



Appendix B

E-UTRA Band 12



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1 Effective (Isotropic) Radiated Power

1.1. Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Conducted Power(dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band12	1.4MHz	QPSK	23017	1RB#0	23.41	18.96	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	23.51	19.06	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	23.33	18.88	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#0	23.41	18.96	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#1	23.51	19.06	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#3	23.40	18.95	34.77	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	22.65	18.20	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	23.49	19.04	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#5	23.56	19.11	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#2	23.53	19.08	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#0	23.40	18.95	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#1	23.63	19.18	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#3	23.42	18.97	34.77	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	22.71	18.26	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	23.47	19.02	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	23.52	19.07	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	23.31	18.86	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#0	23.31	18.86	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#1	23.48	19.03	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#3	23.45	19.00	34.77	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	22.24	17.79	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	22.51	18.06	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	22.65	18.20	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	22.52	18.07	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#1	22.62	18.17	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#0	22.72	18.27	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#3	22.60	18.15	34.77	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	21.62	17.17	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	22.78	18.33	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#2	22.98	18.53	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#5	22.79	18.34	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#3	22.94	18.49	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#0	23.03	18.58	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#1	22.95	18.50	34.77	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	21.73	17.28	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	22.41	17.96	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	22.57	18.12	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#5	22.40	17.95	34.77	PASS



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Band12	1.4MHz	16QAM	23173	3RB#0	22.52	18.07	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#1	22.68	18.23	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#3	22.53	18.08	34.77	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	21.38	16.93	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#8	23.45	19.00	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#14	23.61	19.16	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#0	23.47	19.02	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#0	22.78	18.33	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#4	22.55	18.10	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#7	22.39	17.94	34.77	PASS
Band12	3MHz	QPSK	23025	15RB#0	22.68	18.23	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#0	23.43	18.98	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#14	23.70	19.25	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#8	23.50	19.05	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#7	22.74	18.29	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#0	22.49	18.04	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#4	22.71	18.26	34.77	PASS
Band12	3MHz	QPSK	23095	15RB#0	22.62	18.17	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#8	23.40	18.95	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#0	23.53	19.08	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#14	23.35	18.90	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#0	22.33	17.88	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#7	22.47	18.02	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#4	22.27	17.82	34.77	PASS
Band12	3MHz	QPSK	23165	15RB#0	22.28	17.83	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#14	22.50	18.05	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#0	22.60	18.15	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#8	22.38	17.93	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#7	21.76	17.31	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#4	21.54	17.09	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#0	21.58	17.13	34.77	PASS
Band12	3MHz	16QAM	23025	15RB#0	21.59	17.14	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#14	22.71	18.26	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#0	22.96	18.51	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#8	22.80	18.35	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#7	21.77	17.32	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#0	21.59	17.14	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#4	21.75	17.30	34.77	PASS
Band12	3MHz	16QAM	23095	15RB#0	21.75	17.30	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#8	22.31	17.86	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#0	22.44	17.99	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#14	22.39	17.94	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#0	21.36	16.91	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#4	21.49	17.04	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#7	21.30	16.85	34.77	PASS
Band12	3MHz	16QAM	23165	15RB#0	21.31	16.86	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#0	23.41	18.96	34.77	PASS



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Band12	5MHz	QPSK	23035	1RB#12	23.55	19.10	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#24	23.42	18.97	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#0	22.65	18.20	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#6	22.44	17.99	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#13	22.42	17.97	34.77	PASS
Band12	5MHz	QPSK	23035	25RB#0	22.61	18.16	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#0	23.40	18.95	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#24	23.68	19.23	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#12	23.42	18.97	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#0	22.69	18.24	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#6	22.46	18.01	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#13	22.73	18.28	34.77	PASS
Band12	5MHz	QPSK	23095	25RB#0	22.64	18.19	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#24	23.36	18.91	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#0	23.48	19.03	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#12	23.41	18.96	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#0	22.35	17.90	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#6	22.49	18.04	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#13	22.22	17.77	34.77	PASS
Band12	5MHz	QPSK	23155	25RB#0	22.31	17.86	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#0	22.44	17.99	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#12	22.65	18.20	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#24	22.43	17.98	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#6	21.80	17.35	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#0	21.59	17.14	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#13	21.54	17.09	34.77	PASS
Band12	5MHz	16QAM	23035	25RB#0	21.66	17.21	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#0	22.75	18.30	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#12	22.96	18.51	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#24	22.73	18.28	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#13	21.65	17.20	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#0	21.54	17.09	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#6	21.83	17.38	34.77	PASS
Band12	5MHz	16QAM	23095	25RB#0	21.76	17.31	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#12	22.37	17.92	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#0	22.46	18.01	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#24	22.28	17.83	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#0	21.36	16.91	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#6	21.57	17.12	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#13	21.32	16.87	34.77	PASS
Band12	5MHz	16QAM	23155	25RB#0	21.24	16.79	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#49	23.56	19.11	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#24	23.74	19.29	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#0	23.60	19.15	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#0	22.88	18.43	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#12	22.66	18.21	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#25	22.64	18.19	34.77	PASS



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Band12	10MHz	QPSK	23060	50RB#0	22.79	18.34	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#0	23.65	19.20	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#49	23.85	19.40	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#24	23.63	19.18	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#25	22.94	18.49	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#0	22.71	18.26	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#12	22.91	18.46	34.77	PASS
Band12	10MHz	QPSK	23095	50RB#0	22.87	18.42	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#24	23.59	19.14	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#0	23.70	19.25	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#49	23.59	19.14	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#0	22.53	18.08	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#25	22.67	18.22	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#12	22.38	17.93	34.77	PASS
Band12	10MHz	QPSK	23130	50RB#0	22.47	18.02	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#49	22.62	18.17	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#0	22.83	18.38	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#24	22.63	18.18	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#25	21.97	17.52	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#12	21.78	17.33	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#0	21.74	17.29	34.77	PASS
Band12	10MHz	16QAM	23060	50RB#0	21.84	17.39	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#49	22.94	18.49	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#0	23.15	18.70	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#24	22.95	18.50	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#25	21.87	17.42	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#0	21.76	17.31	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#12	21.98	17.53	34.77	PASS
Band12	10MHz	16QAM	23095	50RB#0	21.96	17.51	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#24	22.54	18.09	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#0	22.67	18.22	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#49	22.53	18.08	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#0	21.57	17.12	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#12	21.72	17.27	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#25	21.55	17.10	34.77	PASS
Band12	10MHz	16QAM	23130	50RB#0	21.48	17.03	34.77	PASS

Remark:

a: For getting the EIRP (Efficient Isotropic Radiated Power), the following formula should be taken to calculate it,

$$ERP [dBm] = \text{Conducted Power [dBm]} + \text{Gain [dBd]}$$

$$EIRP [dBm] = \text{Conducted Power [dBm]} + \text{Gain [dBi]}$$



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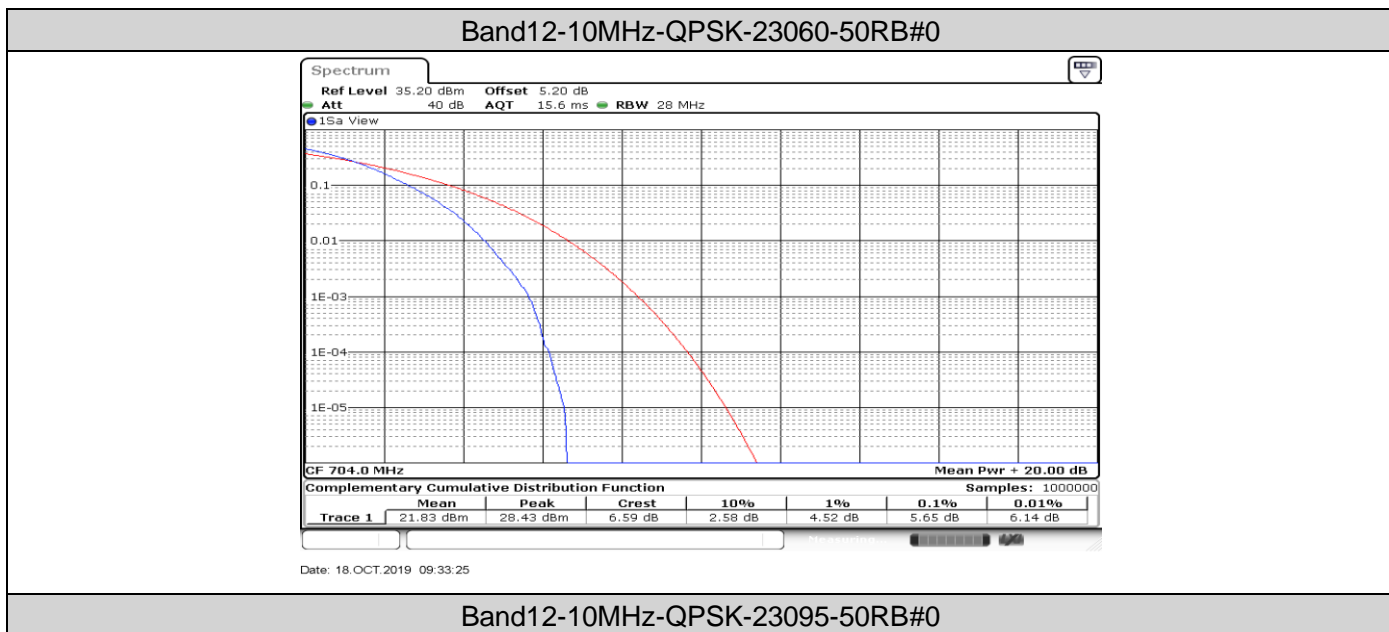


2. Peak-to-Average Ratio (CCDF)

2.1. Test Result

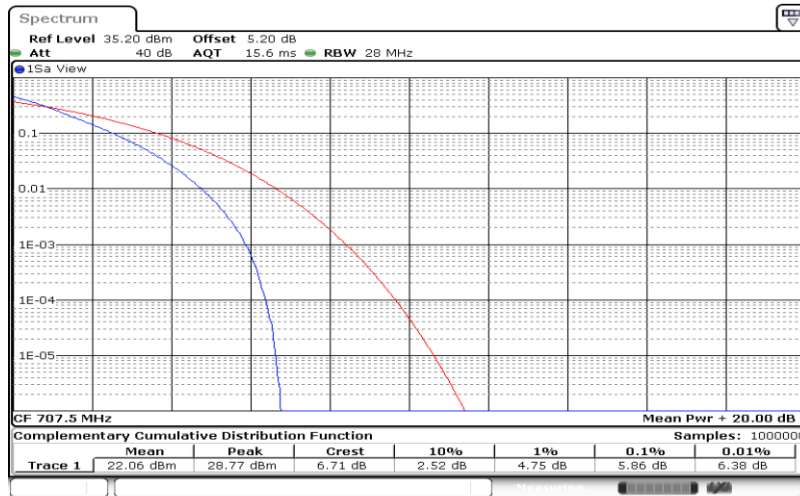
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band12	10MHz	QPSK	23060	50RB#0	5.65	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	5.86	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	5.51	13	PASS
Band12	10MHz	16QAM	23060	50RB#0	6.20	13	PASS
Band12	10MHz	16QAM	23095	50RB#0	6.43	13	PASS
Band12	10MHz	16QAM	23130	50RB#0	6.23	13	PASS

2.2. Test Plots



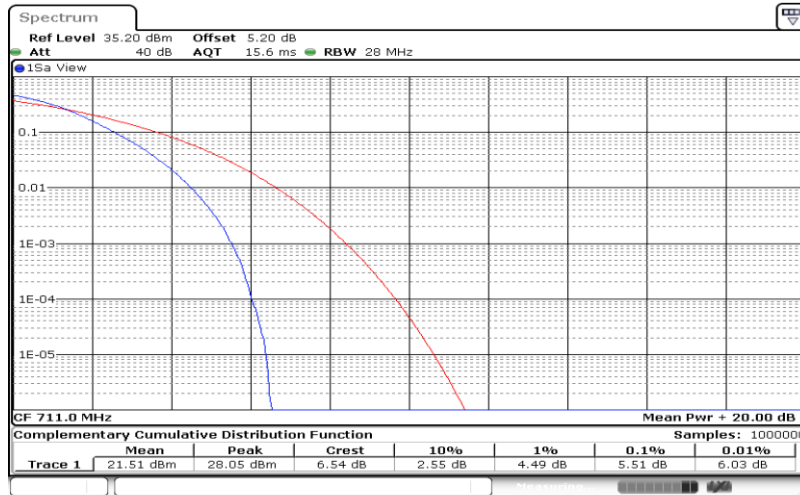
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Date: 18.OCT.2019 09:33:48

