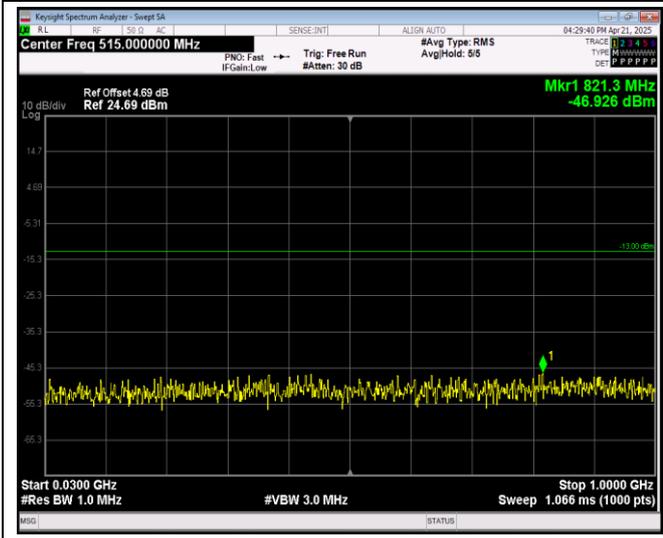


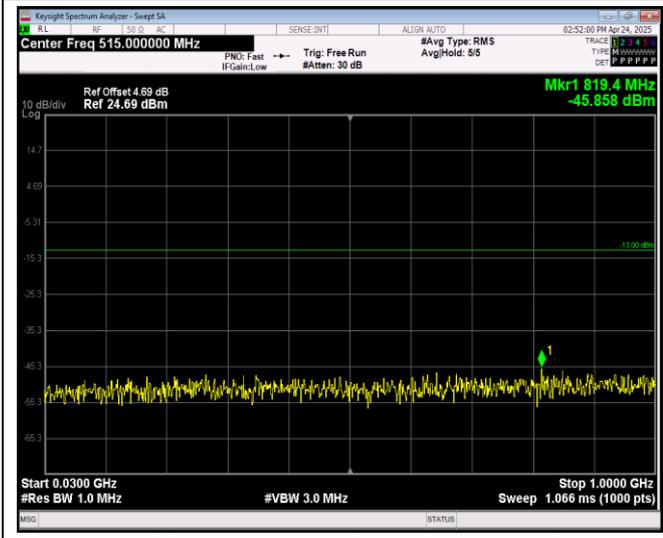
Band66-1.4MHz-64QAM-132665-1RB#0-Range1:30~1000MHz

