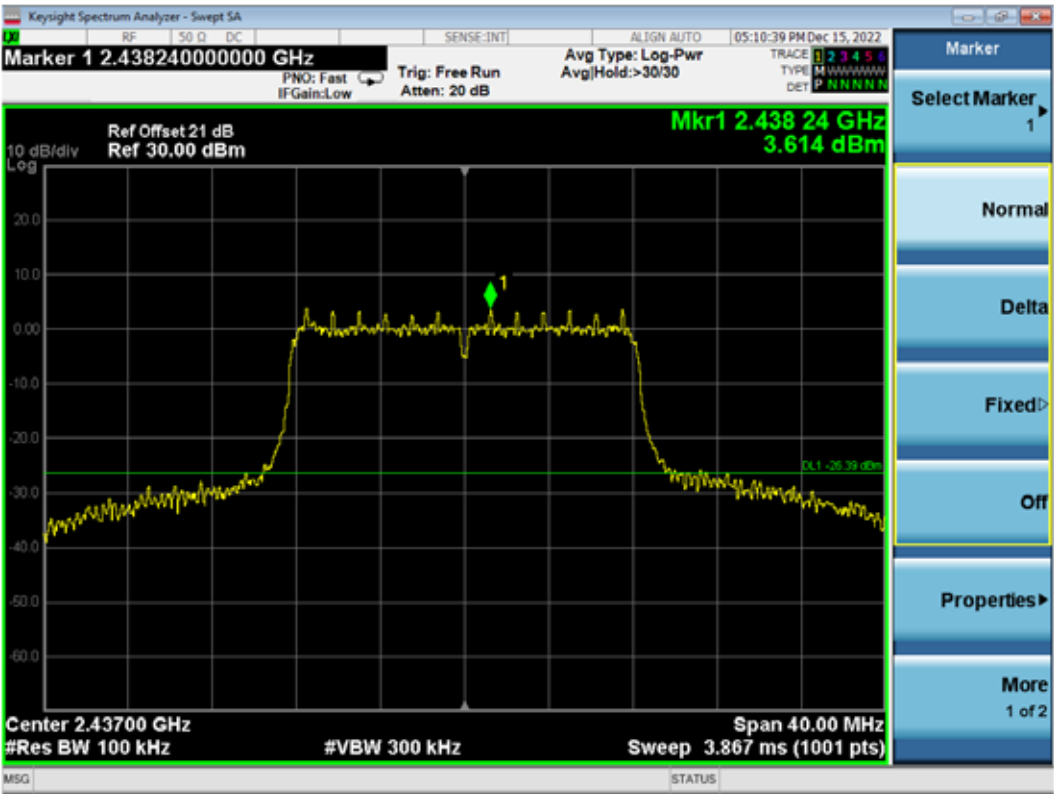
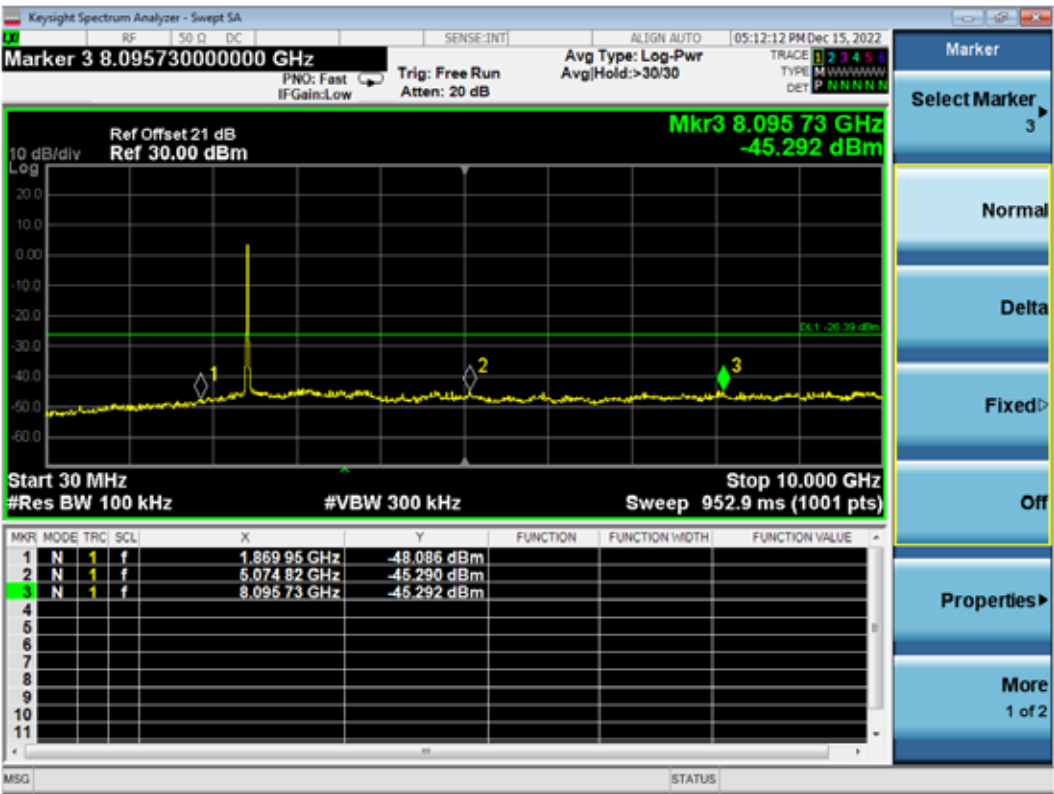


