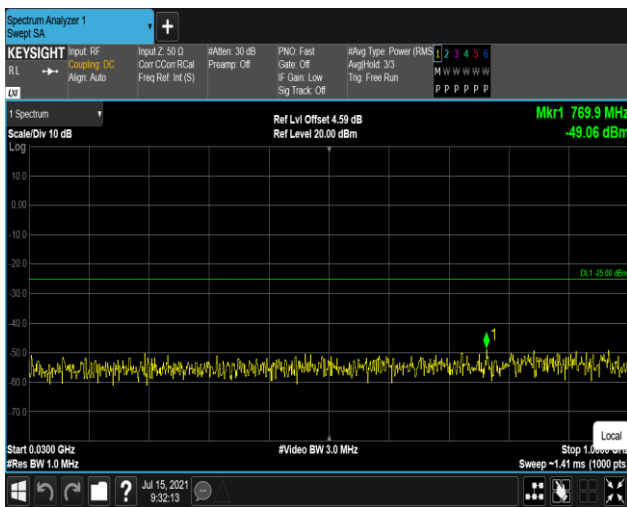
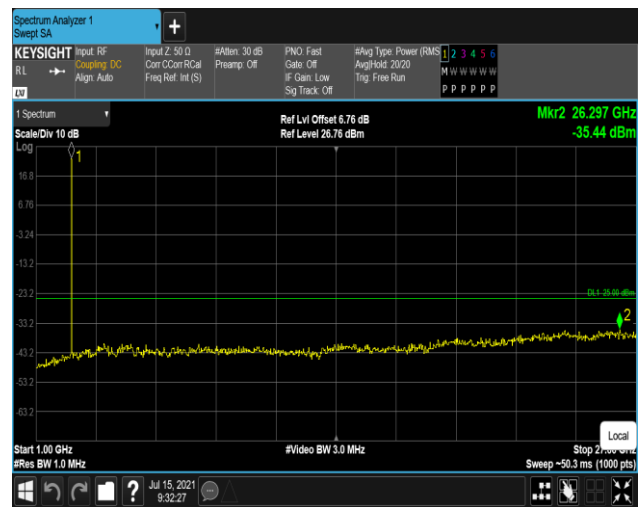


