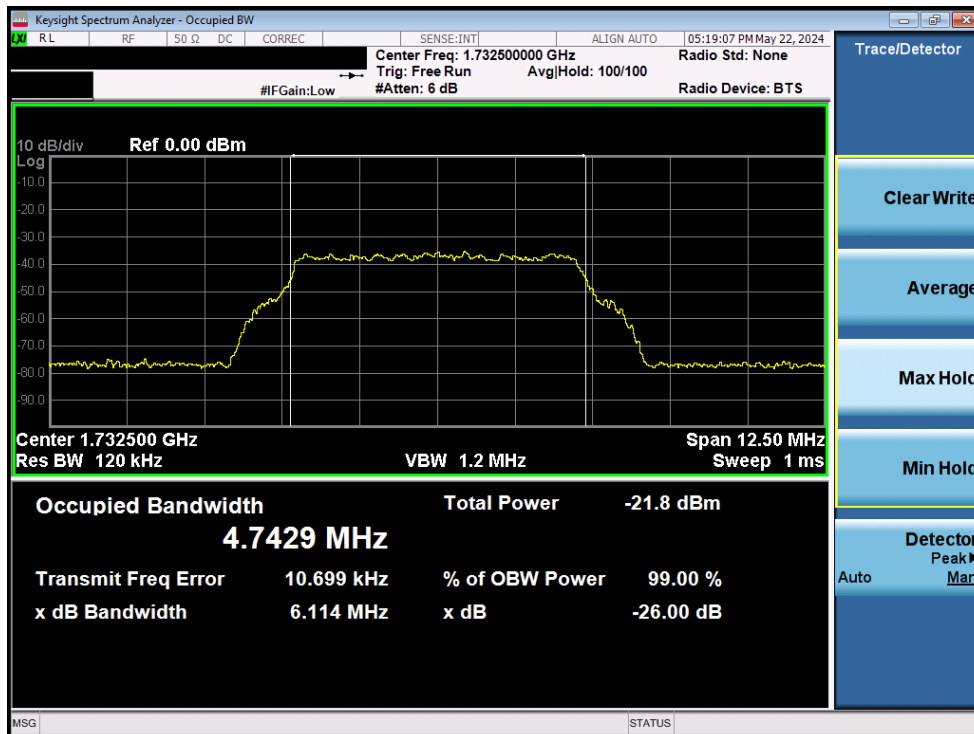
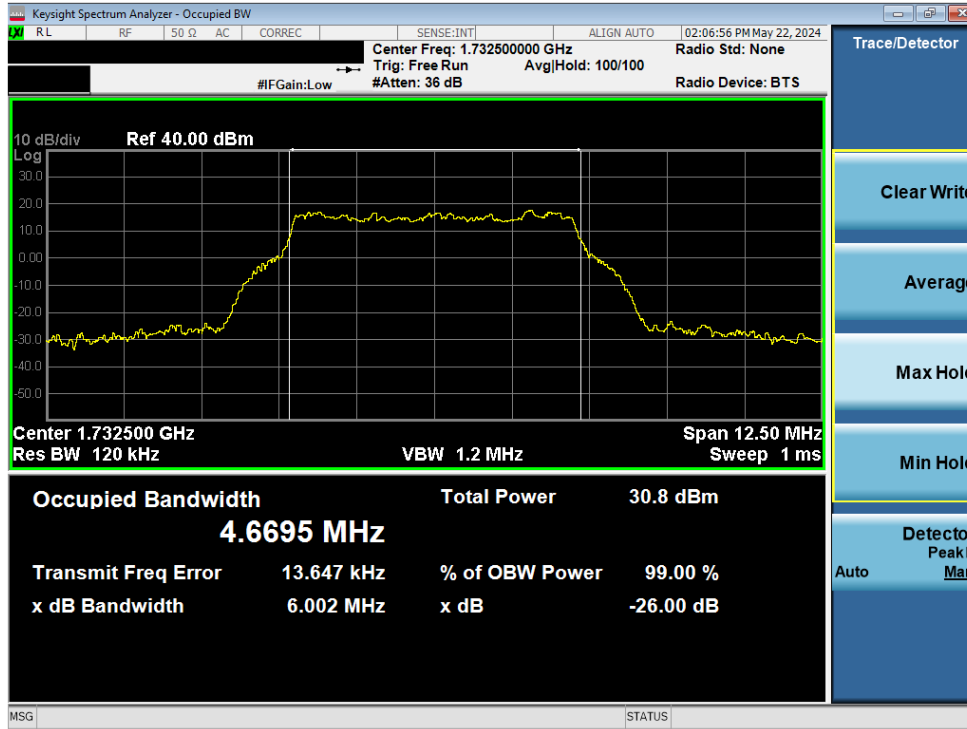


Plot 7-208. Occupied Bandwidth – BAND 4 UL QPSK (Input)

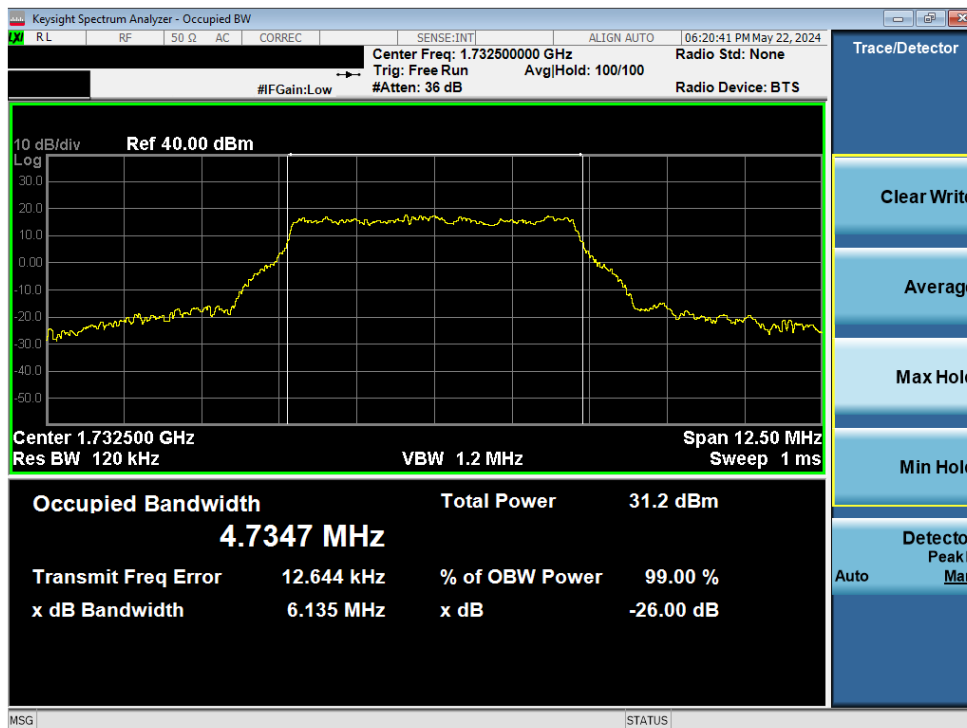


Plot 7-209. Occupied Bandwidth – BAND 4 UL 256-QAM (Input)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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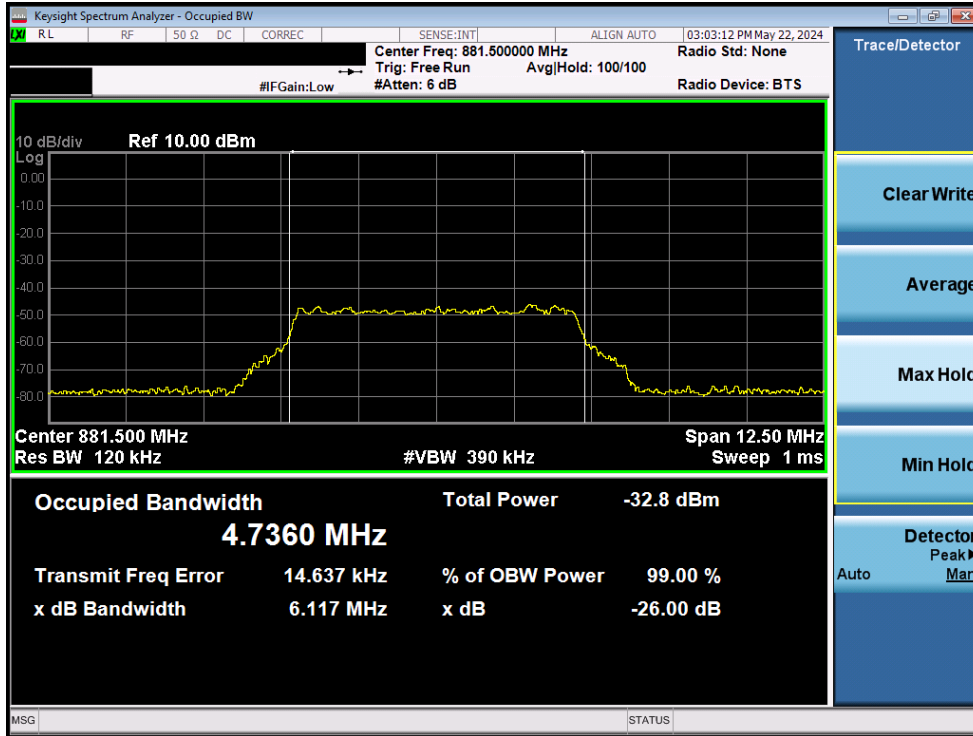
Plot 7-210. Occupied Bandwidth – BAND 4 UL QPSK (Output)



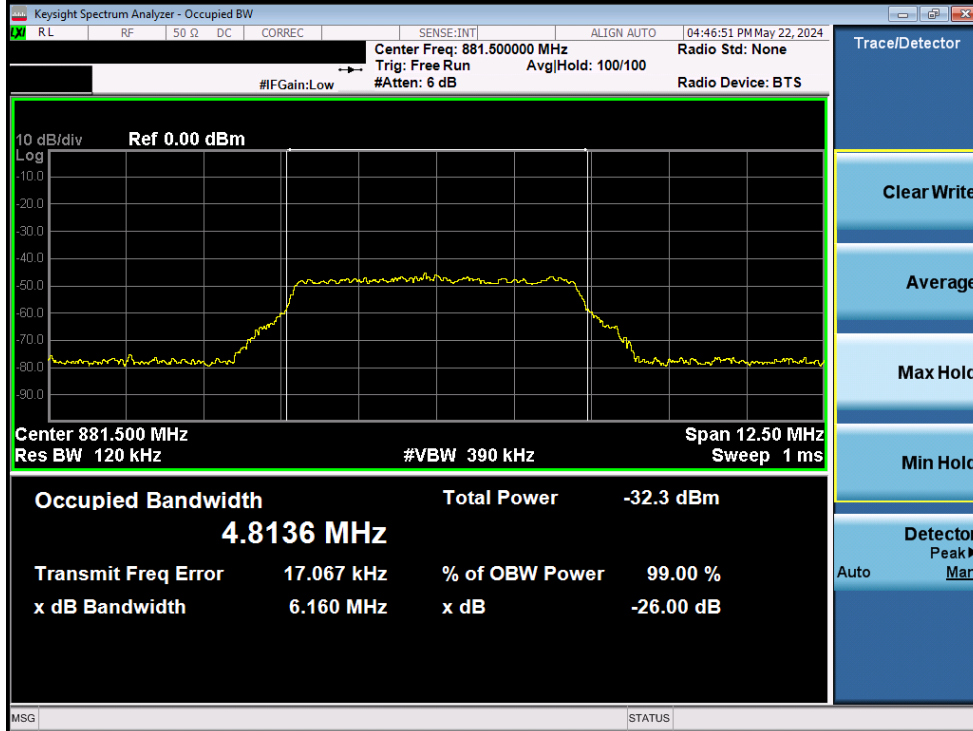
Plot 7-211. Occupied Bandwidth – BAND 4 UL 256-QAM (Output)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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LTE Band 5



Plot 7-212. Occupied Bandwidth – BAND 5 DL QPSK (Input)

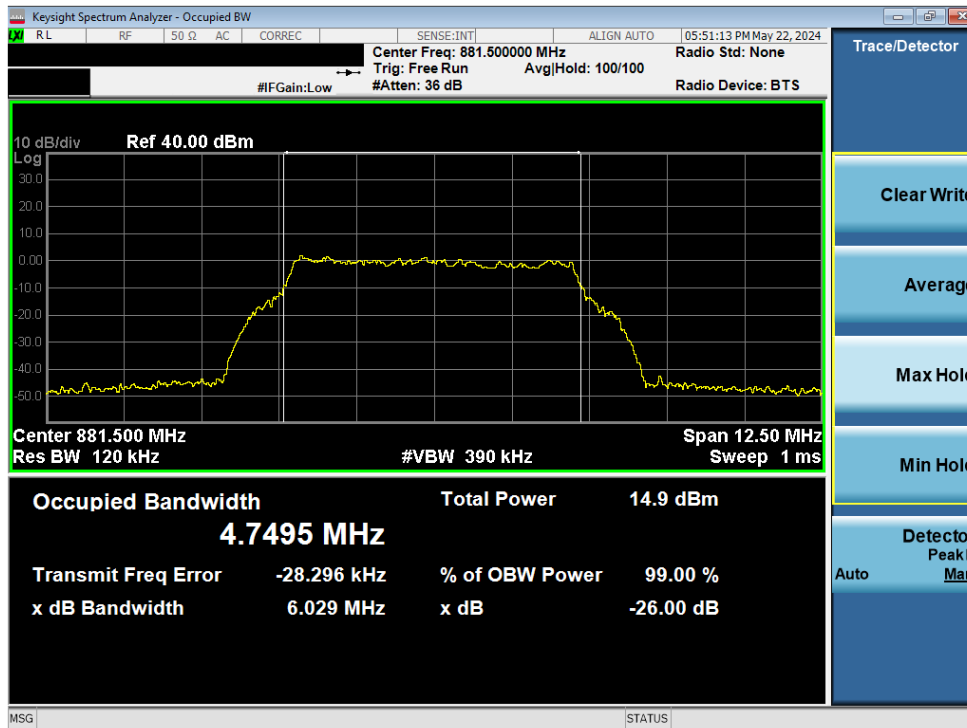


Plot 7-213. Occupied Bandwidth – BAND 5 DL 256-QAM (Input)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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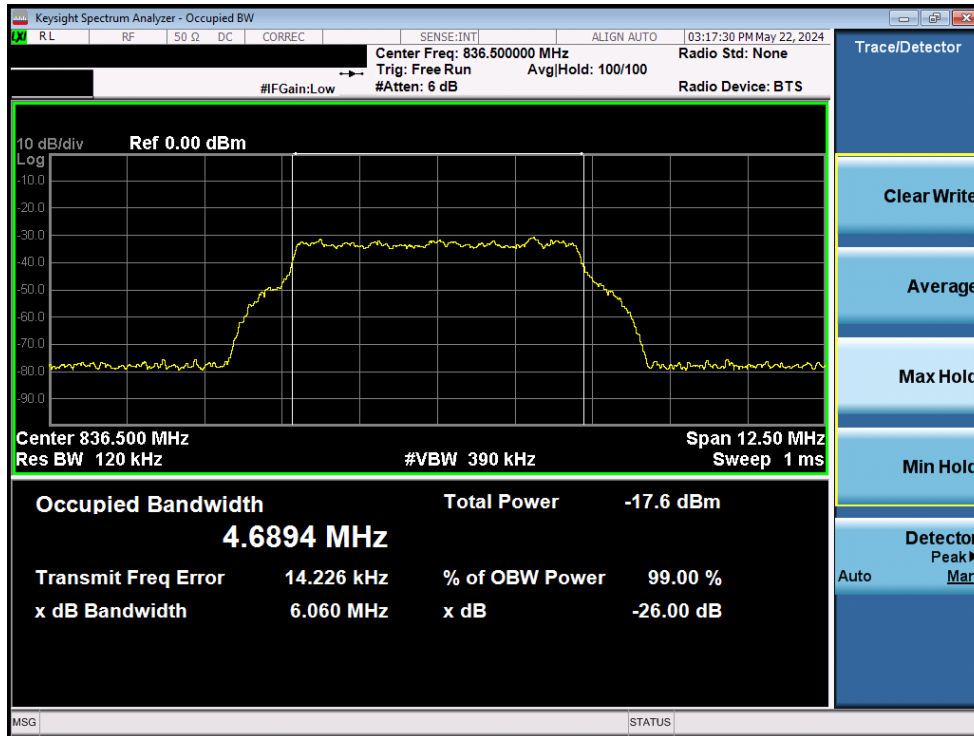


Plot 7-214. Occupied Bandwidth – BAND 5 DL QPSK (Output)

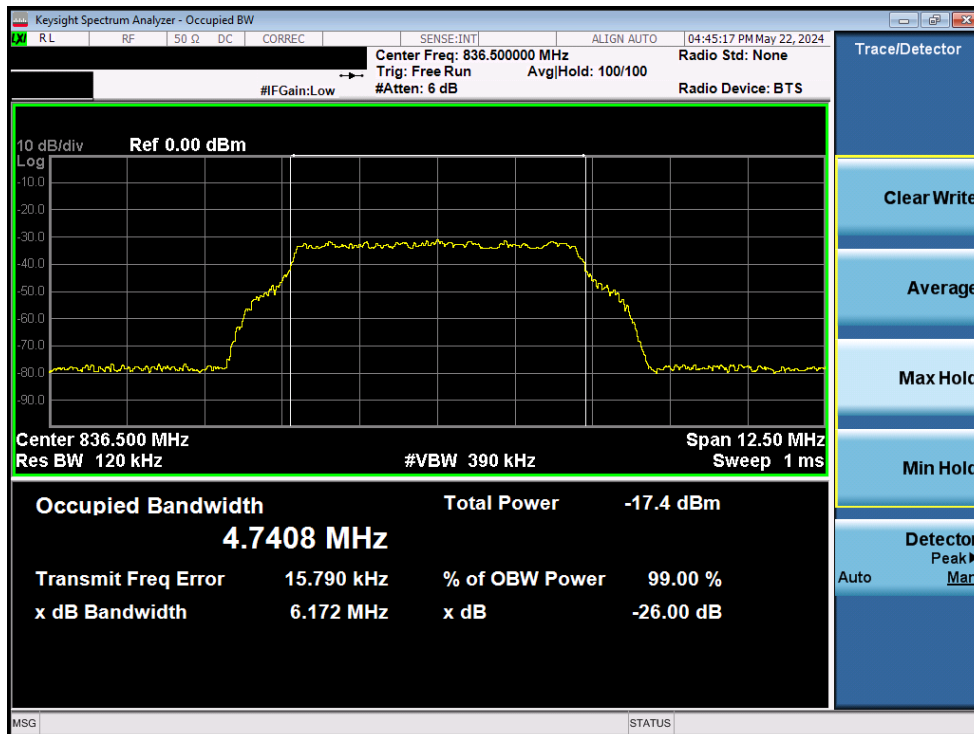


Plot 7-215. Occupied Bandwidth – BAND 5 DL 256-QAM (Output)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-216. Occupied Bandwidth – BAND 5 UL QPSK (Input)



Plot 7-217. Occupied Bandwidth – BAND 5 UL 256-QAM (Input)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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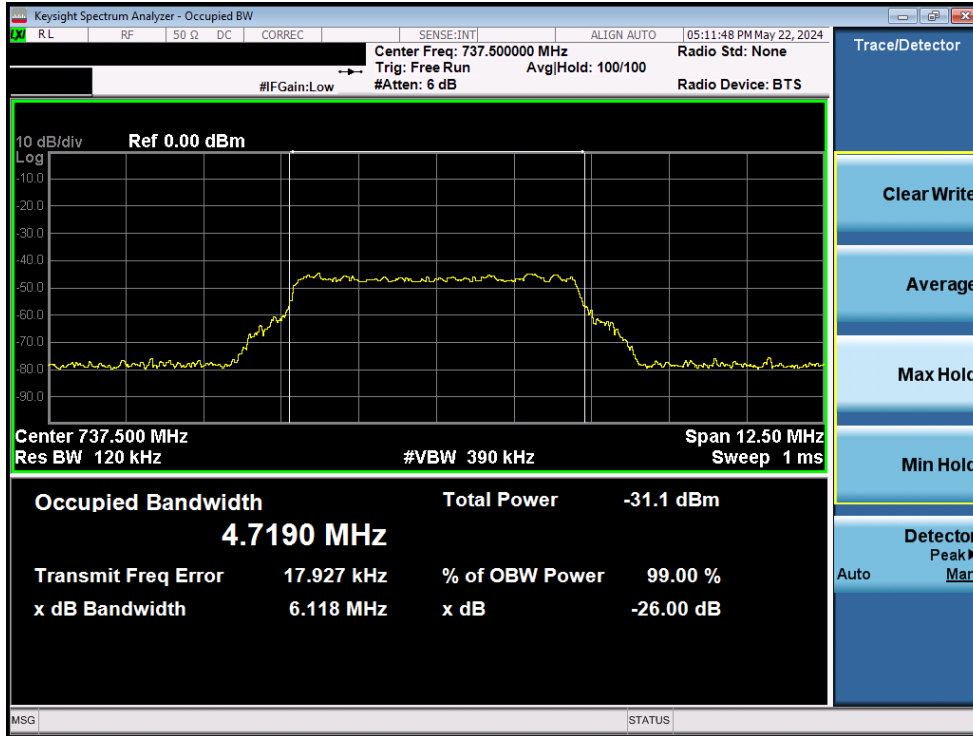
Plot 7-218. Occupied Bandwidth – BAND 5 UL QPSK (Output)



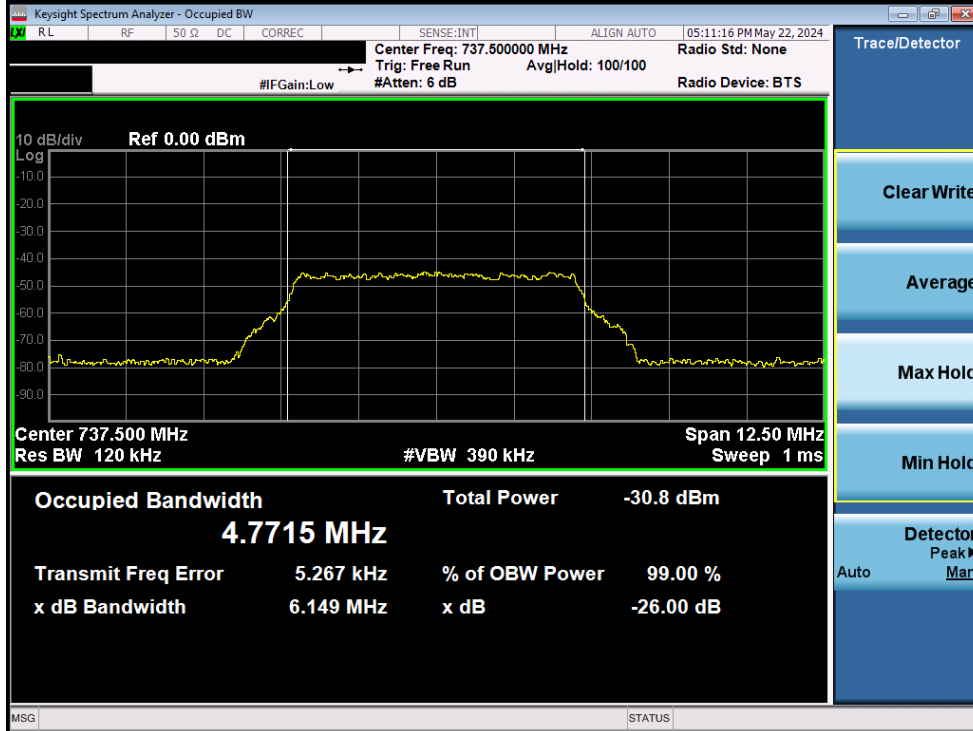
Plot 7-219. Occupied Bandwidth – BAND 5 UL 256-QAM (Output)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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EUT Type: Provider Specific Signal Booster		

LTE Band 12



Plot 7-220. Occupied Bandwidth – BAND 12 DL QPSK (Input)