Band12-10MHz-QPSK-23130-50RB#0

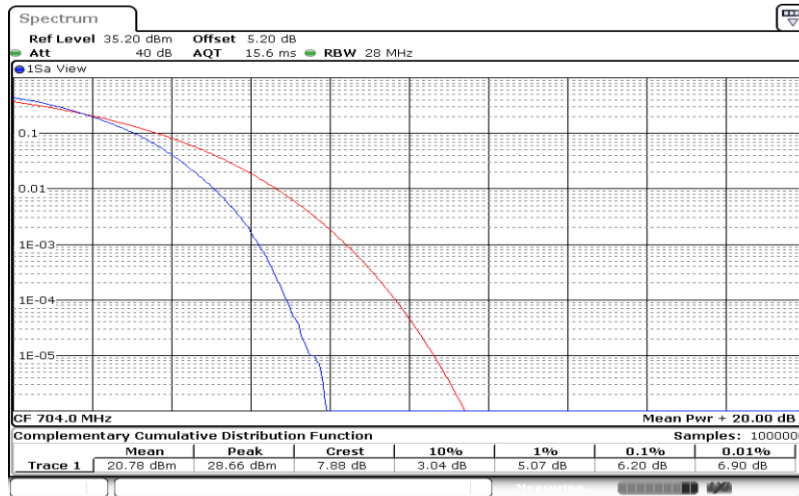


Date: 18.OCT.2019 09:34:12

Band12-10MHz-16QAM-23060-50RB#0

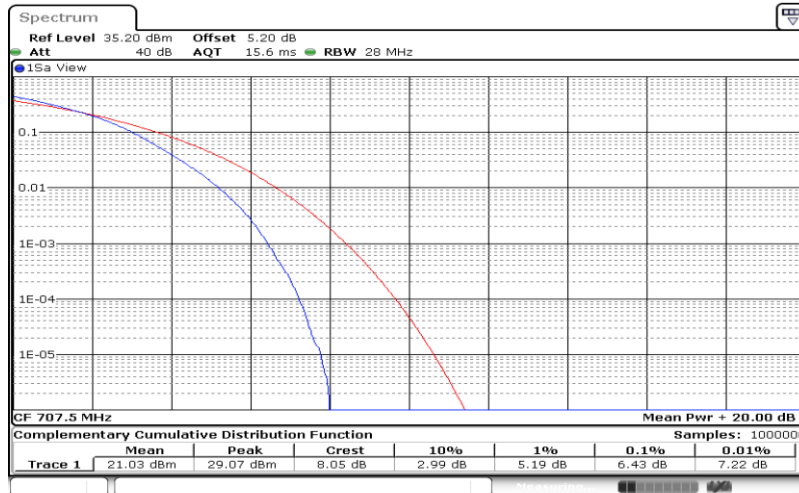


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Date: 18.OCT.2019 09:33:37

Band12-10MHz-16QAM-23095-50RB#0

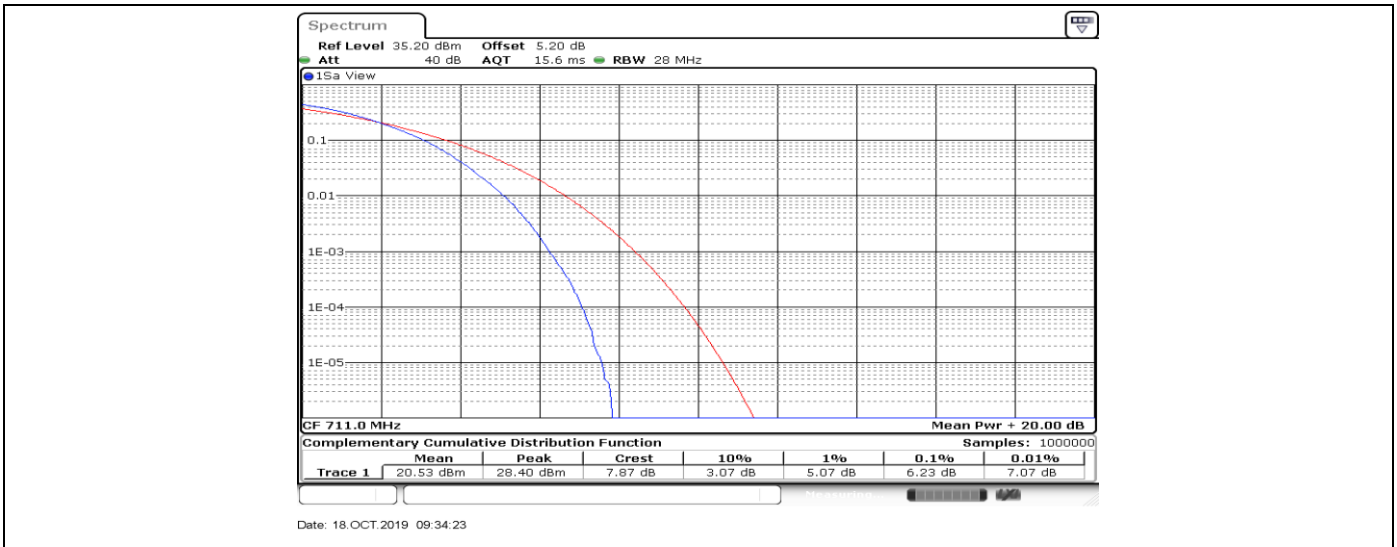


Date: 18.OCT.2019 09:34:00

Band12-10MHz-16QAM-23130-50RB#0



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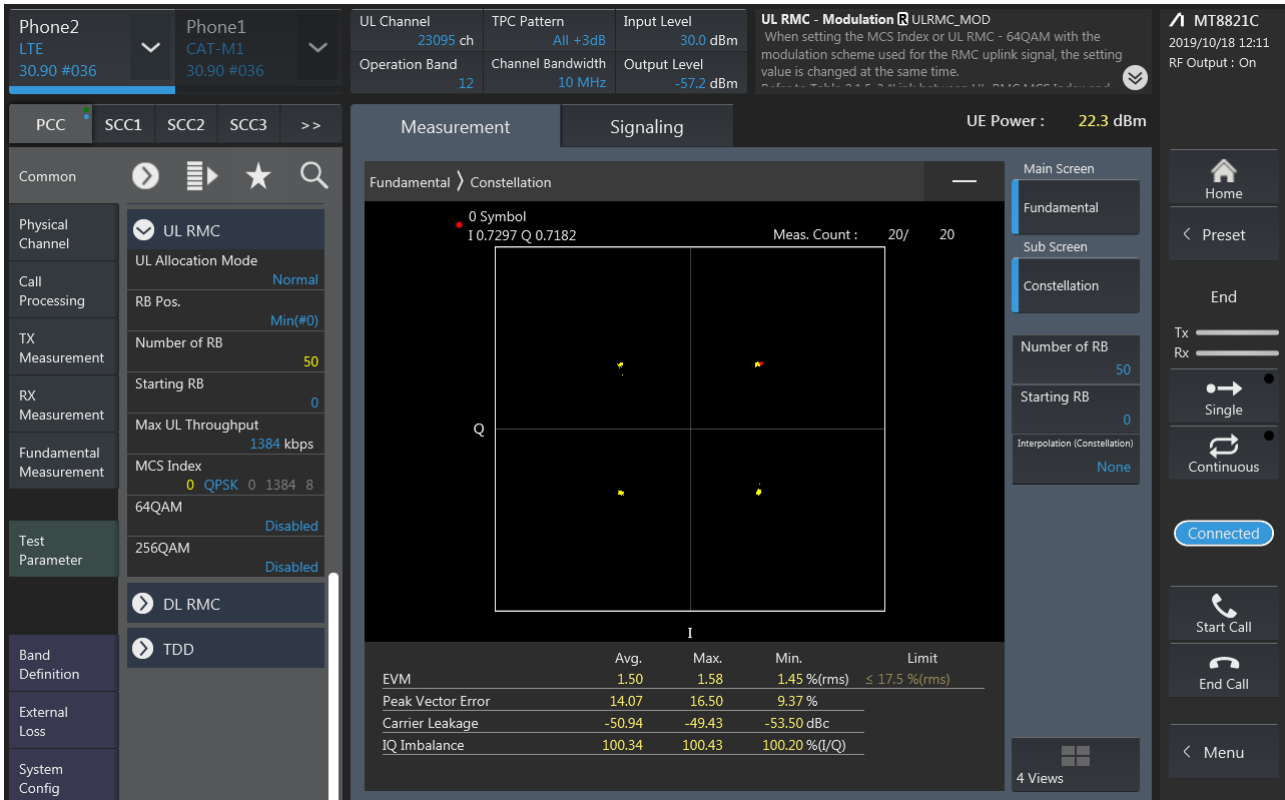
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3. Modulation Characteristics

3.1. Test Mode = LTE /TM1 10MHz

3.1.1. Test Channel = MCH



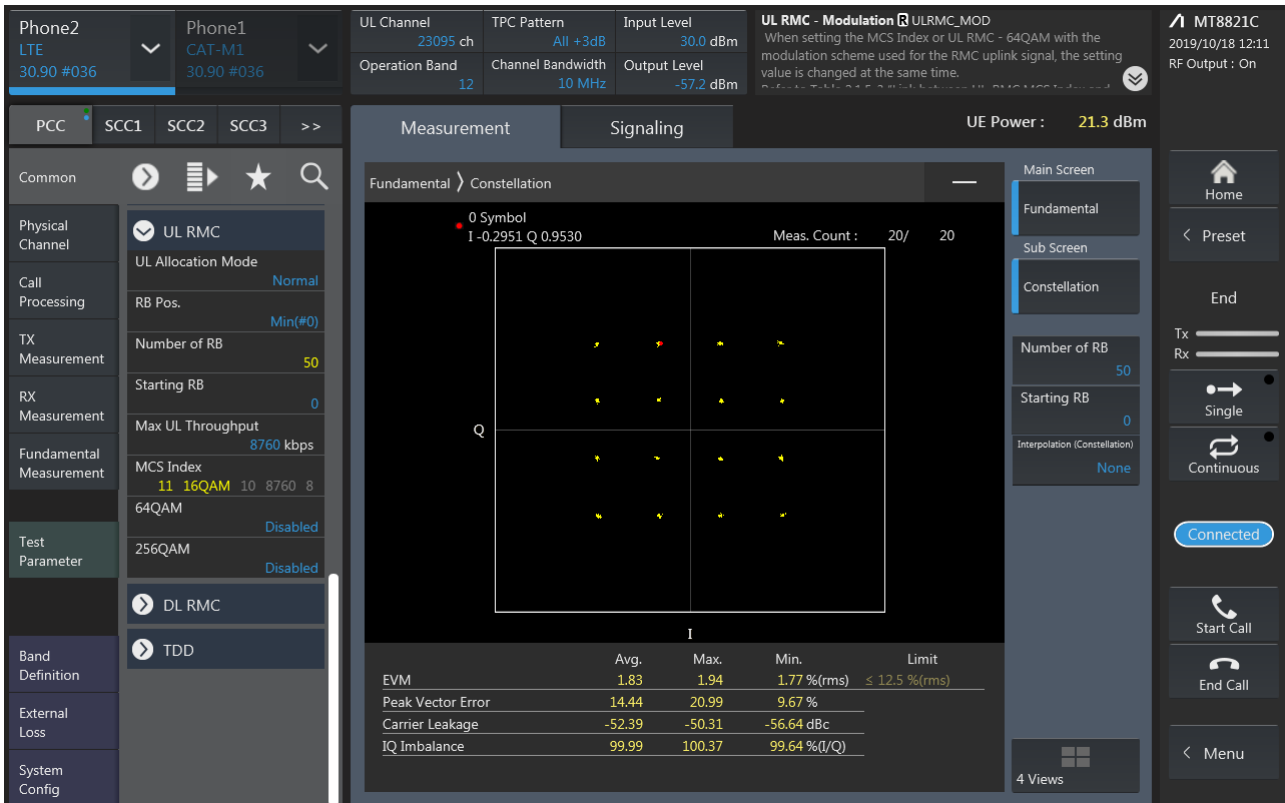
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3.2. Test Mode = LTE /TM2 10MHz

3.2.1. Test Channel = MCH



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4. 26dB Bandwidth and Occupied Bandwidth

4.1. Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	1.091	1.266	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.091	1.299	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.091	1.302	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.088	1.296	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.091	1.293	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.088	1.281	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.685	2.916	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.691	2.916	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.685	2.898	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.667	2.898	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.679	2.904	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.667	2.898	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.466	4.960	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.496	5.090	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.466	4.940	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.476	5.030	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.496	5.140	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.476	4.990	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.911	9.760	PASS
Band12	10MHz	QPSK	23095	50RB#0	8.991	10.020	PASS
Band12	10MHz	QPSK	23130	50RB#0	8.911	9.720	PASS
Band12	10MHz	16QAM	23060	50RB#0	8.911	9.760	PASS
Band12	10MHz	16QAM	23095	50RB#0	8.991	9.900	PASS
Band12	10MHz	16QAM	23130	50RB#0	8.911	9.740	PASS



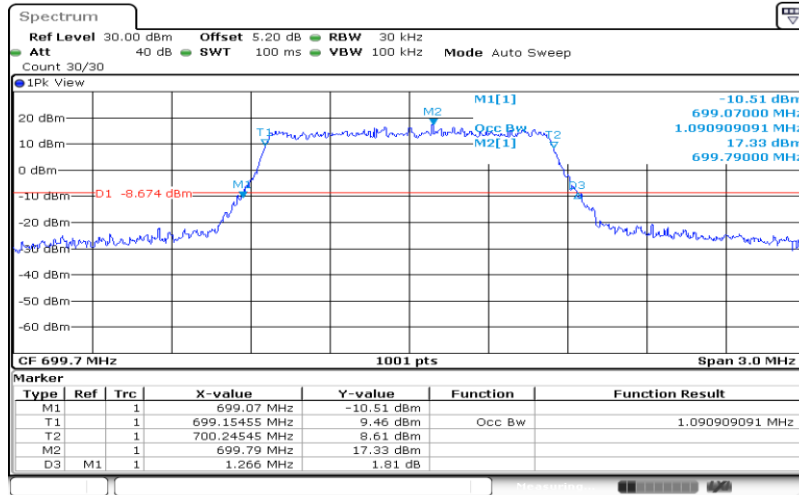
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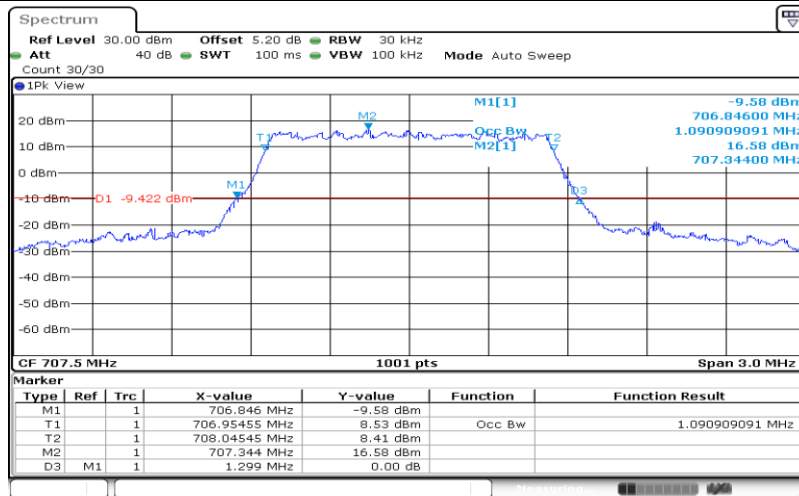
4.2. Test Plots

