

Appendix B

E-UTRA Band 12



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1 Effective (Isotropic) Radiated Power

1.1. Test Result

Band	Bandwidth	Modulation	Channel	RB Config.	Result (dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band12	1.4MHz	QPSK	23017	1RB#0	22.54	17.41	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	22.91	17.78	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	22.79	17.66	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#0	22.76	17.63	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#1	22.88	17.75	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#3	22.96	17.83	34.77	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	21.81	16.68	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	22.50	17.37	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#2	22.91	17.78	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#5	22.53	17.40	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#0	22.88	17.75	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#1	22.99	17.86	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#3	22.96	17.83	34.77	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	21.96	16.83	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	22.64	17.51	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	23.10	17.97	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	22.68	17.55	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#0	23.08	17.95	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#1	23.18	18.05	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#3	22.99	17.86	34.77	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	22.09	16.96	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	21.55	16.42	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	22.41	17.28	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	21.54	16.41	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#0	21.72	16.59	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#1	21.73	16.60	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#3	21.63	16.50	34.77	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	20.65	15.52	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	21.55	16.42	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#2	22.16	17.03	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#5	21.66	16.53	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#0	21.81	16.68	34.77	PASS



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Band12	1.4MHz	16QAM	23095	3RB#1	22.14	17.01	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#3	21.95	16.82	34.77	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	20.95	15.82	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	21.52	16.39	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	22.16	17.03	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#5	21.52	16.39	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#0	22.12	16.99	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#1	22.07	16.94	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#3	21.98	16.85	34.77	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	21.03	15.90	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#0	22.53	17.40	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#8	22.93	17.80	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#14	22.77	17.64	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#0	21.76	16.63	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#4	21.88	16.75	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#7	21.93	16.80	34.77	PASS
Band12	3MHz	QPSK	23025	15RB#0	21.81	16.68	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#0	22.54	17.41	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#8	22.91	17.78	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#14	22.51	17.38	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#0	21.90	16.77	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#4	22.01	16.88	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#7	21.98	16.85	34.77	PASS
Band12	3MHz	QPSK	23095	15RB#0	21.93	16.80	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#0	22.68	17.55	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#8	23.08	17.95	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#14	22.69	17.56	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#0	22.08	16.95	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#4	22.21	17.08	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#7	22.00	16.87	34.77	PASS
Band12	3MHz	QPSK	23165	15RB#0	22.10	16.97	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#0	21.56	16.43	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#8	22.39	17.26	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#14	21.55	16.42	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#0	20.73	15.60	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#4	20.75	15.62	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#7	20.67	15.54	34.77	PASS
Band12	3MHz	16QAM	23025	15RB#0	20.62	15.49	34.77	PASS



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Band12	3MHz	16QAM	23095	1RB#0	21.54	16.41	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#8	22.15	17.02	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#14	21.67	16.54	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#0	20.79	15.66	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#4	21.15	16.02	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#7	20.96	15.83	34.77	PASS
Band12	3MHz	16QAM	23095	15RB#0	20.92	15.79	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#0	21.51	16.38	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#8	22.14	17.01	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#14	21.51	16.38	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#0	21.07	15.94	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#4	21.06	15.93	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#7	21.00	15.87	34.77	PASS
Band12	3MHz	16QAM	23165	15RB#0	20.99	15.86	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#0	22.55	17.42	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#12	22.92	17.79	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#24	22.80	17.67	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#0	21.76	16.63	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#6	21.86	16.73	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#13	21.93	16.80	34.77	PASS
Band12	5MHz	QPSK	23035	25RB#0	21.86	16.73	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#0	22.59	17.46	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#12	22.92	17.79	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#24	22.51	17.38	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#0	21.91	16.78	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#6	21.97	16.84	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#13	21.97	16.84	34.77	PASS
Band12	5MHz	QPSK	23095	25RB#0	21.95	16.82	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#0	22.66	17.53	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#12	23.12	17.99	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#24	22.67	17.54	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#0	22.12	16.99	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#6	22.18	17.05	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#13	21.99	16.86	34.77	PASS
Band12	5MHz	QPSK	23155	25RB#0	22.14	17.01	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#0	21.51	16.38	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#12	22.38	17.25	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#24	21.52	16.39	34.77	PASS



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Band12	5MHz	16QAM	23035	12RB#0	20.72	15.59	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#6	20.78	15.65	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#13	20.63	15.50	34.77	PASS
Band12	5MHz	16QAM	23035	25RB#0	20.62	15.49	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#0	21.53	16.40	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#12	22.20	17.07	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#24	21.63	16.50	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#0	20.76	15.63	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#6	21.14	16.01	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#13	20.98	15.85	34.77	PASS
Band12	5MHz	16QAM	23095	25RB#0	20.94	15.81	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#0	21.50	16.37	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#12	22.12	16.99	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#24	21.52	16.39	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#0	21.07	15.94	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#6	21.04	15.91	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#13	20.96	15.83	34.77	PASS
Band12	5MHz	16QAM	23155	25RB#0	21.03	15.90	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#0	22.51	17.38	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#24	23.00	17.87	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#49	22.85	17.72	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#0	21.84	16.71	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#12	21.96	16.83	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#25	22.01	16.88	34.77	PASS
Band12	10MHz	QPSK	23060	50RB#0	21.91	16.78	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#0	23.18	18.05	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#24	23.00	17.87	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#49	22.60	17.47	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#0	22.29	17.16	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#12	22.06	16.93	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#25	22.04	16.91	34.77	PASS
Band12	10MHz	QPSK	23095	50RB#0	22.01	16.88	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#0	22.73	17.60	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#24	23.17	18.04	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#49	22.77	17.64	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#0	22.18	17.05	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#12	22.27	17.14	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#25	22.09	16.96	34.77	PASS



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Band12	10MHz	QPSK	23130	50RB#0	22.19	17.06	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#0	21.51	16.38	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#24	22.47	17.34	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#49	21.57	16.44	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#0	20.81	15.68	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#12	20.83	15.70	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#25	20.73	15.60	34.77	PASS
Band12	10MHz	16QAM	23060	50RB#0	20.72	15.59	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#0	21.52	16.39	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#24	22.25	17.12	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#49	21.72	16.59	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#0	20.86	15.73	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#12	21.21	16.08	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#25	21.03	15.90	34.77	PASS
Band12	10MHz	16QAM	23095	50RB#0	21.00	15.87	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#0	21.57	16.44	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#24	22.22	17.09	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#49	21.60	16.47	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#0	21.17	16.04	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#12	21.12	15.99	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#25	21.05	15.92	34.77	PASS
Band12	10MHz	16QAM	23130	50RB#0	21.09	15.96	34.77	PASS

Remark:

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

ERP [dBm] = Conducted Power [dBm] + Gain [dBi]

EIRP [dBm] = Conducted Power [dBm] + Gain [dBi]

The conducted Power is measured by Base Station Simulator



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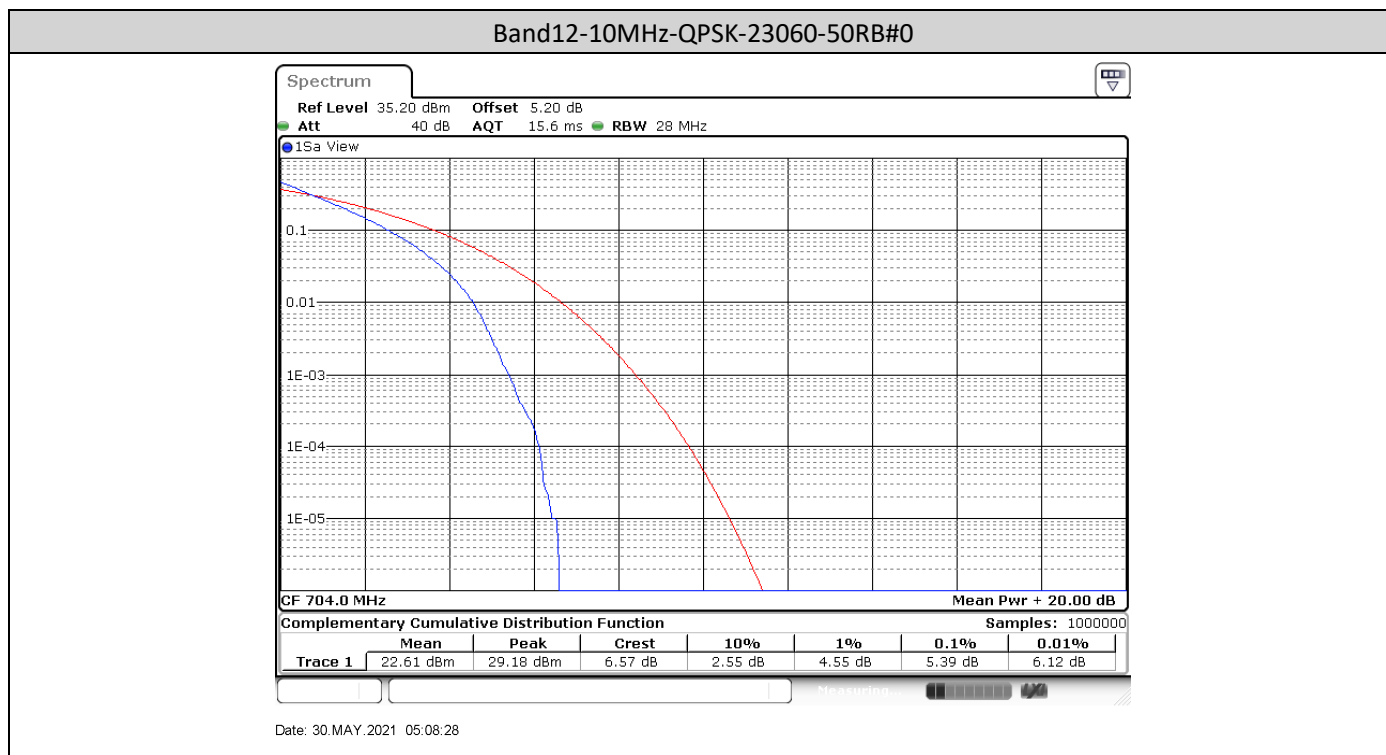


2. Peak-to-Average Ratio (CCDF)

2.1. Test Result

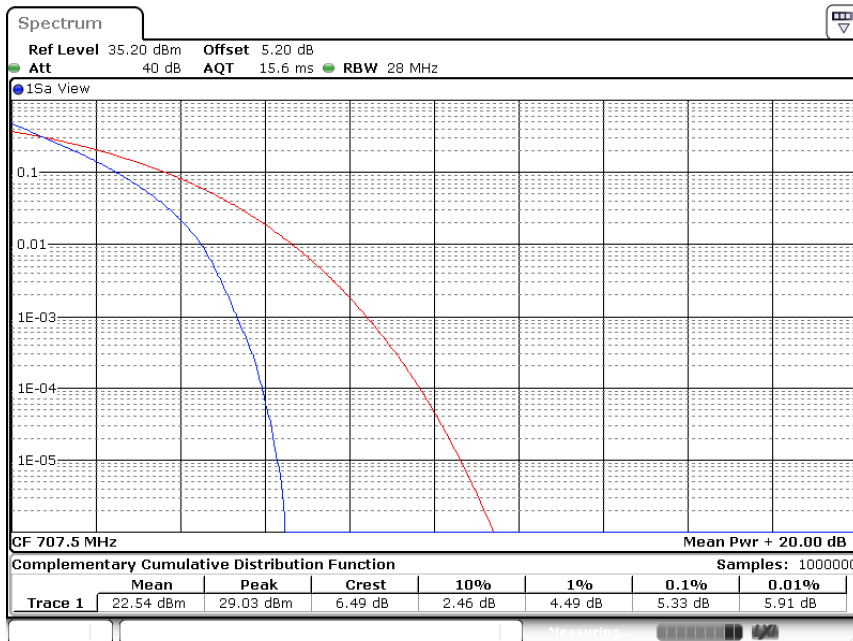
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band12	10MHz	QPSK	23060	50RB#0	5.39	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	5.33	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	5.36	13	PASS
Band12	10MHz	16QAM	23060	50RB#0	6.12	13	PASS
Band12	10MHz	16QAM	23095	50RB#0	6.14	13	PASS
Band12	10MHz	16QAM	23130	50RB#0	6.12	13	PASS

2.2. Test Plots



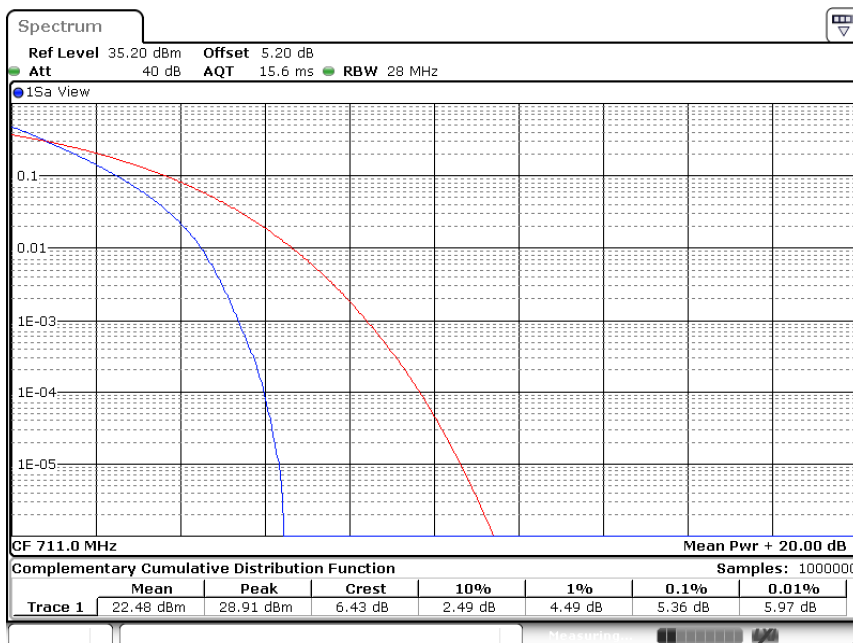


Band12-10MHz-QPSK-23095-50RB#0



Date: 30.MAY.2021 05:08:51

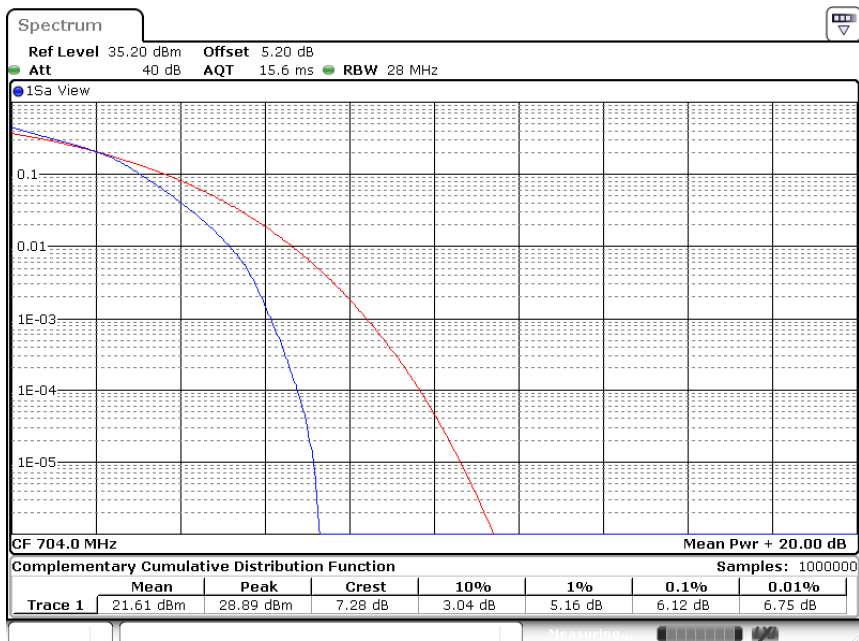
Band12-10MHz-QPSK-23130-50RB#0



Date: 30.MAY.2021 05:09:13

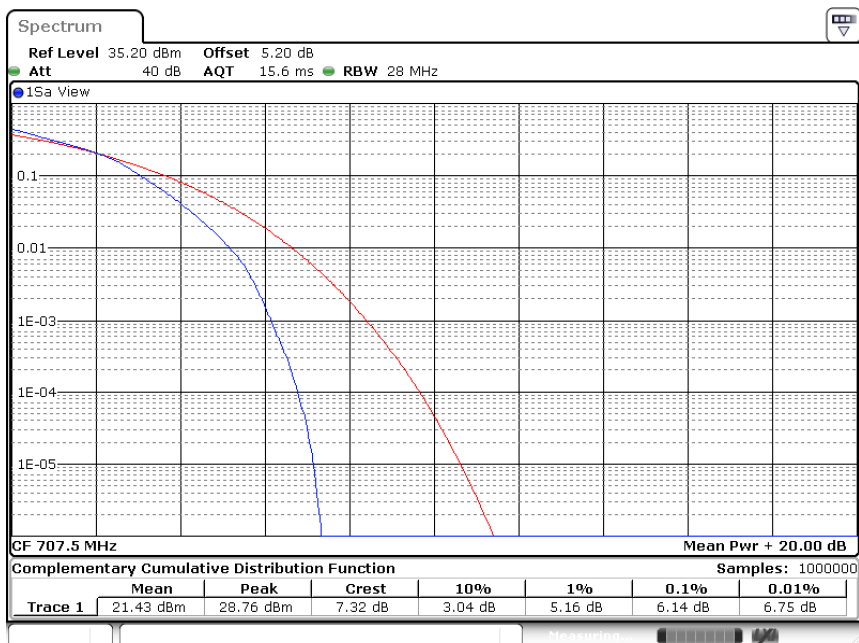


Band12-10MHz-16QAM-23060-50RB#0



Date: 30.MAY.2021 05:08:39

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

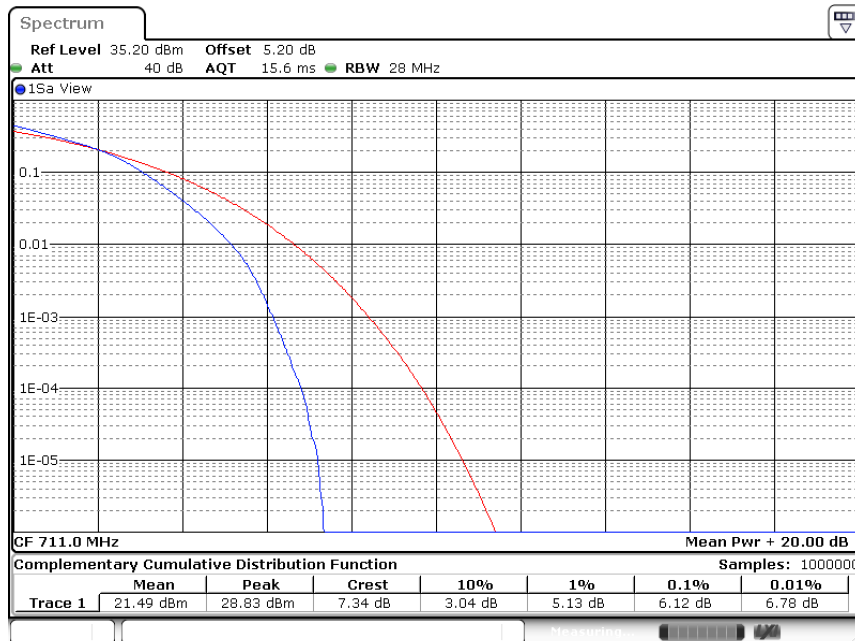


Date: 30.MAY.2021 05:09:02





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



Date: 30.MAY.2021 05:09:25

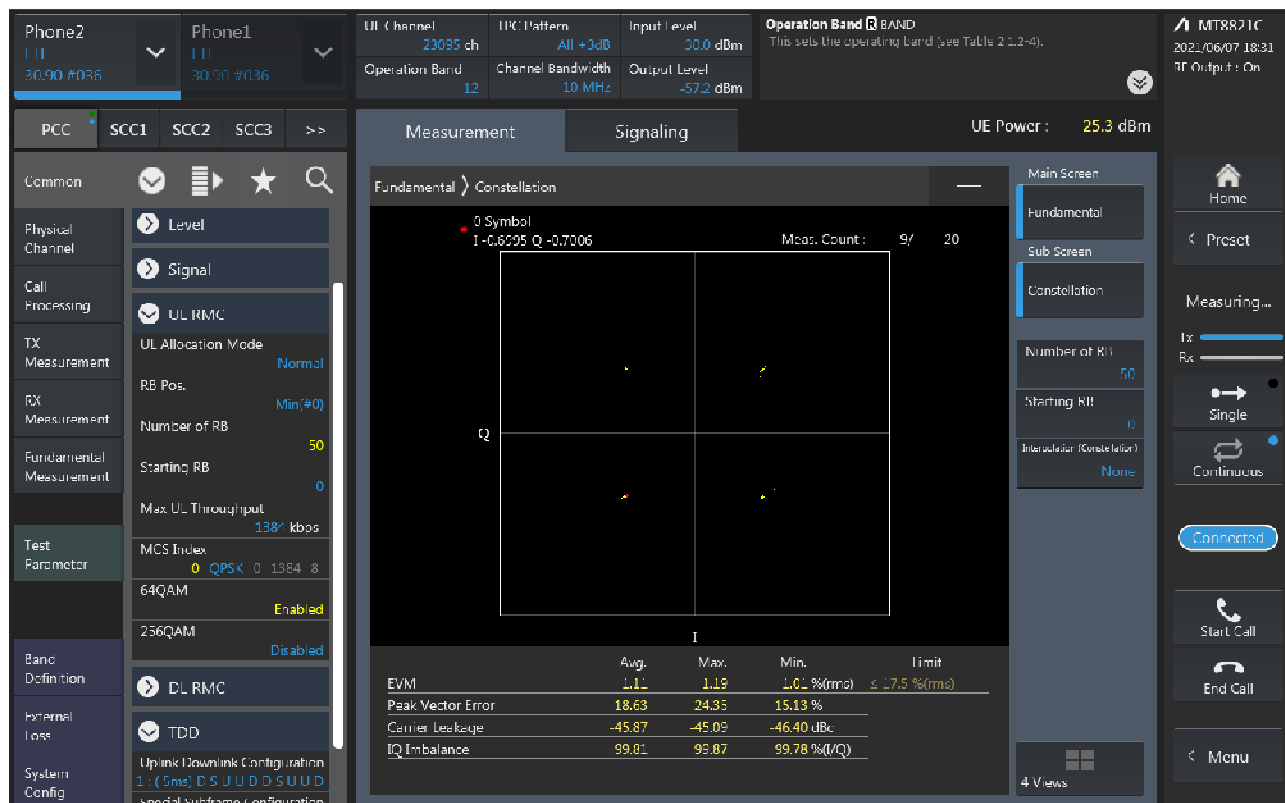
Remark: all modulation and all Bandwidth had been tested, but only the worst configuration was displayed in this report.



