

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	23.69	18.54	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	23.84	18.69	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	23.70	18.55	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#0	23.78	18.63	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#1	23.83	18.68	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#3	23.81	18.66	34.77	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	22.77	17.62	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	23.67	18.52	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#2	23.78	18.63	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#5	23.69	18.54	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#0	23.78	18.63	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#1	23.83	18.68	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#3	23.80	18.65	34.77	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	22.78	17.63	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	23.63	18.48	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	23.75	18.60	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	23.66	18.51	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#0	23.74	18.59	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#1	23.79	18.64	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#3	23.75	18.60	34.77	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	22.74	17.59	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	23.07	17.92	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	23.22	18.07	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	23.04	17.89	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#0	22.96	17.81	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#1	23.00	17.85	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#3	22.87	17.72	34.77	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	21.94	16.79	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	22.97	17.82	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#2	23.08	17.93	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#5	22.96	17.81	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#0	22.95	17.80	34.77	PASS



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Band12	1.4MHz	16QAM	23095	3RB#1	22.97	17.82	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#3	22.99	17.84	34.77	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	21.93	16.78	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	22.88	17.73	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	23.06	17.91	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#5	22.91	17.76	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#0	22.91	17.76	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#1	22.91	17.76	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#3	22.90	17.75	34.77	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	21.85	16.70	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#0	23.75	18.60	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#8	23.77	18.62	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#14	23.76	18.61	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#0	22.74	17.59	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#4	22.81	17.66	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#7	22.76	17.61	34.77	PASS
Band12	3MHz	QPSK	23025	15RB#0	22.75	17.60	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#0	23.70	18.55	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#8	23.71	18.56	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#14	23.71	18.56	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#0	22.73	17.58	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#4	22.82	17.67	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#7	22.75	17.60	34.77	PASS
Band12	3MHz	QPSK	23095	15RB#0	22.71	17.56	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#0	23.67	18.52	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#8	23.66	18.51	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#14	23.68	18.53	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#0	22.71	17.56	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#4	22.72	17.57	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#7	22.69	17.54	34.77	PASS
Band12	3MHz	QPSK	23165	15RB#0	22.65	17.50	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#0	23.06	17.91	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#8	23.12	17.97	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#14	23.08	17.93	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#0	21.87	16.72	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#4	21.93	16.78	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#7	21.88	16.73	34.77	PASS
Band12	3MHz	16QAM	23025	15RB#0	21.80	16.65	34.77	PASS



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Band12	3MHz	16QAM	23095	1RB#0	22.98	17.83	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#8	23.04	17.89	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#14	23.07	17.92	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#0	21.86	16.71	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#4	21.89	16.74	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#7	21.86	16.71	34.77	PASS
Band12	3MHz	16QAM	23095	15RB#0	21.79	16.64	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#0	22.90	17.75	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#8	23.04	17.89	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#14	23.03	17.88	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#0	21.85	16.70	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#4	21.84	16.69	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#7	21.81	16.66	34.77	PASS
Band12	3MHz	16QAM	23165	15RB#0	21.70	16.55	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#0	23.62	18.47	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#12	23.92	18.77	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#24	23.62	18.47	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#0	22.77	17.62	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#6	22.81	17.66	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#13	22.72	17.57	34.77	PASS
Band12	5MHz	QPSK	23035	25RB#0	22.71	17.56	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#0	23.63	18.48	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#12	23.90	18.75	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#24	23.57	18.42	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#0	22.73	17.58	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#6	22.83	17.68	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#13	22.74	17.59	34.77	PASS
Band12	5MHz	QPSK	23095	25RB#0	22.74	17.59	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#0	23.58	18.43	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#12	23.83	18.68	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#24	23.56	18.41	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#0	22.76	17.61	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#6	22.76	17.61	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#13	22.59	17.44	34.77	PASS
Band12	5MHz	QPSK	23155	25RB#0	22.66	17.51	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#0	22.88	17.73	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#12	23.21	18.06	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#24	22.92	17.77	34.77	PASS



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Band12	5MHz	16QAM	23035	12RB#0	21.85	16.70	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#6	21.88	16.73	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#13	21.81	16.66	34.77	PASS
Band12	5MHz	16QAM	23035	25RB#0	21.77	16.62	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#0	23.00	17.85	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#12	23.22	18.07	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#24	22.89	17.74	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#0	21.83	16.68	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#6	21.90	16.75	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#13	21.82	16.67	34.77	PASS
Band12	5MHz	16QAM	23095	25RB#0	21.80	16.65	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#0	22.86	17.71	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#12	23.18	18.03	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#24	22.85	17.70	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#0	21.79	16.64	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#6	21.82	16.67	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#13	21.67	16.52	34.77	PASS
Band12	5MHz	16QAM	23155	25RB#0	21.73	16.58	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#0	23.75	18.60	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#24	23.83	18.68	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#49	23.70	18.55	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#0	22.85	17.70	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#12	22.79	17.64	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#25	22.80	17.65	34.77	PASS
Band12	10MHz	QPSK	23060	50RB#0	22.85	17.70	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#0	23.74	18.59	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#24	23.79	18.64	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#49	23.66	18.51	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#0	22.81	17.66	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#12	22.76	17.61	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#25	22.79	17.64	34.77	PASS
Band12	10MHz	QPSK	23095	50RB#0	22.82	17.67	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#0	23.71	18.56	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#24	23.78	18.63	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#49	23.63	18.48	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#0	22.73	17.58	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#12	22.72	17.57	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#25	22.62	17.47	34.77	PASS



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Band12	10MHz	QPSK	23130	50RB#0	22.65	17.50	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#0	22.97	17.82	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#24	23.17	18.02	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#49	23.04	17.89	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#0	21.90	16.75	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#12	21.86	16.71	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#25	21.86	16.71	34.77	PASS
Band12	10MHz	16QAM	23060	50RB#0	21.88	16.73	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#0	23.10	17.95	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#24	23.18	18.03	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#49	23.03	17.88	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#0	21.85	16.70	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#12	21.80	16.65	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#25	21.83	16.68	34.77	PASS
Band12	10MHz	16QAM	23095	50RB#0	21.87	16.72	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#0	23.00	17.85	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#24	23.02	17.87	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#49	22.94	17.79	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#0	21.77	16.62	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#12	21.77	16.62	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#25	21.65	16.50	34.77	PASS
Band12	10MHz	16QAM	23130	50RB#0	21.72	16.57	34.77	PASS

Remark:

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

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

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



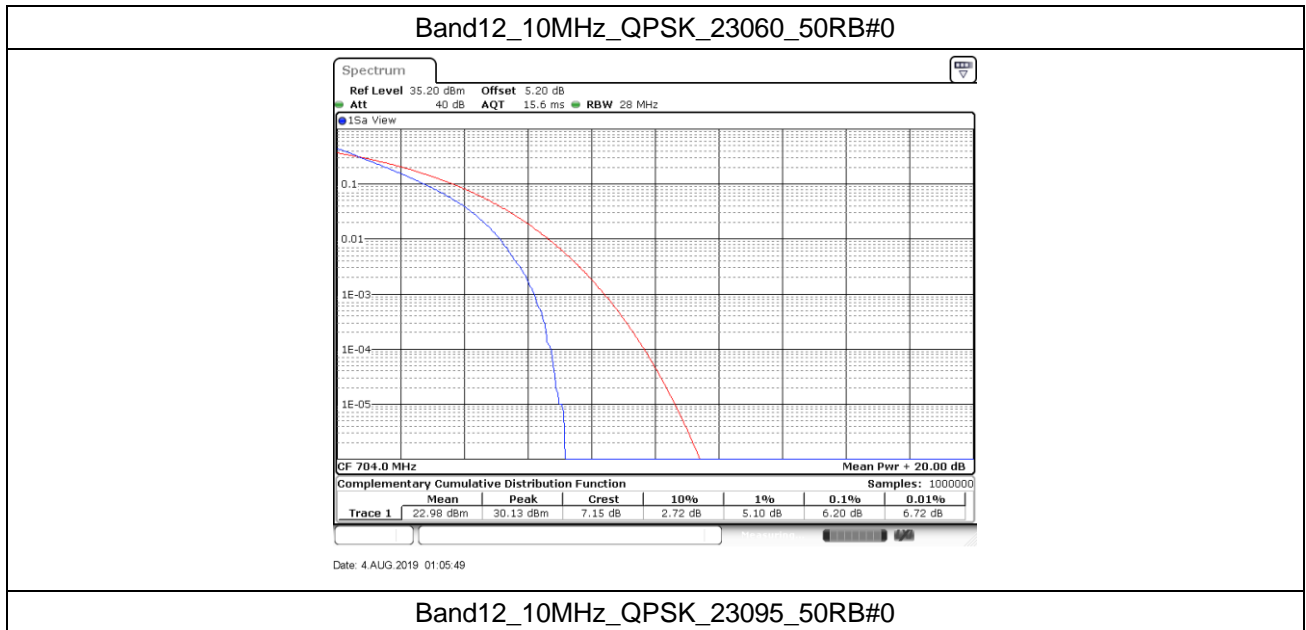
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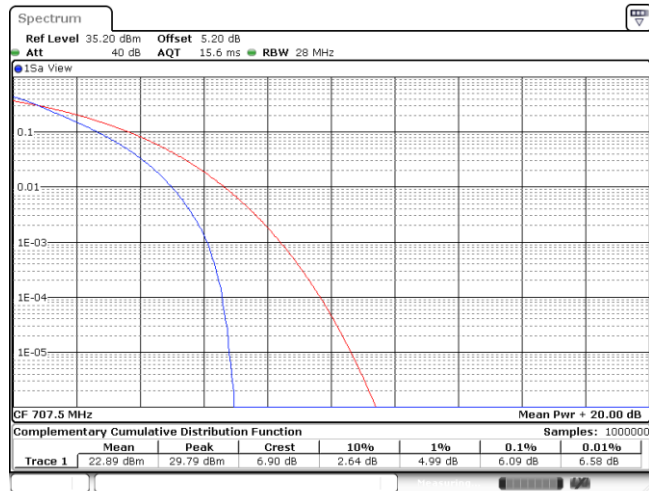
2. Peak-to-Average Ratio(CCDF)

2.1. Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band1 2	10MHz	QPSK	23060	50RB#0	6.20	13	PASS
Band1 2	10MHz	QPSK	23095	50RB#0	6.09	13	PASS
Band1 2	10MHz	QPSK	23130	50RB#0	6.06	13	PASS
Band1 2	10MHz	16QAM	23060	50RB#0	6.70	13	PASS
Band1 2	10MHz	16QAM	23095	50RB#0	6.75	13	PASS
Band1 2	10MHz	16QAM	23130	50RB#0	6.70	13	PASS

