



Band7-5MHz-QPSK-20775-1RB#0-Range1:30~100

0MHz



Band7-5MHz-QPSK-20775-1RB#0-Range2:1000~2700

0MHz



Band7-5MHz-QPSK-21100-1RB#0-Range1:30~100

0MHz



Band7-5MHz-QPSK-21100-1RB#0-Range2:1000~2700

0MHz



Band7-5MHz-QPSK-21425-1RB#0-Range1:30~100

0MHz



Band7-5MHz-QPSK-21425-1RB#0-Range2:1000~2700

0MHz



Band7-5MHz-16QAM-20775-1RB#0-Range1:30~10

00MHz



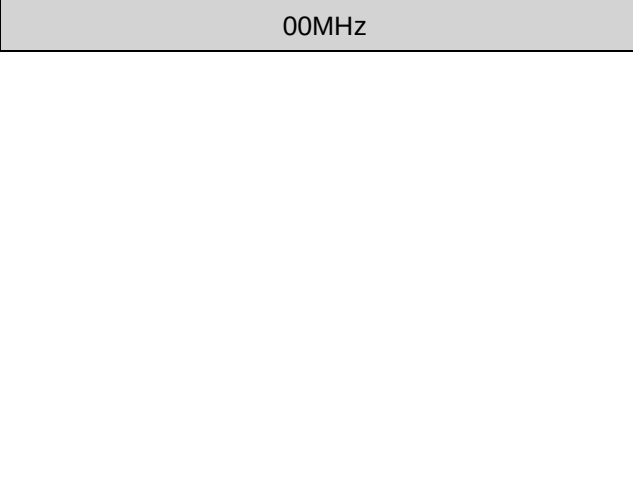
Band7-5MHz-16QAM-20775-1RB#0-Range2:1000~270

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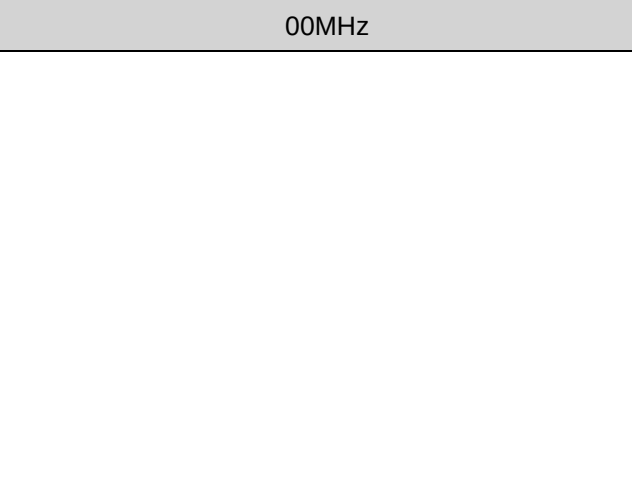
Band7-5MHz-16QAM-21100-1RB#0-Range1:30~10

00MHz



Band7-5MHz-16QAM-21100-1RB#0-Range2:1000~270

00MHz





Band7-5MHz-16QAM-21425-1RB#0-Range1:30~1000MHz



Band7-5MHz-16QAM-21425-1RB#0-Range2:1000~2700MHz



Band7-20MHz-QPSK-21350-1RB#0-Range1:30~1000MHz



Band7-20MHz-QPSK-21350-1RB#0-Range2:1000~2700MHz



Band7-20MHz-16QAM-21350-1RB#0-Range1:30~1

000MHz



Band7-20MHz-16QAM-21350-1RB#0-Range2:1000~27

000MHz



Band12-1.4MHz-QPSK-23017-1RB#0-Range1:30~1

000MHz



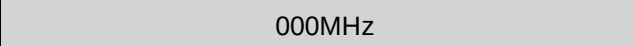
Band12-1.4MHz-QPSK-23017-1RB#0-Range2:1000~1

0000MHz



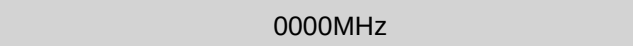
Band12-1.4MHz-QPSK-23095-1RB#0-Range1:30~1

000MHz



Band12-1.4MHz-QPSK-23095-1RB#0-Range2:1000~1

0000MHz





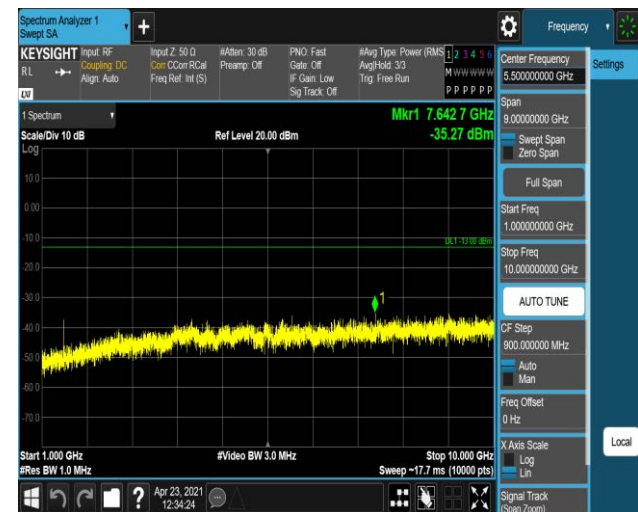
Band12-1.4MHz-QPSK-23173-1RB#0-Range1:30~1
000MHz



