



Appendix B

E-UTRA BAND 38



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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
Band38	5MHz	QPSK	37775	1RB#0	23.39	25.45	33.00	PASS
Band38	5MHz	QPSK	37775	1RB#12	23.55	25.61	33.00	PASS
Band38	5MHz	QPSK	37775	1RB#24	23.46	25.52	33.00	PASS
Band38	5MHz	QPSK	37775	12RB#0	22.53	24.59	33.00	PASS
Band38	5MHz	QPSK	37775	12RB#6	22.51	24.57	33.00	PASS
Band38	5MHz	QPSK	37775	12RB#13	22.44	24.50	33.00	PASS
Band38	5MHz	QPSK	37775	25RB#0	22.44	24.50	33.00	PASS
Band38	5MHz	QPSK	38000	1RB#0	23.35	25.41	33.00	PASS
Band38	5MHz	QPSK	38000	1RB#12	23.78	25.84	33.00	PASS
Band38	5MHz	QPSK	38000	1RB#24	23.40	25.46	33.00	PASS
Band38	5MHz	QPSK	38000	12RB#0	22.48	24.54	33.00	PASS
Band38	5MHz	QPSK	38000	12RB#6	22.54	24.60	33.00	PASS
Band38	5MHz	QPSK	38000	12RB#13	22.47	24.53	33.00	PASS
Band38	5MHz	QPSK	38000	25RB#0	22.47	24.53	33.00	PASS
Band38	5MHz	QPSK	38225	1RB#0	23.32	25.38	33.00	PASS
Band38	5MHz	QPSK	38225	1RB#12	23.63	25.69	33.00	PASS
Band38	5MHz	QPSK	38225	1RB#24	23.49	25.55	33.00	PASS
Band38	5MHz	QPSK	38225	12RB#0	22.45	24.51	33.00	PASS
Band38	5MHz	QPSK	38225	12RB#6	22.36	24.42	33.00	PASS
Band38	5MHz	QPSK	38225	12RB#13	22.41	24.47	33.00	PASS
Band38	5MHz	QPSK	38225	25RB#0	22.43	24.49	33.00	PASS
Band38	5MHz	16QAM	37775	1RB#0	22.03	24.09	33.00	PASS
Band38	5MHz	16QAM	37775	1RB#12	22.24	24.30	33.00	PASS
Band38	5MHz	16QAM	37775	1RB#24	21.74	23.80	33.00	PASS
Band38	5MHz	16QAM	37775	12RB#0	21.40	23.46	33.00	PASS
Band38	5MHz	16QAM	37775	12RB#6	21.48	23.54	33.00	PASS
Band38	5MHz	16QAM	37775	12RB#13	21.31	23.37	33.00	PASS
Band38	5MHz	16QAM	37775	25RB#0	21.40	23.46	33.00	PASS
Band38	5MHz	16QAM	38000	1RB#0	21.94	24.00	33.00	PASS
Band38	5MHz	16QAM	38000	1RB#12	22.28	24.34	33.00	PASS
Band38	5MHz	16QAM	38000	1RB#24	21.99	24.05	33.00	PASS
Band38	5MHz	16QAM	38000	12RB#0	21.43	23.49	33.00	PASS



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Band38	5MHz	16QAM	38000	12RB#6	21.42	23.48	33.00	PASS
Band38	5MHz	16QAM	38000	12RB#13	21.37	23.43	33.00	PASS
Band38	5MHz	16QAM	38000	25RB#0	21.35	23.41	33.00	PASS
Band38	5MHz	16QAM	38225	1RB#0	21.95	24.01	33.00	PASS
Band38	5MHz	16QAM	38225	1RB#12	22.14	24.20	33.00	PASS
Band38	5MHz	16QAM	38225	1RB#24	21.91	23.97	33.00	PASS
Band38	5MHz	16QAM	38225	12RB#0	21.37	23.43	33.00	PASS
Band38	5MHz	16QAM	38225	12RB#6	21.25	23.31	33.00	PASS
Band38	5MHz	16QAM	38225	12RB#13	21.36	23.42	33.00	PASS
Band38	5MHz	16QAM	38225	25RB#0	21.26	23.32	33.00	PASS
Band38	10MHz	QPSK	37800	1RB#0	23.62	25.68	33.00	PASS
Band38	10MHz	QPSK	37800	1RB#24	23.75	25.81	33.00	PASS
Band38	10MHz	QPSK	37800	1RB#49	23.25	25.31	33.00	PASS
Band38	10MHz	QPSK	37800	25RB#0	22.66	24.72	33.00	PASS
Band38	10MHz	QPSK	37800	25RB#12	22.58	24.64	33.00	PASS
Band38	10MHz	QPSK	37800	25RB#25	22.34	24.40	33.00	PASS
Band38	10MHz	QPSK	37800	50RB#0	22.44	24.50	33.00	PASS
Band38	10MHz	QPSK	38000	1RB#0	23.38	25.44	33.00	PASS
Band38	10MHz	QPSK	38000	1RB#24	23.89	25.95	33.00	PASS
Band38	10MHz	QPSK	38000	1RB#49	23.25	25.31	33.00	PASS
Band38	10MHz	QPSK	38000	25RB#0	22.52	24.58	33.00	PASS
Band38	10MHz	QPSK	38000	25RB#12	22.53	24.59	33.00	PASS
Band38	10MHz	QPSK	38000	25RB#25	22.37	24.43	33.00	PASS
Band38	10MHz	QPSK	38000	50RB#0	22.45	24.51	33.00	PASS
Band38	10MHz	QPSK	38200	1RB#0	23.26	25.32	33.00	PASS
Band38	10MHz	QPSK	38200	1RB#24	23.73	25.79	33.00	PASS
Band38	10MHz	QPSK	38200	1RB#49	23.17	25.23	33.00	PASS
Band38	10MHz	QPSK	38200	25RB#0	22.58	24.64	33.00	PASS
Band38	10MHz	QPSK	38200	25RB#12	22.43	24.49	33.00	PASS
Band38	10MHz	QPSK	38200	25RB#25	22.30	24.36	33.00	PASS
Band38	10MHz	QPSK	38200	50RB#0	22.39	24.45	33.00	PASS
Band38	10MHz	16QAM	37800	1RB#0	22.12	24.18	33.00	PASS
Band38	10MHz	16QAM	37800	1RB#24	22.08	24.14	33.00	PASS
Band38	10MHz	16QAM	37800	1RB#49	22.08	24.14	33.00	PASS
Band38	10MHz	16QAM	37800	25RB#0	21.49	23.55	33.00	PASS
Band38	10MHz	16QAM	37800	25RB#12	21.54	23.60	33.00	PASS
Band38	10MHz	16QAM	37800	25RB#25	21.42	23.48	33.00	PASS
Band38	10MHz	16QAM	37800	50RB#0	21.37	23.43	33.00	PASS



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Band38	10MHz	16QAM	38000	1RB#0	22.09	24.15	33.00	PASS
Band38	10MHz	16QAM	38000	1RB#24	22.19	24.25	33.00	PASS
Band38	10MHz	16QAM	38000	1RB#49	22.03	24.09	33.00	PASS
Band38	10MHz	16QAM	38000	25RB#0	21.37	23.43	33.00	PASS
Band38	10MHz	16QAM	38000	25RB#12	21.43	23.49	33.00	PASS
Band38	10MHz	16QAM	38000	25RB#25	21.55	23.61	33.00	PASS
Band38	10MHz	16QAM	38000	50RB#0	21.31	23.37	33.00	PASS
Band38	10MHz	16QAM	38200	1RB#0	21.94	24.00	33.00	PASS
Band38	10MHz	16QAM	38200	1RB#24	22.22	24.28	33.00	PASS
Band38	10MHz	16QAM	38200	1RB#49	22.01	24.07	33.00	PASS
Band38	10MHz	16QAM	38200	25RB#0	21.50	23.56	33.00	PASS
Band38	10MHz	16QAM	38200	25RB#12	21.40	23.46	33.00	PASS
Band38	10MHz	16QAM	38200	25RB#25	21.37	23.43	33.00	PASS
Band38	10MHz	16QAM	38200	50RB#0	21.34	23.40	33.00	PASS
Band38	15MHz	QPSK	37825	1RB#0	23.54	25.60	33.00	PASS
Band38	15MHz	QPSK	37825	1RB#38	23.65	25.71	33.00	PASS
Band38	15MHz	QPSK	37825	1RB#74	23.20	25.26	33.00	PASS
Band38	15MHz	QPSK	37825	36RB#0	22.51	24.57	33.00	PASS
Band38	15MHz	QPSK	37825	36RB#18	22.56	24.62	33.00	PASS
Band38	15MHz	QPSK	37825	36RB#39	22.41	24.47	33.00	PASS
Band38	15MHz	QPSK	37825	75RB#0	22.41	24.47	33.00	PASS
Band38	15MHz	QPSK	38000	1RB#0	23.41	25.47	33.00	PASS
Band38	15MHz	QPSK	38000	1RB#38	23.66	25.72	33.00	PASS
Band38	15MHz	QPSK	38000	1RB#74	23.29	25.35	33.00	PASS
Band38	15MHz	QPSK	38000	36RB#0	22.53	24.59	33.00	PASS
Band38	15MHz	QPSK	38000	36RB#18	22.57	24.63	33.00	PASS
Band38	15MHz	QPSK	38000	36RB#39	22.40	24.46	33.00	PASS
Band38	15MHz	QPSK	38000	75RB#0	22.50	24.56	33.00	PASS
Band38	15MHz	QPSK	38175	1RB#0	23.36	25.42	33.00	PASS
Band38	15MHz	QPSK	38175	1RB#38	23.53	25.59	33.00	PASS
Band38	15MHz	QPSK	38175	1RB#74	23.24	25.30	33.00	PASS
Band38	15MHz	QPSK	38175	36RB#0	22.56	24.62	33.00	PASS
Band38	15MHz	QPSK	38175	36RB#18	22.51	24.57	33.00	PASS
Band38	15MHz	QPSK	38175	36RB#39	22.31	24.37	33.00	PASS
Band38	15MHz	QPSK	38175	75RB#0	22.37	24.43	33.00	PASS
Band38	15MHz	16QAM	37825	1RB#0	22.21	24.27	33.00	PASS
Band38	15MHz	16QAM	37825	1RB#38	22.07	24.13	33.00	PASS
Band38	15MHz	16QAM	37825	1RB#74	21.86	23.92	33.00	PASS



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Band38	15MHz	16QAM	37825	36RB#0	21.42	23.48	33.00	PASS
Band38	15MHz	16QAM	37825	36RB#18	21.36	23.42	33.00	PASS
Band38	15MHz	16QAM	37825	36RB#39	21.35	23.41	33.00	PASS
Band38	15MHz	16QAM	37825	75RB#0	21.44	23.50	33.00	PASS
Band38	15MHz	16QAM	38000	1RB#0	22.10	24.16	33.00	PASS
Band38	15MHz	16QAM	38000	1RB#38	21.95	24.01	33.00	PASS
Band38	15MHz	16QAM	38000	1RB#74	21.98	24.04	33.00	PASS
Band38	15MHz	16QAM	38000	36RB#0	21.47	23.53	33.00	PASS
Band38	15MHz	16QAM	38000	36RB#18	21.34	23.40	33.00	PASS
Band38	15MHz	16QAM	38000	36RB#39	21.47	23.53	33.00	PASS
Band38	15MHz	16QAM	38000	75RB#0	21.43	23.49	33.00	PASS
Band38	15MHz	16QAM	38175	1RB#0	22.27	24.33	33.00	PASS
Band38	15MHz	16QAM	38175	1RB#38	21.82	23.88	33.00	PASS
Band38	15MHz	16QAM	38175	1RB#74	22.05	24.11	33.00	PASS
Band38	15MHz	16QAM	38175	36RB#0	21.32	23.38	33.00	PASS
Band38	15MHz	16QAM	38175	36RB#18	21.44	23.50	33.00	PASS
Band38	15MHz	16QAM	38175	36RB#39	21.27	23.33	33.00	PASS
Band38	15MHz	16QAM	38175	75RB#0	21.30	23.36	33.00	PASS
Band38	20MHz	QPSK	37850	1RB#0	23.48	25.54	33.00	PASS
Band38	20MHz	QPSK	37850	1RB#49	23.86	25.92	33.00	PASS
Band38	20MHz	QPSK	37850	1RB#99	23.03	25.09	33.00	PASS
Band38	20MHz	QPSK	37850	50RB#0	22.55	24.61	33.00	PASS
Band38	20MHz	QPSK	37850	50RB#25	22.64	24.70	33.00	PASS
Band38	20MHz	QPSK	37850	50RB#50	22.34	24.40	33.00	PASS
Band38	20MHz	QPSK	37850	100RB#0	22.47	24.53	33.00	PASS
Band38	20MHz	QPSK	38000	1RB#0	23.32	25.38	33.00	PASS
Band38	20MHz	QPSK	38000	1RB#49	23.88	25.94	33.00	PASS
Band38	20MHz	QPSK	38000	1RB#99	23.12	25.18	33.00	PASS
Band38	20MHz	QPSK	38000	50RB#0	22.55	24.61	33.00	PASS
Band38	20MHz	QPSK	38000	50RB#25	22.57	24.63	33.00	PASS
Band38	20MHz	QPSK	38000	50RB#50	22.36	24.42	33.00	PASS
Band38	20MHz	QPSK	38000	100RB#0	22.40	24.46	33.00	PASS
Band38	20MHz	QPSK	38150	1RB#0	23.44	25.50	33.00	PASS
Band38	20MHz	QPSK	38150	1RB#49	23.68	25.74	33.00	PASS
Band38	20MHz	QPSK	38150	1RB#99	23.14	25.20	33.00	PASS
Band38	20MHz	QPSK	38150	50RB#0	22.59	24.65	33.00	PASS
Band38	20MHz	QPSK	38150	50RB#25	22.57	24.63	33.00	PASS
Band38	20MHz	QPSK	38150	50RB#50	22.32	24.38	33.00	PASS