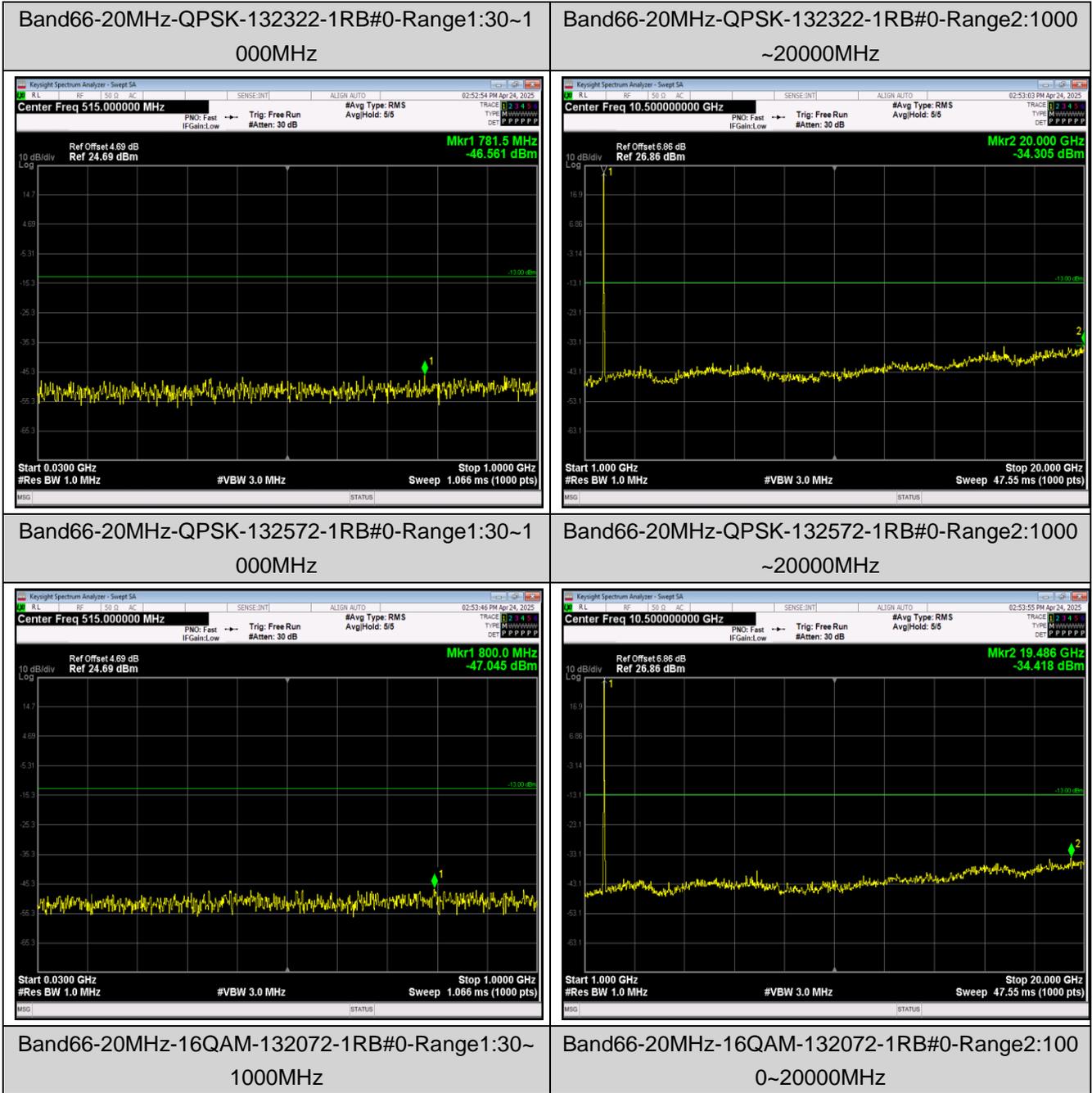
Band66-1.4MHz-64QAM-132665-1RB#0-Range2:1000~20000MHz

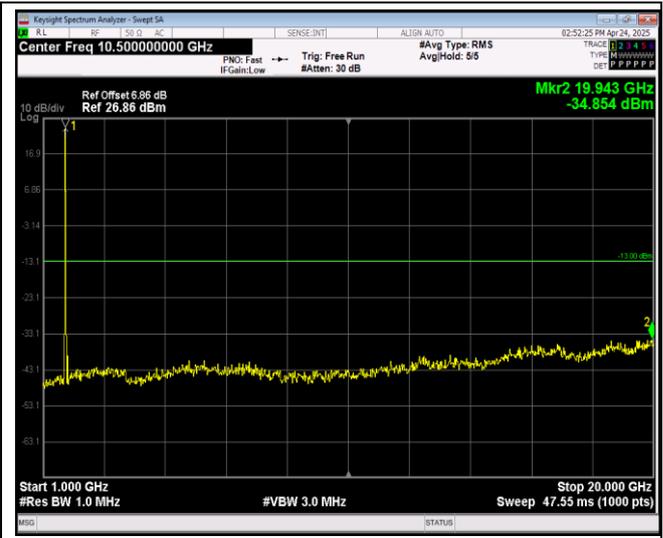
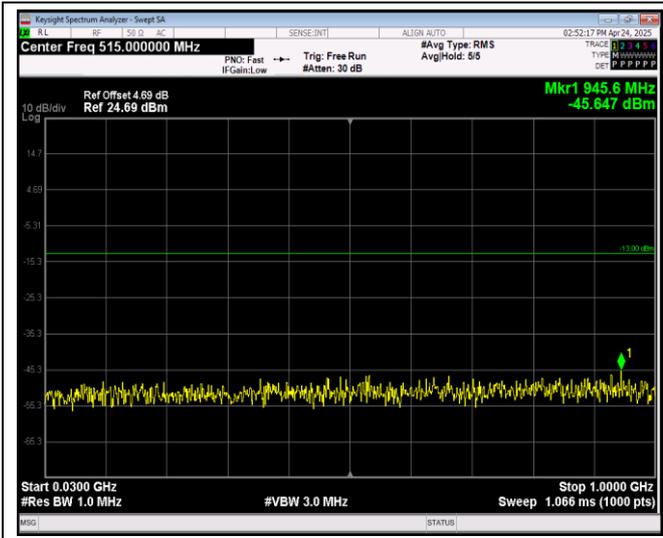


