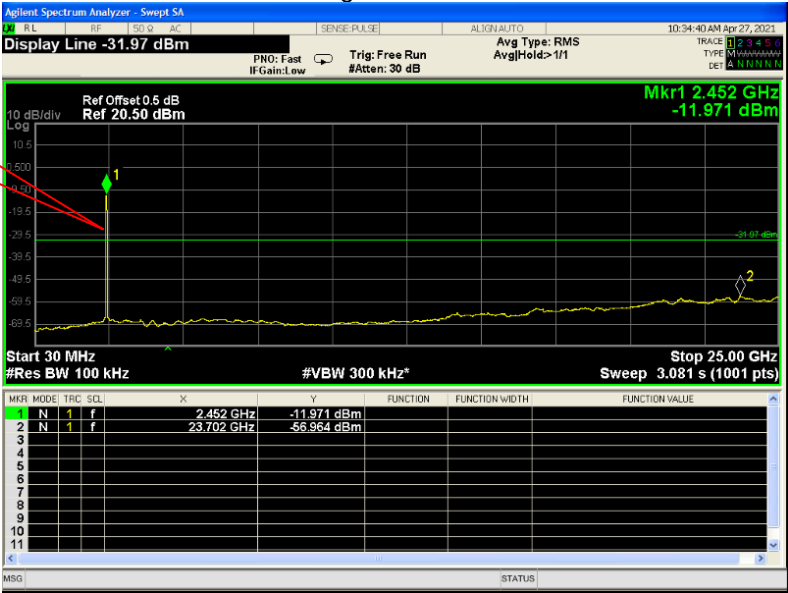


High Channel

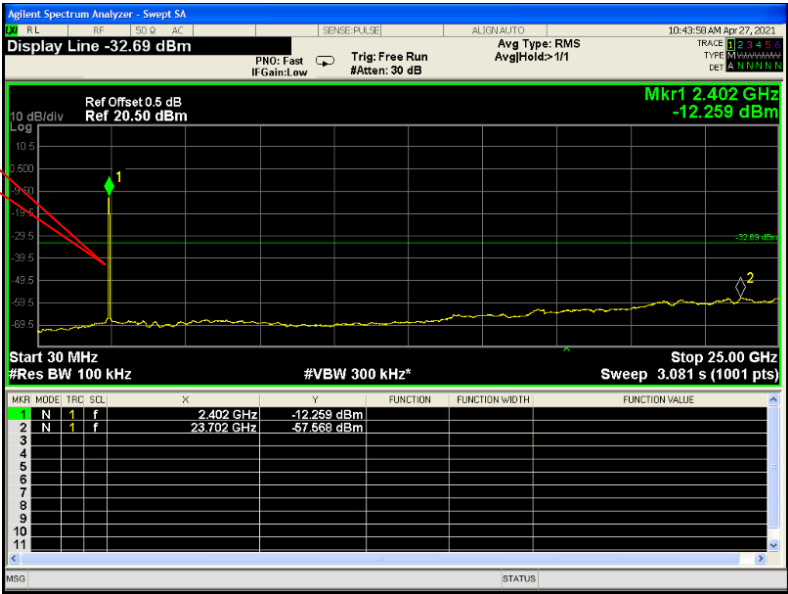
Fundamental



802.11g

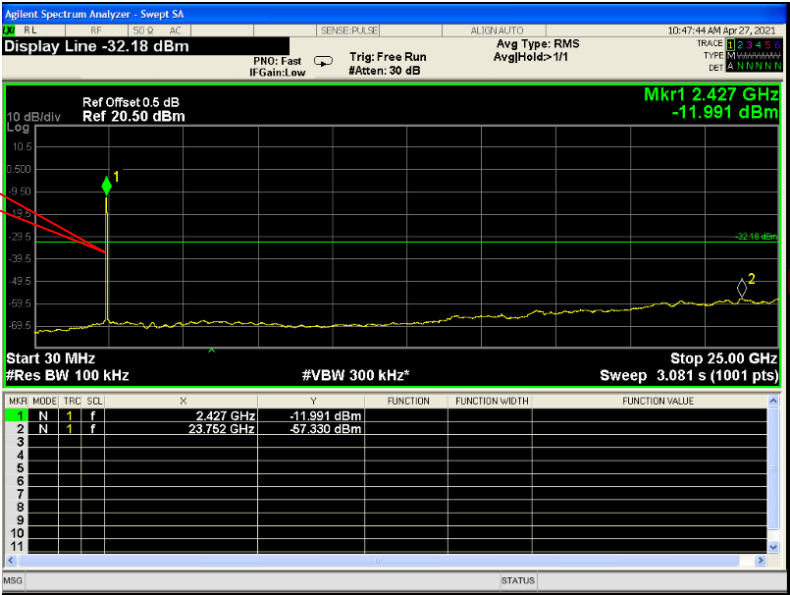
Low Channel

Fundamental



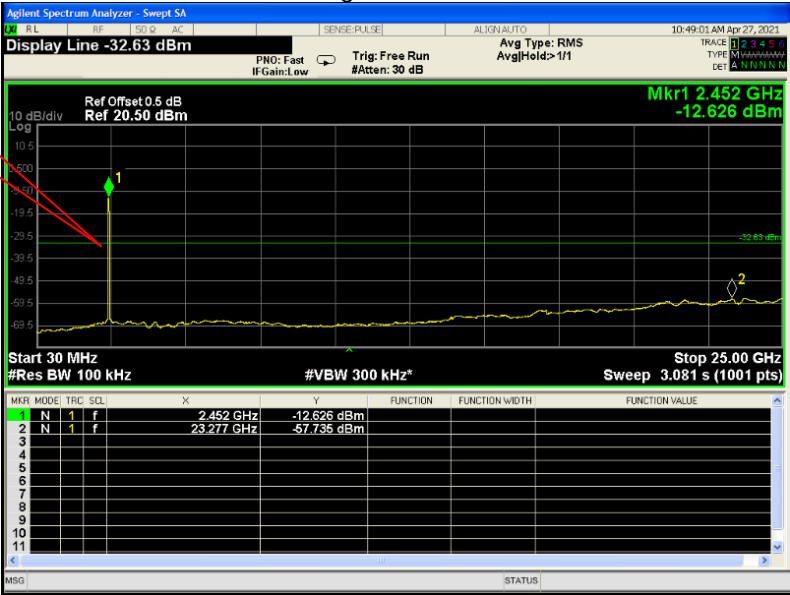
Middle Channel

Fundamental



High Channel

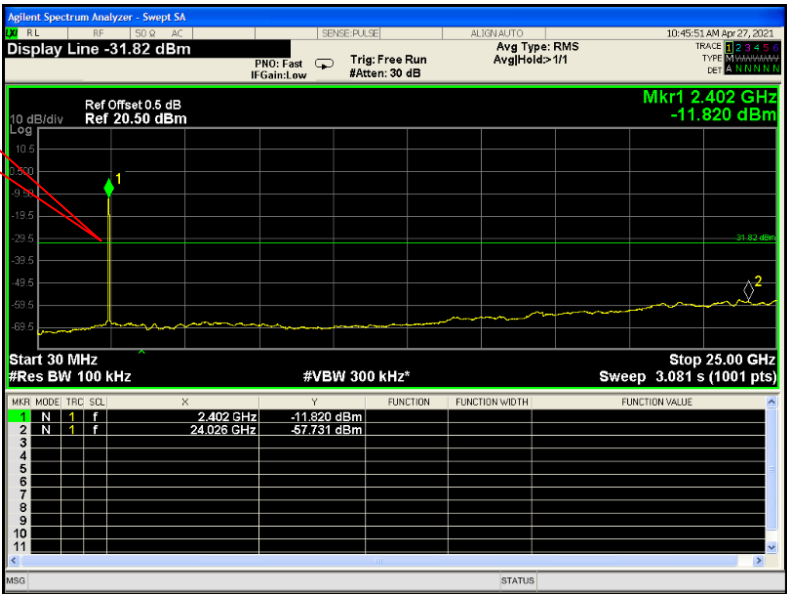
Fundamental



802.11n HT20

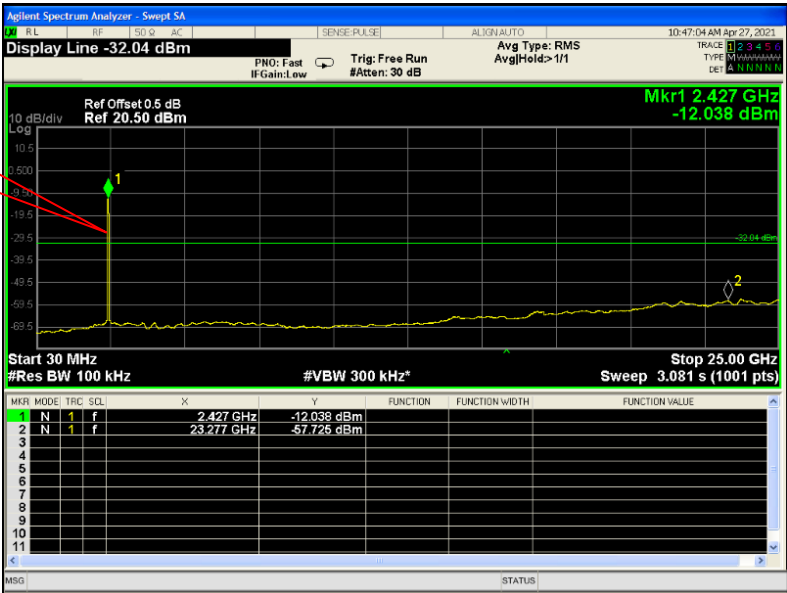
Low Channel

Fundamental



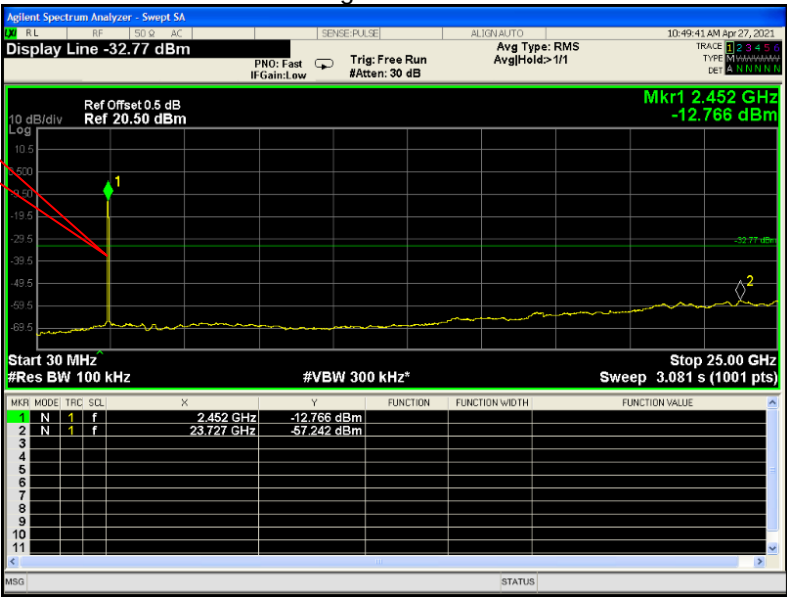
Middle Channel

Fundamental



High Channel

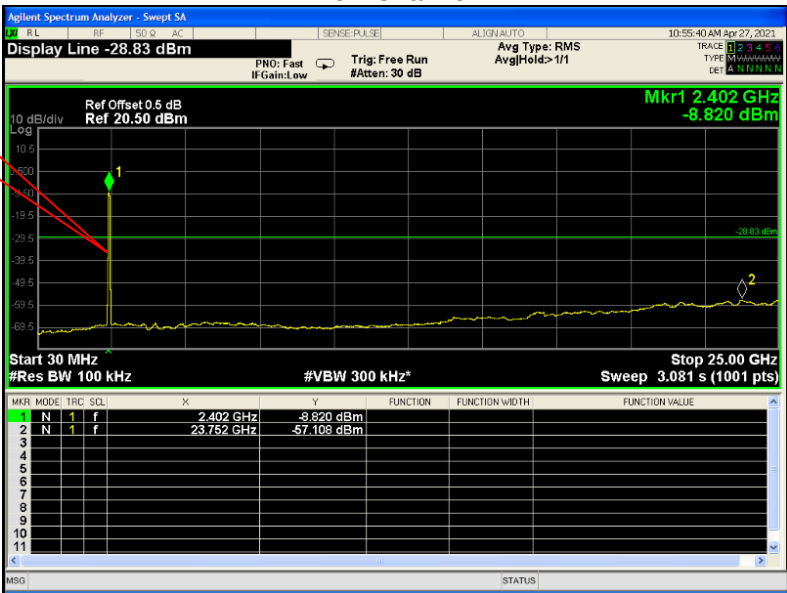
Fundamental



802.11n HT40

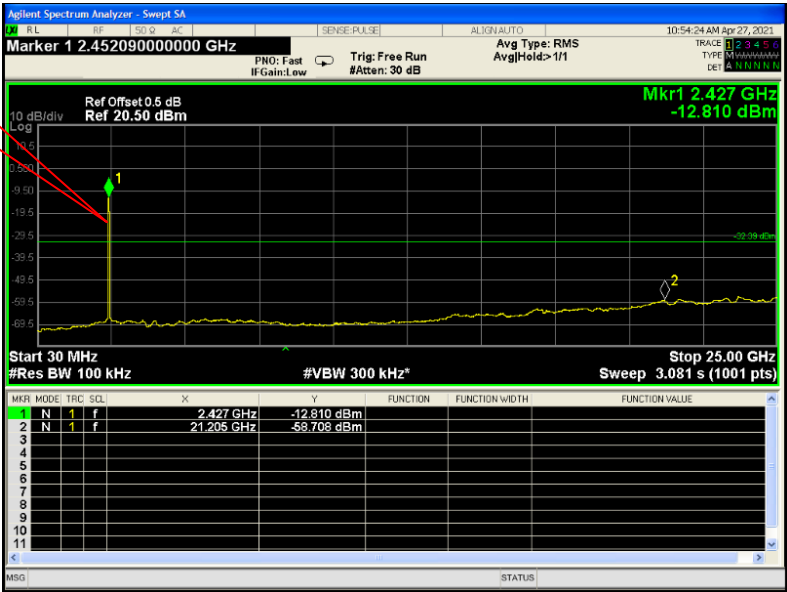
Low Channel

Fundamental



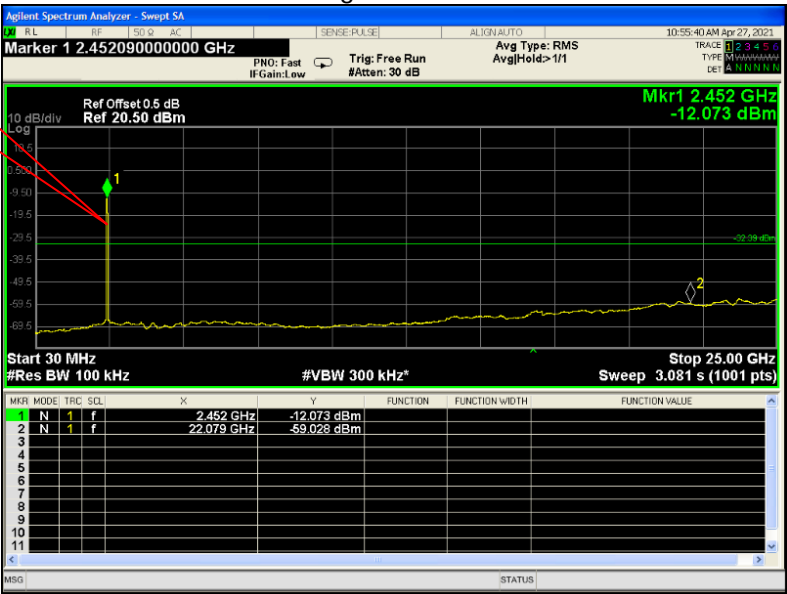
Fundamental

Middle Channel



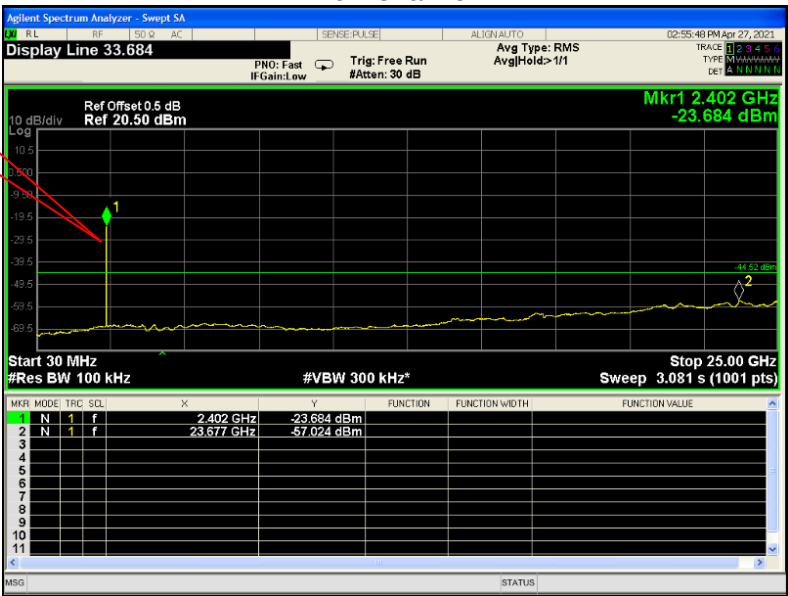
Fundamental

High Channel



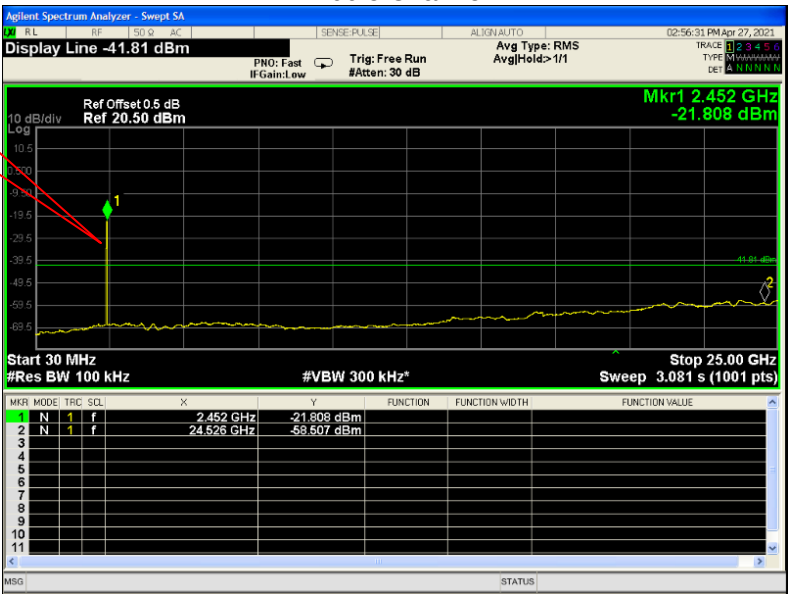
BLE
Low Channel

Fundamental

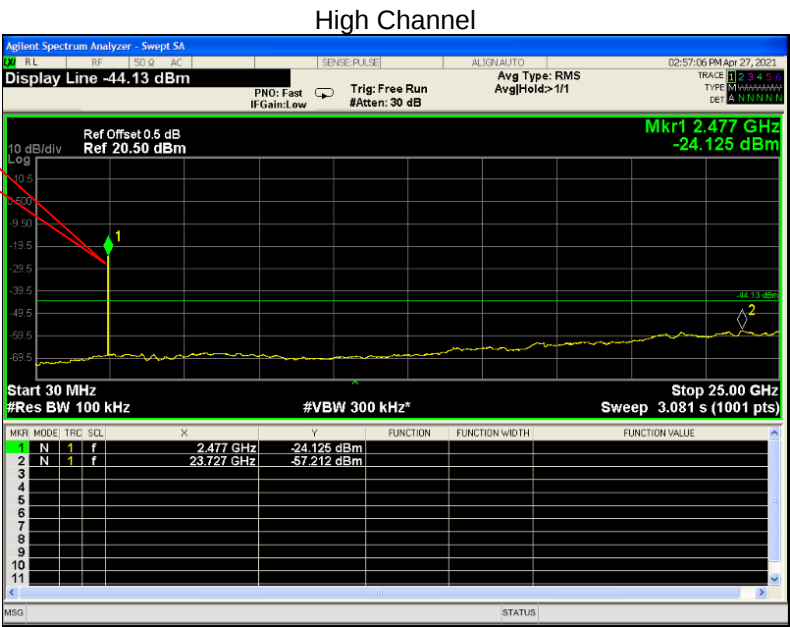


