

Measurement Results vs. Variation of Voltage—LTE Band 2(Bandwidth:10MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	1880	3.3 V	-12.36	PASS
		3.85 V	-12.56	PASS
		4.2 V	-12.59	PASS
16QAM	1880	3.3 V	-12.56	PASS
		3.85 V	-11.30	PASS
		4.2 V	-11.36	PASS

Measurement Results vs. Variation of Temperature—LTE Band 2(Bandwidth:10MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	1880	-30 °C	-12.59	PASS
		-20 °C	-11.22	PASS
		-10 °C	-12.97	PASS
		0 °C	-13.90	PASS
		+10 °C	-13.36	PASS
		+20 °C	-14.26	PASS
		+30 °C	-14.02	PASS
		+40 °C	-13.78	PASS
		+50 °C	-14.49	PASS
16QAM	1880	-30 °C	-11.64	PASS
		-20 °C	-13.92	PASS
		-10 °C	-11.92	PASS
		0 °C	-15.45	PASS
		+10 °C	-12.06	PASS
		+20 °C	-13.10	PASS
		+30 °C	-10.23	PASS
		+40 °C	-12.59	PASS
		+50 °C	-11.22	PASS

Measurement Results vs. Variation of Voltage—LTE Band 2(Bandwidth:15MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	1880	3.3 V	-14.41	PASS
		3.85 V	-13.03	PASS
		4.2 V	-13.18	PASS
16QAM	1880	3.3 V	11.93	PASS
		3.85 V	-11.00	PASS
		4.2 V	-10.69	PASS

Measurement Results vs. Variation of Temperature—LTE Band 2(Bandwidth:15MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	1880	-30 °C	-10.36	PASS
		-20 °C	-13.09	PASS
		-10 °C	-11.23	PASS
		0 °C	-12.82	PASS
		+10 °C	-13.72	PASS
		+20 °C	-10.96	PASS
		+30 °C	-12.06	PASS
		+40 °C	-10.89	PASS
		+50 °C	-11.36	PASS
16QAM	1880	-30 °C	-11.30	PASS
		-20 °C	-12.40	PASS
		-10 °C	-13.55	PASS
		0 °C	-11.70	PASS
		+10 °C	-14.41	PASS
		+20 °C	-13.62	PASS
		+30 °C	-12.04	PASS
		+40 °C	-10.36	PASS
		+50 °C	-13.09	PASS

Measurement Results vs. Variation of Voltage—LTE Band 2(Bandwidth:20MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	1880	3.3 V	-11.79	PASS
		3.85 V	-10.56	PASS
		4.2 V	-12.00	PASS
16QAM	1880	3.3 V	-11.74	PASS
		3.85 V	9.76	PASS
		4.2 V	-12.27	PASS

Measurement Results vs. Variation of Temperature—LTE Band 2(Bandwidth:20MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	1880	-30 °C	-12.15	PASS
		-20 °C	-13.69	PASS
		-10 °C	-12.49	PASS
		0 °C	-12.33	PASS
		+10 °C	-10.33	PASS
		+20 °C	-11.67	PASS
		+30 °C	-13.45	PASS
		+40 °C	12.63	PASS
		+50 °C	-11.37	PASS
16QAM	1880	-30 °C	-10.61	PASS
		-20 °C	-10.61	PASS
		-10 °C	-12.59	PASS
		0 °C	-9.73	PASS
		+10 °C	-9.88	PASS
		+20 °C	-10.60	PASS
		+30 °C	-12.96	PASS
		+40 °C	-12.15	PASS
		+50 °C	-13.69	PASS

Measurement Results vs. Variation of Voltage—LTE Band 4(Bandwidth:1.4MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	1732.5	3.3 V	12.79	PASS
		3.85 V	9.37	PASS
		4.2 V	10.89	PASS
16QAM	1732.5	3.3 V	10.39	PASS
		3.85 V	10.80	PASS
		4.2 V	12.33	PASS

