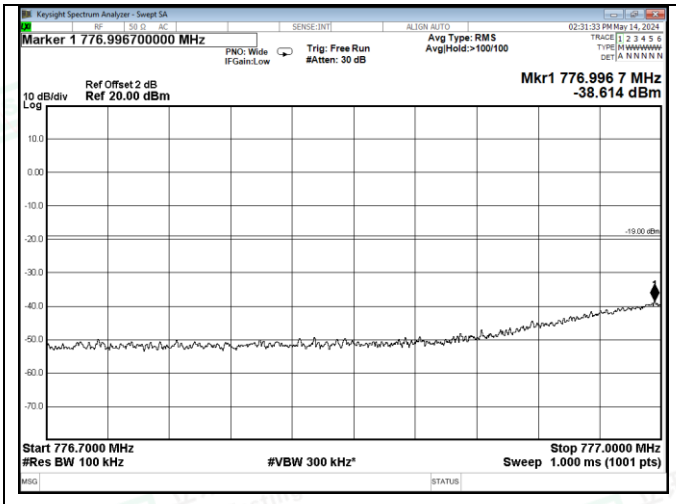
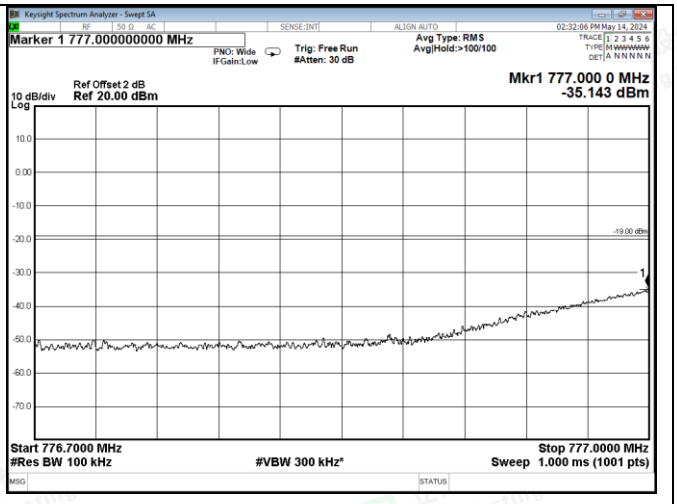
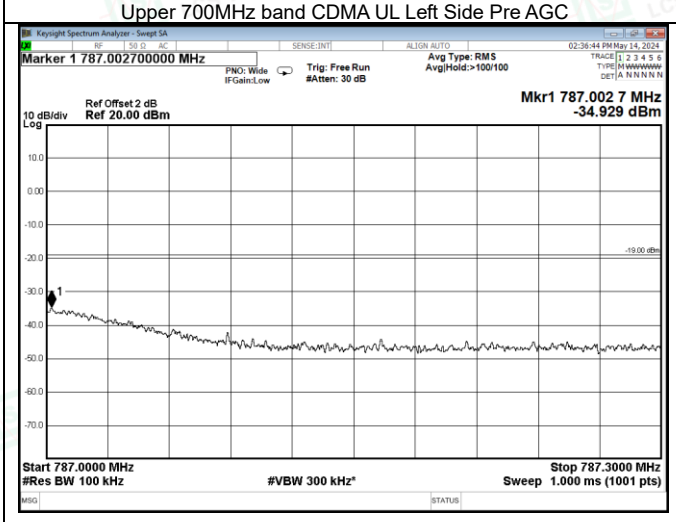


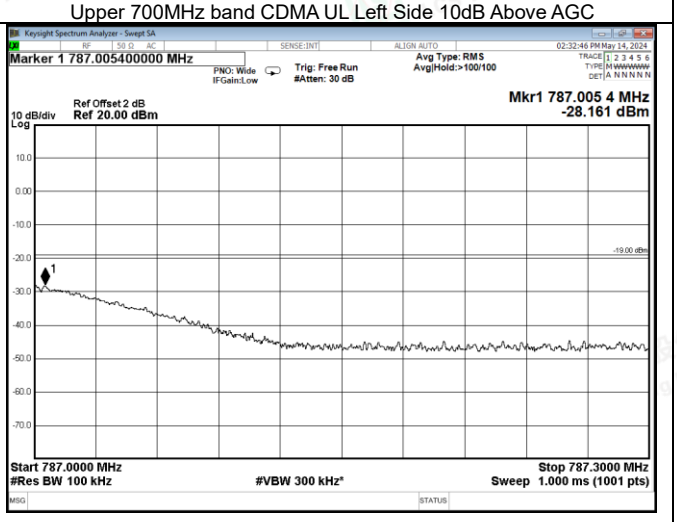
Upper 700MHz band CDMA UL Left Side Pre AGC



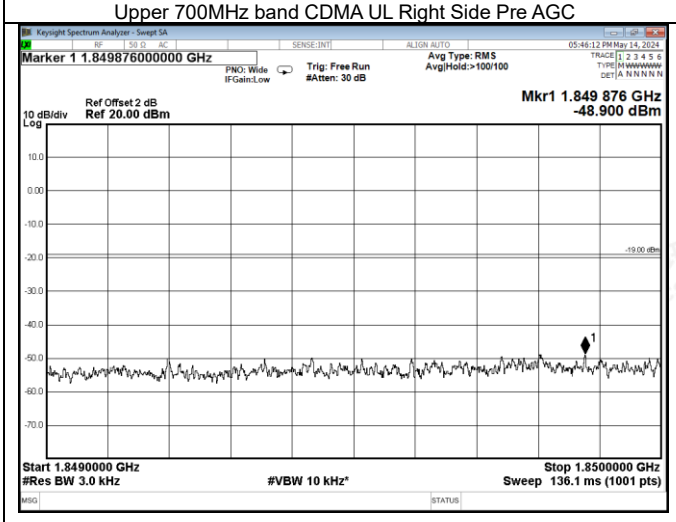
Upper 700MHz band CDMA UL Left Side 10dB Above AGC



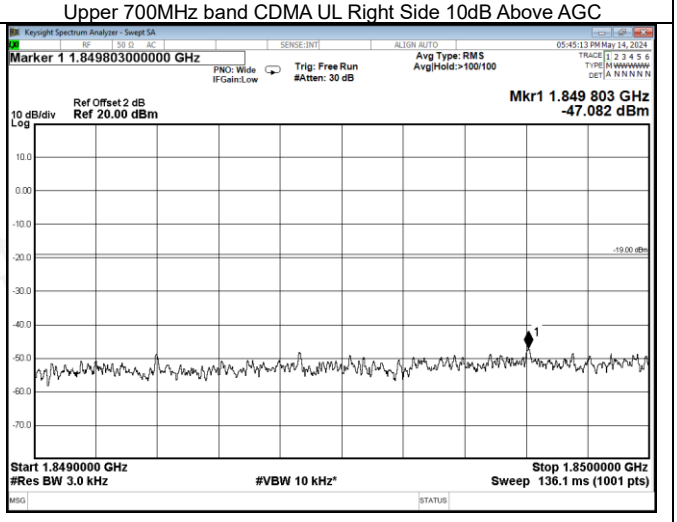
Upper 700MHz band CDMA UL Right Side Pre AGC



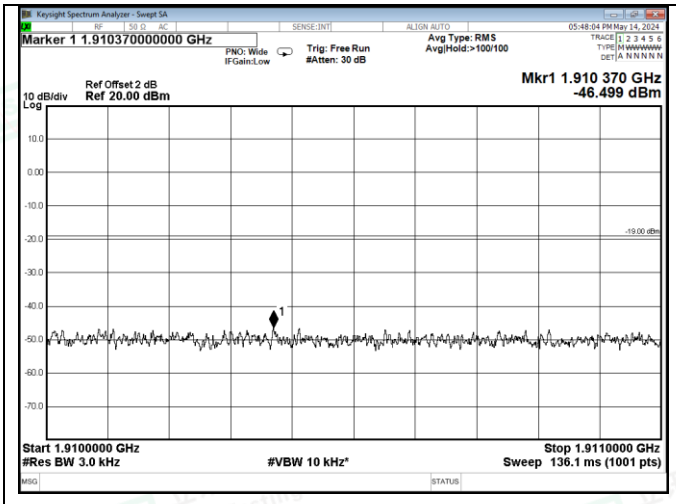
Upper 700MHz band CDMA UL Right Side 10dB Above AGC



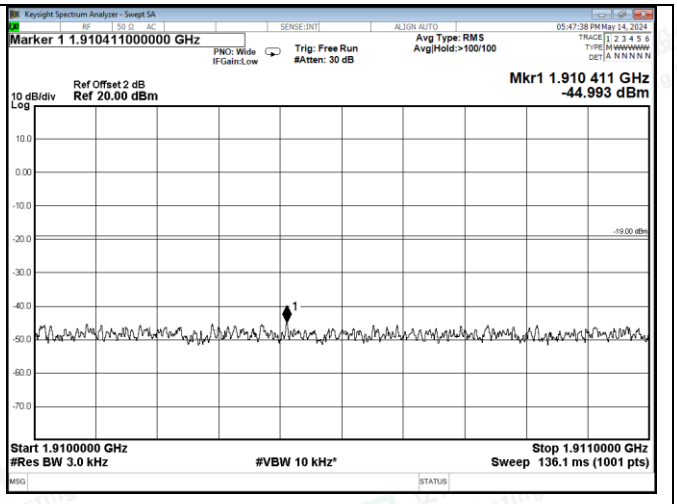
PCS Band LTE UL Left Side Pre AGC



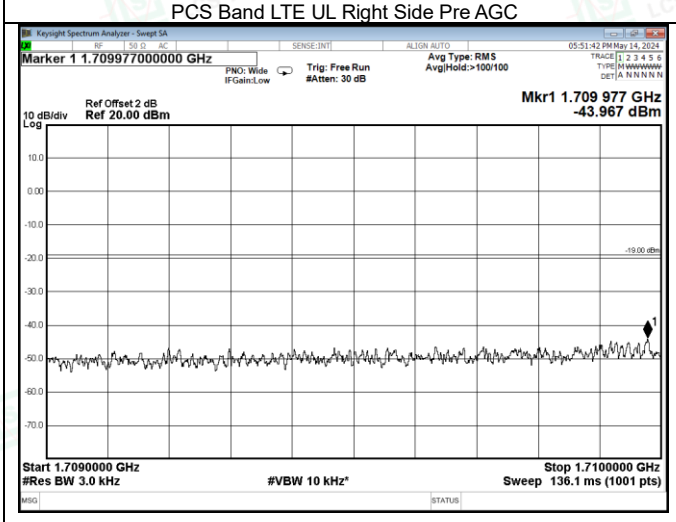
PCS Band LTE UL Left Side 10dB Above AGC



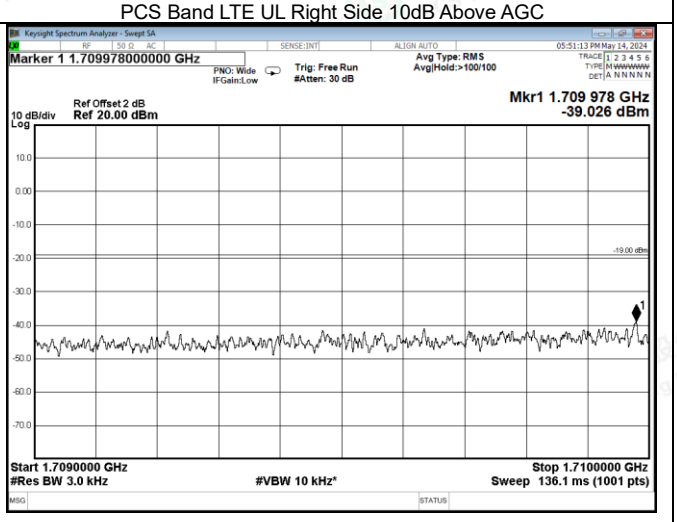
PCS Band LTE UL Right Side Pre AGC



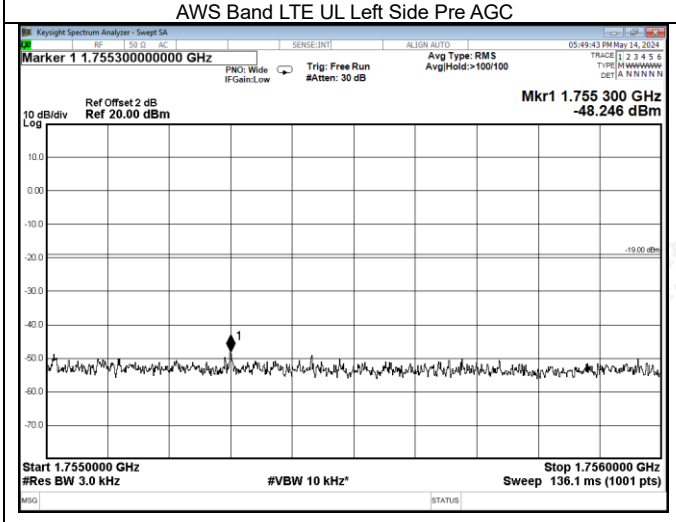
PCS Band LTE UL Right Side 10dB Above AGC



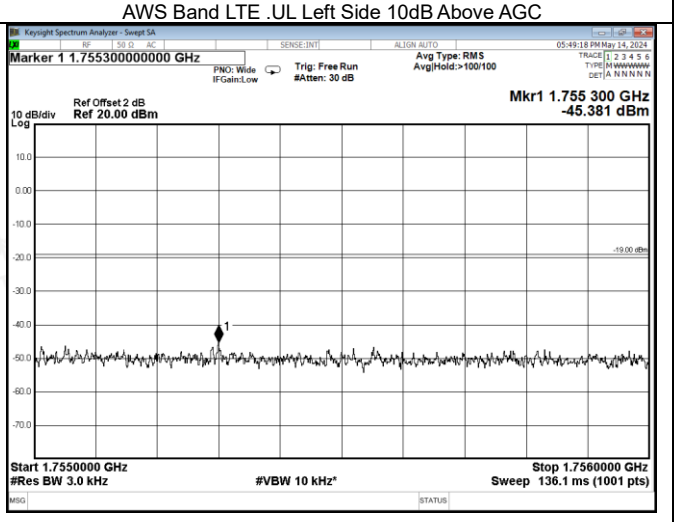
AWS Band LTE UL Left Side Pre AGC



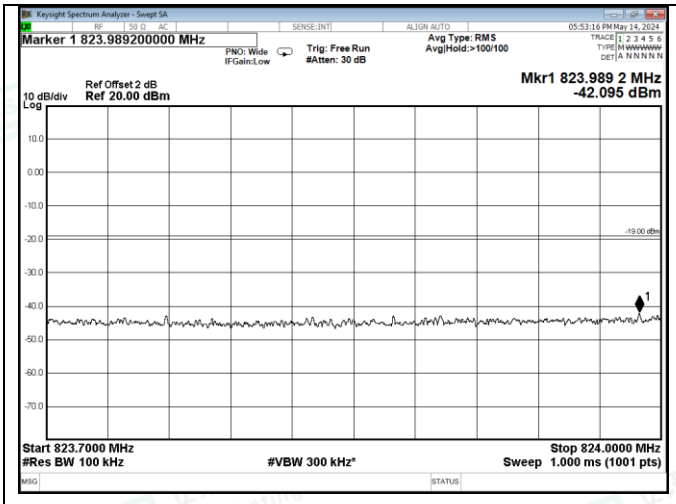
AWS Band LTE .UL Left Side 10dB Above AGC