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Band38	20MHz	QPSK	38150	100RB#0	22.41	24.47	33.00	PASS
Band38	20MHz	16QAM	37850	1RB#0	22.20	24.26	33.00	PASS
Band38	20MHz	16QAM	37850	1RB#49	22.41	24.47	33.00	PASS
Band38	20MHz	16QAM	37850	1RB#99	21.91	23.97	33.00	PASS
Band38	20MHz	16QAM	37850	50RB#0	21.38	23.44	33.00	PASS
Band38	20MHz	16QAM	37850	50RB#25	21.38	23.44	33.00	PASS
Band38	20MHz	16QAM	37850	50RB#50	21.30	23.36	33.00	PASS
Band38	20MHz	16QAM	37850	100RB#0	21.42	23.48	33.00	PASS
Band38	20MHz	16QAM	38000	1RB#0	21.92	23.98	33.00	PASS
Band38	20MHz	16QAM	38000	1RB#49	22.17	24.23	33.00	PASS
Band38	20MHz	16QAM	38000	1RB#99	21.98	24.04	33.00	PASS
Band38	20MHz	16QAM	38000	50RB#0	21.38	23.44	33.00	PASS
Band38	20MHz	16QAM	38000	50RB#25	21.33	23.39	33.00	PASS
Band38	20MHz	16QAM	38000	50RB#50	21.42	23.48	33.00	PASS
Band38	20MHz	16QAM	38000	100RB#0	21.48	23.54	33.00	PASS
Band38	20MHz	16QAM	38150	1RB#0	22.17	24.23	33.00	PASS
Band38	20MHz	16QAM	38150	1RB#49	22.19	24.25	33.00	PASS
Band38	20MHz	16QAM	38150	1RB#99	22.03	24.09	33.00	PASS
Band38	20MHz	16QAM	38150	50RB#0	21.45	23.51	33.00	PASS
Band38	20MHz	16QAM	38150	50RB#25	21.33	23.39	33.00	PASS
Band38	20MHz	16QAM	38150	50RB#50	21.26	23.32	33.00	PASS
Band38	20MHz	16QAM	38150	100RB#0	21.39	23.45	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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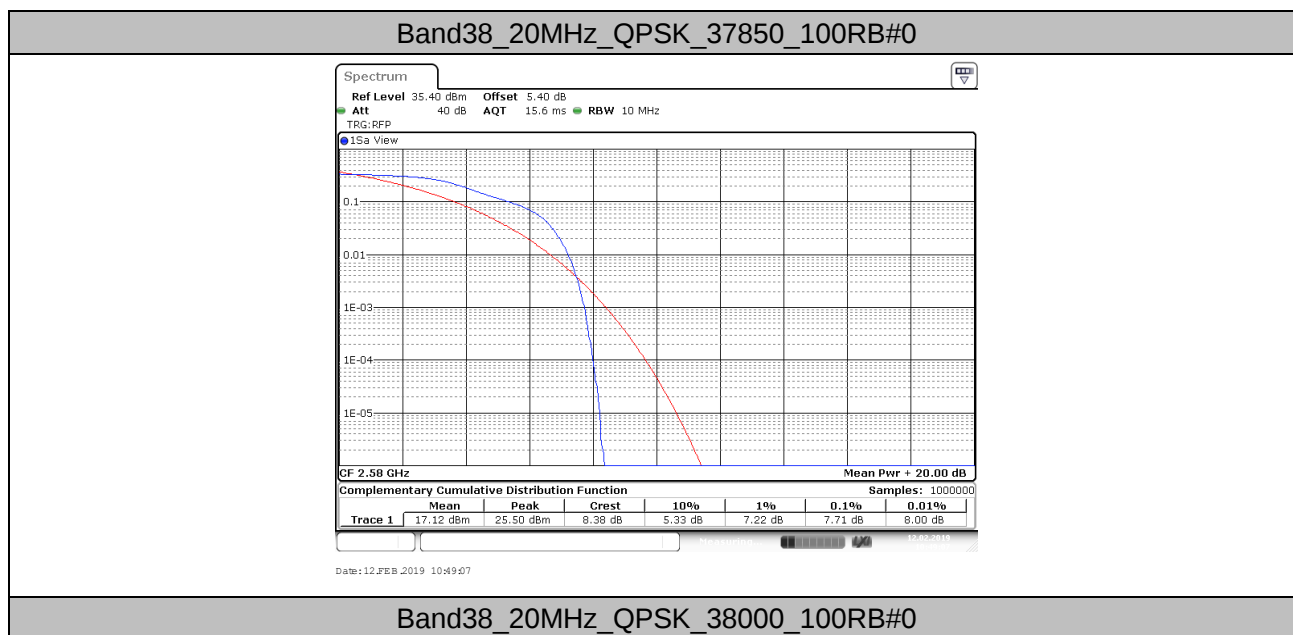


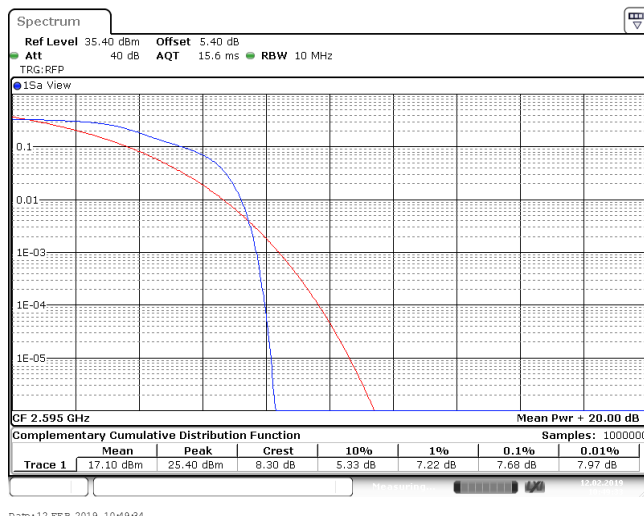
2. Peak-to-Average Ratio(CCDF)

2.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band38	20MHz	QPSK	37850	100RB#0	7.71	13	PASS
Band38	20MHz	QPSK	38000	100RB#0	7.68	13	PASS
Band38	20MHz	QPSK	38150	100RB#0	7.77	13	PASS
Band38	20MHz	16QAM	37850	100RB#0	9.42	13	PASS
Band38	20MHz	16QAM	38000	100RB#0	9.39	13	PASS
Band38	20MHz	16QAM	38150	100RB#0	9.39	13	PASS

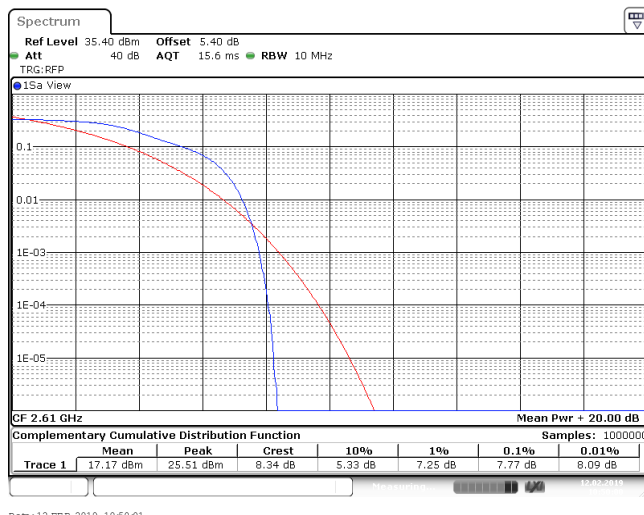
2.2. Test Plots





Date: 12 FEB 2019 10:49:34

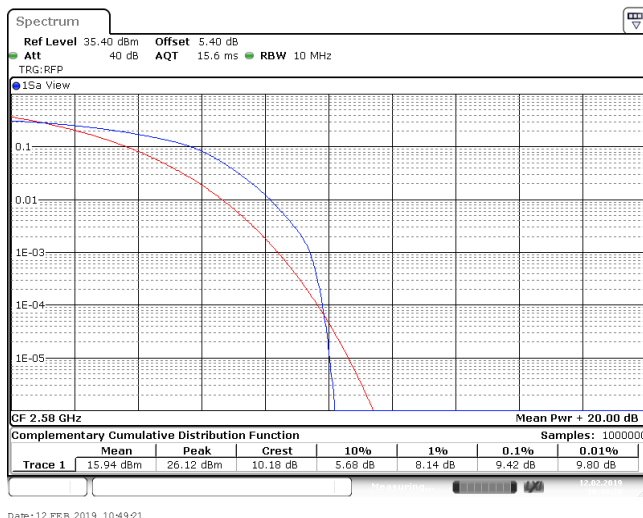
Band38_20MHz_QPSK_38150_100RB#0



Date: 12 FEB 2019 10:50:01

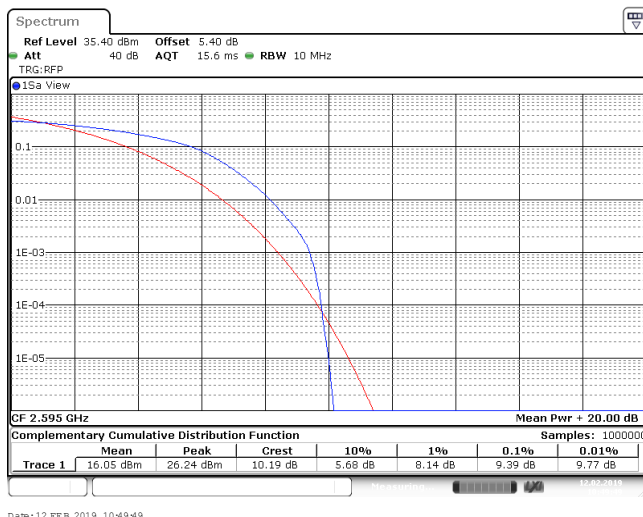
Band38_20MHz_16QAM_37850_100RB#0





Date: 12 FEB 2019 10:49:21

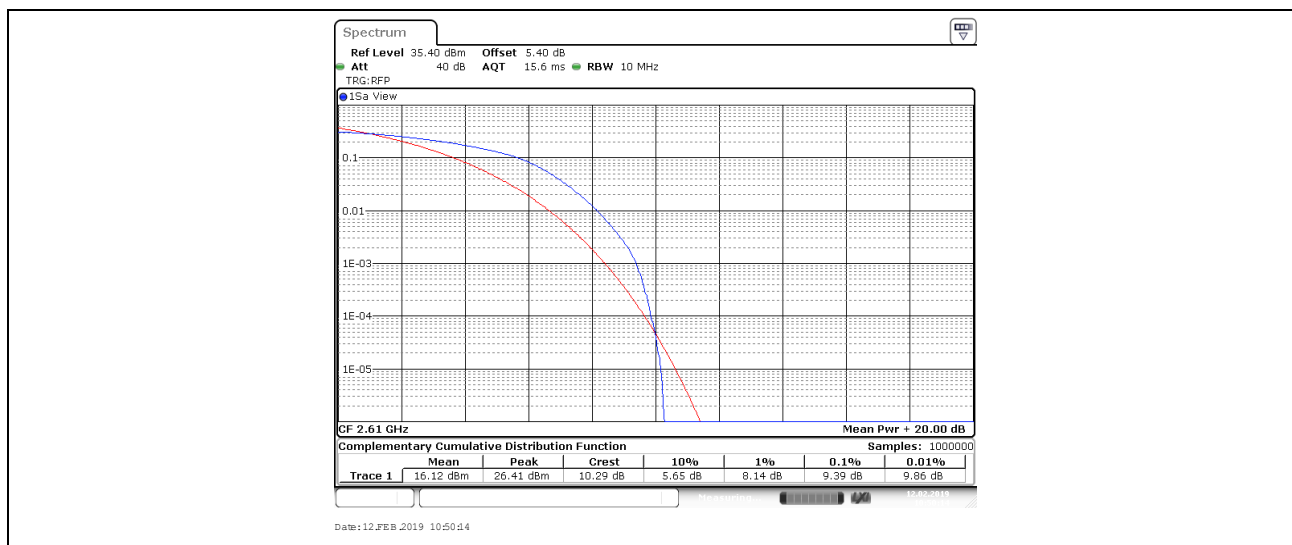
Band38_20MHz_16QAM_38000_100RB#0



Date: 12 FEB 2019 10:49:49

Band38_20MHz_16QAM_38150_100RB#0



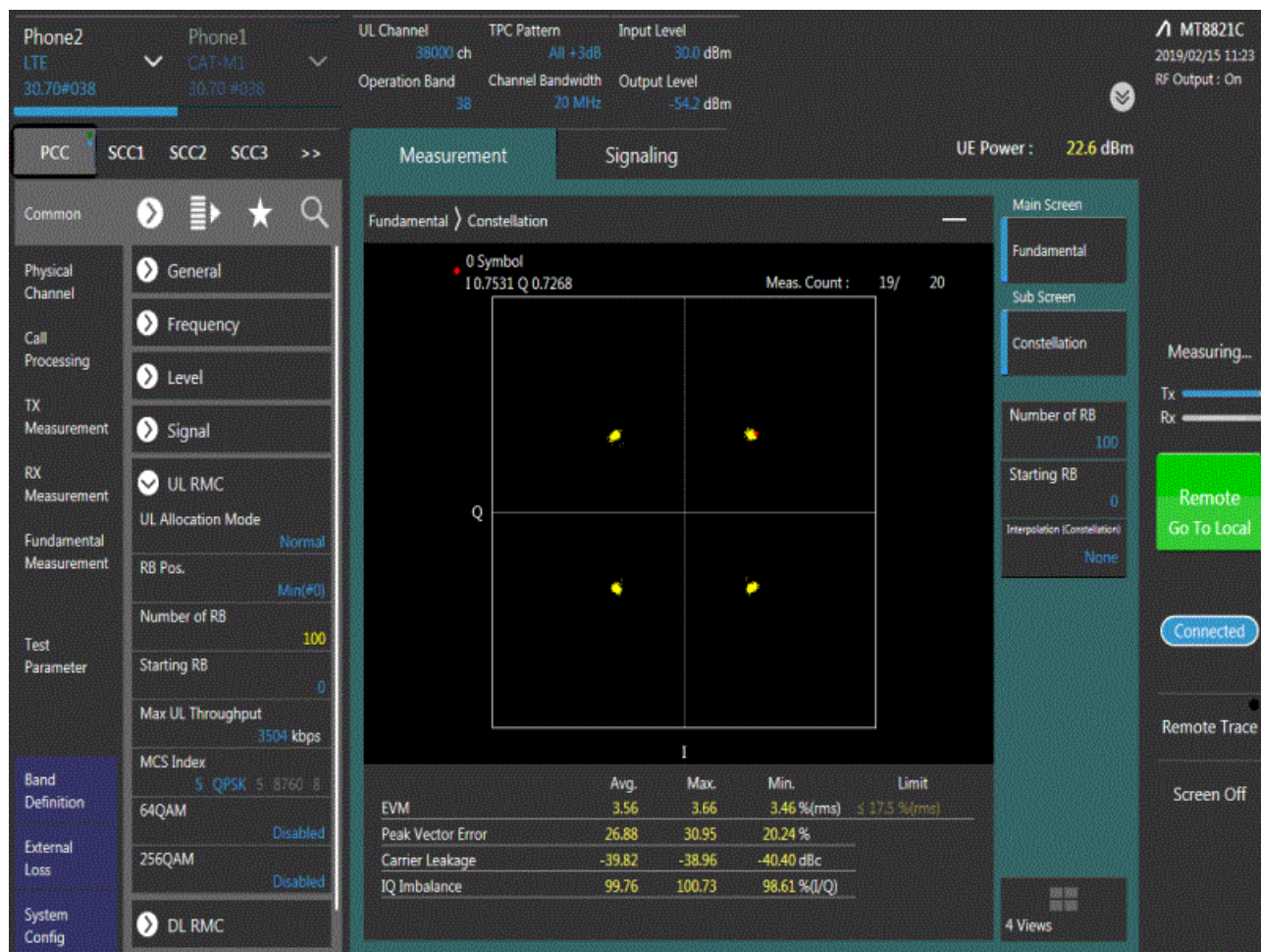


3. Modulation Characteristics

3.1. Test BAND = LTE BAND38

3.1.1. Test Mode = LTE /TM1 20MHz

3.1.1.1. Test Channel = MCH



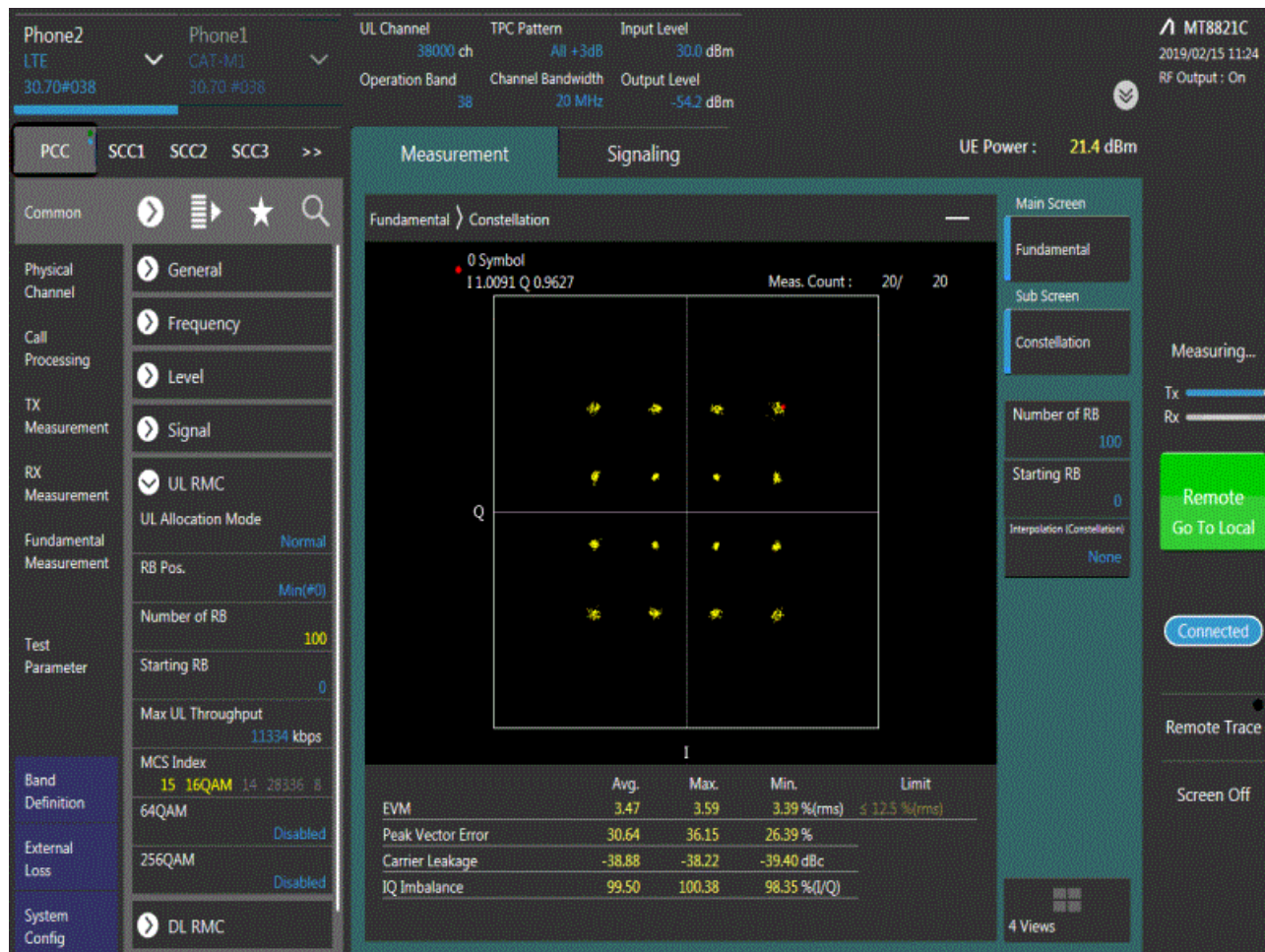
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3.1.2. Test Mode = LTE /TM2 20MHz

