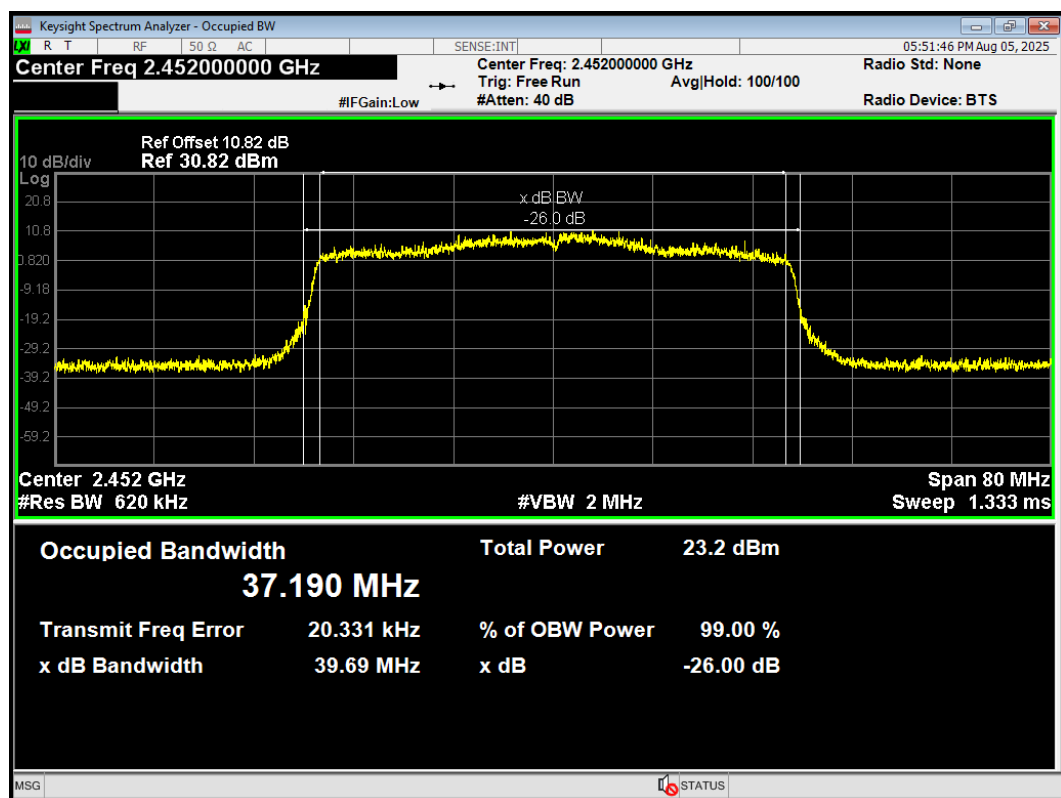
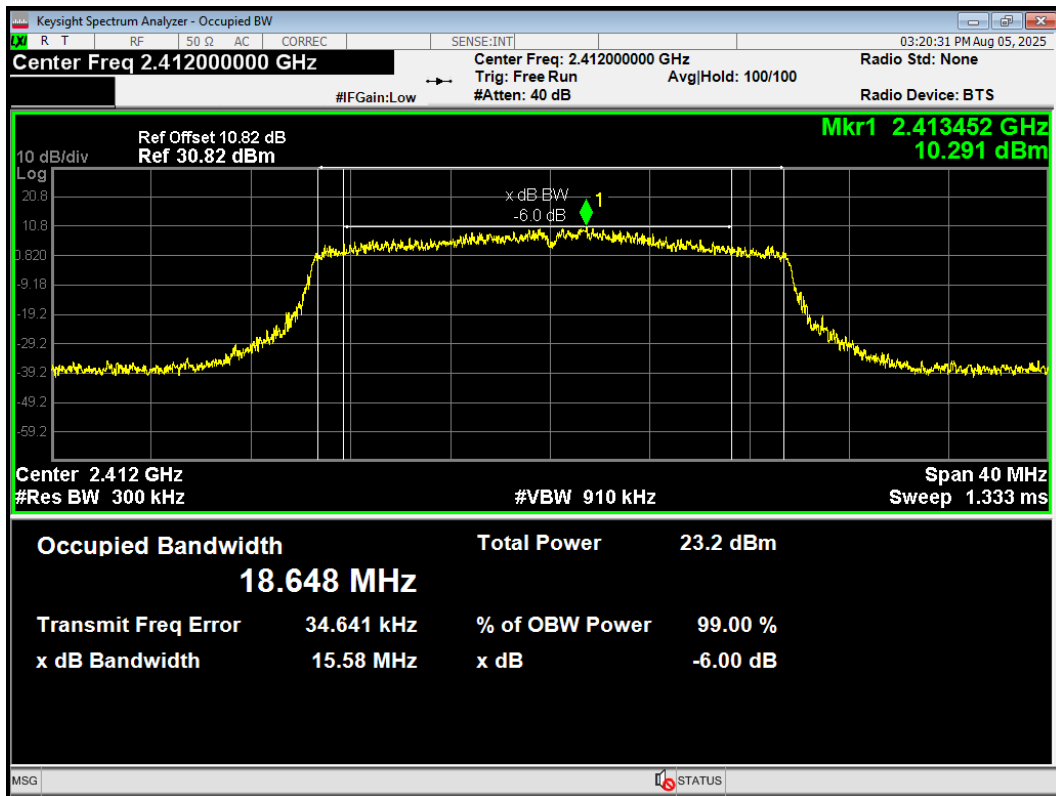


OBW 802.11ax(HE40)484T Index65 2452MHz

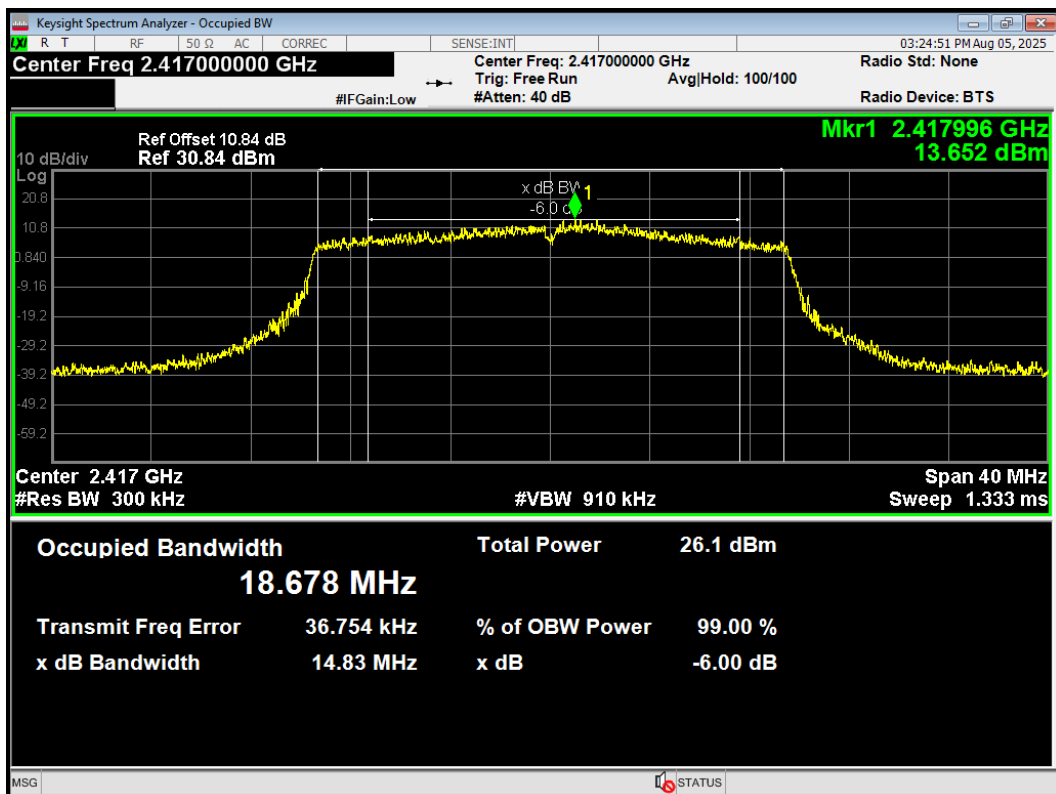


6 dB bandwidth

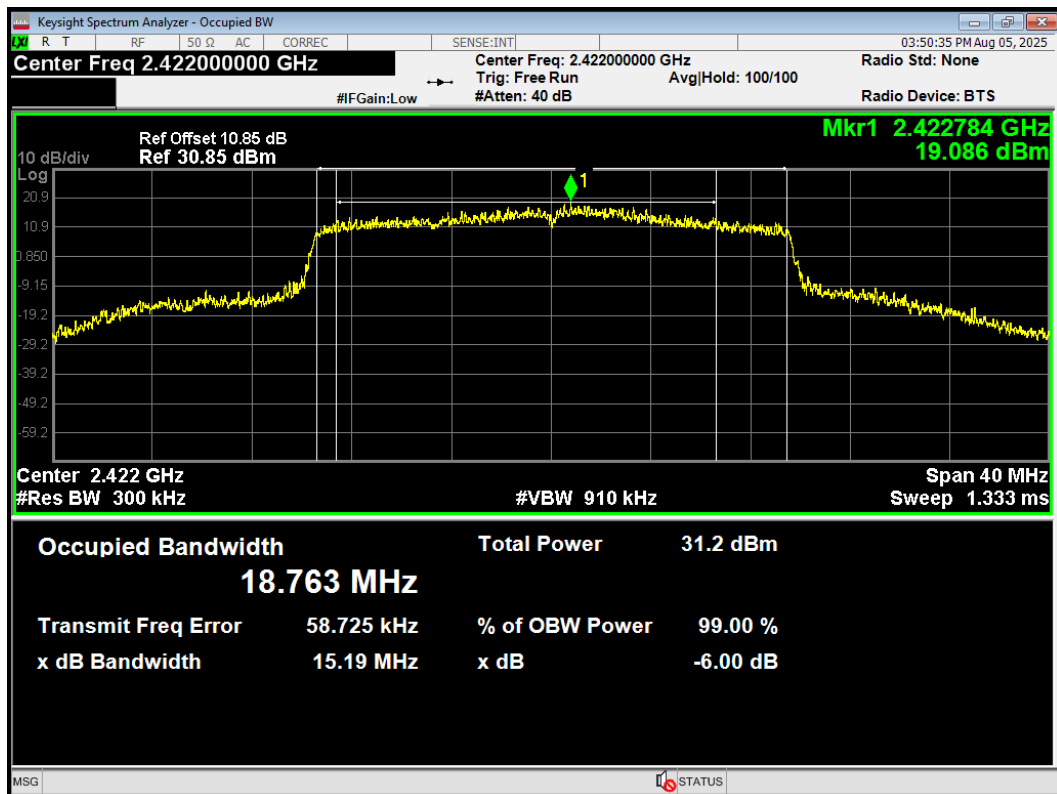
-6dB Bandwidth 802.11ax(HE20)Index61 2412MHz



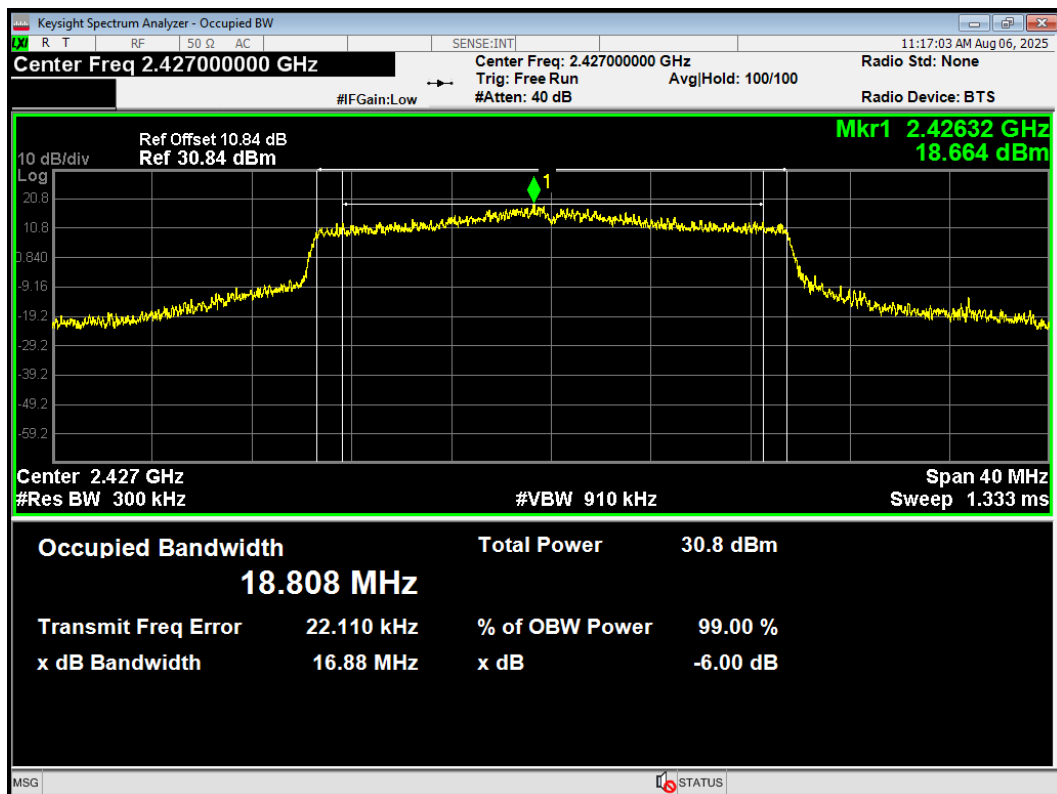
-6dB Bandwidth 802.11ax(HE20)Index61 2417MHz



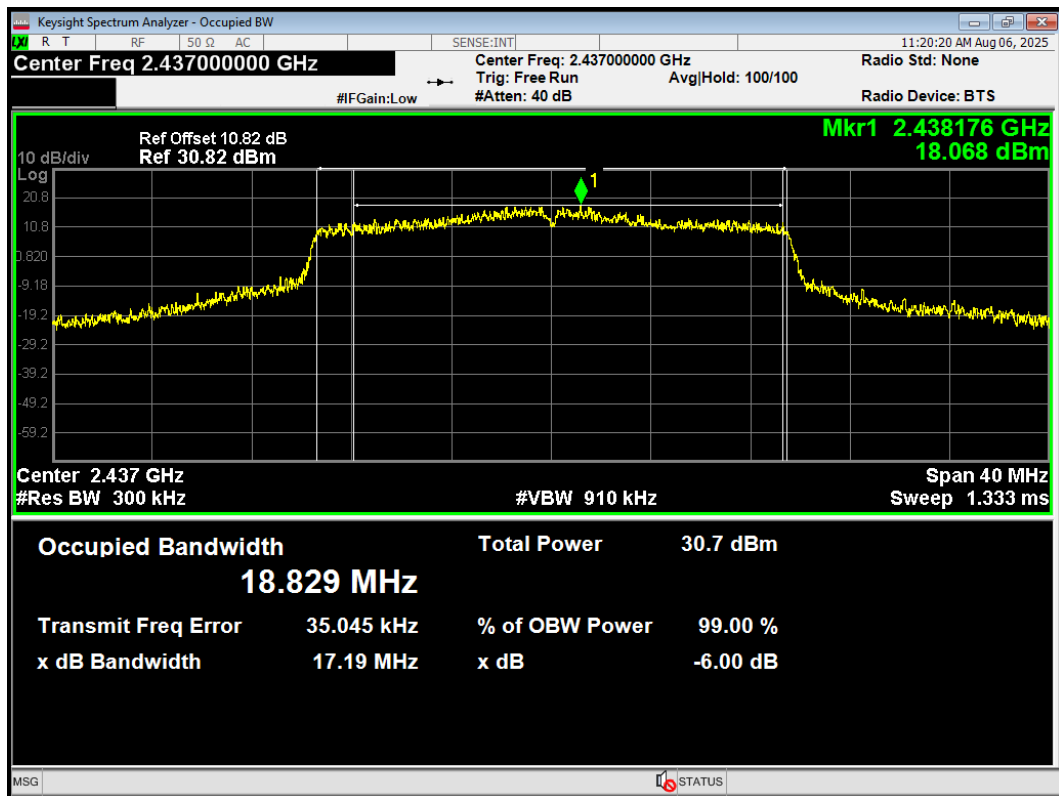
-6dB Bandwidth 802.11ax(HE20)Index61 2422MHz



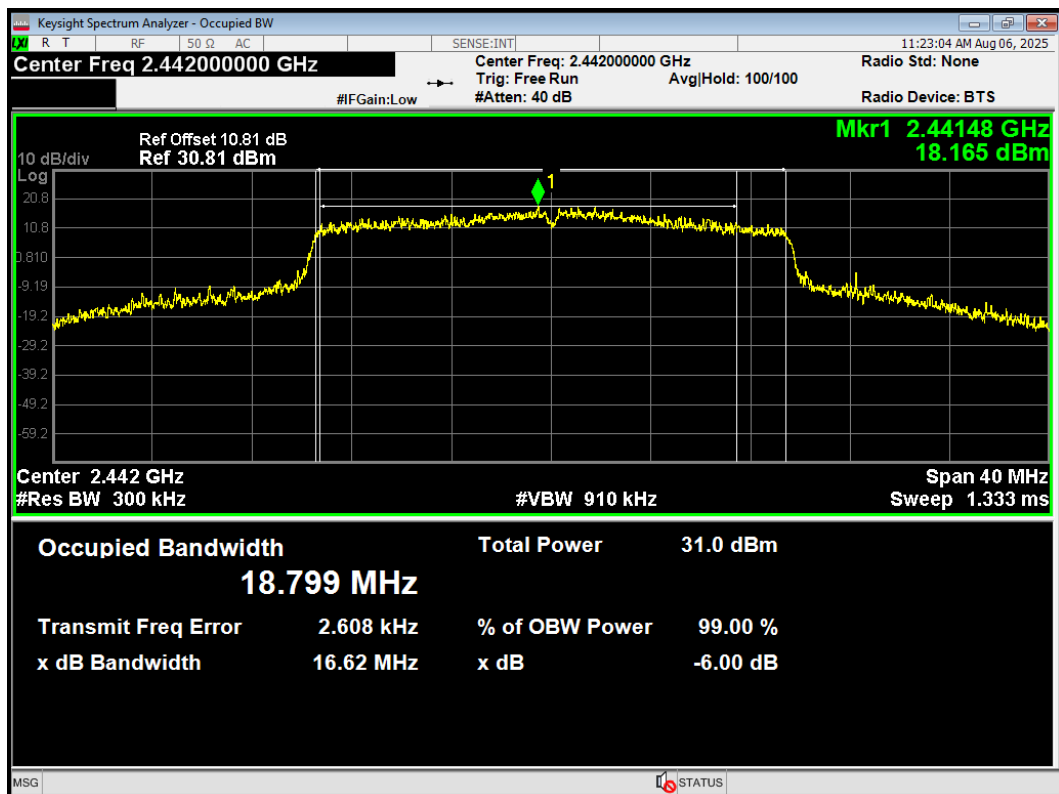
-6dB Bandwidth 802.11ax(HE20)Index61 2427MHz



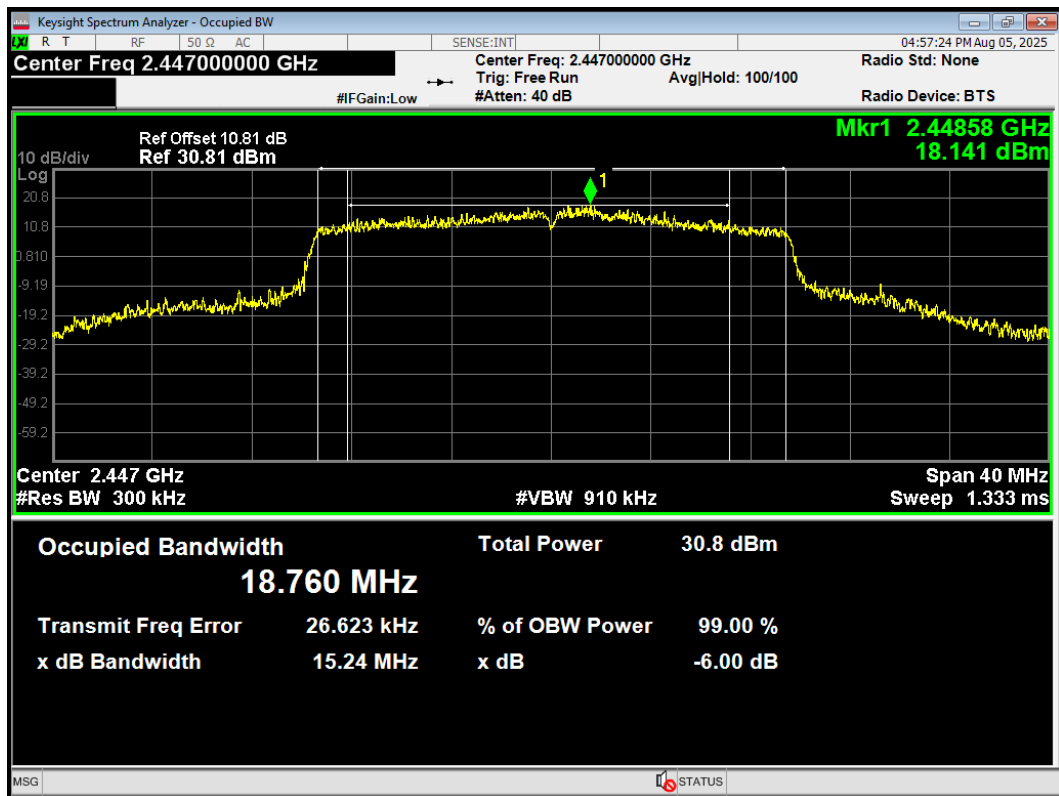
-6dB Bandwidth 802.11ax(HE20)Index61 2437MHz



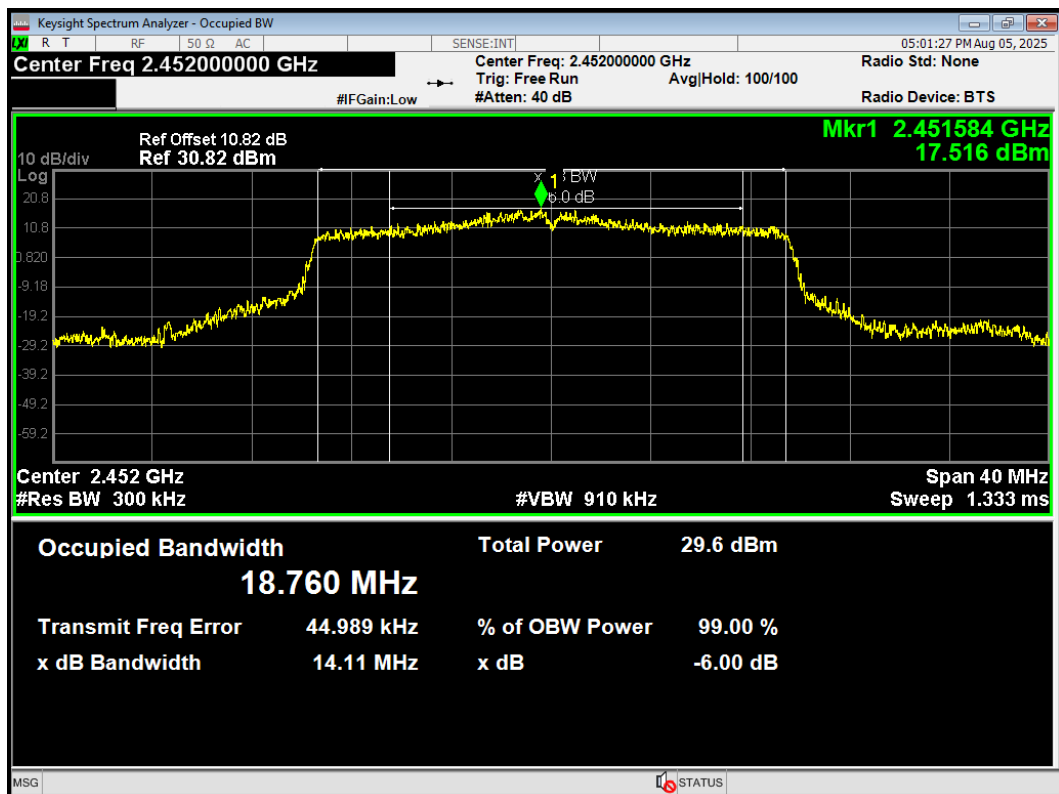
-6dB Bandwidth 802.11ax(HE20)Index61 2442MHz



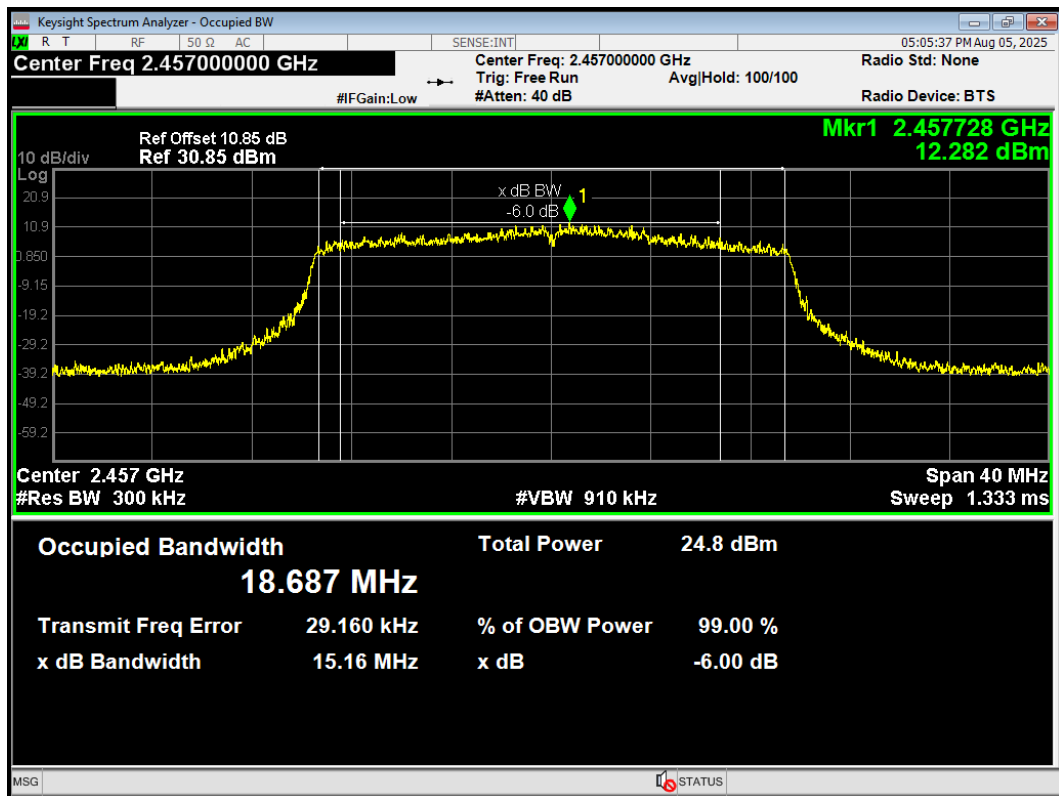
-6dB Bandwidth 802.11ax(HE20)Index61 2447MHz



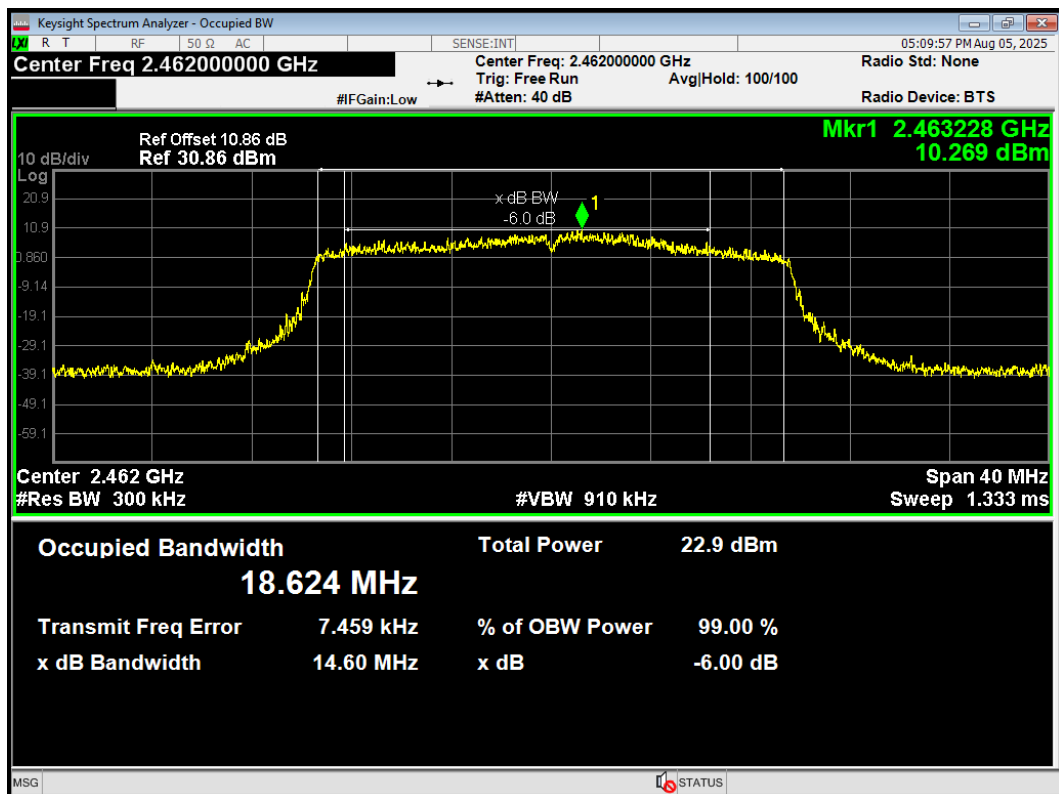
-6dB Bandwidth 802.11ax(HE20)Index61 2452MHz



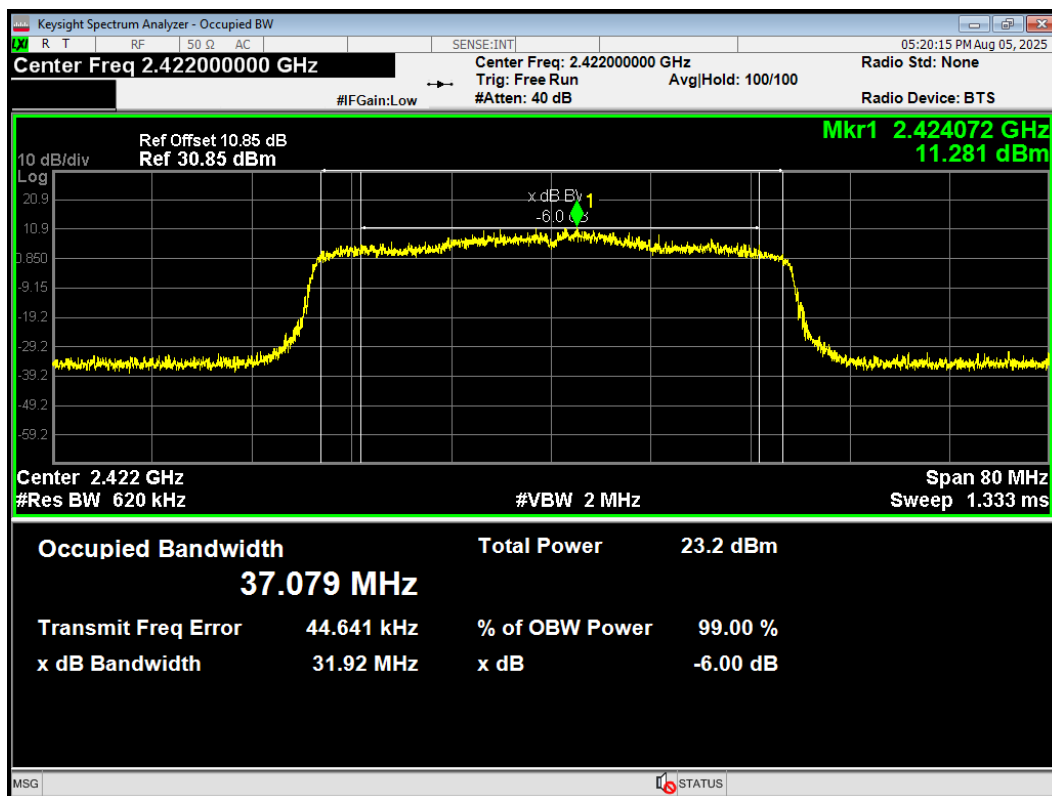
-6dB Bandwidth 802.11ax(HE20)Index61 2457MHz



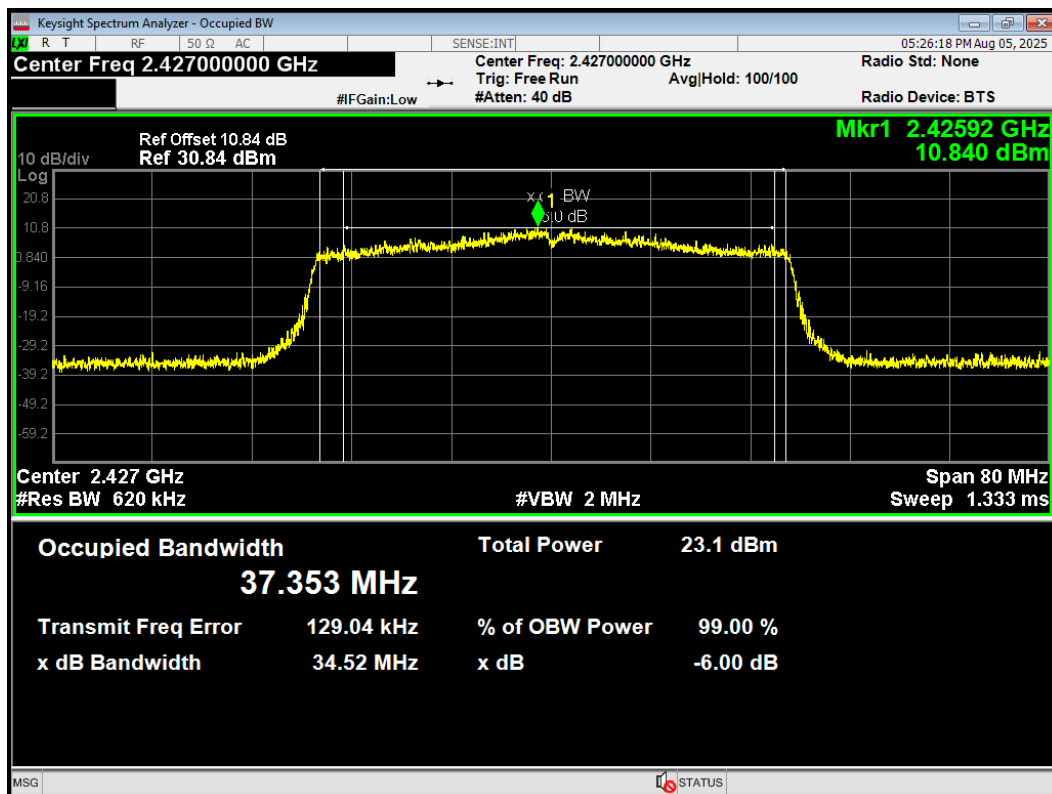
-6dB Bandwidth 802.11ax(HE20)Index61 2462MHz



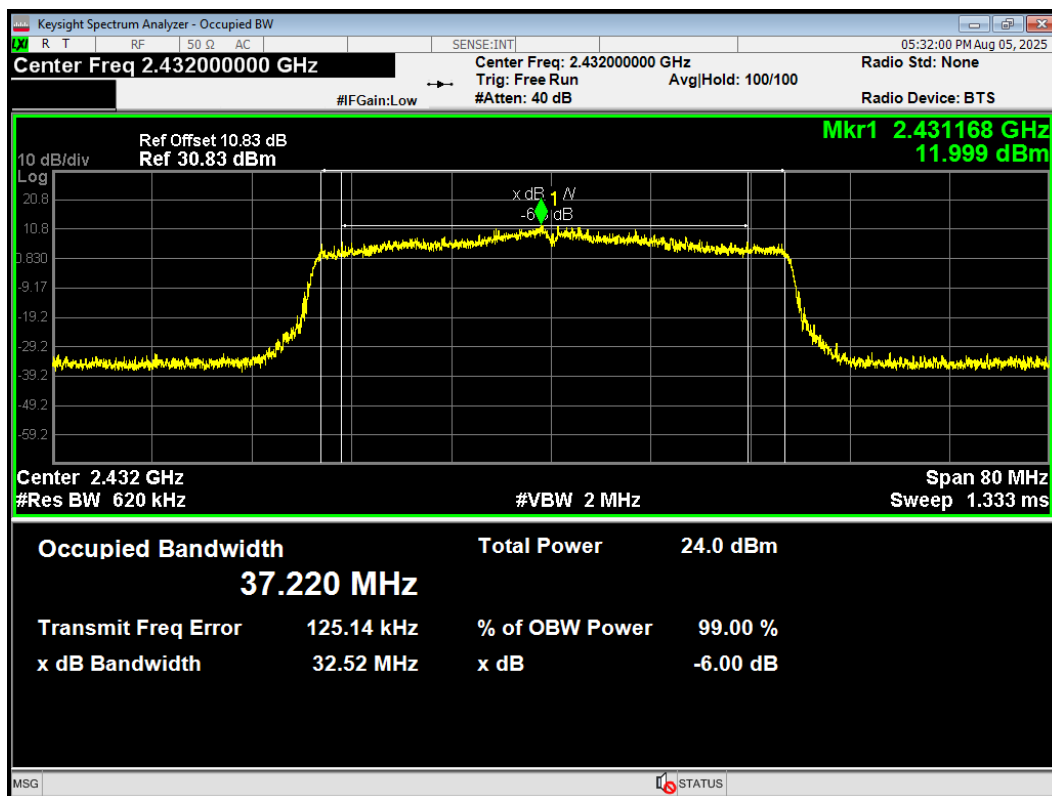
-6dB Bandwidth 802.11ax(HE40)484T Index65 2422MHz



