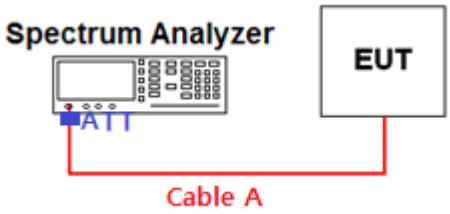
## 5.4. In-Band Emissions

### ▣ Test Requirements and limit

**Part 15.407(b)(7)**

For transmitters operating within the 5.925-7.125 GHz bands: Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

### ▣ Test Configuration




### ▣ Test Procedure

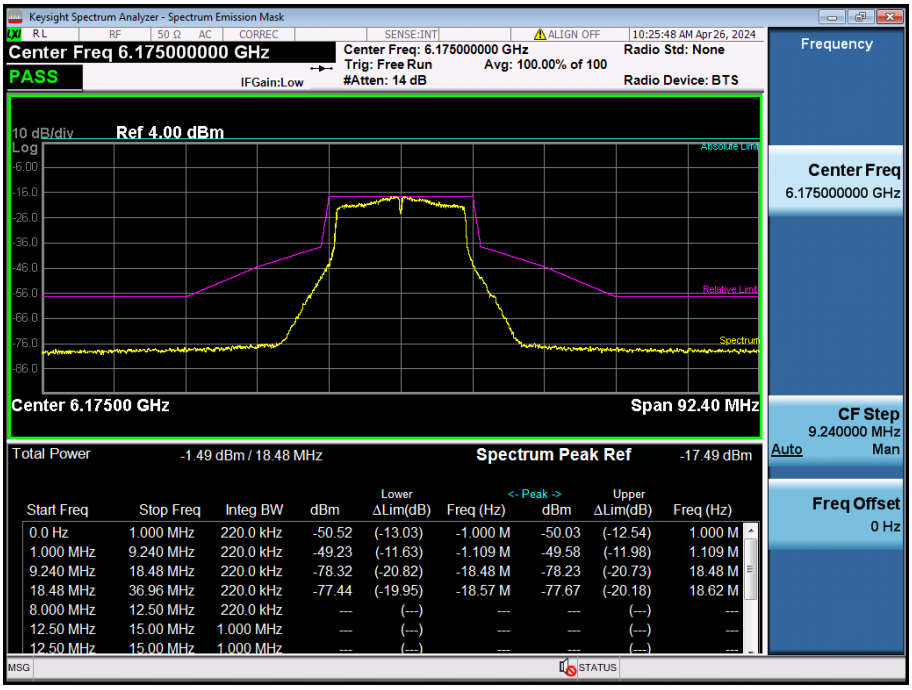
**- KDB 987594 D02v01r01**

1) Connect output of the antenna port to a spectrum analyzer or EMI receiver, with appropriate attenuation, as to not damage the instrumentation.
2) Set the reference level of the measuring equipment in accordance with procedure 4.1.5.2 of ANSI C63.10-2013.
3) Measure the 26 dB EBW using the test procedure 12.4.1 of ANSI C63.10-2013. (This will be used to determine the channel edge.)
4) Measure the power spectral density (which will be used for emissions mask reference) using the following procedure:
   a) Set the span to encompass the entire 26 dB EBW of the signal.
   b) Set RBW = same RBW used for 26 dB EBW measurement.
   c) Set VBW ≥ 3 X RBW
   d) Number of points in sweep ≥ [2 X span / RBW].
   e) Sweep time = auto.
   f) Detector = RMS (i.e., power averaging)
   g) Trace average at least 100 traces in power averaging (rms) mode.
   h) Use the peak search function on the instrument to find the peak of the spectrum.
5) For the purposes of developing the emission mask, the channel bandwidth is defined as the 26 dB EBW.
6) Using the measuring equipment limit line function, develop the emissions mask based on the following requirements. The emissions power spectral density must be reduced below the peak power spectral density (in dB) as follows:
   a. Suppressed by 20 dB at 1 MHz outside of the channel edge. (The channel edge is defined as the 26-dB point on either side of the carrier center frequency.)
   b. Suppressed by 28 dB at one channel bandwidth from the channel center.
   c. Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.
7) Adjust the span to encompass the entire mask as necessary.
8) Clear trace.
9) Trace average at least 100 traces in power averaging (rms) mode.
10) Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask.

## ▣ Test Results

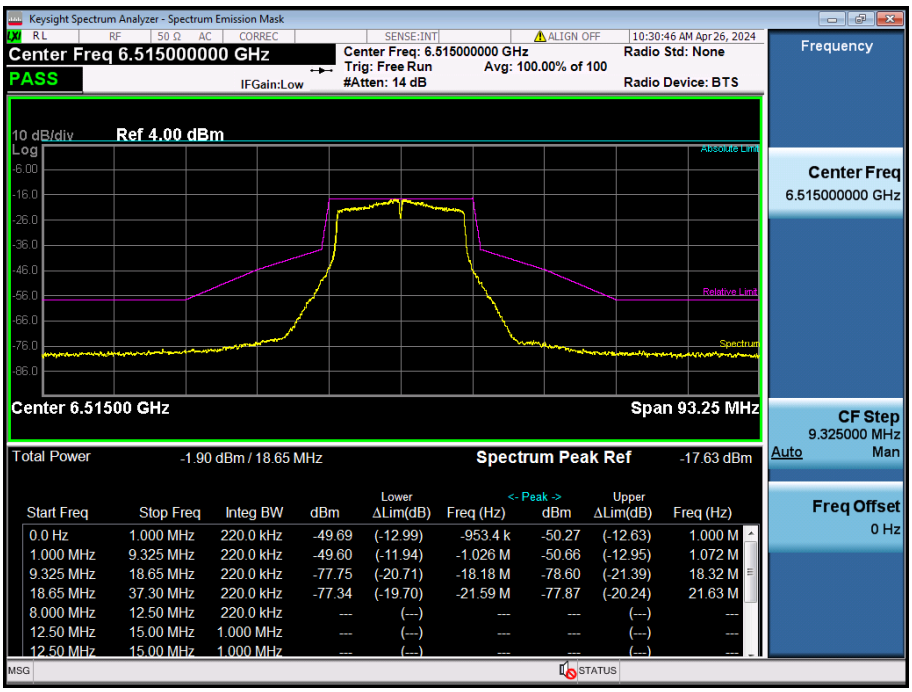
The worst-case channel plot per band was attached.

**In-Band Emissions** Test Mode: LPI & U-NII 5 & 802.11a & 6175 MHz & ANT1



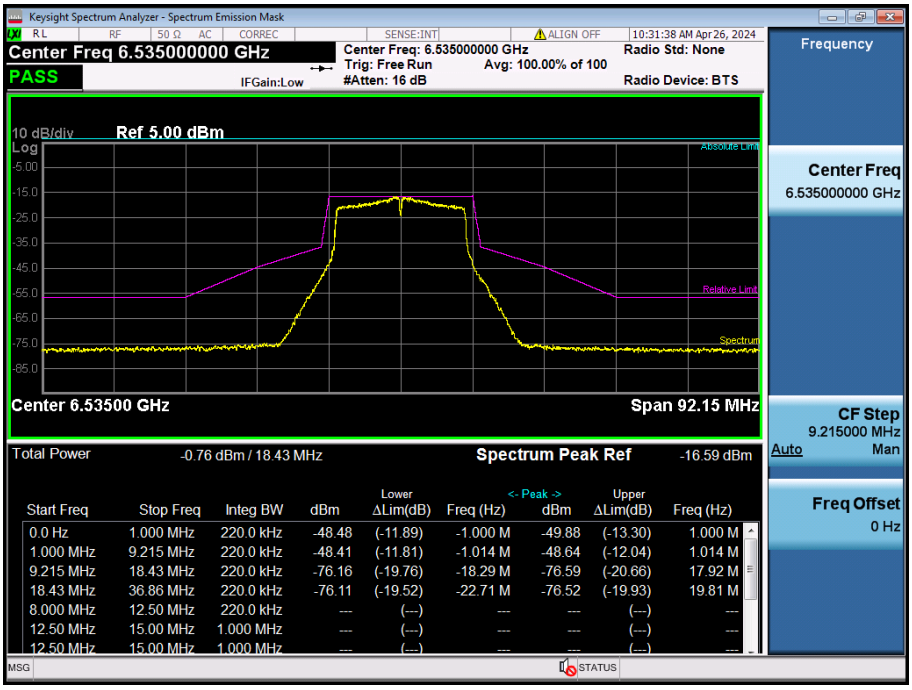

| Start Freq | Stop Freq | Integ BW | dBm | Lower ΔLim(dB) | Lower Freq (Hz) | <- Peak -> dBm | Upper ΔLim(dB) | Upper Freq (Hz) |
|---|---|---|---|---|---|---|---|---|
| 0.0 Hz | 1.000 MHz | 220.0 kHz | -50.52 | (-13.03) | -1.000 M | -50.03 | (-12.54) | 1.000 M |
| 1.000 MHz | 9.240 MHz | 220.0 kHz | -49.23 | (-11.63) | -1.109 M | -49.58 | (-11.98) | 1.109 M |
| 9.240 MHz | 18.48 MHz | 220.0 kHz | -78.32 | (-20.82) | -18.48 M | -78.23 | (-20.73) | 18.48 M |
| 18.48 MHz | 36.96 MHz | 220.0 kHz | -77.44 | (-19.95) | -18.57 M | -77.67 | (-20.18) | 18.62 M |
| 8.000 MHz | 12.50 MHz | 220.0 kHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |

**In-Band Emissions** Test Mode: LPI & U-NII 6 & 802.11a & 6515 MHz & ANT1

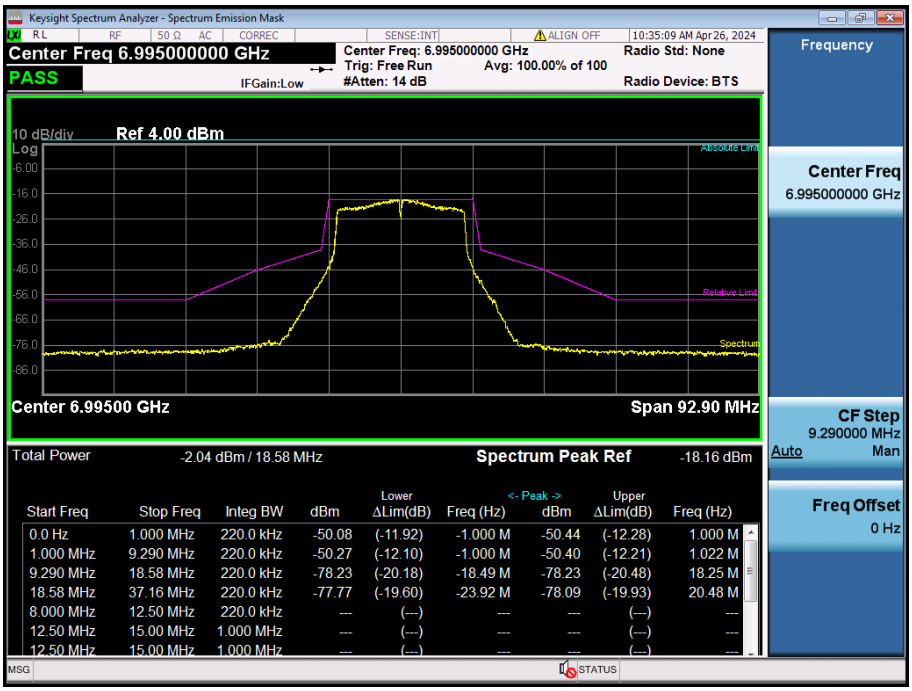



| Start Freq | Stop Freq | Integ BW | dBm | Lower ΔLim(dB) | Lower Freq (Hz) | <- Peak -> dBm | Upper ΔLim(dB) | Upper Freq (Hz) |
|---|---|---|---|---|---|---|---|---|
| 0.0 Hz | 1.000 MHz | 220.0 kHz | -49.69 | (-12.99) | -953.4 k | -50.27 | (-12.63) | 1.000 M |
| 1.000 MHz | 9.325 MHz | 220.0 kHz | -49.60 | (-11.94) | -1.026 M | -50.66 | (-12.95) | 1.072 M |
| 9.325 MHz | 18.65 MHz | 220.0 kHz | -77.75 | (-20.71) | -18.18 M | -78.60 | (-21.39) | 18.32 M |
| 18.65 MHz | 37.30 MHz | 220.0 kHz | -77.34 | (-19.70) | -21.59 M | -77.87 | (-20.24) | 21.63 M |
| 8.000 MHz | 12.50 MHz | 220.0 kHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |

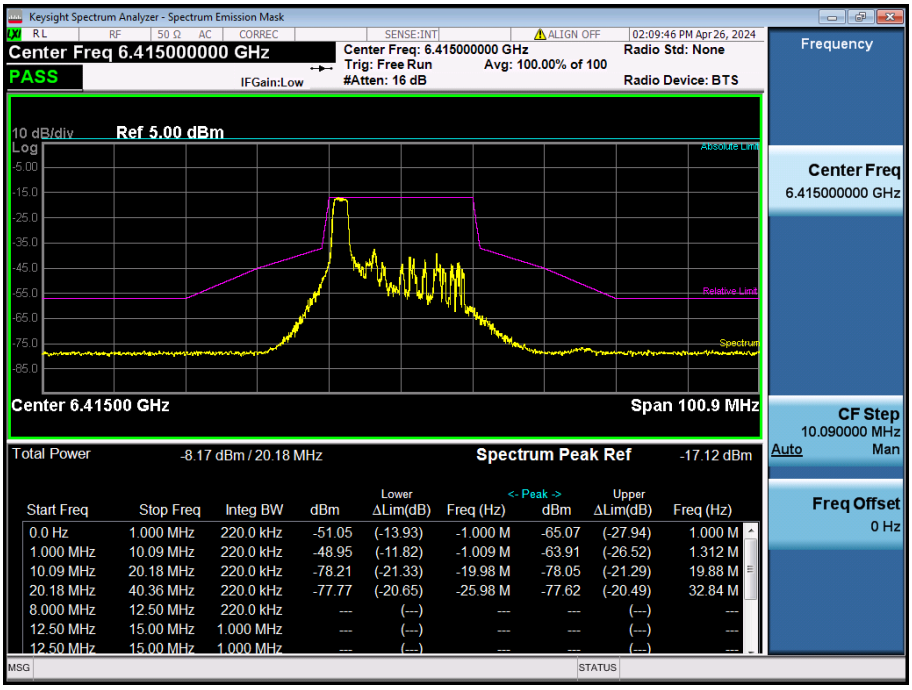
**In-Band Emissions** Test Mode: LPI & U-NII 7 & 802.11a & 6535 MHz & ANT1



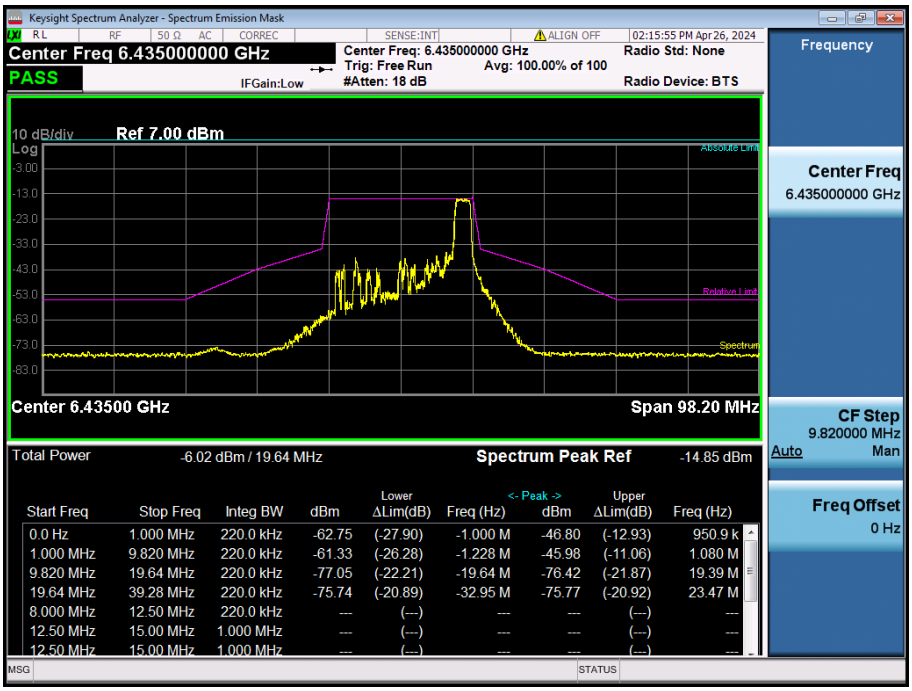

**In-Band Emissions** Test Mode: LPI & U-NII 8 & 802.11a & 6995 MHz & ANT1



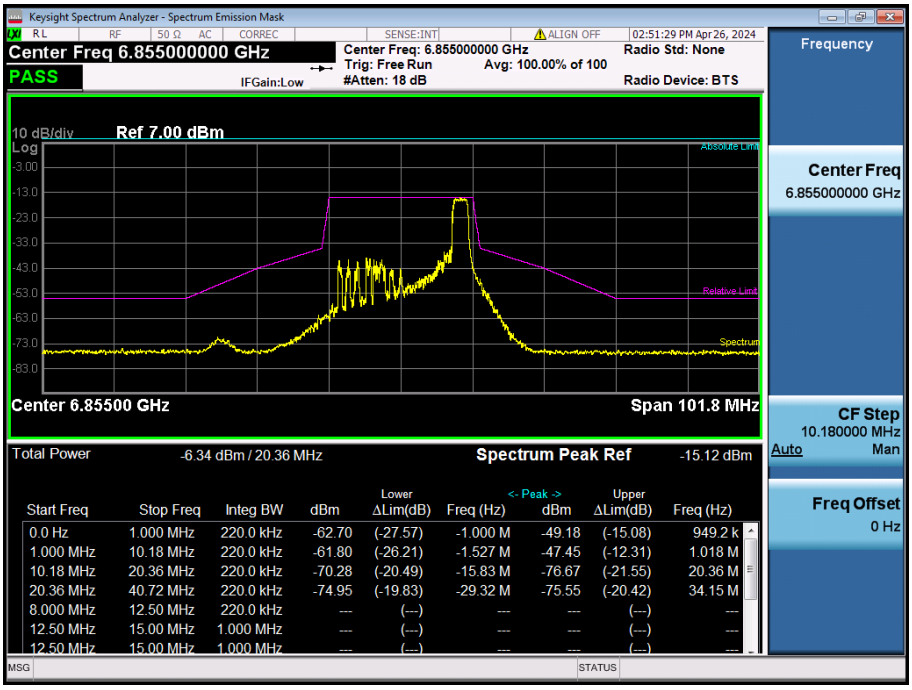
**In-Band Emissions** Test Mode: LPI & U-NII 5 & 802.11ax(HE20) & 6415 MHz & 26T(0) & ANT2



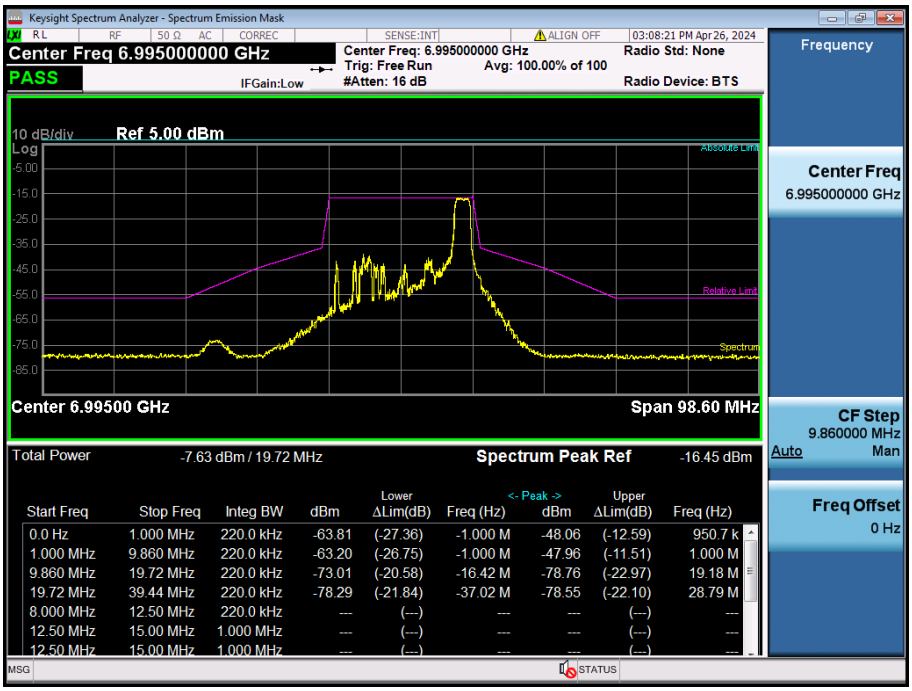

**In-Band Emissions** Test Mode: LPI & U-NII 6 & 802.11ax(HE20) & 6435 MHz & 26T(8) & ANT2



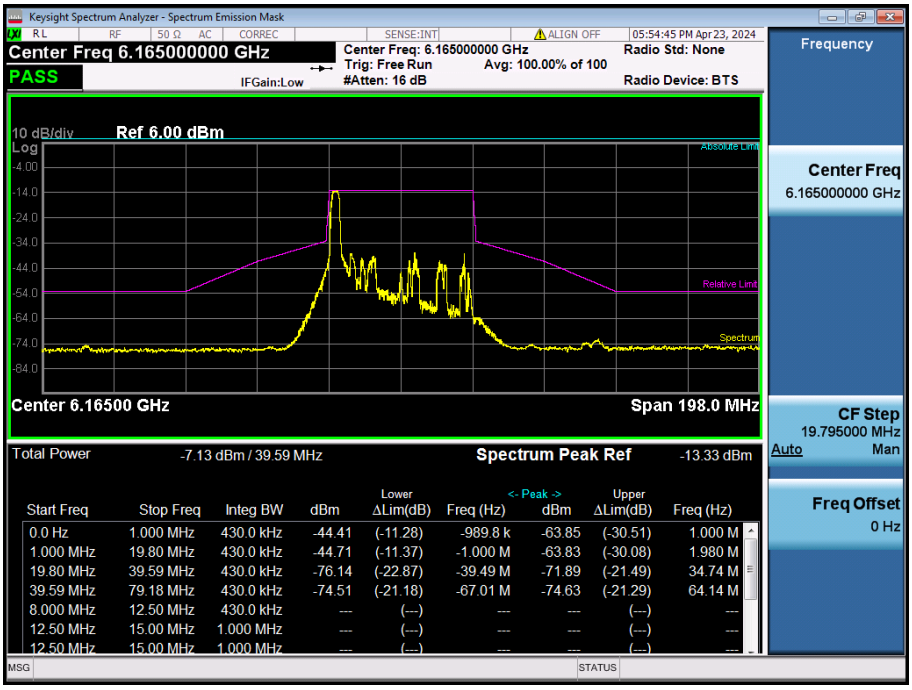
**In-Band Emissions** Test Mode: LPI & U-NII 7 & 802.11ax(HE20) & 6855 MHz & 26T(8) & ANT2



