



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

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



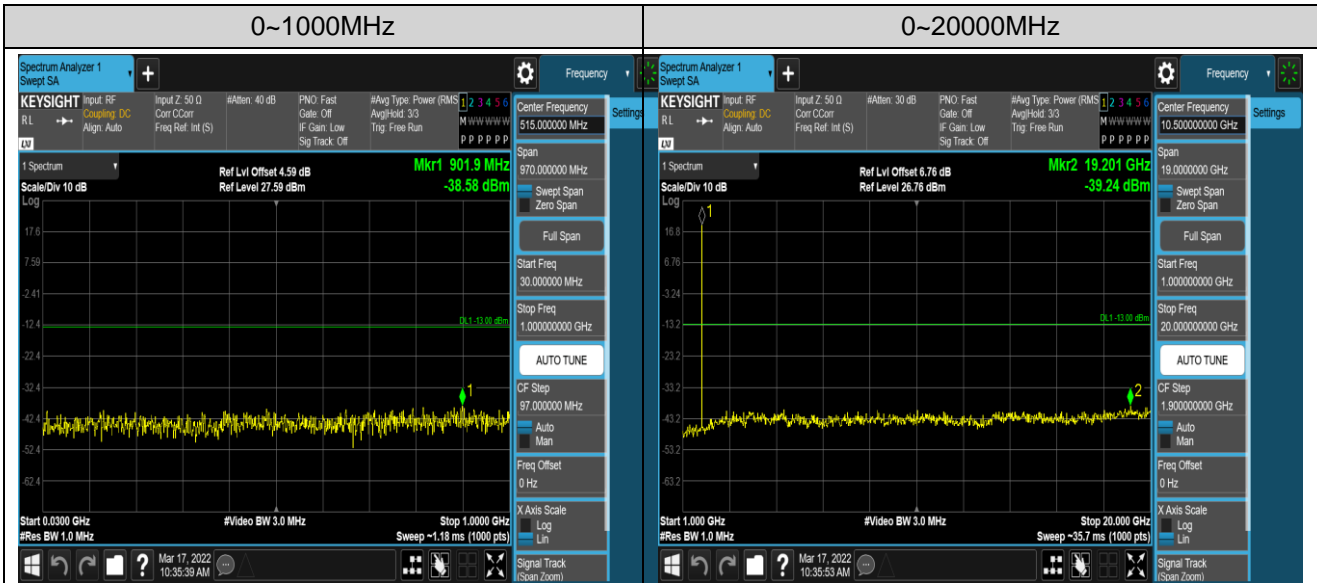
Band66-1.4MHz-16QAM-132322-1RB#0-Range1:3
0~1000MHz