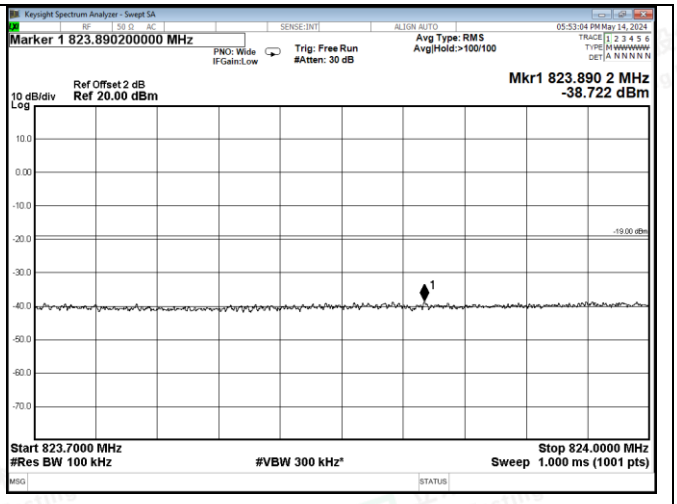
AWS Band LTE UL Right Side Pre AGC



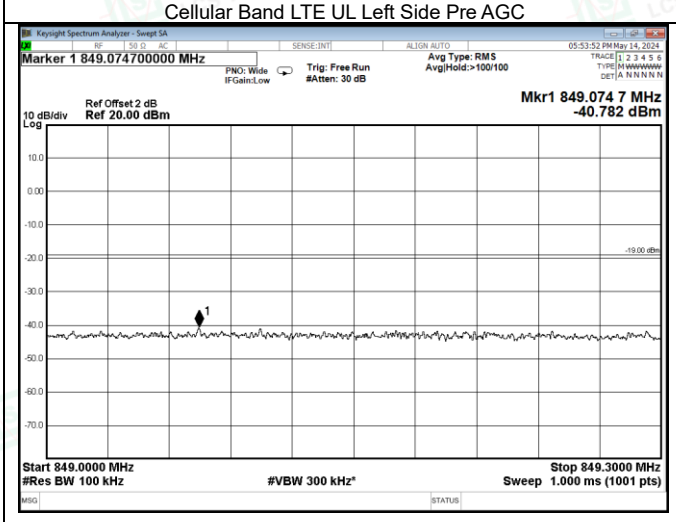
AWS Band LTE UL Right Side 10dB Above AGC



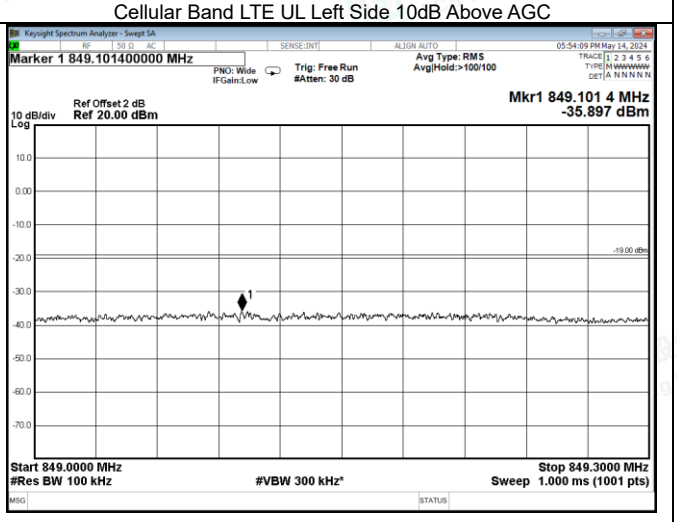
Cellular Band LTE UL Left Side Pre AGC



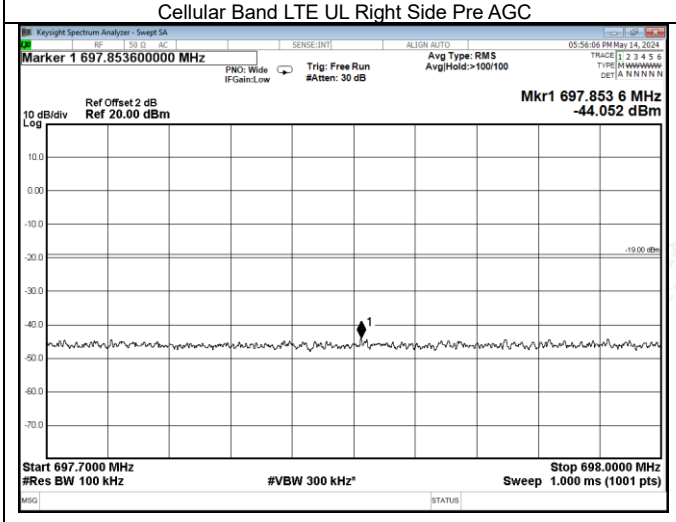
Cellular Band LTE UL Left Side 10dB Above AGC



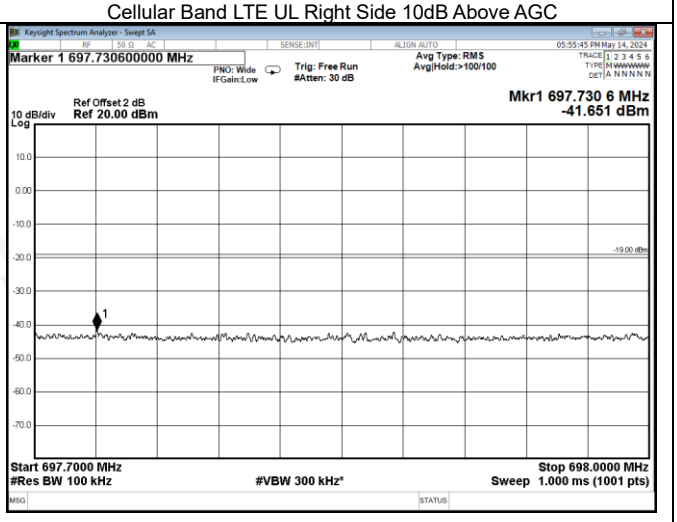
Cellular Band LTE UL Right Side Pre AGC



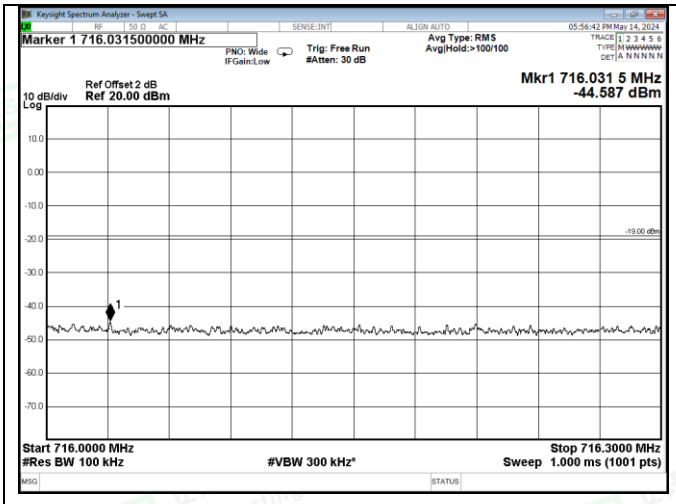
Cellular Band LTE UL Right Side 10dB Above AGC



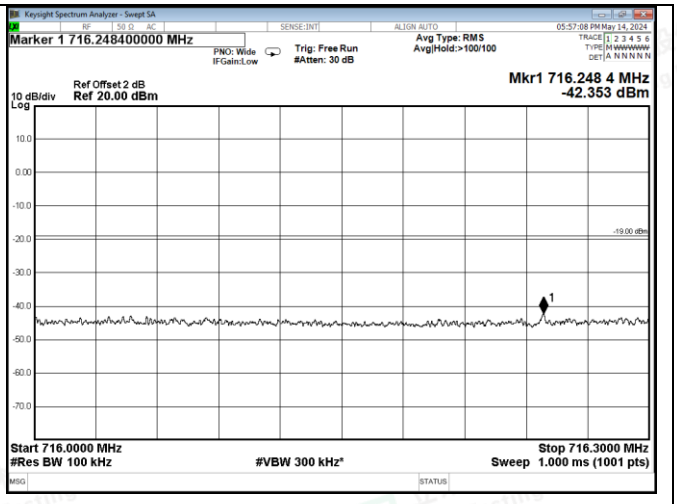
Lower 700MHz band LTE UL Left Side Pre AGC



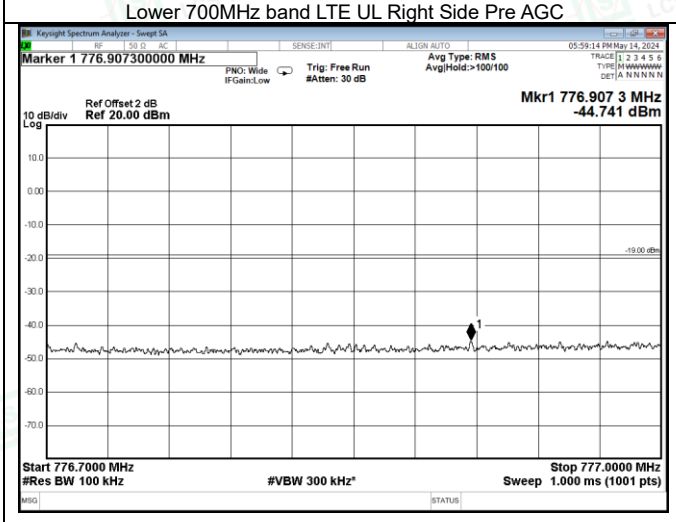
Lower 700MHz band LTE UL Left Side 10dB Above AGC



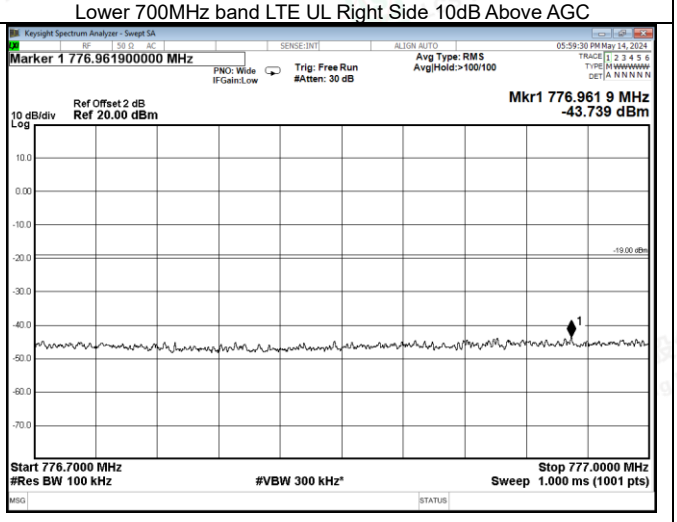
Lower 700MHz band LTE UL Right Side Pre AGC



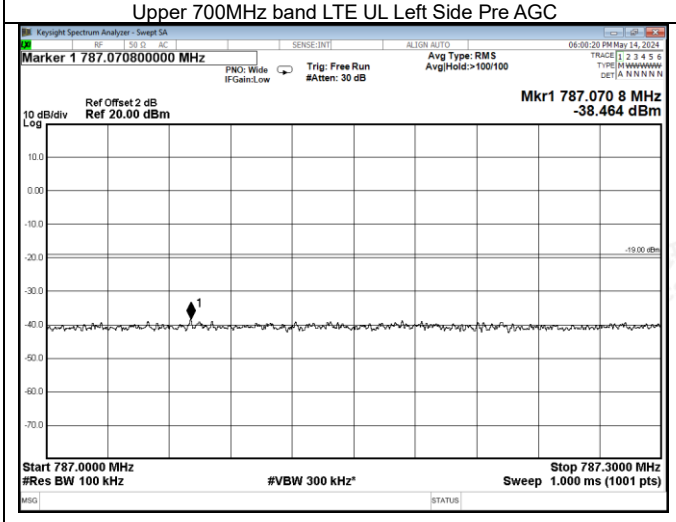
Lower 700MHz band LTE UL Right Side 10dB Above AGC



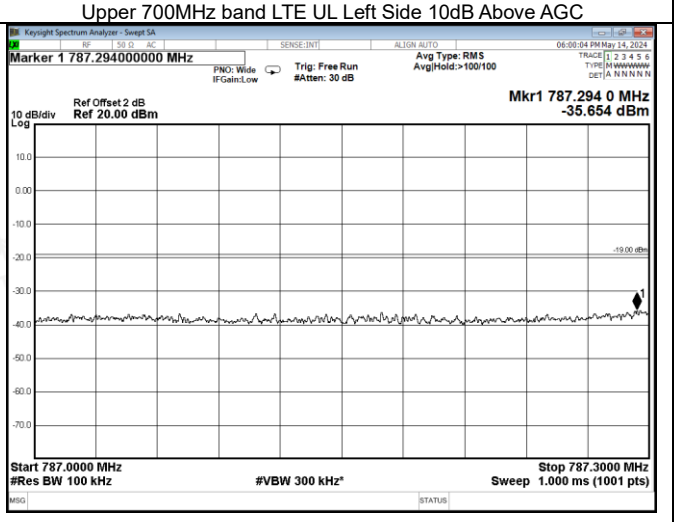
Upper 700MHz band LTE UL Left Side Pre AGC



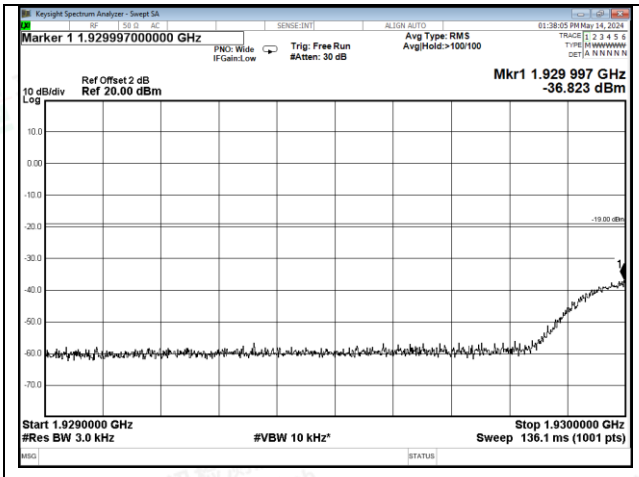
Upper 700MHz band LTE UL Left Side 10dB Above AGC