3. Modulation Characteristics

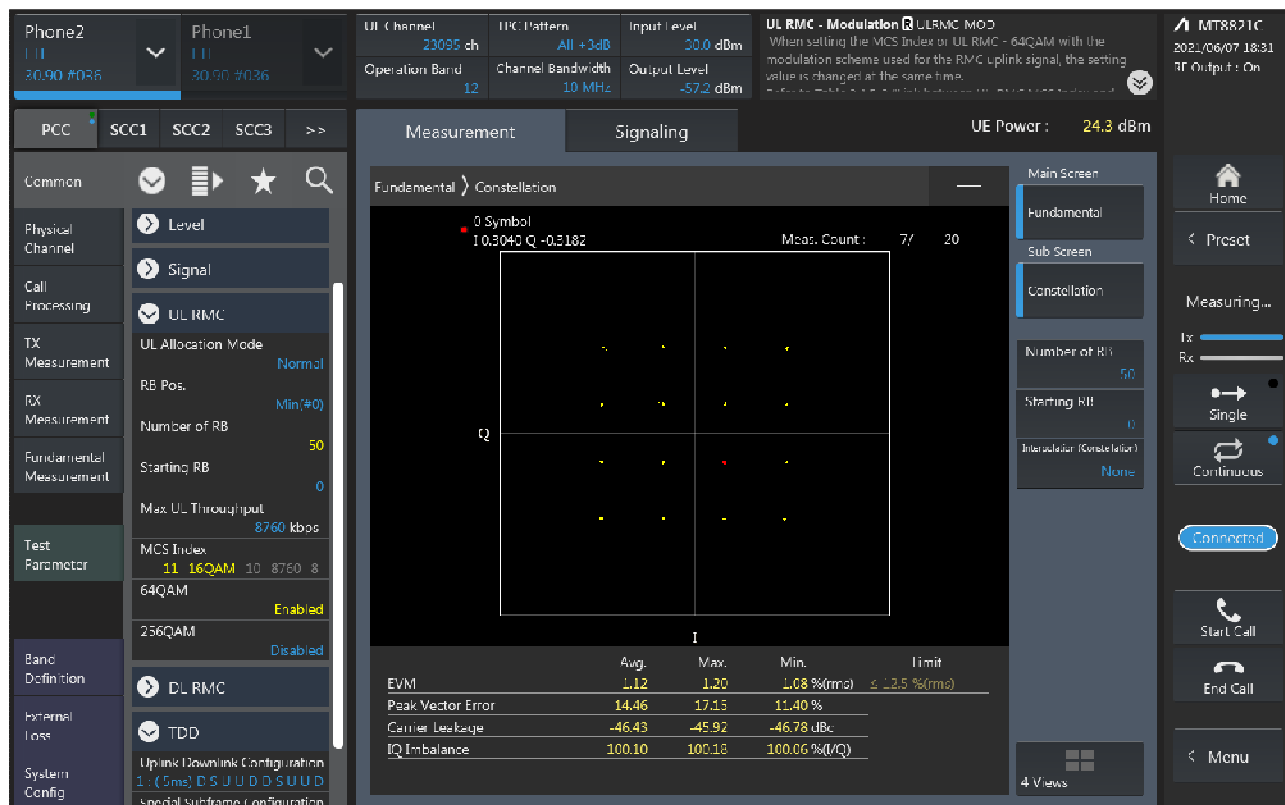
3.1. Test Mode = LTE /TM1 10MHz

3.1.1. Test Channel = MCH



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

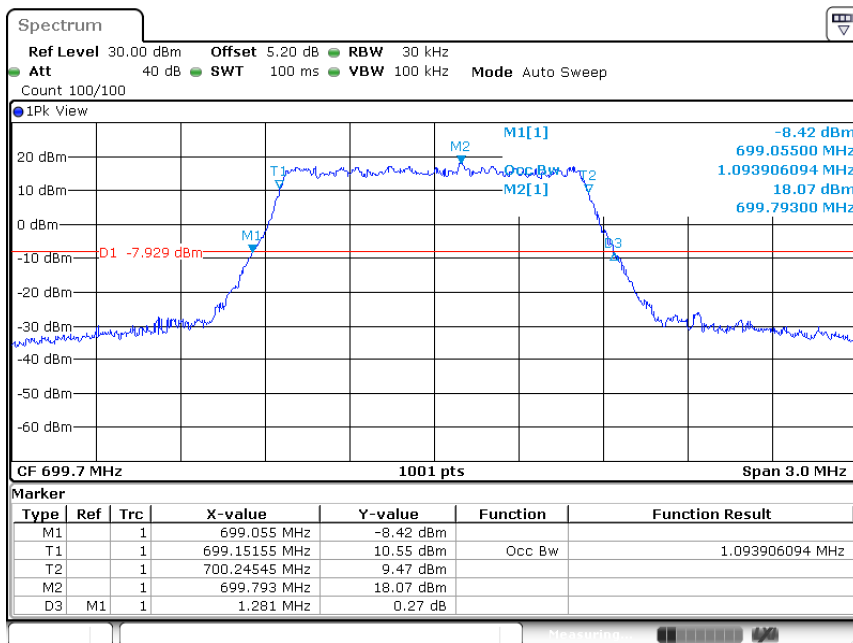
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	1.094	1.281	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.091	1.287	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.091	1.290	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.091	1.287	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.091	1.305	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.088	1.272	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.697	2.994	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.703	2.988	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.697	3.000	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.685	2.970	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.685	2.964	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.679	2.982	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.476	4.910	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.476	4.930	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.476	4.920	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.486	4.940	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.496	4.950	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.476	4.920	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.931	9.720	PASS
Band12	10MHz	QPSK	23095	50RB#0	8.931	9.720	PASS
Band12	10MHz	QPSK	23130	50RB#0	8.911	9.700	PASS
Band12	10MHz	16QAM	23060	50RB#0	8.911	9.760	PASS
Band12	10MHz	16QAM	23095	50RB#0	8.931	9.740	PASS
Band12	10MHz	16QAM	23130	50RB#0	8.911	9.740	PASS





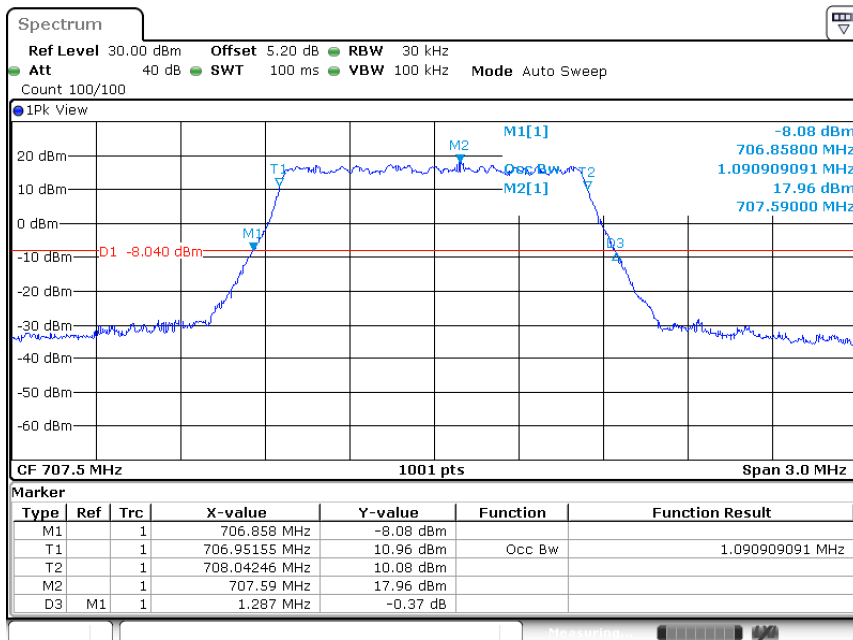
4.2. Test Plots

Band12-1.4MHz-QPSK-23017-6RB#0-1.094



Date: 30.MAY.2021 04:43:20

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



Date: 30.MAY.2021 04:43:59



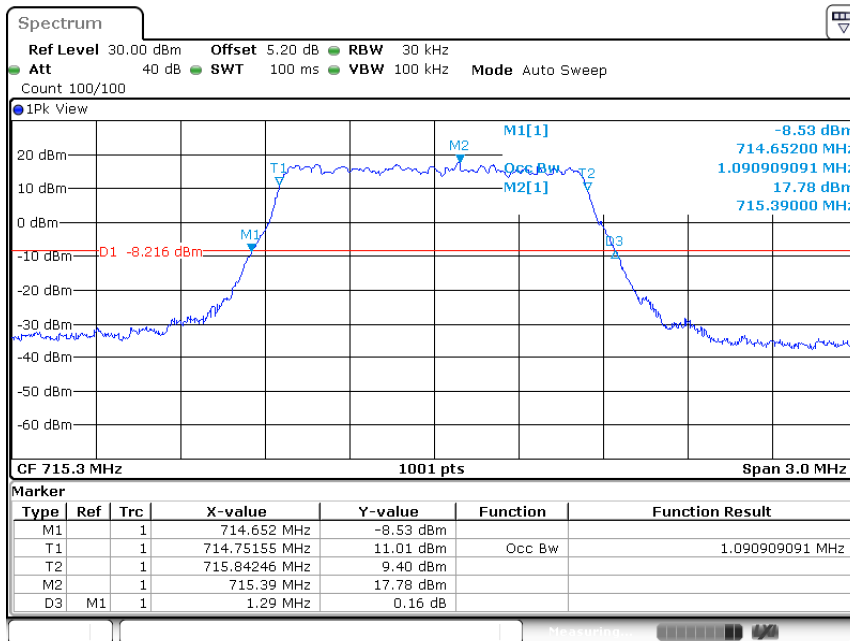
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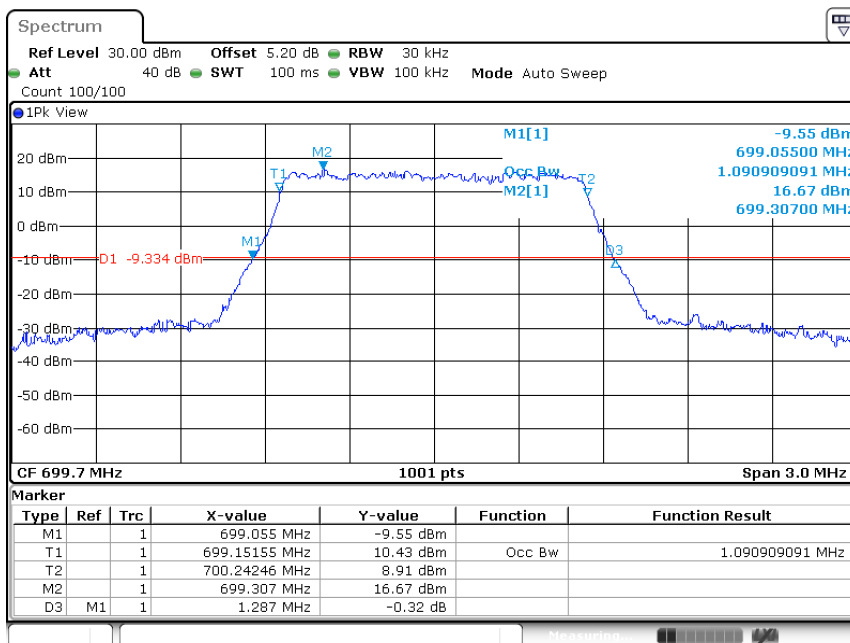


Band12-1.4MHz-QPSK-23173-6RB#0-1.091



Date: 30.MAY.2021 04:44:39

Band12-1.4MHz-16QAM-23017-6RB#0-1.091



Date: 30.MAY.2021 04:43:39



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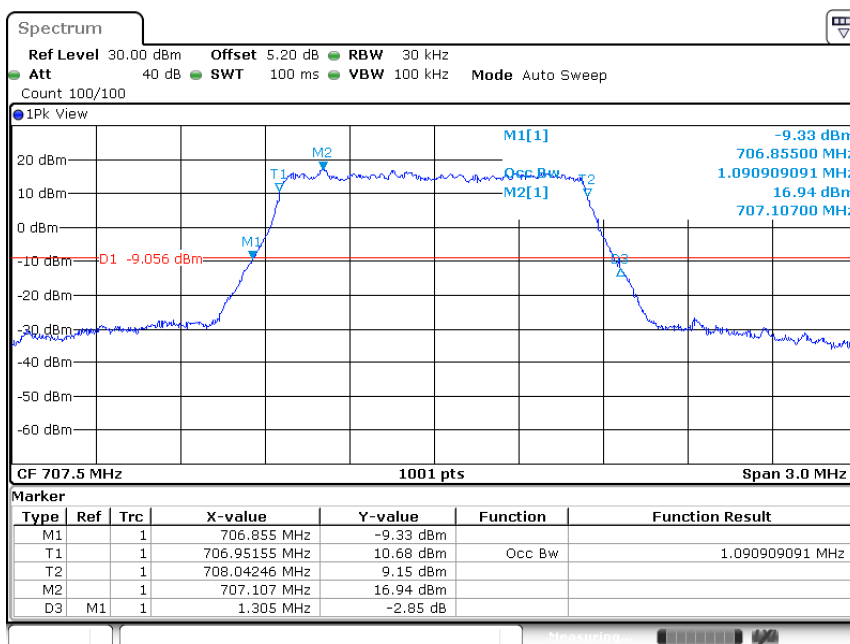
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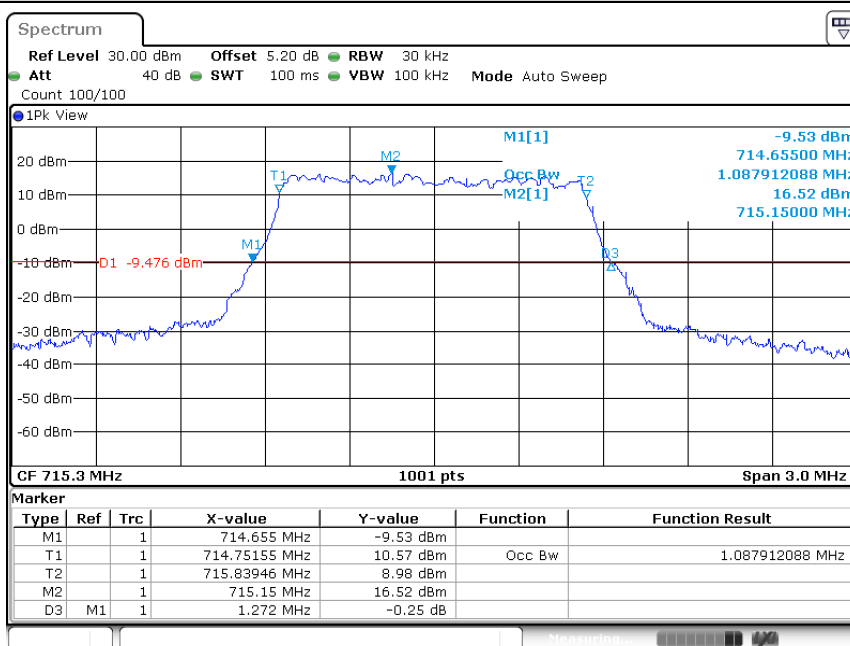


Band12-1.4MHz-16QAM-23095-6RB#0-1.091



Date: 30.MAY.2021 04:44:19

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



Date: 30.MAY.2021 04:44:59

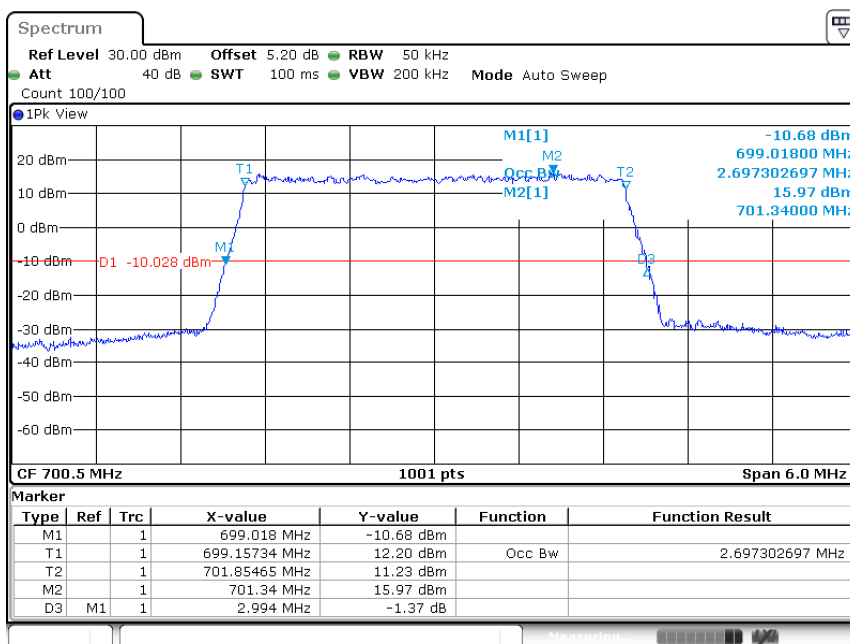


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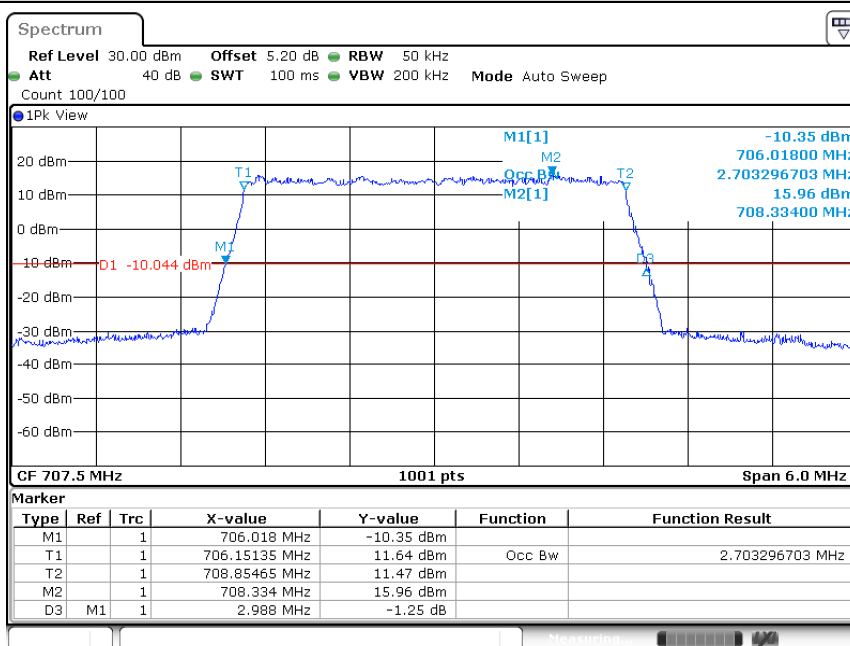


