



Appendix B

E-UTRA BAND 2

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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
Band2	5MHz	QPSK	18625	1RB#0	22.72	23.52	33.00	PASS
Band2	5MHz	QPSK	18625	1RB#12	22.94	23.74	33.00	PASS
Band2	5MHz	QPSK	18625	1RB#24	22.64	23.44	33.00	PASS
Band2	5MHz	QPSK	18625	12RB#0	21.77	22.57	33.00	PASS
Band2	5MHz	QPSK	18625	12RB#6	21.87	22.67	33.00	PASS
Band2	5MHz	QPSK	18625	12RB#13	21.76	22.56	33.00	PASS
Band2	5MHz	QPSK	18625	25RB#0	21.78	22.58	33.00	PASS
Band2	5MHz	QPSK	18900	1RB#0	23.57	24.37	33.00	PASS
Band2	5MHz	QPSK	18900	1RB#12	23.72	24.52	33.00	PASS
Band2	5MHz	QPSK	18900	1RB#24	23.41	24.21	33.00	PASS
Band2	5MHz	QPSK	18900	12RB#0	22.67	23.47	33.00	PASS
Band2	5MHz	QPSK	18900	12RB#6	22.78	23.58	33.00	PASS
Band2	5MHz	QPSK	18900	12RB#13	22.67	23.47	33.00	PASS
Band2	5MHz	QPSK	18900	25RB#0	22.68	23.48	33.00	PASS
Band2	5MHz	QPSK	19175	1RB#0	23.50	24.30	33.00	PASS
Band2	5MHz	QPSK	19175	1RB#12	23.68	24.48	33.00	PASS
Band2	5MHz	QPSK	19175	1RB#24	23.21	24.01	33.00	PASS
Band2	5MHz	QPSK	19175	12RB#0	22.59	23.39	33.00	PASS
Band2	5MHz	QPSK	19175	12RB#6	22.66	23.46	33.00	PASS
Band2	5MHz	QPSK	19175	12RB#13	22.50	23.30	33.00	PASS
Band2	5MHz	QPSK	19175	25RB#0	22.58	23.38	33.00	PASS
Band2	5MHz	16QAM	18625	1RB#0	21.48	22.28	33.00	PASS
Band2	5MHz	16QAM	18625	1RB#12	21.80	22.60	33.00	PASS
Band2	5MHz	16QAM	18625	1RB#24	21.49	22.29	33.00	PASS
Band2	5MHz	16QAM	18625	25RB#0	22.01	22.81	33.00	PASS
Band2	5MHz	16QAM	18900	1RB#0	22.40	23.20	33.00	PASS
Band2	5MHz	16QAM	18900	1RB#12	22.64	23.44	33.00	PASS
Band2	5MHz	16QAM	18900	1RB#24	22.29	23.09	33.00	PASS
Band2	5MHz	16QAM	18900	25RB#0	22.37	23.17	33.00	PASS
Band2	5MHz	16QAM	19175	1RB#0	22.49	23.29	33.00	PASS
Band2	5MHz	16QAM	19175	1RB#12	22.54	23.34	33.00	PASS
Band2	5MHz	16QAM	19175	1RB#24	22.16	22.96	33.00	PASS
Band2	5MHz	16QAM	19175	25RB#0	22.41	23.21	33.00	PASS
Band2	10MHz	QPSK	18650	1RB#0	22.30	23.10	33.00	PASS
Band2	10MHz	QPSK	18650	1RB#24	22.80	23.60	33.00	PASS
Band2	10MHz	QPSK	18650	1RB#49	22.32	23.12	33.00	PASS



Band2	10MHz	QPSK	18650	25RB#0	21.56	22.36	33.00	PASS
Band2	10MHz	QPSK	18650	25RB#12	21.71	22.51	33.00	PASS
Band2	10MHz	QPSK	18650	25RB#25	21.59	22.39	33.00	PASS
Band2	10MHz	QPSK	18650	50RB#0	21.54	22.34	33.00	PASS
Band2	10MHz	QPSK	18900	1RB#0	23.14	23.94	33.00	PASS
Band2	10MHz	QPSK	18900	1RB#24	23.65	24.45	33.00	PASS
Band2	10MHz	QPSK	18900	1RB#49	22.95	23.75	33.00	PASS
Band2	10MHz	QPSK	18900	25RB#0	22.42	23.22	33.00	PASS
Band2	10MHz	QPSK	18900	25RB#12	22.57	23.37	33.00	PASS
Band2	10MHz	QPSK	18900	25RB#25	22.41	23.21	33.00	PASS
Band2	10MHz	QPSK	18900	50RB#0	22.39	23.19	33.00	PASS
Band2	10MHz	QPSK	19150	1RB#0	22.76	23.56	33.00	PASS
Band2	10MHz	QPSK	19150	1RB#24	23.56	24.36	33.00	PASS
Band2	10MHz	QPSK	19150	1RB#49	22.96	23.76	33.00	PASS
Band2	10MHz	QPSK	19150	25RB#0	22.14	22.94	33.00	PASS
Band2	10MHz	QPSK	19150	25RB#12	22.50	23.30	33.00	PASS
Band2	10MHz	QPSK	19150	25RB#25	22.39	23.19	33.00	PASS
Band2	10MHz	QPSK	19150	50RB#0	22.31	23.11	33.00	PASS
Band2	10MHz	16QAM	18650	1RB#0	21.28	22.08	33.00	PASS
Band2	10MHz	16QAM	18650	1RB#24	21.72	22.52	33.00	PASS
Band2	10MHz	16QAM	18650	1RB#49	21.42	22.22	33.00	PASS
Band2	10MHz	16QAM	18650	27RB#0	21.92	22.72	33.00	PASS
Band2	10MHz	16QAM	18900	1RB#0	22.07	22.87	33.00	PASS
Band2	10MHz	16QAM	18900	1RB#24	22.54	23.34	33.00	PASS
Band2	10MHz	16QAM	18900	1RB#49	21.88	22.68	33.00	PASS
Band2	10MHz	16QAM	18900	27RB#0	22.44	23.24	33.00	PASS
Band2	10MHz	16QAM	19150	1RB#0	21.86	22.66	33.00	PASS
Band2	10MHz	16QAM	19150	1RB#24	22.59	23.39	33.00	PASS
Band2	10MHz	16QAM	19150	1RB#49	21.90	22.70	33.00	PASS
Band2	10MHz	16QAM	19150	27RB#0	21.69	22.49	33.00	PASS
Band2	15MHz	QPSK	18675	1RB#0	22.33	23.13	33.00	PASS
Band2	15MHz	QPSK	18675	1RB#38	23.31	24.11	33.00	PASS
Band2	15MHz	QPSK	18675	1RB#74	22.50	23.30	33.00	PASS
Band2	15MHz	QPSK	18675	36RB#0	21.76	22.56	33.00	PASS
Band2	15MHz	QPSK	18675	36RB#18	22.09	22.89	33.00	PASS
Band2	15MHz	QPSK	18675	36RB#39	21.89	22.69	33.00	PASS
Band2	15MHz	QPSK	18675	75RB#0	22.11	22.91	33.00	PASS
Band2	15MHz	QPSK	18900	1RB#0	23.07	23.87	33.00	PASS
Band2	15MHz	QPSK	18900	1RB#38	23.96	24.76	33.00	PASS
Band2	15MHz	QPSK	18900	1RB#74	23.01	23.81	33.00	PASS
Band2	15MHz	QPSK	18900	36RB#0	22.63	23.43	33.00	PASS
Band2	15MHz	QPSK	18900	36RB#18	22.90	23.70	33.00	PASS

Band2	15MHz	QPSK	18900	36RB#39	22.54	23.34	33.00	PASS
Band2	15MHz	QPSK	18900	75RB#0	22.56	23.36	33.00	PASS
Band2	15MHz	QPSK	19125	1RB#0	22.69	23.49	33.00	PASS
Band2	15MHz	QPSK	19125	1RB#38	23.76	24.56	33.00	PASS
Band2	15MHz	QPSK	19125	1RB#74	22.98	23.78	33.00	PASS
Band2	15MHz	QPSK	19125	36RB#0	22.13	22.93	33.00	PASS
Band2	15MHz	QPSK	19125	36RB#18	22.76	23.56	33.00	PASS
Band2	15MHz	QPSK	19125	36RB#39	22.65	23.45	33.00	PASS
Band2	15MHz	QPSK	19125	75RB#0	21.73	22.53	33.00	PASS
Band2	15MHz	16QAM	18675	1RB#0	21.35	22.15	33.00	PASS
Band2	15MHz	16QAM	18675	1RB#38	22.28	23.08	33.00	PASS
Band2	15MHz	16QAM	18675	1RB#74	21.56	22.36	33.00	PASS
Band2	15MHz	16QAM	18675	27RB#0	21.92	22.72	33.00	PASS
Band2	15MHz	16QAM	18900	1RB#0	22.06	22.86	33.00	PASS
Band2	15MHz	16QAM	18900	1RB#38	22.87	23.67	33.00	PASS
Band2	15MHz	16QAM	18900	1RB#74	21.94	22.74	33.00	PASS
Band2	15MHz	16QAM	18900	27RB#0	22.34	23.14	33.00	PASS
Band2	15MHz	16QAM	19125	1RB#0	21.68	22.48	33.00	PASS
Band2	15MHz	16QAM	19125	1RB#38	22.75	23.55	33.00	PASS
Band2	15MHz	16QAM	19125	1RB#74	21.98	22.78	33.00	PASS
Band2	15MHz	16QAM	19125	27RB#0	21.58	22.38	33.00	PASS
Band2	20MHz	QPSK	18700	1RB#0	23.39	24.19	33.00	PASS
Band2	20MHz	QPSK	18700	1RB#49	22.95	23.75	33.00	PASS
Band2	20MHz	QPSK	18700	1RB#99	23.89	24.69	33.00	PASS
Band2	20MHz	QPSK	18700	50RB#0	21.98	22.78	33.00	PASS
Band2	20MHz	QPSK	18700	50RB#25	21.94	22.74	33.00	PASS
Band2	20MHz	QPSK	18700	50RB#50	22.25	23.05	33.00	PASS
Band2	20MHz	QPSK	18700	100RB#0	23.09	23.89	33.00	PASS
Band2	20MHz	QPSK	18900	1RB#0	24.06	24.86	33.00	PASS
Band2	20MHz	QPSK	18900	1RB#49	23.52	24.32	33.00	PASS
Band2	20MHz	QPSK	18900	1RB#99	23.95	24.75	33.00	PASS
Band2	20MHz	QPSK	18900	50RB#0	22.73	23.53	33.00	PASS
Band2	20MHz	QPSK	18900	50RB#25	22.61	23.41	33.00	PASS
Band2	20MHz	QPSK	18900	50RB#50	22.67	23.47	33.00	PASS
Band2	20MHz	QPSK	18900	100RB#0	23.29	24.09	33.00	PASS
Band2	20MHz	QPSK	19100	1RB#0	23.96	24.76	33.00	PASS
Band2	20MHz	QPSK	19100	1RB#49	23.08	23.88	33.00	PASS
Band2	20MHz	QPSK	19100	1RB#99	23.90	24.70	33.00	PASS
Band2	20MHz	QPSK	19100	50RB#0	22.34	23.14	33.00	PASS
Band2	20MHz	QPSK	19100	50RB#25	22.16	22.96	33.00	PASS
Band2	20MHz	QPSK	19100	50RB#50	22.69	23.49	33.00	PASS
Band2	20MHz	QPSK	19100	100RB#0	22.72	23.52	33.00	PASS

Band2	20MHz	16QAM	18700	1RB#0	22.34	23.14	33.00	PASS
Band2	20MHz	16QAM	18700	1RB#49	21.81	22.61	33.00	PASS
Band2	20MHz	16QAM	18700	1RB#99	22.87	23.67	33.00	PASS
Band2	20MHz	16QAM	18700	27RB#0	22.48	23.28	33.00	PASS
Band2	20MHz	16QAM	18900	1RB#0	23.08	23.88	33.00	PASS
Band2	20MHz	16QAM	18900	1RB#49	22.59	23.39	33.00	PASS
Band2	20MHz	16QAM	18900	1RB#99	22.98	23.78	33.00	PASS
Band2	20MHz	16QAM	18900	27RB#0	22.47	23.27	33.00	PASS
Band2	20MHz	16QAM	19100	1RB#0	23.03	23.83	33.00	PASS
Band2	20MHz	16QAM	19100	1RB#49	22.20	23.00	33.00	PASS
Band2	20MHz	16QAM	19100	1RB#99	23.05	23.85	33.00	PASS
Band2	20MHz	16QAM	19100	27RB#0	22.48	23.28	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,