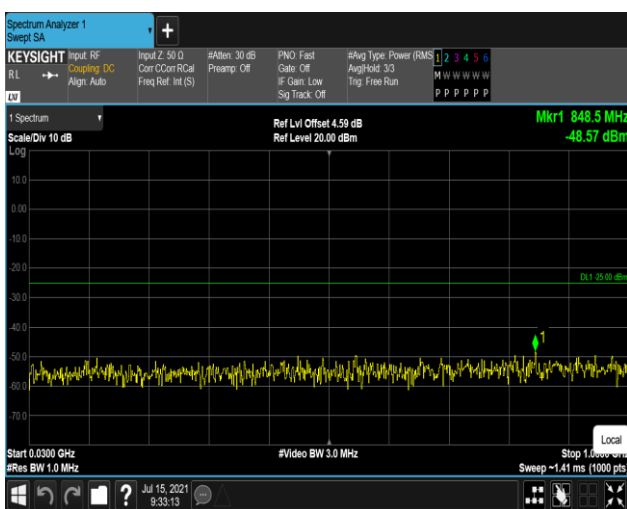
Band41-5MHz-QPSK-40065:30~1000MHz



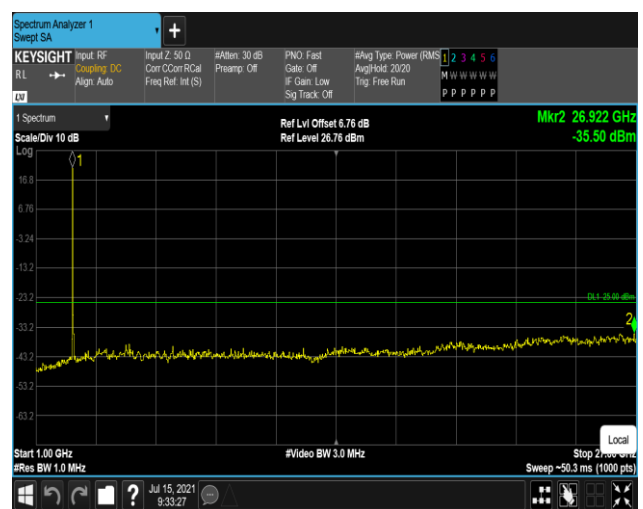
Band41-5MHz-QPSK-40065:1000~27000MHz



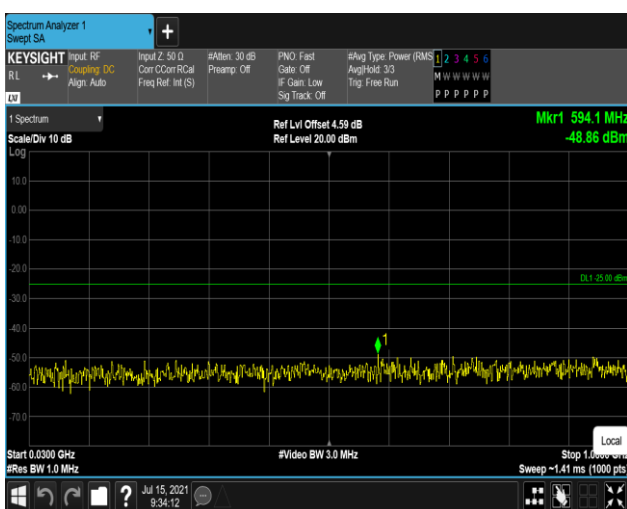
Band41-5MHz-QPSK-40640:30~1000MHz



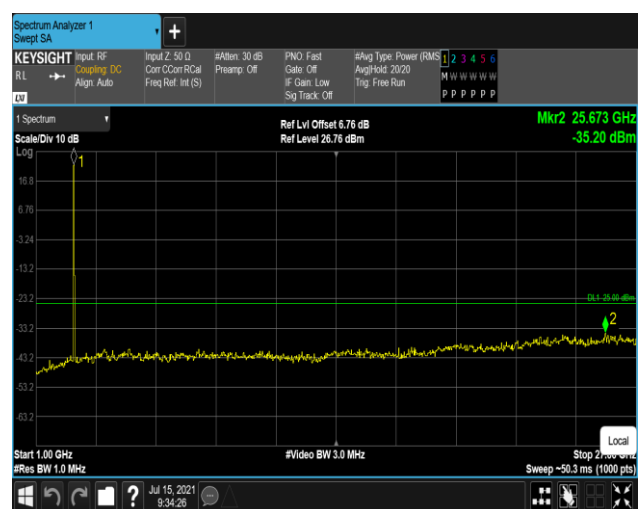
Band41-5MHz-QPSK-40640:1000~27000MHz



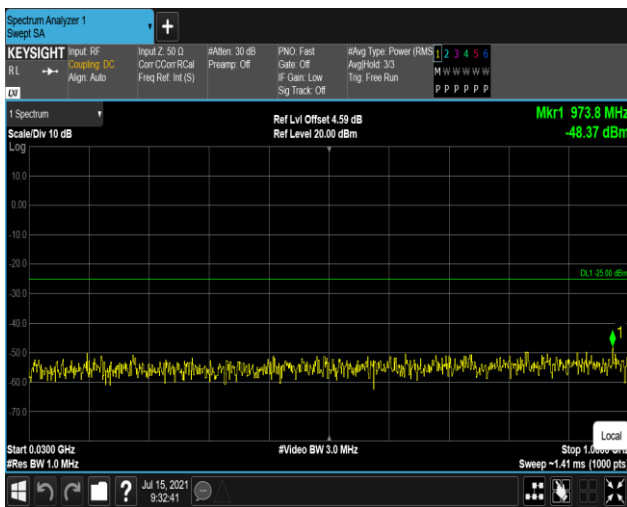
Band41-5MHz-QPSK-41215:30~1000MHz



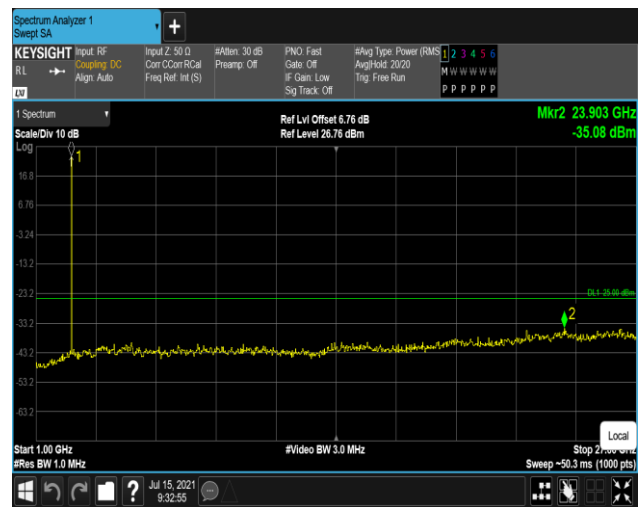
Band41-5MHz-QPSK-41215:1000~27000MHz



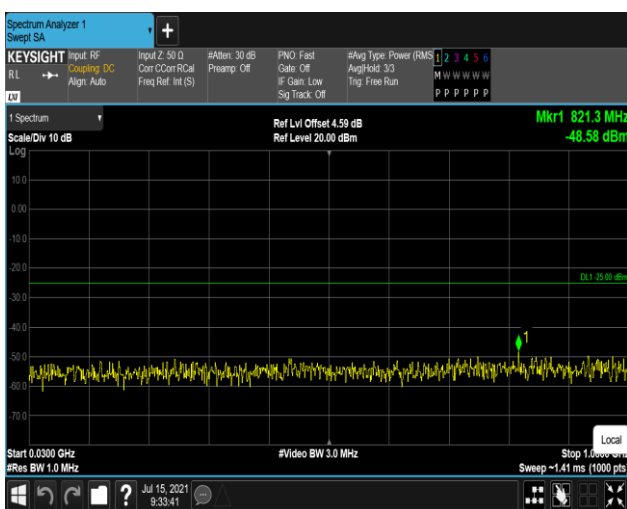
Band41-5MHz-16QAM-40065:30~1000MHz



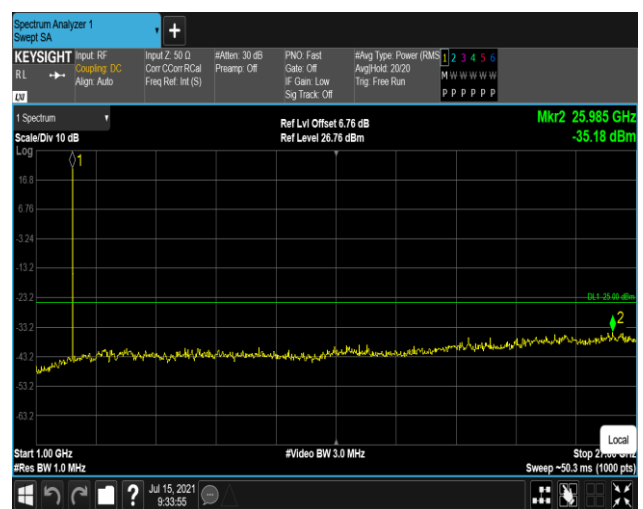
