

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					
3.70	-30	-3.35	-0.001291	Within authorized band for Band 41	Pass
	-20	-18.71	-0.007210		
	-10	-24.53	-0.009453		
	0	-17.78	-0.006852		
	10	-18.02	-0.006944		
	20	8.53	0.003287		
	30	-16.84	-0.006489		
	40	3.73	0.001437		
	50	-10.77	-0.004150		
16QAM					
3.70	-30	-3.03	-0.001168	Within authorized band for Band 41	Pass
	-20	-17.37	-0.006694		
	-10	-21.17	-0.008158		
	0	-19.64	-0.007568		
	10	-12.50	-0.004817		
	20	-29.13	-0.011225		
	30	-23.88	-0.009202		
	40	-20.10	-0.007746		
	50	-18.87	-0.007272		
64QAM					
3.70	-30	6.82	0.002628	Within authorized band for Band 41	Pass
	-20	-4.95	-0.001908		
	-10	-2.90	-0.001118		
	0	-18.68	-0.007198		
	10	8.30	0.003198		
	20	-8.96	-0.003453		
	30	-10.10	-0.003892		
	40	-16.59	-0.006393		
	50	-20.41	-0.007865		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					

25	3.33	-21.11	-0.008135	Within authorized band for Band 41	Pass
	3.70	-19.21	-0.007403		
	4.07	14.23	0.005484		
16QAM					
25	3.33	-15.96	-0.006150	Within authorized band for Band41	Pass
	3.70	-15.22	-0.005865		
	4.07	-14.86	-0.005726		
64QAM					
25	3.33	-3.02	-0.001164	Within authorized band for Band 41	Pass
	3.70	4.72	0.001819		
	4.07	9.34	0.003599		
<i>Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.</i>					

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					
3.70	-30	-15.26	-0.008745	Within authorized band for Band 66	Pass
	-20	-11.83	-0.006779		
	-10	-3.25	-0.001862		
	0	-10.83	-0.006206		
	10	-10.39	-0.005954		
	20	-10.71	-0.006138		
	30	-12.37	-0.007089		
	40	-10.61	-0.006080		
	50	-18.75	-0.010745		
16QAM					
3.70	-30	-12.45	-0.007135	Within authorized band for Band 66	Pass
	-20	-5.92	-0.003393		
	-10	-11.86	-0.006797		
	0	-12.85	-0.007364		
	10	-6.11	-0.003501		
	20	-10.50	-0.006017		
	30	-10.91	-0.006252		
	40	-15.84	-0.009077		
	50	-8.57	-0.004911		
64QAM					
3.70	-30	-14.58	-0.008355	Within authorized band for Band 66	Pass
	-20	-3.95	-0.002264		
	-10	-11.97	-0.006860		
	0	-1.62	-0.000928		
	10	-4.09	-0.002344		
	20	-6.68	-0.003828		
	30	-11.83	-0.006779		
	40	-12.52	-0.007175		
	50	-11.49	-0.006585		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					

25	3.33	-12.16	-0.006968	Within authorized band for Band 66	Pass
	3.70	-15.74	-0.009020		
	4.07	-10.96	-0.006281		
16QAM					
25	3.33	6.47	0.003708	Within authorized band for Band 66	Pass
	3.70	-4.63	-0.002653		
	4.07	-16.25	-0.009312		
64QAM					
25	3.33	-7.00	-0.004011	Within authorized band for Band 66	Pass
	3.70	-10.89	-0.006241		
	4.07	-5.58	-0.003198		
<i>Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.</i>					

LTE Band 71 part:

Reference Frequency: LTE Band 71 (10MHz) Middle channel=133172 Frequency=668.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.70	-30	-10.57	-0.015823	Within authorized band for Band 71	Pass
	-20	-14.00	-0.020958		
	-10	-10.37	-0.015524		
	0	-11.56	-0.017305		
	10	-7.44	-0.011138		
	20	-10.73	-0.016063		
	30	-12.06	-0.018054		
	40	-6.62	-0.009910		
	50	-12.03	-0.018009		
16QAM					
3.70	-30	-14.52	-0.021737	Within authorized band for Band 71	Pass
	-20	-14.76	-0.022096		
	-10	-10.67	-0.015973		
	0	-15.69	-0.023488		
	10	-3.78	-0.005659		
	20	-6.07	-0.009087		
	30	-9.60	-0.014371		
	40	-5.64	-0.008443		
	50	-8.05	-0.012051		
64QAM					
3.70	-30	-10.29	-0.015404	Within authorized band for Band 71	Pass
	-20	-10.90	-0.016317		
	-10	-15.02	-0.022485		
	0	-13.03	-0.019506		
	10	-12.95	-0.019386		
	20	-12.66	-0.018952		
	30	-6.78	-0.010150		
	40	-10.33	-0.015464		
	50	-6.39	-0.009566		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					

