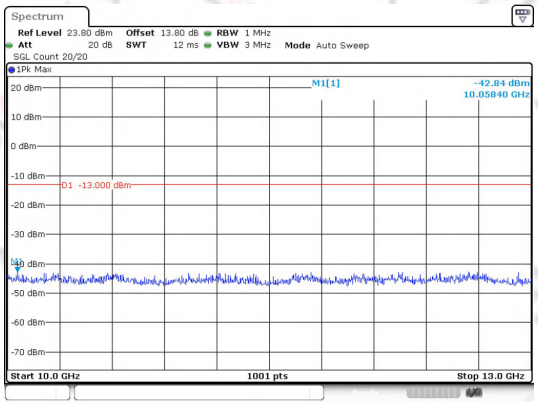
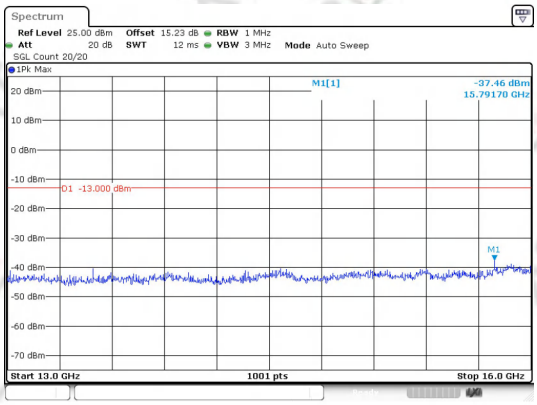


