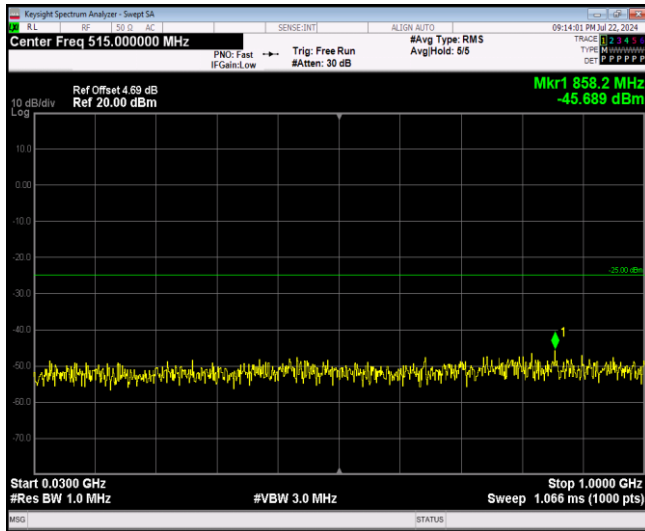
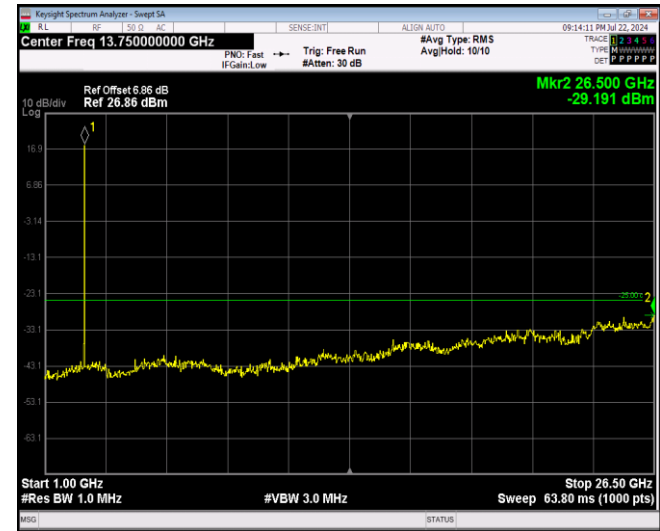


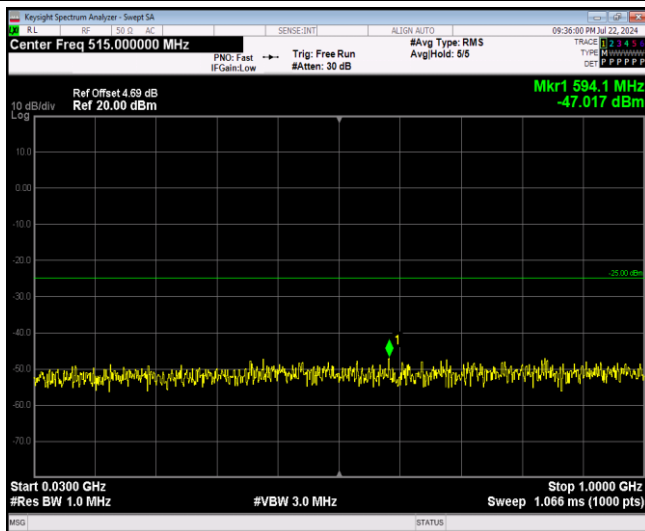
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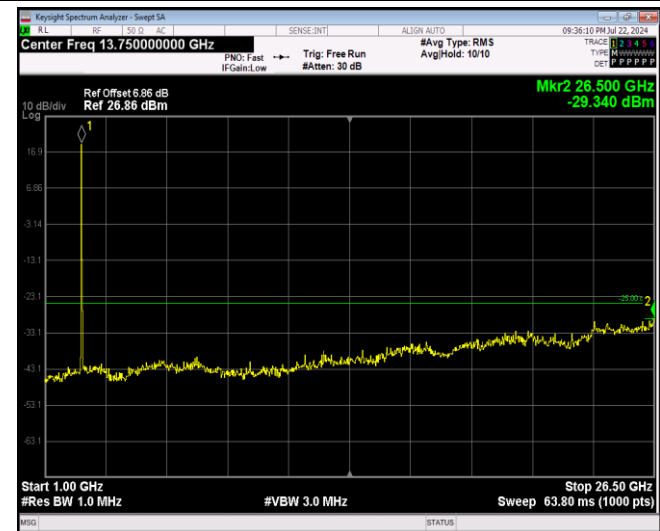
Band41-5MHz-64QAM-41215-1RB#0-Range2:1000~26500MHz



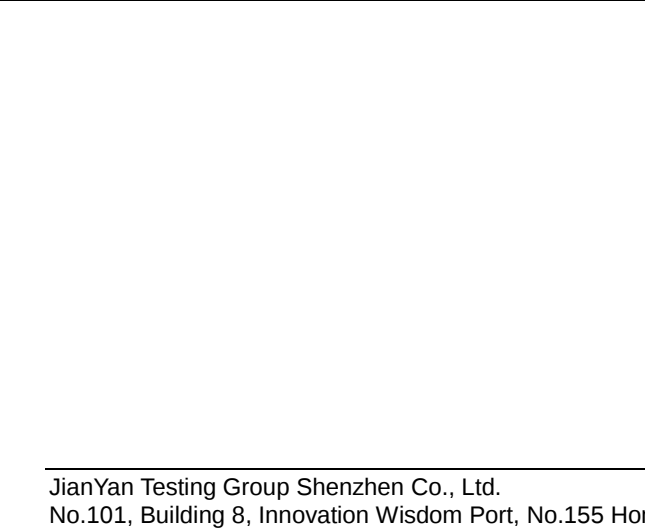
Band41-20MHz-QPSK-40140-1RB#0-Range1:30~1000MHz