Band12-3MHz-QPSK-23025-15RB#0-2.697



Date: 30.MAY.2021 04:45:24

Band12-3MHz-QPSK-23095-15RB#0-2.703



Date: 30.MAY.2021 04:46:04



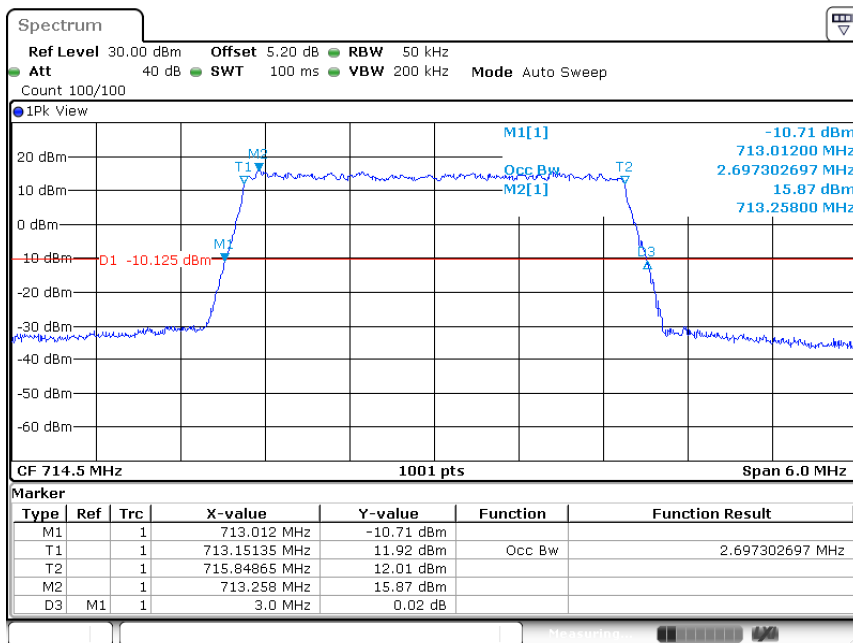
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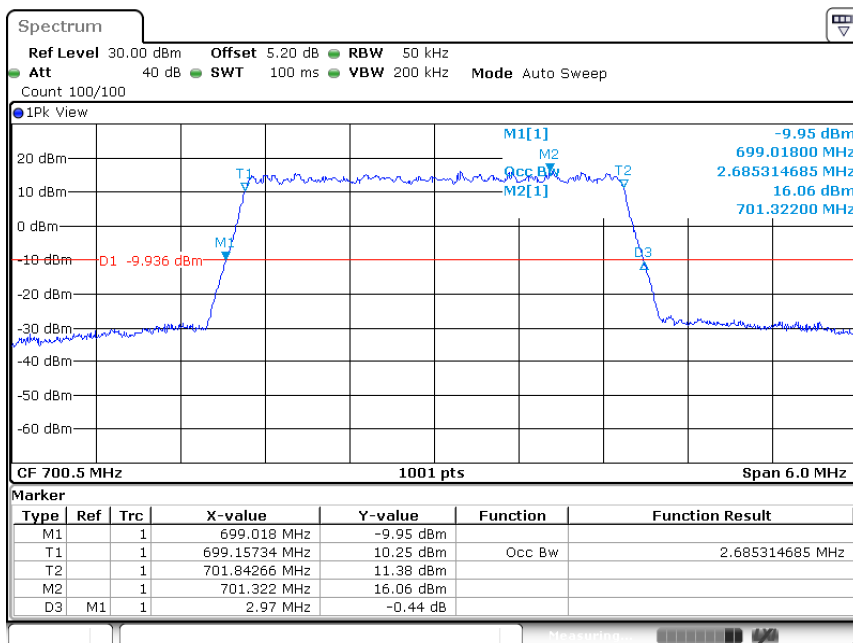


Band12-3MHz-QPSK-23165-15RB#0-2.697



Date: 30.MAY.2021 04:46:44

Band12-3MHz-16QAM-23025-15RB#0-2.685



Date: 30.MAY.2021 04:45:44

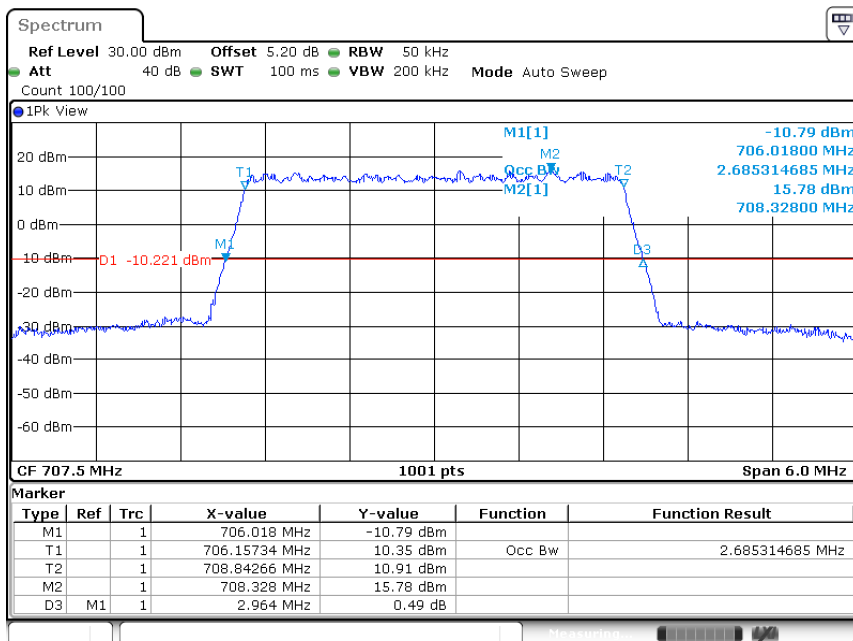


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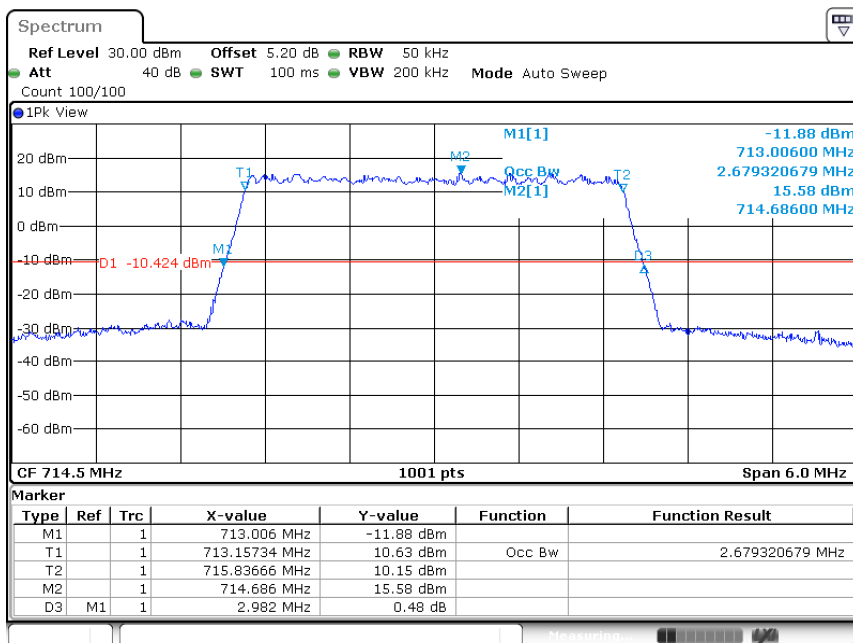
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Band12-3MHz-16QAM-23095-15RB#0-2.685



Date: 30.MAY.2021 04:46:24

Band12-3MHz-16QAM-23165-15RB#0-2.679

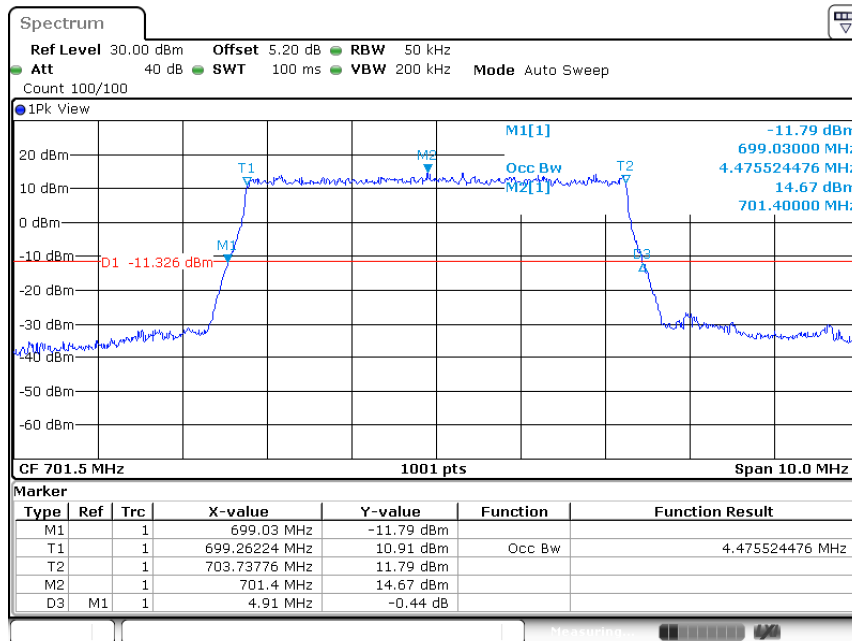


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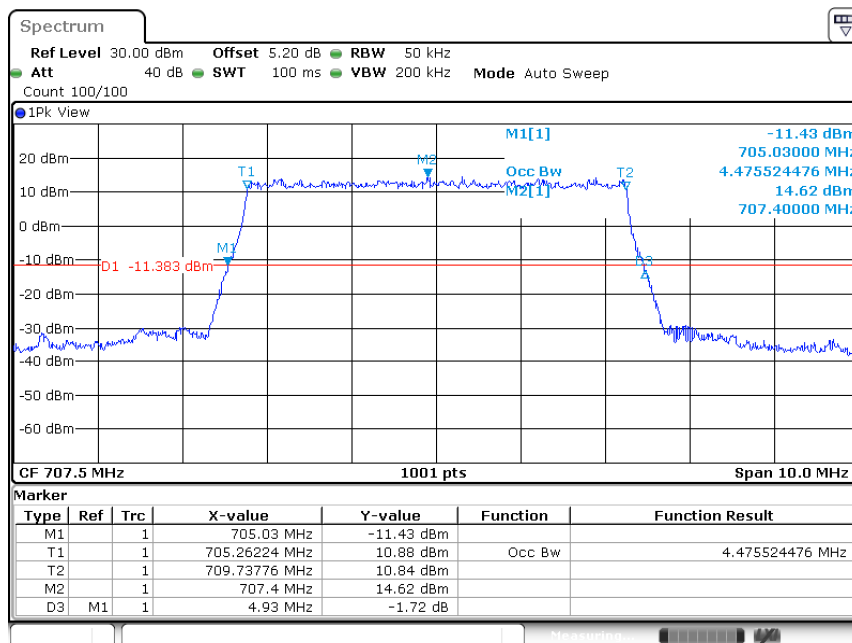


Band12-5MHz-QPSK-23035-25RB#0-4.476



Date: 30.MAY.2021 04:47:29

Band12-5MHz-QPSK-23095-25RB#0-4.476

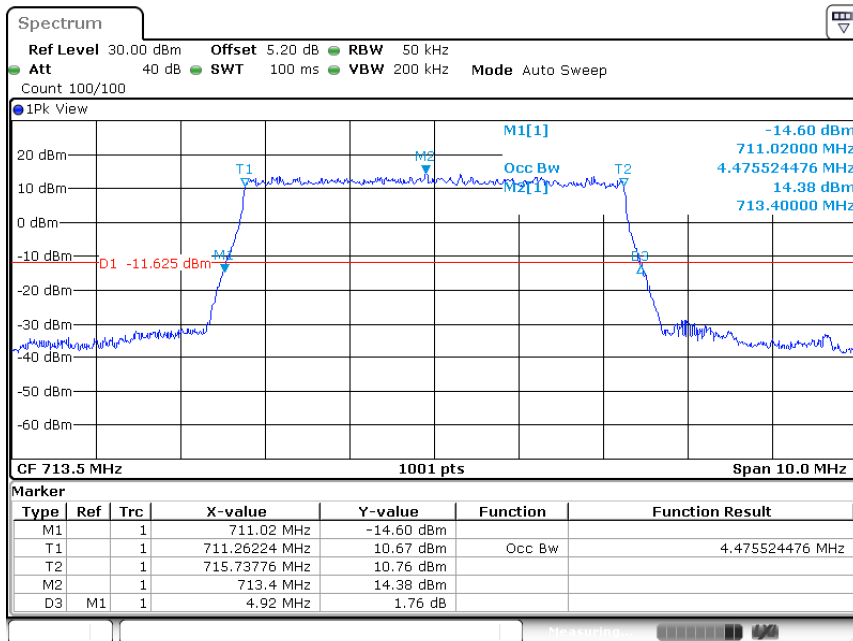


Date: 30.MAY.2021 04:48:09



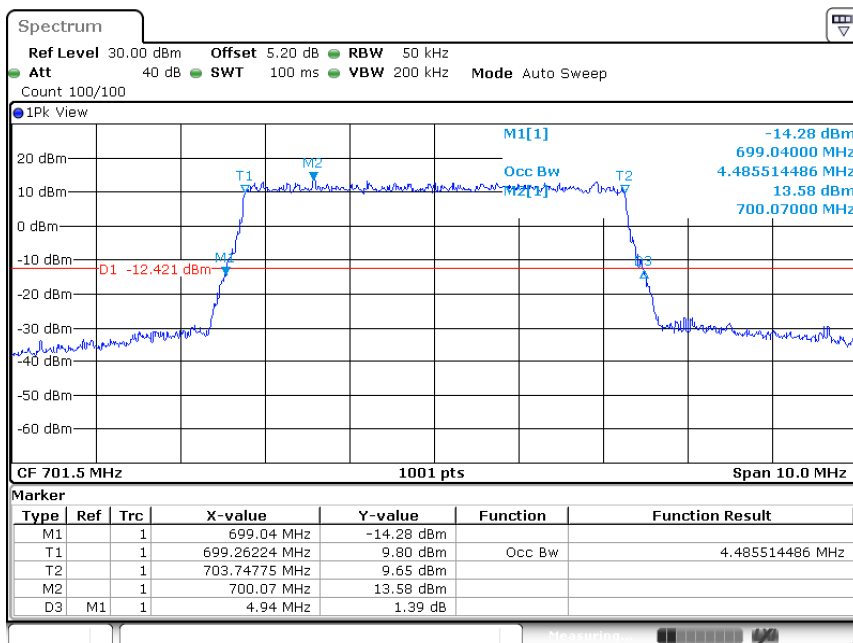


Band12-5MHz-QPSK-23155-25RB#0-4.476



Date: 30.MAY.2021 04:48:49

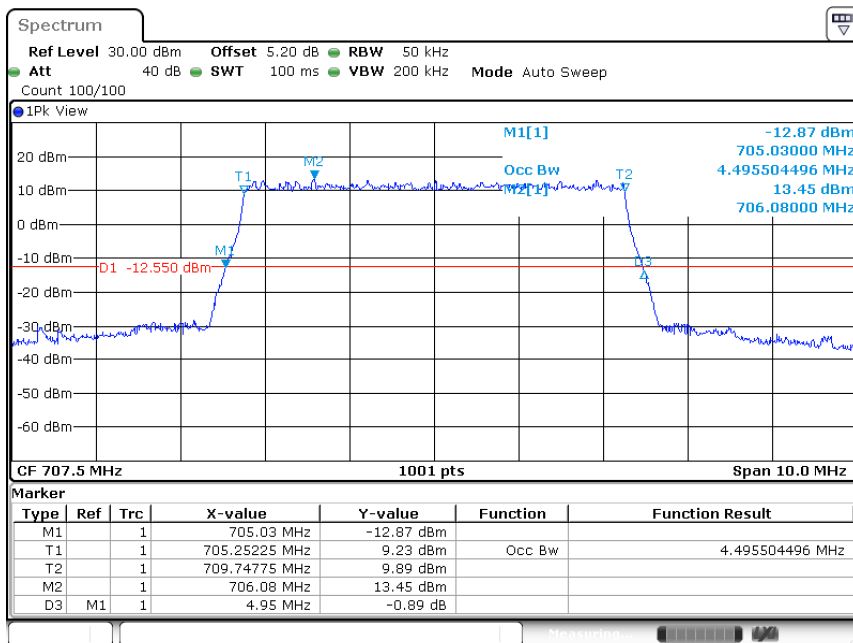
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Date: 30.MAY.2021 04:47:49

