



Appendix B

E-UTRA BAND 4

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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
Band4	5MHz	QPSK	19975	1RB#0	23.38	22.38	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#12	23.65	22.65	30.00	PASS
Band4	5MHz	QPSK	19975	1RB#24	23.28	22.28	30.00	PASS
Band4	5MHz	QPSK	19975	12RB#0	22.59	21.59	30.00	PASS
Band4	5MHz	QPSK	19975	12RB#6	22.68	21.68	30.00	PASS
Band4	5MHz	QPSK	19975	12RB#13	22.56	21.56	30.00	PASS
Band4	5MHz	QPSK	19975	25RB#0	22.61	21.61	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#0	23.01	22.01	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#12	23.32	22.32	30.00	PASS
Band4	5MHz	QPSK	20175	1RB#24	23.03	22.03	30.00	PASS
Band4	5MHz	QPSK	20175	12RB#0	22.16	21.16	30.00	PASS
Band4	5MHz	QPSK	20175	12RB#6	22.26	21.26	30.00	PASS
Band4	5MHz	QPSK	20175	12RB#13	22.16	21.16	30.00	PASS
Band4	5MHz	QPSK	20175	25RB#0	22.14	21.14	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#0	23.63	22.63	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#12	23.89	22.89	30.00	PASS
Band4	5MHz	QPSK	20375	1RB#24	23.35	22.35	30.00	PASS
Band4	5MHz	QPSK	20375	12RB#0	22.82	21.82	30.00	PASS
Band4	5MHz	QPSK	20375	12RB#6	22.87	21.87	30.00	PASS
Band4	5MHz	QPSK	20375	12RB#13	22.70	21.70	30.00	PASS
Band4	5MHz	QPSK	20375	25RB#0	22.78	21.78	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#0	22.48	21.48	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#12	22.74	21.74	30.00	PASS
Band4	5MHz	16QAM	19975	1RB#24	22.38	21.38	30.00	PASS
Band4	5MHz	16QAM	19975	25RB#0	21.48	20.48	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#0	22.14	21.14	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#12	22.44	21.44	30.00	PASS
Band4	5MHz	16QAM	20175	1RB#24	22.21	21.21	30.00	PASS
Band4	5MHz	16QAM	20175	25RB#0	21.46	20.46	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#0	22.73	21.73	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#12	22.90	21.90	30.00	PASS
Band4	5MHz	16QAM	20375	1RB#24	22.48	21.48	30.00	PASS
Band4	5MHz	16QAM	20375	25RB#0	21.43	20.43	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#0	23.14	22.14	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#24	23.60	22.60	30.00	PASS
Band4	10MHz	QPSK	20000	1RB#49	22.72	21.72	30.00	PASS



Band4	10MHz	QPSK	20000	25RB#0	22.46	21.46	30.00	PASS
Band4	10MHz	QPSK	20000	25RB#12	22.52	21.52	30.00	PASS
Band4	10MHz	QPSK	20000	25RB#25	22.17	21.17	30.00	PASS
Band4	10MHz	QPSK	20000	50RB#0	22.27	21.27	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#0	22.71	21.71	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#24	23.30	22.30	30.00	PASS
Band4	10MHz	QPSK	20175	1RB#49	22.79	21.79	30.00	PASS
Band4	10MHz	QPSK	20175	25RB#0	21.98	20.98	30.00	PASS
Band4	10MHz	QPSK	20175	25RB#12	22.16	21.16	30.00	PASS
Band4	10MHz	QPSK	20175	25RB#25	22.08	21.08	30.00	PASS
Band4	10MHz	QPSK	20175	50RB#0	22.01	21.01	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#0	23.26	22.26	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#24	23.81	22.81	30.00	PASS
Band4	10MHz	QPSK	20350	1RB#49	23.07	22.07	30.00	PASS
Band4	10MHz	QPSK	20350	25RB#0	22.62	21.62	30.00	PASS
Band4	10MHz	QPSK	20350	25RB#12	22.81	21.81	30.00	PASS
Band4	10MHz	QPSK	20350	25RB#25	22.66	21.66	30.00	PASS
Band4	10MHz	QPSK	20350	50RB#0	22.61	21.61	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#0	22.31	21.31	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#24	22.60	21.60	30.00	PASS
Band4	10MHz	16QAM	20000	1RB#49	21.83	20.83	30.00	PASS
Band4	10MHz	16QAM	20000	27RB#0	22.42	21.42	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#0	21.72	20.72	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#24	22.34	21.34	30.00	PASS
Band4	10MHz	16QAM	20175	1RB#49	21.96	20.96	30.00	PASS
Band4	10MHz	16QAM	20175	27RB#0	22.43	21.43	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#0	22.37	21.37	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#24	22.79	21.79	30.00	PASS
Band4	10MHz	16QAM	20350	1RB#49	22.19	21.19	30.00	PASS
Band4	10MHz	16QAM	20350	27RB#0	22.46	21.46	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#0	23.14	22.14	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#38	23.70	22.70	30.00	PASS
Band4	15MHz	QPSK	20025	1RB#74	22.60	21.60	30.00	PASS
Band4	15MHz	QPSK	20025	36RB#0	22.54	21.54	30.00	PASS
Band4	15MHz	QPSK	20025	36RB#18	22.69	21.69	30.00	PASS
Band4	15MHz	QPSK	20025	36RB#39	22.20	21.20	30.00	PASS
Band4	15MHz	QPSK	20025	75RB#0	22.24	21.24	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#0	22.69	21.69	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#38	23.61	22.61	30.00	PASS
Band4	15MHz	QPSK	20175	1RB#74	22.98	21.98	30.00	PASS
Band4	15MHz	QPSK	20175	36RB#0	22.17	21.17	30.00	PASS
Band4	15MHz	QPSK	20175	36RB#18	22.49	21.49	30.00	PASS



Band4	15MHz	QPSK	20175	36RB#39	22.32	21.32	30.00	PASS
Band4	15MHz	QPSK	20175	75RB#0	22.58	21.58	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#0	23.06	22.06	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#38	24.08	23.08	30.00	PASS
Band4	15MHz	QPSK	20325	1RB#74	23.07	22.07	30.00	PASS
Band4	15MHz	QPSK	20325	36RB#0	22.63	21.63	30.00	PASS
Band4	15MHz	QPSK	20325	36RB#18	23.05	22.05	30.00	PASS
Band4	15MHz	QPSK	20325	36RB#39	22.81	21.81	30.00	PASS
Band4	15MHz	QPSK	20325	75RB#0	22.32	21.32	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#0	22.28	21.28	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#38	22.95	21.95	30.00	PASS
Band4	15MHz	16QAM	20025	1RB#74	21.86	20.86	30.00	PASS
Band4	15MHz	16QAM	20025	27RB#0	22.35	21.35	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#0	21.98	20.98	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#38	22.83	21.83	30.00	PASS
Band4	15MHz	16QAM	20175	1RB#74	22.21	21.21	30.00	PASS
Band4	15MHz	16QAM	20175	27RB#0	22.46	21.46	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#0	22.21	21.21	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#38	23.14	22.14	30.00	PASS
Band4	15MHz	16QAM	20325	1RB#74	22.24	21.24	30.00	PASS
Band4	15MHz	16QAM	20325	27RB#0	22.31	21.31	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#0	24.19	23.19	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#49	23.17	22.17	30.00	PASS
Band4	20MHz	QPSK	20050	1RB#99	23.78	22.78	30.00	PASS
Band4	20MHz	QPSK	20050	50RB#0	22.62	21.62	30.00	PASS
Band4	20MHz	QPSK	20050	50RB#25	22.29	21.29	30.00	PASS
Band4	20MHz	QPSK	20050	50RB#50	22.32	21.32	30.00	PASS
Band4	20MHz	QPSK	20050	100RB#0	23.21	22.21	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#0	23.84	22.84	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#49	23.08	22.08	30.00	PASS
Band4	20MHz	QPSK	20175	1RB#99	23.99	22.99	30.00	PASS
Band4	20MHz	QPSK	20175	50RB#0	22.33	21.33	30.00	PASS
Band4	20MHz	QPSK	20175	50RB#25	22.26	21.26	30.00	PASS
Band4	20MHz	QPSK	20175	50RB#50	22.61	21.61	30.00	PASS
Band4	20MHz	QPSK	20175	100RB#0	22.47	21.47	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#0	22.41	21.41	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#49	23.56	22.56	30.00	PASS
Band4	20MHz	QPSK	20300	1RB#99	24.13	23.13	30.00	PASS
Band4	20MHz	QPSK	20300	50RB#0	22.70	21.70	30.00	PASS
Band4	20MHz	QPSK	20300	50RB#25	22.71	21.71	30.00	PASS
Band4	20MHz	QPSK	20300	50RB#50	23.03	22.03	30.00	PASS
Band4	20MHz	QPSK	20300	100RB#0	23.41	22.41	30.00	PASS

Band4	20MHz	16QAM	20050	1RB#0	23.34	22.34	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#49	22.39	21.39	30.00	PASS
Band4	20MHz	16QAM	20050	1RB#99	22.98	21.98	30.00	PASS
Band4	20MHz	16QAM	20050	27RB#0	22.46	21.46	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#0	22.96	21.96	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#49	22.27	21.27	30.00	PASS
Band4	20MHz	16QAM	20175	1RB#99	23.16	22.16	30.00	PASS
Band4	20MHz	16QAM	20175	27RB#0	22.48	21.48	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#0	23.00	22.00	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#49	22.78	21.78	30.00	PASS
Band4	20MHz	16QAM	20300	1RB#99	23.39	22.39	30.00	PASS
Band4	20MHz	16QAM	20300	27RB#0	22.29	21.29	30.00	PASS

Remark:

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

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

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

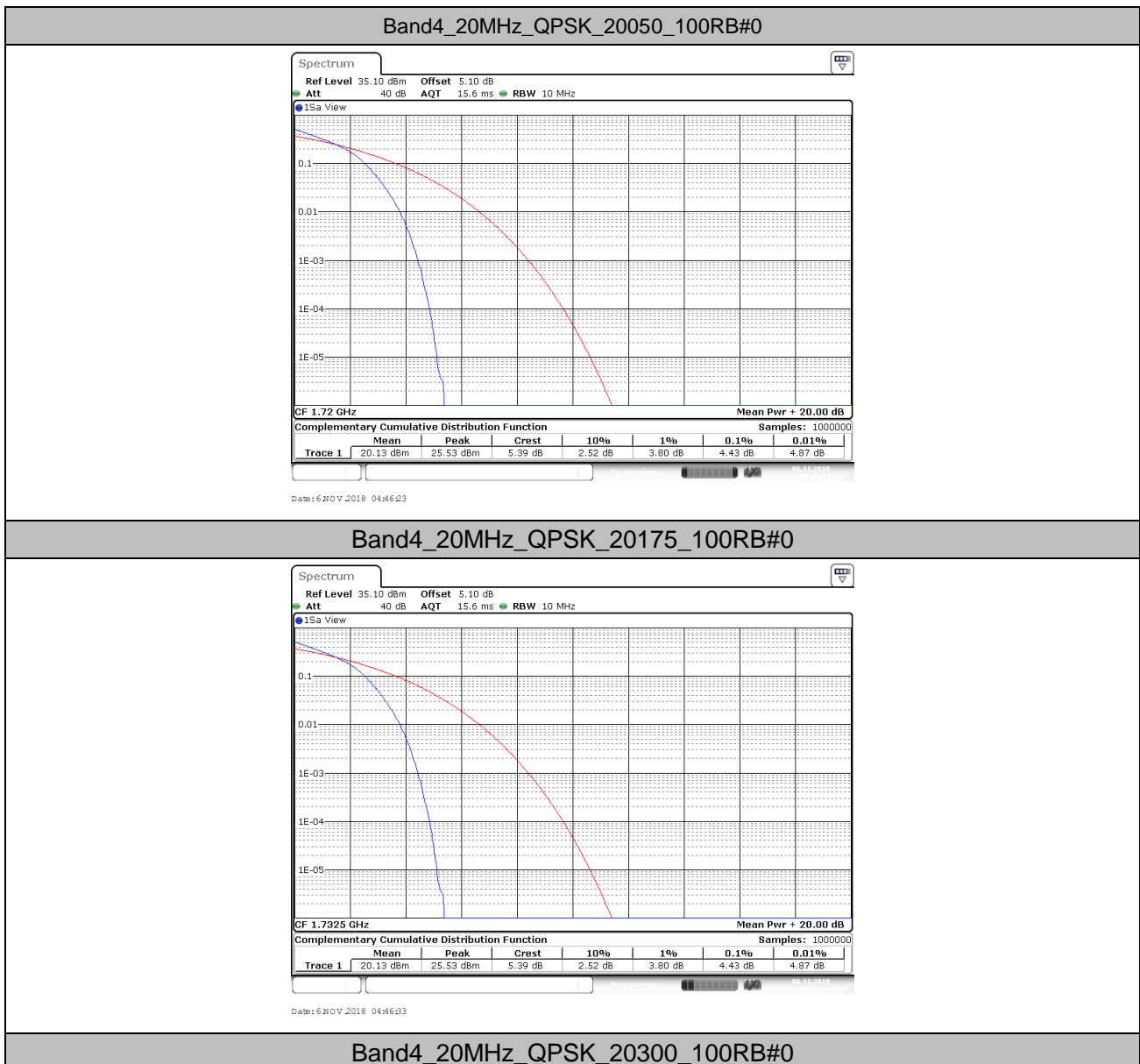
b: SGP=Signal Generator Level

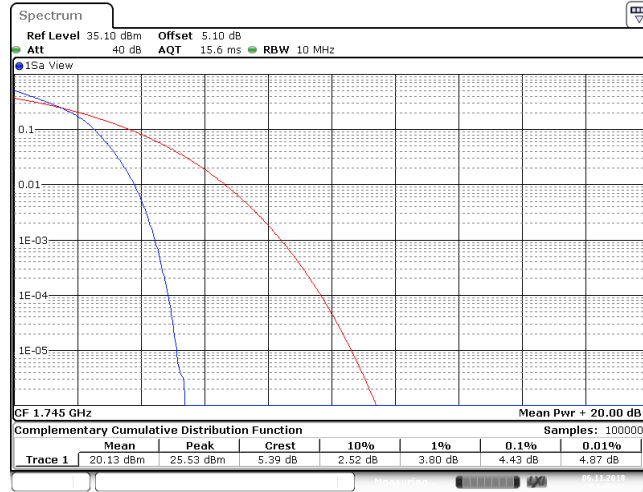
2. Peak-to-Average Ratio(CCDF)