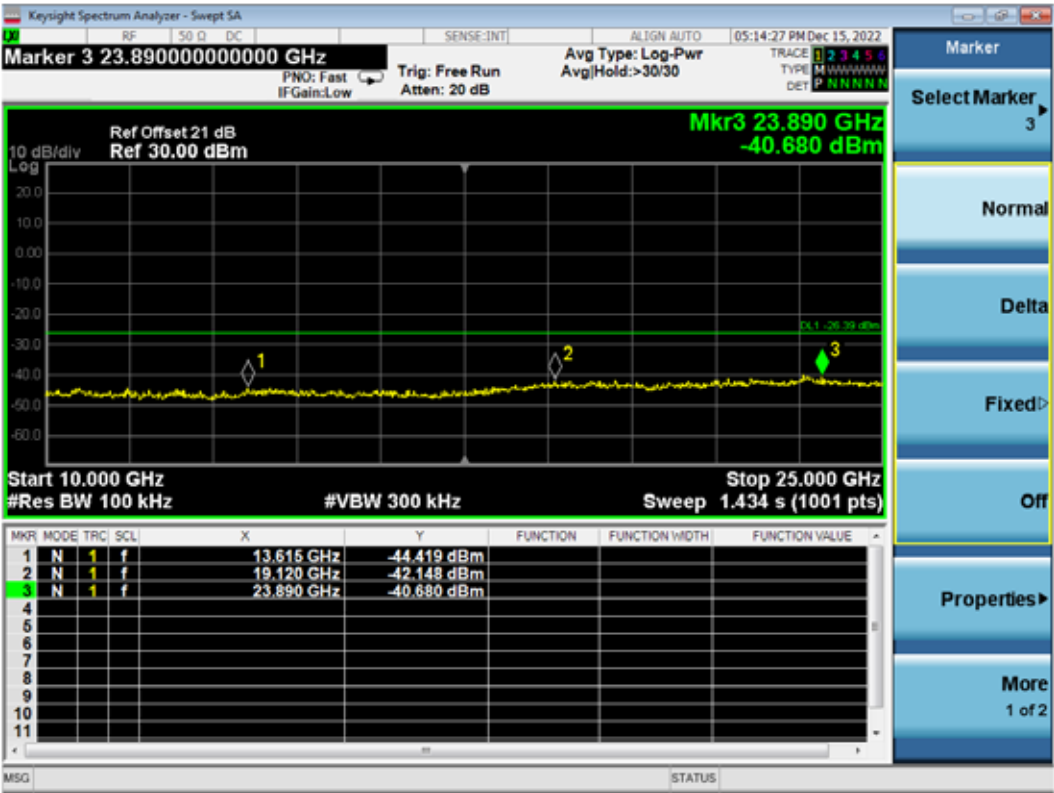
802.11g CH2437MHz

Reference level



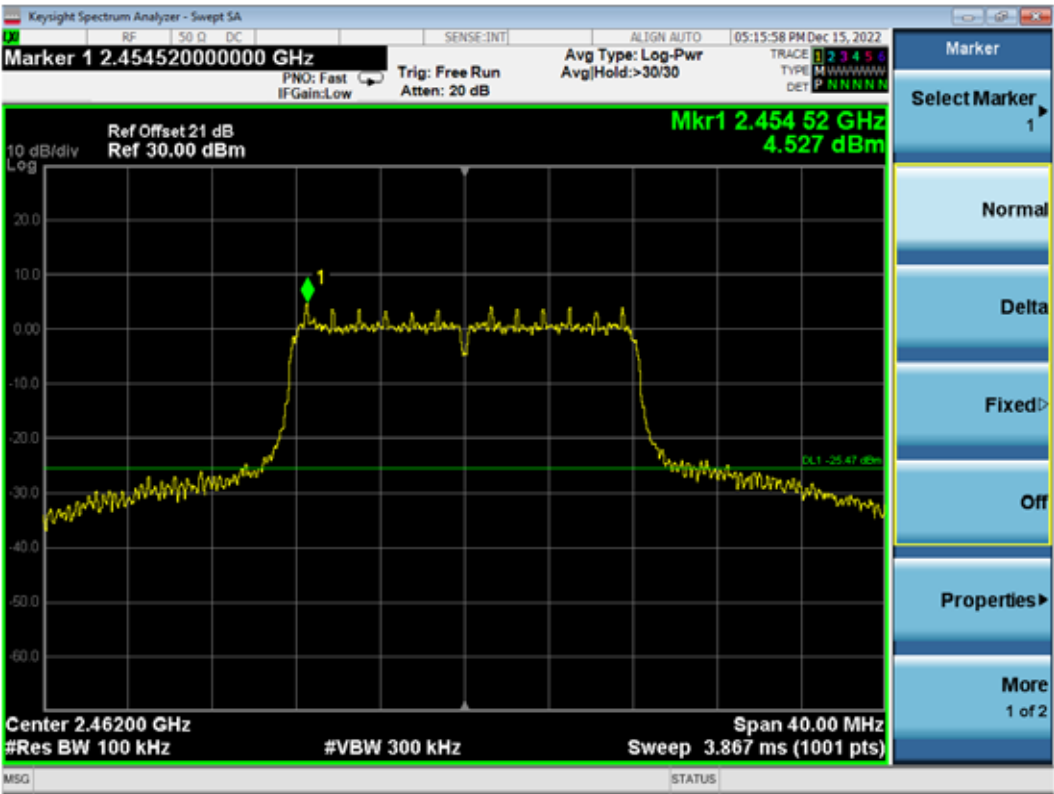
Emission level



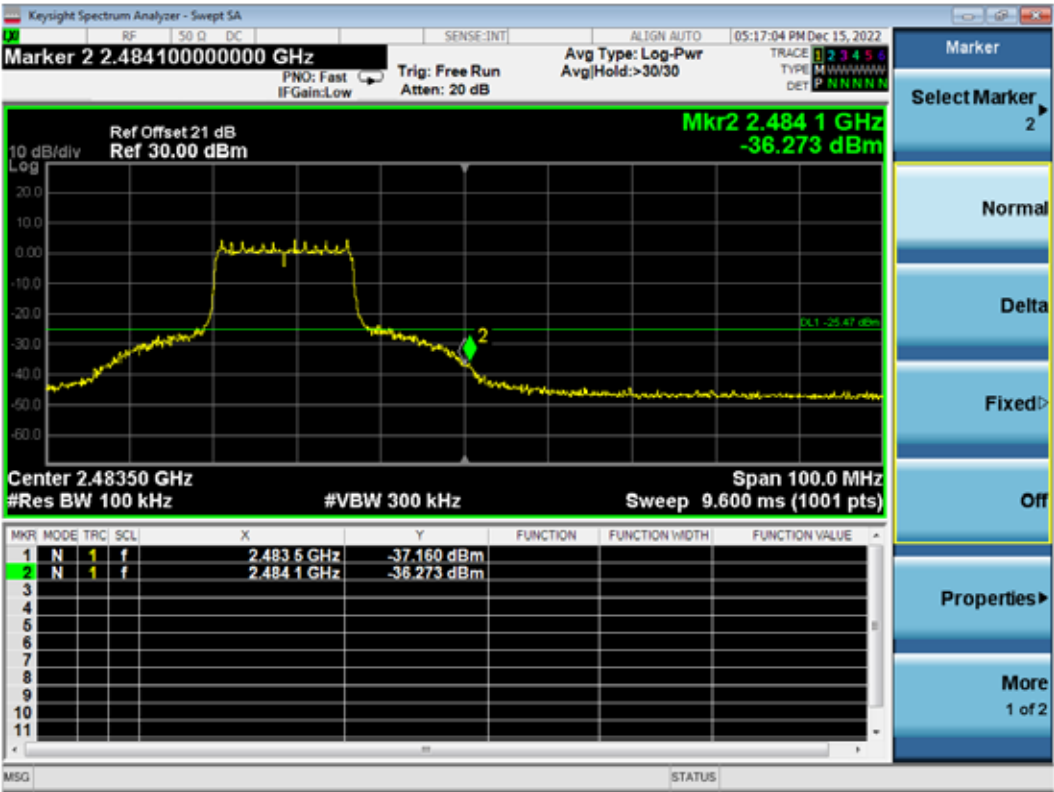


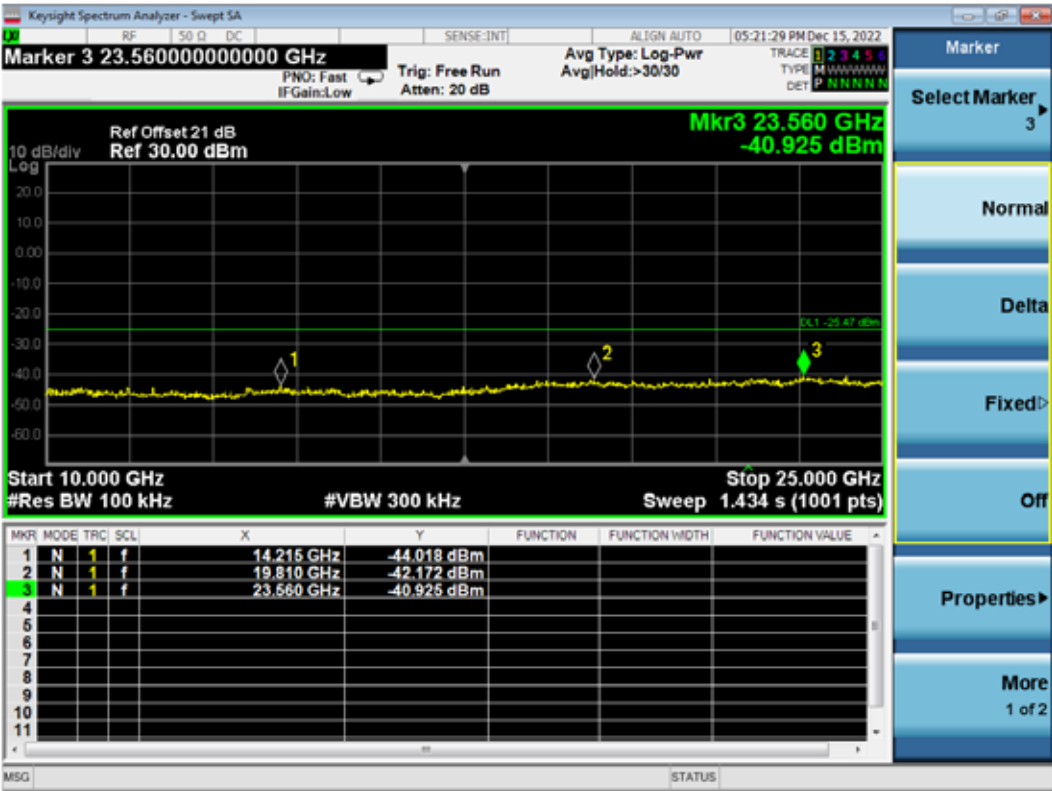
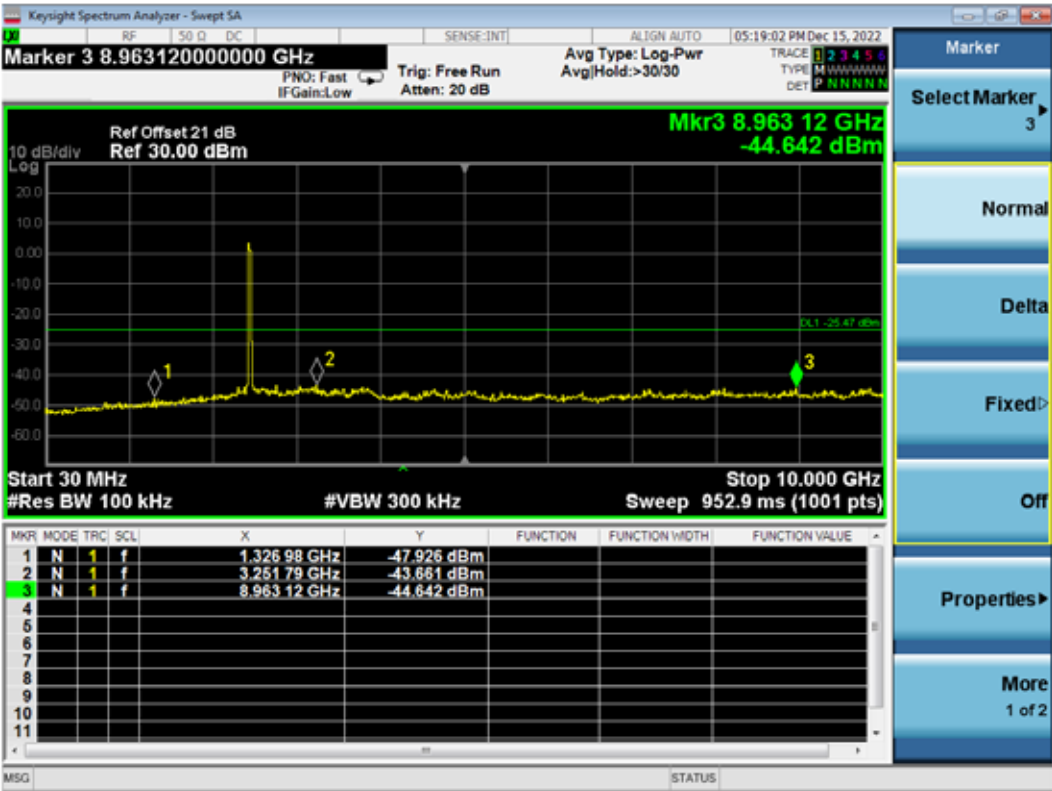
802.11g CH2462MHz