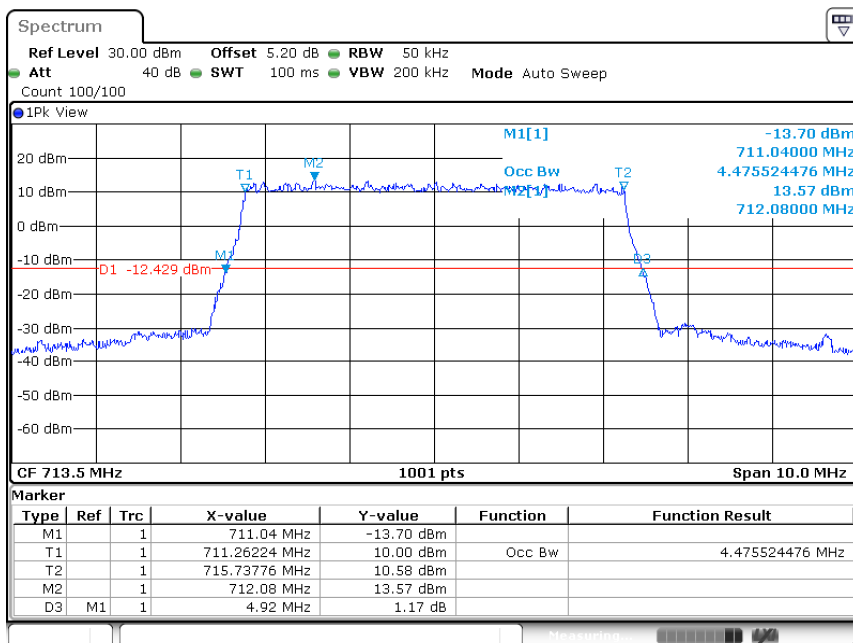


Band12-5MHz-16QAM-23095-25RB#0-4.496



Date: 30.MAY.2021 04:48:29

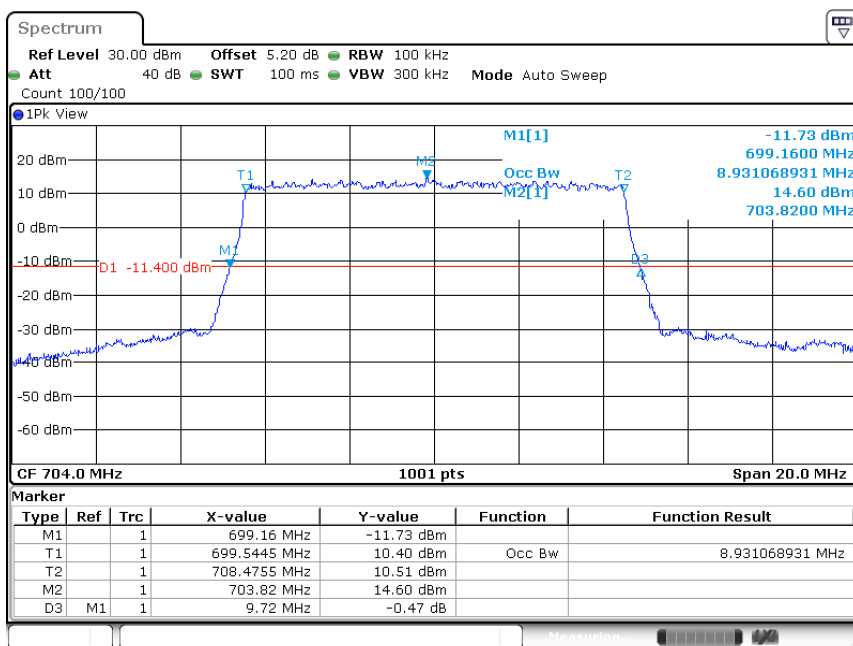
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Date: 30.MAY.2021 04:49:09

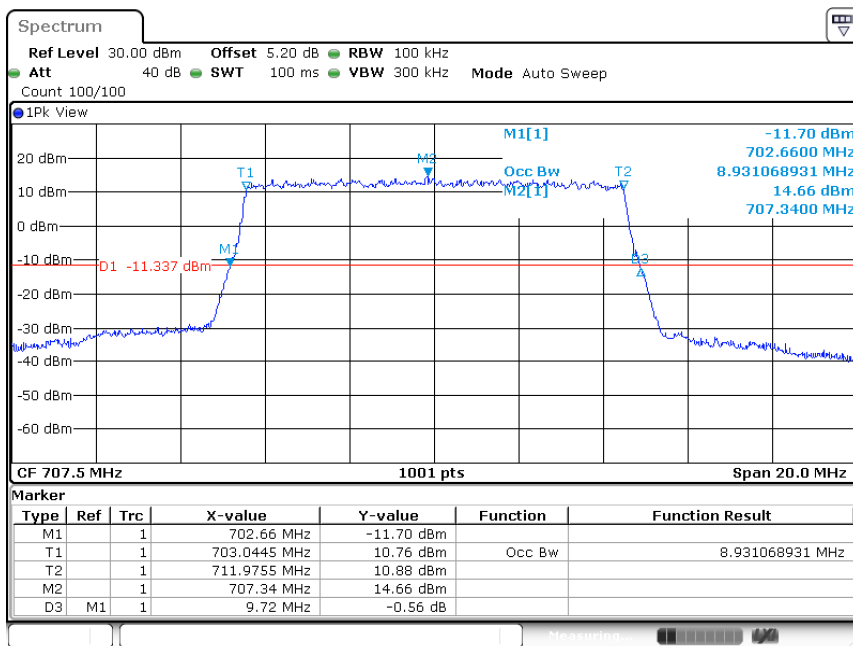


Band12-10MHz-QPSK-23060-50RB#0-8.931



Date: 30.MAY.2021 04:49:34

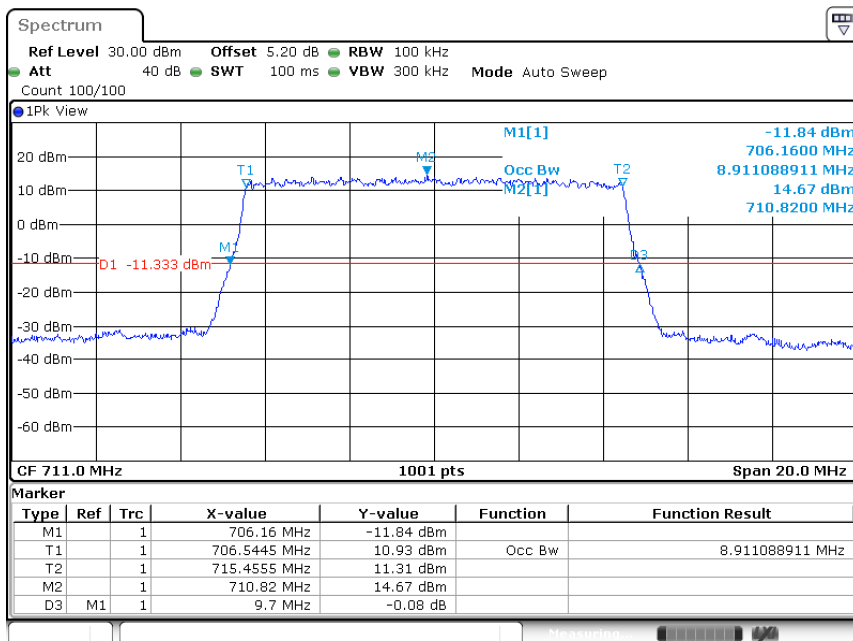
Band12-10MHz-QPSK-23095-50RB#0-8.931



Date: 30.MAY.2021 04:50:14

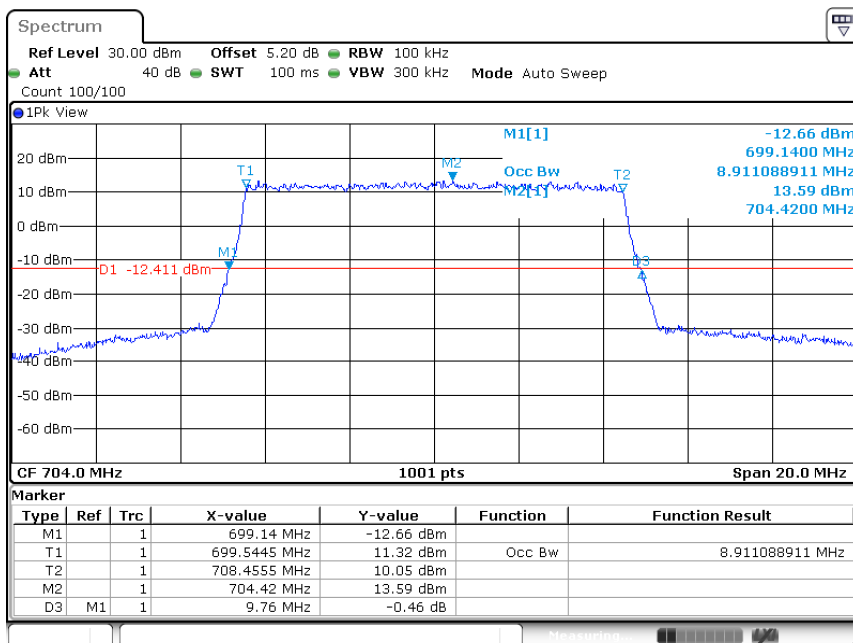


Band12-10MHz-QPSK-23130-50RB#0-8.911



Date: 30.MAY.2021 04:50:54

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

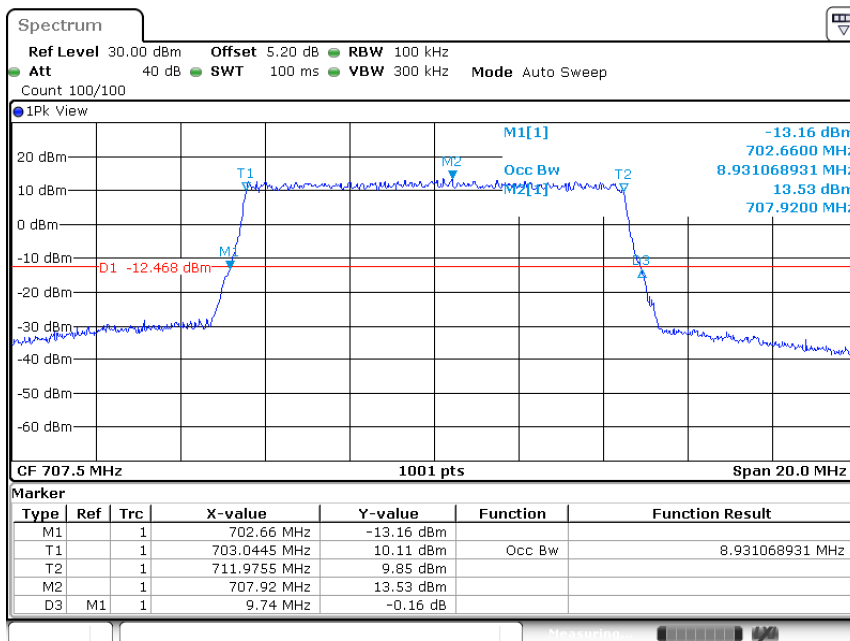


Date: 30.MAY.2021 04:49:54



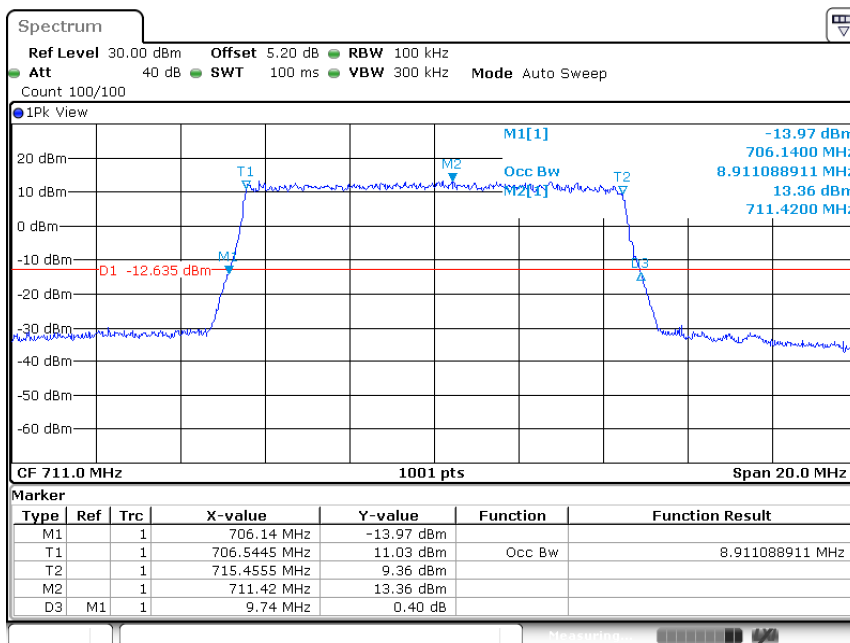


Band12-10MHz-16QAM-23095-50RB#0-8.931



Date: 30.MAY.2021 04:50:34

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



Date: 30.MAY.2021 04:51:13



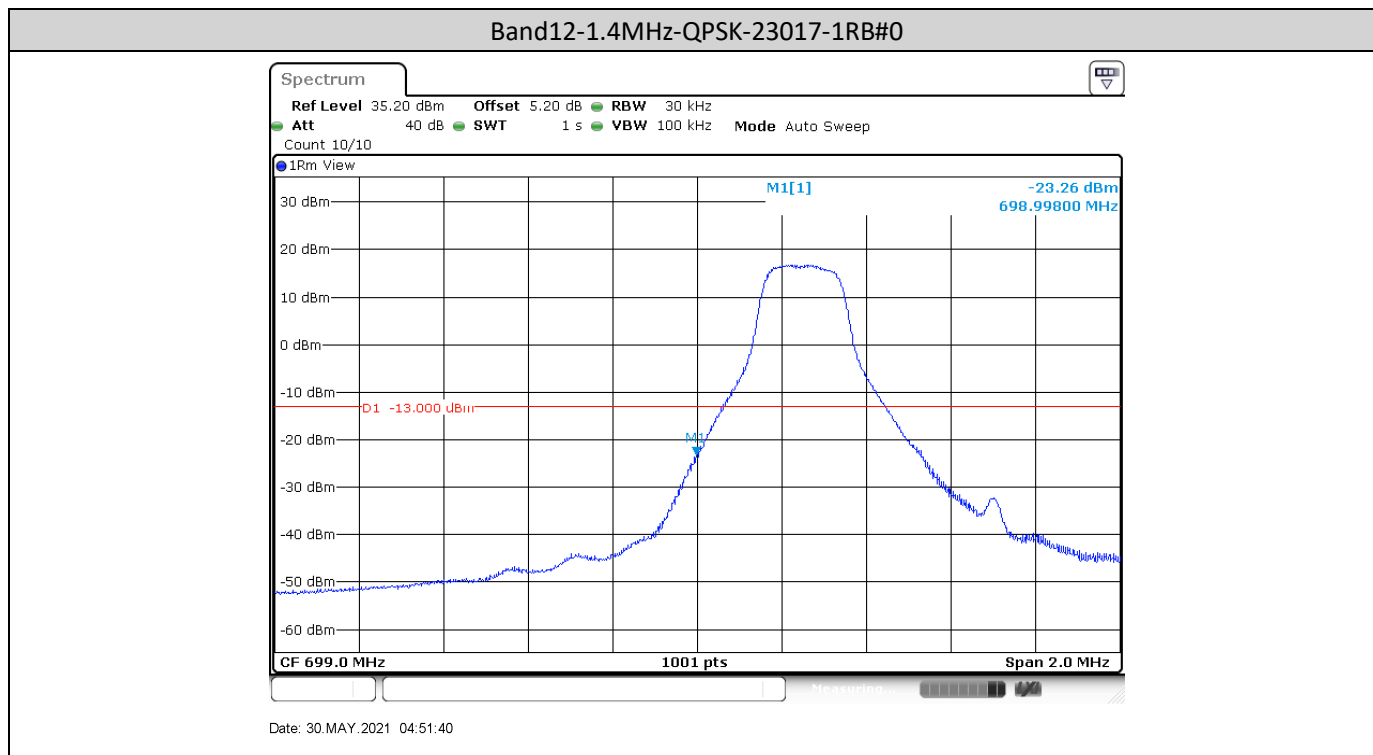
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5. Band Edge Compliance

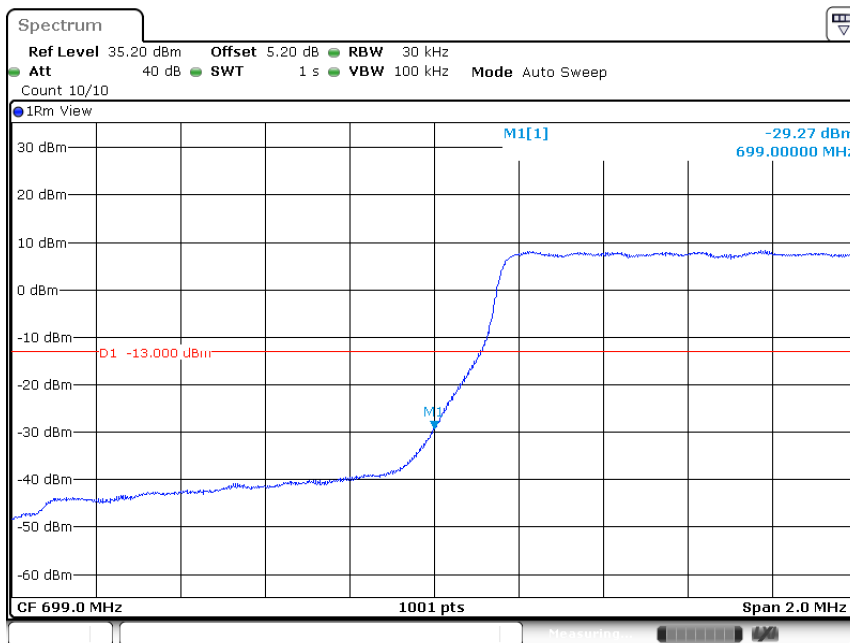
5.1. Test Plots



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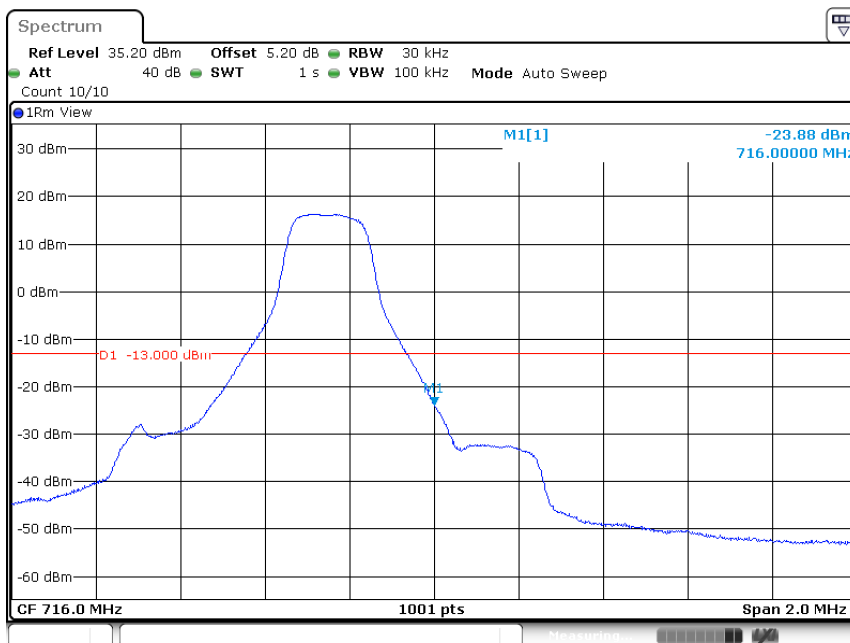


