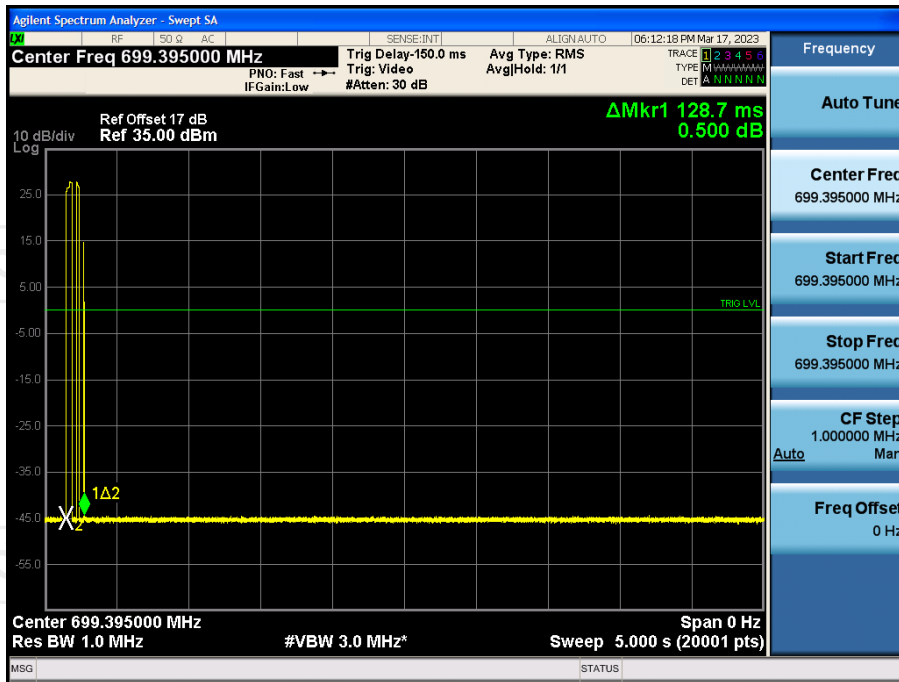
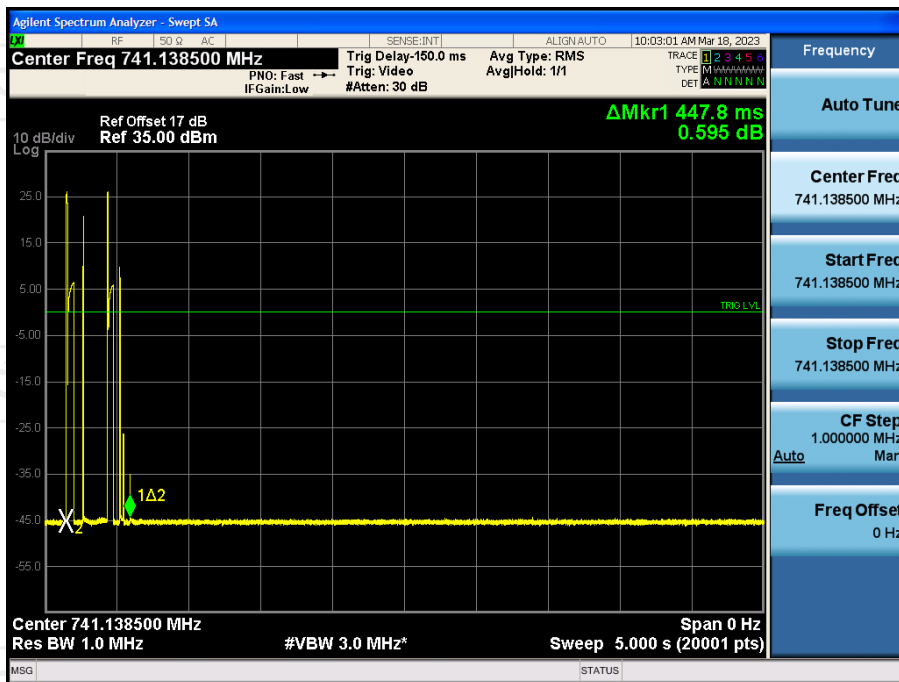


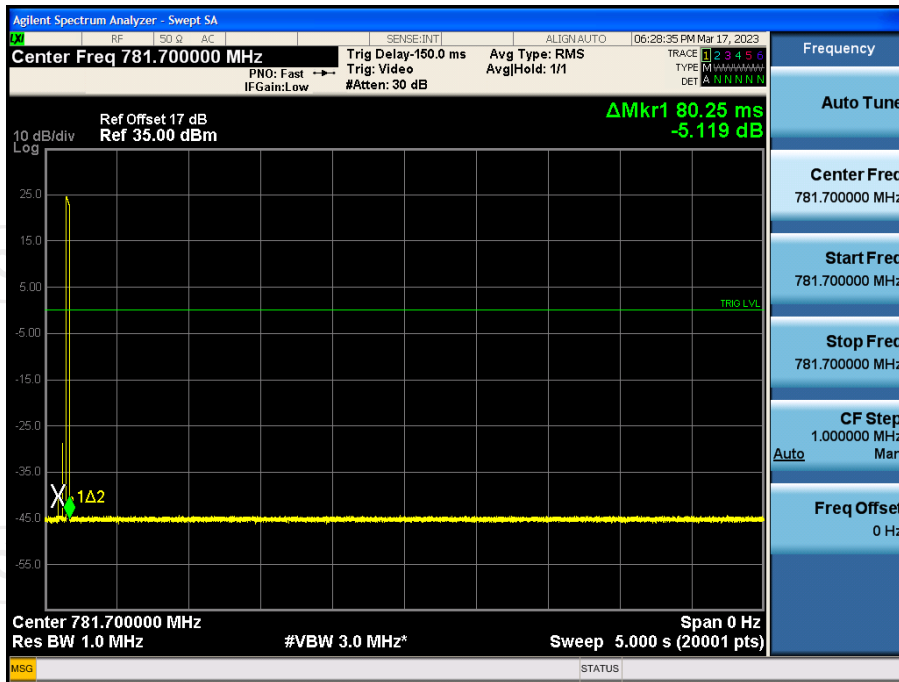
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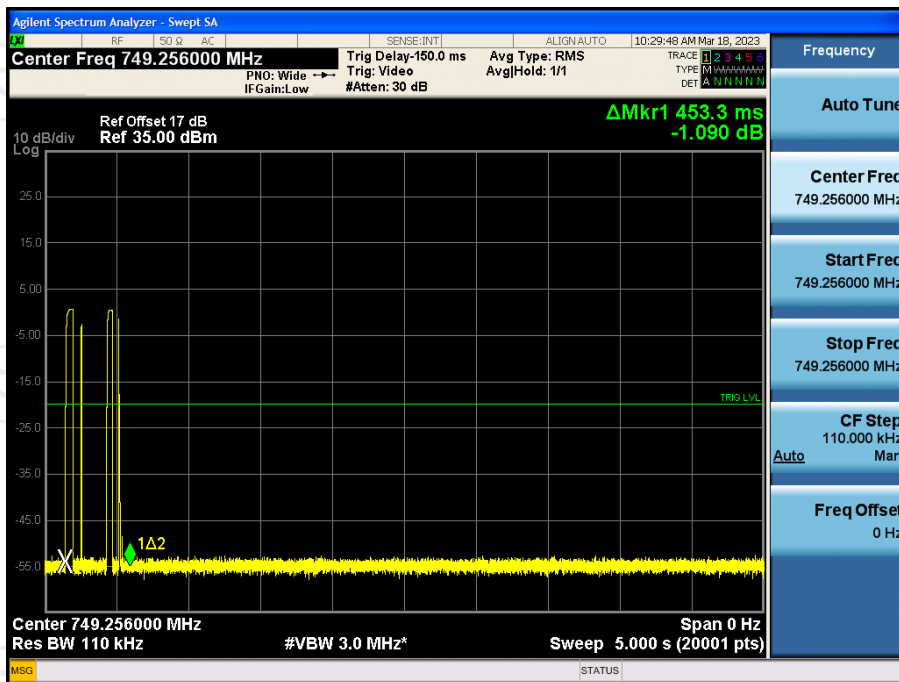
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Upper700MHz UL

