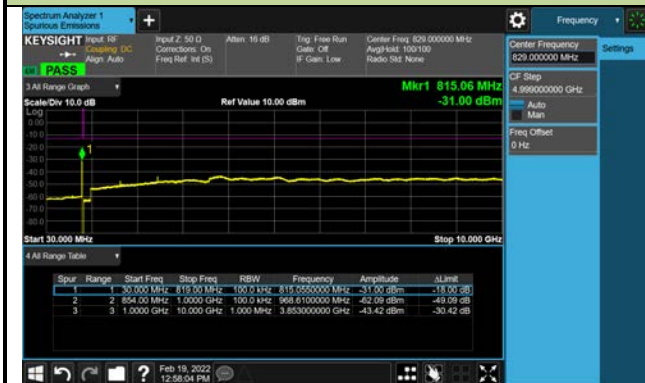
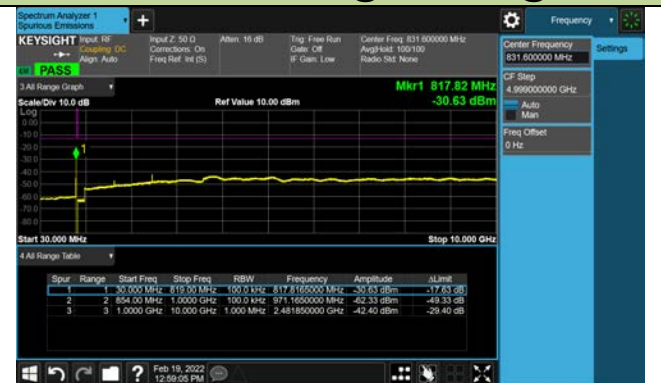


10+10MHz Channel Bandwidth

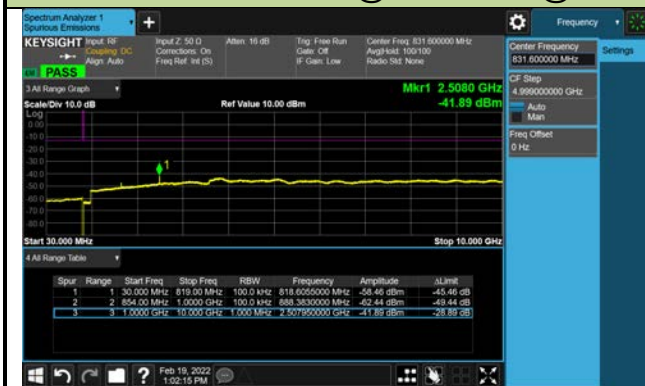
Lowest Channel



Middle Channel/1RB@0 and 1RB@49



Middle Channel/1RB@99 and 1RB@0



Highest Channel



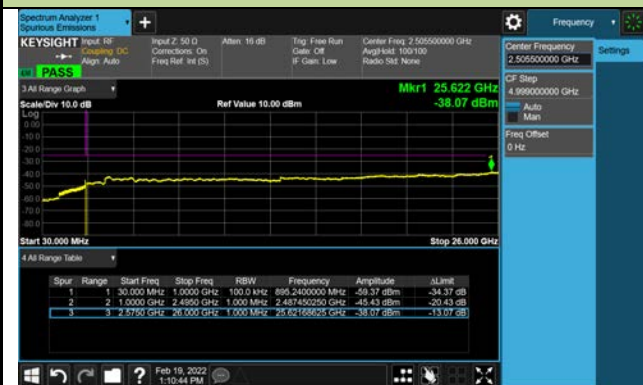
Product	LTE Module	Test Site	SIP-SR1
Test Engineer	Candy Luo	Test Date	2022/02/19
Test Band	Intra-Band CA_7C_1RB_QPSK		

Frequency (MHz)		Channel Bandwidth (MHz)	Frequency Range (MHz)	Max Spurious Emissions (dBm)	Limit (dBm)	Result
PCC	SCC					
2505.5	2519.9	10+20	30 ~ 26000	-38.07	≤ -25.00	Pass
2525.6	2540.0	10+20	30 ~ 26000	-38.17	≤ -25.00	Pass
2545.6	2560.0	10+20	30 ~ 26000	-38.44	≤ -25.00	Pass
2507.5	2519.5	15+10	30 ~ 26000	-38.41	≤ -25.00	Pass
2530.1	2542.1	15+10	30 ~ 26000	-38.34	≤ -25.00	Pass
2552.7	2564.7	15+10	30 ~ 26000	-38.22	≤ -25.00	Pass
2507.5	2522.5	15+15	30 ~ 26000	-38.25	≤ -25.00	Pass
2527.5	2542.5	15+15	30 ~ 26000	-38.26	≤ -25.00	Pass
2547.5	2562.5	15+15	30 ~ 26000	-38.14	≤ -25.00	Pass
2507.8	2524.9	15+20	30 ~ 26000	-38.30	≤ -25.00	Pass
2525.3	2542.4	15+20	30 ~ 26000	-38.29	≤ -25.00	Pass
2542.9	2560.0	15+20	30 ~ 26000	-38.18	≤ -25.00	Pass
2510.0	2524.4	20+10	30 ~ 26000	-38.42	≤ -25.00	Pass
2530.1	2544.5	20+10	30 ~ 26000	-38.29	≤ -25.00	Pass
2550.1	2564.5	20+10	30 ~ 26000	-38.26	≤ -25.00	Pass
2510.0	2527.1	20+15	30 ~ 26000	-38.07	≤ -25.00	Pass
2527.6	2544.7	20+15	30 ~ 26000	-38.22	≤ -25.00	Pass
2545.1	2562.2	20+15	30 ~ 26000	-38.19	≤ -25.00	Pass
2510.0	2529.8	20+20	30 ~ 26000	-38.36	≤ -25.00	Pass
2525.1	2544.9	20+20	30 ~ 26000	-38.28	≤ -25.00	Pass
2540.2	2560.0	20+20	30 ~ 26000	-38.21	≤ -25.00	Pass

Note: Spurious emissions within 9kHz - 30MHz were found more than 20dB below limit line.