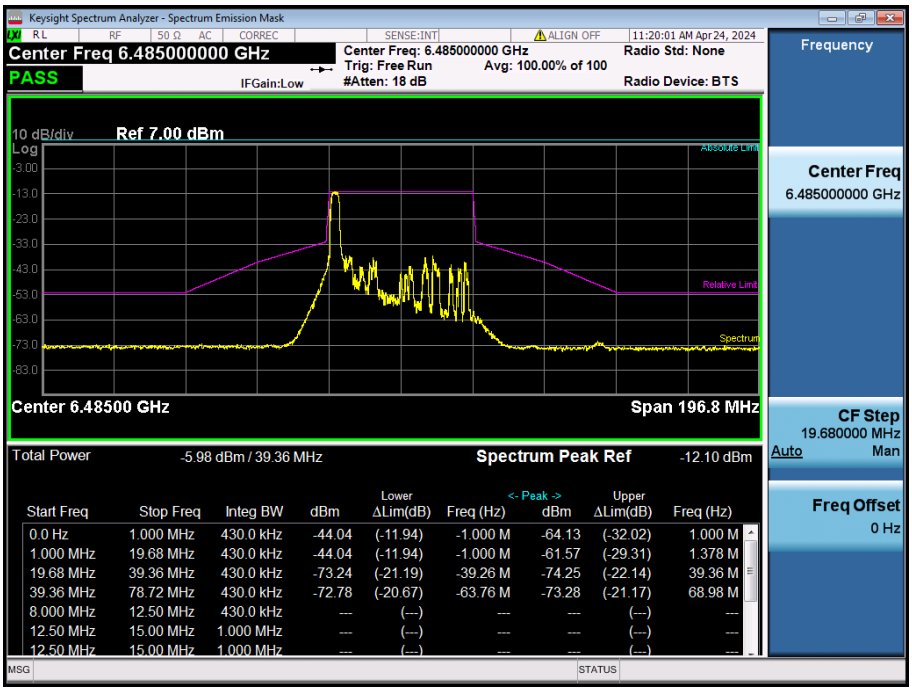

**In-Band Emissions** Test Mode: LPI & U-NII 8 & 802.11ax(HE20) & 6995 MHz & 26T(8) & ANT1



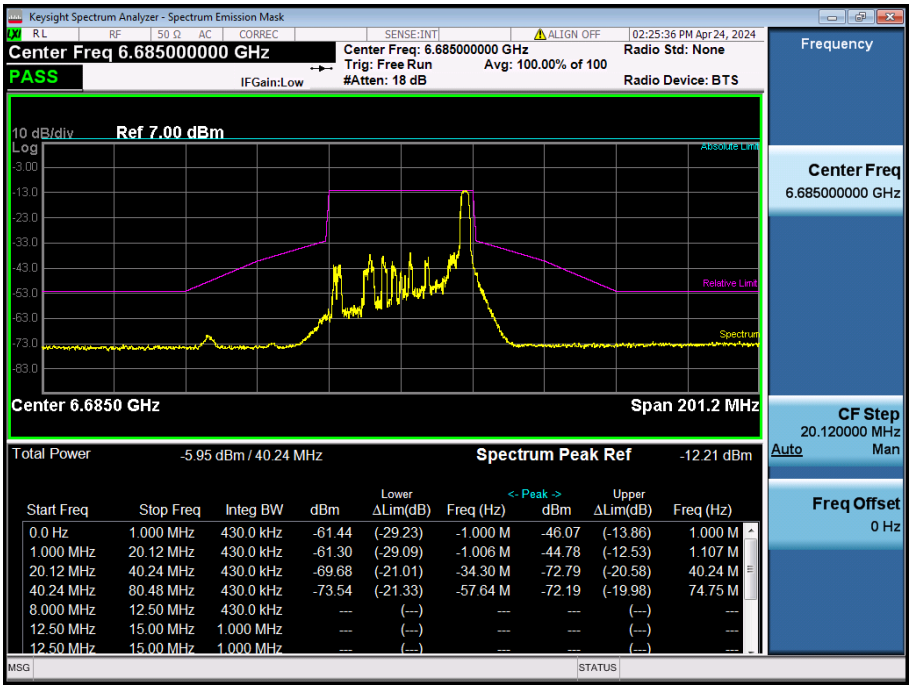
**In-Band Emissions** Test Mode: LPI & U-NII 5 & 802.11ax(HE40) & 6165 MHz & 26T(0) & ANT2



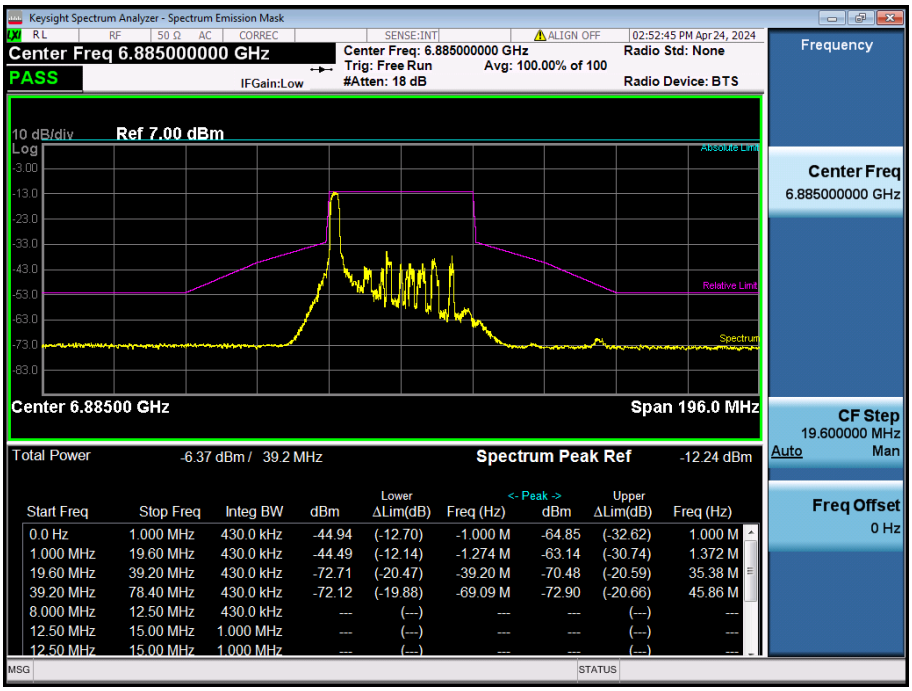

**In-Band Emissions** Test Mode: LPI & U-NII 6 & 802.11ax(HE40) & 6485 MHz & 26T(0) & ANT2



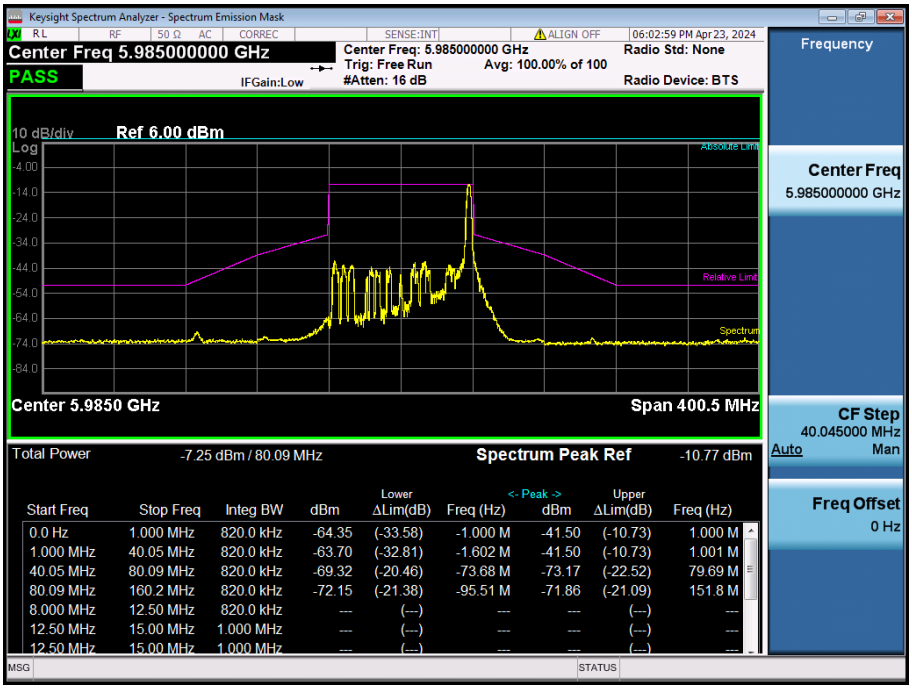
**In-Band Emissions** Test Mode: LPI & U-NII 7 & 802.11ax(HE40) & 6685 MHz & 26T(17) & ANT2



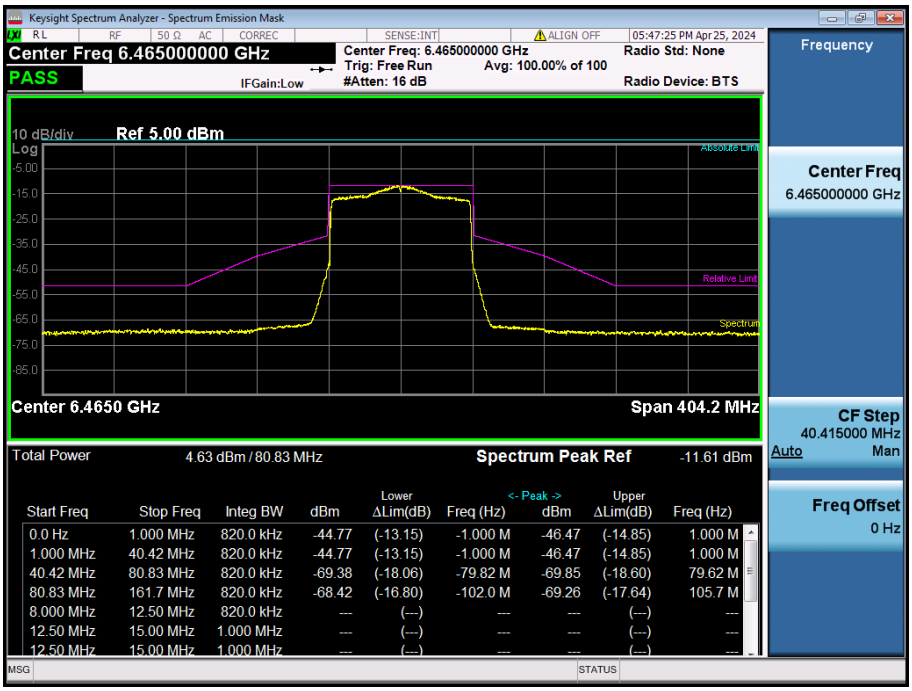

**In-Band Emissions** Test Mode: LPI & U-NII 8 & 802.11ax(HE40) & 6885 MHz & 26T(0) & ANT2



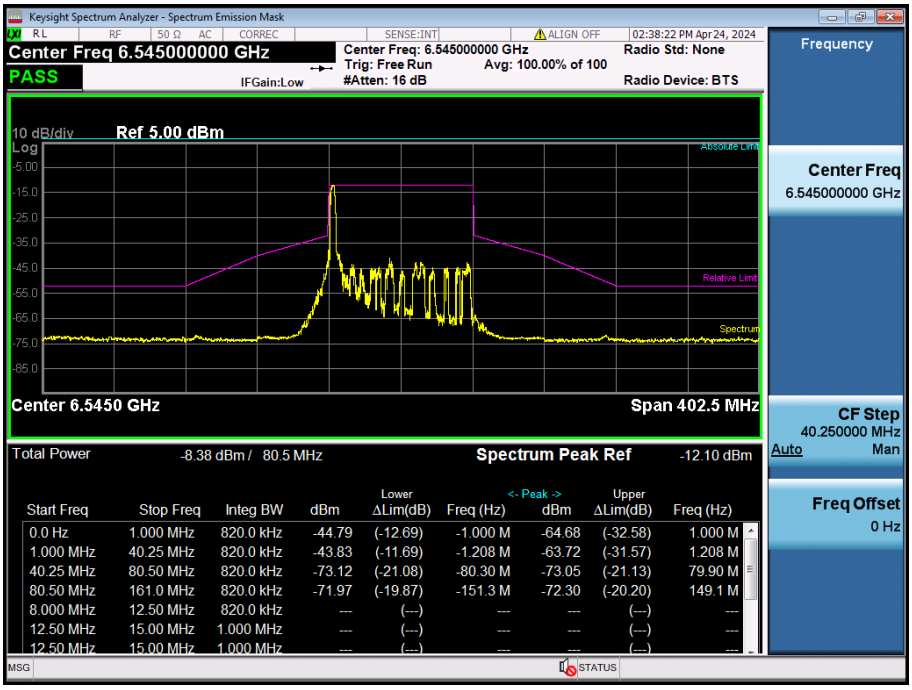
**In-Band Emissions** Test Mode: LPI & U-NII 5 & 802.11ax(HE80) & 5985 MHz & 26T(36) & ANT2




**In-Band Emissions** Test Mode: LPI & U-NII 6 & 802.11ax(HE80) & 6465 MHz & 996T(67) & ANT2

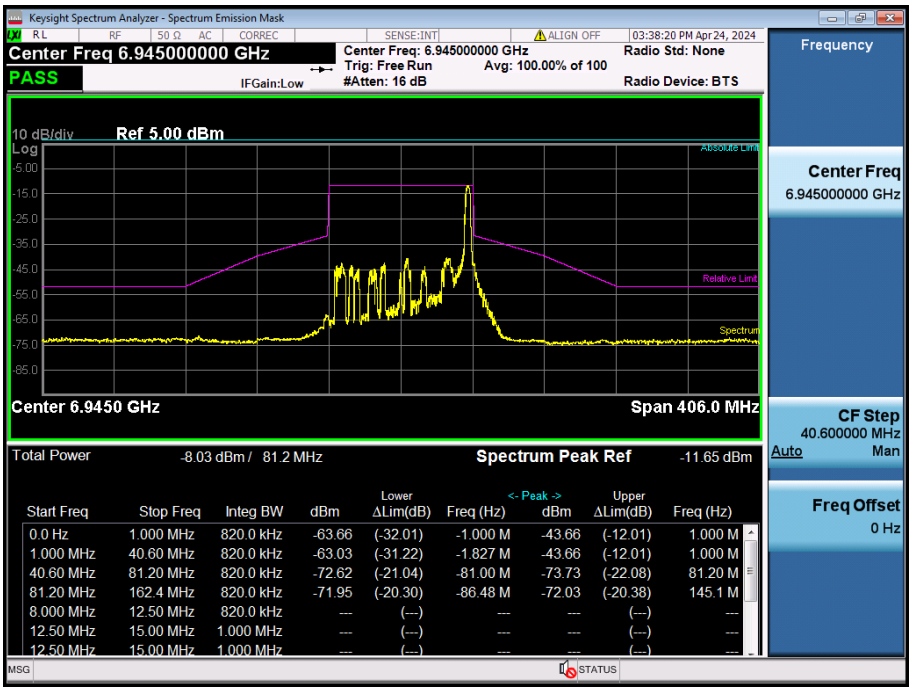


**In-Band Emissions** Test Mode: LPI & U-NII 7 & 802.11ax(HE80) & 6545 MHz & 26T(0) & ANT1



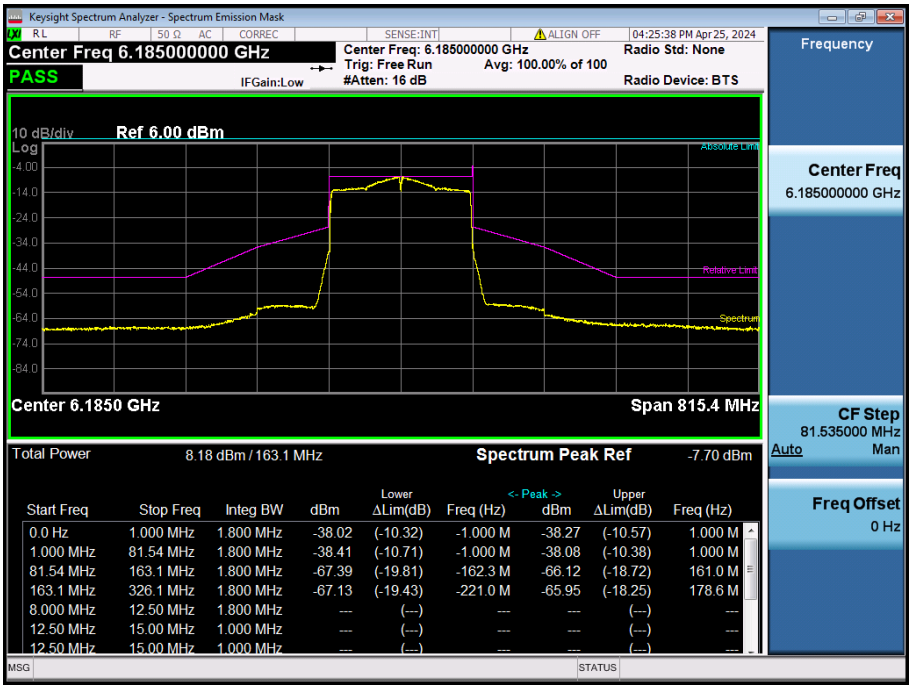

| Start Freq | Stop Freq | Integ BW | dBm | Lower ΔLim(dB) | Lower Freq (Hz) | <- Peak -> dBm | Upper ΔLim(dB) | Upper Freq (Hz) |
|---|---|---|---|---|---|---|---|---|
| 0.0 Hz | 1.000 MHz | 820.0 kHz | -44.79 | (-12.69) | -1.000 M | -64.68 | (-32.58) | 1.000 M |
| 1.000 MHz | 40.25 MHz | 820.0 kHz | -43.83 | (-11.69) | -1.208 M | -63.72 | (-31.57) | 1.208 M |
| 40.25 MHz | 80.50 MHz | 820.0 kHz | -73.12 | (-21.08) | -80.30 M | -73.05 | (-21.13) | 79.90 M |
| 80.50 MHz | 161.0 MHz | 820.0 kHz | -71.97 | (-19.87) | -151.3 M | -72.30 | (-20.20) | 149.1 M |
| 8.000 MHz | 12.50 MHz | 820.0 kHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |

**In-Band Emissions** Test Mode: LPI & U-NII 8 & 802.11ax(HE80) & 6945 MHz & 26T(36) & ANT1



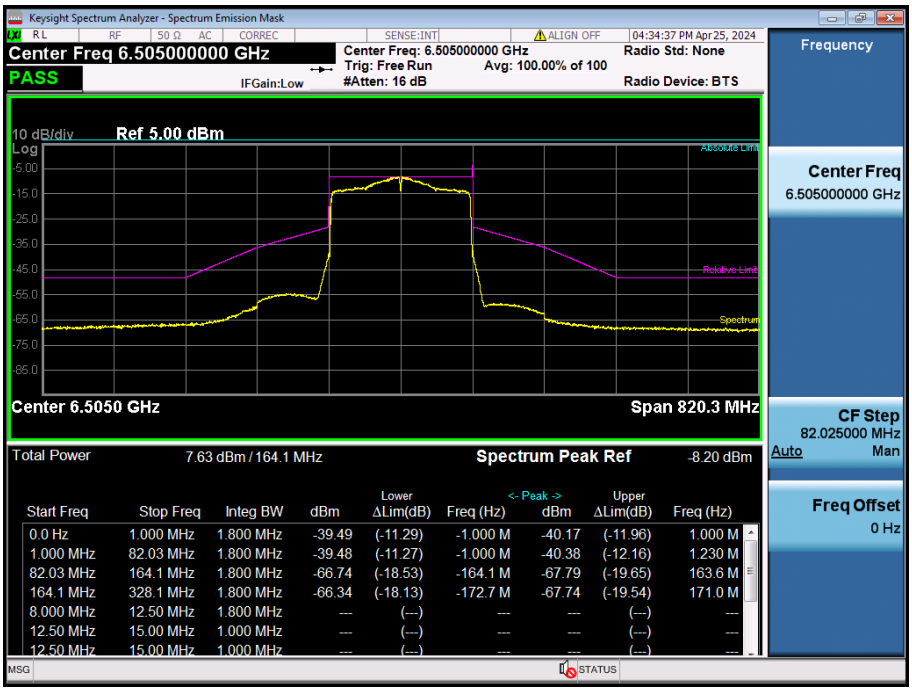

| Start Freq | Stop Freq | Integ BW | dBm | Lower ΔLim(dB) | Lower Freq (Hz) | <- Peak -> dBm | Upper ΔLim(dB) | Upper Freq (Hz) |
|---|---|---|---|---|---|---|---|---|
| 0.0 Hz | 1.000 MHz | 820.0 kHz | -63.66 | (-32.01) | -1.000 M | -43.66 | (-12.01) | 1.000 M |
| 1.000 MHz | 40.60 MHz | 820.0 kHz | -63.03 | (-31.22) | -1.827 M | -43.66 | (-12.01) | 1.000 M |
| 40.60 MHz | 81.20 MHz | 820.0 kHz | -72.62 | (-21.04) | -81.00 M | -73.73 | (-22.08) | 81.20 M |
| 81.20 MHz | 162.4 MHz | 820.0 kHz | -71.95 | (-20.30) | -86.48 M | -72.03 | (-20.38) | 145.1 M |
| 8.000 MHz | 12.50 MHz | 820.0 kHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |

