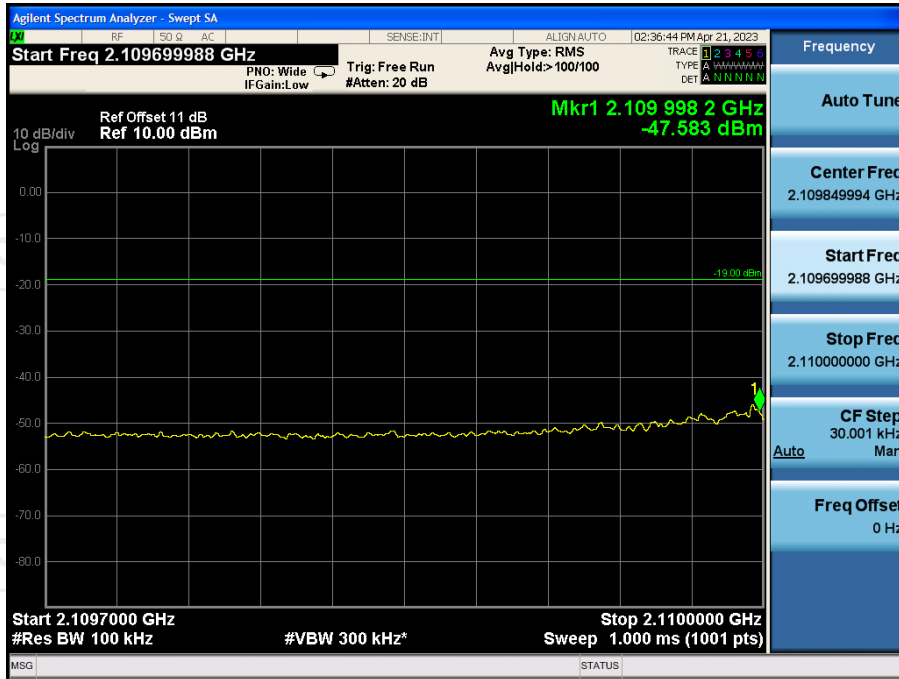
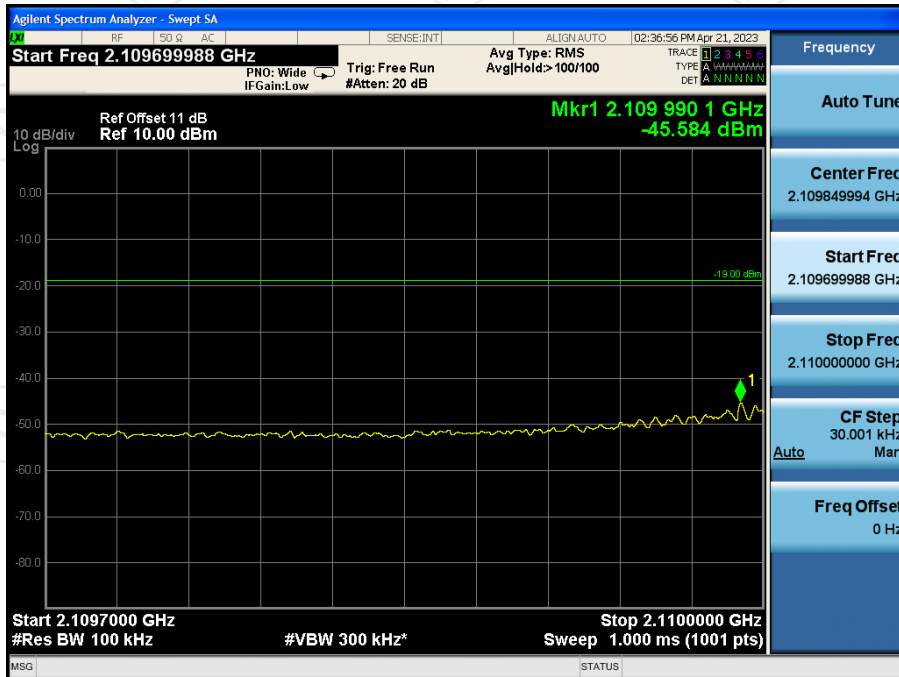