Measurement Results vs. Variation of Temperature—LTE Band 4(Bandwidth:1.4MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	1732.5	-30 °C	11.72	PASS
		-20 °C	11.17	PASS
		-10 °C	9.96	PASS
		0 °C	10.43	PASS
		+10 °C	11.60	PASS
		+20 °C	12.06	PASS
		+30 °C	10.36	PASS
		+40 °C	9.43	PASS
		+50 °C	12.27	PASS
16QAM	1732.5	-30 °C	-8.94	PASS
		-20 °C	10.64	PASS
		-10 °C	12.75	PASS
		0 °C	9.33	PASS
		+10 °C	11.06	PASS
		+20 °C	10.47	PASS
		+30 °C	9.13	PASS
		+40 °C	11.72	PASS
		+50 °C	11.17	PASS

Measurement Results vs. Variation of Voltage—LTE Band 4(Bandwidth:3MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	1732.5	3.3 V	10.70	PASS
		3.85 V	10.10	PASS
		4.2 V	-9.30	PASS
16QAM	1732.5	3.3 V	9.57	PASS
		3.85 V	-11.83	PASS
		4.2 V	12.69	PASS

Measurement Results vs. Variation of Temperature—LTE Band 4(Bandwidth:3MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	1732.5	-30 °C	10.17	PASS
		-20 °C	-9.17	PASS
		-10 °C	9.03	PASS
		0 °C	-10.29	PASS
		+10 °C	10.67	PASS
		+20 °C	10.23	PASS
		+30 °C	9.27	PASS
		+40 °C	-11.44	PASS
		+50 °C	8.84	PASS
16QAM	1732.5	-30 °C	-8.58	PASS
		-20 °C	10.46	PASS
		-10 °C	9.41	PASS
		0 °C	-10.67	PASS
		+10 °C	12.49	PASS
		+20 °C	10.77	PASS
		+30 °C	-9.01	PASS
		+40 °C	10.17	PASS
		+50 °C	-9.17	PASS

Measurement Results vs. Variation of Voltage—LTE Band 4(Bandwidth:5MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	1732.5	3.3 V	11.47	PASS
		3.85 V	12.37	PASS
		4.2 V	8.70	PASS
16QAM	1732.5	3.3 V	10.09	PASS
		3.85 V	14.00	PASS
		4.2 V	10.04	PASS

Measurement Results vs. Variation of Temperature—LTE Band 4(Bandwidth:5MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	1732.5	-30 °C	10.64	PASS
		-20 °C	-10.20	PASS
		-10 °C	9.30	PASS
		0 °C	10.26	PASS
		+10 °C	9.81	PASS
		+20 °C	8.00	PASS
		+30 °C	8.60	PASS
		+40 °C	11.42	PASS
		+50 °C	10.43	PASS
16QAM	1732.5	-30 °C	10.36	PASS
		-20 °C	8.21	PASS
		-10 °C	10.57	PASS
		0 °C	8.08	PASS
		+10 °C	9.54	PASS
		+20 °C	9.64	PASS
		+30 °C	10.41	PASS
		+40 °C	10.64	PASS
		+50 °C	-10.20	PASS

Measurement Results vs. Variation of Voltage—LTE Band 4(Bandwidth:10MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	1732.5	3.3 V	12.86	PASS
		3.85 V	9.97	PASS
		4.2 V	11.63	PASS
16QAM	1732.5	3.3 V	-10.19	PASS
		3.85 V	9.77	PASS
		4.2 V	11.79	PASS

Measurement Results vs. Variation of Temperature—LTE Band 4(Bandwidth:10MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	1732.5	-30 °C	9.40	PASS
		-20 °C	13.95	PASS
		-10 °C	11.43	PASS
		0 °C	12.95	PASS
		+10 °C	11.50	PASS
		+20 °C	12.97	PASS
		+30 °C	9.64	PASS
		+40 °C	12.79	PASS
		+50 °C	9.86	PASS
16QAM	1732.5	-30 °C	11.44	PASS
		-20 °C	-9.81	PASS
		-10 °C	10.13	PASS
		0 °C	12.59	PASS
		+10 °C	10.13	PASS
		+20 °C	11.03	PASS
		+30 °C	11.94	PASS
		+40 °C	9.40	PASS
		+50 °C	13.95	PASS

Measurement Results vs. Variation of Voltage—LTE Band 4(Bandwidth:15MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	1732.5	3.3 V	9.03	PASS
		3.85 V	-10.29	PASS
		4.2 V	-8.58	PASS
16QAM	1732.5	3.3 V	13.89	PASS
		3.85 V	8.91	PASS
		4.2 V	13.63	PASS