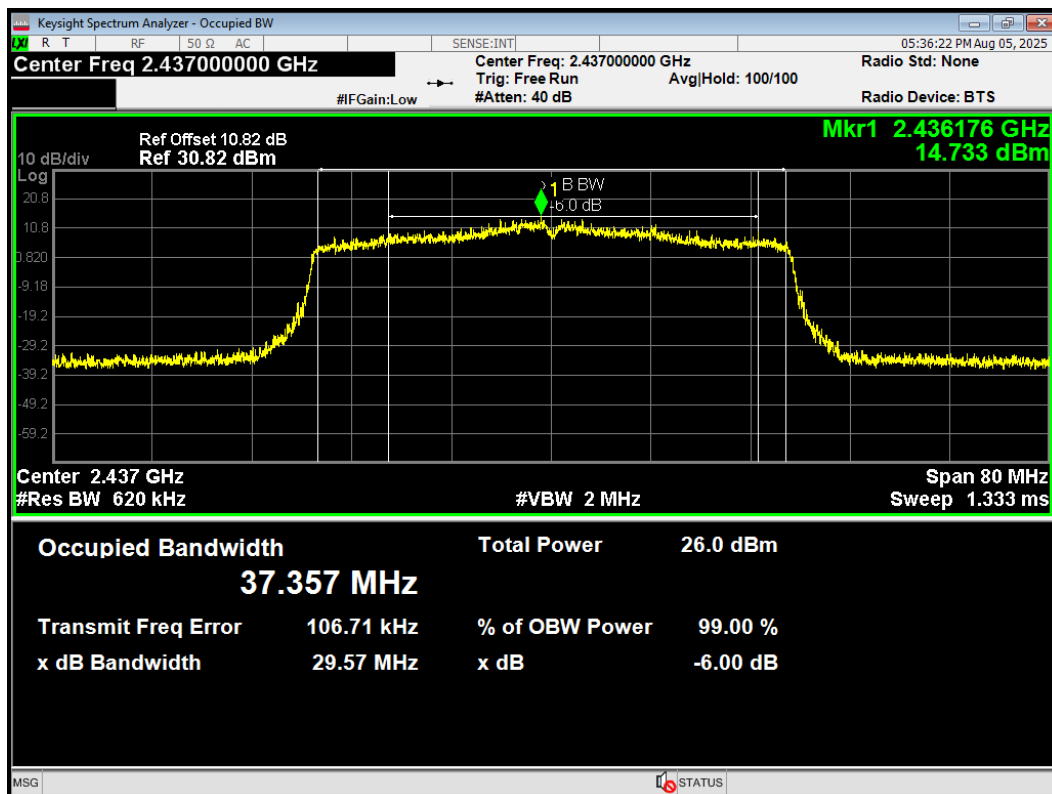
-6dB Bandwidth 802.11ax(HE40)484T Index65 2427MHz



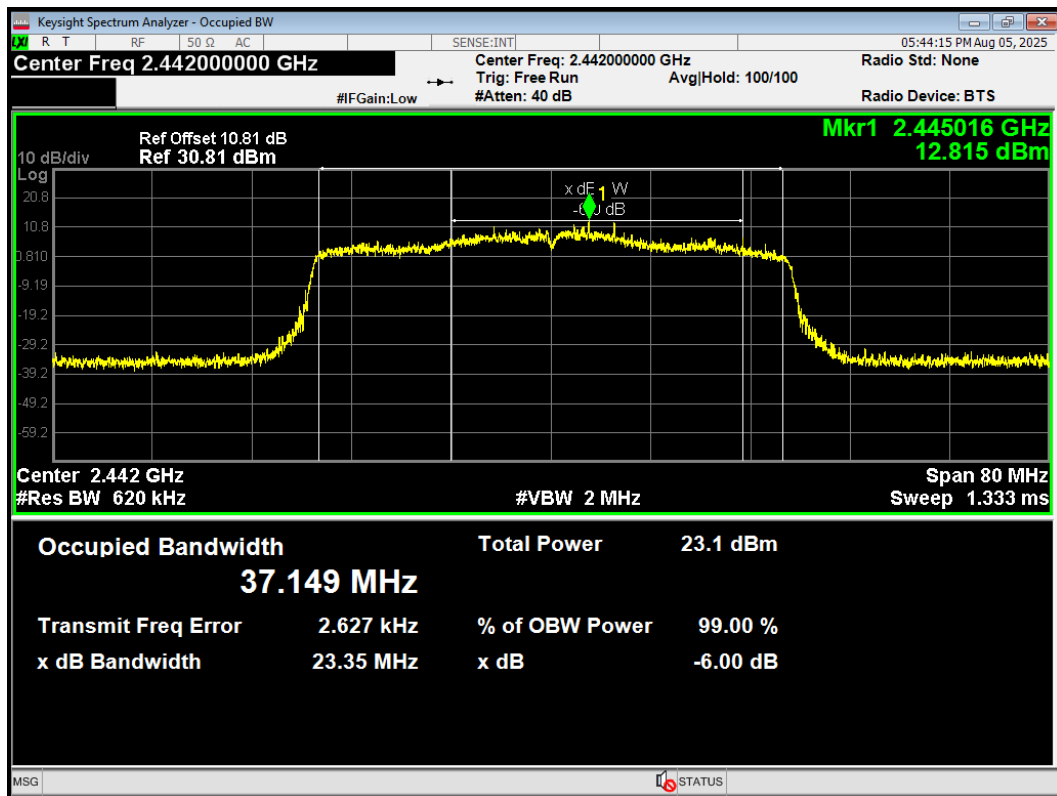
-6dB Bandwidth 802.11ax(HE40)484T Index65 2432MHz



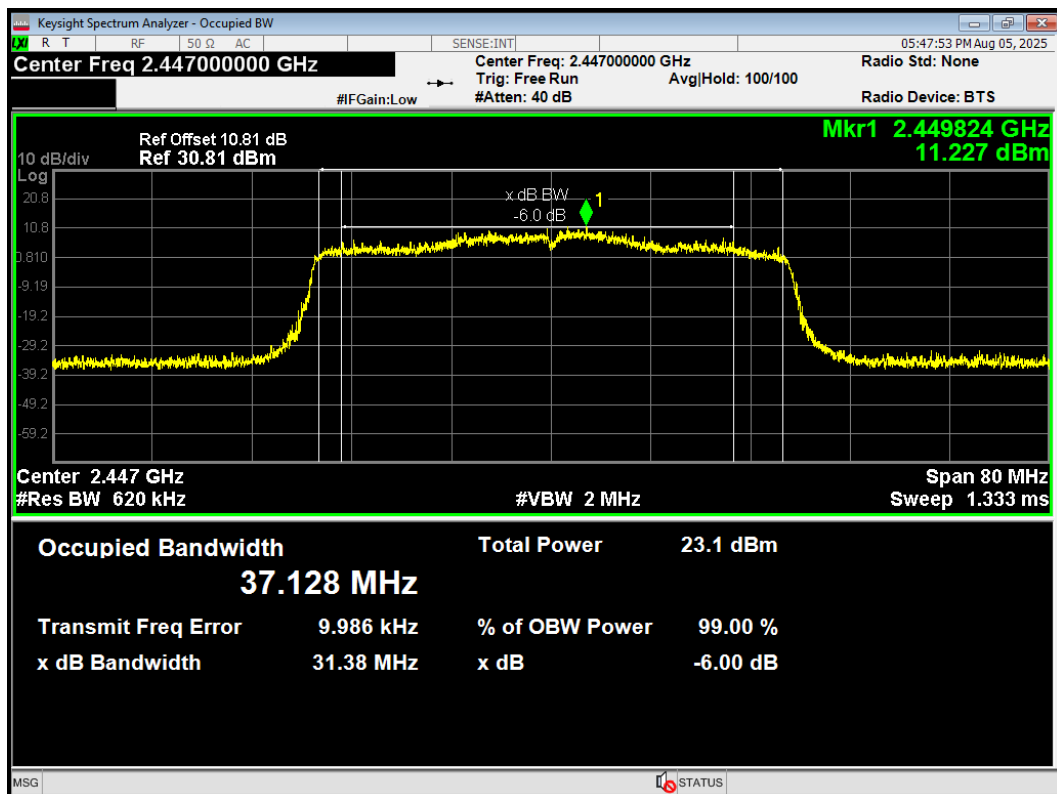
-6dB Bandwidth 802.11ax(HE40)484T Index65 2437MHz



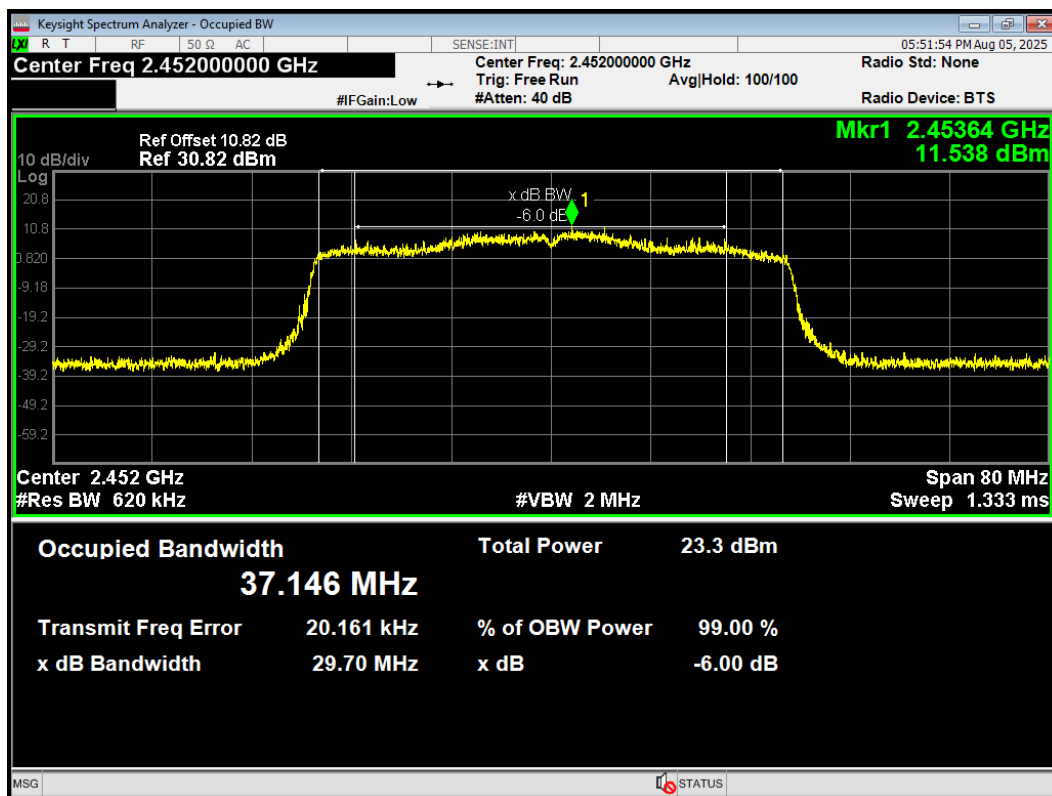
-6dB Bandwidth 802.11ax(HE40)484T Index65 2442MHz



-6dB Bandwidth 802.11ax(HE40)484T Index65 2447MHz



-6dB Bandwidth 802.11ax(HE40)484T Index65 2452MHz



5.3. Band Edge

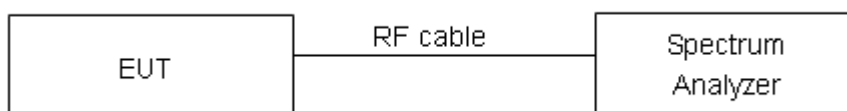
Ambient Condition

Temperature	Relative humidity
15°C ~ 35°C	20% ~ 80%

Method of Measurement

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable the band edge of the lowest and highest channels were measured. The peak detector is used and RBW is set to 100 kHz and VBW is set to 300 kHz on spectrum analyzer. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

Rule Part 15.247(d) specifies 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.”

Measurement Uncertainty

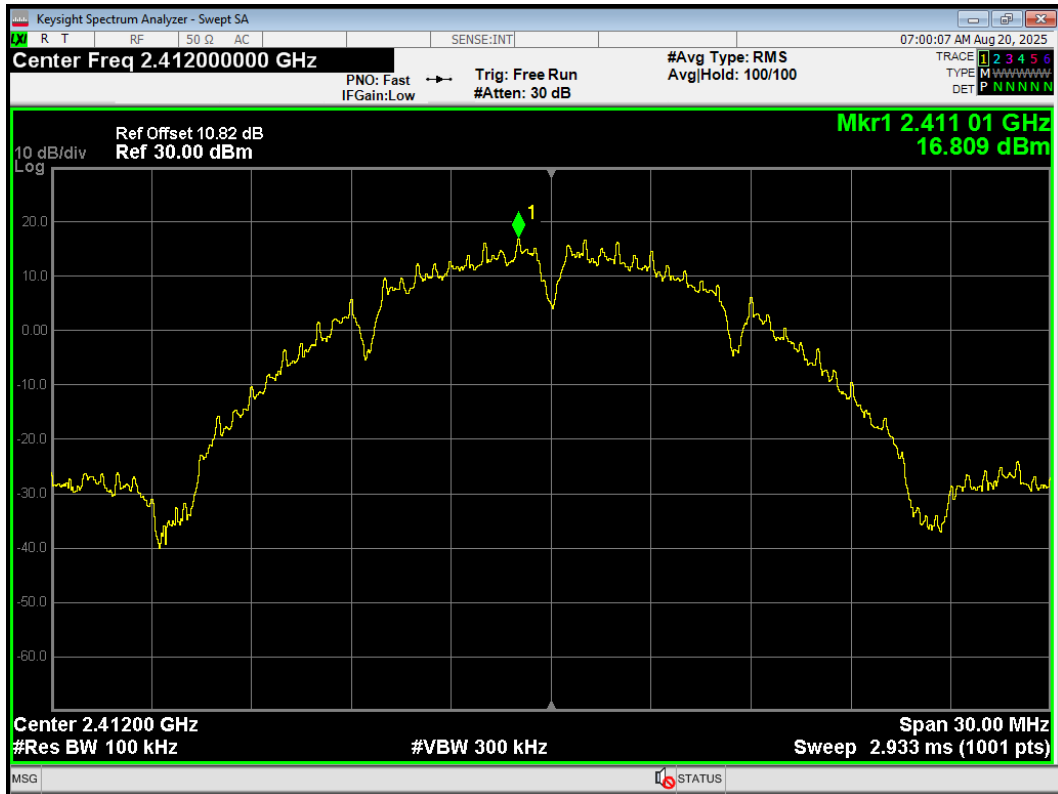
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 1.96$.