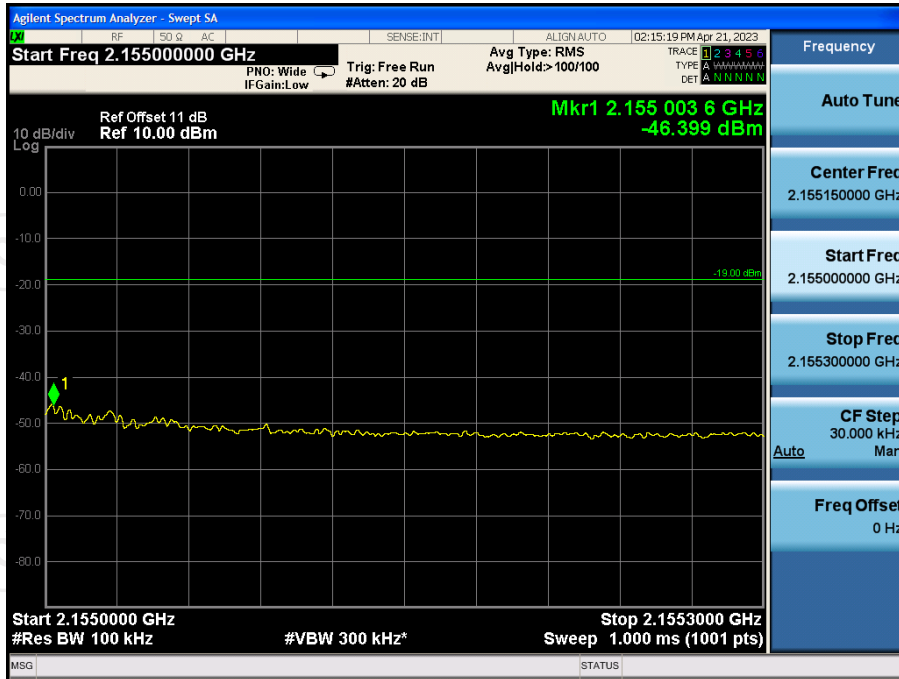
AWS-1 LTE DL Left Side Pre AGC



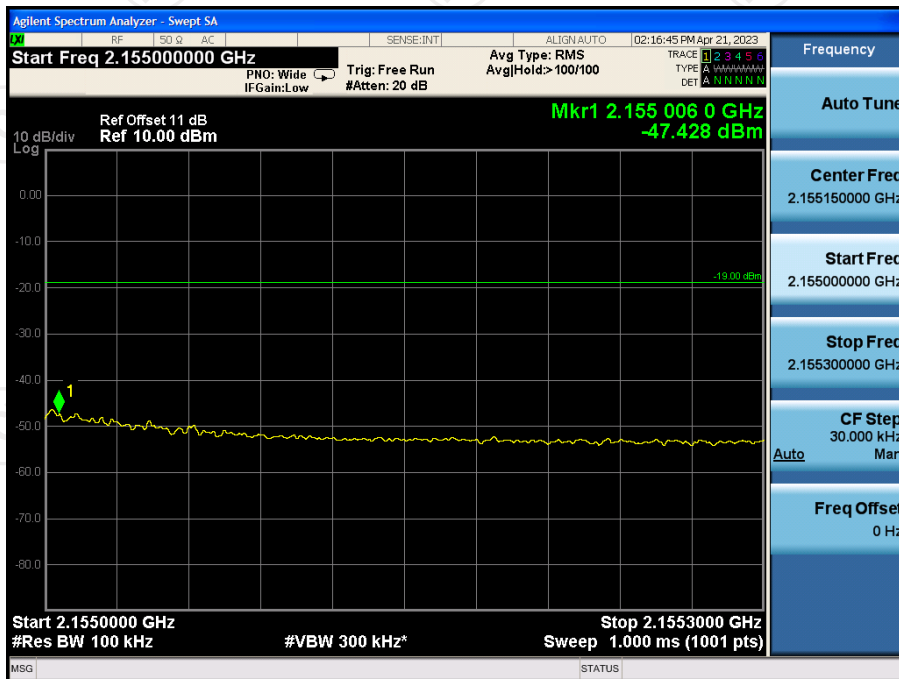
AWS-1 LTE DL Left Side Max. input



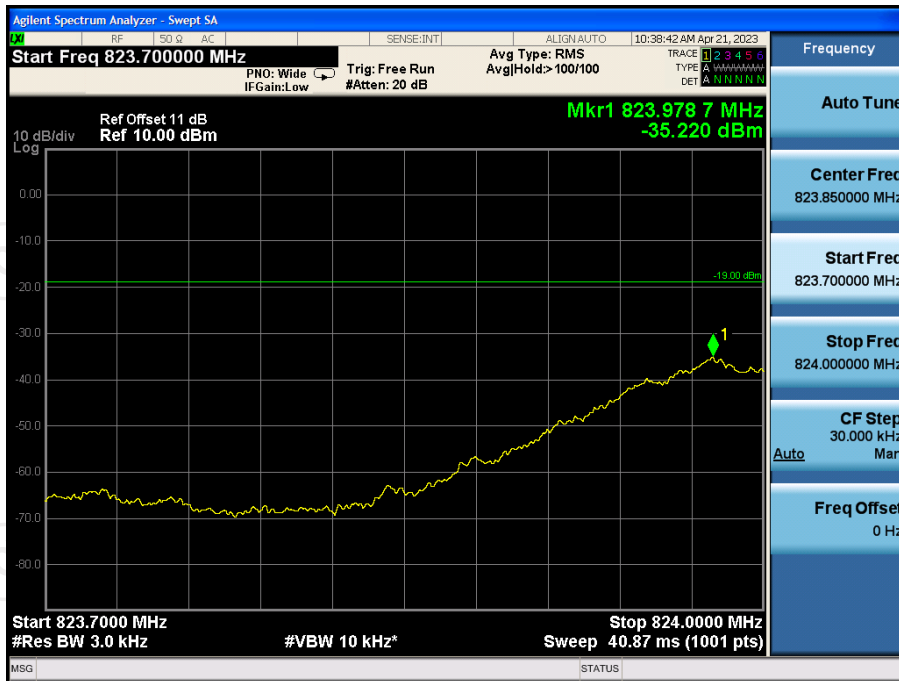
AWS-1 LTE DL Right Side Pre AGC



AWS-1 LTE DL Right Side Max. input



Cellular GSM UL Left Side Pre AGC



Cellular GSM UL Left Side Max. input



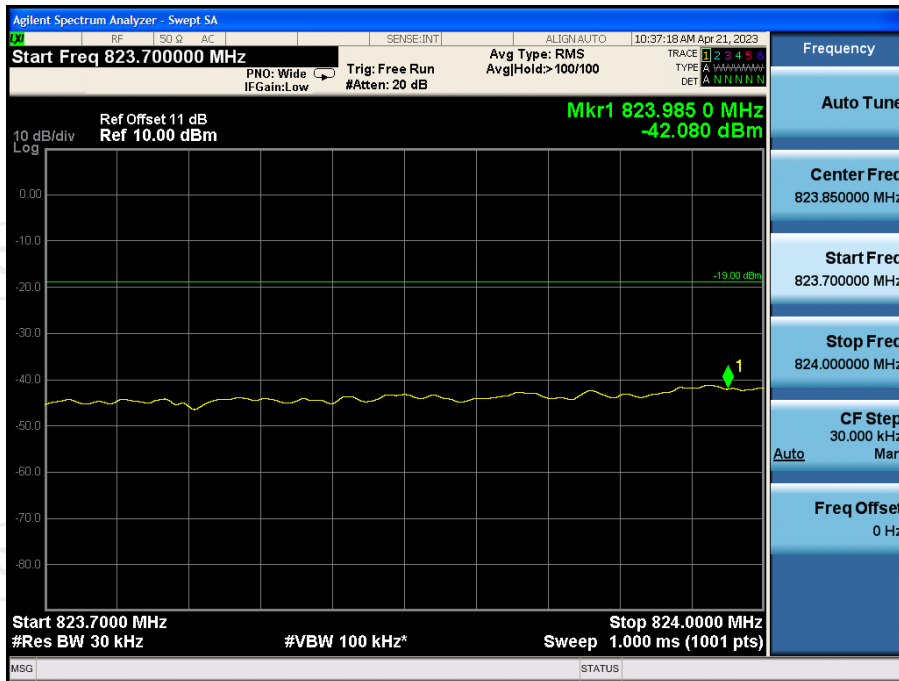
Cellular GSM UL Right Side Pre AGC



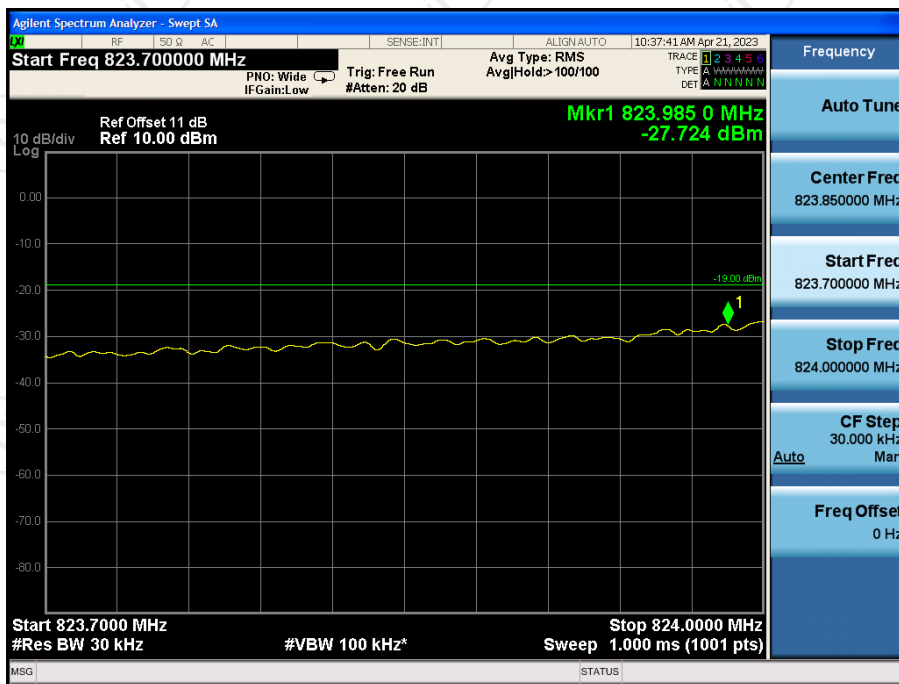
Cellular GSM UL Right Side Max. input



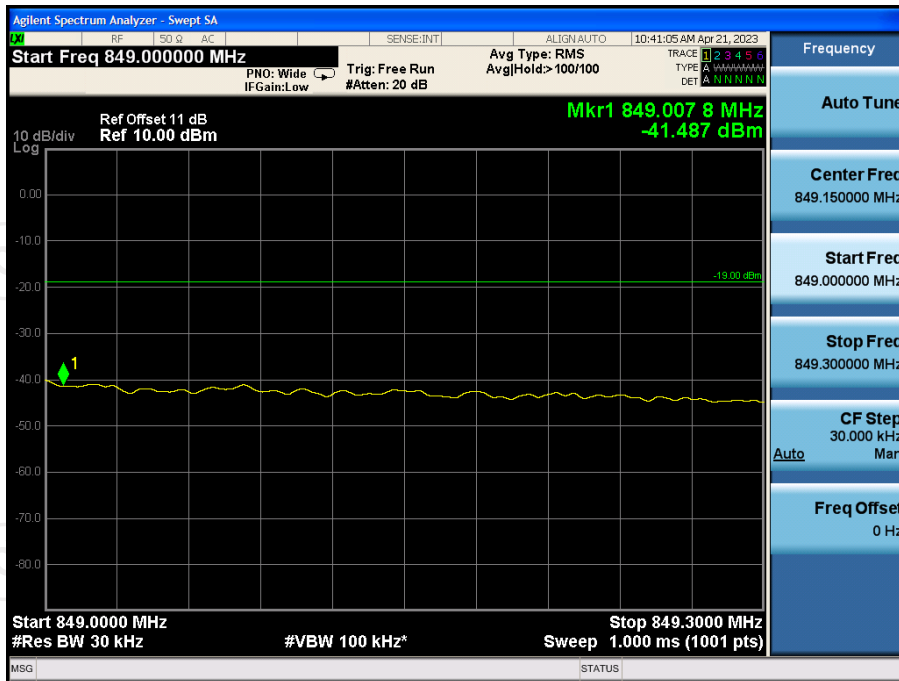
Cellular CDMA UL Left Side Pre AGC



Cellular CDMA UL Left Side Max. input



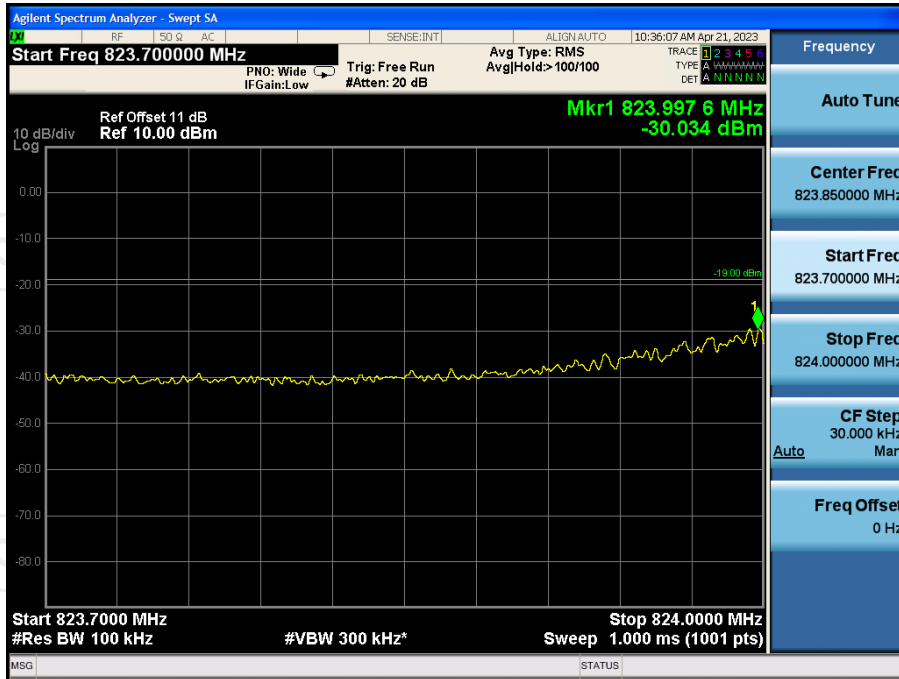
Cellular CDMA UL Right Side Pre AGC



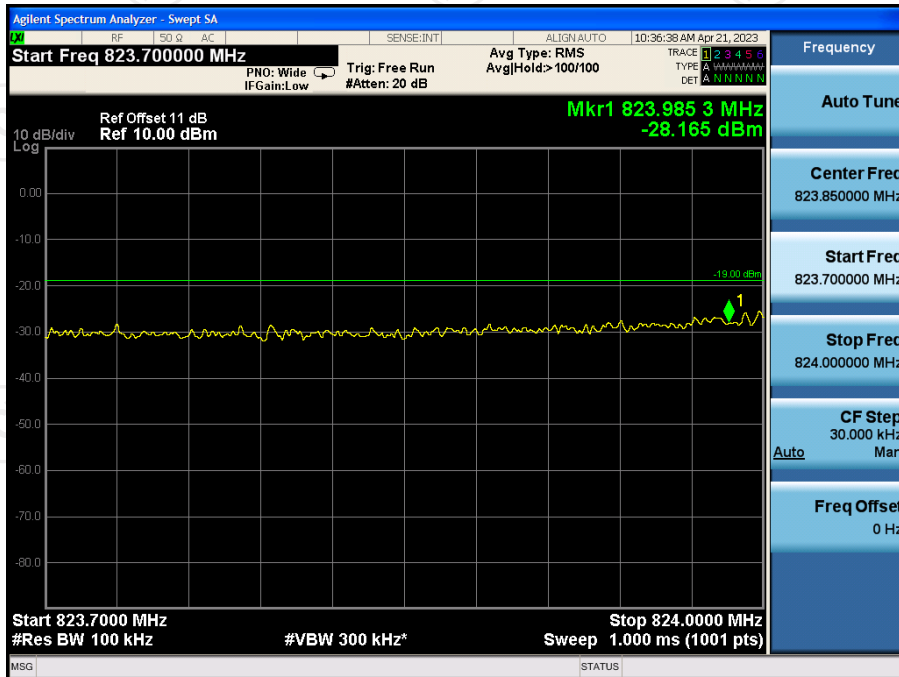
Cellular CDMA UL Right Side Max. input



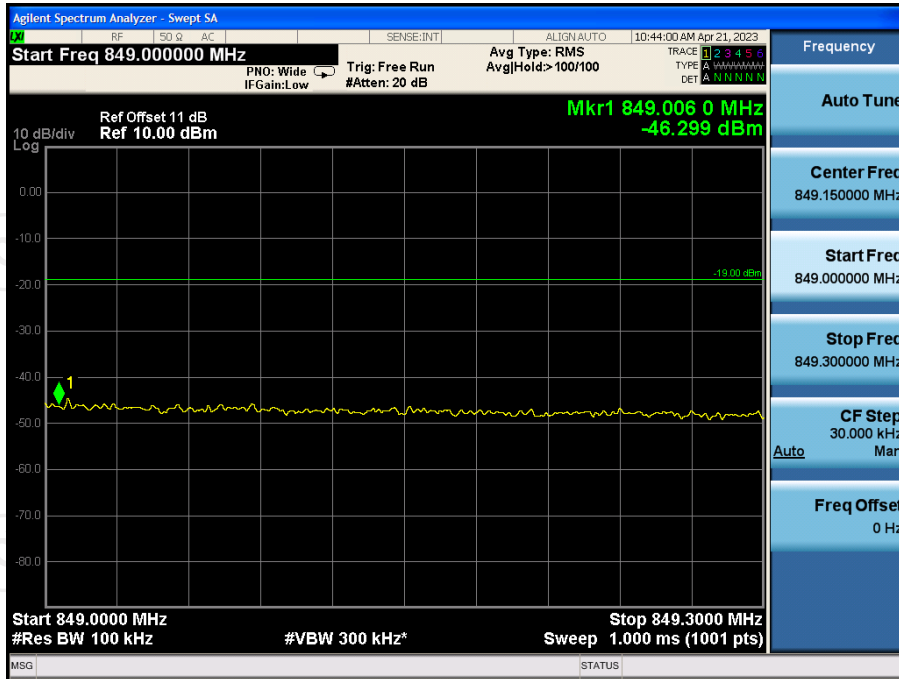
Cellular LTE UL Left Side Pre AGC



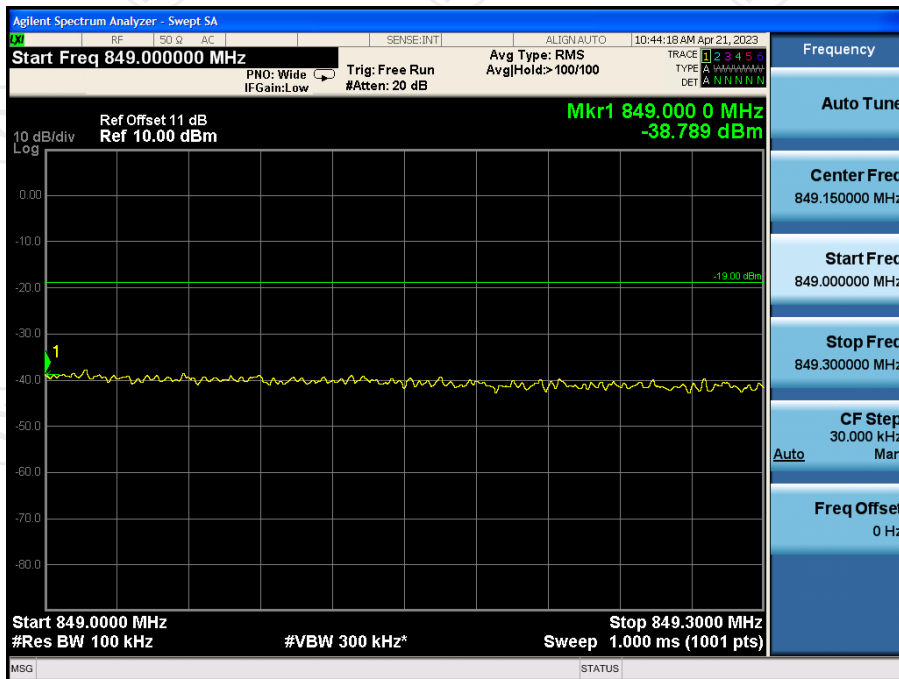
Cellular LTE UL Left Side Max. input



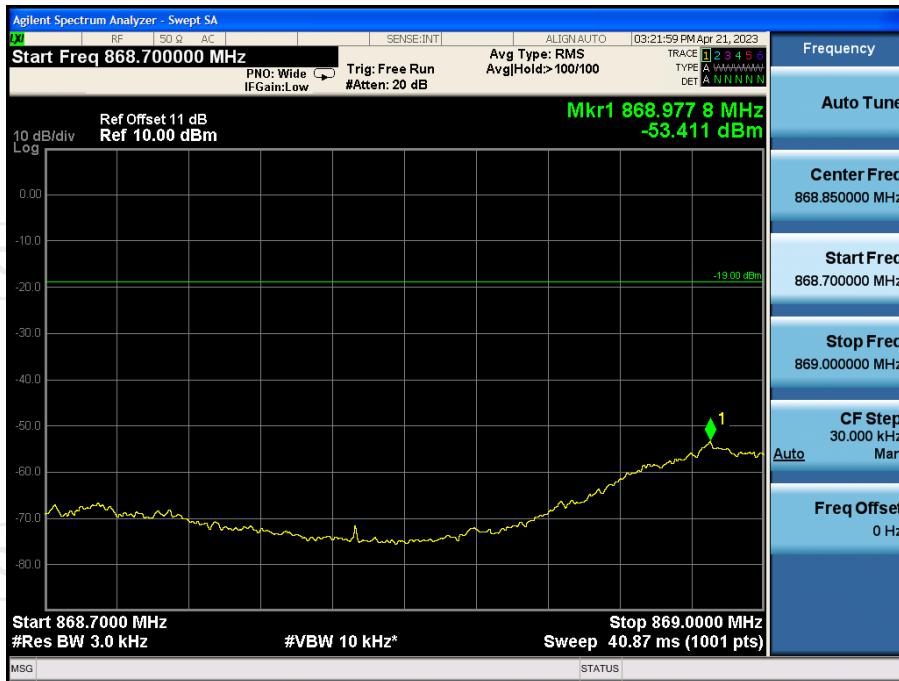
Cellular LTE UL Right Side Pre AGC



Cellular LTE UL Right Side Max. input



Cellular GSM DL Left Side Pre AGC



Cellular GSM DL Left Side Max. input



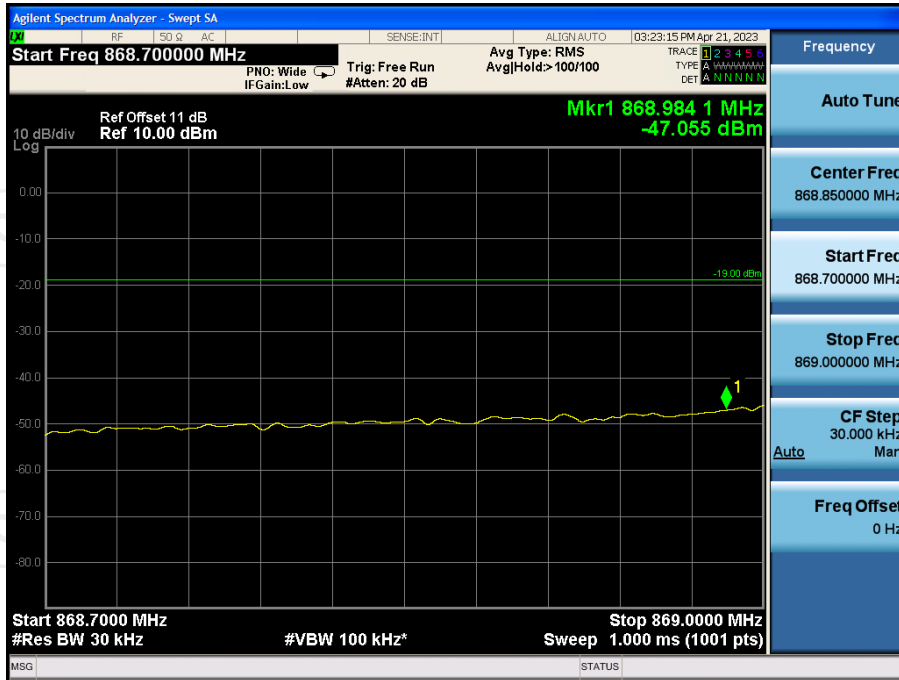
Cellular GSM DL Right Side Pre AGC



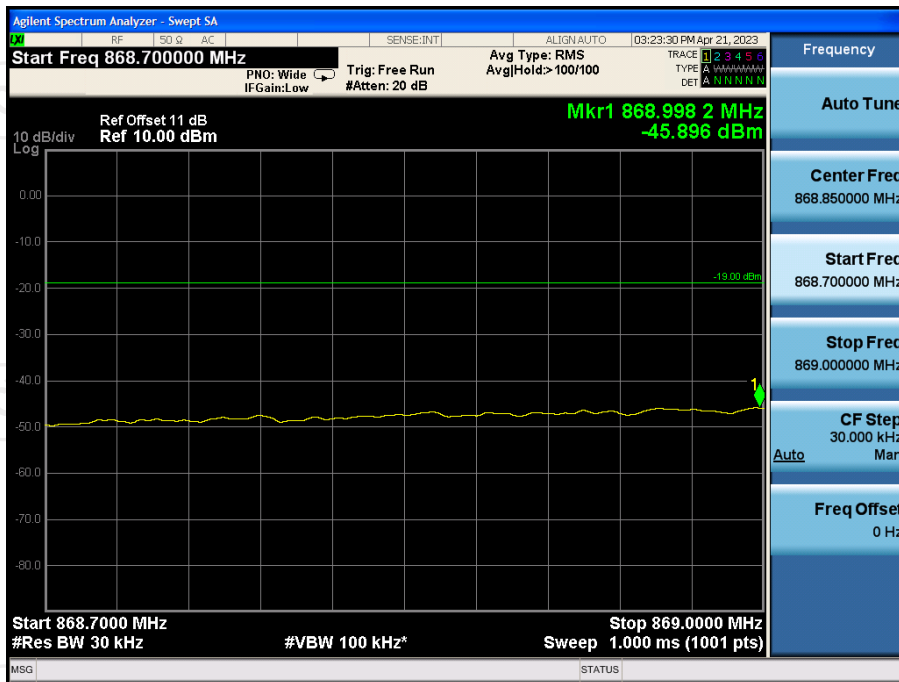
Cellular GSM DL Right Side Max. input



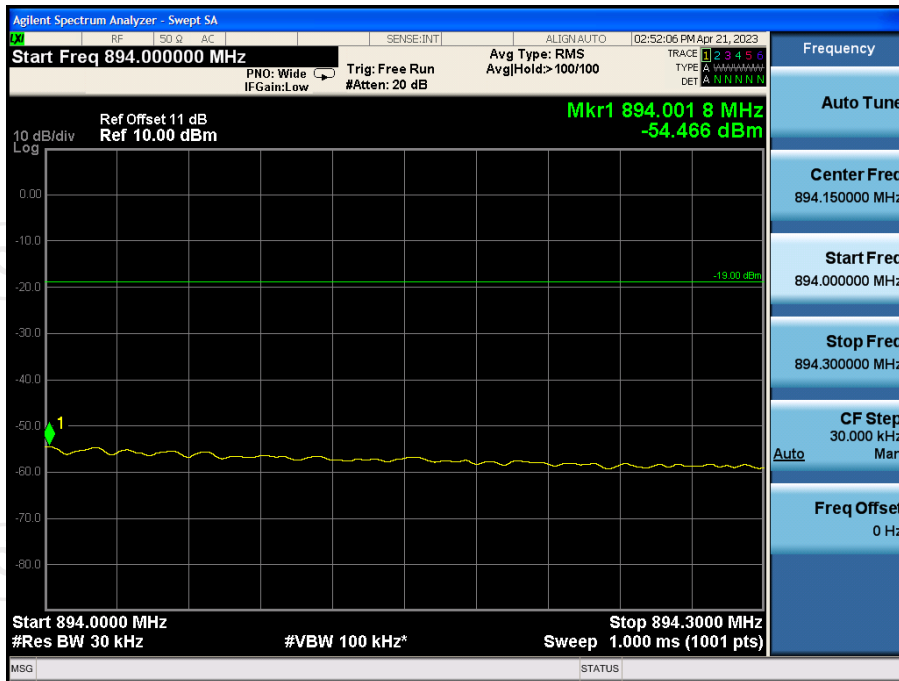
Cellular CDMA DL Left Side Pre AGC