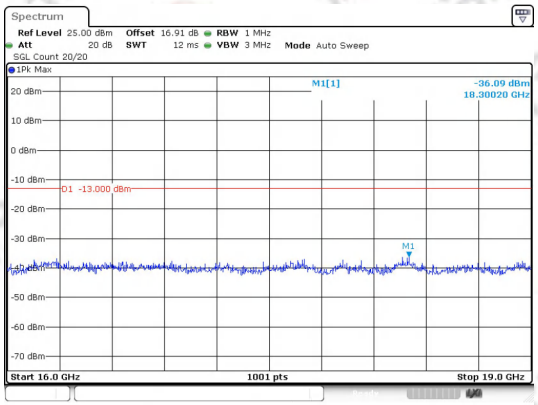
10000.0MHz-13000.0MHz

Band 4 20MHz/1720.0/Low 16QAM 1@0



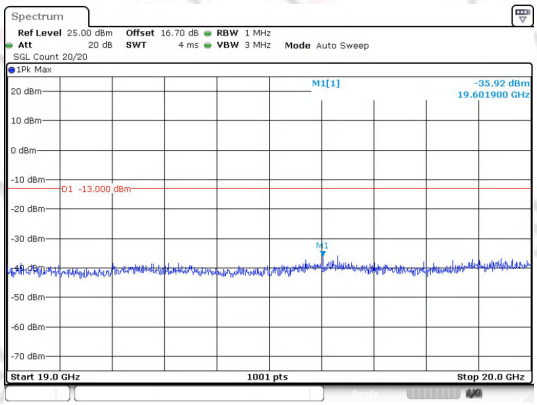
13000.0MHz-16000.0MHz

Band 4 20MHz/1720.0/Low 16QAM 1@0



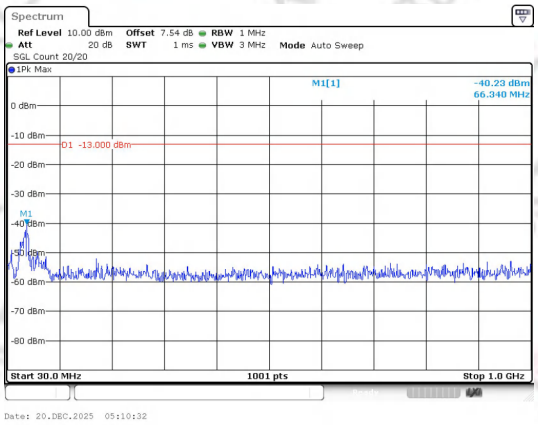
16000.0MHz-19000.0MHz

Band 4 20MHz/1720.0/Low 16QAM 1@0



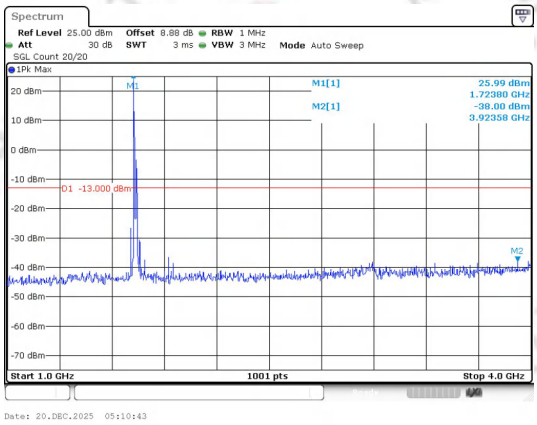
19000.0MHz-20000.0MHz

Band 4 20MHz/1720.0/Low 16QAM 1@0



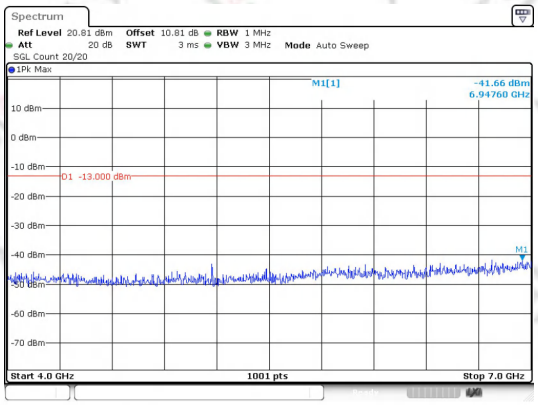
30.0MHz-1000.0MHz

Band 4 20MHz/1732.5/Mid QPSK 1@0



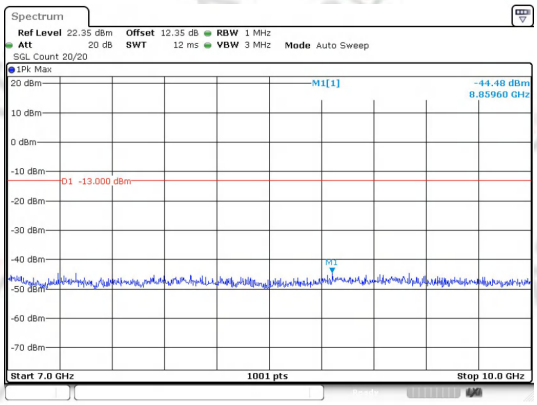
1000.0MHz-4000.0MHz

Band 4 20MHz/1732.5/Mid QPSK 1@0



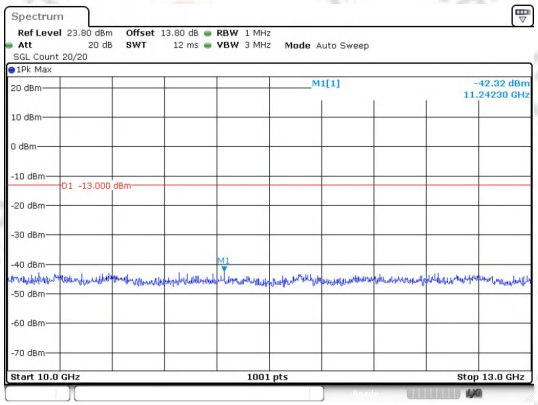
4000.0MHz-7000.0MHz

Band 4 20MHz/1732.5/Mid QPSK 1@0



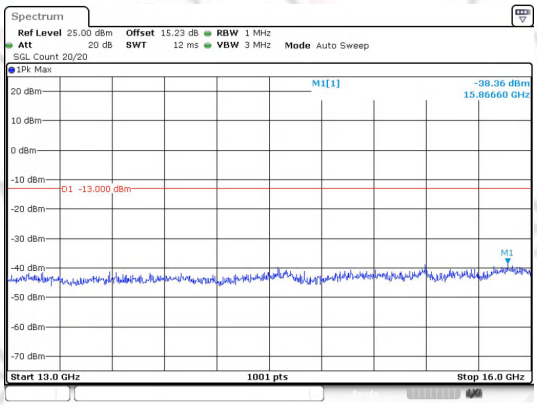
7000.0MHz-10000.0MHz

Band 4 20MHz/1732.5/Mid QPSK 1@0



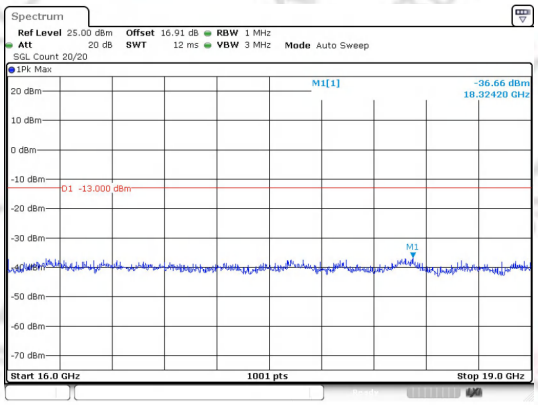
10000.0MHz-13000.0MHz

Band 4 20MHz/1732.5/Mid QPSK 1@0



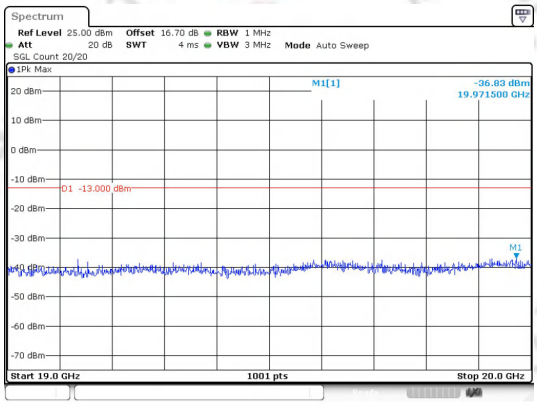
13000.0MHz-16000.0MHz

Band 4 20MHz/1732.5/Mid QPSK 1@0



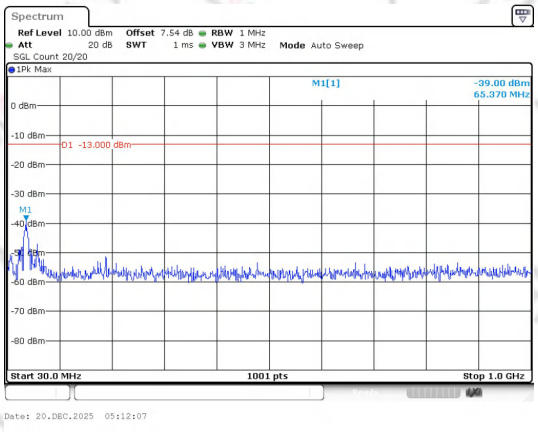
16000.0MHz-19000.0MHz

Band 4 20MHz/1732.5/Mid QPSK 1@0



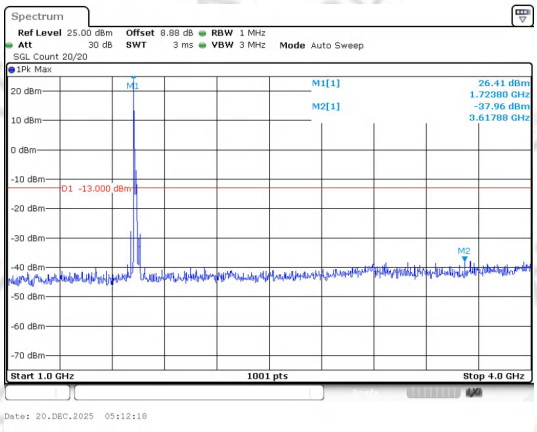
19000.0MHz-20000.0MHz

Band 4 20MHz/1732.5/Mid QPSK 1@0



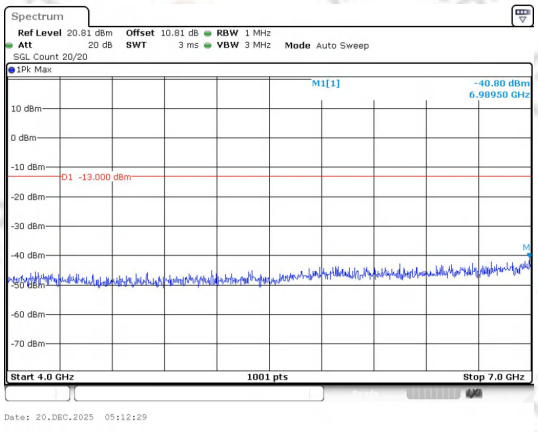
30.0MHz-1000.0MHz

Band 4 20MHz/1732.5/Mid 16QAM 1@0



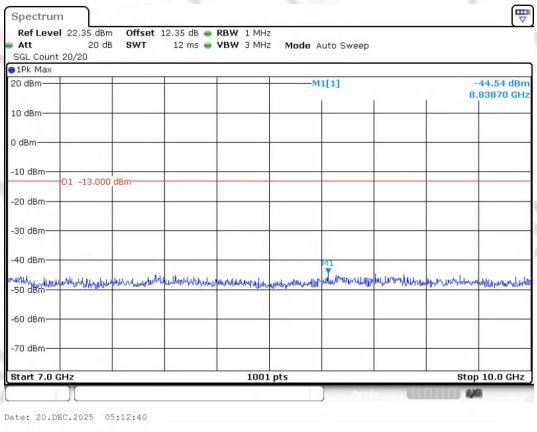
1000.0MHz-4000.0MHz

Band 4 20MHz/1732.5/Mid 16QAM 1@0



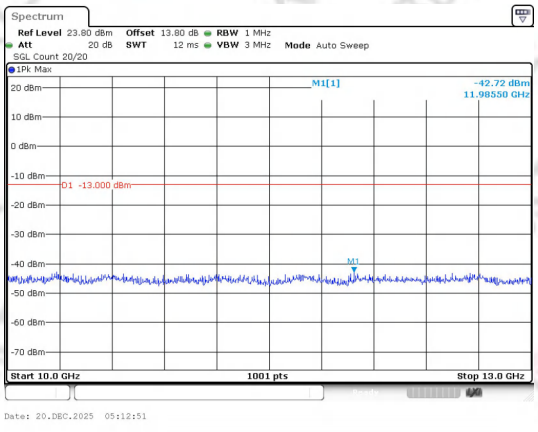
4000.0MHz-7000.0MHz

Band 4 20MHz/1732.5/Mid 16QAM 1@0



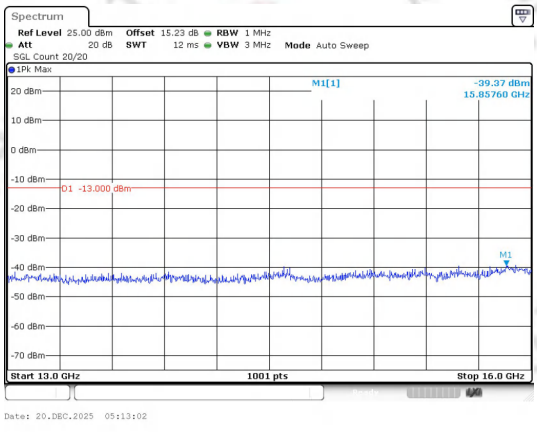
7000.0MHz-10000.0MHz

Band 4 20MHz/1732.5/Mid 16QAM 1@0



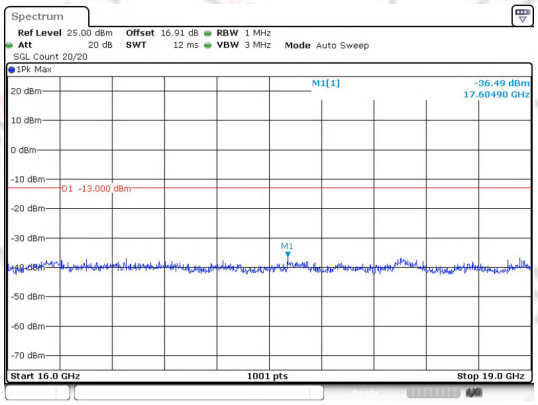
10000.0MHz-13000.0MHz

Band 4 20MHz/1732.5/Mid 16QAM 1@0



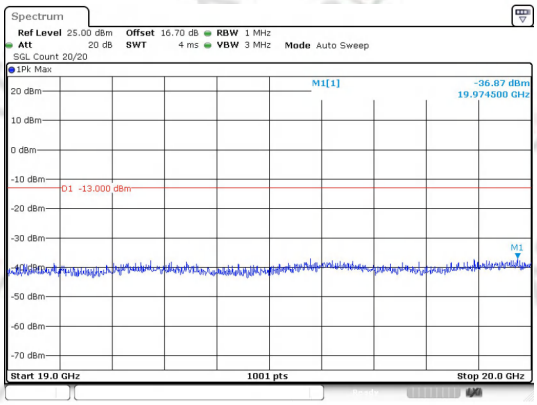
13000.0MHz-16000.0MHz

Band 4 20MHz/1732.5/Mid 16QAM 1@0



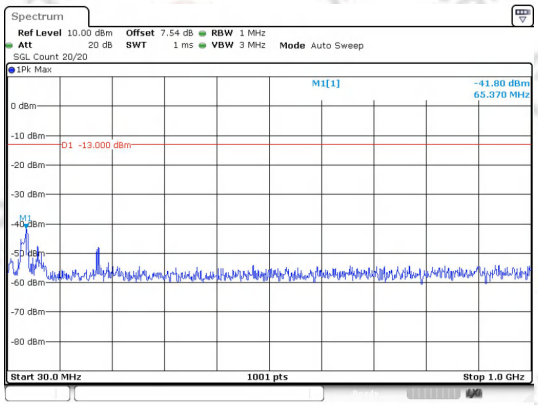
16000.0MHz-19000.0MHz

Band 4 20MHz/1732.5/Mid 16QAM 1@0



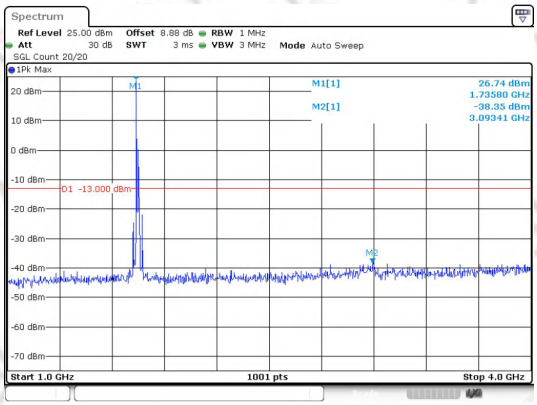
19000.0MHz-20000.0MHz

Band 4 20MHz/1732.5/Mid 16QAM 1@0



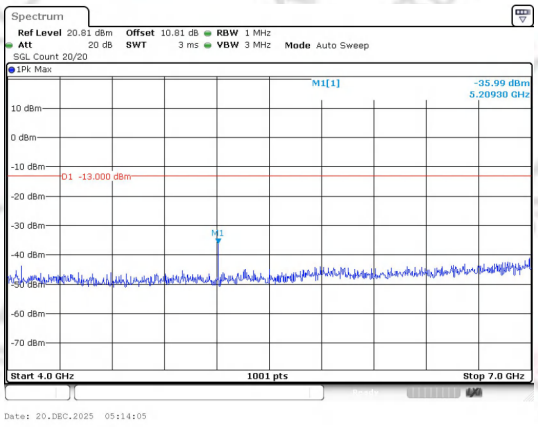
30.0MHz-1000.0MHz

Band 4 20MHz/1745.0/High QPSK 1@0



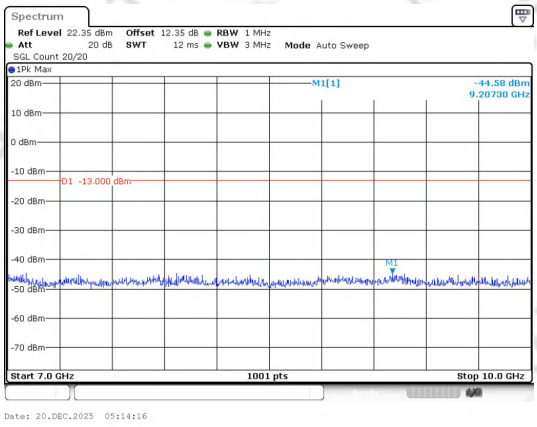
1000.0MHz-4000.0MHz

Band 4 20MHz/1745.0/High QPSK 1@0



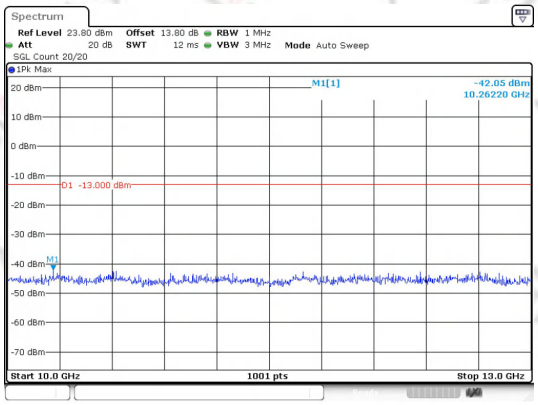
4000.0MHz-7000.0MHz

Band 4 20MHz/1745.0/High QPSK 1@0



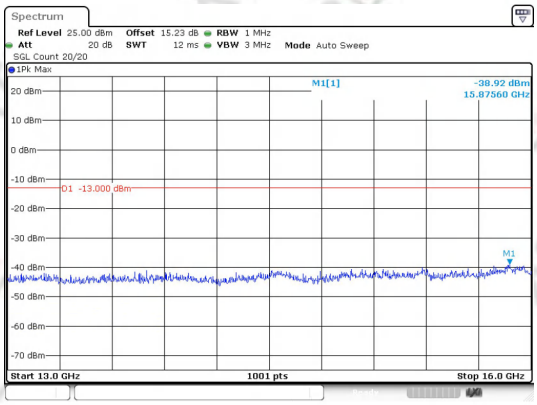
7000.0MHz-10000.0MHz

Band 4 20MHz/1745.0/High QPSK 1@0



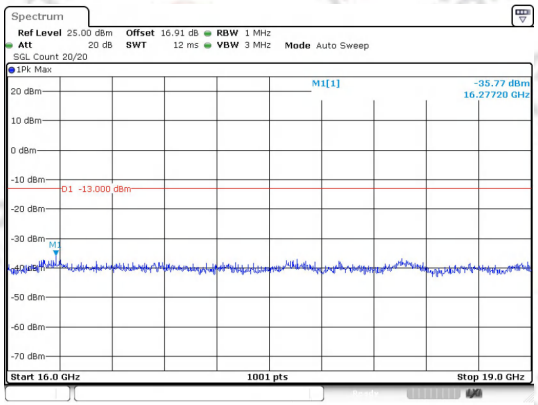
10000.0MHz-13000.0MHz

Band 4 20MHz/1745.0/High QPSK 1@0



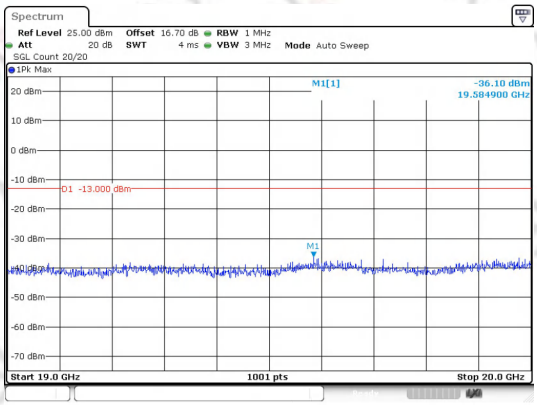
13000.0MHz-16000.0MHz

Band 4 20MHz/1745.0/High QPSK 1@0



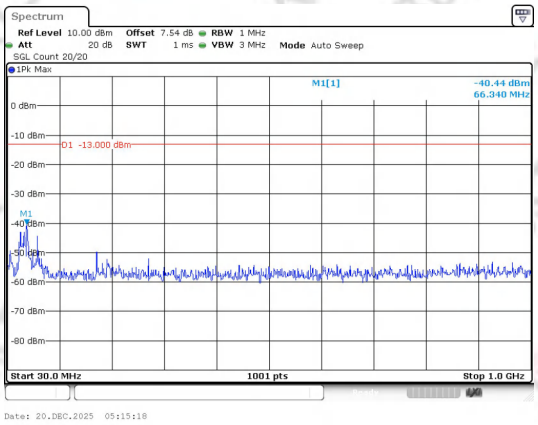
16000.0MHz-19000.0MHz

Band 4 20MHz/1745.0/High QPSK 1@0



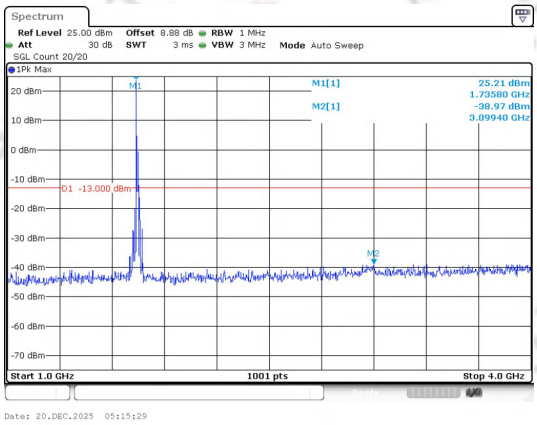
