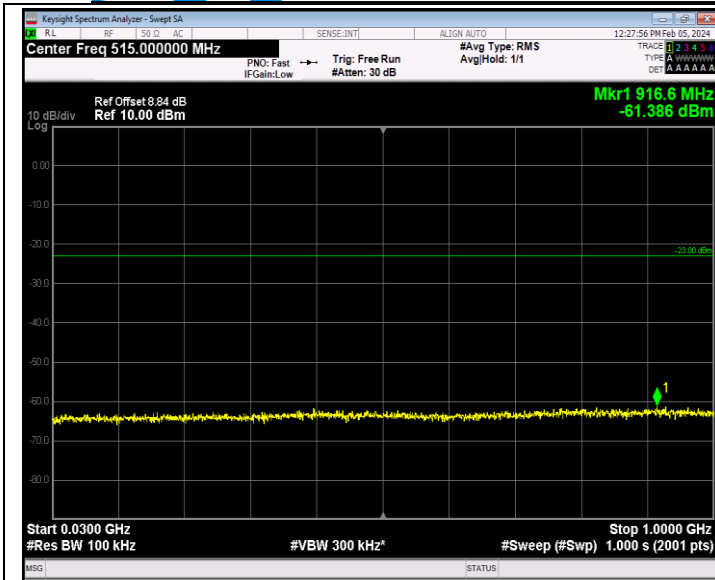
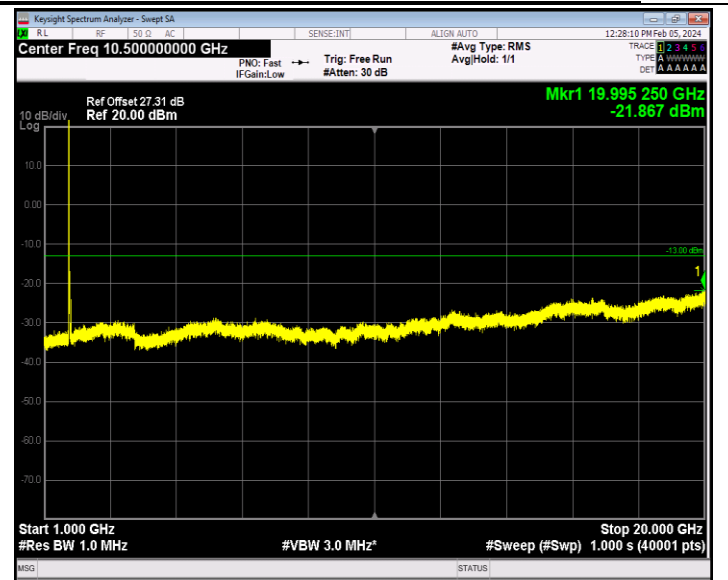
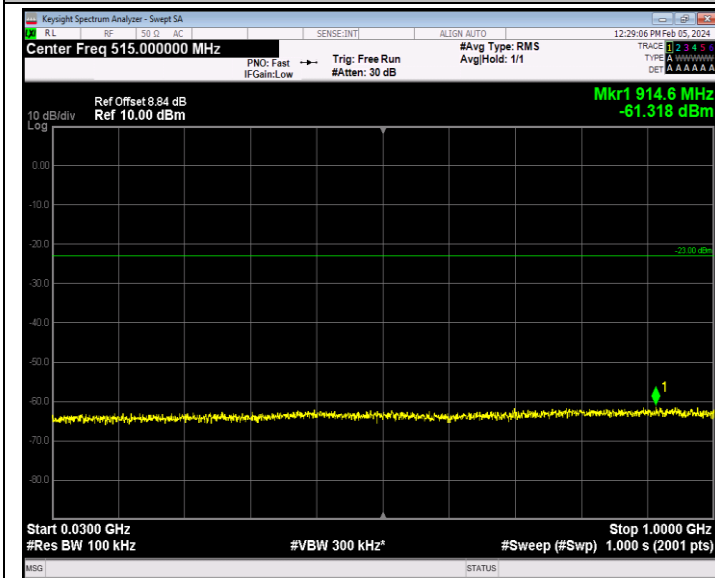




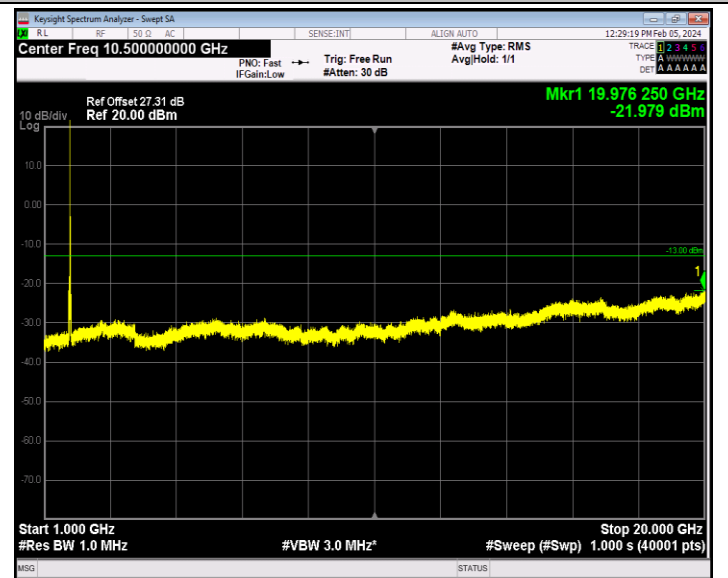
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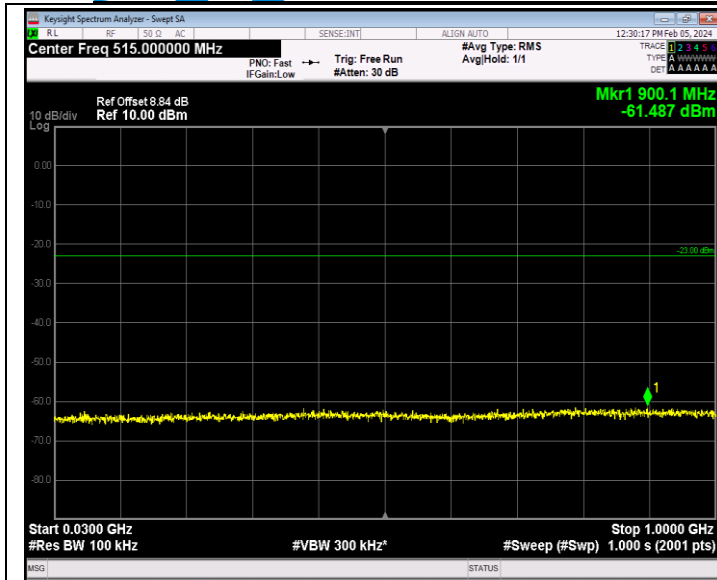
Band66_20MHz_16QAM_132072_1RB#0_1000~20000_1000~20000