Cellular CDMA DL Left Side Max. input



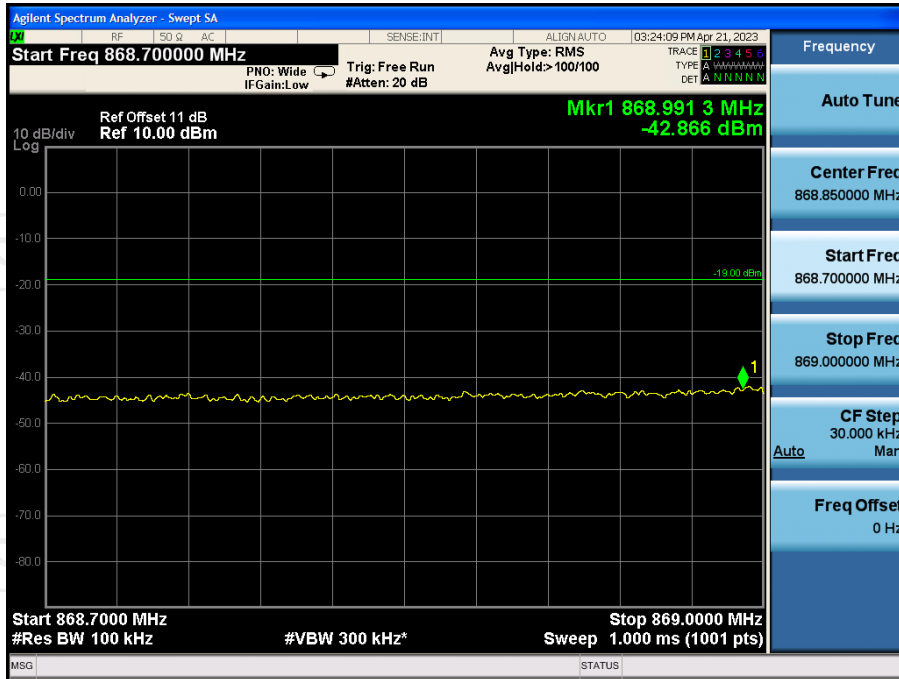
Cellular CDMA DL Right Side Pre AGC



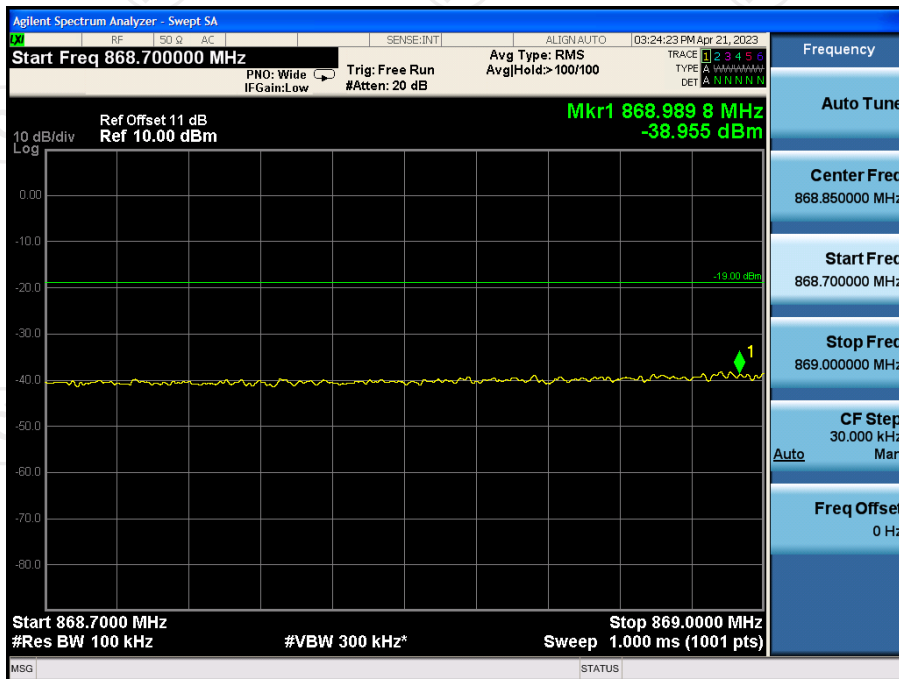
Cellular CDMA DL Right Side Max. input



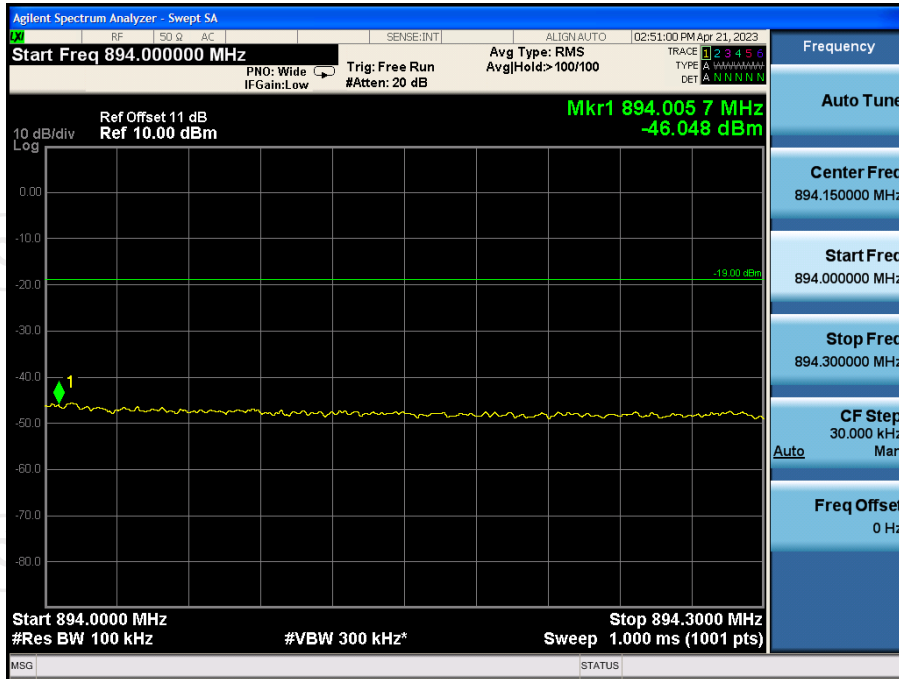
Cellular LTE DL Left Side Pre AGC



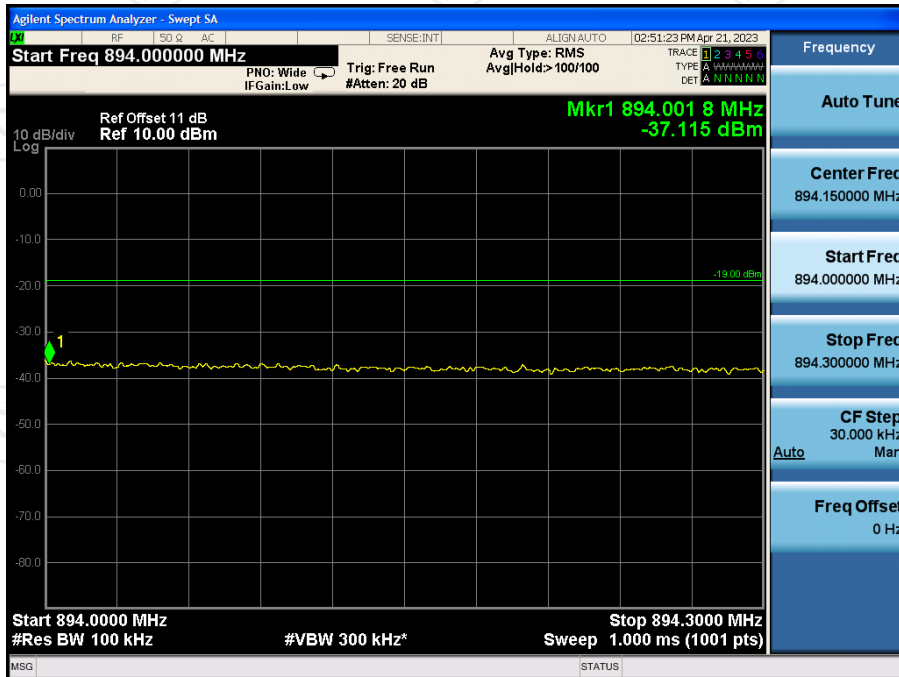
Cellular LTE DL Left Side Max. input



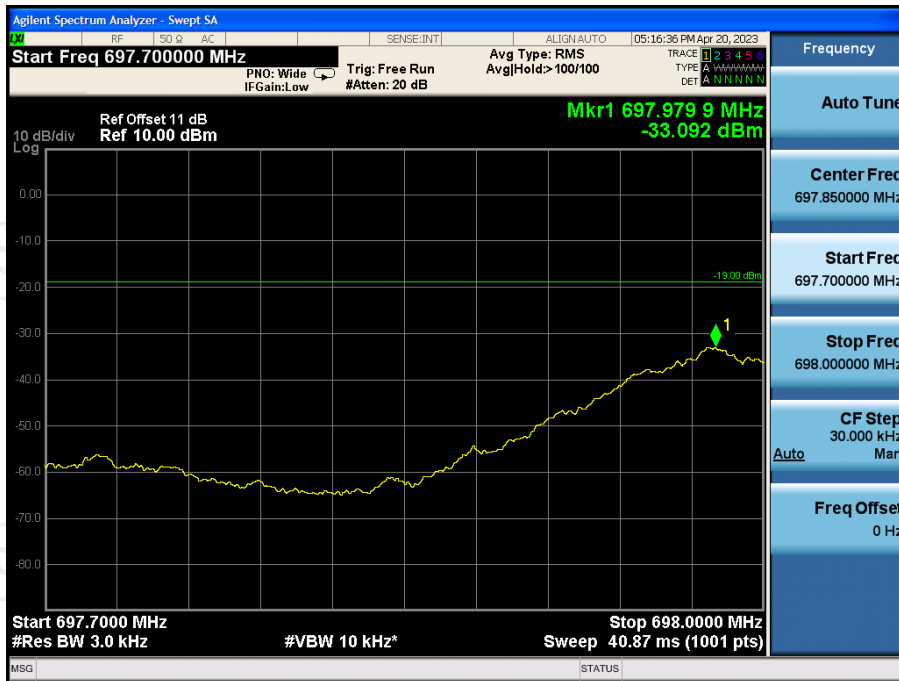
Cellular LTE DL Right Side Pre AGC



Cellular LTE DL Right Side Max. input



Lower700MHz GSM UL Left Side Pre AGC



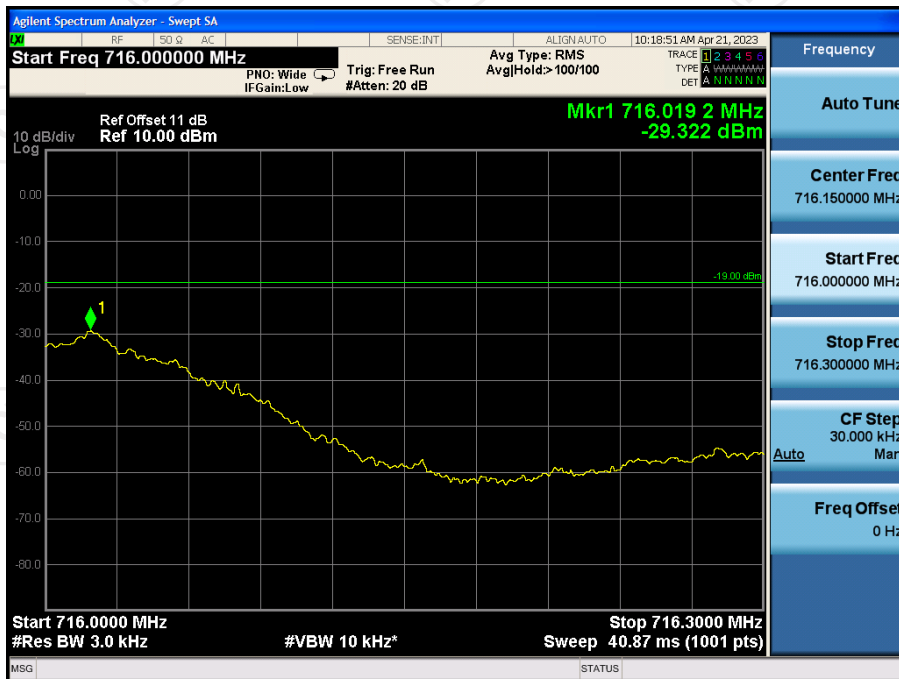
Lower700MHz GSM UL Left Side Max. input



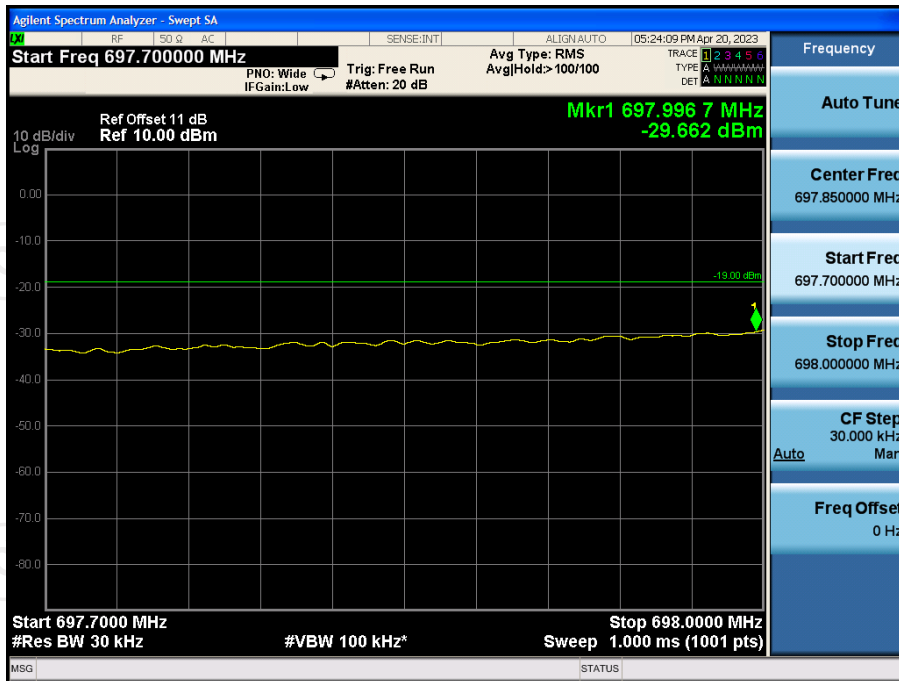
Lower700MHz GSM UL Right Side Pre AGC



Lower700MHz GSM UL Right Side Max. input



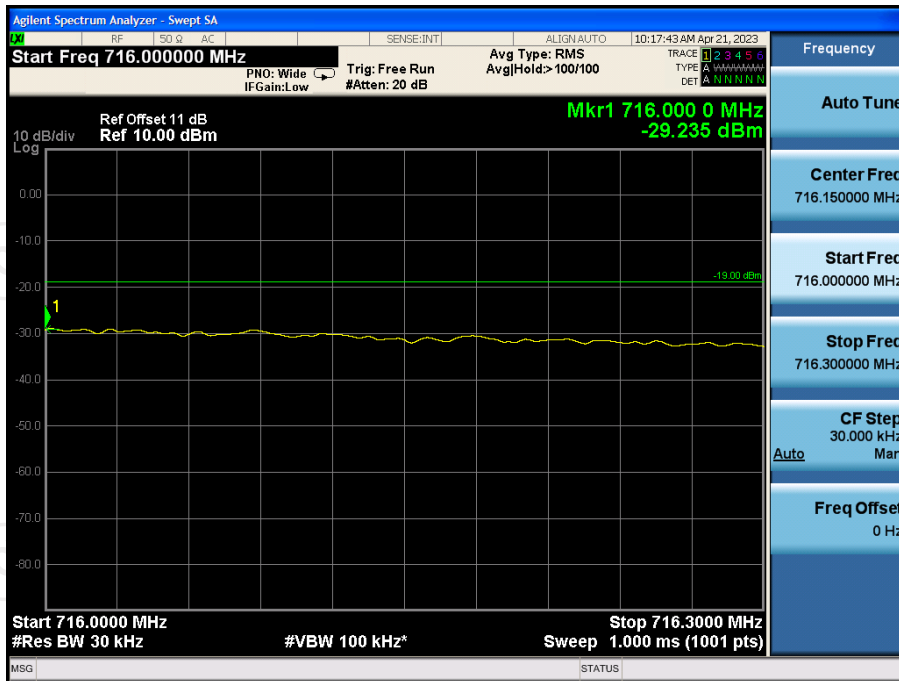
Lower700MHz CDMA UL Left Side Pre AGC



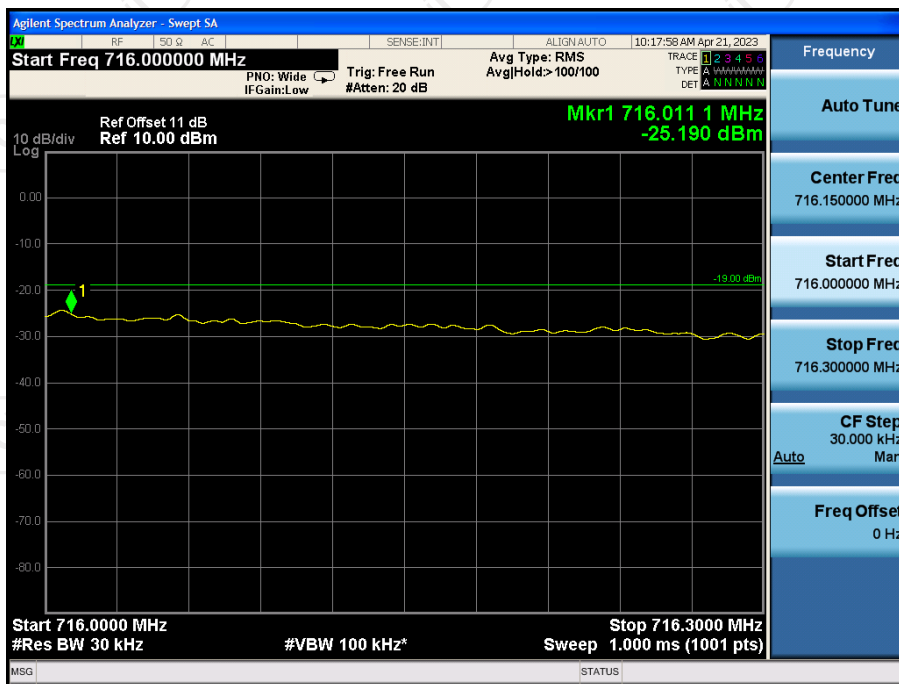
Lower700MHz CDMA UL Left Side Max. input



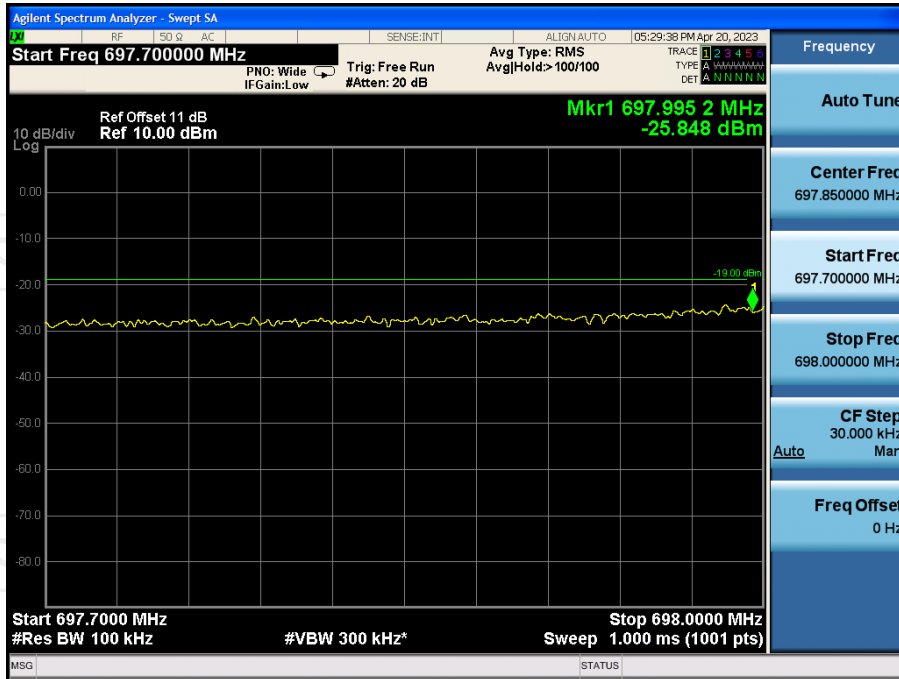
Lower700MHz CDMA UL Right Side Pre AGC



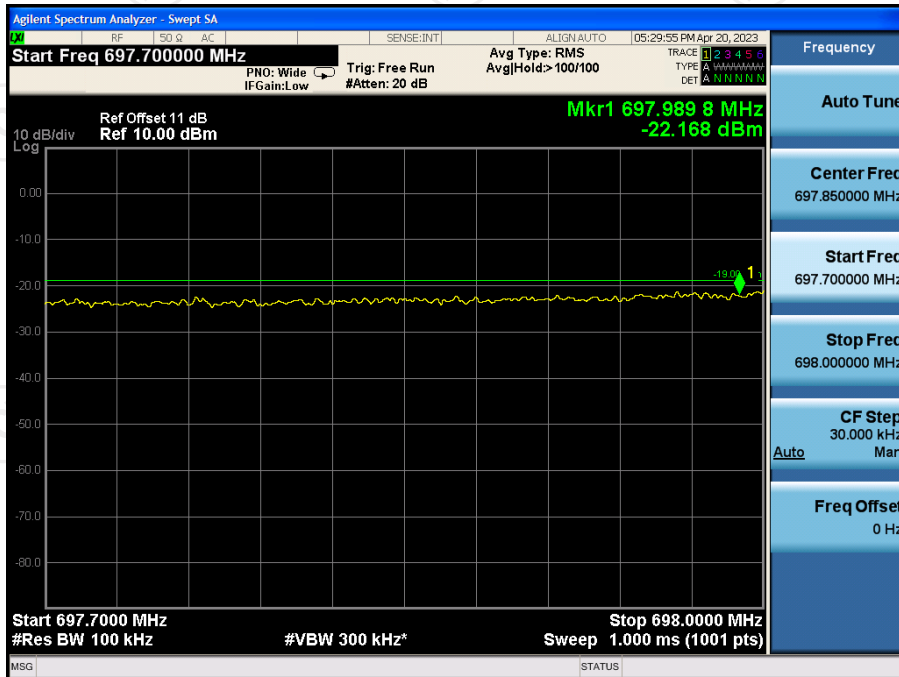
Lower700MHz CDMA UL Right Side Max. input



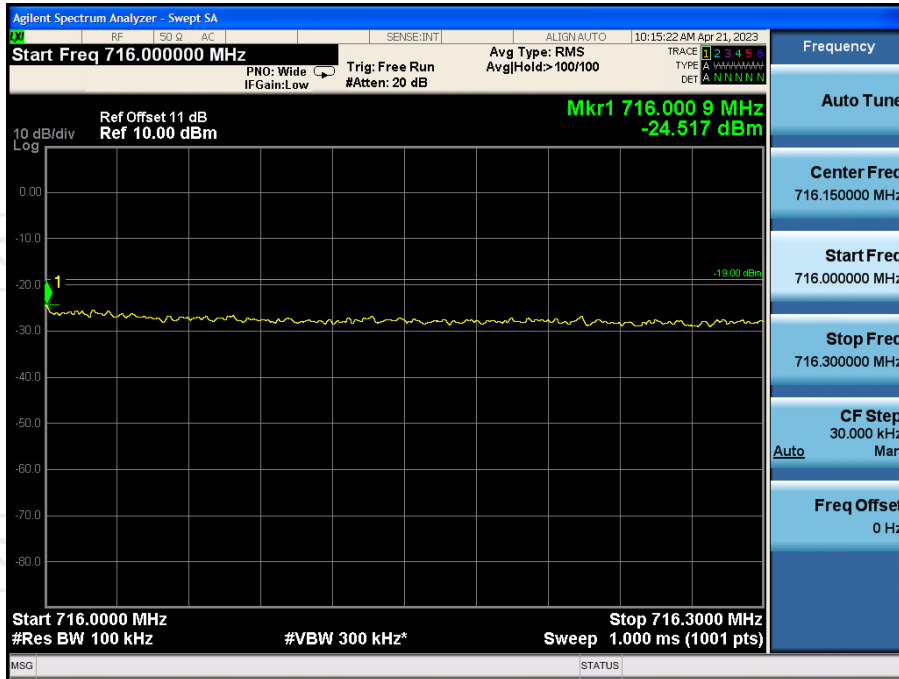
Lower700MHz LTE UL Left Side Pre AGC



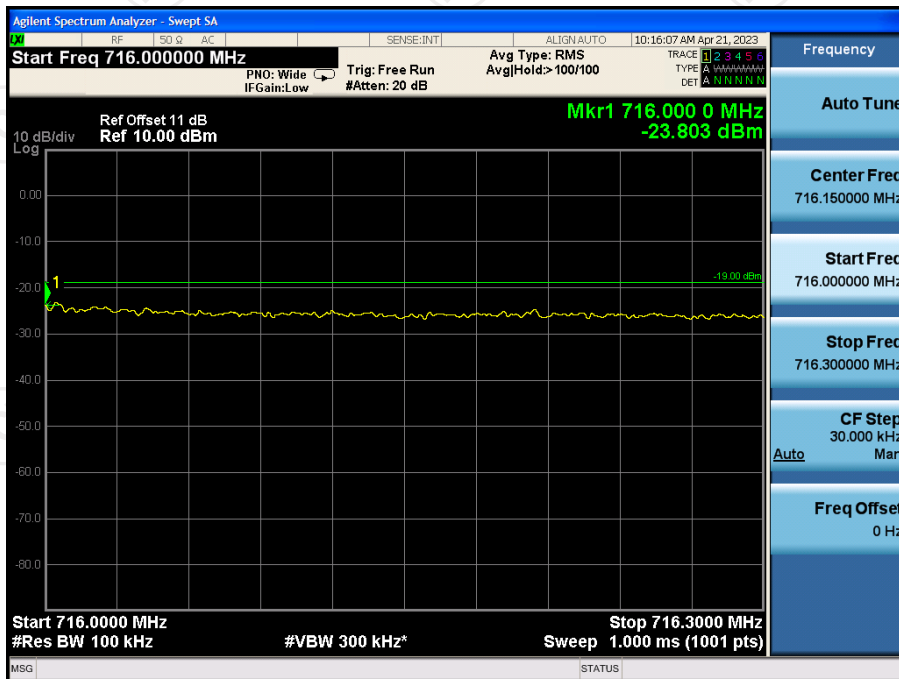
Lower700MHz LTE UL Left Side Max. input



Lower700MHz LTE UL Right Side Pre AGC



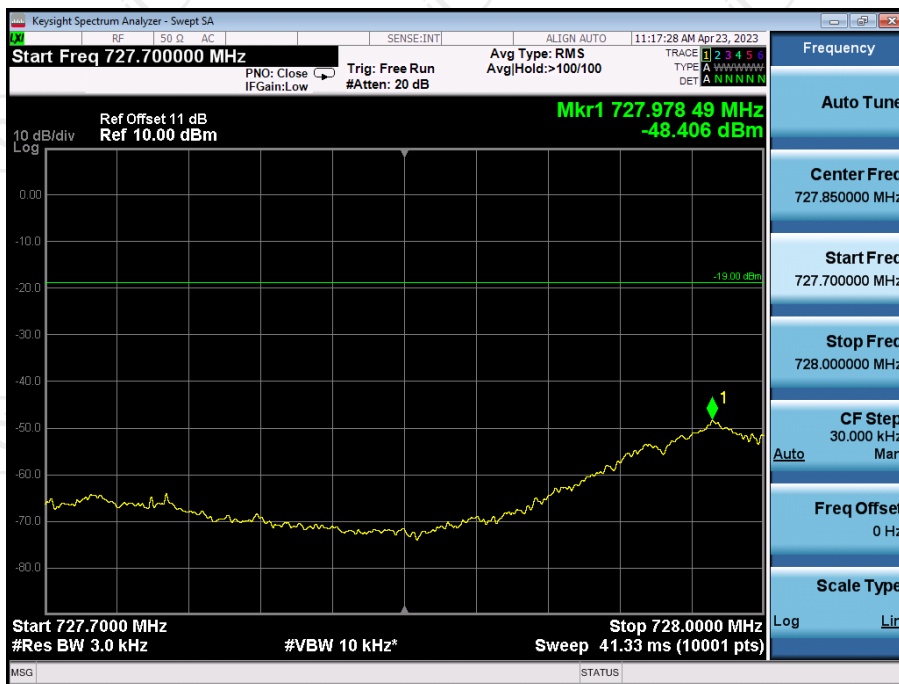
Lower700MHz LTE UL Right Side Max. input