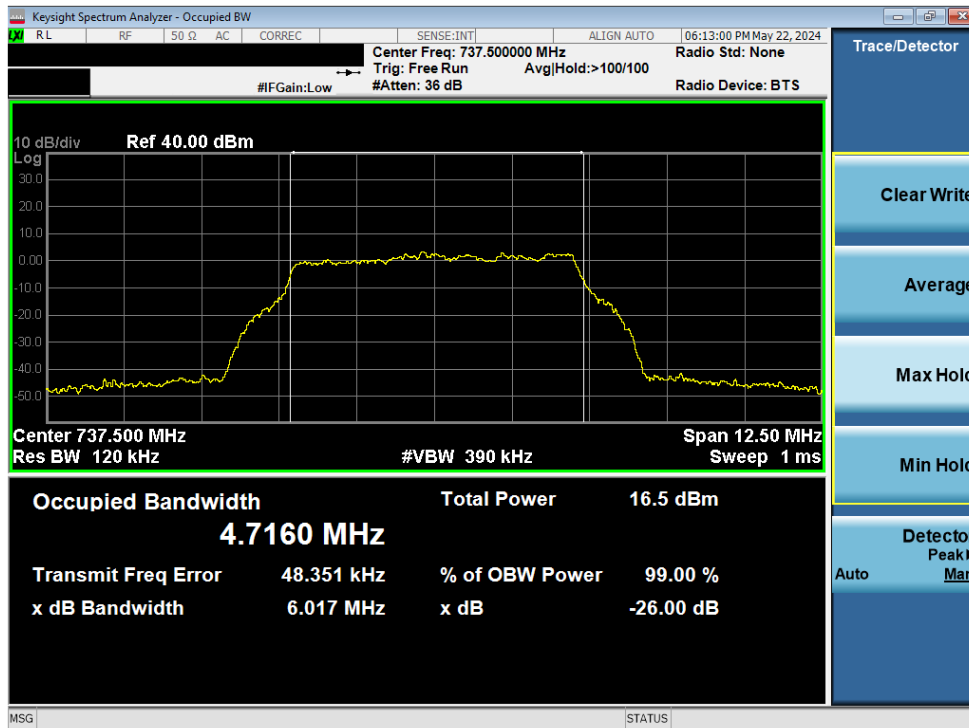


Plot 7-221. Occupied Bandwidth – BAND 12 DL 256-QAM (Input)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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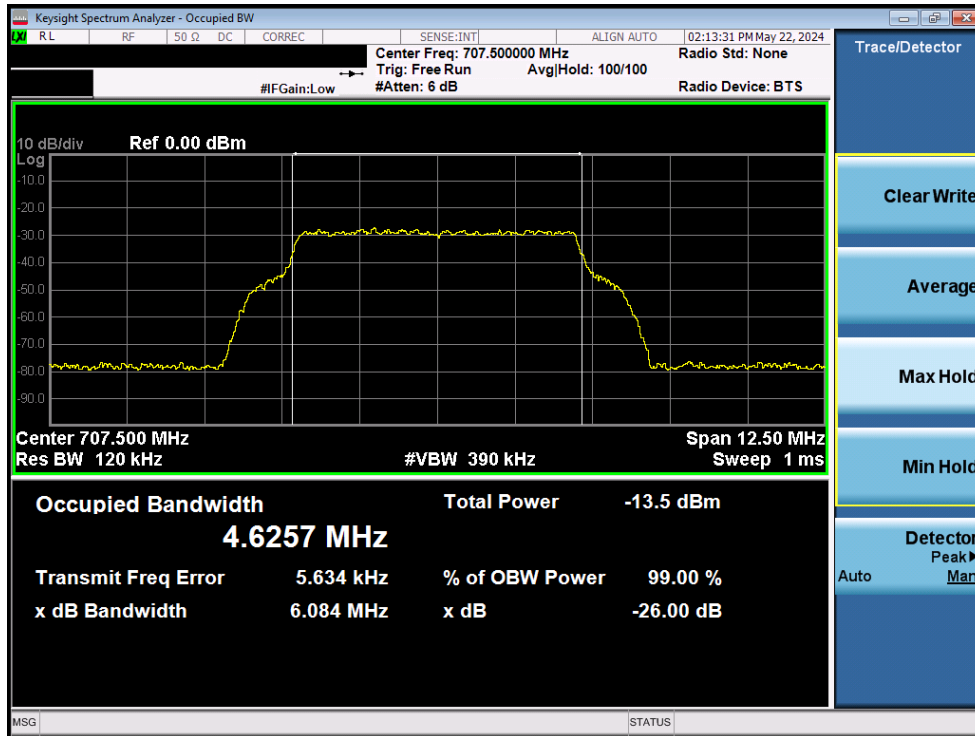


Plot 7-222. Occupied Bandwidth – BAND 12 DL QPSK (Output)

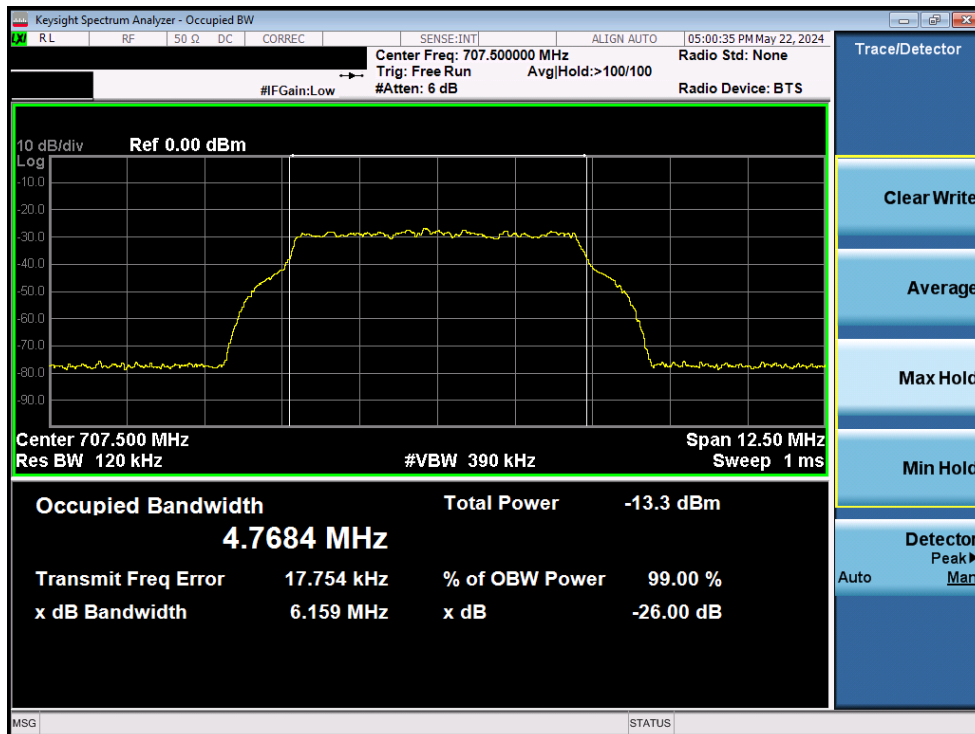


Plot 7-223. Occupied Bandwidth – BAND 12 DL 256-QAM (Output)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-224. Occupied Bandwidth – BAND 12 UL QPSK (Input)



Plot 7-225. Occupied Bandwidth – BAND 12 UL 256-QAM (Input)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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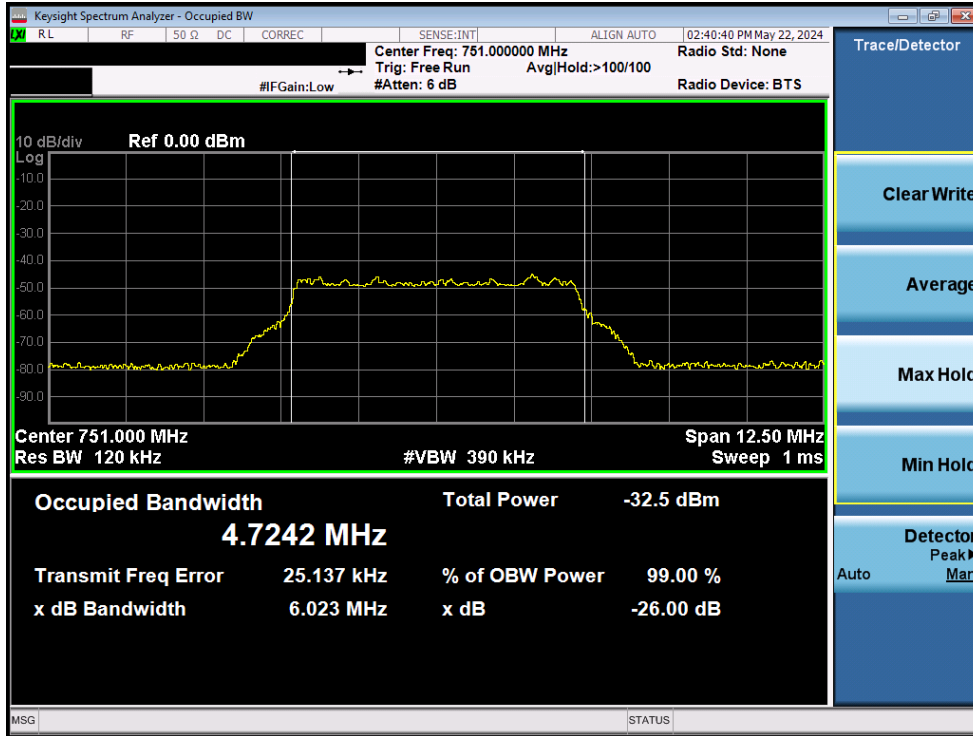
Plot 7-226. Occupied Bandwidth – BAND 12 UL QPSK (Output)



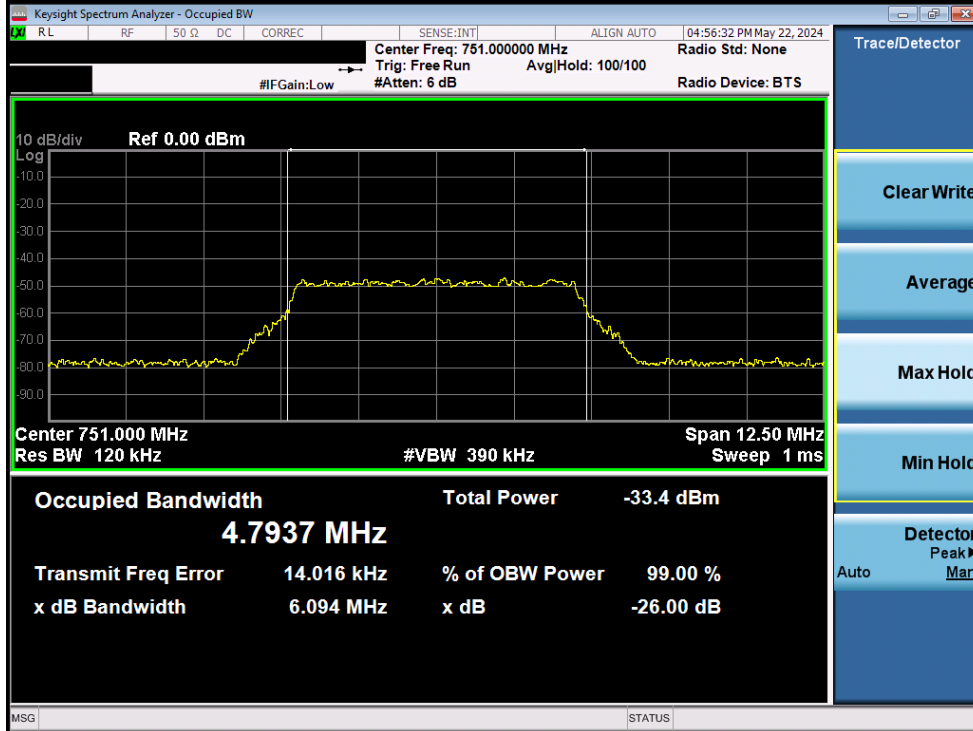
Plot 7-227. Occupied Bandwidth – BAND 12 UL 256-QAM (Output)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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LTE Band 13



Plot 7-228. Occupied Bandwidth – BAND 13 DL QPSK (Input)

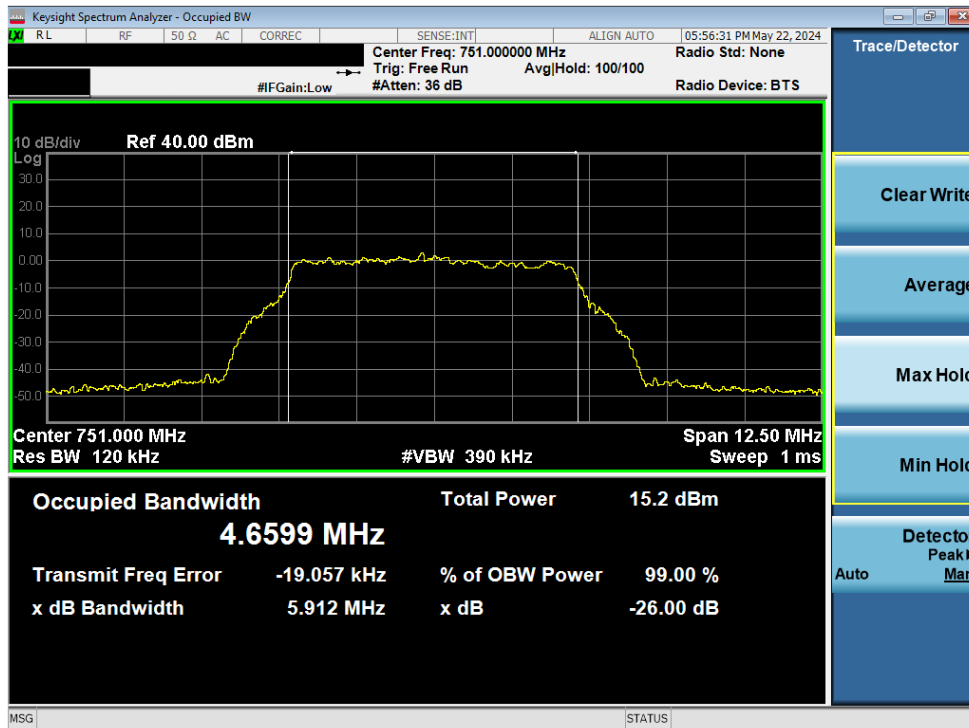


Plot 7-229. Occupied Bandwidth – BAND 13 DL 256-QAM (Input)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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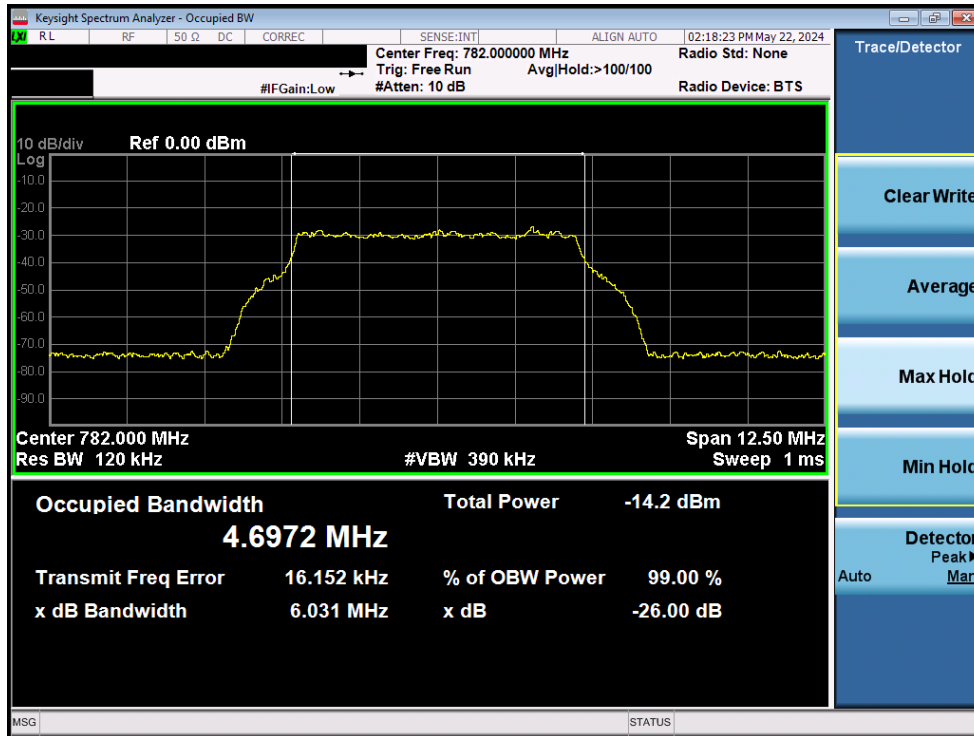


Plot 7-230. Occupied Bandwidth – BAND 13 DL QPSK (Output)

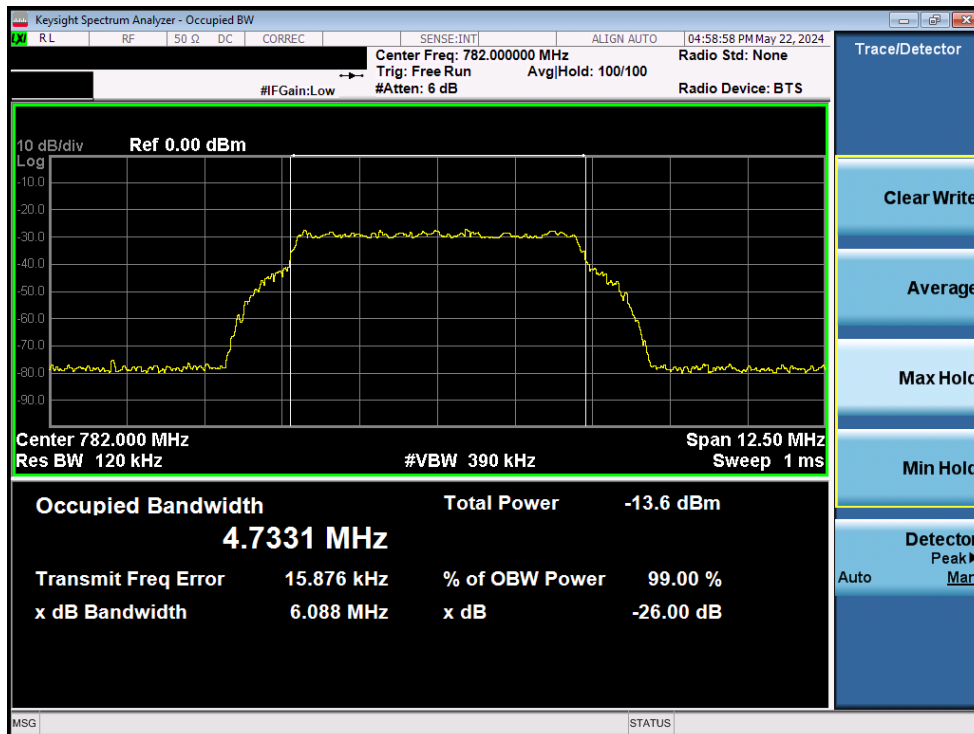


Plot 7-231. Occupied Bandwidth – BAND 13 DL 256-QAM (Output)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-232. Occupied Bandwidth – BAND 13 UL QPSK (Input)

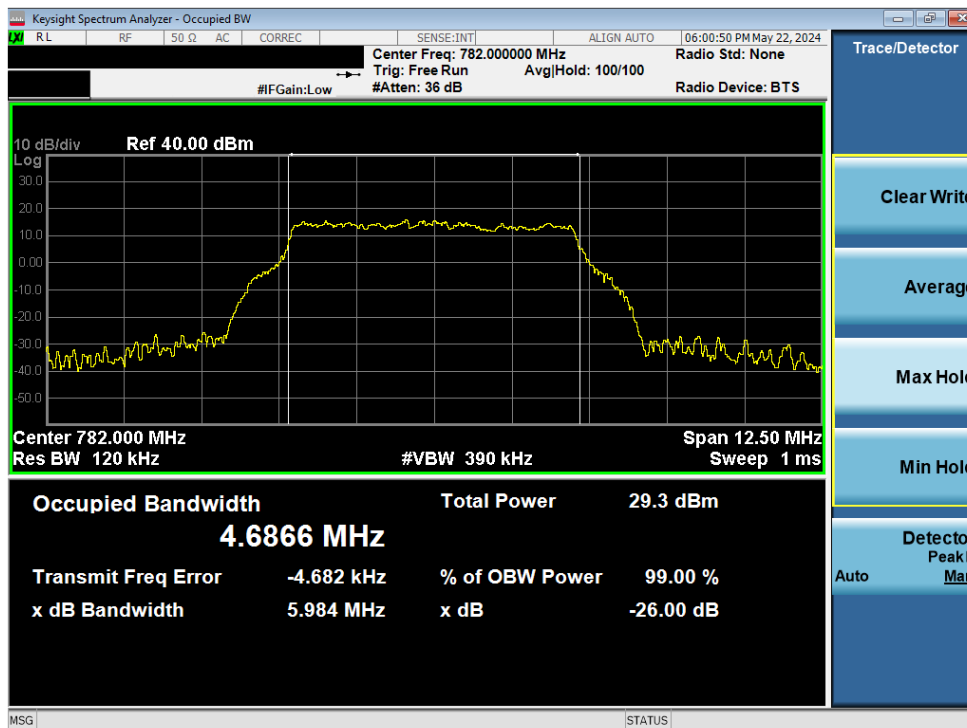


Plot 7-233. Occupied Bandwidth – BAND 13 UL 256-QAM (Input)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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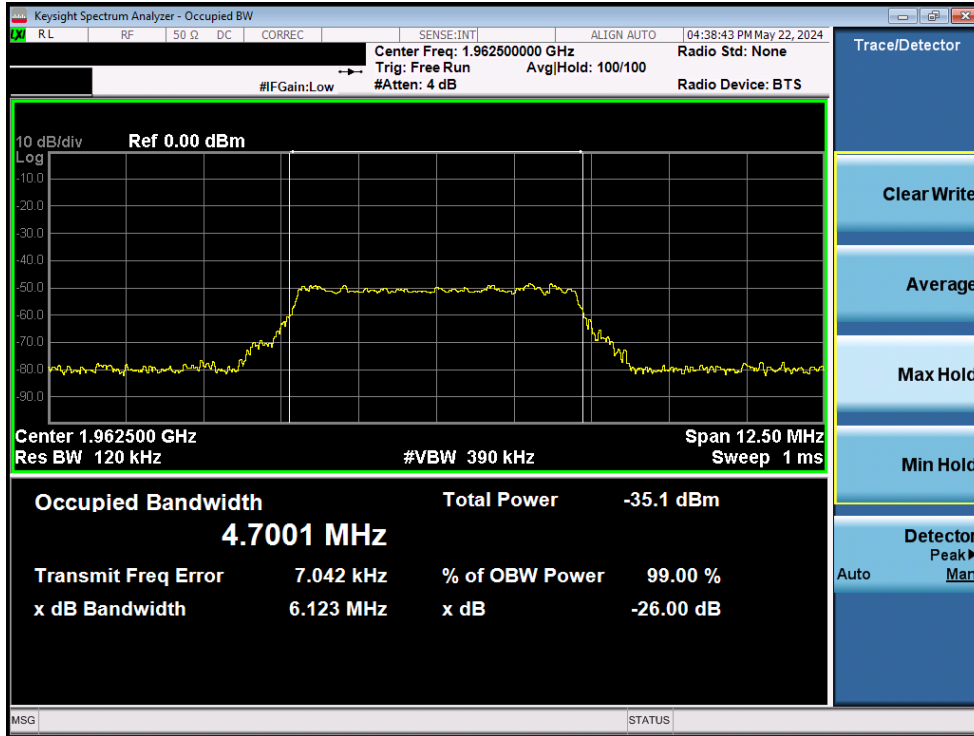
Plot 7-234. Occupied Bandwidth – BAND 13 UL QPSK (Output)