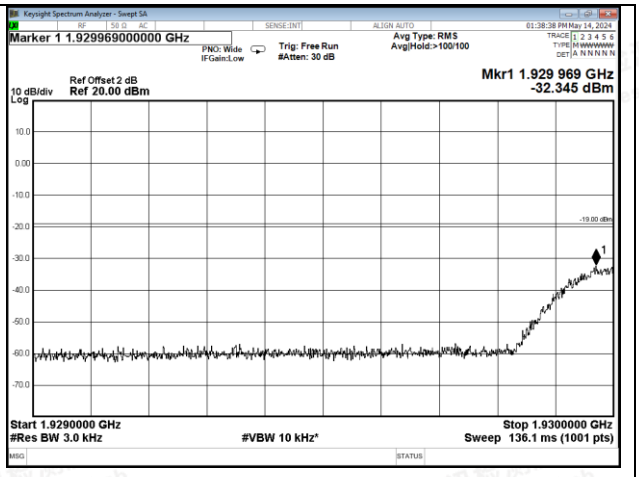
Upper 700MHz band LTE UL Right Side Pre AGC



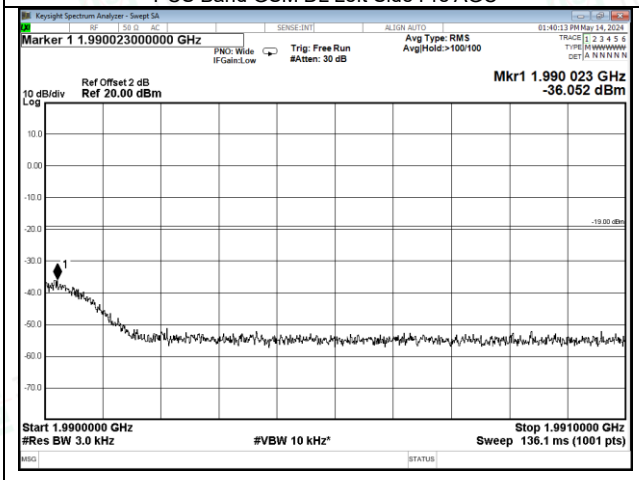
Upper 700MHz band3 LTE UL Right Side 10dB Above AGC



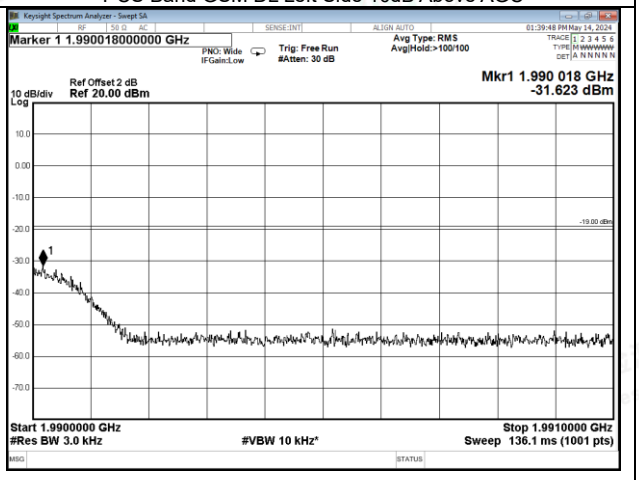
PCS Band GSM DL Left Side Pre AGC



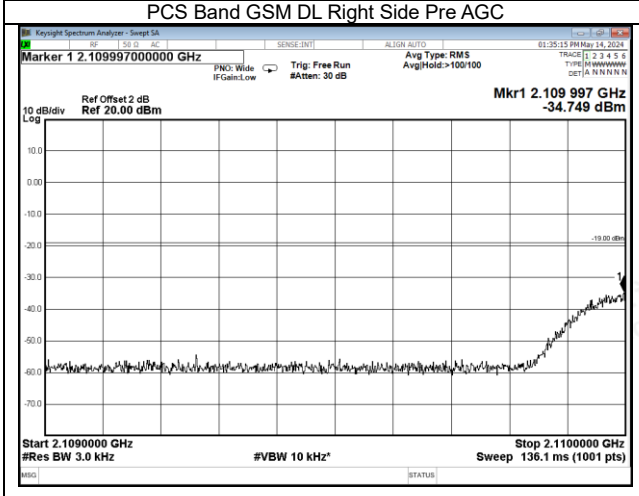
PCS Band GSM DL Left Side 10dB Above AGC



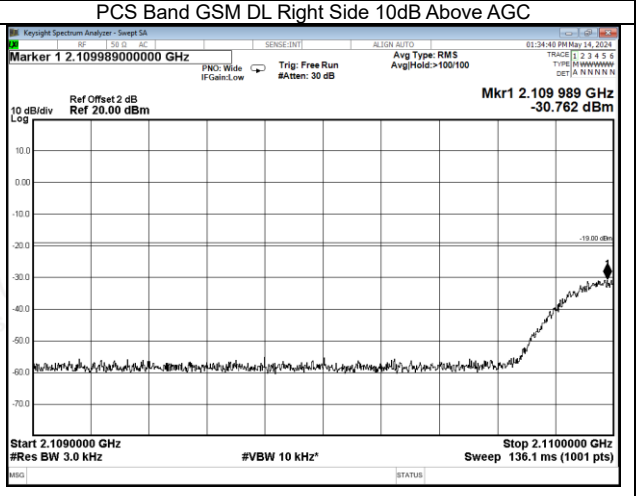
PCS Band GSM DL Right Side Pre AGC



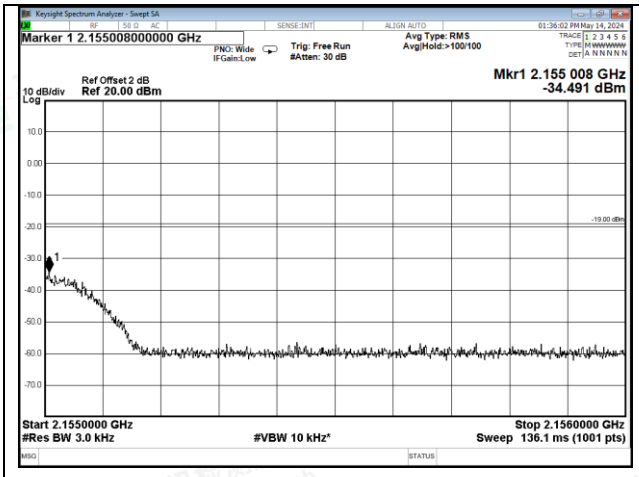
PCS Band GSM DL Right Side 10dB Above AGC



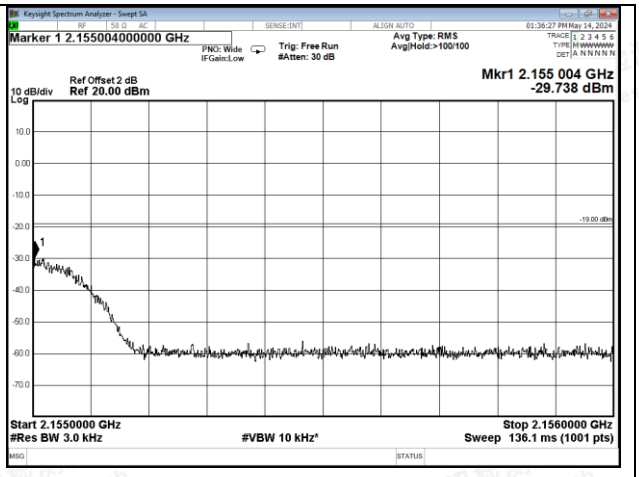
AWS Band GSM DL Left Side Pre AGC



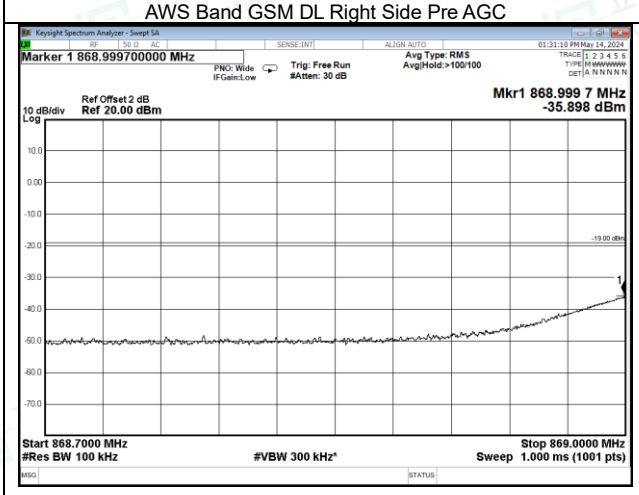
AWS Band GSM DL Left Side 10dB Above AGC



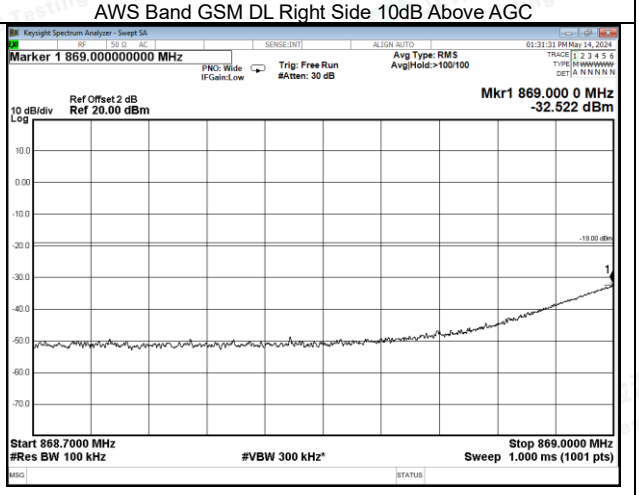
AWS Band GSM DL Right Side Pre AGC



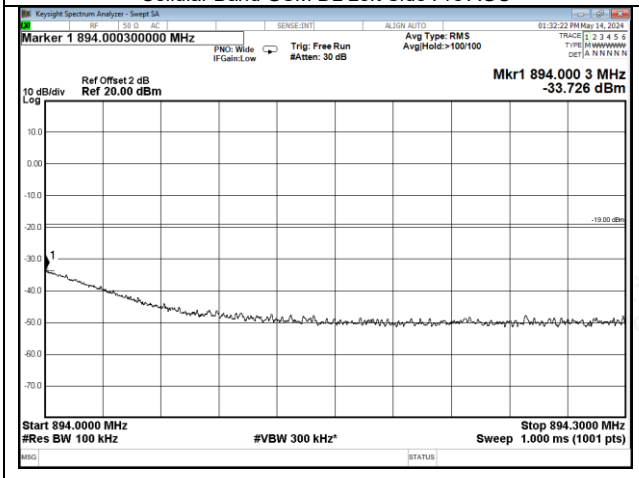
AWS Band GSM DL Right Side 10dB Above AGC



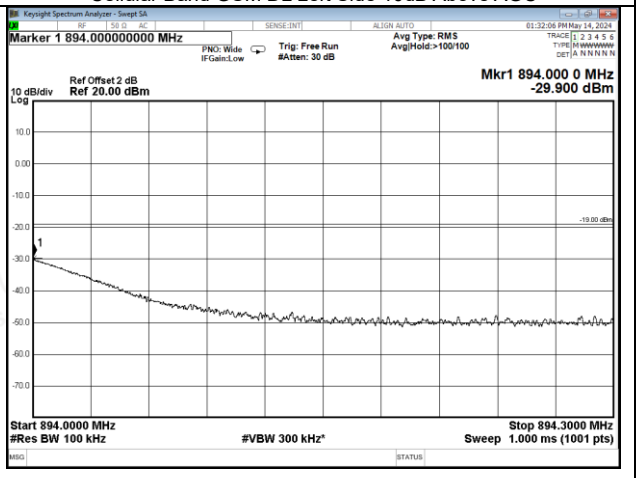
Cellular Band GSM DL Left Side Pre AGC



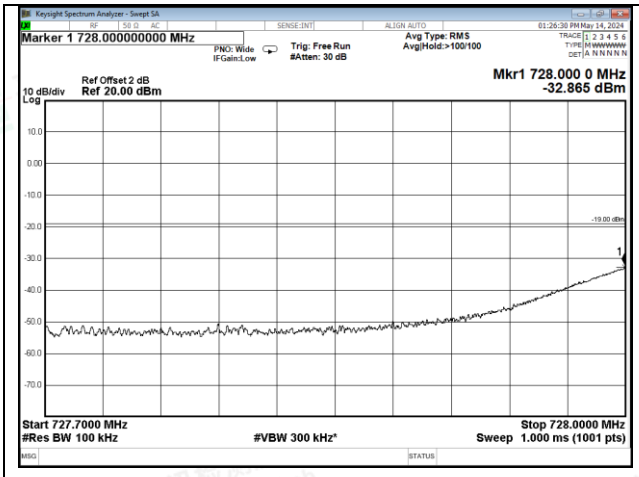
Cellular Band GSM DL Left Side 10dB Above AGC



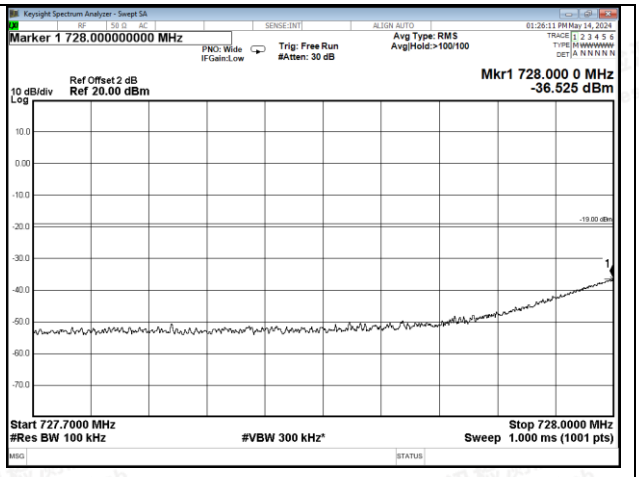
Cellular Band GSM DL Right Side Pre AGC



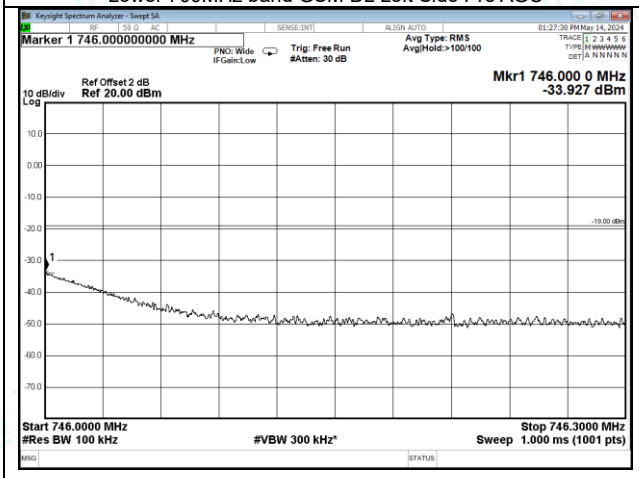
Cellular Band GSM DL Right Side 10dB Above AGC