10+20MHz Channel Bandwidth

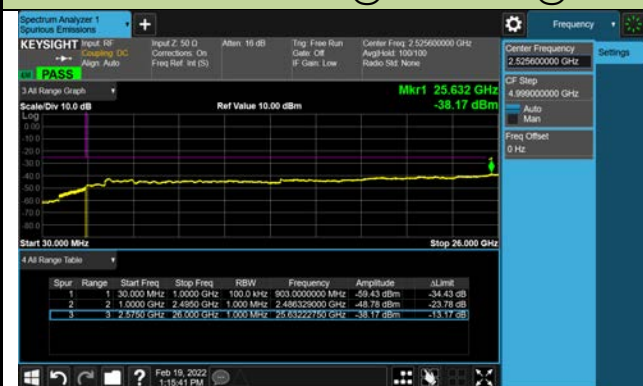
Lowest Channel



Middle Channel/1RB@0 and 1RB@99



Middle Channel/1RB@49 and 1RB@0

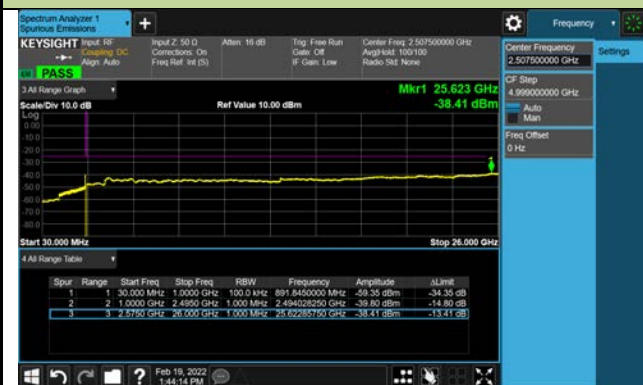


Highest Channel



15+10MHz Channel Bandwidth

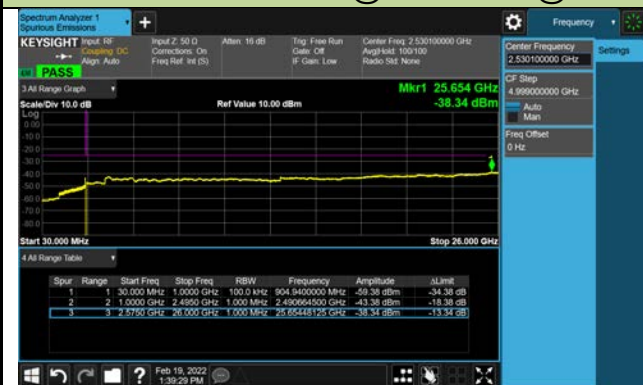
Lowest Channel



Middle Channel/1RB@0 and 1RB@49



Middle Channel/1RB@49 and 1RB@0

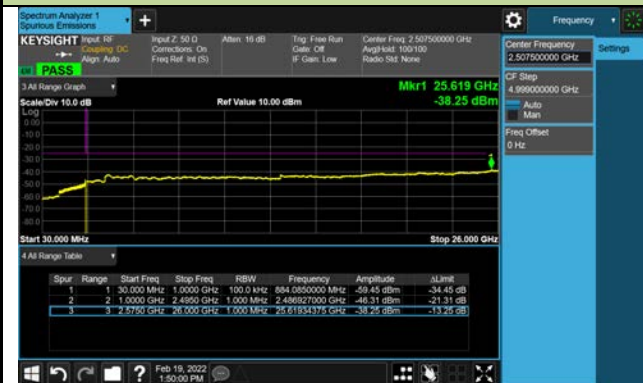


Highest Channel

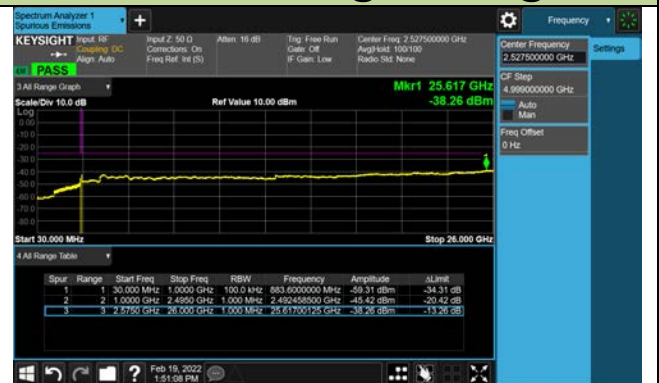


15+15MHz Channel Bandwidth

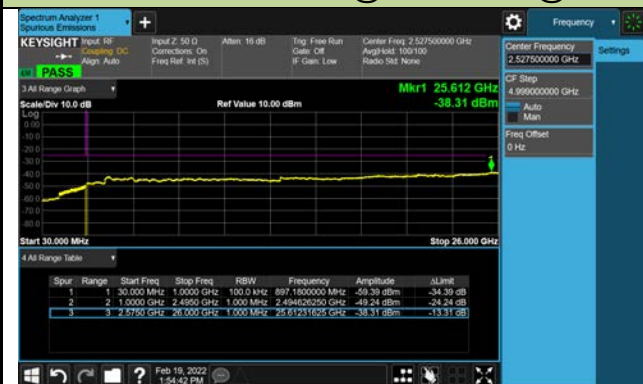
Lowest Channel



Middle Channel/1RB@0 and 1RB@74



Middle Channel/1RB@74 and 1RB@0

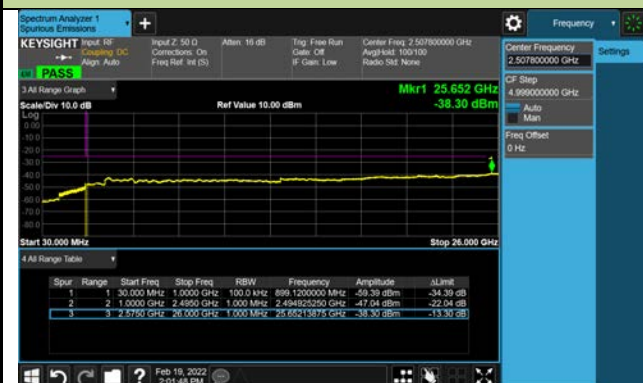


Highest Channel

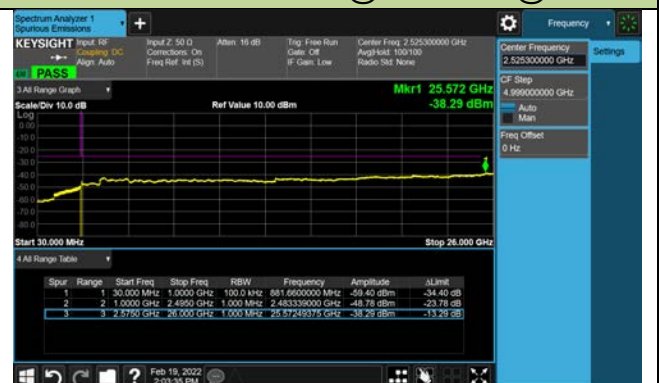


15+20MHz Channel Bandwidth

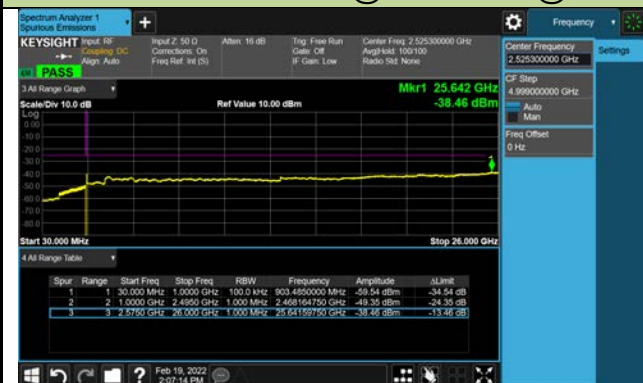
Lowest Channel



Middle Channel/1RB@0 and 1RB@99



Middle Channel/1RB@74 and 1RB@0

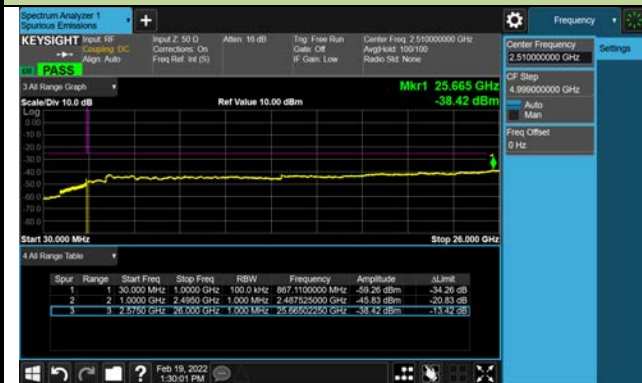


Highest Channel

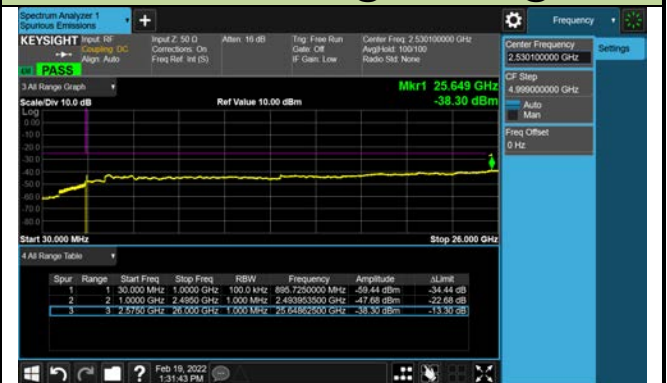


20+10MHz Channel Bandwidth

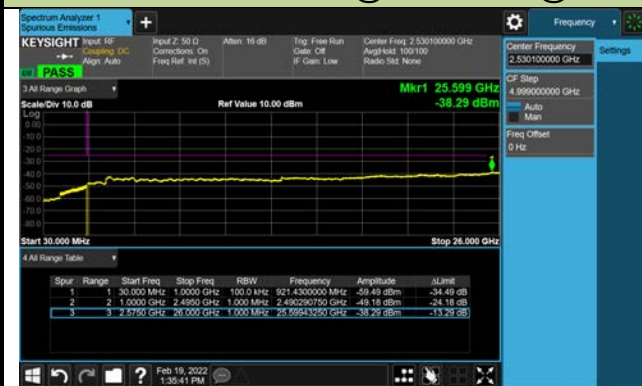
Lowest Channel



Middle Channel/1RB@0 and 1RB@49



Middle Channel/1RB@99 and 1RB@0

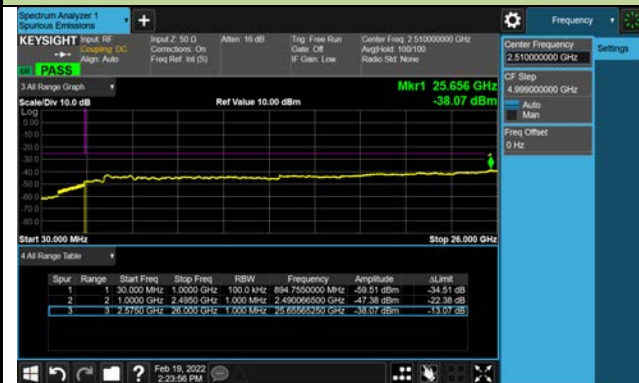


Highest Channel

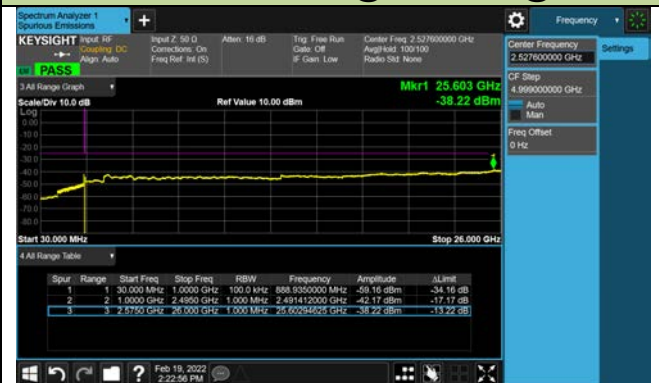


