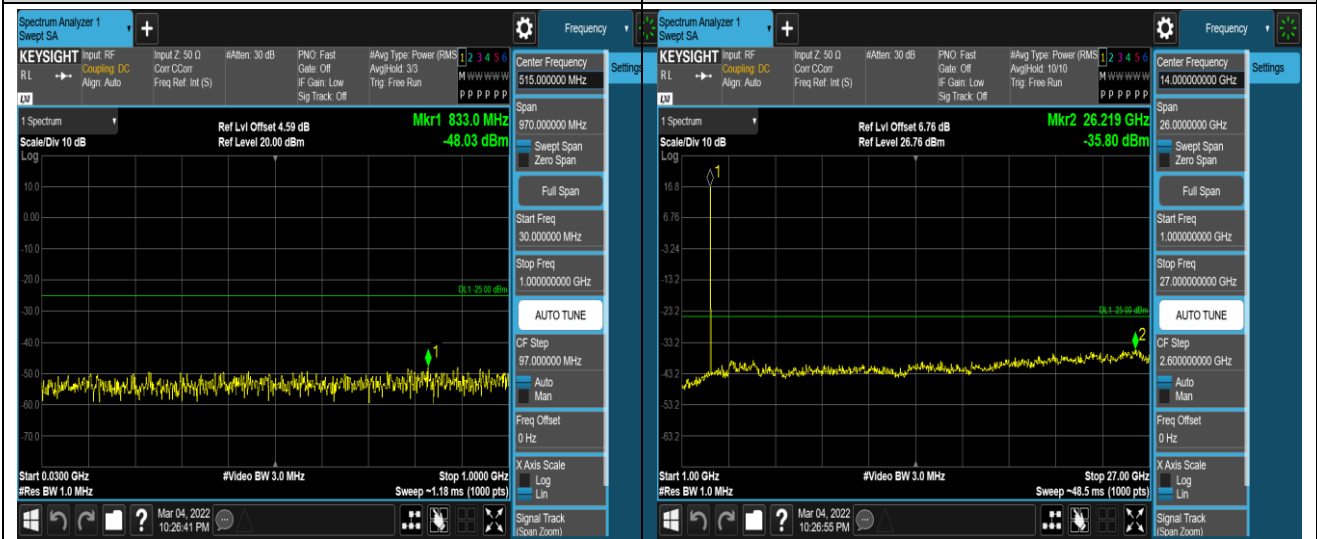


Band41-20MHz-16QAM-40640-1RB#0-Range1:30~1000MHz