**In-Band Emissions** Test Mode: LPI & U-NII 5 & 802.11ax(HE160) & 6185 MHz & SU & ANT2



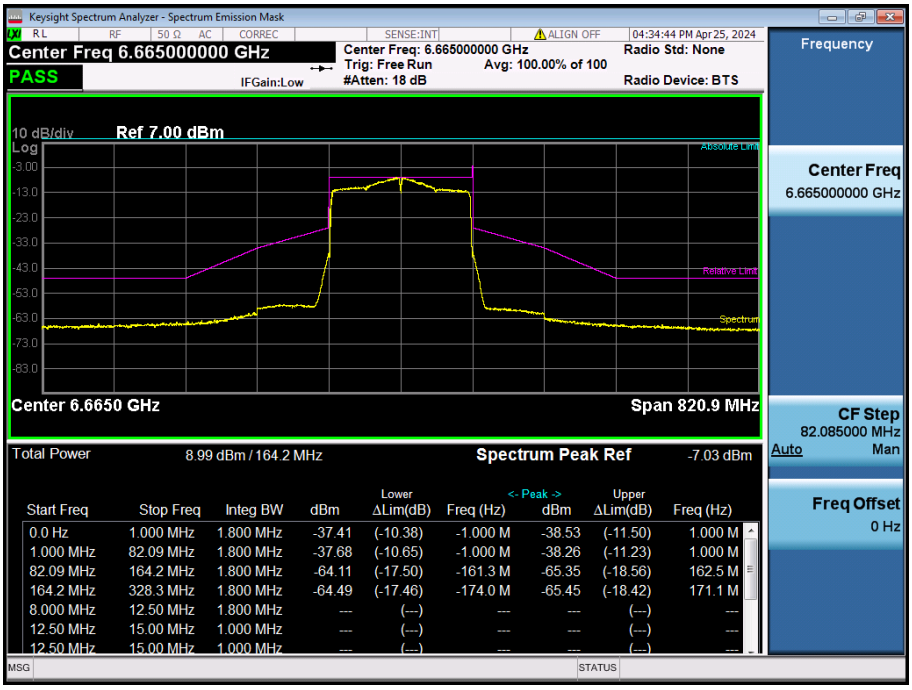

| Start Freq | Stop Freq | Integ BW | dBm | Lower ΔLim(dB) | Freq (Hz) | <- Peak -> dBm | Upper ΔLim(dB) | Freq (Hz) |
|---|---|---|---|---|---|---|---|---|
| 0.0 Hz | 1.000 MHz | 1.800 MHz | -38.02 | (-10.32) | -1.000 M | -38.27 | (-10.57) | 1.000 M |
| 1.000 MHz | 81.54 MHz | 1.800 MHz | -38.41 | (-10.71) | -1.000 M | -38.08 | (-10.38) | 1.000 M |
| 81.54 MHz | 163.1 MHz | 1.800 MHz | -67.39 | (-19.81) | -162.3 M | -66.12 | (-18.72) | 161.0 M |
| 163.1 MHz | 326.1 MHz | 1.800 MHz | -67.13 | (-19.43) | -221.0 M | -65.95 | (-18.25) | 178.6 M |
| 8.000 MHz | 12.50 MHz | 1.800 MHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |

**In-Band Emissions** Test Mode: LPI & U-NII 6 & 802.11ax(HE160) & 6505 MHz & SU & ANT1




| Start Freq | Stop Freq | Integ BW | dBm | Lower ΔLim(dB) | Freq (Hz) | <- Peak -> dBm | Upper ΔLim(dB) | Freq (Hz) |
|---|---|---|---|---|---|---|---|---|
| 0.0 Hz | 1.000 MHz | 1.800 MHz | -39.49 | (-11.29) | -1.000 M | -40.17 | (-11.96) | 1.000 M |
| 1.000 MHz | 82.03 MHz | 1.800 MHz | -39.48 | (-11.27) | -1.000 M | -40.38 | (-12.16) | 1.230 M |
| 82.03 MHz | 164.1 MHz | 1.800 MHz | -66.74 | (-18.53) | -164.1 M | -67.79 | (-19.65) | 163.6 M |
| 164.1 MHz | 328.1 MHz | 1.800 MHz | -66.34 | (-18.13) | -172.7 M | -67.74 | (-19.54) | 171.0 M |
| 8.000 MHz | 12.50 MHz | 1.800 MHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |

**In-Band Emissions** Test Mode: LPI & U-NII 7 & 802.11ax(HE160) & 6665 MHz & SU & ANT2




| Start Freq | Stop Freq | Integ BW | dBm | Lower ΔLim(dB) | Freq (Hz) | <- Peak -> dBm | Upper ΔLim(dB) | Freq (Hz) |
|---|---|---|---|---|---|---|---|---|
| 0.0 Hz | 1.000 MHz | 1.800 MHz | -37.41 | (-10.38) | -1.000 M | -38.53 | (-11.50) | 1.000 M |
| 1.000 MHz | 82.09 MHz | 1.800 MHz | -37.68 | (-10.65) | -1.000 M | -38.26 | (-11.23) | 1.000 M |
| 82.09 MHz | 164.2 MHz | 1.800 MHz | -64.11 | (-17.50) | -161.3 M | -65.35 | (-18.56) | 162.5 M |
| 164.2 MHz | 328.3 MHz | 1.800 MHz | -64.49 | (-17.46) | -174.0 M | -65.45 | (-18.42) | 171.1 M |
| 8.000 MHz | 12.50 MHz | 1.800 MHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |

**In-Band Emissions** Test Mode: LPI & U-NII 8 & 802.11ax(HE160) & 6985 MHz & SU & ANT1


| Start Freq | Stop Freq | Integ BW | dBm | Lower ΔLim(dB) | Freq (Hz) | <- Peak -> dBm | Upper ΔLim(dB) | Freq (Hz) |
|---|---|---|---|---|---|---|---|---|
| 0.0 Hz | 1.000 MHz | 1.800 MHz | -39.95 | (-9.99) | -1.000 M | -41.37 | (-11.41) | 1.000 M |
| 1.000 MHz | 81.87 MHz | 1.800 MHz | -39.73 | (-9.77) | -1.000 M | -41.60 | (-11.64) | 1.000 M |
| 81.87 MHz | 163.7 MHz | 1.800 MHz | -68.70 | (-18.74) | -163.7 M | -70.16 | (-20.26) | 163.3 M |
| 163.7 MHz | 327.5 MHz | 1.800 MHz | -68.29 | (-18.33) | -172.3 M | -69.93 | (-19.97) | 166.6 M |
| 8.000 MHz | 12.50 MHz | 1.800 MHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |
| 12.50 MHz | 15.00 MHz | 1.000 MHz | --- | (---) | --- | --- | (---) | --- |

## 5.5. Contention-based protocol

### ▣ Test Requirements and limit

**15.407(d)(6)**

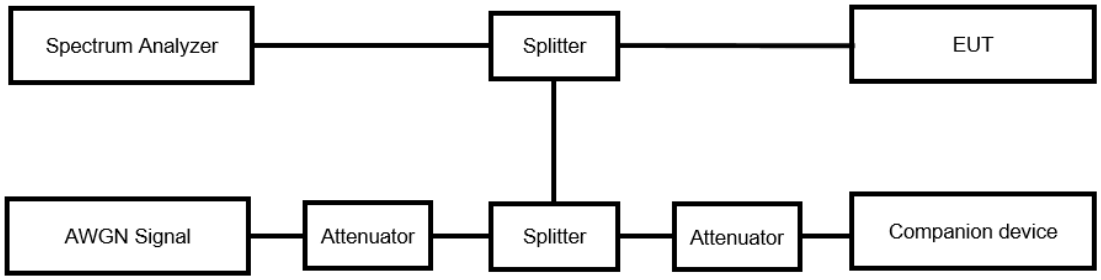
Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band must employ a contention-based protocol.

**KDB 987594 D02v01r01 Section II.I.**

Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band (herein referred to as unlicensed devices) are required to use technologies that include a contention-based protocol to avoid co-channel interference with incumbent devices sharing the band. To ensure incumbent co-channel operations are detected in a technology-agnostic manner, unlicensed devices are required to detect co-channel radio frequency energy (energy detect) and avoid simultaneous transmission. Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel (in which incumbent signal is transmitted) and stay off the incumbent channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm)1. The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain.

To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF energy throughout their intended operating channel. For example, an 802.11 device that plans to transmit a 40 MHz- wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel. Additionally, **low-power indoor devices must detect co-channel energy with 90% or greater certainty.**

### ▣ Test Configuration



## ▣ Test Procedure

**- KDB 987594 D02v01r01**

1) Configure the EUT to transmit with a constant duty cycle.
2) Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
3) Set the signal analyzer center frequency to the nominal EEUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2, as shown in test configuration. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
4) Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step two.
5) Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
6) Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT as shown in test configuration.
7) Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
8) Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
9) (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
10) Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step 5, choose a different center frequency for the AWGN signal and repeat the process.

**Table 1**. Criteria to determine number of times detection threshold test may be performed

| If | Number of Tests | Placement of Incumbent Transmission |
|---|---|---|
| $BW_{EUT} \leq BW_{Inc}$ | Once | Tune incumbent and EUT transmissions ($f_{c1}=f_{c2}$) |
| $BW_{Inc} < BW_{EUT} \leq 2BW_{Inc}$ | Once | Incumbent transmission is contained within $BW_{EUT}$ |
| $2BW_{Inc} < BW_{EUT} \leq 4BW_{Inc}$ | Twice. Incumbent transmission is contained within $BW_{Inc}$ | Incumbent transmission is located as closely as possible to the lower edge and upper edge, respectively, of the EUT channel |
| $BW_{EUT} > 4BW_{Inc}$ | Three times | Incumbent transmission is located as closely as possible to the lower edge of the EUT channel, in the middle of EUT channel, and as closely as possible to the upper edge of the EUT channel |

where:
$BW_{EUT}$: Transmission bandwidth of EUT signal
$BW_{Inc}$: Transmission bandwidth of the simulated incumbent signal (10 MHz wide AWGN signal)
$f_{c1}$: Center frequency of EUT transmission
$f_{c2}$: Center frequency of simulated incumbent signal

## ▣ Test Results

### Detection Results

| Band | Channel BW (MHz) | Channel | EUT Frequency (MHz) | AWGN Frequency (MHz) | AWGN Power (dBm) | Antenna Gain(dBi) | Adjusted Power (dBm) | Detection Limit (dBm) | EUT TX Status |
|---|---|---|---|---|---|---|---|---|---|
| NII-5 | 20 | 37 | 6135 | 6135 | -91.3 | 1.56 | -92.8 | -62.0 | OFF |
| NII-5 | 20 | 37 | 6135 | 6135 | -93.1 | 1.56 | -94.6 | -62.0 | Minimal |
| NII-5 | 20 | 37 | 6135 | 6135 | -96.5 | 1.56 | -98.0 | -62.0 | ON |
| NII-6 | 20 | 101 | 6455 | 6455 | -86.6 | 1.11 | -87.7 | -62.0 | OFF |
| NII-6 | 20 | 101 | 6455 | 6455 | -87.9 | 1.11 | -89.0 | -62.0 | Minimal |
| NII-6 | 20 | 101 | 6455 | 6455 | -96.9 | 1.11 | -98.0 | -62.0 | ON |
| NII-7 | 20 | 149 | 6695 | 6695 | -87.4 | 1.12 | -88.5 | -62.0 | OFF |
| NII-7 | 20 | 149 | 6695 | 6695 | -88.5 | 1.12 | -89.6 | -62.0 | Minimal |
| NII-7 | 20 | 149 | 6695 | 6695 | -96.7 | 1.12 | -97.8 | -62.0 | ON |
| NII-8 | 20 | 213 | 7015 | 7015 | -90.1 | 1.22 | -91.3 | -62.0 | OFF |
| NII-8 | 20 | 213 | 7015 | 7015 | -91.3 | 1.22 | -92.5 | -62.0 | Minimal |
| NII-8 | 20 | 213 | 7015 | 7015 | -96.8 | 1.22 | -98.0 | -62.0 | ON |
| NII-5 | 160 | 47 | 6185 | 6110 | -87.6 | 1.56 | -89.1 | -62.0 | OFF |
| NII-5 | 160 | 47 | 6185 | 6110 | -89.8 | 1.56 | -91.3 | -62.0 | Minimal |
| NII-5 | 160 | 47 | 6185 | 6110 | -96.5 | 1.56 | -98.0 | -62.0 | ON |
| NII-5 | 160 | 47 | 6185 | 6185 | -81.9 | 1.56 | -83.5 | -62.0 | OFF |
| NII-5 | 160 | 47 | 6185 | 6185 | -83.4 | 1.56 | -85.0 | -62.0 | Minimal |
| NII-5 | 160 | 47 | 6185 | 6185 | -96.4 | 1.56 | -98.0 | -62.0 | ON |
| NII-5 | 160 | 47 | 6185 | 6260 | -86.7 | 1.56 | -88.3 | -62.0 | OFF |
| NII-5 | 160 | 47 | 6185 | 6260 | -88.8 | 1.56 | -90.4 | -62.0 | Minimal |
| NII-5 | 160 | 47 | 6185 | 6260 | -96.4 | 1.56 | -98.0 | -62.0 | ON |
| NII-6 | 160 | 111 | 6505 | 6430 | -83.9 | 1.11 | -85.0 | -62.0 | OFF |
| NII-6 | 160 | 111 | 6505 | 6430 | -85.4 | 1.11 | -86.5 | -62.0 | Minimal |
| NII-6 | 160 | 111 | 6505 | 6430 | -96.9 | 1.11 | -98.0 | -62.0 | ON |
| NII-6 | 160 | 111 | 6505 | 6505 | -78.7 | 1.11 | -79.8 | -62.0 | OFF |
| NII-6 | 160 | 111 | 6505 | 6505 | -80.7 | 1.11 | -81.8 | -62.0 | Minimal |
| NII-6 | 160 | 111 | 6505 | 6505 | -96.9 | 1.11 | -98.0 | -62.0 | ON |
| NII-6 | 160 | 111 | 6505 | 6580 | -83.6 | 1.11 | -84.7 | -62.0 | OFF |
| NII-6 | 160 | 111 | 6505 | 6580 | -85.5 | 1.11 | -86.6 | -62.0 | Minimal |
| NII-6 | 160 | 111 | 6505 | 6580 | -96.9 | 1.11 | -98.0 | -62.0 | ON |
| NII-7 | 160 | 143 | 6665 | 6590 | -86.6 | 1.12 | -87.7 | -62.0 | OFF |
| NII-7 | 160 | 143 | 6665 | 6590 | -88.4 | 1.12 | -89.5 | -62.0 | Minimal |
| NII-7 | 160 | 143 | 6665 | 6590 | -96.6 | 1.12 | -97.7 | -62.0 | ON |
| NII-7 | 160 | 143 | 6665 | 6665 | -82.6 | 1.12 | -83.7 | -62.0 | OFF |
| NII-7 | 160 | 143 | 6665 | 6665 | -83.9 | 1.12 | -85.0 | -62.0 | Minimal |
| NII-7 | 160 | 143 | 6665 | 6665 | -96.6 | 1.12 | -97.7 | -62.0 | ON |
| NII-7 | 160 | 143 | 6665 | 6740 | -85.3 | 1.12 | -86.4 | -62.0 | OFF |
| NII-7 | 160 | 143 | 6665 | 6740 | -87.4 | 1.12 | -88.5 | -62.0 | Minimal |
| NII-7 | 160 | 143 | 6665 | 6740 | -96.6 | 1.12 | -97.7 | -62.0 | ON |
| NII-8 | 160 | 207 | 6985 | 6910 | -84.8 | 1.22 | -86.1 | -62.0 | OFF |
| NII-8 | 160 | 207 | 6985 | 6910 | -85.6 | 1.22 | -86.9 | -62.0 | Minimal |
| NII-8 | 160 | 207 | 6985 | 6910 | -96.7 | 1.22 | -98.0 | -62.0 | ON |
| NII-8 | 160 | 207 | 6985 | 6985 | -78.6 | 1.22 | -79.8 | -62.0 | OFF |
| NII-8 | 160 | 207 | 6985 | 6985 | -81.4 | 1.22 | -82.6 | -62.0 | Minimal |
| NII-8 | 160 | 207 | 6985 | 6985 | -96.8 | 1.22 | -98.0 | -62.0 | ON |
| NII-8 | 160 | 207 | 6985 | 7060 | -84.1 | 1.22 | -85.3 | -62.0 | OFF |
| NII-8 | 160 | 207 | 6985 | 7060 | -85.3 | 1.22 | -86.5 | -62.0 | Minimal |
| NII-8 | 160 | 207 | 6985 | 7060 | -96.8 | 1.22 | -98.0 | -62.0 | ON |

Note: Contention based protocol was tested with receiver with the lowest antenna gain.
Adjusted power(dBm) = AWGN Power(dBm) – Antenna gain(dBi)

**Detection Probability**

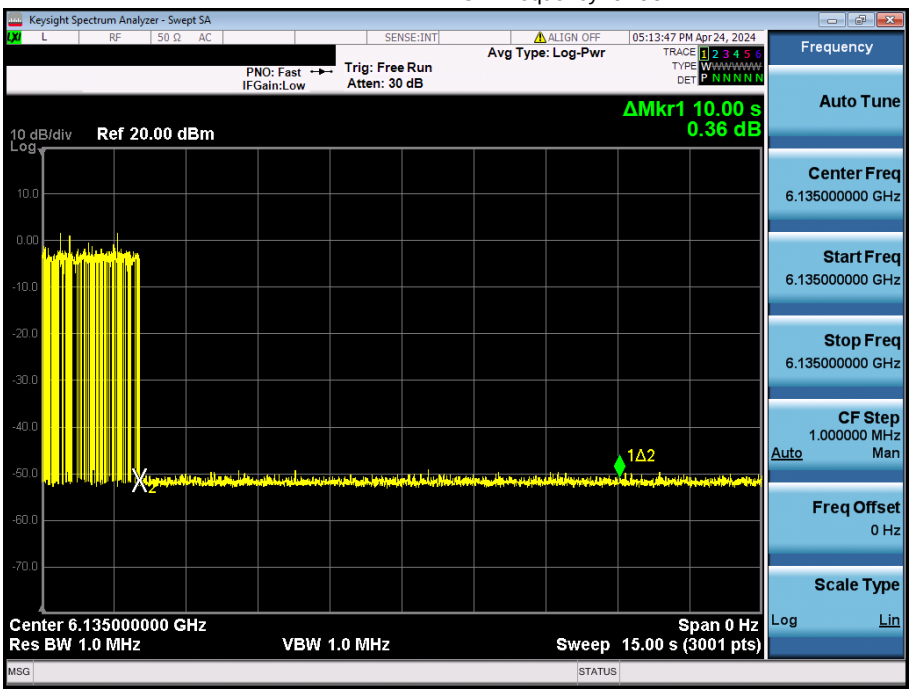
| Band | Channel BW (MHz) | Channel | EUT Frequency (MHz) | AWGN Frequency (MHz) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Detection probability (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NII-5 | 20 | 37 | 6135 | 6135 | O | O | O | O | O | O | O | O | O | O | 100 |
| NII-6 | 20 | 101 | 6455 | 6455 | O | O | O | O | O | O | O | O | O | O | 100 |
| NII-7 | 20 | 149 | 6695 | 6695 | O | O | O | O | O | O | O | O | O | O | 100 |
| NII-8 | 20 | 213 | 7015 | 7015 | O | O | O | O | O | O | O | O | O | O | 100 |
| NII-5 | 160 | 47 | 6185 | 6110 | O | O | O | O | O | O | O | O | O | O | 100 |
| NII-5 | 160 | 47 | 6185 | 6185 | O | O | O | O | O | O | O | O | O | O | 100 |
| NII-5 | 160 | 47 | 6185 | 6260 | O | O | O | O | O | O | O | O | O | O | 100 |
| NII-6 | 160 | 111 | 6505 | 6430 | O | O | O | O | O | O | O | O | O | O | 100 |
| NII-6 | 160 | 111 | 6505 | 6505 | O | O | O | O | O | O | O | O | O | O | 100 |
| NII-6 | 160 | 111 | 6505 | 6580 | O | O | O | O | O | O | O | O | O | O | 100 |
| NII-7 | 160 | 143 | 6665 | 6590 | O | O | O | O | O | O | O | O | O | O | 100 |
| NII-7 | 160 | 143 | 6665 | 6665 | O | O | O | O | O | O | O | O | O | O | 100 |
| NII-7 | 160 | 143 | 6665 | 6740 | O | O | O | O | O | O | O | O | O | O | 100 |
| NII-8 | 160 | 207 | 6985 | 6910 | O | O | O | O | O | O | O | O | O | O | 100 |
| NII-8 | 160 | 207 | 6985 | 6985 | O | O | O | O | O | O | O | O | O | O | 100 |
| NII-8 | 160 | 207 | 6985 | 7060 | O | O | O | O | O | O | O | O | O | O | 100 |

## ▣ Test Plots

### AWGN Signal

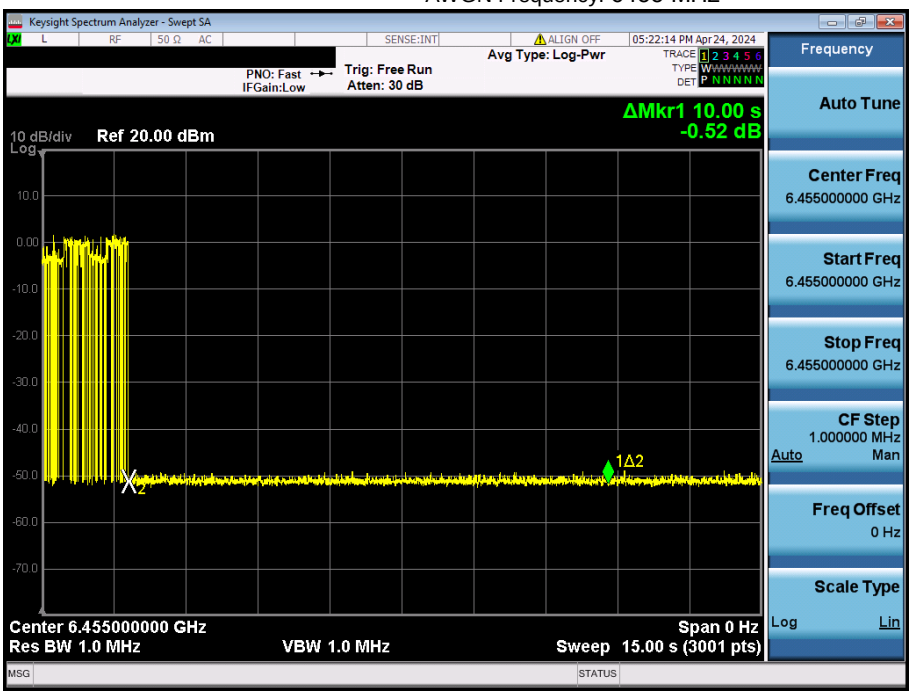
**Timing Plot**

Test Mode: U-NII 5 & Channel BW: 20 MHz & EUT Frequency: 6135 MHz
AWGN Frequency: 6135 MHz