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

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

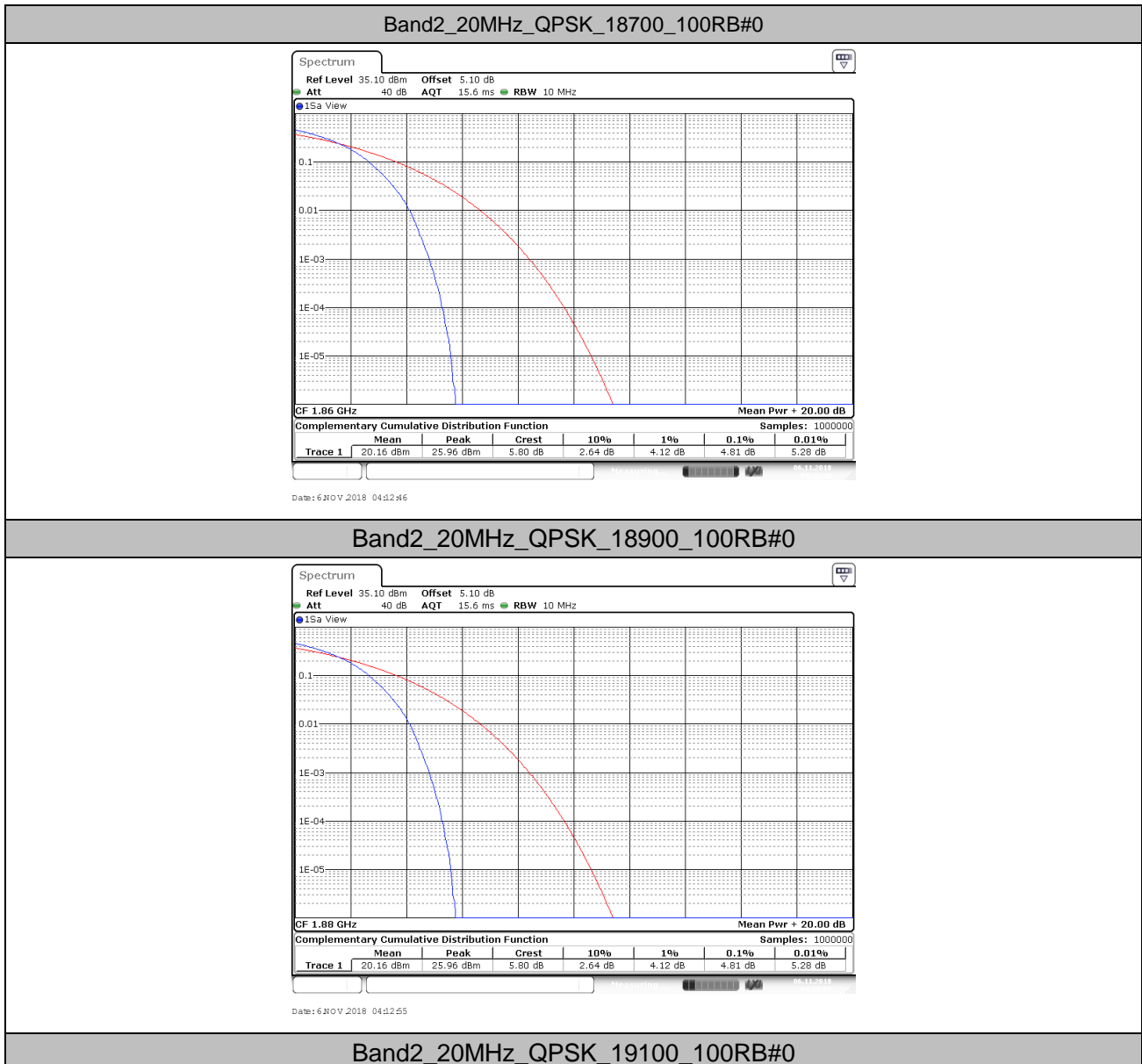
b: SGP=Signal Generator Level

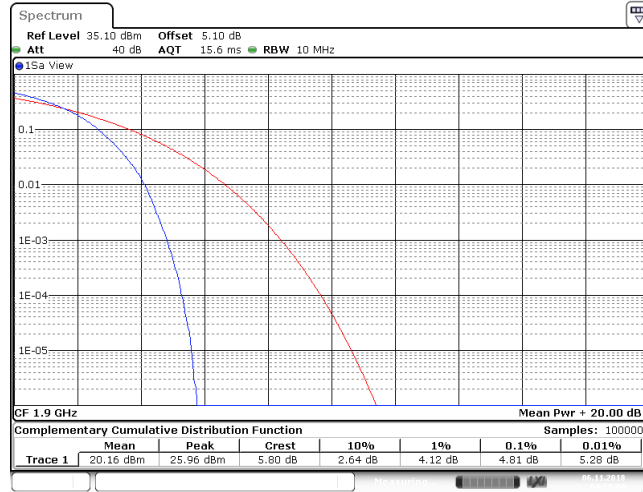
2. Peak-to-Average Ratio(CCDF)

2.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band2	20MHz	QPSK	18700	100RB#0	4.81	13	PASS
Band2	20MHz	QPSK	18900	100RB#0	4.81	13	PASS
Band2	20MHz	QPSK	19100	100RB#0	4.81	13	PASS
Band2	20MHz	16QAM	18700	27RB#0	6.38	13	PASS
Band2	20MHz	16QAM	18900	27RB#0	6.38	13	PASS
Band2	20MHz	16QAM	19100	27RB#0	6.38	13	PASS

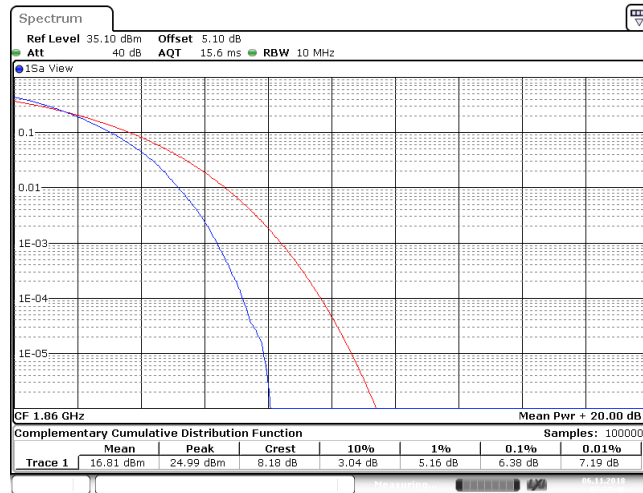
2.2. Test Plots





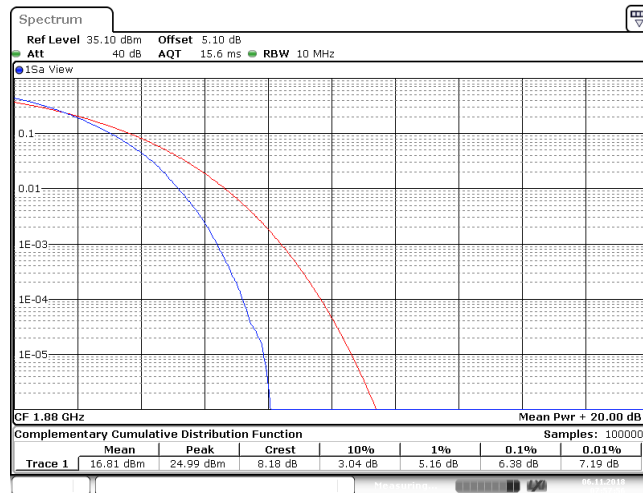
Date: 6 NOV 2018 04:13:05

Band2_20MHz_16QAM_18700_27RB#0



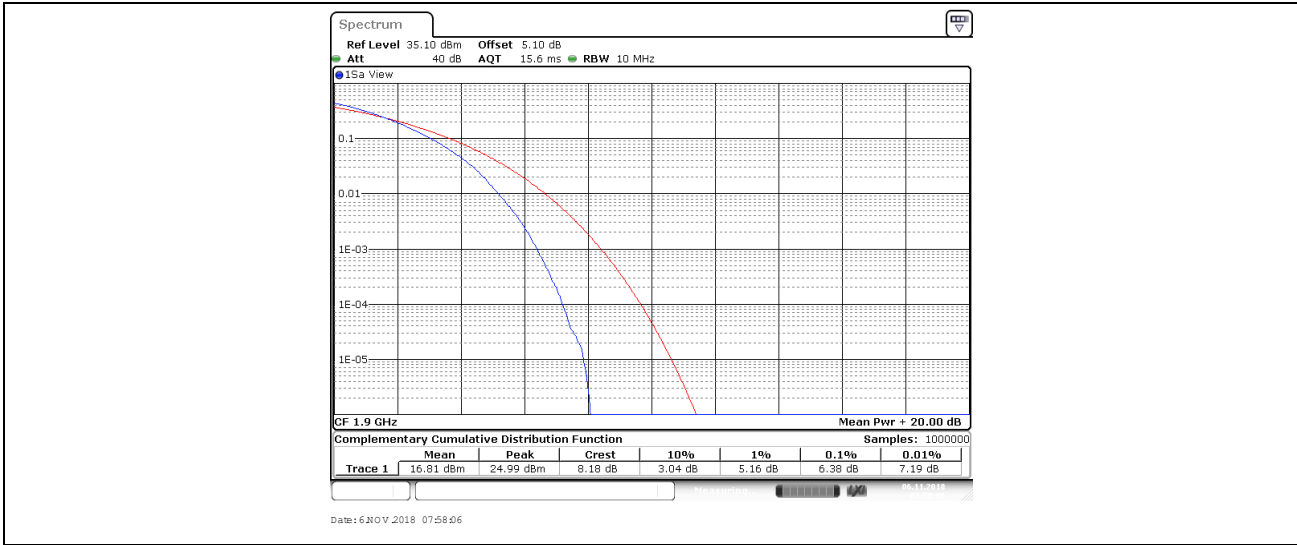
Date: 6 NOV 2018 07:57:47

Band2_20MHz_16QAM_18900_27RB#0



Date: 6 NOV 2018 07:57:57

Band2_20MHz_16QAM_19100_27RB#0

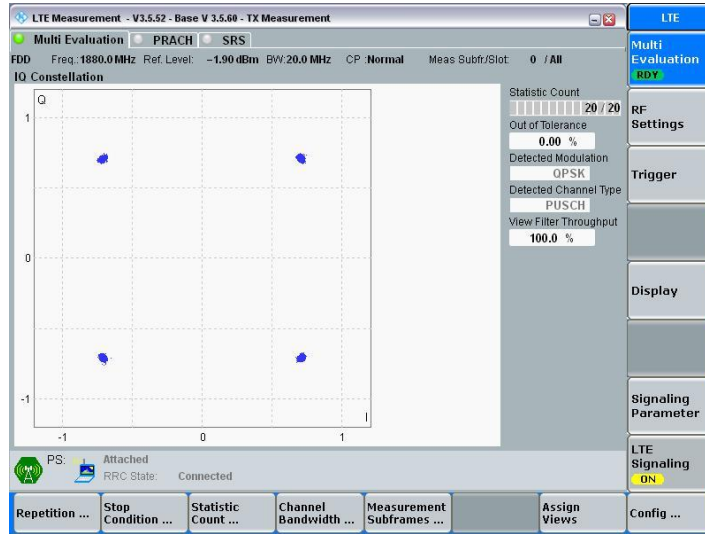


3. Modulation Characteristics

3.1. Test BAND = LTE BAND2

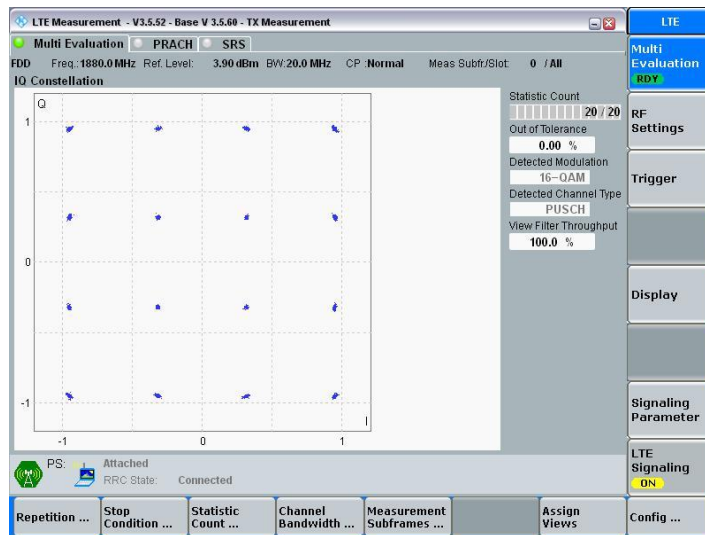
3.1.1. Test Mode = LTE /TM1 20MHz

3.1.1.1. Test Channel = MCH



3.1.2. Test Mode = LTE /TM2 20MHz

3.1.2.1. Test Channel = MCH

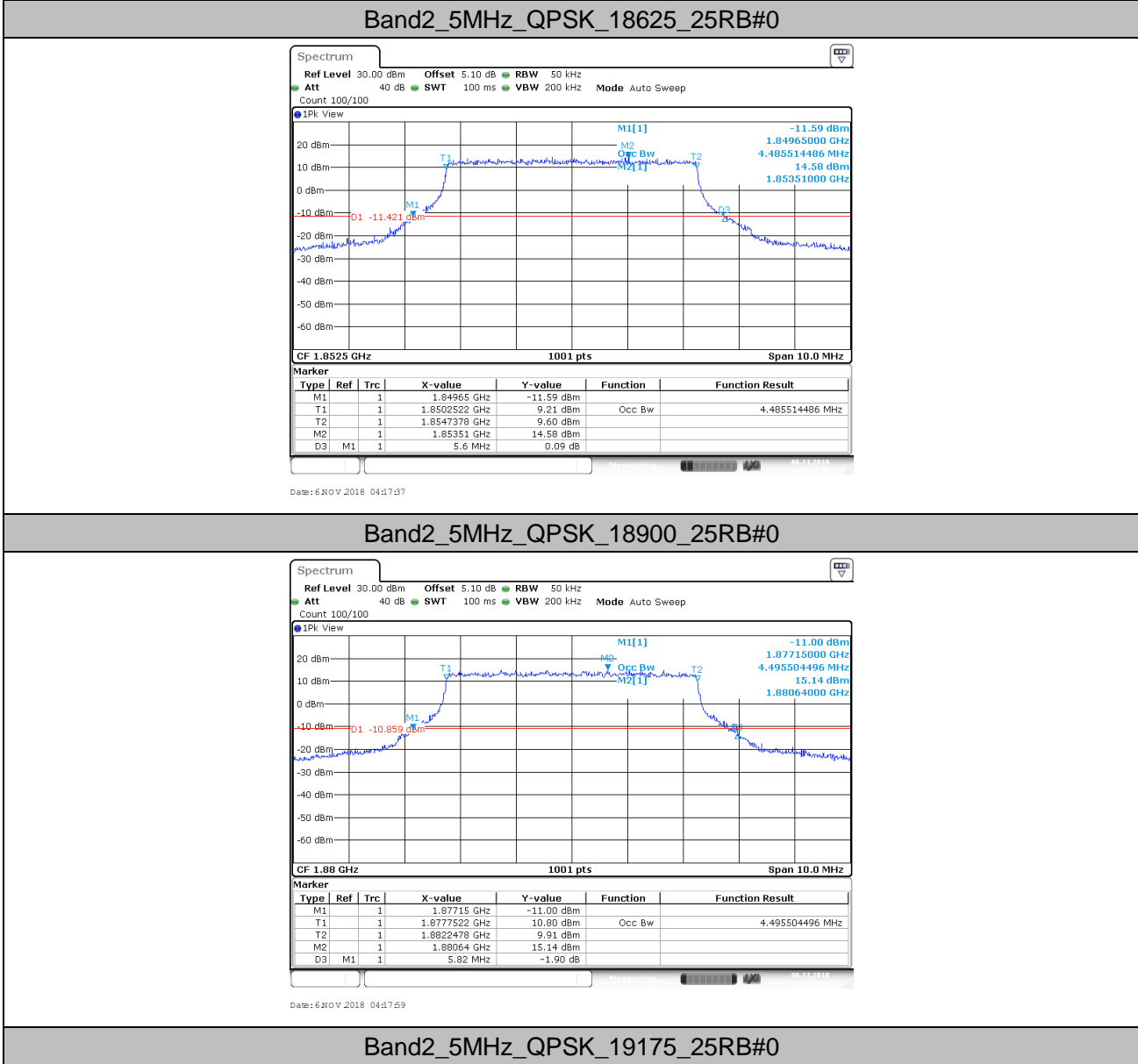


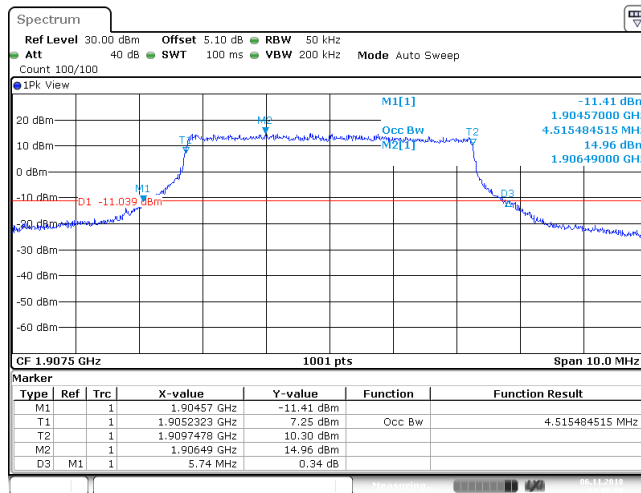
4. 26dB Bandwidth and Occupied Bandwidth