Band66-20MHz-QPSK-132072-1RB#0-Range1:30~1000MHz

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

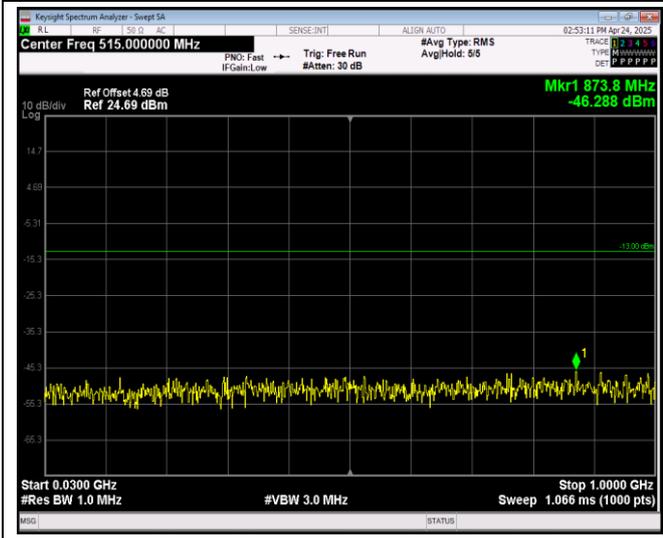






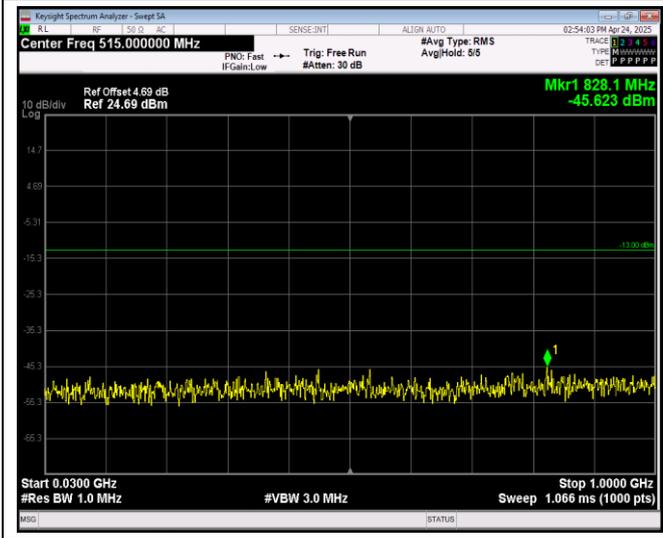
Band66-20MHz-16QAM-132322-1RB#0-Range1:30~1000MHz