Band12-1.4MHz-QPSK-23017-6RB#0-1.091



Date: 18.OCT.2019 09:07:17

Band12-1.4MHz-QPSK-23095-6RB#0-1.091

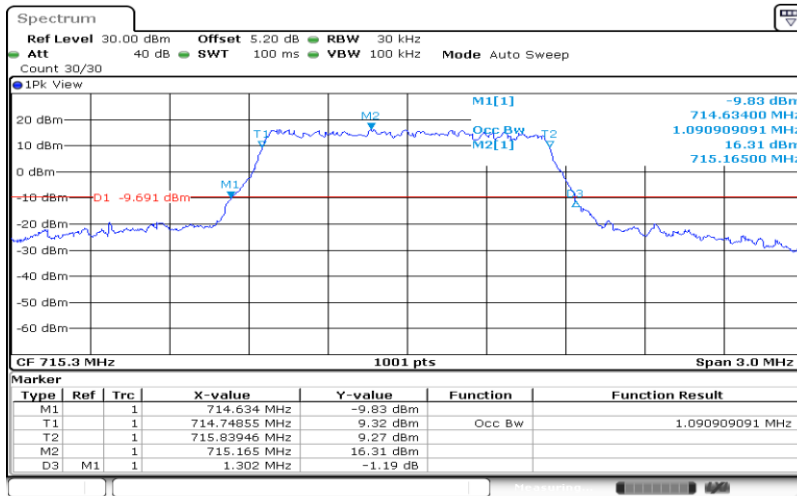


Date: 18.OCT.2019 09:07:44

Band12-1.4MHz-QPSK-23173-6RB#0-1.091

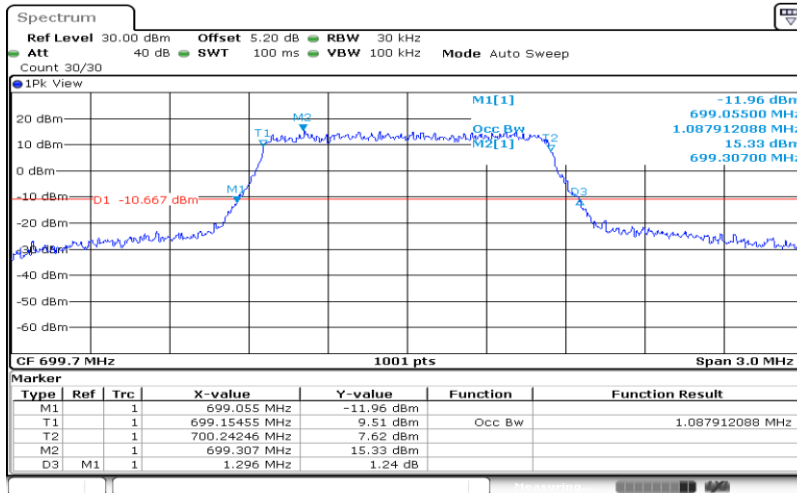


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Date: 18.OCT.2019 09:08:10

Band12-1.4MHz-16QAM-23017-6RB#0-1.088

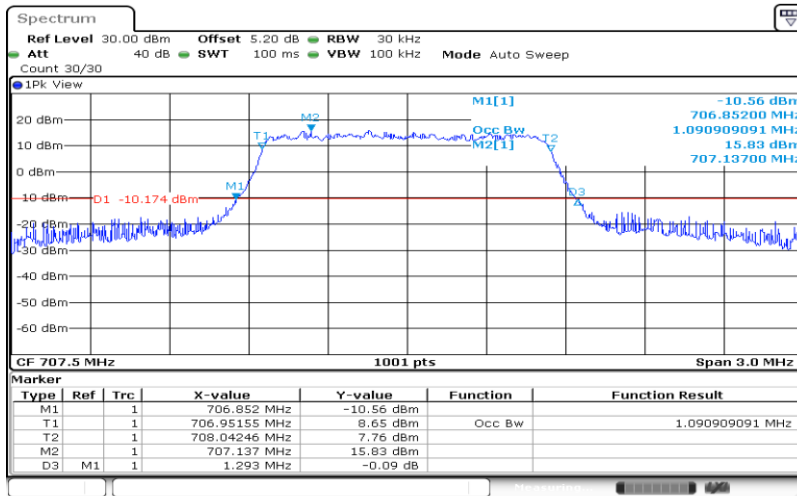


Date: 18.OCT.2019 09:07:30

Band12-1.4MHz-16QAM-23095-6RB#0-1.091

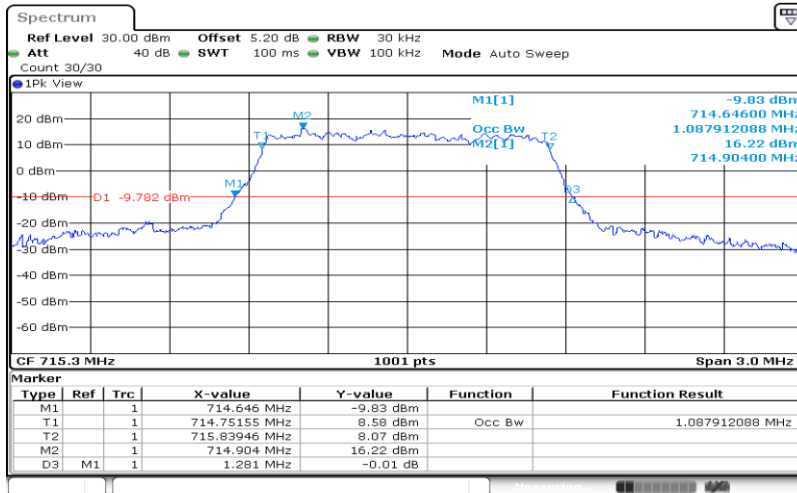


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Date: 18.OCT.2019 09:07:56

Band12-1.4MHz-16QAM-23173-6RB#0-1.088

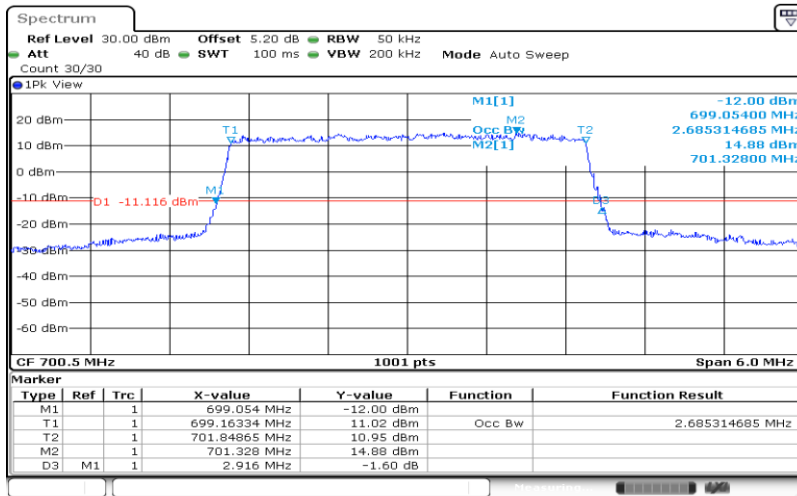


Date: 18.OCT.2019 09:08:22

Band12-3MHz-QPSK-23025-15RB#0-2.685

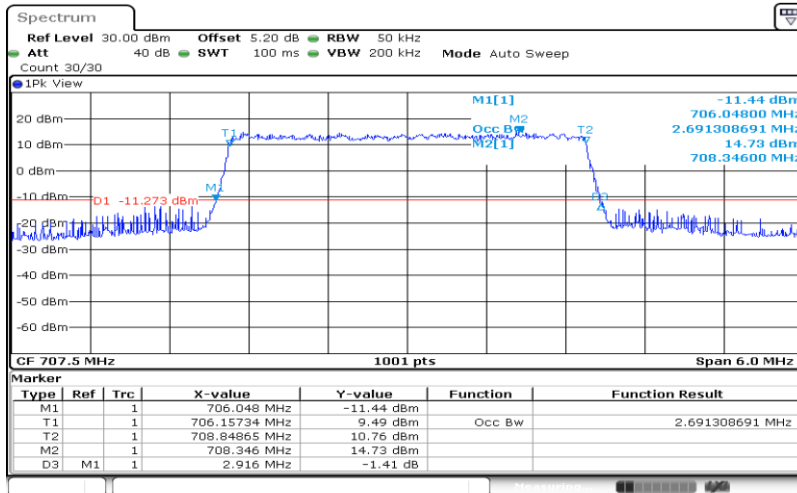


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Date: 18.OCT.2019 09:08:40

Band12-3MHz-QPSK-23095-15RB#0-2.691

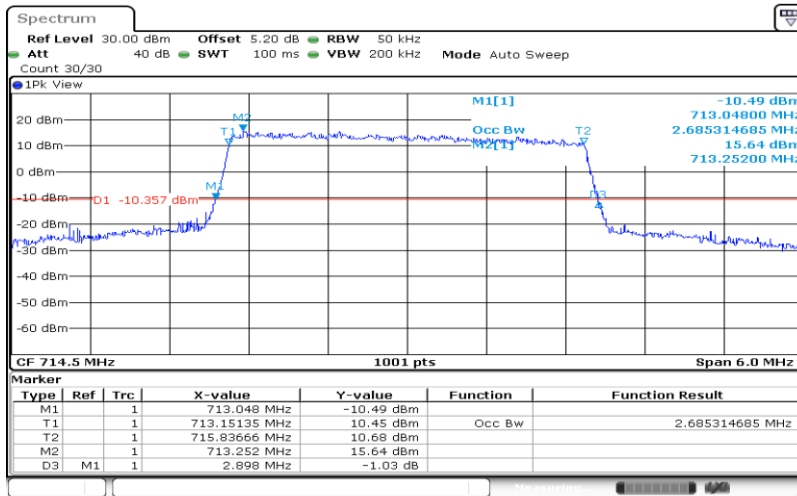


Date: 18.OCT.2019 09:09:06

Band12-3MHz-QPSK-23165-15RB#0-2.685

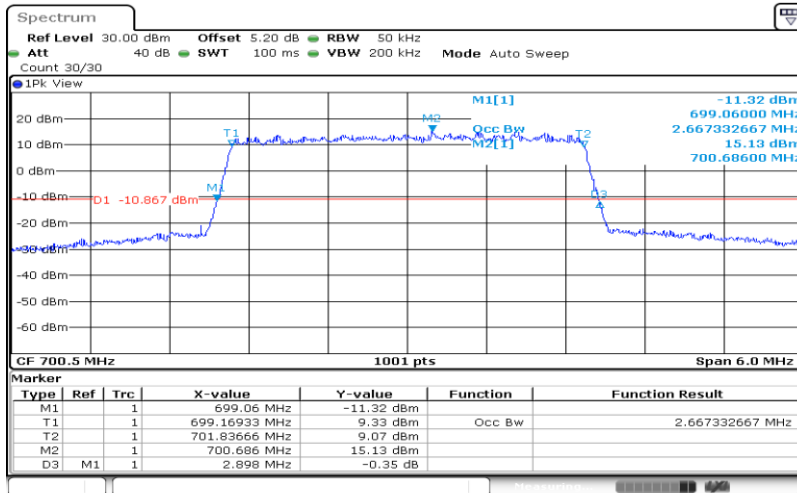


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Date: 18.OCT.2019 09:09:32

Band12-3MHz-16QAM-23025-15RB#0-2.667

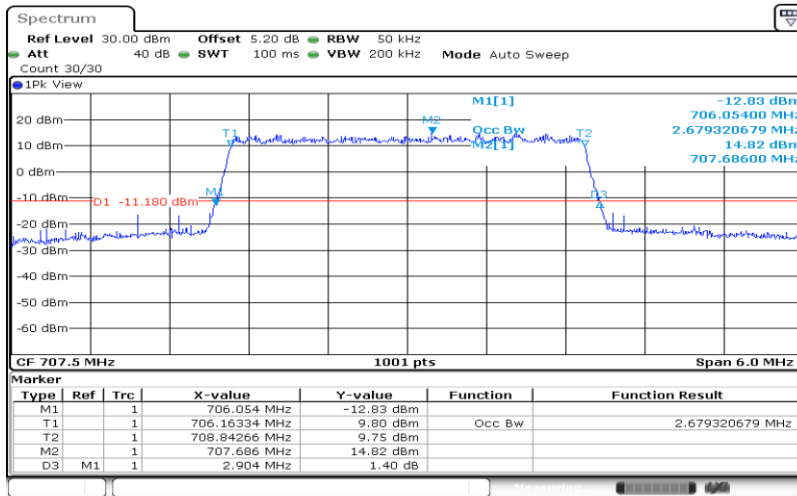


Date: 18.OCT.2019 09:08:53

Band12-3MHz-16QAM-23095-15RB#0-2.679

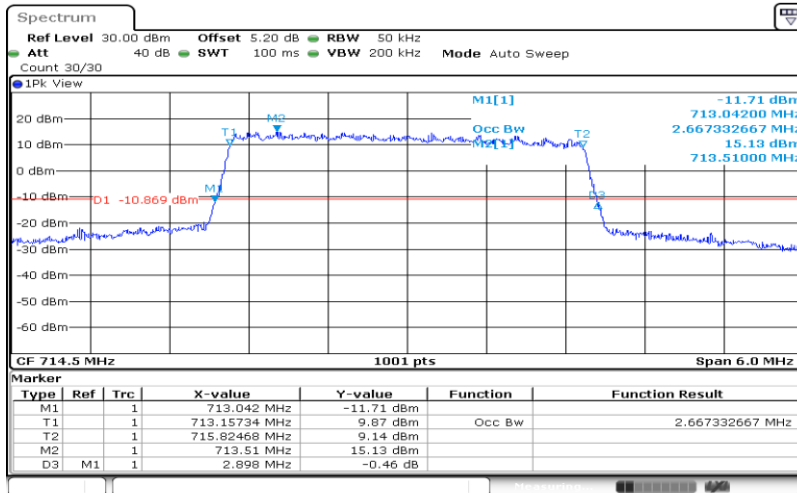


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Date: 18.OCT.2019 09:09:19

Band12-3MHz-16QAM-23165-15RB#0-2.667

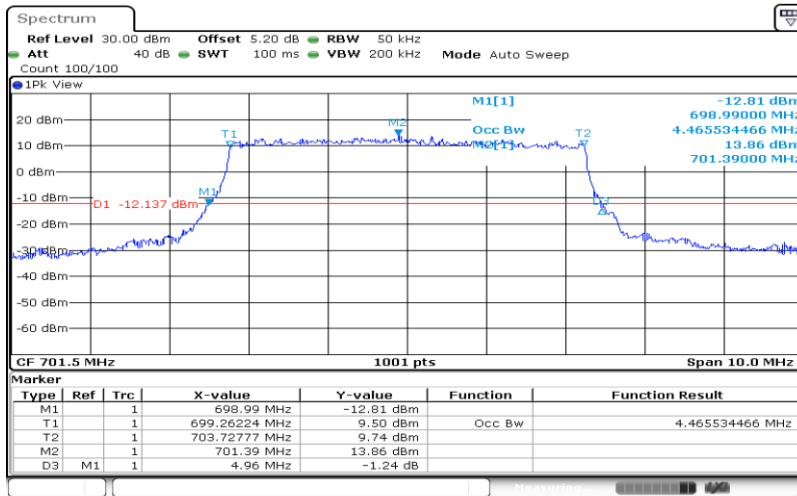


Date: 18.OCT.2019 09:09:45