4.1. Test Result

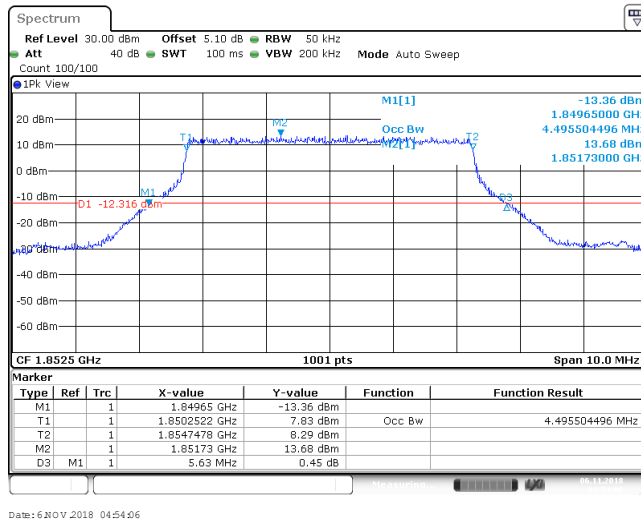
BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band2	5MHz	QPSK	18625	25RB#0	4.486	5.600	PASS
Band2	5MHz	QPSK	18900	25RB#0	4.496	5.820	PASS
Band2	5MHz	QPSK	19175	25RB#0	4.515	5.740	PASS
Band2	5MHz	16QAM	18625	25RB#0	4.496	5.630	PASS
Band2	5MHz	16QAM	18900	25RB#0	4.496	5.620	PASS
Band2	5MHz	16QAM	19175	25RB#0	4.496	5.480	PASS
Band2	10MHz	QPSK	18650	50RB#0	8.931	10.540	PASS
Band2	10MHz	QPSK	18900	50RB#0	8.951	10.940	PASS
Band2	10MHz	QPSK	19150	50RB#0	8.971	10.900	PASS
Band2	10MHz	16QAM	18650	27RB#0	4.975	6.840	PASS
Band2	10MHz	16QAM	18900	27RB#0	4.955	7.260	PASS
Band2	10MHz	16QAM	19150	27RB#0	4.955	6.680	PASS
Band2	15MHz	QPSK	18675	75RB#0	13.487	15.960	PASS
Band2	15MHz	QPSK	18900	75RB#0	13.457	16.200	PASS
Band2	15MHz	QPSK	19125	75RB#0	13.457	15.840	PASS
Band2	15MHz	16QAM	18675	27RB#0	5.574	8.730	PASS
Band2	15MHz	16QAM	18900	27RB#0	5.395	8.460	PASS
Band2	15MHz	16QAM	19125	27RB#0	5.425	8.640	PASS
Band2	20MHz	QPSK	18700	100RB#0	17.982	20.440	PASS
Band2	20MHz	QPSK	18900	100RB#0	17.942	20.600	PASS
Band2	20MHz	QPSK	19100	100RB#0	17.942	20.160	PASS
Band2	20MHz	16QAM	18700	27RB#0	5.475	8.000	PASS
Band2	20MHz	16QAM	18900	27RB#0	5.475	8.320	PASS
Band2	20MHz	16QAM	19100	27RB#0	5.315	7.920	PASS

4.2. Test Plots

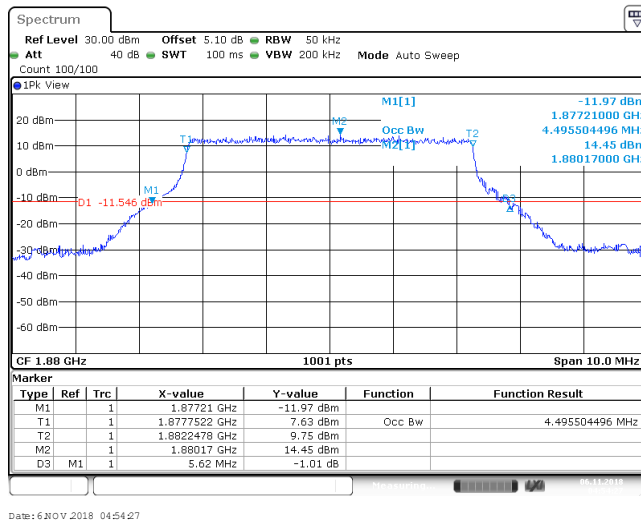




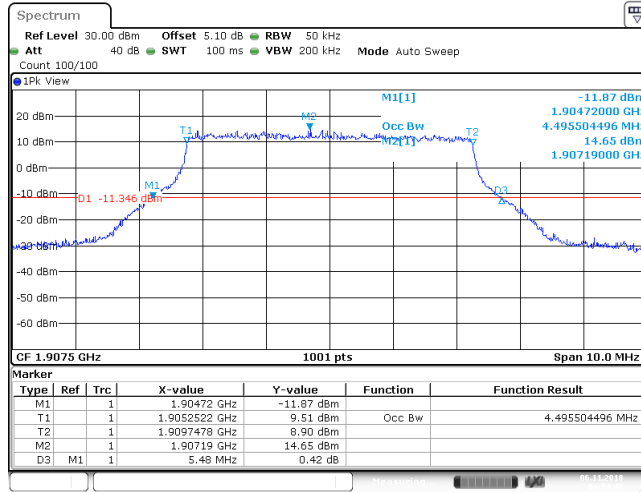
Band2_5MHz_16QAM_18625_25RB#0



Band2_5MHz_16QAM_18900_25RB#0

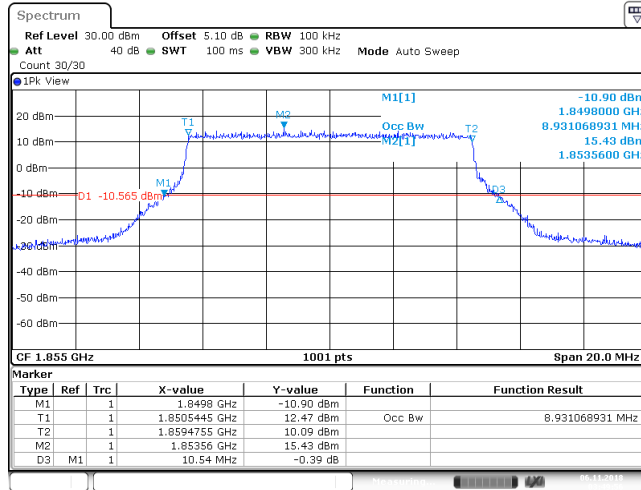


Band2_5MHz_16QAM_19175_25RB#0



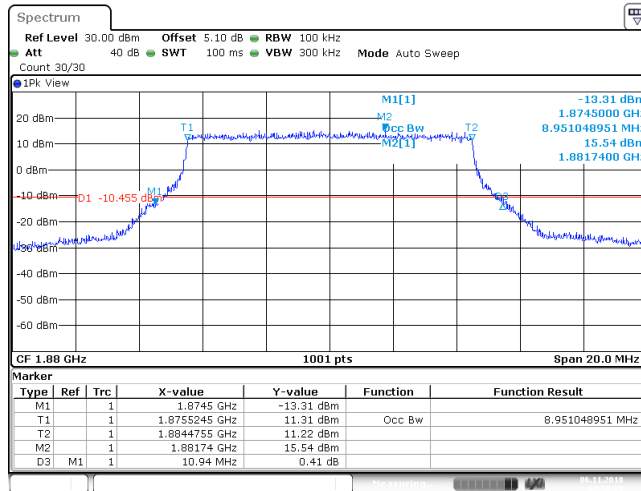
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Band2_10MHz_QPSK_18650_50RB#0



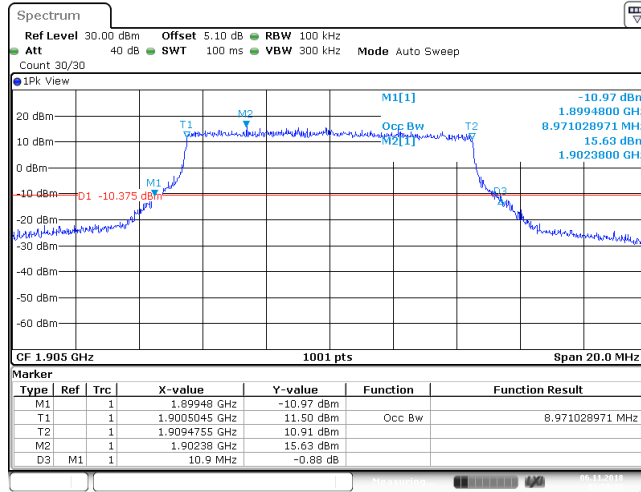
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Band2_10MHz_QPSK_18900_50RB#0



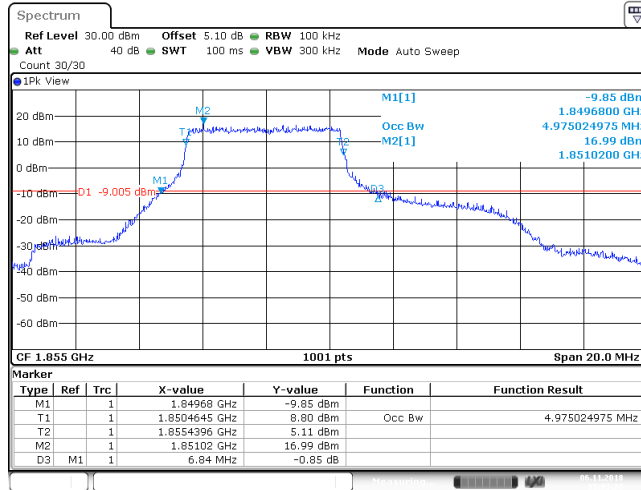
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Band2_10MHz_QPSK_19150_50RB#0



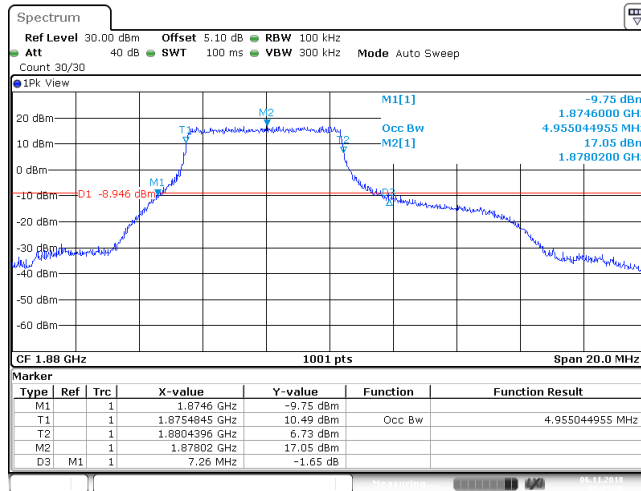
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Band2_10MHz_16QAM_18650_27RB#0



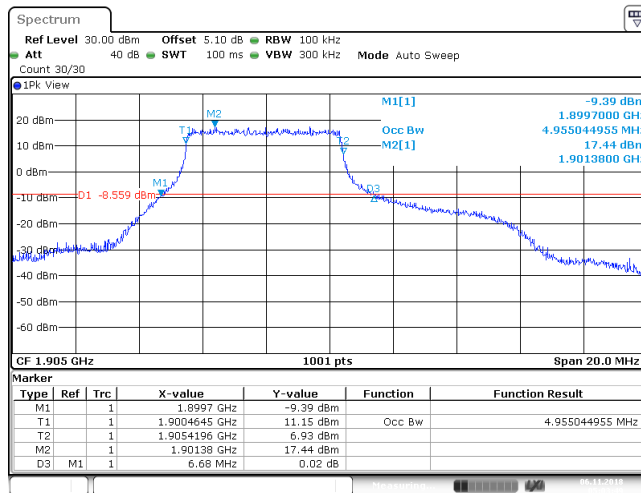
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Band2_10MHz_16QAM_18900_27RB#0