Lower700MHz GSM DL Left Side Pre AGC



Lower700MHz GSM DL Left Side Max. input



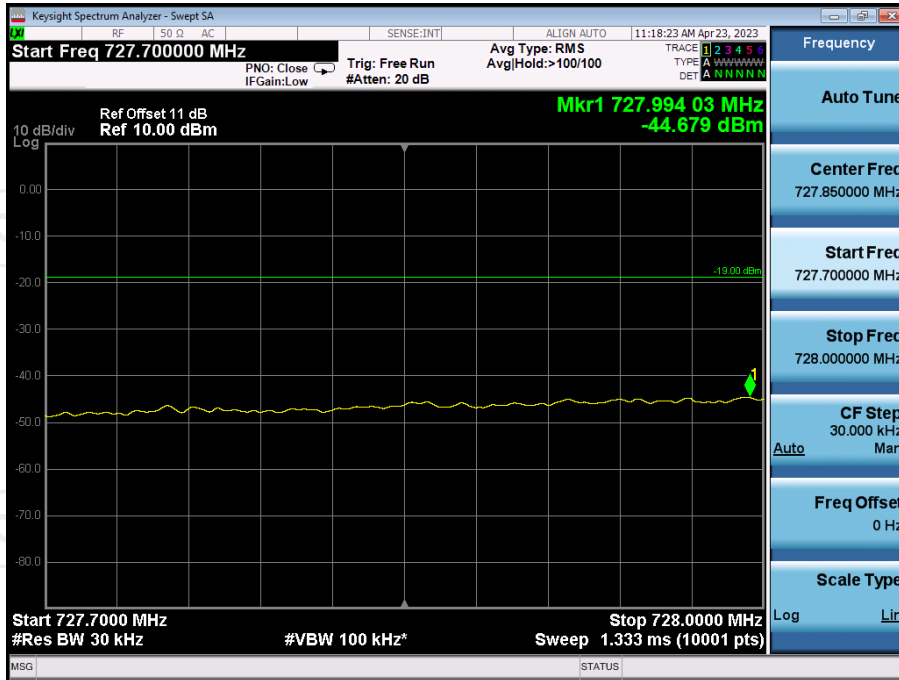
Lower700MHz GSM DL Right Side Pre AGC



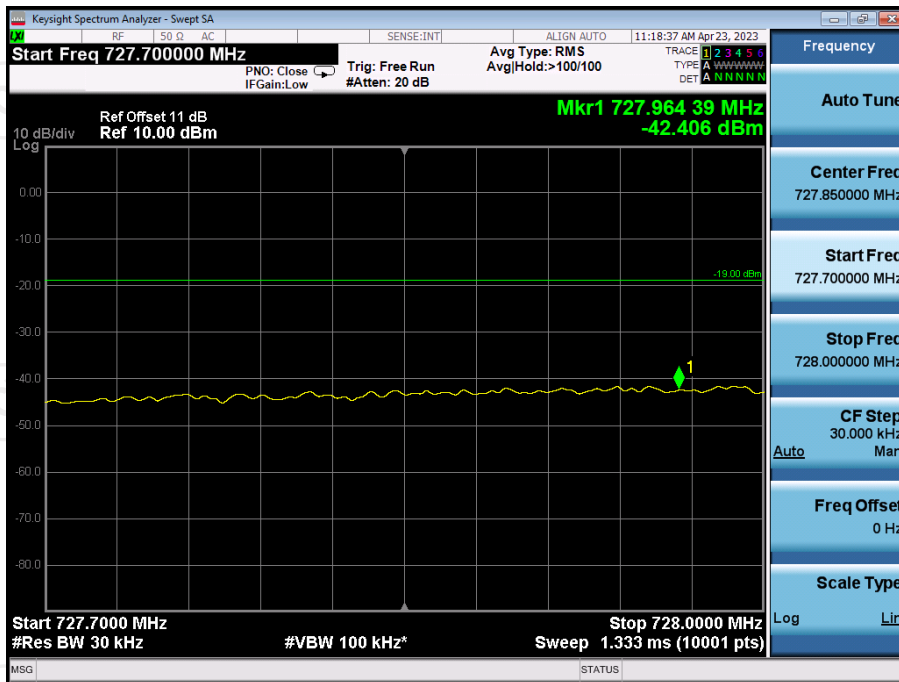
Lower700MHz GSM DL Right Side Max. input



Lower700MHz CDMA DL Left Side Pre AGC



Lower700MHz CDMA DL Left Side Max. input



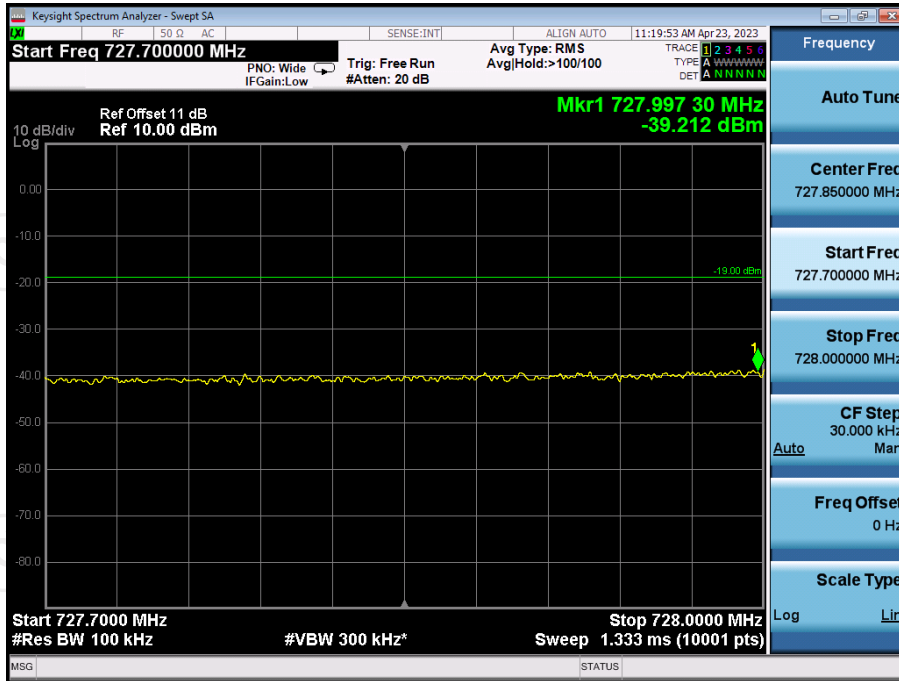
Lower700MHz CDMA DL Right Side Pre AGC



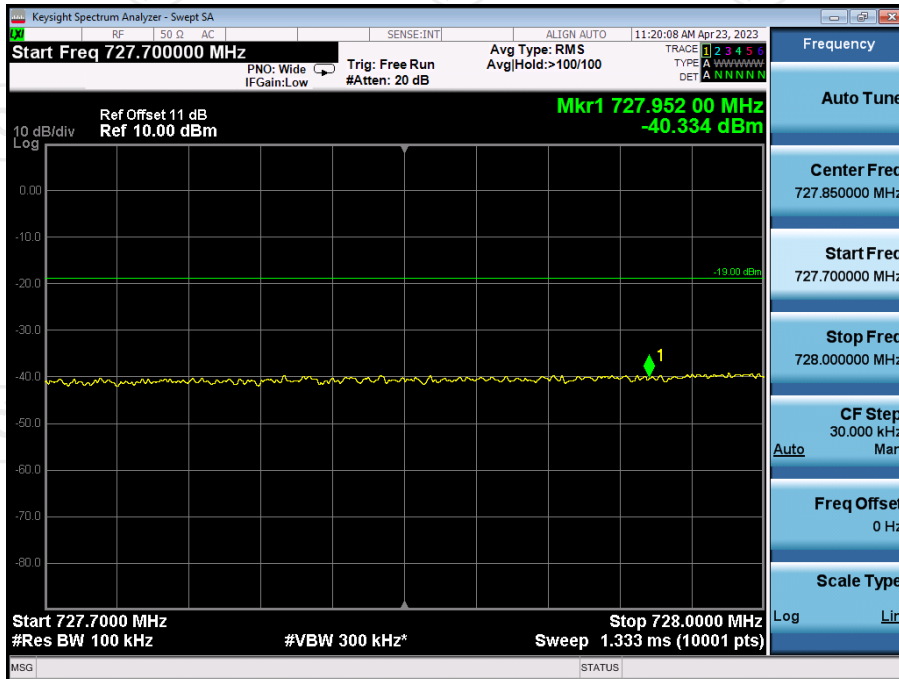
Lower700MHz CDMA DL Right Side Max. input



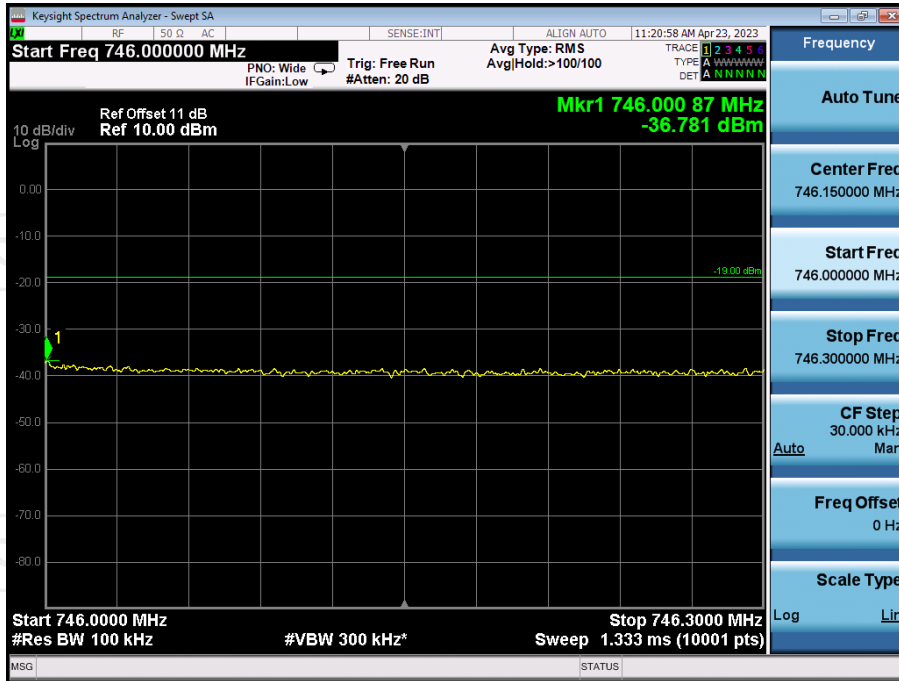
Lower700MHz LTE DL Left Side Pre AGC



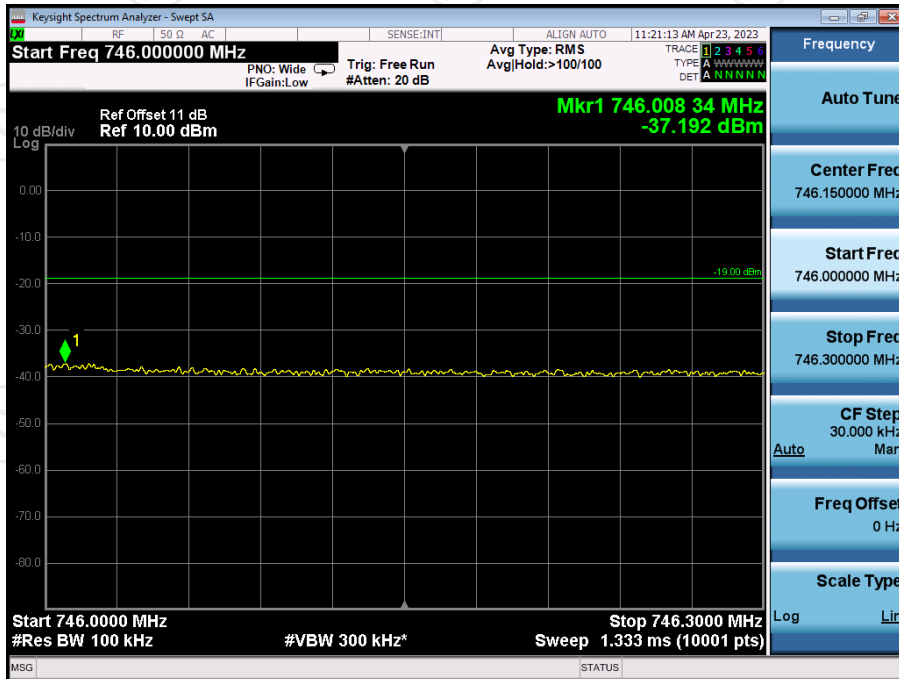
Lower700MHz LTE DL Left Side Max. input



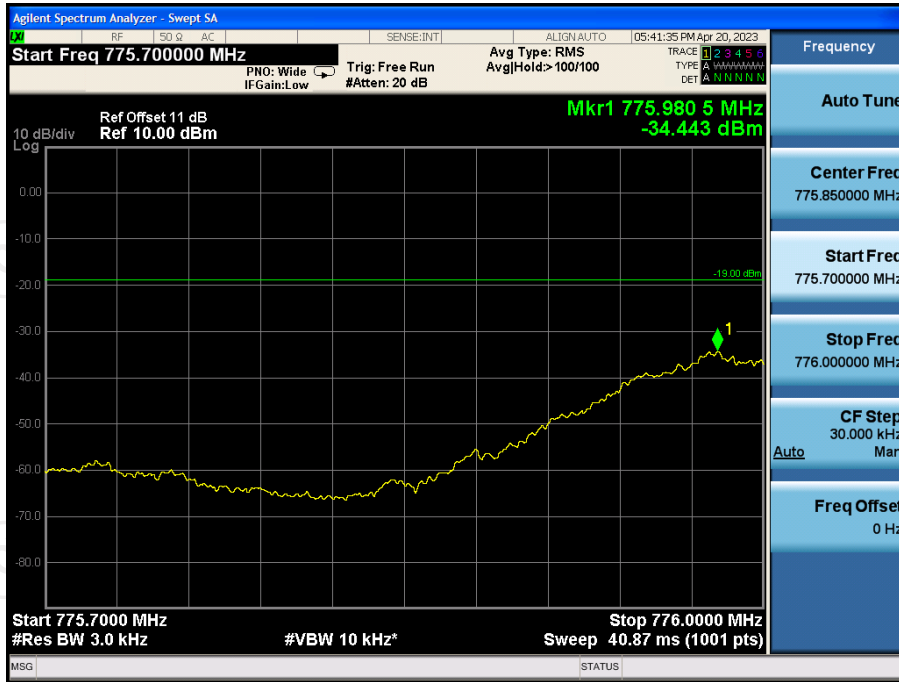
Lower700MHz LTE DL Right Side Pre AGC



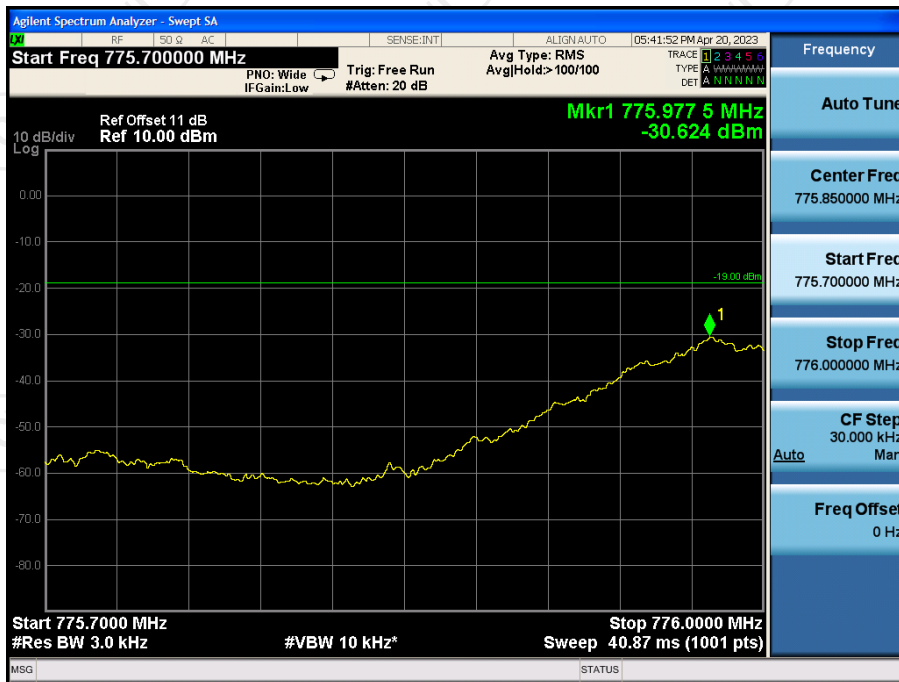
Lower700MHz LTE DL Right Side Max. input



Upper700MHz GSM UL Left Side Pre AGC



Upper700MHz GSM UL Left Side Max. input



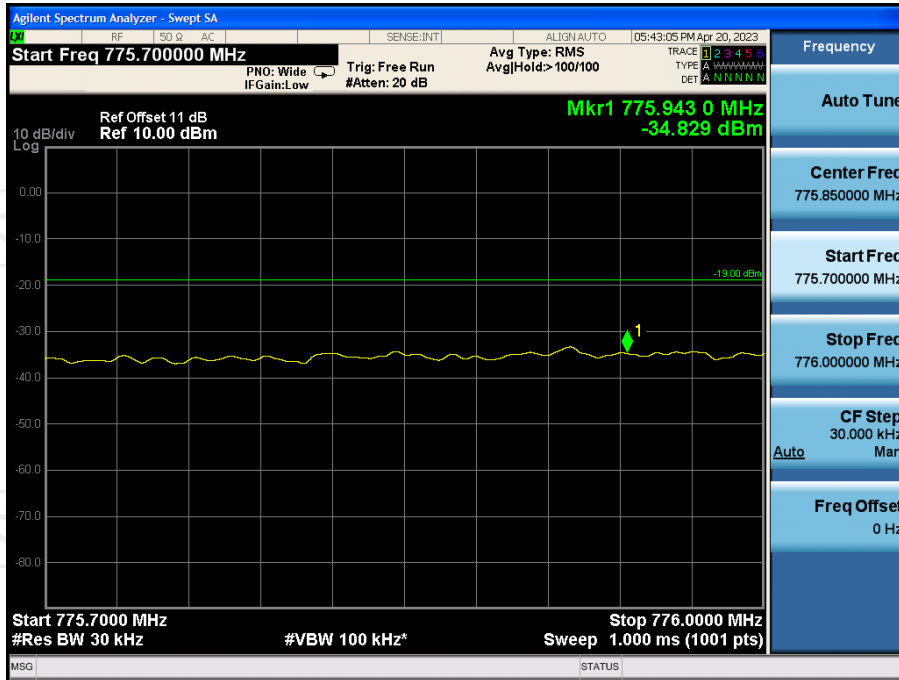
Upper700MHz GSM UL Right Side Pre AGC



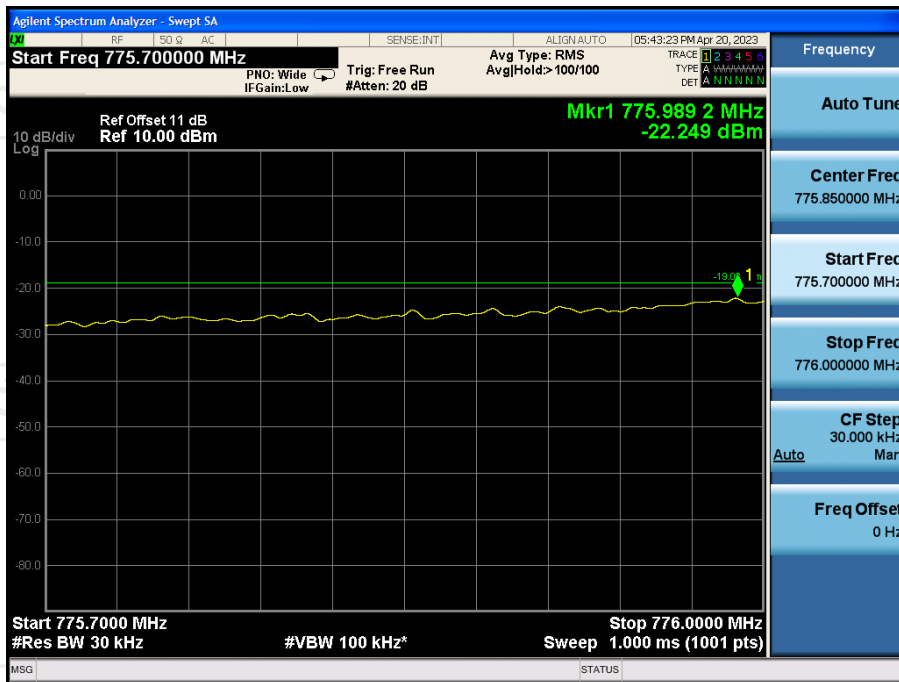
Upper700MHz GSM UL Right Side Max. input



