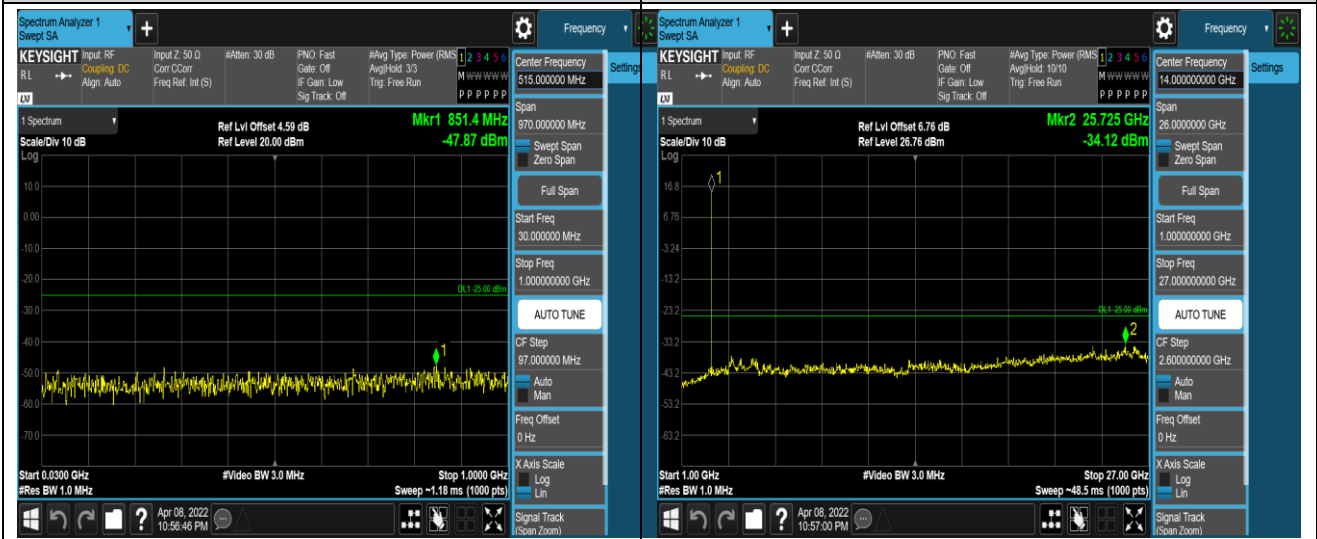


Band41-20MHz-16QAM-41490-1RB#0-Range1:30
~1000MHz

Band41-20MHz-16QAM-41490-1RB#0-Range2:1000~
27000MHz



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					
7.78	-30	-2.53	-0.001346	Within authorized band for Band 2	Pass
	-20	-3.25	-0.001729		
	-10	-3.12	-0.001660		
	0	-4.42	-0.002351		
	10	-4.43	-0.002356		
	20	-4.18	-0.002223		
	30	-2.68	-0.001426		
	40	-4.22	-0.002245		
	50	-2.88	-0.001532		
16QAM					
7.78	-30	-2.20	-0.001170	Within authorized band for Band 2	Pass
	-20	-2.92	-0.001553		
	-10	-3.52	-0.001872		
	0	-3.03	-0.001612		
	10	-3.18	-0.001691		
	20	-3.43	-0.001824		
	30	-3.86	-0.002053		
	40	-2.09	-0.001112		
	50	-4.15	-0.002207		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	7.2	2.98	0.001585	Within authorized band for Band 2	Pass
	7.78	3.40	0.001809		
	8.96	4.03	0.002144		
16QAM					
25	7.2	-3.72	-0.001979	Within authorized band for Band 2	Pass
	7.78	-3.28	-0.001745		
	8.96	1.86	0.000989		