Band12-1.4MHz-QPSK-23173-1RB#0-Range2:1000~1
0000MHz

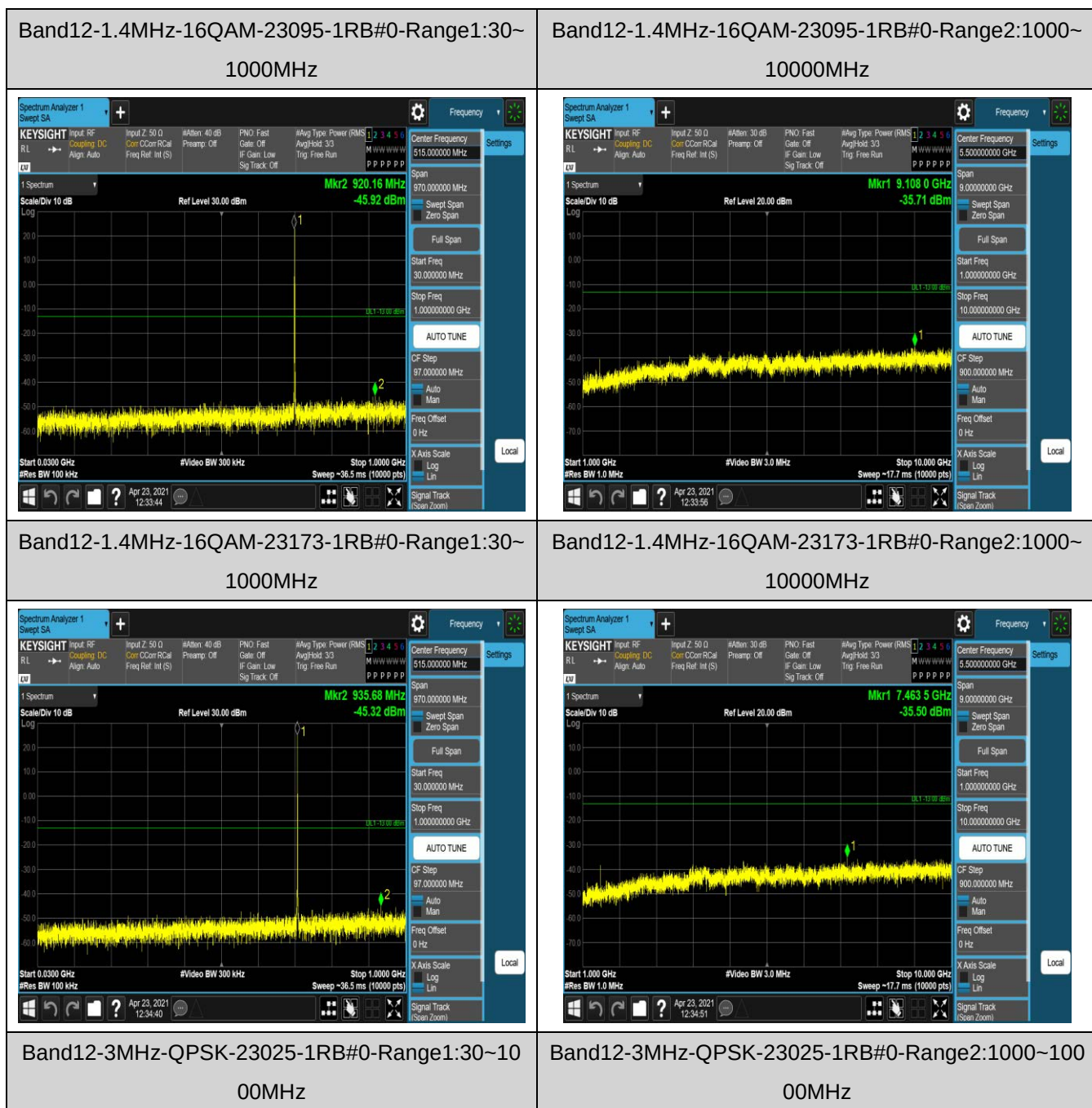


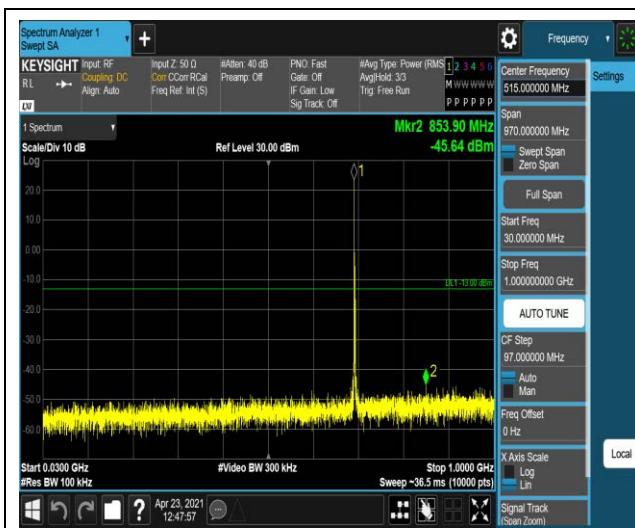
Band12-1.4MHz-16QAM-23017-1RB#0-Range1:30~
1000MHz



Band12-1.4MHz-16QAM-23017-1RB#0-Range2:1000~
10000MHz







Band12-3MHz-QPSK-23095-1RB#0-Range1:30~10

00MHz



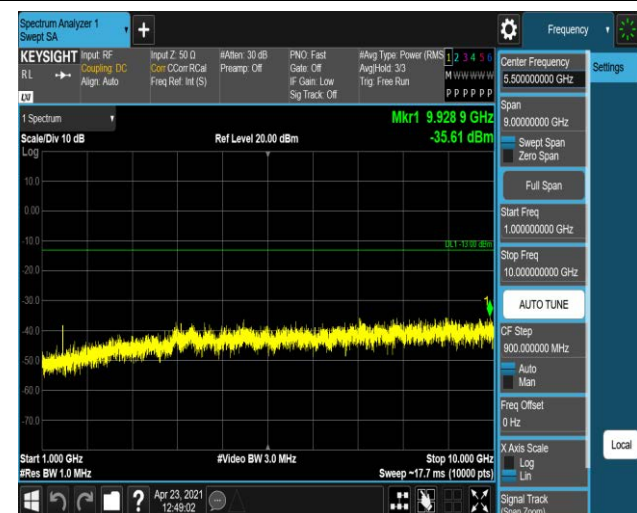
Band12-3MHz-QPSK-23095-1RB#0-Range2:1000~100

00MHz



Band12-3MHz-QPSK-23165-1RB#0-Range1:30~10

00MHz



Band12-3MHz-QPSK-23165-1RB#0-Range2:1000~100

00MHz



Band12-3MHz-16QAM-23025-1RB#0-Range1:30~1

000MHz



Band12-3MHz-16QAM-23025-1RB#0-Range2:1000~10

000MHz



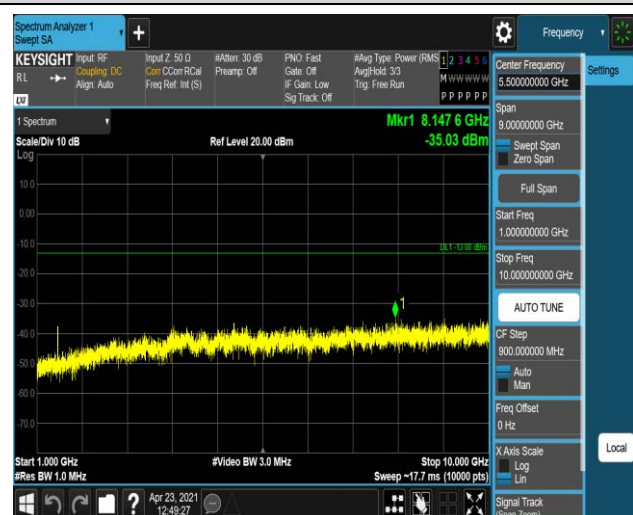
Band12-3MHz-16QAM-23095-1RB#0-Range1:30~1