Middle Channel

Fundamental



Fundamental



9 Band Edge Measurement

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 15.247 Meas Guidance v05 August 24, 2018;
ANSI C63.10:2013

Test Limit: Regulation 15.247 (d), In any 100 kHz bandwidth outside the frequency band which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Test Mode: Transmitting

9.1 Test Produce

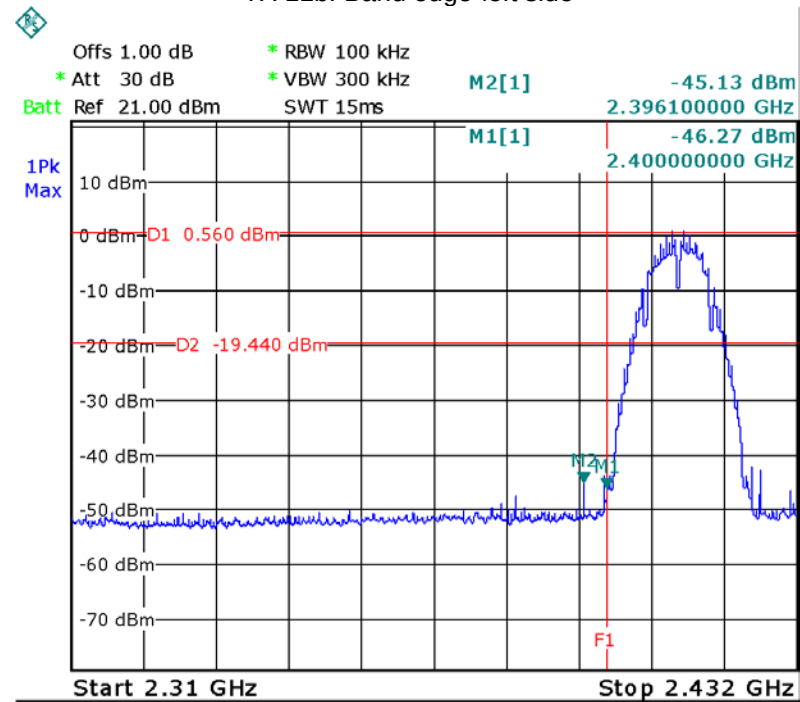
1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW to 100 kHz and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

9.2 Test Result

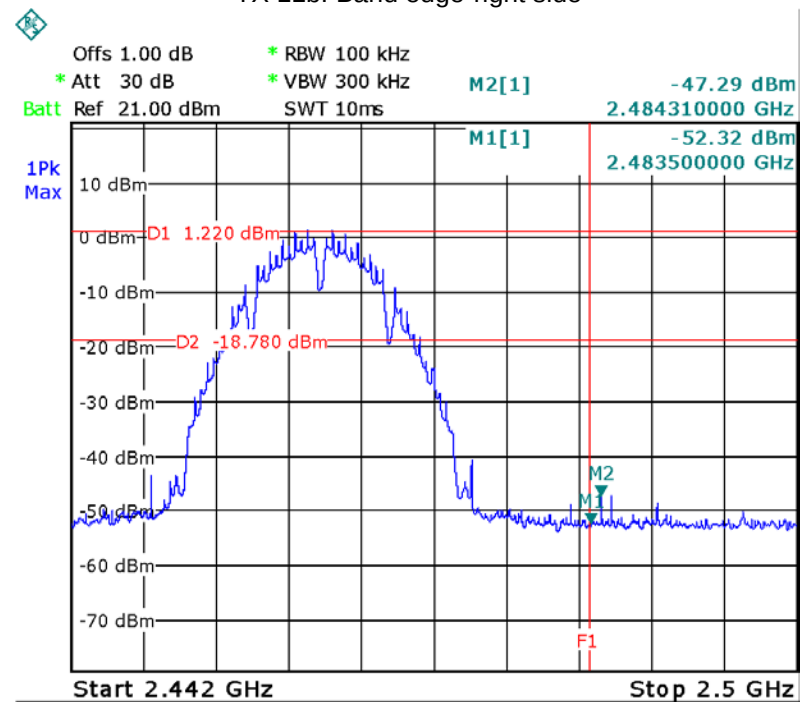
Test result plots shown as follows:

Antenna 0

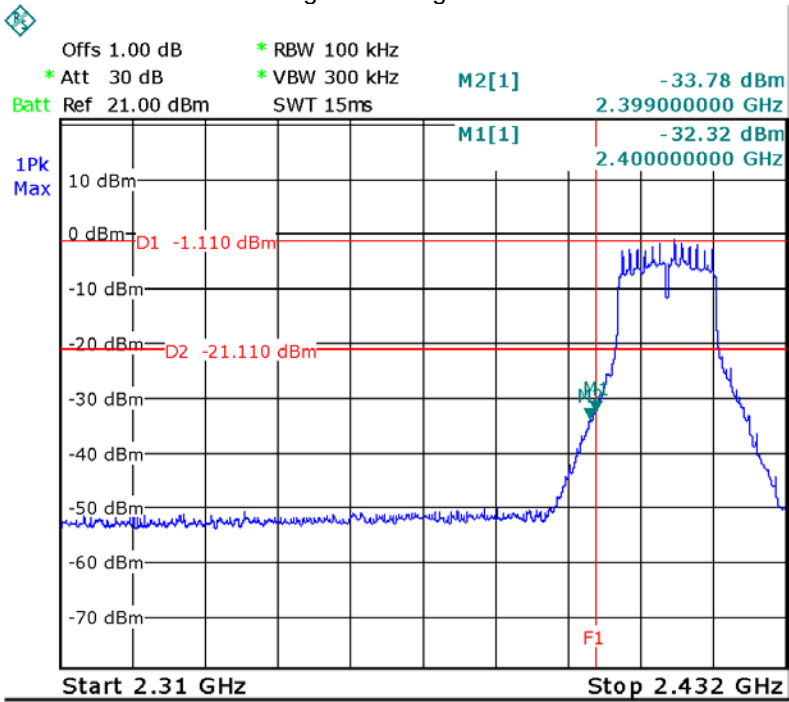
TX 11b: Band edge-left side



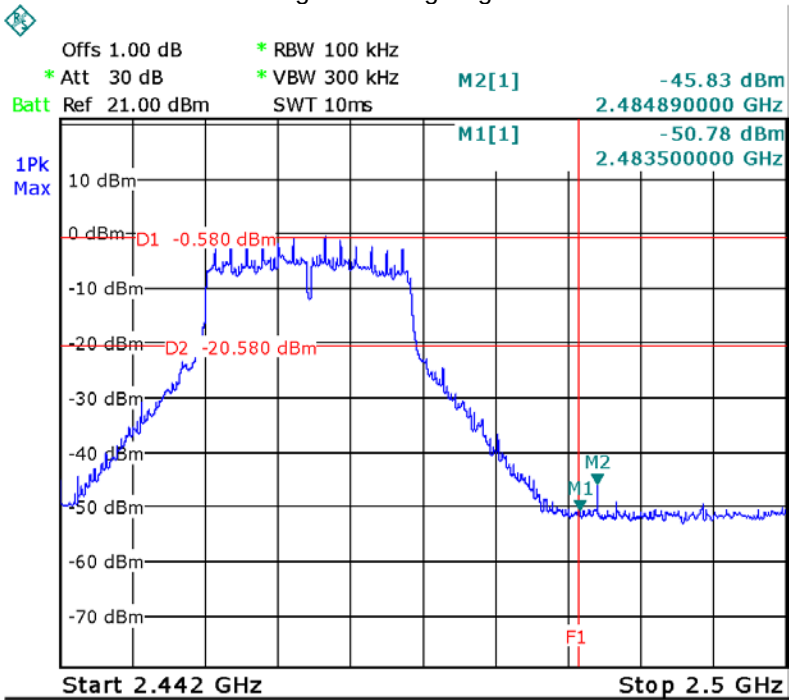
TX 11b: Band edge-right side

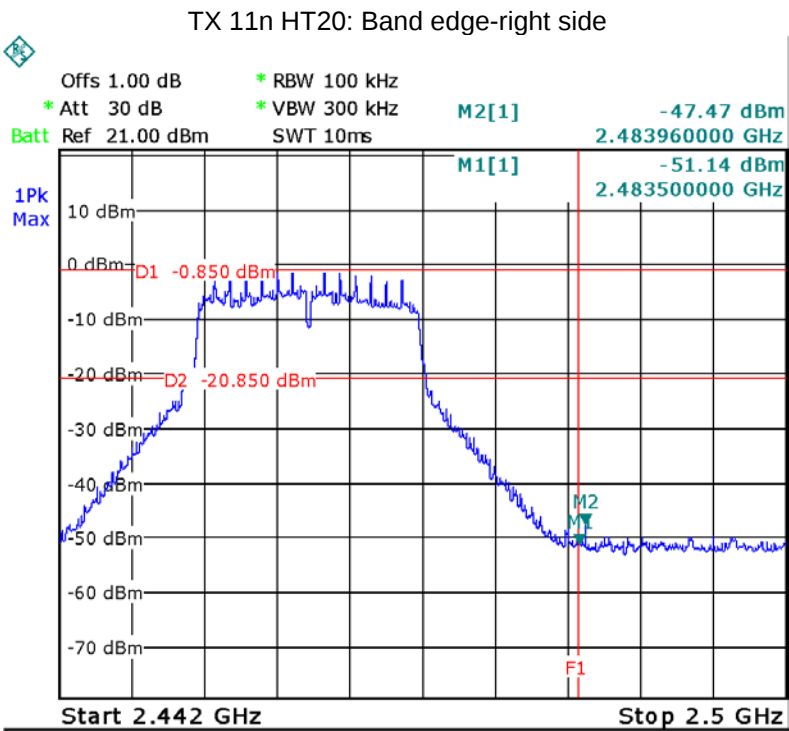
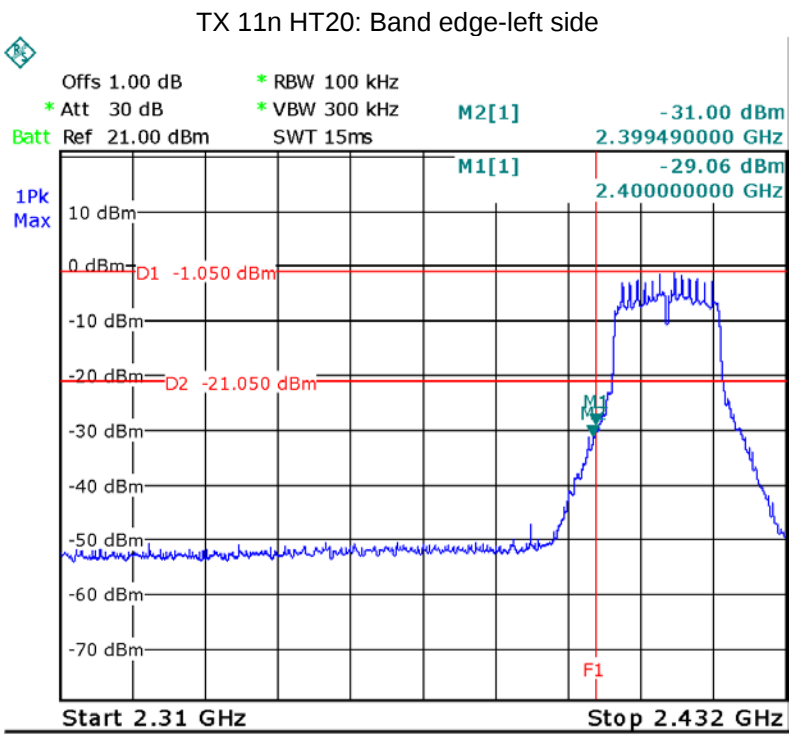