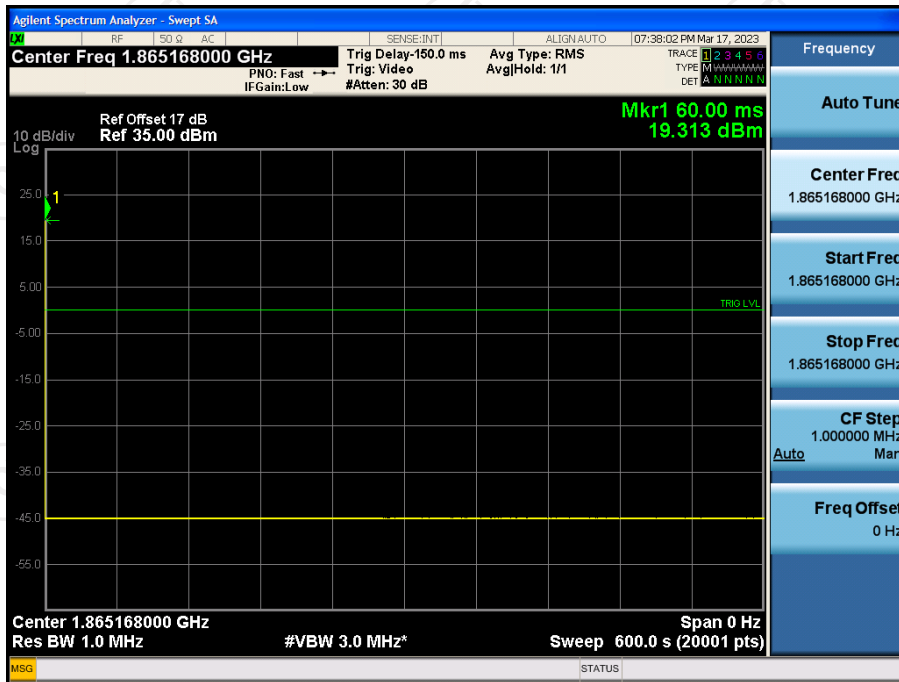


Upper700MHz DL

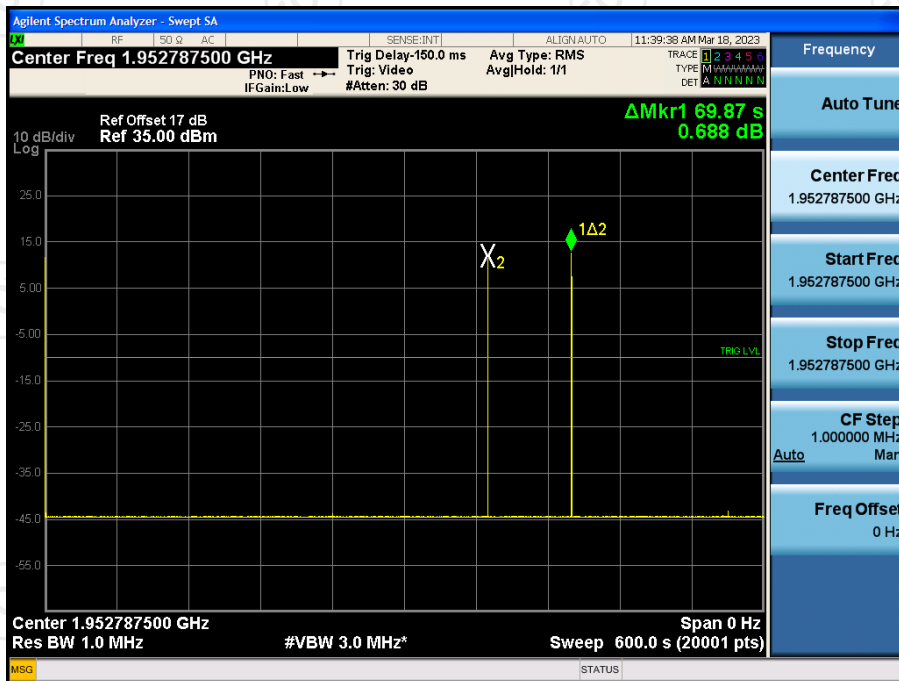


Test Plots of restarting time

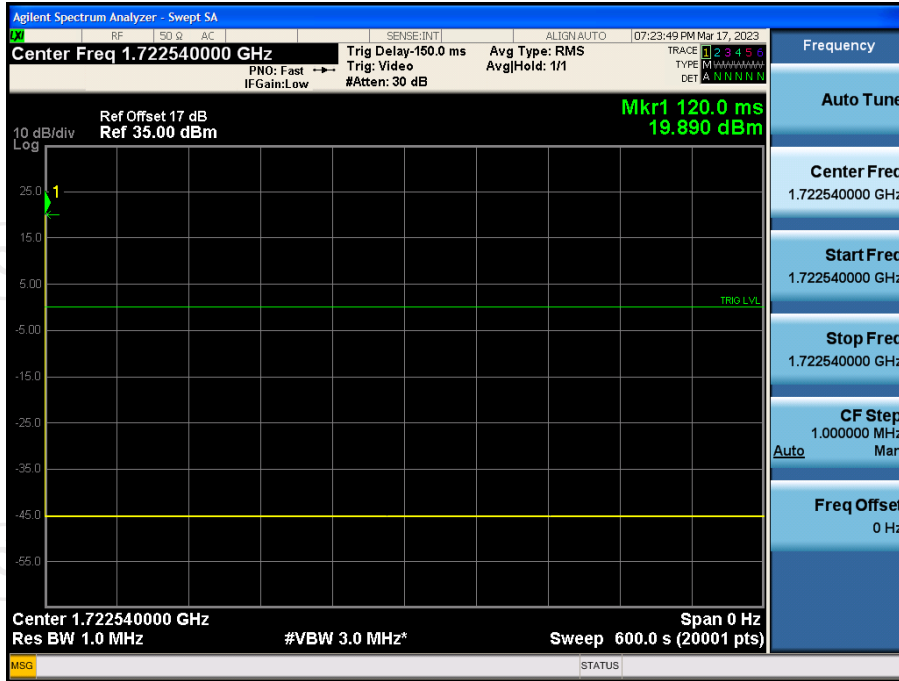
PCS UL



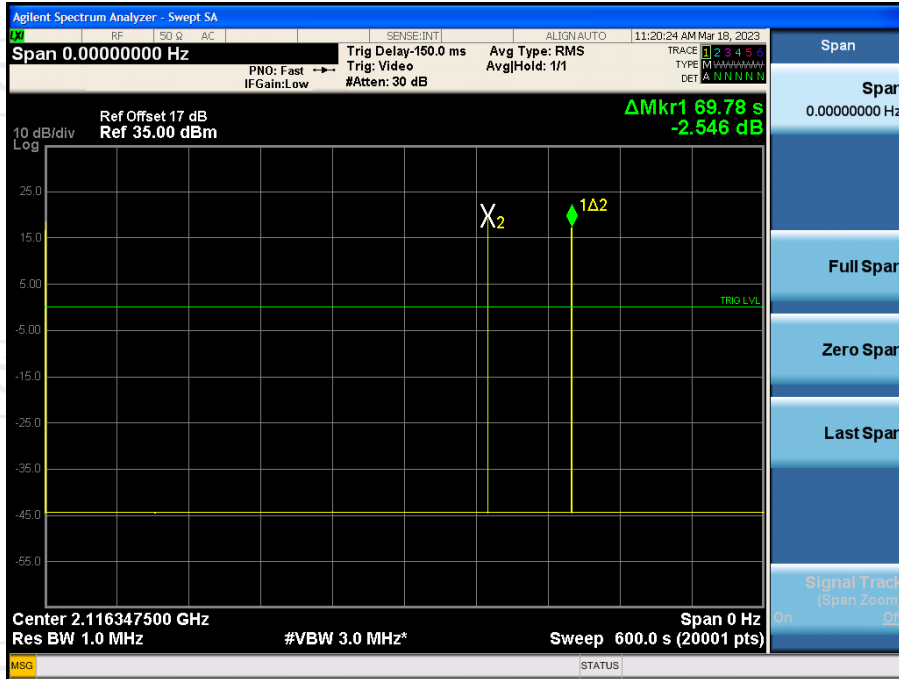
PCS DL



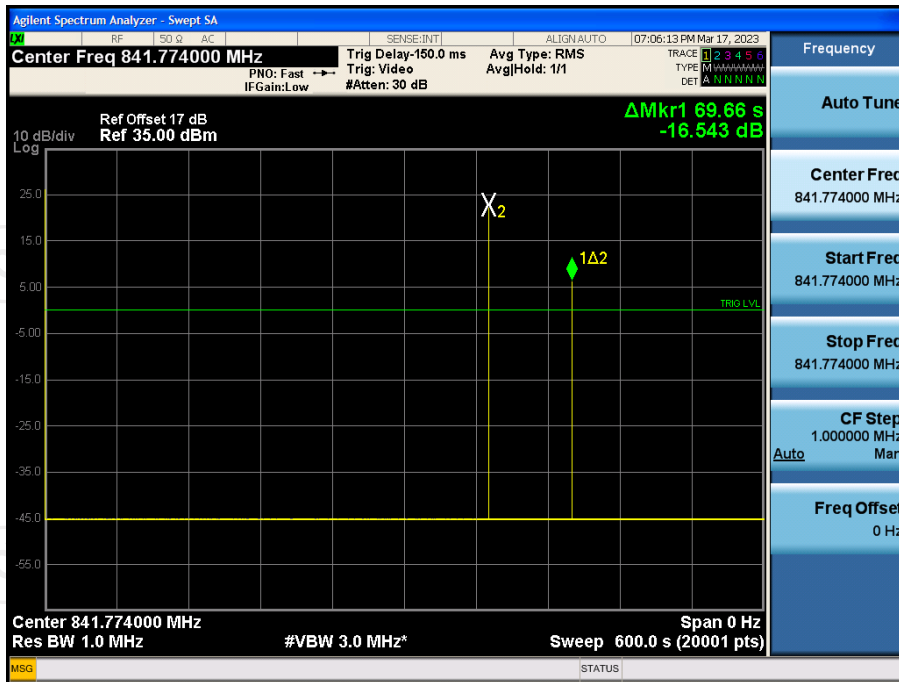
AWS-1 UL



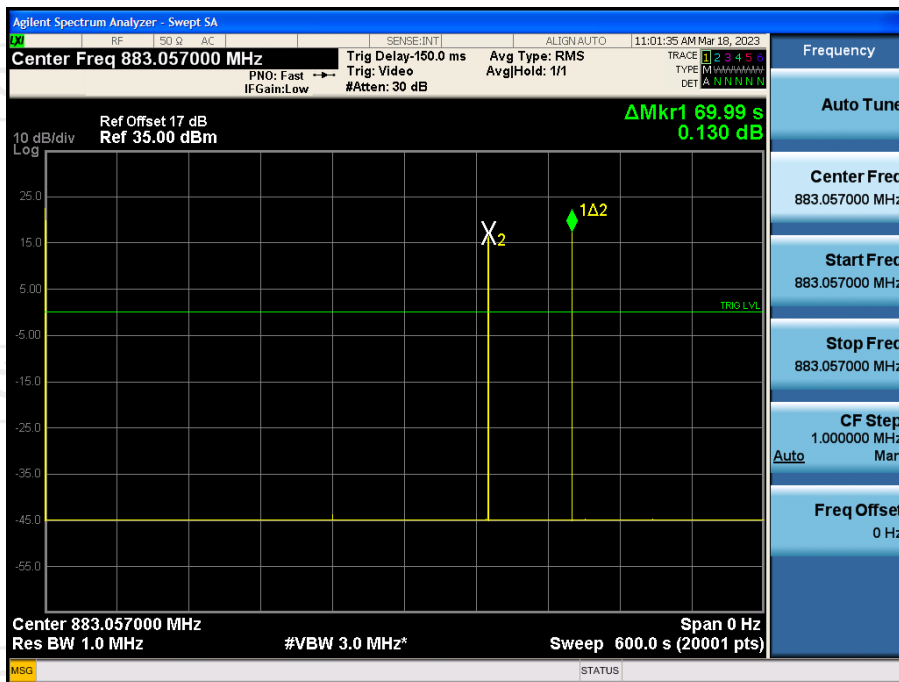
AWS-1 DL



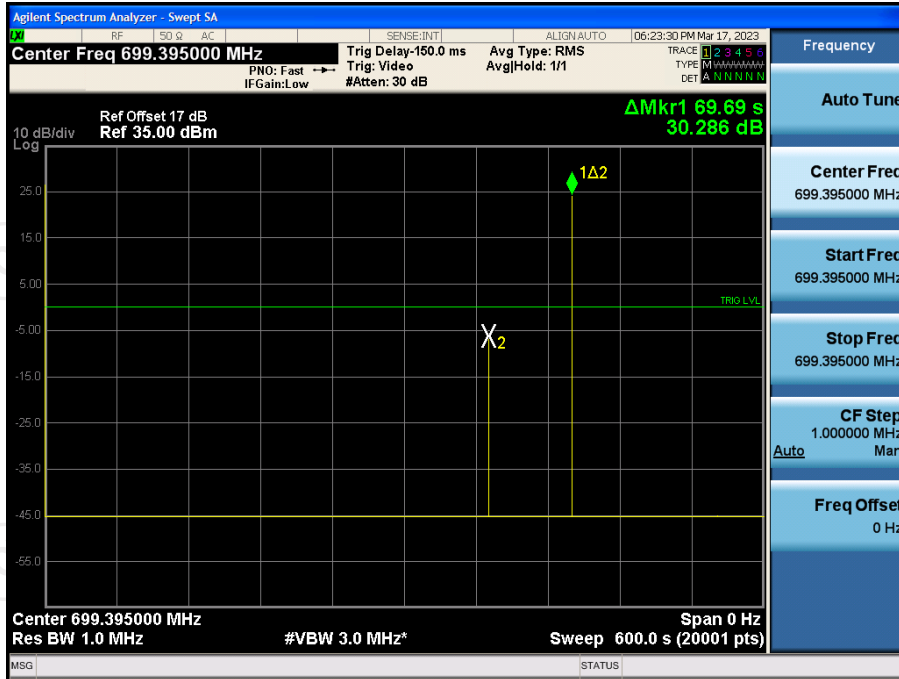
Cellular UL



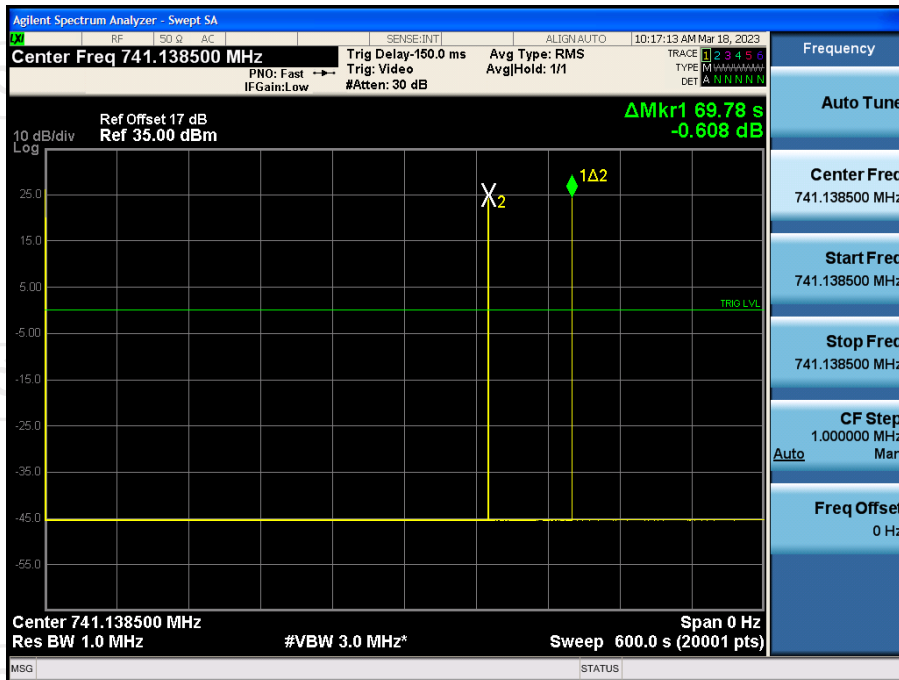
Cellular DL



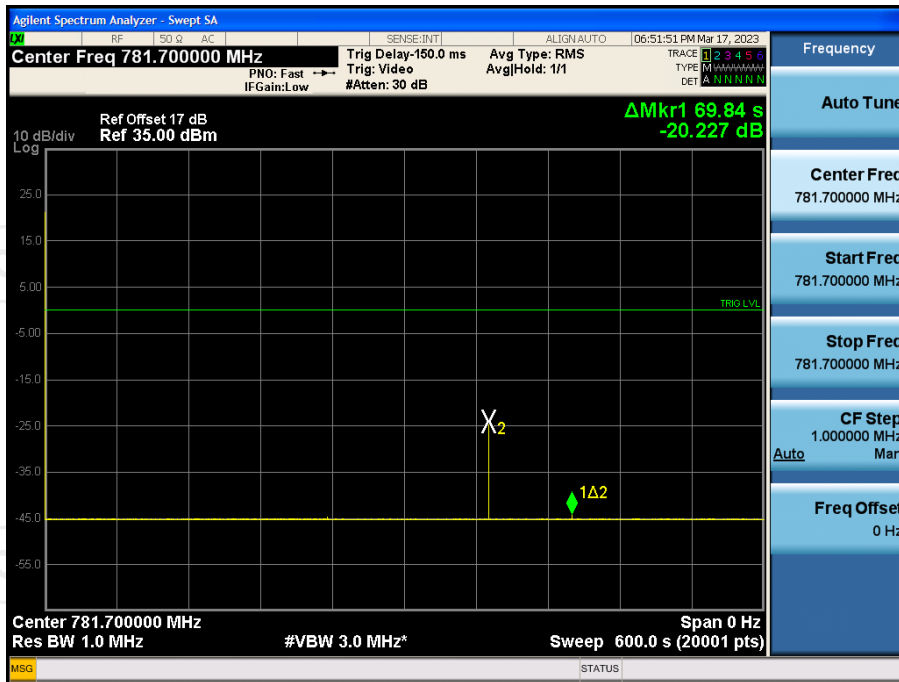
Lower700MHz UL



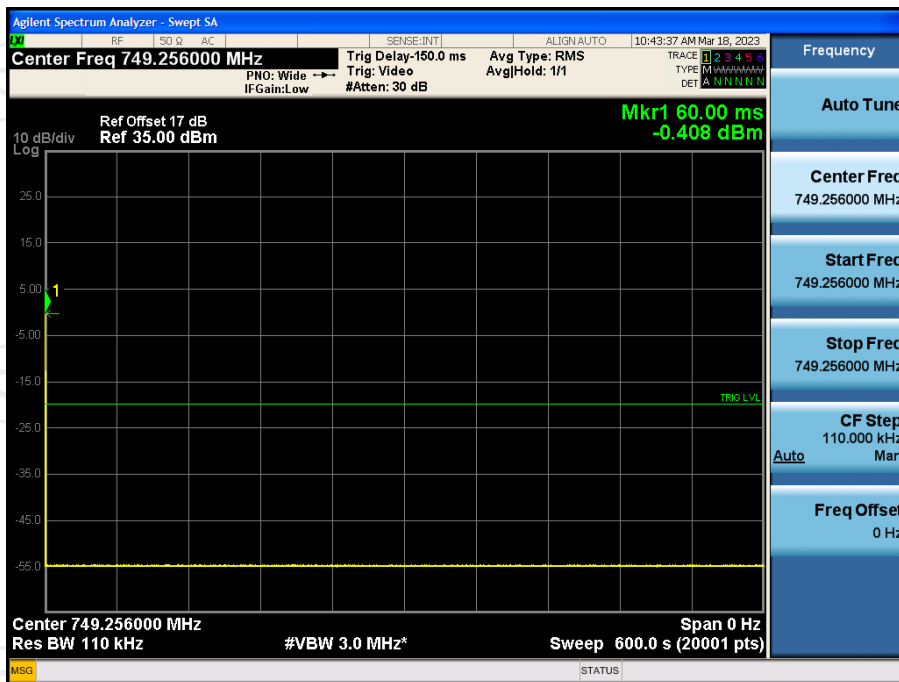
Lower700MHz DL



Upper700MHz UL



Upper700MHz DL



Test results of Mitigation or Shutdown

PCS		Uplink(1850-1915MHz)							
Signal Type		AWGN							
Isolation	Peak Oscillations		Minimal Level		Delta Value	Limit	Time to Mitigate Oscillation	Mitigation Time Limit	Result
	Freq.	Level	Freq.	Level					
dB	MHz	dBm	MHz	dBm	dB	dB	sec	sec	
+5	1856.99	-72.10	1852.20	-84.55	12.45	<12	238	300	Pass
+4	1856.99	-70.60	1852.20	-84.82	14.22	<12	240	300	Pass
+3	1856.99	-68.94	1852.20	-85.24	16.30	<12	245	300	Pass
+2	1856.99	-66.22	1852.20	-85.40	19.18	<12	242	300	Pass
+1	1856.99	-62.48	1852.20	-85.22	22.74	<12	236	300	Pass
0	1856.99	-46.42	1852.20	-86.03	39.61	<12	234	300	Pass
-1	EUT Shutdown								

PCS		Downlink(1930-1995MHz)							
Signal Type		AWGN							
Isolation	Peak Oscillations		Minimal Level		Delta Value	Limit	Time to Mitigate Oscillation	Mitigation Time Limit	Result
	Freq.	Level	Freq.	Level					
dB	MHz	dBm	MHz	dBm	dB	dB	sec	sec	
+5	1953.46	-70.44	1958.13	-81.63	11.19	<12	235	300	Pass
+4	1953.46	-69.28	1958.13	-81.96	12.68	<12	239	300	Pass
+3	1953.46	-68.60	1958.13	-82.18	13.58	<12	241	300	Pass
+2	1953.46	-66.91	1958.13	-82.42	15.51	<12	244	300	Pass
+1	1953.46	-64.45	1958.13	-83.15	18.70	<12	240	300	Pass
0	1953.46	-60.58	1958.13	-83.35	22.77	<12	238	300	Pass