Frequency	Uncertainty
2GHz-3GHz	1.407 dB

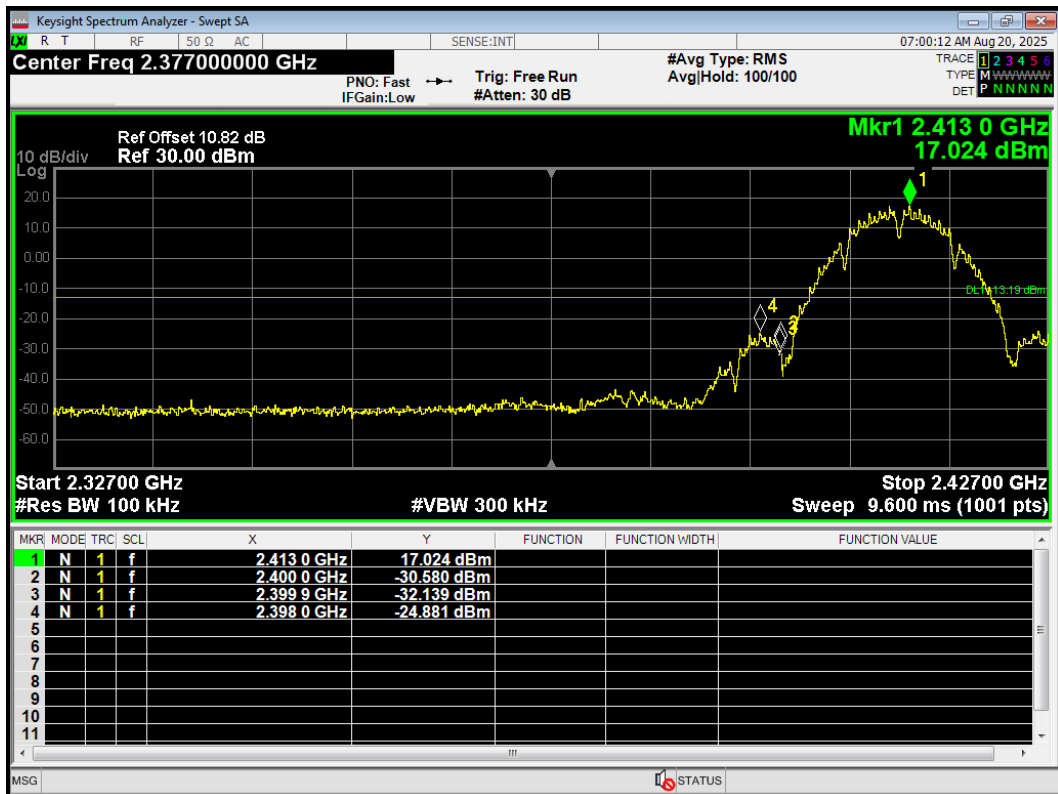
Test Results: PASS

SU Mode

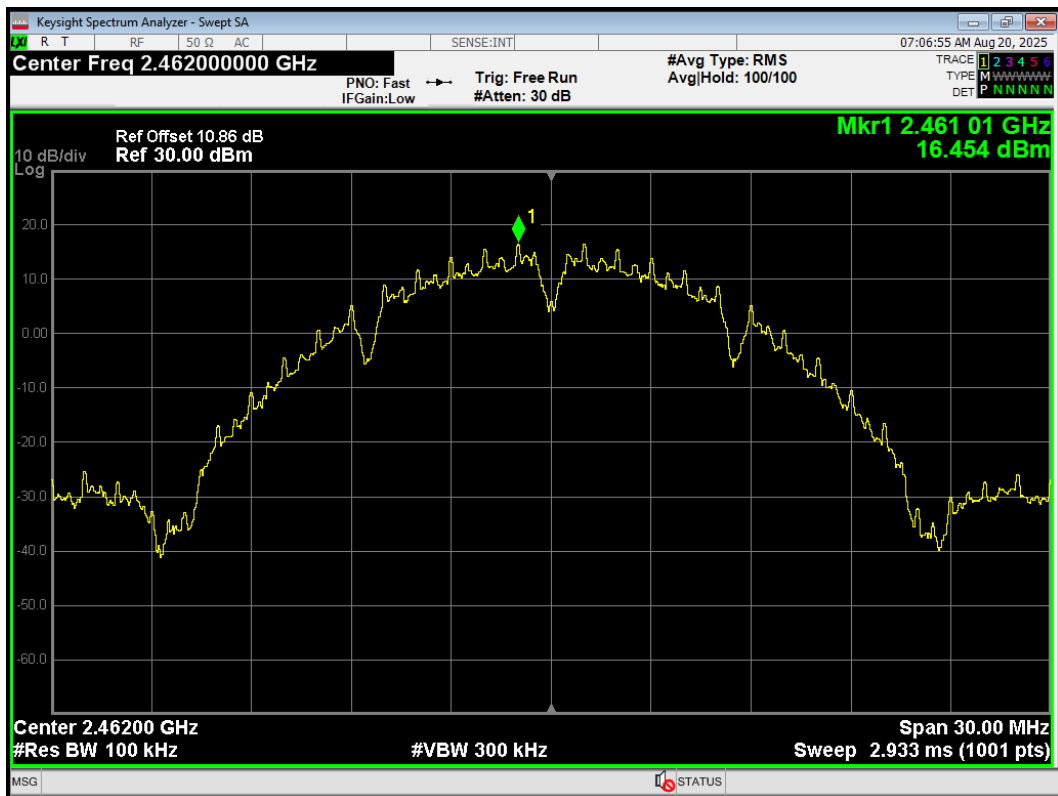
Band Edge 802.11b 2412MHz Ref



Band Edge 802.11b 2412MHz Emission



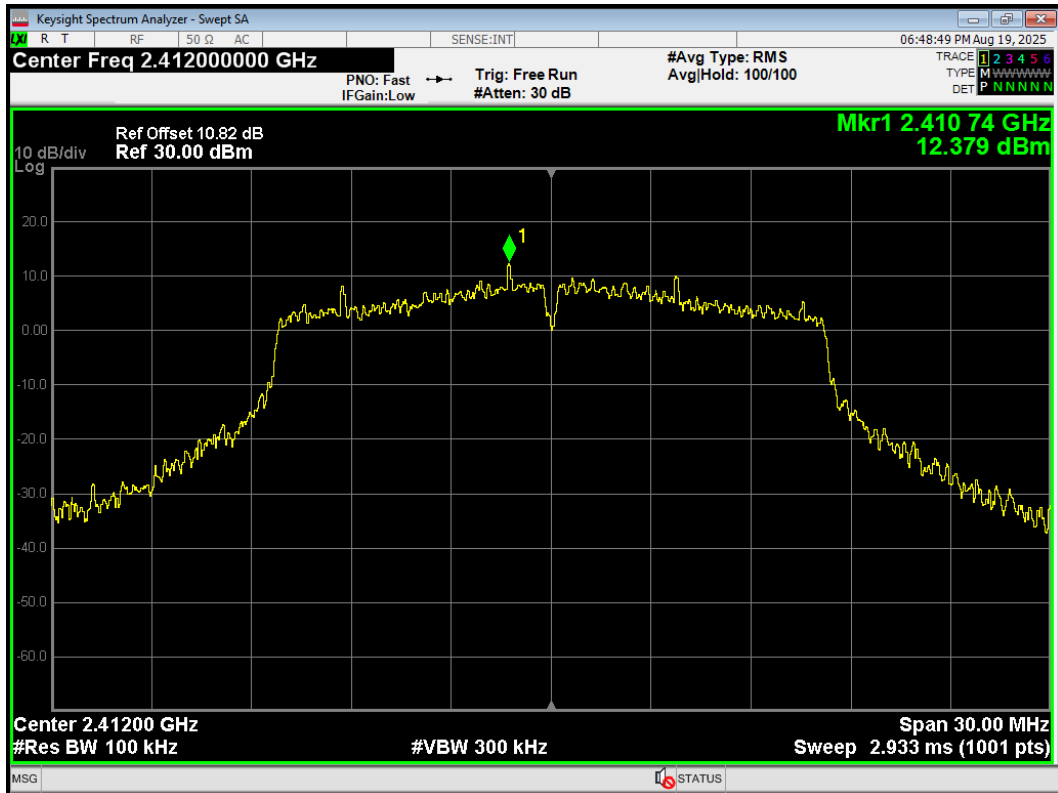
Band Edge 802.11b 2462MHz Ref



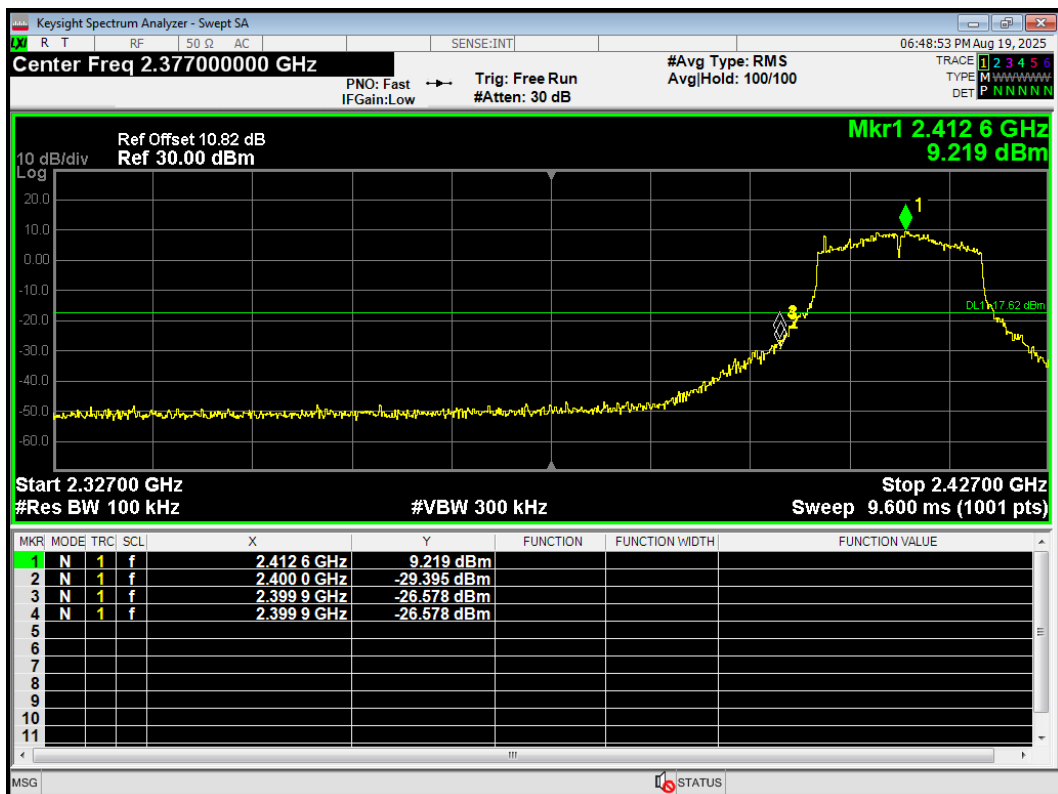
Band Edge 802.11b 2462MHz Emission



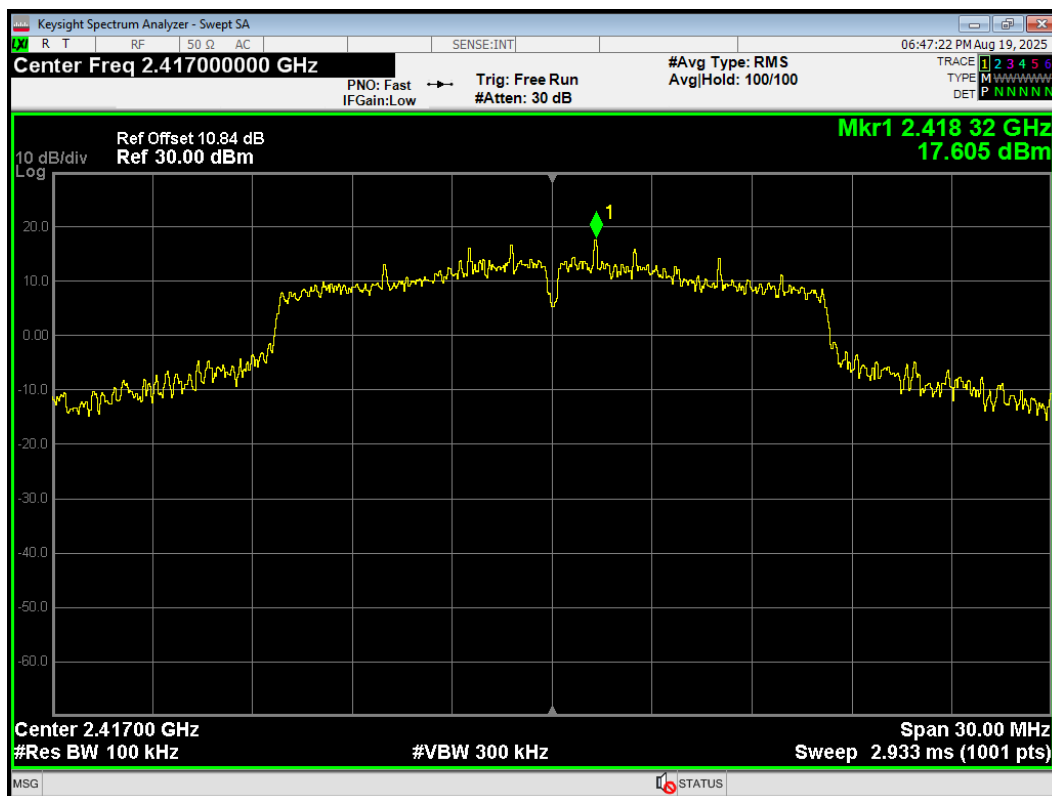
Band Edge 802.11g 2412MHz Ref



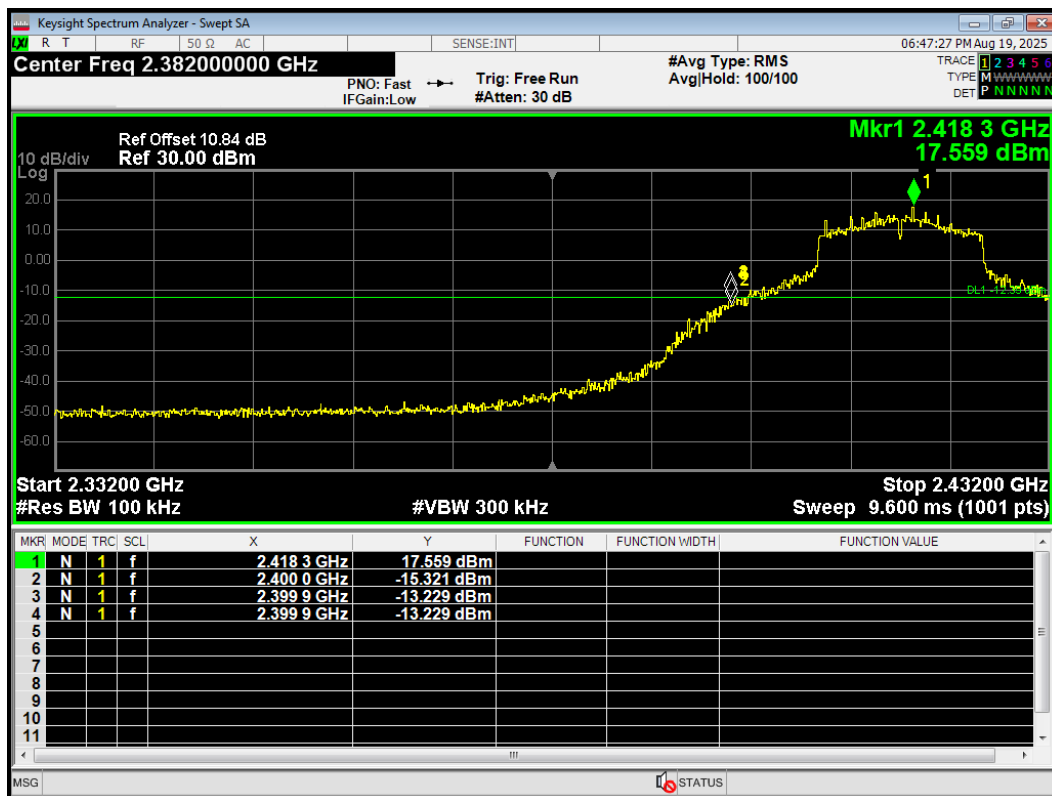
Band Edge 802.11g 2412MHz Emission



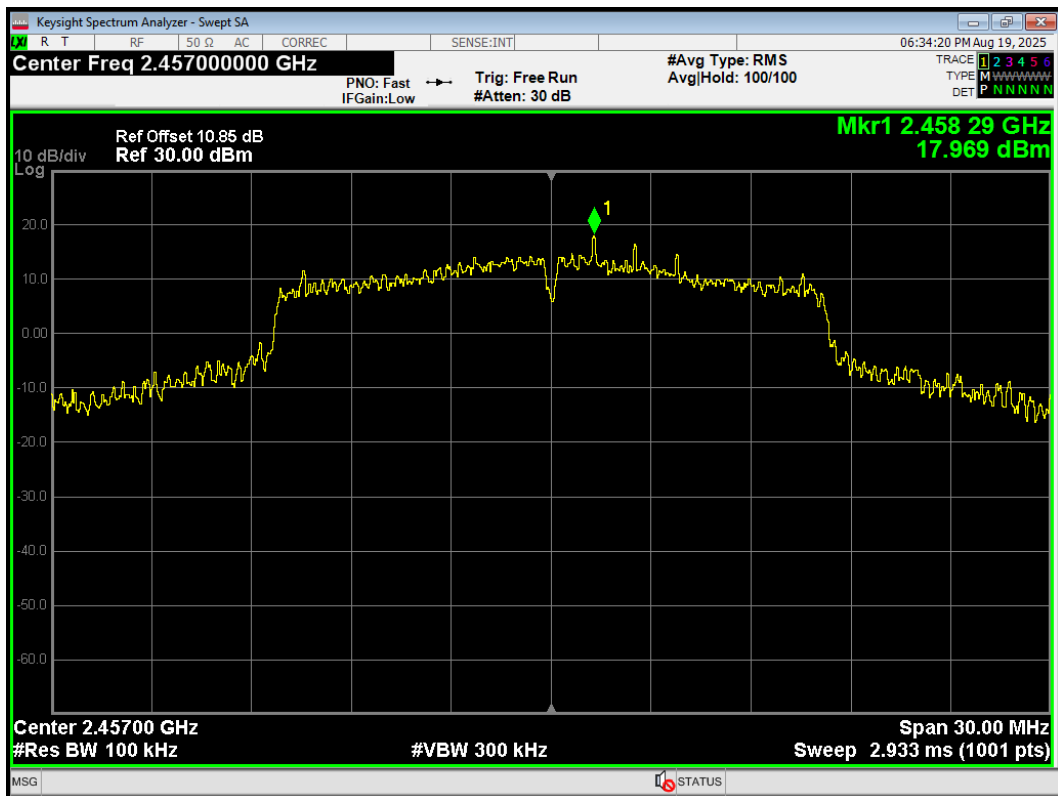
Band Edge 802.11g 2417MHz Ref



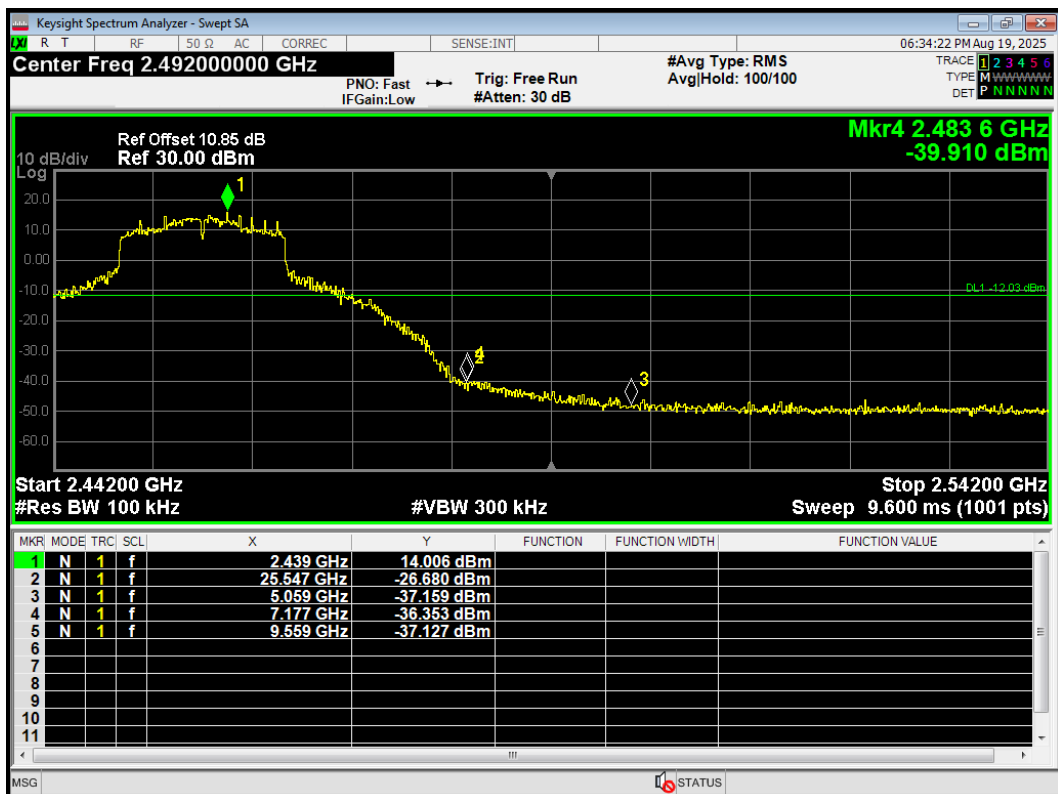
Band Edge 802.11g 2417MHz Emission



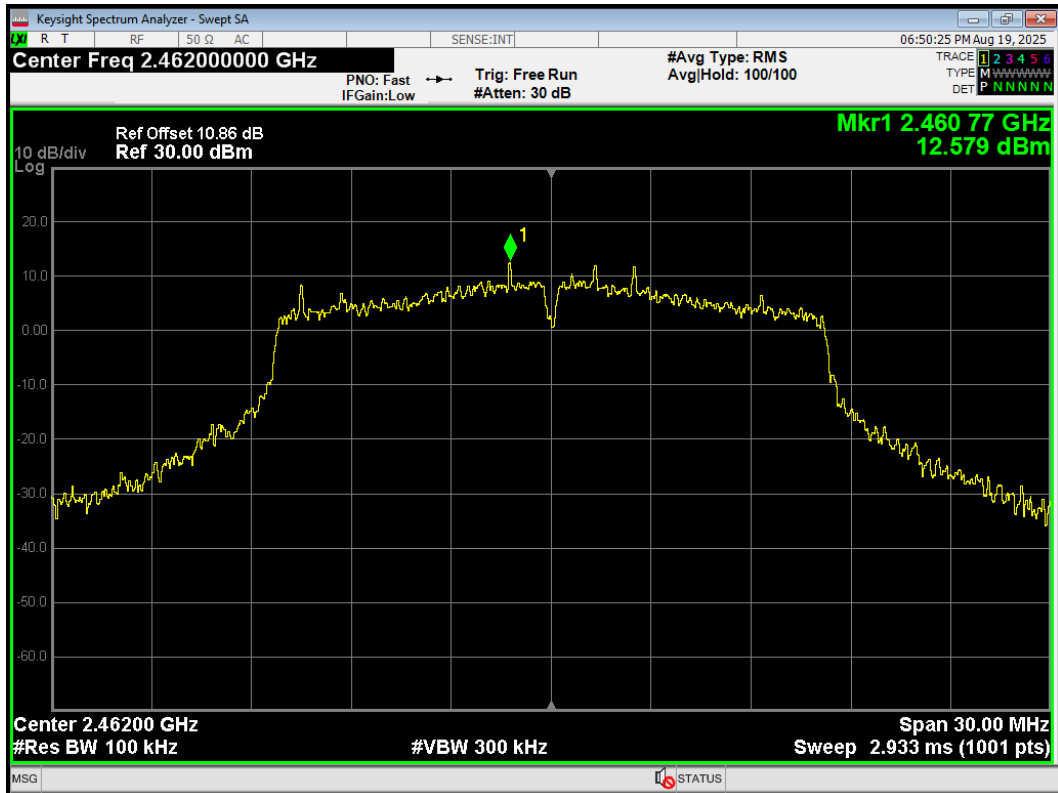
Band Edge 802.11g 2457MHz Ref



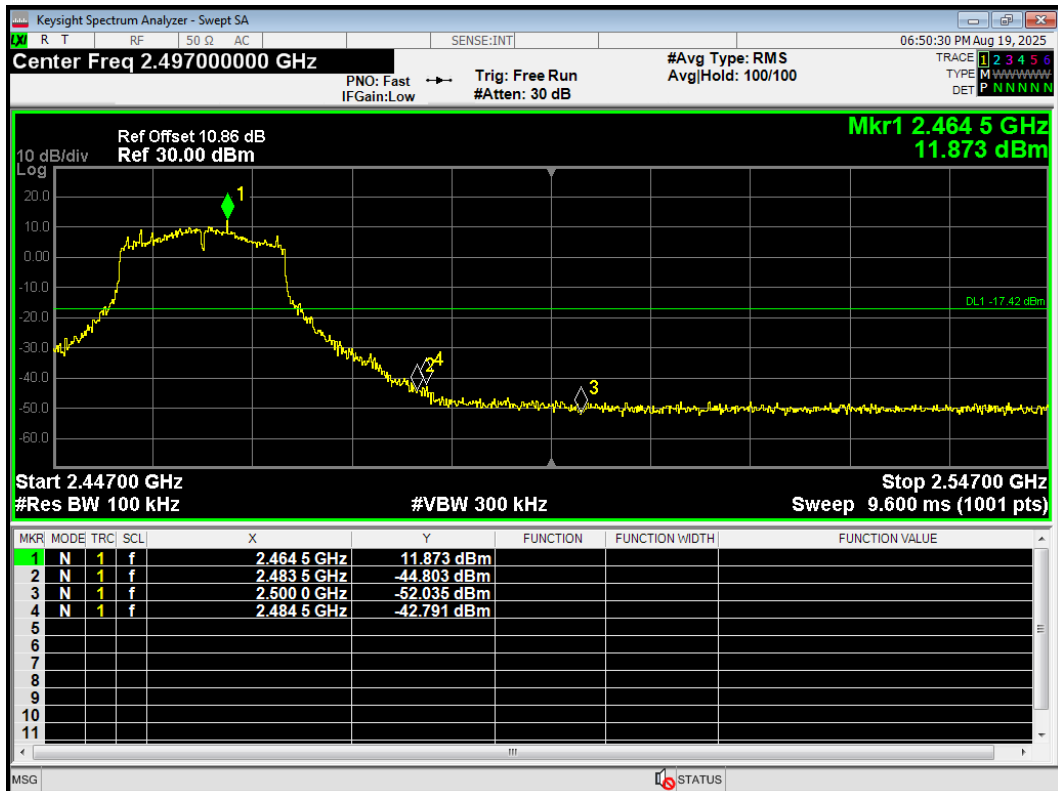
Band Edge 802.11g 2457MHz Emission



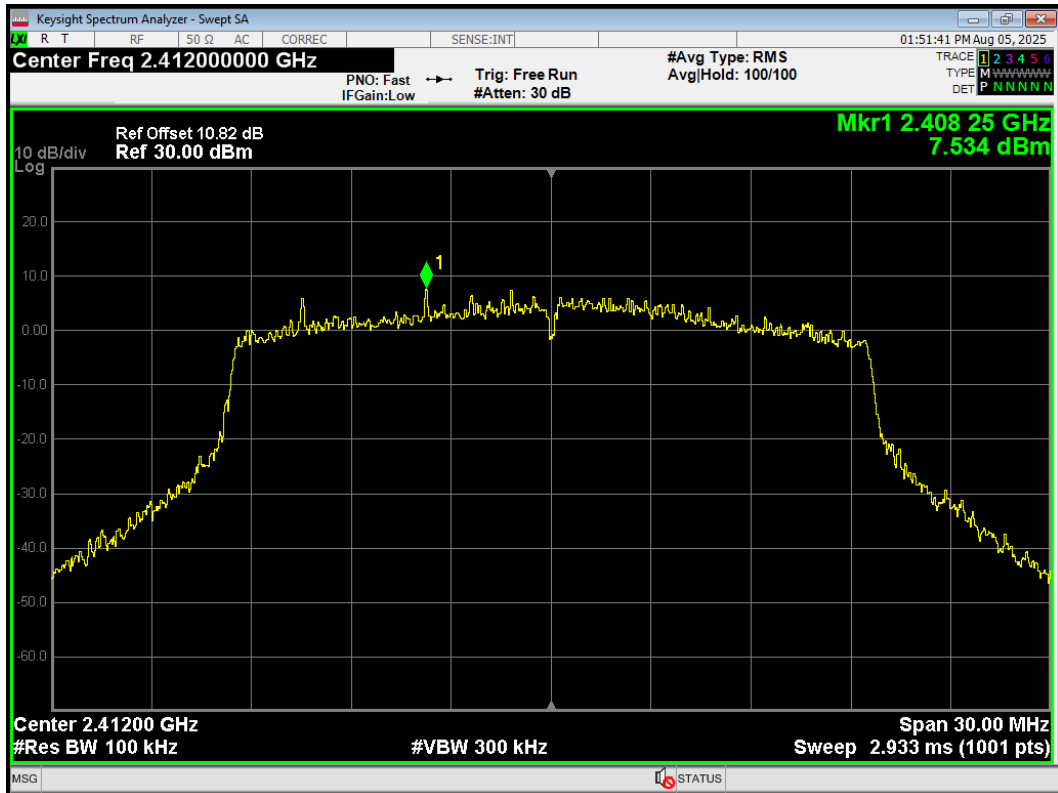
Band Edge 802.11g 2462MHz Ref



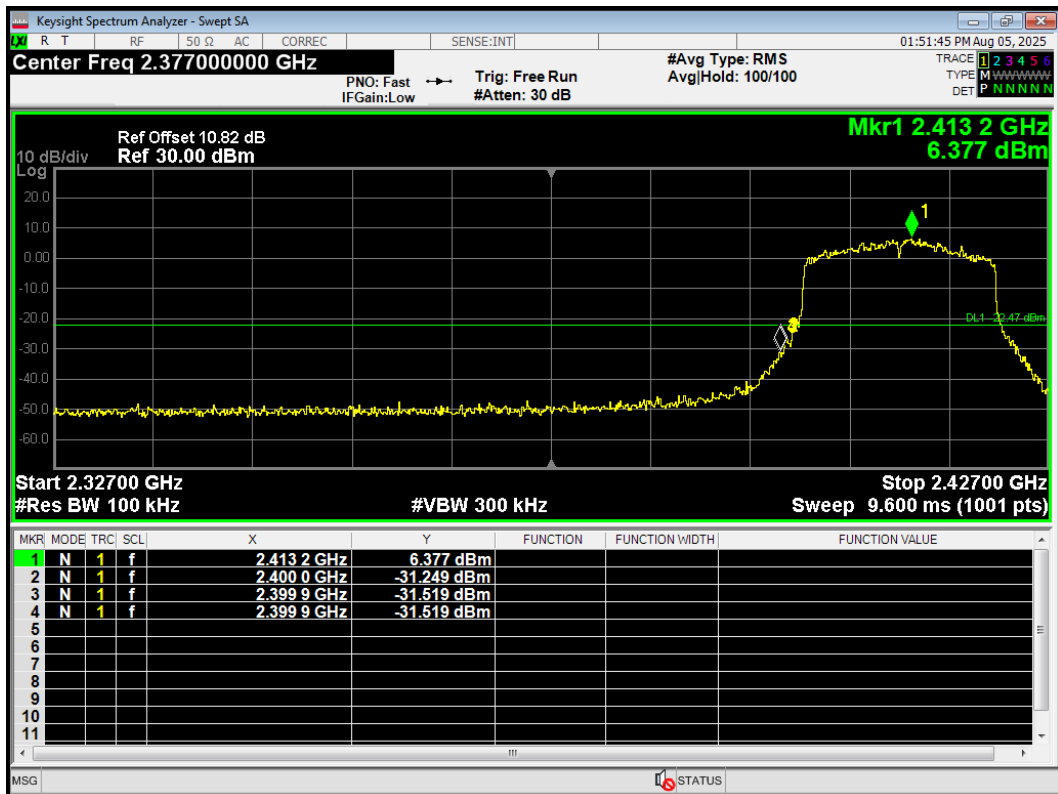
Band Edge 802.11g 2462MHz Emission



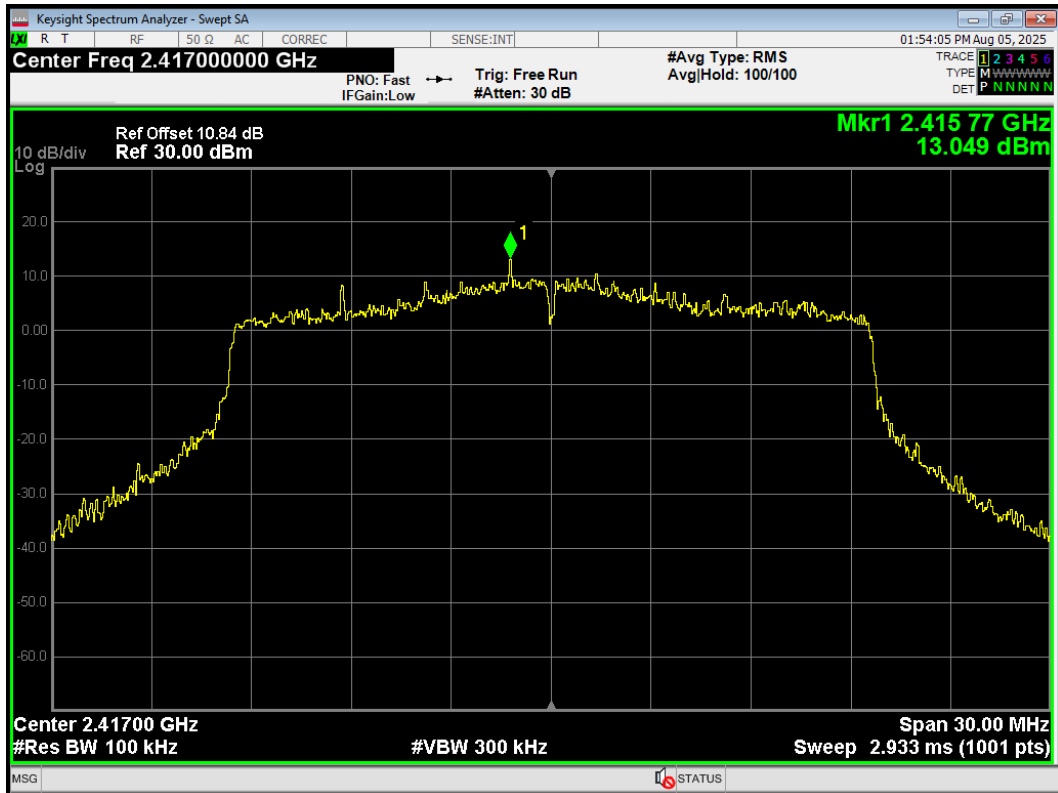
Band Edge 802.11ax(HE20) 2412MHz Ref



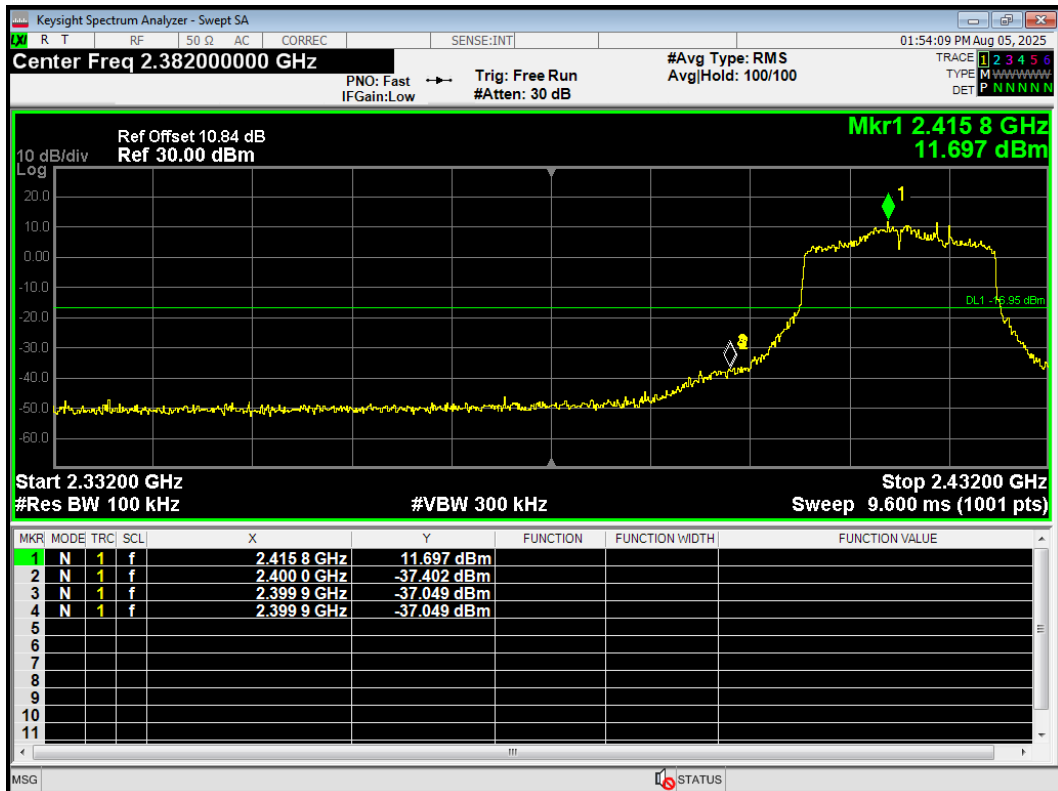
Band Edge 802.11ax(HE20) 2412MHz Emission



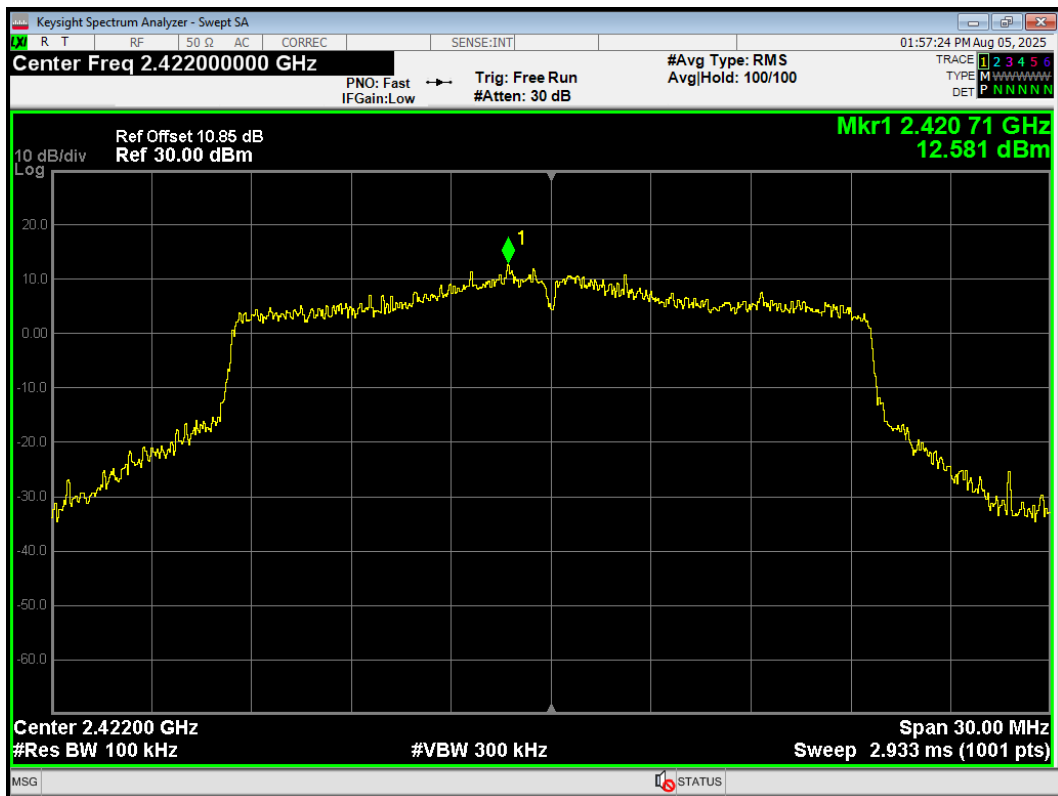
Band Edge 802.11ax(HE20) 2417MHz Ref



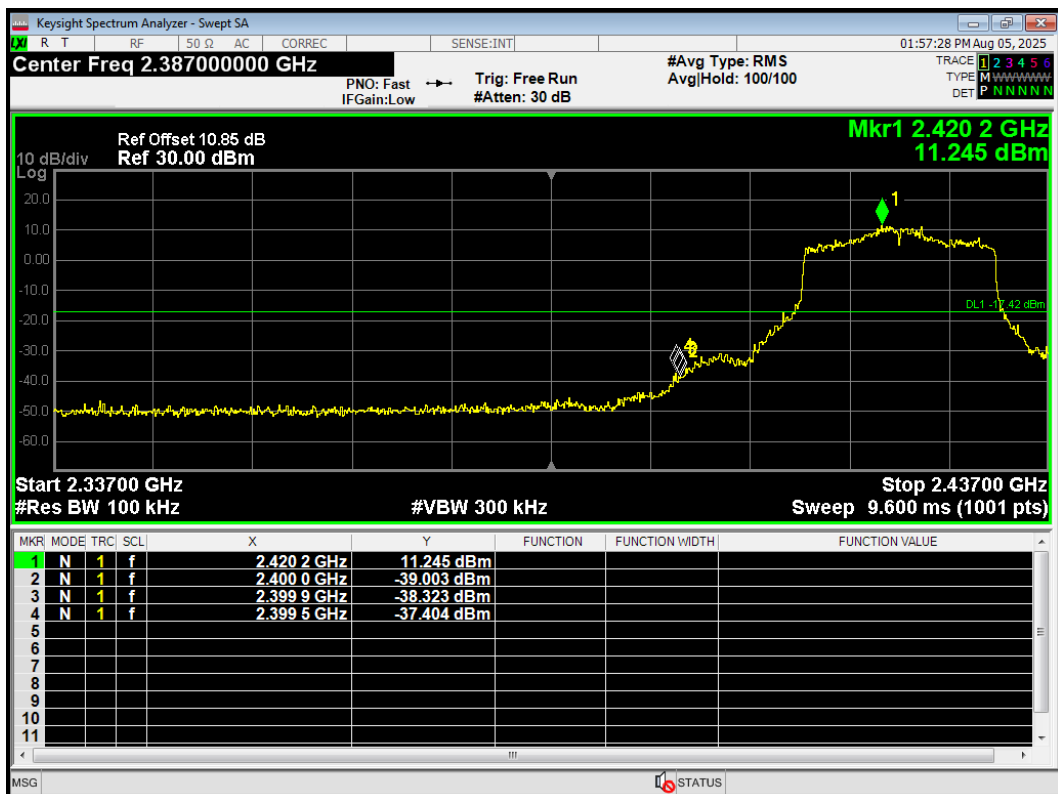
Band Edge 802.11ax(HE20) 2417MHz Emission



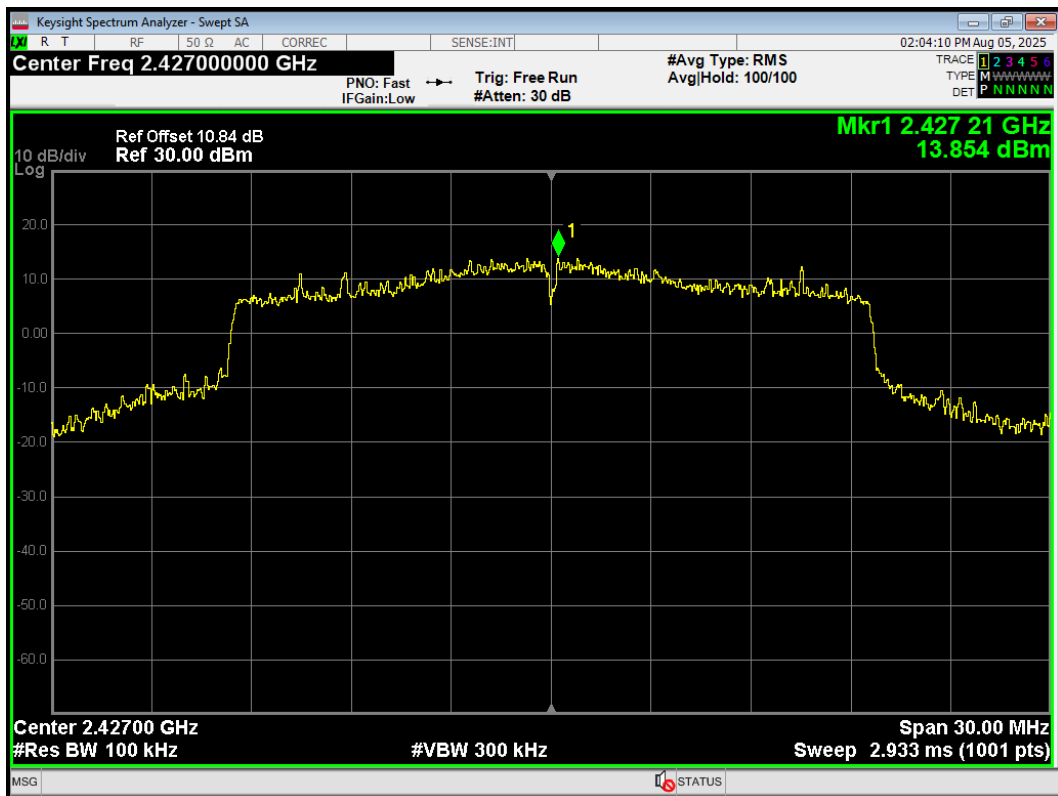
Band Edge 802.11ax(HE20) 2422MHz Ref



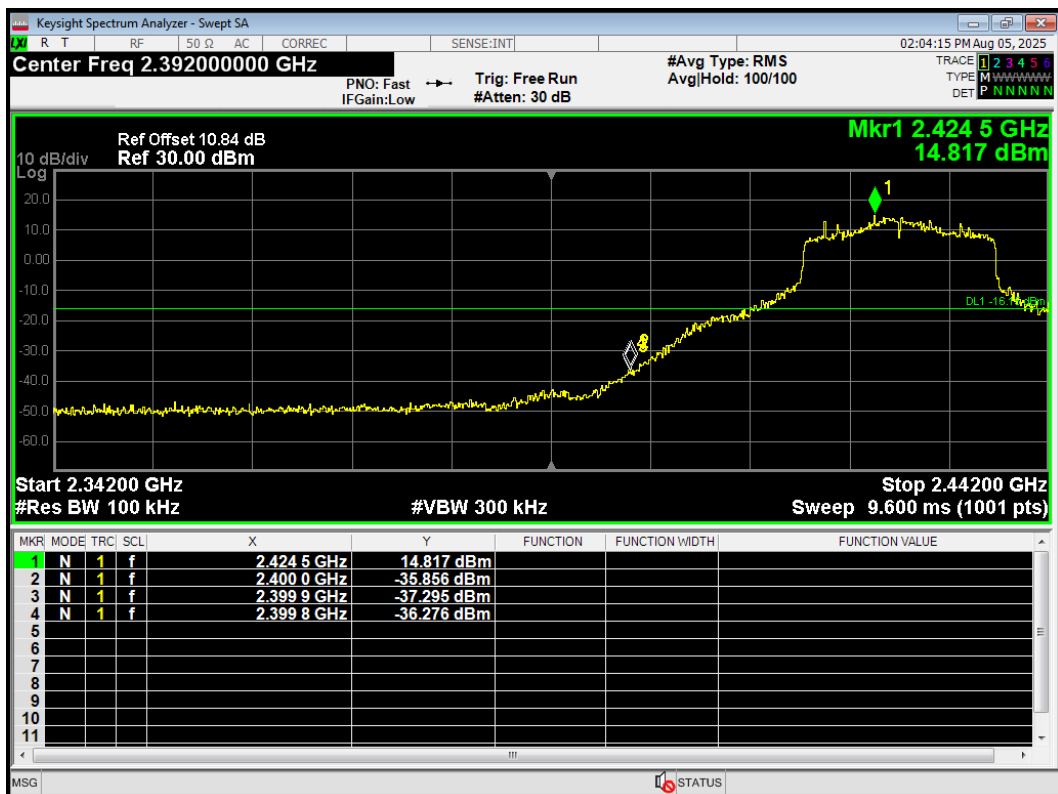
Band Edge 802.11ax(HE20) 2422MHz Emission



Band Edge 802.11ax(HE20) 2427MHz Ref



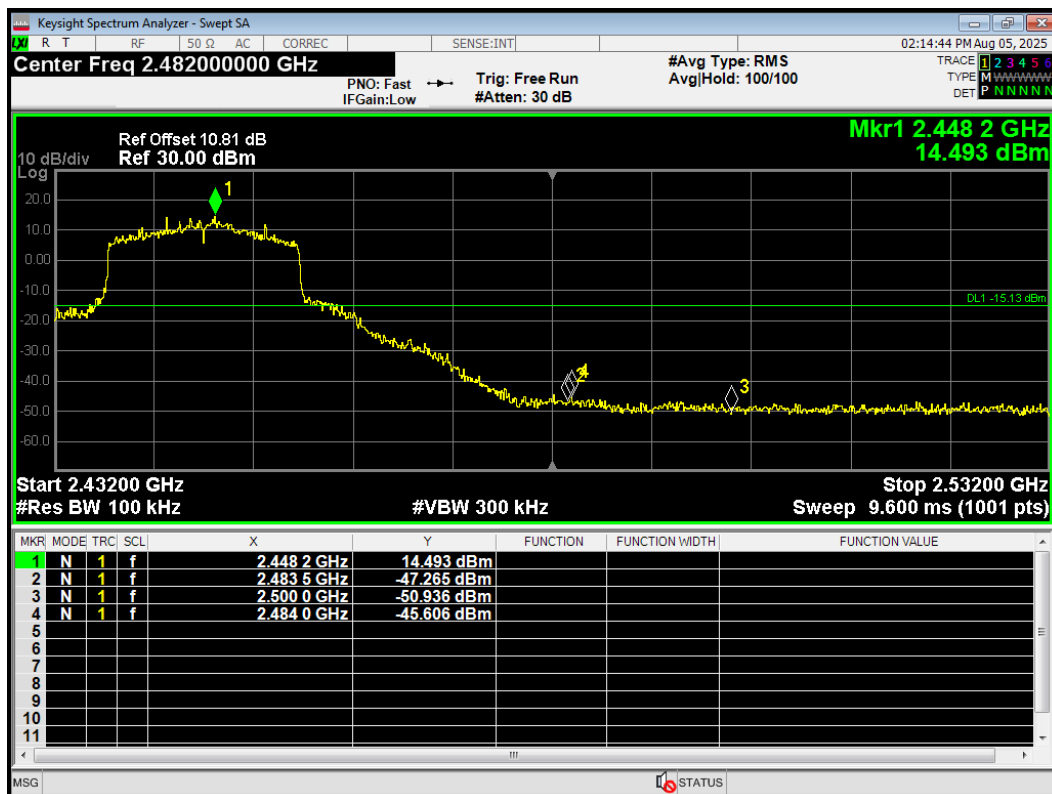
Band Edge 802.11ax(HE20) 2427MHz Emission



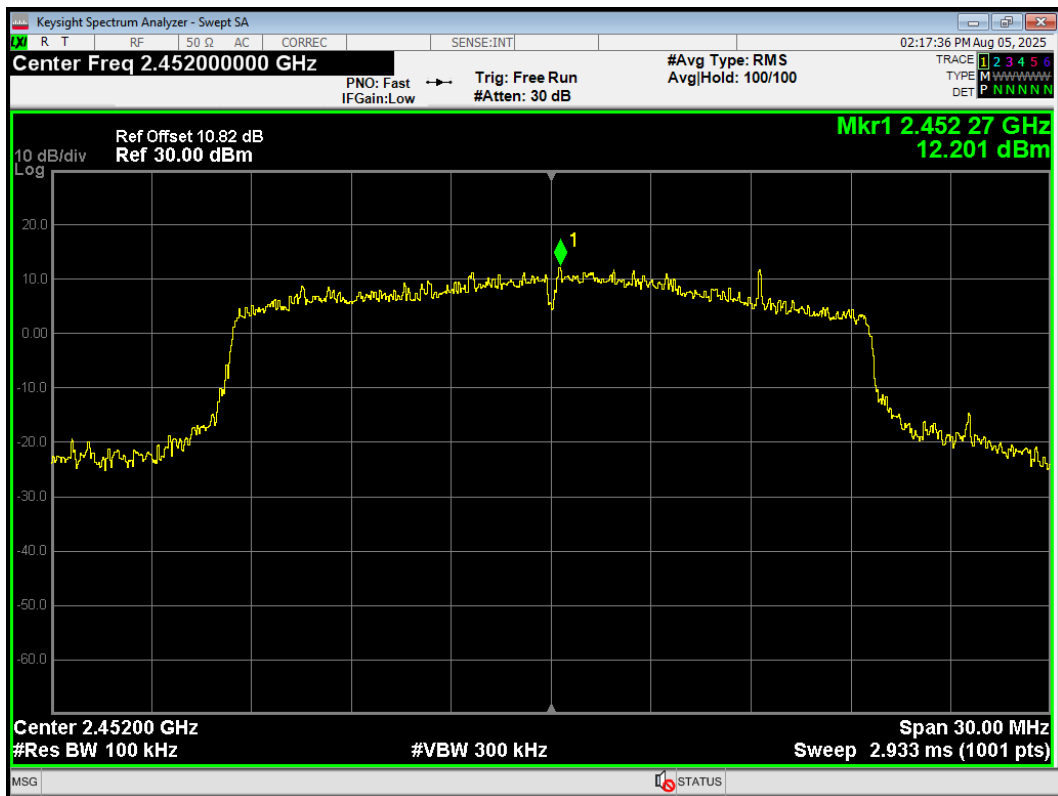
Band Edge 802.11ax(HE20) 2447MHz Ref



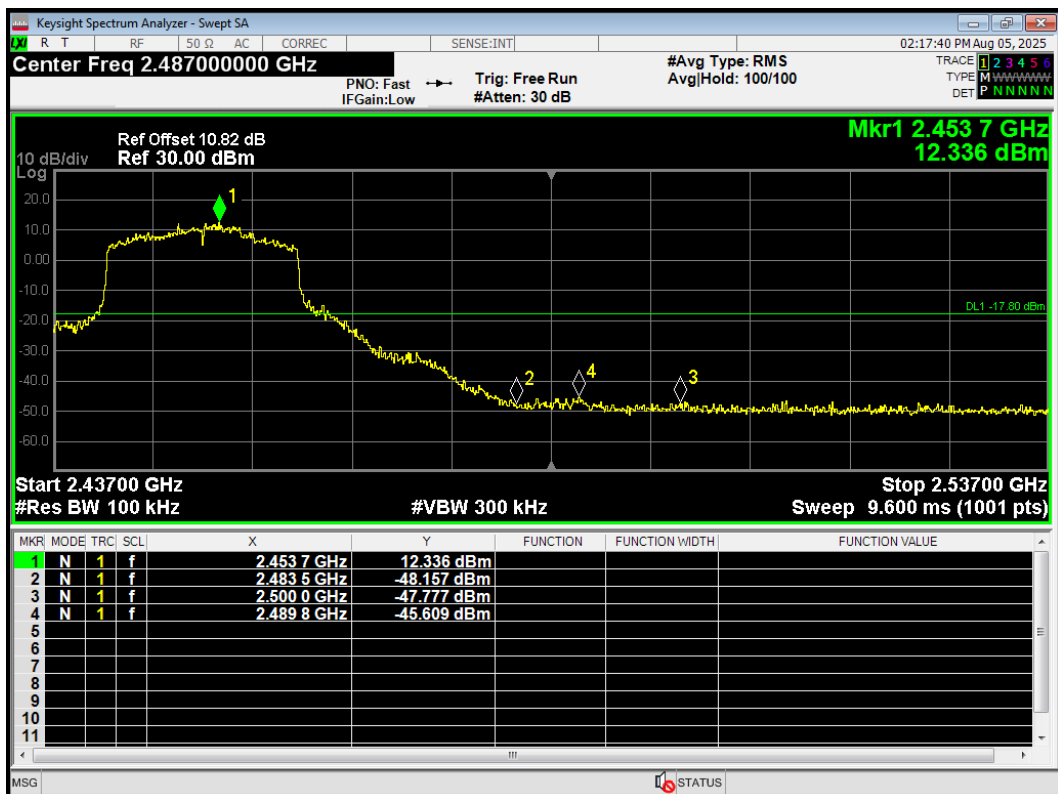
Band Edge 802.11ax(HE20) 2447MHz Emission



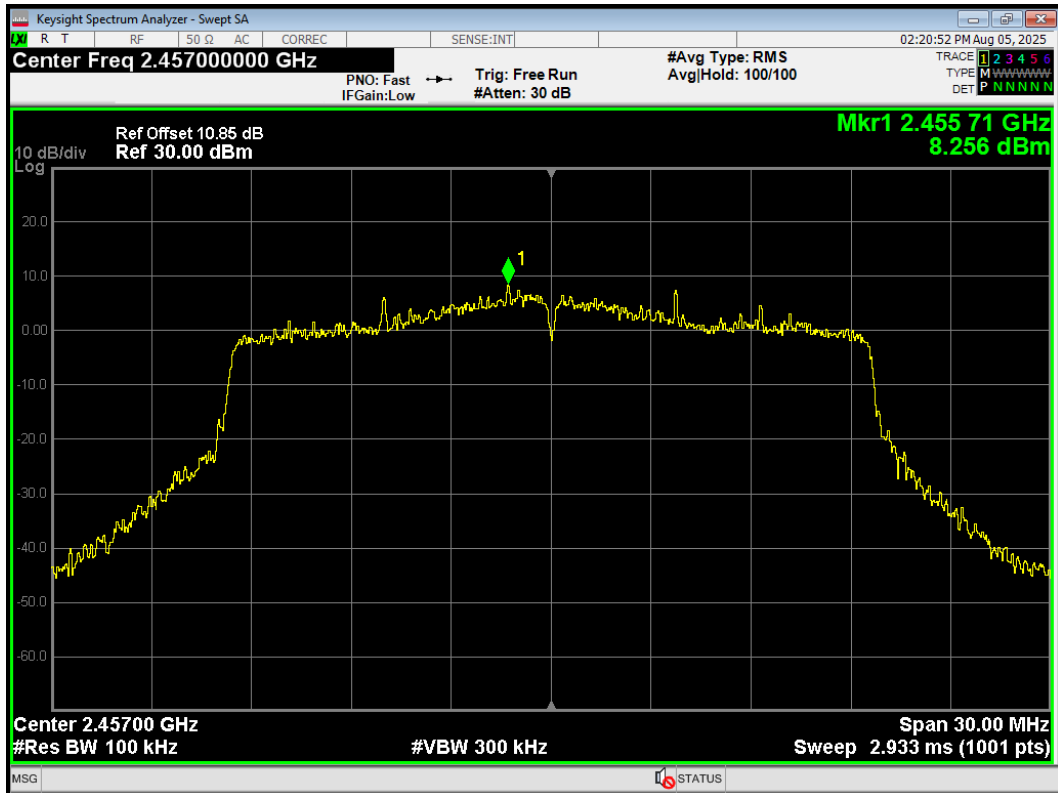
Band Edge 802.11ax(HE20) 2452MHz Ref



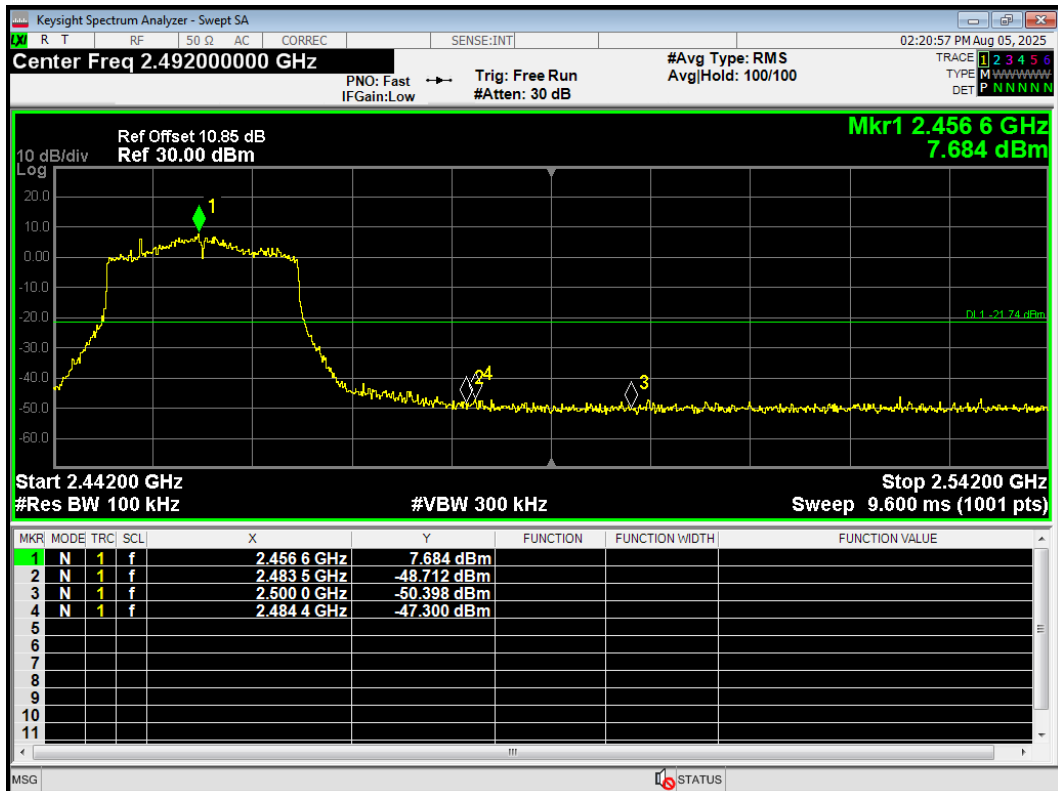
Band Edge 802.11ax(HE20) 2452MHz Emission