2.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band4	20MHz	QPSK	20050	100RB#0	4.43	13	PASS
Band4	20MHz	QPSK	20175	100RB#0	4.43	13	PASS
Band4	20MHz	QPSK	20300	100RB#0	4.43	13	PASS
Band4	20MHz	16QAM	20050	27RB#0	6.23	13	PASS
Band4	20MHz	16QAM	20175	27RB#0	6.23	13	PASS
Band4	20MHz	16QAM	20300	27RB#0	6.23	13	PASS

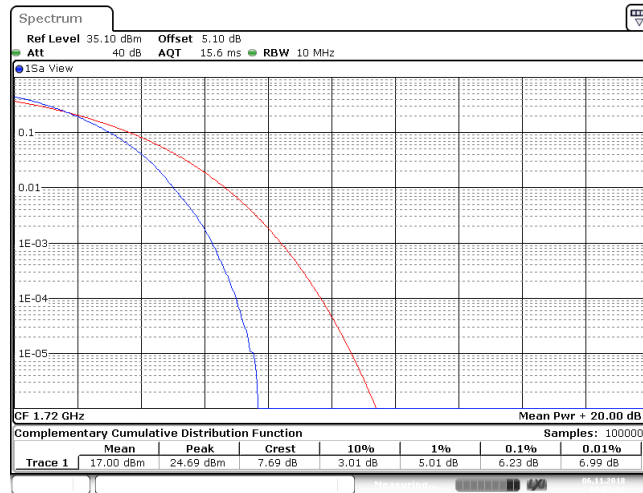
2.2. Test Plots





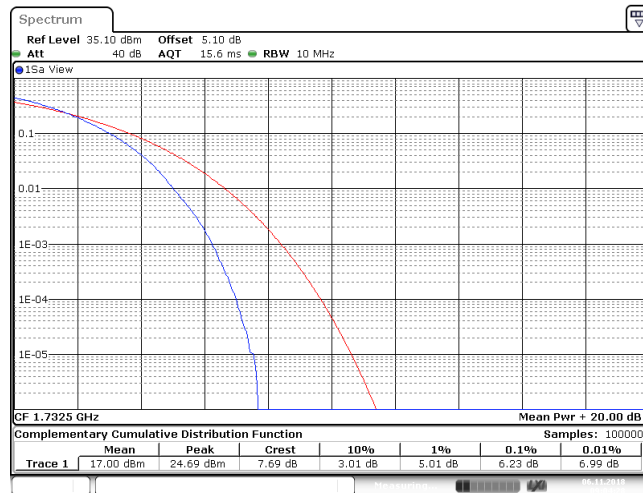
Date: 6 NOV 2018 04:46:42

Band4_20MHz_16QAM_20050_27RB#0



Date: 6 NOV 2018 09:03:02

Band4_20MHz_16QAM_20175_27RB#0



Date: 6 NOV 2018 09:04:29

Band4_20MHz_16QAM_20300_27RB#0

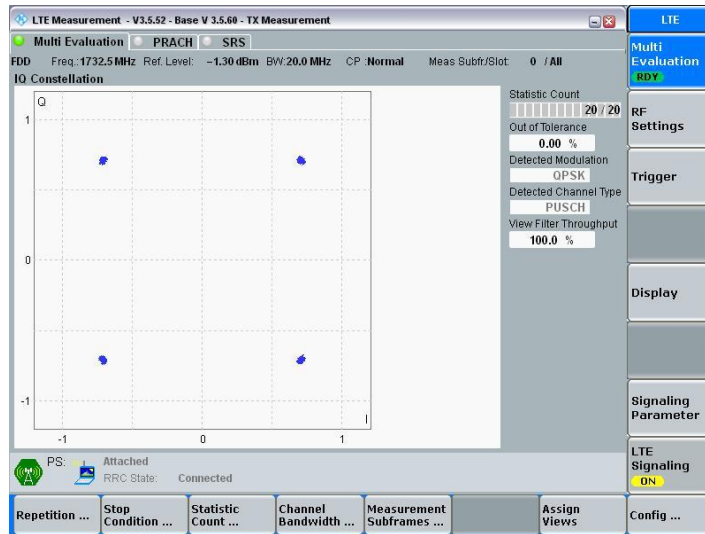


3. Modulation Characteristics

3.1. Test BAND = LTE BAND4

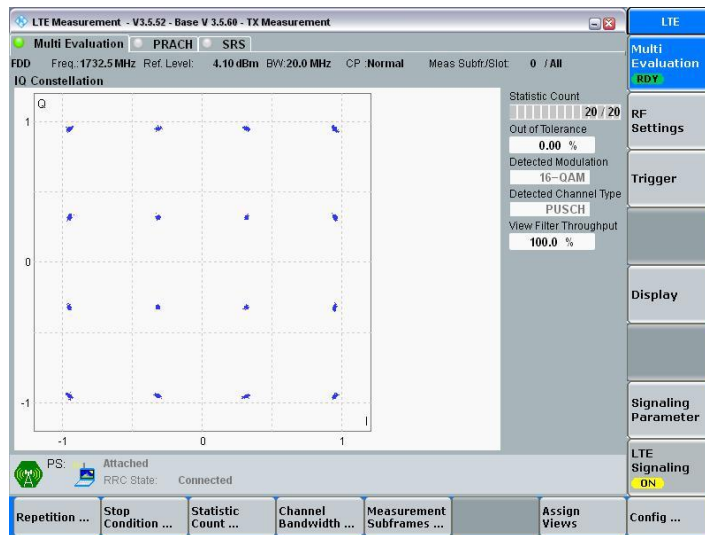
3.1.1. Test Mode = LTE /TM1 20MHz

3.1.1.1. Test Channel = MCH



3.1.2. Test Mode = LTE /TM2 20MHz

3.1.2.1. Test Channel = MCH

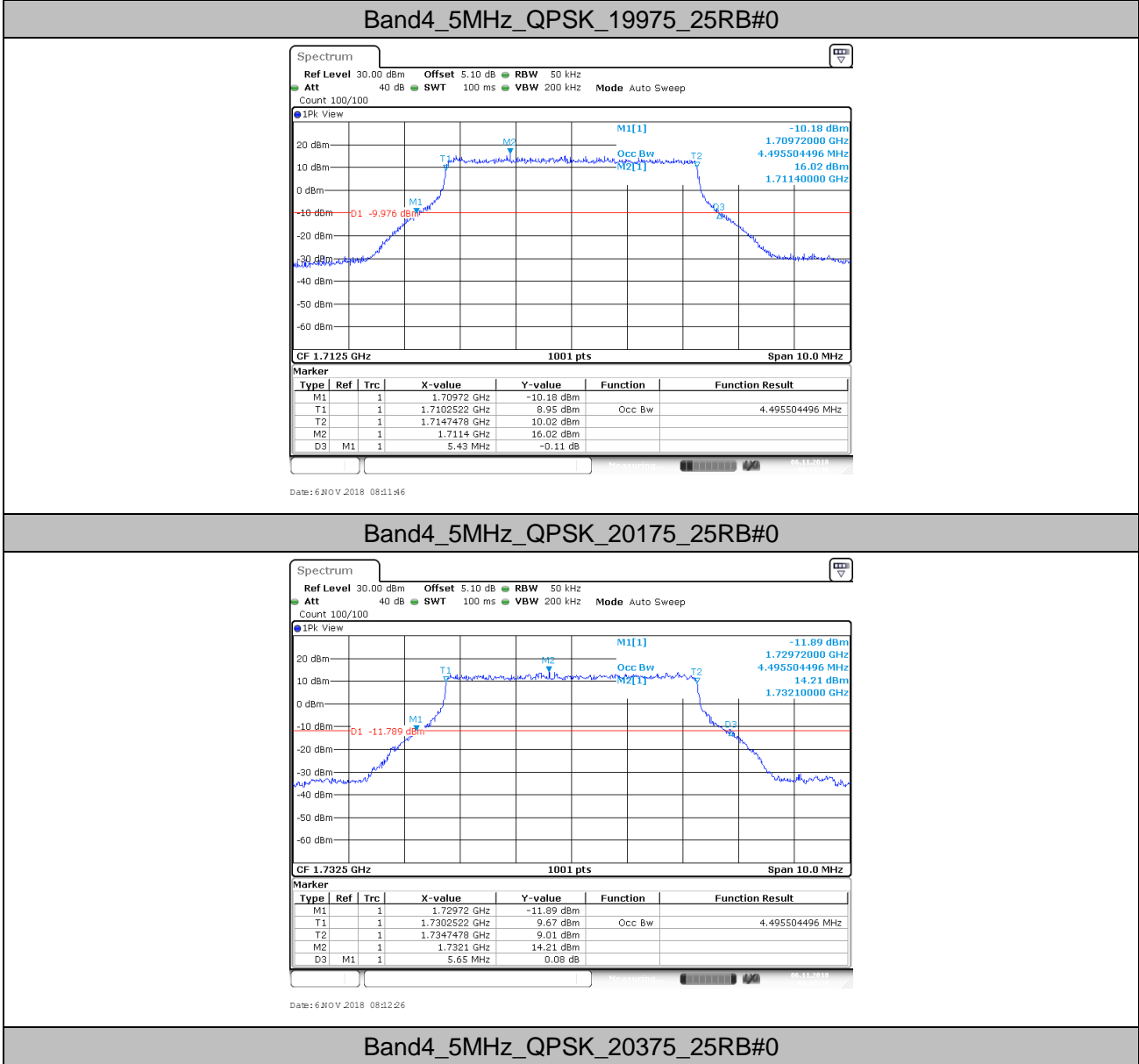


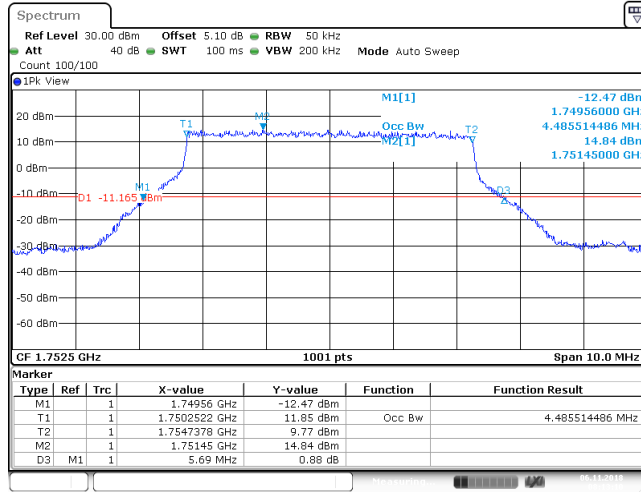
4. 26dB Bandwidth and Occupied Bandwidth

4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band4	5MHz	QPSK	19975	25RB#0	4.496	5.430	PASS
Band4	5MHz	QPSK	20175	25RB#0	4.496	5.650	PASS
Band4	5MHz	QPSK	20375	25RB#0	4.486	5.690	PASS
Band4	5MHz	16QAM	19975	25RB#0	4.486	5.630	PASS
Band4	5MHz	16QAM	20175	25RB#0	4.505	5.620	PASS
Band4	5MHz	16QAM	20375	25RB#0	4.496	5.510	PASS
Band4	10MHz	QPSK	20000	50RB#0	8.971	10.900	PASS
Band4	10MHz	QPSK	20175	50RB#0	8.971	10.840	PASS
Band4	10MHz	QPSK	20350	50RB#0	8.951	10.880	PASS
Band4	10MHz	16QAM	20000	27RB#0	4.935	7.100	PASS
Band4	10MHz	16QAM	20175	27RB#0	4.975	6.960	PASS
Band4	10MHz	16QAM	20350	27RB#0	4.975	6.780	PASS
Band4	15MHz	QPSK	20025	75RB#0	13.546	16.530	PASS
Band4	15MHz	QPSK	20175	75RB#0	13.546	16.320	PASS
Band4	15MHz	QPSK	20325	75RB#0	13.546	16.350	PASS
Band4	15MHz	16QAM	20025	27RB#0	5.335	8.340	PASS
Band4	15MHz	16QAM	20175	27RB#0	5.694	9.180	PASS
Band4	15MHz	16QAM	20325	27RB#0	5.455	8.490	PASS
Band4	20MHz	QPSK	20050	100RB#0	18.102	20.680	PASS
Band4	20MHz	QPSK	20175	100RB#0	18.062	20.600	PASS
Band4	20MHz	QPSK	20300	100RB#0	18.022	20.760	PASS
Band4	20MHz	16QAM	20050	27RB#0	5.275	7.720	PASS
Band4	20MHz	16QAM	20175	27RB#0	5.554	7.960	PASS
Band4	20MHz	16QAM	20300	27RB#0	5.475	8.360	PASS

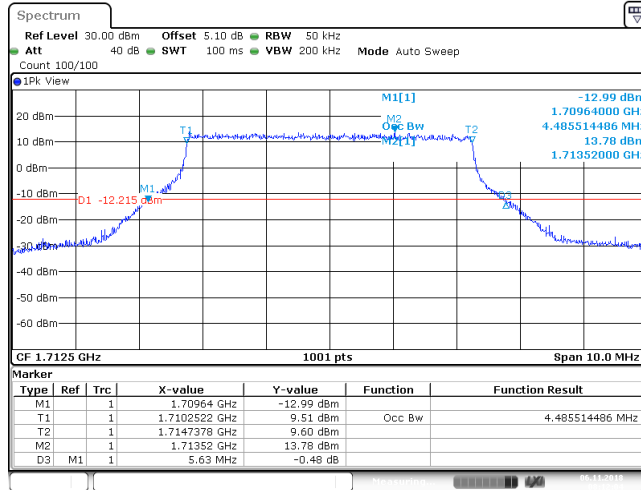
4.2. Test Plots





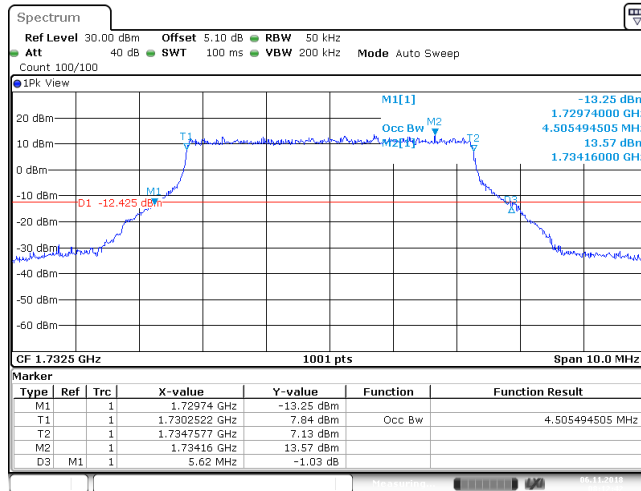
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Band4_5MHz_16QAM_19975_25RB#0