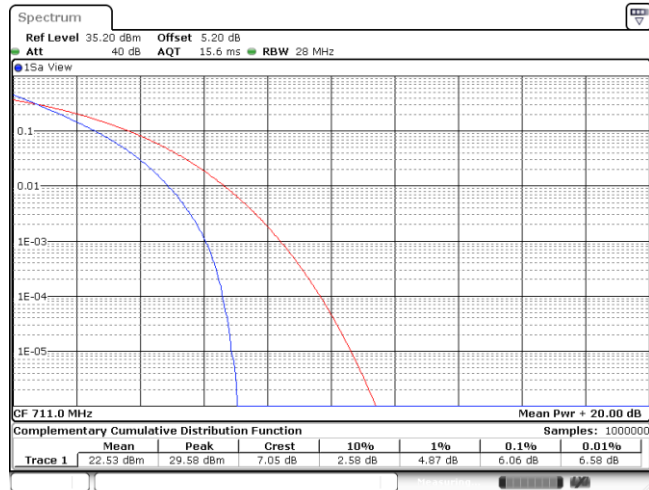
2.2. Test Plots





Date: 4.AUG.2019 01:06:12

Band12_10MHz_QPSK_23130_50RB#0

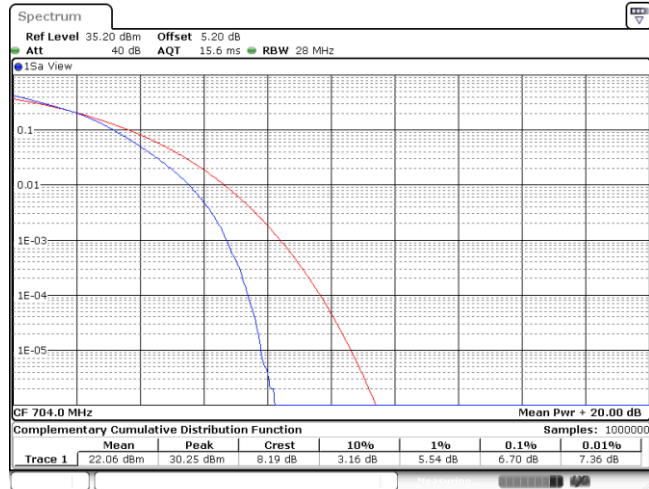


Date: 4.AUG.2019 01:06:35

Band12_10MHz_16QAM_23060_50RB#0

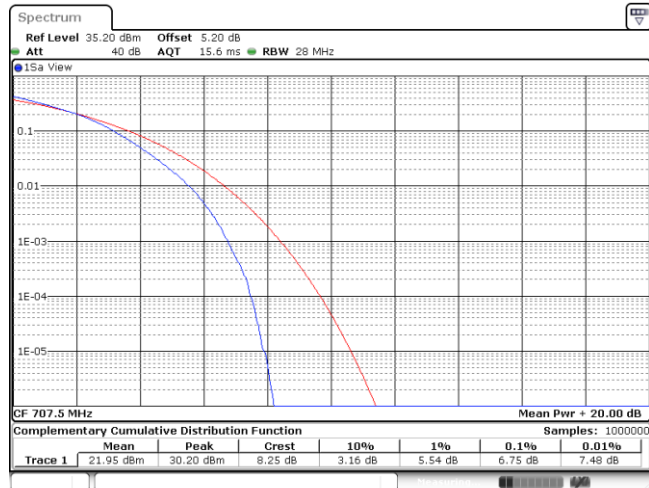


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Date: 4.AUG.2019 01:06:00

Band12_10MHz_16QAM_23095_50RB#0



Date: 4.AUG.2019 01:06:23

Band12_10MHz_16QAM_23130_50RB#0



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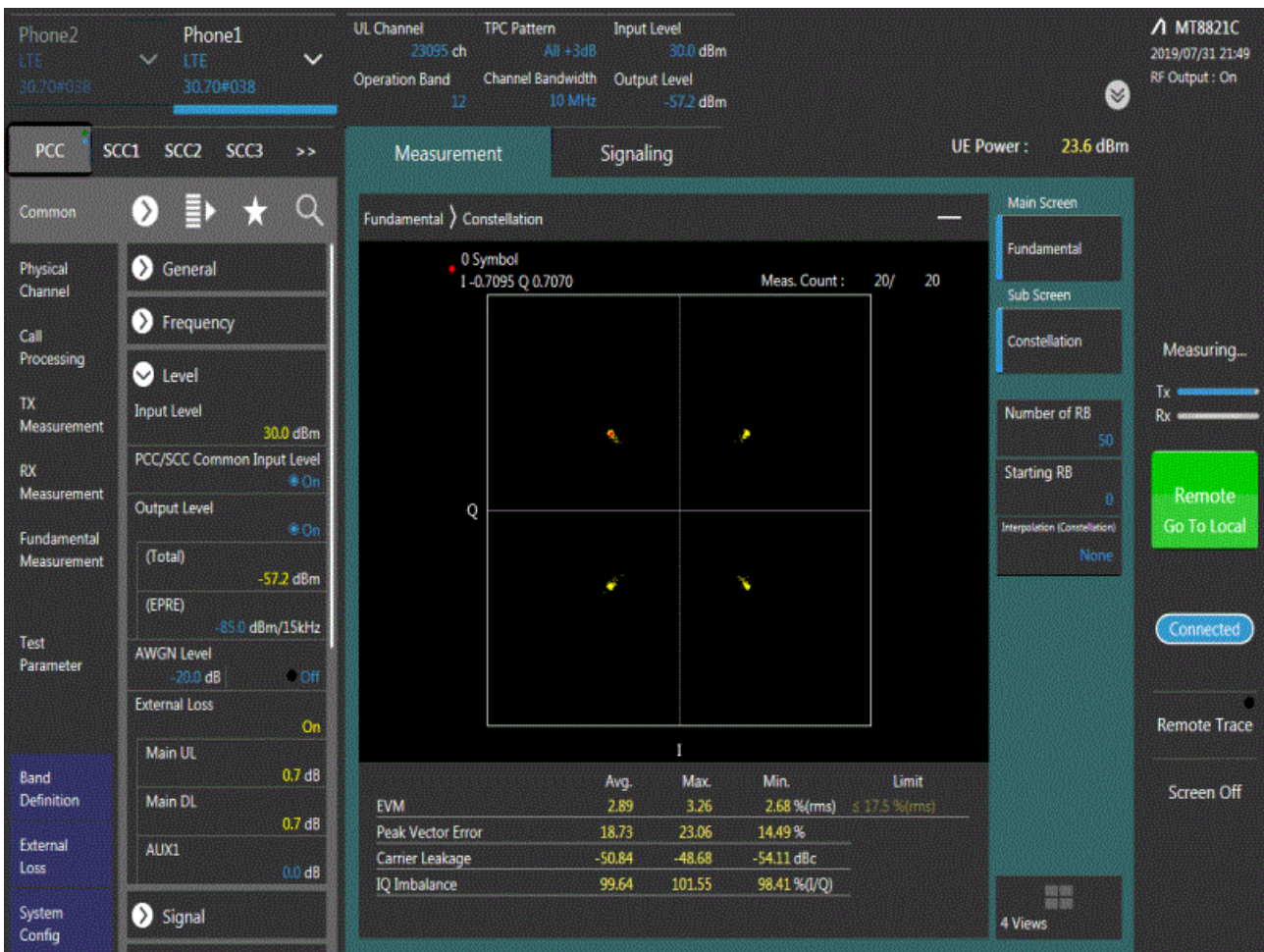
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3. Modulation Characteristics

3.1. Test Band = LTE Band 12

3.2. Test Mode = LTE /TM1 10MHz

3.2.1. Test Channel = MCH

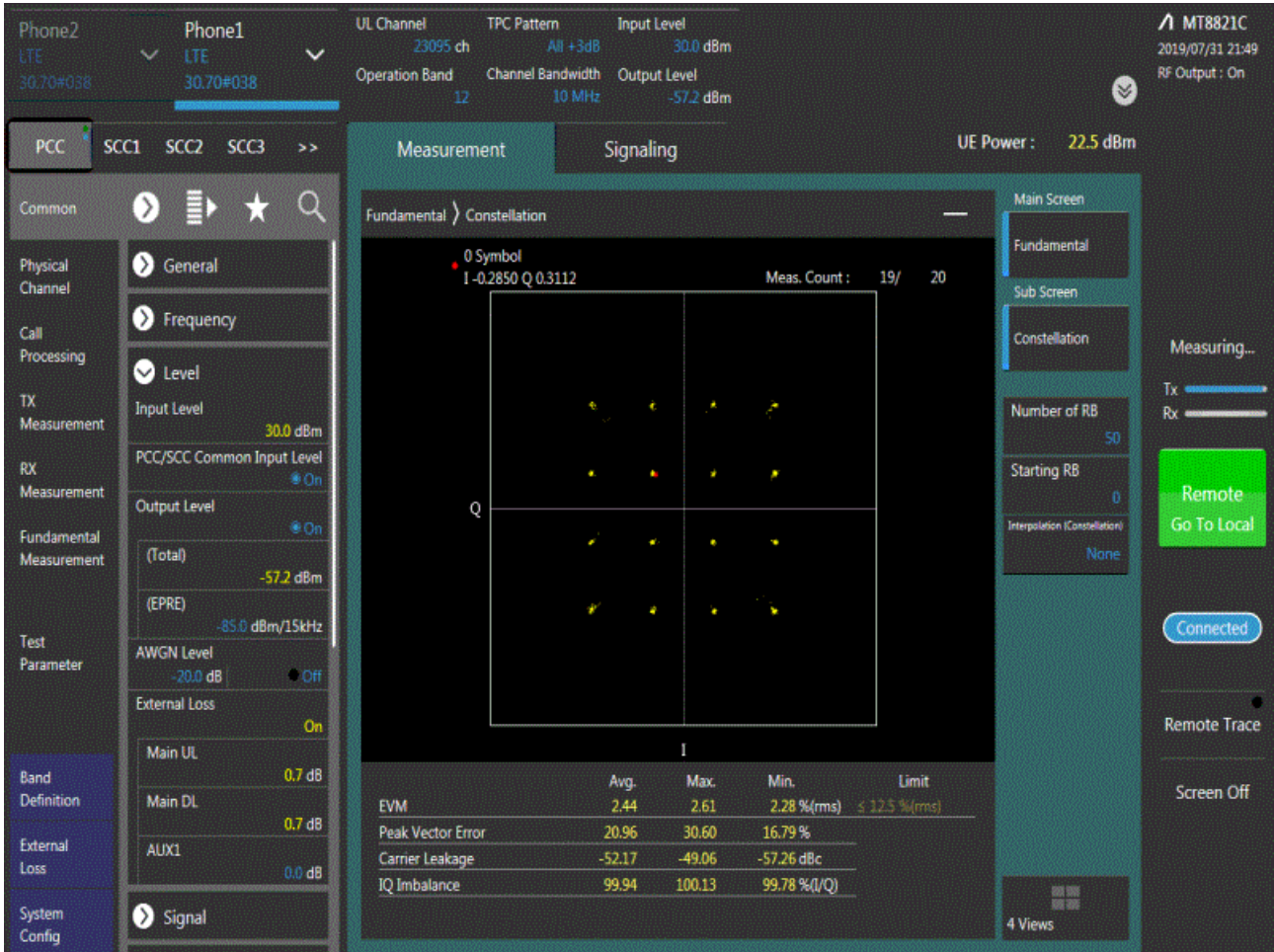


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3.3. Test Mode = LTE /TM2 10MHz

3.3.1. Test Channel = MCH



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4. 26dB Bandwidth and Occupied Bandwidth

4.1. Test Result

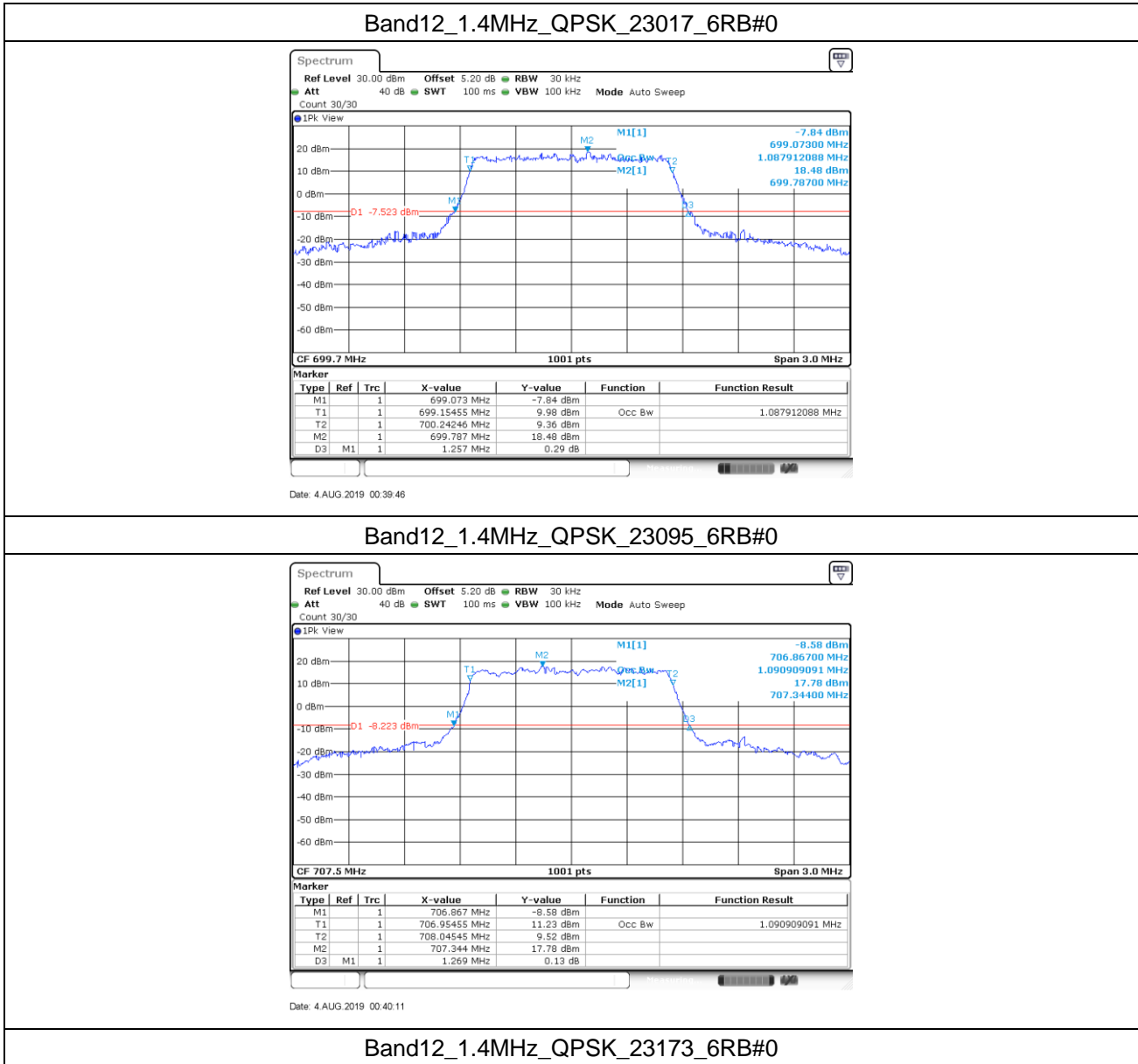
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	1.088	1.257	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.091	1.269	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.094	1.302	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.091	1.296	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.094	1.299	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.091	1.287	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.685	2.916	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.685	2.916	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.697	2.916	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.673	2.898	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.679	2.910	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.679	2.916	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.476	5.030	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.486	5.050	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.486	5.040	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.486	5.080	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.486	5.080	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.496	5.110	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.971	9.920	PASS
Band12	10MHz	QPSK	23095	50RB#0	8.951	9.880	PASS
Band12	10MHz	QPSK	23130	50RB#0	8.911	9.800	PASS
Band12	10MHz	16QAM	23060	50RB#0	8.951	9.860	PASS
Band12	10MHz	16QAM	23095	50RB#0	8.951	9.860	PASS
Band12	10MHz	16QAM	23130	50RB#0	8.911	9.820	PASS



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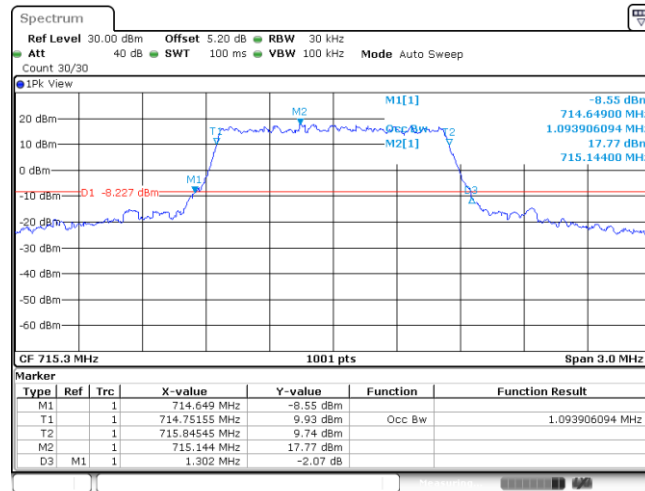
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4.2. Test Plots