Band41-5MHz-16QAM-40065:1000~27000MHz



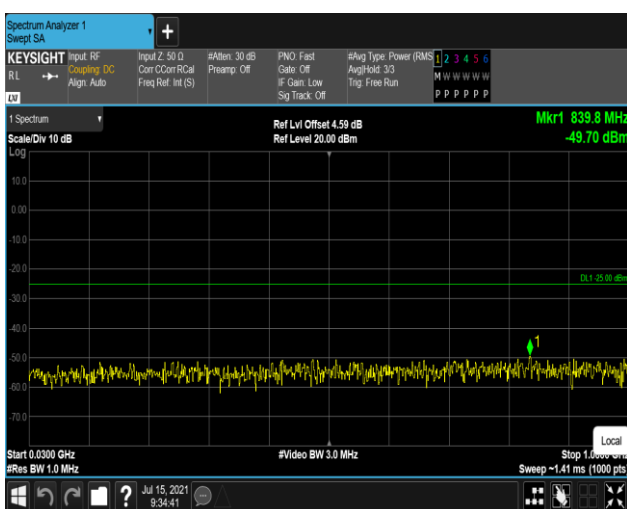
Band41-5MHz-16QAM-40640:30~1000MHz



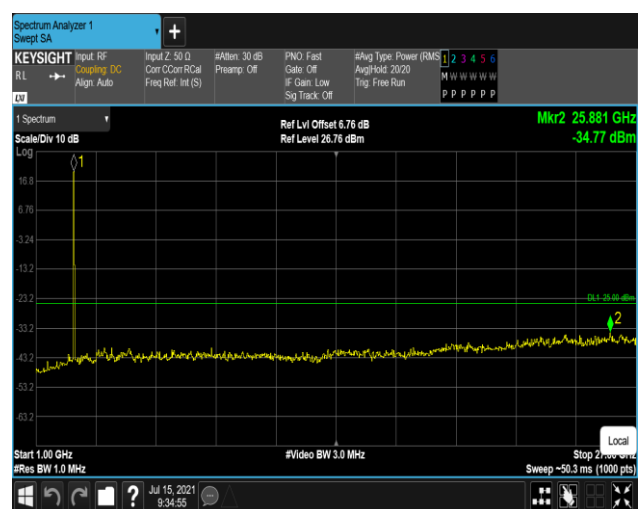
Band41-5MHz-16QAM-40640:1000~27000MHz



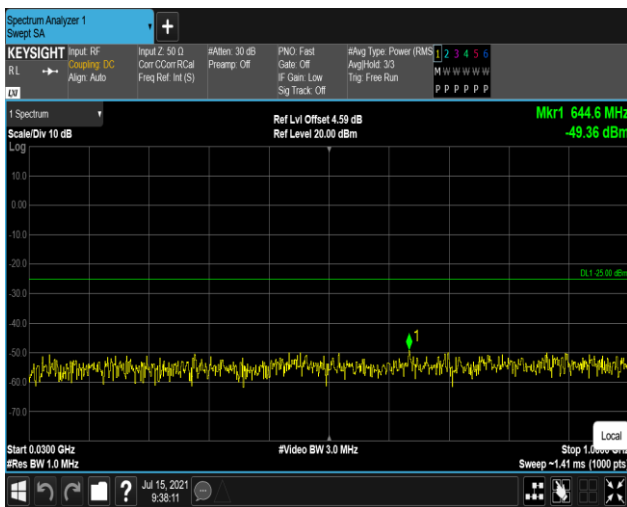
Band41-5MHz-16QAM-41215:30~1000MHz



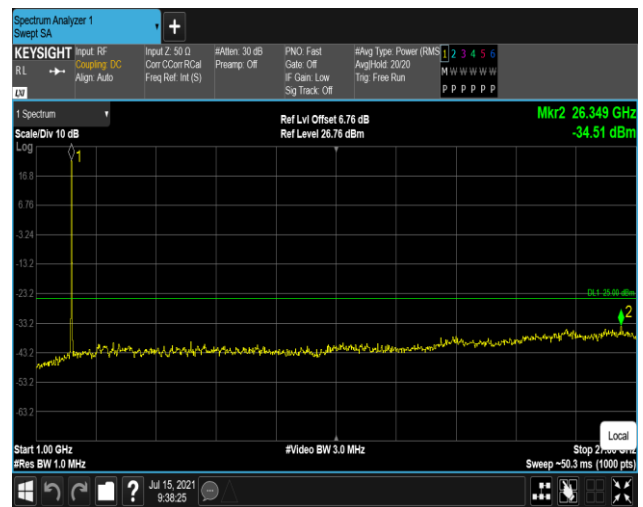
Band41-5MHz-16QAM-41215:1000~27000MHz



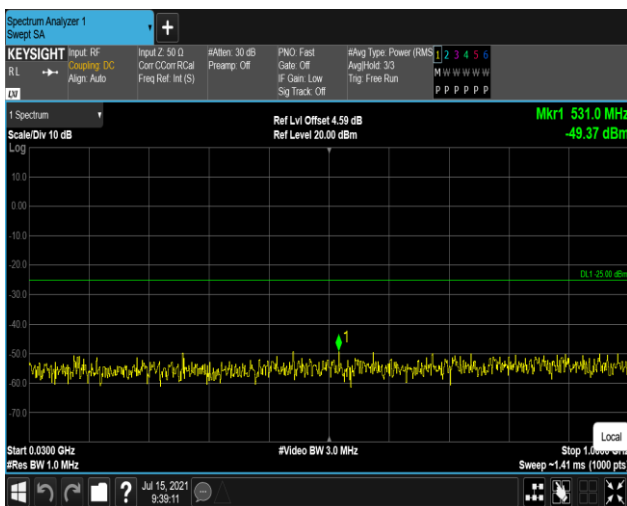
Band41-20MHz-QPSK-40140:30~1000MHz



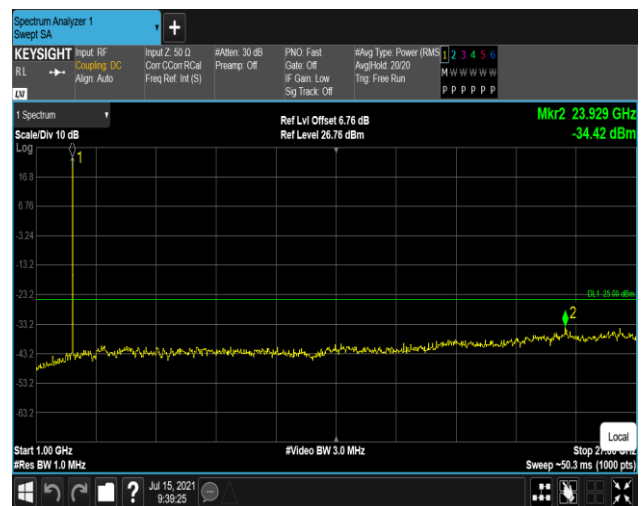
Band41-20MHz-QPSK-40140:1000~27000MHz



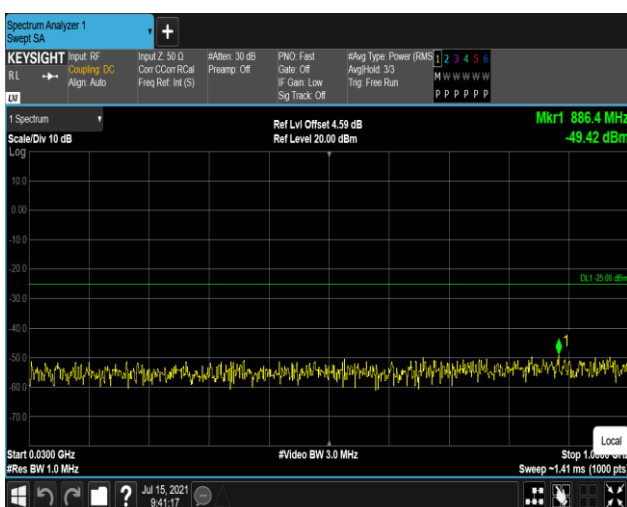
Band41-20MHz-QPSK-40640:30~1000MHz



