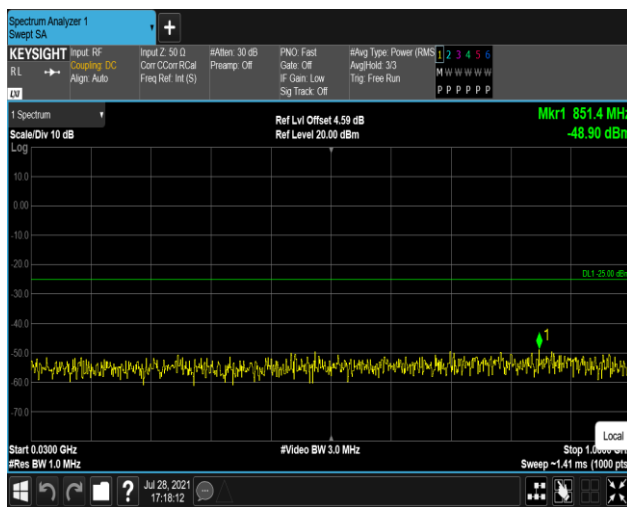
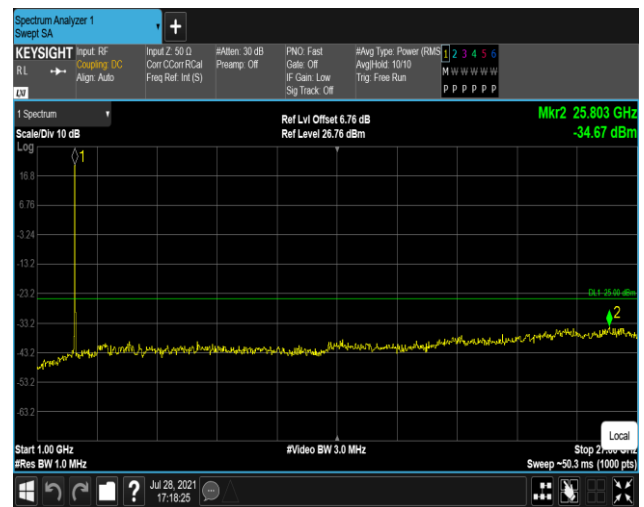