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

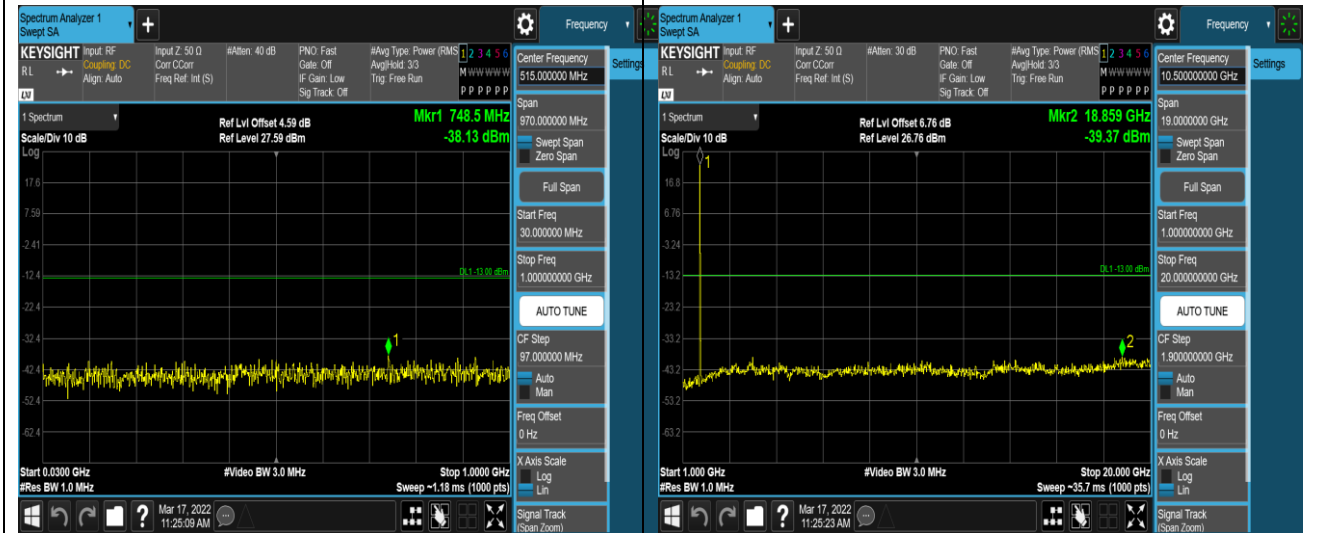


Band66-1.4MHz-16QAM-132665-1RB#0-Range1:3

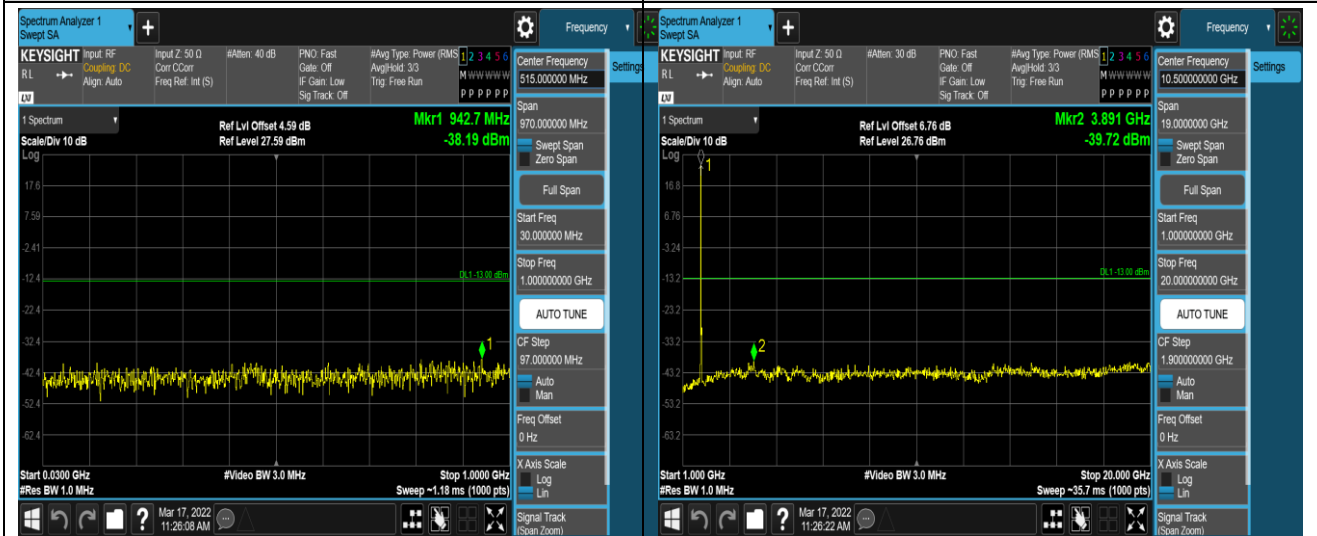
Band66-1.4MHz-16QAM-132665-1RB#0-Range2:100