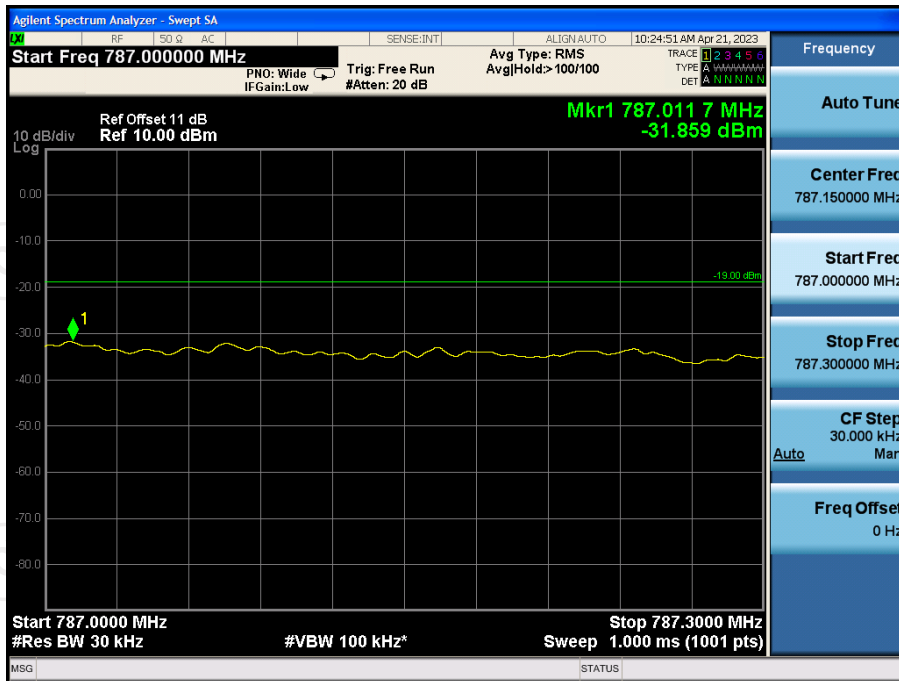
Upper700MHz CDMA UL Left Side Pre AGC



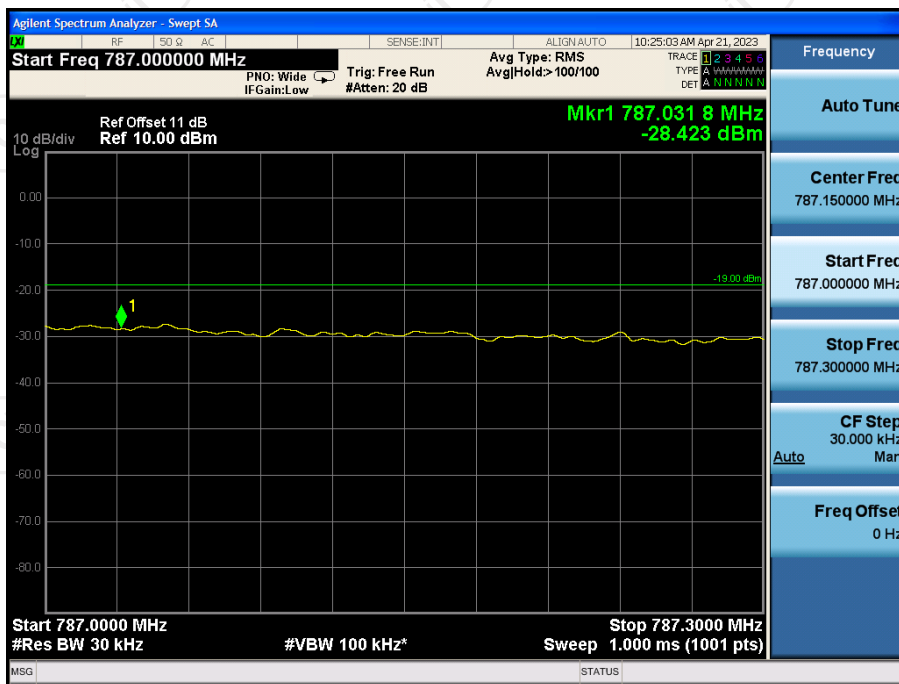
Upper700MHz CDMA UL Left Side Max. input



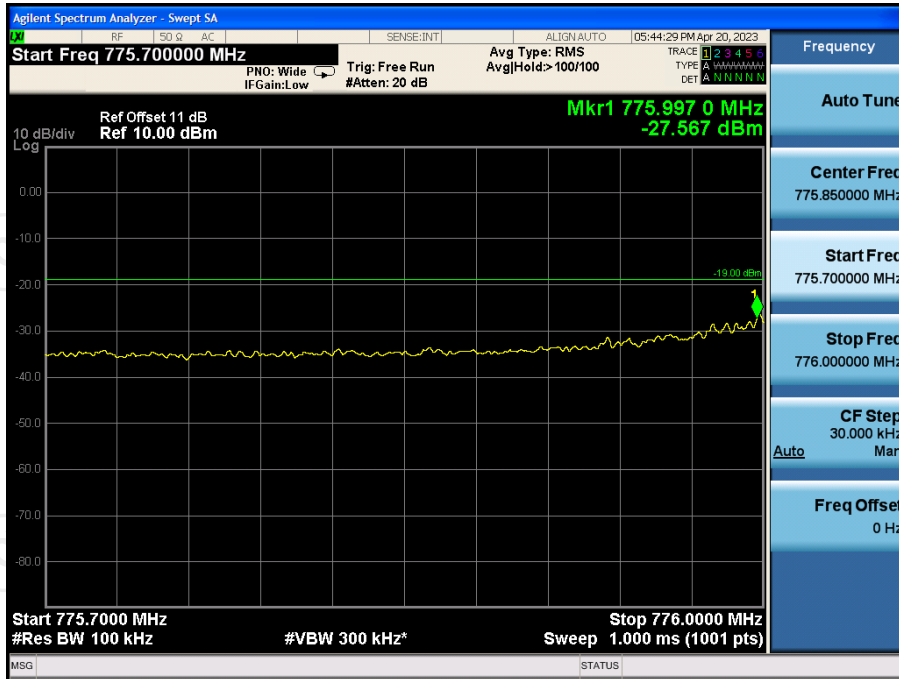
Upper700MHz CDMA UL Right Side Pre AGC



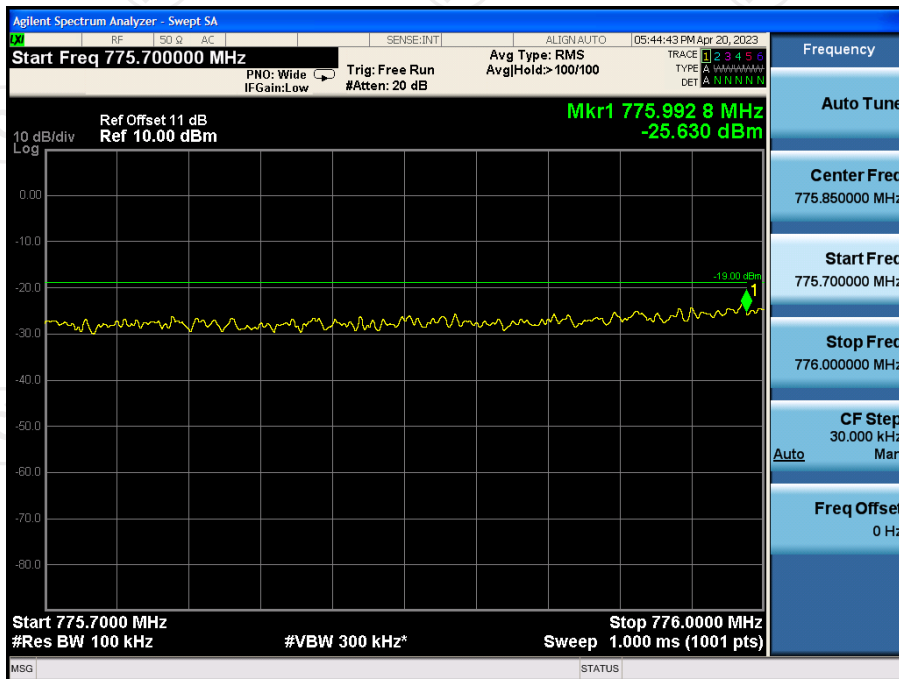
Upper700MHz CDMA UL Right Side Max. input



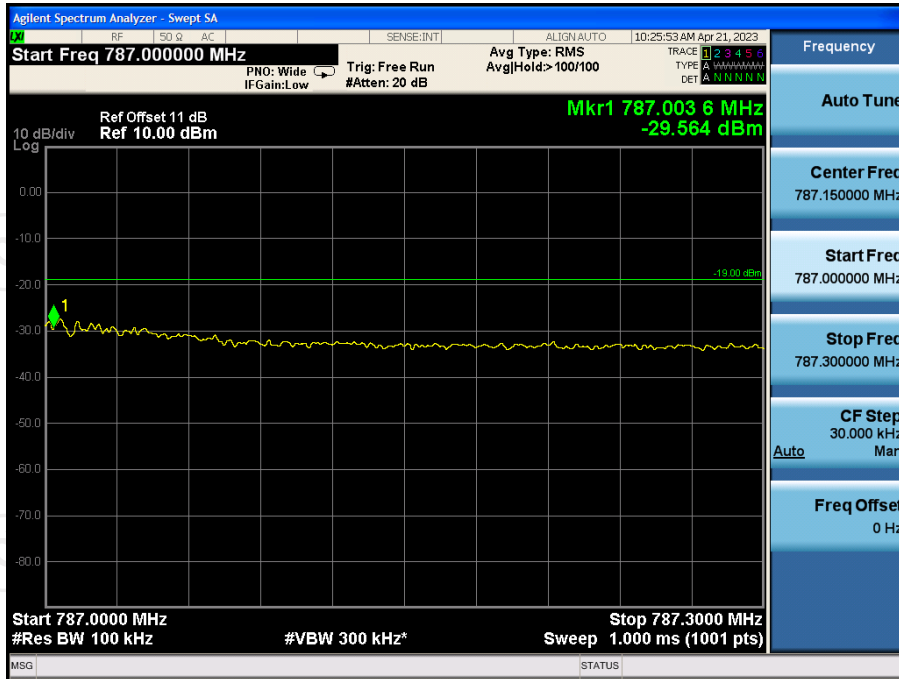
Upper700MHz LTE UL Left Side Pre AGC



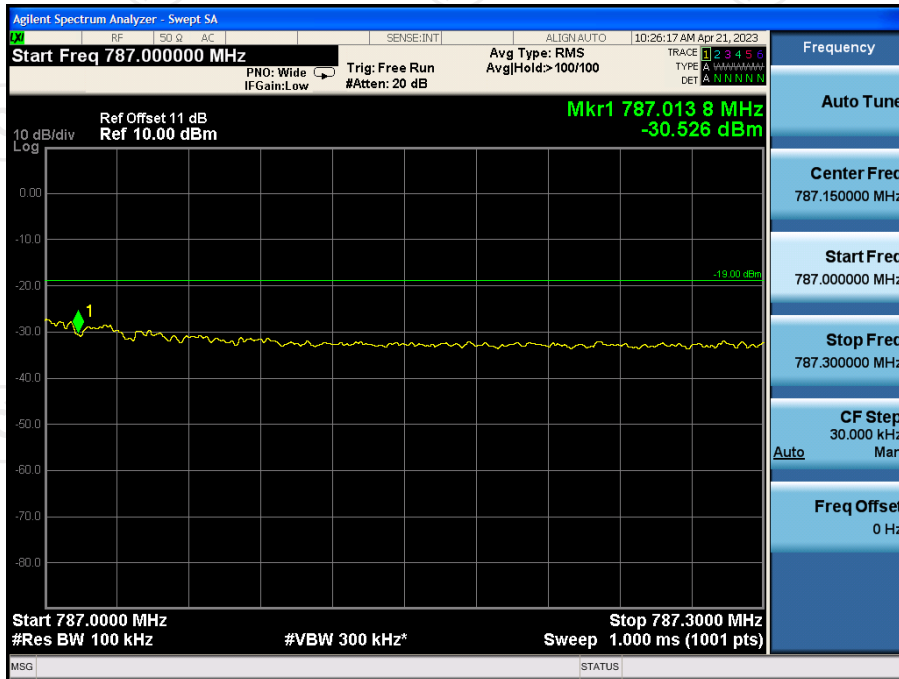
Upper700MHz LTE UL Left Side Max. input



Upper700MHz LTE UL Right Side Pre AGC



Upper700MHz LTE UL Right Side Max. input



Upper700MHz GSM DL Left Side Pre AGC



Upper700MHz GSM DL Left Side Max. input



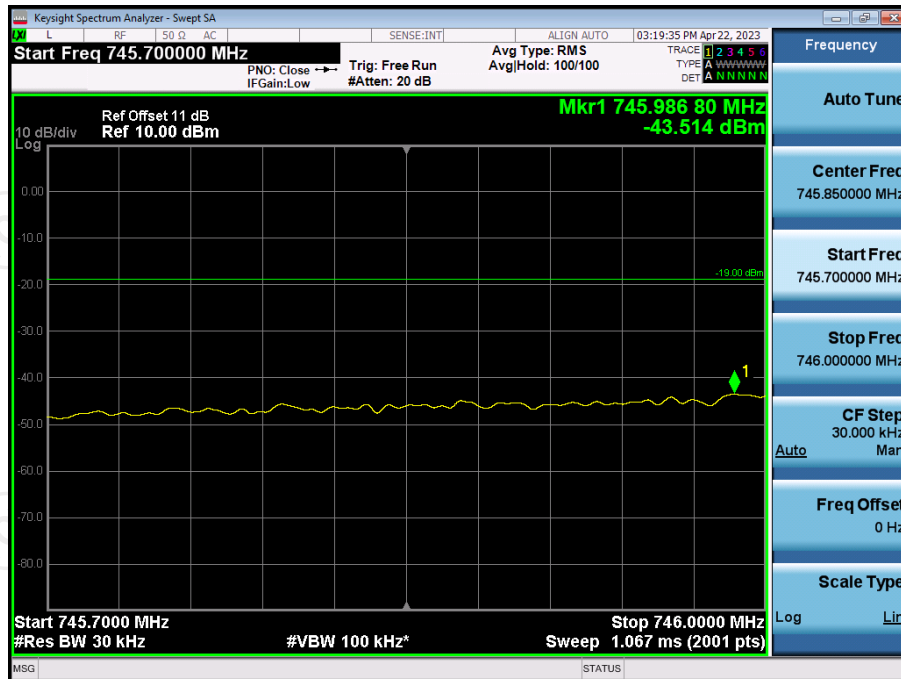
Upper700MHz GSM DL Right Side Pre AGC



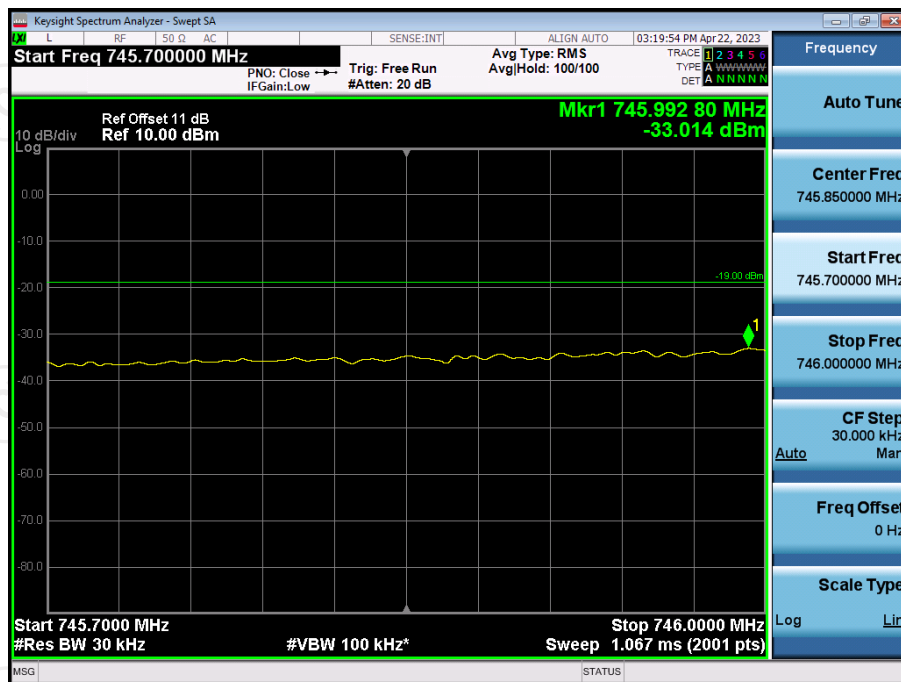
Upper700MHz GSM DL Right Side Max. input