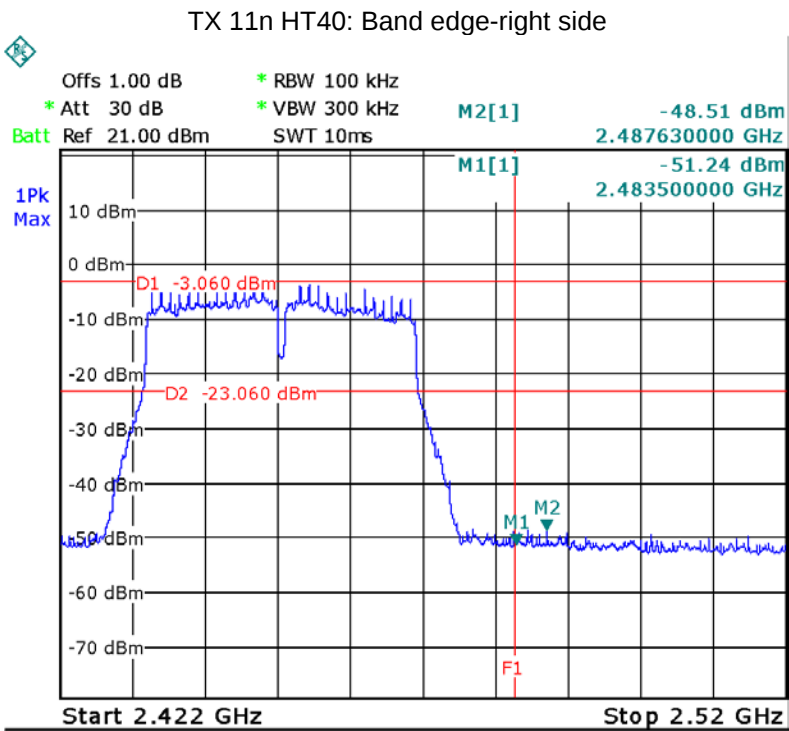
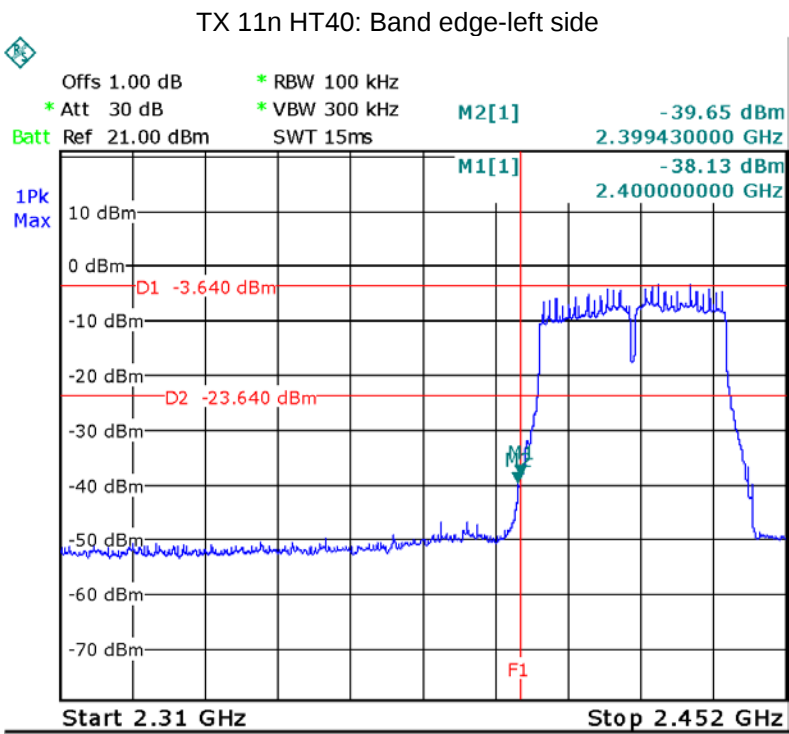
TX 11g: Band edge-left side



TX 11g: Band edge-right side

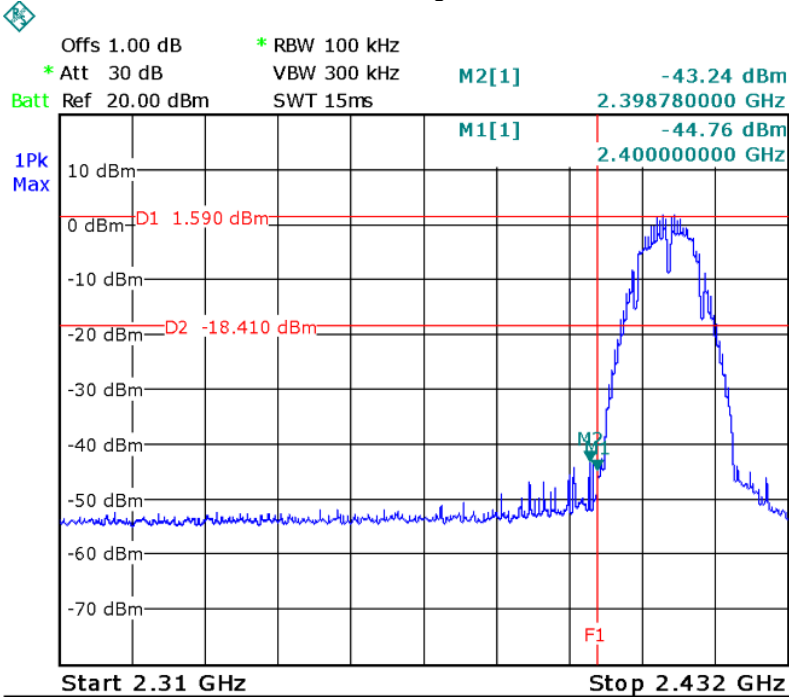




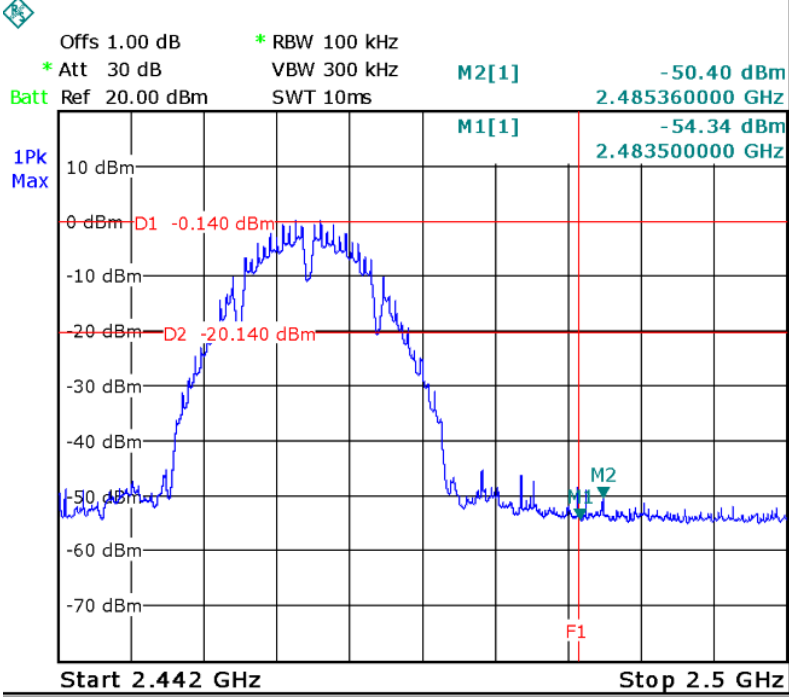


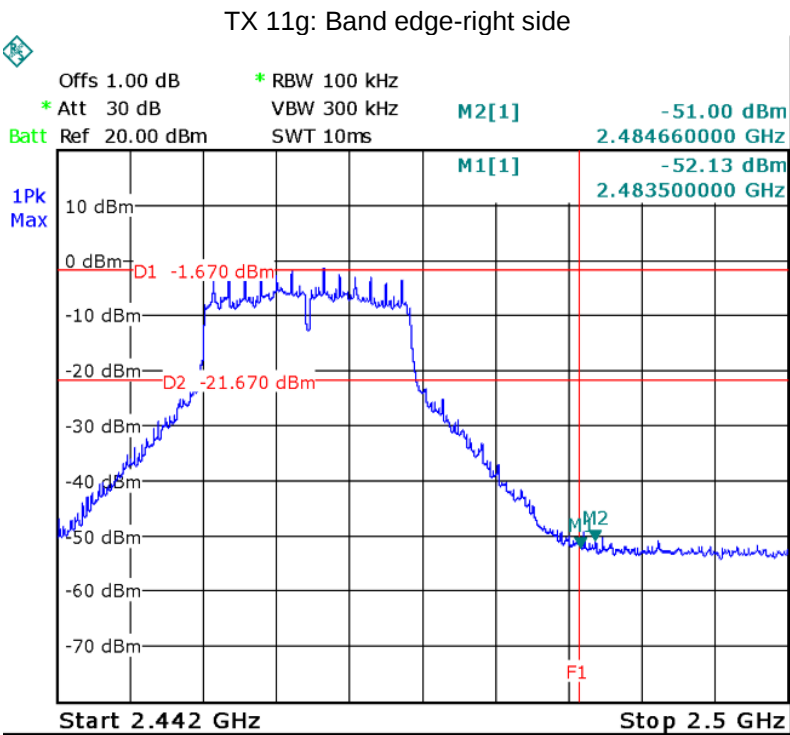
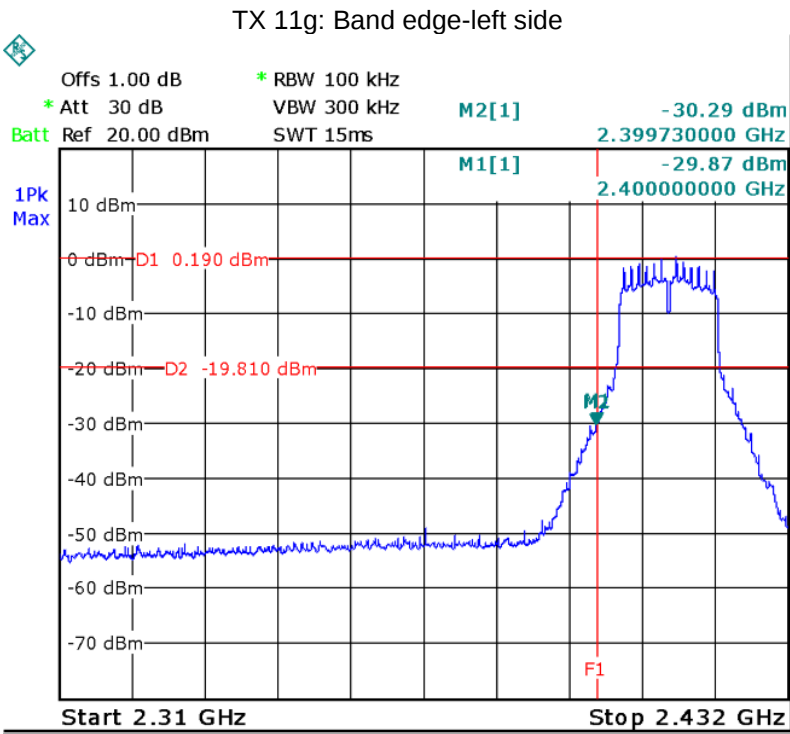
Antenna 1

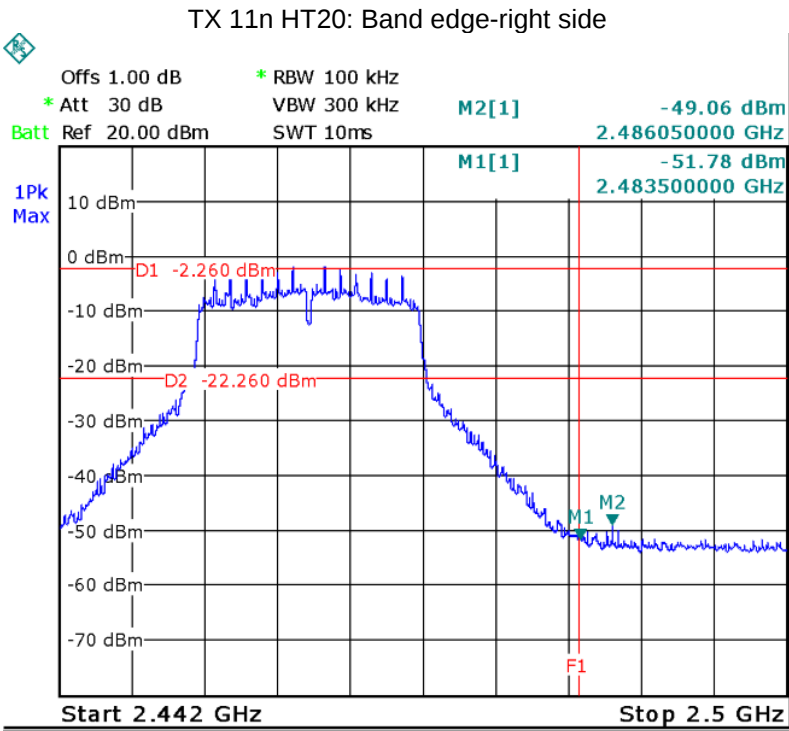
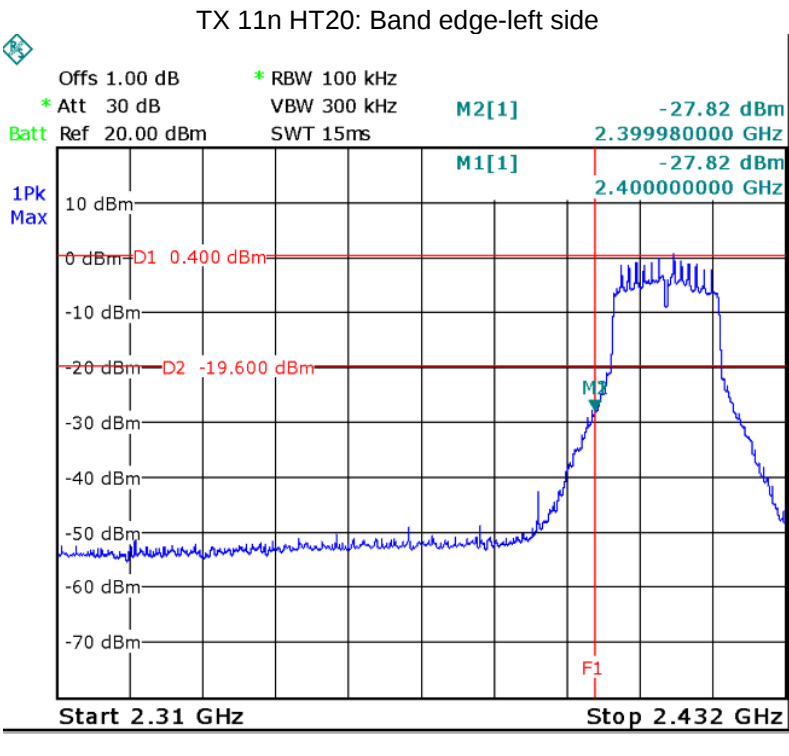
TX 11b: Band edge-left side

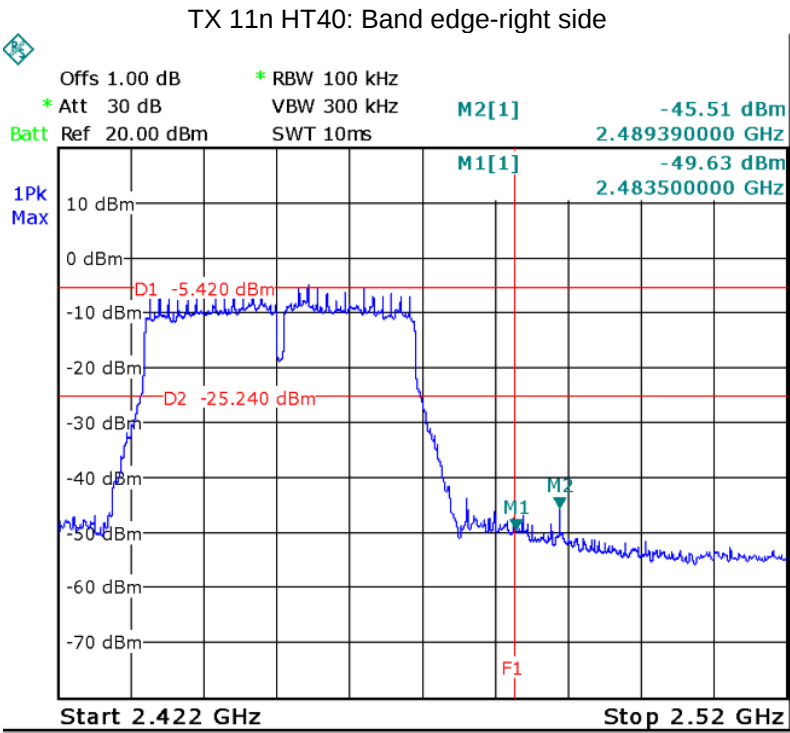
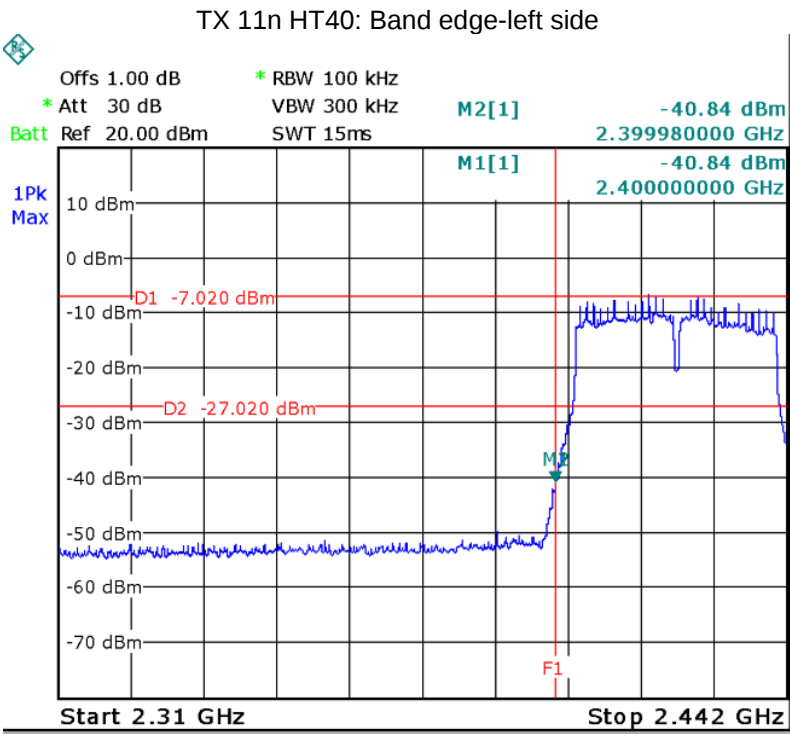