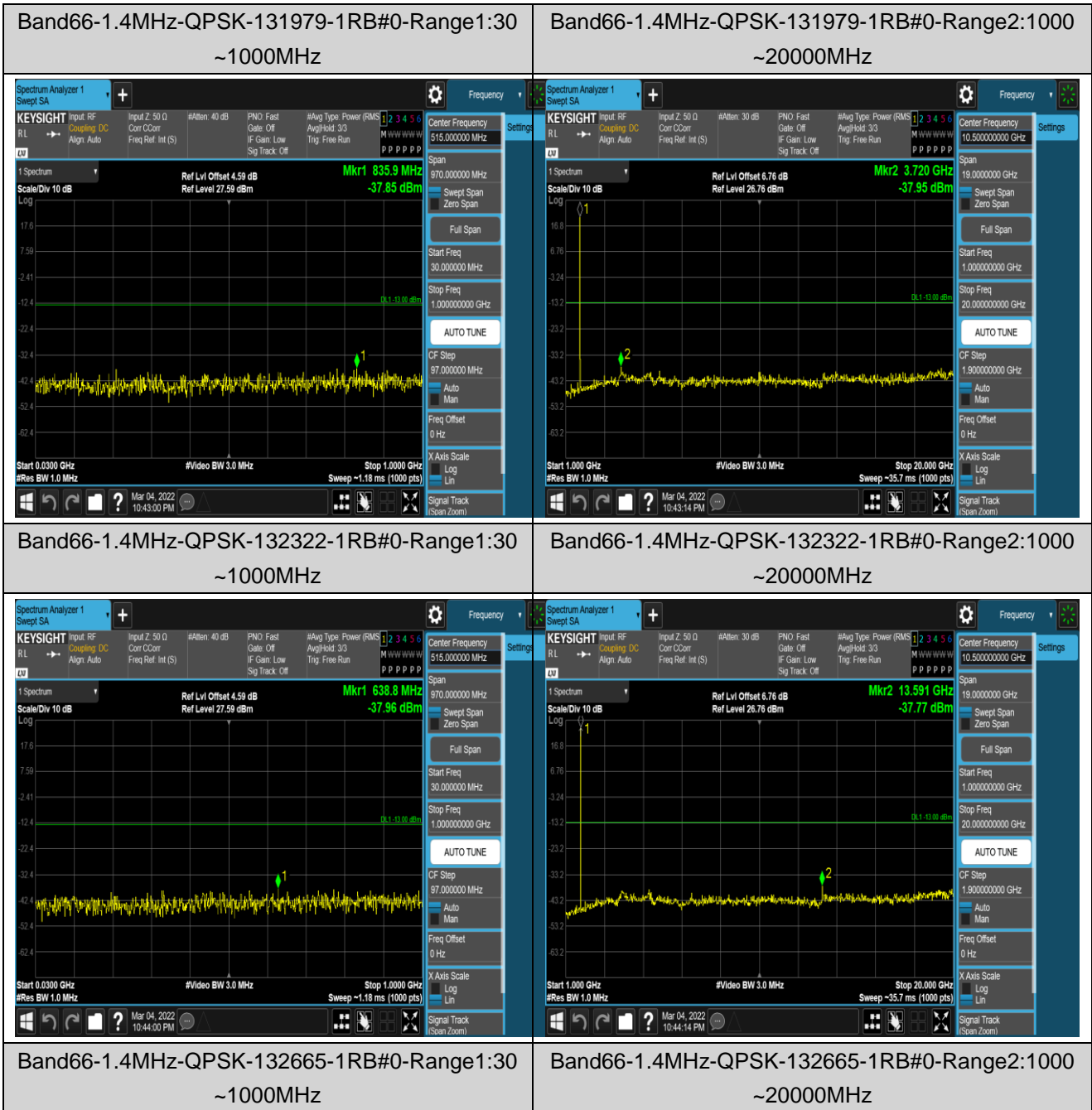
Band41-20MHz-16QAM-40640-1RB#0-Range2:1000~27000MHz