Measurement Results vs. Variation of Temperature—LTE Band 4(Bandwidth:15MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	1732.5	-30 °C	-30.06	PASS
		-20 °C	12.80	PASS
		-10 °C	11.01	PASS
		0 °C	11.69	PASS
		+10 °C	10.00	PASS
		+20 °C	9.07	PASS
		+30 °C	10.59	PASS
		+40 °C	9.74	PASS
		+50 °C	13.49	PASS
16QAM	1732.5	-30 °C	-11.33	PASS
		-20 °C	10.86	PASS
		-10 °C	12.46	PASS
		0 °C	12.85	PASS
		+10 °C	11.47	PASS
		+20 °C	9.13	PASS
		+30 °C	11.73	PASS
		+40 °C	-30.06	PASS
		+50 °C	12.80	PASS

Measurement Results vs. Variation of Voltage—LTE Band 4(Bandwidth:20MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	1732.5	3.3 V	-17.45	PASS
		3.85 V	-15.03	PASS
		4.2 V	-17.54	PASS
16QAM	1732.5	3.3 V	-22.10	PASS
		3.85 V	-16.58	PASS
		4.2 V	-18.07	PASS

Measurement Results vs. Variation of Temperature—LTE Band 4(Bandwidth:20MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	1732.5	-30 °C	-10.77	PASS
		-20 °C	-11.26	PASS
		-10 °C	-8.96	PASS
		0 °C	-14.46	PASS
		+10 °C	-8.58	PASS
		+20 °C	-7.47	PASS
		+30 °C	6.65	PASS
		+40 °C	-6.84	PASS
		+50 °C	-12.40	PASS
16QAM	1732.5	-30 °C	-13.69	PASS
		-20 °C	-9.16	PASS
		-10 °C	-12.83	PASS
		0 °C	-8.63	PASS
		+10 °C	-12.62	PASS
		+20 °C	-13.15	PASS
		+30 °C	-14.12	PASS
		+40 °C	-10.77	PASS
		+50 °C	-11.26	PASS

Measurement Results vs. Variation of Voltage—LTE Band 5(Bandwidth:1.4MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	836.5	3.3 V	5.99	PASS
		3.85 V	-5.65	PASS
		4.2 V	-5.99	PASS
16QAM	836.5	3.3 V	-4.62	PASS
		3.85 V	-4.86	PASS
		4.2 V	-6.09	PASS

Measurement Results vs. Variation of Temperature—LTE Band 5(Bandwidth:1.4MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	836.5	-30 °C	-5.58	PASS
		-20 °C	6.48	PASS
		-10 °C	5.18	PASS
		0 °C	5.62	PASS
		+10 °C	-4.48	PASS
		+20 °C	4.58	PASS
		+30 °C	6.07	PASS
		+40 °C	4.92	PASS
		+50 °C	5.85	PASS
16QAM	836.5	-30 °C	5.38	PASS
		-20 °C	5.22	PASS
		-10 °C	6.49	PASS
		0 °C	8.20	PASS
		+10 °C	-4.66	PASS
		+20 °C	7.11	PASS
		+30 °C	4.89	PASS
		+40 °C	-5.58	PASS
		+50 °C	6.48	PASS

Measurement Results vs. Variation of Voltage—LTE Band 5(Bandwidth:3MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	836.5	3.3 V	5.36	PASS
		3.85 V	5.54	PASS
		4.2 V	3.99	PASS
16QAM	836.5	3.3 V	-5.22	PASS
		3.85 V	6.31	PASS
		4.2 V	5.64	PASS

Measurement Results vs. Variation of Temperature—LTE Band 5(Bandwidth:3MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	836.5	-30 °C	4.32	PASS
		-20 °C	-5.61	PASS
		-10 °C	-4.21	PASS
		0 °C	5.62	PASS
		+10 °C	-5.05	PASS
		+20 °C	6.35	PASS
		+30 °C	5.18	PASS
		+40 °C	5.44	PASS
		+50 °C	5.76	PASS
16QAM	836.5	-30 °C	4.12	PASS
		-20 °C	4.99	PASS
		-10 °C	5.08	PASS
		0 °C	4.58	PASS
		+10 °C	5.15	PASS
		+20 °C	4.41	PASS
		+30 °C	5.49	PASS
		+40 °C	4.32	PASS
		+50 °C	-5.61	PASS

