



Appendix B

E-UTRA BAND 41



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1. Effective (Isotropic) Radiated Power

1.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
Band41	5MHz	QPSK	39675	1RB#0	23.42	26.42	33.00	PASS
Band41	5MHz	QPSK	39675	1RB#12	23.78	26.78	33.00	PASS
Band41	5MHz	QPSK	39675	1RB#24	23.60	26.60	33.00	PASS
Band41	5MHz	QPSK	39675	12RB#0	22.62	25.62	33.00	PASS
Band41	5MHz	QPSK	39675	12RB#6	22.67	25.67	33.00	PASS
Band41	5MHz	QPSK	39675	12RB#13	22.53	25.53	33.00	PASS
Band41	5MHz	QPSK	39675	25RB#0	22.58	25.58	33.00	PASS
Band41	5MHz	QPSK	40620	1RB#0	23.46	26.46	33.00	PASS
Band41	5MHz	QPSK	40620	1RB#12	23.91	26.91	33.00	PASS
Band41	5MHz	QPSK	40620	1RB#24	23.57	26.57	33.00	PASS
Band41	5MHz	QPSK	40620	12RB#0	22.61	25.61	33.00	PASS
Band41	5MHz	QPSK	40620	12RB#6	22.61	25.61	33.00	PASS
Band41	5MHz	QPSK	40620	12RB#13	22.42	25.42	33.00	PASS
Band41	5MHz	QPSK	40620	25RB#0	22.53	25.53	33.00	PASS
Band41	5MHz	QPSK	41565	1RB#0	23.42	26.42	33.00	PASS
Band41	5MHz	QPSK	41565	1RB#12	23.47	26.47	33.00	PASS
Band41	5MHz	QPSK	41565	1RB#24	23.27	26.27	33.00	PASS
Band41	5MHz	QPSK	41565	12RB#0	22.53	25.53	33.00	PASS
Band41	5MHz	QPSK	41565	12RB#6	22.47	25.47	33.00	PASS
Band41	5MHz	QPSK	41565	12RB#13	22.44	25.44	33.00	PASS
Band41	5MHz	QPSK	41565	25RB#0	22.52	25.52	33.00	PASS
Band41	5MHz	16QAM	39675	1RB#0	22.11	25.11	33.00	PASS
Band41	5MHz	16QAM	39675	1RB#12	22.16	25.16	33.00	PASS
Band41	5MHz	16QAM	39675	1RB#24	22.08	25.08	33.00	PASS
Band41	5MHz	16QAM	39675	12RB#0	21.51	24.51	33.00	PASS
Band41	5MHz	16QAM	39675	12RB#6	21.64	24.64	33.00	PASS
Band41	5MHz	16QAM	39675	12RB#13	21.49	24.49	33.00	PASS
Band41	5MHz	16QAM	39675	25RB#0	21.55	24.55	33.00	PASS
Band41	5MHz	16QAM	40620	1RB#0	22.03	25.03	33.00	PASS
Band41	5MHz	16QAM	40620	1RB#12	22.22	25.22	33.00	PASS
Band41	5MHz	16QAM	40620	1RB#24	21.92	24.92	33.00	PASS
Band41	5MHz	16QAM	40620	12RB#0	21.41	24.41	33.00	PASS



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Band41	5MHz	16QAM	40620	12RB#6	21.40	24.40	33.00	PASS
Band41	5MHz	16QAM	40620	12RB#13	21.32	24.32	33.00	PASS
Band41	5MHz	16QAM	40620	25RB#0	21.51	24.51	33.00	PASS
Band41	5MHz	16QAM	41565	1RB#0	22.14	25.14	33.00	PASS
Band41	5MHz	16QAM	41565	1RB#12	22.38	25.38	33.00	PASS
Band41	5MHz	16QAM	41565	1RB#24	21.99	24.99	33.00	PASS
Band41	5MHz	16QAM	41565	12RB#0	21.40	24.40	33.00	PASS
Band41	5MHz	16QAM	41565	12RB#6	21.40	24.40	33.00	PASS
Band41	5MHz	16QAM	41565	12RB#13	21.34	24.34	33.00	PASS
Band41	5MHz	16QAM	41565	25RB#0	21.40	24.40	33.00	PASS
Band41	10MHz	QPSK	39700	1RB#0	23.61	26.61	33.00	PASS
Band41	10MHz	QPSK	39700	1RB#24	23.85	26.85	33.00	PASS
Band41	10MHz	QPSK	39700	1RB#49	23.48	26.48	33.00	PASS
Band41	10MHz	QPSK	39700	25RB#0	22.62	25.62	33.00	PASS
Band41	10MHz	QPSK	39700	25RB#12	22.72	25.72	33.00	PASS
Band41	10MHz	QPSK	39700	25RB#25	22.50	25.50	33.00	PASS
Band41	10MHz	QPSK	39700	50RB#0	22.66	25.66	33.00	PASS
Band41	10MHz	QPSK	40620	1RB#0	23.48	26.48	33.00	PASS
Band41	10MHz	QPSK	40620	1RB#24	23.86	26.86	33.00	PASS
Band41	10MHz	QPSK	40620	1RB#49	23.24	26.24	33.00	PASS
Band41	10MHz	QPSK	40620	25RB#0	22.68	25.68	33.00	PASS
Band41	10MHz	QPSK	40620	25RB#12	22.62	25.62	33.00	PASS
Band41	10MHz	QPSK	40620	25RB#25	22.46	25.46	33.00	PASS
Band41	10MHz	QPSK	40620	50RB#0	22.57	25.57	33.00	PASS
Band41	10MHz	QPSK	41540	1RB#0	23.57	26.57	33.00	PASS
Band41	10MHz	QPSK	41540	1RB#24	23.78	26.78	33.00	PASS
Band41	10MHz	QPSK	41540	1RB#49	23.28	26.28	33.00	PASS
Band41	10MHz	QPSK	41540	25RB#0	22.70	25.70	33.00	PASS
Band41	10MHz	QPSK	41540	25RB#12	22.60	25.60	33.00	PASS
Band41	10MHz	QPSK	41540	25RB#25	22.38	25.38	33.00	PASS
Band41	10MHz	QPSK	41540	50RB#0	22.59	25.59	33.00	PASS
Band41	10MHz	16QAM	39700	1RB#0	22.16	25.16	33.00	PASS
Band41	10MHz	16QAM	39700	1RB#24	22.29	25.29	33.00	PASS
Band41	10MHz	16QAM	39700	1RB#49	22.19	25.19	33.00	PASS
Band41	10MHz	16QAM	39700	25RB#0	21.58	24.58	33.00	PASS
Band41	10MHz	16QAM	39700	25RB#12	21.62	24.62	33.00	PASS
Band41	10MHz	16QAM	39700	25RB#25	21.55	24.55	33.00	PASS
Band41	10MHz	16QAM	39700	50RB#0	21.57	24.57	33.00	PASS



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Band41	10MHz	16QAM	40620	1RB#0	22.24	25.24	33.00	PASS
Band41	10MHz	16QAM	40620	1RB#24	22.29	25.29	33.00	PASS
Band41	10MHz	16QAM	40620	1RB#49	22.08	25.08	33.00	PASS
Band41	10MHz	16QAM	40620	25RB#0	21.54	24.54	33.00	PASS
Band41	10MHz	16QAM	40620	25RB#12	21.49	24.49	33.00	PASS
Band41	10MHz	16QAM	40620	25RB#25	21.56	24.56	33.00	PASS
Band41	10MHz	16QAM	40620	50RB#0	21.43	24.43	33.00	PASS
Band41	10MHz	16QAM	41540	1RB#0	22.17	25.17	33.00	PASS
Band41	10MHz	16QAM	41540	1RB#24	22.34	25.34	33.00	PASS
Band41	10MHz	16QAM	41540	1RB#49	22.05	25.05	33.00	PASS
Band41	10MHz	16QAM	41540	25RB#0	21.55	24.55	33.00	PASS
Band41	10MHz	16QAM	41540	25RB#12	21.56	24.56	33.00	PASS
Band41	10MHz	16QAM	41540	25RB#25	21.55	24.55	33.00	PASS
Band41	10MHz	16QAM	41540	50RB#0	21.49	24.49	33.00	PASS
Band41	15MHz	QPSK	39725	1RB#0	23.40	26.40	33.00	PASS
Band41	15MHz	QPSK	39725	1RB#38	23.68	26.68	33.00	PASS
Band41	15MHz	QPSK	39725	1RB#74	23.22	26.22	33.00	PASS
Band41	15MHz	QPSK	39725	36RB#0	22.61	25.61	33.00	PASS
Band41	15MHz	QPSK	39725	36RB#18	22.56	25.56	33.00	PASS
Band41	15MHz	QPSK	39725	36RB#39	22.51	25.51	33.00	PASS
Band41	15MHz	QPSK	39725	75RB#0	22.54	25.54	33.00	PASS
Band41	15MHz	QPSK	40620	1RB#0	23.49	26.49	33.00	PASS
Band41	15MHz	QPSK	40620	1RB#38	23.69	26.69	33.00	PASS
Band41	15MHz	QPSK	40620	1RB#74	23.23	26.23	33.00	PASS
Band41	15MHz	QPSK	40620	36RB#0	22.72	25.72	33.00	PASS
Band41	15MHz	QPSK	40620	36RB#18	22.62	25.62	33.00	PASS
Band41	15MHz	QPSK	40620	36RB#39	22.44	25.44	33.00	PASS
Band41	15MHz	QPSK	40620	75RB#0	22.57	25.57	33.00	PASS
Band41	15MHz	QPSK	41515	1RB#0	23.48	26.48	33.00	PASS
Band41	15MHz	QPSK	41515	1RB#38	23.63	26.63	33.00	PASS
Band41	15MHz	QPSK	41515	1RB#74	23.37	26.37	33.00	PASS
Band41	15MHz	QPSK	41515	36RB#0	22.69	25.69	33.00	PASS
Band41	15MHz	QPSK	41515	36RB#18	22.55	25.55	33.00	PASS
Band41	15MHz	QPSK	41515	36RB#39	22.41	25.41	33.00	PASS
Band41	15MHz	QPSK	41515	75RB#0	22.57	25.57	33.00	PASS
Band41	15MHz	16QAM	39725	1RB#0	22.15	25.15	33.00	PASS
Band41	15MHz	16QAM	39725	1RB#38	22.08	25.08	33.00	PASS
Band41	15MHz	16QAM	39725	1RB#74	22.07	25.07	33.00	PASS



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Band41	15MHz	16QAM	39725	36RB#0	21.45	24.45	33.00	PASS
Band41	15MHz	16QAM	39725	36RB#18	21.39	24.39	33.00	PASS
Band41	15MHz	16QAM	39725	36RB#39	21.47	24.47	33.00	PASS
Band41	15MHz	16QAM	39725	75RB#0	21.47	24.47	33.00	PASS
Band41	15MHz	16QAM	40620	1RB#0	22.31	25.31	33.00	PASS
Band41	15MHz	16QAM	40620	1RB#38	21.93	24.93	33.00	PASS
Band41	15MHz	16QAM	40620	1RB#74	22.11	25.11	33.00	PASS
Band41	15MHz	16QAM	40620	36RB#0	21.69	24.69	33.00	PASS
Band41	15MHz	16QAM	40620	36RB#18	21.65	24.65	33.00	PASS
Band41	15MHz	16QAM	40620	36RB#39	21.63	24.63	33.00	PASS
Band41	15MHz	16QAM	40620	75RB#0	21.52	24.52	33.00	PASS
Band41	15MHz	16QAM	41515	1RB#0	22.12	25.12	33.00	PASS
Band41	15MHz	16QAM	41515	1RB#38	22.05	25.05	33.00	PASS
Band41	15MHz	16QAM	41515	1RB#74	21.93	24.93	33.00	PASS
Band41	15MHz	16QAM	41515	36RB#0	21.57	24.57	33.00	PASS
Band41	15MHz	16QAM	41515	36RB#18	21.42	24.42	33.00	PASS
Band41	15MHz	16QAM	41515	36RB#39	21.42	24.42	33.00	PASS
Band41	15MHz	16QAM	41515	75RB#0	21.57	24.57	33.00	PASS
Band41	20MHz	QPSK	39750	1RB#0	23.33	26.33	33.00	PASS
Band41	20MHz	QPSK	39750	1RB#49	23.81	26.81	33.00	PASS
Band41	20MHz	QPSK	39750	1RB#99	23.14	26.14	33.00	PASS
Band41	20MHz	QPSK	39750	50RB#0	22.54	25.54	33.00	PASS
Band41	20MHz	QPSK	39750	50RB#25	22.66	25.66	33.00	PASS
Band41	20MHz	QPSK	39750	50RB#50	22.46	25.46	33.00	PASS
Band41	20MHz	QPSK	39750	100RB#0	22.56	25.56	33.00	PASS
Band41	20MHz	QPSK	40620	1RB#0	23.39	26.39	33.00	PASS
Band41	20MHz	QPSK	40620	1RB#49	23.81	26.81	33.00	PASS
Band41	20MHz	QPSK	40620	1RB#99	23.07	26.07	33.00	PASS
Band41	20MHz	QPSK	40620	50RB#0	22.65	25.65	33.00	PASS
Band41	20MHz	QPSK	40620	50RB#25	22.62	25.62	33.00	PASS
Band41	20MHz	QPSK	40620	50RB#50	22.47	25.47	33.00	PASS
Band41	20MHz	QPSK	40620	100RB#0	22.57	25.57	33.00	PASS
Band41	20MHz	QPSK	41490	1RB#0	23.48	26.48	33.00	PASS
Band41	20MHz	QPSK	41490	1RB#49	23.85	26.85	33.00	PASS
Band41	20MHz	QPSK	41490	1RB#99	23.07	26.07	33.00	PASS
Band41	20MHz	QPSK	41490	50RB#0	22.62	25.62	33.00	PASS
Band41	20MHz	QPSK	41490	50RB#25	22.64	25.64	33.00	PASS
Band41	20MHz	QPSK	41490	50RB#50	22.43	25.43	33.00	PASS