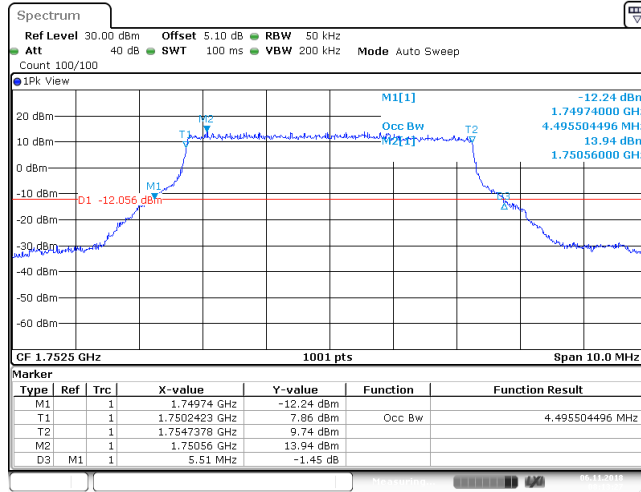
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Band4_5MHz_16QAM_20175_25RB#0



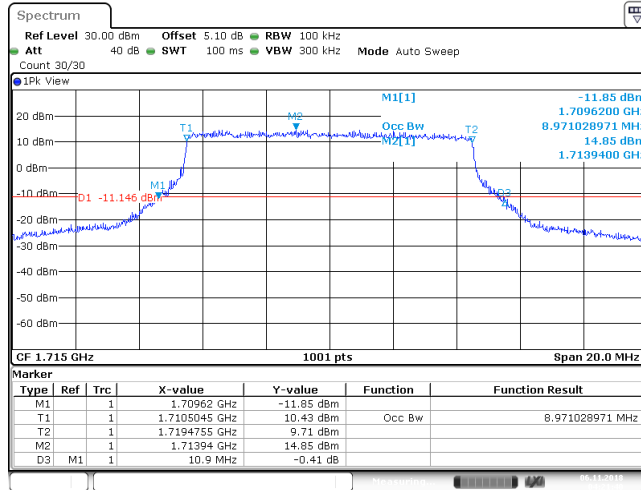
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Band4_5MHz_16QAM_20375_25RB#0



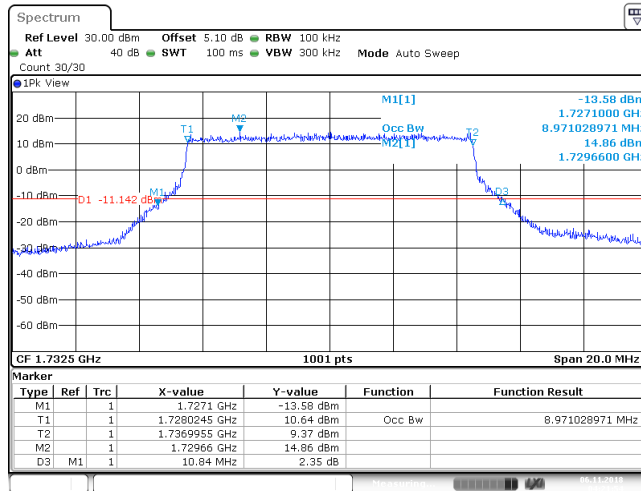
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Band4_10MHz_QPSK_20000_50RB#0



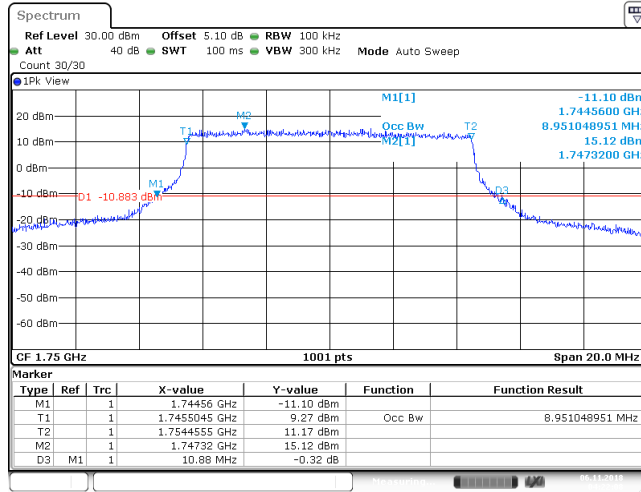
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Band4_10MHz_QPSK_20175_50RB#0

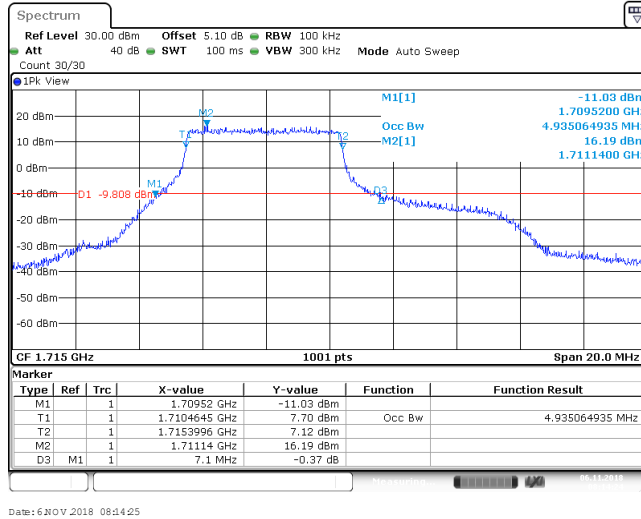


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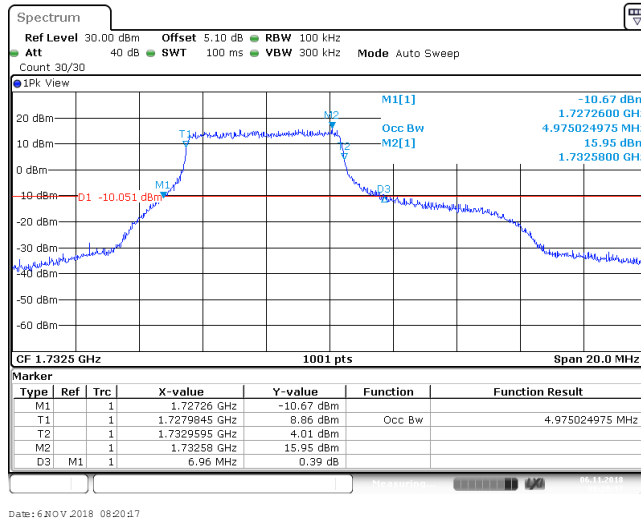
Band4_10MHz_QPSK_20350_50RB#0