000MHz



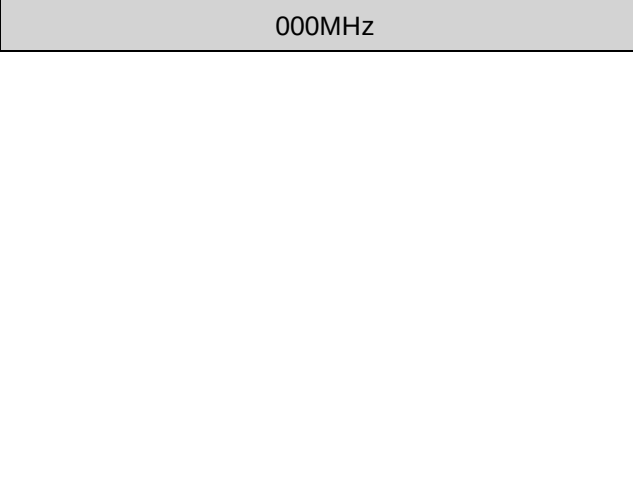
Band12-3MHz-16QAM-23095-1RB#0-Range2:1000~10

000MHz



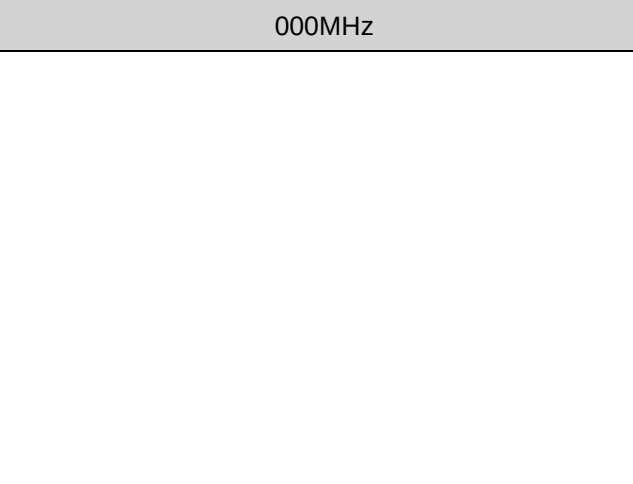
Band12-3MHz-16QAM-23165-1RB#0-Range1:30~1

000MHz



Band12-3MHz-16QAM-23165-1RB#0-Range2:1000~10

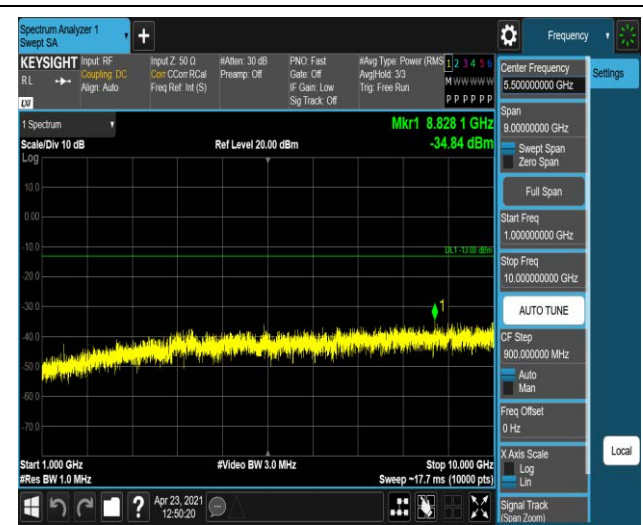
000MHz





Band12-5MHz-QPSK-23035-1RB#0-Range1:30~10

00MHz



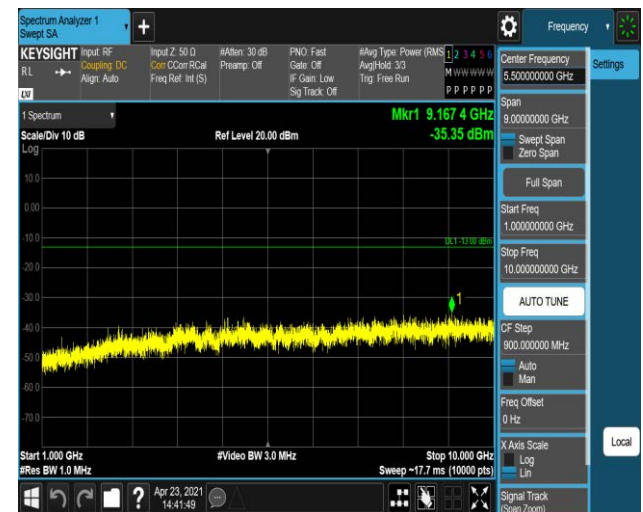
Band12-5MHz-QPSK-23035-1RB#0-Range2:1000~100

00MHz



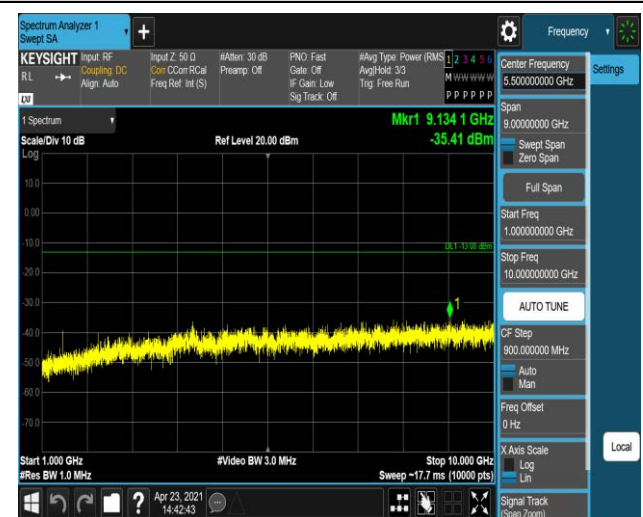
Band12-5MHz-QPSK-23095-1RB#0-Range1:30~10