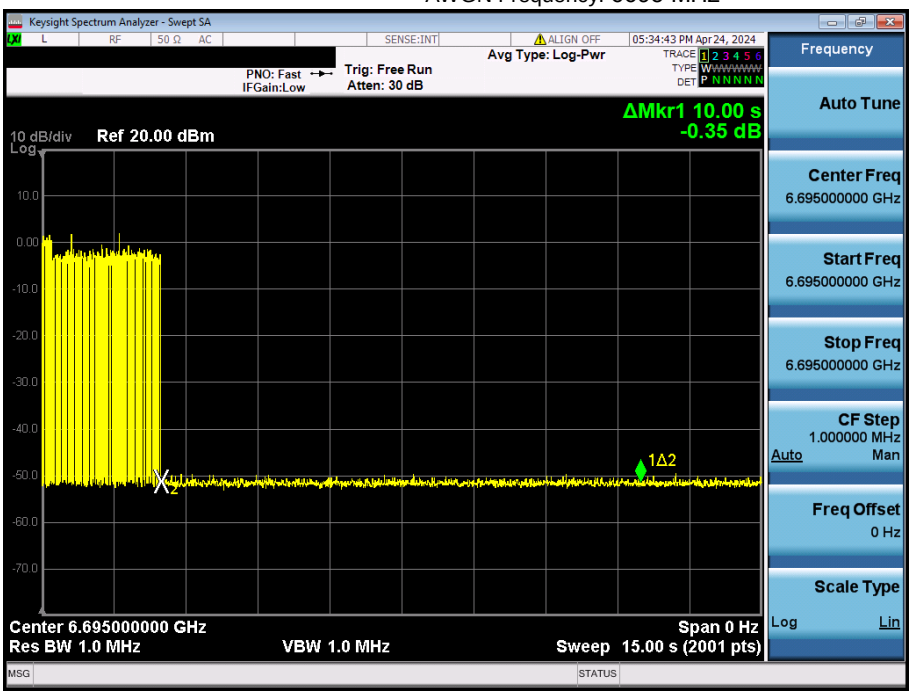



**Timing Plot**

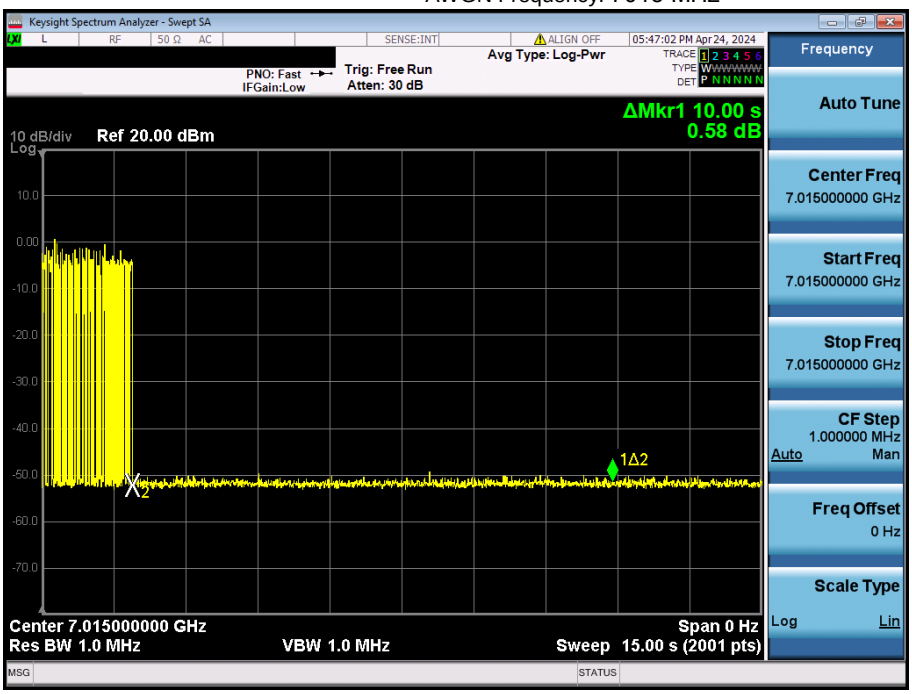
Test Mode: U-NII 6 & Channel BW: 20 MHz & EUT Frequency: 6455 MHz
AWGN Frequency: 6455 MHz



**Timing Plot** Test Mode: U-NII 7 & Channel BW: 20 MHz & EUT Frequency: 6695 MHz
AWGN Frequency: 6695 MHz

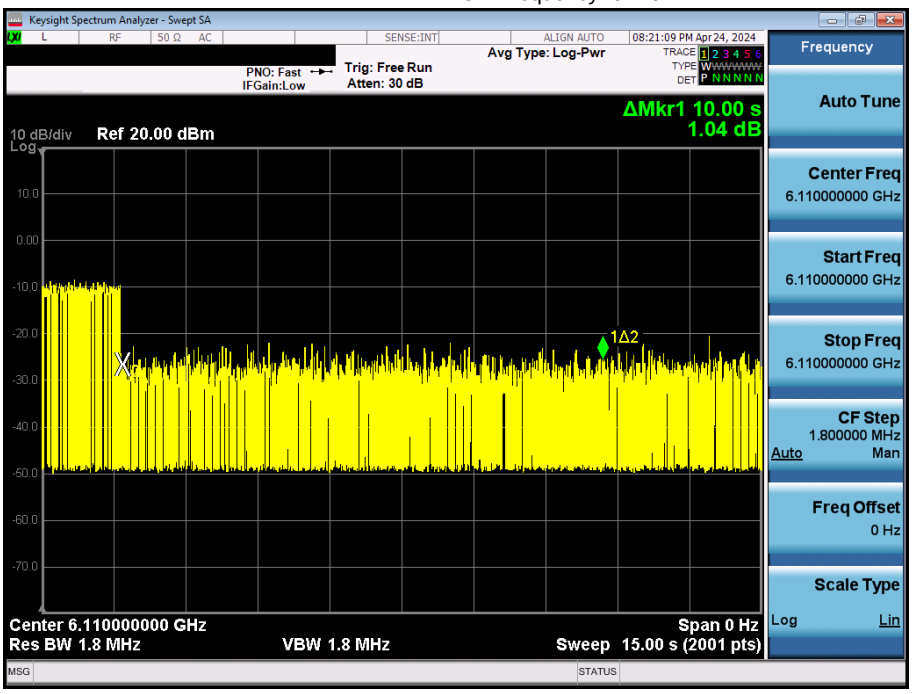



**Timing Plot** Test Mode: U-NII 8 & Channel BW: 20 MHz & EUT Frequency: 7015 MHz
AWGN Frequency: 7015 MHz



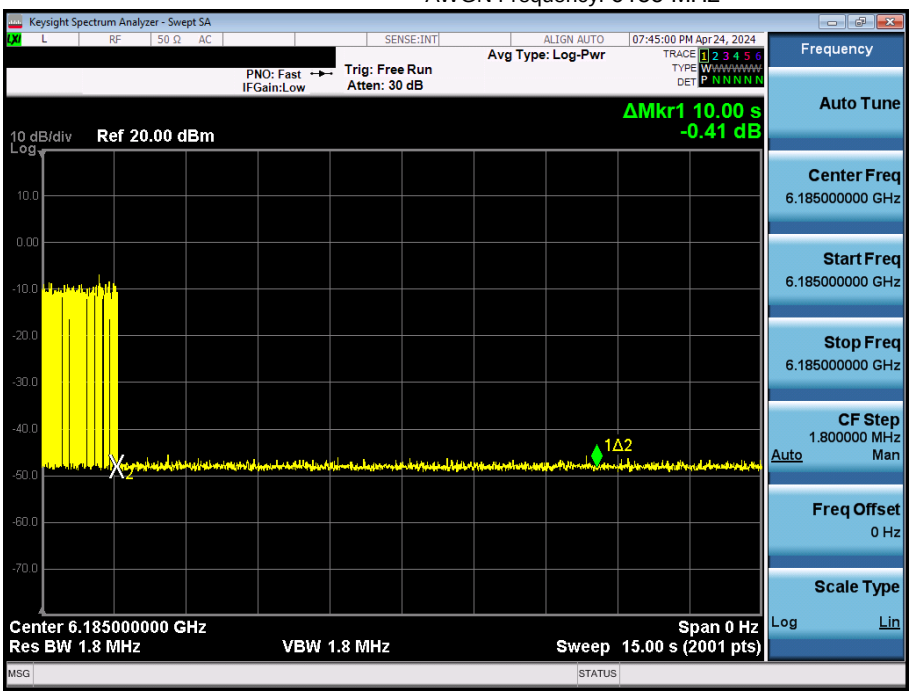
**Timing Plot**

Test Mode: U-NII 5 & Channel BW: 160 MHz & EUT Frequency: 6185 MHz
AWGN Frequency: 6110 MHz

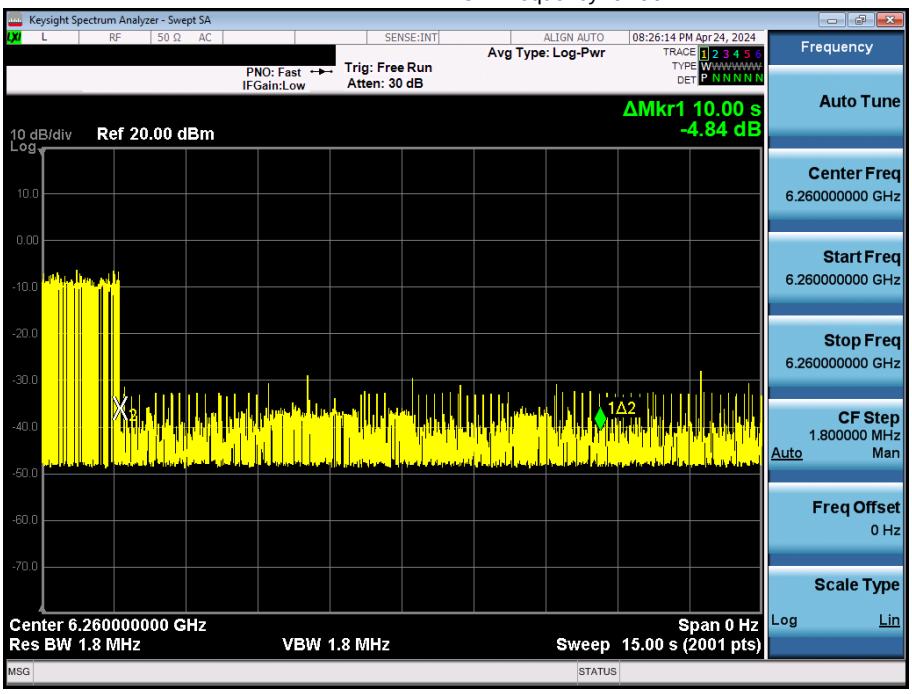



**Timing Plot**

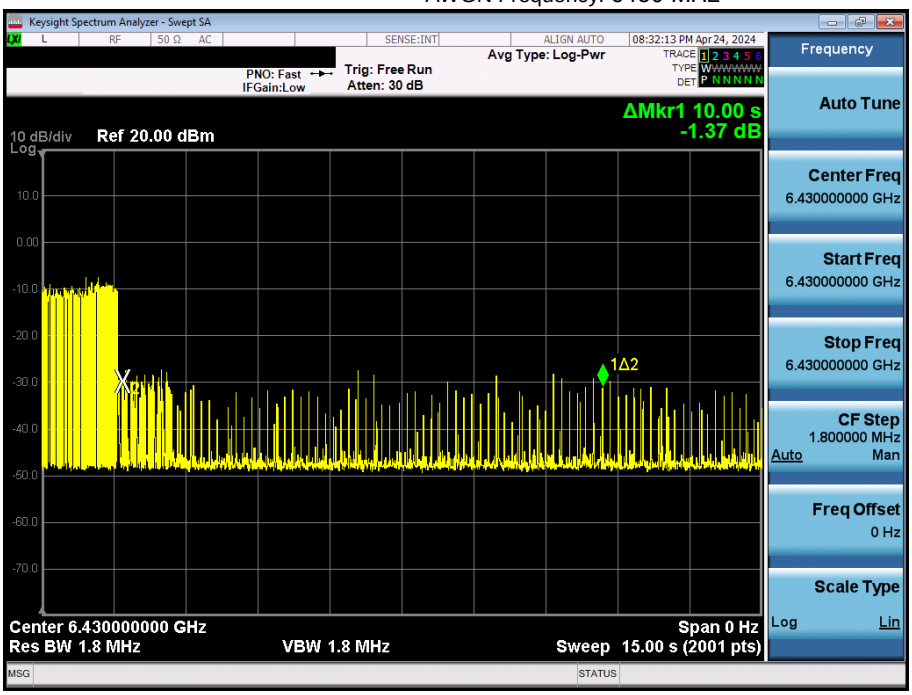
Test Mode: U-NII 5 & Channel BW: 160 MHz & EUT Frequency: 6185 MHz
AWGN Frequency: 6185 MHz



**Timing Plot** Test Mode: U-NII 5 & Channel BW: 160 MHz & EUT Frequency: 6185 MHz
AWGN Frequency: 6260 MHz

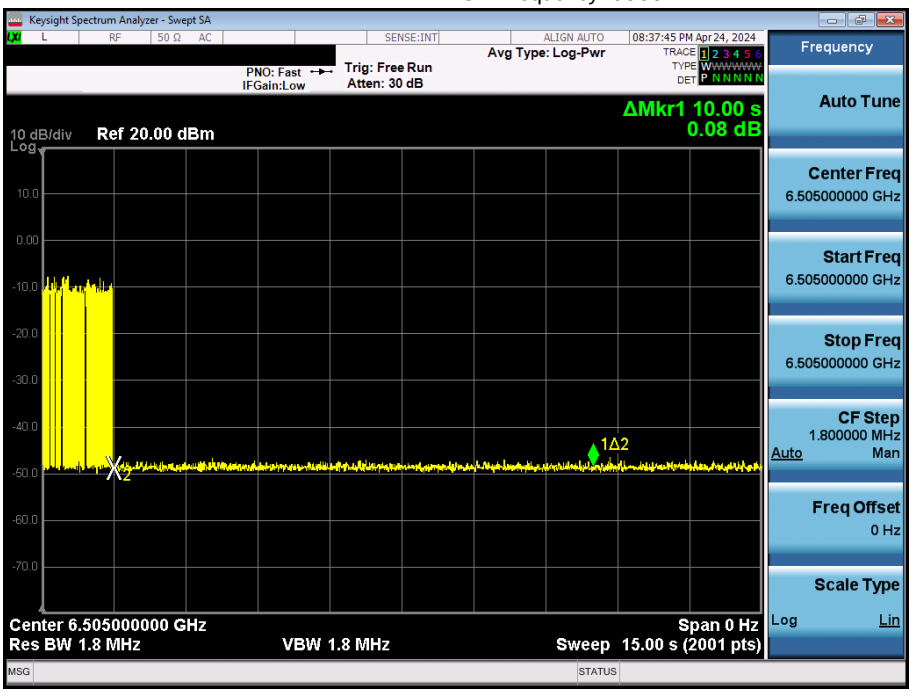



**Timing Plot** Test Mode: U-NII 6 & Channel BW: 160 MHz & EUT Frequency: 6505 MHz
AWGN Frequency: 6430 MHz



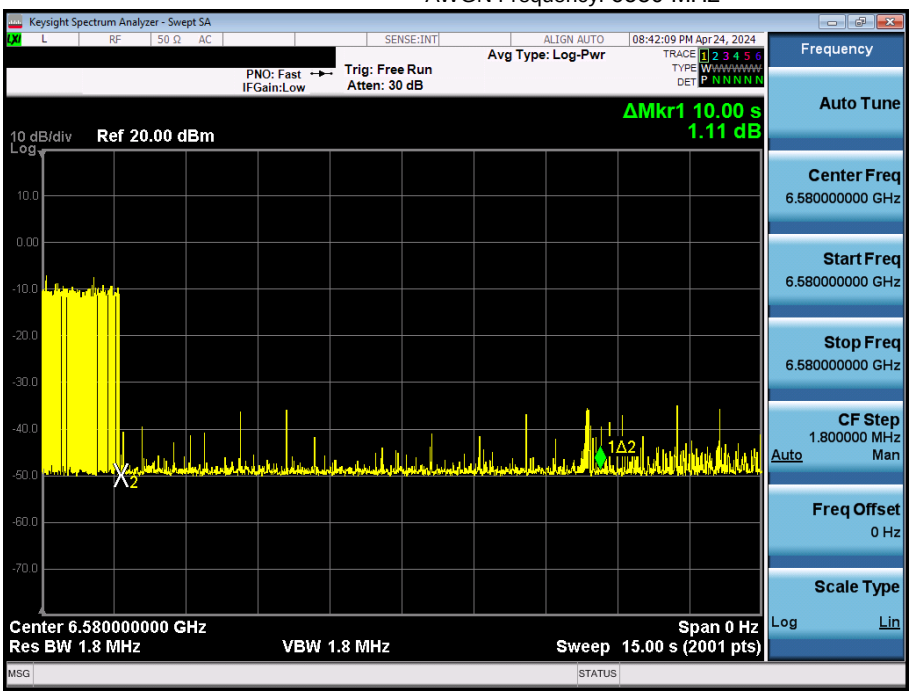
**Timing Plot**

Test Mode: U-NII 6 & Channel BW: 160 MHz & EUT Frequency: 6505 MHz
AWGN Frequency: 6505 MHz

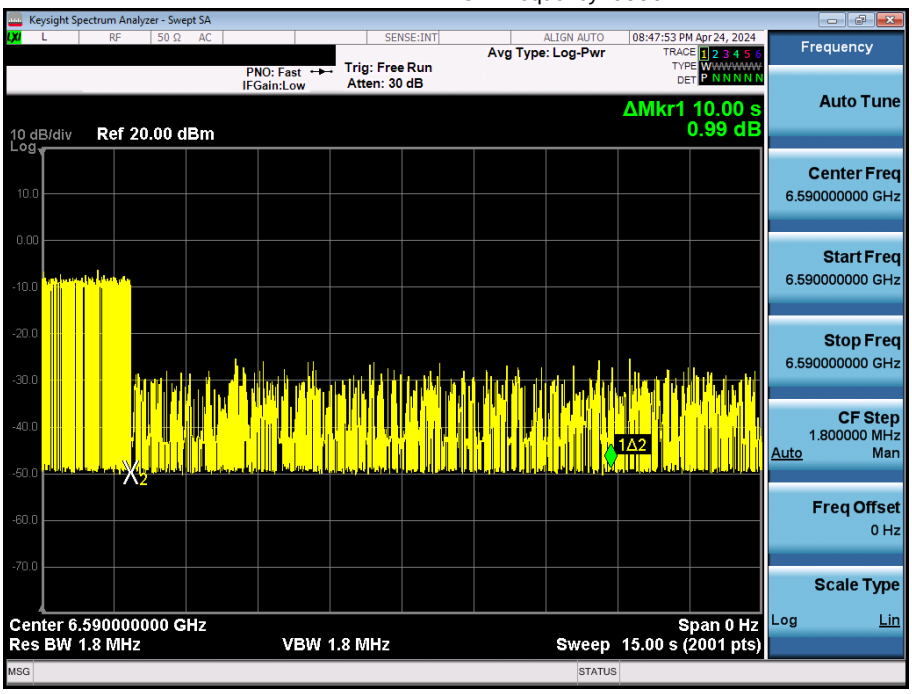



**Timing Plot**

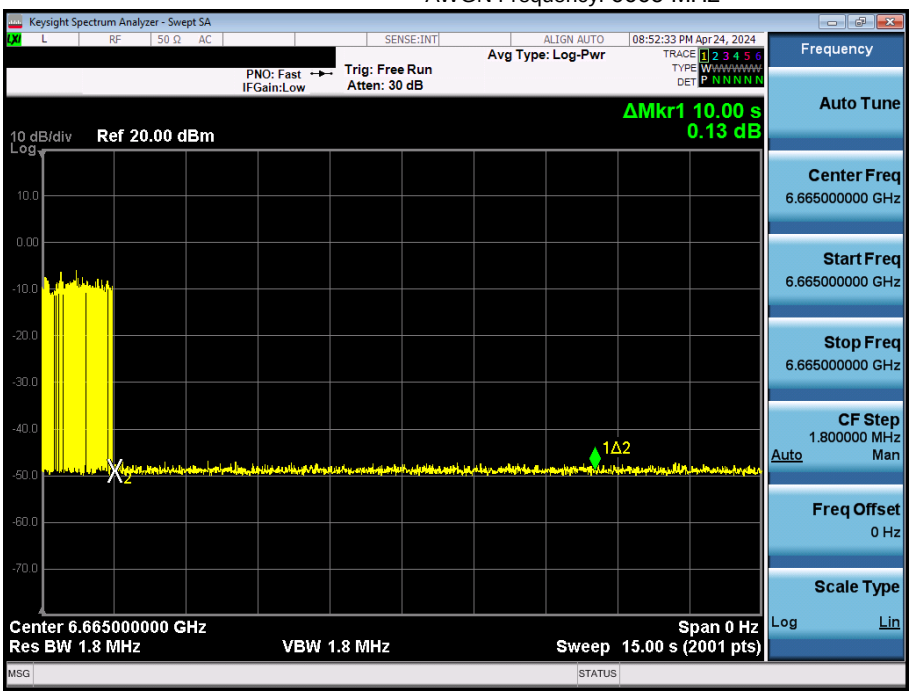
Test Mode: U-NII 6 & Channel BW: 160 MHz & EUT Frequency: 6505 MHz
AWGN Frequency: 6580 MHz