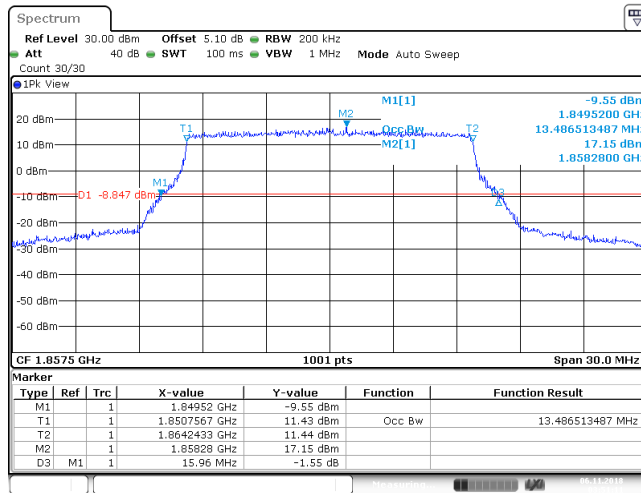
Date: 6 NOV 2018 05:03:36

Band2_10MHz_16QAM_19150_27RB#0



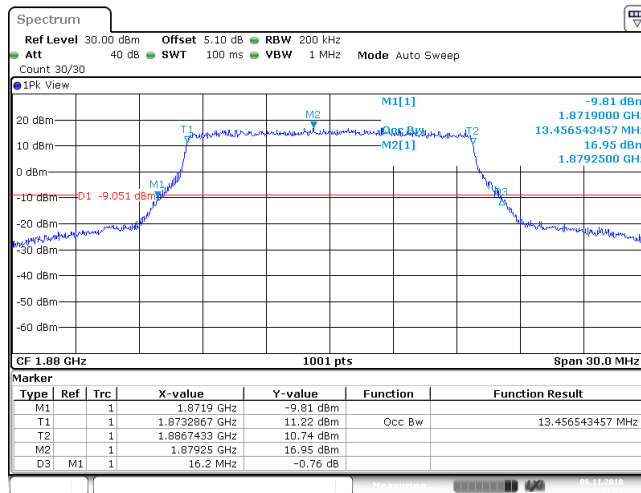
Date: 6 NOV 2018 05:03:50

Band2_15MHz_QPSK_18675_75RB#0



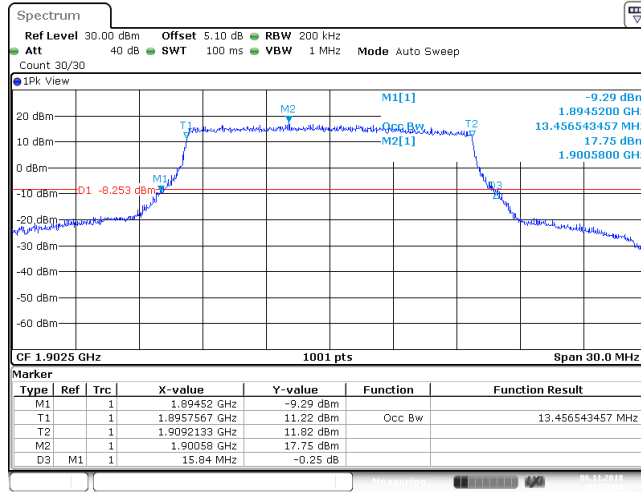
Date: 6 NOV 2018 03:51:41

Band2_15MHz_QPSK_18900_75RB#0



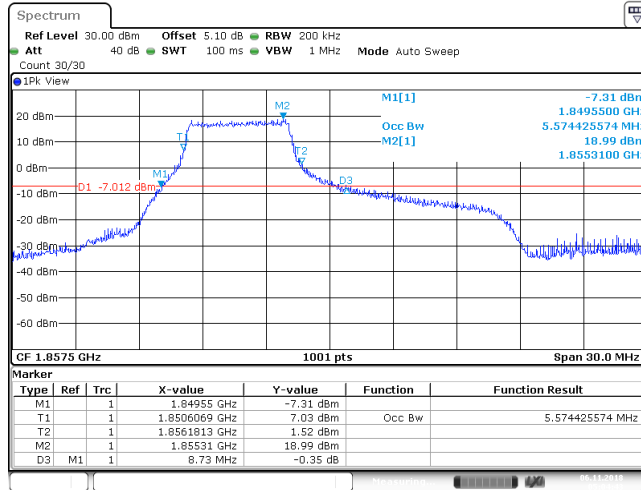
Date: 6 NOV 2018 03:51:25

Band2_15MHz_QPSK_19125_75RB#0



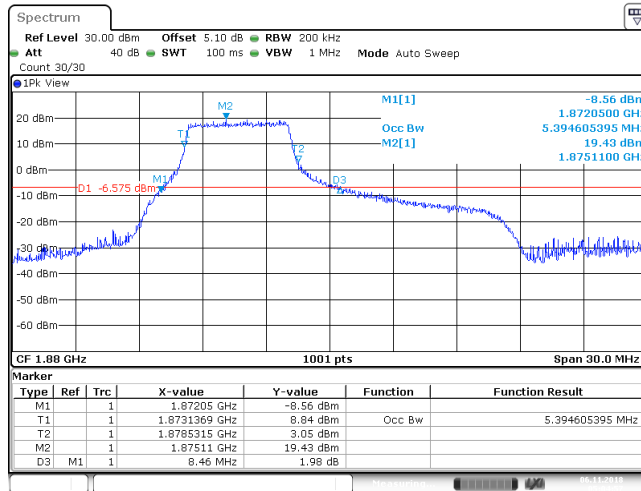
Date: 6 NOV 2018 03:51:38

Band2_15MHz_16QAM_18675_27RB#0



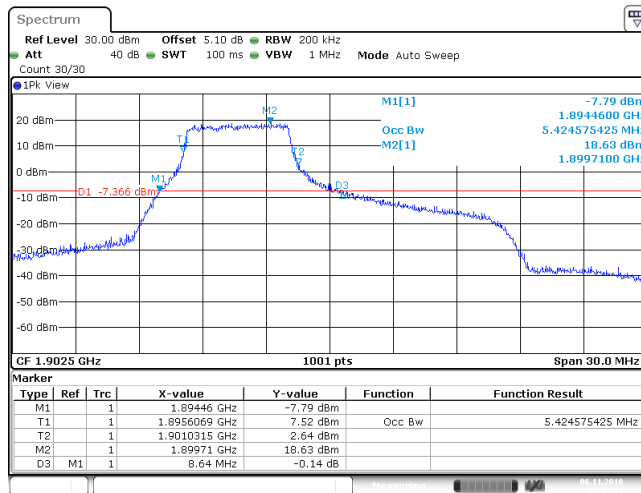
Date: 6 NOV 2018 05:04:43

Band2_15MHz_16QAM_18900_27RB#0



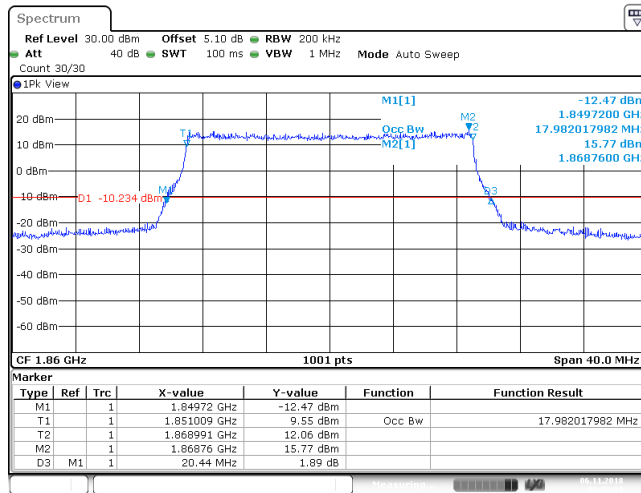
Date: 6 NOV 2018 05:04:57

Band2_15MHz_16QAM_19125_27RB#0



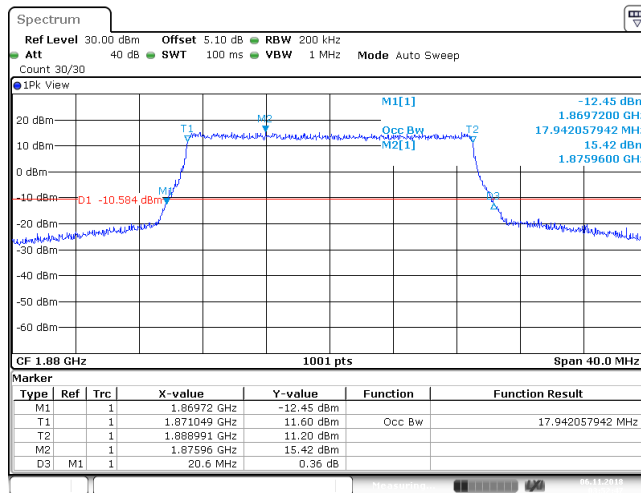
Date: 6 NOV 2018 05:05:11

Band2_20MHz_QPSK_18700_100RB#0



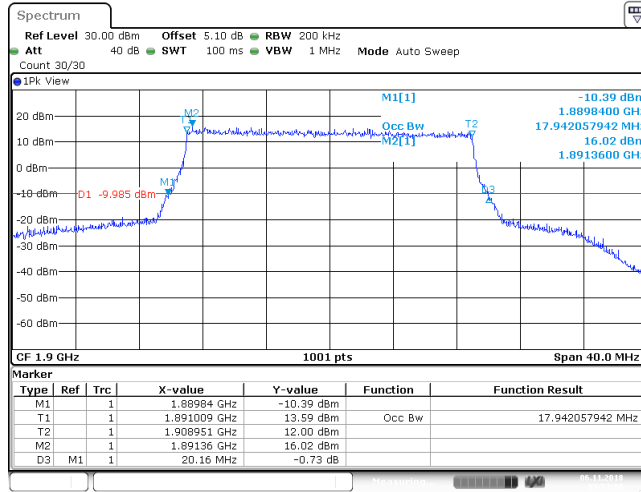
Date: 6 NOV 2018 03:52:33

Band2_20MHz_QPSK_18900_100RB#0



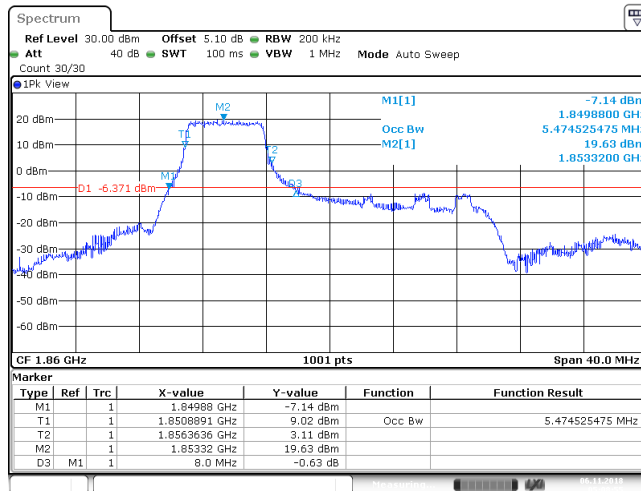
Date: 6 NOV 2018 03:52:47

Band2_20MHz_QPSK_19100_100RB#0



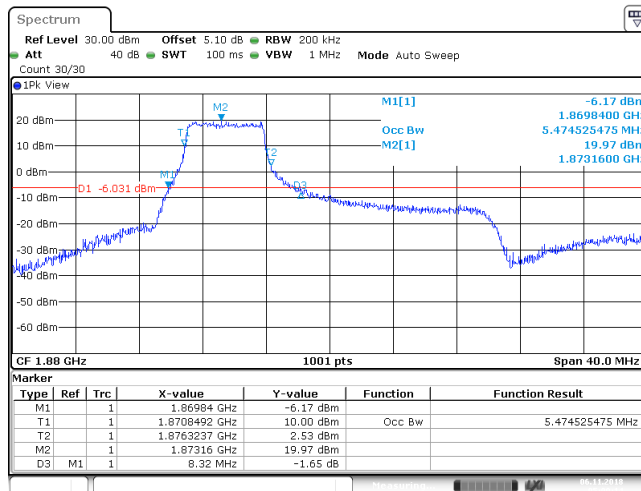
Date: 6 NOV 2018 03:53:01

Band2_20MHz_16QAM_18700_27RB#0



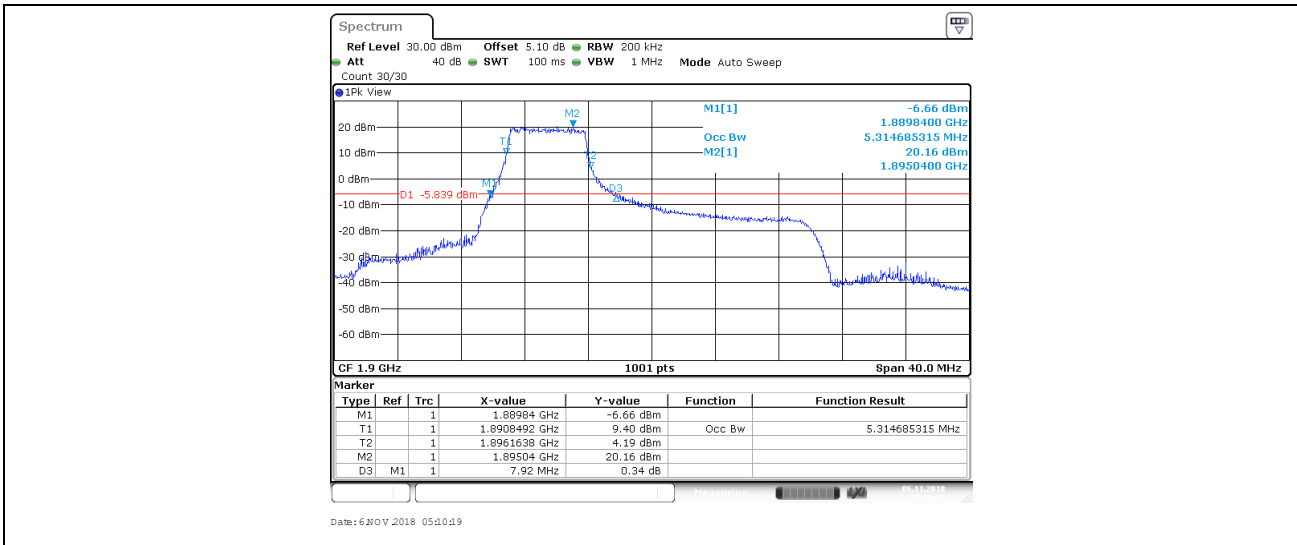