-1	1953.46	-55.20	1958.13	-83.6	28.40	<12	235	300	Pass
-2	EUT Shutdown								

AWS-1		Uplink(1710-1755MHz)							
Signal Type		AWGN							
Isolation	Peak Oscillations		Minimal Level		Delta Value	Limit	Time to Mitigate Oscillation	Mitigation Time Limit	Result
	Freq.	Level	Freq.	Level					
dB	MHz	dBm	MHz	dBm	dB	dB	sec	sec	
+5	1725.56	-71.55	1732.04	-83.59	12.04	<12	237	300	Pass
+4	1725.56	-70.45	1732.04	-84.2	13.75	<12	242	300	Pass
+3	1725.56	-68.98	1732.04	-84.56	15.58	<12	246	300	Pass
+2	1725.56	-66.07	1732.04	-84.97	18.90	<12	247	300	Pass
+1	1725.56	-61.62	1732.04	-84.98	23.36	<12	243	300	Pass
0	1725.56	-51.65	1732.04	-85.61	33.96	<12	240	300	Pass
-1	1725.56	6.88	1732.04	-80.16	87.04	<12	237	300	Pass
-2	EUT Shutdown								

AWS-1		Downlink(2110-2155MHz)							
Signal Type		AWGN							
Isolation	Peak Oscillations		Minimal Level		Delta Value	Limit	Time to Mitigate Oscillation	Mitigation Time Limit	Result
	Freq.	Level	Freq.	Level					
dB	MHz	dBm	MHz	dBm	dB	dB	sec	sec	
+5	2115.98	-70.25	2108.91	-80.64	10.39	<12	236	300	Pass
+4	2115.98	-69.09	2108.91	-80.9	11.81	<12	240	300	Pass
+3	2115.98	-67.68	2108.91	-81.4	13.72	<12	244	300	Pass
+2	2115.98	-65.95	2108.91	-81.59	15.64	<12	245	300	Pass
+1	2115.98	-64.22	2108.91	-82.46	18.24	<12	240	300	Pass
0	2115.98	-60.66	2108.91	-82.72	22.06	<12	238	300	Pass
-1	2115.98	-50.16	2108.91	-83.13	32.97	<12	236	300	Pass
-2	EUT Shutdown								

Cellular	Uplink(824-849MHz)								
Signal Type	AWGN								
Isolation	Peak Oscillations		Minimal Level		Delta Value	Limit	Time to Mitigate Oscillation	Mitigation Time Limit	Result
	Freq.	Level	Freq.	Level					
dB	MHz	dBm	MHz	dBm	dB	dB	sec	sec	
+5	842.87	-68.84	845.69	-82.69	13.85	<12	234	300	Pass
+4	842.87	-67.64	845.69	-82.95	15.31	<12	237	300	Pass
+3	842.87	-65.58	845.69	-83.55	17.97	<12	240	300	Pass
