



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	23.31	20.96	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	23.46	21.11	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	23.48	21.13	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#0	23.30	20.95	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#1	23.47	21.12	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#3	23.56	21.21	34.77	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	22.44	20.09	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	23.32	20.97	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#2	23.23	20.88	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#5	23.27	20.92	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#0	23.34	20.99	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#1	23.39	21.04	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#3	23.27	20.92	34.77	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	22.34	19.99	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	23.38	21.03	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	23.35	21.00	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	23.24	20.89	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#0	23.32	20.97	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#1	23.30	20.95	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#3	23.27	20.92	34.77	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	22.43	20.08	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	22.15	19.80	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	21.90	19.55	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	22.03	19.68	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#0	21.81	19.46	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#1	22.17	19.82	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#3	21.99	19.64	34.77	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	20.96	18.61	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	21.85	19.50	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#2	21.99	19.64	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#5	21.80	19.45	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#0	21.73	19.38	34.77	PASS



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Band12	1.4MHz	16QAM	23095	3RB#1	21.72	19.37	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#3	21.90	19.55	34.77	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	20.76	18.41	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	21.89	19.54	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	21.80	19.45	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#5	21.83	19.48	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#0	21.98	19.63	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#1	21.89	19.54	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#3	21.95	19.60	34.77	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	21.05	18.70	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#0	23.51	21.16	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#8	23.53	21.18	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#14	23.25	20.90	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#0	22.45	20.10	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#4	22.67	20.32	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#7	22.51	20.16	34.77	PASS
Band12	3MHz	QPSK	23025	15RB#0	22.46	20.11	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#0	23.13	20.78	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#8	23.42	21.07	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#14	22.95	20.60	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#0	22.36	20.01	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#4	22.51	20.16	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#7	22.44	20.09	34.77	PASS
Band12	3MHz	QPSK	23095	15RB#0	22.42	20.07	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#0	23.44	21.09	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#8	23.52	21.17	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#14	23.14	20.79	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#0	22.57	20.22	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#4	22.32	19.97	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#7	22.32	19.97	34.77	PASS
Band12	3MHz	QPSK	23165	15RB#0	22.46	20.11	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#0	21.98	19.63	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#8	21.80	19.45	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#14	21.80	19.45	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#0	20.73	18.38	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#4	21.01	18.66	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#7	21.02	18.67	34.77	PASS
Band12	3MHz	16QAM	23025	15RB#0	20.94	18.59	34.77	PASS





Band12	3MHz	16QAM	23095	1RB#0	21.97	19.62	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#8	21.69	19.34	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#14	21.68	19.33	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#0	20.80	18.45	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#4	20.82	18.47	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#7	20.79	18.44	34.77	PASS
Band12	3MHz	16QAM	23095	15RB#0	20.74	18.39	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#0	21.86	19.51	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#8	21.90	19.55	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#14	21.47	19.12	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#0	20.98	18.63	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#4	20.96	18.61	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#7	20.94	18.59	34.77	PASS
Band12	3MHz	16QAM	23165	15RB#0	21.01	18.66	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#0	23.32	20.97	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#12	23.73	21.38	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#24	23.19	20.84	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#0	22.46	20.11	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#6	22.72	20.37	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#13	22.51	20.16	34.77	PASS
Band12	5MHz	QPSK	23035	25RB#0	23.05	20.70	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#0	23.16	20.81	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#12	23.20	20.85	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#24	22.96	20.61	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#0	22.28	19.93	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#6	22.40	20.05	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#13	22.24	19.89	34.77	PASS
Band12	5MHz	QPSK	23095	25RB#0	22.34	19.99	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#0	22.94	20.59	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#12	23.70	21.35	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#24	23.06	20.71	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#0	22.43	20.08	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#6	22.49	20.14	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#13	22.16	19.81	34.77	PASS
Band12	5MHz	QPSK	23155	25RB#0	24.42	22.07	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#0	21.91	19.56	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#12	22.28	19.93	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#24	22.05	19.70	34.77	PASS



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Band12	5MHz	16QAM	23035	12RB#0	20.89	18.54	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#6	20.95	18.60	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#13	21.02	18.67	34.77	PASS
Band12	5MHz	16QAM	23035	25RB#0	20.92	18.57	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#0	21.92	19.57	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#12	21.87	19.52	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#24	21.73	19.38	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#0	20.79	18.44	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#6	20.86	18.51	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#13	20.84	18.49	34.77	PASS
Band12	5MHz	16QAM	23095	25RB#0	20.76	18.41	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#0	21.85	19.50	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#12	22.34	19.99	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#24	21.43	19.08	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#0	20.98	18.63	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#6	21.14	18.79	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#13	20.86	18.51	34.77	PASS
Band12	5MHz	16QAM	23155	25RB#0	20.81	18.46	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#0	23.43	21.08	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#24	23.62	21.27	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#49	22.65	20.30	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#0	22.62	20.27	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#12	22.64	20.29	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#25	22.19	19.84	34.77	PASS
Band12	10MHz	QPSK	23060	50RB#0	21.91	19.56	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#0	23.00	20.65	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#24	23.46	21.11	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#49	22.99	20.64	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#0	22.48	20.13	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#12	22.42	20.07	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#25	22.03	19.68	34.77	PASS
Band12	10MHz	QPSK	23095	50RB#0	21.89	19.54	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#0	23.14	20.79	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#24	23.86	21.51	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#49	23.00	20.65	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#0	22.39	20.04	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#12	22.59	20.24	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#25	22.36	20.01	34.77	PASS



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Band12	10MHz	QPSK	23130	50RB#0	21.82	19.47	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#0	21.83	19.48	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#24	21.33	18.98	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#49	21.52	19.17	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#0	20.97	18.62	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#12	21.06	18.71	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#25	20.76	18.41	34.77	PASS
Band12	10MHz	16QAM	23060	27RB#0	21.00	18.65	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#0	21.93	19.58	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#24	21.99	19.64	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#49	21.52	19.17	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#0	20.82	18.47	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#12	20.93	18.58	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#25	20.74	18.39	34.77	PASS
Band12	10MHz	16QAM	23095	27RB#0	20.85	18.50	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#0	21.48	19.13	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#24	22.07	19.72	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#49	21.49	19.14	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#0	20.82	18.47	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#12	21.15	18.80	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#25	20.94	18.59	34.77	PASS
Band12	10MHz	16QAM	23130	27RB#0	20.71	18.36	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 [dBd]

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



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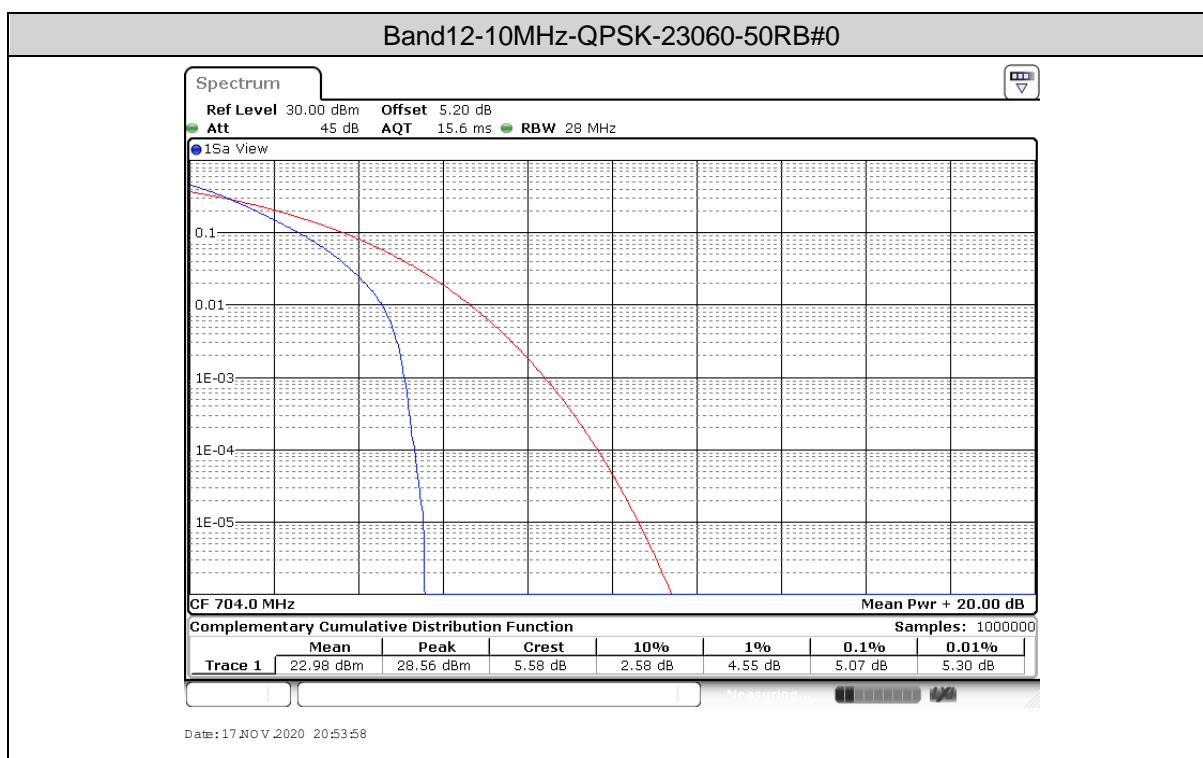
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2 Peak-to-Average Ratio (CCDF)

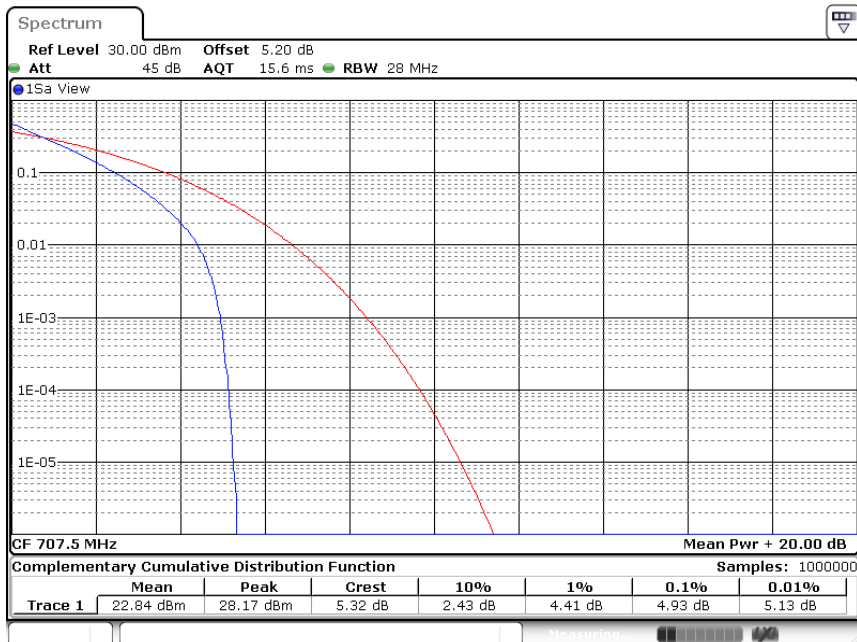
2.1 Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band12	10MHz	QPSK	23060	50RB#0	5.07	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	4.93	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	5.13	13	PASS
Band12	10MHz	16QAM	23060	27RB#0	5.91	13	PASS
Band12	10MHz	16QAM	23095	27RB#0	5.91	13	PASS
Band12	10MHz	16QAM	23130	27RB#0	5.91	13	PASS

2.2 Test Plots

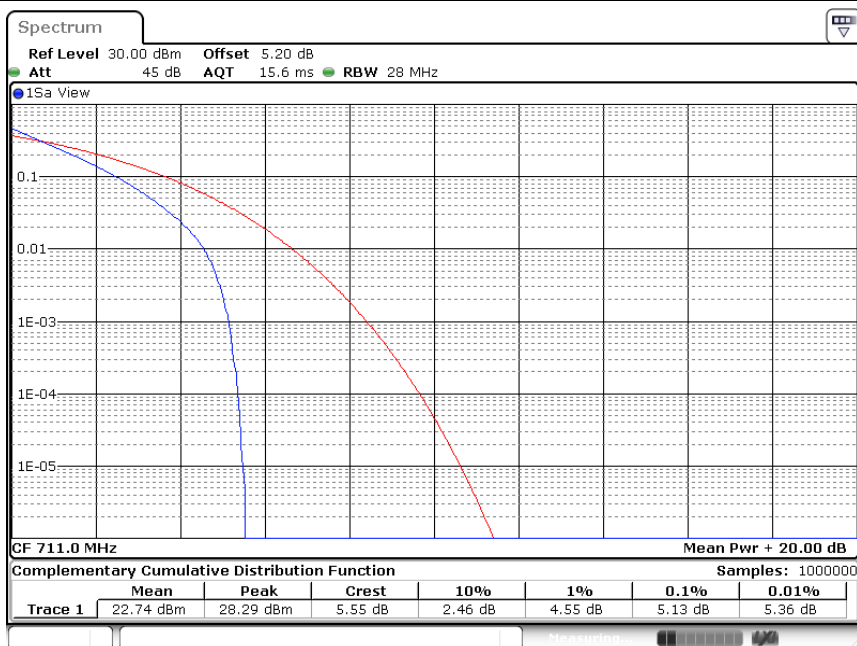


Band12-10MHz-QPSK-23095-50RB#0



Date: 17 NOV 2020 20:54:15

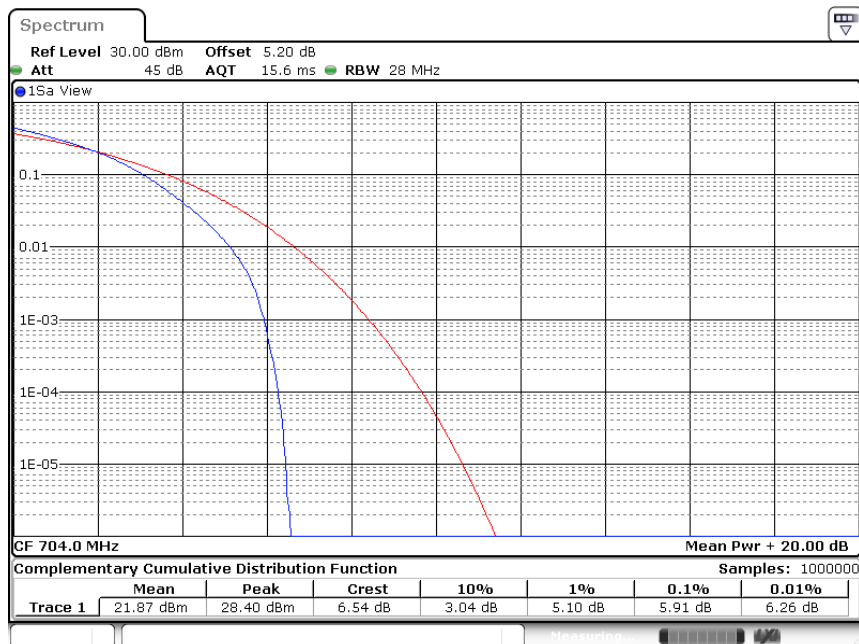
Band12-10MHz-QPSK-23130-50RB#0



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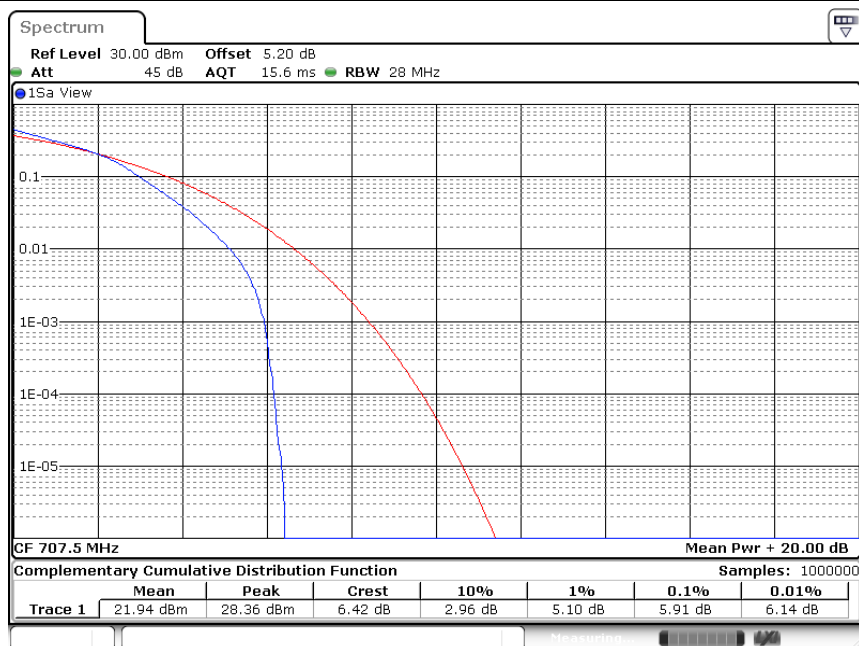


Band12-10MHz-16QAM-23060-27RB#0



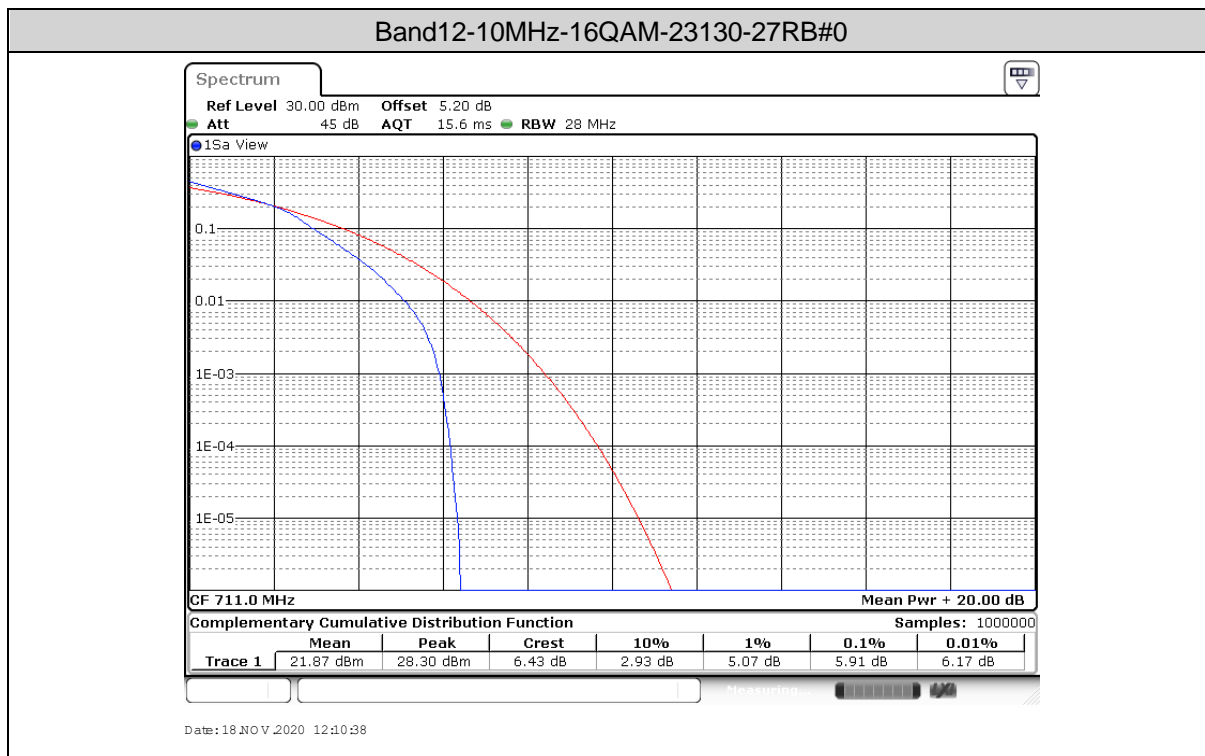
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Band12-10MHz-16QAM-23095-27RB#0