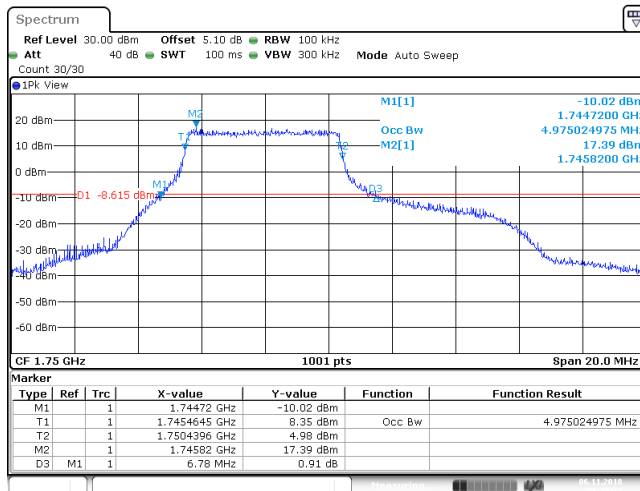
Band4_10MHz_16QAM_20000_27RB#0



Band4_10MHz_16QAM_20175_27RB#0

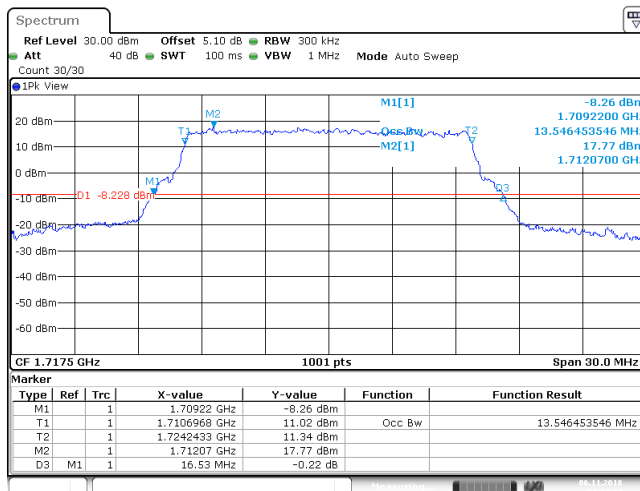


Band4_10MHz_16QAM_20350_27RB#0



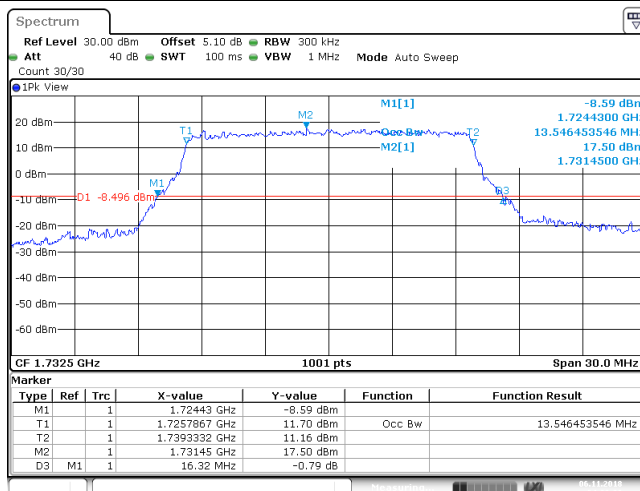
Date: 6 NOV 2018 08:25:34

Band4_15MHz_QPSK_20025_75RB#0



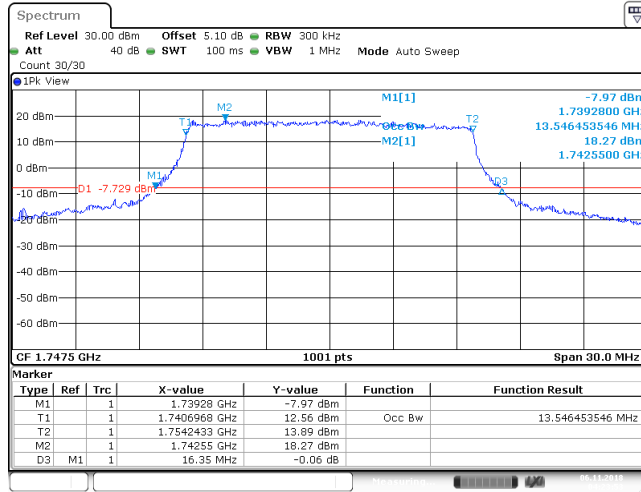
Date: 6 NOV 2018 04:23:25

Band4_15MHz_QPSK_20175_75RB#0

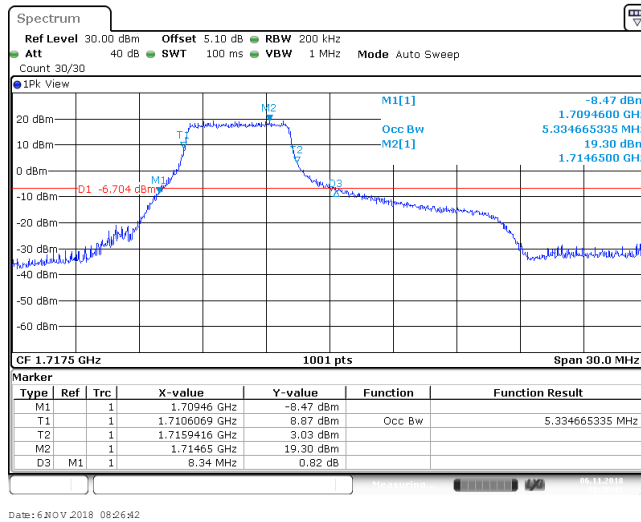


Date: 6 NOV 2018 04:23:39

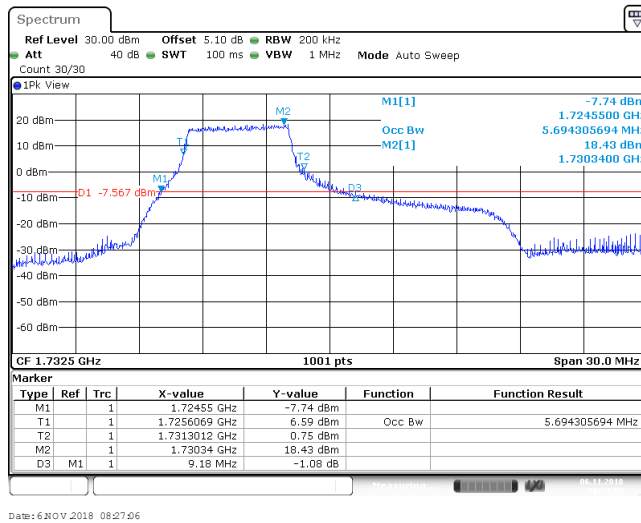
Band4_15MHz_QPSK_20325_75RB#0



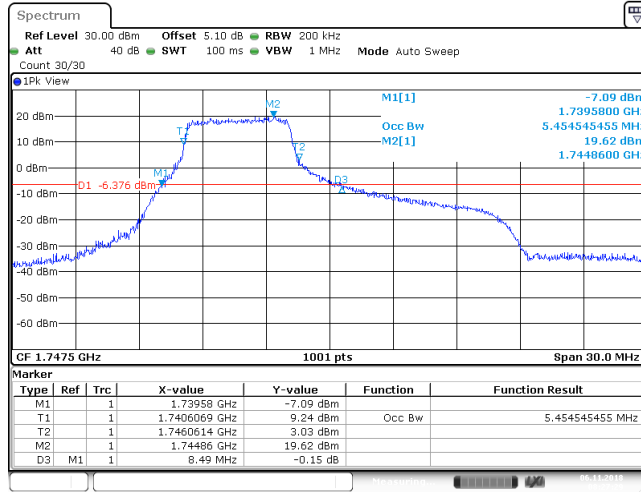
Band4_15MHz_16QAM_20025_27RB#0



Band4_15MHz_16QAM_20175_27RB#0

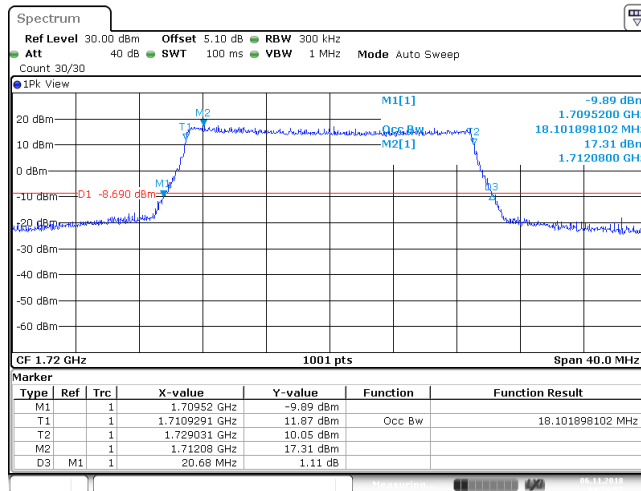


Band4_15MHz_16QAM_20325_27RB#0



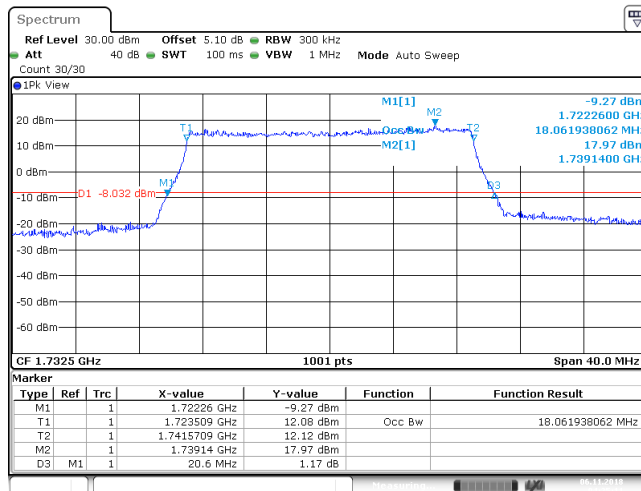
Date: 6 NOV 2018 08:27:29

Band4_20MHz_QPSK_20050_100RB#0



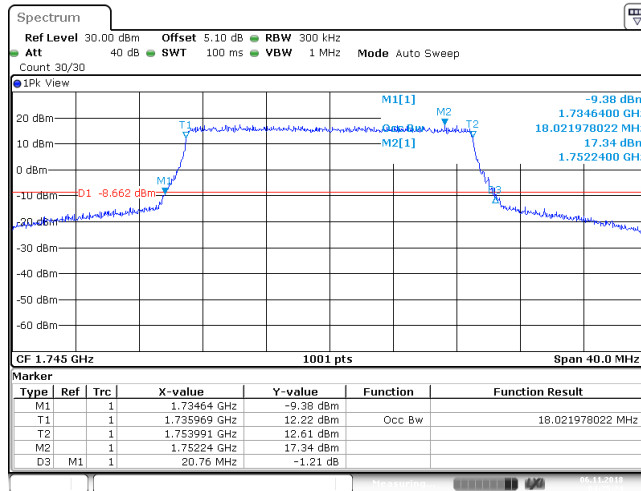
Date: 6 NOV 2018 04:24:57

Band4_20MHz_QPSK_20175_100RB#0



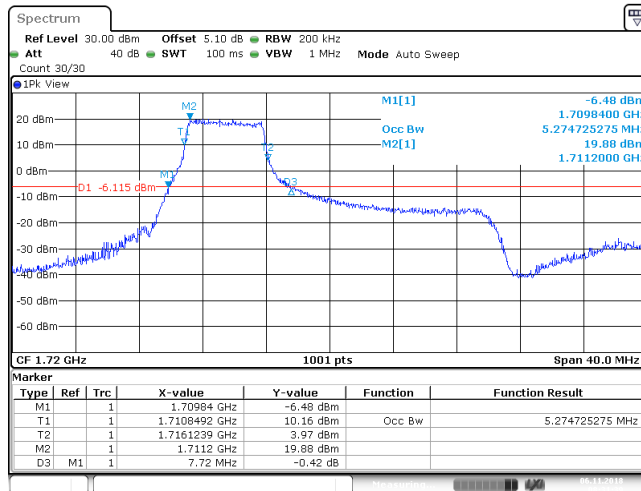
Date: 6 NOV 2018 04:25:11

Band4_20MHz_QPSK_20300_100RB#0



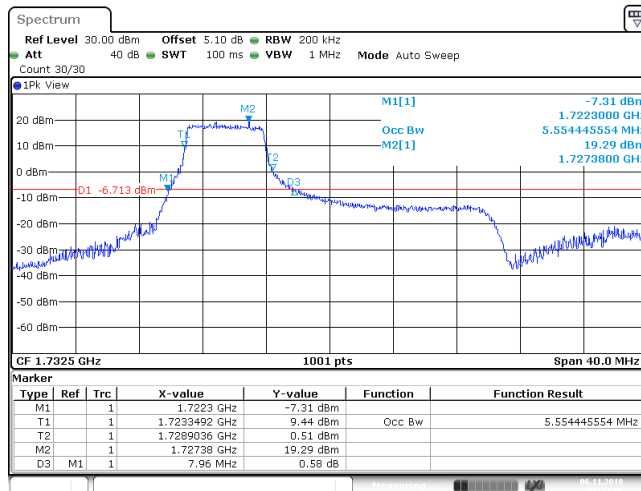
Date: 6 NOV 2018 04:25:25

Band4_20MHz_16QAM_20050_27RB#0



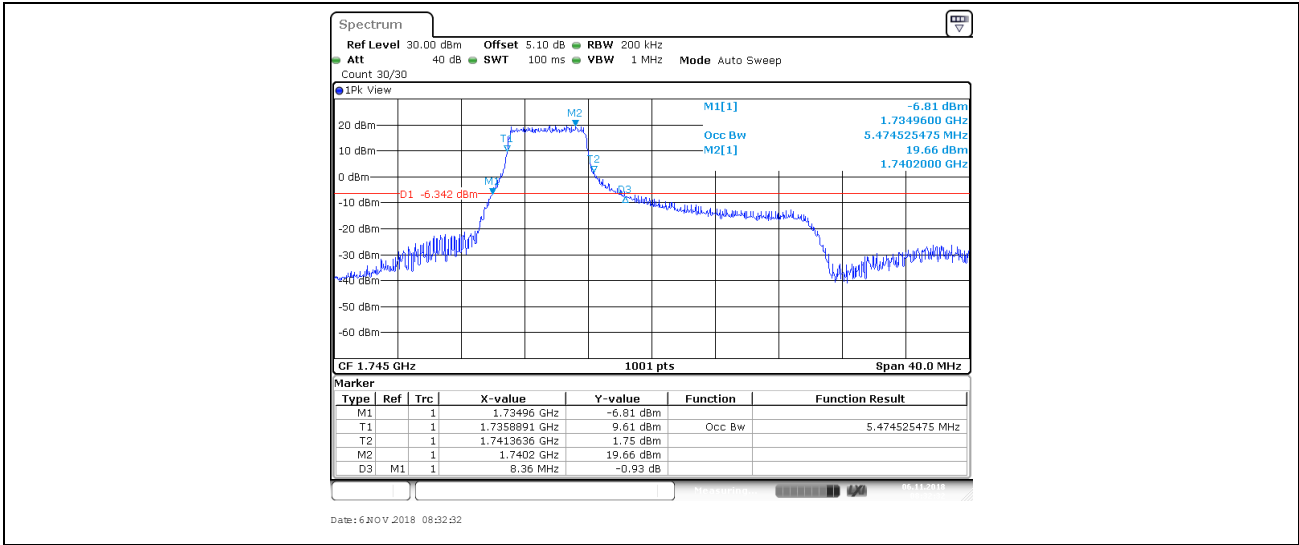
Date: 6 NOV 2018 08:31:09