Band12-1.4MHz-QPSK-23017-6RB#0



Date: 30.MAY.2021 04:52:21

Band12-1.4MHz-QPSK-23173-1RB#5



Date: 30.MAY.2021 04:53:07



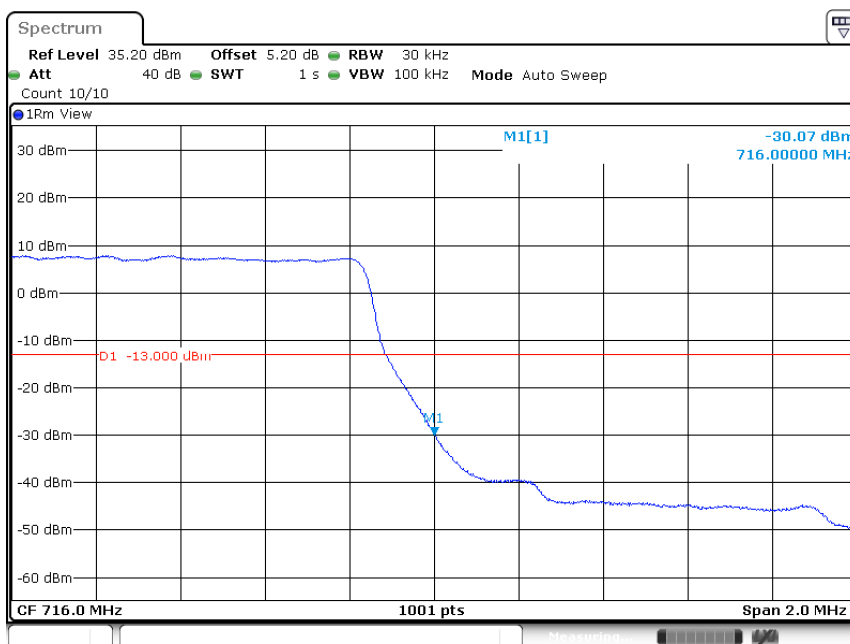
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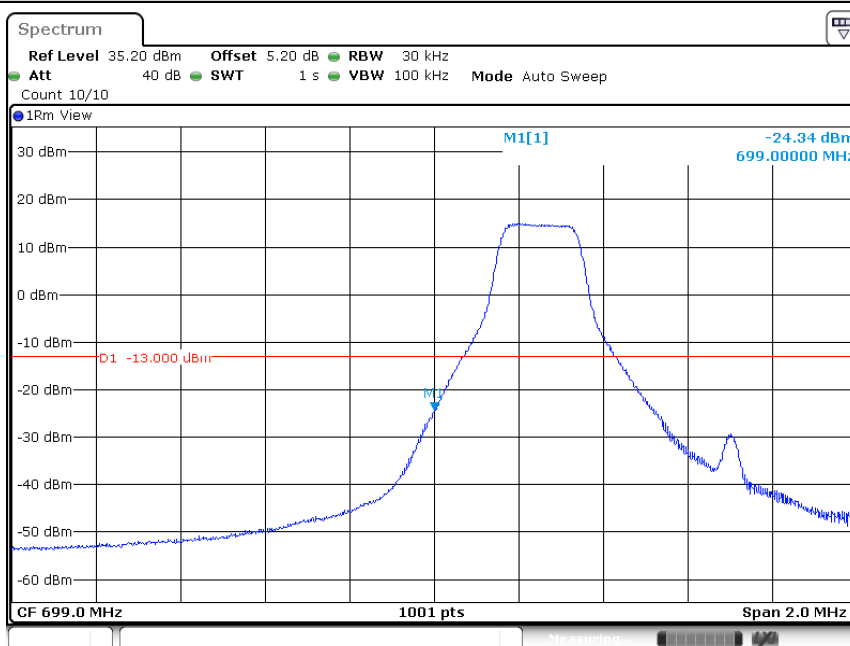


Band12-1.4MHz-QPSK-23173-6RB#0



Date: 30.MAY.2021 04:53:48

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



Date: 30.MAY.2021 04:52:01



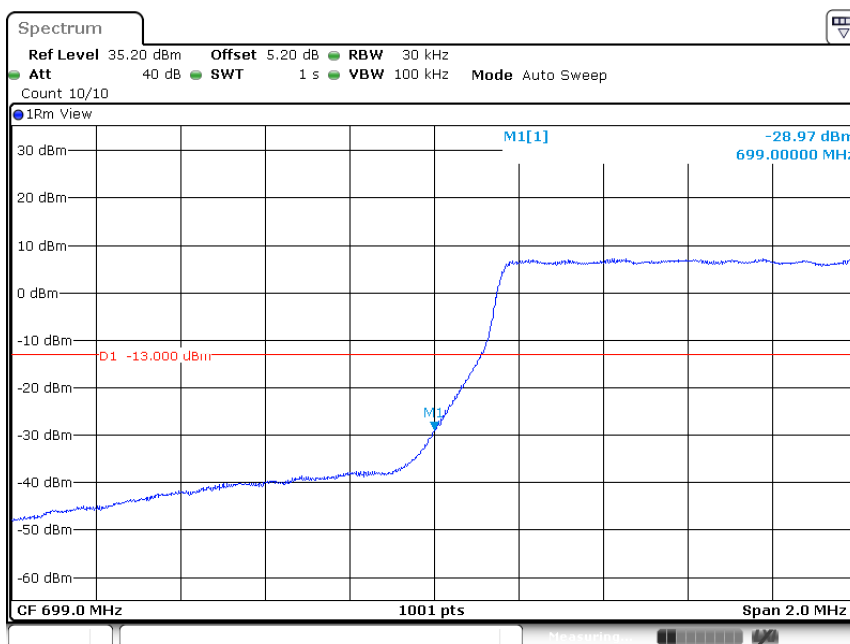
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Band12-1.4MHz-16QAM-23017-6RB#0



Date: 30.MAY.2021 04:52:42

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



Date: 30.MAY.2021 04:53:27



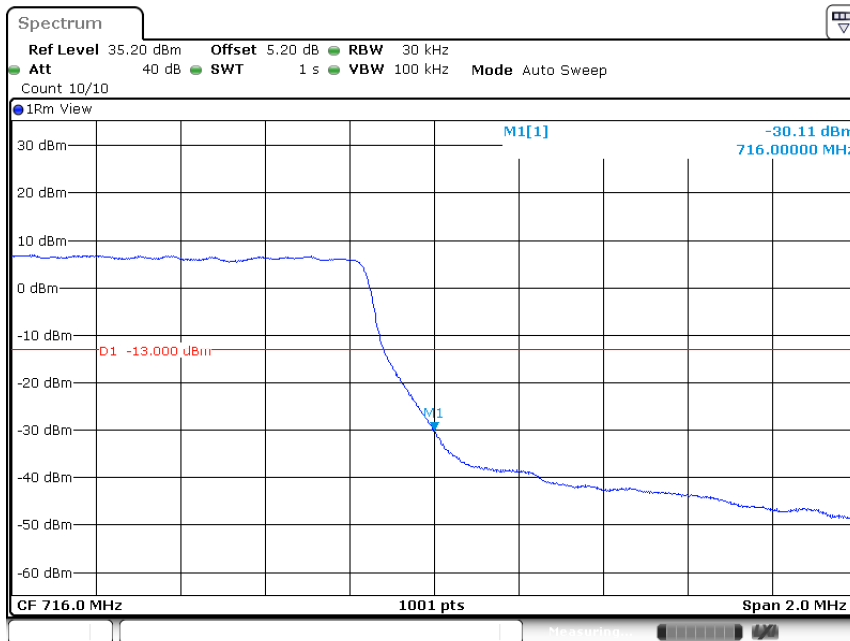
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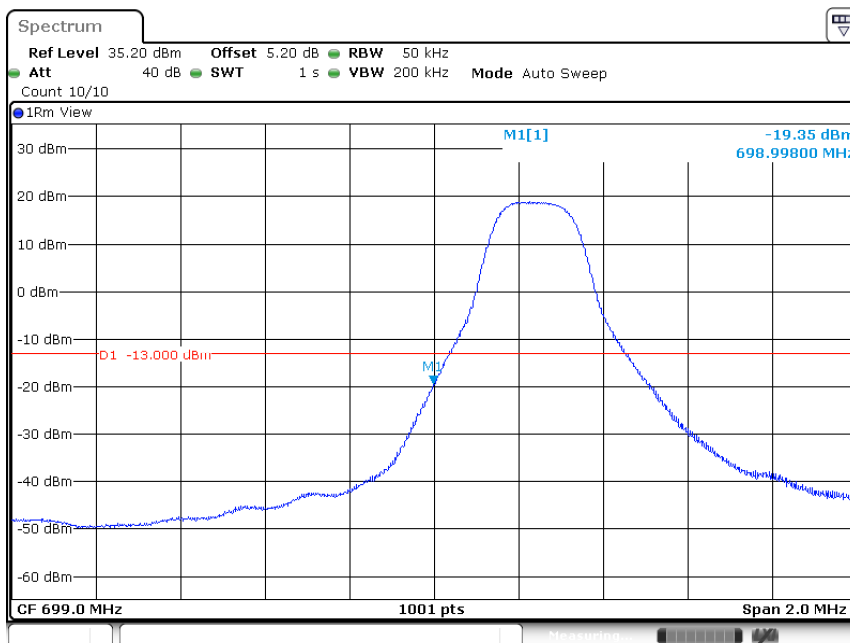


Band12-1.4MHz-16QAM-23173-6RB#0



Date: 30.MAY.2021 04:54:08

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



Date: 30.MAY.2021 04:54:35

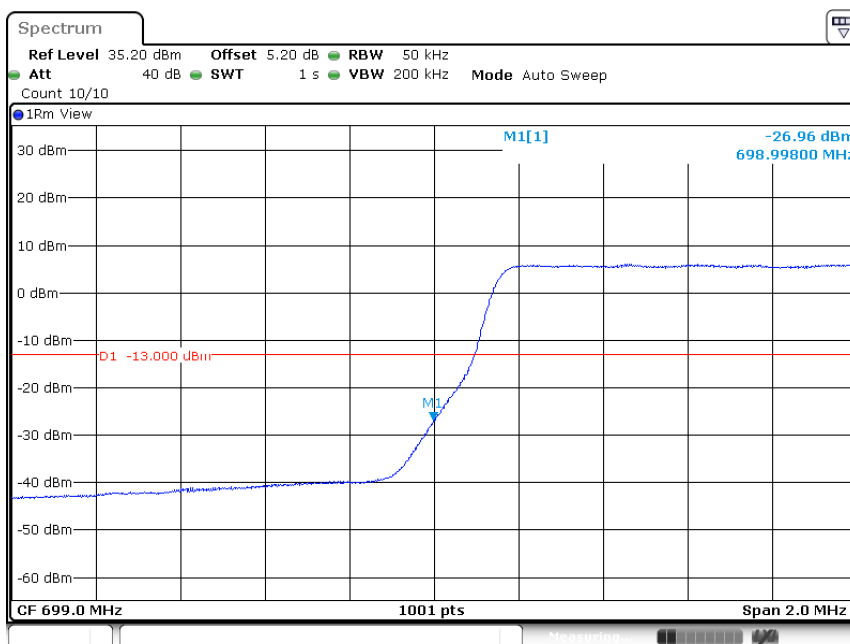


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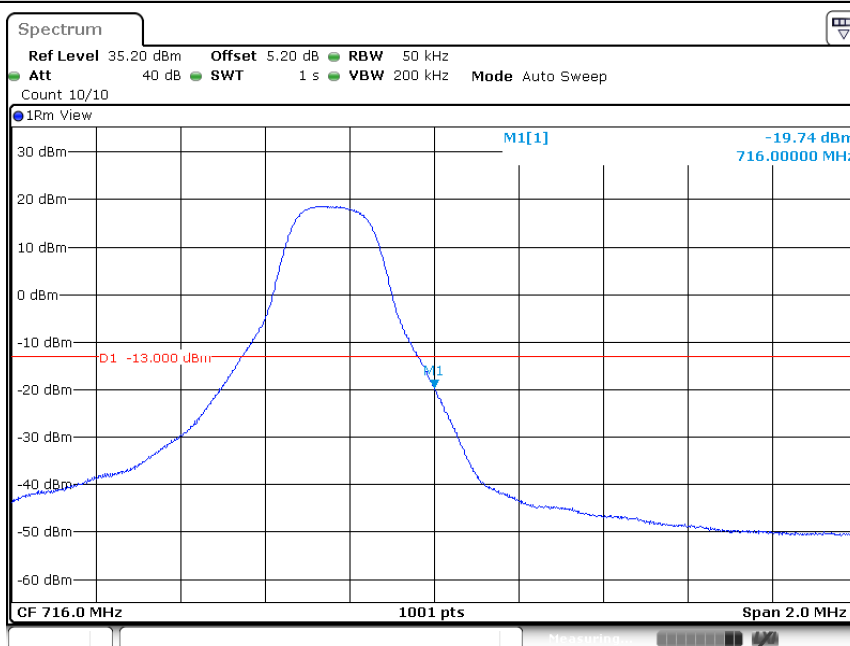


Band12-3MHz-QPSK-23025-15RB#0



Date: 30.MAY.2021 04:55:16

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

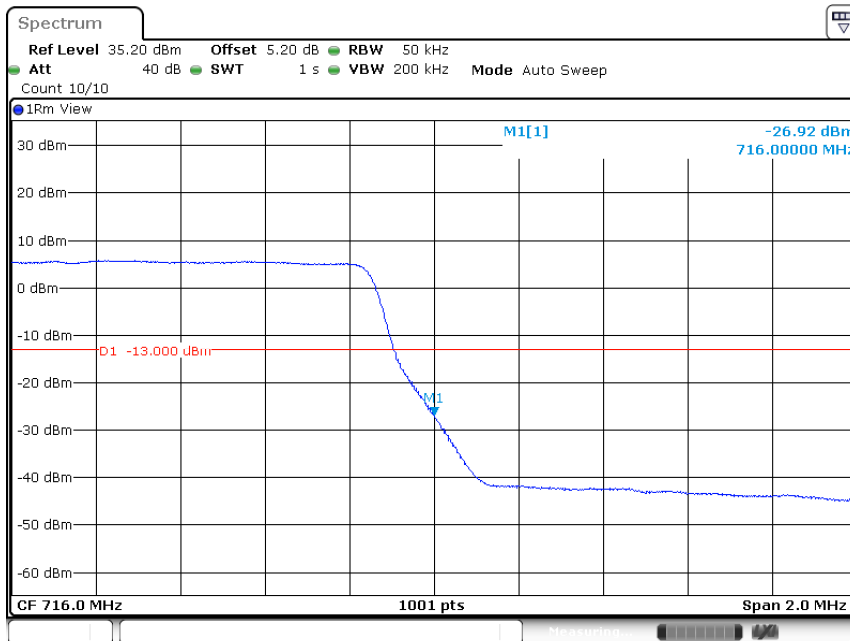


Date: 30.MAY.2021 04:56:01



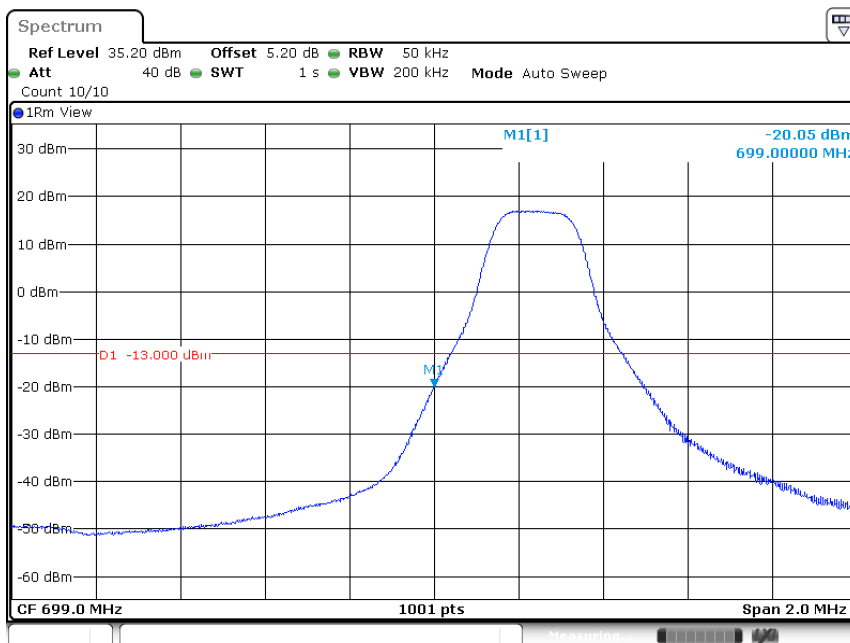


Band12-3MHz-QPSK-23165-15RB#0



Date: 30.MAY.2021 04:56:42

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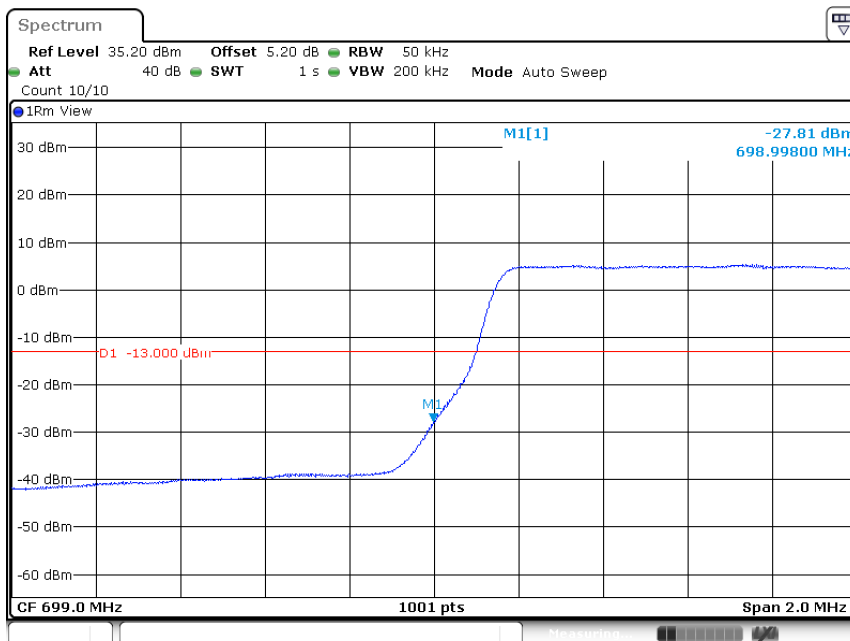


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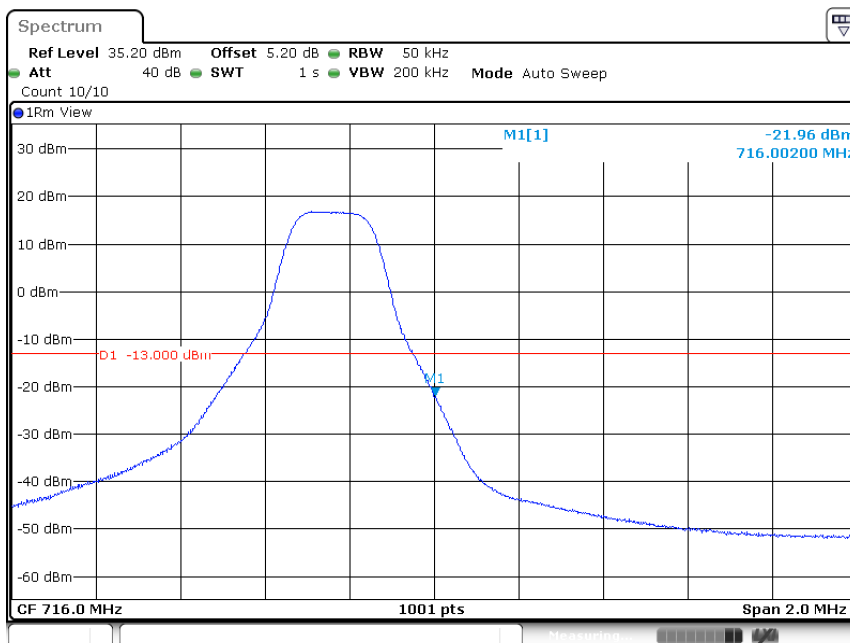


