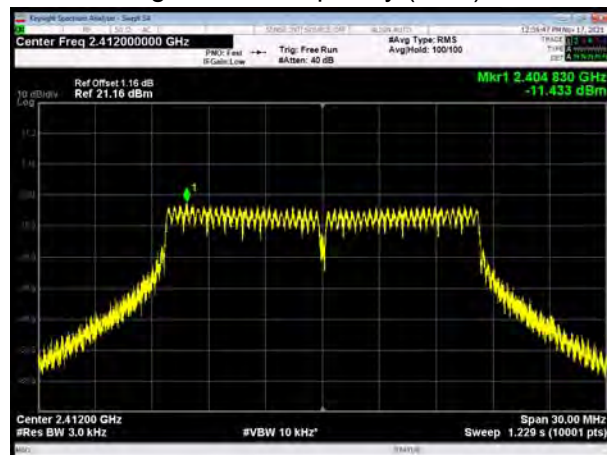
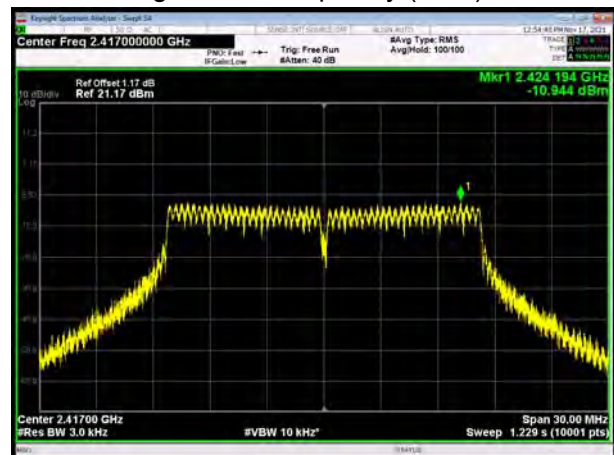


802.11g, Carrier frequency (MHz): 2412



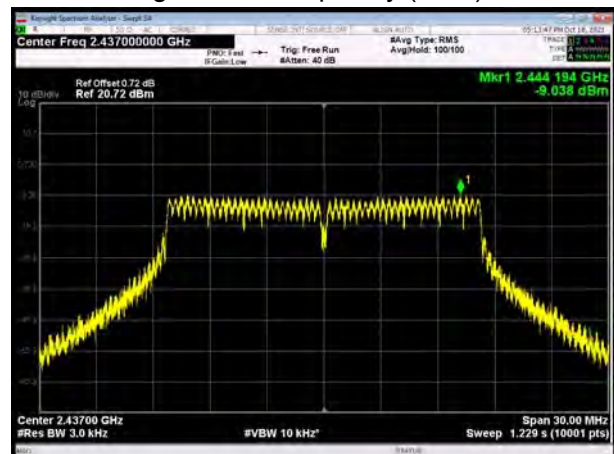
802.11g, Carrier frequency (MHz): 2417



802.11g, Carrier frequency (MHz): 2422



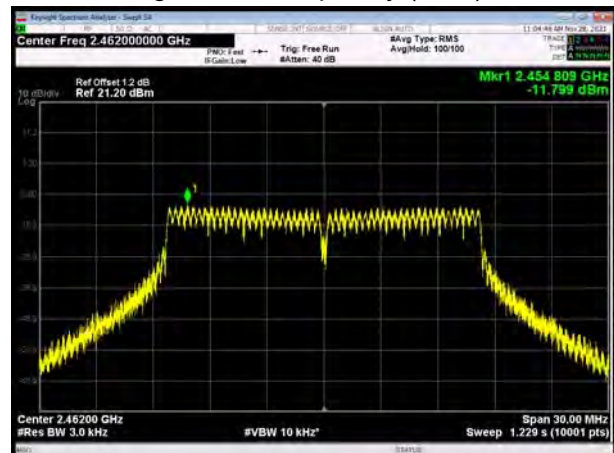
802.11g, Carrier frequency (MHz): 2437



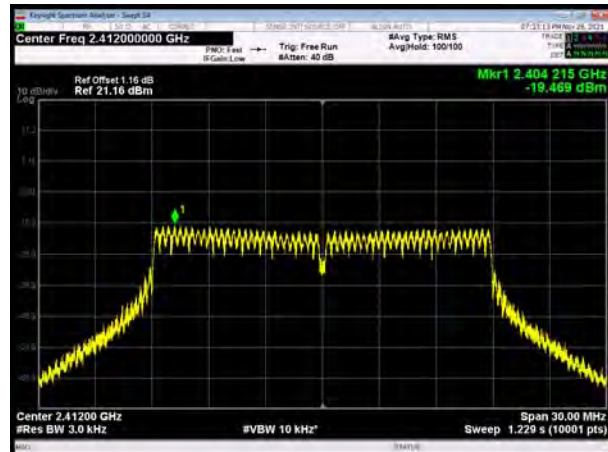
802.11g, Carrier frequency (MHz): 2457



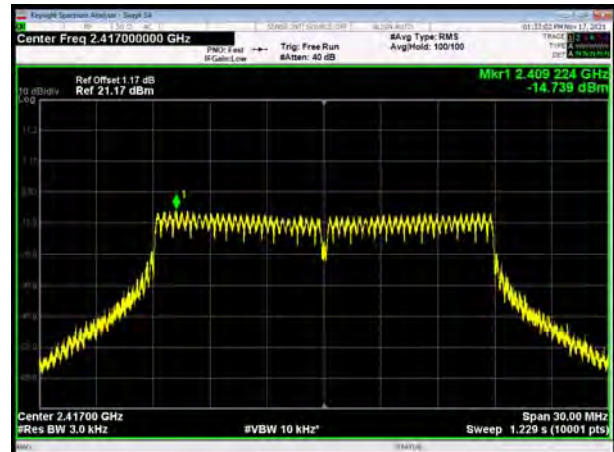
802.11g, Carrier frequency (MHz): 2462



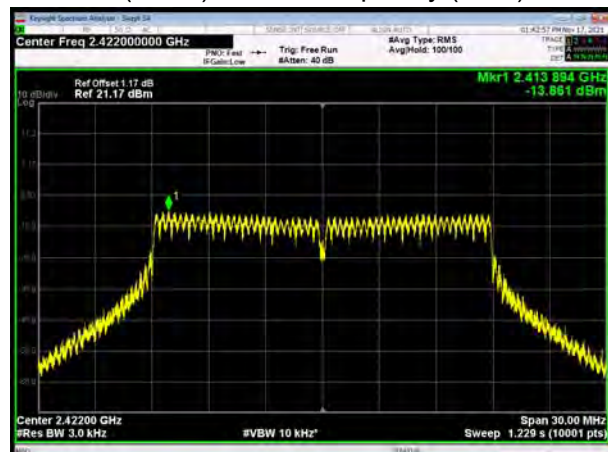
802.11n(HT20), Carrier frequency (MHz): 2412



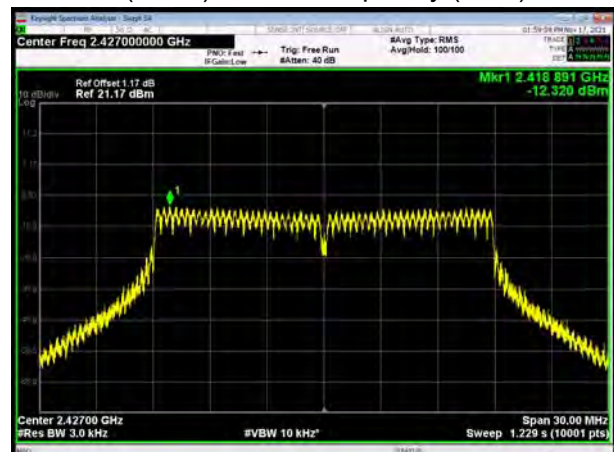
802.11n(HT20), Carrier frequency (MHz): 2417



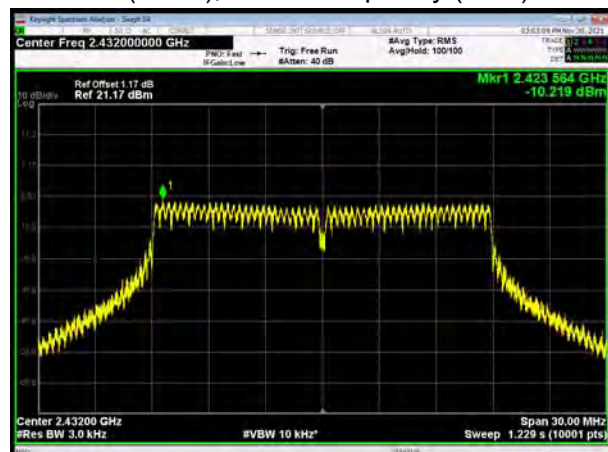
802.11n(HT20), Carrier frequency (MHz): 2422



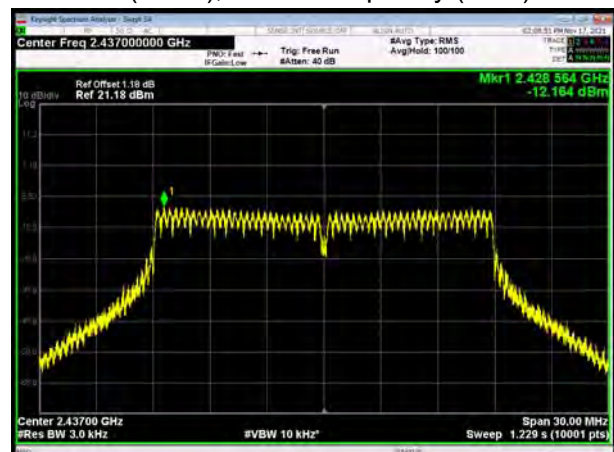
802.11n(HT20), Carrier frequency (MHz): 2427



802.11n(HT20), Carrier frequency (MHz): 2432



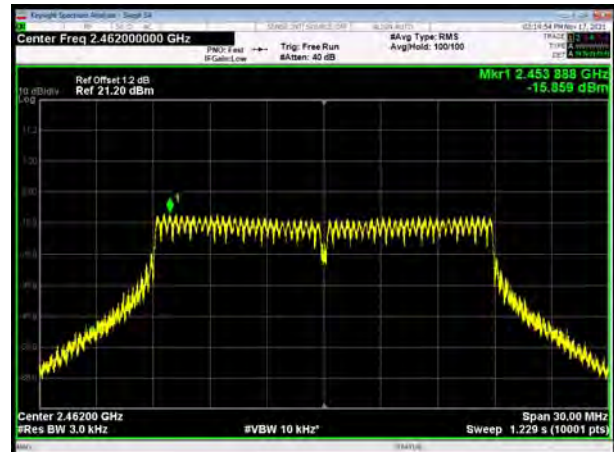
802.11n(HT20), Carrier frequency (MHz): 2437



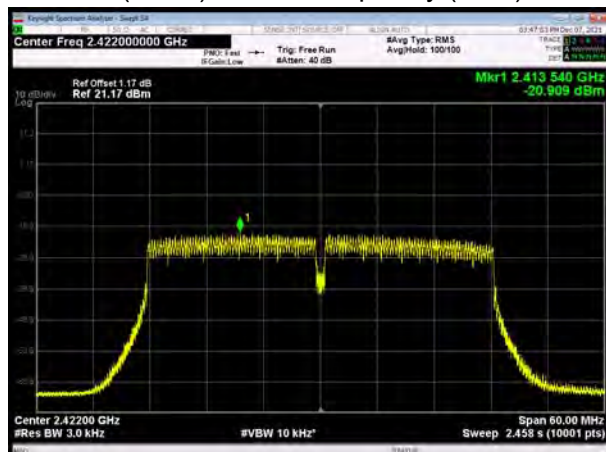
802.11n(HT20), Carrier frequency (MHz):2457



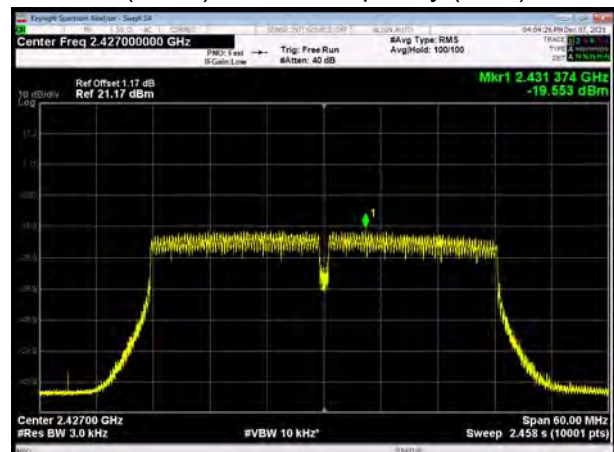
802.11n(HT20), Carrier frequency (MHz):2462



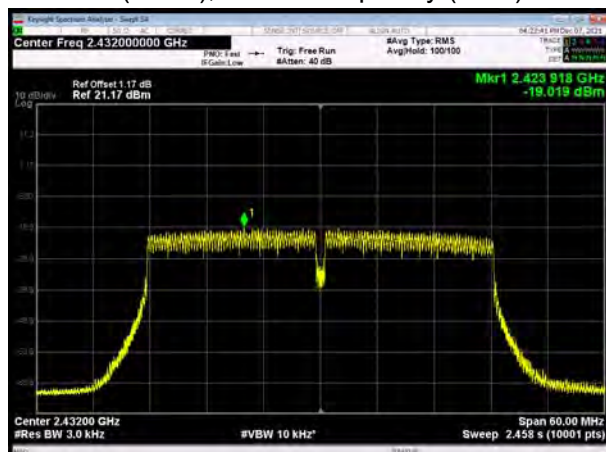
802.11n(HT40), Carrier frequency (MHz): 2422



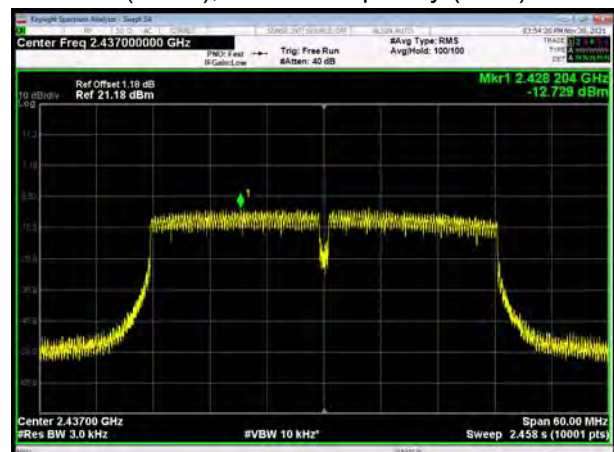
802.11n(HT40), Carrier frequency (MHz): 2427



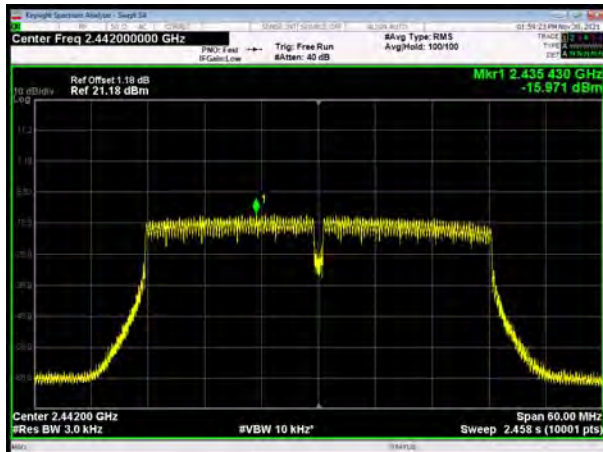
802.11n(HT40), Carrier frequency (MHz): 2432



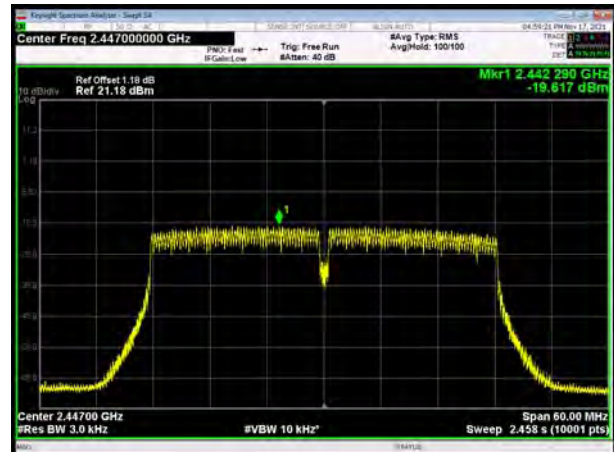
802.11n(HT40), Carrier frequency (MHz): 2437



802.11n(HT40), Carrier frequency (MHz): 2442



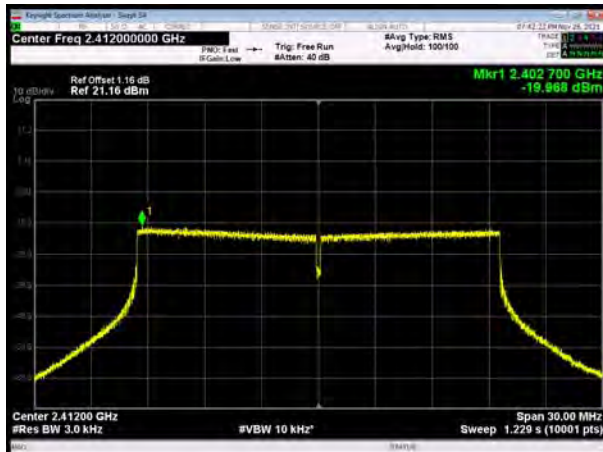
802.11n(HT40), Carrier frequency (MHz): 2447



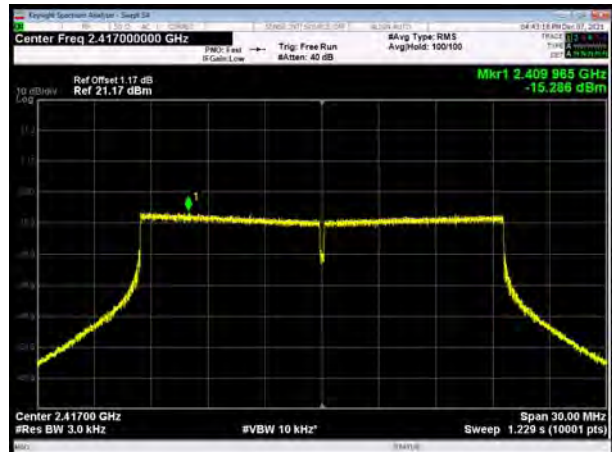
802.11n(HT40), Carrier frequency (MHz): 2452



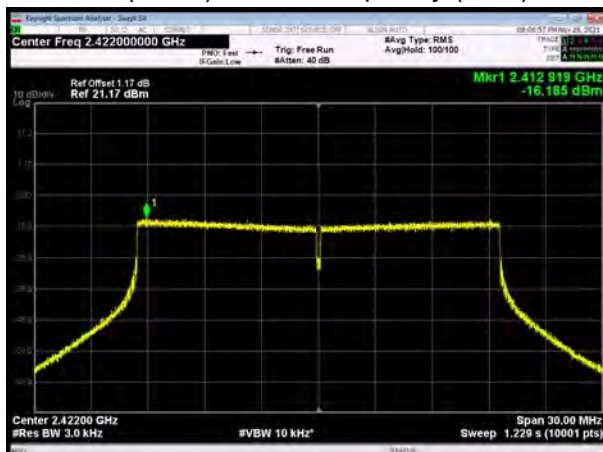
802.11ax(HE20), Carrier frequency (MHz): 2412



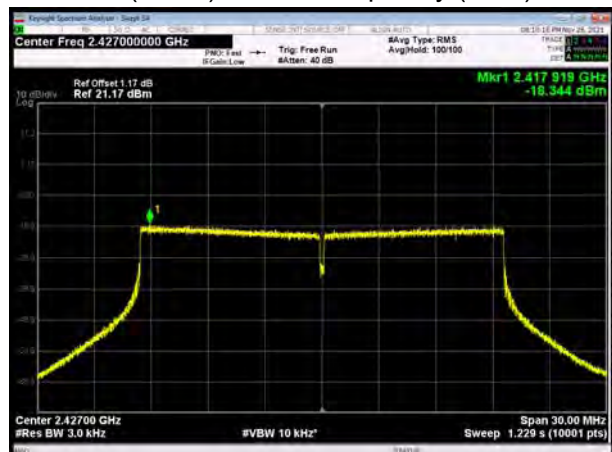
802.11ax(HE20), Carrier frequency (MHz): 2417



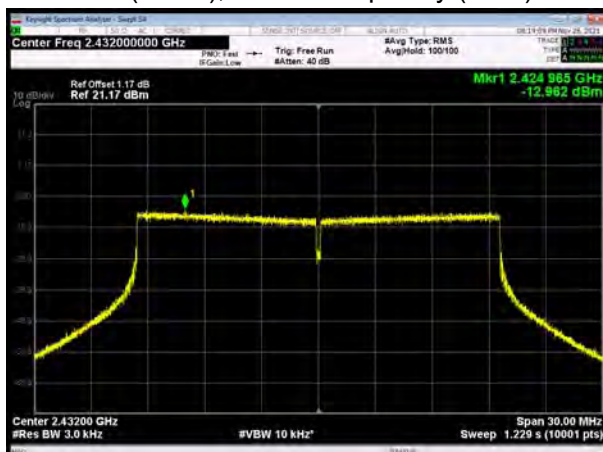
802.11ax(HE20), Carrier frequency (MHz): 2422



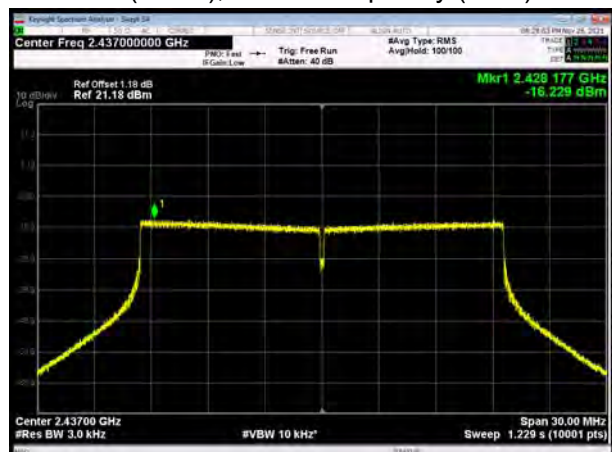
802.11ax(HE20), Carrier frequency (MHz): 2427



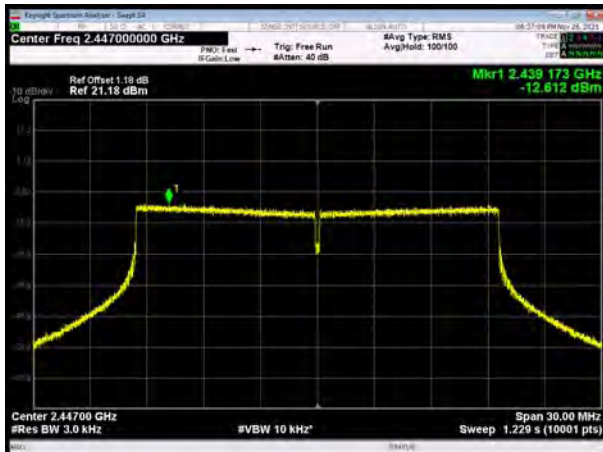
802.11ax(HE20), Carrier frequency (MHz):2432



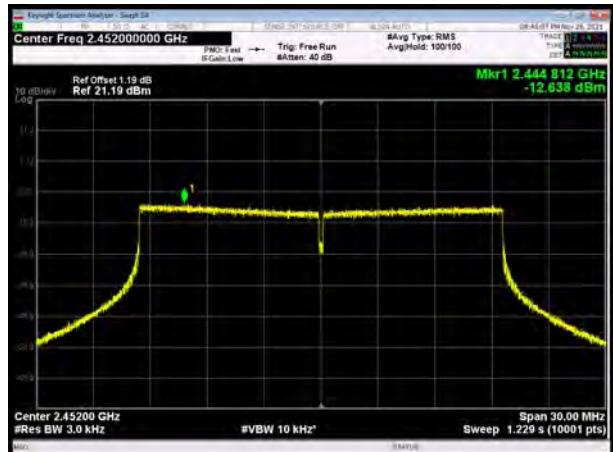
802.11ax(HE20), Carrier frequency (MHz): 2437



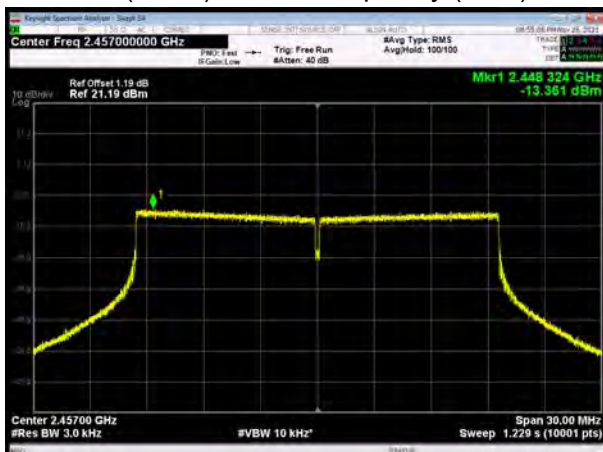
802.11ax(HE20), Carrier frequency (MHz): 2447



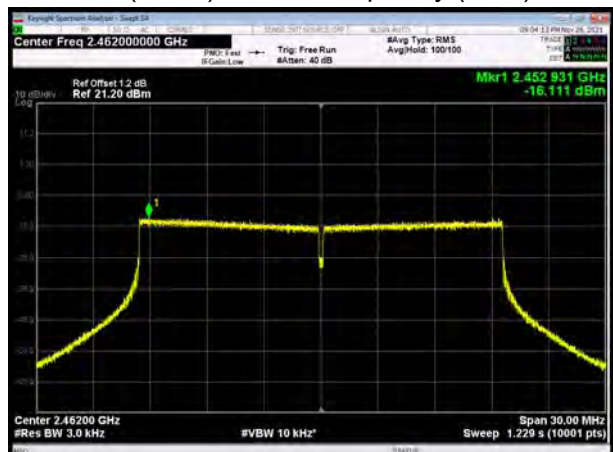
802.11ax(HE20), Carrier frequency (MHz): 2452



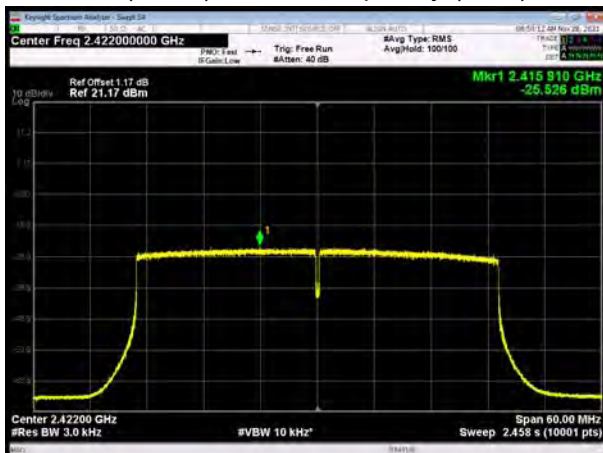
802.11ax(HE20), Carrier frequency (MHz): 2457



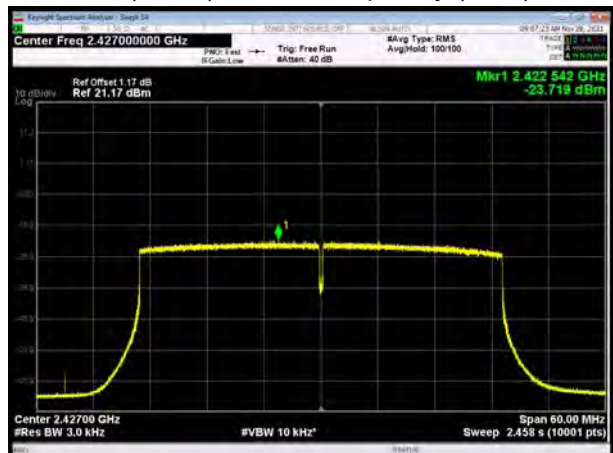
802.11ax(HE20), Carrier frequency (MHz): 2462



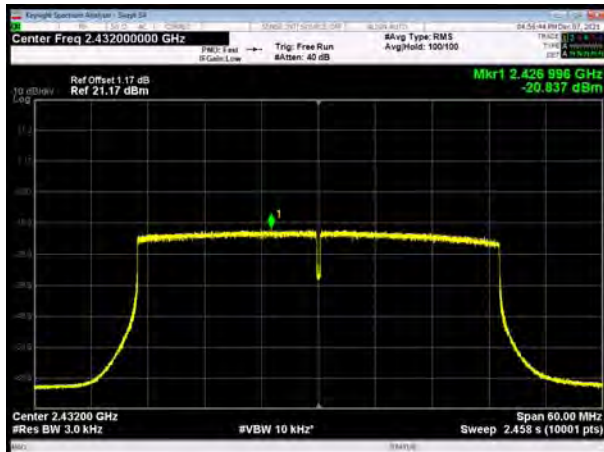
802.11ax(HE40), Carrier frequency (MHz): 2422



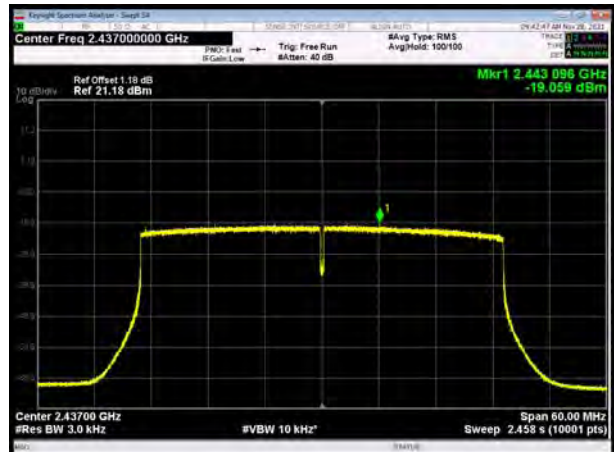
802.11ax(HE40), Carrier frequency (MHz): 2427



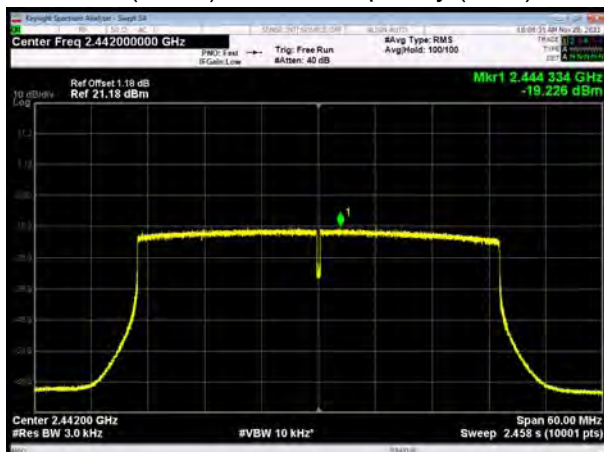
802.11ax(HE40), Carrier frequency (MHz): 2432



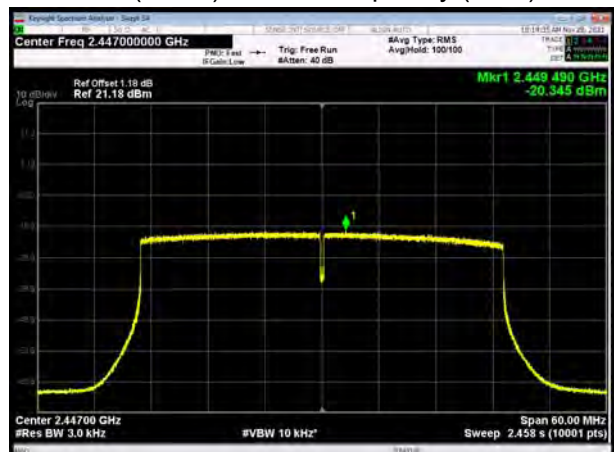
802.11ax(HE40), Carrier frequency (MHz): 2437



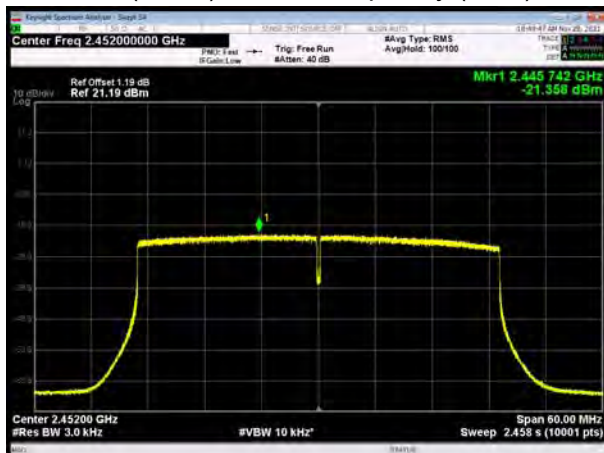
802.11ax(HE40), Carrier frequency (MHz):2442



802.11ax(HE40), Carrier frequency (MHz):2447



802.11ax(HE40), Carrier frequency (MHz):2452



## MIMO Antenna 3

802.11b, Carrier frequency (MHz): 2412



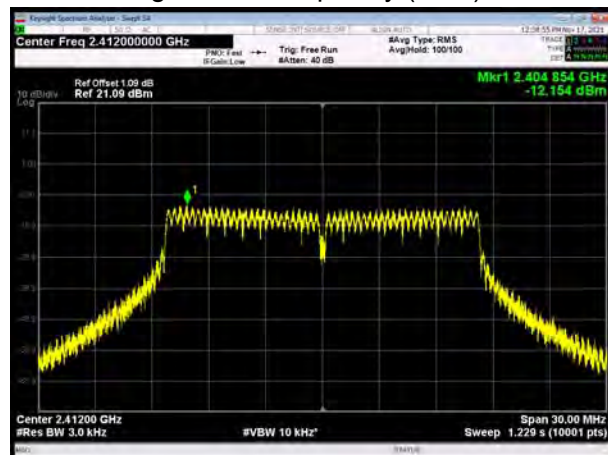
802.11b, Carrier frequency (MHz): 2437



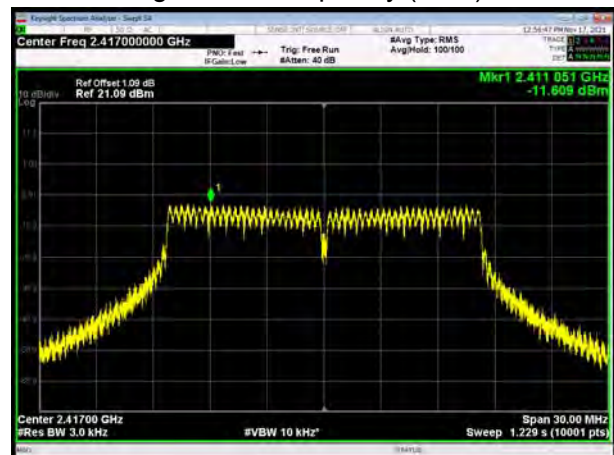
802.11b, Carrier frequency (MHz):2462



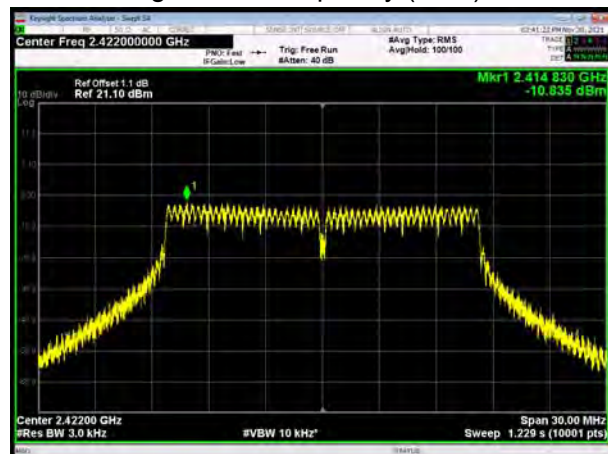
802.11g, Carrier frequency (MHz): 2412



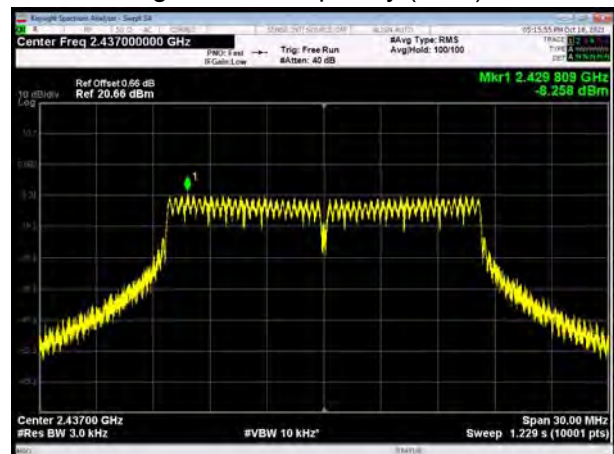
802.11g, Carrier frequency (MHz): 2417



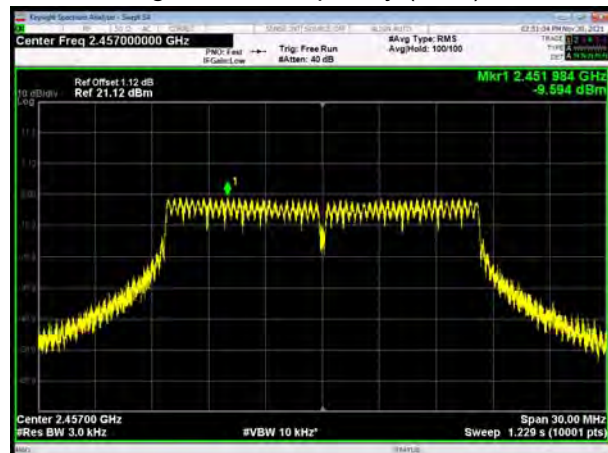
802.11g, Carrier frequency (MHz): 2422



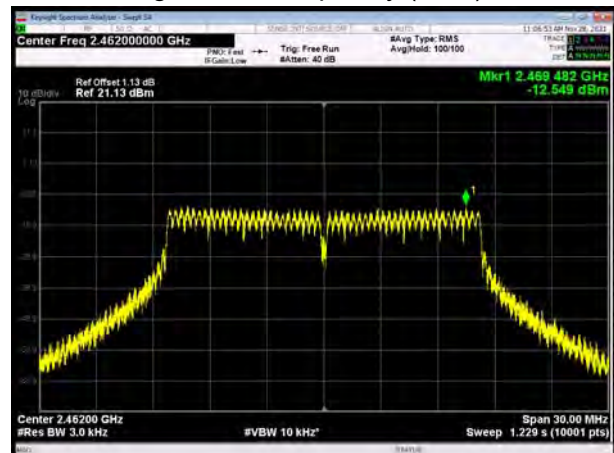
802.11g, Carrier frequency (MHz): 2437



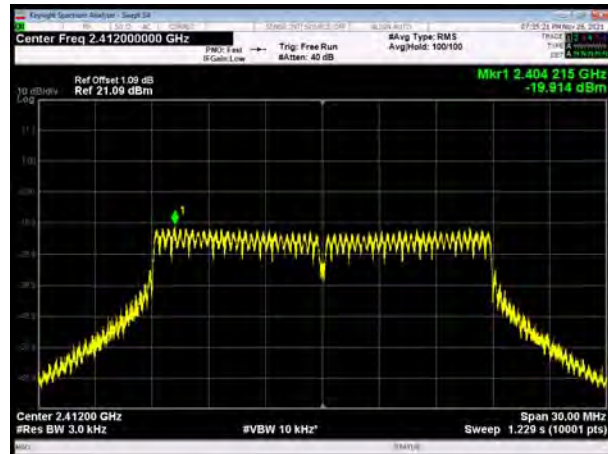
802.11g, Carrier frequency (MHz): 2457



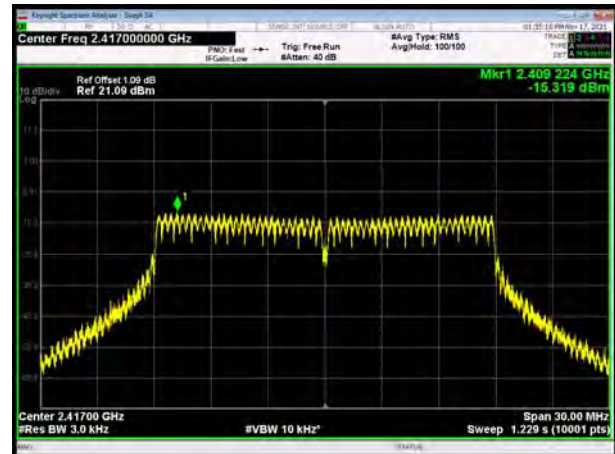
802.11g, Carrier frequency (MHz): 2462



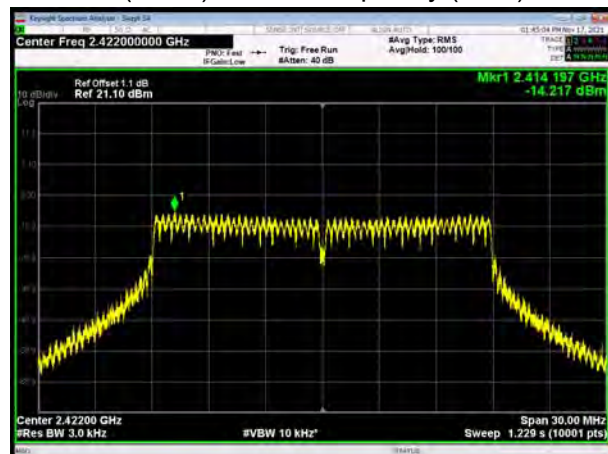
802.11n(HT20), Carrier frequency (MHz): 2412



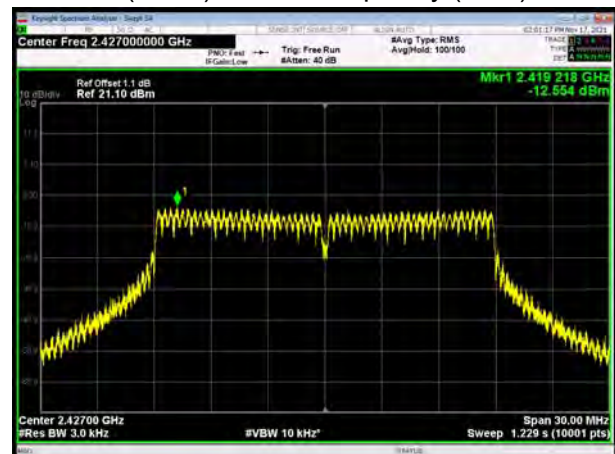
802.11n(HT20), Carrier frequency (MHz): 2417



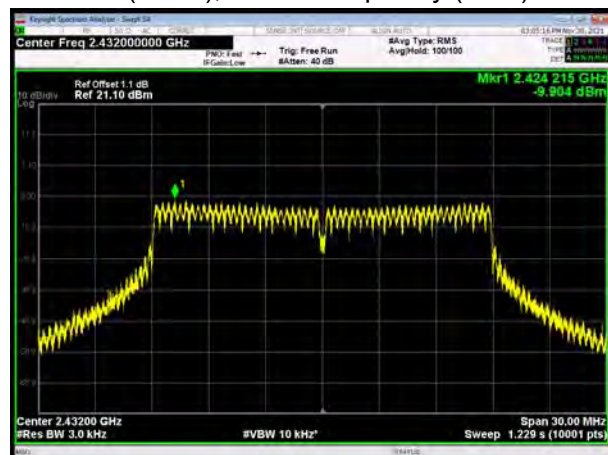
802.11n(HT20), Carrier frequency (MHz): 2422



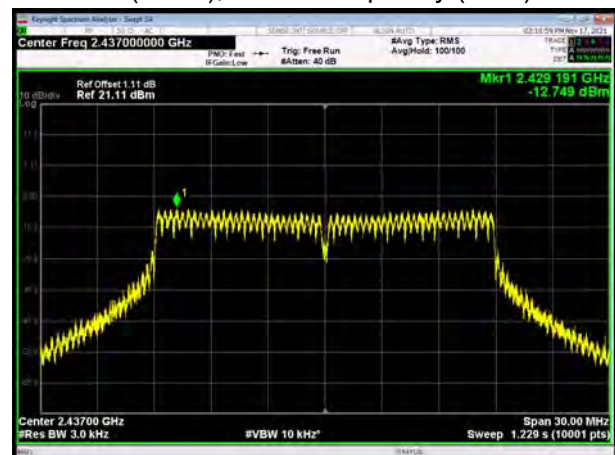
802.11n(HT20), Carrier frequency (MHz): 2427



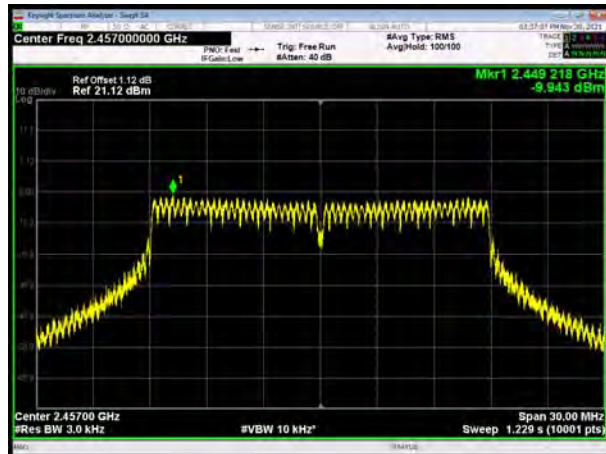
802.11n(HT20), Carrier frequency (MHz): 2432



802.11n(HT20), Carrier frequency (MHz): 2437



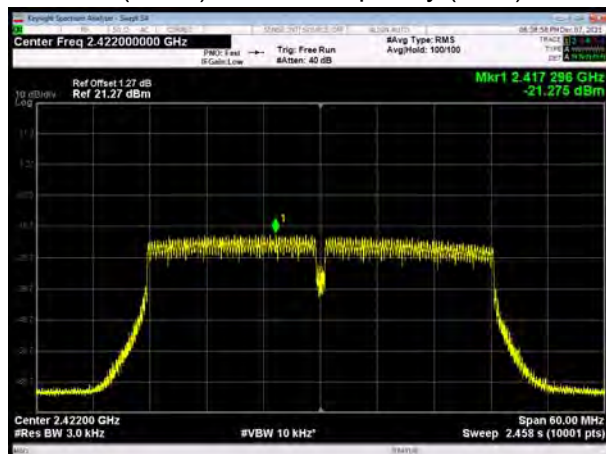
802.11n(HT20), Carrier frequency (MHz):2457