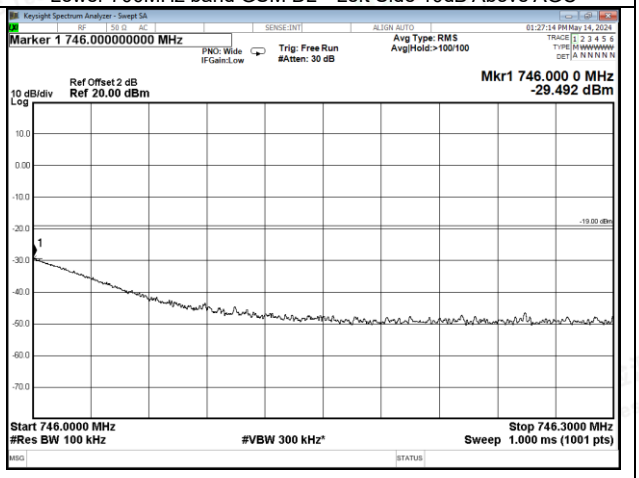
Lower 700MHz band GSM DL Left Side Pre AGC



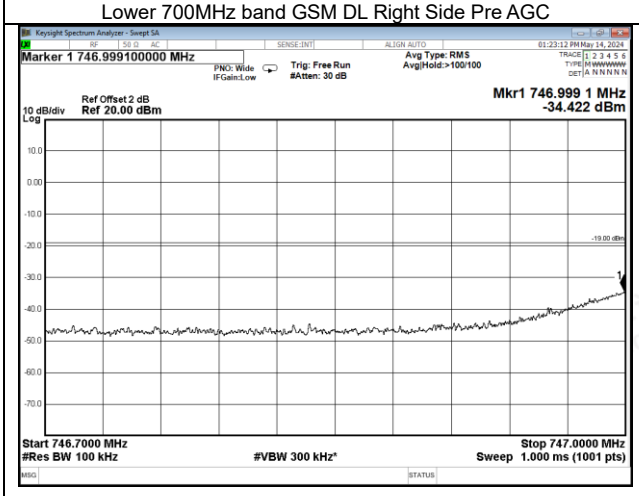
Lower 700MHz band GSM DL Left Side 10dB Above AGC



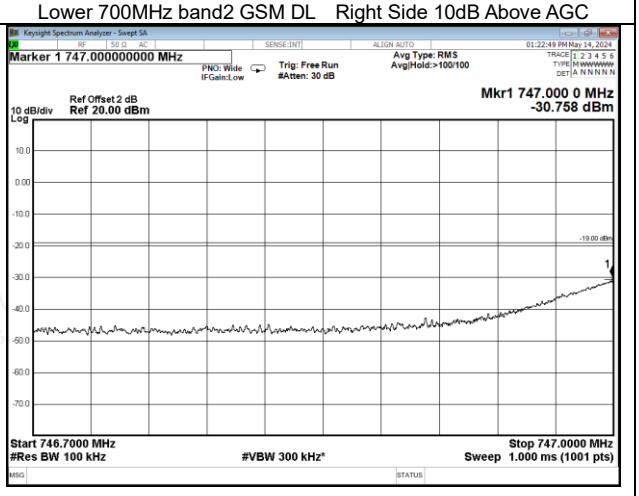
Lower 700MHz band GSM DL Right Side Pre AGC



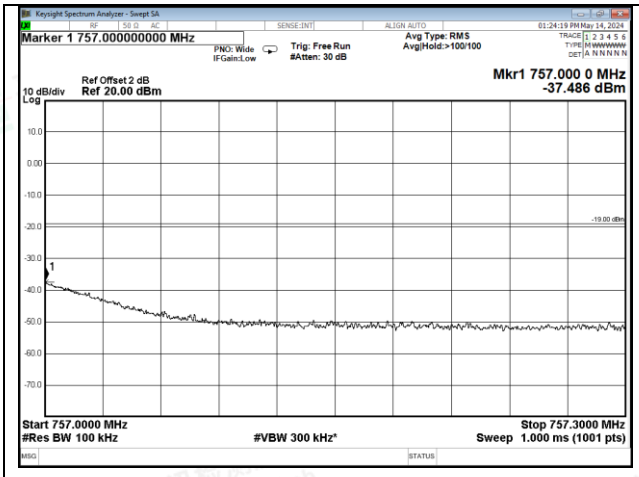
Lower 700MHz band2 GSM DL Right Side 10dB Above AGC



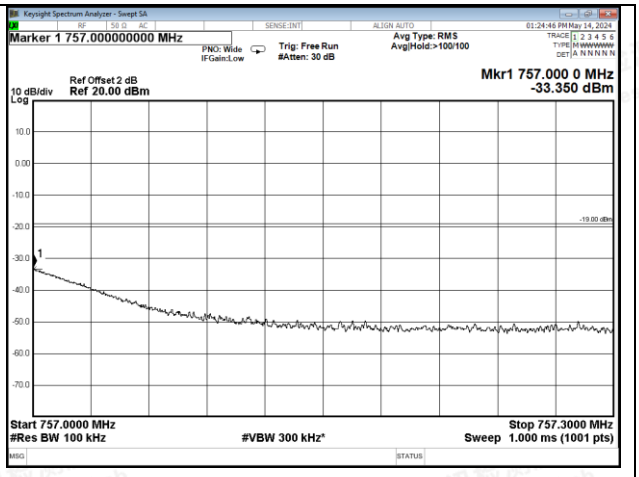
Upper 700MHz band GSM DL Left Side Pre AGC



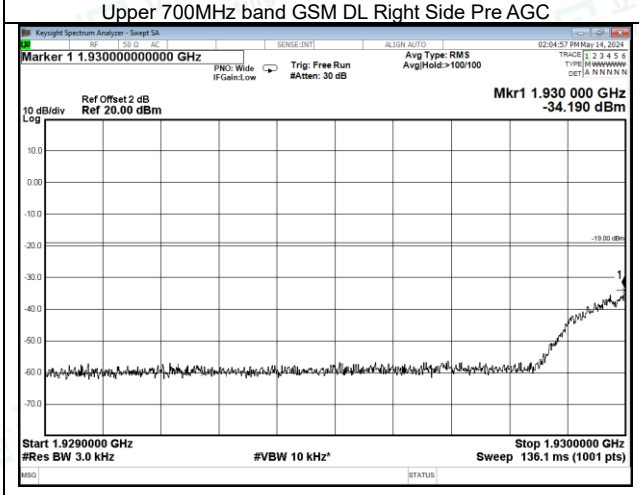
Upper 700MHz band GSM DL Left Side 10dB Above AGC



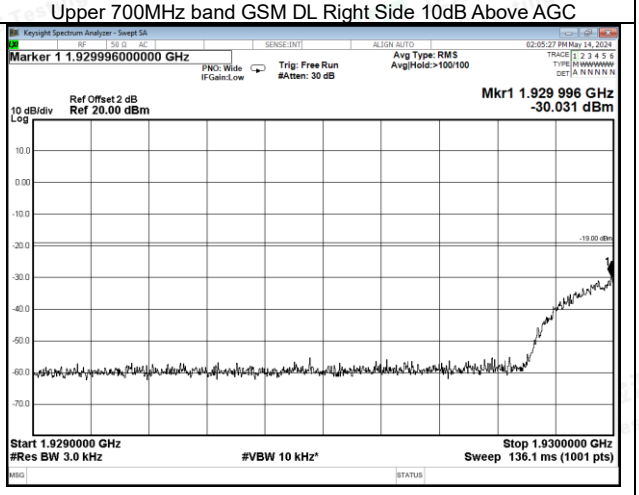
Upper 700MHz band GSM DL Right Side Pre AGC



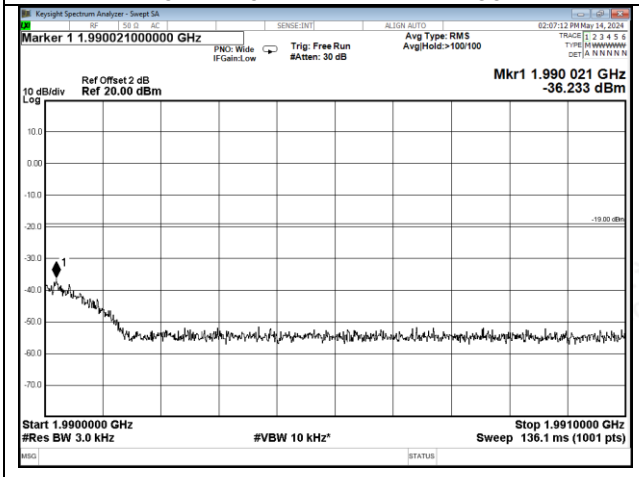
Upper 700MHz band GSM DL Right Side 10dB Above AGC



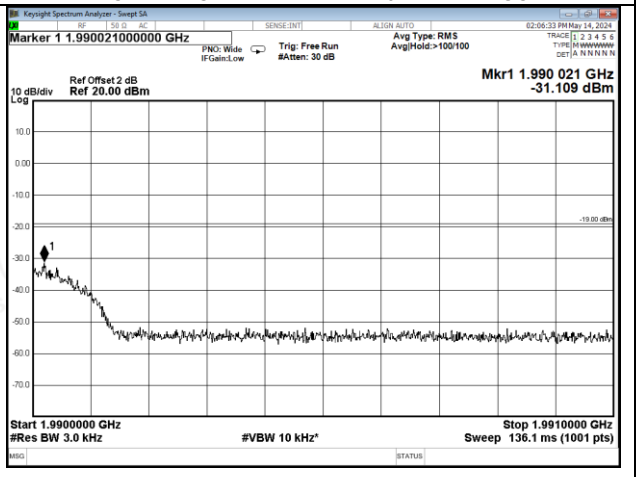
PCS Band CDMA DL Left Side Pre AGC



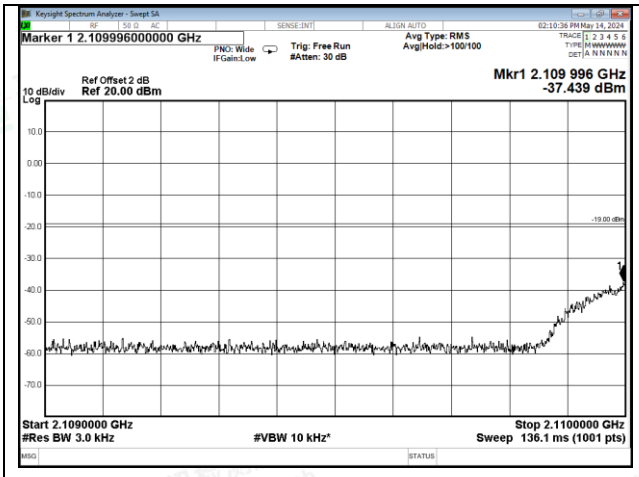
PCS Band CDMA DL Left Side 10dB Above AGC



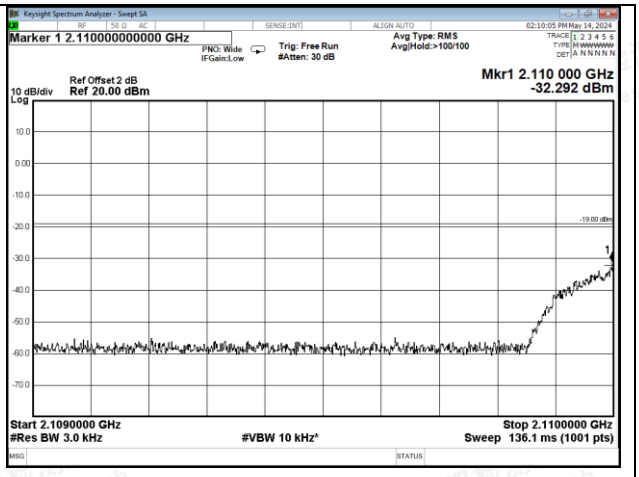
PCS Band CDMA DL Right Side Pre AGC



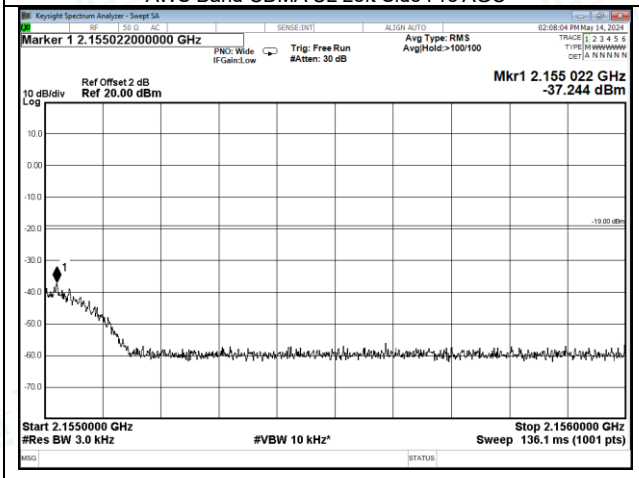
PCS Band CDMA DL Right Side 10dB Above AGC



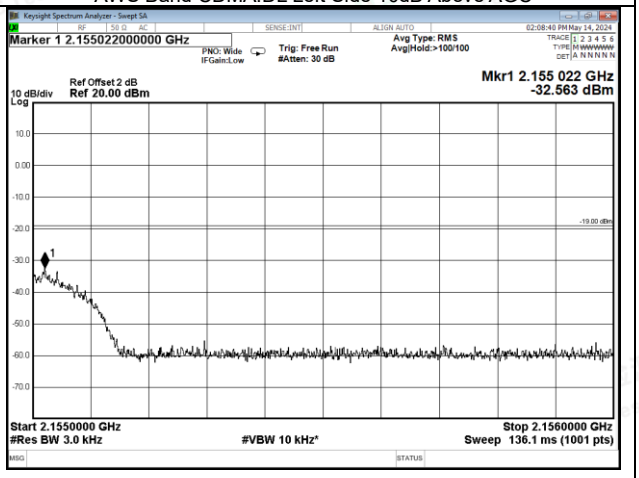
AWS Band CDMA UL Left Side Pre AGC



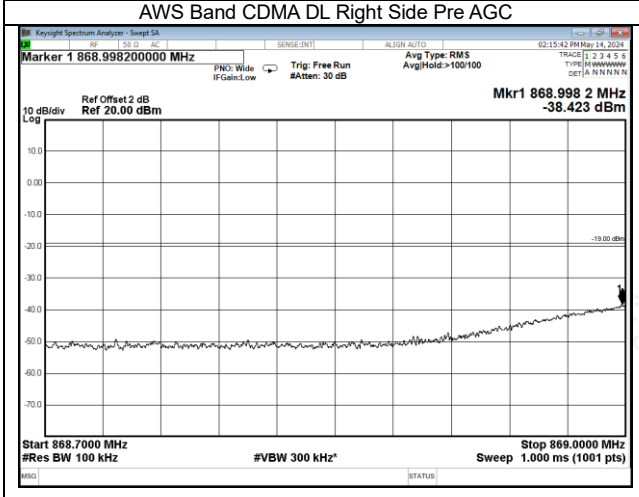
AWS Band CDMA.DL Left Side 10dB Above AGC