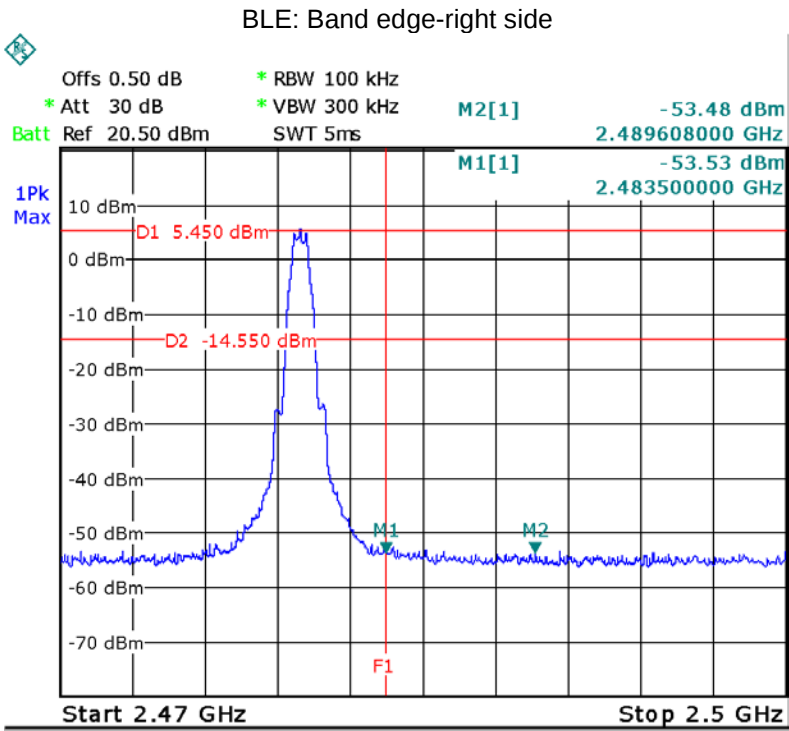
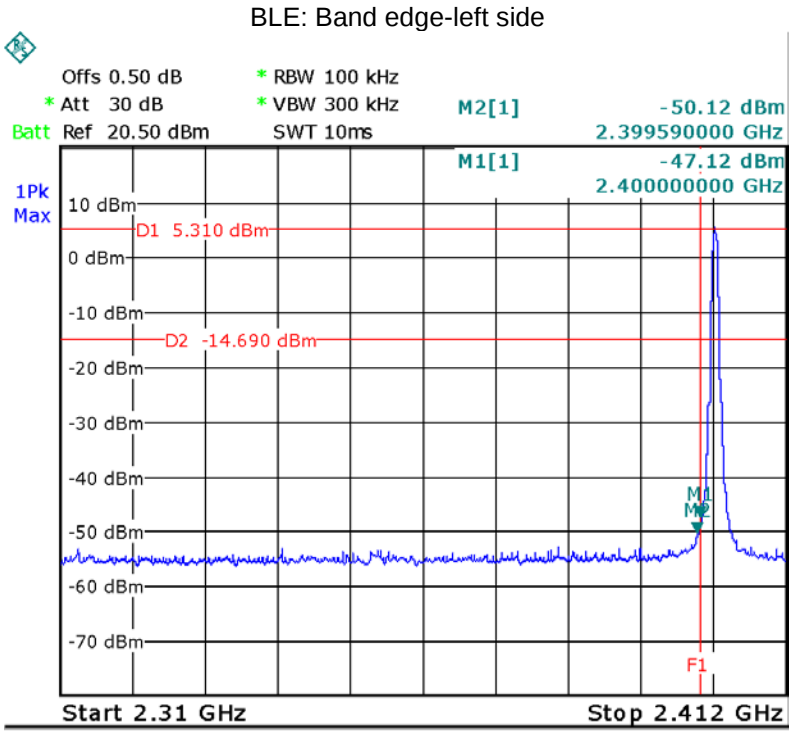
TX 11b: Band edge-right side











10 6 dB Bandwidth and 99% Bandwidth Measurement

Test Requirement: FCC CFR47 Part 15 Section 15.247

Test Method: KDB 558074 D01 15.247 Meas Guidance v05 August 24, 2018;

ANSI C63.10:2013

10.1 Test Procedure:

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: RBW = 100kHz, VBW = 300kHz

10.2 Test Result:

Table 1: Antenna 0

Operation mode	Test Channel	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
TX 11b	Channel 1	8.112	13.32
	Channel 6	8.112	13.25
	Channel 11	8.080	13.32
TX 11g	Channel 1	15.72	17.91
	Channel 6	15.22	16.62
	Channel 11	15.49	16.67
TX 11n HT20	Channel 1	16.46	17.83
	Channel 6	15.95	17.83
	Channel 11	15.47	17.89
TX 11n HT40	Channel 3	35.24	36.67
	Channel 6	35.24	36.45
	Channel 9	35.50	36.56

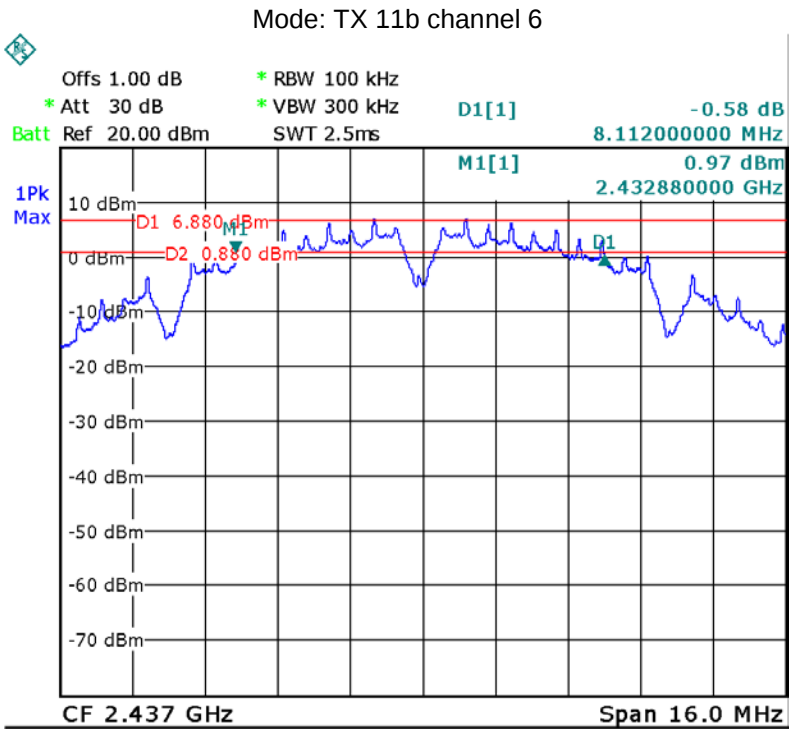
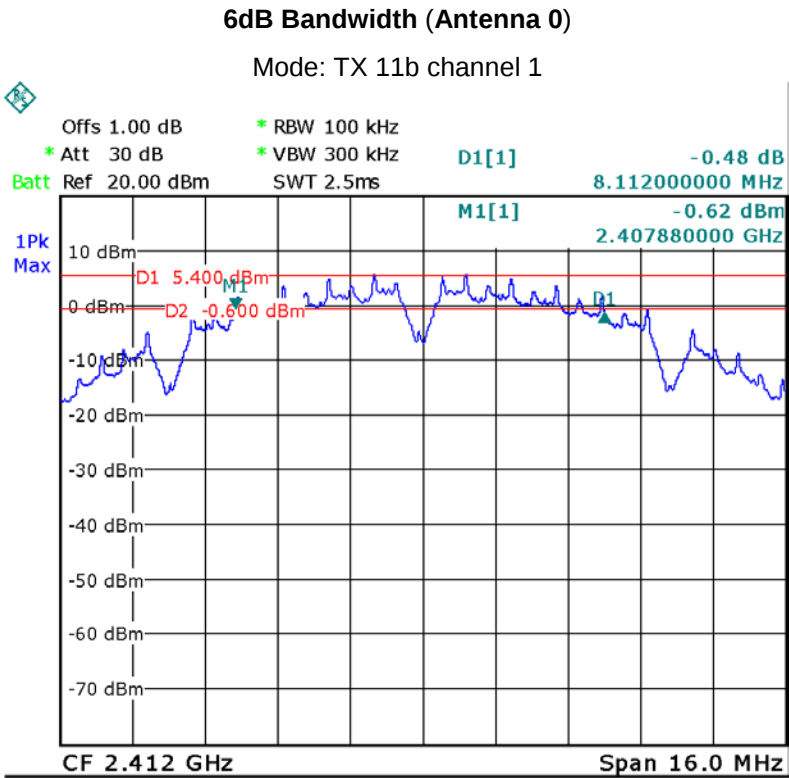
Table 2: Antenna 1

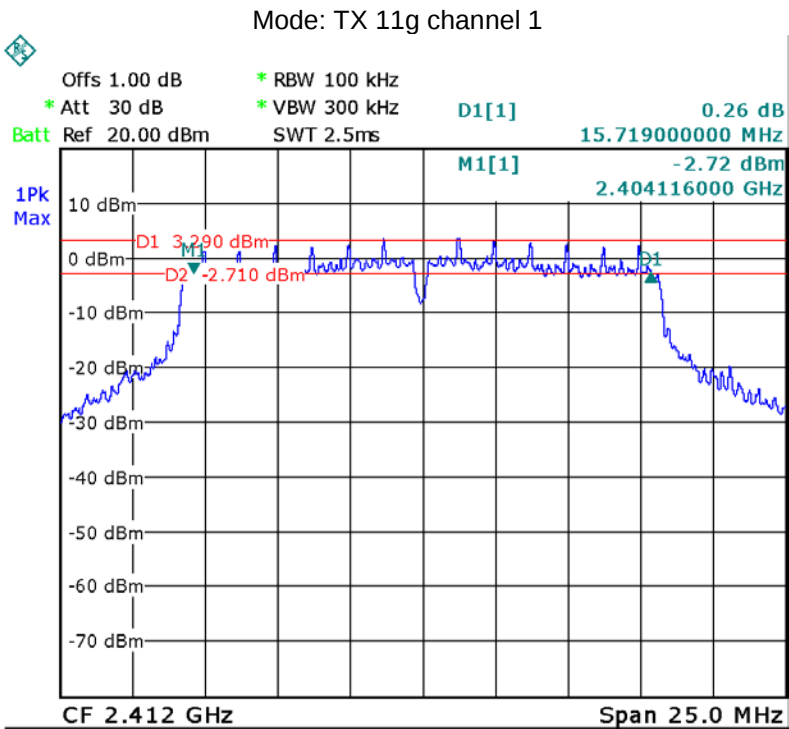
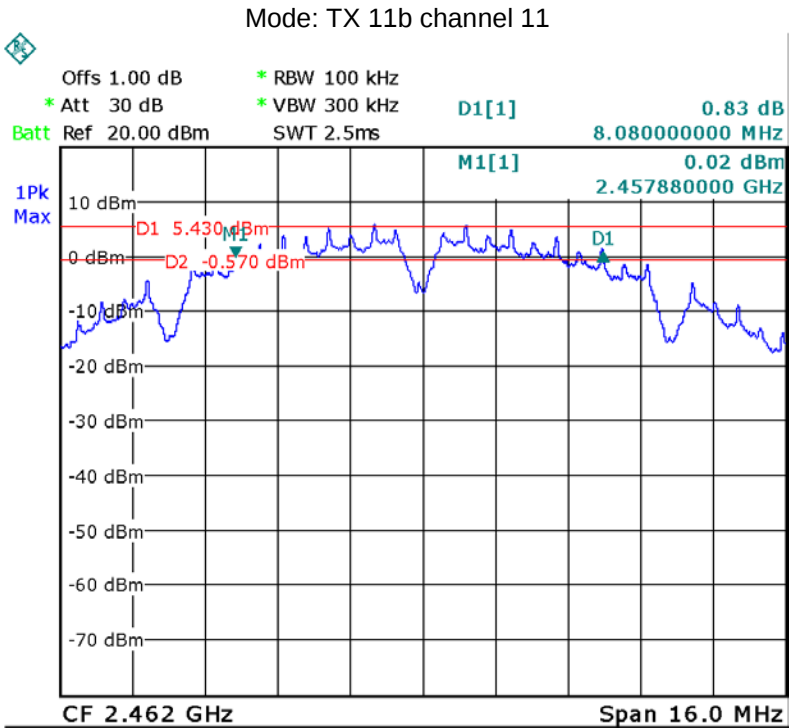
Operation mode	Test Channel	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
TX 11b	Channel 1	8.112	13.35
	Channel 6	8.112	13.35
	Channel 11	8.112	13.38
TX 11g	Channel 1	15.47	16.72
	Channel 6	15.57	16.72
	Channel 11	15.57	16.72
TX 11n HT20	Channel 1	15.63	17.83
	Channel 6	16.11	17.94
	Channel 11	15.58	17.95
TX 11n HT40	Channel 3	35.57	36.56
	Channel 6	35.90	36.67
	Channel 9	36.01	36.57

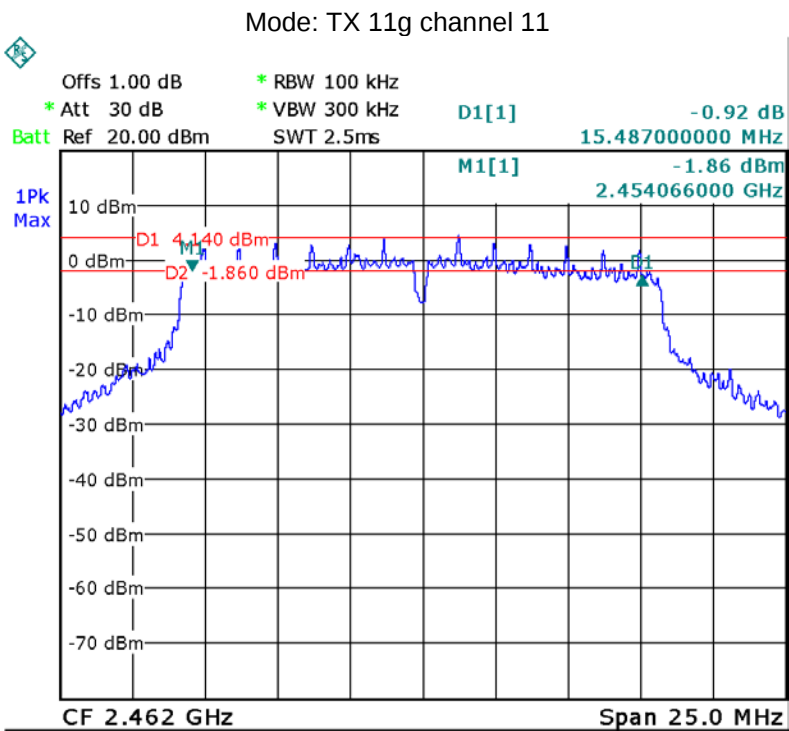
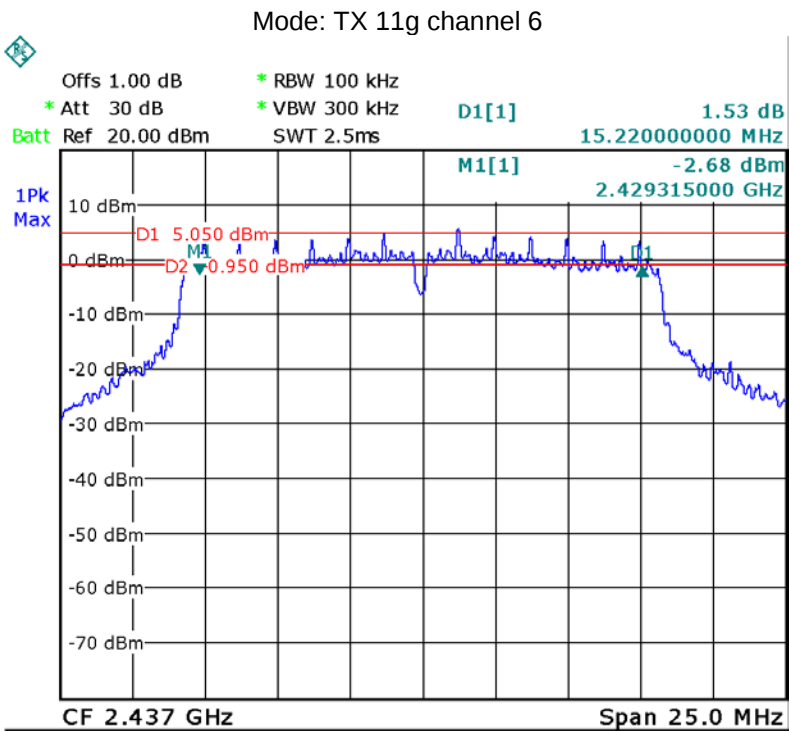
Table 3

