



Appendix B

E-UTRA BAND 5



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1. Effective (Isotropic) Radiated Power

1.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	23.01	23.15	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	23.23	23.37	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	23.38	23.52	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#0	23.47	23.61	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#1	23.50	23.64	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#3	23.46	23.60	38.45	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	22.50	22.64	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	23.25	23.39	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	23.30	23.44	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	23.18	23.32	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#0	23.33	23.47	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#1	23.36	23.50	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#3	23.37	23.51	38.45	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	22.28	22.42	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	23.29	23.43	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	23.36	23.50	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	23.31	23.45	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#0	23.41	23.55	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#1	23.44	23.58	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#3	23.33	23.47	38.45	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	22.48	22.62	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	21.99	22.13	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	22.21	22.35	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	22.07	22.21	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#0	22.63	22.77	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#1	22.52	22.66	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#3	22.73	22.87	38.45	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	21.28	21.42	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	22.11	22.25	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#2	22.10	22.24	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	21.88	22.02	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#0	22.49	22.63	38.45	PASS



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Band5	1.4MHz	16QAM	20525	3RB#1	22.29	22.43	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#3	22.41	22.55	38.45	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	21.31	21.45	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	22.02	22.16	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#2	21.94	22.08	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	21.79	21.93	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#0	22.62	22.76	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#1	22.46	22.60	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#3	22.60	22.74	38.45	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	21.29	21.43	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#0	23.47	23.61	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#8	23.49	23.63	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#14	23.30	23.44	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#0	22.60	22.74	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#4	22.51	22.65	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#7	22.58	22.72	38.45	PASS
Band5	3MHz	QPSK	20415	15RB#0	22.55	22.69	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#0	23.40	23.54	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#8	23.32	23.46	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#14	23.04	23.18	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#0	22.43	22.57	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#4	22.51	22.65	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#7	22.31	22.45	38.45	PASS
Band5	3MHz	QPSK	20525	15RB#0	22.32	22.46	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#0	23.47	23.61	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#8	23.57	23.71	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#14	23.27	23.41	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#0	22.56	22.70	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#4	22.48	22.62	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#7	22.45	22.59	38.45	PASS
Band5	3MHz	QPSK	20635	15RB#0	22.51	22.65	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#0	22.09	22.23	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#8	22.01	22.15	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#14	21.73	21.87	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#0	21.39	21.53	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#4	21.47	21.61	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#7	21.46	21.60	38.45	PASS
Band5	3MHz	16QAM	20415	15RB#0	21.55	21.69	38.45	PASS



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Band5	3MHz	16QAM	20525	1RB#0	22.17	22.31	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#8	22.06	22.20	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#14	22.06	22.20	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#0	21.32	21.46	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#4	21.23	21.37	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#7	21.28	21.42	38.45	PASS
Band5	3MHz	16QAM	20525	15RB#0	21.56	21.70	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#0	22.14	22.28	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#8	22.09	22.23	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#14	22.07	22.21	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#0	21.28	21.42	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#4	21.31	21.45	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#7	21.44	21.58	38.45	PASS
Band5	3MHz	16QAM	20635	15RB#0	21.49	21.63	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#0	23.41	23.55	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#12	23.43	23.57	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#24	23.24	23.38	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#0	22.68	22.82	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#6	22.56	22.70	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#13	22.49	22.63	38.45	PASS
Band5	5MHz	QPSK	20425	25RB#0	22.55	22.69	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#0	23.11	23.25	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#12	23.29	23.43	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#24	23.15	23.29	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#0	22.48	22.62	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#6	22.46	22.60	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#13	22.46	22.60	38.45	PASS
Band5	5MHz	QPSK	20525	25RB#0	22.41	22.55	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#0	23.13	23.27	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#12	23.40	23.54	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#24	23.33	23.47	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#0	22.45	22.59	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#6	22.58	22.72	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#13	22.37	22.51	38.45	PASS
Band5	5MHz	QPSK	20625	25RB#0	22.39	22.53	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#0	21.87	22.01	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#12	22.31	22.45	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#24	21.55	21.69	38.45	PASS



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Band5	5MHz	16QAM	20425	12RB#0	21.45	21.59	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#6	21.44	21.58	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#13	21.23	21.37	38.45	PASS
Band5	5MHz	16QAM	20425	25RB#0	21.48	21.62	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#0	21.85	21.99	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#12	22.36	22.50	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#24	21.96	22.10	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#0	21.36	21.50	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#6	21.21	21.35	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#13	21.20	21.34	38.45	PASS
Band5	5MHz	16QAM	20525	25RB#0	21.43	21.57	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#0	21.95	22.09	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#12	22.52	22.66	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#24	21.96	22.10	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#0	21.43	21.57	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#6	21.30	21.44	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#13	21.26	21.40	38.45	PASS
Band5	5MHz	16QAM	20625	25RB#0	21.25	21.39	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#0	23.51	23.65	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#24	23.53	23.67	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#49	23.04	23.18	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#0	22.61	22.75	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#12	22.66	22.80	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#25	22.28	22.42	38.45	PASS
Band5	10MHz	QPSK	20450	50RB#0	22.38	22.52	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#0	23.22	23.36	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#24	24.00	24.14	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#49	23.03	23.17	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#0	22.57	22.71	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#12	22.53	22.67	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#25	22.33	22.47	38.45	PASS
Band5	10MHz	QPSK	20525	50RB#0	22.43	22.57	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#0	23.30	23.44	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#24	23.54	23.68	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#49	23.00	23.14	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#0	22.51	22.65	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#12	22.45	22.59	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#25	22.35	22.49	38.45	PASS



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Band5	10MHz	QPSK	20600	50RB#0	22.43	22.57	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#0	22.12	22.26	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#24	22.04	22.18	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#49	22.06	22.20	38.45	PASS
Band5	10MHz	16QAM	20450	25RB#0	21.59	21.73	38.45	PASS
Band5	10MHz	16QAM	20450	25RB#12	21.53	21.67	38.45	PASS
Band5	10MHz	16QAM	20450	25RB#25	21.33	21.47	38.45	PASS
Band5	10MHz	16QAM	20450	50RB#0	21.30	21.44	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#0	22.06	22.20	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#24	21.98	22.12	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#49	21.94	22.08	38.45	PASS
Band5	10MHz	16QAM	20525	25RB#0	21.52	21.66	38.45	PASS
Band5	10MHz	16QAM	20525	25RB#12	21.65	21.79	38.45	PASS
Band5	10MHz	16QAM	20525	25RB#25	21.41	21.55	38.45	PASS
Band5	10MHz	16QAM	20525	50RB#0	21.48	21.62	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#0	22.17	22.31	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#24	22.01	22.15	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#49	21.99	22.13	38.45	PASS
Band5	10MHz	16QAM	20600	25RB#0	21.50	21.64	38.45	PASS
Band5	10MHz	16QAM	20600	25RB#12	21.32	21.46	38.45	PASS
Band5	10MHz	16QAM	20600	25RB#25	21.31	21.45	38.45	PASS
Band5	10MHz	16QAM	20600	50RB#0	21.44	21.58	38.45	PASS

Remark:

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

$$\text{ERP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBd]}$$

$$\text{EIRP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBi]}$$

b: SGP=Signal Generator Level



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

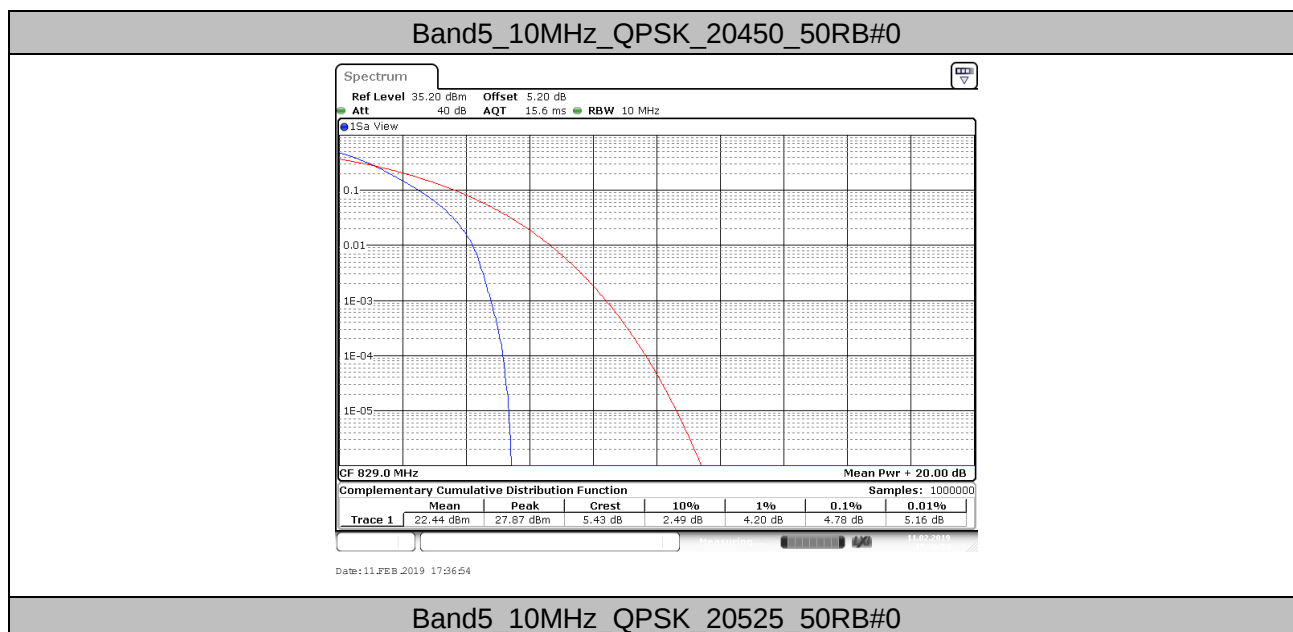


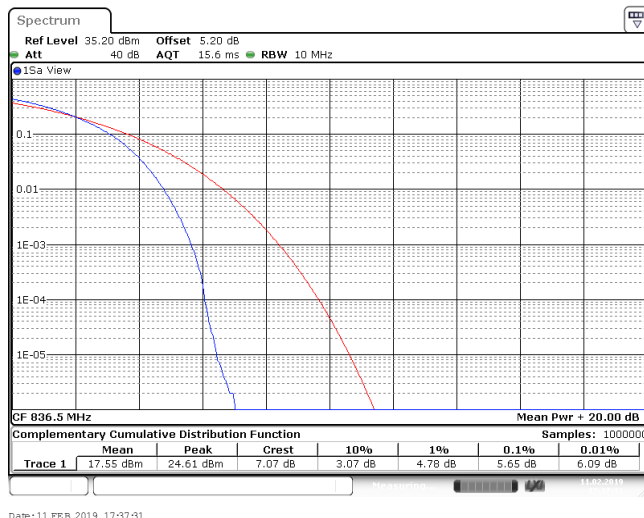
2. Peak-to-Average Ratio(CCDF)

2.1. Test Result

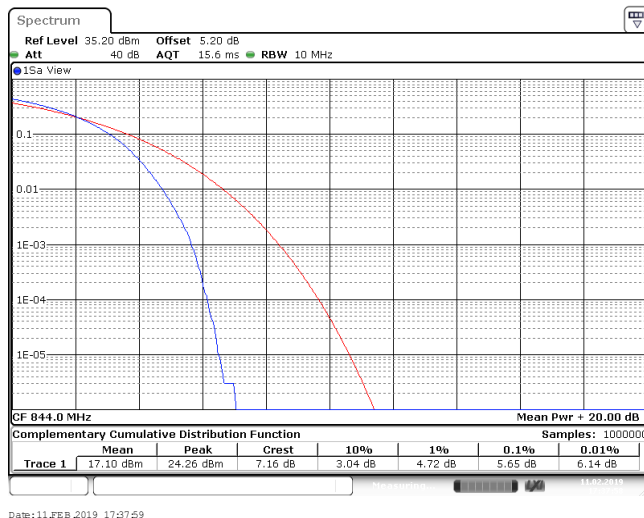
BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band5	10MHz	QPSK	20450	50RB#0	4.78	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	5.65	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	5.65	13	PASS
Band5	10MHz	16QAM	20450	50RB#0	5.80	13	PASS
Band5	10MHz	16QAM	20525	50RB#0	5.91	13	PASS
Band5	10MHz	16QAM	20600	50RB#0	5.65	13	PASS