Reference level



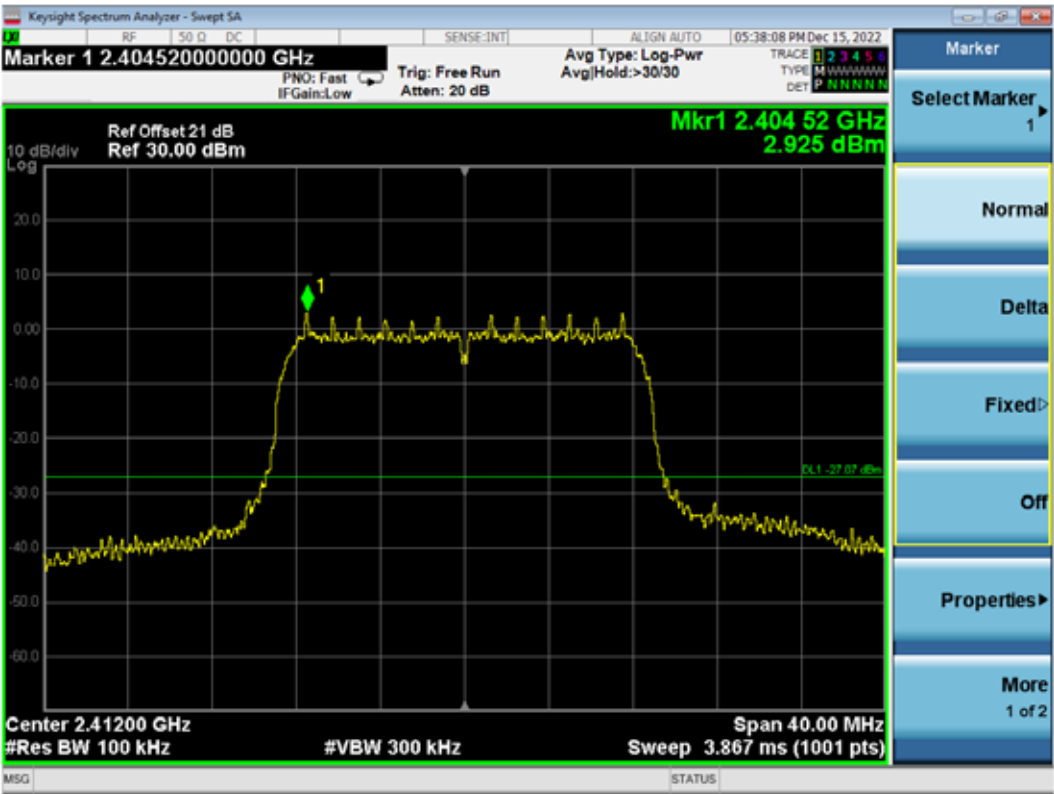
Emission level



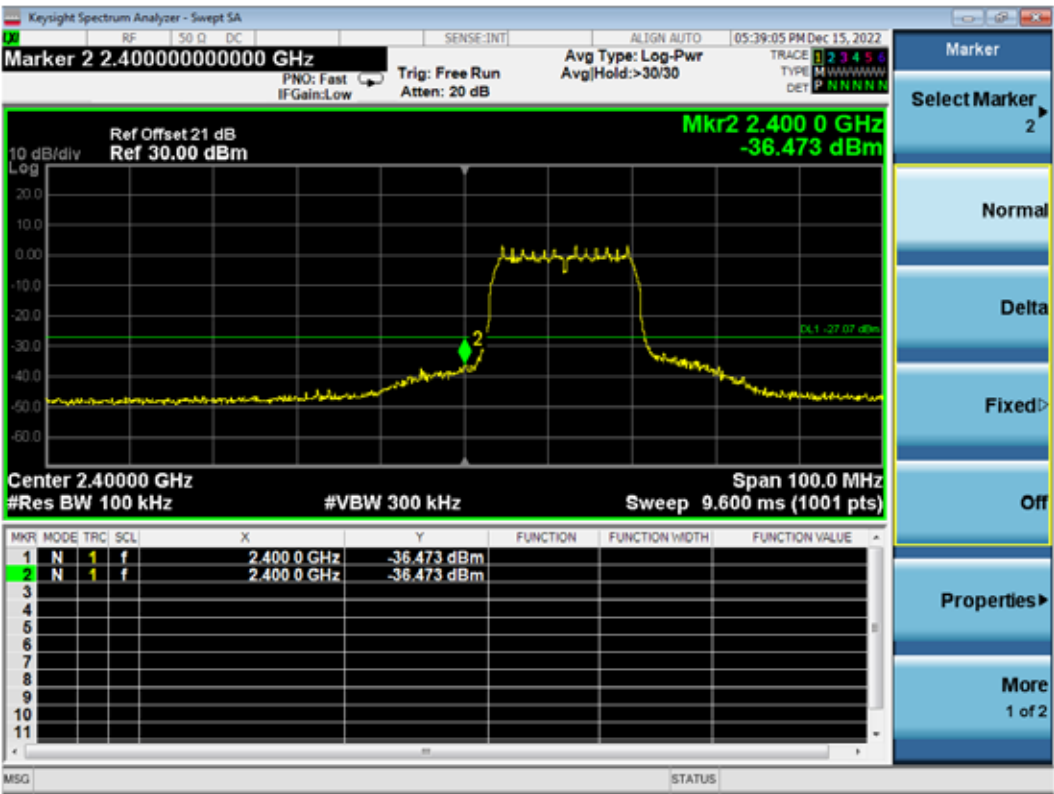


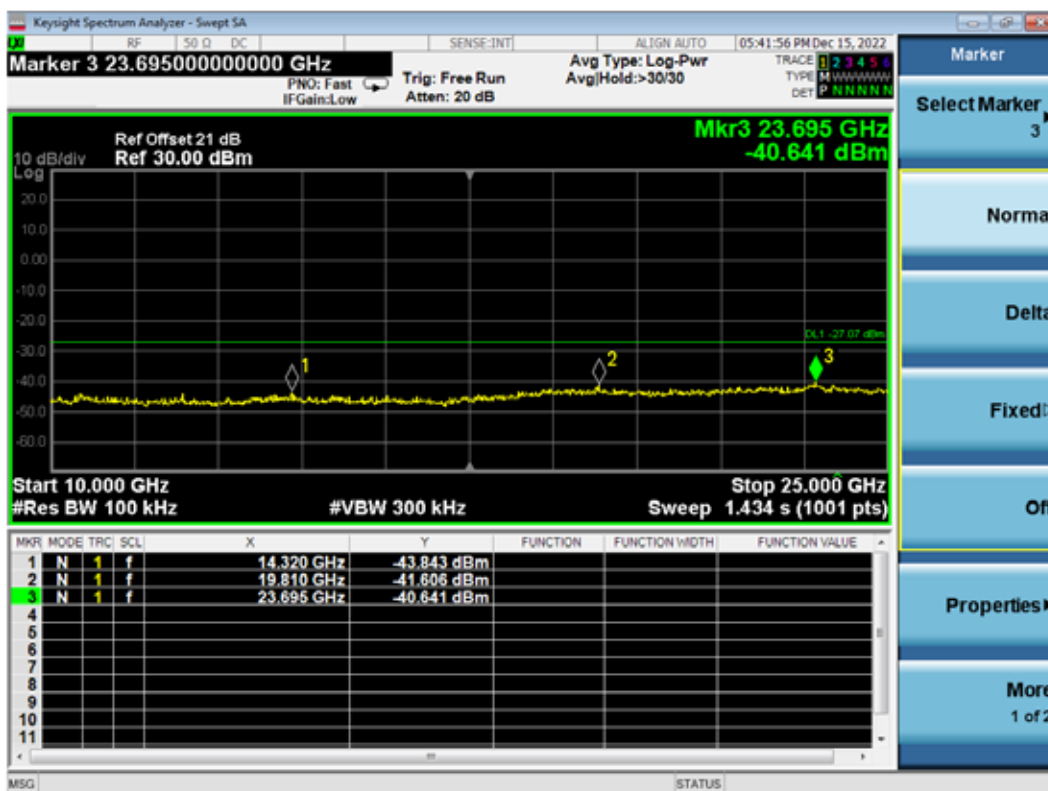
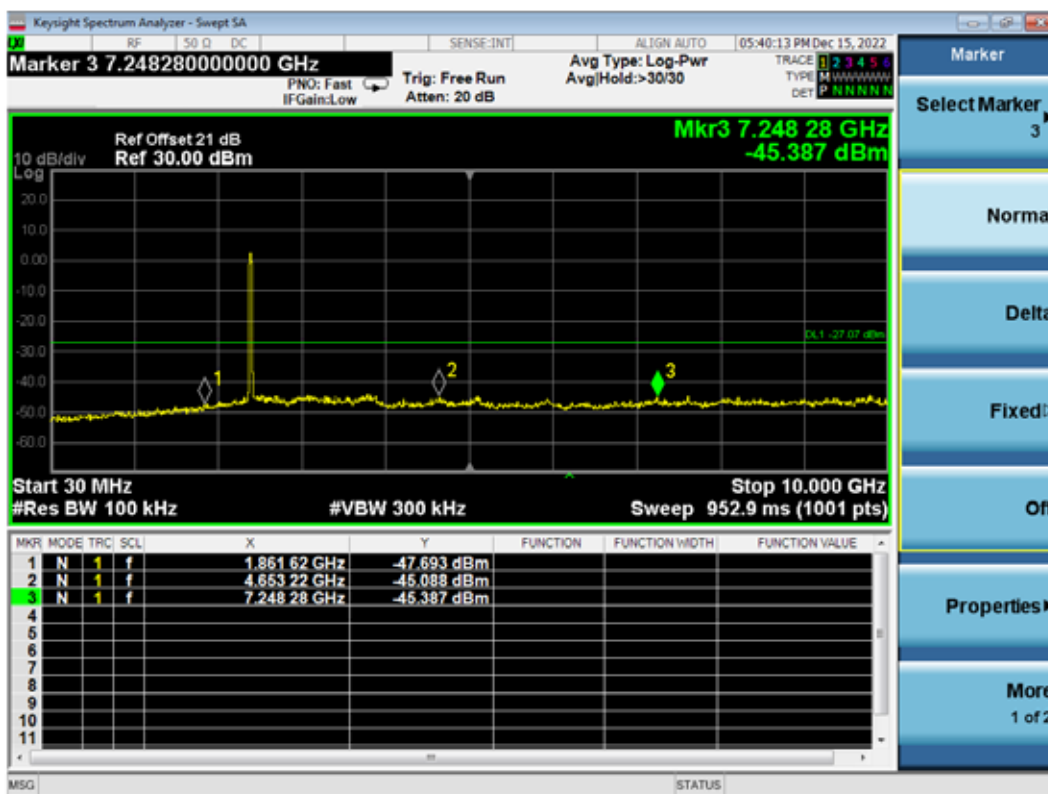
802.11n20 CH2412MHz