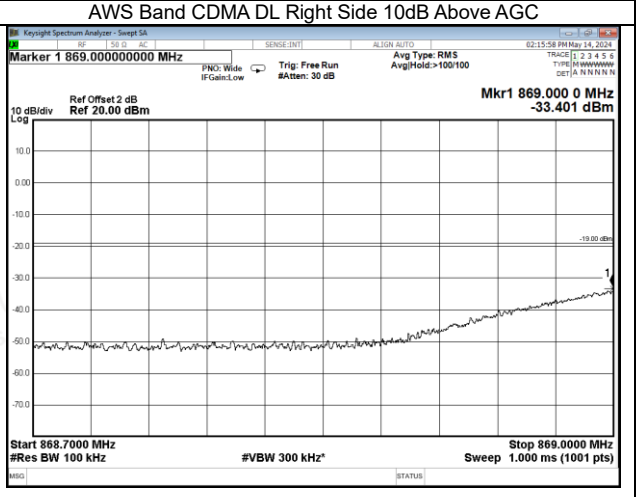
AWS Band CDMA DL Right Side Pre AGC



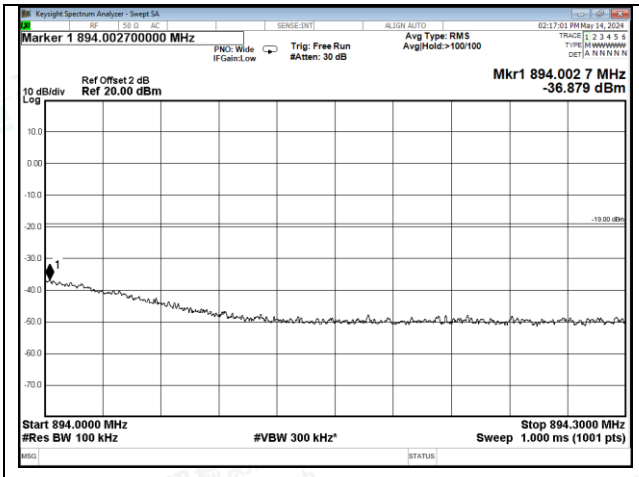
AWS Band CDMA DL Right Side 10dB Above AGC



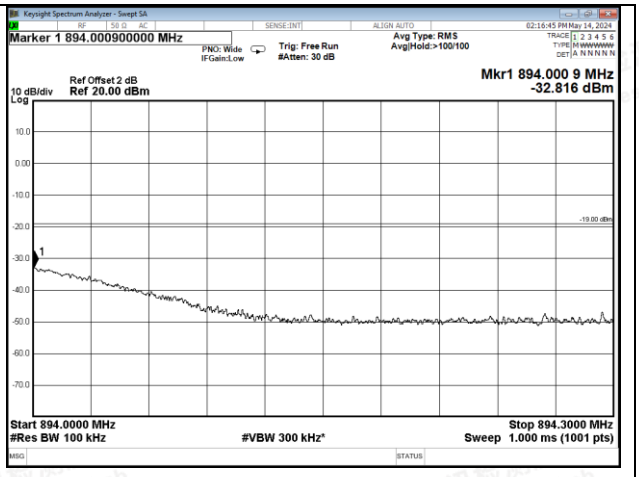
Cellular Band CDMA DL Left Side Pre AGC



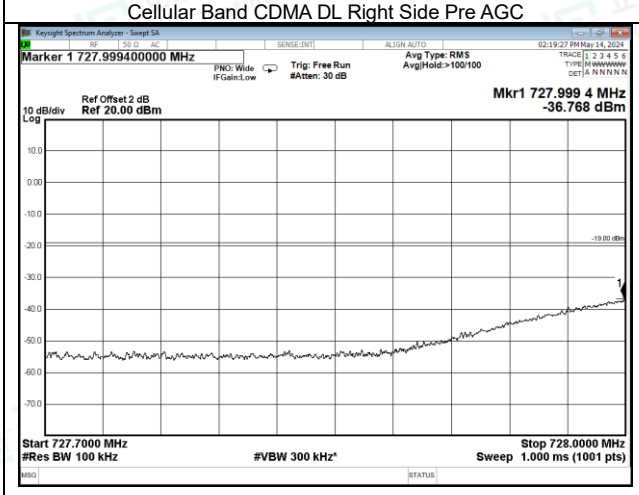
Cellular Band CDMA DL Left Side 10dB Above AGC



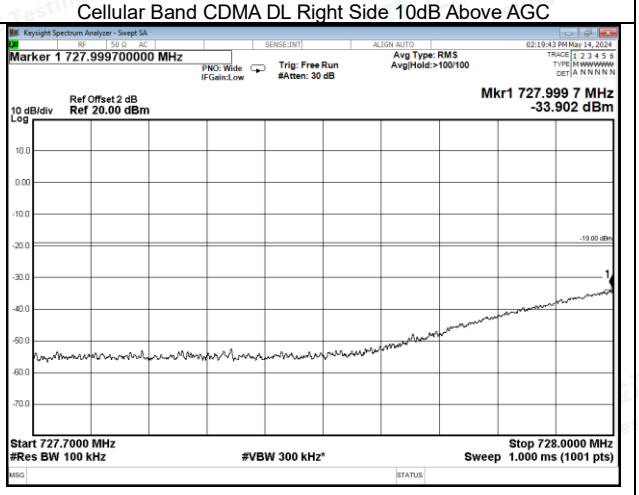
Cellular Band CDMA DL Right Side Pre AGC



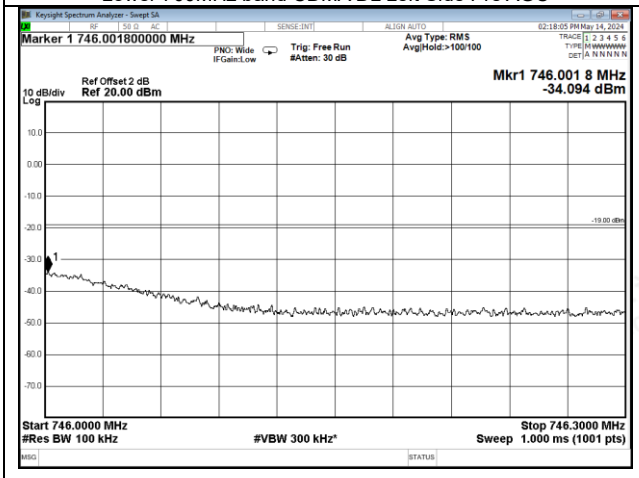
Cellular Band CDMA DL Right Side 10dB Above AGC



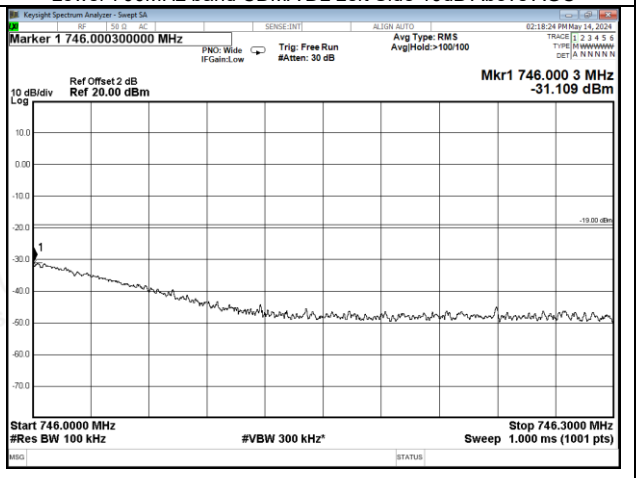
Lower 700MHz band CDMA DL Left Side Pre AGC



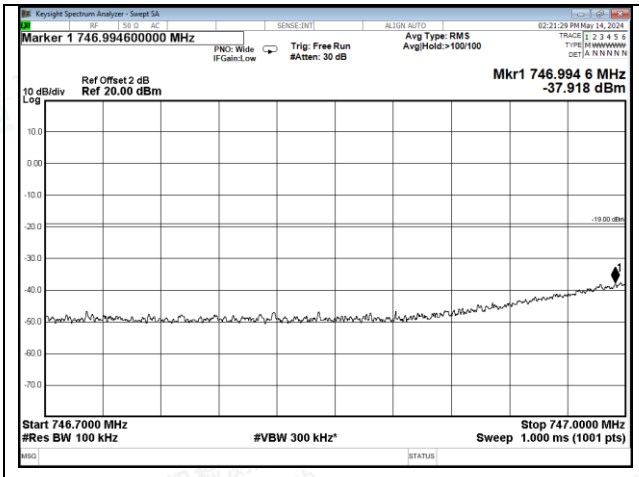
Lower 700MHz band CDMA DL Left Side 10dB Above AGC



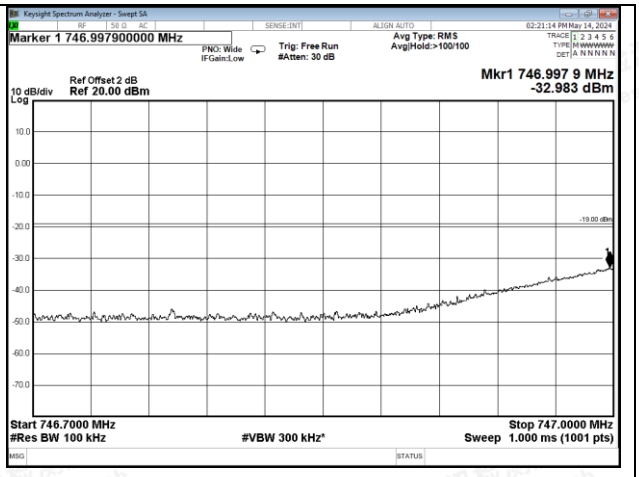
Lower 700MHz band CDMA DL Right Side Pre AGC



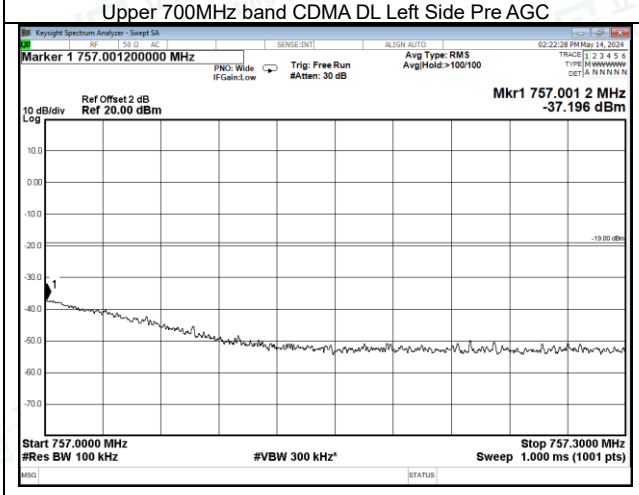
Lower 700MHz band CDMA DL Right Side 10dB Above AGC



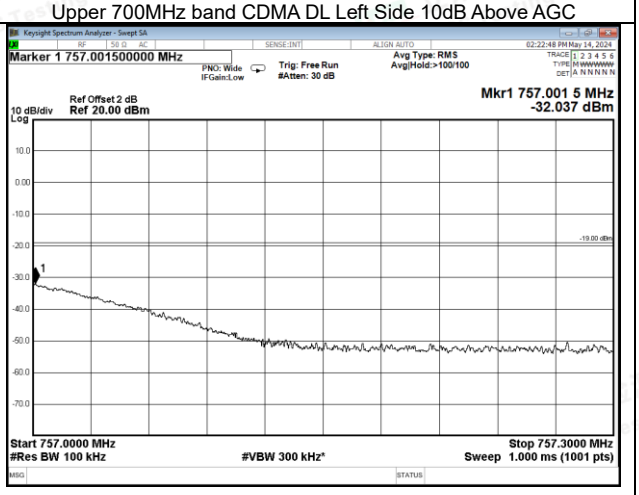
Upper 700MHz band CDMA DL Left Side Pre AGC



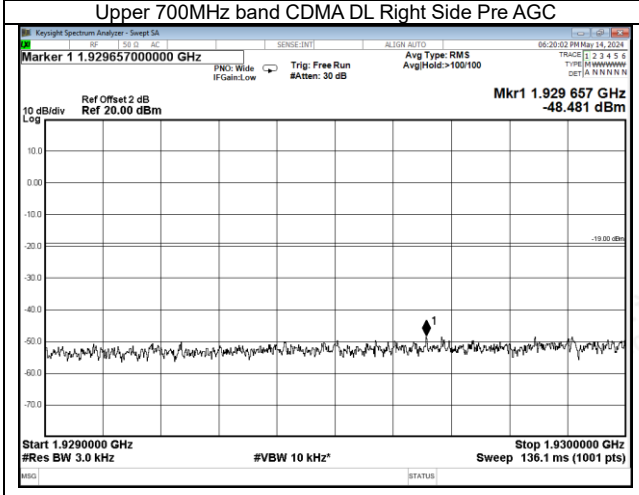
Upper 700MHz band CDMA DL Left Side 10dB Above AGC



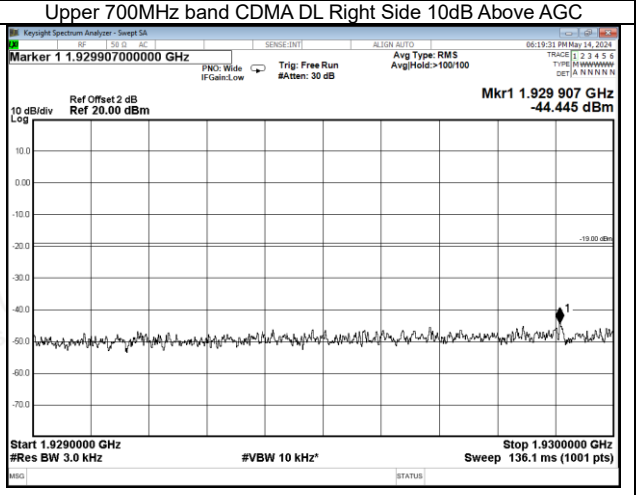
Upper 700MHz band CDMA DL Right Side Pre AGC