Band4_20MHz_16QAM_20175_27RB#0



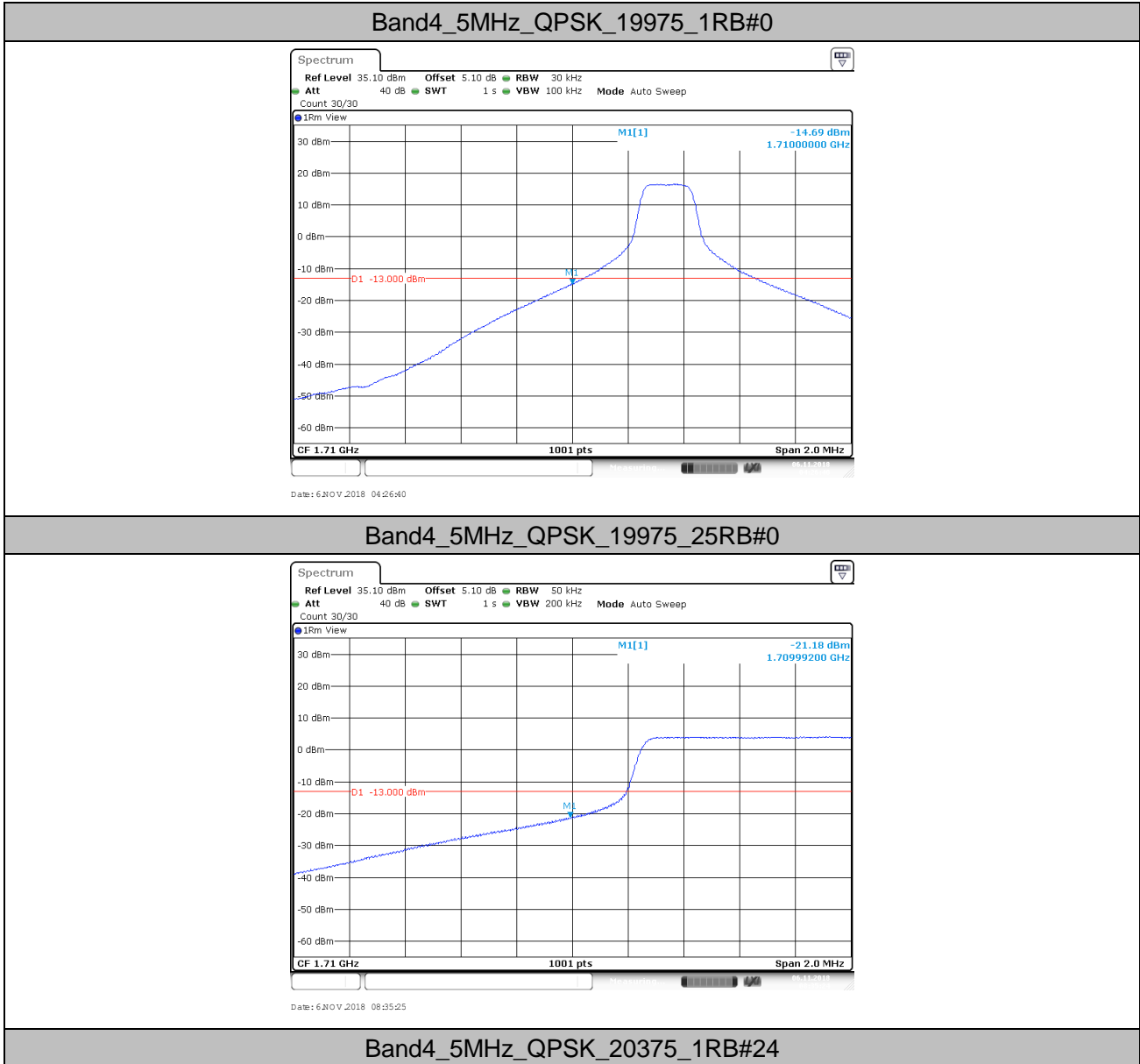
Date: 6 NOV 2018 08:32:06

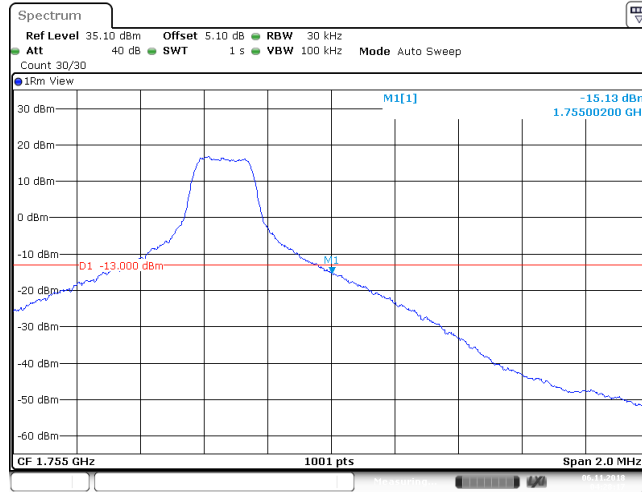
Band4_20MHz_16QAM_20300_27RB#0



5. Band Edge Compliance

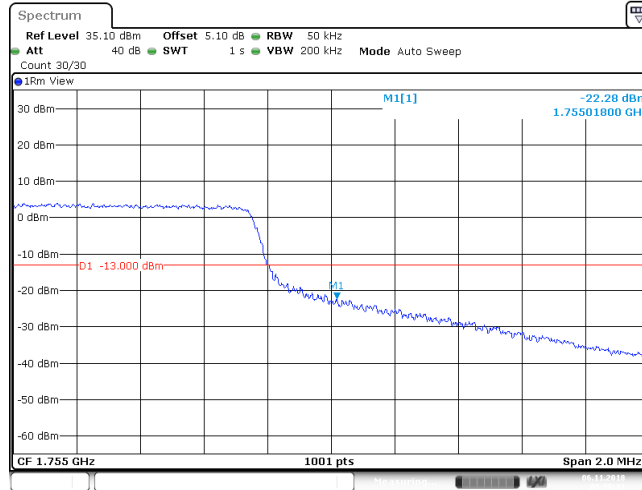
5.1. Test Plots





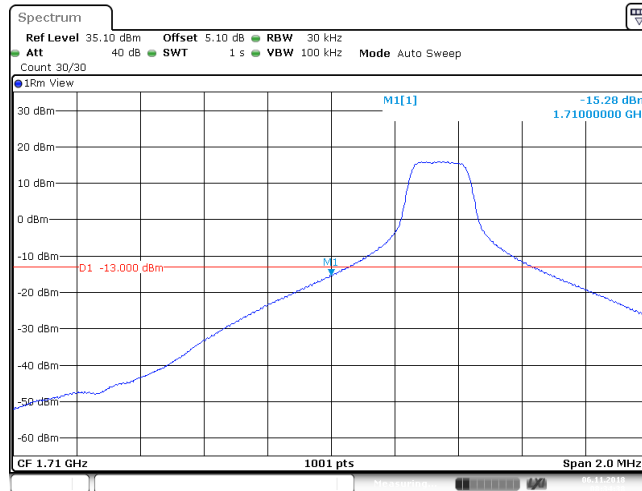
Date: 6 NOV 2018 04:28:18

Band4_5MHz_QPSK_20375_25RB#0



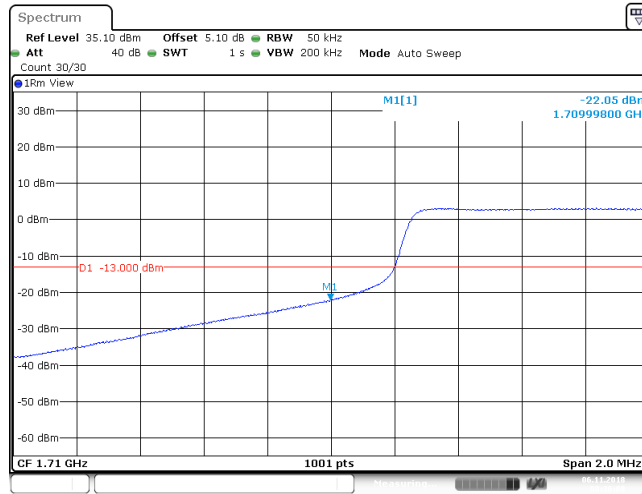
Date: 6 NOV 2018 08:39:31

Band4_5MHz_16QAM_19975_1RB#0



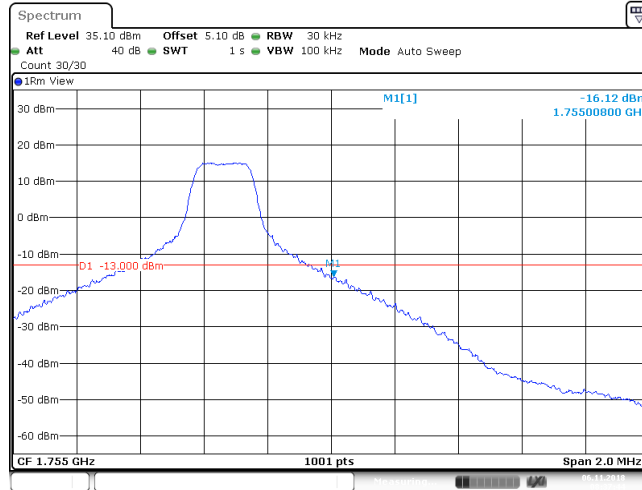
Date: 6 NOV 2018 08:34:38

Band4_5MHz_16QAM_19975_25RB#0



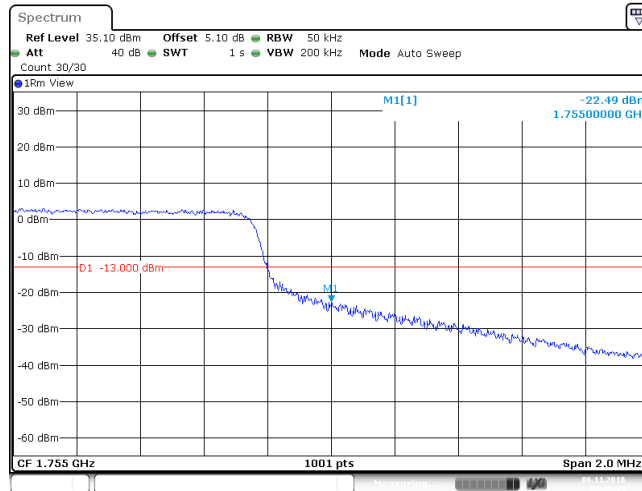
Date: 6 NOV 2018 08:36:08

Band4_5MHz_16QAM_20375_1RB#24



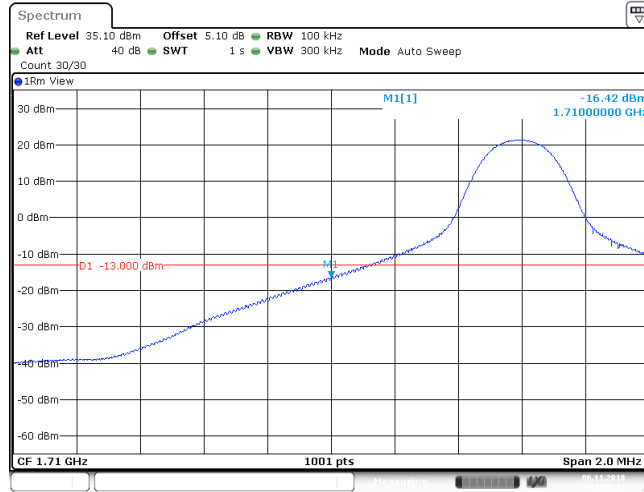
Date: 6 NOV 2018 08:37:45

Band4_5MHz_16QAM_20375_25RB#0



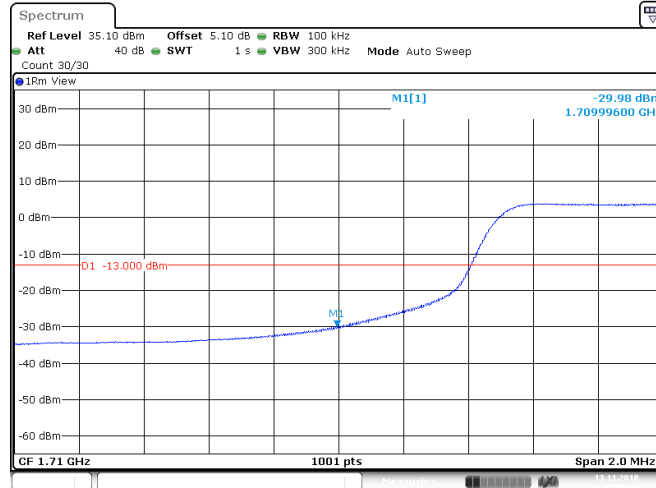
Date: 6 NOV 2018 08:39:15

Band4_10MHz_QPSK_20000_1RB#0



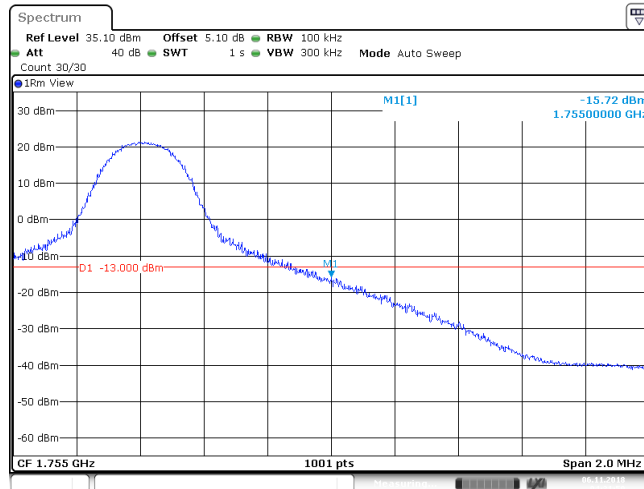
Date: 6 NOV 2018 04:30:23

Band4_10MHz_QPSK_20000_50RB#0



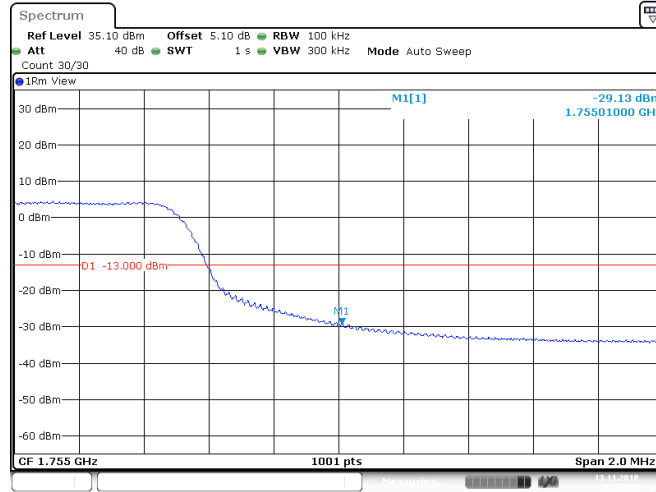
Date: 13 NOV 2018 07:51:34

Band4_10MHz_QPSK_20350_1RB#49



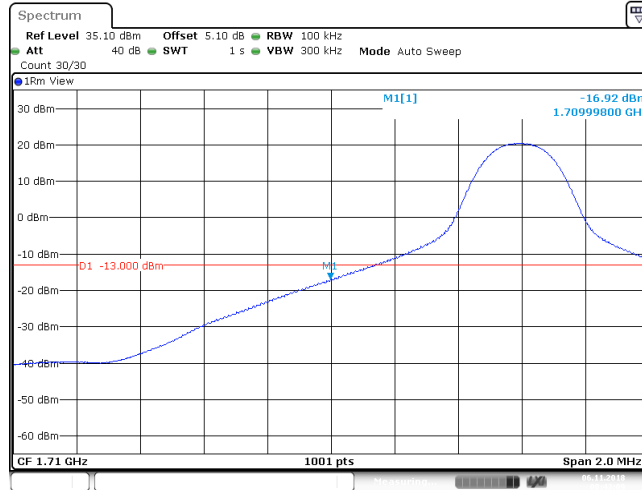
Date: 6 NOV 2018 04:31:59

Band4_10MHz_QPSK_20350_50RB#0