Date: 6 NOV 2018 05:08:56

Band2_20MHz_16QAM_18900_27RB#0



Date: 6 NOV 2018 05:09:15

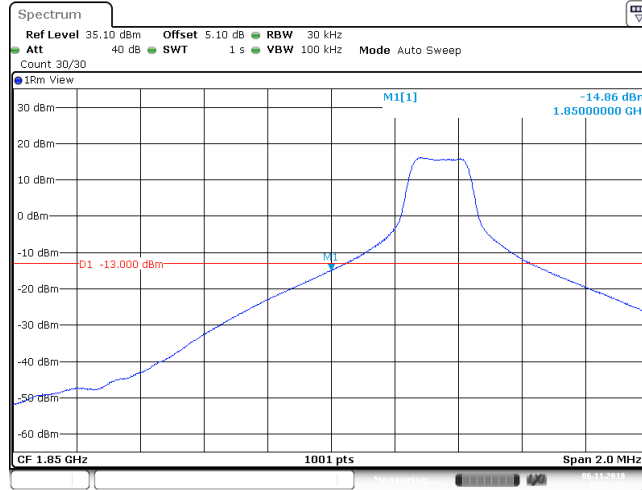
Band2_20MHz_16QAM_19100_27RB#0



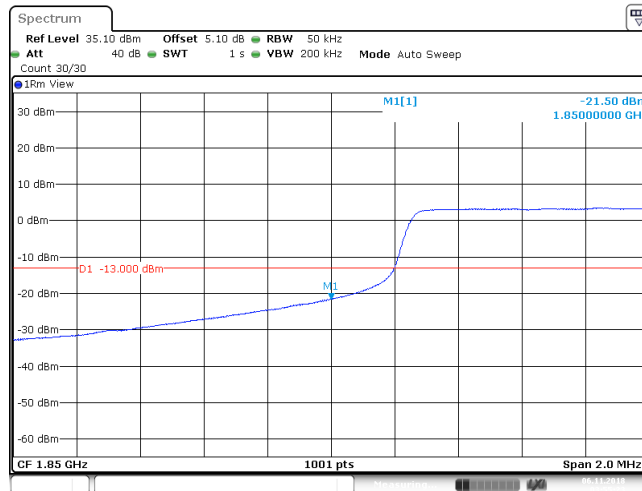
5. Band Edge Compliance

5.1. Test Plots

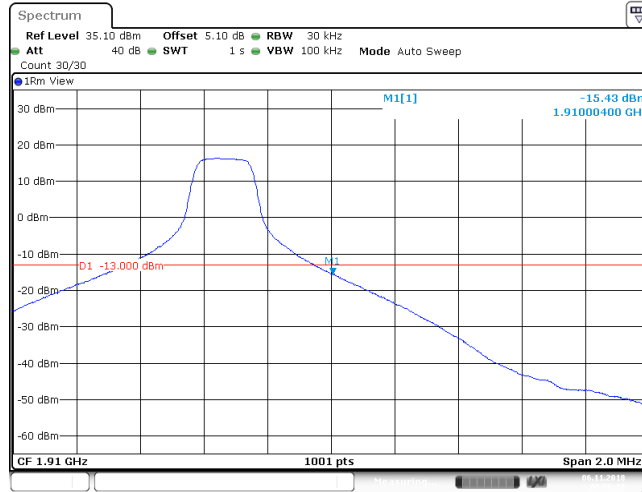
Band2_5MHz_QPSK_18625_1RB#0



Band2_5MHz_QPSK_18625_25RB#0

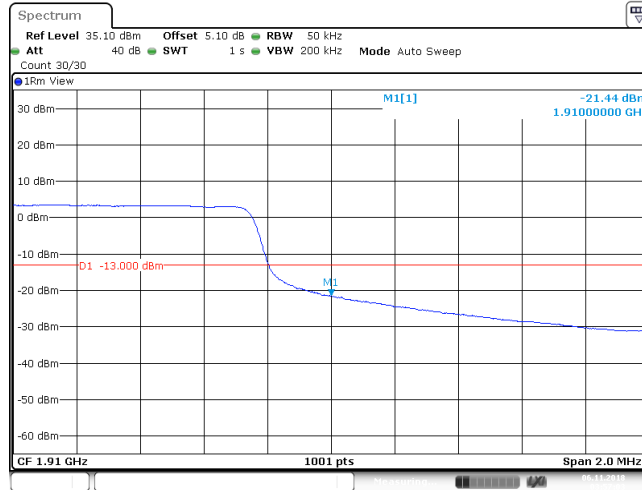


Band2_5MHz_QPSK_19175_1RB#24



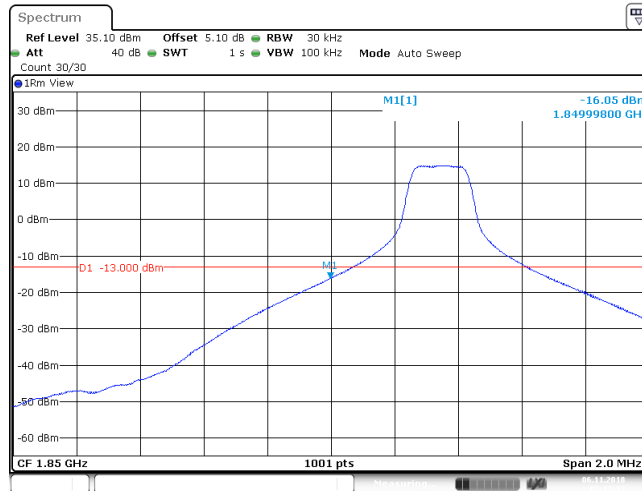
Date: 6 NOV 2018 03:56:16

Band2_5MHz_QPSK_19175_25RB#0



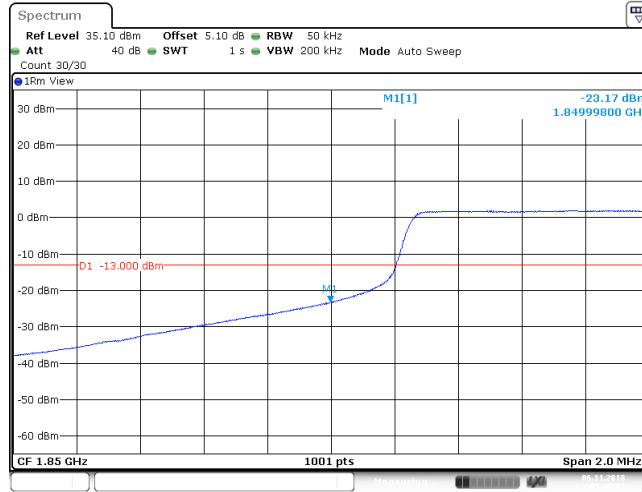
Date: 6 NOV 2018 03:57:03

Band2_5MHz_16QAM_18625_1RB#0



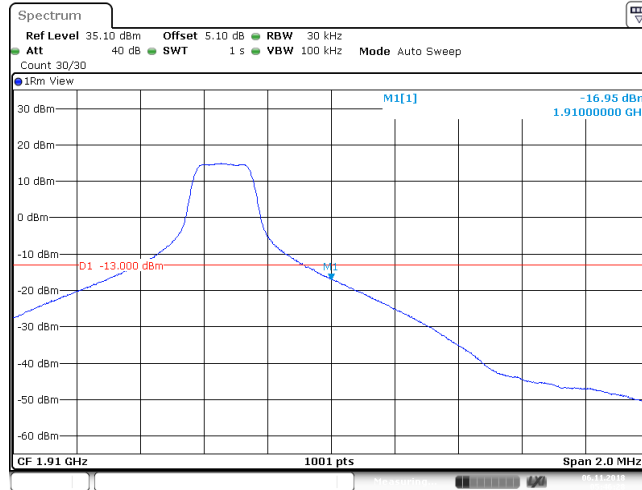
Date: 6 NOV 2018 05:12:33

Band2_5MHz_16QAM_18625_25RB#0



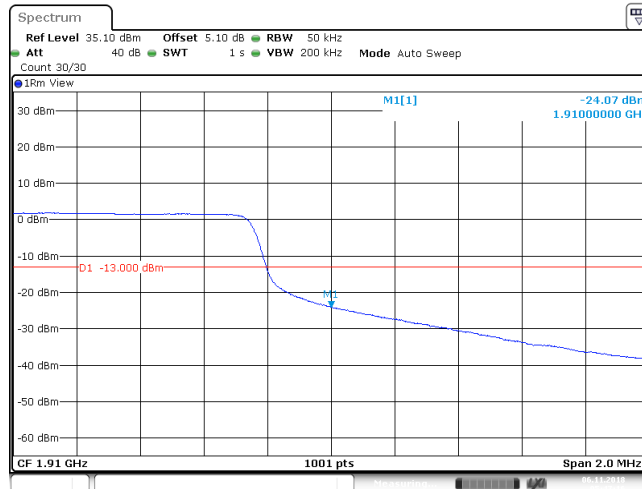
Date: 6 NOV 2018 05:45:05

Band2_5MHz_16QAM_19175_1RB#24



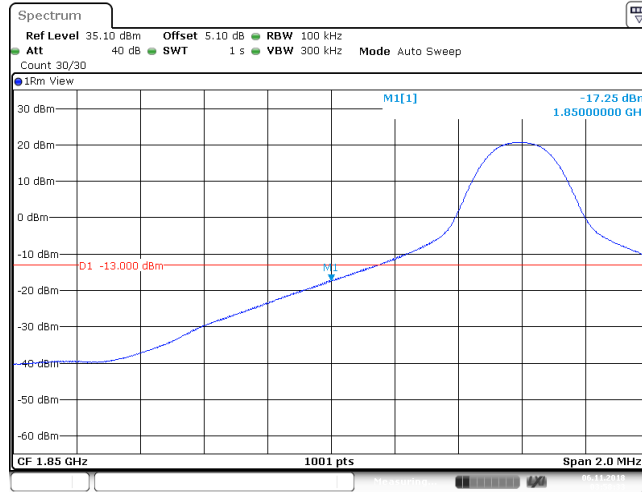
Date: 6 NOV 2018 05:46:29

Band2_5MHz_16QAM_19175_25RB#0



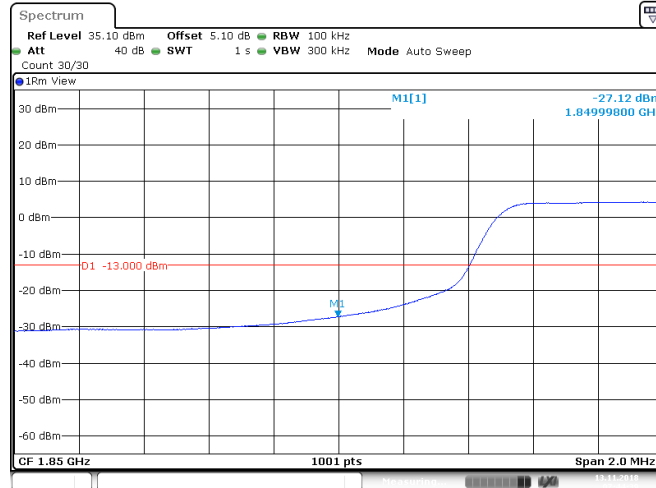
Date: 6 NOV 2018 05:47:16

Band2_10MHz_QPSK_18650_1RB#0



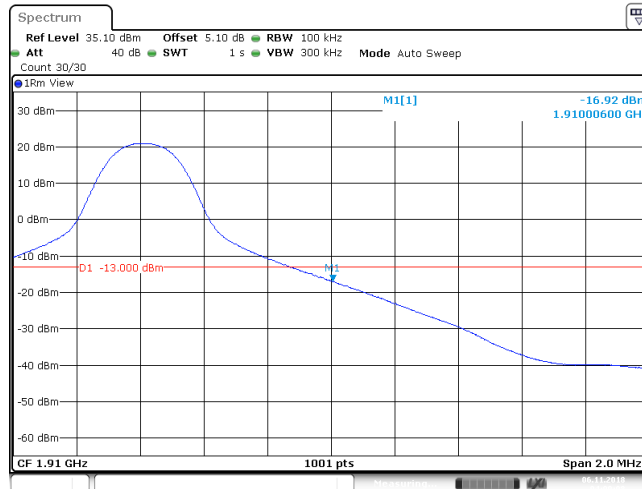
Date: 6 NOV 2018 03:58:33

Band2_10MHz_QPSK_18650_50RB#0



