



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

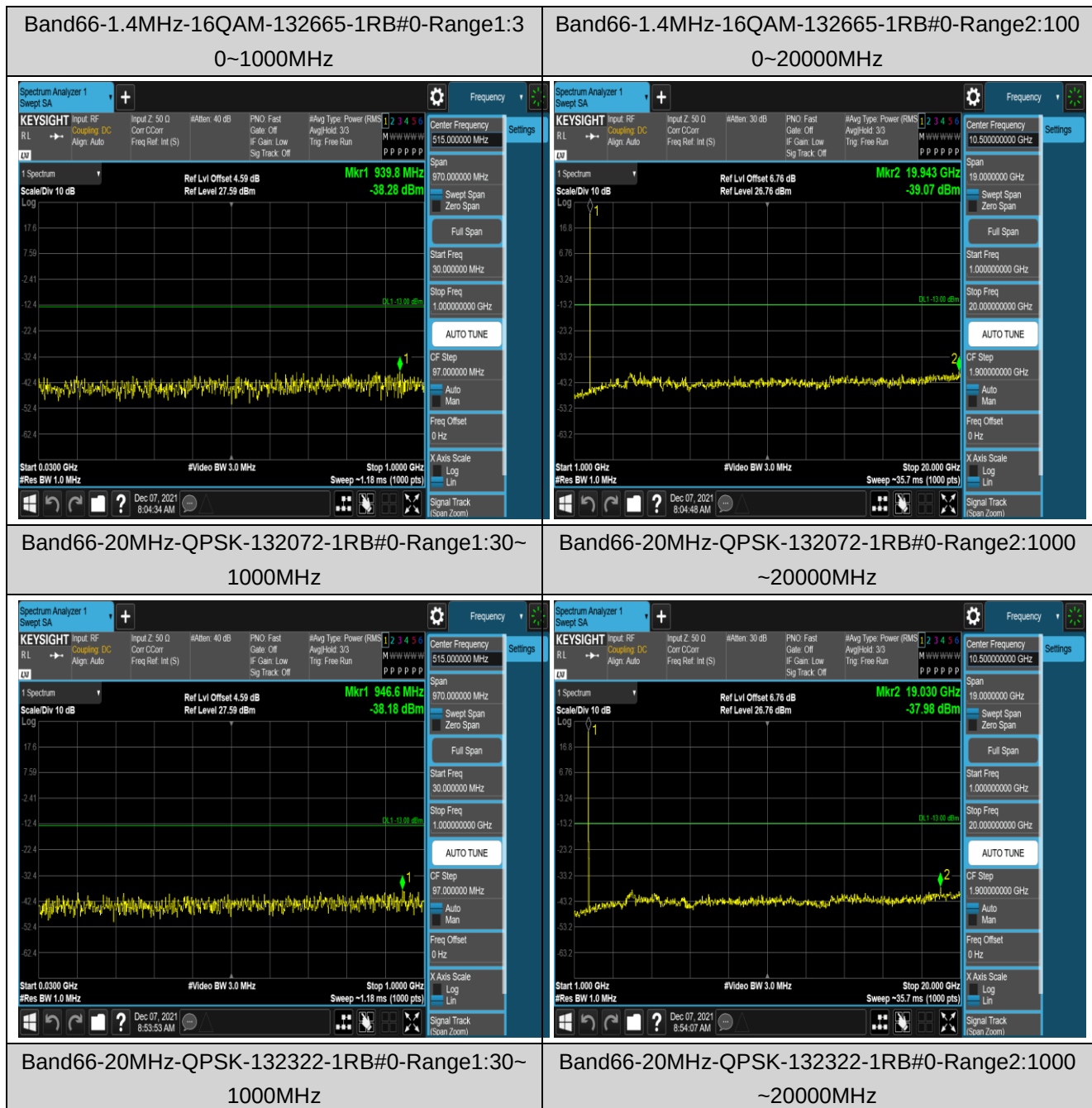
Band66-1.4MHz-16QAM-131979-1RB#0-Range2:100
0~20000MHz