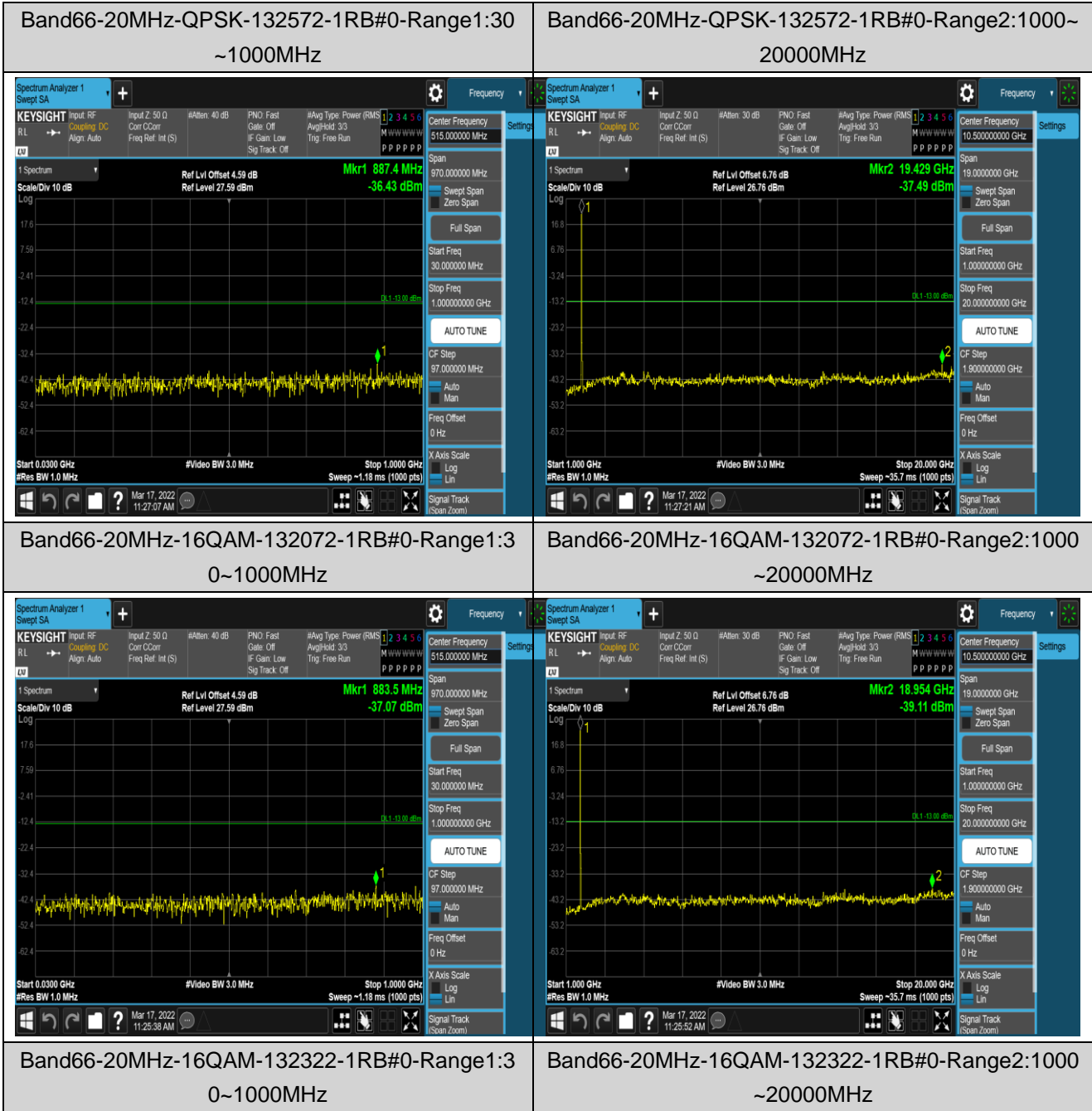


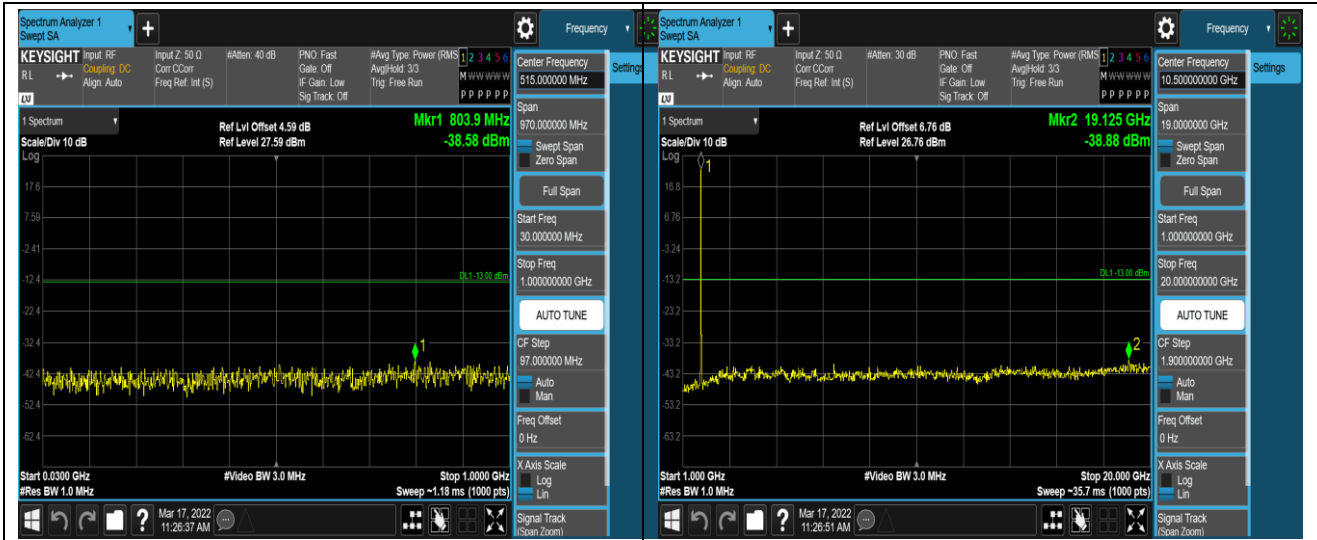
Band66-20MHz-QPSK-132072-1RB#0-Range1:30~1000MHz	Band66-20MHz-QPSK-132072-1RB#0-Range2:1000~20000MHz
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Band66-20MHz-QPSK-132322-1RB#0-Range1:30~1000MHz	Band66-20MHz-QPSK-132322-1RB#0-Range2:1000~20000MHz
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Band66-20MHz-16QAM-132572-1RB#0-Range1:3
0~1000MHz