Date: 18 NOV 2020 12:10:22



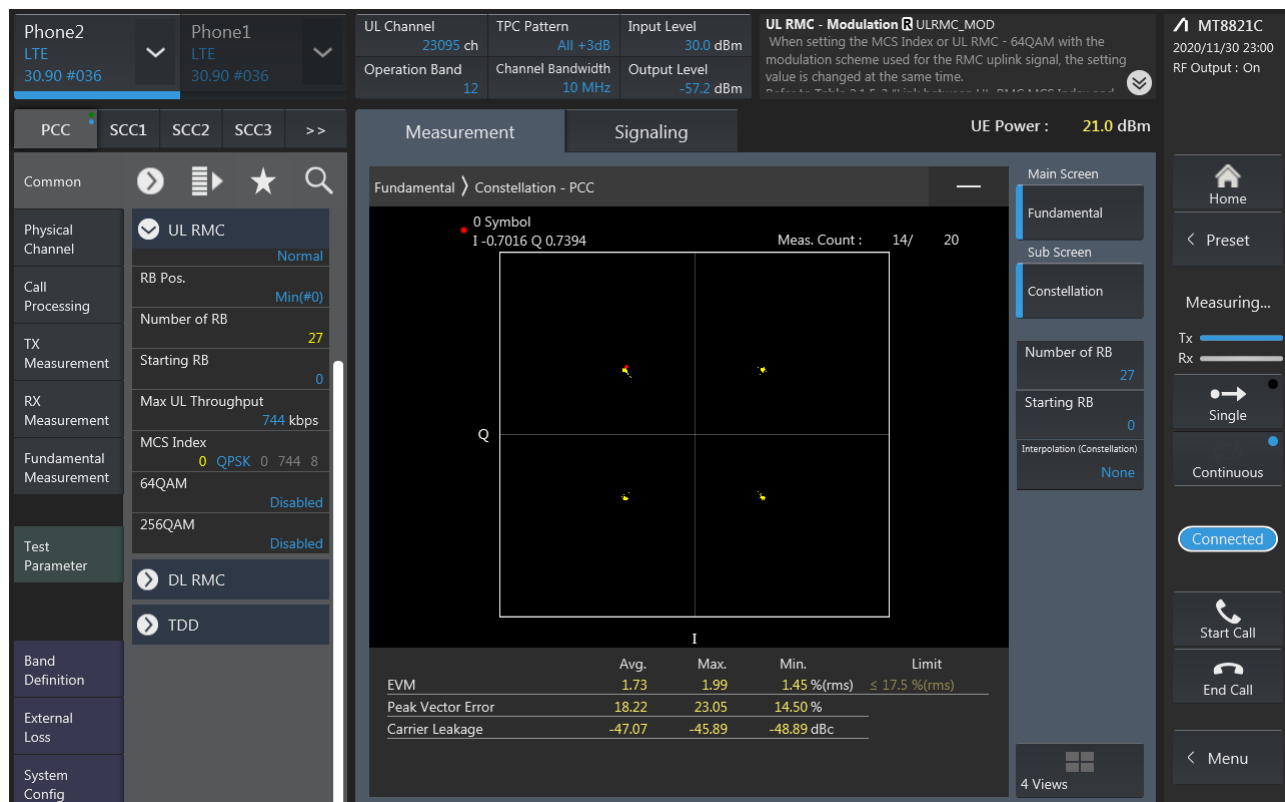




3 Modulation Characteristics

3.1 Test Mode = LTE /TM1 10MHz

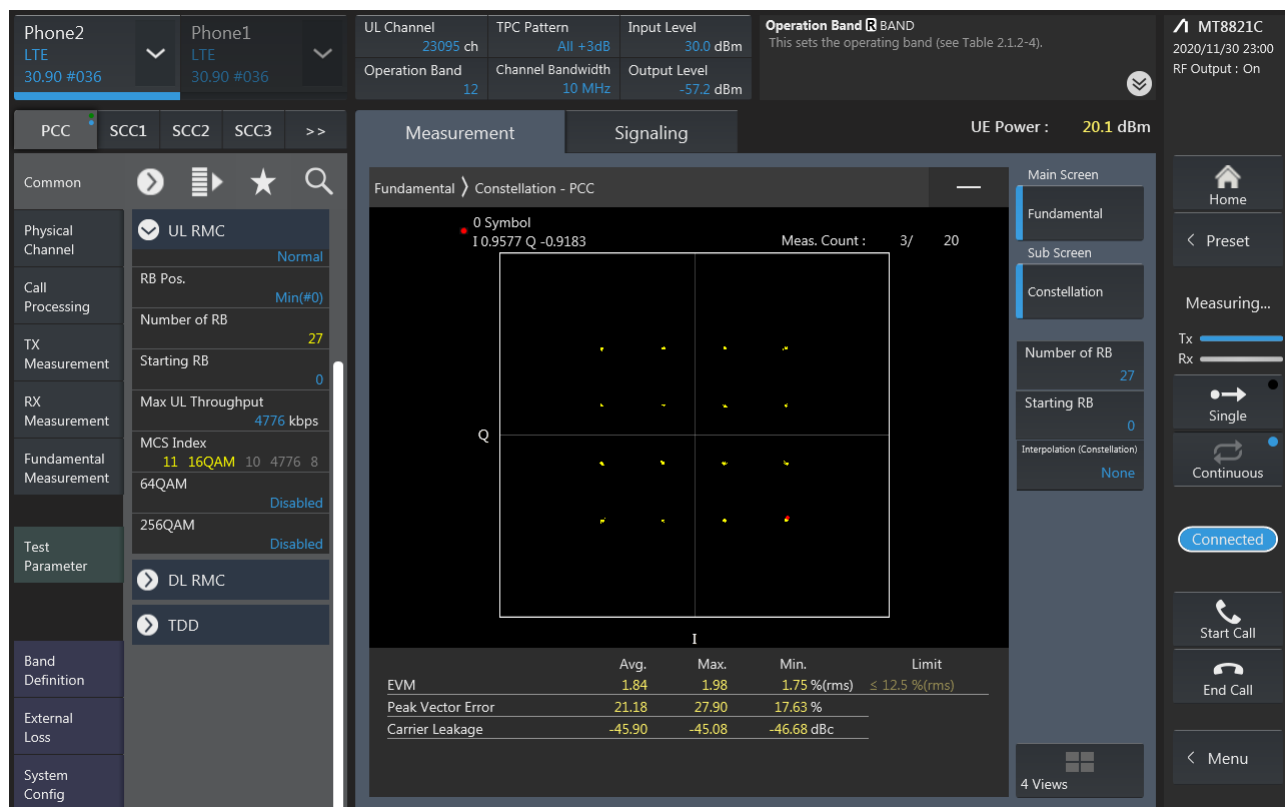
3.1.1 Test Channel = MCH





3.2 Test Mode = LTE /TM2 10MHz

3.2.1 Test Channel = MCH





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	1.293	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.091	1.290	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.091	1.305	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.094	1.287	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.091	1.284	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.697	2.982	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.697	2.988	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.697	2.976	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.685	2.964	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.685	2.970	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.685	2.970	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.466	4.920	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.466	4.920	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.466	4.920	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.476	4.910	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.486	4.920	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.486	4.940	PASS
Band12	10MHz	QPSK	23060	27RB#0	4.855	5.540	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.891	9.600	PASS
Band12	10MHz	QPSK	23095	27RB#0	4.835	5.540	PASS
Band12	10MHz	QPSK	23095	50RB#0	8.931	9.680	PASS
Band12	10MHz	QPSK	23130	27RB#0	4.855	5.620	PASS
Band12	10MHz	QPSK	23130	50RB#0	8.911	9.720	PASS
Band12	10MHz	16QAM	23060	27RB#0	4.855	5.700	PASS
Band12	10MHz	16QAM	23095	27RB#0	4.855	5.600	PASS
Band12	10MHz	16QAM	23130	27RB#0	4.875	5.700	PASS



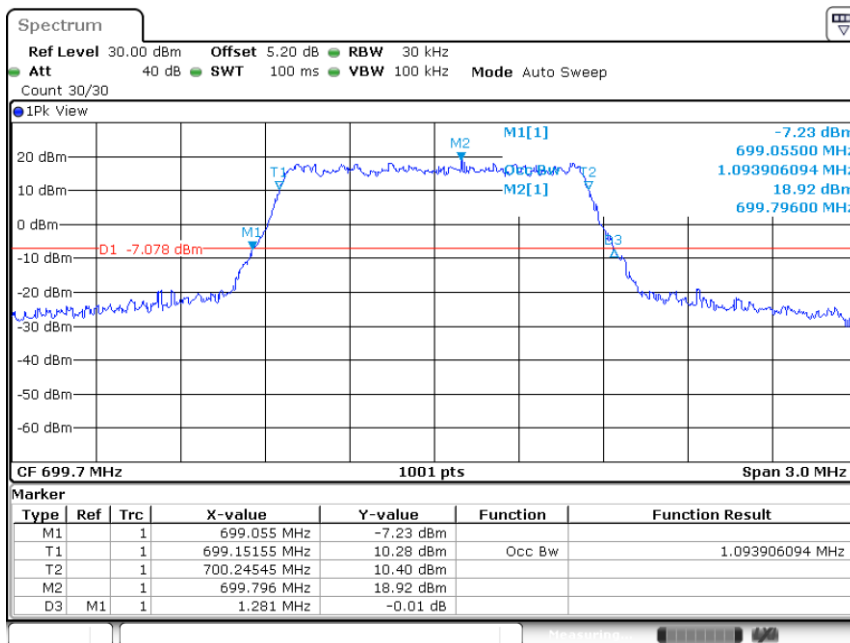
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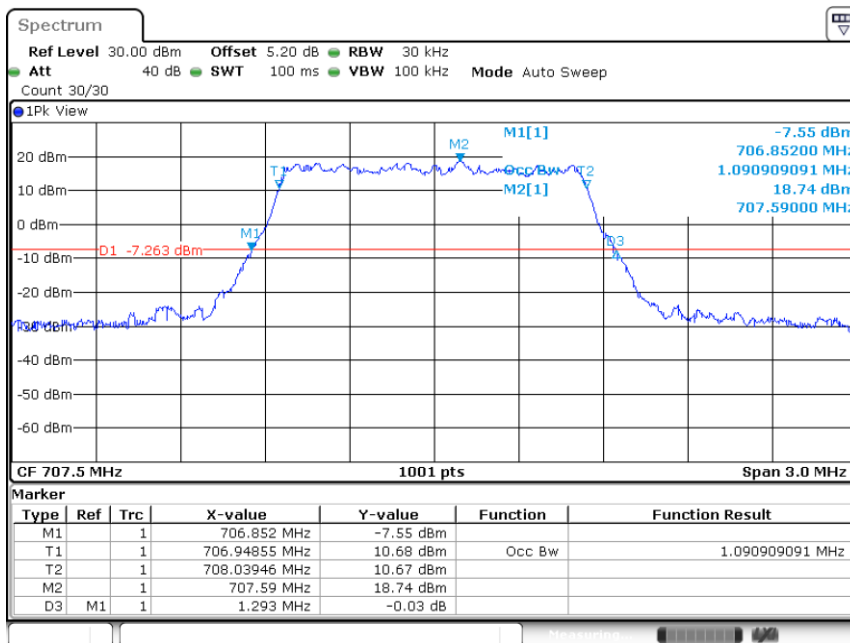
4.2 Test Plots

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



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



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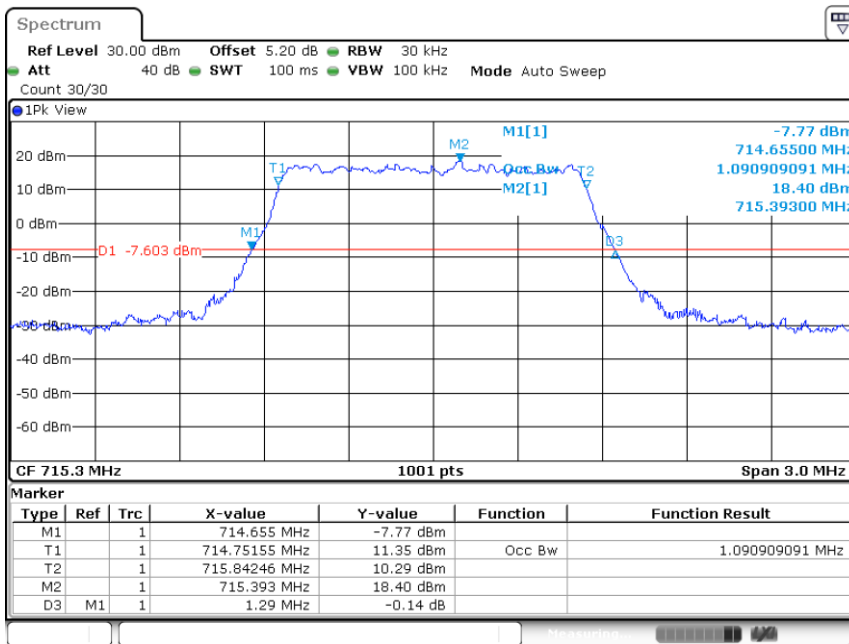
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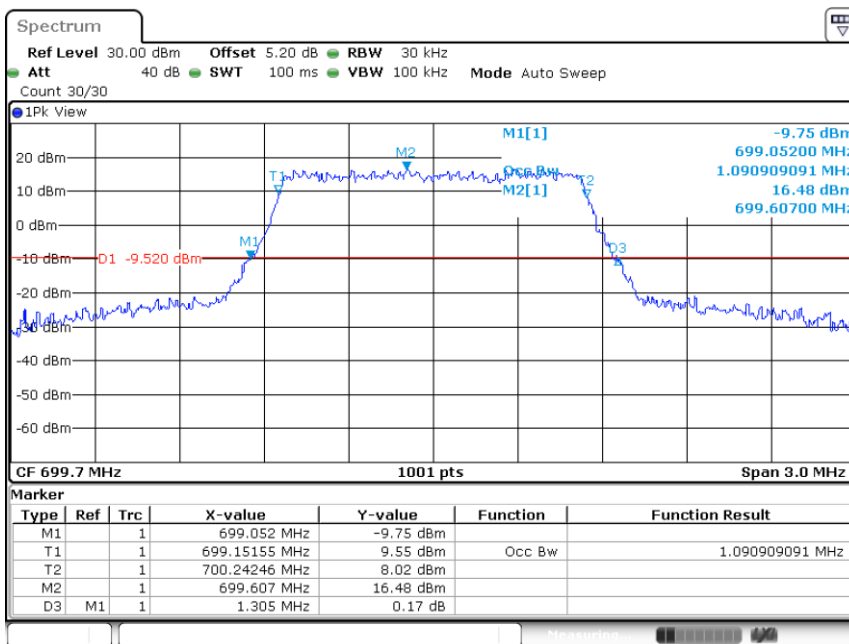


Band12-1.4MHz-QPSK-23173-6RB#0-1.091



Date: 18.NOV.2020 09:18:06

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



Date: 18.NOV.2020 09:56:53



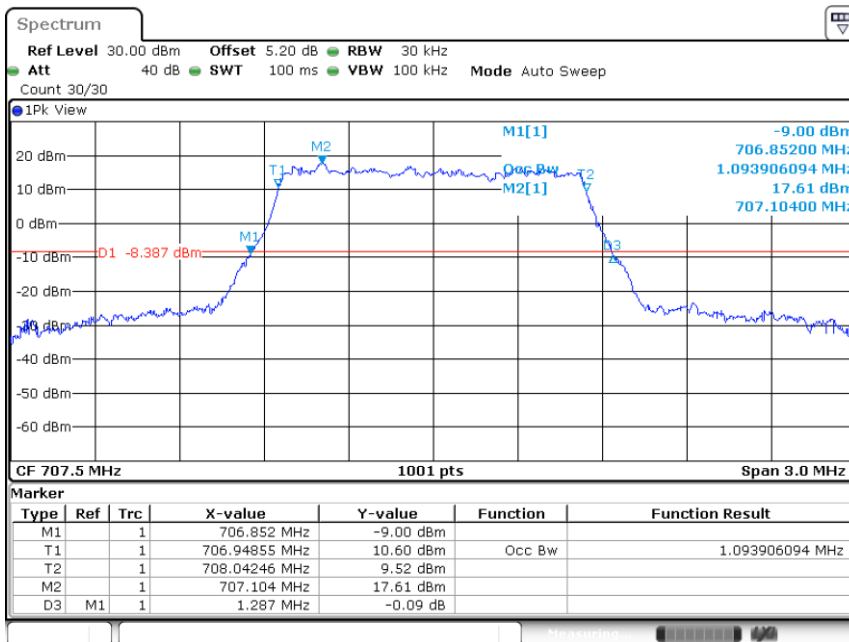
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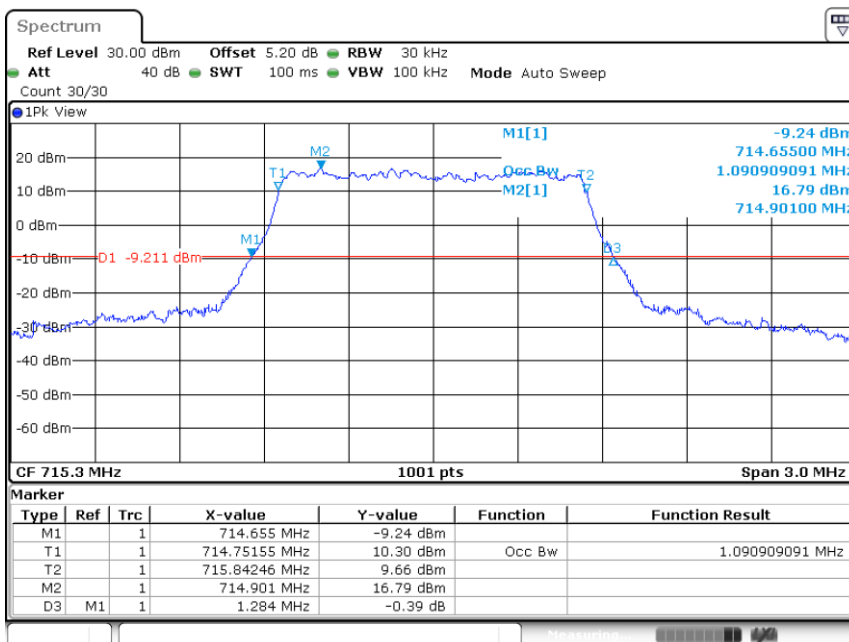


