Appendix B

E-UTRA BAND 12

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1. Effective (Isotropic) Radiated Power

1.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band12	1.4MHz	QPSK	23017	1RB#0	23.57	7.32	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	23.51	7.26	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	23.57	7.32	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#0	23.52	7.27	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#1	23.63	7.38	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#3	23.68	7.43	34.77	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	22.46	6.21	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	23.54	7.29	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#2	23.61	7.36	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#5	23.60	7.35	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#0	23.52	7.27	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#1	23.66	7.41	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#3	23.77	7.52	34.77	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	22.68	6.43	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	23.48	7.23	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	23.49	7.24	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	23.48	7.23	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#0	23.54	7.29	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#1	23.82	7.57	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#3	23.60	7.35	34.77	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	22.55	6.30	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	21.99	5.74	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	22.38	6.13	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	22.30	6.05	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#0	22.75	6.50	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#1	22.66	6.41	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#3	22.58	6.33	34.77	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	21.82	5.57	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	22.02	5.77	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#2	21.95	5.70	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#5	22.09	5.84	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#0	22.60	6.35	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#1	22.83	6.58	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#3	22.76	6.51	34.77	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	21.87	5.62	34.77	PASS

Band12	1.4MHz	16QAM	23173	1RB#0	22.12	5.87	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	22.17	5.92	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#5	21.92	5.67	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#0	22.80	6.55	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#1	22.67	6.42	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#3	23.06	6.81	34.77	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	21.48	5.23	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#0	23.53	7.28	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#8	23.86	7.61	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#14	23.34	7.09	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#0	22.44	6.19	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#4	22.68	6.43	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#7	22.47	6.22	34.77	PASS
Band12	3MHz	QPSK	23025	15RB#0	22.56	6.31	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#0	23.52	7.27	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#8	23.95	7.70	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#14	23.56	7.31	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#0	22.47	6.22	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#4	22.73	6.48	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#7	22.68	6.43	34.77	PASS
Band12	3MHz	QPSK	23095	15RB#0	22.56	6.31	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#0	23.64	7.39	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#8	23.32	7.07	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#14	23.25	7.00	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#0	22.88	6.63	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#4	22.53	6.28	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#7	22.58	6.33	34.77	PASS
Band12	3MHz	QPSK	23165	15RB#0	22.67	6.42	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#0	22.48	6.23	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#8	21.91	5.66	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#14	22.06	5.81	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#0	21.29	5.04	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#4	21.84	5.59	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#7	21.38	5.13	34.77	PASS
Band12	3MHz	16QAM	23025	15RB#0	21.55	5.30	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#0	21.94	5.69	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#8	22.61	6.36	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#14	22.55	6.30	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#0	21.50	5.25	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#4	22.02	5.77	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#7	21.52	5.27	34.77	PASS
Band12	3MHz	16QAM	23095	15RB#0	21.67	5.42	34.77	PASS

Band12	3MHz	16QAM	23165	1RB#0	22.60	6.35	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#8	22.39	6.14	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#14	22.50	6.25	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#0	21.84	5.59	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#4	21.86	5.61	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#7	21.79	5.54	34.77	PASS
Band12	3MHz	16QAM	23165	15RB#0	21.70	5.45	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#0	23.34	7.09	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#12	23.72	7.47	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#24	22.82	6.57	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#0	22.68	6.43	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#6	22.54	6.29	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#13	22.39	6.14	34.77	PASS
Band12	5MHz	QPSK	23035	25RB#0	22.52	6.27	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#0	23.40	7.15	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#12	24.17	7.92	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#24	23.73	7.48	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#0	22.29	6.04	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#6	22.77	6.52	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#13	22.74	6.49	34.77	PASS
Band12	5MHz	QPSK	23095	25RB#0	22.54	6.29	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#0	23.48	7.23	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#12	23.54	7.29	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#24	23.08	6.83	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#0	22.68	6.43	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#6	22.58	6.33	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#13	22.33	6.08	34.77	PASS
Band12	5MHz	QPSK	23155	25RB#0	22.60	6.35	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#0	22.51	6.26	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#12	22.48	6.23	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#24	22.56	6.31	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#0	21.31	5.06	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#6	21.53	5.28	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#13	21.29	5.04	34.77	PASS
Band12	5MHz	16QAM	23035	25RB#0	21.62	5.37	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#0	21.93	5.68	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#12	22.25	6.00	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#24	21.90	5.65	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#0	21.61	5.36	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#6	21.67	5.42	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#13	21.46	5.21	34.77	PASS
Band12	5MHz	16QAM	23095	25RB#0	21.53	5.28	34.77	PASS

Band12	5MHz	16QAM	23155	1RB#0	22.25	6.00	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#12	22.16	5.91	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#24	22.27	6.02	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#0	21.43	5.18	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#6	21.33	5.08	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#13	21.46	5.21	34.77	PASS
Band12	5MHz	16QAM	23155	25RB#0	21.49	5.24	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#0	23.33	7.08	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#24	23.61	7.36	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#49	23.04	6.79	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#0	22.57	6.32	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#12	22.41	6.16	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#25	22.29	6.04	34.77	PASS
Band12	10MHz	QPSK	23060	50RB#0	22.46	6.21	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#0	23.26	7.01	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#24	24.31	8.06	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#49	23.61	7.36	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#0	22.41	6.16	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#12	22.78	6.53	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#25	22.63	6.38	34.77	PASS
Band12	10MHz	QPSK	23095	50RB#0	22.43	6.18	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#0	23.09	6.84	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#24	24.51	8.26	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#49	22.61	6.36	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#0	22.61	6.36	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#12	22.87	6.62	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#25	22.41	6.16	34.77	PASS
Band12	10MHz	QPSK	23130	50RB#0	22.52	6.27	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#0	22.09	5.84	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#24	21.93	5.68	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#49	21.82	5.57	34.77	PASS
Band12	10MHz	16QAM	23060	27RB#0	21.68	5.43	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#0	22.61	6.36	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#24	22.36	6.11	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#49	22.18	5.93	34.77	PASS
Band12	10MHz	16QAM	23095	27RB#0	21.59	5.34	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#0	22.34	6.09	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#24	22.22	5.97	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#49	21.54	5.29	34.77	PASS
Band12	10MHz	16QAM	23130	27RB#0	21.53	5.28	34.77	PASS

Remark:

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

to calculate it,

ERP [dBm] = SGP [dBm] - Cable Loss [dB] + Gain [dBd]

EIRP [dBm] = SGP [dBm] – Cable Loss [dB] + Gain [dBi]

b: SGP=Signal Generator Level

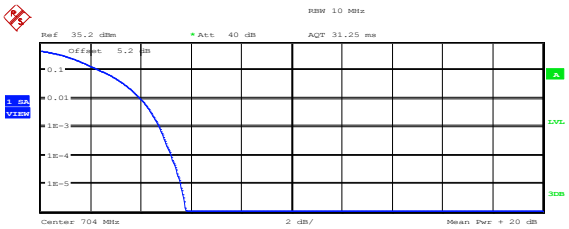
2. Peak-to-Average Ratio(CCDF)

2.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band12	10MHz	QPSK	23060	50RB#0	4.74	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	5.38	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	5.29	13	PASS
Band12	10MHz	16QAM	23060	27RB#0	4.65	13	PASS
Band12	10MHz	16QAM	23095	27RB#0	4.13	13	PASS
Band12	10MHz	16QAM	23130	27RB#0	5.03	13	PASS