3.1.2.1. Test Channel = MCH



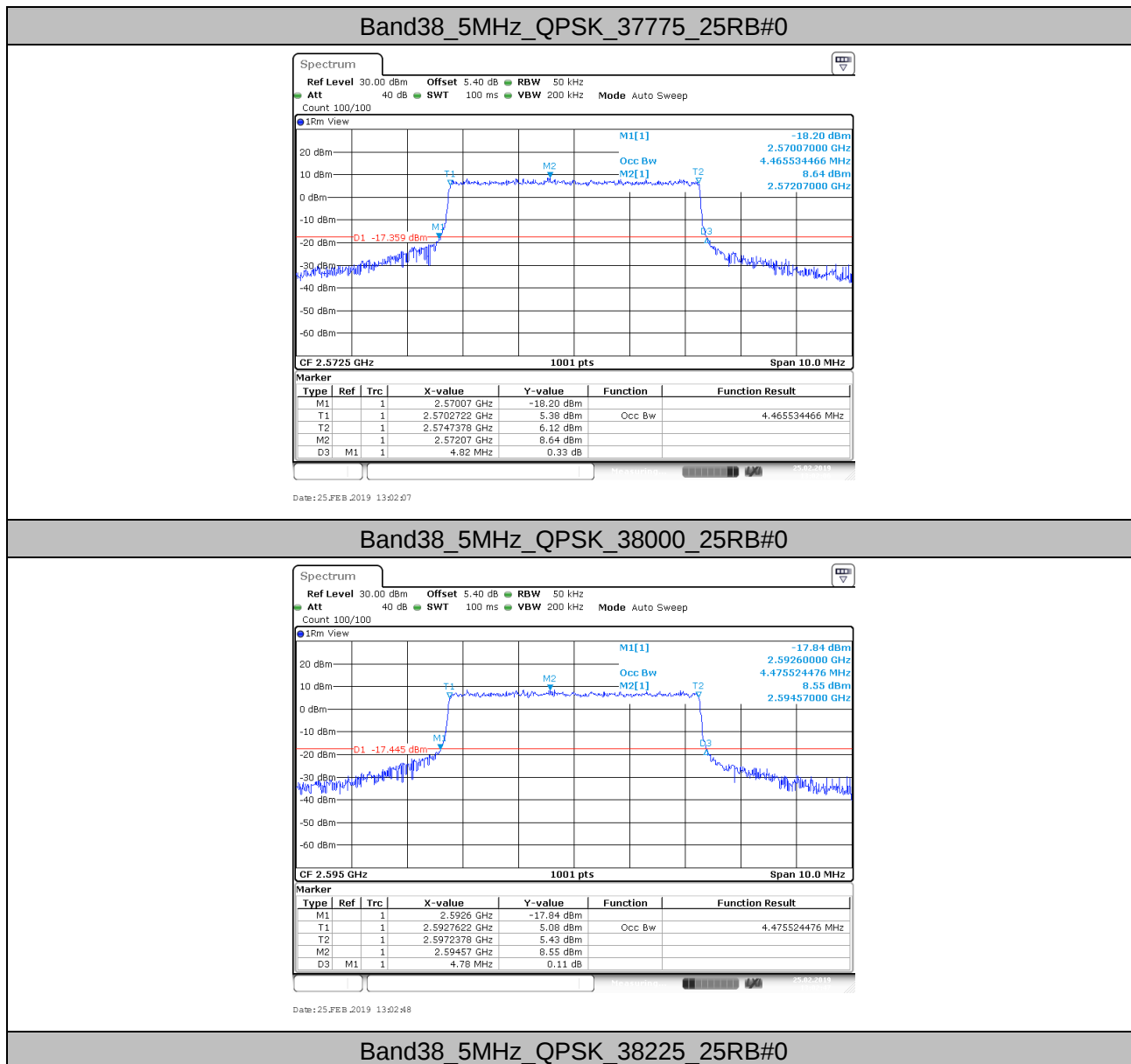
4. 26dB Bandwidth and Occupied Bandwidth

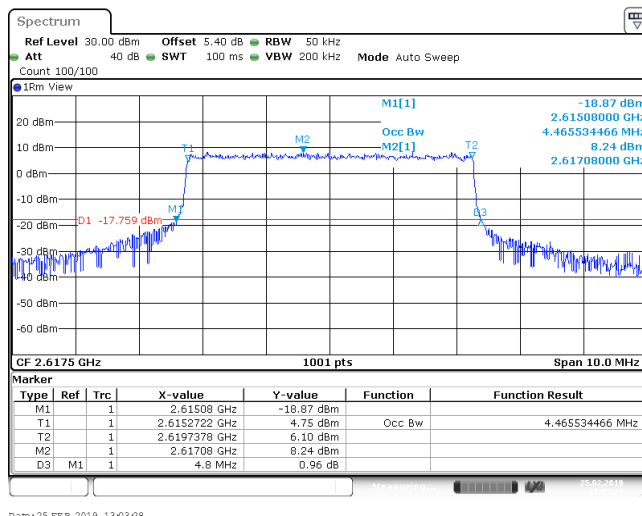
4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band38	5MHz	QPSK	37775	25RB#0	4.466	4.820	PASS
Band38	5MHz	QPSK	38000	25RB#0	4.476	4.780	PASS
Band38	5MHz	QPSK	38225	25RB#0	4.466	4.800	PASS
Band38	5MHz	16QAM	37775	25RB#0	4.486	4.850	PASS
Band38	5MHz	16QAM	38000	25RB#0	4.486	4.840	PASS
Band38	5MHz	16QAM	38225	25RB#0	4.486	4.830	PASS
Band38	10MHz	QPSK	37800	50RB#0	8.911	9.460	PASS
Band38	10MHz	QPSK	38000	50RB#0	8.911	9.480	PASS
Band38	10MHz	QPSK	38200	50RB#0	8.911	9.420	PASS
Band38	10MHz	16QAM	37800	50RB#0	8.911	9.360	PASS
Band38	10MHz	16QAM	38000	50RB#0	8.911	9.380	PASS
Band38	10MHz	16QAM	38200	50RB#0	8.911	9.380	PASS
Band38	15MHz	QPSK	37825	75RB#0	13.457	14.370	PASS
Band38	15MHz	QPSK	38000	75RB#0	13.457	14.310	PASS
Band38	15MHz	QPSK	38175	75RB#0	13.457	14.340	PASS
Band38	15MHz	16QAM	37825	75RB#0	13.457	14.310	PASS
Band38	15MHz	16QAM	38000	75RB#0	13.457	14.310	PASS
Band38	15MHz	16QAM	38175	75RB#0	13.457	14.280	PASS
Band38	20MHz	QPSK	37850	100RB#0	17.822	18.840	PASS
Band38	20MHz	QPSK	38000	100RB#0	17.822	18.840	PASS
Band38	20MHz	QPSK	38150	100RB#0	17.822	18.800	PASS
Band38	20MHz	16QAM	37850	100RB#0	17.822	18.800	PASS
Band38	20MHz	16QAM	38000	100RB#0	17.822	18.840	PASS
Band38	20MHz	16QAM	38150	100RB#0	17.822	18.800	PASS

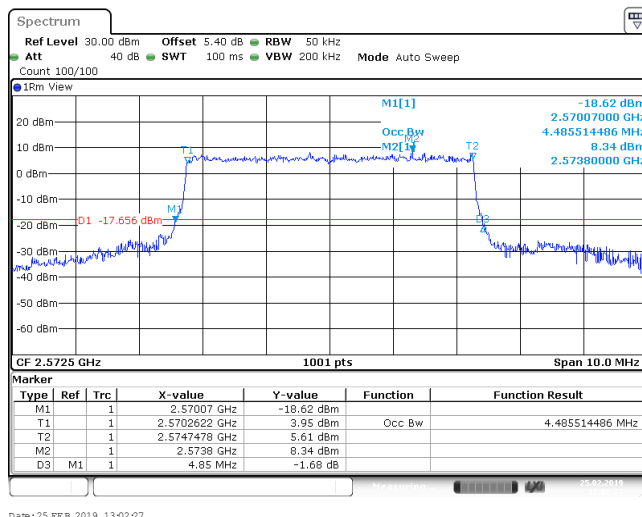


4.2. Test Plots





Band38_5MHz_16QAM_37775_25RB#0

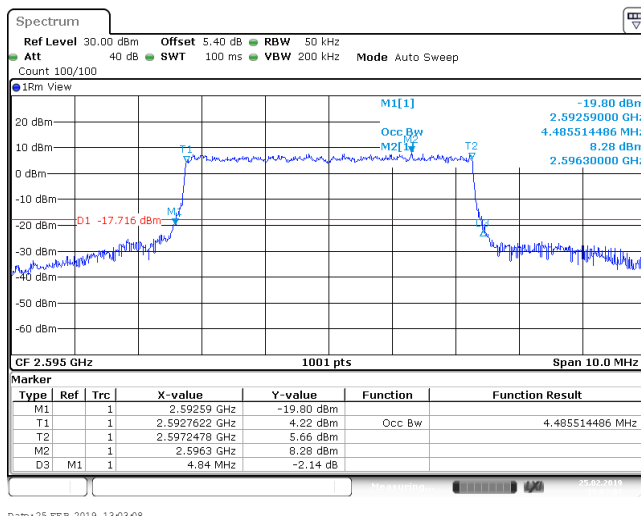


Band38_5MHz_16QAM_38000_25RB#0



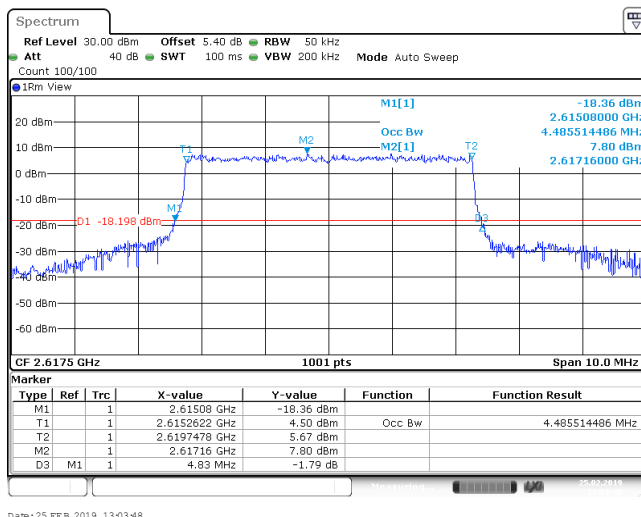
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Date: 25 FEB 2019 13:03:08

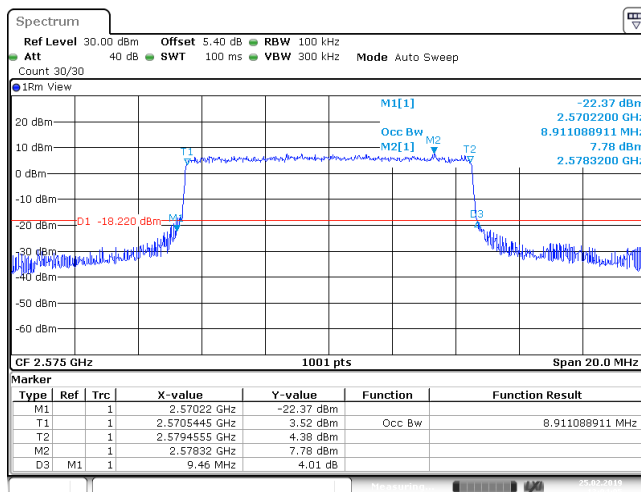
Band38_5MHz_16QAM_38225_25RB#0



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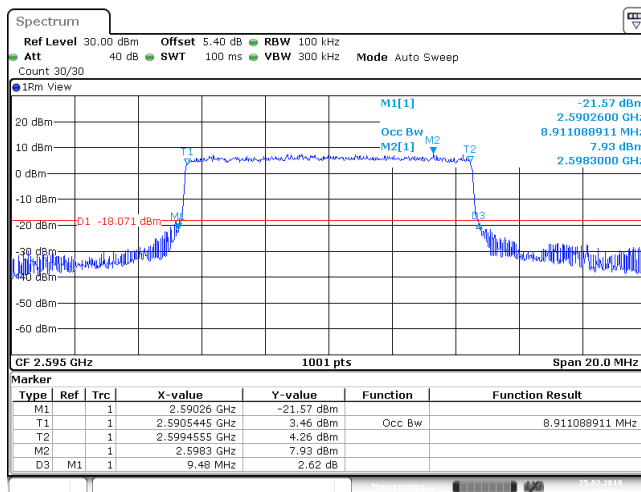
Band38_10MHz_QPSK_37800_50RB#0