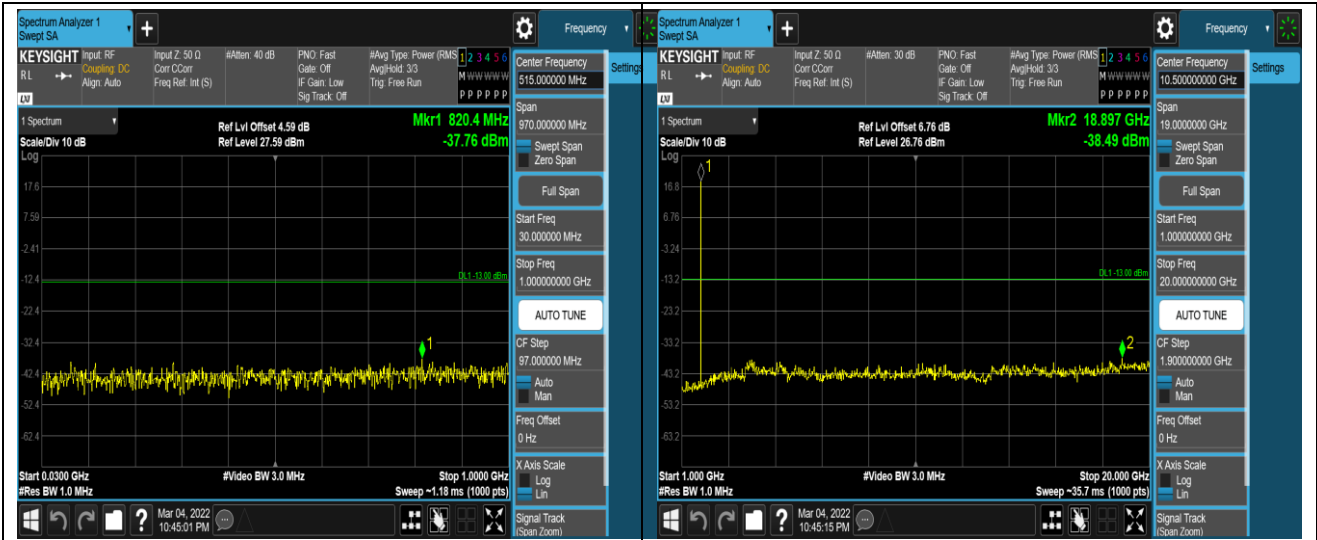


Band41-20MHz-16QAM-41140-1RB#0-Range1:30~1000MHz

Band41-20MHz-16QAM-41140-1RB#0-Range2:1000~27000MHz