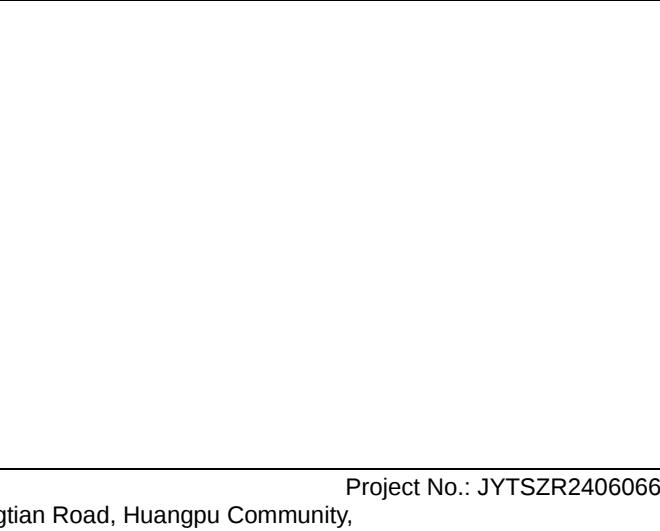
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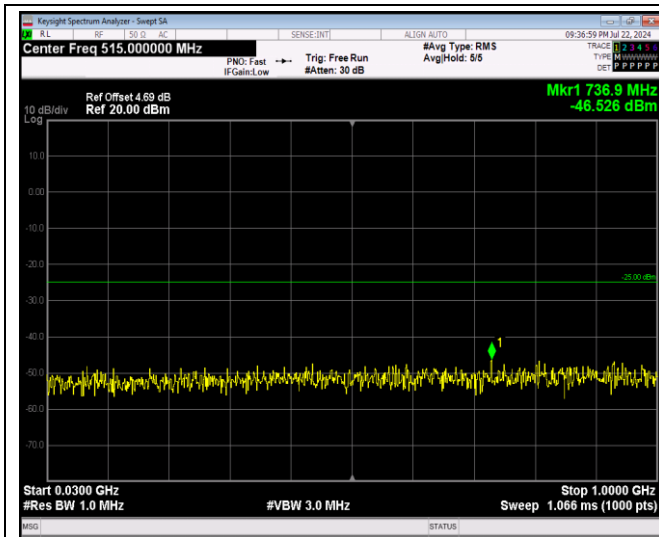


Band41-20MHz-QPSK-40640-1RB#0-Range1:30~1000MHz

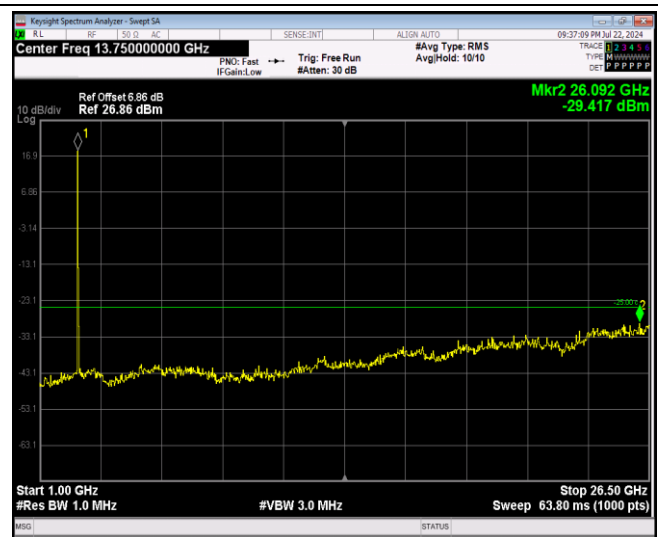


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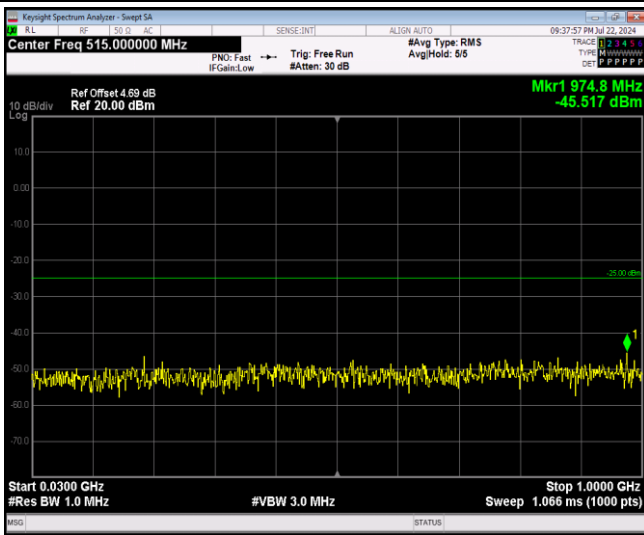




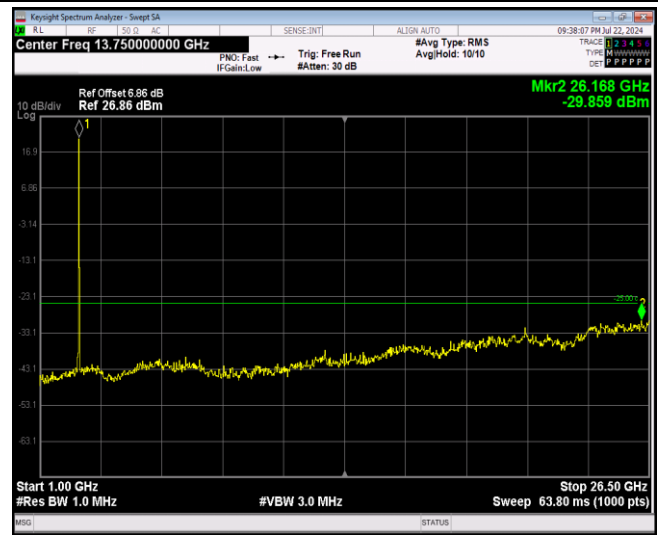
Band41-20MHz-QPSK-41140-1RB#0-Range1:30~1000MHz