25	3.33	-6.81	-0.010195	Within authorized band for Band 71	Pass
	3.70	-10.03	-0.015015		
	4.07	-11.66	-0.017455		
16QAM					
25	3.33	-9.37	-0.014027	Within authorized band for Band 71	Pass
	3.70	-12.90	-0.019311		
	4.07	-11.62	-0.017395		
64QAM					
25	3.33	-8.13	-0.012171	Within authorized band for Band 71	Pass
	3.70	-13.33	-0.019955		
	4.07	-5.32	-0.007964		
<i>Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.</i>					

LTE Band 71 part:

Reference Frequency: LTE Band 71 (10MHz) Middle channel=133297 Frequency=680.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.70	-30	-7.81	-0.011477	Within authorized band for Band 71	Pass
	-20	-12.16	-0.017869		
	-10	-9.34	-0.013725		
	0	-10.30	-0.015136		
	10	-8.23	-0.012094		
	20	-9.41	-0.013828		
	30	-15.32	-0.022513		
	40	-9.31	-0.013681		
	50	-8.77	-0.012888		
16QAM					
3.70	-30	-7.74	-0.011374	Within authorized band for Band 71	Pass
	-20	-13.86	-0.020367		
	-10	-6.88	-0.010110		
	0	-6.65	-0.009772		
	10	-7.58	-0.011139		
	20	-13.32	-0.019574		
	30	-9.01	-0.013240		
	40	-9.63	-0.014151		
	50	-10.23	-0.015033		
64QAM					
3.70	-30	-7.84	-0.011521	Within authorized band for Band 71	Pass
	-20	-8.58	-0.012608		
	-10	-7.58	-0.011139		
	0	-9.81	-0.014416		
	10	-10.31	-0.015151		
	20	-9.44	-0.013872		
	30	-9.00	-0.013226		
	40	-8.17	-0.012006		
	50	-7.91	-0.011624		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					

25	3.33	-6.58	-0.009669	Within authorized band for Band 71	Pass
	3.70	-9.30	-0.013666		
	4.07	-11.59	-0.017032		
16QAM					
25	3.33	-8.13	-0.011947	Within authorized band for Band 71	Pass
	3.70	-12.93	-0.019001		
	4.07	-8.60	-0.012638		
64QAM					
25	3.33	-5.01	-0.007362	Within authorized band for Band 71	Pass
	3.70	-10.20	-0.014989		
	4.07	-16.57	-0.024350		
<i>Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.</i>					



LTE Band 71 part:

Reference Frequency: LTE Band 71 (10MHz) Middle channel=133422 Frequency=693.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.70	-30	-9.76	-0.014084	Within authorized band for Band 71	Pass
	-20	-8.38	-0.012092		
	-10	-15.38	-0.022193		
	0	-12.47	-0.017994		
	10	-9.46	-0.013651		
	20	-13.62	-0.019654		
	30	-12.45	-0.017965		
	40	-13.07	-0.018860		
	50	-13.00	-0.018759		
16QAM					
3.70	-30	-8.04	-0.011602	Within authorized band for Band 71	Pass
	-20	-10.00	-0.014430		
	-10	-7.45	-0.010750		
	0	-8.81	-0.012713		
	10	-12.27	-0.017706		
	20	-12.49	-0.018023		
	30	-14.10	-0.020346		
	40	-11.32	-0.016335		
	50	-12.93	-0.018658		
64QAM					
3.70	-30	-10.59	-0.015281	Within authorized band for Band 71	Pass
	-20	-12.29	-0.017734		
	-10	-10.93	-0.015772		
	0	-14.68	-0.021183		
	10	-14.48	-0.020895		
	20	-9.41	-0.013579		
	30	-13.07	-0.018860		
	40	-10.67	-0.015397		
	50	-13.35	-0.019264		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					