20+15MHz Channel Bandwidth

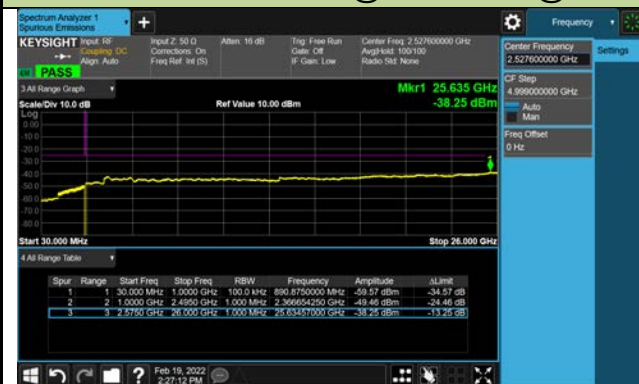
Lowest Channel



Middle Channel/1RB@0 and 1RB@74



Middle Channel/1RB@99 and 1RB@0

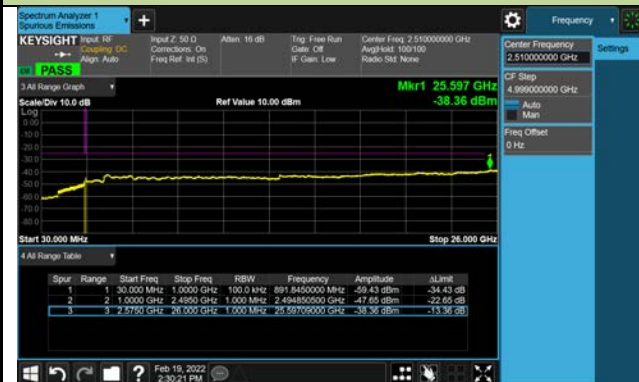


Highest Channel

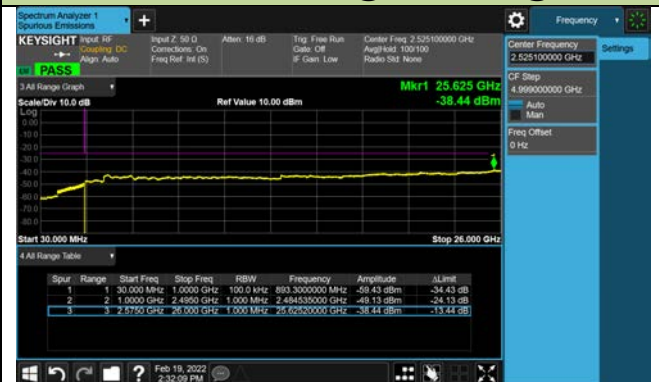


20+20MHz Channel Bandwidth

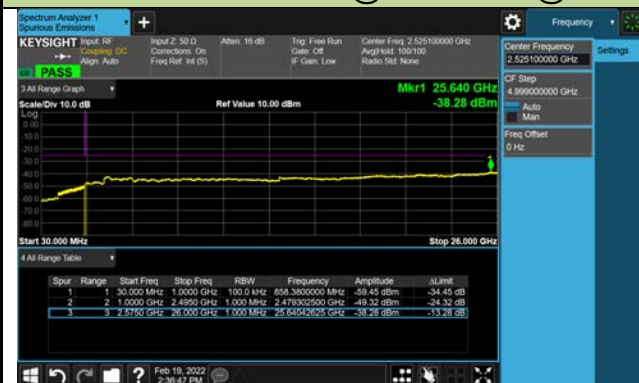
Lowest Channel



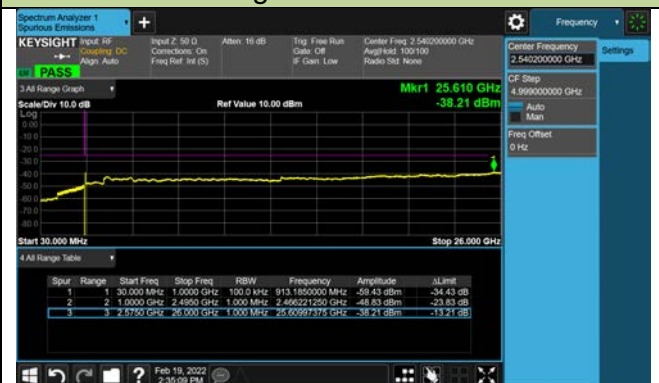
Middle Channel/1RB@0 and 1RB@99



Middle Channel/1RB@99 and 1RB@0



Highest Channel



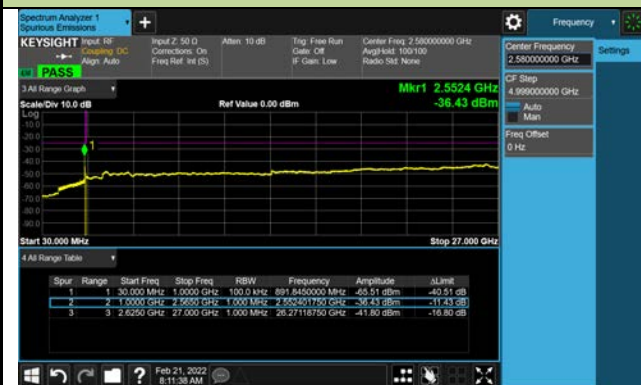
Product	LTE Module	Test Site	SIP-SR1
Test Engineer	Candy Luo	Test Date	2022/02/21
Test Band	Intra-Band CA_38C_1RB_QPSK		

Frequency (MHz)		Channel Bandwidth (MHz)	Frequency Range (MHz)	Max Spurious Emissions (dBm)	Limit (dBm)	Result
PCC	SCC					
2580.00	2599.80	20+20	30 ~ 27000	-36.43	≤ -25.00	Pass
2585.10	2604.90	20+20	30 ~ 27000	-35.06	≤ -25.00	Pass
2590.20	2610.00	20+20	30 ~ 27000	-41.95	≤ -25.00	Pass
2577.50	2592.50	15+15	30 ~ 27000	-27.84	≤ -25.00	Pass
2587.50	2602.50	15+15	30 ~ 27000	-36.38	≤ -25.00	Pass
2597.50	2612.50	15+15	30 ~ 27000	-41.79	≤ -25.00	Pass

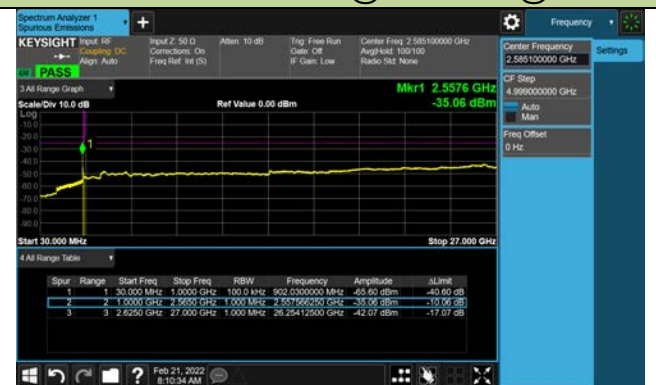
Note: Spurious emissions within 9kHz - 30MHz were found more than 20dB below limit line.