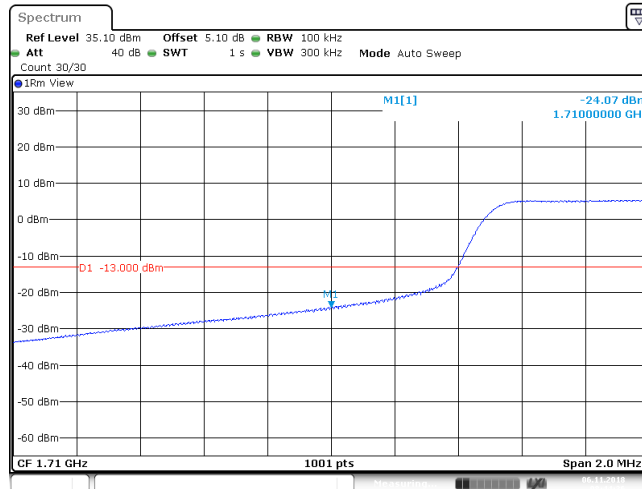
Date: 13 NOV 2018 07:52:23

Band4_10MHz_16QAM_20000_1RB#0



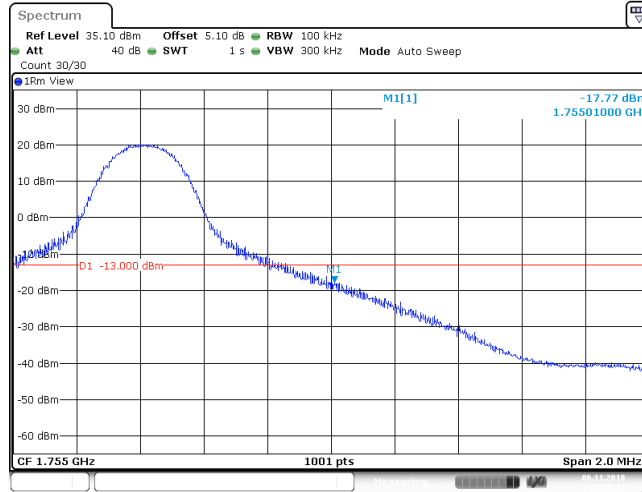
Date: 6 NOV 2018 08:43:09

Band4_10MHz_16QAM_20000_27RB#0



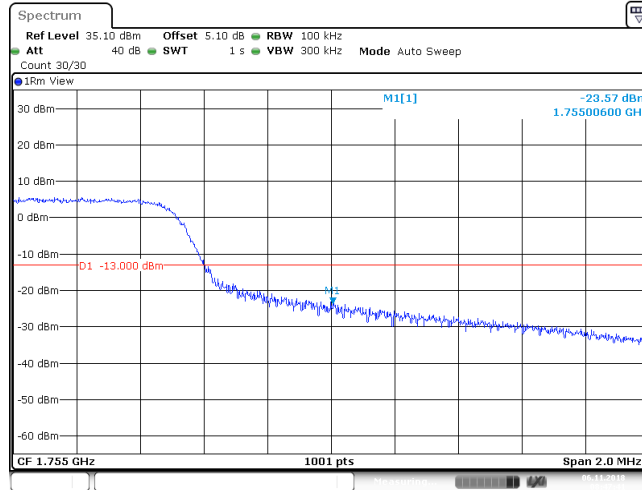
Date: 6 NOV 2018 08:44:36

Band4_10MHz_16QAM_20350_1RB#49



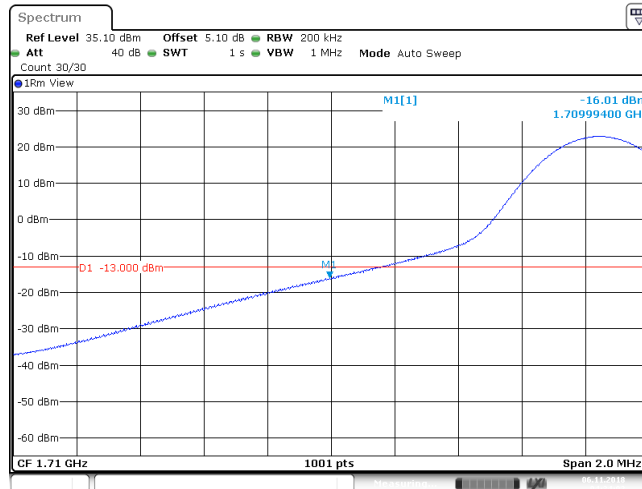
Date: 6 NOV 2018 08:46:13

Band4_10MHz_16QAM_20350_27RB#23



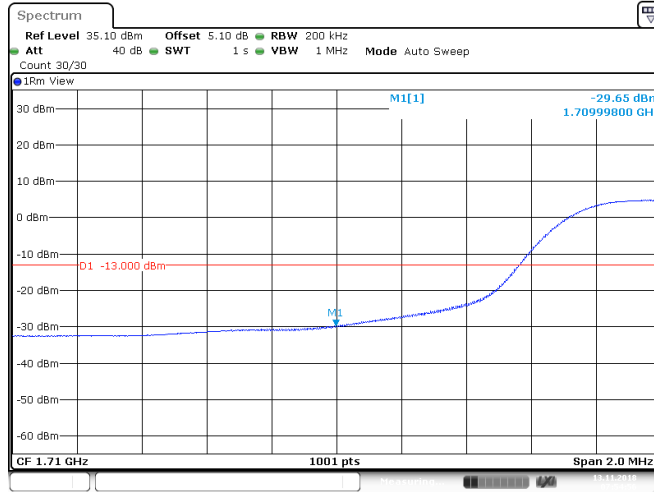
Date: 6 NOV 2018 08:47:41

Band4_15MHz_QPSK_20025_1RB#0



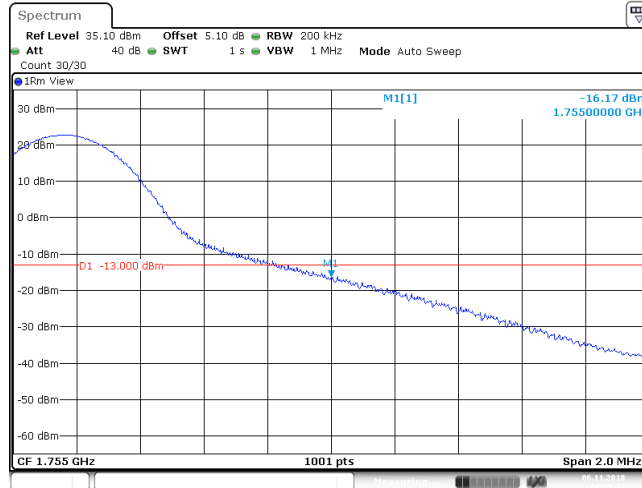
Date: 6 NOV 2018 04:34:02

Band4_15MHz_QPSK_20025_75RB#0



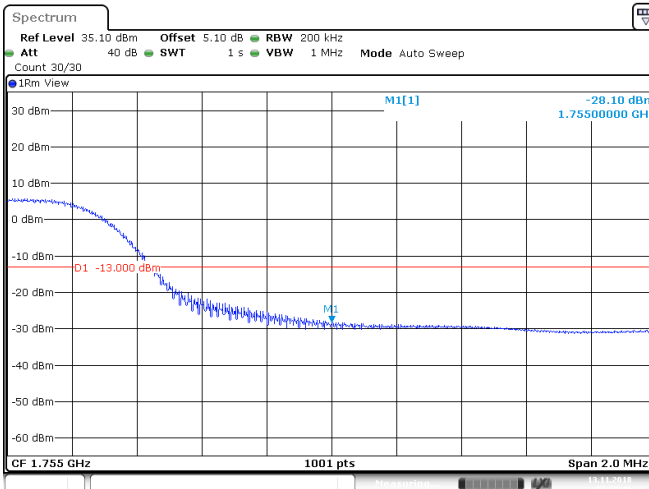
Date: 13 NOV 2018 07:54:56

Band4_15MHz_QPSK_20325_1RB#74



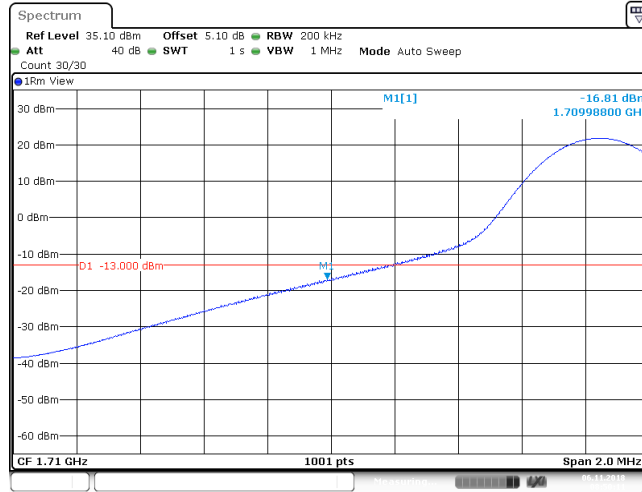
Date: 6 NOV 2018 04:35:38

Band4_15MHz_QPSK_20325_75RB#0



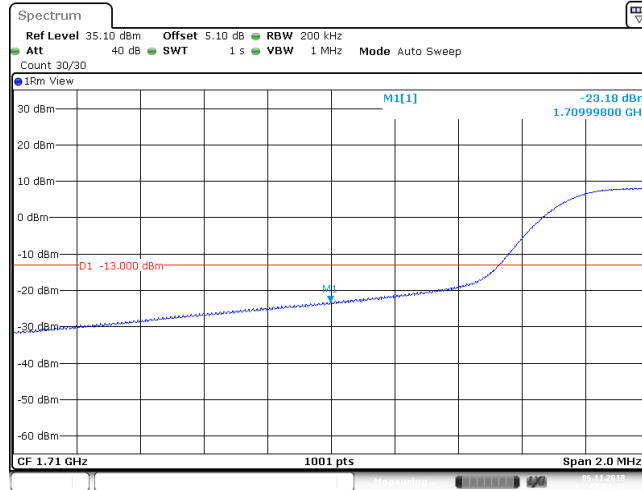
Date: 13 NOV 2018 07:55:46

Band4_15MHz_16QAM_20025_1RB#0



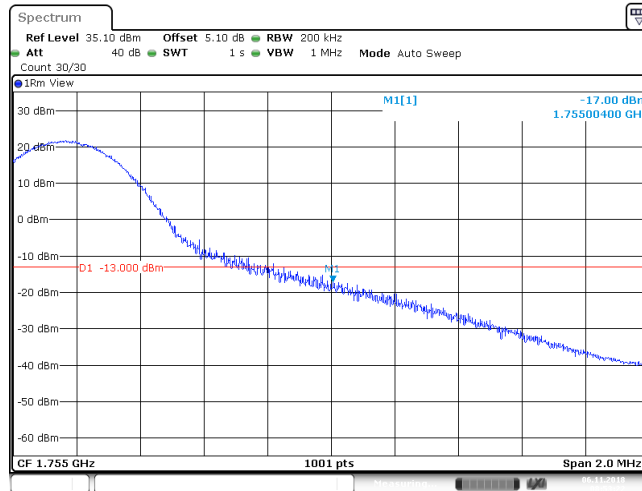
Date: 6 NOV 2018 08:50:11

Band4_15MHz_16QAM_20025_27RB#0



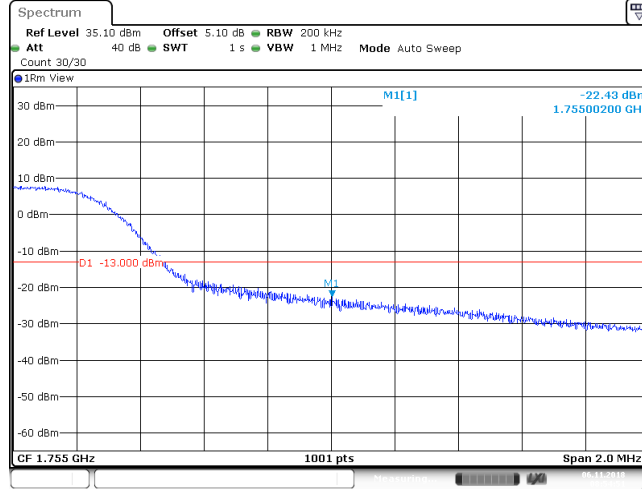
Date: 6 NOV 2018 08:51:39

Band4_15MHz_16QAM_20325_1RB#74



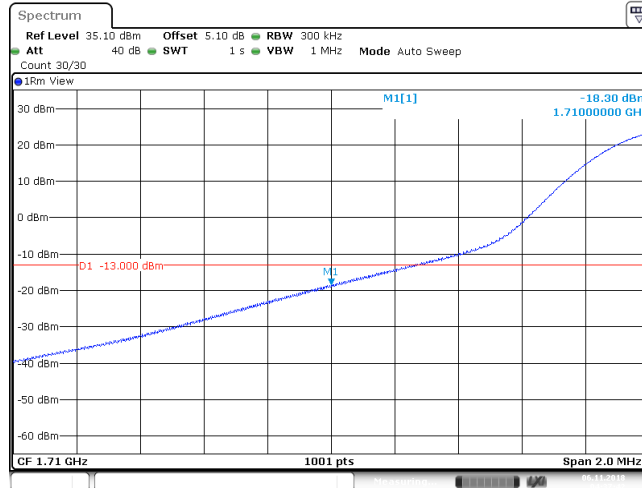