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					
7.78	-30	-3.62	-0.002089	Within authorized band for Band 4	Pass
	-20	-2.56	-0.001478		
	-10	-3.43	-0.001980		
	0	-3.93	-0.002268		
	10	-4.49	-0.002592		
	20	-1.59	-0.000918		
	30	-3.40	-0.001962		
	40	1.50	0.000866		
	50	-3.73	-0.002153		
16QAM					
7.78	-30	-3.66	-0.002113	Within authorized band for Band 4	Pass
	-20	-2.29	-0.001322		
	-10	-4.58	-0.002644		
	0	2.02	0.001166		
	10	-3.15	-0.001818		
	20	-2.56	-0.001478		
	30	-3.85	-0.002222		
	40	-5.21	-0.003007		
	50	-4.15	-0.002395		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	7.2	-3.82	-0.002205	Within authorized band for Band 4	Pass
	7.78	-2.98	-0.001720		
	8.96	-3.12	-0.001801		
16QAM					
25	7.2	-3.52	-0.002032	Within authorized band for Band 4	Pass
	7.78	2.46	0.001420		
	8.96	-2.40	-0.001385		

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					
7.78	-30	-5.97	-0.002355	Within authorized band for Band 7	Pass
	-20	-4.65	-0.001834		
	-10	-3.22	-0.001270		
	0	3.82	0.001507		
	10	-4.06	-0.001602		
	20	2.92	0.001152		
	30	-5.78	-0.002280		
	40	2.12	0.000836		
	50	-4.09	-0.001613		
16QAM					
7.78	-30	-2.22	-0.000876	Within authorized band for Band 7	Pass
	-20	-5.49	-0.002166		
	-10	-4.46	-0.001759		
	0	-3.18	-0.001254		
	10	-3.00	-0.001183		
	20	4.78	0.001886		
	30	-3.06	-0.001207		
	40	-2.33	-0.000919		
	50	2.65	0.001045		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	7.2	-3.75	-0.001479	Within authorized band for Band 7	Pass
	7.78	2.88	0.001136		
	8.96	-3.38	-0.001333		
16QAM					
25	7.2	3.18	0.001254	Within authorized band for Band 7	Pass
	7.78	-3.98	-0.001570		
	8.96	-2.93	-0.001156		

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					
7.78	-30	-2.60	-0.003675	Within authorized band for Band 12	Pass
	-20	-2.45	-0.003463		
	-10	-2.46	-0.003477		
	0	-2.09	-0.002954		
	10	-3.02	-0.004269		
	20	-2.29	-0.003237		
	30	1.57	0.002219		
	40	-2.07	-0.002926		
	50	-2.75	-0.003887		
16QAM					
7.78	-30	-0.83	-0.001173	Within authorized band for Band 12	Pass
	-20	-1.13	-0.001597		
	-10	-1.90	-0.002686		
	0	-2.35	-0.003322		
	10	-2.06	-0.002912		
	20	1.79	0.002530		
	30	-1.77	-0.002502		
	40	-2.13	-0.003011		
	50	-2.95	-0.004170		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	7.2	1.16	0.001640	Within authorized band for Band 12	Pass
	7.78	-2.99	-0.004226		
	8.96	-2.22	-0.003138		
16QAM					
25	7.2	-3.76	-0.005314	Within authorized band for Band 12	Pass
	7.78	-2.72	-0.003845		
	8.96	-1.06	-0.001498		

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

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					
7.78	-30	1.50	0.002113	Within authorized band for Band 17	Pass
	-20	1.07	0.001507		
	-10	-3.76	-0.005296		
	0	-2.13	-0.003000		
	10	-1.95	-0.002746		
	20	-1.54	-0.002169		
	30	-1.42	-0.002000		
	40	-1.67	-0.002352		
	50	1.03	0.001451		
16QAM					
7.78	-30	-1.27	-0.001789	Within authorized band for Band 17	Pass
	-20	1.23	0.001732		
	-10	2.39	0.003366		
	0	2.42	0.003408		
	10	1.70	0.002394		
	20	-1.30	-0.001831		
	30	2.55	0.003592		
	40	-3.22	-0.004535		
	50	1.07	0.001507		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	7.2	-1.36	-0.001915	Within authorized band for Band 17	Pass
	7.78	1.80	0.002535		
	8.96	-2.10	-0.002958		
16QAM					
25	7.2	1.39	0.001958	Within authorized band for Band 17	Pass
	7.78	2.15	0.003028		
	8.96	2.45	0.003451		