2.2. Test Plots

Band12_10MHz_QPSK_23060_50RB#0

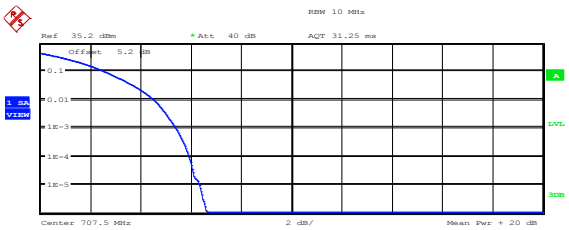


Complementary Cumulative Distribution Function (1000000 samples)

	Trace 1
Mean	22.82 dBm
Peak	28.63 dBm
Crest	5.81 dB
10 %	2.37 dB
1 %	3.97 dB
.1 %	4.74 dB
.01 %	5.19 dB

Date: 20.DEC.2018 19:15:14

Band12_10MHz_QPSK_23095_50RB#0

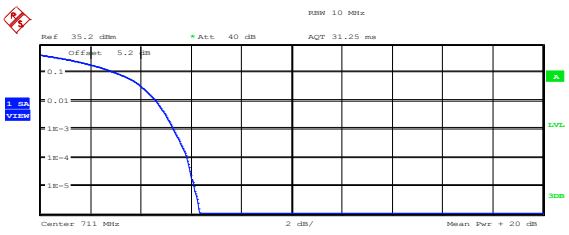


Complementary Cumulative Distribution Function (1000000 samples)

	Trace 1
Mean	22.73 dBm
Peak	29.55 dBm
Crest	6.82 dB
10 %	2.56 dB
1 %	4.49 dB
.1 %	5.38 dB
.01 %	5.93 dB

Date: 20.DEC.2018 19:15:25

Band12_10MHz_QPSK_23130_50RB#0

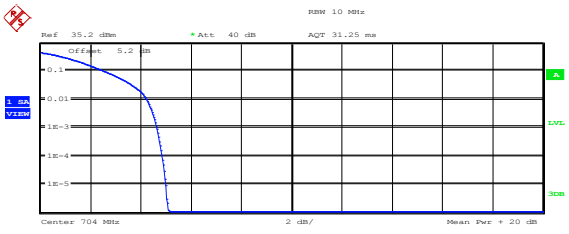


Complementary Cumulative Distribution Function (1000000 samples)

	Trace 1
Mean	22.91 dBm
Peak	29.26 dBm
Crest	6.36 dB
10 %	3.01 dB
1 %	4.58 dB
.1 %	5.29 dB
.01 %	5.83 dB

Date: 20.DEC.2018 19:15:37

Band12_10MHz_16QAM_23060_27RB#0

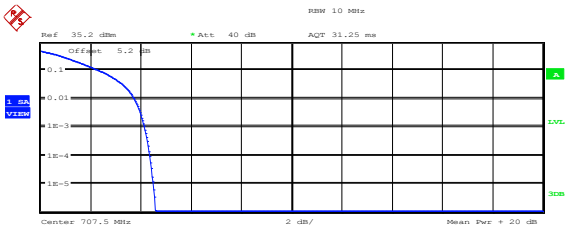


Complementary Cumulative Distribution Function (1000000 samples)

	Trace 1
Mean	22.41 dBm
Peak	27.57 dBm
Crest	5.16 dB
10 %	2.53 dB
1 %	4.23 dB
.1 %	4.65 dB
.01 %	4.84 dB

Date: 20.DEC.2018 18:57:20

Band12_10MHz_16QAM_23095_27RB#0

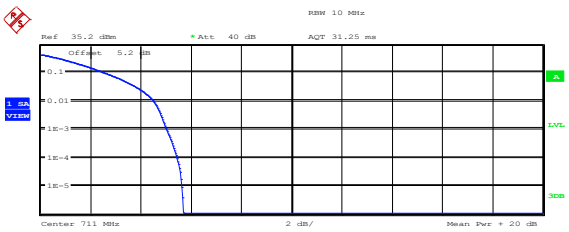


Complementary Cumulative Distribution Function (1000000 samples)

	Trace 1
Mean	22.28 dBm
Peak	26.87 dBm
Crest	4.58 dB
10 %	2.34 dB
1 %	3.72 dB
.1 %	4.13 dB
.01 %	4.36 dB

Date: 20.DEC.2018 18:57:45

Band12_10MHz_16QAM_23130_27RB#0



Complementary Cumulative Distribution Function (1000000 samples)

	Trace 1
Mean	22.38 dBm
Peak	28.14 dBm
Crest	5.75 dB
10 %	2.56 dB
1 %	4.49 dB
.1 %	5.03 dB
.01 %	5.45 dB