Reference level



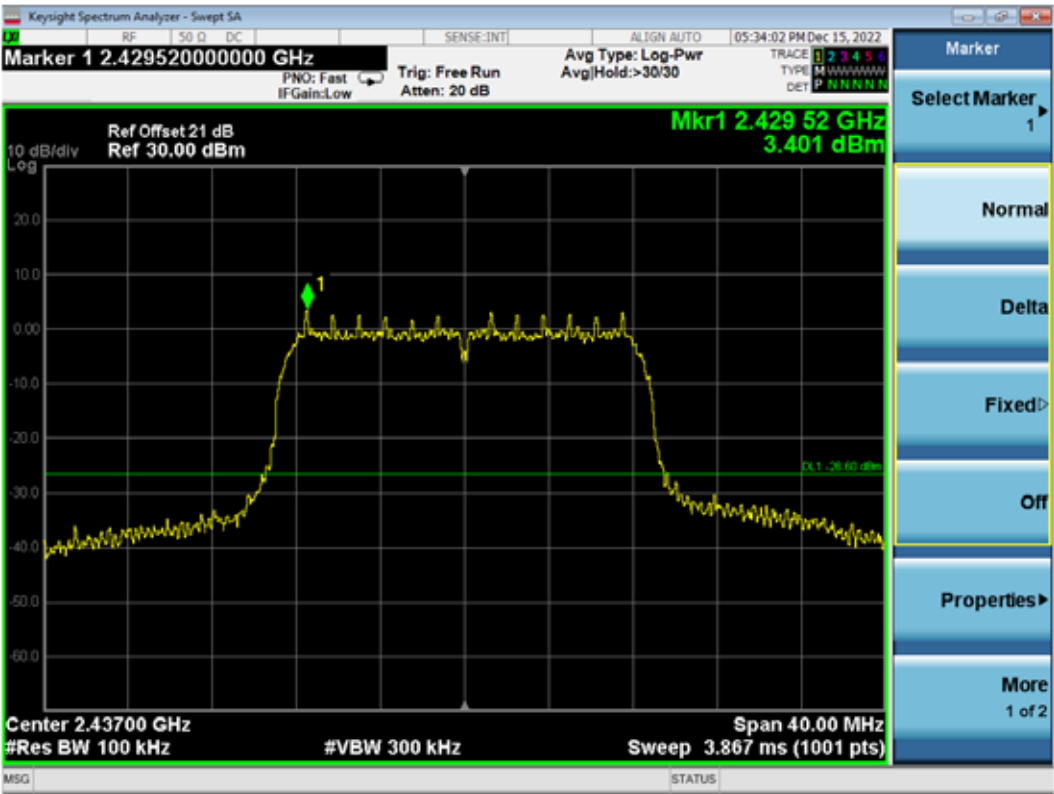
Emission level



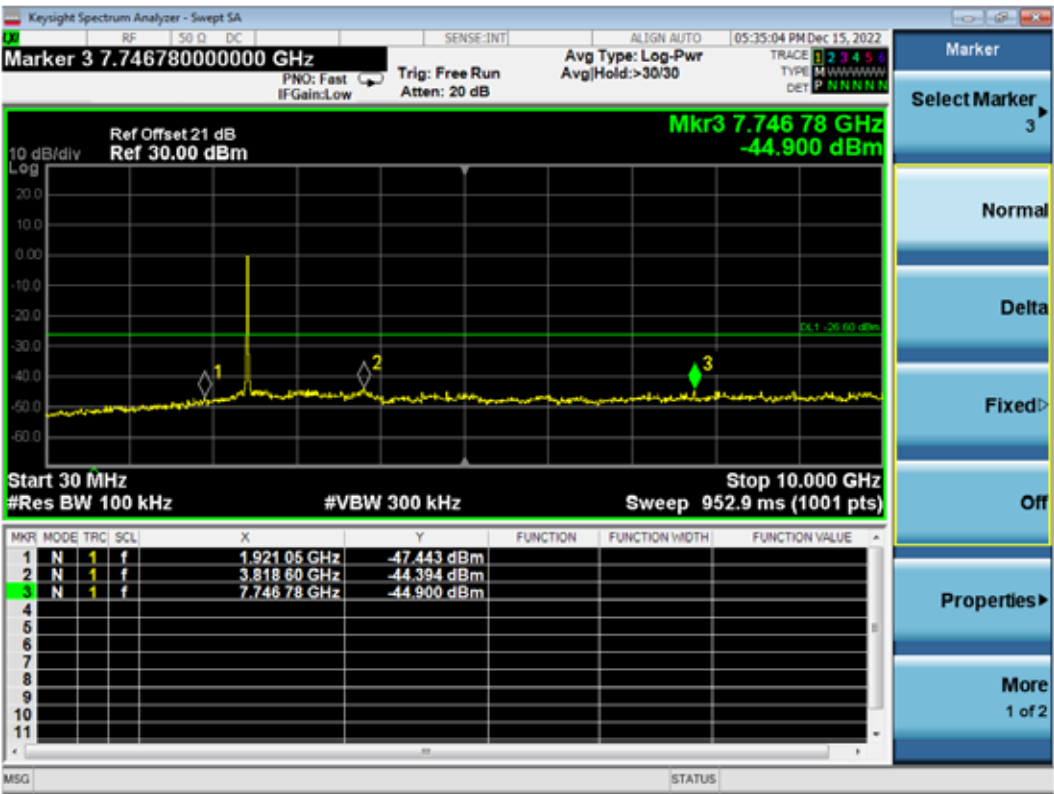


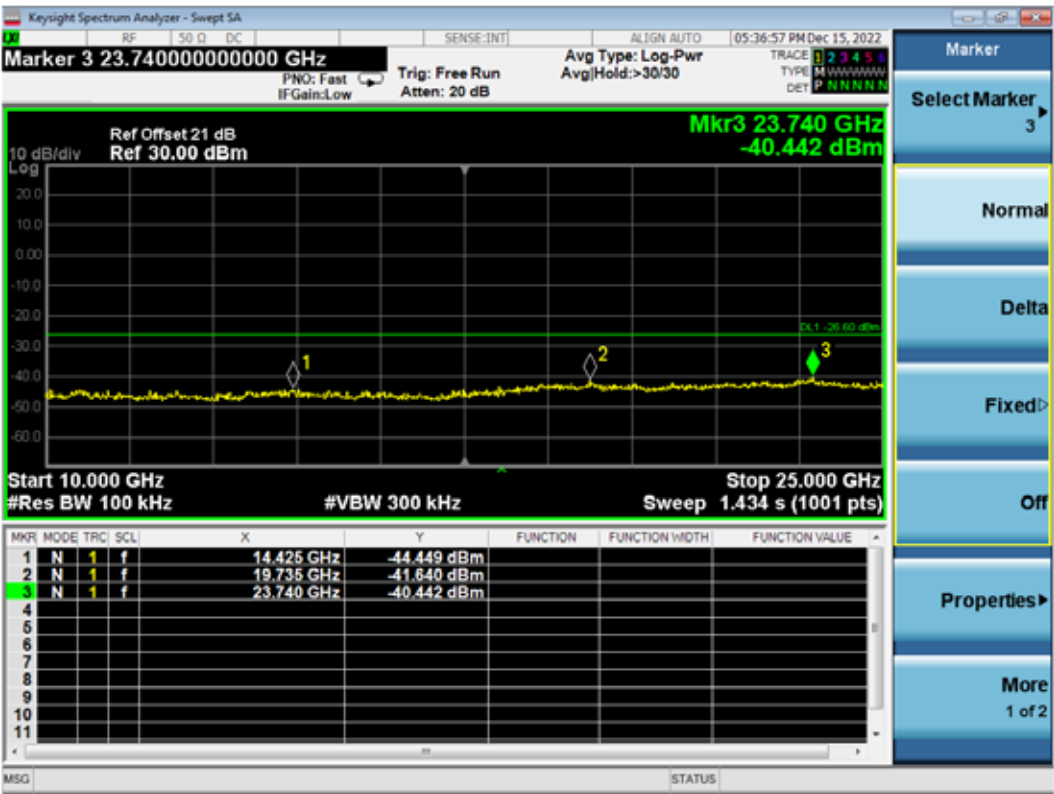
802.11n20 CH2437MHz

Reference level



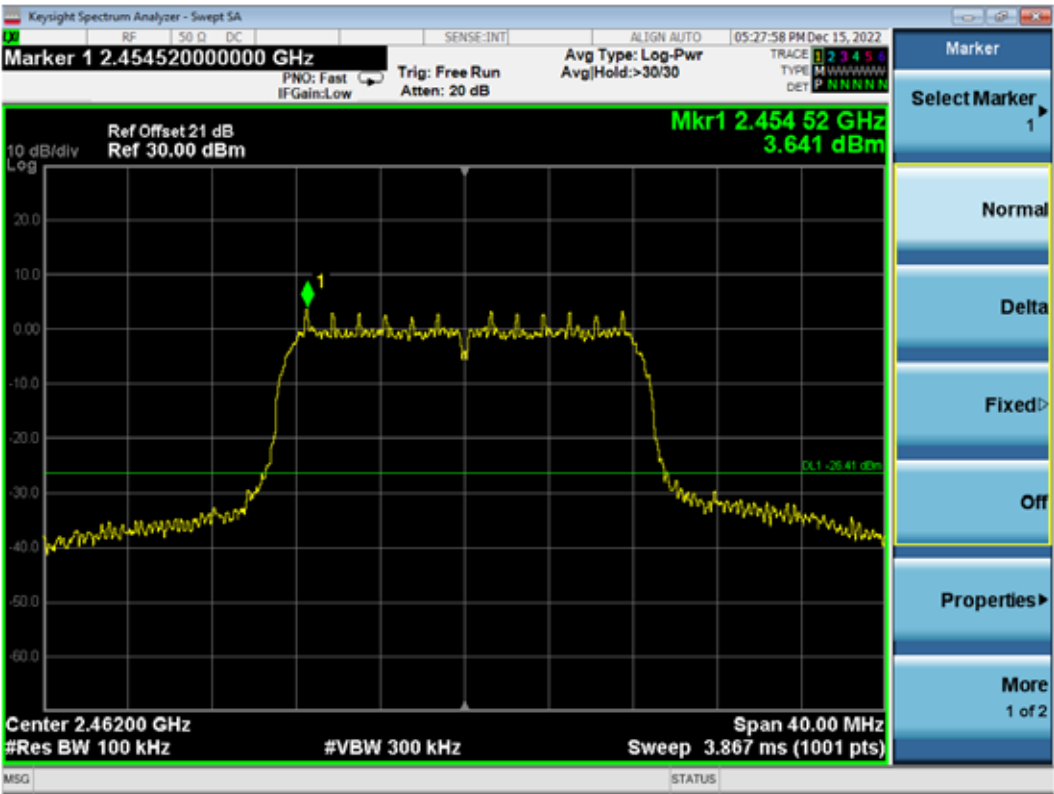
Emission level



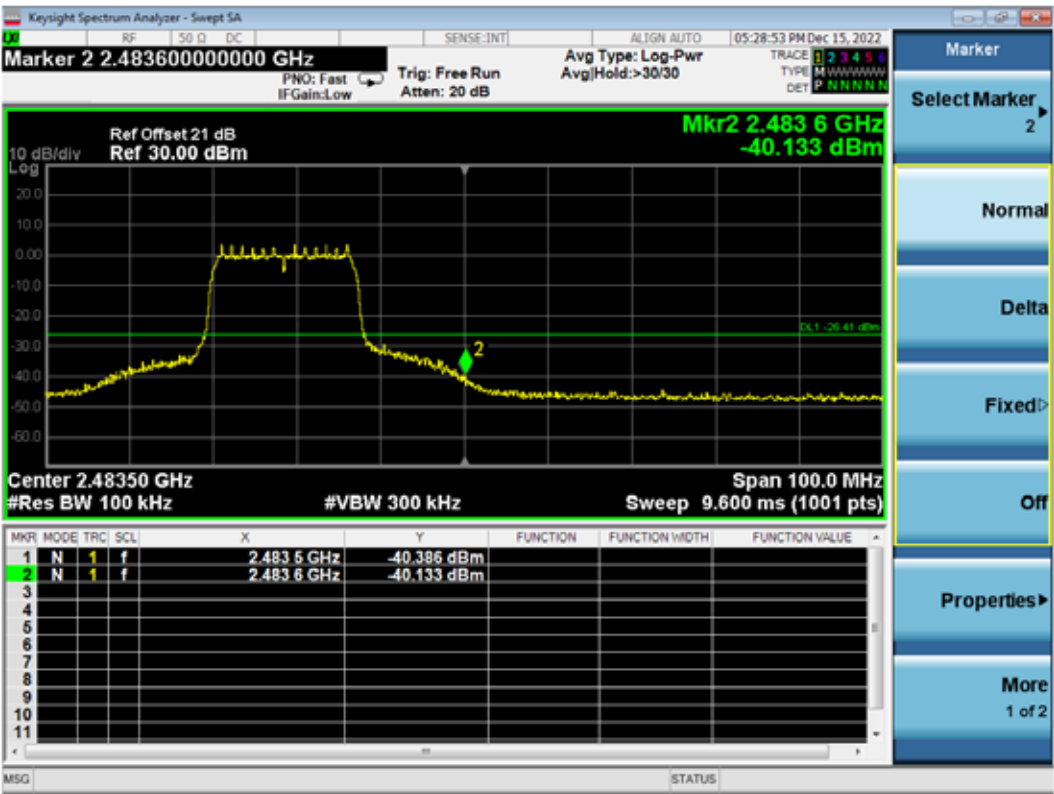


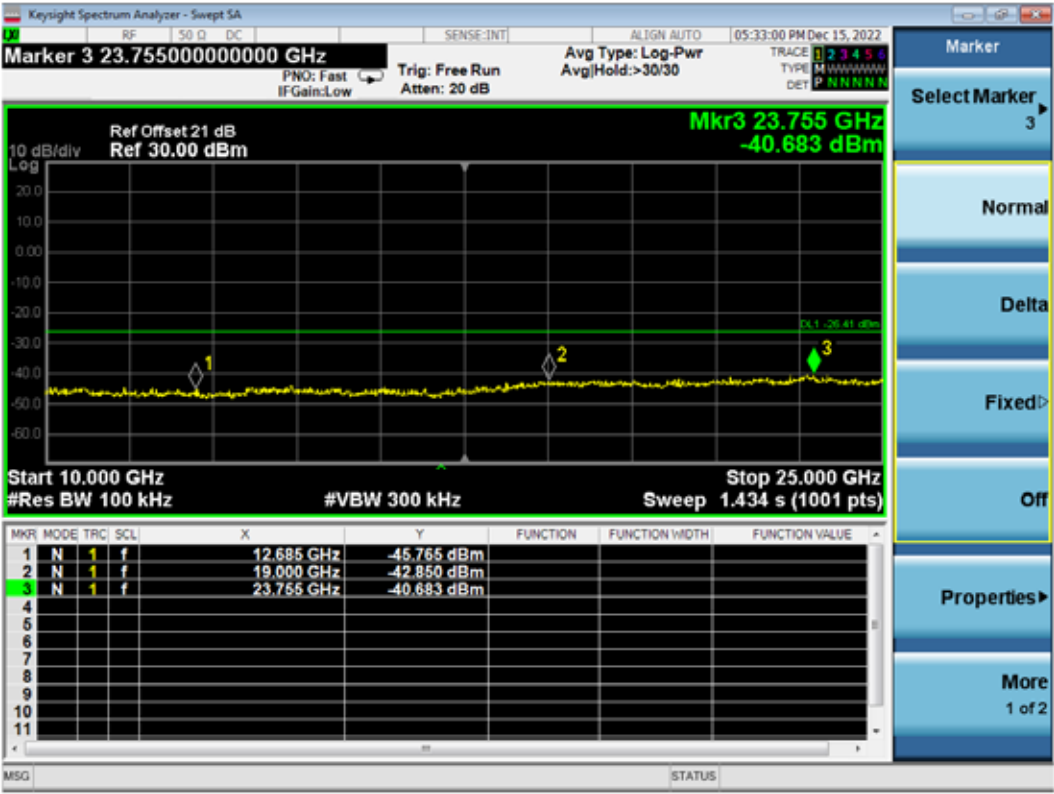
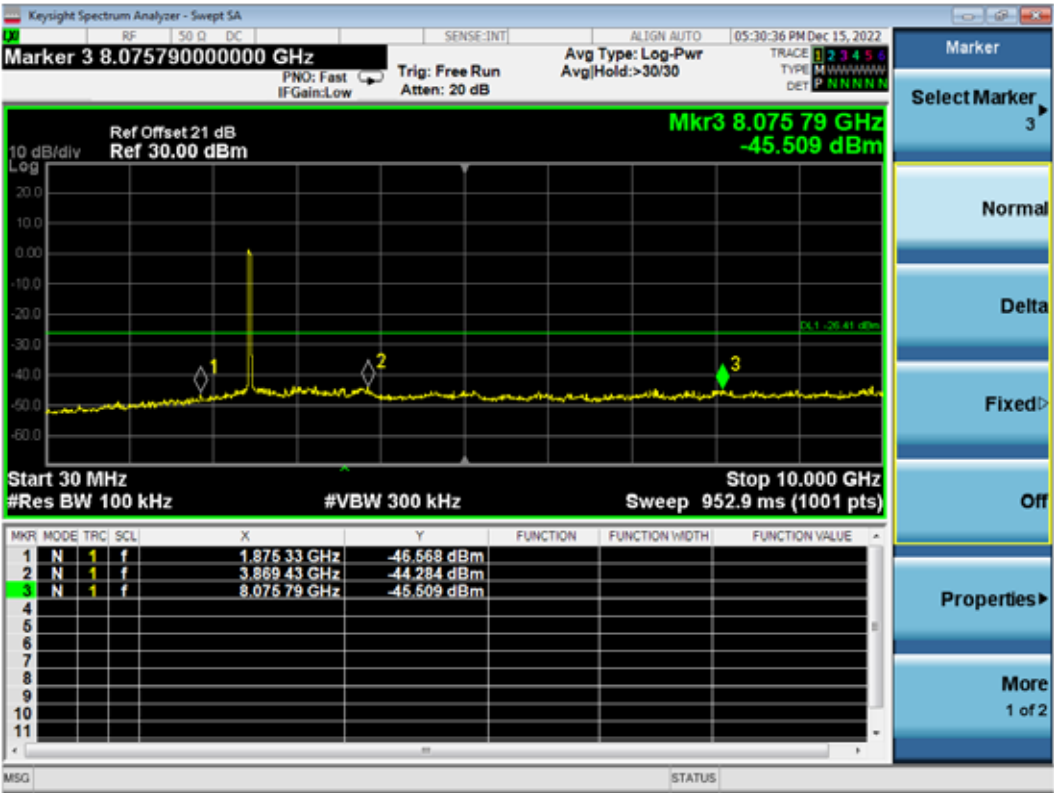
802.11n20 CH2462MHz