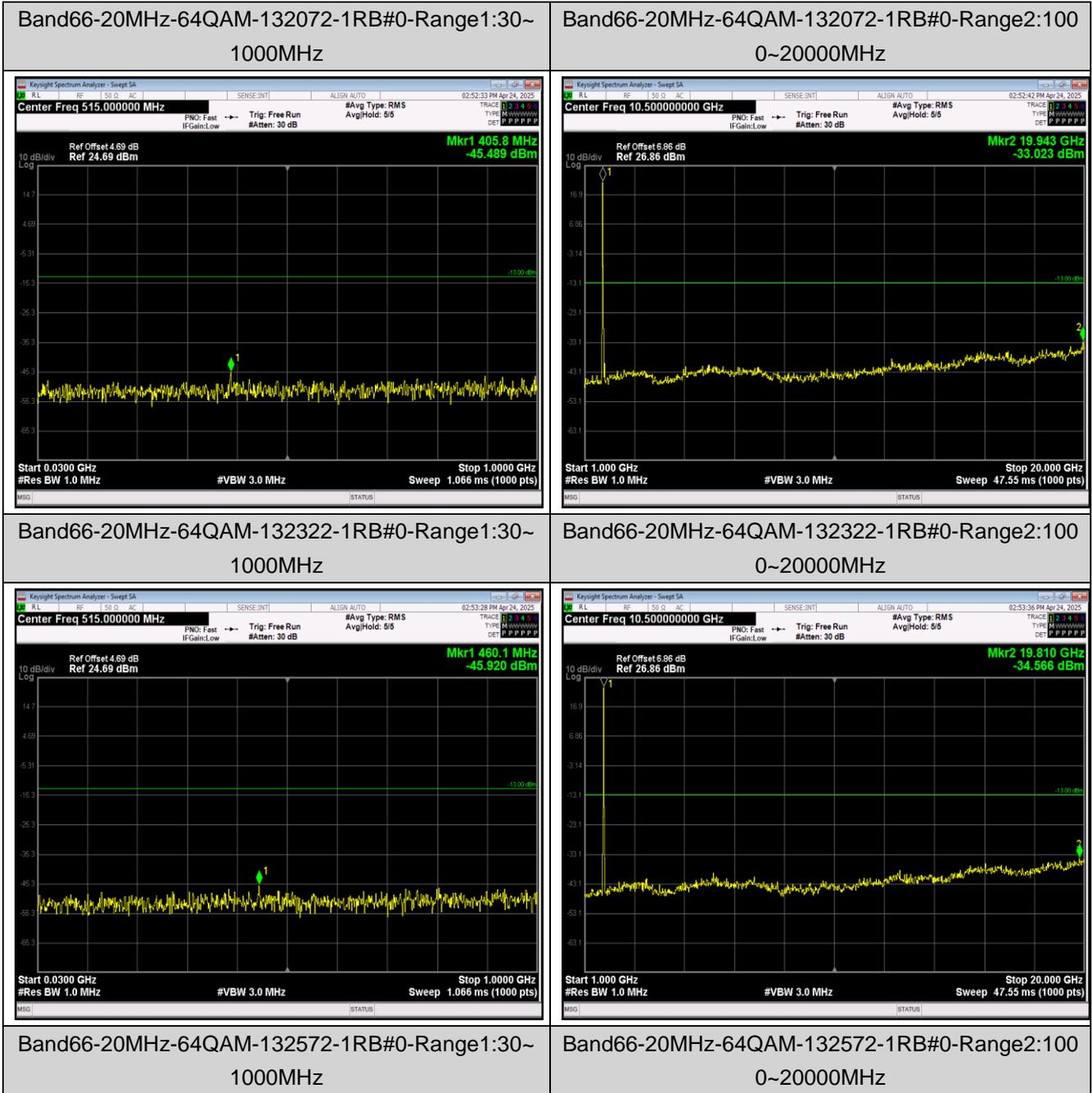
Band66-20MHz-16QAM-132322-1RB#0-Range2:1000~20000MHz