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Band41	20MHz	QPSK	41490	100RB#0	22.57	25.57	33.00	PASS
Band41	20MHz	16QAM	39750	1RB#0	21.96	24.96	33.00	PASS
Band41	20MHz	16QAM	39750	1RB#49	22.31	25.31	33.00	PASS
Band41	20MHz	16QAM	39750	1RB#99	21.91	24.91	33.00	PASS
Band41	20MHz	16QAM	39750	50RB#0	21.46	24.46	33.00	PASS
Band41	20MHz	16QAM	39750	50RB#25	21.49	24.49	33.00	PASS
Band41	20MHz	16QAM	39750	50RB#50	21.44	24.44	33.00	PASS
Band41	20MHz	16QAM	39750	100RB#0	21.43	24.43	33.00	PASS
Band41	20MHz	16QAM	40620	1RB#0	22.20	25.20	33.00	PASS
Band41	20MHz	16QAM	40620	1RB#49	22.27	25.27	33.00	PASS
Band41	20MHz	16QAM	40620	1RB#99	21.90	24.90	33.00	PASS
Band41	20MHz	16QAM	40620	50RB#0	21.49	24.49	33.00	PASS
Band41	20MHz	16QAM	40620	50RB#25	21.43	24.43	33.00	PASS
Band41	20MHz	16QAM	40620	50RB#50	21.45	24.45	33.00	PASS
Band41	20MHz	16QAM	40620	100RB#0	21.55	24.55	33.00	PASS
Band41	20MHz	16QAM	41490	1RB#0	22.13	25.13	33.00	PASS
Band41	20MHz	16QAM	41490	1RB#49	22.34	25.34	33.00	PASS
Band41	20MHz	16QAM	41490	1RB#99	21.90	24.90	33.00	PASS
Band41	20MHz	16QAM	41490	50RB#0	21.51	24.51	33.00	PASS
Band41	20MHz	16QAM	41490	50RB#25	21.49	24.49	33.00	PASS
Band41	20MHz	16QAM	41490	50RB#50	21.43	24.43	33.00	PASS
Band41	20MHz	16QAM	41490	100RB#0	21.52	24.52	33.00	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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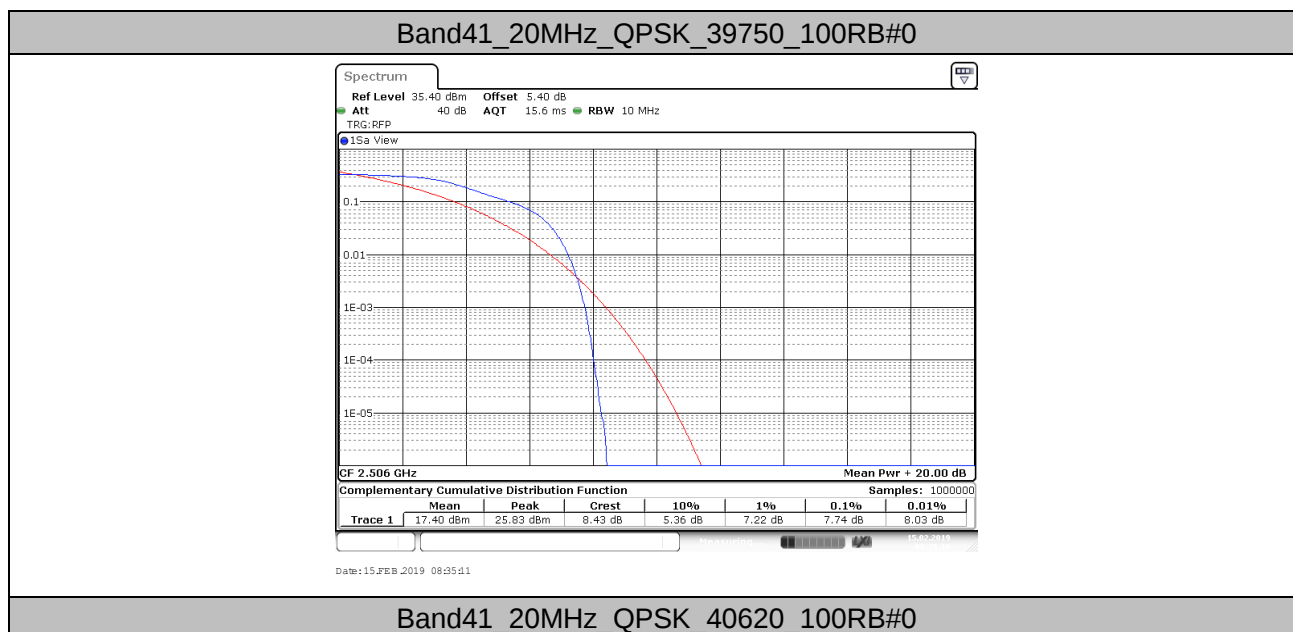


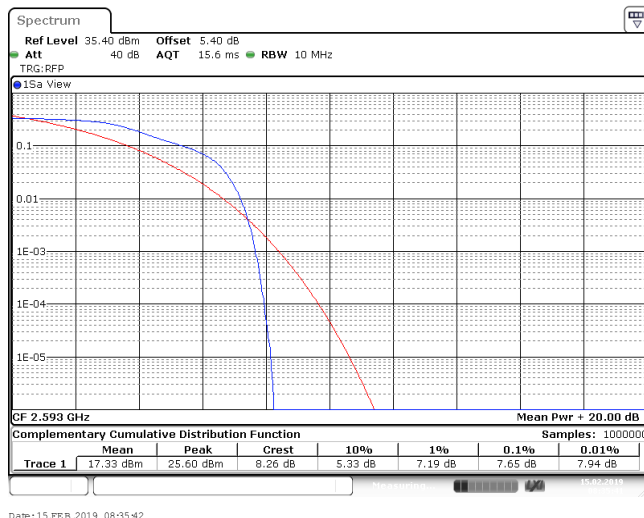
2. Peak-to-Average Ratio(CCDF)

2.1. Test Result

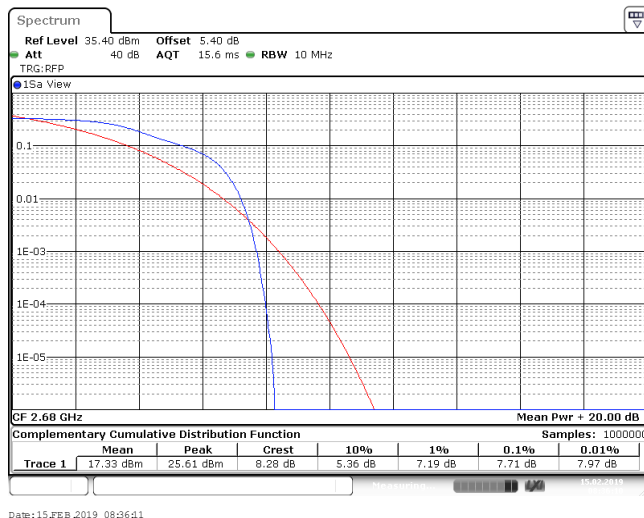
BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band41	20MHz	QPSK	39750	100RB#0	7.74	13	PASS
Band41	20MHz	QPSK	40620	100RB#0	7.65	13	PASS
Band41	20MHz	QPSK	41490	100RB#0	7.71	13	PASS
Band41	20MHz	16QAM	39750	100RB#0	9.39	13	PASS
Band41	20MHz	16QAM	40620	100RB#0	9.36	13	PASS
Band41	20MHz	16QAM	41490	100RB#0	9.39	13	PASS

2.2. Test Plots



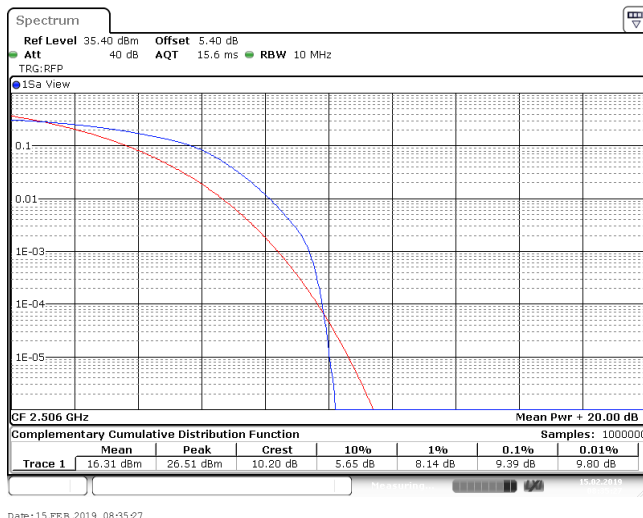


Band41_20MHz_QPSK_41490_100RB#0

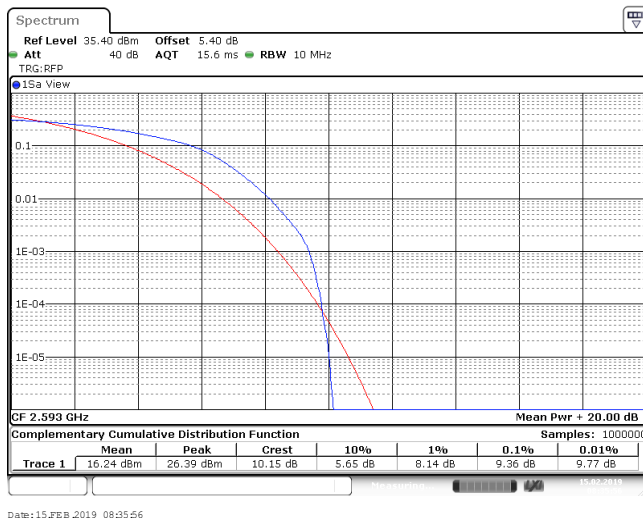


Band41_20MHz_16QAM_39750_100RB#0



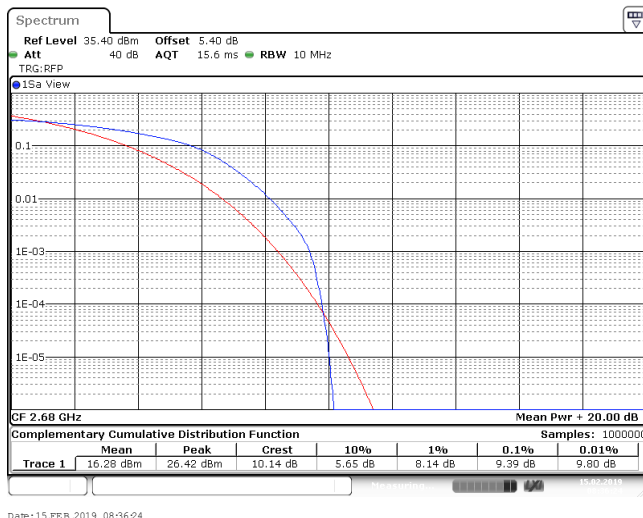


Band41_20MHz_16QAM_40620_100RB#0



Band41_20MHz_16QAM_41490_100RB#0





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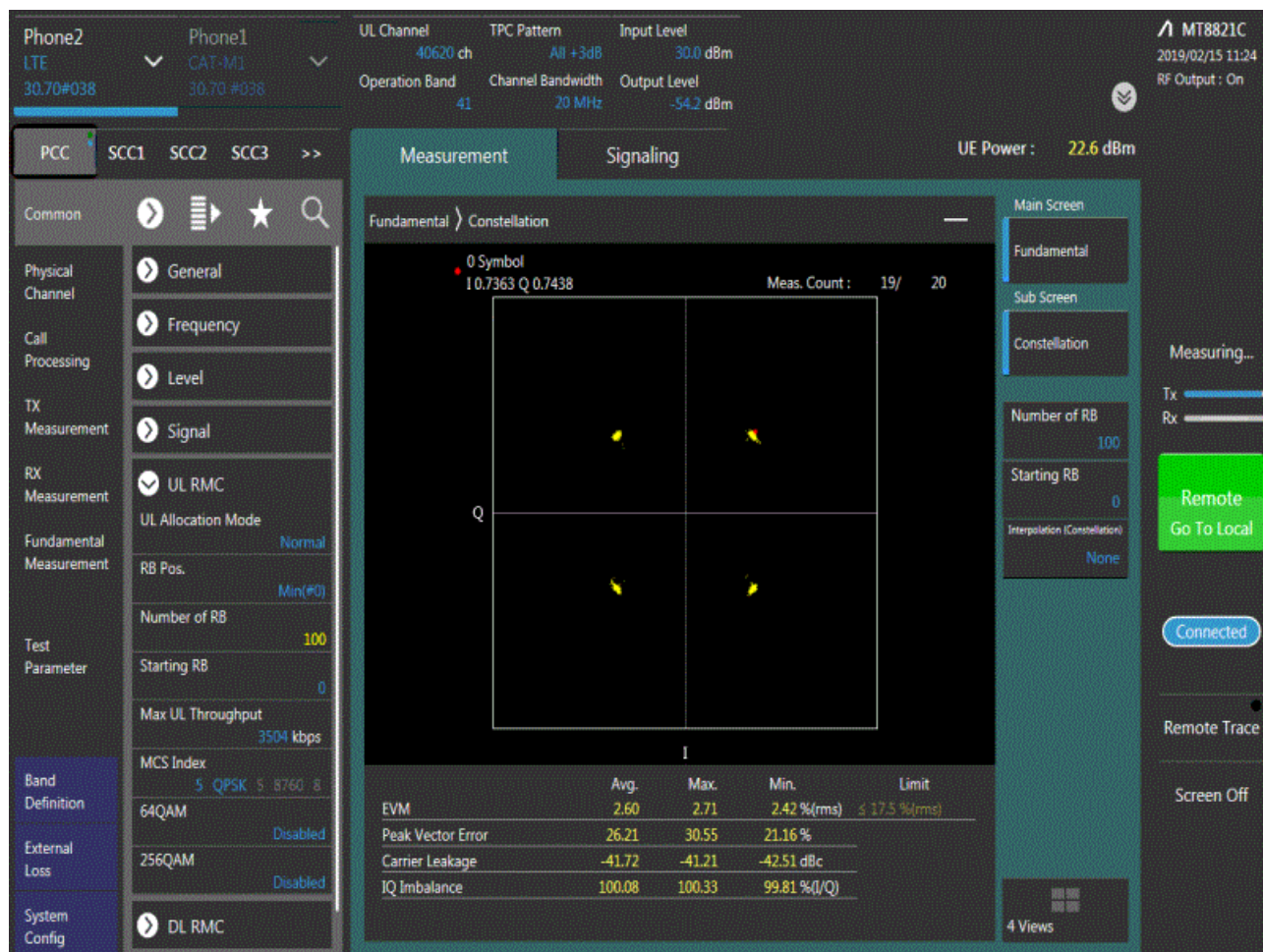
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3. Modulation Characteristics