19000.0MHz-20000.0MHz

Band 4 20MHz/1745.0/High QPSK 1@0



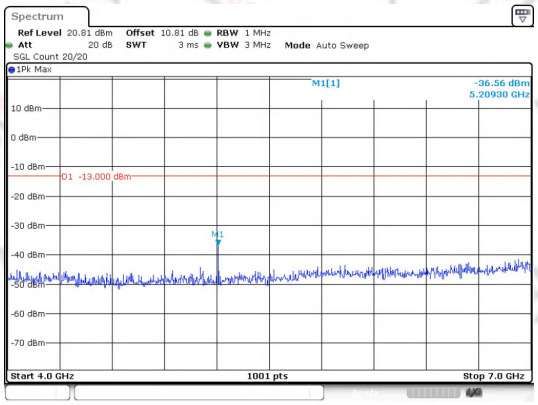
30.0MHz-1000.0MHz

Band 4 20MHz/1745.0/High 16QAM 1@0



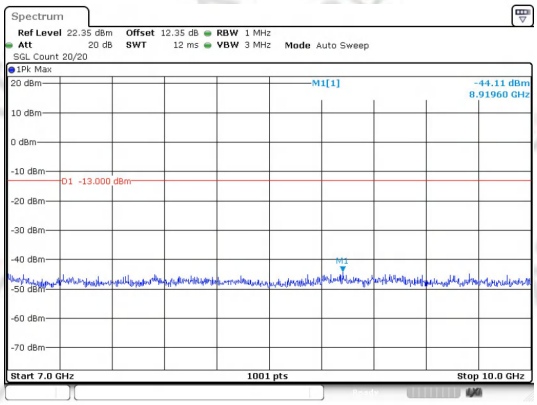
1000.0MHz-4000.0MHz

Band 4 20MHz/1745.0/High 16QAM 1@0



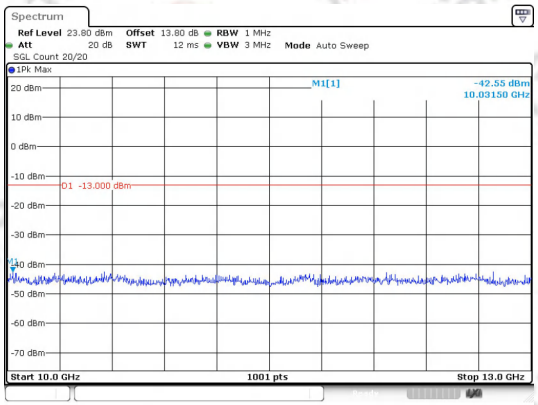
4000.0MHz-7000.0MHz

Band 4 20MHz/1745.0/High 16QAM 1@0



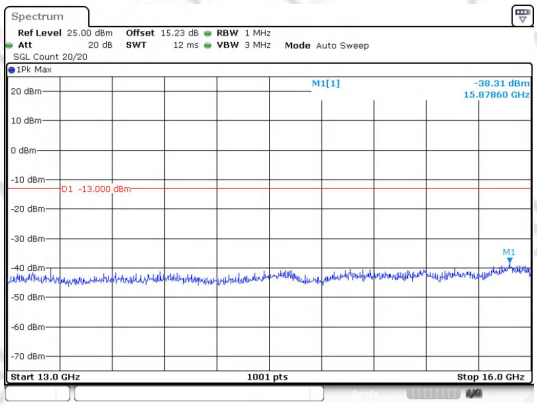
7000.0MHz-10000.0MHz

Band 4 20MHz/1745.0/High 16QAM 1@0



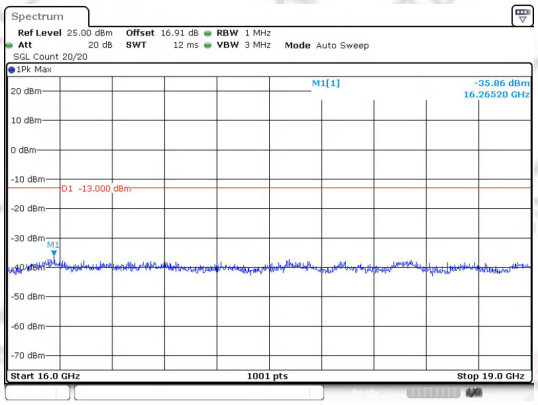
10000.0MHz-13000.0MHz

Band 4 20MHz/1745.0/High 16QAM 1@0



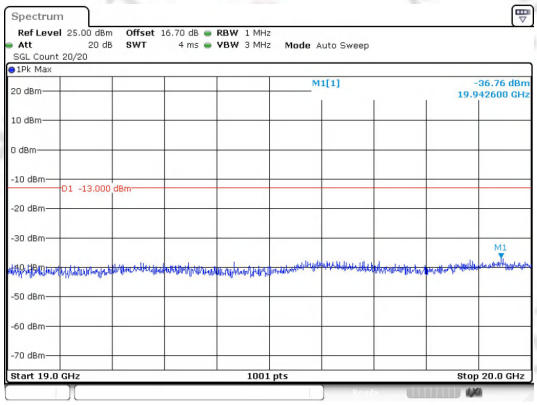
13000.0MHz-16000.0MHz

Band 4 20MHz/1745.0/High 16QAM 1@0



16000.0MHz-19000.0MHz

Band 4 20MHz/1745.0/High 16QAM 1@0



19000.0MHz-20000.0MHz

Band 4 20MHz/1745.0/High 16QAM 1@0

H6.Frequency Stability-TN/VN

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Deviation (Hz)	Deviation (ppm)	Limit(ppm)	Verdict	Environment
4	1.4	19957	1710.7	QPSK	6@0	-18.12	-0.01059	±2.5	PASS	TN/VN
4	1.4	19957	1710.7	16QAM	6@0	2.39	0.0014	±2.5	PASS	TN/VN
4	1.4	20175	1732.5	QPSK	6@0	5.56	0.00321	±2.5	PASS	TN/VN
4	1.4	20175	1732.5	16QAM	6@0	8.48	0.0049	±2.5	PASS	TN/VN
4	1.4	20393	1754.3	QPSK	6@0	4.36	0.00249	±2.5	PASS	TN/VN
4	1.4	20393	1754.3	16QAM	6@0	-3.36	-0.00192	±2.5	PASS	TN/VN
4	3.0	19965	1711.5	QPSK	15@0	-17.81	-0.01041	±2.5	PASS	TN/VN
4	3.0	19965	1711.5	16QAM	15@0	-30.93	-0.01807	±2.5	PASS	TN/VN
4	3.0	20175	1732.5	QPSK	15@0	5.76	0.00333	±2.5	PASS	TN/VN
4	3.0	20175	1732.5	16QAM	15@0	-9.0	-0.00519	±2.5	PASS	TN/VN
4	3.0	20385	1753.5	QPSK	15@0	4.43	0.00253	±2.5	PASS	TN/VN
4	3.0	20385	1753.5	16QAM	15@0	-14.61	-0.00833	±2.5	PASS	TN/VN
4	5.0	19975	1712.5	QPSK	25@0	-16.55	-0.00966	±2.5	PASS	TN/VN
4	5.0	19975	1712.5	16QAM	25@0	-33.04	-0.0193	±2.5	PASS	TN/VN
4	5.0	20175	1732.5	QPSK	25@0	-4.72	-0.00272	±2.5	PASS	TN/VN
4	5.0	20175	1732.5	16QAM	25@0	-35.91	-0.02072	±2.5	PASS	TN/VN
4	5.0	20375	1752.5	QPSK	25@0	-19.43	-0.01108	±2.5	PASS	TN/VN
4	5.0	20375	1752.5	16QAM	25@0	0.94	0.00054	±2.5	PASS	TN/VN
4	10.0	20000	1715.0	QPSK	50@0	-28.7	-0.01673	±2.5	PASS	TN/VN
4	10.0	20000	1715.0	16QAM	50@0	-28.61	-0.01668	±2.5	PASS	TN/VN
4	10.0	20175	1732.5	QPSK	50@0	-16.62	-0.00959	±2.5	PASS	TN/VN
4	10.0	20175	1732.5	16QAM	50@0	-17.14	-0.00989	±2.5	PASS	TN/VN
4	10.0	20350	1750.0	QPSK	50@0	-5.62	-0.00321	±2.5	PASS	TN/VN
4	10.0	20350	1750.0	16QAM	50@0	-16.99	-0.00971	±2.5	PASS	TN/VN
4	15.0	20025	1717.5	QPSK	75@0	-15.95	-0.00929	±2.5	PASS	TN/VN
4	15.0	20025	1717.5	16QAM	75@0	-25.05	-0.01458	±2.5	PASS	TN/VN
4	15.0	20175	1732.5	QPSK	75@0	-8.11	-0.00468	±2.5	PASS	TN/VN
4	15.0	20175	1732.5	16QAM	75@0	-22.96	-0.01325	±2.5	PASS	TN/VN
4	15.0	20325	1747.5	QPSK	75@0	1.04	0.0006	±2.5	PASS	TN/VN
4	15.0	20325	1747.5	16QAM	75@0	-22.76	-0.01302	±2.5	PASS	TN/VN