Band12-5MHz-QPSK-23035-25RB#0-4.466

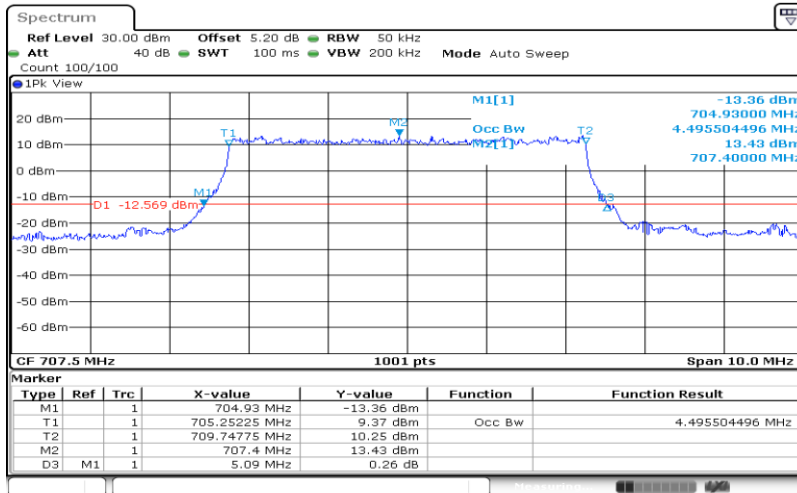


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Date: 18.OCT.2019 09:10:09

Band12-5MHz-QPSK-23095-25RB#0-4.496

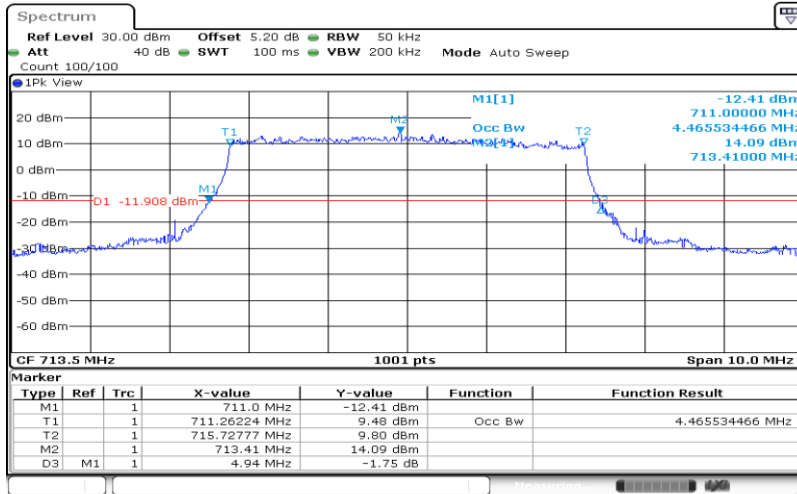


Date: 18.OCT.2019 09:10:50

Band12-5MHz-QPSK-23155-25RB#0-4.466

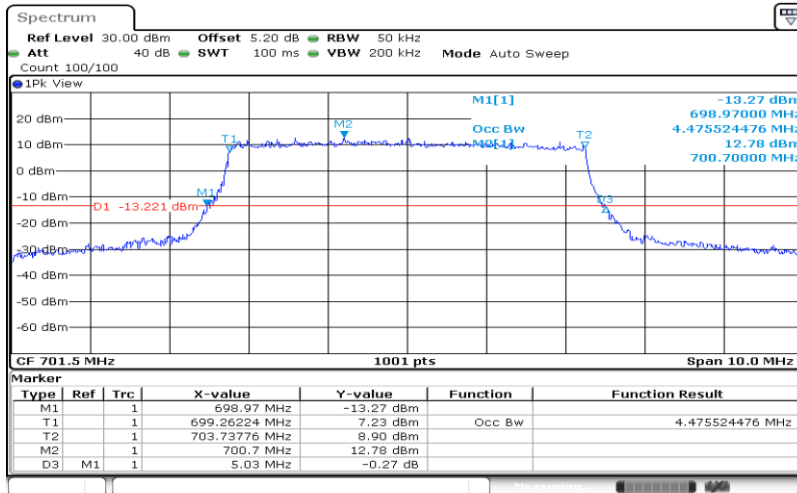


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Date: 18.OCT.2019 09:11:30

Band12-5MHz-16QAM-23035-25RB#0-4.476

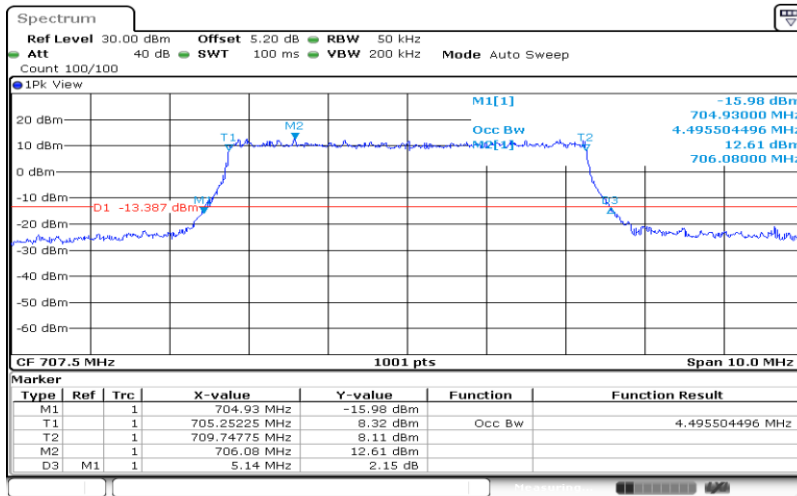


Date: 18.OCT.2019 09:10:29

Band12-5MHz-16QAM-23095-25RB#0-4.496

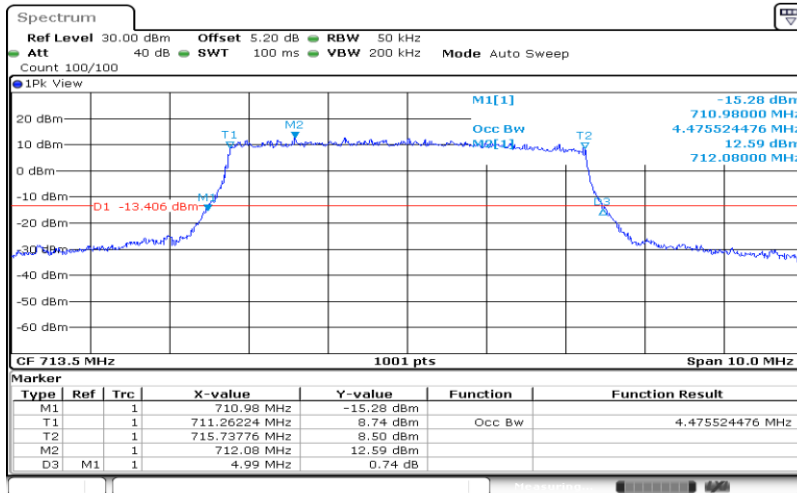


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Date: 18.OCT.2019 09:11:09

Band12-5MHz-16QAM-23155-25RB#0-4.476

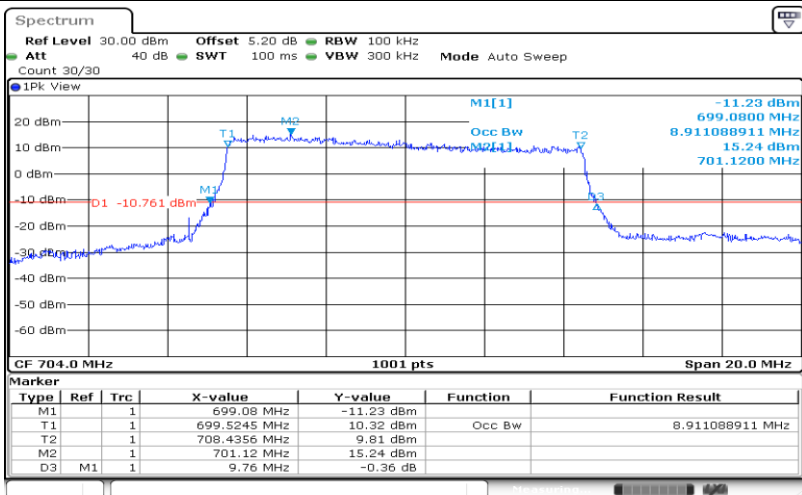


Date: 18.OCT.2019 09:11:50

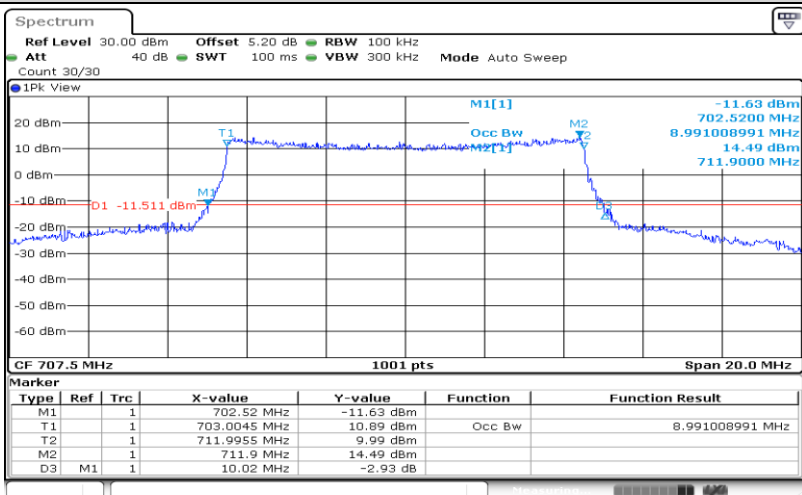
Band12-10MHz-QPSK-23060-50RB#0-8.911



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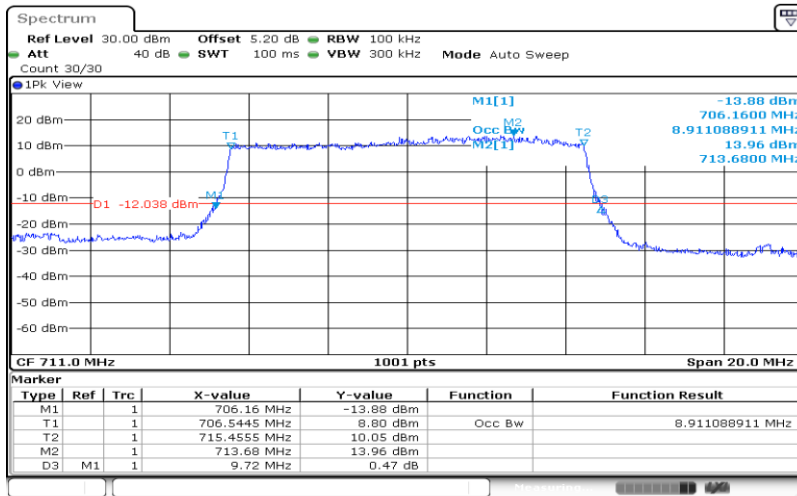
Band12-10MHz-QPSK-23095-50RB#0-8.991



Band12-10MHz-QPSK-23130-50RB#0-8.911

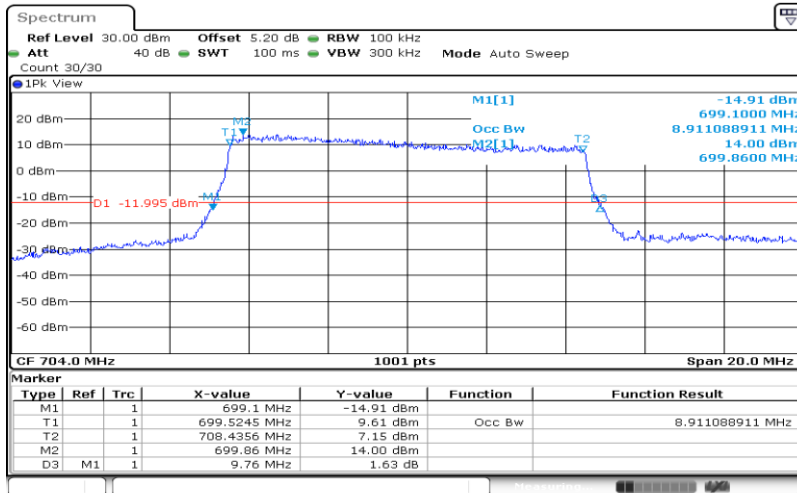


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Date: 18.OCT.2019 09:13:00

Band12-10MHz-16QAM-23060-50RB#0-8.911

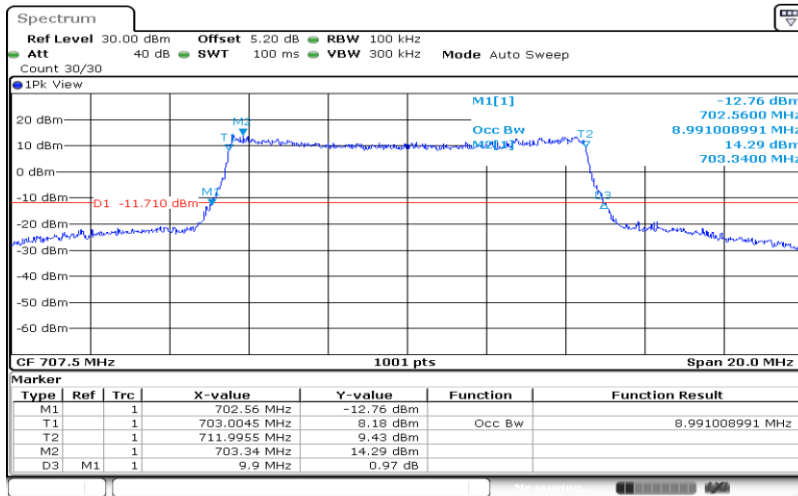


Date: 18.OCT.2019 09:12:20

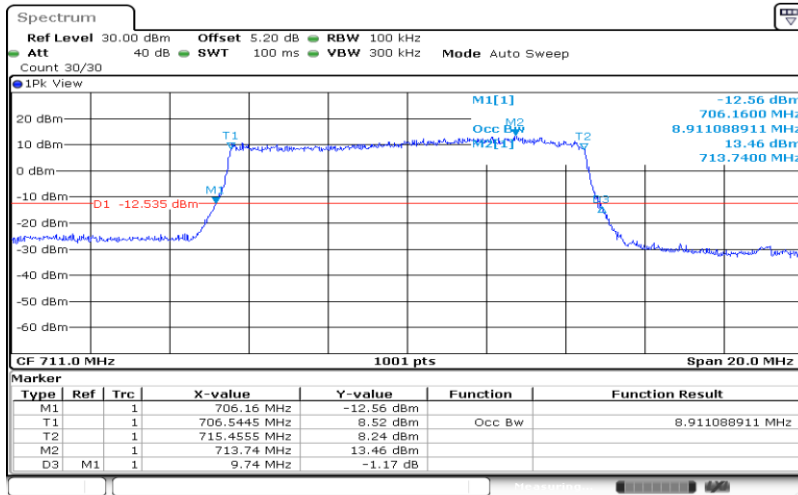
Band12-10MHz-16QAM-23095-50RB#0-8.991



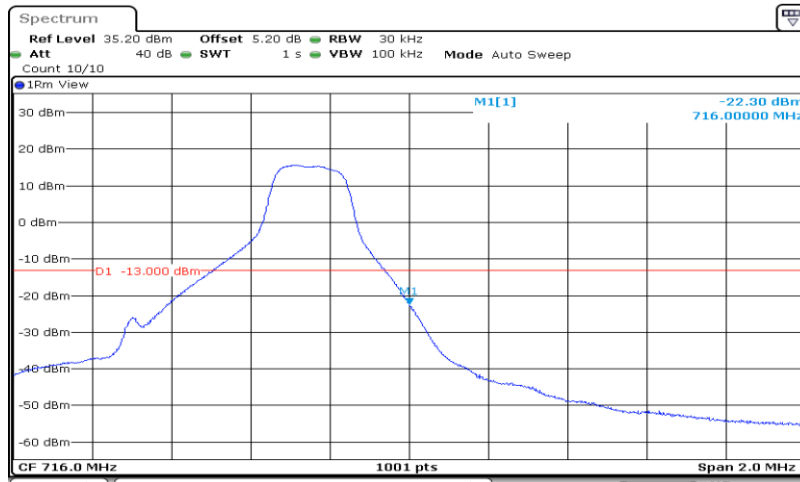
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Band12-10MHz-16QAM-23130-50RB#0-8.911