3.1. Test BAND = LTE BAND41

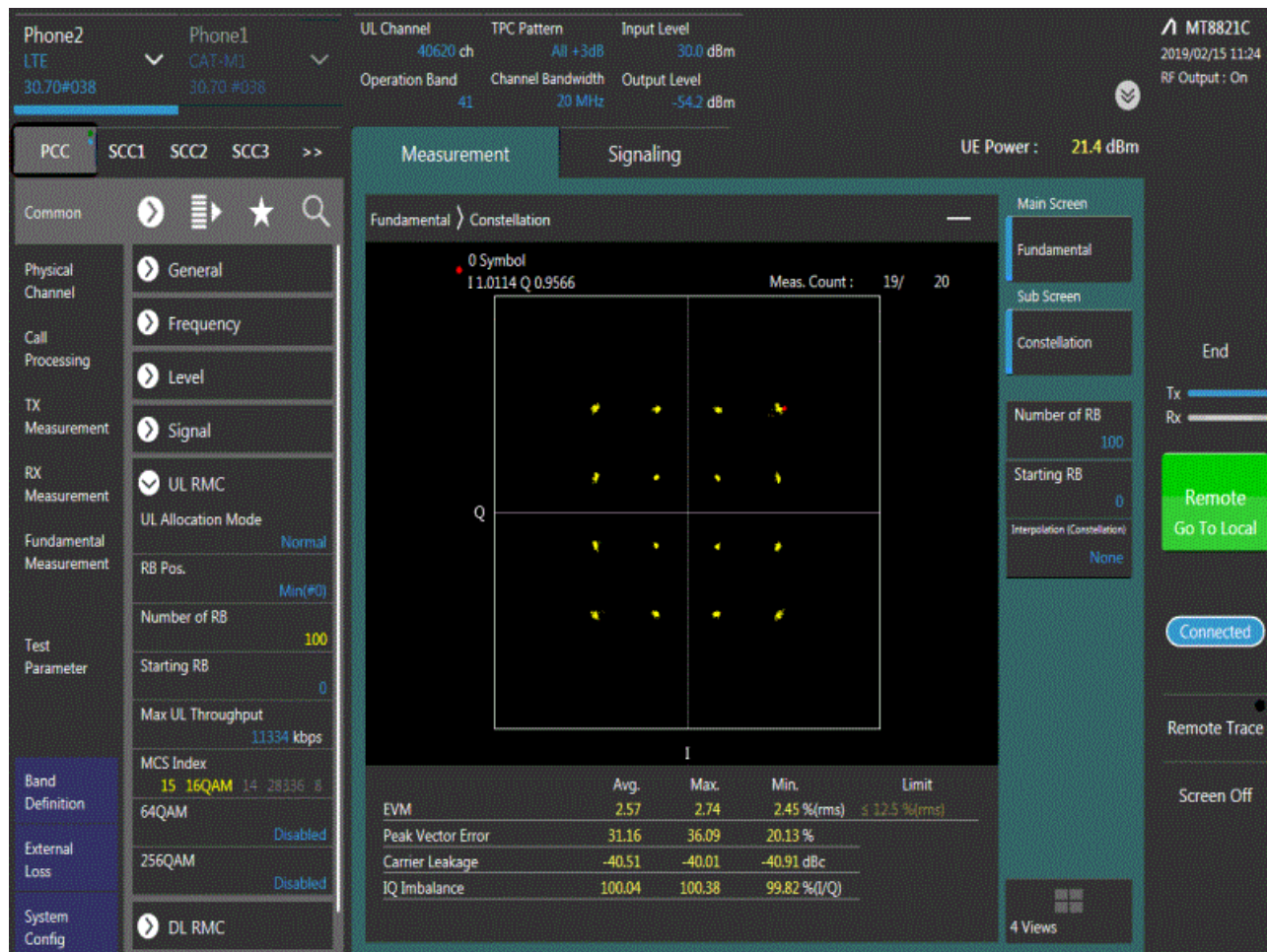
3.1.1. Test Mode = LTE /TM1 20MHz

3.1.1.1. Test Channel = MCH



3.1.2. Test Mode = LTE /TM2 20MHz

3.1.2.1. Test Channel = MCH





4. 26dB Bandwidth and Occupied Bandwidth

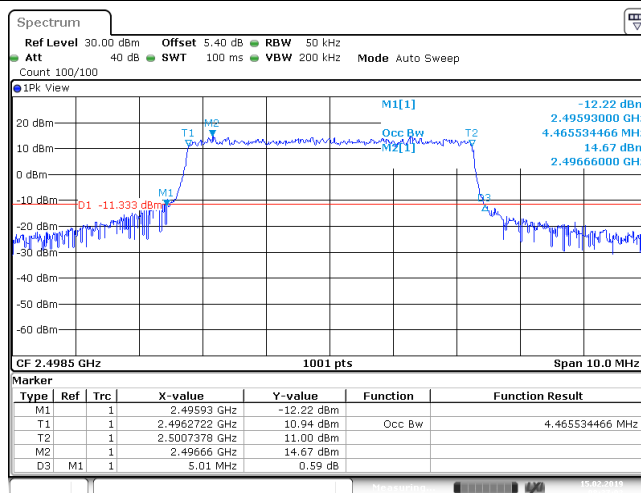
4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band41	5MHz	QPSK	39675	25RB#0	4.466	5.010	PASS
Band41	5MHz	QPSK	40620	25RB#0	4.476	5.070	PASS
Band41	5MHz	QPSK	41565	25RB#0	4.476	4.960	PASS
Band41	5MHz	16QAM	39675	25RB#0	4.496	4.930	PASS
Band41	5MHz	16QAM	40620	25RB#0	4.466	4.880	PASS
Band41	5MHz	16QAM	41565	25RB#0	4.496	4.940	PASS
Band41	10MHz	QPSK	39700	50RB#0	8.891	10.180	PASS
Band41	10MHz	QPSK	40620	50RB#0	8.911	10.600	PASS
Band41	10MHz	QPSK	41540	50RB#0	8.911	10.340	PASS
Band41	10MHz	16QAM	39700	50RB#0	8.891	9.660	PASS
Band41	10MHz	16QAM	40620	50RB#0	8.891	9.840	PASS
Band41	10MHz	16QAM	41540	50RB#0	8.911	9.820	PASS
Band41	15MHz	QPSK	39725	75RB#0	13.457	15.690	PASS
Band41	15MHz	QPSK	40620	75RB#0	13.487	17.400	PASS
Band41	15MHz	QPSK	41515	75RB#0	13.457	15.960	PASS
Band41	15MHz	16QAM	39725	75RB#0	13.457	15.630	PASS
Band41	15MHz	16QAM	40620	75RB#0	13.457	16.230	PASS
Band41	15MHz	16QAM	41515	75RB#0	13.457	16.170	PASS
Band41	20MHz	QPSK	39750	100RB#0	17.862	19.960	PASS
Band41	20MHz	QPSK	40620	100RB#0	17.862	20.400	PASS
Band41	20MHz	QPSK	41490	100RB#0	17.902	20.040	PASS
Band41	20MHz	16QAM	39750	100RB#0	17.822	19.440	PASS
Band41	20MHz	16QAM	40620	100RB#0	17.862	19.640	PASS
Band41	20MHz	16QAM	41490	100RB#0	17.862	19.480	PASS

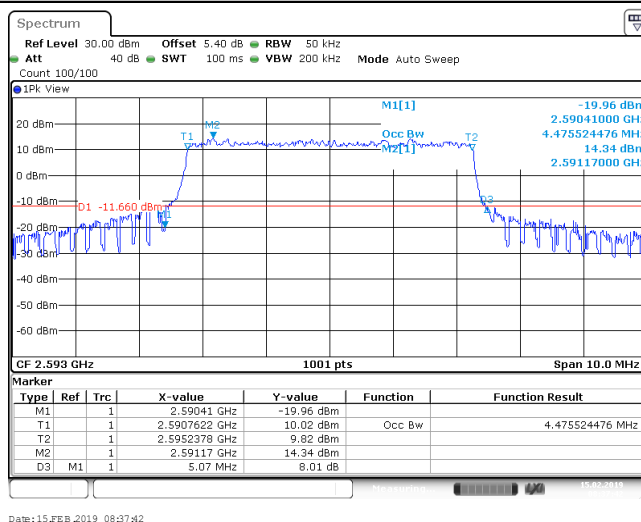


4.2. Test Plots

Band41_5MHz_QPSK_39675_25RB#0

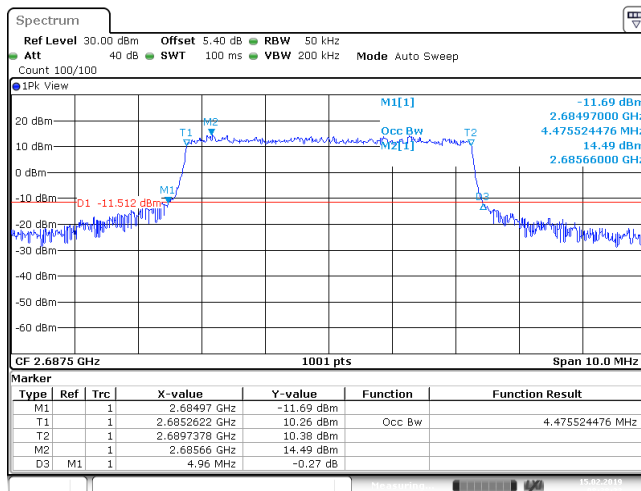


Band41_5MHz_QPSK_40620_25RB#0



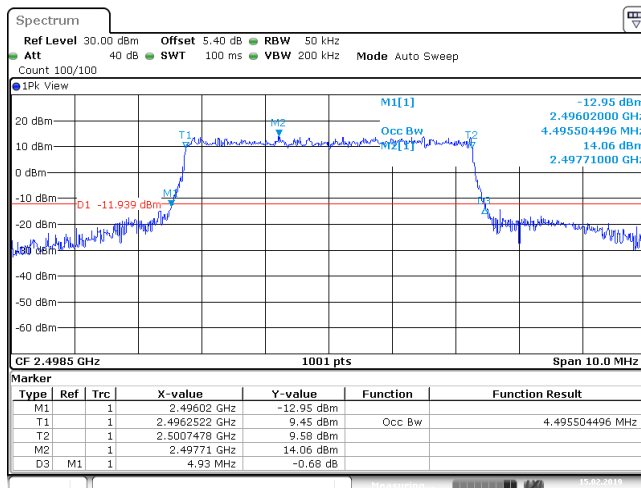
Band41_5MHz_QPSK_41565_25RB#0





Date: 15 FEB 2019 08:38:23

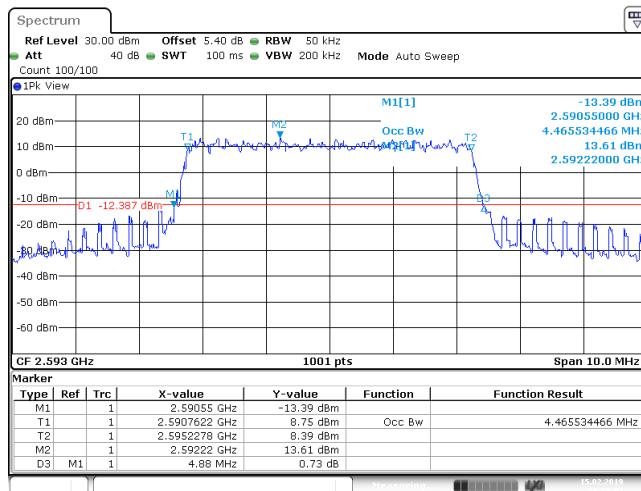
Band41_5MHz_16QAM_39675_25RB#0



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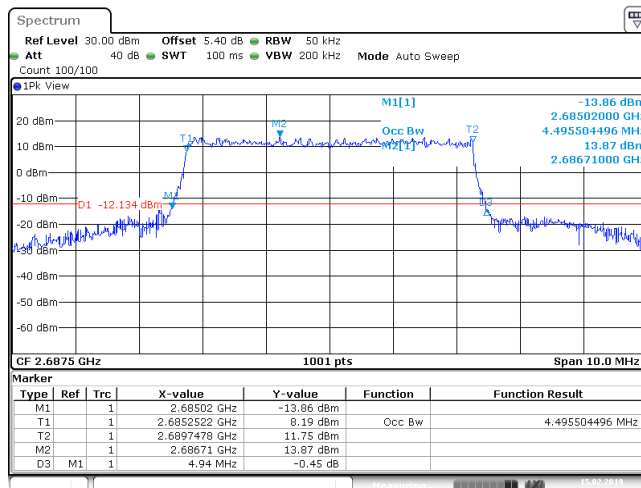
Band41_5MHz_16QAM_40620_25RB#0





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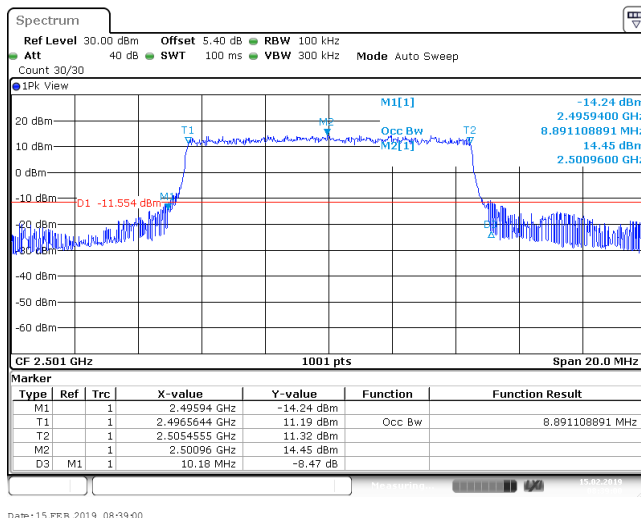
Band41_5MHz_16QAM_41565_25RB#0



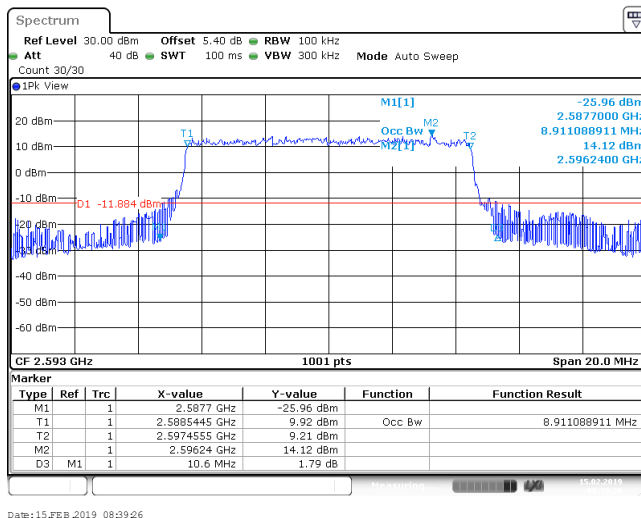
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Band41_10MHz_QPSK_39700_50RB#0