+2	842.87	-60.44	845.69	-83.49	23.05	<12	242	300	Pass
+1	842.87	-51.61	845.69	-84.12	32.51	<12	239	300	Pass
0	842.87	10.49	845.69	-79.32	89.81	<12	235	300	Pass
-1	EUT Shutdown								

Cellular	Downlink(869-894MHz)								
Signal Type	AWGN								
Isolation	Peak Oscillations		Minimal Level		Delta Value	Limit	Time to Mitigate Oscillation	Mitigation Time Limit	Result
	Freq.	Level	Freq.	Level					
dB	MHz	dBm	MHz	dBm	dB	dB	sec	sec	
+5	884.10	-70.32	887.99	-79.8	9.48	<12	235	300	Pass
+4	884.10	-69.39	887.99	-80.14	10.75	<12	238	300	Pass
+3	884.10	-68.48	887.99	-80.29	11.81	<12	244	300	Pass
+2	884.10	-66.40	887.99	-80.76	14.36	<12	247	300	Pass
+1	884.10	-64.81	887.99	-81.08	16.27	<12	242	300	Pass
0	884.10	-62.22	887.99	-81.65	19.43	<12	238	300	Pass
-1	884.10	-58.24	887.99	-82.03	23.79	<12	234	300	Pass
-2	EUT Shutdown								

Lower700M Hz	Uplink(698-716MHz)								
Signal Type	AWGN								
Isolation	Peak Oscillations		Minimal Level		Delta Value	Limit	Time to Mitigate Oscillation	Mitigation Time Limit	Result
	Freq.	Level	Freq.	Level					
dB	MHz	dBm	MHz	dBm	dB	dB	sec	sec	
+5	706.67	-66.43	703.99	-80.08	13.65	<12	235	300	Pass
+4	706.67	-64.26	703.99	-80.23	15.97	<12	238	300	Pass
+3	706.67	-60.39	703.99	-80.19	19.80	<12	240	300	Pass
+2	706.67	-49.82	703.99	-80.41	30.59	<12	242	300	Pass
+1	EUT Shutdown								

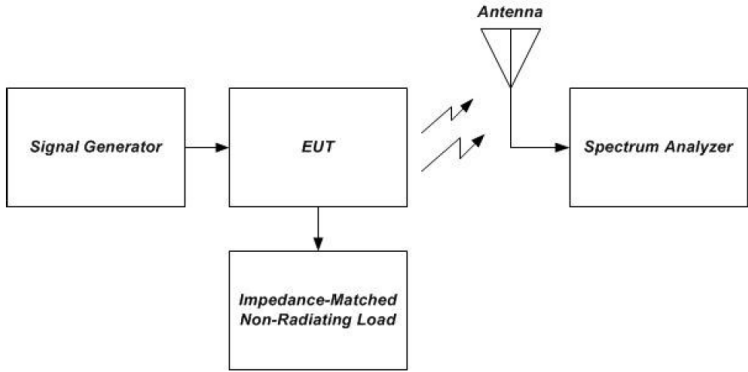
Lower700M Hz	Downlink(728-746MHz)								
Signal Type	AWGN								
Isolation	Peak Oscillations		Minimal Level		Delta Value	Limit	Time to Mitigate Oscillation	Mitigation Time Limit	Result
	Freq.	Level	Freq.	Level					
dB	MHz	dBm	MHz	dBm	dB	dB	sec	sec	
+5	742.67	-62.66	740.25	-79.62	16.96	<12	237	300	Pass
+4	742.67	-58.93	740.25	-80.21	21.28	<12	241	300	Pass
+3	742.67	-54.32	740.25	-80.26	25.94	<12	238	300	Pass
+2	742.67	-35.70	740.25	-80.88	45.18	<12	235	300	Pass
+1	EUT Shutdown								