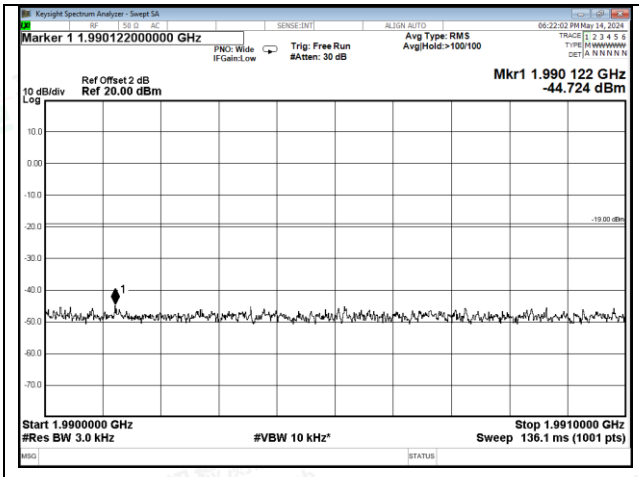
Upper 700MHz band CDMA DL Right Side 10dB Above AGC



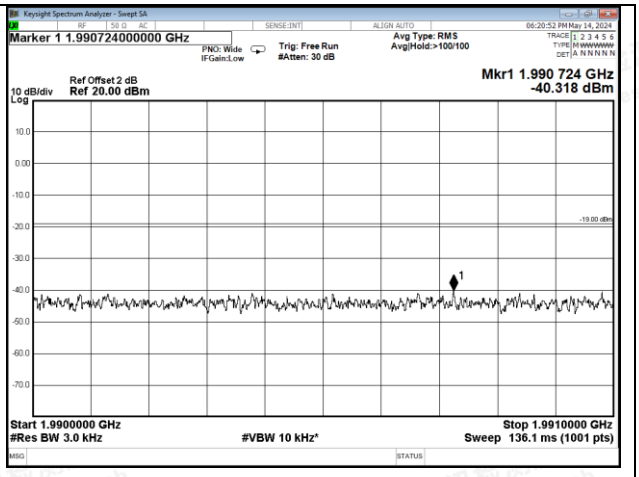
PCS Band LTE DL Left Side Pre AGC



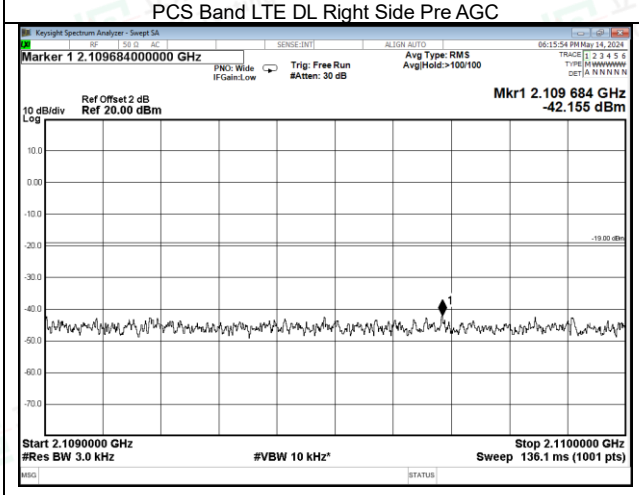
PCS Band LTE DL Left Side 10dB Above AGC



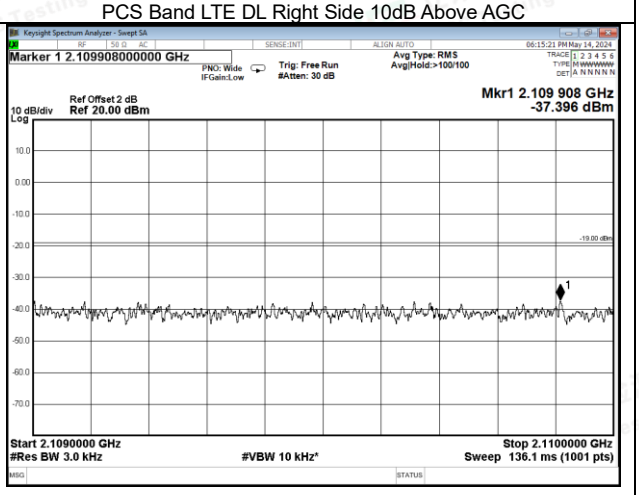
PCS Band LTE DL Right Side Pre AGC



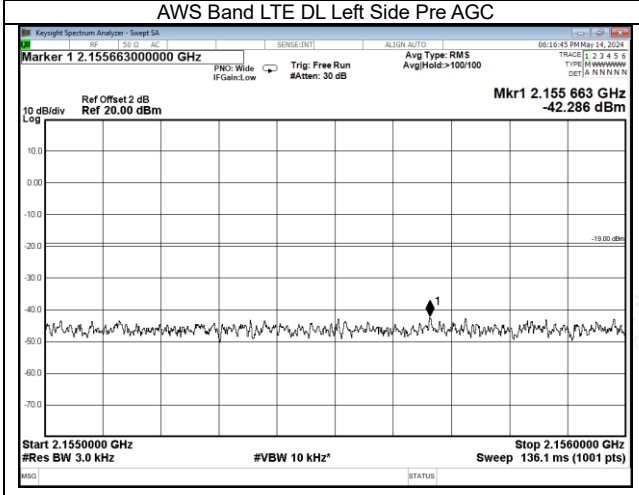
PCS Band LTE DL Right Side 10dB Above AGC



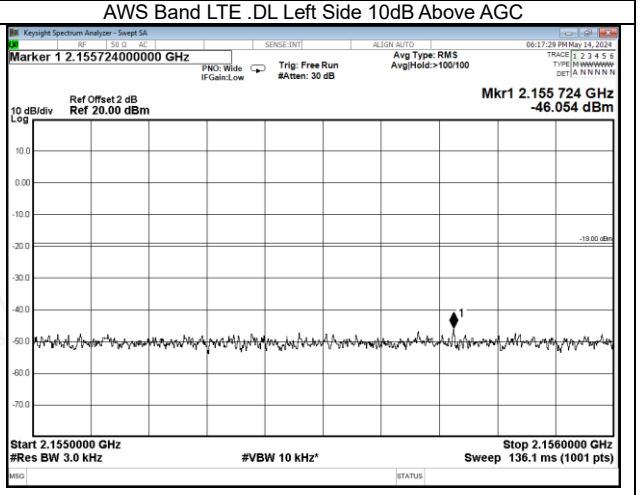
AWS Band LTE DL Left Side Pre AGC



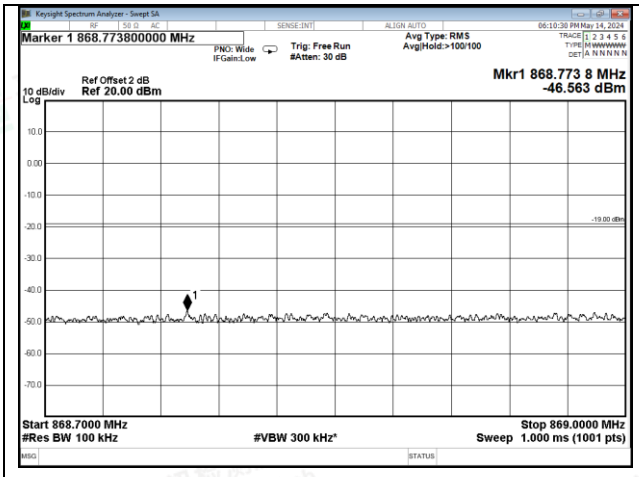
AWS Band LTE .DL Left Side 10dB Above AGC



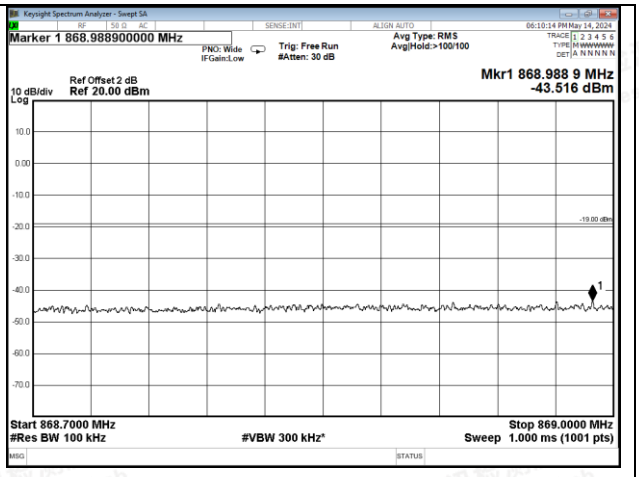
AWS Band LTE DL Right Side Pre AGC



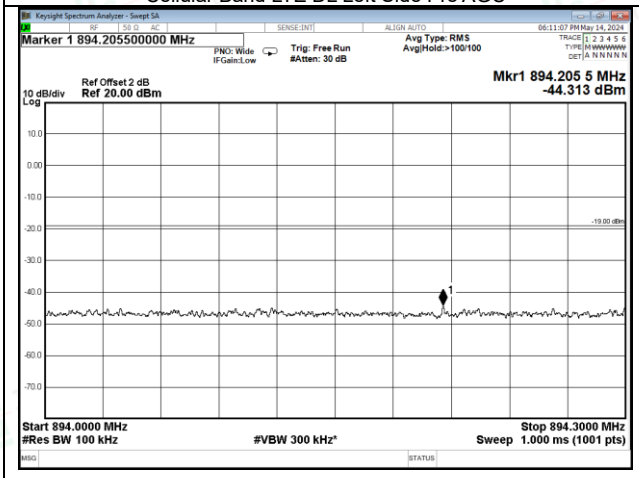
AWS Band LTE DL Right Side 10dB Above AGC



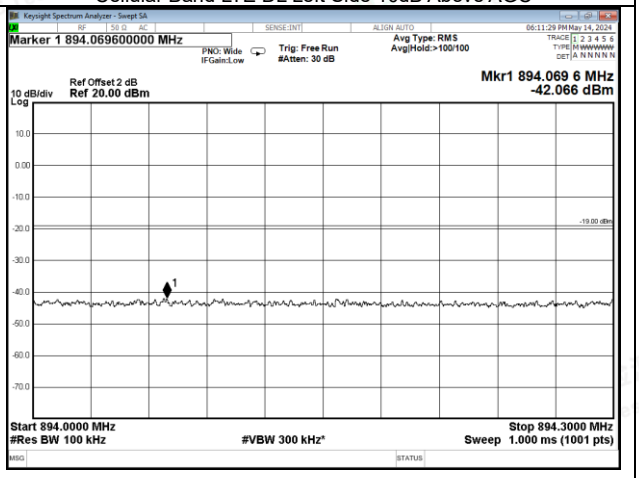
Cellular Band LTE DL Left Side Pre AGC



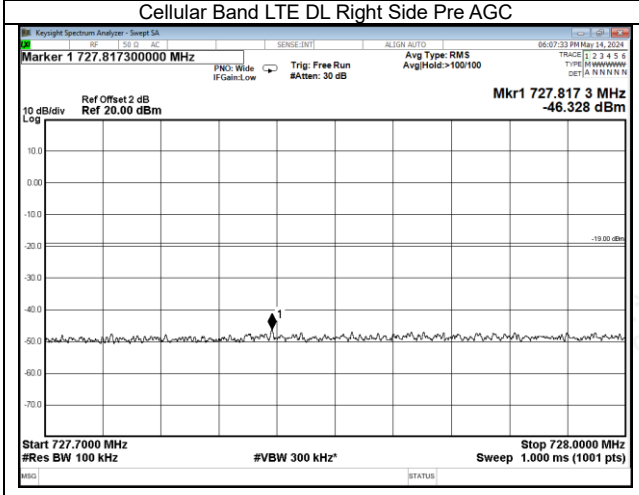
Cellular Band LTE DL Left Side 10dB Above AGC



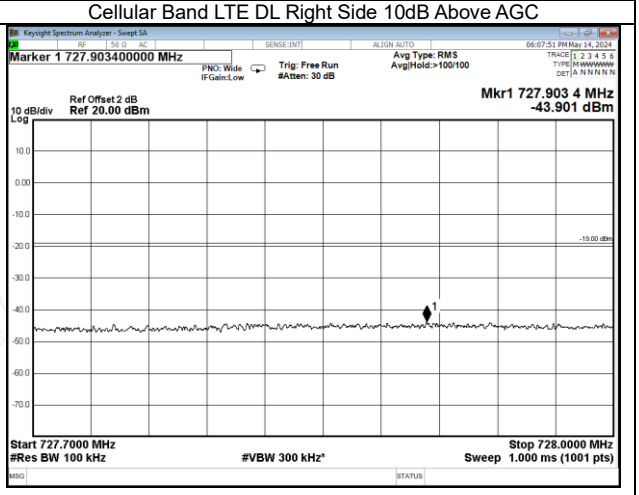
Cellular Band LTE DL Right Side Pre AGC



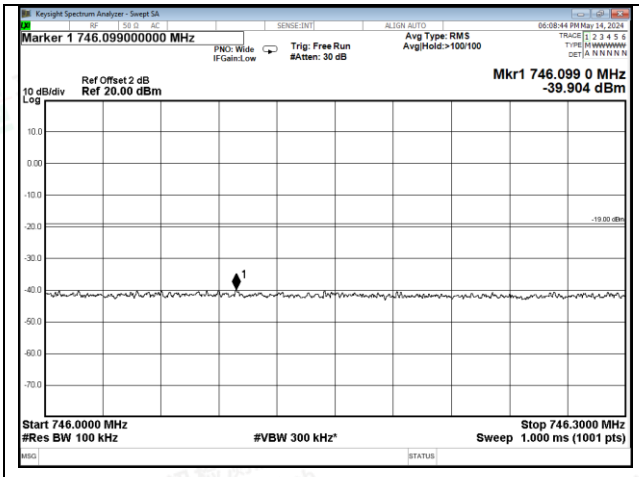
Cellular Band LTE DL Right Side 10dB Above AGC



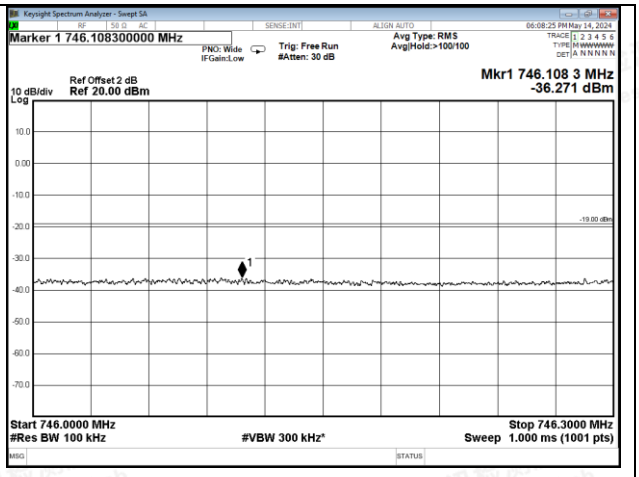
Lower 700MHz band LTE DL Left Side Pre AGC