25	3.33	-7.80	-0.011255	Within authorized band for Band 71	Pass
	3.70	-2.17	-0.003131		
	4.07	-8.30	-0.011977		
16QAM					
25	3.33	-11.03	-0.015916	Within authorized band for Band 71	Pass
	3.70	-9.40	-0.013564		
	4.07	-8.40	-0.012121		
64QAM					
25	3.33	-15.44	-0.022280	Within authorized band for Band 71	Pass
	3.70	-14.61	-0.021082		
	4.07	-10.36	-0.014949		
<i>Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.</i>					

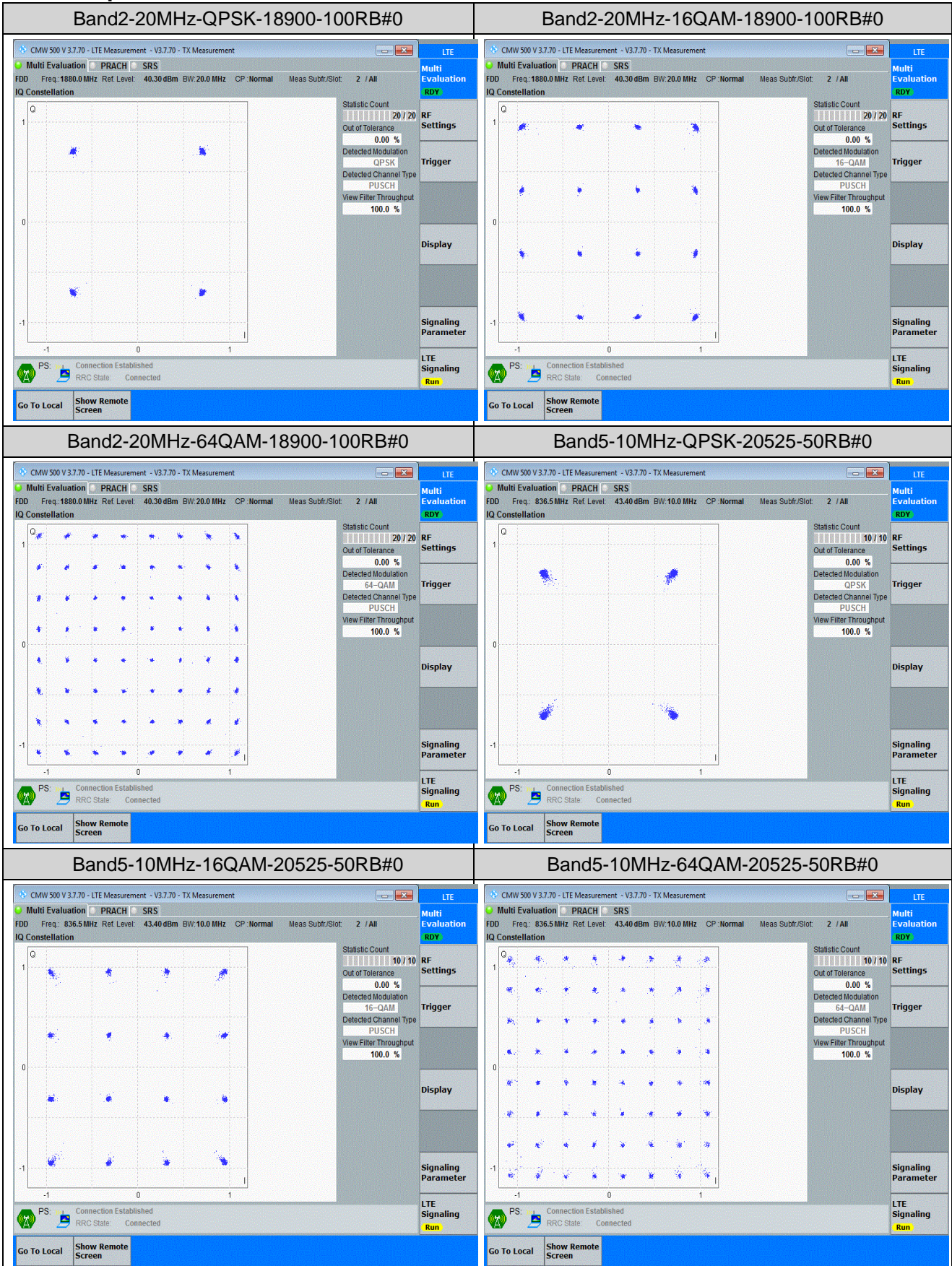
## Appendix G: Modulation Characteristics