Date: 25 FEB 2019 13:04:06

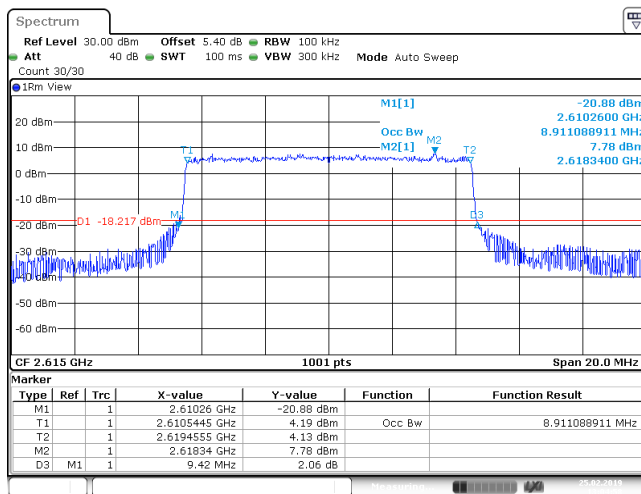
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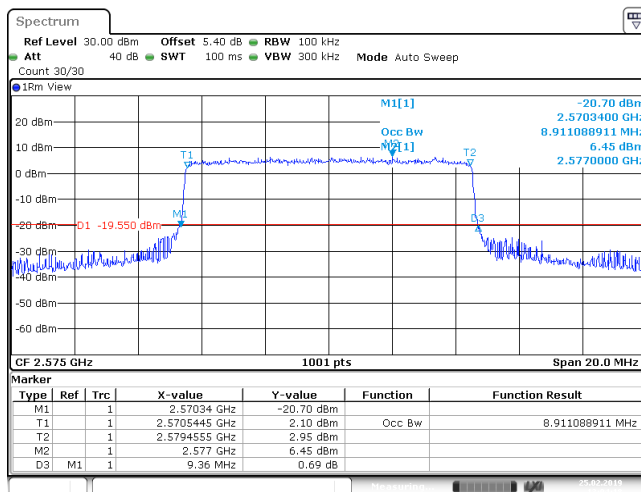
Band38_10MHz_QPSK_38200_50RB#0





Date: 25 FEB 2019 13:04:59

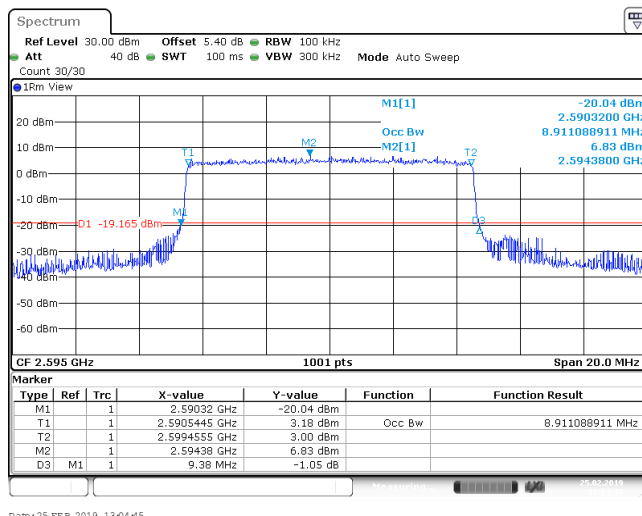
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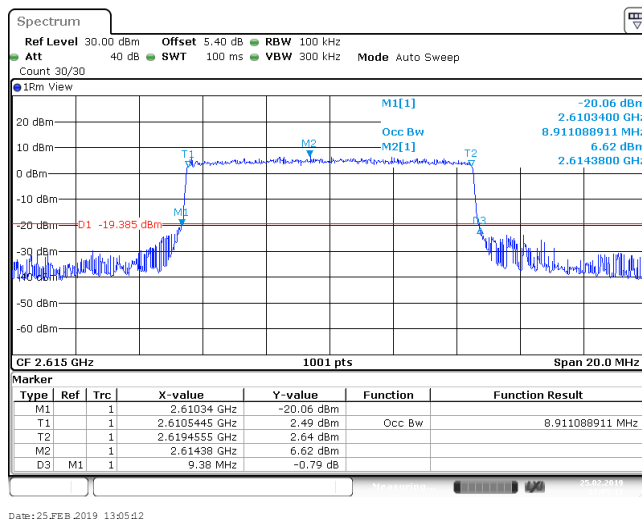
Date: 25 FEB 2019 13:04:19

Band38_10MHz_16QAM_38000_50RB#0



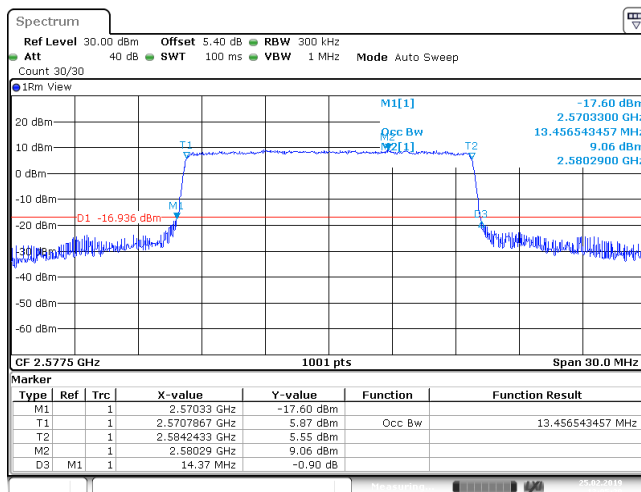


Band38_10MHz_16QAM_38200_50RB#0



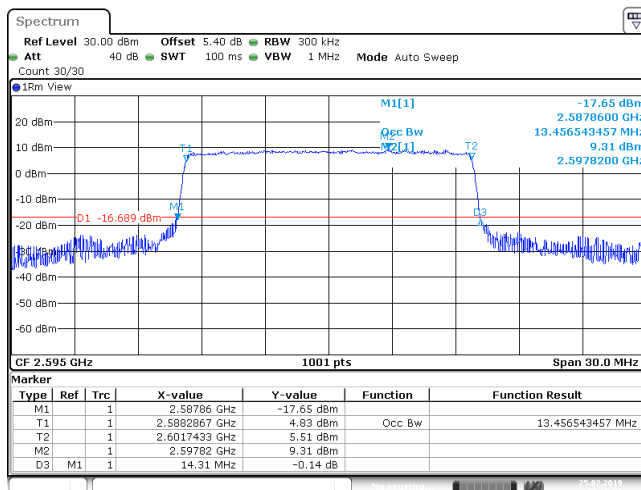
Band38_15MHz_QPSK_37825_75RB#0





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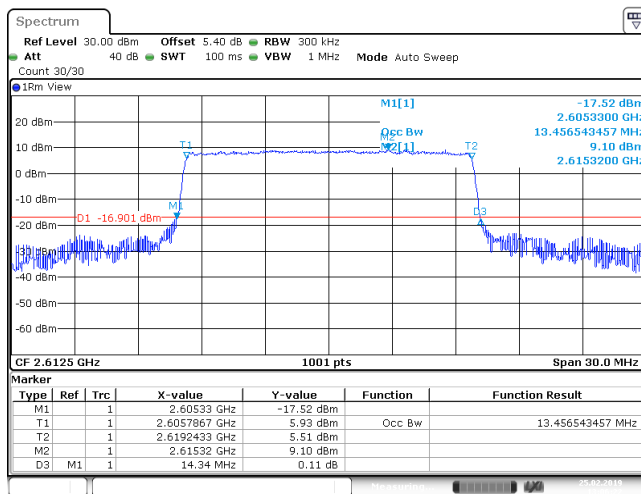
Band38_15MHz_QPSK_38000_75RB#0



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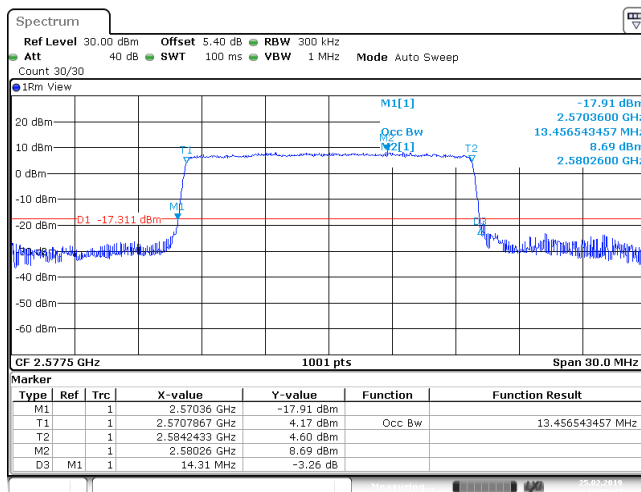
Band38_15MHz_QPSK_38175_75RB#0





Date: 25 FEB 2019 13:06:22

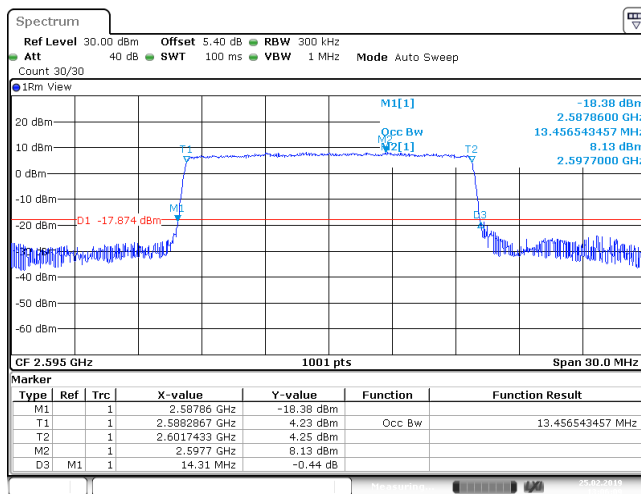
Band38_15MHz_16QAM_37825_75RB#0



Date: 25 FEB 2019 13:05:42

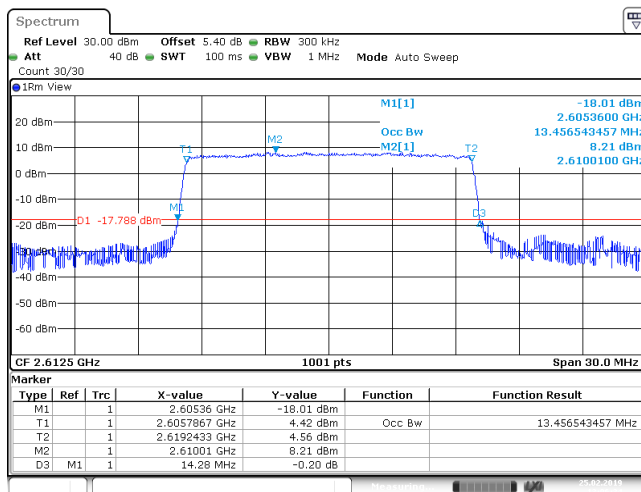
Band38_15MHz_16QAM_38000_75RB#0





Date: 25 FEB 2019 13:06:09

Band38_15MHz_16QAM_38175_75RB#0



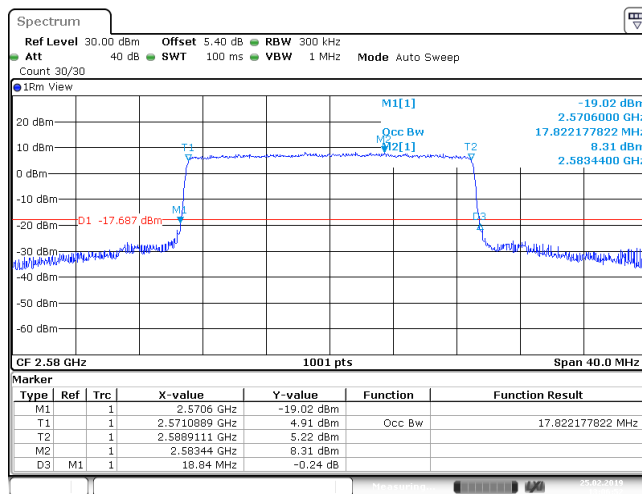
Date: 25 FEB 2019 13:06:35

Band38_20MHz_QPSK_37850_100RB#0



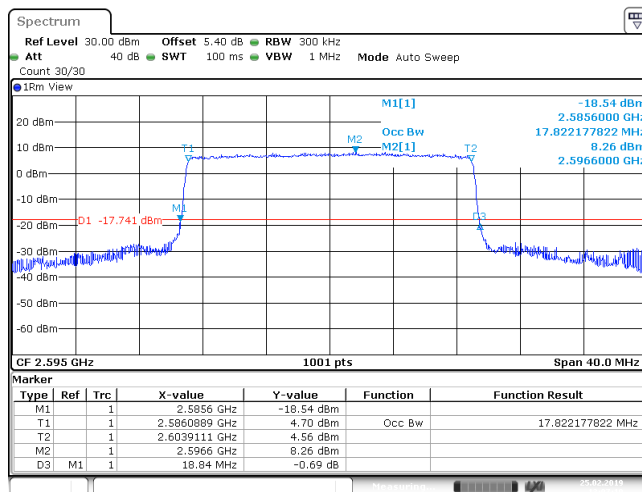
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Date: 25 FEB 2019 13:06:53

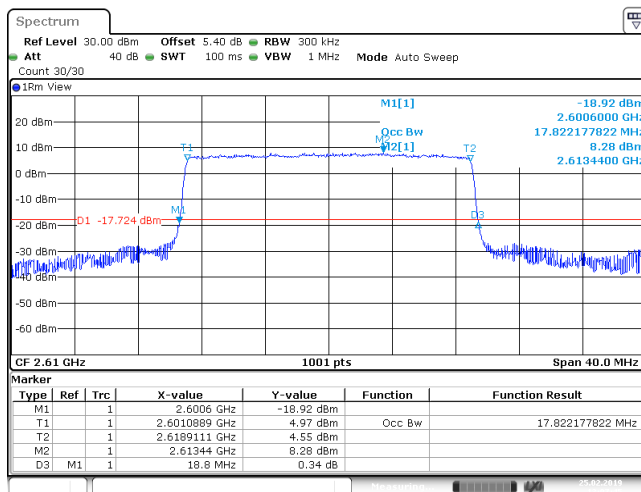
Band38_20MHz_QPSK_38000_100RB#0



Date: 25 FEB 2019 13:07:19

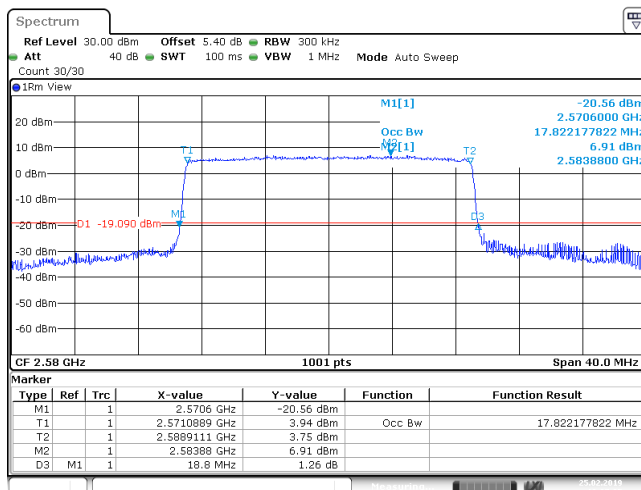
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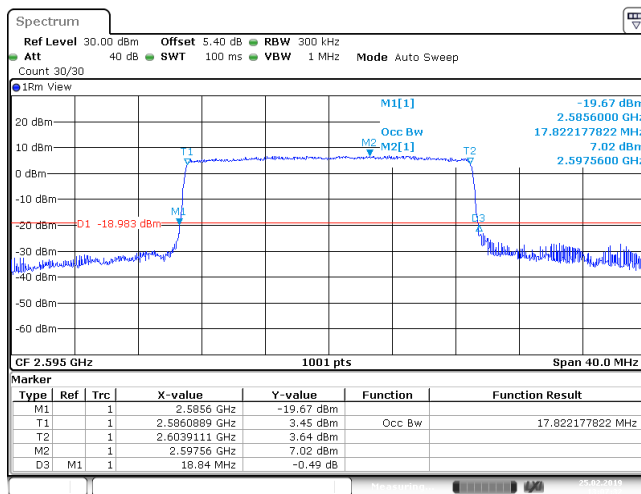
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Date: 25 FEB 2019 13:07:06