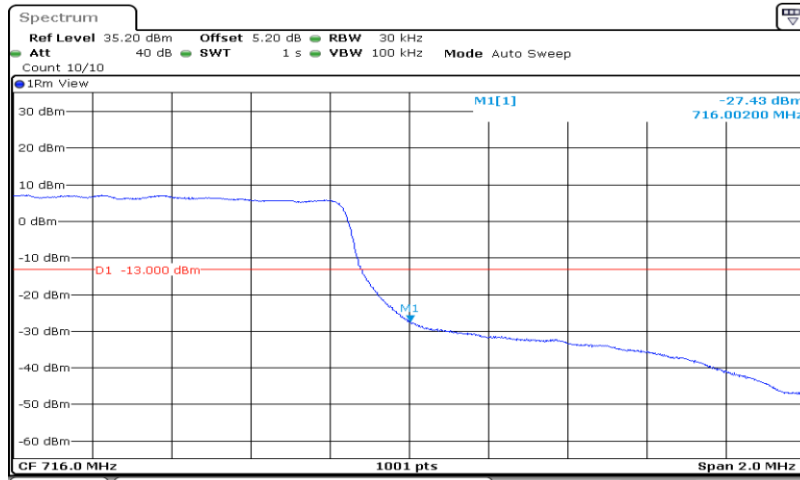


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Date: 18.OCT.2019 09:15:01

Band12-1.4MHz-QPSK-23173-6RB#0

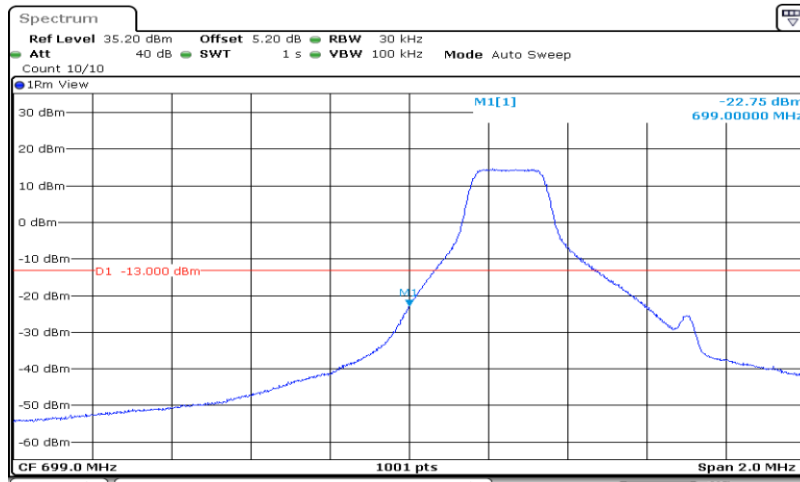


Date: 18.OCT.2019 09:15:40

Band12-1.4MHz-16QAM-23017-1RB#0

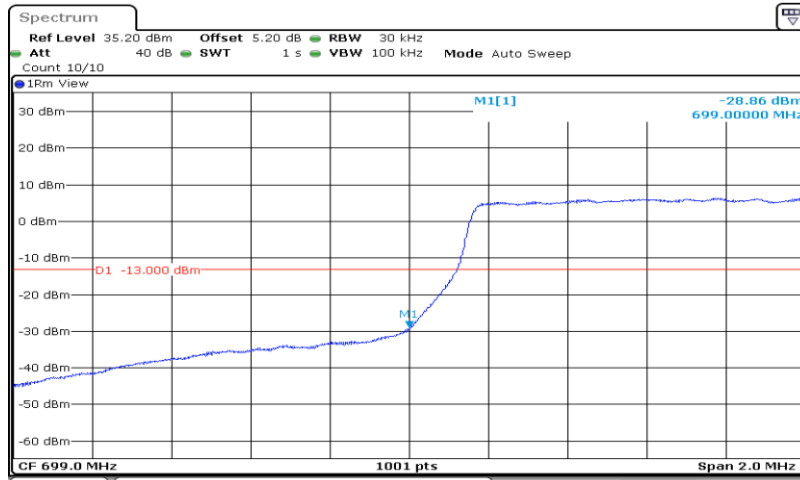


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Date: 18.OCT.2019 09:13:57

Band12-1.4MHz-16QAM-23017-6RB#0

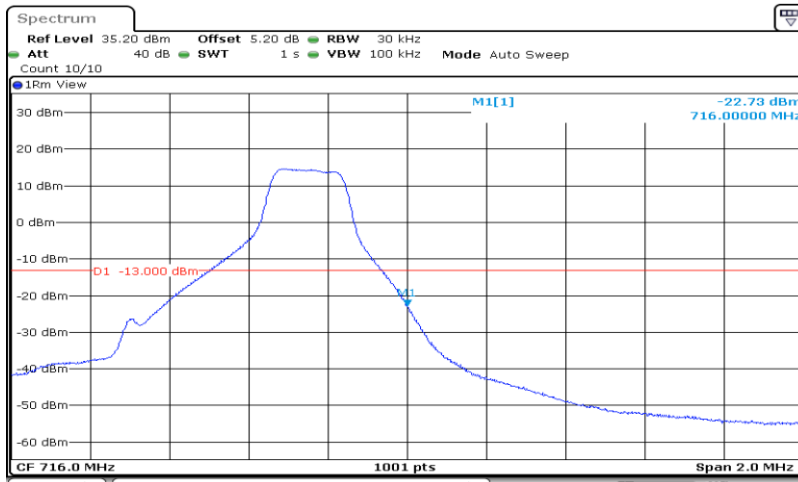


Date: 18.OCT.2019 09:14:37

Band12-1.4MHz-16QAM-23173-1RB#5

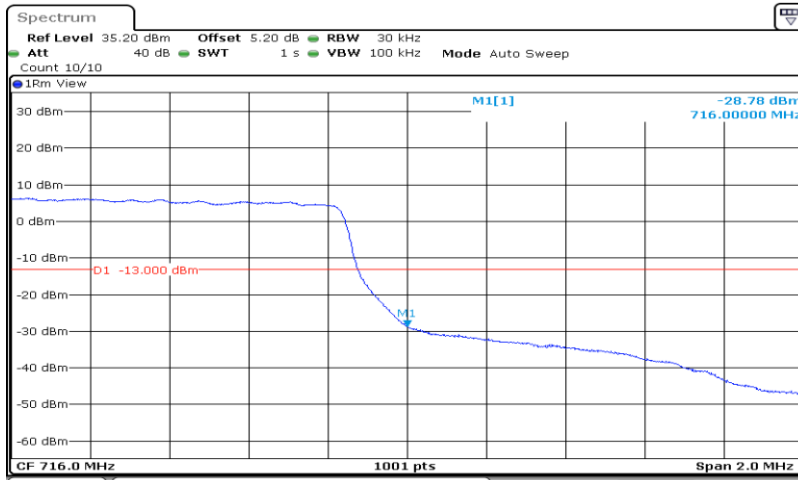


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Date: 18.OCT.2019 09:15:21

Band12-1.4MHz-16QAM-23173-6RB#0

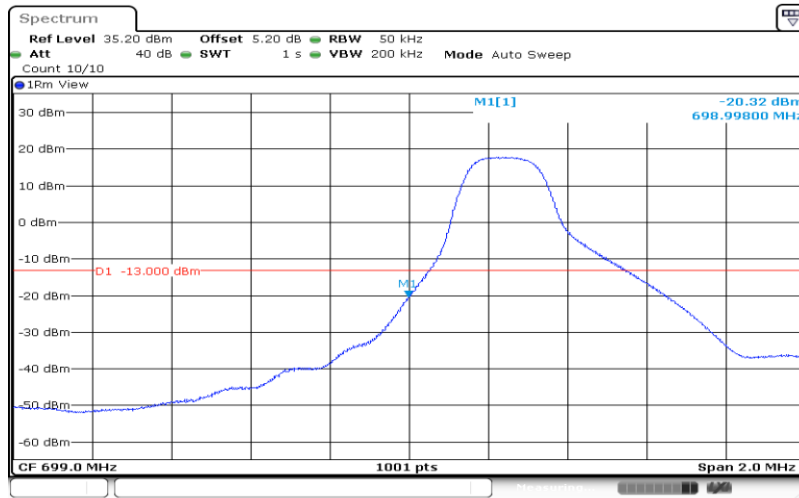


Date: 18.OCT.2019 09:16:00

Band12-3MHz-QPSK-23025-1RB#0

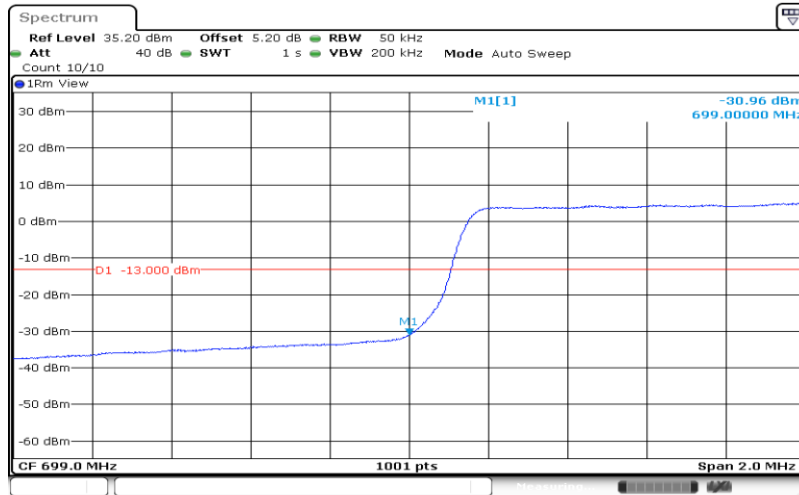


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Date: 18.OCT.2019 09:16:25

Band12-3MHz-QPSK-23025-15RB#0

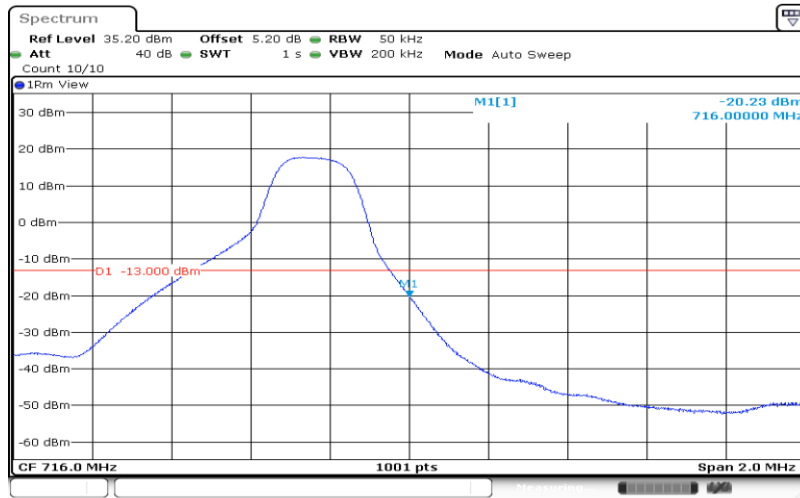


Date: 18.OCT.2019 09:17:05

Band12-3MHz-QPSK-23165-1RB#14

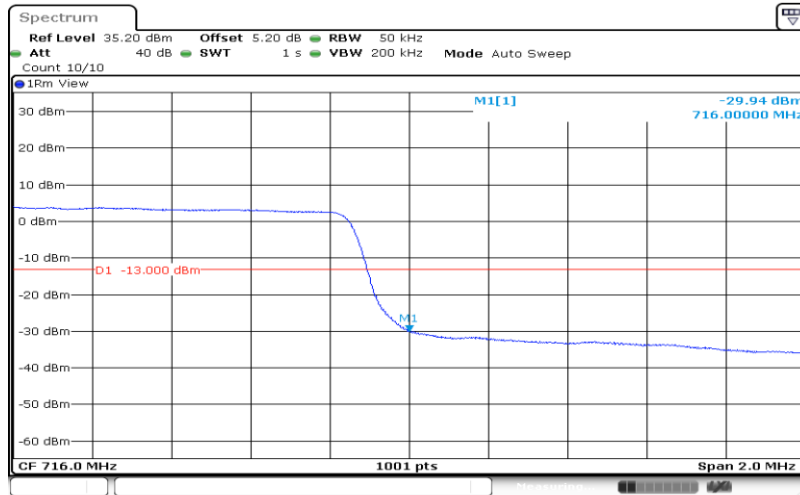


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Date: 18.OCT.2019 09:17:49

Band12-3MHz-QPSK-23165-15RB#0

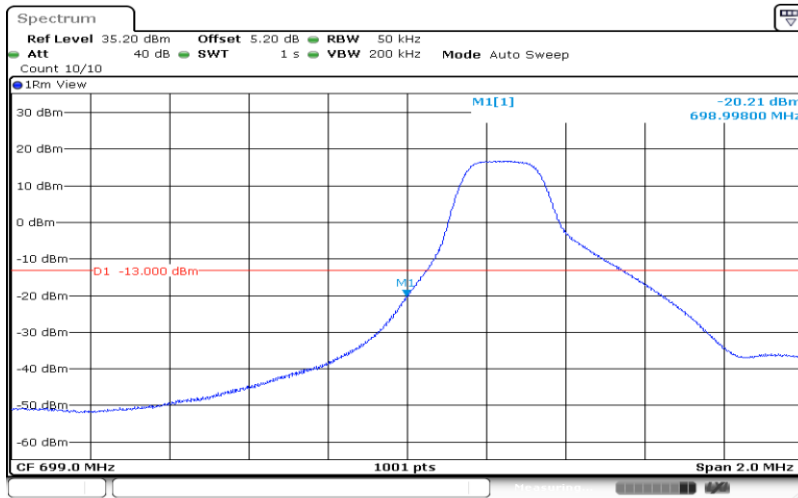


Date: 18.OCT.2019 09:18:28

Band12-3MHz-16QAM-23025-1RB#0

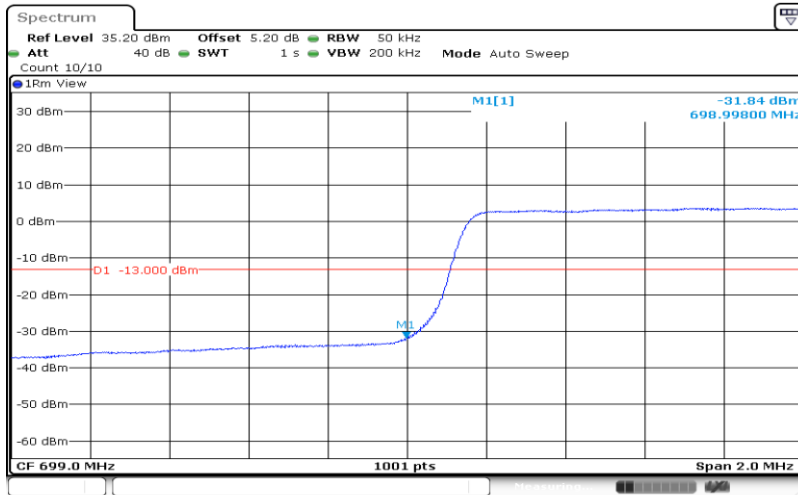


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Date: 18.OCT.2019 09:16:45

Band12-3MHz-16QAM-23025-15RB#0

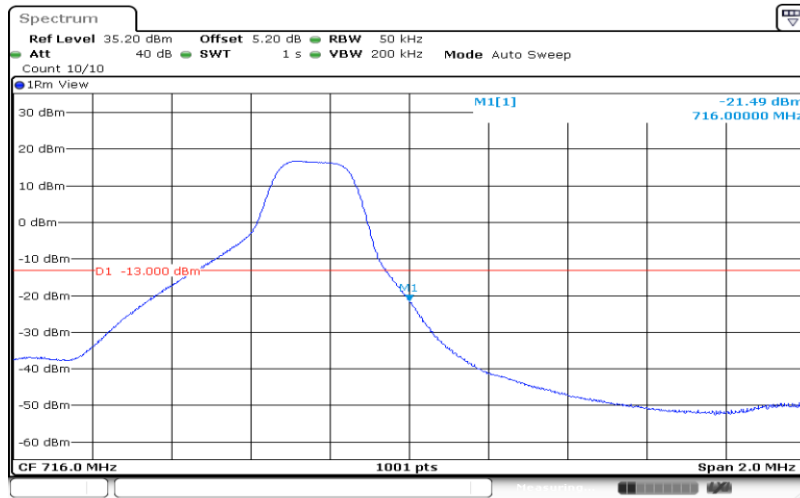


Date: 18.OCT.2019 09:17:24

Band12-3MHz-16QAM-23165-1RB#14

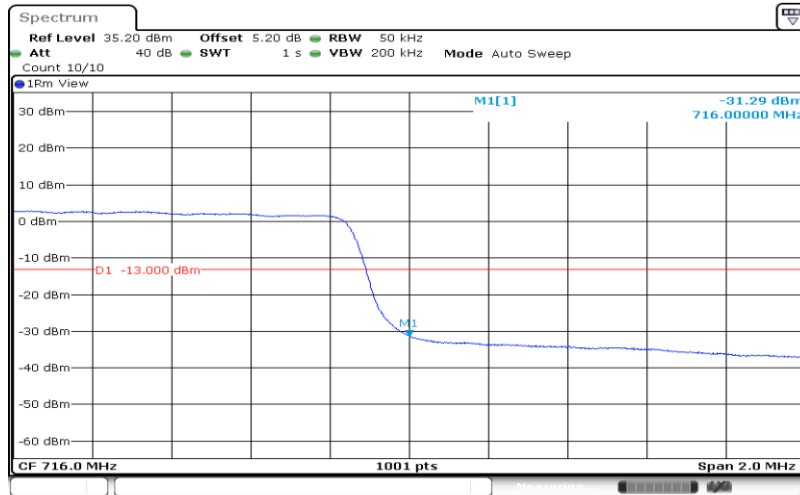