00MHz



Band12-5MHz-QPSK-23095-1RB#0-Range2:1000~100

00MHz



Band12-5MHz-QPSK-23155-1RB#0-Range1:30~10

00MHz



Band12-5MHz-QPSK-23155-1RB#0-Range2:1000~100

00MHz



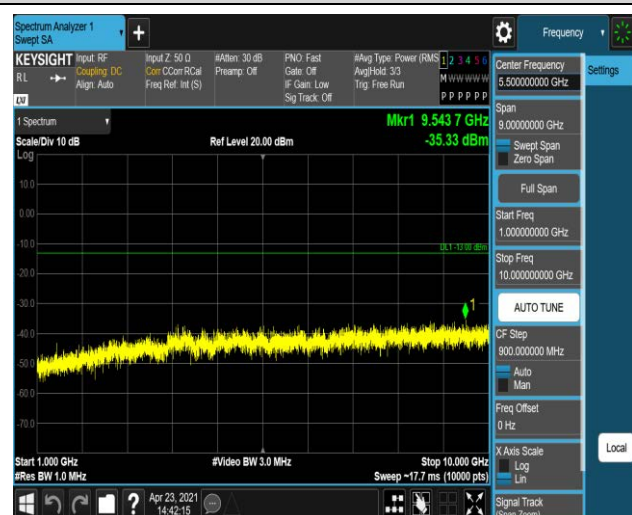
Band12-5MHz-16QAM-23035-1RB#0-Range1:30~1

000MHz



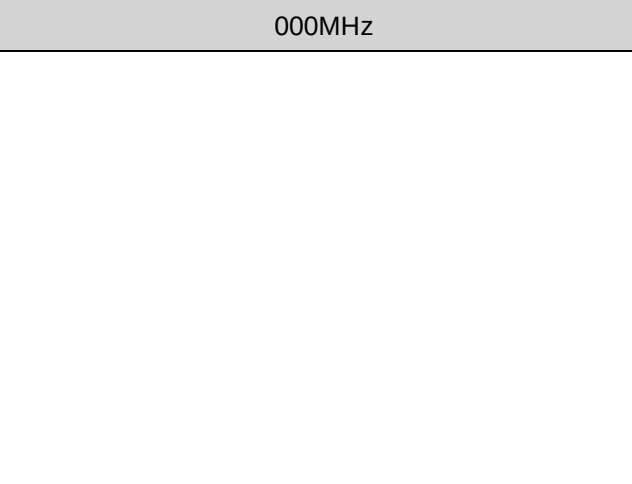
Band12-5MHz-16QAM-23035-1RB#0-Range2:1000~10

000MHz



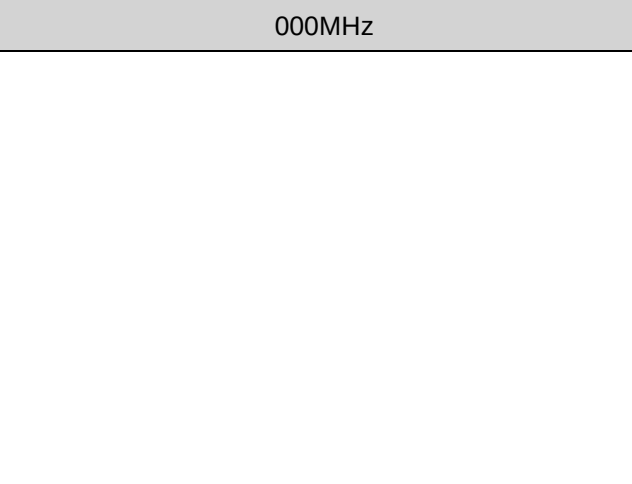
Band12-5MHz-16QAM-23095-1RB#0-Range1:30~1

000MHz



Band12-5MHz-16QAM-23095-1RB#0-Range2:1000~10

000MHz





Band12-5MHz-16QAM-23155-1RB#0-Range1:30~1

000MHz



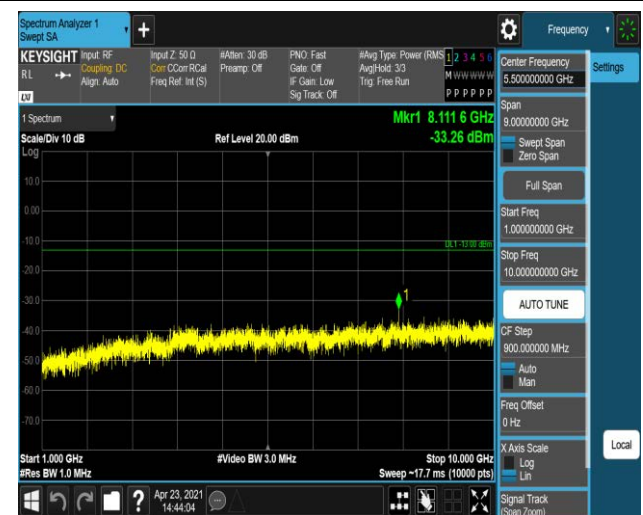
Band12-5MHz-16QAM-23155-1RB#0-Range2:1000~10

000MHz



Band12-10MHz-QPSK-23060-1RB#0-Range1:30~1

000MHz



Band12-10MHz-QPSK-23060-1RB#0-Range2:1000~10

000MHz



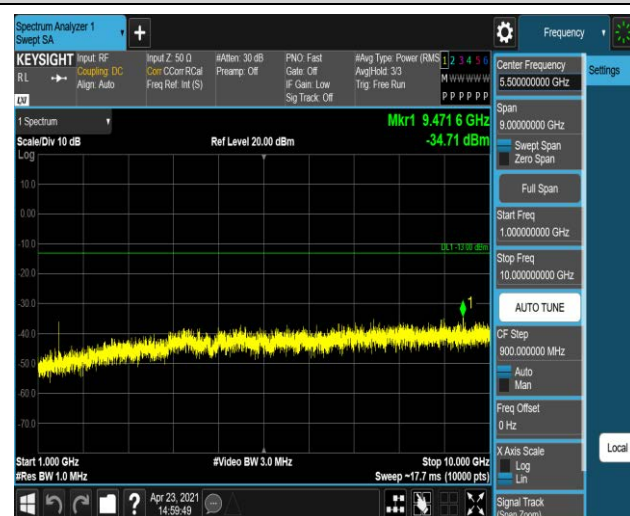
Band12-10MHz-QPSK-23095-1RB#0-Range1:30~1