2.2. Test Plots





Band5_10MHz_QPSK_20600_50RB#0



Band5_10MHz_16QAM_20450_50RB#0

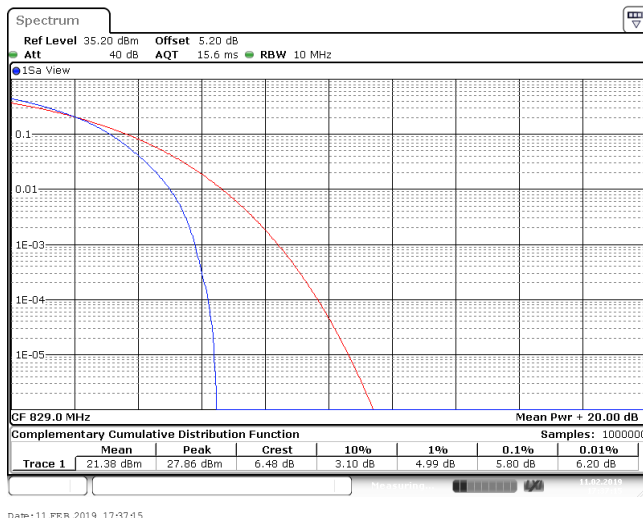


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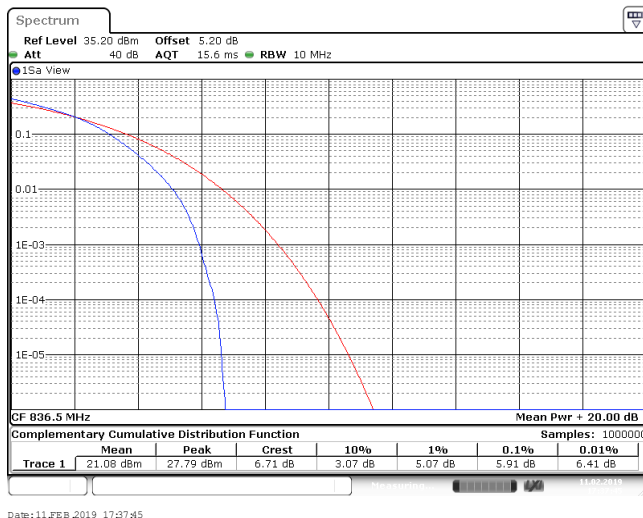
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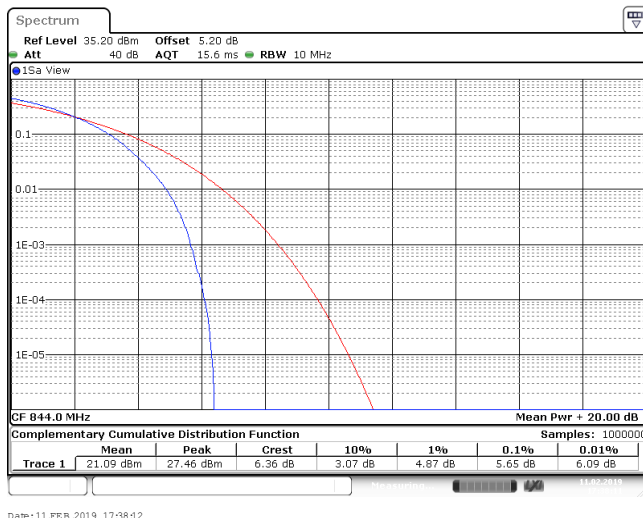


Band5_10MHz_16QAM_20525_50RB#0



Band5_10MHz_16QAM_20600_50RB#0





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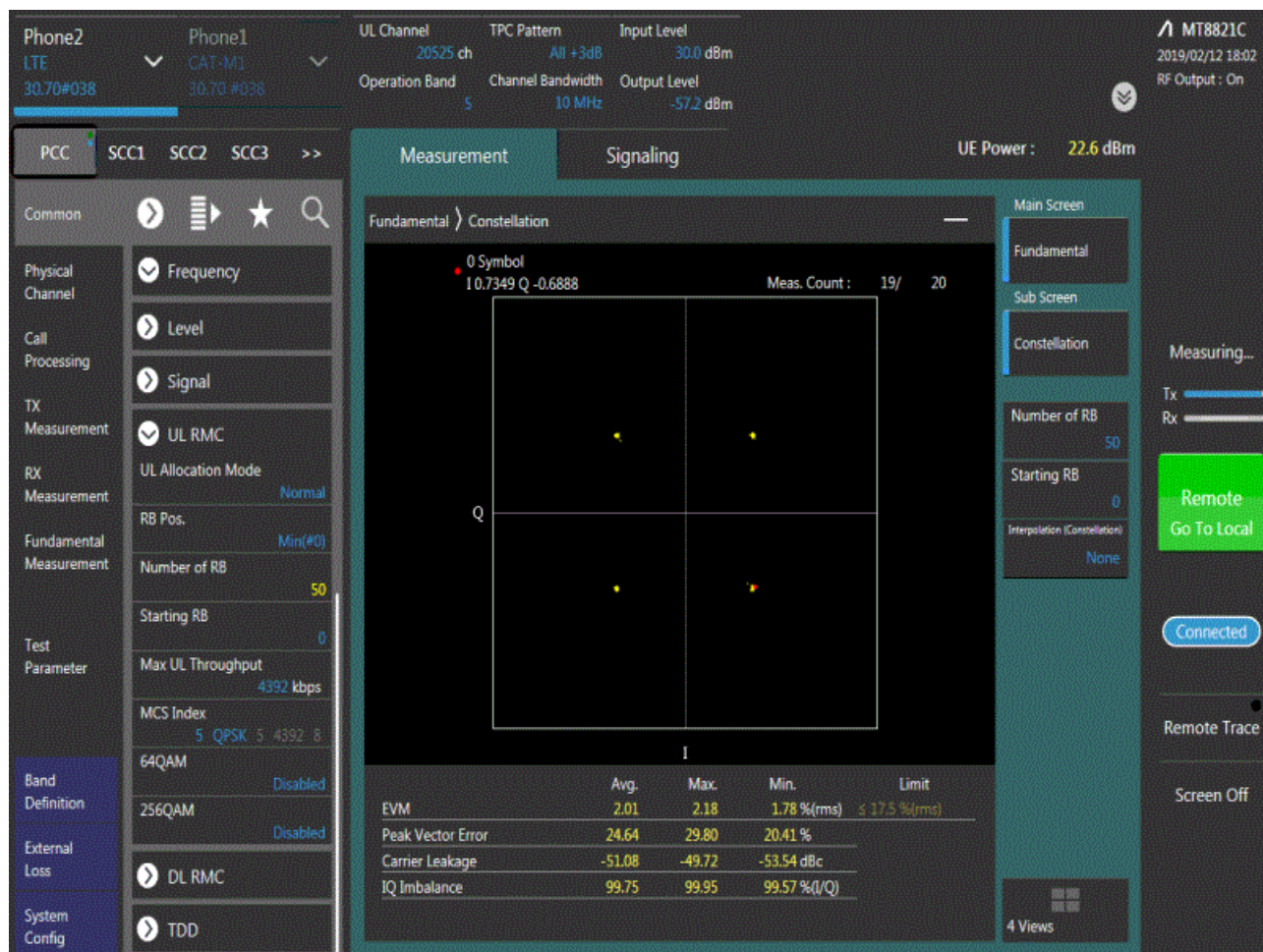
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3. Modulation Characteristics

3.1. Test BAND = LTE BAND5

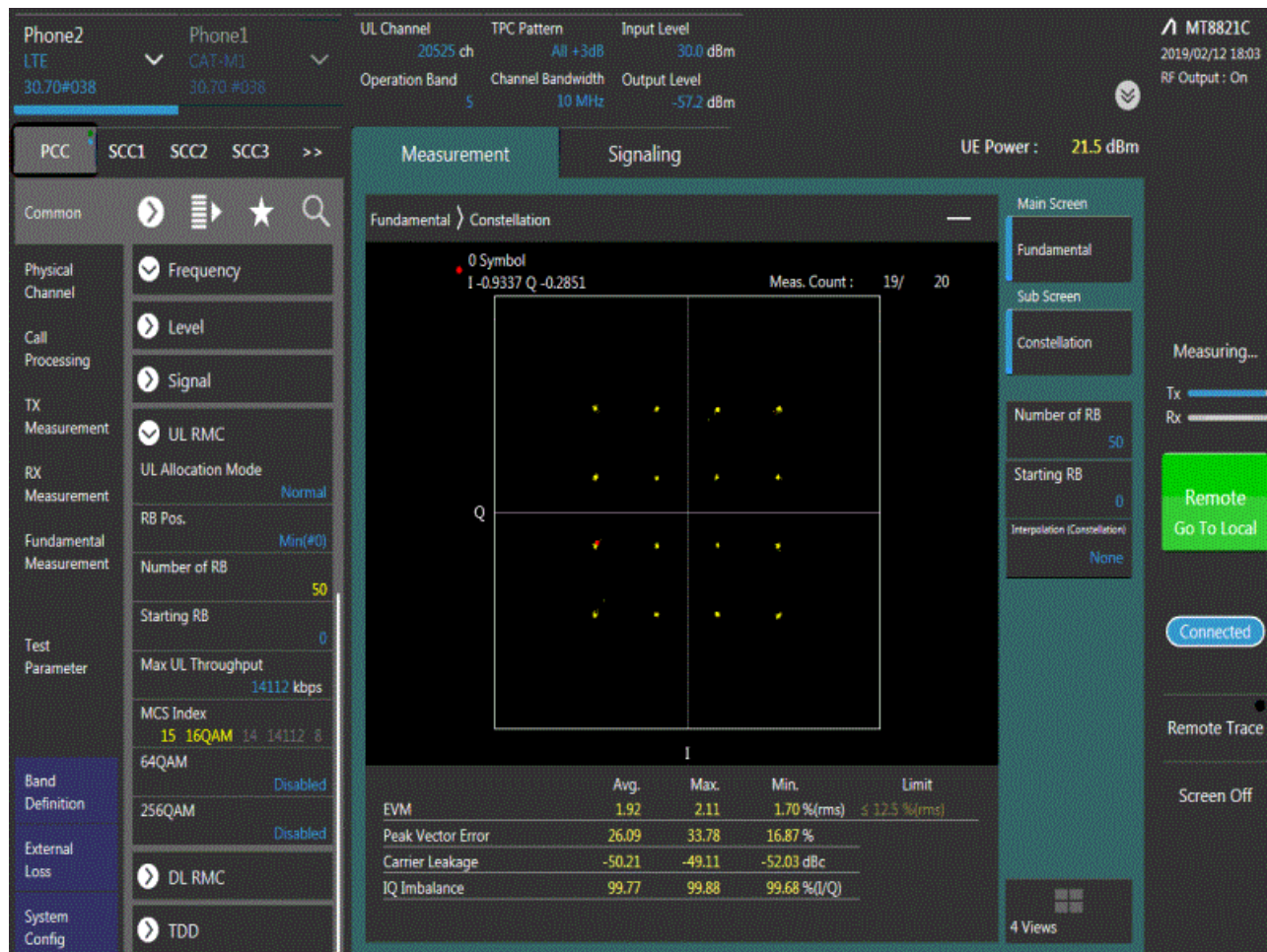
3.1.1. Test Mode = LTE /TM1 10MHz

3.1.1.1. Test Channel = MCH



3.1.2. Test Mode = LTE /TM2 10MHz

3.1.2.1. Test Channel = MCH



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4. 26dB Bandwidth and Occupied Bandwidth

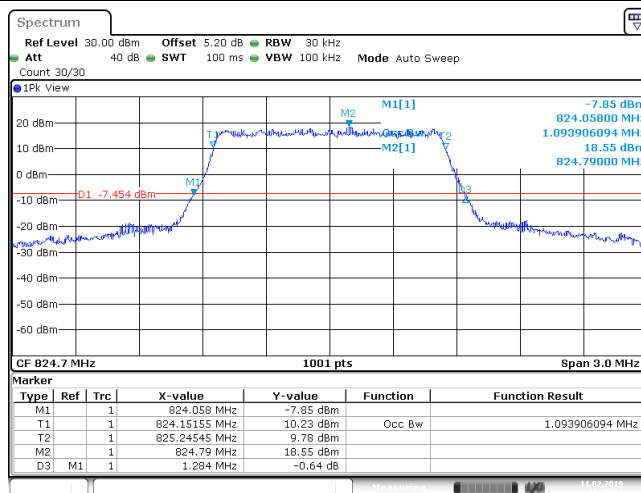
4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.094	1.284	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.094	1.293	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.091	1.296	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.094	1.278	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.091	1.281	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.091	1.284	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.697	2.994	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.703	3.000	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.697	3.006	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.685	2.982	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.691	2.970	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.685	2.976	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.466	4.910	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.476	4.940	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.466	4.900	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.486	4.940	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.486	4.960	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.486	4.950	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.911	9.720	PASS
Band5	10MHz	QPSK	20525	50RB#0	8.931	9.720	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.891	9.680	PASS
Band5	10MHz	16QAM	20450	50RB#0	8.931	9.680	PASS
Band5	10MHz	16QAM	20525	50RB#0	8.931	9.740	PASS
Band5	10MHz	16QAM	20600	50RB#0	8.891	9.700	PASS



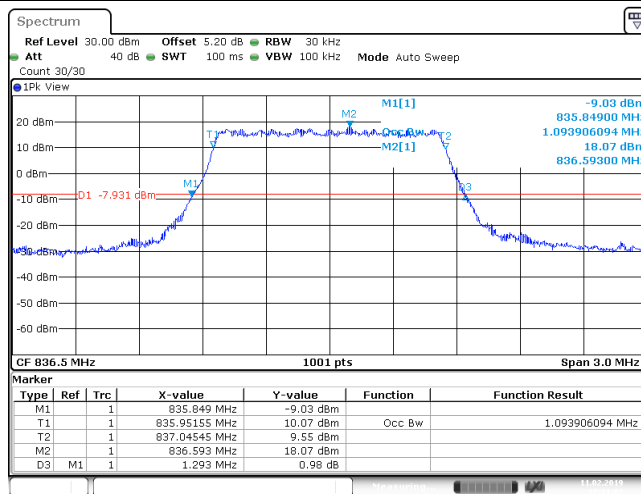
4.2. Test Plots

Band5_1.4MHz_QPSK_20407_6RB#0



Date: 11 FEB 2019 17:00:37

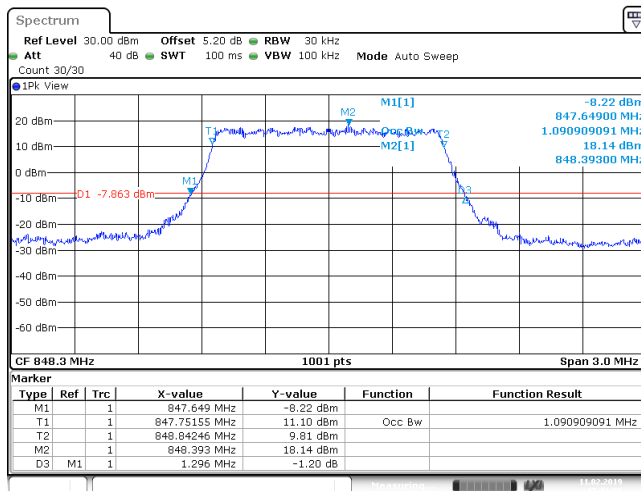
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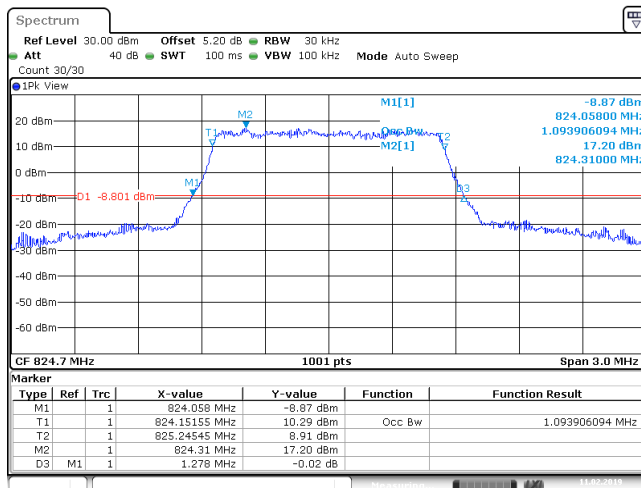
Band5_1.4MHz_QPSK_20643_6RB#0