Band12-1.4MHz-16QAM-23095-6RB#0-1.094



Date: 18.NOV.2020 09:57:06

Band12-1.4MHz-16QAM-23173-6RB#0-1.091



Date: 18.NOV.2020 09:57:19



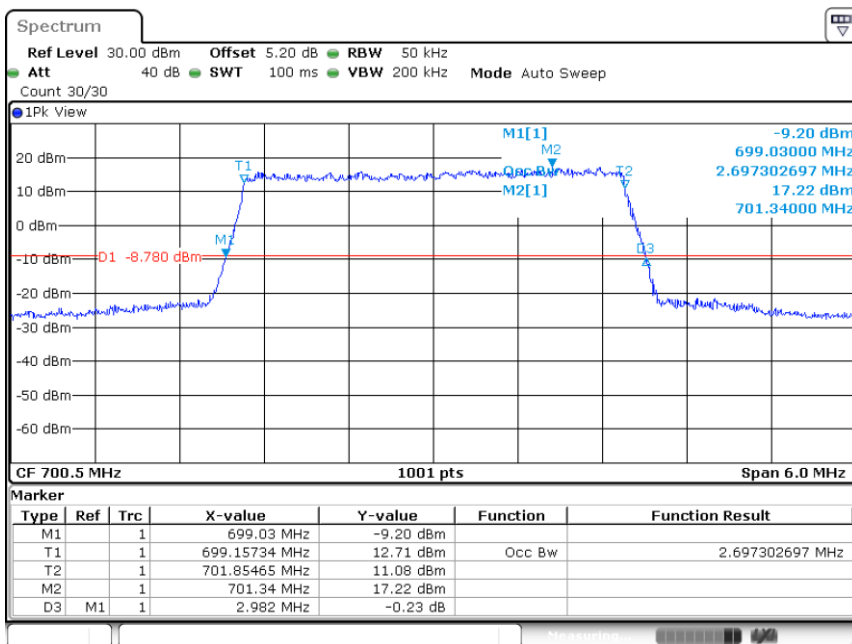
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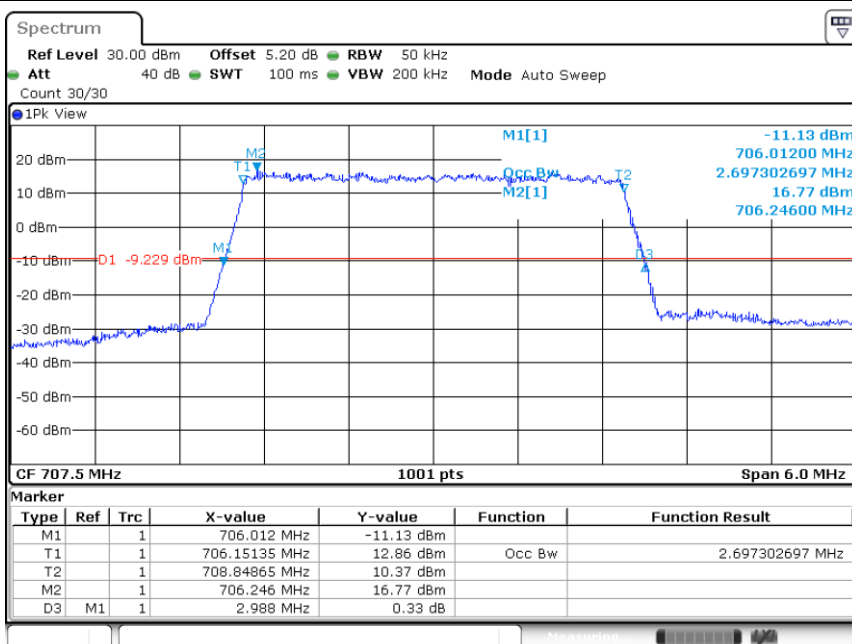
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Band12-3MHz-QPSK-23025-15RB#0-2.697



Date: 18.NOV.2020 09:18:24

Band12-3MHz-QPSK-23095-15RB#0-2.697

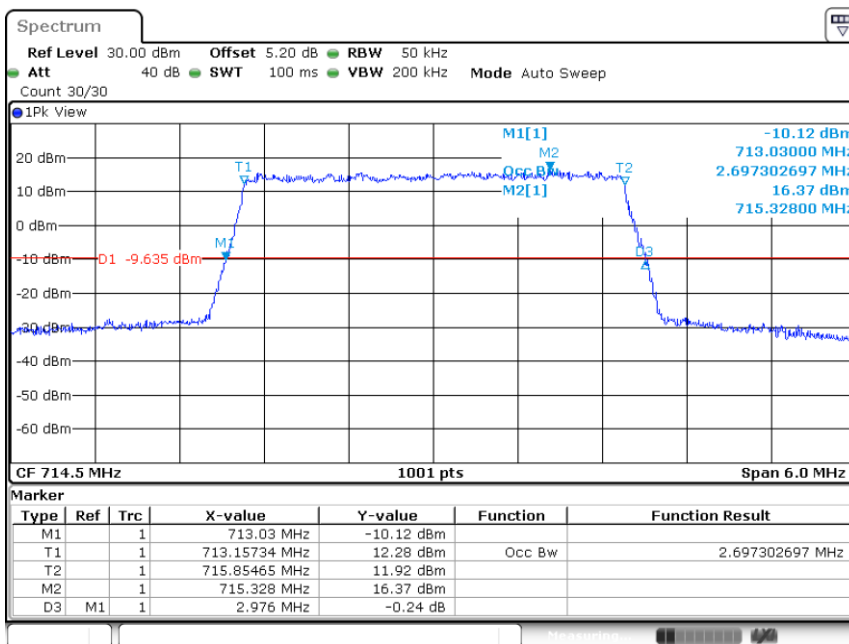


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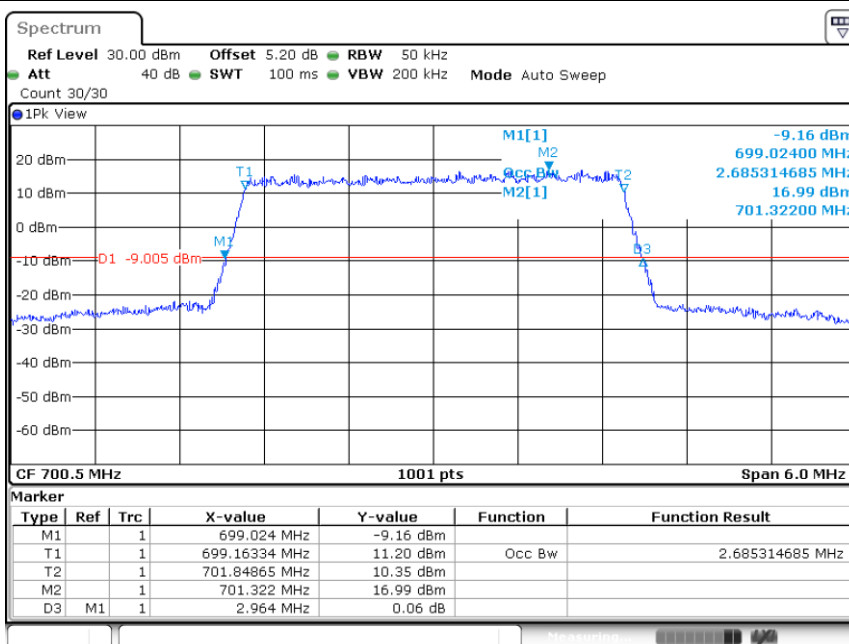


Band12-3MHz-QPSK-23165-15RB#0-2.697



Date: 18.NOV.2020 09:18:49

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



Date: 18.NOV.2020 09:57:36



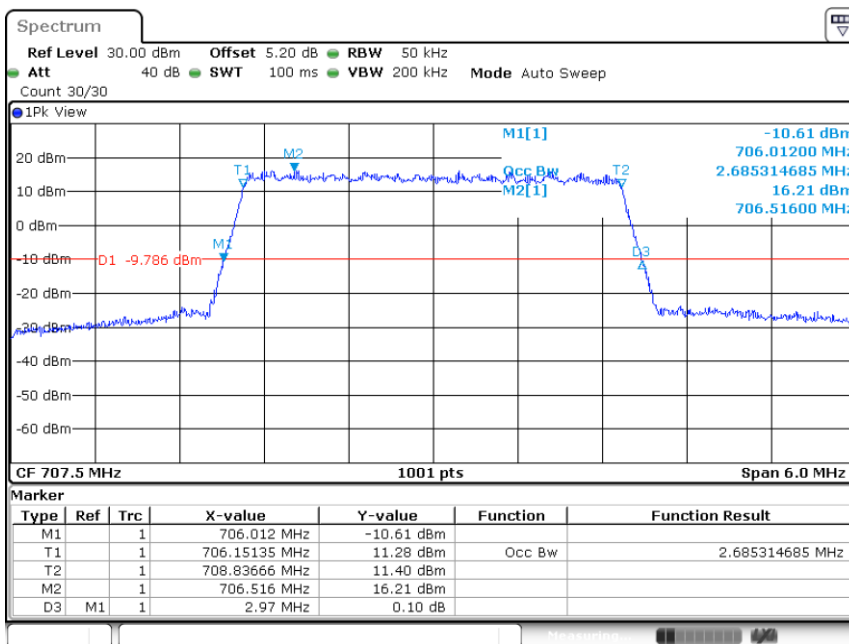
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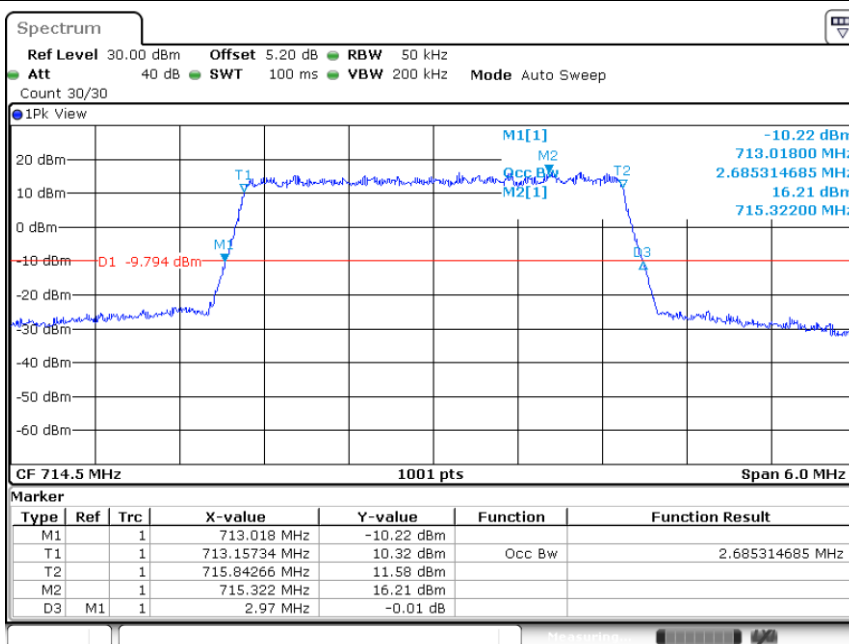
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Band12-3MHz-16QAM-23095-15RB#0-2.685



Date: 18.NOV.2020 09:57:49

Band12-3MHz-16QAM-23165-15RB#0-2.685

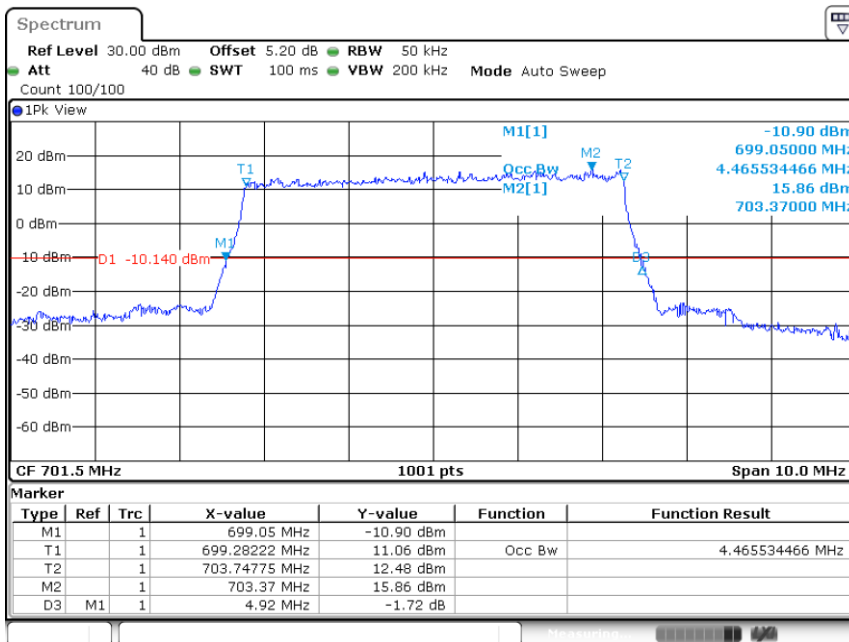


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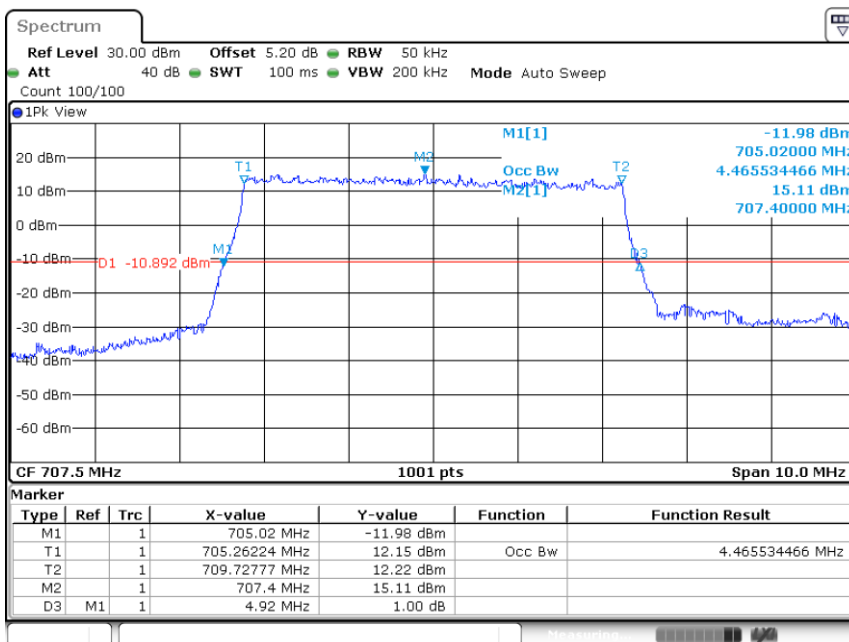


Band12-5MHz-QPSK-23035-25RB#0-4.466



Date: 18.NOV.2020 09:19:14

Band12-5MHz-QPSK-23095-25RB#0-4.466



Date: 18.NOV.2020 09:19:34



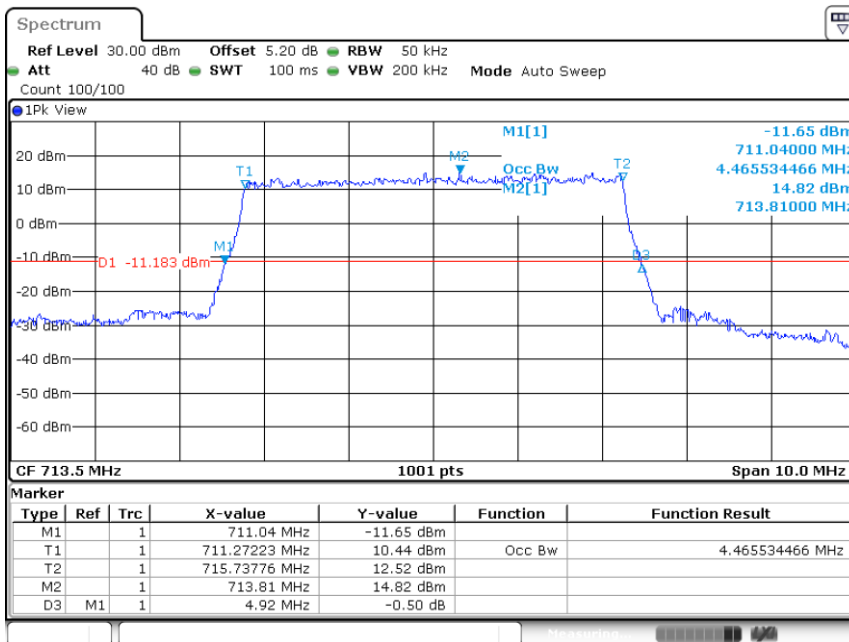
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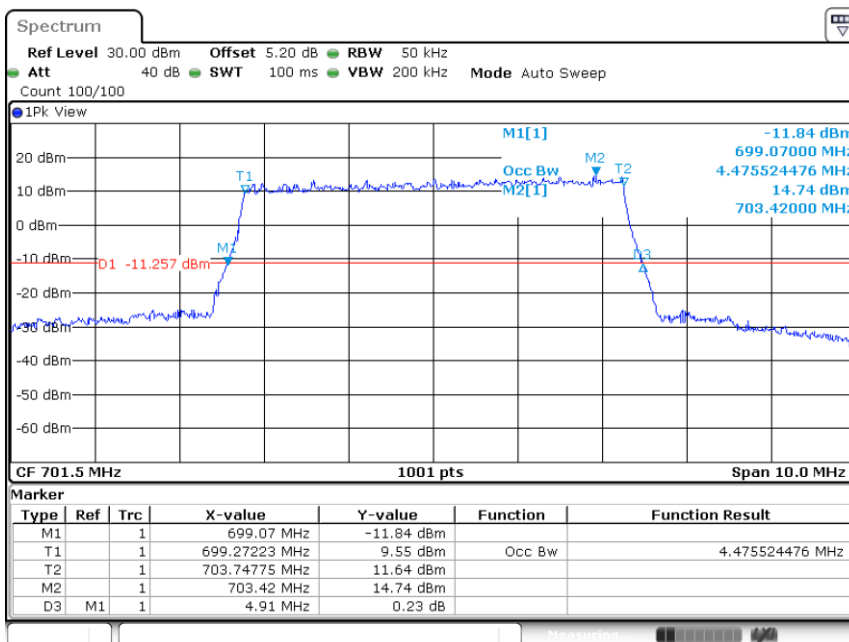


Band12-5MHz-QPSK-23155-25RB#0-4.466



Date: 18.NOV.2020 09:19:54

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



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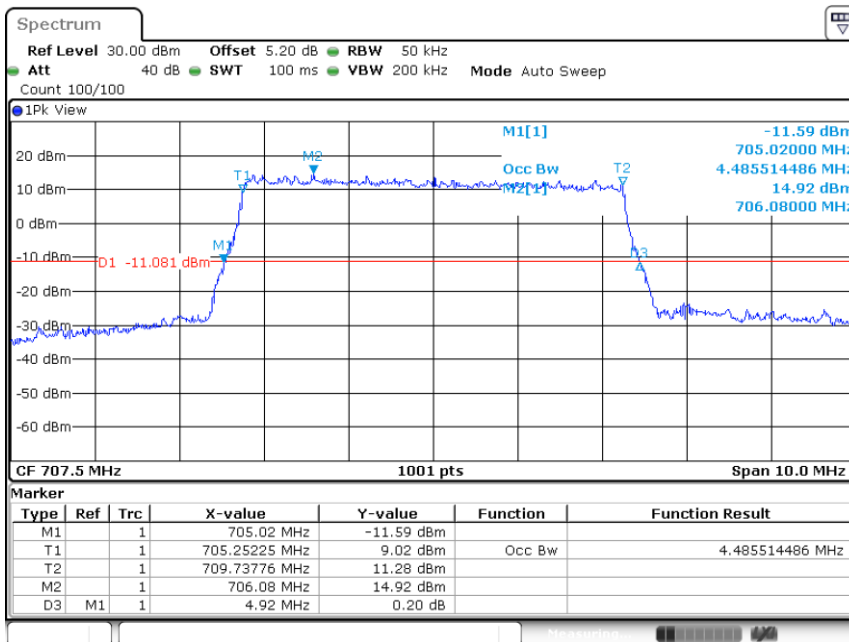
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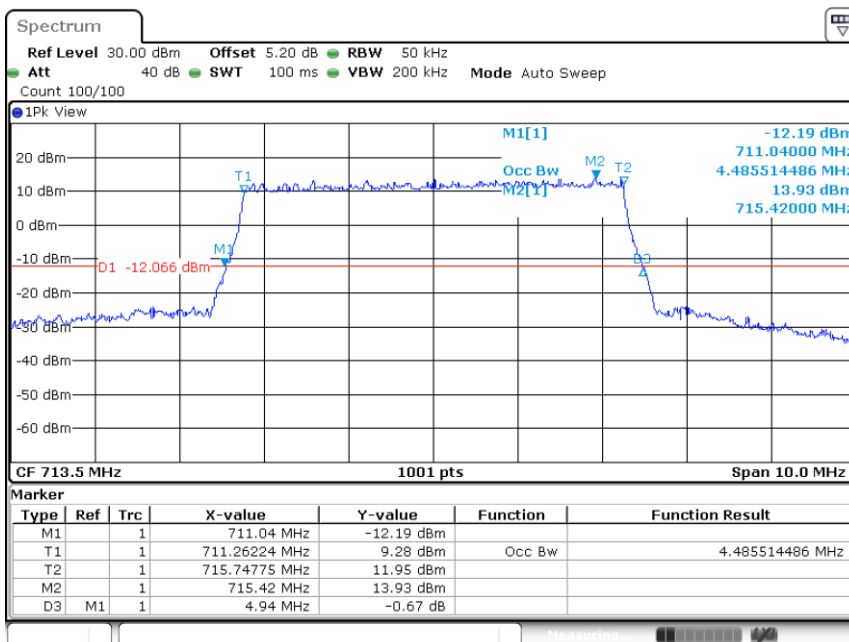