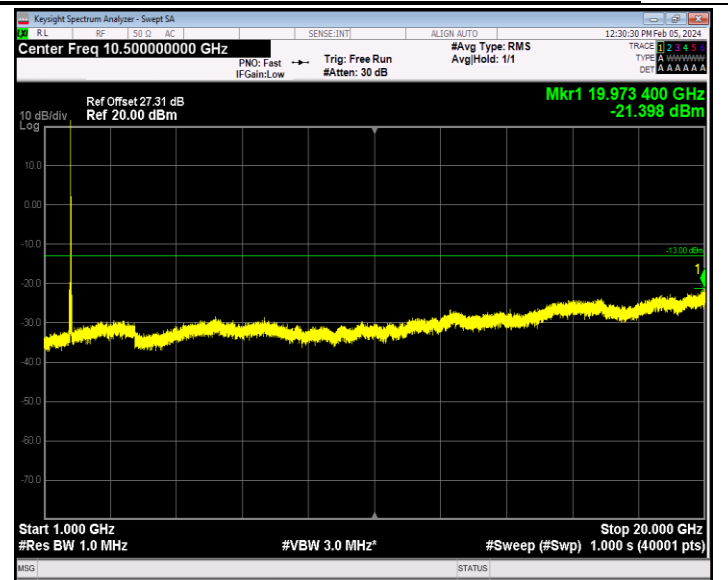
Band66_20MHz_16QAM_132322_1RB#0_30~1000_30~1000



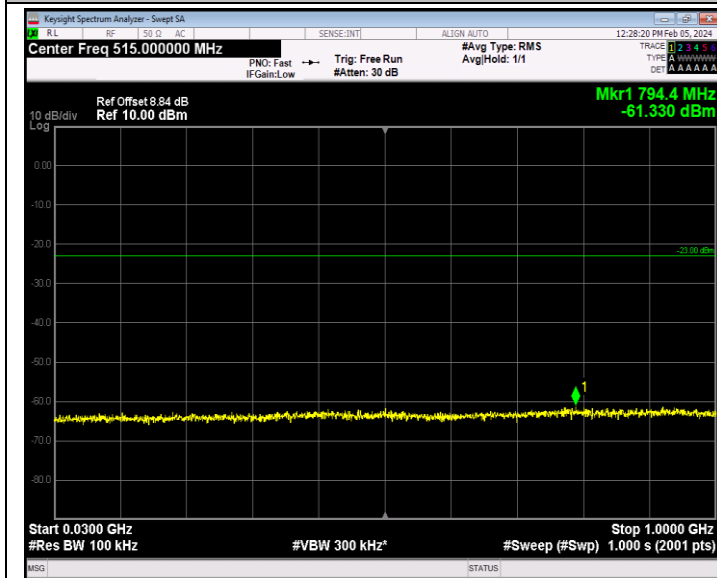
Band66_20MHz_16QAM_132322_1RB#0_1000~20000_1000~20000



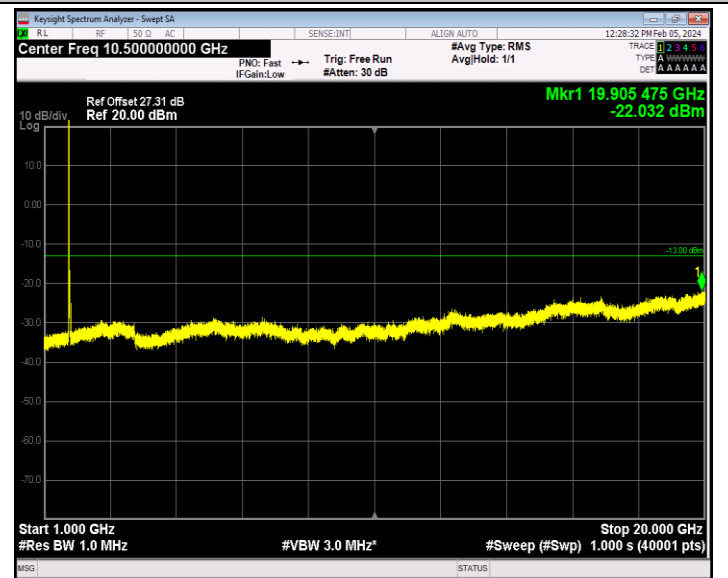
Band66_20MHz_16QAM_132572_1RB#0_30~1000_30~1000