Band41-20MHz-QPSK-40640:1000~27000MHz



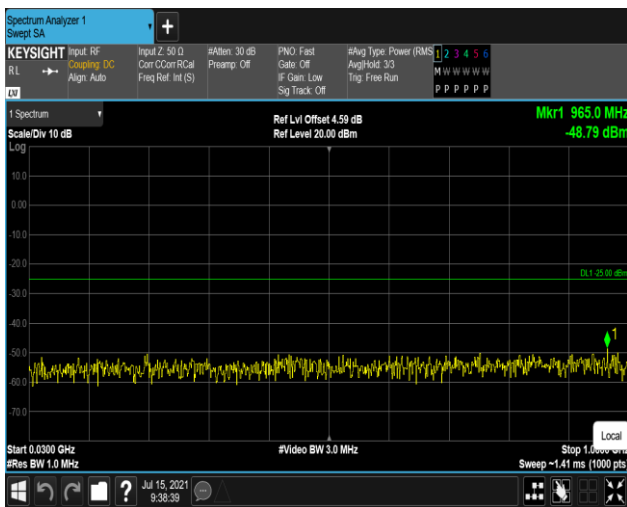
Band41-20MHz-QPSK-41140:30~1000MHz



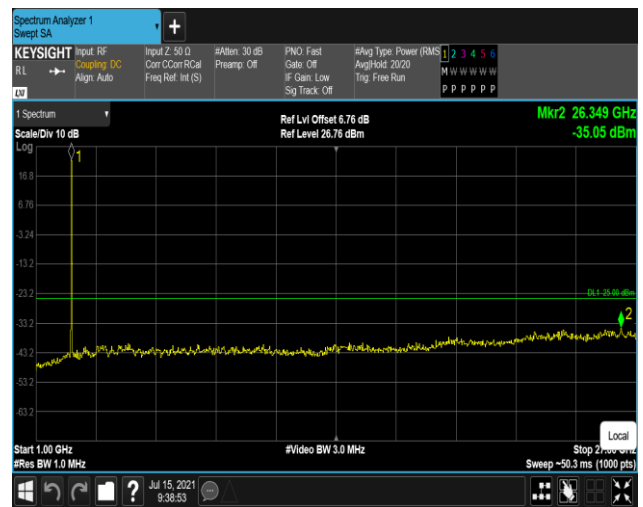
Band41-20MHz-QPSK-41140:1000~27000MHz



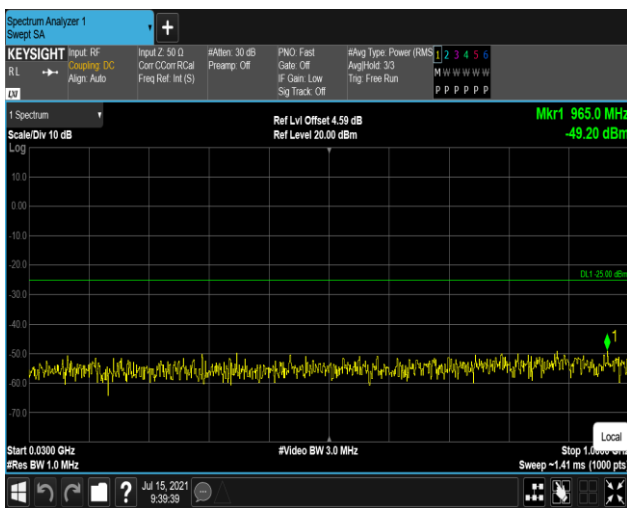
Band41-20MHz-16QAM-40140:30~1000MHz



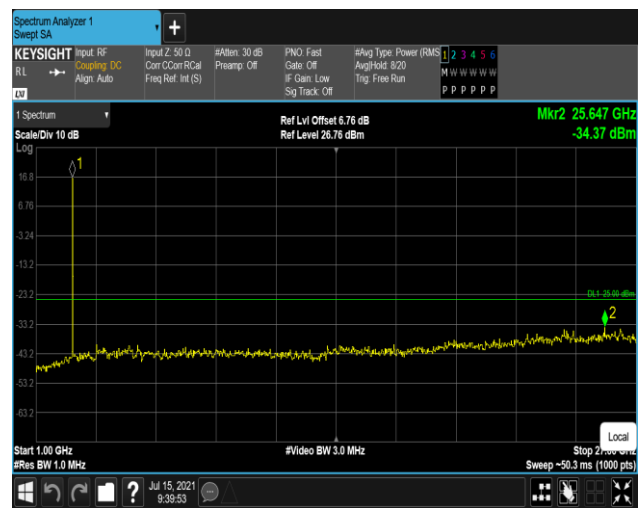
Band41-20MHz-16QAM-40140:1000~27000MHz



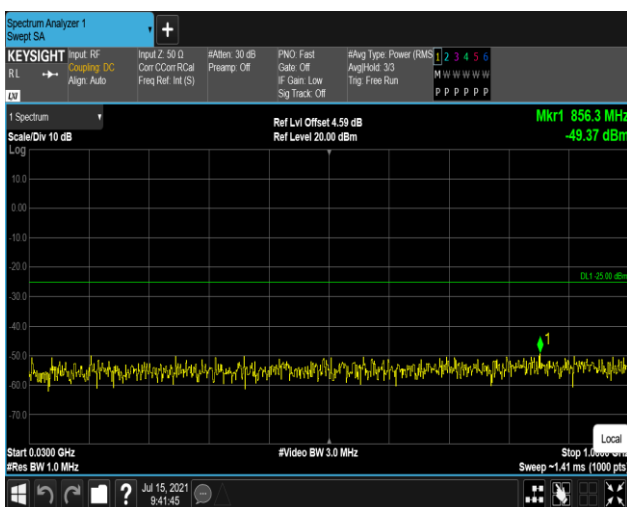
Band41-20MHz-16QAM-40640:30~1000MHz



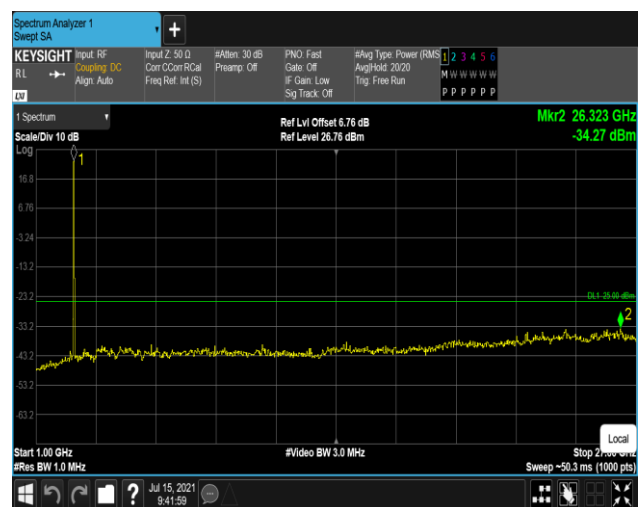
Band41-20MHz-16QAM-40640:1000~27000MHz



Band41-20MHz-16QAM-41140:30~1000MHz



Band41-20MHz-16QAM-41140:1000~27000MHz