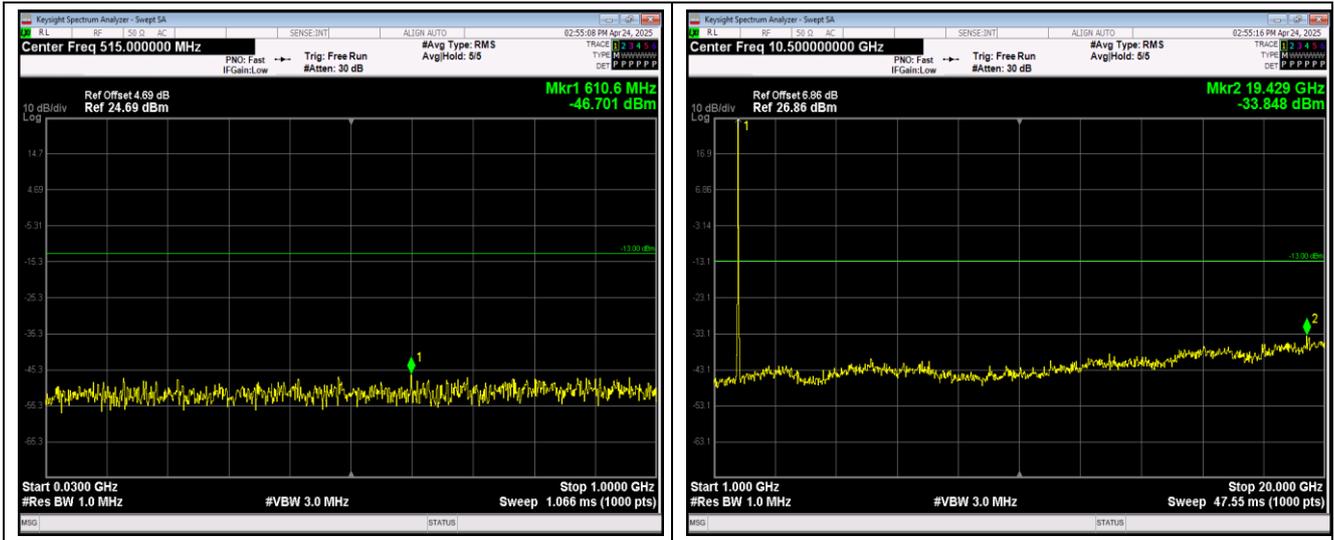


Band66-20MHz-16QAM-132572-1RB#0-Range1:30~1000MHz

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					
3.85	-30	-39.88	-0.021213	Within authorized band for Band 2	Pass
	-20	-27.88	-0.014830		
	-10	-43.43	-0.023101		
	0	-29.80	-0.015851		
	10	15.02	0.007989		
	20	-28.01	-0.014899		
	30	-25.78	-0.013713		
	40	-28.25	-0.015027		
	50	-30.26	-0.016096		
16QAM					
3.85	-30	-20.89	-0.011112	Within authorized band for Band 2	Pass
	-20	-24.29	-0.012920		
	-10	-5.94	-0.003160		
	0	-7.72	-0.004106		
	10	9.21	0.004899		
	20	-9.97	-0.005303		
	30	-28.12	-0.014957		
	40	-41.69	-0.022176		
	50	-29.61	-0.015750		
64QAM					
3.85	-30	-40.34	-0.021457	Within authorized band for Band 2	Pass
	-20	-48.58	-0.025840		
	-10	-32.82	-0.017457		
	0	-24.59	-0.013080		
	10	9.87	0.005250		
	20	-10.86	-0.005777		
	30	-11.89	-0.006324		
	40	10.09	0.005367		
	50	30.61	0.016282		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-13.35	-0.007101	Within authorized band for Band 2	Pass
	3.85	45.69	0.024303		
	4.45	-15.29	-0.008133		
16QAM					
25	3.45	-64.92	-0.034532	Within authorized band for Band 2	Pass
	3.85	-52.60	-0.027979		
	4.45	-43.26	-0.023011		
64QAM					
25	3.45	-35.00	-0.018617	Within authorized band for Band 2	Pass
	3.85	-25.72	-0.013681		
	4.45	-9.11	-0.004846		
<i>Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.</i>					

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	-15.22	-0.008785	Within authorized band for Band 4	Pass
	-20	-17.38	-0.010032		
	-10	-24.45	-0.014113		
	0	-45.55	-0.026291		
	10	-22.20	-0.012814		
	20	-17.31	-0.009991		
	30	18.57	0.010719		
	40	15.78	0.009108		
	50	12.72	0.007342		
16QAM					
3.85	-30	12.57	0.007255	Within authorized band for Band 4	Pass
	-20	42.09	0.024294		
	-10	39.61	0.022863		
	0	25.52	0.014730		
	10	46.45	0.026811		
	20	18.74	0.010817		
	30	31.46	0.018159		
	40	-7.90	-0.004560		
	50	26.25	0.015152		
64QAM					
3.85	-30	-22.72	-0.013114	Within authorized band for Band 4	Pass
	-20	-15.99	-0.009229		
	-10	-19.01	-0.010973		
	0	-8.21	-0.004739		
	10	15.46	0.008924		
	20	14.18	0.008185		
	30	-11.56	-0.006672		
	40	-21.84	-0.012606		
	50	5.79	0.003342		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	24.82	0.014326	Within authorized band for Band 4	Pass
	3.85	45.23	0.026107		
	4.45	18.50	0.010678		
16QAM					
25	3.45	18.12	0.010459	Within authorized band for Band 4	Pass
	3.85	32.30	0.018644		
	4.45	35.99	0.020773		
64QAM					
25	3.45	12.65	0.007302	Within authorized band for Band 4	Pass
	3.85	53.52	0.030892		
	4.45	-15.11	-0.008722		
<i>Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.</i>					