Upper700M Hz	Uplink(776-787MHz)								
Signal Type	AWGN								
Isolation	Peak Oscillations		Minimal Level		Delta Value	Limit	Time to Mitigate Oscillation	Mitigation Time Limit	Result
	Freq.	Level	Freq.	Level					
dB	MHz	dBm	MHz	dBm	dB	dB	sec	sec	
+5	777.80	-69.90	780.98	-79.26	9.36	<12	234	300	Pass
+4	777.80	-68.79	780.98	-79.38	10.59	<12	239	300	Pass
+3	777.80	-66.40	780.98	-79.77	13.37	<12	243	300	Pass
+2	777.80	-63.56	780.98	-79.58	16.02	<12	246	300	Pass
+1	777.80	-57.54	780.98	-79.67	22.13	<12	242	300	Pass
0	777.80	5.90	780.98	-79.76	85.66	<12	238	300	Pass
-1	EUT Shutdown								

Upper700M Hz	Downlink(746-757MHz)								
Signal Type	AWGN								
Isolation	Peak Oscillations		Minimal Level		Delta Value	Limit	Time to Mitigate Oscillation	Mitigation Time Limit	Result
	Freq.	Level	Freq.	Level					
dB	MHz	dBm	MHz	dBm	dB	dB	sec	sec	
+5	752.91	-70.85	755.67	-82.00	11.15	<12	236	300	Pass
+4	752.91	-69.94	755.67	-82.54	12.60	<12	240	300	Pass
+3	752.91	-68.92	755.67	-82.34	13.42	<12	243	300	Pass
+2	752.91	-67.58	755.67	-82.82	15.24	<12	242	300	Pass
+1	752.91	-66.16	755.67	-82.75	16.59	<12	241	300	Pass
0	EUT Shutdown								

6. Radiation Spurious Emission

6.1.1. Test Specification

Test Requirement:	FCC Part2 Section 2.1053
Test Method:	KDB935210 D03 Signal booster Measurements v04r04
Limit:	-13dBm; For equipment operating in the frequency bands 746-757 MHz and 776-787 MHz, The e.i.r.p. in the band 1559-1610 MHz shall not exceed -70 dBW/MHz for wideband signal and -80 dBW for discrete emission with bandwidth less than 700 Hz.
Test setup:	 <p style="text-align: center;">Figure 10 – Radiated spurious emissions test and instrumentation setup</p>
Test Procedure:	<ol style="list-style-type: none"> a) Place the EUT on an OATS or semi-anechoic chamber turntable 3 m from the receiving antenna. b) Connect the EUT to the test equipment as shown in Figure 10 beginning with the uplink output (donor) port. c) Set the signal generator to produce a CW signal with the frequency set to the center of the operational band under test, and the power level set at PIN as determined from measurement results per 7.2. d) Measure the radiated spurious emissions from the EUT from the lowest to the highest frequencies as specified in § 2.1057. Maximize the radiated emissions by using the procedures described in ANSI C63.4. e) Capture the peak emissions Test Plots using a peak detector with Max-Hold for inclusion in the test report. Tabular data is acceptable in lieu of spectrum analyzer Test Plots. f) Repeat 7.12c) through 7.12e) for all uplink and downlink operational bands.

Test results:	PASS
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6.1.2. Test Instruments

Radiated Emission				
Name	Model No.	Manufacturer	Date of Cal.	Due Date
EMI Test Receiver	ESIB7	R&S	Jul. 04, 2022	Jul. 03, 2023
Spectrum Analyzer	FSQ40	R&S	Jul. 04, 2022	Jul. 03, 2023
Pre-amplifier	8447D	HP	Jul. 04, 2022	Jul. 03, 2023
Pre-amplifier	LNPA_0118G-45	SKET	Feb. 21, 2023	Feb. 20, 2024
Pre-amplifier	LNPA_1840G-50	SKET	Feb. 21, 2023	Feb. 20, 2024
Broadband Antenna	VULB9163	Schwarzbeck	Jul. 06, 2022	Jul. 05, 2023
Horn Antenna	BBHA 9120D	Schwarzbeck	Jul. 06, 2022	Jul. 05, 2023
Horn Antenna	BBHA 9170	Schwarzbeck	Feb. 25, 2023	Feb. 24, 2024
Coaxial cable	RC-18G-N-M	SKET	Feb. 25, 2022	Feb. 24, 2024
Coaxial cable	RC_40G-K-M	SKET	Feb. 25, 2022	Feb. 24, 2024
Loop antenna	FMZB1519B	Schwarzbeck	Jun. 12, 2022	Jun. 11, 2024
Signal Generator	N5182A	Agilent	Jul. 04, 2022	Jul. 03, 2023

6.1.3. Test data

Frequency [MHz]	Antenna polarity [H/V]	Reading Level	Substitution factor	Measurement Level [dBm]	Limit [dBm]	Margin [dB]
PCS Uplink						
3765.00	H	-42.43	3.02	-39.41	-13.00	-26.41
3765.00	V	-35.70	2.78	42.92		-29.92
11032.55	H	-59.18	16.08	-43.10		-30.10
11653.90	V	-59.89	14.93	-44.96		-31.96
PCS Downlink						
3925.00	H	-50.36	4.31	-46.05	-13.00	-33.05
3925.00	V	-51.09	2.92	-48.17		-35.17
14128.25	H	-59.15	17.52	-41.63		-28.63
13910.65	V	-59.30	18.73	-40.57		-27.57

Frequency [MHz]	Antenna polarity [H/V]	Reading Level	Substitution factor	Measurement Level [dBm]	Limit [dBm]	Margin [dB]
AWS-1 Uplink						
3465.00	H	-42.94	0.57	-42.37	-13.00	-29.37
3465.00	V	-44.23	0.33	-43.90		-30.90
13990.550	H	-60.38	17.87	-42.51		-29.51
13950.600	V	-60.17	18.94	-41.23		-28.23
AWS-1 Downlink						
4265.00	H	-51.15	4.99	-46.16	-13.00	-33.16
4265.00	V	-51.71	3.67	-48.04		-35.04
10488.55	H	-59.17	15.24	-43.93		-30.93
9275.60	V	-59.44	14.57	-44.87		-31.87

Frequency [MHz]	Antenna polarity [H/V]	Reading Level	Substitution factor	Measurement Level [dBm]	Limit [dBm]	Margin [dB]
Cellular Uplink						
1673.00	H	-39.11	-6.81	-45.92	-13.00	-32.92
1673.00	V	-40.09	-6.41	-46.50		-33.50
7927.60	H	-58.79	11.06	-47.73		-34.73
7098.40	V	-59.47	10.31	-49.16		-36.16
Cellular Downlink						
1763.00	H	-47.76	-6.73	-54.49	-13.00	-41.49
1763.00	V	-48.19	-6.35	-54.54		-41.54
7146.80	H	-59.43	10.09	-49.34		-36.34
6392.40	V	-58.39	8.26	-50.13		-37.13

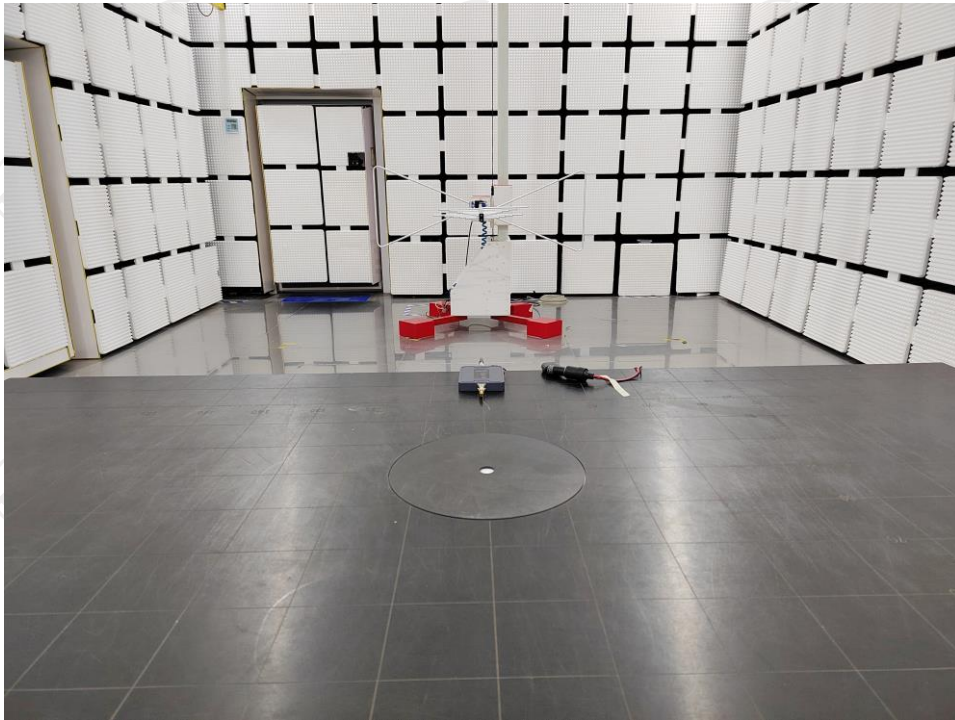
Frequency [MHz]	Antenna polarity [H/V]	Reading Level	Substitution factor	Measurement Level [dBm]	Limit [dBm]	Margin [dB]
Lower700MHz Uplink						
1414.00	H	-40.86	-7.37	-48.23	-13.00	-35.23
1414.00	V	-41.87	-6.82	-48.69		-35.69
6805.20	H	-60.14	9.43	-50.71		-37.71
6532.40	V	-57.44	8.23	-49.21		-36.21
Lower700MHz Downlink						
1474.00	H	-47.51	-7.03	-54.54	-13.00	-41.54
1474.00	V	-48.34	-6.57	-54.91		-41.91
6443.90	H	-57.39	8.35	-49.04		-36.04
7146.35	V	-58.90	10.32	-48.58		-35.58