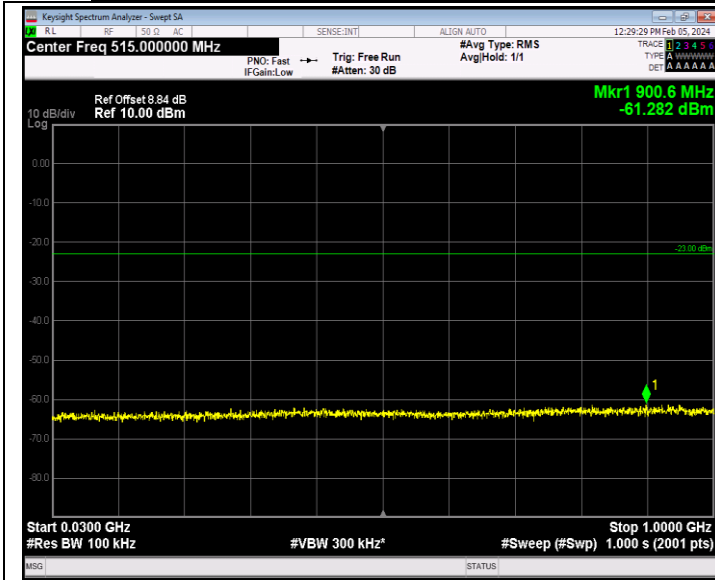
Band66_20MHz_16QAM_132572_1RB#0_1000~20000_1000~20000



Band66_20MHz_64QAM_132072_1RB#0_30~1000_30~1000

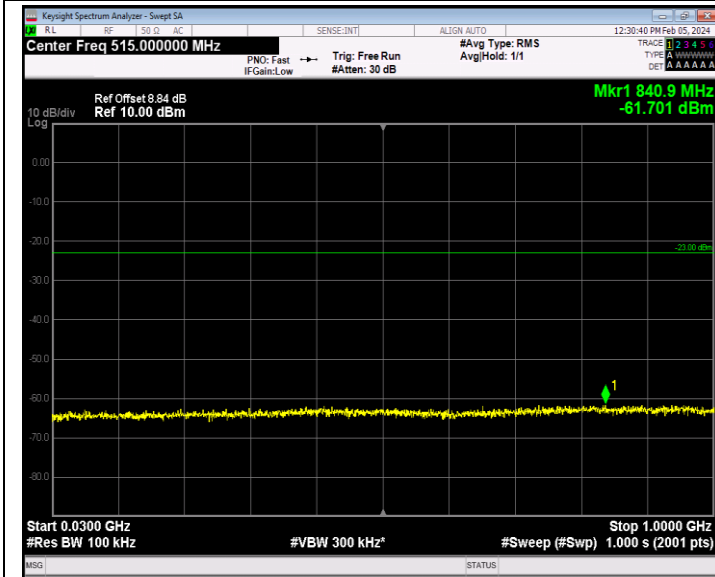


Band66_20MHz_64QAM_132072_1RB#0_1000~20000_1000~20000



Band66_20MHz_64QAM_132322_1RB#0_30~1000_30~1000

Band66_20MHz_64QAM_132322_1RB#0_1000~20000_1000~20000



Band66_20MHz_64QAM_132572_1RB#0_30~1000_30~1000

Band66_20MHz_64QAM_132572_1RB#0_1000~20000_1000~20000

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 (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-11.12	-0.005915	Within authorized band for Band 2	Pass
	-20	-16.14	-0.008585		
	-10	-28.62	-0.015223		
	0	-40.98	-0.021798		
	10	-39.34	-0.020926		
	20	-48.79	-0.025952		
	30	-5.22	-0.002777		
	40	-4.89	-0.002601		
	50	-15.34	-0.008160		
16QAM					
3.85	-30	-8.70	-0.004628	Within authorized band for Band 2	Pass
	-20	11.52	0.006128		
	-10	35.12	0.018681		
	0	46.22	0.024585		
	10	-2.63	-0.001399		
	20	-6.18	-0.003287		
	30	15.61	0.008303		
	40	26.84	0.014277		
	50	34.69	0.018452		
64QAM					
3.85	-30	52.99	0.028186	Within authorized band for Band 2	Pass
	-20	19.27	0.010250		
	-10	42.50	0.022606		
	0	9.27	0.004931		
	10	23.22	0.012351		
	20	34.53	0.018367		
	30	48.62	0.025862		
	40	7.60	0.004043		
	50	16.89	0.008984		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.00	30.06	0.015989	Within authorized band for Band 2	Pass
	3.85	28.45	0.015133		
	4.40	16.54	0.008798		
16QAM					
25	3.00	-17.09	-0.009090	Within authorized band for Band 2	Pass
	3.85	24.05	0.012793		
	4.40	45.19	0.024037		
64QAM					
25	3.00	42.46	0.022585	Within authorized band for Band 2	Pass
	3.85	6.52	0.003468		
	4.40	26.65	0.014176		
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 (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-36.51	-0.014402	Within authorized band for Band 7	Pass
	-20	-45.53	-0.017961		
	-10	24.00	0.009467		
	0	10.16	0.004008		
	10	-13.78	-0.005436		
	20	-11.66	-0.004600		
	30	-13.50	-0.005325		
	40	-15.74	-0.006209		
	50	-22.77	-0.008982		
16QAM					
3.85	-30	33.73	0.013306	Within authorized band for Band 7	Pass
	-20	46.52	0.018351		
	-10	-11.24	-0.004434		
	0	-5.34	-0.002107		
	10	20.50	0.008087		
	20	23.36	0.009215		
	30	30.53	0.012043		
	40	37.57	0.014821		
	50	41.37	0.016320		
64QAM					
3.85	-30	46.66	0.018406	Within authorized band for Band 7	Pass
	-20	44.98	0.017744		
	-10	46.52	0.018351		
	0	47.94	0.018911		
	10	47.22	0.018627		
	20	13.93	0.005495		
	30	16.65	0.006568		
	40	6.81	0.002686		
	50	21.06	0.008308		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.00	17.95	0.007081	Within authorized band for Band 7	Pass
	3.85	-14.43	-0.005692		
	4.40	-24.36	-0.009609		
16QAM					
25	3.00	-25.84	-0.010193	Within authorized band for Band 7	Pass
	3.85	9.31	0.003673		
	4.40	25.49	0.010055		
64QAM					
25	3.00	46.06	0.018170	Within authorized band for Band 7	Pass
	3.85	36.33	0.014331		
	4.40	36.42	0.014367		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