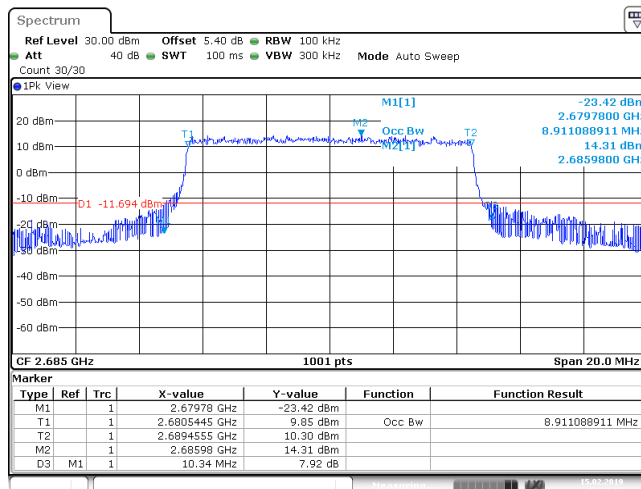


Band41_10MHz_QPSK_40620_50RB#0



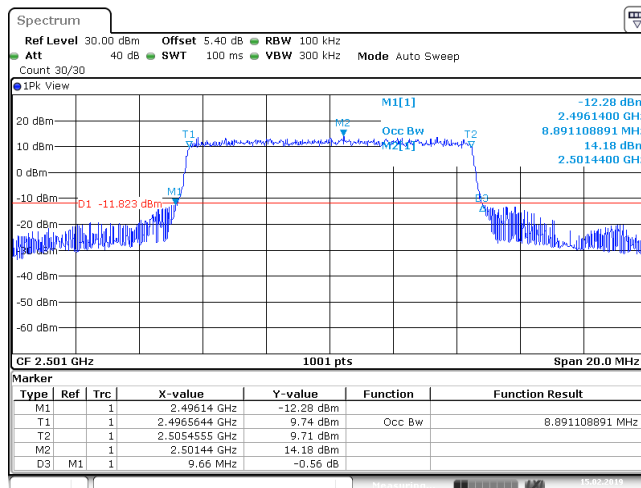
Band41_10MHz_QPSK_41540_50RB#0





Date: 15 FEB 2019 08:39:52

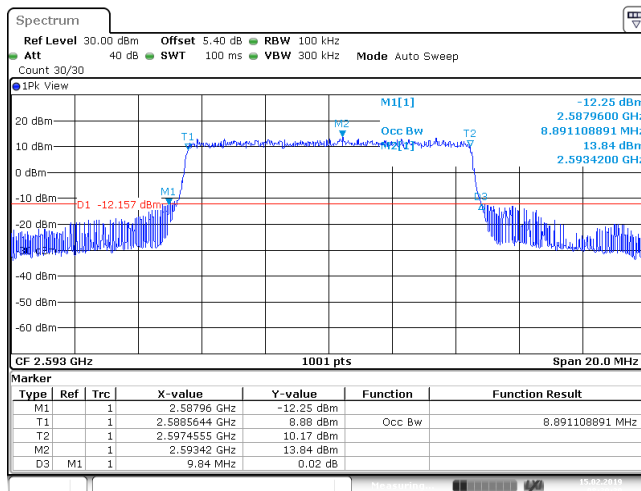
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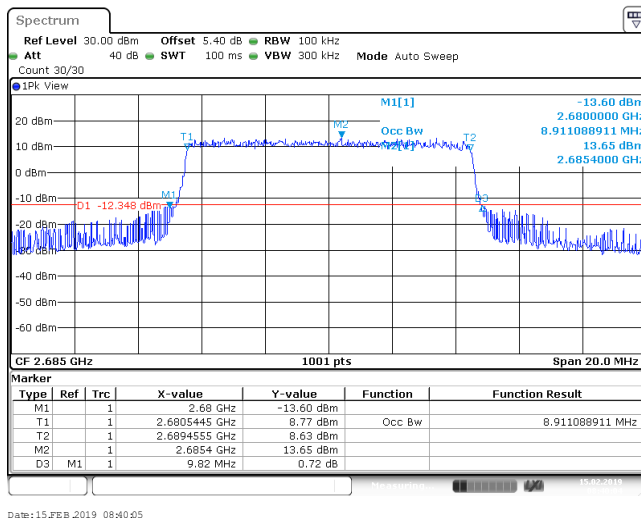
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Band41_10MHz_16QAM_40620_50RB#0



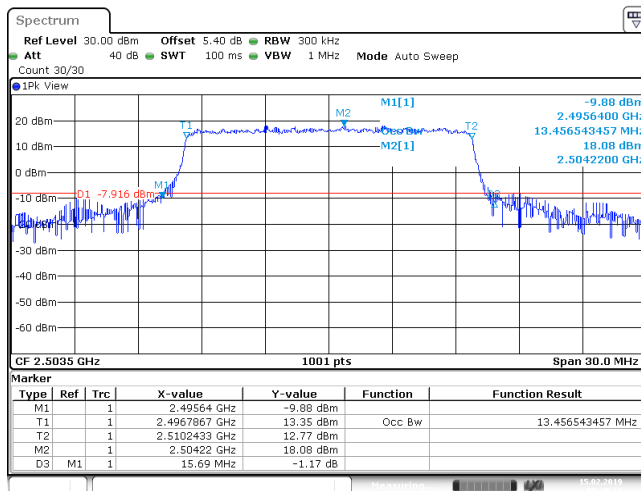


Band41_10MHz_16QAM_41540_50RB#0



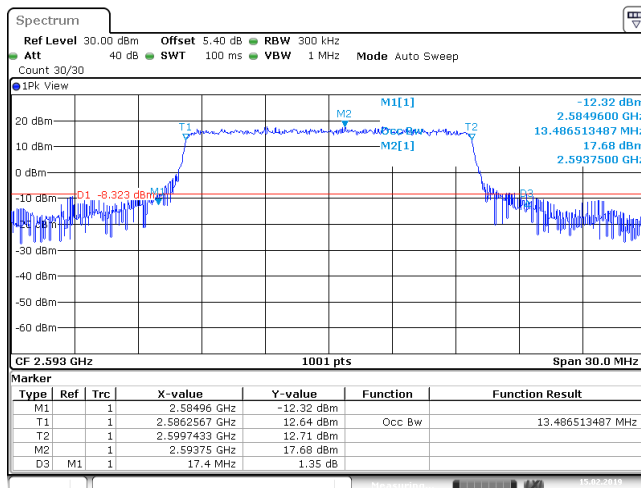
Band41_15MHz_QPSK_39725_75RB#0





Date: 15 FEB 2019 08:40:23

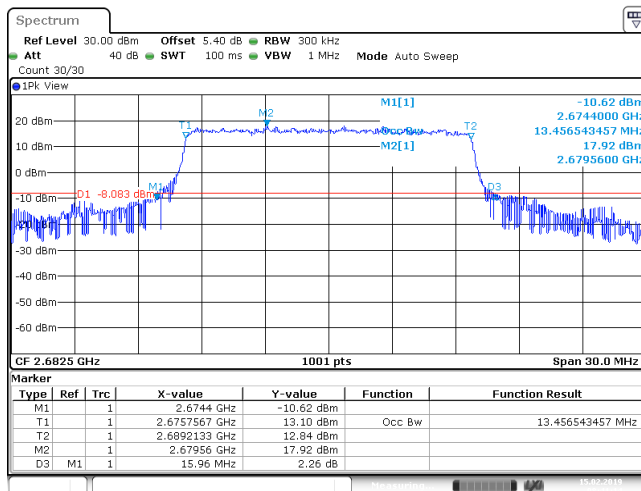
Band41_15MHz_QPSK_40620_75RB#0



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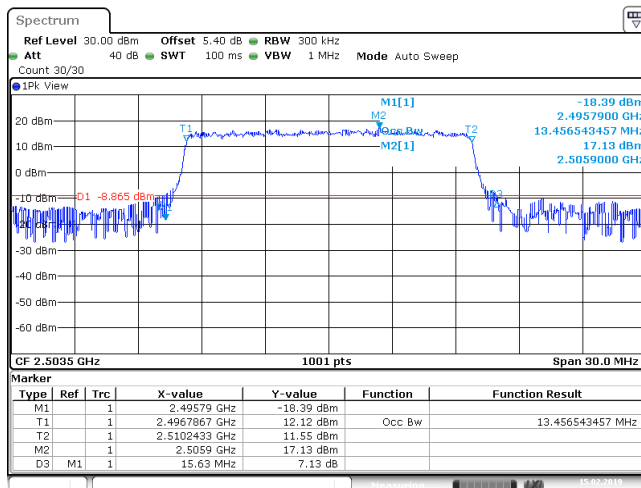
Band41_15MHz_QPSK_41515_75RB#0





Date: 15 FEB 2019 08:41:15

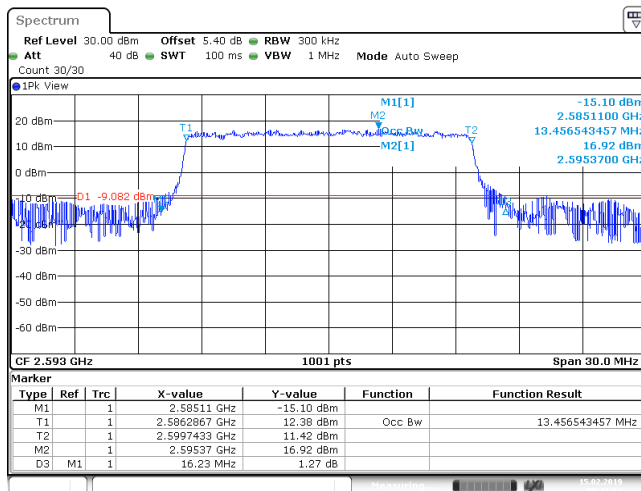
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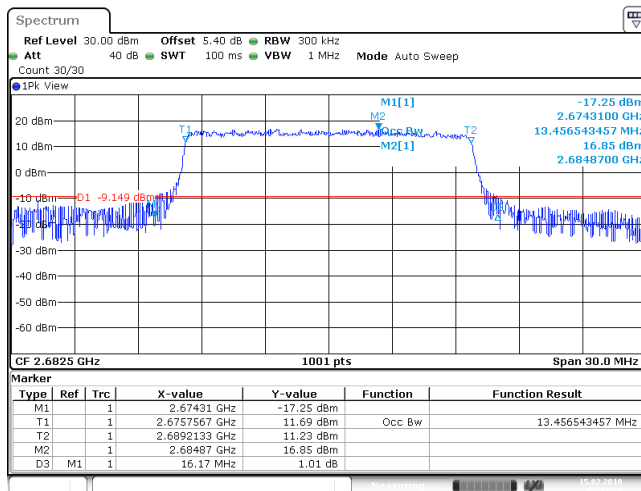
Band41_15MHz_16QAM_40620_75RB#0





Date: 15 FEB 2019 08:41:02

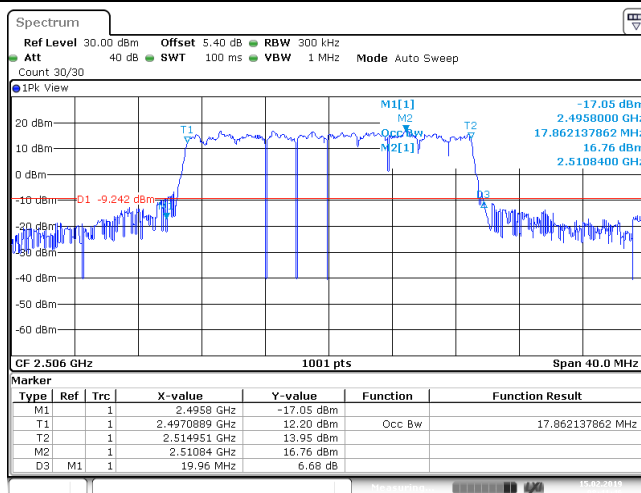
Band41_15MHz_16QAM_41515_75RB#0



Date: 15 FEB 2019 08:41:28

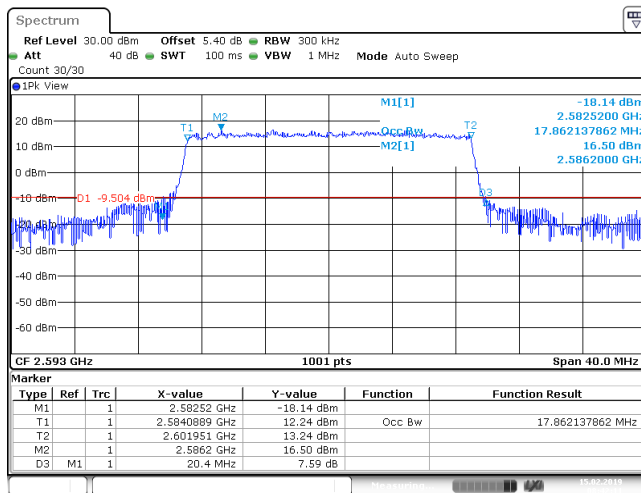
Band41_20MHz_QPSK_39750_100RB#0





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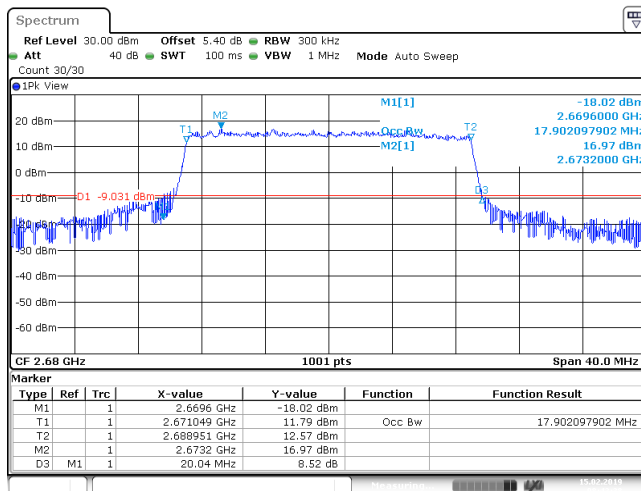
Band41_20MHz_QPSK_40620_100RB#0



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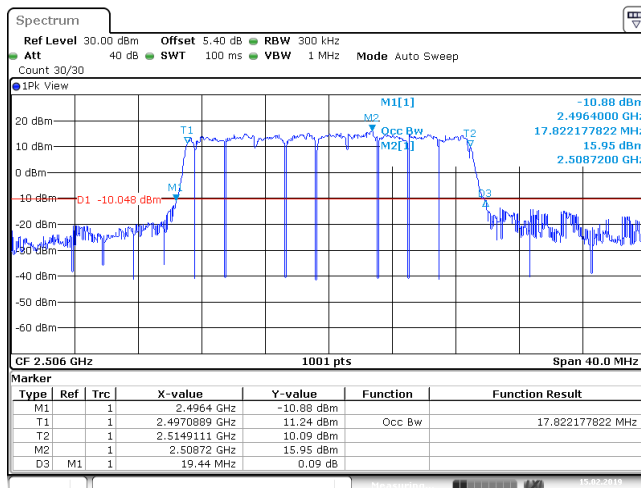
Band41_20MHz_QPSK_41490_100RB#0