Date: 11 FEB 2019 17:11:30

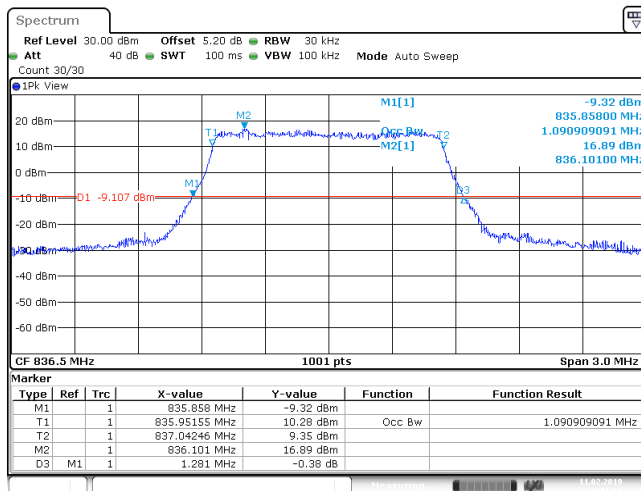
Band5_1.4MHz_16QAM_20407_6RB#0



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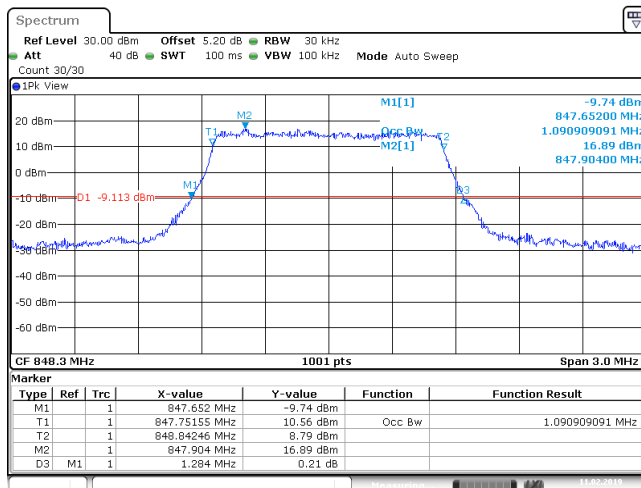
Band5_1.4MHz_16QAM_20525_6RB#0





Date: 11 FEB 2019 17:11:17

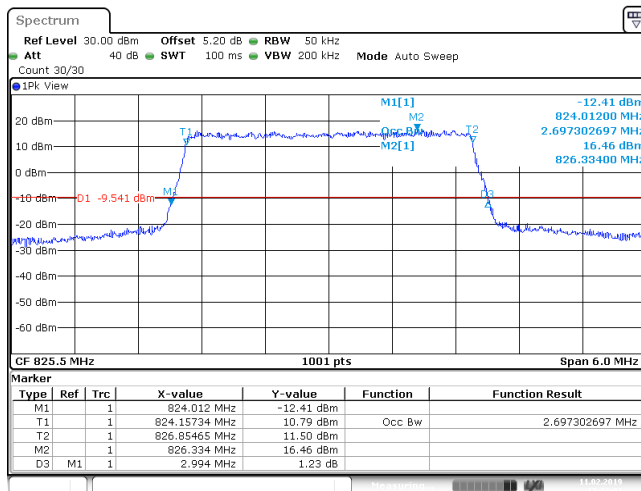
Band5_1.4MHz_16QAM_20643_6RB#0



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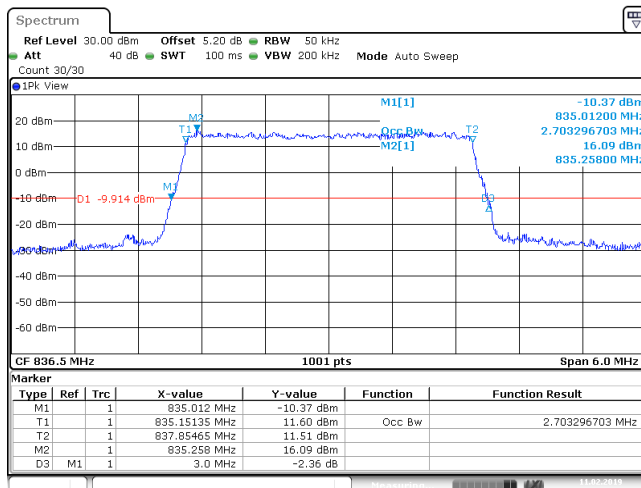
Band5_3MHz_QPSK_20415_15RB#0





Date: 11 FEB 2019 17:12:01

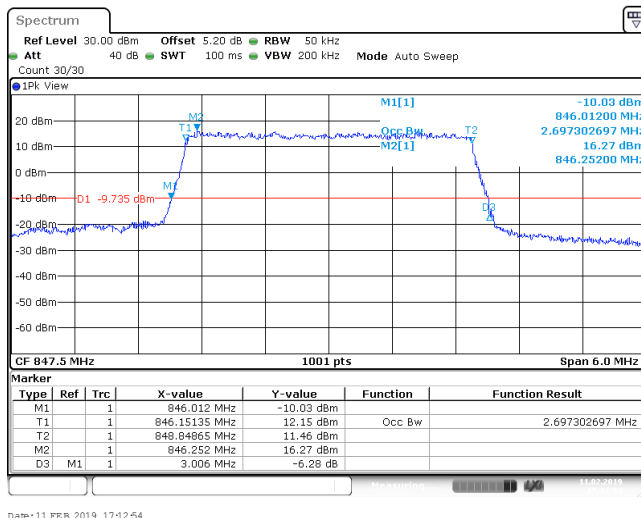
Band5_3MHz_QPSK_20525_15RB#0



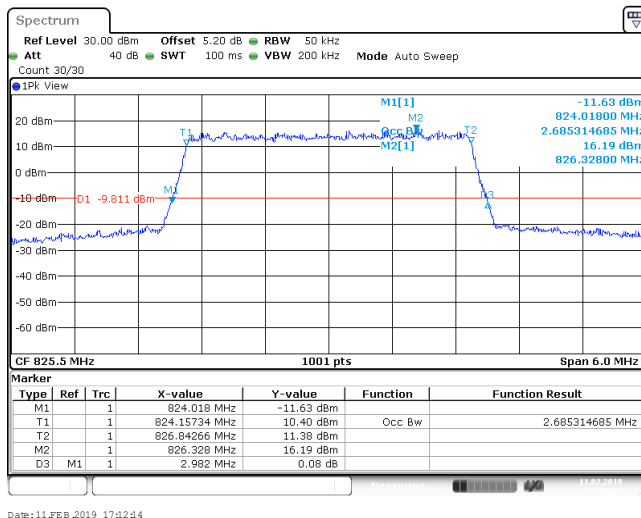
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Band5_3MHz_QPSK_20635_15RB#0





Band5_3MHz_16QAM_20415_15RB#0

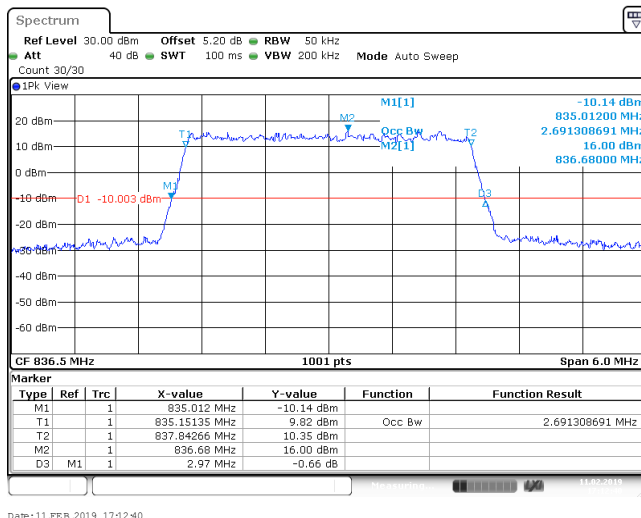


Band5_3MHz_16QAM_20525_15RB#0

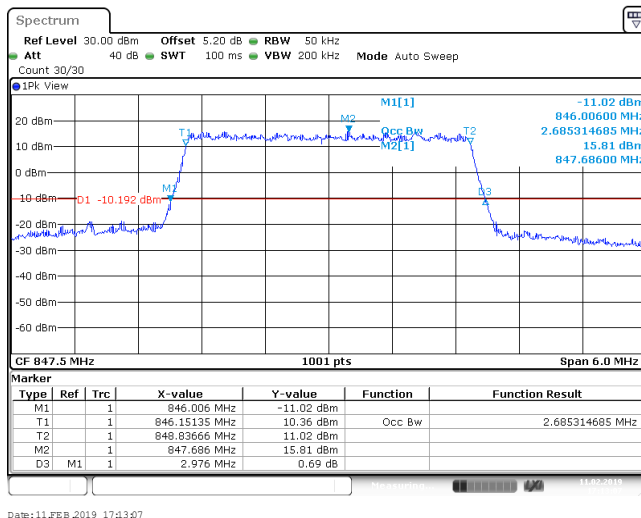


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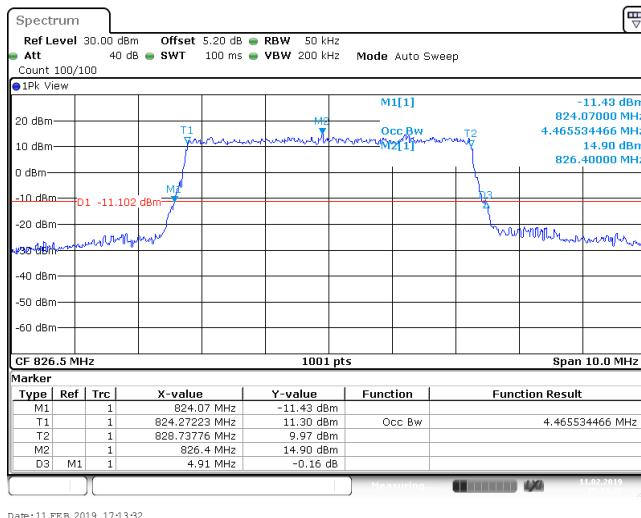