20+20MHz Channel Bandwidth

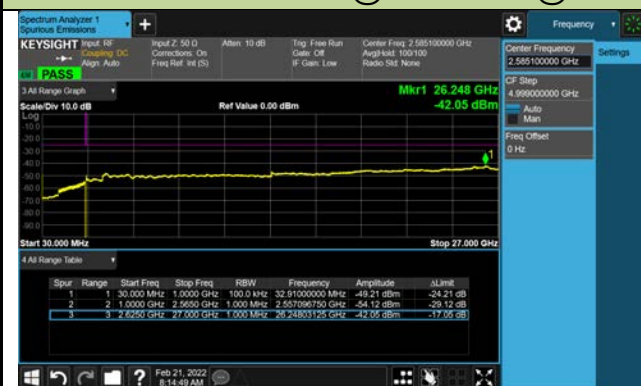
Lowest Channel



Middle Channel/1RB@0 and 1RB@99



Middle Channel/1RB@99 and 1RB@0

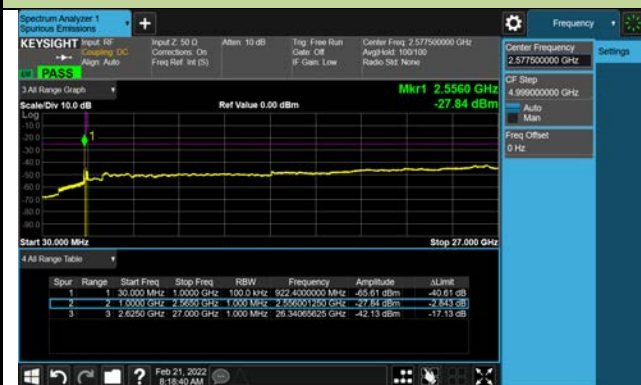


Highest Channel

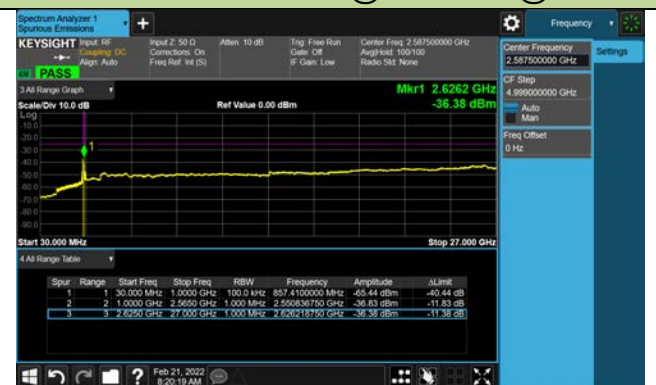


15+15MHz Channel Bandwidth

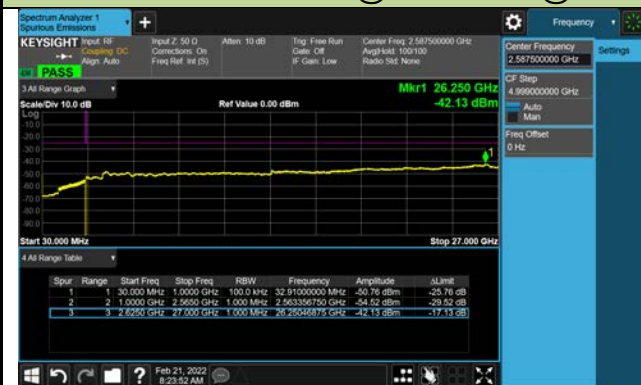
Lowest Channel



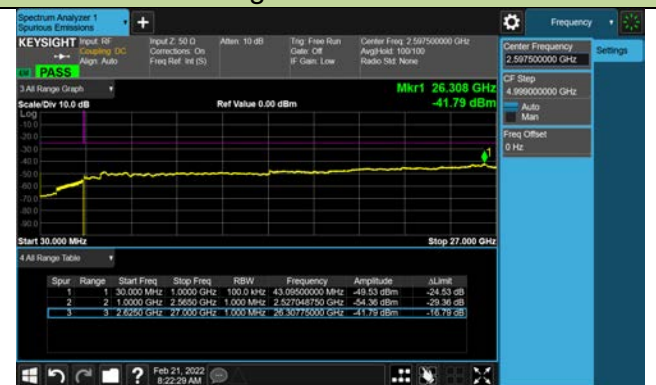
Middle Channel/1RB@0 and 1RB@74



Middle Channel/ 1RB@74 and 1RB@0



Highest Channel



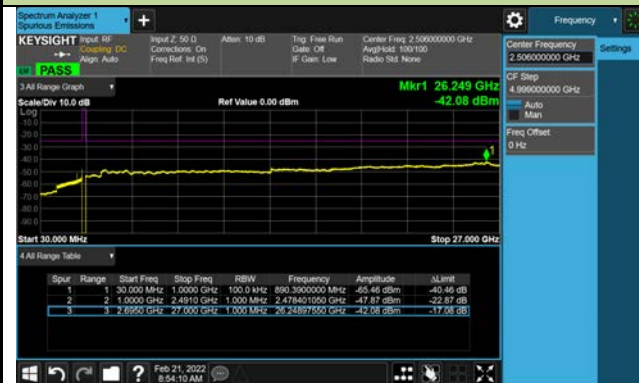
Product	LTE Module	Test Site	SIP-SR1
Test Engineer	Candy Luo	Test Date	2022/02/21
Test Band	Intra-Band CA_41C_1RB_QPSK		

Frequency (MHz)		Channel Bandwidth (MHz)	Frequency Range (MHz)	Max Spurious Emissions (dBm)	Limit (dBm)	Result
PCC	SCC					
2506.00	2525.80	20+20	30 ~ 27000	-42.08	≤ -25.00	Pass
2583.10	2602.90	20+20	30 ~ 27000	-41.89	≤ -25.00	Pass
2660.20	2680.00	20+20	30 ~ 27000	-41.98	≤ -25.00	Pass
2506.00	2523.10	20+15	30 ~ 27000	-41.93	≤ -25.00	Pass
2585.60	2602.70	20+15	30 ~ 27000	-41.82	≤ -25.00	Pass
2665.10	2682.20	20+15	30 ~ 27000	-41.89	≤ -25.00	Pass
2506.00	2520.40	20+10	30 ~ 27000	-39.95	≤ -25.00	Pass
2588.10	2602.50	20+10	30 ~ 27000	-39.84	≤ -25.00	Pass
2670.10	2684.50	20+10	30 ~ 27000	-39.86	≤ -25.00	Pass
2506.00	2517.70	20+5	30 ~ 27000	-39.79	≤ -25.00	Pass
2590.50	2602.20	20+5	30 ~ 27000	-39.79	≤ -25.00	Pass
2675.00	2686.70	20+5	30 ~ 27000	-39.73	≤ -25.00	Pass
2503.80	2520.90	15+20	30 ~ 27000	-39.87	≤ -25.00	Pass
2593.30	2600.40	15+20	30 ~ 27000	-39.95	≤ -25.00	Pass
2662.90	2680.00	15+20	30 ~ 27000	-39.92	≤ -25.00	Pass
2503.50	2518.50	15+15	30 ~ 27000	-39.83	≤ -25.00	Pass
2585.50	2600.50	15+15	30 ~ 27000	-39.84	≤ -25.00	Pass
2667.50	2682.50	15+15	30 ~ 27000	-39.89	≤ -25.00	Pass
2503.50	2515.50	15+10	30 ~ 27000	-39.64	≤ -25.00	Pass
2588.10	2600.10	15+10	30 ~ 27000	-39.71	≤ -25.00	Pass
2672.70	2684.70	15+10	30 ~ 27000	-39.54	≤ -25.00	Pass
2501.50	2515.90	10+20	30 ~ 27000	-39.95	≤ -25.00	Pass
2583.60	2598.00	10+20	30 ~ 27000	-39.75	≤ -25.00	Pass
2665.60	2680.00	10+20	30 ~ 27000	-40.07	≤ -25.00	Pass
2501.30	2513.30	10+15	30 ~ 27000	-39.80	≤ -25.00	Pass
2585.90	2597.90	10+15	30 ~ 27000	-39.59	≤ -25.00	Pass
2670.50	2682.50	10+15	30 ~ 27000	-39.72	≤ -25.00	Pass
2499.30	2511.00	5+20	30 ~ 27000	-39.98	≤ -25.00	Pass
2583.80	2595.50	5+20	30 ~ 27000	-39.74	≤ -25.00	Pass
2668.30	2680.00	5+20	30 ~ 27000	-39.59	≤ -25.00	Pass

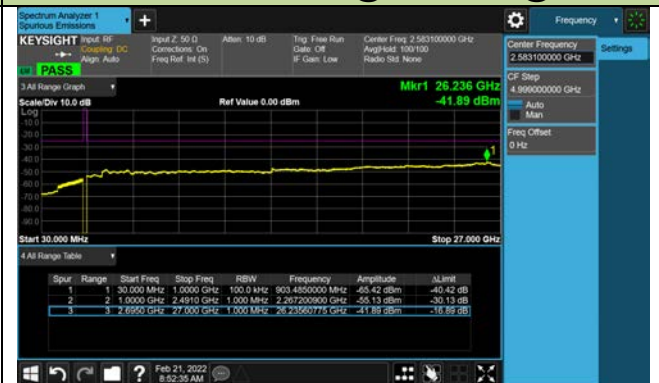
Note: Spurious emissions within 9kHz - 30MHz were found more than 20dB below limit line.