Band12-3MHz-16QAM-23025-15RB#0



Date: 30.MAY.2021 04:55:36

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



Date: 30.MAY.2021 04:56:22

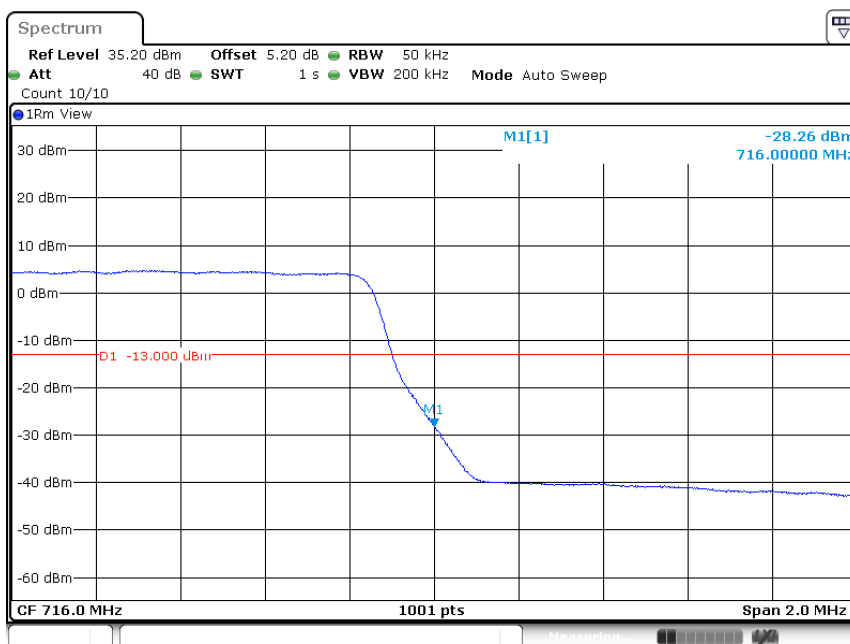


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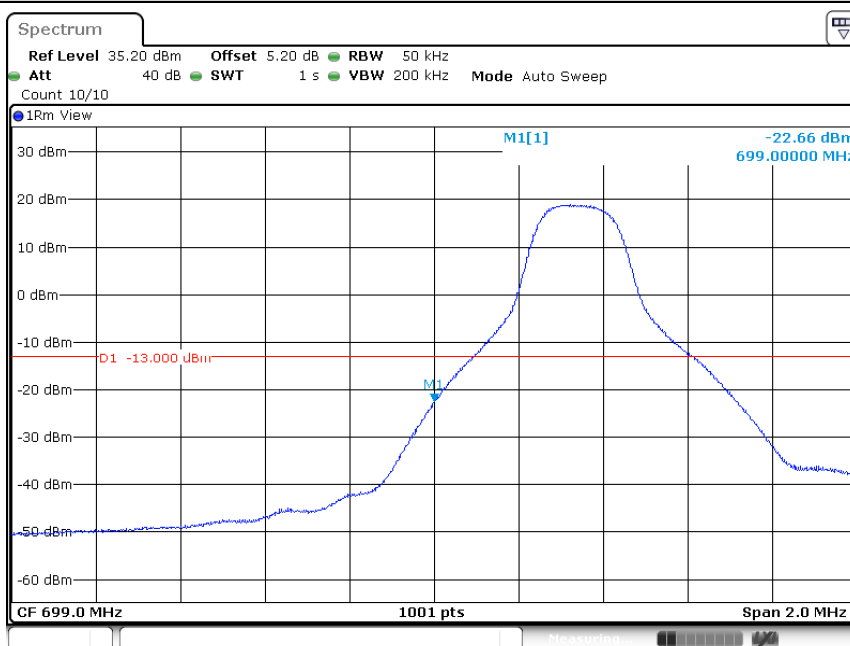


Band12-3MHz-16QAM-23165-15RB#0



Date: 30.MAY.2021 04:57:03

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



Date: 30.MAY.2021 04:57:29



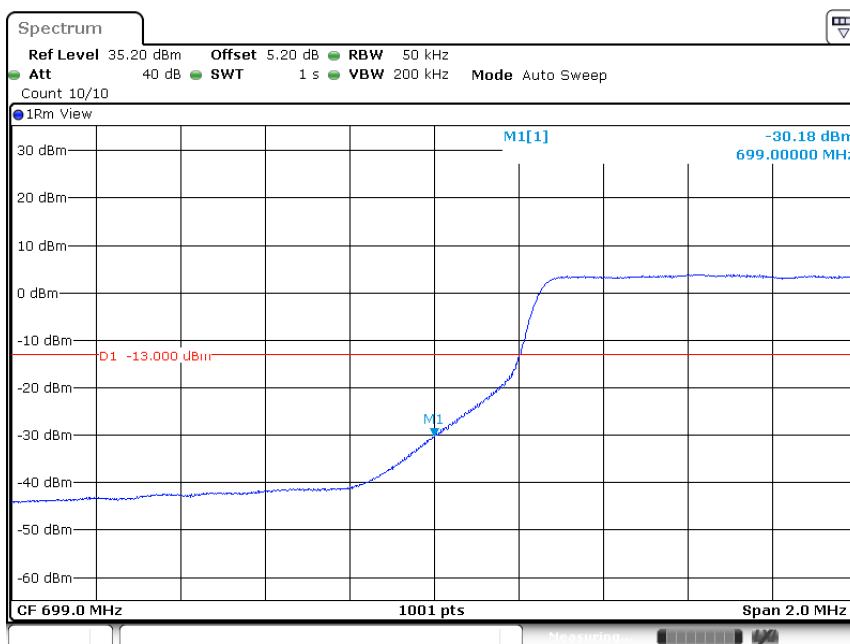
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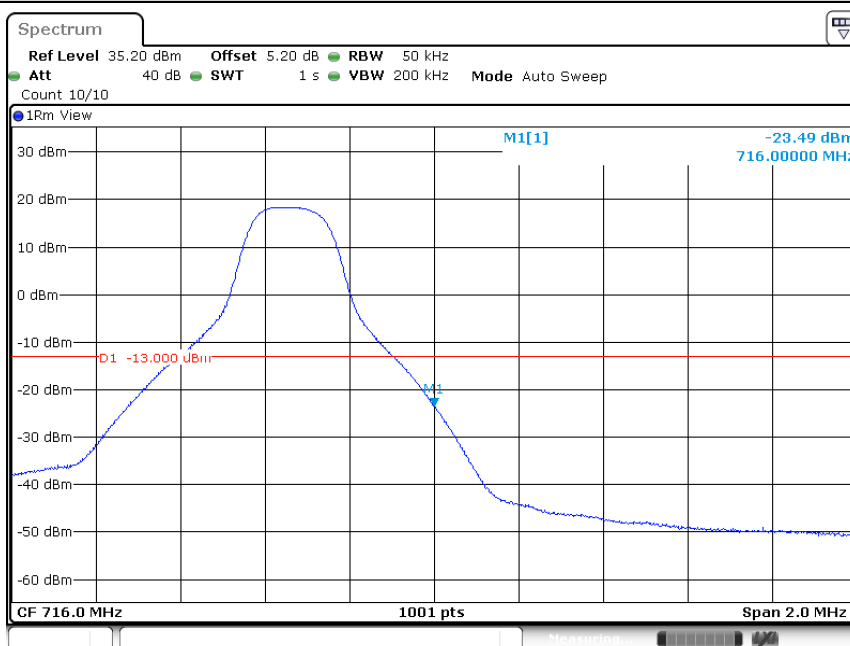


Band12-5MHz-QPSK-23035-25RB#0



Date: 30.MAY.2021 04:58:10

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

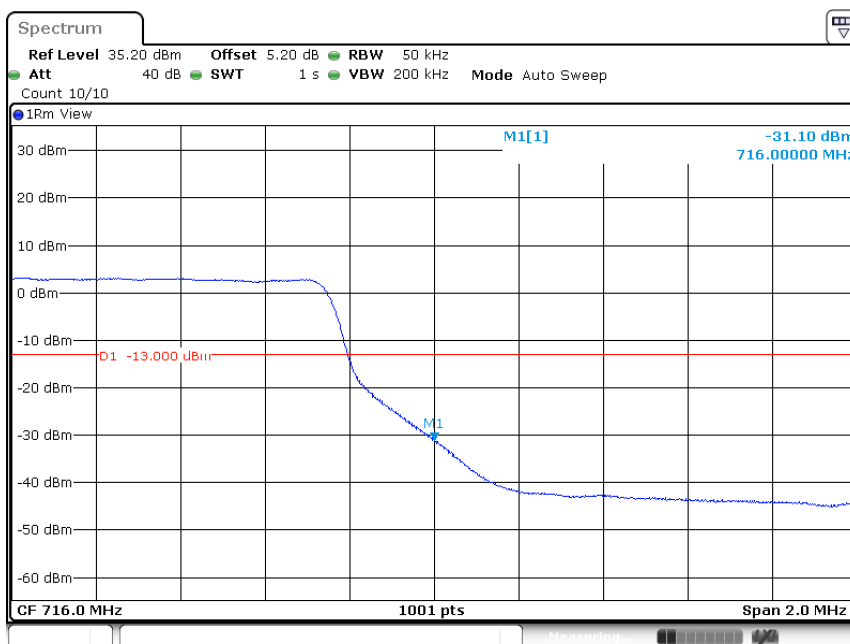


Date: 30.MAY.2021 04:58:56



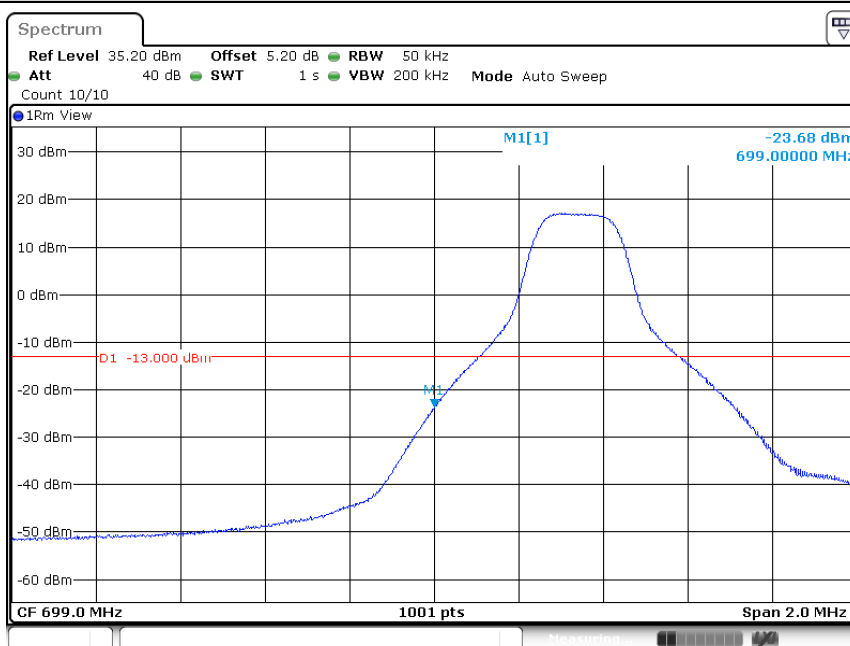


Band12-5MHz-QPSK-23155-25RB#0



Date: 30.MAY.2021 04:59:37

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



Date: 30.MAY.2021 04:57:50



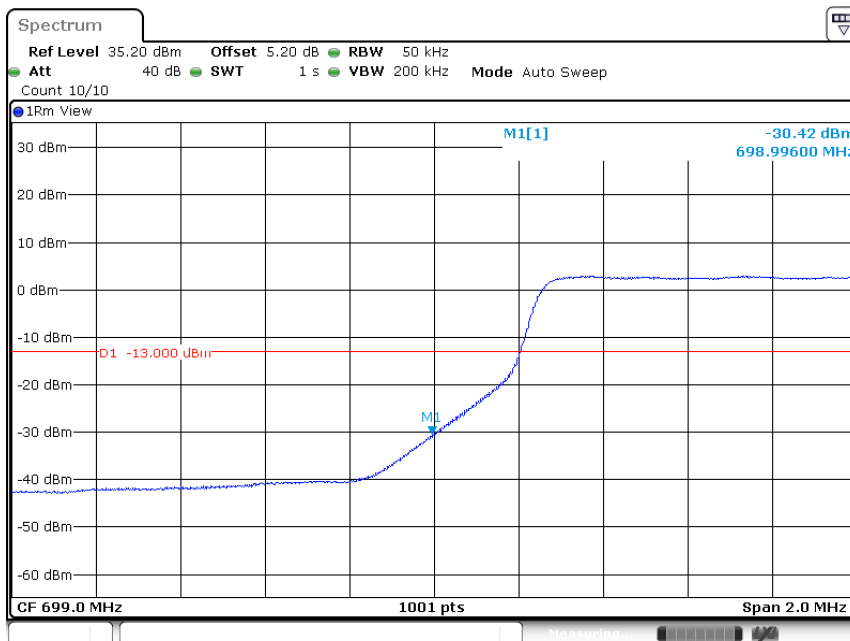
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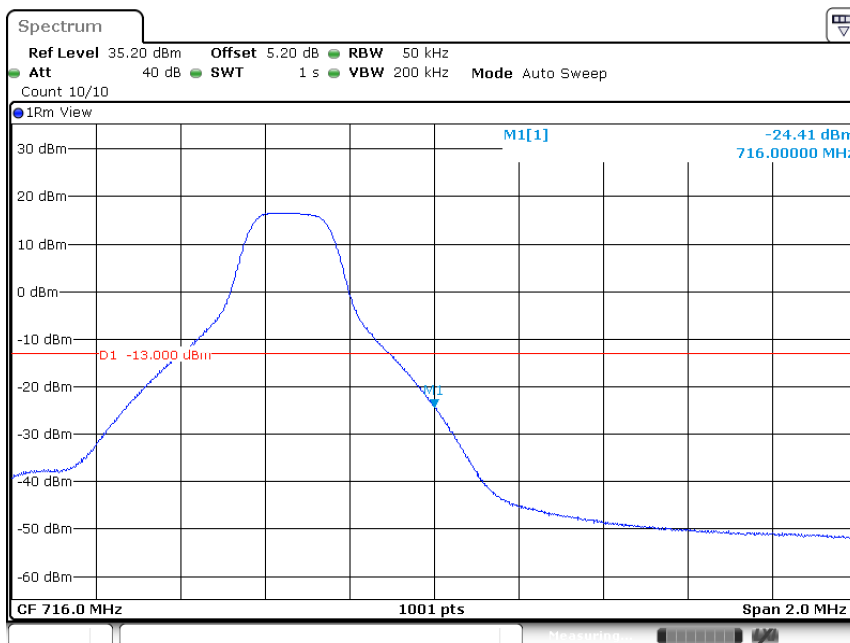


Band12-5MHz-16QAM-23035-25RB#0



Date: 30.MAY.2021 04:58:31

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



Date: 30.MAY.2021 04:59:16

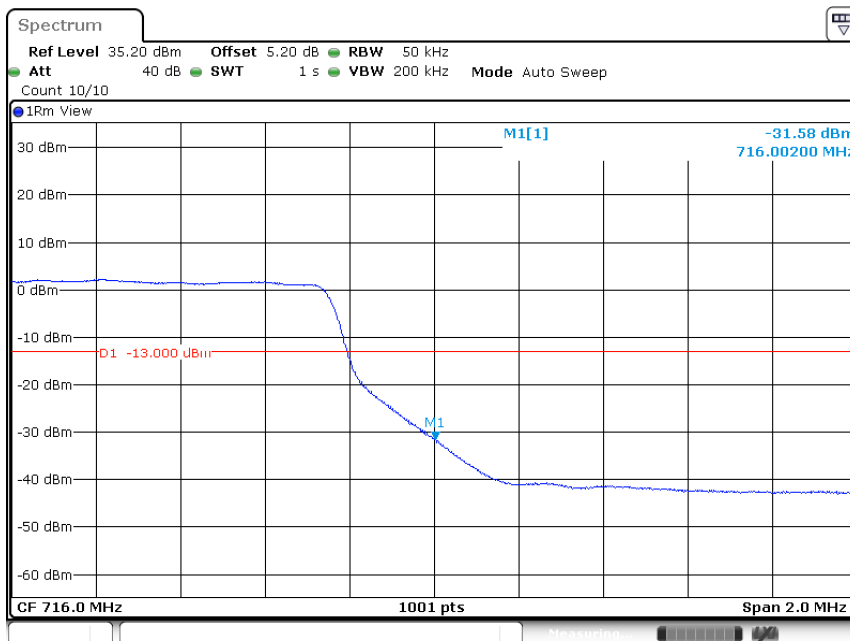


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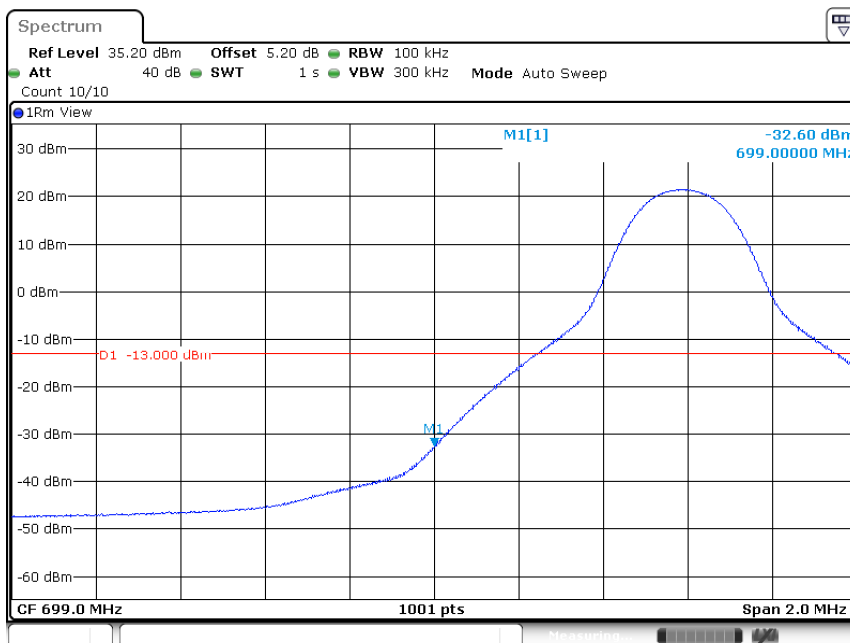


Band12-5MHz-16QAM-23155-25RB#0



Date: 30.MAY.2021 04:59:57

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



Date: 30.MAY.2021 05:00:24



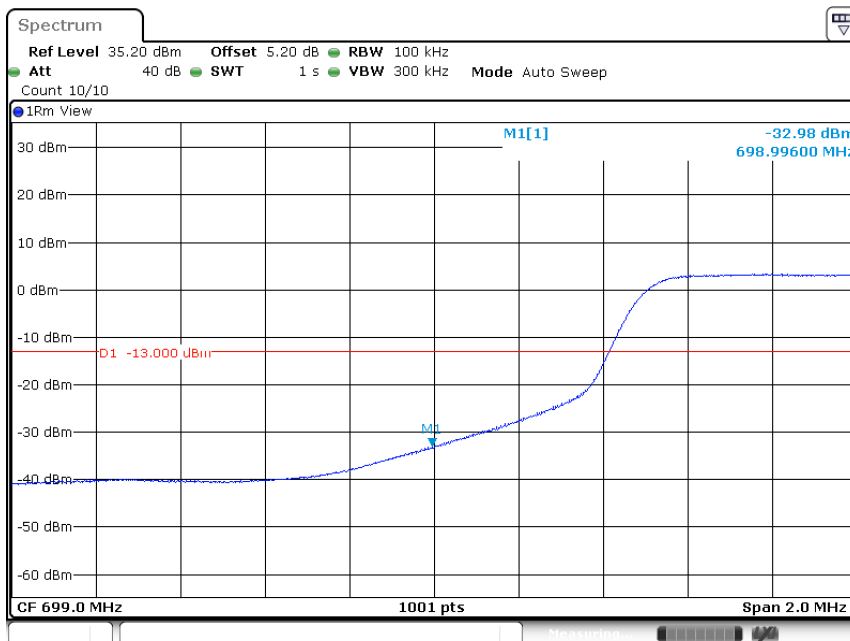
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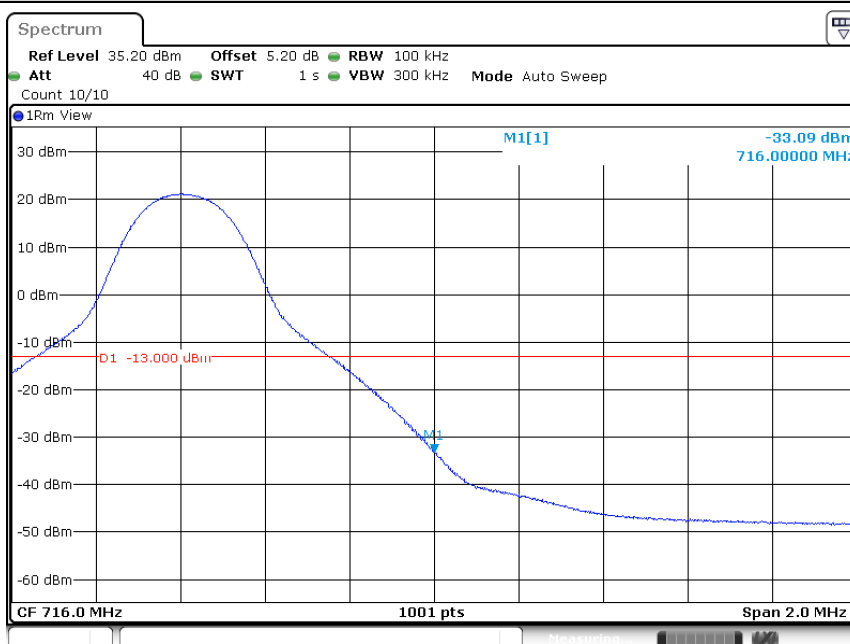