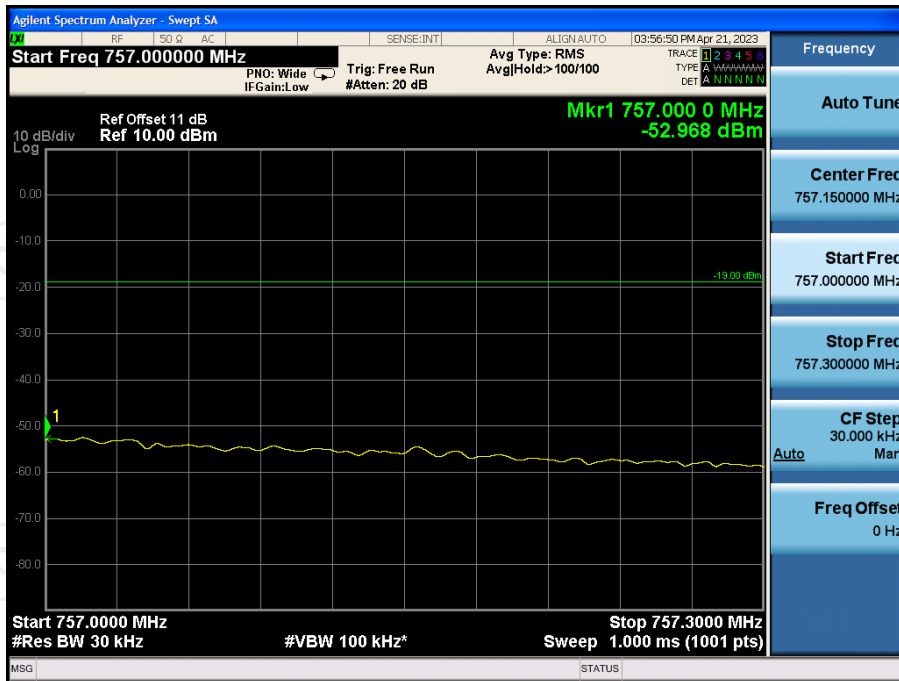
Upper700MHz CDMA DL Left Side Pre AGC



Upper700MHz CDMA DL Left Side Max. input



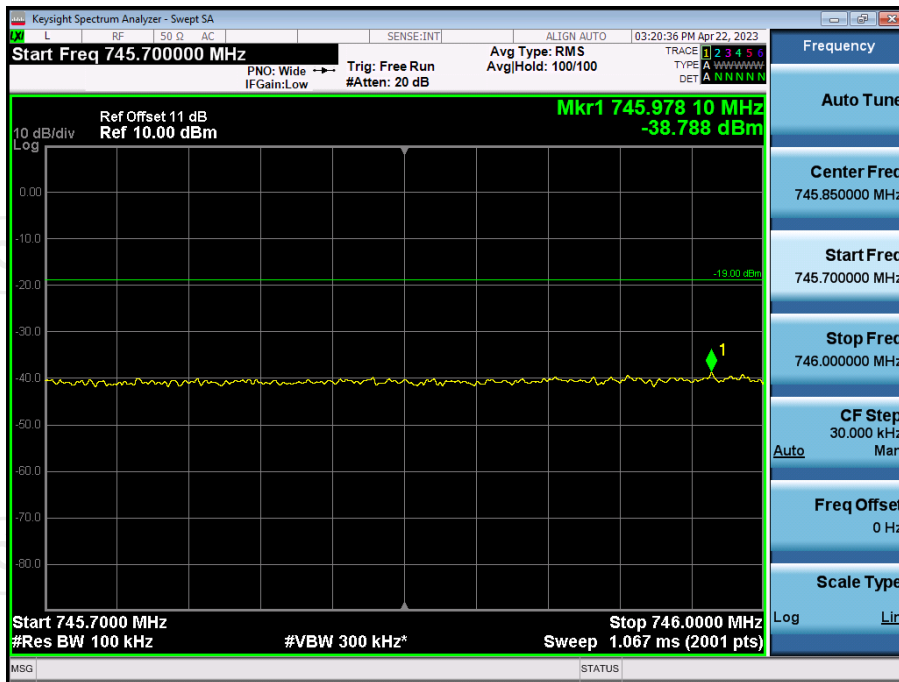
Upper700MHz CDMA DL Right Side Pre AGC



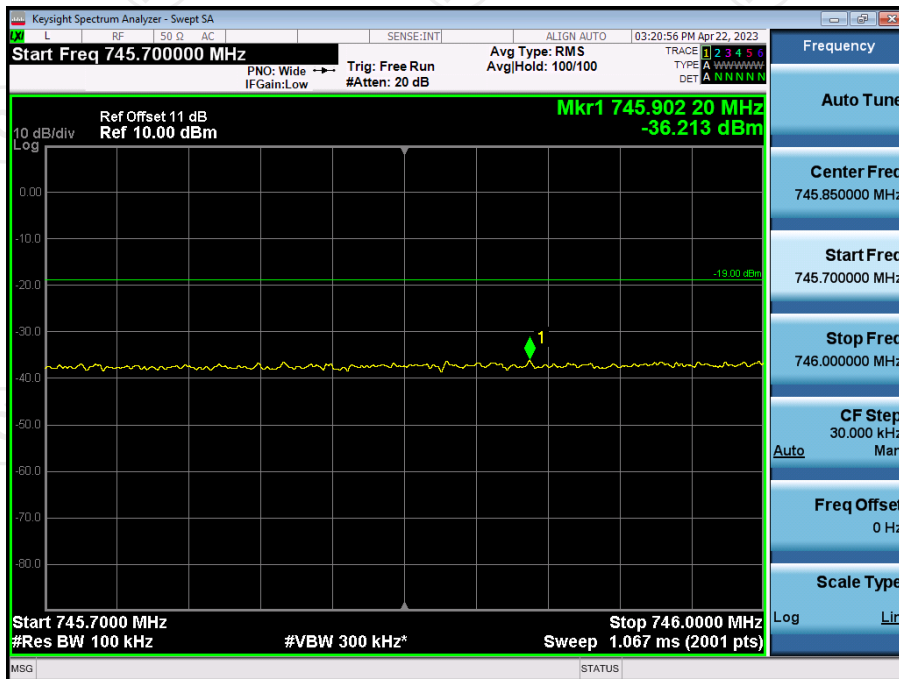
Upper700MHz CDMA DL Right Side Max. input



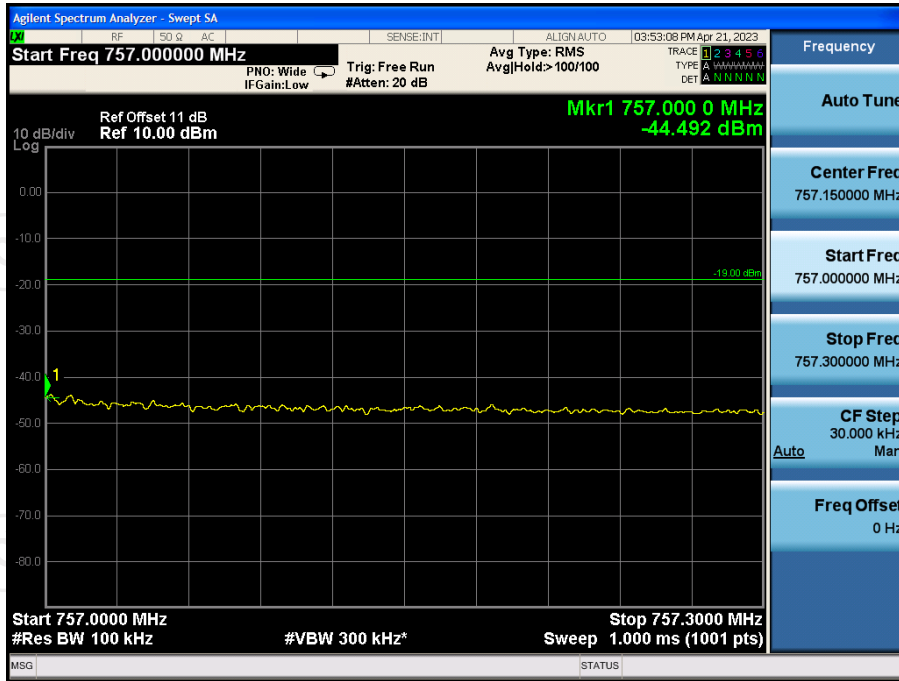
Upper700MHz LTE DL Left Side Pre AGC



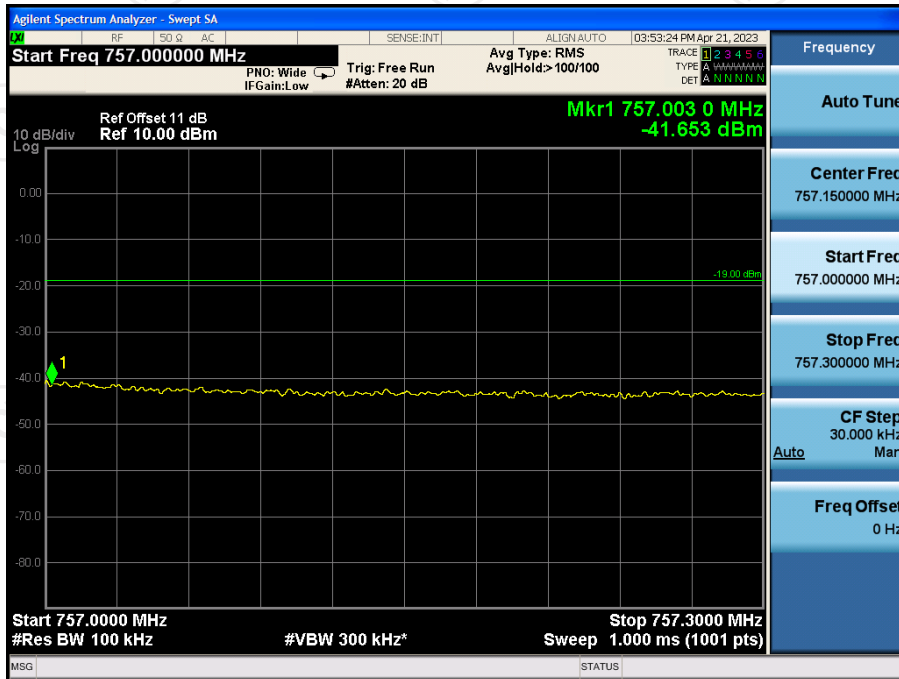
Upper700MHz LTE DL Left Side Max. input



Upper700MHz LTE DL Right Side Pre AGC



Upper700MHz LTE DL Right Side Max. input



5.5. Conducted Spurious Emission

5.5.1. Test Specification

| | |
|--------------------------|---|
| Test Requirement: | FCC Part2 Section 1051; FCC Rules Part 27 Subpart C, Section 27.53 |
| Test Method: | KDB 935210 D03 Signal Booster Measurements v04r04 |
| Limit: | <p>-13 dBm;</p> <p>For equipment operating in the frequency bands 746-756 MHz and 777-787 MHz, The power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least:</p> <p>(i) $76 + 10 \log_{10} p$ (watts), dB, for base and fixed equipment, and</p> <p>(ii) $65 + 10 \log_{10} p$ (watts), dB, for mobile and portable equipment.</p> |
| Test Setup: | <pre> graph LR SG[Signal Generator] --> EUT[EUT] EUT --> RA[RF Attenuator (if required)] RA --> SA[Spectrum Analyzer] </pre> |
| Test Procedure: | <p>a) Connect the EUT to the test equipment as shown in Set-Up. Begin with the uplink output connected to the spectrum analyzer.</p> <p>b) Configure the signal generator for AWGN with a 99% occupied bandwidth of 4.1 MHz operation with a center frequency corresponding to the center of the CMRS band under test.</p> <p>c) Set the signal generator amplitude to the level determined in the power measurement procedure in Maximum power.</p> <p>d) Turn on the signal generator RF output and measure the spurious emission power levels with an appropriate measurement instrument as follows.</p> <p>e) Set RBW = measurement bandwidth specified in the applicable rule section for the operational frequency band under consideration (see Annex A for relevant cross-references). Note that many of the individual rule sections permit the use of a narrower RBW (typically $\geq 1\%$ of the emission bandwidth) to enhance measurement accuracy, but the result must then be integrated over the specified measurement bandwidth.</p> <p>f) Set VBW = 3 X RBW.</p> <p>g) Select the power averaging (RMS) detector. (See above note regarding the use of a peak detector for preliminary measurements.)</p> <p>h) Sweep time = auto-couple.</p> <p>i) Set the analyzer start frequency to the lowest radio frequency signal generated in the equipment, without going below 9 kHz, and the stop frequency to the lower band/block edge frequency minus 100 kHz or 1 MHz, as specified in the applicable rule part. Note that the number of measurement points in each sweep must be $\geq (2 \times \text{span}/\text{RBW})$ which may require that the measurement range defined by the start and stop frequencies above be subdivided, depending on the available number of measurement points provided by the spectrum analyzer. Trace average at least 10 traces in power averaging (i.e., RMS) mode.</p> |

| | |
|---------------------|--|
| | <p>j) Use the peak marker function to identify the highest amplitude level over each measured frequency range Record the frequency and amplitude and capture a Test Plots for inclusion in the test report.</p> <p>k) Reset the analyzer start frequency to the upper band/block edge frequency plus 100 kHz or 1 MHz, as specified in the applicable rule part, and the analyzer stop frequency to 10 times the highest frequency of the fundamental emission. Note that the number of measurement points in each sweep must be $\geq (2 \times \text{span/RBW})$ which may require that the measurement range defined by the start and stop frequencies above be subdivided, depending on the available number of measurement points provided by the spectrum analyzer.</p> <p>l) Use the peak marker function to identify the highest amplitude level over each of the measured frequency ranges. Record the frequency and amplitude and capture a Test Plots for inclusion in the test report.</p> <p>m) Repeat steps b) through l) for each supported frequency band of operation.</p> |
| Test Result: | PASS |

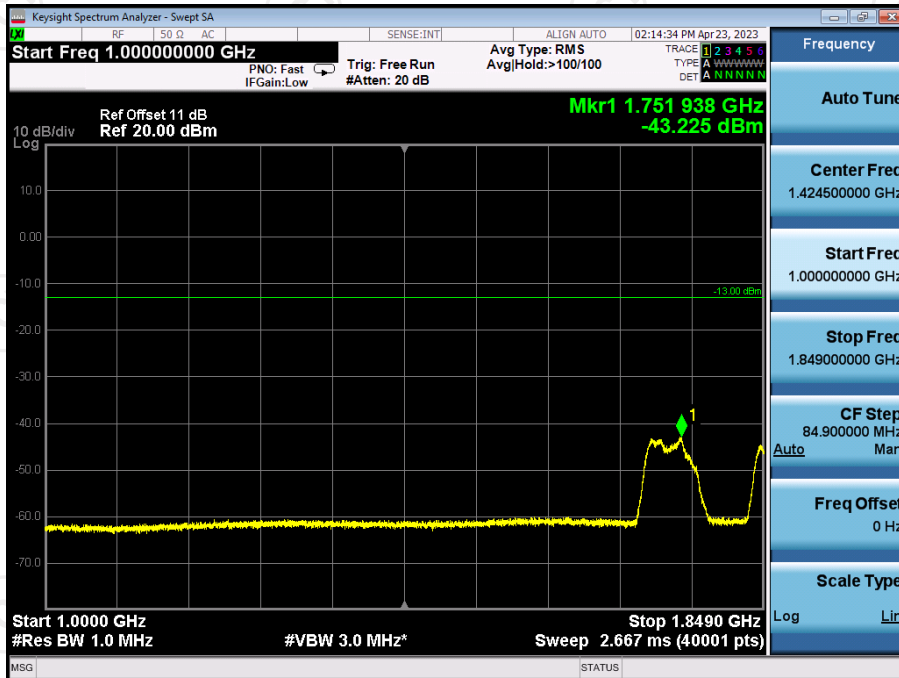
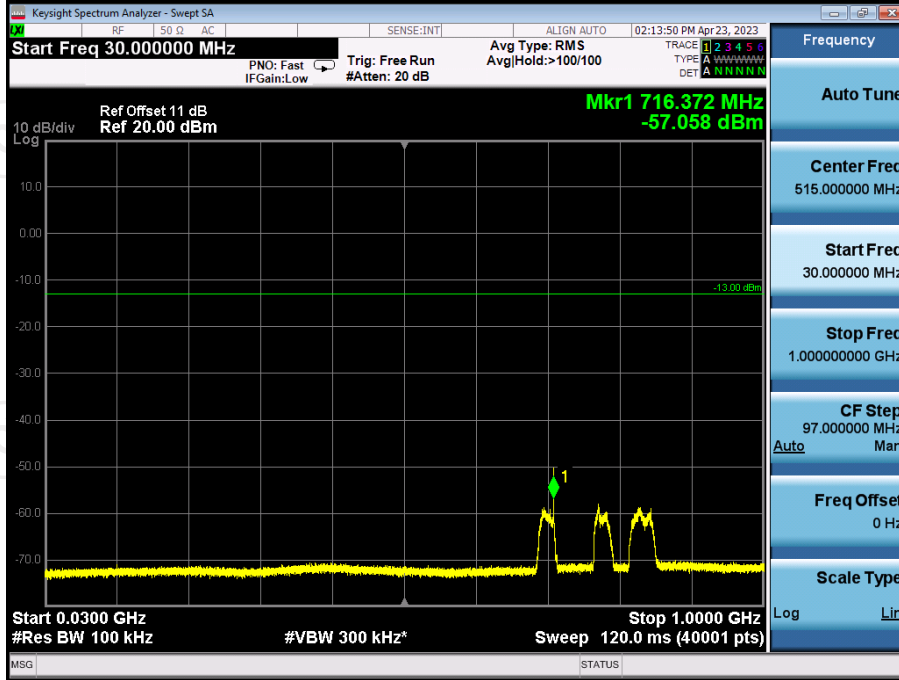
5.5.2. Test Instruments

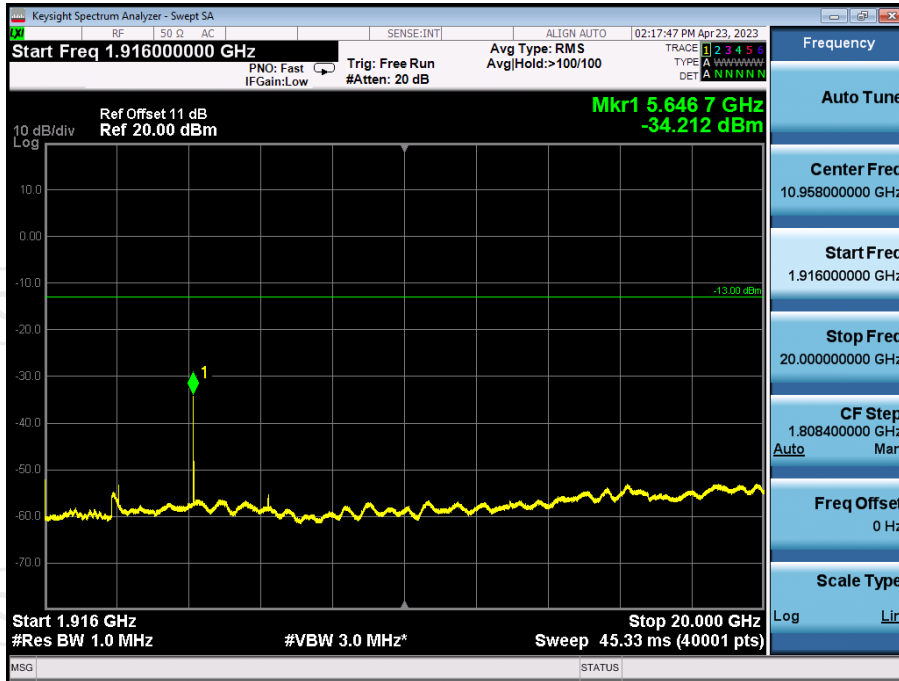
| Equipment | Manufacturer | Model | Serial Number | Calibration Date | Calibration Due |
|-------------------|--------------|--------|---------------|------------------|-----------------|
| Signal Generator | Agilent | N5182A | MY47070282 | Jul. 04, 2022 | Jul. 03, 2023 |
| Spectrum Analyzer | Agilent | N9020A | MY49100619 | Jul. 05, 2022 | Jul. 04, 2023 |
| Attenuator | 50FP-006-H3 | JFW | 907763 | / | / |