4	20.0	20050	1720.0	QPSK	100@0	-2.36	-0.00137	±2.5	PASS	TN/VN
4	20.0	20050	1720.0	16QAM	100@0	-18.37	-0.01068	±2.5	PASS	TN/VN
4	20.0	20175	1732.5	QPSK	100@0	-11.57	-0.00668	±2.5	PASS	TN/VN
4	20.0	20175	1732.5	16QAM	100@0	-26.04	-0.01503	±2.5	PASS	TN/VN
4	20.0	20300	1745.0	QPSK	100@0	-17.68	-0.01013	±2.5	PASS	TN/VN
4	20.0	20300	1745.0	16QAM	100@0	-3.62	-0.00207	±2.5	PASS	TN/VN

Frequency Stability-TH/VH

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Deviation (Hz)	Deviation (ppm)	Limit(ppm)	Verdict	Environment
4	1.4	19957	1710.7	QPSK	6@0	-31.27	-0.01828	±2.5	PASS	TH/VH
4	1.4	19957	1710.7	16QAM	6@0	-9.38	-0.00549	±2.5	PASS	TH/VH
4	1.4	20175	1732.5	QPSK	6@0	2.6	0.0015	±2.5	PASS	TH/VH
4	1.4	20175	1732.5	16QAM	6@0	-25.65	-0.0148	±2.5	PASS	TH/VH
4	1.4	20393	1754.3	QPSK	6@0	-30.74	-0.01752	±2.5	PASS	TH/VH
4	1.4	20393	1754.3	16QAM	6@0	-19.93	-0.01136	±2.5	PASS	TH/VH
4	3.0	19965	1711.5	QPSK	15@0	-19.14	-0.01118	±2.5	PASS	TH/VH
4	3.0	19965	1711.5	16QAM	15@0	-10.69	-0.00624	±2.5	PASS	TH/VH
4	3.0	20175	1732.5	QPSK	15@0	-22.67	-0.01309	±2.5	PASS	TH/VH
4	3.0	20175	1732.5	16QAM	15@0	-5.36	-0.0031	±2.5	PASS	TH/VH
4	3.0	20385	1753.5	QPSK	15@0	4.03	0.0023	±2.5	PASS	TH/VH
4	3.0	20385	1753.5	16QAM	15@0	-39.94	-0.02278	±2.5	PASS	TH/VH
4	5.0	19975	1712.5	QPSK	25@0	-16.49	-0.00963	±2.5	PASS	TH/VH
4	5.0	19975	1712.5	16QAM	25@0	-35.39	-0.02067	±2.5	PASS	TH/VH
4	5.0	20175	1732.5	QPSK	25@0	-8.0	-0.00462	±2.5	PASS	TH/VH
4	5.0	20175	1732.5	16QAM	25@0	-20.83	-0.01202	±2.5	PASS	TH/VH
4	5.0	20375	1752.5	QPSK	25@0	-4.32	-0.00247	±2.5	PASS	TH/VH
4	5.0	20375	1752.5	16QAM	25@0	-0.59	-0.00033	±2.5	PASS	TH/VH
4	10.0	20000	1715.0	QPSK	50@0	-2.49	-0.00145	±2.5	PASS	TH/VH
4	10.0	20000	1715.0	16QAM	50@0	-23.7	-0.01382	±2.5	PASS	TH/VH
4	10.0	20175	1732.5	QPSK	50@0	-12.56	-0.00725	±2.5	PASS	TH/VH
4	10.0	20175	1732.5	16QAM	50@0	-19.07	-0.01101	±2.5	PASS	TH/VH
4	10.0	20350	1750.0	QPSK	50@0	0.57	0.00033	±2.5	PASS	TH/VH
4	10.0	20350	1750.0	16QAM	50@0	-30.81	-0.01761	±2.5	PASS	TH/VH
4	15.0	20025	1717.5	QPSK	75@0	-22.79	-0.01327	±2.5	PASS	TH/VH
4	15.0	20025	1717.5	16QAM	75@0	-36.96	-0.02152	±2.5	PASS	TH/VH
4	15.0	20175	1732.5	QPSK	75@0	-18.1	-0.01045	±2.5	PASS	TH/VH
4	15.0	20175	1732.5	16QAM	75@0	-18.58	-0.01073	±2.5	PASS	TH/VH
4	15.0	20325	1747.5	QPSK	75@0	-8.1	-0.00463	±2.5	PASS	TH/VH
4	15.0	20325	1747.5	16QAM	75@0	-9.93	-0.00568	±2.5	PASS	TH/VH
4	20.0	20050	1720.0	QPSK	100@0	-4.02	-0.00234	±2.5	PASS	TH/VH
4	20.0	20050	1720.0	16QAM	100@0	-20.89	-0.01214	±2.5	PASS	TH/VH
4	20.0	20175	1732.5	QPSK	100@0	-15.65	-0.00903	±2.5	PASS	TH/VH
4	20.0	20175	1732.5	16QAM	100@0	-19.03	-0.01098	±2.5	PASS	TH/VH
4	20.0	20300	1745.0	QPSK	100@0	-3.78	-0.00216	±2.5	PASS	TH/VH
4	20.0	20300	1745.0	16QAM	100@0	-9.93	-0.00569	±2.5	PASS	TH/VH