Reference level



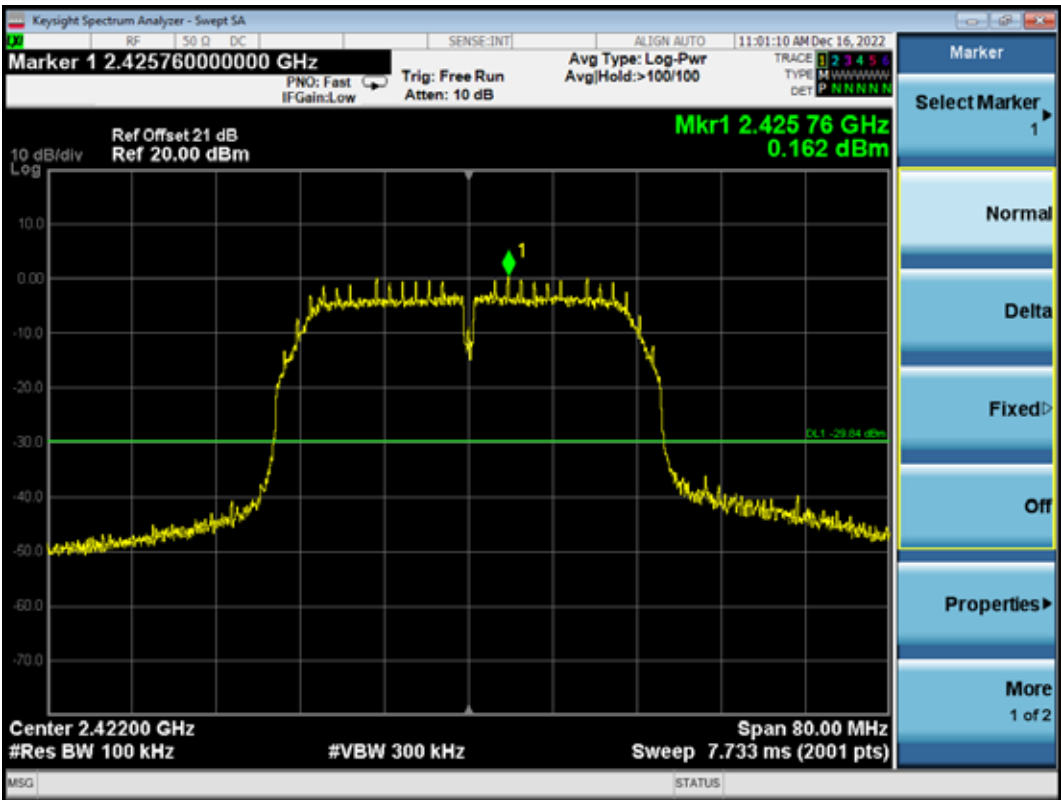
Emission level



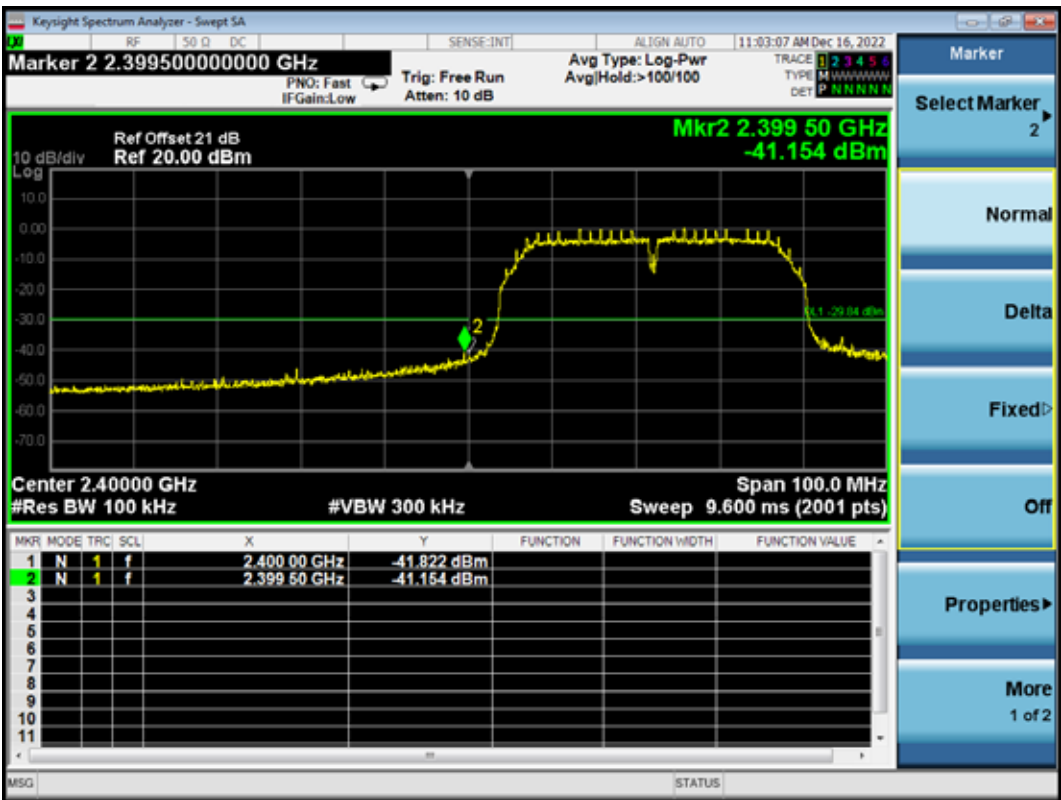


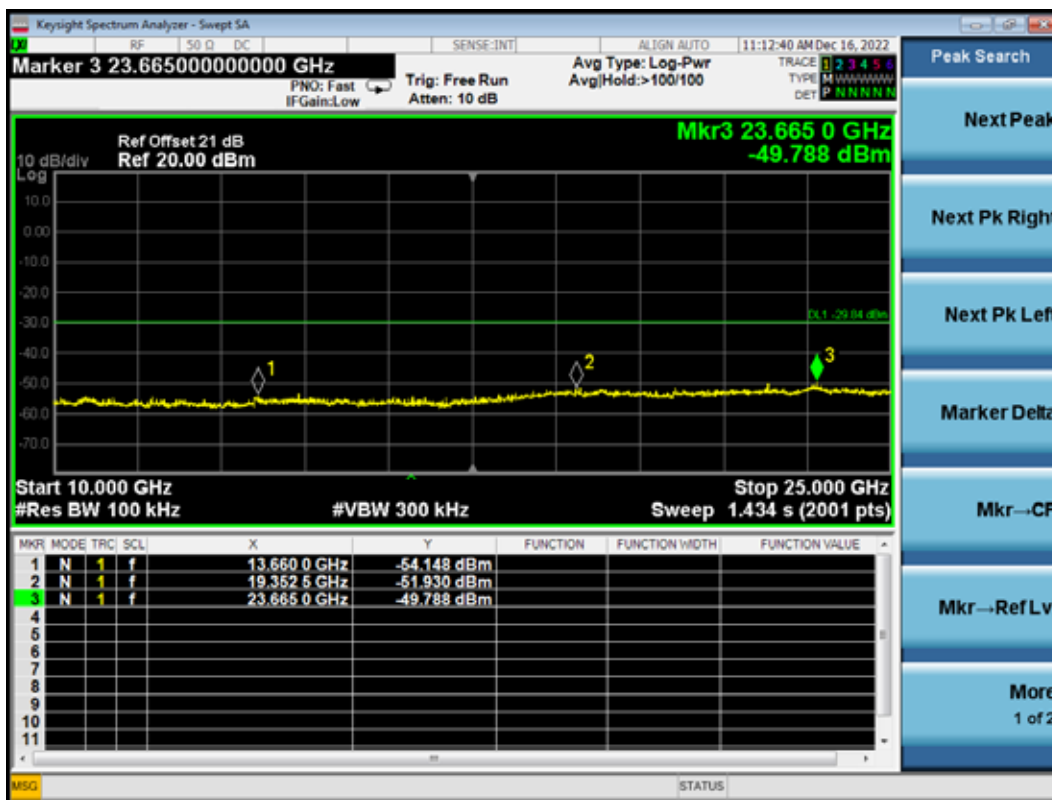
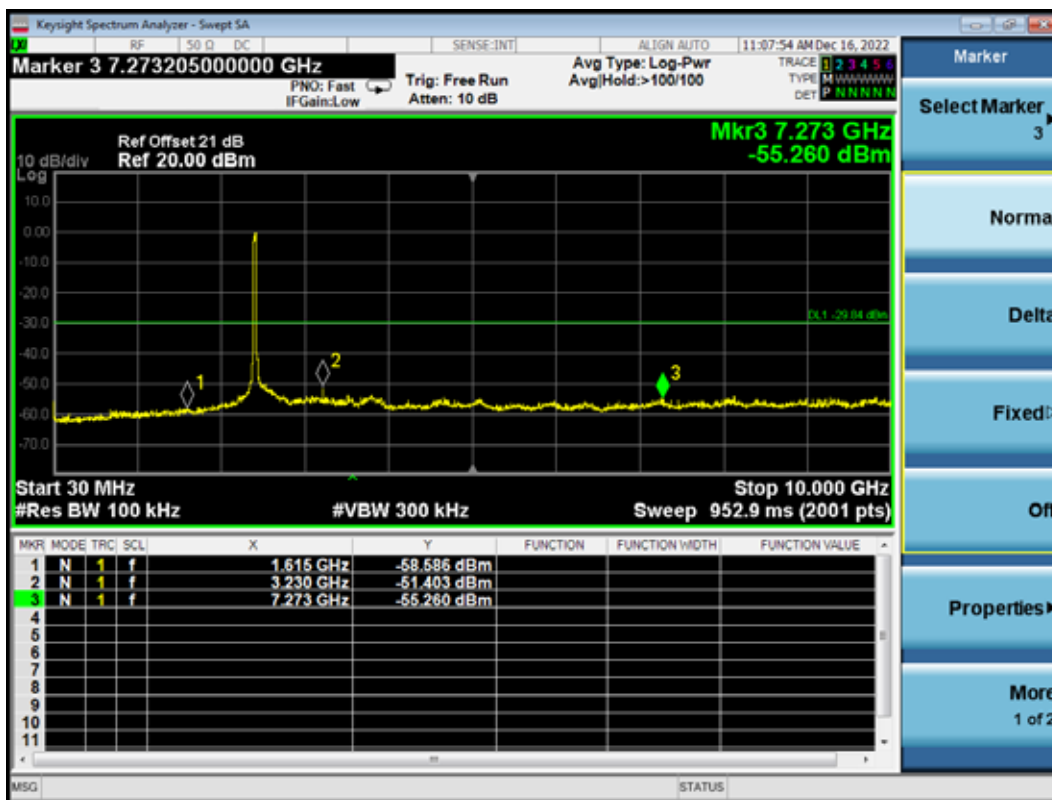
802.11n40 CH2422MHz