20+20MHz Channel Bandwidth

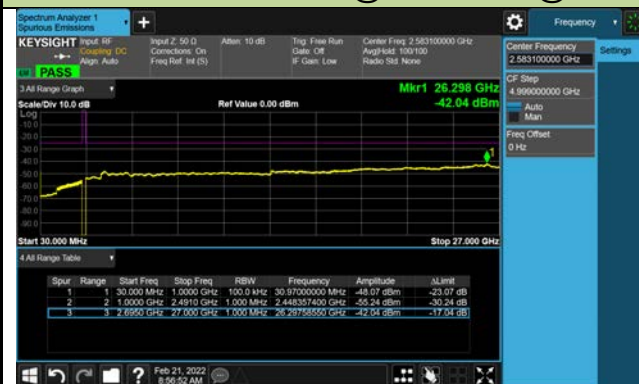
Lowest Channel



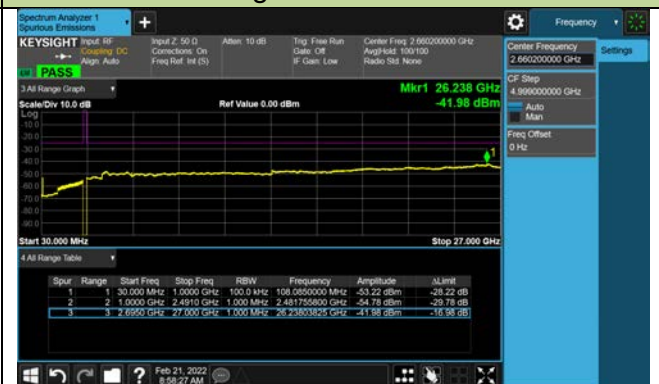
Middle Channel/1RB@0 and 1RB@99



Middle Channel/1RB@99 and 1RB@0

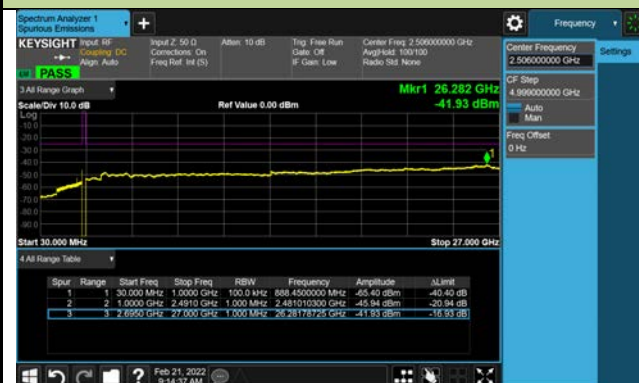


Highest Channel

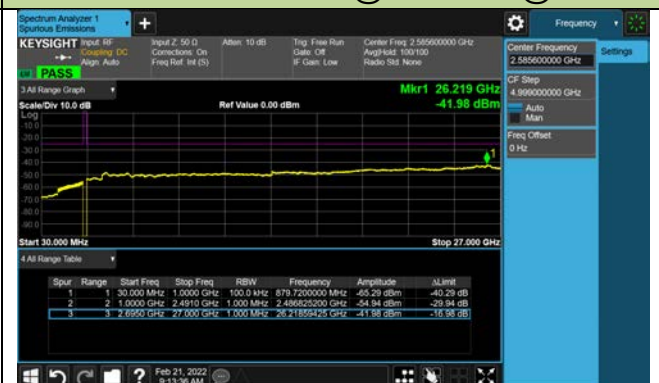


20+15MHz Channel Bandwidth

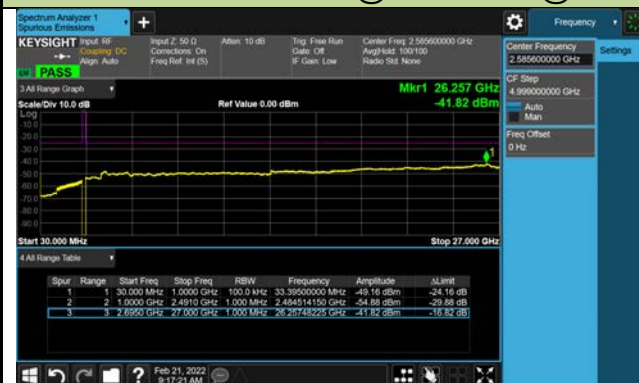
Lowest Channel



Middle Channel/1RB@0 and 1RB@99



Middle Channel/ 1RB@99 and 1RB@0

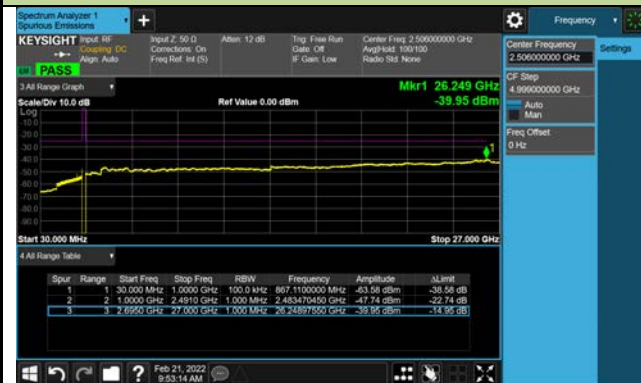


Highest Channel



20+10MHz Channel Bandwidth

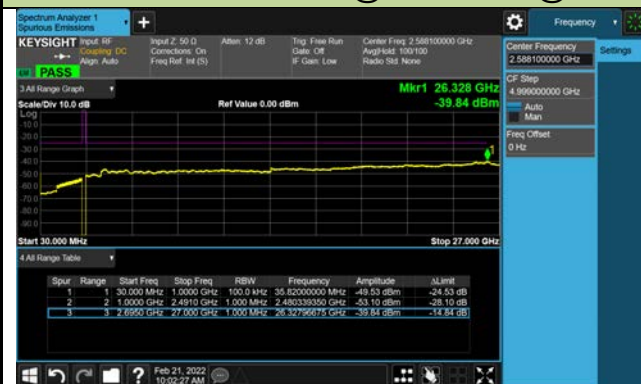
Lowest Channel



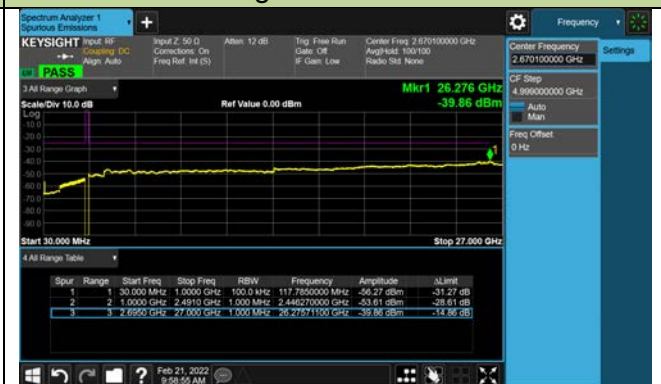
Middle Channel/1RB@0 and 1RB@49



Middle Channel/1RB@99 and 1RB@0

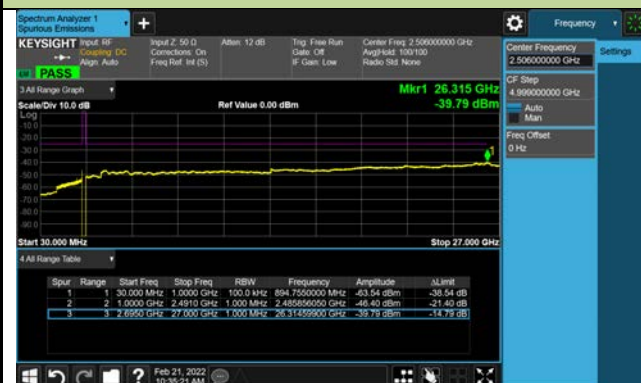


Highest Channel

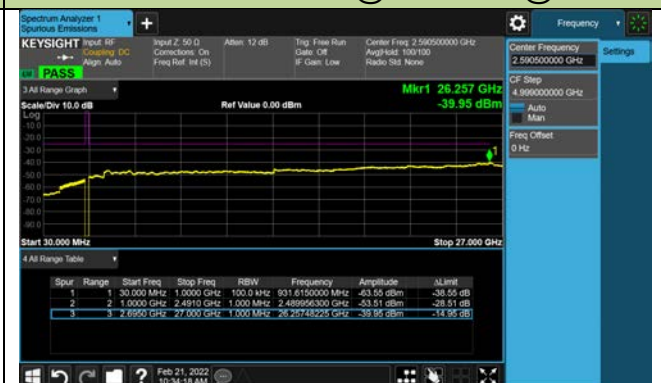


20+5MHz Channel Bandwidth

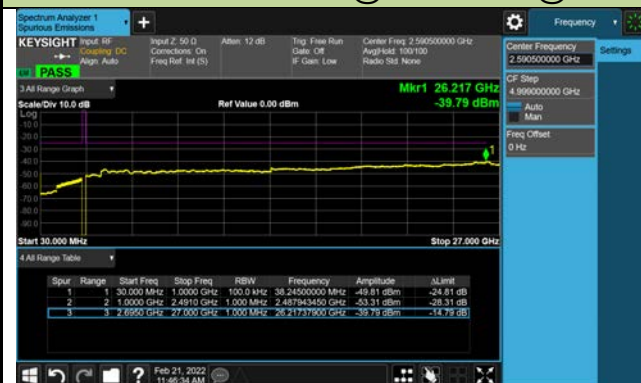
Lowest Channel



Middle Channel/1RB@0 and 1RB@24



Middle Channel/1RB@99 and 1RB@0

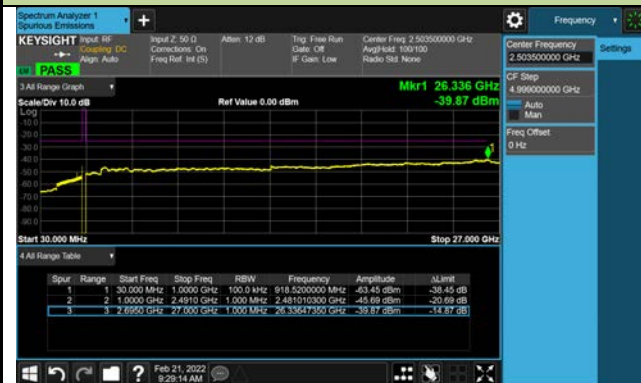


Highest Channel

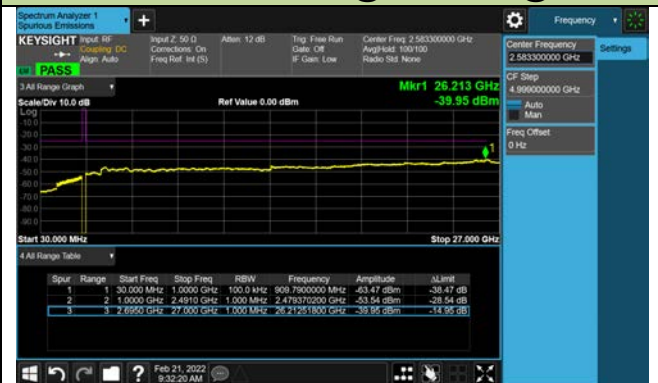