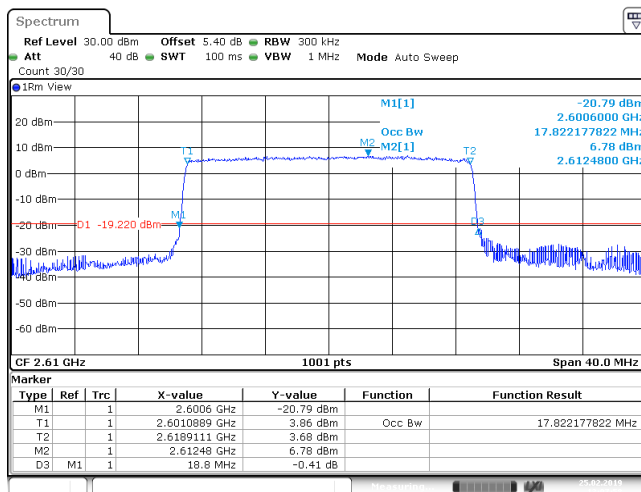
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Date: 25 FEB 2019 13:07:32

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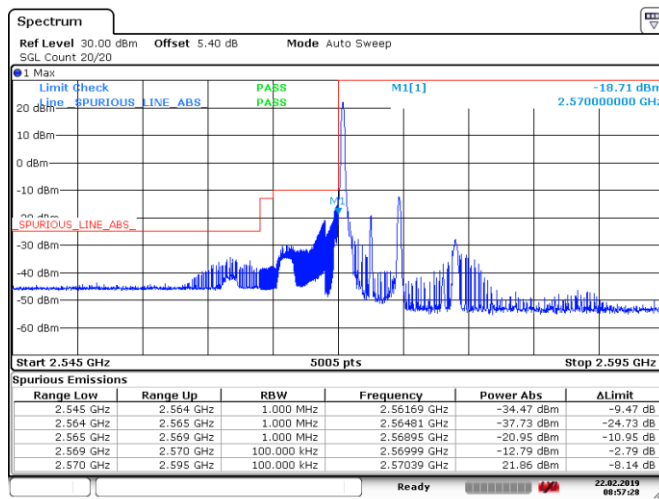
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5. Band Edge Compliance

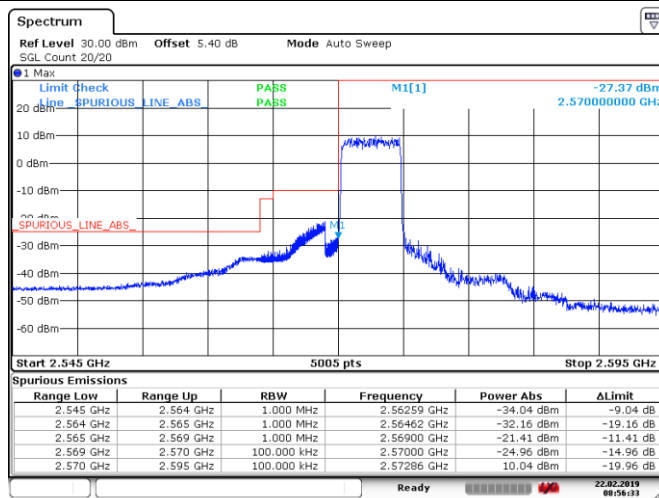
5.1. Test Plots

Band38_5MHz_QPSK_37775_1RB#0



Date: 22 FEB. 2019 08:57:28

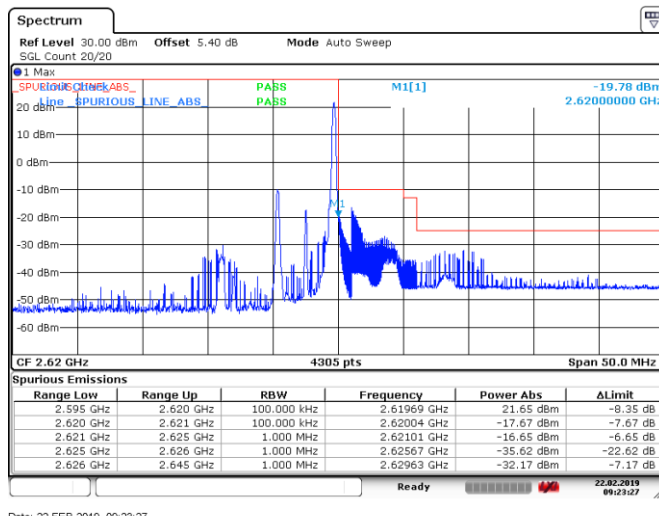
Band38_5MHz_QPSK_37775_25RB#0



Date: 22 FEB. 2019 08:56:34

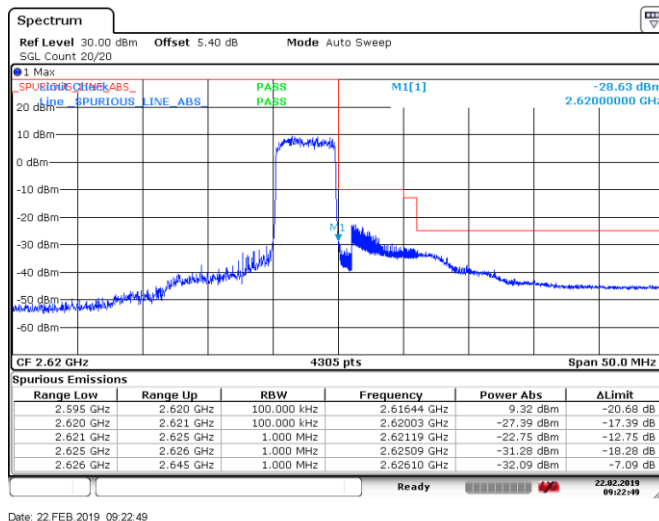
Band38_5MHz_QPSK_38225_1RB#24





Date: 22.FEB.2019 09:23:27

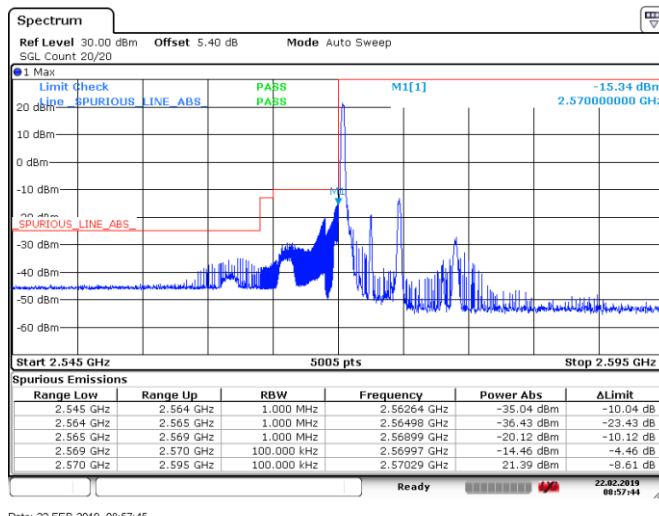
Band38_5MHz_QPSK_38225_25RB#0



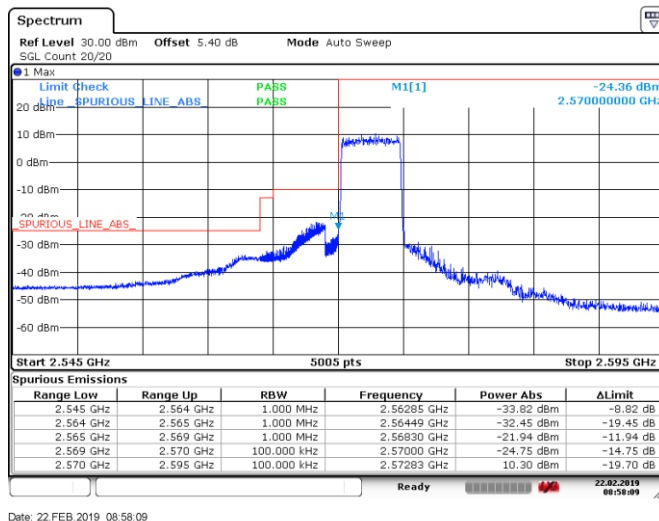
Date: 22.FEB.2019 09:22:49

Band38_5MHz_16QAM_37775_1RB#0



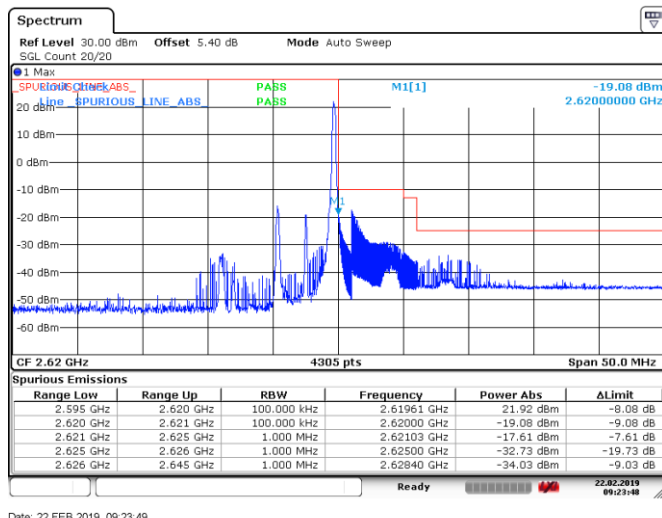


Band38_5MHz_16QAM_37775_25RB#0



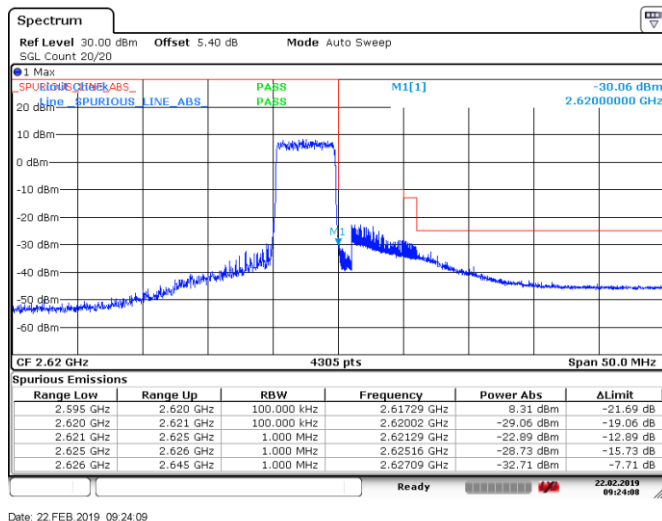
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Date: 22 FEB 2019 09:23:49

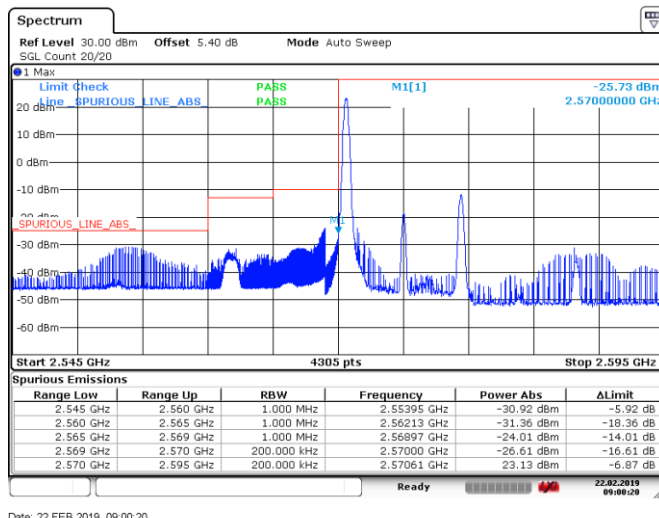
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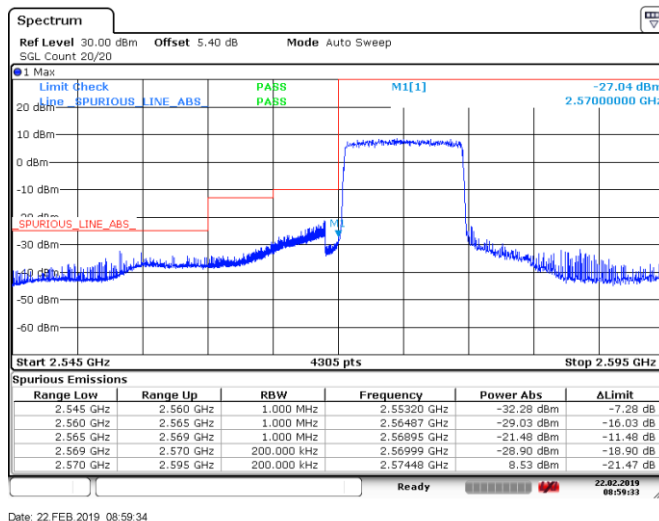
Date: 22 FEB 2019 09:24:09

Band38_10MHz_QPSK_37800_1RB#0



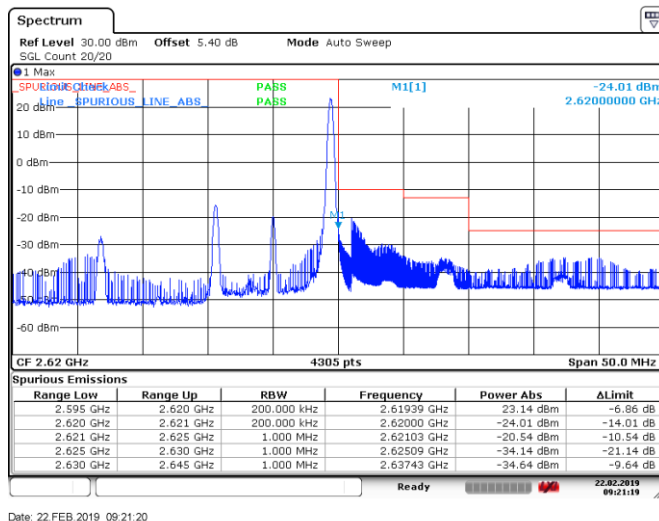


Band38_10MHz_QPSK_37800_50RB#0



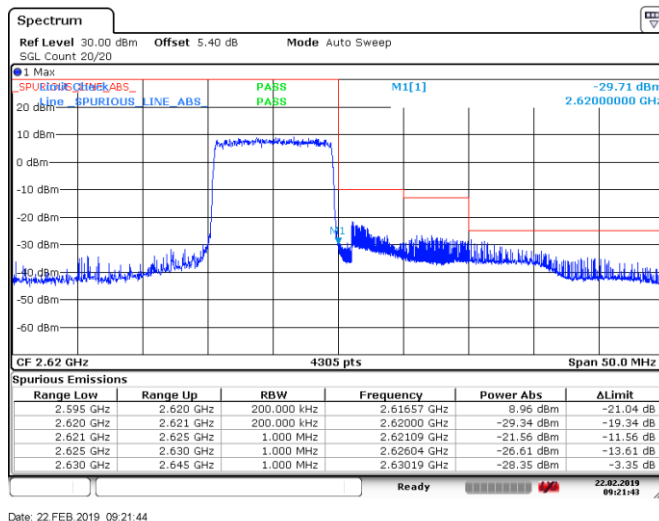
Band38_10MHz_QPSK_38200_1RB#49





Date: 22.FEB.2019 09:21:20

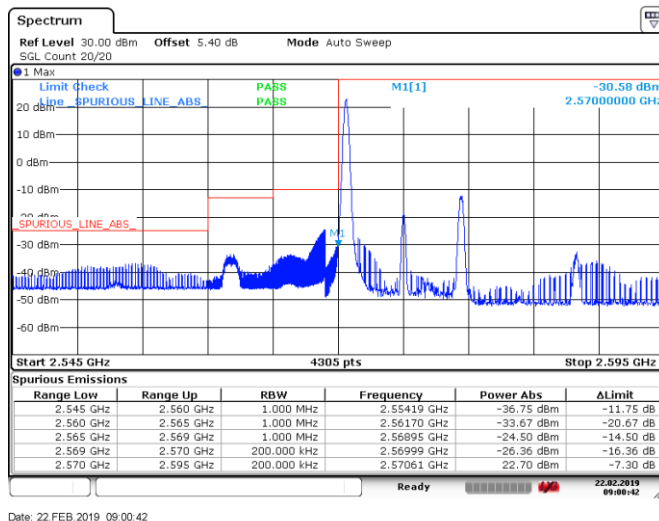
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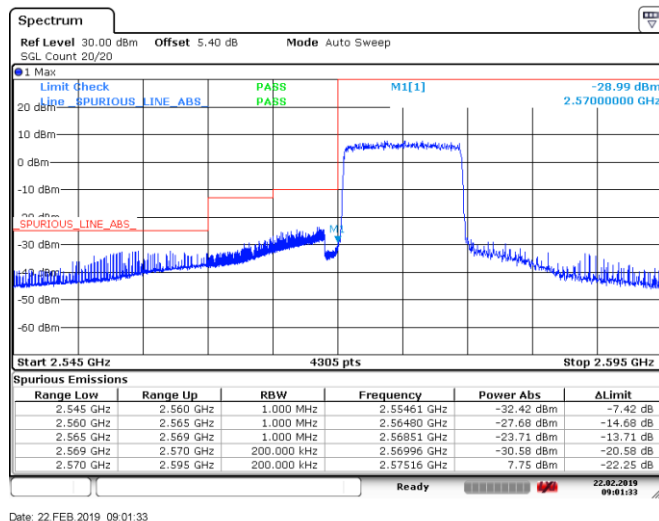
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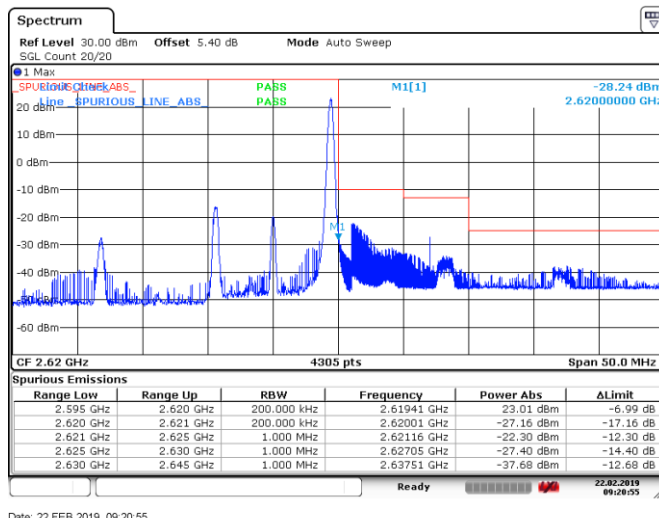