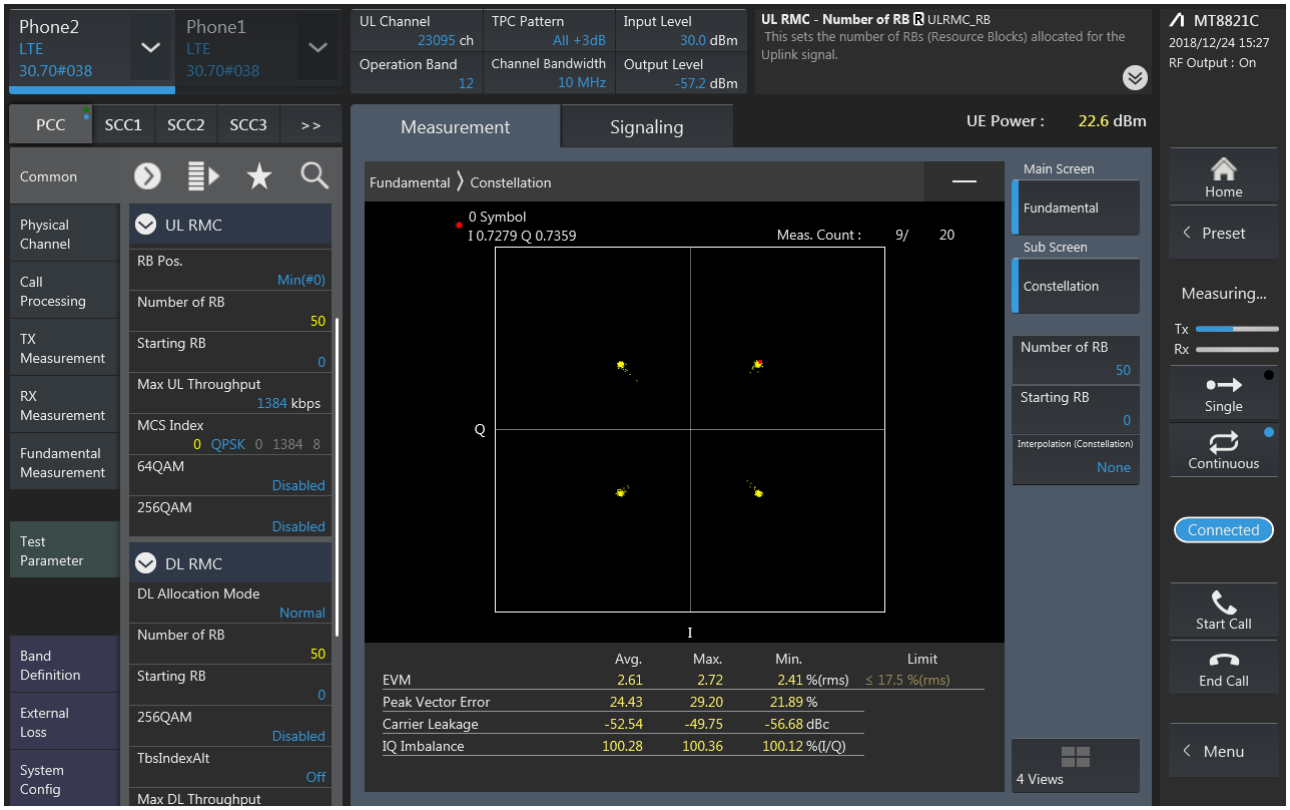
Date: 20.DEC.2018 18:58:41

3. Modulation Characteristics

3.1. Test BAND = LTE BAND12

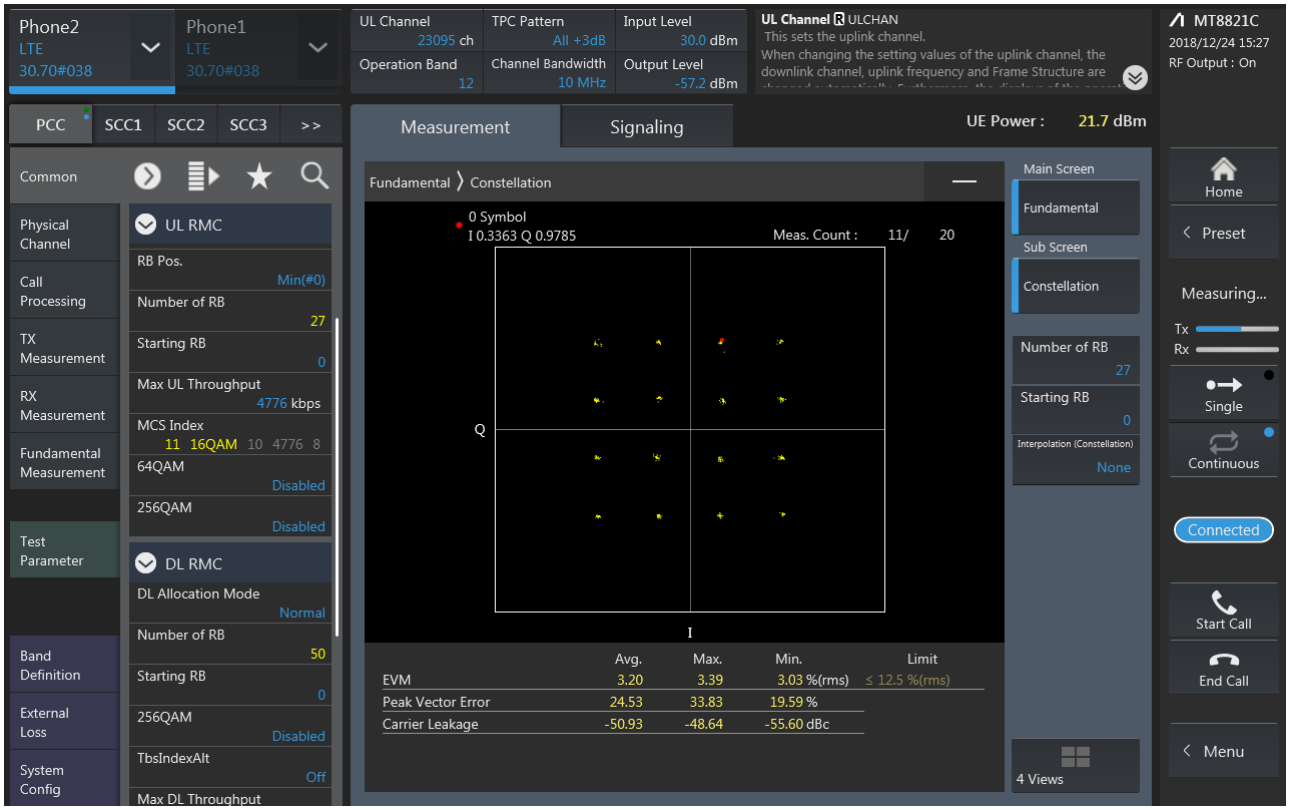
3.1.1. Test Mode = LTE /TM1 10MHz

3.1.1.1. Test Channel = MCH



3.1.2. Test Mode = LTE /TM2 10MHz

3.1.2.1. Test Channel = MCH



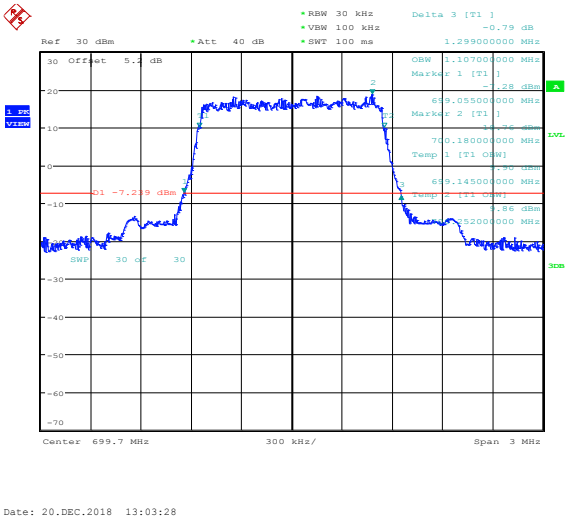
4. 26dB Bandwidth and Occupied Bandwidth

4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	1.107	1.299	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.101	1.314	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.101	1.320	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.104	1.317	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.101	1.320	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.104	1.308	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.706	2.976	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.706	3.006	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.700	2.976	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.700	3.012	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.706	3.012	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.700	2.976	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.480	4.920	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.480	4.950	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.480	4.890	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.470	4.900	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.490	4.980	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.470	4.890	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.900	9.720	PASS
Band12	10MHz	QPSK	23095	50RB#0	8.980	9.880	PASS
Band12	10MHz	QPSK	23130	50RB#0	8.920	9.660	PASS
Band12	10MHz	16QAM	23060	27RB#0	4.880	5.680	PASS
Band12	10MHz	16QAM	23095	27RB#0	4.880	5.740	PASS
Band12	10MHz	16QAM	23130	27RB#0	4.900	5.700	PASS