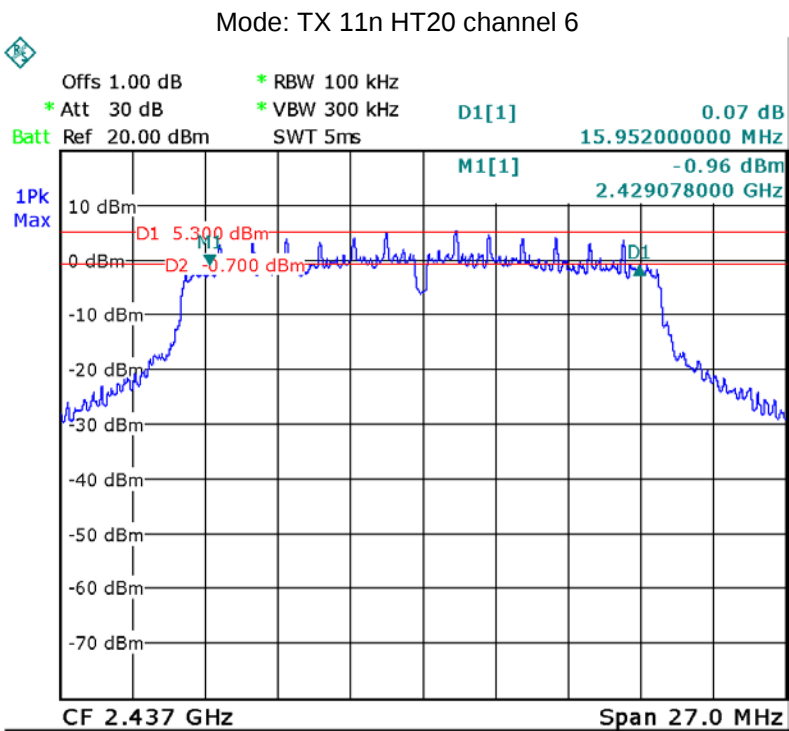
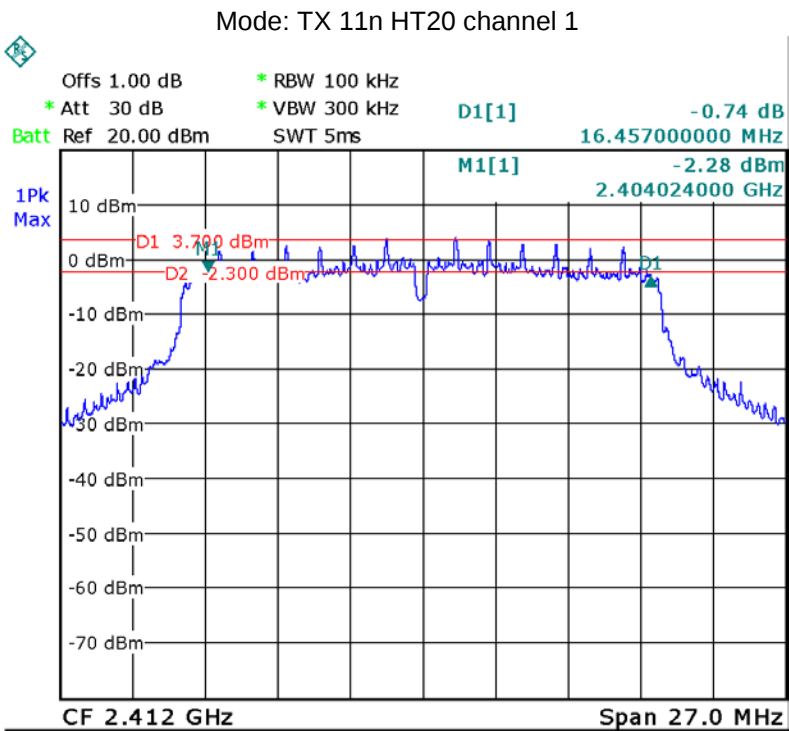
Operation mode	Test Channel	6dB Bandwidth (MHz)	99% Bandwidth (MHz)
BLE	Channel 0	0.641	1.029
	Channel 19	0.635	1.036
	Channel 39	0.623	1.036

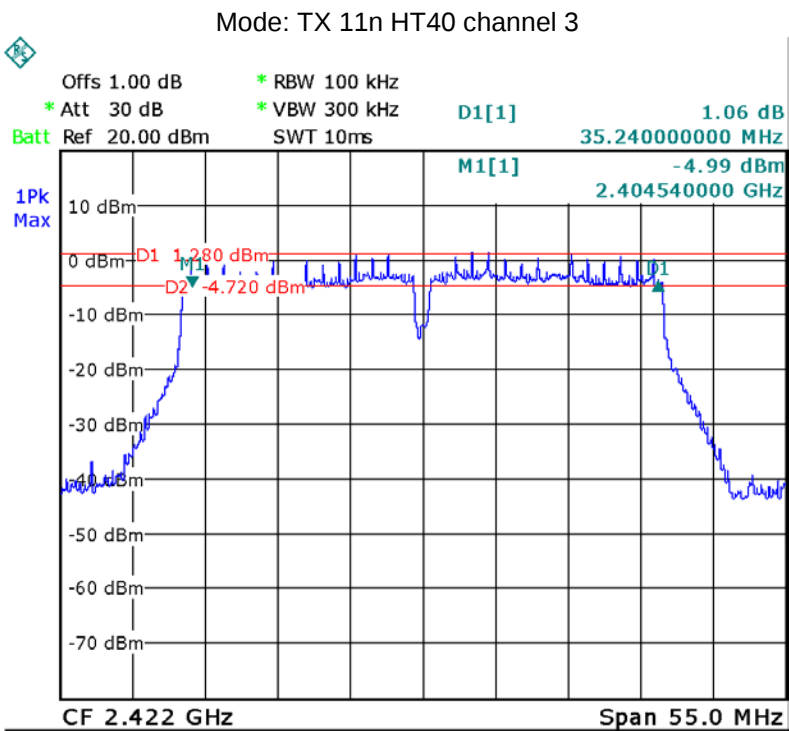
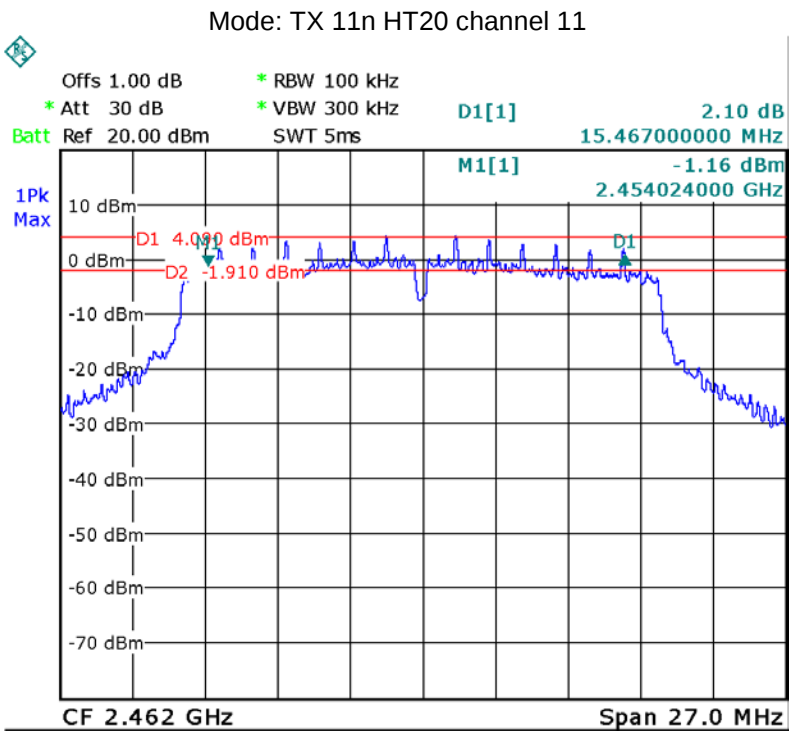
Test result plot:

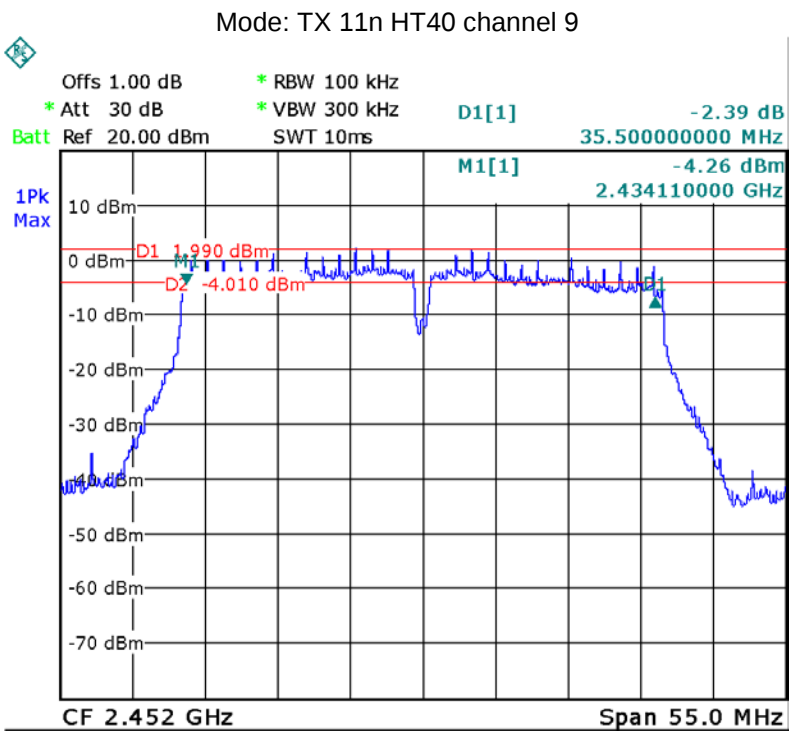
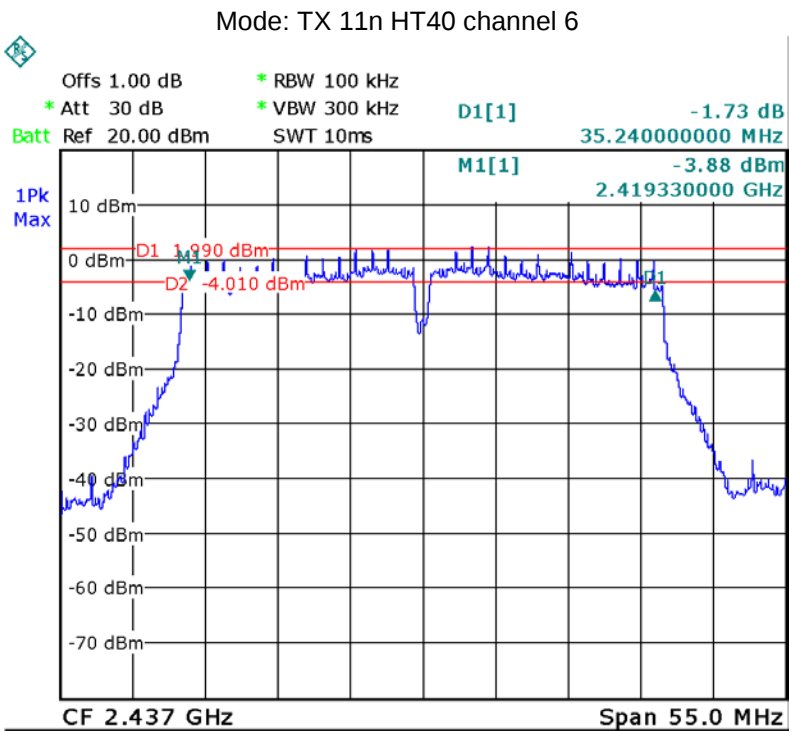


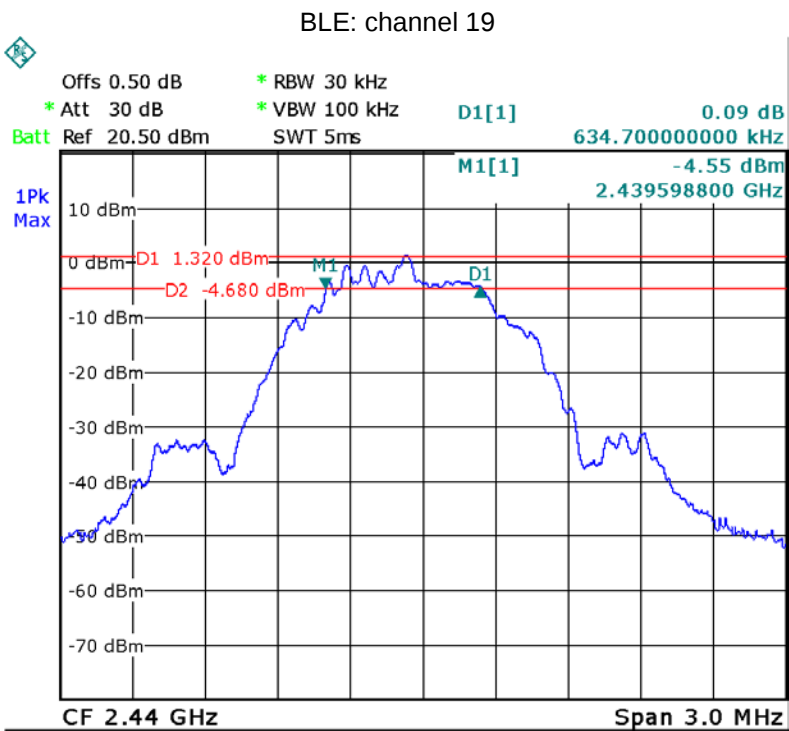
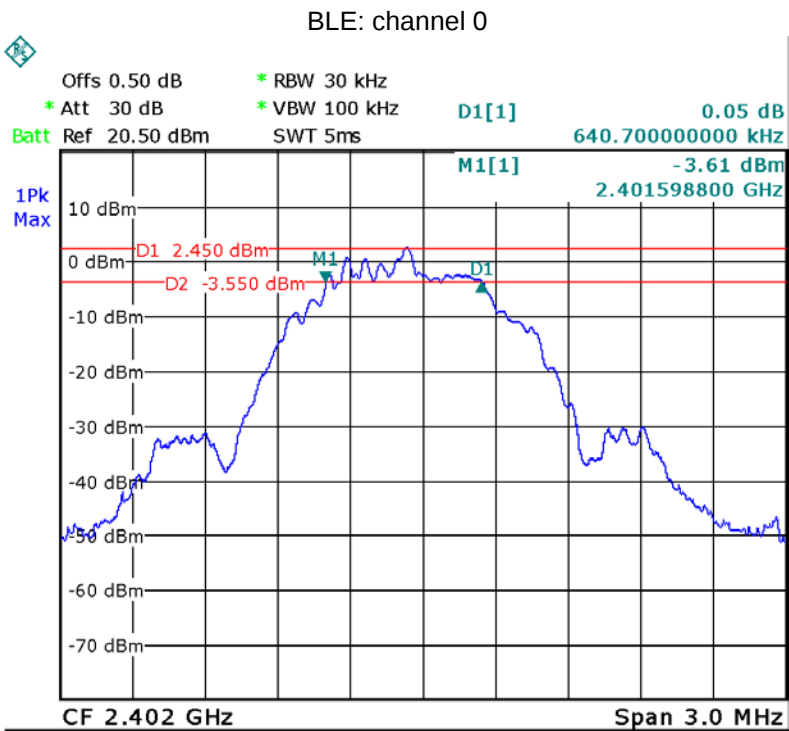