Band5_3MHz_16QAM_20635_15RB#0

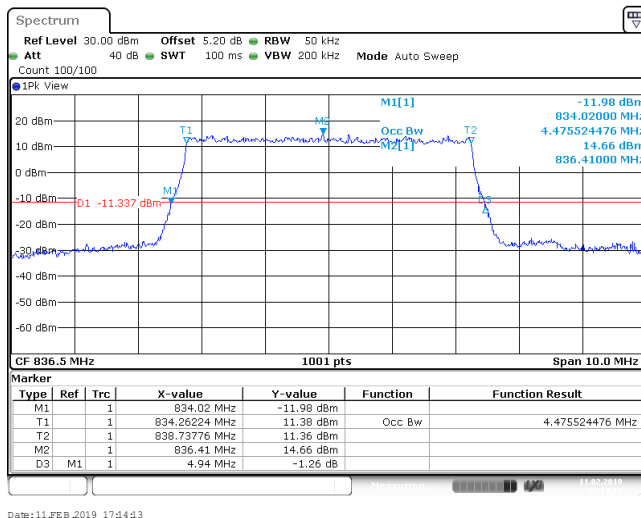


Band5_5MHz_QPSK_20425_25RB#0



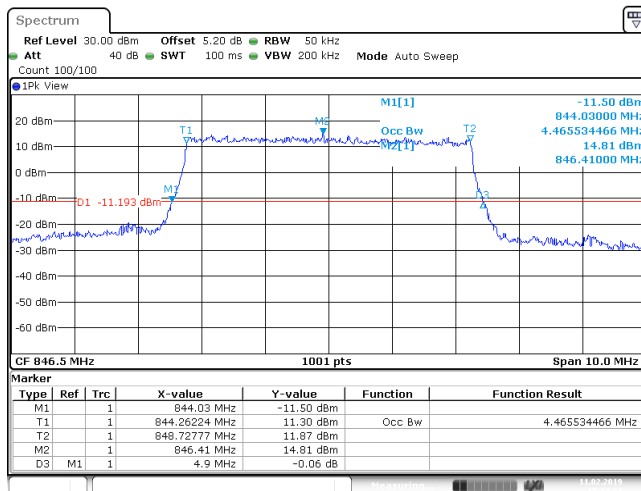


Band5_5MHz_QPSK_20525_25RB#0



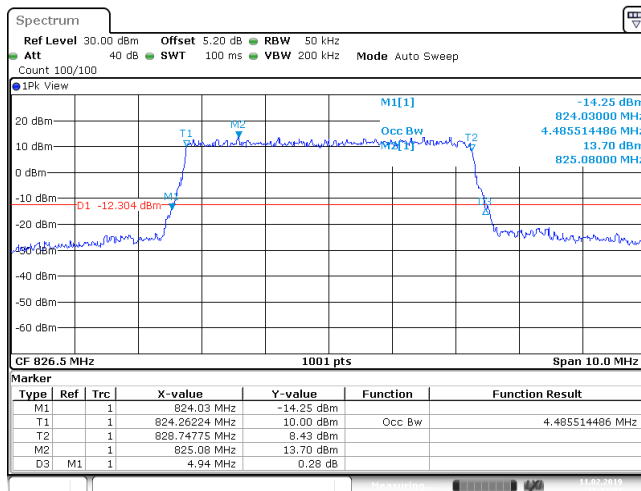
Band5_5MHz_QPSK_20625_25RB#0





Date: 11 FEB 2019 17:14:53

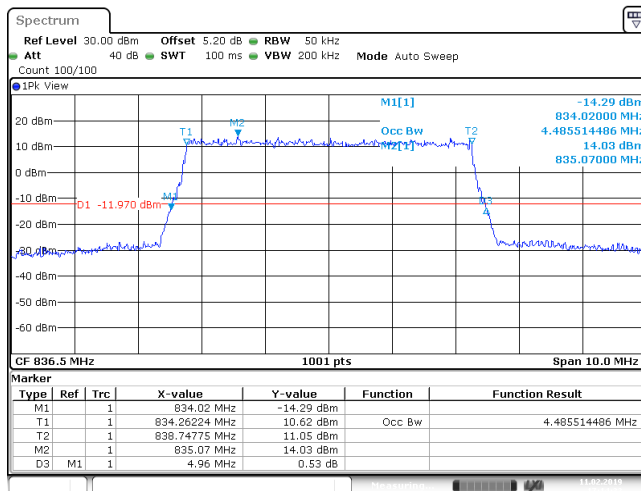
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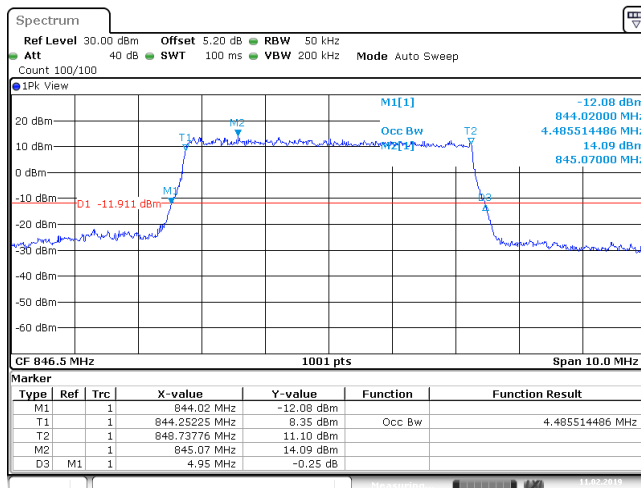
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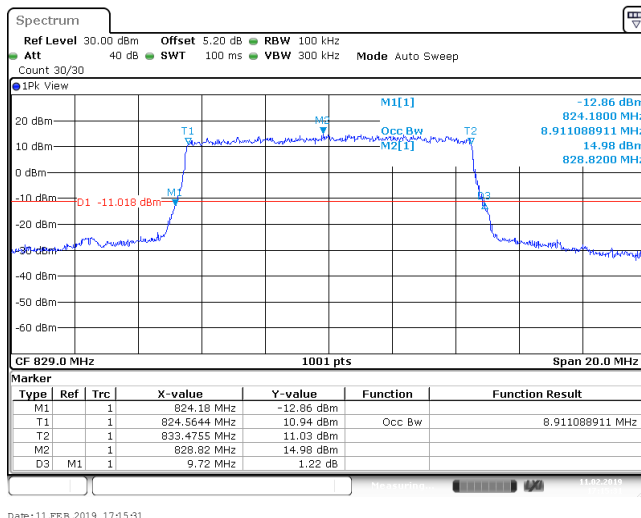
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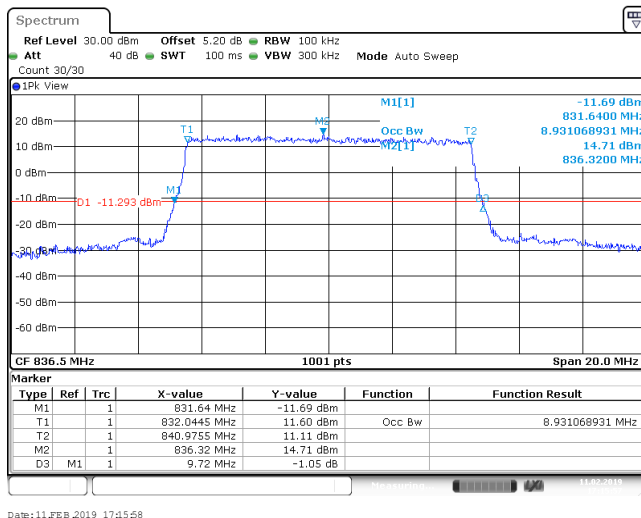
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Band5_10MHz_QPSK_20450_50RB#0



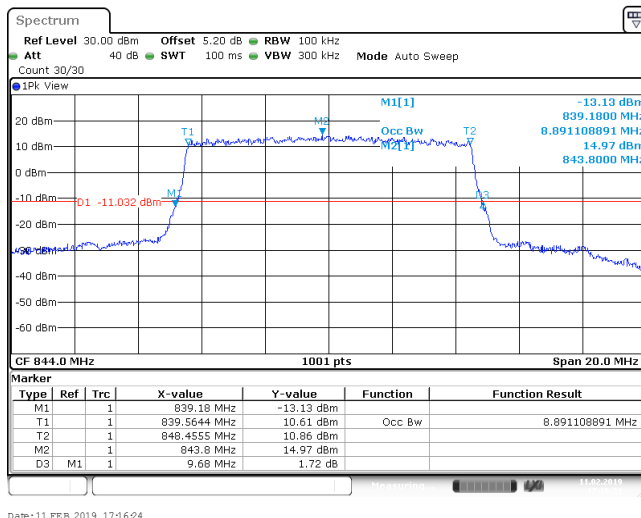


Band5_10MHz_QPSK_20525_50RB#0

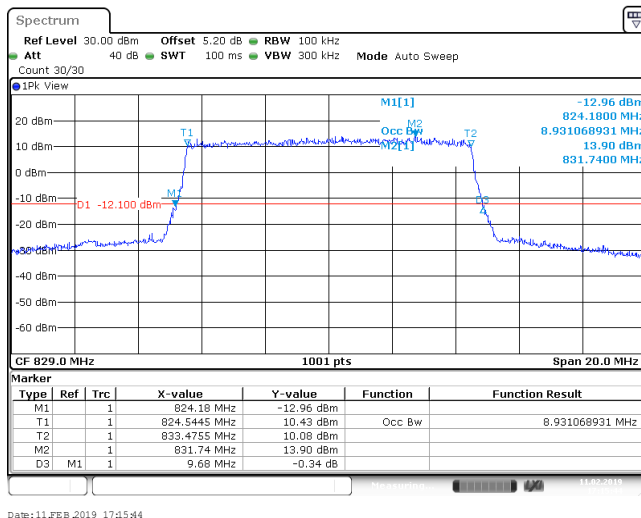


Band5_10MHz_QPSK_20600_50RB#0



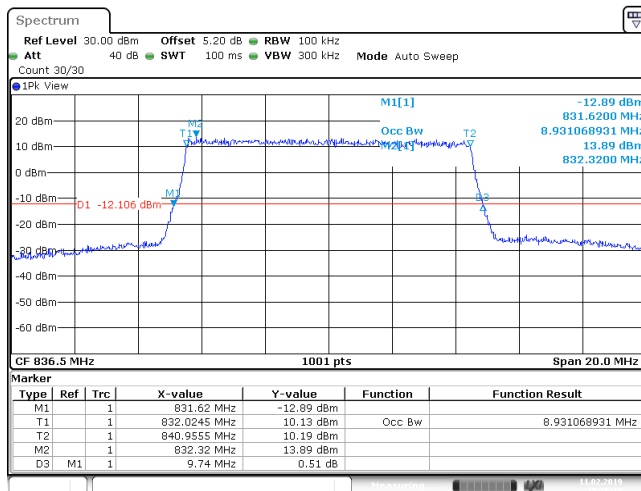


Band5_10MHz_16QAM_20450_50RB#0



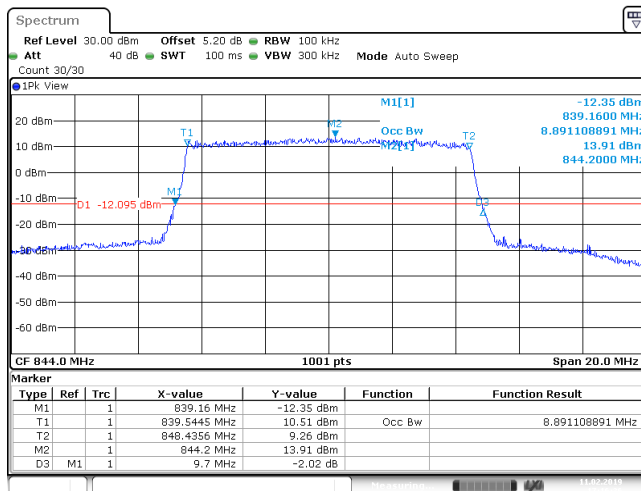
Band5_10MHz_16QAM_20525_50RB#0





Date: 11 FEB 2019 17:16:11

Band5_10MHz_16QAM_20600_50RB#0



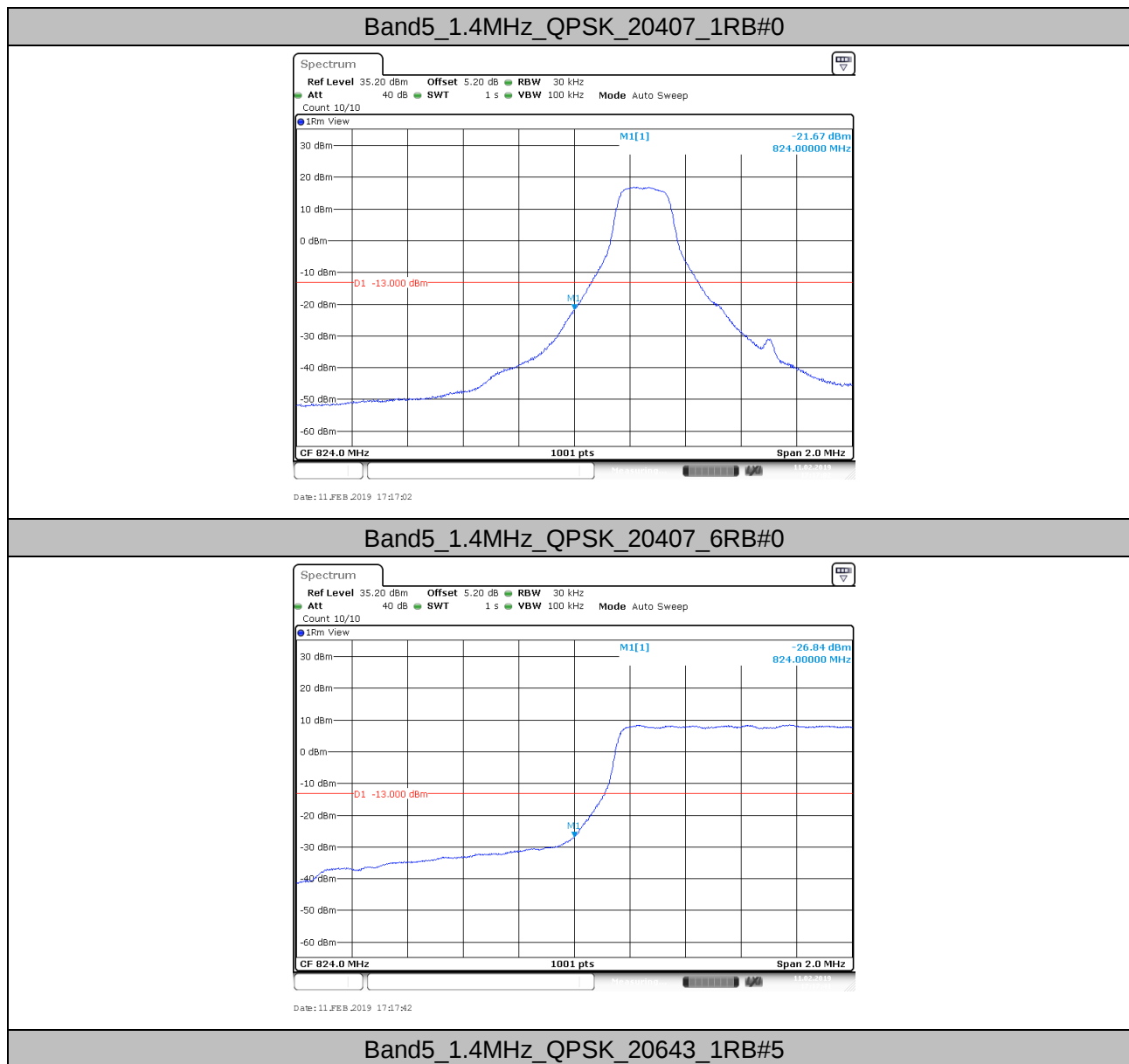
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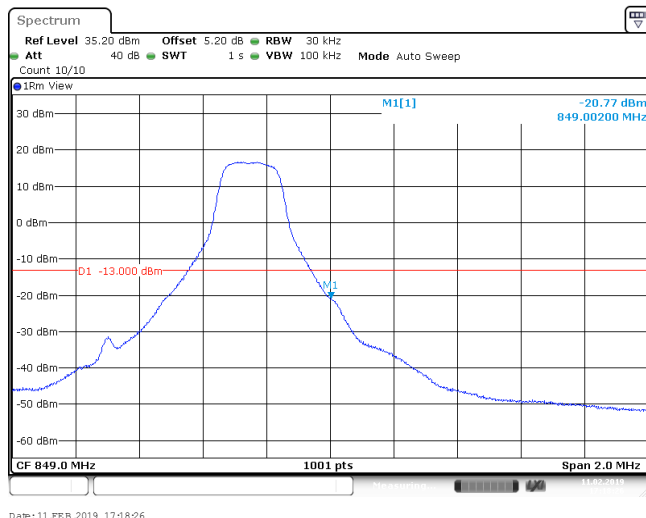