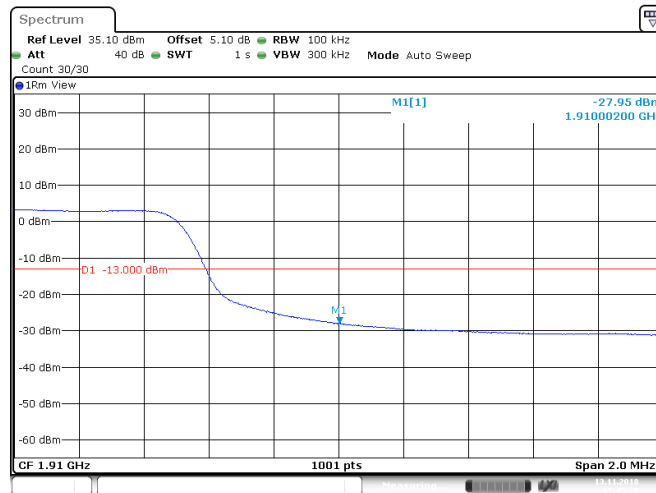
Date: 13 NOV 2018 07:44:40

Band2_10MHz_QPSK_19150_1RB#49



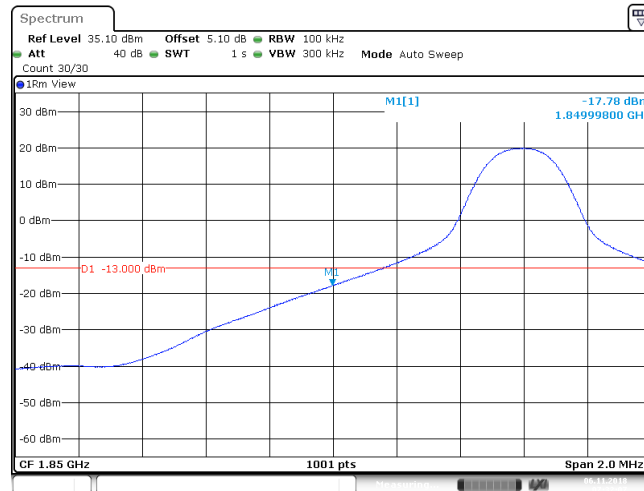
Date: 6 NOV 2018 04:00:09

Band2_10MHz_QPSK_19150_50RB#0



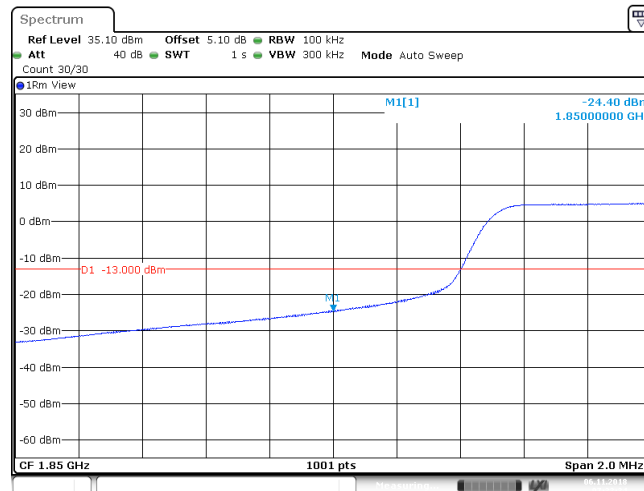
Date: 13 NOV 2018 07:45:28

Band2_10MHz_16QAM_18650_1RB#0



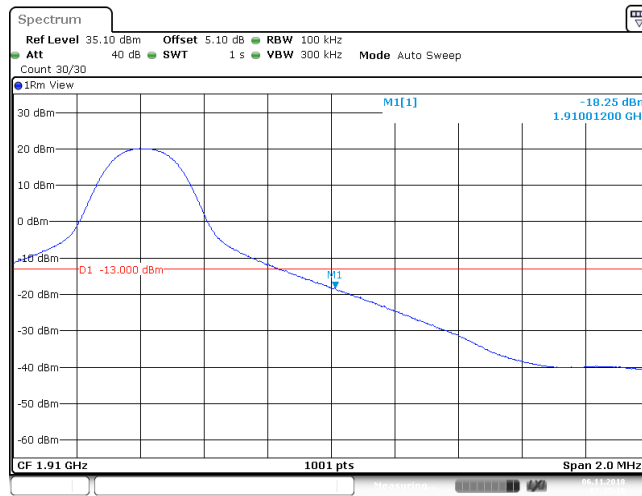
Date: 6 NOV 2018 07:32:08

Band2_10MHz_16QAM_18650_27RB#0



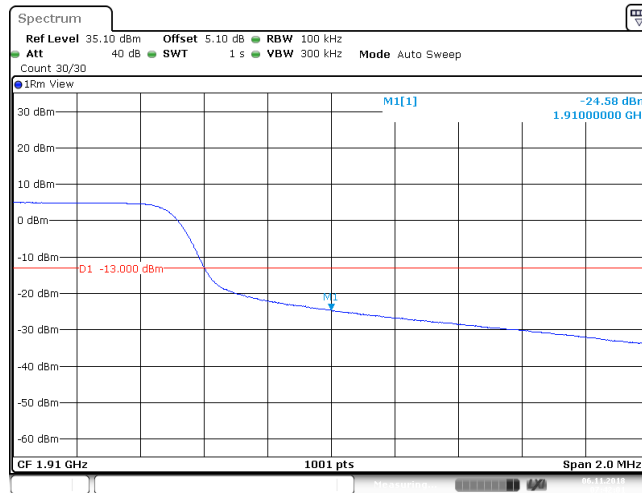
Date: 6 NOV 2018 07:33:35

Band2_10MHz_16QAM_19150_1RB#49



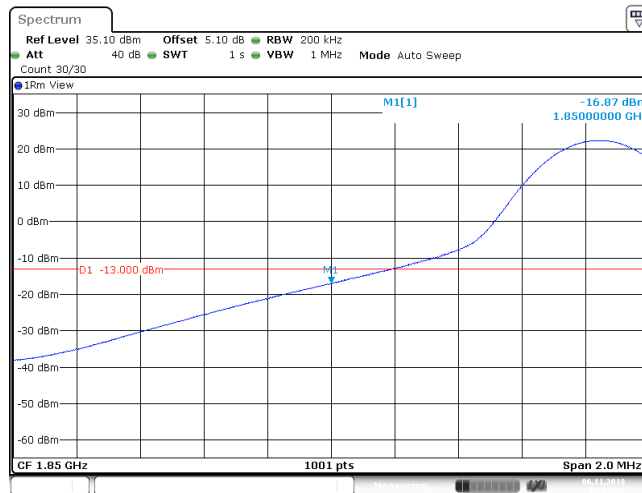
Date: 6 NOV 2018 07:35:11

Band2_10MHz_16QAM_19150_27RB#23



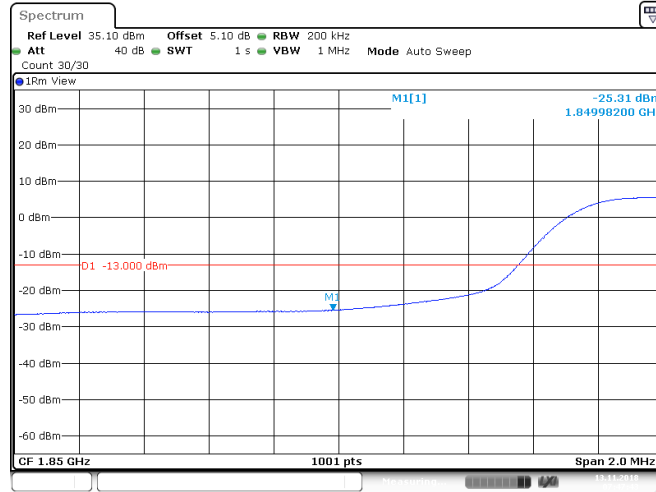
Date: 6 NOV 2018 07:42:01

Band2_15MHz_QPSK_18675_1RB#0



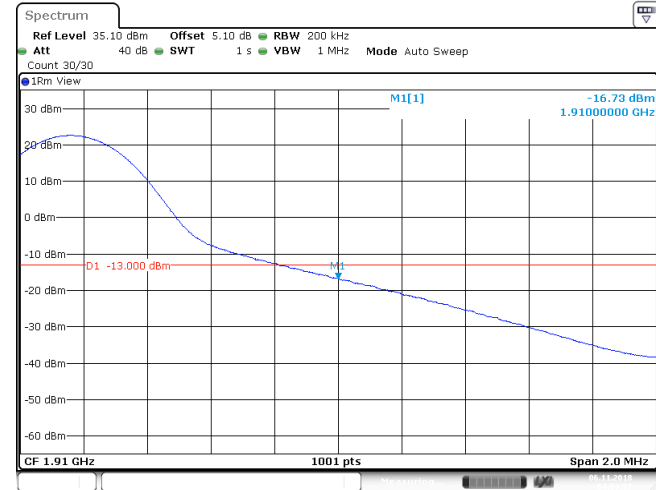
Date: 6 NOV 2018 04:02:16

Band2_15MHz_QPSK_18675_75RB#0



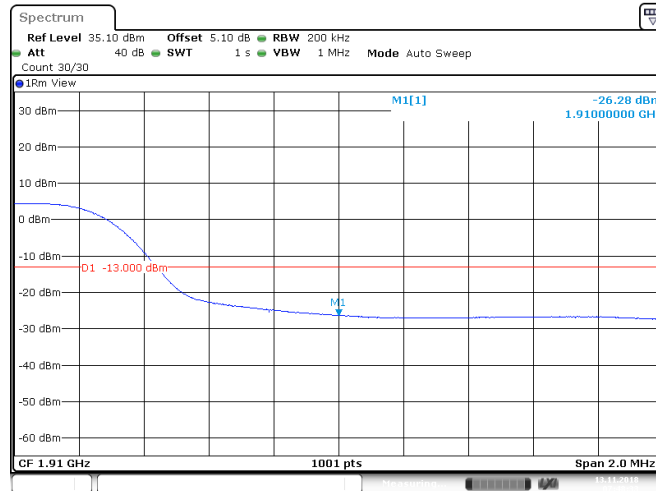
Date: 13 NOV 2018 07:47:43

Band2_15MHz_QPSK_19125_1RB#74



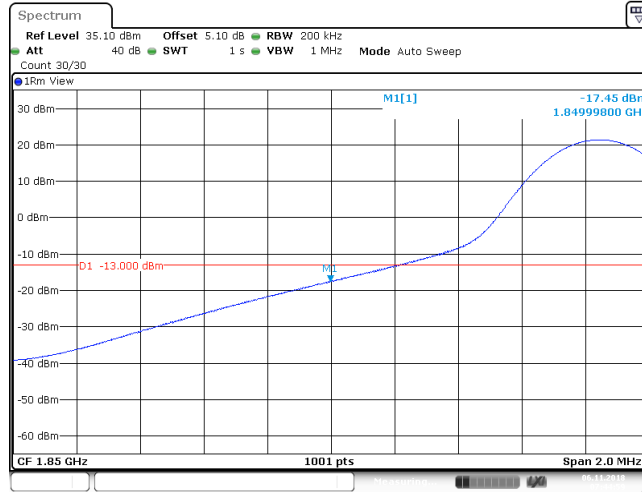
Date: 6 NOV 2018 04:03:58

Band2_15MHz_QPSK_19125_75RB#0



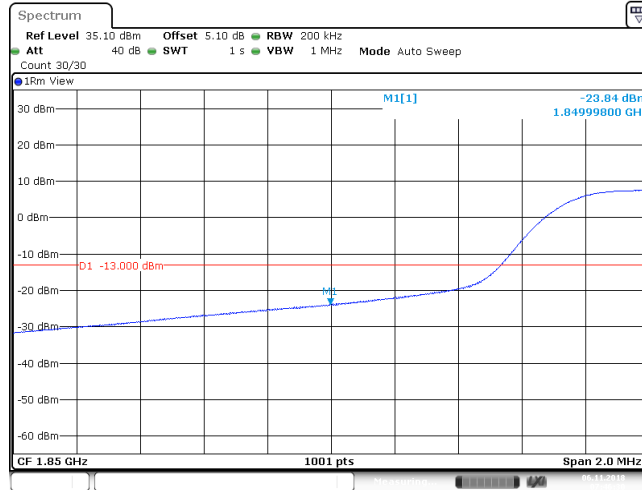
Date: 13 NOV 2018 07:48:33

Band2_15MHz_16QAM_18675_1RB#0



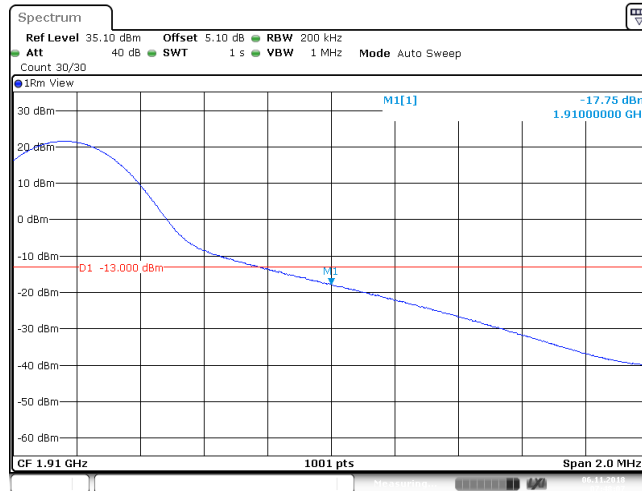