### Test Result

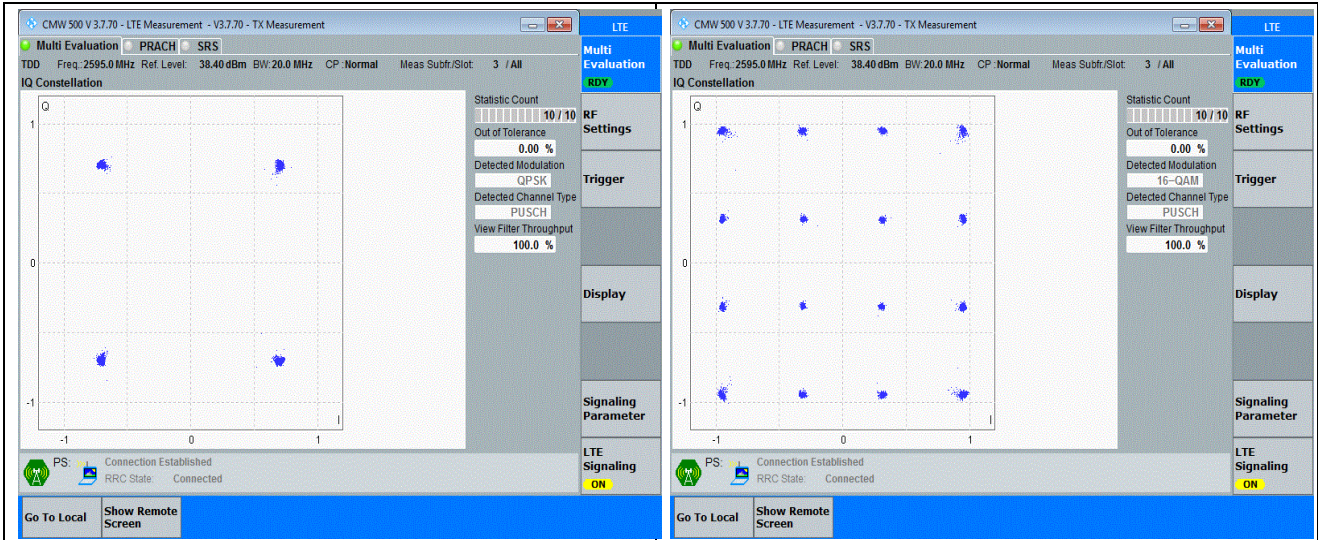
Band	Bandwidth	Modulation	Channel	RB Configuration	Result	Verdict
Band2	20MHz	QPSK	18900	100RB#0	PASS	PASS
Band2	20MHz	16QAM	18900	100RB#0	PASS	PASS
Band2	20MHz	64QAM	18900	100RB#0	PASS	PASS
Band5	10MHz	QPSK	20525	50RB#0	PASS	PASS
Band5	10MHz	16QAM	20525	50RB#0	PASS	PASS
Band5	10MHz	64QAM	20525	50RB#0	PASS	PASS
Band12	10MHz	QPSK	23095	50RB#0	PASS	PASS
Band12	10MHz	16QAM	23095	50RB#0	PASS	PASS
Band12	10MHz	64QAM	23095	50RB#0	PASS	PASS
Band17	10MHz	QPSK	23790	50RB#0	PASS	PASS
Band17	10MHz	16QAM	23790	50RB#0	PASS	PASS
Band17	10MHz	64QAM	23790	50RB#0	PASS	PASS
Band41	20MHz	QPSK	40640	100RB#0	PASS	PASS
Band41	20MHz	16QAM	40640	100RB#0	PASS	PASS
Band41	20MHz	64QAM	40640	100RB#0	PASS	PASS
Band66	20MHz	QPSK	132322	100RB#0	PASS	PASS
Band66	20MHz	16QAM	132322	100RB#0	PASS	PASS
Band66	20MHz	64QAM	132322	100RB#0	PASS	PASS
Band71	20MHz	QPSK	133322	100RB#0	PASS	PASS
Band71	20MHz	16QAM	133322	100RB#0	PASS	PASS
Band71	20MHz	64QAM	133322	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