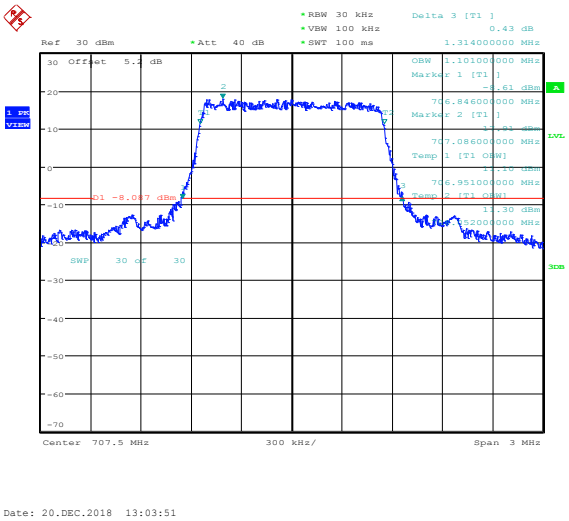
4.2. Test Plots

Band12_1.4MHz_QPSK_23017_6RB#0



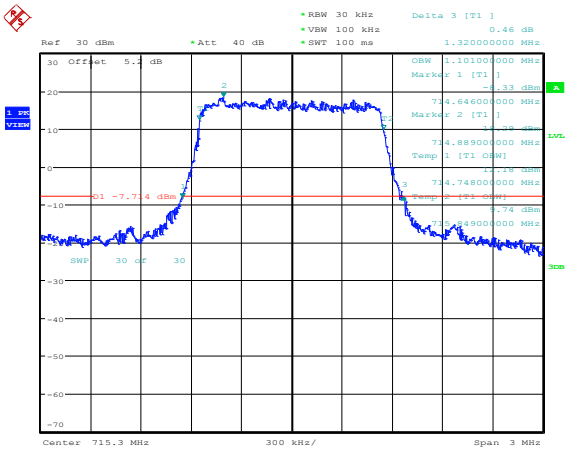
Date: 20.DEC.2018 13:03:28

Band12_1.4MHz_QPSK_23095_6RB#0



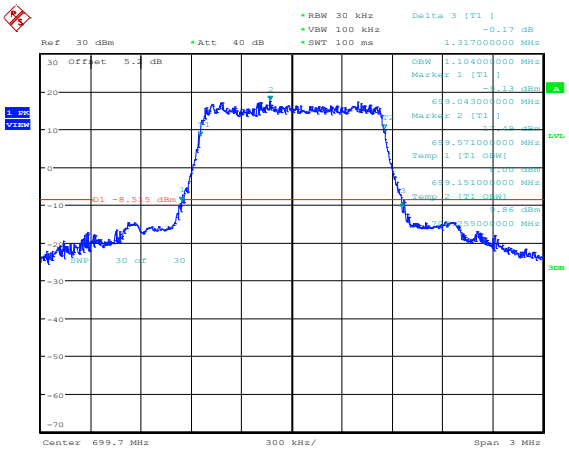
Date: 20.DEC.2018 13:03:51

Band12_1.4MHz_QPSK_23173_6RB#0



Date: 20.DEC.2018 13:04:14

Band12_1.4MHz_16QAM_23017_6RB#0



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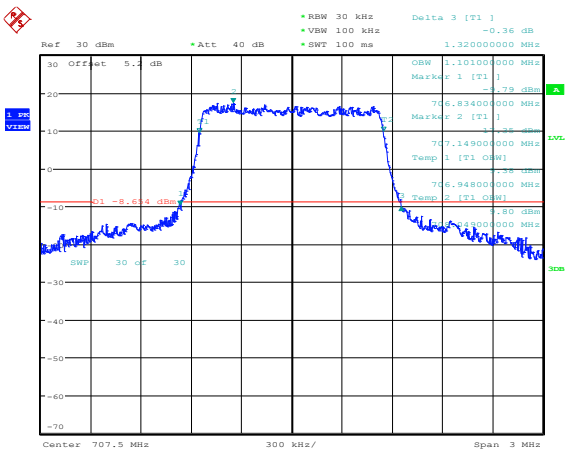
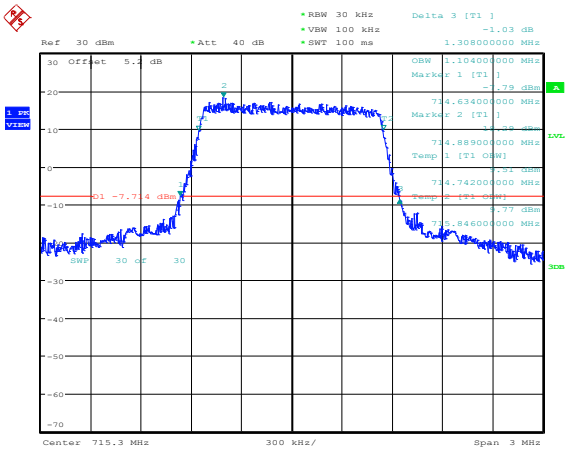