## 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					
3.87	-30	-10.96	-0.005830	Within authorized band for Band 2	Pass
	-20	-10.26	-0.005457		
	-10	-11.56	-0.006149		
	0	9.16	0.004872		
	10	-9.34	-0.004968		
	20	-8.96	-0.004766		
	30	-10.31	-0.005484		
	40	-11.49	-0.006112		
	50	9.88	0.005255		
16QAM					
3.87	-30	-7.81	-0.004154	Within authorized band for Band 2	Pass
	-20	-10.26	-0.005457		
	-10	-9.93	-0.005282		
	0	-9.71	-0.005165		
	10	10.91	0.005803		
	20	-16.37	-0.008707		
	30	6.57	0.003495		
	40	-10.57	-0.005622		
	50	8.74	0.004649		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	5.95	0.003165	Within authorized band for Band 2	Pass
	3.87	-12.77	-0.006793		
	4.45	-9.74	-0.005181		
16QAM					
25	3.50	-6.82	-0.003628	Within authorized band for Band 2	Pass
	3.87	-10.56	-0.005617		
	4.45	5.84	0.003106		

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

LTE Band 4 part:

Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 Frequency=1732.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.87	-30	-7.14	-0.004121	Within authorized band for Band 4	Pass
	-20	-9.07	-0.005235		
	-10	-9.30	-0.005368		
	0	5.22	0.003013		
	10	5.38	0.003105		
	20	-9.04	-0.005218		
	30	-7.24	-0.004179		
	40	-7.25	-0.004185		
	50	7.44	0.004294		
16QAM					
3.87	-30	8.28	0.004779	Within authorized band for Band 4	Pass
	-20	4.52	0.002609		
	-10	-8.77	-0.005062		
	0	4.82	0.002782		
	10	8.13	0.004693		
	20	6.59	0.003804		
	30	-7.35	-0.004242		
	40	8.90	0.005137		
	50	10.77	0.006216		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-8.64	-0.004987	Within authorized band for Band 4	Pass
	3.87	-11.62	-0.006707		
	4.45	-10.64	-0.006141		
16QAM					
25	3.50	-8.18	-0.004722	Within authorized band for Band 4	Pass
	3.87	7.34	0.004237		
	4.45	6.42	0.003706		