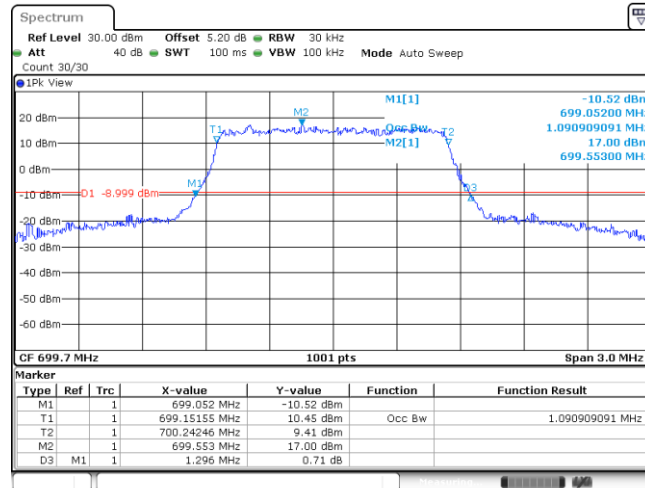
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Date: 4 AUG.2019 00:40:37

Band12_1.4MHz_16QAM_23017_6RB#

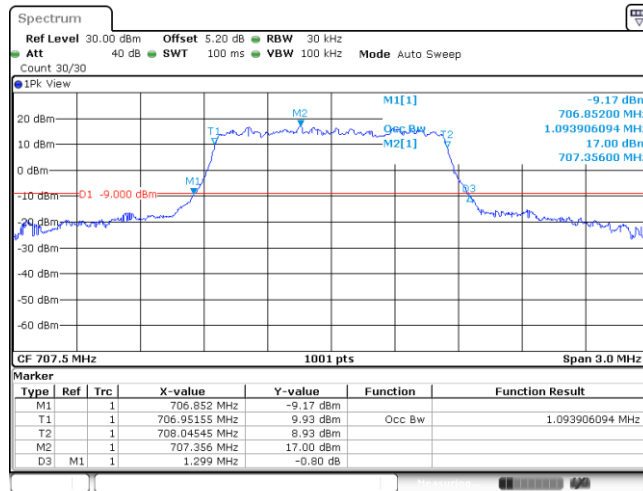


Date: 4 AUG.2019 00:39:58

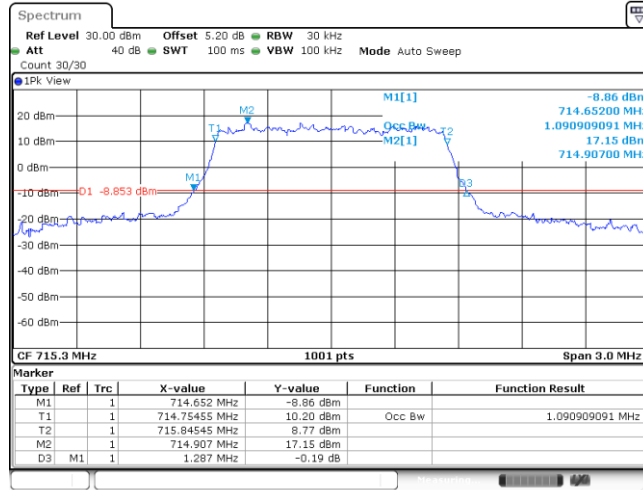
Band12_1.4MHz_16QAM_23095_6RB#



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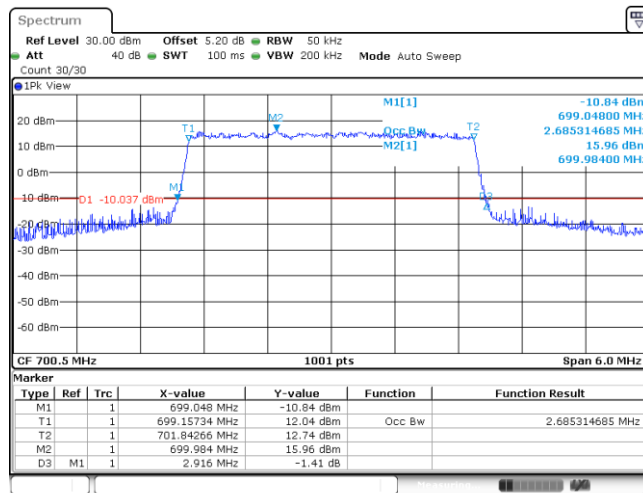
Band12_1.4MHz_16QAM_23173_6RB#0



Band12_3MHz_QPSK_23025_15RB#0

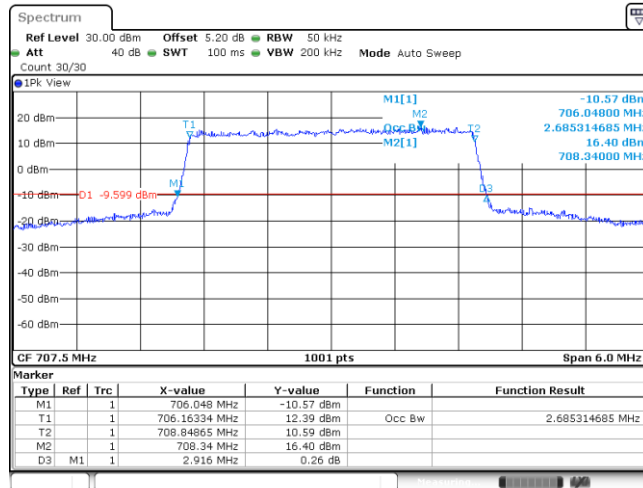


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Date: 4 AUG.2019 00:41:08

Band12_3MHz_QPSK_23095_15RB#0

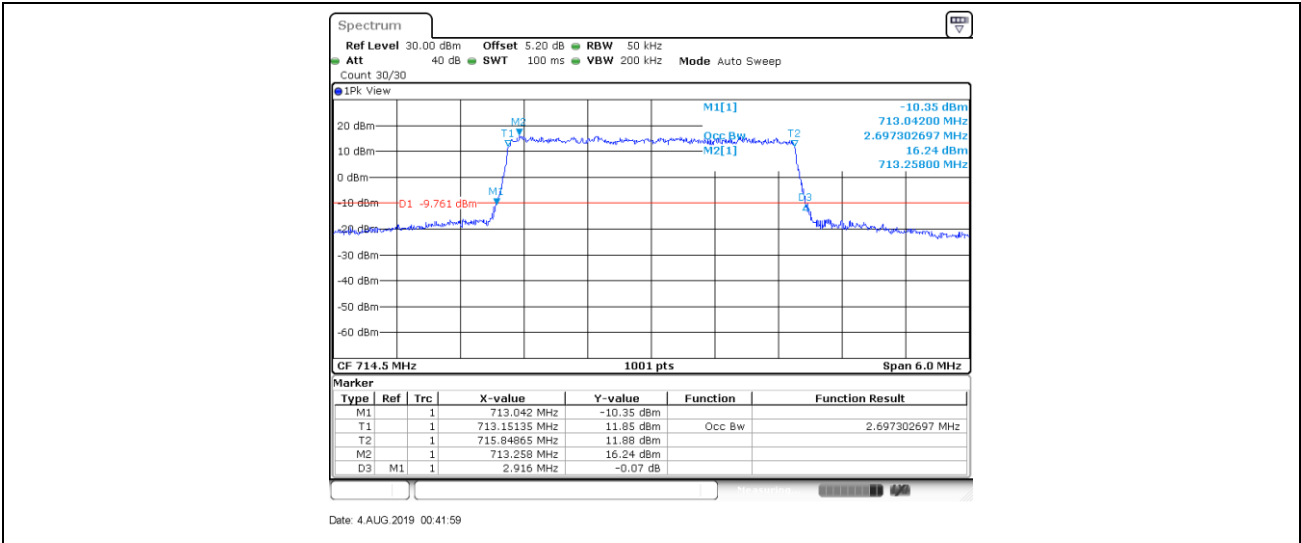


Date: 4 AUG.2019 00:41:34

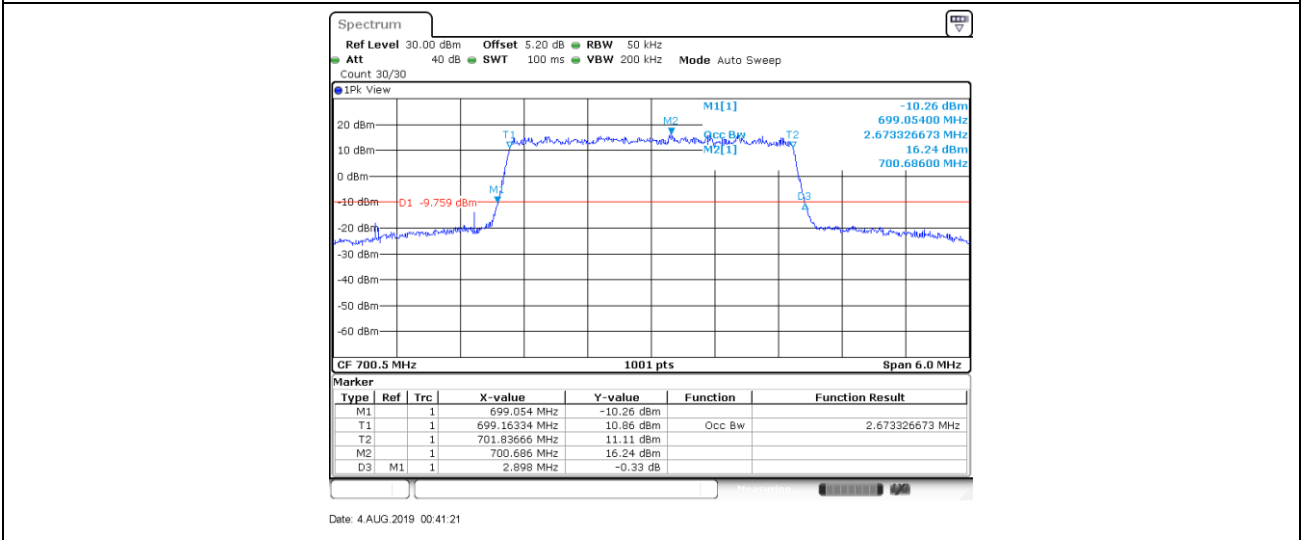
Band12_3MHz_QPSK_23165_15RB#0



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Band12_3MHz_16QAM_23025_15RB#

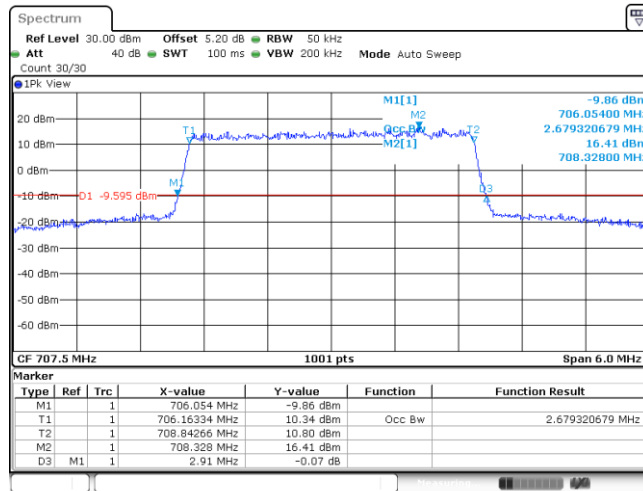


Band12_3MHz_16QAM_23095_15RB#



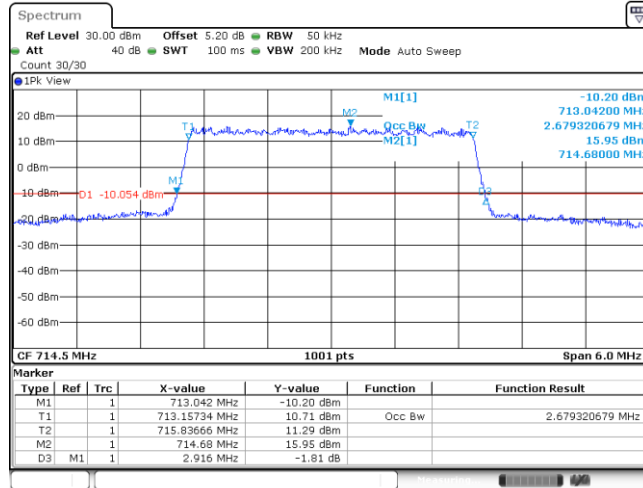
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Band12_3MHz_16QAM_23165_15RB#0