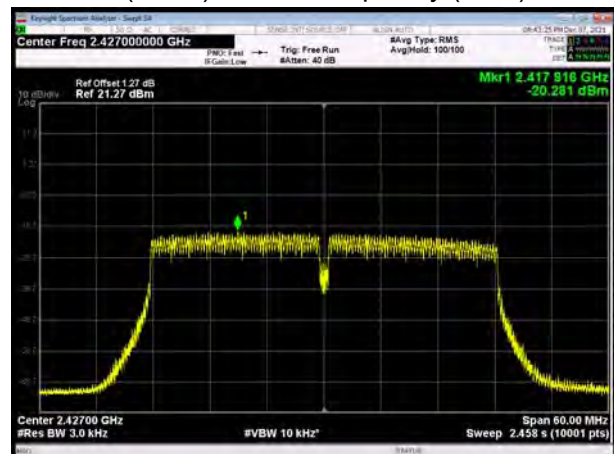
802.11n(HT20), Carrier frequency (MHz):2462



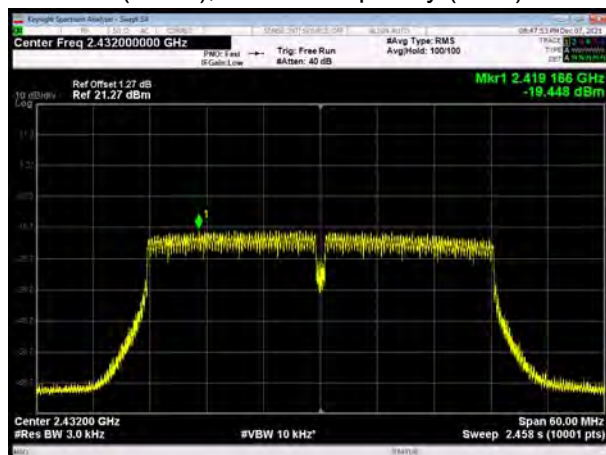
802.11n(HT40), Carrier frequency (MHz): 2422



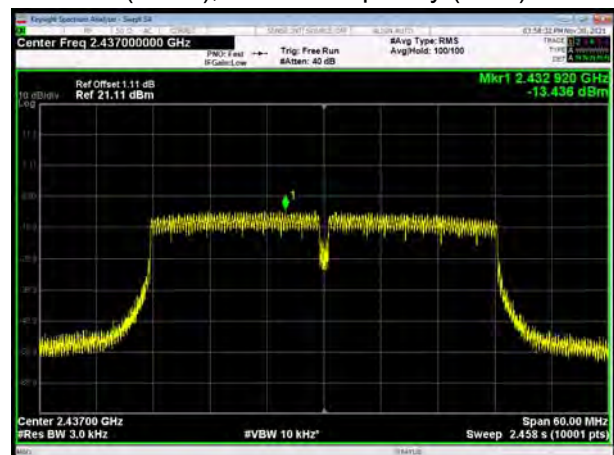
802.11n(HT40), Carrier frequency (MHz): 2427



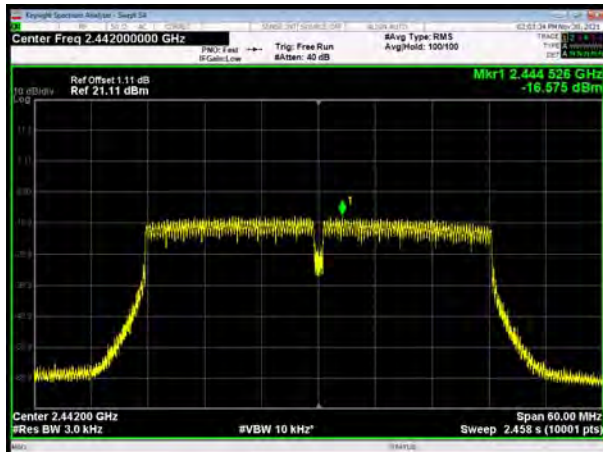
802.11n(HT40), Carrier frequency (MHz): 2432



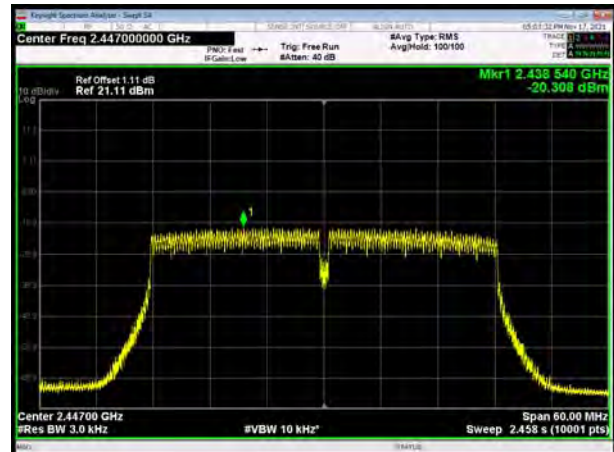
802.11n(HT40), Carrier frequency (MHz): 2437



802.11n(HT40), Carrier frequency (MHz): 2442



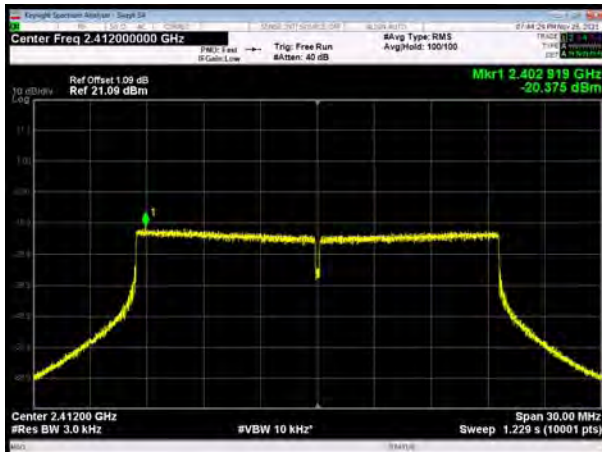
802.11n(HT40), Carrier frequency (MHz): 2447



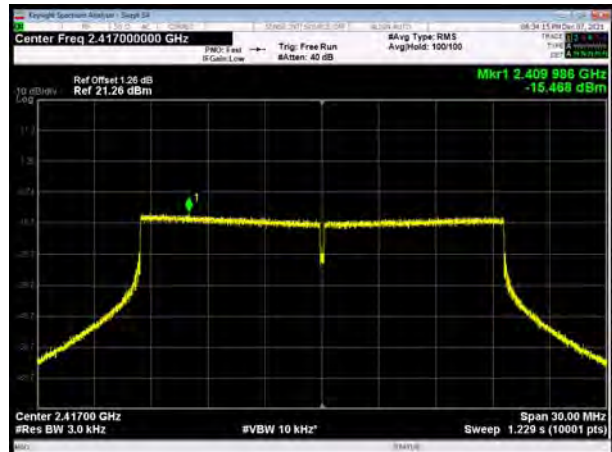
802.11n(HT40), Carrier frequency (MHz): 2452



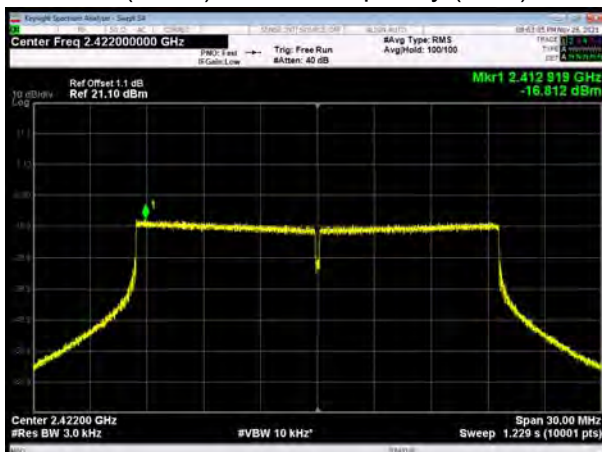
802.11ax(HE20), Carrier frequency (MHz): 2412



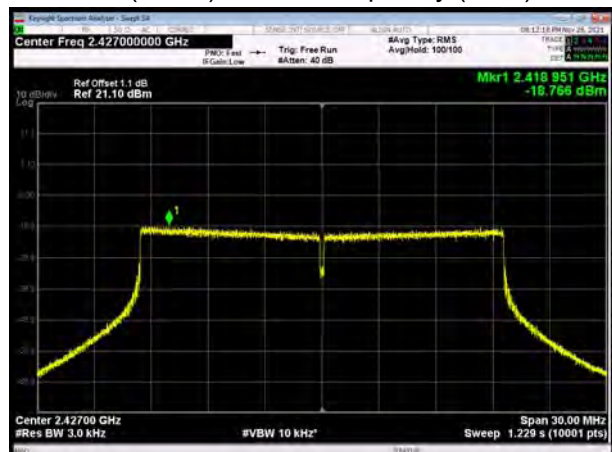
802.11ax(HE20), Carrier frequency (MHz): 2417



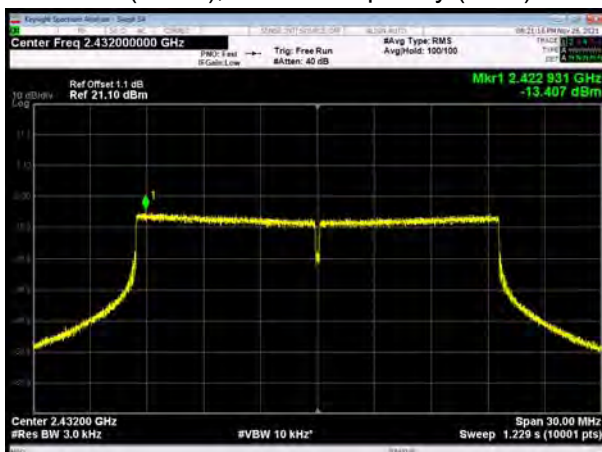
802.11ax(HE20), Carrier frequency (MHz): 2422



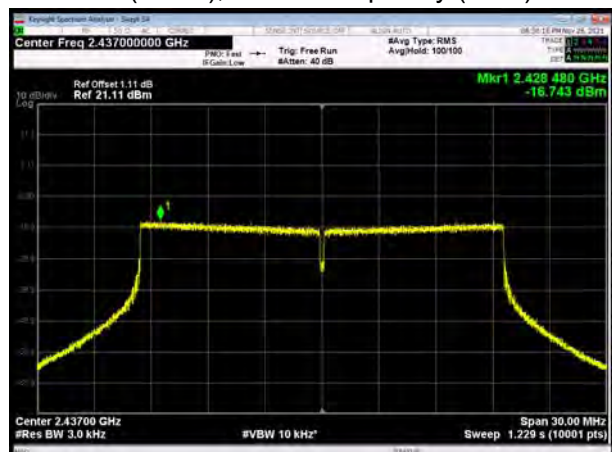
802.11ax(HE20), Carrier frequency (MHz): 2427



802.11ax(HE20), Carrier frequency (MHz):2432



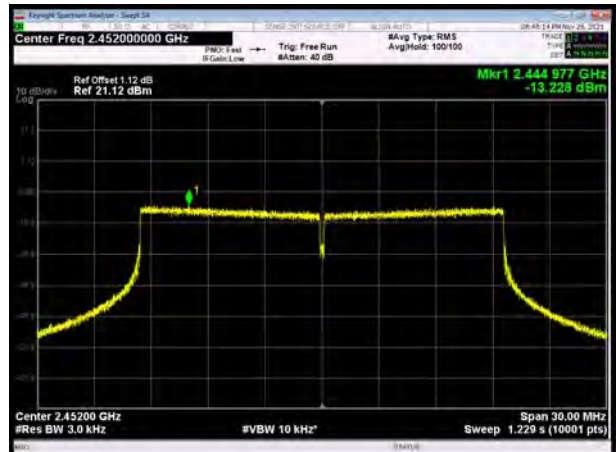
802.11ax(HE20), Carrier frequency (MHz): 2437



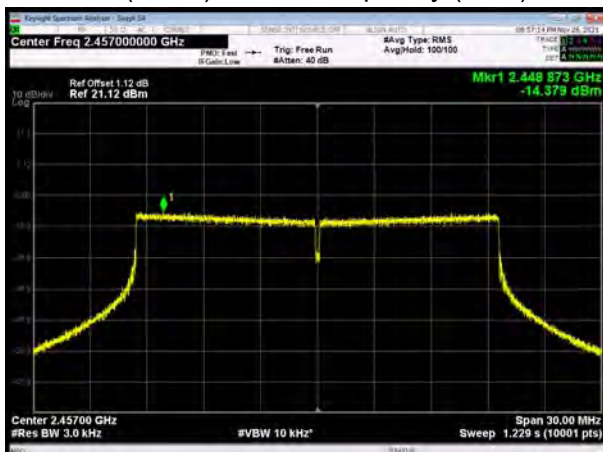
802.11ax(HE20), Carrier frequency (MHz): 2447



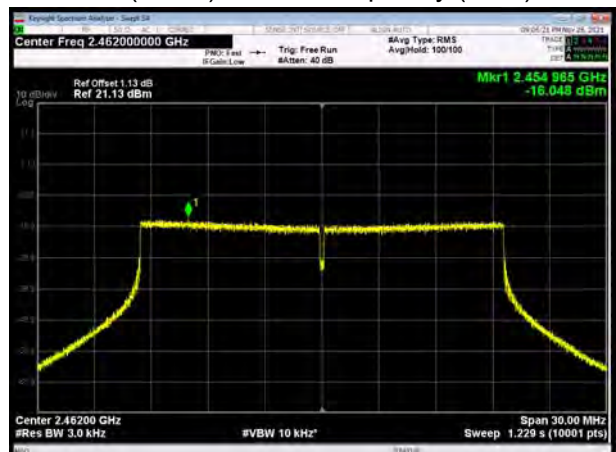
802.11ax(HE20), Carrier frequency (MHz): 2452



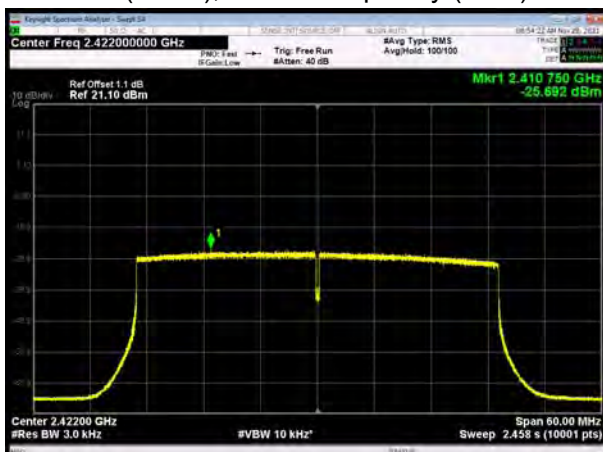
802.11ax(HE20), Carrier frequency (MHz): 2457



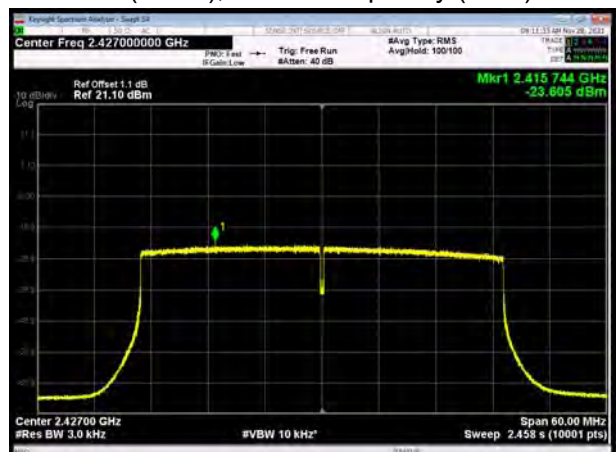
802.11ax(HE20), Carrier frequency (MHz): 2462



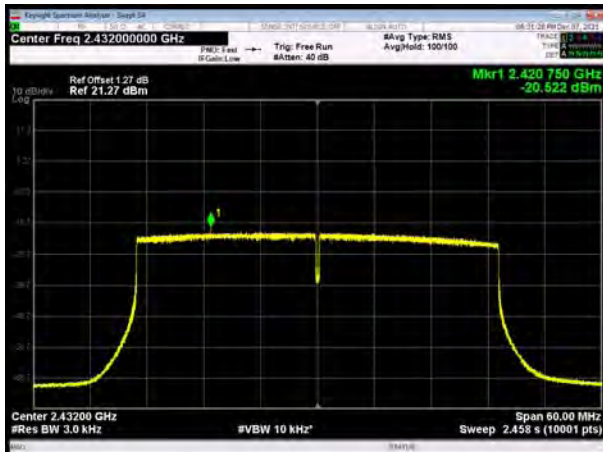
802.11ax(HE40), Carrier frequency (MHz): 2422



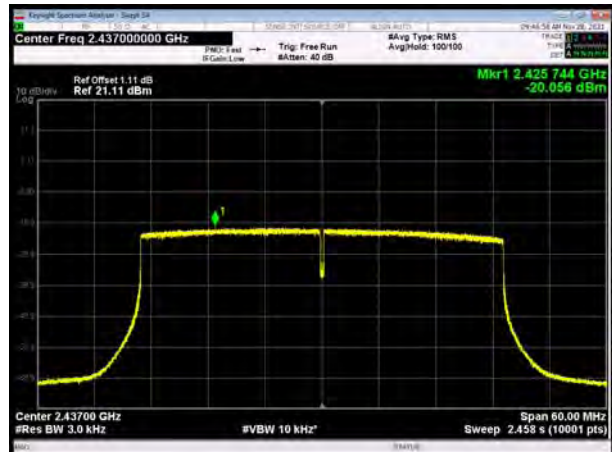
802.11ax(HE40), Carrier frequency (MHz): 2427



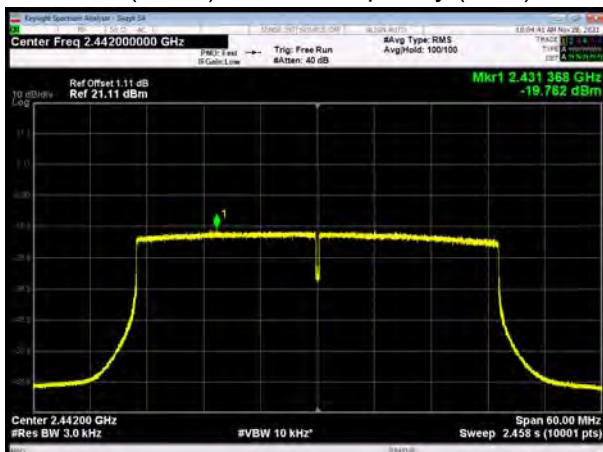
802.11ax(HE40), Carrier frequency (MHz): 2432



802.11ax(HE40), Carrier frequency (MHz): 2437



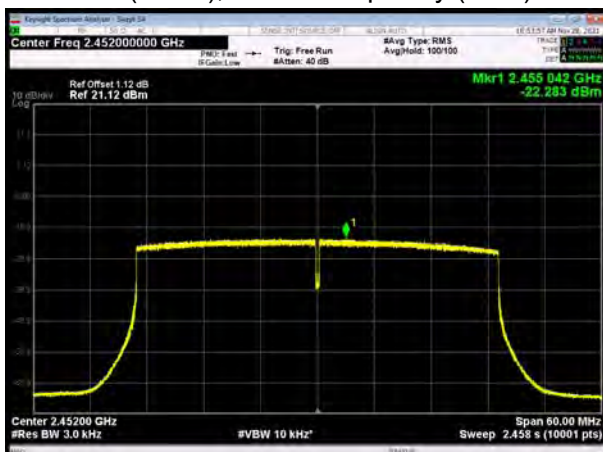
802.11ax(HE40), Carrier frequency (MHz): 2442



802.11ax(HE40), Carrier frequency (MHz): 2447



802.11ax(HE40), Carrier frequency (MHz): 2452



## MIMO Antenna 4

802.11b, Carrier frequency (MHz): 2412



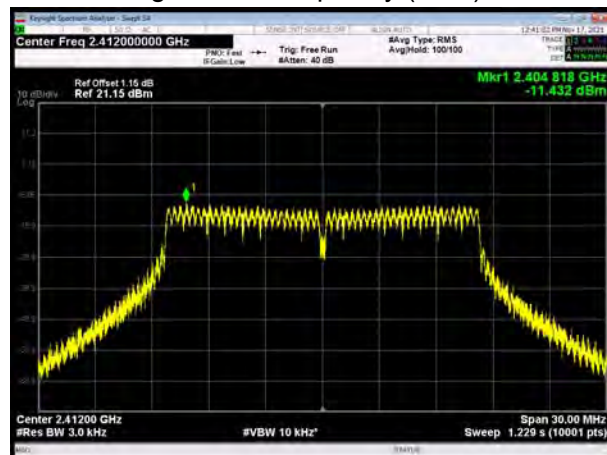
802.11b, Carrier frequency (MHz): 2437



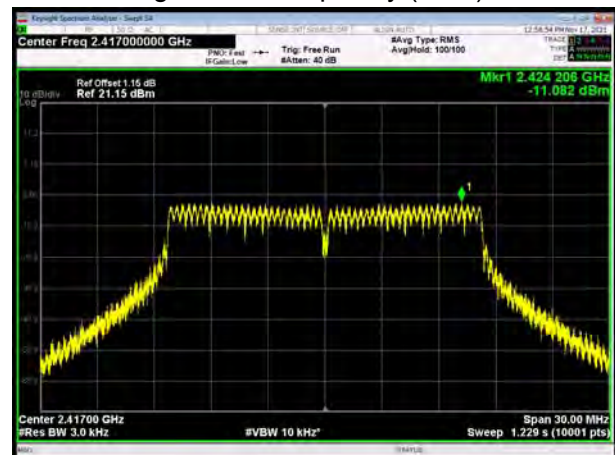
802.11b, Carrier frequency (MHz): 2462



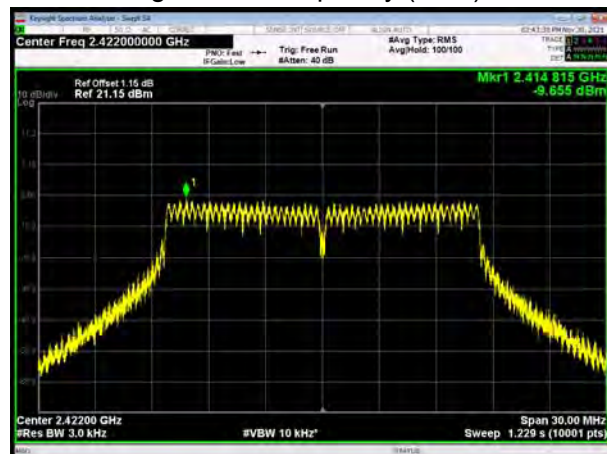
802.11g, Carrier frequency (MHz): 2412



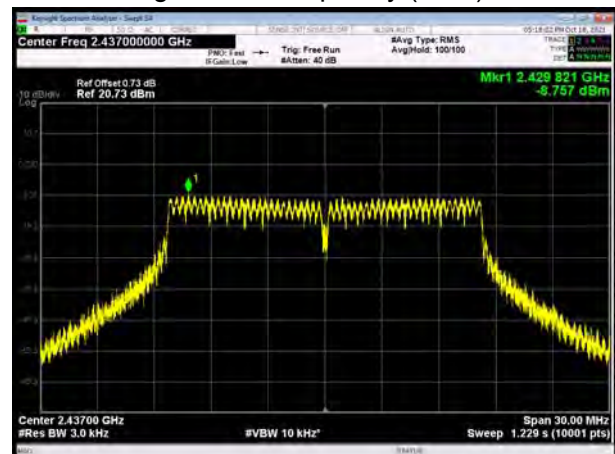
802.11g, Carrier frequency (MHz): 2417



802.11g, Carrier frequency (MHz): 2422



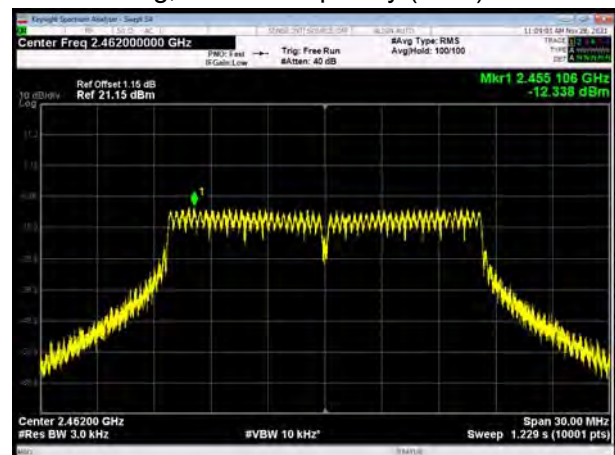
802.11g, Carrier frequency (MHz): 2437



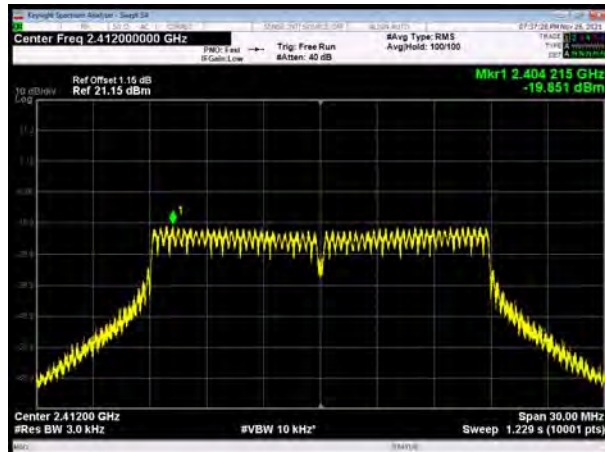
802.11g, Carrier frequency (MHz): 2457



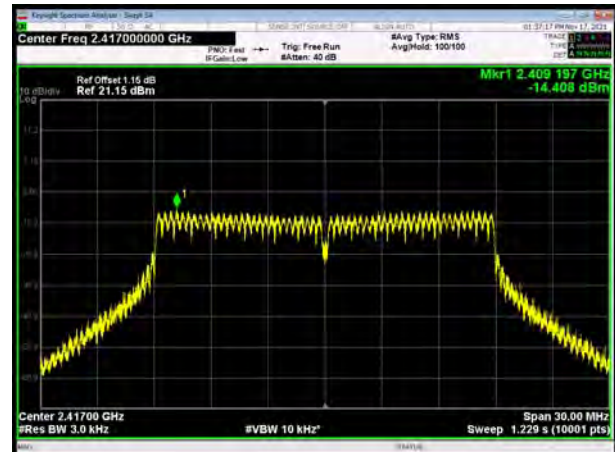
802.11g, Carrier frequency (MHz): 2462



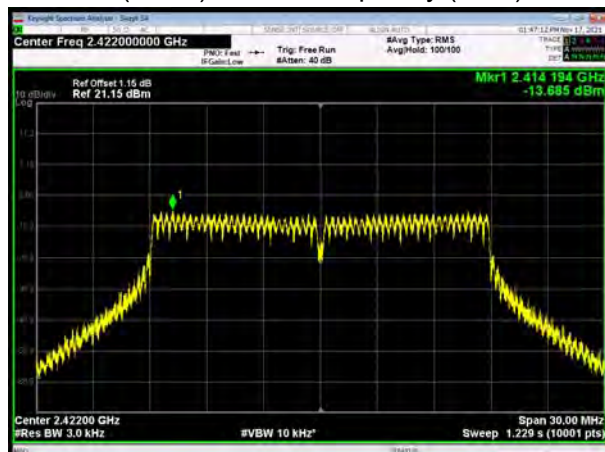
802.11n(HT20), Carrier frequency (MHz): 2412



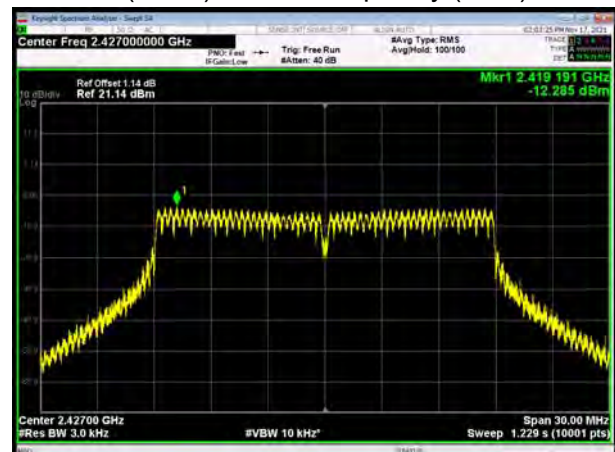
802.11n(HT20), Carrier frequency (MHz): 2417



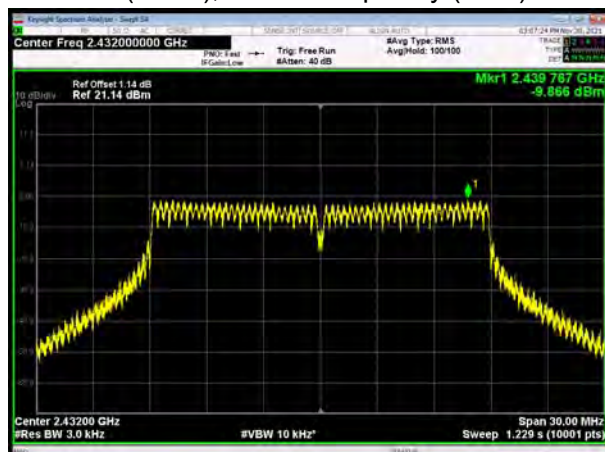
802.11n(HT20), Carrier frequency (MHz): 2422



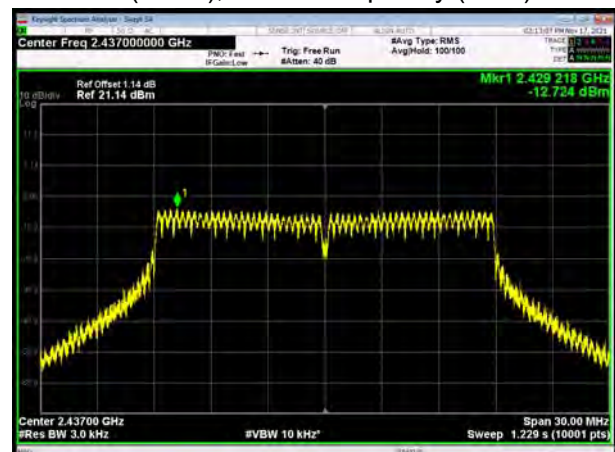
802.11n(HT20), Carrier frequency (MHz): 2427



802.11n(HT20), Carrier frequency (MHz):2432



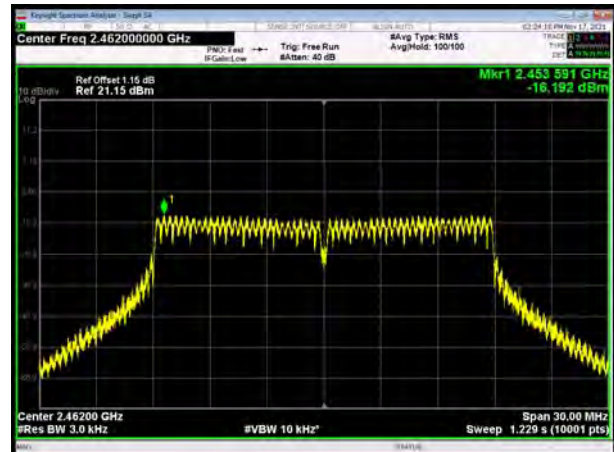
802.11n(HT20), Carrier frequency (MHz):2437



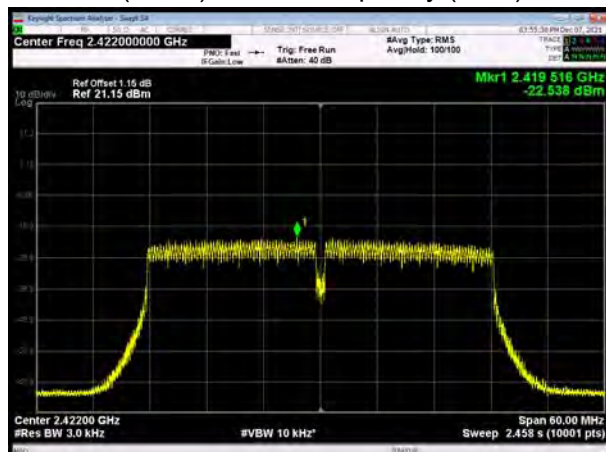
802.11n(HT20), Carrier frequency (MHz):2457



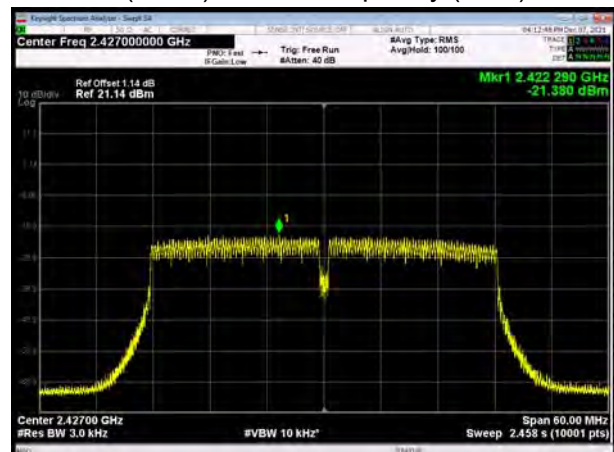
802.11n(HT20), Carrier frequency (MHz):2462



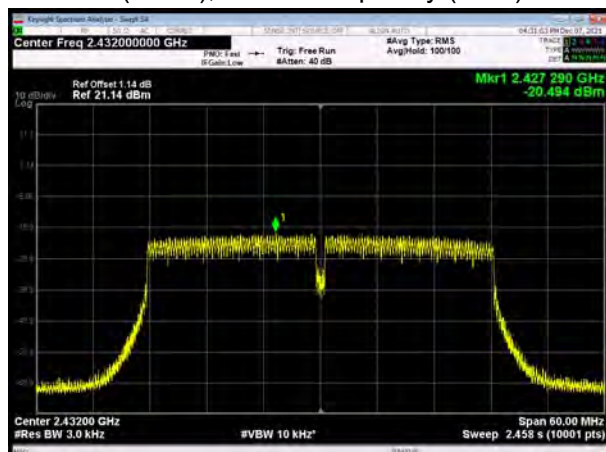
802.11n(HT40), Carrier frequency (MHz): 2422



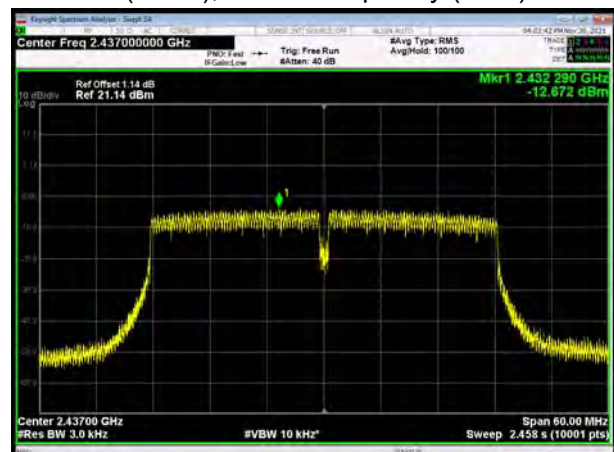
802.11n(HT40), Carrier frequency (MHz): 2427



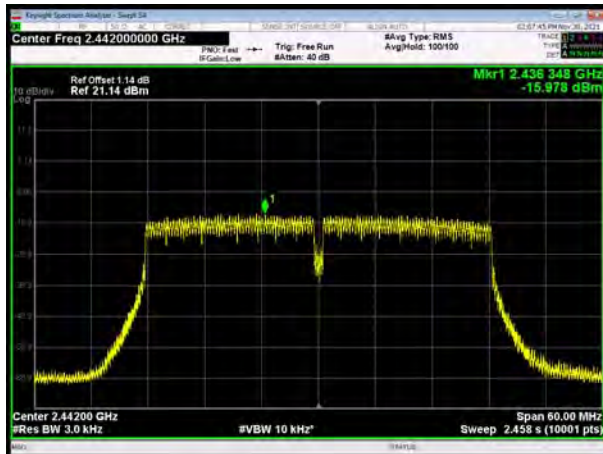
802.11n(HT40), Carrier frequency (MHz): 2432



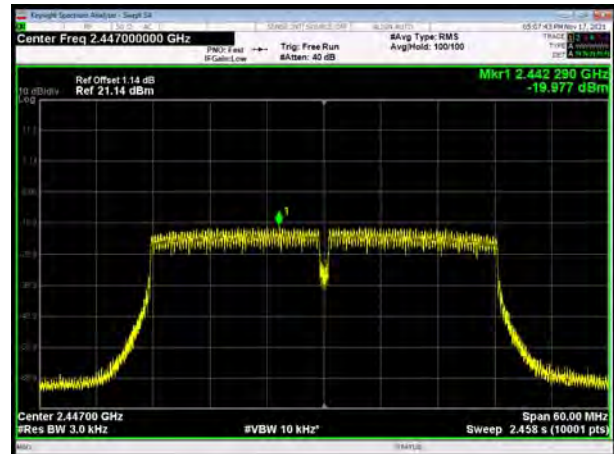
802.11n(HT40), Carrier frequency (MHz): 2437



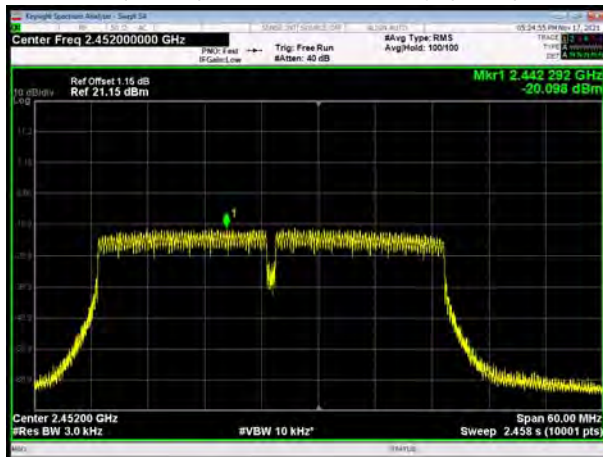
802.11n(HT40), Carrier frequency (MHz): 2442



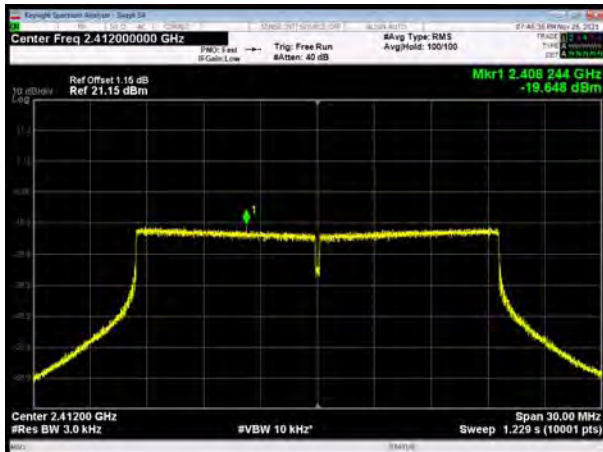
802.11n(HT40), Carrier frequency (MHz): 2447



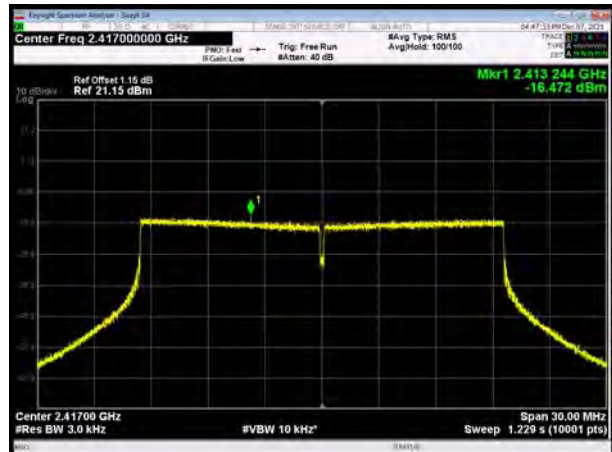
802.11n(HT40), Carrier frequency (MHz): 2452



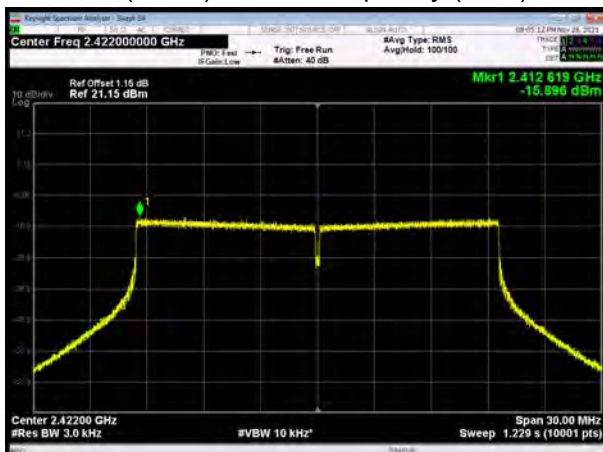
802.11ax(HE20), Carrier frequency (MHz): 2412



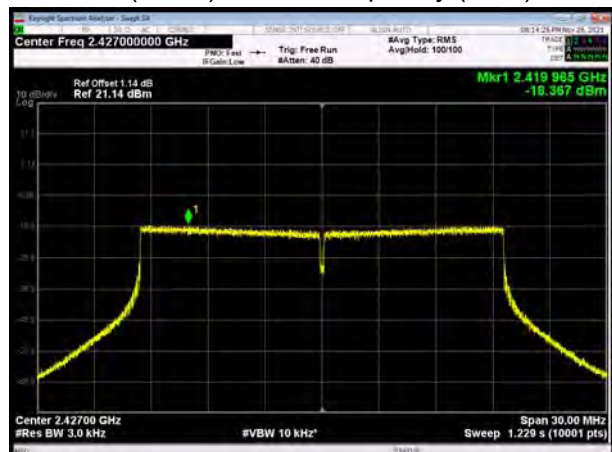
802.11ax(HE20), Carrier frequency (MHz): 2417



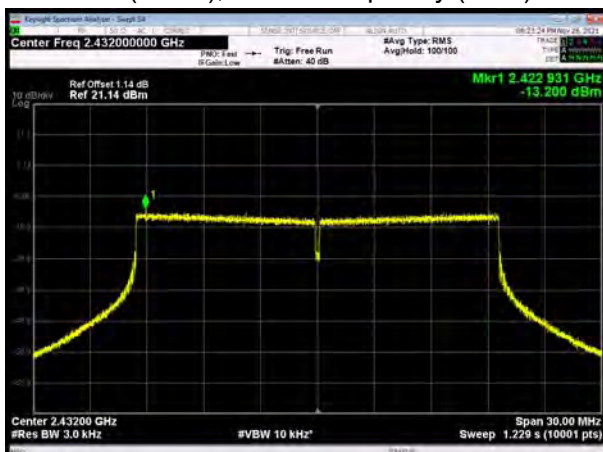
802.11ax(HE20), Carrier frequency (MHz): 2422



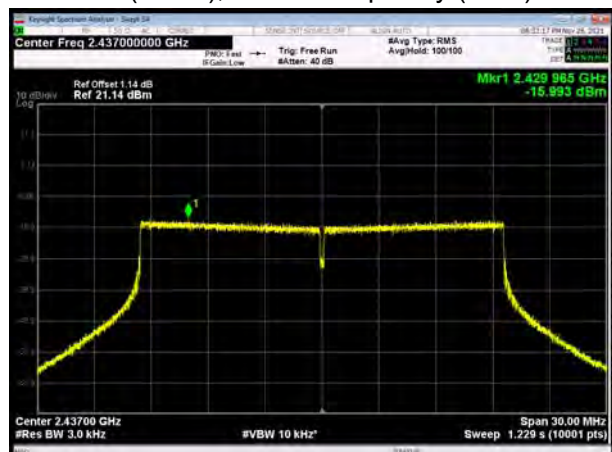
802.11ax(HE20), Carrier frequency (MHz): 2427



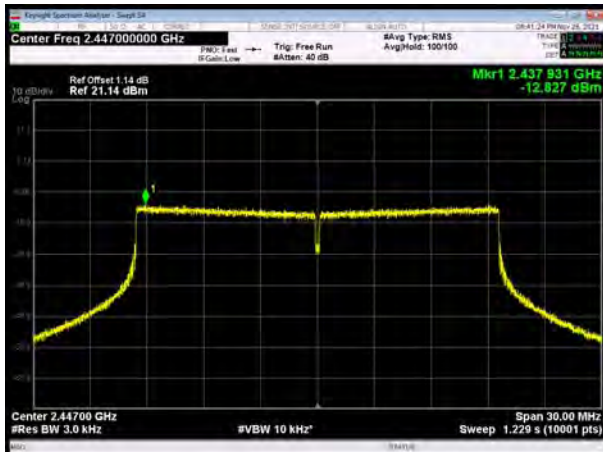
802.11ax(HE20), Carrier frequency (MHz):2432



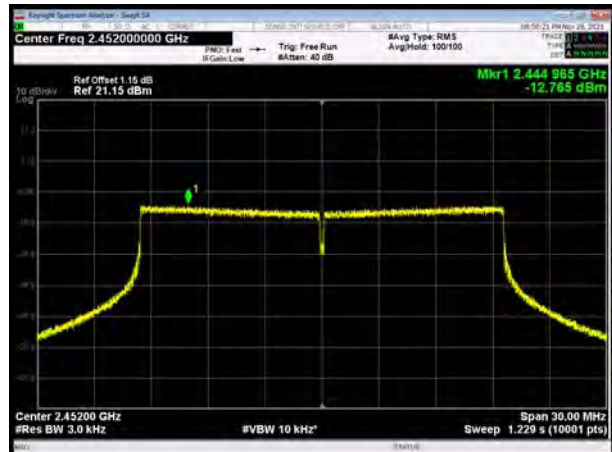
802.11ax(HE20), Carrier frequency (MHz): 2437



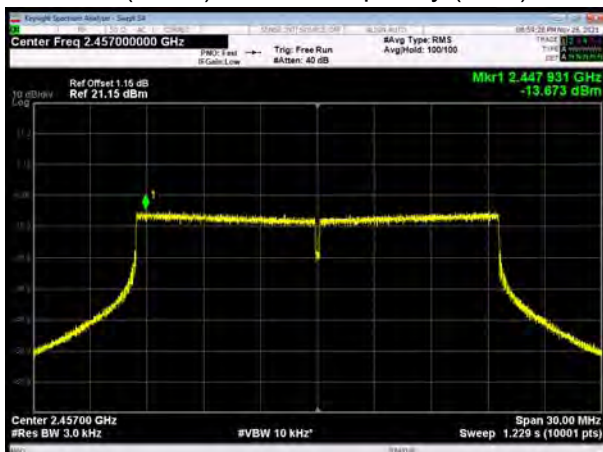
802.11ax(HE20), Carrier frequency (MHz): 2447