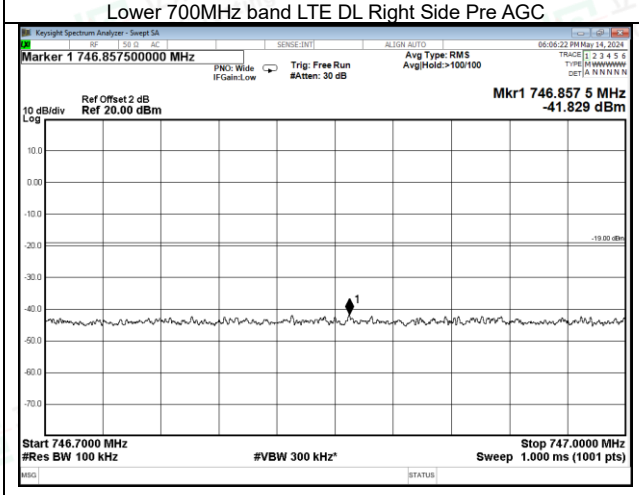
Lower 700MHz band LTE DL Left Side 10dB Above AGC



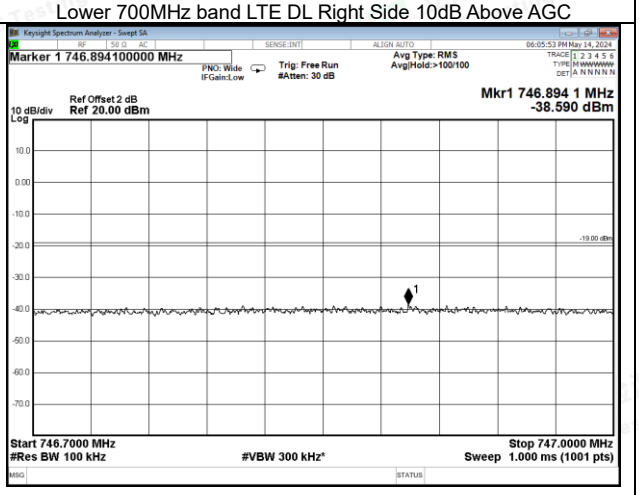
Lower 700MHz band LTE DL Right Side Pre AGC



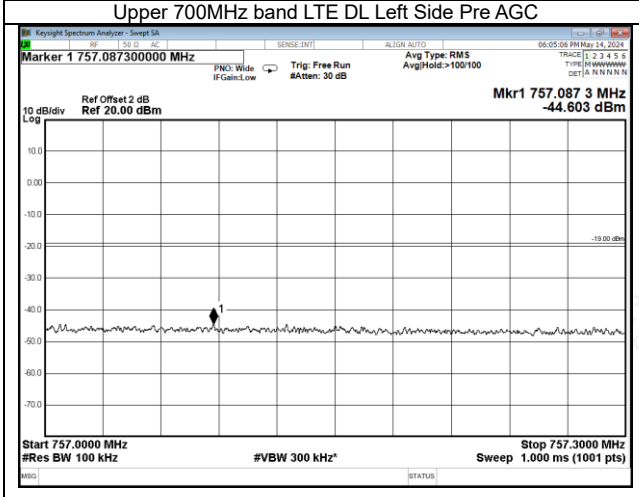
Lower 700MHz band LTE DL Right Side 10dB Above AGC



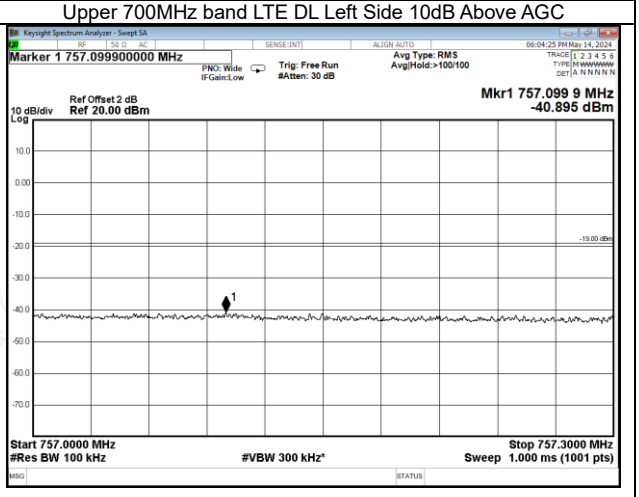
Upper 700MHz band LTE DL Left Side Pre AGC



Upper 700MHz band LTE DL Left Side 10dB Above AGC



Upper 700MHz band LTE DL Right Side Pre AGC



Upper 700MHz band LTE DL Right Side 10dB Above AGC

Note:Indoor port 1 and indoor port 2 were tested,the report only recorded the worst result of Indoor port 1

6.6. Conducted Spurious Emission

Applicable Standard

According to § 2.1051 Spurious emissions at antenna terminals:
The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 + 10 log10(P) dB.
So the Conducted emissions limit = -13 dBm

Test Procedure

According to section 7.6 of KDB 935210 D03 Signal Booster Measurement v04r04:
The following procedures shall be used to demonstrate compliance to the applicable conducted spurious emissions limits as per Section 2.1051.
NOTE–For frequencies below 1 GHz, an RBW of 1 MHz may be used in a preliminary measurement. If non-compliant emissions are detected, a final measurement shall be made with a 100 kHz RBW. Additionally, a peak detector may also be used for the preliminary measurement. If non-compliant emissions are detected then a final measurement of these emissions shall be made with the power averaging (rms) detector.
a) Connect the EUT to the test equipment as shown in Figure 1. Begin with the uplink output (donor) port connected to the spectrum analyzer.
b) Configure the signal generator for AWGN with a 99% OBW of 4.1 MHz, with a center frequency corresponding to the center of the CMRS band under test.
c) Set the signal generator amplitude to the level determined in the power measurement procedure in 7.2.
d) Turn on the signal generator RF output and measure the spurious emission power levels with an appropriate measuring instrument as follows.
1) Set RBW = measurement bandwidth specified in the applicable rule section for the operational frequency band under consideration (see Appendix A for relevant cross-references). Note that many of the individual rule sections permit the use of a narrower RBW [typically ≥ 1% of the emission bandwidth (EBW)] to enhance measurement accuracy, but the result must then be integrated over the specified measurement bandwidth.
2) Set VBW = 3 RBW.
3) Select the power averaging (rms) detector. (See above note regarding the use of a peak detector for preliminary measurements.)
4) Sweep time = auto-couple.
5) 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 ≥ (2 span/RBW), which may require that the measurement range defined by the preceding start and stop frequencies be subdivided, depending on the available number of measurement points of the spectrum analyzer. Trace average at least 10 traces in power averaging (i.e., rms) mode.
6) Sweep time = auto-couple.
7) Use the peak marker function to identify the highest amplitude level over each measured frequency range. Record the frequency and amplitude and capture a plot for inclusion in the test report.
8) 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 ≥ (2 span/RBW) which may require that the measurement range defined

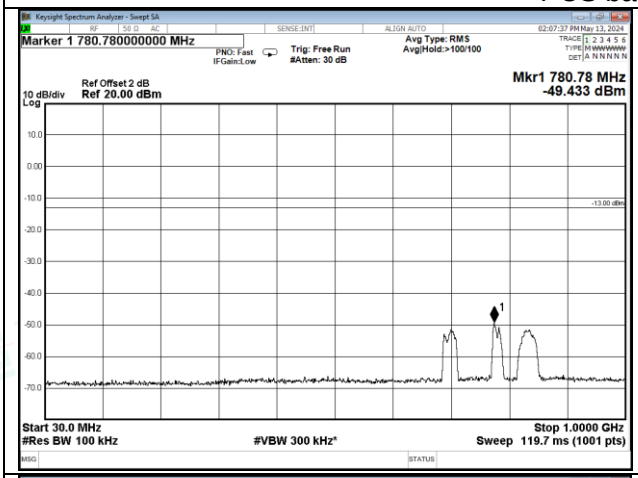
by the start and stop frequencies above be subdivided, depending on the available number of measurement points provided by the spectrum analyzer.
9) Use the peak marker function to identify the highest amplitude level over each of the measured frequency ranges. Record the frequency and amplitude and capture a plot for inclusion in the test report.
e) Repeat 7.6b) through 7.6d) for each supported frequency band of operation.

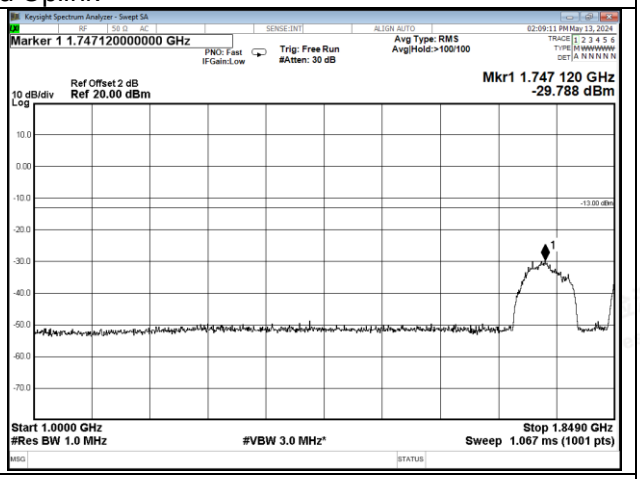
Test data

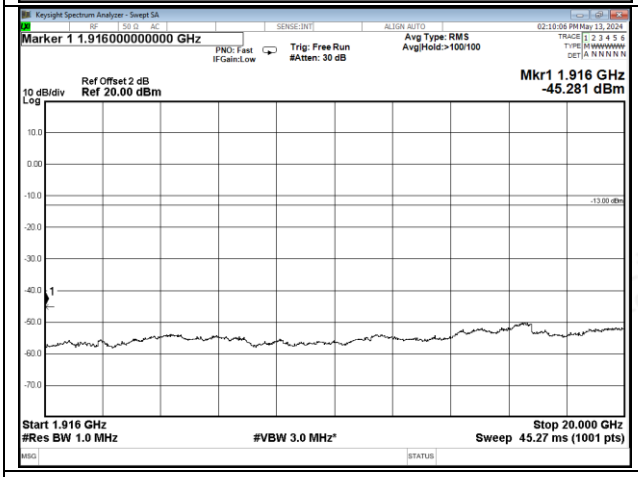
Temperature	23.7℃	Humidity	53.8%
Test Engineer	Nick Peng	Test Mode	Transmitting

Test Graphs

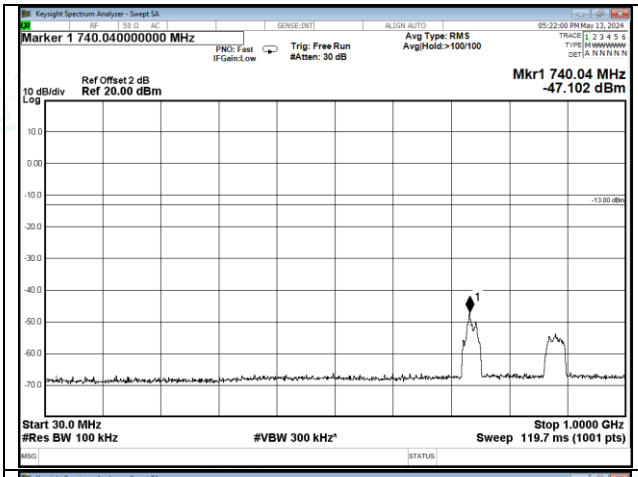
PCS band Uplink

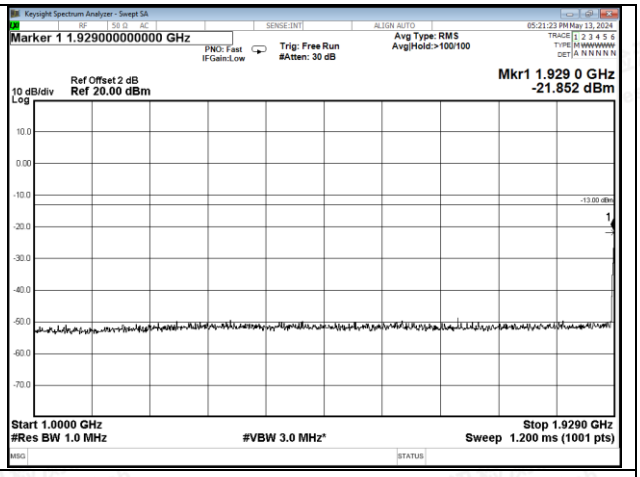


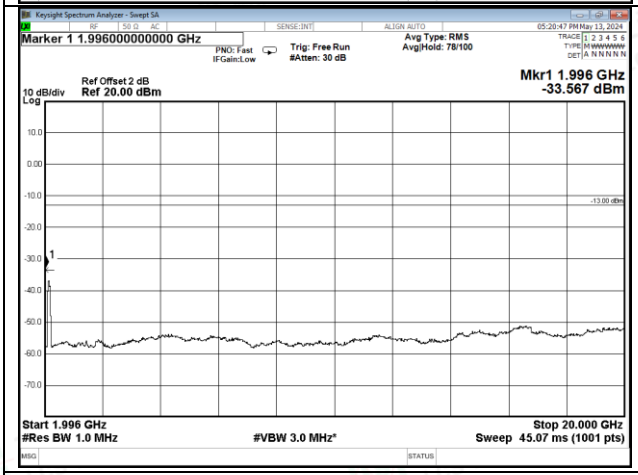




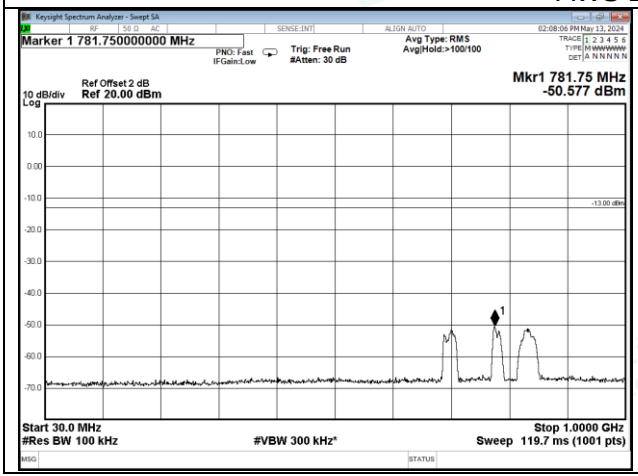
PCS band Downlink

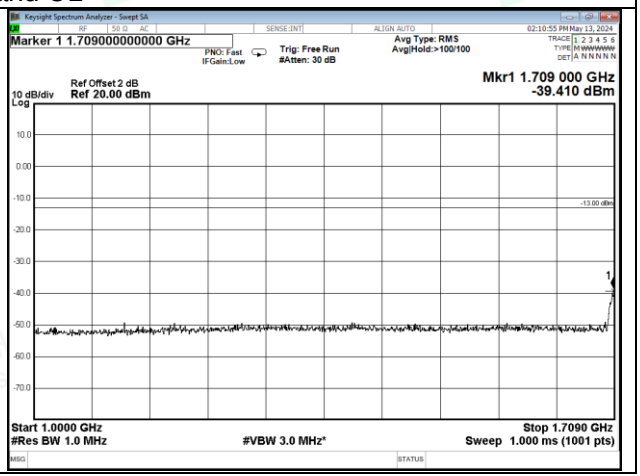

Marker 1 740.040000000 MHz
Mkr1 740.04 MHz
-47.102 dBm
Ref Offset 2 dB
10 dB/div Ref 20.00 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz*
Stop 1.0000 GHz
Sweep 119.7 ms (1001 pts)