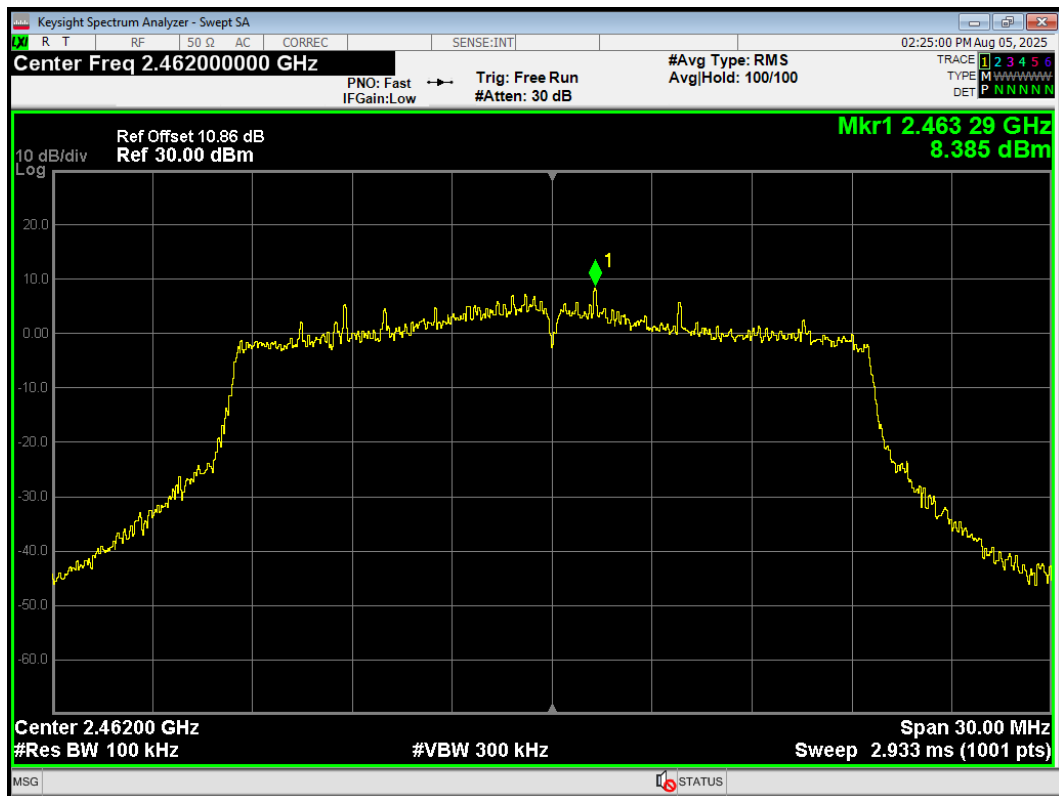
Band Edge 802.11ax(HE20) 2457MHz Ref



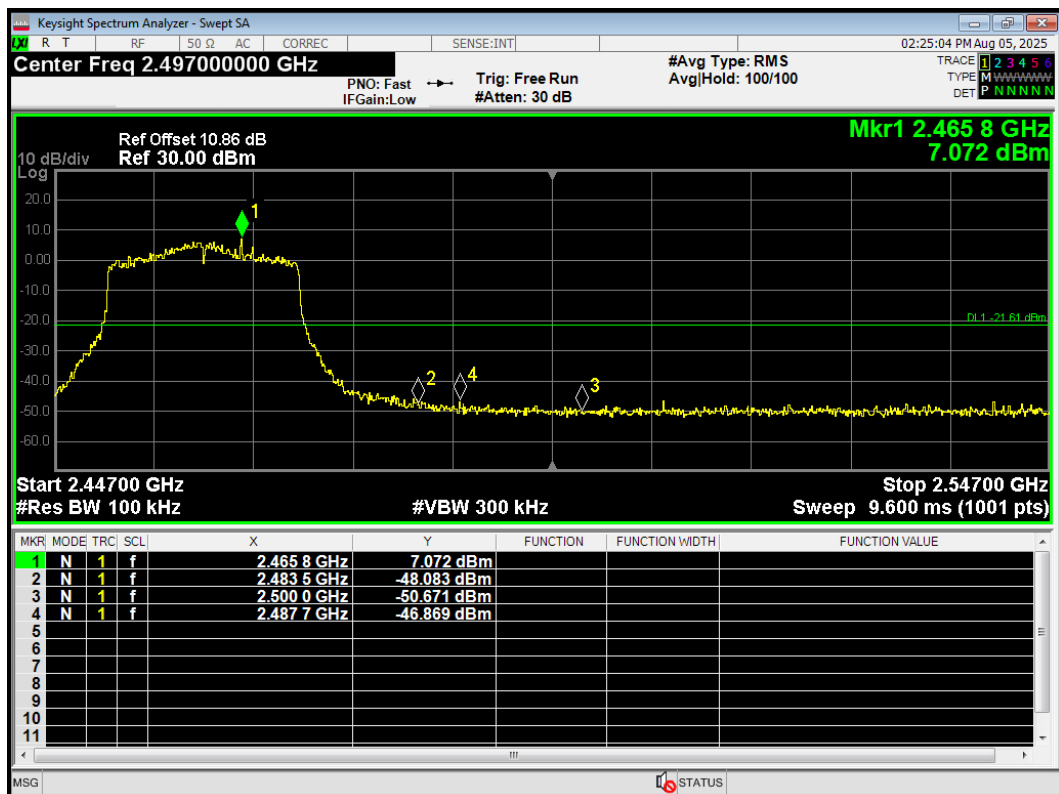
Band Edge 802.11ax(HE20) 2457MHz Emission



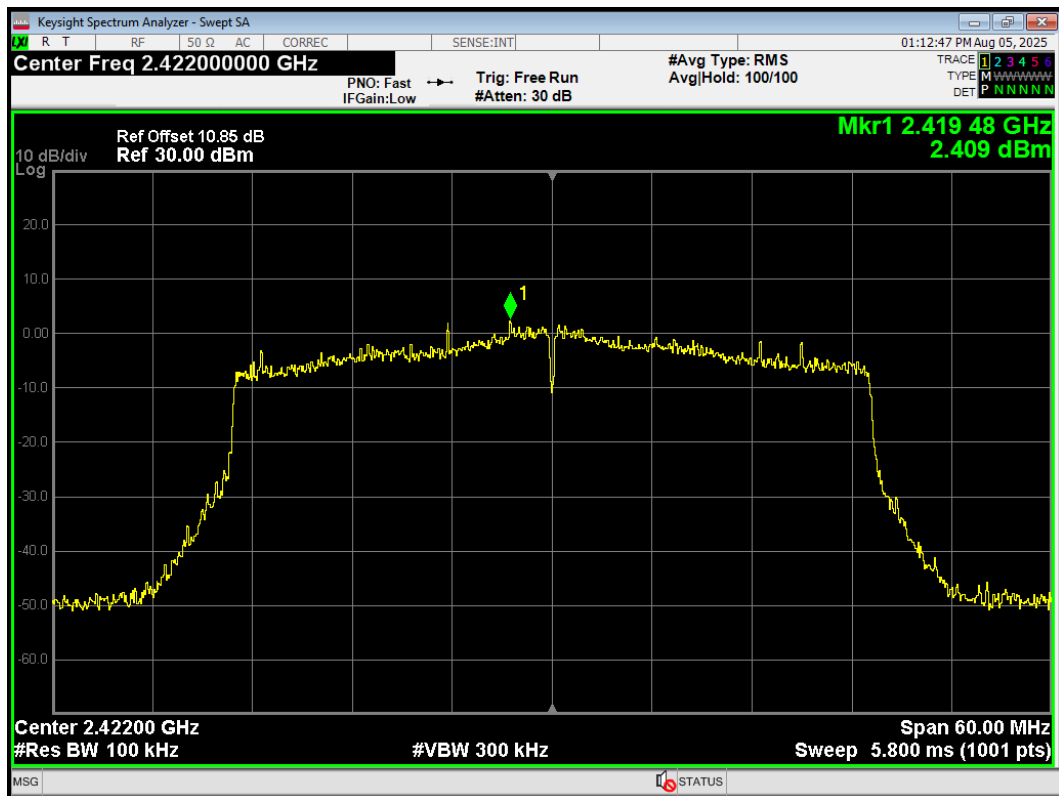
Band Edge 802.11ax(HE20) 2462MHz Ref



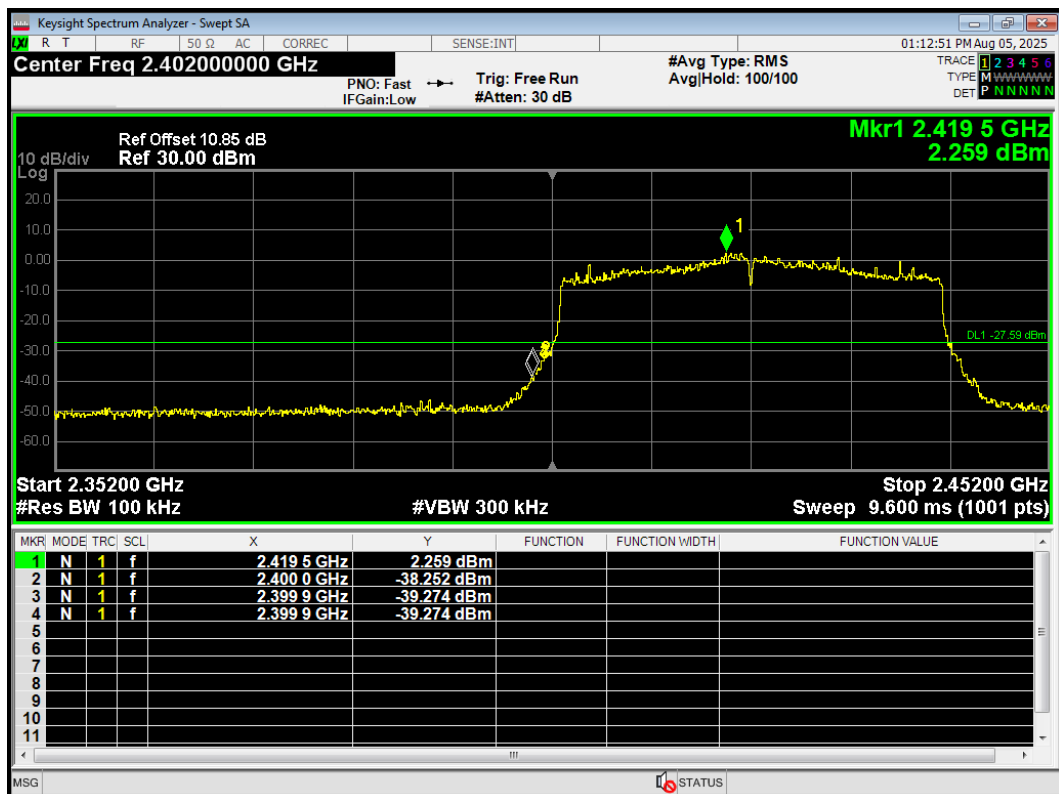
Band Edge 802.11ax(HE20) 2462MHz Emission



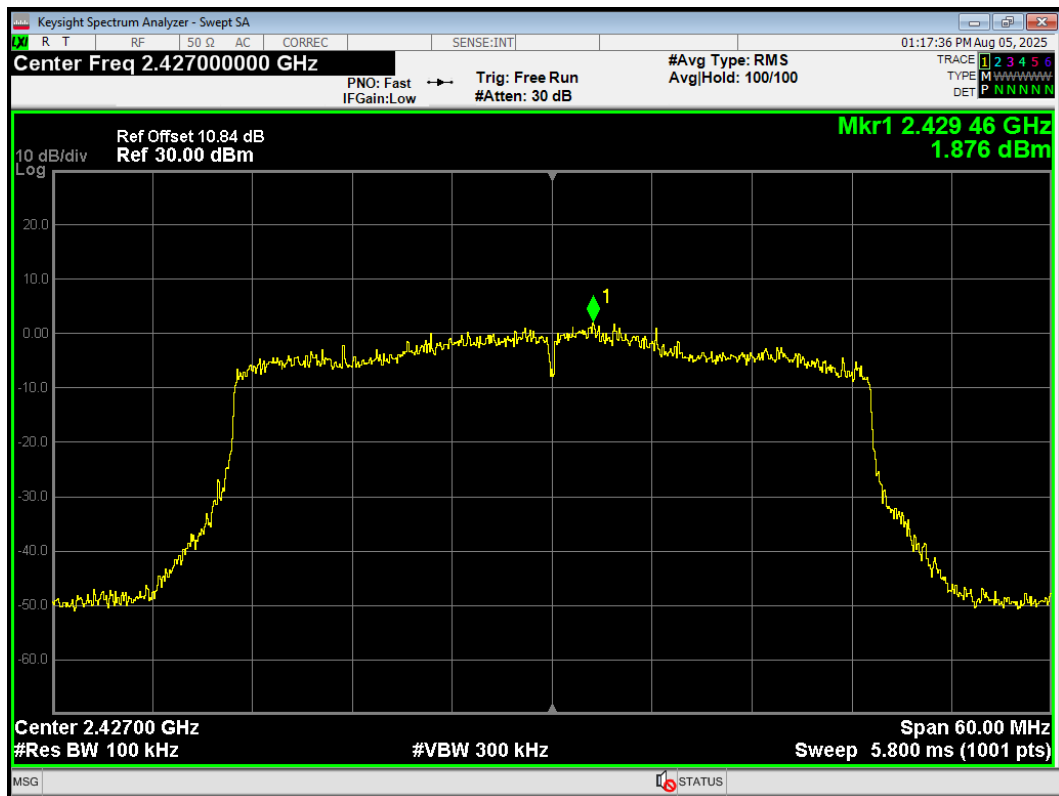
Band Edge 802.11ax(HE40) 2422MHz Ref



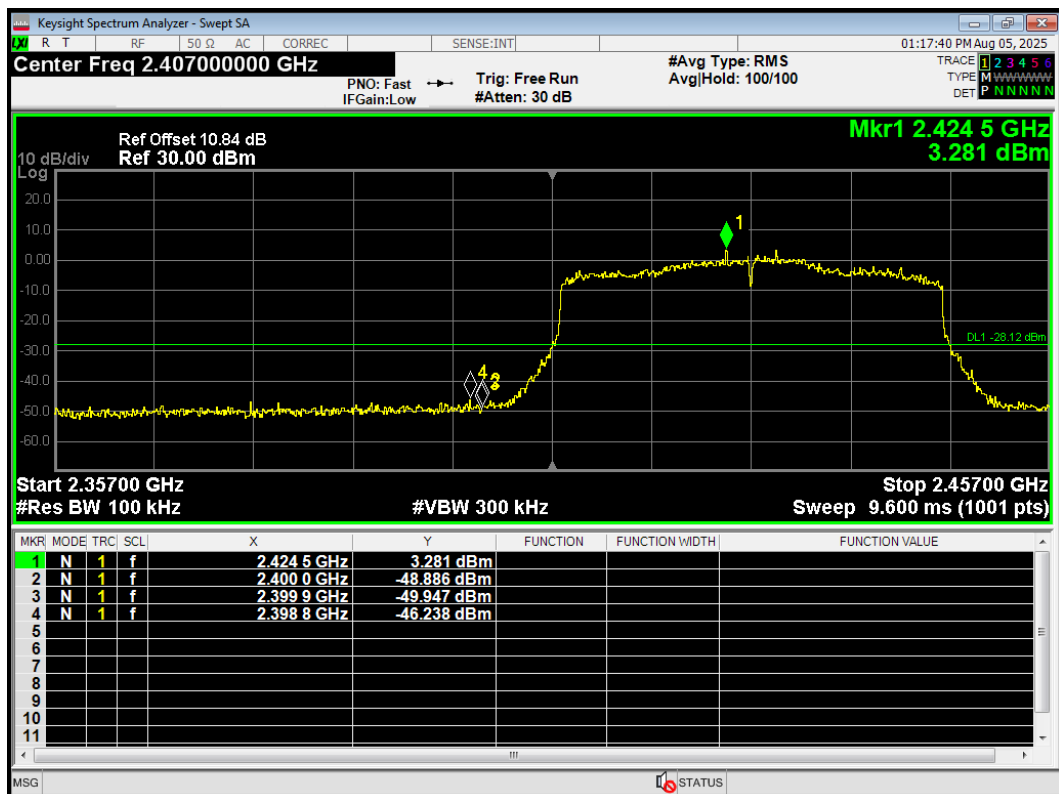
Band Edge 802.11ax(HE40) 2422MHz Emission



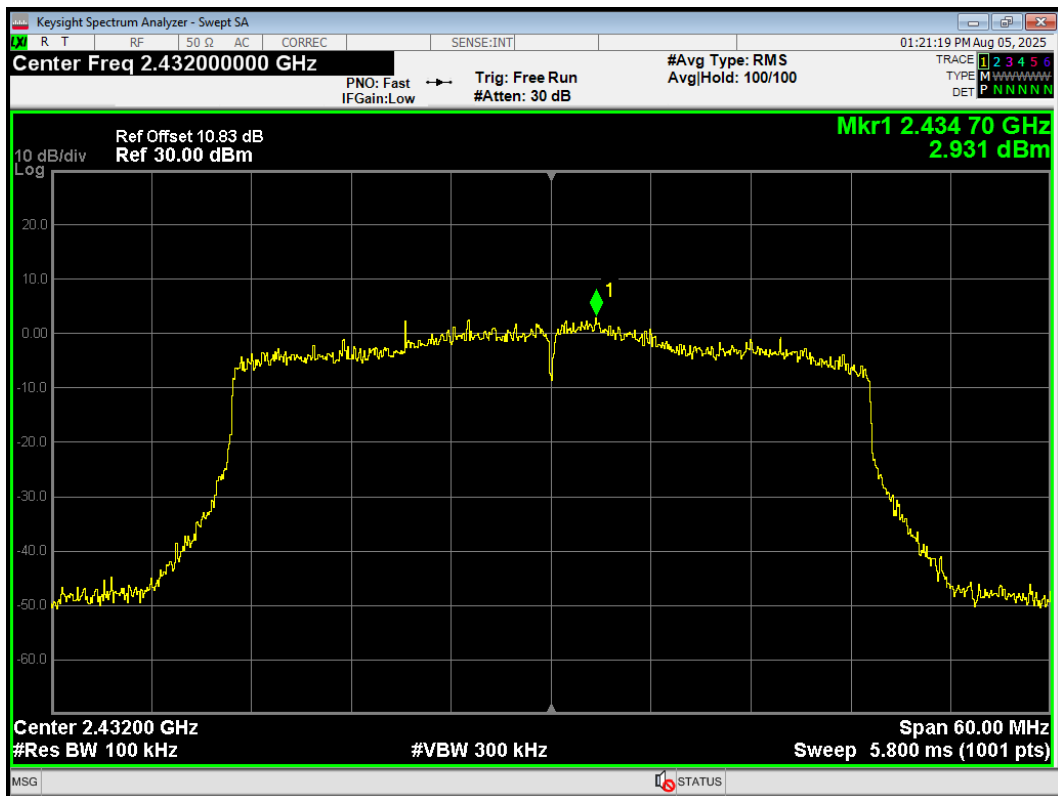
Band Edge 802.11ax(HE40) 2427MHz Ref



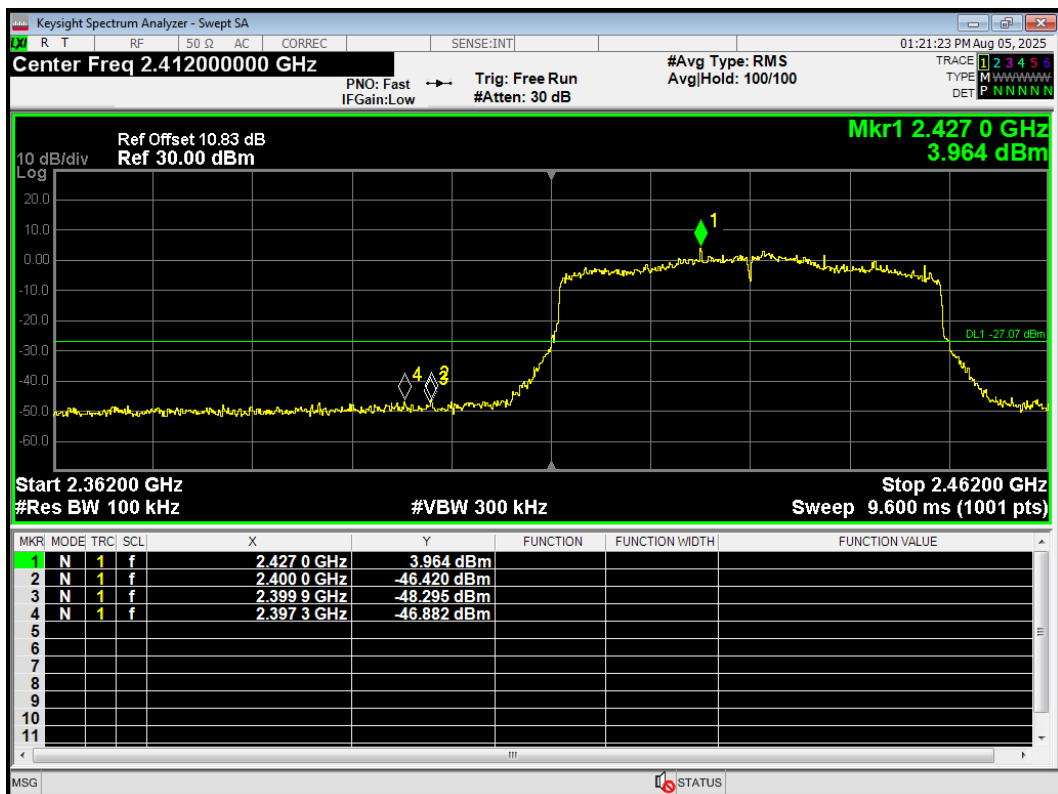
Band Edge 802.11ax(HE40) 2427MHz Emission



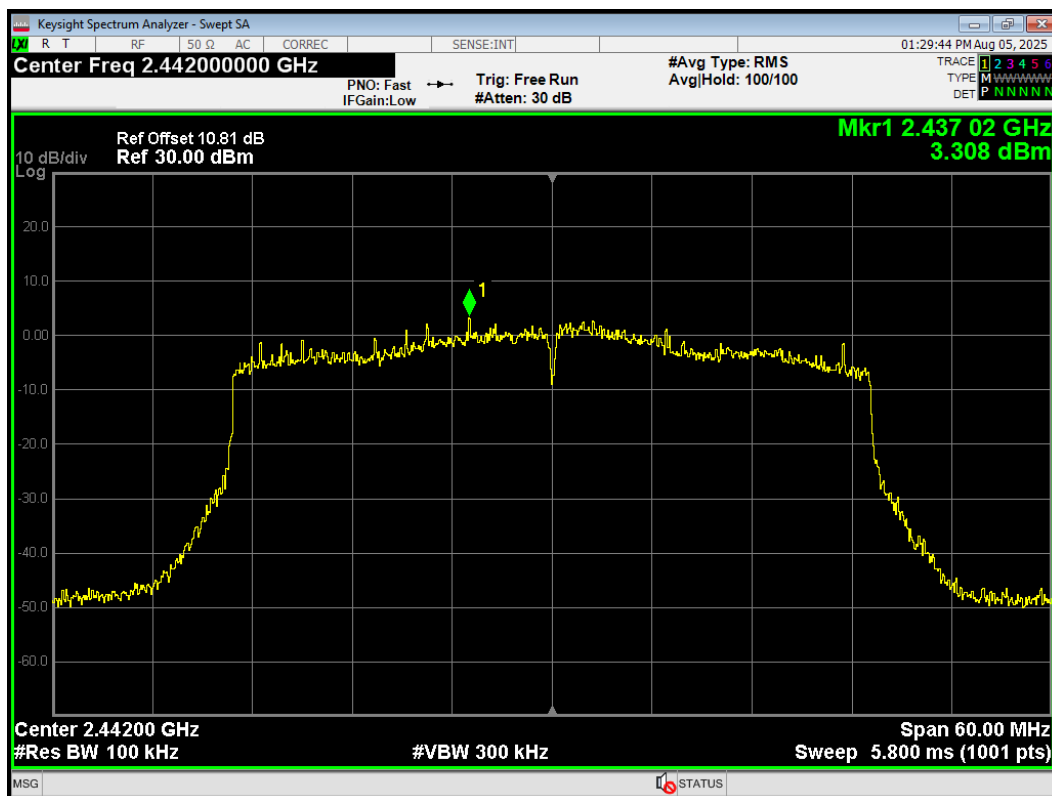
Band Edge 802.11ax(HE40) 2432MHz Ref



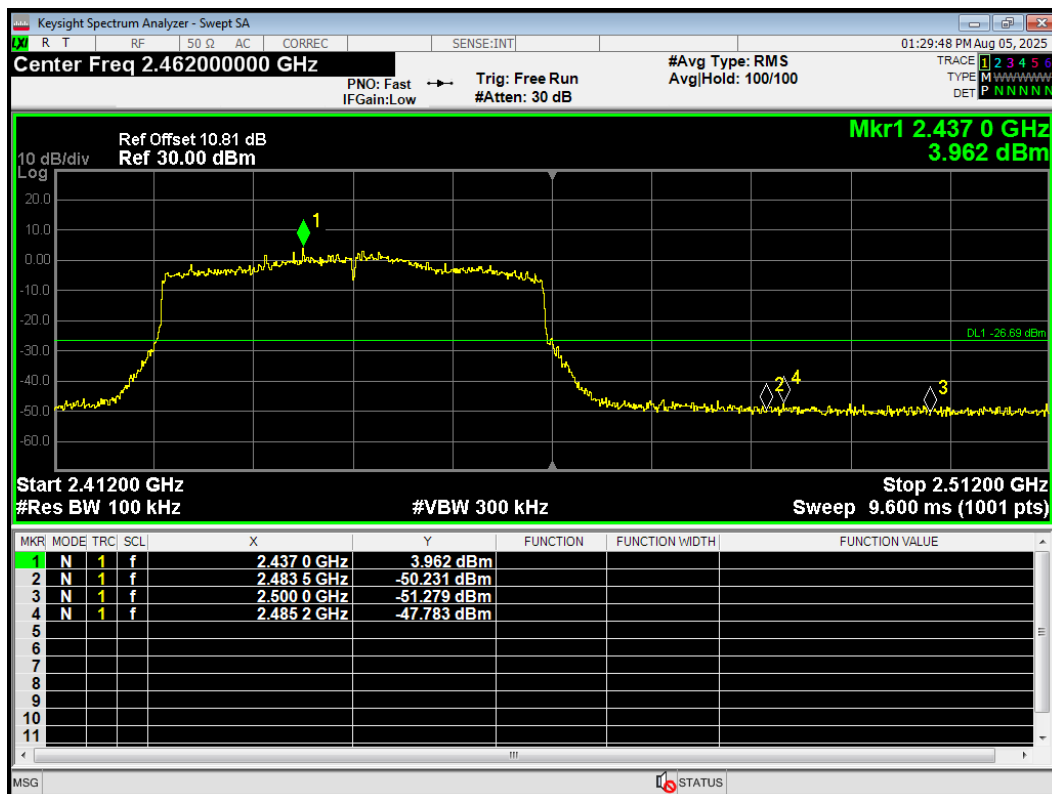
Band Edge 802.11ax(HE40) 2432MHz Emission



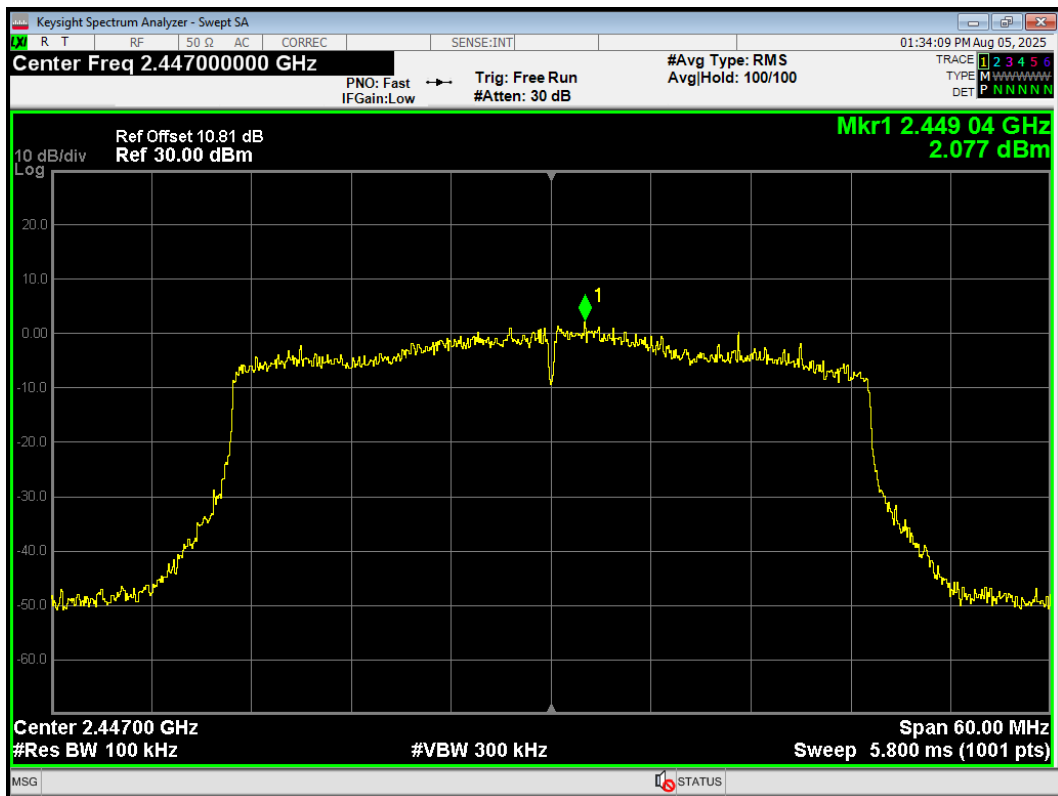
Band Edge 802.11ax(HE40) 2442MHz Ref



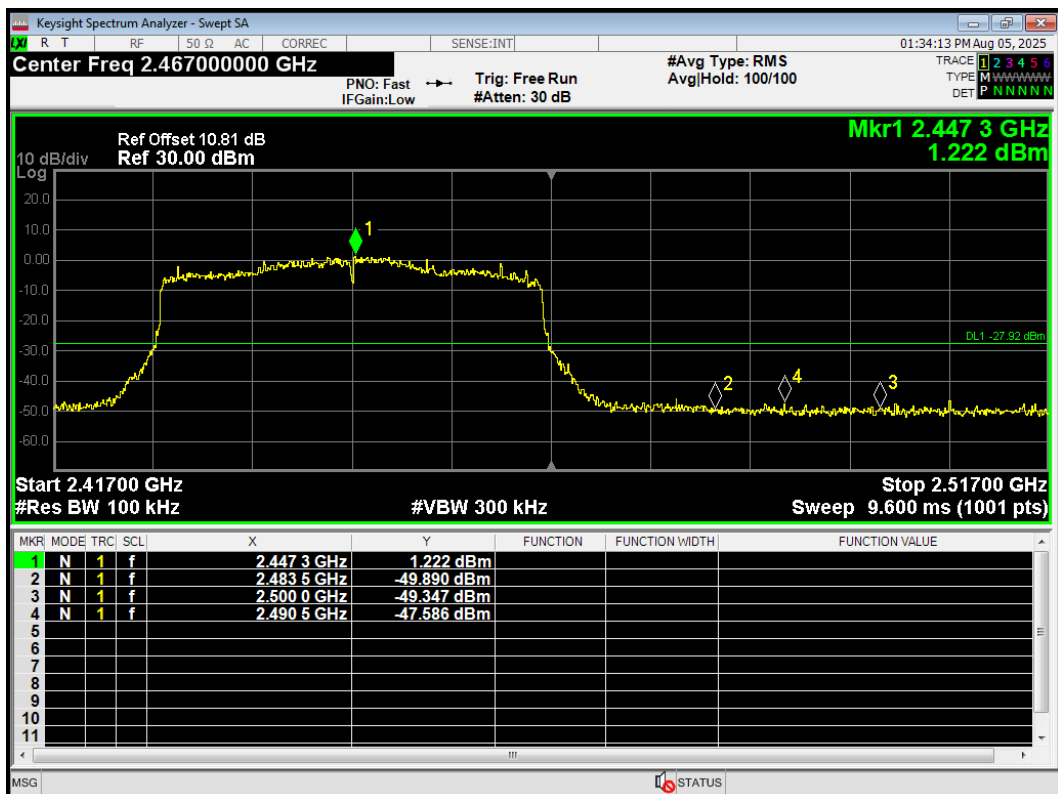
Band Edge 802.11ax(HE40) 2442MHz Emission