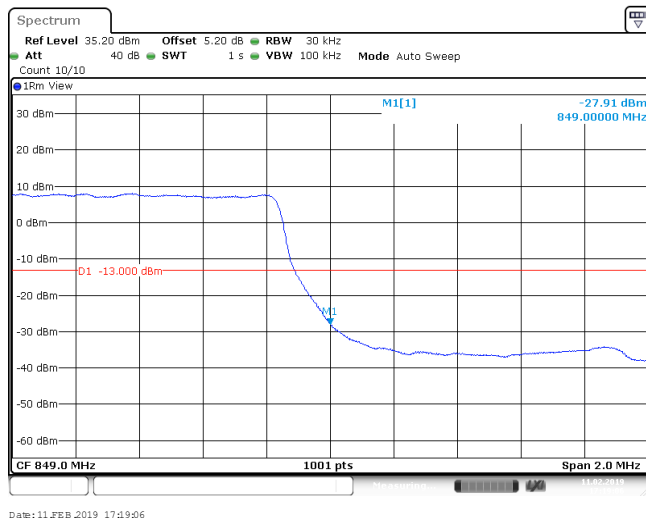
5. Band Edge Compliance

5.1. Test Plots



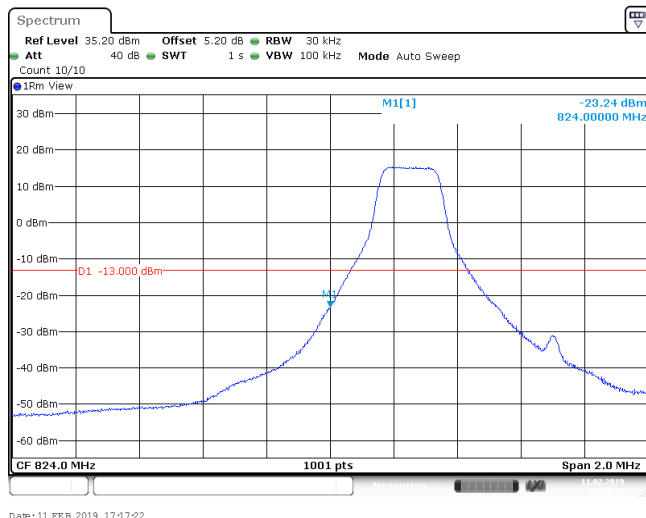


Band5_1.4MHz_QPSK_20643_6RB#0

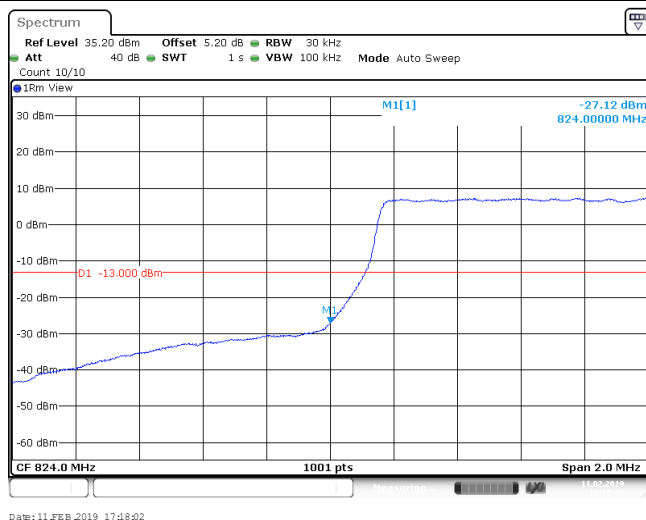


Band5_1.4MHz_16QAM_20407_1RB#0





Band5_1.4MHz_16QAM_20407_6RB#0



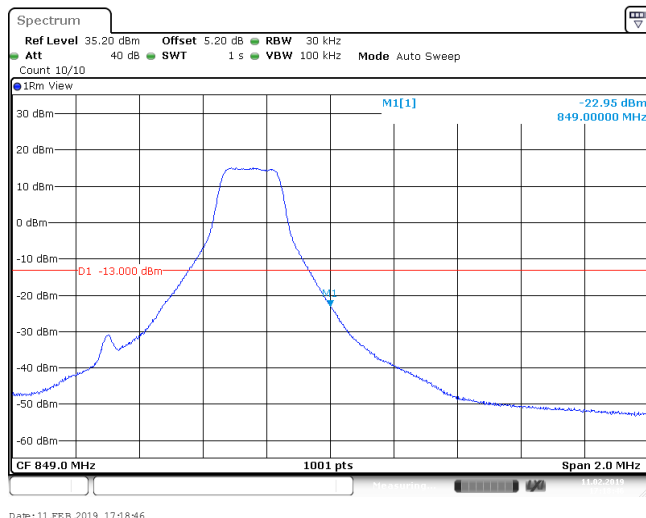
Band5_1.4MHz_16QAM_20643_1RB#5



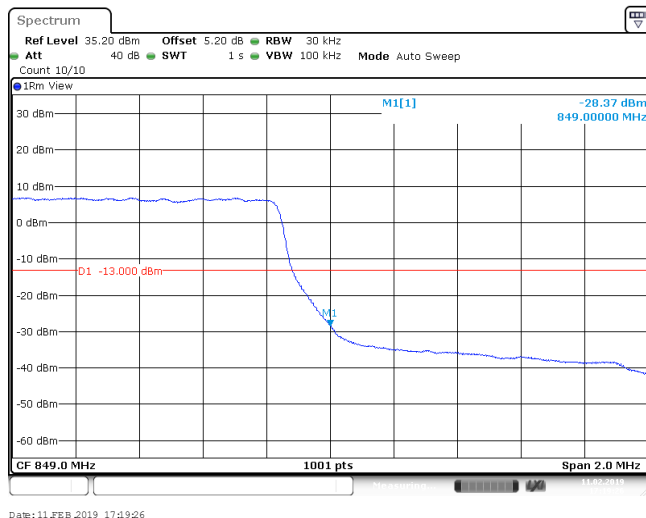
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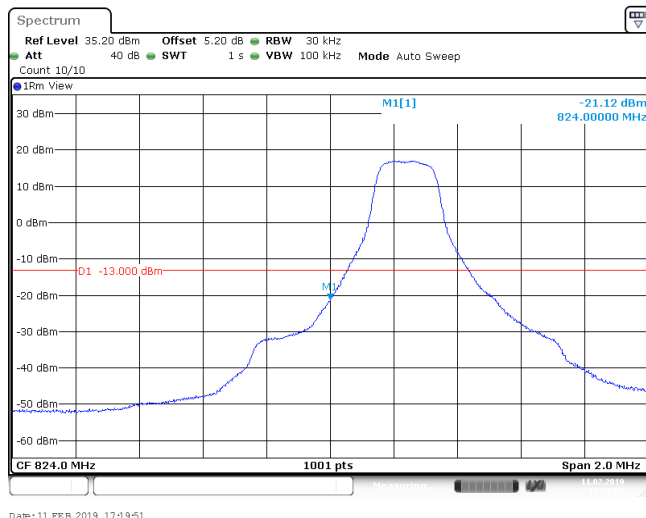


Band5_1.4MHz_16QAM_20643_6RB#0

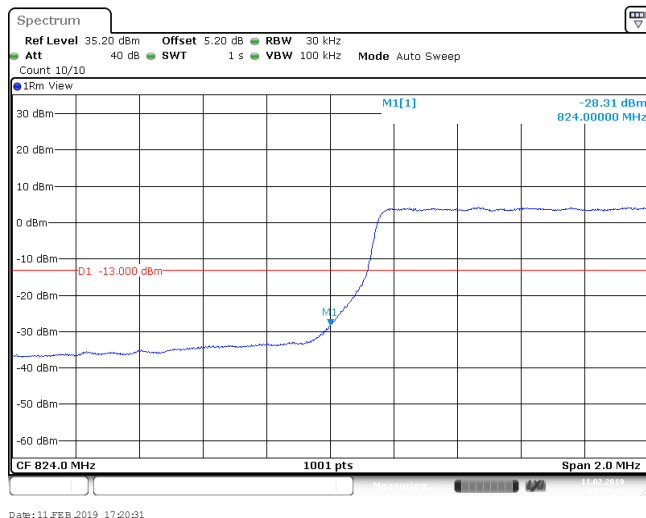


Band5_3MHz_QPSK_20415_1RB#0





Band5_3MHz_QPSK_20415_15RB#0

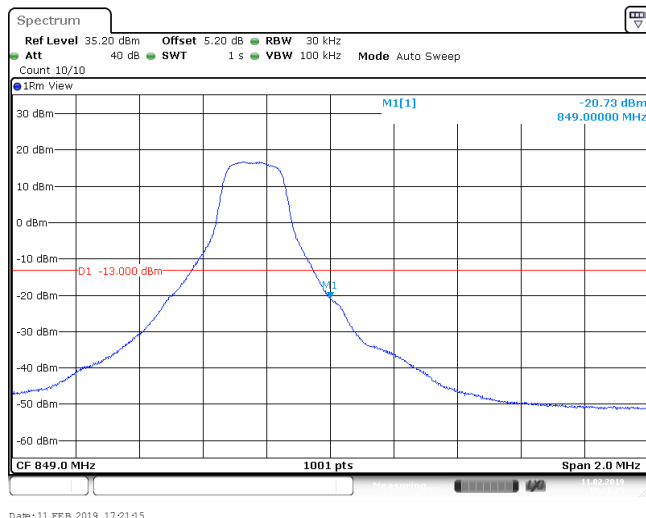


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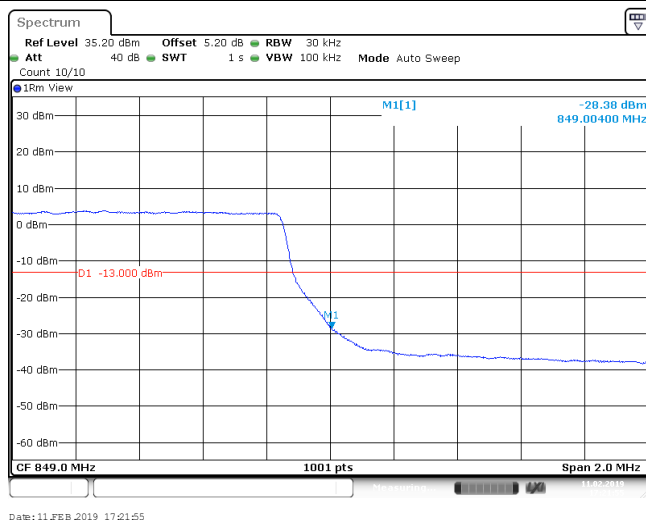


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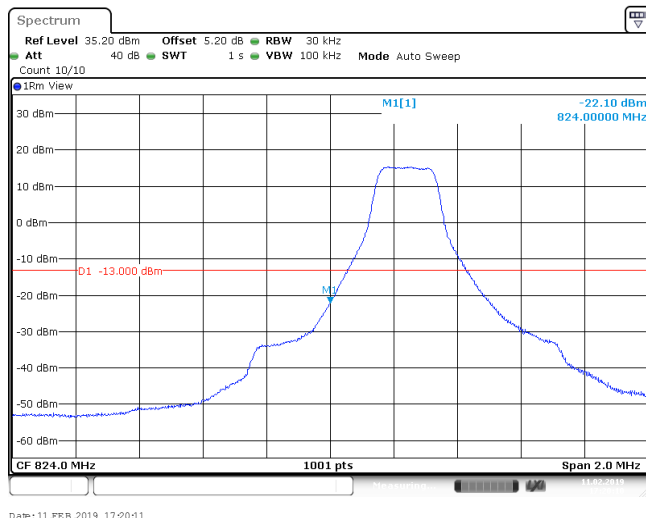