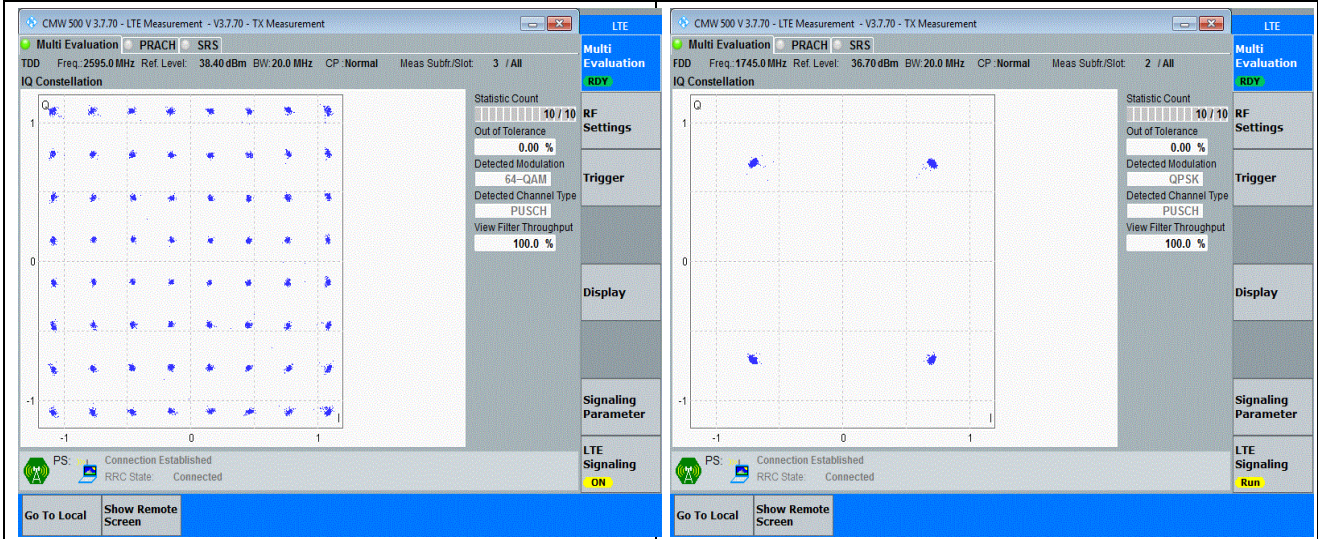


<p align="center"><b>Band12-10MHz-QPSK-23095-50RB#0</b></p>	<p align="center"><b>Band12-10MHz-16QAM-23095-50RB#0</b></p>
<p align="center"><b>Band12-10MHz-64QAM-23095-50RB#0</b></p>	<p align="center"><b>Band17-10MHz-QPSK-23790-50RB#0</b></p>
<p align="center"><b>Band17-10MHz-16QAM-23790-50RB#0</b></p>	<p align="center"><b>Band17-10MHz-64QAM-23790-50RB#0</b></p>
<p align="center"><b>Band41-20MHz-QPSK-40640-100RB#0</b></p>	<p align="center"><b>Band41-20MHz-16QAM-40640-100RB#0</b></p>