Band66-20MHz-16QAM-132572-1RB#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					
3.87	-30	-14.96	-0.007957	Within authorized band for Band 2	Pass
	-20	-4.69	-0.002495		
	-10	-15.61	-0.008303		
	0	-14.13	-0.007516		
	10	-18.45	-0.009814		
	20	-8.13	-0.004324		
	30	-15.81	-0.008410		
	40	-17.65	-0.009388		
	50	-5.39	-0.002867		
16QAM					
3.87	-30	-7.58	-0.004032	Within authorized band for Band 2	Pass
	-20	-9.30	-0.004947		
	-10	12.45	0.006622		
	0	-13.92	-0.007404		
	10	-16.71	-0.008888		
	20	10.31	0.005484		
	30	11.59	0.006165		
	40	-4.49	-0.002388		
	50	-4.11	-0.002186		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	13.46	0.007160	Within authorized band for Band 2	Pass
	3.87	-16.08	-0.008553		
	4.44	-2.27	-0.001207		
16QAM					
25	3.50	-18.28	-0.009723	Within authorized band for Band 2	Pass
	3.87	-19.87	-0.010569		
	4.44	-14.83	-0.007888		

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	-8.10	-0.009683	±2.5	Pass
	-20	-3.72	-0.004447		
	-10	-6.55	-0.007830		
	0	-6.91	-0.008261		
	10	-7.37	-0.008811		
	20	-11.49	-0.013736		
	30	-2.90	-0.003467		
	40	-9.31	-0.011130		
	50	-2.03	-0.002427		
16QAM					
3.87	-30	-5.21	-0.006228	±2.5	Pass
	-20	-7.64	-0.009133		
	-10	-6.68	-0.007986		
	0	-2.66	-0.003180		
	10	-8.73	-0.010436		
	20	-7.25	-0.008667		
	30	-2.79	-0.003335		
	40	5.06	0.006049		
	50	-1.42	-0.001698		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-10.49	-0.012540	±2.5	Pass
	3.87	-7.07	-0.008452		
	4.44	-9.43	-0.011273		
16QAM					
25	3.50	-8.47	-0.010126	±2.5	Pass
	3.87	-4.15	-0.004961		
	4.44	-10.54	-0.012600		

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	-19.78	-0.007803	Within authorized band for Band 7	Pass
	-20	-18.70	-0.007377		
	-10	-14.73	-0.005811		
	0	-23.03	-0.009085		
	10	8.96	0.003535		
	20	-23.50	-0.009270		
	30	-3.56	-0.001404		
	40	-24.08	-0.009499		
	50	-4.79	-0.001890		
16QAM					
3.87	-30	22.83	0.009006	Within authorized band for Band 7	Pass
	-20	14.03	0.005535		
	-10	17.12	0.006753		
	0	3.09	0.001219		
	10	-18.50	-0.007298		
	20	-21.50	-0.008481		
	30	18.02	0.007108		
	40	11.59	0.004572		
	50	16.95	0.006686		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-24.36	-0.009609	Within authorized band for Band 7	Pass
	3.87	-15.91	-0.006276		
	4.44	-18.01	-0.007105		
16QAM					
25	3.50	16.01	0.006316	Within authorized band for Band 7	Pass
	3.87	-4.43	-0.001748		
	4.44	-20.11	-0.007933		