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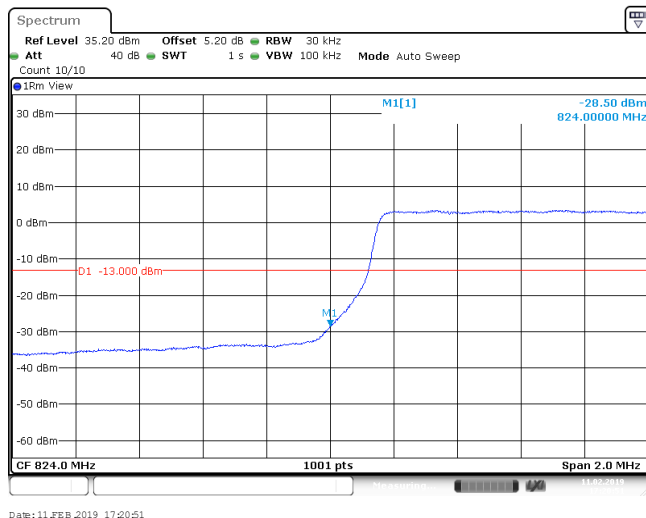


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Band5_3MHz_16QAM_20415_15RB#0



Band5_3MHz_16QAM_20635_1RB#14

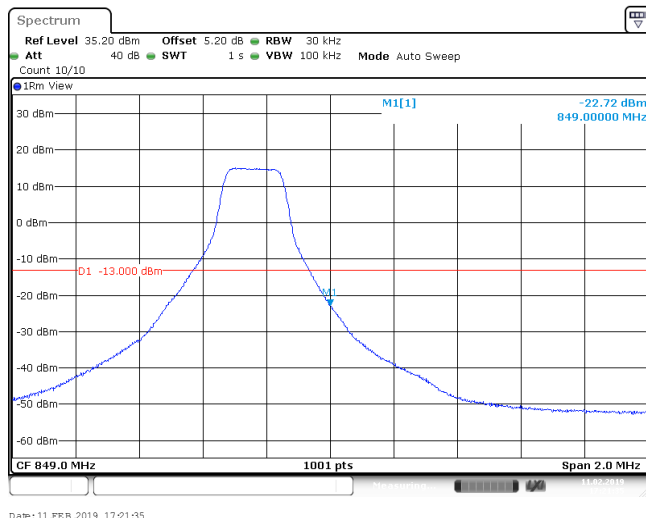


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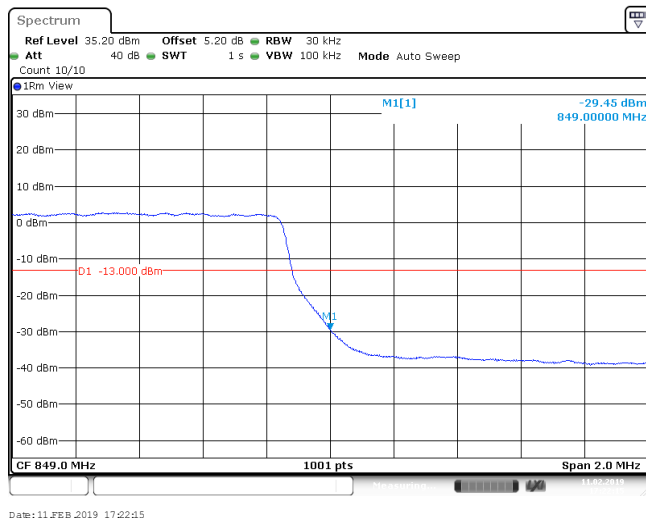
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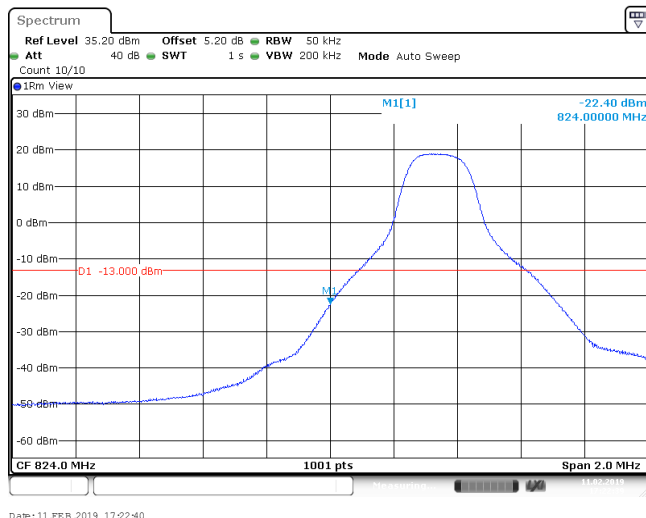


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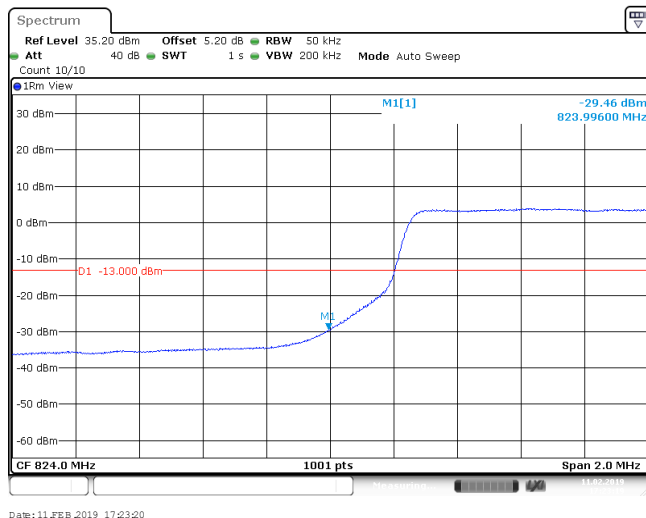


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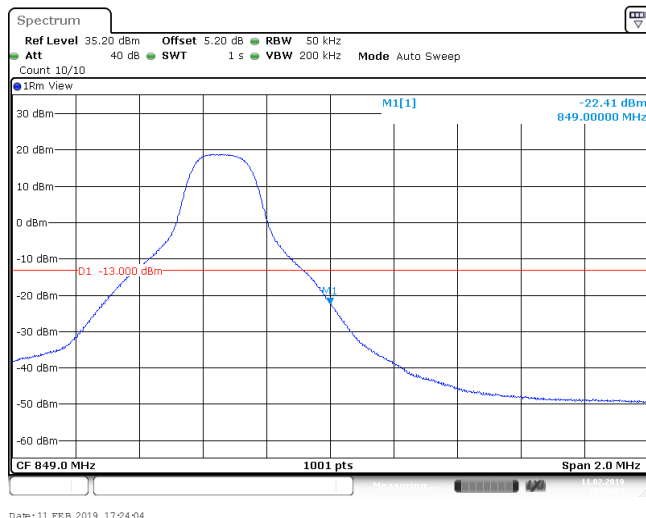


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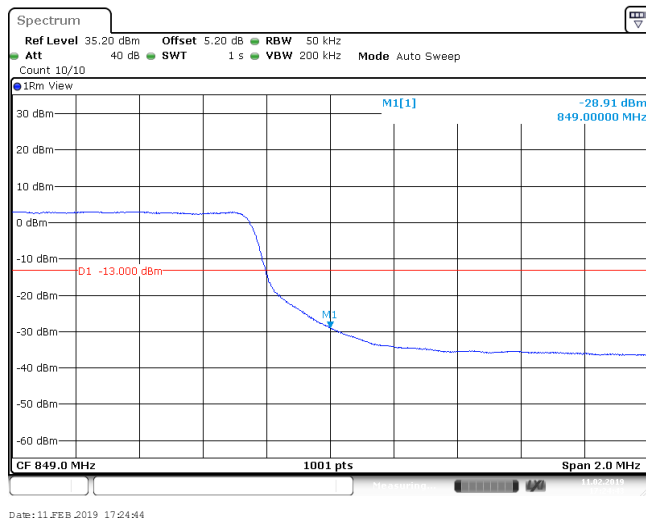


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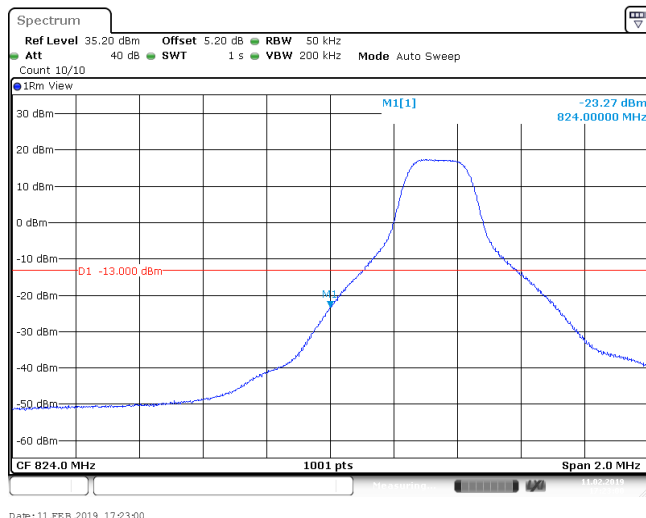


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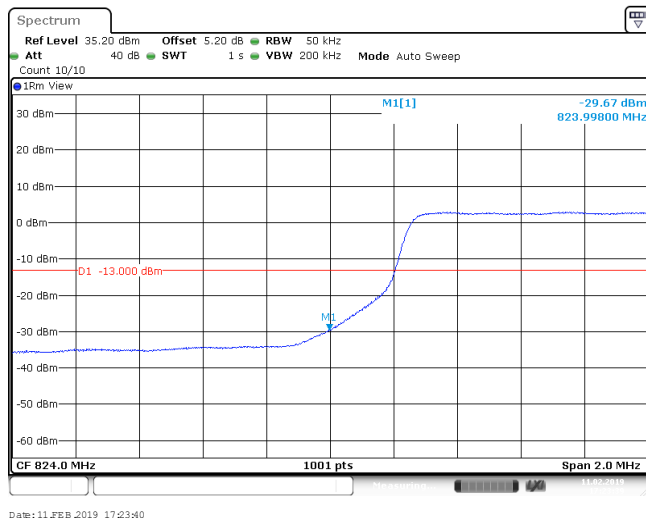


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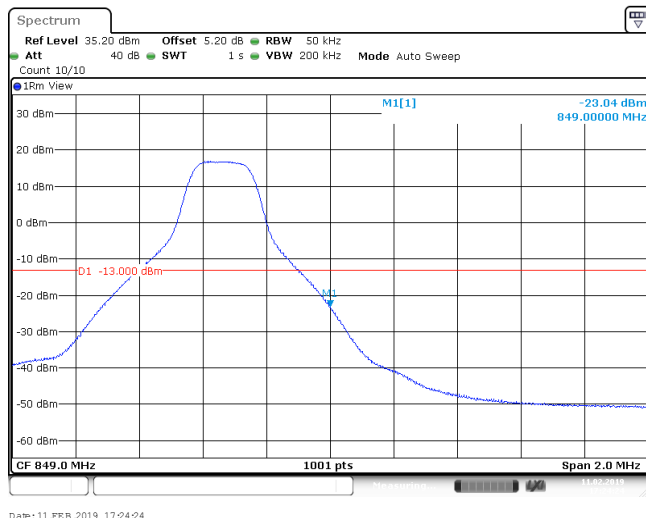


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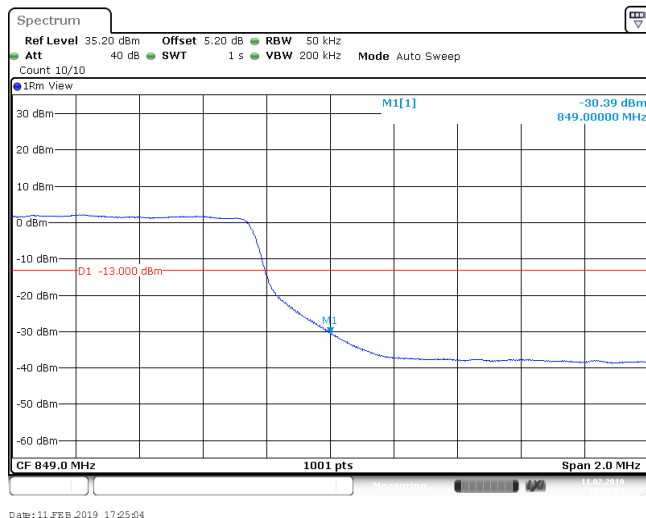


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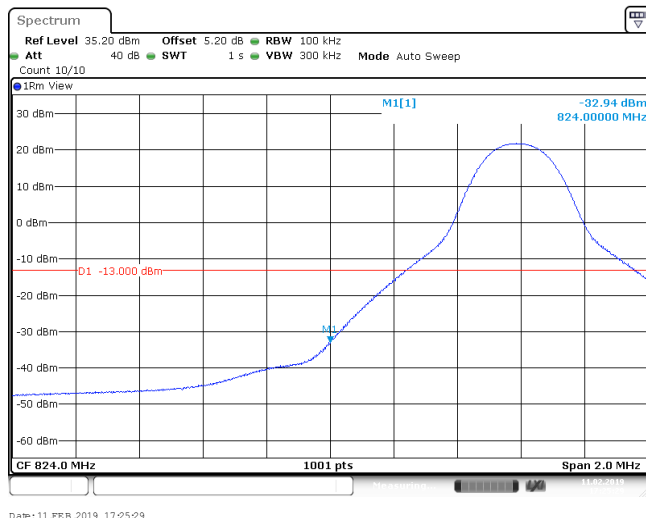