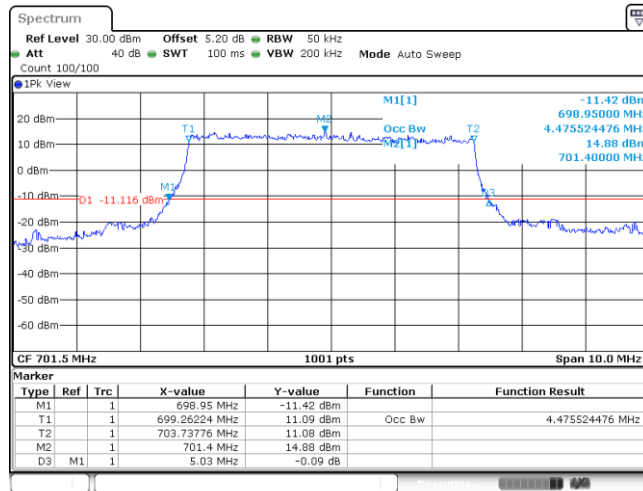


Date: 4 AUG.2019 00:42:12

Band12_5MHz_QPSK_23035_25RB#0

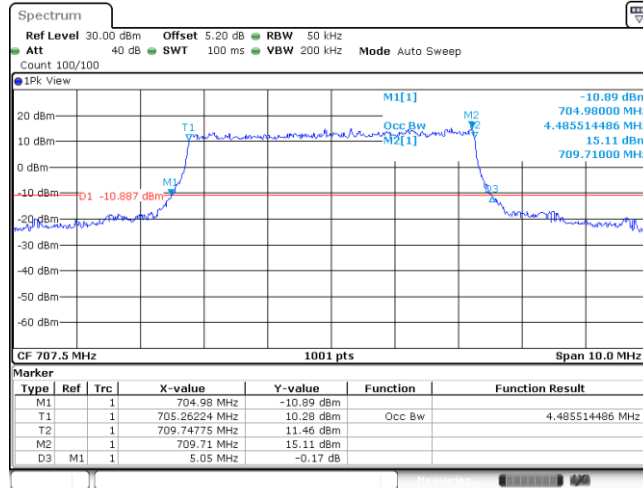


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Date: 4 AUG.2019 00:42:37

Band12_5MHz_QPSK_23095_25RB#0

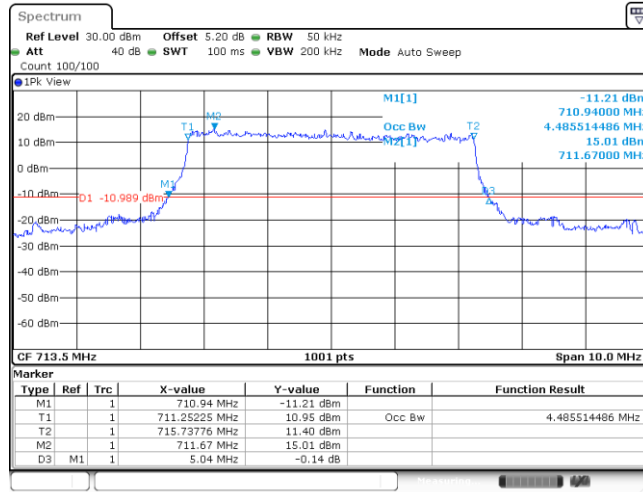


Date: 4 AUG.2019 00:43:17

Band12_5MHz_QPSK_23155_25RB#0

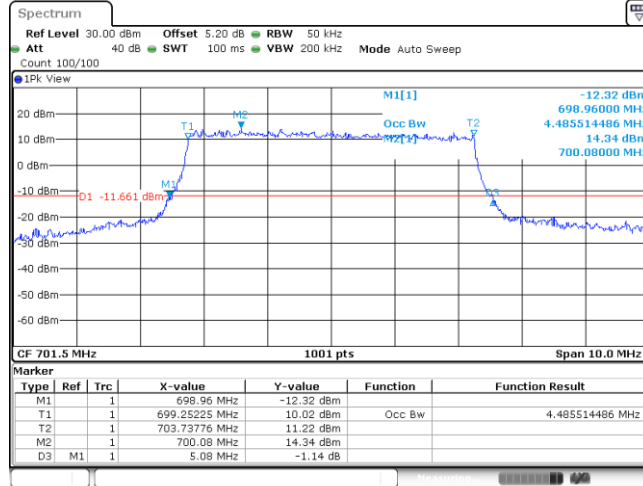


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Date: 4 AUG 2019 00:43:56

Band12_5MHz_16QAM_23035_25RB#0

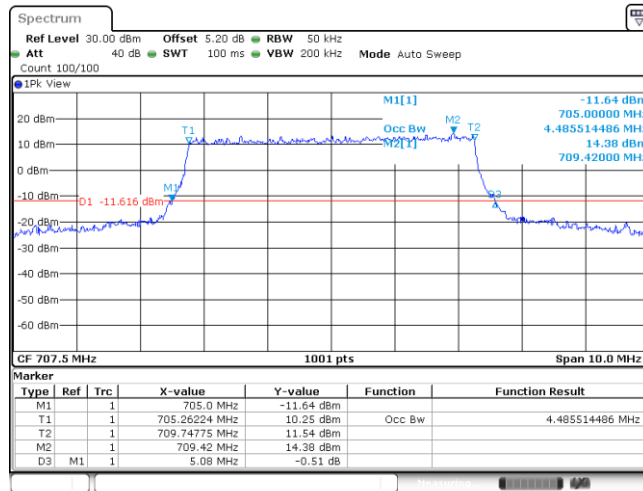


Date: 4 AUG 2019 00:42:57

Band12_5MHz_16QAM_23095_25RB#0

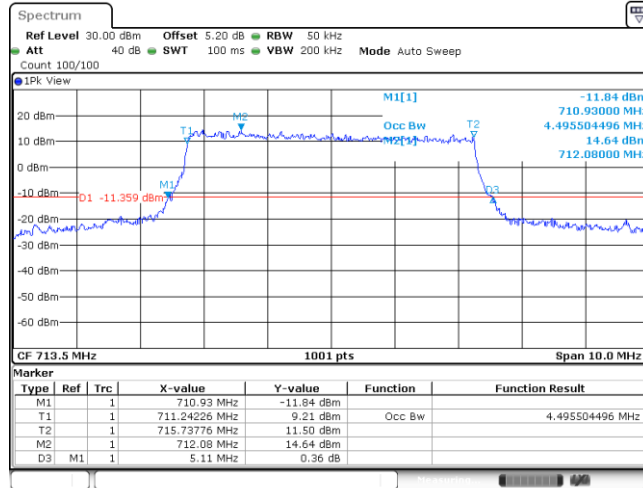


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Date: 4 AUG.2019 00:43:37

Band12_5MHz_16QAM_23155_25RB#

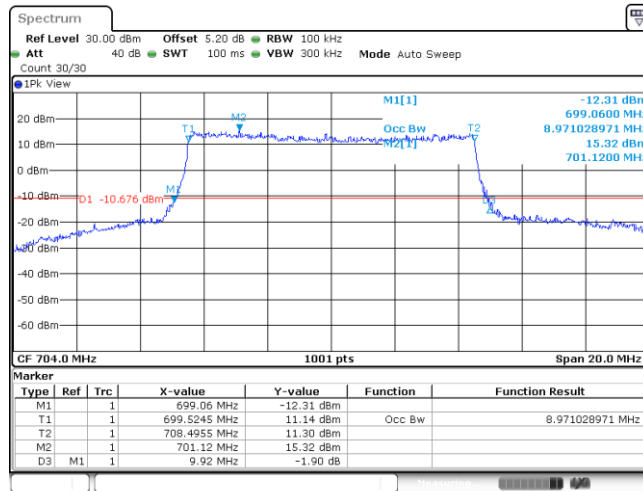


Date: 4 AUG.2019 00:44:16

Band12_10MHz_QPSK_23060_50RB#

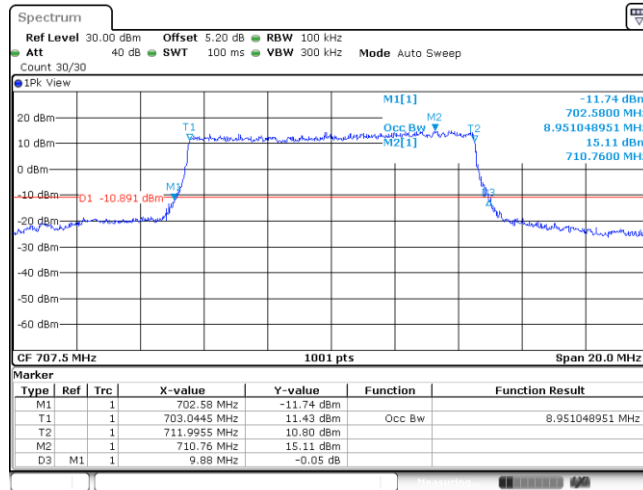


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Date: 4 AUG.2019 00:44:34

Band12_10MHz_QPSK_23095_50RB#0

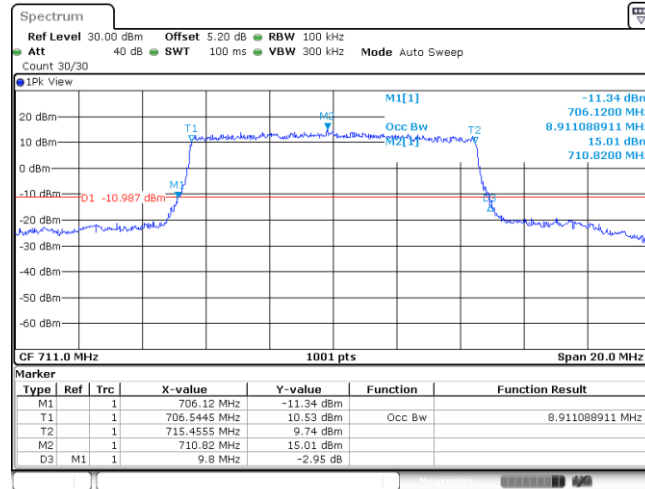


Date: 4 AUG.2019 00:45:00

Band12_10MHz_QPSK_23130_50RB#0

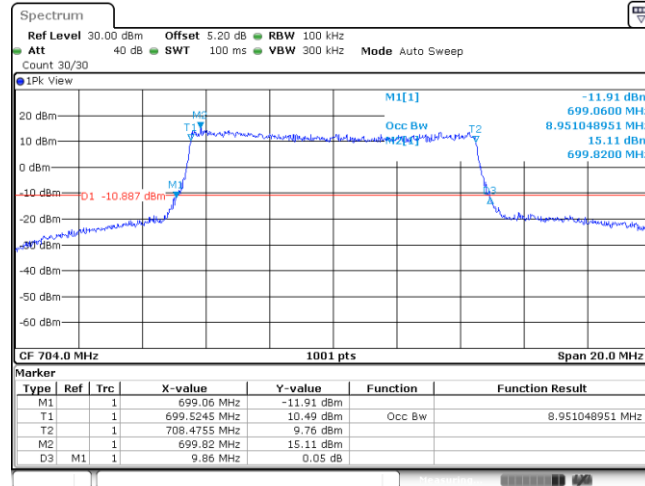


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Date: 4 AUG.2019 00:45:26

Band12_10MHz_16QAM_23060_50RB#0

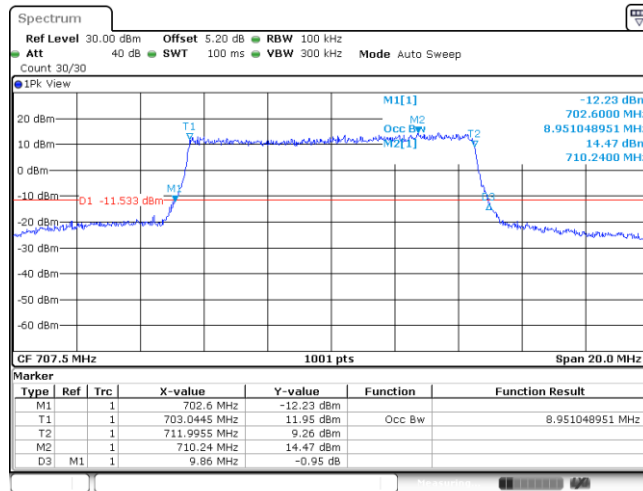


Date: 4 AUG.2019 00:44:47

Band12_10MHz_16QAM_23095_50RB#0

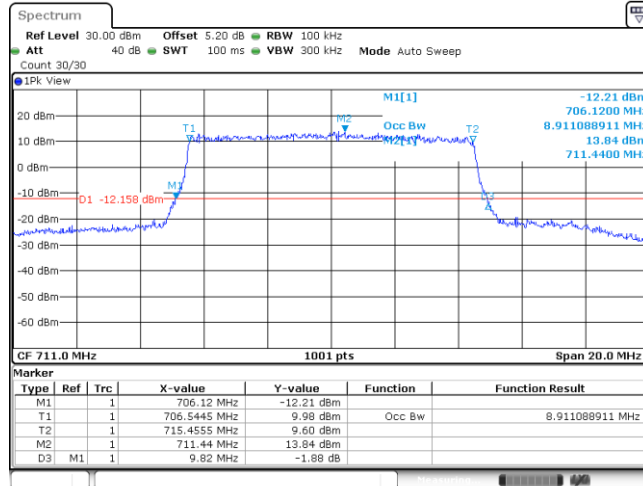


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Date: 4 AUG.2019 00:45:13

Band12_10MHz_16QAM_23130_50RB#0



Date: 4 AUG.2019 00:45:38