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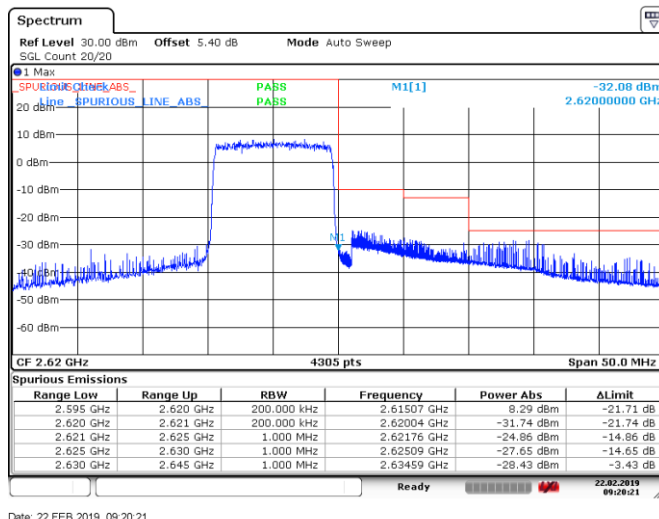
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Date: 22 FEB 2019 09:20:55

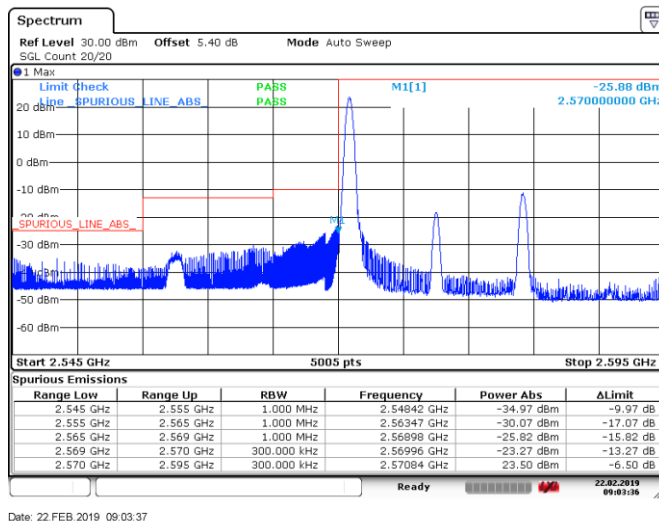
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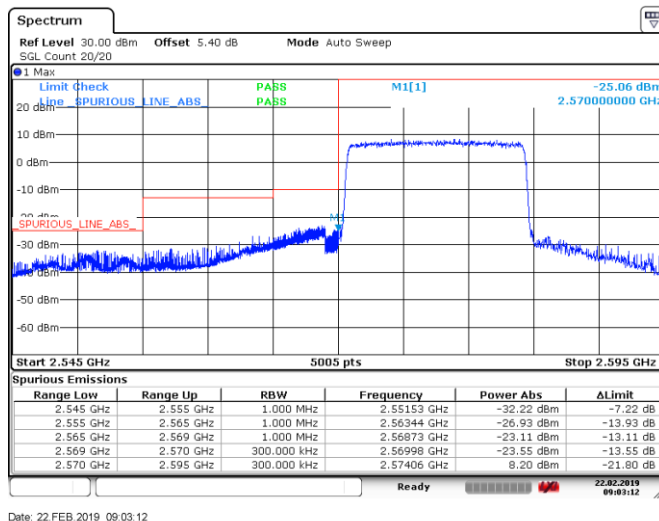
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Band38_15MHz_QPSK_37825_1RB#0



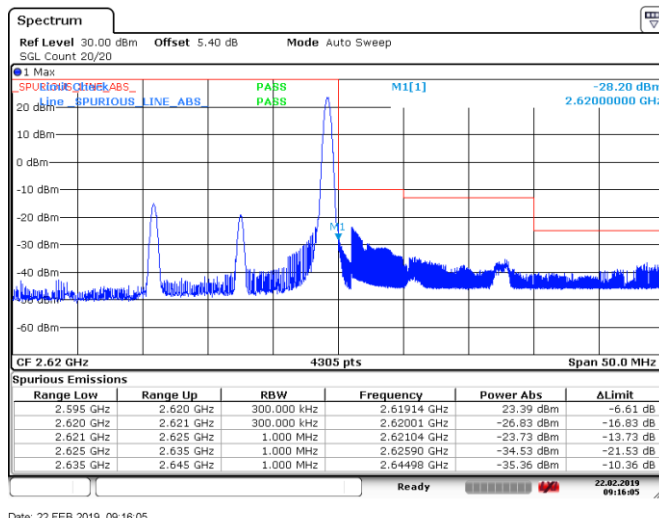


Band38_15MHz_QPSK_37825_75RB#0

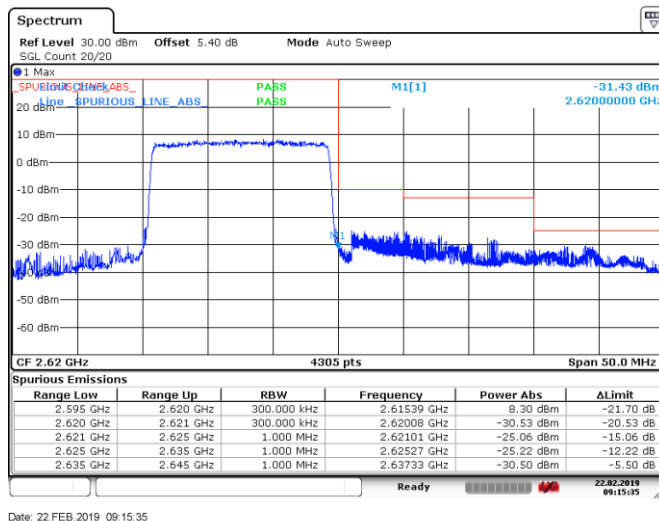


Band38_15MHz_QPSK_38175_1RB#74



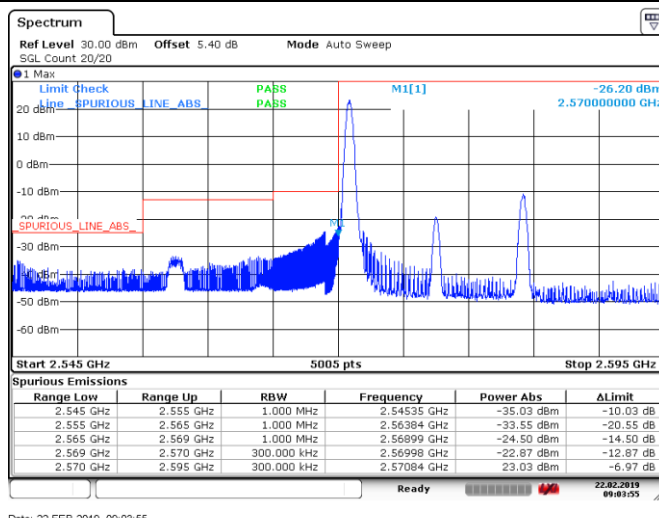


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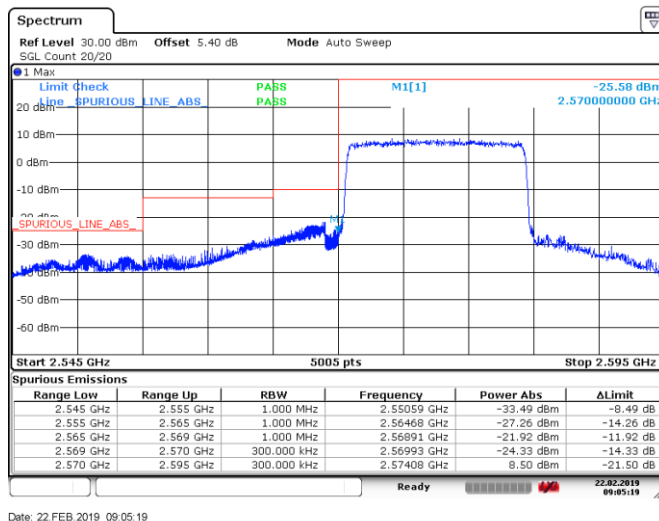


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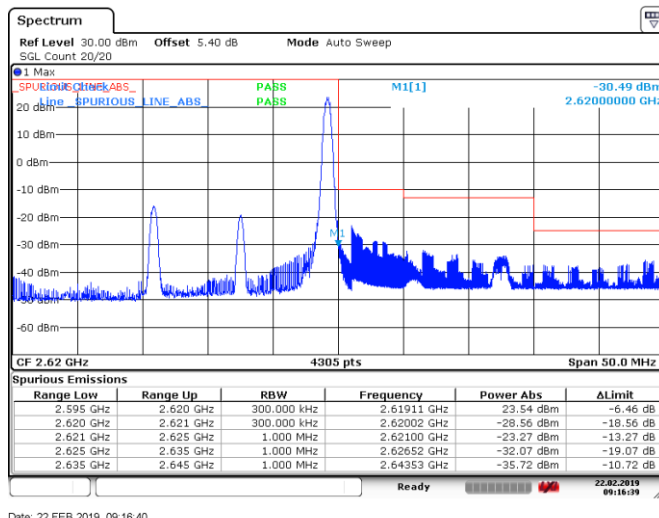


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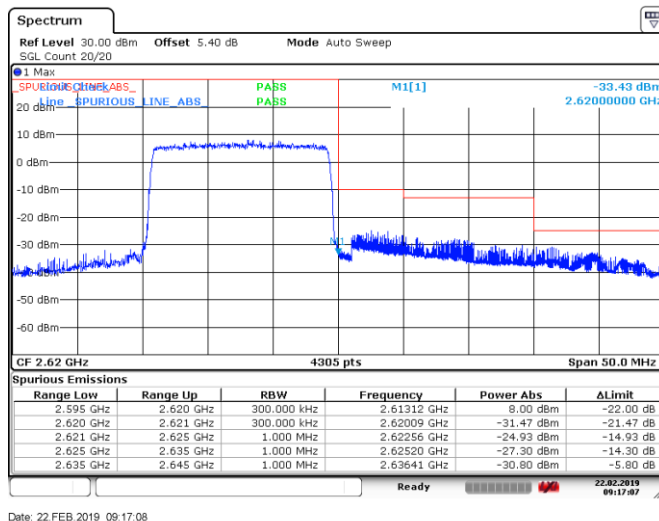
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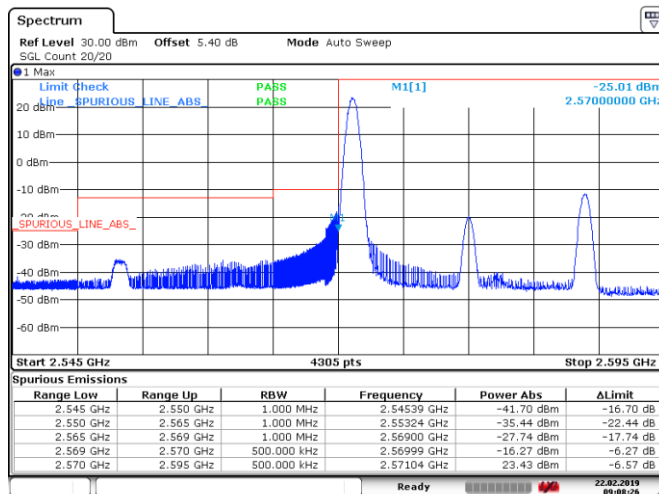
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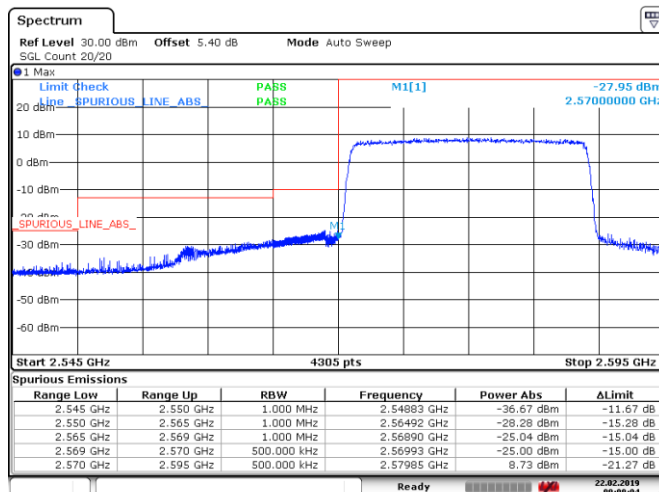
Band38_20MHz_QPSK_37850_1RB#0