Frequency Stability-TH/VL

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Deviation (Hz)	Deviation (ppm)	Limit(ppm)	Verdict	Environment
4	1.4	19957	1710.7	QPSK	6@0	-0.67	-0.00039	±2.5	PASS	TH/VL
4	1.4	19957	1710.7	16QAM	6@0	-31.43	-0.01837	±2.5	PASS	TH/VL
4	1.4	20175	1732.5	QPSK	6@0	-3.0	-0.00173	±2.5	PASS	TH/VL
4	1.4	20175	1732.5	16QAM	6@0	6.08	0.00351	±2.5	PASS	TH/VL
4	1.4	20393	1754.3	QPSK	6@0	-2.93	-0.00167	±2.5	PASS	TH/VL
4	1.4	20393	1754.3	16QAM	6@0	-20.37	-0.01161	±2.5	PASS	TH/VL
4	3.0	19965	1711.5	QPSK	15@0	-2.63	-0.00154	±2.5	PASS	TH/VL
4	3.0	19965	1711.5	16QAM	15@0	-13.06	-0.00763	±2.5	PASS	TH/VL
4	3.0	20175	1732.5	QPSK	15@0	-7.41	-0.00428	±2.5	PASS	TH/VL
4	3.0	20175	1732.5	16QAM	15@0	-27.85	-0.01608	±2.5	PASS	TH/VL
4	3.0	20385	1753.5	QPSK	15@0	4.12	0.00235	±2.5	PASS	TH/VL
4	3.0	20385	1753.5	16QAM	15@0	-42.89	-0.02446	±2.5	PASS	TH/VL
4	5.0	19975	1712.5	QPSK	25@0	-5.75	-0.00336	±2.5	PASS	TH/VL
4	5.0	19975	1712.5	16QAM	25@0	-7.57	-0.00442	±2.5	PASS	TH/VL
4	5.0	20175	1732.5	QPSK	25@0	-30.18	-0.01742	±2.5	PASS	TH/VL
4	5.0	20175	1732.5	16QAM	25@0	-14.38	-0.0083	±2.5	PASS	TH/VL
4	5.0	20375	1752.5	QPSK	25@0	-34.8	-0.01986	±2.5	PASS	TH/VL
4	5.0	20375	1752.5	16QAM	25@0	-33.1	-0.01889	±2.5	PASS	TH/VL
4	10.0	20000	1715.0	QPSK	50@0	-17.07	-0.00995	±2.5	PASS	TH/VL
4	10.0	20000	1715.0	16QAM	50@0	-7.1	-0.00414	±2.5	PASS	TH/VL
4	10.0	20175	1732.5	QPSK	50@0	-1.76	-0.00102	±2.5	PASS	TH/VL
4	10.0	20175	1732.5	16QAM	50@0	-15.12	-0.00873	±2.5	PASS	TH/VL
4	10.0	20350	1750.0	QPSK	50@0	-32.4	-0.01851	±2.5	PASS	TH/VL
4	10.0	20350	1750.0	16QAM	50@0	-6.72	-0.00384	±2.5	PASS	TH/VL
4	15.0	20025	1717.5	QPSK	75@0	-34.29	-0.01996	±2.5	PASS	TH/VL
4	15.0	20025	1717.5	16QAM	75@0	-26.88	-0.01565	±2.5	PASS	TH/VL
4	15.0	20175	1732.5	QPSK	75@0	-33.56	-0.01937	±2.5	PASS	TH/VL
4	15.0	20175	1732.5	16QAM	75@0	-21.41	-0.01236	±2.5	PASS	TH/VL
4	15.0	20325	1747.5	QPSK	75@0	-24.35	-0.01393	±2.5	PASS	TH/VL
4	15.0	20325	1747.5	16QAM	75@0	-27.32	-0.01564	±2.5	PASS	TH/VL
4	20.0	20050	1720.0	QPSK	100@0	-28.8	-0.01674	±2.5	PASS	TH/VL
4	20.0	20050	1720.0	16QAM	100@0	-33.06	-0.01922	±2.5	PASS	TH/VL
4	20.0	20175	1732.5	QPSK	100@0	-37.88	-0.02186	±2.5	PASS	TH/VL
4	20.0	20175	1732.5	16QAM	100@0	-12.02	-0.00694	±2.5	PASS	TH/VL
4	20.0	20300	1745.0	QPSK	100@0	-9.86	-0.00565	±2.5	PASS	TH/VL
4	20.0	20300	1745.0	16QAM	100@0	-37.81	-0.02167	±2.5	PASS	TH/VL

Frequency Stability-TH/VN

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Deviation (Hz)	Deviation (ppm)	Limit(ppm)	Verdict	Environment
4	1.4	19957	1710.7	QPSK	6@0	-12.06	-0.00705	±2.5	PASS	TH/VN
4	1.4	19957	1710.7	16QAM	6@0	-30.21	-0.01766	±2.5	PASS	TH/VN
4	1.4	20175	1732.5	QPSK	6@0	-2.56	-0.00148	±2.5	PASS	TH/VN
4	1.4	20175	1732.5	16QAM	6@0	-21.72	-0.01253	±2.5	PASS	TH/VN
4	1.4	20393	1754.3	QPSK	6@0	-13.79	-0.00786	±2.5	PASS	TH/VN
4	1.4	20393	1754.3	16QAM	6@0	-40.4	-0.02303	±2.5	PASS	TH/VN
4	3.0	19965	1711.5	QPSK	15@0	-14.66	-0.00857	±2.5	PASS	TH/VN
4	3.0	19965	1711.5	16QAM	15@0	-21.09	-0.01232	±2.5	PASS	TH/VN
4	3.0	20175	1732.5	QPSK	15@0	-22.47	-0.01297	±2.5	PASS	TH/VN
4	3.0	20175	1732.5	16QAM	15@0	-43.62	-0.02518	±2.5	PASS	TH/VN
4	3.0	20385	1753.5	QPSK	15@0	-12.1	-0.0069	±2.5	PASS	TH/VN
4	3.0	20385	1753.5	16QAM	15@0	-16.09	-0.00918	±2.5	PASS	TH/VN
4	5.0	19975	1712.5	QPSK	25@0	-7.1	-0.00414	±2.5	PASS	TH/VN
4	5.0	19975	1712.5	16QAM	25@0	-17.74	-0.01036	±2.5	PASS	TH/VN
4	5.0	20175	1732.5	QPSK	25@0	-1.4	-0.00081	±2.5	PASS	TH/VN
4	5.0	20175	1732.5	16QAM	25@0	-37.52	-0.02166	±2.5	PASS	TH/VN
4	5.0	20375	1752.5	QPSK	25@0	2.03	0.00116	±2.5	PASS	TH/VN
4	5.0	20375	1752.5	16QAM	25@0	7.77	0.00443	±2.5	PASS	TH/VN
4	10.0	20000	1715.0	QPSK	50@0	-21.92	-0.01278	±2.5	PASS	TH/VN
4	10.0	20000	1715.0	16QAM	50@0	-35.52	-0.02071	±2.5	PASS	TH/VN
4	10.0	20175	1732.5	QPSK	50@0	-8.3	-0.00479	±2.5	PASS	TH/VN
4	10.0	20175	1732.5	16QAM	50@0	-4.28	-0.00247	±2.5	PASS	TH/VN
4	10.0	20350	1750.0	QPSK	50@0	-0.84	-0.00048	±2.5	PASS	TH/VN
4	10.0	20350	1750.0	16QAM	50@0	-14.36	-0.00821	±2.5	PASS	TH/VN
4	15.0	20025	1717.5	QPSK	75@0	-12.63	-0.00735	±2.5	PASS	TH/VN
4	15.0	20025	1717.5	16QAM	75@0	-34.56	-0.02012	±2.5	PASS	TH/VN
4	15.0	20175	1732.5	QPSK	75@0	5.14	0.00296	±2.5	PASS	TH/VN
4	15.0	20175	1732.5	16QAM	75@0	-38.71	-0.02234	±2.5	PASS	TH/VN
4	15.0	20325	1747.5	QPSK	75@0	-1.09	-0.00062	±2.5	PASS	TH/VN
4	15.0	20325	1747.5	16QAM	75@0	-6.59	-0.00377	±2.5	PASS	TH/VN
4	20.0	20050	1720.0	QPSK	100@0	-11.04	-0.00642	±2.5	PASS	TH/VN
4	20.0	20050	1720.0	16QAM	100@0	-24.69	-0.01436	±2.5	PASS	TH/VN
4	20.0	20175	1732.5	QPSK	100@0	-11.83	-0.00683	±2.5	PASS	TH/VN
4	20.0	20175	1732.5	16QAM	100@0	-6.82	-0.00394	±2.5	PASS	TH/VN
4	20.0	20300	1745.0	QPSK	100@0	-13.62	-0.0078	±2.5	PASS	TH/VN
4	20.0	20300	1745.0	16QAM	100@0	-16.79	-0.00962	±2.5	PASS	TH/VN