000MHz



Band12-10MHz-QPSK-23095-1RB#0-Range2:1000~10

000MHz



Band12-10MHz-QPSK-23130-1RB#0-Range1:30~1

000MHz



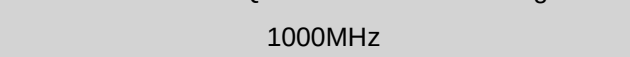
Band12-10MHz-QPSK-23130-1RB#0-Range2:1000~10

000MHz



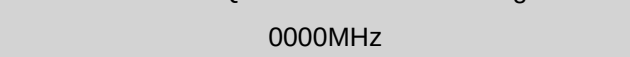
Band12-10MHz-16QAM-23060-1RB#0-Range1:30~

1000MHz



Band12-10MHz-16QAM-23060-1RB#0-Range2:1000~1

0000MHz





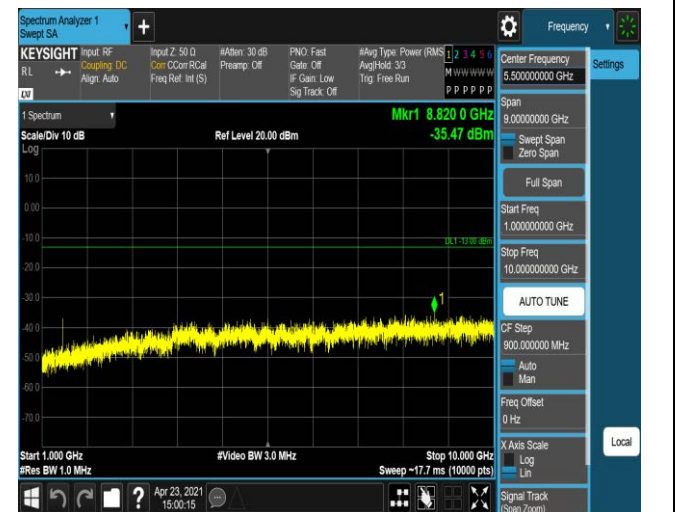
Band12-10MHz-16QAM-23095-1RB#0-Range1:30~1000MHz



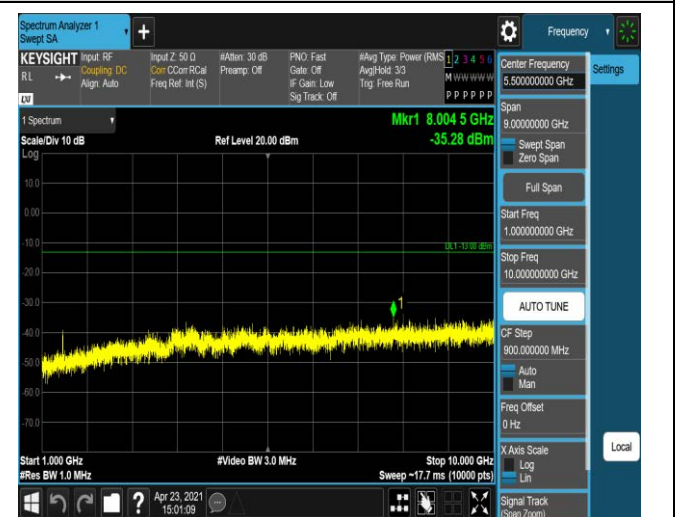
Band12-10MHz-16QAM-23095-1RB#0-Range2:1000~10000MHz



Band12-10MHz-16QAM-23130-1RB#0-Range1:30~1000MHz



Band12-10MHz-16QAM-23130-1RB#0-Range2:1000~10000MHz



Band17-5MHz-QPSK-23755-1RB#0-Range1:30~10

00MHz



Band17-5MHz-QPSK-23755-1RB#0-Range2:1000~100

00MHz



Band17-5MHz-QPSK-23790-1RB#0-Range1:30~10

00MHz



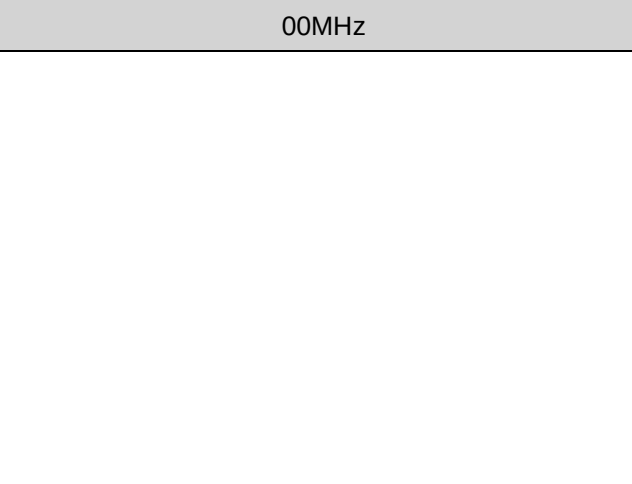
Band17-5MHz-QPSK-23790-1RB#0-Range2:1000~100

00MHz



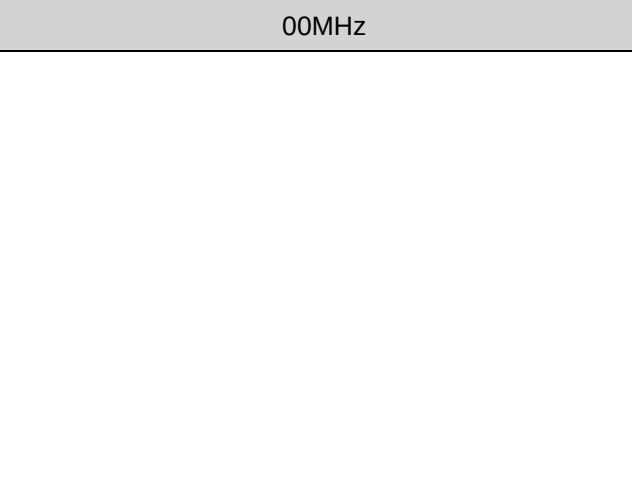
Band17-5MHz-QPSK-23825-1RB#0-Range1:30~10