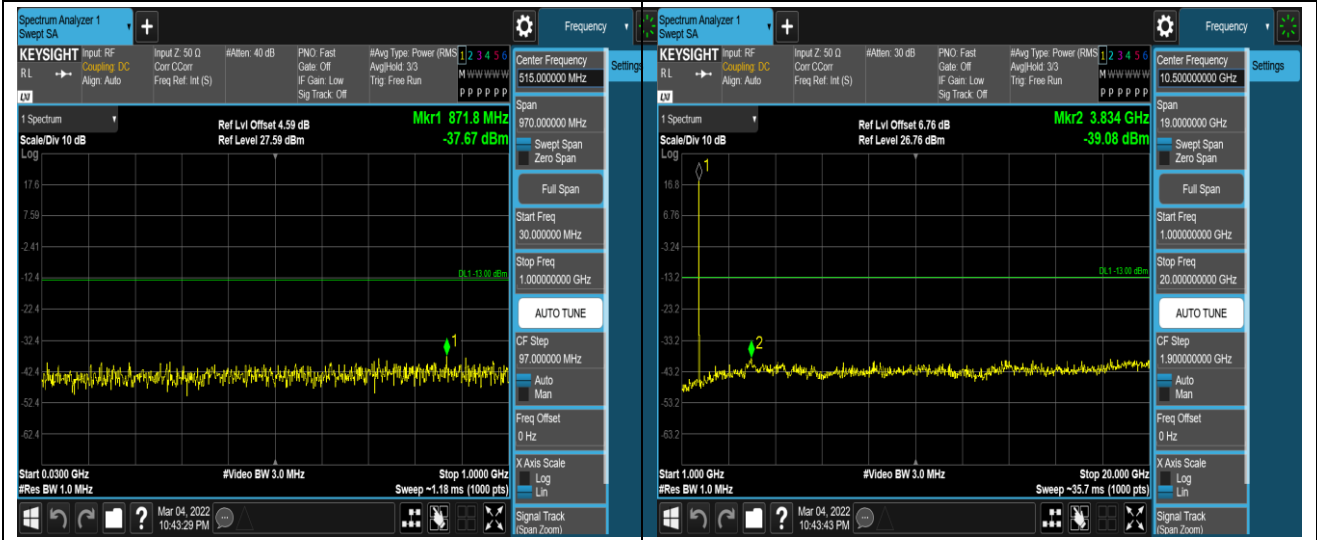






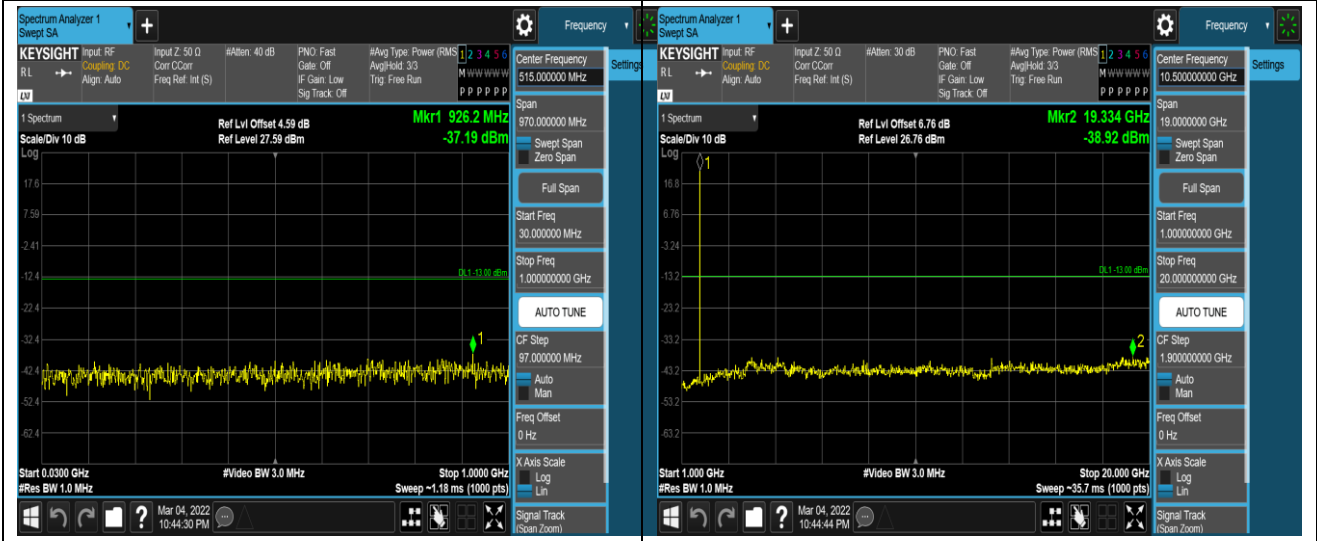
Band66-1.4MHz-16QAM-131