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	10.27	0.003958	Within authorized band for Band 41	Pass
	-20	-4.73	-0.001823		
	-10	6.18	0.002382		
	0	13.56	0.005225		
	10	7.60	0.002929		
	20	-8.96	-0.003453		
	30	7.80	0.003006		
	40	4.46	0.001719		
	50	-9.83	-0.003788		
16QAM					
3.87	-30	9.94	0.003830	Within authorized band for Band 41	Pass
	-20	12.46	0.004802		
	-10	-3.13	-0.001206		
	0	-11.86	-0.004570		
	10	-12.25	-0.004721		
	20	-12.13	-0.004674		
	30	-6.87	-0.002647		
	40	9.27	0.003572		
	50	11.72	0.004516		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	20.14	0.007761	Within authorized band for Band 41	Pass
	3.87	12.17	0.004690		
	4.44	16.12	0.006212		
16QAM					
25	3.50	-10.94	-0.004216	Within authorized band for Band41	Pass
	3.87	4.31	0.001661		
	4.44	5.62	0.002166		

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					
3.87	-30	18.35	0.010516	Within authorized band for Band 66	Pass
	-20	-6.55	-0.003754		
	-10	12.96	0.007427		
	0	13.65	0.007822		
	10	15.41	0.008831		
	20	4.45	0.002550		
	30	-8.03	-0.004602		
	40	12.92	0.007404		
	50	3.13	0.001794		
16QAM					
3.87	-30	6.12	0.003507	Within authorized band for Band 66	Pass
	-20	17.40	0.009971		
	-10	8.40	0.004814		
	0	20.11	0.011524		
	10	12.86	0.007370		
	20	9.47	0.005427		
	30	2.25	0.001289		
	40	9.37	0.005370		
	50	3.85	0.002206		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	15.56	0.008917	Within authorized band for Band 66	Pass
	3.87	-4.21	-0.002413		
	4.44	10.43	0.005977		
16QAM					
25	3.50	6.39	0.003662	Within authorized band for Band 66	Pass
	3.87	-8.24	-0.004722		
	4.44	-7.15	-0.004097		