Reference level



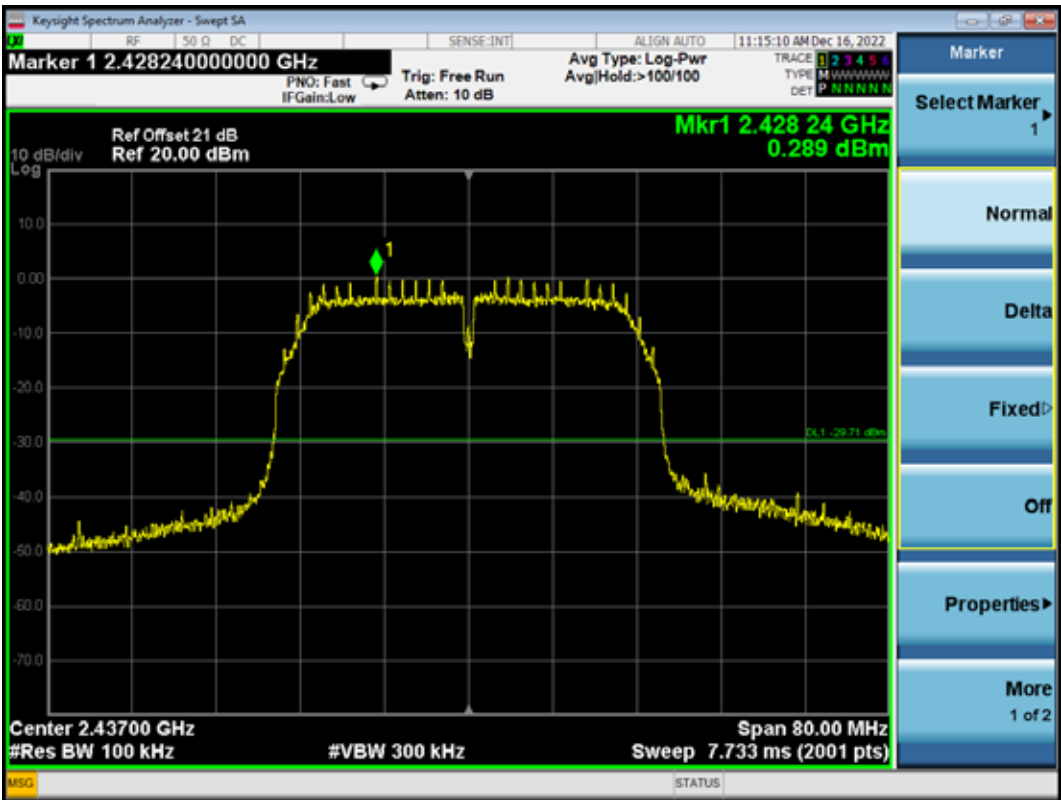
Emission level



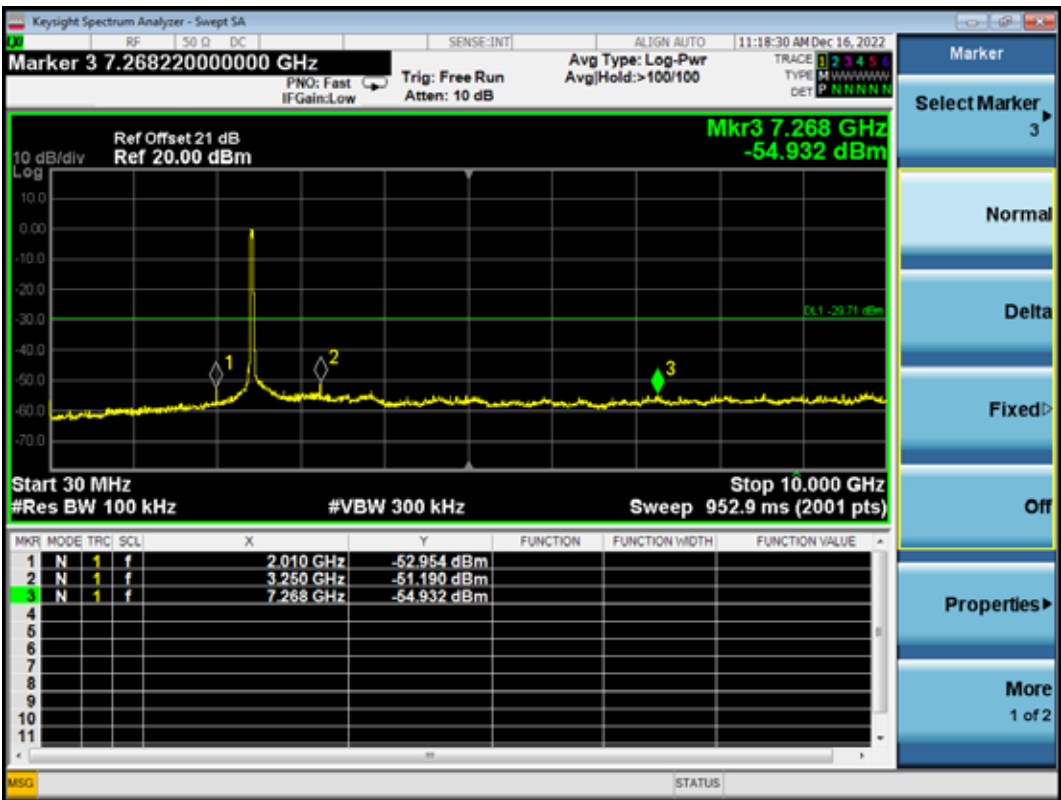


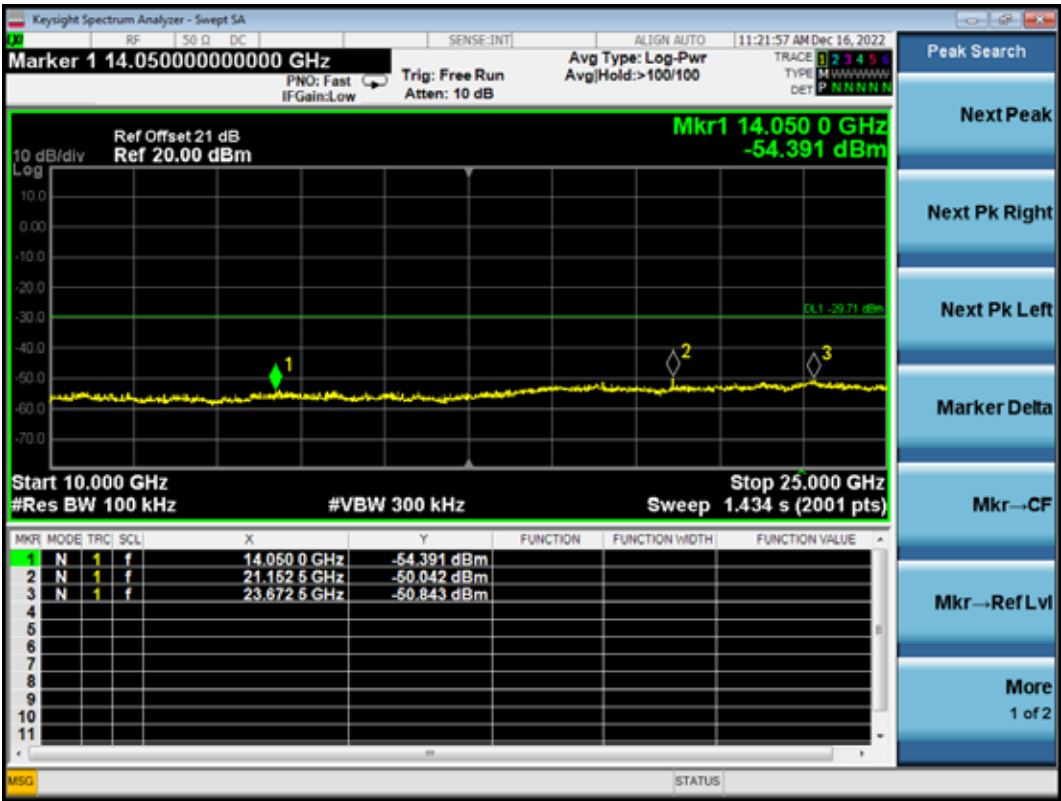
802.11n40 CH2437MHz

Reference level



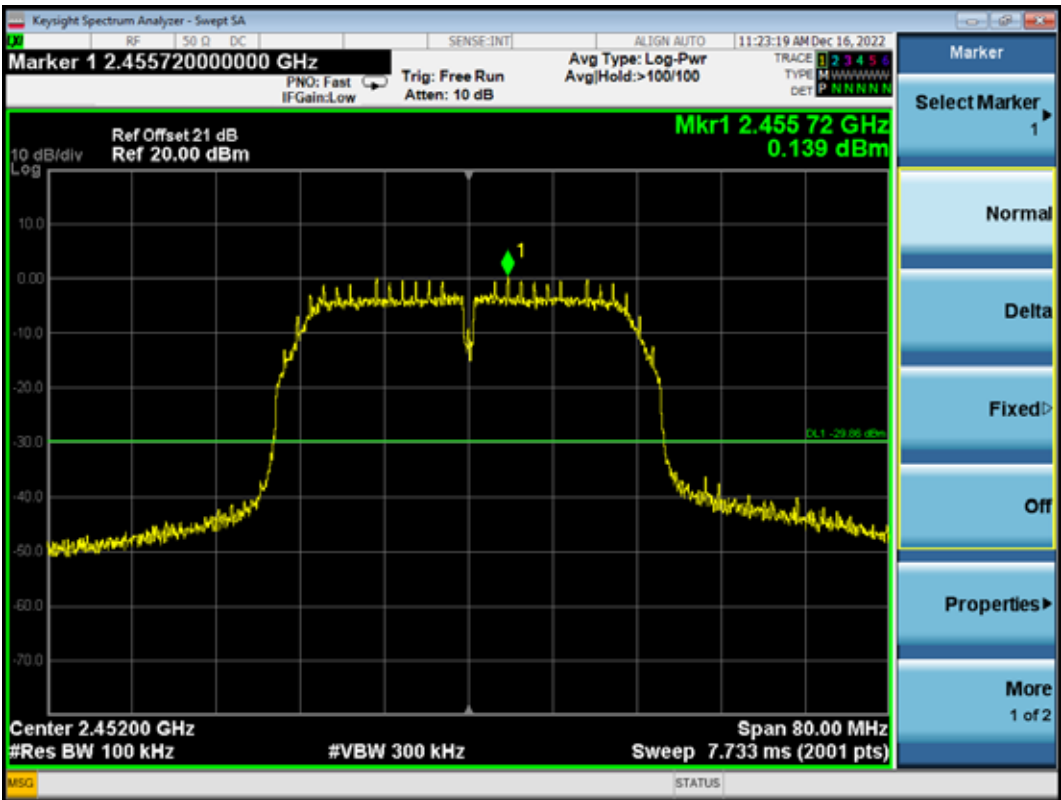
Emission level



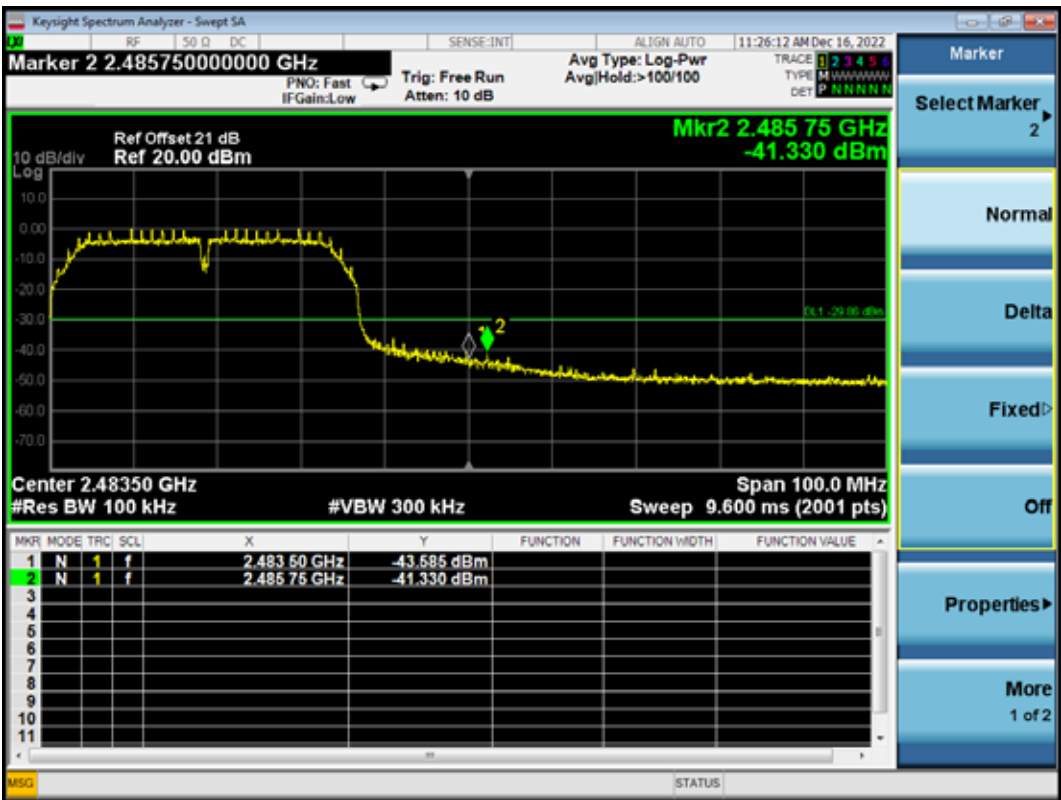


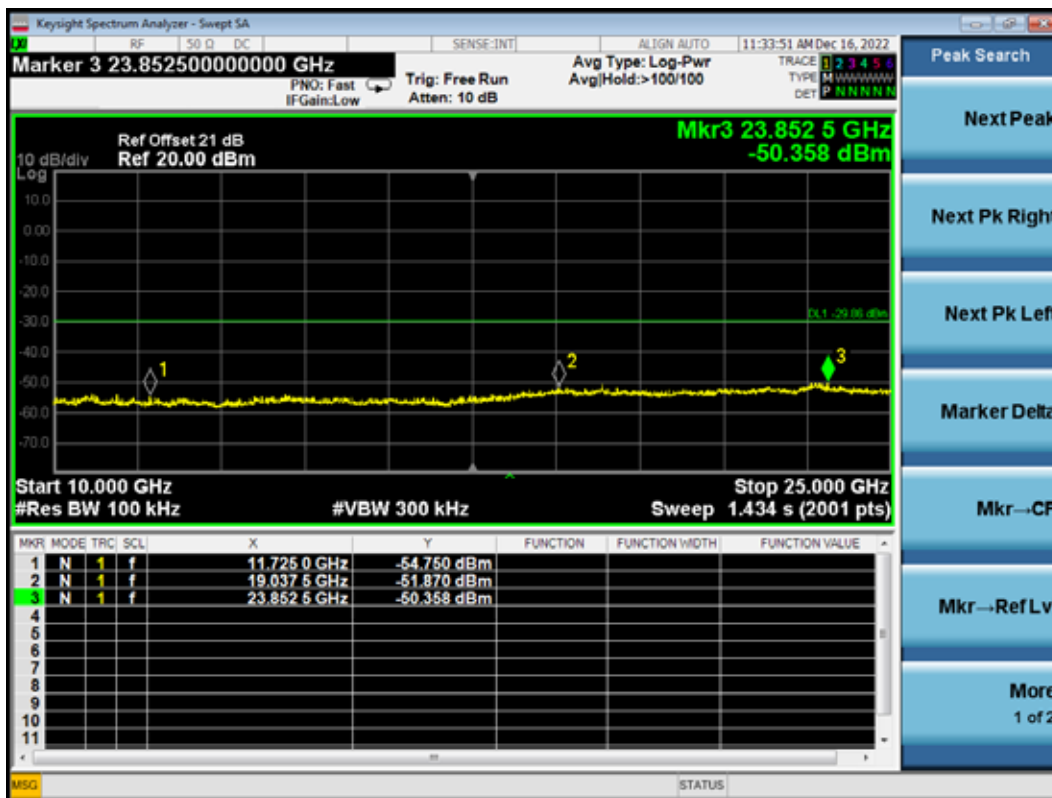
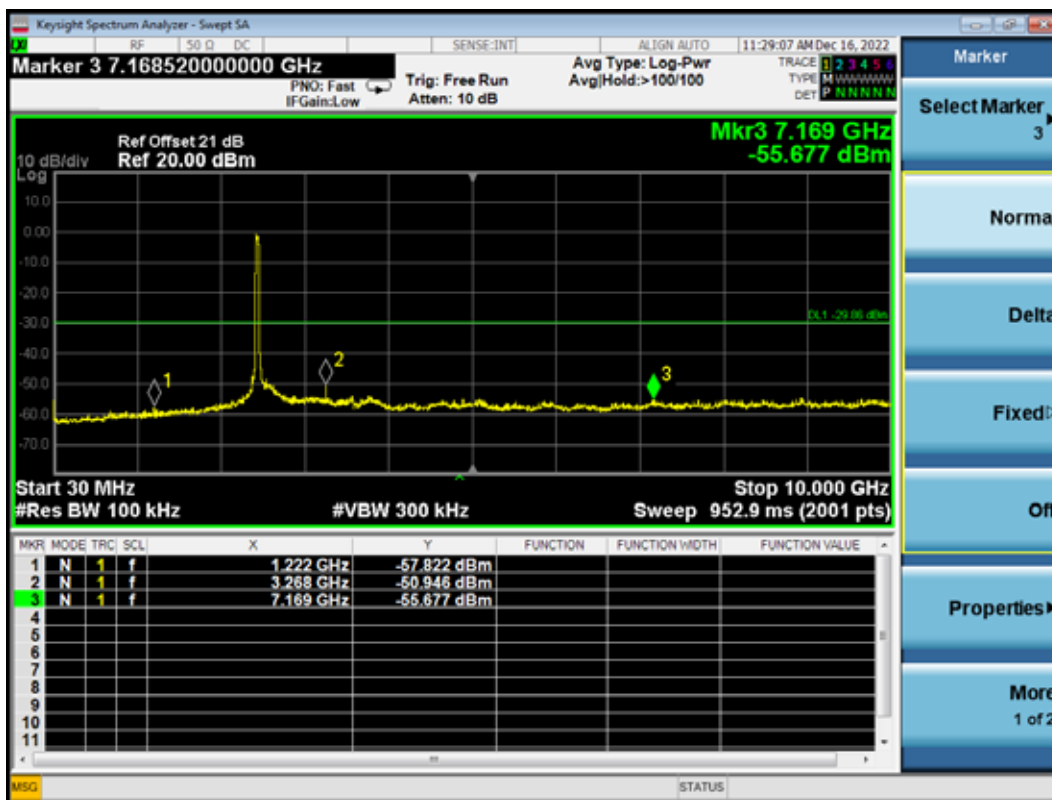
802.11n40 CH2452MHz

Reference level



Emission level





9 POWER SPECTRAL DENSITY MEASUREMENT

9.1 Test Equipment

The following test equipment was used during the power spectral density measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A	MY52221182	2022.09.15	1 Year
2.	Coaxial Cable	WOKEN	SFL402-105F LEX	F02-150819-045	2022.03.07	1 Year
3.	20 dB Attenuator	Mini-Circuits	VAT-20+	001	2022.08.06	1 Year

9.2 Block Diagram of Test Setup

The Same as section 5.2.

9.3 Specification Limits (§15.247(e))

The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band.

9.4 Operating Condition of EUT

The software as section 2.3 was used to enable the EUT to change the test mode one by one.

9.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.

- Set analyzer center frequency to DTS channel center frequency.
- Set the span to 1.5 times the DTS bandwidth.
- Set the RBW to $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- Set the VBW $\square [3 \square \text{RBW}]$.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level within the RBW.
- If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

The test procedure is defined in ANSI C63.10-2013 (11.10.2 Measurement Procedure “Method PKPSD (peak PSD)” was used).