Date: 6 NOV 2018 08:53:22

Band4_15MHz_16QAM_20325_27RB#48



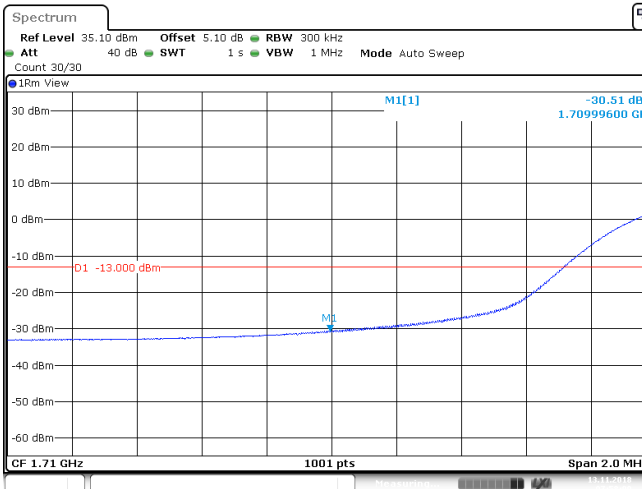
Date: 6 NOV 2018 08:54:52

Band4_20MHz_QPSK_20050_1RB#0



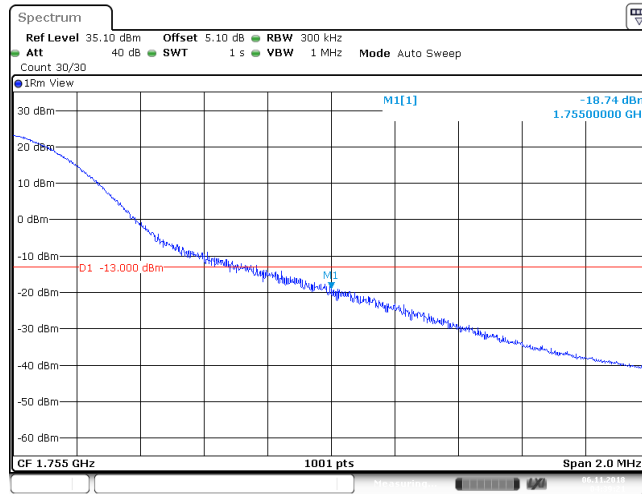
Date: 6 NOV 2018 04:37:43

Band4_20MHz_QPSK_20050_100RB#0



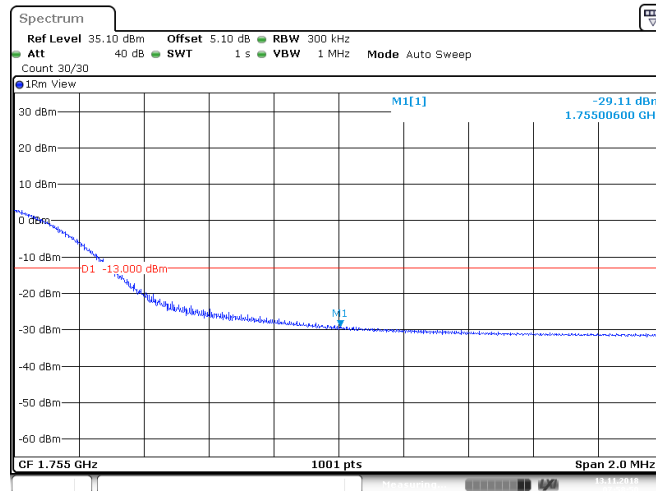
Date: 13 NOV 2018 07:58:00

Band4_20MHz_QPSK_20300_1RB#99



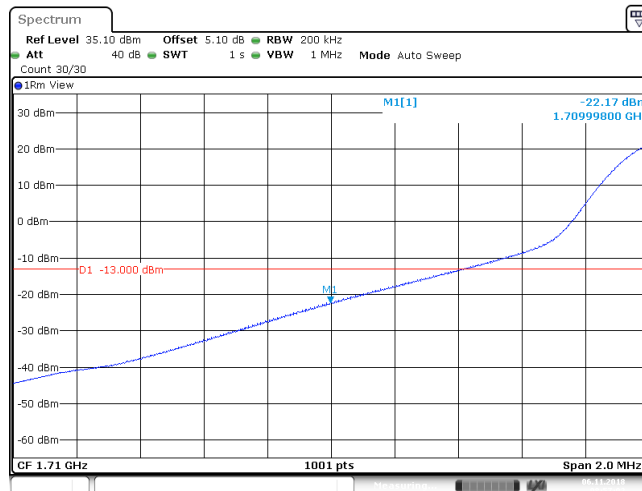
Date: 6 NOV 2018 04:39:21

Band4_20MHz_QPSK_20300_100RB#0



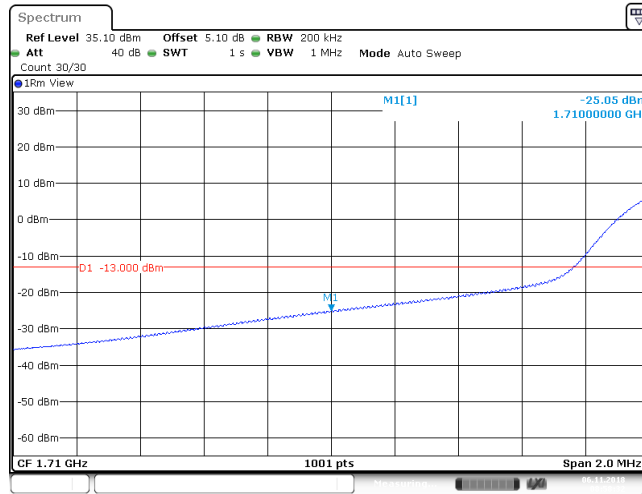
Date: 13 NOV 2018 07:58:51

Band4_20MHz_16QAM_20050_1RB#0



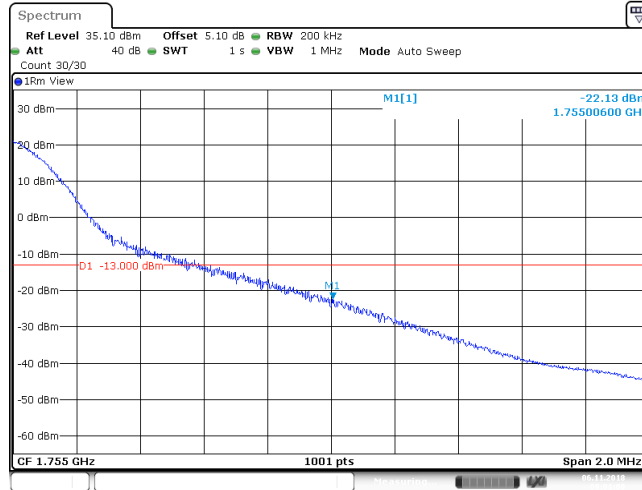
Date: 6 NOV 2018 08:57:03

Band4_20MHz_16QAM_20050_27RB#0



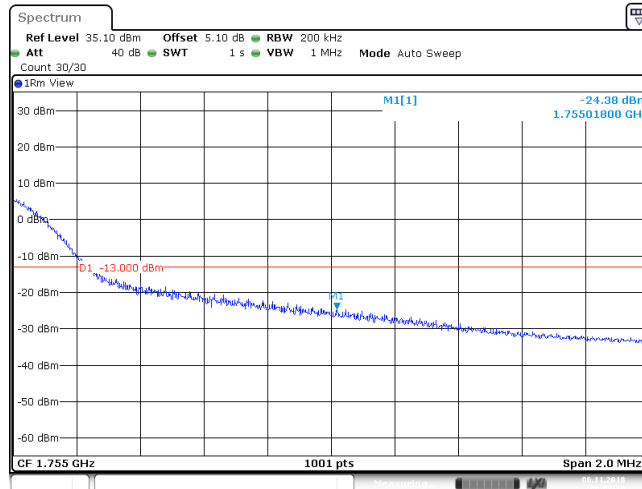
Date: 6 NOV 2018 08:58:33

Band4_20MHz_16QAM_20300_1RB#99



Date: 6 NOV 2018 09:01:00

Band4_20MHz_16QAM_20300_27RB#73



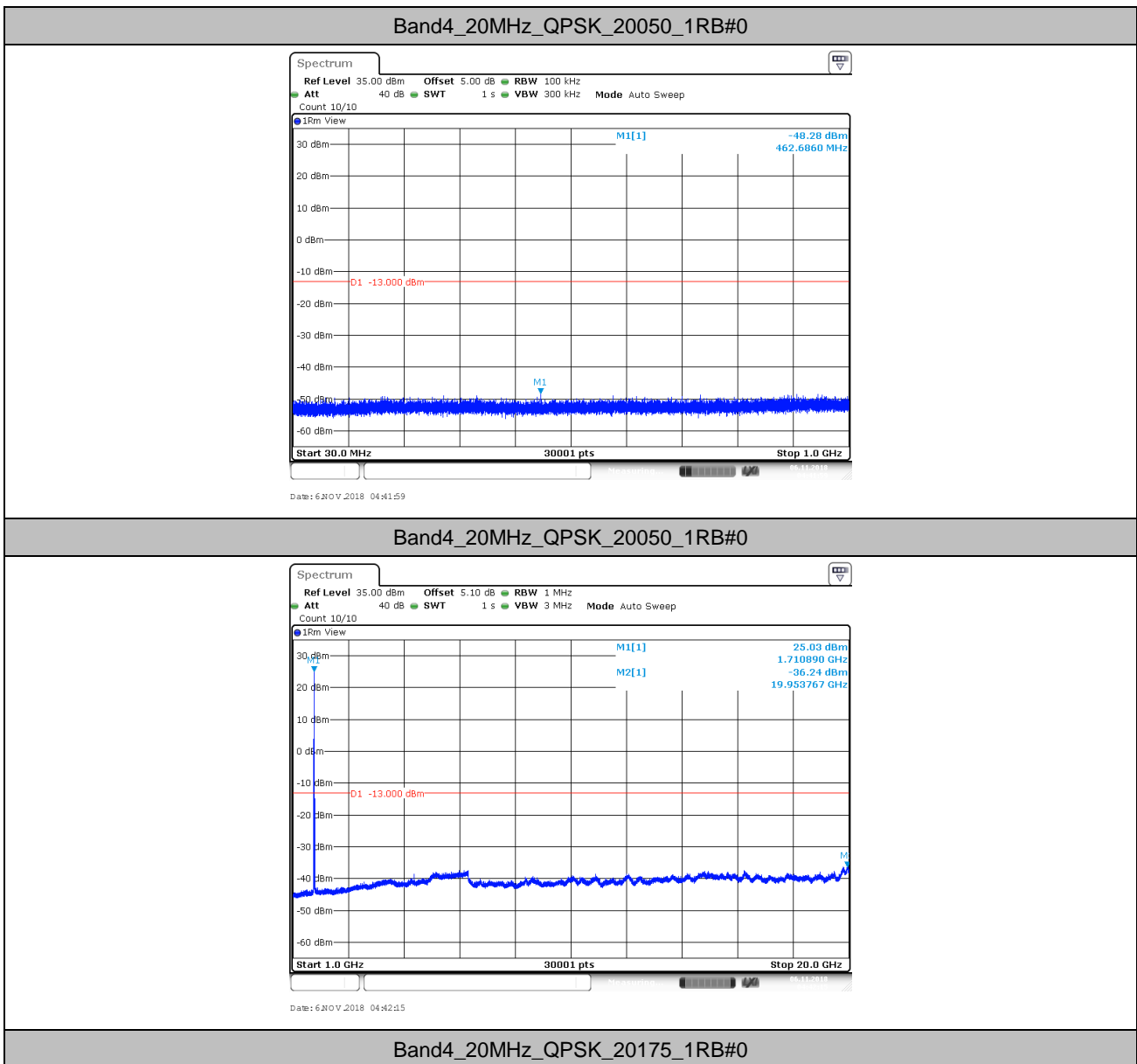
Date: 6 NOV 2018 09:02:30

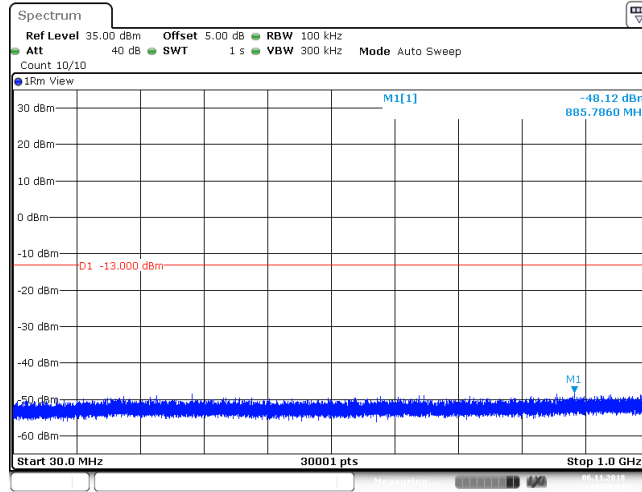
6. Spurious Emission at Antenna Terminal

Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = $k * (Span / RBW)$ " with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

Remark2: only the worst case data displayed in this report.