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	-32.83	-0.046403	Within authorized band for Band 12	Pass
	-20	-44.25	-0.062544		
	-10	-44.40	-0.062756		
	0	-40.47	-0.057201		
	10	-2.72	-0.003845		
	20	-5.38	-0.007604		
	30	-8.67	-0.012254		
	40	-8.00	-0.011307		
	50	-8.44	-0.011929		
16QAM					
3.85	-30	32.14	0.045428	Within authorized band for Band 12	Pass
	-20	46.83	0.066191		
	-10	14.62	0.020664		
	0	27.62	0.039039		
	10	44.19	0.062459		
	20	46.79	0.066134		
	30	45.56	0.064396		
	40	46.95	0.066360		
	50	3.08	0.004353		
64QAM					
3.85	-30	6.71	0.009484	Within authorized band for Band 12	Pass
	-20	19.33	0.027322		
	-10	23.10	0.032650		
	0	27.59	0.038996		
	10	39.30	0.055548		
	20	5.22	0.007378		
	30	11.34	0.016028		
	40	18.57	0.026247		
	50	23.40	0.033074		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.00	1.47	0.002078	Within authorized band for Band 12	Pass
	3.85	-13.12	-0.018544		
	4.40	-25.96	-0.036693		
16QAM					
25	3.00	-13.29	-0.018784	Within authorized band for Band 12	Pass
	3.85	-4.39	-0.006205		
	4.40	10.16	0.014360		
64QAM					
25	3.00	16.84	0.023802	Within authorized band for Band 12	Pass
	3.85	34.26	0.048424		
	4.40	44.78	0.063293		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 26 part: (814-824 MHz)

Reference Frequency: LTE Band 26(10MHz) Middle channel=26740 Frequency=819.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	4.06	0.004957	Within authorized band for Band 26	Pass
	-20	-17.57	-0.021453		
	-10	-38.28	-0.046740		
	0	2.90	0.003541		
	10	-10.07	-0.012295		
	20	-5.05	-0.006166		
	30	-12.92	-0.015775		
	40	-16.61	-0.020281		
	50	-23.88	-0.029158		
16QAM					
3.85	-30	33.35	0.040720	Within authorized band for Band 26	Pass
	-20	44.53	0.054371		
	-10	5.11	0.006239		
	0	5.82	0.007106		
	10	22.82	0.027863		
	20	31.07	0.037937		
	30	34.39	0.041990		
	40	38.05	0.046459		
	50	42.13	0.051441		
64QAM					
3.85	-30	12.19	0.014884	Within authorized band for Band 26	Pass
	-20	23.36	0.028523		
	-10	40.38	0.049304		
	0	8.90	0.010867		
	10	23.50	0.028694		
	20	33.33	0.040696		
	30	43.23	0.052784		
	40	6.64	0.008107		
	50	19.33	0.023602		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.00	9.43	0.011514	Within authorized band for Band 26	Pass
	3.85	-11.56	-0.014115		
	4.40	-35.00	-0.042735		
16QAM					
25	3.00	-29.98	-0.036606	Within authorized band for Band 26	Pass
	3.85	-10.53	-0.012857		
	4.40	19.05	0.023260		
64QAM					
25	3.00	43.27	0.052833	Within authorized band for Band 26	Pass
	3.85	13.59	0.016593		
	4.40	36.58	0.044664		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

LTE Band 26 part: (824-849 MHz)