9.6 Test Results

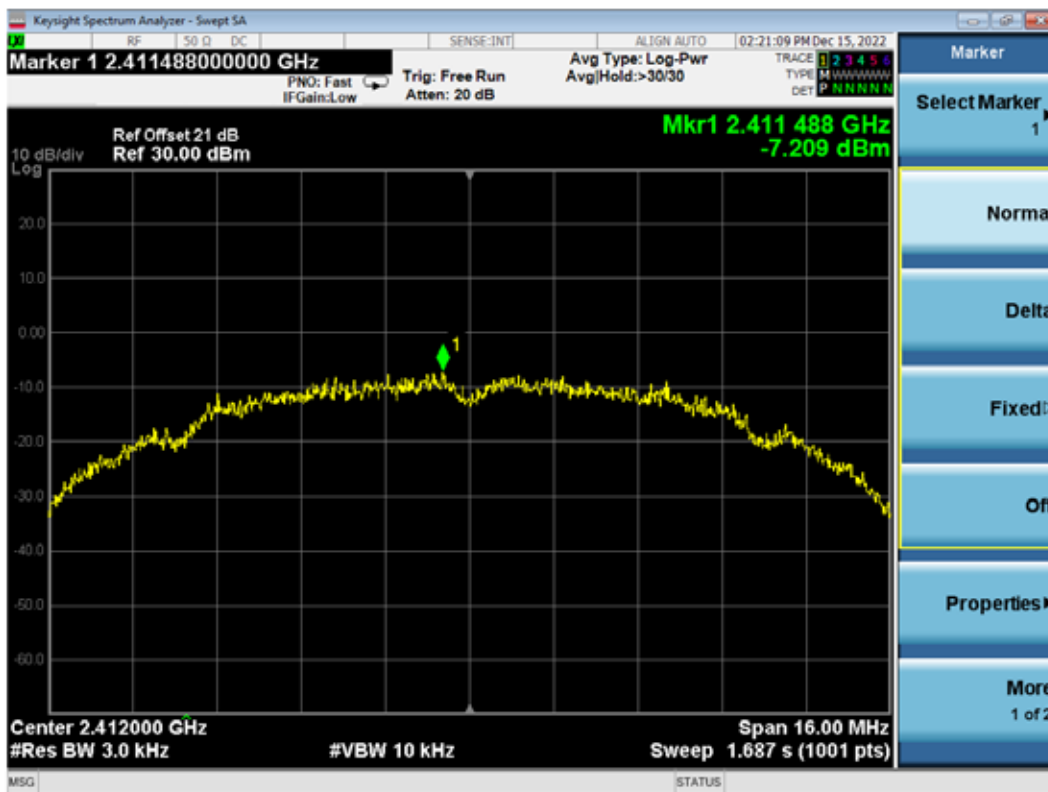
PASSED.

All the test results are attached in next pages.

(Test Date: 2022.12.15 Temperature: 23°C Humidity: 51 %)

Modulation	Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limit
802.11b	1	2412	-7.209	8 dBm
	6	2437	-6.03	8 dBm
	11	2462	-5.963	8 dBm
802.11g	1	2412	-10.497	8 dBm
	6	2437	-10.276	8 dBm
	11	2462	-9.931	8 dBm
802.11n20	1	2412	-10.887	8 dBm
	6	2437	-11.045	8 dBm
	11	2462	-10.507	8 dBm
802.11n40	3	2422	-12.942	8 dBm
	6	2437	-13.168	8 dBm
	9	2452	-13.196	8 dBm