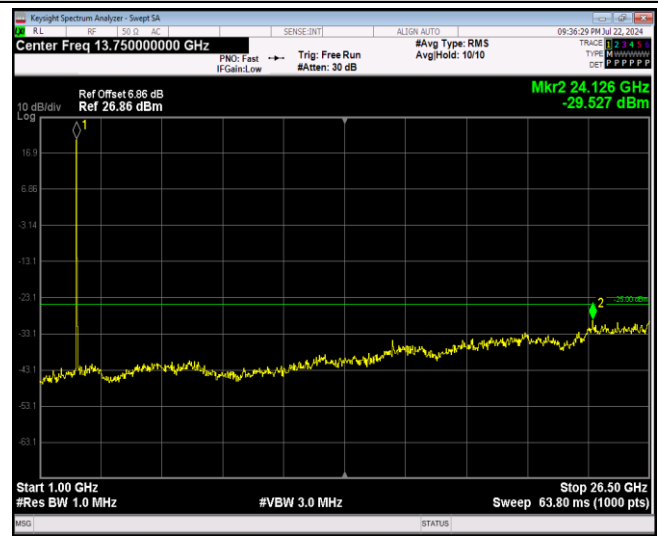
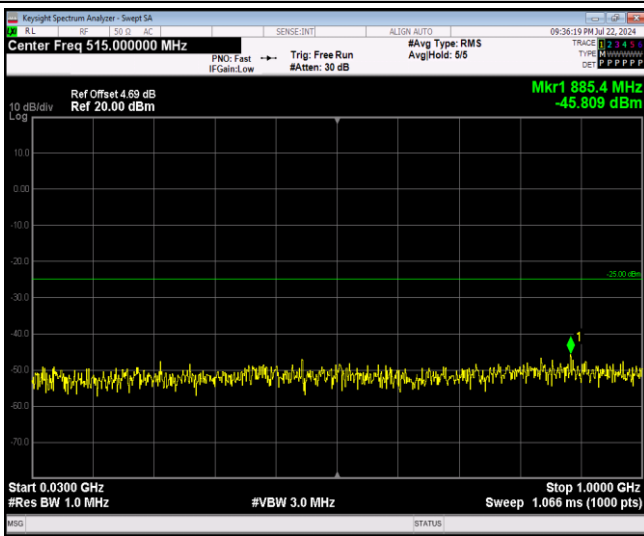
Band41-20MHz-QPSK-41140-1RB#0-Range2:1000~26500MHz



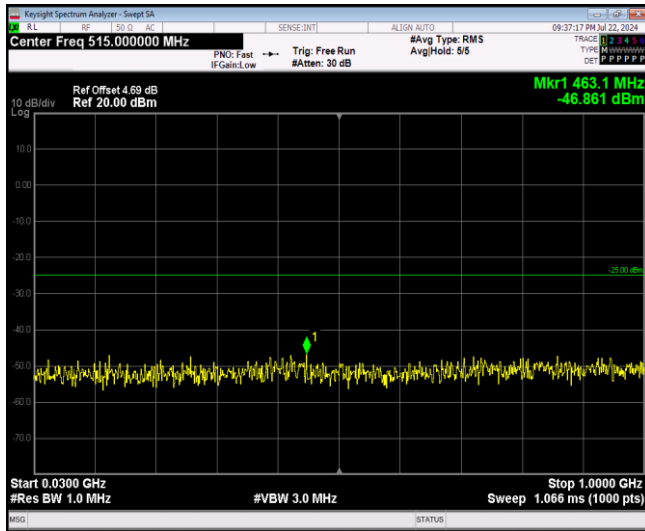
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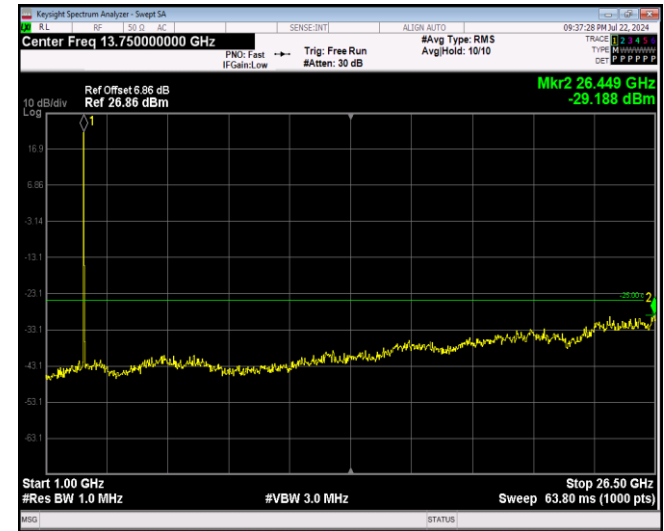
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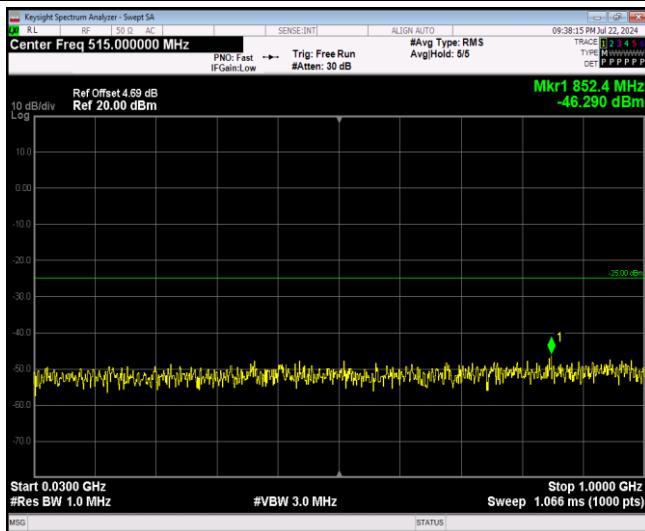
Band41-20MHz-16QAM-40640-1RB#0-Range1:30~1
000MHz