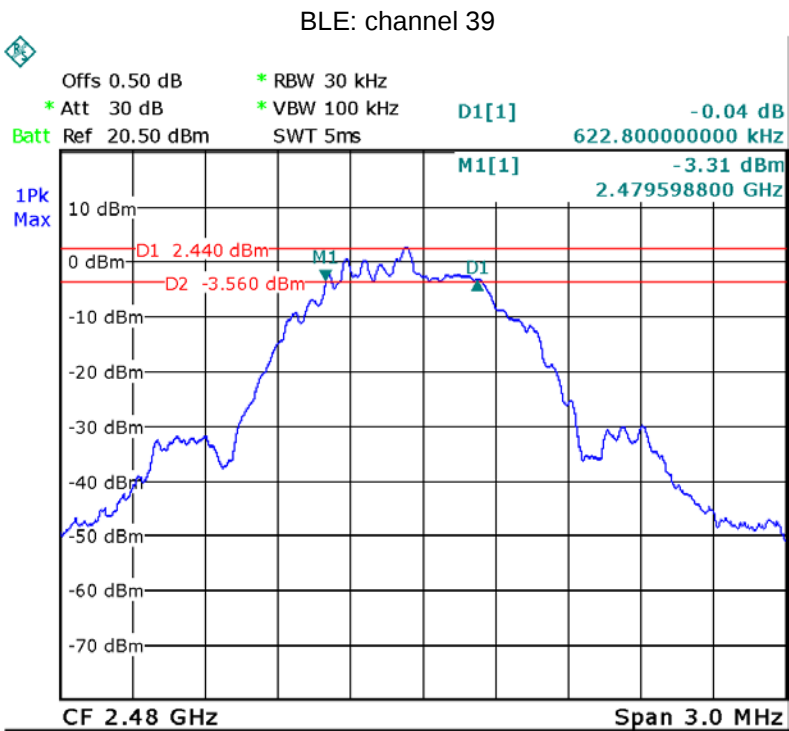






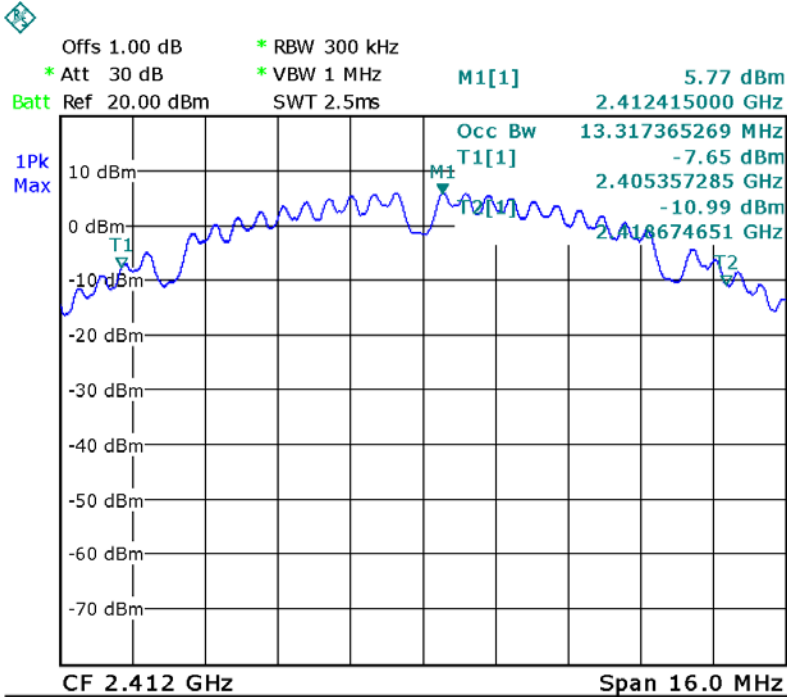




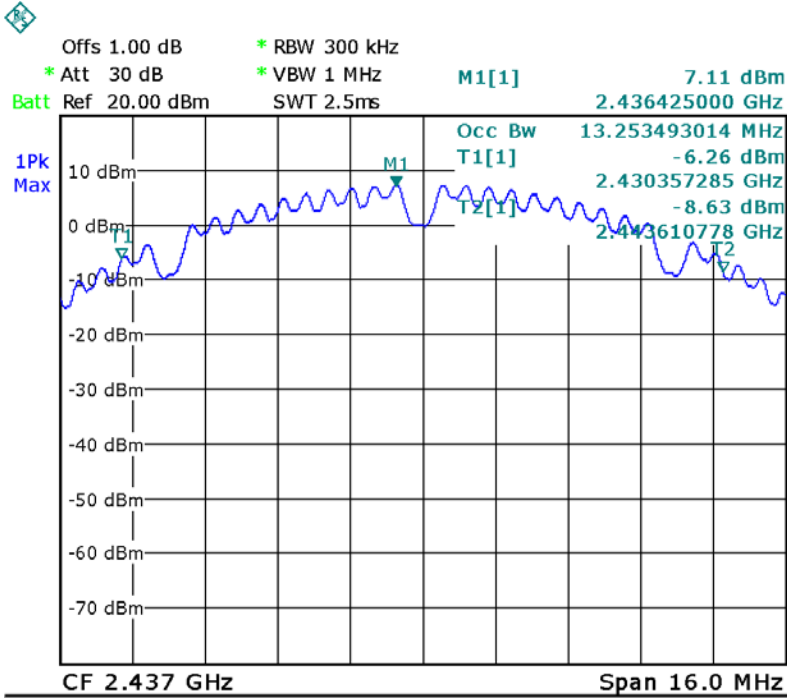


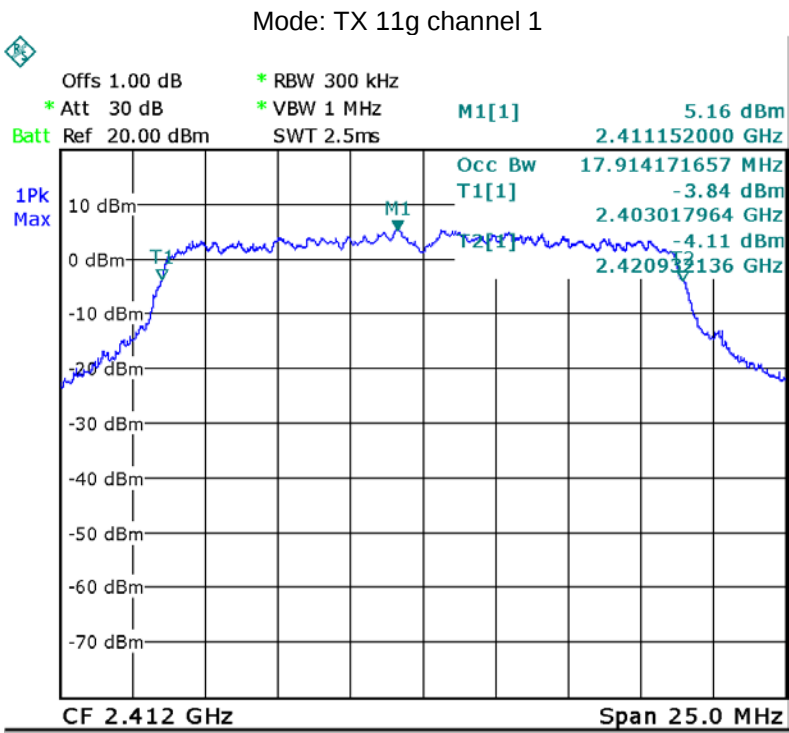
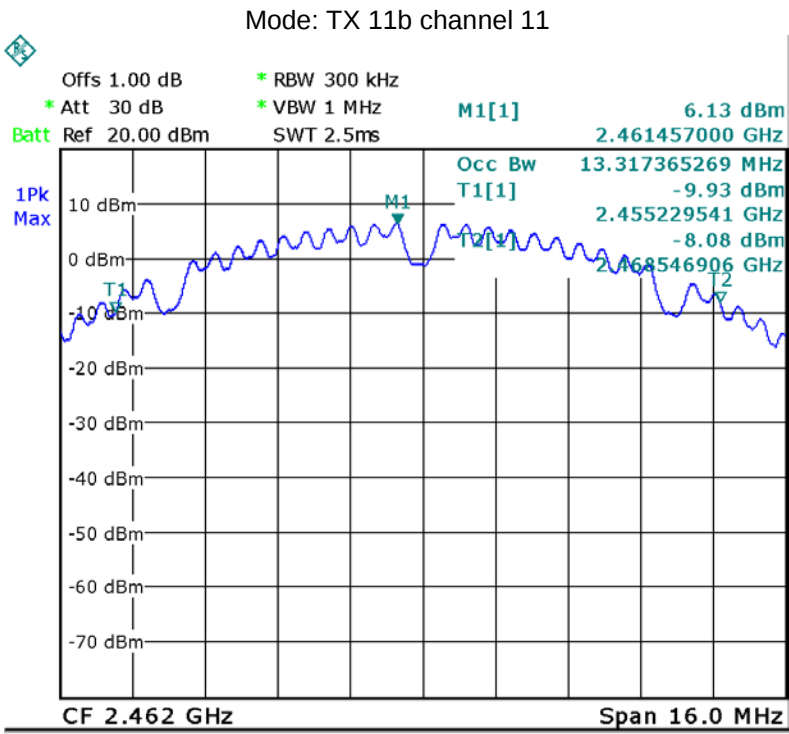
99% Bandwidth(Antenna 0)

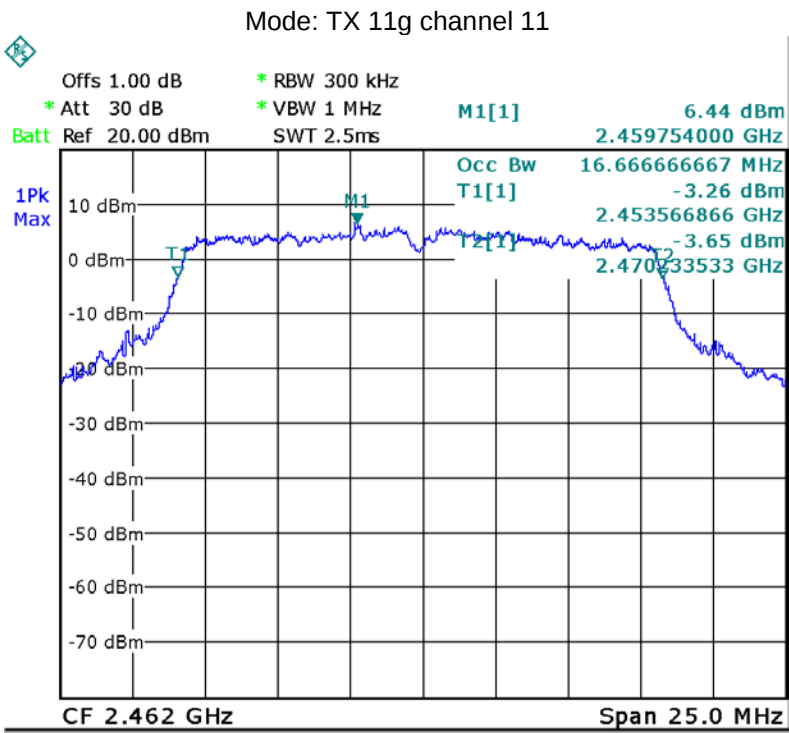
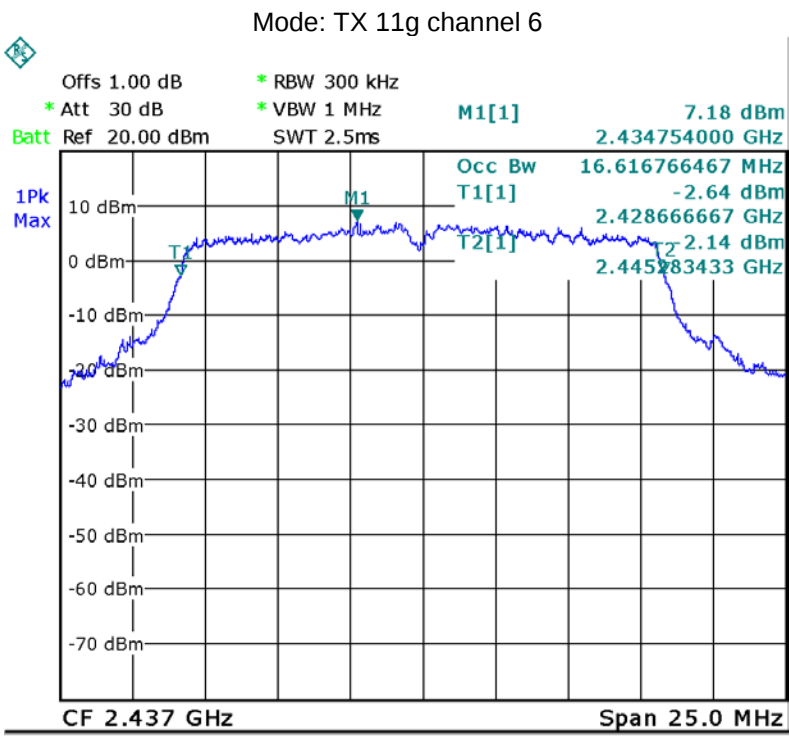
Mode: TX 11b channel 1

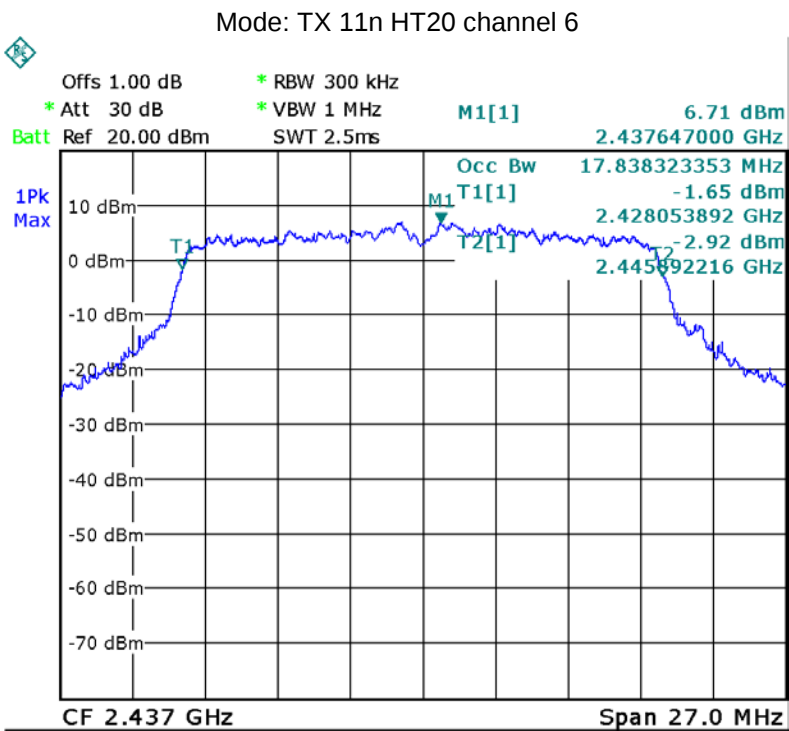
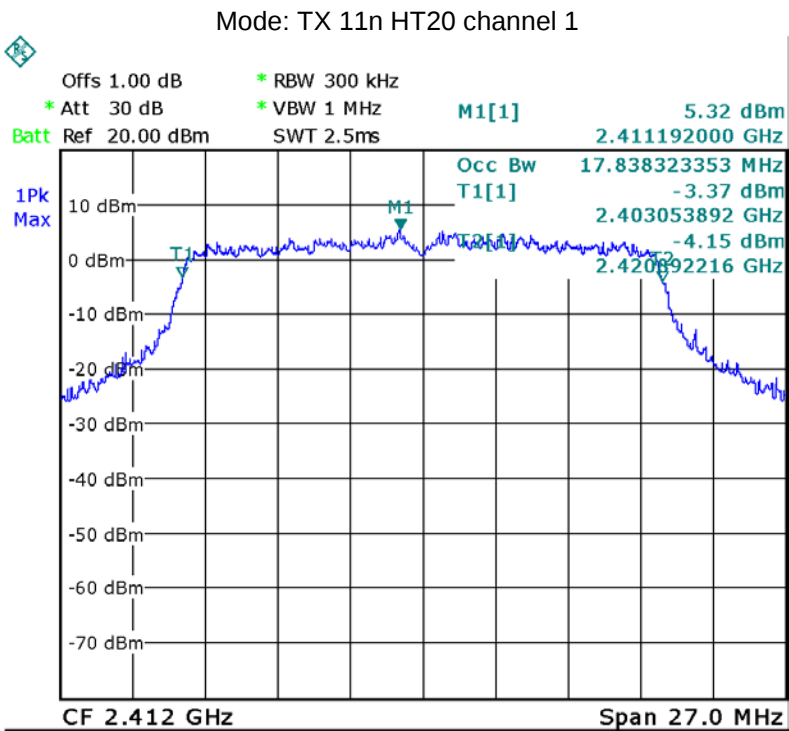