Band12-5MHz-16QAM-23095-25RB#0-4.486



Date: 18.NOV.2020 09:58:46

Band12-5MHz-16QAM-23155-25RB#0-4.486



Date: 18.NOV.2020 09:59:06



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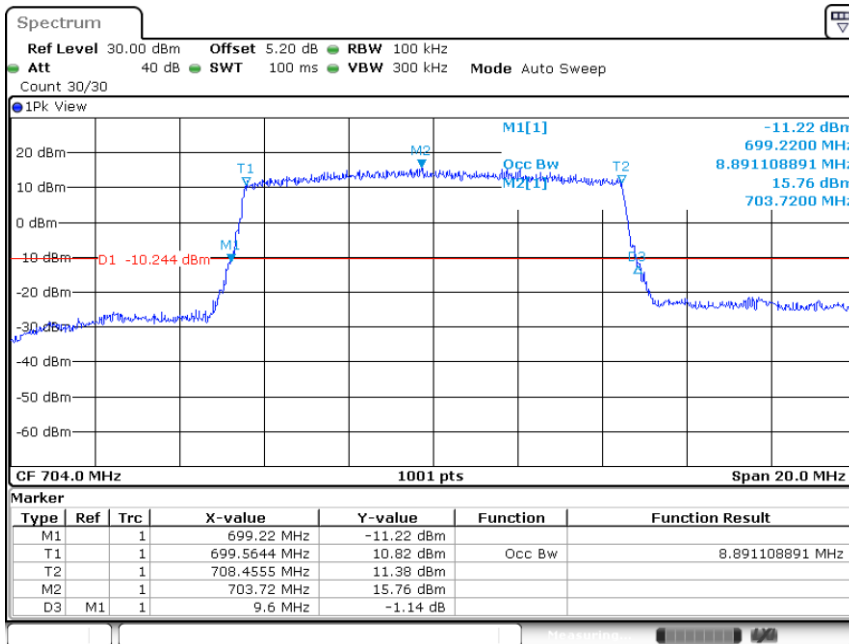
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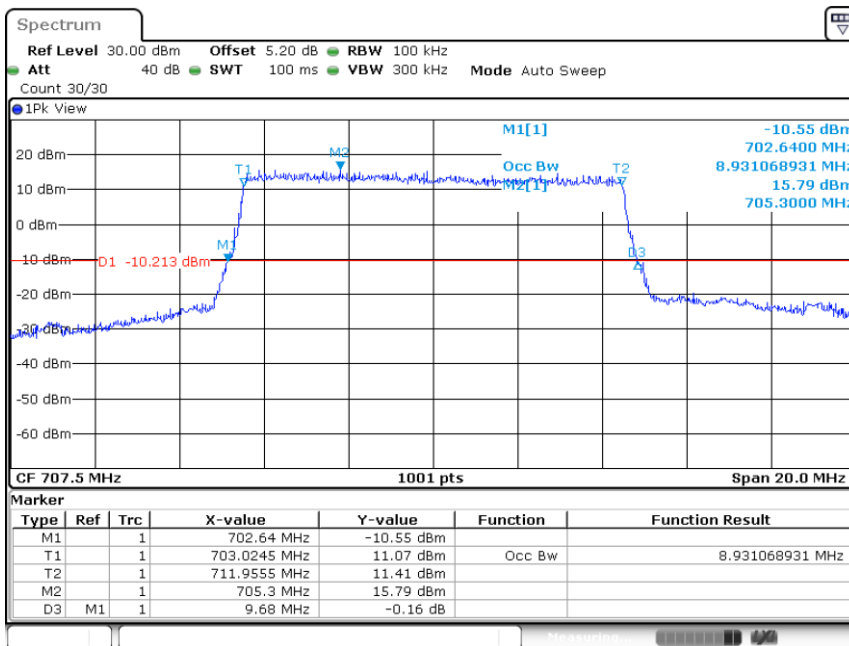


Band12-10MHz-QPSK-23060-50RB#0-8.891



Date: 26.NOV.2020 17:34:10

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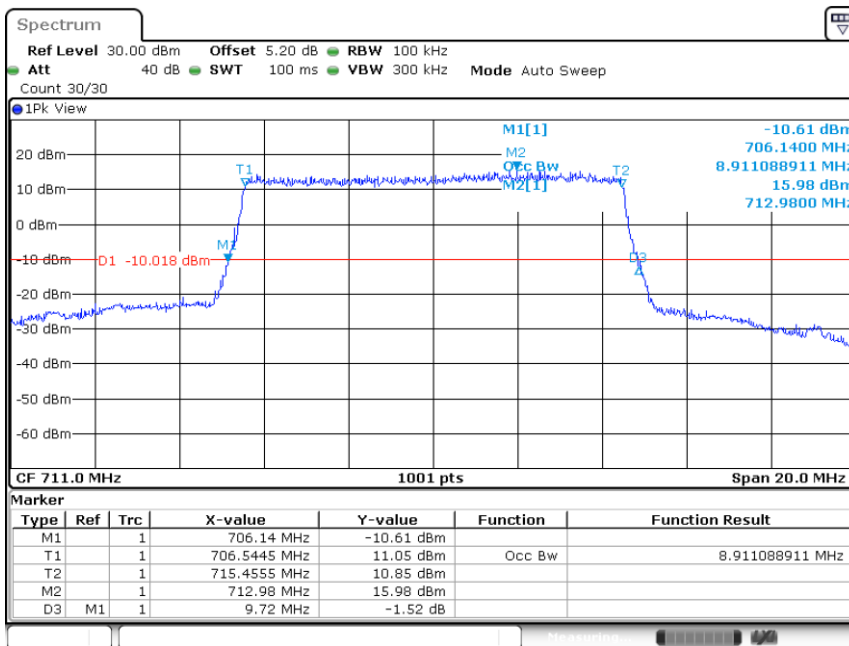


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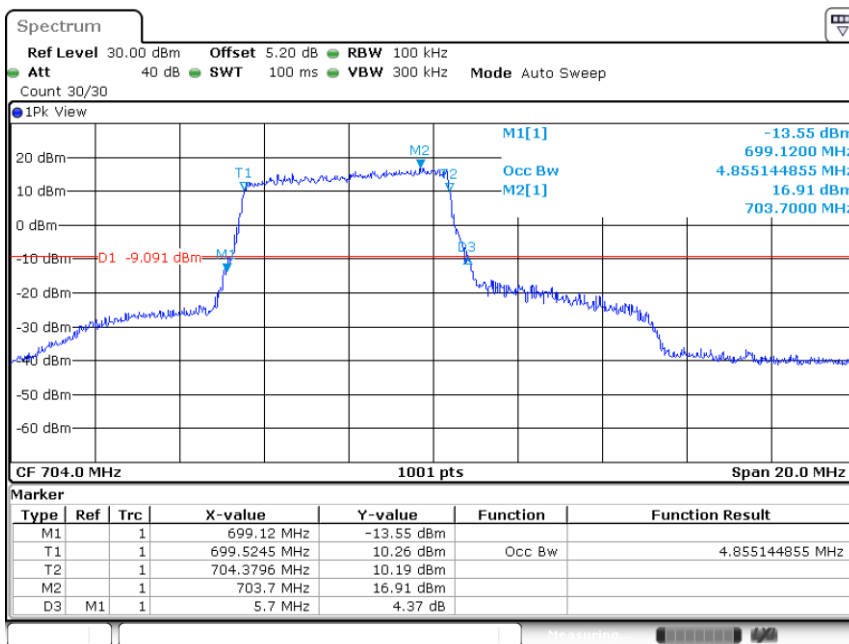


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Date: 26.NOV.2020 17:34:36

Band12-10MHz-16QAM-23060-27RB#0-4.855



Date: 18.NOV.2020 09:59:24

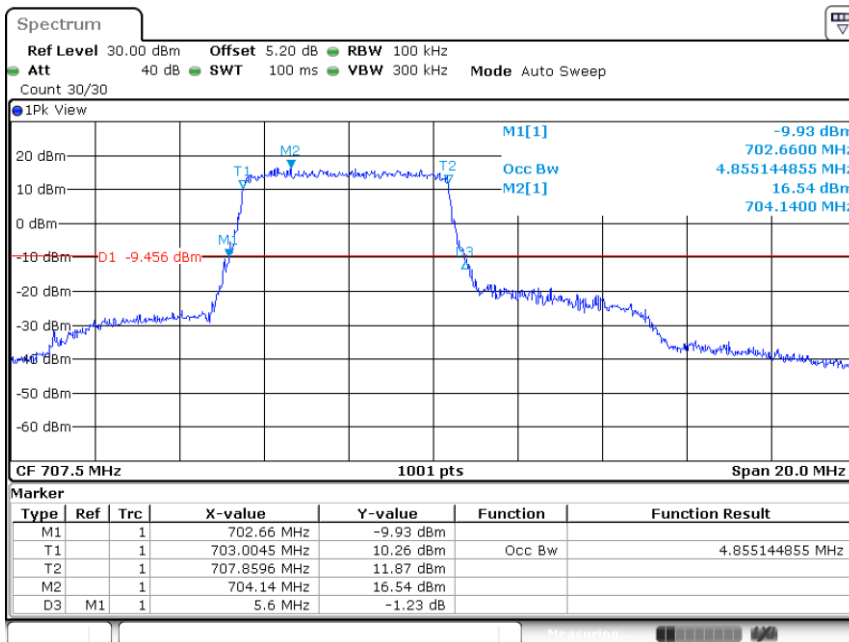


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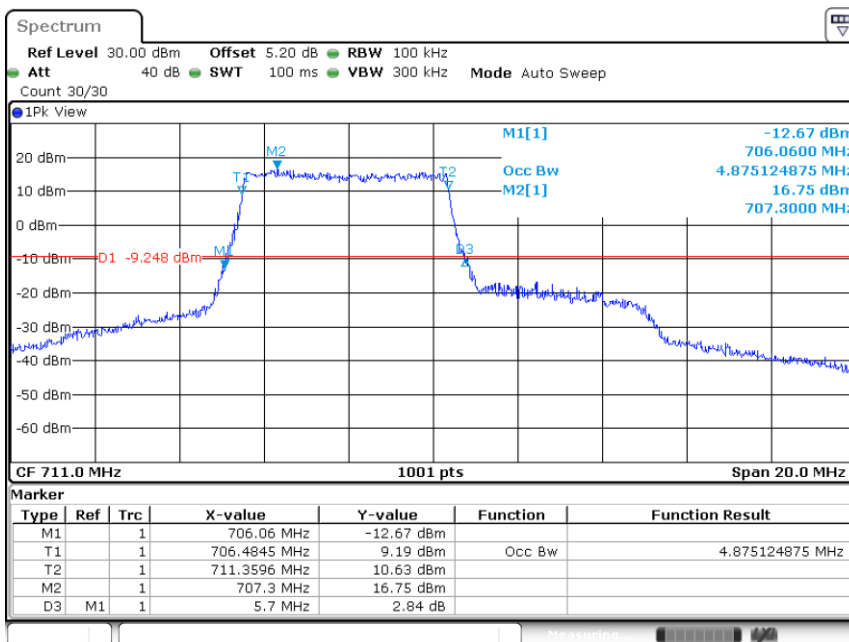


Band12-10MHz-16QAM-23095-27RB#0-4.855



Date: 18.NOV.2020 09:59:37

Band12-10MHz-16QAM-23130-27RB#0-4.875



Date: 18.NOV.2020 09:59:49

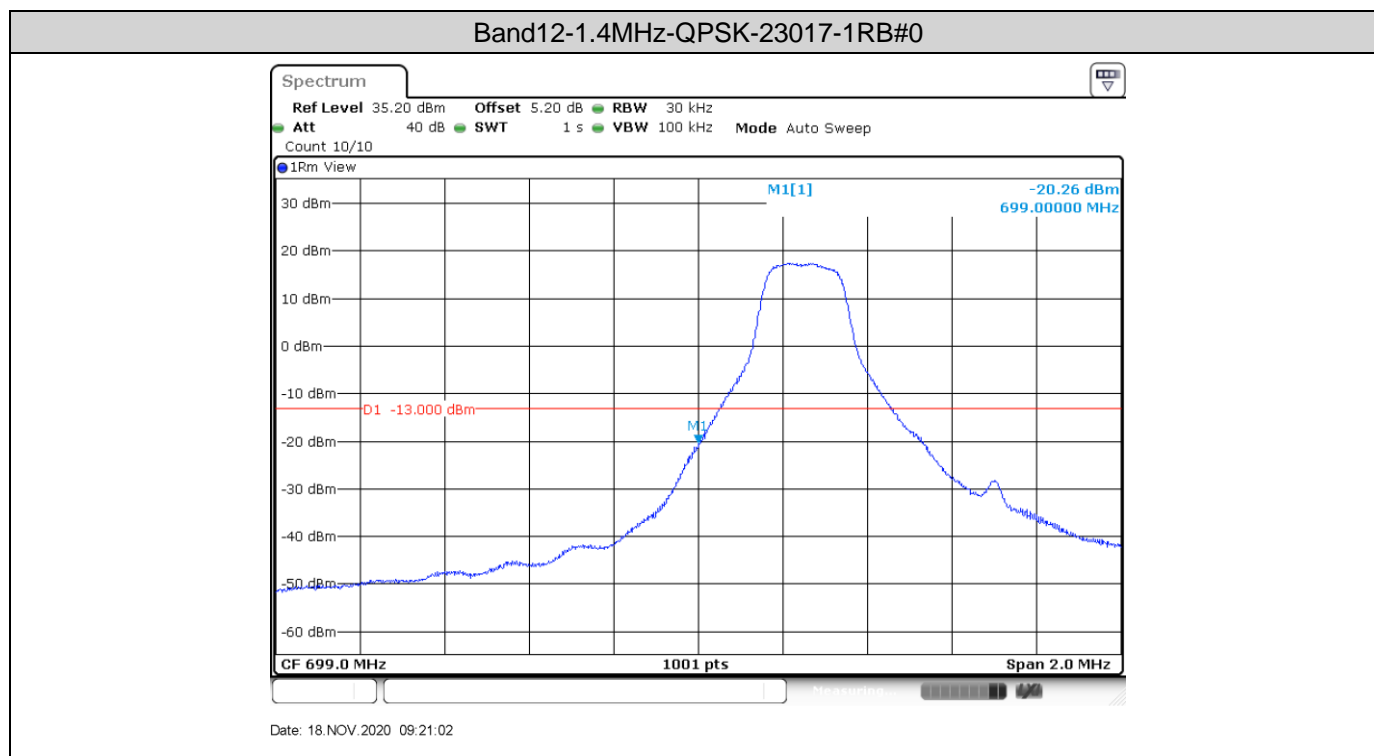


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5 Band Edge Compliance

5.1 Test Plots



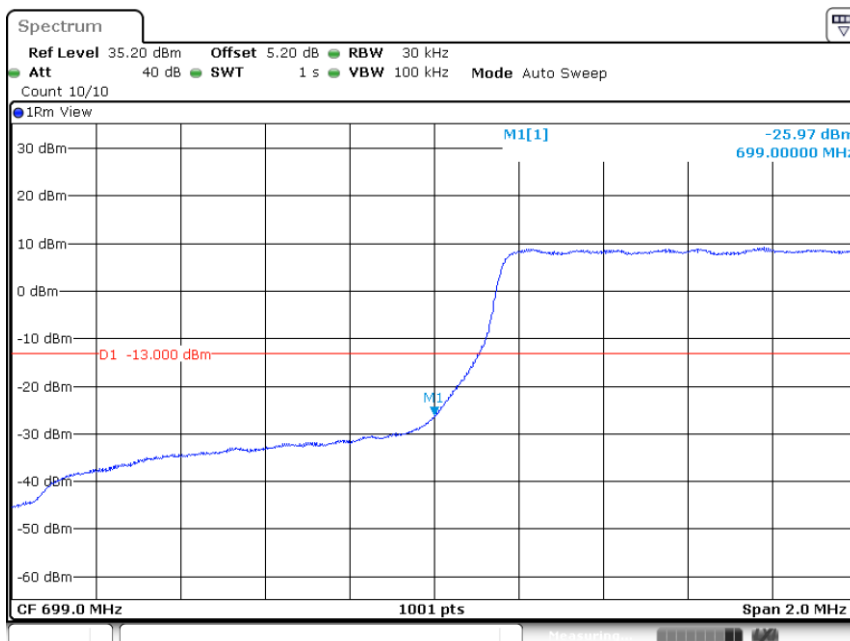
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Band12-1.4MHz-QPSK-23017-6RB#0