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Date: 18.OCT.2019 09:18:08

Band12-3MHz-16QAM-23165-15RB#0

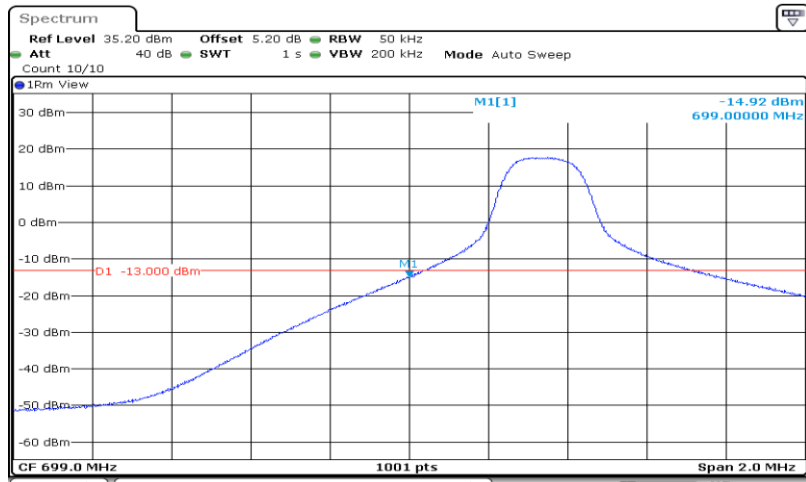


Date: 18.OCT.2019 09:18:48

Band12-5MHz-QPSK-23035-1RB#0

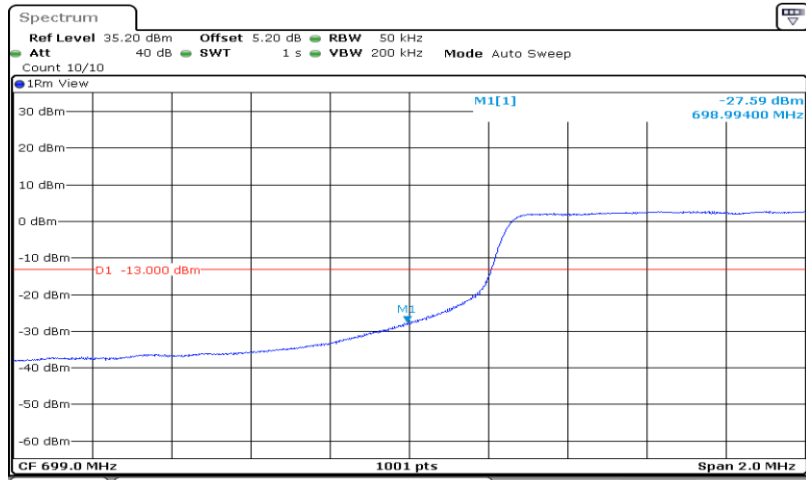


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Date: 18.OCT.2019 09:19:12

Band12-5MHz-QPSK-23035-25RB#0

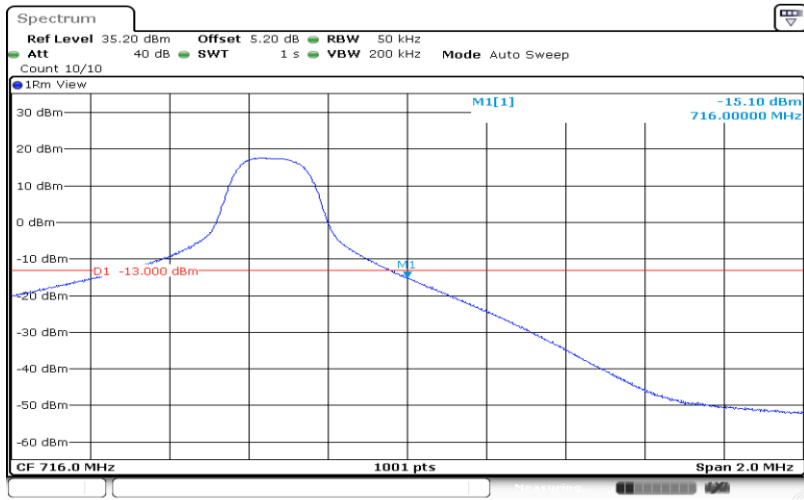


Date: 18.OCT.2019 09:19:51

Band12-5MHz-QPSK-23155-1RB#24

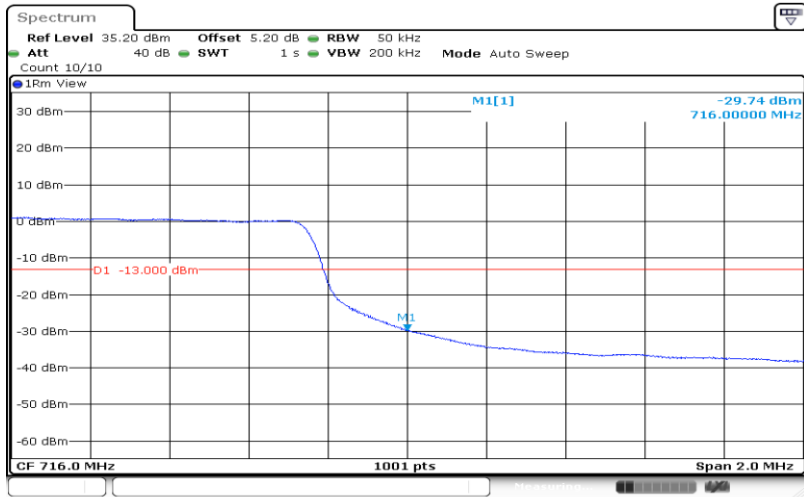


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Date: 18.OCT.2019 09:20:35

Band12-5MHz-QPSK-23155-25RB#0

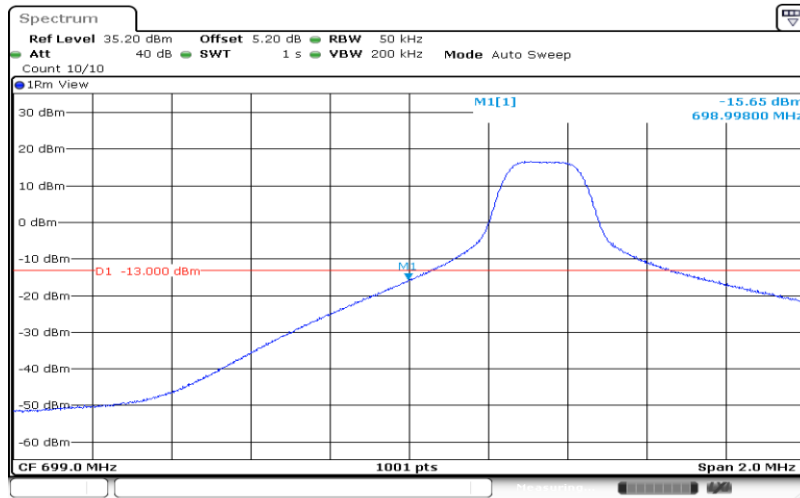


Date: 18.OCT.2019 09:21:15

Band12-5MHz-16QAM-23035-1RB#0

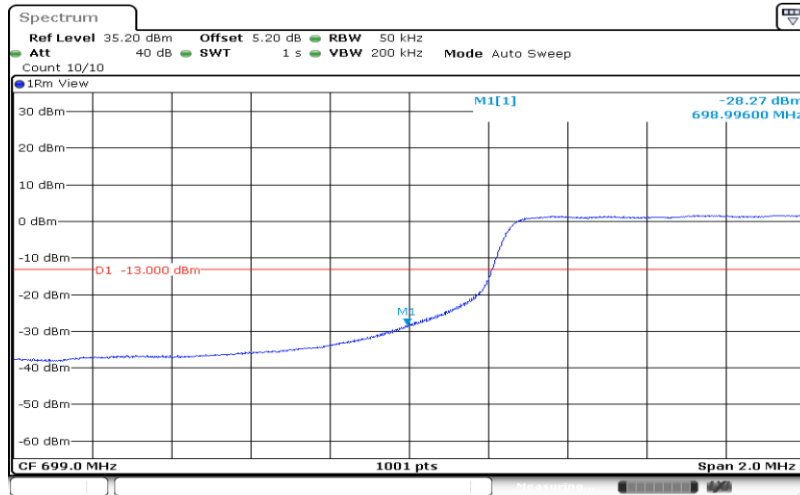


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Date: 18.OCT.2019 09:19:32

Band12-5MHz-16QAM-23035-25RB#0

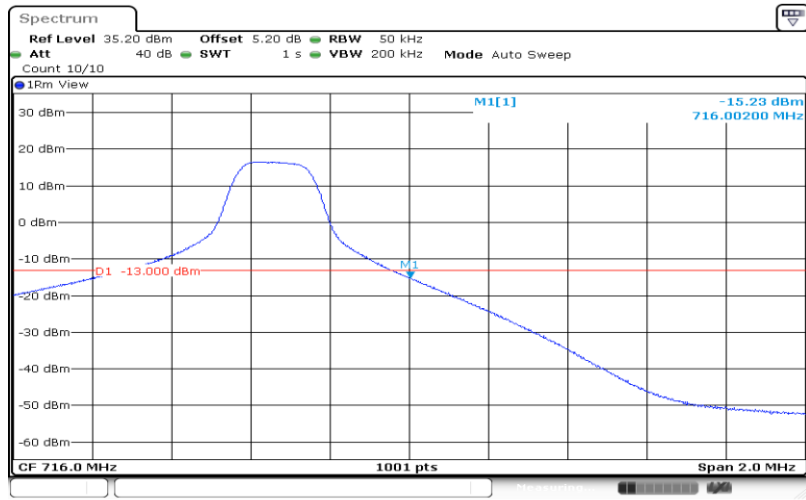


Date: 18.OCT.2019 09:20:11

Band12-5MHz-16QAM-23155-1RB#24

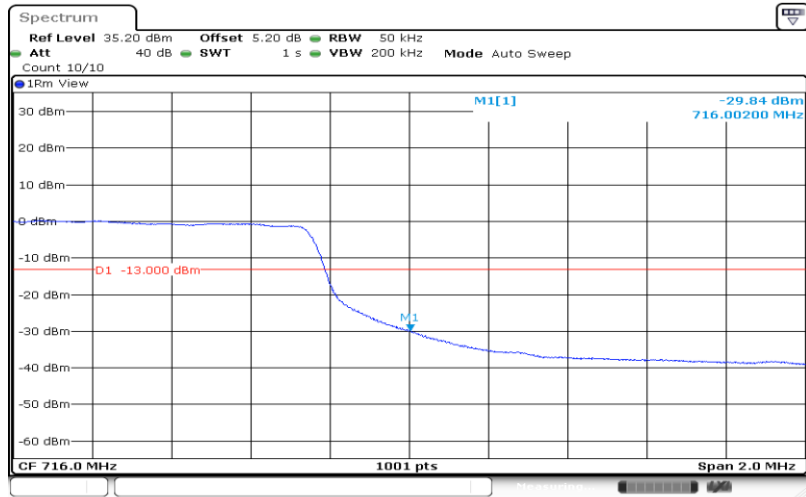


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Date: 18.OCT.2019 09:20:55

Band12-5MHz-16QAM-23155-25RB#0

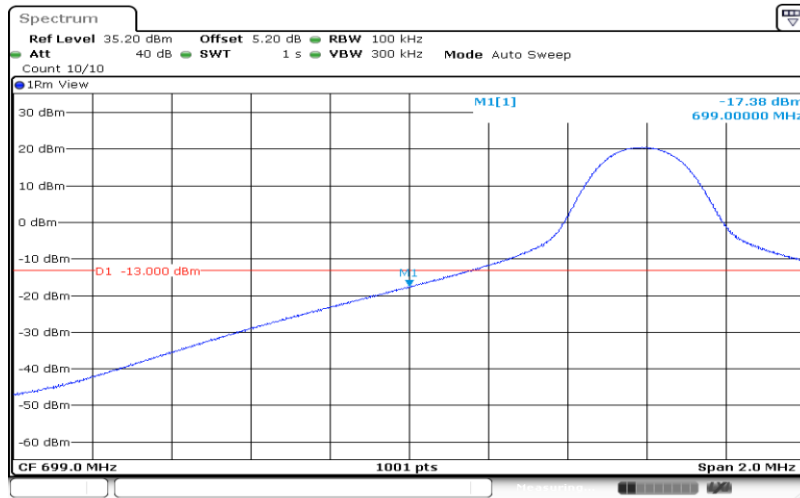


Date: 18.OCT.2019 09:21:35

Band12-10MHz-QPSK-23060-1RB#0

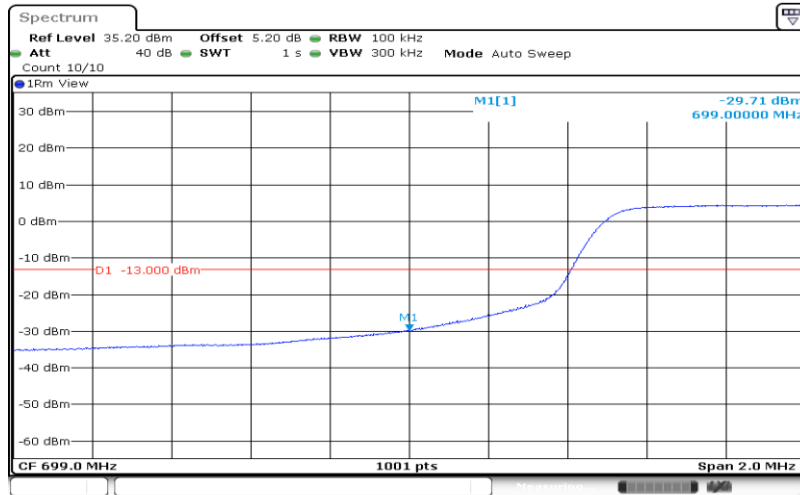


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Date: 18.OCT.2019 09:21:59

Band12-10MHz-QPSK-23060-50RB#0

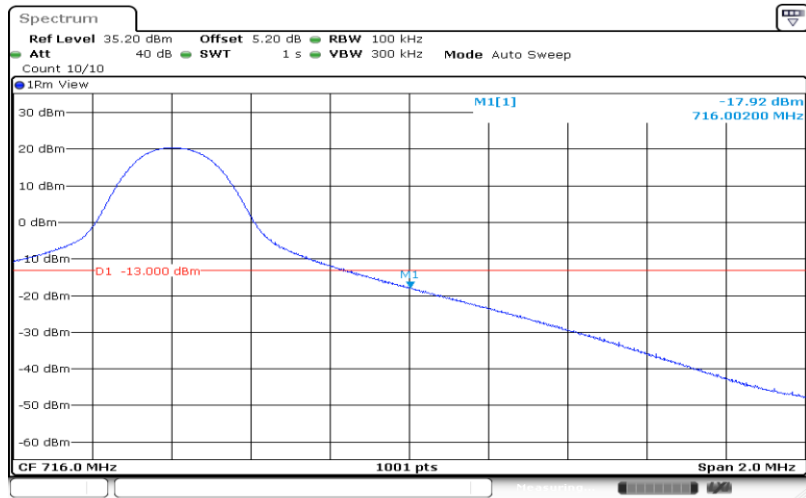


Date: 18.OCT.2019 09:22:39

Band12-10MHz-QPSK-23130-1RB#49

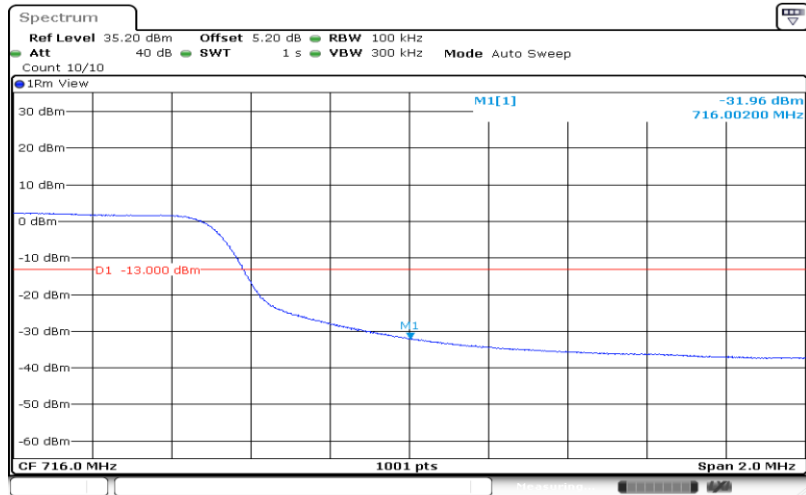