5.5.3. Test data

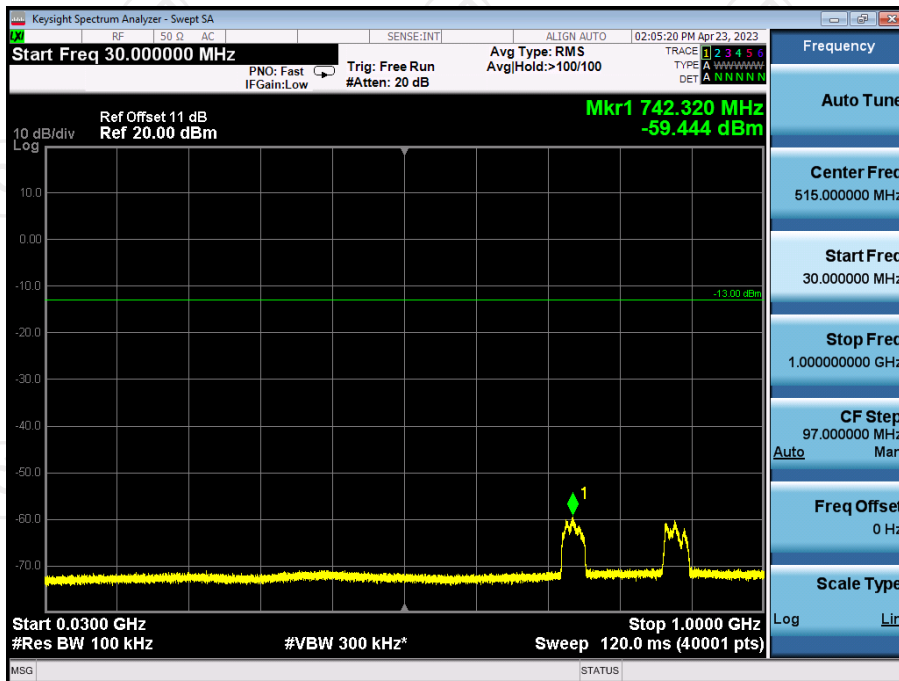
Test Plots

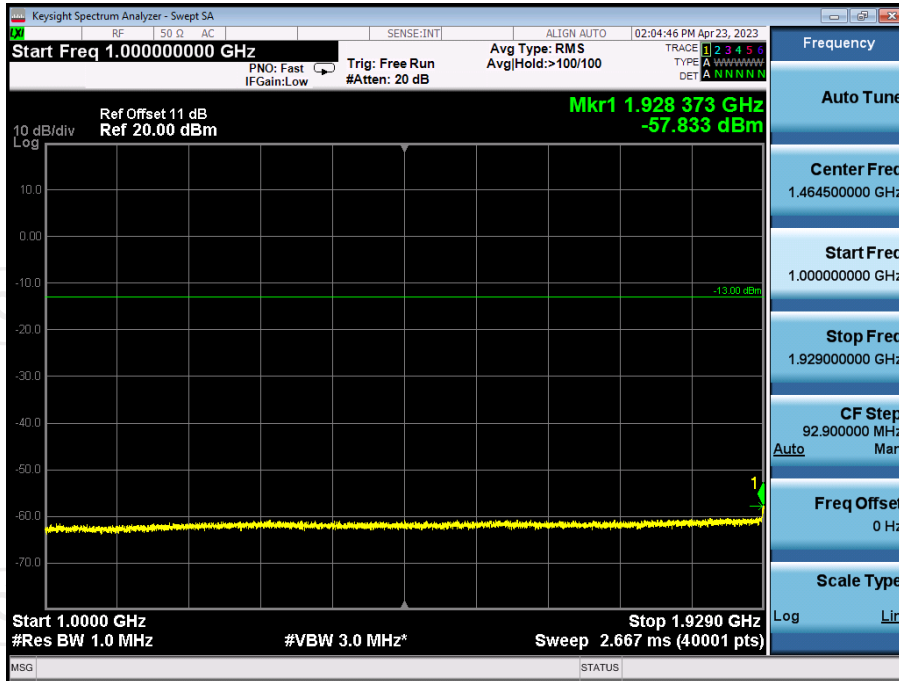
PCS Uplink





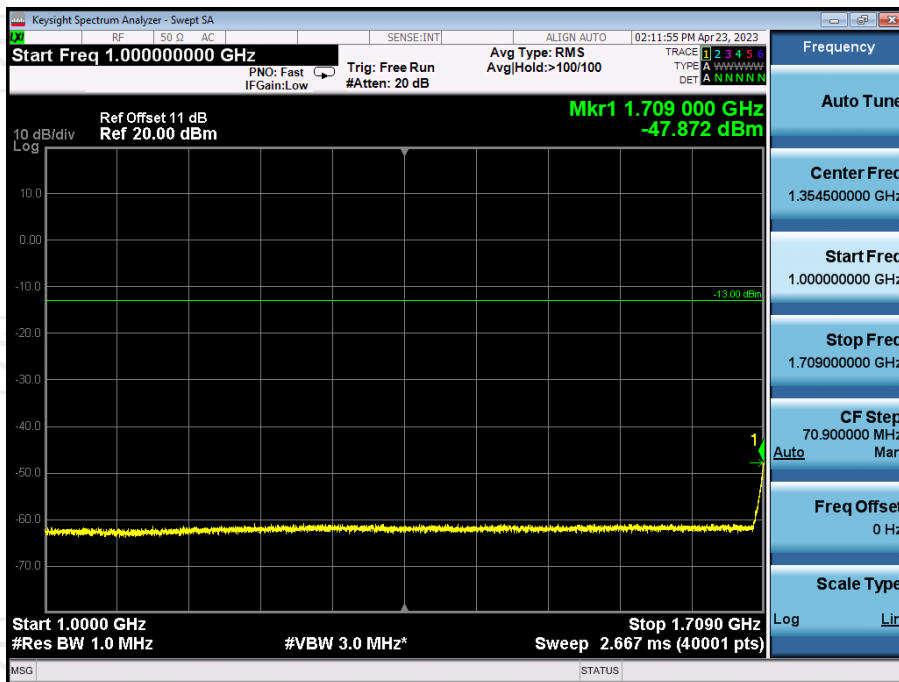
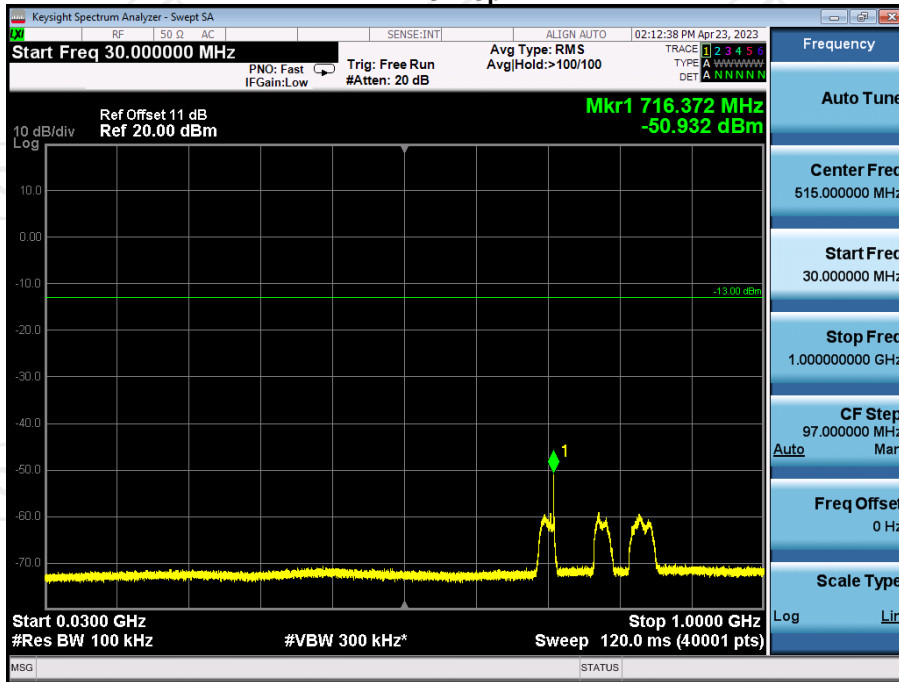
PCS Downlink

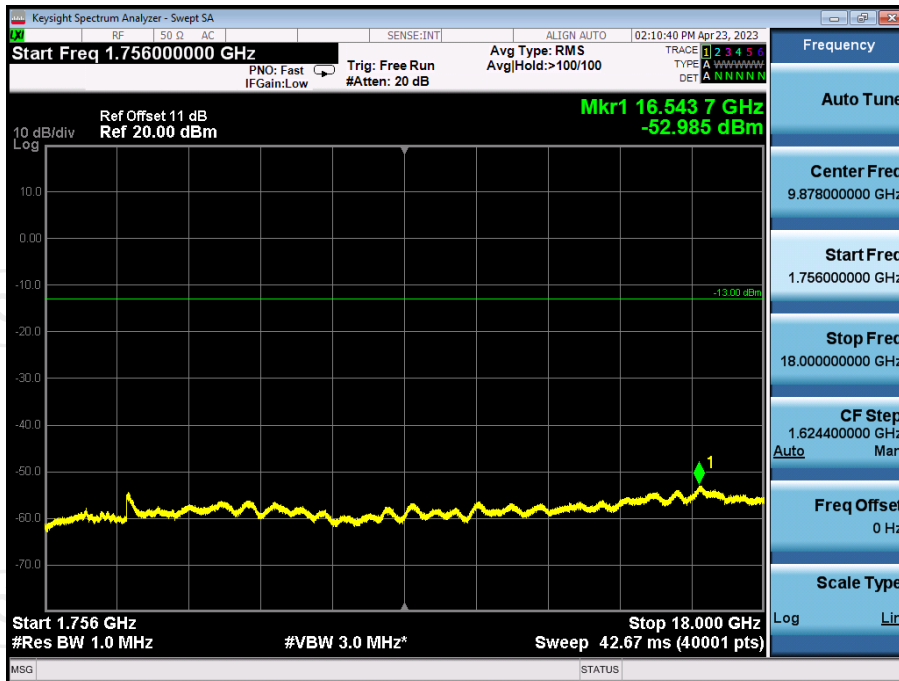




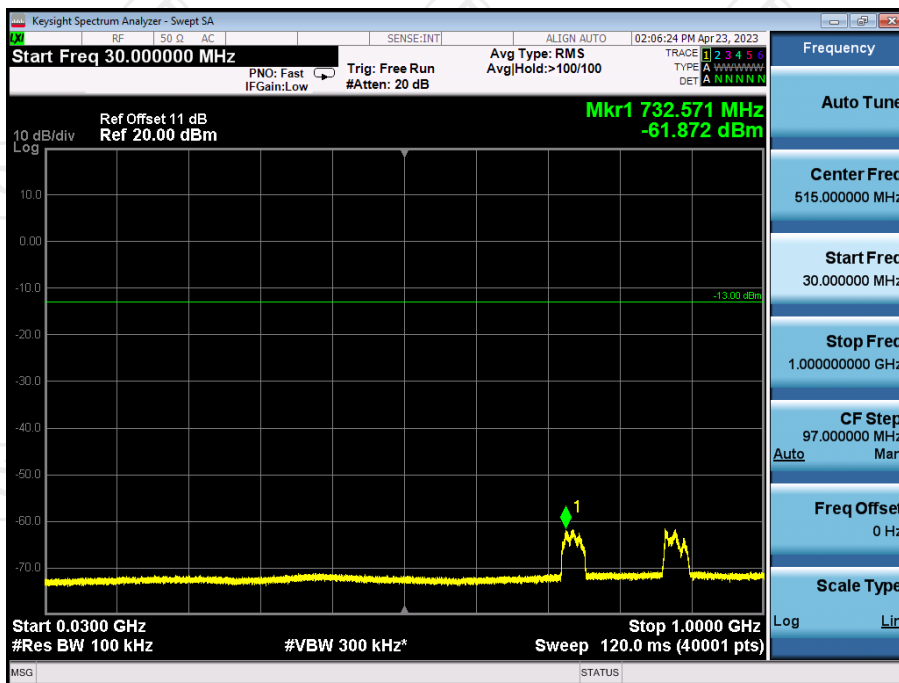
Test Plots

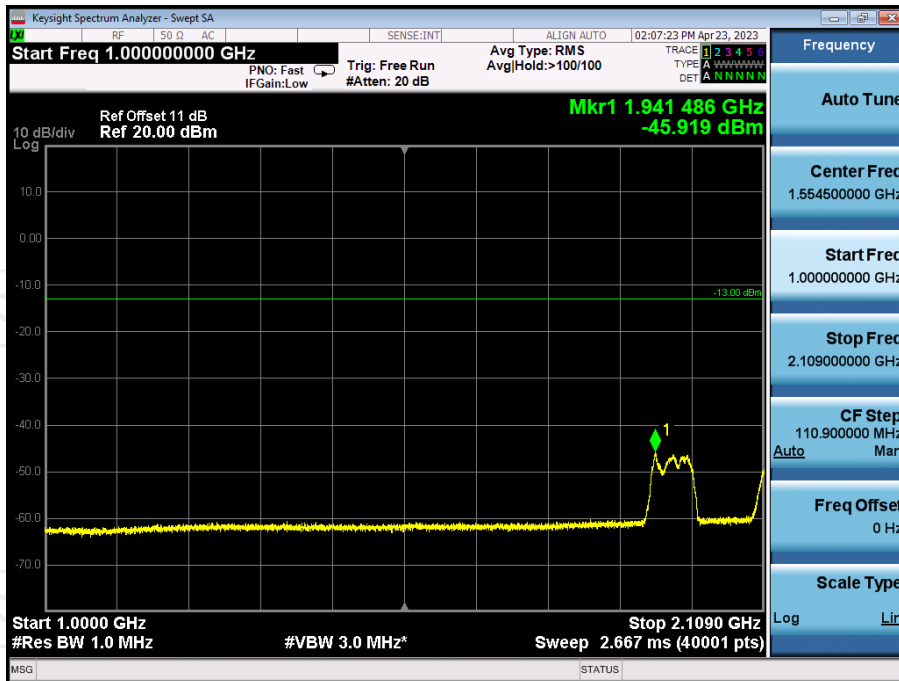
AWS-1 Uplink





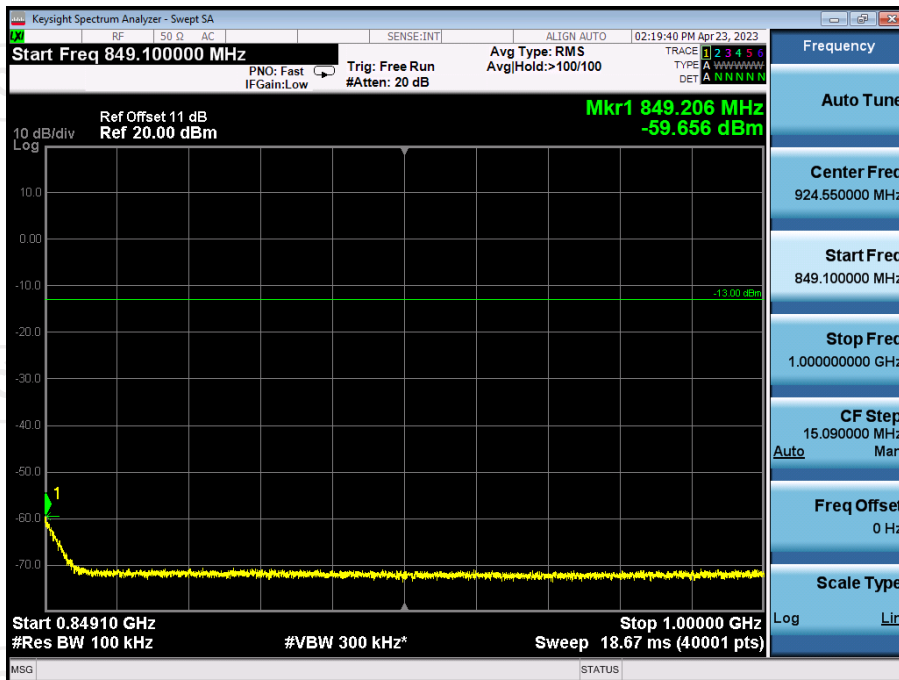
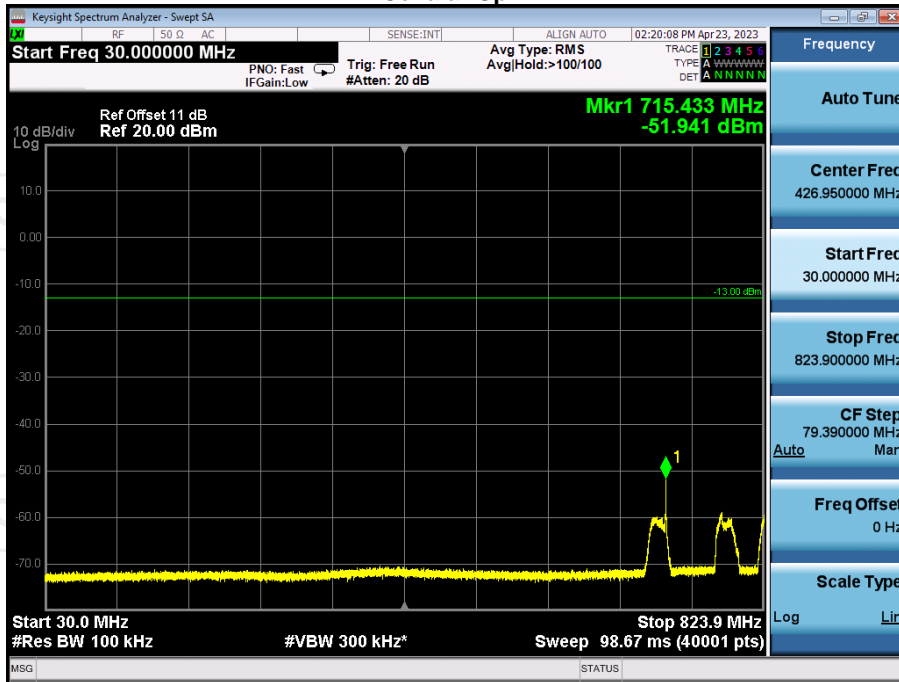
AWS-1 Downlink

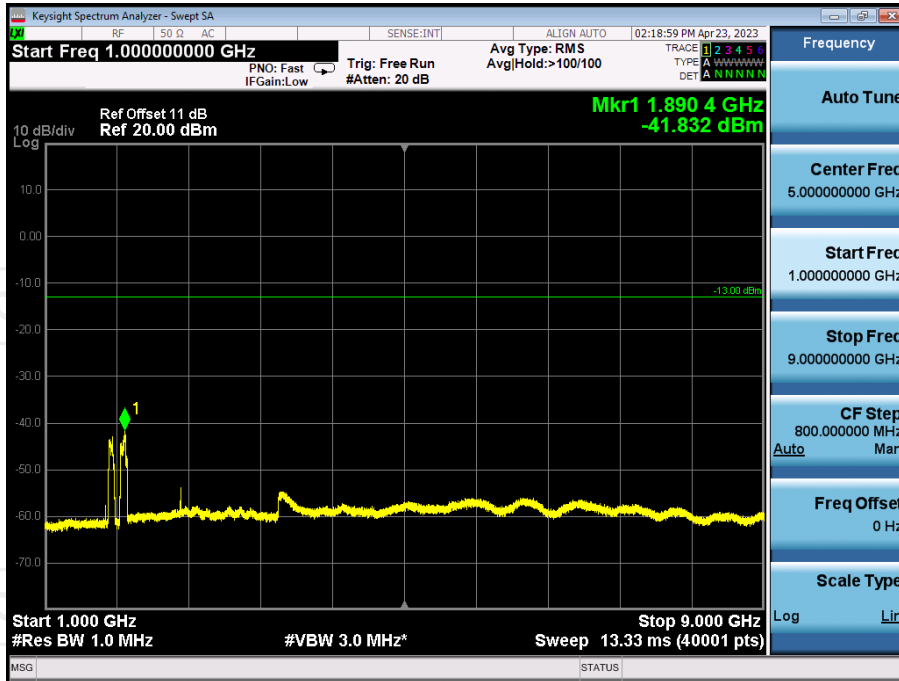




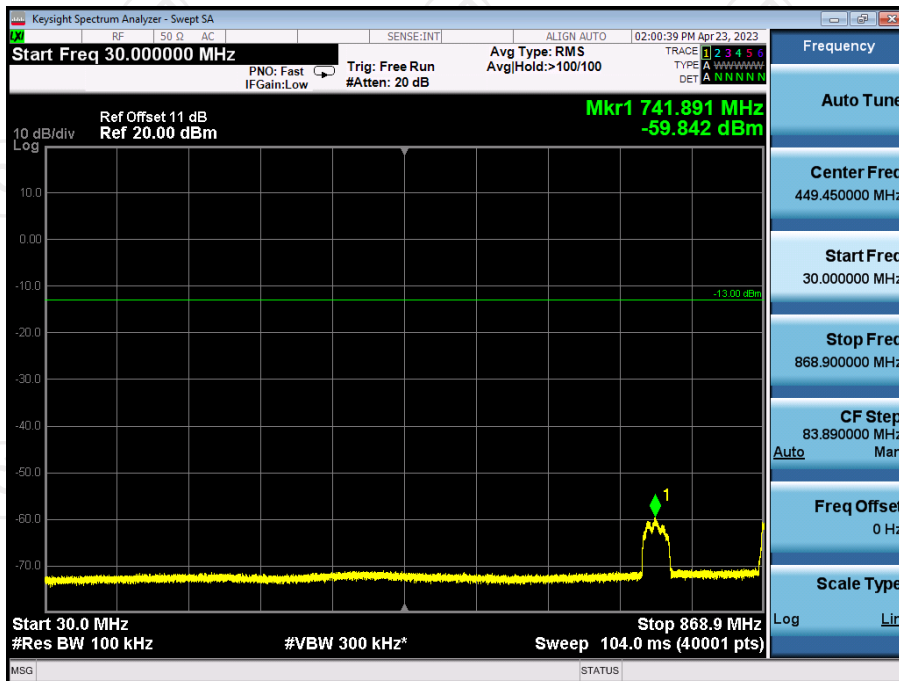
Test Plots

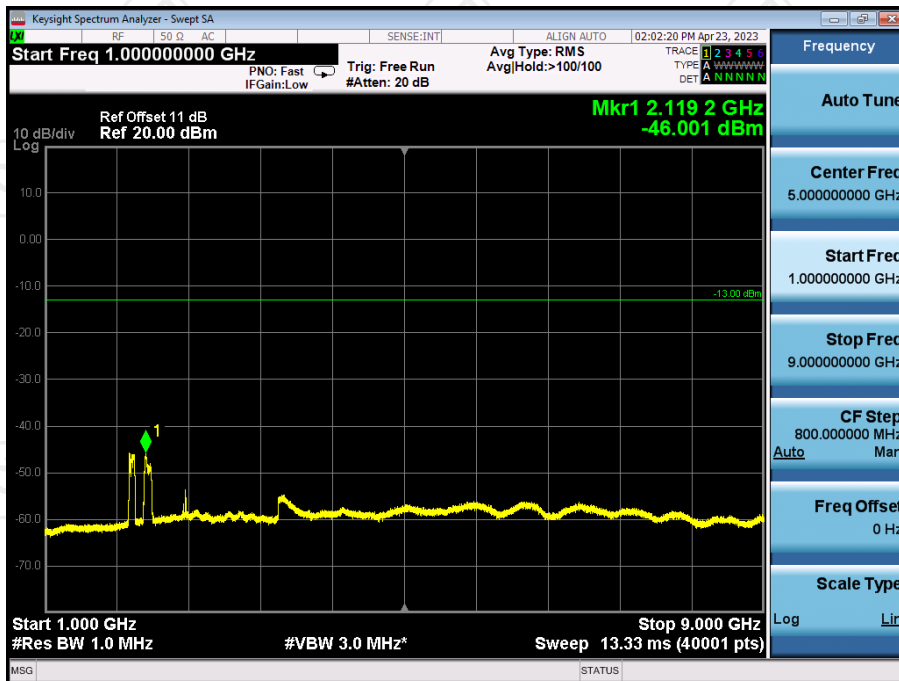
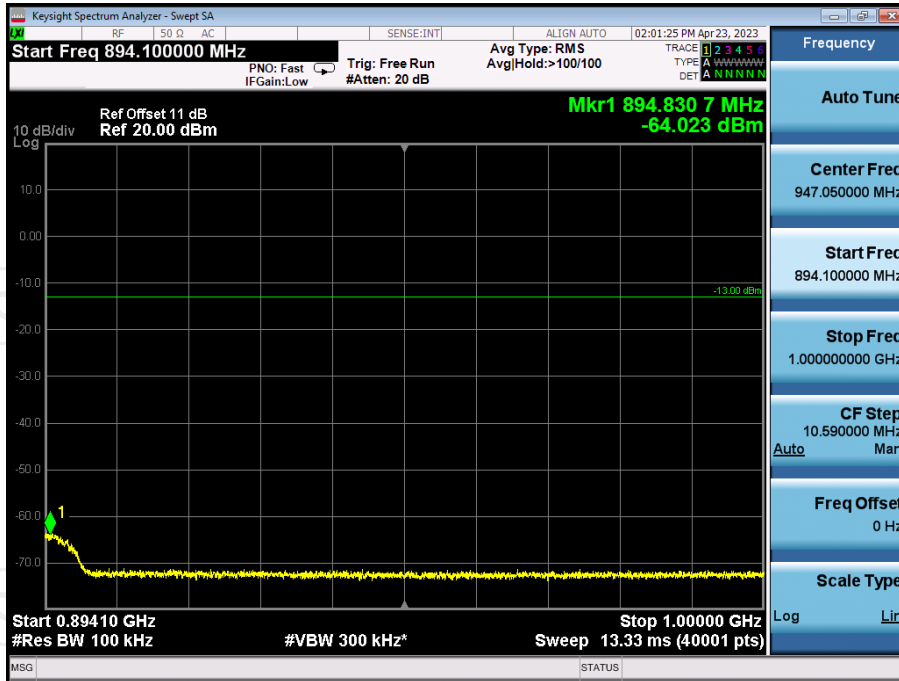
Cellular Uplink