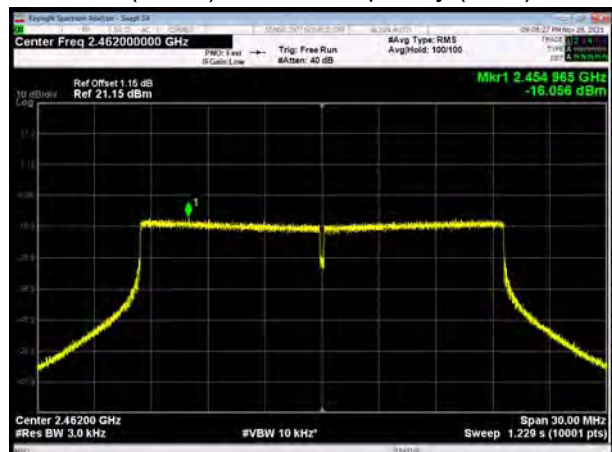
802.11ax(HE20), Carrier frequency (MHz): 2452



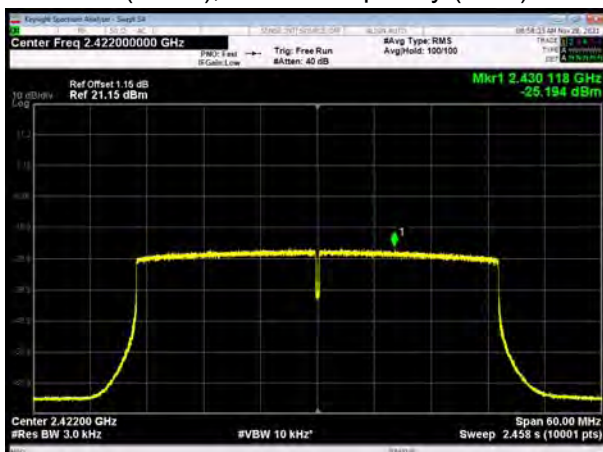
802.11ax(HE20), Carrier frequency (MHz): 2457



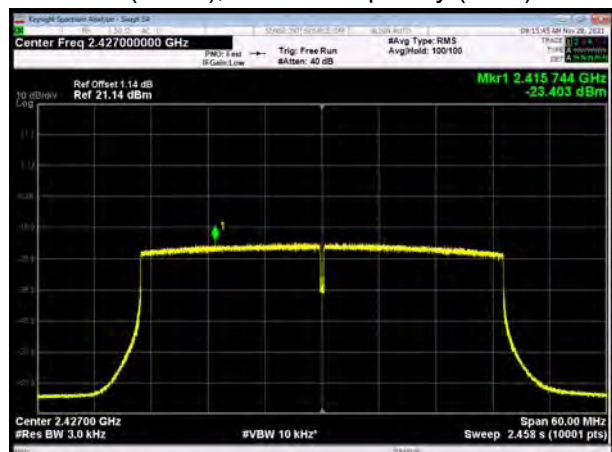
802.11ax(HE20), Carrier frequency (MHz): 2462



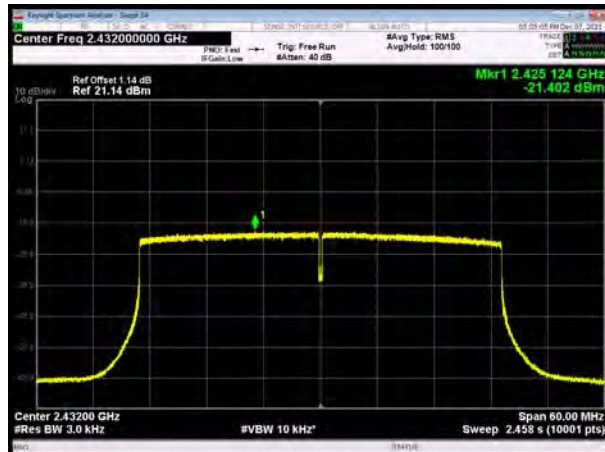
802.11ax(HE40), Carrier frequency (MHz): 2422



802.11ax(HE40), Carrier frequency (MHz): 2427



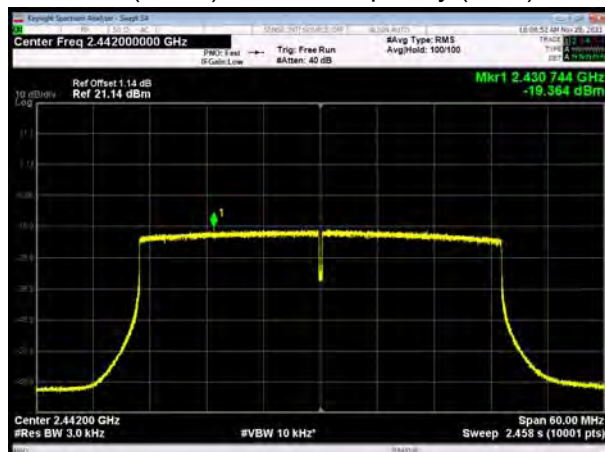
802.11ax(HE40), Carrier frequency (MHz): 2432



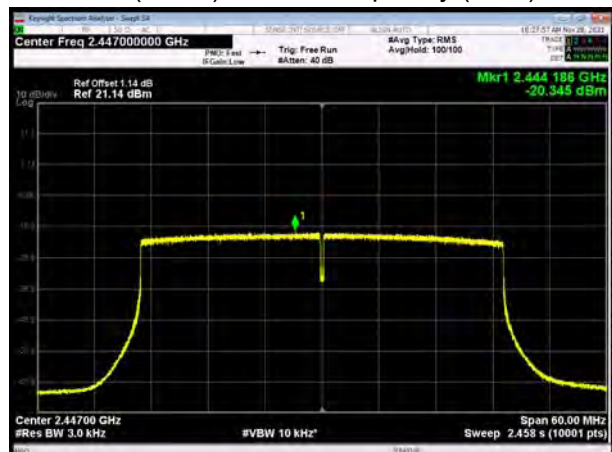
802.11ax(HE40), Carrier frequency (MHz): 2437



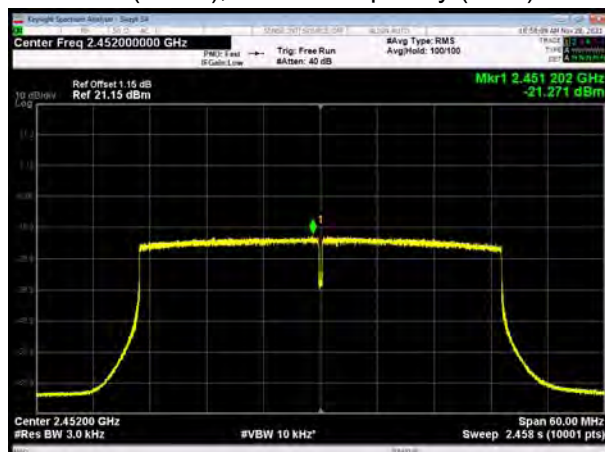
802.11ax(HE40), Carrier frequency (MHz): 2442



802.11ax(HE40), Carrier frequency (MHz): 2447



802.11ax(HE40), Carrier frequency (MHz): 2452



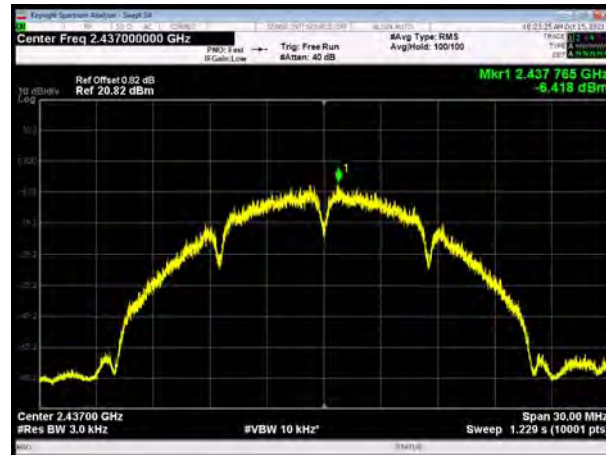


Internal Antenna 2: DZZ  
MIMO Without Beamforming  
MIMO Antenna 1

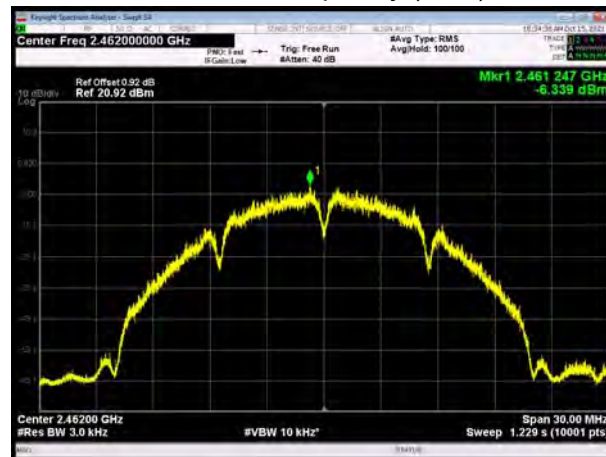
802.11b, Carrier frequency (MHz): 2412



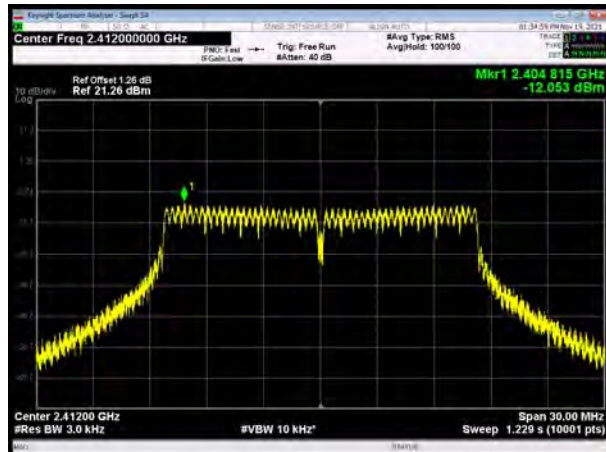
802.11b, Carrier frequency (MHz): 2437



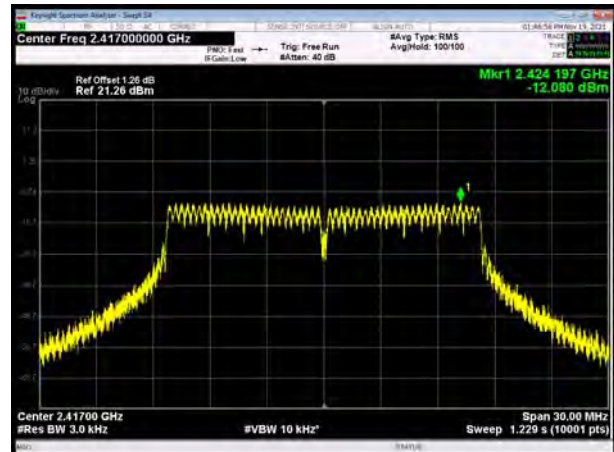
802.11b, Carrier frequency (MHz):2462



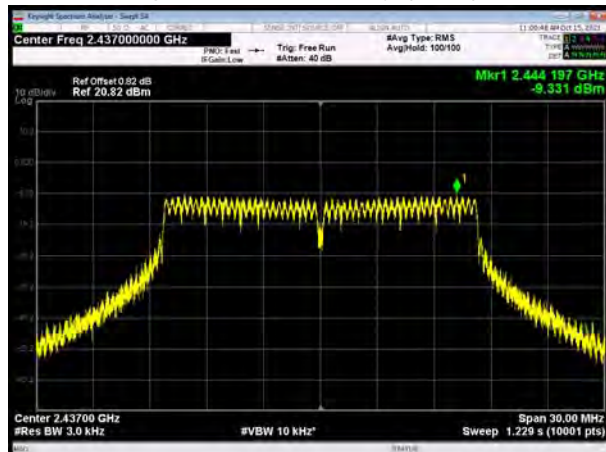
802.11g, Carrier frequency (MHz): 2412



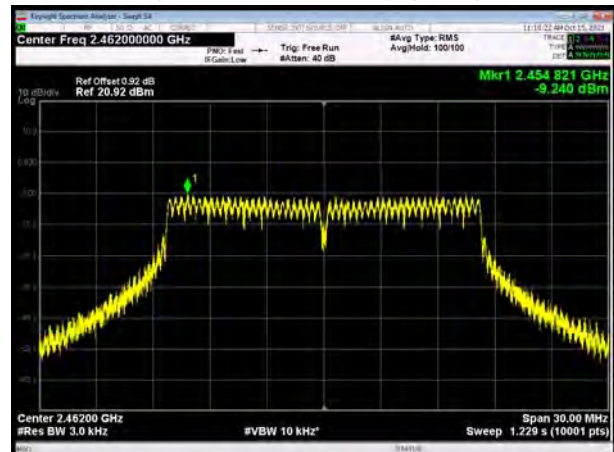
802.11g, Carrier frequency (MHz): 2417



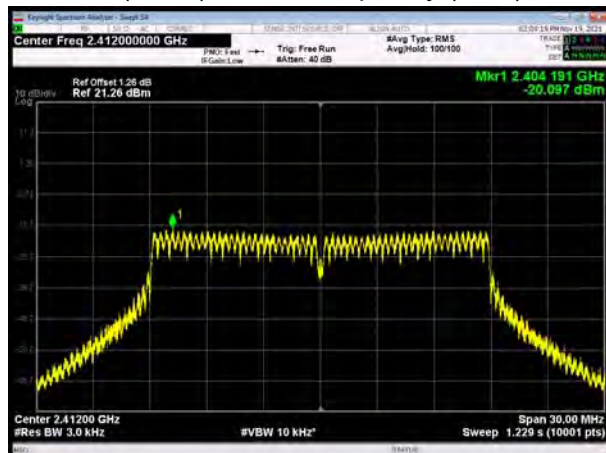
802.11g, Carrier frequency (MHz): 2437



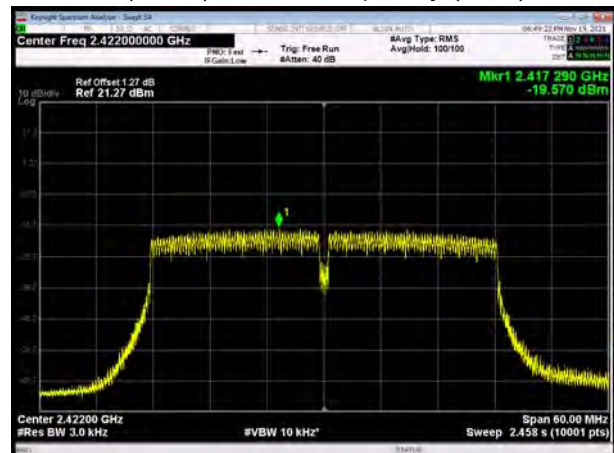
802.11g, Carrier frequency (MHz): 2462



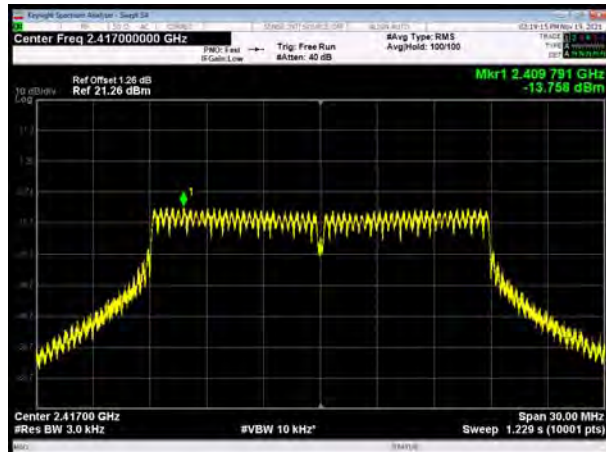
802.11n(HT20), Carrier frequency (MHz): 2412



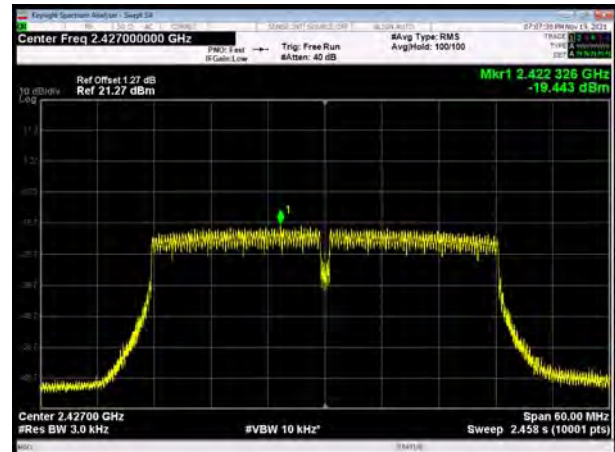
802.11n(HT40), Carrier frequency (MHz): 2422



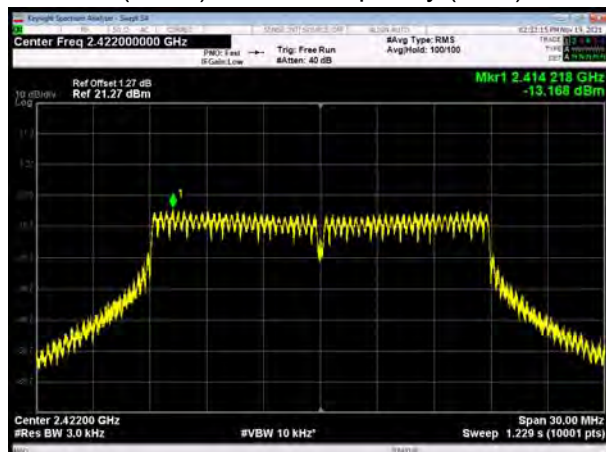
802.11n(HT20), Carrier frequency (MHz): 2417



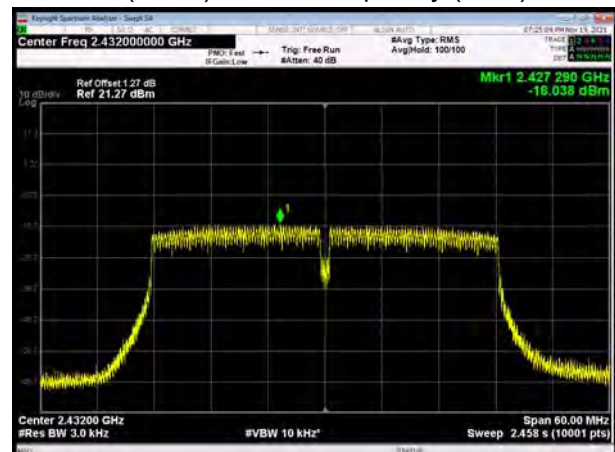
802.11n(HT40), Carrier frequency (MHz): 2427



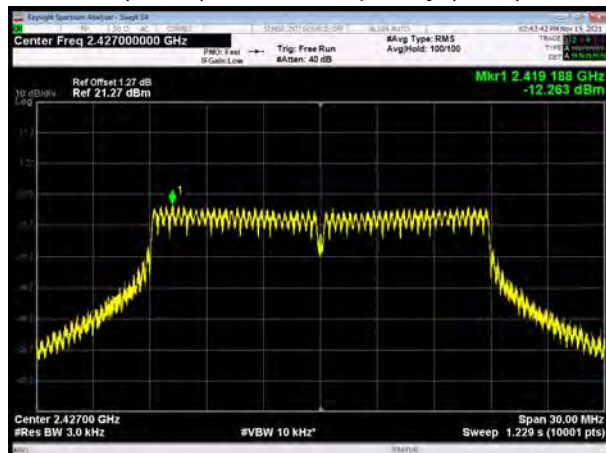
802.11n(HT20), Carrier frequency (MHz): 2422



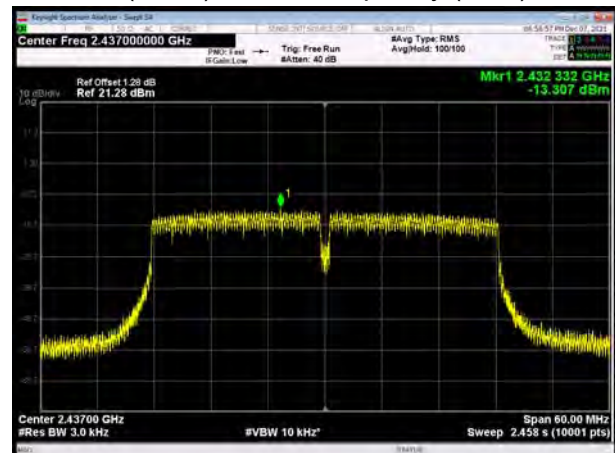
802.11n(HT40), Carrier frequency (MHz): 2432



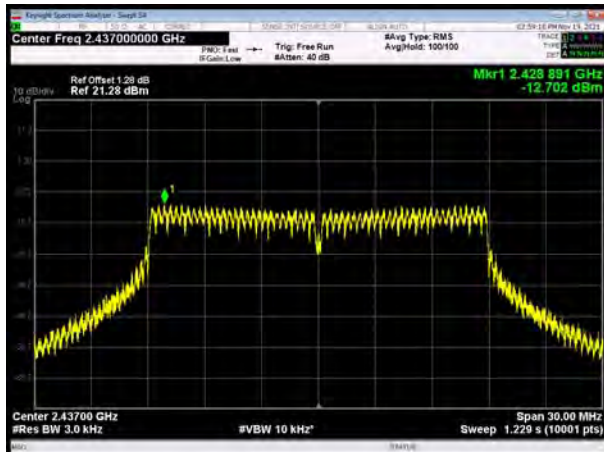
802.11n(HT20), Carrier frequency (MHz): 2427



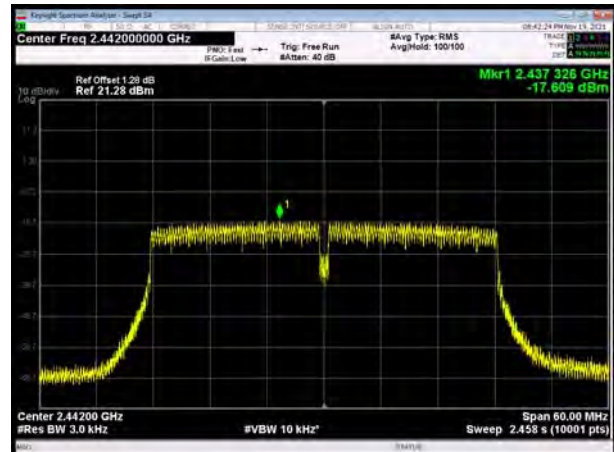
802.11n(HT40), Carrier frequency (MHz): 2437



802.11n(HT20), Carrier frequency (MHz):2437



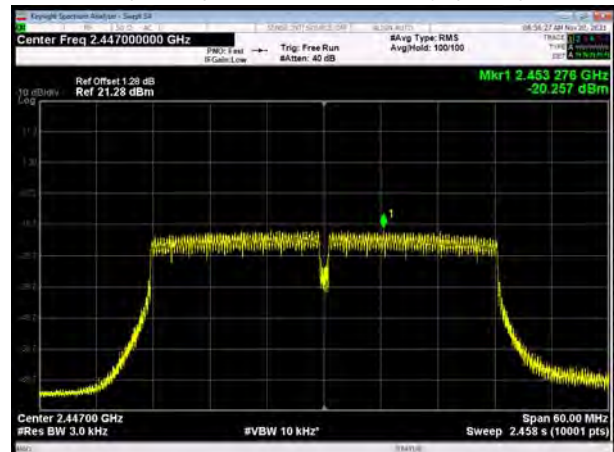
802.11n(HT40), Carrier frequency (MHz): 2442



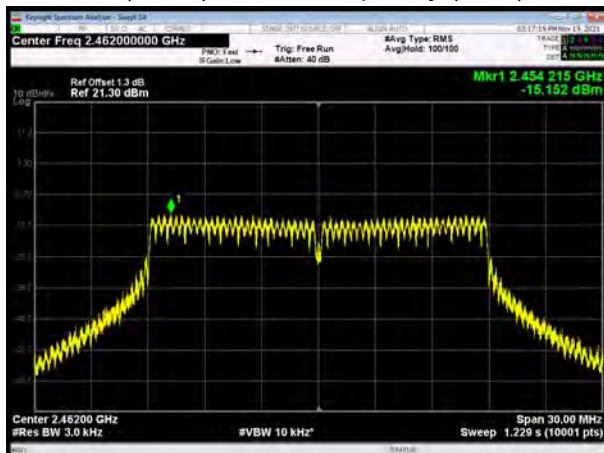
802.11n(HT20), Carrier frequency (MHz):2457



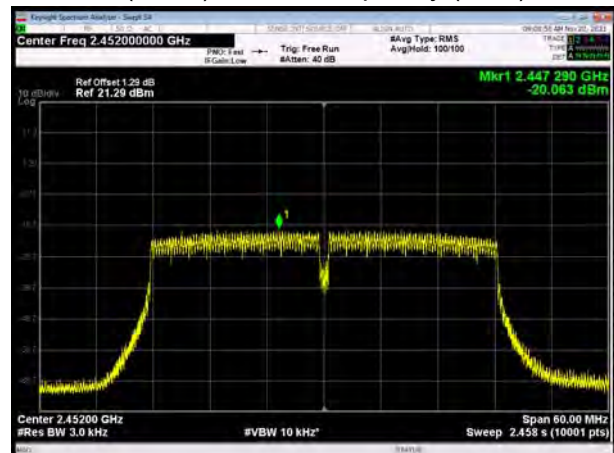
802.11n(HT40), Carrier frequency (MHz): 2447



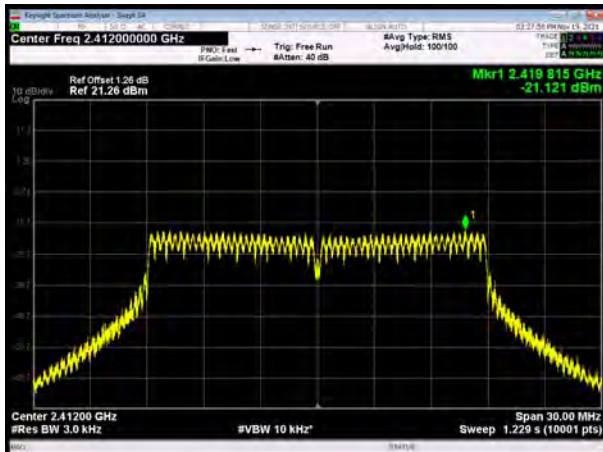
802.11n(HT20), Carrier frequency (MHz):2462



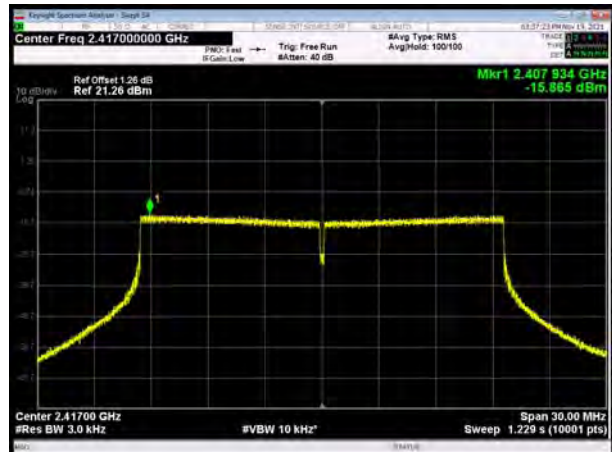
802.11n(HT40), Carrier frequency (MHz): 2452



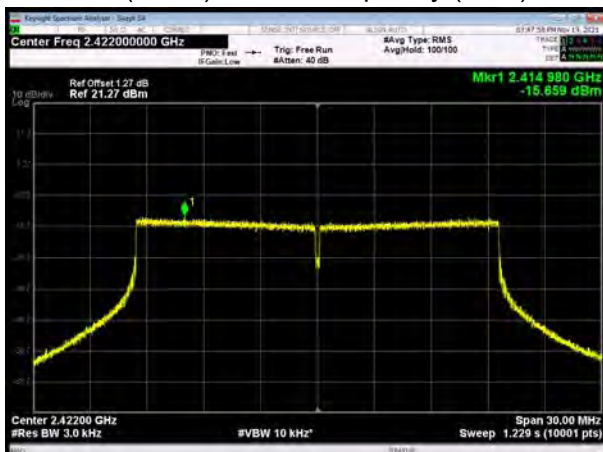
802.11ax(HE20), Carrier frequency (MHz): 2412



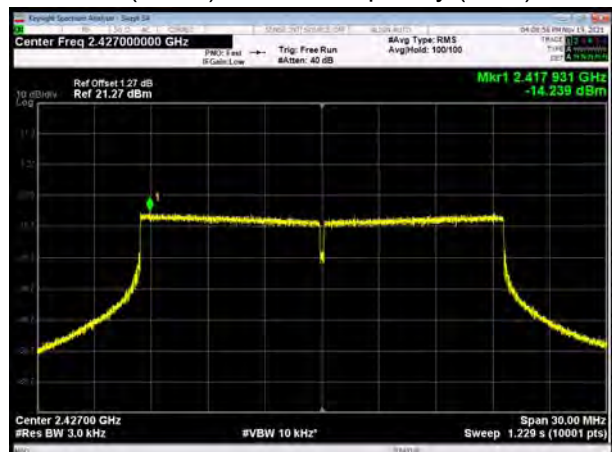
802.11ax(HE20), Carrier frequency (MHz): 2417



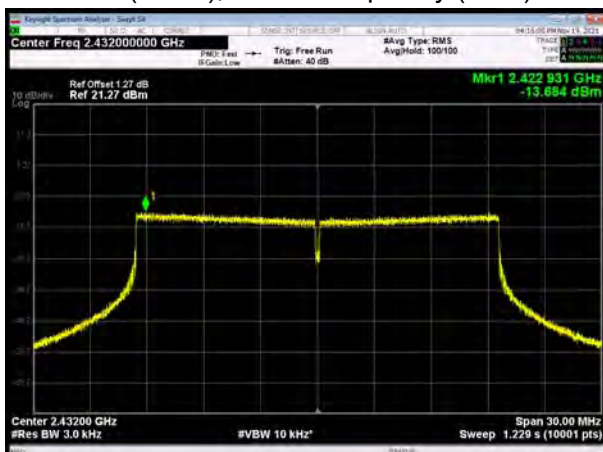
802.11ax(HE20), Carrier frequency (MHz): 2422



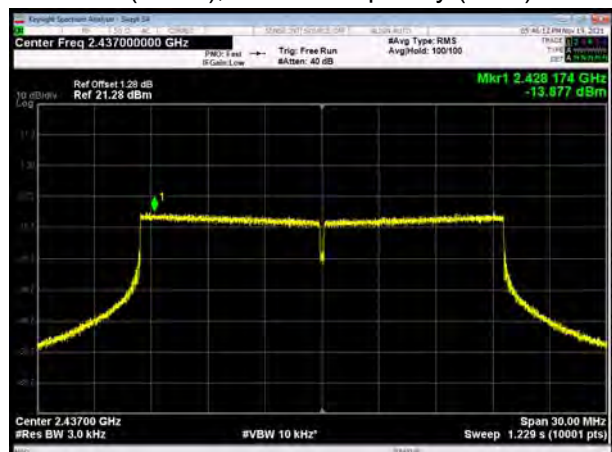
802.11ax(HE20), Carrier frequency (MHz): 2427



802.11ax(HE20), Carrier frequency (MHz):2432



802.11ax(HE20), Carrier frequency (MHz): 2437



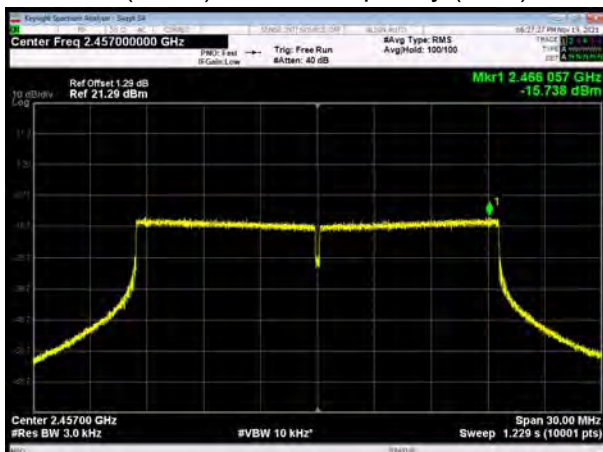
802.11ax(HE20), Carrier frequency (MHz): 2447



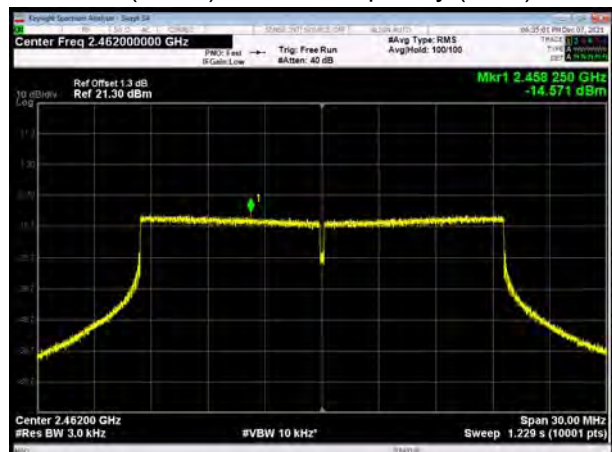
802.11ax(HE20), Carrier frequency (MHz): 2452



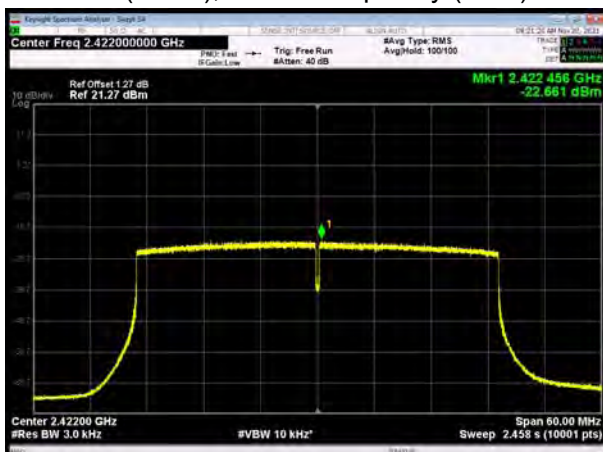
802.11ax(HE20), Carrier frequency (MHz): 2457



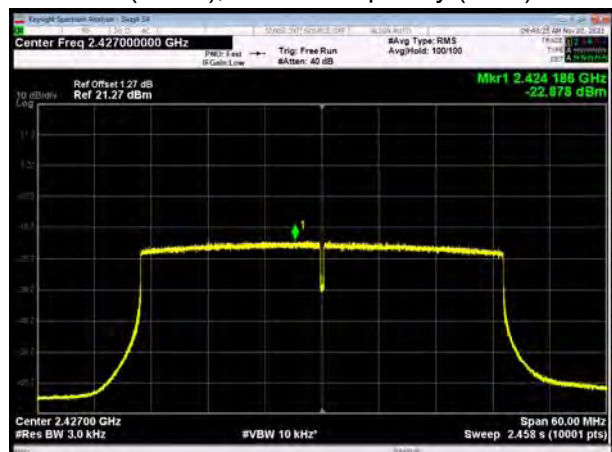
802.11ax(HE20), Carrier frequency (MHz): 2462



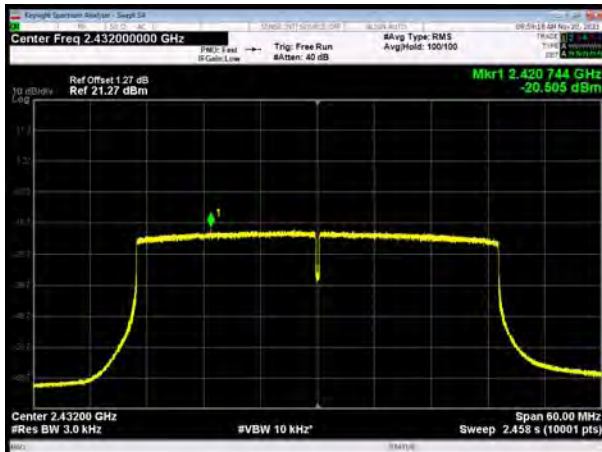
802.11ax(HE40), Carrier frequency (MHz): 2422



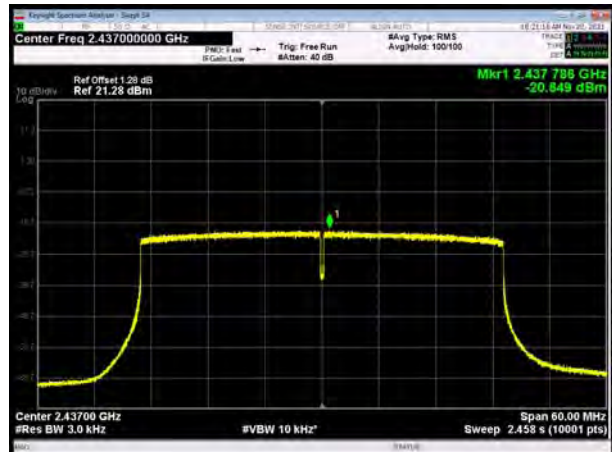
802.11ax(HE40), Carrier frequency (MHz): 2427



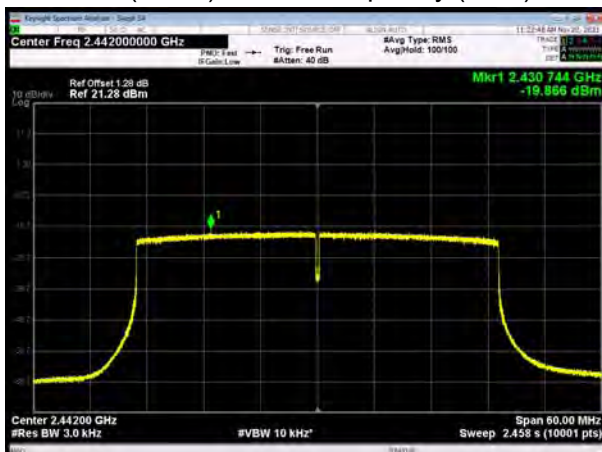
802.11ax(HE40), Carrier frequency (MHz): 2432



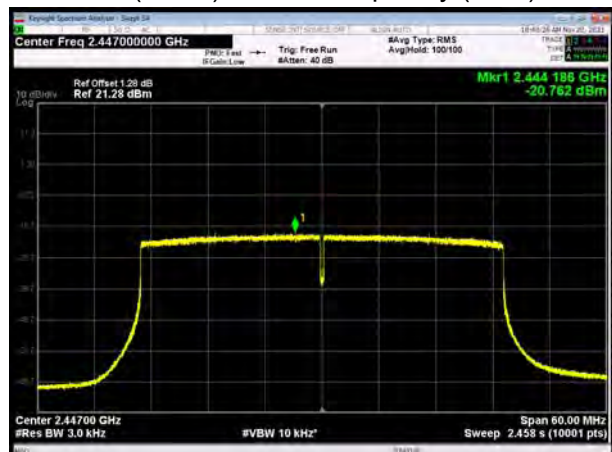
802.11ax(HE40), Carrier frequency (MHz): 2437



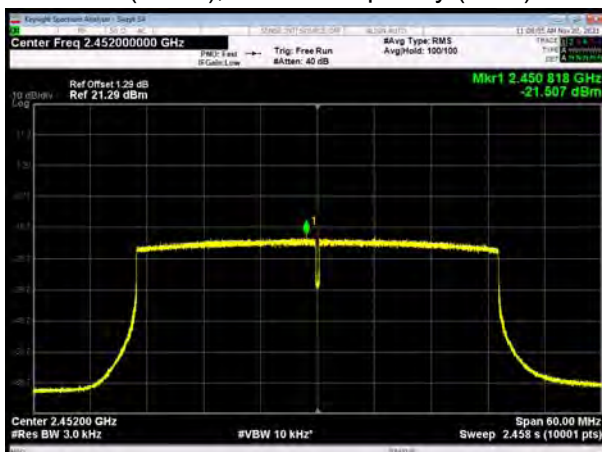
802.11ax(HE40), Carrier frequency (MHz): 2442



802.11ax(HE40), Carrier frequency (MHz): 2447

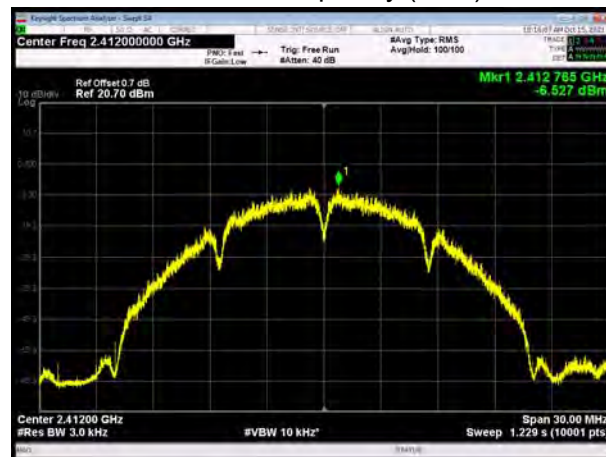


802.11ax(HE40), Carrier frequency (MHz): 2452



## MIMO Antenna 2

802.11b, Carrier frequency (MHz): 2412



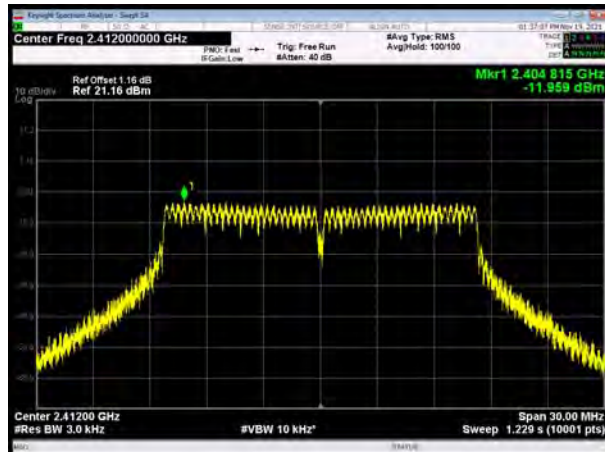
802.11b, Carrier frequency (MHz): 2437



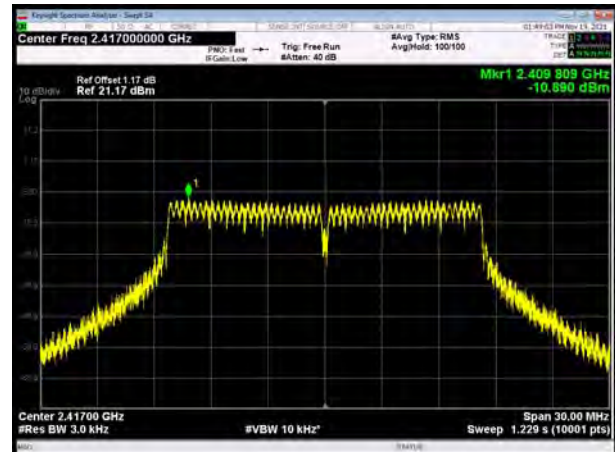
802.11b, Carrier frequency (MHz): 2462



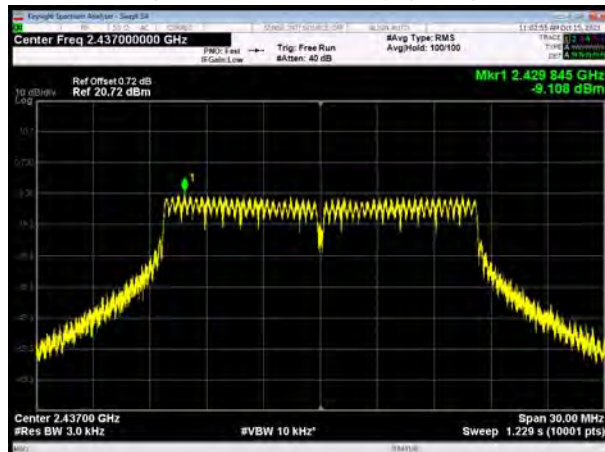
802.11g, Carrier frequency (MHz): 2412



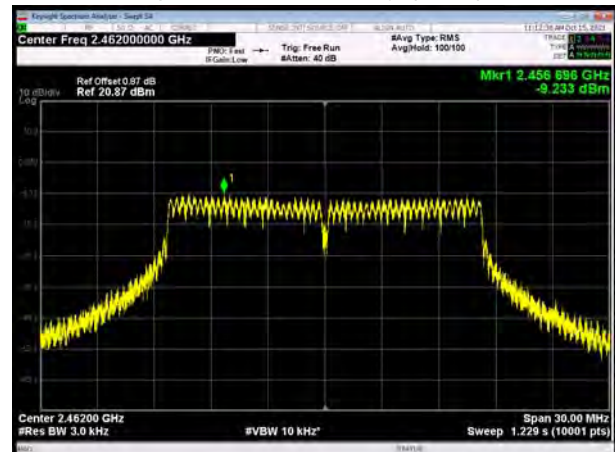
802.11g, Carrier frequency (MHz): 2417



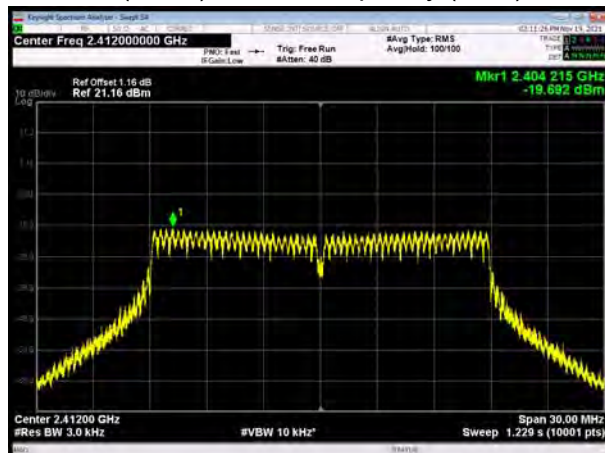
802.11g, Carrier frequency (MHz): 2437



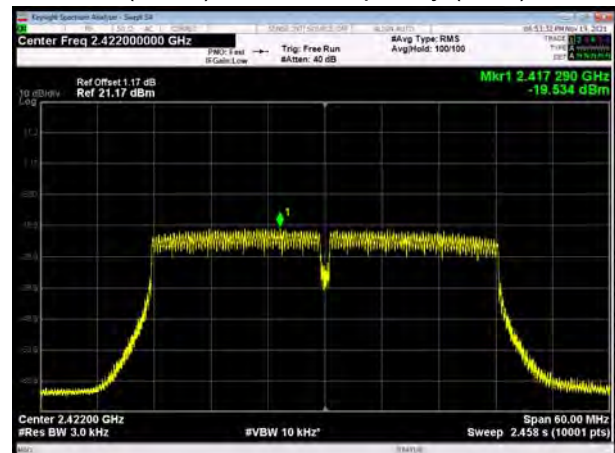
802.11g, Carrier frequency (MHz): 2462



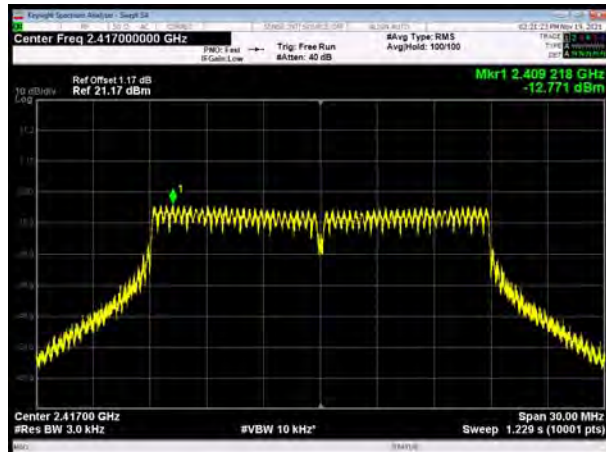
802.11n(HT20), Carrier frequency (MHz): 2412