979-1RB#0-Range1:3 0~1000MHz

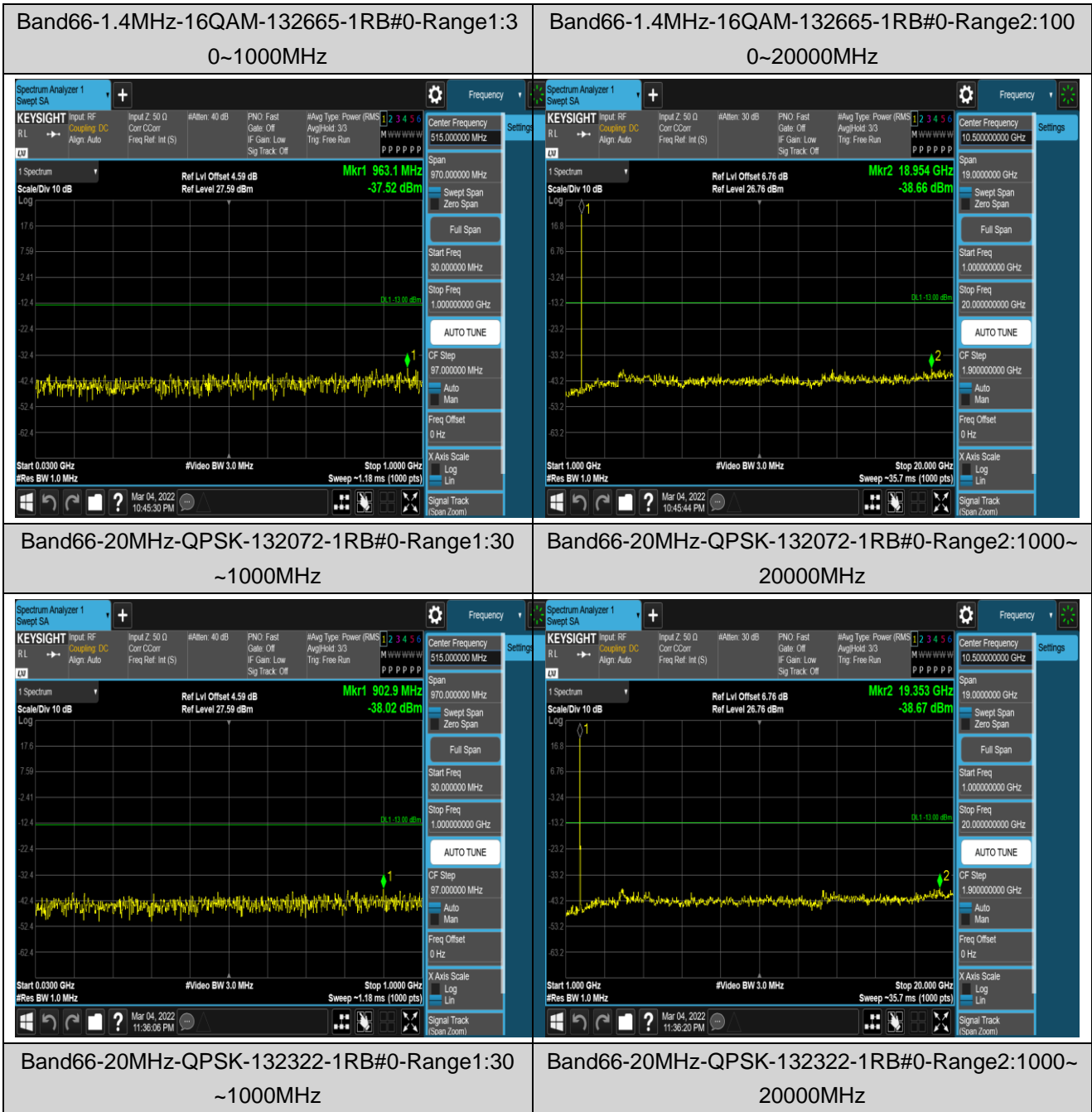
Band66-1.4MHz-16QAM-131979-1RB#0-Range2:100 0~20000MHz