00MHz



Band17-5MHz-QPSK-23825-1RB#0-Range2:1000~100

00MHz





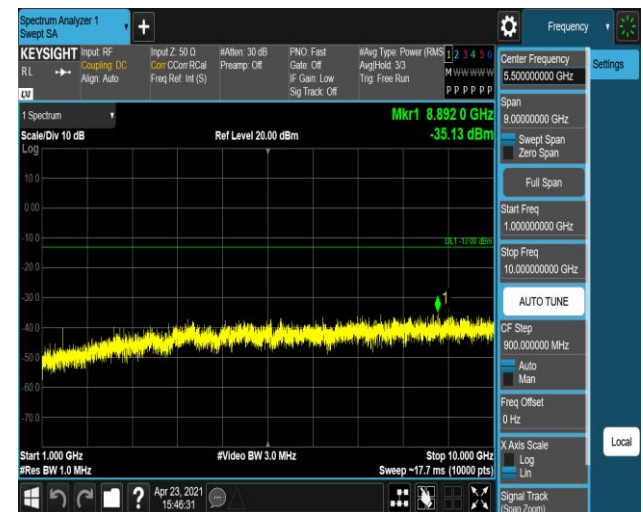
Band17-5MHz-16QAM-23755-1RB#0-Range1:30~1
000MHz



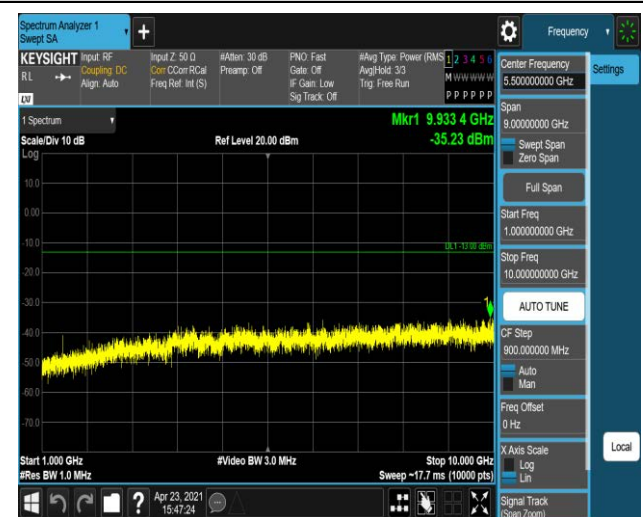
Band17-5MHz-16QAM-23755-1RB#0-Range2:1000~10
000MHz



Band17-5MHz-16QAM-23790-1RB#0-Range1:30~1
000MHz



Band17-5MHz-16QAM-23790-1RB#0-Range2:1000~10
000MHz



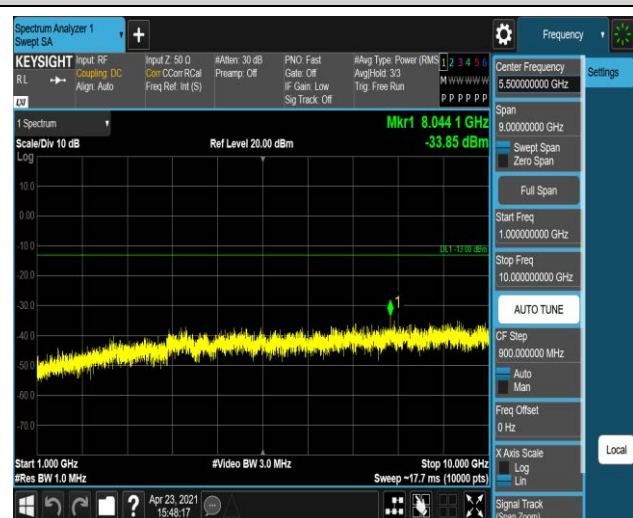
Band17-5MHz-16QAM-23825-1RB#0-Range1:30~1

000MHz



Band17-5MHz-16QAM-23825-1RB#0-Range2:1000~10

000MHz



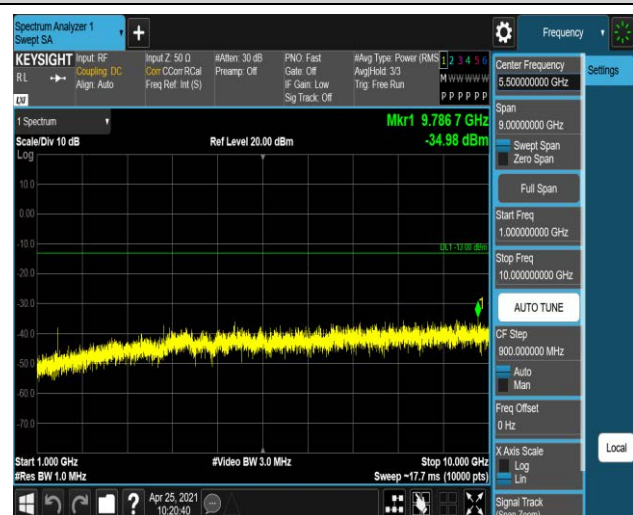
Band17-10MHz-QPSK-23780-1RB#0-Range1:30~1

000MHz



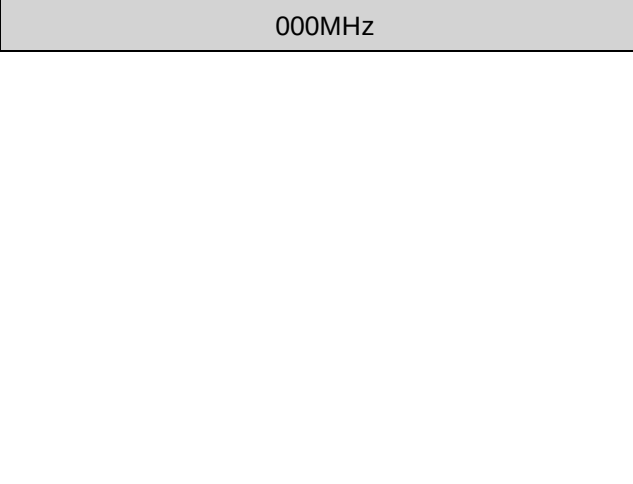
Band17-10MHz-QPSK-23780-1RB#0-Range2:1000~10

000MHz



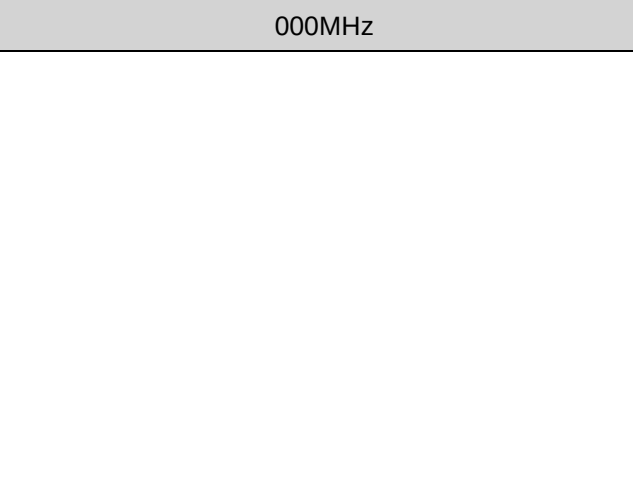
Band17-10MHz-QPSK-23790-1RB#0-Range1:30~1