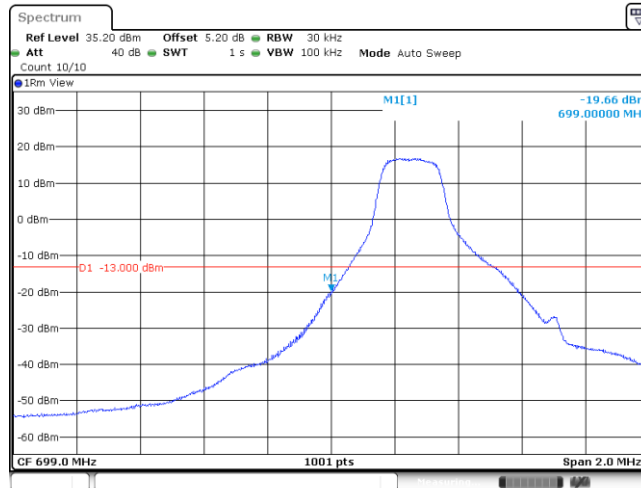


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5. Band Edge Compliance

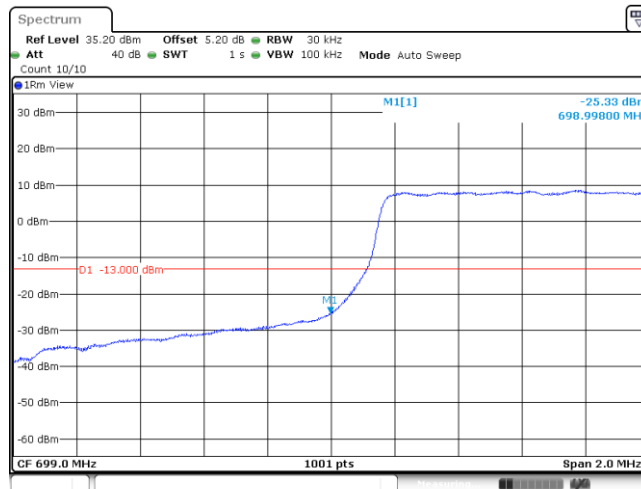
5.1. Test Plots

Band12_1.4MHz_QPSK_23017_1RB#0



Date: 4.AUG.2019 00:46:04

Band12_1.4MHz_QPSK_23017_6RB#0

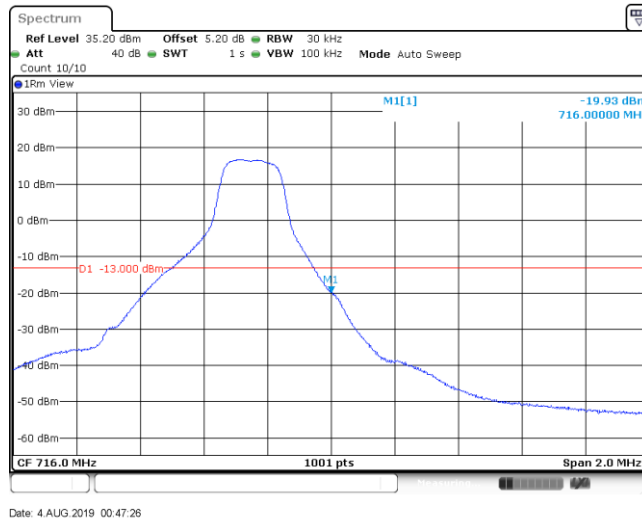


Date: 4.AUG.2019 00:46:43

Band12_1.4MHz_QPSK_23173_1RB#5

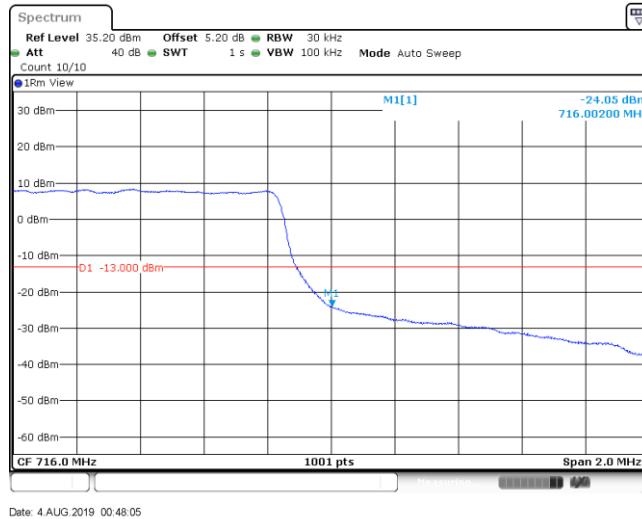


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Date: 4 AUG 2019 00:47:26

Band12_1.4MHz_QPSK_23173_6RB#0

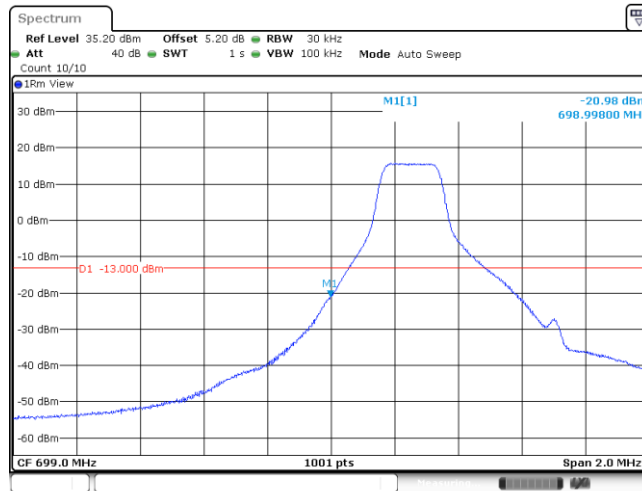


Date: 4 AUG 2019 00:48:05

Band12_1.4MHz_16QAM_23017_1RB#0

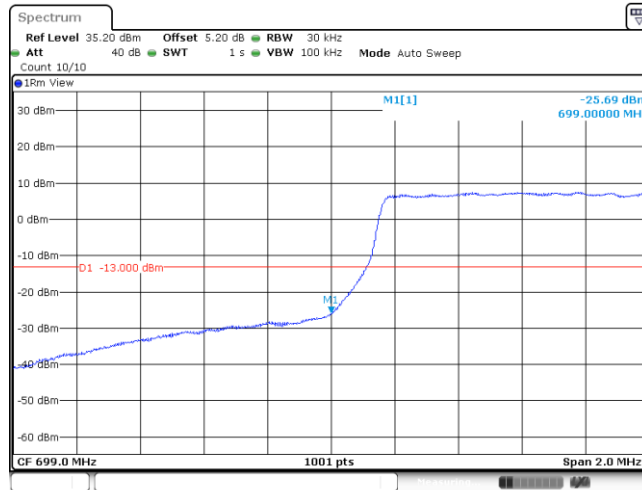


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Date: 4 AUG 2019 00:46:23

Band12_1.4MHz_16QAM_23017_6RB#0

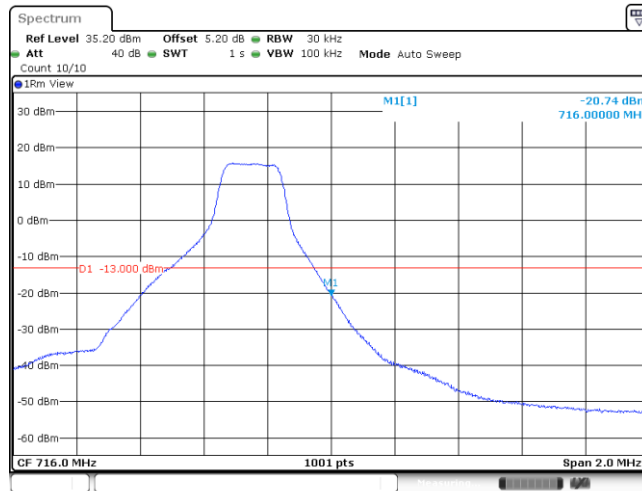


Date: 4 AUG 2019 00:47:03

Band12_1.4MHz_16QAM_23173_1RB#5

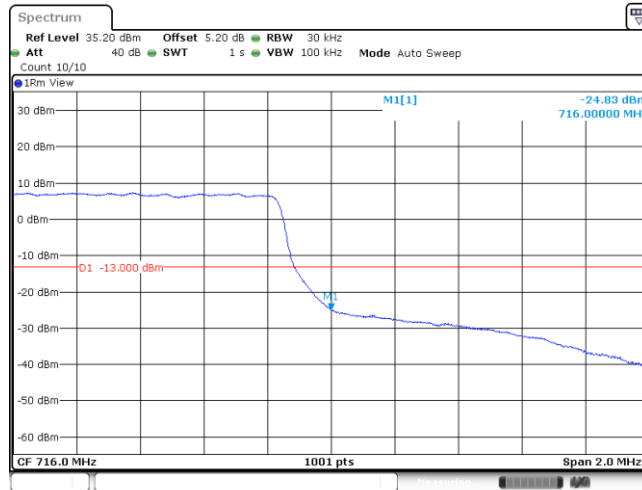


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Date: 4 AUG 2019 00:47:46

Band12_1.4MHz_16QAM_23173_6RB#0

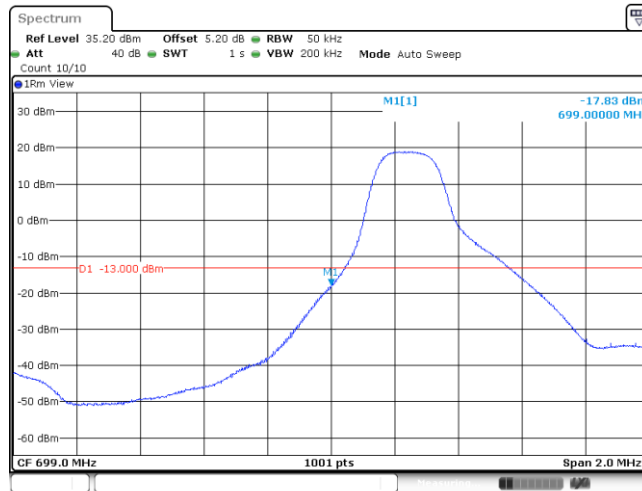


Date: 4 AUG 2019 00:48:25

Band12_3MHz_QPSK_23025_1RB#0

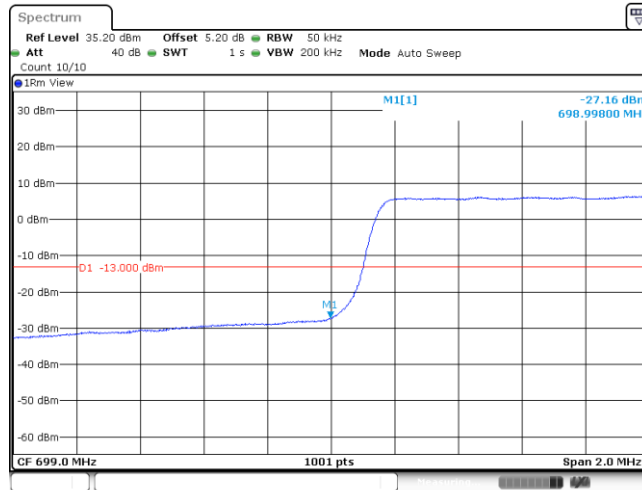


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Date: 4 AUG 2019 00:48:51

Band12_3MHz_QPSK_23025_15RB#0

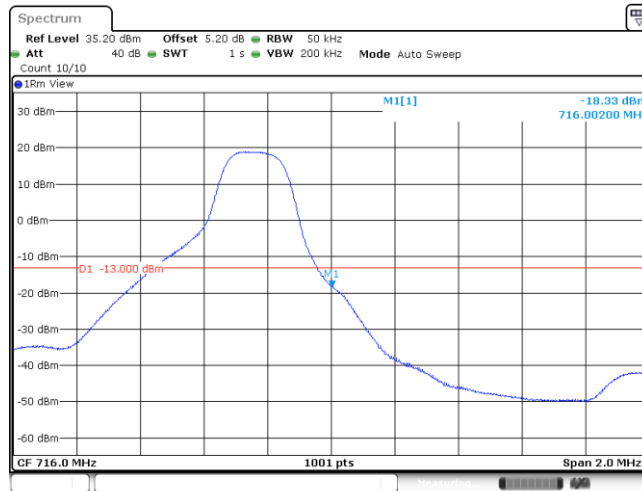


Date: 4 AUG 2019 00:49:30

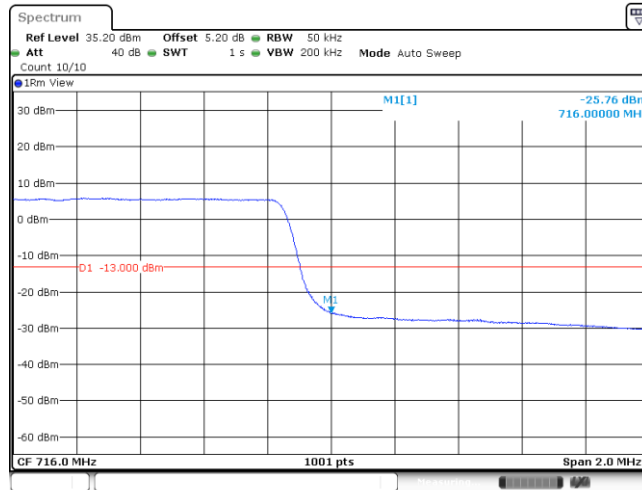
Band12_3MHz_QPSK_23165_1RB#14



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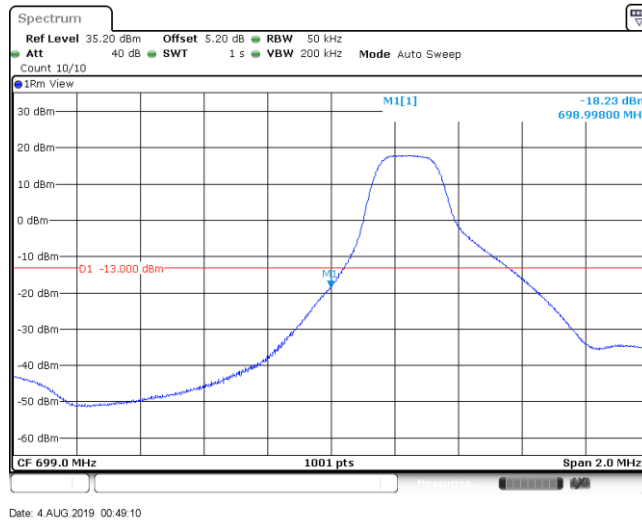
Band12_3MHz_QPSK_23165_15RB#0