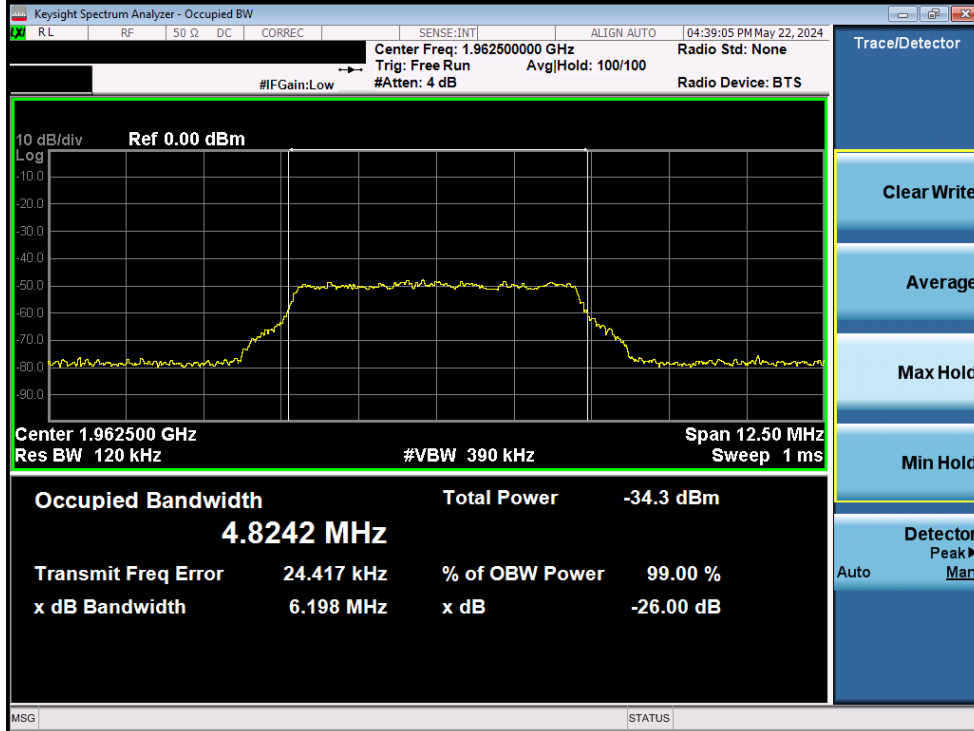
Plot 7-235. Occupied Bandwidth – BAND 13 UL 256-QAM (Output)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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LTE Band 25/2

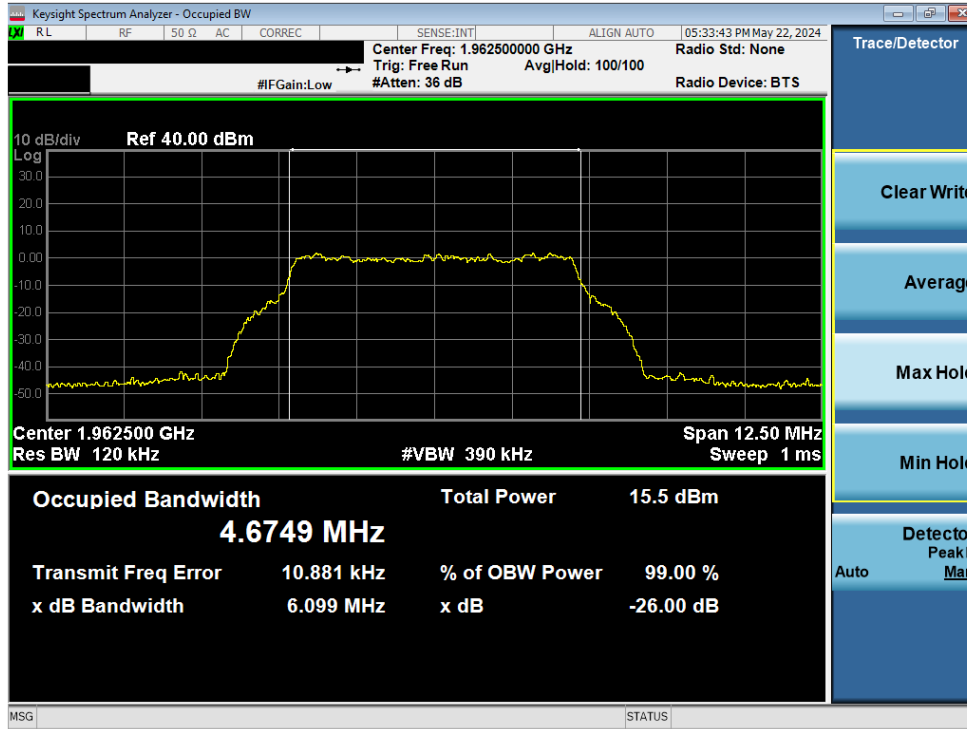


Plot 7-236. Occupied Bandwidth – BAND 25/2 DL QPSK (Input)

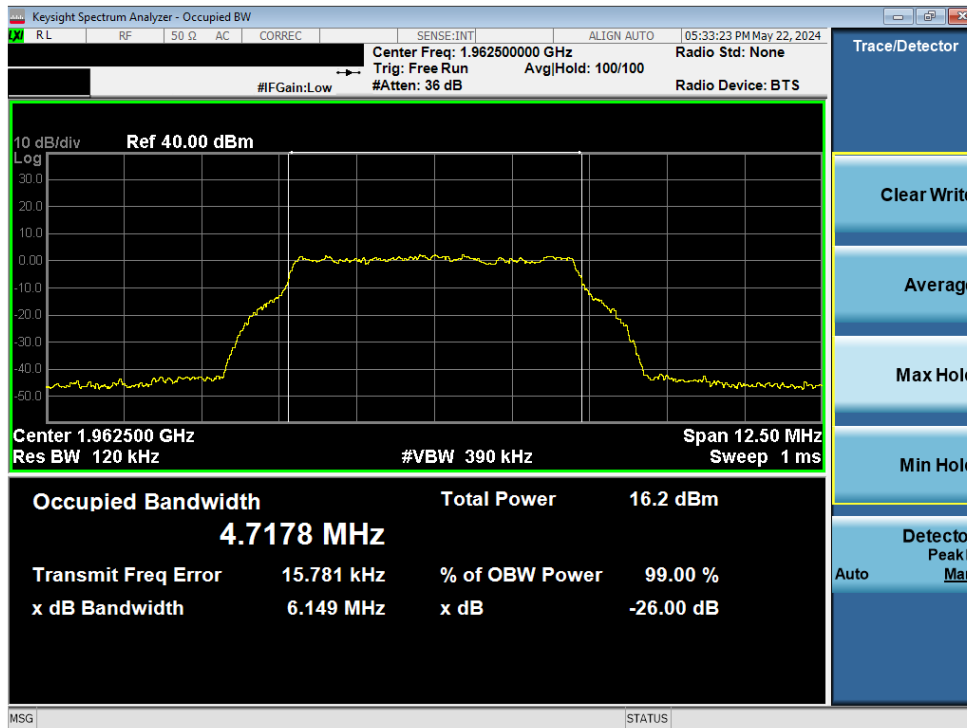


Plot 7-237. Occupied Bandwidth – BAND 25/2 DL 256-QAM (Input)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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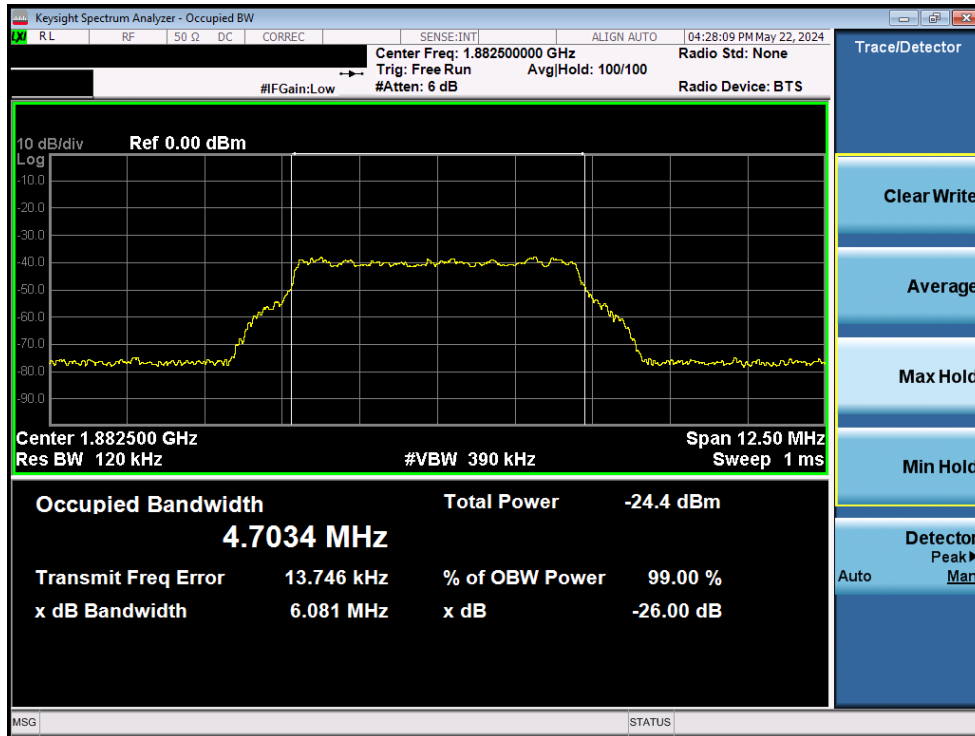


Plot 7-238. Occupied Bandwidth – BAND 25/2 DL QPSK (Output)

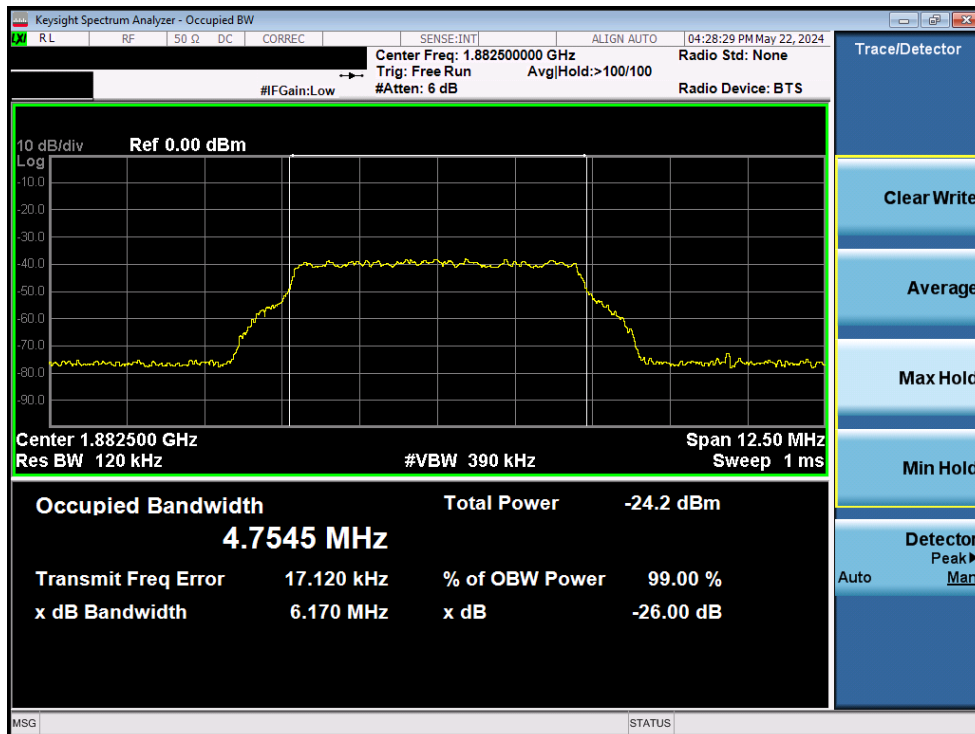


Plot 7-239. Occupied Bandwidth – BAND 25/2 DL 256-QAM (Output)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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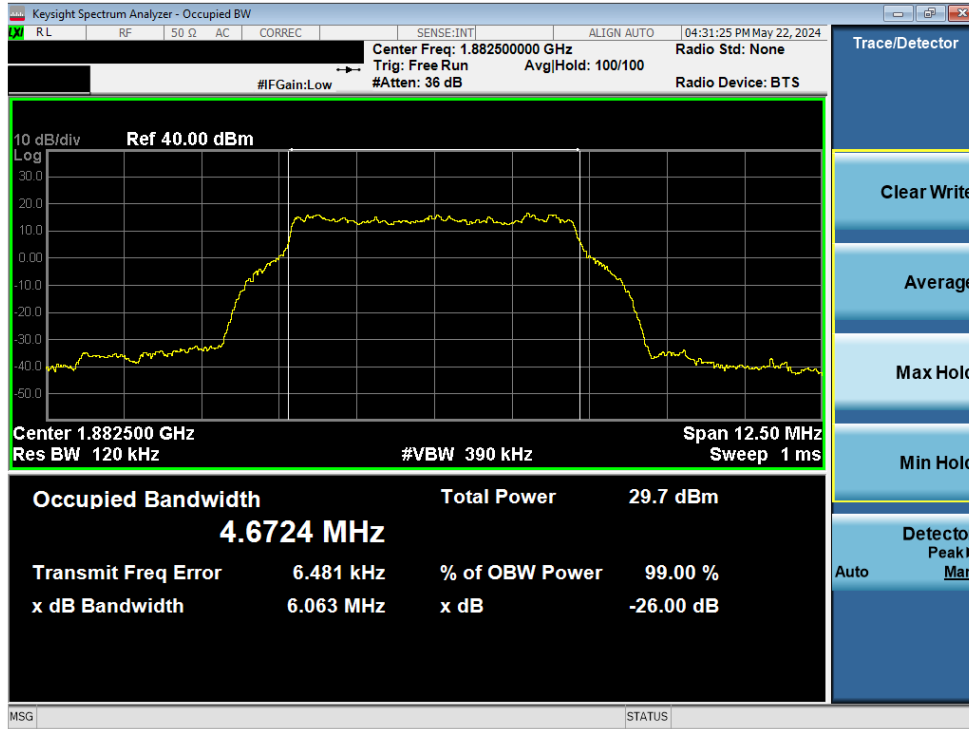


Plot 7-240. Occupied Bandwidth – BAND 25/2 UL QPSK (Input)

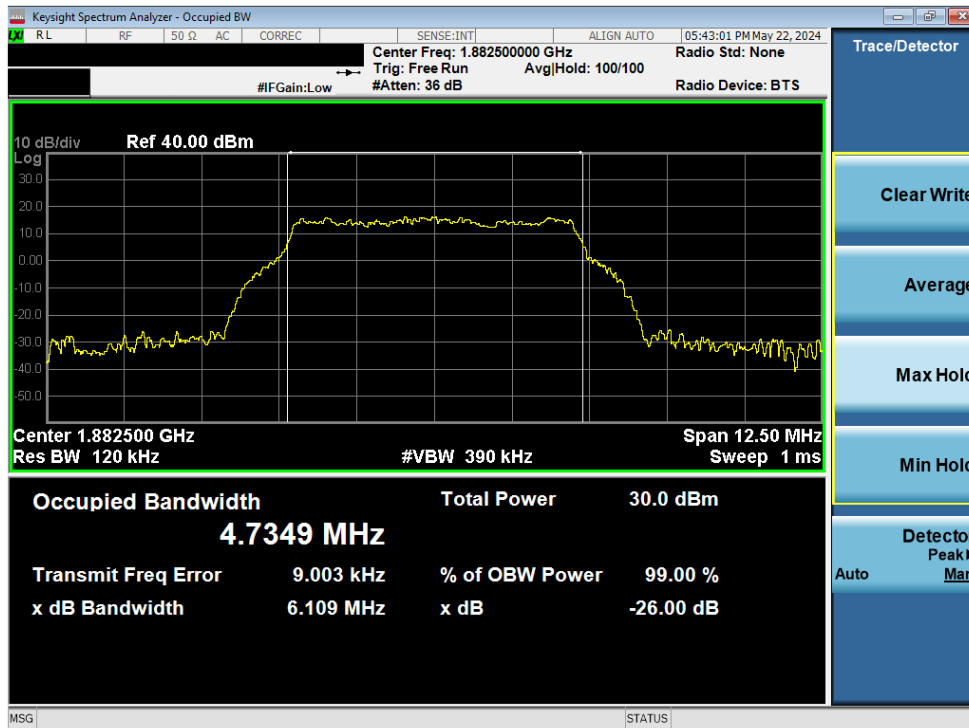


Plot 7-241. Occupied Bandwidth – BAND 25/2 UL 256-QAM (Input)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-242. Occupied Bandwidth – BAND 25/2 UL QPSK (Output)



Plot 7-243. Occupied Bandwidth – BAND 25/2 UL 256-QAM (Output)

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7.13 Oscillation Detection

Test Overview

Consumer boosters must be able to detect and mitigate any oscillations in uplink and downlink bands. Oscillation detection and mitigation must occur automatically within **0.3 seconds in the uplink band and within 1 second in the downlink band**. In cases where oscillation is detected, the booster must continue mitigation for **at least one minute before restarting**. After five such restarts, the booster must not resume operation until manually reset.


Test Procedure Used

KDB 935210 D04 Section 7.11

Test Settings

Oscillation Detection Test

1. Connect the normal-operating mode EUT to the test equipment as shown in Figure 7-13 (uplink) or Figure 7-14 (downlink).
2. Set the feedback step attenuator to 110 dB, and set the BSCL step attenuator such that the booster is operating at maximum gain and the minimum input level required for normal operation.
3. Spectrum analyzer settings:
 - 1) Set the spectrum analyzer center frequency to the center of the passband of the booster.
 - 2) Set the spectrum analyzer RBW to at least 1 MHz and the VBW \geq 3 MHz.
 - 3) Set the spectrum analyzer to zero-span, with a sweep time of 5 seconds, single-sweep, max-hold.
4. Set the spectrum analyzer sweep trigger level in this and the subsequent steps to 3 dB above the output power level of the booster that was found in Step 2
5. Reduce the feedback step attenuator setting from 110 dB until the sweep is triggered at oscillation onset, which may require an iterative process to find the precise setting where oscillation occurs, or up to a level equal to the booster maximum gain – 20 dB.
6. Use the CURSOR function of the spectrum analyzer to measure the time from the onset of oscillation until the EUT turns off, by setting CURSOR 1 on the leading edge of the oscillation signal, and CURSOR 2 on the trailing edge. The spectrum analyzer sweep time may be adjusted to improve the time resolution of these cursors.
7. Capture the spectrum analyzer trace for inclusion in the test report, and with the oscillation power level being discernible.
8. Repeat Step 2 to 7 for all operational uplink and downlink bands.
9. Replace the normal-operating mode EUT with the EUT that supports a test mode.
10. Set the spectrum analyzer time base (zero-span time) for a minimum 120 seconds, with the same trigger as in the preceding steps, and a single sweep.
11. Start the spectrum analyzer sweep, and manually force the booster into oscillation by changing the feedback step attenuator, as described in Step 5

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12. When the sweep is complete, place cursors between the first two oscillation detections, and save the plot for inclusion in the test report; report the power level associated with the oscillation separately if it can't be displayed on the trace. The time between restarts must match the manufacturer's timing for the test mode, and there shall be no more than five restarts.
13. Repeat Step 10 through 12 for all operational uplink and downlink bands.
14. If no oscillations are detected with the preceding procedure, a pre-test shall be performed with a wider spectrum span to ensure that the frequency of oscillation is within the RBW of the spectrum analyzer.

Oscillation Mitigation or Shutdown


1. Connect the normal-operating mode EUT to the test equipment as shown in Figure 7-15.
2. Spectrum analyzer settings:
 - 1) Set the spectrum analyzer's center frequency to the center of band under test,
 - 2) $RBW = 30 \text{ kHz}$, $VBW \geq 3 \times RBW$,
 - 3) power averaging (rms) detector,
 - 4) trace averages ≥ 100 ,
 - 5) span $\geq 120 \%$ of operational band under test,
 - 6) number of sweep points $\geq 2 \times \text{span}/RBW$.

NOTE—To measure 120 % of the band under test in one span with spectrum analyzers having less than the required number of sweep points: i) Perform pre-tests with span equal to smaller band segments, such that 120 % of the operational band is captured in multiple tests, using the setup parameters specified; ii) record the center frequency of the strongest oscillation level occurring, and iii) confirm this frequency is within the span and band segment used in this test.

3. Configure the signal generator for AWGN operation with a 99 % OBW of 4.1 MHz, tuned to the frequency of 2.5 MHz above the lower edge or below the upper edge of the operating band under test.
4. Adjust the RF output level of the signal generator such that the measured power level of the AWGN signal at the output port of the booster is 30 dB less than the maximum power of the booster for the band under test. The input signal shall not obstruct the measurement of the strongest oscillation peak in the band, and shall not be included within the span of the measurement.

NOTE—Boosters with operating spectrum passbands of 10 MHz or less may use a CW signal source at band edge rather than AWGN. For device passbands greater than 10 MHz, standard CMRS signal sources (i.e., CDMA, W-CDMA, LTE) may be used instead of AWGN at the band edge.

5. Set the variable attenuator to a high attenuation setting such that the booster will operate at maximum gain when powered on. Reset the EUT (e.g., cycle ac/dc power). Allow the EUT to complete its boot-up process, to reach full operational gain, and to stabilize its operation.

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6. Set the variable attenuator such that the insertion loss for the center of the band under test (isolation) between the booster donor port and server port is 5 dB greater than the maximum gain, as recorded in the maximum gain test procedure for the band under test.
 7. Verify the EUT shuts down, i.e., to mitigate the oscillations. If the booster does not shut down, measure and verify the peak oscillation level as follows.
 - 1) Allow the spectrum analyzer trace to stabilize.
 - 2) Place the marker at the highest oscillation level occurring within the span, and record its output level and frequency.
 - 3) Set the spectrum analyzer center frequency to the frequency with the highest oscillation signal level, and reduce the span such that the upper and lower adjacent oscillation peaks are within the span.
 - 4) Use the minimum search marker function to find the lowest output level that is within the span, and within the operational band under test, and record its output level and frequency.
 - 5) The peak oscillation level, as measured in Step 7-2), shall not exceed by 12.0 dB the minimal output level measured in Step 7-4). Record the measurement results of Step 7-2) and Step 7-4) in tabular format for inclusion in the report.
 - 6) The procedure of Step 7-1) to Step 7-5) allows the spectrum analyzer trace to stabilize, and verification of shutdown or oscillation level measurement shall occur within 300 seconds.
 8. Decrease the variable attenuator in 1 dB steps, and repeat Step 7 for each 1 dB step. Continue testing to the level when the insertion loss for the center of band under test (isolation) between the booster donor port and server port is 5 dB lower than the maximum gain
- NOTE—Provider-specific boosters with gain greater than 75 dB and 85 dB must continue testing to the levels 15 dB and 25 dB lower than maximum gain, respectively.
9. Repeat Step 2 to 8 for all operational uplink and downlink bands.