**Timing Plot** Test Mode: U-NII 7 & Channel BW: 160 MHz & EUT Frequency: 6665 MHz
AWGN Frequency: 6590 MHz

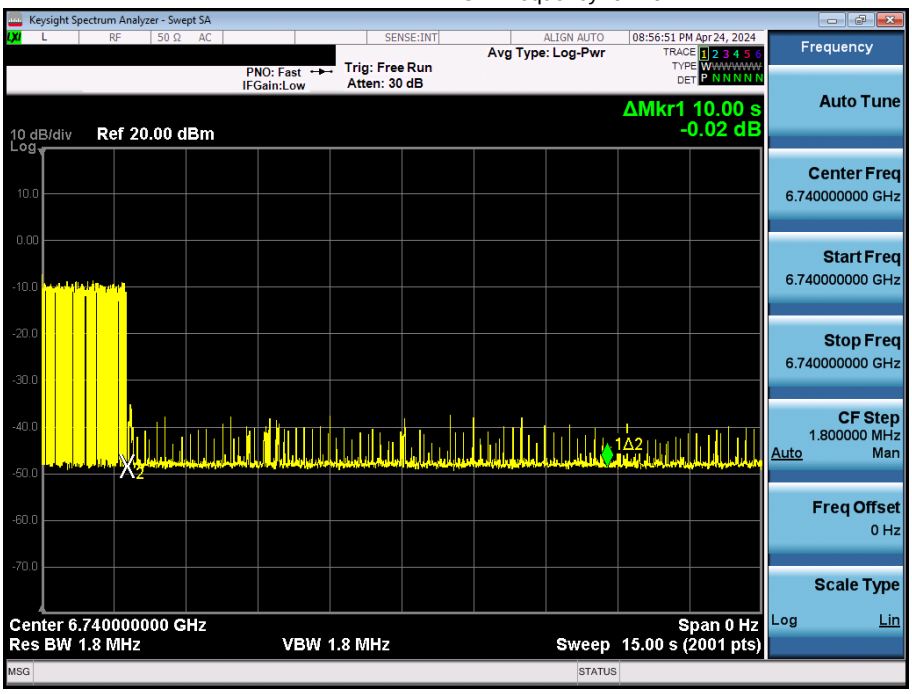



**Timing Plot** Test Mode: U-NII 7 & Channel BW: 160 MHz & EUT Frequency: 6665 MHz
AWGN Frequency: 6665 MHz



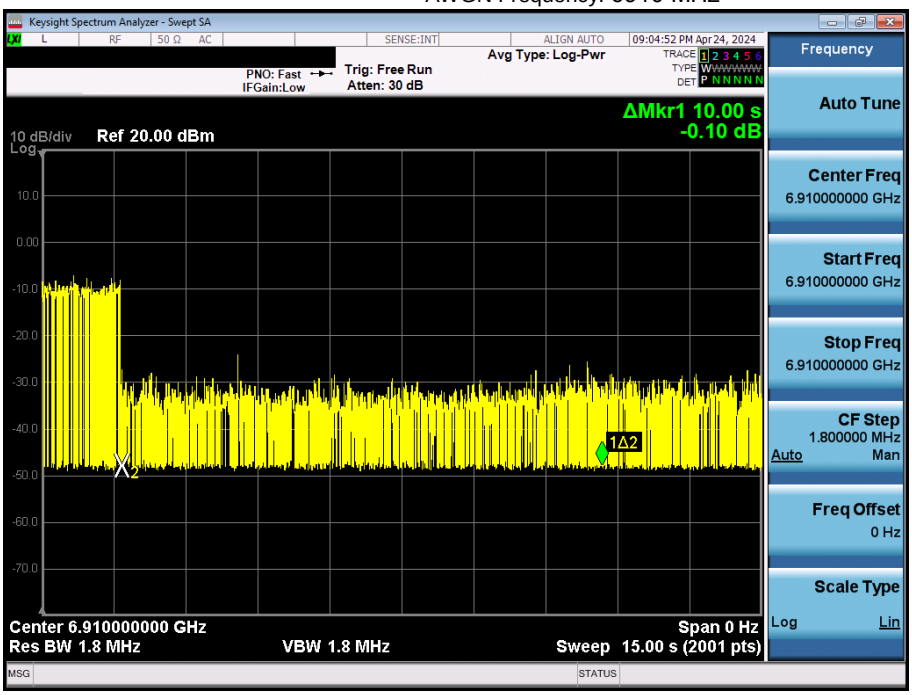
**Timing Plot**

Test Mode: U-NII 7 & Channel BW: 160 MHz & EUT Frequency: 6665 MHz
AWGN Frequency: 6740 MHz

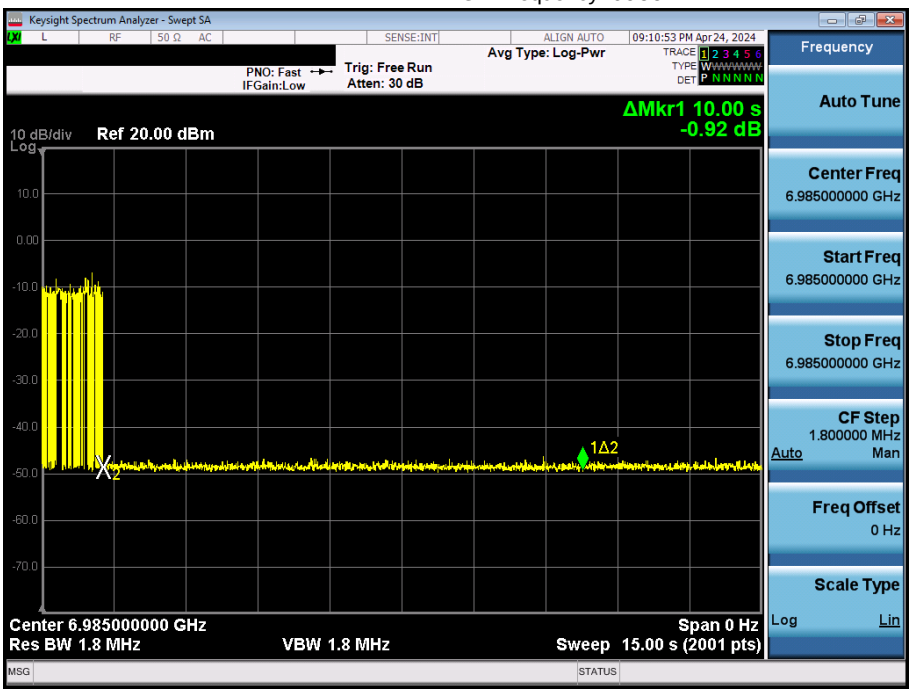



**Timing Plot**

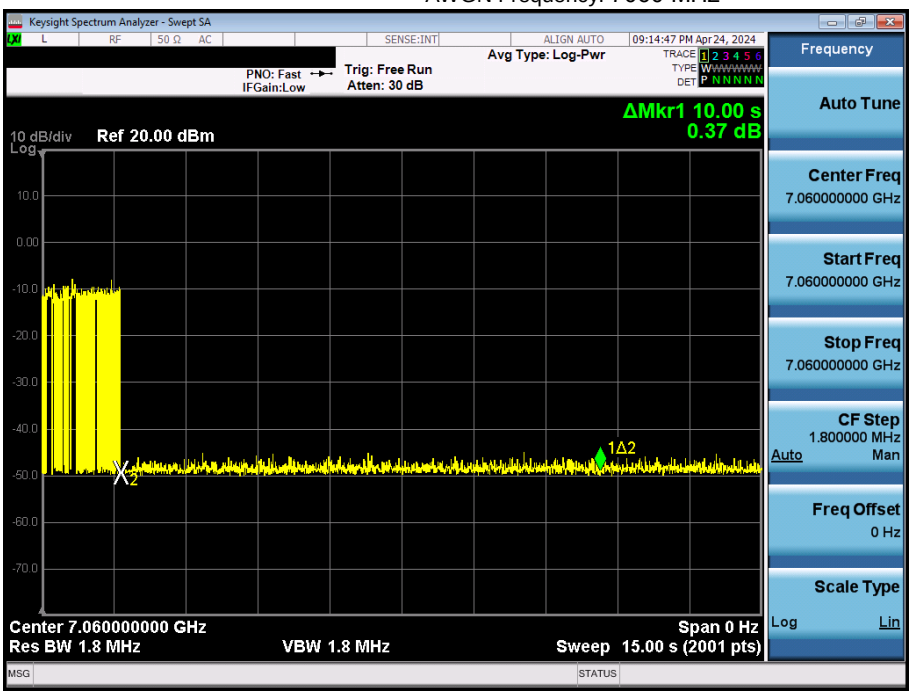
Test Mode: U-NII 8 & Channel BW: 160 MHz & EUT Frequency: 6985 MHz
AWGN Frequency: 6910 MHz



**Timing Plot** Test Mode: U-NII 8 & Channel BW: 160 MHz & EUT Frequency: 6665 MHz
AWGN Frequency: 6985 MHz




**Timing Plot** Test Mode: U-NII 8 & Channel BW: 160 MHz & EUT Frequency: 6985 MHz
AWGN Frequency: 7060 MHz



## 5.6. Unwanted Emissions

### ▣ Test Requirements and limit

**Part 15.407(b)(6)**

For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of −27 dBm/MHz.

**Part 15.407(b)(9)**

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.

**Part 15.407(b)(10)**

The provisions of § 15.205 apply to intentional radiators operating under this section.

**Part 15.209: General requirements**

| Frequency (MHz) | FCC Limit (uV/m) | Measurement Distance (m) |
|---|---|---|
| 0.009 – 0.490 | 2 400 / F (kHz) | 300 |
| 0.490 – 1.705 | 24 000 / F (kHz) | 30 |
| 1.705 – 30.0 | 30 | 30 |

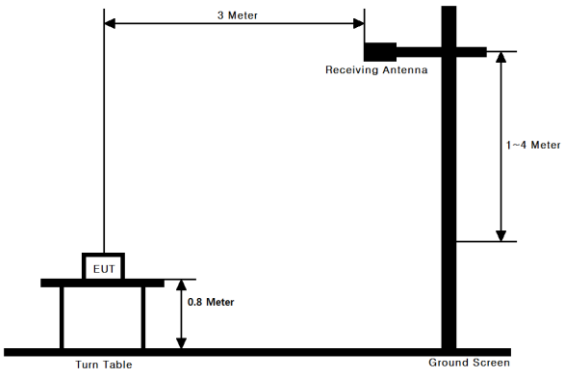
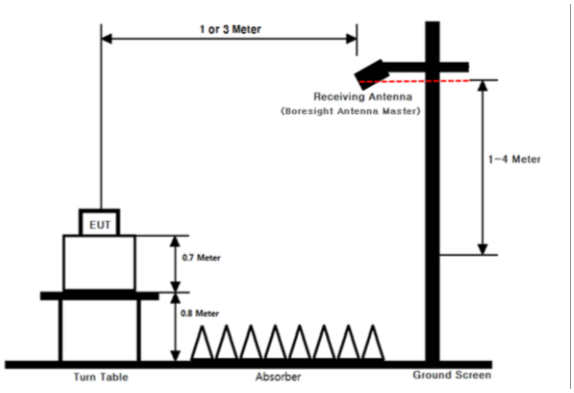
| Frequency (MHz) | FCC Limit (uV/m) | Measurement Distance (m) |
|---|---|---|
| 30 ~ 88 | 100 ** | 3 |
| 88 ~ 216 | 150 ** | 3 |
| 216 ~ 960 | 200 ** | 3 |
| Above 960 | 500 | 3 |

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§15.231 and 15.241.

**Part 15.205(a): Restricted band of operation**

| MHz | MHz | MHz | MHz | GHz | GHz |
|---|---|---|---|---|---|
| 0.009 ~ 0.110 | 8.414 25 ~ 8.414 75 | 108 ~ 121.94 | 1 300 ~ 1 427 | 4.5 ~ 5.15 | 14.47 ~ 14.5 |
| 0.495 ~ 0.505 | 12.29 ~ 12.293 | 123 ~ 138 | 1 435 ~ 1 626.5 | 5.35 ~ 5.46 | 15.35 ~ 16.2 |
| 2.173 5 ~ 2.190 5 | 12.519 75 ~ 12.520 25 | 149.9 ~ 150.05 | 1 645.5 ~ 1 646.5 | 7.25 ~ 7.75 | 17.7 ~ 21.4 |
| 4.125 ~ 4.128 | 12.576 75 ~ 12.577 25 | 156.524 75 ~ 156.525 25 | 1 660 ~ 1 710 | 8.025 ~ 8.5 | 22.01 ~ 23.12 |
| 4.177 25 ~ 4.177 75 | 13.36 ~ 13.41 | 156.7 ~ 156.9 | 1 718.8 ~ 1 722.2 | 9.0 ~ 9.2 | 23.6 ~ 24.0 |
| 4.207 25 ~ 4.207 75 | 16.42 ~ 16.423 | 162.012 5 ~ 167.17 | 2 200 ~ 2 300 | 9.3 ~ 9.5 | 31.2 ~ 31.8 |
| 6.215 ~ 6.218 | 16.694 75 ~ 16.695 25 | 167.72 ~ 173.2 | 2 310 ~ 2 390 | 10.6 ~ 12.7 | 36.43 ~ 36.5 |
| 6.267 75 ~ 6.268 25 | 16.804 25 ~ 16.804 75 | 240 ~ 285 | 2 483.5 ~ 2 500 | 13.25 ~ 13.4 | Above 38.6 |
| 6.311 75 ~ 6.312 25 | 25.5 ~ 25.67 | 322 ~ 335.4 | 2 655 ~ 2 900 | | |
| 8.291 ~ 8.294 | 37.5 ~ 38.25 | 399.90 ~ 410 | 3 260 ~ 3 267 | | |
| 8.362 ~ 8.366 | 73 ~ 74.6 | 608 ~ 614 | 3 332 ~ 3 339 | | |
| 8.376 25 ~ 8.386 75 | 74.8 ~ 75.2 | 960 ~ 1 240 | 3 345.8 ~ 3 358 | | |
| | | | 3 600 ~ 4 400 | | |

## ▣ Test Configuration

| Below 1 GHz | Above 1 GHz |
|---|---|
|  |  |





## ▣ Test Procedure

1) The EUT is placed on a non-conductive table. For emission measurements at or below 1 GHz, the table height is 80 cm. For emission measurements above 1 GHz, the table height is 1.5 m.
2) The turn table shall be rotated for 360 degrees to determine the position of maximum emission level.
3) EUT is set 1 m or 3 m away from the receiving antenna, which is varied from 1 m to 4 m to find out the highest emissions.
4) Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5) And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6) Repeat above procedures until the measurements for all frequencies are complete.

Radiated spurious emission measured using following Measurement Procedure of KDB 789033 D02v02r01

► **General Requirements for Unwanted Emissions Measurements**

The following requirements apply to all unwanted emissions measurements, both in and outside of the restricted bands:

- EUT Duty Cycle

(1) The EUT shall be configured or modified to transmit continuously except as stated in (ii), below. The intent is to test at 100 percent duty cycle; however a small reduction in duty cycle (to no lower than 98 percent) is permitted if required by the EUT for amplitude control purposes. Manufacturers are expected to provide software to the test lab to permit such continuous operation.

(2) If continuous transmission (or at least 98 percent duty cycle) cannot be achieved due to hardware limitations of the EUT (e.g., overheating), the following additions to the measurement and reporting procedures are required:

- The EUT shall be configured to operate at the maximum achievable duty cycle.
- Measure the duty cycle, x, of the transmitter output signal.
- Adjustments to measurement procedures (e.g., increasing test time and number of traces averaged) shall be performed as described in the procedures below.
- The test report shall include the following additional information:
  - The reason for the duty cycle limitation.
  - The duty cycle achieved for testing and the associated transmit duration and interval between transmissions.
  - The sweep time and the amount of time used for trace stabilization during max-hold measurements for peak emission measurements.

(3) Reduction of the measured emission amplitude levels to account for operational duty factor is not permitted. Compliance is based on emission levels occurring during transmission - not on an average across on and off times of the transmitter.

► **Measurements below 1000 MHz**

a) Follow the requirements in section II.G.3, “General Requirements for Unwanted Emissions Measurements”.

b) Compliance shall be demonstrated using CISPR quasi-peak detection; however, peak detection is permitted as an alternative to quasi-peak detection.

► **Measurements above 1000 MHz (Peak)**

a) Follow the requirements in section II.G.3, “General Requirements for Unwanted Emissions Measurements”.

b) Peak emission levels are measured by setting the analyzer as follows:

(i) RBW = 1 MHz.
(ii) VBW ≥ 3 MHz.
(iii) Detector = Peak.
(iv) Sweep time = Auto.
(v) Trace mode = Max hold.
(vi) Allow sweeps to continue until the trace stabilizes. Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately 1/x, where x is the duty cycle. For example, at 50 percent duty cycle, the measurement time will increase by a factor of two relative to measurement time for continuous transmission.

► **Measurements above 1000 MHz (Method AD)**

(i) RBW = 1 MHz.
(ii) VBW ≥ 3 MHz.
(iii) Detector = RMS, if span / (# of points in sweep) ≤ RBW / 2. Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If the condition is not satisfied, the detector mode shall be set to peak.
(iv) Averaging type = power (i.e., RMS)
• As an alternative, the detector and averaging type may be set for linear voltage averaging. Some analyzers require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.
(v) Sweep time = Auto.
(vi) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, the number of traces shall be increased by a factor of 1/x, where x is the duty cycle. For example, with 50 percent duty cycle, at least 200 traces shall be averaged.
(vii) If tests are performed with the EUT transmitting at a duty cycle less than 98 percent, a correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:
• If power averaging (RMS) mode was used in step (iv) above, the correction factor is 10 log(1/x), where x is the duty cycle. For example, if the transmit duty cycle was 50 percent, then 3 dB must be added to the measured emission levels.
• If linear voltage averaging mode was used in step (iv) above, the correction factor is 20 log (1/x), where x is the duty cycle. For example, if the transmit duty cycle was 50 percent, then 6 dB must be added to the measured emission levels.
• If a specific emission is demonstrated to be continuous (100 percent duty cycle) rather than turning on and off with the transmit cycle, no duty cycle correction is required for that emission.

## ▣ Test Results

**Test Notes**

1. The radiated emissions were investigated 9 kHz to 40 GHz. And no other spurious and harmonic emissions were found below listed frequencies.
2. Information of Distance Correction Factor
   For finding emissions, measurements may be performed at a distance closer than that specified in the regulations.
   In this case, the distance factor is applied to the result.
   - Calculation of distance correction factor
   At frequencies below 30 MHz = 40 log( tested distance / specified distance )
   At frequencies at or above 30 MHz = 20 log( tested distance / specified distance )
   When distance factor is “N/A”, the measurements were performed at the specified distance and distance factor is not applied.
3. Sample Calculation.
   Margin = Limit – Result / Result = Reading + TF+ DCCF + DCF / TF = AF + CL + HL + AL – AG
   Where, TF = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain, HL = High pass filter Loss, AL = Attenuator Loss,
   DCCF = Duty Cycle Correction Factor, DCF = Distance Correction Factor
   Please refer to the appendix II for duty cycle correction factor.
4. The limit is converted to field strength.
   E(dBuV/m) = EIRP(dBm) + 95.2 dB = -27 dBm + 95.2 = 68.2 dBuV/m (Average)

### Radiated Spurious Emissions data(9 kHz ~ 40 GHz) : *LPI & MIMO(CDD) & 802.11a*

| Band | Tested Frequency (MHz) | Freq. (MHz) | ANT Pol | EUT Position (Axis) | Detector Mode | Reading (dBuV) | TF (dB/m) | DCCF (dB) | DCF (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| U-NII 5 | 5935 | 5924.94 | H | Z | PK | 67.92 | 3.25 | N/A | N/A | 71.17 | 88.20 | 17.03 |
| | | 5924.99 | H | Z | AV | 54.68 | 3.73 | 0.02 | N/A | 58.43 | 68.20 | 9.77 |
| | | 11870.21 | H | Z | PK | 44.92 | 9.49 | N/A | N/A | 54.41 | 74.00 | 19.59 |
| | | 11870.41 | H | Z | AV | 35.07 | 9.49 | 0.02 | N/A | 44.58 | 54.00 | 9.42 |
| | 6175 | 12350.17 | H | Z | PK | 45.97 | 9.38 | N/A | N/A | 55.35 | 74.00 | 18.65 |
| | | 12350.08 | H | Z | AV | 34.92 | 9.38 | 0.02 | N/A | 44.32 | 54.00 | 9.68 |
| | 6415 | 12830.94 | H | Z | PK | 44.09 | 8.79 | N/A | N/A | 52.88 | 88.20 | 35.32 |
| | | 12830.64 | H | Z | AV | 34.12 | 8.79 | 0.02 | N/A | 42.93 | 68.20 | 25.27 |
| U-NII 6 | 6435 | 12869.30 | H | Z | PK | 44.49 | 8.71 | N/A | N/A | 53.20 | 88.20 | 35.00 |
| | | 12869.37 | H | Z | AV | 34.41 | 8.71 | 0.02 | N/A | 43.14 | 68.20 | 25.06 |
| | 6475 | 12950.28 | H | Z | PK | 45.24 | 8.62 | N/A | N/A | 53.86 | 88.20 | 34.34 |
| | | 12950.16 | H | Z | AV | 35.04 | 8.62 | 0.02 | N/A | 43.68 | 68.20 | 24.52 |
| | 6515 | 13029.29 | H | Z | PK | 45.04 | 8.47 | N/A | N/A | 53.51 | 88.20 | 34.69 |
| | | 13029.04 | H | Z | AV | 35.11 | 8.47 | 0.02 | N/A | 43.60 | 68.20 | 24.60 |
| U-NII 7 | 6535 | 13070.86 | H | Z | PK | 45.85 | 8.45 | N/A | N/A | 54.30 | 88.20 | 33.90 |
| | | 13070.25 | H | Z | AV | 34.97 | 8.45 | 0.02 | N/A | 43.44 | 68.20 | 24.76 |
| | 6695 | 13389.05 | H | Z | PK | 44.69 | 8.84 | N/A | N/A | 53.53 | 74.00 | 20.47 |
| | | 13389.84 | H | Z | AV | 34.71 | 8.84 | 0.02 | N/A | 43.57 | 54.00 | 10.43 |
| | 6855 | 13709.51 | H | Z | PK | 45.16 | 8.57 | N/A | N/A | 53.73 | 88.20 | 34.47 |
| | | 13709.91 | H | Z | AV | 34.59 | 8.57 | 0.02 | N/A | 43.18 | 68.20 | 25.02 |
| U-NII 8 | 6875 | 13749.36 | H | Z | PK | 45.26 | 8.45 | N/A | N/A | 53.71 | 88.20 | 34.49 |
| | | 13749.20 | H | Z | AV | 34.90 | 8.45 | 0.02 | N/A | 43.37 | 68.20 | 24.83 |
| | 6995 | 13989.94 | H | Z | PK | 45.01 | 8.51 | N/A | N/A | 53.52 | 88.20 | 34.68 |
| | | 13989.06 | H | Z | AV | 35.33 | 8.51 | 0.02 | N/A | 43.86 | 68.20 | 24.34 |
| | 7115 | 7125.07 | H | Z | PK | 59.99 | 6.33 | N/A | N/A | 66.32 | 88.20 | 21.88 |
| | | 7125.03 | H | Z | AV | 47.78 | 6.33 | 0.02 | N/A | 54.13 | 68.20 | 14.07 |
| | | 14230.18 | H | Z | PK | 45.26 | 9.22 | N/A | N/A | 54.48 | 88.20 | 33.72 |
| | | 14230.07 | H | Z | AV | 34.80 | 9.22 | 0.02 | N/A | 44.04 | 68.20 | 24.16 |