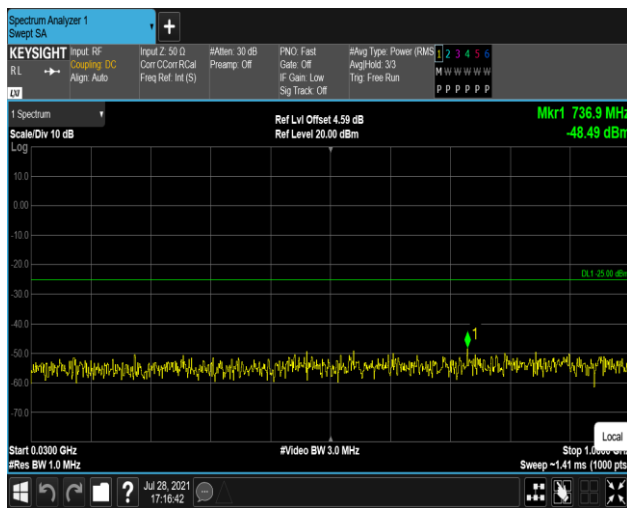
Band41-20MHz-QPSK-41140:30~1000MHz



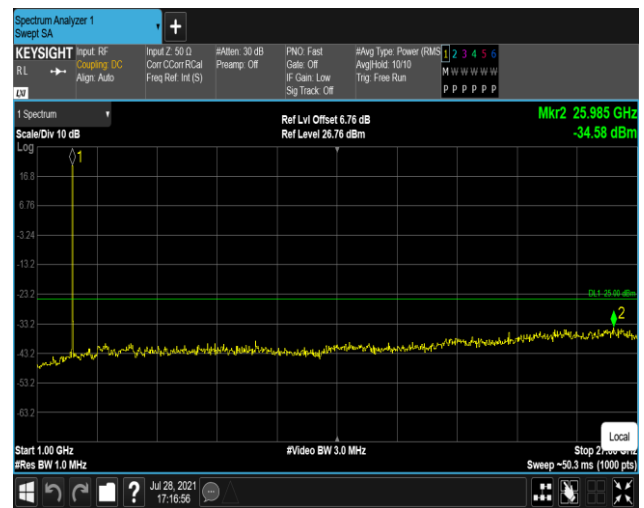
Band41-20MHz-QPSK-41140:1000~27000MHz



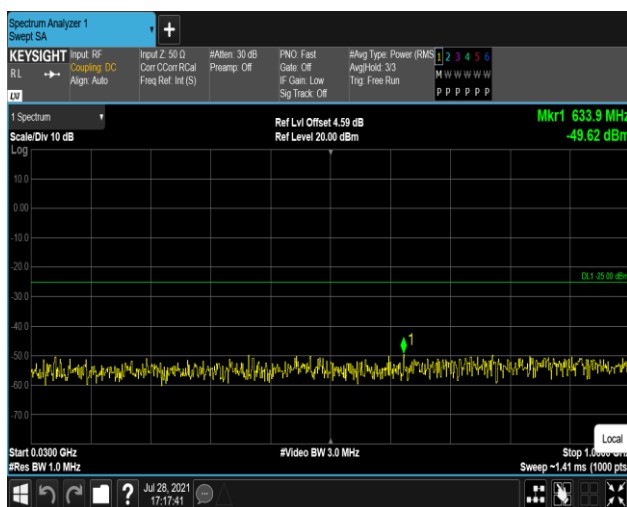
Band41-20MHz-16QAM-40140:30~1000MHz



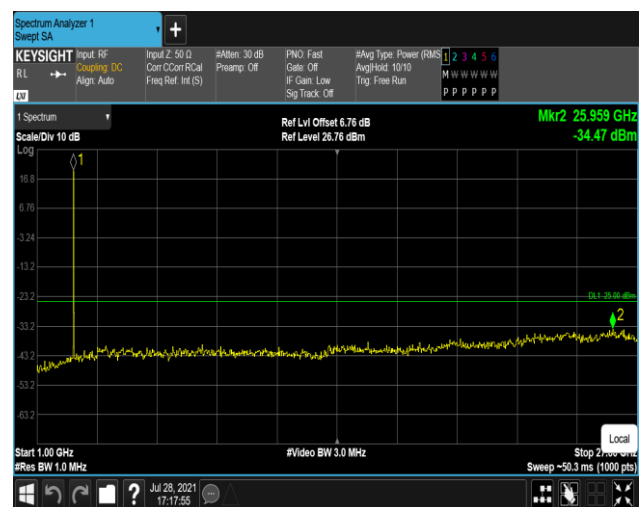
Band41-20MHz-16QAM-40140:1000~27000MHz



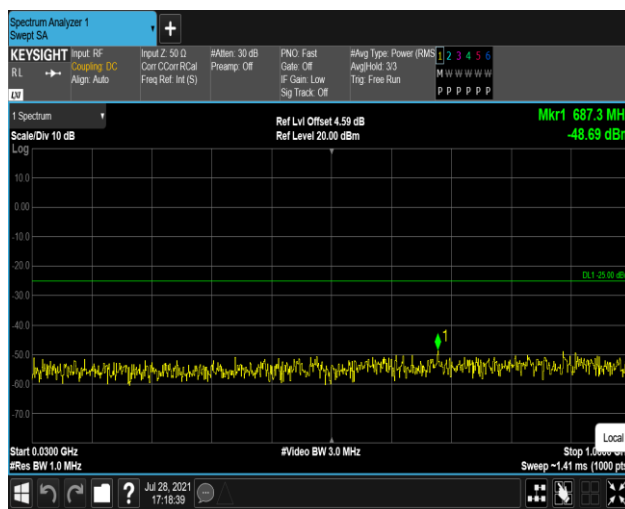
Band41-20MHz-16QAM-40640:30~1000MHz



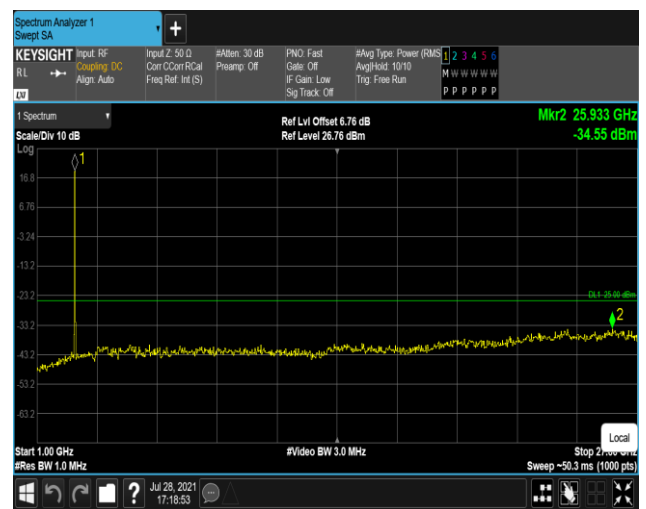
Band41-20MHz-16QAM-40640:1000~27000MHz



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



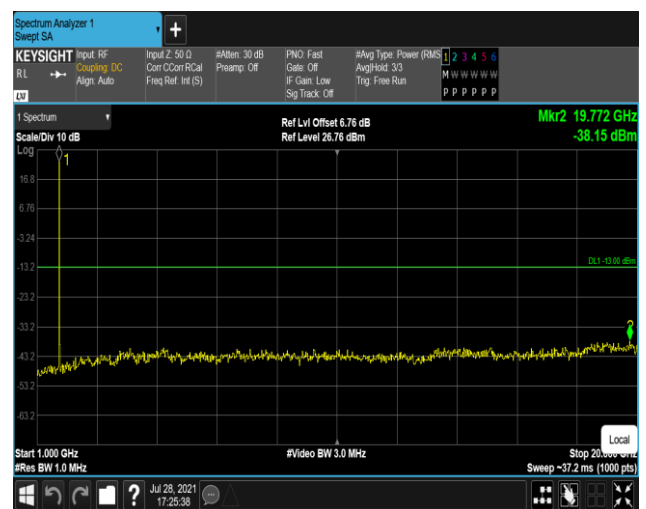
Band41-20MHz-16QAM-41140:1000~27000MHz



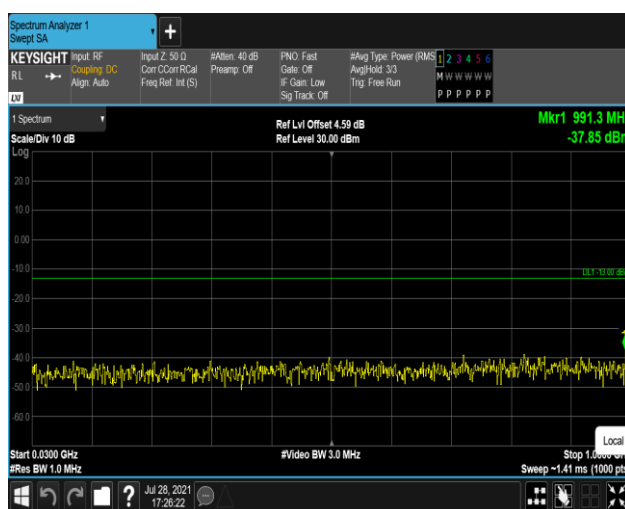
Band66-1.4MHz-QPSK-131979:30~1000MHz