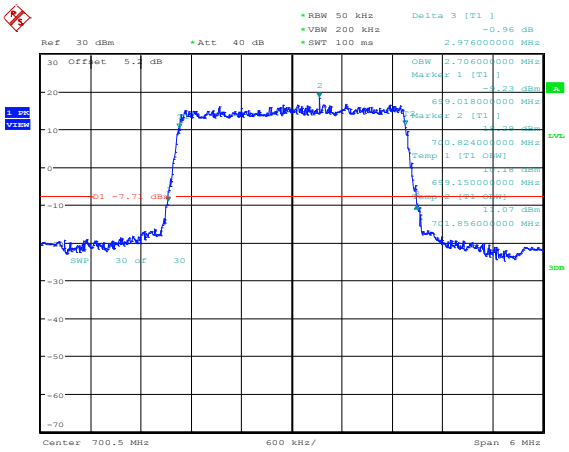
Date: 20.DEC.2018 13:04:01

Band12_1.4MHz_16QAM_23173_6RB#0



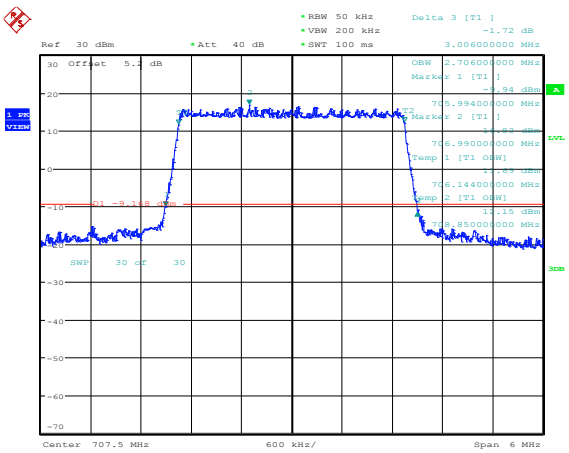
Date: 20.DEC.2018 13:04:24

Band12_3MHz_QPSK_23025_15RB#0



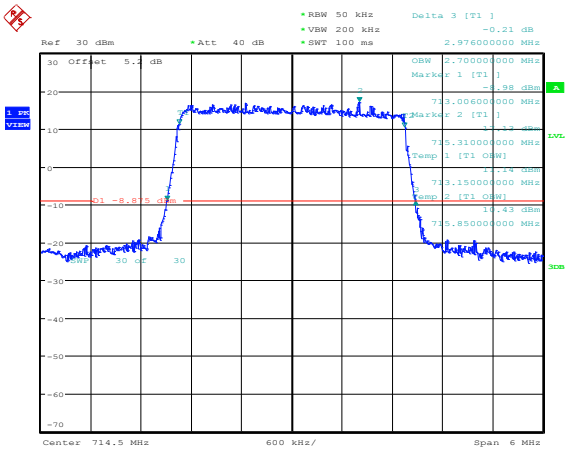
Date: 20.DEC.2018 13:04:48

Band12_3MHz_QPSK_23095_15RB#0



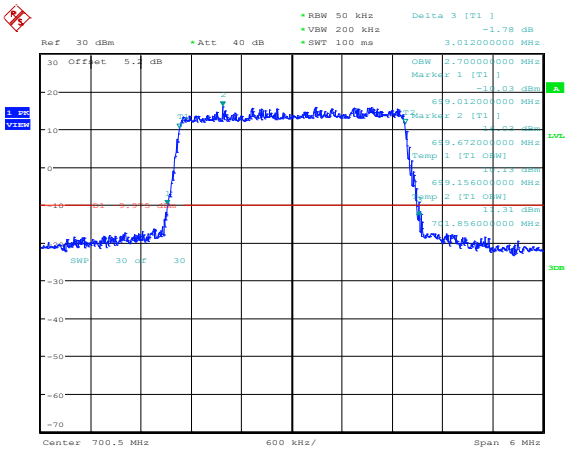
Date: 20.DEC.2018 13:05:11

Band12_3MHz_QPSK_23165_15RB#0



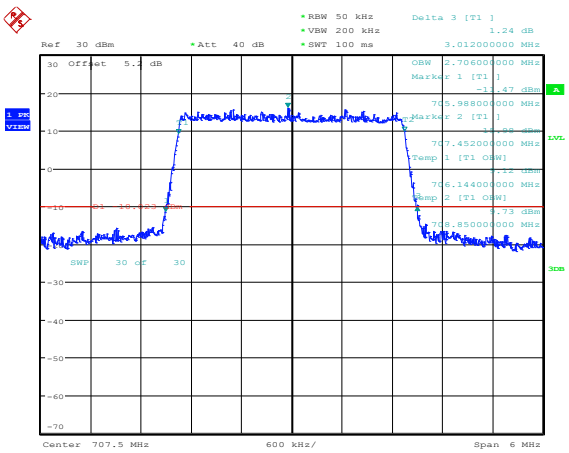
Date: 20.DEC.2018 13:05:34

Band12_3MHz_16QAM_23025_15RB#0



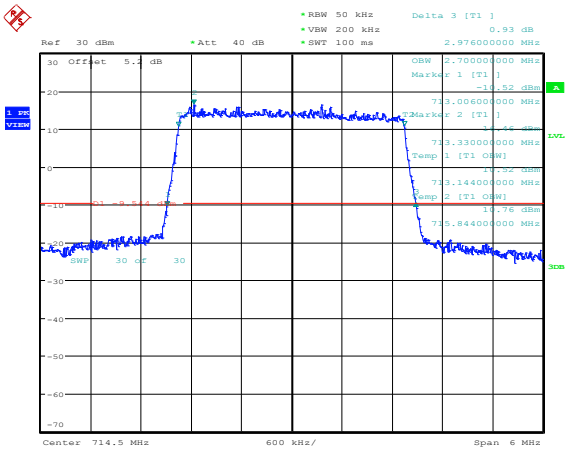
Date: 20.DEC.2018 13:04:59

Band12_3MHz_16QAM_23095_15RB#0



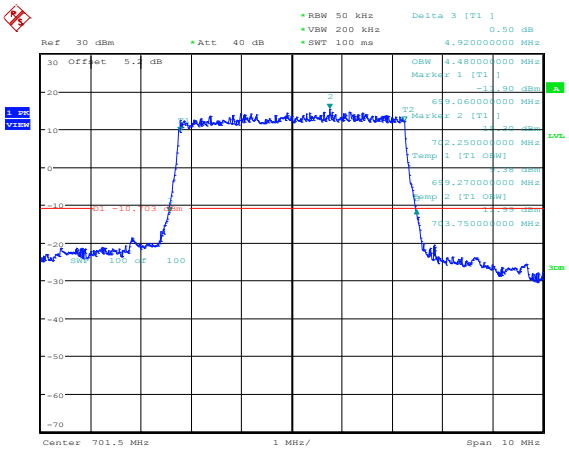
Date: 20.DEC.2018 13:05:22

Band12_3MHz_16QAM_23165_15RB#0



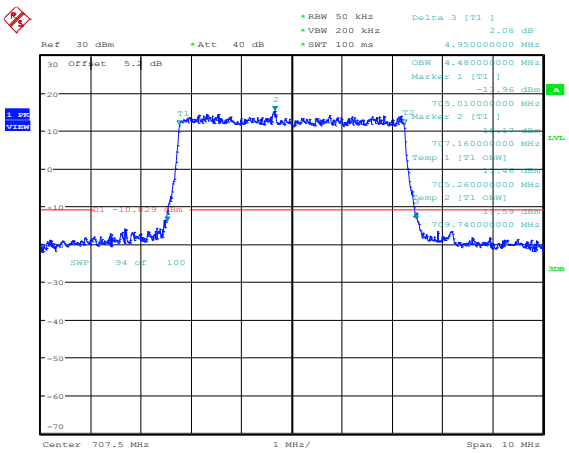
Date: 20.DEC.2018 13:05:45

Band12_5MHz_QPSK_23035_25RB#0



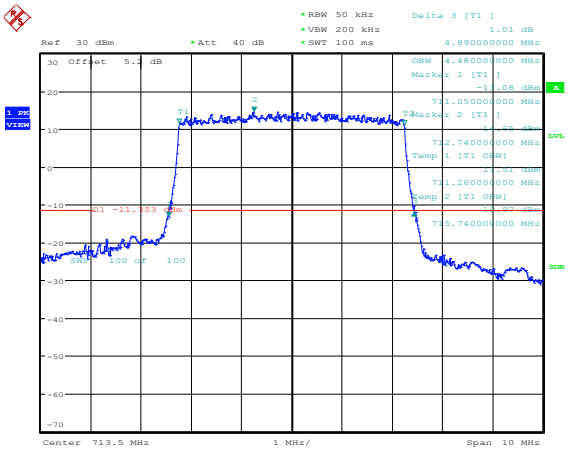
Date: 20.DEC.2018 13:06:29

Band12_5MHz_QPSK_23095_25RB#0