Date: 6 NOV 2018 07:44:59

Band2_15MHz_16QAM_18675_27RB#0



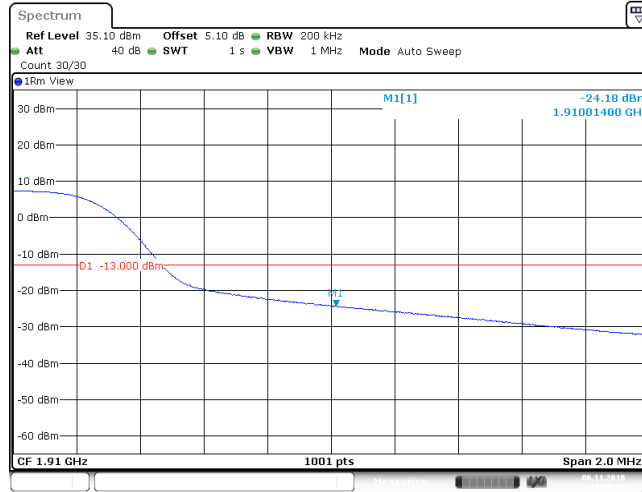
Date: 6 NOV 2018 07:46:31

Band2_15MHz_16QAM_19125_1RB#74

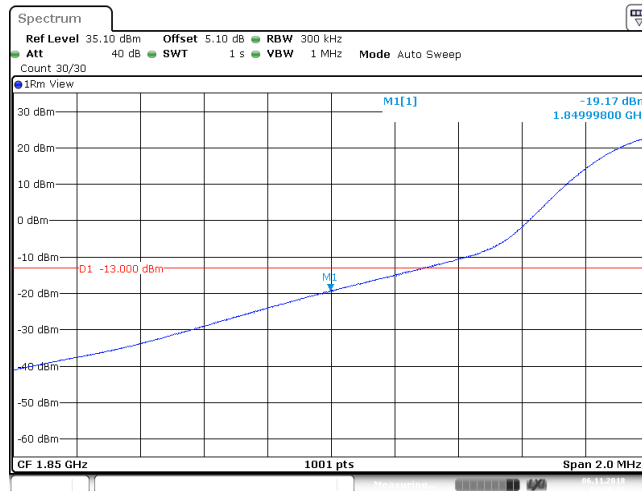


Date: 6 NOV 2018 07:48:08

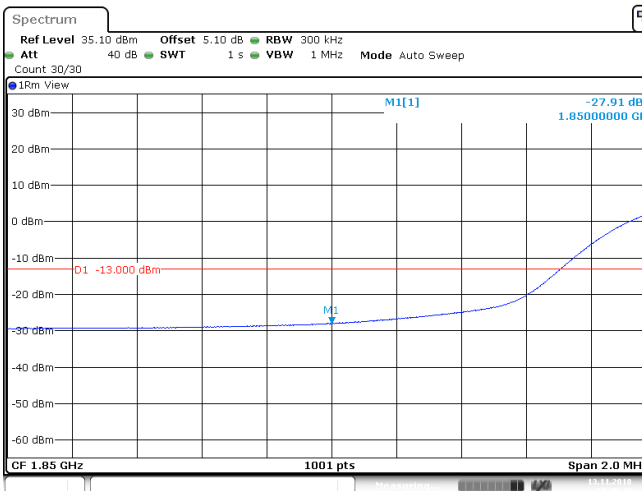
Band2_15MHz_16QAM_19125_27RB#48



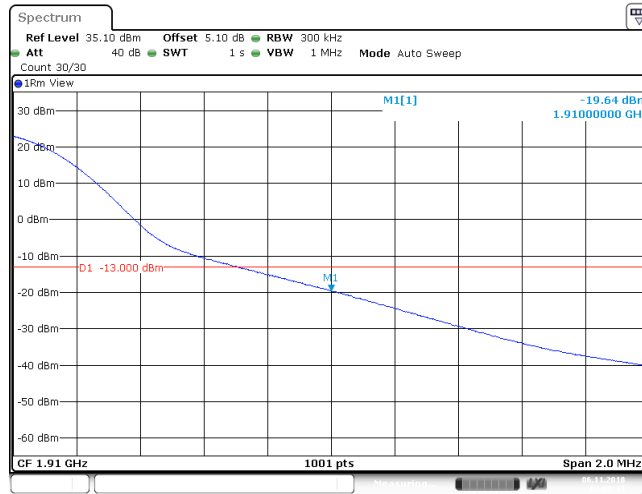
Band2_20MHz_QPSK_18700_1RB#0



Band2_20MHz_QPSK_18700_100RB#0

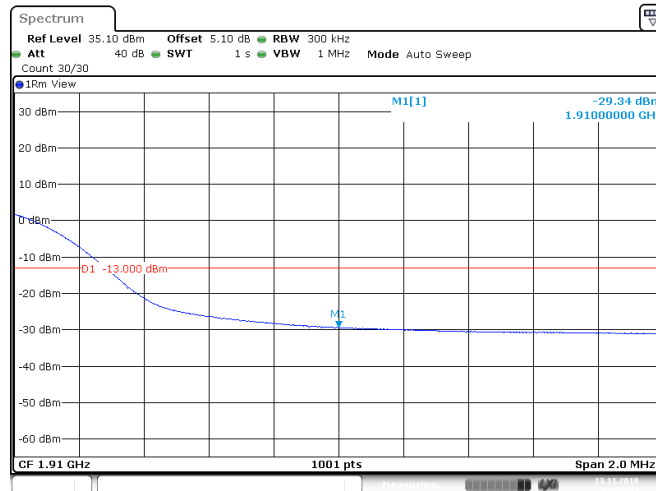


Band2_20MHz_QPSK_19100_1RB#99



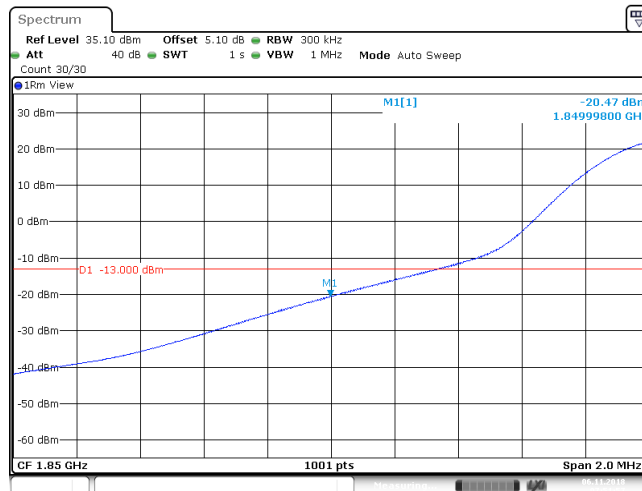
Date: 6 NOV 2018 04:08:15

Band2_20MHz_QPSK_19100_100RB#0



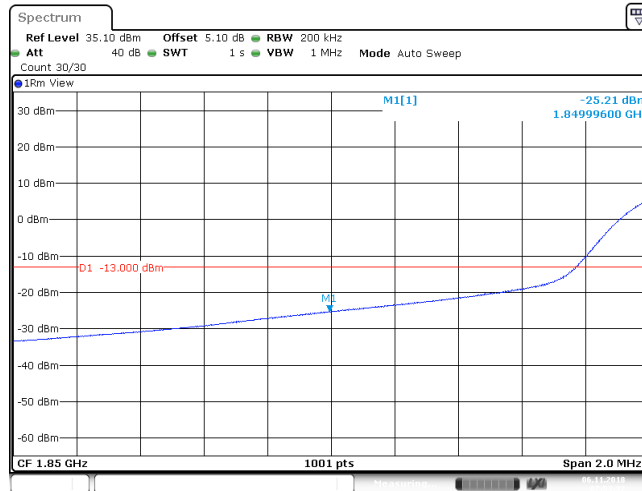
Date: 13 NOV 2018 07:50:38

Band2_20MHz_16QAM_18700_1RB#0



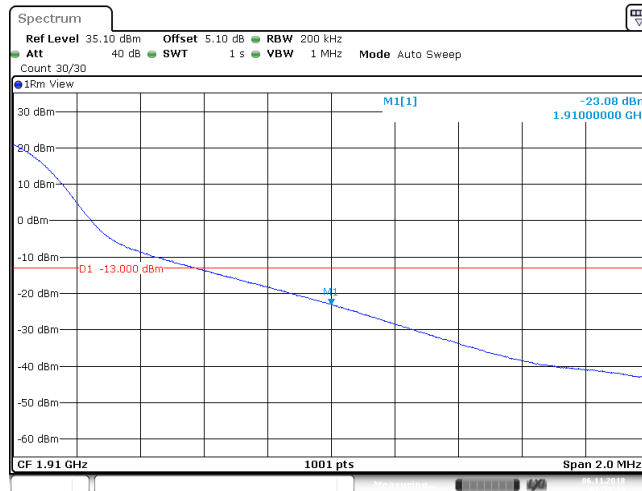
Date: 6 NOV 2018 07:51:58

Band2_20MHz_16QAM_18700_27RB#0



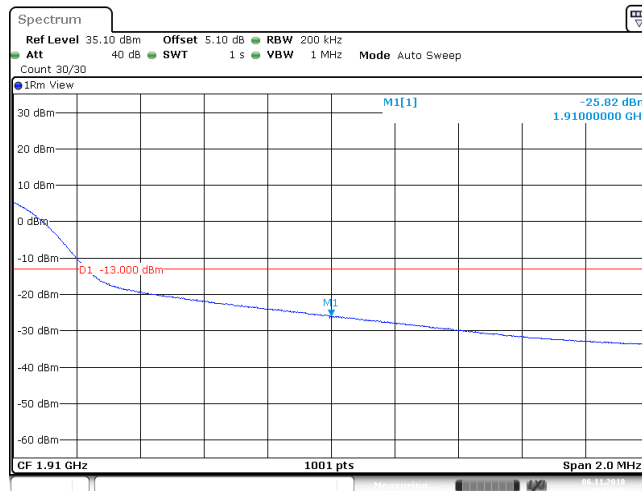
Date: 6 NOV 2018 07:53:32

Band2_20MHz_16QAM_19100_1RB#99



Date: 6 NOV 2018 07:55:30

Band2_20MHz_16QAM_19100_27RB#73



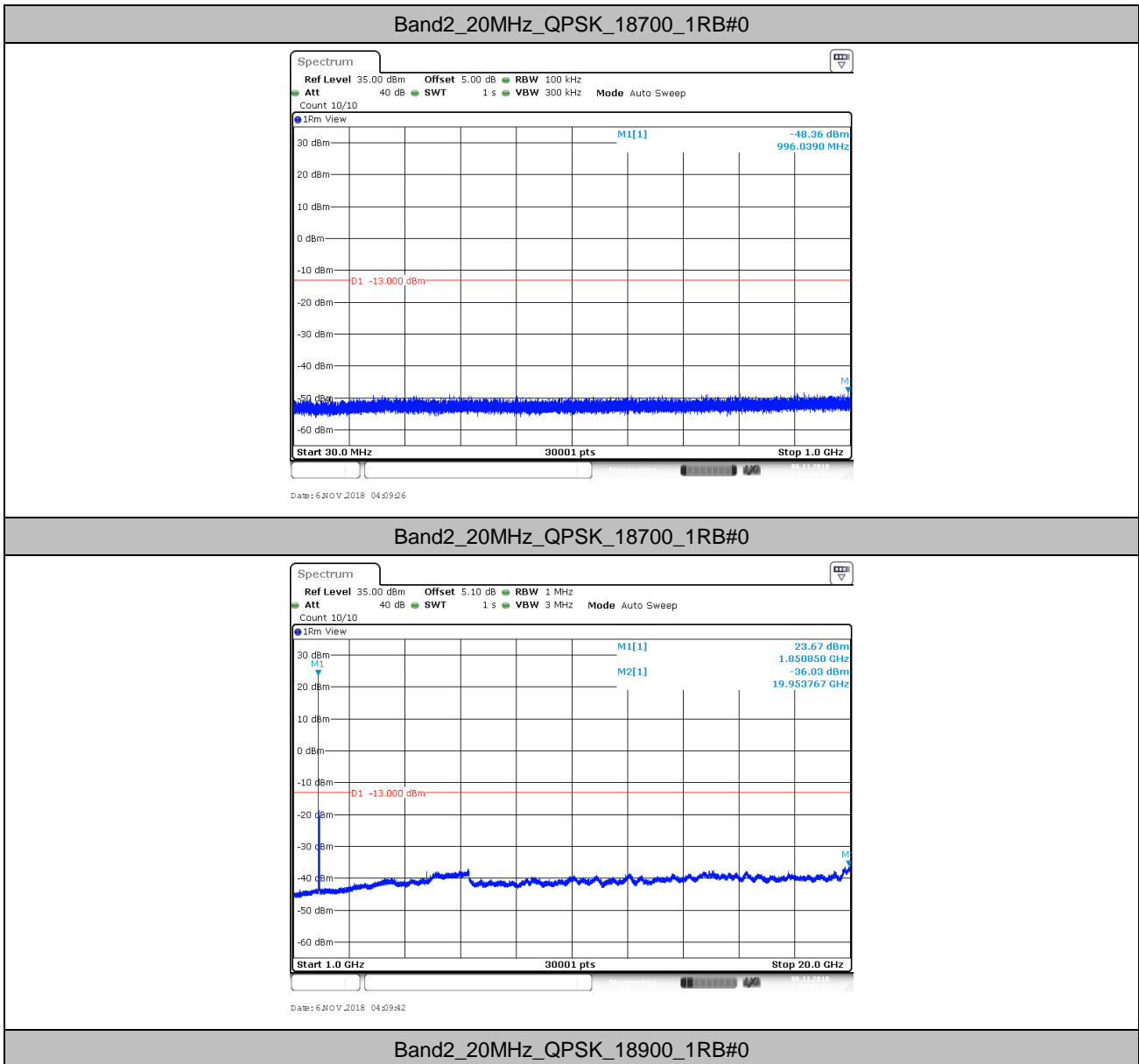
Date: 6 NOV 2018 07:57:04

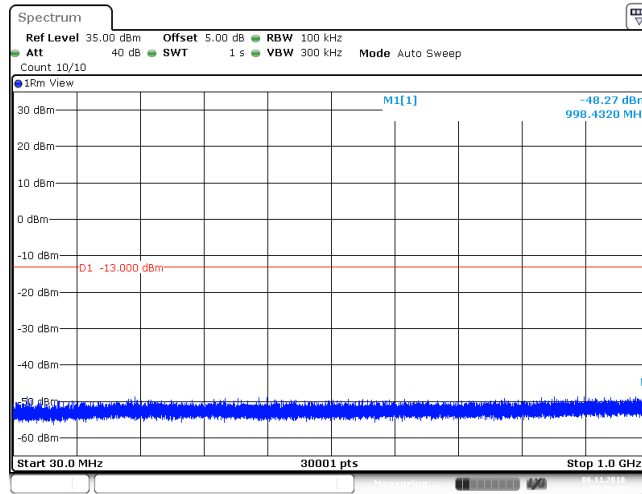
6. Spurious Emission at Antenna Terminal

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.