Reference Frequency: LTE Band 26(15MHz) Middle channel=26915 Frequency=836.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-9.71	-0.011608	Within authorized band for Band 26	Pass
	-20	-32.23	-0.038530		
	-10	-45.02	-0.053819		
	0	-17.57	-0.021004		
	10	-27.57	-0.032959		
	20	-38.39	-0.045894		
	30	-41.87	-0.050054		
	40	-41.97	-0.050173		
	50	-45.38	-0.054250		
16QAM					
3.85	-30	28.92	0.034573	Within authorized band for Band 26	Pass
	-20	32.64	0.039020		
	-10	22.67	0.027101		
	0	33.46	0.040000		
	10	45.32	0.054178		
	20	-3.08	-0.003682		
	30	3.99	0.004770		
	40	8.98	0.010735		
	50	22.17	0.026503		
64QAM					
3.85	-30	40.21	0.048069	Within authorized band for Band 26	Pass
	-20	9.28	0.011094		
	-10	25.09	0.029994		
	0	36.44	0.043562		
	10	48.17	0.057585		
	20	3.16	0.003778		
	30	5.91	0.007065		
	40	13.42	0.016043		
	50	30.10	0.035983		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.00	12.06	0.014417	Within authorized band for Band 26	Pass
	3.85	-8.80	-0.010520		
	4.40	-37.75	-0.045129		
16QAM					
25	3.00	3.75	0.004483	Within authorized band for Band 26	Pass
	3.85	10.43	0.012469		
	4.40	19.41	0.023204		
64QAM					
25	3.00	35.31	0.042212	Within authorized band for Band 26	Pass
	3.85	46.72	0.055852		
	4.40	20.48	0.024483		
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	-24.73	-0.009530	Within authorized band for Band 41	Pass
	-20	-26.29	-0.010131		
	-10	-31.09	-0.011981		
	0	-40.14	-0.015468		
	10	-14.76	-0.005688		
	20	-29.04	-0.011191		
	30	-30.97	-0.011934		
	40	-52.50	-0.020231		
	50	-35.73	-0.013769		
16QAM					
3.85	-30	42.89	0.016528	Within authorized band for Band 41	Pass
	-20	30.11	0.011603		
	-10	-18.63	-0.007179		
	0	31.31	0.012066		
	10	32.44	0.012501		
	20	37.95	0.014624		
	30	15.92	0.006135		
	40	28.32	0.010913		
	50	-15.44	-0.005950		
64QAM					
3.85	-30	-12.59	-0.004852	Within authorized band for Band 41	Pass
	-20	48.35	0.018632		
	-10	26.46	0.010197		
	0	64.26	0.024763		
	10	-7.94	-0.003060		
	20	38.01	0.014647		
	30	57.25	0.022062		
	40	38.24	0.014736		
	50	68.22	0.026289		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.00	6.14	0.002366	Within authorized band for Band 41	Pass
	3.85	-39.24	-0.015121		
	4.40	-31.84	-0.012270		
16QAM					
25	3.00	38.67	0.014902	Within authorized band for Band41	Pass
	3.85	45.38	0.017487		
	4.40	15.96	0.006150		
64QAM					
25	3.00	23.92	0.009218	Within authorized band for Band41	Pass
	3.85	15.99	0.006162		
	4.40	55.15	0.021252		
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	-35.02	-0.020069	Within authorized band for Band 66	Pass
	-20	-10.77	-0.006172		
	-10	-35.36	-0.020264		
	0	-4.23	-0.002424		
	10	-22.10	-0.012665		
	20	-28.97	-0.016602		
	30	4.41	0.002527		
	40	-14.72	-0.008436		
	50	6.01	0.003444		
16QAM					
3.85	-30	12.73	0.007295	Within authorized band for Band 66	Pass
	-20	-10.06	-0.005765		
	-10	20.34	0.011656		
	0	28.91	0.016567		
	10	36.42	0.020871		
	20	39.55	0.022665		
	30	9.67	0.005542		
	40	27.64	0.015840		
	50	7.90	0.004527		
64QAM					
3.85	-30	5.41	0.003100	Within authorized band for Band 66	Pass
	-20	35.38	0.020275		
	-10	30.07	0.017232		
	0	27.91	0.015994		
	10	44.35	0.025415		
	20	29.88	0.017123		
	30	19.08	0.010934		
	40	28.71	0.016453		
	50	22.65	0.012980		

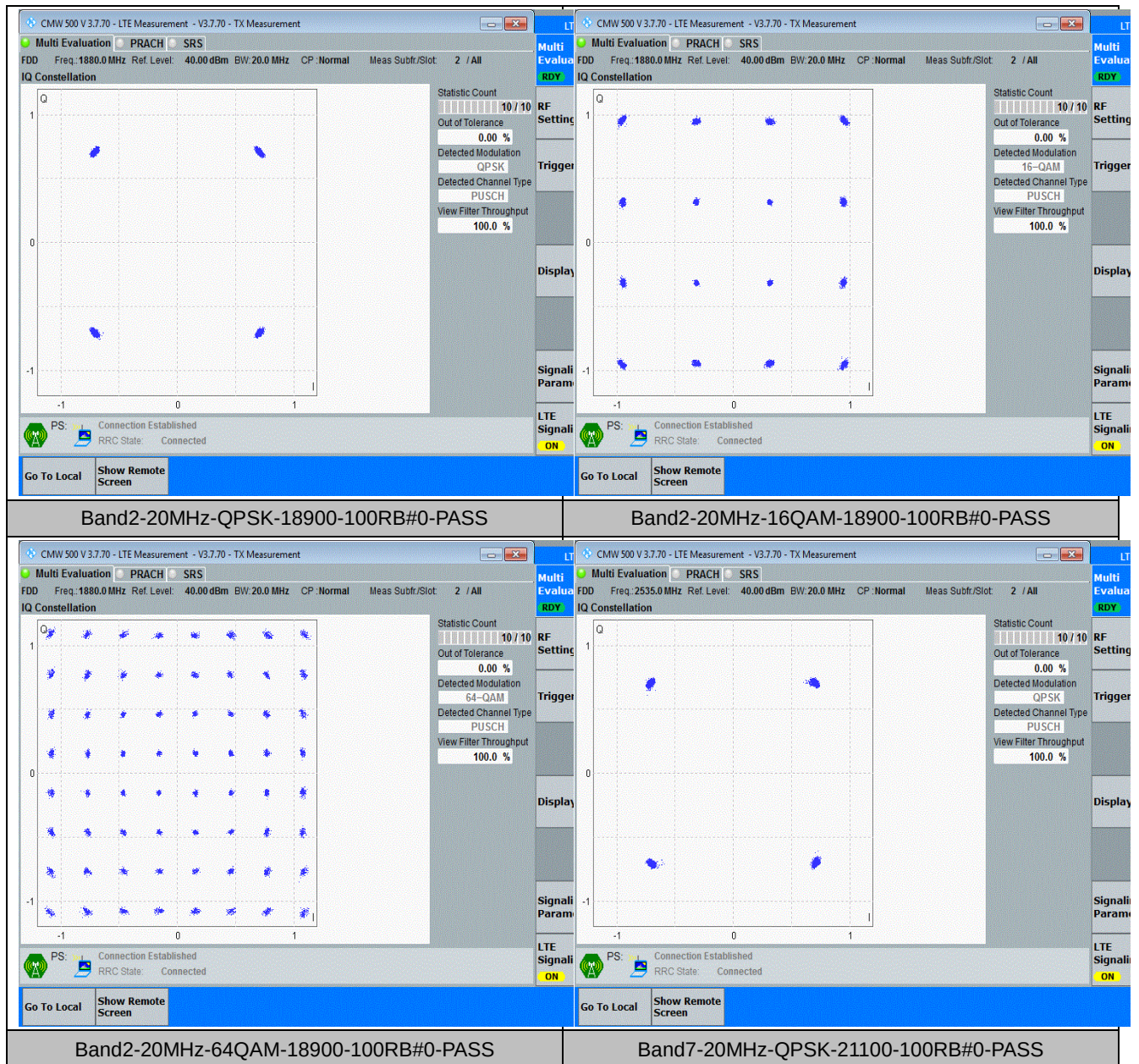
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.00	36.38	0.020848	Within authorized band for Band 66	Pass
	3.85	-24.26	-0.013903		
	4.40	-12.46	-0.007140		
16QAM					
25	3.00	-6.14	-0.003519	Within authorized band for Band 66	Pass
	3.85	44.47	0.025484		
	4.40	21.72	0.012447		
64QAM					
25	3.00	15.03	0.008613	Within authorized band for Band 66	Pass
	3.85	10.99	0.006298		
	4.40	21.63	0.012395		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