Measurement Results vs. Variation of Voltage—LTE Band 5(Bandwidth:5MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	836.5	3.3 V	5.28	PASS
		3.85 V	-4.99	PASS
		4.2 V	6.45	PASS
16QAM	836.5	3.3 V	5.26	PASS
		3.85 V	5.81	PASS
		4.2 V	5.41	PASS

Measurement Results vs. Variation of Temperature—LTE Band 5(Bandwidth:5MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	836.5	-30 °C	6.02	PASS
		-20 °C	4.59	PASS
		-10 °C	5.12	PASS
		0 °C	-4.65	PASS
		+10 °C	4.35	PASS
		+20 °C	6.01	PASS
		+30 °C	5.45	PASS
		+40 °C	-5.11	PASS
		+50 °C	-4.25	PASS
16QAM	836.5	-30 °C	6.25	PASS
		-20 °C	-4.98	PASS
		-10 °C	-5.38	PASS
		0 °C	-5.14	PASS
		+10 °C	-7.32	PASS
		+20 °C	5.97	PASS
		+30 °C	6.29	PASS
		+40 °C	6.02	PASS
		+50 °C	4.59	PASS

Measurement Results vs. Variation of Voltage—LTE Band 5(Bandwidth:10MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	836.5	3.3 V	6.42	PASS
		3.85 V	5.21	PASS
		4.2 V	6.55	PASS
16QAM	836.5	3.3 V	3.89	PASS
		3.85 V	5.87	PASS
		4.2 V	4.66	PASS

Measurement Results vs. Variation of Temperature—LTE Band 5(Bandwidth:10MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	836.5	-30 °C	4.31	PASS
		-20 °C	5.05	PASS
		-10 °C	5.11	PASS
		0 °C	5.72	PASS
		+10 °C	-5.04	PASS
		+20 °C	5.29	PASS
		+30 °C	4.81	PASS
		+40 °C	5.85	PASS
		+50 °C	6.07	PASS
16QAM	836.5	-30 °C	7.22	PASS
		-20 °C	5.08	PASS
		-10 °C	5.32	PASS
		0 °C	5.01	PASS
		+10 °C	-5.75	PASS
		+20 °C	5.64	PASS
		+30 °C	5.11	PASS
		+40 °C	4.31	PASS
		+50 °C	5.05	PASS

Measurement Results vs. Variation of Temperature—LTE Band 12(Bandwidth:1.4MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	707.5	3.3 V	-5.36	PASS
		3.85 V	-6.77	PASS
		4.2 V	-5.24	PASS
16QAM	707.5	3.3 V	-5.22	PASS
		3.85 V	-5.22	PASS
		4.2 V	-4.52	PASS

Measurement Results vs. Variation of Temperature—LTE Band 12(Bandwidth:1.4MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	707.5	-30 °C	-4.89	PASS
		-20 °C	-4.16	PASS
		-10 °C	-4.86	PASS
		0 °C	-3.89	PASS
		+10 °C	-4.49	PASS
		+20 °C	-4.31	PASS
		+30 °C	-5.11	PASS
		+40 °C	-5.01	PASS
		+50 °C	-5.61	PASS
16QAM	707.5	-30 °C	-5.58	PASS
		-20 °C	-5.91	PASS
		-10 °C	-4.46	PASS
		0 °C	-4.56	PASS
		+10 °C	-4.38	PASS
		+20 °C	-4.21	PASS
		+30 °C	-5.61	PASS
		+40 °C	-4.89	PASS
		+50 °C	-4.16	PASS

Measurement Results vs. Variation of Temperature—LTE Band 12(Bandwidth:3MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	707.5	3.3 V	-4.05	PASS
		3.85 V	-4.32	PASS
		4.2 V	-5.89	PASS
16QAM	707.5	3.3 V	-5.26	PASS
		3.85 V	-5.19	PASS
		4.2 V	-4.76	PASS