Frequency Stability-TL/VN

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Deviation (Hz)	Deviation (ppm)	Limit(ppm)	Verdict	Environment
4	1.4	19957	1710.7	QPSK	6@0	-30.2	-0.01765	±2.5	PASS	TL/VN
4	1.4	19957	1710.7	16QAM	6@0	3.98	0.00232	±2.5	PASS	TL/VN
4	1.4	20175	1732.5	QPSK	6@0	-2.39	-0.00138	±2.5	PASS	TL/VN
4	1.4	20175	1732.5	16QAM	6@0	0.74	0.00043	±2.5	PASS	TL/VN
4	1.4	20393	1754.3	QPSK	6@0	1.24	0.00071	±2.5	PASS	TL/VN
4	1.4	20393	1754.3	16QAM	6@0	-13.7	-0.00781	±2.5	PASS	TL/VN
4	3.0	19965	1711.5	QPSK	15@0	-32.24	-0.01884	±2.5	PASS	TL/VN
4	3.0	19965	1711.5	16QAM	15@0	-15.82	-0.00924	±2.5	PASS	TL/VN
4	3.0	20175	1732.5	QPSK	15@0	-1.92	-0.00111	±2.5	PASS	TL/VN
4	3.0	20175	1732.5	16QAM	15@0	-12.96	-0.00748	±2.5	PASS	TL/VN
4	3.0	20385	1753.5	QPSK	15@0	-8.85	-0.00505	±2.5	PASS	TL/VN
4	3.0	20385	1753.5	16QAM	15@0	-1.85	-0.00105	±2.5	PASS	TL/VN
4	5.0	19975	1712.5	QPSK	25@0	-12.56	-0.00733	±2.5	PASS	TL/VN
4	5.0	19975	1712.5	16QAM	25@0	-29.97	-0.0175	±2.5	PASS	TL/VN
4	5.0	20175	1732.5	QPSK	25@0	-8.45	-0.00488	±2.5	PASS	TL/VN
4	5.0	20175	1732.5	16QAM	25@0	-24.56	-0.01418	±2.5	PASS	TL/VN
4	5.0	20375	1752.5	QPSK	25@0	-6.01	-0.00343	±2.5	PASS	TL/VN
4	5.0	20375	1752.5	16QAM	25@0	-28.17	-0.01607	±2.5	PASS	TL/VN
4	10.0	20000	1715.0	QPSK	50@0	-22.69	-0.01323	±2.5	PASS	TL/VN
4	10.0	20000	1715.0	16QAM	50@0	-37.22	-0.0217	±2.5	PASS	TL/VN
4	10.0	20175	1732.5	QPSK	50@0	-16.98	-0.0098	±2.5	PASS	TL/VN
4	10.0	20175	1732.5	16QAM	50@0	-45.13	-0.02605	±2.5	PASS	TL/VN
4	10.0	20350	1750.0	QPSK	50@0	2.56	0.00146	±2.5	PASS	TL/VN
4	10.0	20350	1750.0	16QAM	50@0	-7.47	-0.00427	±2.5	PASS	TL/VN
4	15.0	20025	1717.5	QPSK	75@0	-32.69	-0.01903	±2.5	PASS	TL/VN
4	15.0	20025	1717.5	16QAM	75@0	-16.21	-0.00944	±2.5	PASS	TL/VN
4	15.0	20175	1732.5	QPSK	75@0	-4.84	-0.00279	±2.5	PASS	TL/VN
4	15.0	20175	1732.5	16QAM	75@0	-20.6	-0.01189	±2.5	PASS	TL/VN
4	15.0	20325	1747.5	QPSK	75@0	4.51	0.00258	±2.5	PASS	TL/VN
4	15.0	20325	1747.5	16QAM	75@0	-26.91	-0.0154	±2.5	PASS	TL/VN
4	20.0	20050	1720.0	QPSK	100@0	-3.48	-0.00202	±2.5	PASS	TL/VN
4	20.0	20050	1720.0	16QAM	100@0	-31.93	-0.01856	±2.5	PASS	TL/VN
4	20.0	20175	1732.5	QPSK	100@0	-18.67	-0.01078	±2.5	PASS	TL/VN
4	20.0	20175	1732.5	16QAM	100@0	-46.25	-0.02669	±2.5	PASS	TL/VN
4	20.0	20300	1745.0	QPSK	100@0	-10.36	-0.00594	±2.5	PASS	TL/VN
4	20.0	20300	1745.0	16QAM	100@0	-41.2	-0.02361	±2.5	PASS	TL/VN

Frequency Stability-TN/VH

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Deviation (Hz)	Deviation (ppm)	Limit(ppm)	Verdict	Environment
4	1.4	19957	1710.7	QPSK	6@0	-18.17	-0.01062	±2.5	PASS	TN/VH
4	1.4	19957	1710.7	16QAM	6@0	-3.28	-0.00191	±2.5	PASS	TN/VH
4	1.4	20175	1732.5	QPSK	6@0	4.36	0.00252	±2.5	PASS	TN/VH
4	1.4	20175	1732.5	16QAM	6@0	-2.9	-0.00168	±2.5	PASS	TN/VH
4	1.4	20393	1754.3	QPSK	6@0	-2.23	-0.00127	±2.5	PASS	TN/VH
4	1.4	20393	1754.3	16QAM	6@0	-23.46	-0.01337	±2.5	PASS	TN/VH
4	3.0	19965	1711.5	QPSK	15@0	-1.75	-0.00102	±2.5	PASS	TN/VH
4	3.0	19965	1711.5	16QAM	15@0	-19.77	-0.01155	±2.5	PASS	TN/VH
4	3.0	20175	1732.5	QPSK	15@0	1.87	0.00108	±2.5	PASS	TN/VH
4	3.0	20175	1732.5	16QAM	15@0	-16.42	-0.00948	±2.5	PASS	TN/VH
4	3.0	20385	1753.5	QPSK	15@0	-0.8	-0.00046	±2.5	PASS	TN/VH
4	3.0	20385	1753.5	16QAM	15@0	-23.05	-0.01314	±2.5	PASS	TN/VH
4	5.0	19975	1712.5	QPSK	25@0	-25.78	-0.01505	±2.5	PASS	TN/VH
4	5.0	19975	1712.5	16QAM	25@0	-0.79	-0.00046	±2.5	PASS	TN/VH
4	5.0	20175	1732.5	QPSK	25@0	-12.59	-0.00727	±2.5	PASS	TN/VH
4	5.0	20175	1732.5	16QAM	25@0	-50.71	-0.02927	±2.5	PASS	TN/VH
4	5.0	20375	1752.5	QPSK	25@0	-1.3	-0.00074	±2.5	PASS	TN/VH
4	5.0	20375	1752.5	16QAM	25@0	-0.27	-0.00016	±2.5	PASS	TN/VH
4	10.0	20000	1715.0	QPSK	50@0	-35.83	-0.02089	±2.5	PASS	TN/VH
4	10.0	20000	1715.0	16QAM	50@0	-16.38	-0.00955	±2.5	PASS	TN/VH
4	10.0	20175	1732.5	QPSK	50@0	0.36	0.00021	±2.5	PASS	TN/VH
4	10.0	20175	1732.5	16QAM	50@0	-28.12	-0.01623	±2.5	PASS	TN/VH
4	10.0	20350	1750.0	QPSK	50@0	-19.33	-0.01104	±2.5	PASS	TN/VH
4	10.0	20350	1750.0	16QAM	50@0	-7.58	-0.00433	±2.5	PASS	TN/VH
4	15.0	20025	1717.5	QPSK	75@0	-21.66	-0.01261	±2.5	PASS	TN/VH
4	15.0	20025	1717.5	16QAM	75@0	-10.37	-0.00604	±2.5	PASS	TN/VH
4	15.0	20175	1732.5	QPSK	75@0	-1.75	-0.00101	±2.5	PASS	TN/VH
4	15.0	20175	1732.5	16QAM	75@0	-39.0	-0.02251	±2.5	PASS	TN/VH
4	15.0	20325	1747.5	QPSK	75@0	-7.93	-0.00454	±2.5	PASS	TN/VH
4	15.0	20325	1747.5	16QAM	75@0	-12.79	-0.00732	±2.5	PASS	TN/VH
4	20.0	20050	1720.0	QPSK	100@0	-22.19	-0.0129	±2.5	PASS	TN/VH
4	20.0	20050	1720.0	16QAM	100@0	-41.9	-0.02436	±2.5	PASS	TN/VH
4	20.0	20175	1732.5	QPSK	100@0	3.48	0.00201	±2.5	PASS	TN/VH
4	20.0	20175	1732.5	16QAM	100@0	-24.26	-0.014	±2.5	PASS	TN/VH
4	20.0	20300	1745.0	QPSK	100@0	-27.77	-0.01591	±2.5	PASS	TN/VH
4	20.0	20300	1745.0	16QAM	100@0	-25.32	-0.01451	±2.5	PASS	TN/VH

Frequency Stability-TN/VL

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Deviation (Hz)	Deviation (ppm)	Limit(ppm)	Verdict	Environment
4	1.4	19957	1710.7	QPSK	6@0	-13.13	-0.00768	±2.5	PASS	TN/VL
4	1.4	19957	1710.7	16QAM	6@0	-2.16	-0.00126	±2.5	PASS	TN/VL
4	1.4	20175	1732.5	QPSK	6@0	-8.85	-0.00511	±2.5	PASS	TN/VL
4	1.4	20175	1732.5	16QAM	6@0	-3.32	-0.00192	±2.5	PASS	TN/VL
4	1.4	20393	1754.3	QPSK	6@0	-7.18	-0.00409	±2.5	PASS	TN/VL
4	1.4	20393	1754.3	16QAM	6@0	-29.47	-0.0168	±2.5	PASS	TN/VL
4	3.0	19965	1711.5	QPSK	15@0	-13.09	-0.00765	±2.5	PASS	TN/VL
4	3.0	19965	1711.5	16QAM	15@0	-34.03	-0.01988	±2.5	PASS	TN/VL
4	3.0	20175	1732.5	QPSK	15@0	-9.07	-0.00523	±2.5	PASS	TN/VL
4	3.0	20175	1732.5	16QAM	15@0	-35.86	-0.0207	±2.5	PASS	TN/VL
4	3.0	20385	1753.5	QPSK	15@0	-8.38	-0.00478	±2.5	PASS	TN/VL
4	3.0	20385	1753.5	16QAM	15@0	-23.05	-0.01314	±2.5	PASS	TN/VL
4	5.0	19975	1712.5	QPSK	25@0	-25.46	-0.01487	±2.5	PASS	TN/VL
4	5.0	19975	1712.5	16QAM	25@0	-29.78	-0.01739	±2.5	PASS	TN/VL
4	5.0	20175	1732.5	QPSK	25@0	9.23	0.00533	±2.5	PASS	TN/VL
4	5.0	20175	1732.5	16QAM	25@0	-13.28	-0.00766	±2.5	PASS	TN/VL
4	5.0	20375	1752.5	QPSK	25@0	-10.09	-0.00575	±2.5	PASS	TN/VL
4	5.0	20375	1752.5	16QAM	25@0	-27.97	-0.01596	±2.5	PASS	TN/VL
4	10.0	20000	1715.0	QPSK	50@0	-6.48	-0.00378	±2.5	PASS	TN/VL
4	10.0	20000	1715.0	16QAM	50@0	-10.5	-0.00612	±2.5	PASS	TN/VL
4	10.0	20175	1732.5	QPSK	50@0	-15.16	-0.00875	±2.5	PASS	TN/VL
4	10.0	20175	1732.5	16QAM	50@0	-5.41	-0.00312	±2.5	PASS	TN/VL
4	10.0	20350	1750.0	QPSK	50@0	7.97	0.00455	±2.5	PASS	TN/VL
4	10.0	20350	1750.0	16QAM	50@0	-25.92	-0.01481	±2.5	PASS	TN/VL
4	15.0	20025	1717.5	QPSK	75@0	-14.75	-0.00859	±2.5	PASS	TN/VL
4	15.0	20025	1717.5	16QAM	75@0	-37.25	-0.02169	±2.5	PASS	TN/VL
4	15.0	20175	1732.5	QPSK	75@0	-13.92	-0.00803	±2.5	PASS	TN/VL
4	15.0	20175	1732.5	16QAM	75@0	2.6	0.0015	±2.5	PASS	TN/VL
4	15.0	20325	1747.5	QPSK	75@0	-3.95	-0.00226	±2.5	PASS	TN/VL
4	15.0	20325	1747.5	16QAM	75@0	-41.87	-0.02396	±2.5	PASS	TN/VL
4	20.0	20050	1720.0	QPSK	100@0	-19.41	-0.01129	±2.5	PASS	TN/VL
4	20.0	20050	1720.0	16QAM	100@0	-3.16	-0.00184	±2.5	PASS	TN/VL
4	20.0	20175	1732.5	QPSK	100@0	-14.46	-0.00835	±2.5	PASS	TN/VL
4	20.0	20175	1732.5	16QAM	100@0	-42.36	-0.02445	±2.5	PASS	TN/VL
4	20.0	20300	1745.0	QPSK	100@0	-22.09	-0.01266	±2.5	PASS	TN/VL
4	20.0	20300	1745.0	16QAM	100@0	5.46	0.00313	±2.5	PASS	TN/VL