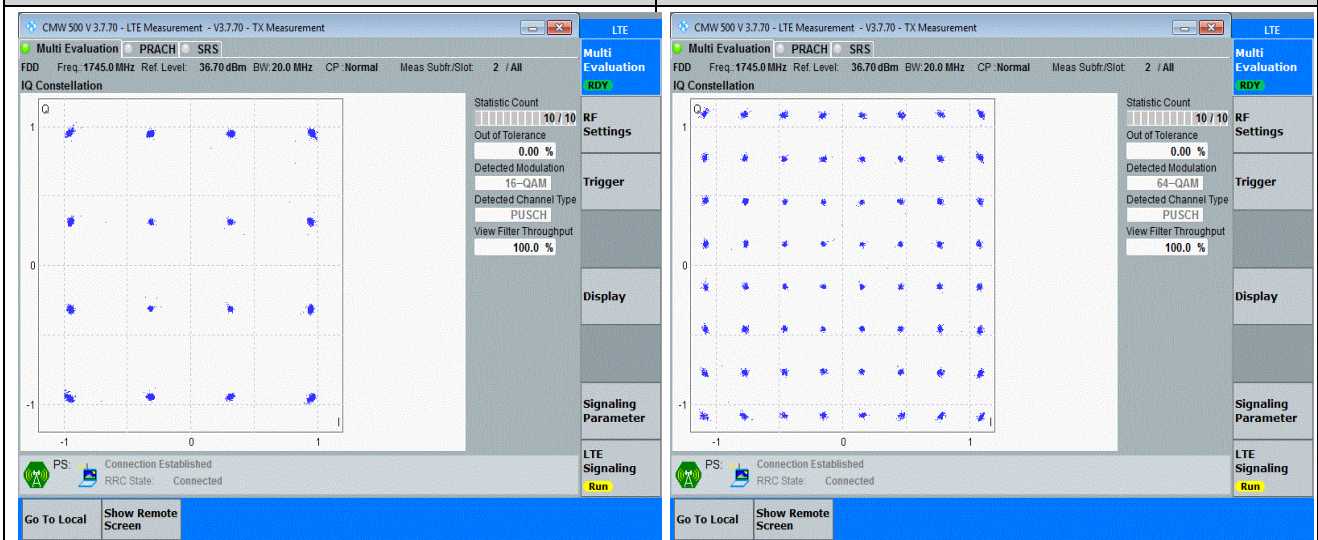
Band41-20MHz-64QAM-40640-100RB#0

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



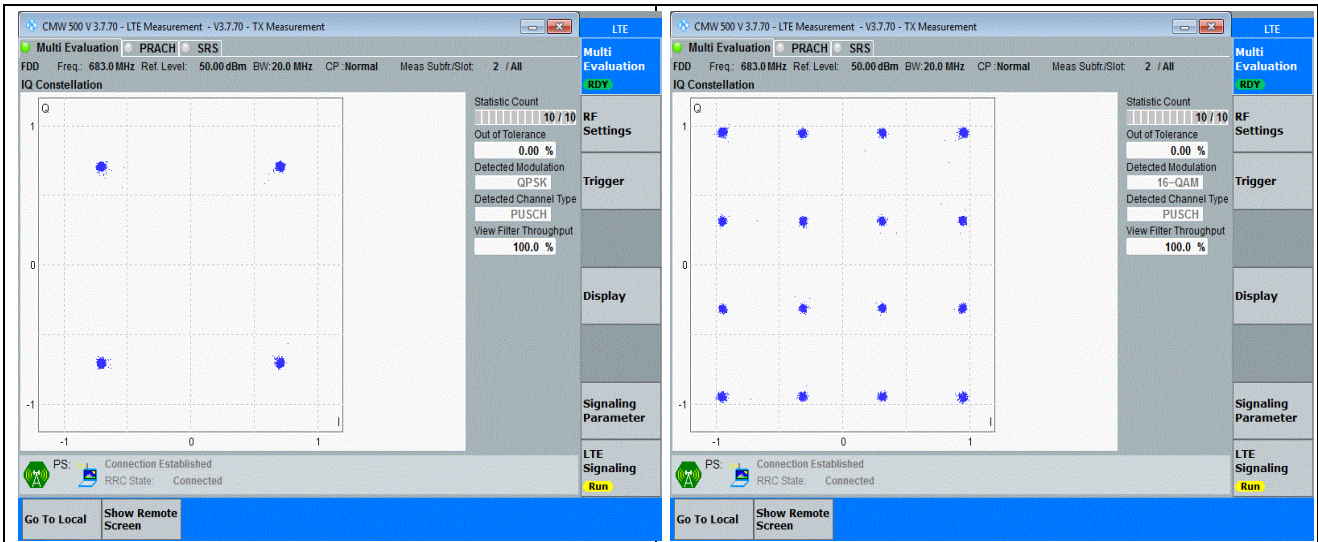
Band66-20MHz-16QAM-132322-100RB#0

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



Band71-20MHz-QPSK-133322-100RB#0

Band71-20MHz-16QAM-133322-100RB#0



**Band71-20MHz-64QAM-133322-100RB#0**