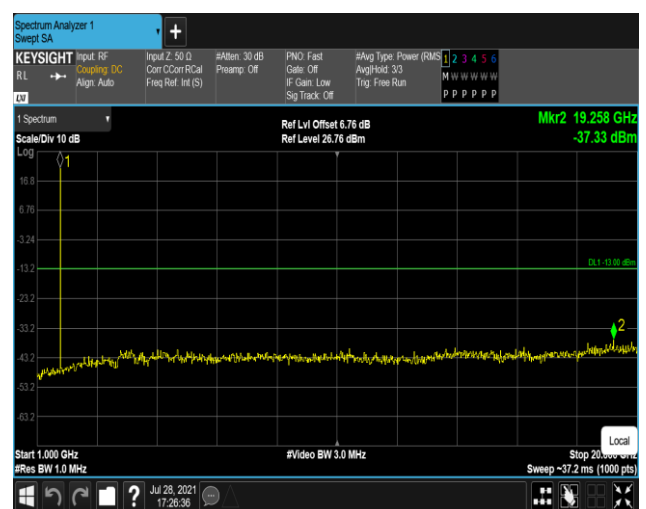
Band66-1.4MHz-QPSK-131979:1000~20000MHz



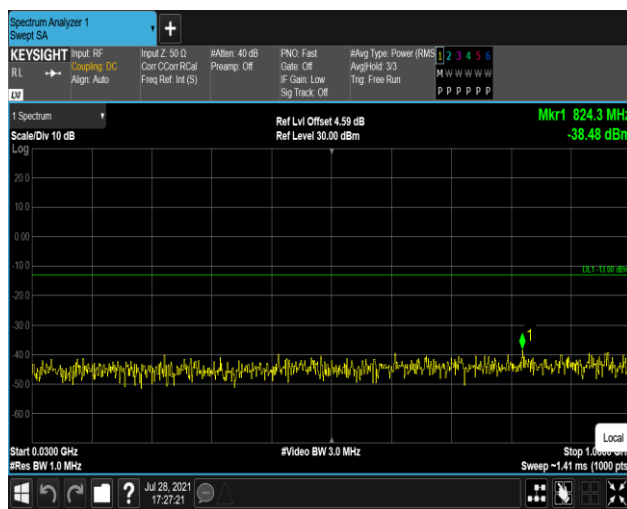
Band66-1.4MHz-QPSK-132322:30~1000MHz



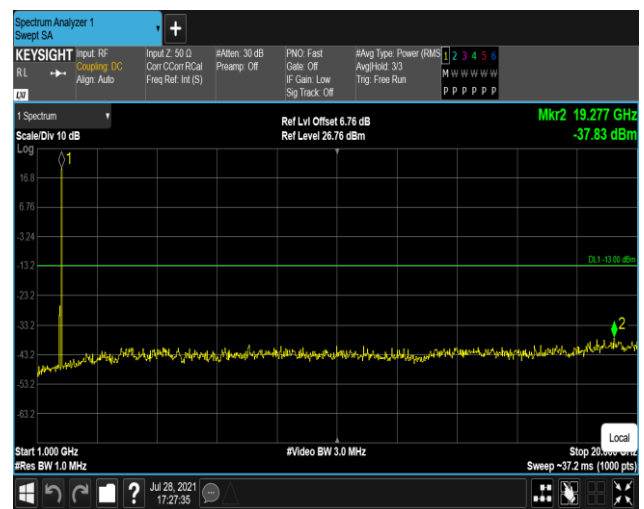
Band66-1.4MHz-QPSK-132322:1000~20000MHz



Band66-1.4MHz-QPSK-132665:30~1000MHz



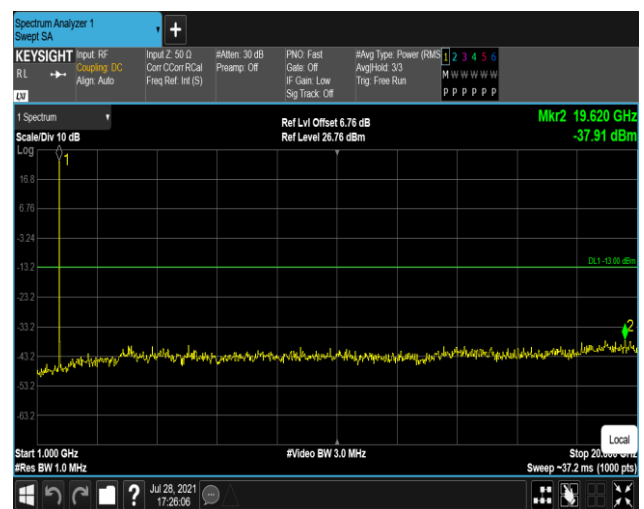
Band66-1.4MHz-QPSK-132665:1000~20000MHz



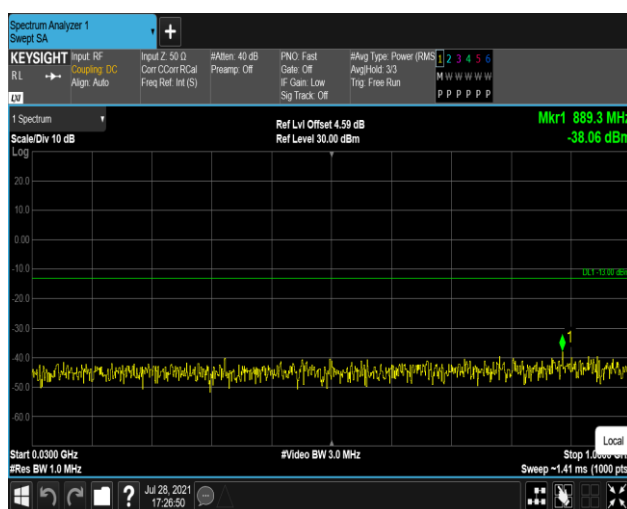
Band66-1.4MHz-16QAM-131979:30~1000MHz



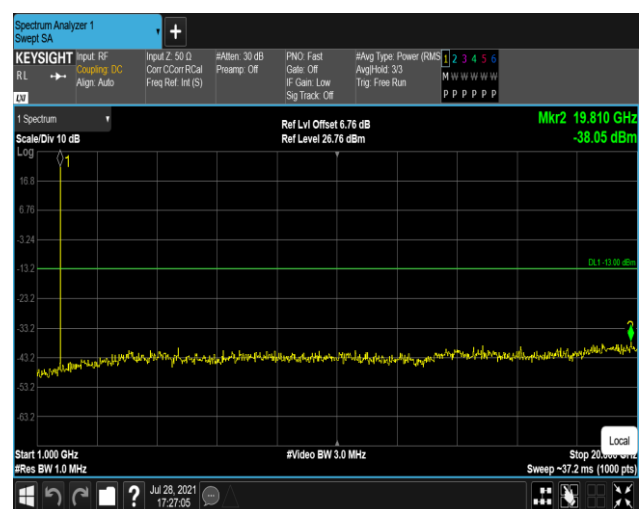
Band66-1.4MHz-16QAM-131979:1000~20000MHz



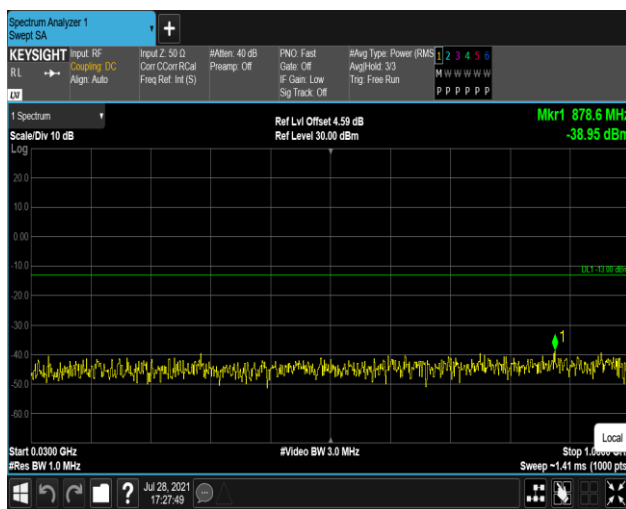
Band66-1.4MHz-16QAM-132322:30~1000MHz



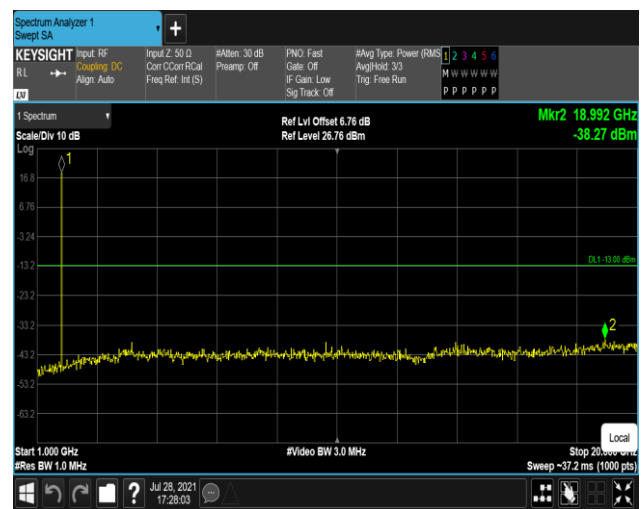
Band66-1.4MHz-16QAM-132322:1000~20000MHz