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

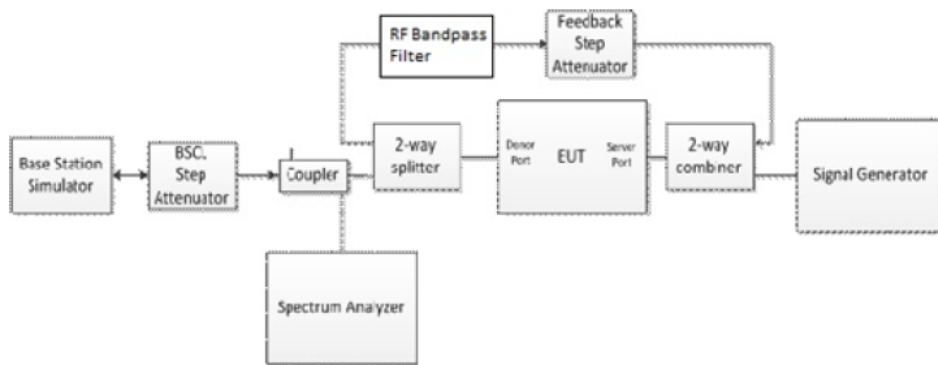



Figure 7-13. Uplink oscillation detection test setup

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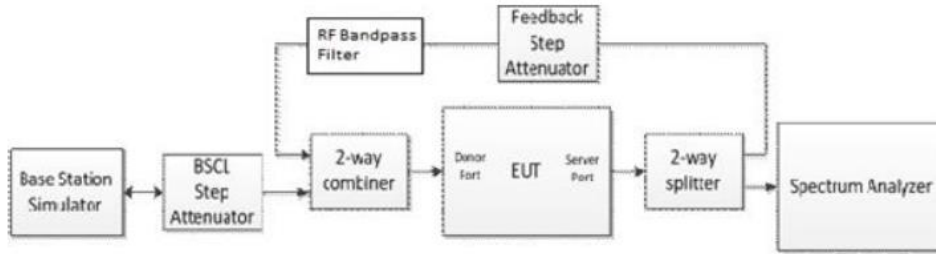


Figure 7-14. Downlink oscillation detection test setup

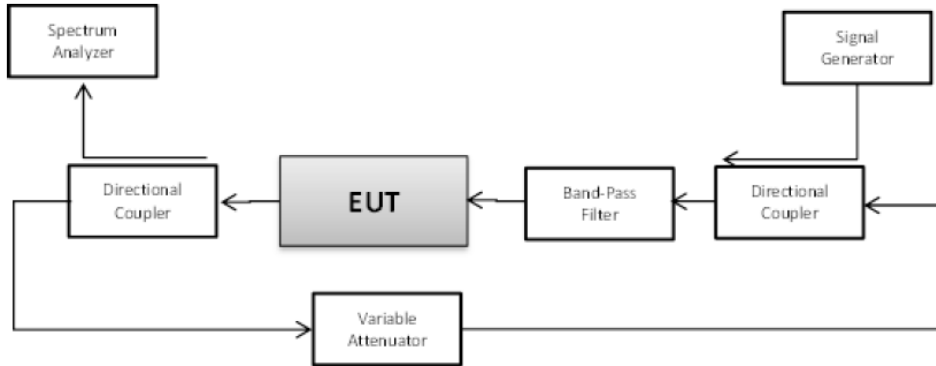



Figure 7-15. Downlink oscillation mitigation test setup

Test Notes

The manufacturer has declared that the booster will shutdown after an oscillation event. As such, the oscillation mitigation test cases are not required. One set of 120s mitigation plots were observed to confirm booster shutdown so the data is not included


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Band	Frequency (MHz)	Mitigation Time (s)	Limit (s)	Margin (s)
LTE Band 4 (DL)	2132.5	0.080	1.0	0.920
LTE Band 4 (UL)	1732.5	0.075	0.3	0.225
LTE Band 5 (DL)	881.5	0.081	1.0	0.919
LTE Band 5 (UL)	836.5	0.155	0.3	0.145
LTE Band 12 (DL)	737.5	0.071	1.0	0.929
LTE Band 12 (UL)	707.5	0.070	0.3	0.230
LTE Band 13 (DL)	751	0.206	1.0	0.794
LTE Band 13 (UL)	782	0.151	0.3	0.149
LTE Band 25/2 (DL)	1960	0.080	1.0	0.920
LTE Band 25/2 (UL)	1880	0.070	0.3	0.230

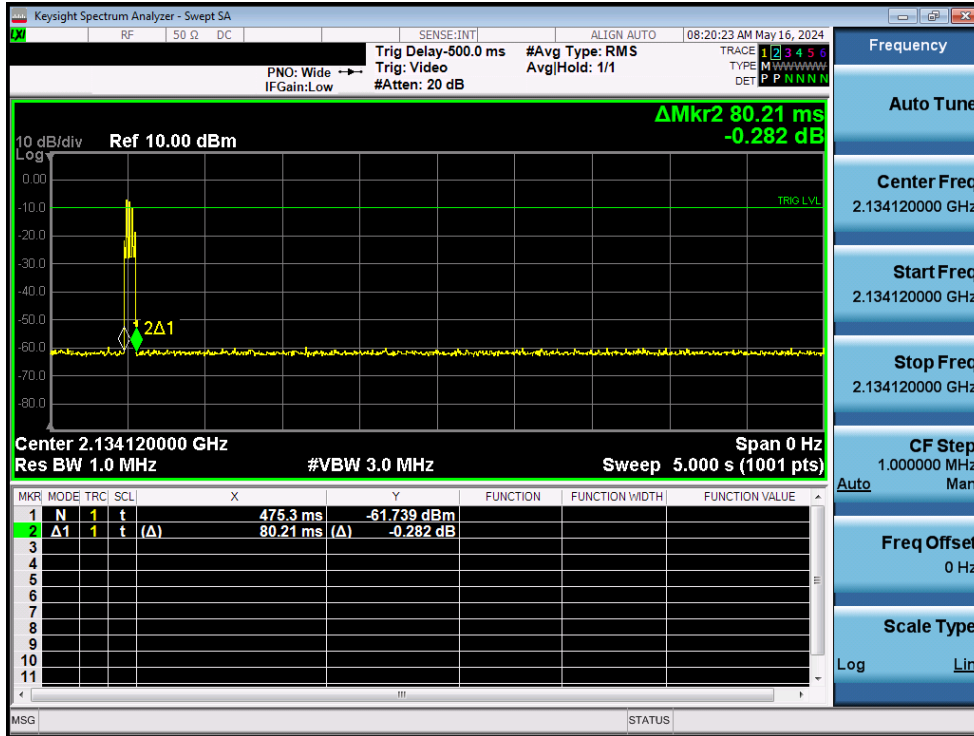
Table 7-37. Summary of Oscillation Detection – Mitigation Time

Band	Frequency (MHz)	# of Restart	Limit	Margin
LTE Band 4 (DL)	2132.5	0	5	5
LTE Band 4 (UL)	1732.5	0	5	5
LTE Band 5 (DL)	881.5	0	5	5
LTE Band 5 (UL)	836.5	0	5	5
LTE Band 12 (DL)	737.5	0	5	5
LTE Band 12 (UL)	707.5	0	5	5
LTE Band 13 (DL)	751	0	5	5
LTE Band 13 (UL)	782	0	5	5
LTE Band 25/2 (DL)	1960	0	5	5
LTE Band 25/2 (UL)	1880	0	5	5

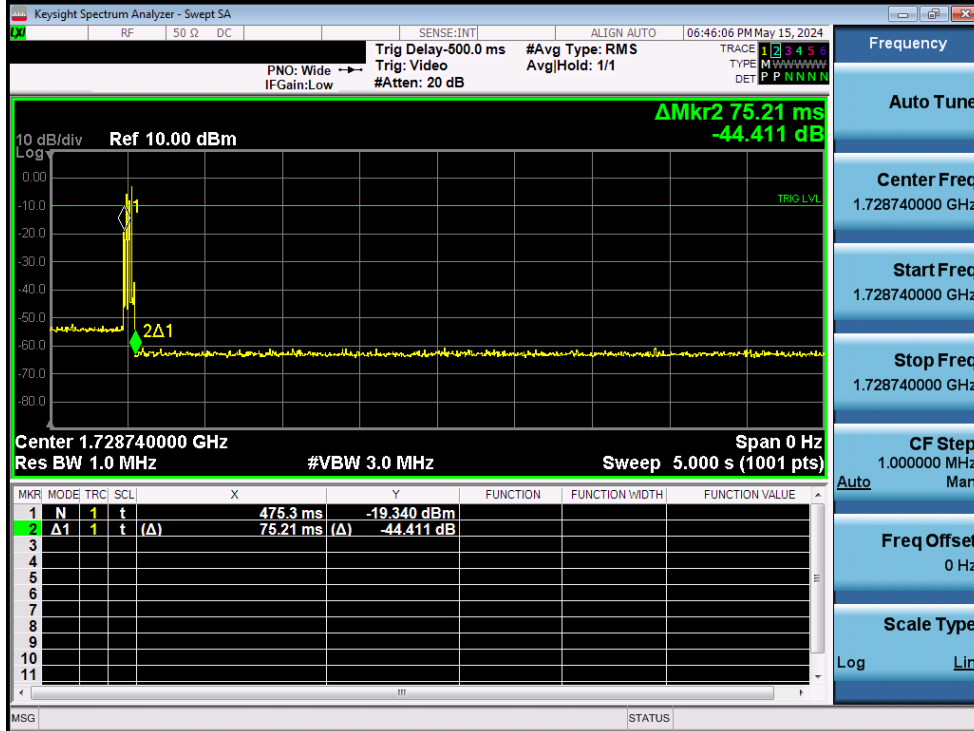
Table 7-38. Summary of Oscillation Detection – Restart

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LTE Band 4



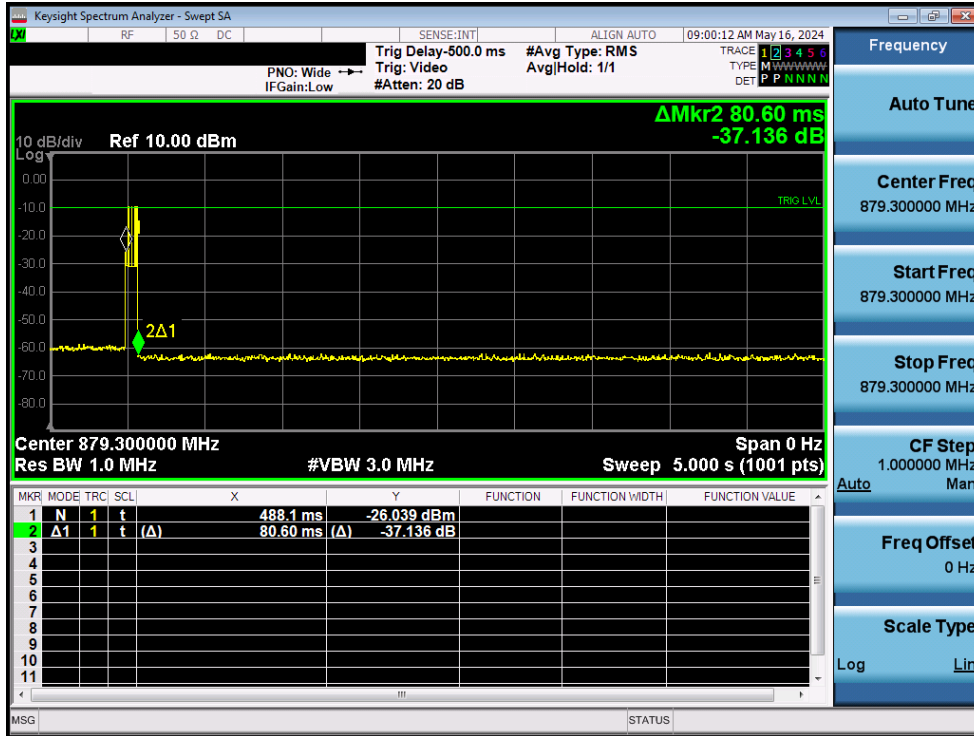
Plot 7-244. Oscillation Detection– BAND 4 DL



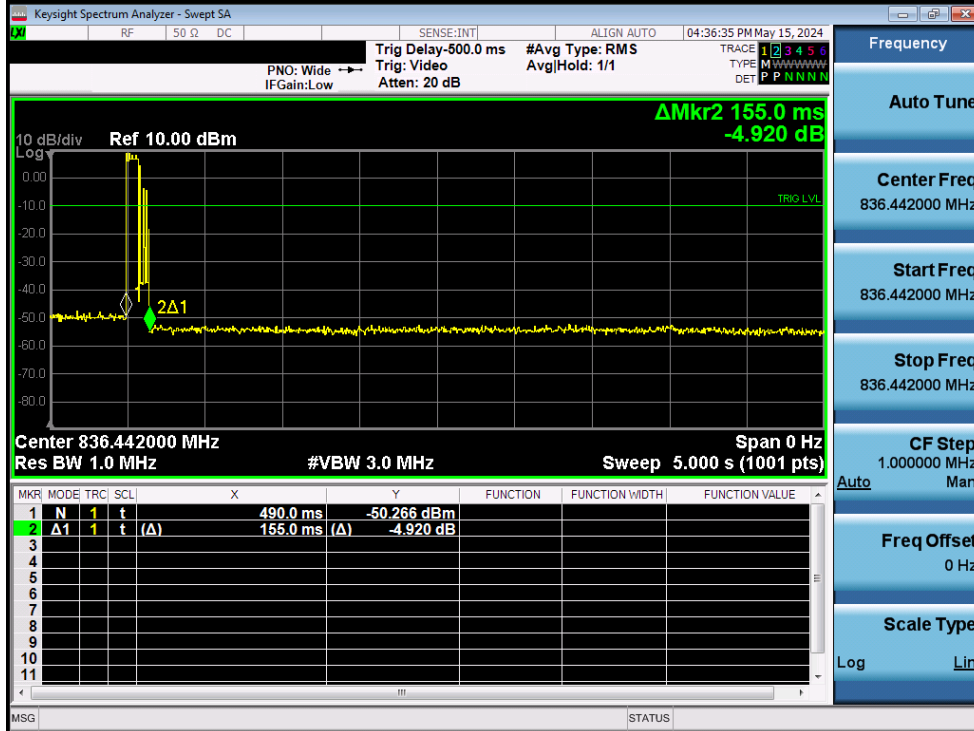
Plot 7-245. Oscillation Detection– BAND 4 UL

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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LTE Band 5



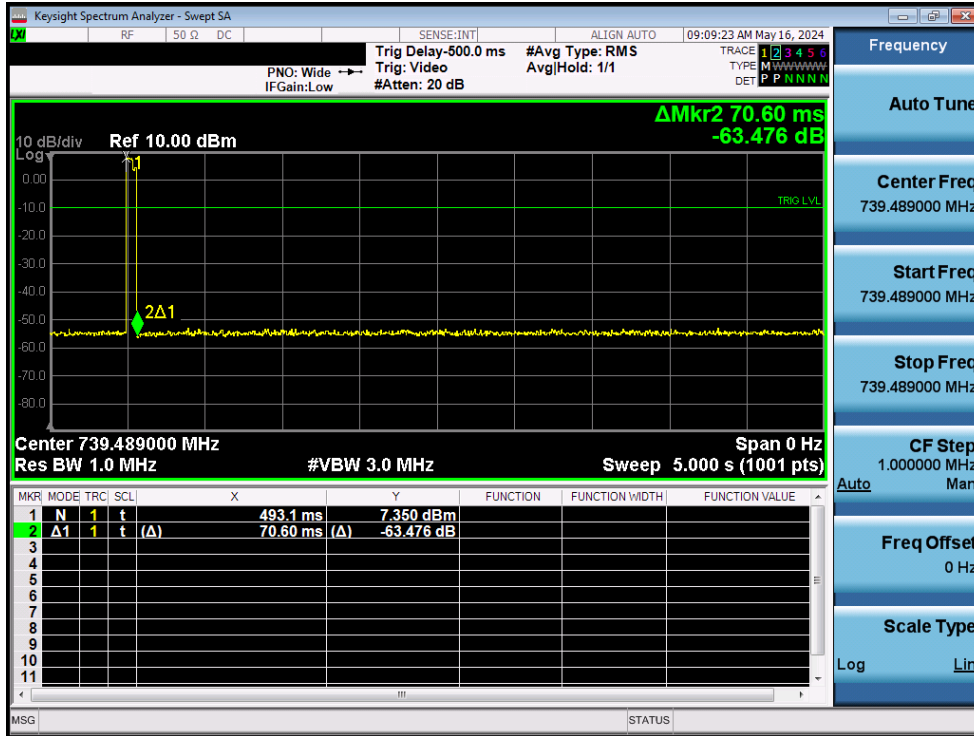
Plot 7-246. Oscillation Detection– BAND 5 DL



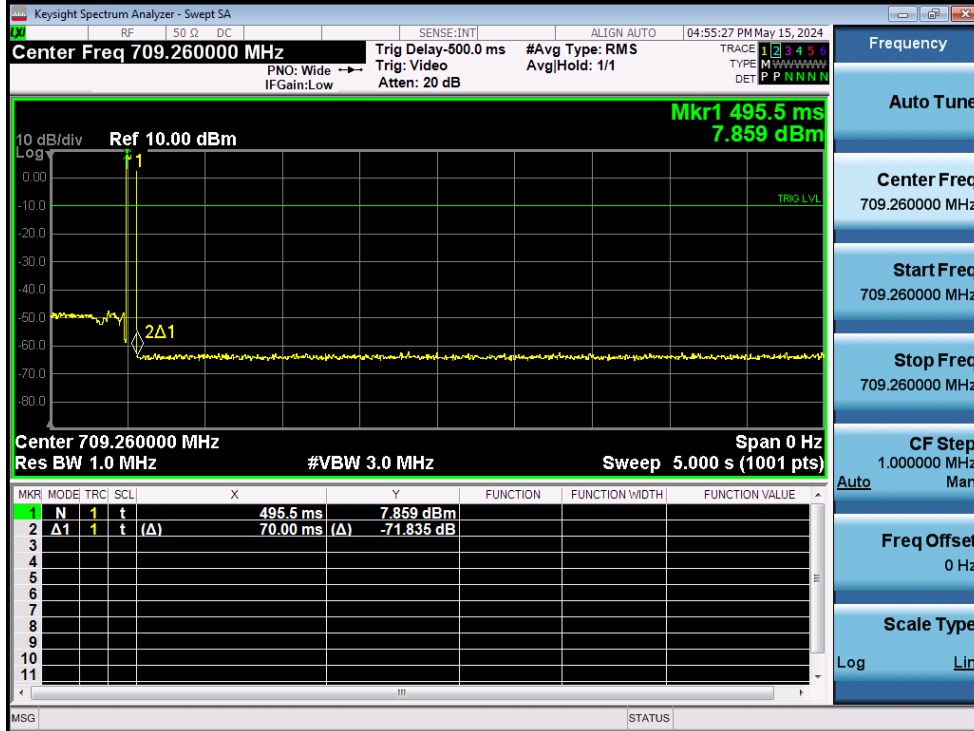
Plot 7-247. Oscillation Detection– BAND 5 UL

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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LTE Band 12



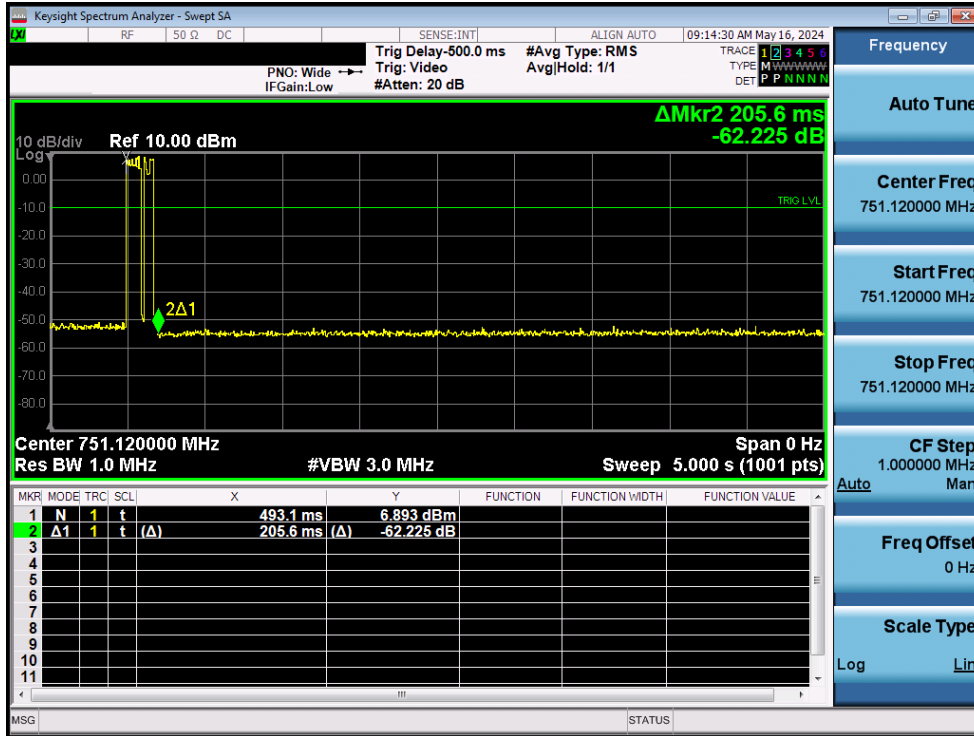
Plot 7-248. Oscillation Detection– BAND 12 DL



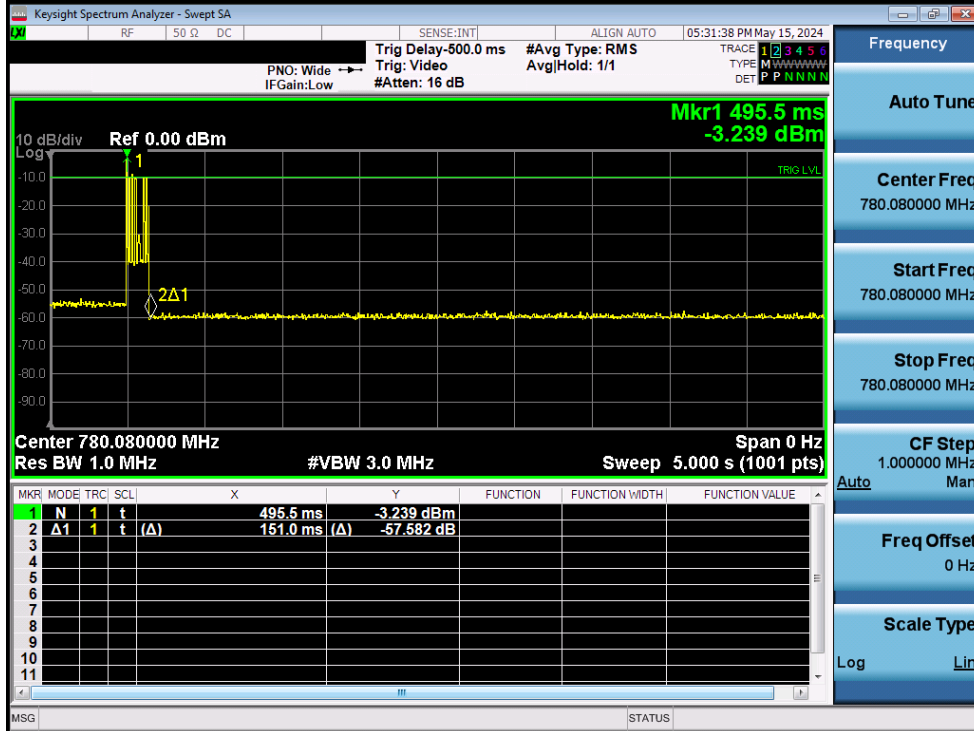
Plot 7-249. Oscillation Detection– BAND 12 UL

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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LTE Band 13



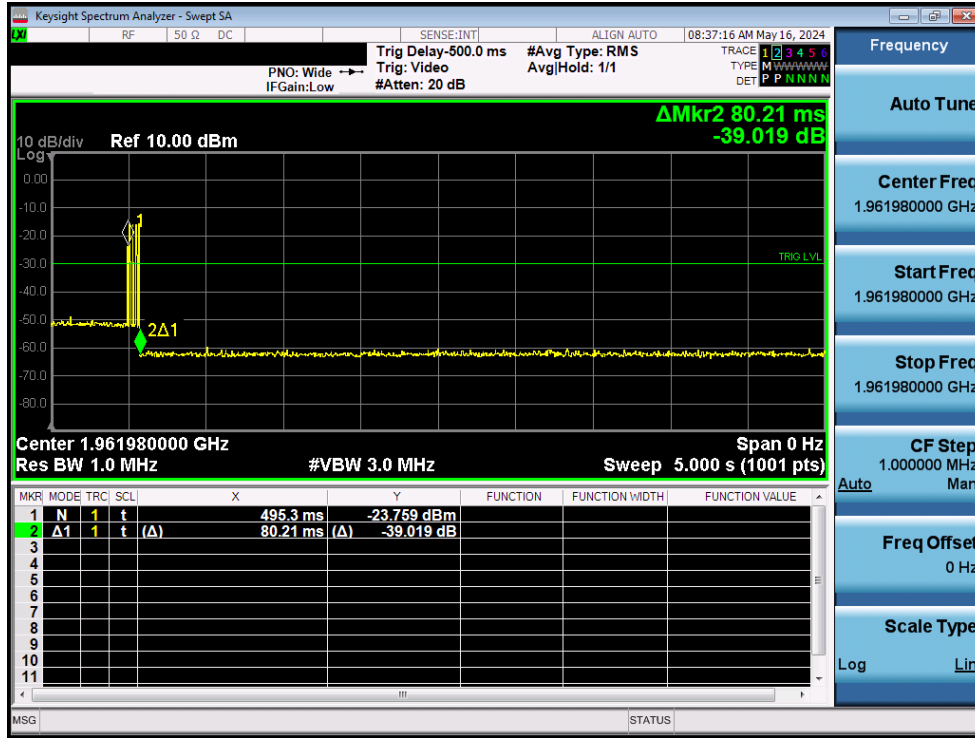
Plot 7-250. Oscillation Detection– BAND 13 DL



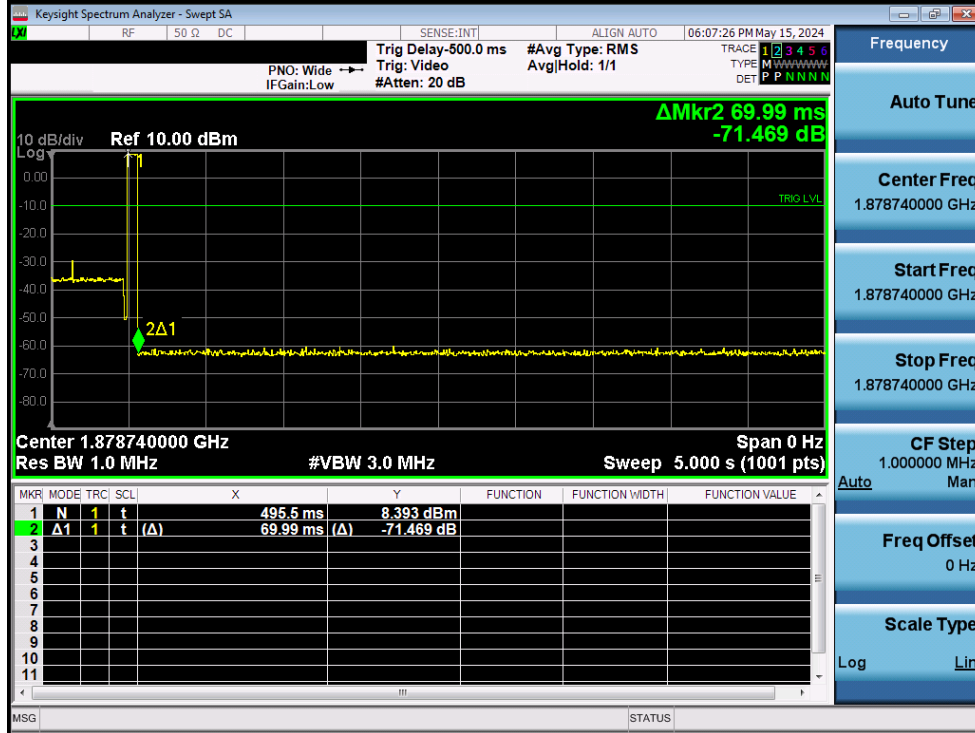
Plot 7-251. Oscillation Detection– BAND 13 UL

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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LTE Band 25/2



Plot 7-252. Oscillation Detection– BAND 25/2 DL



Plot 7-253. Oscillation Detection– BAND 25/2 UL

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Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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7.14 Radiated Spurious Emissions Measurements

Test Overview

Radiated spurious emissions measurements are performed using the field strength conversion method described in ANSI C63.26-2015 with the EUT transmitting into a 50 ohm termination. Measurements on signals operating below 1GHz are performed using hybrid (biconical/log) antennas. Measurements on signals operating above 1GHz are performed using vertically and horizontally polarized broadband horn antennas. All measurements are performed as RMS measurements while the EUT is operating at maximum power, and at the appropriate frequencies.