Band12-10MHz-QPSK-23060-50RB#0



Date: 30.MAY.2021 05:01:05

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



Date: 30.MAY.2021 05:01:50

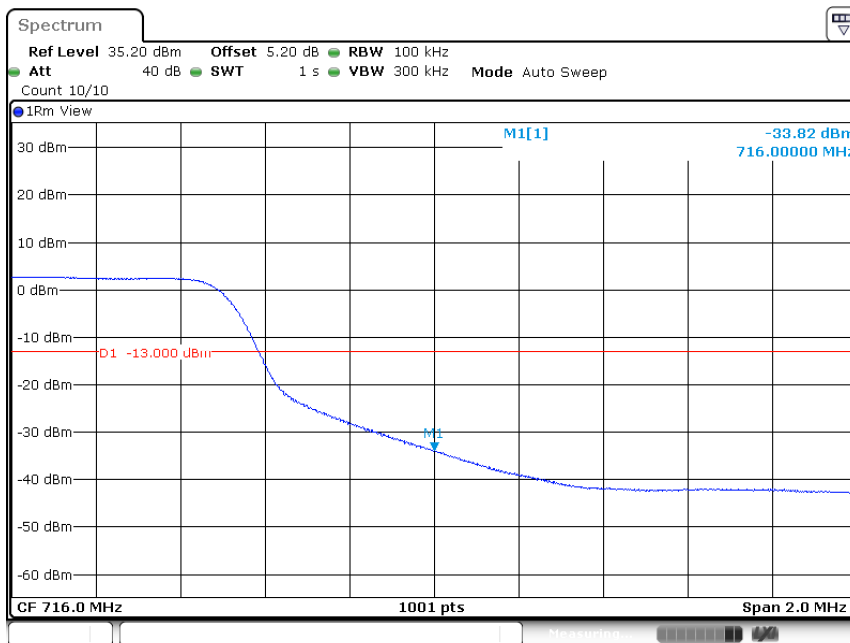


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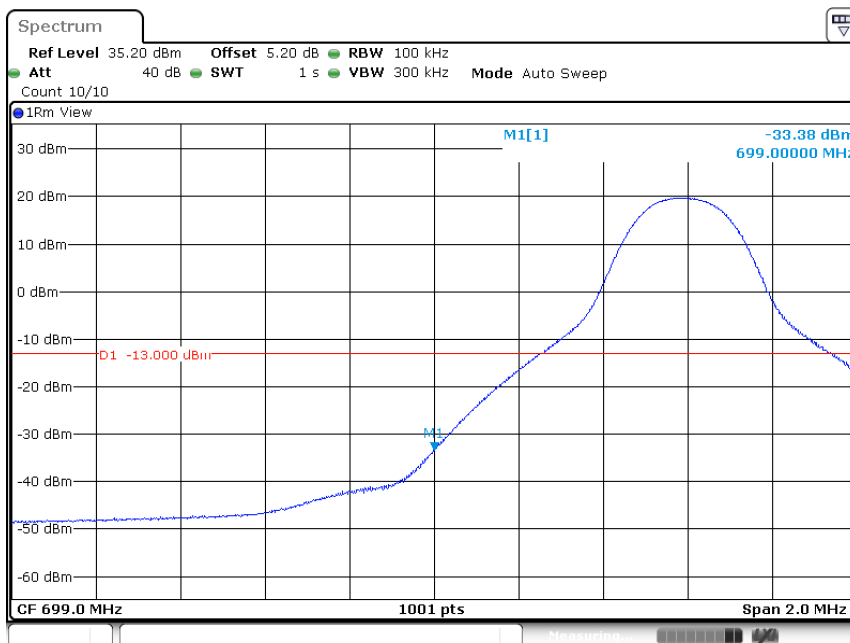


Band12-10MHz-QPSK-23130-50RB#0



Date: 30.MAY.2021 05:02:31

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



Date: 30.MAY.2021 05:00:44



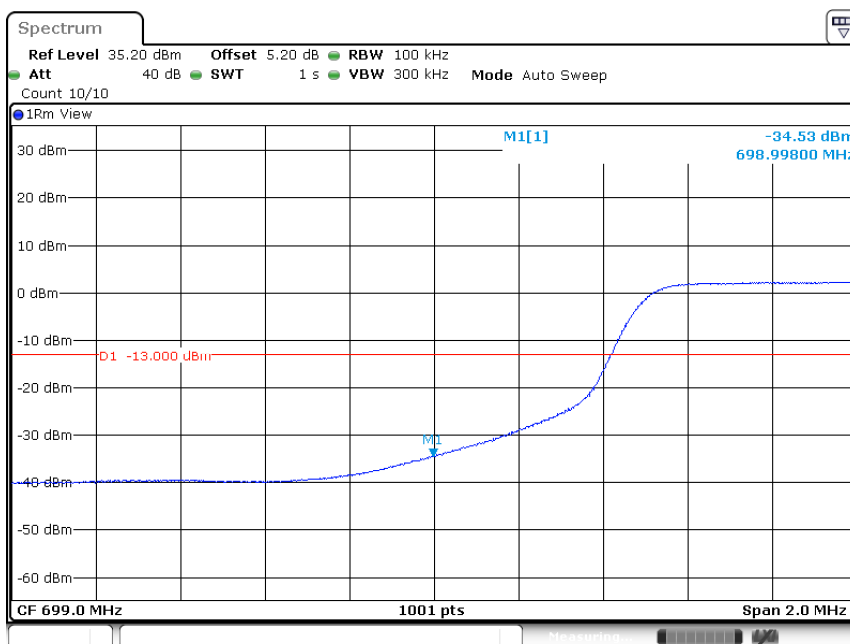
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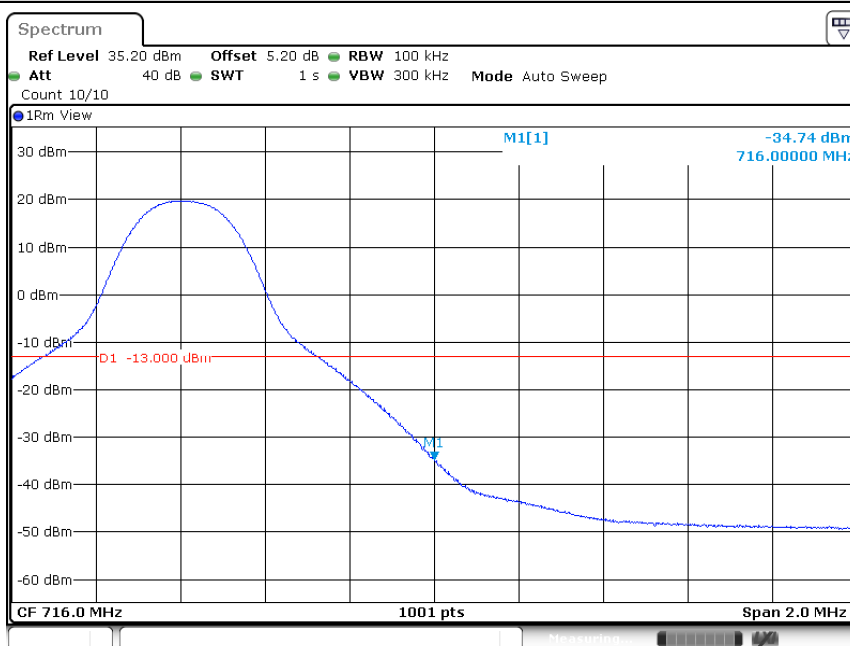


Band12-10MHz-16QAM-23060-50RB#0



Date: 30.MAY.2021 05:01:25

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



Date: 30.MAY.2021 05:02:11

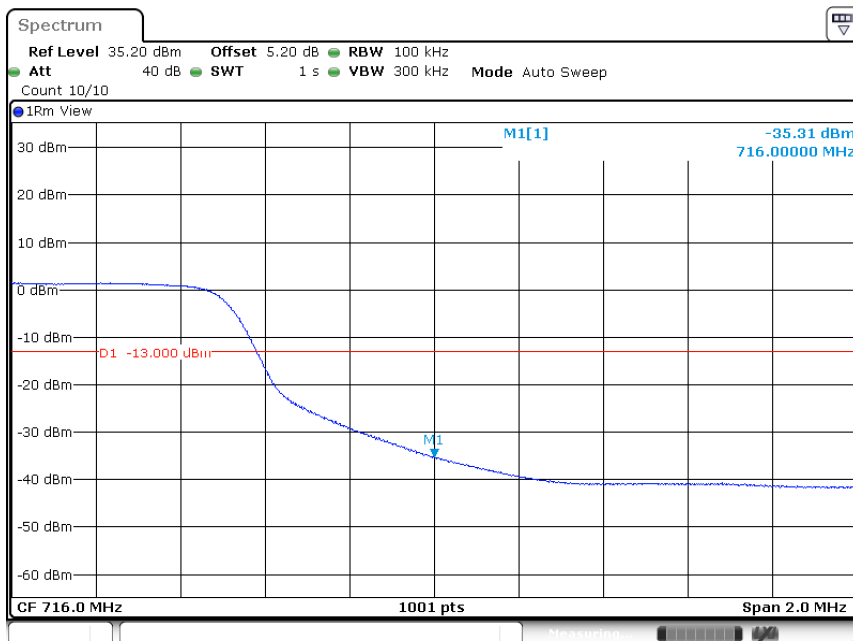


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Band12-10MHz-16QAM-23130-50RB#0



Date: 30.MAY.2021 05:02:52



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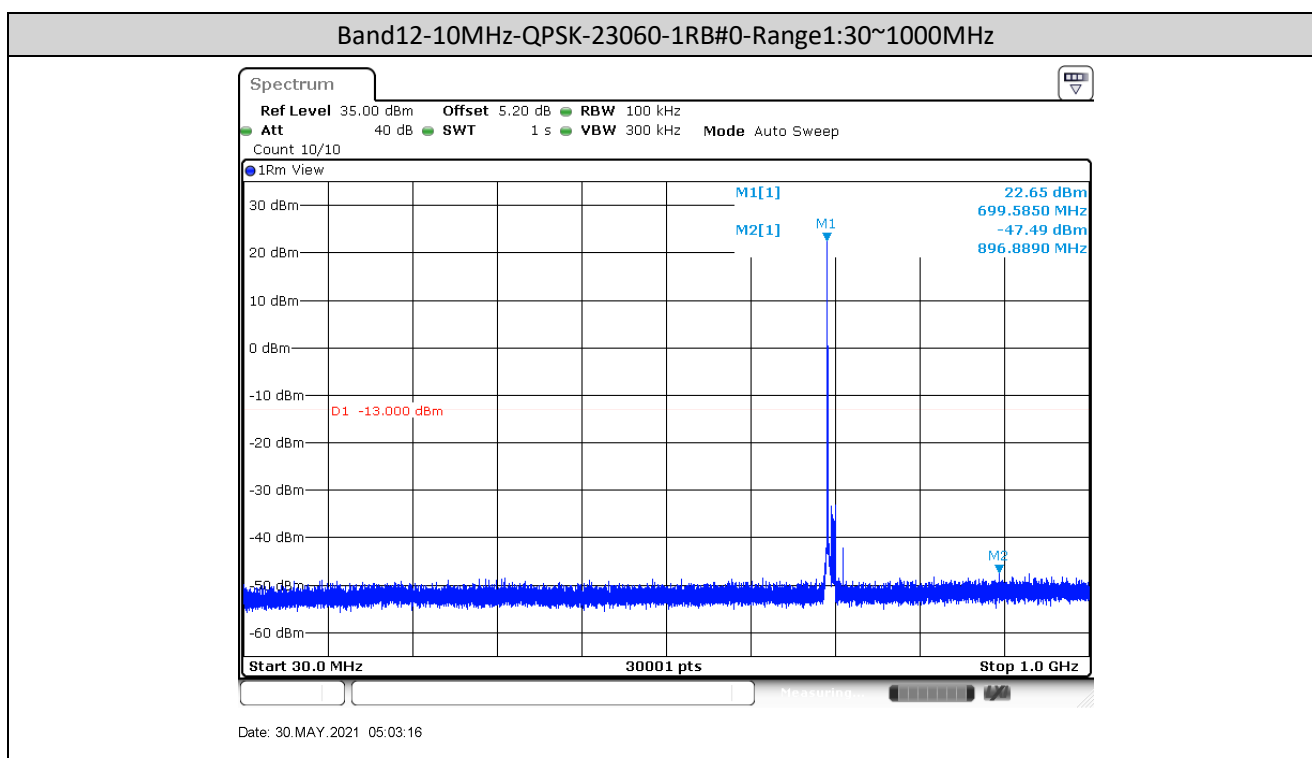
6. Spurious Emission at Antenna Terminal

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: 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.

Remark3: 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.

6.1. Test Plots



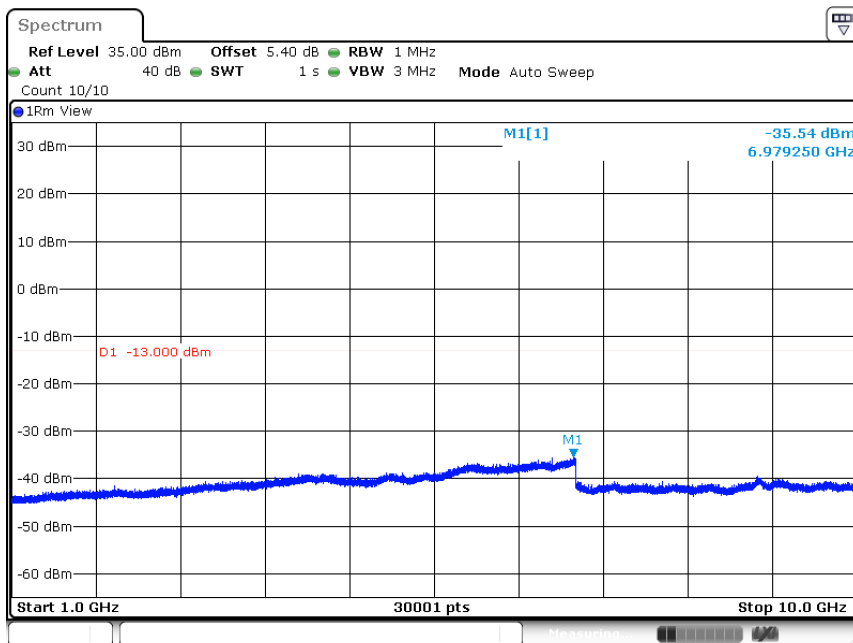
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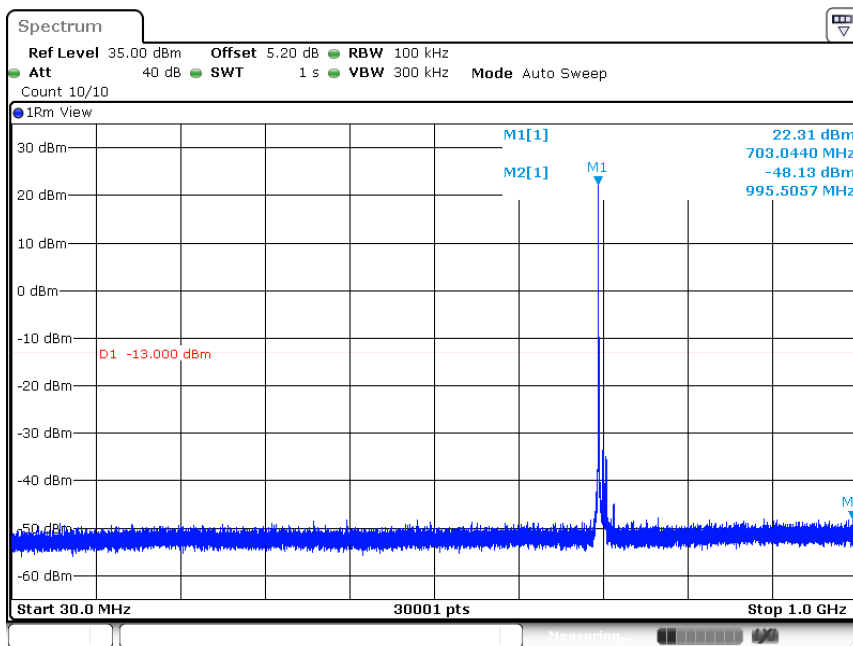
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Band12-10MHz-QPSK-23060-1RB#0-Range2:1000~10000MHz



Date: 30.MAY.2021 05:03:32

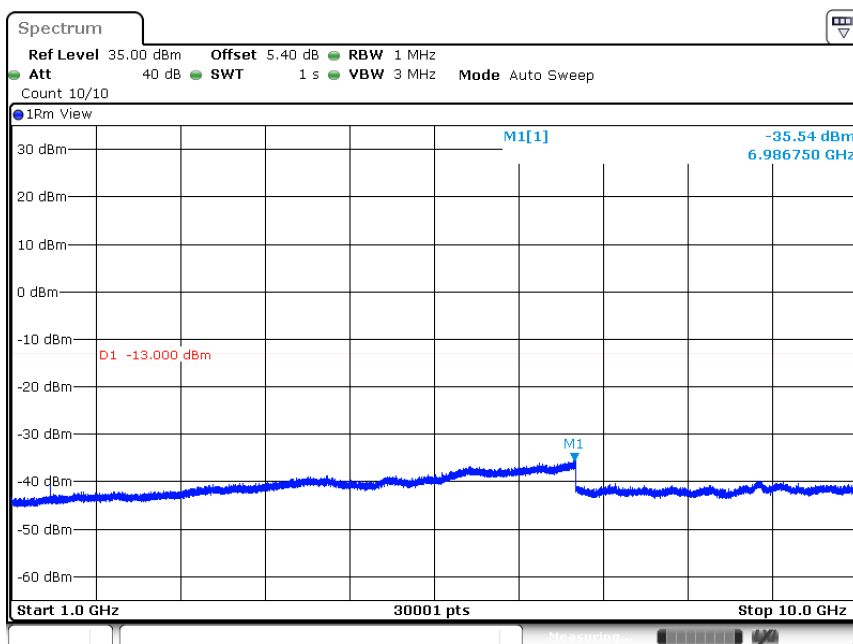
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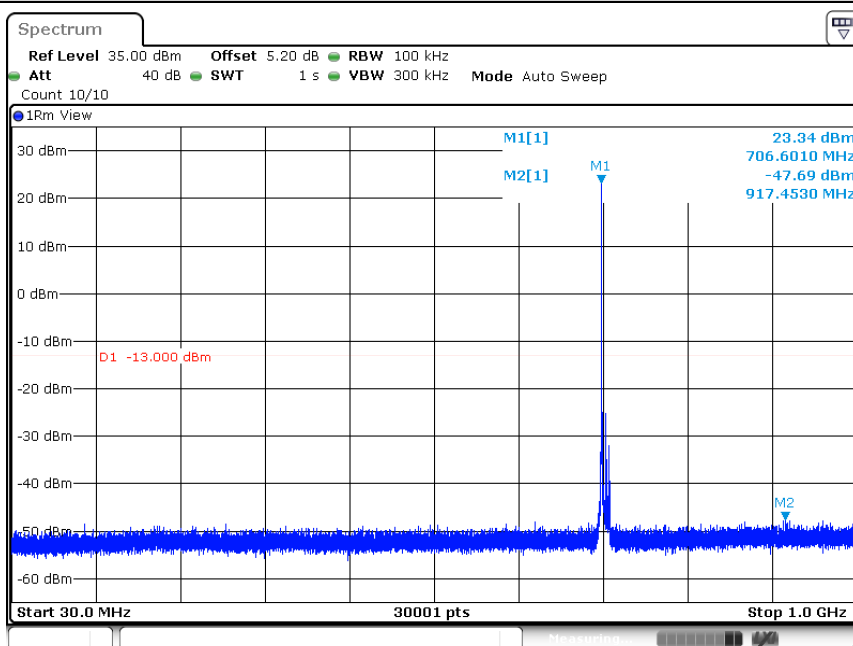