Date: 15 FEB 2019 08:42:38

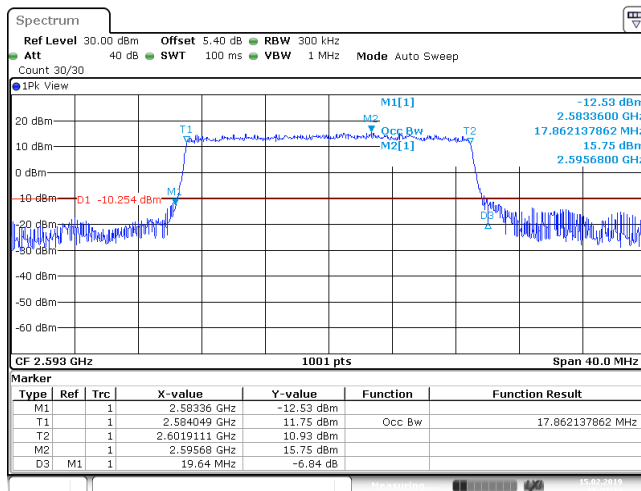
Band41_20MHz_16QAM_39750_100RB#0



Date: 15 FEB 2019 08:41:59

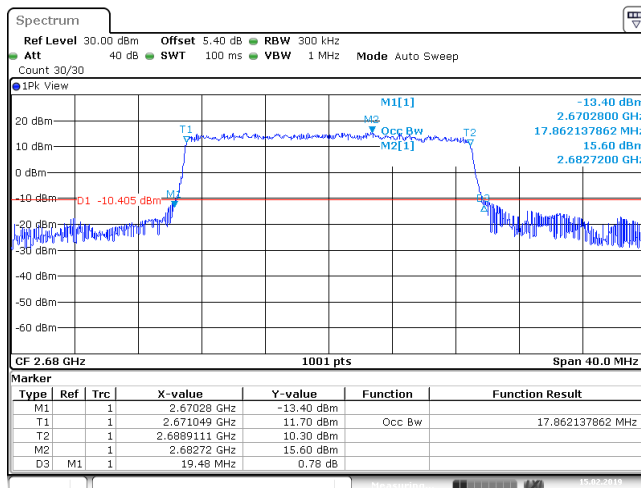
Band41_20MHz_16QAM_40620_100RB#0





Date: 15.FEB.2019 08:42:25

Band41_20MHz_16QAM_41490_100RB#0



Date: 15.FEB.2019 08:42:51



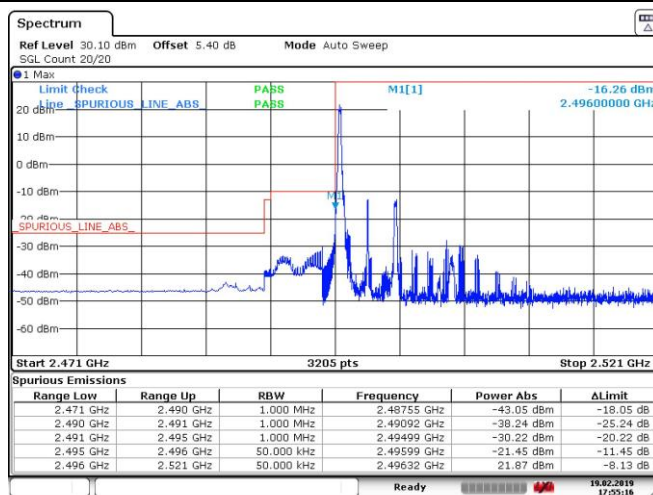
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5. Band Edge Compliance