000MHz



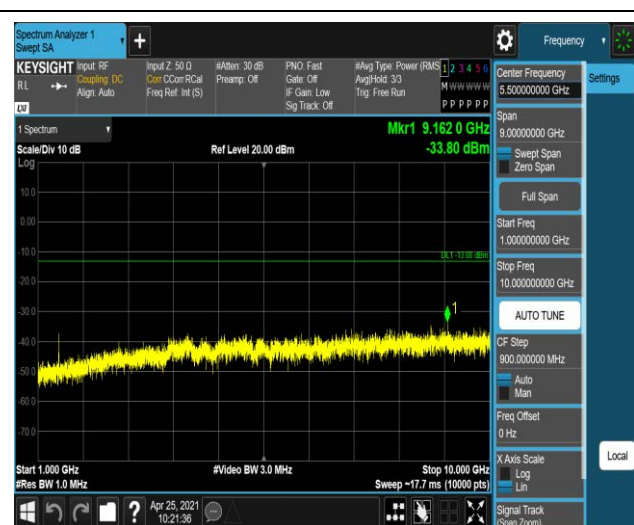
Band17-10MHz-QPSK-23790-1RB#0-Range2:1000~10

000MHz





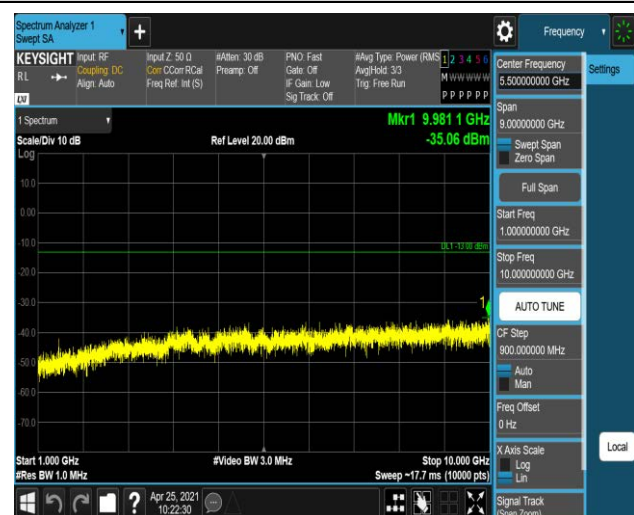
Band17-10MHz-QPSK-23800-1RB#0-Range1:30~1000MHz



Band17-10MHz-QPSK-23800-1RB#0-Range2:1000~10000MHz



Band17-10MHz-16QAM-23780-1RB#0-Range1:30~1000MHz



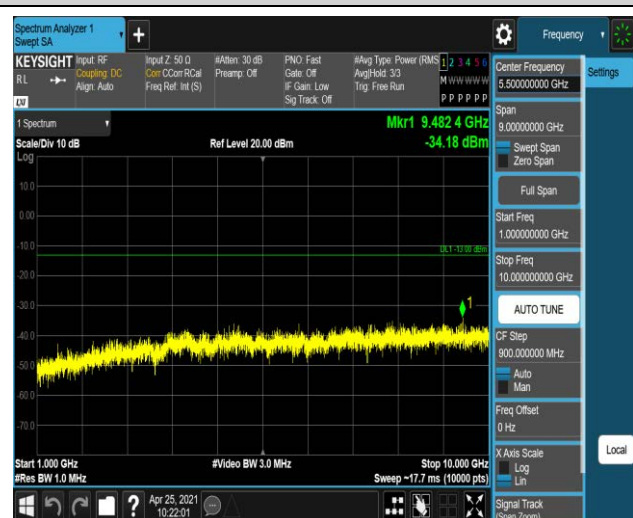
Band17-10MHz-16QAM-23780-1RB#0-Range2:1000~10000MHz



Band17-10MHz-16QAM-23790-1RB#0-Range1:30~
1000MHz



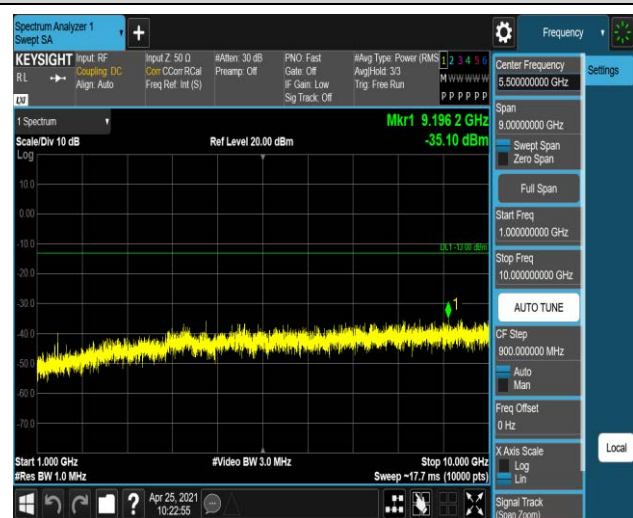
Band17-10MHz-16QAM-23790-1RB#0-Range2:1000~1
0000MHz



Band17-10MHz-16QAM-23800-1RB#0-Range1:30~
1000MHz



Band17-10MHz-16QAM-23800-1RB#0-Range2:1000~1
0000MHz



Appendix F: Frequency Stability

Test Result(Worst case):

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					
3.80	-30	-35.25	-0.018750	Within authorized band for Band 2	Pass
	-20	-24.00	-0.012766		
	-10	-34.07	-0.018122		
	0	-18.28	-0.009723		
	10	-34.25	-0.018218		
	20	-10.54	-0.005606		
	30	-45.43	-0.024165		
	40	-29.41	-0.015644		
	50	12.19	0.006484		
16QAM					
3.80	-30	-23.86	-0.012691	Within authorized band for Band 2	Pass
	-20	-32.93	-0.017516		
	-10	-32.94	-0.017521		
	0	-32.37	-0.017218		
	10	-40.04	-0.021298		
	20	-36.98	-0.019670		
	30	-49.80	-0.026489		
	40	-50.64	-0.026936		
	50	-53.00	-0.028191		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-51.26	-0.027266	Within authorized band for Band 2	Pass
	3.80	-40.01	-0.021282		
	4.40	-25.75	-0.013697		
16QAM					
25	3.50	-19.48	-0.010362	Within authorized band for Band 2	Pass
	3.80	-19.68	-0.010468		
	4.40	-12.20	-0.006489		
Note: Only the worst case shown in the report.					