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					
3.87	-30	-5.36	-0.006408	±2.5	Pass
	-20	-4.85	-0.005798		
	-10	-4.19	-0.005009		
	0	-10.64	-0.012720		
	10	-4.42	-0.005284		
	20	-9.44	-0.011285		
	30	-9.06	-0.010831		
	40	-6.75	-0.008069		
	50	-6.71	-0.008022		
16QAM					
3.87	-30	-3.88	-0.004638	±2.5	Pass
	-20	-10.60	-0.012672		
	-10	-7.67	-0.009169		
	0	-8.08	-0.009659		
	10	-5.34	-0.006384		
	20	-6.61	-0.007902		
	30	-6.71	-0.008022		
	40	-8.84	-0.010568		
	50	-9.14	-0.010926		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-7.67	-0.009169	±2.5	Pass
	3.87	-8.93	-0.010675		
	4.45	-7.57	-0.009050		
16QAM					
25	3.50	-6.78	-0.008105	±2.5	Pass
	3.87	-10.00	-0.011955		
	4.45	-5.51	-0.006587		
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					
3.87	-30	-10.99	-0.004335	Within authorized band for Band 7	Pass
	-20	-10.97	-0.004327		
	-10	-3.69	-0.001456		
	0	-13.05	-0.005148		
	10	-17.45	-0.006884		
	20	-11.97	-0.004722		
	30	-11.17	-0.004406		
	40	-9.88	-0.003897		
	50	-13.48	-0.005318		
16QAM					
3.87	-30	7.45	0.002939	Within authorized band for Band 7	Pass
	-20	-18.07	-0.007128		
	-10	5.35	0.002110		
	0	-6.41	-0.002529		
	10	-13.38	-0.005278		
	20	-15.21	-0.006000		
	30	-11.23	-0.004430		
	40	-16.74	-0.006604		
	50	-14.33	-0.005653		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-5.98	-0.002359	Within authorized band for Band 7	Pass
	3.87	-11.12	-0.004387		
	4.45	-15.56	-0.006138		
16QAM					
25	3.50	7.68	0.003030	Within authorized band for Band 7	Pass
	3.87	-9.33	-0.003680		
	4.45	-15.79	-0.006229		

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



LTE Band 38 part:

Reference Frequency: LTE Band 38(10MHz) Middle channel=38000 Frequency=2595.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.87	-30	-13.82	-0.005326	Within authorized band for Band 38	Pass
	-20	-14.65	-0.005645		
	-10	6.62	0.002551		
	0	-6.01	-0.002316		
	10	-7.84	-0.003021		
	20	-13.65	-0.005260		
	30	-8.11	-0.003125		
	40	-5.92	-0.002281		
	50	-15.95	-0.006146		
16QAM					
3.87	-30	-14.23	-0.005484	Within authorized band for Band 38	Pass
	-20	-10.23	-0.003942		
	-10	-10.94	-0.004216		
	0	9.83	0.003788		
	10	-13.13	-0.005060		
	20	-15.42	-0.005942		
	30	-11.84	-0.004563		
	40	4.16	0.001603		
	50	-14.23	-0.005484		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-11.97	-0.004613	Within authorized band for Band 38	Pass
	3.87	11.69	0.004505		
	4.45	-15.44	-0.005950		
16QAM					
25	3.50	-15.26	-0.005881	Within authorized band for Band 38	Pass
	3.87	-15.35	-0.005915		
	4.45	-6.41	-0.002470		
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		
QPSK					
3.87	-30	-15.02	-0.005788	Within authorized band for Band 41	Pass
	-20	-16.32	-0.006289		
	-10	-13.33	-0.005137		
	0	-9.66	-0.003723		
	10	4.11	0.001584		
	20	-7.35	-0.002832		
	30	-11.30	-0.004355		
	40	-8.81	-0.003395		
	50	-12.40	-0.004778		
16QAM					
3.87	-30	-10.91	-0.004204	Within authorized band for Band 41	Pass
	-20	-18.10	-0.006975		
	-10	-8.75	-0.003372		
	0	-8.65	-0.003333		
	10	-11.83	-0.004559		
	20	-11.29	-0.004351		
	30	-8.35	-0.003218		
	40	-11.57	-0.004459		
	50	-15.12	-0.005827		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-16.04	-0.006181	Within authorized band for Band 41	Pass
	3.87	9.77	0.003765		
	4.45	-6.45	-0.002486		
16QAM					
25	3.50	-14.56	-0.005611	Within authorized band for Band41	Pass
	3.87	-11.60	-0.004470		
	4.45	-13.85	-0.005337		

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
Band4	20MHz	QPSK	20175	100RB#0	PASS	PASS
Band4	20MHz	16QAM	20175	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
Band38	20MHz	QPSK	37850	100RB#0	PASS	PASS
Band38	20MHz	QPSK	38000	100RB#0	PASS	PASS
Band38	20MHz	QPSK	38150	100RB#0	PASS	PASS
Band38	20MHz	16QAM	37850	100RB#0	PASS	PASS
Band38	20MHz	16QAM	38000	100RB#0	PASS	PASS
Band38	20MHz	16QAM	38150	100RB#0	PASS	PASS
Band41	20MHz	QPSK	40640	100RB#0	PASS	PASS
Band41	20MHz	16QAM	40640	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