**Radiated Spurious Emissions data(9 kHz ~ 40 GHz) : *LPI & MIMO(CDD) & 802.11ax(HE20)***

| Band | Tested Frequency (MHz) | Tone | RU | Freq. (MHz) | ANT Pol | EUT Position (Axis) | Detector Mode | Reading (dBuV) | TF (dB/m) | DCCF (dB) | DCF (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| U-NII 5 | 5935 | 26T | 0 | 5 924.99 | V | Y | PK | 68.44 | 3.73 | N/A | N/A | 72.17 | 88.20 | 16.03 |
| | | 26T | 0 | 5 924.99 | V | Y | AV | 62.09 | 3.73 | 0.01 | N/A | 65.83 | 68.20 | 2.37 |
| | | SU | - | 5 924.99 | V | Y | PK | 69.65 | 3.73 | N/A | N/A | 73.38 | 88.20 | 14.82 |
| | | SU | - | 5 924.99 | V | Y | AV | 61.85 | 3.73 | 0.02 | N/A | 65.60 | 68.20 | 2.60 |
| | | 26T | 4 | 11869.88 | V | Y | PK | 44.65 | 9.49 | N/A | N/A | 54.14 | 74.00 | 19.86 |
| | | 26T | 4 | 11869.85 | V | Y | AV | 35.09 | 9.49 | 0.01 | N/A | 44.59 | 54.00 | 9.41 |
| | | SU | NA | 11869.98 | V | Y | PK | 44.53 | 9.49 | N/A | N/A | 54.02 | 74.00 | 19.98 |
| | | SU | NA | 11869.84 | V | Y | AV | 34.82 | 9.49 | 0.02 | N/A | 44.33 | 54.00 | 9.67 |
| | 6175 | 26T | 4 | 12349.43 | V | Y | PK | 45.15 | 9.38 | N/A | N/A | 54.53 | 74.00 | 19.47 |
| | | 26T | 4 | 12349.70 | V | Y | AV | 34.73 | 9.38 | 0.01 | N/A | 44.12 | 54.00 | 9.88 |
| | | SU | NA | 12350.54 | V | Y | PK | 44.81 | 9.38 | N/A | N/A | 54.19 | 74.00 | 19.81 |
| | | SU | NA | 12350.15 | V | Y | AV | 34.36 | 9.38 | 0.02 | N/A | 43.76 | 54.00 | 10.24 |
| | 6415 | 26T | 4 | 12830.68 | V | Y | PK | 44.68 | 8.79 | N/A | N/A | 53.47 | 88.20 | 34.73 |
| | | 26T | 4 | 12830.08 | V | Y | AV | 34.31 | 8.79 | 0.01 | N/A | 43.11 | 68.20 | 25.09 |
| | | SU | NA | 12829.42 | V | Y | PK | 44.26 | 8.79 | N/A | N/A | 53.05 | 88.20 | 35.15 |
| | | SU | NA | 12829.52 | V | Y | AV | 34.18 | 8.79 | 0.02 | N/A | 42.99 | 68.20 | 25.21 |
| U-NII 6 | 6435 | 26T | 4 | 12870.72 | V | Y | PK | 45.49 | 8.71 | N/A | N/A | 54.20 | 88.20 | 34.00 |
| | | 26T | 4 | 12870.60 | V | Y | AV | 34.46 | 8.71 | 0.01 | N/A | 43.18 | 68.20 | 25.02 |
| | | SU | - | 12869.81 | V | Y | PK | 45.75 | 8.71 | N/A | N/A | 54.46 | 88.20 | 33.74 |
| | | SU | - | 12869.13 | V | Y | AV | 34.68 | 8.71 | 0.02 | N/A | 43.41 | 68.20 | 24.79 |
| | 6475 | 26T | 4 | 12950.31 | V | Y | PK | 45.89 | 8.62 | N/A | N/A | 54.51 | 88.20 | 33.69 |
| | | 26T | 4 | 12950.92 | V | Y | AV | 34.95 | 8.62 | 0.01 | N/A | 43.58 | 68.20 | 24.62 |
| | | SU | - | 12950.55 | V | Y | PK | 45.11 | 8.62 | N/A | N/A | 53.73 | 88.20 | 34.47 |
| | | SU | - | 12950.60 | V | Y | AV | 34.87 | 8.62 | 0.02 | N/A | 43.51 | 68.20 | 24.69 |
| | 6515 | 26T | 4 | 13029.57 | V | Y | PK | 45.00 | 8.47 | N/A | N/A | 53.47 | 88.20 | 34.73 |
| | | 26T | 4 | 13029.81 | V | Y | AV | 34.88 | 8.47 | 0.01 | N/A | 43.36 | 68.20 | 24.84 |
| | | SU | - | 13030.82 | V | Y | PK | 45.14 | 8.48 | N/A | N/A | 53.62 | 88.20 | 34.58 |
| | | SU | - | 13030.25 | V | Y | AV | 34.83 | 8.48 | 0.02 | N/A | 43.33 | 68.20 | 24.87 |
| U-NII 7 | 6535 | 26T | 4 | 13070.77 | V | Y | PK | 45.13 | 8.45 | N/A | N/A | 53.58 | 88.20 | 34.62 |
| | | 26T | 4 | 13070.24 | V | Y | AV | 35.43 | 8.45 | 0.01 | N/A | 43.89 | 68.20 | 24.31 |
| | | SU | - | 13069.35 | V | Y | PK | 45.27 | 8.46 | N/A | N/A | 53.73 | 88.20 | 34.47 |
| | | SU | - | 13069.91 | V | Y | AV | 34.94 | 8.46 | 0.02 | N/A | 43.42 | 68.20 | 24.78 |
| | 6695 | 26T | 4 | 13390.83 | V | Y | PK | 45.81 | 8.83 | N/A | N/A | 54.64 | 74.00 | 19.36 |
| | | 26T | 4 | 13390.41 | V | Y | AV | 34.69 | 8.83 | 0.01 | N/A | 43.53 | 54.00 | 10.47 |
| | | SU | - | 13390.33 | V | Y | PK | 45.47 | 8.83 | N/A | N/A | 54.30 | 74.00 | 19.70 |
| | | SU | - | 13390.72 | V | Y | AV | 34.49 | 8.83 | 0.02 | N/A | 43.34 | 54.00 | 10.66 |
| | 6855 | 26T | 4 | 13709.31 | V | Y | PK | 46.40 | 8.57 | N/A | N/A | 54.97 | 88.20 | 33.23 |
| | | 26T | 4 | 13709.48 | V | Y | AV | 34.60 | 8.57 | 0.01 | N/A | 43.18 | 68.20 | 25.02 |
| | | SU | - | 13709.06 | V | Y | PK | 44.90 | 8.57 | N/A | N/A | 53.47 | 88.20 | 34.73 |
| | | SU | - | 13709.35 | V | Y | AV | 34.89 | 8.57 | 0.02 | N/A | 43.48 | 68.20 | 24.72 |
| U-NII 8 | 6875 | 26T | 4 | 13749.07 | V | Y | PK | 44.97 | 8.45 | N/A | N/A | 53.42 | 88.20 | 34.78 |
| | | 26T | 4 | 13749.65 | V | Y | AV | 34.78 | 8.45 | 0.01 | N/A | 43.24 | 68.20 | 24.96 |
| | | SU | - | 13749.67 | V | Y | PK | 45.39 | 8.45 | N/A | N/A | 53.84 | 88.20 | 34.36 |
| | | SU | - | 13749.74 | V | Y | AV | 34.88 | 8.45 | 0.02 | N/A | 43.35 | 68.20 | 24.85 |
| | 6995 | 26T | 4 | 13990.36 | V | Y | PK | 45.24 | 8.51 | N/A | N/A | 53.75 | 88.20 | 34.45 |
| | | 26T | 4 | 13990.17 | V | Y | AV | 35.26 | 8.51 | 0.01 | N/A | 43.78 | 68.20 | 24.42 |
| | | SU | - | 13989.26 | V | Y | PK | 46.32 | 8.51 | N/A | N/A | 54.83 | 88.20 | 33.37 |
| | | SU | - | 13989.80 | V | Y | AV | 35.47 | 8.51 | 0.02 | N/A | 44.00 | 68.20 | 24.20 |
| | 7115 | 52T | 40 | 7125.04 | V | Y | PK | 67.66 | 6.33 | N/A | N/A | 73.99 | 88.20 | 14.21 |
| | | 52T | 40 | 7125.01 | V | Y | AV | 59.35 | 6.33 | 0.02 | N/A | 65.70 | 68.20 | 2.50 |
| | | SU | - | 7125.11 | V | Y | PK | 66.24 | 6.33 | N/A | N/A | 72.57 | 88.20 | 15.63 |
| | | SU | - | 7125.01 | V | Y | AV | 59.01 | 6.33 | 0.02 | N/A | 65.36 | 68.20 | 2.84 |
| | | 26T | 4 | 14229.43 | V | Y | PK | 44.97 | 9.22 | N/A | N/A | 54.19 | 88.20 | 34.01 |
| | | 26T | 4 | 14229.30 | V | Y | AV | 34.81 | 9.22 | 0.01 | N/A | 44.04 | 68.20 | 24.16 |
| | | SU | - | 14229.86 | V | Y | PK | 45.76 | 9.22 | N/A | N/A | 54.98 | 88.20 | 33.22 |
| | | SU | - | 14229.92 | V | Y | AV | 34.23 | 9.22 | 0.02 | N/A | 43.47 | 68.20 | 24.73 |

**Radiated Spurious Emissions data(9 kHz ~ 40 GHz) : *LPI & MIMO(CDD) & 802.11ax(HE40)***

| Band | Tested Frequency (MHz) | Tone | RU | Freq. (MHz) | ANT Pol | EUT Position (Axis) | Detector Mode | Reading (dBuV) | TF (dB/m) | DCCF (dB) | DCF (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| U-NII 5 | 5965 | 26T | 0 | 5896.73 | V | Y | PK | 48.86 | 3.50 | N/A | N/A | 52.36 | 88.20 | 35.84 |
| | | 26T | 0 | 5896.27 | V | Y | AV | 38.29 | 3.49 | 0.02 | N/A | 41.80 | 68.20 | 26.40 |
| | | SU | - | 5898.43 | V | Y | PK | 51.44 | 3.51 | N/A | N/A | 54.95 | 88.20 | 33.25 |
| | | SU | - | 5898.40 | V | Y | AV | 41.21 | 3.51 | 0.02 | N/A | 44.74 | 68.20 | 23.46 |
| | | 26T | 8 | 11929.80 | V | Y | PK | 45.02 | 9.60 | N/A | N/A | 54.62 | 74.00 | 19.38 |
| | | 26T | 8 | 11929.86 | V | Y | AV | 34.75 | 9.60 | 0.02 | N/A | 44.37 | 54.00 | 9.63 |
| | | SU | - | 11929.78 | V | Y | PK | 45.35 | 9.60 | N/A | N/A | 54.95 | 74.00 | 19.05 |
| | | SU | - | 11929.87 | V | Y | AV | 34.65 | 9.60 | 0.02 | N/A | 44.27 | 54.00 | 9.73 |
| | 6165 | 26T | 8 | 12329.57 | V | Y | PK | 45.22 | 9.41 | N/A | N/A | 54.63 | 74.00 | 19.37 |
| | | 26T | 8 | 12329.77 | V | Y | AV | 34.88 | 9.40 | 0.02 | N/A | 44.30 | 54.00 | 9.70 |
| | | SU | - | 12329.68 | V | Y | PK | 45.15 | 9.41 | N/A | N/A | 54.56 | 74.00 | 19.44 |
| | | SU | - | 12329.76 | V | Y | AV | 35.05 | 9.40 | 0.02 | N/A | 44.47 | 54.00 | 9.53 |
| | 6405 | 26T | 8 | 12810.84 | V | Y | PK | 44.77 | 8.86 | N/A | N/A | 53.63 | 88.20 | 34.57 |
| | | 26T | 8 | 12810.05 | V | Y | AV | 34.37 | 8.87 | 0.02 | N/A | 43.26 | 68.20 | 24.94 |
| | | SU | - | 12809.69 | V | Y | PK | 44.73 | 8.87 | N/A | N/A | 53.60 | 88.20 | 34.60 |
| | | SU | - | 12809.64 | V | Y | AV | 34.37 | 8.87 | 0.02 | N/A | 43.26 | 68.20 | 24.94 |
| U-NII 6 | 6445 | 26T | 8 | 12889.20 | V | Y | PK | 45.44 | 8.72 | N/A | N/A | 54.16 | 88.20 | 34.04 |
| | | 26T | 8 | 12889.82 | V | Y | AV | 34.52 | 8.72 | 0.02 | N/A | 43.26 | 68.20 | 24.94 |
| | | SU | - | 12889.19 | V | Y | PK | 45.10 | 8.72 | N/A | N/A | 53.82 | 88.20 | 34.38 |
| | | SU | - | 12889.87 | V | Y | AV | 34.99 | 8.72 | 0.02 | N/A | 43.73 | 68.20 | 24.47 |
| | 6485 | 26T | 8 | 12969.73 | V | Y | PK | 45.02 | 8.55 | N/A | N/A | 53.57 | 88.20 | 34.63 |
| | | 26T | 8 | 12969.29 | V | Y | AV | 35.09 | 8.55 | 0.02 | N/A | 43.66 | 68.20 | 24.54 |
| | | SU | - | 12969.07 | V | Y | PK | 45.32 | 8.55 | N/A | N/A | 53.87 | 88.20 | 34.33 |
| | | SU | - | 12969.67 | V | Y | AV | 34.66 | 8.55 | 0.02 | N/A | 43.23 | 68.20 | 24.97 |
| | 6525 | 26T | 8 | 13050.53 | V | Y | PK | 45.49 | 8.50 | N/A | N/A | 53.99 | 88.20 | 34.21 |
| | | 26T | 8 | 13050.47 | V | Y | AV | 35.08 | 8.50 | 0.02 | N/A | 43.60 | 68.20 | 24.60 |
| | | SU | - | 13050.27 | V | Y | PK | 45.23 | 8.50 | N/A | N/A | 53.73 | 88.20 | 34.47 |
| | | SU | - | 13050.57 | V | Y | AV | 34.67 | 8.50 | 0.02 | N/A | 43.19 | 68.20 | 25.01 |
| U-NII 7 | 6565 | 26T | 8 | 13129.18 | V | Y | PK | 45.88 | 8.42 | N/A | N/A | 54.30 | 88.20 | 33.90 |
| | | 26T | 8 | 13129.62 | V | Y | AV | 35.55 | 8.42 | 0.02 | N/A | 43.99 | 68.20 | 24.21 |
| | | SU | - | 13129.73 | V | Y | PK | 46.52 | 8.42 | N/A | N/A | 54.94 | 88.20 | 33.26 |
| | | SU | - | 13129.45 | V | Y | AV | 34.56 | 8.42 | 0.02 | N/A | 43.00 | 68.20 | 25.20 |
| | 6685 | 26T | 8 | 13369.87 | V | Y | PK | 44.94 | 8.85 | N/A | N/A | 53.79 | 74.00 | 20.21 |
| | | 26T | 8 | 13369.76 | V | Y | AV | 34.39 | 8.85 | 0.02 | N/A | 43.26 | 54.00 | 10.74 |
| | | SU | - | 13369.09 | V | Y | PK | 45.11 | 8.85 | N/A | N/A | 53.96 | 74.00 | 20.04 |
| | | SU | - | 13369.06 | V | Y | AV | 34.33 | 8.85 | 0.02 | N/A | 43.20 | 54.00 | 10.80 |
| | 6845 | 26T | 8 | 13689.40 | V | Y | PK | 45.61 | 8.61 | N/A | N/A | 54.22 | 88.20 | 33.98 |
| | | 26T | 8 | 13689.84 | V | Y | AV | 35.23 | 8.61 | 0.02 | N/A | 43.86 | 68.20 | 24.34 |
| | | SU | - | 13690.08 | V | Y | PK | 45.55 | 8.61 | N/A | N/A | 54.16 | 88.20 | 34.04 |
| | | SU | - | 13690.82 | V | Y | AV | 34.78 | 8.60 | 0.02 | N/A | 43.40 | 68.20 | 24.80 |
| U-NII 8 | 6885 | 26T | 8 | 13770.21 | V | Y | PK | 45.59 | 8.43 | N/A | N/A | 54.02 | 88.20 | 34.18 |
| | | 26T | 8 | 13770.64 | V | Y | AV | 35.02 | 8.43 | 0.02 | N/A | 43.47 | 68.20 | 24.73 |
| | | SU | - | 13770.08 | V | Y | PK | 45.87 | 8.43 | N/A | N/A | 54.30 | 88.20 | 33.90 |
| | | SU | - | 13770.96 | V | Y | AV | 35.38 | 8.43 | 0.02 | N/A | 43.83 | 68.20 | 24.37 |
| | 7005 | 26T | 8 | 14009.96 | V | Y | PK | 45.90 | 8.57 | N/A | N/A | 54.47 | 88.20 | 33.73 |
| | | 26T | 8 | 14009.88 | V | Y | AV | 35.43 | 8.57 | 0.02 | N/A | 44.02 | 68.20 | 24.18 |
| | | SU | - | 14010.51 | V | Y | PK | 45.57 | 8.57 | N/A | N/A | 54.14 | 88.20 | 34.06 |
| | | SU | - | 14010.86 | V | Y | AV | 35.49 | 8.57 | 0.02 | N/A | 44.08 | 68.20 | 24.12 |
| | 7085 | 26T | 17 | 7148.03 | V | Y | PK | 48.36 | 6.55 | N/A | N/A | 54.91 | 88.20 | 33.29 |
| | | 26T | 17 | 7147.74 | V | Y | AV | 38.36 | 6.55 | 0.02 | N/A | 44.93 | 68.20 | 23.27 |
| | | SU | - | 7147.48 | V | Y | PK | 47.57 | 6.55 | N/A | N/A | 54.12 | 88.20 | 34.08 |
| | | SU | - | 7148.30 | V | Y | AV | 37.48 | 6.56 | 0.02 | N/A | 44.06 | 68.20 | 24.14 |
| | | 26T | 8 | 14169.86 | V | Y | PK | 45.90 | 8.98 | N/A | N/A | 54.88 | 88.20 | 33.32 |
| | | 26T | 8 | 14169.18 | V | Y | AV | 35.47 | 8.97 | 0.02 | N/A | 44.46 | 68.20 | 23.74 |
| | | SU | - | 14170.23 | V | Y | PK | 46.63 | 8.98 | N/A | N/A | 55.61 | 88.20 | 32.59 |
| | | SU | - | 14170.92 | V | Y | AV | 35.27 | 8.98 | 0.02 | N/A | 44.27 | 68.20 | 23.93 |