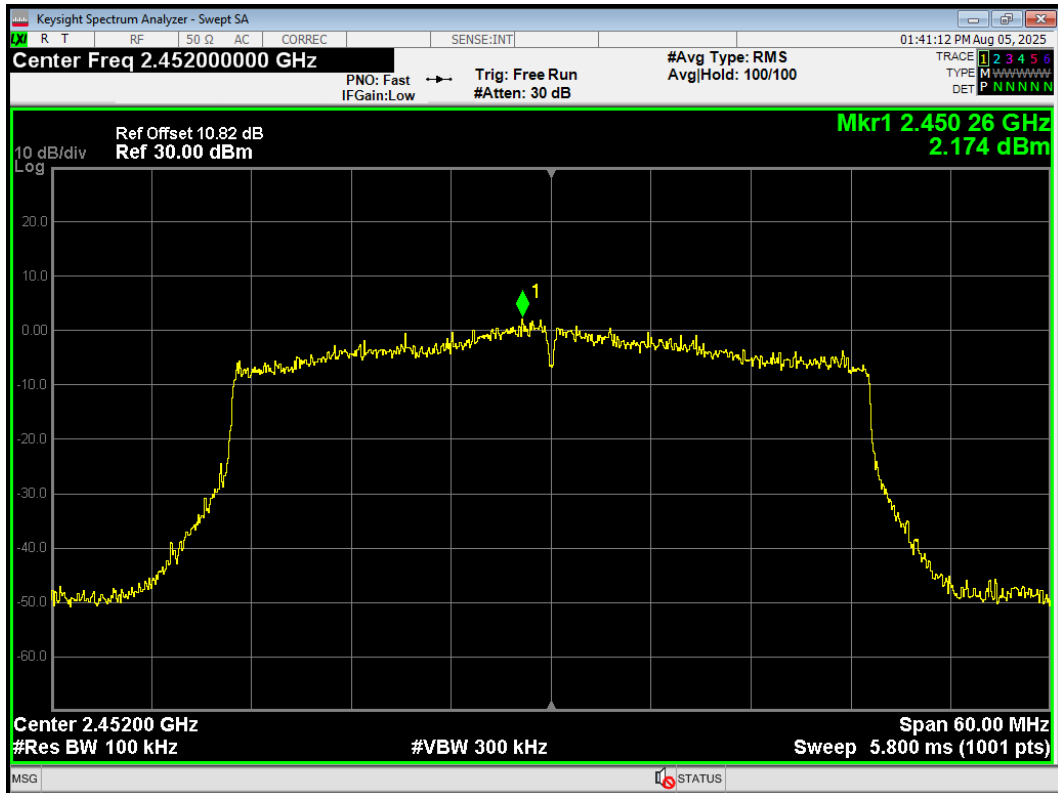
Band Edge 802.11ax(HE40) 2447MHz Ref



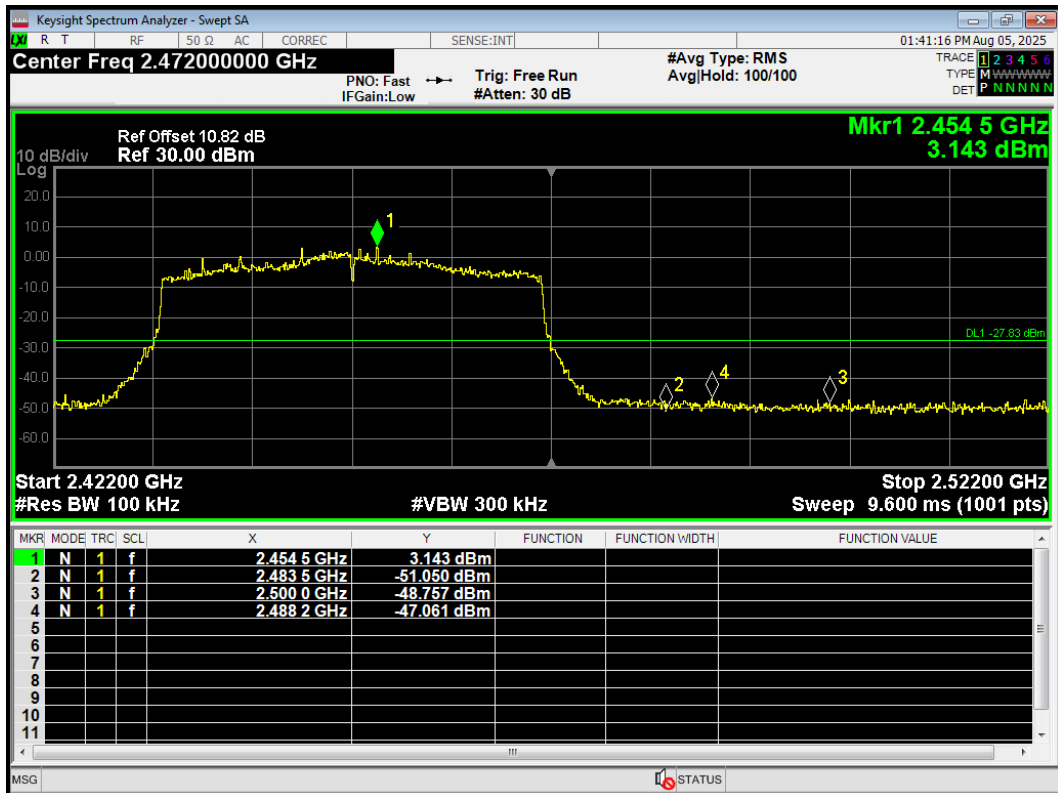
Band Edge 802.11ax(HE40) 2447MHz Emission



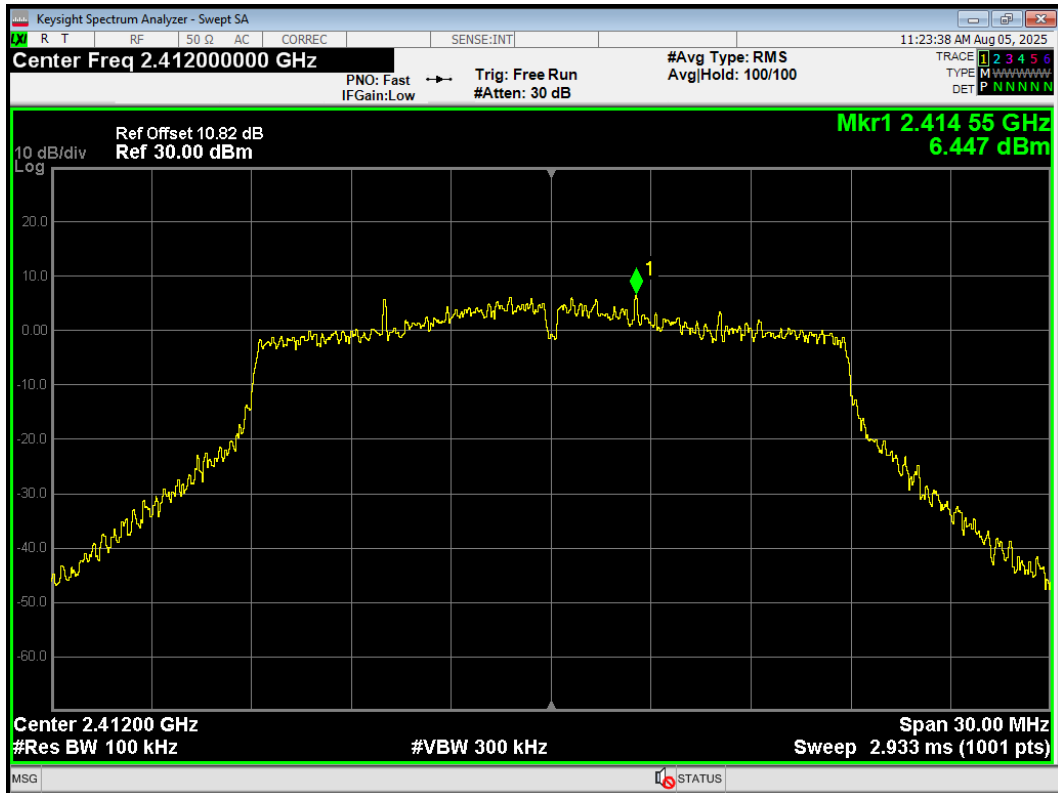
Band Edge 802.11ax(HE40) 2452MHz Ref



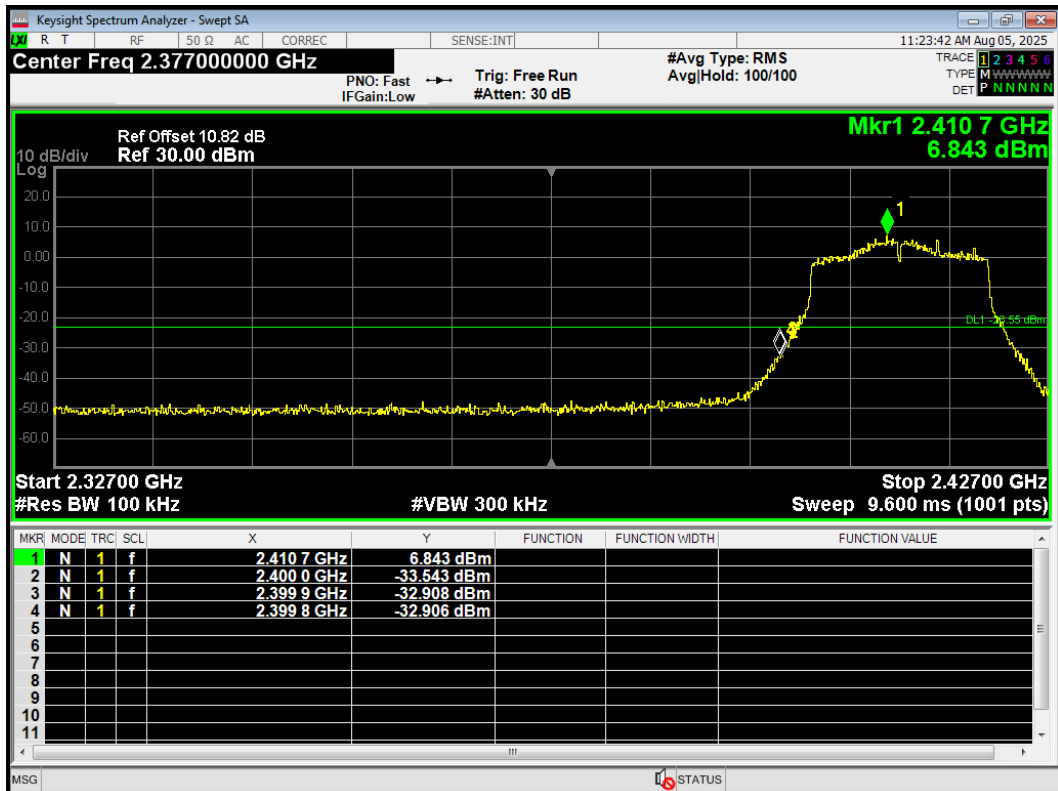
Band Edge 802.11ax(HE40) 2452MHz Emission



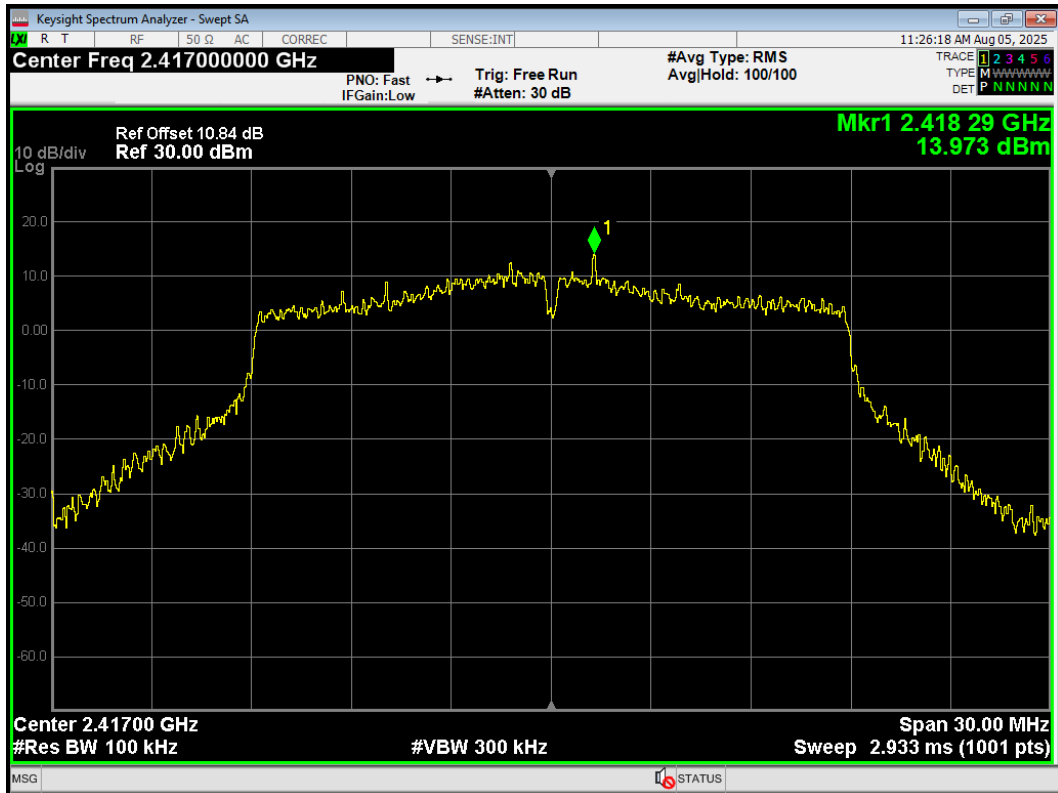
Band Edge 802.11n(HT20) 2412MHz Ref



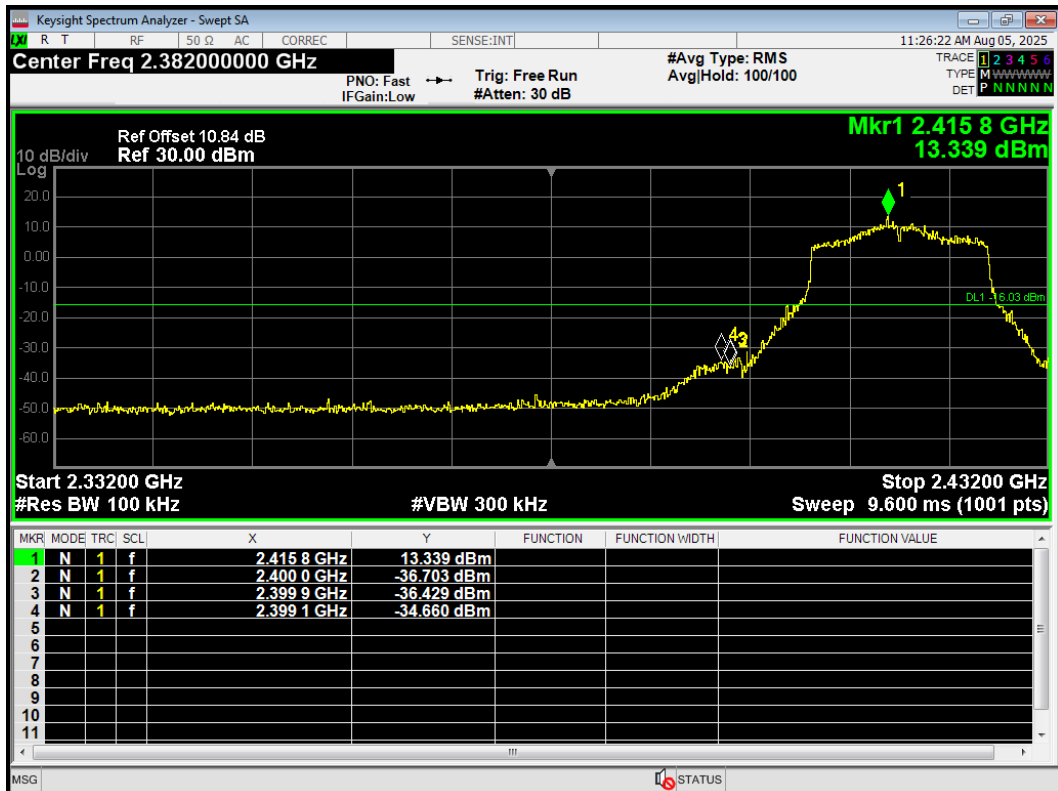
Band Edge 802.11n(HT20) 2412MHz Emission



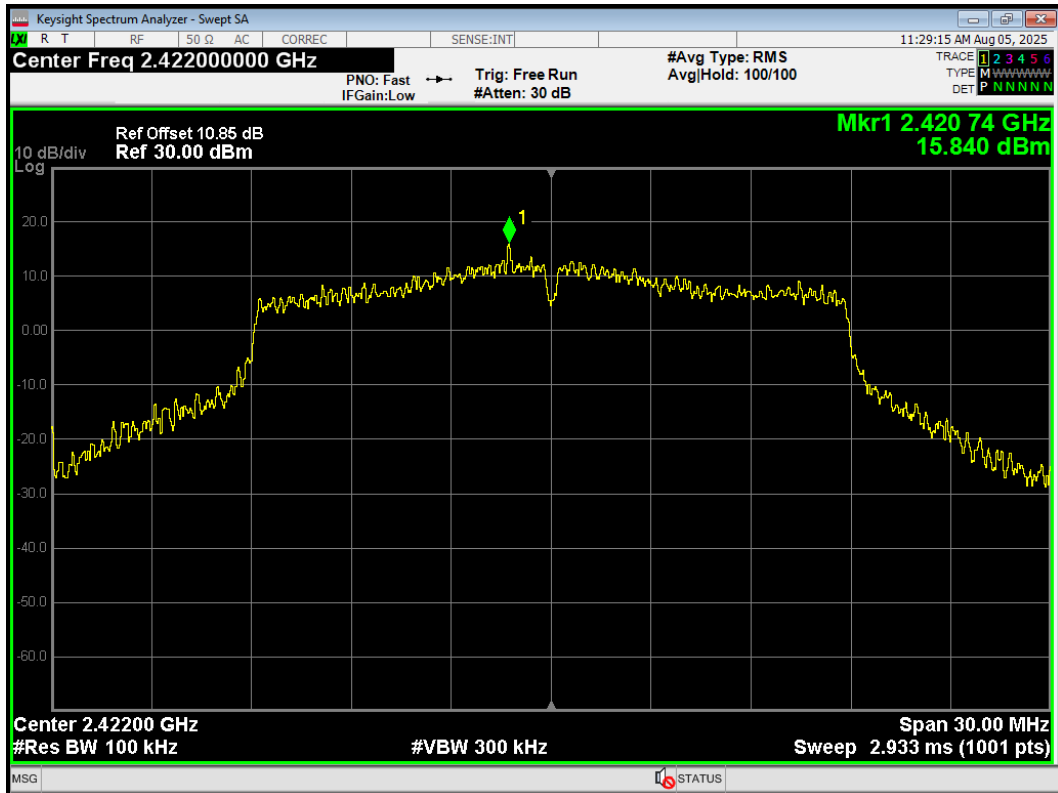
Band Edge 802.11n(HT20) 2417MHz Ref



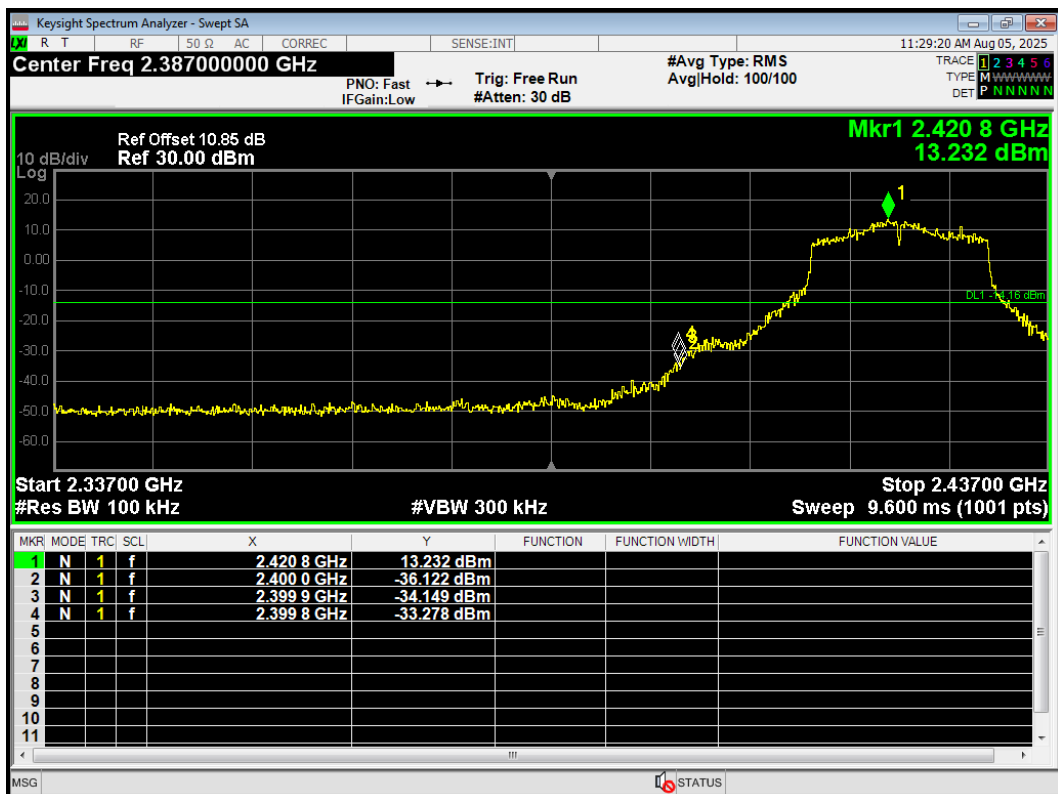
Band Edge 802.11n(HT20) 2417MHz Emission



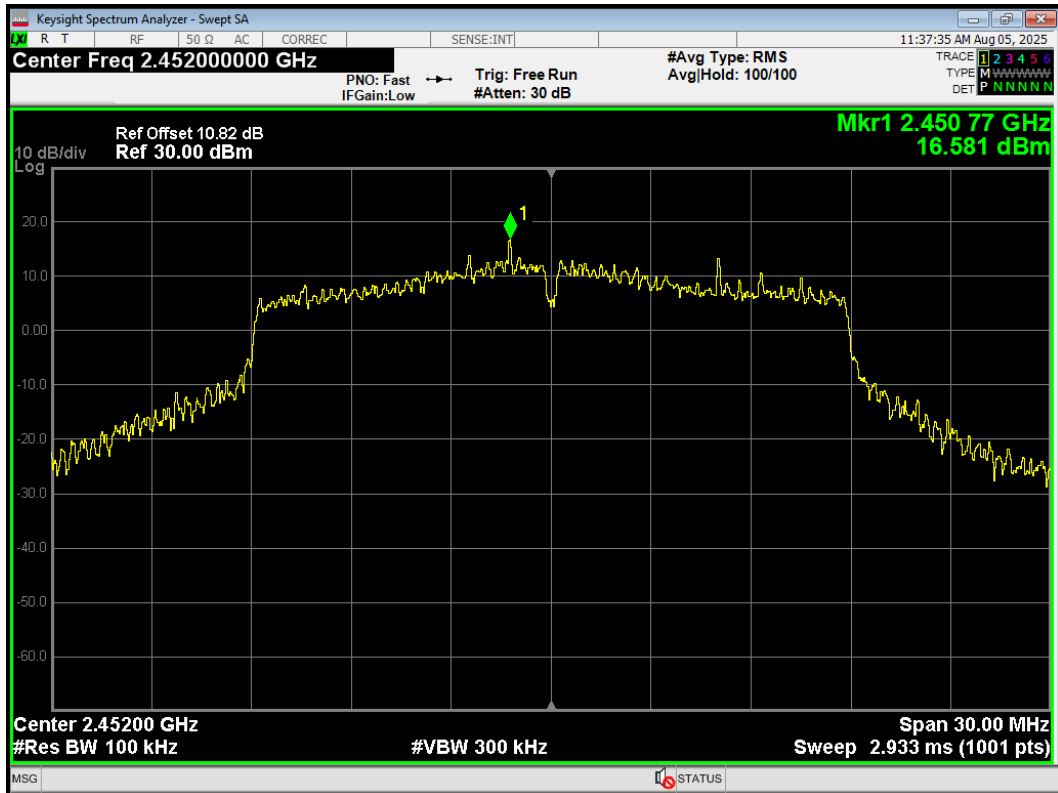
Band Edge 802.11n(HT20) 2422MHz Ref



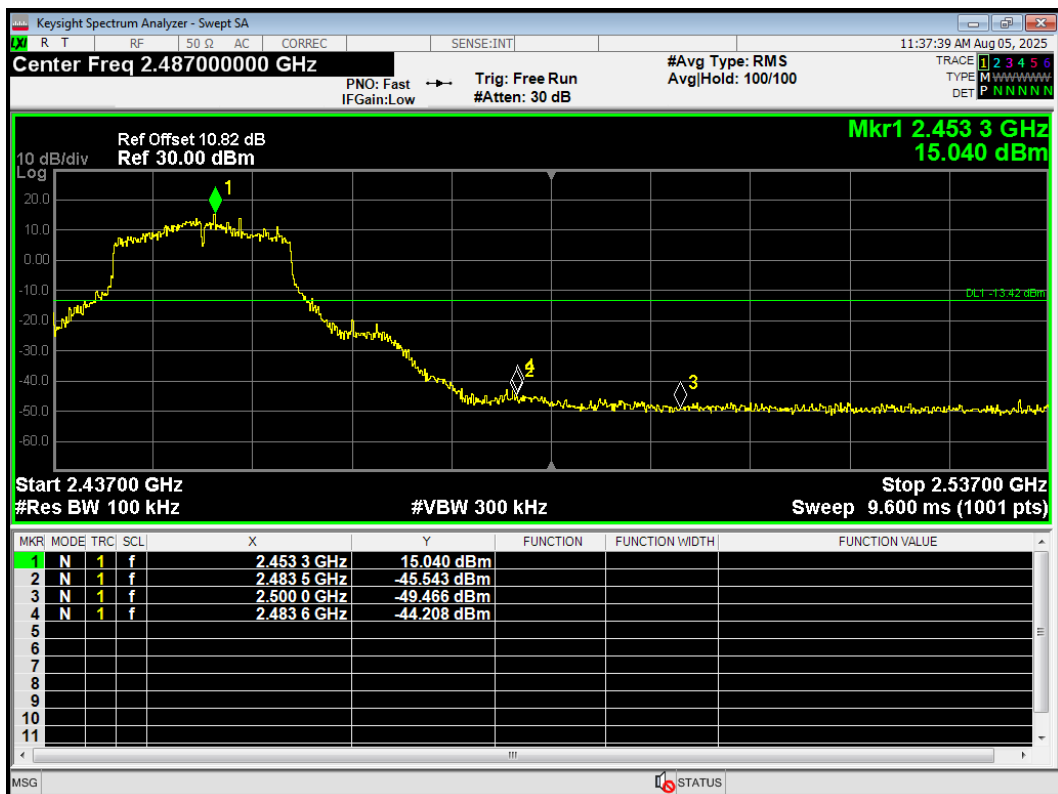
Band Edge 802.11n(HT20) 2422MHz Emission



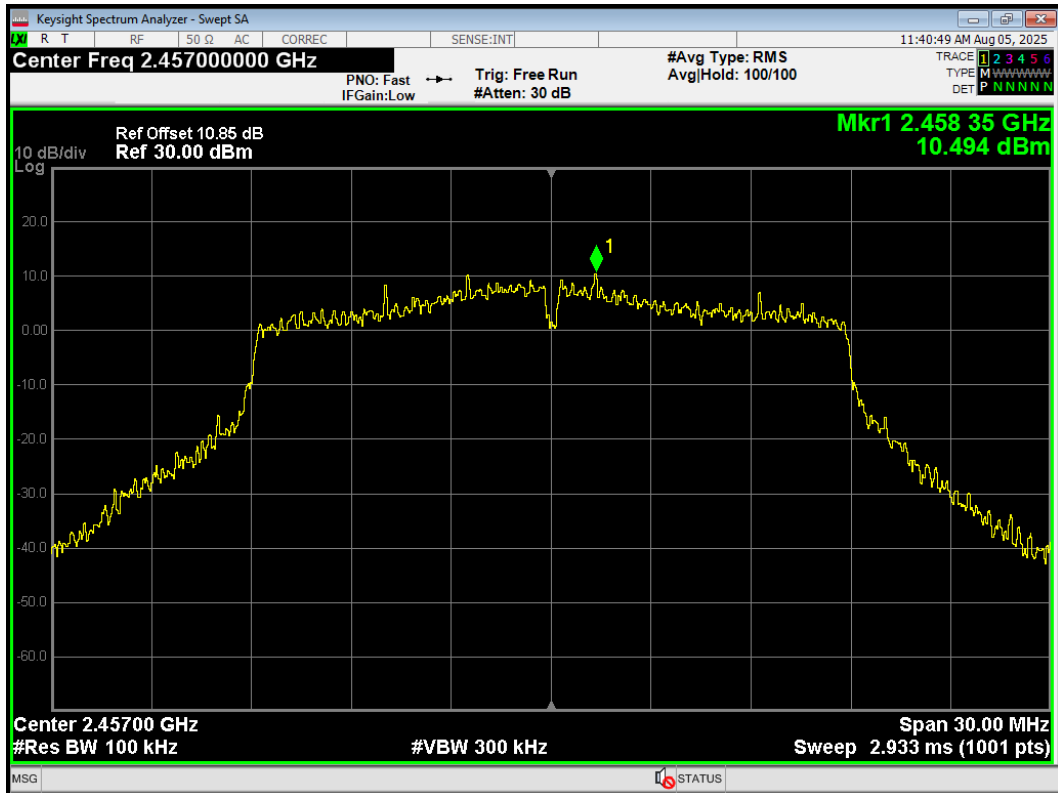
Band Edge 802.11n(HT20) 2452MHz Ref



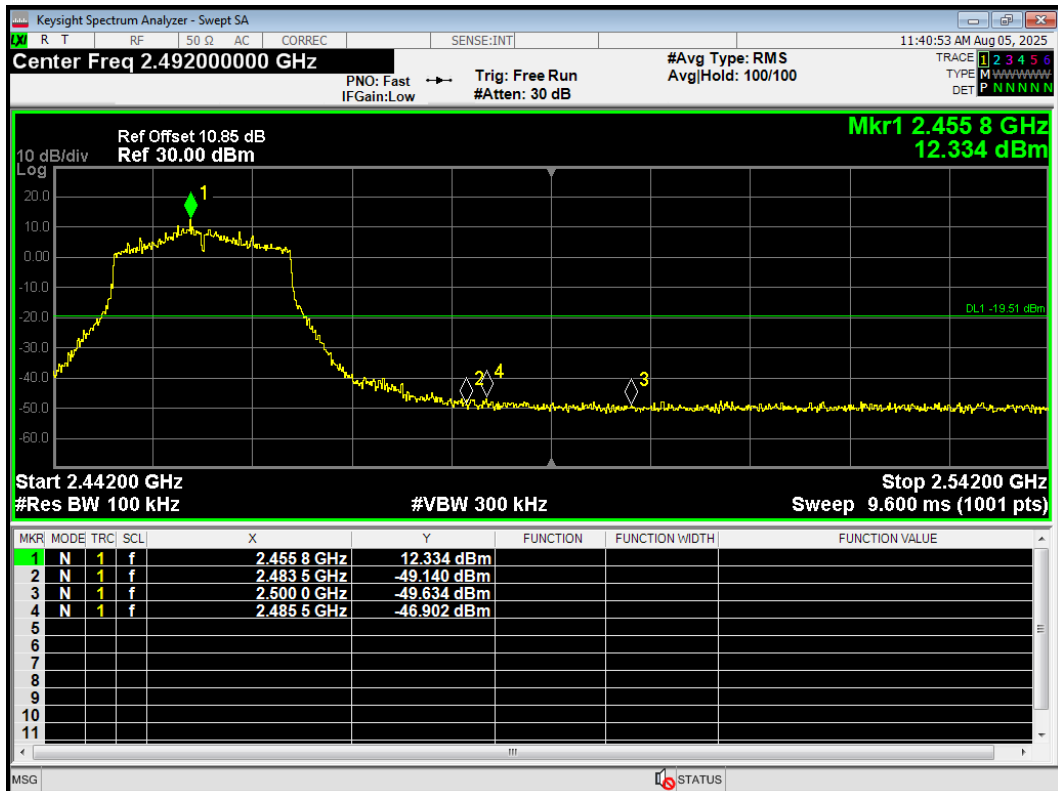
Band Edge 802.11n(HT20) 2452MHz Emission



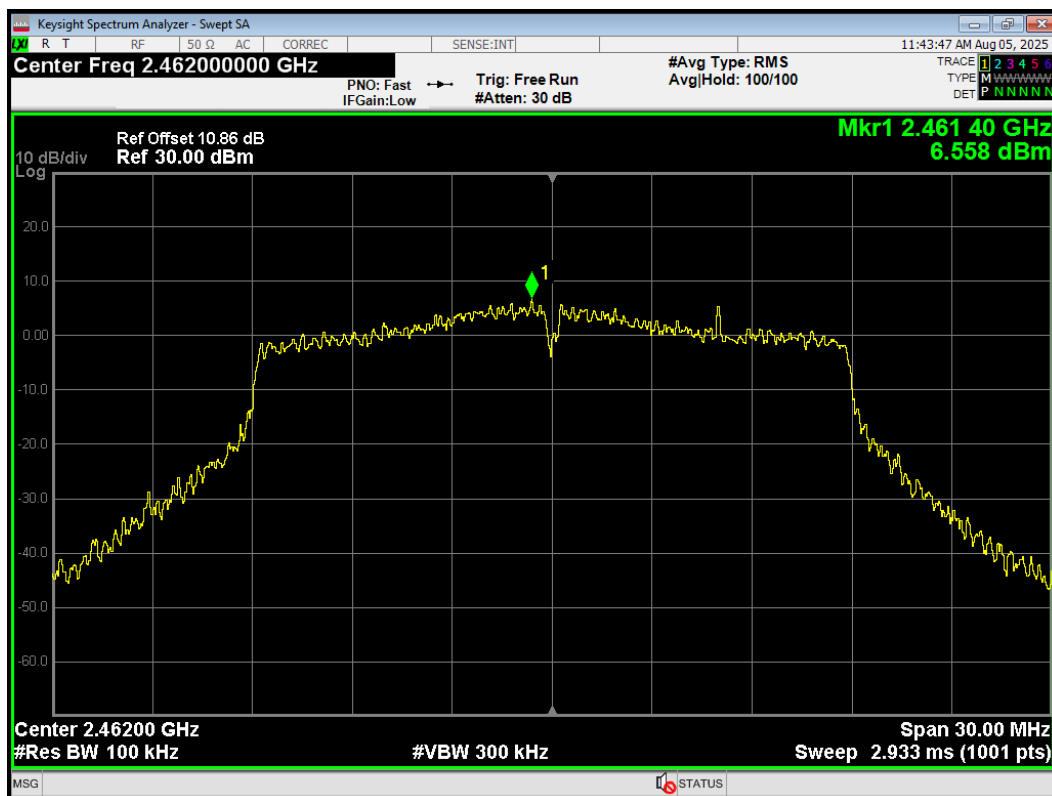
Band Edge 802.11n(HT20) 2457MHz Ref



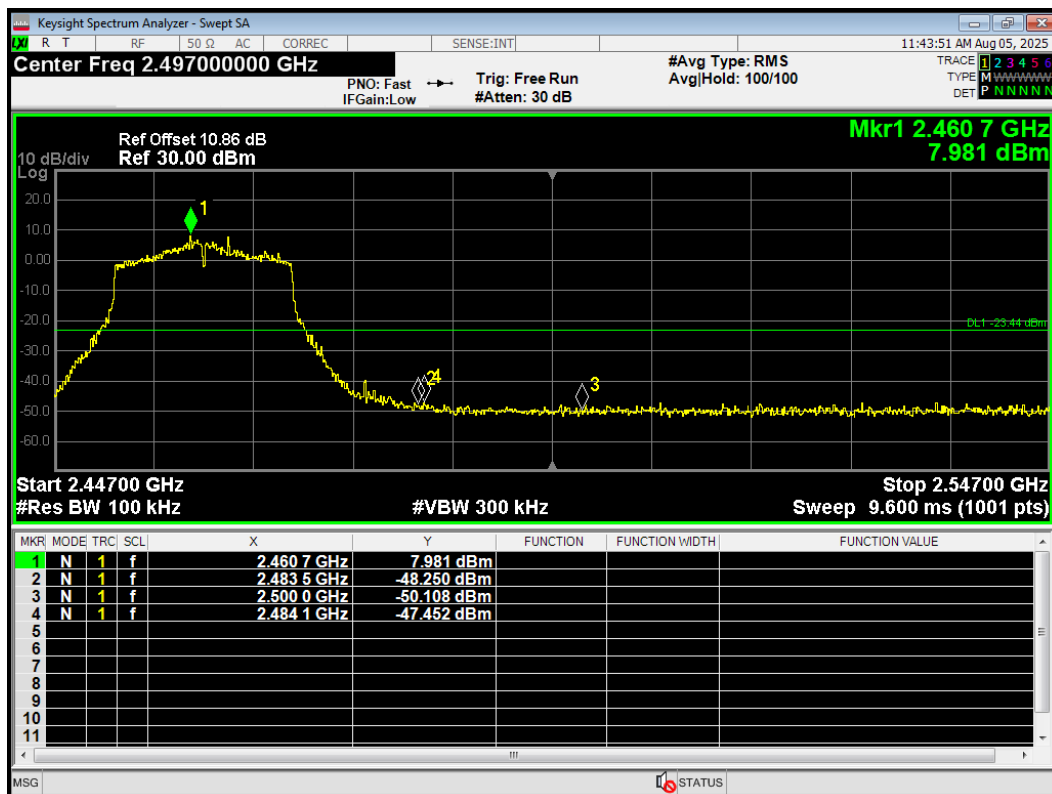
Band Edge 802.11n(HT20) 2457MHz Emission