15+20MHz Channel Bandwidth

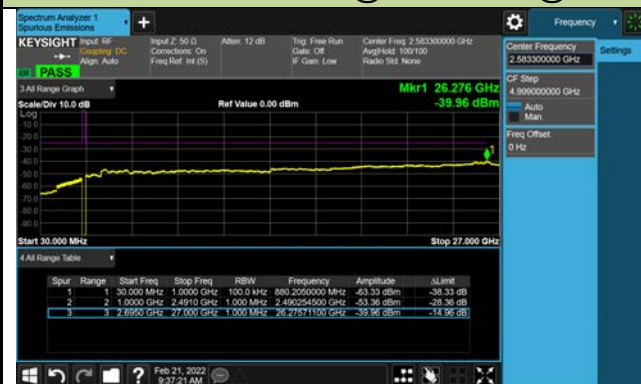
Lowest Channel



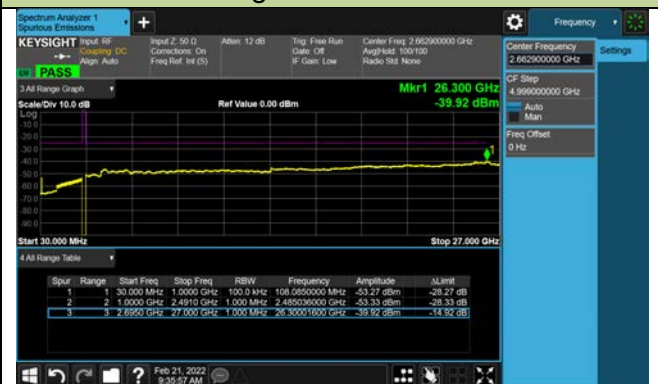
Middle Channel/1RB@0 and 1RB@99



Middle Channel/1RB@74 and 1RB@0



Highest Channel



15+15MHz Channel Bandwidth

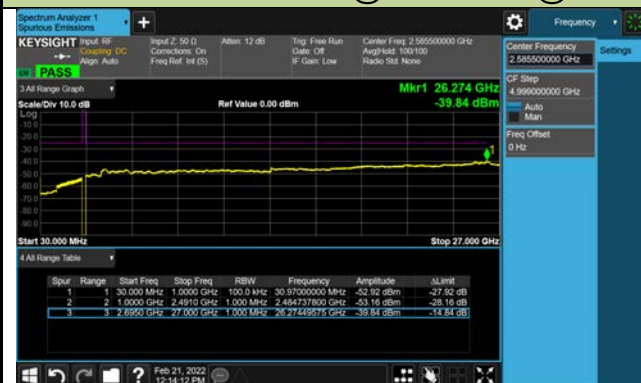
Lowest Channel



Middle Channel/1RB@0 and 1RB@74



Middle Channel/1RB@74 and 1RB@0

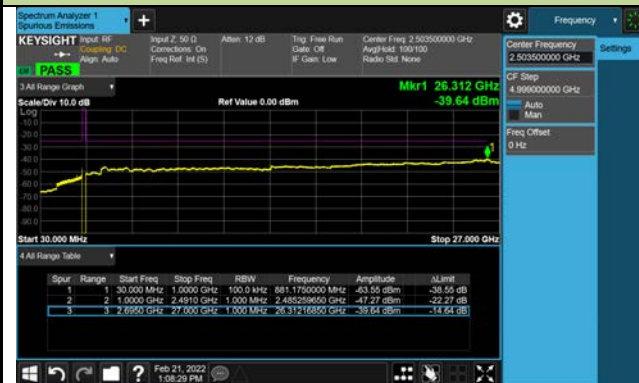


Highest Channel



15+10MHz Channel Bandwidth

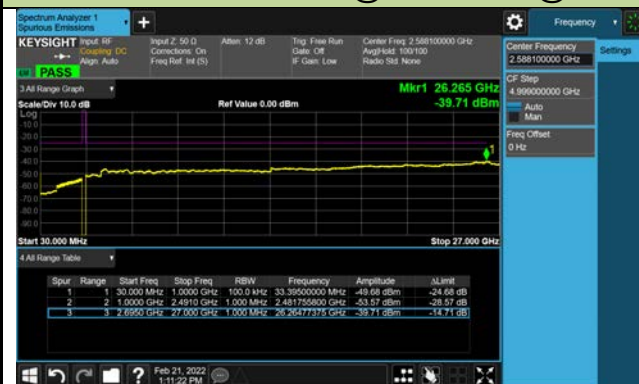
Lowest Channel



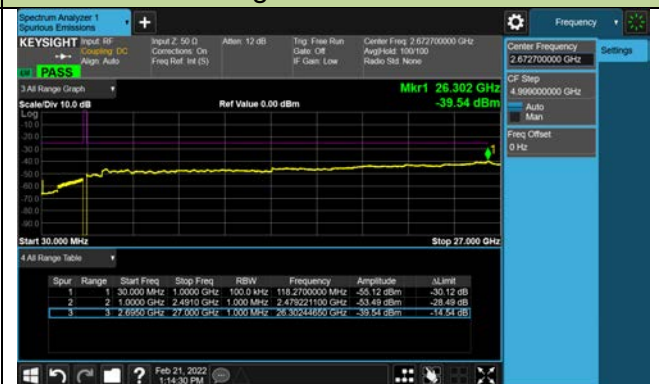
Middle Channel/1RB@0 and 1RB@49



Middle Channel/1RB@74 and 1RB@0



Highest Channel

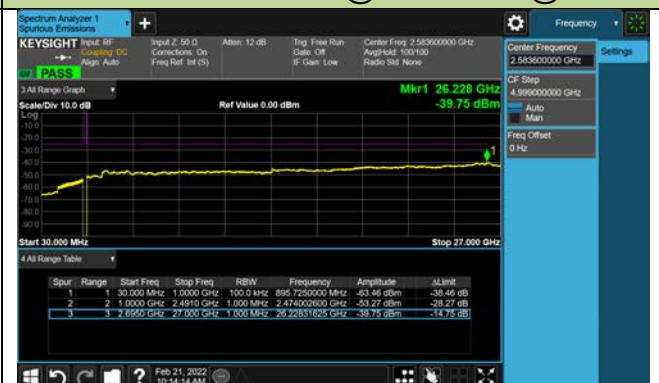


10+20MHz Channel Bandwidth

Lowest Channel



Middle Channel/1RB@49 and 1RB@99



Middle Channel/1RB@49 and 1RB@0

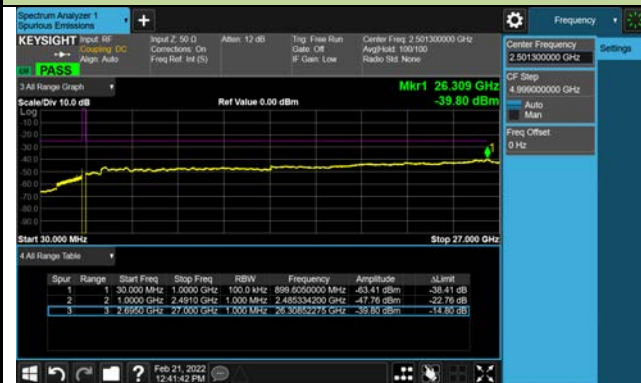


Highest Channel



10+15MHz Channel Bandwidth

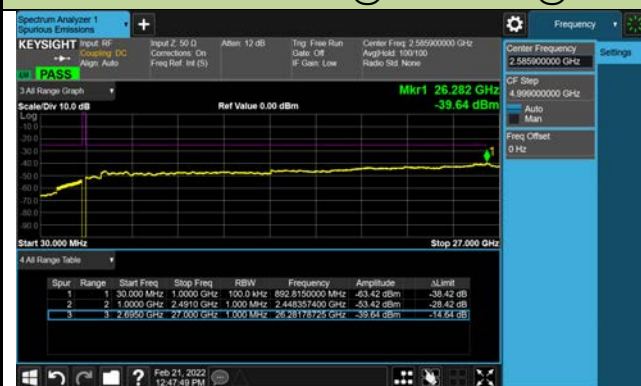
Lowest Channel



Middle Channel/1RB@0 and 1RB@74



Middle Channel/1RB@49 and 1RB@0

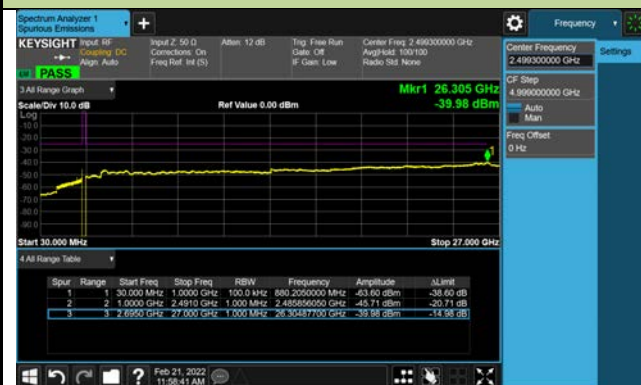