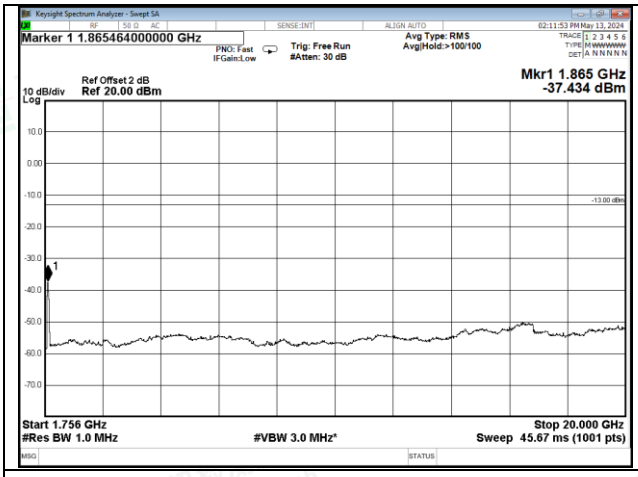

Marker 1 1.929000000000 GHz
Mkr1 1.929 0 GHz
-21.852 dBm
Ref Offset 2 dB
10 dB/div Ref 20.00 dBm
Start 1.0000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 1.9290 GHz
Sweep 1.200 ms (1001 pts)


Marker 1 1.996000000000 GHz
Mkr1 1.996 GHz
-33.567 dBm
Ref Offset 2 dB
10 dB/div Ref 20.00 dBm
Start 1.996 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 20.000 GHz
Sweep 45.07 ms (1001 pts)

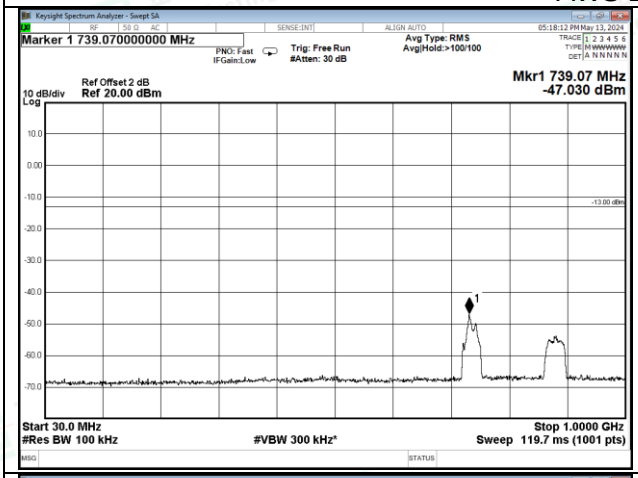
AWS Band UL

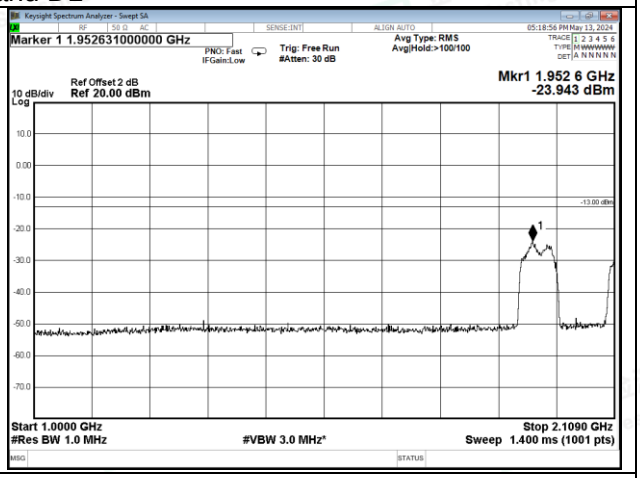

Marker 1 781.750000000 MHz
Mkr1 781.75 MHz
-50.577 dBm
Ref Offset 2 dB
10 dB/div Ref 20.00 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz*
Stop 1.0000 GHz
Sweep 119.7 ms (1001 pts)

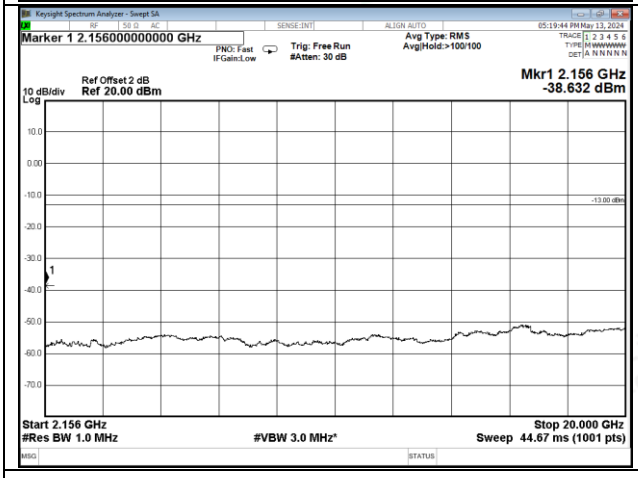

Marker 1 1.709000000000 GHz
Mkr1 1.709 000 GHz
-39.410 dBm
Ref Offset 2 dB
10 dB/div Ref 20.00 dBm
Start 1.0000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 1.7090 GHz
Sweep 1.000 ms (1001 pts)



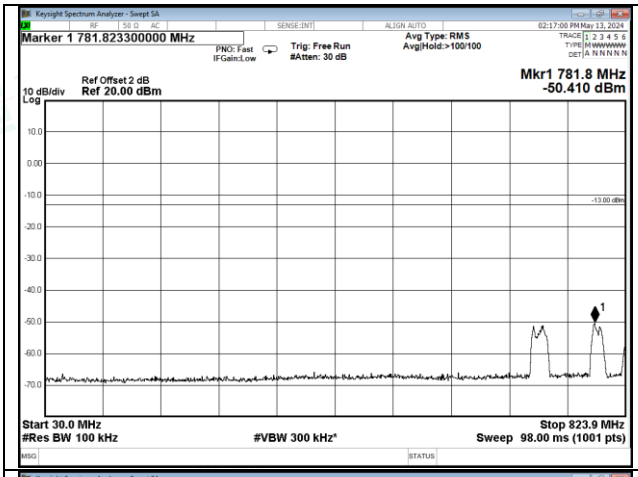
AWS Band DL

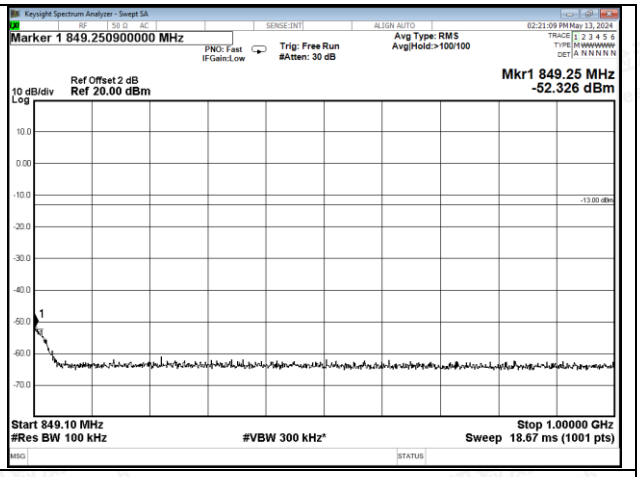


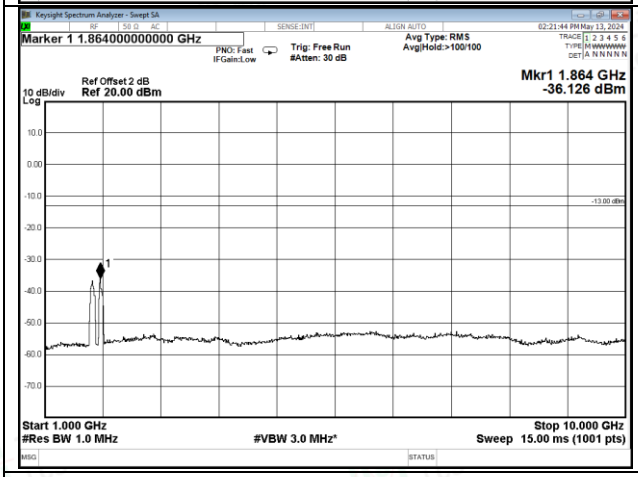




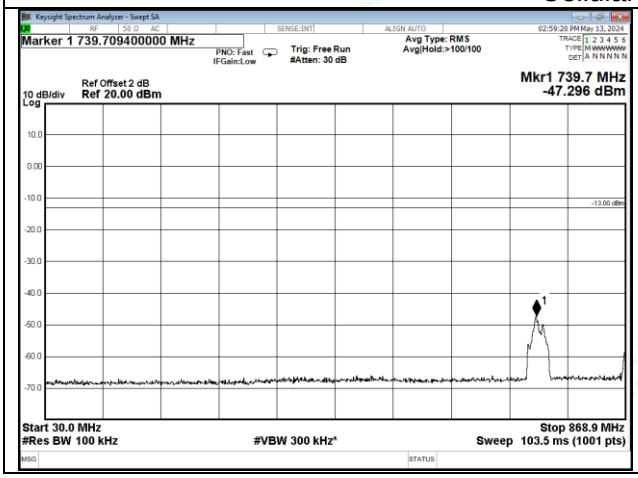
Cellular Band UL

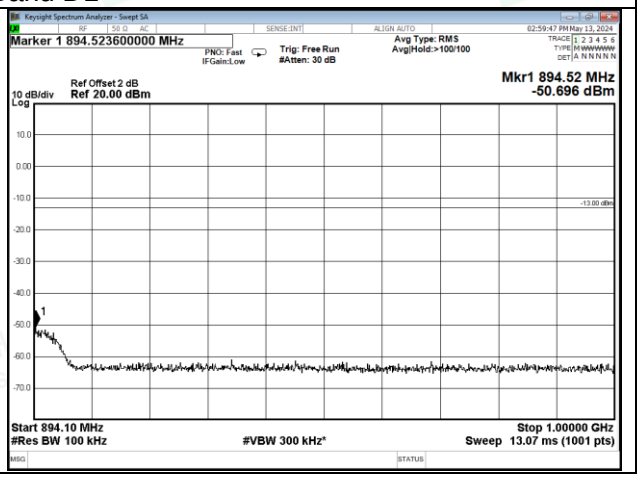


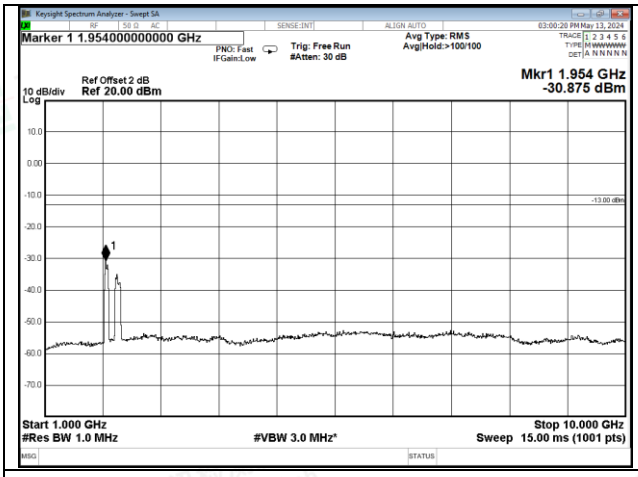




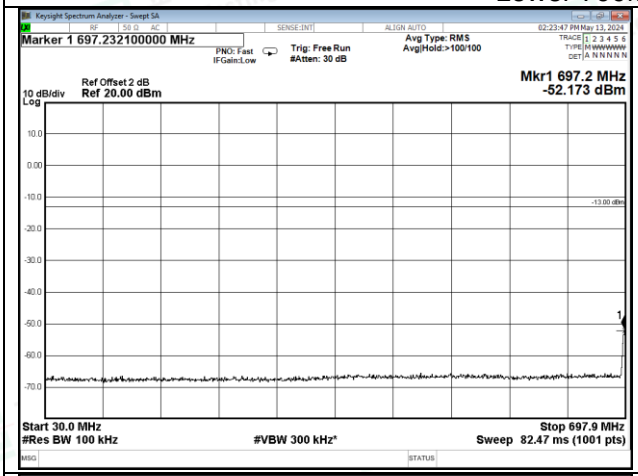
Cellular Band DL

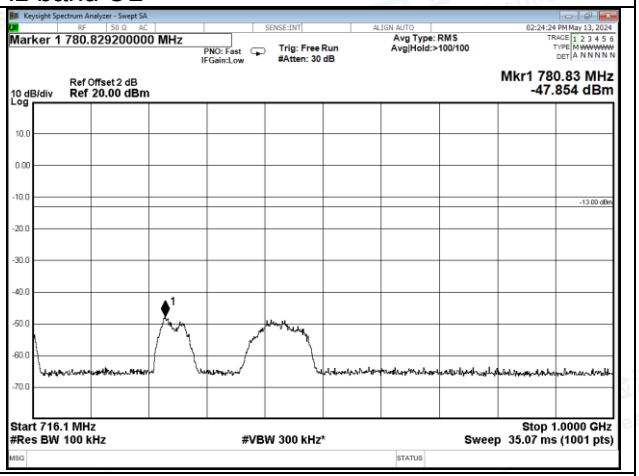


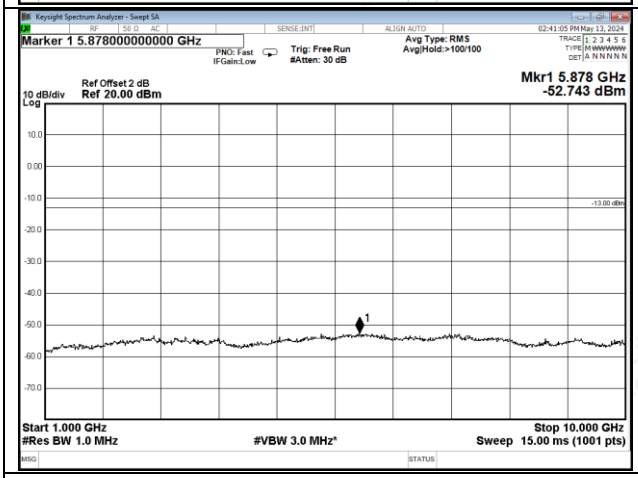




Lower 700MHz band UL







Lower 700MHz band DL