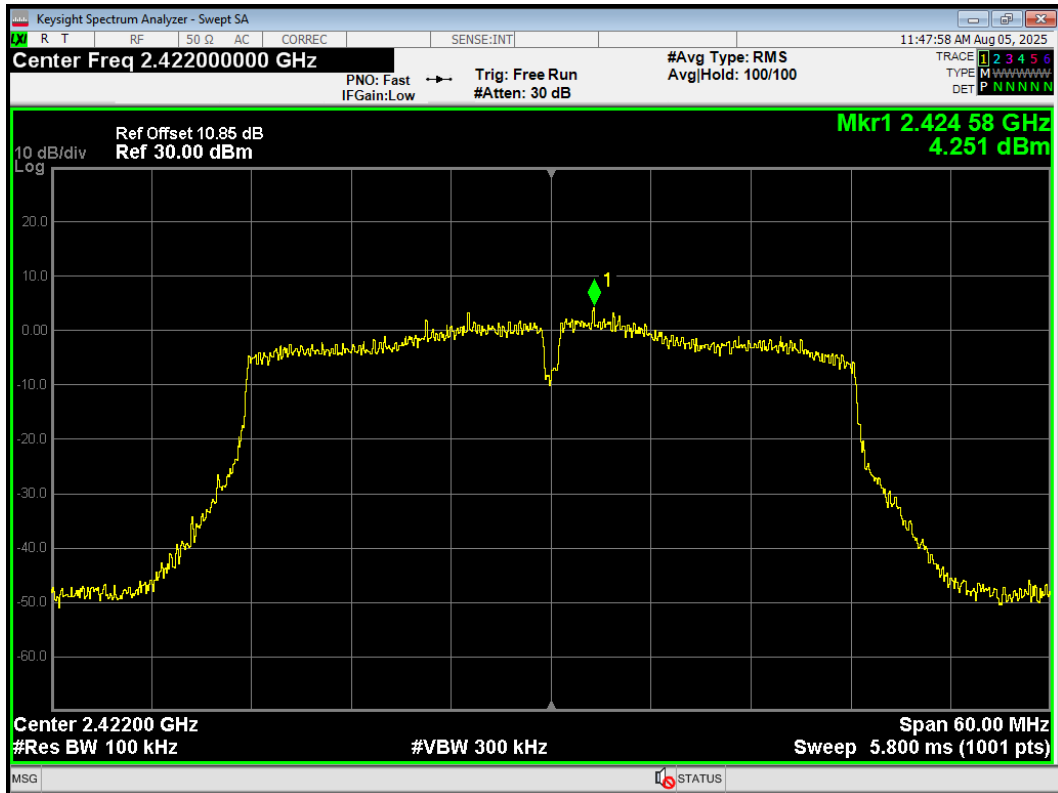
Band Edge 802.11n(HT20) 2462MHz Ref



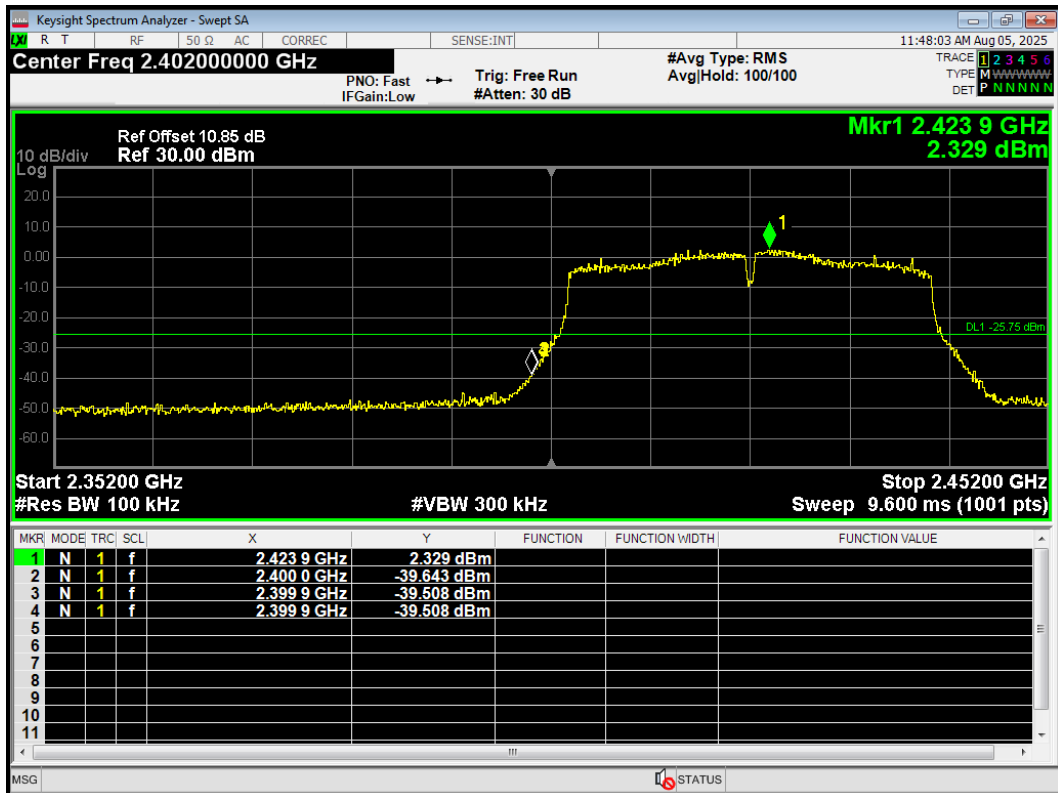
Band Edge 802.11n(HT20) 2462MHz Emission



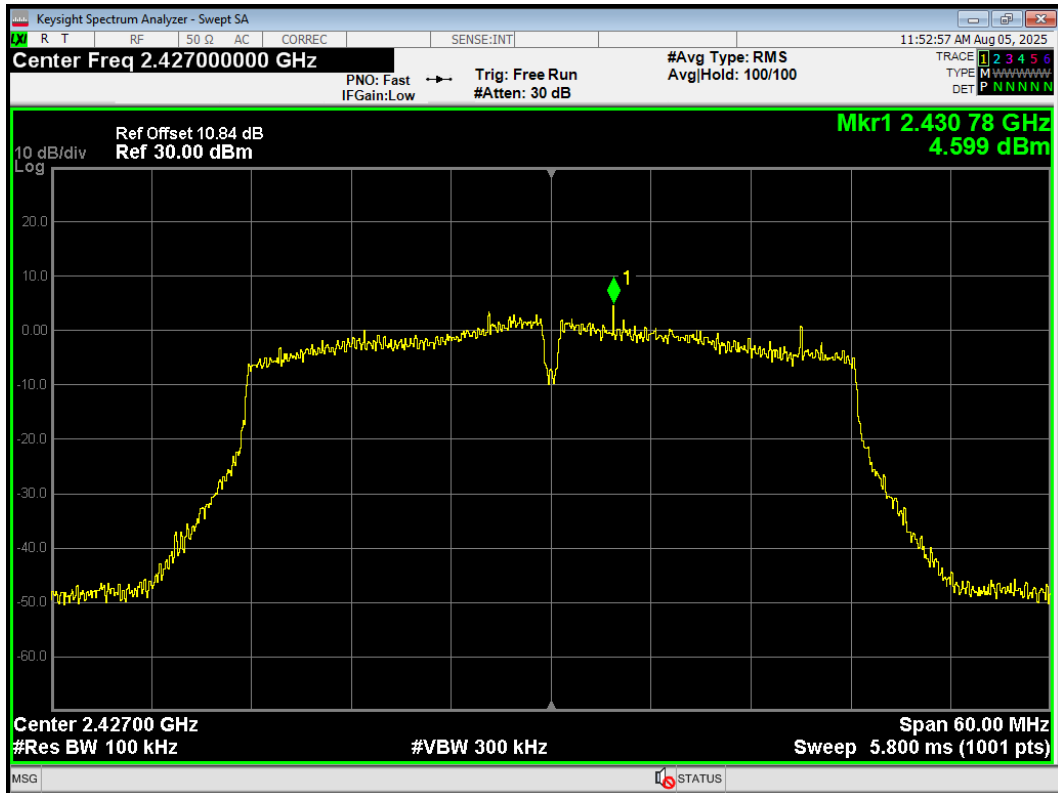
Band Edge 802.11n(HT40) 2422MHz Ref



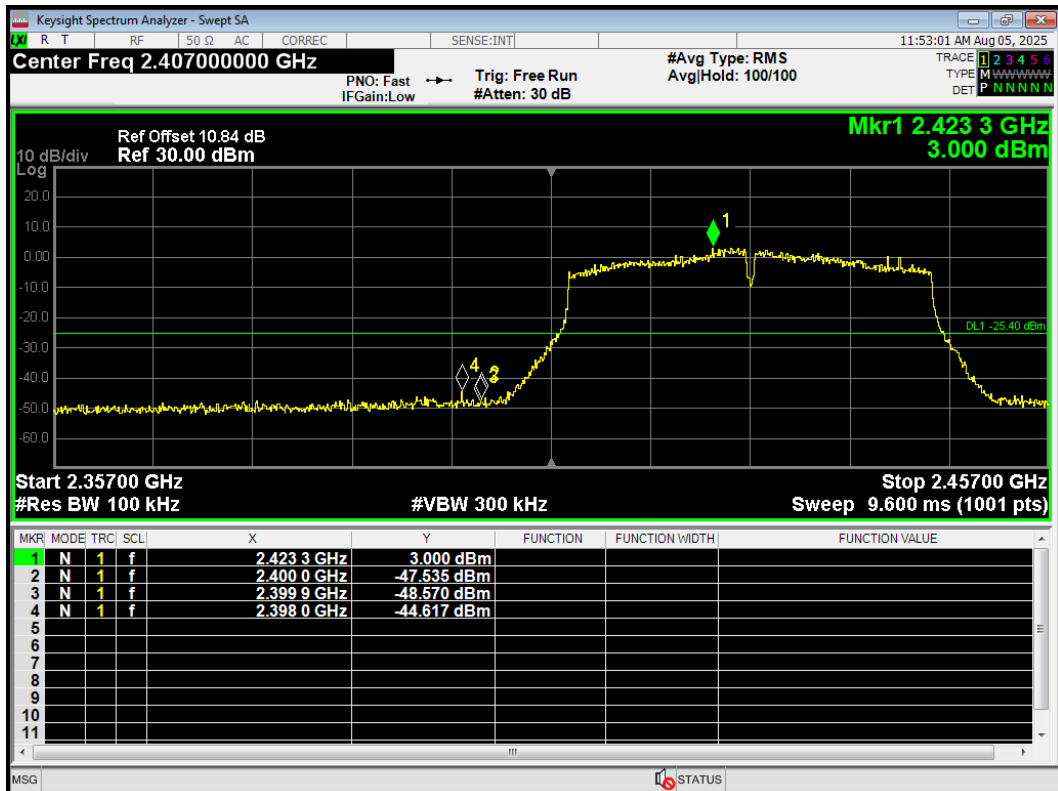
Band Edge 802.11n(HT40) 2422MHz Emission



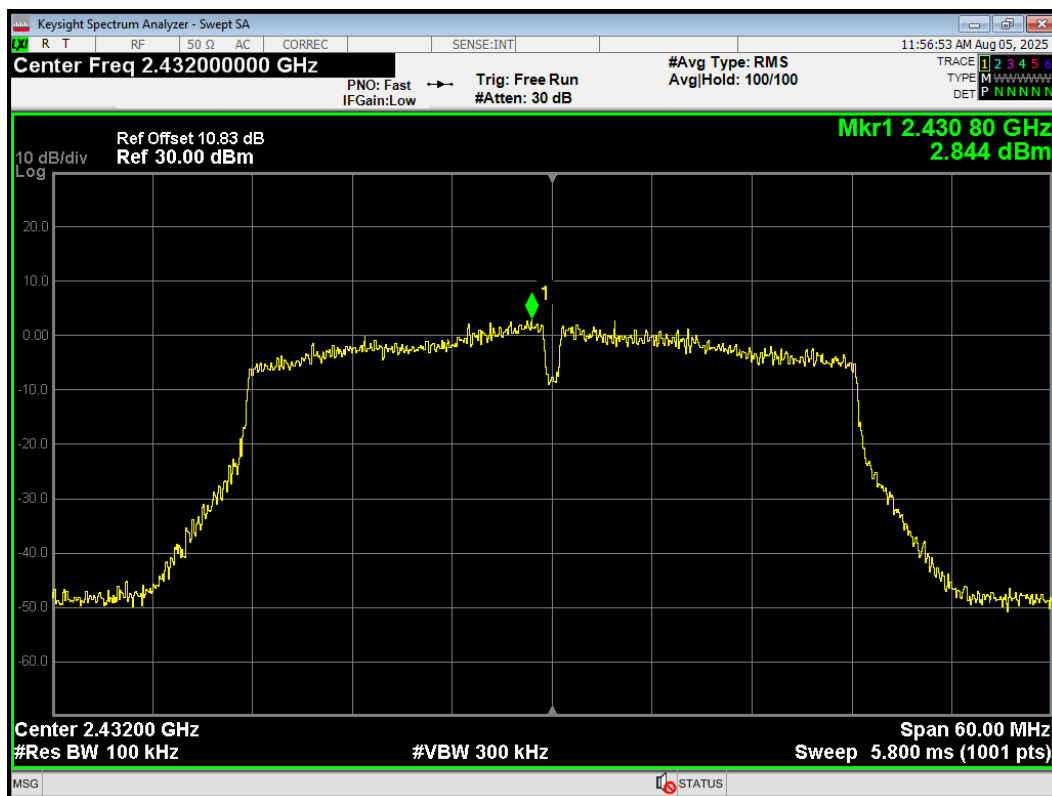
Band Edge 802.11n(HT40) 2427MHz Ref



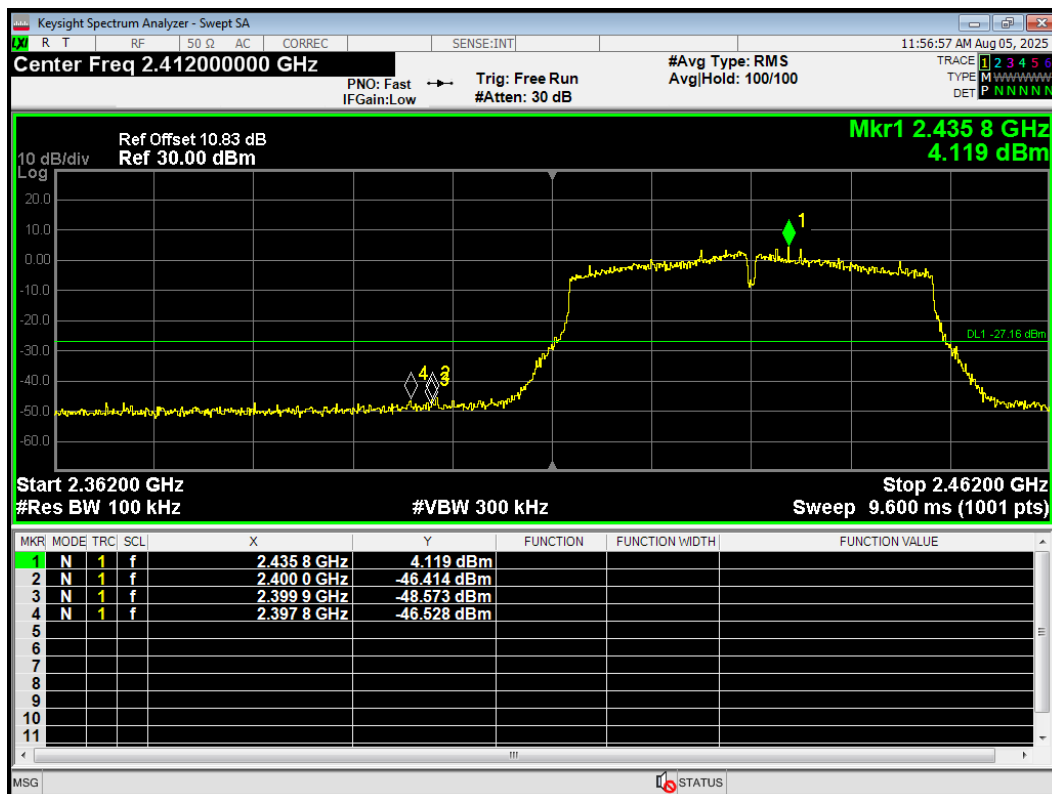
Band Edge 802.11n(HT40) 2427MHz Emission



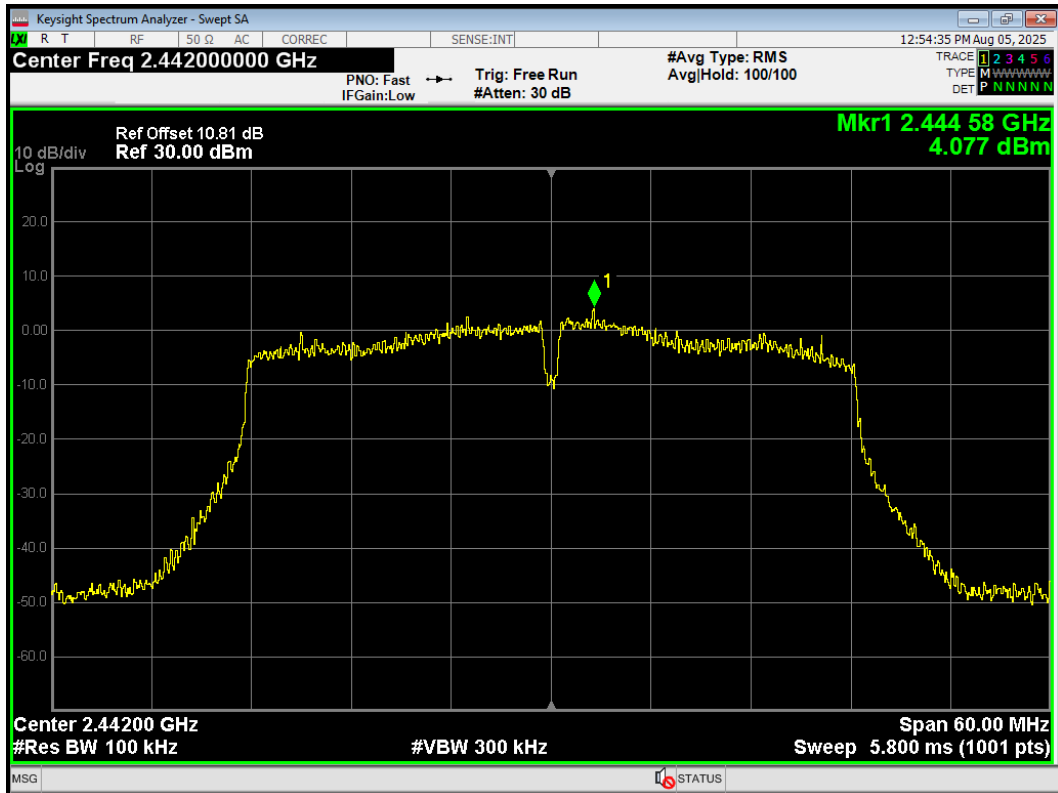
Band Edge 802.11n(HT40) 2432MHz Ref



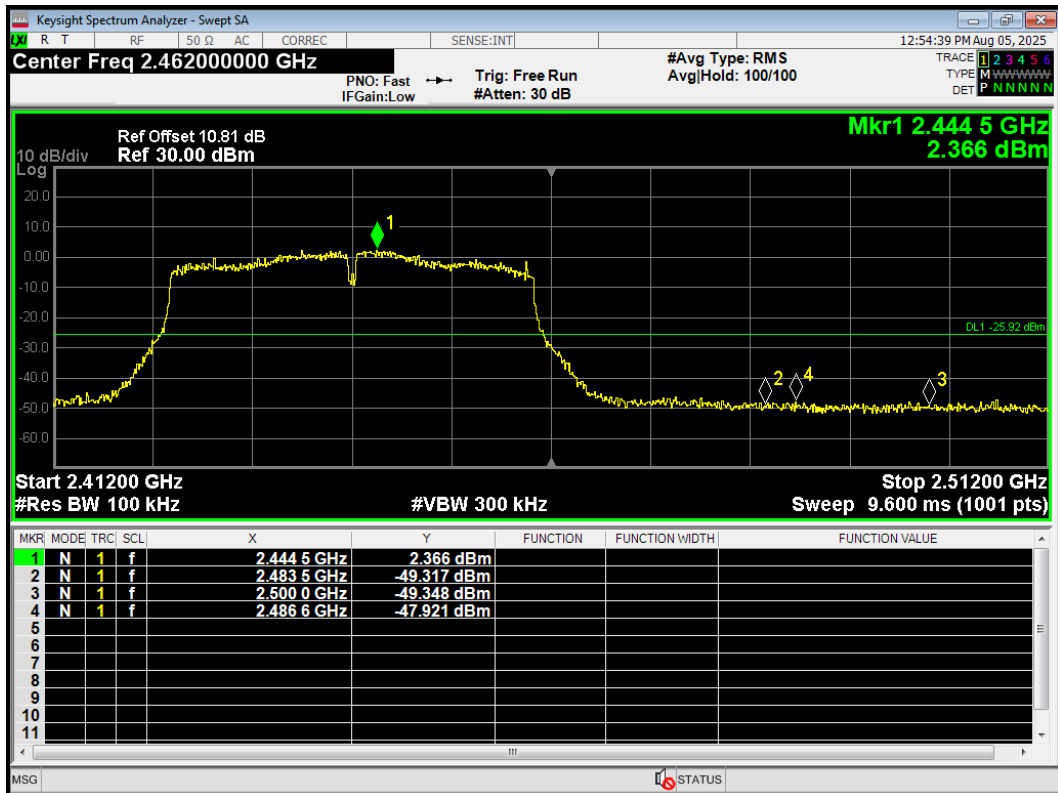
Band Edge 802.11n(HT40) 2432MHz Emission



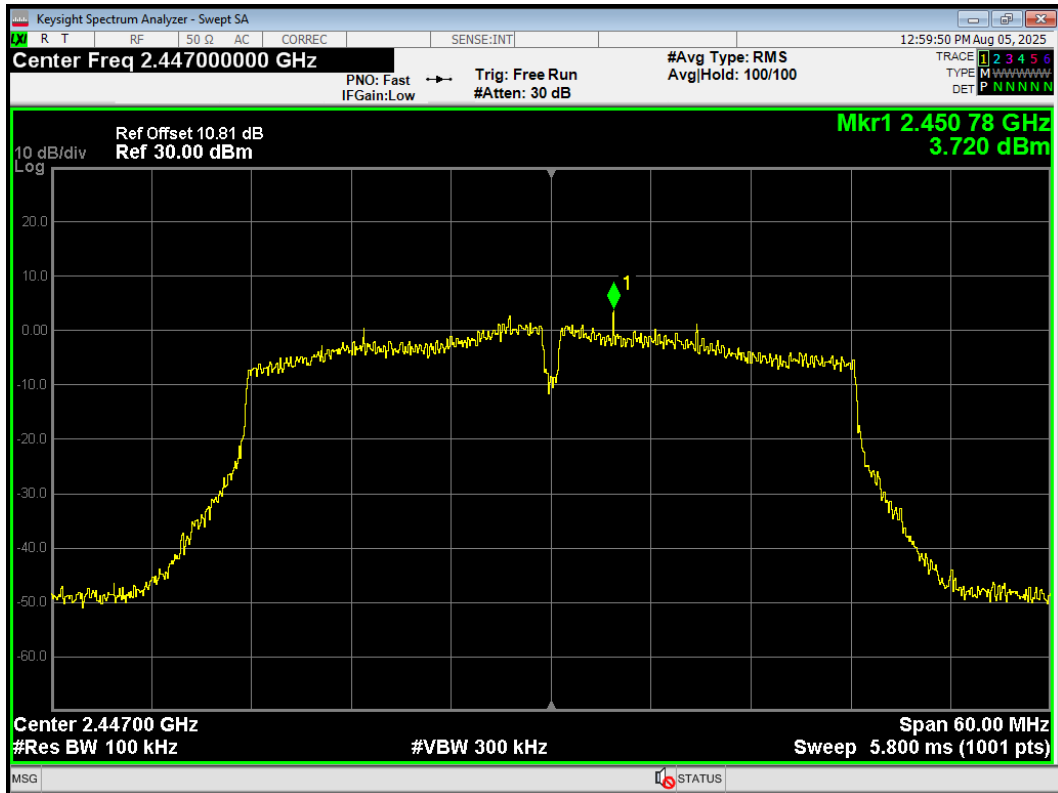
Band Edge 802.11n(HT40) 2442MHz Ref



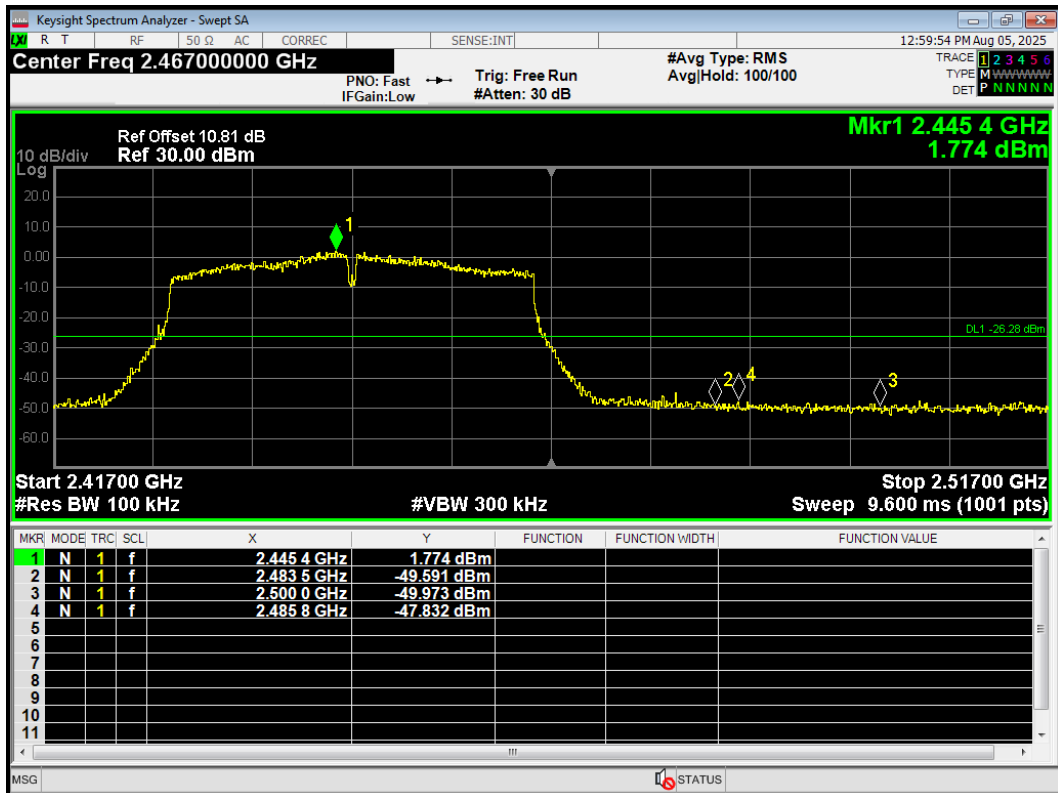
Band Edge 802.11n(HT40) 2442MHz Emission



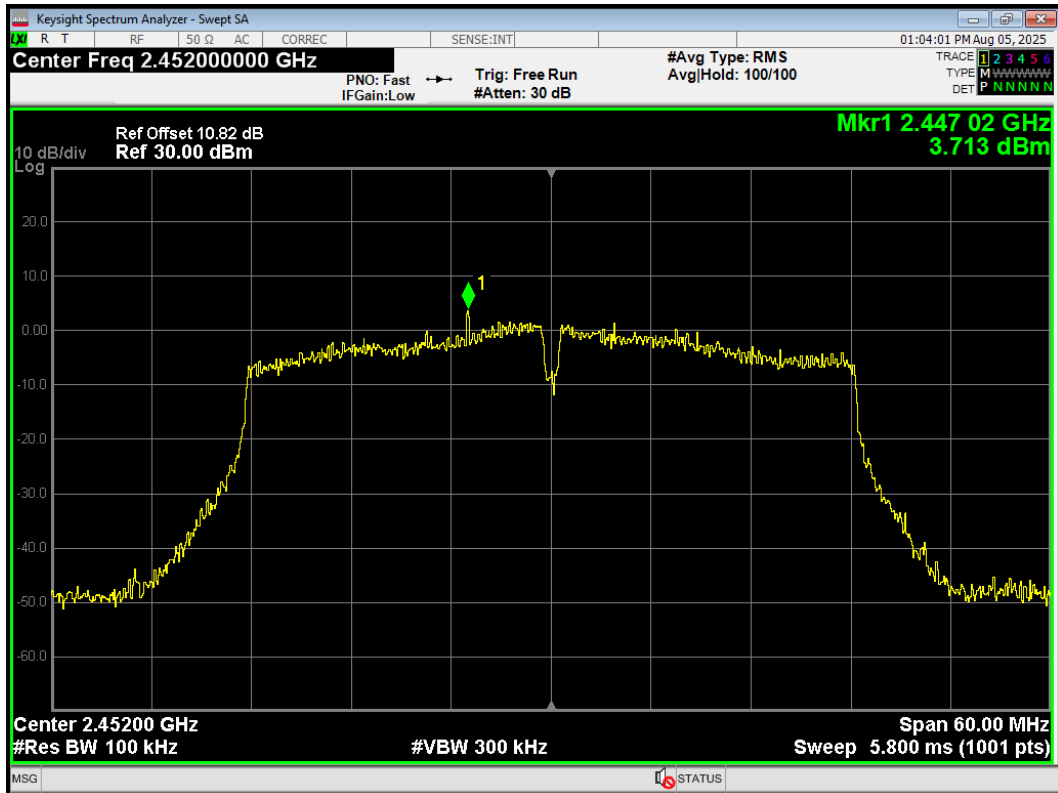
Band Edge 802.11n(HT40) 2447MHz Ref



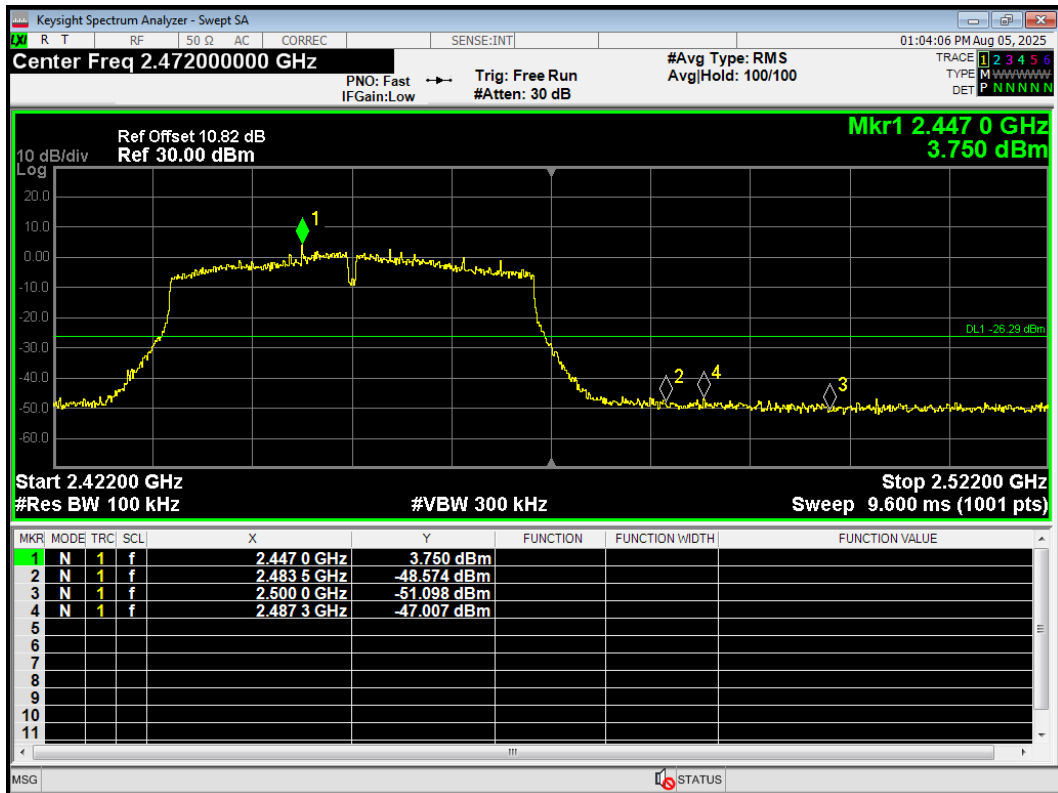
Band Edge 802.11n(HT40) 2447MHz Emission



Band Edge 802.11n(HT40) 2452MHz Ref

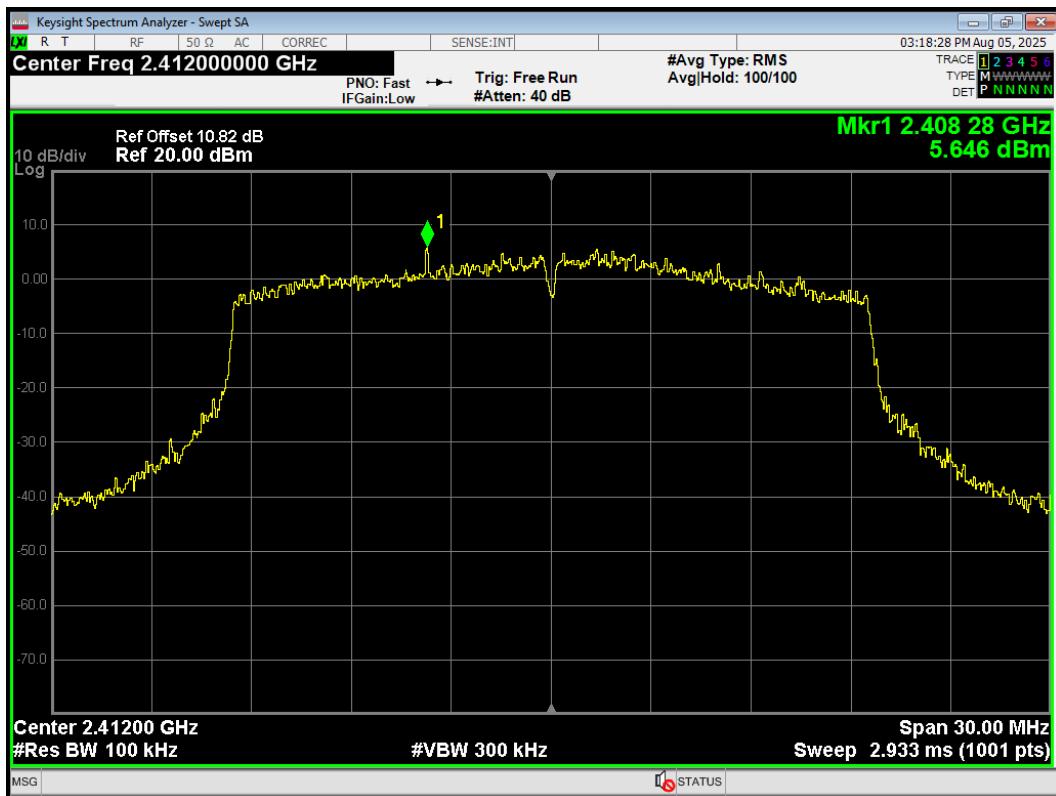


Band Edge 802.11n(HT40) 2452MHz Emission

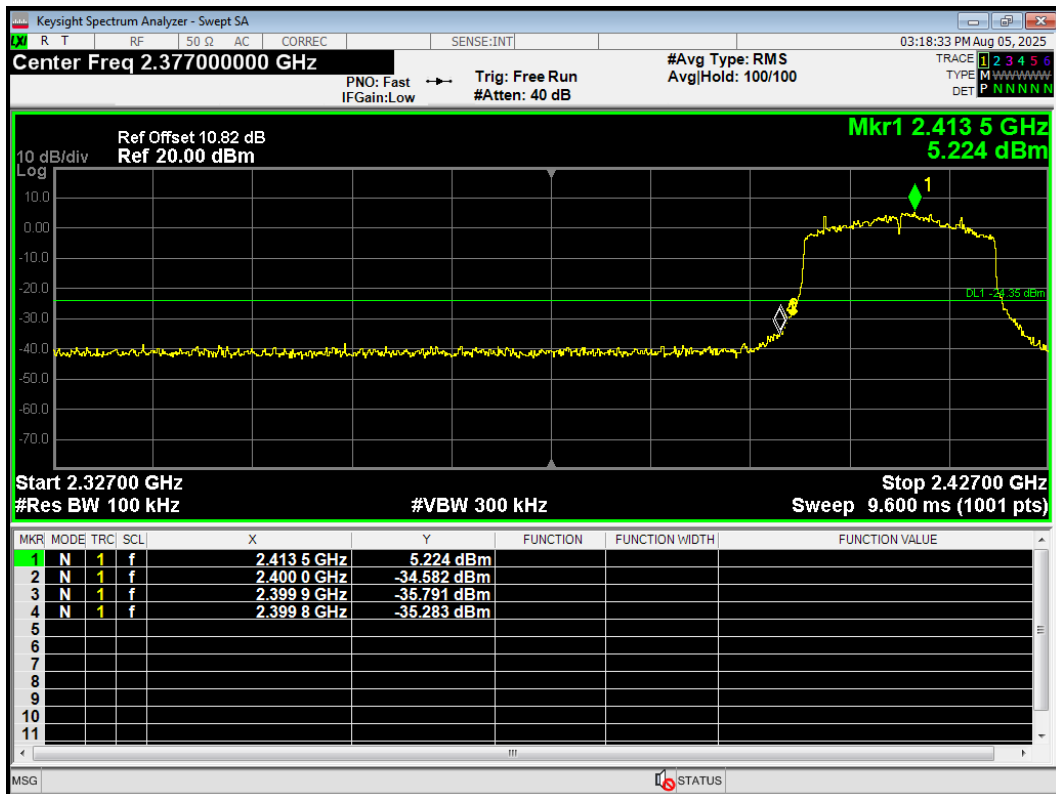


RU Mode

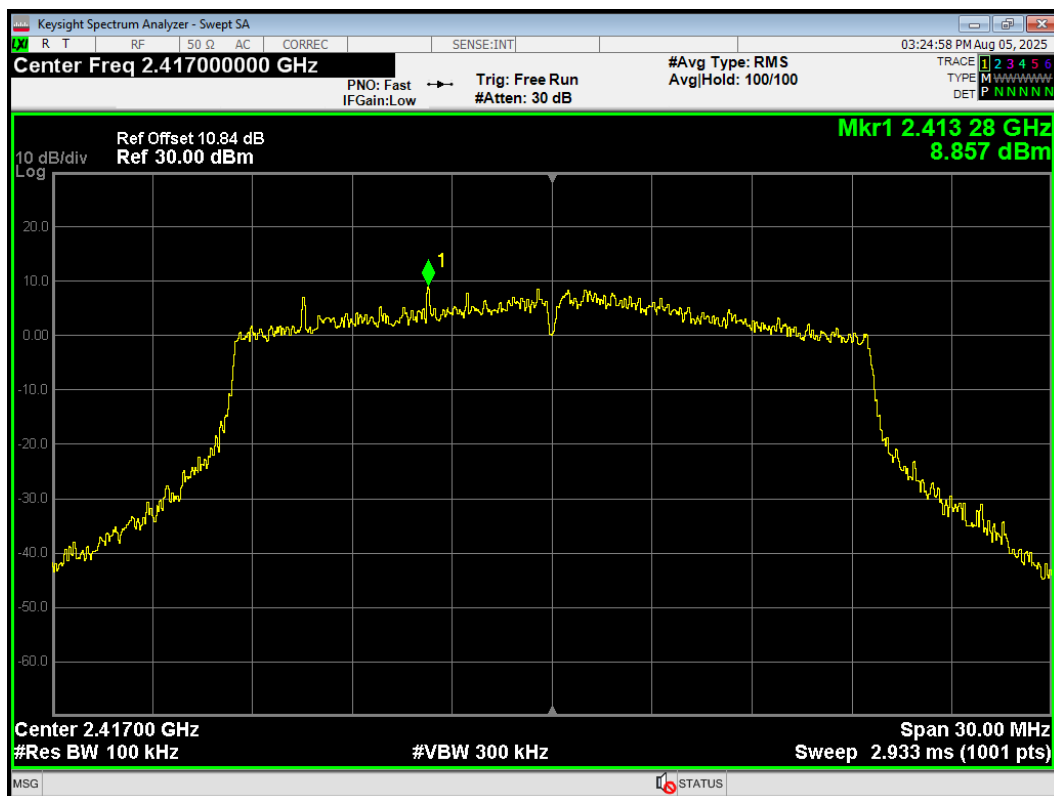
Band Edge 802.11ax(HE20)Index61 2412MHz Ref