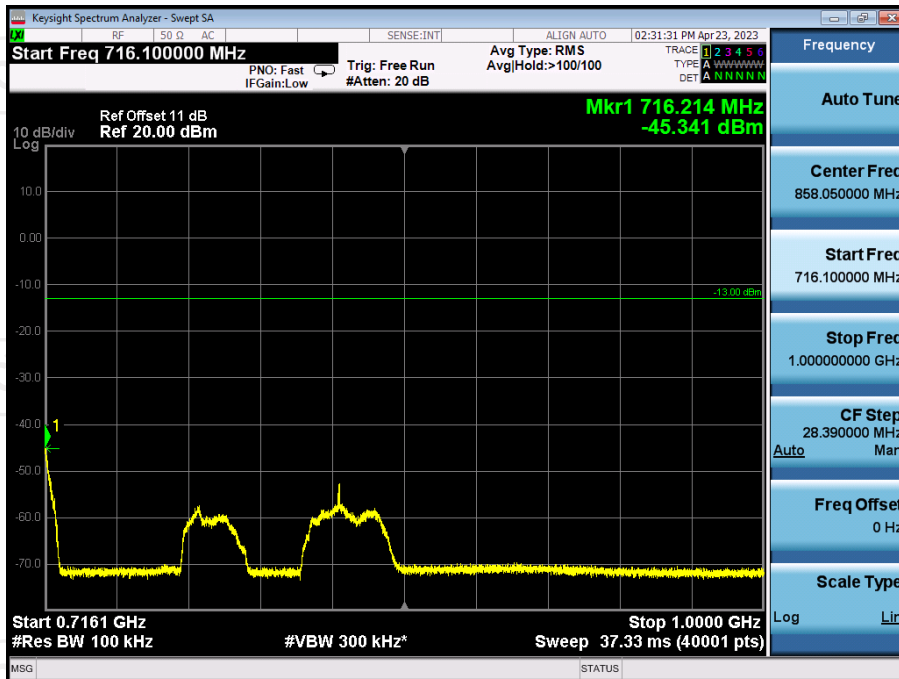
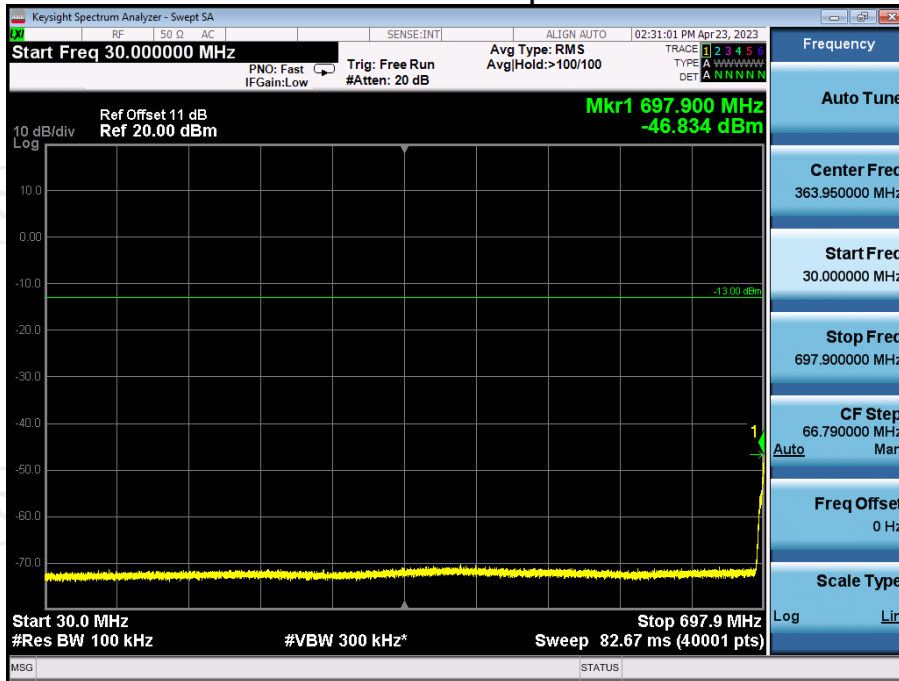
Cellular Downlink

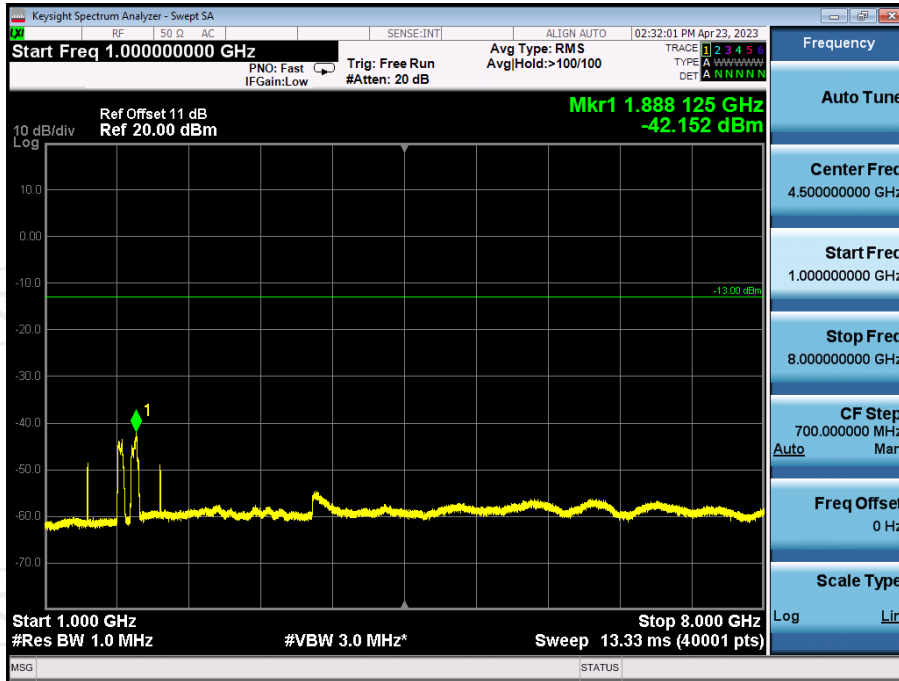




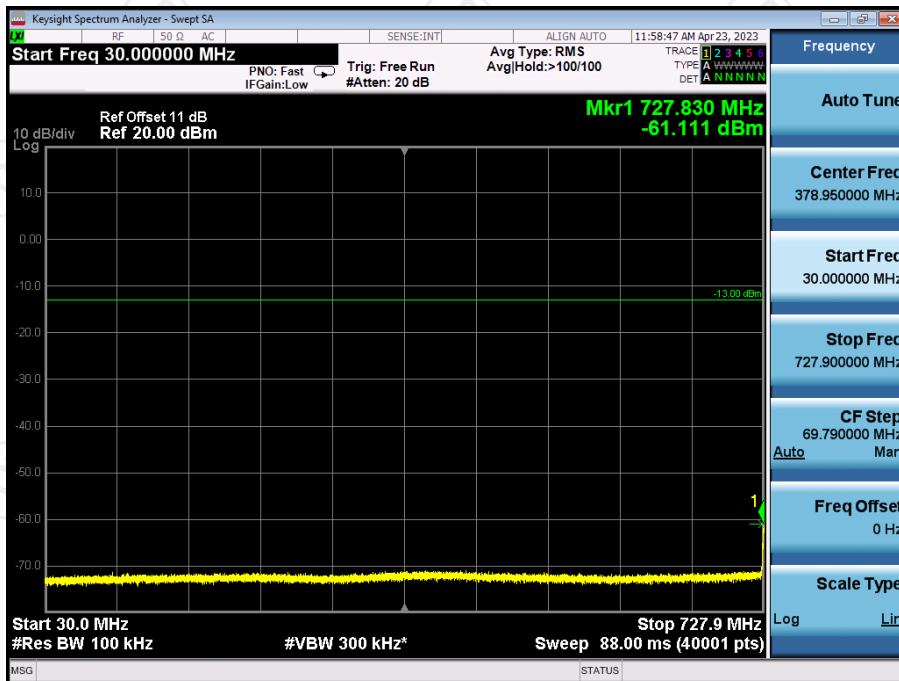
Test Plots

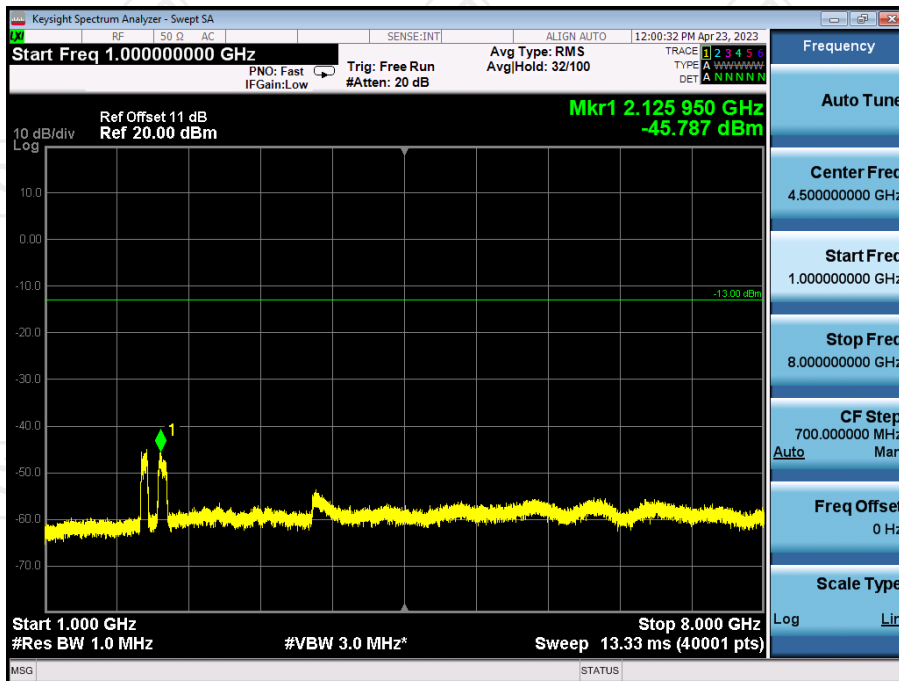
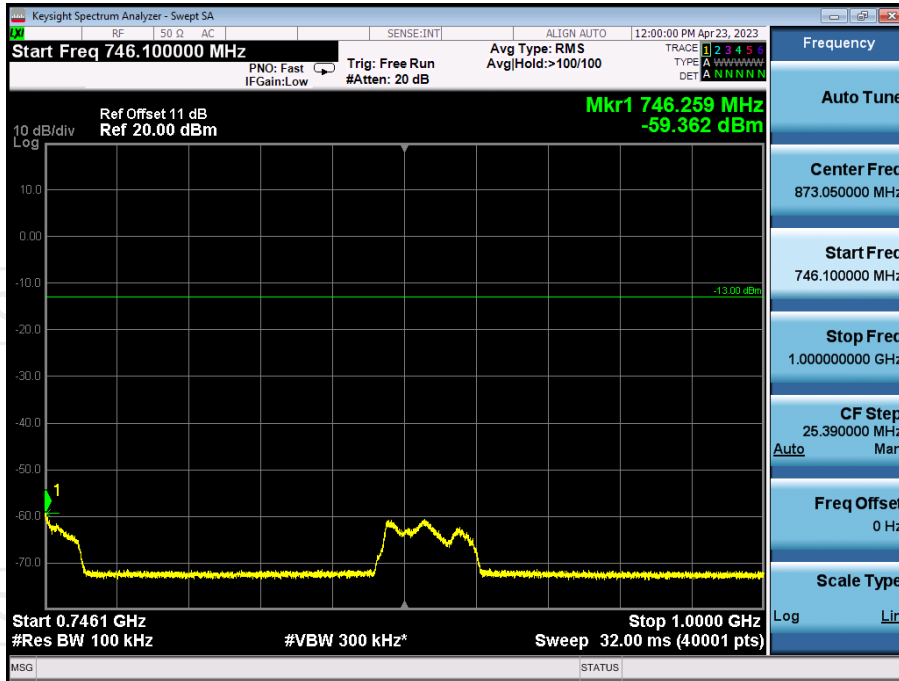
Lower700MHz Uplink





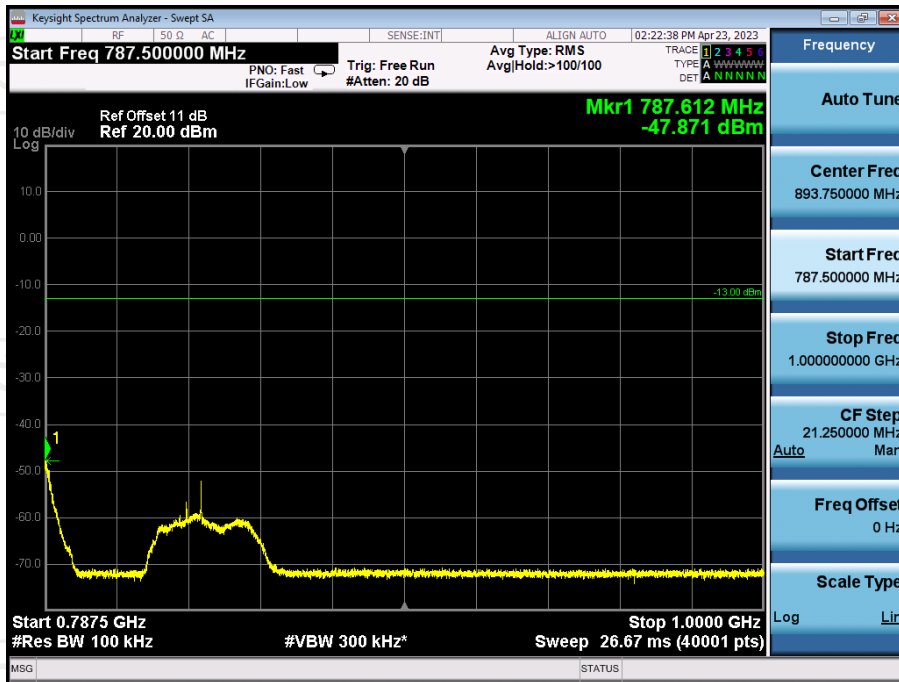
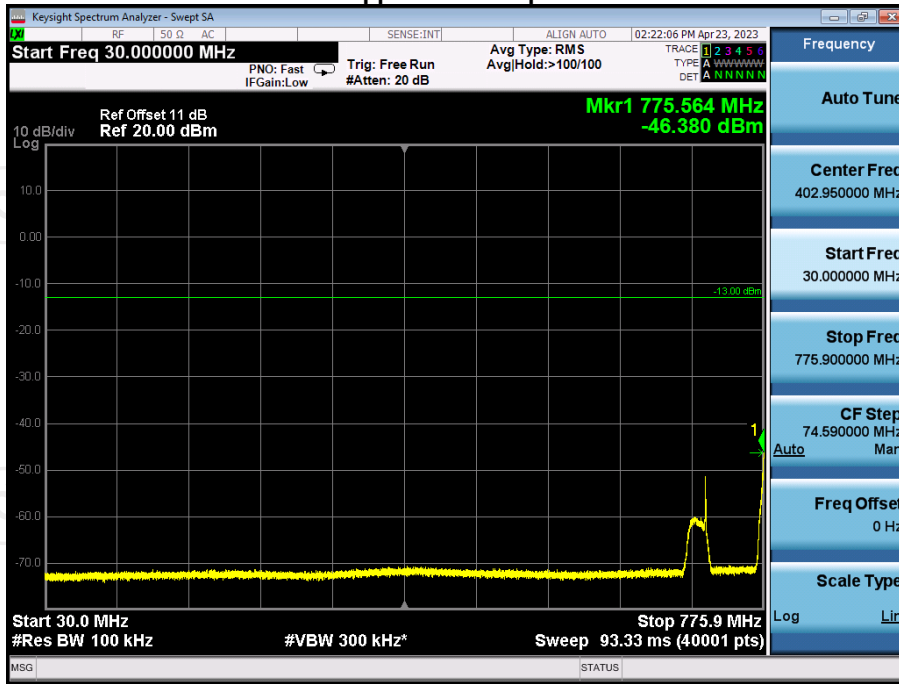
Lower700MHz Downlink

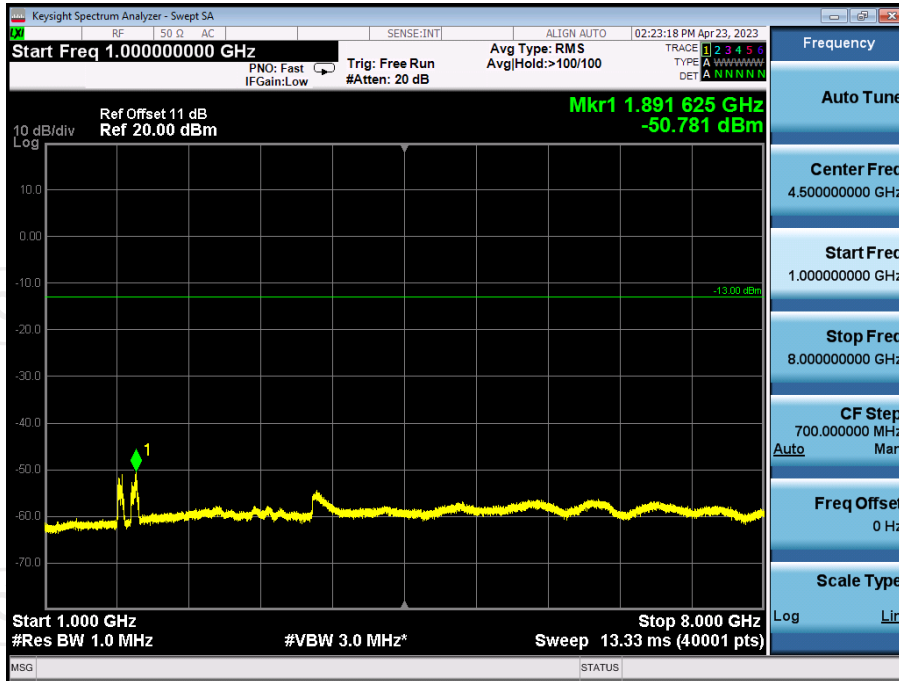




Test Plots

Upper700MHz Uplink





763~775MHz