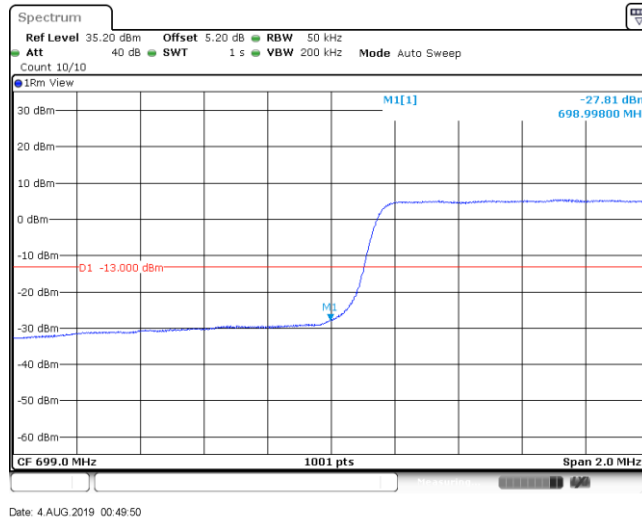
Band12_3MHz_16QAM_23025_1RB#0



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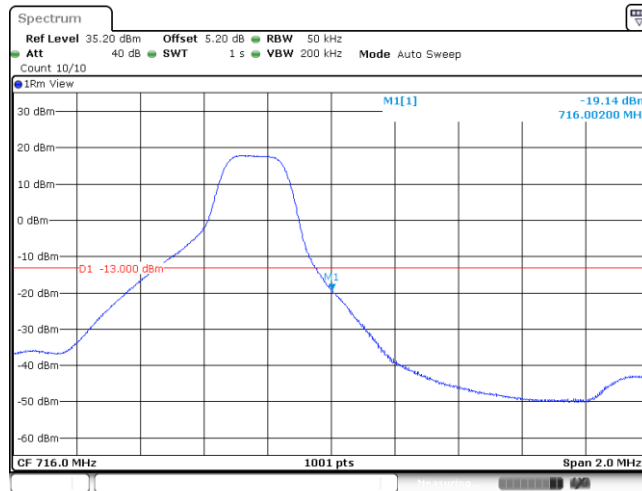
Band12_3MHz_16QAM_23025_15RB#0



Band12_3MHz_16QAM_23165_1RB#14

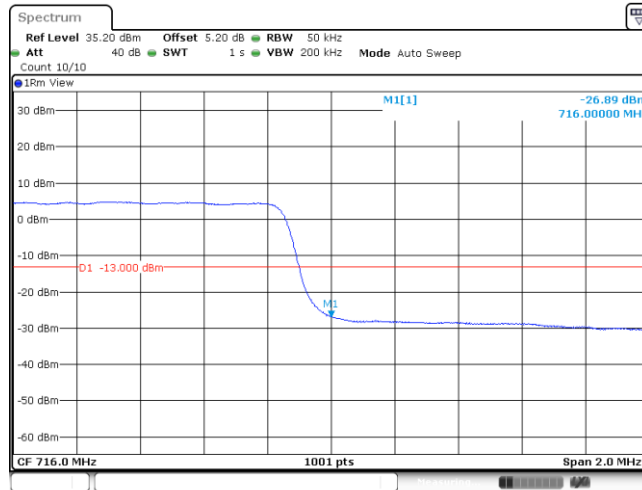


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Date: 4 AUG 2019 00:50:33

Band12_3MHz_16QAM_23165_15RB#0

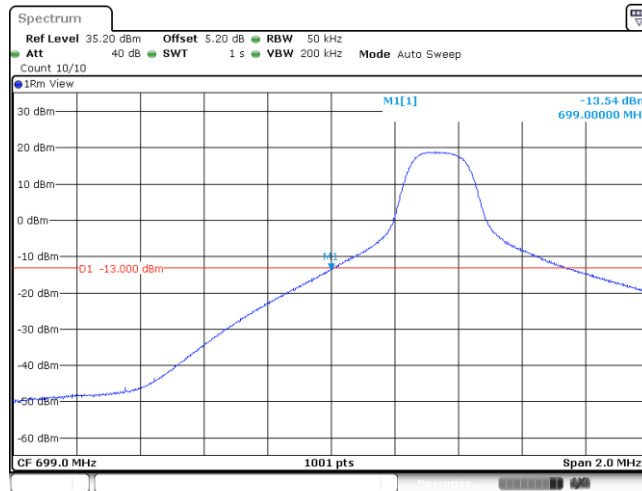


Date: 4 AUG 2019 00:51:12

Band12_5MHz_QPSK_23035_1RB#0

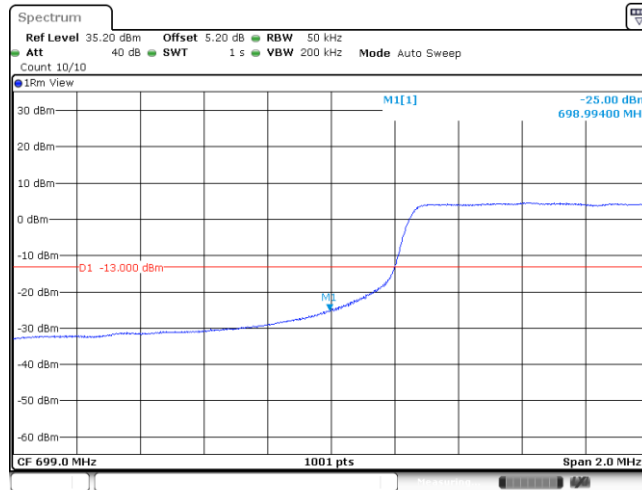


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Date: 4 AUG 2019 00:51:37

Band12_5MHz_QPSK_23035_25RB#0

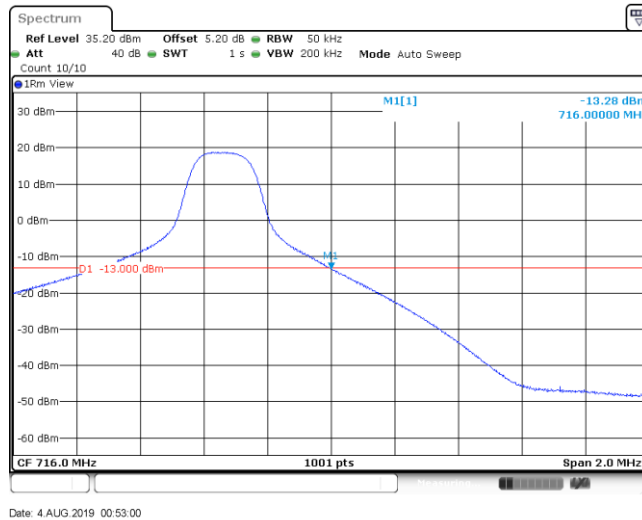


Date: 4 AUG 2019 00:52:17

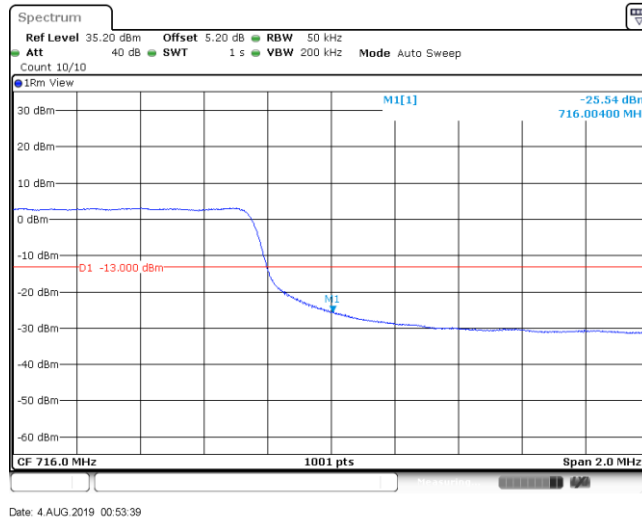
Band12_5MHz_QPSK_23155_1RB#24



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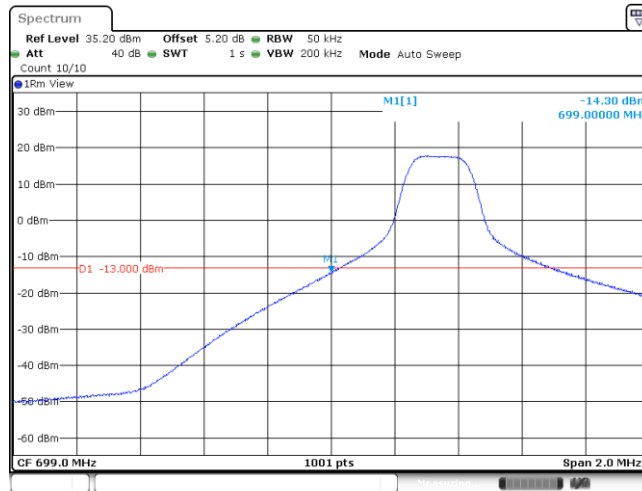
Band12_5MHz_QPSK_23155_25RB#0



Band12_5MHz_16QAM_23035_1RB#0

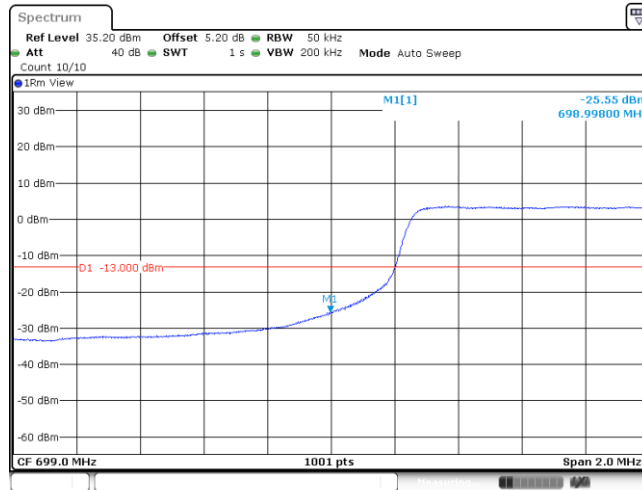


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Date: 4 AUG 2019 00:51:57

Band12_5MHz_16QAM_23035_25RB#0

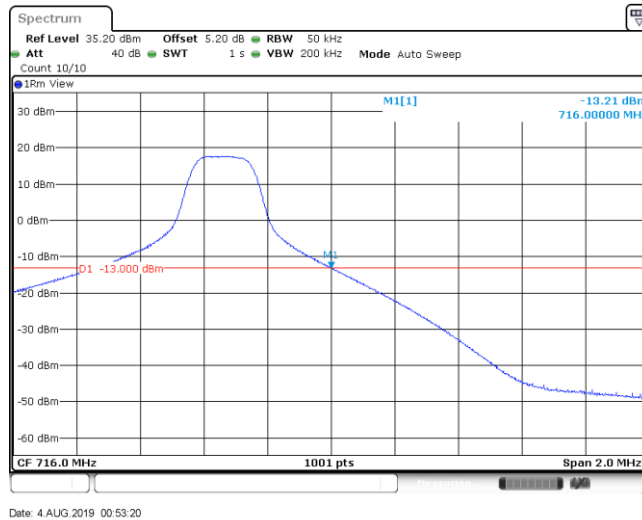


Date: 4 AUG 2019 00:52:38

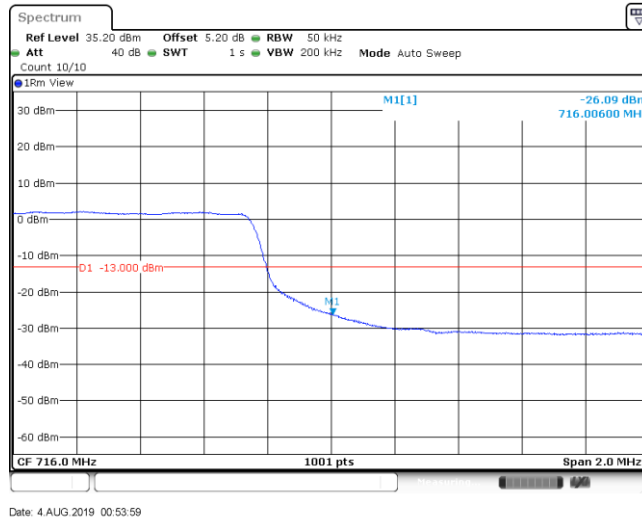
Band12_5MHz_16QAM_23155_1RB#24



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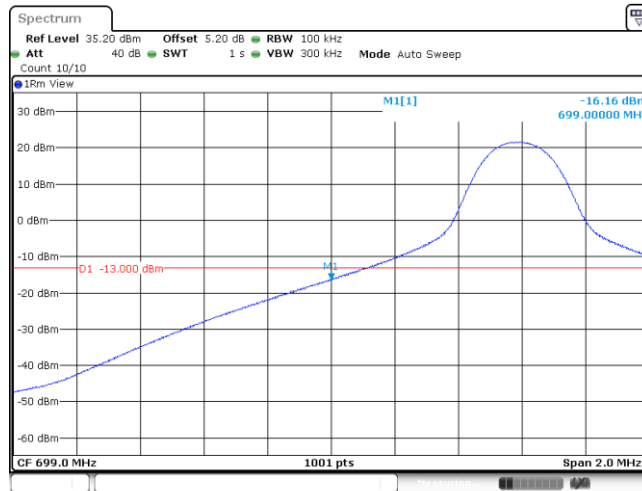
Band12_5MHz_16QAM_23155_25RB#0