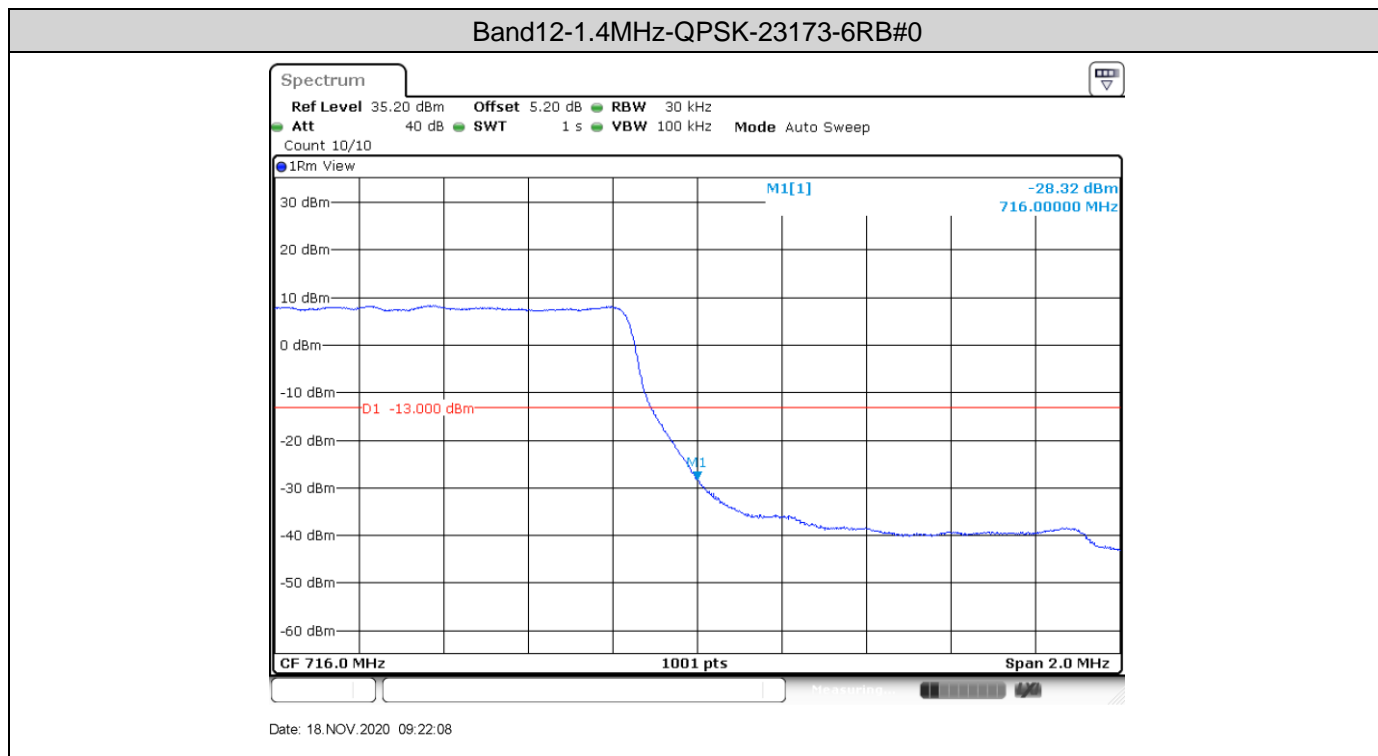
Date: 18.NOV.2020 09:21:23

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



Date: 18.NOV.2020 09:21:48





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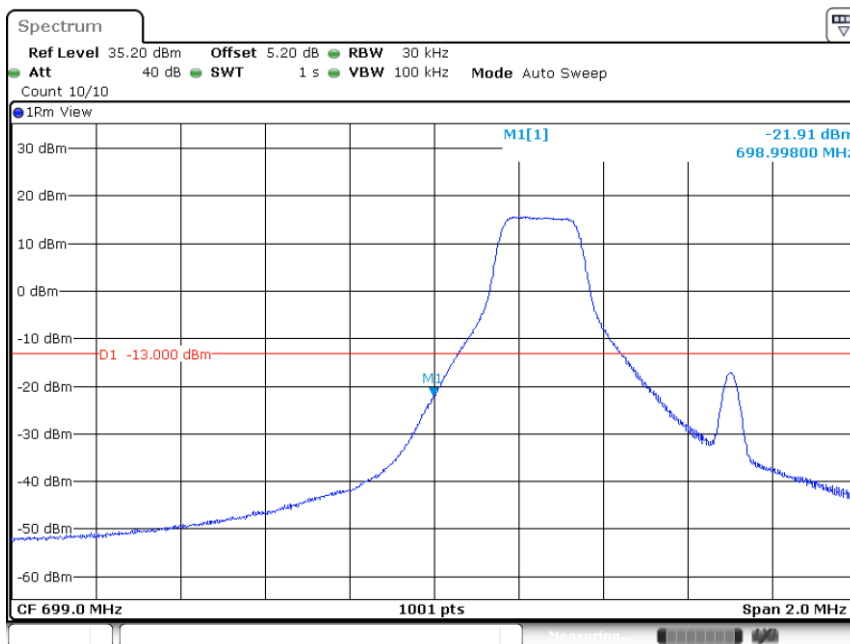
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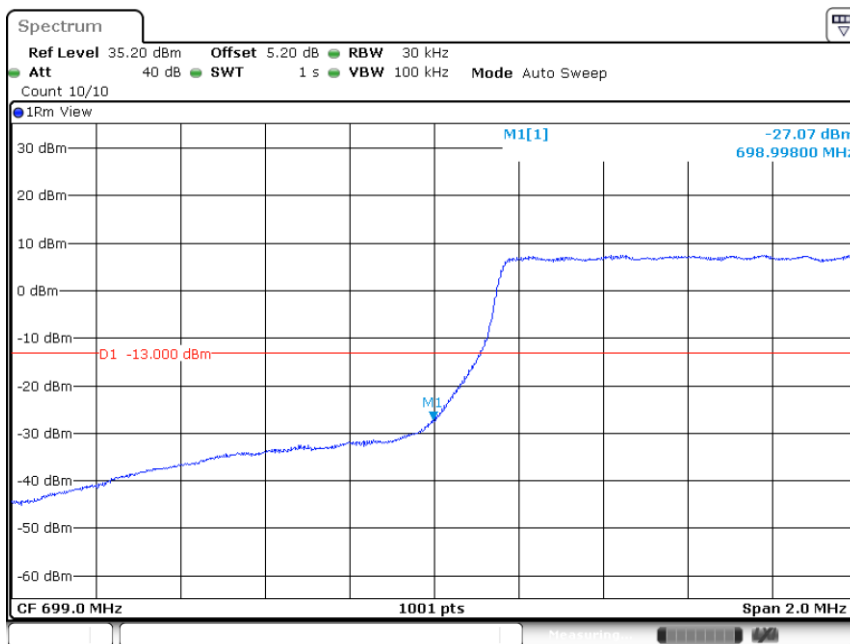


Band12-1.4MHz-16QAM-23017-1RB#0



Date: 18.NOV.2020 10:00:15

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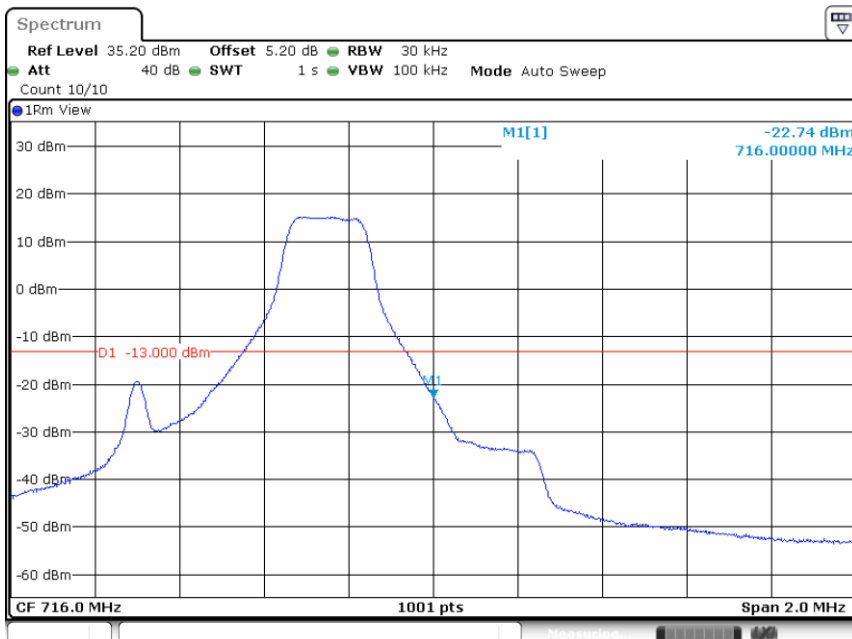
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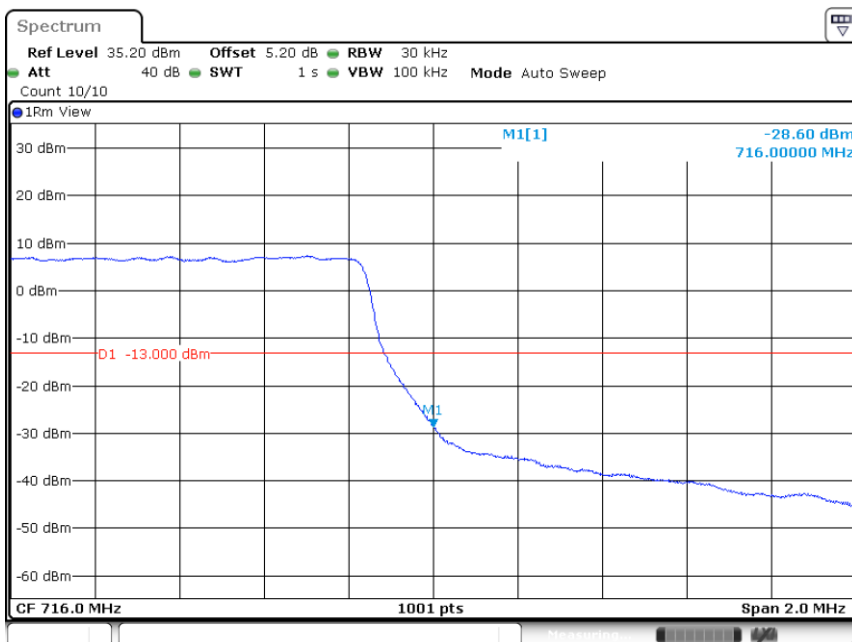
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Band12-1.4MHz-16QAM-23173-1RB#5



Date: 18.NOV.2020 10:01:00

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



Date: 18.NOV.2020 10:01:20



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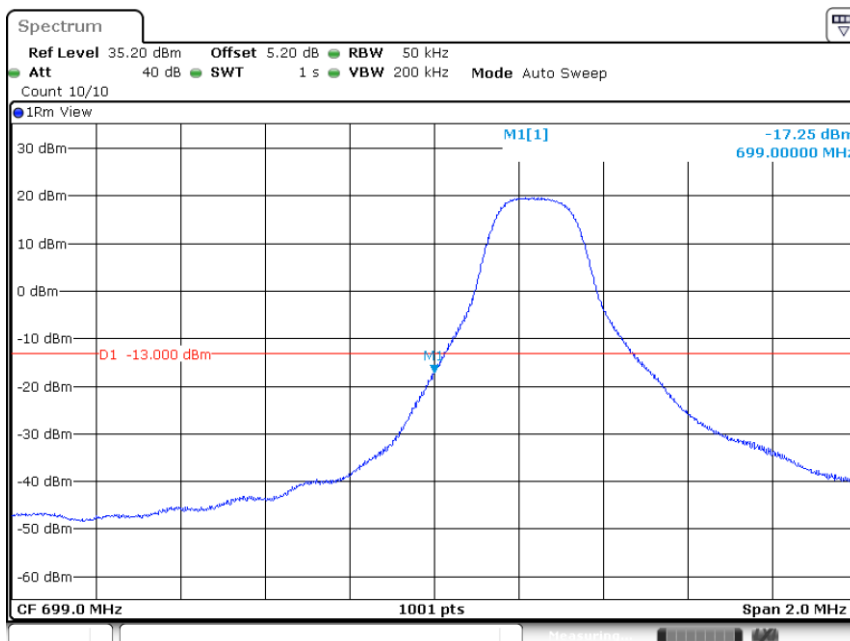
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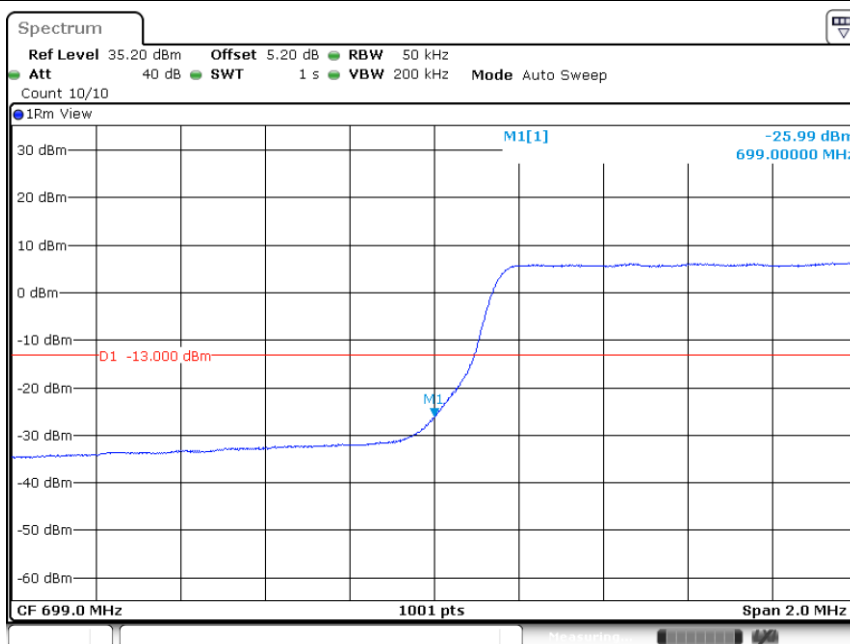


Band12-3MHz-QPSK-23025-1RB#0



Date: 18.NOV.2020 09:22:33

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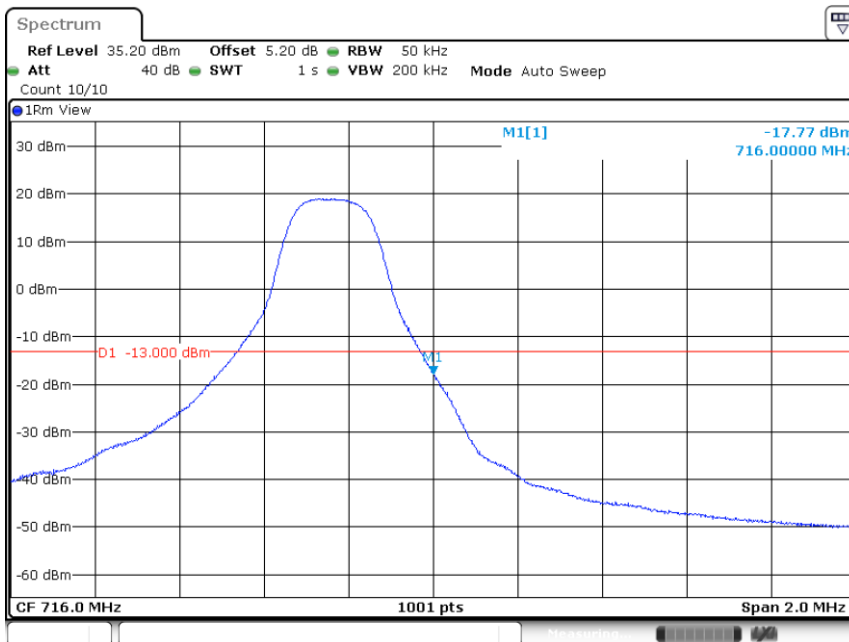


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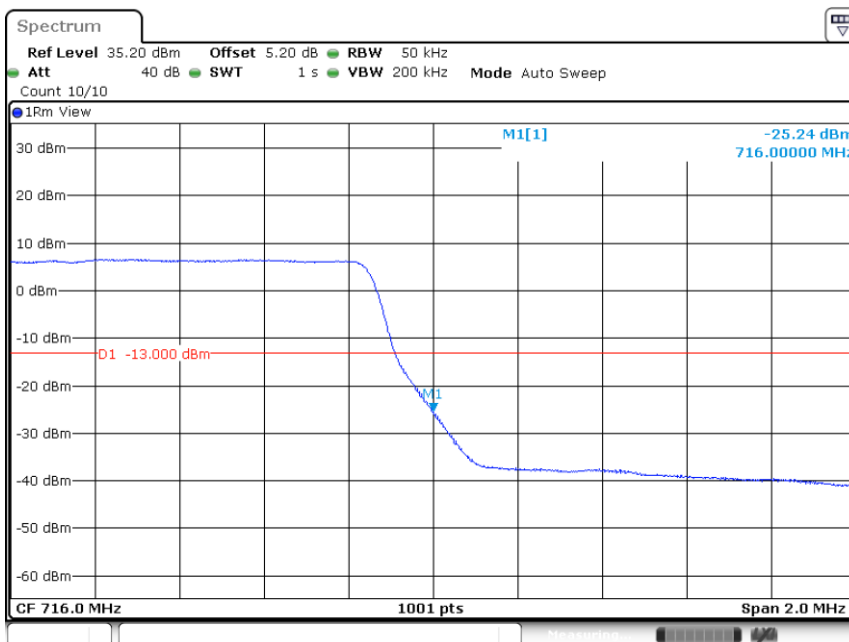


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Date: 18.NOV.2020 09:23:19

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

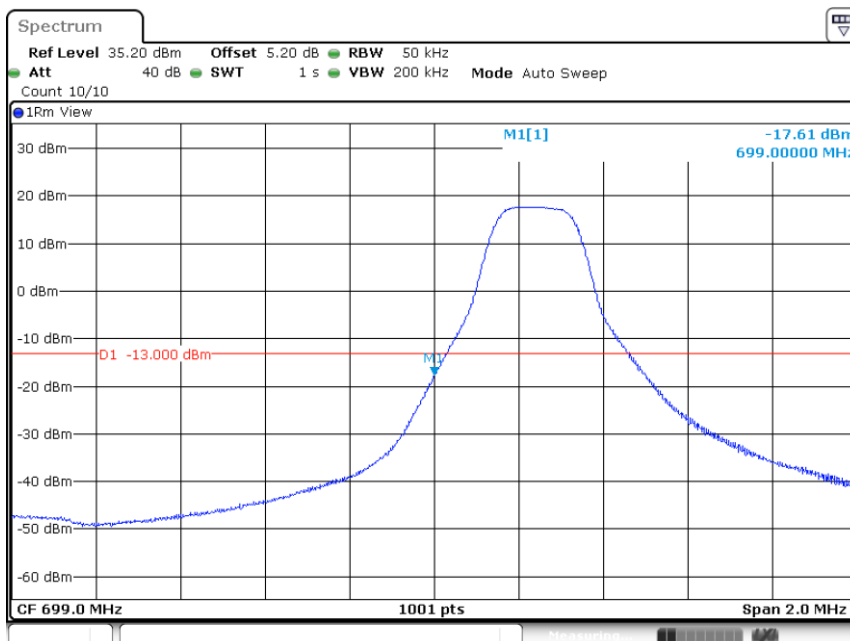


Date: 18.NOV.2020 09:23:39



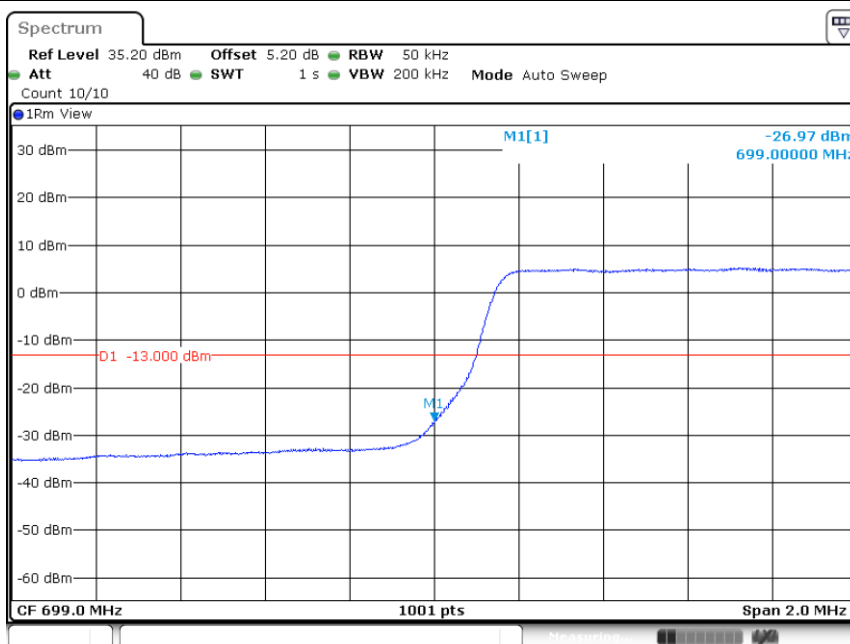


Band12-3MHz-16QAM-23025-1RB#0



Date: 18.NOV.2020 10:01:46

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



Date: 18.NOV.2020 10:02:06



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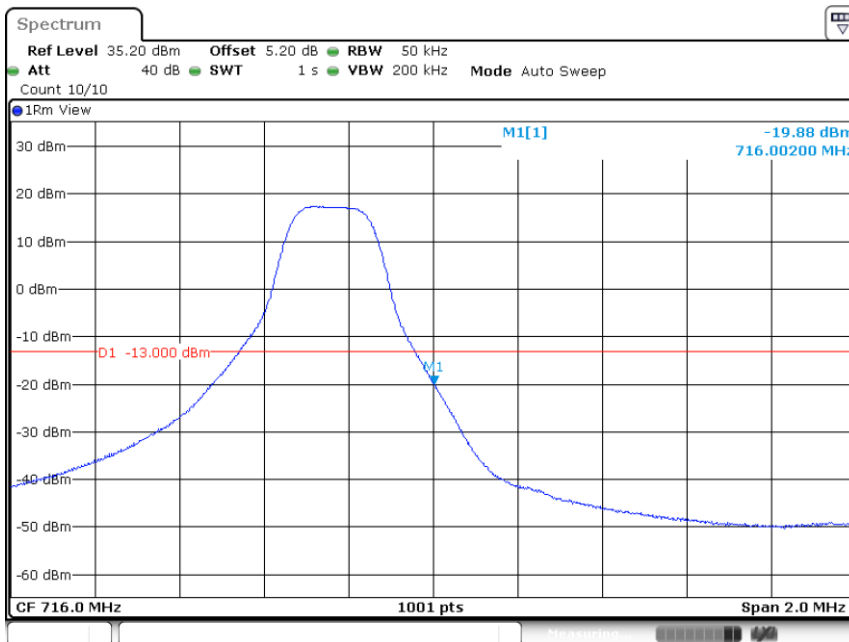
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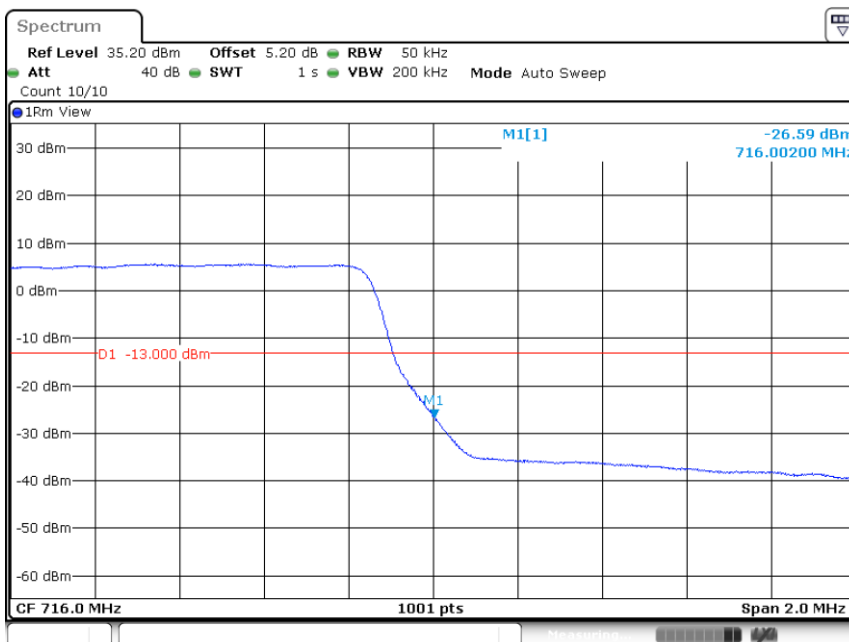