Measurement Results vs. Variation of Temperature—LTE Band 12(Bandwidth:3MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	707.5	-30 °C	-5.34	PASS
		-20 °C	4.62	PASS
		-10 °C	-5.94	PASS
		0 °C	-5.04	PASS
		+10 °C	-4.63	PASS
		+20 °C	-4.76	PASS
		+30 °C	-4.99	PASS
		+40 °C	4.56	PASS
		+50 °C	-4.63	PASS
16QAM	707.5	-30 °C	-5.34	PASS
		-20 °C	-5.59	PASS
		-10 °C	-5.31	PASS
		0 °C	-4.28	PASS
		+10 °C	-4.58	PASS
		+20 °C	-5.05	PASS
		+30 °C	-4.33	PASS
		+40 °C	-5.34	PASS
		+50 °C	4.62	PASS

Measurement Results vs. Variation of Temperature—LTE Band 12(Bandwidth:5MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	707.5	3.3 V	-4.61	PASS
		3.85 V	-4.22	PASS
		4.2 V	4.03	PASS
16QAM	707.5	3.3 V	-6.64	PASS
		3.85 V	-4.81	PASS
		4.2 V	-5.26	PASS

Measurement Results vs. Variation of Temperature—LTE Band 12(Bandwidth:5MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	707.5	-30 °C	4.11	PASS
		-20 °C	-3.66	PASS
		-10 °C	-4.51	PASS
		0 °C	-5.22	PASS
		+10 °C	4.91	PASS
		+20 °C	-4.36	PASS
		+30 °C	-4.85	PASS
		+40 °C	5.16	PASS
		+50 °C	-3.71	PASS
16QAM	707.5	-30 °C	-6.95	PASS
		-20 °C	-5.39	PASS
		-10 °C	-5.74	PASS
		0 °C	-4.73	PASS
		+10 °C	-3.78	PASS
		+20 °C	-4.65	PASS
		+30 °C	-4.38	PASS
		+40 °C	4.11	PASS
		+50 °C	-3.66	PASS

Measurement Results vs. Variation of Temperature—LTE Band 12(Bandwidth:10MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	707.5	3.3 V	-4.51	PASS
		3.85 V	-4.72	PASS
		4.2 V	-4.46	PASS
16QAM	707.5	3.3 V	-4.88	PASS
		3.85 V	-5.98	PASS
		4.2 V	4.41	PASS

Measurement Results vs. Variation of Temperature—LTE Band 12(Bandwidth:10MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	707.5	-30 °C	-5.19	PASS
		-20 °C	-4.94	PASS
		-10 °C	3.96	PASS
		0 °C	-5.52	PASS
		+10 °C	-4.66	PASS
		+20 °C	-5.49	PASS
		+30 °C	4.66	PASS
		+40 °C	3.30	PASS
		+50 °C	4.73	PASS
16QAM	707.5	-30 °C	-4.28	PASS
		-20 °C	-4.69	PASS
		-10 °C	-4.45	PASS
		0 °C	4.51	PASS
		+10 °C	-4.56	PASS
		+20 °C	-5.46	PASS
		+30 °C	-4.29	PASS
		+40 °C	-5.19	PASS
		+50 °C	-4.94	PASS

Measurement Results vs. Variation of Temperature—LTE Band 13(Bandwidth:5MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	782	3.3 V	-4.03	PASS
		3.85 V	4.55	PASS
		4.2 V	-5.39	PASS
16QAM	782	3.3 V	4.99	PASS
		3.85 V	-5.31	PASS
		4.2 V	5.28	PASS

Measurement Results vs. Variation of Temperature—LTE Band 13(Bandwidth:5MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	782	-30 °C	-13.13	PASS
		-20 °C	-13.73	PASS
		-10 °C	-11.70	PASS
		0 °C	-13.59	PASS
		+10 °C	-12.37	PASS
		+20 °C	-17.19	PASS
		+30 °C	-14.15	PASS
		+40 °C	-13.22	PASS
		+50 °C	-12.12	PASS
16QAM	782	-30 °C	-13.80	PASS
		-20 °C	-8.24	PASS
		-10 °C	-7.77	PASS
		0 °C	-9.61	PASS
		+10 °C	-11.27	PASS
		+20 °C	-8.28	PASS
		+30 °C	-10.93	PASS
		+40 °C	-13.13	PASS
		+50 °C	-13.73	PASS