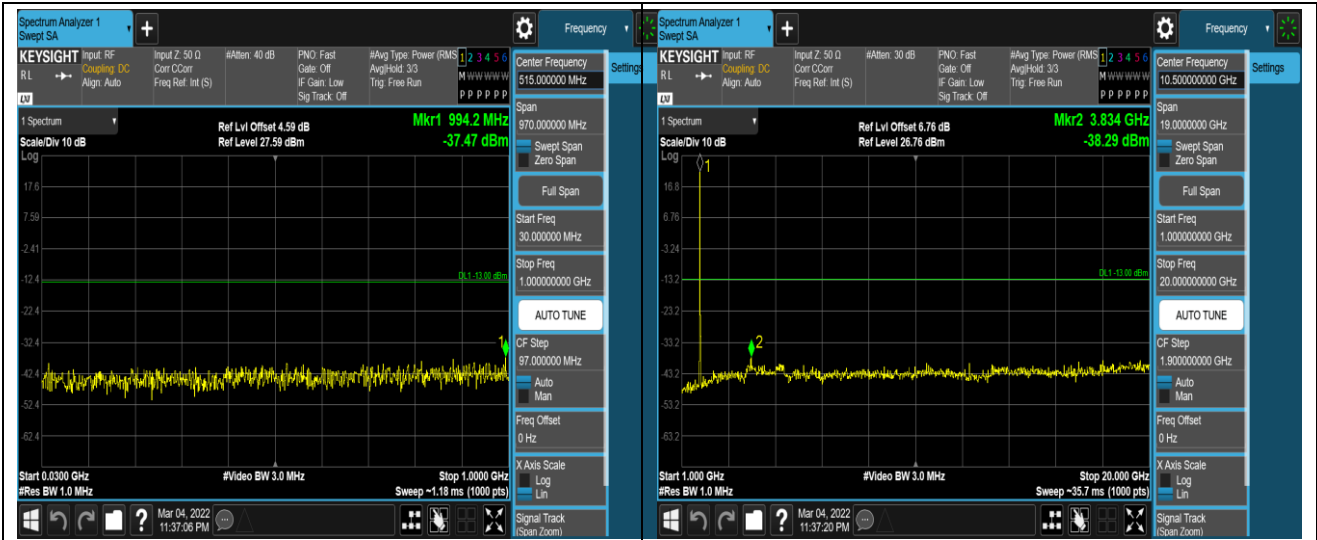


Band66-1.4MHz-16QAM-132322-1RB#0-Range1:3 0~1000MHz

Band66-1.4MHz-16QAM-132322-1RB#0-Range2:100 0~20000MHz







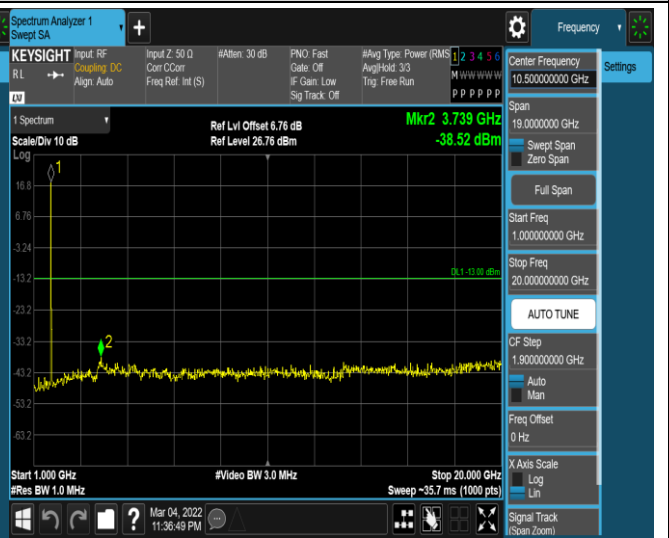
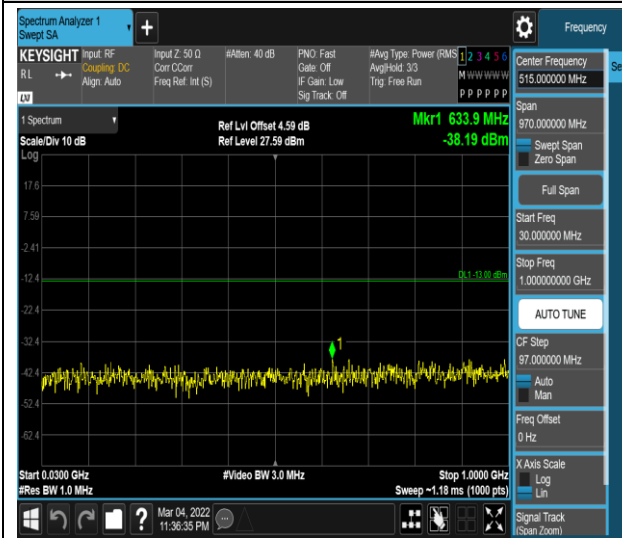
Band66-20MHz-QPSK-132572-1RB#0-Range1:30  
~1000MHz

Band66-20MHz-QPSK-132572-1RB#0-Range2:1000~  
20000MHz



Band66-20MHz-16QAM-132072-1RB#0-Range1:3  
0~1000MHz

Band66-20MHz-16QAM-132072-1RB#0-Range2:1000  
~20000MHz





## Appendix F: Frequency Stability

### Test Result

LTE Band 2 part:

Reference Frequency: LTE Band 2 (10MHz) Middle channel=18900 Frequency=1880.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	4.88	0.002596	Within authorized band for Band 2	Pass
	-20	-9.96	-0.005298		
	-10	-12.49	-0.006644		
	0	-11.36	-0.006043		
	10	-6.25	-0.003324		
	20	-21.26	-0.011309		
	30	-14.92	-0.007936		
	40	-21.90	-0.011649		
	50	-18.93	-0.010069		
16QAM					
3.85	-30	10.56	0.005617	Within authorized band for Band 2	Pass
	-20	-12.02	-0.006394		
	-10	-19.74	-0.010500		
	0	-14.99	-0.007973		
	10	-10.74	-0.005713		
	20	-13.30	-0.007074		
	30	-11.03	-0.005867		
	40	-9.57	-0.005090		
	50	-15.64	-0.008319		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-16.06	-0.008543	Within authorized band for Band 2	Pass
	3.85	-26.06	-0.013862		
	4.43	-13.93	-0.007410		
16QAM					
25	3.50	-18.75	-0.009973	Within authorized band for Band 2	Pass
	3.85	-13.46	-0.007160		
	4.43	-15.45	-0.008218		

Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.



## LTE Band 5 part:

Reference Frequency: LTE Band 5(10MHz) Middle channel=20525 Frequency=836.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-6.41	-0.007663	±2.5	Pass
	-20	-11.63	-0.013903		
	-10	-6.14	-0.007340		
	0	-10.84	-0.012959		
	10	-9.86	-0.011787		
	20	-5.41	-0.006467		
	30	-7.58	-0.009062		
	40	-6.45	-0.007711		
	50	-9.31	-0.011130		
16QAM					
3.85	-30	-8.05	-0.009623	±2.5	Pass
	-20	-8.43	-0.010078		
	-10	-10.96	-0.013102		
	0	-4.31	-0.005152		
	10	4.03	0.004818		
	20	-12.46	-0.014895		
	30	-12.46	-0.014895		
	40	-7.17	-0.008571		
	50	-8.50	-0.010161		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-9.00	-0.010759	±2.5	Pass
	3.85	-16.99	-0.020311		
	4.43	-10.81	-0.012923		
16QAM					
25	3.50	-8.40	-0.010042	±2.5	Pass
	3.85	4.88	0.005834		
	4.43	-9.47	-0.011321		

Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.

LTE Band 7 part:

Reference Frequency: LTE Band 7(10MHz) Middle channel=21100 Frequency=2535.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-16.04	-0.006327	Within authorized band for Band 7	Pass
	-20	17.72	0.006990		
	-10	-17.61	-0.006947		
	0	18.81	0.007420		
	10	-22.83	-0.009006		
	20	-17.07	-0.006734		
	30	10.31	0.004067		
	40	-16.29	-0.006426		
	50	-7.61	-0.003002		
16QAM					
3.85	-30	-15.32	-0.006043	Within authorized band for Band 7	Pass
	-20	-17.77	-0.007010		
	-10	-17.34	-0.006840		
	0	-17.07	-0.006734		
	10	-15.65	-0.006174		
	20	-16.55	-0.006529		
	30	-17.54	-0.006919		
	40	-14.23	-0.005613		
	50	2.55	0.001006		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-28.82	-0.011369	Within authorized band for Band 7	Pass
	3.85	-28.15	-0.011105		
	4.43	13.39	0.005282		
16QAM					
25	3.50	-10.16	-0.004008	Within authorized band for Band 7	Pass
	3.85	-6.52	-0.002572		
	4.43	-19.60	-0.007732		

Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.

**LTE Band 17 part:**

Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 Frequency=710.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
<b>QPSK</b>					
3.85	-30	-9.43	-0.013282	Within authorized band for Band 17	Pass
	-20	-8.81	-0.012408		
	-10	-10.97	-0.015451		
	0	-10.27	-0.014465		
	10	-9.91	-0.013958		
	20	-3.85	-0.005423		
	30	-5.79	-0.008155		
	40	-6.61	-0.009310		
	50	-7.14	-0.010056		
<b>16QAM</b>					
3.85	-30	-4.91	-0.006915	Within authorized band for Band 17	Pass
	-20	-7.41	-0.010437		
	-10	-10.56	-0.014873		
	0	-11.47	-0.016155		
	10	-8.58	-0.012085		
	20	-6.52	-0.009183		
	30	2.37	0.003338		
	40	-12.10	-0.017042		
	50	-12.56	-0.017690		
<b>Voltage</b>					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
<b>QPSK</b>					
25	3.50	-3.19	-0.004493	Within authorized band for Band 17	Pass
	3.85	-12.33	-0.017366		
	4.43	-4.99	-0.007028		
<b>16QAM</b>					
25	3.50	-15.38	-0.021662	Within authorized band for Band 17	Pass
	3.85	-9.40	-0.013239		
	4.43	-7.40	-0.010423		

*Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.*

**LTE Band 41 part:**

Reference Frequency: LTE Band 41 (10MHz) Middle channel=40640 Frequency=2595.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
<b>QPSK</b>					
3.85	-30	-17.12	-0.006597	Within authorized band for Band 41	Pass
	-20	-33.32	-0.012840		
	-10	10.51	0.004050		
	0	-24.40	-0.009403		
	10	-19.41	-0.007480		
	20	-1.67	-0.000644		
	30	4.72	0.001819		
	40	-27.44	-0.010574		
	50	-30.48	-0.011746		
<b>16QAM</b>					
3.85	-30	2.83	0.001091	Within authorized band for Band 41	Pass
	-20	6.79	0.002617		
	-10	-3.92	-0.001511		
	0	-26.12	-0.010066		
	10	-14.09	-0.005430		
	20	-18.25	-0.007033		
	30	-28.02	-0.010798		
	40	-27.67	-0.010663		
	50	12.92	0.004979		
<b>Voltage</b>					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
<b>QPSK</b>					
25	3.50	-4.32	-0.001665	Within authorized band for Band 41	Pass
	3.85	-28.61	-0.011025		
	4.43	-5.55	-0.002139		
<b>16QAM</b>					
25	3.50	-21.36	-0.008231	Within authorized band for Band41	Pass
	3.85	-34.62	-0.013341		
	4.43	-28.32	-0.010913		

*Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.*

**LTE Band 66 part:**

Reference Frequency: LTE Band 66 (10MHz) Middle channel=132322 Frequency=1745.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-9.24	-0.005295	Within authorized band for Band 66	Pass
	-20	-8.33	-0.004774		
	-10	-11.03	-0.006321		
	0	-1.86	-0.001066		
	10	-8.11	-0.004648		
	20	-9.47	-0.005427		
	30	-9.54	-0.005467		
	40	-6.12	-0.003507		
	50	-9.13	-0.005232		
16QAM					
3.85	-30	-10.81	-0.006195	Within authorized band for Band 66	Pass
	-20	-5.76	-0.003301		
	-10	-7.12	-0.004080		
	0	-4.15	-0.002378		
	10	-8.23	-0.004716		
	20	-7.18	-0.004115		
	30	-8.33	-0.004774		
	40	-10.11	-0.005794		
	50	-9.71	-0.005564		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-7.20	-0.004126	Within authorized band for Band 66	Pass
	3.85	-13.06	-0.007484		
	4.43	-4.98	-0.002854		
16QAM					
25	3.50	-6.91	-0.003960	Within authorized band for Band 66	Pass
	3.85	-9.14	-0.005238		
	4.43	4.62	0.002648		

Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.

## Appendix G: Modulation Characteristics

### Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result	Verdict
Band2	20MHz	QPSK	18900	100RB#0	PASS	PASS
Band2	20MHz	16QAM	18900	100RB#0	PASS	PASS
Band5	10MHz	QPSK	20525	50RB#0	PASS	PASS
Band5	10MHz	16QAM	20525	50RB#0	PASS	PASS
Band7	20MHz	QPSK	21100	100RB#0	PASS	PASS
Band7	20MHz	16QAM	21100	100RB#0	PASS	PASS
Band17	10MHz	QPSK	23790	50RB#0	PASS	PASS
Band17	10MHz	16QAM	23790	50RB#0	PASS	PASS
Band41	20MHz	QPSK	40640	100RB#0	PASS	PASS
Band41	20MHz	16QAM	40640	100RB#0	PASS	PASS
Band66	20MHz	QPSK	132322	100RB#0	PASS	PASS
Band66	20MHz	16QAM	132322	100RB#0	PASS	PASS

*Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.*

Test Graphs