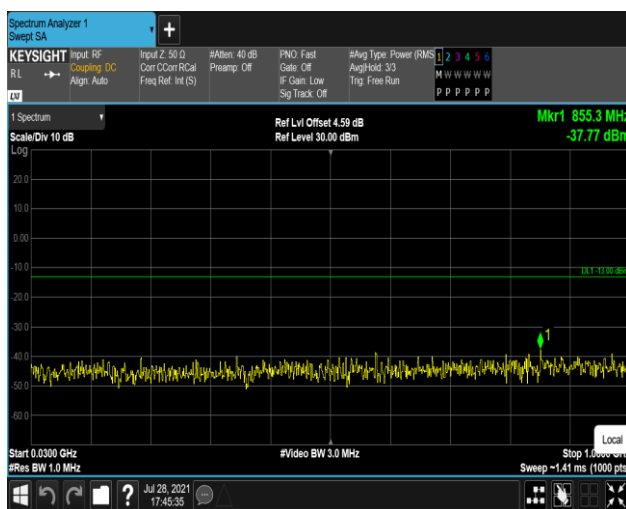
Band66-1.4MHz-16QAM-132665:30~1000MHz



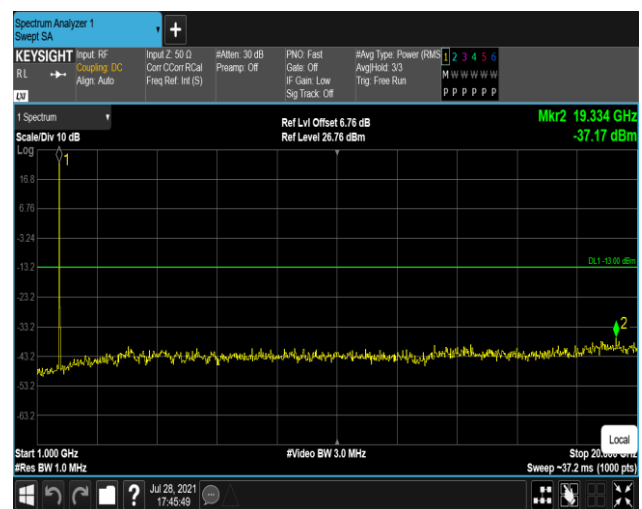
Band66-1.4MHz-16QAM-132665:1000~20000MHz