LTE Band 4 part:

Reference Frequency: LTE Band 4(10MHz) Middle channel=20175 Frequency=1732.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	-46.32	-0.026736	Within authorized band for Band 4	Pass
	-20	-28.38	-0.016381		
	-10	-53.33	-0.030782		
	0	-15.21	-0.008779		
	10	-35.55	-0.020519		
	20	-11.32	-0.006534		
	30	-27.88	-0.016092		
	40	-41.73	-0.024087		
	50	3.86	0.002228		
16QAM					
3.80	-30	16.08	0.009281	Within authorized band for Band 4	Pass
	-20	20.94	0.012087		
	-10	22.14	0.012779		
	0	33.35	0.019250		
	10	38.14	0.022014		
	20	-16.99	-0.009807		
	30	-9.28	-0.005356		
	40	-6.39	-0.003688		
	50	-13.09	-0.007556		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.42	-40.24	-0.023227	Within authorized band for Band 4	Pass
	3.80	-8.63	-0.004981		
	3.50	-38.12	-0.022003		
16QAM					
25	4.42	-7.02	-0.004052	Within authorized band for Band 4	Pass
	3.80	-13.66	-0.007885		
	3.50	10.57	0.006101		
Note: Only the worst case shown in the report.					

LTE Band 5 part:

Reference Frequency: LTE Band 5(10MHz) Middle channel=20525 Frequency=836.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	-3.03	-0.003622	±2.5	Pass
	-20	-20.01	-0.023921		
	-10	-25.81	-0.030855		
	0	-32.52	-0.038876		
	10	-34.53	-0.041279		
	20	-42.21	-0.050460		
	30	-44.79	-0.053545		
	40	-9.50	-0.011357		
	50	-10.67	-0.012756		
16QAM					
3.80	-30	-3.13	-0.003742	±2.5	Pass
	-20	4.86	0.005810		
	-10	-3.91	-0.004674		
	0	4.41	0.005272		
	10	3.25	0.003885		
	20	2.50	0.002989		
	30	4.02	0.004806		
	40	8.75	0.010460		
	50	5.62	0.006718		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-32.52	-0.038876	±2.5	Pass
	3.80	9.10	0.010879		
	4.40	-27.79	-0.033222		
16QAM					
25	3.50	-7.52	-0.008990	±2.5	Pass
	3.80	-12.87	-0.015386		
	4.40	-4.91	-0.005870		
Note: Only the worst case shown in the 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					
3.80	-30	-33.06	-0.013041	Within authorized band for Band 7	Pass
	-20	-19.57	-0.007720		
	-10	-13.03	-0.005140		
	0	-31.20	-0.012308		
	10	-38.48	-0.015179		
	20	12.86	0.005073		
	30	-12.19	-0.004809		
	40	-13.70	-0.005404		
	50	-15.54	-0.006130		
16QAM					
3.80	-30	-32.29	-0.012738	Within authorized band for Band 7	Pass
	-20	-32.33	-0.012753		
	-10	-31.86	-0.012568		
	0	-39.88	-0.015732		
	10	-34.56	-0.013633		
	20	-34.76	-0.013712		
	30	-32.84	-0.012955		
	40	-44.13	-0.017408		
	50	-39.88	-0.015732		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	3.50	-29.60	-0.011677	Within authorized band for Band 7	Pass
	3.80	-23.06	-0.009097		
	4.40	-38.12	-0.015037		
16QAM					
25	3.50	-14.96	-0.005901	Within authorized band for Band 7	Pass
	3.80	-26.24	-0.010351		
	4.40	-33.14	-0.013073		
Note: Only the worst case shown in the report.					

LTE Band 12 part:

Reference Frequency: LTE Band 12(10MHz) Middle channel=23095 Frequency=707.5MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	13.30	0.018799	Within authorized band for Band 12	Pass
	-20	24.79	0.035039		
	-10	27.35	0.038657		
	0	32.87	0.046459		
	10	37.06	0.052382		
	20	40.51	0.057258		
	30	46.05	0.065088		
	40	-3.08	-0.004353		
	50	1.96	0.002770		
16QAM					
3.80	-30	40.88	0.057781	Within authorized band for Band 12	Pass
	-20	-1.90	-0.002686		
	-10	8.77	0.012396		
	0	14.65	0.020707		
	10	17.91	0.025314		
	20	18.81	0.026587		
	30	22.56	0.031887		
	40	30.16	0.042629		
	50	29.74	0.042035		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.42	-5.04	-0.007124	Within authorized band for Band 12	Pass
	3.80	-13.79	-0.019491		
	3.50	11.69	0.016523		
16QAM					
25	4.42	22.02	0.031124	Within authorized band for Band 12	Pass
	3.80	8.88	0.012551		
	3.50	31.73	0.044848		
Note: Only the worst case shown in the report.					

LTE Band 17 part:

Reference Frequency: LTE Band 17(10MHz) Middle channel=23790 Frequency=710.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (℃)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
3.80	-30	13.40	0.018967	Within authorized band for Band 17	Pass
	-20	18.61	0.026341		
	-10	24.85	0.035173		
	0	29.78	0.042151		
	10	32.29	0.045704		
	20	38.92	0.055088		
	30	40.58	0.057438		
	40	44.78	0.063383		
	50	45.56	0.064487		
16QAM					
3.80	-30	-5.29	-0.007488	Within authorized band for Band 17	Pass
	-20	-4.62	-0.006539		
	-10	-7.71	-0.010913		
	0	-7.65	-0.010828		
	10	-5.32	-0.007530		
	20	-6.45	-0.009130		
	30	-6.39	-0.009045		
	40	-5.91	-0.008365		
	50	-7.41	-0.010488		
Voltage					
Temperature (℃)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	4.42	-7.88	-0.011154	Within authorized band for Band 17	Pass
	3.80	-5.51	-0.007799		
	3.50	3.71	0.005251		
16QAM					
25	4.42	-2.83	-0.004006	Within authorized band for Band 17	Pass
	3.80	47.59	0.067360		
	3.50	-3.95	-0.005591		
Note: Only the worst case shown in the report.					