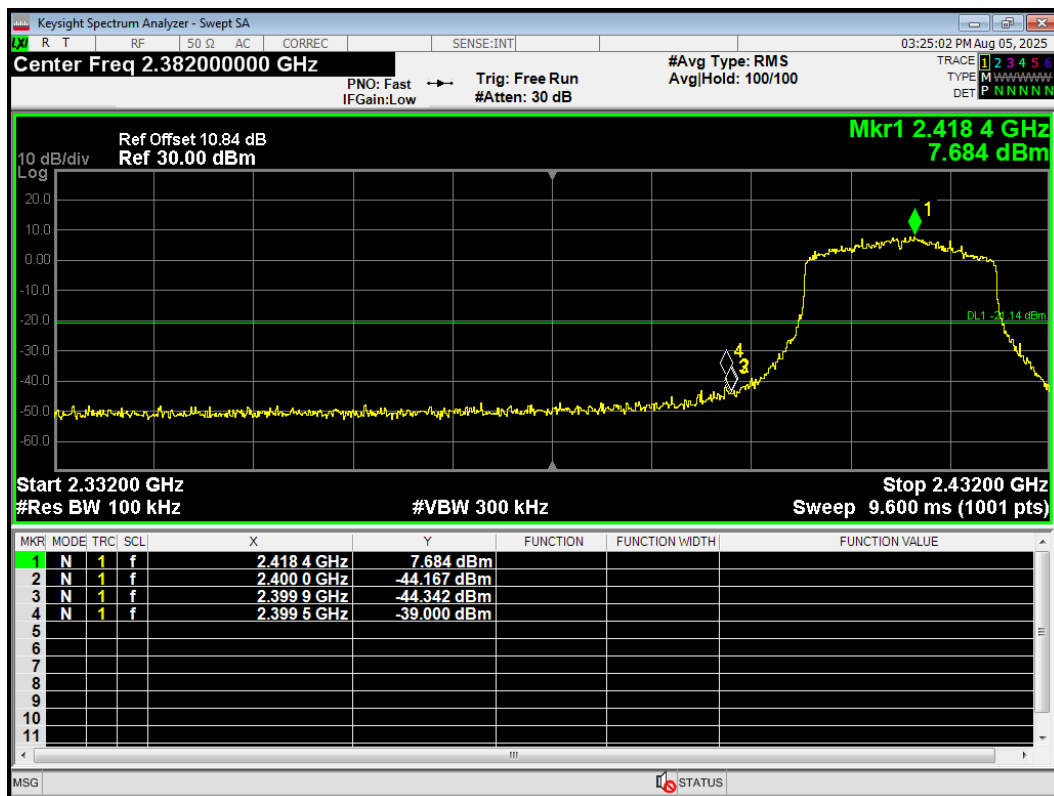
Band Edge 802.11ax(HE20)Index61 2412MHz Emission



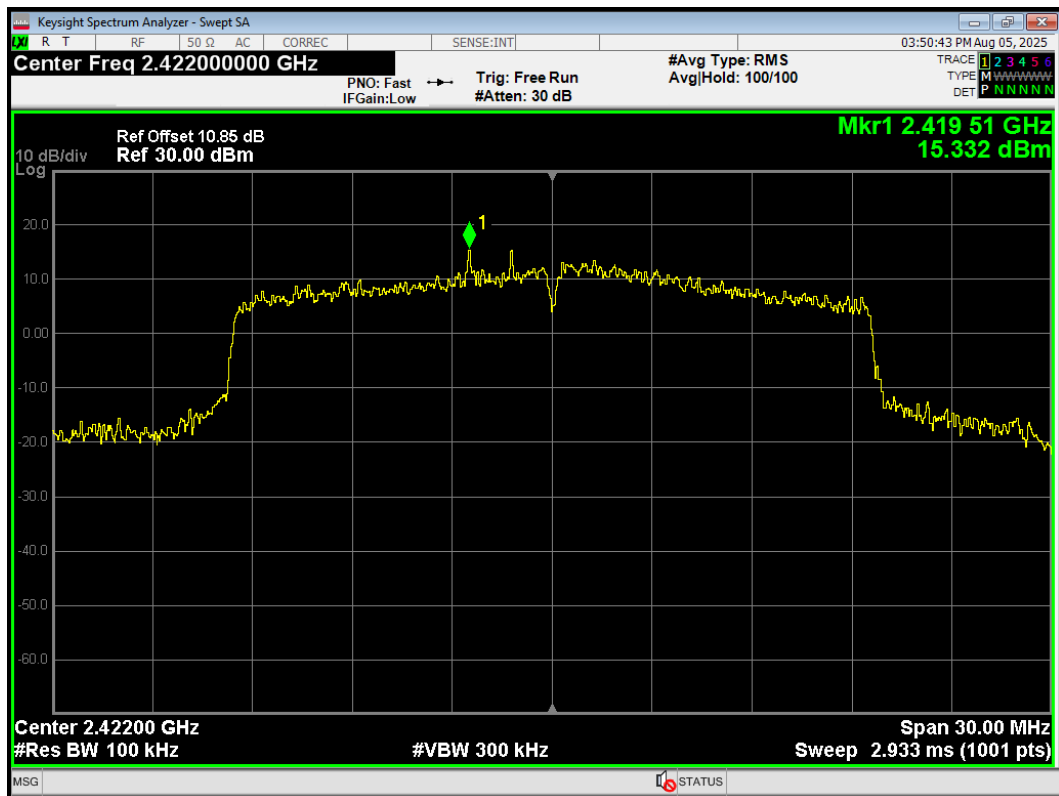
Band Edge 802.11ax(HE20)Index61 2417MHz Ref



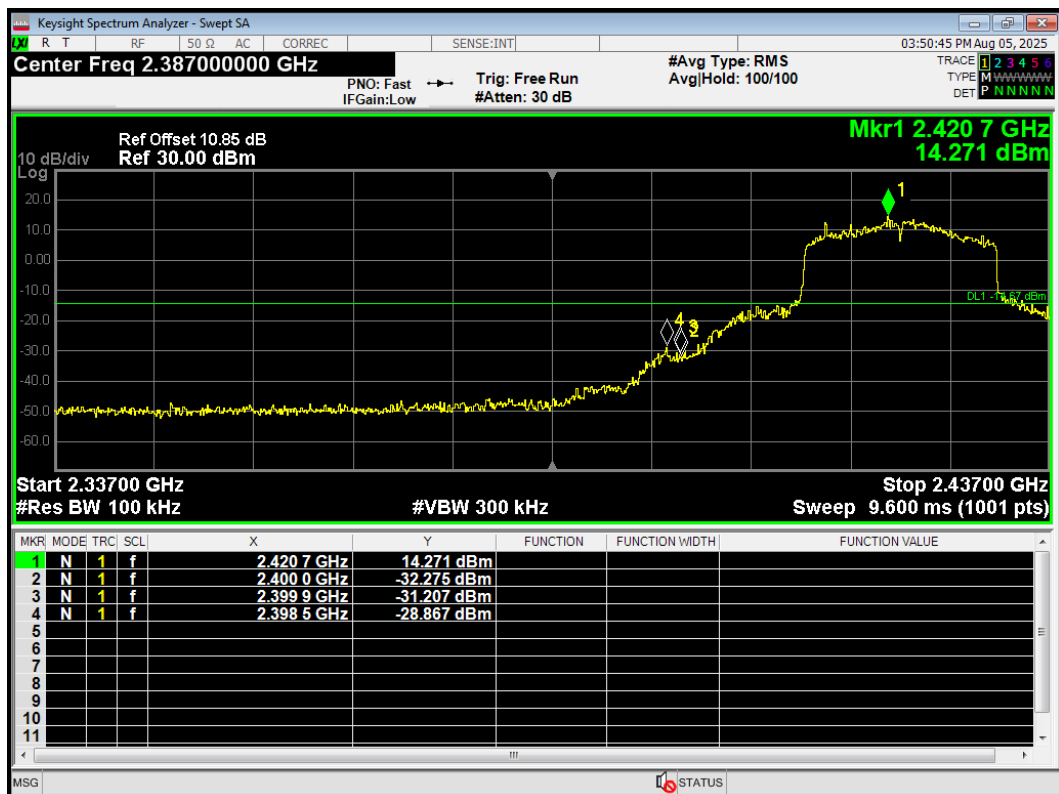
Band Edge 802.11ax(HE20)Index61 2417MHz Emission



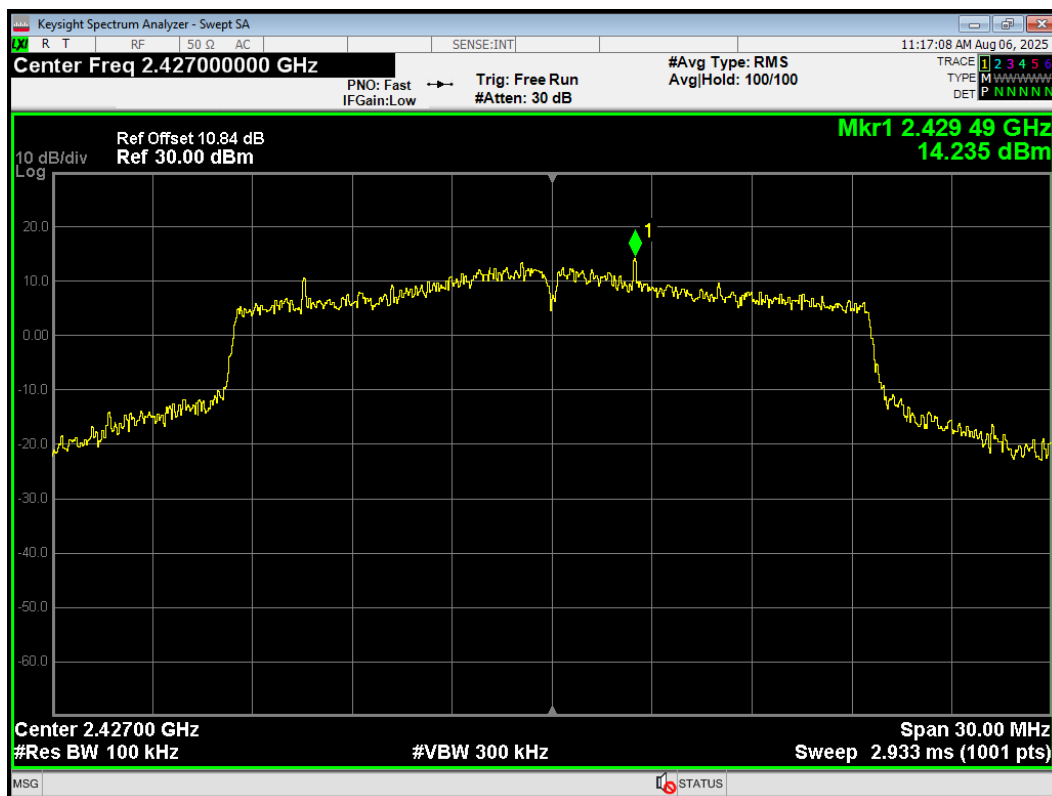
Band Edge 802.11ax(HE20)Index61 2422MHz Ref



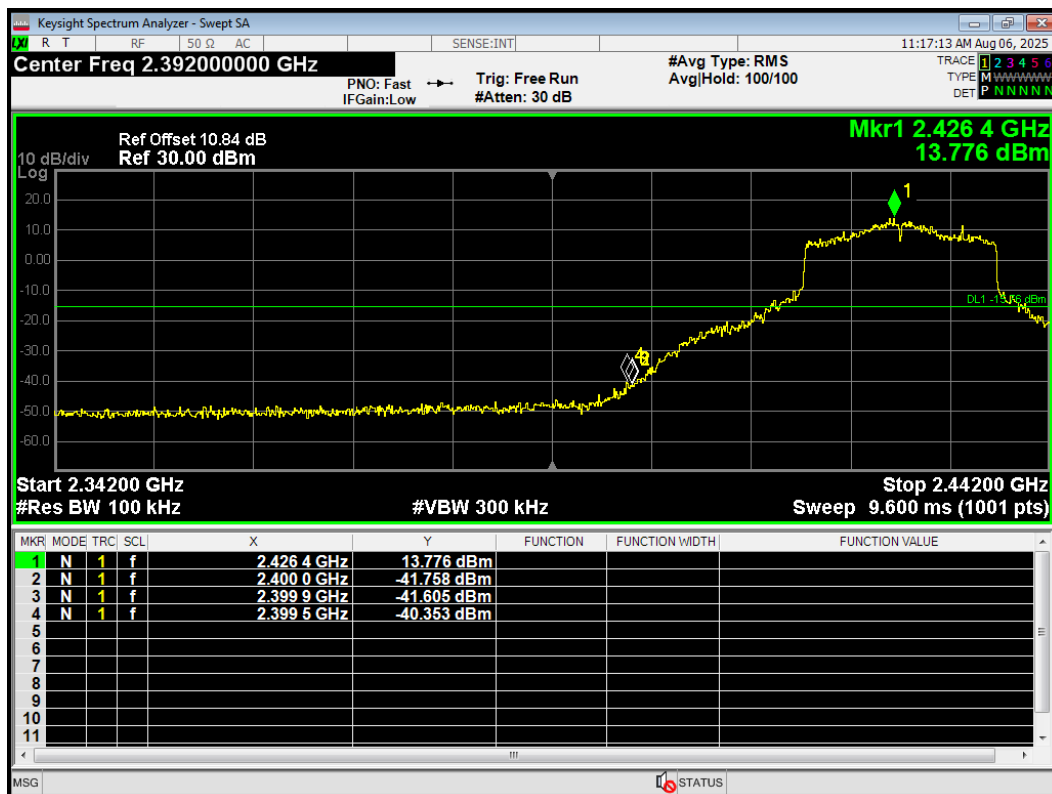
Band Edge 802.11ax(HE20)Index61 2422MHz Emission



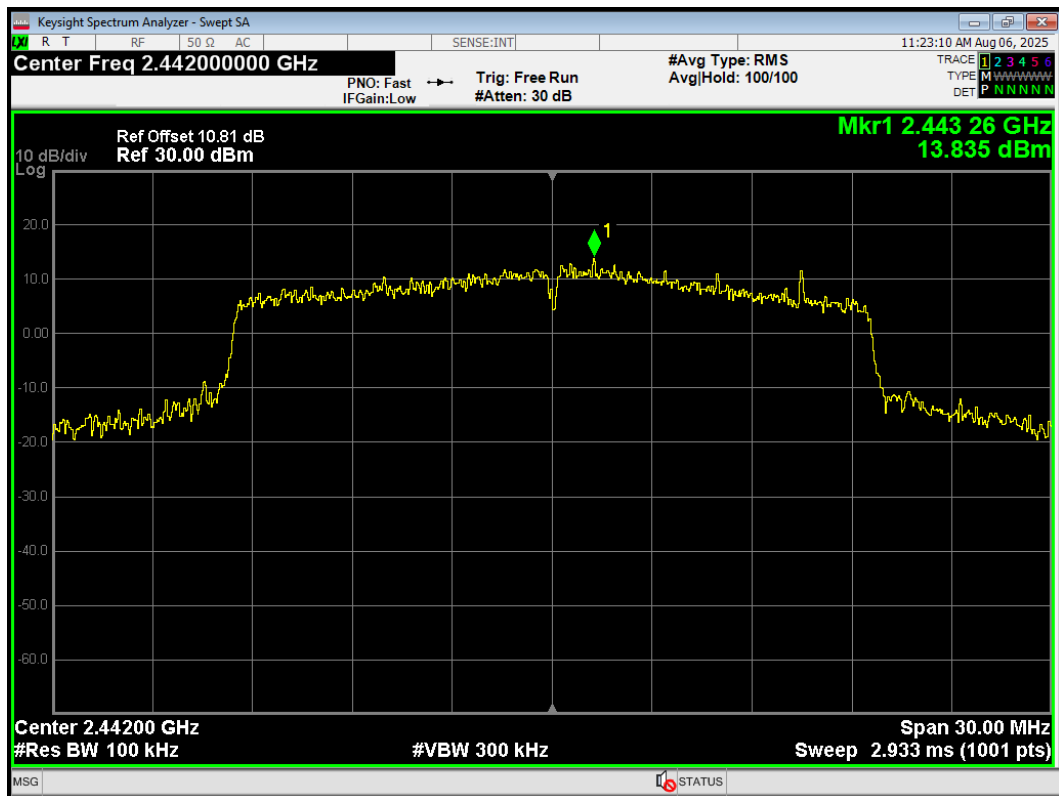
Band Edge 802.11ax(HE20)Index61 2427MHz Ref



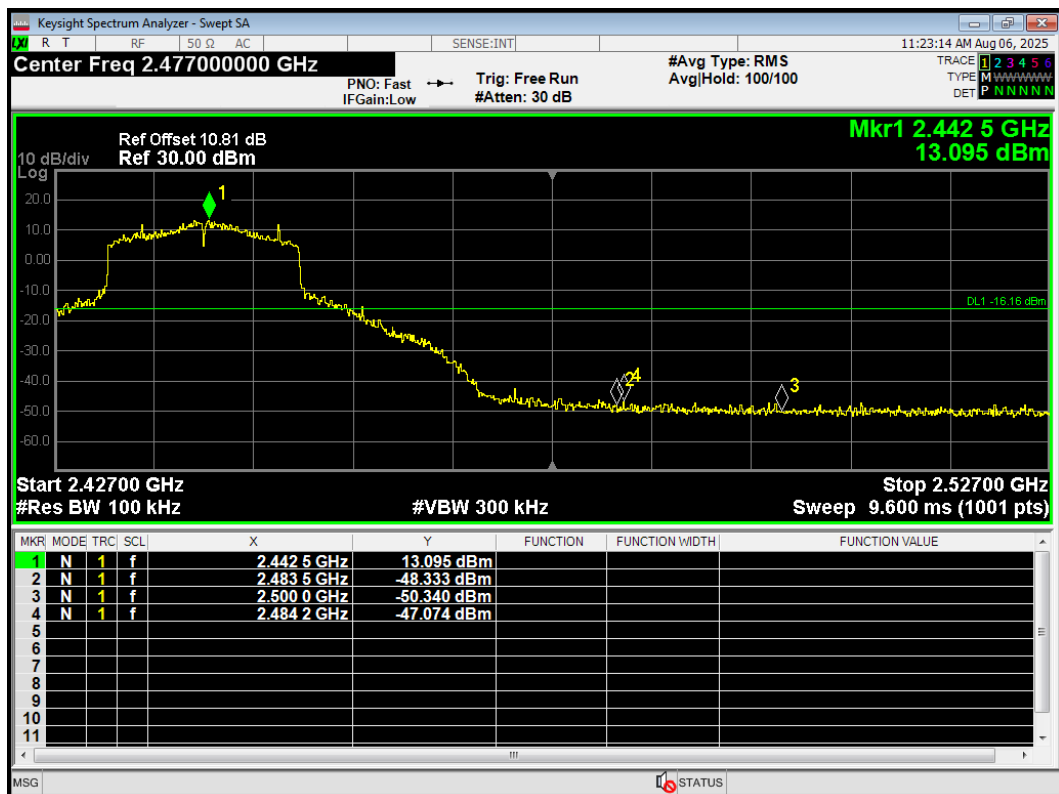
Band Edge 802.11ax(HE20)Index61 2427MHz Emission



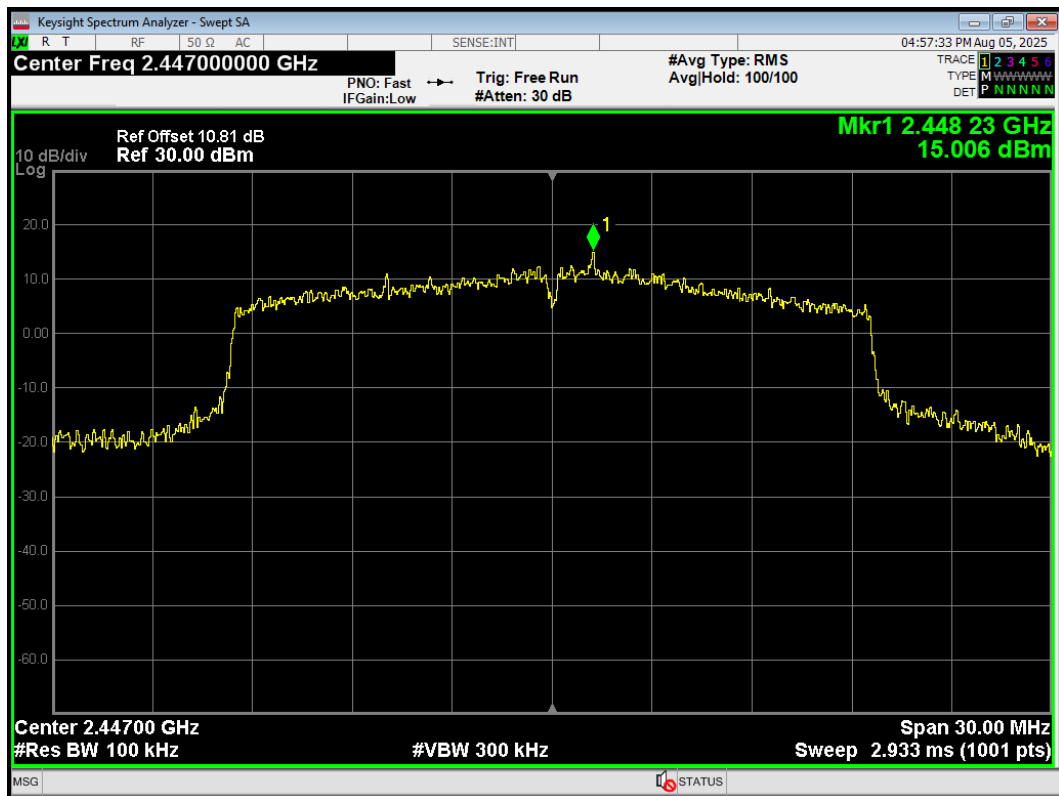
Band Edge 802.11ax(HE20)Index61 2442MHz Ref



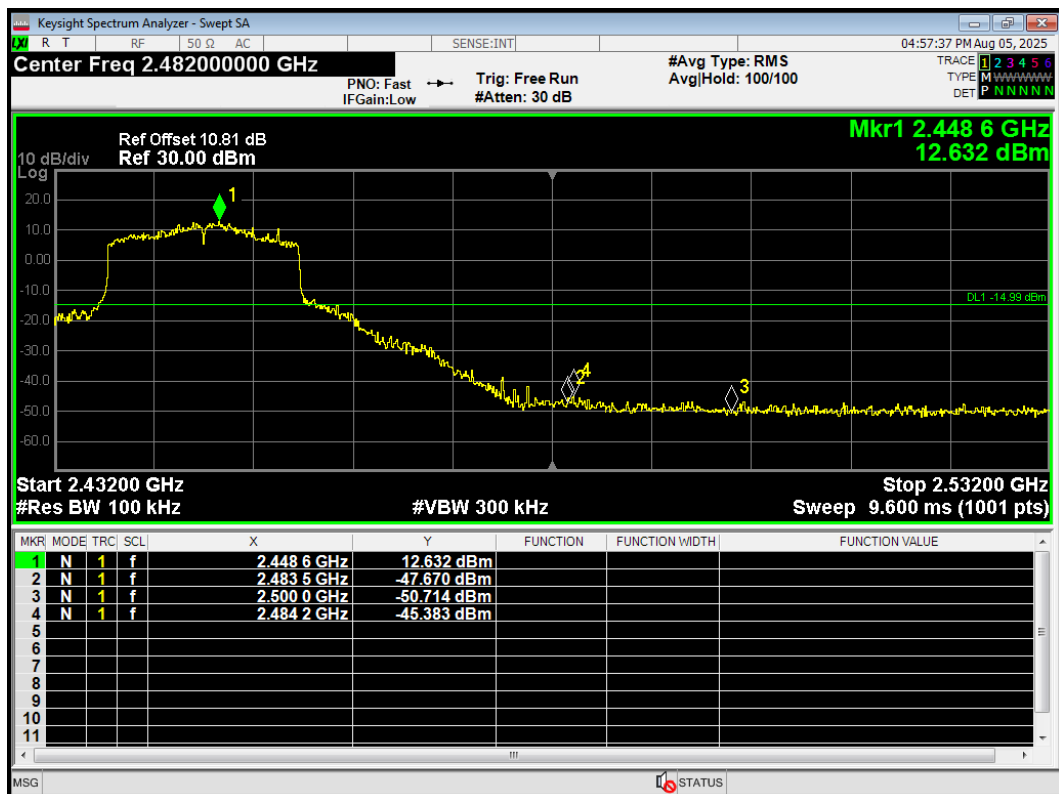
Band Edge 802.11ax(HE20)Index61 2442MHz Emission



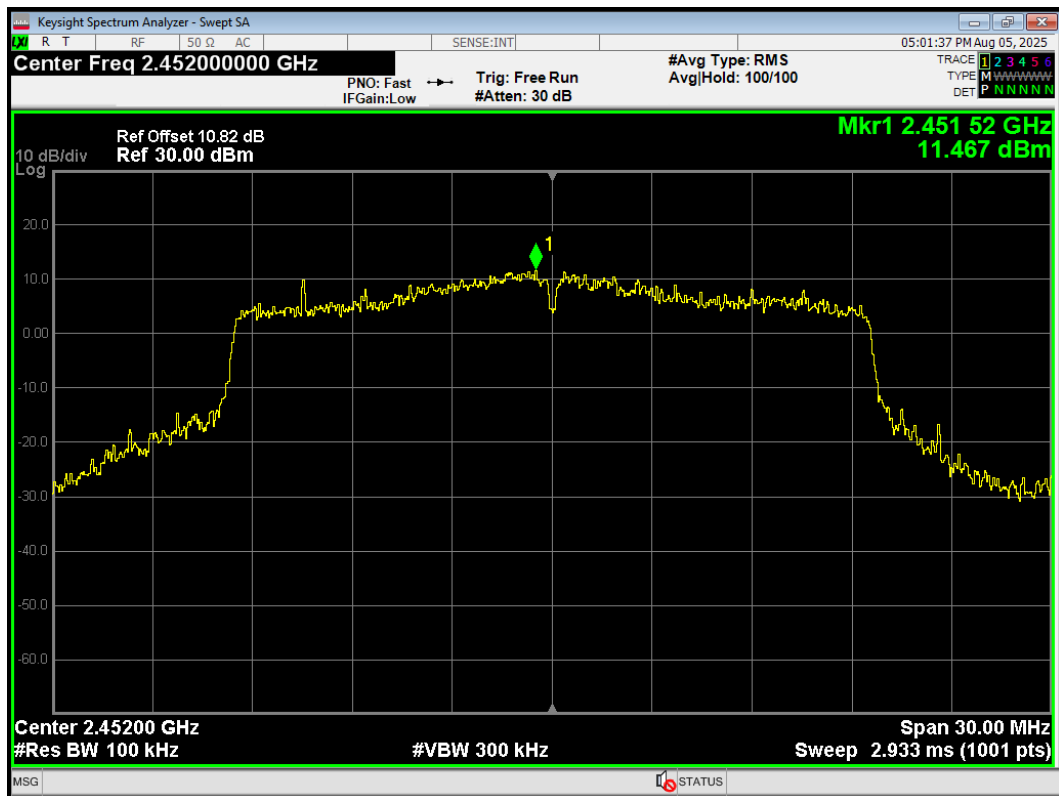
Band Edge 802.11ax(HE20)Index61 2447MHz Ref



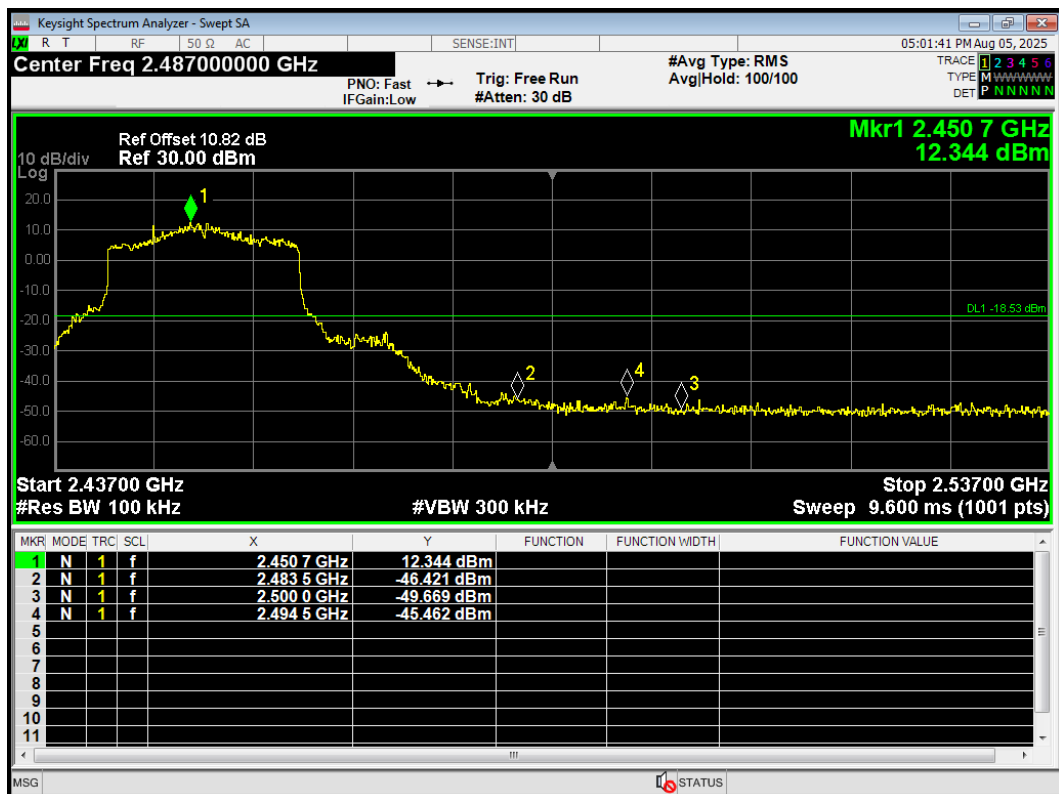
Band Edge 802.11ax(HE20)Index61 2447MHz Emission



Band Edge 802.11ax(HE20)Index61 2452MHz Ref



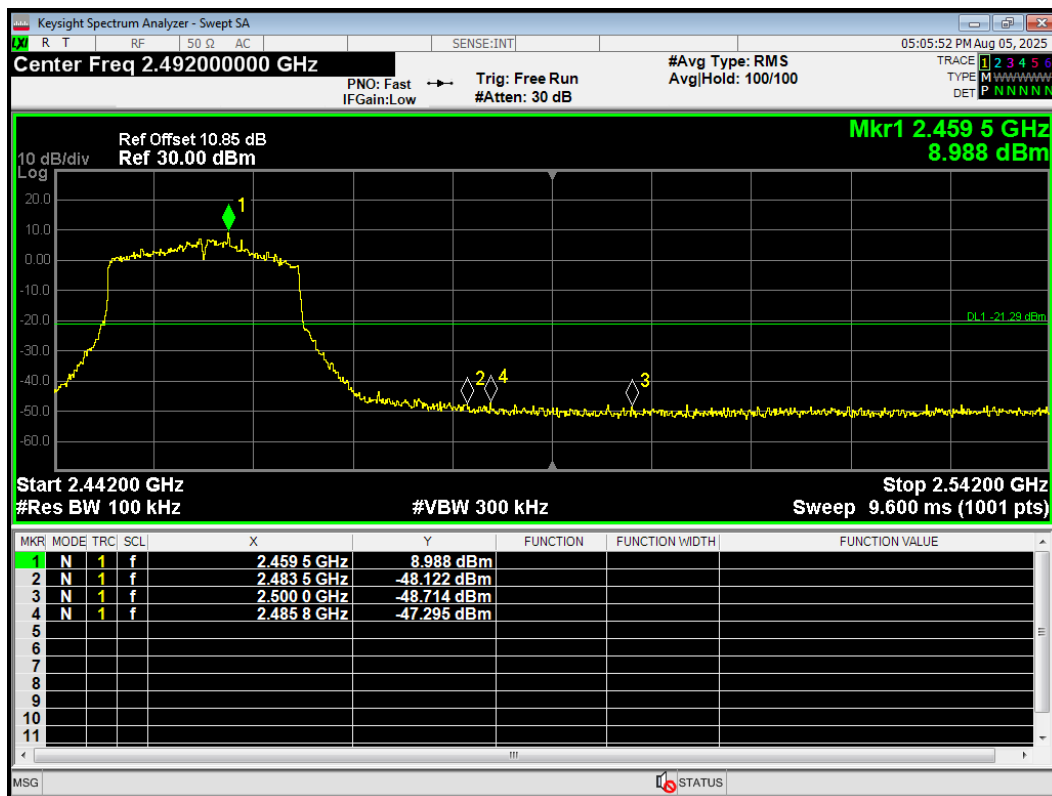
Band Edge 802.11ax(HE20)Index61 2452MHz Emission



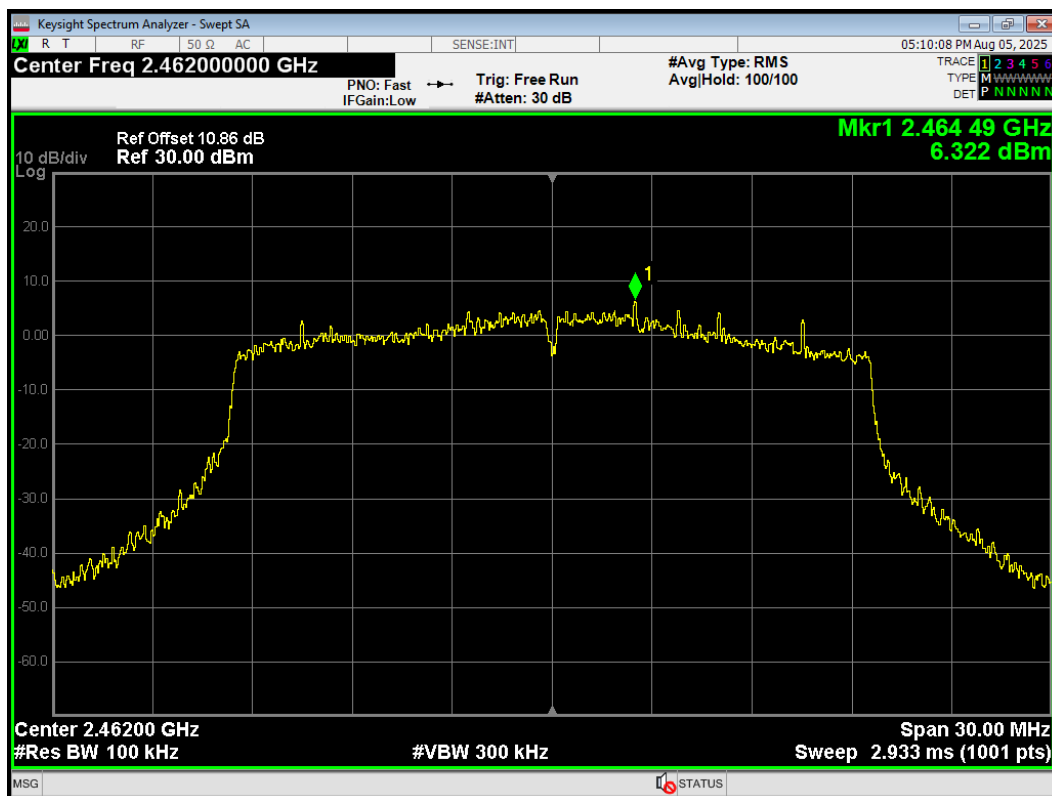
Band Edge 802.11ax(HE20)Index61 2457MHz Ref