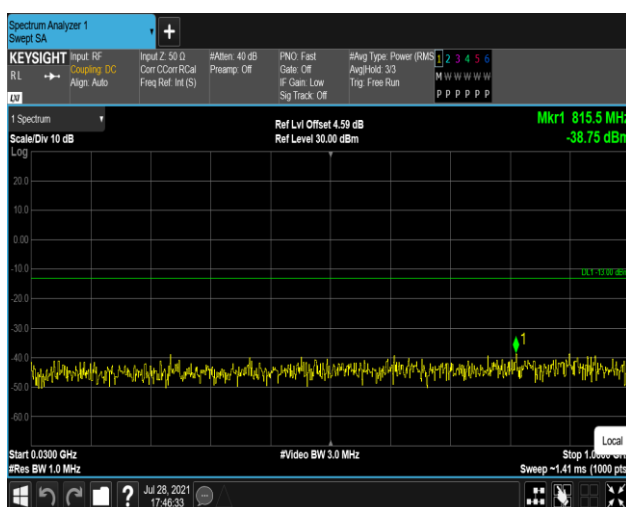
Band66-20MHz-QPSK-132072:30~1000MHz



Band66-20MHz-QPSK-132072:1000~20000MHz



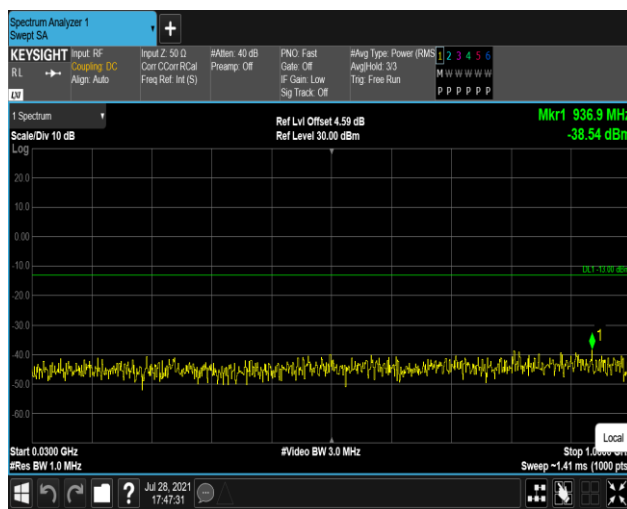
Band66-20MHz-QPSK-132322:30~1000MHz



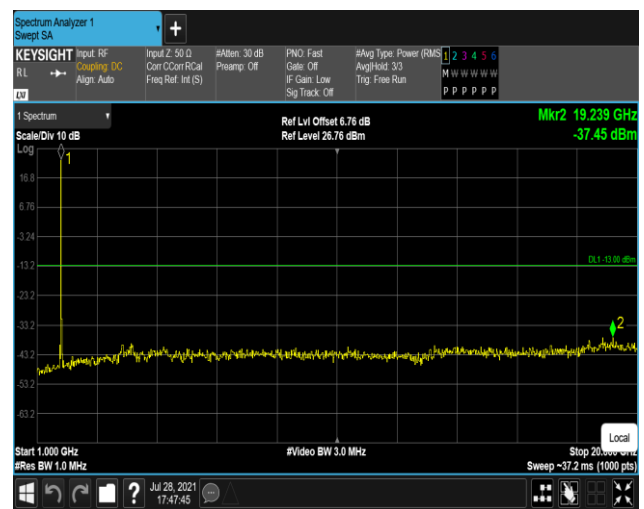
Band66-20MHz-QPSK-132322:1000~20000MHz



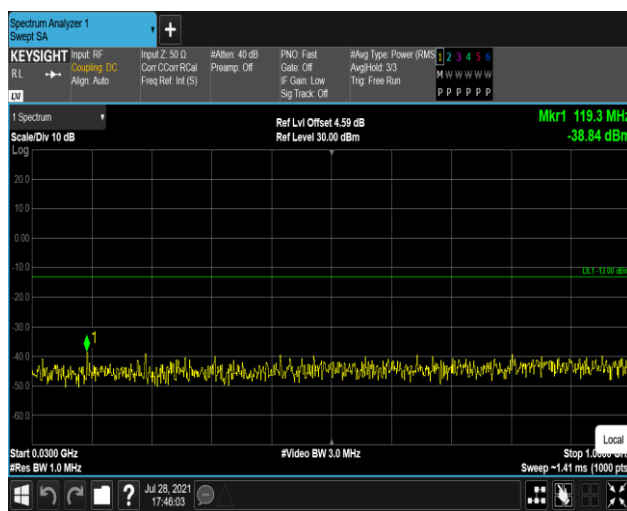
Band66-20MHz-QPSK-132572:30~1000MHz



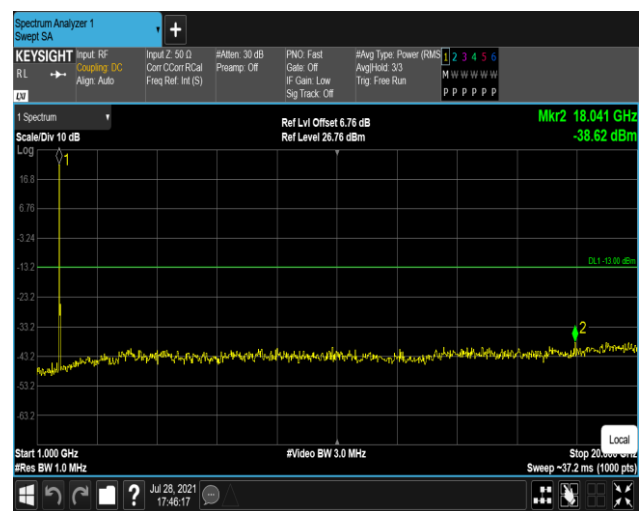
Band66-20MHz-QPSK-132572:1000~20000MHz



Band66-20MHz-16QAM-132072:30~1000MHz



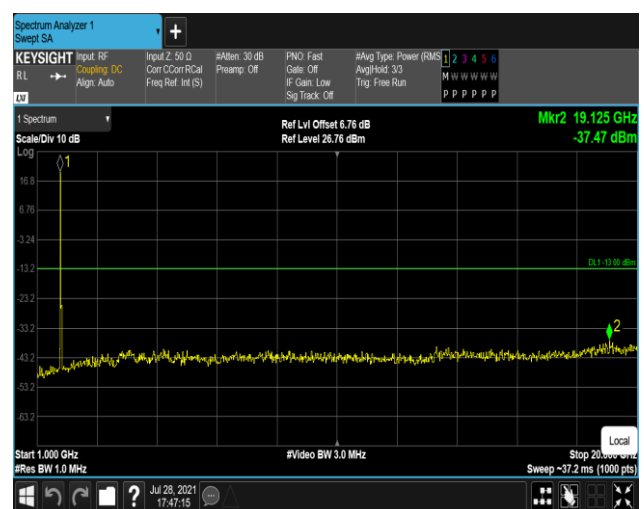
Band66-20MHz-16QAM-132072:1000~20000MHz

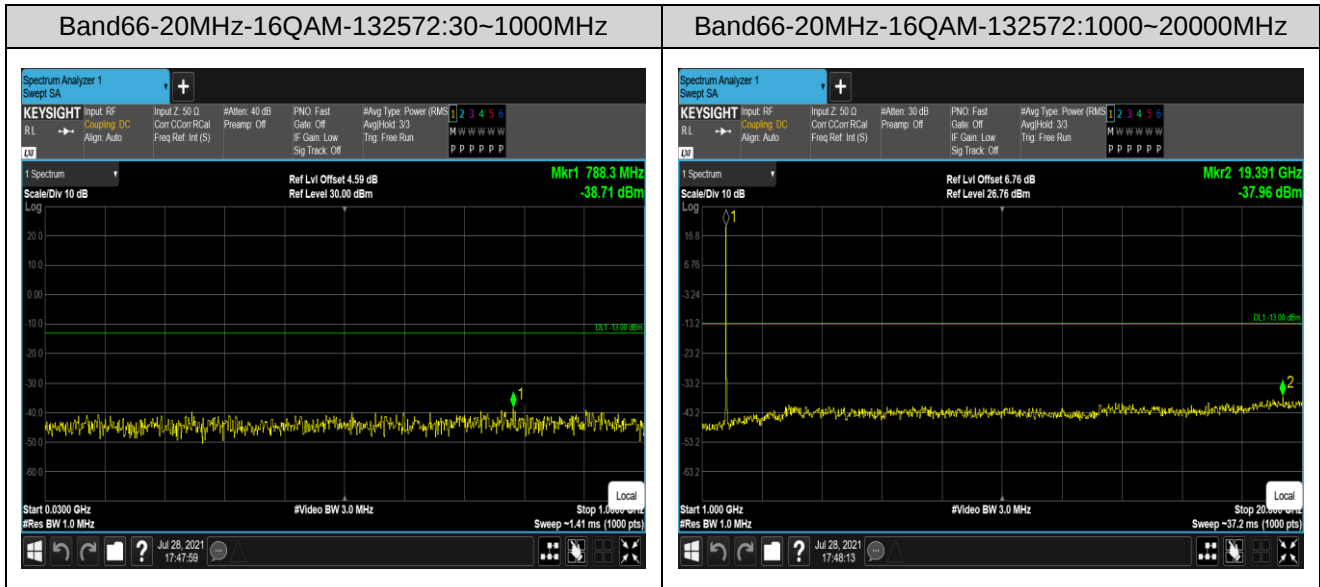


Band66-20MHz-16QAM-132322:30~1000MHz



Band66-20MHz-16QAM-132322:1000~20000MHz





Appendix F: Frequency Stability

Test Result

LTE Band 12 part:

Reference Frequency: LTE Band 12(10MHz) Middle channel=23095 Frequency=707.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-8.87	-0.012537	Within authorized band for Band 12	Pass
	-20	-12.66	-0.017894		
	-10	-9.13	-0.012905		
	0	-7.10	-0.010035		
	10	-10.67	-0.015081		
	20	-7.65	-0.010813		
	30	-7.47	-0.010558		
	40	-6.87	-0.009710		
	50	-11.26	-0.015915		
16QAM					
3.85	-30	-10.56	-0.014926	Within authorized band for Band 12	Pass
	-20	-6.95	-0.009823		
	-10	-5.16	-0.007293		
	0	-4.11	-0.005809		
	10	-9.34	-0.013201		
	20	-10.30	-0.014558		
	30	-11.13	-0.015731		
	40	-10.83	-0.015307		
	50	-7.42	-0.010488		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-9.76	-0.013795	Within authorized band for Band 12	Pass
	3.85	-7.02	-0.009922		
	4.40	-7.21	-0.010191		
16QAM					
25	3.50	-8.11	-0.011463	Within authorized band for Band 12	Pass
	3.85	-9.17	-0.012961		
	4.40	-8.51	-0.012028		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 13 part:

Reference Frequency: LTE Band 13(10MHz) Middle channel=23230 Frequency=782.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-11.42	-0.014604	Within authorized band for Band 13	Pass
	-20	-10.19	-0.013031		
	-10	2.07	0.002647		
	0	-7.72	-0.009872		
	10	-6.27	-0.008018		
	20	-8.90	-0.011381		
	30	-12.60	-0.016113		
	40	-6.07	-0.007762		
	50	-14.05	-0.017967		
16QAM					
3.85	-30	-7.22	-0.009233	Within authorized band for Band 13	Pass
	-20	-12.99	-0.016611		
	-10	-10.80	-0.013811		
	0	-7.98	-0.010205		
	10	-15.35	-0.019629		
	20	-7.47	-0.009552		
	30	-14.22	-0.018184		
	40	-12.55	-0.016049		
	50	-12.43	-0.015895		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-5.88	-0.007519	Within authorized band for Band 13	Pass
	3.85	-7.58	-0.009693		
	4.40	-9.27	-0.011854		
16QAM					
25	3.50	-5.45	-0.006969	Within authorized band for Band 13	Pass
	3.85	-6.84	-0.008747		
	4.40	-6.75	-0.008632		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 25 part:

Reference Frequency: LTE Band 25(10MHz) Middle channel=26365 Frequency=1882.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-10.07	-0.005812	Within authorized band for Band 38	Pass
	-20	-8.73	-0.005039		
	-10	-4.18	-0.002413		
	0	-8.91	-0.005143		
	10	-9.16	-0.005287		
	20	-8.81	-0.005085		
	30	-7.90	-0.004560		
	40	-8.10	-0.004675		
	50	4.86	0.002805		
16QAM					
3.85	-30	-7.48	-0.004317	Within authorized band for Band 38	Pass
	-20	-7.77	-0.004485		
	-10	-14.68	-0.008473		
	0	-5.01	-0.002892		
	10	-7.31	-0.004219		
	20	-9.18	-0.005299		
	30	2.05	0.001183		
	40	-11.37	-0.006563		
	50	-8.75	-0.005051		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-6.78	-0.003913	Within authorized band for Band 38	Pass
	3.85	-8.35	-0.004820		
	4.40	-9.13	-0.005270		
16QAM					
25	3.50	-8.93	-0.005154	Within authorized band for Band 38	Pass
	3.85	-5.82	-0.003359		
	4.40	-7.30	-0.004214		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 26(FCC Part90) part:

Reference Frequency: LTE Band 26 (10MHz) Middle channel=26740 Frequency=819.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-4.66	-0.005690	±2.5	Pass
	-20	-8.20	-0.010012		
	-10	-7.14	-0.008718		
	0	-7.48	-0.009133		
	10	-6.84	-0.008352		
	20	-9.38	-0.011453		
	30	-8.80	-0.010745		
	40	-11.69	-0.014274		
	50	-4.52	-0.005519		
16QAM					
3.85	-30	-9.00	-0.010759	±2.5	Pass
	-20	-8.91	-0.010652		
	-10	-8.97	-0.010723		
	0	-7.31	-0.008739		
	10	-12.87	-0.015386		
	20	-9.31	-0.011130		
	30	-11.07	-0.013234		
	40	-10.89	-0.013019		
	50	-11.92	-0.014250		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-7.87	-0.009609	±2.5	Pass
	3.85	-3.16	-0.003858		
	4.40	-9.60	-0.011722		
16QAM					
25	3.50	-9.23	-0.011034	±2.5	Pass
	3.85	-11.93	-0.014262		
	4.40	-12.70	-0.015182		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 26(FCC Part22) part:

Reference Frequency: LTE Band 26 (10MHz) Middle channel=26915 Frequency=836.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-9.04	-0.011038	±2.5	Pass
	-20	-10.07	-0.012295		
	-10	-9.06	-0.011062		
	0	-8.07	-0.009853		
	10	-4.56	-0.005568		
	20	-12.73	-0.015543		
	30	-8.31	-0.010147		
	40	-9.16	-0.011184		
	50	-8.44	-0.010305		
16QAM					
3.85	-30	-9.91	-0.011847	±2.5	Pass
	-20	-12.22	-0.014608		
	-10	-8.57	-0.010245		
	0	-11.23	-0.013425		
	10	-13.66	-0.016330		
	20	-9.20	-0.010998		
	30	-8.43	-0.010078		
	40	-9.31	-0.011130		
	50	-11.64	-0.013915		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-5.05	-0.006166	±2.5	Pass
	3.85	-4.91	-0.005995		
	4.40	-10.51	-0.012833		
16QAM					
25	3.50	-8.65	-0.010341	±2.5	Pass
	3.85	-11.13	-0.013305		
	4.40	-10.26	-0.012265		
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					
3.85	-30	-7.40	-0.002852	Within authorized band for Band 41	Pass
	-20	-12.36	-0.004763		
	-10	-9.03	-0.003480		
	0	-9.06	-0.003491		
	10	-16.19	-0.006239		
	20	-12.79	-0.004929		
	30	-4.19	-0.001615		
	40	-12.57	-0.004844		
	50	-7.31	-0.002817		
16QAM					
3.85	-30	-3.98	-0.001534	Within authorized band for Band 41	Pass
	-20	-9.77	-0.003765		
	-10	-14.13	-0.005445		
	0	-7.42	-0.002859		
	10	-6.11	-0.002355		
	20	-9.01	-0.003472		
	30	-13.69	-0.005276		
	40	-11.23	-0.004328		
	50	-6.14	-0.002366		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-5.72	-0.002204	Within authorized band for Band 41	Pass
	3.85	-15.58	-0.006004		
	4.40	-11.50	-0.004432		
16QAM					
25	3.50	-8.85	-0.003410	Within authorized band for Band41	Pass
	3.85	-18.34	-0.007067		
	4.40	-11.53	-0.004443		
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	-9.07	-0.005198	Within authorized band for Band 66	Pass
	-20	-7.80	-0.004470		
	-10	-10.67	-0.006115		
	0	7.85	0.004499		
	10	-12.39	-0.007100		
	20	-9.14	-0.005238		
	30	-7.44	-0.004264		
	40	-6.08	-0.003484		
	50	-9.98	-0.005719		
16QAM					
3.85	-30	-13.45	-0.007708	Within authorized band for Band 66	Pass
	-20	-3.89	-0.002229		
	-10	-5.15	-0.002951		
	0	-11.24	-0.006441		
	10	-12.62	-0.007232		
	20	-5.85	-0.003352		
	30	-4.03	-0.002309		
	40	-6.68	-0.003828		
	50	-12.07	-0.006917		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-5.41	-0.003100	Within authorized band for Band 66	Pass
	3.85	-9.64	-0.005524		
	4.40	-9.91	-0.005679		
16QAM					
25	3.50	-5.65	-0.003238	Within authorized band for Band 66	Pass
	3.85	-5.95	-0.003410		
	4.40	-10.03	-0.005748		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