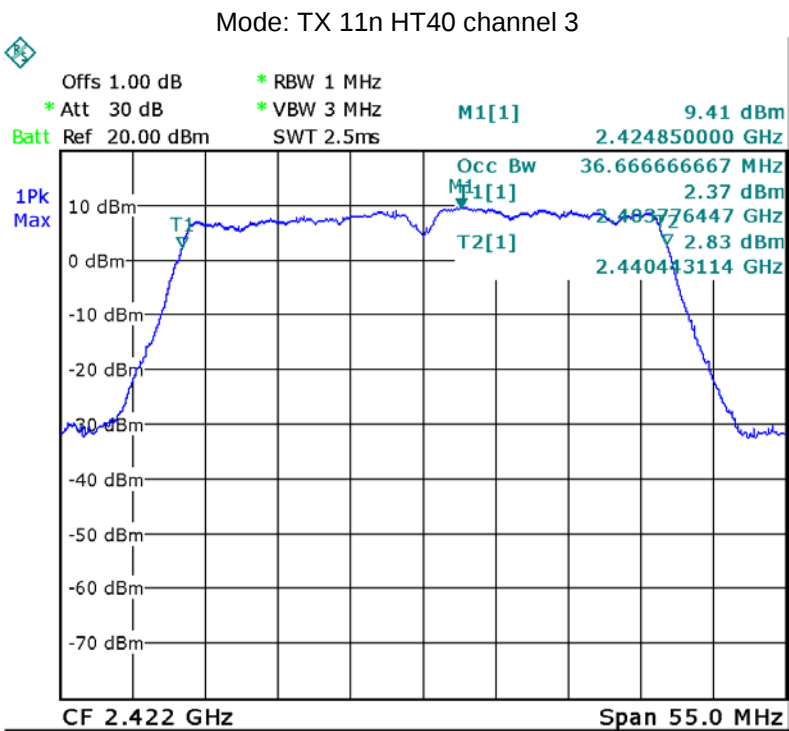
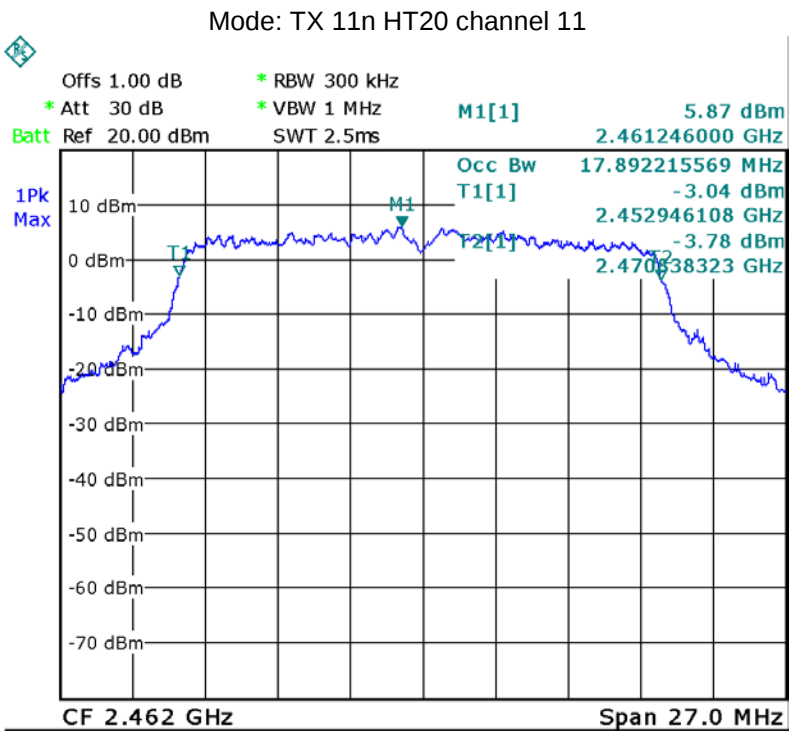
Mode: TX 11b channel 6

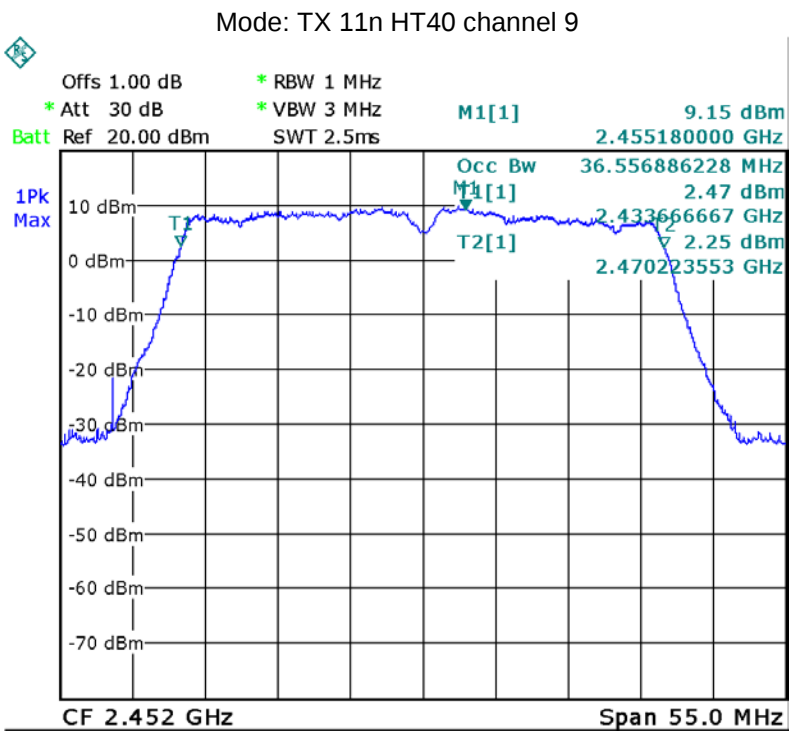
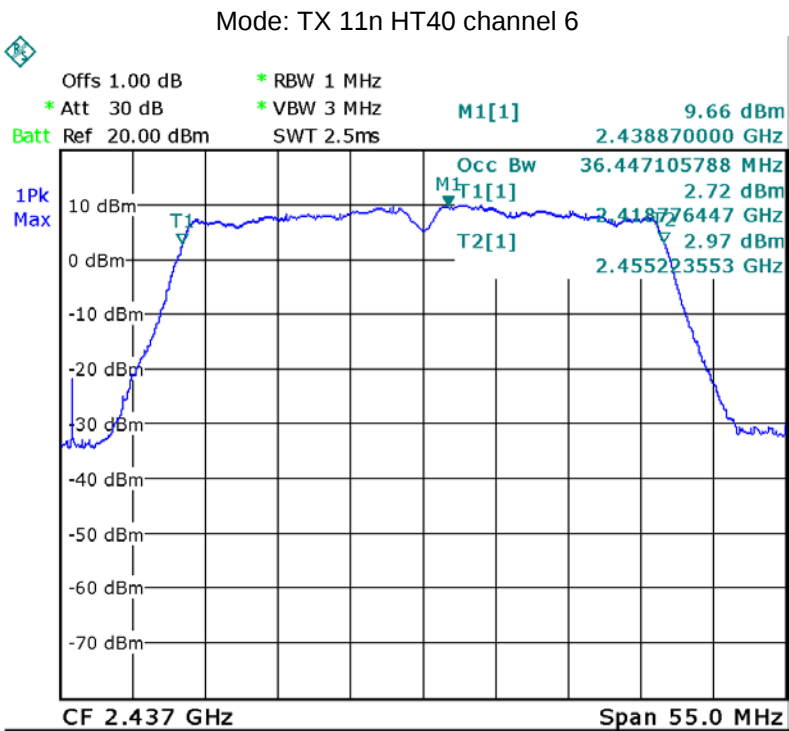






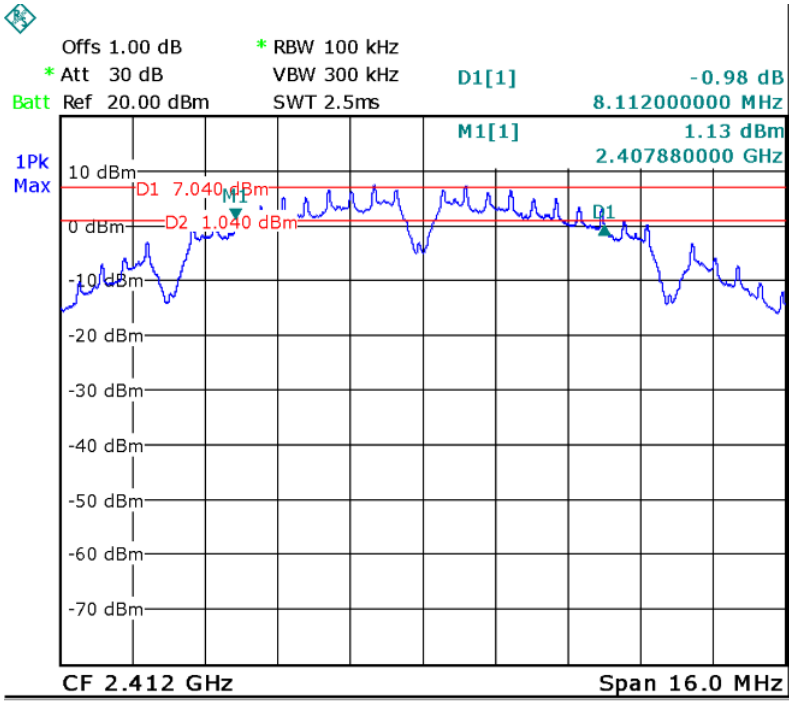




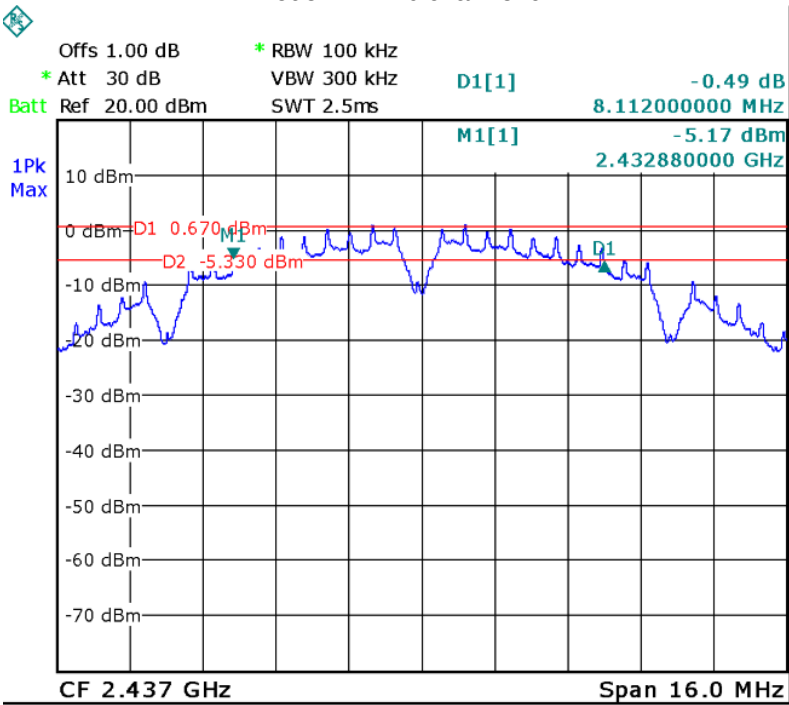


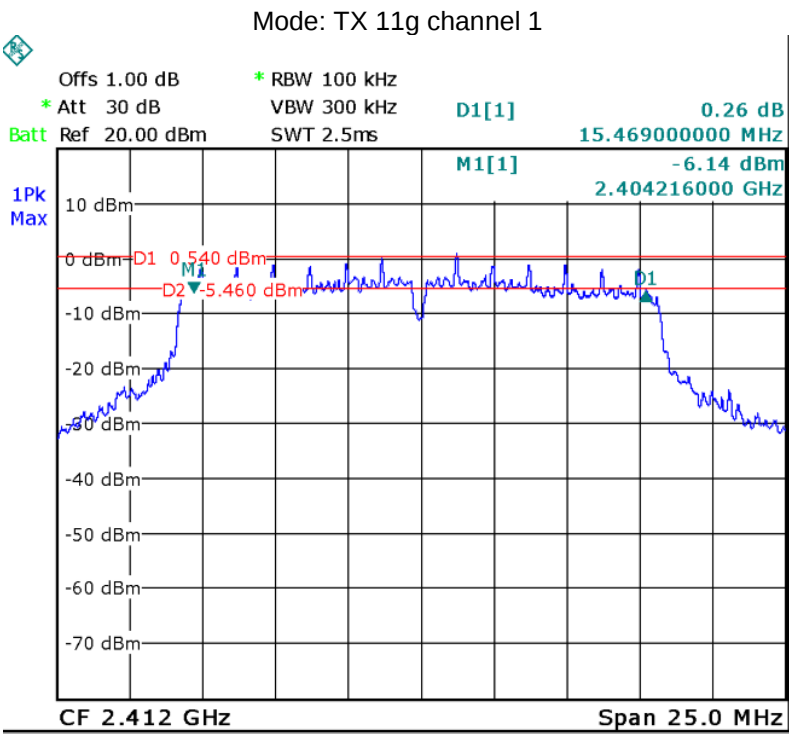
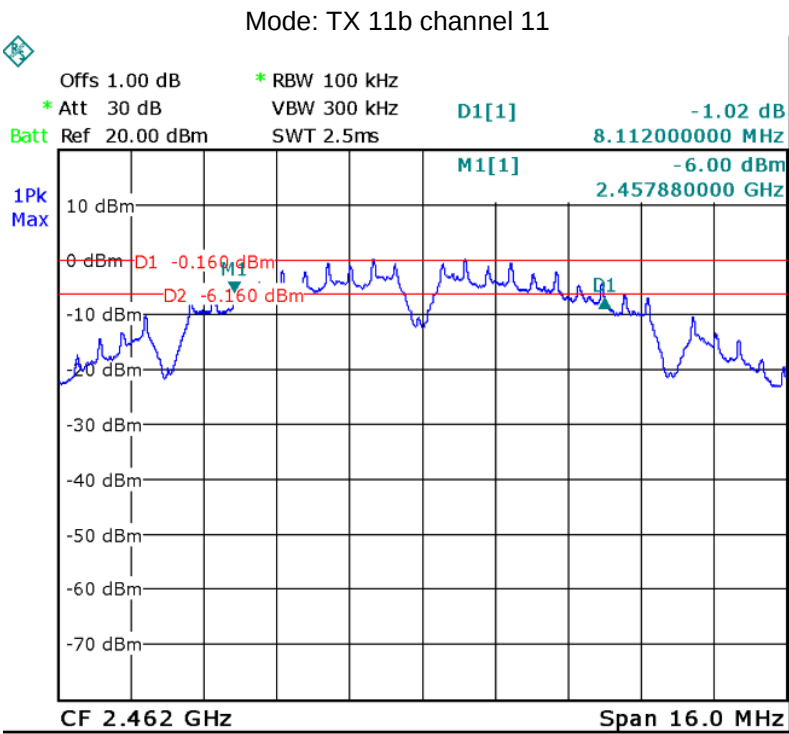
6dB Bandwidth (Antenna 1)