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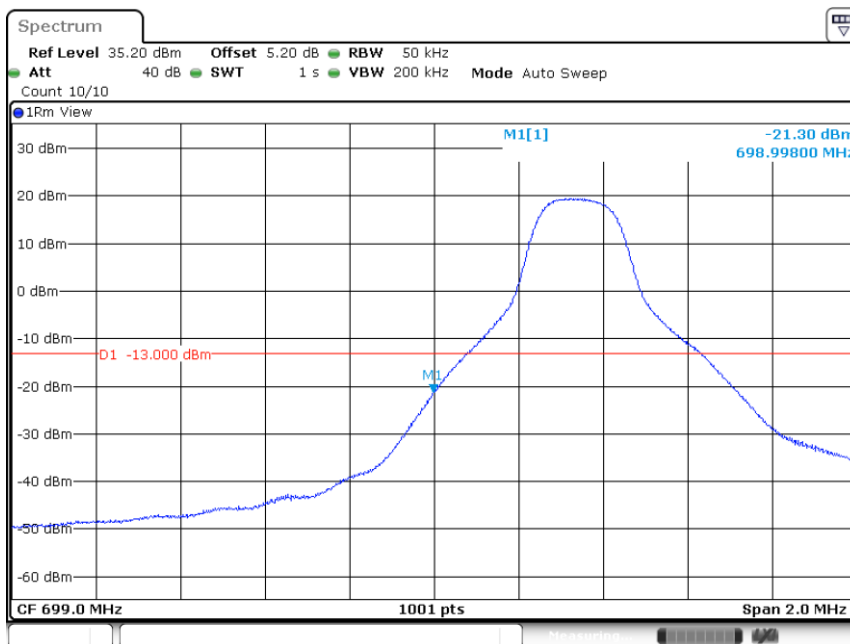


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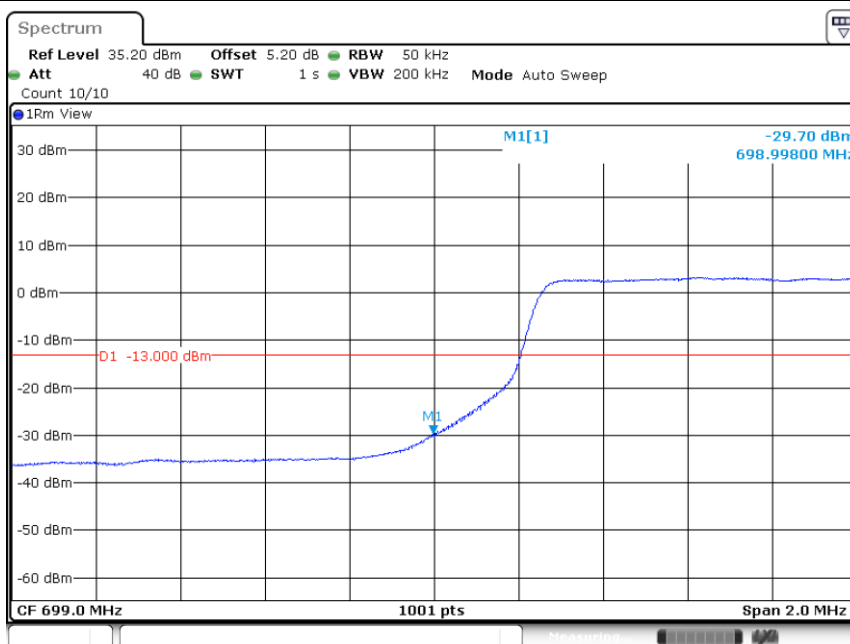


Band12-5MHz-QPSK-23035-1RB#0



Date: 18.NOV.2020 09:24:04

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



Date: 18.NOV.2020 09:24:25



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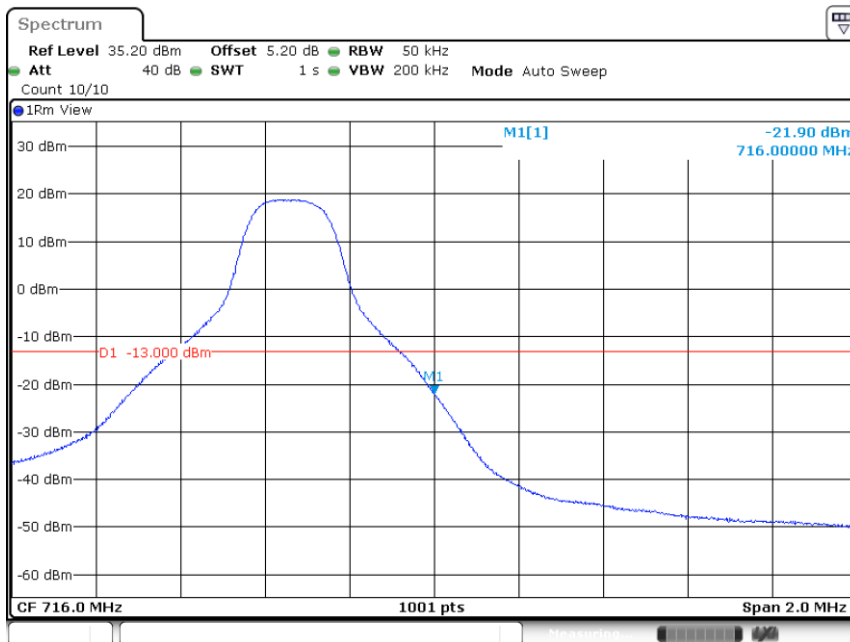
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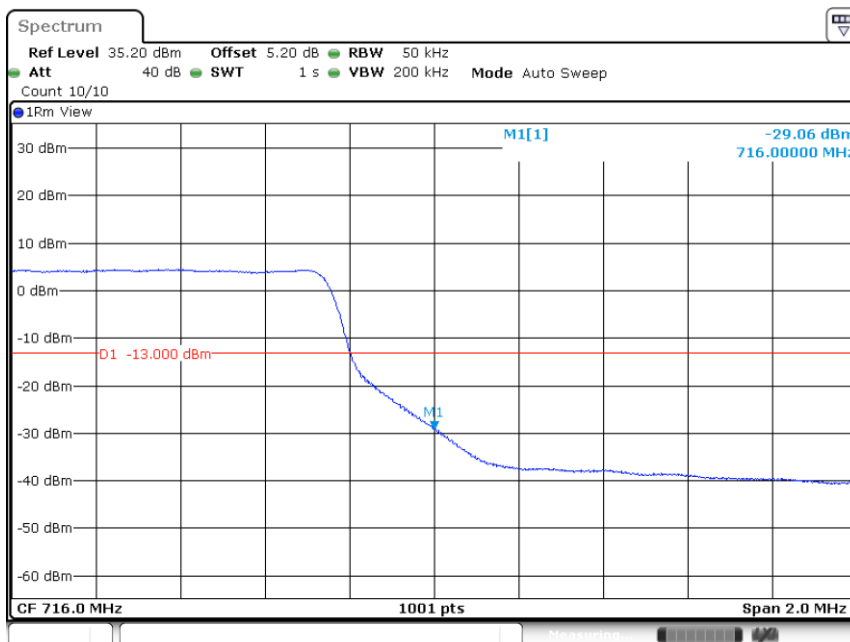


Band12-5MHz-QPSK-23155-1RB#24



Date: 18.NOV.2020 09:24:49

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



Date: 18.NOV.2020 09:25:10



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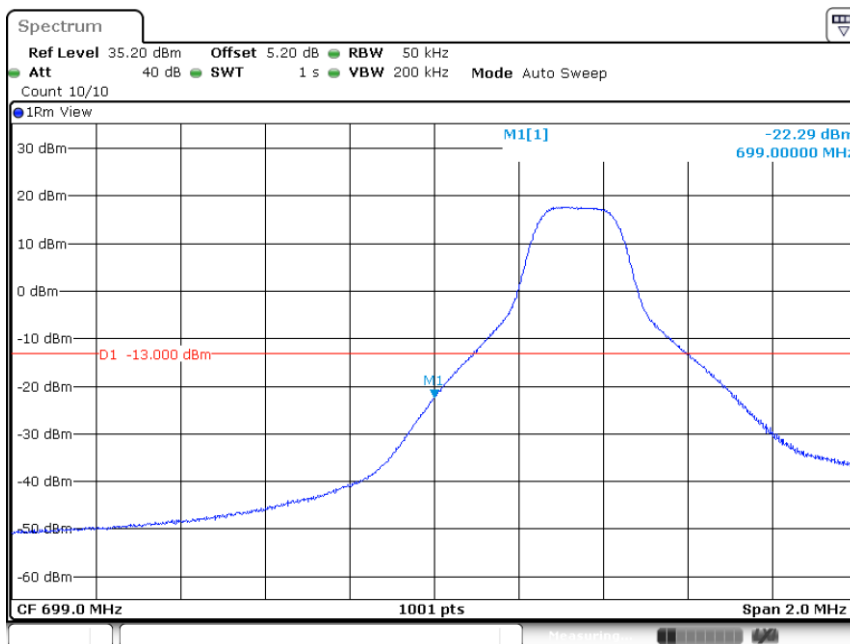
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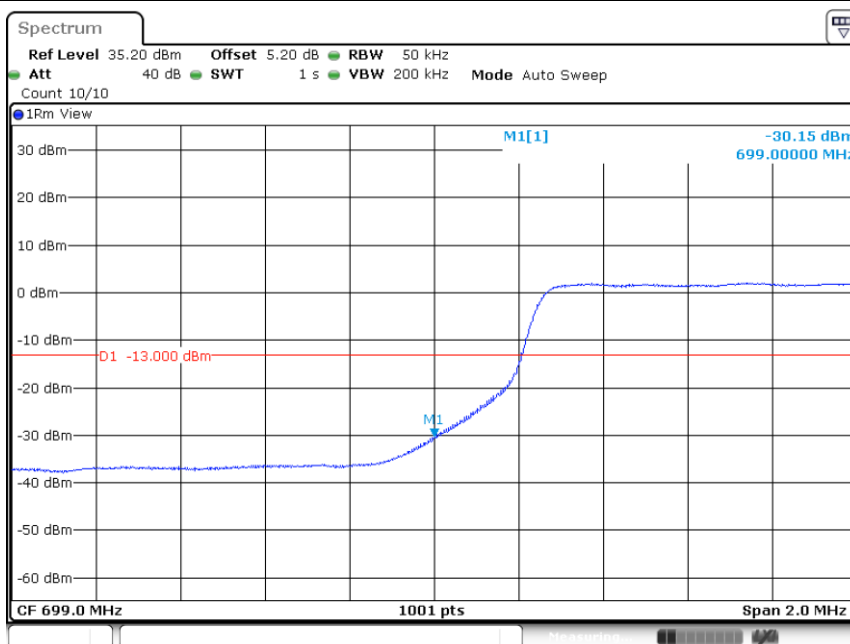


Band12-5MHz-16QAM-23035-1RB#0



Date: 18.NOV.2020 10:03:17

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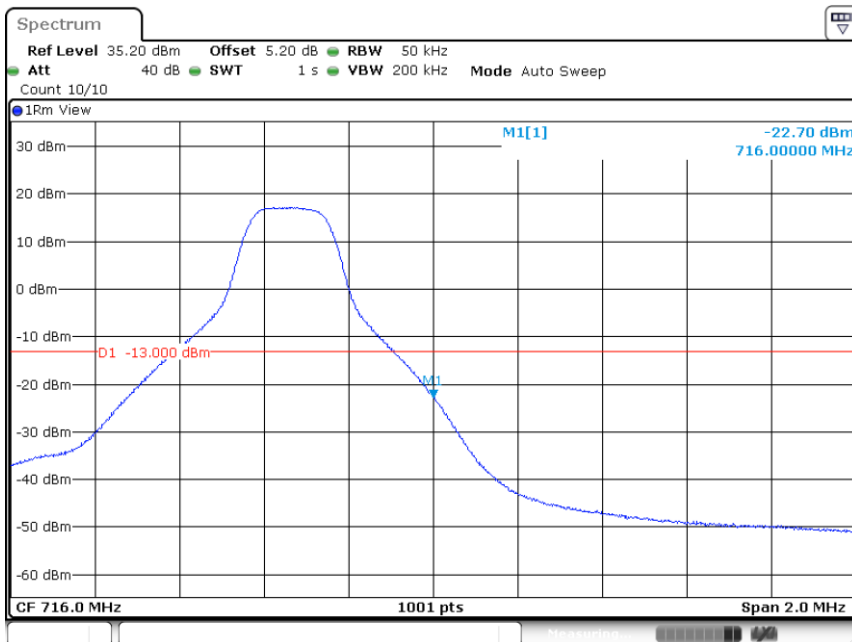


Date: 18.NOV.2020 10:03:37



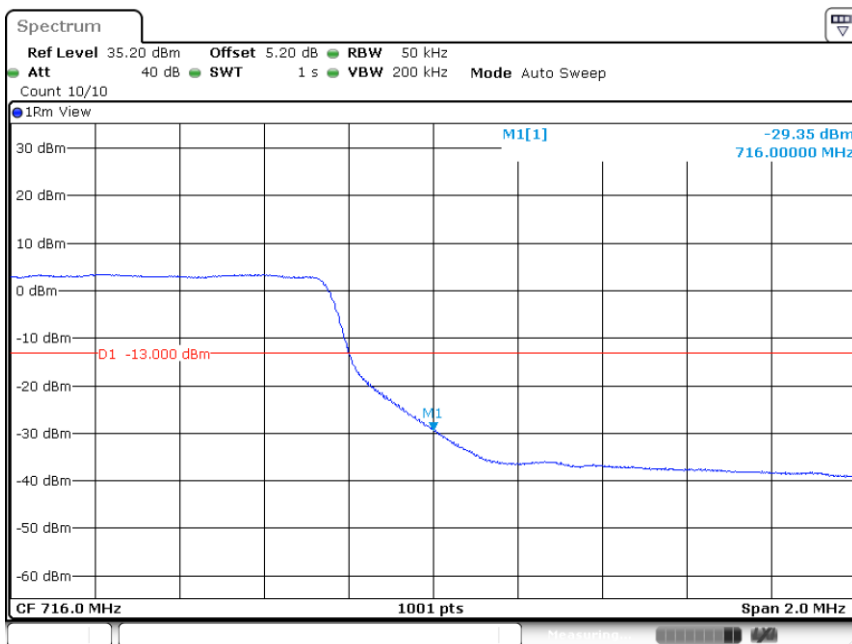


Band12-5MHz-16QAM-23155-1RB#24



Date: 18.NOV.2020 10:04:02

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



Date: 18.NOV.2020 10:04:22

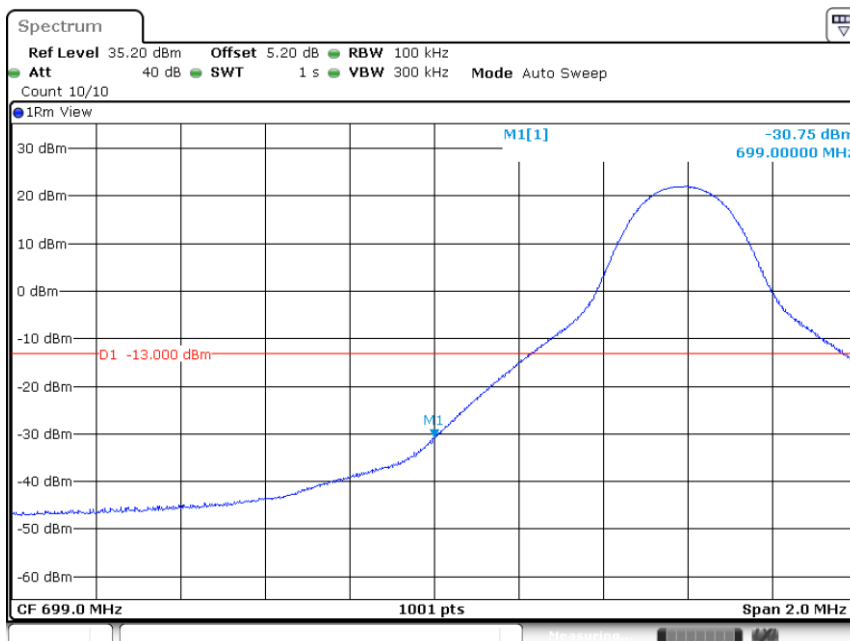


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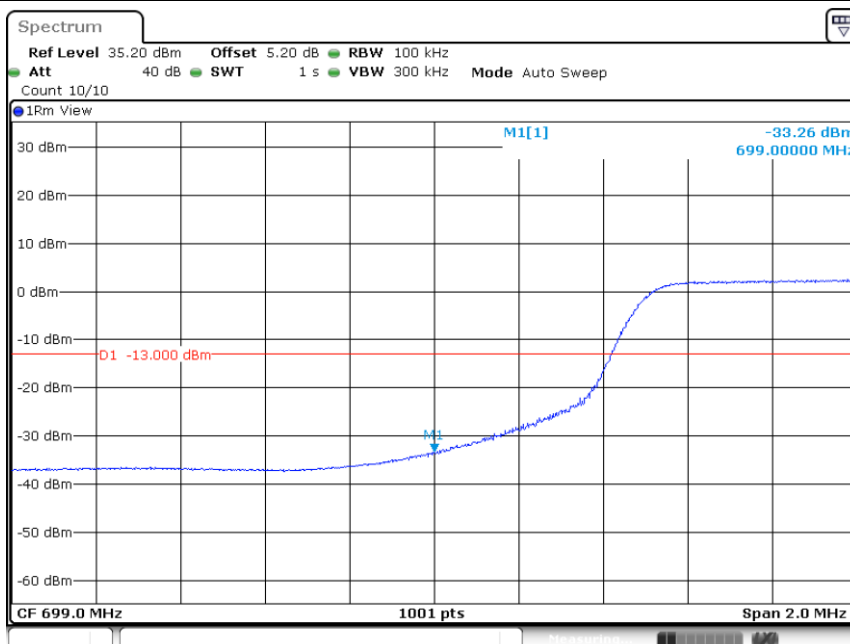