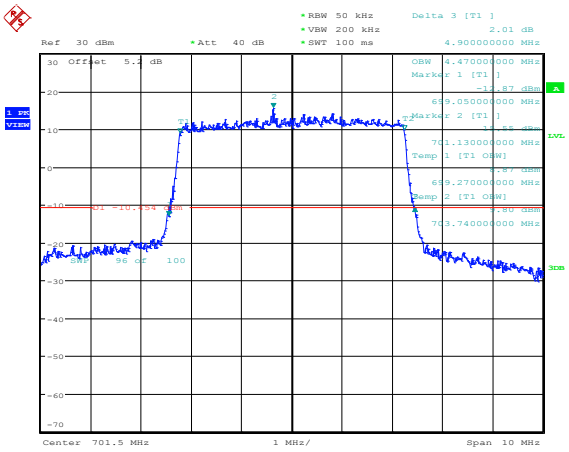
Date: 20.DEC.2018 13:07:07

Band12_5MHz_QPSK_23155_25RB#0



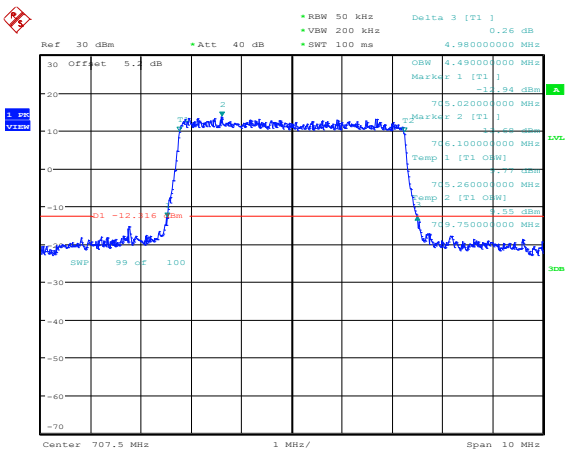
Date: 20.DEC.2018 13:07:44

Band12_5MHz_16QAM_23035_25RB#0



Date: 20.DEC.2018 13:06:47

Band12_5MHz_16QAM_23095_25RB#0



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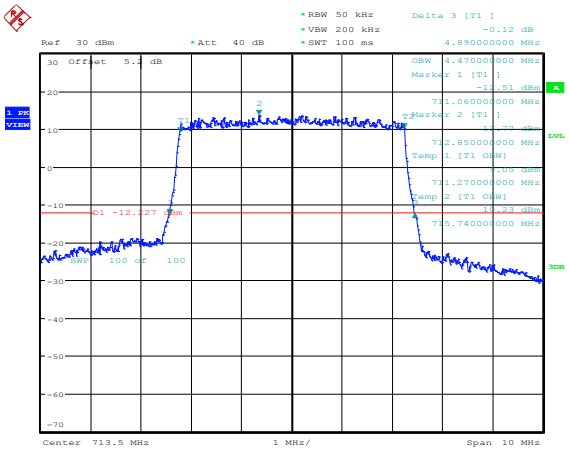
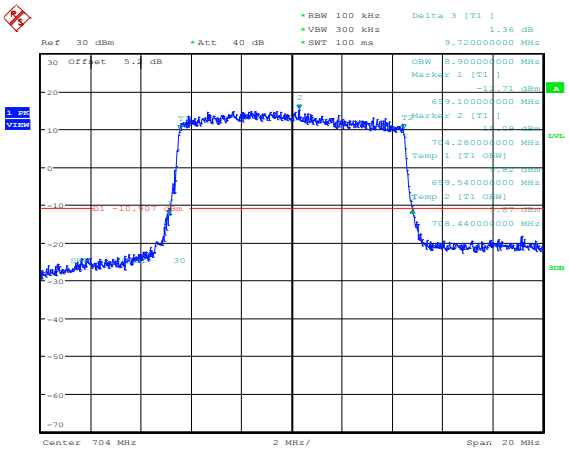
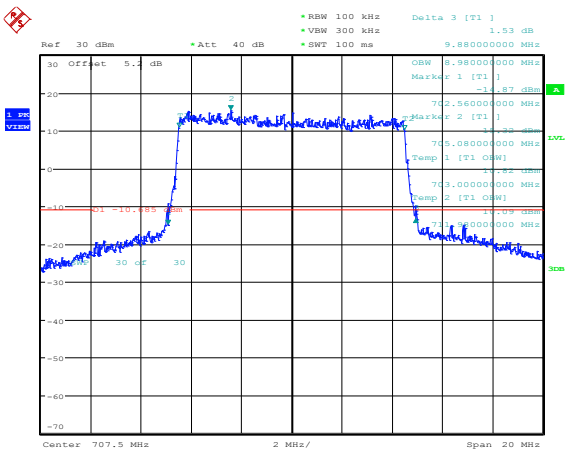
Band12_5MHz_16QAM_23155_25RB#0



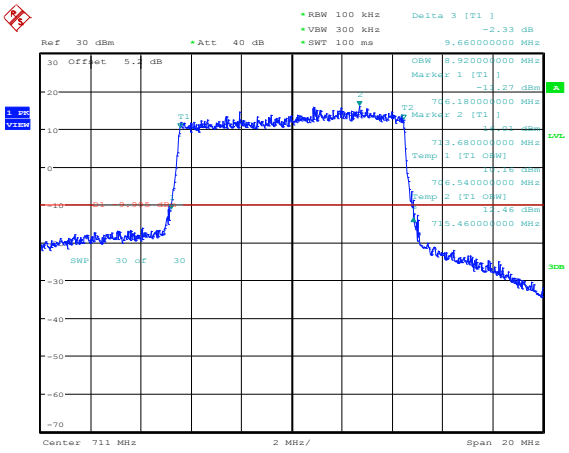
Band12_10MHz_QPSK_23060_50RB#0



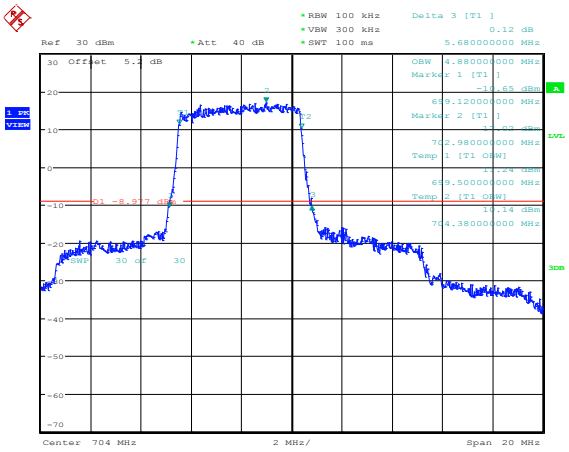
Band12_10MHz_QPSK_23095_50RB#0



Band12_10MHz_QPSK_23130_50RB#0



Band12_10MHz_16QAM_23060_27RB#0



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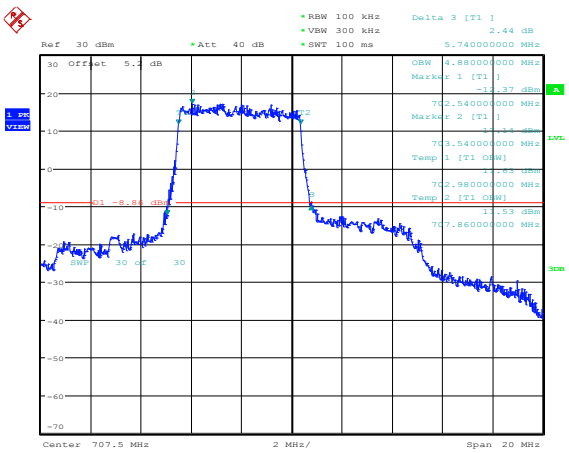

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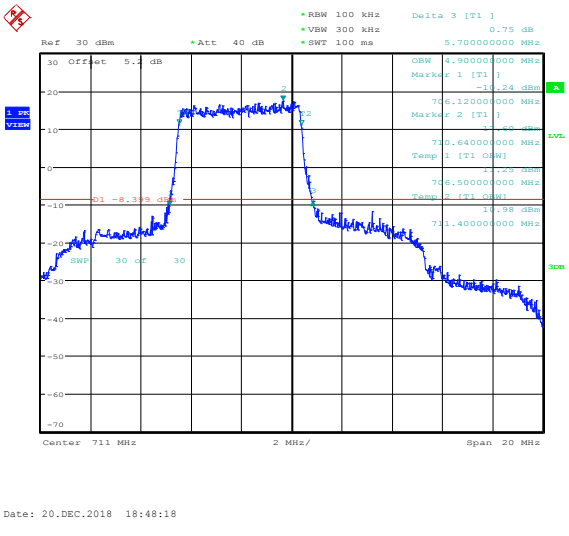
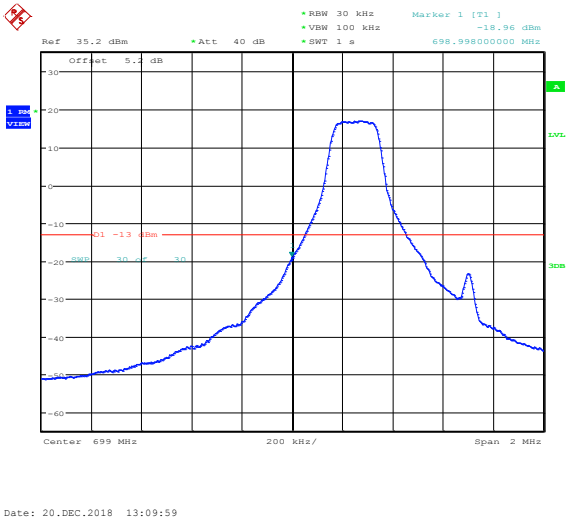