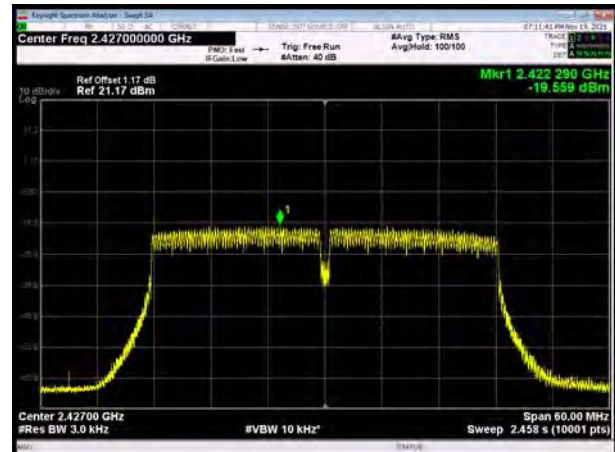
802.11n(HT40), Carrier frequency (MHz): 2422



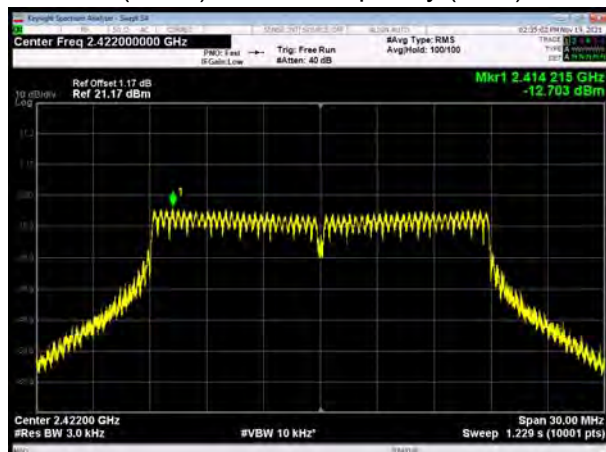
802.11n(HT20), Carrier frequency (MHz): 2417



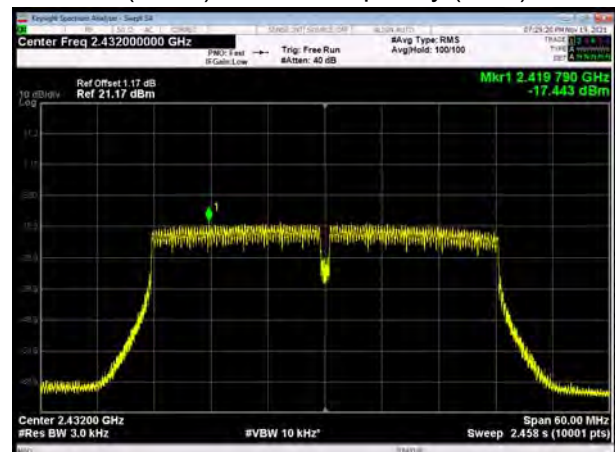
802.11n(HT40), Carrier frequency (MHz): 2427



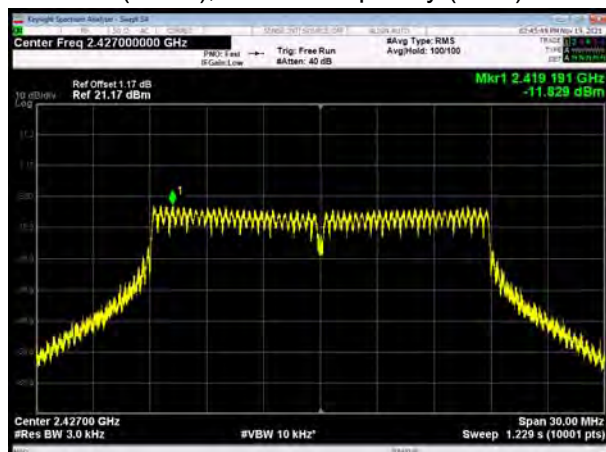
802.11n(HT20), Carrier frequency (MHz): 2422



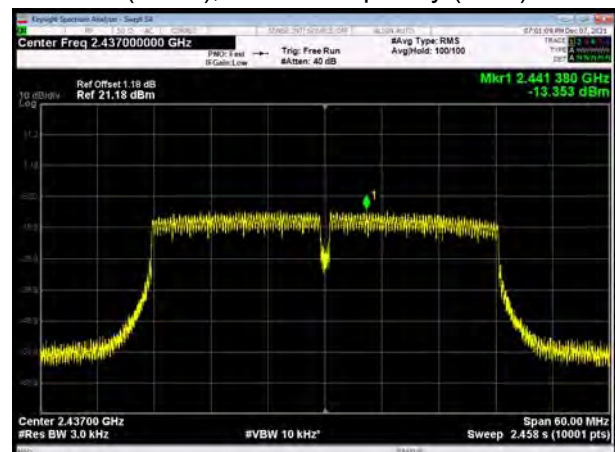
802.11n(HT40), Carrier frequency (MHz): 2432



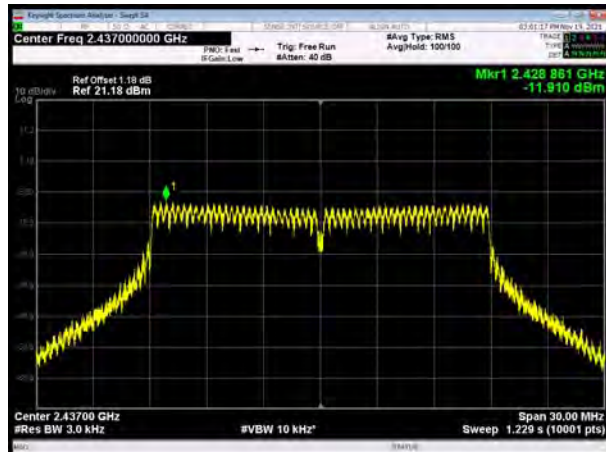
802.11n(HT20), Carrier frequency (MHz): 2427



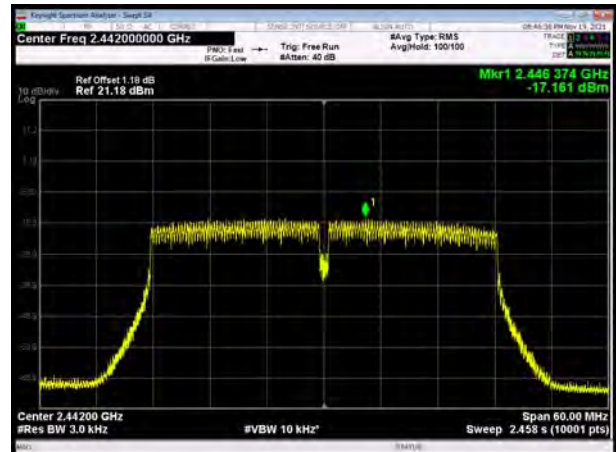
802.11n(HT40), Carrier frequency (MHz): 2437



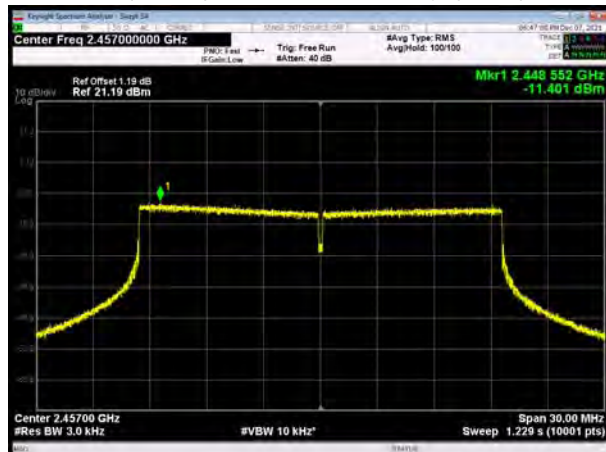
802.11n(HT20), Carrier frequency (MHz):2437



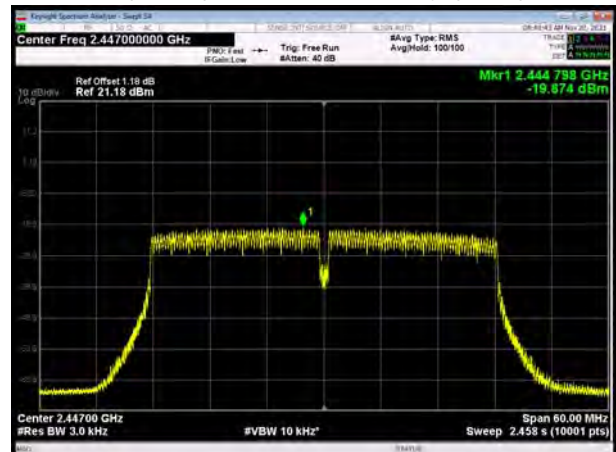
802.11n(HT40), Carrier frequency (MHz): 2442



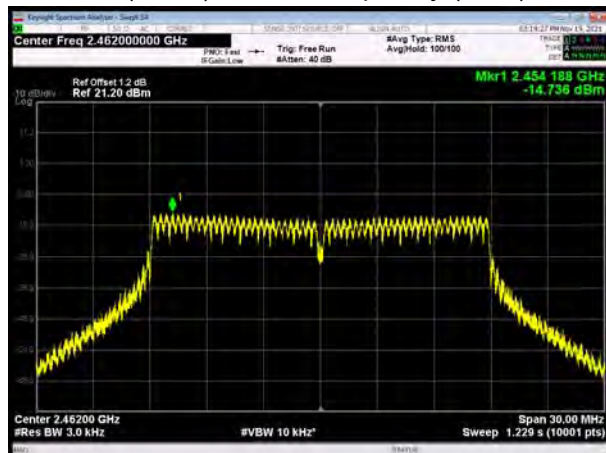
802.11n(HT20), Carrier frequency (MHz):2457



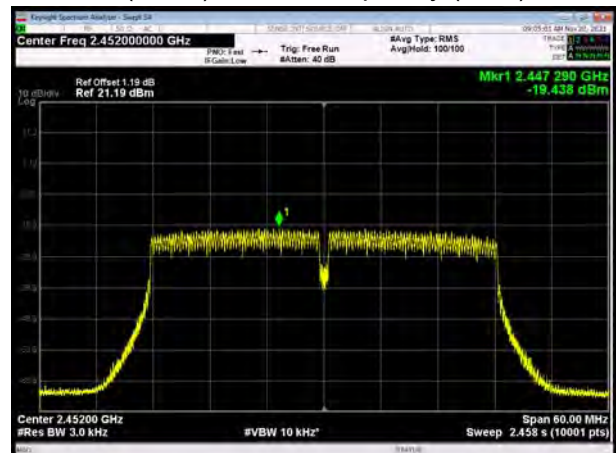
802.11n(HT40), Carrier frequency (MHz): 2447



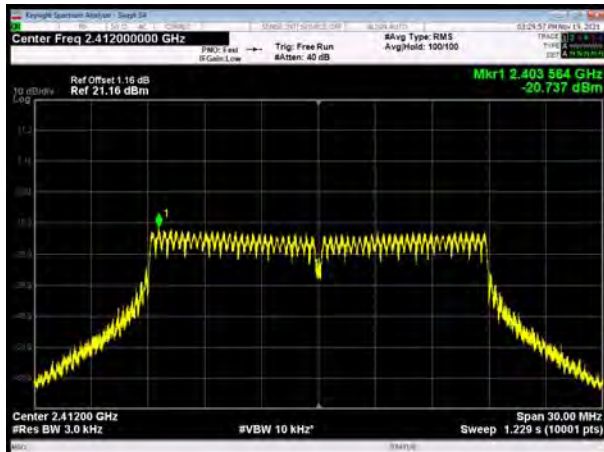
802.11n(HT20), Carrier frequency (MHz):2462



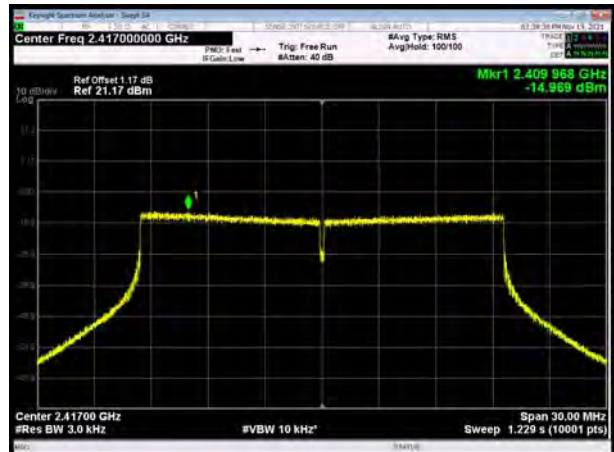
802.11n(HT40), Carrier frequency (MHz): 2452



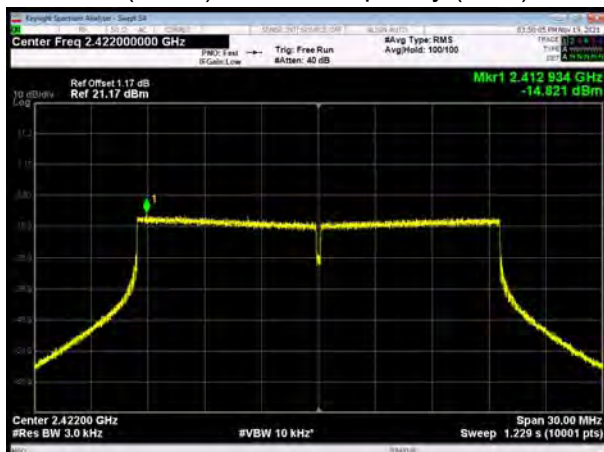
802.11ax(HE20), Carrier frequency (MHz): 2412



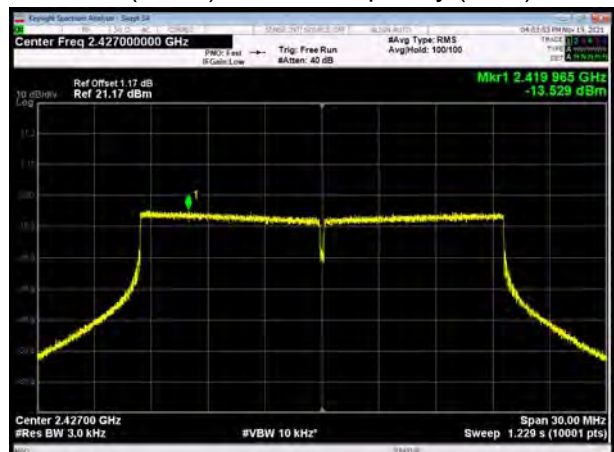
802.11ax(HE20), Carrier frequency (MHz): 2417



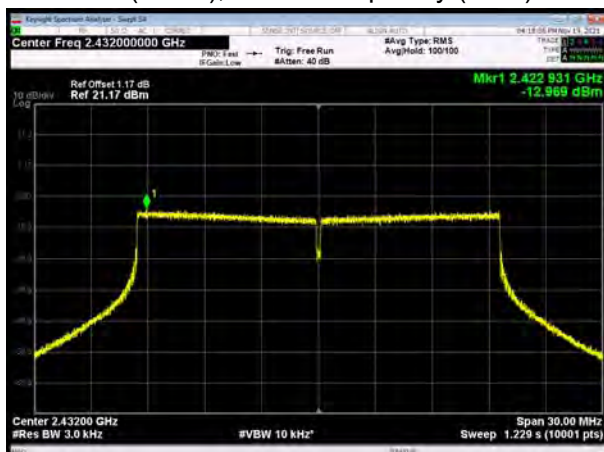
802.11ax(HE20), Carrier frequency (MHz): 2422



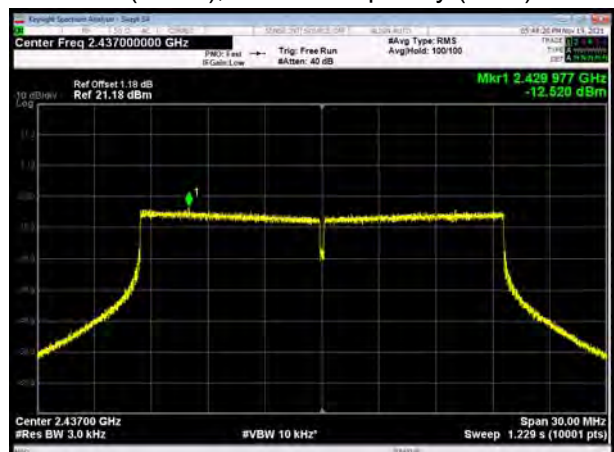
802.11ax(HE20), Carrier frequency (MHz): 2427



802.11ax(HE20), Carrier frequency (MHz):2432



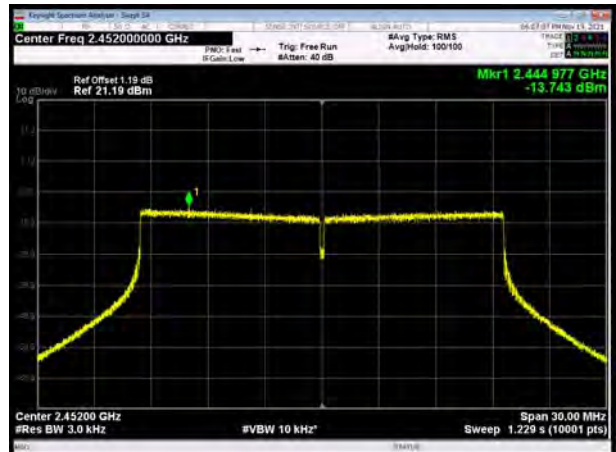
802.11ax(HE20), Carrier frequency (MHz): 2437



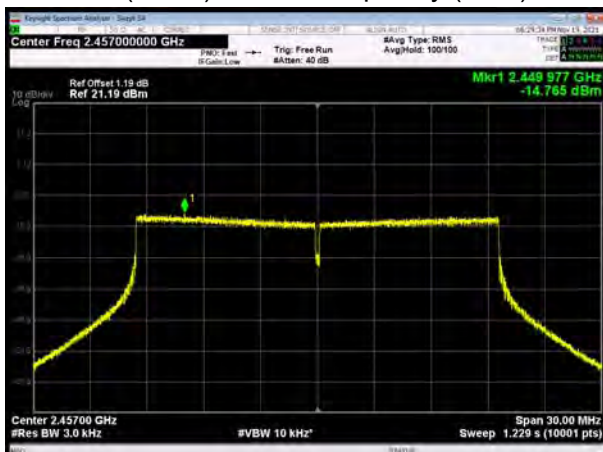
802.11ax(HE20), Carrier frequency (MHz): 2447



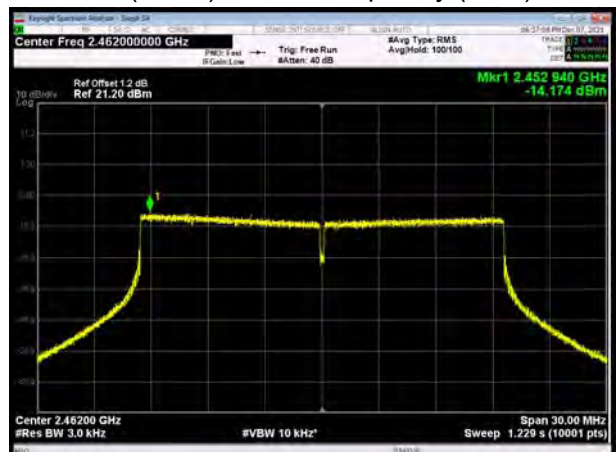
802.11ax(HE20), Carrier frequency (MHz): 2452



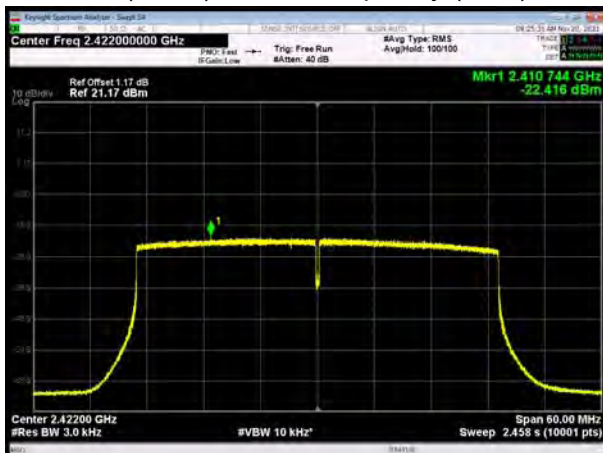
802.11ax(HE20), Carrier frequency (MHz): 2457



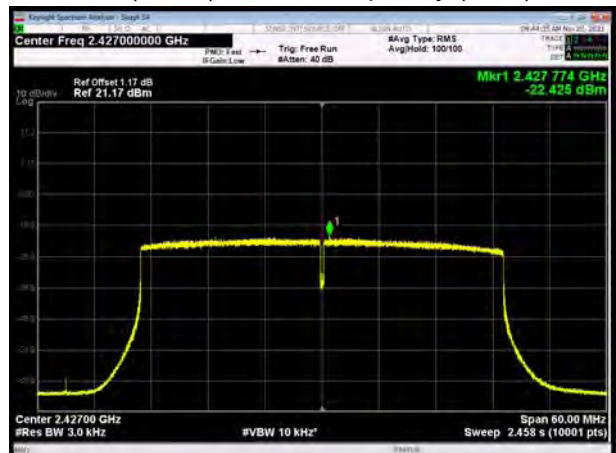
802.11ax(HE20), Carrier frequency (MHz): 2462



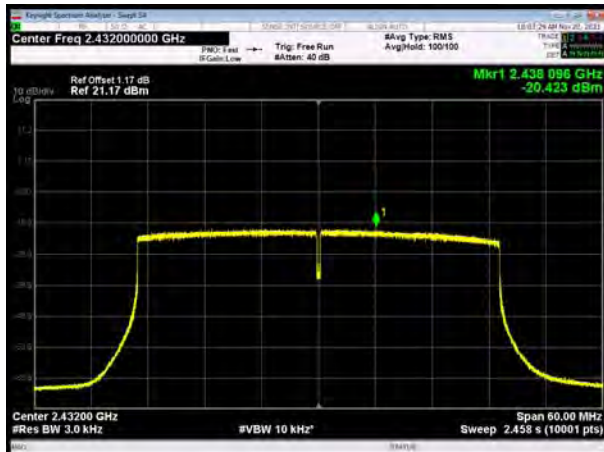
802.11ax(HE40), Carrier frequency (MHz): 2422



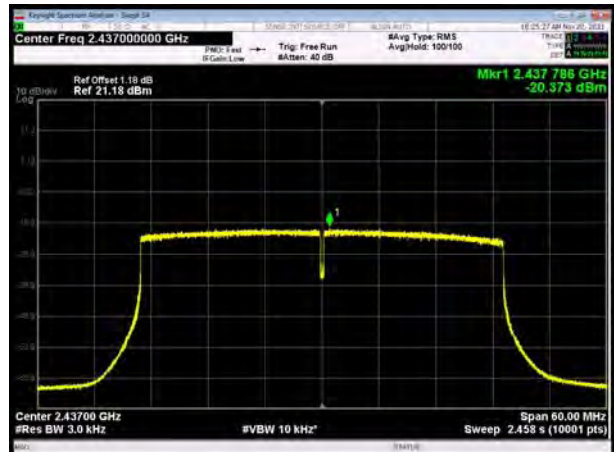
802.11ax(HE40), Carrier frequency (MHz): 2427



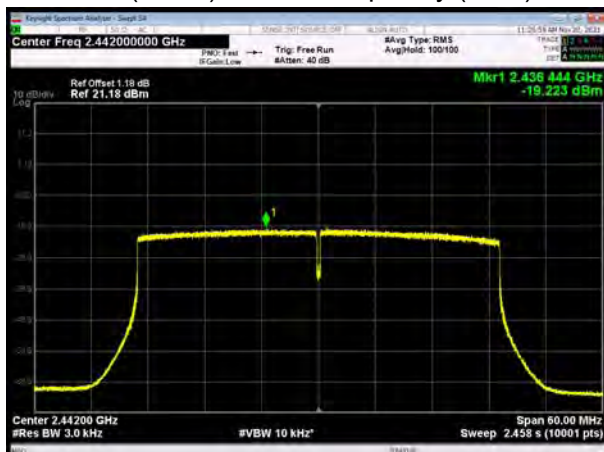
802.11ax(HE40), Carrier frequency (MHz):2432



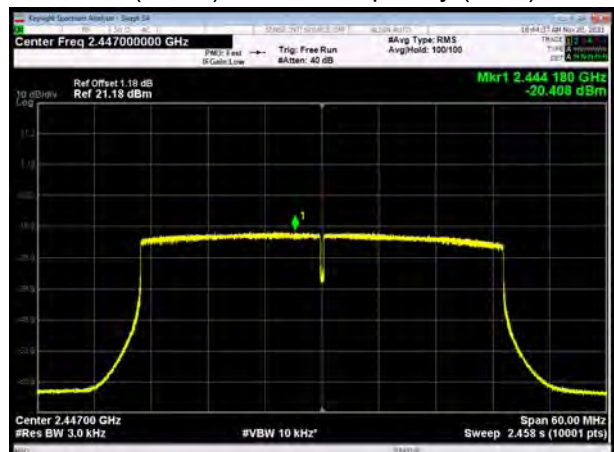
802.11ax(HE40), Carrier frequency (MHz):2437



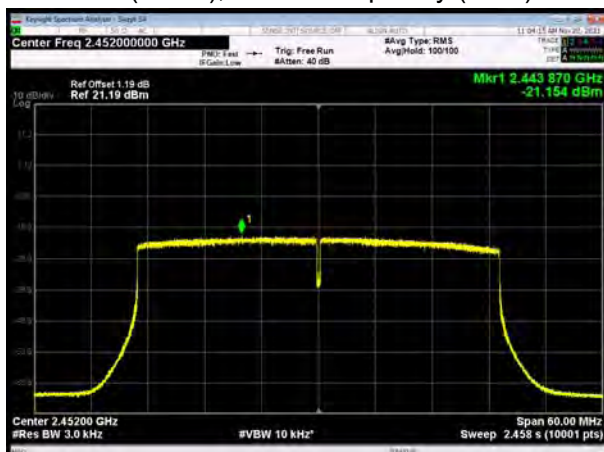
802.11ax(HE40), Carrier frequency (MHz):2442



802.11ax(HE40), Carrier frequency (MHz):2447



802.11ax(HE40), Carrier frequency (MHz):2452



## MIMO Antenna 3

802.11b, Carrier frequency (MHz): 2412



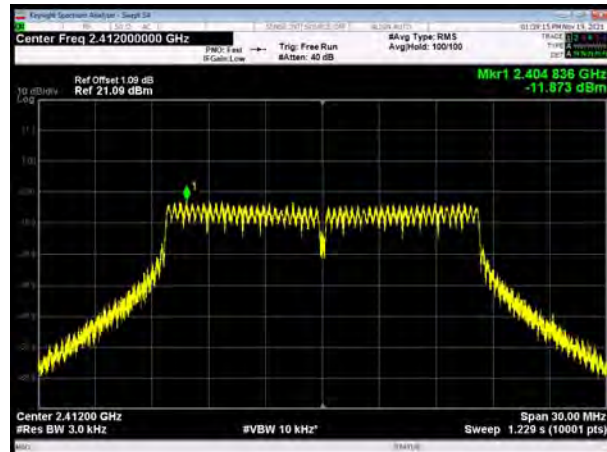
802.11b, Carrier frequency (MHz): 2437



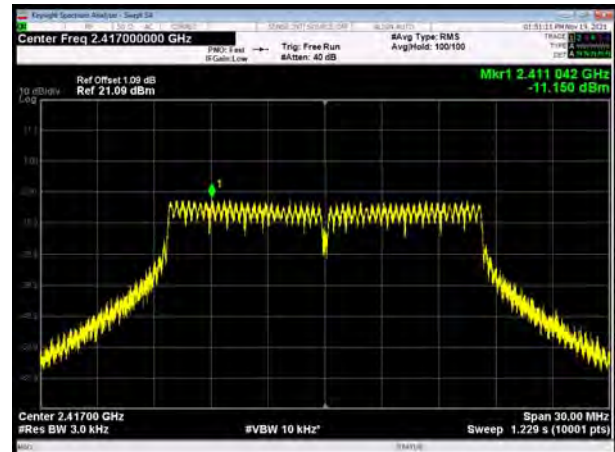
802.11b, Carrier frequency (MHz): 2462



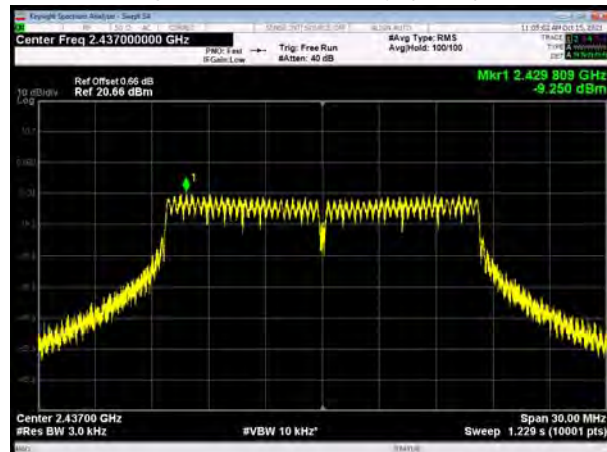
802.11g, Carrier frequency (MHz): 2412



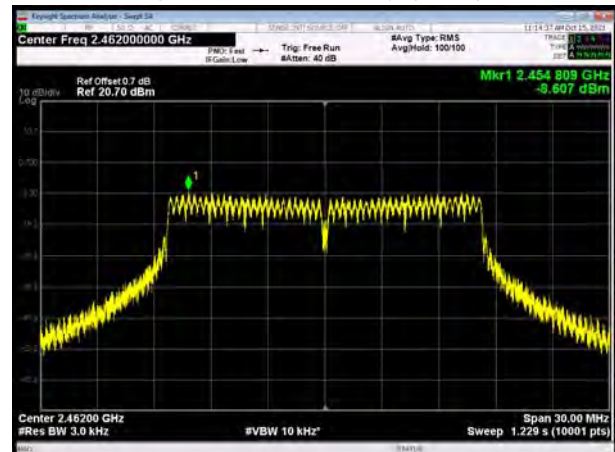
802.11g, Carrier frequency (MHz): 2417



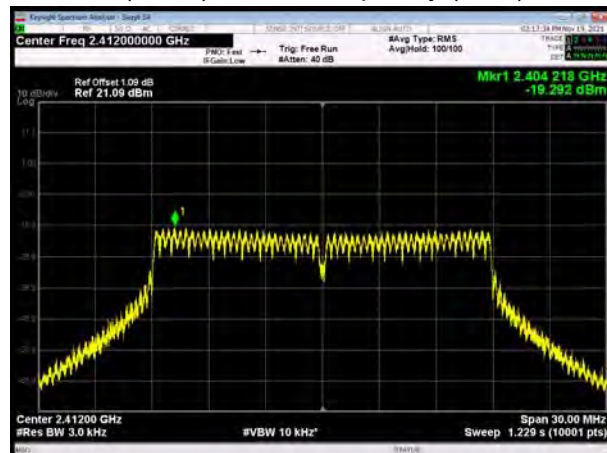
802.11g, Carrier frequency (MHz): 2437



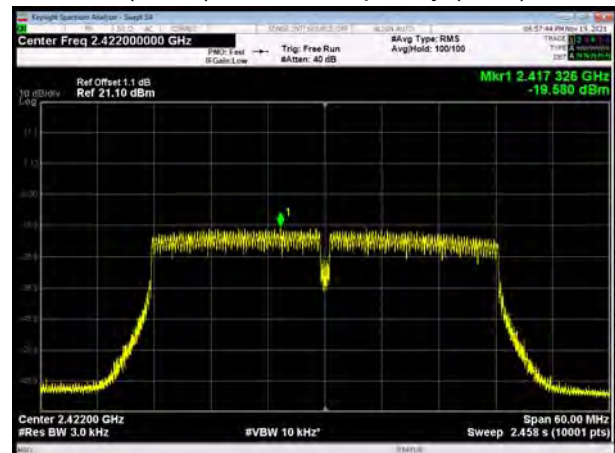
802.11g, Carrier frequency (MHz): 2462



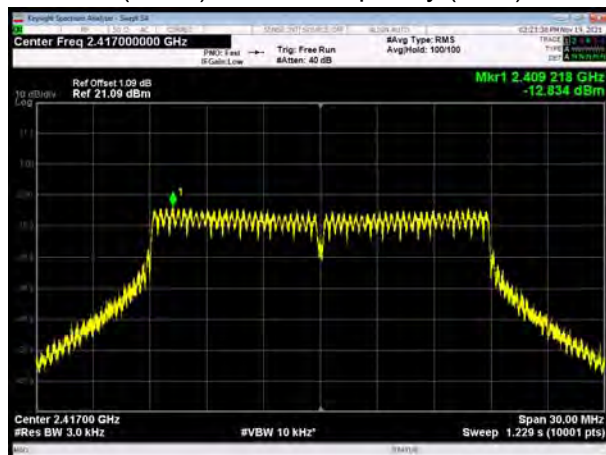
802.11n(HT20), Carrier frequency (MHz): 2412



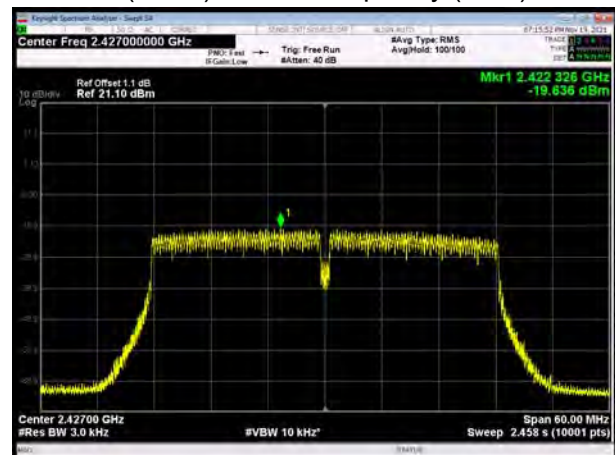
802.11n(HT40), Carrier frequency (MHz): 2422



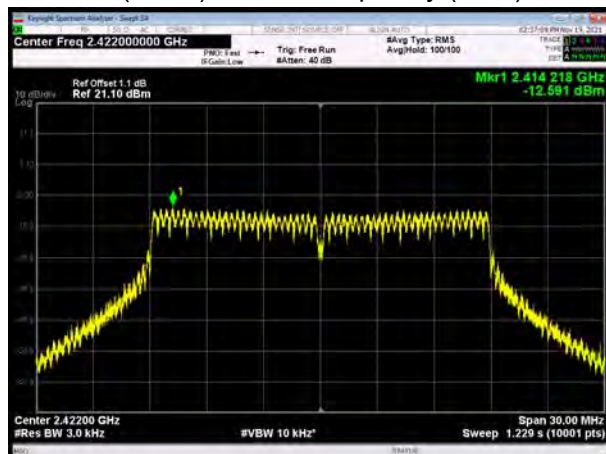
802.11n(HT20), Carrier frequency (MHz): 2417



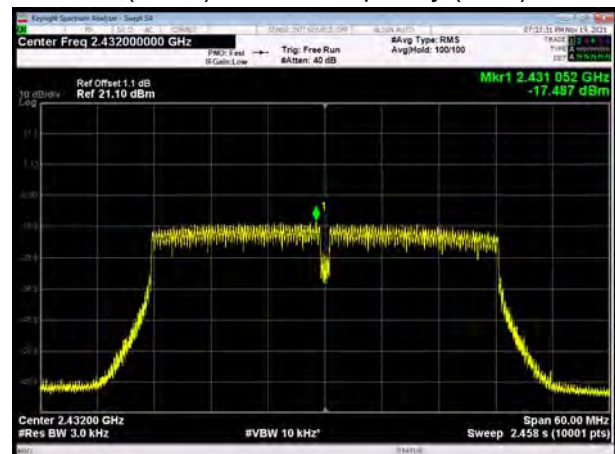
802.11n(HT40), Carrier frequency (MHz): 2427



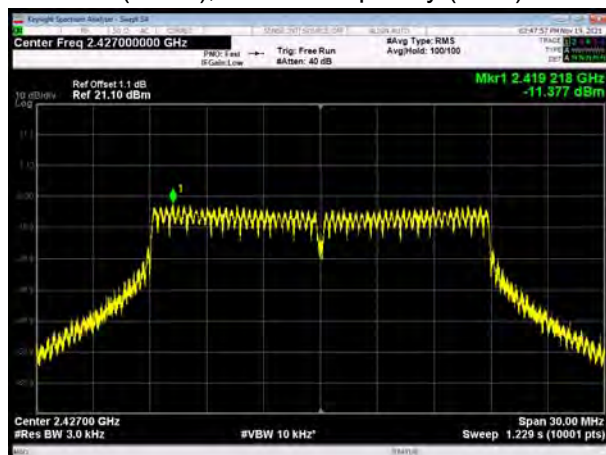
802.11n(HT20), Carrier frequency (MHz): 2422



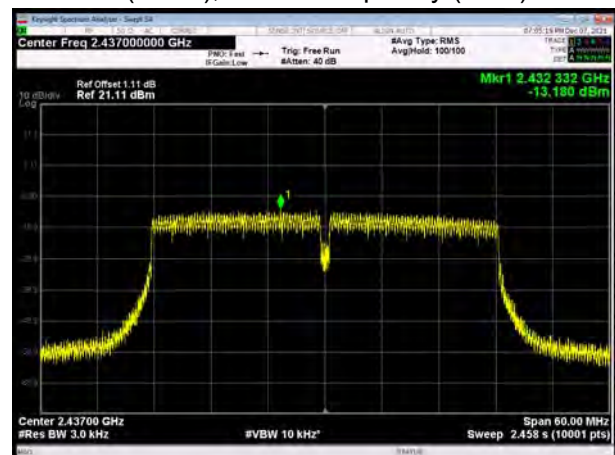
802.11n(HT40), Carrier frequency (MHz): 2432



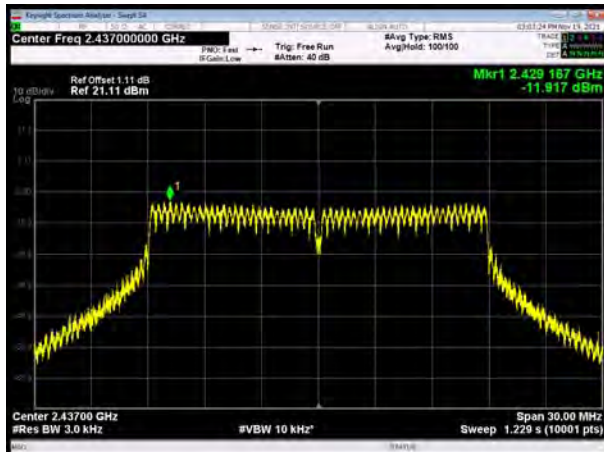
802.11n(HT20), Carrier frequency (MHz): 2427



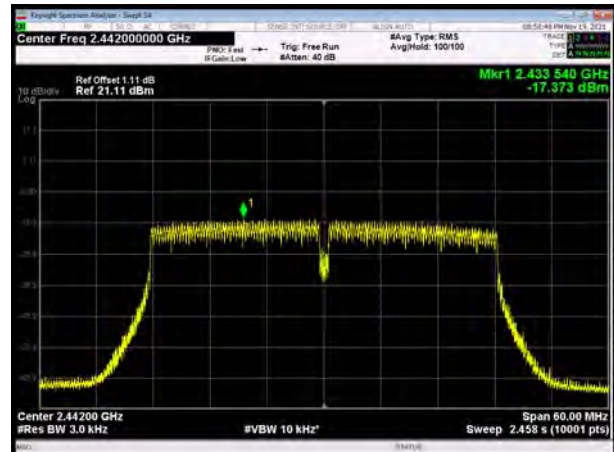
802.11n(HT40), Carrier frequency (MHz): 2437



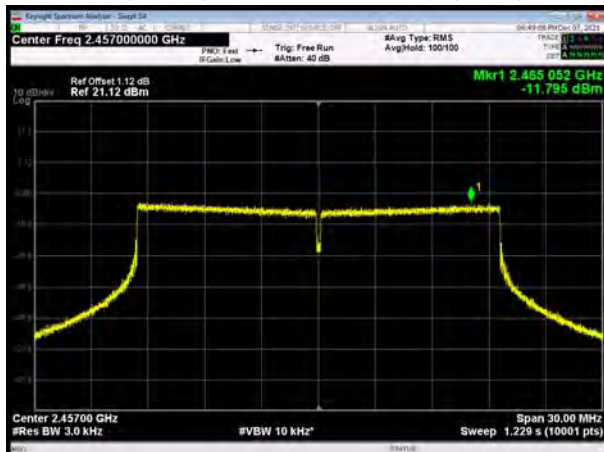
802.11n(HT20), Carrier frequency (MHz):2437



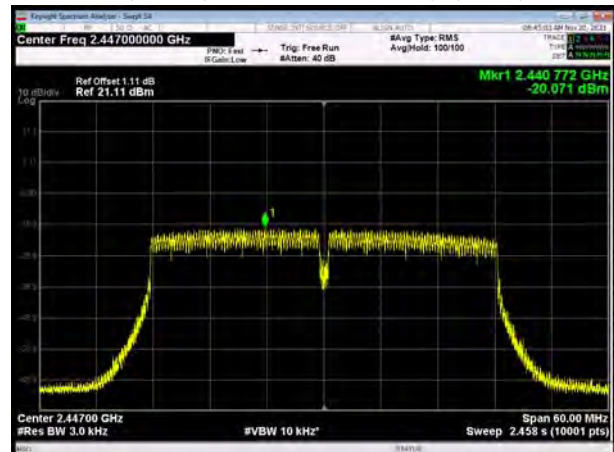
802.11n(HT40), Carrier frequency (MHz): 2442



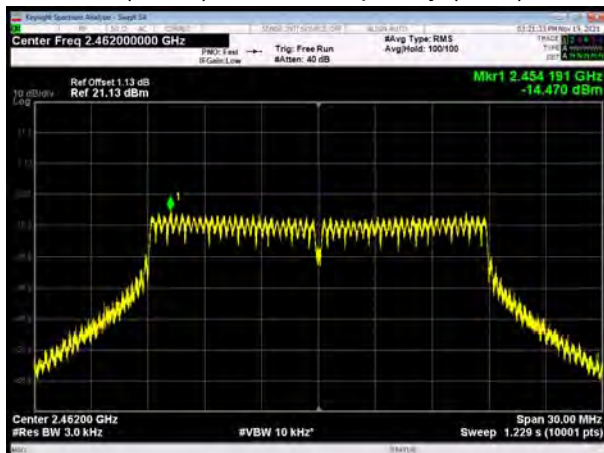
802.11n(HT20), Carrier frequency (MHz):2457



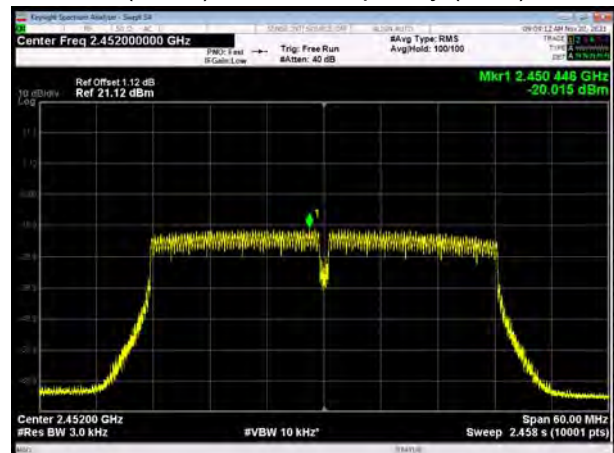
802.11n(HT40), Carrier frequency (MHz): 2447



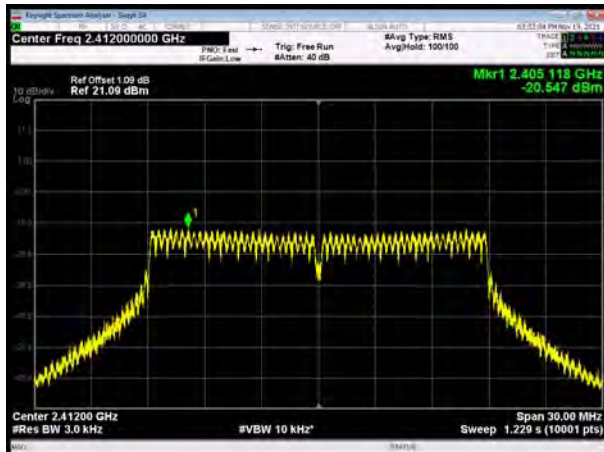
802.11n(HT20), Carrier frequency (MHz):2462



802.11n(HT40), Carrier frequency (MHz): 2452



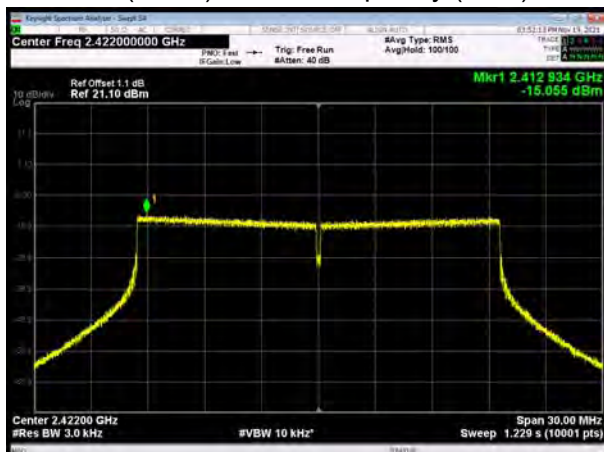
802.11ax(HE20), Carrier frequency (MHz): 2412



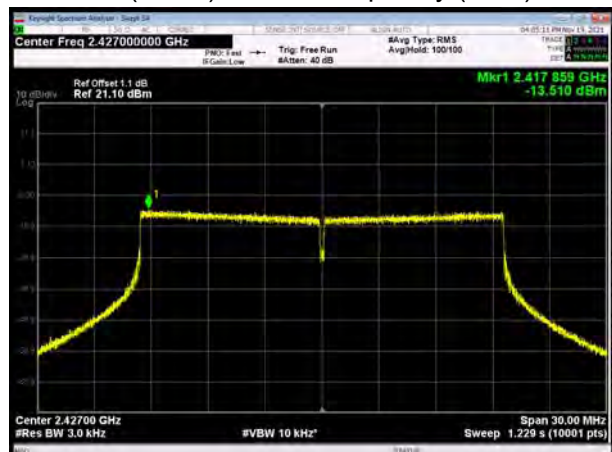
802.11ax(HE20), Carrier frequency (MHz): 2417