The conductive power or total radiated power of any emissions outside a licensee's frequency block shall be -13dBm.

Test Procedure Used

ANSI C63.26-2015 – Section 5.5.4
KDB 935210 D04 Section 7.13

Test Settings

1. RBW = 100kHz for bands operating below 1GHz and 1MHz for bands operating above 1GHz
2. VBW \geq 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points \geq 2 x span / RBW
5. Detector = RMS
6. Trace mode = Average (Max Hold for pulsed emissions)
7. The trace was allowed to stabilize

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Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

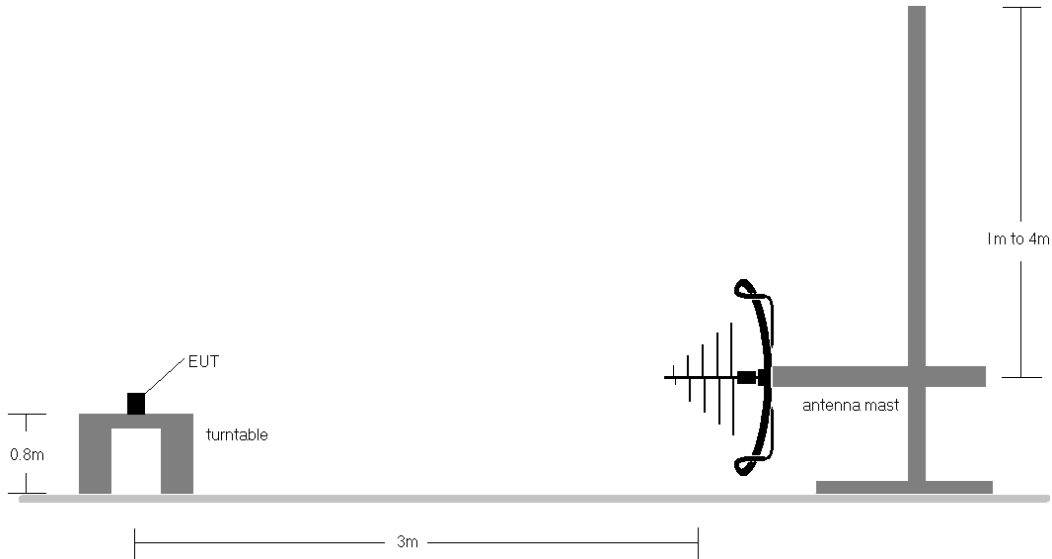


Figure 7-16. Test Instrument & Measurement Setup < 1GHz

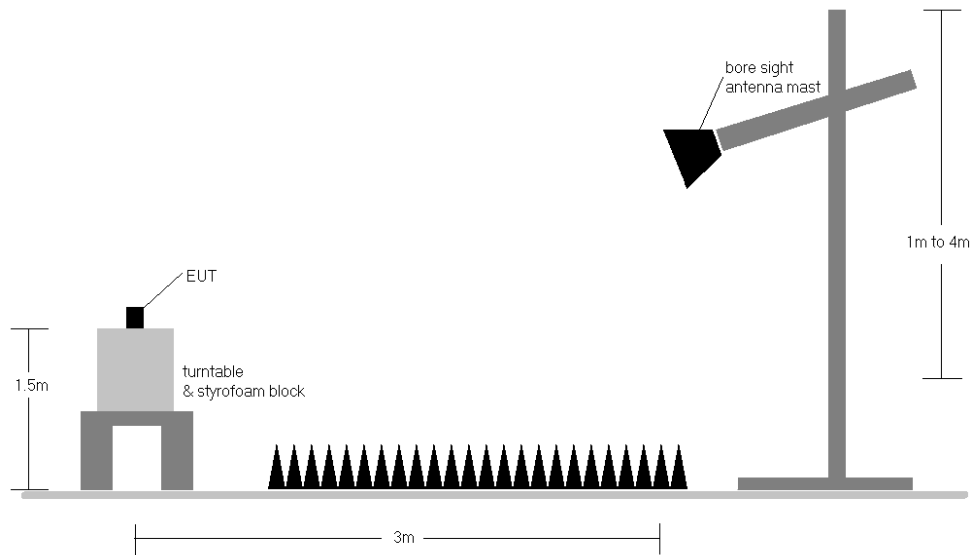




Figure 7-17. Test Instrument & Measurement Setup > 1GHz

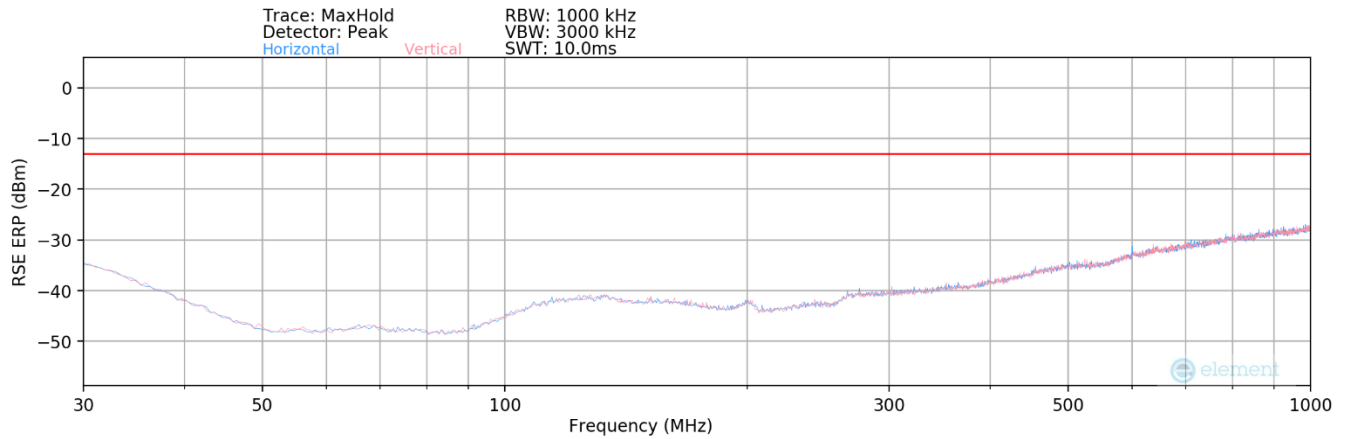
<p>FCC ID: PWO076 IC: 4726A-076</p>	 <p>PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)</p>	<p>Approved by: Technical Manager</p>
<p>Test Report S/N: 1M2406100049-01.PWO</p>	<p>Test Dates: 05/13 - 06/19/2024</p>	<p>EUT Type: Provider Specific Signal Booster</p>

Test Notes

- 1) Field strengths are calculated using the Measurement quantity conversions in ANSI C63.26-2015 Section 5.2.7:
 - a) $E(\text{dB}\mu\text{V}/\text{m}) = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}$
 - b) $\text{EIRP (dBm)} = E(\text{dB}\mu\text{V}/\text{m}) + 20\log D - 104.8$; where D is the measurement distance in meters.
- 2) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case emissions are reported with the EUT positioning shown in the tables below.
- 3) This unit was tested while powered by 120VAC.
- 4) The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter. The worst-case emissions are reported.
- 5) Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
- 6) The "-" shown in the following RSE tables are used to denote a noise floor measurement.
- 7) All radiated testing was performed by using a signal generator connected to the input port to transmit and then measuring the radiated output transmission with terminated 50 ohm termination. For DL radiated measurement signal generator is connected to Donor port while all unused donor and server ports are terminated with 50ohm termination. For UL radiated measurement signal generator is connected to Server port while all unused donor and server ports are terminated with 50ohm termination.

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LTE Band 4

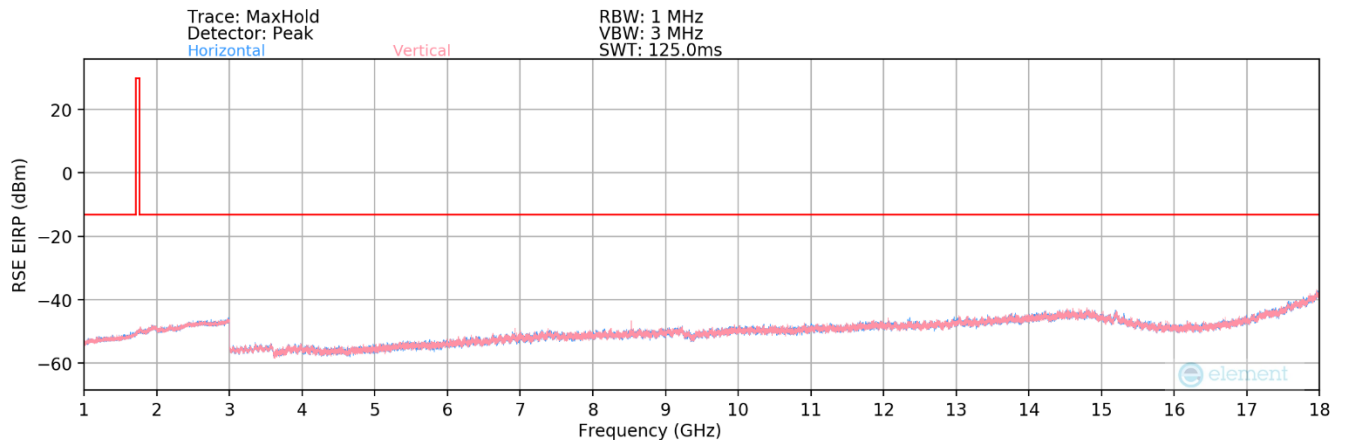


Plot 7-254. Radiated Spurious Plot Below 1GHz (Band 4 DL)

Bandwidth (MHz):	5
Frequency (MHz):	2132.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
47.80	V	120	156	-78.10	15.36	44.26	-51.00	-13.00	-38.00
54.90	V	125	227	-70.14	13.89	50.75	-44.51	-13.00	-31.51
74.30	V	118	18	-77.95	14.45	43.50	-51.76	-13.00	-38.76
189.00	V	166	231	-86.47	18.11	38.64	-56.62	-13.00	-43.62
425.00	V	180	170	-91.23	23.93	39.70	-55.56	-13.00	-42.56

Table 7-39. Radiated Spurious Data (Band 4 DL)



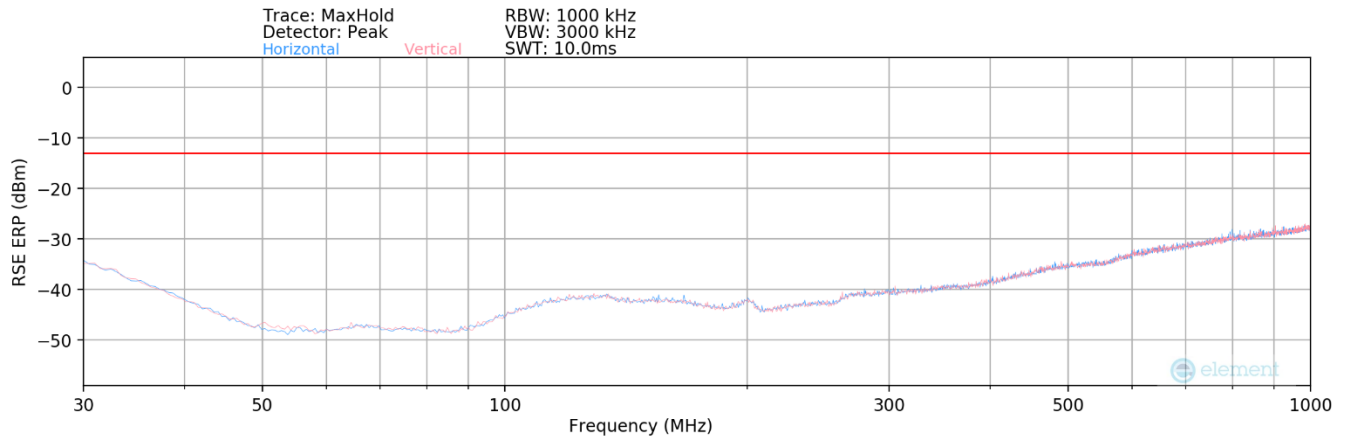
Plot 7-255. Radiated Spurious Plot Above 1GHz (Band 4 DL)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Bandwidth (MHz):	5
Frequency (MHz):	2132.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
2600.00	V	-	-	-73.90	2.95	36.05	-59.20	-13.00	-46.20
4265.00	V	-	-	-74.41	-2.01	30.58	-64.68	-13.00	-51.68
6397.50	V	-	-	-75.11	1.60	33.49	-61.76	-13.00	-48.76
8530.00	V	174	78	-64.18	5.36	48.18	-47.08	-13.00	-34.08
10662.50	V	-	-	-77.99	8.41	37.42	-57.83	-13.00	-44.83
12795.00	V	-	-	-78.41	9.65	38.24	-57.02	-13.00	-44.02
14927.50	V	-	-	-77.42	11.67	41.25	-54.01	-13.00	-41.01
17060.00	V	-	-	-76.71	10.62	40.91	-54.34	-13.00	-41.34

Table 7-40. Radiated Spurious Data (Band 4 DL)



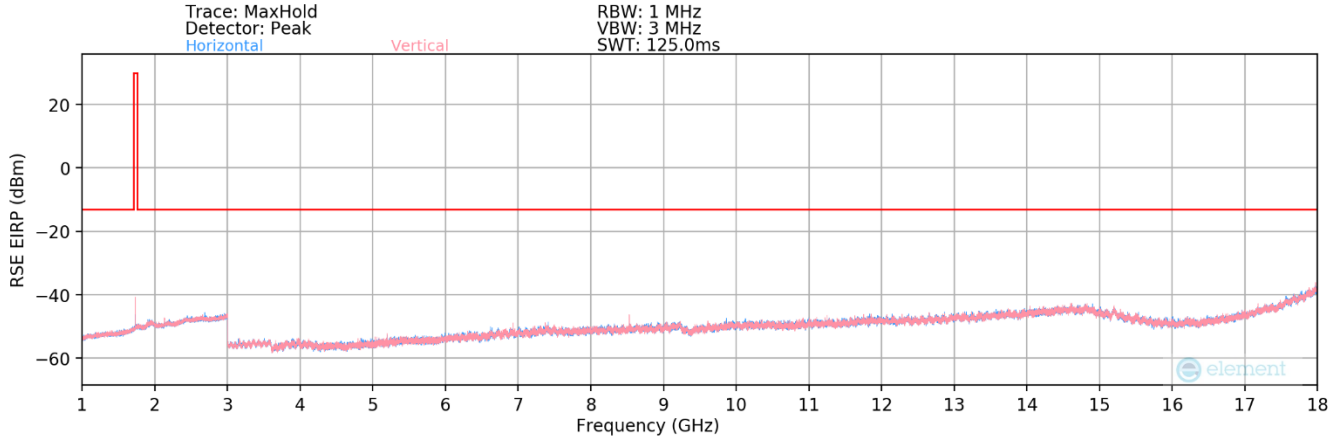
Plot 7-256. Radiated Spurious Plot Below 1GHz (Band 4 UL)

Bandwidth (MHz):	5
Frequency (MHz):	1732.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
47.50	V	126	164	-76.68	15.50	45.82	-49.43	-13.00	-36.43
54.90	V	114	244	-69.86	13.89	51.03	-44.23	-13.00	-31.23
73.80	V	107	10	-77.25	14.50	44.25	-51.01	-13.00	-38.01
189.00	V	262	36	-86.59	18.11	38.52	-56.74	-13.00	-43.74
218.50	V	179	159	-85.31	19.46	41.15	-54.11	-13.00	-41.11
400.00	V	146	174	-86.90	23.26	43.36	-51.90	-13.00	-38.90
425.00	V	146	174	-87.12	23.93	43.81	-51.45	-13.00	-38.45
982.00	V	-	-	-88.31	31.42	50.11	-45.14	-13.00	-32.14

Table 7-41. Radiated Spurious Data (Band 4 UL)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-257. Radiated Spurious Plot Above 1GHz (Band 4 UL)

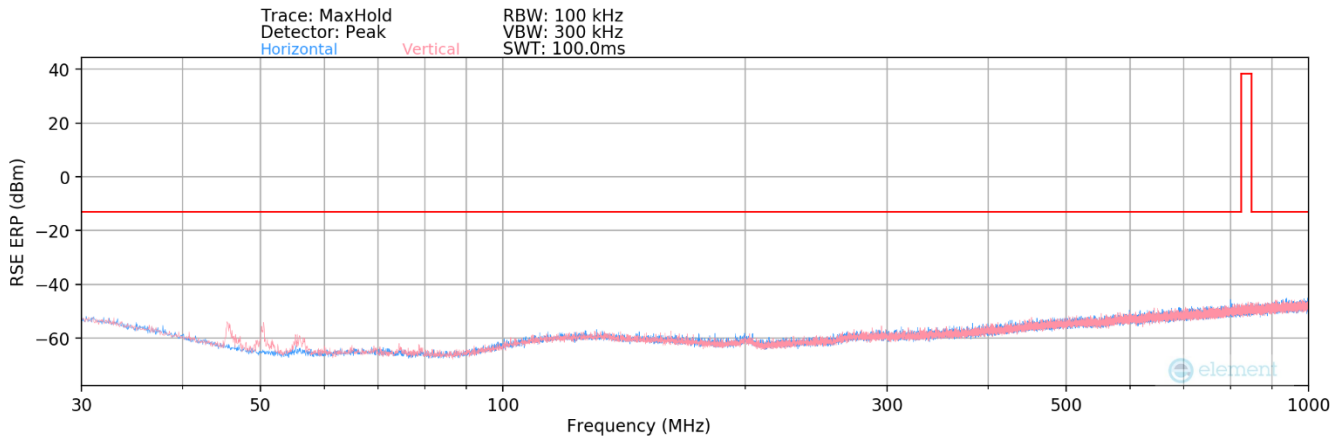
Bandwidth (MHz):	5
Frequency (MHz):	1732.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
2200.00	V	237	220	-64.78	1.55	43.77	-51.49	-13.00	-38.49
3465.00	V	155	55	-70.35	-2.99	33.66	-61.60	-13.00	-48.60
5197.50	V	159	123	-65.48	-0.55	40.97	-54.29	-13.00	-41.29
6930.00	V	222	289	-68.43	3.67	42.24	-53.02	-13.00	-40.02
8662.50	V	146	339	-75.90	5.96	37.06	-58.20	-13.00	-45.20
10395.00	V	-	-	-77.81	7.69	36.88	-58.38	-13.00	-45.38
12127.50	V	-	-	-78.02	9.14	38.12	-57.14	-13.00	-44.14
13860.00	V	321	284	-73.35	11.27	44.92	-50.33	-13.00	-37.33
15592.50	V	-	-	-77.54	9.42	38.88	-56.38	-13.00	-43.38

Table 7-42. Radiated Spurious Data (Band 4 UL)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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LTE Band 5

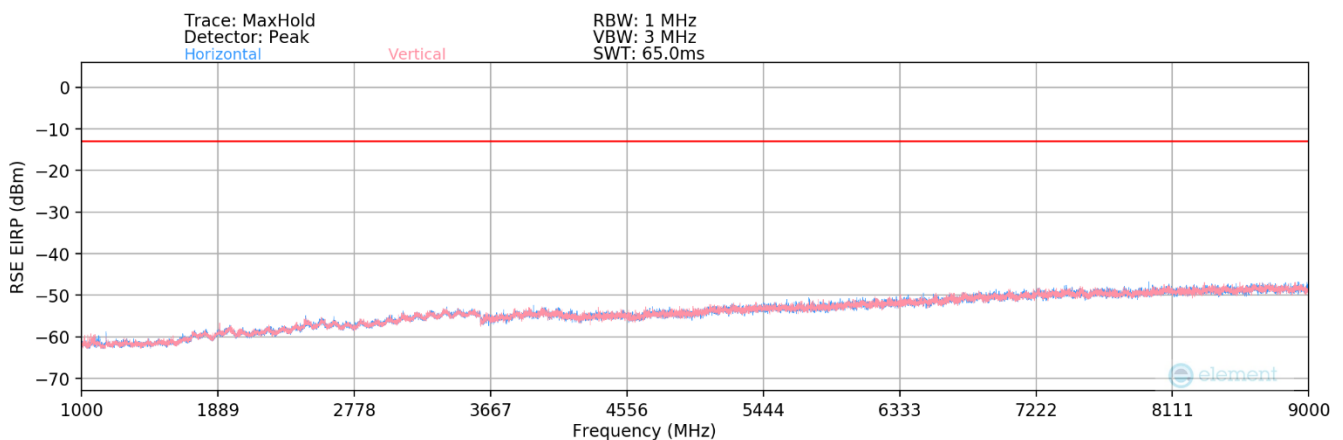


Plot 7-258. Radiated Spurious Plot Below 1GHz (Band 5 DL)

Bandwidth (MHz):	5
Frequency (MHz):	881.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	100kHz / 300kHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
45.54	V	162	53	-84.42	16.51	39.09	-56.16	-13.00	-43.16
50.46	V	122	348	-77.96	14.43	43.47	-51.79	-13.00	-38.79
55.91	V	107	312	-83.52	13.90	37.38	-57.88	-13.00	-44.88
218.30	V	171	289	-88.42	17.70	36.28	-58.97	-13.00	-45.97
252.10	V	133	333	-96.03	18.78	29.75	-65.51	-13.00	-52.51
650.00	V	-	-	-96.08	27.87	38.79	-56.46	-13.00	-43.46