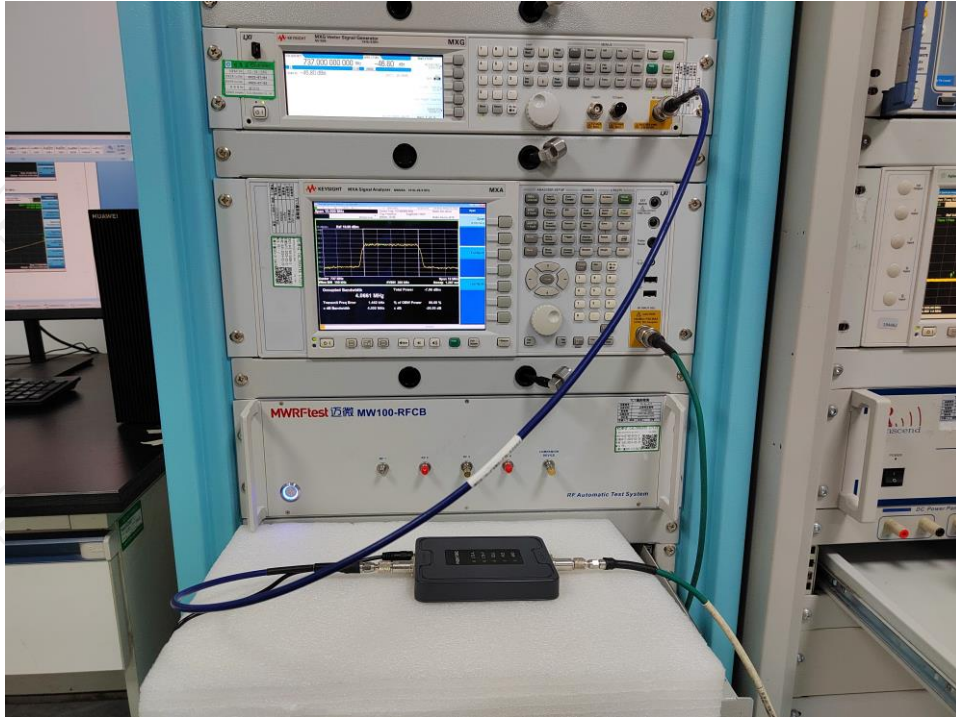
Frequency [MHz]	Antenna polarity [H/V]	Reading Level	Substitution factor	Measurement Level [dBm]	Limit [dBm]	Margin [dB]
Upper700MHz Uplink						
1563.00	H	-42.75	-6.95	-49.7	-13.00	-36.70
1563.00	V	-45.07	-6.46	-51.53		-38.53
7185.20	H	-59.82	10.08	-49.74		-36.74
6430.40	V	-58.27	8.23	-50.04		-37.04
1601.25	H	-61.33	-6.92	-68.25	-40.00	-28.25
1604.38	V	-64.55	-6.31	-70.86		-30.86
Upper700MHz Downlink						
1503.00	H	-50.13	-6.98	-57.11	-13.00	-44.11
1503.00	V	-51.45	-6.52	-57.97		-44.97
6413.10	H	-57.30	8.37	-48.93		-35.93
7113.10	V	-59.65	10.32	-49.33		-36.33
1606.61	H	-61.37	-6.91	-68.28	-40.00	-28.28
1602.54	V	-64.36	-6.32	-70.68		-30.68

Appendix A: Photographs of Test Setup

Product: Cell Phone Signal Booster

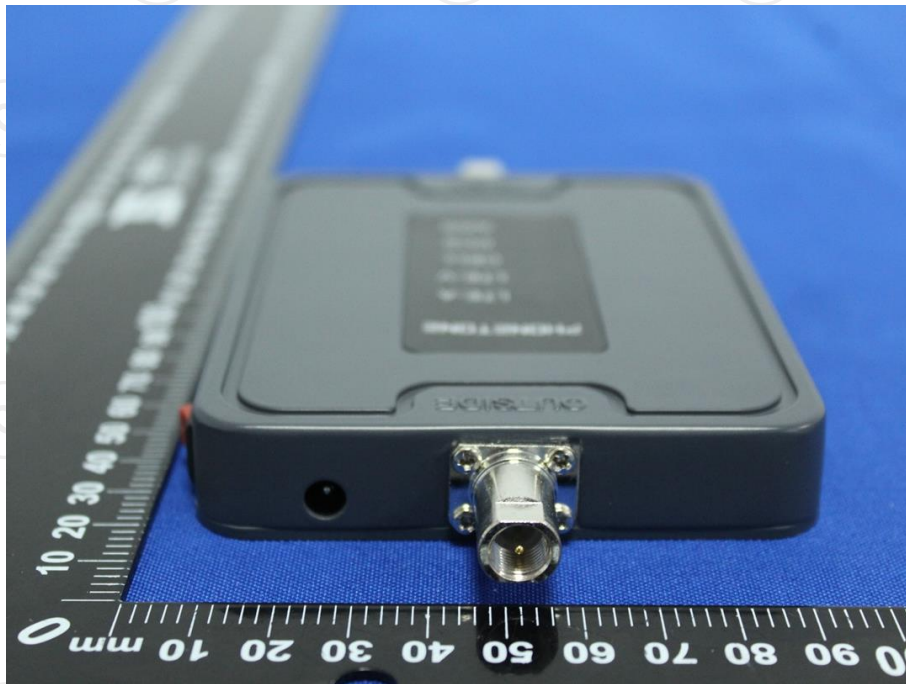
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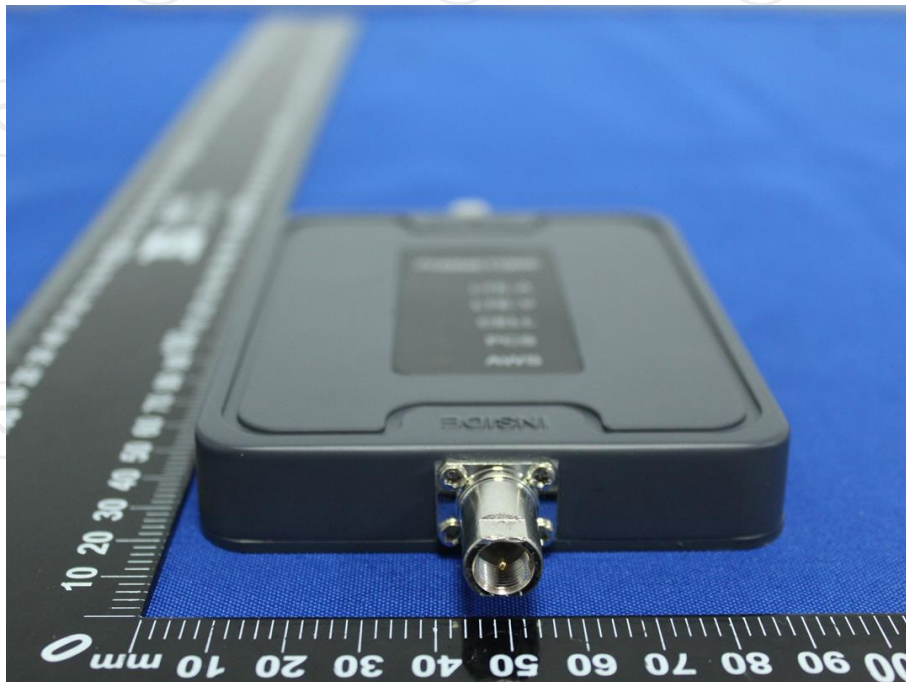
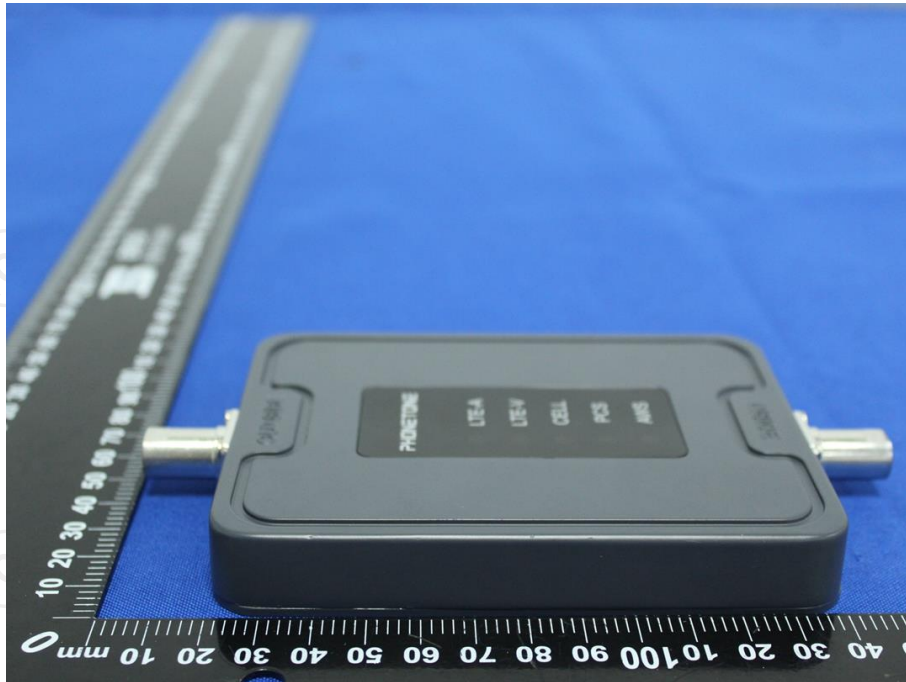