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	8.78	0.010496	±2.5	Pass
	-20	12.76	0.015254		
	-10	14.58	0.017430		
	0	15.64	0.018697		
	10	15.38	0.018386		
	20	16.24	0.019414		
	30	17.91	0.021411		
	40	21.09	0.025212		
	50	20.71	0.024758		
16QAM					
3.85	-30	37.48	0.044806	±2.5	Pass
	-20	45.72	0.054656		
	-10	-5.69	-0.006802		
	0	7.08	0.008464		
	10	22.44	0.026826		
	20	32.00	0.038255		
	30	40.30	0.048177		
	40	45.53	0.054429		
	50	43.86	0.052433		
64QAM					
3.85	-30	10.46	0.012504	±2.5	Pass
	-20	9.47	0.011321		
	-10	19.57	0.023395		
	0	28.11	0.033604		
	10	33.72	0.040311		
	20	46.32	0.055374		
	30	16.59	0.019833		
	40	27.42	0.032779		
	50	24.81	0.029659		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	11.52	0.013772	±2.5	Pass
	3.85	46.85	0.056007		
	4.45	12.53	0.014979		
16QAM					
25	3.45	21.86	0.026133	±2.5	Pass
	3.85	13.46	0.016091		
	4.45	30.43	0.036378		
64QAM					
25	3.45	-4.98	-0.005953	±2.5	Pass
	3.85	46.88	0.056043		
	4.45	5.52	0.006599		
<i>Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.</i>					

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	-58.57	-0.023105	Within authorized band for Band 7	Pass
	-20	12.77	0.005037		
	-10	-40.58	-0.016008		
	0	-43.63	-0.017211		
	10	-41.23	-0.016264		
	20	-24.23	-0.009558		
	30	18.17	0.007168		
	40	10.31	0.004067		
	50	-41.81	-0.016493		
16QAM					
3.85	-30	23.46	0.009254	Within authorized band for Band 7	Pass
	-20	39.38	0.015535		
	-10	53.42	0.021073		
	0	67.33	0.026560		
	10	-10.71	-0.004225		
	20	23.67	0.009337		
	30	22.59	0.008911		
	40	44.25	0.017456		
	50	36.26	0.014304		
64QAM					
3.85	-30	43.26	0.017065	Within authorized band for Band 7	Pass
	-20	5.56	0.002193		
	-10	40.58	0.016008		
	0	40.08	0.015811		
	10	40.13	0.015830		
	20	19.76	0.007795		
	30	52.03	0.020525		
	40	-20.26	-0.007992		
	50	-19.81	-0.007815		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-51.86	-0.020458	Within authorized band for Band 7	Pass
	3.85	87.33	0.034450		
	4.45	-48.45	-0.019112		
16QAM					
25	3.45	18.97	0.007483	Within authorized band for Band 7	Pass
	3.85	-30.54	-0.012047		
	4.45	35.82	0.014130		
64QAM					
25	3.45	29.01	0.011444	Within authorized band for Band 7	Pass
	3.85	9.77	0.003854		
	4.45	12.50	0.004931		
<i>Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.</i>					

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	-34.28	-0.048452	Within authorized band for Band 12	Pass
	-20	-2.82	-0.003986		
	-10	-17.09	-0.024155		
	0	-31.27	-0.044198		
	10	-50.34	-0.071152		
	20	-16.26	-0.022982		
	30	-25.66	-0.036269		
	40	-38.44	-0.054332		
	50	-49.05	-0.069329		
16QAM					
3.85	-30	-91.90	-0.129894	Within authorized band for Band 12	Pass
	-20	-37.04	-0.052353		
	-10	-16.58	-0.023435		
	0	-20.97	-0.029640		
	10	-19.05	-0.026926		
	20	-15.75	-0.022261		
	30	-4.45	-0.006290		
	40	-33.95	-0.047986		
	50	-14.76	-0.020862		
64QAM					
3.85	-30	-47.14	-0.066629	Within authorized band for Band 12	Pass
	-20	-16.55	-0.023392		
	-10	-31.37	-0.044339		
	0	-45.43	-0.064212		
	10	-4.39	-0.006205		
	20	-11.40	-0.016113		
	30	-20.37	-0.028792		
	40	-27.98	-0.039548		
	50	-35.36	-0.049979		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-44.67	-0.063138	Within authorized band for Band 12	Pass
	3.85	-48.24	-0.068184		
	4.45	-15.69	-0.022177		
16QAM					
25	3.45	-20.23	-0.028594	Within authorized band for Band 12	Pass
	3.85	-19.21	-0.027152		
	4.45	-17.18	-0.024283		
64QAM					
25	3.45	-21.33	-0.030148	Within authorized band for Band 12	Pass
	3.85	-22.93	-0.032410		
	4.45	-24.18	-0.034177		
<i>Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.</i>					