Band12_10MHz_QPSK_23060_1RB#0

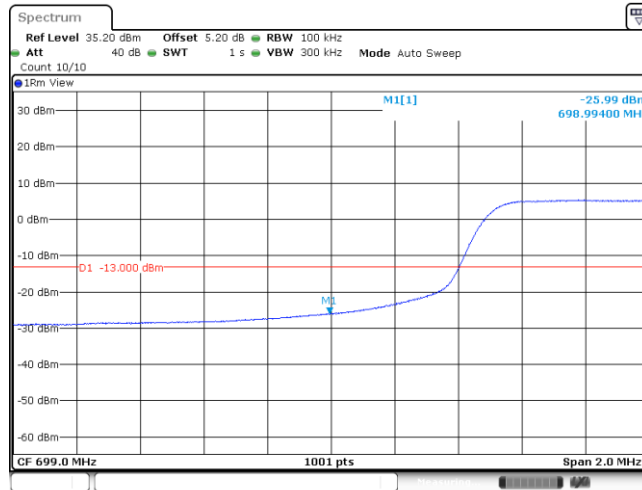


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Date: 4 AUG 2019 00:54:25

Band12_10MHz_QPSK_23060_50RB#0

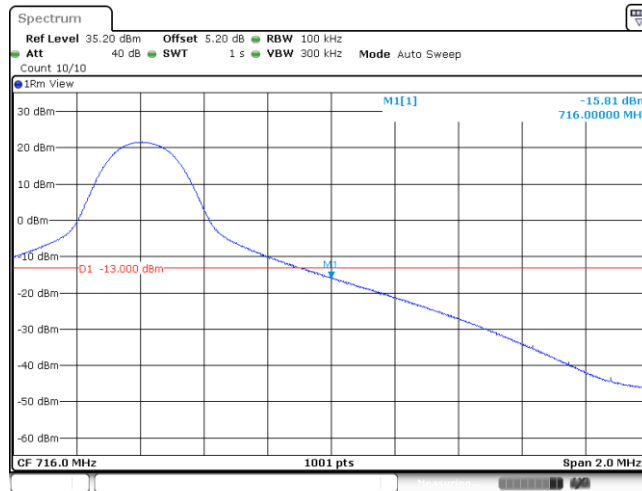


Date: 4 AUG 2019 00:55:04

Band12_10MHz_QPSK_23130_1RB#49

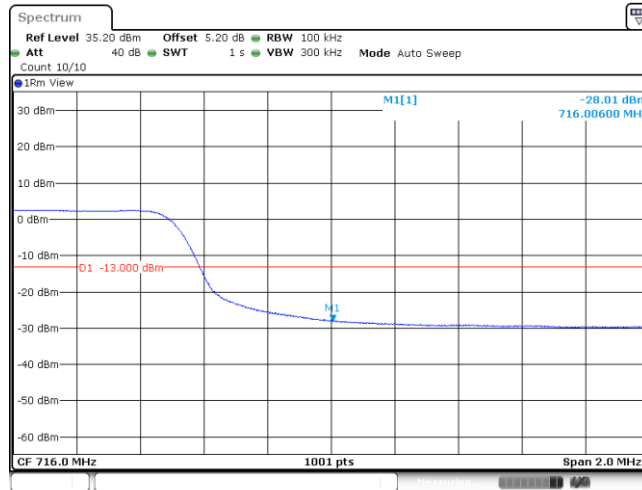


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Date: 4 AUG 2019 00:55:47

Band12_10MHz_QPSK_23130_50RB#0

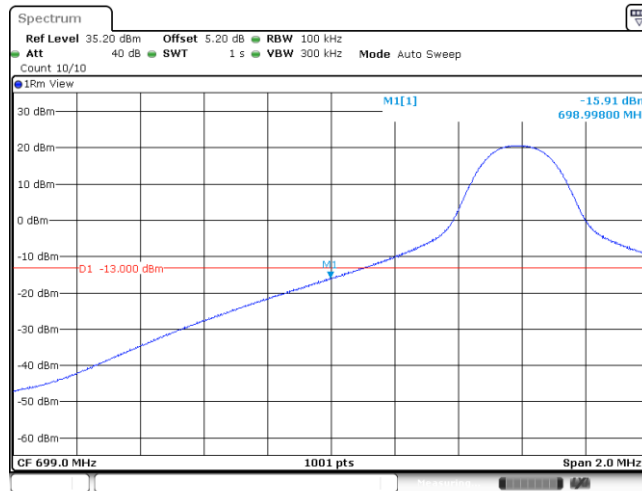


Date: 4 AUG 2019 00:56:27

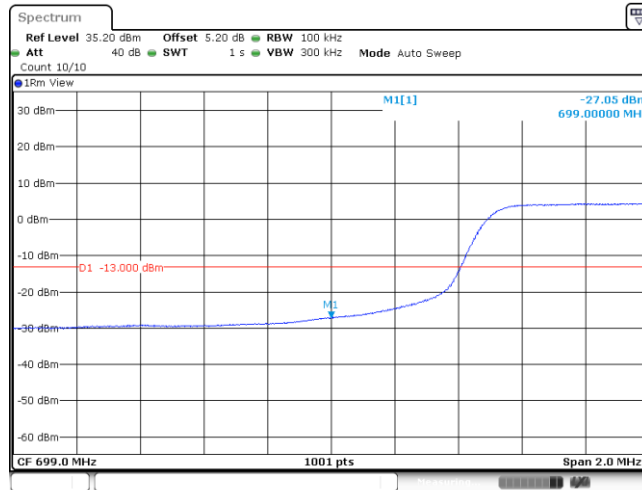
Band12_10MHz_16QAM_23060_1RB#0



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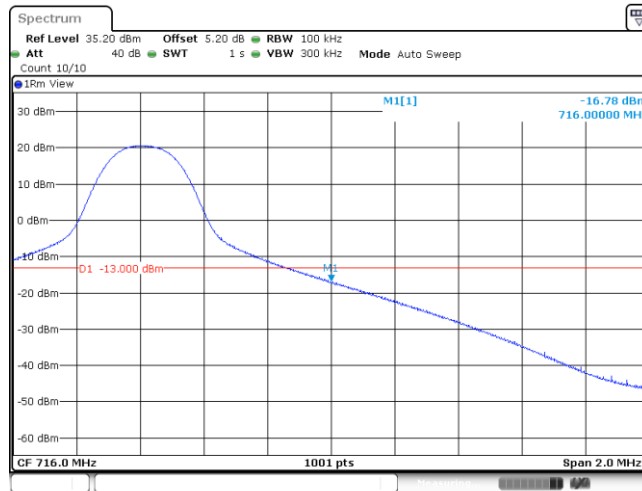
Band12_10MHz_16QAM_23060_50RB#0



Band12_10MHz_16QAM_23130_1RB#49

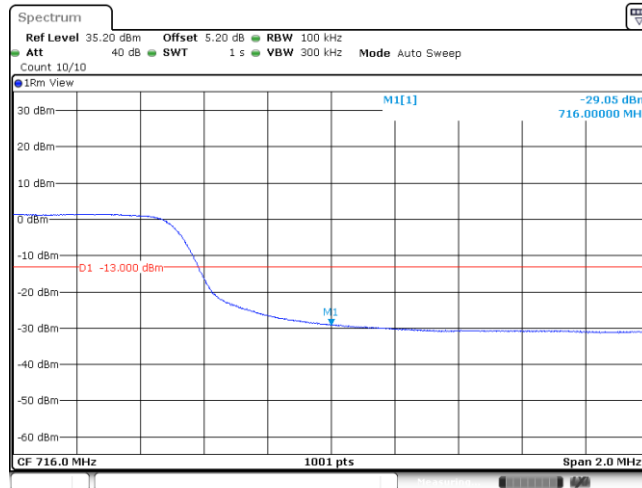


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Date: 4.AUG.2019 00:56:07

Band12_10MHz_16QAM_23130_50RB#0



Date: 4.AUG.2019 00:56:46



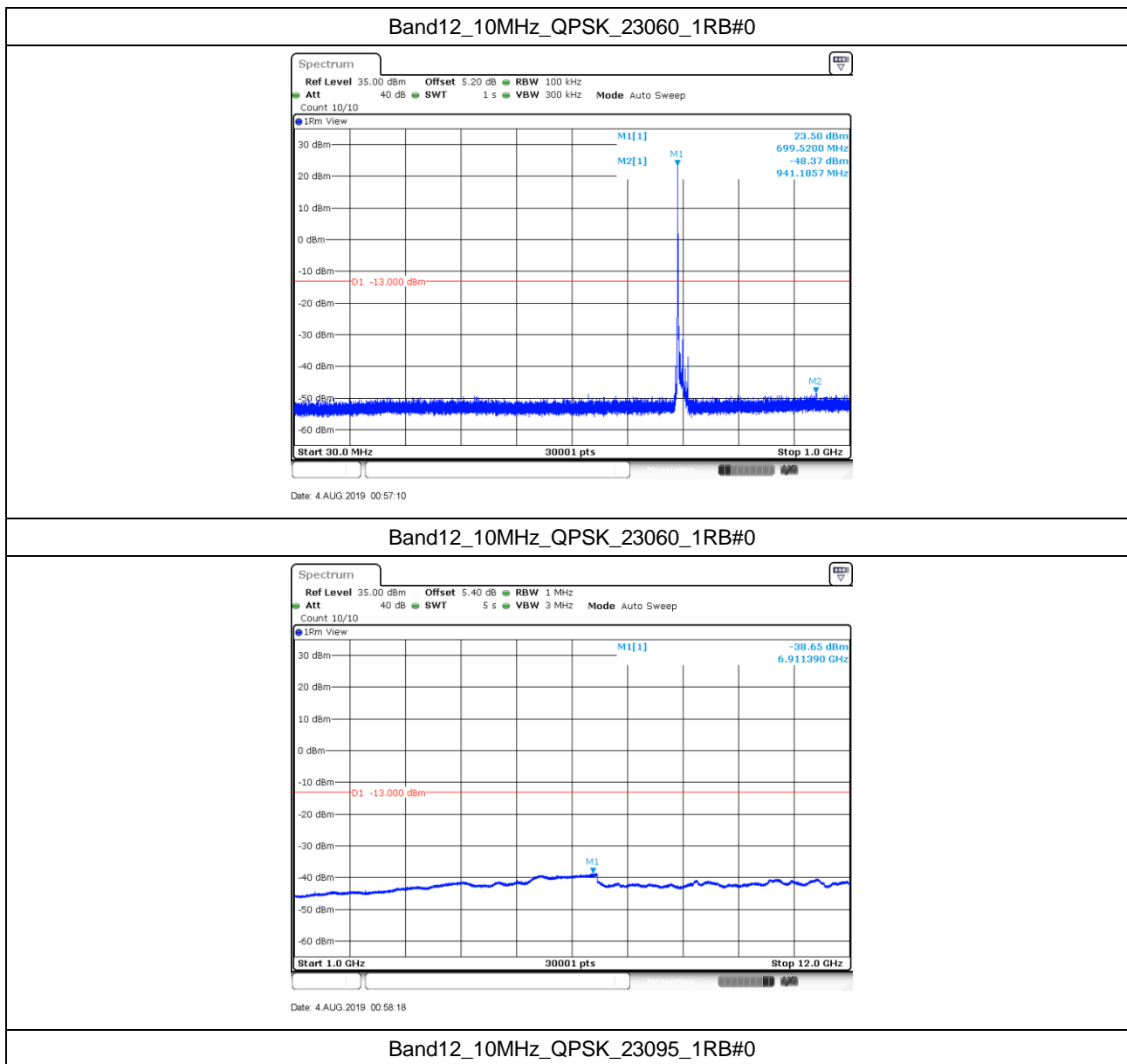
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6. Spurious Emission at Antenna Terminal

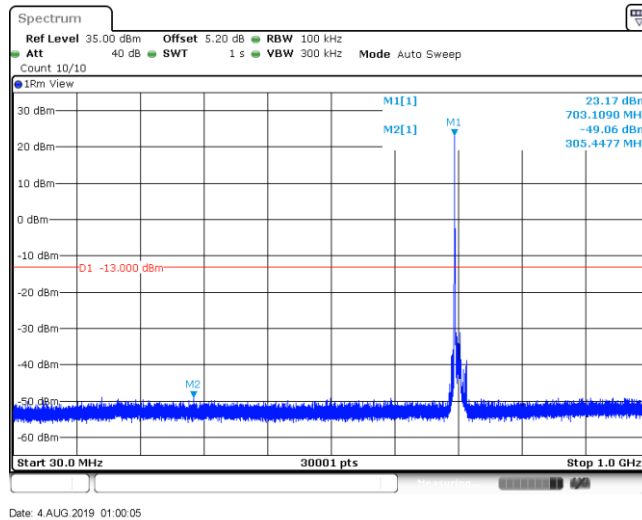
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =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

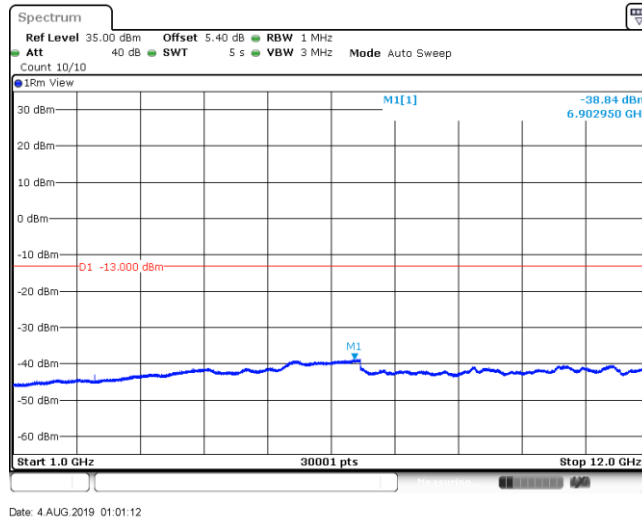
6.1. Test Plots



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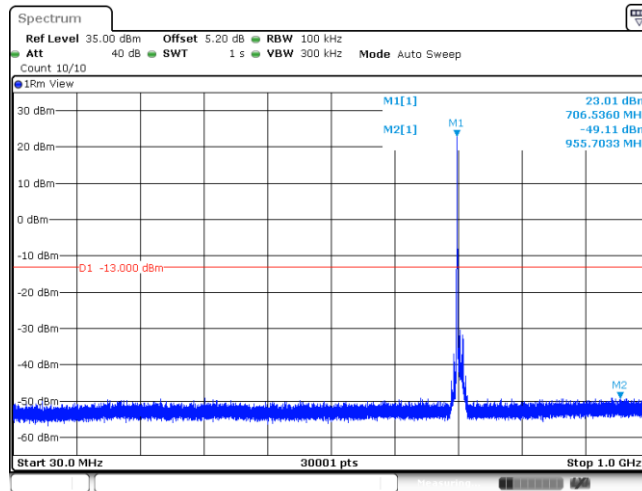
Band12_10MHz_QPSK_23095_1RB#0