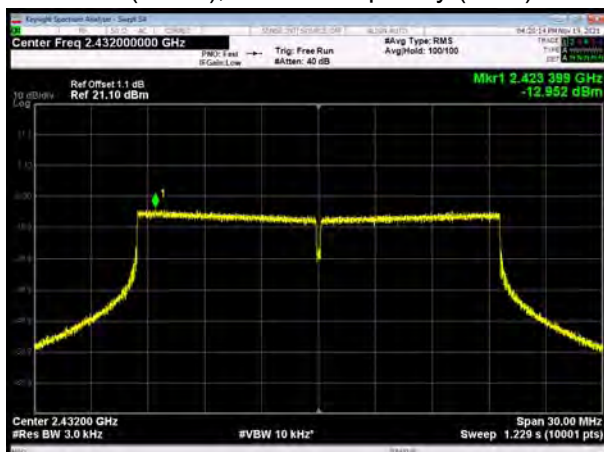
802.11ax(HE20), Carrier frequency (MHz): 2422



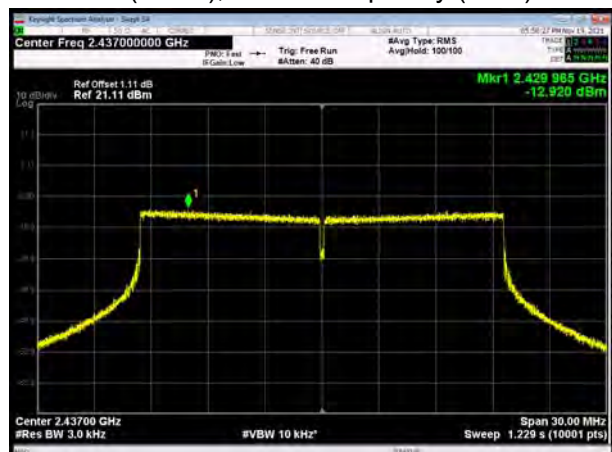
802.11ax(HE20), Carrier frequency (MHz): 2427



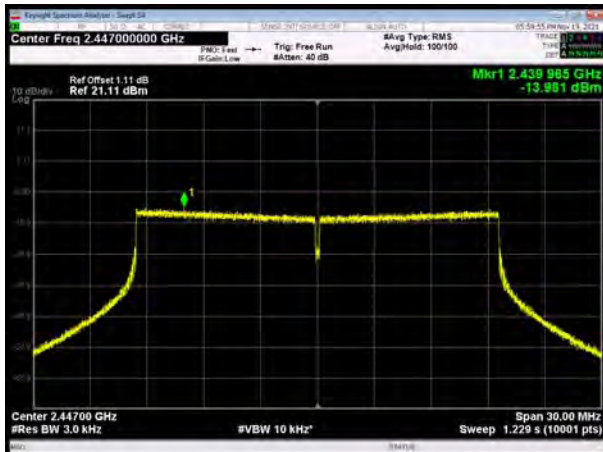
802.11ax(HE20), Carrier frequency (MHz):2432



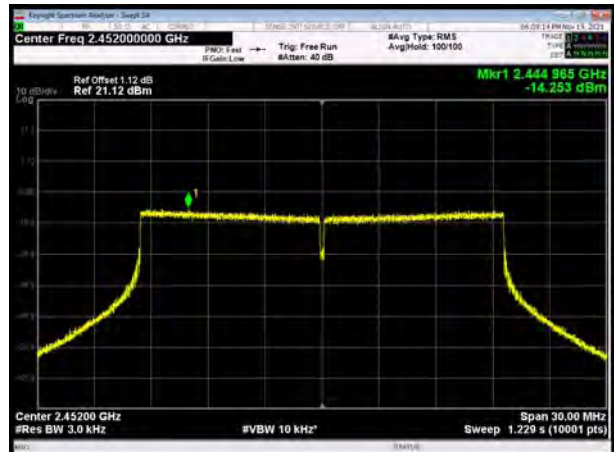
802.11ax(HE20), Carrier frequency (MHz): 2437



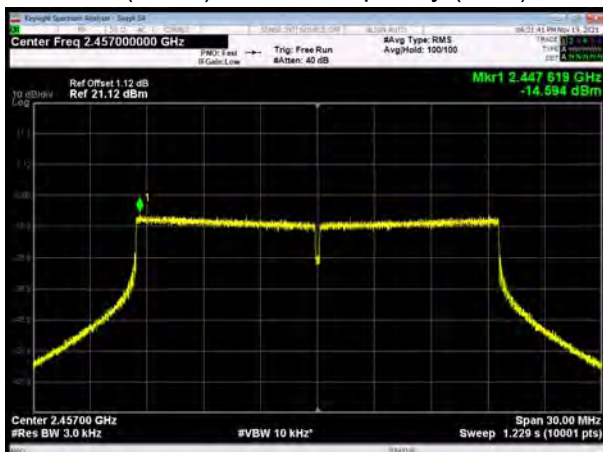
802.11ax(HE20), Carrier frequency (MHz): 2447



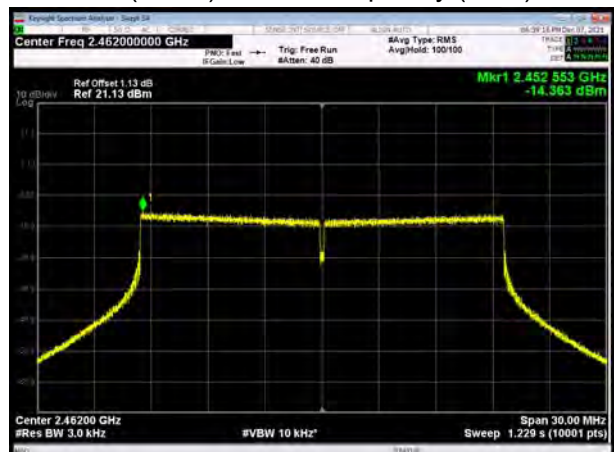
802.11ax(HE20), Carrier frequency (MHz): 2452



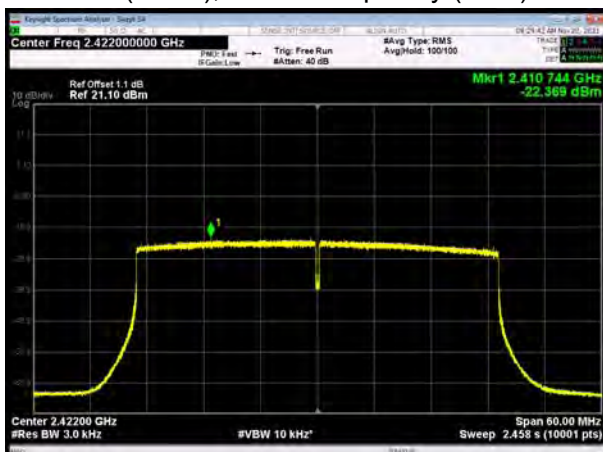
802.11ax(HE20), Carrier frequency (MHz): 2457



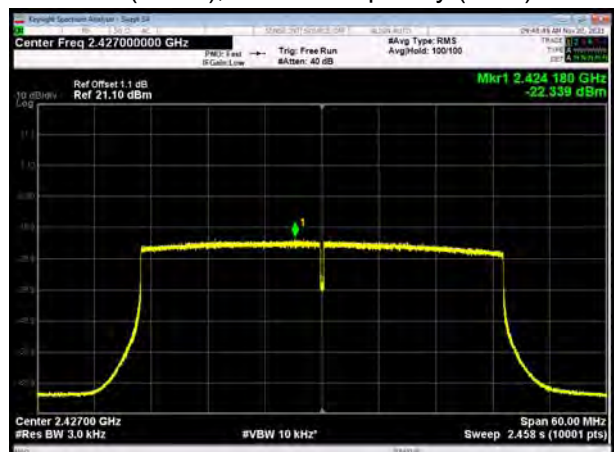
802.11ax(HE20), Carrier frequency (MHz): 2462



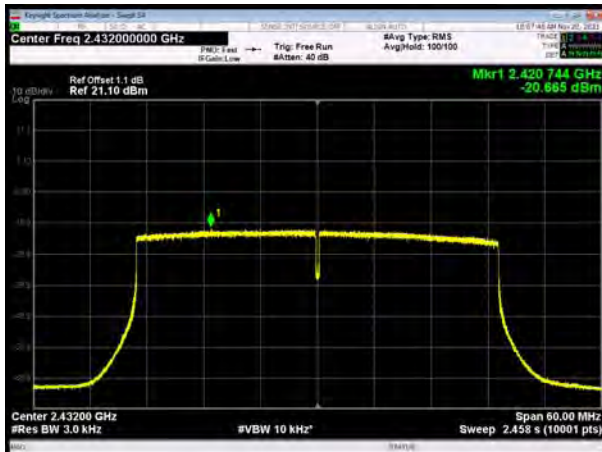
802.11ax(HE40), Carrier frequency (MHz): 2422



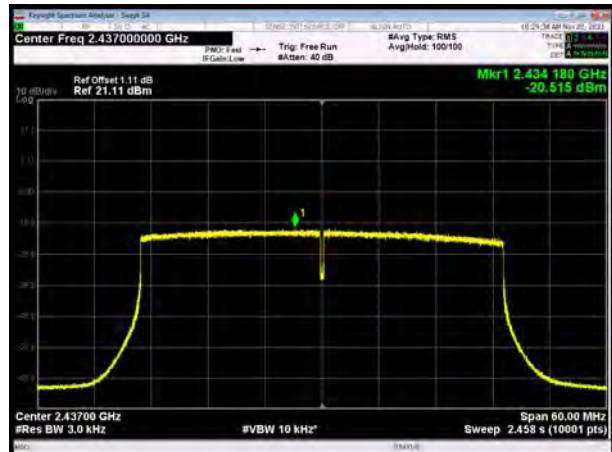
802.11ax(HE40), Carrier frequency (MHz): 2427



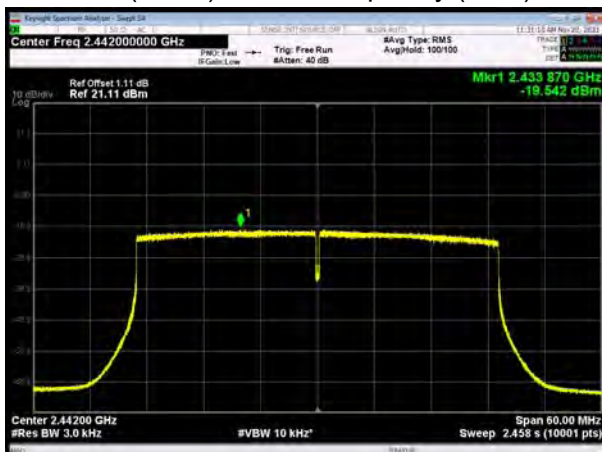
802.11ax(HE40), Carrier frequency (MHz):2432



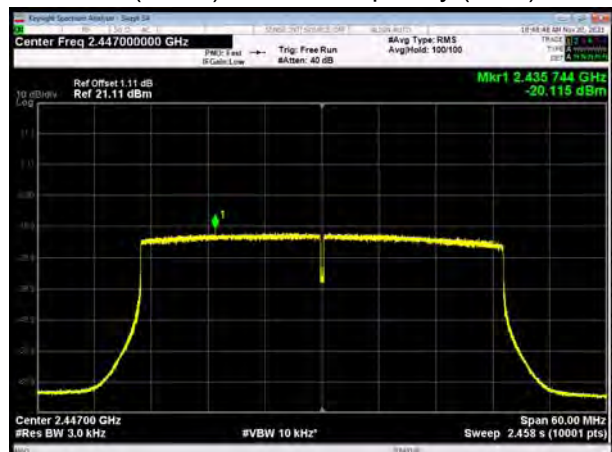
802.11ax(HE40), Carrier frequency (MHz):2437



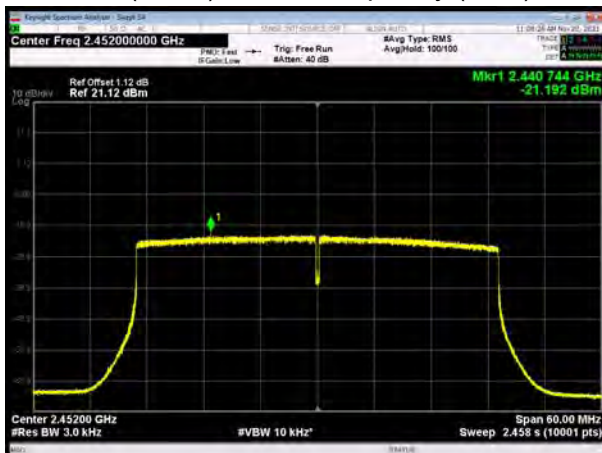
802.11ax(HE40), Carrier frequency (MHz):2442



802.11ax(HE40), Carrier frequency (MHz):2447



802.11ax(HE40), Carrier frequency (MHz):2452





## MIMO Antenna 4

802.11b, Carrier frequency (MHz): 2412



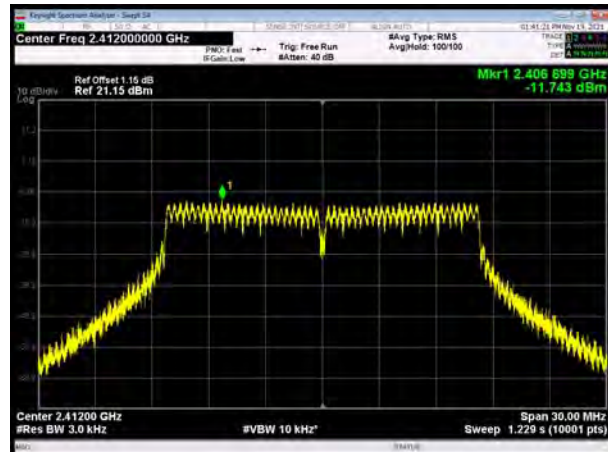
802.11b, Carrier frequency (MHz): 2437



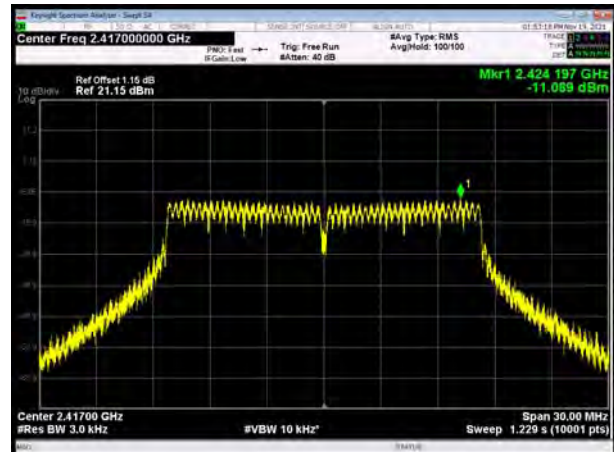
802.11b, Carrier frequency (MHz):2462



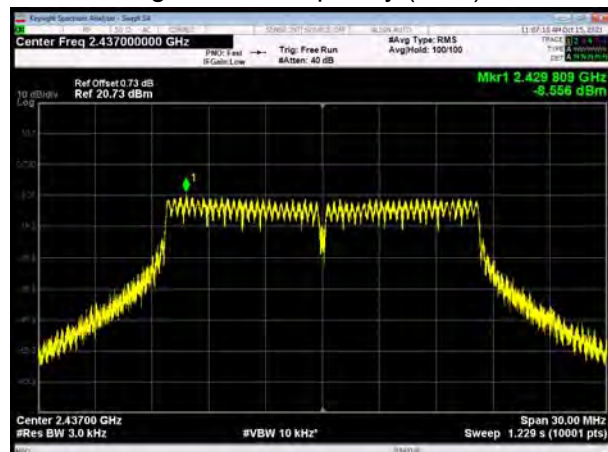
802.11g, Carrier frequency (MHz): 2412



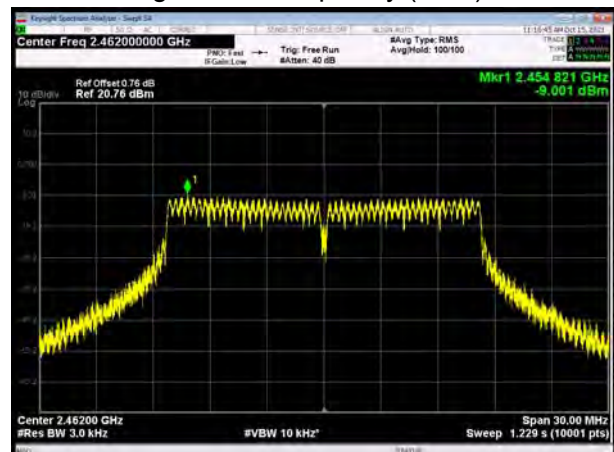
802.11g, Carrier frequency (MHz): 2417



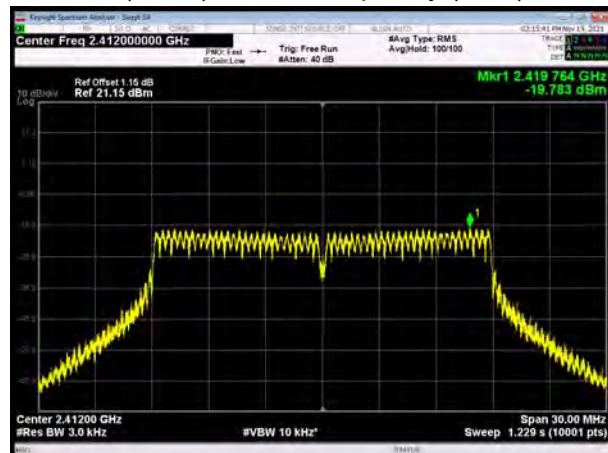
802.11g, Carrier frequency (MHz): 2437



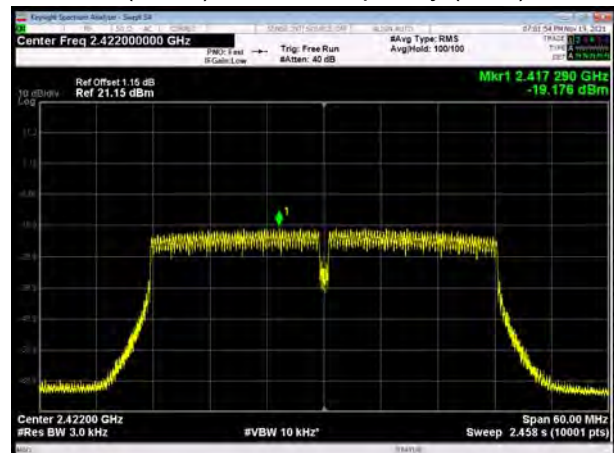
802.11g, Carrier frequency (MHz): 2462



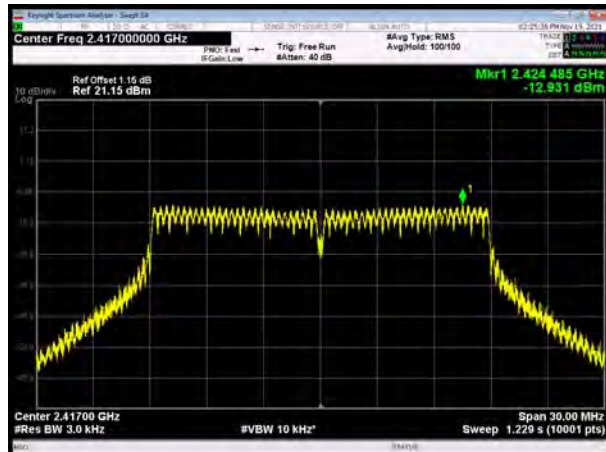
802.11n(HT20), Carrier frequency (MHz): 2412



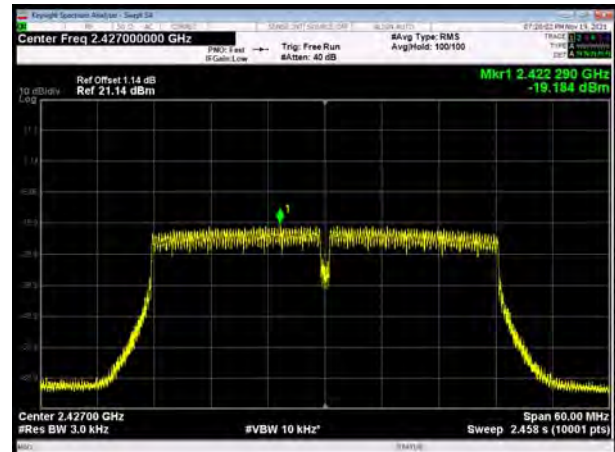
802.11n(HT40), Carrier frequency (MHz): 2422



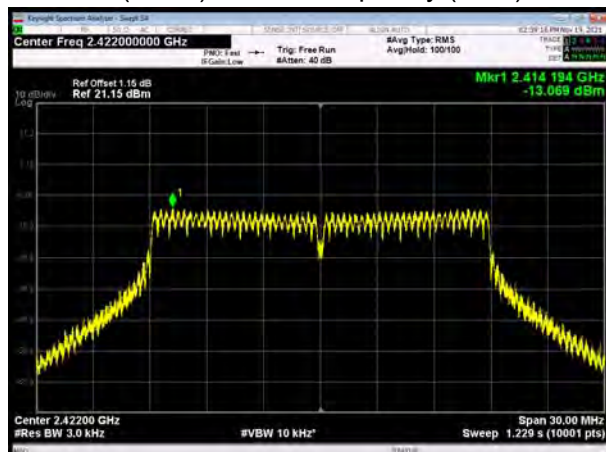
802.11n(HT20), Carrier frequency (MHz): 2417



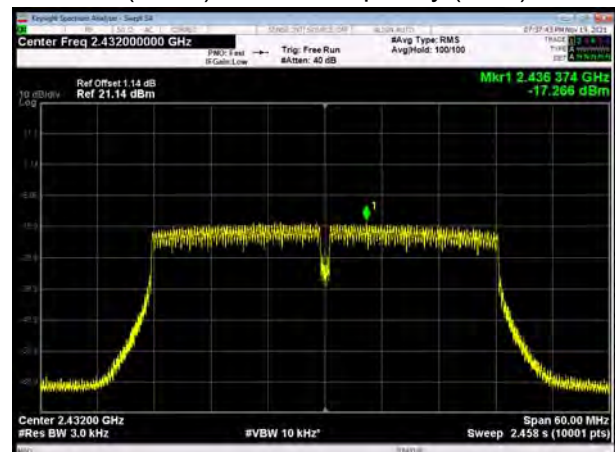
802.11n(HT40), Carrier frequency (MHz): 2427



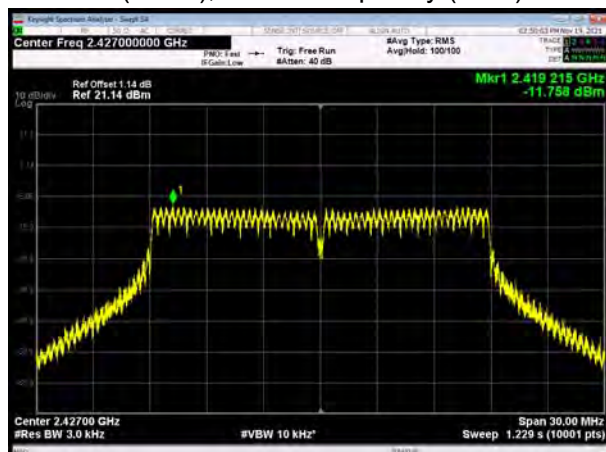
802.11n(HT20), Carrier frequency (MHz): 2422



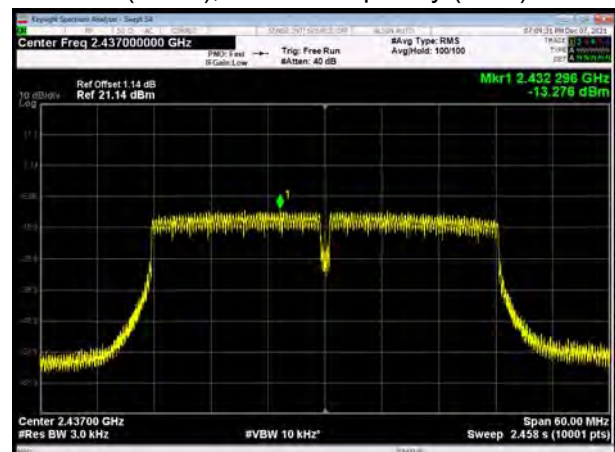
802.11n(HT40), Carrier frequency (MHz): 2432



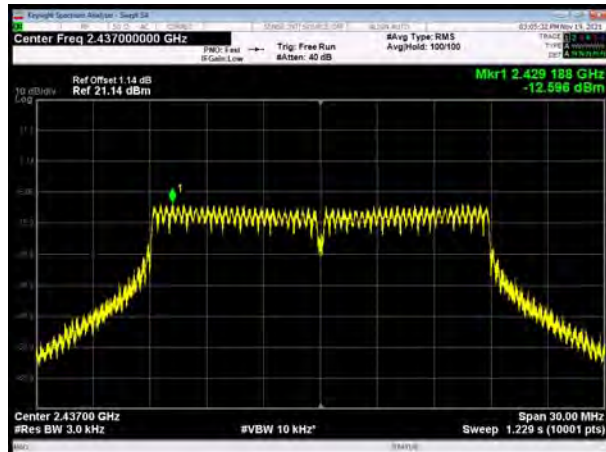
802.11n(HT20), Carrier frequency (MHz): 2427



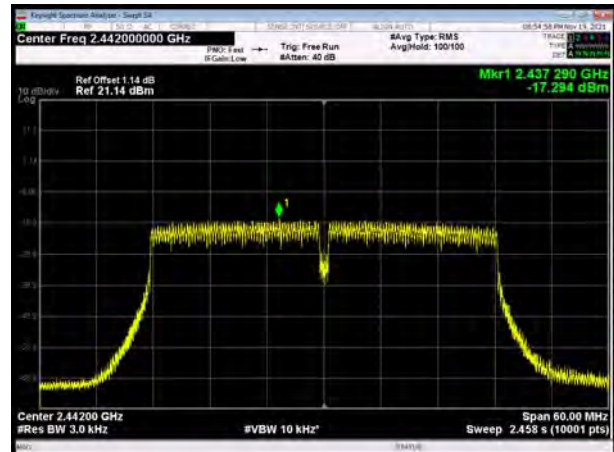
802.11n(HT40), Carrier frequency (MHz): 2437



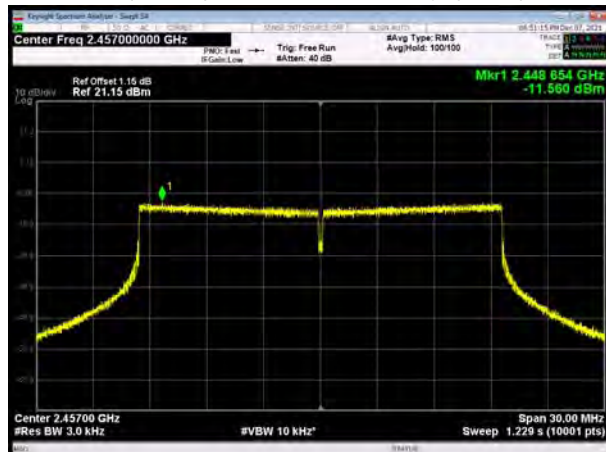
802.11n(HT20), Carrier frequency (MHz):2437



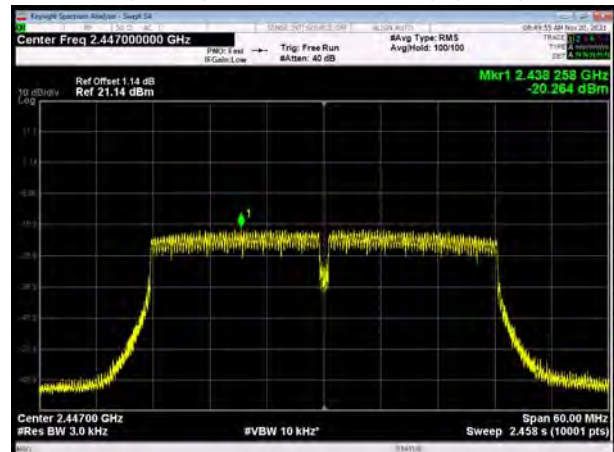
802.11n(HT40), Carrier frequency (MHz): 2442



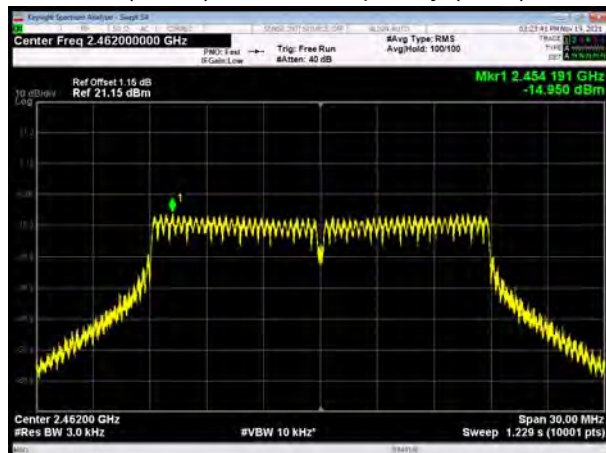
802.11n(HT20), Carrier frequency (MHz):2457



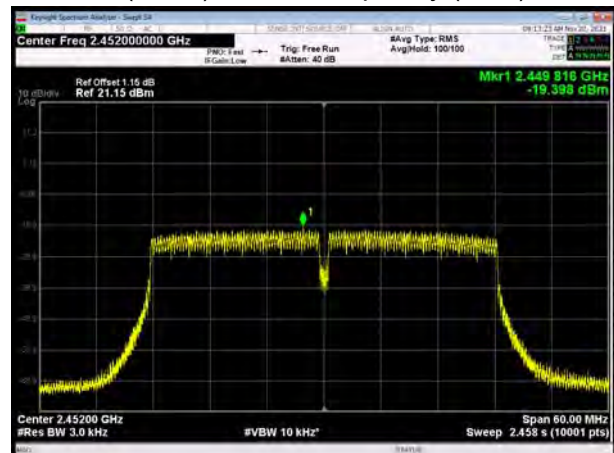
802.11n(HT40), Carrier frequency (MHz): 2447



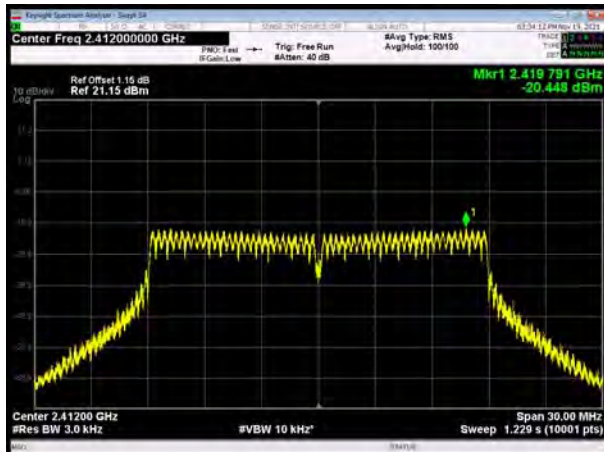
802.11n(HT20), Carrier frequency (MHz):2462



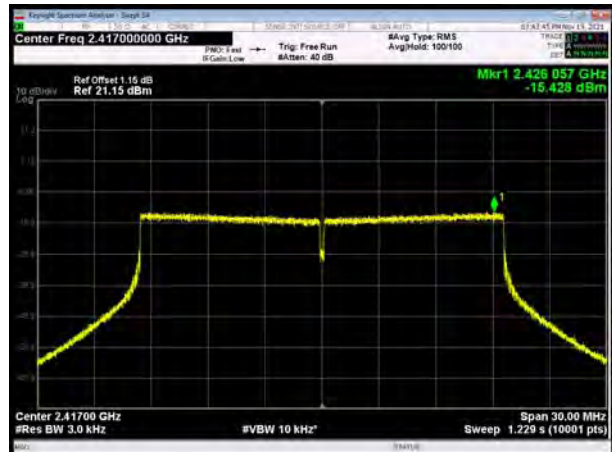
802.11n(HT40), Carrier frequency (MHz): 2452



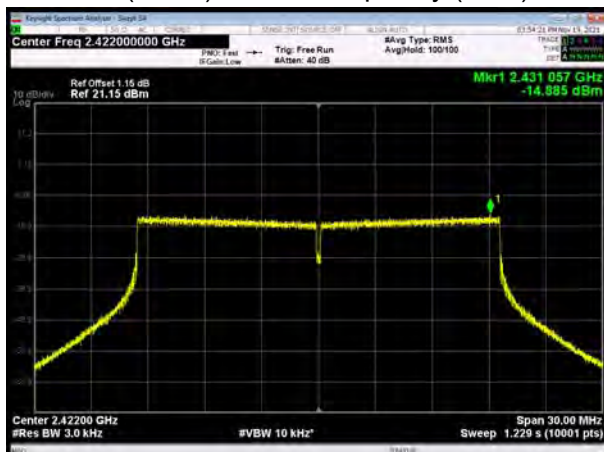
802.11ax(HE20), Carrier frequency (MHz): 2412



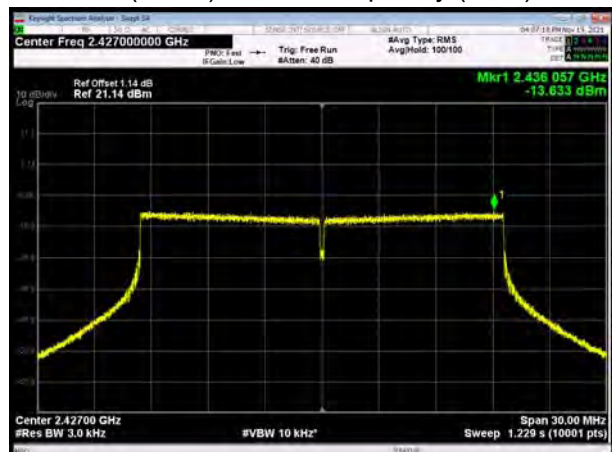
802.11ax(HE20), Carrier frequency (MHz): 2417



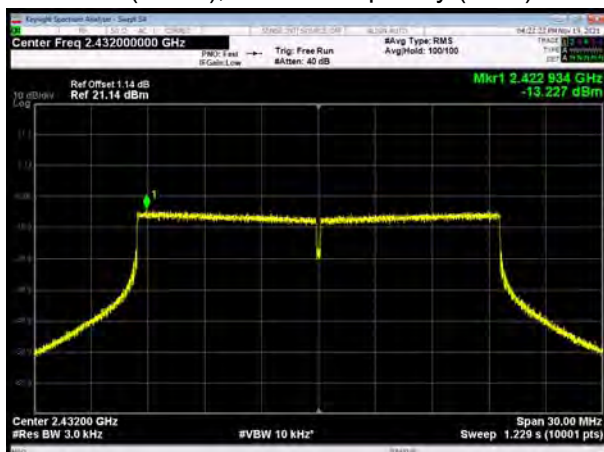
802.11ax(HE20), Carrier frequency (MHz): 2422



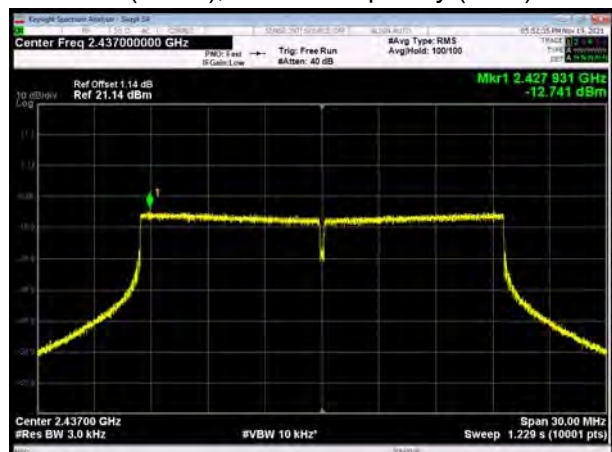
802.11ax(HE20), Carrier frequency (MHz): 2427



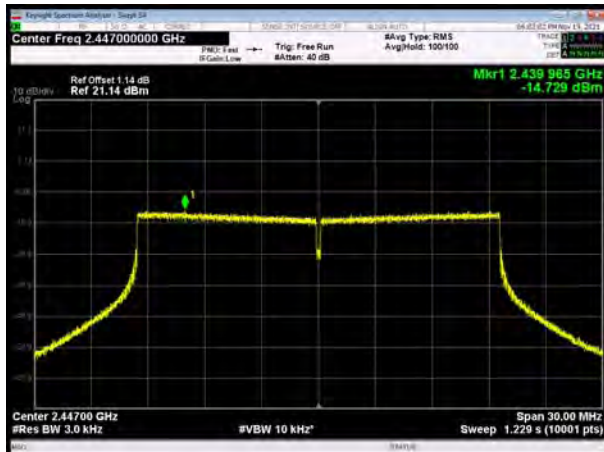
802.11ax(HE20), Carrier frequency (MHz):2432



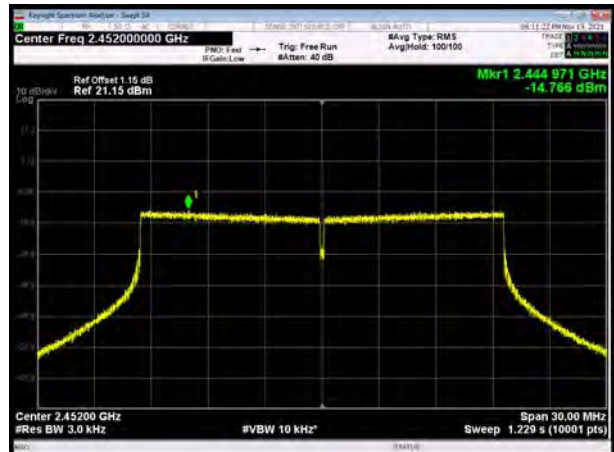
802.11ax(HE20), Carrier frequency (MHz): 2437



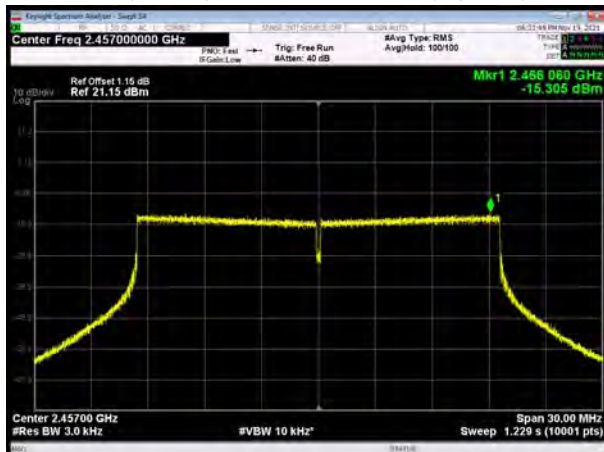
802.11ax(HE20), Carrier frequency (MHz): 2447



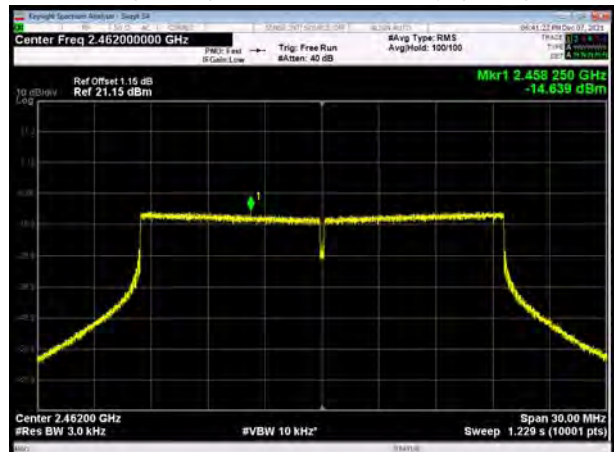
802.11ax(HE20), Carrier frequency (MHz): 2452



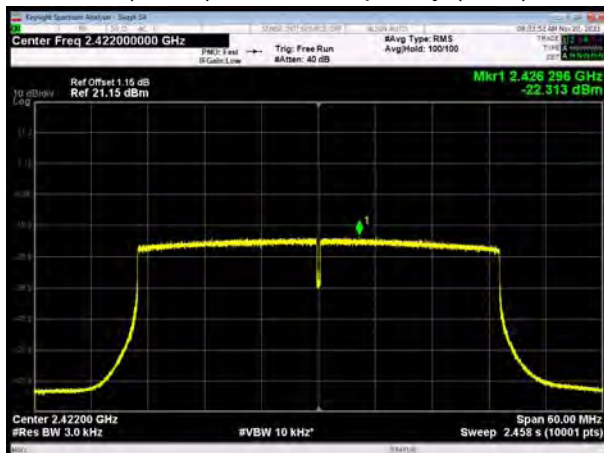
802.11ax(HE20), Carrier frequency (MHz): 2457



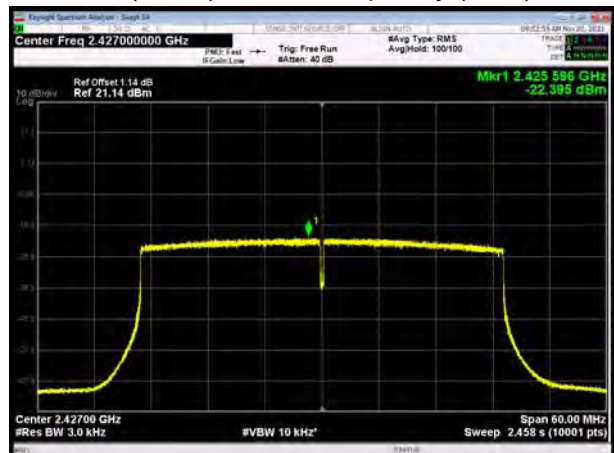
802.11ax(HE20), Carrier frequency (MHz): 2462



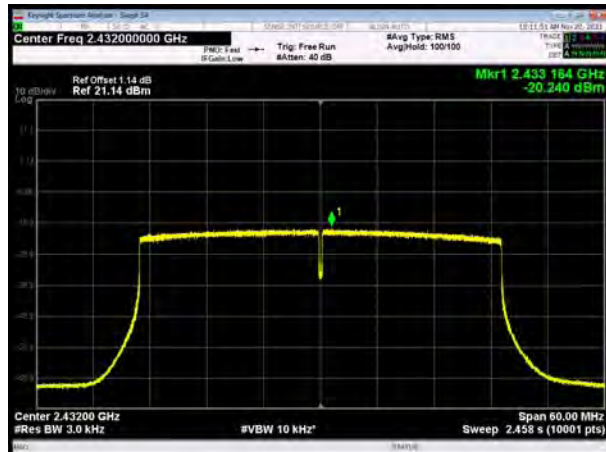
802.11ax(HE40), Carrier frequency (MHz): 2422



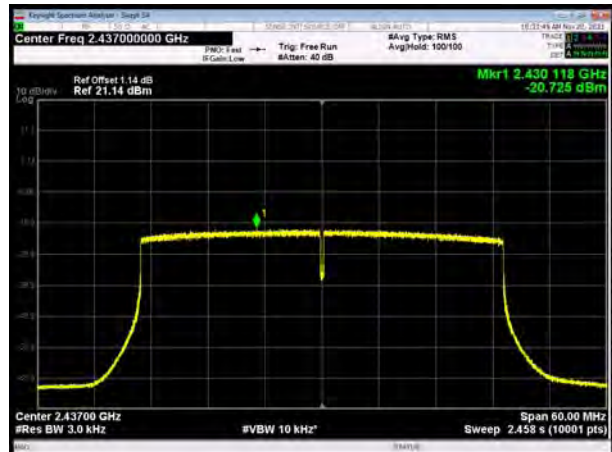
802.11ax(HE40), Carrier frequency (MHz): 2427



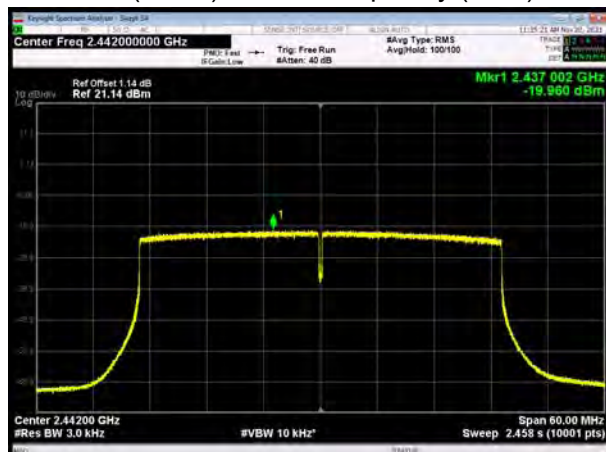
802.11ax(HE40), Carrier frequency (MHz):2432



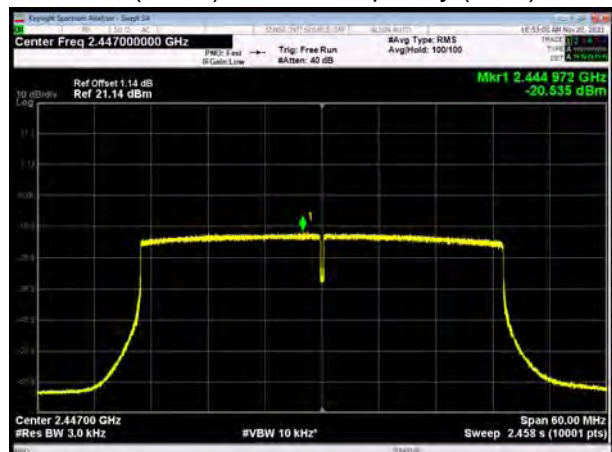
802.11ax(HE40), Carrier frequency (MHz):2437



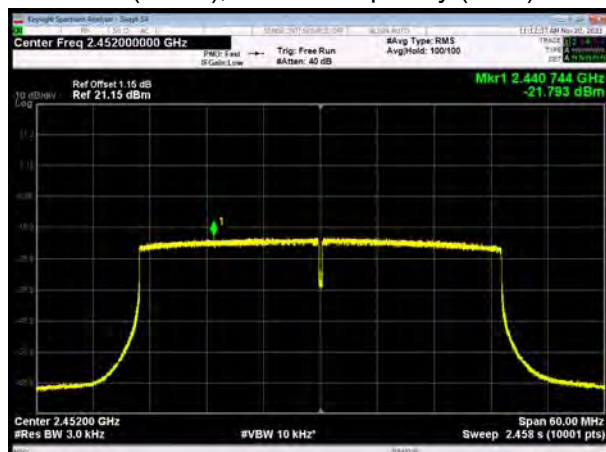
802.11ax(HE40), Carrier frequency (MHz):2442