Table 7-43. Radiated Spurious Data (Band 5 DL)



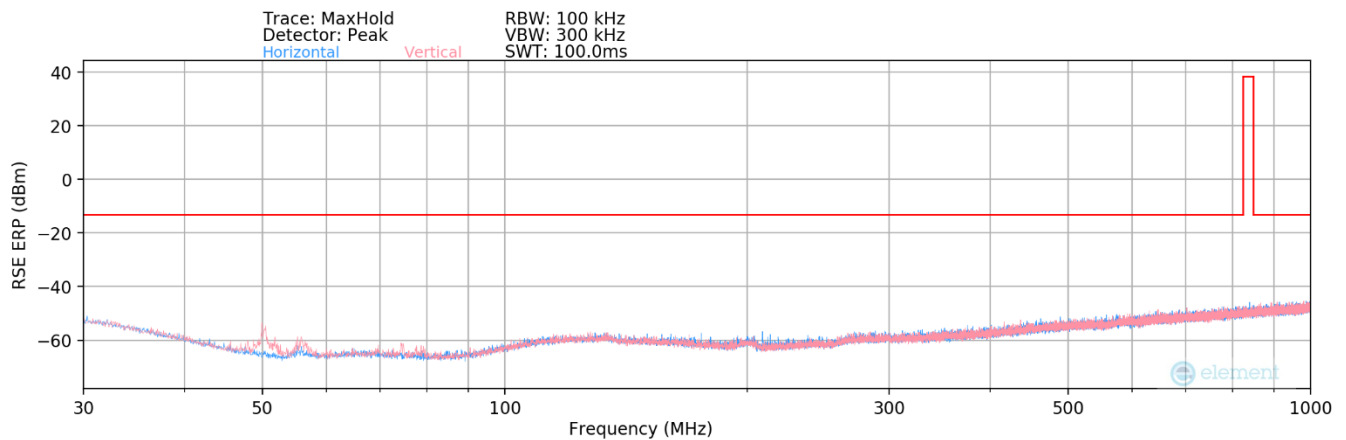
Plot 7-259. Radiated Spurious Plot Above 1GHz (Band 5 DL)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Bandwidth (MHz):	5
Frequency (MHz):	881.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1763.00	H	-	-	-74.48	-8.52	24.00	-71.26	-13.00	-58.26
2644.50	H	142	12	-66.11	-6.19	34.70	-60.56	-13.00	-47.56
3526.00	H	-	-	-74.01	-3.64	29.35	-65.90	-13.00	-52.90
4407.50	H	-	-	-74.73	-2.17	30.10	-65.16	-13.00	-52.16
5289.00	H	-	-	-74.59	-0.72	31.69	-63.57	-13.00	-50.57
6170.50	H	-	-	-75.04	1.20	33.16	-62.10	-13.00	-49.10
7052.00	H	197	321	-72.41	3.33	37.92	-57.33	-13.00	-44.33
7933.50	H	-	-	-76.32	4.33	35.01	-60.25	-13.00	-47.25

Table 7-44. Radiated Spurious Data (Band 5 DL)



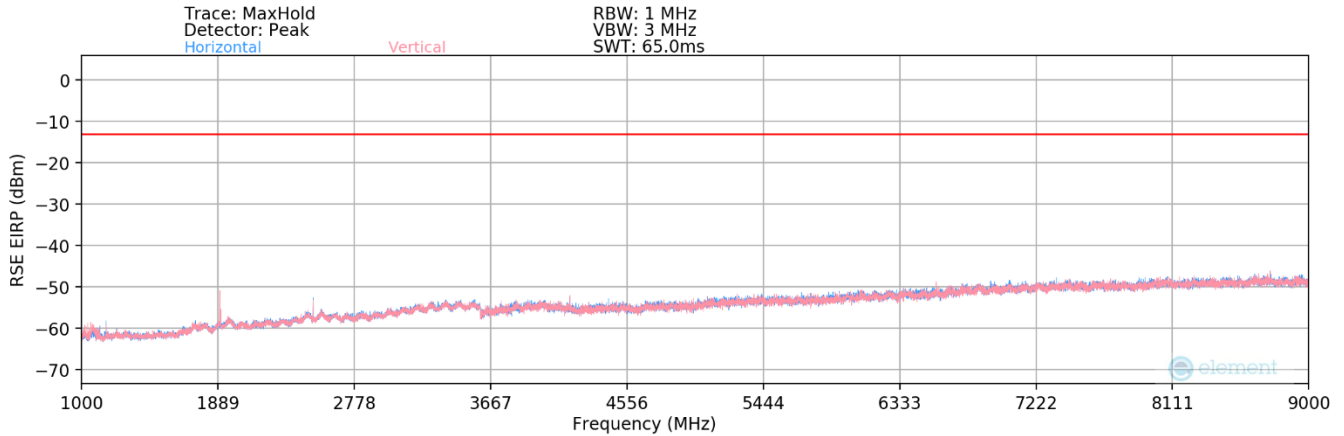
Plot 7-260. Radiated Spurious Plot Below 1GHz (Band 5 UL)

Bandwidth (MHz):	5
Frequency (MHz):	836.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	100kHz / 300kHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
50.00	V	143	304	-77.19	14.56	44.37	-50.88	-13.00	-37.88
55.37	V	122	215	-82.73	13.89	38.16	-57.09	-13.00	-44.09
78.71	V	129	254	-86.12	14.20	35.08	-60.18	-13.00	-47.18
213.60	H	169	279	-86.71	17.56	37.85	-57.41	-13.00	-44.41

Table 7-45. Radiated Spurious Data (Band 5 UL)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-261. Radiated Spurious Plot Above 1GHz (Band 5 UL)

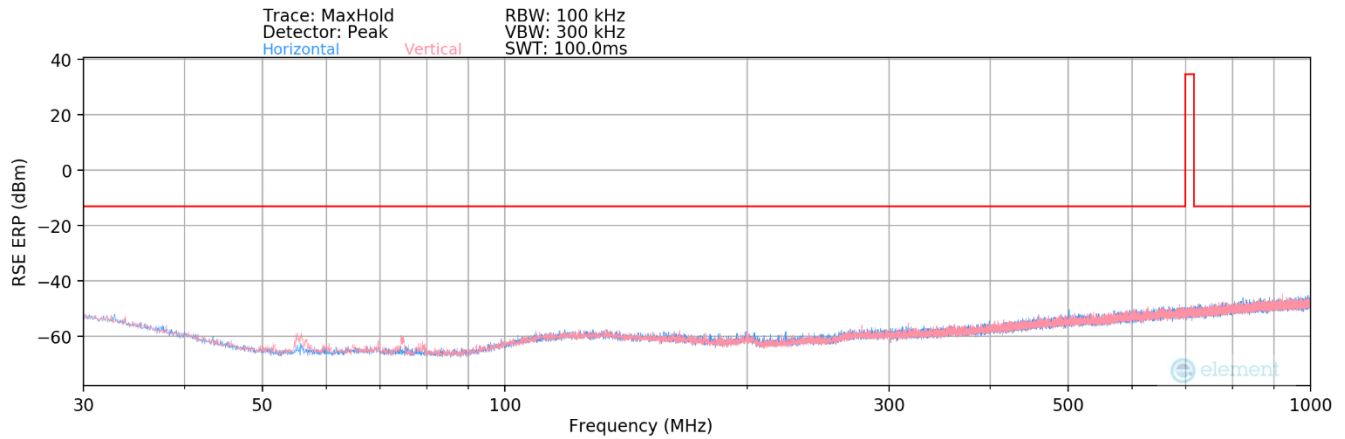
Bandwidth (MHz):	5
Frequency (MHz):	836.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1160.00	H	163	12	-67.98	-11.50	27.52	-67.73	-13.00	-54.73
1673.00	H	-	-	-73.71	-9.69	23.60	-71.66	-13.00	-58.66
1902.00	H	373	40	-65.30	-8.52	33.18	-62.08	-13.00	-49.08
2509.50	H	138	172	-59.40	-5.94	41.66	-53.59	-13.00	-40.59
3346.00	H	-	-	-74.31	-3.62	29.07	-66.19	-13.00	-53.19
4182.50	H	123	73	-64.54	-2.42	40.04	-55.22	-13.00	-42.22
5019.00	H	-	-	-74.55	-1.33	31.12	-64.14	-13.00	-51.14
5855.50	H	-	-	-75.15	0.25	32.10	-63.16	-13.00	-50.16
6692.00	H	109	41	-75.28	2.38	34.10	-61.16	-13.00	-48.16
7528.50	H	-	-	-75.47	3.80	35.33	-59.92	-13.00	-46.92

Table 7-46. Radiated Spurious Data (Band 5 UL)

FCC ID: PWO076 IC: 4726A-076		PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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LTE Band 12

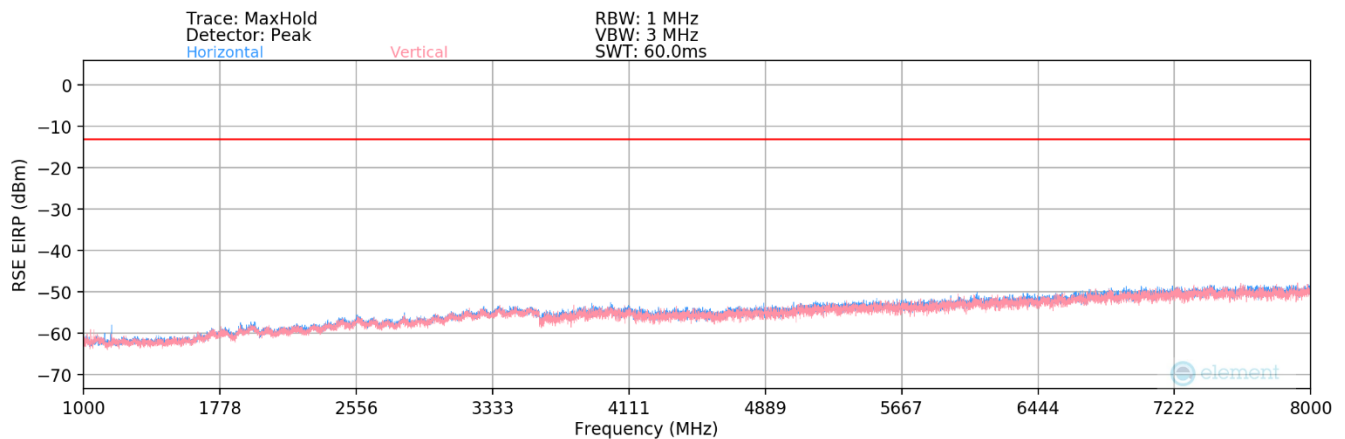


Plot 7-262. Radiated Spurious Plot Below 1GHz (Band 12 DL)

Bandwidth (MHz):	5
Frequency (MHz):	737.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	100kHz / 300kHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
50.48	V	149	0	-85.07	14.42	36.35	-58.91	-13.00	-45.91
55.90	V	122	209	-81.18	13.90	39.72	-55.54	-13.00	-42.54
74.30	V	160	216	-83.39	14.45	38.06	-57.20	-13.00	-44.20
209.15	V	175	224	-94.28	17.56	30.28	-64.97	-13.00	-51.97

Table 7-47. Radiated Spurious Data (Band 12 DL)



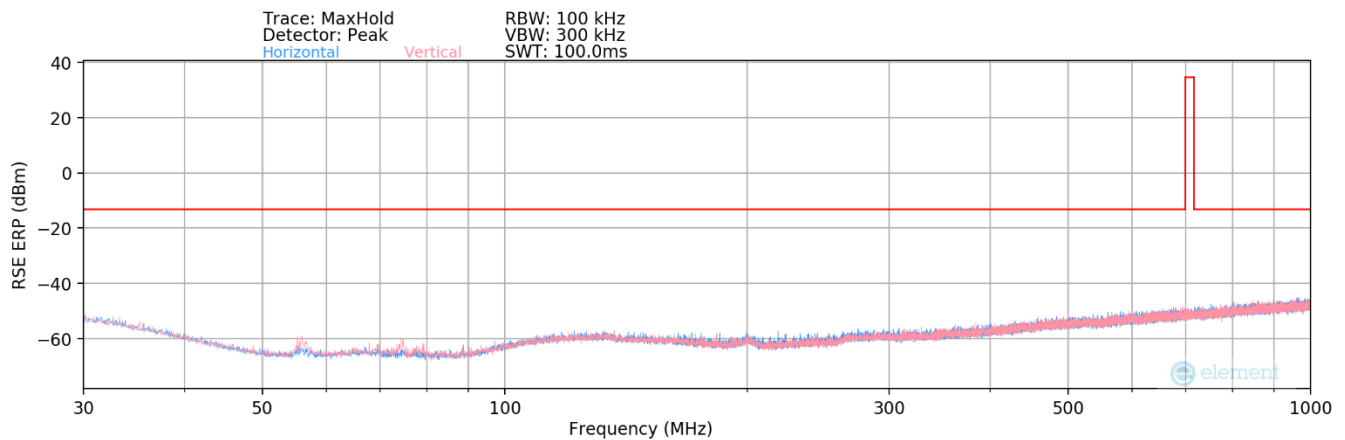
Plot 7-263. Radiated Spurious Plot Above 1GHz (Band 12 DL)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Bandwidth (MHz):	5
Frequency (MHz):	737.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1160.00	H	315	37	-69.52	-11.76	25.72	-69.54	-13.00	-56.54
1475.00	V	250	265	-70.37	-10.72	25.91	-69.34	-13.00	-56.34
2212.50	V	244	305	-70.68	-7.47	28.85	-66.40	-13.00	-53.40
2950.00	V	305	66	-73.30	-5.78	27.92	-67.33	-13.00	-54.33
3687.50	V	131	224	-74.34	-2.92	29.74	-65.52	-13.00	-52.52
4425.00	V	-	-	-74.90	-2.14	29.96	-65.30	-13.00	-52.30
5162.50	V	-	-	-75.09	-0.49	31.42	-63.84	-13.00	-50.84
5900.00	V	122	287	-74.52	0.41	32.89	-62.37	-13.00	-49.37
6637.50	V	-	-	-75.22	2.04	33.82	-61.43	-13.00	-48.43

Table 7-48. Radiated Spurious Data (Band 12 DL)



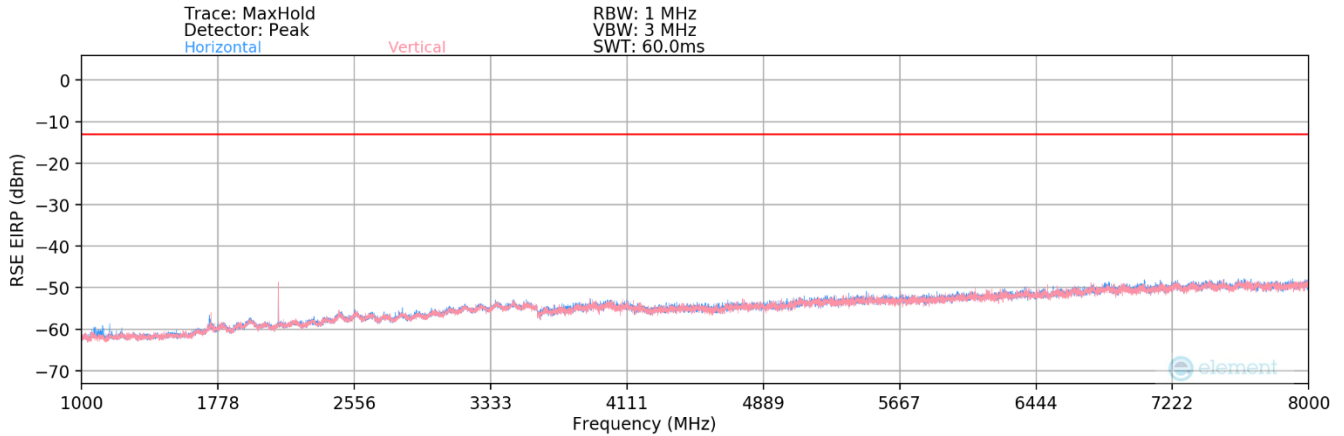
Plot 7-264. Radiated Spurious Plot Below 1GHz (Band 12 UL)

Bandwidth (MHz):	5
Frequency (MHz):	707.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	100kHz / 300kHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
55.94	V	125	234	-81.70	13.90	39.20	-56.06	-13.00	-43.06
74.80	V	135	23	-77.85	14.40	43.55	-51.70	-13.00	-38.70
78.75	V	135	23	-82.87	14.20	38.33	-56.93	-13.00	-43.93
450.00	V	192	178	-91.05	24.68	40.63	-54.63	-13.00	-41.63

Table 7-49. Radiated Spurious Data (Band 12 UL)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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Plot 7-265. Radiated Spurious Plot Above 1GHz (Band 12 UL)

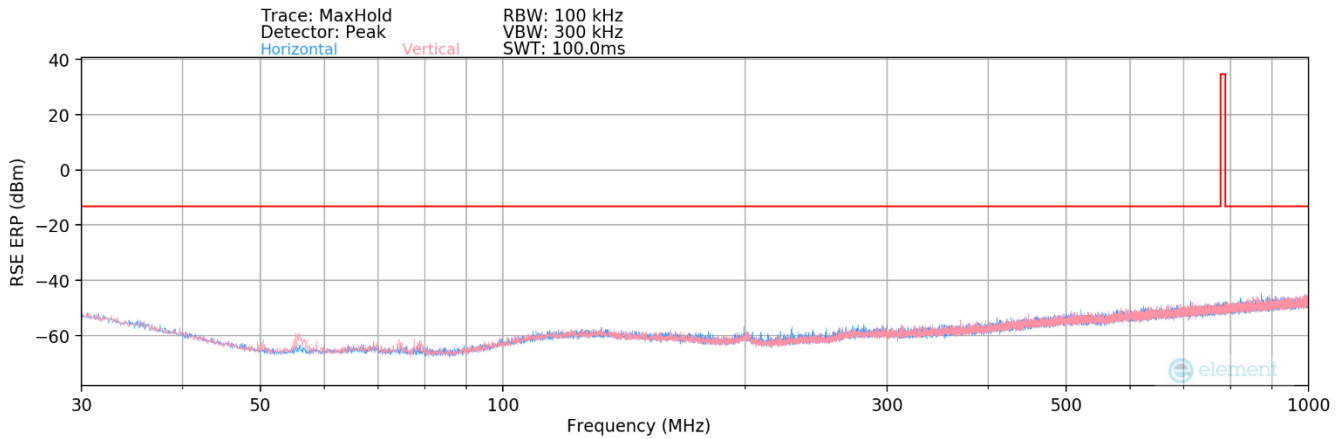
Bandwidth (MHz):	5
Frequency (MHz):	707.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1160.00	H	303	32	-69.52	-11.76	25.72	-69.54	-13.00	-56.54
1415.00	V	-	-	-73.01	-11.23	22.76	-72.49	-13.00	-59.49
1732.90	H	226	202	-70.28	-8.99	27.73	-67.53	-13.00	-54.53
2122.50	V	118	267	-53.95	-8.26	44.79	-50.46	-13.00	-37.46
2830.00	V	314	53	-69.54	-5.82	31.64	-63.62	-13.00	-50.62
3537.50	V	123	17	-69.95	-3.57	33.48	-61.77	-13.00	-48.77
4245.00	V	-	-	-74.56	-2.70	29.74	-65.52	-13.00	-52.52
4952.50	V	163	273	-71.86	-1.60	33.54	-61.72	-13.00	-48.72
5660.00	V	-	-	-74.66	-0.10	32.24	-63.01	-13.00	-50.01
6367.50	V	-	-	-74.87	1.49	33.62	-61.64	-13.00	-48.64

Table 7-50. Radiated Spurious Data (Band 12 UL)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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LTE Band 13

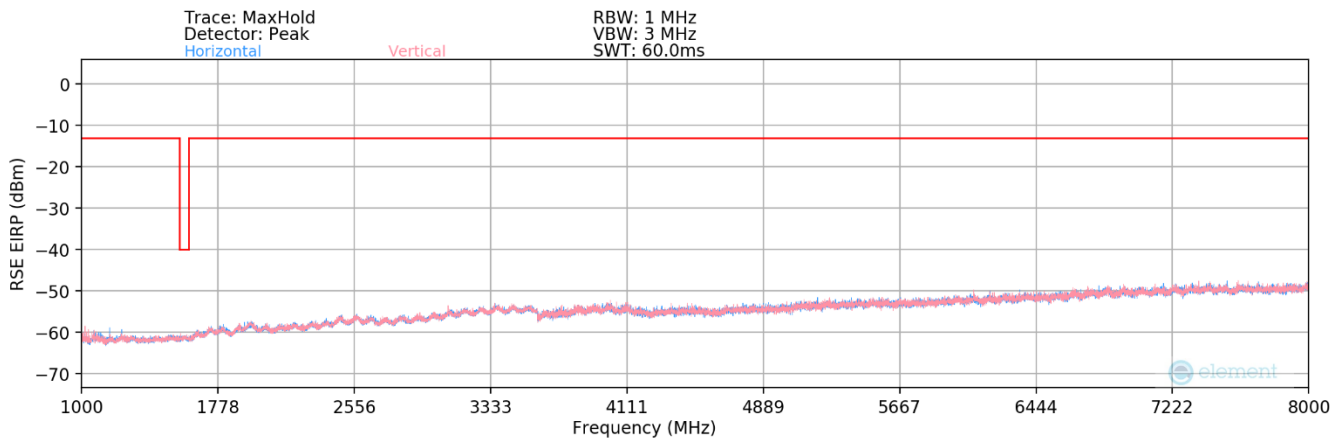


Plot 7-266. Radiated Spurious Plot Below 1GHz (Band 13 DL)

Bandwidth (MHz):	5
Frequency (MHz):	751
Detector / Trace Mode:	RMS / Average
RBW / VBW:	100kHz / 300kHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
55.94	V	122	200	-83.22	13.90	37.68	-57.58	-13.00	-44.58
78.66	V	117	217	-85.25	14.19	35.94	-59.31	-13.00	-46.31
218.80	V	175	342	-95.01	17.71	29.70	-65.56	-13.00	-52.56

Table 7-51. Radiated Spurious Data (Band 13 DL)



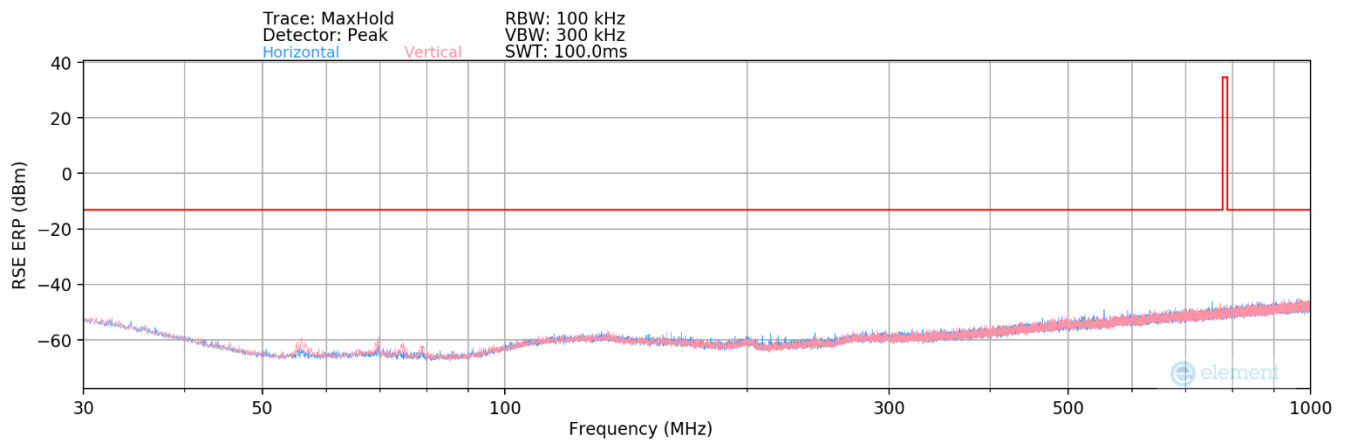
Plot 7-267. Radiated Spurious Plot Above 1GHz (Band 13 DL)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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Bandwidth (MHz):	5
Frequency (MHz):	751
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1502.00	V	-	-	-72.50	-10.67	23.83	-71.43	-13.00	-58.43
1733.00	V	238	30	-67.14	-8.96	30.90	-64.35	-13.00	-51.35
2253.00	V	137	135	-71.14	-7.45	28.41	-66.85	-13.00	-53.85
3004.00	V	148	54	-71.82	-5.42	29.76	-65.49	-13.00	-52.49
3755.00	V	-	-	-74.28	-2.69	30.03	-65.23	-13.00	-52.23
4506.00	V	-	-	-74.55	-2.27	30.18	-65.08	-13.00	-52.08
5257.00	V	-	-	-74.78	-0.54	31.68	-63.57	-13.00	-50.57
6008.00	V	144	131	-73.14	0.93	34.79	-60.47	-13.00	-47.47
6759.00	V	-	-	-75.06	2.68	34.62	-60.64	-13.00	-47.64