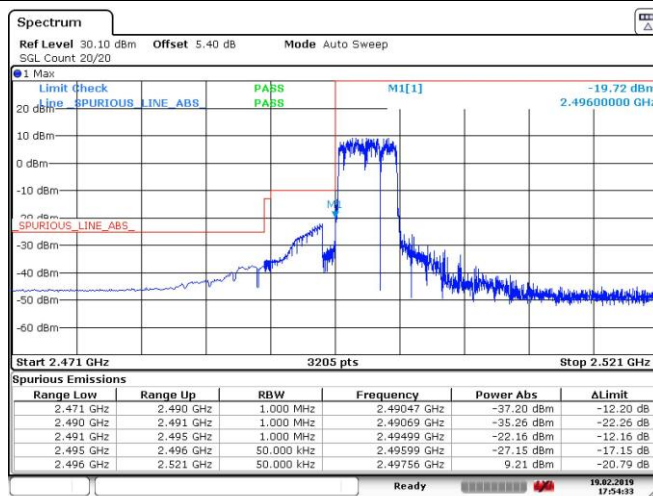
5.1. Test Plots

Band41_5MHz_QPSK_39675_1RB#0



Date: 19 FEB 2019 17:55:16

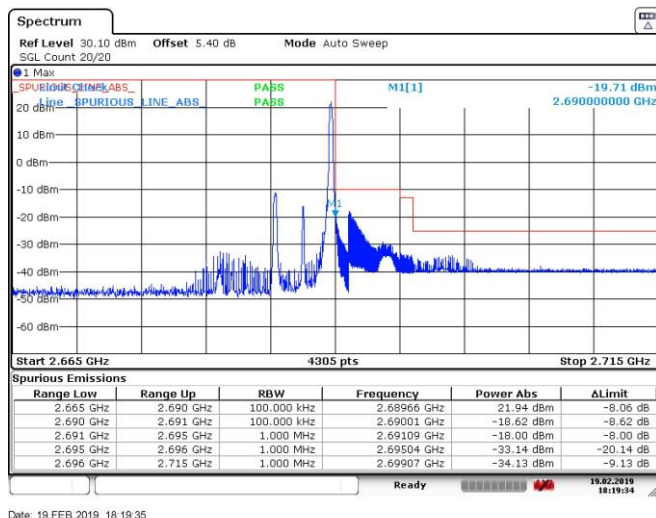
Band41_5MHz_QPSK_39675_25RB#0



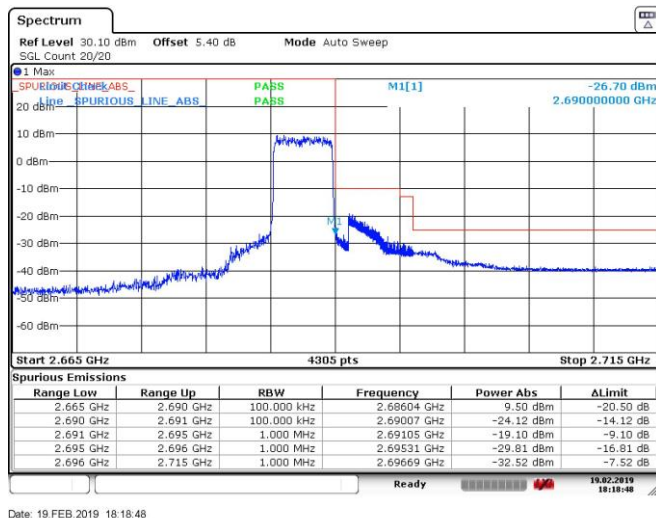
Date: 19 FEB 2019 17:54:32

Band41_5MHz_QPSK_41565_1RB#24



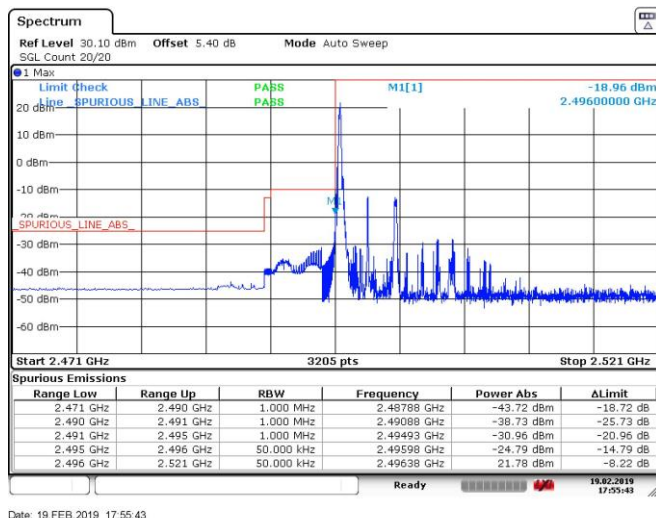


Band41_5MHz_QPSK_41565_25RB#0

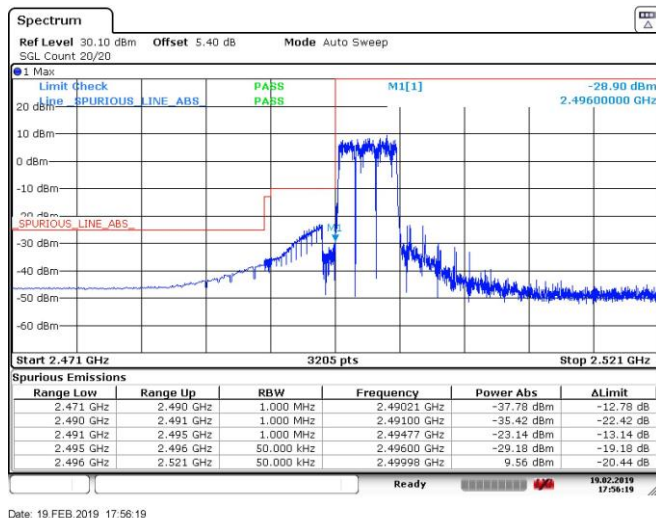


Band41_5MHz_16QAM_39675_1RB#0



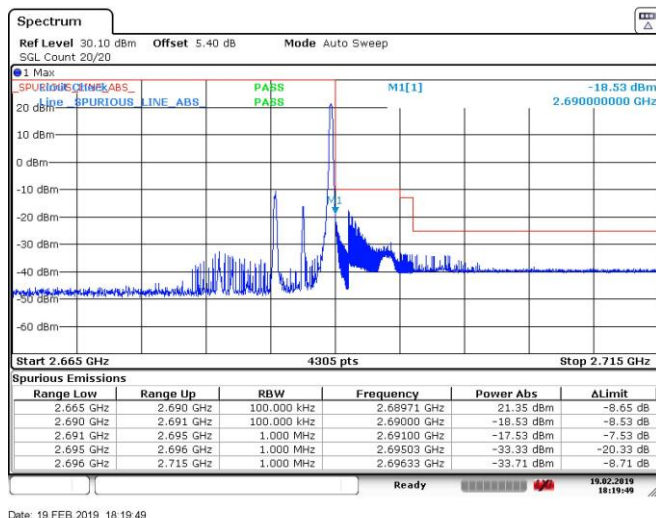


Band41_5MHz_16QAM_39675_25RB#0

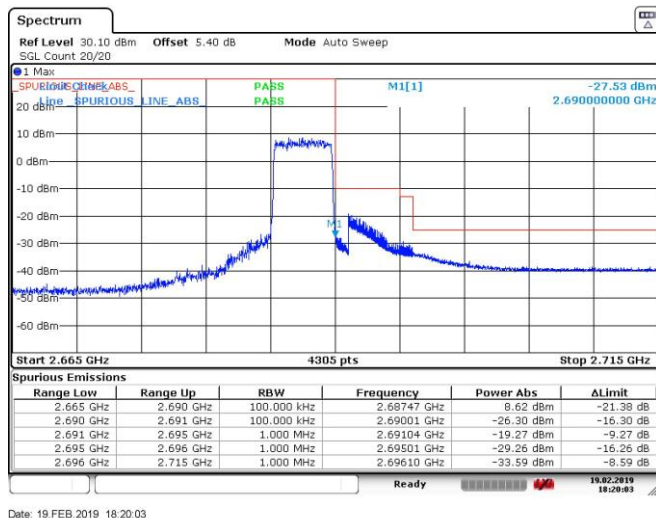


Band41_5MHz_16QAM_41565_1RB#24



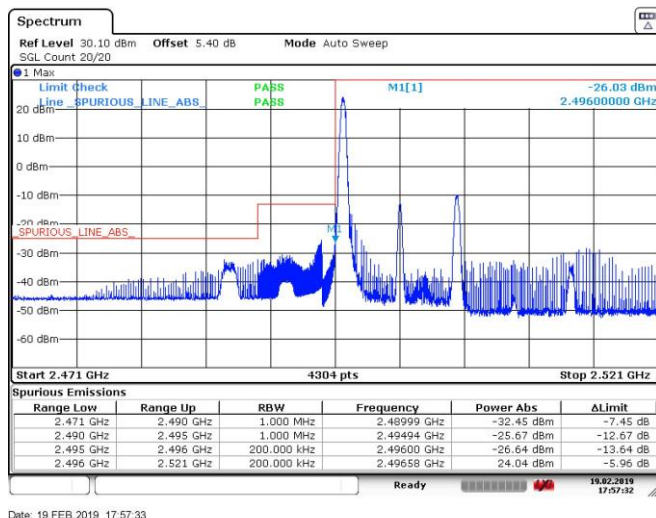


Band41_5MHz_16QAM_41565_25RB#0

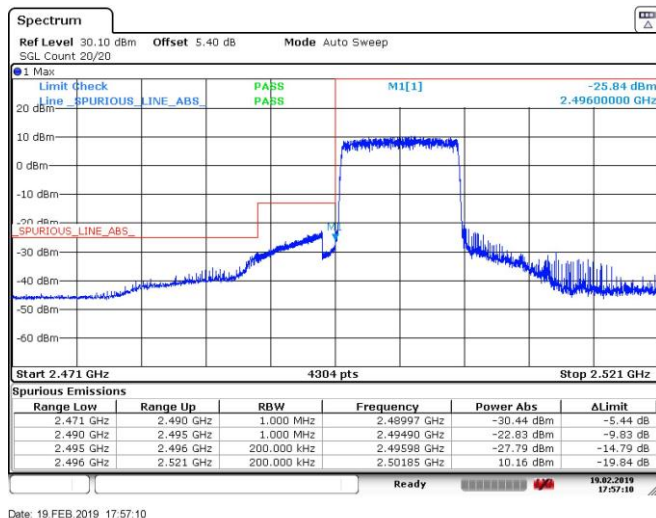


Band41_10MHz_QPSK_39700_1RB#0



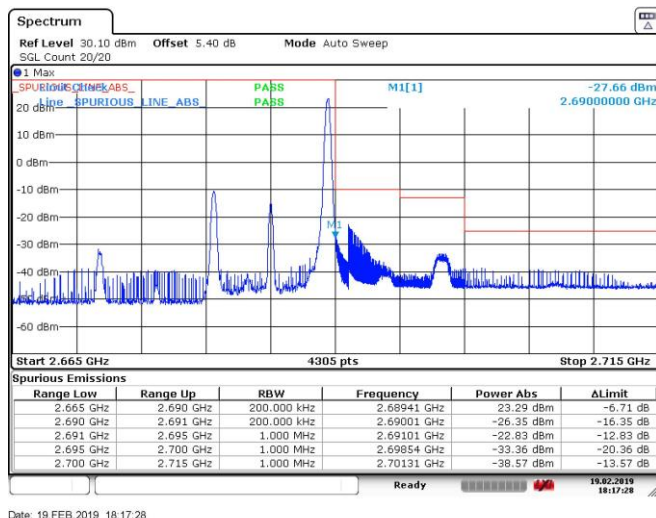


Band41_10MHz_QPSK_39700_50RB#0

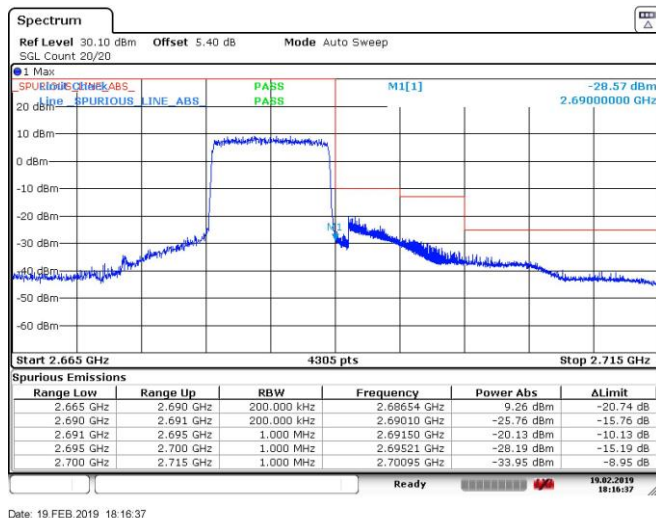


Band41_10MHz_QPSK_41540_1RB#49



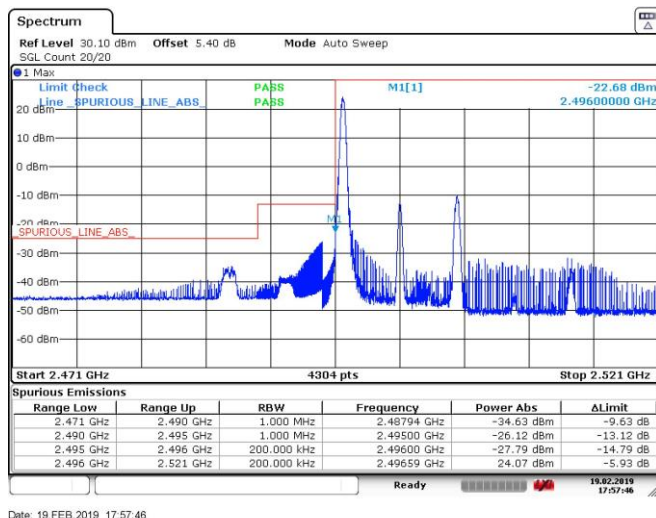


Band41_10MHz_QPSK_41540_50RB#0

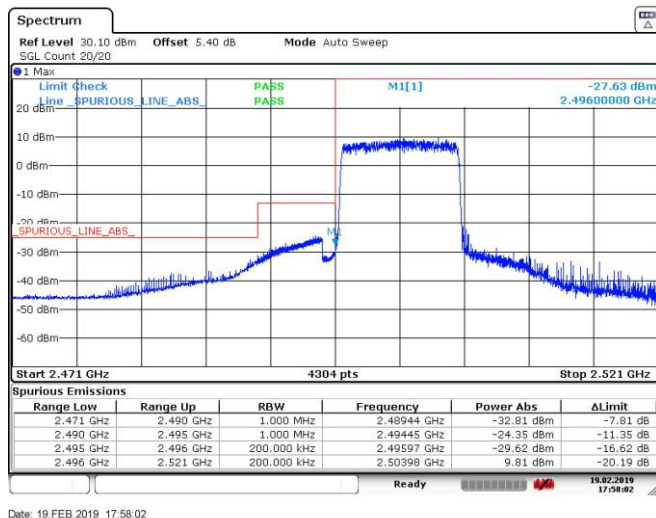


Band41_10MHz_16QAM_39700_1RB#0



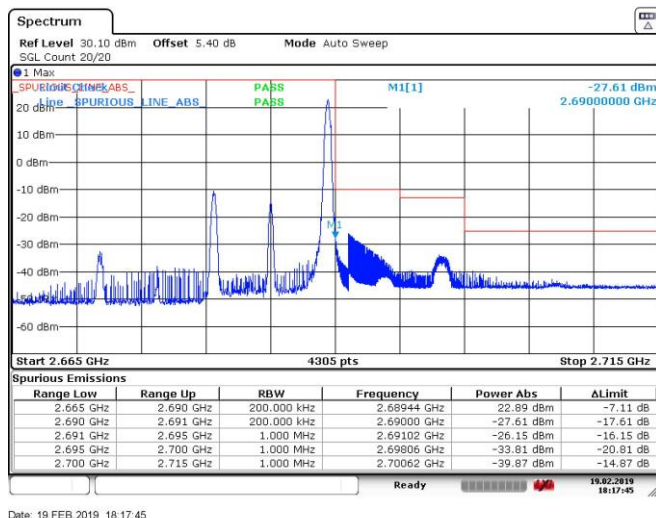


Band41_10MHz_16QAM_39700_50RB#0

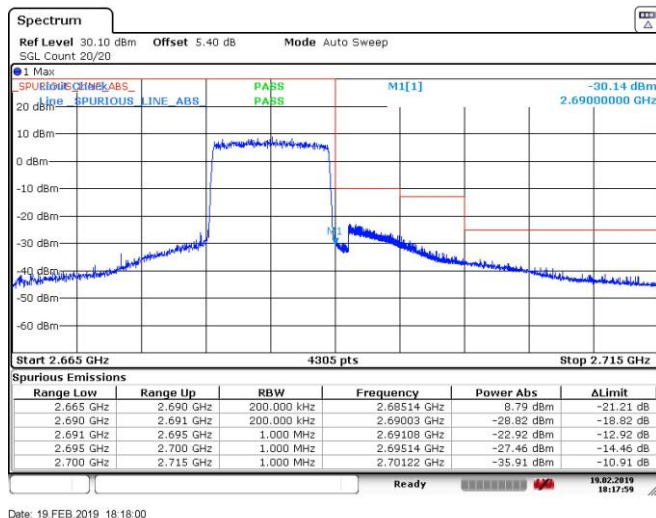


Band41_10MHz_16QAM_41540_1RB#49



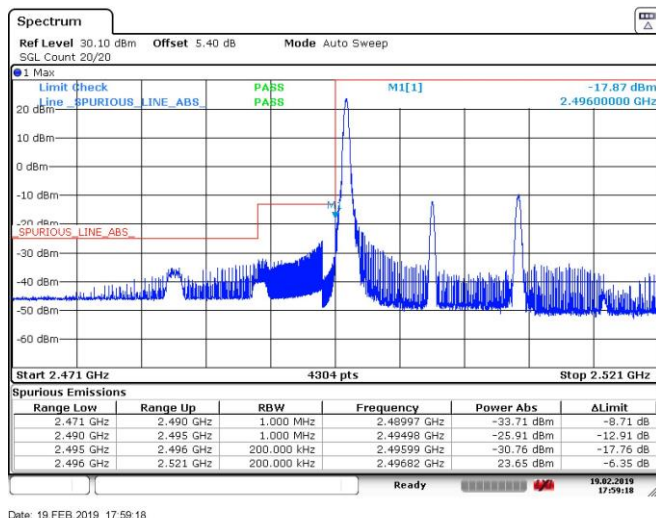


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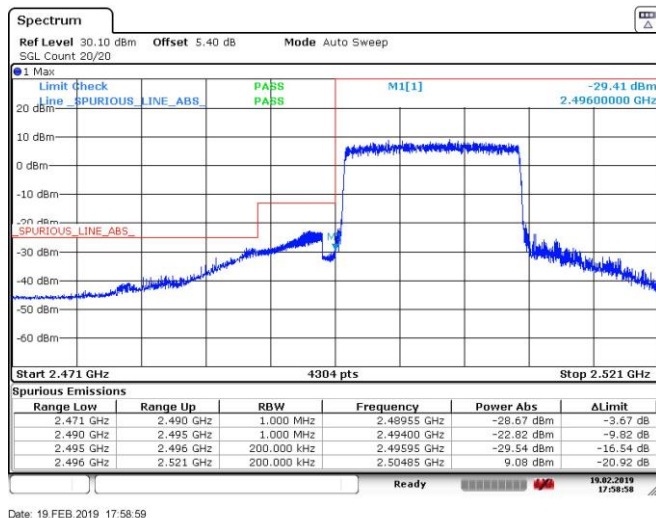


Band41_15MHz_QPSK_39725_1RB#0



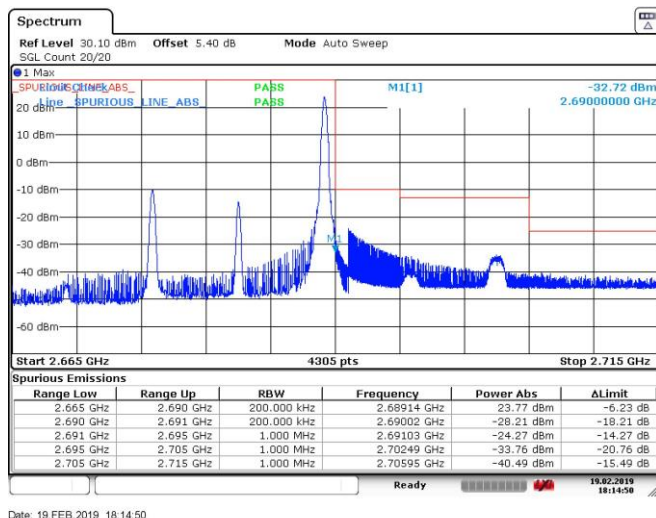


Band41_15MHz_QPSK_39725_75RB#0

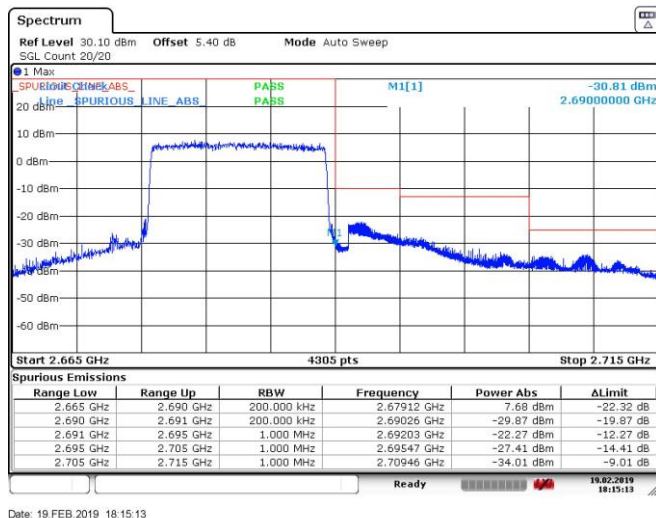


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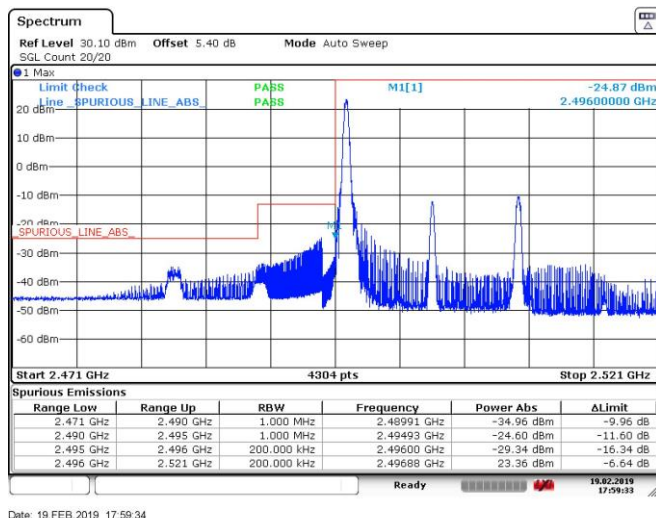


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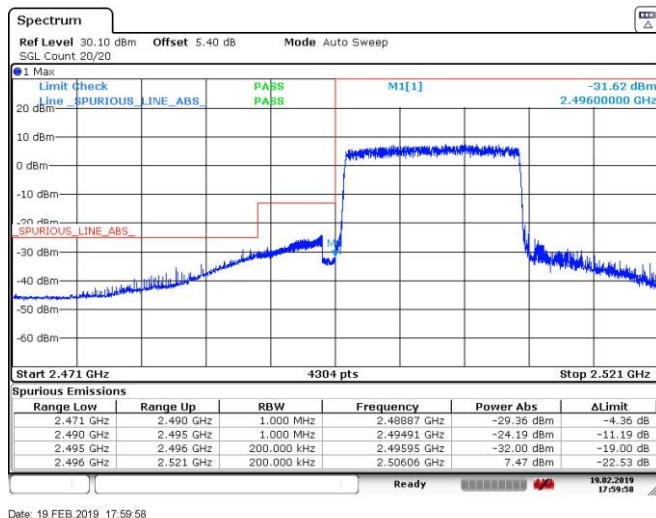


Band41_15MHz_16QAM_39725_1RB#0



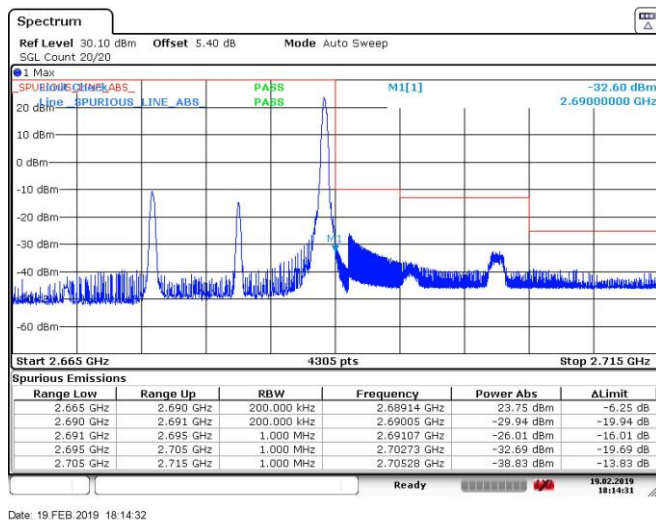


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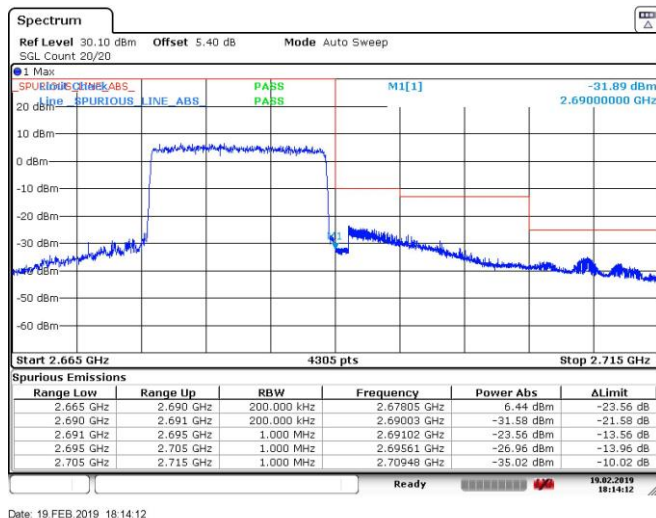