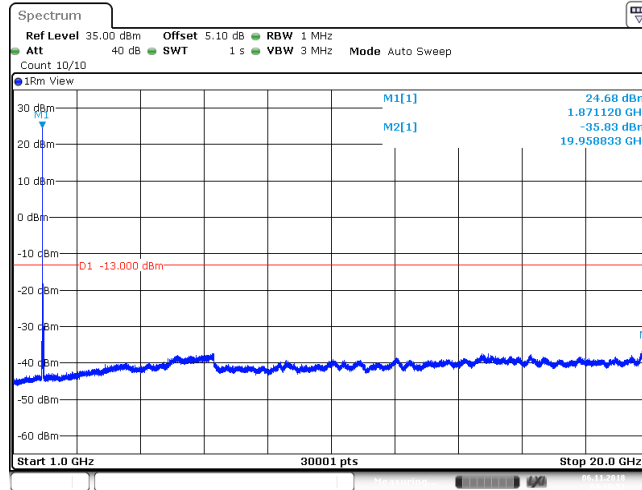
6.1. Test Plots





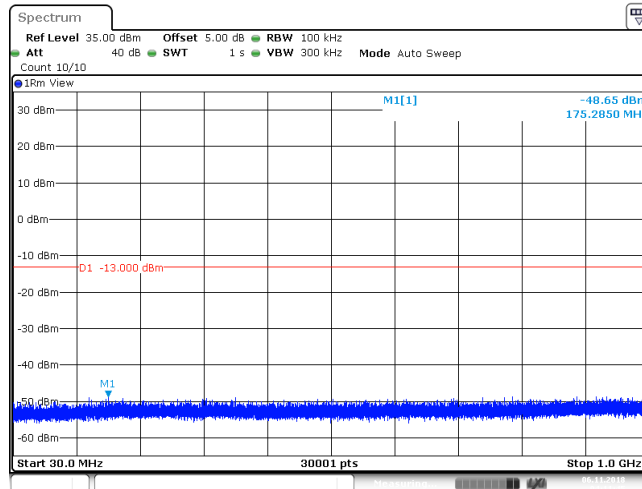
Date: 6 NOV 2018 04:10:36

Band2_20MHz_QPSK_18900_1RB#0



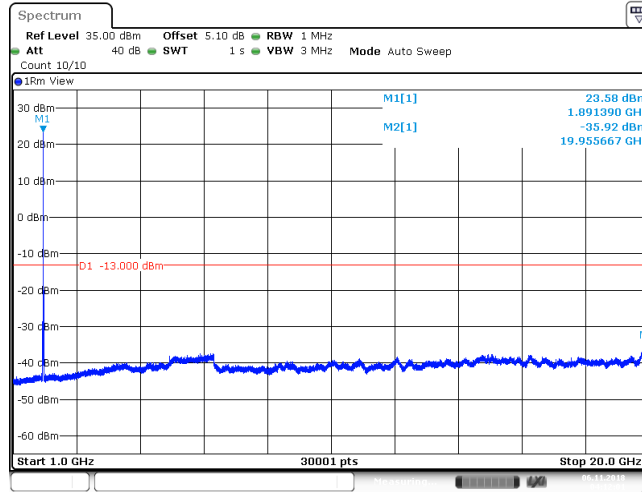
Date: 6 NOV 2018 04:10:52

Band2_20MHz_QPSK_19100_1RB#0



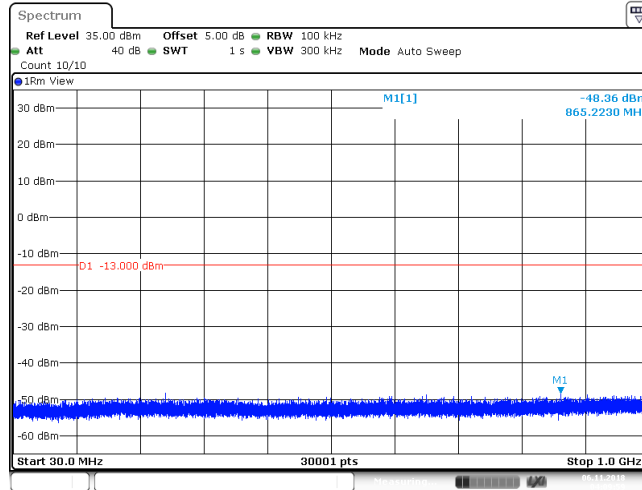
Date: 6 NOV 2018 04:11:45

Band2_20MHz_QPSK_19100_1RB#0



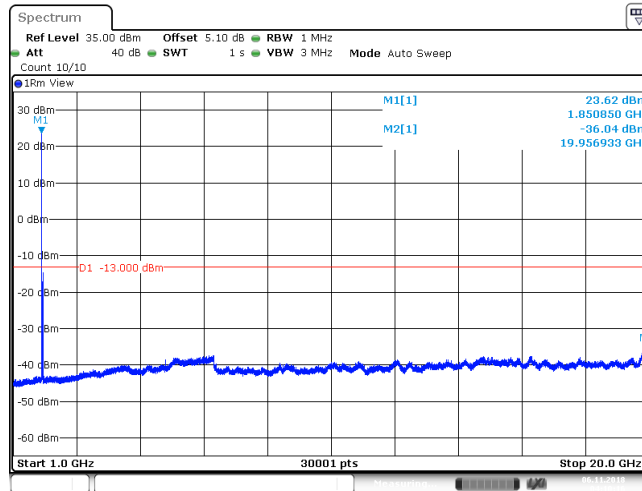
Date: 6 NOV 2018 04:12:01

Band2_20MHz_16QAM_18700_1RB#0



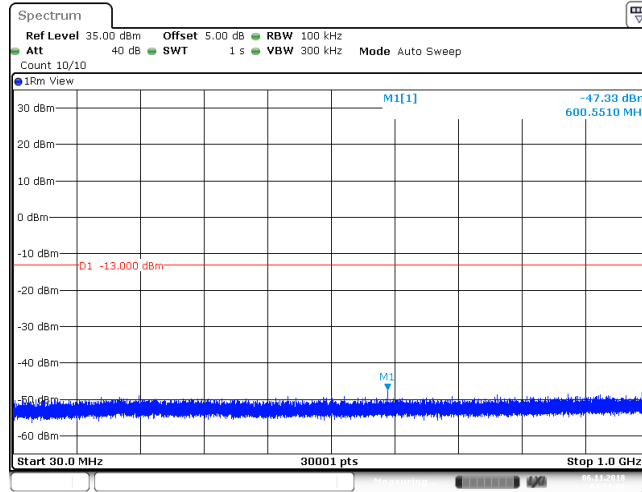
Date: 6 NOV 2018 04:10:00

Band2_20MHz_16QAM_18700_1RB#0



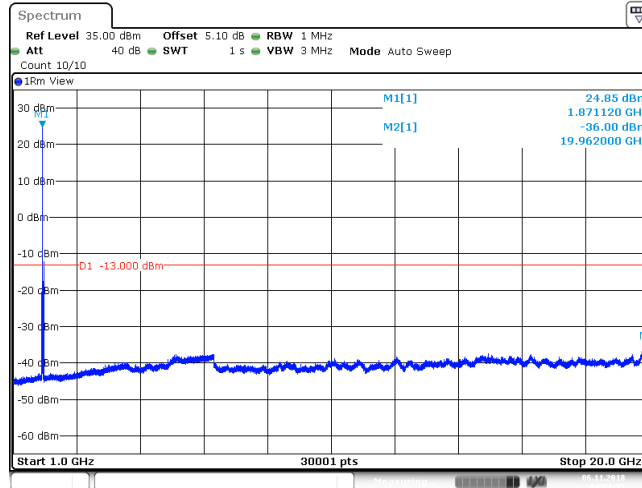
Date: 6 NOV 2018 04:10:16

Band2_20MHz_16QAM_18900_1RB#0



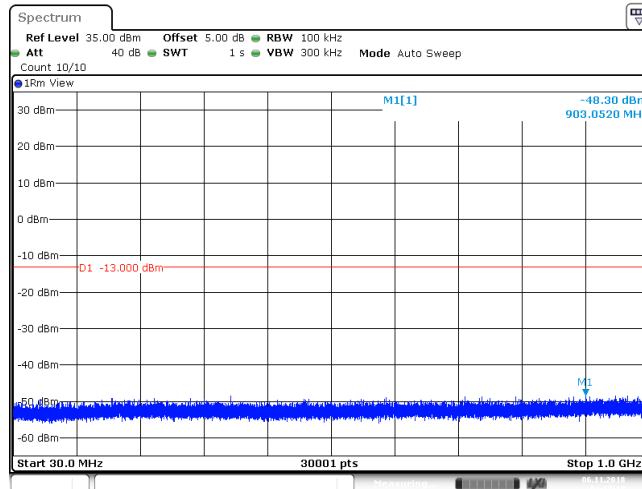
Date: 6 NOV 2018 04:11:09

Band2_20MHz_16QAM_18900_1RB#0



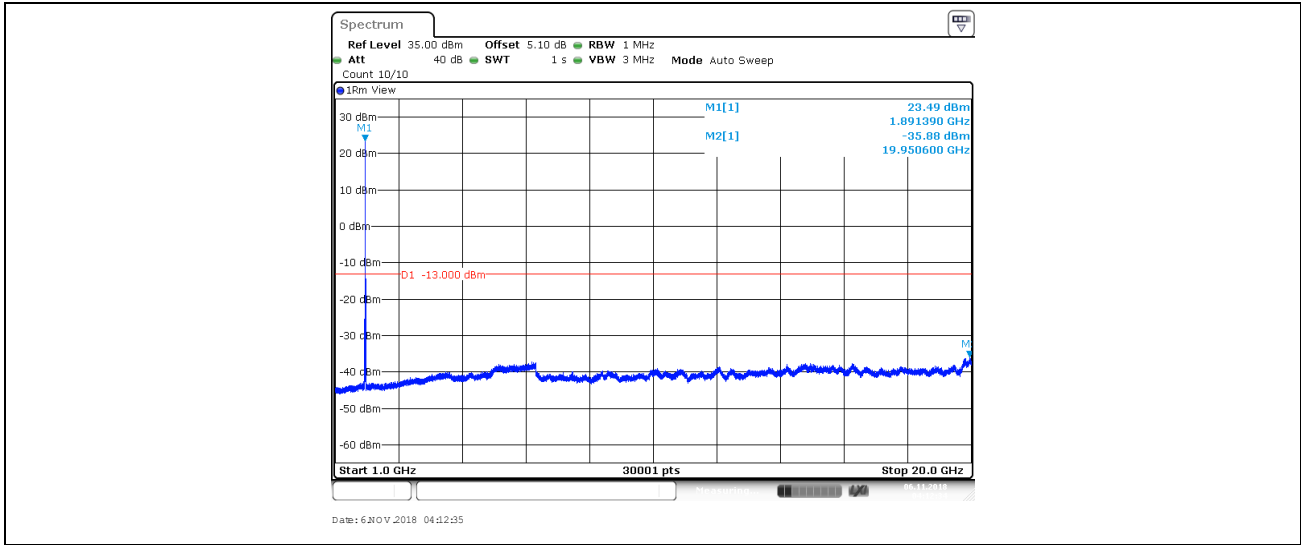
Date: 6 NOV 2018 04:11:25

Band2_20MHz_16QAM_19100_1RB#0



Date: 6 NOV 2018 04:12:19

Band2_20MHz_16QAM_19100_1RB#0



7. Field Strength of Spurious Radiation

7.1. Test BAND = LTE BAND 2

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
64.350000	-81.98	-13.00	68.98	Vertical
125.000000	-86.37	-13.00	73.37	Vertical
3702.000000	-50.11	-13.00	37.11	Vertical
5553.200000	-49.89	-13.00	36.89	Vertical
7404.400000	-64.06	-13.00	51.06	Vertical
10636.850000	-62.61	-13.00	49.61	Vertical
63.050000	-77.37	-13.00	64.37	Horizontal
264.450000	-87.53	-13.00	74.53	Horizontal
3702.000000	-52.16	-13.00	39.16	Horizontal
5553.200000	-50.59	-13.00	37.59	Horizontal
7404.400000	-60.20	-13.00	47.20	Horizontal
10643.350000	-62.85	-13.00	49.85	Horizontal

7.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
64.450000	-82.00	-13.00	69.00	Vertical
125.000000	-86.26	-13.00	73.26	Vertical
3741.975000	-49.00	-13.00	36.00	Vertical
5613.000000	-51.16	-13.00	38.16	Vertical
7484.350000	-64.08	-13.00	51.08	Vertical
11417.175000	-63.41	-13.00	50.41	Vertical
57.250000	-78.13	-13.00	65.13	Horizontal
263.400000	-86.90	-13.00	73.90	Horizontal
3741.975000	-47.90	-13.00	34.90	Horizontal
5613.325000	-51.64	-13.00	38.64	Horizontal
7484.025000	-63.52	-13.00	50.52	Horizontal
11226.725000	-63.00	-13.00	50.00	Horizontal

7.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
63.650000	-81.28	-13.00	68.28	Vertical
317.400000	-73.02	-13.00	60.02	Vertical
3781.950000	-57.00	-13.00	44.00	Vertical
5673.125000	-52.17	-13.00	39.17	Vertical
7968.925000	-63.85	-13.00	50.85	Vertical
10630.350000	-62.49	-13.00	49.49	Vertical
63.650000	-81.28	-13.00	68.28	Horizontal
317.400000	-73.02	-13.00	60.02	Horizontal
3781.950000	-57.00	-13.00	44.00	Horizontal
5673.125000	-52.17	-13.00	39.17	Horizontal
7968.925000	-63.85	-13.00	50.85	Horizontal
10630.350000	-62.49	-13.00	49.49	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
Band2	20MHz	QPSK	18700	100RB#0	VL	NT	17.71	0.000095	±2.5	PASS
Band2	20MHz	QPSK	18700	100RB#0	VN	NT	1.52	0.000008	±2.5	PASS
Band2	20MHz	QPSK	18700	100RB#0	VH	NT	-26.74	-0.000144	±2.5	PASS
Band2	20MHz	QPSK	18900	100RB#0	VL	NT	7.30	0.000039	±2.5	PASS
Band2	20MHz	QPSK	18900	100RB#0	VN	NT	-29.09	-0.000155	±2.5	PASS
Band2	20MHz	QPSK	18900	100RB#0	VH	NT	9.97	0.000053	±2.5	PASS
Band2	20MHz	QPSK	19100	100RB#0	VL	NT	22.20	0.000117	±2.5	PASS
Band2	20MHz	QPSK	19100	100RB#0	VN	NT	-6.88	-0.000036	±2.5	PASS
Band2	20MHz	QPSK	19100	100RB#0	VH	NT	-9.46	-0.000050	±2.5	PASS
Band2	20MHz	16QAM	18700	100RB#0	VL	NT	27.61	0.000148	±2.5	PASS
Band2	20MHz	16QAM	18700	27RB#0	VN	NT	-28.00	-0.000151	±2.5	PASS
Band2	20MHz	16QAM	18700	27RB#0	VH	NT	-27.55	-0.000148	±2.5	PASS
Band2	20MHz	16QAM	18900	27RB#0	VL	NT	-12.41	-0.000066	±2.5	PASS
Band2	20MHz	16QAM	18900	27RB#0	VN	NT	-8.50	-0.000045	±2.5	PASS
Band2	20MHz	16QAM	18900	27RB#0	VH	NT	21.43	0.000114	±2.5	PASS
Band2	20MHz	16QAM	19100	27RB#0	VL	NT	24.48	0.000129	±2.5	PASS
Band2	20MHz	16QAM	19100	27RB#0	VN	NT	-23.27	-0.000122	±2.5	PASS
Band2	20MHz	16QAM	19100	27RB#0	VH	NT	27.15	0.000143	±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
Band2	20MHz	QPSK	18700	100RB#0	NV	-30	-20.98	-0.000113	±2.5	PASS
Band2	20MHz	QPSK	18700	100RB#0	NV	-20	10.95	0.000059	±2.5	PASS
Band2	20MHz	QPSK	18700	100RB#0	NV	0	-23.05	-0.000124	±2.5	PASS
Band2	20MHz	QPSK	18700	100RB#0	NV	10	-2.90	-0.000016	±2.5	PASS
Band2	20MHz	QPSK	18700	100RB#0	NV	20	23.71	0.000127	±2.5	PASS
Band2	20MHz	QPSK	18700	100RB#0	NV	30	-22.93	-0.000123	±2.5	PASS
Band2	20MHz	QPSK	18700	100RB#0	NV	40	5.12	0.000028	±2.5	PASS
Band2	20MHz	QPSK	18700	100RB#0	NV	50	2.30	0.000012	±2.5	PASS
Band2	20MHz	QPSK	18900	100RB#0	NV	-30	-25.35	-0.000135	±2.5	PASS
Band2	20MHz	QPSK	18900	100RB#0	NV	-20	12.19	0.000065	±2.5	PASS
Band2	20MHz	QPSK	18900	100RB#0	NV	0	28.36	0.000151	±2.5	PASS
Band2	20MHz	QPSK	18900	100RB#0	NV	10	-25.63	-0.000136	±2.5	PASS
Band2	20MHz	QPSK	18900	100RB#0	NV	20	-28.89	-0.000154	±2.5	PASS
Band2	20MHz	QPSK	18900	100RB#0	NV	30	8.48	0.000045	±2.5	PASS
Band2	20MHz	QPSK	18900	100RB#0	NV	40	27.70	0.000147	±2.5	PASS
Band2	20MHz	QPSK	18900	100RB#0	NV	50	13.91	0.000074	±2.5	PASS
Band2	20MHz	QPSK	19100	100RB#0	NV	-30	-4.03	-0.000021	±2.5	PASS
Band2	20MHz	QPSK	19100	100RB#0	NV	-20	-5.41	-0.000028	±2.5	PASS
Band2	20MHz	QPSK	19100	100RB#0	NV	0	1.81	0.000010	±2.5	PASS



Band2	20MHz	QPSK	19100	100RB#0	NV	10	2.53	0.000013	±2.5	PASS
Band2	20MHz	QPSK	19100	100RB#0	NV	20	-27.56	-0.000145	±2.5	PASS
Band2	20MHz	QPSK	19100	100RB#0	NV	30	5.58	0.000029	±2.5	PASS
Band2	20MHz	QPSK	19100	100RB#0	NV	40	-9.55	-0.000050	±2.5	PASS
Band2	20MHz	QPSK	19100	100RB#0	NV	50	9.47	0.000050	±2.5	PASS
Band2	20MHz	16QAM	18700	27RB#0	NV	-30	22.77	0.000122	±2.5	PASS
Band2	20MHz	16QAM	18700	27RB#0	NV	-20	-3.45	-0.000019	±2.5	PASS
Band2	20MHz	16QAM	18700	27RB#0	NV	0	9.63	0.000052	±2.5	PASS
Band2	20MHz	16QAM	18700	27RB#0	NV	10	-5.25	-0.000028	±2.5	PASS
Band2	20MHz	16QAM	18700	27RB#0	NV	20	8.37	0.000045	±2.5	PASS
Band2	20MHz	16QAM	18700	27RB#0	NV	30	-21.78	-0.000117	±2.5	PASS
Band2	20MHz	16QAM	18700	27RB#0	NV	40	20.28	0.000109	±2.5	PASS
Band2	20MHz	16QAM	18700	27RB#0	NV	50	-6.09	-0.000033	±2.5	PASS
Band2	20MHz	16QAM	18900	27RB#0	NV	-30	-15.76	-0.000084	±2.5	PASS
Band2	20MHz	16QAM	18900	27RB#0	NV	-20	-13.59	-0.000072	±2.5	PASS
Band2	20MHz	16QAM	18900	27RB#0	NV	0	-6.63	-0.000035	±2.5	PASS
Band2	20MHz	16QAM	18900	27RB#0	NV	10	24.06	0.000128	±2.5	PASS
Band2	20MHz	16QAM	18900	27RB#0	NV	20	18.60	0.000099	±2.5	PASS
Band2	20MHz	16QAM	18900	27RB#0	NV	30	-10.42	-0.000055	±2.5	PASS
Band2	20MHz	16QAM	18900	27RB#0	NV	40	21.85	0.000116	±2.5	PASS
Band2	20MHz	16QAM	18900	27RB#0	NV	50	9.36	0.000050	±2.5	PASS
Band2	20MHz	16QAM	19100	27RB#0	NV	-30	4.17	0.000022	±2.5	PASS
Band2	20MHz	16QAM	19100	27RB#0	NV	-20	24.50	0.000129	±2.5	PASS
Band2	20MHz	16QAM	19100	27RB#0	NV	0	-12.98	-0.000068	±2.5	PASS
Band2	20MHz	16QAM	19100	27RB#0	NV	10	-24.43	-0.000129	±2.5	PASS
Band2	20MHz	16QAM	19100	27RB#0	NV	20	-27.49	-0.000145	±2.5	PASS
Band2	20MHz	16QAM	19100	27RB#0	NV	30	17.38	0.000091	±2.5	PASS
Band2	20MHz	16QAM	19100	27RB#0	NV	40	0.29	0.000002	±2.5	PASS
Band2	20MHz	16QAM	19100	27RB#0	NV	50	29.61	0.000156	±2.5	PASS

The End