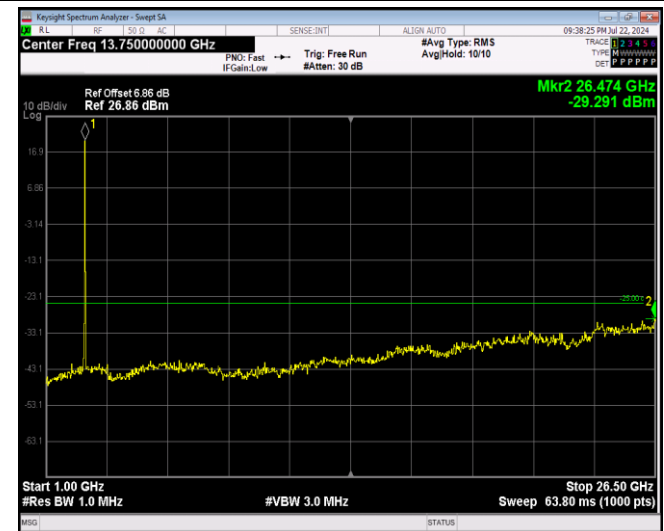
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6500MHz



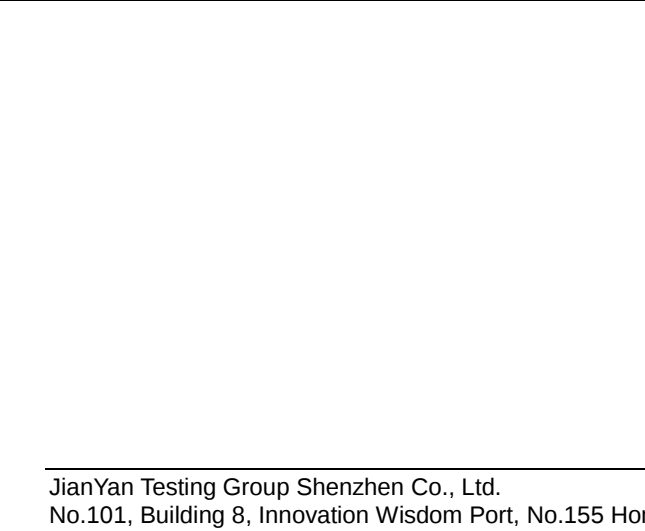
Band41-20MHz-16QAM-41140-1RB#0-Range1:30~1
000MHz



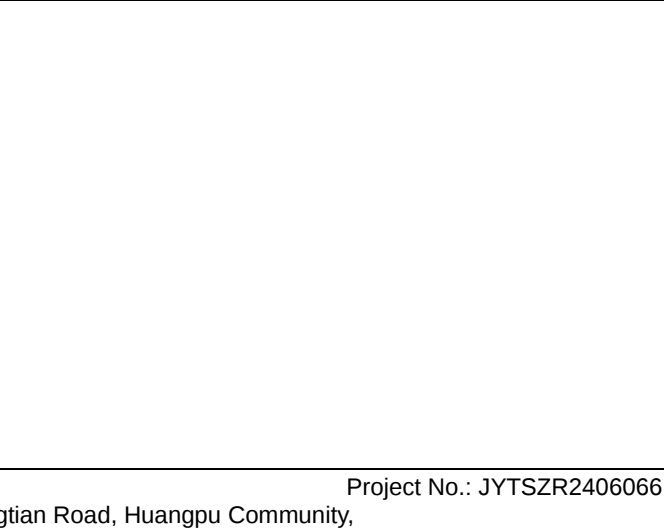
Band41-20MHz-16QAM-41140-1RB#0-Range2:1000~2
6500MHz