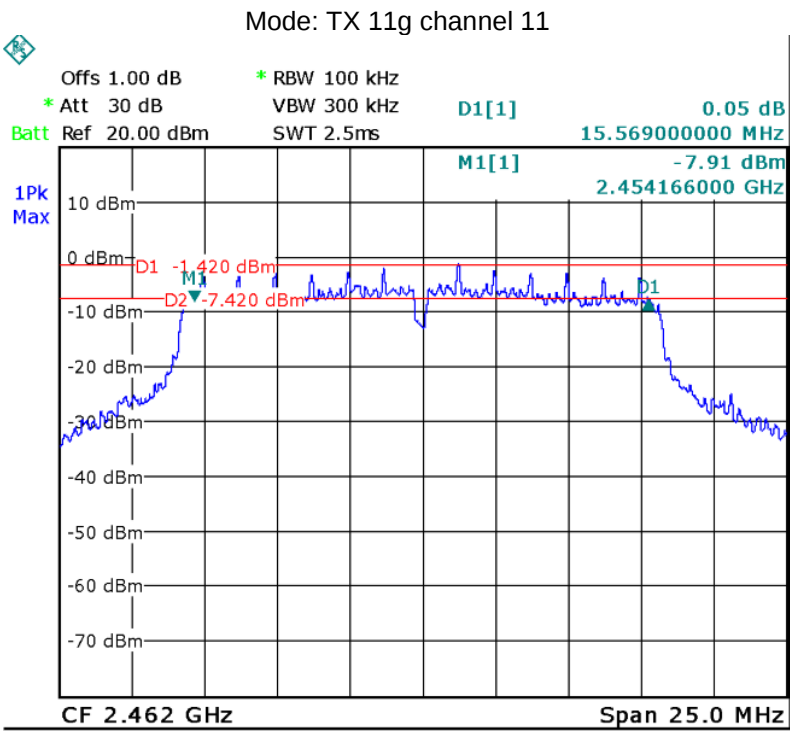
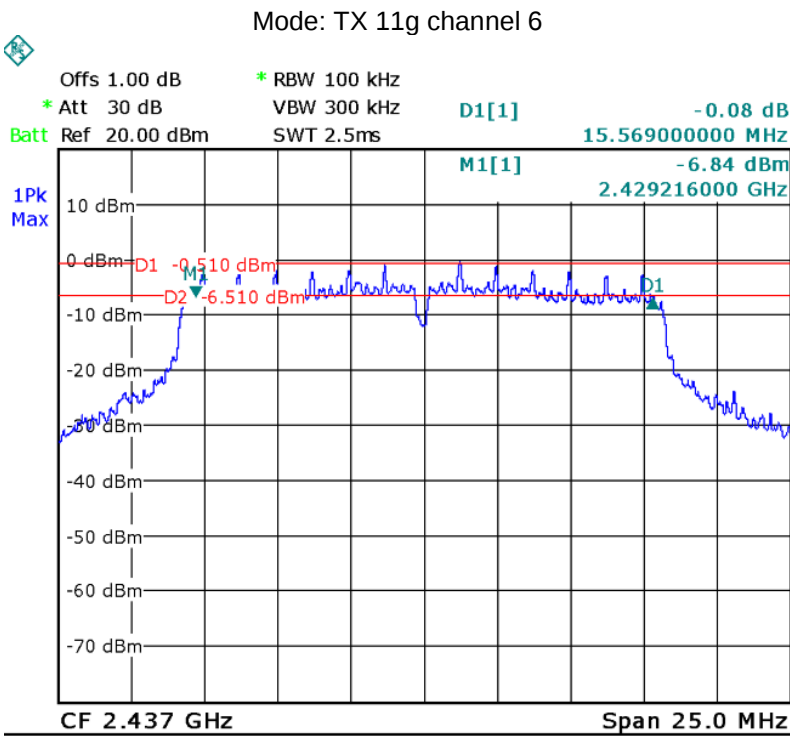
Mode: TX 11b channel 1

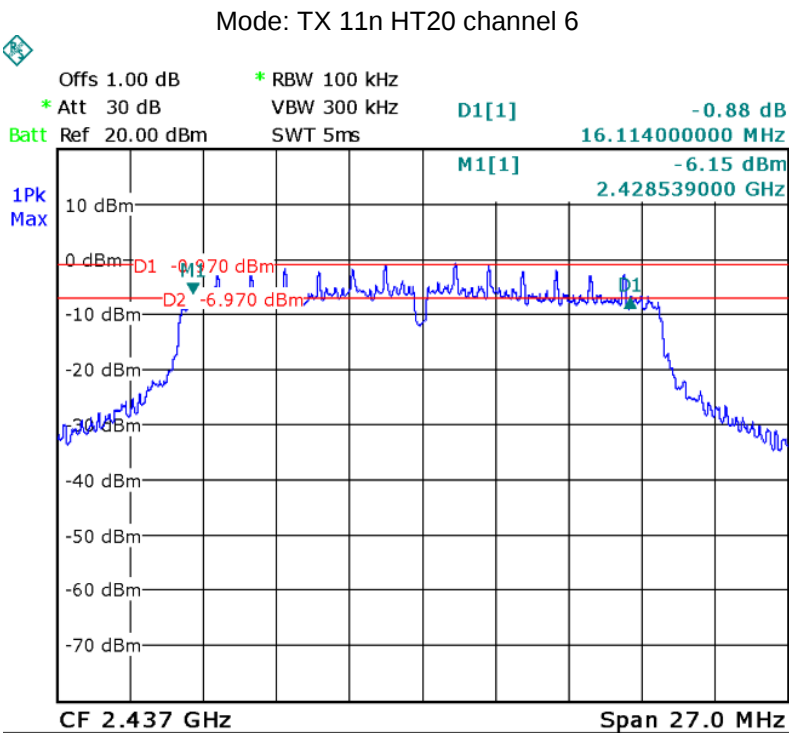
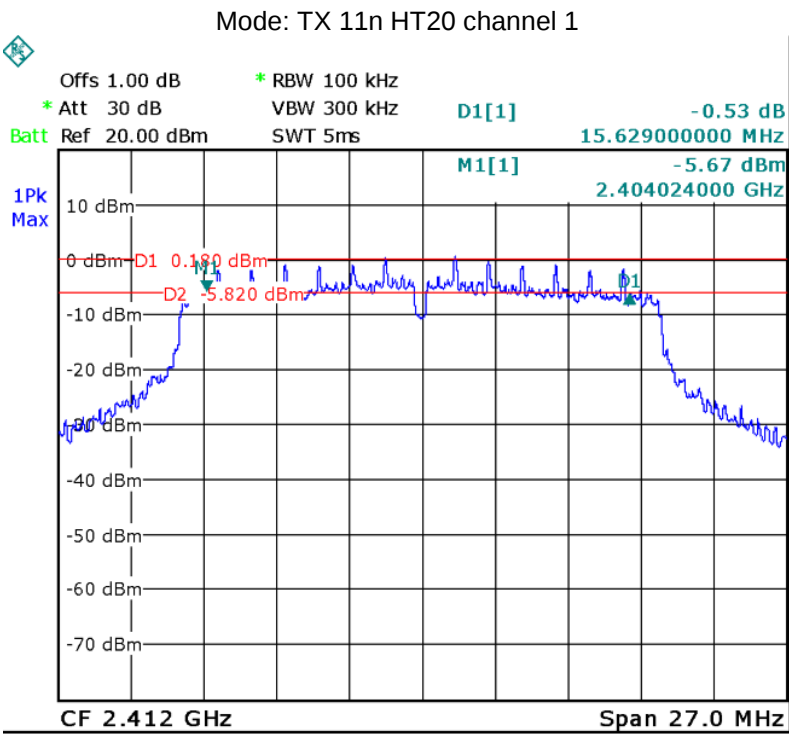


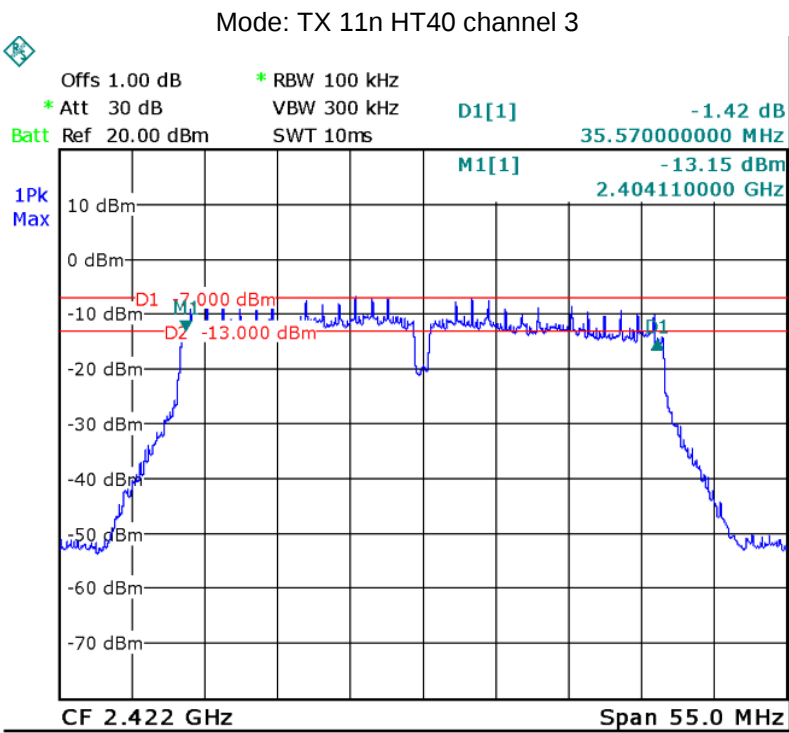
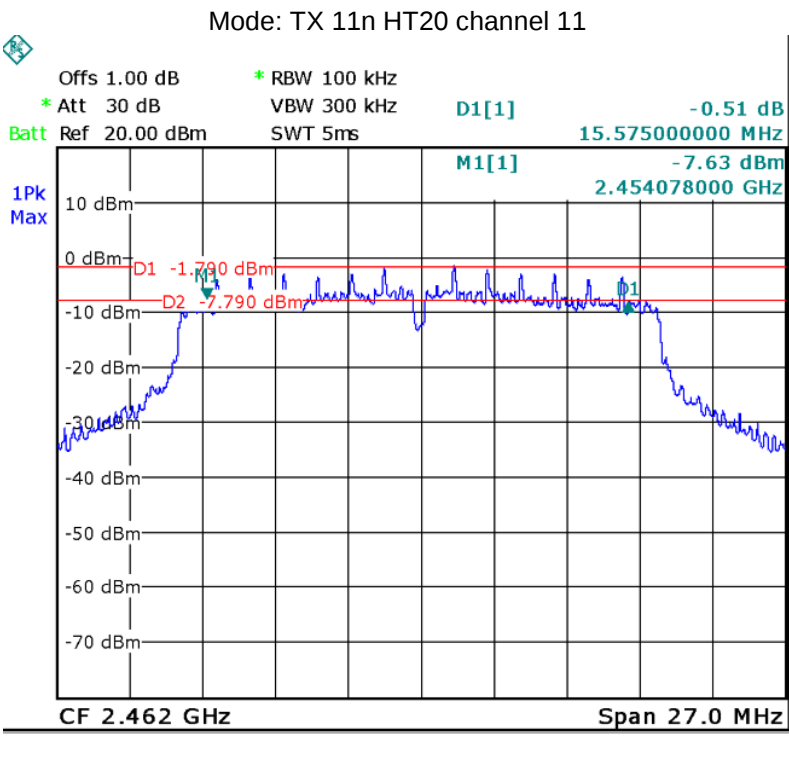
Mode: TX 11b channel 6

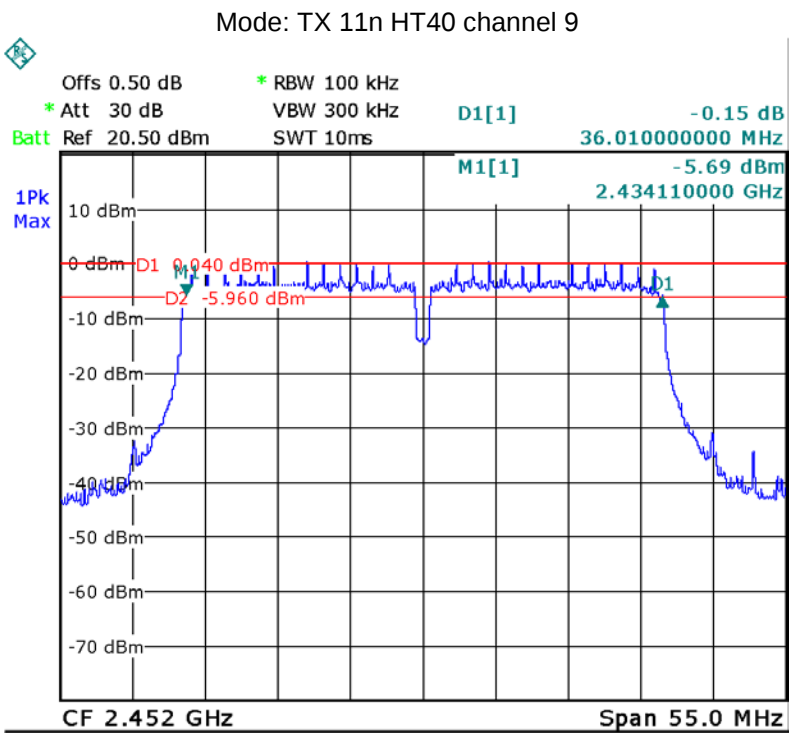
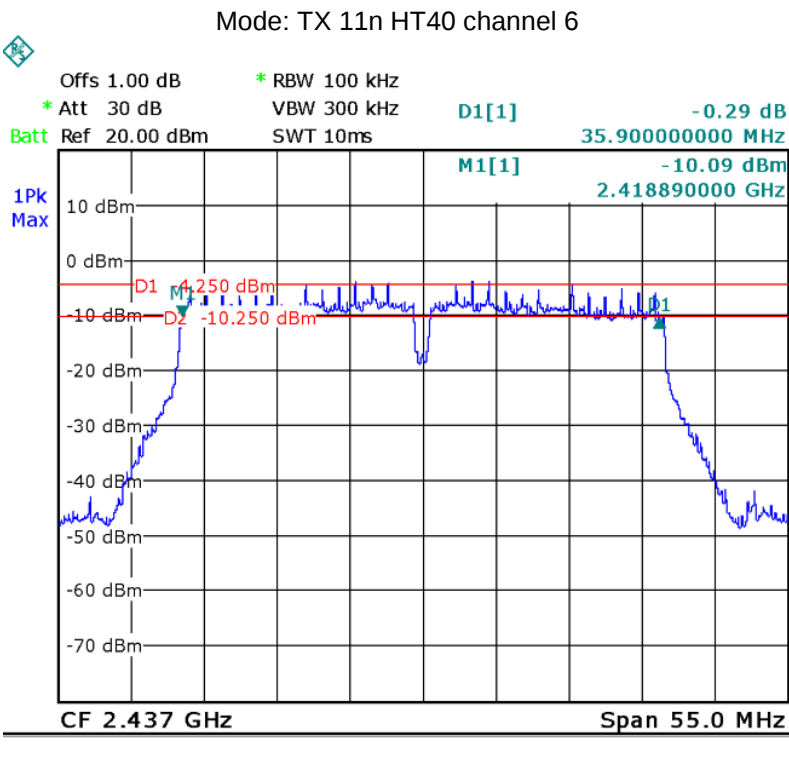






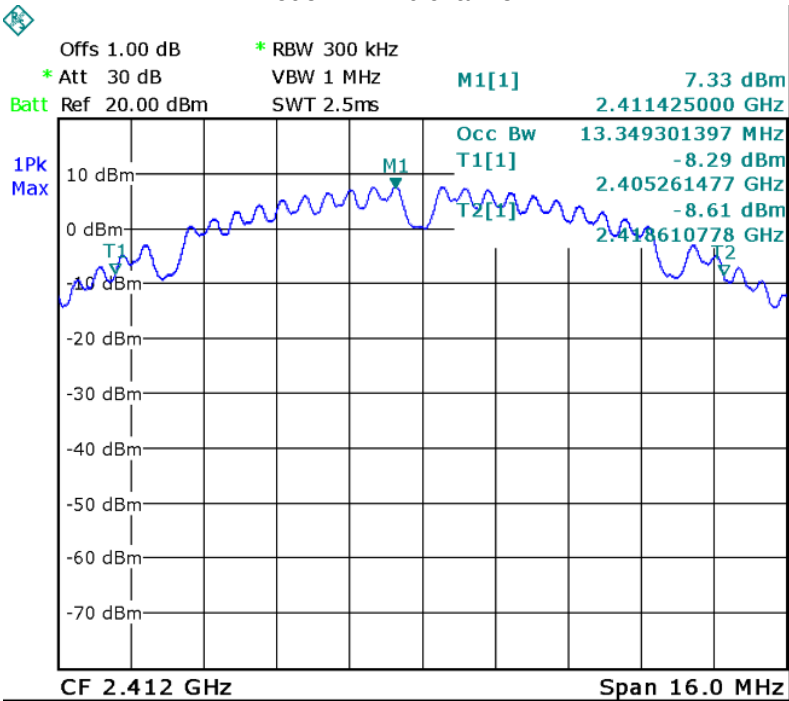






99% Bandwidth (Antenna 1)

Mode: TX 11b channel 1



Mode: TX 11b channel 6