Band12-10MHz-QPSK-23060-1RB#0



Date: 18.NOV.2020 09:25:35

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

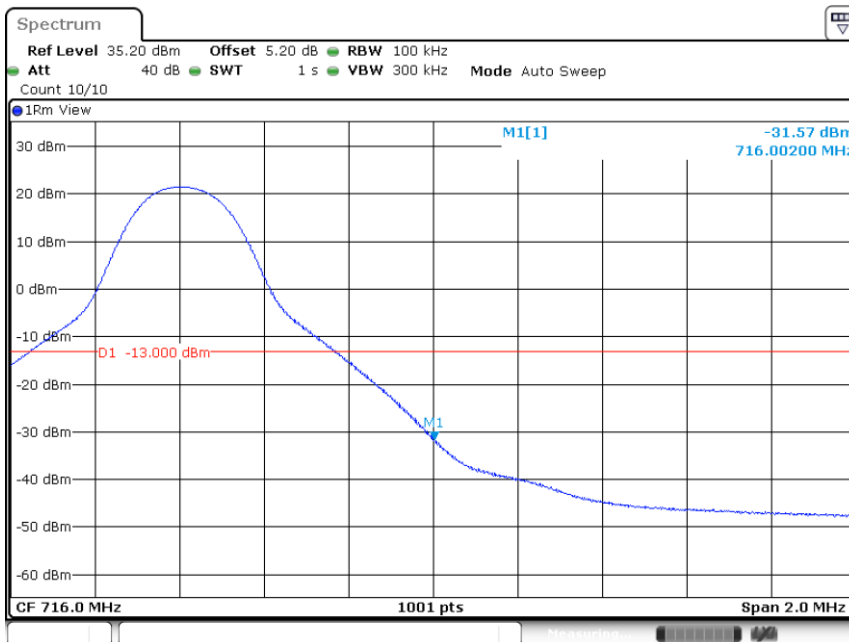


Date: 26.NOV.2020 17:35:01



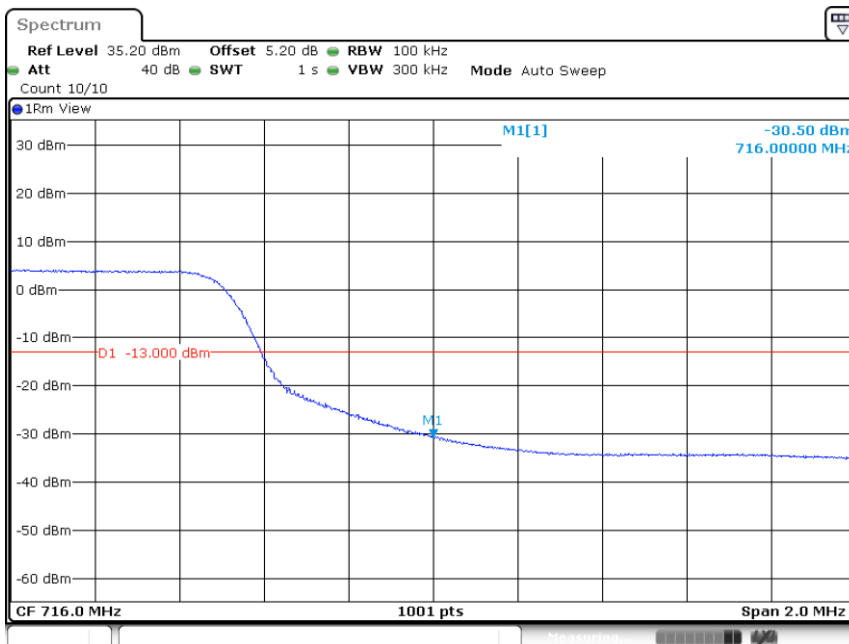


Band12-10MHz-QPSK-23130-1RB#49



Date: 18.NOV.2020 09:26:20

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



Date: 26.NOV.2020 17:35:25

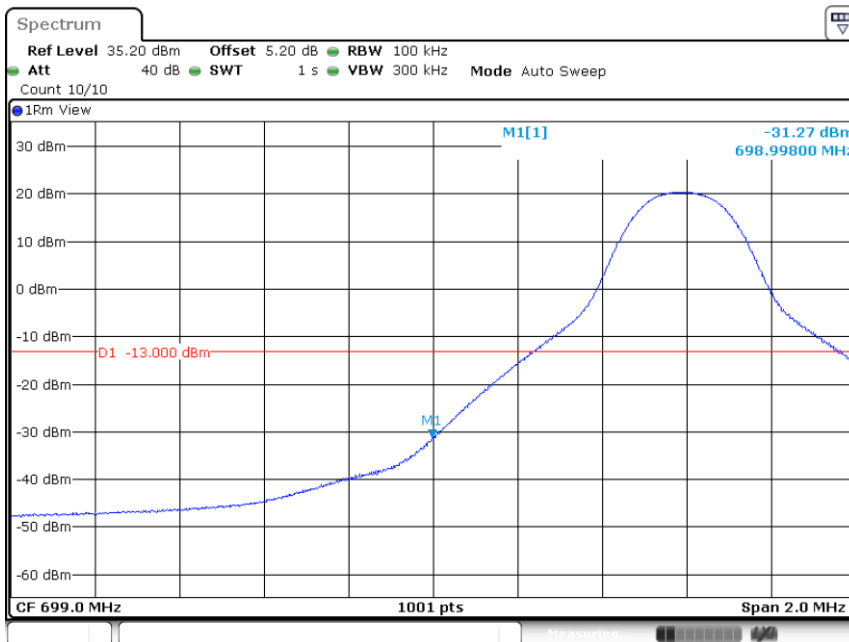


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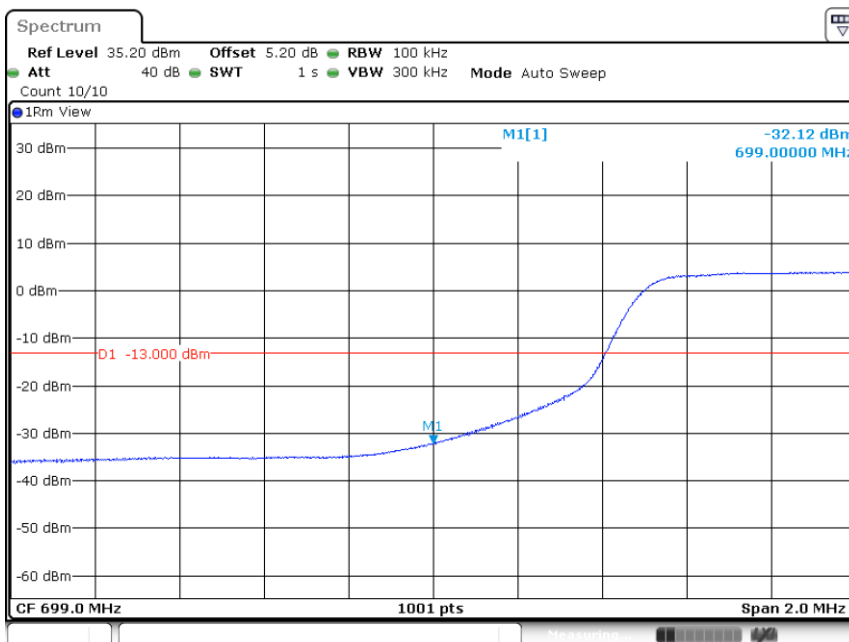


Band12-10MHz-16QAM-23060-1RB#0



Date: 18.NOV.2020 10:04:48

Band12-10MHz-16QAM-23060-27RB#0



Date: 18.NOV.2020 10:05:08

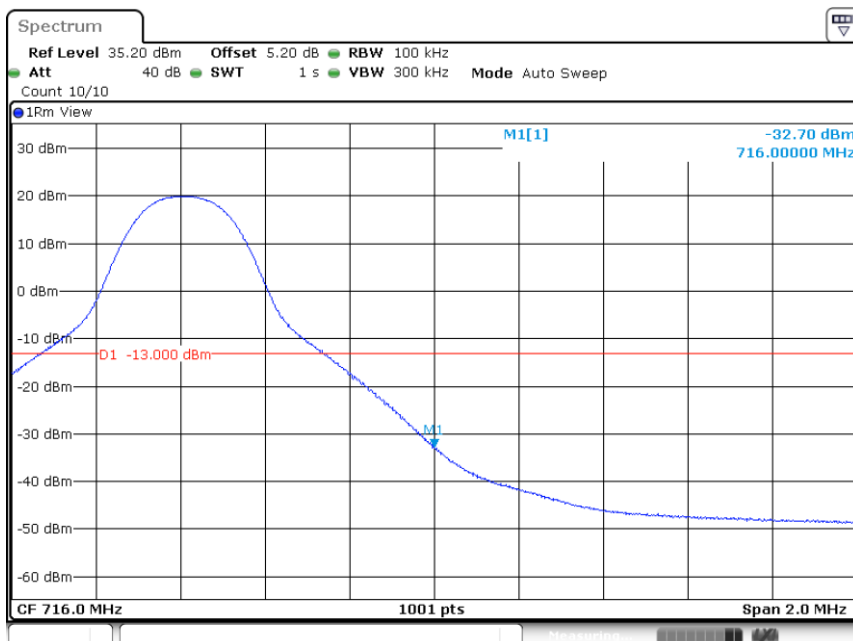


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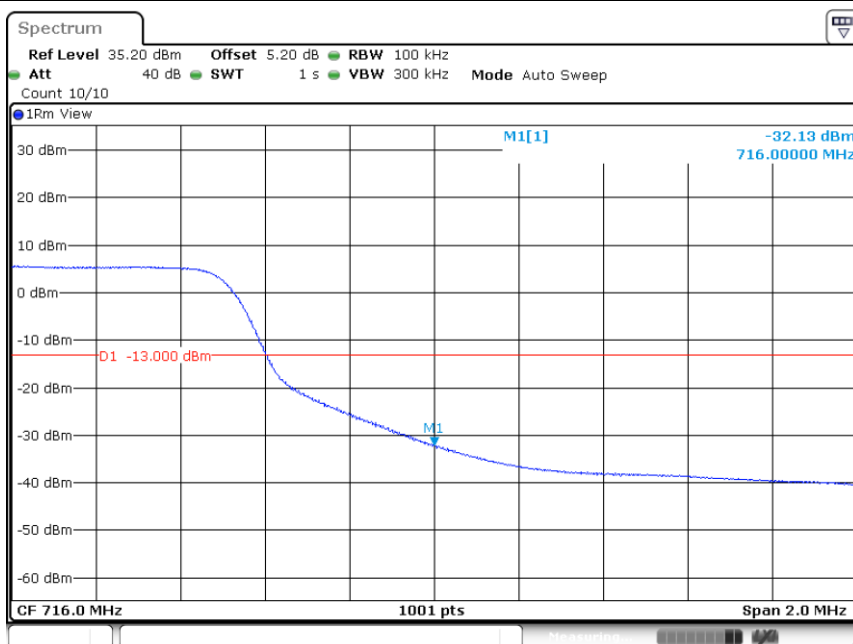


Band12-10MHz-16QAM-23130-1RB#49



Date: 18.NOV.2020 10:05:33

Band12-10MHz-16QAM-23130-27RB#23



Date: 18.NOV.2020 10:05:53



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch (2010) China CCC Laboratory

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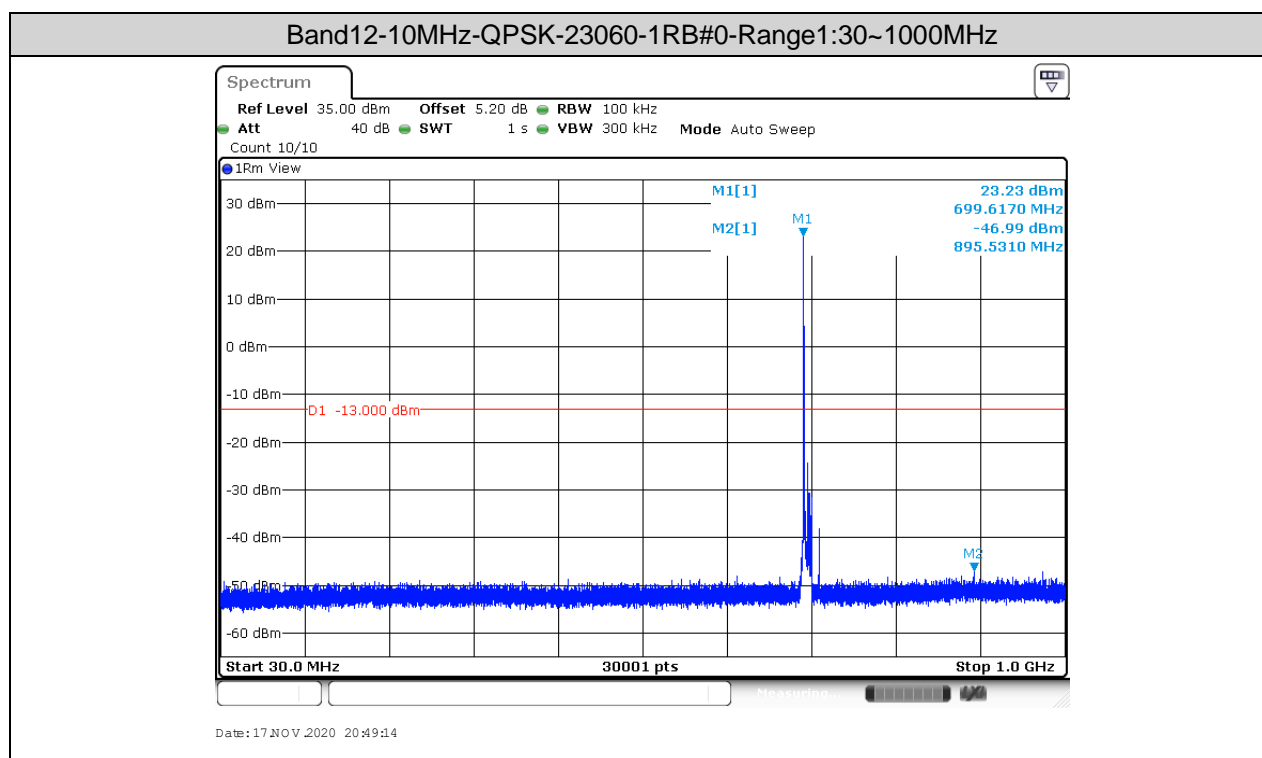
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6 Spurious Emission at Antenna Terminal

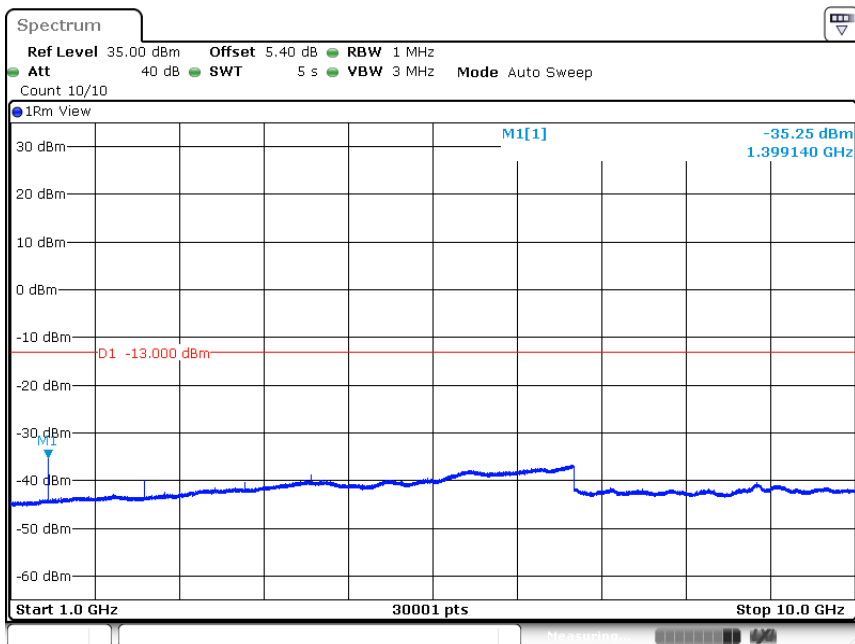
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =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

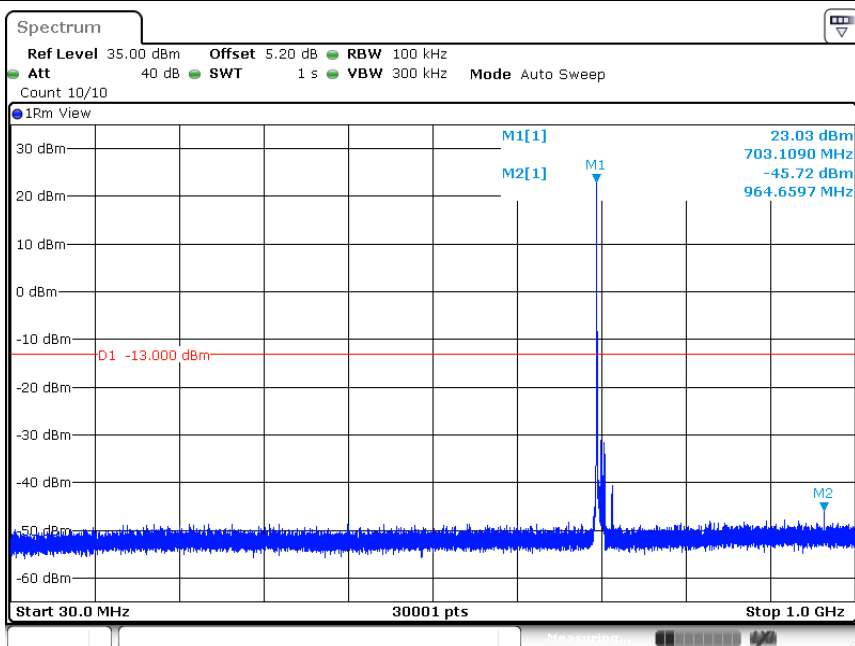


Band12-10MHz-QPSK-23060-1RB#0-Range2:1000~10000MHz



Date: 17 NOV 2020 20:50:24

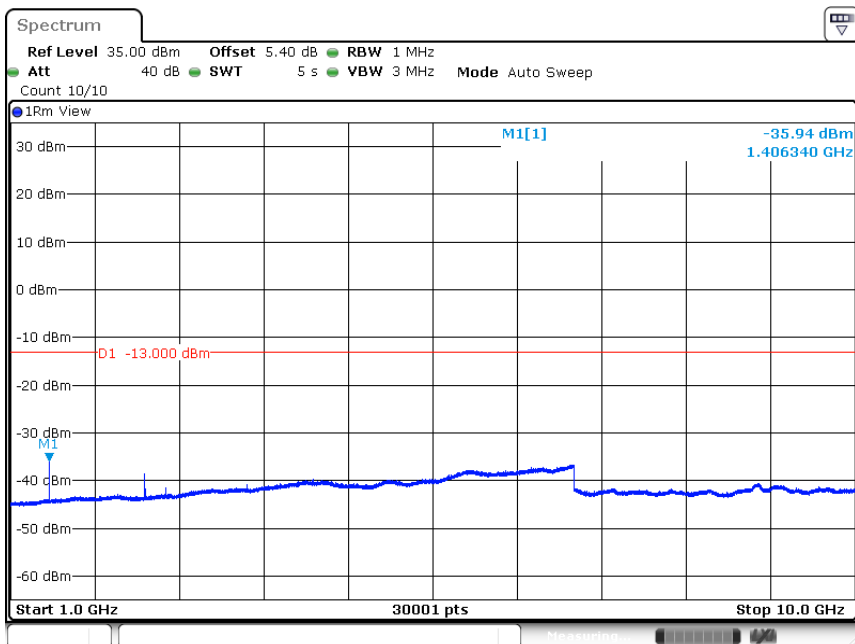
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Date: 17 NOV 2020 20:50:50