802.11ax(HE40), Carrier frequency (MHz):2447



802.11ax(HE40), Carrier frequency (MHz):2452





# With Beamforming MIMO Antenna 1

802.11b, Carrier frequency (MHz): 2412



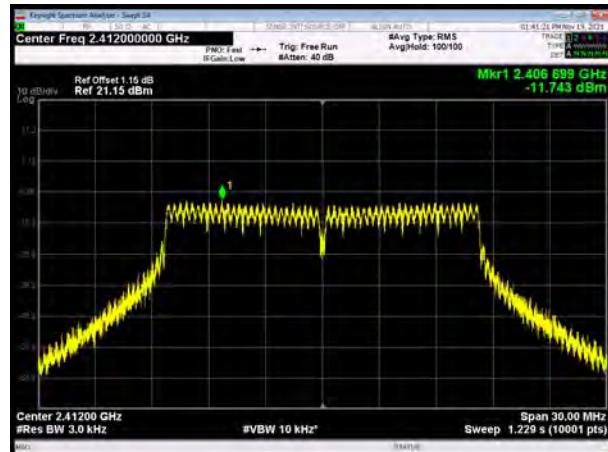
802.11b, Carrier frequency (MHz): 2437



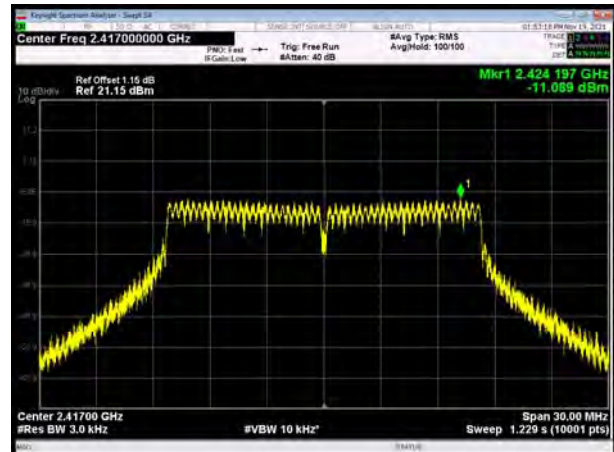
802.11b, Carrier frequency (MHz):2462



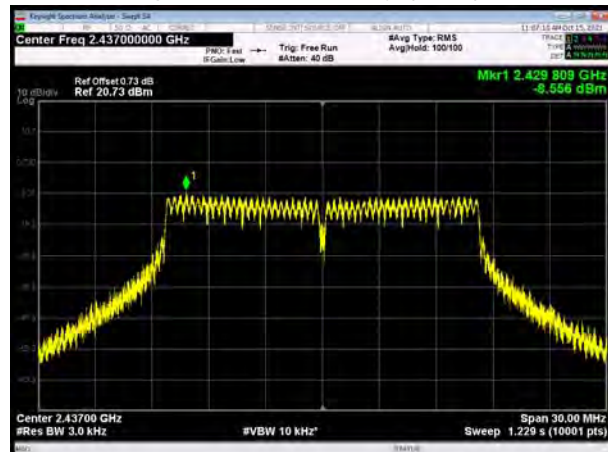
802.11g, Carrier frequency (MHz): 2412



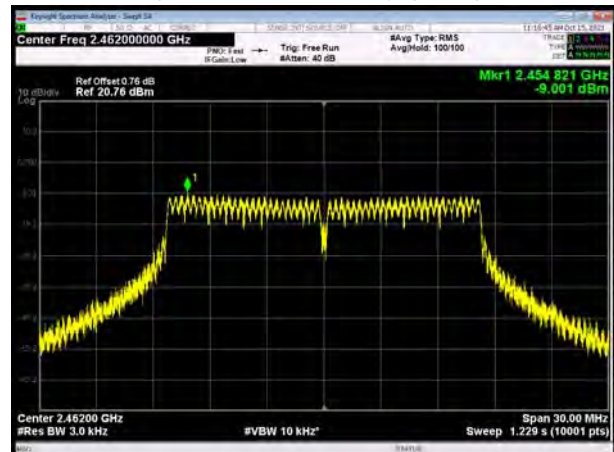
802.11g, Carrier frequency (MHz): 2417



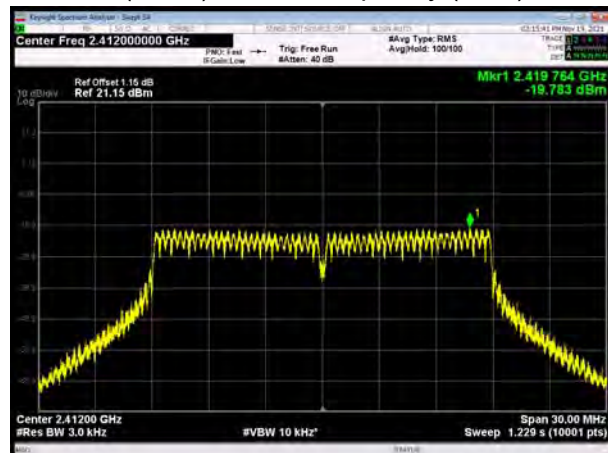
802.11g, Carrier frequency (MHz): 2437



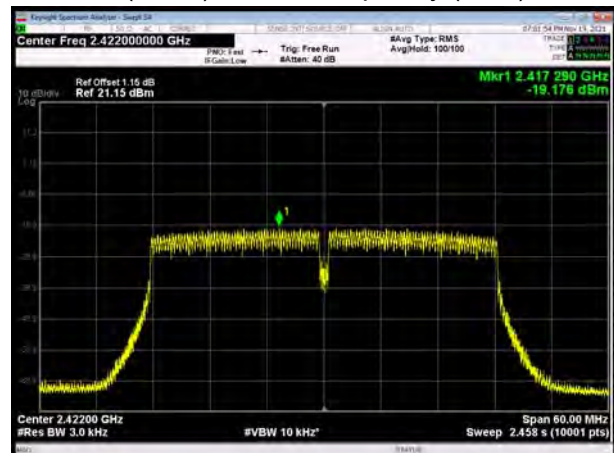
802.11g, Carrier frequency (MHz): 2462



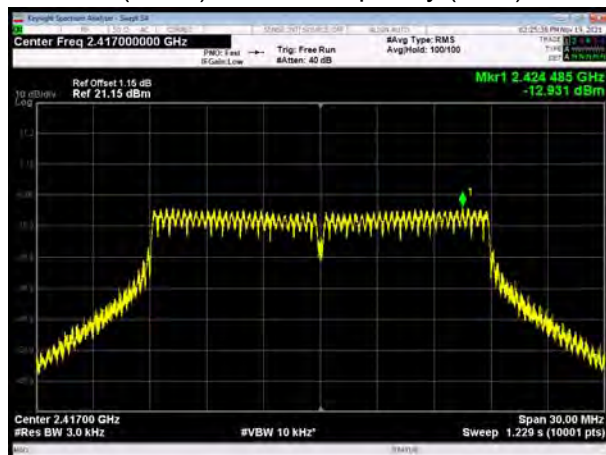
802.11n(HT20), Carrier frequency (MHz): 2412



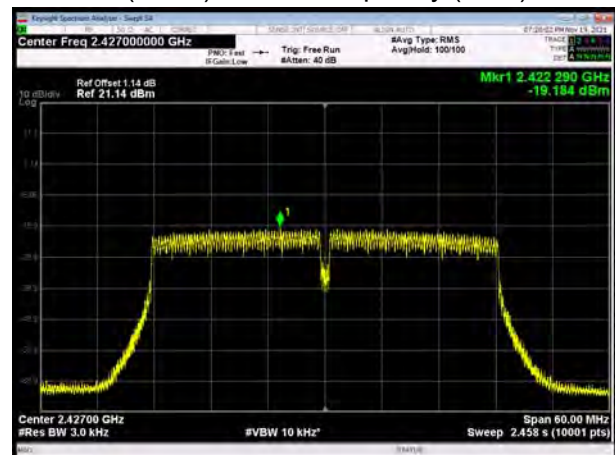
802.11n(HT40), Carrier frequency (MHz): 2422



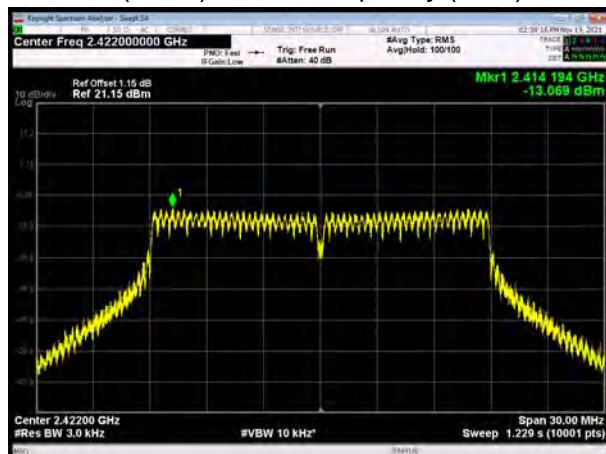
802.11n(HT20), Carrier frequency (MHz): 2417



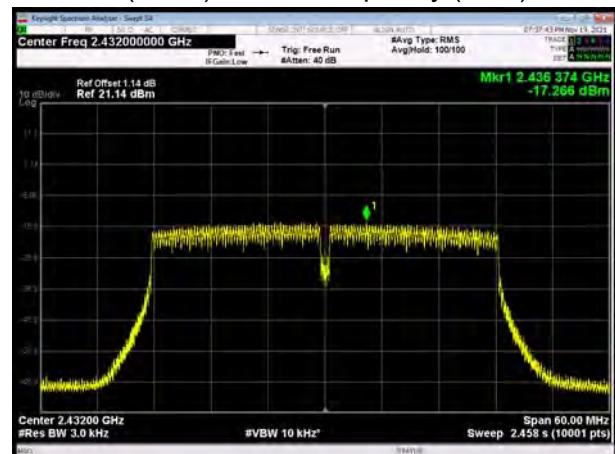
802.11n(HT40), Carrier frequency (MHz): 2427



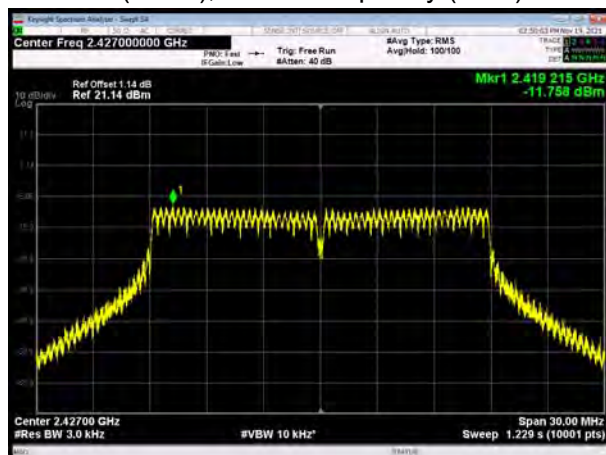
802.11n(HT20), Carrier frequency (MHz): 2422



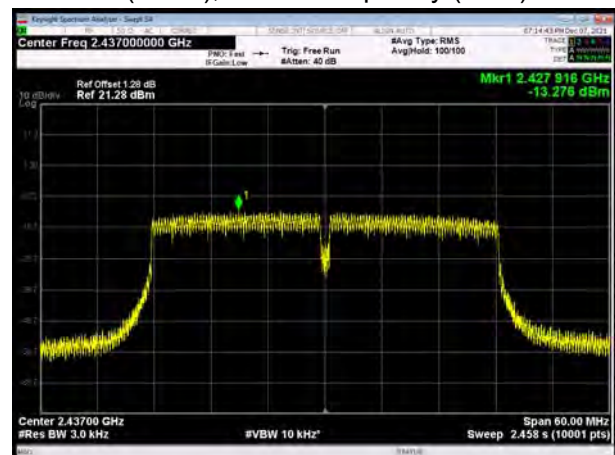
802.11n(HT40), Carrier frequency (MHz): 2432



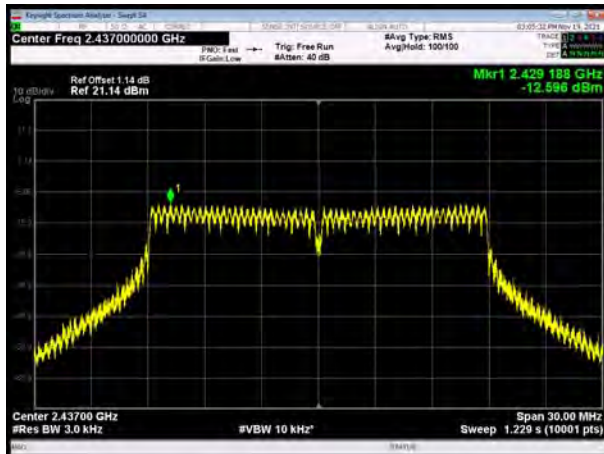
802.11n(HT20), Carrier frequency (MHz): 2427



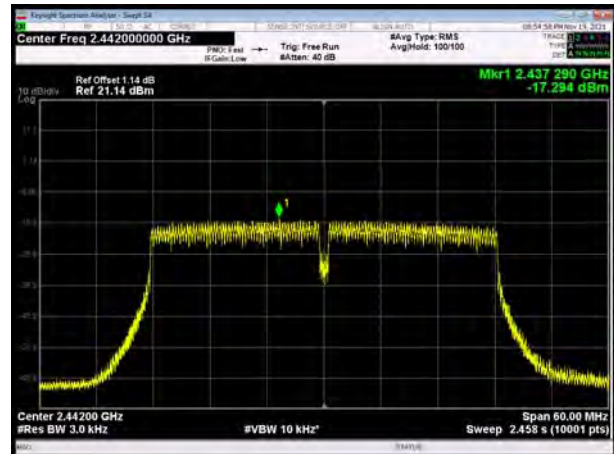
802.11n(HT40), Carrier frequency (MHz): 2437



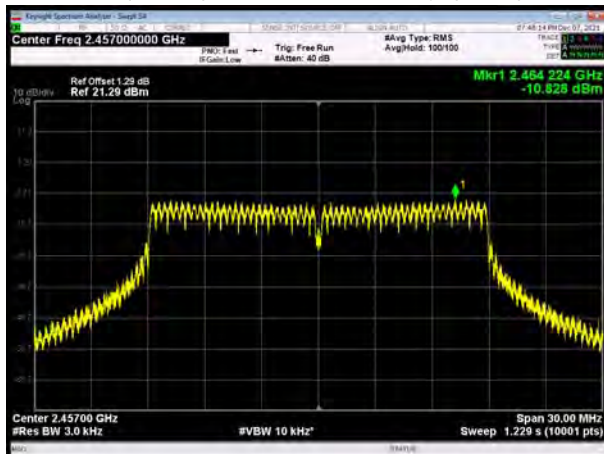
802.11n(HT20), Carrier frequency (MHz):2437



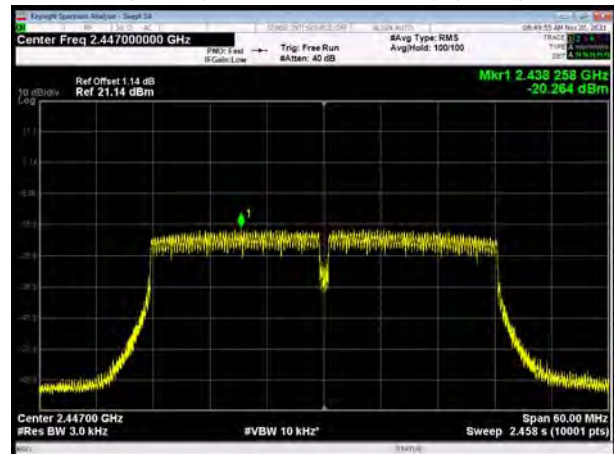
802.11n(HT40), Carrier frequency (MHz): 2442



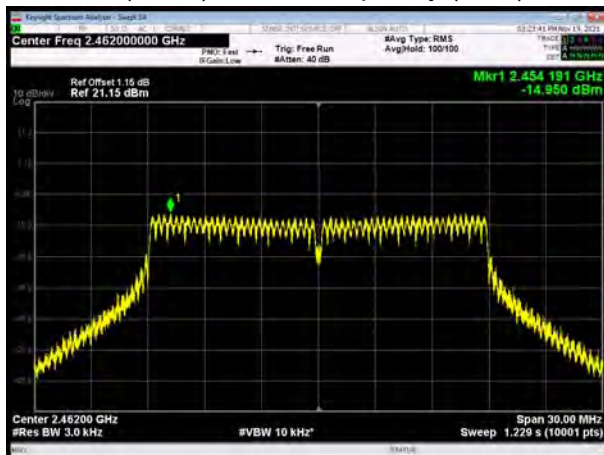
802.11n(HT20), Carrier frequency (MHz):2457



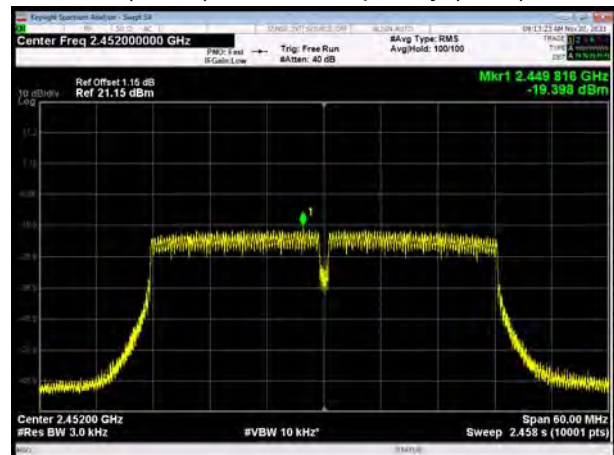
802.11n(HT40), Carrier frequency (MHz): 2447



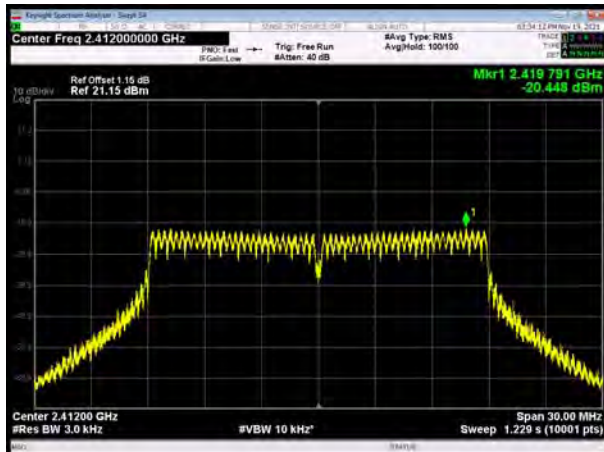
802.11n(HT20), Carrier frequency (MHz):2462



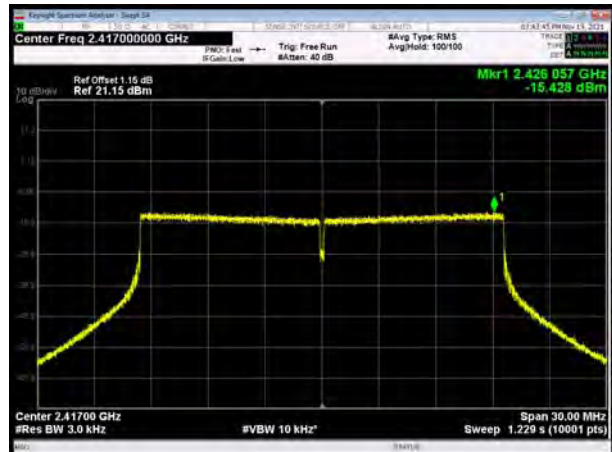
802.11n(HT40), Carrier frequency (MHz): 2452



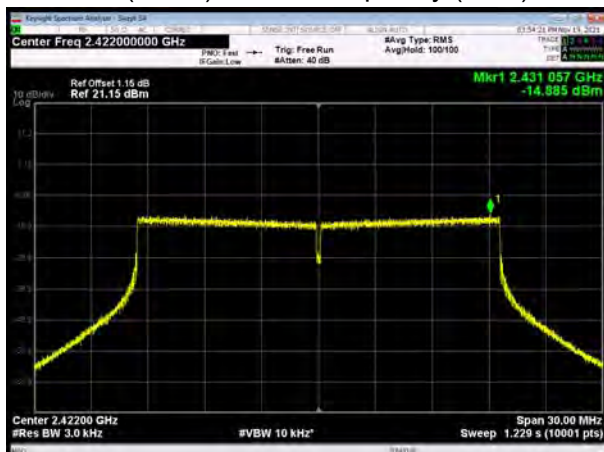
802.11ax(HE20), Carrier frequency (MHz): 2412



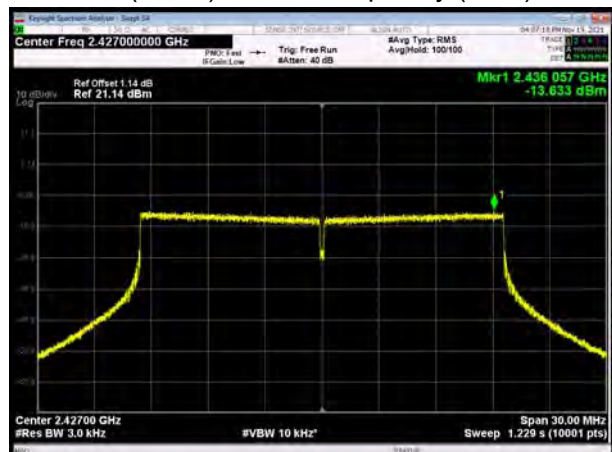
802.11ax(HE20), Carrier frequency (MHz): 2417



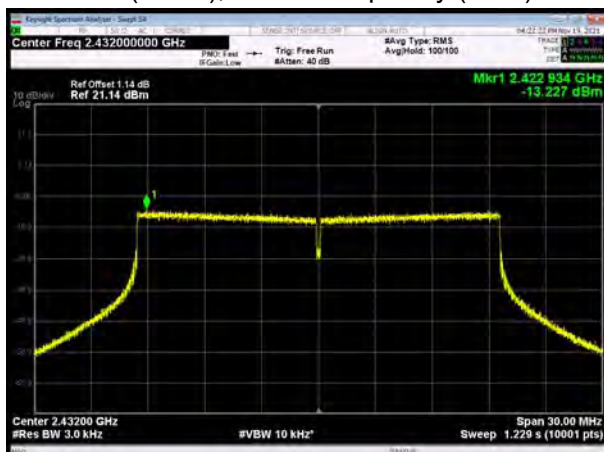
802.11ax(HE20), Carrier frequency (MHz): 2422



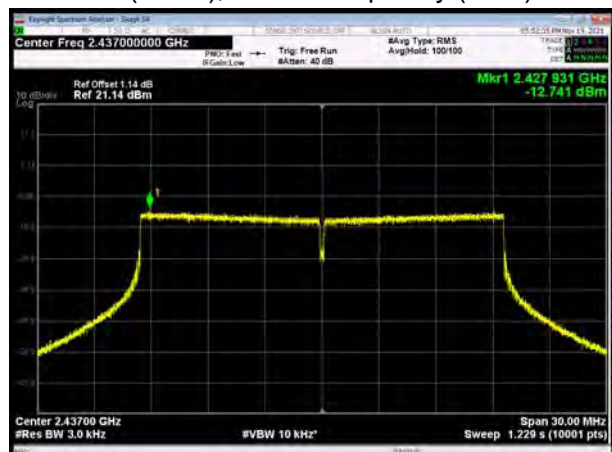
802.11ax(HE20), Carrier frequency (MHz): 2427



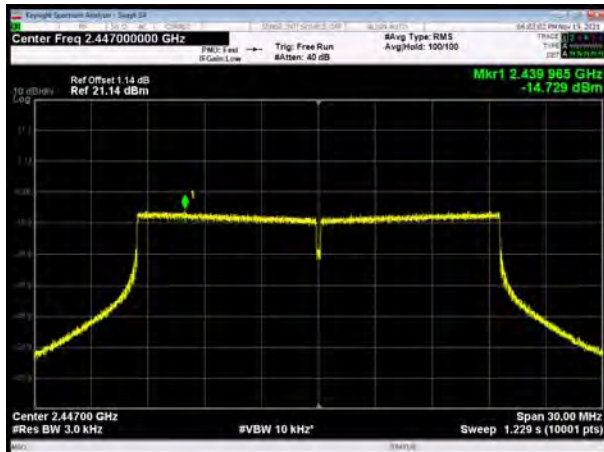
802.11ax(HE20), Carrier frequency (MHz):2432



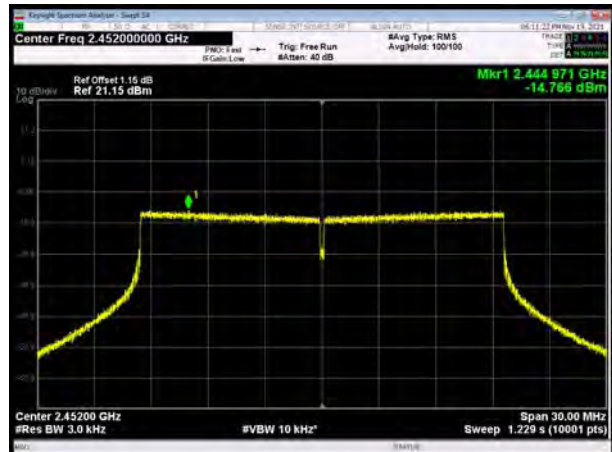
802.11ax(HE20), Carrier frequency (MHz): 2437



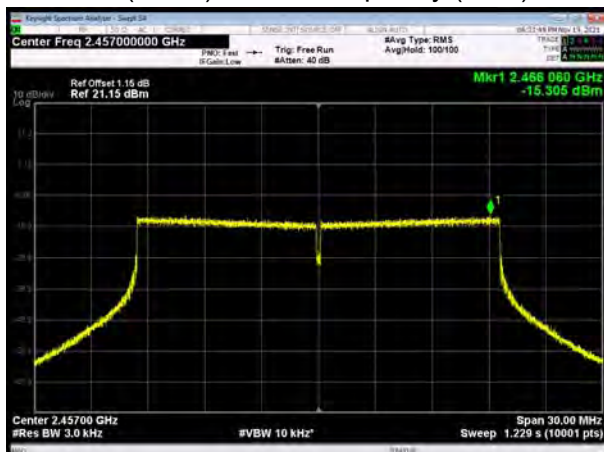
802.11ax(HE20), Carrier frequency (MHz): 2447



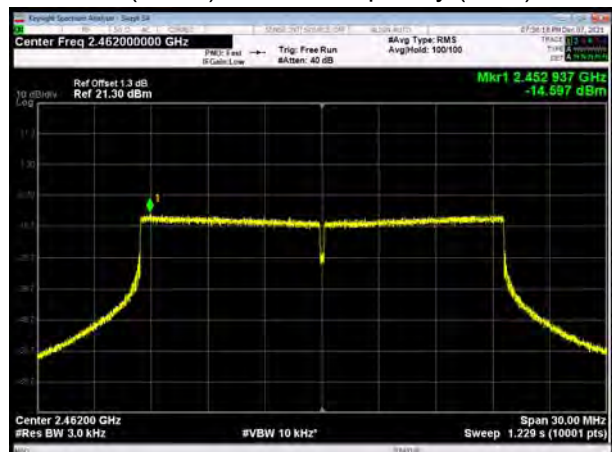
802.11ax(HE20), Carrier frequency (MHz): 2452



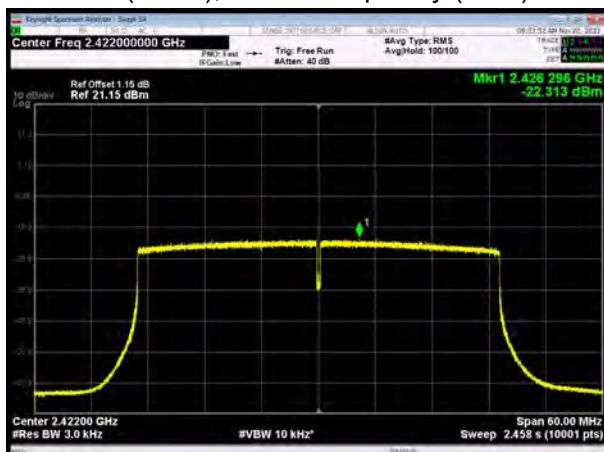
802.11ax(HE20), Carrier frequency (MHz): 2457



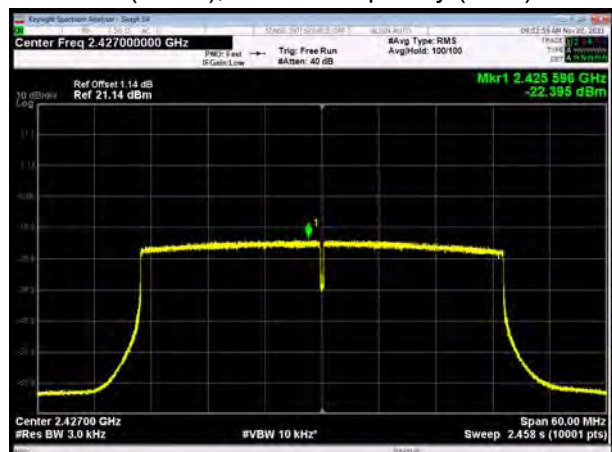
802.11ax(HE20), Carrier frequency (MHz): 2462



802.11ax(HE40), Carrier frequency (MHz): 2422

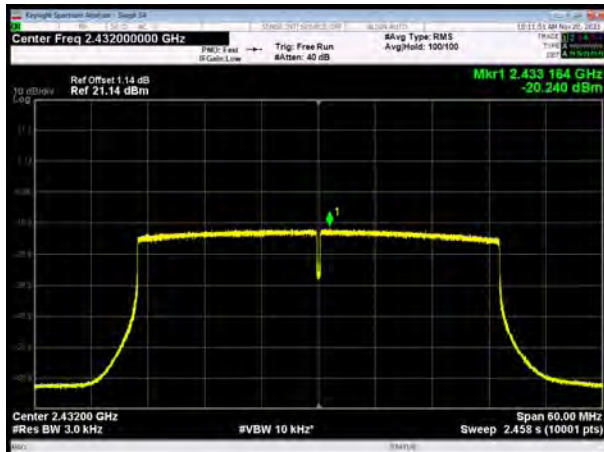


802.11ax(HE40), Carrier frequency (MHz): 2427

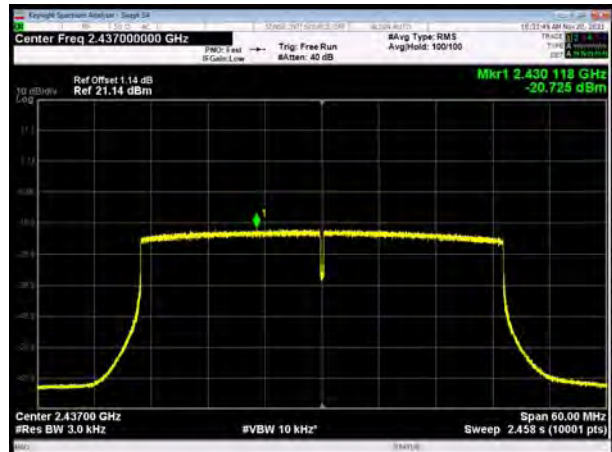




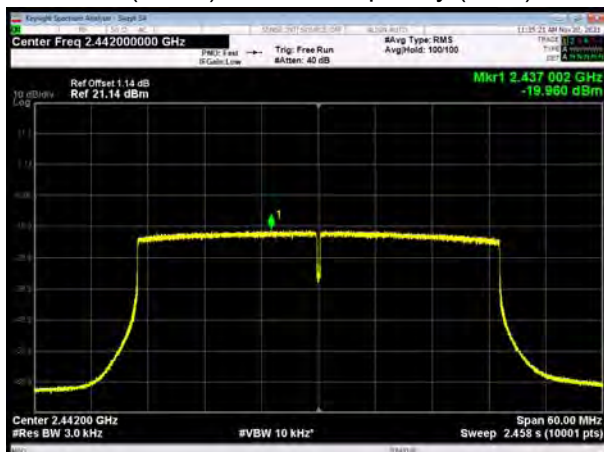
802.11ax(HE40), Carrier frequency (MHz):2432



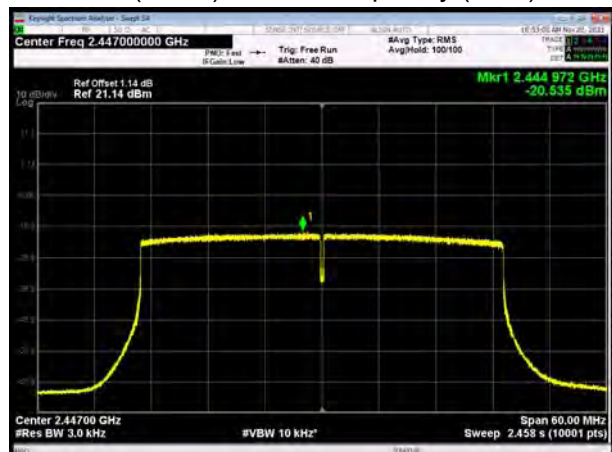
802.11ax(HE40), Carrier frequency (MHz):2437



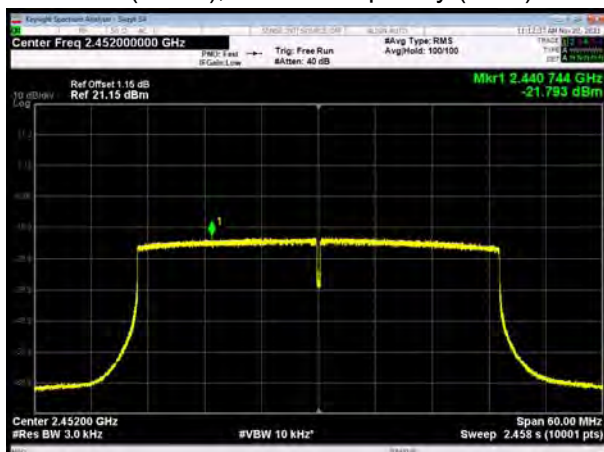
802.11ax(HE40), Carrier frequency (MHz):2442



802.11ax(HE40), Carrier frequency (MHz):2447



802.11ax(HE40), Carrier frequency (MHz):2452

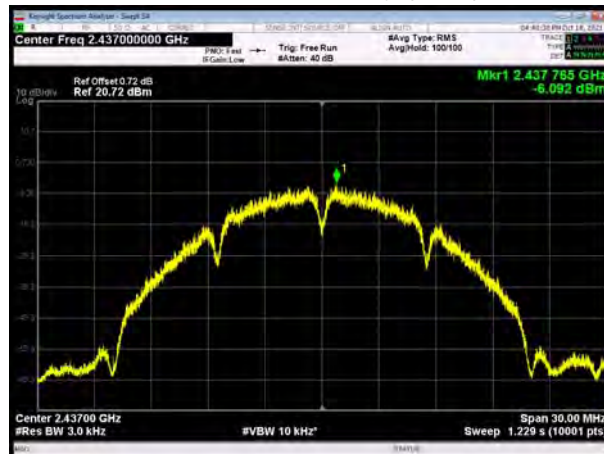


## MIMO Antenna 2

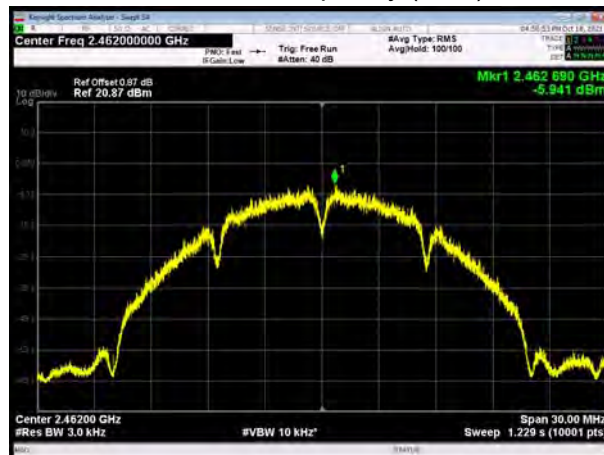
802.11b, Carrier frequency (MHz): 2412



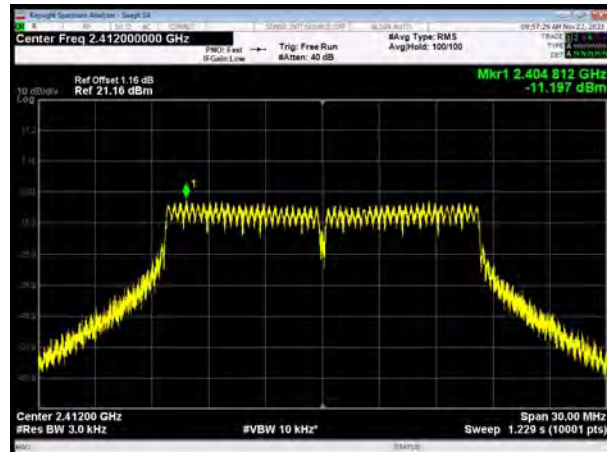
802.11b, Carrier frequency (MHz): 2437



802.11b, Carrier frequency (MHz): 2462



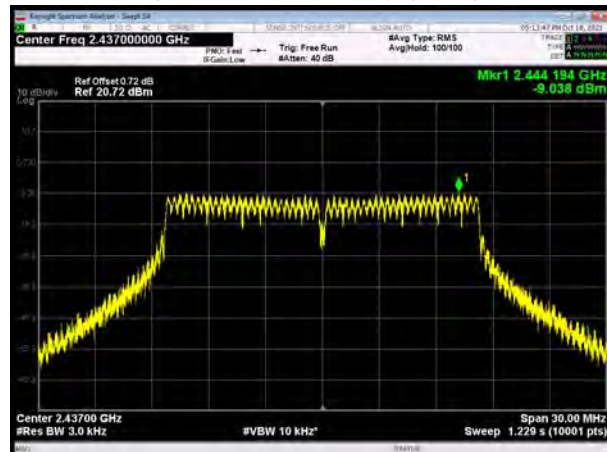
802.11g, Carrier frequency (MHz): 2412



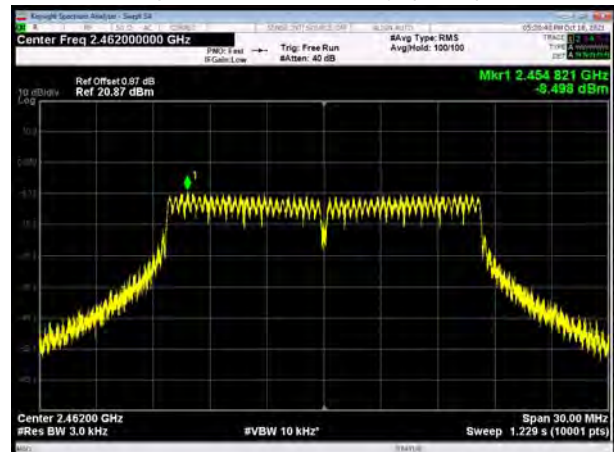
802.11g, Carrier frequency (MHz): 2417



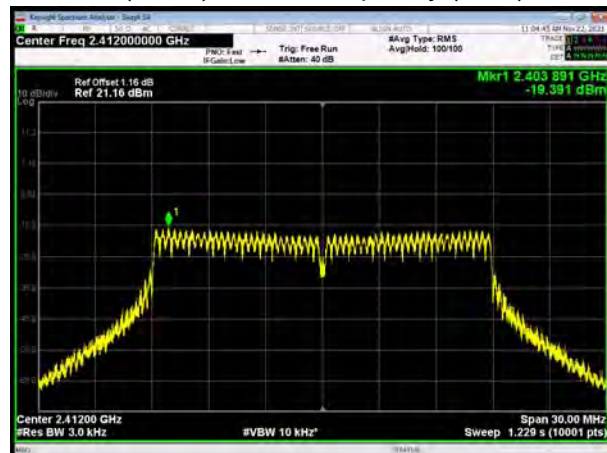
802.11g, Carrier frequency (MHz): 2437



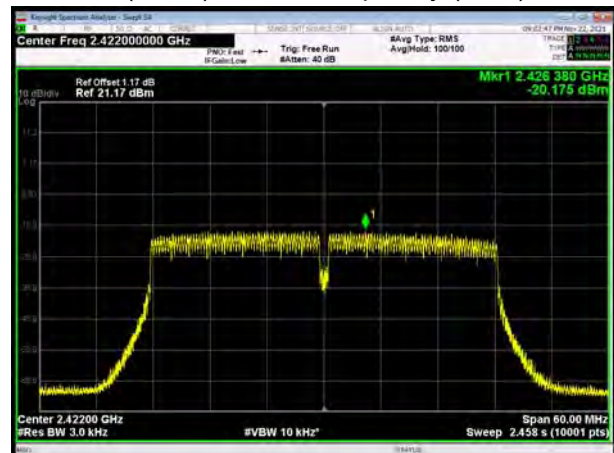
802.11g, Carrier frequency (MHz): 2462



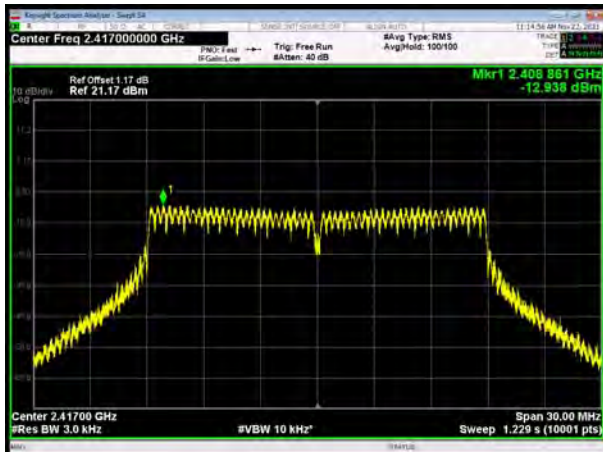
802.11n(HT20), Carrier frequency (MHz): 2412



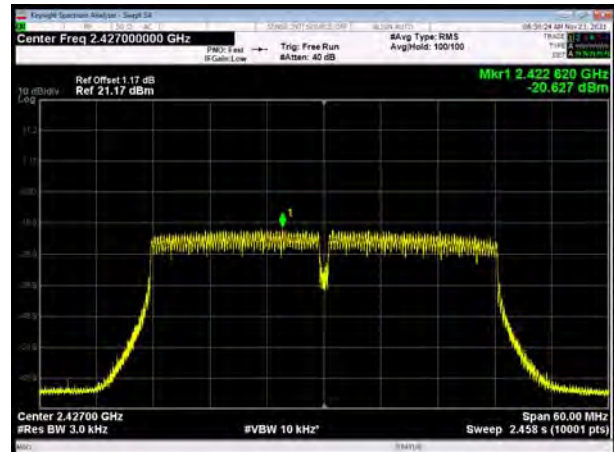
802.11n(HT40), Carrier frequency (MHz): 2422



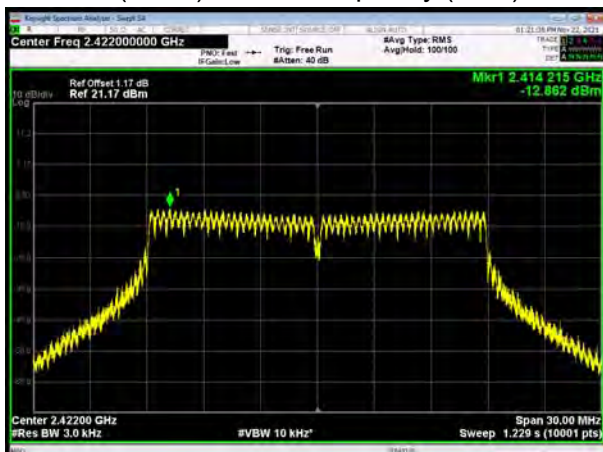
802.11n(HT20), Carrier frequency (MHz): 2417



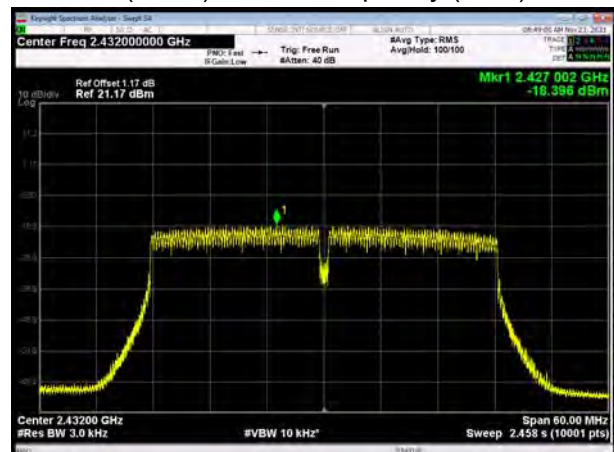
802.11n(HT40), Carrier frequency (MHz): 2427



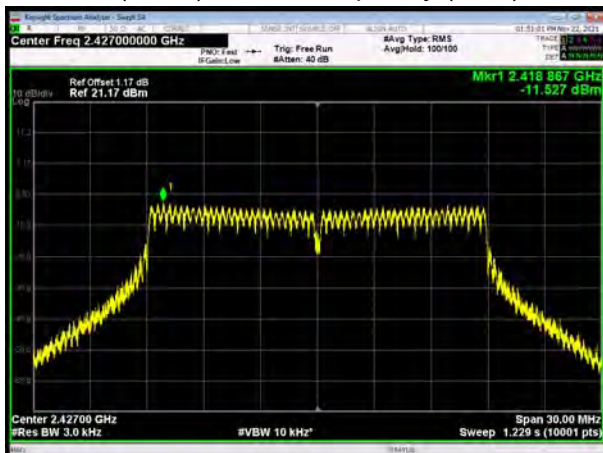
802.11n(HT20), Carrier frequency (MHz): 2422



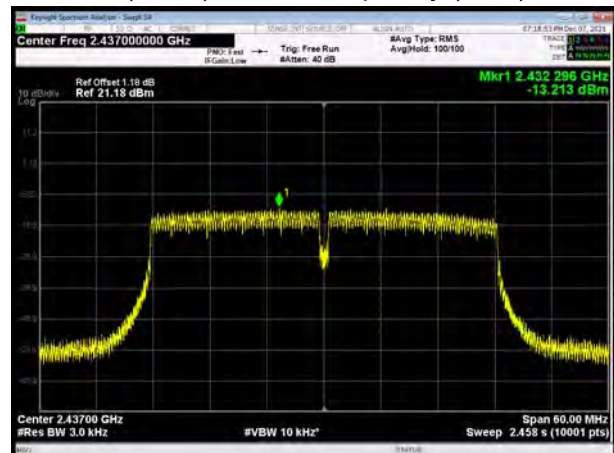
802.11n(HT40), Carrier frequency (MHz): 2432