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

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

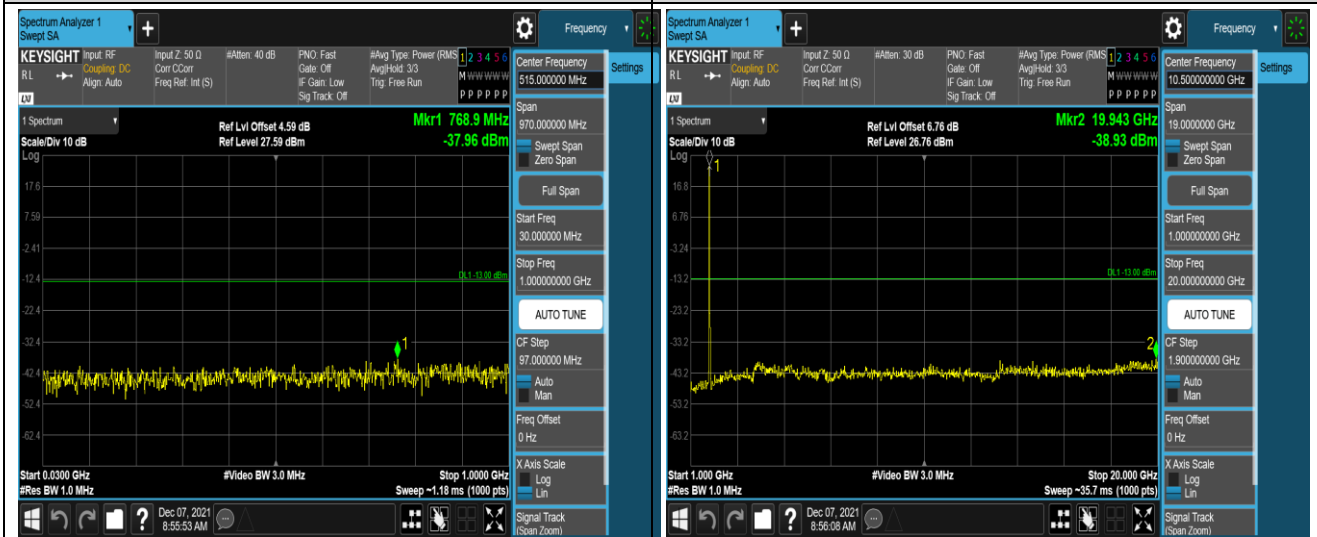






Band66-20MHz-QPSK-132572-1RB#0-Range1:30~1000MHz

Band66-20MHz-QPSK-132572-1RB#0-Range2:1000~20000MHz



Band66-20MHz-16QAM-132072-1RB#0-Range1:30~1000MHz

Band66-20MHz-16QAM-132072-1RB#0-Range2:1000~20000MHz



Band66-20MHz-16QAM-132322-1RB#0-Range1:30
~1000MHz



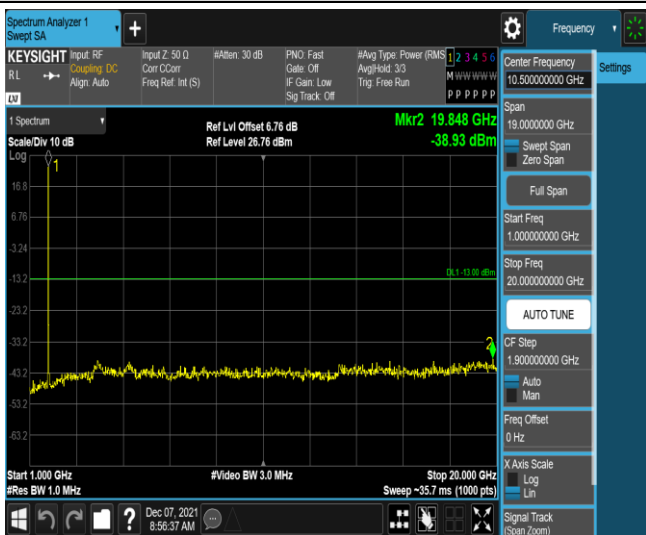
Band66-20MHz-16QAM-132322-1RB#0-Range2:100
0~20000MHz