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

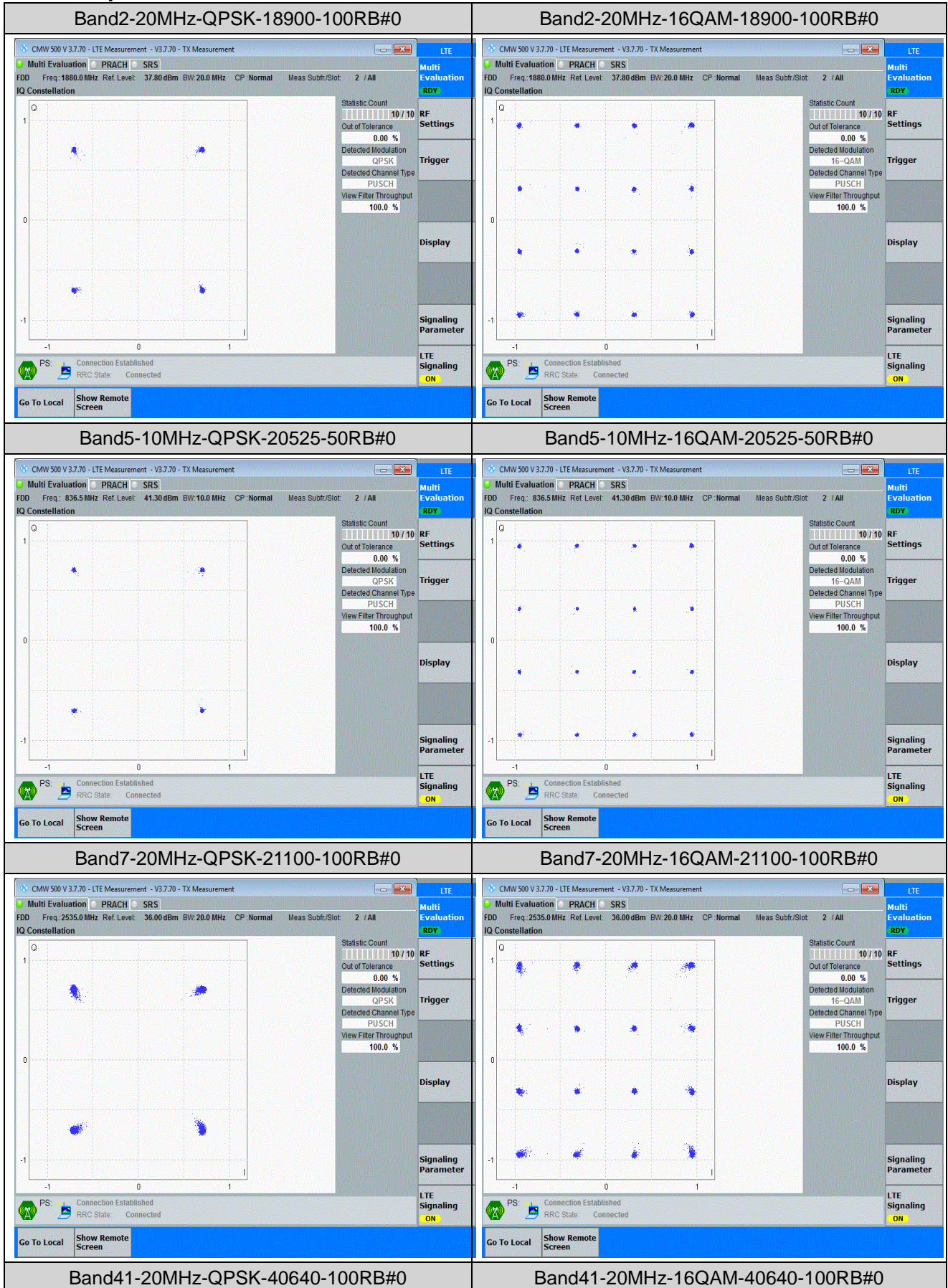
Appendix G: Modulation Characteristics

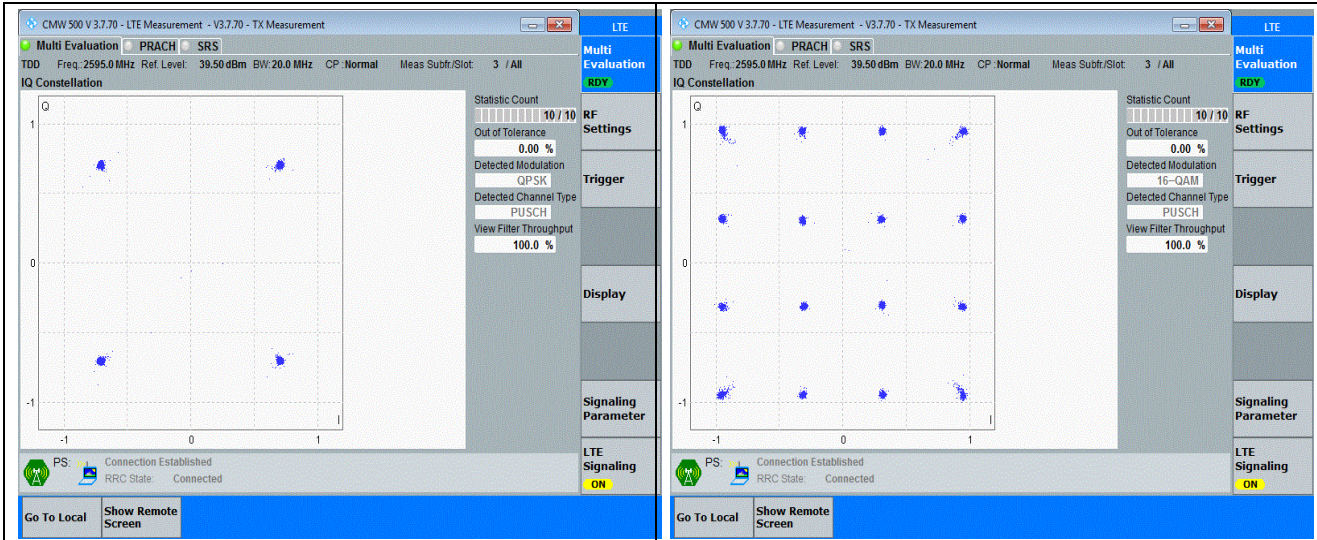
Test Result

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
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





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

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