**Radiated Spurious Emissions data(9 kHz ~ 40 GHz) : *LPI & MIMO(CDD) & 802.11ax(HE80)***

| Band | Tested Frequency (MHz) | Tone | RU | Freq. (MHz) | ANT Pol | EUT Position (Axis) | Detector Mode | Reading (dBuV) | TF (dB/m) | DCCF (dB) | DCF (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| U-NII 5 | 5985 | 996T | 67 | 5896.69 | V | Y | PK | 48.90 | 3.49 | N/A | N/A | 52.39 | 88.20 | 35.81 |
| | | 996T | 67 | 5896.89 | V | Y | AV | 38.97 | 3.50 | 0.04 | N/A | 42.51 | 68.20 | 25.69 |
| | | SU | - | 5917.90 | V | Y | PK | 51.00 | 3.67 | N/A | N/A | 54.67 | 88.20 | 33.53 |
| | | SU | - | 5917.20 | V | Y | AV | 40.26 | 3.67 | 0.02 | N/A | 43.95 | 68.20 | 24.25 |
| | | 26T | 18 | 11969.44 | V | Y | PK | 45.21 | 9.71 | N/A | N/A | 54.92 | 74.00 | 19.08 |
| | | 26T | 18 | 11969.82 | V | Y | AV | 34.83 | 9.71 | 0.02 | N/A | 44.56 | 54.00 | 9.44 |
| | | SU | - | 11970.04 | V | Y | PK | 45.54 | 9.71 | N/A | N/A | 55.25 | 74.00 | 18.75 |
| | | SU | - | 11970.40 | V | Y | AV | 34.01 | 9.71 | 0.02 | N/A | 43.74 | 54.00 | 10.26 |
| | 6145 | 26T | 18 | 12290.05 | V | Y | PK | 44.24 | 9.44 | N/A | N/A | 53.68 | 74.00 | 20.32 |
| | | 26T | 18 | 12290.17 | V | Y | AV | 34.16 | 9.44 | 0.02 | N/A | 43.62 | 54.00 | 10.38 |
| | | SU | - | 12290.97 | V | Y | PK | 44.40 | 9.44 | N/A | N/A | 53.84 | 74.00 | 20.16 |
| | | SU | - | 12290.94 | V | Y | AV | 33.96 | 9.44 | 0.02 | N/A | 43.42 | 54.00 | 10.58 |
| | 6385 | 26T | 18 | 12769.41 | V | Y | PK | 44.52 | 8.96 | N/A | N/A | 53.48 | 88.20 | 34.72 |
| | | 26T | 18 | 12769.94 | V | Y | AV | 33.90 | 8.96 | 0.02 | N/A | 42.88 | 68.20 | 25.32 |
| | | SU | - | 12770.30 | V | Y | PK | 44.58 | 8.96 | N/A | N/A | 53.54 | 88.20 | 34.66 |
| | | SU | - | 12770.95 | V | Y | AV | 33.75 | 8.96 | 0.02 | N/A | 42.73 | 68.20 | 25.47 |
| U-NII 6 | 6465 | 26T | 18 | 12929.73 | V | Y | PK | 45.88 | 8.66 | N/A | N/A | 54.54 | 88.20 | 33.66 |
| | | 26T | 18 | 12929.66 | V | Y | AV | 34.88 | 8.66 | 0.02 | N/A | 43.56 | 68.20 | 24.64 |
| | | SU | - | 12930.25 | V | Y | PK | 44.96 | 8.66 | N/A | N/A | 53.62 | 88.20 | 34.58 |
| | | SU | - | 12930.98 | V | Y | AV | 34.53 | 8.66 | 0.02 | N/A | 43.21 | 68.20 | 24.99 |
| U-NII 7 | 6545 | 26T | 18 | 13090.22 | V | Y | PK | 44.77 | 8.40 | N/A | N/A | 53.17 | 88.20 | 35.03 |
| | | 26T | 18 | 13090.84 | V | Y | AV | 34.65 | 8.40 | 0.02 | N/A | 43.07 | 68.20 | 25.13 |
| | | SU | - | 13090.08 | V | Y | PK | 44.97 | 8.40 | N/A | N/A | 53.37 | 88.20 | 34.83 |
| | | SU | - | 13090.13 | V | Y | AV | 34.29 | 8.40 | 0.02 | N/A | 42.71 | 68.20 | 25.49 |
| | 6705 | 26T | 18 | 13409.18 | V | Y | PK | 46.14 | 8.84 | N/A | N/A | 54.98 | 88.20 | 33.22 |
| | | 26T | 18 | 13409.75 | V | Y | AV | 35.17 | 8.84 | 0.02 | N/A | 44.03 | 68.20 | 24.17 |
| | | SU | - | 13409.83 | V | Y | PK | 47.03 | 8.84 | N/A | N/A | 55.87 | 88.20 | 32.33 |
| | | SU | - | 13409.85 | V | Y | AV | 35.31 | 8.84 | 0.02 | N/A | 44.17 | 68.20 | 24.03 |
| | 6865 | 26T | 18 | 13730.49 | V | Y | PK | 45.17 | 8.51 | N/A | N/A | 53.68 | 88.20 | 34.52 |
| | | 26T | 18 | 13730.28 | V | Y | AV | 34.99 | 8.51 | 0.02 | N/A | 43.52 | 68.20 | 24.68 |
| | | SU | - | 13730.79 | V | Y | PK | 45.33 | 8.51 | N/A | N/A | 53.84 | 88.20 | 34.36 |
| | | SU | - | 13730.64 | V | Y | AV | 34.73 | 8.51 | 0.02 | N/A | 43.26 | 68.20 | 24.94 |
| U-NII 8 | 6945 | 26T | 18 | 13889.40 | V | Y | PK | 46.15 | 8.42 | N/A | N/A | 54.57 | 88.20 | 33.63 |
| | | 26T | 18 | 13889.88 | V | Y | AV | 35.70 | 8.42 | 0.02 | N/A | 44.14 | 68.20 | 24.06 |
| | | SU | - | 13890.16 | V | Y | PK | 45.83 | 8.42 | N/A | N/A | 54.25 | 88.20 | 33.95 |
| | | SU | - | 13890.26 | V | Y | AV | 35.67 | 8.42 | 0.02 | N/A | 44.11 | 68.20 | 24.09 |
| | 7025 | 996T | 67 | 7138.86 | V | Y | PK | 48.26 | 6.46 | N/A | N/A | 54.72 | 88.20 | 33.48 |
| | | 996T | 67 | 7138.23 | V | Y | AV | 38.15 | 6.46 | 0.04 | N/A | 44.65 | 68.20 | 23.55 |
| | | SU | - | 7145.07 | V | Y | PK | 47.32 | 6.53 | N/A | N/A | 53.85 | 88.20 | 34.35 |
| | | SU | - | 7145.25 | V | Y | AV | 37.32 | 6.53 | 0.02 | N/A | 43.87 | 68.20 | 24.33 |
| | | 26T | 18 | 14049.76 | V | Y | PK | 45.83 | 8.77 | N/A | N/A | 54.60 | 88.20 | 33.60 |
| | | 26T | 18 | 14049.83 | V | Y | AV | 34.78 | 8.77 | 0.02 | N/A | 43.57 | 68.20 | 24.63 |
| | | SU | - | 14049.98 | V | Y | PK | 45.66 | 8.77 | N/A | N/A | 54.43 | 88.20 | 33.77 |
| | | SU | - | 14049.98 | V | Y | AV | 35.13 | 8.77 | 0.02 | N/A | 43.92 | 68.20 | 24.28 |

**Radiated Spurious Emissions data(9 kHz ~ 40 GHz) : *LPI & MIMO(CDD) & 802.11ax(HE160)***

| Band | Tested Frequency (MHz) | Tone | RU | Freq. (MHz) | ANT Pol | EUT Position (Axis) | Detector Mode | Reading (dBuV) | TF (dB/m) | DCCF (dB) | DCF (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| U-NII 5 | 6025 | 2X996T | 68 | 5900.36 | V | Y | PK | 58.27 | 3.53 | N/A | N/A | 61.80 | 88.20 | 26.40 |
| | | 2X996T | 68 | 5900.74 | V | Y | AV | 42.96 | 3.53 | 0.15 | N/A | 46.64 | 68.20 | 21.56 |
| | | SU | - | 5922.84 | V | Y | PK | 51.94 | 3.72 | N/A | N/A | 55.66 | 88.20 | 32.54 |
| | | SU | - | 5923.61 | V | Y | AV | 41.37 | 3.72 | 0.04 | N/A | 45.13 | 68.20 | 23.07 |
| | | 26T | 0U | 12049.77 | V | Y | PK | 45.48 | 9.59 | N/A | N/A | 55.07 | 74.00 | 18.93 |
| | | 26T | 0U | 12049.95 | V | Y | AV | 34.86 | 9.59 | 0.01 | N/A | 44.46 | 54.00 | 9.54 |
| | | SU | - | 12049.64 | V | Y | PK | 45.24 | 9.59 | N/A | N/A | 54.83 | 74.00 | 19.17 |
| | | SU | - | 12049.21 | V | Y | AV | 34.64 | 9.59 | 0.04 | N/A | 44.27 | 54.00 | 9.73 |
| | 6185 | 26T | 0U | 12369.27 | V | Y | PK | 45.34 | 9.35 | N/A | N/A | 54.69 | 74.00 | 19.31 |
| | | 26T | 0U | 12369.46 | V | Y | AV | 34.97 | 9.35 | 0.01 | N/A | 44.33 | 54.00 | 9.67 |
| | | SU | - | 12368.98 | V | Y | PK | 46.00 | 9.35 | N/A | N/A | 55.35 | 74.00 | 18.65 |
| | | SU | - | 12369.65 | V | Y | AV | 35.23 | 9.35 | 0.04 | N/A | 44.62 | 54.00 | 9.38 |
| | 6345 | 26T | 0U | 12689.48 | V | Y | PK | 45.43 | 9.03 | N/A | N/A | 54.46 | 74.00 | 19.54 |
| | | 26T | 0U | 12689.62 | V | Y | AV | 34.70 | 9.03 | 0.01 | N/A | 43.74 | 54.00 | 10.26 |
| | | SU | - | 12690.91 | V | Y | PK | 45.37 | 9.03 | N/A | N/A | 54.40 | 74.00 | 19.60 |
| | | SU | - | 12690.23 | V | Y | AV | 34.97 | 9.03 | 0.04 | N/A | 44.04 | 54.00 | 9.96 |
| U-NII 6 | 6505 | 26T | 0U | 13009.28 | V | Y | PK | 46.52 | 8.44 | N/A | N/A | 54.96 | 88.20 | 33.24 |
| | | 26T | 0U | 13009.56 | V | Y | AV | 35.27 | 8.44 | 0.01 | N/A | 43.72 | 68.20 | 24.48 |
| | | SU | - | 13009.10 | V | Y | PK | 46.55 | 8.44 | N/A | N/A | 54.99 | 88.20 | 33.21 |
| | | SU | - | 13009.24 | V | Y | AV | 35.66 | 8.44 | 0.04 | N/A | 44.14 | 68.20 | 24.06 |
| U-NII 7 | 6665 | 26T | 0U | 13329.80 | V | Y | PK | 45.39 | 8.78 | N/A | N/A | 54.17 | 74.00 | 19.83 |
| | | 26T | 0U | 13329.28 | V | Y | AV | 34.89 | 8.78 | 0.01 | N/A | 43.68 | 54.00 | 10.32 |
| | | SU | - | 13328.83 | V | Y | PK | 44.96 | 8.78 | N/A | N/A | 53.74 | 74.00 | 20.26 |
| | | SU | - | 13329.09 | V | Y | AV | 34.95 | 8.78 | 0.04 | N/A | 43.77 | 54.00 | 10.23 |
| | 6825 | 26T | 0U | 13649.58 | V | Y | PK | 45.34 | 8.64 | N/A | N/A | 53.98 | 88.20 | 34.22 |
| | | 26T | 0U | 13649.96 | V | Y | AV | 35.23 | 8.64 | 0.01 | N/A | 43.88 | 68.20 | 24.32 |
| | | SU | - | 13650.75 | V | Y | PK | 46.16 | 8.64 | N/A | N/A | 54.80 | 88.20 | 33.40 |
| | | SU | - | 13650.23 | V | Y | AV | 35.26 | 8.64 | 0.04 | N/A | 43.94 | 68.20 | 24.26 |
| U-NII 8 | 6985 | 2X996T | 68 | 7134.87 | V | Y | PK | 48.39 | 6.42 | N/A | N/A | 54.81 | 88.20 | 33.39 |
| | | 2X996T | 68 | 7134.51 | V | Y | AV | 37.96 | 6.42 | 0.15 | N/A | 44.53 | 68.20 | 23.67 |
| | | SU | - | 7143.51 | V | Y | PK | 48.79 | 6.51 | N/A | N/A | 55.30 | 88.20 | 32.90 |
| | | SU | - | 7142.94 | V | Y | AV | 38.29 | 6.50 | 0.04 | N/A | 44.83 | 68.20 | 23.37 |
| | | 26T | 0U | 13970.26 | V | Y | PK | 45.81 | 8.49 | N/A | N/A | 54.30 | 88.20 | 33.90 |
| | | 26T | 0U | 13970.72 | V | Y | AV | 35.12 | 8.49 | 0.01 | N/A | 43.62 | 68.20 | 24.58 |
| | | SU | - | 13970.52 | V | Y | PK | 45.70 | 8.49 | N/A | N/A | 54.19 | 88.20 | 34.01 |
| | | SU | - | 13970.38 | V | Y | AV | 35.16 | 8.49 | 0.04 | N/A | 43.69 | 68.20 | 24.51 |

## 5.7. AC Power-Line Conducted Emissions

### ▣ Test Requirements, §15.207 & RSS-Gen[8.8]

An intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 uH/50 ohm line impedance stabilization network (LISN).

Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequency ranges.

| Frequency Range (MHz) | Conducted Limit (dBuV) | |
|---|---|---|
| | Quasi-Peak | Average |
| 0.15 ~ 0.5 | 66 to 56 * | 56 to 46 * |
| 0.5 ~ 5.0 | 56 | 46 |
| 5 ~ 30 | 60 | 50 |

* Decreases with the logarithm of the frequency

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

### ▣ Test Configuration

See test photographs for the actual connections between EUT and support equipment.

### ▣ Test Procedure

Conducted emissions from the EUT were measured according to the ANSI C63.10-2013.

1. The test procedure is performed in a 6.5 m × 3.5 m × 3.5 m (L × W × H) shielded room. The EUT along with its peripherals were placed on a 1.0 m (W) × 1.5 m (L) and 0.8 m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.
2. The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room.
3. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.
4. The excess power cable between the EUT and the LISN was bundled. The power cables of peripherals were unbundled. All connecting cables of EUT and peripherals were moved to find the maximum emission.

### ▣ Test Results: Comply

See next pages for actual measured spectrum plots and data for worst case result.

## AC Power-Line Conducted Emissions (Graph)

Test Mode: LPI & U-NII 5 & 802.11ax(HE20) & 6175 MHz & SU

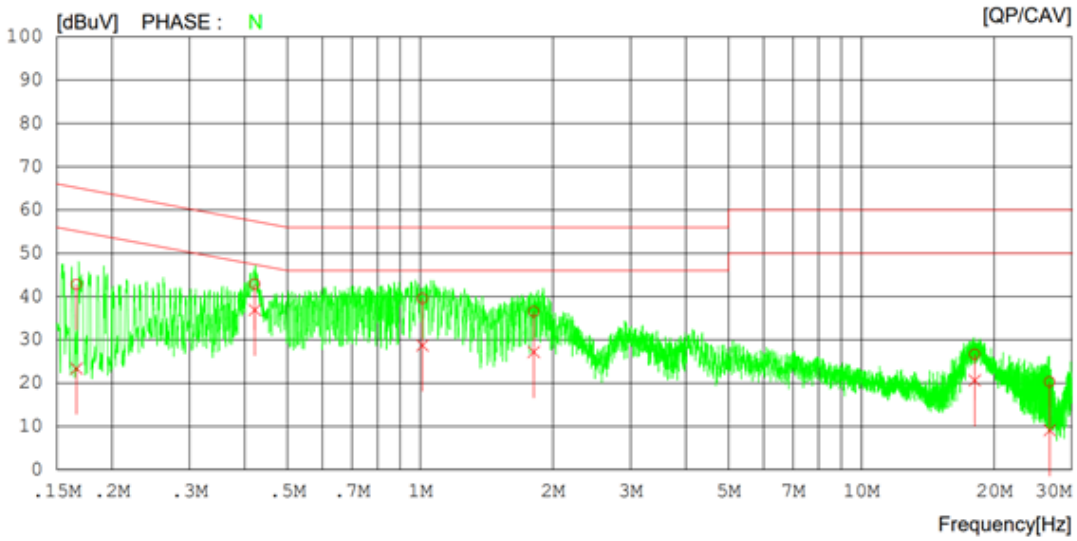
# Results of Conducted Emission

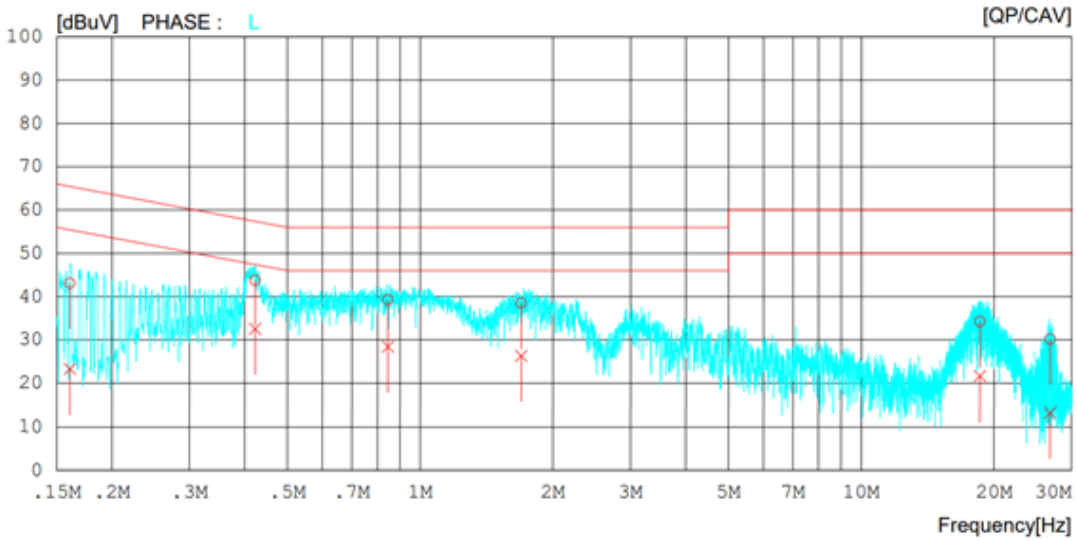
Date 2024-04-29

| | | | |
|---|---|---|---|
| Order No. | | Referrence No. | |
| Model No. | PM95 | Power Supply | 120 V, 60 Hz |
| Serial No. | | Temp/Humi. | 23 'C / 41 % |
| Test Condition | UNII_5 | Operator | S.M.GIL |
| Memo | ax20_6175 | | |

LIMIT : FCC P15.207 AV
FCC P15.207 QP

Lisn Factor
1. NSLK 8128 RC-387_N_23.10.26
2. NSLK 8128 RC-387_L1_23.10.26
Cable Loss
1. C1_LISN TO RECIVER_2023-12-11
Pulse Lmitter
1. PULSE LIMITER_ESH3-Z2_101333_2023.08.21



## AC Power-Line Conducted Emissions (Data List)

Test Mode: LPI & U-NII 5 & 802.11ax(HE20) & 6175 MHz & SU

# Results of Conducted Emission

Date 2024-04-29

| | | | |
|---|---|---|---|
| Order No. | | Referrence No. | |
| Model No. | PM95 | Power Supply | 120 V, 60 Hz |
| Serial No. | | Temp/Humi. | 23 'C / 41 % |
| Test Condition | UNII_5 | Operator | S.M.GIL |
| Memo | ax20_6175 | | |

LIMIT : FCC P15.207 AV
FCC P15.207 QP

Lisn Factor
1. NSLK 8128 RC-387_N_23.10.26
2. NSLK 8128 RC-387_LT_23.10.26
Cable Loss
1. C1_LISN TO RECIVER_2023-12-11
Pulse Limitter
1. PULSE LIMITER_ESH3-Z2_101333_2023.08.21

| NO | FREQ | READING | | C.FACTOR | RESULT | | LIMIT | | MARGIN | | PHASE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | QP | CAV | | QP | CAV | QP | CAV | QP | CAV | |
| | [MHz] | [dBuV] | [dBuV] | [dB] | [dBuV] | [dBuV] | [dBuV] | [dBuV] | [dBuV] | [dBuV] | |
| 1 | 0.16614 | 32.79 | 13.36 | 9.99 | 42.78 | 23.35 | 65.15 | 55.15 | 22.37 | 31.80 | N |
| 2 | 0.42155 | 32.88 | 26.87 | 10.00 | 42.88 | 36.87 | 57.42 | 47.42 | 14.54 | 10.55 | N |
| 3 | 1.01120 | 29.53 | 18.67 | 10.02 | 39.55 | 28.69 | 56.00 | 46.00 | 16.45 | 17.31 | N |
| 4 | 1.80960 | 26.44 | 17.12 | 10.05 | 36.49 | 27.17 | 56.00 | 46.00 | 19.51 | 18.83 | N |
| 5 | 18.07760 | 16.14 | 10.08 | 10.54 | 26.68 | 20.62 | 60.00 | 50.00 | 33.32 | 29.38 | N |
| 6 | 26.74060 | 9.67 | -1.49 | 10.60 | 20.27 | 9.11 | 60.00 | 50.00 | 39.73 | 40.89 | N |
| 7 | 0.16059 | 33.10 | 13.30 | 9.99 | 43.09 | 23.29 | 65.43 | 55.43 | 22.34 | 32.14 | L |
| 8 | 0.42224 | 33.77 | 22.56 | 10.00 | 43.77 | 32.56 | 57.40 | 47.40 | 13.63 | 14.84 | L |
| 9 | 0.84451 | 29.15 | 18.32 | 10.11 | 39.26 | 28.43 | 56.00 | 46.00 | 16.74 | 17.57 | L |
| 10 | 1.69400 | 28.35 | 16.16 | 10.15 | 38.50 | 26.31 | 56.00 | 46.00 | 17.50 | 19.69 | L |
| 11 | 18.56600 | 23.68 | 11.07 | 10.58 | 34.26 | 21.65 | 60.00 | 50.00 | 25.74 | 28.35 | L |
| 12 | 26.78720 | 19.57 | 2.60 | 10.67 | 30.24 | 13.27 | 60.00 | 50.00 | 29.76 | 36.73 | L |

## AC Power-Line Conducted Emissions (Graph)

Test Mode: LPI & U-NII 6 & 802.11a & 6435 MHz

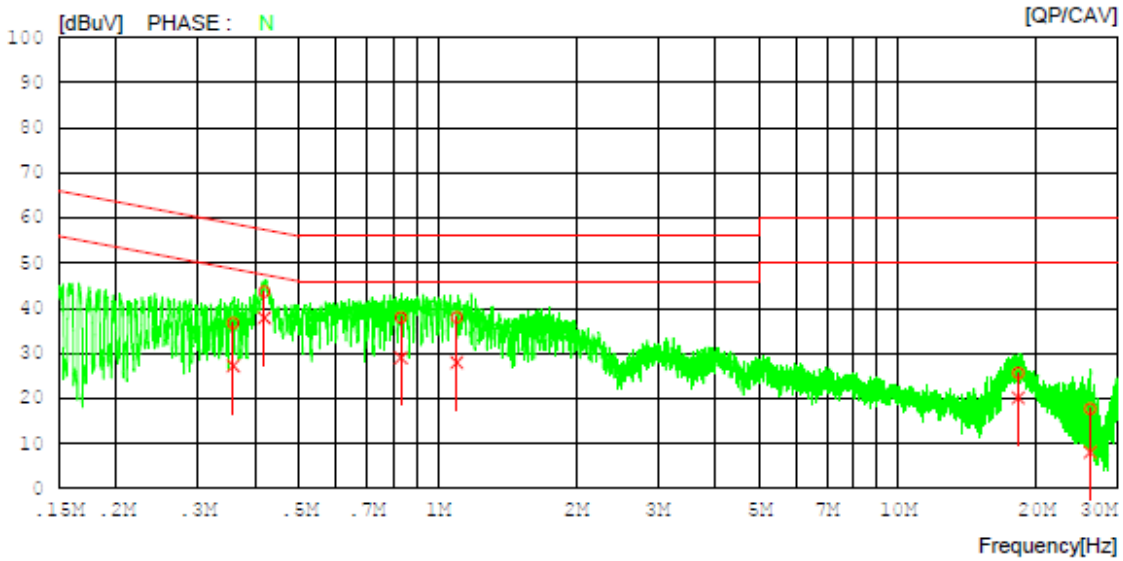
### Results of Conducted Emission

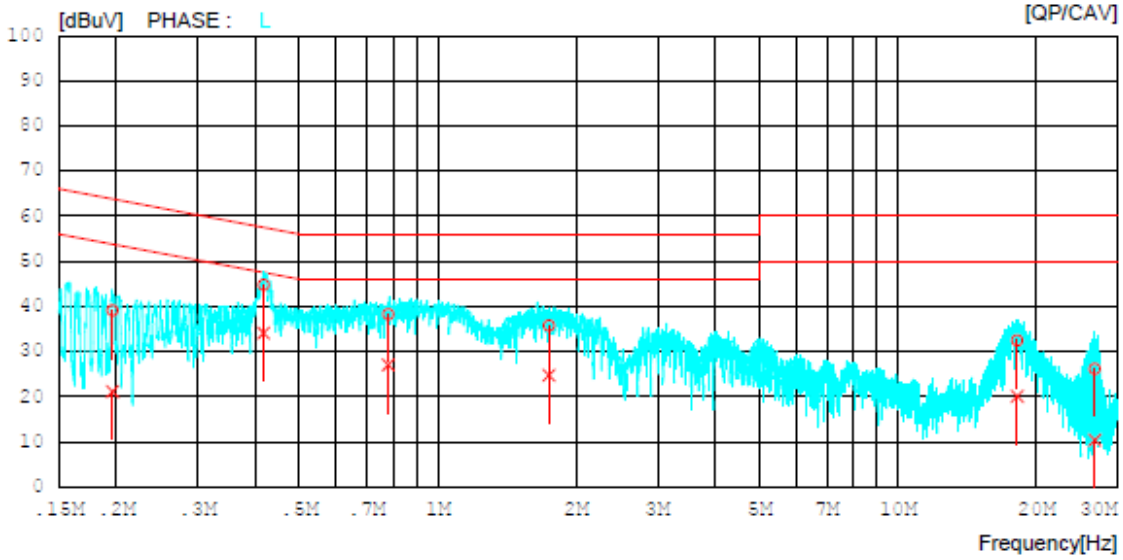
Date 2024-04-29

| | | | |
|---|---|---|---|
| Order No. | | Referrence No. | |
| Model No. | PM95 | Power Supply | 120 V, 60 Hz |
| Serial No. | | Temp/Humi. | 23 'C / 41 % |
| Test Condition | UNII_6 | Operator | S.M.GIL |
| Memo | a_6435 | | |