Table 7-52. Radiated Spurious Data (Band 13 DL)



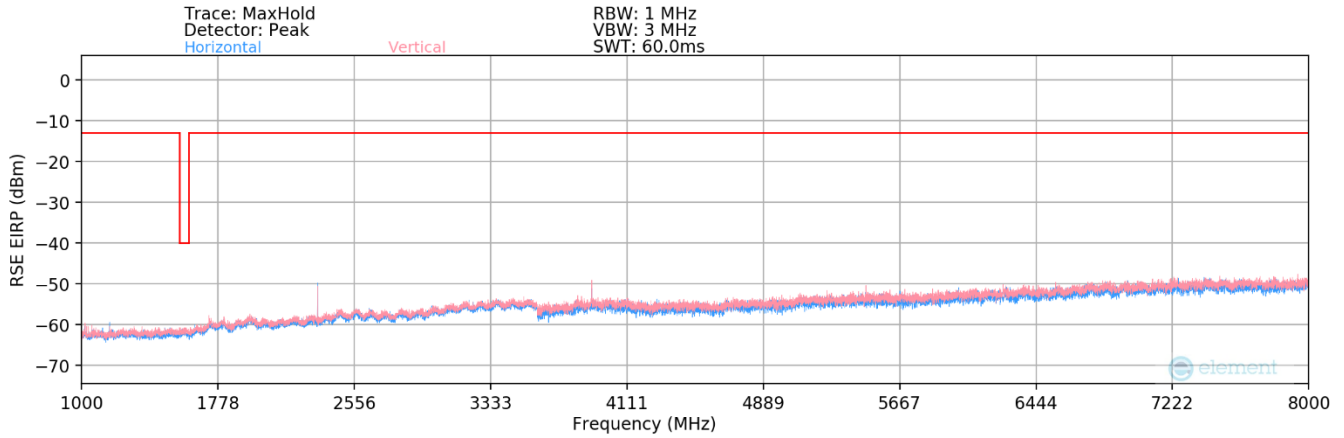
Plot 7-268. Radiated Spurious Plot Below 1GHz (Band 13 UL)

Bandwidth (MHz):	5
Frequency (MHz):	782
Detector / Trace Mode:	RMS / Average
RBW / VBW:	100kHz / 300kHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dB μ V/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
55.90	V	111	206	-84.92	13.90	35.98	-59.28	-13.00	-46.28
69.68	V	199	194	-90.11	14.66	31.55	-63.71	-13.00	-50.71
78.76	V	121	209	-84.79	14.20	36.41	-58.85	-13.00	-45.85
189.50	V	201	262	-93.42	18.16	31.74	-63.52	-13.00	-50.52
450.00	V	212	171	-93.52	24.68	38.16	-57.10	-13.00	-44.10

Table 7-53. Radiated Spurious Data (Band 13 UL)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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Plot 7-269. Radiated Spurious Plot Above 1GHz (Band 13 UL)

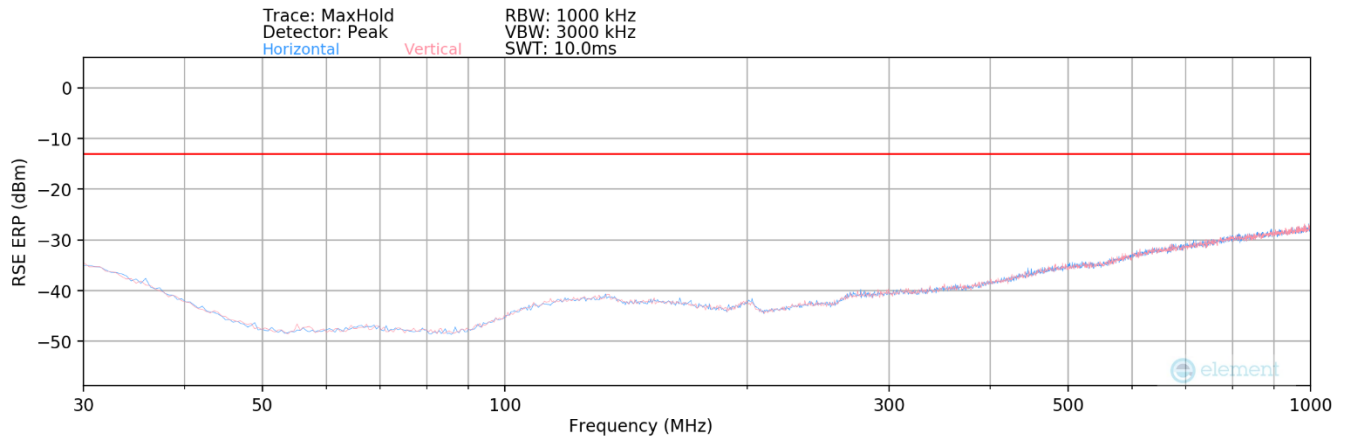
Bandwidth (MHz):	5
Frequency (MHz):	782
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1160.00	H	325	49	-67.48	-11.50	28.02	-67.23	-40.00	-27.23
1564.00	V	246	151	-71.04	-10.83	25.13	-70.12	-40.00	-30.12
2346.00	H	242	4	-51.31	-7.44	48.25	-47.00	-13.00	-34.00
3128.00	V	148	20	-70.32	-4.71	31.97	-63.29	-13.00	-50.29
3910.00	V	184	316	-58.98	-2.11	45.91	-49.35	-13.00	-36.35
4692.00	V	-	-	-74.55	-1.99	30.46	-64.80	-13.00	-51.80
5474.00	V	151	141	-65.58	-0.27	41.15	-54.10	-13.00	-41.10
6256.00	V	118	279	-68.41	1.23	39.82	-55.43	-13.00	-42.43
7038.00	V	-	-	-75.40	3.27	34.87	-60.39	-13.00	-47.39

Table 7-54. Radiated Spurious Data (Band 13 UL)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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LTE Band 25/2

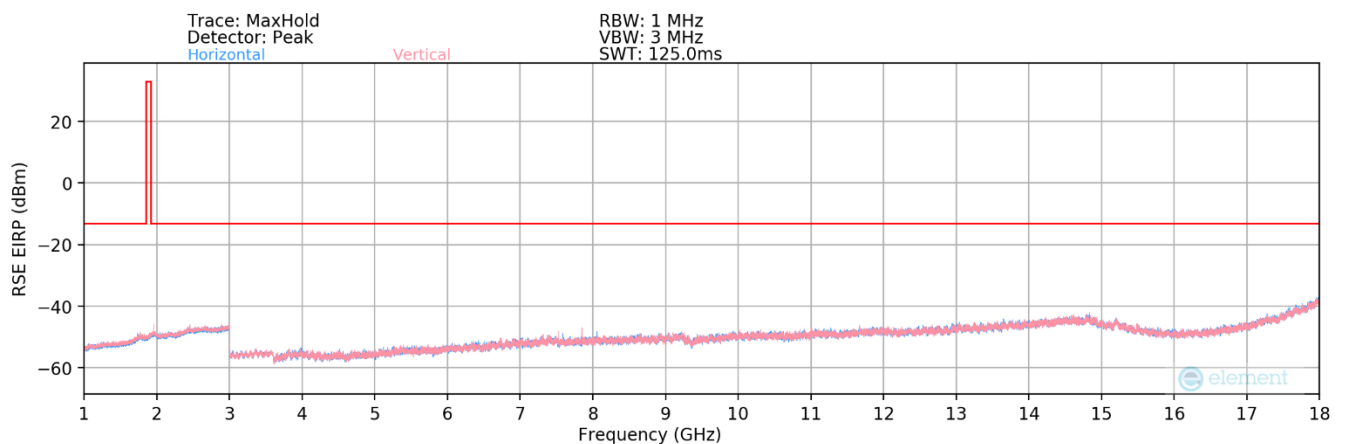


Plot 7-270. Radiated Spurious Plot Below 1GHz (Band 25/2 DL)

Bandwidth (MHz):	5
Frequency (MHz):	1962.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
47.81	V	122	155	-79.29	15.35	43.06	-52.20	-13.00	-39.20
55.85	V	126	5	-73.35	13.90	47.55	-47.71	-13.00	-34.71
79.27	V	125	183	-79.09	14.17	42.08	-53.18	-13.00	-40.18
203.90	V	152	62	-86.95	18.72	38.77	-56.49	-13.00	-43.49
645.00	H	-	-	-88.85	27.81	45.96	-49.30	-13.00	-36.30
863.00	V	386	74	-88.40	30.56	49.16	-46.09	-13.00	-33.09

Table 7-55. Radiated Spurious Data (Band 25/2 DL)



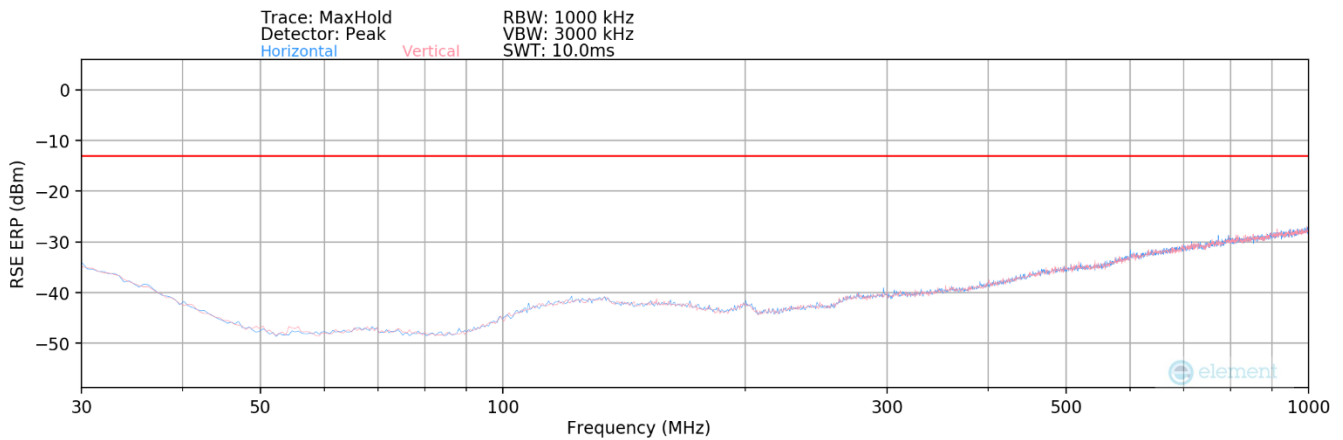
Plot 7-271. Radiated Spurious Plot Above 1GHz (Band 25/2 DL)

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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Bandwidth (MHz):	5
Frequency (MHz):	1962.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
3925.00	V	157	75	-72.78	-1.56	32.66	-62.60	-13.00	-49.60
5887.50	V	-	-	-75.11	0.32	32.21	-63.05	-13.00	-50.05
7850.00	V	363	147	-63.04	4.08	48.04	-47.22	-13.00	-34.22
9812.50	V	-	-	-77.50	7.18	36.68	-58.58	-13.00	-45.58
11775.00	V	-	-	-77.95	9.36	38.41	-56.84	-13.00	-43.84
13737.50	V	-	-	-77.81	11.66	40.85	-54.41	-13.00	-41.41
15700.00	V	-	-	-77.32	8.84	38.52	-56.74	-13.00	-43.74
17662.50	V	-	-	-76.62	14.98	45.36	-49.90	-13.00	-36.90

Table 7-56. Radiated Spurious Data (Band 25/2 DL)



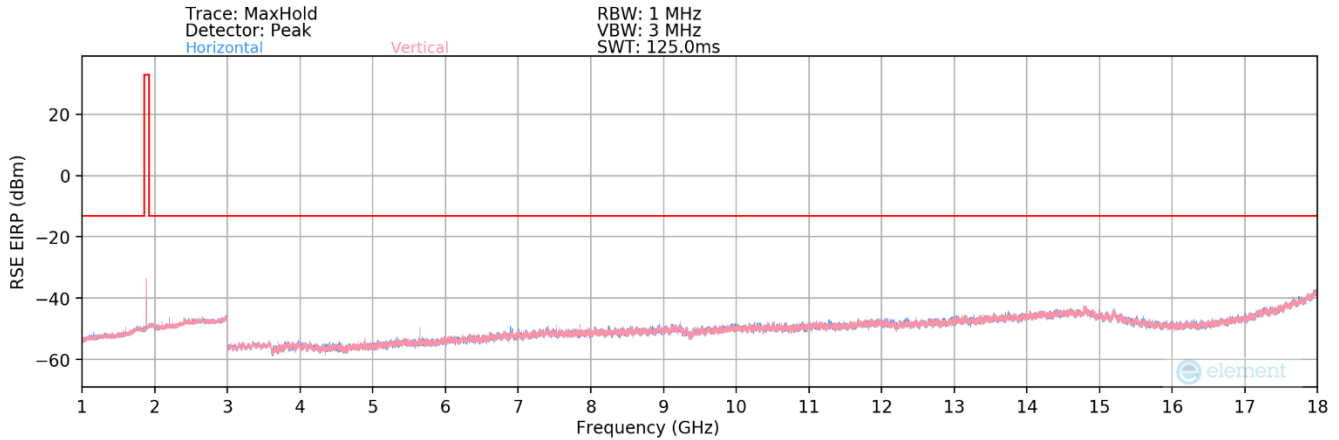
Plot 7-272. Radiated Spurious Plot Below 1GHz (Band 25/2 UL)

Bandwidth (MHz):	5
Frequency (MHz):	1882.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
49.63	V	118	116	-78.71	14.67	42.96	-52.29	-13.00	-39.29
55.96	V	126	224	-73.24	13.90	47.66	-47.60	-13.00	-34.60
79.27	V	129	324	-74.40	14.17	46.77	-48.49	-13.00	-35.49
213.45	V	222	49	-85.77	17.54	38.77	-56.49	-13.00	-43.49
424.60	V	158	165	-86.33	23.93	44.60	-50.66	-13.00	-37.66

Table 7-57. Radiated Spurious Data (Band 25/2 UL)

FCC ID: PWO076 IC: 4726A-076		PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster		Page 208 of 221



Plot 7-273. Radiated Spurious Plot Above 1GHz (Band 25/2 UL)

Bandwidth (MHz):	5
Frequency (MHz):	1882.5
Detector / Trace Mode:	RMS / Average
RBW / VBW:	1MHz / 3MHz

Frequency [MHz]	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	EIRP Spurious Emission Level [dBm]	Limit [dBm]	Margin [dB]
1800.00	V	378	332	-69.98	0.33	37.35	-57.91	-13.00	-44.91
2400.00	V	123	260	-68.26	2.39	41.13	-54.13	-13.00	-41.13
1962.50	V	169	278	-65.46	1.28	42.82	-52.43	-13.00	-39.43
3765.00	V	163	252	-67.71	-1.76	37.53	-57.73	-13.00	-44.73
5647.50	V	193	121	-63.05	0.21	44.16	-51.09	-13.00	-38.09
7530.00	V	237	283	-66.12	3.76	44.64	-50.61	-13.00	-37.61
7850.00	V	275	145	-63.05	4.08	48.03	-47.23	-13.00	-34.23
9412.50	V	158	89	-74.71	6.39	38.68	-56.57	-13.00	-43.57
11295.00	V	388	234	-76.52	8.53	39.01	-56.24	-13.00	-43.24
13177.50	V	-	-	-78.30	10.81	39.51	-55.74	-13.00	-42.74
15060.00	V	-	-	-77.97	11.30	40.33	-54.93	-13.00	-41.93
16942.50	V	-	-	-77.33	10.17	39.84	-55.41	-13.00	-42.41

Table 7-58. Radiated Spurious Data (Band 25/2 UL)

FCC ID: PWO076 IC: 4726A-076		PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster	Page 209 of 221

7.15 Out of Band Gain

Test Overview

A frequency selective booster shall have the following minimum attenuation referenced to the gain in the center of the pass band of the booster:

- (i) -20 dB at the band edge, where band edge is the end of the licensee's allocated spectrum,
- (ii) -30 dB at 1 MHz offset from band edge,
- (iii) -40 dB at 5 MHz offset from band edge.

A frequency selective booster having maximum gain greater than 80 dB (referenced to the center of the pass band) shall limit the out of band gain to 60 dB at 0.2 MHz offset from the band edge, and 45 dB at 1 MHz offset from the band edge, where band edge is the end of the licensee's allocated spectrum.

Test Procedure Used


KDB 935210 D04 Section 7.15

Test Settings

1. Connect the EUT to the test equipment as shown in Figure 7-2 or Figure 7-3, as appropriate.
2. Set the signal generator to transmit a CW signal at the center of the authorized licensee's spectrum block(s), with output power level set to that as determined in 7.1.2.
3. Set the spectrum analyzer RBW = 100 kHz, VBW \geq 300 kHz, set the center frequency to the center of the authorized spectrum block, then measure the output power of the generated signal.
4. With the power setting of the signal generator remaining unchanged, measure the output power level of the generated signal at a frequency offset in accordance with Section 20.21(e)(9)(i)(E).
5. Connect the RF signal output of the signal generator to the booster, then measure the output signal at the center of the authorized spectrum block and at the frequency offset as determined in Step 4.
6. Compute out-of-band gain by subtracting the power measured in Step 5 from the power measured in Step 4. The computed out-of-band gain must be below the reference gain in the center of the band, as specified in Section 20.21(e)(9)(i)(E).
7. Repeat Step 1 through 6 for all uplink and down link operational bands.

Test Notes


None

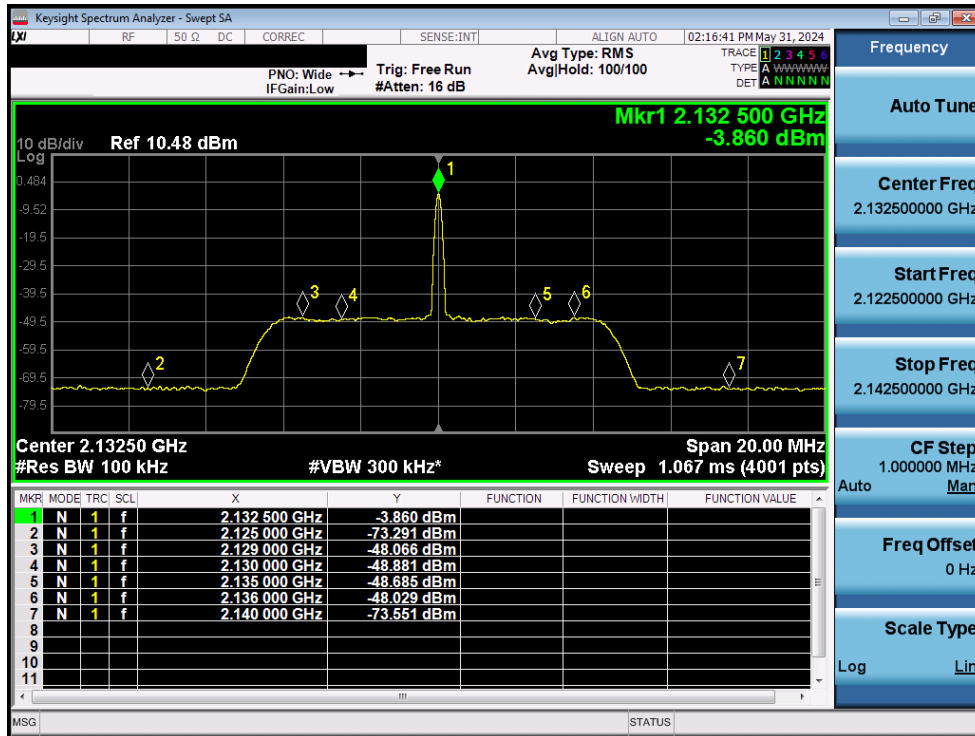
FCC ID: PWO076 IC: 4726A-076		PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster	Page 210 of 221

LTE Band 4

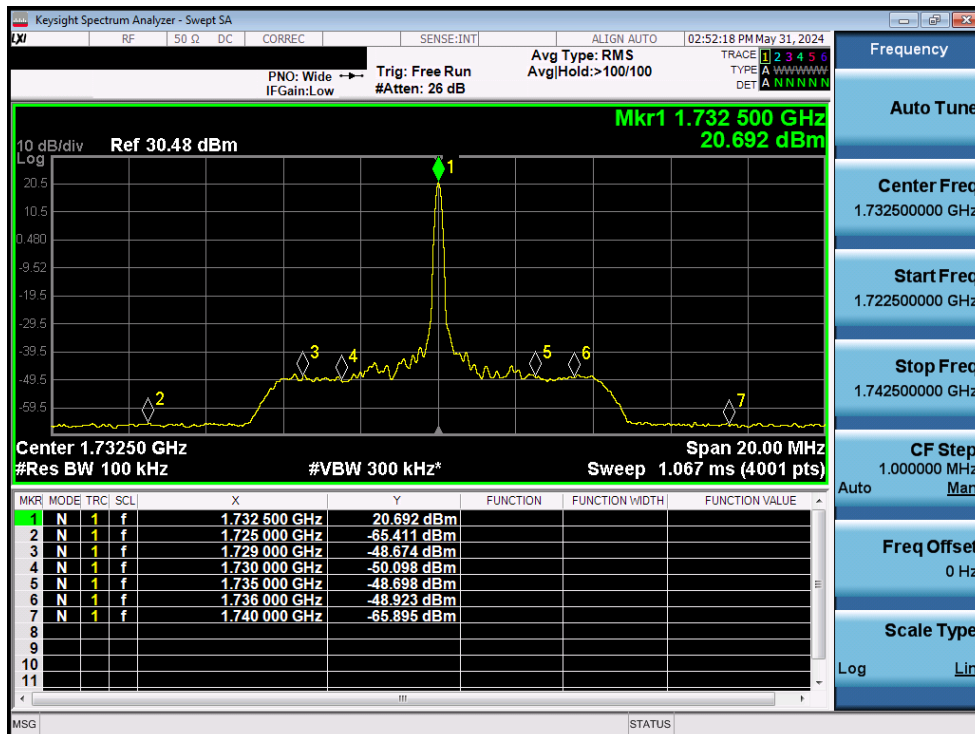
Band	Frequency Range (MHz)	Offset (MHz)	Input Power Level (dBm)	Output Power Level (dBm)	Gain (dB)	Gain Limit (dB)	Margin (dB)
LTE Band 4 (DL)	2110-2155	Center Frequency	-76.09	-3.86	72.23	-	-
		0 (Low Band Edge)		-48.881	27.21	52.23	-25.02
		-1		-48.066	28.02	42.23	-14.21
		-5		-73.291	2.80	32.23	-29.43
		0 (High Band Edge)		-48.685	27.41	52.23	-24.83
		+1		-48.029	28.06	42.23	-14.17
		+5		-73.551	2.54	32.23	-29.69
LTE Band 4 (UL)	1710-1755	Center Frequency	-43.331	20.692	64.02	-	-
		0 (Low Band Edge)		-50.098	-6.77	44.02	-50.79
		-1		-48.674	-5.34	34.02	-39.37
		-5		-65.411	-22.08	24.02	-46.10
		0 (High Band Edge)		-48.698	-5.37	44.02	-49.39
		+1		-48.923	-5.59	34.02	-39.62
		+5		-65.895	-22.56	24.02	-46.59

Table 7-59. Out of Band Gain Data - BAND 4

FCC ID: PWO076 IC: 4726A-076		PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-274. Out of Gain Plot - BAND 4 DL