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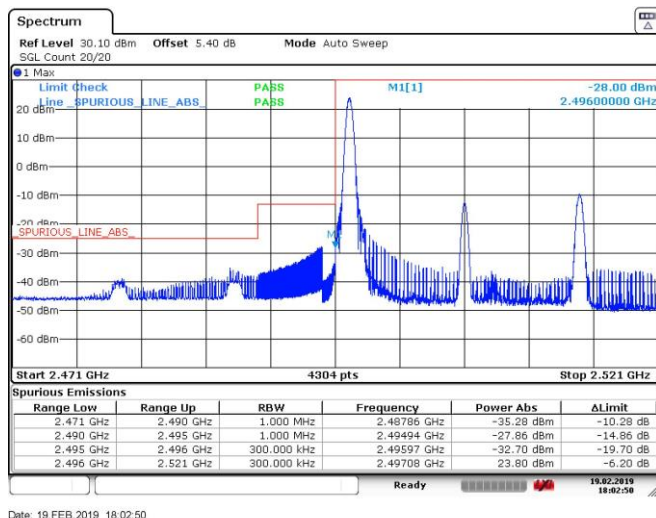


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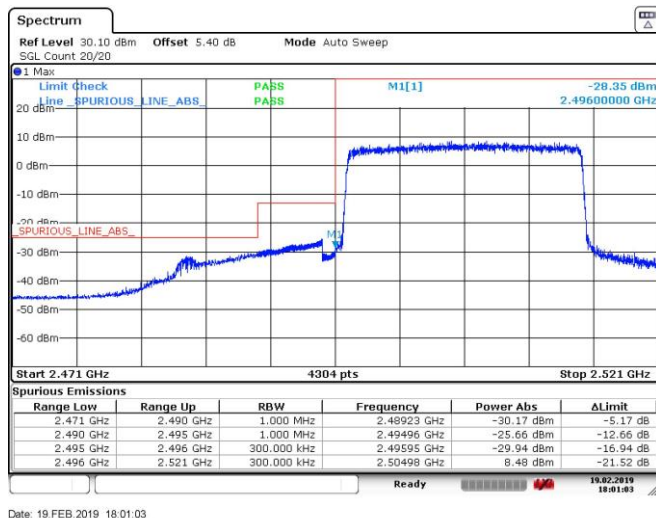


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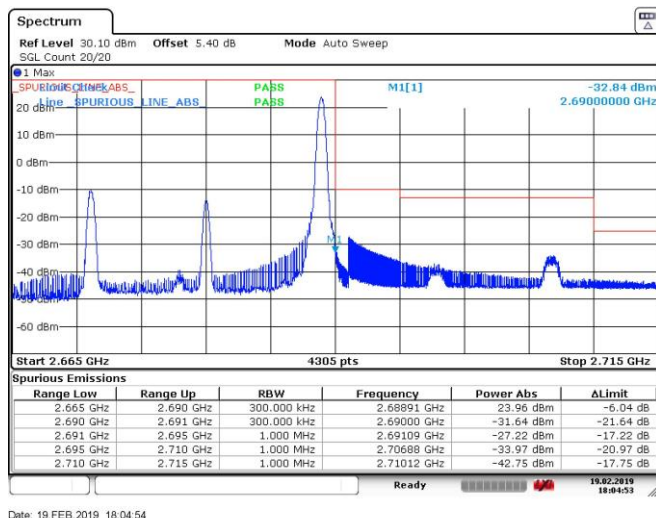


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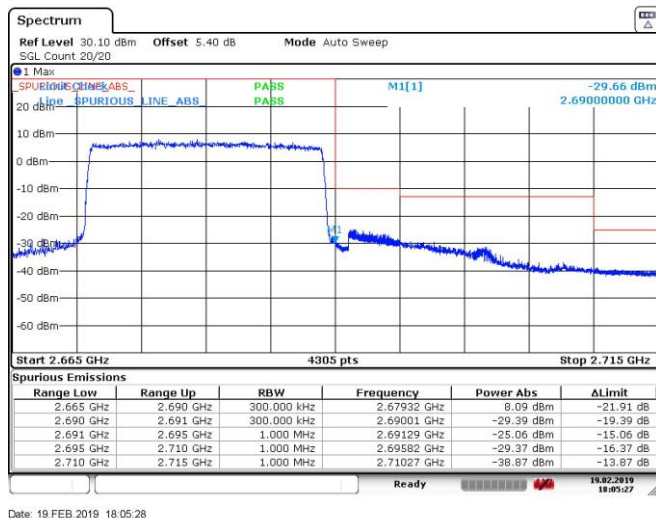


Band41_20MHz_QPSK_41490_1RB#99



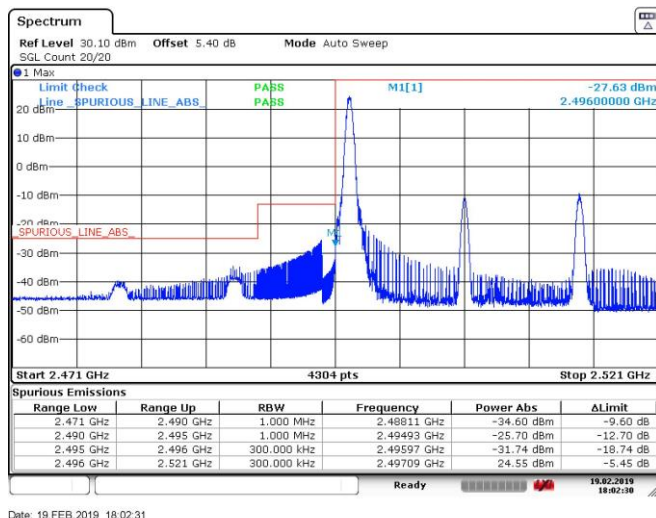


Band41_20MHz_QPSK_41490_100RB#0

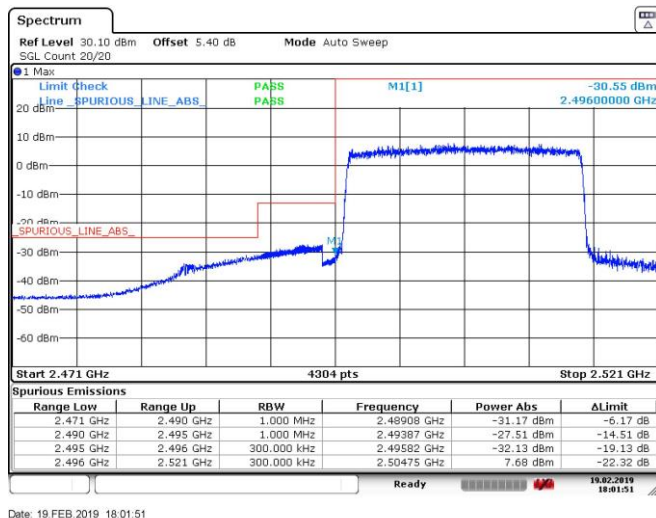


Band41_20MHz_16QAM_39750_1RB#0





Band41_20MHz_16QAM_39750_100RB#0



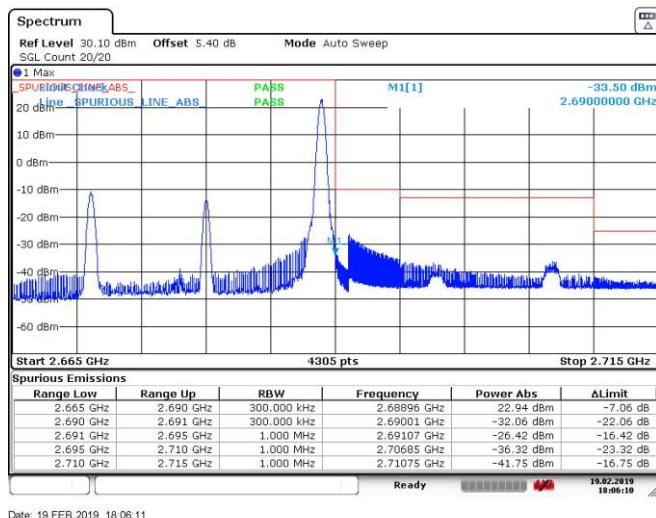
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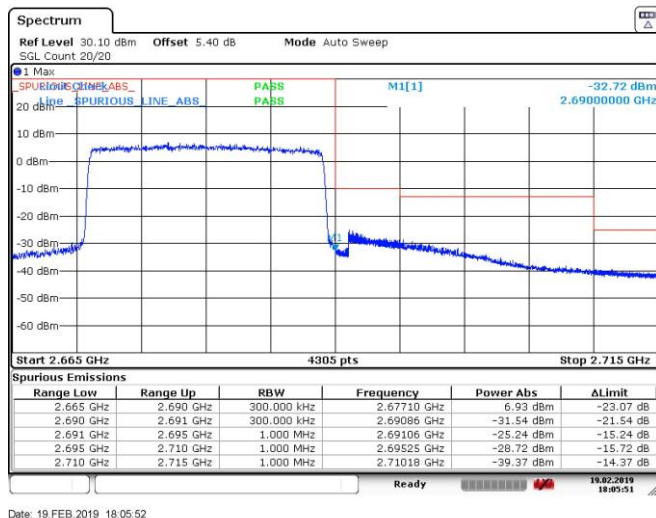
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Band41_20MHz_16QAM_41490_100RB#0





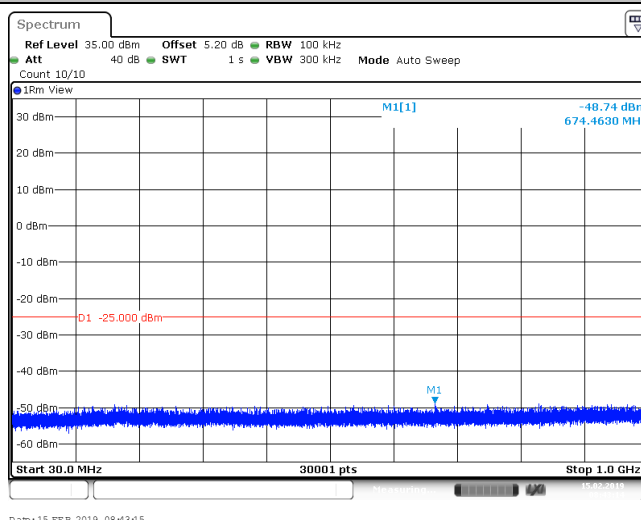
6. Spurious Emission at Antenna Terminal

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.