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Date: 18.OCT.2019 09:23:23

Band12-10MHz-QPSK-23130-50RB#0

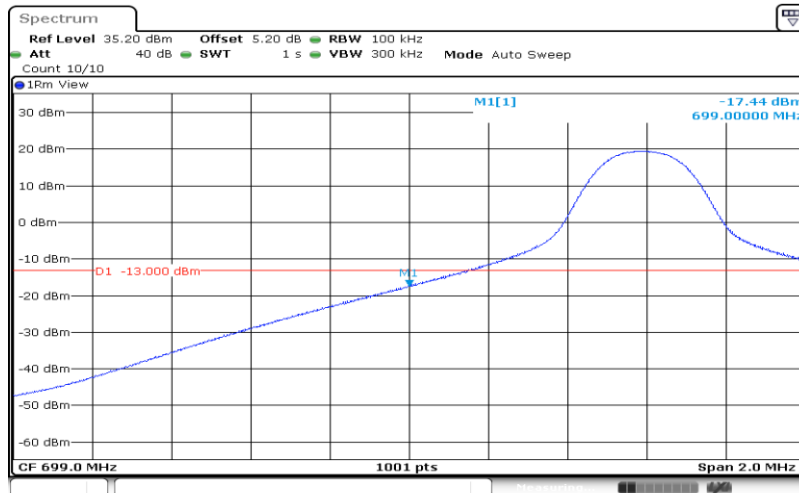


Date: 18.OCT.2019 09:24:03

Band12-10MHz-16QAM-23060-1RB#0

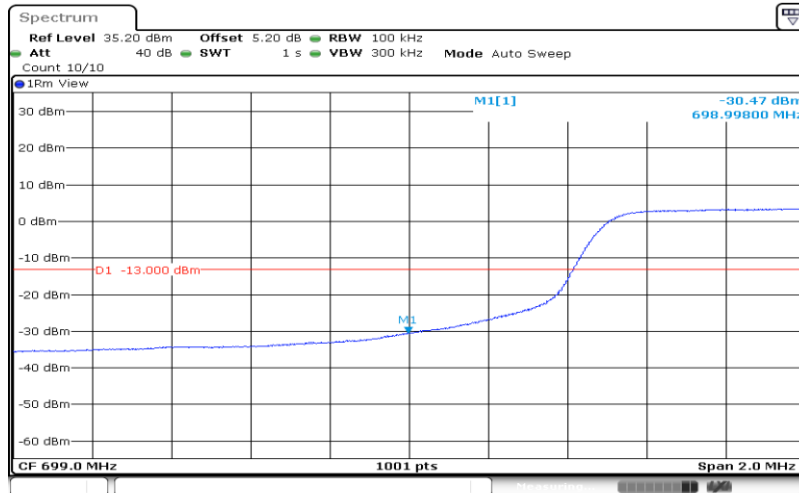


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Date: 18.OCT.2019 09:22:19

Band12-10MHz-16QAM-23060-50RB#0

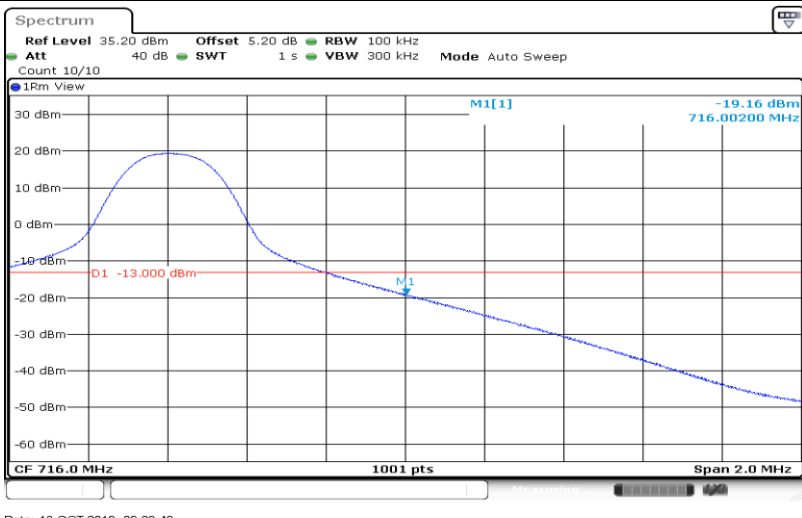


Date: 18.OCT.2019 09:22:58

Band12-10MHz-16QAM-23130-1RB#49

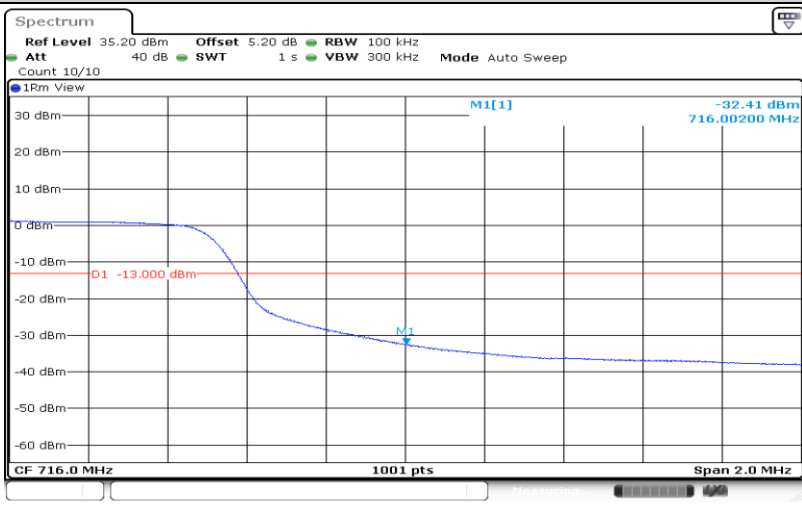


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Date: 18.OCT.2019 09:23:43

Band12-10MHz-16QAM-23130-50RB#0



Date: 18.OCT.2019 09:24:22



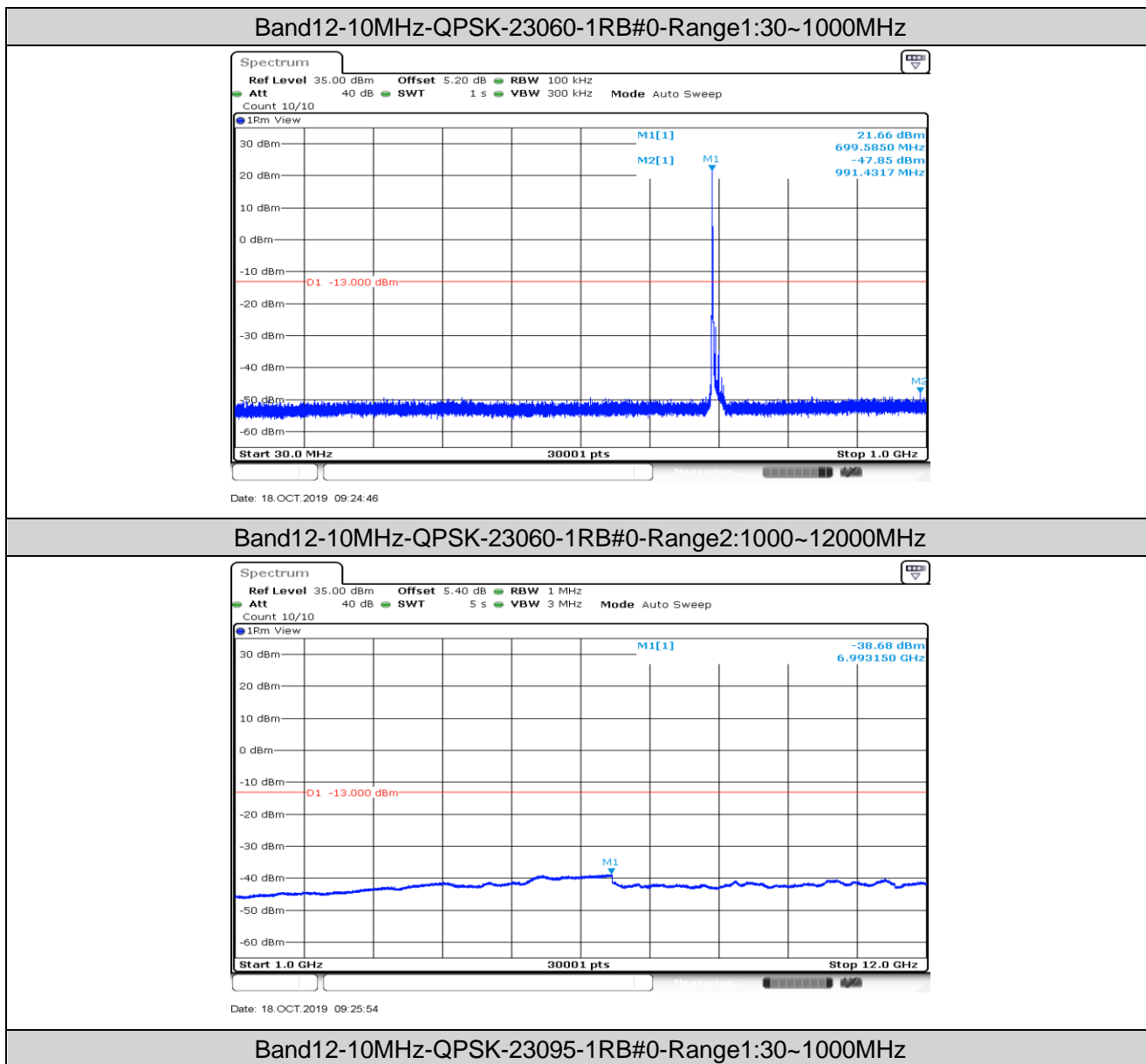
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 中国·深圳·科技园中区M-10栋一号厂房 邮编: 518057 t (86-755) 26012053 f (86-755) 26710594 sgs.china@sgs.com

6. Spurious Emission at Antenna Terminal

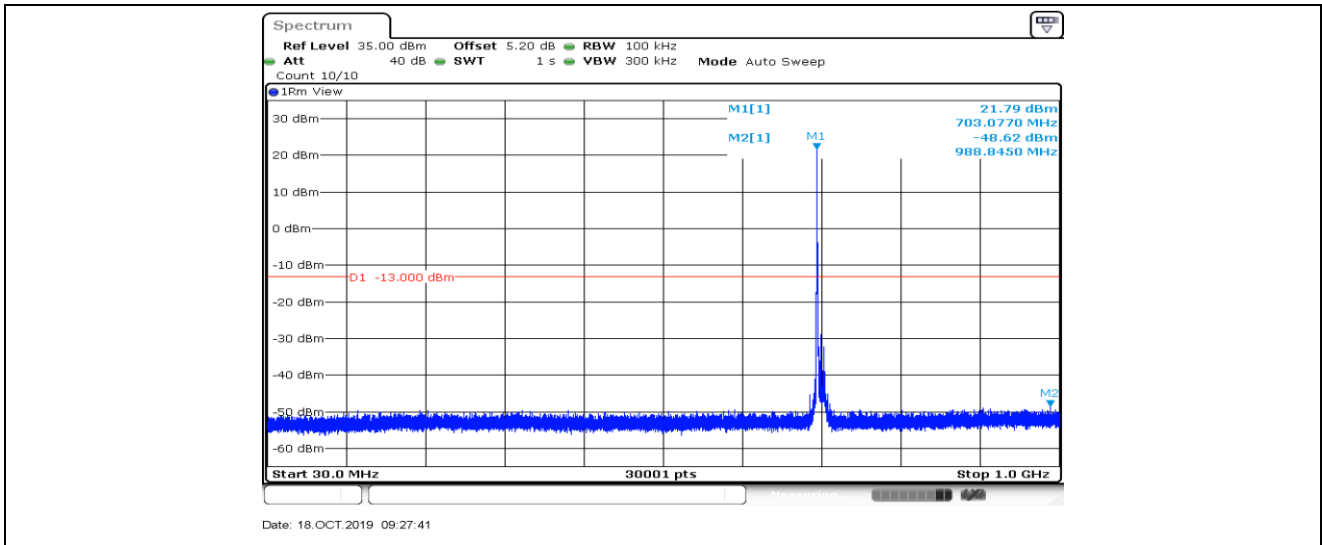
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = $k * (Span / RBW)$ " with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

Remark2: only the worst case data displayed in this report.

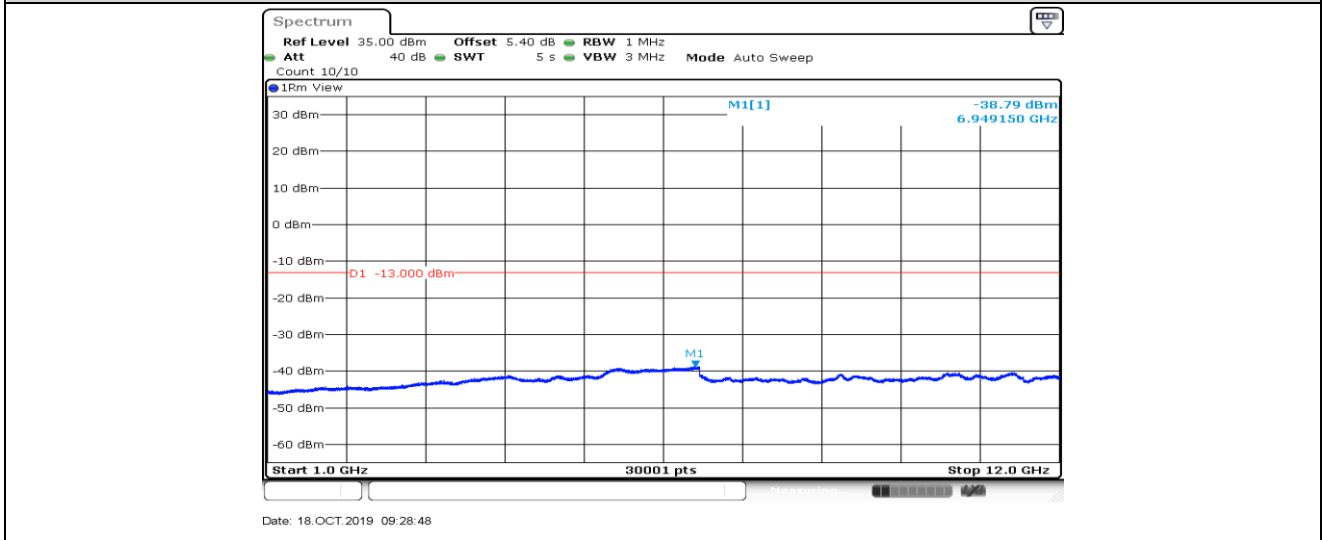
6.1. Test Plots



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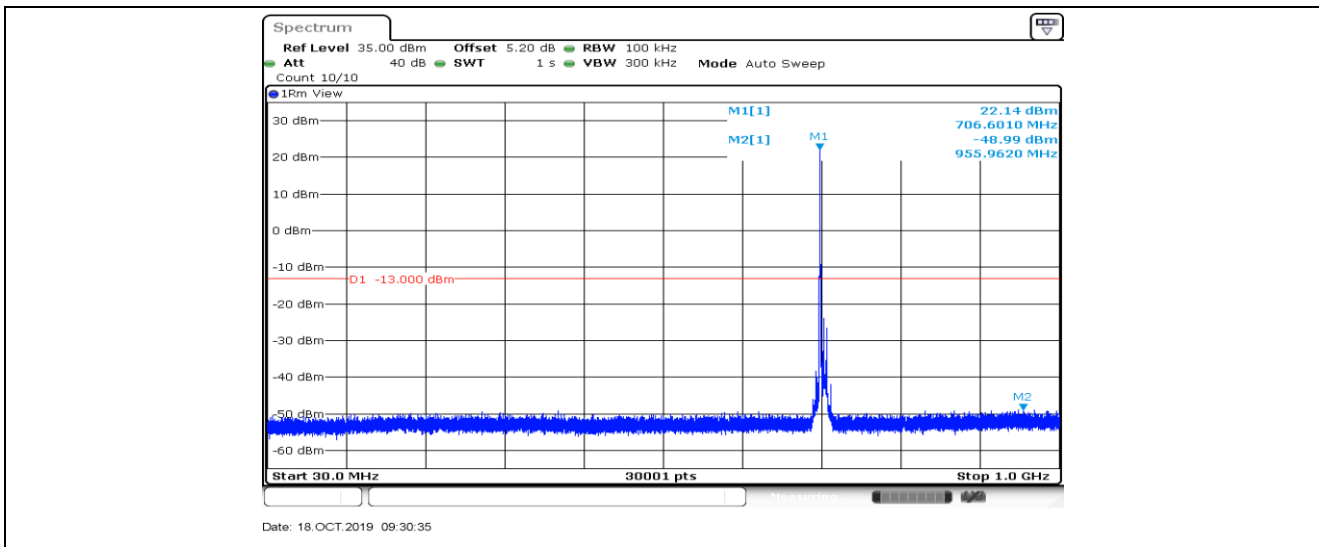
Band12-10MHz-QPSK-23095-1RB#0-Range2:1000~12000MHz



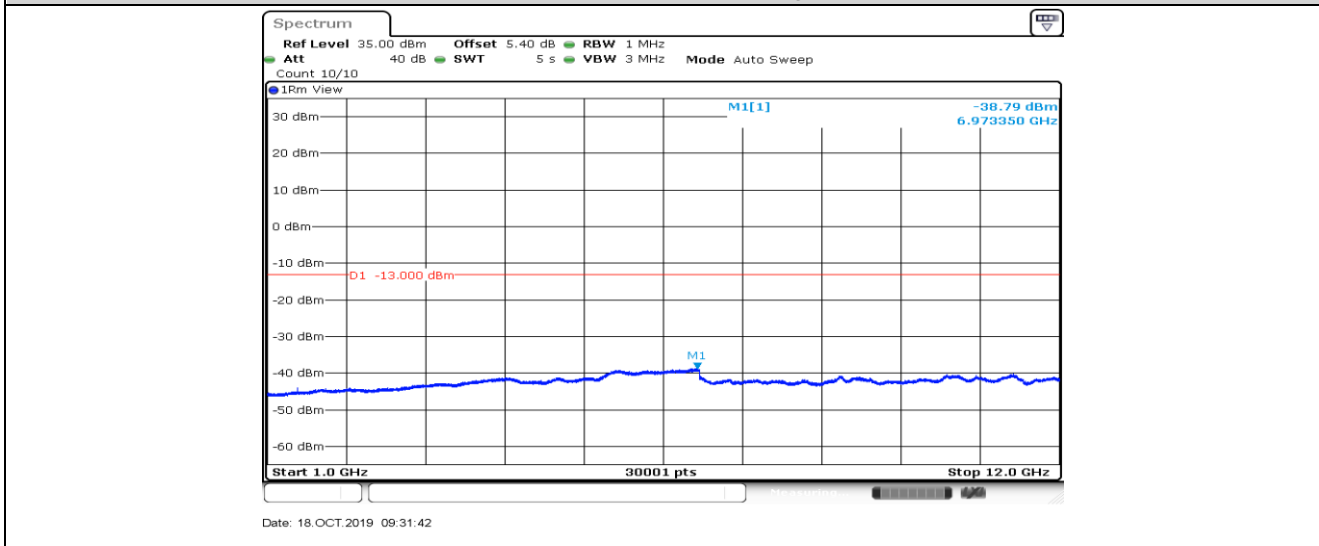
Band12-10MHz-QPSK-23130-1RB#0-Range1:30~1000MHz



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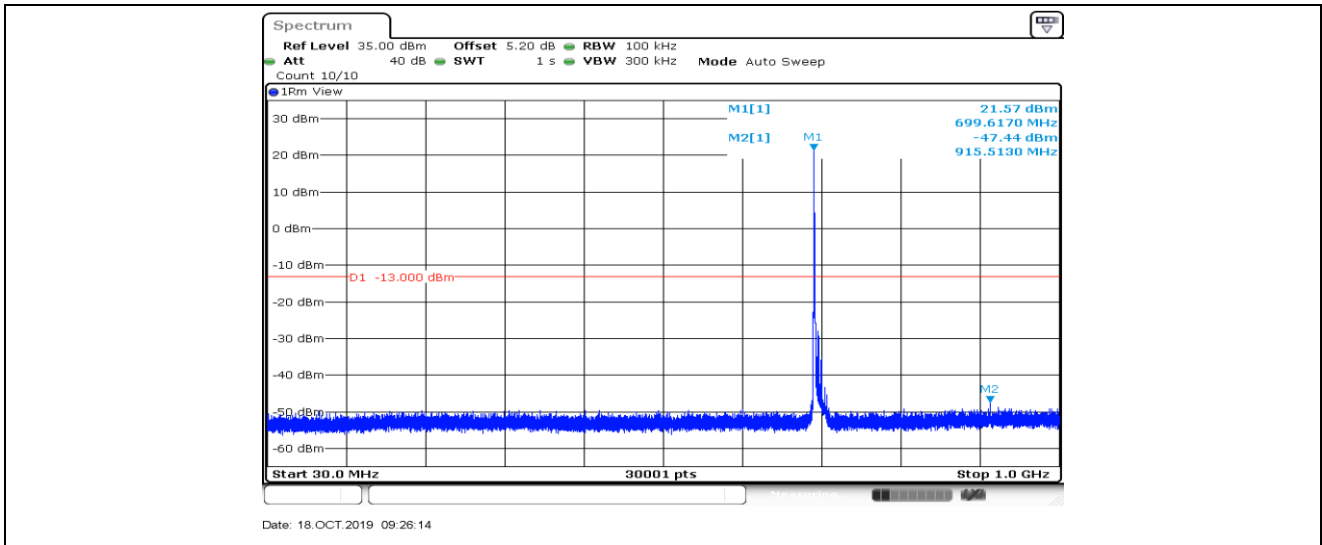
Band12-10MHz-QPSK-23130-1RB#0-Range2:1000~12000MHz