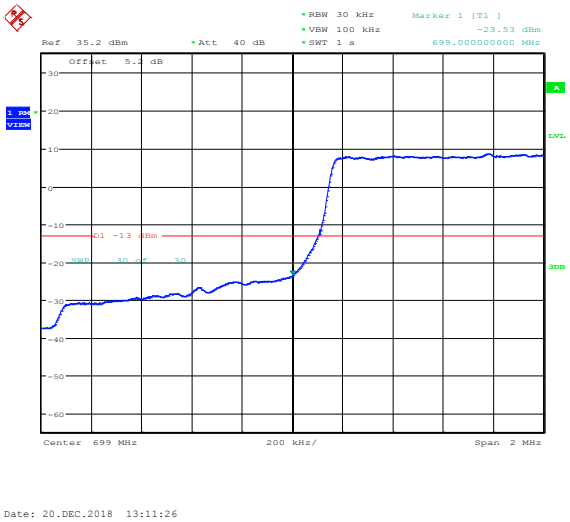
5. Band Edge Compliance

5.1. Test Plots

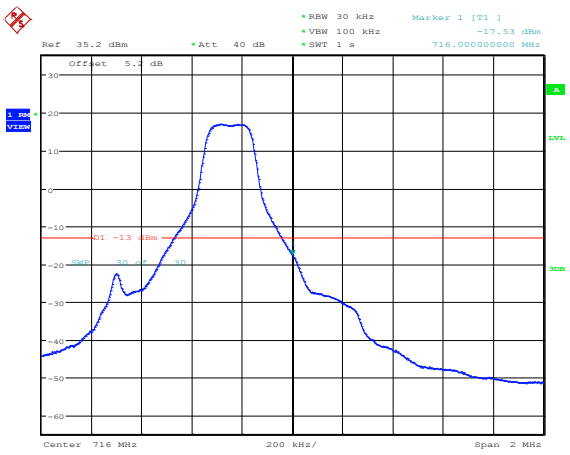
Band12_1.4MHz_QPSK_23017_1RB#0



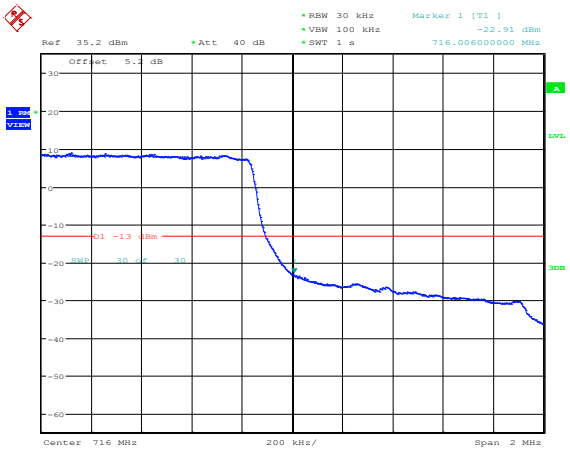
Band12_1.4MHz_QPSK_23017_6RB#0



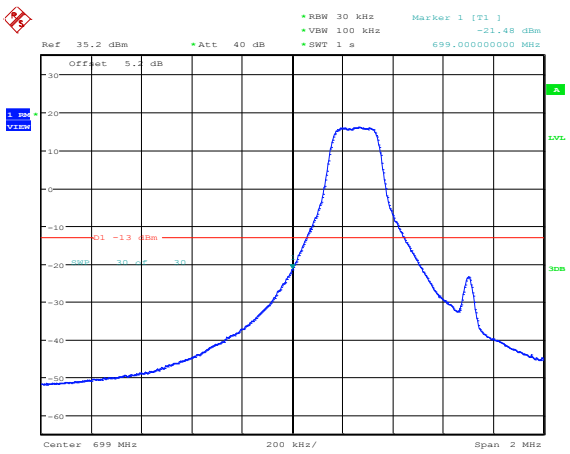
Band12_1.4MHz_QPSK_23173_1RB#5



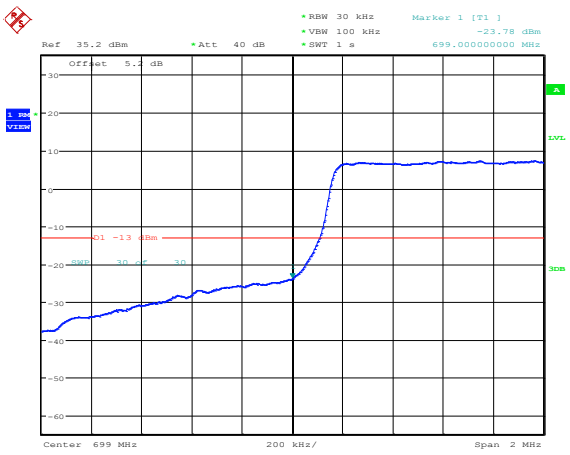
Band12_1.4MHz_QPSK_23173_6RB#0



Band12_1.4MHz_16QAM_23017_1RB#0

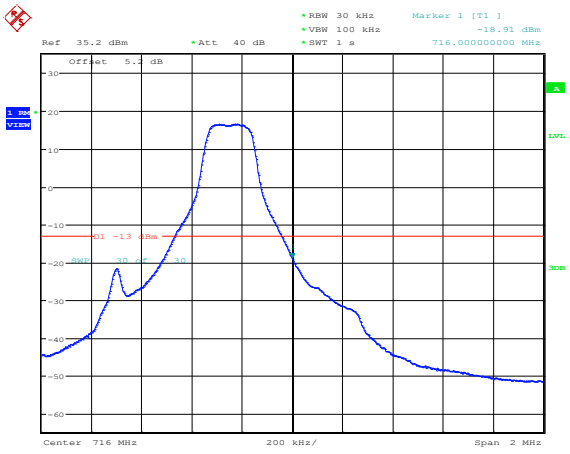


Band12_1.4MHz_16QAM_23017_6RB#0



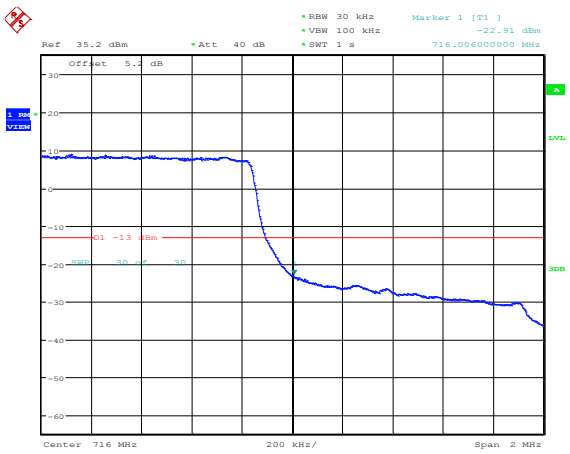
Date: 20.DEC.2018 13:12:10

Band12_1.4MHz_16QAM_23173_1RB#5



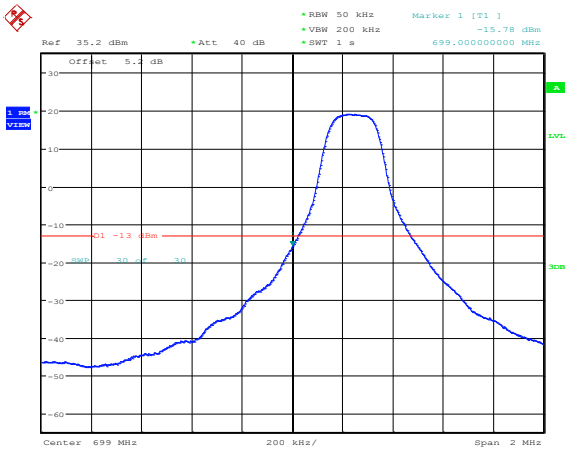
Date: 20.DEC.2018 13:15:11

Band12_1.4MHz_16QAM_23173_6RB#0

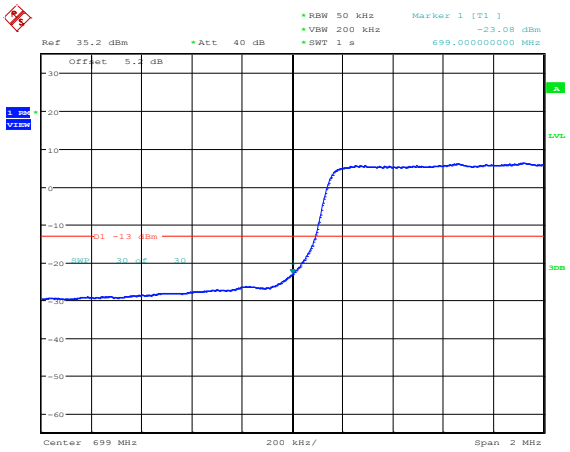