Highest Channel



5+20MHz Channel Bandwidth

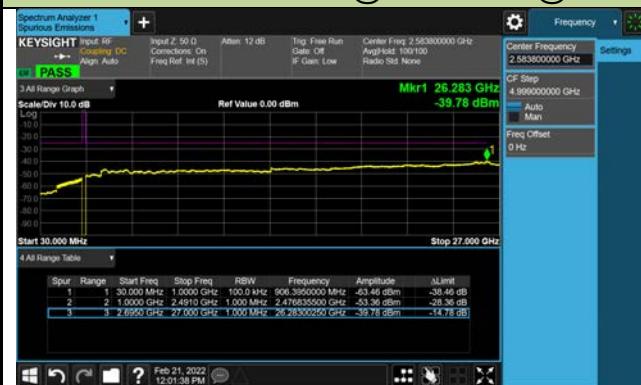
Lowest Channel



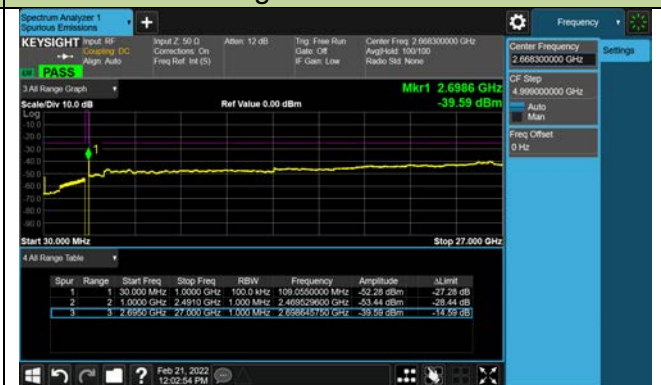
Middle Channel/1RB@0 and 1RB@99



Middle Channel/1RB@24 and 1RB@0



Highest Channel



5.6. Radiated Spurious Emission Measurement

5.6.1. Test Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm.

For Band 7, 38/41, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $55 + 10 \log(P)$ dB. The emission limit equal to -25dBm.

$E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20 \log D + 104.8$; where D is the measurement distance in meters. The emission limit equal to 82.3dB μ V/m or 70.3dB μ V/m.

5.6.2. Test Procedure

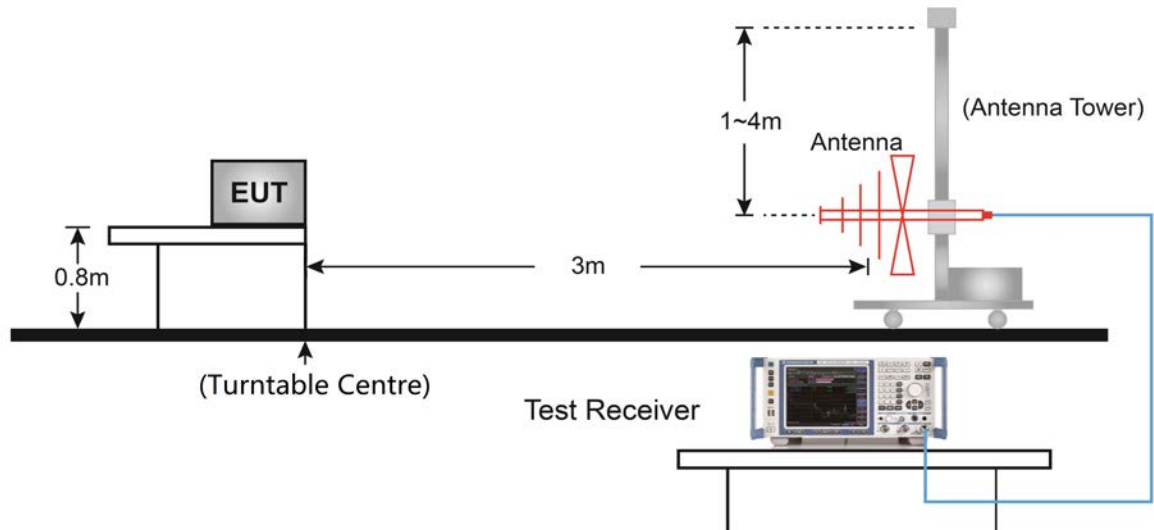
ANSI C63.26-2015 - Section 5.2.7 & 5.5

5.6.3. Test Setting

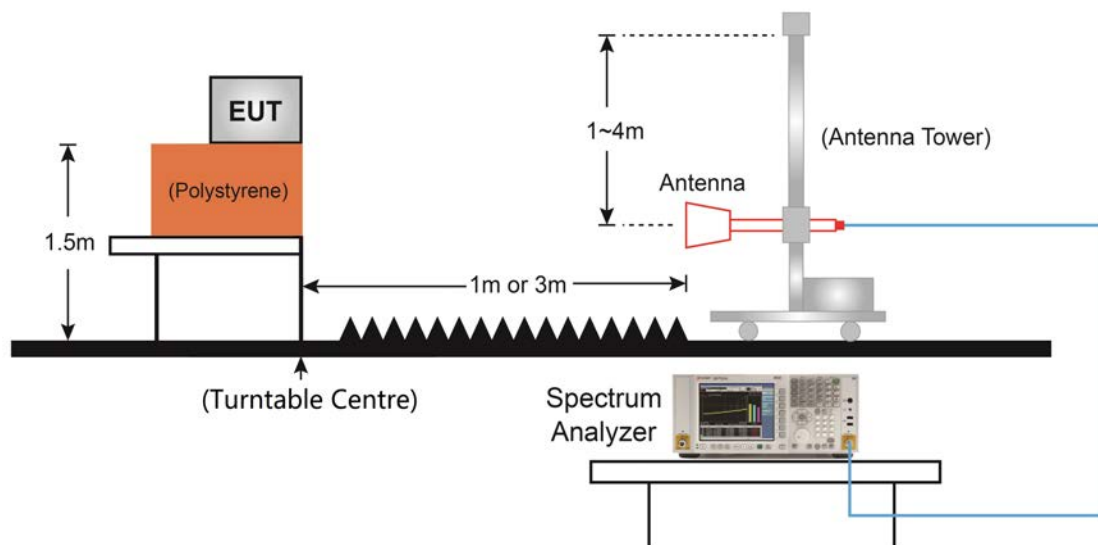
1. RBW = 1MHz
2. VBW $\geq 3 \times$ RBW
3. Sweep time $\geq 10 \times$ (number of points in sweep) $\times$ (transmission symbol period)
4. Detector = Peak
5. Trace mode = max hold
6. The trace was allowed to stabilize