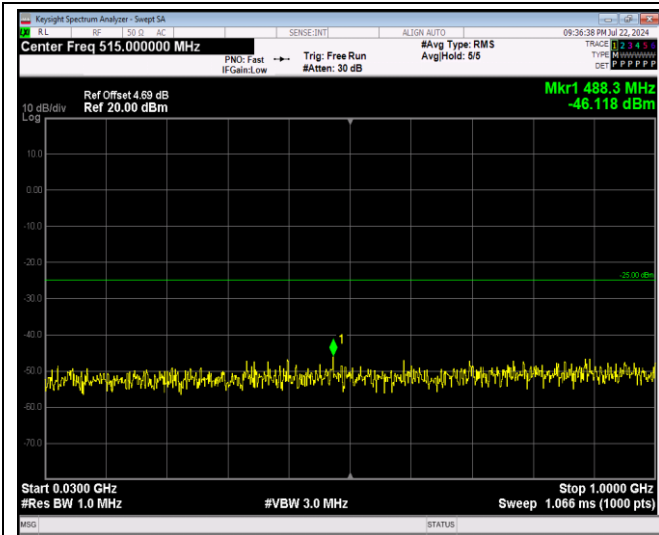


Band41-20MHz-64QAM-40140-1RB#0-Range1:30~1
000MHz

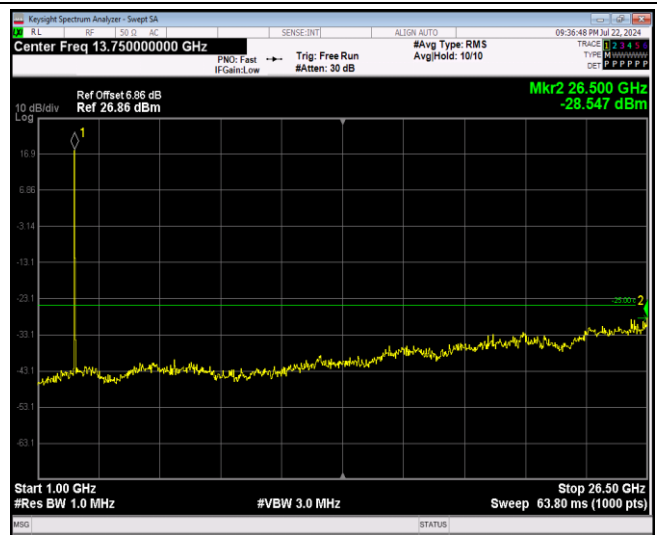


Band41-20MHz-64QAM-40140-1RB#0-Range2:1000~2
6500MHz

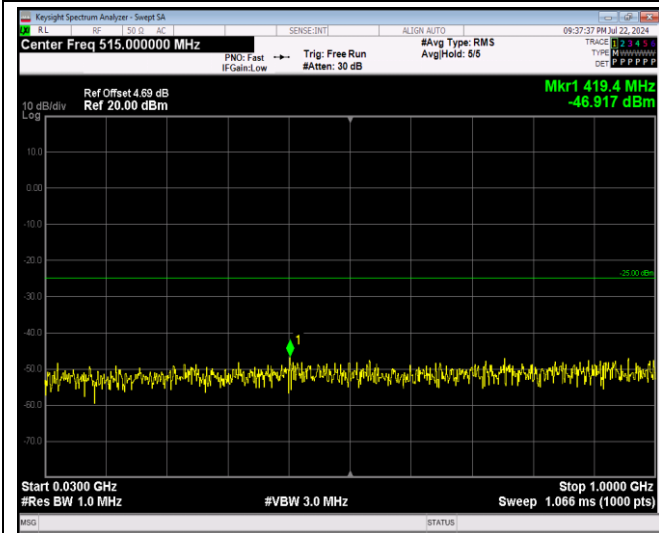




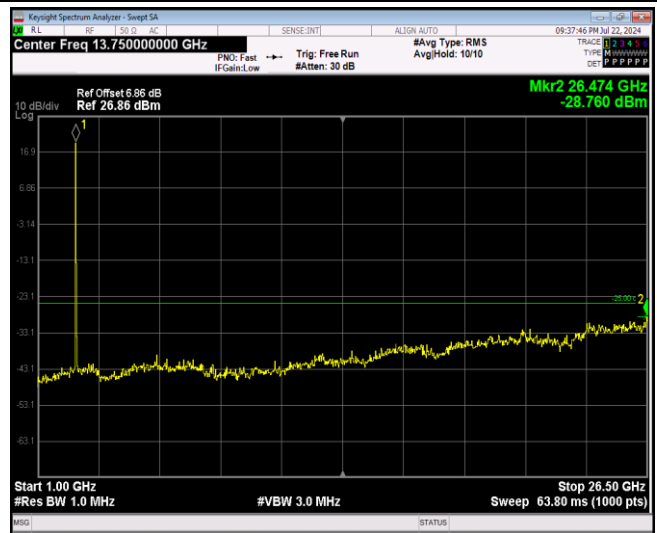
Band41-20MHz-64QAM-40640-1RB#0-Range1:30~1000MHz



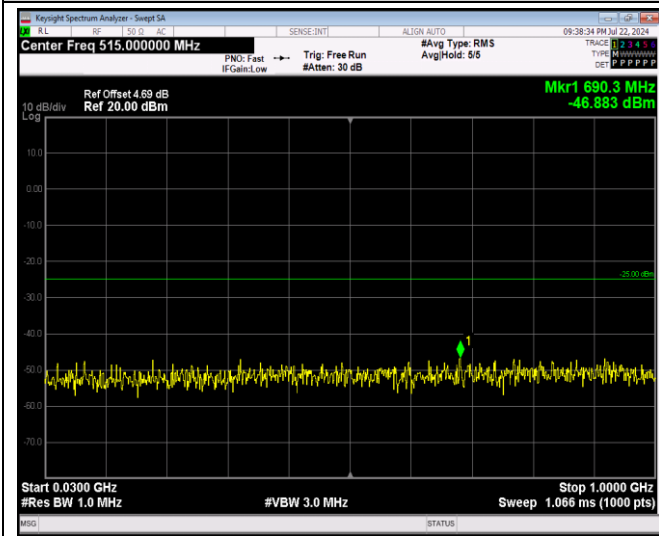
Band41-20MHz-64QAM-40640-1RB#0-Range2:1000~26500MHz