Band66-20MHz-16QAM-132572-1RB#0-Range1:30
~1000MHz



Band66-20MHz-16QAM-132572-1RB#0-Range2:100
0~20000MHz



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					
3.85	-30	-5.68	-0.003021	Within authorized band for Band 2	Pass
	-20	-15.51	-0.00825		
	-10	-13.33	-0.00709		
	0	-15.92	-0.008468		
	10	-3.45	-0.001835		
	20	-19.93	-0.010601		
	30	-14.25	-0.00758		
	40	8.77	0.004665		
	50	-3.3	-0.001755		
16QAM					
3.85	-30	-5.19	-0.002761	Within authorized band for Band 2	Pass
	-20	-6.11	-0.00325		
	-10	-12.87	-0.006846		
	0	-17.74	-0.009436		
	10	-9.91	-0.005271		
	20	-2.69	-0.001431		
	30	-3.69	-0.001963		
	40	-11.76	-0.006255		
	50	-8.71	-0.004633		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-13.69	-0.007282	Within authorized band for Band 2	Pass
	3.85	-17.8	-0.009468		
	4.40	-15.39	-0.008186		
16QAM					
25	3.50	-14.18	-0.007543	Within authorized band for Band 2	Pass
	3.85	-4.35	-0.002314		
	4.40	-12.83	-0.006824		
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					
3.85	-30	-8.77	-0.005062	Within authorized band for Band 4	Pass
	-20	-12.97	-0.007486		
	-10	-10.81	-0.00624		
	0	-3.88	-0.00224		
	10	-13.36	-0.007711		
	20	-11.63	-0.006713		
	30	-6.04	-0.003486		
	40	-14.82	-0.008554		
	50	-6.21	-0.003584		
16QAM					
3.85	-30	-5.31	-0.003065	Within authorized band for Band 4	Pass
	-20	-12.26	-0.007076		
	-10	-10.11	-0.005835		
	0	-6.94	-0.004006		
	10	-11.17	-0.006447		
	20	-11.5	-0.006638		
	30	2.73	0.001576		
	40	-10.64	-0.006141		
	50	-5.84	-0.003371		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-10.91	-0.006297	Within authorized band for Band 4	Pass
	3.85	-12.22	-0.007053		
	4.40	-13.16	-0.007596		
16QAM					
25	3.50	-15.56	-0.008981	Within authorized band for Band 4	Pass
	3.85	-10.59	-0.006113		
	4.40	-14.81	-0.008548		
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					
3.85	-30	-7.4	-0.008846	±2.5	Pass
	-20	-11.03	-0.013186		
	-10	-6.08	-0.007268		
	0	-15.68	-0.018745		
	10	-4.55	-0.005439		
	20	-10.14	-0.012122		
	30	-9.58	-0.011452		
	40	-9.43	-0.011273		
	50	-2.93	-0.003503		
16QAM					
3.85	-30	-11.03	-0.013186	±2.5	Pass
	-20	-11	-0.01315		
	-10	3.09	0.003694		
	0	-6.95	-0.008308		
	10	-3.68	-0.004399		
	20	-5.14	-0.006145		
	30	-6.78	-0.008105		
	40	-12.95	-0.015481		
	50	-9.4	-0.011237		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-5.45	-0.006515	±2.5	Pass
	3.85	-8.43	-0.010078		
	4.40	-4.96	-0.005929		
16QAM					
25	3.50	-10.39	-0.012421	±2.5	Pass
	3.85	-11.19	-0.013377		
	4.40	-10.51	-0.012564		
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					
3.85	-30	-7.15	-0.002821	Within authorized band for Band 7	Pass
	-20	-9.03	-0.003562		
	-10	-24.76	-0.009767		
	0	-7.28	-0.002872		
	10	-8.9	-0.003511		
	20	-8.65	-0.003412		
	30	-19.71	-0.007775		
	40	7.48	0.002951		
	50	-15.18	-0.005988		
16QAM					
3.85	-30	-21.69	-0.008556	Within authorized band for Band 7	Pass
	-20	-14.53	-0.005732		
	-10	-5.02	-0.00198		
	0	-9.81	-0.00387		
	10	8.2	0.003235		
	20	5.56	0.002193		
	30	6.12	0.002414		
	40	9.28	0.003661		
	50	-9.46	-0.003732		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-16.02	-0.00632	Within authorized band for Band 7	Pass
	3.85	-17.31	-0.006828		
	4.40	-15.22	-0.006004		
16QAM					
25	3.50	-16.81	-0.006631	Within authorized band for Band 7	Pass
	3.85	-16.78	-0.006619		
	4.40	-18.12	-0.007148		
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	-8.27	-0.011689	Within authorized band for Band 12	Pass
	-20	-12.23	-0.017286		
	-10	-9.36	-0.01323		
	0	-11.54	-0.016311		
	10	-8.94	-0.012636		
	20	-2.26	-0.003194		
	30	-8.37	-0.01183		
	40	-1.89	-0.002671		
	50	-1.66	-0.002346		
16QAM					
3.85	-30	-3.85	-0.005442	Within authorized band for Band 12	Pass
	-20	-9.11	-0.012876		
	-10	-10.71	-0.015138		
	0	-7.71	-0.010898		
	10	-4.58	-0.006473		
	20	-12.12	-0.017131		
	30	-5.18	-0.007322		
	40	-4.46	-0.006304		
	50	-6.29	-0.00889		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	2.35	0.003322	Within authorized band for Band 12	Pass
	3.85	-1.85	-0.002615		
	4.40	-11.16	-0.015774		
16QAM					
25	3.50	-5.44	-0.007689	Within authorized band for Band 12	Pass
	3.85	-9.36	-0.01323		
	4.40	-6.84	-0.009668		
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 (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-8.08	-0.010332	Within authorized band for Band 13	Pass
	-20	-5.39	-0.006893		
	-10	-11.89	-0.015205		
	0	-11.72	-0.014987		
	10	-7.32	-0.009361		
	20	-7.34	-0.009386		
	30	-11.37	-0.01454		
	40	-12.2	-0.015601		
	50	-10.41	-0.013312		
16QAM					
3.85	-30	-18.1	-0.023146	Within authorized band for Band 13	Pass
	-20	-5.01	-0.006407		
	-10	-9.84	-0.012583		
	0	-10.79	-0.013798		
	10	-11.82	-0.015115		
	20	-9.06	-0.011586		
	30	-6.18	-0.007903		
	40	-9.28	-0.011867		
	50	-11.87	-0.015179		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-15.02	-0.019207	Within authorized band for Band 13	Pass
	3.85	4.15	0.005307		
	4.40	-11.84	-0.015141		
16QAM					
25	3.50	-9.13	-0.011675	Within authorized band for Band 13	Pass
	3.85	-9.93	-0.012698		
	4.40	-8.5	-0.01087		
Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.					