5.6.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.6.5. Test Result

Product	LTE Module	Test Site	SIP-AC2
Test Engineer	Allen Zou	Test Date	2022/02/22~2022/02/28
Test Band	LTE Band 5B_1RB_QPSK		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level(dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
106.6	13.0	14.6	27.6	82.3	-54.7	Peak	Horizontal
146.9	7.7	18.1	25.8	82.3	-56.5	Peak	Horizontal
38.7	20.2	17.7	37.9	82.3	-44.4	Peak	Vertical
108.1	14.0	14.8	28.8	82.3	-53.5	Peak	Vertical
7485.5	50.1	-5.9	44.2	82.3	-38.1	Peak	Horizontal
8165.5	50.8	-5.1	45.7	82.3	-36.6	Peak	Horizontal
8344.0	49.8	-5.1	44.7	82.3	-37.6	Peak	Vertical
11472.0	49.7	-2.8	46.9	82.3	-35.4	Peak	Vertical
Middle Channel							
107.6	13.3	14.8	28.1	82.3	-54.2	Peak	Horizontal
147.4	8.2	18.1	26.3	82.3	-56.0	Peak	Horizontal
34.4	17.8	17.2	35.0	82.3	-47.3	Peak	Vertical
38.7	21.3	17.7	39.0	82.3	-43.3	Peak	Vertical
8429.0	49.7	-4.8	44.9	82.3	-37.4	Peak	Horizontal
12543.0	48.9	-2.0	46.9	82.3	-35.4	Peak	Horizontal
8378.0	48.5	-5.1	43.4	82.3	-38.9	Peak	Vertical
11905.5	47.2	-2.5	44.7	82.3	-37.6	Peak	Vertical
High Channel							
107.1	13.1	14.7	27.8	82.3	-54.5	Peak	Horizontal
146.9	8.1	18.1	26.2	82.3	-56.1	Peak	Horizontal
38.7	21.0	17.7	38.7	82.3	-43.6	Peak	Vertical
63.5	10.5	16.8	27.3	82.3	-55.0	Peak	Vertical
8310.0	50.5	-4.9	45.6	82.3	-36.7	Peak	Horizontal
11225.5	49.4	-3.1	46.3	82.3	-36.0	Peak	Horizontal
8216.5	49.7	-4.8	44.9	82.3	-37.4	Peak	Vertical
11820.5	49.0	-2.6	46.4	82.3	-35.9	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB).

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

Product	LTE Module	Test Site	SIP-AC2
Test Engineer	Allen Zou	Test Date	2022/02/22~2022/02/28
Test Band	LTE Band 7C_1RB_QPSK		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level(dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
68.8	13.3	16.7	30.0	70.3	-40.3	Peak	Horizontal
194.9	12.9	16.2	29.1	70.3	-41.2	Peak	Horizontal
64.9	16.8	17.3	34.1	70.3	-36.2	Peak	Vertical
129.9	15.1	17.4	32.5	70.3	-37.8	Peak	Vertical
8837.0	49.6	-4.5	45.1	70.3	-25.2	Peak	Horizontal
16946.0	45.2	7.2	52.4	70.3	-17.9	Peak	Horizontal
13741.5	47.5	0.4	47.9	70.3	-22.4	Peak	Vertical
16742.0	46.0	6.6	52.6	70.3	-17.7	Peak	Vertical
Middle Channel							
69.3	13.1	16.6	29.7	70.3	-40.6	Peak	Horizontal
134.3	9.6	17.7	27.3	70.3	-43.0	Peak	Horizontal
68.3	17.5	16.8	34.3	70.3	-36.0	Peak	Vertical
129.9	15.4	17.4	32.8	70.3	-37.5	Peak	Vertical
16929.0	45.3	7.2	52.5	70.3	-17.8	Peak	Horizontal
17966.0	45.7	7.8	53.5	70.3	-16.8	Peak	Horizontal
14863.5	45.9	2.6	48.5	70.3	-21.8	Peak	Vertical
16929.0	45.4	7.2	52.6	70.3	-17.7	Peak	Vertical
High Channel							
68.3	13.5	16.8	30.3	70.3	-40.0	Peak	Horizontal
194.9	11.9	16.2	28.1	70.3	-42.2	Peak	Horizontal
64.9	16.9	17.3	34.2	70.3	-36.1	Peak	Vertical
129.9	14.8	17.4	32.2	70.3	-38.1	Peak	Vertical
16742.0	45.8	6.6	52.4	70.3	-17.9	Peak	Horizontal
17337.0	44.7	7.9	52.6	70.3	-17.7	Peak	Horizontal
16529.5	47.3	5.8	53.1	70.3	-17.2	Peak	Vertical
17337.0	45.2	7.9	53.1	70.3	-17.2	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB).

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

Product	LTE Module	Test Site	SIP-AC2
Test Engineer	Allen Zou	Test Date	2022/02/22~2022/02/28
Test Band	LTE Band 38C_1RB_QPSK		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level(dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
194.9	11.2	16.2	27.4	70.3	-42.9	Peak	Horizontal
827.3	1.9	29.4	31.3	70.3	-39.0	Peak	Horizontal
34.9	16.2	17.5	33.7	70.3	-36.6	Peak	Vertical
54.7	15.5	18.3	33.8	70.3	-36.5	Peak	Vertical
15433.0	45.8	3.8	49.6	70.3	-20.7	Peak	Horizontal
17337.0	45.3	7.9	53.2	70.3	-17.1	Peak	Horizontal
16529.5	45.3	5.8	51.1	70.3	-19.2	Peak	Vertical
17337.0	44.3	7.9	52.2	70.3	-18.1	Peak	Vertical
Middle Channel							
194.9	10.2	16.2	26.4	70.3	-43.9	Peak	Horizontal
931.6	2.3	30.2	32.5	70.3	-37.8	Peak	Horizontal
34.4	15.5	17.5	33.0	70.3	-37.3	Peak	Vertical
992.7	1.8	31.2	33.0	70.3	-37.3	Peak	Vertical
15722.0	46.5	3.7	50.2	70.3	-20.1	Peak	Horizontal
17294.5	46.2	6.5	52.7	70.3	-17.6	Peak	Horizontal
15679.5	46.3	3.6	49.9	70.3	-20.4	Peak	Vertical
16929.0	45.6	7.2	52.8	70.3	-17.5	Peak	Vertical
High Channel							
194.9	11.2	16.2	27.4	70.3	-42.9	Peak	Horizontal
873.4	2.1	29.9	32.0	70.3	-38.3	Peak	Horizontal
34.4	16.5	17.5	34.0	70.3	-36.3	Peak	Vertical
129.9	13.9	17.4	31.3	70.3	-39.0	Peak	Vertical
14804.0	46.7	1.8	48.5	70.3	-21.8	Peak	Horizontal
16742.0	44.9	6.6	51.5	70.3	-18.8	Peak	Horizontal
15076.0	47.0	3.0	50.0	70.3	-20.3	Peak	Vertical
17235.0	45.7	7.5	53.2	70.3	-17.1	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB).

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

Product	LTE Module	Test Site	SIP-AC2
Test Engineer	Allen Zou	Test Date	2022/02/22~2022/02/28
Test Band	LTE Band 41C_1RB_QPSK		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level(dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Low Channel							
194.9	11.5	16.2	27.7	70.3	-42.6	Peak	Horizontal
957.3	2.0	30.5	32.5	70.3	-37.8	Peak	Horizontal
33.9	15.8	17.5	33.3	70.3	-37.0	Peak	Vertical
54.7	15.5	18.3	33.8	70.3	-36.5	Peak	Vertical
14974.0	46.7	3.2	49.9	70.3	-20.4	Peak	Horizontal
17345.5	45.3	7.4	52.7	70.3	-17.6	Peak	Horizontal
16750.5	45.8	6.5	52.3	70.3	-18.0	Peak	Vertical
17337.0	44.3	7.9	52.2	70.3	-18.1	Peak	Vertical
Middle Channel							
194.9	11.2	16.2	27.4	70.3	-42.9	Peak	Horizontal
227.4	10.8	15.8	26.6	70.3	-43.7	Peak	Horizontal
34.4	16.7	17.5	34.2	70.3	-36.1	Peak	Vertical
54.7	15.1	18.3	33.4	70.3	-36.9	Peak	Vertical
14753.0	46.2	2.9	49.1	70.3	-21.2	Peak	Horizontal
17337.0	45.4	7.9	53.3	70.3	-17.0	Peak	Horizontal
15509.5	47.3	3.0	50.3	70.3	-20.0	Peak	Vertical
17337.0	45.2	7.9	53.1	70.3	-17.2	Peak	Vertical
High Channel							
194.9	10.8	16.2	27.0	70.3	-43.3	Peak	Horizontal
965.6	1.9	30.7	32.6	70.3	-37.7	Peak	Horizontal
34.9	16.3	17.5	33.8	70.3	-36.5	Peak	Vertical
54.7	14.9	18.3	33.2	70.3	-37.1	Peak	Vertical
15926.0	45.6	5.4	51.0	70.3	-19.3	Peak	Horizontal
16929.0	45.6	7.2	52.8	70.3	-17.5	Peak	Horizontal
14855.0	46.5	2.5	49.0	70.3	-21.3	Peak	Vertical
16954.5	45.6	6.8	52.4	70.3	-17.9	Peak	Vertical

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB).

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m)

6. CONCLUSION

The data collected relate only the item(s) tested and show that unit is compliance with FCC Rules.

_____ The End _____

Appendix A - Test Setup Photograph

Refer to “2202RSU033-UT” file.

Appendix B - EUT Photograph

Refer to “2202RSU033-UE” file.