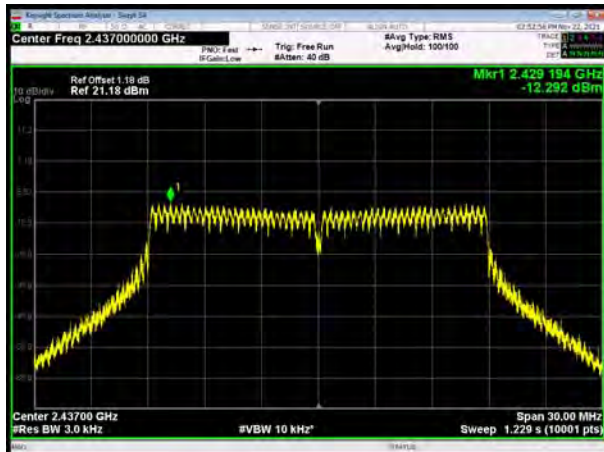
802.11n(HT20), Carrier frequency (MHz): 2427



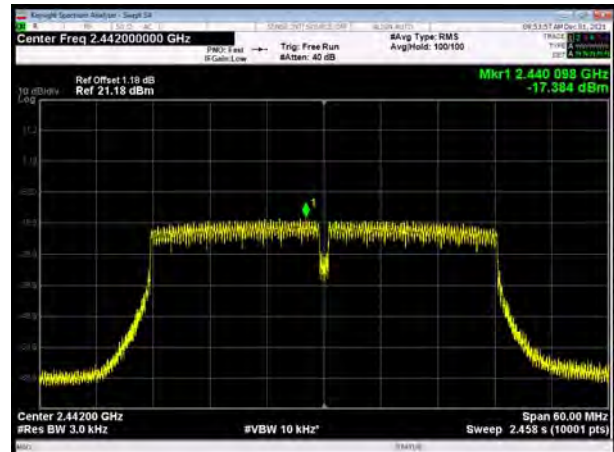
802.11n(HT40), Carrier frequency (MHz): 2437



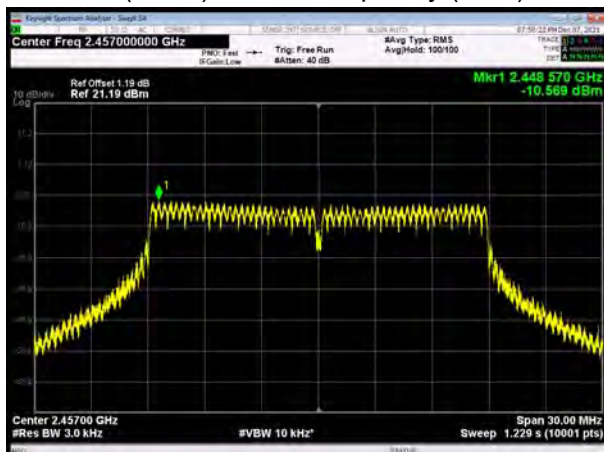
802.11n(HT20), Carrier frequency (MHz):2437



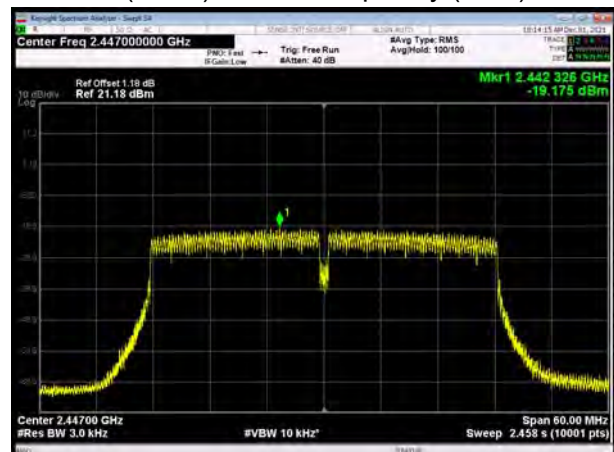
802.11n(HT40), Carrier frequency (MHz): 2442



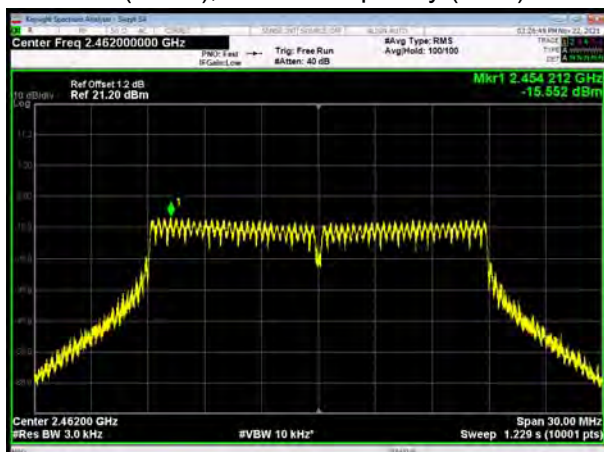
802.11n(HT20), Carrier frequency (MHz):2457



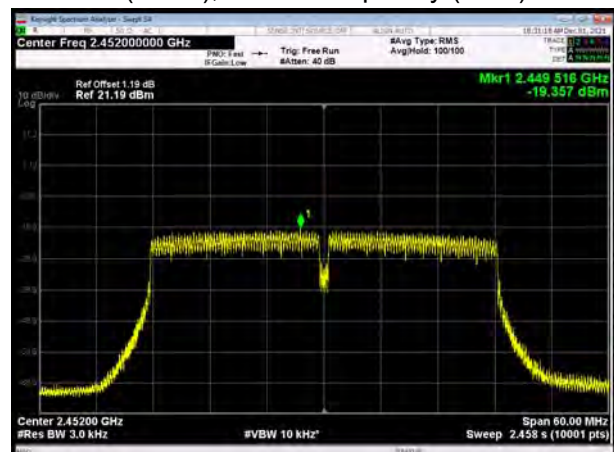
802.11n(HT40), Carrier frequency (MHz): 2447



802.11n(HT20), Carrier frequency (MHz):2462



802.11n(HT40), Carrier frequency (MHz): 2452



802.11ax(HE20), Carrier frequency (MHz): 2412



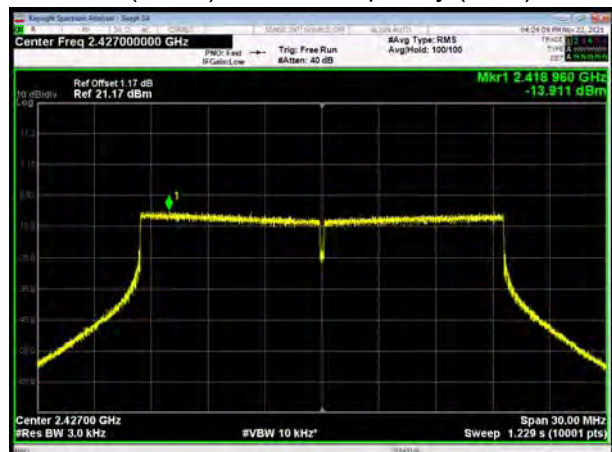
802.11ax(HE20), Carrier frequency (MHz): 2417



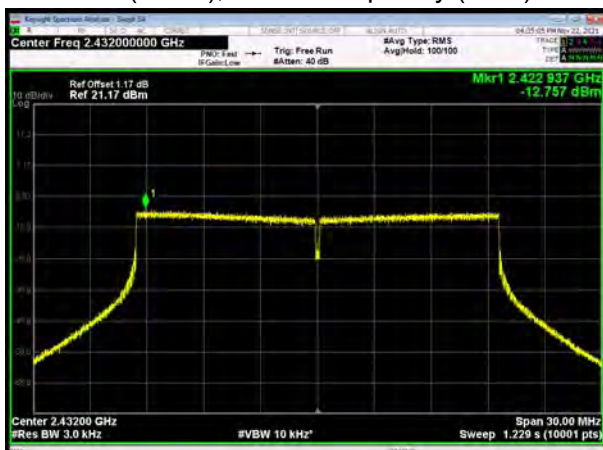
802.11ax(HE20), Carrier frequency (MHz): 2422



802.11ax(HE20), Carrier frequency (MHz): 2427



802.11ax(HE20), Carrier frequency (MHz):2432



802.11ax(HE20), Carrier frequency (MHz): 2437



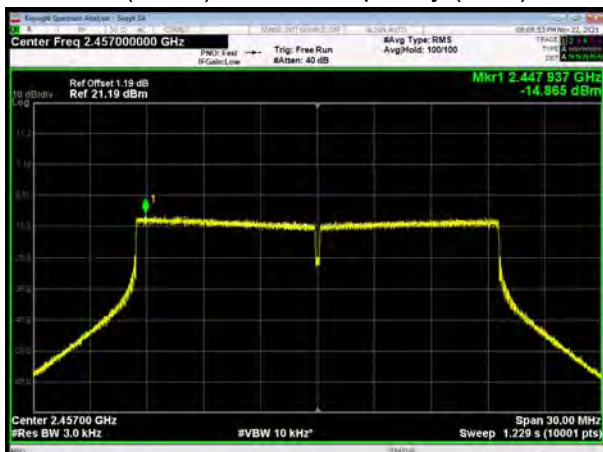
802.11ax(HE20), Carrier frequency (MHz): 2447



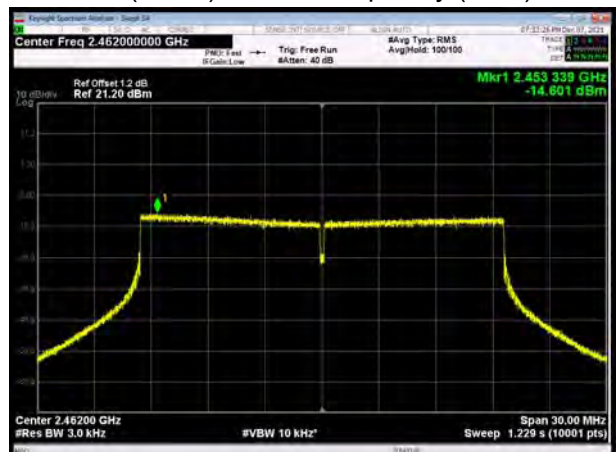
802.11ax(HE20), Carrier frequency (MHz): 2452



802.11ax(HE20), Carrier frequency (MHz): 2457



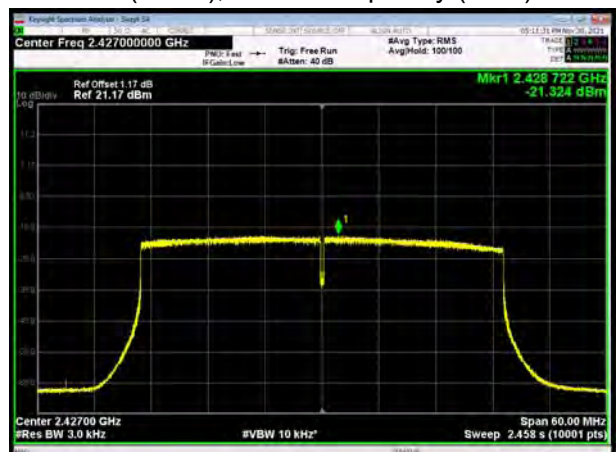
802.11ax(HE20), Carrier frequency (MHz): 2462



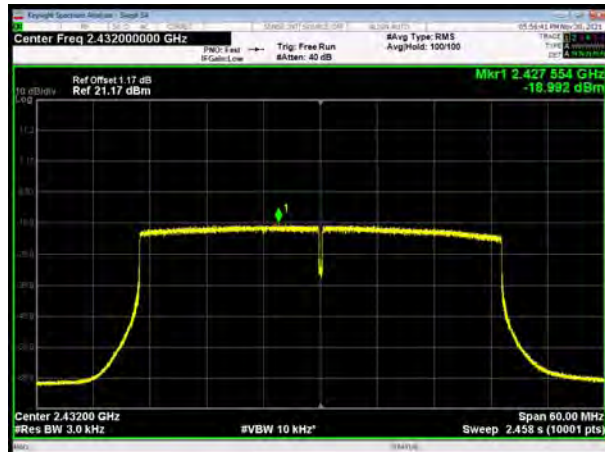
802.11ax(HE40), Carrier frequency (MHz): 2422



802.11ax(HE40), Carrier frequency (MHz): 2427



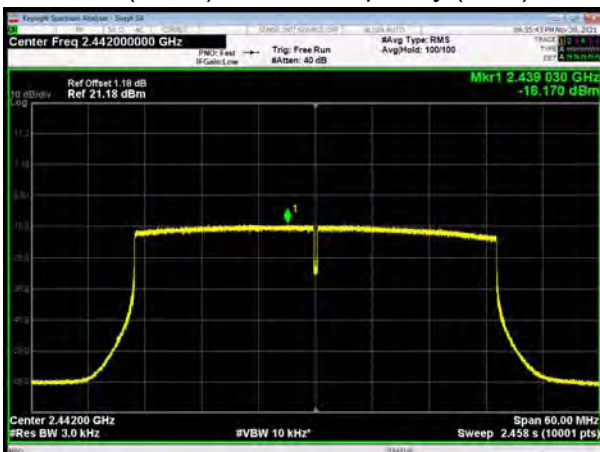
802.11ax(HE40), Carrier frequency (MHz): 2432



802.11ax(HE40), Carrier frequency (MHz): 2437



802.11ax(HE40), Carrier frequency (MHz):2442



802.11ax(HE40), Carrier frequency (MHz):2447



802.11ax(HE40), Carrier frequency (MHz):2452



## MIMO Antenna 3

802.11b, Carrier frequency (MHz): 2412



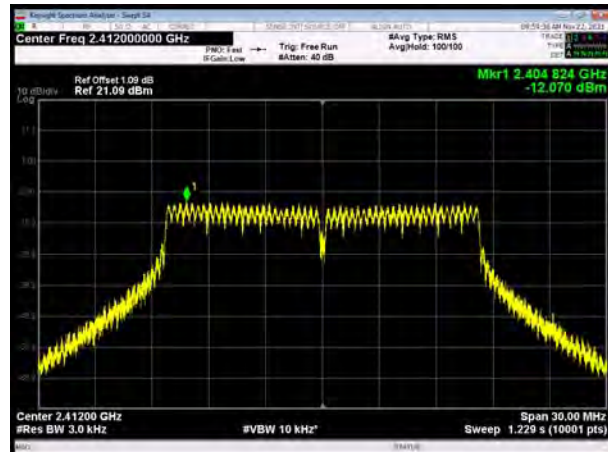
802.11b, Carrier frequency (MHz): 2437



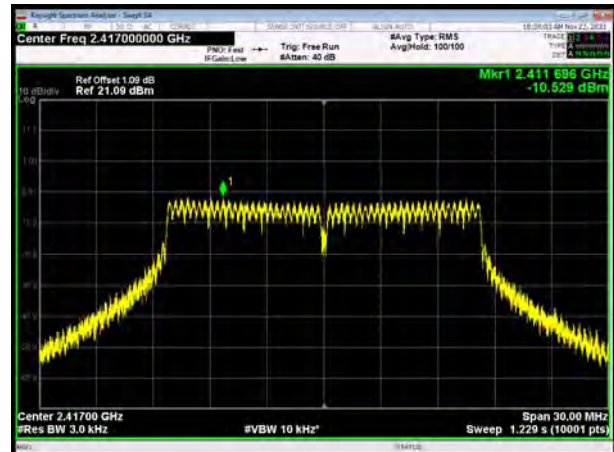
802.11b, Carrier frequency (MHz): 2462



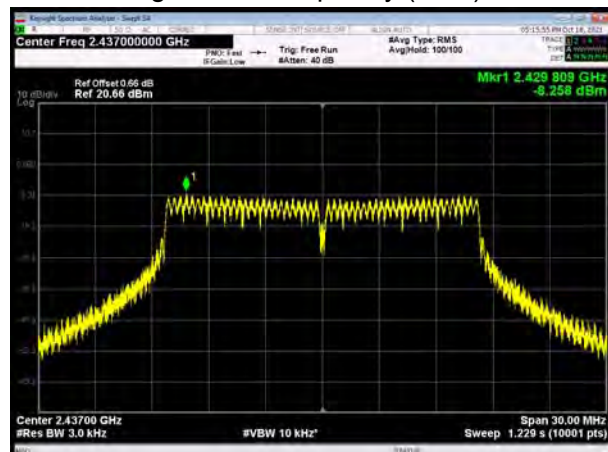
802.11g, Carrier frequency (MHz): 2412



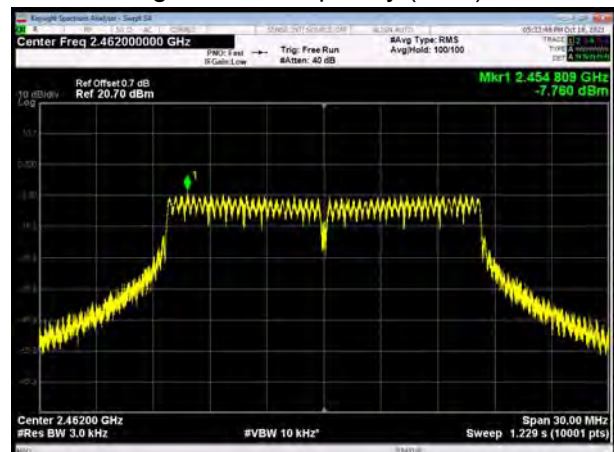
802.11g, Carrier frequency (MHz): 2417



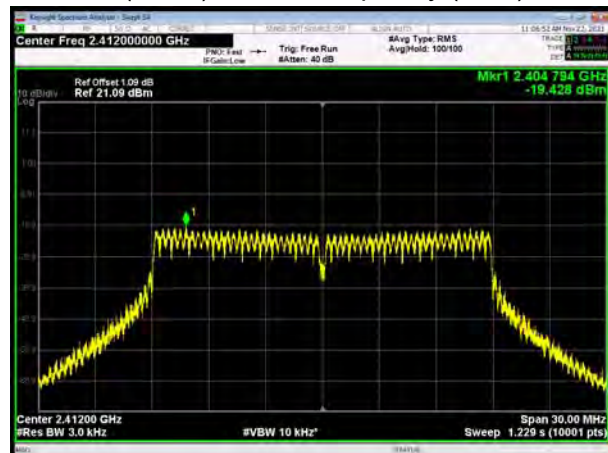
802.11g, Carrier frequency (MHz): 2437



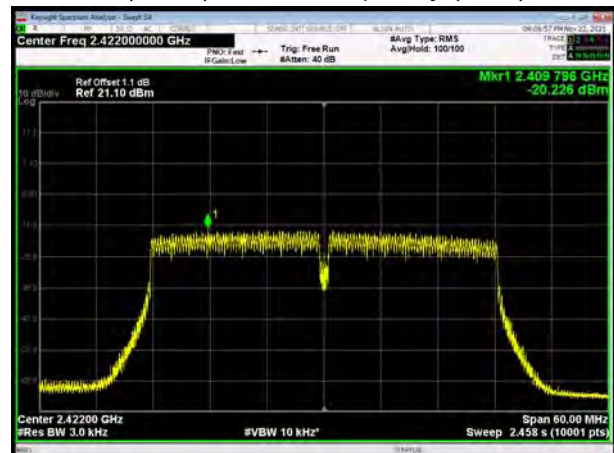
802.11g, Carrier frequency (MHz): 2462



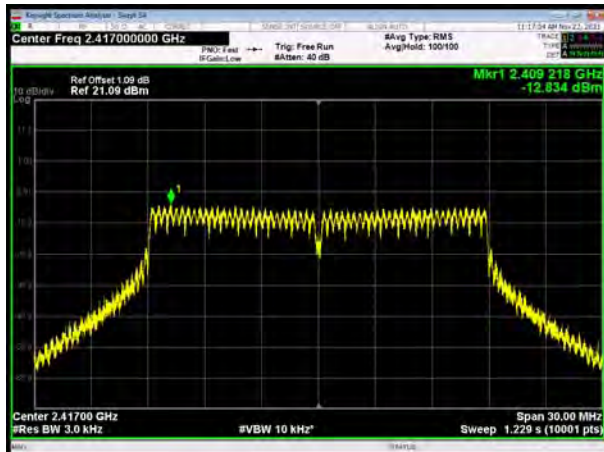
802.11n(HT20), Carrier frequency (MHz): 2412



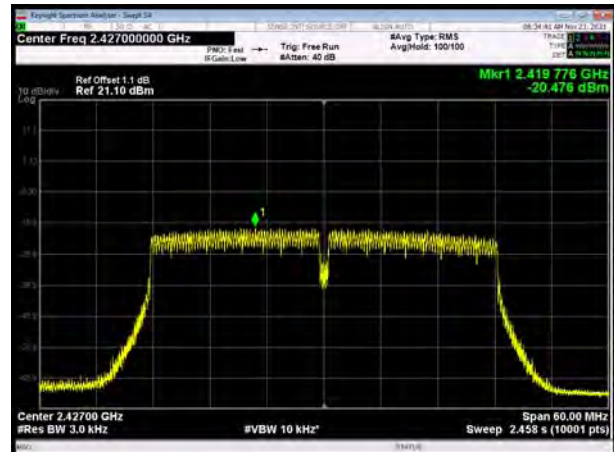
802.11n(HT40), Carrier frequency (MHz): 2422



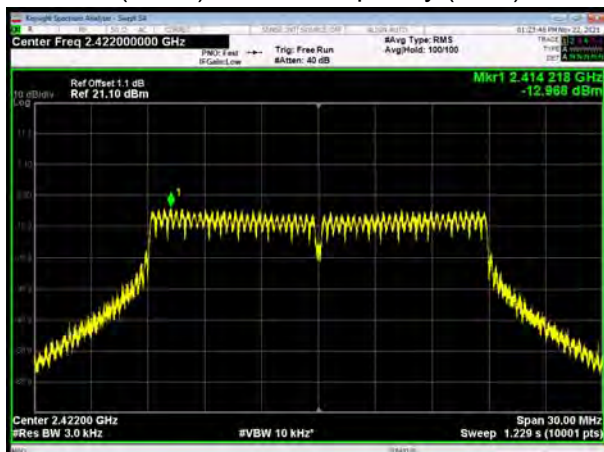
802.11n(HT20), Carrier frequency (MHz): 2417



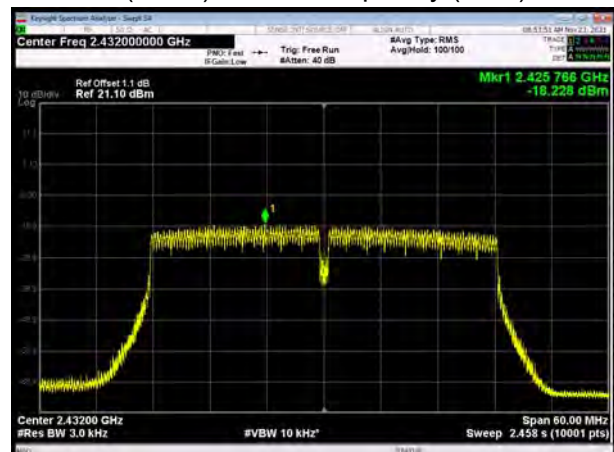
802.11n(HT40), Carrier frequency (MHz): 2427



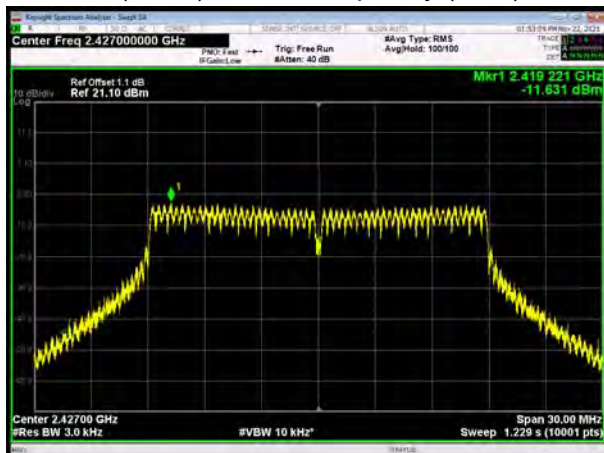
802.11n(HT20), Carrier frequency (MHz): 2422



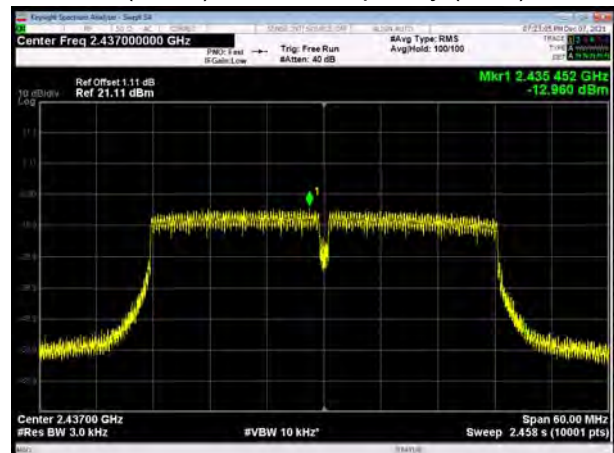
802.11n(HT40), Carrier frequency (MHz): 2432



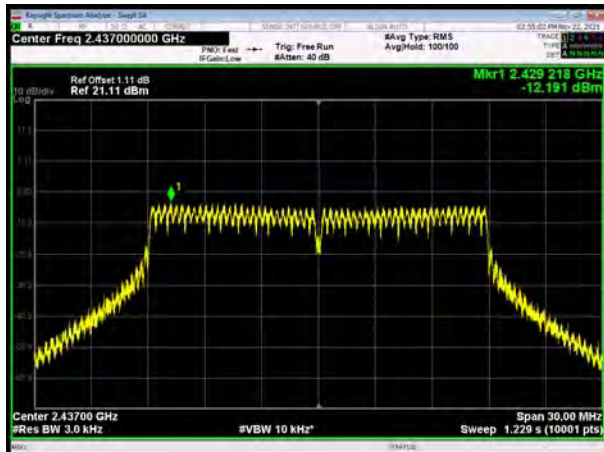
802.11n(HT20), Carrier frequency (MHz): 2427



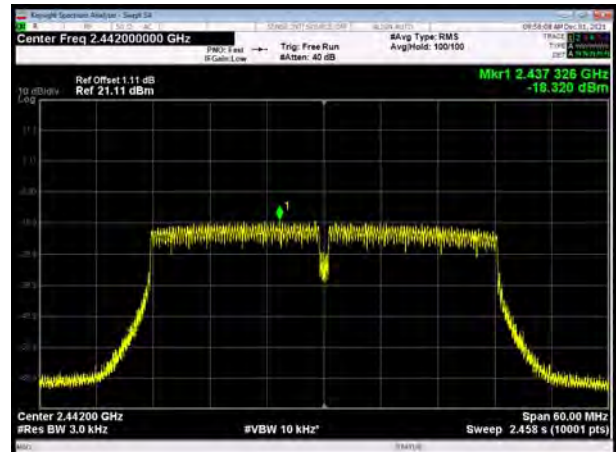
802.11n(HT40), Carrier frequency (MHz): 2437



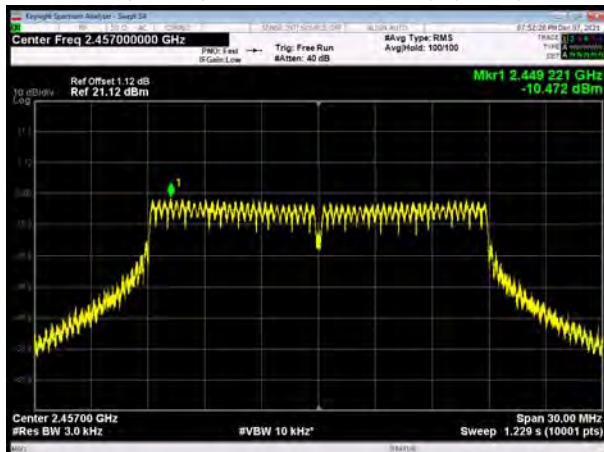
802.11n(HT20), Carrier frequency (MHz):2437



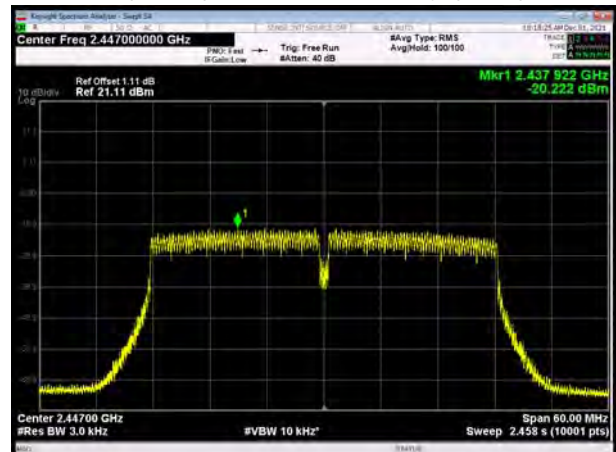
802.11n(HT40), Carrier frequency (MHz): 2442



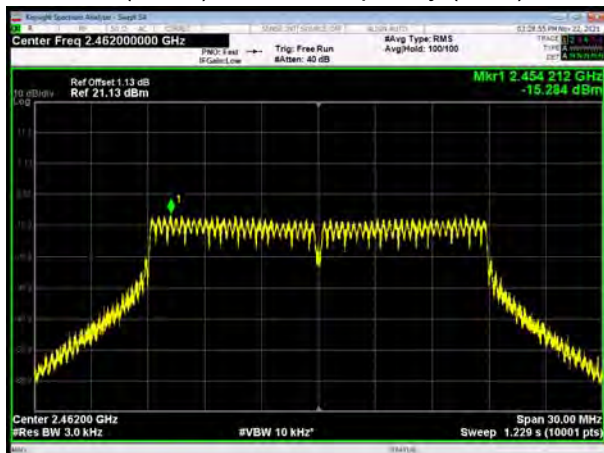
802.11n(HT20), Carrier frequency (MHz):2457



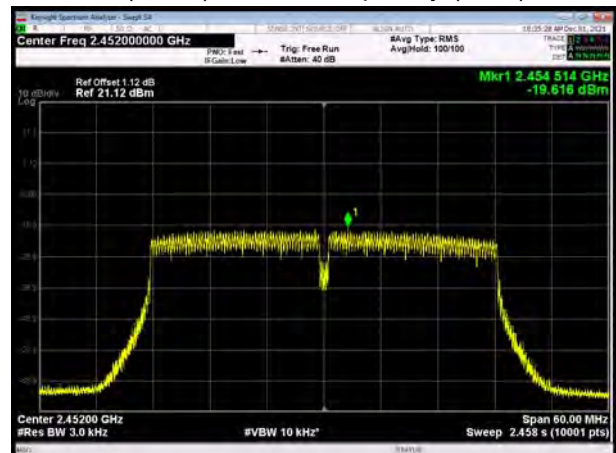
802.11n(HT40), Carrier frequency (MHz): 2447



802.11n(HT20), Carrier frequency (MHz):2462



802.11n(HT40), Carrier frequency (MHz): 2452



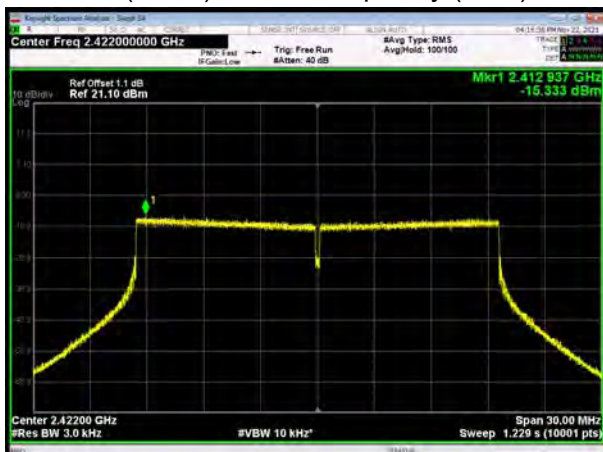
802.11ax(HE20), Carrier frequency (MHz): 2412



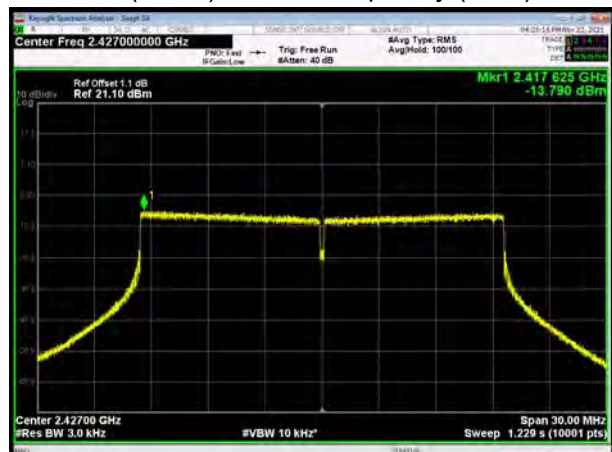
802.11ax(HE20), Carrier frequency (MHz): 2417



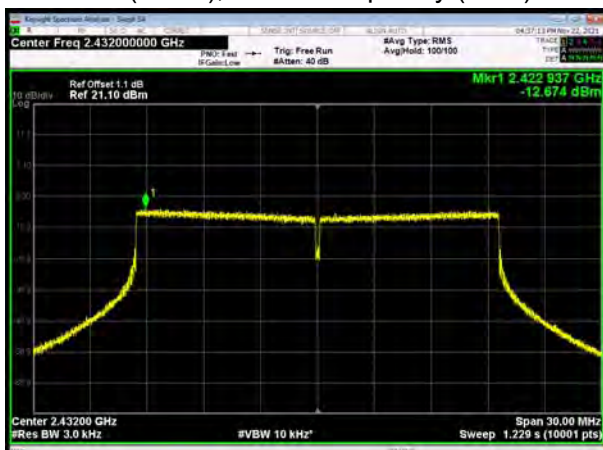
802.11ax(HE20), Carrier frequency (MHz): 2422



802.11ax(HE20), Carrier frequency (MHz): 2427



802.11ax(HE20), Carrier frequency (MHz):2432



802.11ax(HE20), Carrier frequency (MHz): 2437



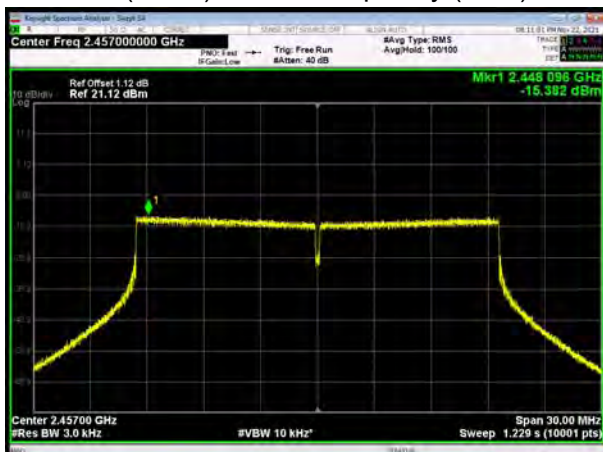
802.11ax(HE20), Carrier frequency (MHz): 2447



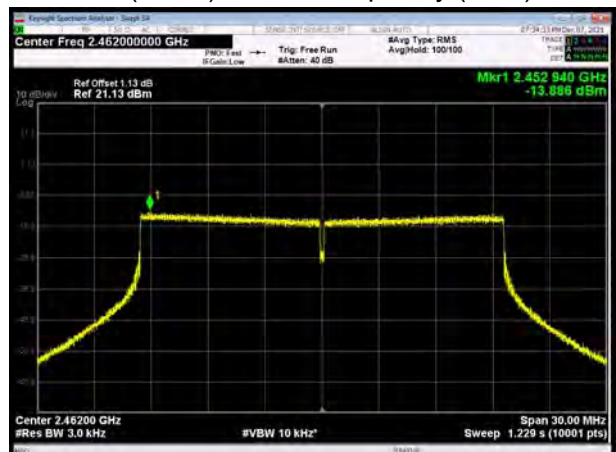
802.11ax(HE20), Carrier frequency (MHz): 2452



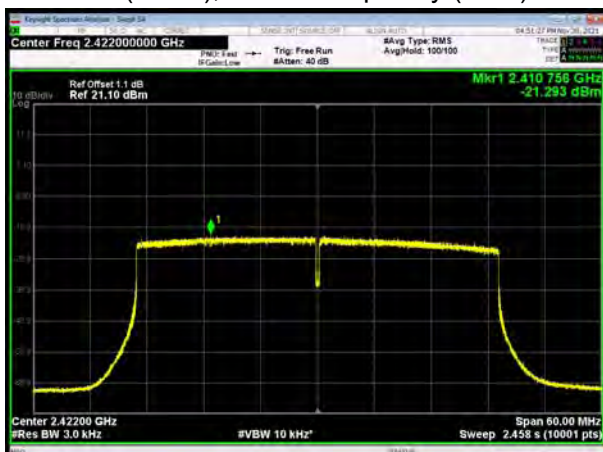
802.11ax(HE20), Carrier frequency (MHz): 2457



802.11ax(HE20), Carrier frequency (MHz): 2462



802.11ax(HE40), Carrier frequency (MHz): 2422



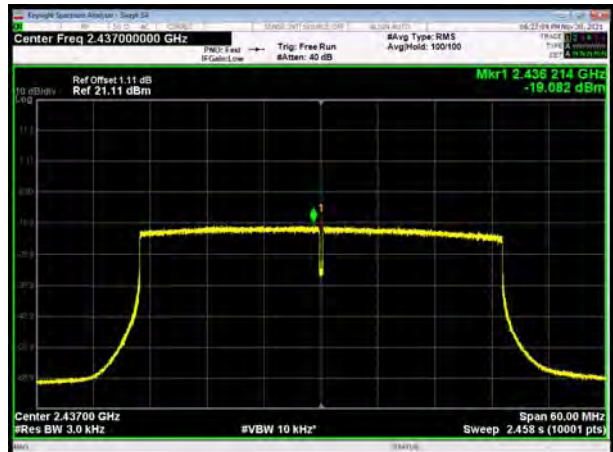
802.11ax(HE40), Carrier frequency (MHz): 2427



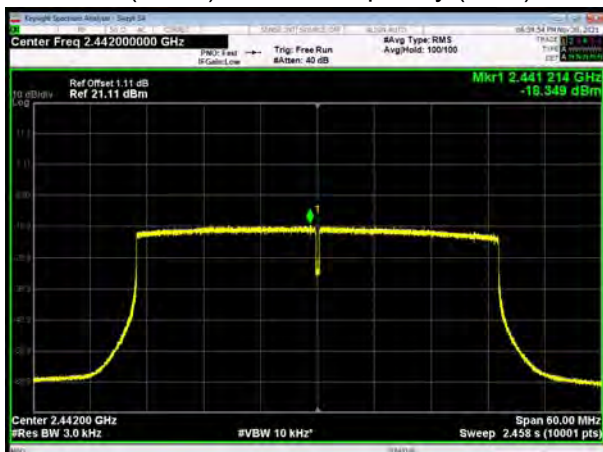
802.11ax(HE40), Carrier frequency (MHz):2432



802.11ax(HE40), Carrier frequency (MHz):2437



802.11ax(HE40), Carrier frequency (MHz):2442



802.11ax(HE40), Carrier frequency (MHz):2447



802.11ax(HE40), Carrier frequency (MHz):2452



## MIMO Antenna 4

802.11b, Carrier frequency (MHz): 2412



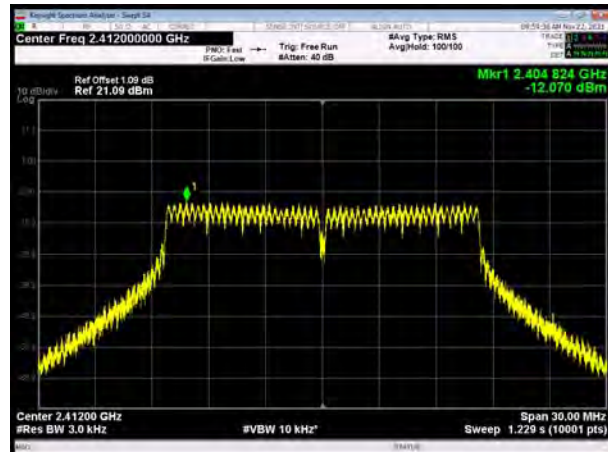
802.11b, Carrier frequency (MHz): 2437



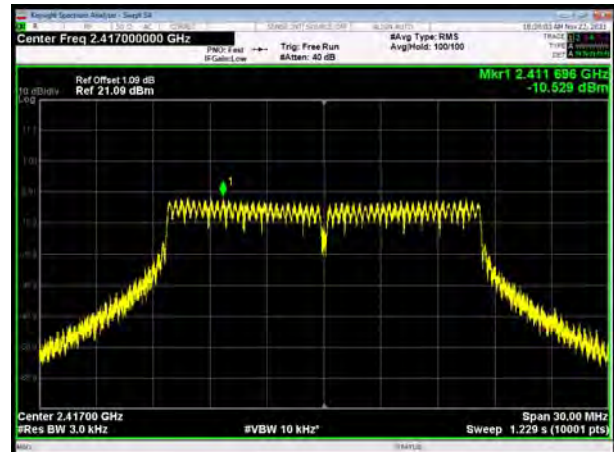
802.11b, Carrier frequency (MHz): 2462



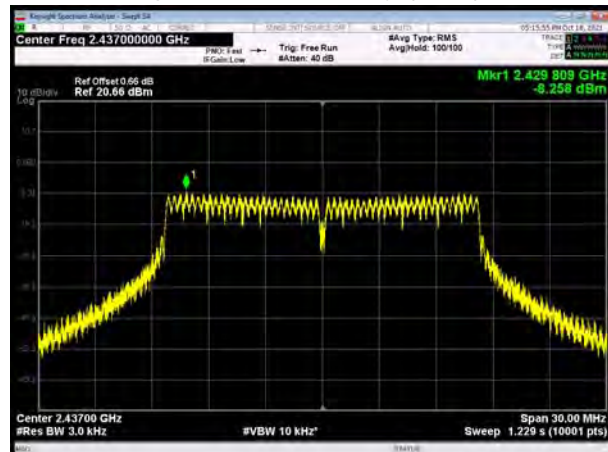
802.11g, Carrier frequency (MHz): 2412



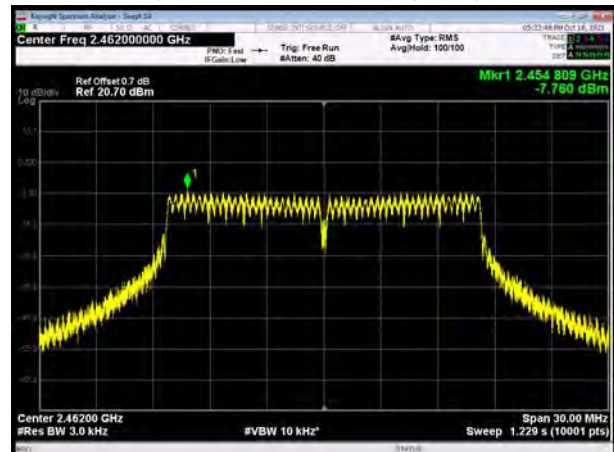
802.11g, Carrier frequency (MHz): 2417



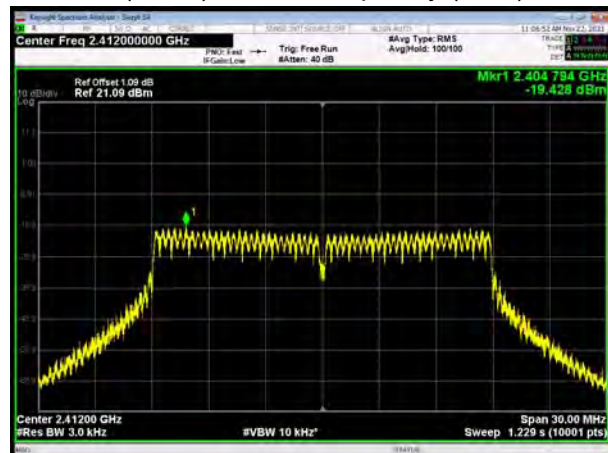
802.11g, Carrier frequency (MHz): 2437



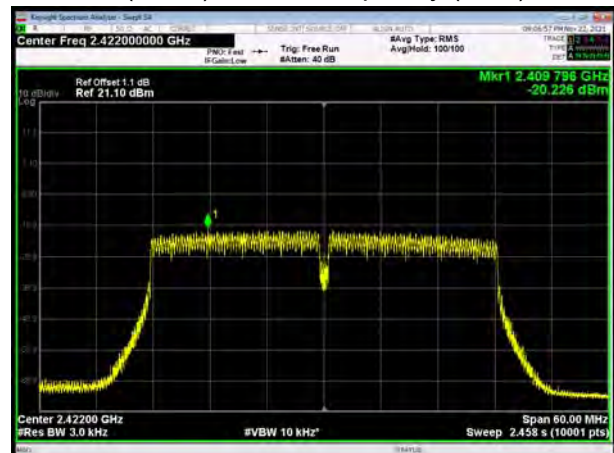
802.11g, Carrier frequency (MHz): 2462



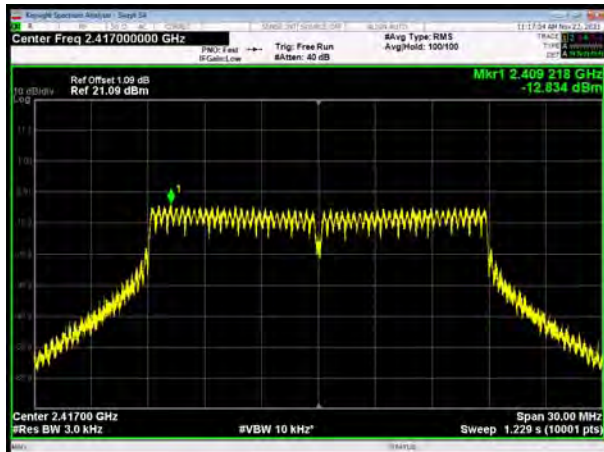
802.11n(HT20), Carrier frequency (MHz): 2412



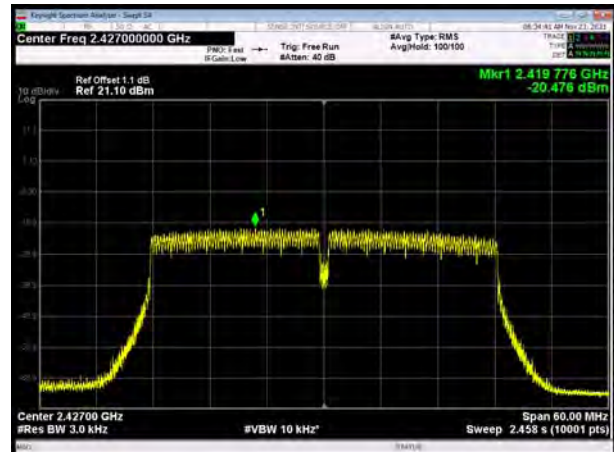
802.11n(HT40), Carrier frequency (MHz): 2422