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

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					
7.78	-30	-2.19	-0.002674	±2.5	Pass
	-20	1.69	0.002063		
	-10	1.53	0.001868		
	0	2.15	0.002625		
	10	-2.06	-0.002515		
	20	-1.80	-0.002198		
	30	2.78	0.003394		
	40	2.65	0.003236		
	50	2.37	0.002894		
16QAM					
7.78	-30	1.95	0.002381	±2.5	Pass
	-20	2.25	0.002747		
	-10	2.95	0.003602		
	0	-1.29	-0.001575		
	10	3.15	0.003846		
	20	2.00	0.002442		
	30	-2.07	-0.002527		
	40	3.25	0.003968		
	50	2.98	0.003639		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	7.2	3.26	0.003980	±2.5	Pass
	7.78	-1.29	-0.001575		
	8.96	1.92	0.002344		
16QAM					
25	7.2	2.86	0.003492	±2.5	Pass
	7.78	2.42	0.002955		
	8.96	-1.49	-0.001819		

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

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					
7.78	-30	-1.63	-0.001949	±2.5	Pass
	-20	-0.97	-0.001160		
	-10	2.72	0.003252		
	0	-2.10	-0.002510		
	10	1.59	0.001901		
	20	-1.59	-0.001901		
	30	2.53	0.003025		
	40	2.92	0.003491		
	50	-0.96	-0.001148		
16QAM					
7.78	-30	-1.76	-0.002104	±2.5	Pass
	-20	-2.20	-0.002630		
	-10	2.45	0.002929		
	0	1.56	0.001865		
	10	2.60	0.003108		
	20	-1.10	-0.001315		
	30	3.68	0.004399		
	40	0.96	0.001148		
	50	2.66	0.003180		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	7.2	1.70	0.002032	±2.5	Pass
	7.78	-1.42	-0.001698		
	8.96	-3.28	-0.003921		
16QAM					
25	7.2	-3.38	-0.004041	±2.5	Pass
	7.78	2.80	0.003347		
	8.96	-1.90	-0.002271		

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

LTE Band 38 part:

Reference Frequency: LTE Band 38(10MHz) Middle channel=38000 Frequency=2595.0MHz					
Temperature					
Power supplied (Vdc)	Temperature (°C)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
7.78	-30	3.71	0.001430	Within authorized band for Band 38	Pass
	-20	-7.84	-0.003021		
	-10	-7.25	-0.002794		
	0	-3.48	-0.001341		
	10	-6.92	-0.002667		
	20	-6.77	-0.002609		
	30	-5.89	-0.002270		
	40	2.59	0.000998		
	50	-7.47	-0.002879		
16QAM					
7.78	-30	4.69	0.001807	Within authorized band for Band 38	Pass
	-20	-5.42	-0.002089		
	-10	-4.51	-0.001738		
	0	-4.26	-0.001642		
	10	-3.02	-0.001164		
	20	-6.59	-0.002539		
	30	3.53	0.001360		
	40	-5.09	-0.001961		
	50	-4.18	-0.001611		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	7.2	-3.95	-0.001522	Within authorized band for Band 38	Pass
	7.78	-4.55	-0.001753		
	8.96	-4.05	-0.001561		
16QAM					
25	7.2	-7.21	-0.002778	Within authorized band for Band 38	Pass
	7.78	5.69	0.002193		
	8.96	-10.71	-0.004127		

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					
7.78	-30	4.76	0.001836	Within authorized band for Band 41	Pass
	-20	4.43	0.001708		
	-10	-4.15	-0.001600		
	0	4.72	0.001820		
	10	-7.30	-0.002815		
	20	-5.72	-0.002206		
	30	-3.38	-0.001304		
	40	6.68	0.002576		
	50	-3.13	-0.001207		
16QAM					
7.78	-30	-4.56	-0.001759	Within authorized band for Band 41	Pass
	-20	-9.18	-0.003540		
	-10	-12.49	-0.004817		
	0	-4.88	-0.001882		
	10	-8.98	-0.003463		
	20	-5.12	-0.001975		
	30	-9.06	-0.003494		
	40	-9.91	-0.003822		
	50	-4.61	-0.001778		
Voltage					
Temperature (°C)	Power supplied (Vdc)	Frequency error		Limit (ppm)	Result
		Hz	ppm		
QPSK					
25	7.2	-4.55	-0.001755	Within authorized band for Band 41	Pass
	7.78	-4.39	-0.001693		
	8.96	3.93	0.001516		
16QAM					
25	7.2	-3.85	-0.001485	Within authorized band for Band41	Pass
	7.78	-9.08	-0.003502		
	8.96	-5.51	-0.002125		

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