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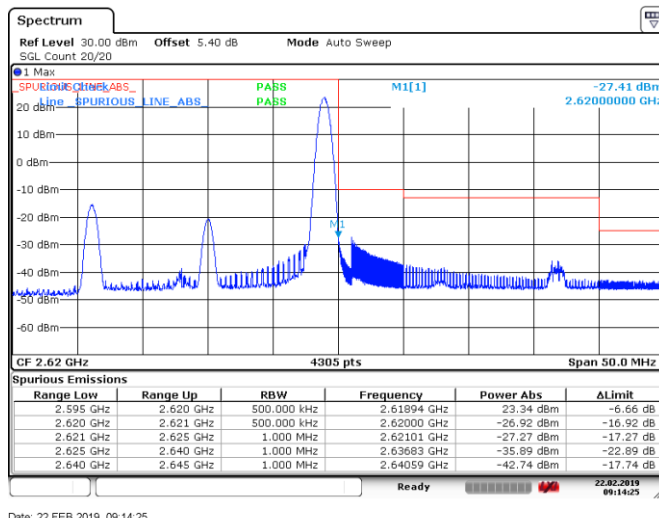
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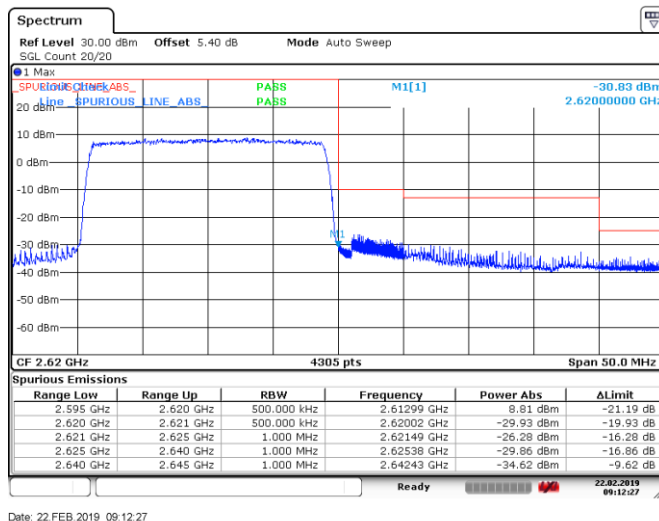
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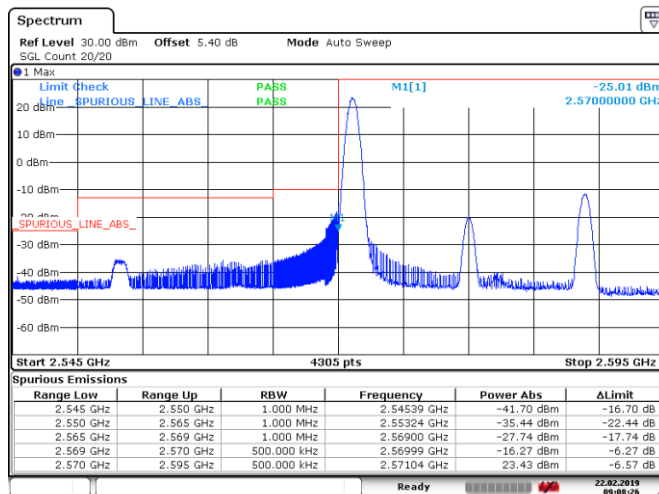
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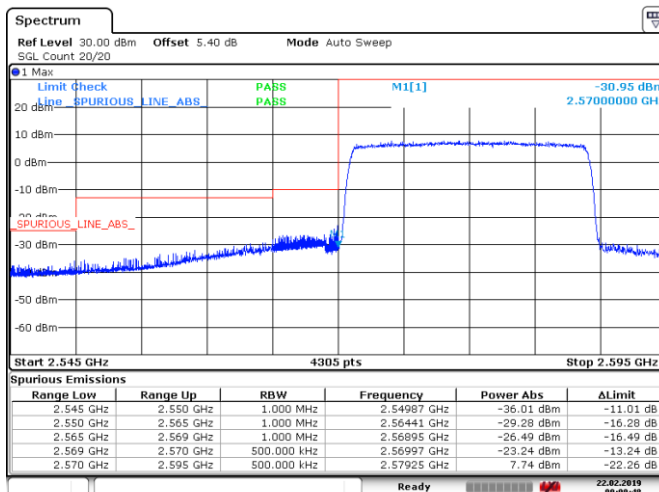
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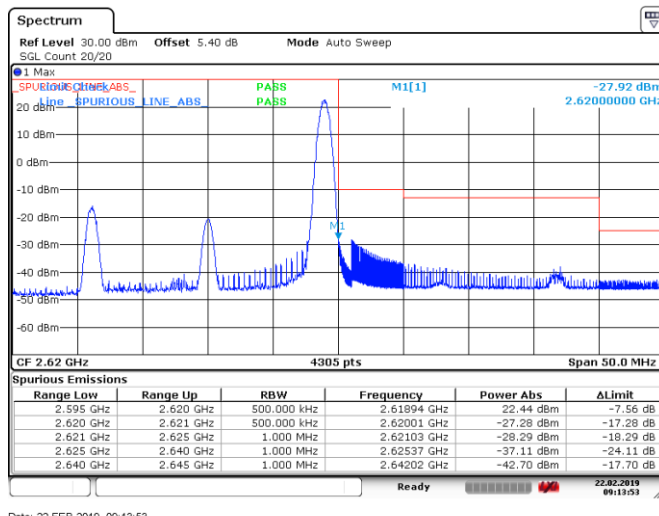
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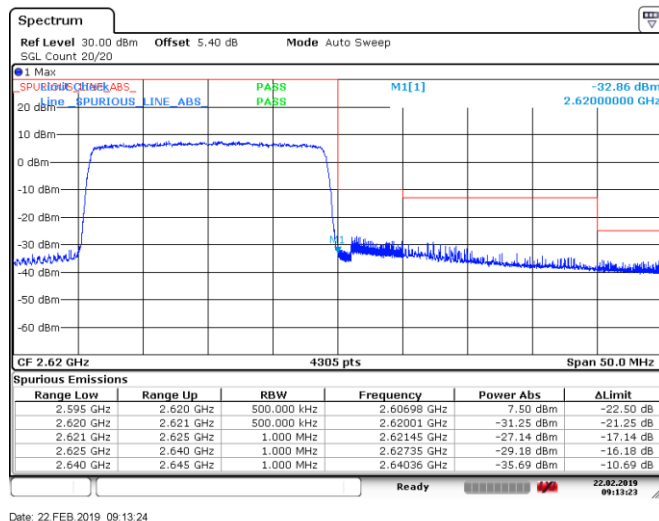
Band38_20MHz_16QAM_38150_1RB#99





Date: 22 FEB 2019 09:13:53

Band38_20MHz_16QAM_38150_100RB#0



Date: 22 FEB 2019 09:13:24



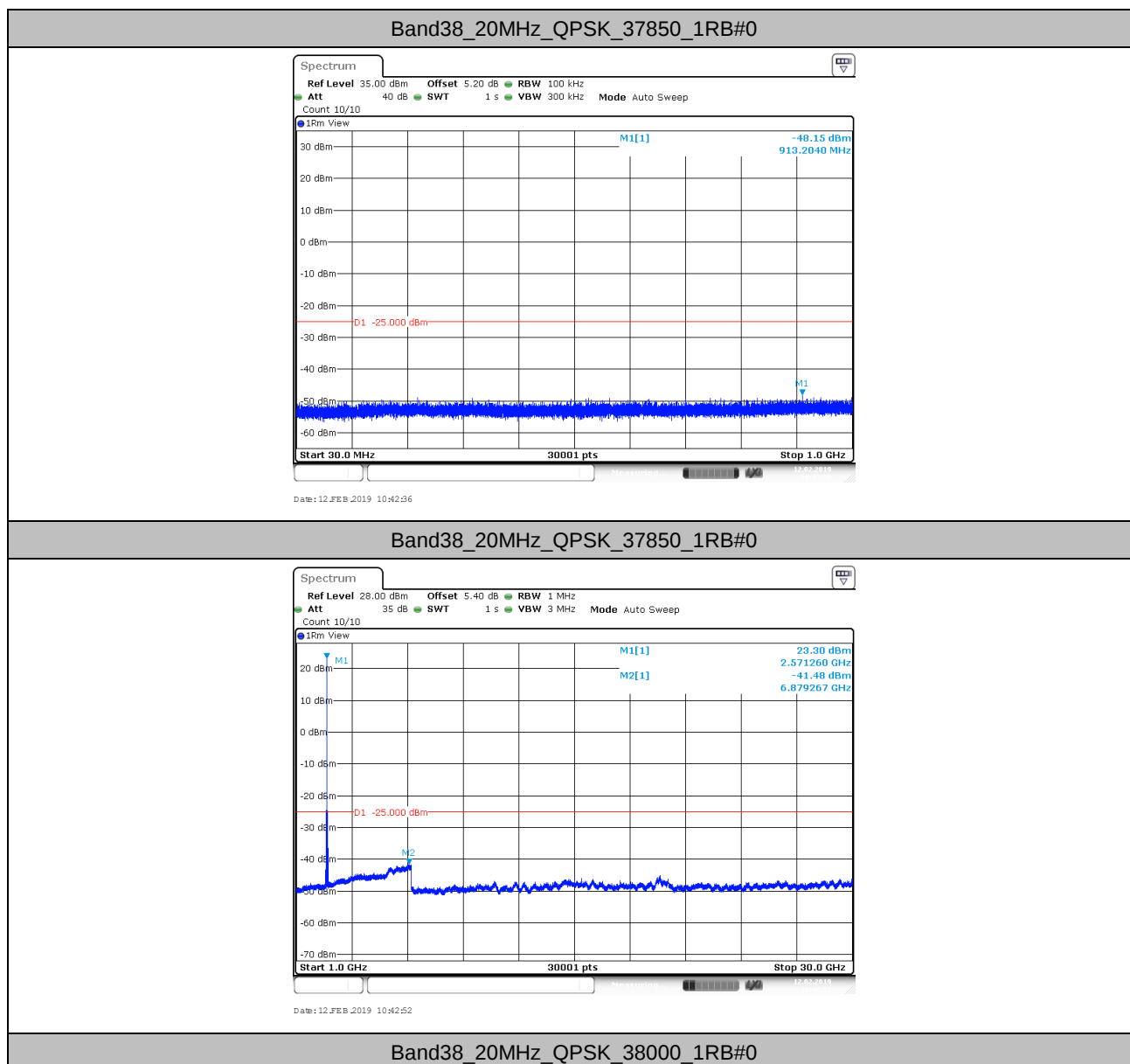


6. Spurious Emission at Antenna Terminal

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

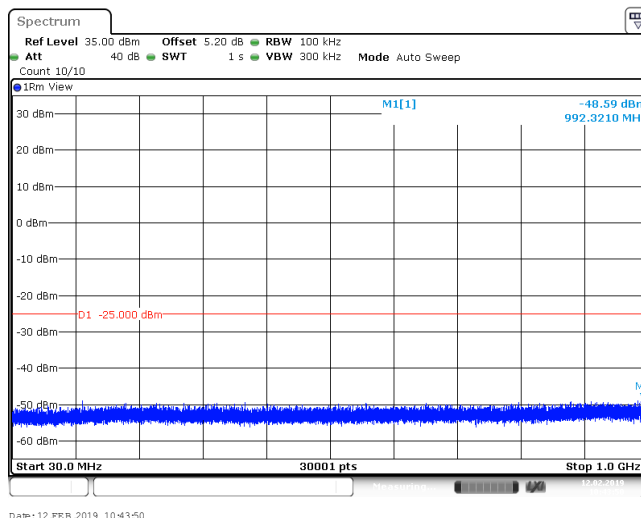


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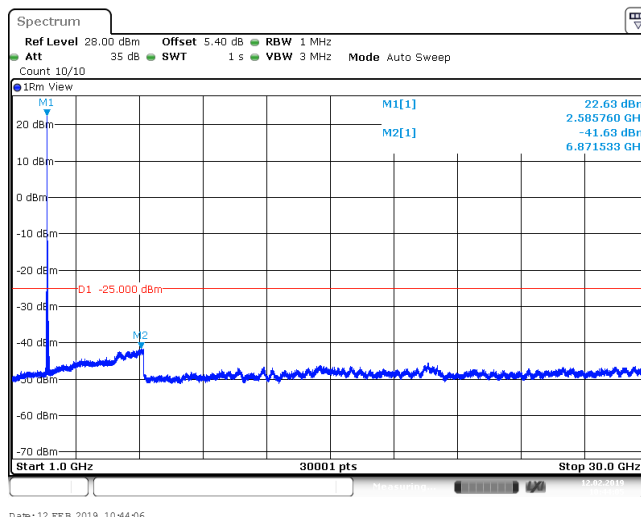
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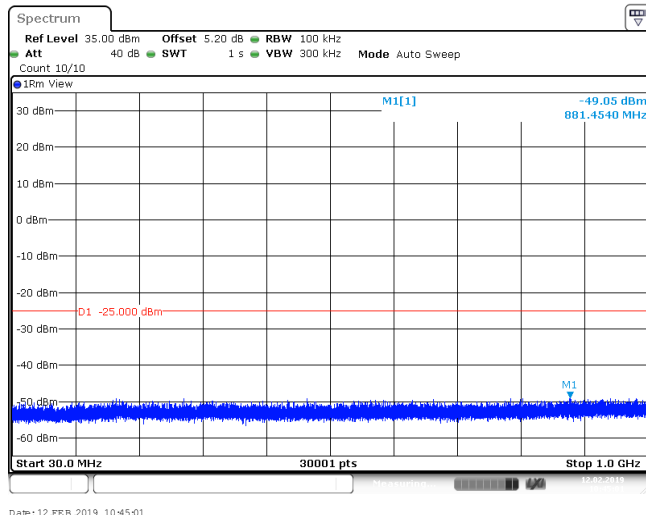
Band38_20MHz_QPSK_38000_1RB#0



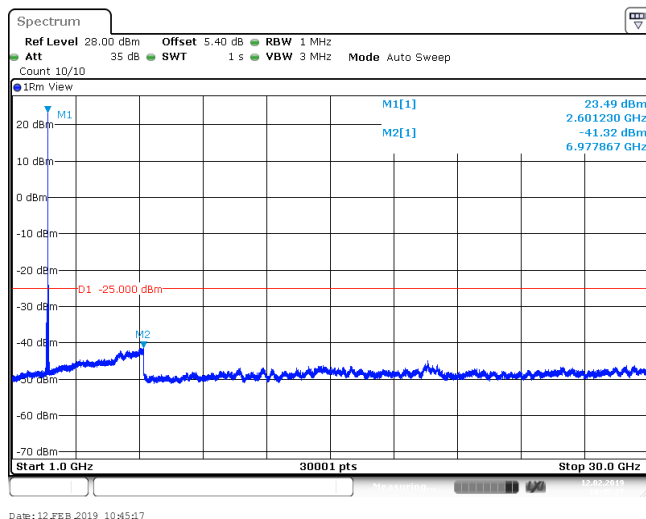
Band38_20MHz_QPSK_38150_1RB#0



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Band38_20MHz_QPSK_38150_1RB#0



Band38_20MHz_16QAM_37850_1RB#0

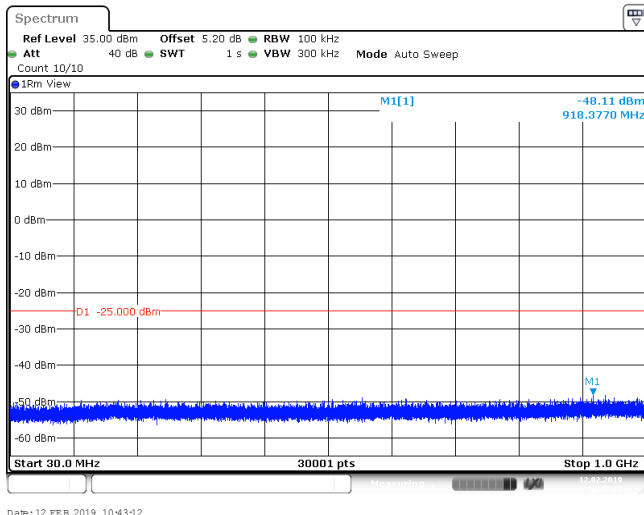


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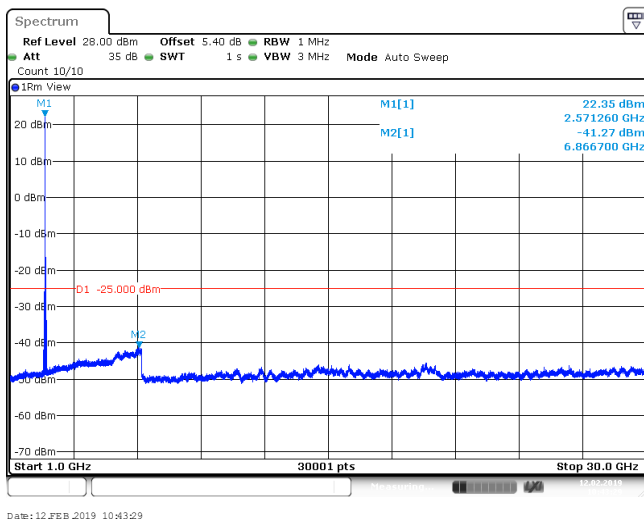
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Band38_20MHz_16QAM_37850_1RB#0