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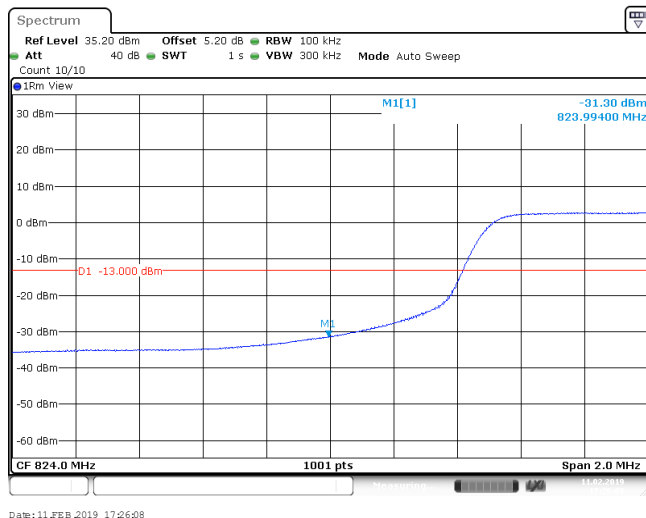


Band5_10MHz_QPSK_20450_1RB#0





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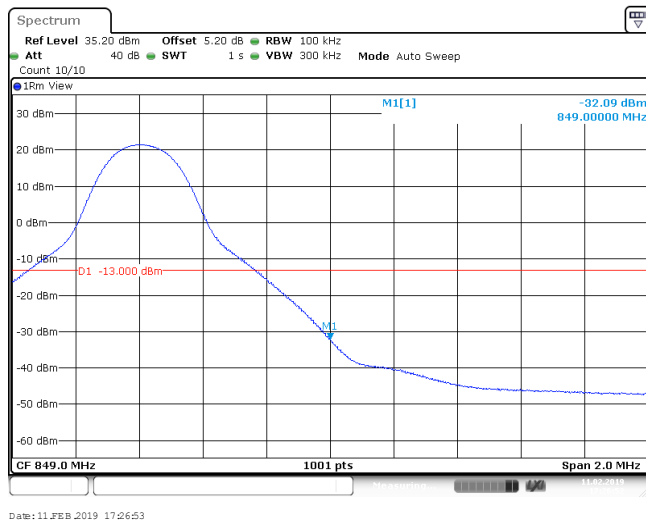


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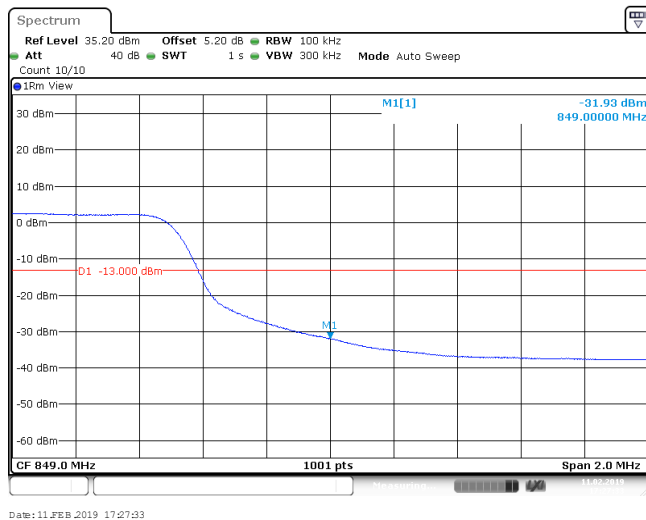


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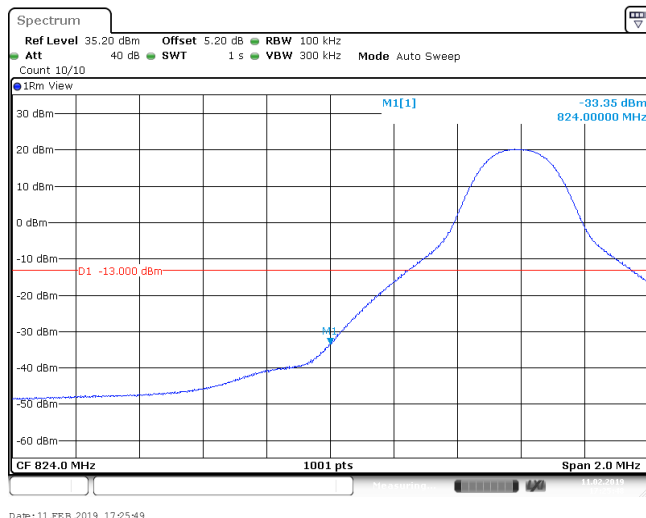


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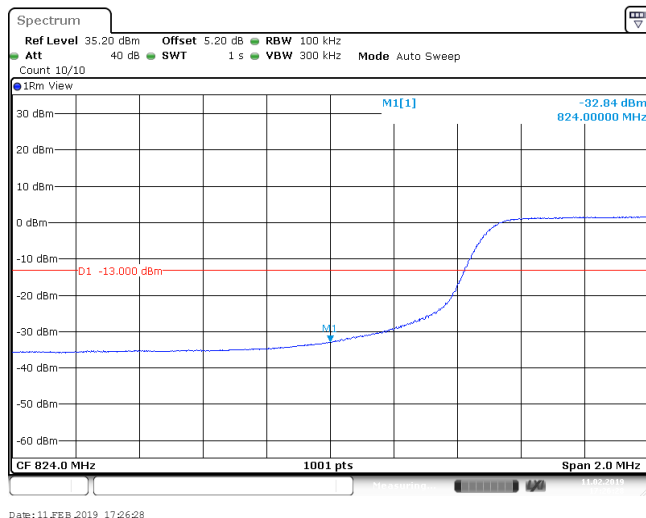


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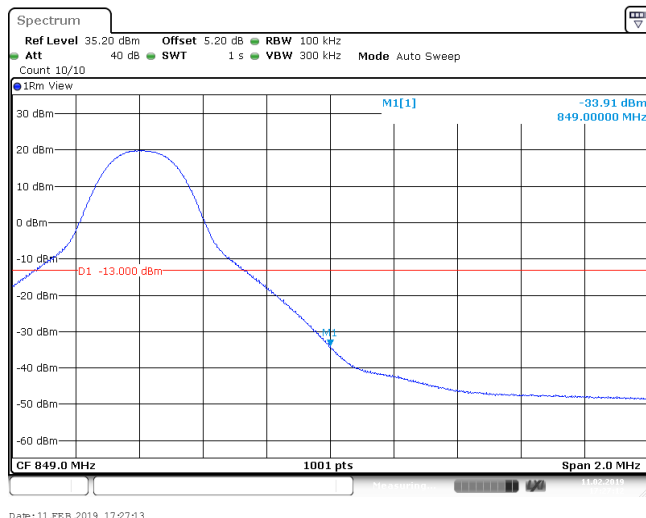


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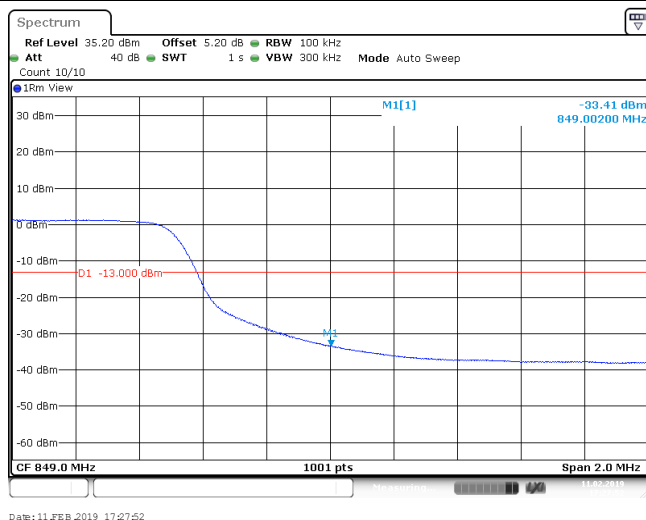


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Band5_10MHz_16QAM_20600_50RB#0



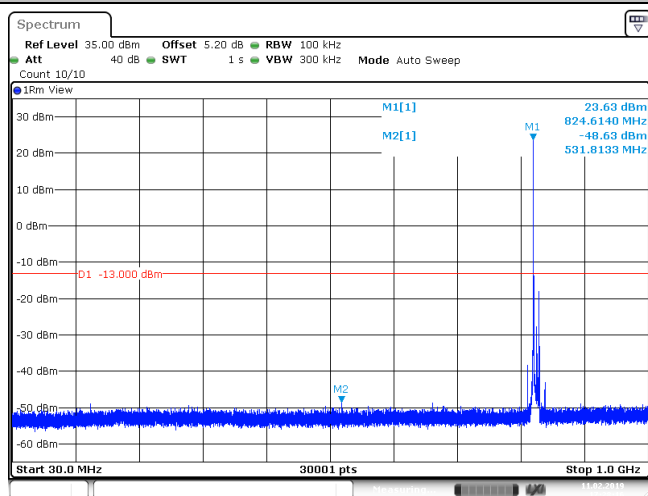
6. Spurious Emission at Antenna Terminal

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 = $k * (\text{Span} / RBW)$ " 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.

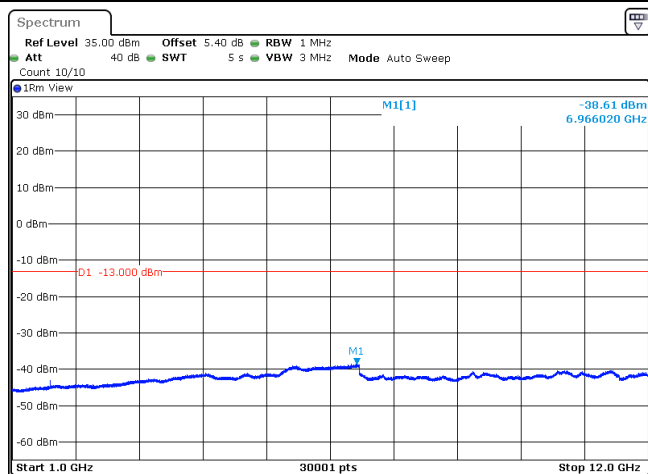
6.1. Test Plots

Band5_10MHz_QPSK_20450_1RB#0



Date: 11 FEB 2019 17:28:17

Band5_10MHz_QPSK_20450_1RB#0



Date: 11 FEB 2019 17:29:24

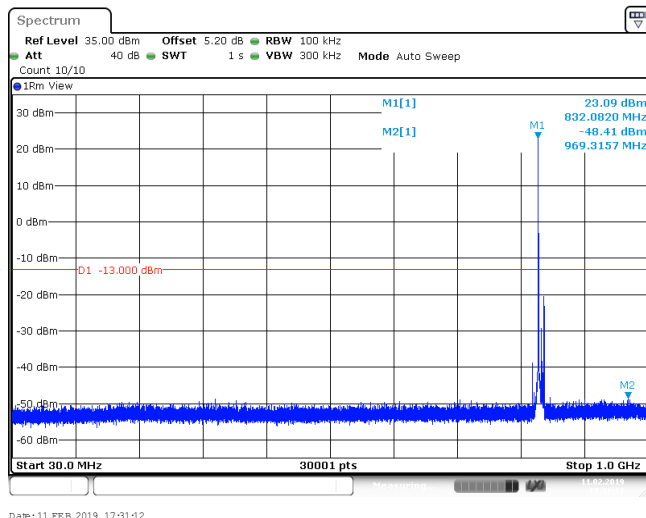
Band5_10MHz_QPSK_20525_1RB#0



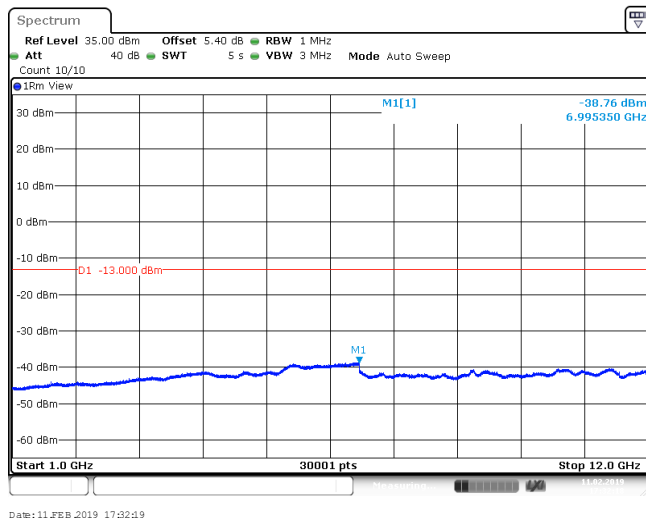
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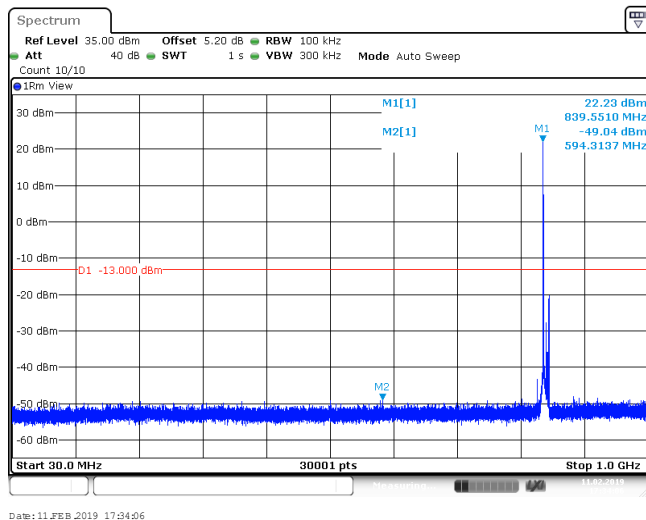