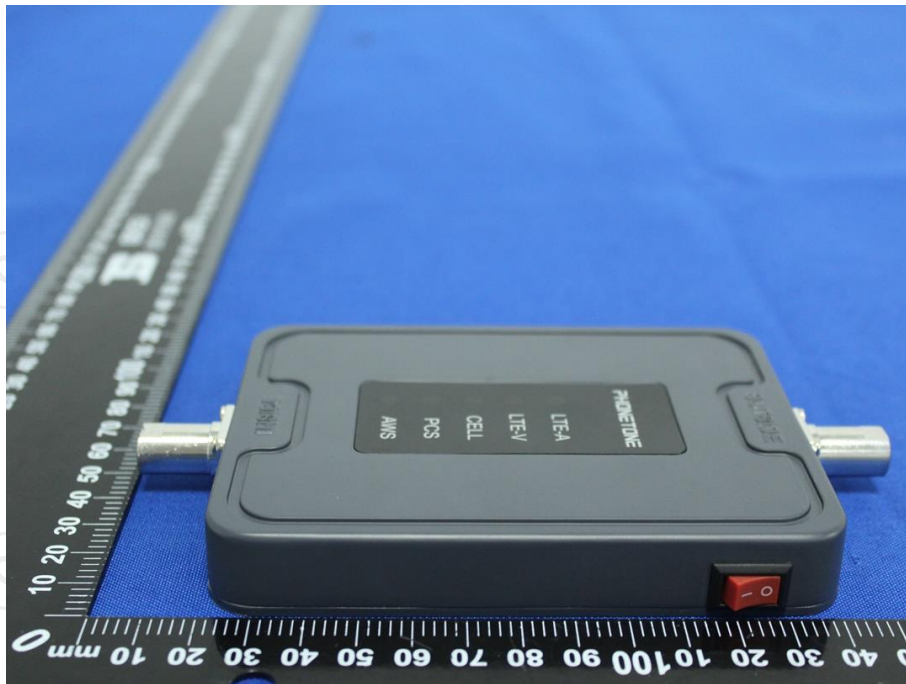


Appendix B: Photographs of EUT
Product: Cell Phone Signal Booster
Model: AN-CPAL50-01
External Photos

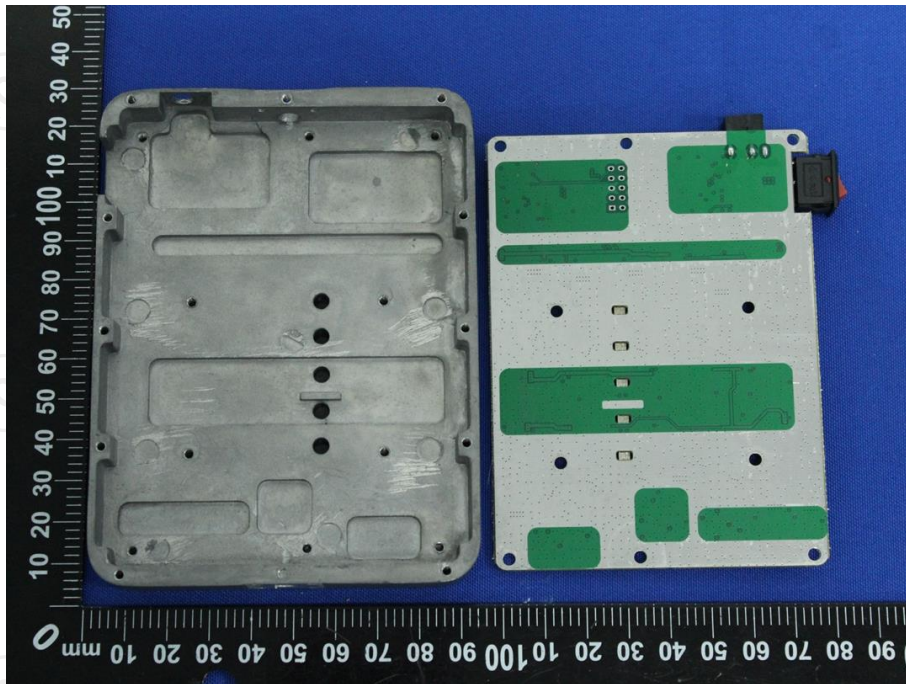
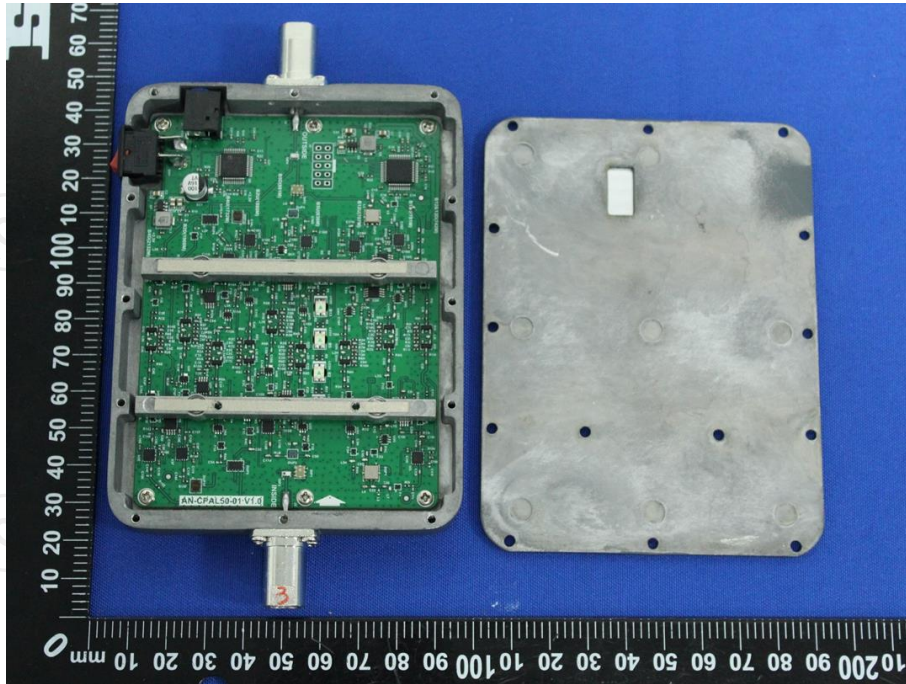


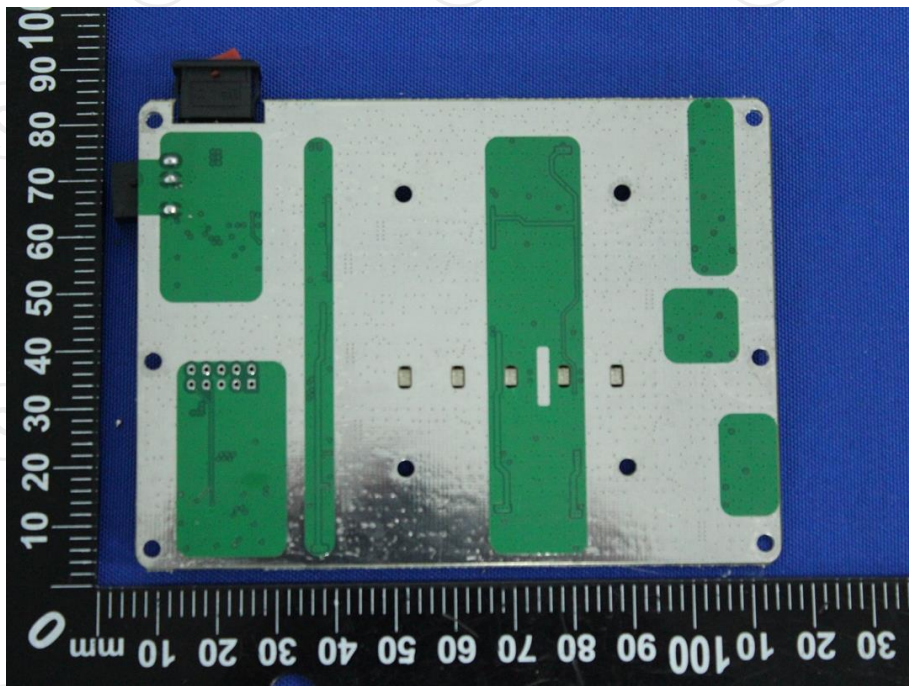
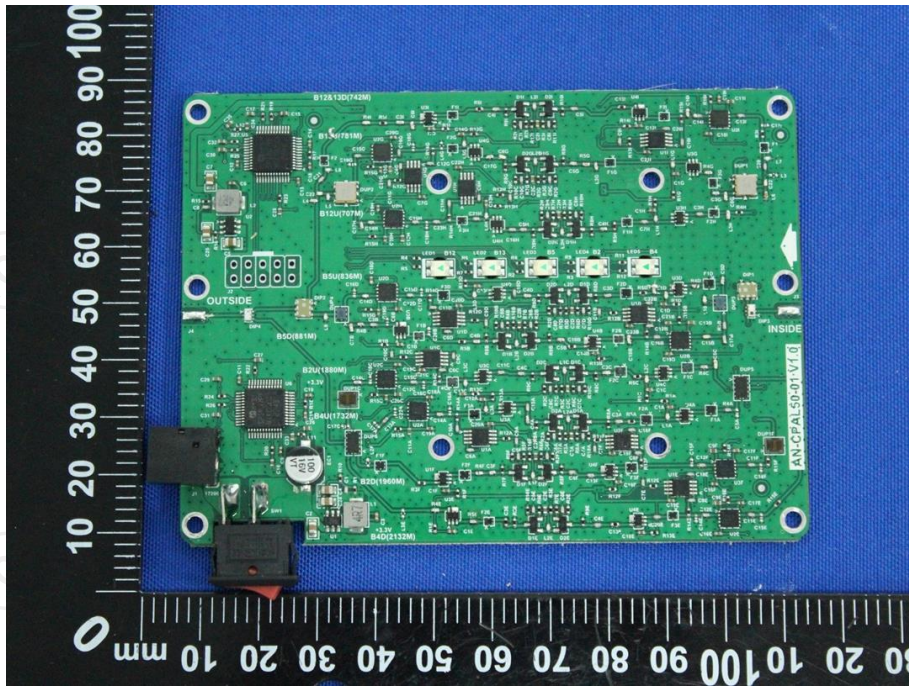