Frequency Stability-TL/VH

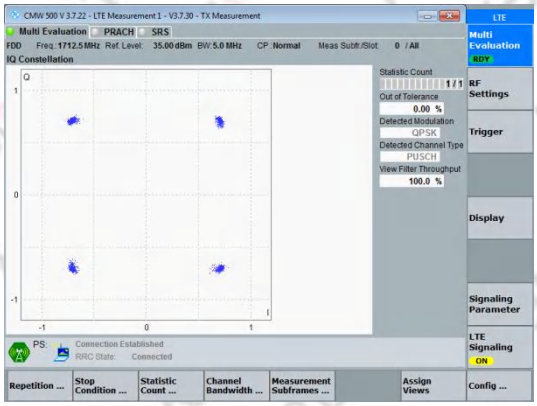
Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Deviation (Hz)	Deviation (ppm)	Limit(ppm)	Verdict	Environment
4	1.4	19957	1710.7	QPSK	6@0	-11.69	-0.00683	±2.5	PASS	TL/VH
4	1.4	19957	1710.7	16QAM	6@0	-2.59	-0.00151	±2.5	PASS	TL/VH
4	1.4	20175	1732.5	QPSK	6@0	-6.35	-0.00367	±2.5	PASS	TL/VH
4	1.4	20175	1732.5	16QAM	6@0	-33.82	-0.01952	±2.5	PASS	TL/VH
4	1.4	20393	1754.3	QPSK	6@0	-3.78	-0.00215	±2.5	PASS	TL/VH
4	1.4	20393	1754.3	16QAM	6@0	-12.46	-0.0071	±2.5	PASS	TL/VH
4	3.0	19965	1711.5	QPSK	15@0	-20.76	-0.01213	±2.5	PASS	TL/VH
4	3.0	19965	1711.5	16QAM	15@0	-6.41	-0.00374	±2.5	PASS	TL/VH
4	3.0	20175	1732.5	QPSK	15@0	1.83	0.00106	±2.5	PASS	TL/VH
4	3.0	20175	1732.5	16QAM	15@0	1.0	0.00058	±2.5	PASS	TL/VH
4	3.0	20385	1753.5	QPSK	15@0	-17.55	-0.01001	±2.5	PASS	TL/VH
4	3.0	20385	1753.5	16QAM	15@0	-9.23	-0.00526	±2.5	PASS	TL/VH
4	5.0	19975	1712.5	QPSK	25@0	-9.94	-0.00581	±2.5	PASS	TL/VH
4	5.0	19975	1712.5	16QAM	25@0	-11.44	-0.00668	±2.5	PASS	TL/VH
4	5.0	20175	1732.5	QPSK	25@0	-1.95	-0.00112	±2.5	PASS	TL/VH
4	5.0	20175	1732.5	16QAM	25@0	-23.59	-0.01362	±2.5	PASS	TL/VH
4	5.0	20375	1752.5	QPSK	25@0	-16.52	-0.00943	±2.5	PASS	TL/VH
4	5.0	20375	1752.5	16QAM	25@0	3.93	0.00224	±2.5	PASS	TL/VH
4	10.0	20000	1715.0	QPSK	50@0	-14.69	-0.00857	±2.5	PASS	TL/VH
4	10.0	20000	1715.0	16QAM	50@0	-8.96	-0.00522	±2.5	PASS	TL/VH
4	10.0	20175	1732.5	QPSK	50@0	-11.07	-0.00639	±2.5	PASS	TL/VH
4	10.0	20175	1732.5	16QAM	50@0	-35.78	-0.02065	±2.5	PASS	TL/VH
4	10.0	20350	1750.0	QPSK	50@0	5.52	0.00316	±2.5	PASS	TL/VH
4	10.0	20350	1750.0	16QAM	50@0	-27.67	-0.01581	±2.5	PASS	TL/VH
4	15.0	20025	1717.5	QPSK	75@0	-26.87	-0.01564	±2.5	PASS	TL/VH
4	15.0	20025	1717.5	16QAM	75@0	-10.14	-0.00591	±2.5	PASS	TL/VH
4	15.0	20175	1732.5	QPSK	75@0	-9.33	-0.00538	±2.5	PASS	TL/VH
4	15.0	20175	1732.5	16QAM	75@0	-16.11	-0.0093	±2.5	PASS	TL/VH
4	15.0	20325	1747.5	QPSK	75@0	0.57	0.00033	±2.5	PASS	TL/VH
4	15.0	20325	1747.5	16QAM	75@0	-10.5	-0.00601	±2.5	PASS	TL/VH
4	20.0	20050	1720.0	QPSK	100@0	-19.67	-0.01144	±2.5	PASS	TL/VH
4	20.0	20050	1720.0	16QAM	100@0	-22.47	-0.01307	±2.5	PASS	TL/VH
4	20.0	20175	1732.5	QPSK	100@0	-14.36	-0.00829	±2.5	PASS	TL/VH
4	20.0	20175	1732.5	16QAM	100@0	13.93	0.00804	±2.5	PASS	TL/VH
4	20.0	20300	1745.0	QPSK	100@0	1.86	0.00107	±2.5	PASS	TL/VH
4	20.0	20300	1745.0	16QAM	100@0	-3.79	-0.00217	±2.5	PASS	TL/VH

Frequency Stability-TL/VL

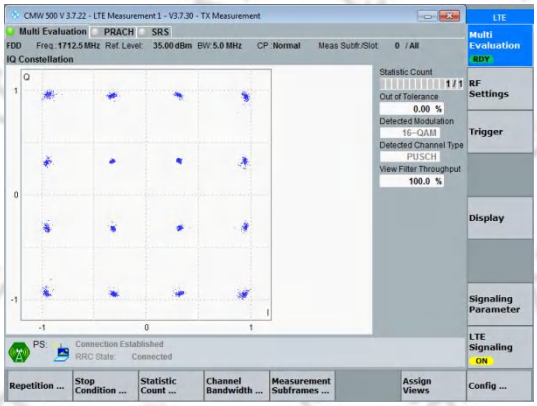
Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Deviation (Hz)	Deviation (ppm)	Limit(ppm)	Verdict	Environment
4	1.4	19957	1710.7	QPSK	6@0	-8.43	-0.00493	±2.5	PASS	TL/VL
4	1.4	19957	1710.7	16QAM	6@0	-17.8	-0.0104	±2.5	PASS	TL/VL
4	1.4	20175	1732.5	QPSK	6@0	-1.79	-0.00103	±2.5	PASS	TL/VL
4	1.4	20175	1732.5	16QAM	6@0	-19.18	-0.01107	±2.5	PASS	TL/VL
4	1.4	20393	1754.3	QPSK	6@0	-4.58	-0.00261	±2.5	PASS	TL/VL
4	1.4	20393	1754.3	16QAM	6@0	-23.83	-0.01359	±2.5	PASS	TL/VL
4	3.0	19965	1711.5	QPSK	15@0	-13.68	-0.00799	±2.5	PASS	TL/VL
4	3.0	19965	1711.5	16QAM	15@0	-16.82	-0.00983	±2.5	PASS	TL/VL
4	3.0	20175	1732.5	QPSK	15@0	-9.94	-0.00574	±2.5	PASS	TL/VL
4	3.0	20175	1732.5	16QAM	15@0	-39.63	-0.02287	±2.5	PASS	TL/VL
4	3.0	20385	1753.5	QPSK	15@0	-6.44	-0.00367	±2.5	PASS	TL/VL
4	3.0	20385	1753.5	16QAM	15@0	-37.81	-0.02156	±2.5	PASS	TL/VL
4	5.0	19975	1712.5	QPSK	25@0	5.65	0.0033	±2.5	PASS	TL/VL
4	5.0	19975	1712.5	16QAM	25@0	-25.19	-0.01471	±2.5	PASS	TL/VL
4	5.0	20175	1732.5	QPSK	25@0	-20.51	-0.01184	±2.5	PASS	TL/VL
4	5.0	20175	1732.5	16QAM	25@0	-10.49	-0.00605	±2.5	PASS	TL/VL
4	5.0	20375	1752.5	QPSK	25@0	1.23	0.0007	±2.5	PASS	TL/VL
4	5.0	20375	1752.5	16QAM	25@0	-25.41	-0.0145	±2.5	PASS	TL/VL
4	10.0	20000	1715.0	QPSK	50@0	-35.2	-0.02053	±2.5	PASS	TL/VL
4	10.0	20000	1715.0	16QAM	50@0	-5.95	-0.00347	±2.5	PASS	TL/VL
4	10.0	20175	1732.5	QPSK	50@0	-4.33	-0.0025	±2.5	PASS	TL/VL
4	10.0	20175	1732.5	16QAM	50@0	-22.39	-0.01292	±2.5	PASS	TL/VL
4	10.0	20350	1750.0	QPSK	50@0	-22.36	-0.01278	±2.5	PASS	TL/VL
4	10.0	20350	1750.0	16QAM	50@0	15.49	0.00885	±2.5	PASS	TL/VL
4	15.0	20025	1717.5	QPSK	75@0	-26.22	-0.01527	±2.5	PASS	TL/VL
4	15.0	20025	1717.5	16QAM	75@0	3.03	0.00177	±2.5	PASS	TL/VL
4	15.0	20175	1732.5	QPSK	75@0	-22.03	-0.01272	±2.5	PASS	TL/VL
4	15.0	20175	1732.5	16QAM	75@0	-26.06	-0.01504	±2.5	PASS	TL/VL
4	15.0	20325	1747.5	QPSK	75@0	-35.72	-0.02044	±2.5	PASS	TL/VL
4	15.0	20325	1747.5	16QAM	75@0	-20.16	-0.01153	±2.5	PASS	TL/VL
4	20.0	20050	1720.0	QPSK	100@0	-14.85	-0.00863	±2.5	PASS	TL/VL
4	20.0	20050	1720.0	16QAM	100@0	-29.05	-0.01689	±2.5	PASS	TL/VL
4	20.0	20175	1732.5	QPSK	100@0	-12.43	-0.00718	±2.5	PASS	TL/VL
4	20.0	20175	1732.5	16QAM	100@0	-28.82	-0.01664	±2.5	PASS	TL/VL
4	20.0	20300	1745.0	QPSK	100@0	-5.28	-0.00302	±2.5	PASS	TL/VL
4	20.0	20300	1745.0	16QAM	100@0	-29.8	-0.01708	±2.5	PASS	TL/VL