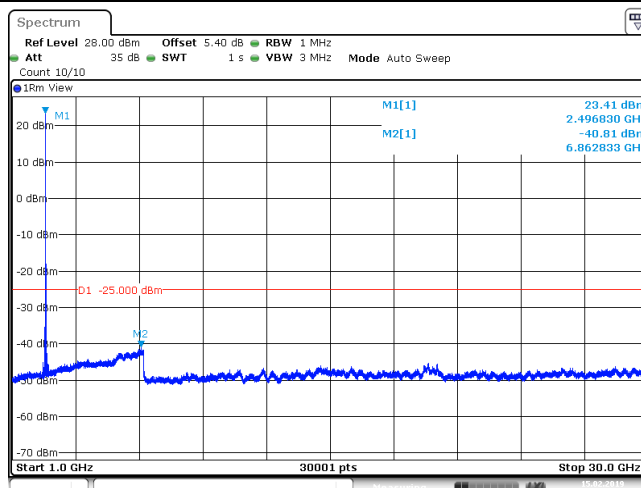
6.1. Test Plots

Band41_20MHz_QPSK_39750_1RB#0



Date: 15 FEB 2019 08:43:15

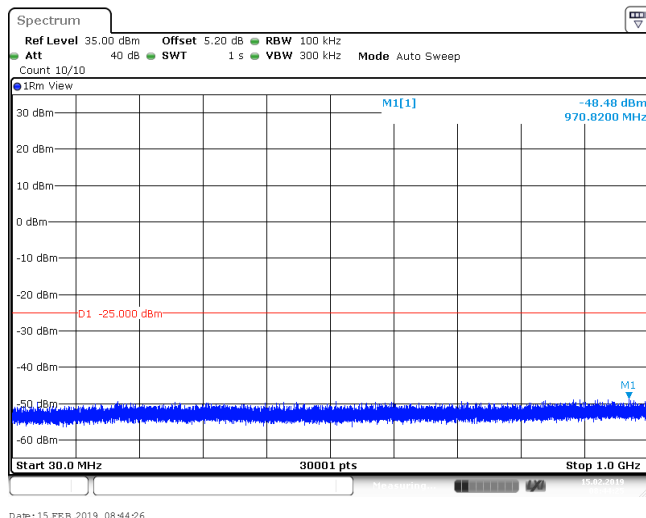
Band41_20MHz_QPSK_39750_1RB#0



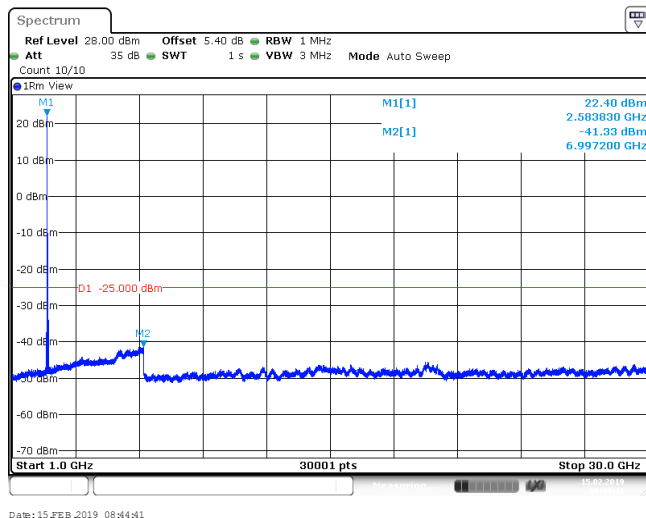
Date: 15 FEB 2019 08:43:31

Band41_20MHz_QPSK_40620_1RB#0



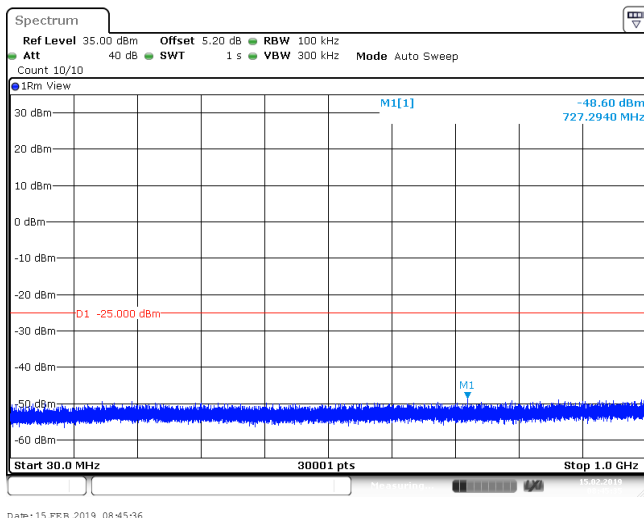


Band41_20MHz_QPSK_40620_1RB#0

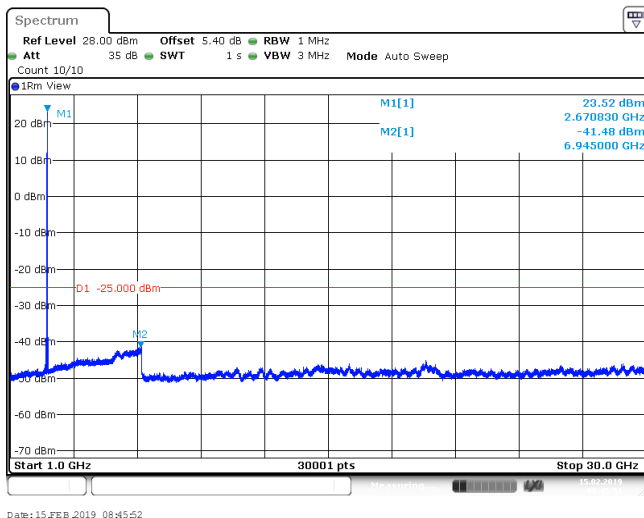


Band41_20MHz_QPSK_41490_1RB#0



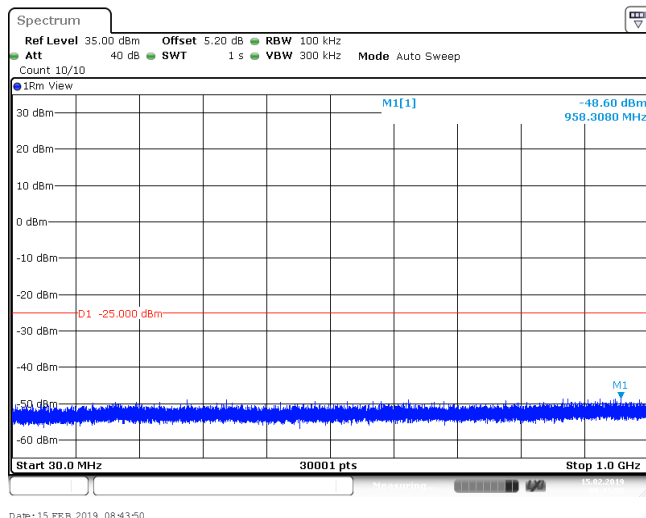


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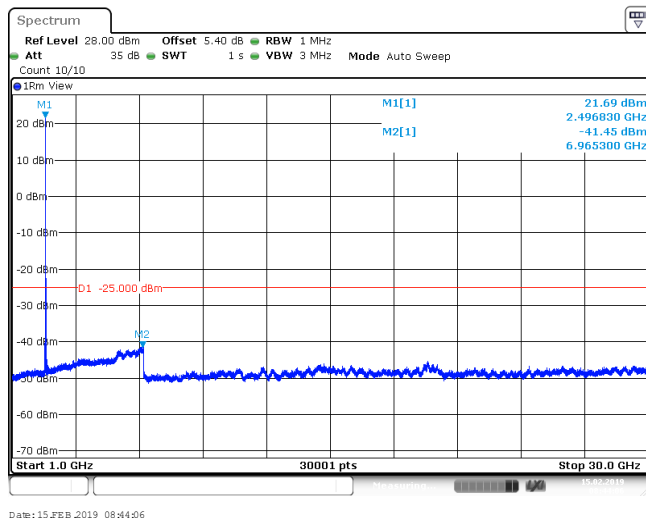


Band41_20MHz_16QAM_39750_1RB#0





Band41_20MHz_16QAM_39750_1RB#0

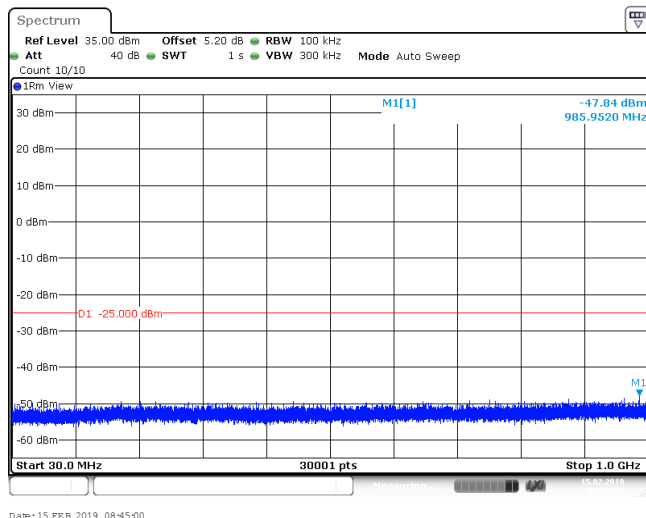


Band41_20MHz_16QAM_40620_1RB#0

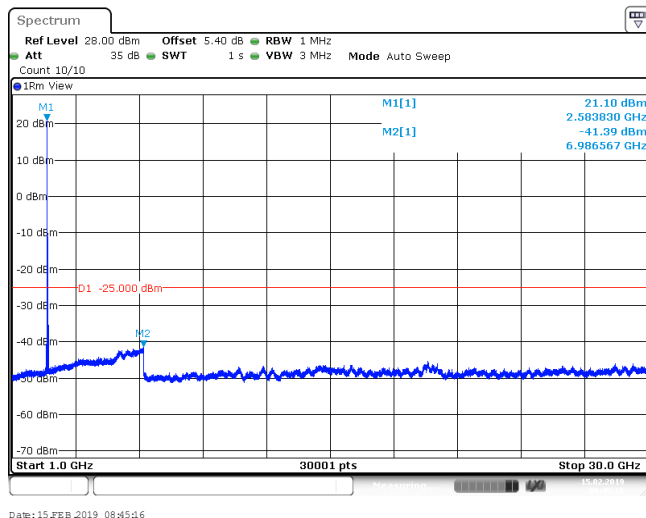


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Band41_20MHz_16QAM_40620_1RB#0

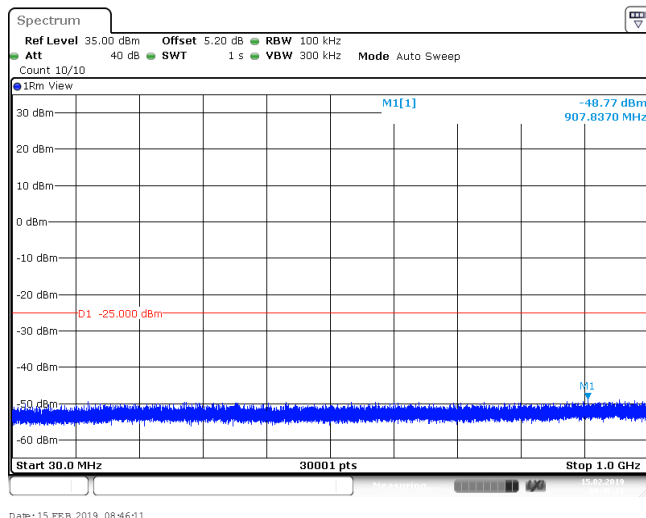


Band41_20MHz_16QAM_41490_1RB#0

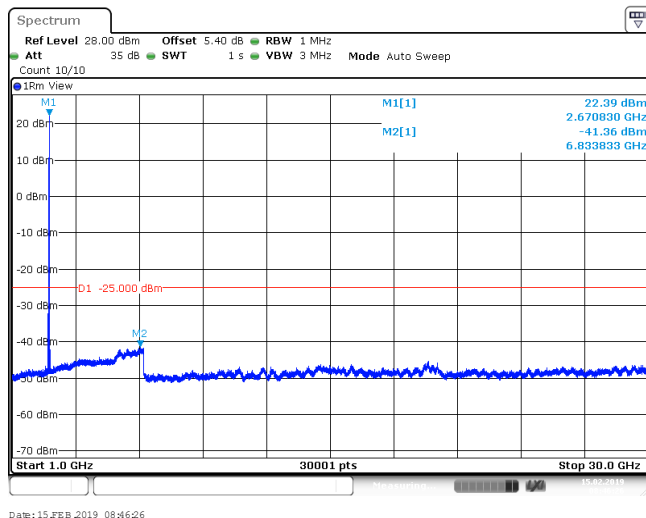


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Band41_20MHz_16QAM_41490_1RB#0



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7. Field Strength of Spurious Radiation

7.1. Test BAND = LTE BAND 41

7.1.1. Test Mode = LTE/TM1 20MHz

7.1.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
50.5650	-71.60	-25.00	46.60	Vertical
114.0062	-65.38	-25.00	40.38	Vertical
497.6604	-66.05	-25.00	41.05	Vertical
2699.9400	-37.57	-25.00	12.57	Vertical
4602.5534	-55.76	-25.00	30.76	Vertical
17985.4995	-33.63	-25.00	8.63	Vertical
43.8232	-64.80	-25.00	39.80	Horizontal
151.2561	-70.52	-25.00	45.52	Horizontal
694.3862	-63.10	-25.00	38.10	Horizontal
4602.5534	-55.85	-25.00	30.85	Horizontal
9333.2111	-48.86	-25.00	23.86	Horizontal
17995.9999	-37.36	-25.00	12.36	Horizontal

7.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
69.2870	-69.57	-25.00	44.57	Vertical
113.8607	-65.21	-25.00	40.21	Vertical
602.5226	-63.99	-25.00	38.99	Vertical
2700.7401	-37.54	-25.00	12.54	Vertical
5105.5702	-56.21	-25.00	31.21	Vertical
17991.9997	-33.31	-25.00	8.31	Vertical
42.8531	-64.27	-25.00	39.27	Horizontal
152.1291	-70.98	-25.00	45.98	Horizontal



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520.5050	-65.96	-25.00	40.96	Horizontal
5103.5701	-55.72	-25.00	30.72	Horizontal
9314.7105	-49.38	-25.00	24.38	Horizontal
16399.4466	-38.45	-25.00	13.45	Horizontal

7.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
68.7049	-69.46	-25.00	44.46	Vertical
108.0404	-65.53	-25.00	40.53	Vertical
584.8677	-64.28	-25.00	39.28	Vertical
2700.3401	-37.67	-25.00	12.67	Vertical
4762.0587	-52.98	-25.00	27.98	Vertical
17885.4962	-35.67	-25.00	10.67	Vertical
43.2412	-64.36	-25.00	39.36	Horizontal
150.3345	-69.44	-25.00	44.44	Horizontal
707.8214	-62.82	-25.00	37.82	Horizontal
2701.9404	-36.22	-25.00	11.22	Horizontal
7478.1493	-53.13	-25.00	28.13	Horizontal
16390.4463	-38.61	-25.00	13.61	Horizontal

7.1.1.4. Spot check worse mode

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
47.7519	-70.71	-25.00	45.71	Vertical
111.1931	-64.15	-25.00	39.15	Vertical
586.9533	-63.14	-25.00	38.14	Vertical
5168.0723	-46.96	-25.00	21.96	Vertical
10336.7446	-37.84	-25.00	12.84	Vertical
17995.4999	-33.49	-25.00	8.49	Vertical
43.6777	-64.04	-25.00	39.04	Horizontal
151.5956	-67.14	-25.00	42.14	Horizontal



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243.0227	-68.28	-25.00	43.28	Horizontal
5168.5723	-51.27	-25.00	26.27	Horizontal
10336.2445	-46.43	-25.00	21.43	Horizontal
17997.4999	-38.32	-25.00	13.32	Horizontal

Remark:

- 1) The disturbance above 12.75GHz and 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
Band41	20MHz	QPSK	39750	100RB#0	VL	NT	-1.70	-0.000678	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	VN	NT	-1.30	-0.000519	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	VH	NT	-0.70	-0.000279	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	VL	NT	-1.00	-0.000386	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	VN	NT	-2.10	-0.000810	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	VH	NT	2.50	0.000964	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	VL	NT	0.70	0.000261	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	VN	NT	-1.30	-0.000485	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	VH	NT	-3.70	-0.001381	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	VL	NT	-3.10	-0.001237	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	VN	NT	1.90	0.000758	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	VH	NT	-1.30	-0.000519	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	VL	NT	1.10	0.000424	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	VN	NT	-1.20	-0.000463	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	VH	NT	3.20	0.001234	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	VL	NT	-5.20	-0.001940	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	VN	NT	-2.90	-0.001082	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	VH	NT	1.60	0.000597	±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
Band41	20MHz	QPSK	39750	100RB#0	NV	-30	-1.00	-0.000399	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	-20	3.30	0.001317	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	0	-4.70	-0.001875	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	10	0.20	0.000080	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	20	1.50	0.000599	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	30	1.10	0.000439	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	40	3.00	0.001197	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	50	1.10	0.000439	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	-30	1.50	0.000578	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	-20	-1.80	-0.000694	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	0	3.30	0.001273	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	10	2.20	0.000848	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	20	-2.90	-0.001118	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	30	-2.70	-0.001041	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	40	4.20	0.001620	±2.5	PASS



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Band41	20MHz	QPSK	40620	100RB#0	NV	50	0.40	0.000154	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	-30	0.10	0.000037	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	-20	0.30	0.000112	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	0	-2.80	-0.001045	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	10	-3.50	-0.001306	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	20	1.60	0.000597	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	30	1.50	0.000560	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	40	-3.90	-0.001455	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	50	0.00	0.000000	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	-30	-3.80	-0.001516	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	-20	-3.80	-0.001516	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	0	1.90	0.000758	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	10	3.90	0.001556	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	20	3.00	0.001197	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	30	2.40	0.000958	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	40	0.70	0.000279	±2.5	PASS
Band41	20MHz	16QAM	39750	100RB#0	NV	50	-2.40	-0.000958	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	-30	4.90	0.001890	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	-20	-0.30	-0.000116	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	0	-1.40	-0.000540	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	10	4.10	0.001581	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	20	3.30	0.001273	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	30	0.10	0.000039	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	40	-0.80	-0.000309	±2.5	PASS
Band41	20MHz	16QAM	40620	100RB#0	NV	50	3.60	0.001388	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	-30	-3.90	-0.001455	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	-20	2.00	0.000746	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	0	1.40	0.000522	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	10	-1.30	-0.000485	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	20	-1.20	-0.000448	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	30	-3.60	-0.001343	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	40	-2.60	-0.000970	±2.5	PASS
Band41	20MHz	16QAM	41490	100RB#0	NV	50	2.40	0.000896	±2.5	PASS

The End



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