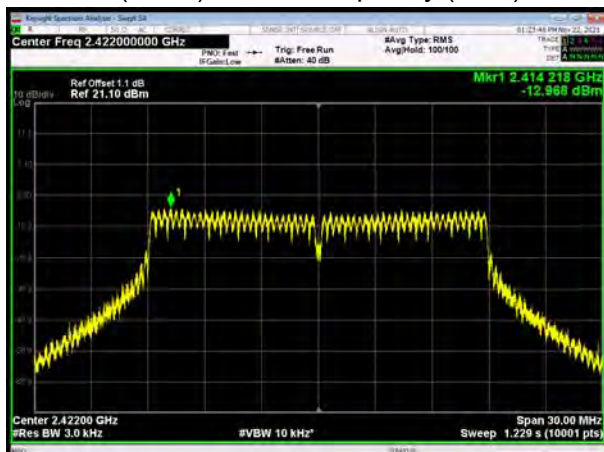
802.11n(HT20), Carrier frequency (MHz): 2417



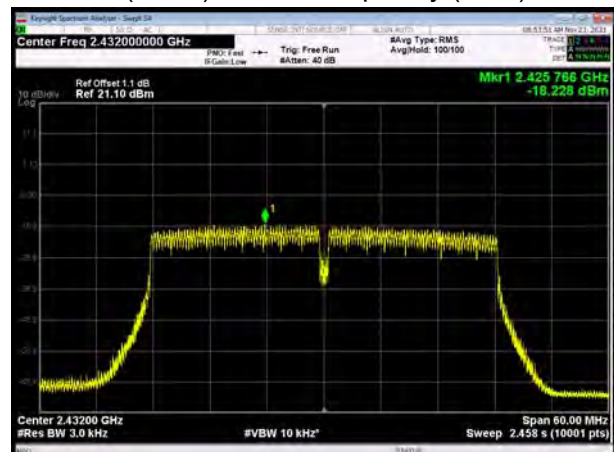
802.11n(HT40), Carrier frequency (MHz): 2427



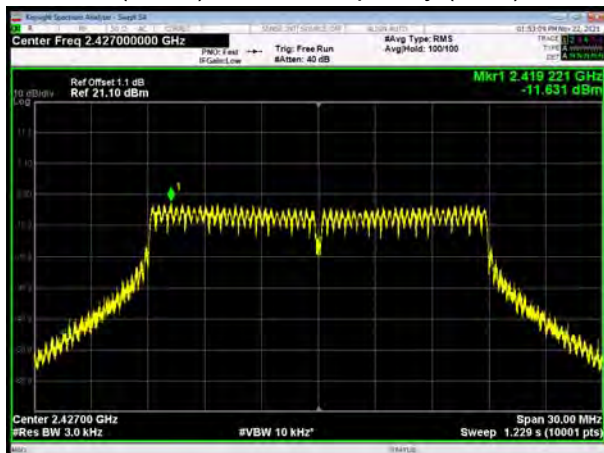
802.11n(HT20), Carrier frequency (MHz): 2422



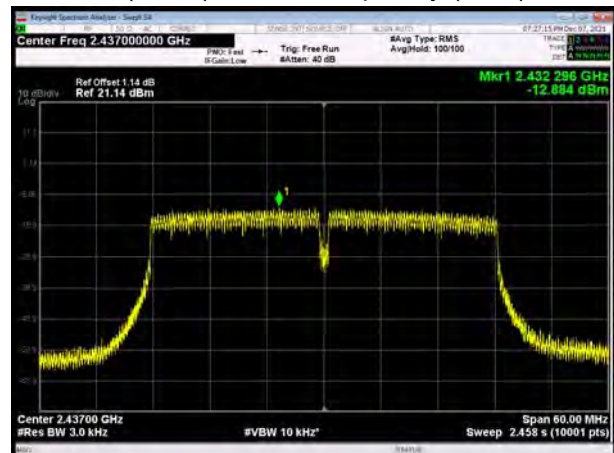
802.11n(HT40), Carrier frequency (MHz): 2432



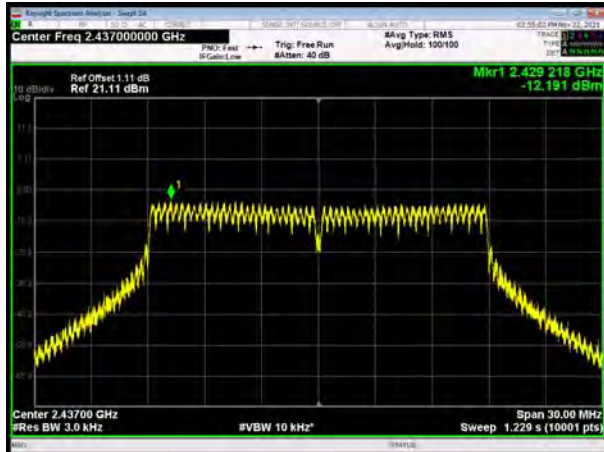
802.11n(HT20), Carrier frequency (MHz): 2427



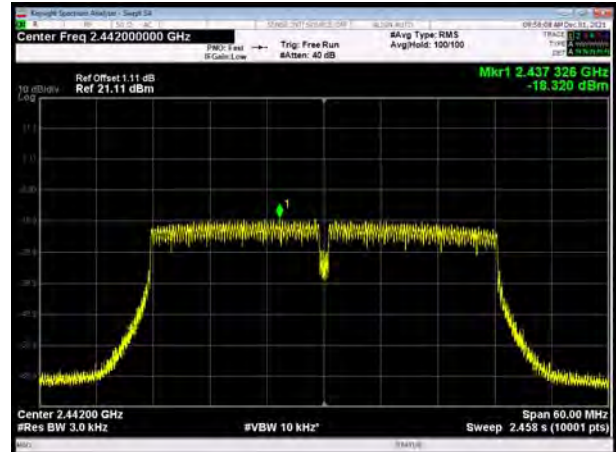
802.11n(HT40), Carrier frequency (MHz): 2437



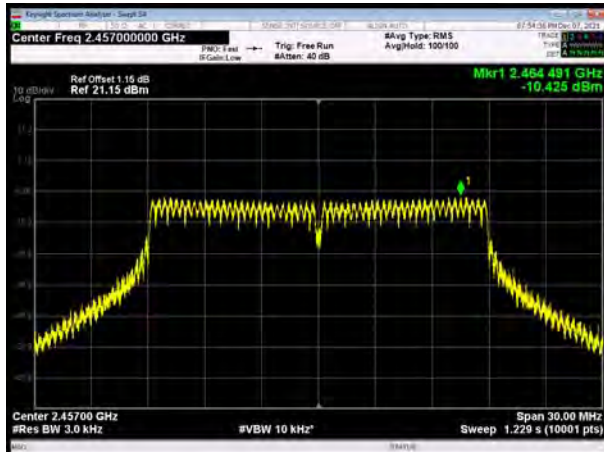
802.11n(HT20), Carrier frequency (MHz):2437



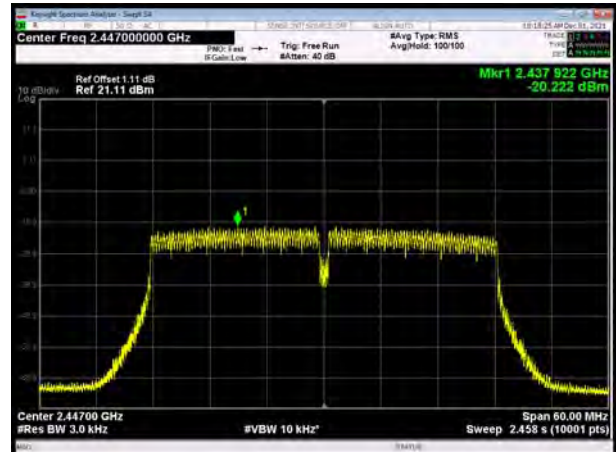
802.11n(HT40), Carrier frequency (MHz): 2442



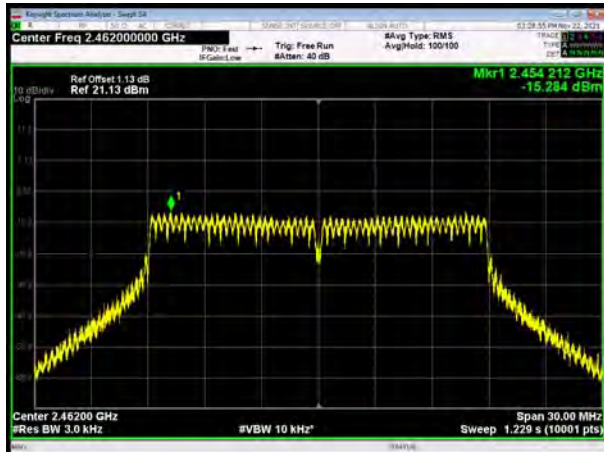
802.11n(HT20), Carrier frequency (MHz):2457



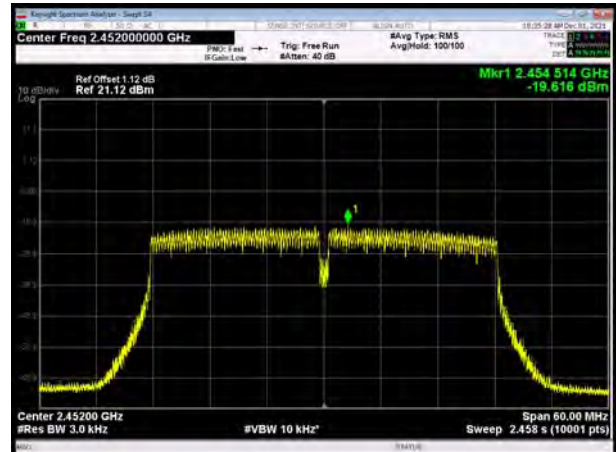
802.11n(HT40), Carrier frequency (MHz): 2447



802.11n(HT20), Carrier frequency (MHz):2462



802.11n(HT40), Carrier frequency (MHz): 2452



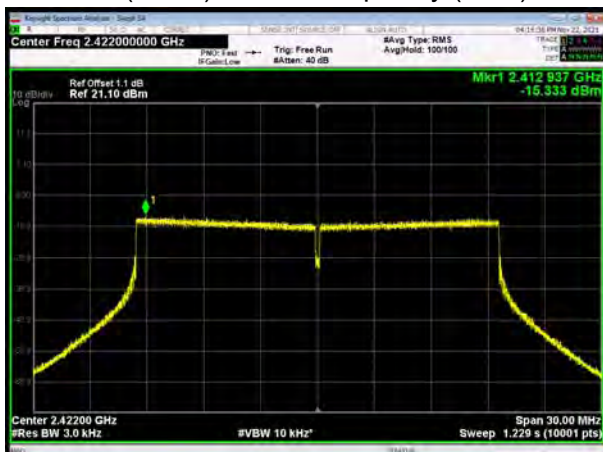
802.11ax(HE20), Carrier frequency (MHz): 2412



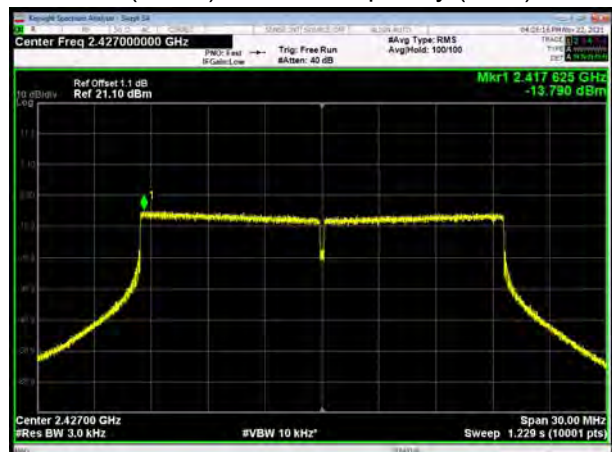
802.11ax(HE20), Carrier frequency (MHz): 2417



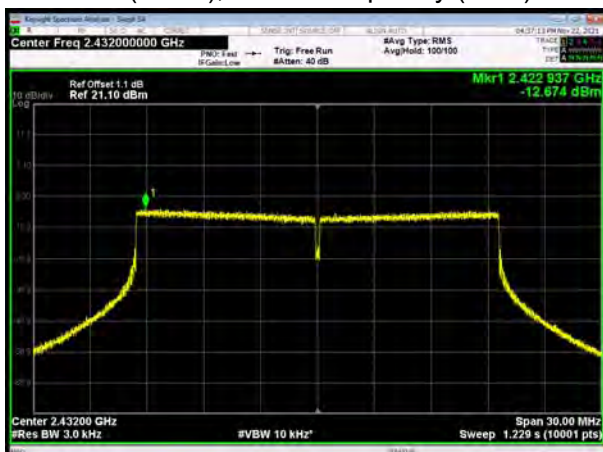
802.11ax(HE20), Carrier frequency (MHz): 2422



802.11ax(HE20), Carrier frequency (MHz): 2427



802.11ax(HE20), Carrier frequency (MHz):2432



802.11ax(HE20), Carrier frequency (MHz): 2437



802.11ax(HE20), Carrier frequency (MHz): 2447



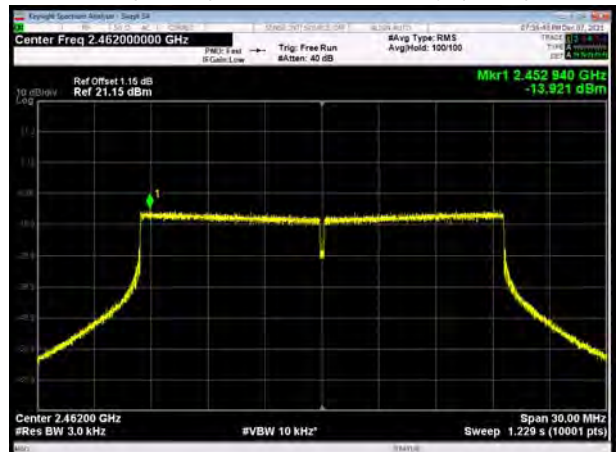
802.11ax(HE20), Carrier frequency (MHz): 2452



802.11ax(HE20), Carrier frequency (MHz): 2457



802.11ax(HE20), Carrier frequency (MHz): 2462



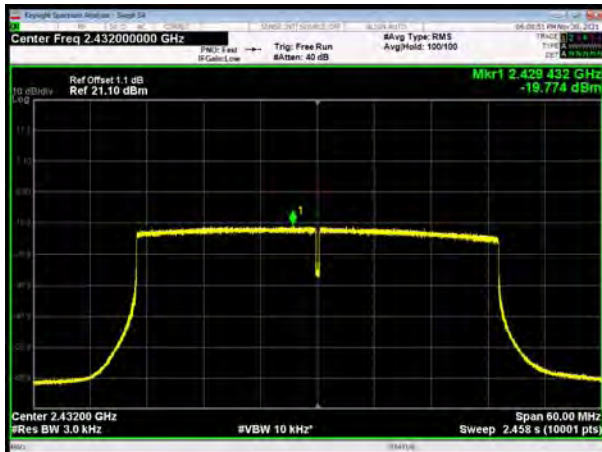
802.11ax(HE40), Carrier frequency (MHz): 2422



802.11ax(HE40), Carrier frequency (MHz): 2427



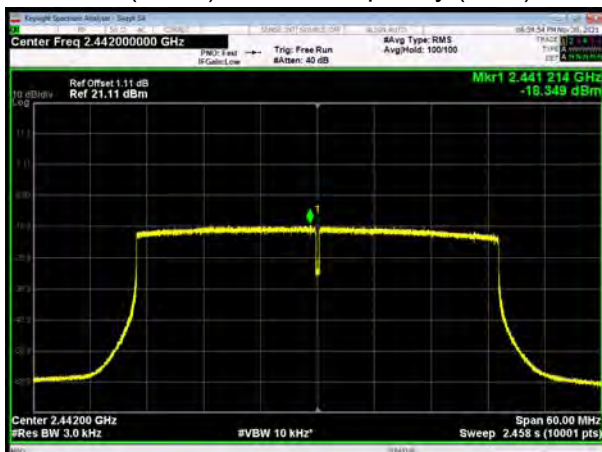
802.11ax(HE40), Carrier frequency (MHz): 2432



802.11ax(HE40), Carrier frequency (MHz): 2437



802.11ax(HE40), Carrier frequency (MHz): 2442



802.11ax(HE40), Carrier frequency (MHz): 2447



802.11ax(HE40), Carrier frequency (MHz): 2452



## 5.5. Spurious RF Conducted Emissions

### Ambient condition

| Temperature | Relative humidity | Pressure |
|-------------|-------------------|----------|
| 23°C ~25°C  | 45%~50%           | 101.5kPa |

### Method of Measurement

The EUT was connected to the spectrum analyzer with a known loss. The spectrum analyzer scans from 30MHz to the 10th harmonic of the carrier. The peak detector is used. Set RBW to 100 kHz and VBW to 300 kHz, Sweep is set to ATUO.

The test is in transmitting mode.

### Test setup



### Limits

Rule Part 15.247(d) pacifies that “In any 100 kHz bandwidth outside the frequency band in 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. ”

| Test Mode       | Carrier frequency (MHz) | Reference value (dBm) | Limit  |
|-----------------|-------------------------|-----------------------|--------|
| 802.11b         | 2412                    | 17.08                 | -12.92 |
|                 | 2437                    | 15.26                 | -14.74 |
|                 | 2462                    | 15.23                 | -14.77 |
| 802.11g         | 2412                    | 12.36                 | -17.64 |
|                 | 2417                    | 10.76                 | -19.24 |
|                 | 2422                    | 12.32                 | -17.68 |
|                 | 2437                    | 12.93                 | -17.07 |
|                 | 2457                    | 12.26                 | -17.74 |
|                 | 2462                    | 10.72                 | -19.28 |
| 802.11n<br>HT20 | 2412                    | 2.94                  | -27.06 |
|                 | 2417                    | 7.49                  | -22.51 |



|                  |      |       |        |
|------------------|------|-------|--------|
|                  | 2422 | 9.36  | -20.64 |
|                  | 2427 | 10.07 | -19.93 |
|                  | 2432 | 11.33 | -18.67 |
|                  | 2437 | 9.57  | -20.43 |
|                  | 2457 | 10.23 | -19.77 |
|                  | 2462 | 5.74  | -24.26 |
| 802.11n<br>HT40  | 2422 | 0.18  | -29.82 |
|                  | 2427 | 2.58  | -27.42 |
|                  | 2432 | 3.08  | -26.92 |
|                  | 2437 | 6.16  | -23.84 |
|                  | 2442 | 6.36  | -23.64 |
|                  | 2447 | 4.25  | -25.75 |
|                  | 2452 | 3.59  | -26.41 |
| 802.11ax<br>HE20 | 2412 | 4.09  | -25.91 |
|                  | 2417 | 7.26  | -22.74 |
|                  | 2422 | 7.02  | -22.98 |
|                  | 2427 | 6.67  | -23.33 |
|                  | 2432 | 11.57 | -18.43 |
|                  | 2437 | 9.45  | -20.55 |
|                  | 2447 | 12.32 | -17.68 |
|                  | 2452 | 13.14 | -16.86 |
|                  | 2457 | 12.55 | -17.45 |
|                  | 2462 | 8.22  | -21.78 |
| 802.11ax<br>HE40 | 2422 | 1.27  | -28.73 |
|                  | 2427 | 3.34  | -26.66 |
|                  | 2432 | 1.11  | -28.89 |
|                  | 2437 | 6.21  | -23.79 |
|                  | 2442 | 7.35  | -22.65 |
|                  | 2447 | 5.17  | -24.83 |
|                  | 2452 | 5.23  | -24.77 |

### Measurement Uncertainty

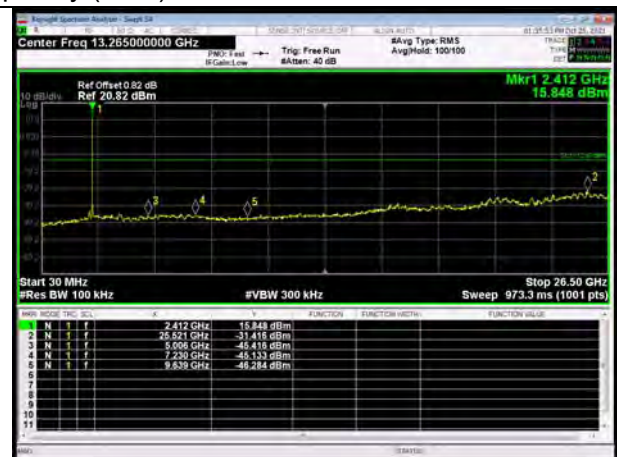
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor  $k = 1.96$ .

| Frequency   | Uncertainty |
|-------------|-------------|
| 100kHz-2GHz | 0.684 dB    |
| 2GHz-26GHz  | 1.407 dB    |

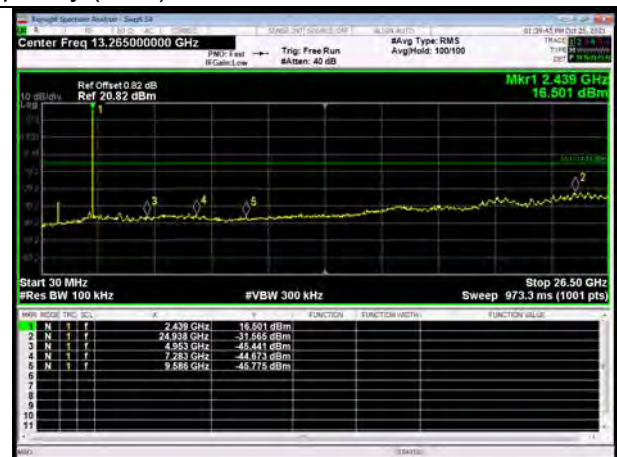


## Test Results:

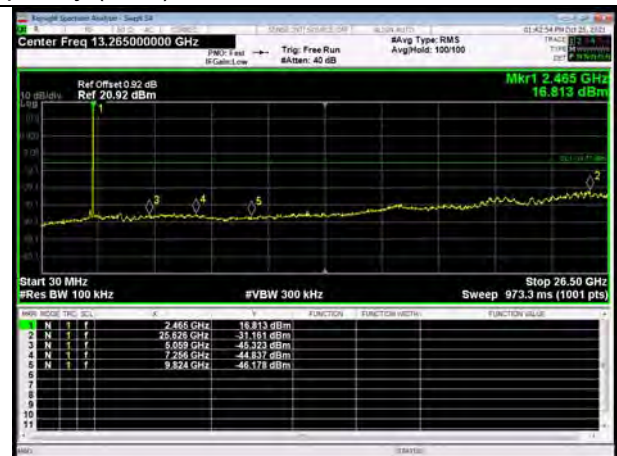
802.11b, Carrier frequency (MHz): 2412



802.11b, Carrier frequency (MHz): 2437

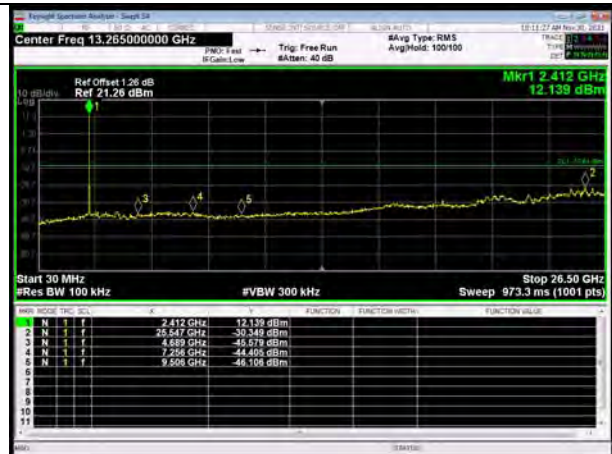


802.11b, Carrier frequency (MHz): 2462

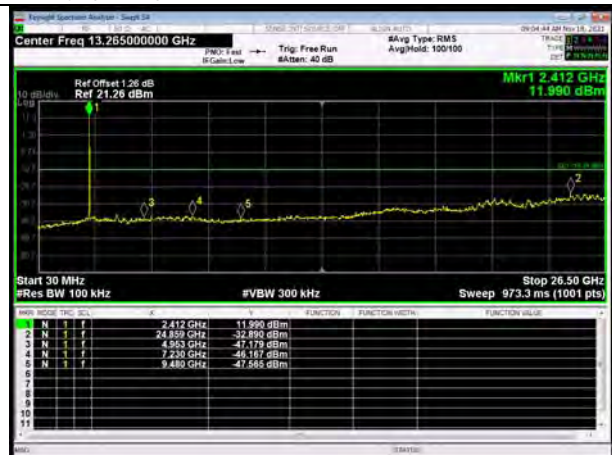




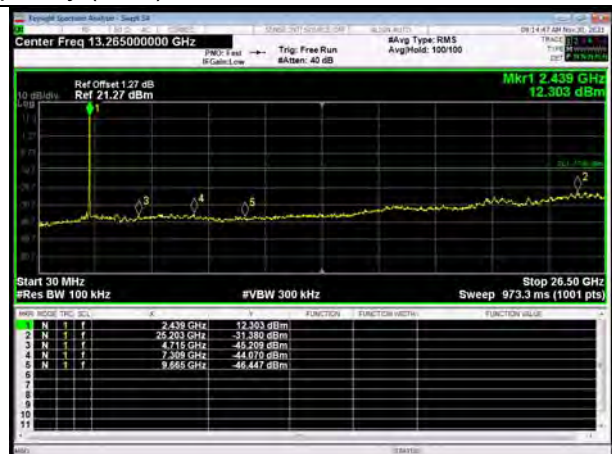
## 802.11g, Carrier frequency (MHz): 2412



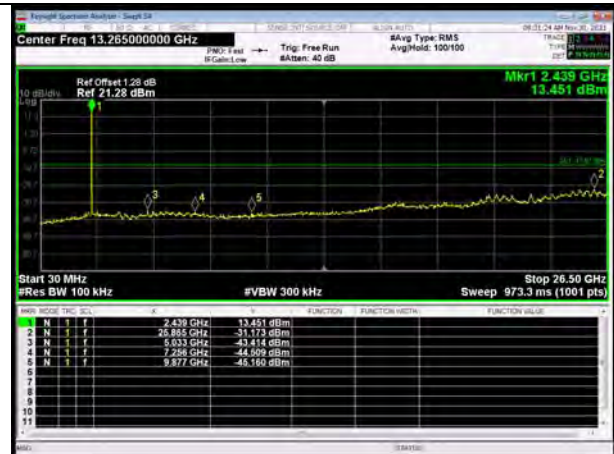
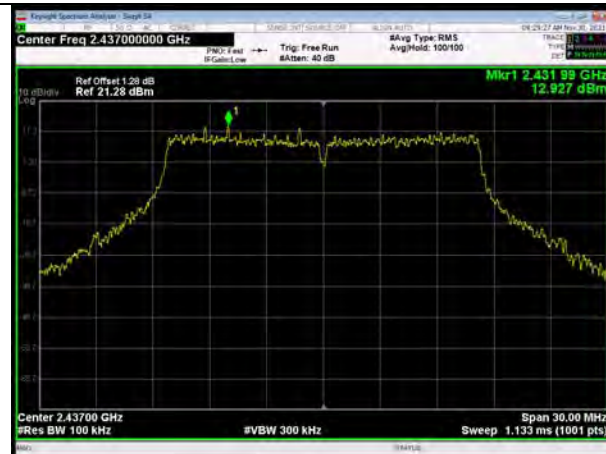
## 802.11g, Carrier frequency (MHz): 2417



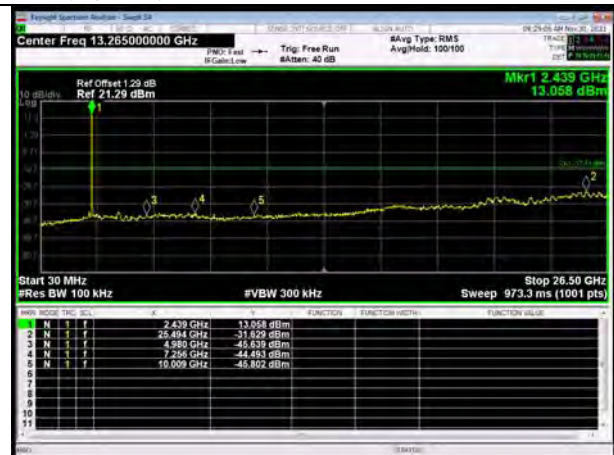
## 802.11g, Carrier frequency (MHz): 2422



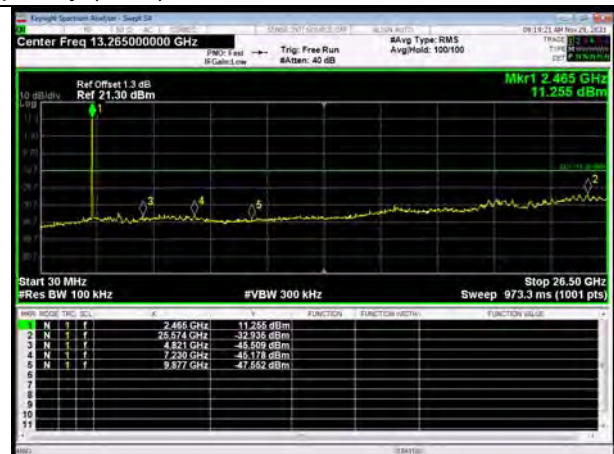
## 802.11g, Carrier frequency (MHz): 2437



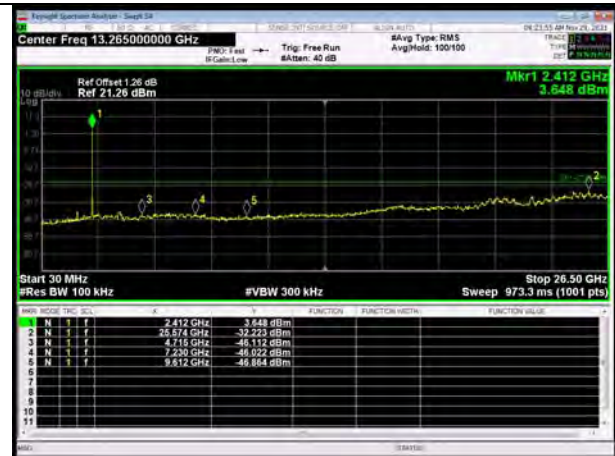
## 802.11g, Carrier frequency (MHz): 2457



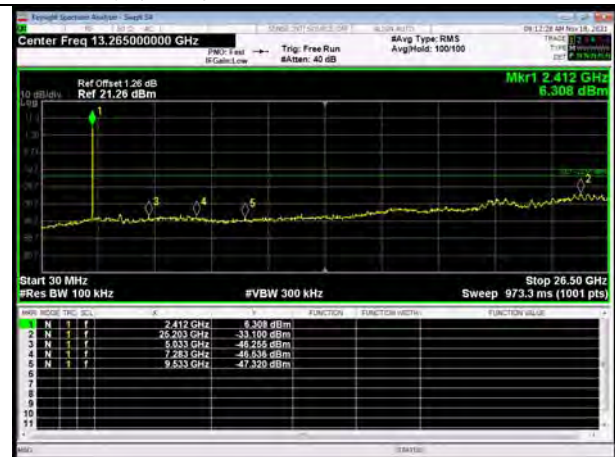
## 802.11g, Carrier frequency (MHz): 2462



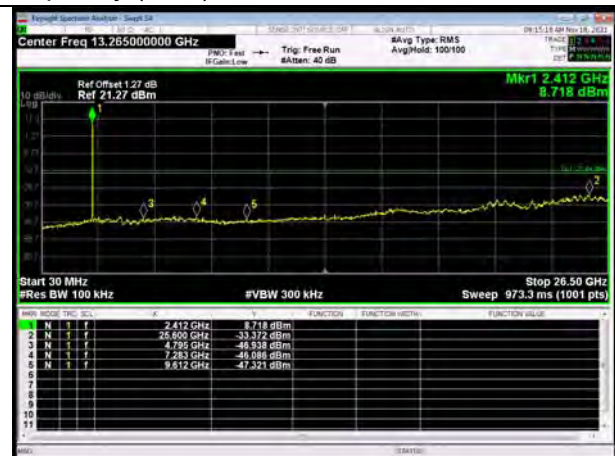
## 802.11n(HT20), Carrier frequency (MHz): 2412



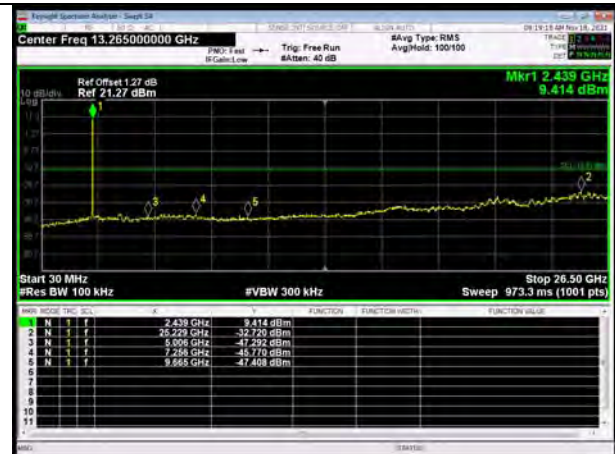
## 802.11n(HT20), Carrier frequency (MHz): 2417



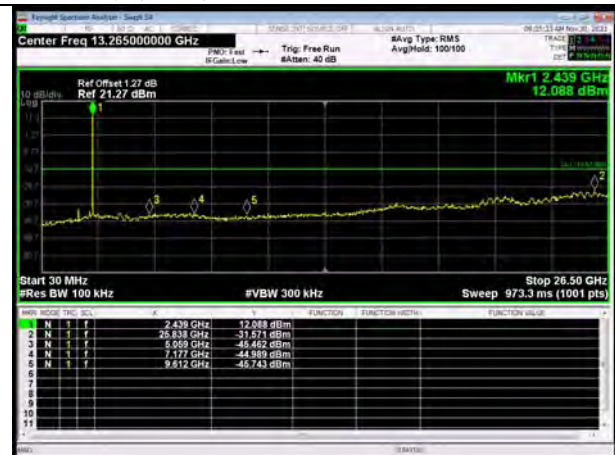
## 802.11n(HT20), Carrier frequency (MHz): 2422



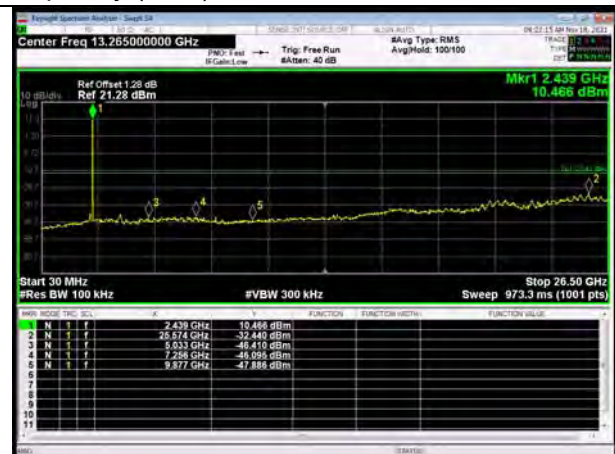
## 802.11n(HT20), Carrier frequency (MHz): 2427



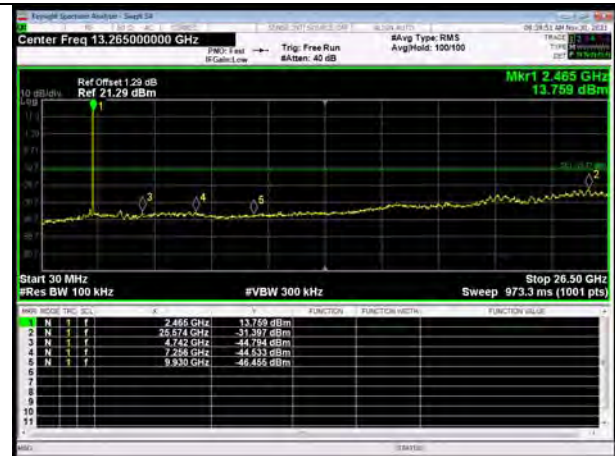
## 802.11n(HT20), Carrier frequency (MHz): 2432



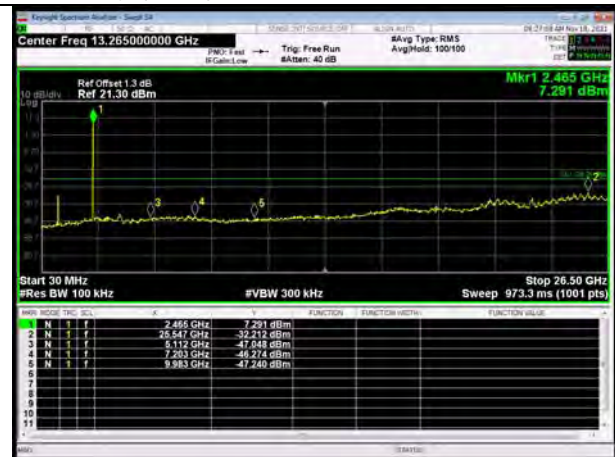
## 802.11n(HT20), Carrier frequency (MHz): 2437



## 802.11n(HT20), Carrier frequency (MHz):2457



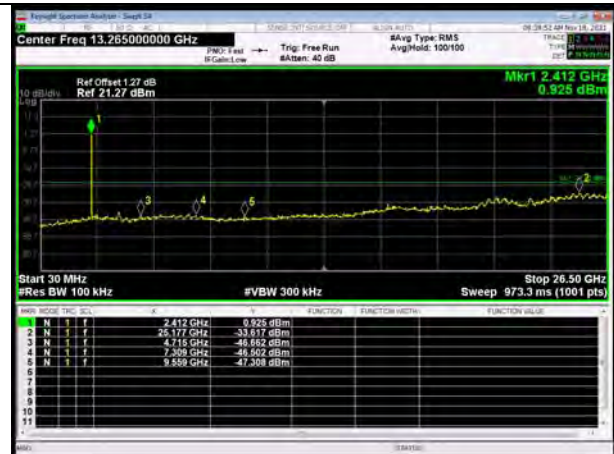
## 802.11n(HT20), Carrier frequency (MHz):2462



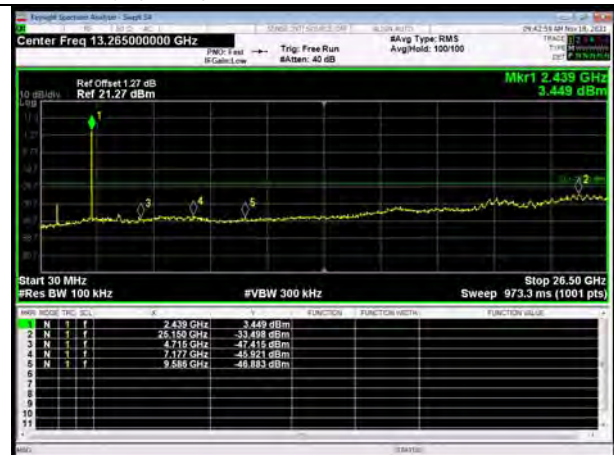
## 802.11n(HT40), Carrier frequency (MHz): 2422



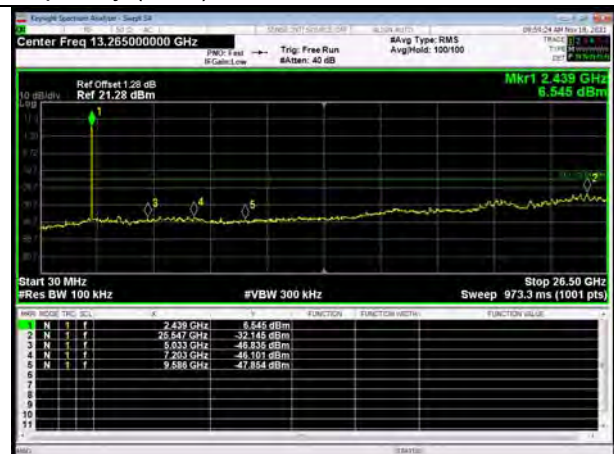
## 802.11n(HT40), Carrier frequency (MHz): 2427



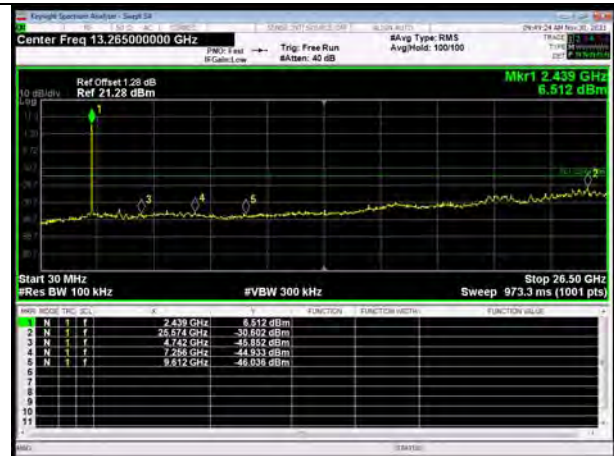
## 802.11n(HT40), Carrier frequency (MHz): 2432



## 802.11n(HT40), Carrier frequency (MHz): 2437



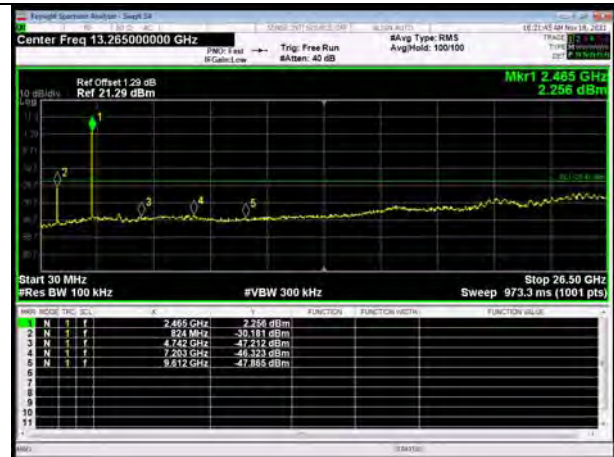
## 802.11n(HT40), Carrier frequency (MHz): 2442



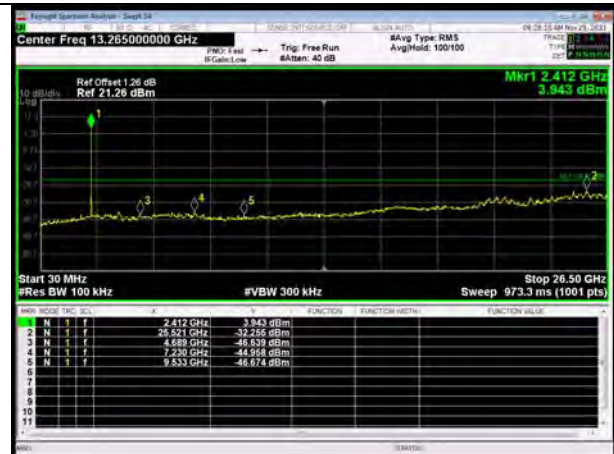
## 802.11n(HT40), Carrier frequency (MHz): 2447



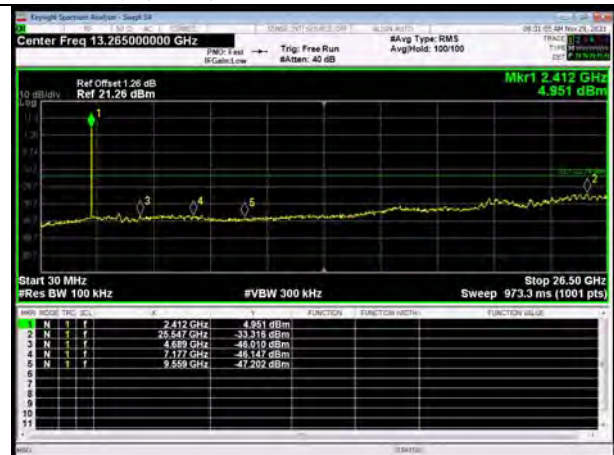
## 802.11n(HT40), Carrier frequency (MHz): 2452



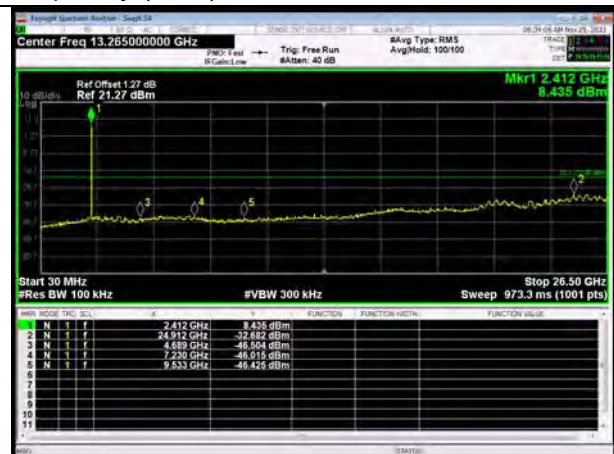
## 802.11ax(HE20), Carrier frequency (MHz): 2412



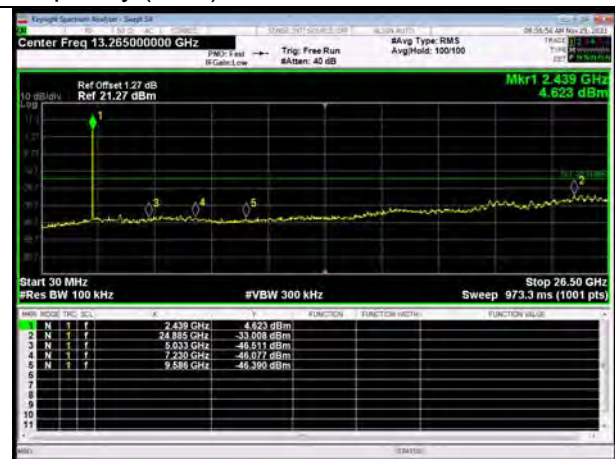
## 802.11ax(HE20), Carrier frequency (MHz): 2417



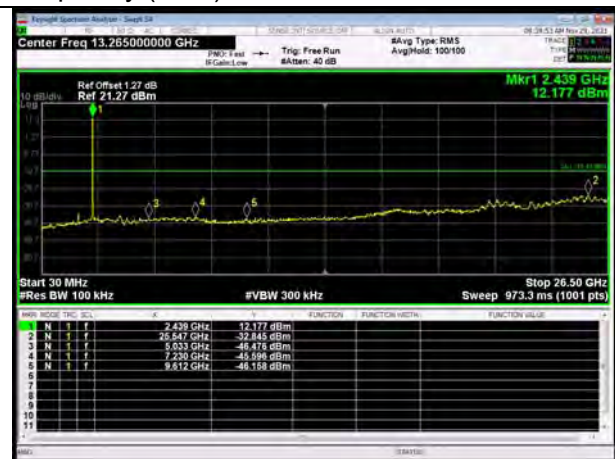
## 802.11ax(HE20), Carrier frequency (MHz): 2422



## 802.11ax(HE20), Carrier frequency (MHz): 2427



## 802.11ax(HE20), Carrier frequency (MHz):2432



## 802.11ax(HE20), Carrier frequency (MHz):2437