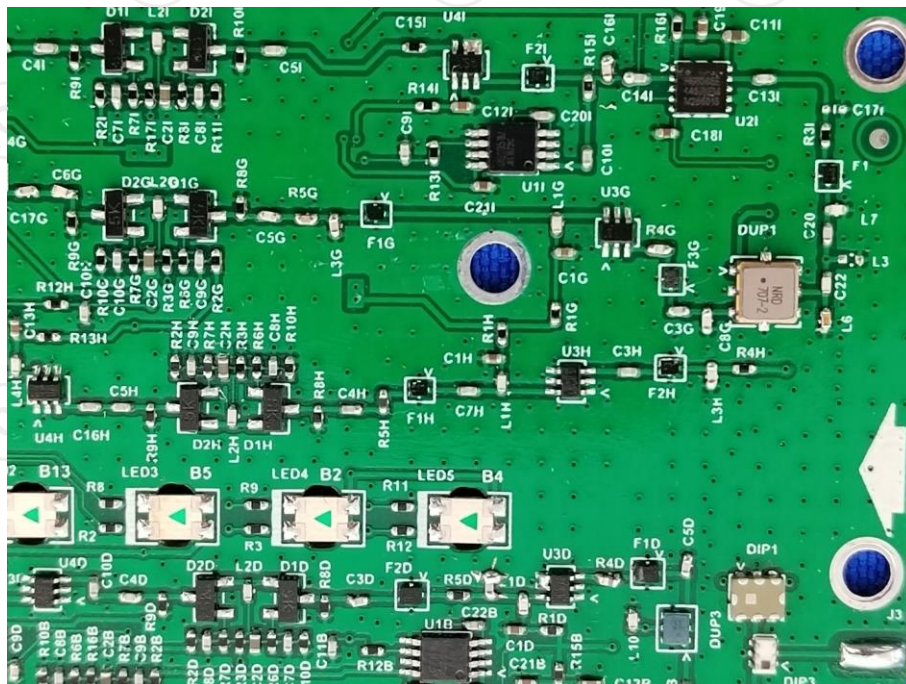
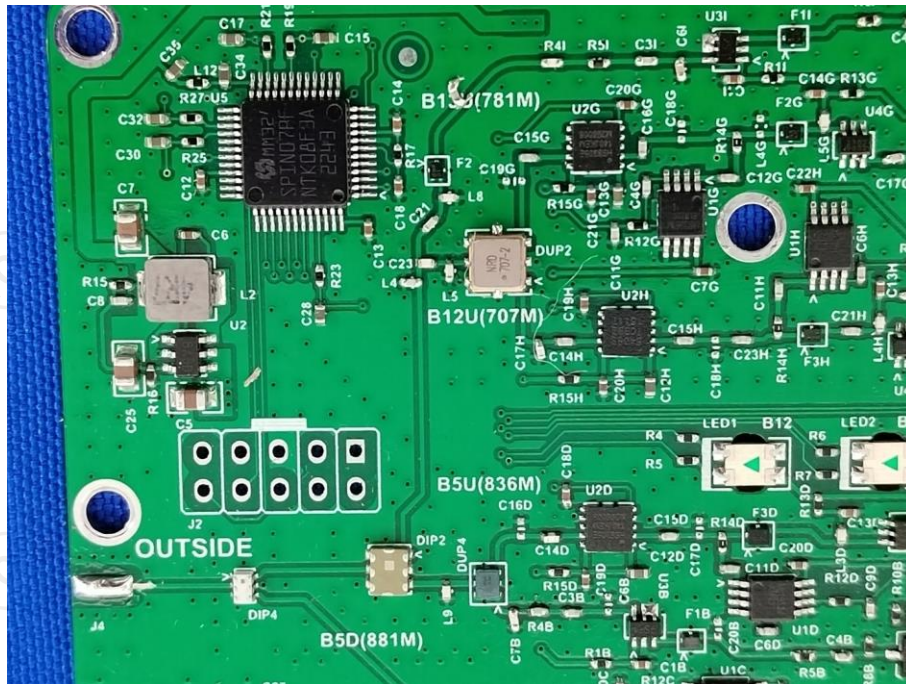


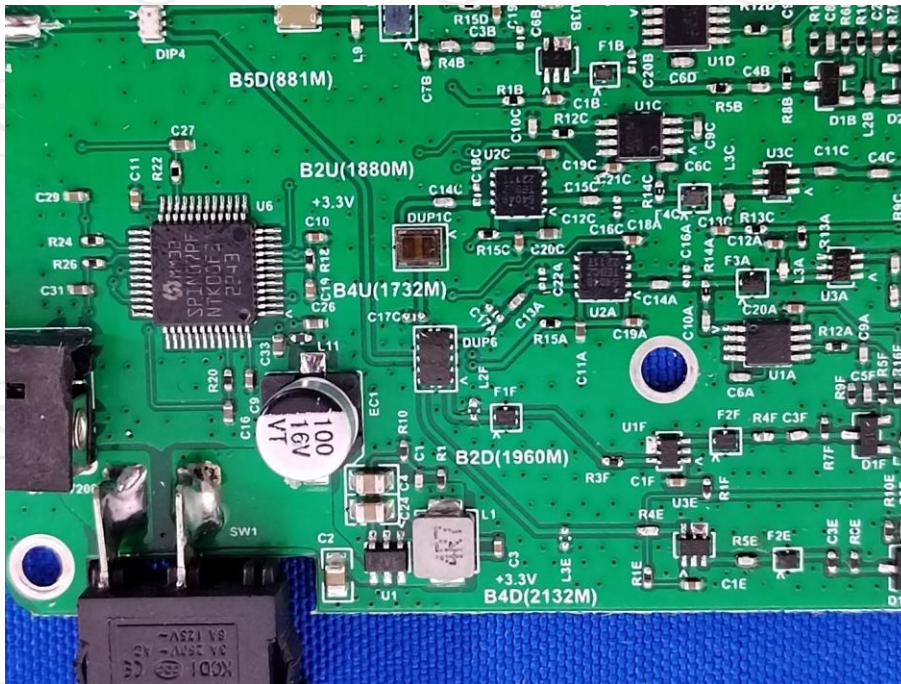
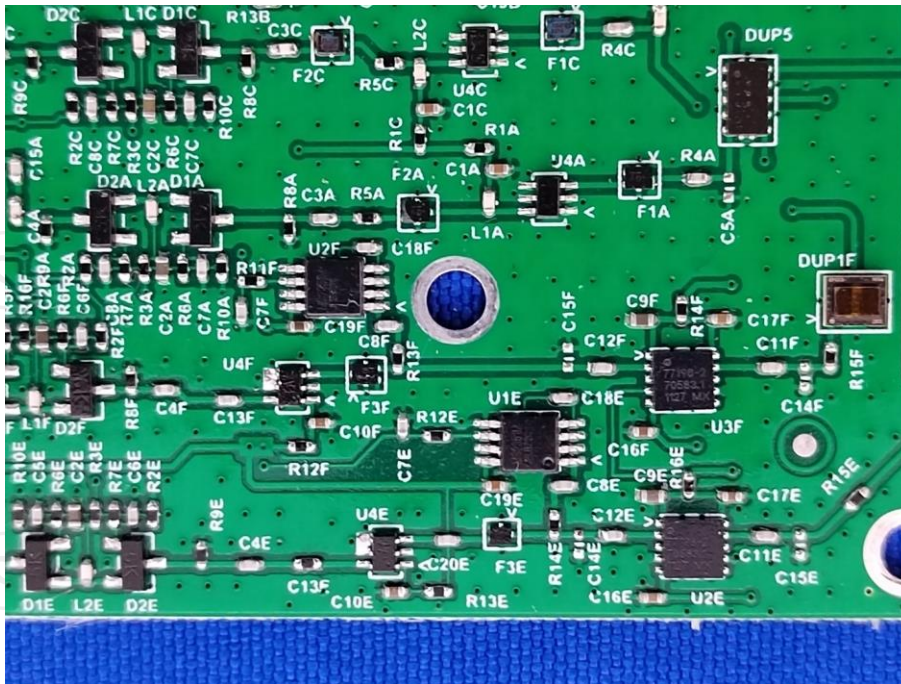


Product: Cell Phone Signal Booster
Model: AN-CPAL50-01
Internal Photos









*****END OF REPORT*****