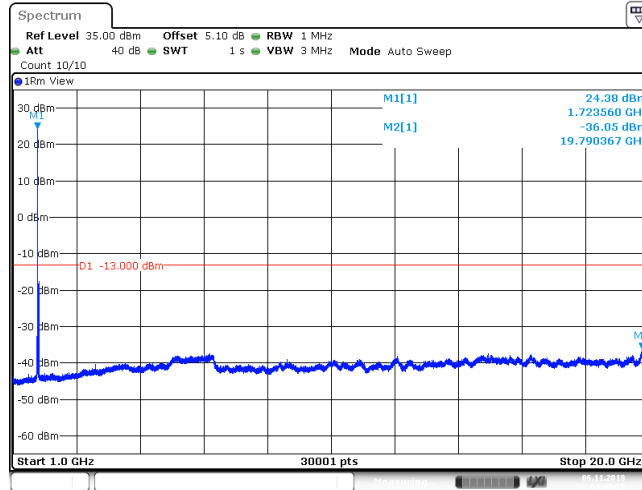
6.1. Test Plots





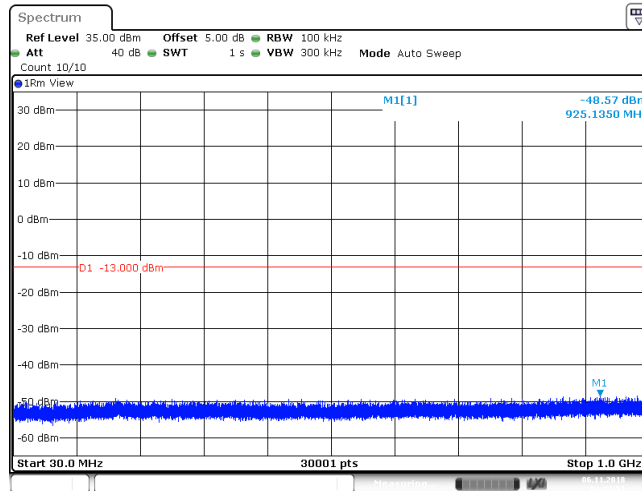
Date: 6 NOV 2018 04:43:10

Band4_20MHz_QPSK_20175_1RB#0



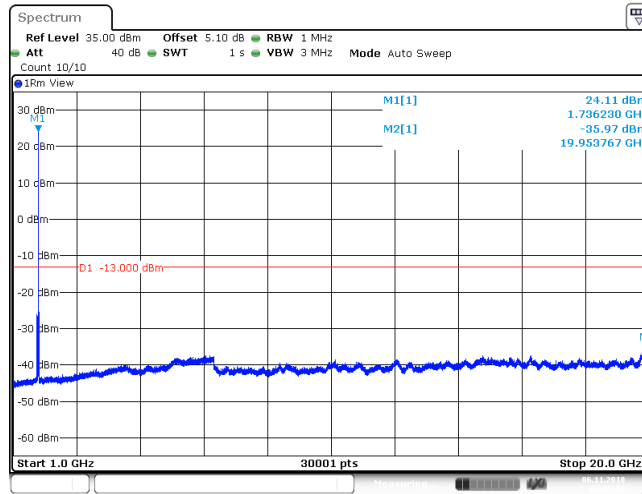
Date: 6 NOV 2018 04:43:25

Band4_20MHz_QPSK_20300_1RB#0



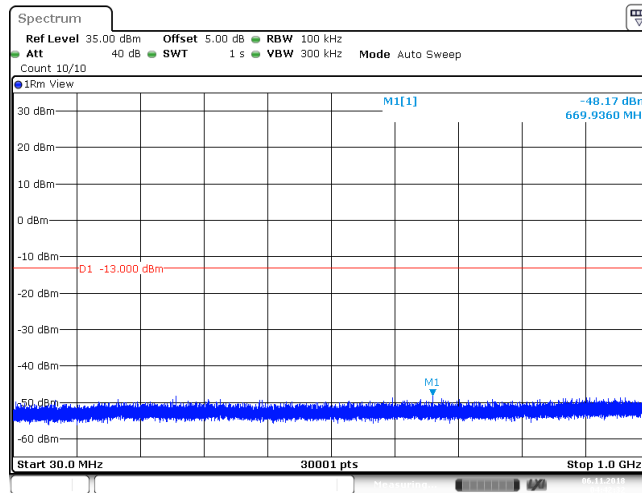
Date: 6 NOV 2018 04:44:51

Band4_20MHz_QPSK_20300_1RB#0



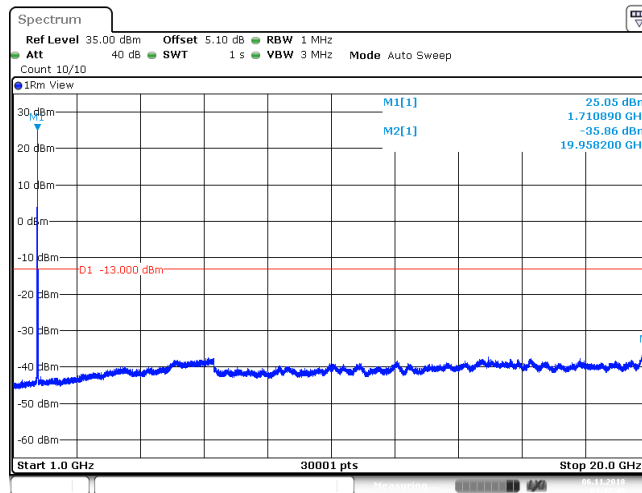
Date: 6 NOV 2018 04:45:07

Band4_20MHz_16QAM_20050_1RB#0



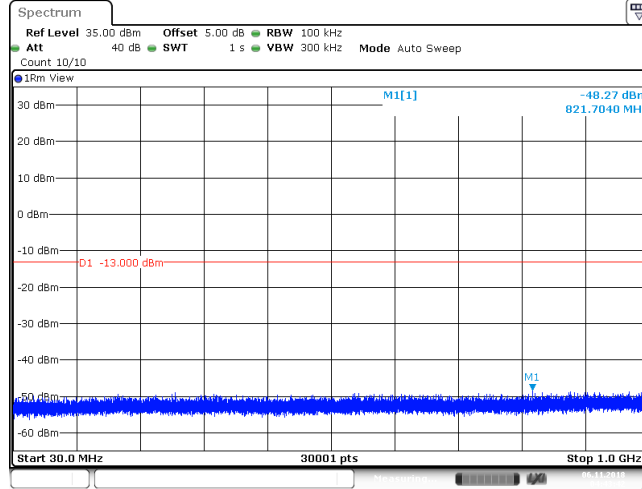
Date: 6 NOV 2018 04:42:33

Band4_20MHz_16QAM_20050_1RB#0



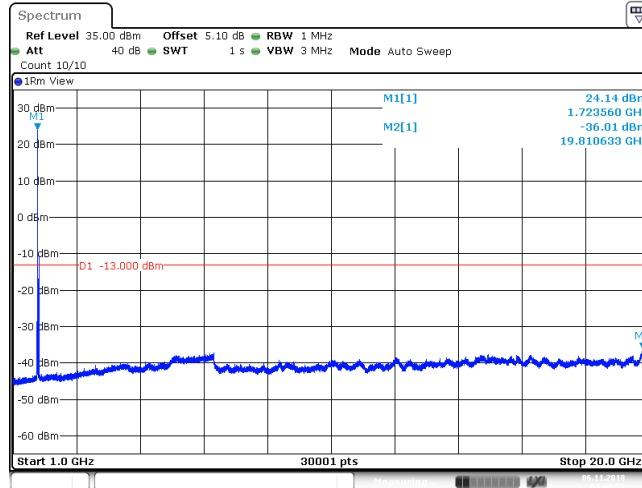
Date: 6 NOV 2018 04:42:48

Band4_20MHz_16QAM_20175_1RB#0



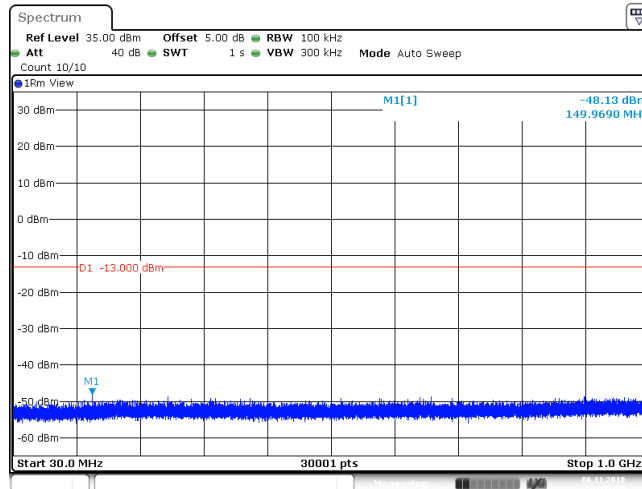
Date: 6 NOV 2018 04:43:43

Band4_20MHz_16QAM_20175_1RB#0



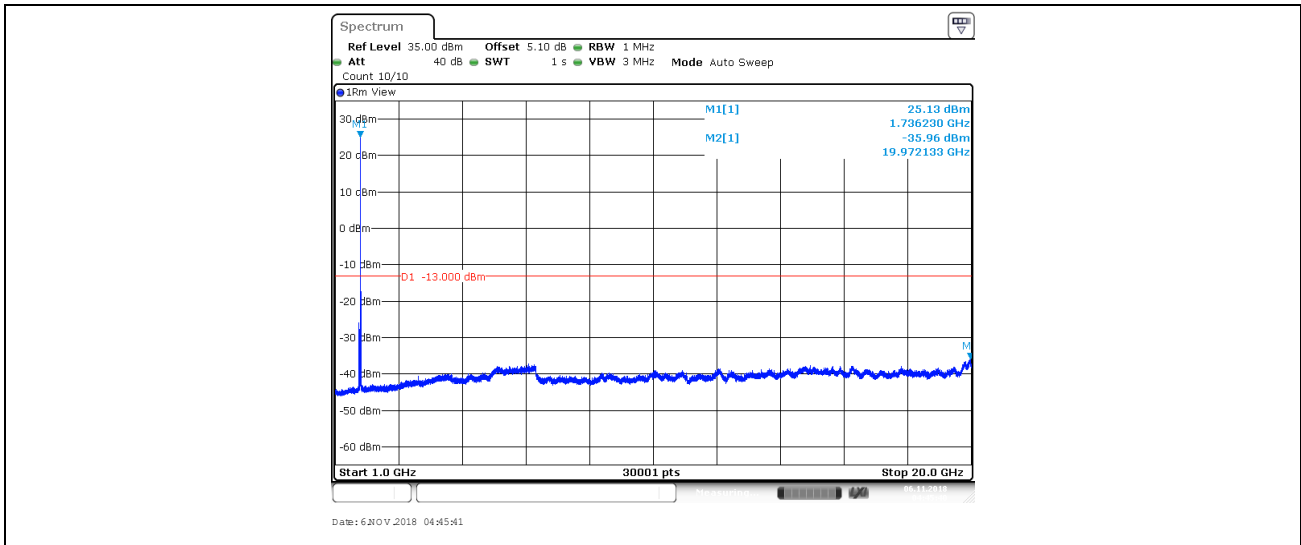
Date: 6 NOV 2018 04:43:59

Band4_20MHz_16QAM_20300_1RB#0



Date: 6 NOV 2018 04:45:25

Band4_20MHz_16QAM_20300_1RB#0



7. Field Strength of Spurious Radiation

7.1. Test BAND = LTE BAND 4

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
65.550000	-81.89	-13.00	68.89	Vertical
319.500000	-72.56	-13.00	59.56	Vertical
3422.175000	-53.27	-13.00	40.27	Vertical
5133.300000	-63.31	-13.00	50.31	Vertical
7958.200000	-63.87	-13.00	50.87	Vertical
10641.725000	-62.64	-13.00	49.64	Vertical
56.500000	-77.61	-13.00	64.61	Horizontal
321.350000	-76.26	-13.00	63.26	Horizontal
3422.175000	-49.47	-13.00	36.47	Horizontal
5132.975000	-56.24	-13.00	43.24	Horizontal
6844.425000	-62.79	-13.00	49.79	Horizontal
8554.900000	-64.16	-13.00	51.16	Horizontal

7.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
63.700000	-81.56	-13.00	68.56	Vertical
295.950000	-78.22	-13.00	65.22	Vertical
3447.200000	-52.46	-13.00	39.46	Vertical
5170.675000	-64.37	-13.00	51.37	Vertical
7964.050000	-63.70	-13.00	50.70	Vertical
10630.350000	-62.69	-13.00	49.69	Vertical
62.400000	-77.93	-13.00	64.93	Horizontal
321.250000	-77.51	-13.00	64.51	Horizontal
3446.875000	-51.69	-13.00	38.69	Horizontal
5170.675000	-55.19	-13.00	42.19	Horizontal
6894.150000	-63.06	-13.00	50.06	Horizontal
9254.950000	-63.34	-13.00	50.34	Horizontal

7.1.1.3. Test Channel = HCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
65.100000	-82.04	-13.00	69.04	Vertical
319.600000	-75.86	-13.00	62.86	Vertical
3471.900000	-53.98	-13.00	40.98	Vertical
5208.050000	-63.77	-13.00	50.77	Vertical
7873.050000	-64.17	-13.00	51.17	Vertical
10649.525000	-62.74	-13.00	49.74	Vertical
61.900000	-78.14	-13.00	65.14	Horizontal
268.250000	-87.44	-13.00	74.44	Horizontal
3471.900000	-51.82	-13.00	38.82	Horizontal
5208.050000	-55.23	-13.00	42.23	Horizontal
6944.200000	-62.00	-13.00	49.00	Horizontal
10640.425000	-62.90	-13.00	49.90	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
Band4	20MHz	QPSK	20050	100RB#0	VL	NT	-28.34	-0.000165	±2.5	PASS
Band4	20MHz	QPSK	20050	100RB#0	VN	NT	-15.20	-0.000088	±2.5	PASS
Band4	20MHz	QPSK	20050	100RB#0	VH	NT	18.20	0.000106	±2.5	PASS
Band4	20MHz	QPSK	20175	100RB#0	VL	NT	11.36	0.000066	±2.5	PASS
Band4	20MHz	QPSK	20175	100RB#0	VN	NT	24.02	0.000139	±2.5	PASS
Band4	20MHz	QPSK	20175	100RB#0	VH	NT	-27.03	-0.000156	±2.5	PASS
Band4	20MHz	QPSK	20300	100RB#0	VL	NT	-29.48	-0.000169	±2.5	PASS
Band4	20MHz	QPSK	20300	100RB#0	VN	NT	-14.69	-0.000084	±2.5	PASS
Band4	20MHz	QPSK	20300	100RB#0	VH	NT	-27.20	-0.000156	±2.5	PASS
Band4	20MHz	16QAM	20050	100RB#0	VL	NT	26.13	0.000152	±2.5	PASS
Band4	20MHz	16QAM	20050	100RB#0	VN	NT	-29.19	-0.000170	±2.5	PASS
Band4	20MHz	16QAM	20050	100RB#0	VH	NT	8.82	0.000051	±2.5	PASS
Band4	20MHz	16QAM	20175	100RB#0	VL	NT	1.99	0.000011	±2.5	PASS
Band4	20MHz	16QAM	20175	100RB#0	VN	NT	3.91	0.000023	±2.5	PASS
Band4	20MHz	16QAM	20175	100RB#0	VH	NT	11.96	0.000069	±2.5	PASS
Band4	20MHz	16QAM	20300	100RB#0	VL	NT	7.96	0.000046	±2.5	PASS
Band4	20MHz	16QAM	20300	100RB#0	VN	NT	-19.83	-0.000114	±2.5	PASS
Band4	20MHz	16QAM	20300	100RB#0	VH	NT	27.00	0.000155	±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
Band4	20MHz	QPSK	20050	100RB#0	NV	-30	11.89	0.000060	±2.5	PASS
Band4	20MHz	QPSK	20050	100RB#0	NV	-20	25.80	0.000129	±2.5	PASS
Band4	20MHz	QPSK	20050	100RB#0	NV	0	-18.35	-0.000092	±2.5	PASS
Band4	20MHz	QPSK	20050	100RB#0	NV	10	-28.43	-0.000142	±2.5	PASS
Band4	20MHz	QPSK	20050	100RB#0	NV	20	29.99	0.000150	±2.5	PASS
Band4	20MHz	QPSK	20050	100RB#0	NV	30	0.94	0.000005	±2.5	PASS
Band4	20MHz	QPSK	20050	100RB#0	NV	40	11.97	0.000060	±2.5	PASS
Band4	20MHz	QPSK	20050	100RB#0	NV	50	-25.58	-0.000128	±2.5	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-30	16.85	0.000084	±2.5	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	-20	-2.52	-0.000013	±2.5	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	0	24.15	0.000120	±2.5	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	10	-6.45	-0.000032	±2.5	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	20	-19.66	-0.000098	±2.5	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	30	3.92	0.000020	±2.5	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	40	-4.53	-0.000023	±2.5	PASS
Band4	20MHz	QPSK	20175	100RB#0	NV	50	3.82	0.000019	±2.5	PASS
Band4	20MHz	QPSK	20300	100RB#0	NV	-30	12.32	0.000061	±2.5	PASS
Band4	20MHz	QPSK	20300	100RB#0	NV	-20	11.88	0.000059	±2.5	PASS
Band4	20MHz	QPSK	20300	100RB#0	NV	0	-17.93	-0.000089	±2.5	PASS



Band4	20MHz	QPSK	20300	100RB#0	NV	10	14.75	0.000073	±2.5	PASS
Band4	20MHz	QPSK	20300	100RB#0	NV	20	19.96	0.000099	±2.5	PASS
Band4	20MHz	QPSK	20300	100RB#0	NV	30	-26.23	-0.000130	±2.5	PASS
Band4	20MHz	QPSK	20300	100RB#0	NV	40	-13.17	-0.000065	±2.5	PASS
Band4	20MHz	QPSK	20300	100RB#0	NV	50	-14.46	-0.000072	±2.5	PASS
Band4	20MHz	16QAM	20050	100RB#0	NV	-30	15.07	0.000076	±2.5	PASS
Band4	20MHz	16QAM	20050	100RB#0	NV	-20	-3.91	-0.000020	±2.5	PASS
Band4	20MHz	16QAM	20050	100RB#0	NV	0	-22.83	-0.000114	±2.5	PASS
Band4	20MHz	16QAM	20050	100RB#0	NV	10	24.06	0.000121	±2.5	PASS
Band4	20MHz	16QAM	20050	100RB#0	NV	20	25.21	0.000126	±2.5	PASS
Band4	20MHz	16QAM	20050	100RB#0	NV	30	-18.47	-0.000093	±2.5	PASS
Band4	20MHz	16QAM	20050	100RB#0	NV	40	-3.48	-0.000017	±2.5	PASS
Band4	20MHz	16QAM	20050	100RB#0	NV	50	-17.30	-0.000087	±2.5	PASS
Band4	20MHz	16QAM	20175	100RB#0	NV	-30	7.47	0.000037	±2.5	PASS
Band4	20MHz	16QAM	20175	100RB#0	NV	-20	14.31	0.000071	±2.5	PASS
Band4	20MHz	16QAM	20175	100RB#0	NV	0	-21.23	-0.000106	±2.5	PASS
Band4	20MHz	16QAM	20175	100RB#0	NV	10	-17.84	-0.000089	±2.5	PASS
Band4	20MHz	16QAM	20175	100RB#0	NV	20	-13.95	-0.000069	±2.5	PASS
Band4	20MHz	16QAM	20175	100RB#0	NV	30	-11.28	-0.000056	±2.5	PASS
Band4	20MHz	16QAM	20175	100RB#0	NV	40	9.38	0.000047	±2.5	PASS
Band4	20MHz	16QAM	20175	100RB#0	NV	50	-12.66	-0.000063	±2.5	PASS
Band4	20MHz	16QAM	20300	100RB#0	NV	-30	-0.02	0.000000	±2.5	PASS
Band4	20MHz	16QAM	20300	100RB#0	NV	-20	-14.55	-0.000072	±2.5	PASS
Band4	20MHz	16QAM	20300	100RB#0	NV	0	-18.33	-0.000091	±2.5	PASS
Band4	20MHz	16QAM	20300	100RB#0	NV	10	27.81	0.000138	±2.5	PASS
Band4	20MHz	16QAM	20300	100RB#0	NV	20	25.64	0.000127	±2.5	PASS
Band4	20MHz	16QAM	20300	100RB#0	NV	30	-12.43	-0.000062	±2.5	PASS
Band4	20MHz	16QAM	20300	100RB#0	NV	40	-14.00	-0.000069	±2.5	PASS
Band4	20MHz	16QAM	20300	100RB#0	NV	50	-26.46	-0.000131	±2.5	PASS

The End