Measurement Results vs. Variation of Temperature—LTE Band 13(Bandwidth:10MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	782	3.3 V	-4.98	PASS
		3.85 V	-5.18	PASS
		4.2 V	-5.01	PASS
16QAM	782	3.3 V	4.56	PASS
		3.85 V	-4.53	PASS
		4.2 V	-4.45	PASS

Measurement Results vs. Variation of Temperature—LTE Band 13(Bandwidth:10MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	782	-30 °C	4.39	PASS
		-20 °C	-5.75	PASS
		-10 °C	-5.34	PASS
		0 °C	-4.59	PASS
		+10 °C	4.76	PASS
		+20 °C	-4.61	PASS
		+30 °C	-4.69	PASS
		+40 °C	-5.56	PASS
		+50 °C	-5.49	PASS
16QAM	782	-30 °C	5.22	PASS
		-20 °C	-4.46	PASS
		-10 °C	-4.06	PASS
		0 °C	-4.98	PASS
		+10 °C	-6.42	PASS
		+20 °C	5.58	PASS
		+30 °C	-5.01	PASS
		+40 °C	4.39	PASS
		+50 °C	-5.75	PASS

Measurement Results vs.Variation of Voltage—LTE Band 66(1.4MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	1745	3.3 V	-12.62	PASS
		3.85 V	-13.56	PASS
		4.2 V	-9.74	PASS
16QAM	1745	3.3 V	-11.27	PASS
		3.85 V	-14.32	PASS
		4.2 V	-11.40	PASS

Measurement Results vs.Variation of Temperature—LTE Band66(1.4MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	1745	-30 °C	-15.03	PASS
		-20 °C	-13.12	PASS
		-10 °C	-13.23	PASS
		0 °C	-10.43	PASS
		+10 °C	-10.70	PASS
		+20 °C	-10.90	PASS
		+30 °C	-9.77	PASS
		+40 °C	-11.89	PASS
		+50 °C	-11.77	PASS
16QAM	1745	-30 °C	8.78	PASS
		-20 °C	-13.09	PASS
		-10 °C	-11.97	PASS
		0 °C	-13.00	PASS
		+10 °C	-11.97	PASS
		+20 °C	-12.52	PASS
		+30 °C	-9.21	PASS
		+40 °C	-15.03	PASS
		+50 °C	-13.12	PASS

MeasurementResults vs.Variation ofVoltage –LTE Band 66(3MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	1745	3.3 V	9.98	PASS
		3.85 V	-10.56	PASS
		4.2 V	-14.49	PASS
16QAM	1745	3.3 V	-12.90	PASS
		3.85 V	-10.44	PASS
		4.2 V	-9.74	PASS

MeasurementResults vs.Variation ofTemperature –LTE Band 66(3MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	1745	-30 °C	9.41	PASS
		-20 °C	-12.35	PASS
		-10 °C	-10.47	PASS
		0 °C	-11.29	PASS
		+10 °C	-9.24	PASS
		+20 °C	-10.81	PASS
		+30 °C	-11.09	PASS
		+40 °C	-11.93	PASS
		+50 °C	-7.75	PASS
16QAM	1745	-30 °C	-10.43	PASS
		-20 °C	-9.00	PASS
		-10 °C	-10.81	PASS
		0 °C	-11.01	PASS
		+10 °C	-11.13	PASS
		+20 °C	-11.74	PASS
		+30 °C	-9.31	PASS
		+40 °C	9.41	PASS
		+50 °C	-12.35	PASS

MeasurementResults vs.Variation ofVoltage –LTE Band 66(5MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	1745	3.3 V	-10.89	PASS
		3.85 V	12.63	PASS
		4.2 V	-10.86	PASS
16QAM	1745	3.3 V	-11.40	PASS
		3.85 V	-12.66	PASS
		4.2 V	-9.23	PASS