Band41-20MHz-64QAM-41140-1RB#0-Range1:30~1000MHz



Band41-20MHz-64QAM-41140-1RB#0-Range2:1000~26500MHz



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	-12.90	-0.006862	Within authorized band for Band 2	Pass
	-20	-11.46	-0.006096		
	-10	12.46	0.006628		
	0	-10.34	-0.005500		
	10	10.63	0.005654		
	20	6.78	0.003606		
	30	6.51	0.003463		
	40	7.32	0.003894		
	50	-6.22	-0.003309		
16QAM					
3.87	-30	-6.27	-0.003335	Within authorized band for Band 2	Pass
	-20	-11.94	-0.006351		
	-10	13.76	0.007319		
	0	4.42	0.002351		
	10	8.75	0.004654		
	20	2.43	0.001293		
	30	-12.70	-0.006755		
	40	-10.50	-0.005585		
	50	-17.65	-0.009388		
64QAM					
3.87	-30	-7.51	-0.003995	Within authorized band for Band 2	Pass
	-20	10.39	0.005527		
	-10	11.92	0.006340		
	0	8.67	0.004612		
	10	-6.39	-0.003399		
	20	-7.74	-0.004117		
	30	-6.59	-0.003505		
	40	2.55	0.001356		
	50	-10.76	-0.005723		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-11.01	-0.005856	Within authorized band for Band 2	Pass
	3.87	-10.26	-0.005457		
	4.45	-14.32	-0.007617		
16QAM					
25	3.45	-8.57	-0.004559	Within authorized band for Band 2	Pass
	3.87	-7.25	-0.003856		
	4.45	11.59	0.006165		
64QAM					
25	3.45	-12.49	-0.006644	Within authorized band for Band 2	Pass
	3.87	-11.22	-0.005968		
	4.45	-13.59	-0.007229		
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	6.21	0.003584	Within authorized band for Band 4	Pass
	-20	5.58	0.003221		
	-10	-10.99	-0.006343		
	0	-12.02	-0.006938		
	10	-11.07	-0.006390		
	20	-11.79	-0.006805		
	30	-9.04	-0.005218		
	40	-10.30	-0.005945		
	50	-8.98	-0.005183		
16QAM					
3.87	-30	8.41	0.004854	Within authorized band for Band 4	Pass
	-20	-10.97	-0.006332		
	-10	-9.76	-0.005633		
	0	-9.77	-0.005639		
	10	-6.90	-0.003983		
	20	-5.64	-0.003255		
	30	-4.98	-0.002874		
	40	-5.15	-0.002973		
	50	8.53	0.004924		
64QAM					
3.87	-30	-1.70	-0.000981	Within authorized band for Band 4	Pass
	-20	6.15	0.003550		
	-10	9.21	0.005316		
	0	-9.60	-0.005541		
	10	-7.55	-0.004358		
	20	-4.52	-0.002609		
	30	-5.16	-0.002978		
	40	-8.65	-0.004993		
	50	-6.27	-0.003619		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-9.43	-0.005443	Within authorized band for Band 4	Pass
	3.87	4.89	0.002823		
	4.45	-7.18	-0.004144		
16QAM					
25	3.45	-8.34	-0.004814	Within authorized band for Band 4	Pass
	3.87	-8.04	-0.004641		
	4.45	9.47	0.005466		
64QAM					
25	3.45	-1.26	-0.000727	Within authorized band for Band 4	Pass
	3.87	-6.08	-0.003509		
	4.45	9.48	0.005472		
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	-5.65	-0.006754	±2.5	Pass
	-20	-7.14	-0.008536		
	-10	-4.63	-0.005535		
	0	-5.66	-0.006766		
	10	-5.64	-0.006742		
	20	-3.60	-0.004304		
	30	-3.08	-0.003682		
	40	-4.69	-0.005607		
	50	-4.51	-0.005392		
16QAM					
3.87	-30	-5.05	-0.006037	±2.5	Pass
	-20	-4.49	-0.005368		
	-10	-4.86	-0.005810		
	0	-5.84	-0.006981		
	10	-5.92	-0.007077		
	20	-2.13	-0.002546		
	30	-6.98	-0.008344		
	40	-4.38	-0.005236		
	50	-5.64	-0.006742		
64QAM					
3.87	-30	-3.88	-0.004638	±2.5	Pass
	-20	-6.42	-0.007675		
	-10	-1.77	-0.002116		
	0	-3.63	-0.004340		
	10	-5.35	-0.006396		
	20	-4.55	-0.005439		
	30	-1.83	-0.002188		
	40	1.12	0.001339		
	50	-4.76	-0.005690		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-4.73	-0.005655	±2.5	Pass
	3.87	-5.56	-0.006647		
	4.45	-3.86	-0.004614		
16QAM					
25	3.45	-5.51	-0.006587	±2.5	Pass
	3.87	-8.01	-0.009576		
	4.45	-5.99	-0.007161		
64QAM					
25	3.45	-6.31	-0.007543	±2.5	Pass
	3.87	4.61	0.005511		
	4.45	4.61	0.005511		
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	-16.65	-0.006568	Within authorized band for Band 7	Pass
	-20	-12.09	-0.004769		
	-10	-10.69	-0.004217		
	0	-7.82	-0.003085		
	10	-11.04	-0.004355		
	20	-17.09	-0.006742		
	30	3.00	0.001183		
	40	-12.66	-0.004994		
	50	-14.85	-0.005858		
16QAM					
3.87	-30	-10.91	-0.004304	Within authorized band for Band 7	Pass
	-20	6.87	0.002710		
	-10	-14.81	-0.005842		
	0	-4.98	-0.001964		
	10	-14.96	-0.005901		
	20	11.83	0.004667		
	30	-7.27	-0.002868		
	40	-4.92	-0.001941		
	50	-16.98	-0.006698		
64QAM					
3.87	-30	10.19	0.004020	Within authorized band for Band 7	Pass
	-20	15.72	0.006201		
	-10	-13.98	-0.005515		
	0	-11.30	-0.004458		
	10	-12.33	-0.004864		
	20	-12.04	-0.004750		
	30	9.91	0.003909		
	40	11.33	0.004469		
	50	-7.68	-0.003030		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-8.03	-0.003168	Within authorized band for Band 7	Pass
	3.87	-4.08	-0.001609		
	4.45	-12.09	-0.004769		
16QAM					
25	3.45	13.83	0.005456	Within authorized band for Band 7	Pass
	3.87	-16.42	-0.006477		
	4.45	15.16	0.005980		
64QAM					
25	3.45	10.76	0.004245	Within authorized band for Band 7	Pass
	3.87	-17.27	-0.006813		
	4.45	-20.61	-0.008130		
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	-9.23	-0.003557	Within authorized band for Band 41	Pass
	-20	-10.00	-0.003854		
	-10	-7.30	-0.002813		
	0	-3.89	-0.001499		
	10	-11.03	-0.004250		
	20	-1.59	-0.000613		
	30	-4.66	-0.001796		
	40	-6.38	-0.002459		
	50	3.26	0.001256		
16QAM					
3.87	-30	-5.01	-0.001931	Within authorized band for Band 41	Pass
	-20	-4.55	-0.001753		
	-10	-5.61	-0.002162		
	0	-6.79	-0.002617		
	10	-9.57	-0.003688		
	20	4.05	0.001561		
	30	-5.19	-0.002000		
	40	-5.65	-0.002177		
	50	1.79	0.000690		
64QAM					
3.87	-30	-6.24	-0.002405	Within authorized band for Band 41	Pass
	-20	-8.33	-0.003210		
	-10	-3.38	-0.001303		
	0	6.44	0.002482		
	10	-3.32	-0.001279		
	20	-4.95	-0.001908		
	30	2.10	0.000809		
	40	-7.37	-0.002840		
	50	-5.94	-0.002289		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-5.94	-0.002289	Within authorized band for Band 41	Pass
	3.87	-10.53	-0.004058		
	4.45	-9.23	-0.003557		
16QAM					
25	3.45	-3.76	-0.001449	Within authorized band for Band41	Pass
	3.87	-3.52	-0.001356		
	4.45	-2.95	-0.001137		
64QAM					
25	3.45	-11.12	-0.004285	Within authorized band for Band41	Pass
	3.87	2.60	0.001002		
	4.45	3.78	0.001457		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					