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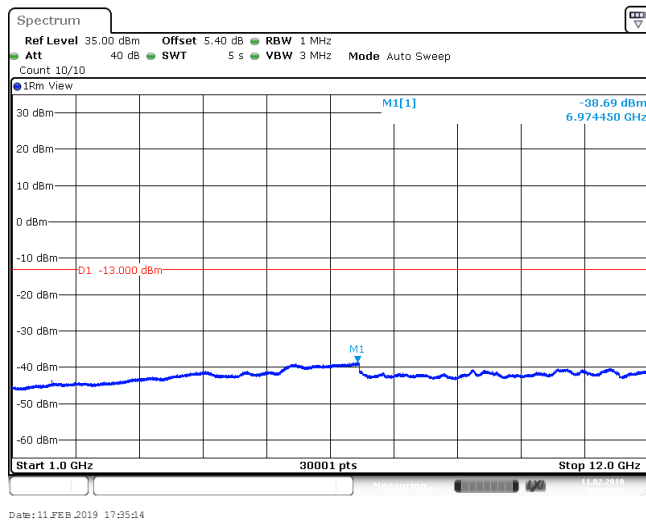


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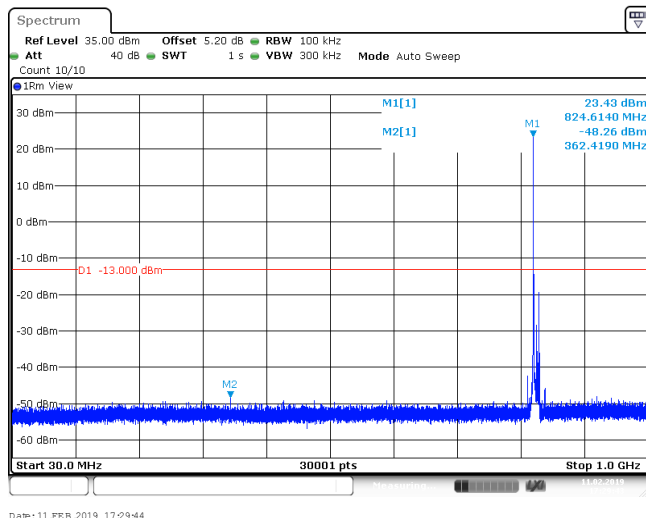


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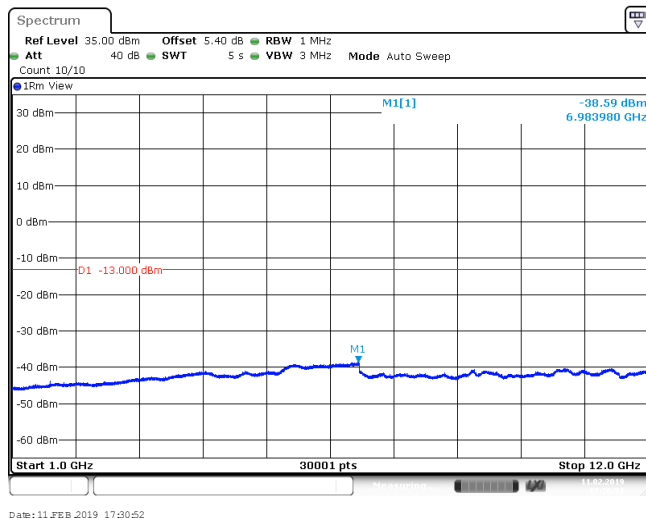


Band5_10MHz_16QAM_20450_1RB#0



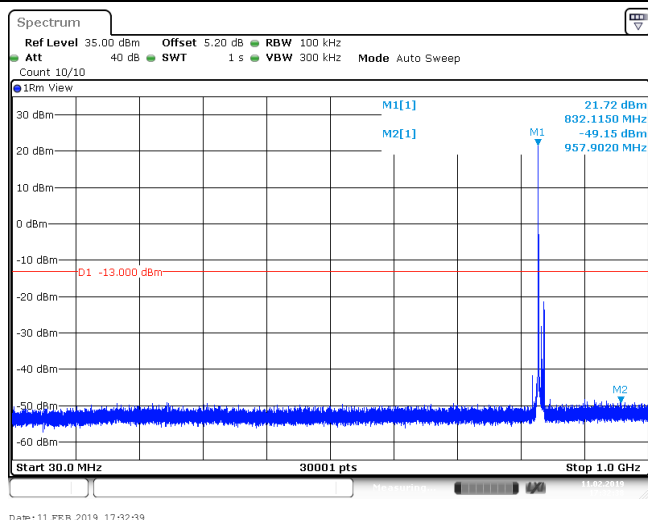


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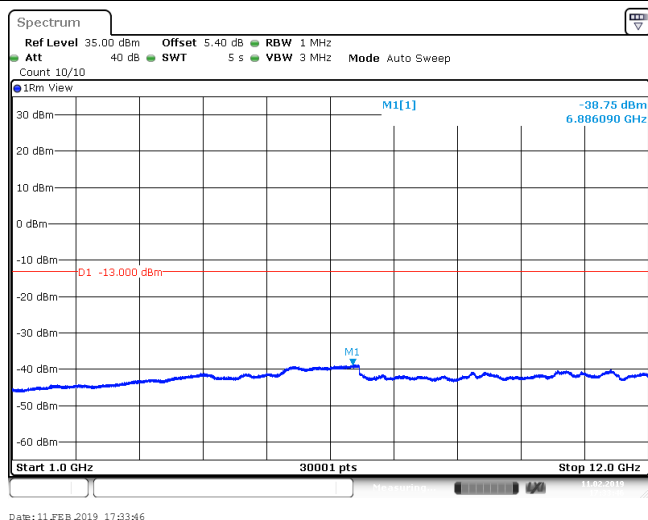


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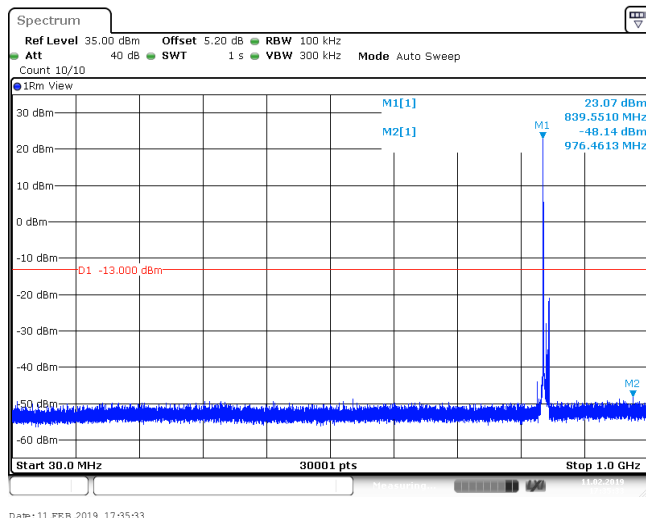


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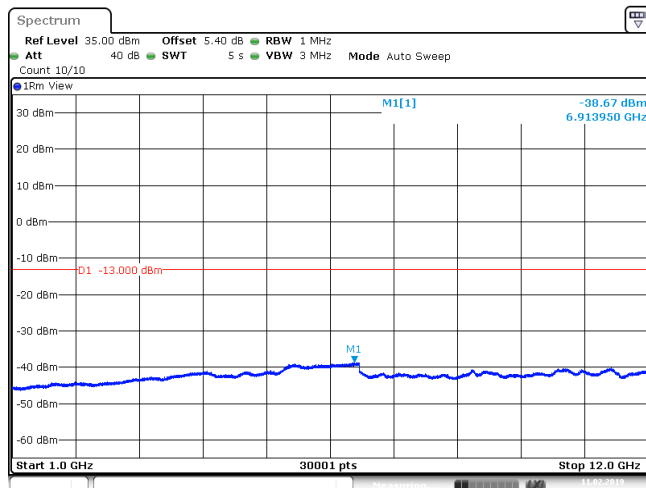
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Band5_10MHz_16QAM_20600_1RB#0



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7. Field Strength of Spurious Radiation

7.1. Test BAND = LTE BAND 5

7.1.1. Test Mode = LTE/TM1 10MHz

7.1.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
75.4468	-69.35	-13.00	56.35	Vertical
116.3828	-65.25	-13.00	52.25	Vertical
451.0981	-67.09	-13.00	54.09	Vertical
1648.9298	-59.00	-13.00	46.00	Vertical
3298.2099	-52.77	-13.00	39.77	Vertical
4947.4649	-49.70	-13.00	36.70	Vertical
45.5208	-63.94	-13.00	50.94	Horizontal
234.1952	-68.36	-13.00	55.36	Horizontal
563.5752	-64.67	-13.00	51.67	Horizontal
1648.9298	-61.69	-13.00	48.69	Horizontal
2473.8948	-56.56	-13.00	43.56	Horizontal
8495.7832	-52.68	-13.00	39.68	Horizontal

7.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
69.0445	-69.49	-13.00	56.49	Vertical
109.9805	-64.89	-13.00	51.89	Vertical
399.9765	-67.27	-13.00	54.27	Vertical
1664.1328	-57.97	-13.00	44.97	Vertical
3328.2109	-52.44	-13.00	39.44	Vertical
4992.6664	-47.39	-13.00	34.39	Vertical
44.5992	-64.82	-13.00	51.82	Horizontal
164.8852	-69.30	-13.00	56.30	Horizontal
578.9504	-64.42	-13.00	51.42	Horizontal
1664.1328	-60.04	-13.00	47.04	Horizontal
2496.2993	-56.50	-13.00	43.50	Horizontal



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7899.5633	-53.68	-13.00	40.68	Horizontal
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7.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
49.7890	-72.81	-13.00	59.81	Vertical
110.7565	-65.15	-13.00	52.15	Vertical
403.8082	-68.08	-13.00	55.08	Vertical
1678.9358	-59.01	-13.00	46.01	Vertical
3358.2119	-53.27	-13.00	40.27	Vertical
5037.4679	-49.28	-13.00	36.28	Vertical
42.8046	-64.55	-13.00	51.55	Horizontal
164.8852	-69.73	-13.00	56.73	Horizontal
624.8822	-62.76	-13.00	49.76	Horizontal
1678.9358	-61.81	-13.00	48.81	Horizontal
3358.2119	-56.56	-13.00	43.56	Horizontal
7400.1467	-54.64	-13.00	41.64	Horizontal

7.1.1.4. Spot Check worse mode

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
47.6064	-70.63	-13.00	57.63	Vertical
112.9876	-61.78	-13.00	48.78	Vertical
391.5856	-64.78	-13.00	51.78	Vertical
1664.1328	-46.04	-13.00	33.04	Vertical
2496.2993	-51.11	-13.00	38.11	Vertical
3328.4109	-47.34	-13.00	34.34	Vertical
43.8717	-61.50	-13.00	48.50	Horizontal
151.4501	-67.28	-13.00	54.28	Horizontal
233.8557	-64.66	-13.00	51.66	Horizontal
1664.1328	-50.88	-13.00	37.88	Horizontal
2496.2993	-50.82	-13.00	37.82	Horizontal
3328.4109	-49.00	-13.00	36.00	Horizontal



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Remark:

- 1) 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.
- 2) We have tested all modulation and all Bandwidth , but only the worst case data presented in this report.





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
Band5	10MHz	QPSK	20450	50RB#0	VL	NT	-0.90	-0.001086	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VN	NT	-0.30	-0.000362	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VH	NT	-0.80	-0.000965	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VL	NT	-1.90	-0.002271	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VN	NT	-1.10	-0.001315	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VH	NT	0.00	0.000000	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VL	NT	-0.70	-0.000829	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VN	NT	-0.50	-0.000592	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VH	NT	-1.00	-0.001185	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	VL	NT	-1.20	-0.001448	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	VN	NT	-0.10	-0.000121	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	VH	NT	0.50	0.000603	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	VL	NT	-0.60	-0.000717	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	VN	NT	0.10	0.000120	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	VH	NT	-1.90	-0.002271	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	VL	NT	-1.00	-0.001185	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	VN	NT	-0.80	-0.000948	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	VH	NT	-0.10	-0.000118	±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
Band5	10MHz	QPSK	20450	50RB#0	NV	-30	-0.80	-0.000965	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	-20	-0.50	-0.000603	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	0	-1.80	-0.002171	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	10	-2.00	-0.002413	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	20	-0.90	-0.001086	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	30	-1.00	-0.001206	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	40	-1.90	-0.002292	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	50	-0.60	-0.000724	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-30	-2.10	-0.002510	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-20	-0.10	-0.000120	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	0	-0.10	-0.000120	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	10	0.40	0.000478	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	20	-0.70	-0.000837	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	30	0.10	0.000120	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	40	0.20	0.000239	±2.5	PASS



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Band5	10MHz	QPSK	20525	50RB#0	NV	50	1.20	0.001435	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-30	0.00	0.000000	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-20	-0.40	-0.000474	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	0	-0.30	-0.000355	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	10	-0.30	-0.000355	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	20	-1.30	-0.001540	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	30	-0.80	-0.000948	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	40	-0.10	-0.000118	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	50	-1.30	-0.001540	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	-30	0.60	0.000724	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	-20	-0.30	-0.000362	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	0	0.30	0.000362	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	10	-0.40	-0.000483	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	20	-1.30	-0.001568	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	30	-1.90	-0.002292	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	40	0.40	0.000483	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	50	0.40	0.000483	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	-30	0.10	0.000120	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	-20	-0.40	-0.000478	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	0	-1.20	-0.001435	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	10	-0.20	-0.000239	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	20	-0.60	-0.000717	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	30	0.30	0.000359	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	40	-0.70	-0.000837	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	50	0.20	0.000239	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	-30	0.00	0.000000	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	-20	-0.70	-0.000829	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	0	-0.70	-0.000829	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	10	-0.50	-0.000592	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	20	0.50	0.000592	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	30	-0.20	-0.000237	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	40	-1.00	-0.001185	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	50	-1.30	-0.001540	±2.5	PASS

The End



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