MeasurementResults vs.Variation ofTemperature –LTE Band 66(5MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	1745	-30 °C	-12.25	PASS
		-20 °C	-10.63	PASS
		-10 °C	-12.13	PASS
		0 °C	-9.81	PASS
		+10 °C	-10.94	PASS
		+20 °C	-11.36	PASS
		+30 °C	-12.32	PASS
		+40 °C	-12.22	PASS
		+50 °C	-10.41	PASS
16QAM	1745	-30 °C	10.49	PASS
		-20 °C	10.76	PASS
		-10 °C	-10.21	PASS
		0 °C	-7.90	PASS
		+10 °C	-13.78	PASS
		+20 °C	-9.34	PASS
		+30 °C	10.00	PASS
		+40 °C	-12.25	PASS
		+50 °C	-10.63	PASS

Measurement Results vs.Variation of Voltage—LTE Band 66(10MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	1745	3.3 V	-10.09	PASS
		3.85 V	-12.12	PASS
		4.2 V	-11.93	PASS
16QAM	1745	3.3 V	-11.59	PASS
		3.85 V	-10.26	PASS
		4.2 V	-12.93	PASS

Measurement Results vs.Variation of Temperature—LTE Band 66(10MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	1745	-30 °C	-12.36	PASS
		-20 °C	-10.77	PASS
		-10 °C	-13.79	PASS
		0 °C	-12.76	PASS
		+10 °C	-16.69	PASS
		+20 °C	-10.34	PASS
		+30 °C	-9.77	PASS
		+40 °C	-12.27	PASS
		+50 °C	-10.23	PASS
16QAM	1745	-30 °C	-13.52	PASS
		-20 °C	-13.10	PASS
		-10 °C	-12.79	PASS
		0 °C	-12.30	PASS
		+10 °C	-13.49	PASS
		+20 °C	-11.99	PASS
		+30 °C	-10.81	PASS
		+40 °C	-12.36	PASS
		+50 °C	-10.77	PASS

Measurement Results vs.Variation of Voltage—LTE Band 66(15MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	1745	3.3 V	-12.43	PASS
		3.85 V	11.37	PASS
		4.2 V	-10.77	PASS
16QAM	1745	3.3 V	-9.68	PASS
		3.85 V	-9.41	PASS
		4.2 V	-10.31	PASS

Measurement Results vs.Variation of Temperature—LTE Band 66(15MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	1745	-30 °C	-11.16	PASS
		-20 °C	9.97	PASS
		-10 °C	-9.91	PASS
		0 °C	-11.12	PASS
		+10 °C	-10.97	PASS
		+20 °C	-11.03	PASS
		+30 °C	-11.43	PASS
		+40 °C	-11.57	PASS
		+50 °C	-12.65	PASS
16QAM	1745	-30 °C	-11.69	PASS
		-20 °C	-11.69	PASS
		-10 °C	-13.18	PASS
		0 °C	-8.77	PASS
		+10 °C	-10.97	PASS
		+20 °C	-11.59	PASS
		+30 °C	-11.73	PASS
		+40 °C	-11.16	PASS
		+50 °C	9.97	PASS

Measurement Results vs.Variation of Voltage—LTE Band 66(20MHz)

Modulation	Nominal Frequency (MHz)	Voltage [Vdc]	Measured Frequency Error(Hz)	Verdict
QPSK	1745	3.3 V	13.53	PASS
		3.85 V	-9.83	PASS
		4.2 V	-9.08	PASS
16QAM	1745	3.3 V	-13.50	PASS
		3.85 V	-8.71	PASS
		4.2 V	-11.10	PASS

Measurement Results vs.Variation of Temperature—LTE Band 66(20MHz)

Modulation	Nominal Frequency (MHz)	Temperature	Measured Frequency Error(Hz)	Verdict
QPSK	1745	-30 °C	-10.50	PASS
		-20 °C	-9.54	PASS
		-10 °C	-13.36	PASS
		0 °C	-10.20	PASS
		+10 °C	8.91	PASS
		+20 °C	-9.06	PASS
		+30 °C	-9.63	PASS
		+40 °C	-12.37	PASS
		+50 °C	10.43	PASS
16QAM	1745	-30 °C	-13.25	PASS
		-20 °C	8.70	PASS
		-10 °C	-10.31	PASS
		0 °C	-10.51	PASS
		+10 °C	-9.23	PASS
		+20 °C	-10.93	PASS
		+30 °C	10.51	PASS
		+40 °C	-10.50	PASS
		+50 °C	-9.54	PASS

END OF REPORT