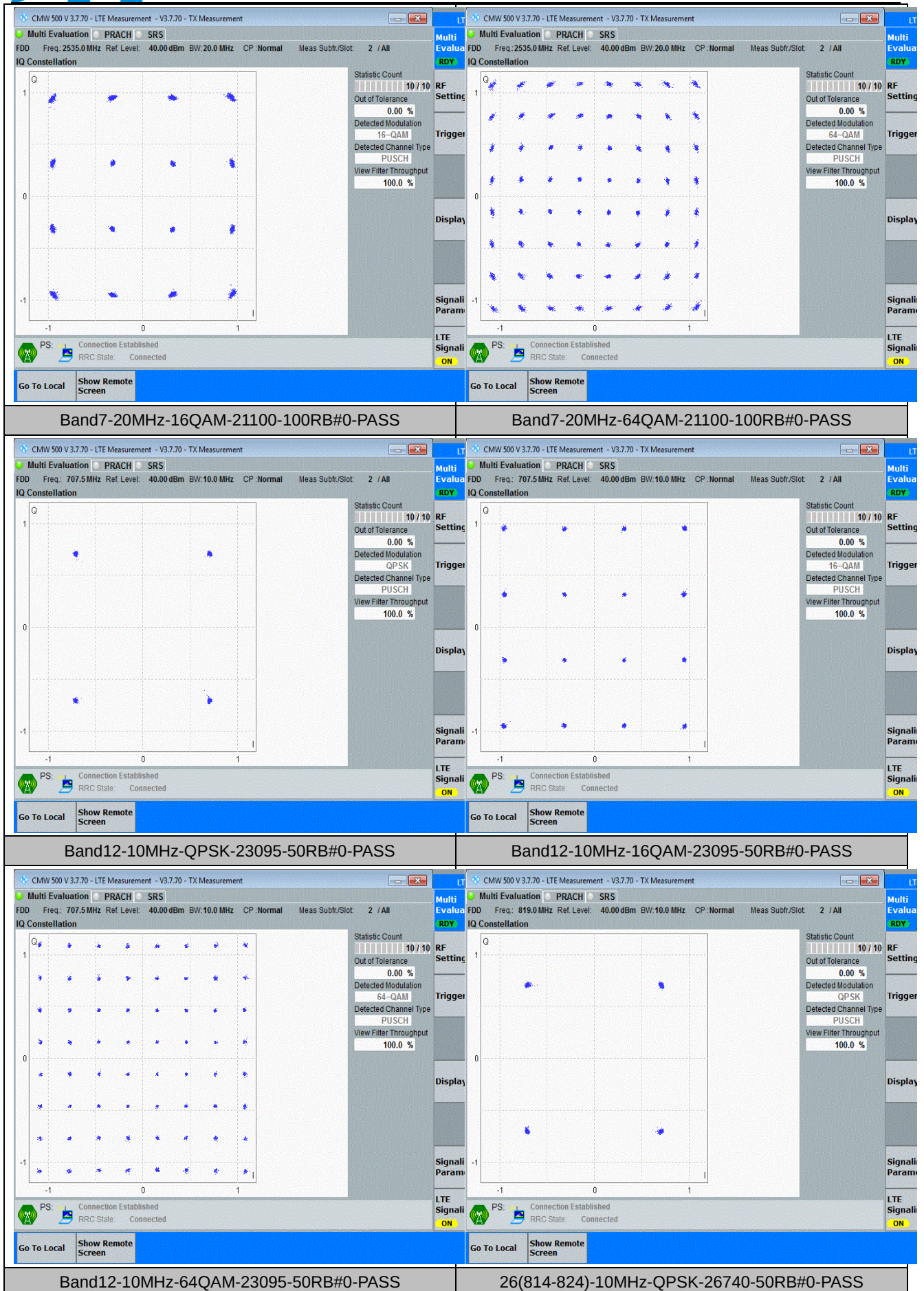
Appendix G: Modulation Characteristics

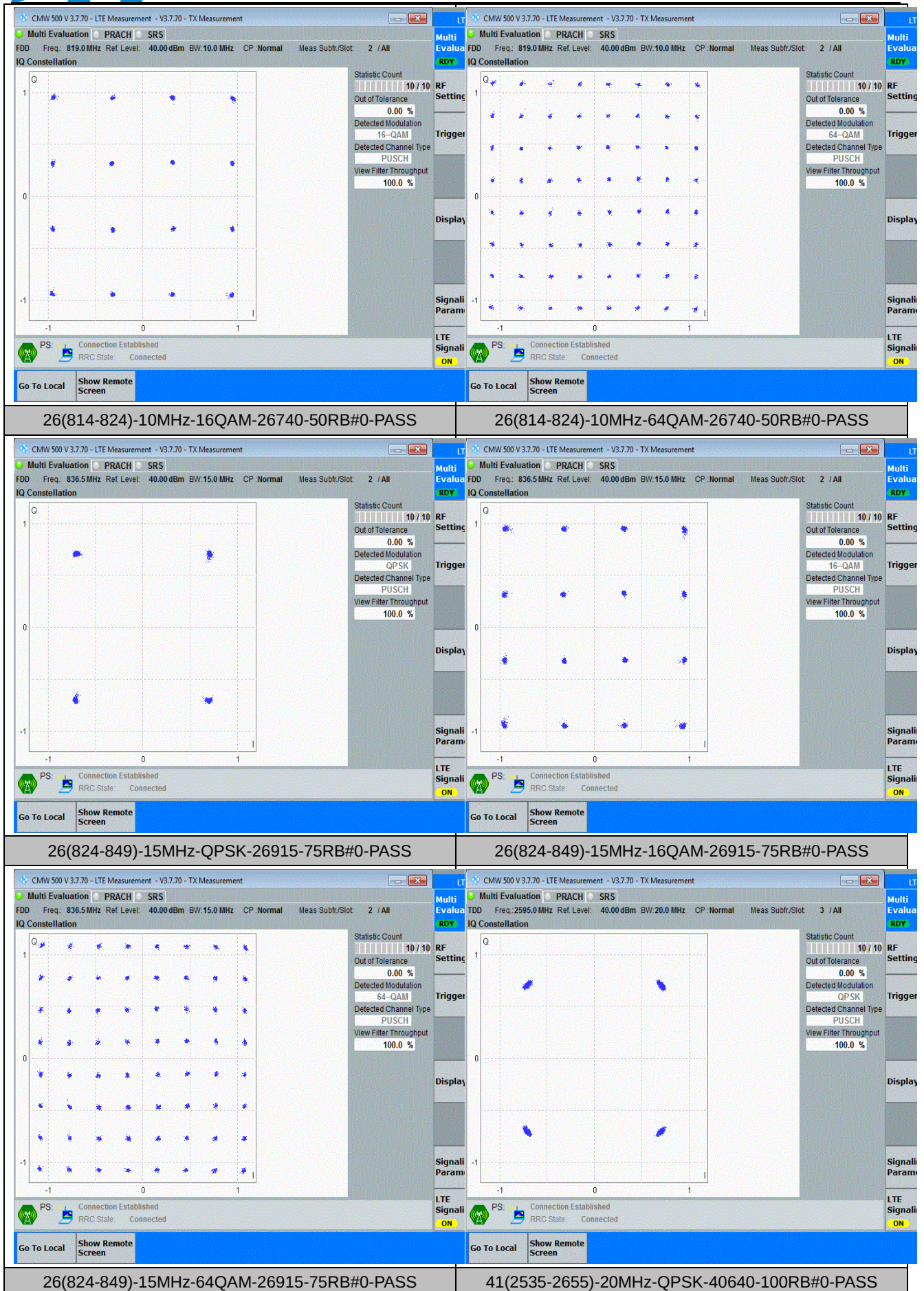
Test Result

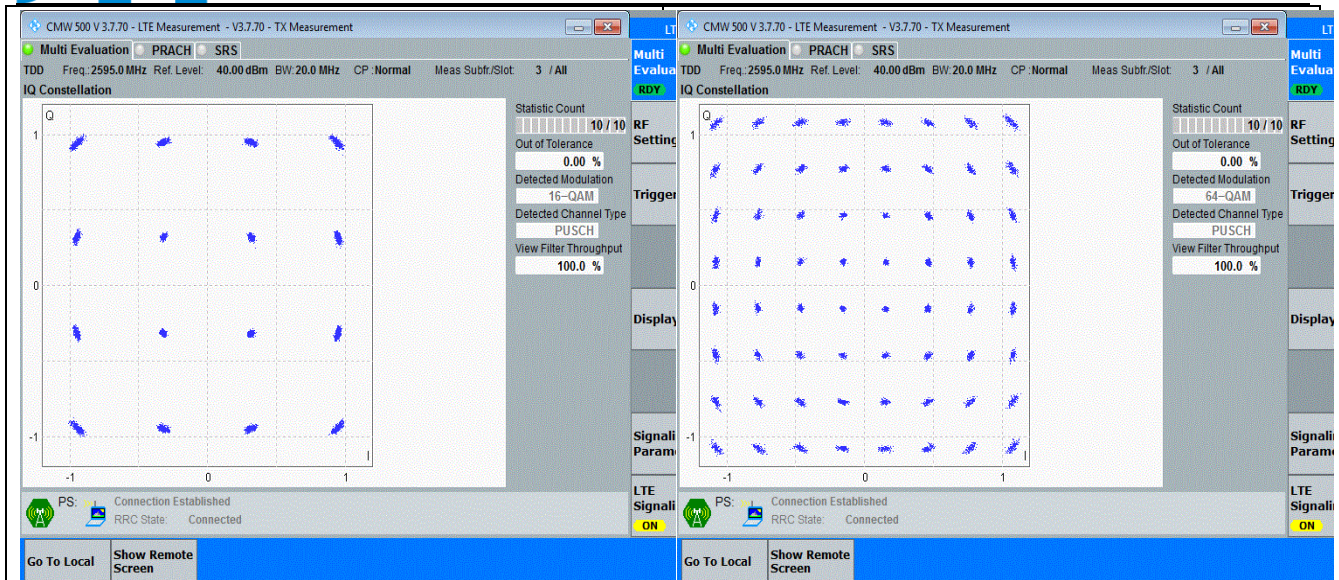
Band	Bandwidth	Modulation	Channel	RB Configuration	Verdict
Band2	20MHz	QPSK	18900	100RB#0	PASS
Band2	20MHz	16QAM	18900	100RB#0	PASS
Band2	20MHz	64QAM	18900	100RB#0	PASS
Band7	20MHz	QPSK	21100	100RB#0	PASS
Band7	20MHz	16QAM	21100	100RB#0	PASS
Band7	20MHz	64QAM	21100	100RB#0	PASS
Band12	10MHz	QPSK	23095	50RB#0	PASS
Band12	10MHz	16QAM	23095	50RB#0	PASS
Band12	10MHz	64QAM	23095	50RB#0	PASS
26(814-824)	10MHz	QPSK	26740	50RB#0	PASS
26(814-824)	10MHz	16QAM	26740	50RB#0	PASS
26(814-824)	10MHz	64QAM	26740	50RB#0	PASS
26(824-849)	15MHz	QPSK	26915	75RB#0	PASS
26(824-849)	15MHz	16QAM	26915	75RB#0	PASS
26(824-849)	15MHz	64QAM	26915	75RB#0	PASS
41(2535-2655)	20MHz	QPSK	40640	100RB#0	PASS
41(2535-2655)	20MHz	16QAM	40640	100RB#0	PASS
41(2535-2655)	20MHz	64QAM	40640	100RB#0	PASS
Band66	20MHz	QPSK	132322	100RB#0	PASS
Band66	20MHz	16QAM	132322	100RB#0	PASS
Band66	20MHz	64QAM	132322	100RB#0	PASS