Band38_20MHz_16QAM_38000_1RB#0

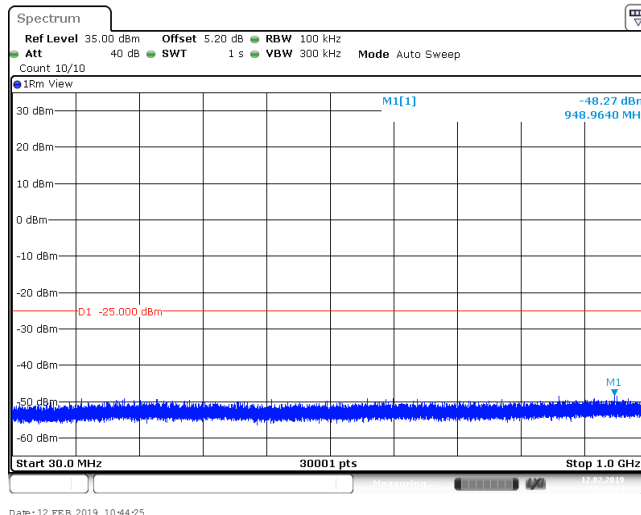


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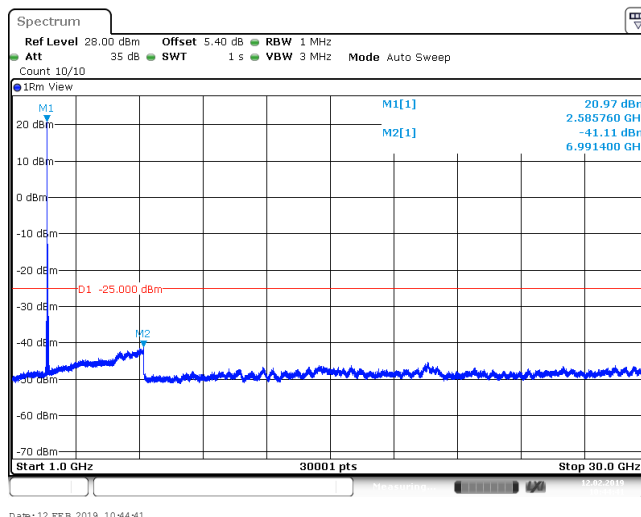
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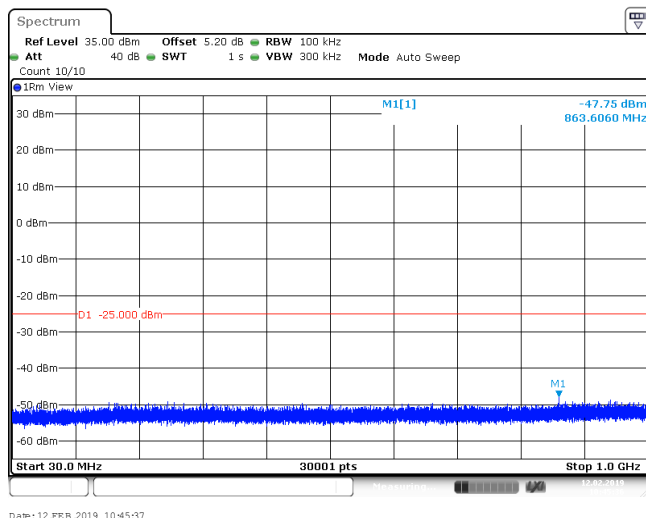
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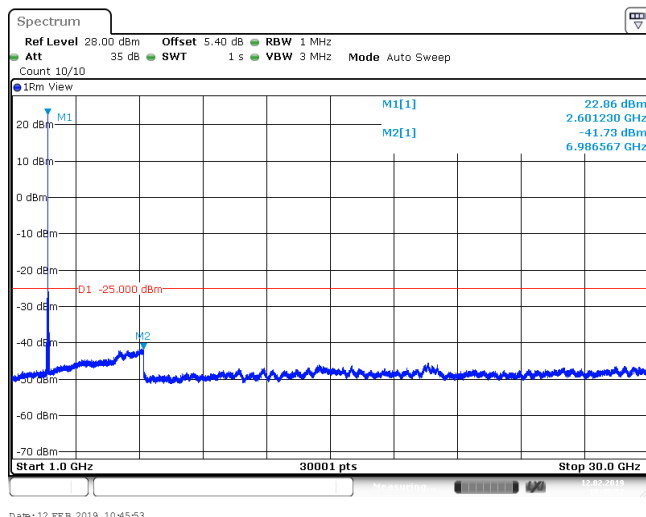
Band38_20MHz_16QAM_38150_1RB#0



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Band38_20MHz_16QAM_38150_1RB#0





7. Field Strength of Spurious Radiation

7.1. Test BAND = LTE Band38

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
75.5923	-69.79	-25.00	44.79	Vertical
110.5625	-65.48	-25.00	40.48	Vertical
572.7906	-64.71	-25.00	39.71	Vertical
5172.0724	-45.51	-25.00	20.51	Vertical
10344.7448	-35.21	-25.00	10.21	Vertical
17990.9997	-33.49	-25.00	8.49	Vertical
40.9130	-64.00	-25.00	39.00	Horizontal
231.0911	-68.48	-25.00	43.48	Horizontal
642.7311	-63.62	-25.00	38.62	Horizontal
5172.0724	-50.32	-25.00	25.32	Horizontal
10344.7448	-44.32	-25.00	19.32	Horizontal
17994.9998	-37.75	-25.00	12.75	Horizontal

7.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
61.4781	-69.89	-25.00	44.89	Vertical
114.6367	-65.45	-25.00	40.45	Vertical
588.2144	-64.79	-25.00	39.79	Vertical
5142.0714	-44.83	-25.00	19.83	Vertical
10284.2428	-38.05	-25.00	13.05	Vertical
17988.4996	-33.15	-25.00	8.15	Vertical
45.4723	-64.19	-25.00	39.19	Horizontal
248.8914	-68.42	-25.00	43.42	Horizontal



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735.5648	-62.58	-25.00	37.58	Horizontal
5142.0714	-52.83	-25.00	27.83	Horizontal
10284.2428	-42.48	-25.00	17.48	Horizontal
16387.4462	-38.51	-25.00	13.51	Horizontal

7.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
68.5109	-68.77	-25.00	43.77	Vertical
111.6296	-65.32	-25.00	40.32	Vertical
376.5498	-68.16	-25.00	43.16	Vertical
5202.0734	-45.24	-25.00	20.24	Vertical
10404.7468	-34.19	-25.00	9.19	Vertical
17982.9994	-33.42	-25.00	8.42	Vertical
38.3909	-64.52	-25.00	39.52	Horizontal
151.1591	-69.65	-25.00	44.65	Horizontal
601.0676	-63.27	-25.00	38.27	Horizontal
5202.0734	-52.39	-25.00	27.39	Horizontal
10404.2468	-38.37	-25.00	13.37	Horizontal
17996.9999	-38.08	-25.00	13.08	Horizontal

7.1.1.4. Spot check worse mode

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
55.4638	-68.88	-25.00	43.88	Vertical
113.4727	-64.28	-25.00	39.28	Vertical
229.4905	-66.84	-25.00	41.84	Vertical
5172.0724	-46.81	-25.00	21.81	Vertical
10344.2448	-37.23	-25.00	12.23	Vertical
17977.4993	-33.65	-25.00	8.65	Vertical
39.3125	-63.18	-25.00	38.18	Horizontal
150.6255	-66.37	-25.00	41.37	Horizontal



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246.4663	-67.30	-25.00	42.30	Horizontal
5172.0724	-50.09	-25.00	25.09	Horizontal
10344.2448	-47.49	-25.00	22.49	Horizontal
17999.0000	-38.38	-25.00	13.38	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.



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8. Frequency Stability

8.1. Frequency Vs Voltage

Voltage										
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band38	20MHz	QPSK	37850	100RB#0	VL	NT	-0.50	-0.000194	±2.5	PASS
Band38	20MHz	QPSK	37850	100RB#0	VN	NT	-3.30	-0.001279	±2.5	PASS
Band38	20MHz	QPSK	37850	100RB#0	VH	NT	-5.00	-0.001938	±2.5	PASS
Band38	20MHz	QPSK	38000	100RB#0	VL	NT	-5.50	-0.002119	±2.5	PASS
Band38	20MHz	QPSK	38000	100RB#0	VN	NT	-0.60	-0.000231	±2.5	PASS
Band38	20MHz	QPSK	38000	100RB#0	VH	NT	-0.40	-0.000154	±2.5	PASS
Band38	20MHz	QPSK	38150	100RB#0	VL	NT	-4.50	-0.001724	±2.5	PASS
Band38	20MHz	QPSK	38150	100RB#0	VN	NT	-1.20	-0.000460	±2.5	PASS
Band38	20MHz	QPSK	38150	100RB#0	VH	NT	-3.80	-0.001456	±2.5	PASS
Band38	20MHz	16QAM	37850	100RB#0	VL	NT	-0.90	-0.000349	±2.5	PASS
Band38	20MHz	16QAM	37850	100RB#0	VN	NT	-3.20	-0.001240	±2.5	PASS
Band38	20MHz	16QAM	37850	100RB#0	VH	NT	1.70	0.000659	±2.5	PASS
Band38	20MHz	16QAM	38000	100RB#0	VL	NT	-2.10	-0.000809	±2.5	PASS
Band38	20MHz	16QAM	38000	100RB#0	VN	NT	-3.70	-0.001426	±2.5	PASS
Band38	20MHz	16QAM	38000	100RB#0	VH	NT	-4.00	-0.001541	±2.5	PASS
Band38	20MHz	16QAM	38150	100RB#0	VL	NT	-6.20	-0.002375	±2.5	PASS
Band38	20MHz	16QAM	38150	100RB#0	VN	NT	-3.20	-0.001226	±2.5	PASS
Band38	20MHz	16QAM	38150	100RB#0	VH	NT	-4.30	-0.001648	±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
Band38	20MHz	QPSK	37850	100RB#0	NV	-30	-1.20	-0.000465	±2.5	PASS
Band38	20MHz	QPSK	37850	100RB#0	NV	-20	-3.10	-0.001202	±2.5	PASS
Band38	20MHz	QPSK	37850	100RB#0	NV	0	-5.10	-0.001977	±2.5	PASS
Band38	20MHz	QPSK	37850	100RB#0	NV	10	-5.70	-0.002209	±2.5	PASS
Band38	20MHz	QPSK	37850	100RB#0	NV	20	0.20	0.000078	±2.5	PASS
Band38	20MHz	QPSK	37850	100RB#0	NV	30	0.00	0.000000	±2.5	PASS
Band38	20MHz	QPSK	37850	100RB#0	NV	40	-4.50	-0.001744	±2.5	PASS
Band38	20MHz	QPSK	37850	100RB#0	NV	50	-3.20	-0.001240	±2.5	PASS
Band38	20MHz	QPSK	38000	100RB#0	NV	-30	-5.30	-0.002042	±2.5	PASS
Band38	20MHz	QPSK	38000	100RB#0	NV	-20	-7.40	-0.002852	±2.5	PASS
Band38	20MHz	QPSK	38000	100RB#0	NV	0	-5.20	-0.002004	±2.5	PASS
Band38	20MHz	QPSK	38000	100RB#0	NV	10	-5.60	-0.002158	±2.5	PASS
Band38	20MHz	QPSK	38000	100RB#0	NV	20	0.00	0.000000	±2.5	PASS
Band38	20MHz	QPSK	38000	100RB#0	NV	30	-3.00	-0.001156	±2.5	PASS
Band38	20MHz	QPSK	38000	100RB#0	NV	40	-1.60	-0.000617	±2.5	PASS



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Band38	20MHz	QPSK	38000	100RB#0	NV	50	-0.70	-0.000270	±2.5	PASS
Band38	20MHz	QPSK	38150	100RB#0	NV	-30	-1.70	-0.000651	±2.5	PASS
Band38	20MHz	QPSK	38150	100RB#0	NV	-20	-4.90	-0.001877	±2.5	PASS
Band38	20MHz	QPSK	38150	100RB#0	NV	0	-2.00	-0.000766	±2.5	PASS
Band38	20MHz	QPSK	38150	100RB#0	NV	10	-5.30	-0.002031	±2.5	PASS
Band38	20MHz	QPSK	38150	100RB#0	NV	20	-3.60	-0.001379	±2.5	PASS
Band38	20MHz	QPSK	38150	100RB#0	NV	30	-0.80	-0.000307	±2.5	PASS
Band38	20MHz	QPSK	38150	100RB#0	NV	40	0.20	0.000077	±2.5	PASS
Band38	20MHz	QPSK	38150	100RB#0	NV	50	-4.50	-0.001724	±2.5	PASS
Band38	20MHz	16QAM	37850	100RB#0	NV	-30	-4.90	-0.001899	±2.5	PASS
Band38	20MHz	16QAM	37850	100RB#0	NV	-20	-1.10	-0.000426	±2.5	PASS
Band38	20MHz	16QAM	37850	100RB#0	NV	0	-0.70	-0.000271	±2.5	PASS
Band38	20MHz	16QAM	37850	100RB#0	NV	10	-4.20	-0.001628	±2.5	PASS
Band38	20MHz	16QAM	37850	100RB#0	NV	20	-2.30	-0.000891	±2.5	PASS
Band38	20MHz	16QAM	37850	100RB#0	NV	30	-4.80	-0.001860	±2.5	PASS
Band38	20MHz	16QAM	37850	100RB#0	NV	40	-1.80	-0.000698	±2.5	PASS
Band38	20MHz	16QAM	37850	100RB#0	NV	50	-2.80	-0.001085	±2.5	PASS
Band38	20MHz	16QAM	38000	100RB#0	NV	-30	-1.70	-0.000655	±2.5	PASS
Band38	20MHz	16QAM	38000	100RB#0	NV	-20	0.10	0.000039	±2.5	PASS
Band38	20MHz	16QAM	38000	100RB#0	NV	0	-2.70	-0.001040	±2.5	PASS
Band38	20MHz	16QAM	38000	100RB#0	NV	10	-4.10	-0.001580	±2.5	PASS
Band38	20MHz	16QAM	38000	100RB#0	NV	20	-3.80	-0.001464	±2.5	PASS
Band38	20MHz	16QAM	38000	100RB#0	NV	30	-4.80	-0.001850	±2.5	PASS
Band38	20MHz	16QAM	38000	100RB#0	NV	40	-4.40	-0.001696	±2.5	PASS
Band38	20MHz	16QAM	38000	100RB#0	NV	50	-3.00	-0.001156	±2.5	PASS
Band38	20MHz	16QAM	38150	100RB#0	NV	-30	-1.80	-0.000690	±2.5	PASS
Band38	20MHz	16QAM	38150	100RB#0	NV	-20	-5.00	-0.001916	±2.5	PASS
Band38	20MHz	16QAM	38150	100RB#0	NV	0	-5.10	-0.001954	±2.5	PASS
Band38	20MHz	16QAM	38150	100RB#0	NV	10	-1.50	-0.000575	±2.5	PASS
Band38	20MHz	16QAM	38150	100RB#0	NV	20	-3.50	-0.001341	±2.5	PASS
Band38	20MHz	16QAM	38150	100RB#0	NV	30	-2.30	-0.000881	±2.5	PASS
Band38	20MHz	16QAM	38150	100RB#0	NV	40	-7.10	-0.002720	±2.5	PASS
Band38	20MHz	16QAM	38150	100RB#0	NV	50	-3.40	-0.001303	±2.5	PASS

The End



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