Band12-10MHz-QPSK-23095-1RB#0-Range2:1000~10000MHz



Date: 30.MAY.2021 05:04:42

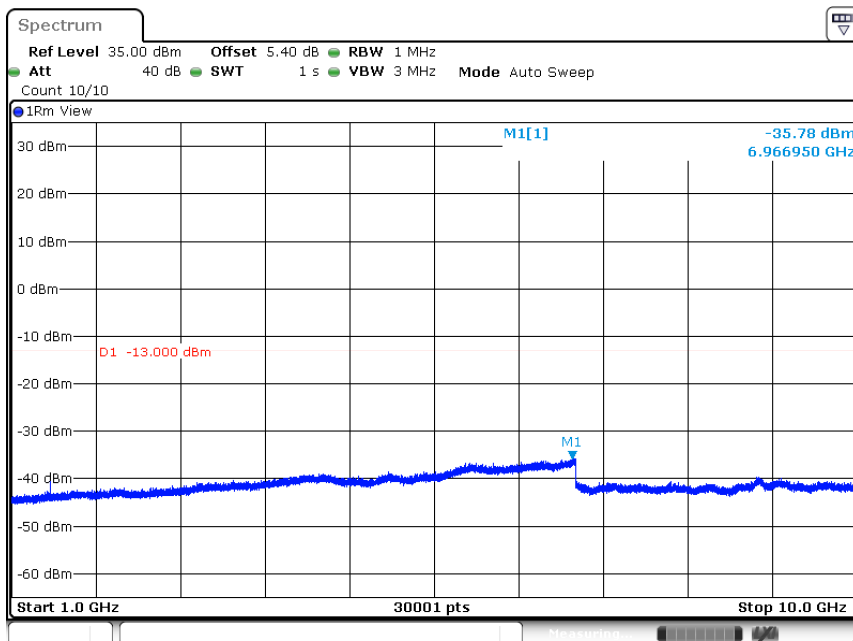
Band12-10MHz-QPSK-23130-1RB#0-Range1:30~1000MHz



Date: 30.MAY.2021 05:05:38

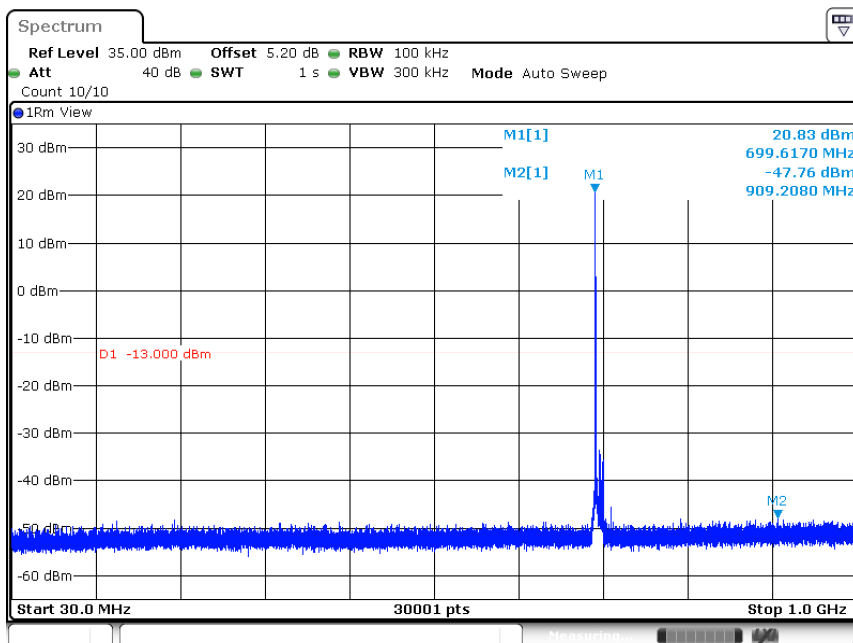


Band12-10MHz-QPSK-23130-1RB#0-Range2:1000~10000MHz



Date: 30.MAY.2021 05:05:54

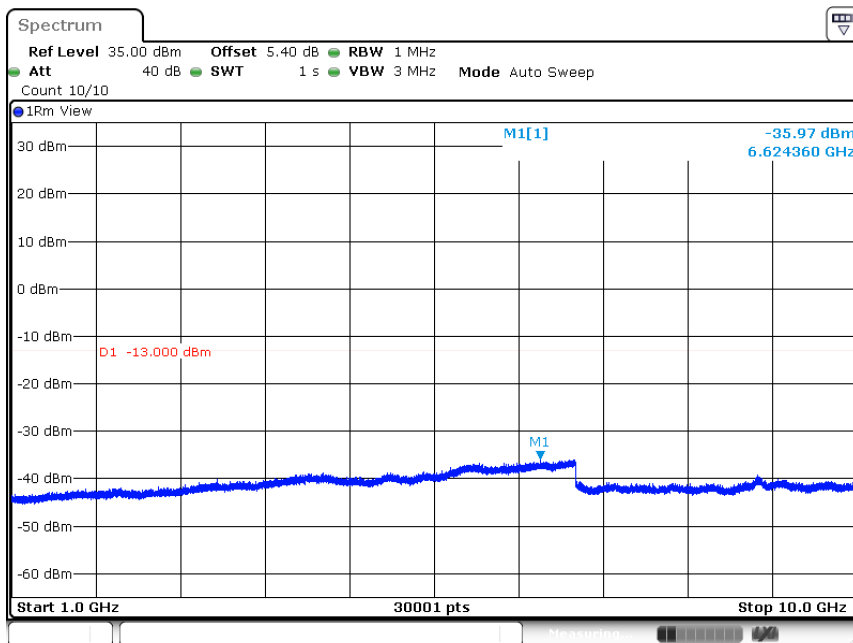
Band12-10MHz-16QAM-23060-1RB#0-Range1:30~1000MHz



Date: 30.MAY.2021 05:03:51

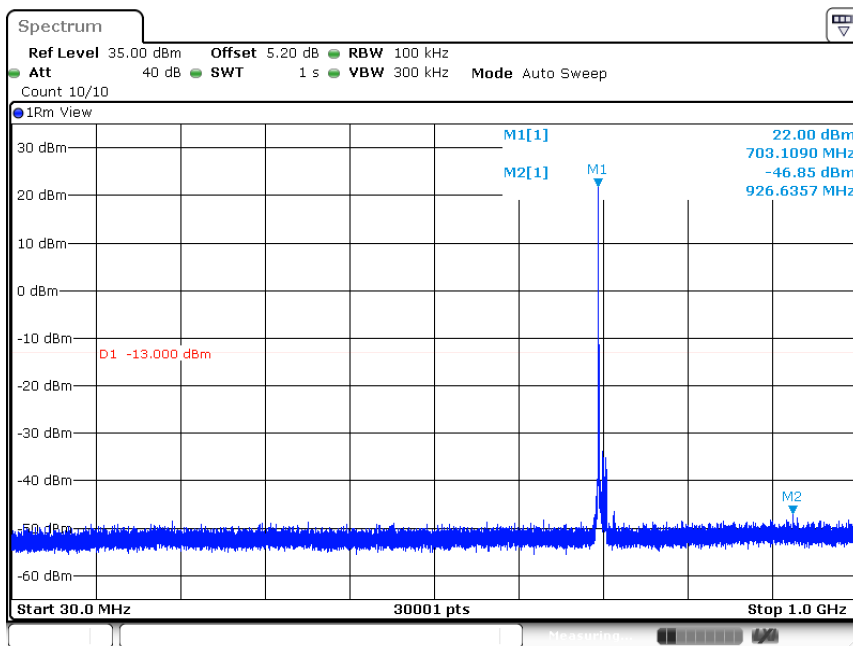


Band12-10MHz-16QAM-23060-1RB#0-Range2:1000~10000MHz



Date: 30.MAY.2021 05:04:07

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



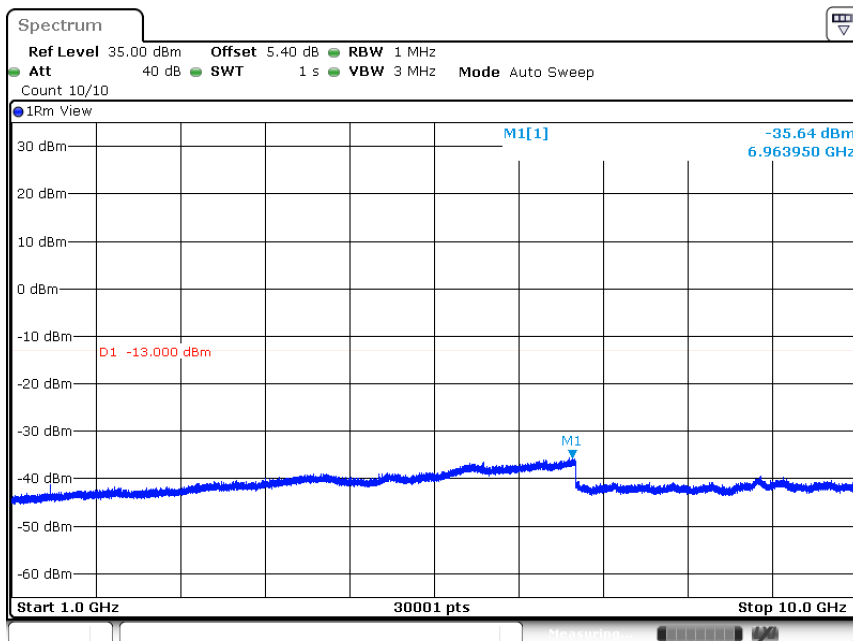
Date: 30.MAY.2021 05:05:02



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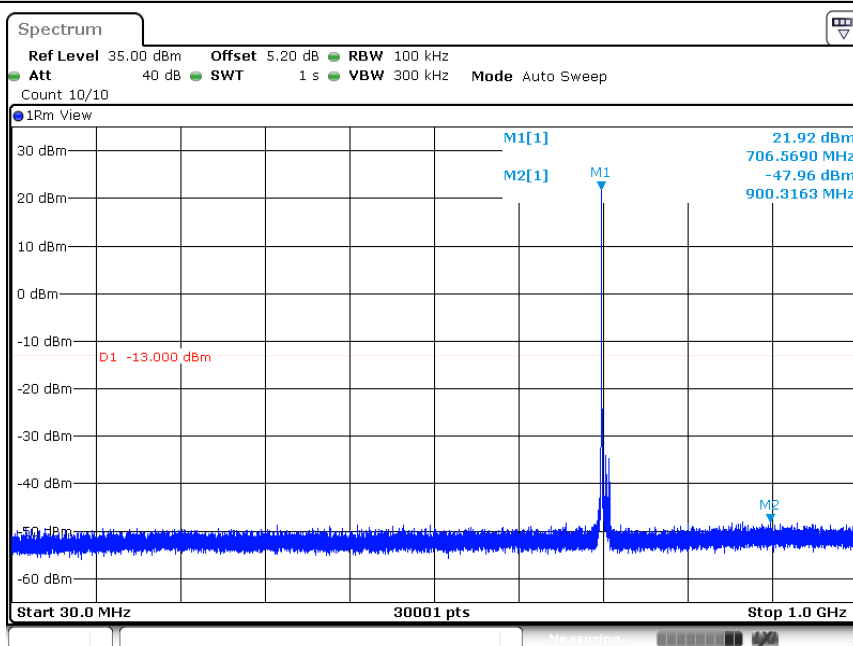
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Date: 30.MAY.2021 05:05:17

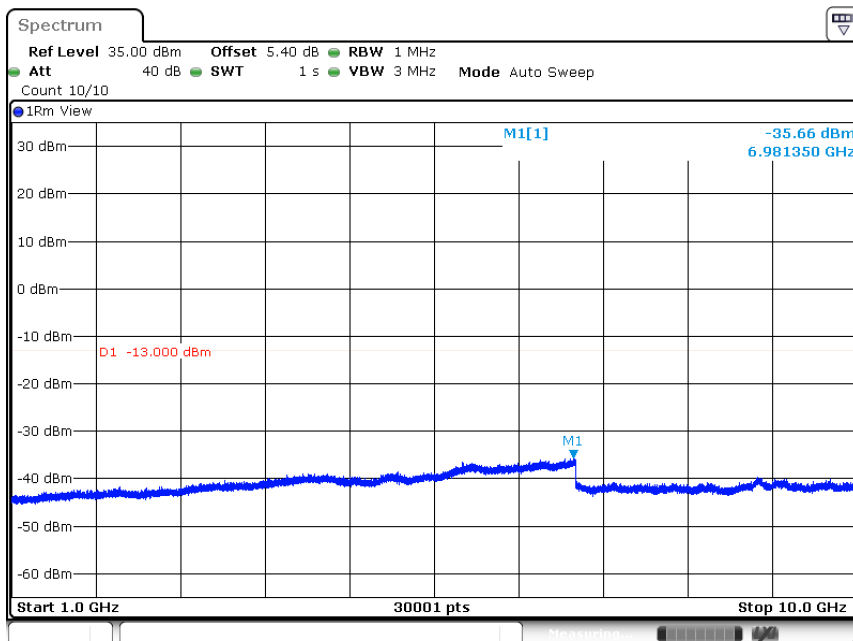
Band12-10MHz-16QAM-23130-1RB#0-Range1:30~1000MHz



Date: 30.MAY.2021 05:06:14



Band12-10MHz-16QAM-23130-1RB#0-Range2:1000~10000MHz



Date: 30.MAY.2021 05:06:29



7. Field Strength of Spurious Radiation

7.1. Test Band LTE_Band12

7.1.1. Test Channel = Low

Suspected Data List						
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1049.4025	27.40	-61.51	-13.00	48.51	Horizontal
2	1399.3200	38.66	-50.42	-13.00	37.42	Horizontal
3	2098.8549	34.69	-52.42	-13.00	39.42	Horizontal
4	3497.7249	58.54	-56.34	-13.00	43.34	Horizontal
5	4197.4099	62.16	-50.60	-13.00	37.60	Horizontal
6	9589.0795	47.15	-51.19	-13.00	38.19	Horizontal



7.2. Test Band LTE_Band12

7.2.1. Test Channel = Low

Suspected Data List						
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1399.3200	29.87	-59.21	-13.00	46.21	Vertical
2	2098.9549	33.80	-53.31	-13.00	40.31	Vertical
3	3498.0749	56.85	-58.02	-13.00	45.02	Vertical
4	4197.7599	62.63	-50.13	-13.00	37.13	Vertical
5	7461.3231	49.47	-52.88	-13.00	39.88	Vertical
6	9903.3952	46.82	-51.45	-13.00	38.45	Vertical



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7.3. Test Band LTE_Band12**7.3.1. Test Channel = Middle**

Suspected Data List						
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1406.0203	35.60	-53.47	-13.00	40.47	Horizontal
2	2109.3555	37.92	-49.23	-13.00	36.23	Horizontal
3	2984.8992	22.39	-60.56	-13.00	47.56	Horizontal
4	3515.2258	56.51	-58.48	-13.00	45.48	Horizontal
5	4218.4109	58.48	-54.24	-13.00	41.24	Horizontal
6	9638.7819	46.72	-51.49	-13.00	38.49	Horizontal



7.4. Test Band LTE_Band12

7.4.1. Test Channel = Middle

Suspected Data List						
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1406.1203	30.73	-58.34	-13.00	45.34	Vertical
2	2109.4555	35.88	-51.27	-13.00	38.27	Vertical
3	2982.9992	22.41	-60.55	-13.00	47.55	Vertical
4	3515.2258	54.14	-60.85	-13.00	47.85	Vertical
5	4218.4109	58.96	-53.76	-13.00	40.76	Vertical
6	9602.3801	46.78	-51.44	-13.00	38.44	Vertical



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7.5. Test Band LTE_Band12**7.5.1. Test Channel = High**

Suspected Data List						
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1413.2207	41.83	-47.22	-13.00	34.22	Horizontal
2	2119.8560	39.99	-47.21	-13.00	34.21	Horizontal
3	3533.0767	64.25	-50.94	-13.00	37.94	Horizontal
4	4239.7620	61.26	-51.40	-13.00	38.40	Horizontal
5	6865.2433	50.01	-54.61	-13.00	41.61	Horizontal
6	9596.0798	46.70	-51.57	-13.00	38.57	Horizontal



7.6.Test Band LTE_Band12

7.6.1. Test Channel = High

Suspected Data List						
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1413.2207	35.57	-53.48	-13.00	40.48	Vertical
2	2119.8560	36.41	-50.79	-13.00	37.79	Vertical
3	3533.0767	61.26	-53.93	-13.00	40.93	Vertical
4	4239.4120	61.79	-50.88	-13.00	37.88	Vertical
5	6970.9485	49.04	-54.68	-13.00	41.68	Vertical
6	9589.7795	46.97	-51.36	-13.00	38.36	Vertical

Remark:

- 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.
- 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.
- all modulation and all Bandwidth had been tested, but only the worst case data displayed in this report.



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Shenzhen Branch (CMAA) Calibration Laboratory

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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	-1.30	-0.001847	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	VN	NT	-1.40	-0.001989	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	VH	NT	0.10	0.000142	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VL	NT	-0.30	-0.000424	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VN	NT	-1.00	-0.001413	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VH	NT	-1.30	-0.001837	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VL	NT	-1.20	-0.001688	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VN	NT	-1.80	-0.002532	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VH	NT	-1.10	-0.001547	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VL	NT	0.70	0.000994	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VN	NT	0.20	0.000284	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VH	NT	0.40	0.000568	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VL	NT	-0.90	-0.001272	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VN	NT	-0.80	-0.001131	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VH	NT	0.40	0.000565	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VL	NT	-1.90	-0.002672	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VN	NT	-1.20	-0.001688	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VH	NT	-1.90	-0.002672	±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	-0.60	-0.000852	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	-20	0.50	0.000710	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	-10	-0.30	-0.000426	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	0	-1.20	-0.001705	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	10	0.30	0.000426	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	20	-1.30	-0.001847	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	30	-0.20	-0.000284	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	40	-1.40	-0.001989	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	50	-1.10	-0.001563	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-30	0.50	0.000707	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-20	-0.90	-0.001272	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-10	-0.20	-0.000283	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	0	-0.70	-0.000989	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	10	-0.90	-0.001272	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	20	-1.70	-0.002403	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	30	-1.00	-0.001413	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	40	-1.30	-0.001837	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	50	-2.10	-0.002968	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-30	-1.50	-0.002110	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-20	-1.80	-0.002532	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-10	-2.20	-0.003094	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	0	-2.50	-0.003516	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	10	-2.90	-0.004079	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	20	-2.40	-0.003376	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	30	-2.10	-0.002954	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	40	-2.10	-0.002954	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	50	-1.60	-0.002250	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	-30	-0.80	-0.001136	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	-20	0.10	0.000142	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	-10	-1.50	-0.002131	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	0	1.00	0.001420	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	10	-0.50	-0.000710	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	20	0.30	0.000426	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	30	-0.20	-0.000284	±2.5	PASS



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Band12	10MHz	16QAM	23060	50RB#0	NV	40	0.60	0.000852	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	50	-0.20	-0.000284	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	-30	0.80	0.001131	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	-20	-0.20	-0.000283	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	-10	-0.30	-0.000424	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	0	-1.40	-0.001979	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	10	-2.10	-0.002968	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	20	-0.80	-0.001131	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	30	1.00	0.001413	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	40	-0.60	-0.000848	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	50	0.60	0.000848	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	-30	-0.40	-0.000563	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	-20	-1.40	-0.001969	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	-10	-2.70	-0.003797	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	0	-1.50	-0.002110	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	10	-0.70	-0.000985	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	20	-1.60	-0.002250	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	30	-0.90	-0.001266	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	40	-0.50	-0.000703	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	50	-1.20	-0.001688	±2.5	PASS



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