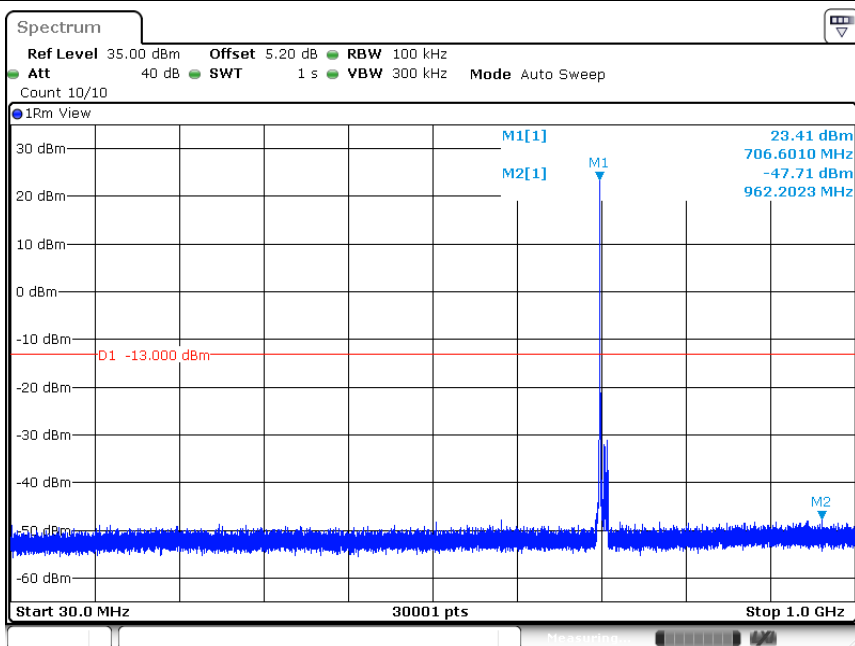


Band12-10MHz-QPSK-23095-1RB#0-Range2:1000~10000MHz



Date: 17 NOV 2020 20:52:01

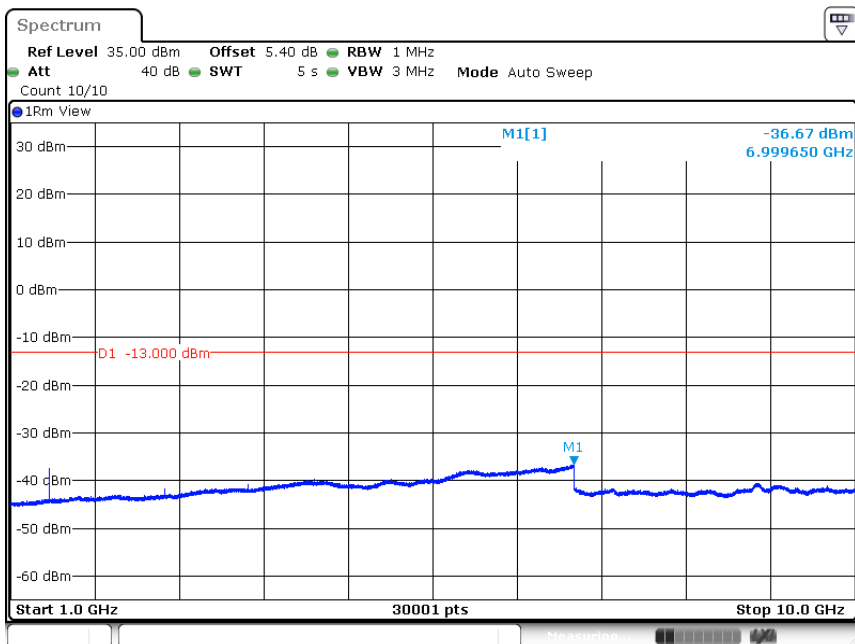
Band12-10MHz-QPSK-23130-1RB#0-Range1:30~1000MHz



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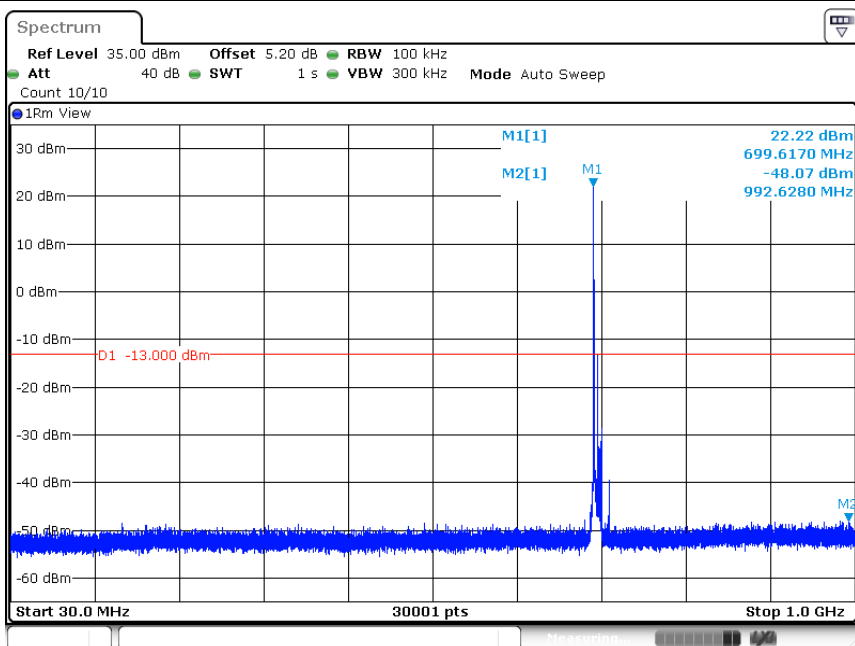


Band12-10MHz-QPSK-23130-1RB#0-Range2:1000~10000MHz



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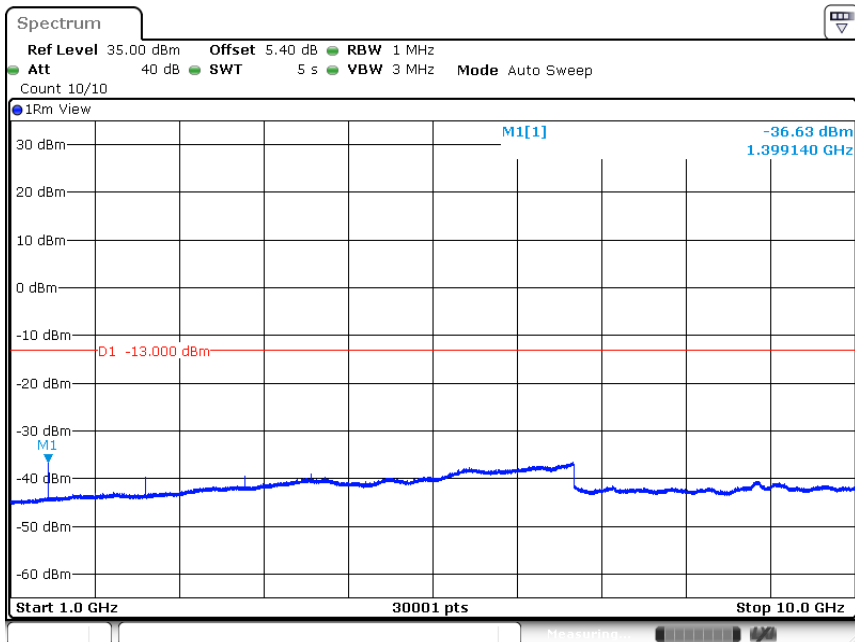
Band12-10MHz-16QAM-23060-1RB#0-Range1:30~1000MHz



Date: 18 NOV 2020 12:05:20

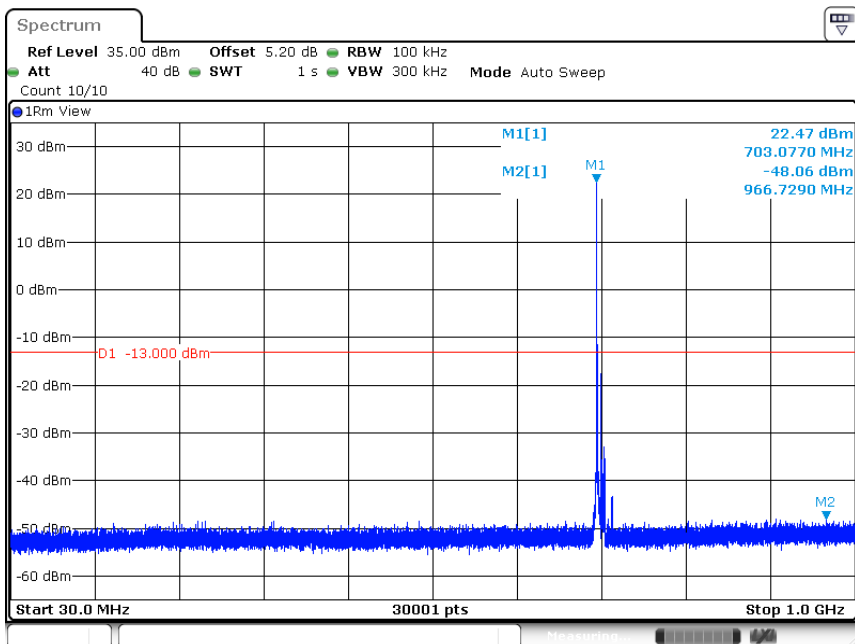


Band12-10MHz-16QAM-23060-1RB#0-Range2:1000~10000MHz



Date: 18 NOV 2020 12:06:31

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



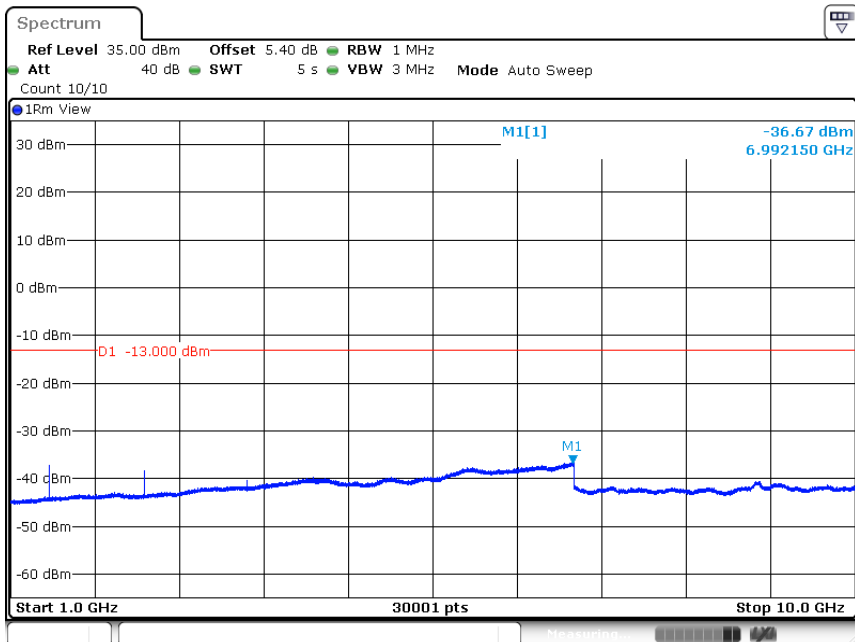
Date: 18 NOV 2020 12:06:57



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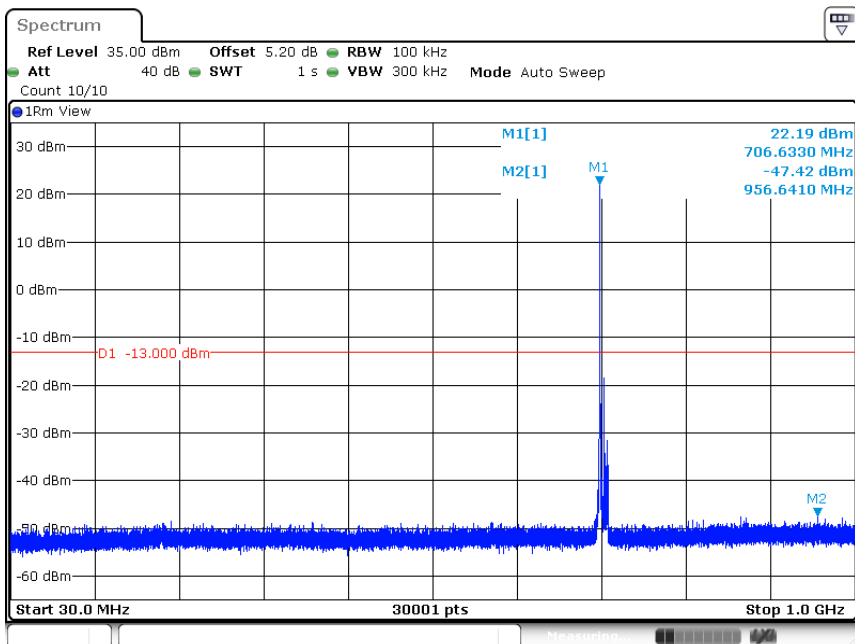
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Band12-10MHz-16QAM-23095-1RB#0-Range2:1000~10000MHz



Date: 18 NOV 2020 12:08:08

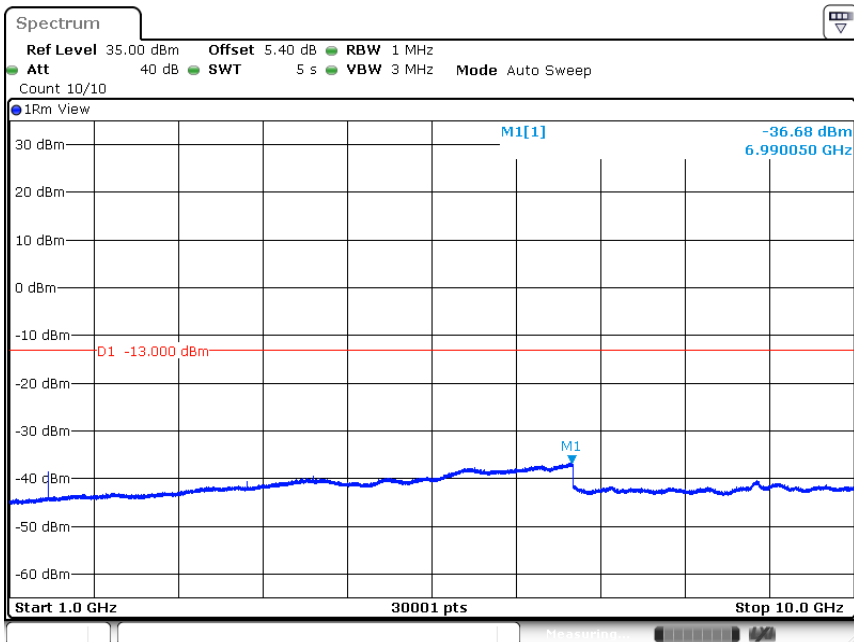
Band12-10MHz-16QAM-23130-1RB#0-Range1:30~1000MHz



Date: 18 NOV 2020 12:08:33



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



Date: 18 NOV 2020 12:09:44





7 Field Strength of Spurious Radiation

7.1 Test Mode =LTE/TM1 10MHz

7.1.1 Test Channel = LCH

Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
47.9944	-57.80	-13.00	44.80	232	198	Horizontal
229.8785	-65.78	-13.00	52.78	284	346	Horizontal
1398.8798	-37.55	-13.00	24.55	109	328	Horizontal
2099.0198	-45.36	-13.00	32.36	168	319	Horizontal
3498.1399	-39.01	-13.00	26.01	218	26	Horizontal
4197.3279	-52.90	-13.00	39.90	164	346	Horizontal
119.7780	-60.58	-13.00	47.58	252	329	Vertical
1398.8798	-42.70	-13.00	29.70	234	79	Vertical
2099.0198	-48.24	-13.00	35.24	196	231	Vertical
3497.8599	-40.45	-13.00	27.45	264	75	Vertical
4197.6079	-52.73	-13.00	39.73	118	180	Vertical
4896.7959	-57.29	-13.00	44.29	311	50	Vertical

7.1.2 Test Channel = MCH

Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
47.1699	-58.26	-13.00	45.26	196	238	Horizontal
242.9256	-65.87	-13.00	52.87	133	216	Horizontal
1406.0812	-37.46	-13.00	24.46	128	326	Horizontal
2109.4219	-48.79	-13.00	35.79	216	354	Horizontal
3515.5006	-42.04	-13.00	29.04	284	46	Horizontal
4218.6087	-58.74	-13.00	45.74	163	46	Horizontal
52.4566	-56.51	-13.00	43.51	133	258	Vertical
119.0990	-60.58	-13.00	47.58	315	323	Vertical
1406.0812	-43.44	-13.00	30.44	169	81	Vertical
2109.4219	-51.00	-13.00	38.00	128	173	Vertical
3515.5006	-41.72	-13.00	28.72	252	68	Vertical
4218.6087	-56.16	-13.00	43.16	188	173	Vertical



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7.1.3 Test Channel = HCH

Freq. [MHz]	Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]	Polarity
46.5393	-57.91	-13.00	44.91	262	196	Horizontal
234.7772	-65.49	-13.00	52.49	222	323	Horizontal
1413.2827	-50.07	-13.00	37.07	185	324	Horizontal
2119.8240	-46.36	-13.00	33.36	196	315	Horizontal
3533.1413	-44.51	-13.00	31.51	162	46	Horizontal
4239.6096	-58.84	-13.00	45.84	174	360	Horizontal
50.7590	-58.45	-13.00	45.45	185	281	Vertical
118.5654	-61.72	-13.00	48.72	166	344	Vertical
1412.8826	-55.90	-13.00	42.90	252	82	Vertical
2119.8240	-48.67	-13.00	35.67	174	59	Vertical
3533.1413	-45.21	-13.00	32.21	284	68	Vertical
4239.3296	-57.87	-13.00	44.87	132	301	Vertical

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	5.30	0.007528	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	VN	NT	1.50	0.002131	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	VH	NT	-0.90	-0.001278	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VL	NT	0.90	0.001272	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VN	NT	3.50	0.004947	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VH	NT	-4.30	-0.006078	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VL	NT	-1.50	-0.002110	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VN	NT	-5.30	-0.007454	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VH	NT	-6.00	-0.008439	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	VL	NT	2.20	0.003125	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	VN	NT	2.50	0.003551	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	VH	NT	0.90	0.001278	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	VL	NT	-5.40	-0.007633	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	VN	NT	-4.80	-0.006784	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	VH	NT	-0.20	-0.000283	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	VL	NT	1.00	0.001406	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	VN	NT	-1.90	-0.002672	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	VH	NT	-0.20	-0.000281	±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	-1.60	-0.002273	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	-20	3.70	0.005256	±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	1.90	0.002699	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	20	-0.60	-0.000852	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	30	-2.10	-0.002983	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	40	-3.60	-0.005114	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	50	-3.70	-0.005256	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-30	-1.10	-0.001555	±2.5	PASS



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Band12	10MHz	QPSK	23095	50RB#0	NV	-20	-2.50	-0.003534	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	0	1.00	0.001413	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	10	-1.60	-0.002261	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	20	3.30	0.004664	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	30	-4.90	-0.006926	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	40	-3.40	-0.004806	±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	-3.30	-0.004641	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-20	0.30	0.000422	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	0	1.70	0.002391	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	10	-1.60	-0.002250	±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	-3.40	-0.004782	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	40	3.20	0.004501	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	50	-4.70	-0.006610	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	-30	0.70	0.000994	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	-20	-2.10	-0.002983	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	0	-0.80	-0.001136	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	10	-3.50	-0.004972	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	20	0.80	0.001136	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	30	-1.60	-0.002273	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	40	-1.90	-0.002699	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	50	-3.90	-0.005540	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	-30	-5.30	-0.007491	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	-20	-3.20	-0.004523	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	0	-2.70	-0.003816	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	10	-4.50	-0.006360	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	20	-2.80	-0.003958	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	30	2.60	0.003675	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	40	-2.40	-0.003392	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	50	-1.50	-0.002120	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	-30	-0.30	-0.000422	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	-20	-1.40	-0.001969	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	0	1.10	0.001547	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	10	1.90	0.002672	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	20	-3.70	-0.005204	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	30	2.40	0.003376	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	40	1.70	0.002391	±2.5	PASS



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Band12	10MHz	16QAM	23130	27RB#0	NV	50	1.40	0.001969	±2.5	PASS
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The End