Plot 7-275. Out of Gain Plot - BAND 4 UL

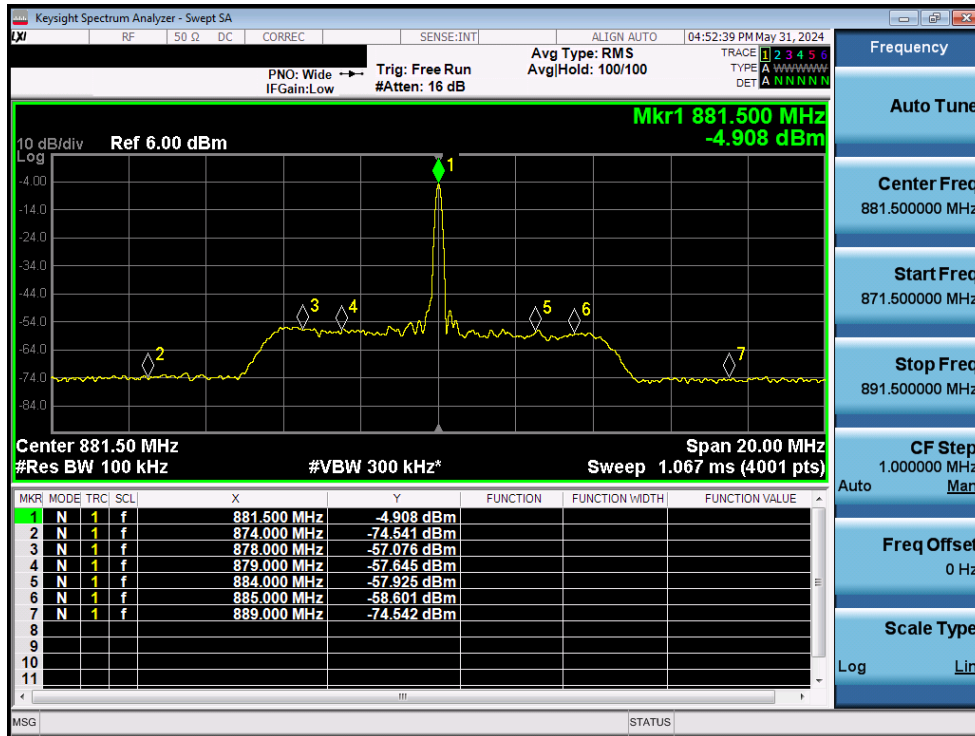
FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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LTE Band 5

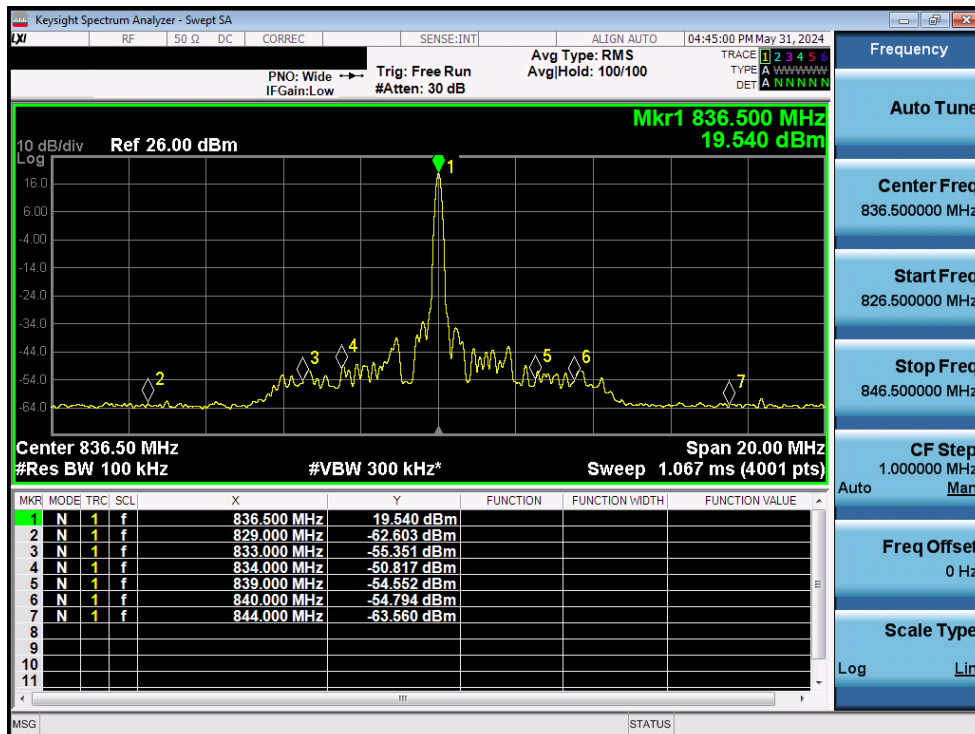
Band	Frequency Range (MHz)	Offset (MHz)	Input Power Level (dBm)	Output Power Level (dBm)	Gain (dB)	Gain Limit (dB)	Margin (dB)
LTE Band 5 (DL)	869-894	Center Frequency	-66.922	-4.908	62.01	-	-
		0 (Low Band Edge)		-57.645	9.28	42.01	-32.74
		-1		-57.076	9.85	32.01	-22.17
		-5		-74.541	-7.62	22.01	-29.63
		0 (High Band Edge)		-57.925	9.00	42.01	-33.02
		+1		-58.601	8.32	32.01	-23.69
		+5		-74.542	-7.62	22.01	-29.63
LTE Band 5 (UL)	824-849	Center Frequency	-37.757	19.54	57.30	-	-
		0 (Low Band Edge)		-50.817	-13.06	37.30	-50.36
		-1		-55.351	-17.59	27.30	-44.89
		-5		-62.603	-24.85	17.30	-42.14
		0 (High Band Edge)		-54.552	-16.80	37.30	-54.09
		+1		-54.794	-17.04	27.30	-44.33
		+5		-63.56	-25.80	17.30	-43.10

Table 7-60. Out of Band Gain Data - BAND 5

FCC ID: PWO076 IC: 4726A-076		PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-276. Out of Gain Plot - BAND 5 DL




Plot 7-277. Out of Gain Plot - BAND 5 UL

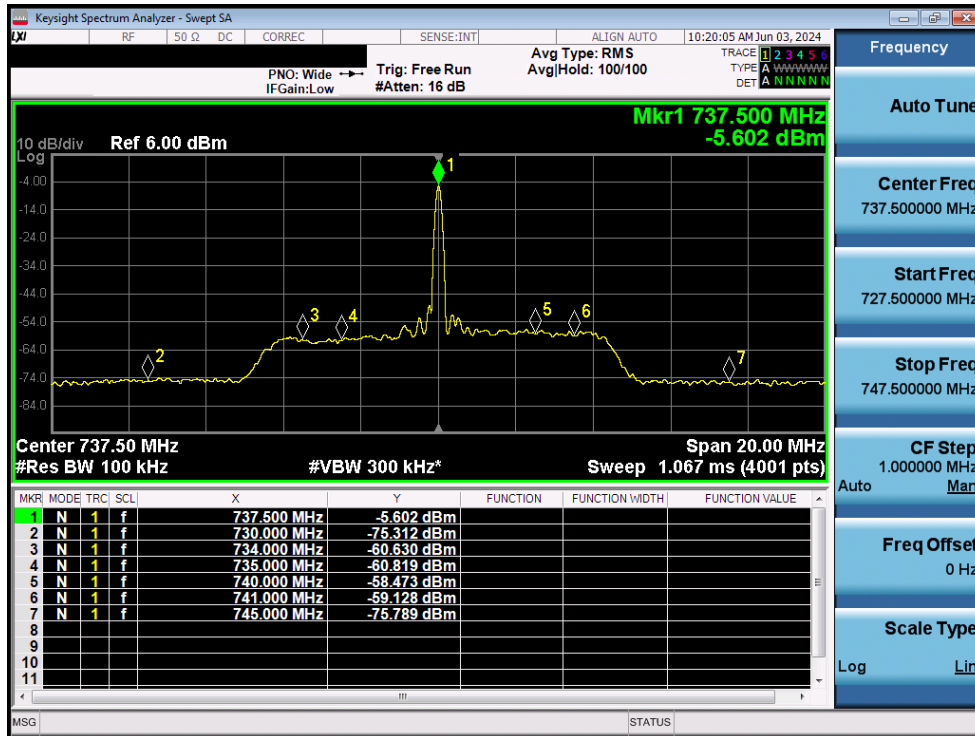
FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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LTE Band 12

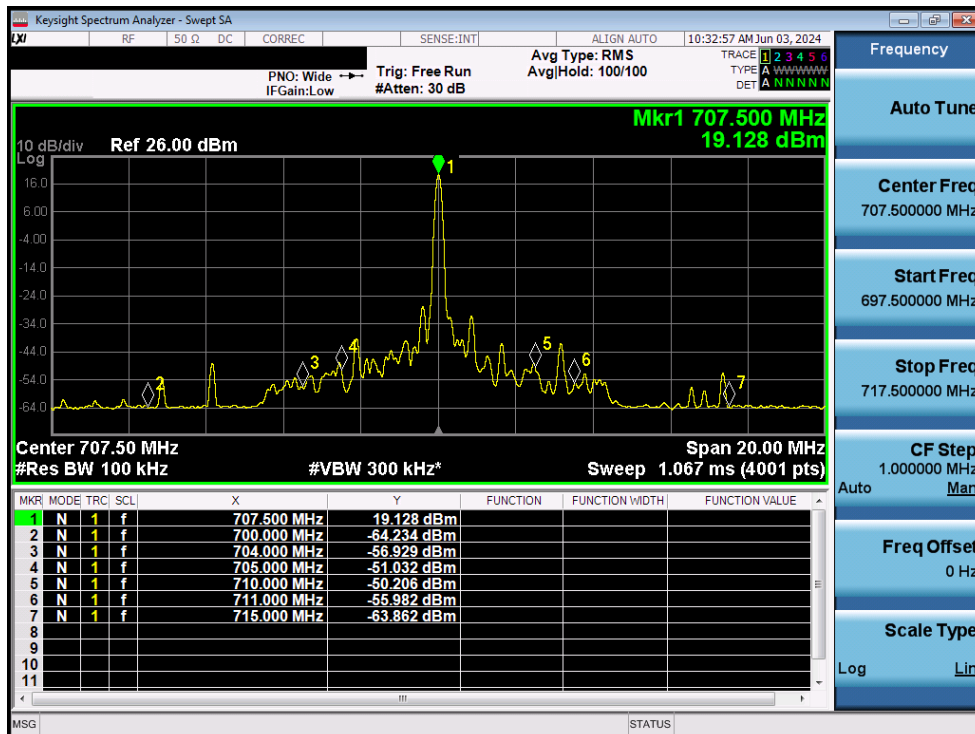
Band	Frequency Range (MHz)	Offset (MHz)	Input Power Level (dBm)	Output Power Level (dBm)	Gain (dB)	Gain Limit (dB)	Margin (dB)
LTE Band 12 (DL)	729-746	Center Frequency	-73.696	-5.602	68.09	-	-
		0 (Low Band Edge)		-60.819	12.88	48.09	-35.22
		-1		-60.63	13.07	38.09	-25.03
		-5		-75.312	-1.62	28.09	-29.71
		0 (High Band Edge)		-58.473	15.22	48.09	-32.87
		+1		-59.128	14.57	38.09	-23.53
		+5		-75.789	-2.09	28.09	-30.19
LTE Band 12 (UL)	699-716	Center Frequency	-34.927	19.128	54.06	-	-
		0 (Low Band Edge)		-51.032	-16.11	34.06	-50.16
		-1		-56.929	-22.00	24.06	-46.06
		-5		-64.234	-29.31	14.06	-43.36
		0 (High Band Edge)		-50.206	-15.28	34.06	-49.33
		+1		-55.982	-21.06	24.06	-45.11
		+5		-63.862	-28.94	14.06	-42.99

Table 7-61. Out of Band Gain Data - BAND 12

FCC ID: PWO076 IC: 4726A-076		PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-278. Out of Gain Plot - BAND 12 DL




Plot 7-279. Out of Gain Plot - BAND 12 UL

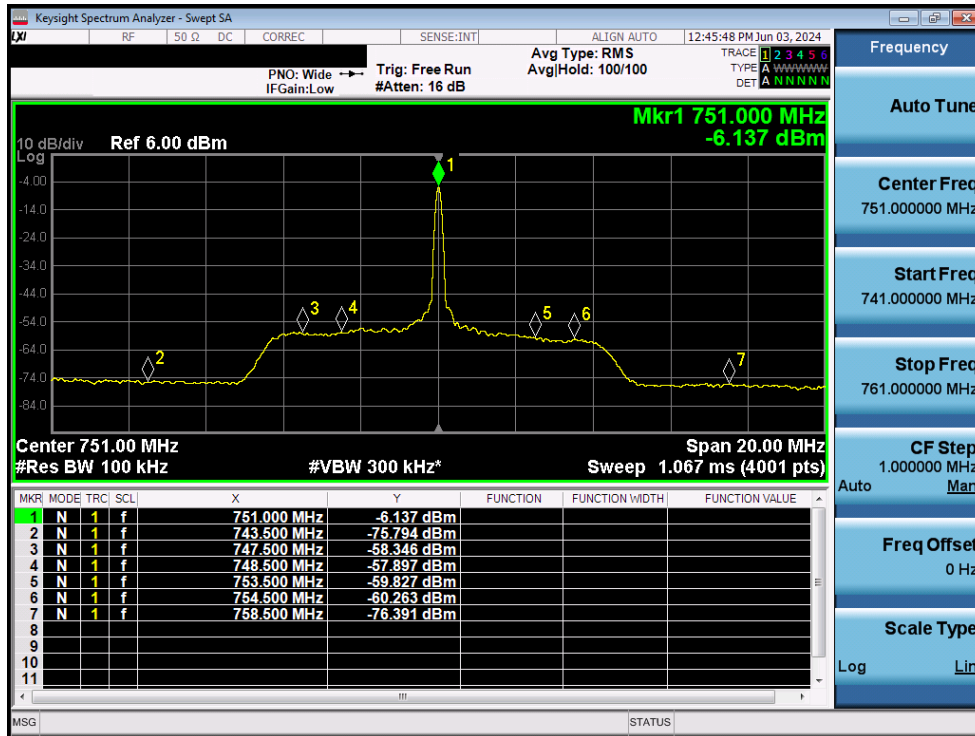
FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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LTE Band 13

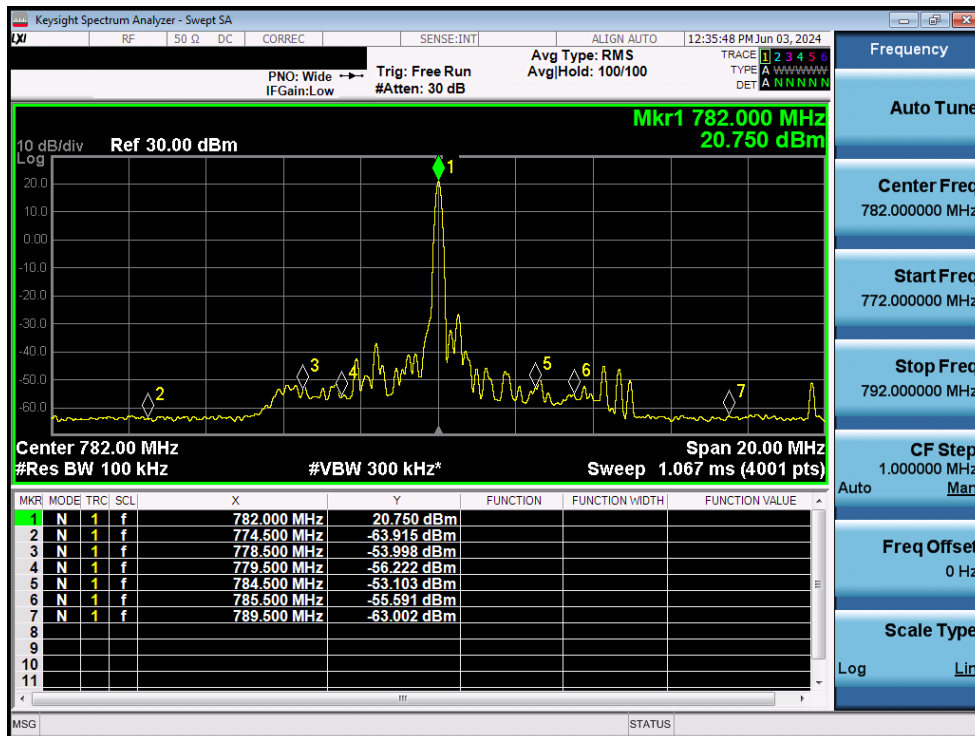
Band	Frequency Range (MHz)	Offset (MHz)	Input Power Level (dBm)	Output Power Level (dBm)	Gain (dB)	Gain Limit (dB)	Margin (dB)
LTE Band 13 (DL)	746-756	Center Frequency	-69.384	-6.137	63.25	-	-
		0 (Low Band Edge)		-57.897	11.49	43.25	-31.76
		-1		-58.346	11.04	33.25	-22.21
		-5		-75.794	-6.41	23.25	-29.66
		0 (High Band Edge)		-59.827	9.56	43.25	-33.69
		+1		-60.263	9.12	33.25	-24.13
		+5		-76.391	-7.01	23.25	-30.25
LTE Band 13 (UL)	777-787	Center Frequency	-34.552	20.75	55.30	-	-
		0 (Low Band Edge)		-56.222	-21.67	35.30	-56.97
		-1		-53.998	-19.45	25.30	-44.75
		-5		-63.915	-29.36	15.30	-44.67
		0 (High Band Edge)		-53.103	-18.55	35.30	-53.85
		+1		-55.591	-21.04	25.30	-46.34
		+5		-63.002	-28.45	15.30	-43.75

Table 7-62. Out of Band Gain Data - BAND 13

FCC ID: PWO076 IC: 4726A-076		PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-280. Out of Gain Plot - BAND 13 DL




Plot 7-281. Out of Gain Plot - BAND 13 UL

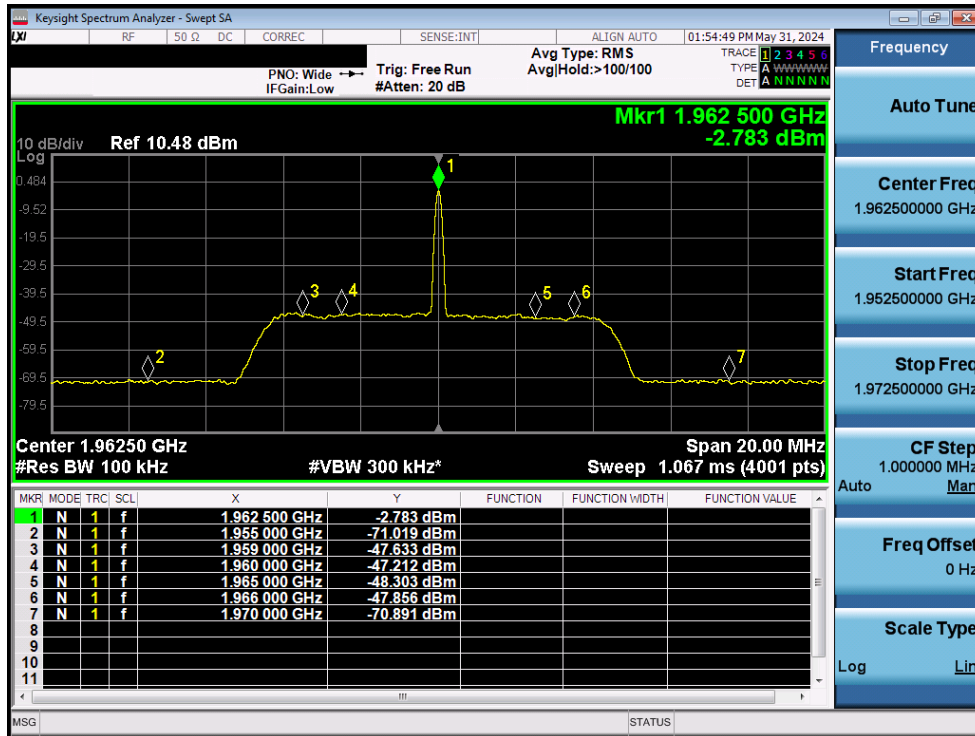
FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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LTE Band 25/2

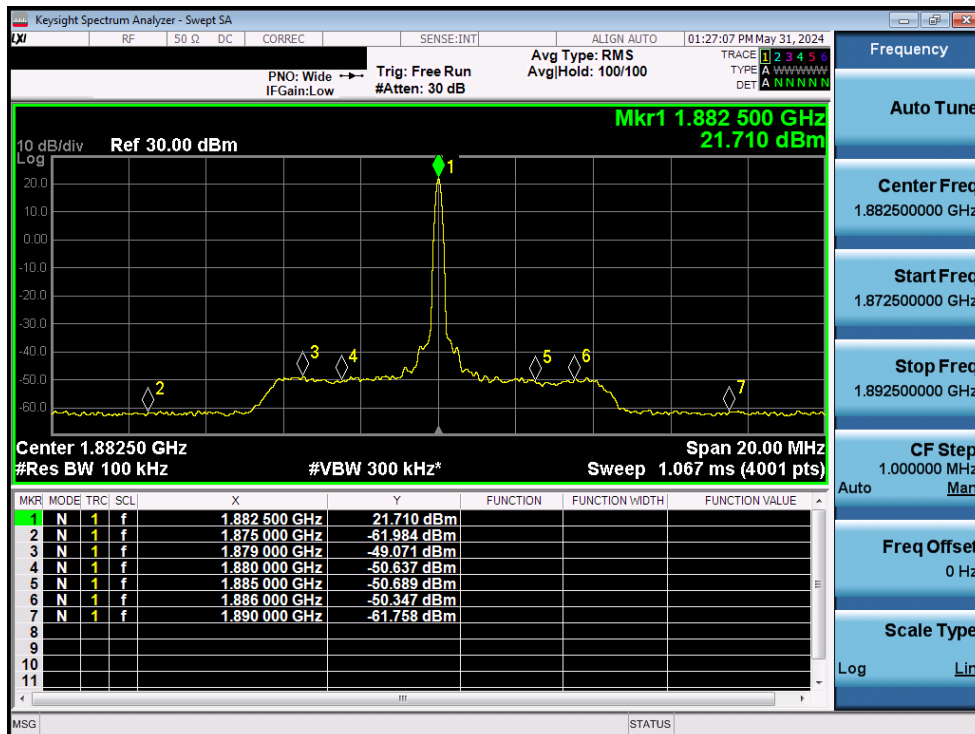
Band	Frequency Range (MHz)	Offset (MHz)	Input Power Level (dBm)	Output Power Level (dBm)	Gain (dB)	Gain Limit (dB)	Margin (dB)
LTE Band 25/2 (DL)	1930-1995	Center Frequency	-74.272	-2.783	71.49	-	-
		0 (Low Band Edge)		-47.212	27.06	51.49	-24.43
		-1		-47.633	26.64	41.49	-14.85
		-5		-71.019	3.25	31.49	-28.24
		0 (High Band Edge)		-48.303	25.97	51.49	-25.52
		+1		-47.856	26.42	41.49	-15.07
		+5		-70.891	3.38	31.49	-28.11
LTE Band 25/2 (UL)	1850-1915	Center Frequency	-43.305	21.71	65.02	-	-
		0 (Low Band Edge)		-50.637	-7.33	45.02	-52.35
		-1		-49.071	-5.77	35.02	-40.78
		-5		-61.984	-18.68	25.02	-43.69
		0 (High Band Edge)		-50.689	-7.38	45.02	-52.40
		+1		-50.347	-7.04	35.02	-42.06
		+5		-61.758	-18.45	25.02	-43.47

Table 7-63. Out of Band Gain Data - BAND 25/2

FCC ID: PWO076 IC: 4726A-076		PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Plot 7-282. Out of Gain Plot - BAND 25/2 DL




Plot 7-283. Out of Gain Plot - BAND 25/2 UL

FCC ID: PWO076 IC: 4726A-076	PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster
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8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Wilson Electronics Provider Specific Signal Booster FCC ID: PWO076 / IC: 4726A-076** complies with the relevant requirements of Part 20, 22, 24 and Part 27 for FCC approval and also RSS-131 for ISED Canada approval.

FCC ID: PWO076 IC: 4726A-076	 PART 20, 22, 24 & 27 MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N: 1M2406100049-01.PWO	Test Dates: 05/13 - 06/19/2024	EUT Type: Provider Specific Signal Booster