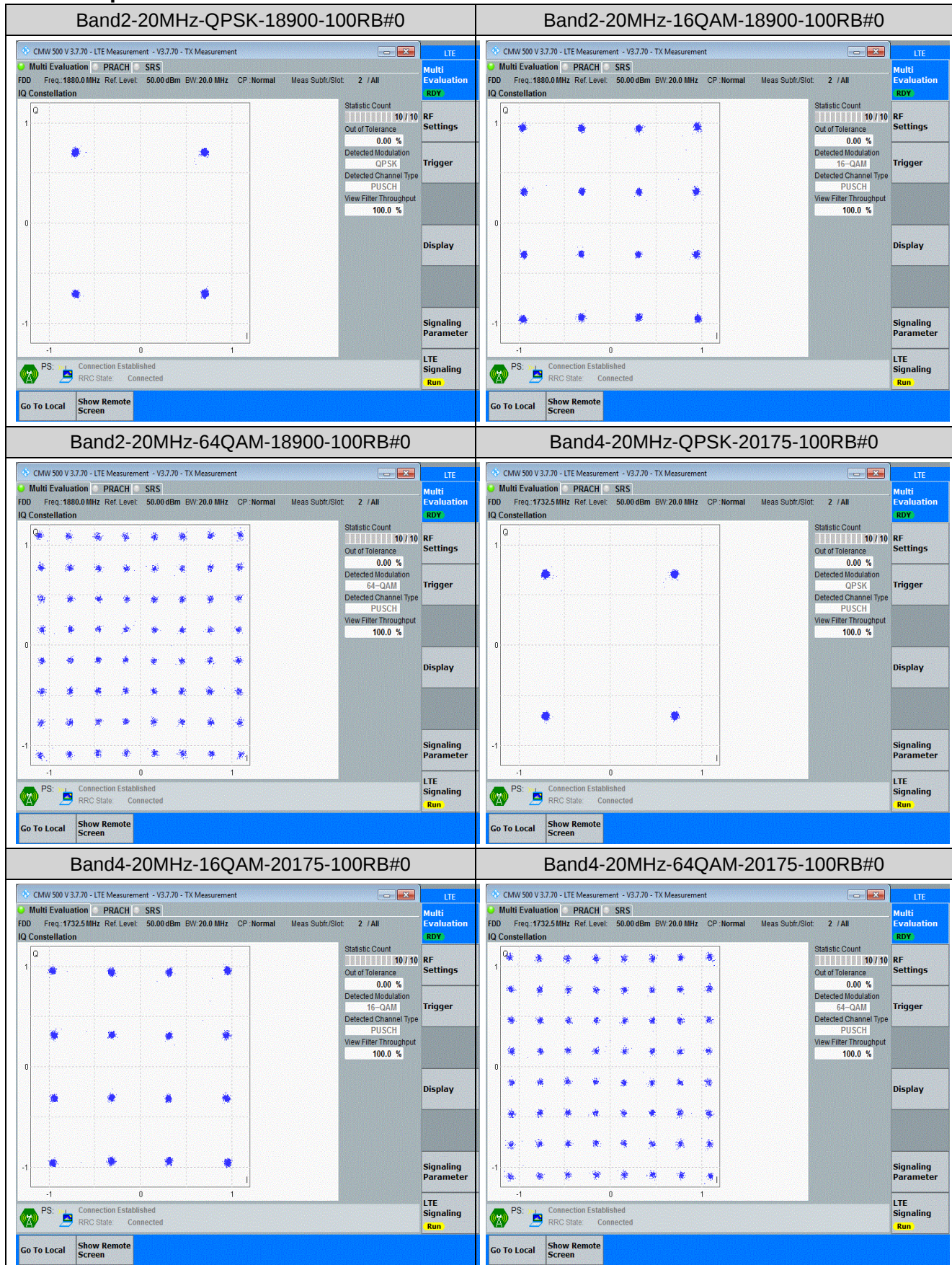
Appendix G: Modulation Characteristics

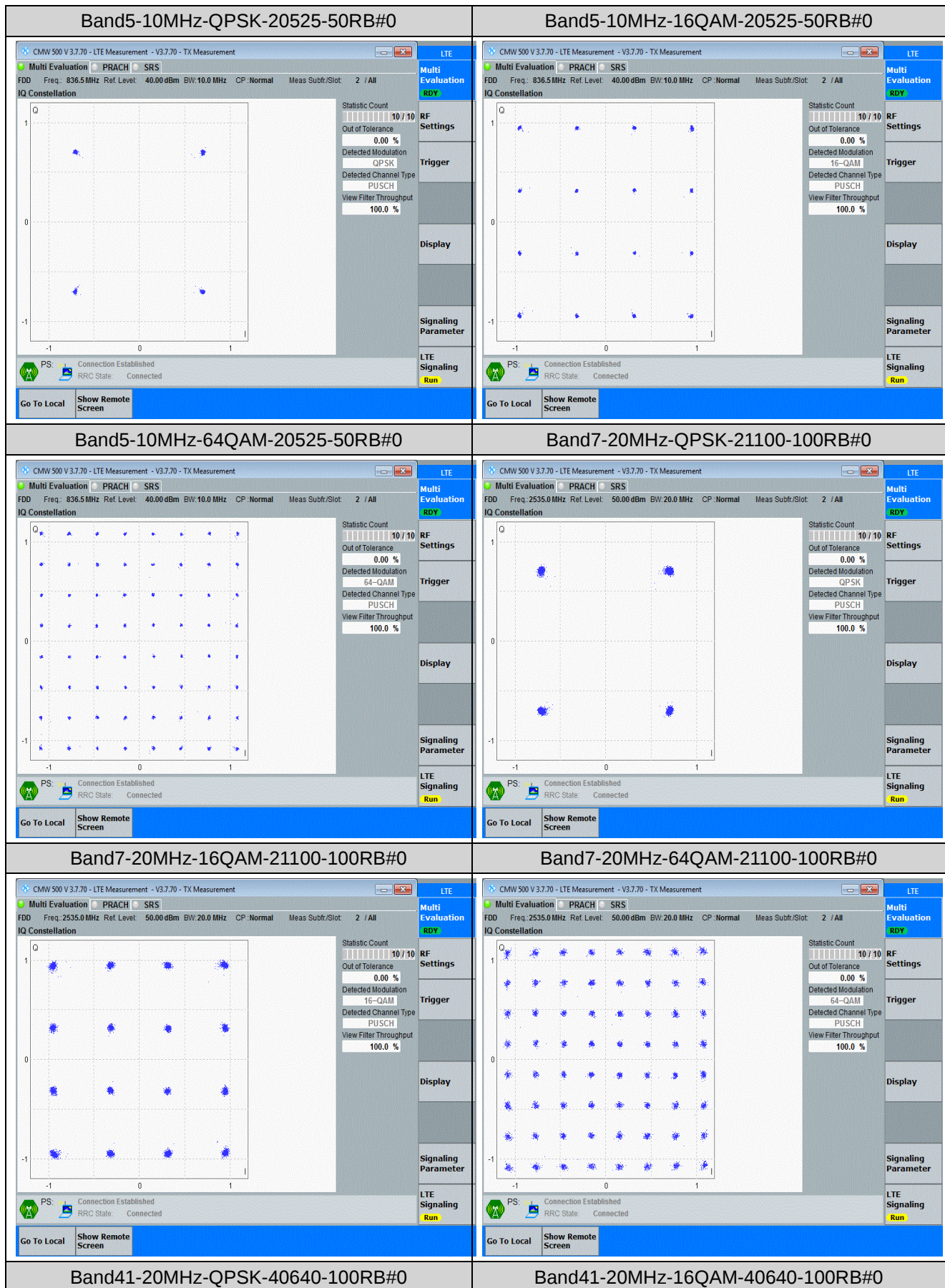
Test Result

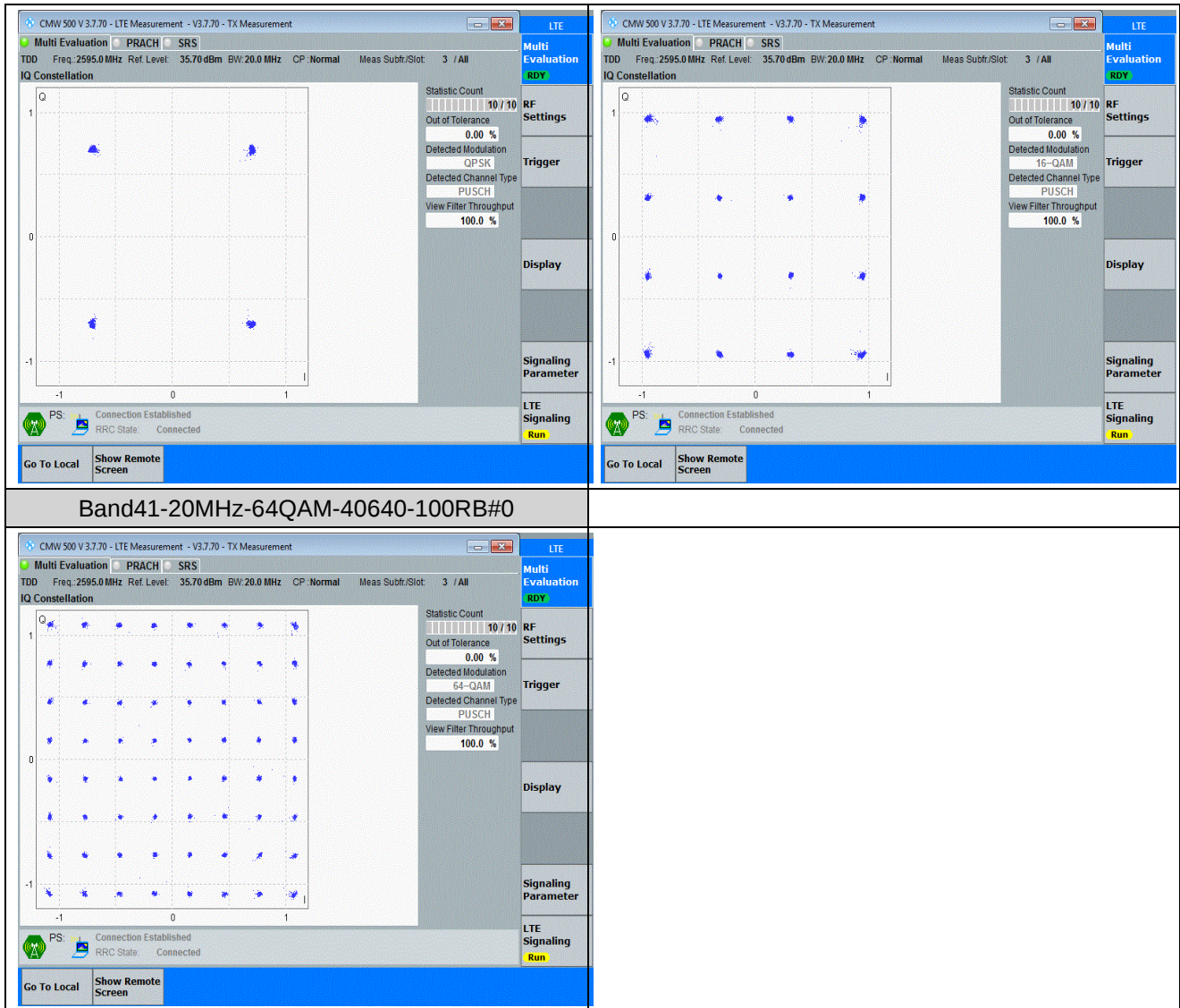
Band	Bandwidth	Modulation	Channel	RB Configuration	Result	Verdict
Band2	20MHz	QPSK	18900	100RB#0	PASS	PASS
Band2	20MHz	16QAM	18900	100RB#0	PASS	PASS
Band2	20MHz	64QAM	18900	100RB#0	PASS	PASS
Band4	20MHz	QPSK	20175	100RB#0	PASS	PASS
Band4	20MHz	16QAM	20175	100RB#0	PASS	PASS
Band4	20MHz	64QAM	20175	100RB#0	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
Band7	20MHz	QPSK	21100	100RB#0	PASS	PASS
Band7	20MHz	16QAM	21100	100RB#0	PASS	PASS
Band7	20MHz	64QAM	21100	100RB#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

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

Test Graphs







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