802.11b CH2412 MHz



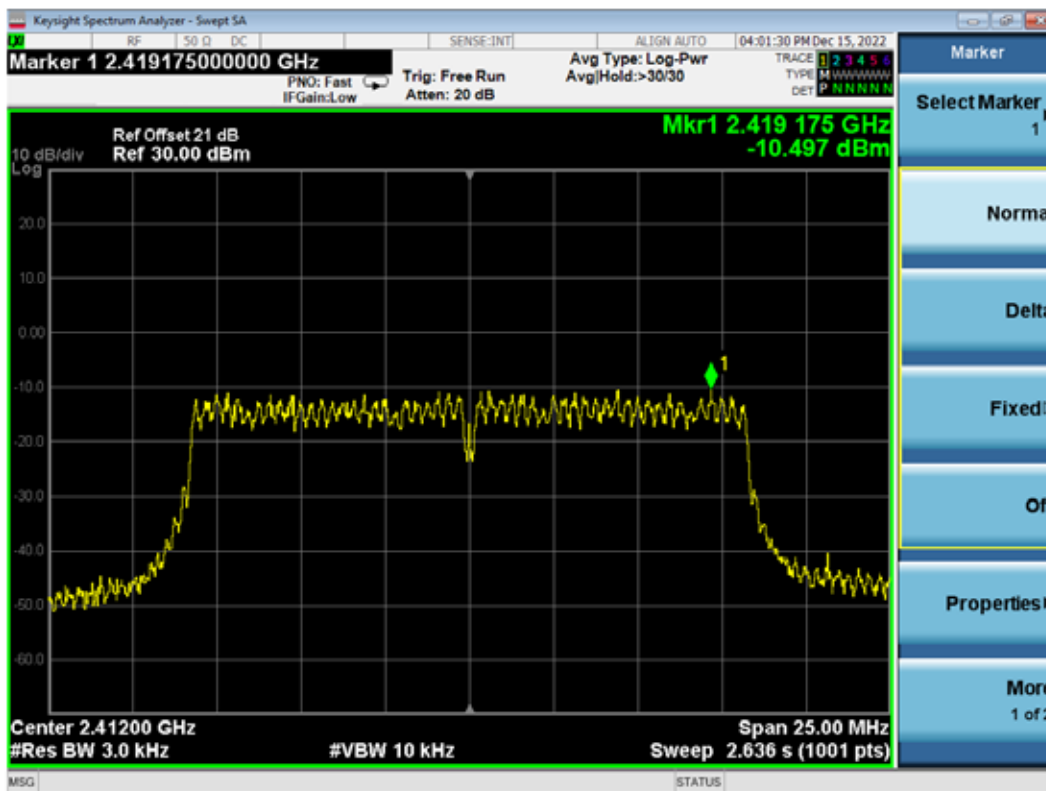
802.11b CH2437 MHz



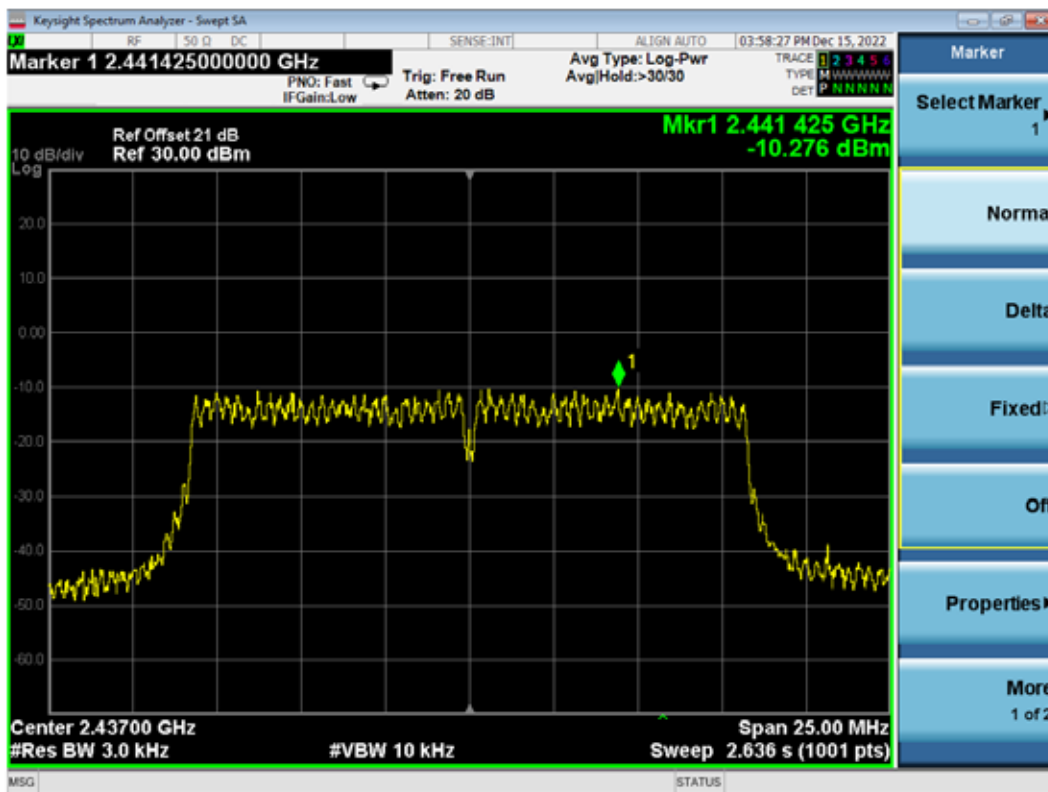
802.11b CH2462 MHz



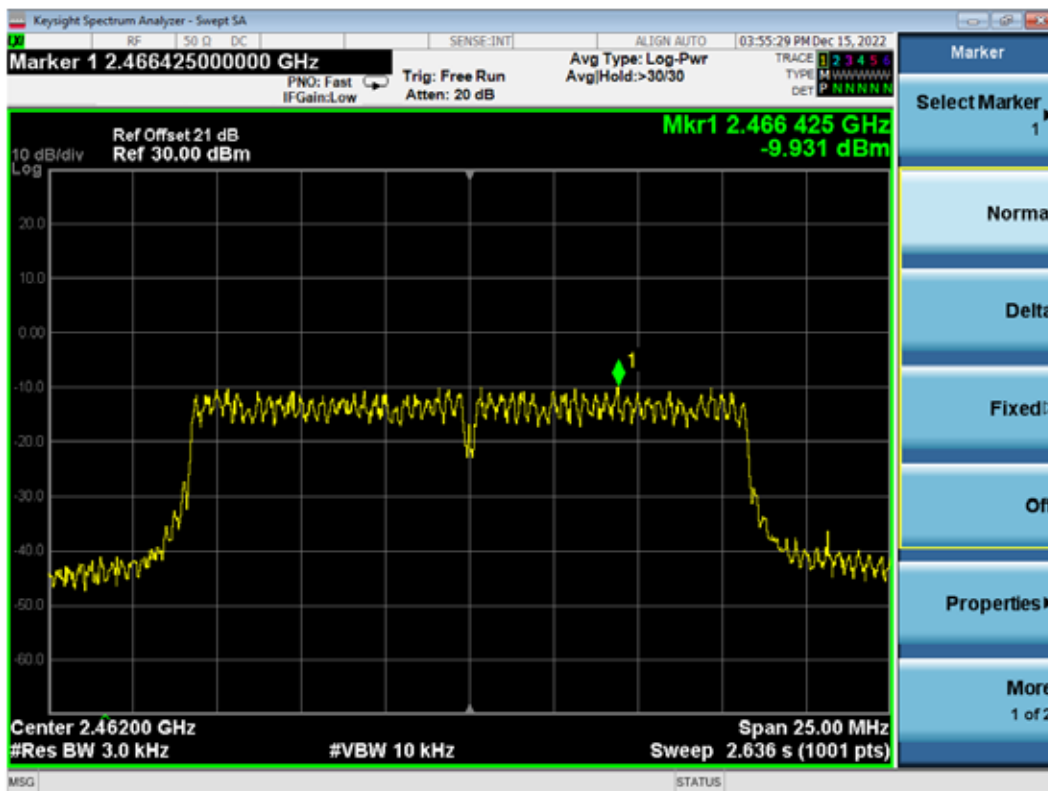
802.11g CH2412 MHz



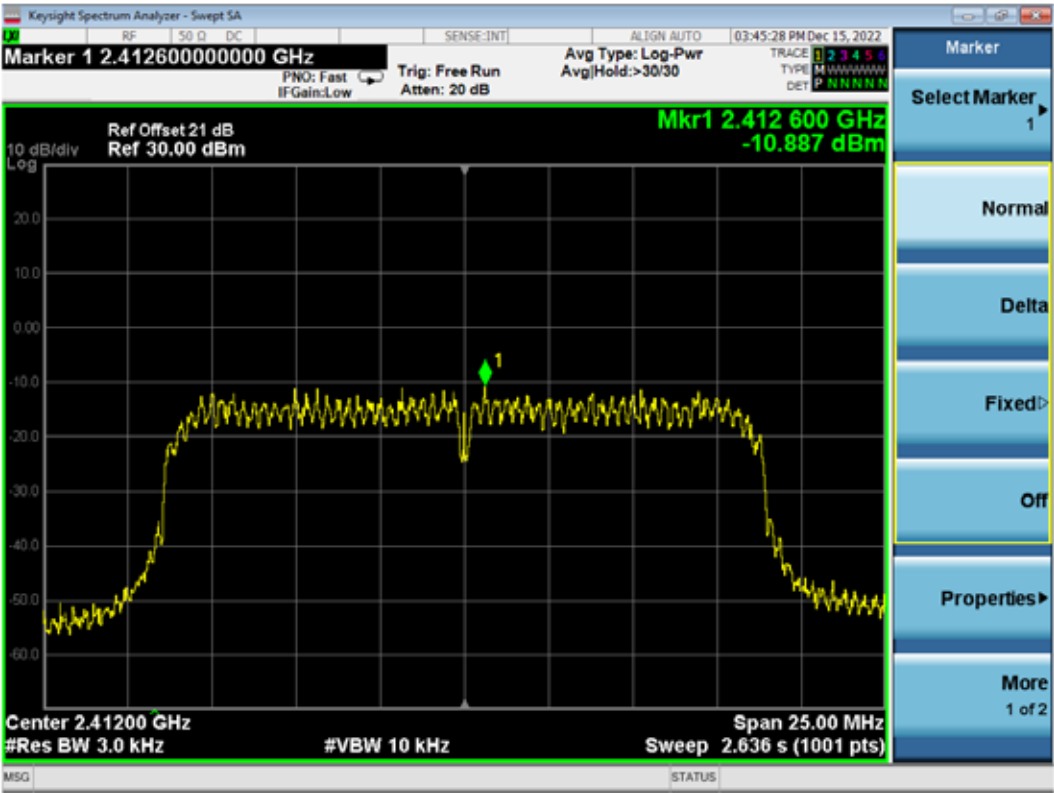
802.11g CH2437 MHz



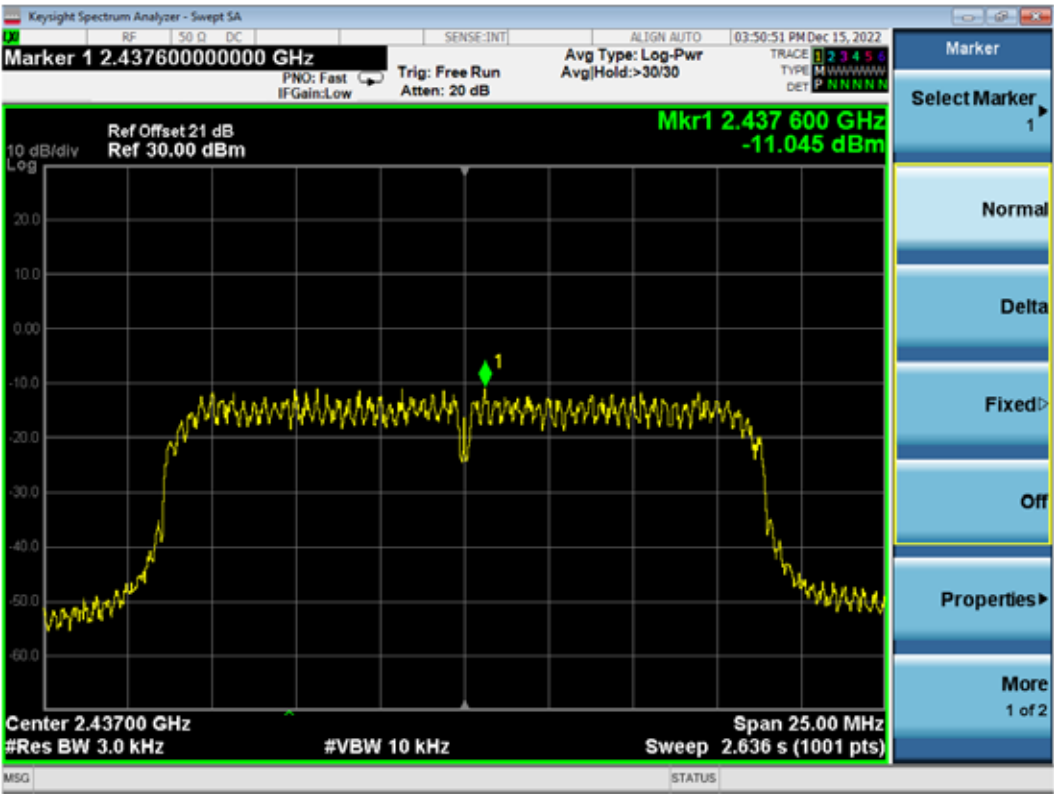
802.11g CH2462 MHz



802.11n20 CH2412 MHz



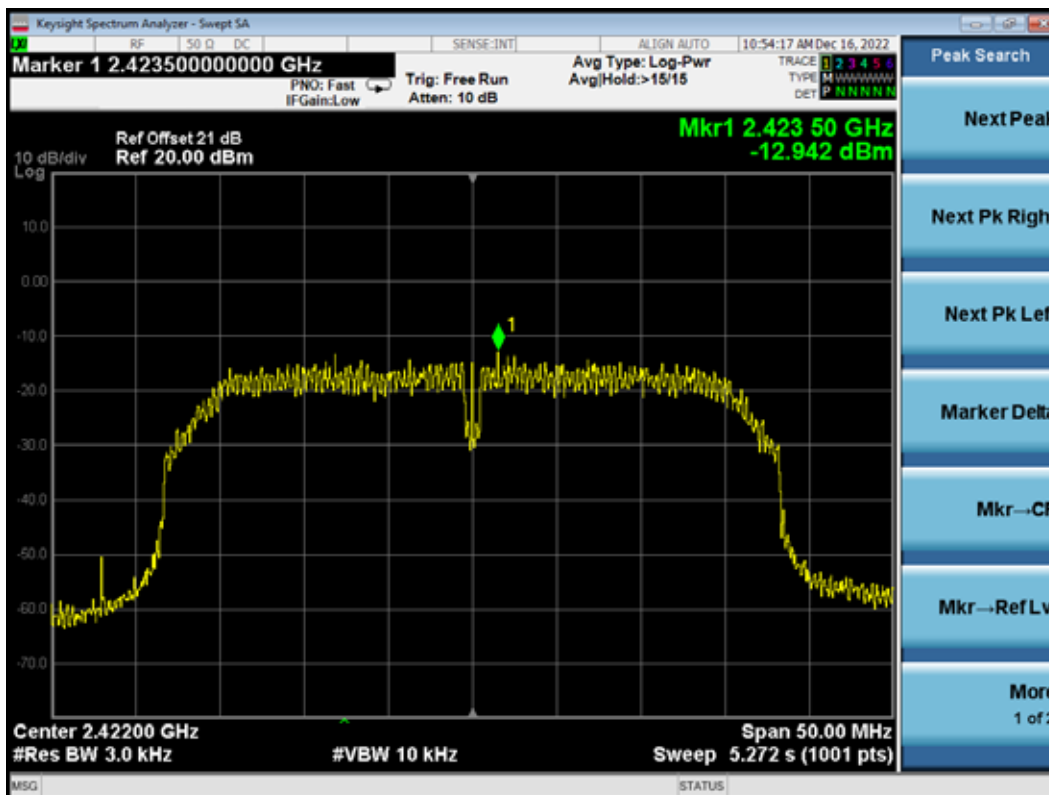
802.11n20 CH2437 MHz



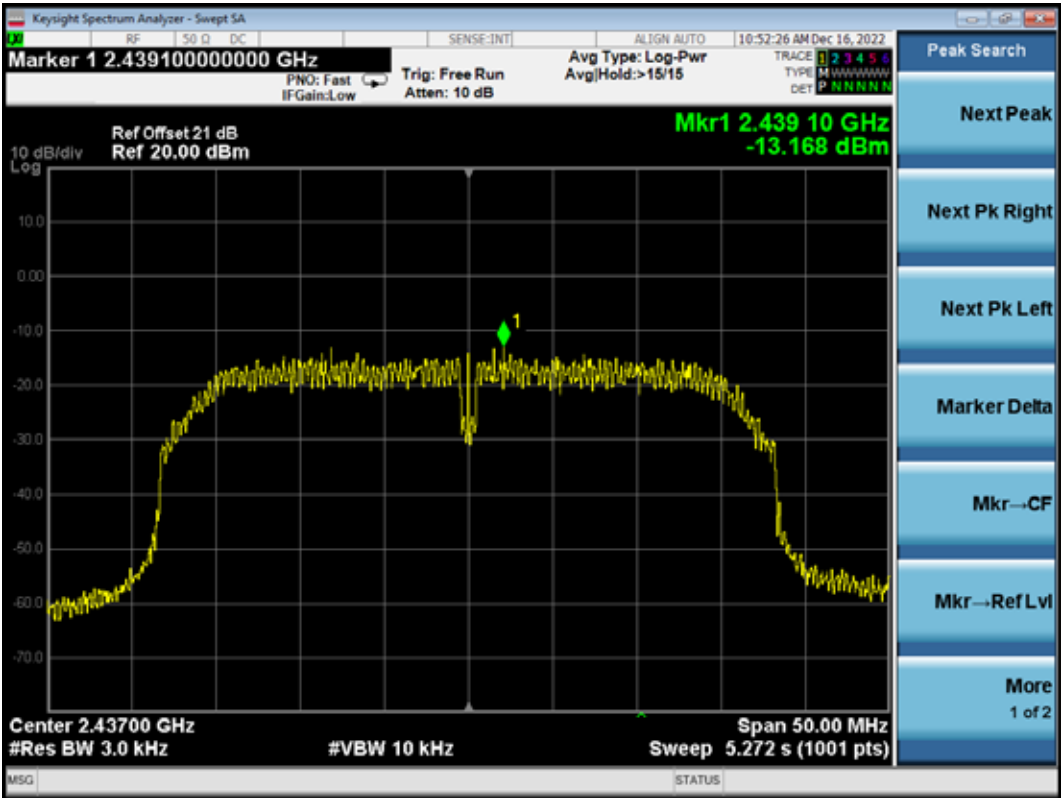
802.11n20 CH2462 MHz



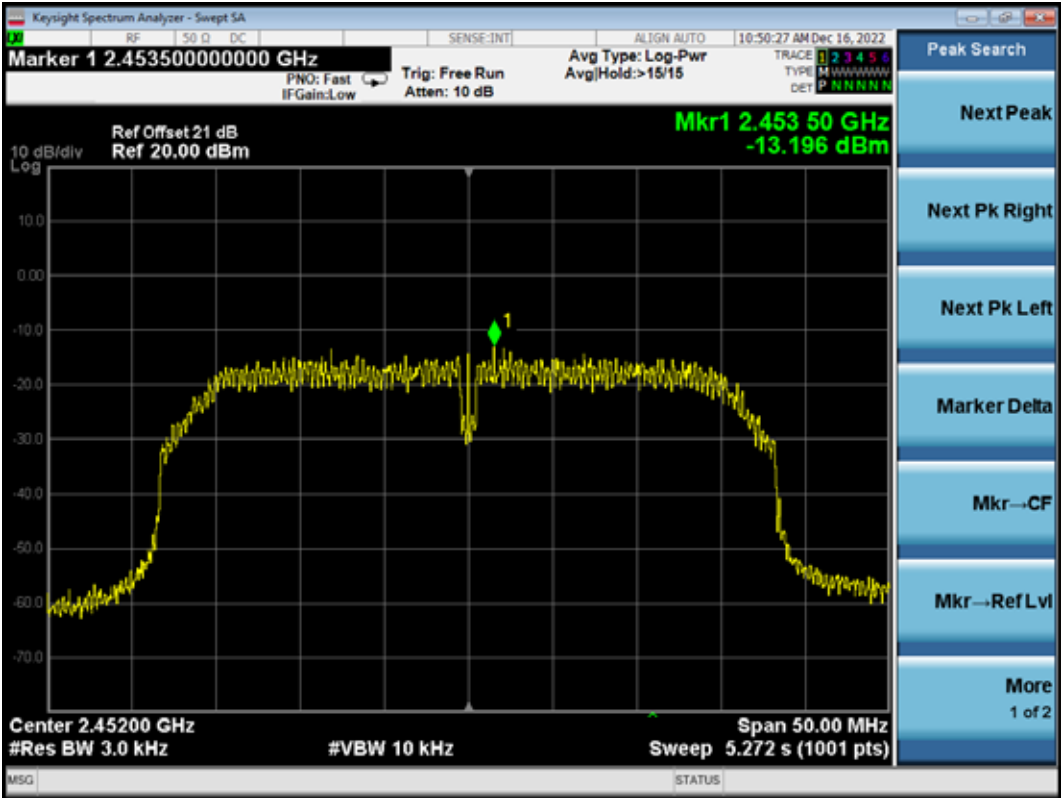
802.11n40 CH2422 MHz



802.11n40 CH2437 MHz



802.11n40 CH2452 MHz



10 ANTENNA REQUIREMENT

10.1 Specification Limits (§15.203)

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

10.2 Result

According to KDB 353028 D1, the following describes the three ways that can be used to demonstrate compliance to Section 15.203:

- a) Antenna permanently attached.
- b) Unique (non-standard) antenna connector.
- c) Professional installation.

For this product, the antenna is:

- ☒ Antenna permanently attached
- ☐ Unique (non-standard) antenna connector
- ☐ Professional installation
- ☐ not meet any of ways list above

that

- ☒ compliant
- ☐ not compliant

with the requirement of Section 15.203.

11 DEVIATION TO TEST SPECIFICATIONS

None.

12 MEASUREMENT UNCERTAINTY LIST

The measurement uncertainty was estimated for test on the EUT according to CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage of K=2.

The uncertainties value is not used in determining the PASS/FAIL results.

Test Items/Facilities	Frequency/Equipment/Unit	Uncertainty
Conducted Emission No.1 Shielded Room	9kHz~150kHz	±3.1 dB
	150kHz~30MHz	±2.6 dB
Conducted Emission No.3 Shielded Room	9kHz~150kHz	±3.1 dB
	150kHz~30MHz	±2.6 dB
Radiated Emission	30MHz~200MHz, Horizontal	±3.8 dB
	30MHz~200MHz, Vertical	±4.1 dB
	200MHz~1000MHz, Horizontal	±3.6 dB
	200MHz~1000MHz, Vertical	±5.1 dB
	1GHz~6GHz	±5.3 dB
	6GHz~18GHz	±5.3 dB
	18GHz~40GHz	±3.5 dB
Output Power Test	50MHz~18GHz	0.77 dB
Power Density Test	9kHz~6GHz	1.08 dB
RF Frequency Test	9kHz~40GHz	6×10^{-4}
Bandwidth Test	9kHz~6GHz	1.5×10^{-3}
RF Radiated Power Test	30MHz~1000MHz	3.06 dB
Conducted Output Power Test	50MHz~18GHz	0.83 dB
AC Voltage(<10kHz) Test	120V~230V	0.04 %
DC Power Test	0V~30V	0.4 %
Temperature	-40°C~+100°C	0.52 °C
Humidity	30%~95%	2.6 %