LIMIT : FCC P15.207 AV
FCC P15.207 QP

Lisn Factor
1. NSLK 8128 RC-387_N_23.10.26
2. NSLK 8128 RC-387_L1_23.10.26
Cable Loss
1. C1_LISN TO RECIVER_2023-12-11
Pulse Lmitter
1. PULSE LIMITER_ESH3-Z2_101333_2023.08.21



## AC Power-Line Conducted Emissions (Data List)

Test Mode: LPI & U-NII 6 & 802.11a & 6435 MHz

# Results of Conducted Emission

Date 2024-04-29

| | | | |
|---|---|---|---|
| Order No. | | Referrence No. | |
| Model No. | PM95 | Power Supply | 120 V, 60 Hz |
| Serial No. | | Temp/Humi. | 23 'C / 41 % |
| Test Condition | UNII_6 | Operator | S.M.GIL |

Memo a_6435

LIMIT : FCC P15.207 AV
FCC P15.207 QP

Lisn Factor
1. NSLK 8128 RC-387_N_23.10.26
2. NSLK 8128 RC-387_L1_23.10.26
Cable Loss
1. C1_LISN TO RECIVER_2023-12-11
Pulse Lmitter
1. PULSE LIMITER_ESH3-Z2_101333_2023.08.21

| NO | FREQ | READING QP | READING CAV | C.FACTOR | RESULT QP | RESULT CAV | LIMIT QP | LIMIT CAV | MARGIN QP | MARGIN CAV | PHASE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | [dBuV] | [dBuV] | [dB] | [dBuV] | [dBuV] | [dBuV] | [dBuV] | [dBuV] | [dBuV] | |
| 1 | 0.35889 | 26.71 | 17.23 | 10.00 | 36.71 | 27.23 | 58.75 | 48.75 | 22.04 | 21.52 | N |
| 2 | 0.41920 | 33.69 | 27.87 | 10.00 | 43.69 | 37.87 | 57.46 | 47.46 | 13.77 | 9.59 | N |
| 3 | 0.83085 | 27.91 | 19.02 | 10.01 | 37.92 | 29.03 | 56.00 | 46.00 | 18.08 | 16.97 | N |
| 4 | 1.09880 | 27.92 | 17.98 | 10.02 | 37.94 | 28.00 | 56.00 | 46.00 | 18.06 | 18.00 | N |
| 5 | 18.24400 | 15.12 | 9.59 | 10.54 | 25.66 | 20.13 | 60.00 | 50.00 | 34.34 | 29.87 | N |
| 6 | 26.16380 | 7.10 | -2.53 | 10.60 | 17.70 | 8.07 | 60.00 | 50.00 | 42.30 | 41.93 | N |
| 7 | 0.19611 | 29.02 | 11.11 | 9.99 | 39.01 | 21.10 | 63.77 | 53.77 | 24.76 | 32.67 | L |
| 8 | 0.41786 | 34.77 | 24.05 | 10.00 | 44.77 | 34.05 | 57.49 | 47.49 | 12.72 | 13.44 | L |
| 9 | 0.77984 | 28.13 | 16.87 | 10.11 | 38.24 | 26.98 | 56.00 | 46.00 | 17.76 | 19.02 | L |
| 10 | 1.74200 | 25.58 | 14.53 | 10.15 | 35.73 | 24.68 | 56.00 | 46.00 | 20.27 | 21.32 | L |
| 11 | 18.13840 | 21.85 | 9.47 | 10.58 | 32.43 | 20.05 | 60.00 | 50.00 | 27.57 | 29.95 | L |
| 12 | 26.77520 | 15.45 | -0.37 | 10.67 | 26.12 | 10.30 | 60.00 | 50.00 | 33.88 | 39.70 | L |

## AC Power-Line Conducted Emissions (Graph)

Test Mode: LPI & U-NII 7 & 802.11a & 6535 MHz

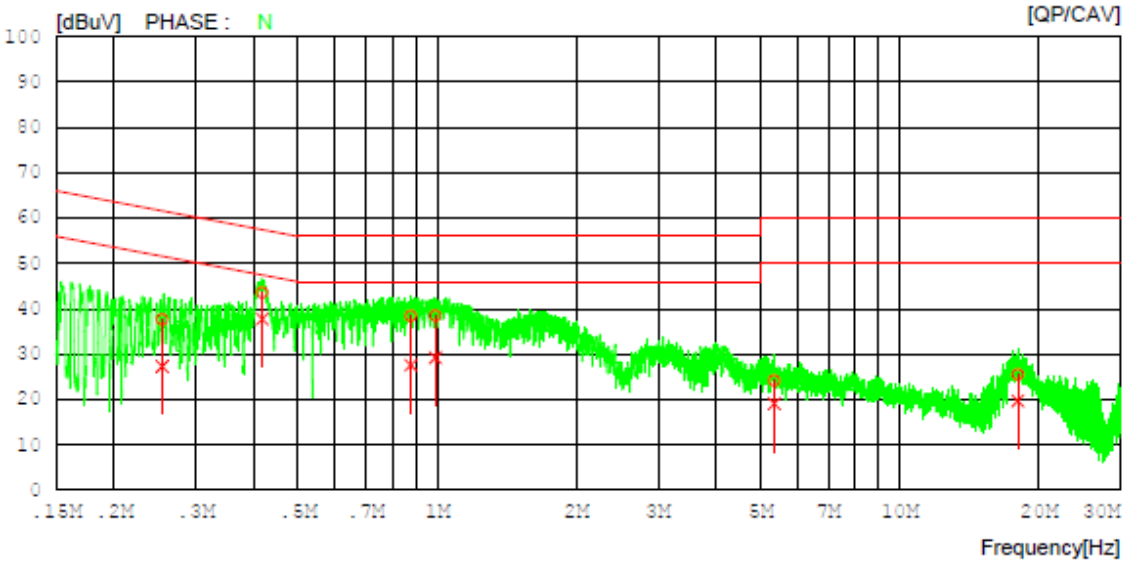
### Results of Conducted Emission

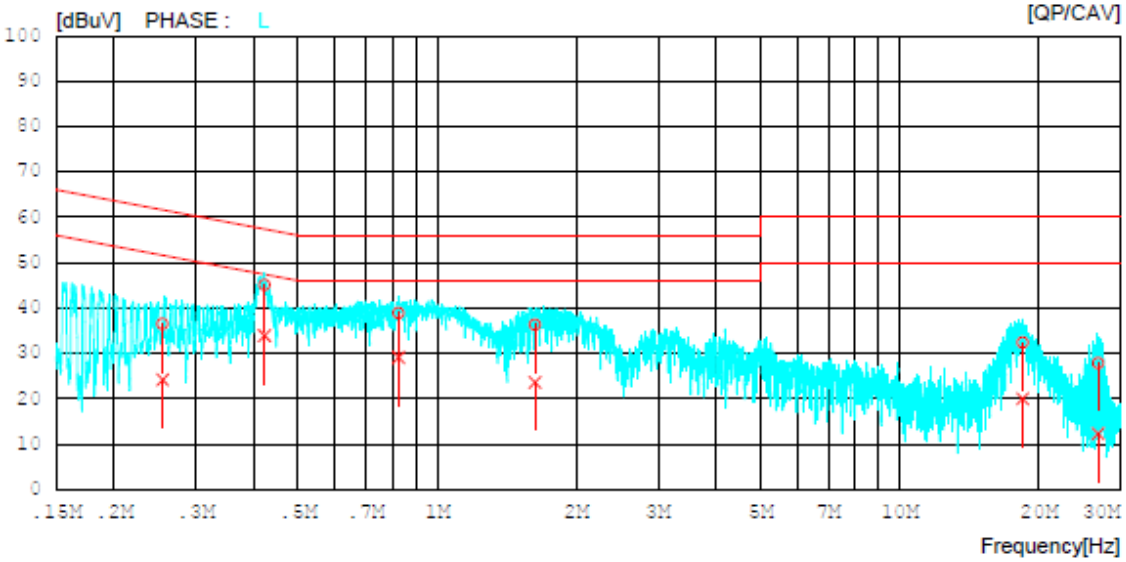
Date 2024-04-29

| | | | |
|---|---|---|---|
| Order No. | | Referrence No. | |
| Model No. | PM95 | Power Supply | 120 V, 60 Hz |
| Serial No. | | Temp/Humi. | 23 'C / 41 % |
| Test Condition | UNII_7 | Operator | S.M.GIL |
| Memo | a_6535 | | |

LIMIT : FCC P15.207 AV
FCC P15.207 QP

Lisn Factor
1. NSLK 8128 RC-387_N_23.10.26
2. NSLK 8128 RC-387_L1_23.10.26
Cable Loss
1. C1_LISN TO RECIVER_2023-12-11
Pulse Lmitter
1. PULSE LIMITER_ESH3-Z2_101333_2023.08.21



## AC Power-Line Conducted Emissions (Data List)

Test Mode: LPI & U-NII 7 & 802.11a & 6535 MHz

# Results of Conducted Emission

Date 2024-04-29

| | | | |
|---|---|---|---|
| Order No. | | Referrence No. | |
| Model No. | PM95 | Power Supply | 120 V, 60 Hz |
| Serial No. | | Temp/Humi. | 23 'C / 41 % |
| Test Condition | UNII_7 | Operator | S.M.GIL |
| Memo | a_6535 | | |

LIMIT : FCC P15.207 AV
FCC P15.207 QP

Lisn Factor
1. NSLK 8128 RC-387_N_23.10.26
2. NSLK 8128 RC-387_L1_23.10.26
Cable Loss
1. C1_LISN TO RECIVER_2023-12-11
Pulse Lmitter
1. PULSE LIMITER_ESH3-Z2_101333_2023.08.21

| NO | FREQ | READING QP | READING CAV | C.FACTOR | RESULT QP | RESULT CAV | LIMIT QP | LIMIT CAV | MARGIN QP | MARGIN CAV | PHASE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | [dBuV] | [dBuV] | [dB] | [dBuV] | [dBuV] | [dBuV] | [dBuV] | [dBuV] | [dBuV] | |
| 1 | 0.25412 | 27.68 | 17.34 | 9.99 | 37.67 | 27.33 | 61.62 | 51.62 | 23.95 | 24.29 | N |
| 2 | 0.41810 | 33.62 | 27.78 | 10.00 | 43.62 | 37.78 | 57.49 | 47.49 | 13.87 | 9.71 | N |
| 3 | 0.87581 | 28.38 | 17.56 | 10.02 | 38.40 | 27.58 | 56.00 | 46.00 | 17.60 | 18.42 | N |
| 4 | 0.99038 | 28.49 | 19.21 | 10.02 | 38.51 | 29.23 | 56.00 | 46.00 | 17.49 | 16.77 | N |
| 5 | 5.34920 | 13.95 | 8.84 | 10.23 | 24.18 | 19.07 | 60.00 | 50.00 | 35.82 | 30.93 | N |
| 6 | 17.98640 | 14.97 | 9.21 | 10.54 | 25.51 | 19.75 | 60.00 | 50.00 | 34.49 | 30.25 | N |
| 7 | 0.25456 | 26.47 | 14.18 | 9.99 | 36.46 | 24.17 | 61.61 | 51.61 | 25.15 | 27.44 | L |
| 8 | 0.42270 | 35.09 | 23.87 | 10.00 | 45.09 | 33.87 | 57.39 | 47.39 | 12.30 | 13.52 | L |
| 9 | 0.82418 | 28.74 | 18.96 | 10.11 | 38.85 | 29.07 | 56.00 | 46.00 | 17.15 | 16.93 | L |
| 10 | 1.62460 | 26.12 | 13.43 | 10.15 | 36.27 | 23.58 | 56.00 | 46.00 | 19.73 | 22.42 | L |
| 11 | 18.42520 | 21.77 | 9.37 | 10.57 | 32.34 | 19.94 | 60.00 | 50.00 | 27.66 | 30.06 | L |
| 12 | 26.81580 | 17.17 | 1.60 | 10.67 | 27.84 | 12.27 | 60.00 | 50.00 | 32.16 | 37.73 | L |

## AC Power-Line Conducted Emissions (Graph)

Test Mode: LPI & U-NII 8 & 802.11ax(HE20) & 7115 MHz & SU

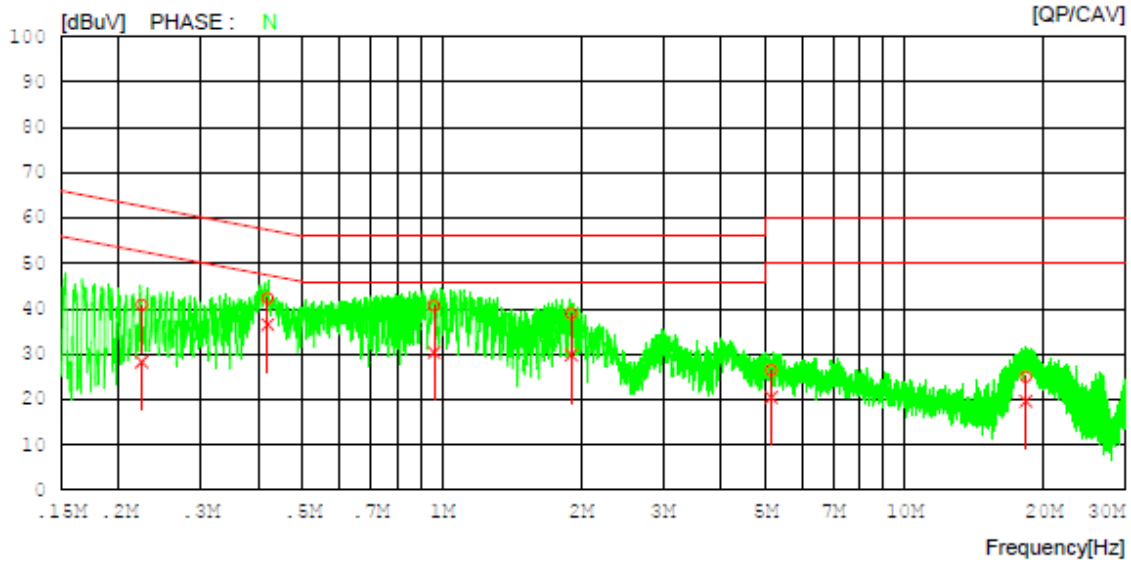
### Results of Conducted Emission

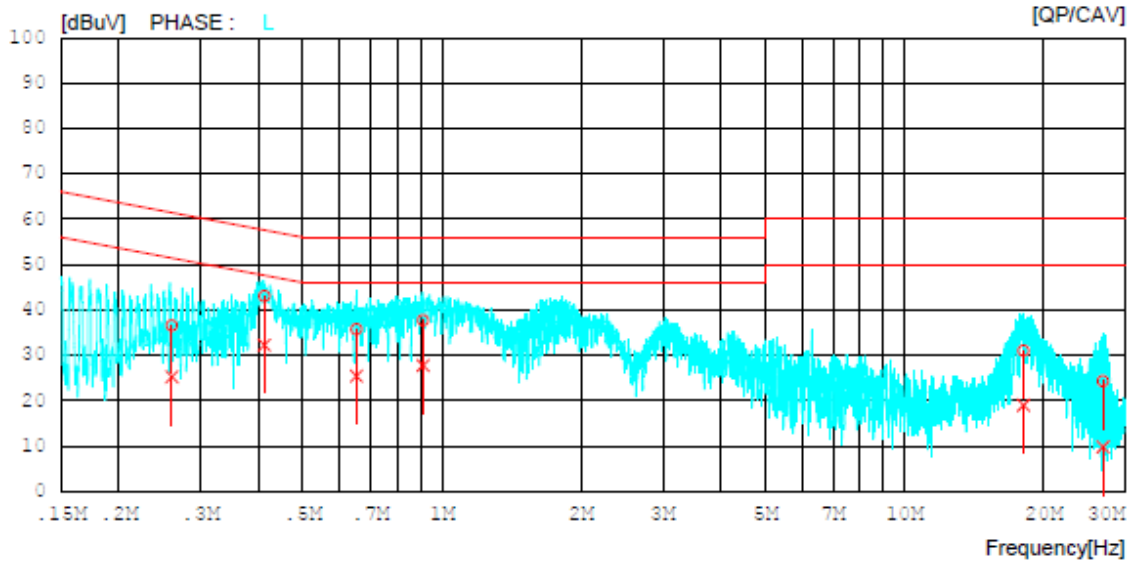
Date 2024-04-29

| | | | |
|---|---|---|---|
| Order No. | | Referrence No. | |
| Model No. | PM95 | Power Supply | 120 V, 60 Hz |
| Serial No. | | Temp/Humi. | 23 'C / 41 % |
| Test Condition | UNII_8 | Operator | S.M.GIL |
| Memo | ax20_7115 | | |

LIMIT : FCC P15.207 AV
FCC P15.207 QP

Lisn Factor
1. NSLK 8128 RC-387_N_23.10.26
2. NSLK 8128 RC-387_L1_23.10.26
Cable Loss
1. C1_LISN TO RECIVER_2023-12-11
Pulse Lmitter
1. PULSE LIMITER_ESH3-Z2_101333_2023.08.21



## AC Power-Line Conducted Emissions (Data List)

Test Mode: LPI & U-NII 8 & 802.11ax(HE20) & 7115 MHz & SU

# Results of Conducted Emission

Date 2024-04-29

| | | | |
|---|---|---|---|
| Order No. | | Referrence No. | |
| Model No. | PM95 | Power Supply | 120 V, 60 Hz |
| Serial No. | | Temp/Humi. | 23 'C / 41 % |
| Test Condition | UNII_8 | Operator | S.M.GIL |
| Memo | ax20_7115 | | |

LIMIT : FCC P15.207 AV
FCC P15.207 QP

Lisn Factor
1. NSLK 8128 RC-387_N_23.10.26
2. NSLK 8128 RC-387_L1_23.10.26
Cable Loss
1. C1_LISN TO RECIVER_2023-12-11
Pulse Lmitter
1. PULSE LIMITER_ESH3-Z2_101333_2023.08.21

| NO | FREQ | READING QP | READING CAV | C.FACTOR | RESULT QP | RESULT CAV | LIMIT QP | LIMIT CAV | MARGIN QP | MARGIN CAV | PHASE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | [dBuV] | [dBuV] | [dB] | [dBuV] | [dBuV] | [dBuV] | [dBuV] | [dBuV] | [dBuV] | |
| 1 | 0.22403 | 30.68 | 18.33 | 9.99 | 40.67 | 28.32 | 62.67 | 52.67 | 21.80 | 24.35 | N |
| 2 | 0.41950 | 32.35 | 26.53 | 10.00 | 42.35 | 36.53 | 57.46 | 47.46 | 15.11 | 10.93 | N |
| 3 | 0.96061 | 30.68 | 20.36 | 10.02 | 40.70 | 30.38 | 56.00 | 46.00 | 15.30 | 15.62 | N |
| 4 | 1.90160 | 28.88 | 19.79 | 10.06 | 38.94 | 29.85 | 56.00 | 46.00 | 17.06 | 16.15 | N |
| 5 | 5.14320 | 16.22 | 10.24 | 10.22 | 26.44 | 20.46 | 60.00 | 50.00 | 33.56 | 29.54 | N |
| 6 | 18.28040 | 14.46 | 9.09 | 10.54 | 25.00 | 19.63 | 60.00 | 50.00 | 35.00 | 30.37 | N |
| 7 | 0.26044 | 26.52 | 15.22 | 9.99 | 36.51 | 25.21 | 61.42 | 51.42 | 24.91 | 26.21 | L |
| 8 | 0.41269 | 33.02 | 22.24 | 10.00 | 43.02 | 32.24 | 57.59 | 47.59 | 14.57 | 15.35 | L |
| 9 | 0.65271 | 25.61 | 15.30 | 10.11 | 35.72 | 25.41 | 56.00 | 46.00 | 20.28 | 20.59 | L |
| 10 | 0.90892 | 27.54 | 17.58 | 10.12 | 37.66 | 27.70 | 56.00 | 46.00 | 18.34 | 18.30 | L |
| 11 | 18.07160 | 20.39 | 8.39 | 10.58 | 30.97 | 18.97 | 60.00 | 50.00 | 29.03 | 31.03 | L |
| 12 | 26.84260 | 13.62 | -0.92 | 10.67 | 24.29 | 9.75 | 60.00 | 50.00 | 35.71 | 40.25 | L |

# APPENDIX I

## Conducted Test set up Diagram

### ▪ Conducted Measurement