Test Graphs



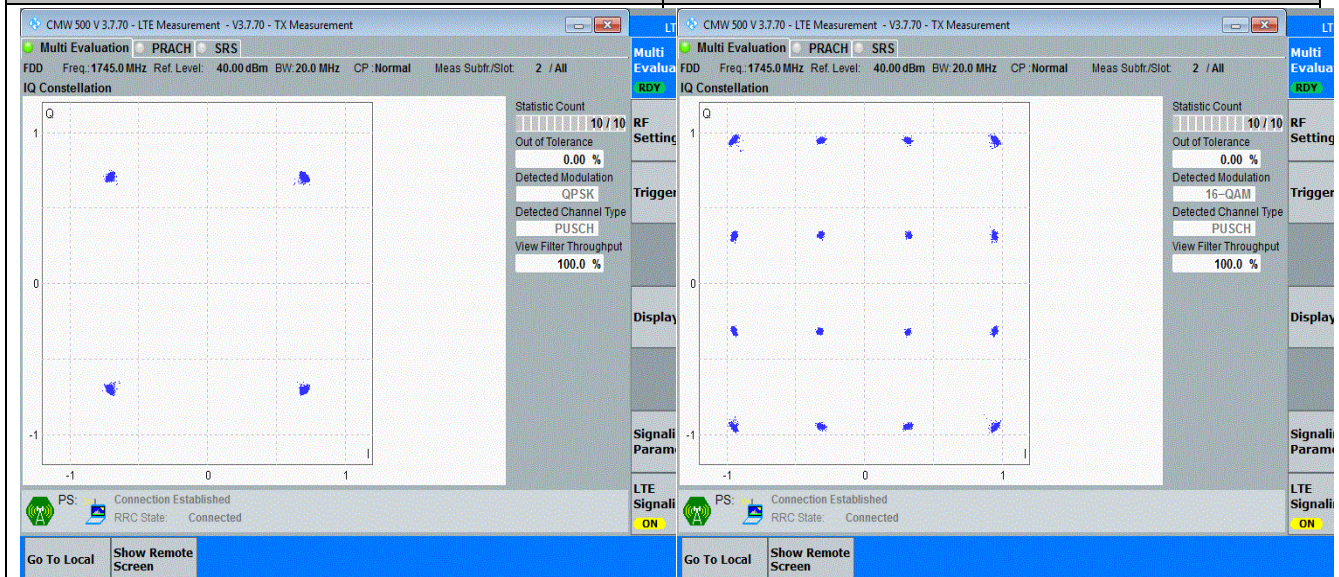






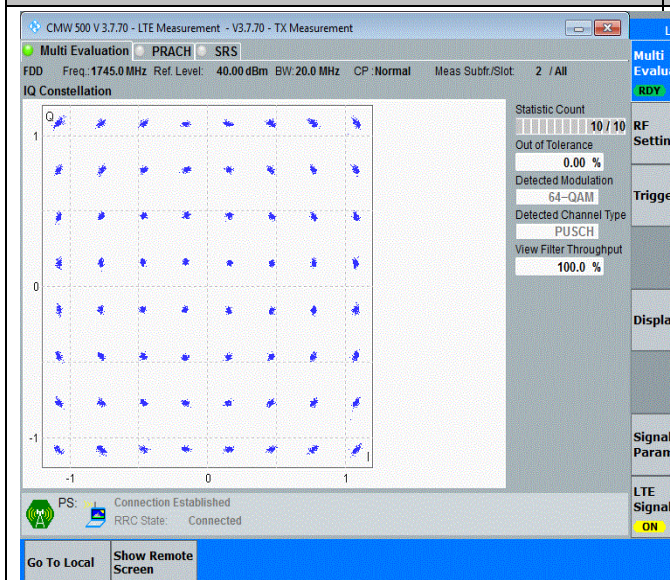
41(2535-2655)-20MHz-16QAM-40640-100RB#0-PASS

41(2535-2655)-20MHz-64QAM-40640-100RB#0-PASS



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

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



Band66-20MHz-64QAM-132322-100RB#0-PASS