Band12_10MHz_QPSK_23130_1RB#0

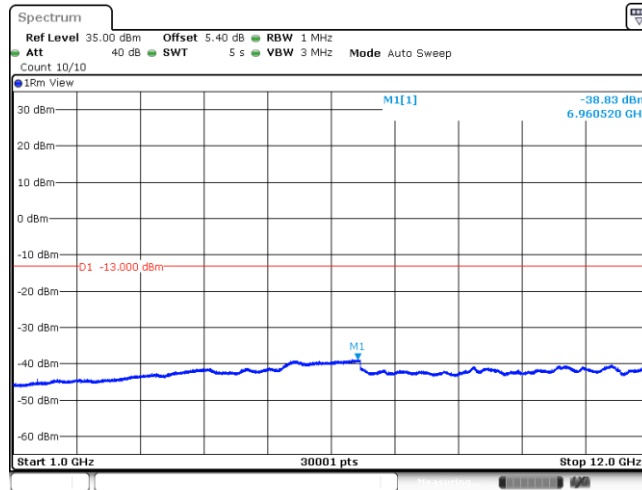


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Date: 4 AUG 2019 01:02:59

Band12_10MHz_QPSK_23130_1RB#0



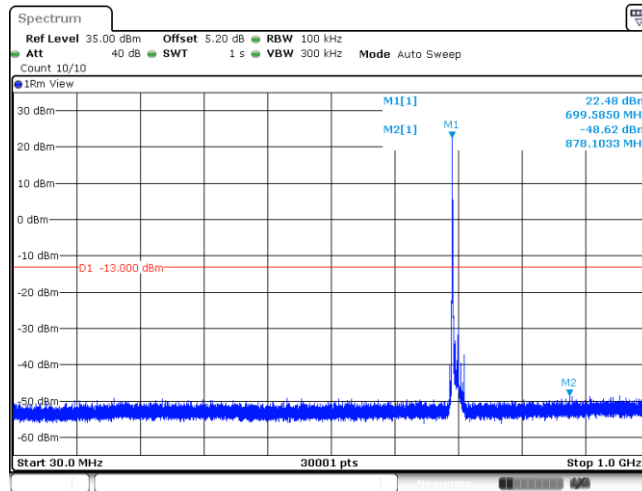
Date: 4 AUG 2019 01:04:06

Band12_10MHz_16QAM_23060_1RB#0



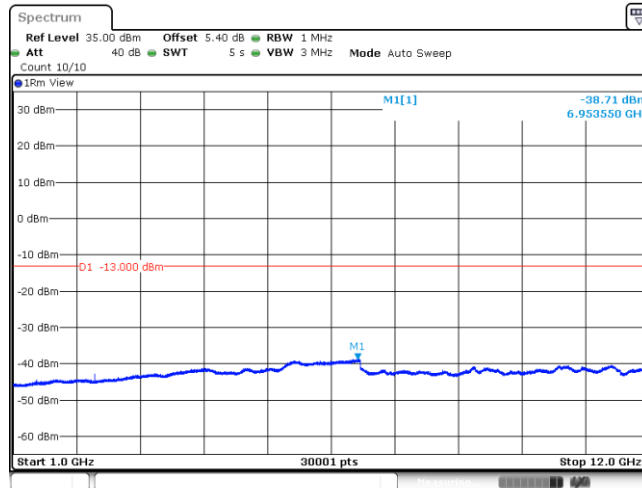
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Date: 4 AUG 2019 00:58:37

Band12_10MHz_16QAM_23060_1RB#0

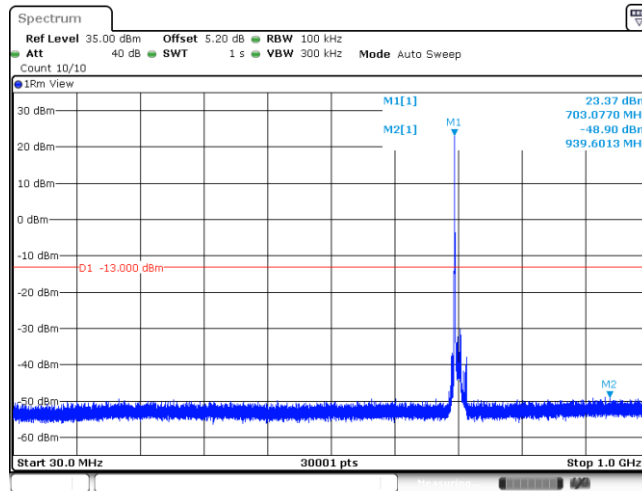


Date: 4 AUG 2019 00:58:45

Band12_10MHz_16QAM_23095_1RB#0

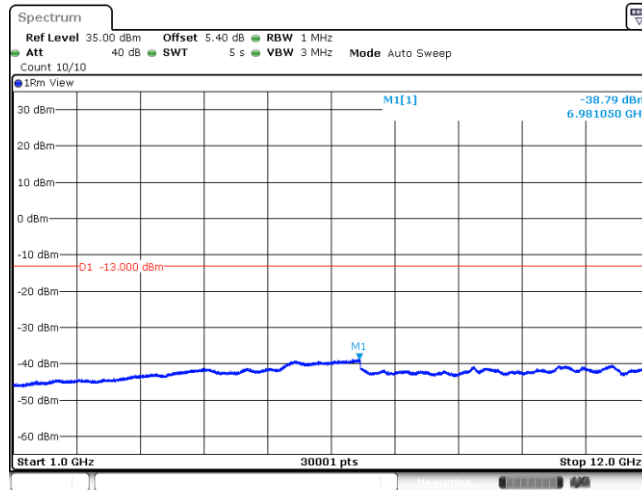


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Date: 4.AUG.2019 01:01:31

Band12_10MHz_16QAM_23095_1RB#0

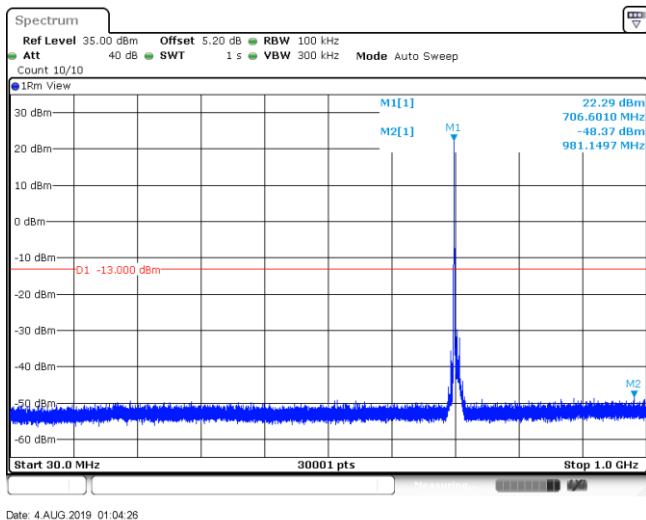


Date: 4.AUG.2019 01:02:39

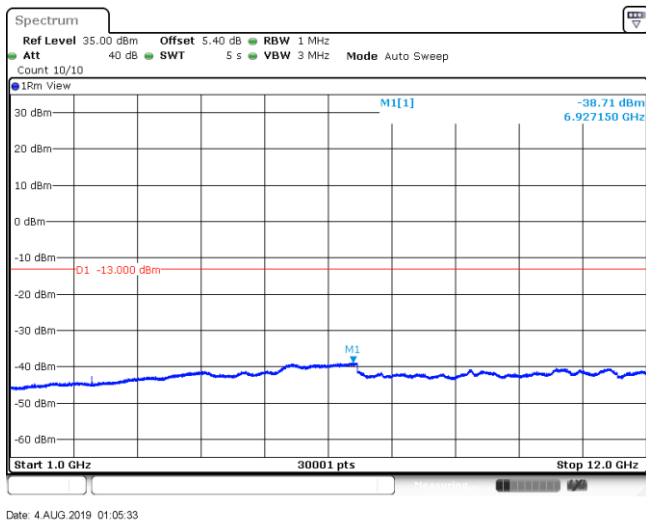
Band12_10MHz_16QAM_23130_1RB#0



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Band12_10MHz_16QAM_23130_1RB#0



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7. Field Strength of Spurious Radiation

7.1. Test Band = LTE Band 12

7.1.1. Test Mode = LTE/TM1

7.1.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
112.6481	-64.66	-13.00	51.66	Vertical
590.9305	-65.26	-13.00	52.26	Vertical
1399.2799	-47.79	-13.00	34.79	Vertical
2941.9884	-56.95	-13.00	43.95	Vertical
14530.0612	-42.98	-13.00	29.98	Vertical
17998.8000	-32.35	-13.00	19.35	Vertical
40.8645	-64.67	-13.00	51.67	Horizontal
229.9270	-67.53	-13.00	54.53	Horizontal
1399.2799	-54.05	-13.00	41.05	Horizontal
2943.9888	-56.90	-13.00	43.90	Horizontal
16398.5359	-37.72	-13.00	24.72	Horizontal
17981.9993	-37.35	-13.00	24.35	Horizontal

7.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
112.0661	-65.17	-13.00	52.17	Vertical
593.7922	-64.50	-13.00	51.50	Vertical
1406.0812	-52.51	-13.00	39.51	Vertical
2998.7998	-56.40	-13.00	43.40	Vertical
14509.0604	-42.41	-13.00	29.41	Vertical
17894.3958	-34.88	-13.00	21.88	Vertical
41.3496	-64.91	-13.00	51.91	Horizontal
555.8148	-65.29	-13.00	52.29	Horizontal
987.0014	-57.76	-13.00	44.76	Horizontal
1406.0812	-57.87	-13.00	44.87	Horizontal
16396.1358	-38.33	-13.00	25.33	Horizontal
17984.3994	-37.43	-13.00	24.43	Horizontal



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7.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
108.5254	-65.02	-13.00	52.02	Vertical
585.6438	-64.02	-13.00	51.02	Vertical
1413.2827	-53.84	-13.00	40.84	Vertical
3000.0000	-56.13	-13.00	43.13	Vertical
14698.0679	-42.42	-13.00	29.42	Vertical
17990.3996	-32.21	-13.00	19.21	Vertical
41.8346	-64.64	-13.00	51.64	Horizontal
573.3242	-64.37	-13.00	51.37	Horizontal
993.1612	-56.74	-13.00	43.74	Horizontal
2695.5391	-56.11	-13.00	43.11	Horizontal
16395.5358	-38.27	-13.00	25.27	Horizontal
17983.1993	-37.29	-13.00	24.29	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 had been displayed.



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8. Frequency Stability

8.1. Frequency Vs Voltage

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	-1.20	-0.001705	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	VN	NT	-2.10	-0.002983	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	VH	NT	-3.80	-0.005398	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VL	NT	-5.80	-0.008198	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VN	NT	-2.60	-0.003675	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VH	NT	-5.50	-0.007774	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VL	NT	-4.60	-0.006470	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VN	NT	-5.80	-0.008158	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VH	NT	-6.40	-0.009001	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VL	NT	-4.00	-0.005682	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VN	NT	0.90	0.001278	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VH	NT	-4.50	-0.006392	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VL	NT	-1.00	-0.001413	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VN	NT	-4.50	-0.006360	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VH	NT	-5.10	-0.007208	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VL	NT	-8.10	-0.011392	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VN	NT	-8.80	-0.012377	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VH	NT	-4.20	-0.005907	±2.5	PASS

8.2. Frequency Vs Temperature

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	-5.30	-0.007528	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	-20	-4.70	-0.006676	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	0	-5.70	-0.008097	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	10	-8.60	-0.012216	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	20	-5.10	-0.007244	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	30	-2.40	-0.003409	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	40	-1.90	-0.002699	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	50	-4.90	-0.006960	±2.5	PASS



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Band12	10MHz	QPSK	23095	50RB#0	NV	-30	-6.10	-0.008622	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-20	-5.90	-0.008339	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	0	-6.00	-0.008481	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	10	-9.80	-0.013852	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	20	-4.90	-0.006926	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	30	-6.40	-0.009046	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	40	-2.30	-0.003251	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	50	-6.60	-0.009329	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-30	-2.90	-0.004079	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-20	-1.90	-0.002672	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	0	-0.40	-0.000563	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	10	-3.50	-0.004923	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	20	-7.00	-0.009845	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	30	-6.50	-0.009142	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	40	-8.10	-0.011392	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	50	-7.60	-0.010689	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	-30	-5.20	-0.007386	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	-20	-4.40	-0.006250	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	0	-8.20	-0.011648	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	10	-8.00	-0.011364	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	20	-7.30	-0.010369	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	30	-11.10	-0.015767	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	40	-7.70	-0.010938	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	50	-7.90	-0.011222	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	-30	-5.40	-0.007633	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	-20	-1.40	-0.001979	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	0	-1.00	-0.001413	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	10	-1.20	-0.001696	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	20	-1.00	-0.001413	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	30	-6.40	-0.009046	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	40	-6.40	-0.009046	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	50	-8.90	-0.012580	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	-30	-3.60	-0.005063	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	-20	-1.10	-0.001547	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	0	-3.50	-0.004923	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	10	-4.40	-0.006188	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	20	-3.70	-0.005204	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	30	-4.10	-0.005767	±2.5	PASS



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Band12	10MHz	16QAM	23130	50RB#0	NV	40	-0.70	-0.000985	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	50	-3.30	-0.004641	±2.5	PASS

The End



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