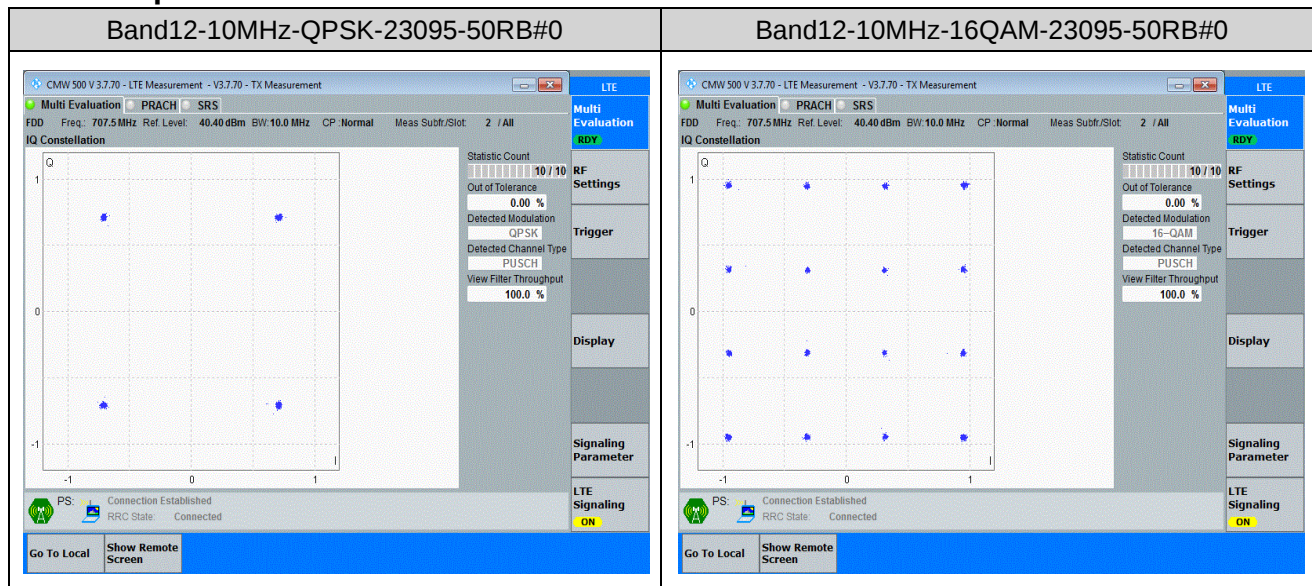
Appendix G: Modulation Characteristics

Test Result

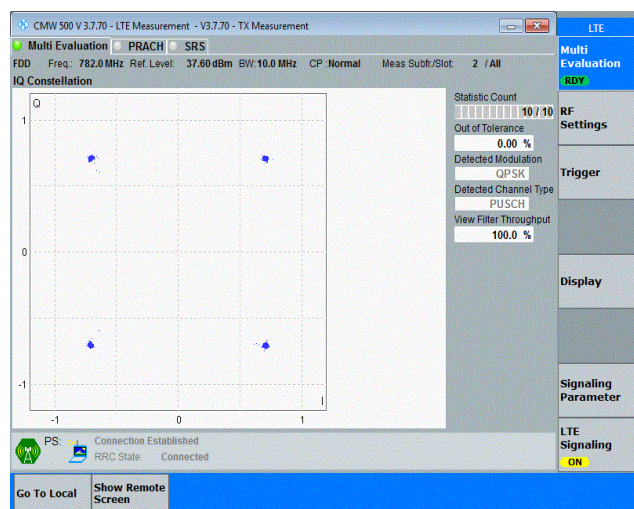
Band	Bandwidth	Modulation	Channel	RB Configuration	Result	Verdict
Band12	10MHz	QPSK	23095	50RB#0	PASS	PASS
Band12	10MHz	16QAM	23095	50RB#0	PASS	PASS
Band13	10MHz	QPSK	23230	50RB#0	PASS	PASS
Band13	10MHz	16QAM	23230	50RB#0	PASS	PASS
Band25	20MHz	QPSK	26365	100RB#0	PASS	PASS
Band25	20MHz	16QAM	26365	100RB#0	PASS	PASS
Band26	15MHz	QPSK	26765	75RB#0	PASS	PASS
Band26	15MHz	QPSK	26915	75RB#0	PASS	PASS
Band26	15MHz	16QAM	26765	75RB#0	PASS	PASS
Band26	15MHz	16QAM	26915	75RB#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.