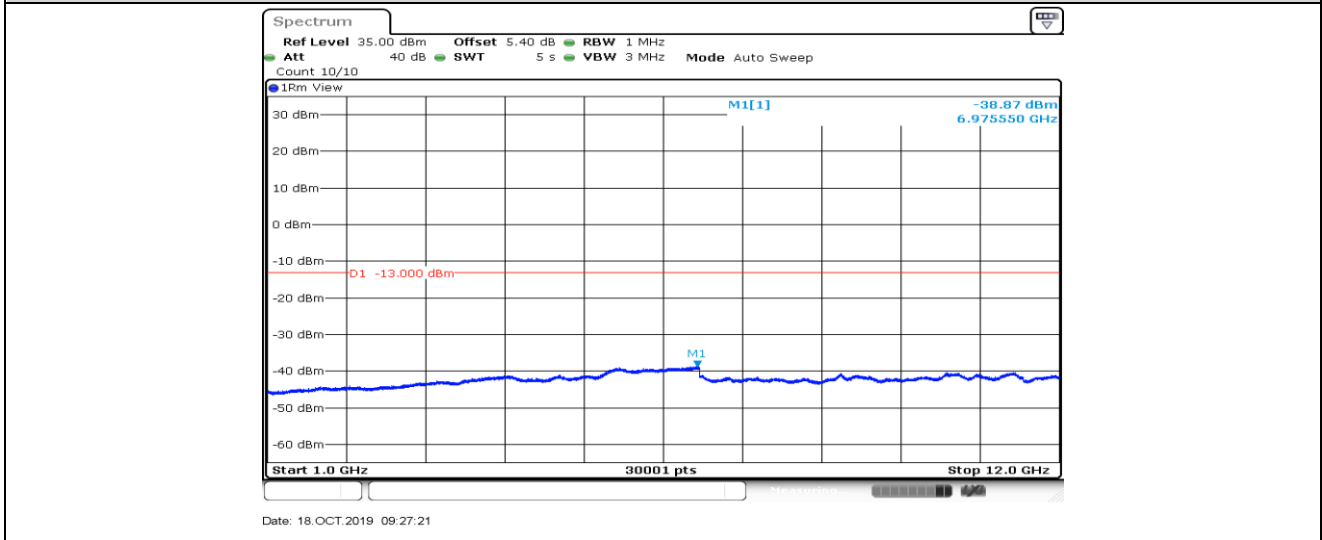
Band12-10MHz-16QAM-23060-1RB#0-Range1:30~1000MHz



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Band12-10MHz-16QAM-23060-1RB#0-Range2: 1000~12000MHz

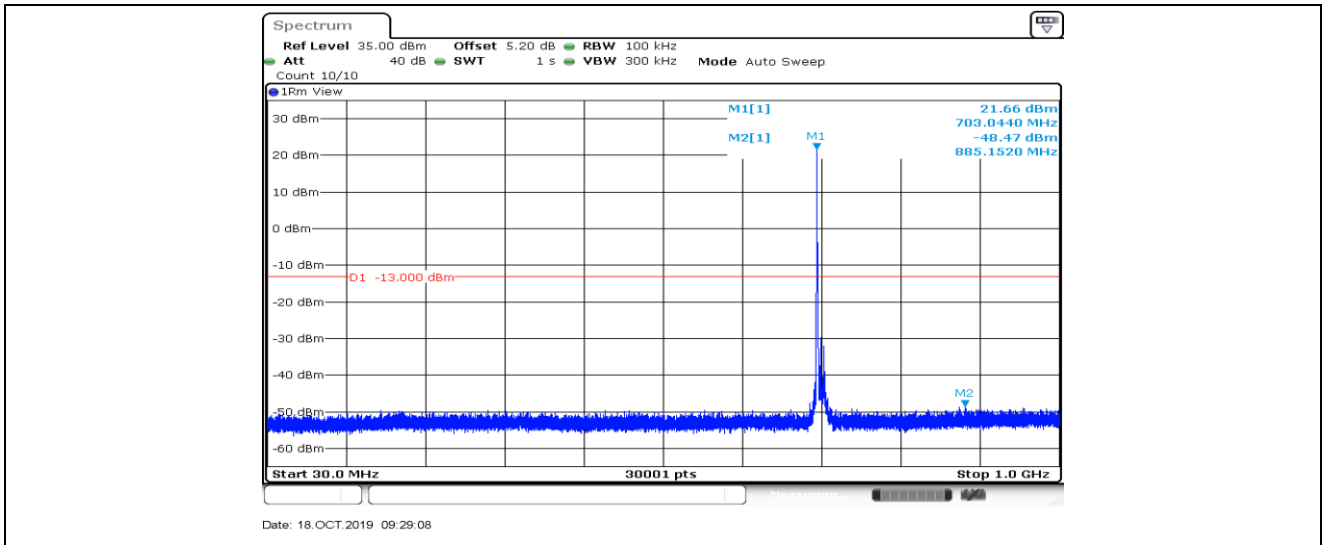


Band12-10MHz-16QAM-23095-1RB#0-Range1: 30~1000MHz

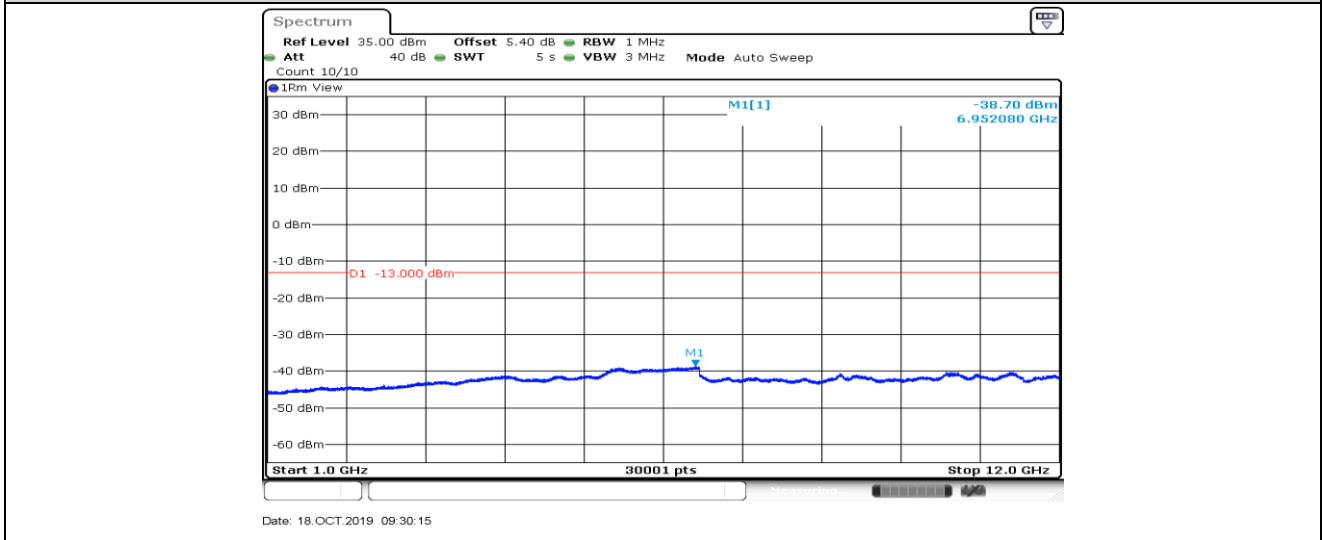


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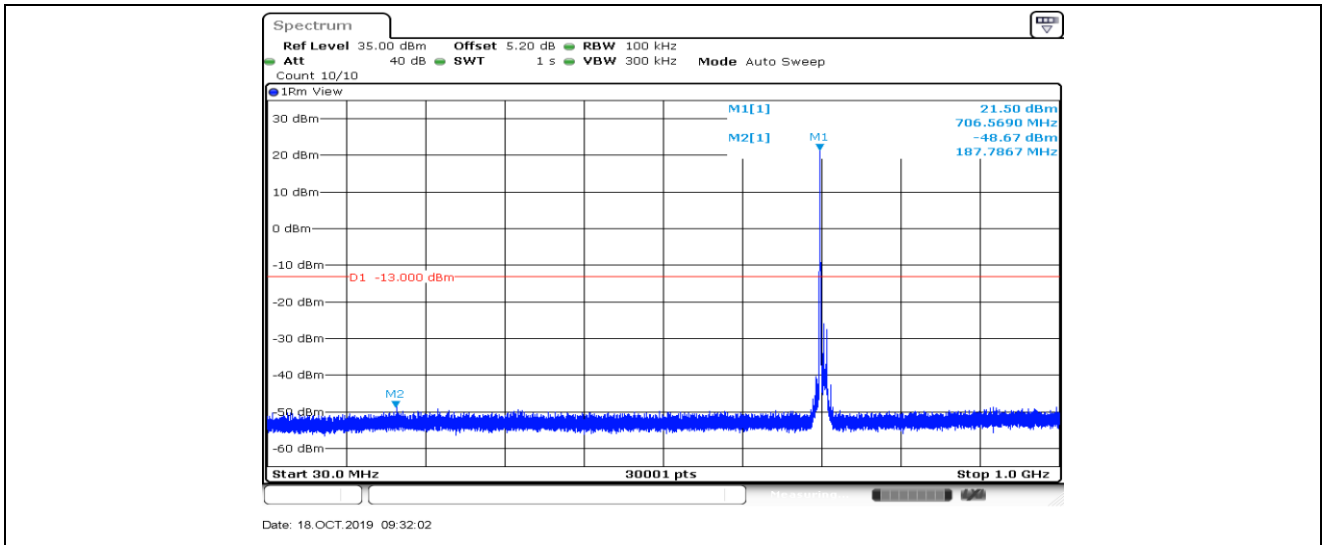
Band12-10MHz-16QAM-23095-1RB#0-Range2: 1000~12000MHz



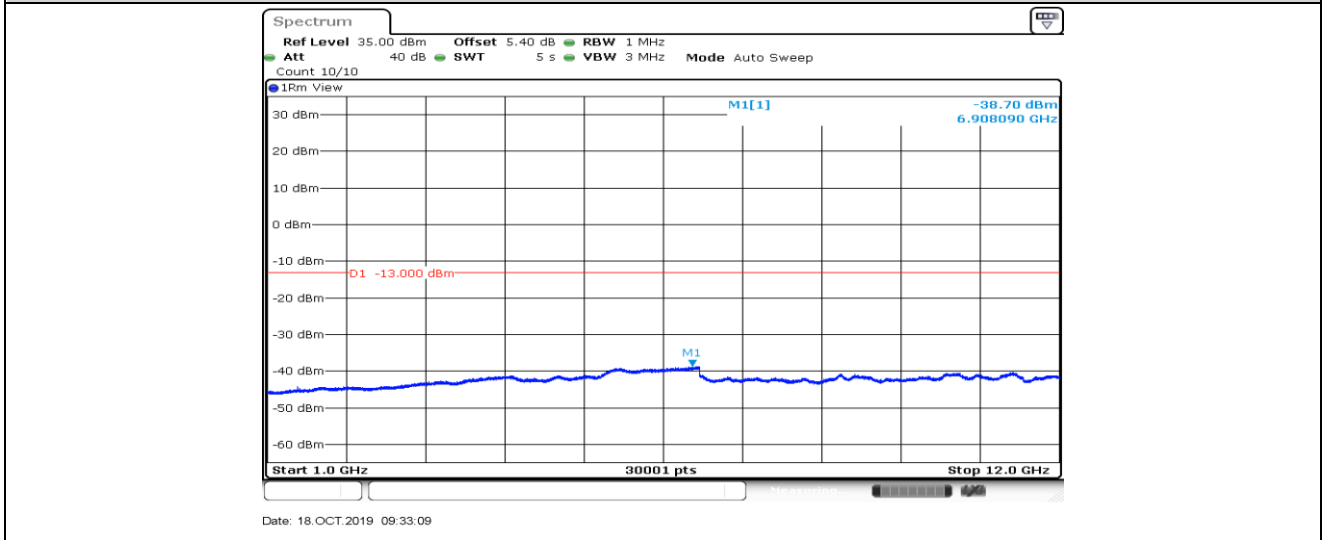
Band12-10MHz-16QAM-23130-1RB#0-Range1: 30~1000MHz



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Band12-10MHz-16QAM-23130-1RB#0-Range2:1000~12000MHz



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7. Field Strength of Spurious Radiation

7.1. Test Mode =LTE/TM1 10MHz

7.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
48.7704	-69.54	-13.00	56.54	Vertical
109.5925	-64.07	-13.00	51.07	Vertical
996.6533	-56.49	-13.00	43.49	Vertical
1765.7532	-55.16	-13.00	42.16	Vertical
2413.8828	-48.76	-13.00	35.76	Vertical
17991.5997	-33.30	-13.00	20.30	Vertical
42.6106	-63.86	-13.00	50.86	Horizontal
230.8000	-67.47	-13.00	54.47	Horizontal
996.6048	-54.96	-13.00	41.96	Horizontal
1406.0812	-52.46	-13.00	39.46	Horizontal
2413.4827	-46.97	-13.00	33.97	Horizontal
16398.5359	-38.29	-13.00	25.29	Horizontal

7.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
64.5337	-69.23	-13.00	56.23	Vertical
112.5511	-64.12	-13.00	51.12	Vertical
332.1701	-68.37	-13.00	55.37	Vertical
2416.2833	-51.19	-13.00	38.19	Vertical
8001.2000	-52.39	-13.00	39.39	Vertical
17988.5995	-33.02	-13.00	20.02	Vertical
40.0885	-64.31	-13.00	51.31	Horizontal
237.4934	-66.85	-13.00	53.85	Horizontal
1399.2799	-53.61	-13.00	40.61	Horizontal
2428.6857	-37.72	-13.00	24.72	Horizontal
7392.1757	-53.65	-13.00	40.65	Horizontal
16387.7355	-38.50	-13.00	25.50	Horizontal



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7.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
52.5051	-70.10	-13.00	57.10	Vertical
118.4199	-64.49	-13.00	51.49	Vertical
459.8770	-66.00	-13.00	53.00	Vertical
2413.8828	-49.78	-13.00	36.78	Vertical
7947.1979	-52.68	-13.00	39.68	Vertical
17986.1994	-33.32	-13.00	20.32	Vertical
46.3453	-64.20	-13.00	51.20	Horizontal
84.7592	-75.07	-13.00	62.07	Horizontal
245.1083	-67.74	-13.00	54.74	Horizontal
1412.8826	-56.57	-13.00	43.57	Horizontal
2414.2829	-48.04	-13.00	35.04	Horizontal
17998.8000	-37.72	-13.00	24.72	Horizontal

Remark:

- 1 According to 971168 D01 Power Meas License Digital Systems, The amplitudes of unwanted emissions that are attenuated more than 20 dB below the applicable limit are not required to be reported.
- 2 The disturbance below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the worst case data displayed in this report.
- 3 all modulation and all Bandwidth had been tested, but only the worst case data displayed in this report.



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8. Frequency Stability

8.1. Frequency Vs Voltage

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band12	10MHz	QPSK	23060	50RB#0	VL	NT	-6.10	-0.008665	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	VN	NT	-1.80	-0.002557	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	VH	NT	-5.80	-0.008239	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VL	NT	-7.60	-0.010742	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VN	NT	-7.00	-0.009894	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VH	NT	-4.80	-0.006784	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VL	NT	-6.00	-0.008439	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VN	NT	-7.70	-0.010830	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VH	NT	-2.40	-0.003376	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VL	NT	-1.30	-0.001847	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VN	NT	-4.80	-0.006818	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VH	NT	-5.10	-0.007244	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VL	NT	-6.50	-0.009187	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VN	NT	-8.20	-0.011590	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VH	NT	-11.90	-0.016820	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VL	NT	-2.80	-0.003938	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VN	NT	-2.90	-0.004079	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VH	NT	-3.70	-0.005204	±2.5	PASS

8.2. Frequency Vs Temperature

Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band12	10MHz	QPSK	23060	50RB#0	NV	-30	-2.70	-0.003835	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	-20	-2.20	-0.003125	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	0	-10.40	-0.014773	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	10	-7.60	-0.010795	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	20	-6.60	-0.009375	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	30	-0.80	-0.001136	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	40	-1.60	-0.002273	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	50	-6.90	-0.009801	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-30	-1.90	-0.002686	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-20	-5.70	-0.008057	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	0	-3.70	-0.005230	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	10	-3.60	-0.005088	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	20	-0.70	-0.000989	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	30	-3.00	-0.004240	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	40	-3.90	-0.005512	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	50	-5.00	-0.007067	±2.5	PASS



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Band12	10MHz	QPSK	23130	50RB#0	NV	-30	-8.40	-0.011814	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-20	-12.20	-0.017159	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	0	-8.40	-0.011814	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	10	-7.60	-0.010689	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	20	-4.90	-0.006892	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	30	-8.70	-0.012236	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	40	-2.70	-0.003797	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	50	-4.20	-0.005907	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	-30	-1.70	-0.002415	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	-20	-5.10	-0.007244	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	0	-7.70	-0.010938	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	10	-7.00	-0.009943	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	20	-3.00	-0.004261	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	30	-5.40	-0.007670	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	40	-2.80	-0.003977	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	50	-11.60	-0.016477	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	-30	-9.50	-0.013428	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	-20	-3.60	-0.005088	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	0	-9.40	-0.013286	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	10	-0.10	-0.000141	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	20	-12.40	-0.017527	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	30	-13.80	-0.019505	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	40	-10.10	-0.014276	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	50	-7.40	-0.010459	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	-30	-10.00	-0.014065	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	-20	-8.00	-0.011252	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	0	-3.20	-0.004501	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	10	-8.80	-0.012377	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	20	-2.30	-0.003235	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	30	-6.90	-0.009705	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	40	-7.80	-0.010970	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	50	-1.20	-0.001688	±2.5	PASS

The End



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