H7.Modulation Characteristics

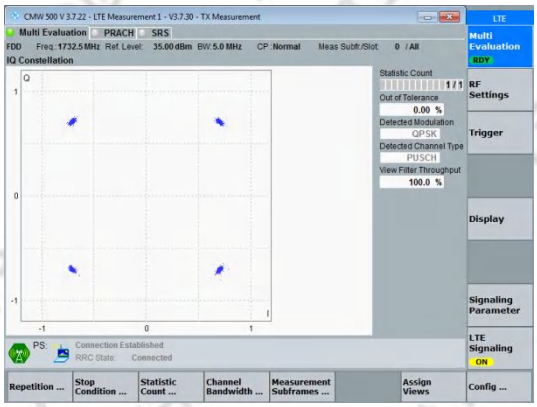
Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Verdict
4	5.0	19975	1712.5	QPSK	25@0	PASS
4	5.0	19975	1712.5	16QAM	25@0	PASS
4	5.0	20175	1732.5	QPSK	25@0	PASS
4	5.0	20175	1732.5	16QAM	25@0	PASS
4	5.0	20375	1752.5	QPSK	25@0	PASS
4	5.0	20375	1752.5	16QAM	25@0	PASS
4	20.0	20050	1720.0	QPSK	100@0	PASS
4	20.0	20050	1720.0	16QAM	100@0	PASS
4	20.0	20175	1732.5	QPSK	100@0	PASS
4	20.0	20175	1732.5	16QAM	100@0	PASS
4	20.0	20300	1745.0	QPSK	100@0	PASS
4	20.0	20300	1745.0	16QAM	100@0	PASS



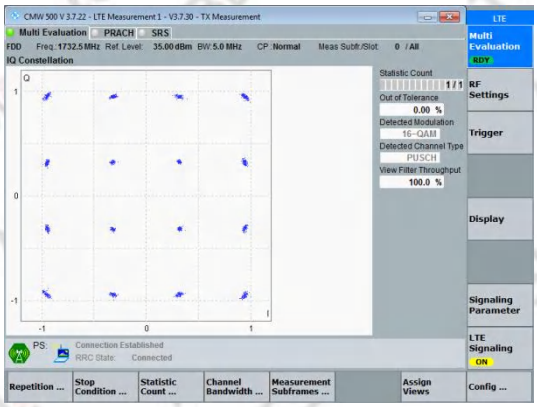
Band 4 5MHz/1712.5/Low QPSK 25@0



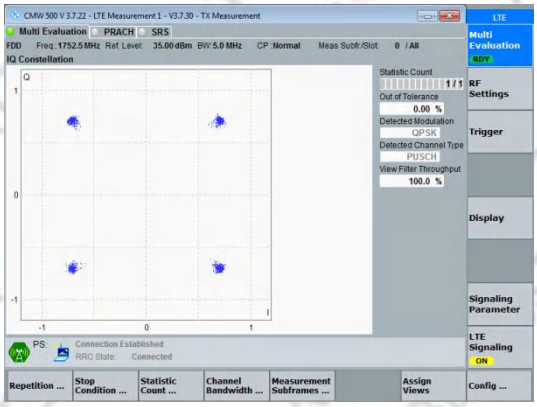
Band 4 5MHz/1712.5/Low 16QAM 25@0



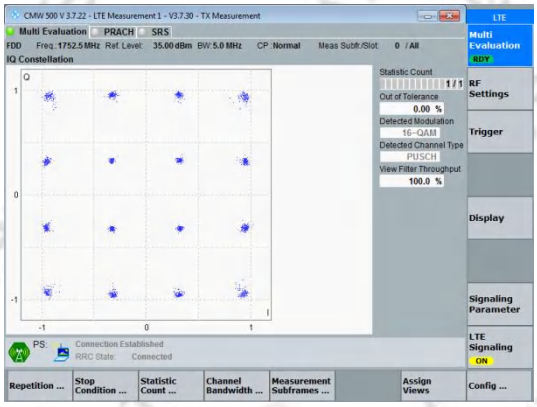
Band 4 5MHz/1732.5/Mid QPSK 25@0



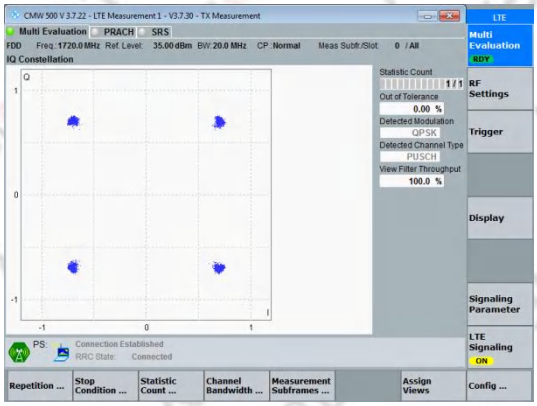
Band 4 5MHz/1732.5/Mid 16QAM 25@0



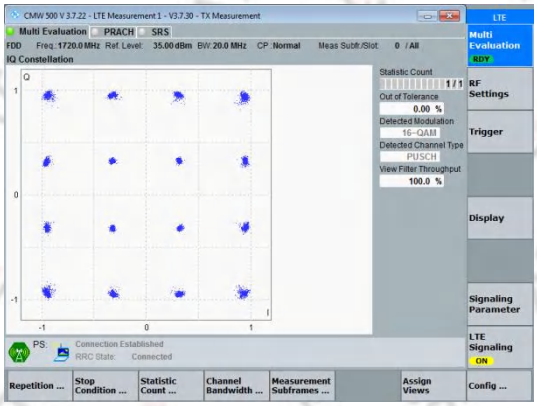
Band 4 5MHz/1752.5/High QPSK 25@0



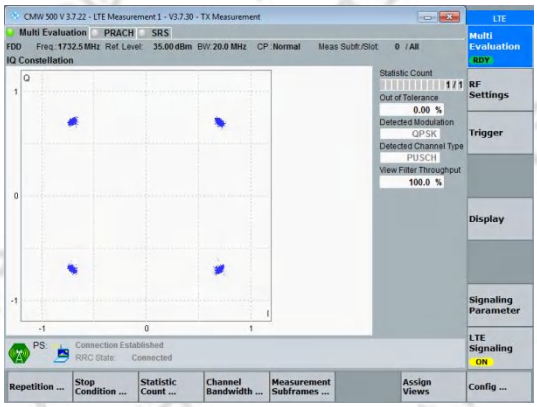
Band 4 5MHz/1752.5/High 16QAM 25@0



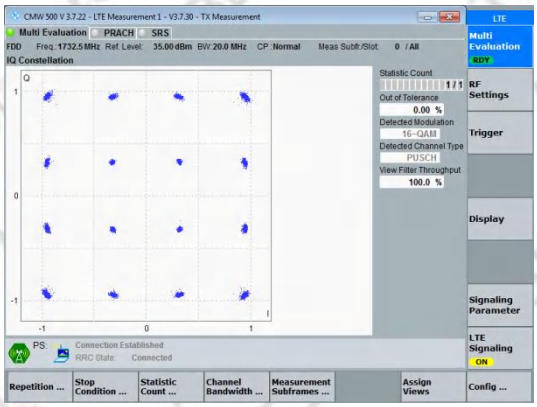
Band 4 20MHz/1720.0/Low QPSK 100@0



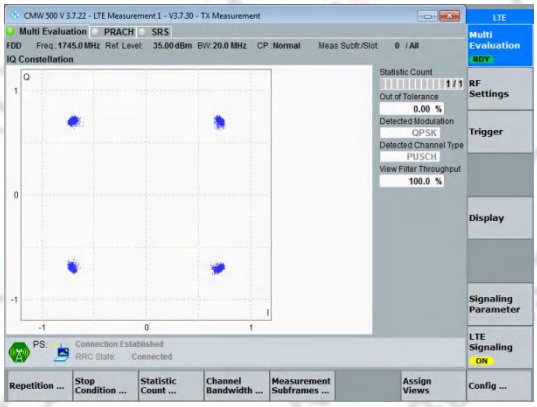
Band 4 20MHz/1720.0/Low 16QAM 100@0



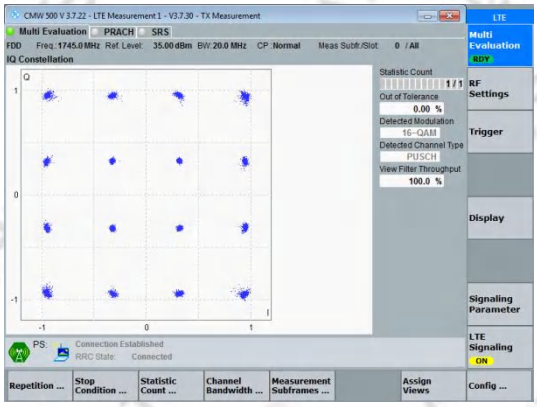
Band 4 20MHz/1732.5/Mid QPSK 100@0



Band 4 20MHz/1732.5/Mid 16QAM 100@0



Band 4 20MHz/1745.0/High QPSK 100@0



Band 4 20MHz/1745.0/High 16QAM 100@0