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	3.56	0.004552	Within authorized band for Band 13	Pass
	-20	-11.43	-0.014616		
	-10	-16.38	-0.020946		
	0	-5.18	-0.006624		
	10	-7.88	-0.010077		
	20	-20.99	-0.026841		
	30	-33.97	-0.043440		
	40	-48.42	-0.061918		
	50	-47.74	-0.061049		
16QAM					
3.85	-30	33.39	0.042698	Within authorized band for Band 13	Pass
	-20	44.12	0.056419		
	-10	48.05	0.061445		
	0	48.65	0.062212		
	10	51.74	0.066164		
	20	50.02	0.063964		
	30	52.50	0.067136		
	40	10.67	0.013645		
	50	25.19	0.032212		
64QAM					
3.85	-30	37.89	0.048453	Within authorized band for Band 13	Pass
	-20	9.48	0.012123		
	-10	27.21	0.034795		
	0	37.52	0.047980		
	10	50.85	0.065026		
	20	6.19	0.007916		
	30	11.69	0.014949		
	40	19.38	0.024783		
	50	24.75	0.031650		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	12.27	0.015691	Within authorized band for Band 13	Pass
	3.85	25.15	0.032161		
	4.45	6.39	0.008171		
16QAM					
25	3.45	-13.79	-0.017634	Within authorized band for Band 13	Pass
	3.85	-43.50	-0.055627		
	4.45	16.12	0.020614		
64QAM					
25	3.45	47.72	0.061023	Within authorized band for Band 13	Pass
	3.85	24.89	0.031829		
	4.45	19.17	0.024514		
<i>Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.</i>					

LTE Band 17 part:

Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 Frequency=710.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-26.65	-0.037535	Within authorized band for Band 17	Pass
	-20	-36.08	-0.050817		
	-10	-43.47	-0.061225		
	0	2.93	0.004127		
	10	-11.77	-0.016577		
	20	-14.35	-0.020211		
	30	-25.31	-0.035648		
	40	-35.79	-0.050408		
	50	-7.68	-0.010817		
16QAM					
3.85	-30	-22.37	-0.031507	Within authorized band for Band 17	Pass
	-20	-35.65	-0.050211		
	-10	-46.62	-0.065662		
	0	-98.43	-0.138634		
	10	-9.03	-0.012718		
	20	-43.16	-0.060789		
	30	-13.90	-0.019577		
	40	-34.26	-0.048254		
	50	-5.35	-0.007535		
64QAM					
3.85	-30	-12.75	-0.017958	Within authorized band for Band 17	Pass
	-20	-20.18	-0.028423		
	-10	-21.76	-0.030648		
	0	-29.37	-0.041366		
	10	-37.29	-0.052521		
	20	-40.84	-0.057521		
	30	-37.59	-0.052944		
	40	-39.47	-0.055592		
	50	-40.14	-0.056535		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-7.35	-0.010352	Within authorized band for Band 17	Pass
	3.85	-36.36	-0.051211		
	4.45	-14.58	-0.020535		
16QAM					
25	3.45	-7.51	-0.010577	Within authorized band for Band 17	Pass
	3.85	-15.12	-0.021296		
	4.45	7.34	0.010338		
64QAM					
25	3.45	3.83	0.005394	Within authorized band for Band 17	Pass
	3.85	46.32	0.065239		
	4.45	4.71	0.006634		
<i>Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.</i>					

LTE Band 26 part:

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	48.65	0.059402	Within authorized band for Band 26	Pass
	-20	-5.32	-0.006496		
	-10	5.87	0.007167		
	0	13.85	0.016911		
	10	12.96	0.015824		
	20	13.65	0.016667		
	30	22.47	0.027436		
	40	29.78	0.036361		
	50	46.48	0.056752		
16QAM					
3.85	-30	-15.96	-0.019487	Within authorized band for Band 26	Pass
	-20	-16.04	-0.019585		
	-10	-11.92	-0.014554		
	0	-7.22	-0.008816		
	10	-4.91	-0.005995		
	20	6.51	0.007949		
	30	11.74	0.014335		
	40	10.30	0.012576		
	50	4.11	0.005018		
64QAM					
3.85	-30	28.04	0.034237	Within authorized band for Band 26	Pass
	-20	43.53	0.053150		
	-10	12.09	0.014762		
	0	24.18	0.029524		
	10	34.86	0.042564		
	20	44.57	0.054420		
	30	5.16	0.006300		
	40	16.62	0.020293		
	50	27.39	0.033443		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	31.67	0.038669	Within authorized band for Band 26	Pass
	3.85	11.86	0.014481		
	4.45	38.42	0.046911		
16QAM					
25	3.45	-12.43	-0.015177	Within authorized band for Band 26	Pass
	3.85	-5.99	-0.007314		
	4.45	-15.92	-0.019438		
64QAM					
25	3.45	-4.45	-0.005433	Within authorized band for Band 26	Pass
	3.85	-10.94	-0.013358		
	4.45	17.27	0.021087		
<i>Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.</i>					

LTE Band 26 part:

Reference Frequency: LTE Band 26(10MHz) Middle channel=26915 Frequency=836.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.85	-30	-29.71	-0.035517	Within authorized band for Band 26	Pass
	-20	-20.96	-0.025057		
	-10	-23.83	-0.028488		
	0	-35.00	-0.041841		
	10	-48.72	-0.058243		
	20	-22.76	-0.027209		
	30	-21.07	-0.025188		
	40	-31.20	-0.037298		
	50	-45.93	-0.054907		
16QAM					
3.85	-30	-15.61	-0.018661	Within authorized band for Band 26	Pass
	-20	10.23	0.012230		
	-10	27.45	0.032815		
	0	18.98	0.022690		
	10	3.25	0.003885		
	20	10.70	0.012791		
	30	-7.58	-0.009062		
	40	-15.48	-0.018506		
	50	-17.71	-0.021172		
64QAM					
3.85	-30	19.10	0.022833	Within authorized band for Band 26	Pass
	-20	37.02	0.044256		
	-10	13.38	0.015995		
	0	28.55	0.034130		
	10	47.08	0.056282		
	20	7.12	0.008512		
	30	8.31	0.009934		
	40	16.22	0.019390		
	50	18.77	0.022439		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	-44.86	-0.053628	Within authorized band for Band 26	Pass
	3.85	32.10	0.038374		
	4.45	-21.94	-0.026228		
16QAM					
25	3.45	-7.05	-0.008428	Within authorized band for Band 26	Pass
	3.85	-8.54	-0.010209		
	4.45	-12.12	-0.014489		
64QAM					
25	3.45	10.64	0.012720	Within authorized band for Band 26	Pass
	3.85	-11.47	-0.013712		
	4.45	46.81	0.055959		
<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					
3.85	-30	-33.46	-0.019175	Within authorized band for Band 66	Pass
	-20	-46.32	-0.026544		
	-10	-7.17	-0.004109		
	0	12.52	0.007175		
	10	-13.43	-0.007696		
	20	-24.33	-0.013943		
	30	-39.95	-0.022894		
	40	-12.97	-0.007433		
	50	-36.36	-0.020837		
16QAM					
3.85	-30	24.53	0.014057	Within authorized band for Band 66	Pass
	-20	26.74	0.015324		
	-10	37.21	0.021324		
	0	34.40	0.019713		
	10	31.39	0.017989		
	20	36.84	0.021112		
	30	41.18	0.023599		
	40	42.04	0.024092		
	50	47.69	0.027330		
64QAM					
3.85	-30	10.54	0.006040	Within authorized band for Band 66	Pass
	-20	7.62	0.004367		
	-10	7.54	0.004321		
	0	8.31	0.004762		
	10	23.78	0.013628		
	20	18.60	0.010659		
	30	28.58	0.016378		
	40	25.26	0.014476		
	50	29.33	0.016808		

Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.45	15.12	0.008665	Within authorized band for Band 66	Pass
	3.85	16.06	0.009203		
	4.45	-36.08	-0.020676		
16QAM					
25	3.45	-21.92	-0.012562	Within authorized band for Band 66	Pass
	3.85	-37.78	-0.021650		
	4.45	8.50	0.004871		
64QAM					
25	3.45	50.10	0.028711	Within authorized band for Band 66	Pass
	3.85	48.45	0.027765		
	4.45	8.98	0.005146		
<i>Remark: All bandwidth and all modulation had been tested, but only the worst case data displayed in this report.</i>					