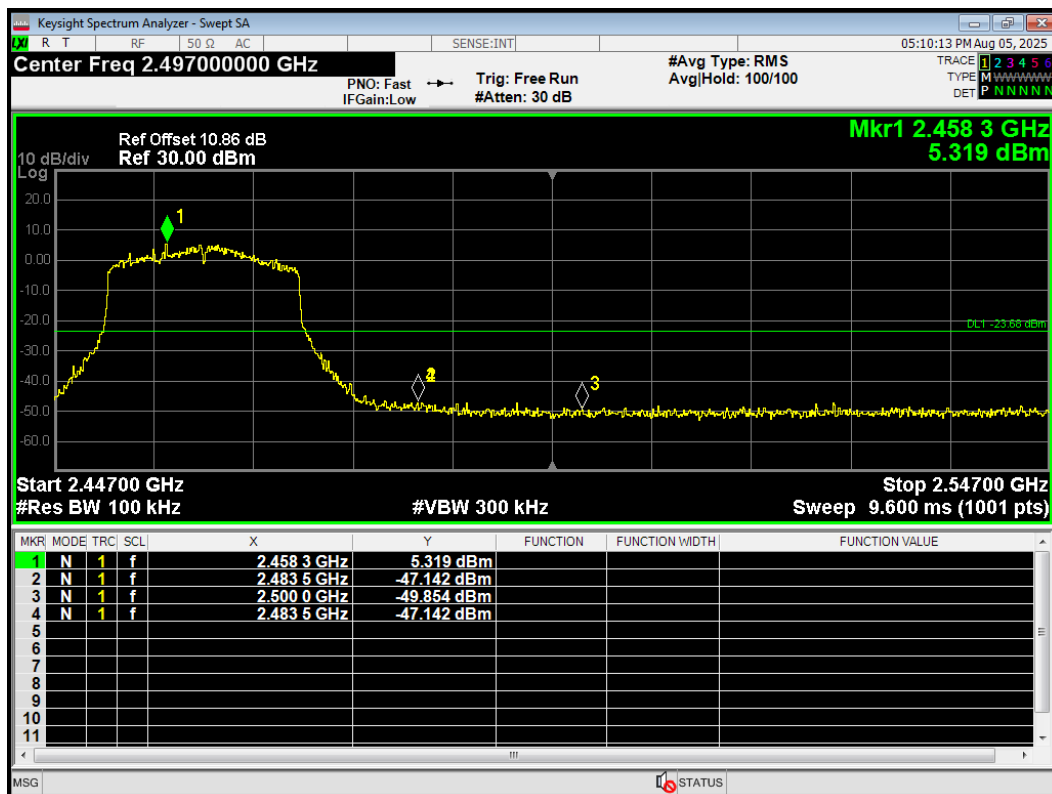
Band Edge 802.11ax(HE20)Index61 2457MHz Emission



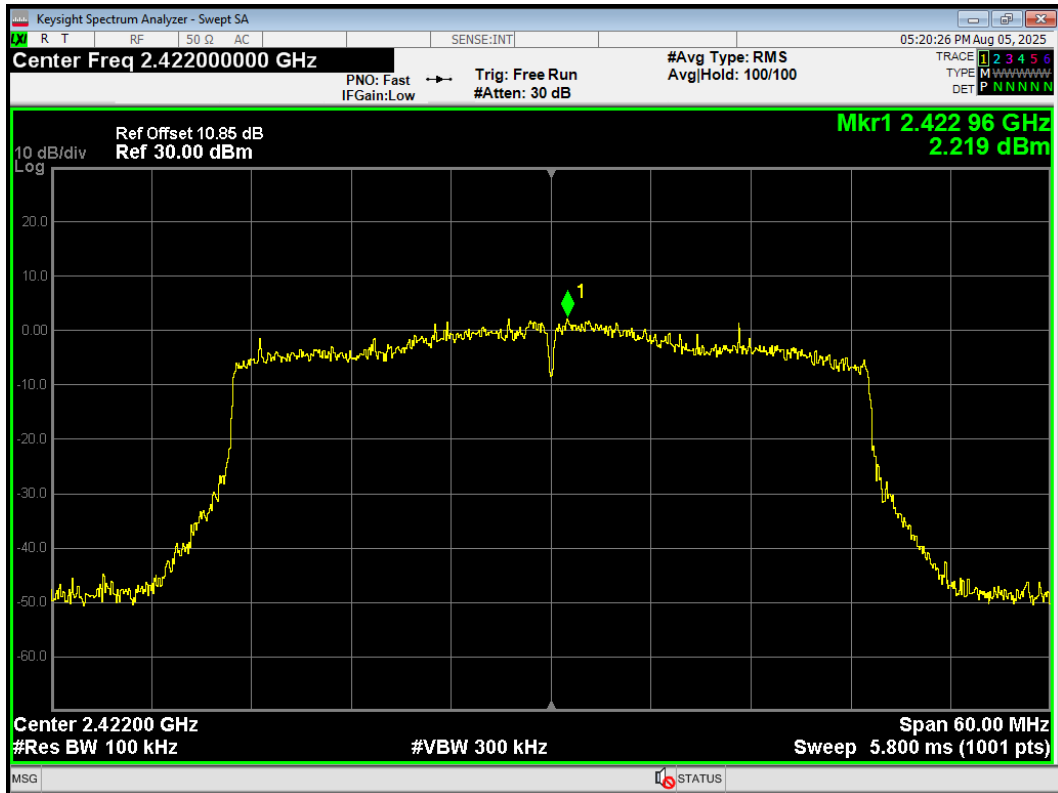
Band Edge 802.11ax(HE20)Index61 2462MHz Ref



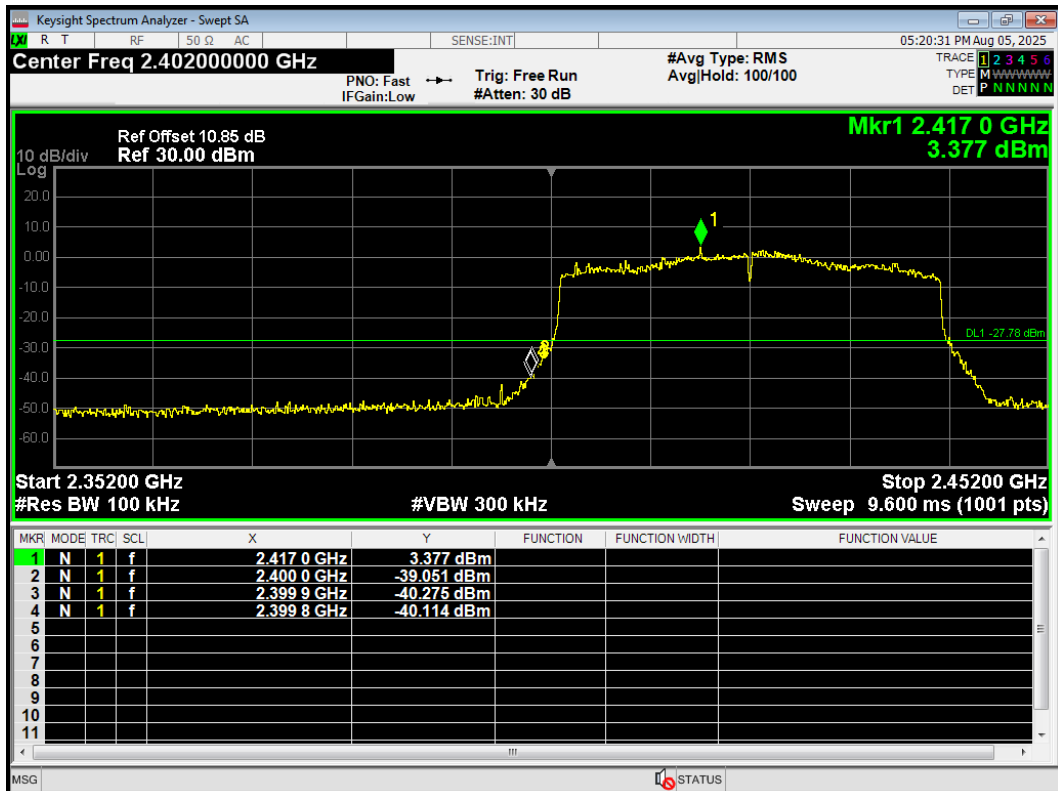
Band Edge 802.11ax(HE20)Index61 2462MHz Emission



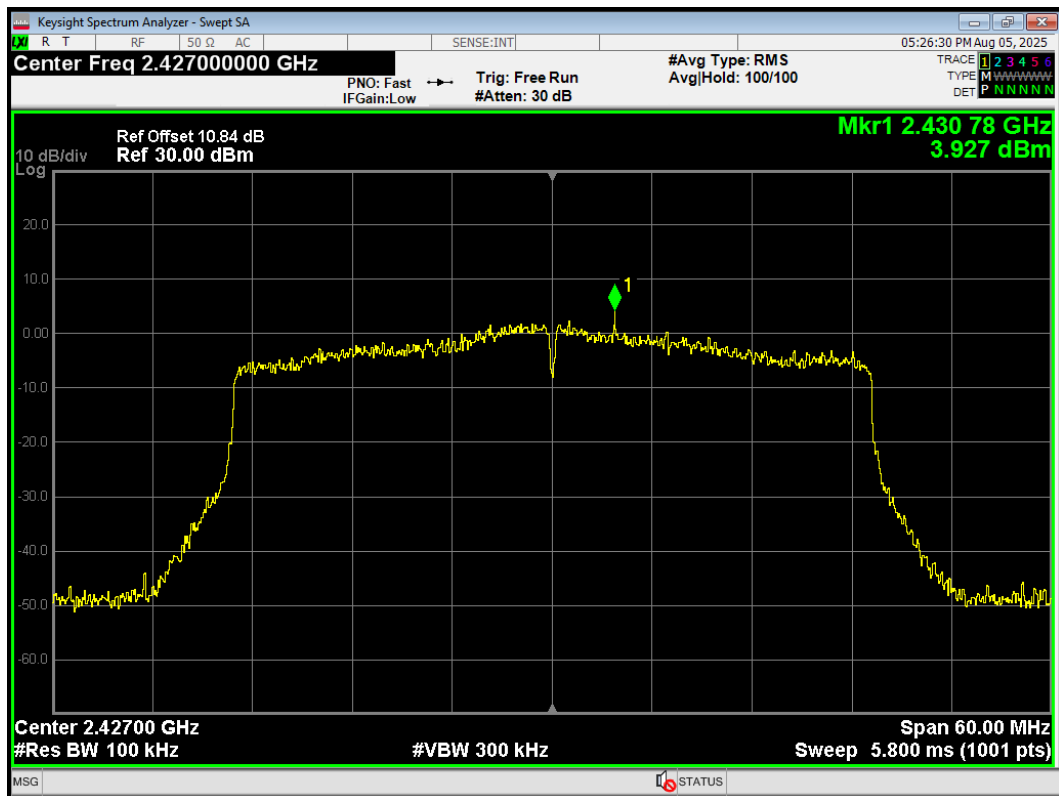
Band Edge 802.11ax(HE40)484T Index65 2422MHz Ref



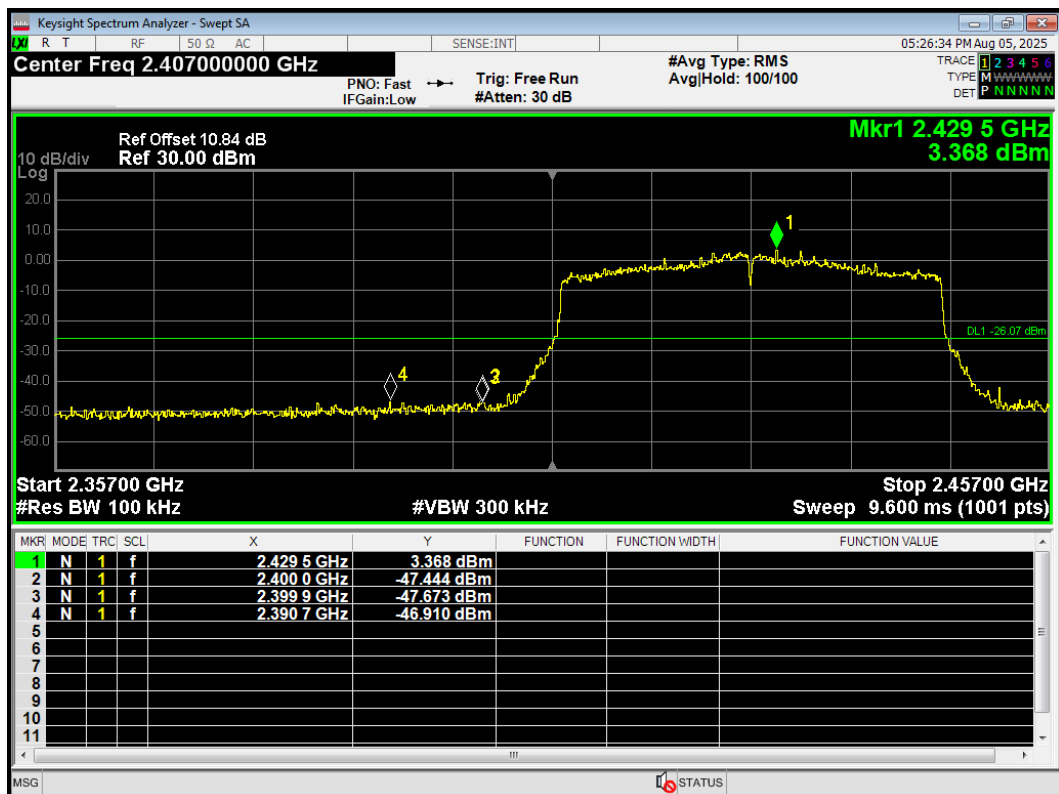
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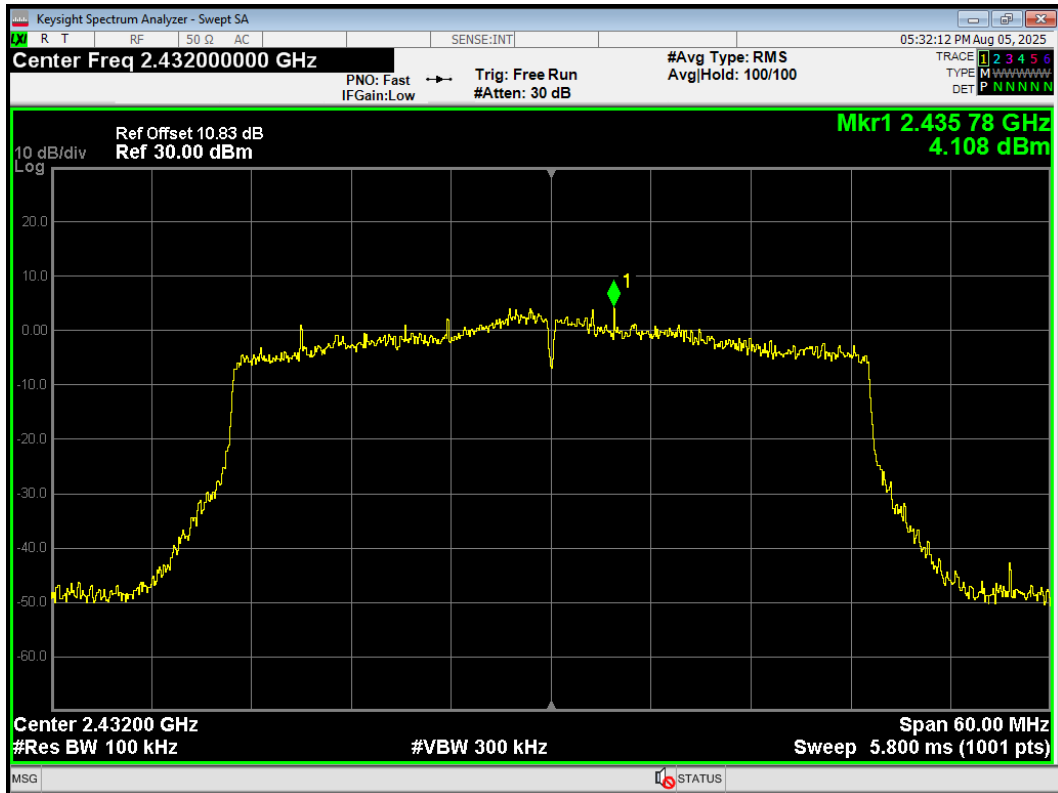
Band Edge 802.11ax(HE40)484T Index65 2427MHz Ref



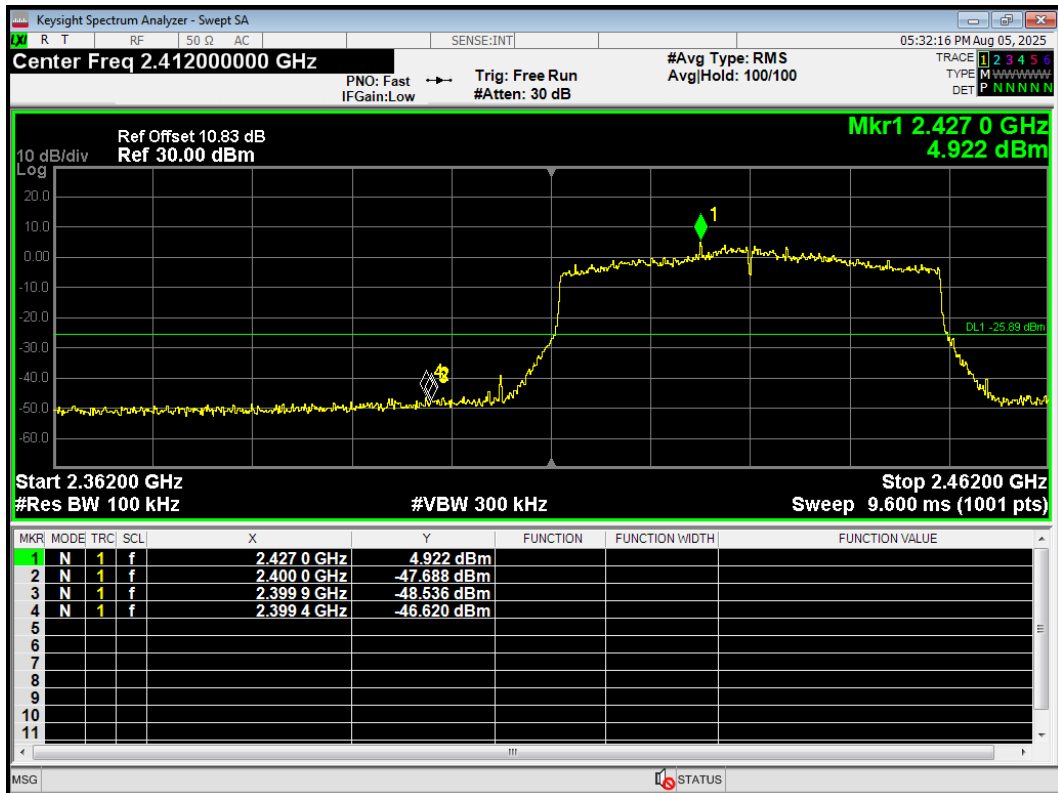
Band Edge 802.11ax(HE40)484T Index65 2427MHz Emission



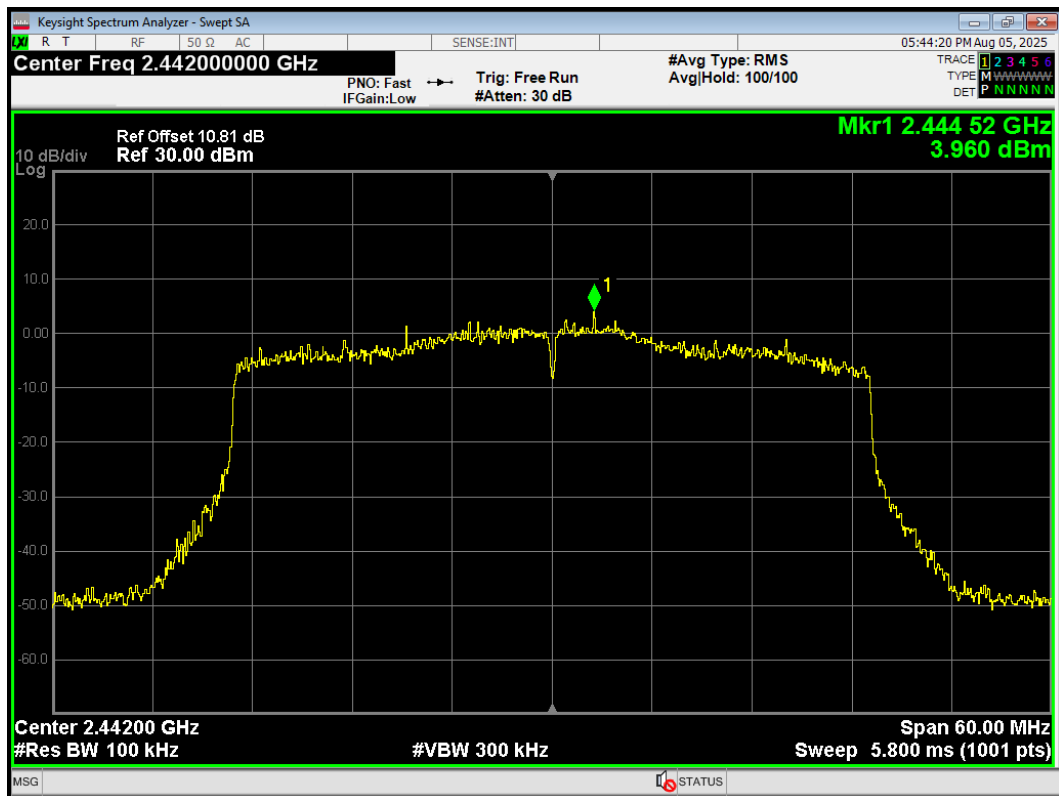
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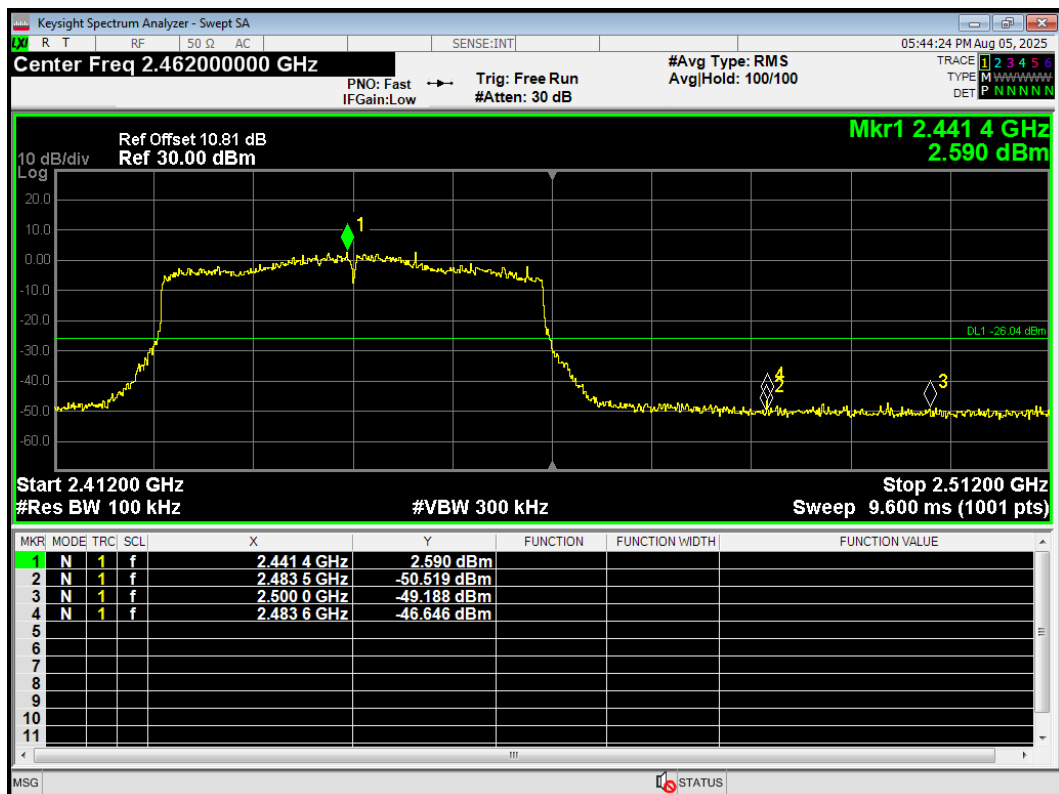
Band Edge 802.11ax(HE40)484T Index65 2432MHz Emission



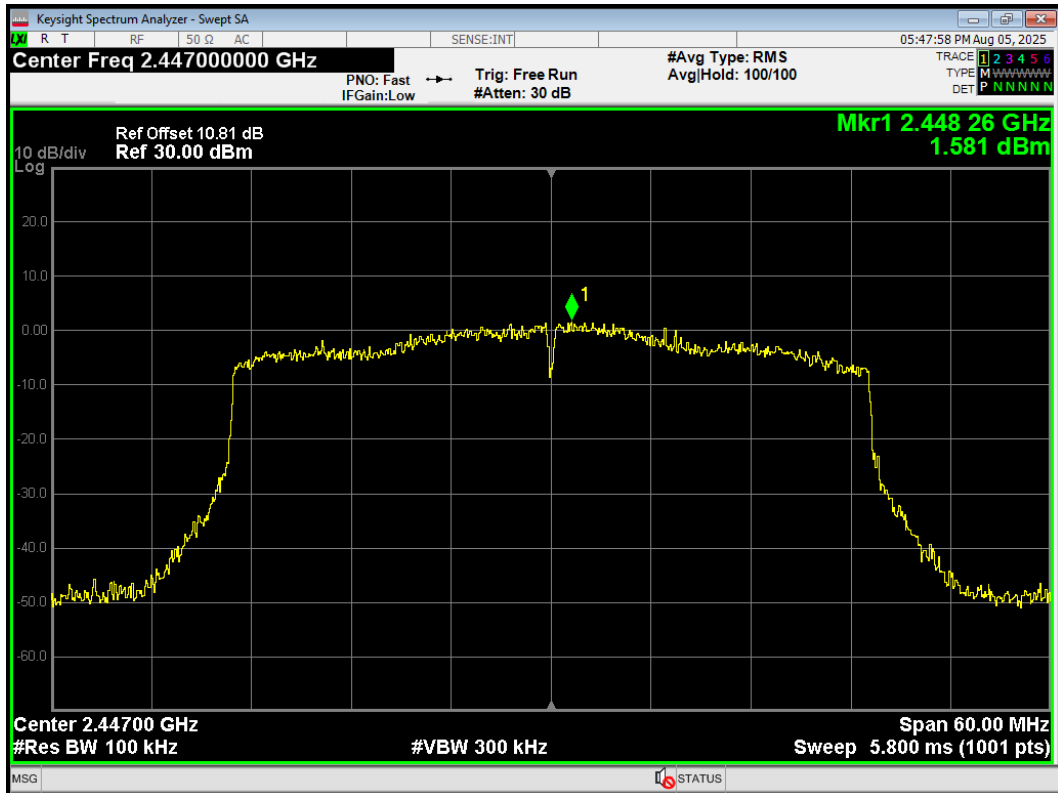
Band Edge 802.11ax(HE40)484T Index65 2442MHz Ref



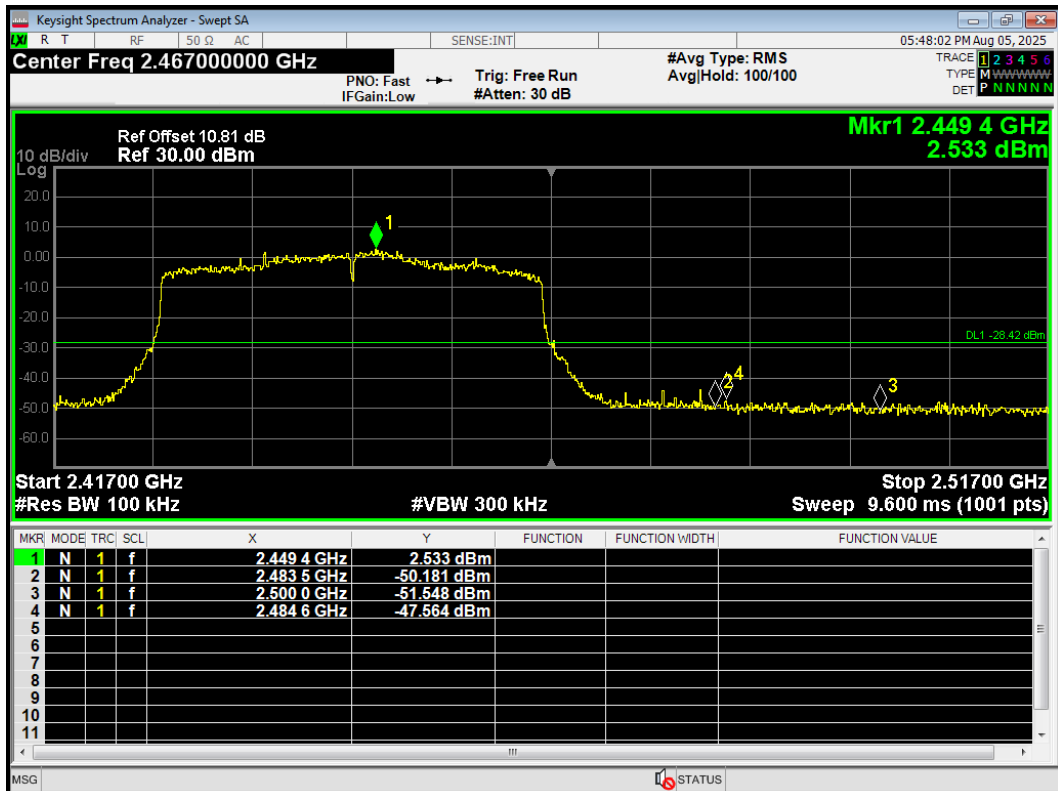
Band Edge 802.11ax(HE40)484T Index65 2442MHz Emission



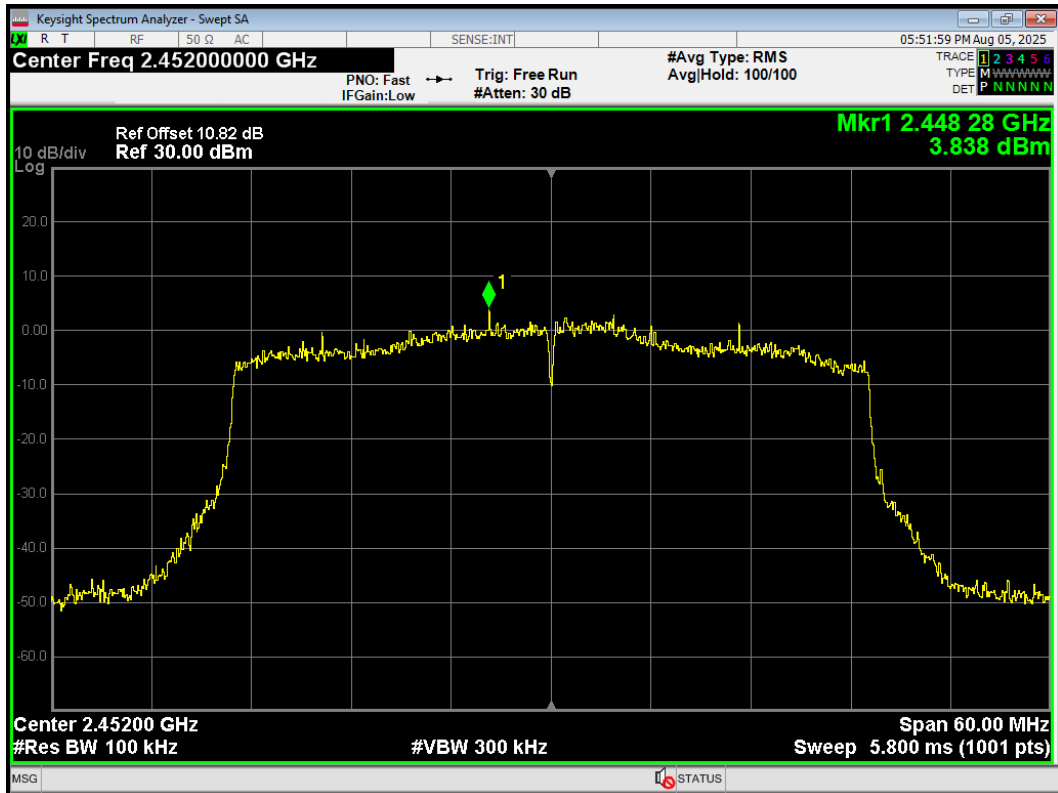
Band Edge 802.11ax(HE40)484T Index65 2447MHz Ref



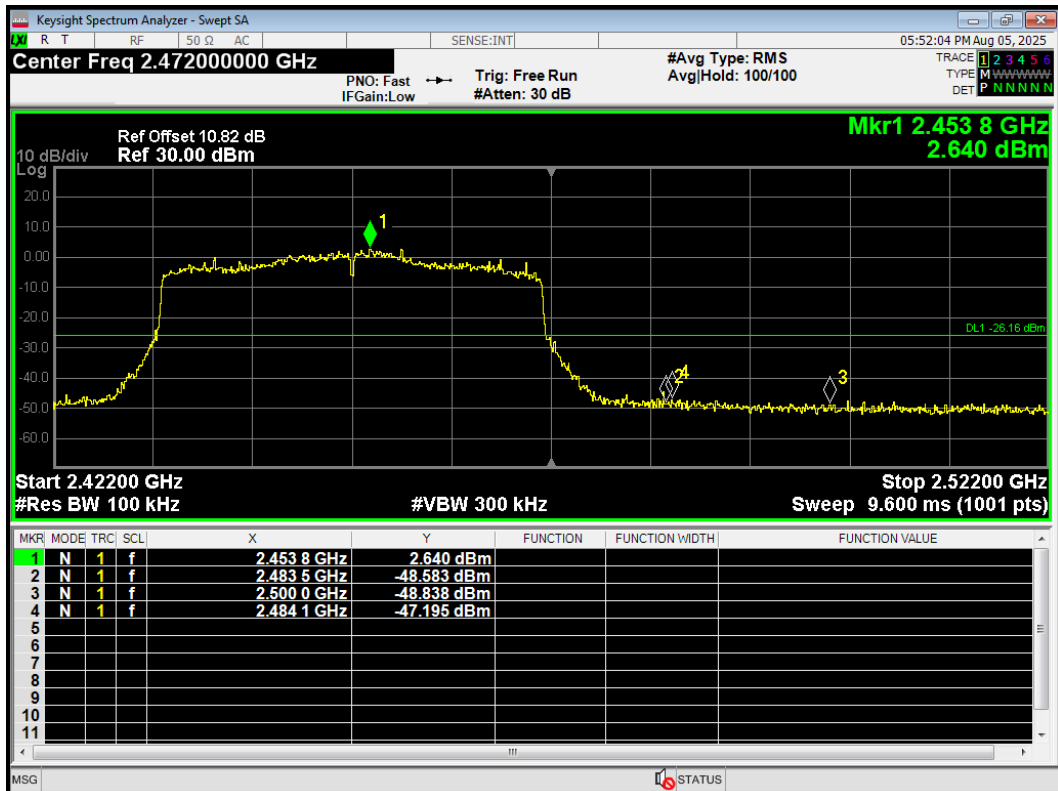
Band Edge 802.11ax(HE40)484T Index65 2447MHz Emission



Band Edge 802.11ax(HE40)484T Index65 2452MHz Ref



Band Edge 802.11ax(HE40)484T Index65 2452MHz Emission



5.4. Power Spectral Density

Ambient Condition

Temperature	Relative humidity
15°C ~ 35°C	20% ~ 80%

Method of Measurement

During the process of the testing, The EUT was connected to Spectrum Analyzer with a known loss. The EUT is max power transmission with proper modulation.

Method AVGPSD-1 was used for this test.

- Set instrument center frequency to DTS channel center frequency
- Set span to at least 1.5 times the OBW
- Set RBW to: $3\text{kHz} \leq \text{RBW} \leq 100\text{kHz}$
- Set VBW $\geq [3 \times \text{RBW}]$
- Detector=power averaging (rms) or sample detector (when rms not available)
- Ensure that the number of measurement points in the sweep $\geq [2 \times \text{span}/\text{RBW}]$
- Sweep time auto couple
- Employ trace averaging (rms) mode over a minimum of 100 traces
- Use the peak marker function to determine the maximum amplitude level.
- If the measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced)

Method AVGPSD-2 was used for this test.

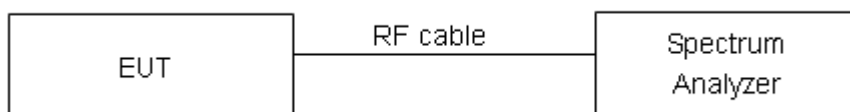
- Measure the duty cycle (D) of the transmitter output signal as described in 11.6
- Set instrument center frequency to DTS channel center frequency
- Set span to at least 1.5 times the OBW
- Set RBW to: $3\text{kHz} \leq \text{RBW} \leq 100\text{kHz}$
- Set VBW $\geq [3 \times \text{RBW}]$
- Detector= power averaging (rms) or sample detector (when rms not available)
- Ensure that the number of measurement points in the sweep $\geq [2 \times \text{span}/\text{RBW}]$
- Sweep time =auto couple
- Do not use sweep triggering; allow sweep to "free run"
- Employ trace averaging (rms) mode over a minimum of 100 traces
- Use the peak marker function to determine the maximum amplitude level

l) Add $[10 \log(1/D)]$, where D is the duty cycle measured in step a), to the measured PSD to compute the average PSD during the actual transmission time

m) If measured value exceeds requirement specified by regulatory agency then reduce RBW (but no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced)

The conducted Power is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

Test setup



Limits

Rule Part 15.247(e) specifies that " For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. "

Limits	$\leq 8 \text{ dBm} / 3\text{kHz}$
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Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 0.75\text{dB}$.