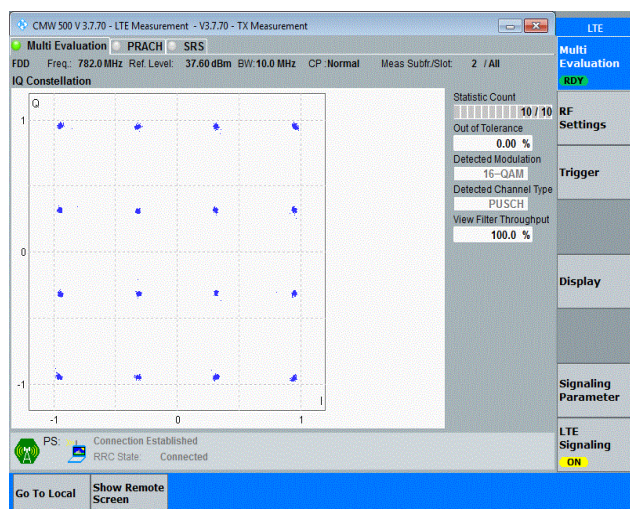
Test Graphs



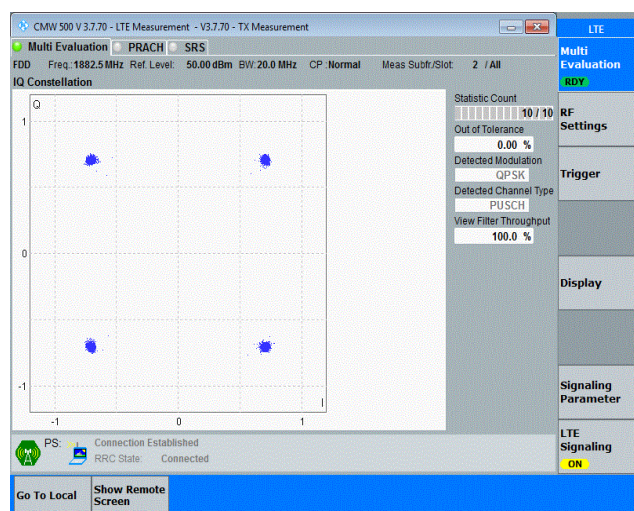
Band13-10MHz-QPSK-23230-50RB#0



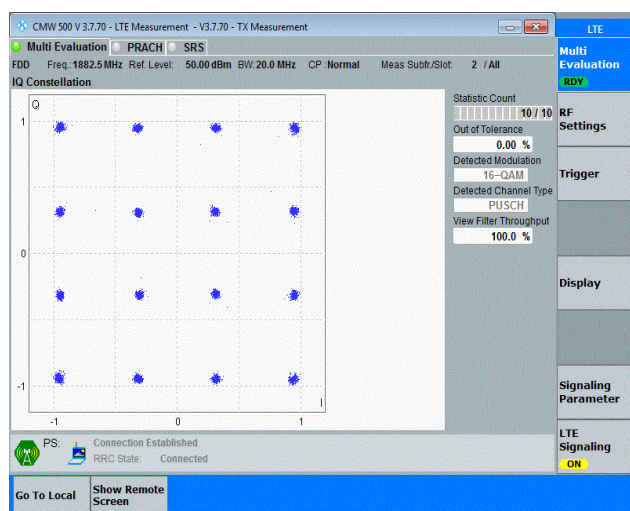
Band13-10MHz-16QAM-23230-50RB#0



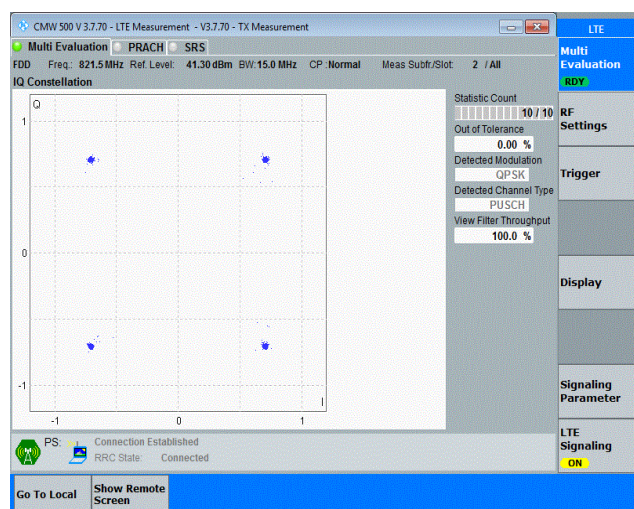
Band25-20MHz-QPSK-26365-100RB#0



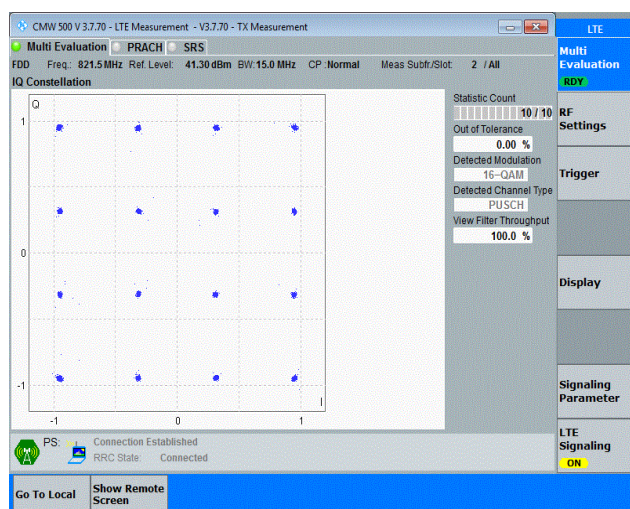
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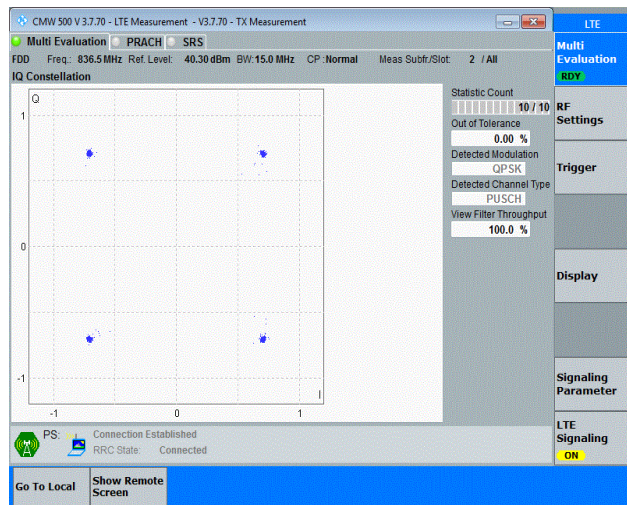
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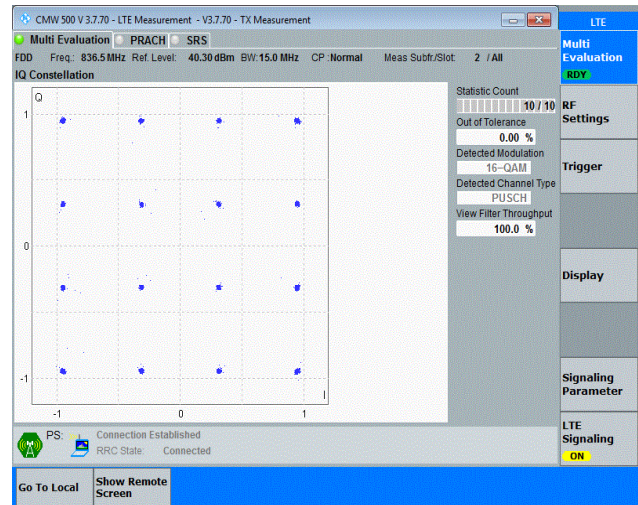
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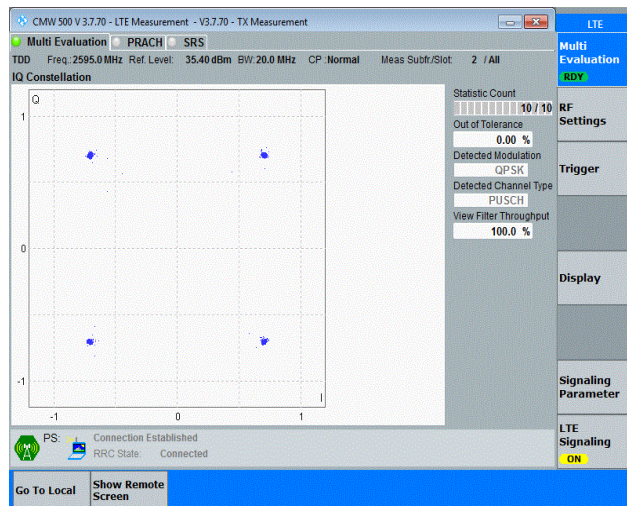
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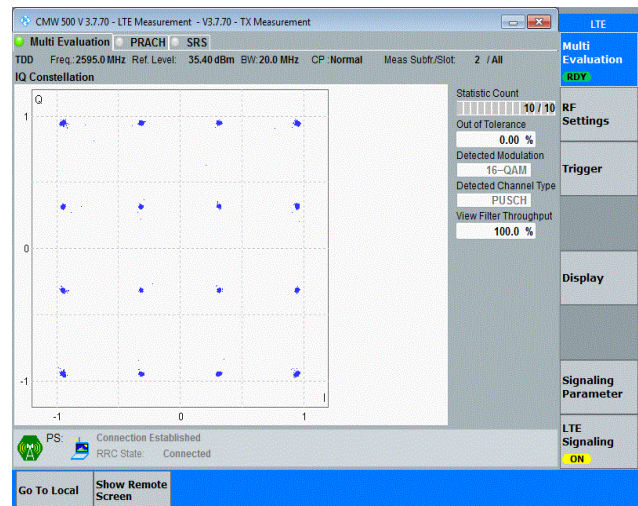
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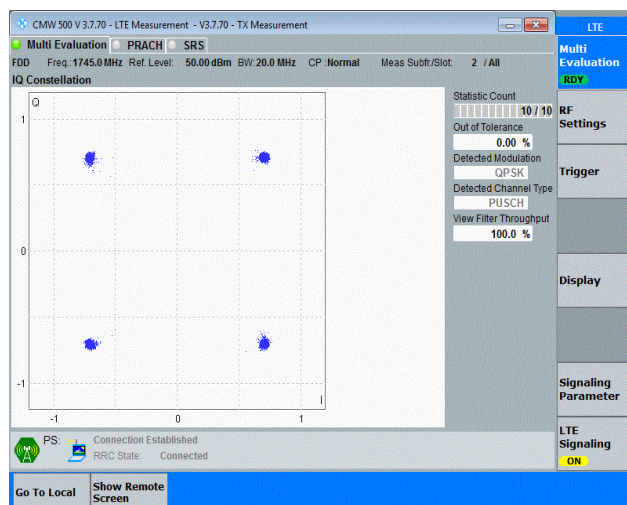
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Band41-20MHz-16QAM-40640-100RB#0



Band66-20MHz-QPSK-132322-100RB#0



Band66-20MHz-16QAM-132322-100RB#0