Date: 20.DEC.2018 13:15:55

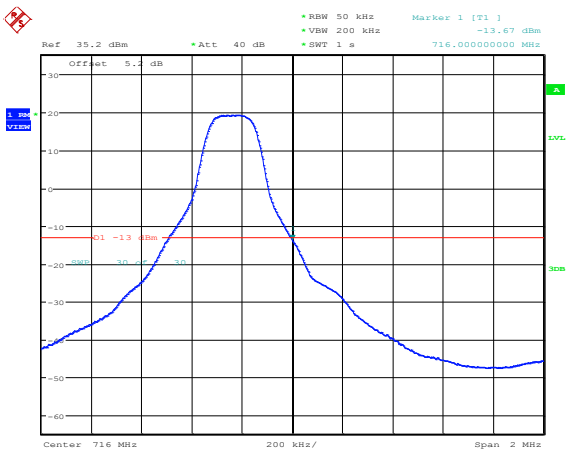
Band12_3MHz_QPSK_23025_1RB#0



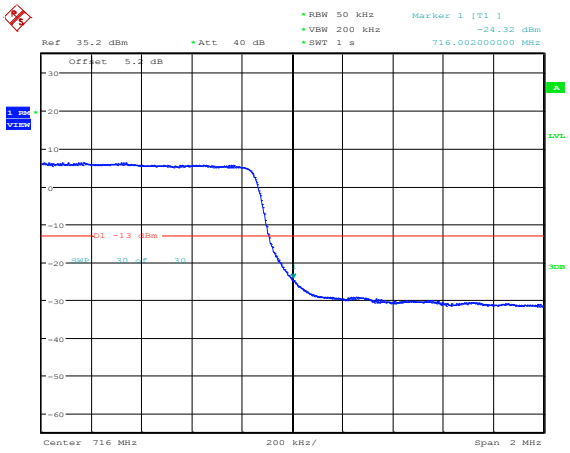
Band12_3MHz_QPSK_23025_15RB#0



Band12_3MHz_QPSK_23165_1RB#14

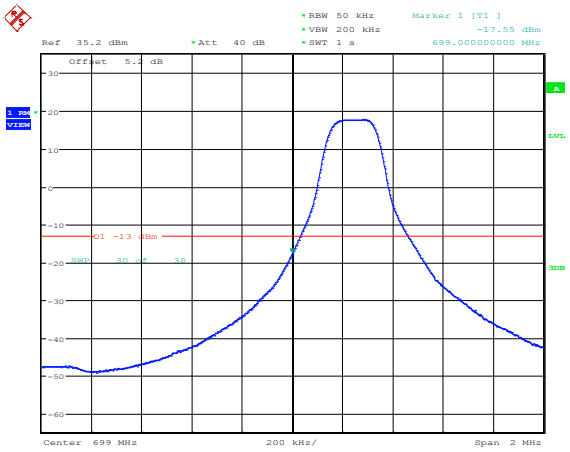


Band12_3MHz_QPSK_23165_15RB#0



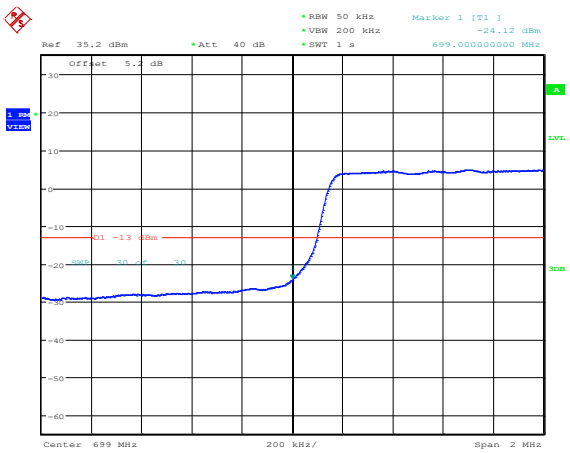
Date: 20.DEC.2018 13:22:26

Band12_3MHz_16QAM_23025_1RB#0



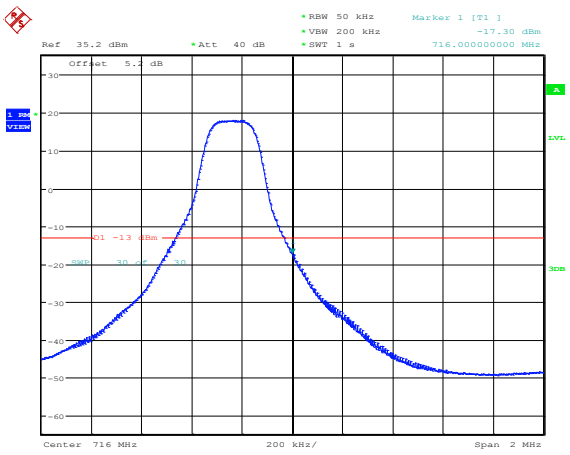
Date: 20.DEC.2018 13:18:41

Band12_3MHz_16QAM_23025_15RB#0

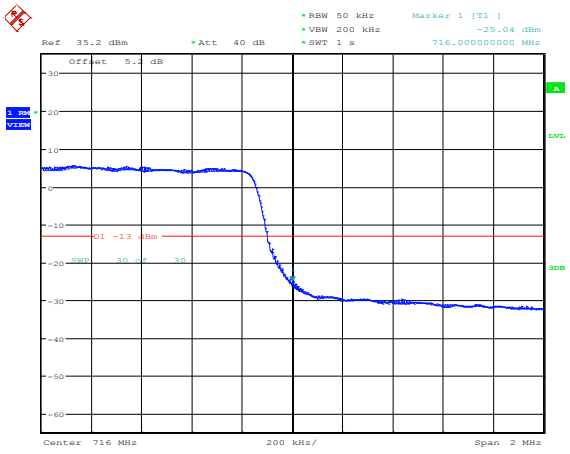


Date: 20.DEC.2018 13:20:08

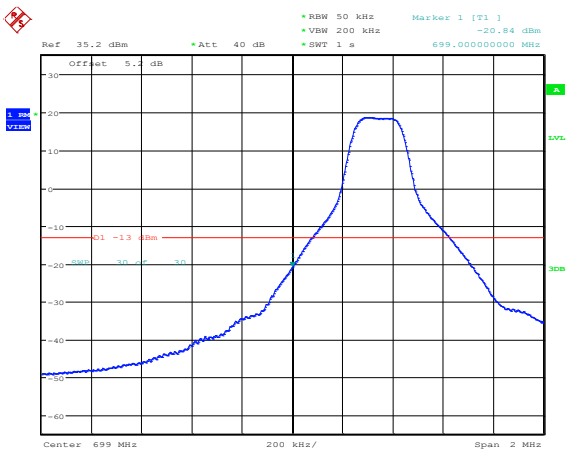
Band12_3MHz_16QAM_23165_1RB#14



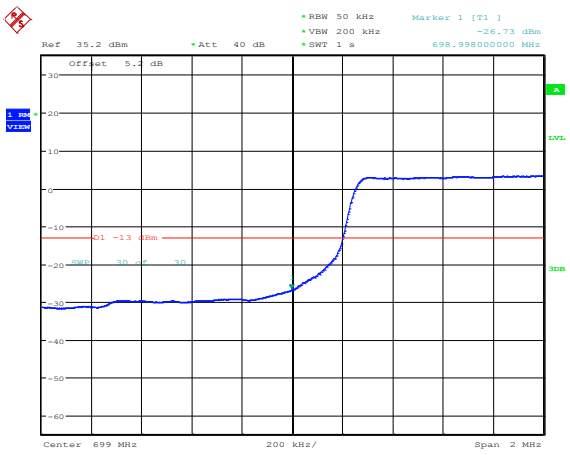
Band12_3MHz_16QAM_23165_15RB#0



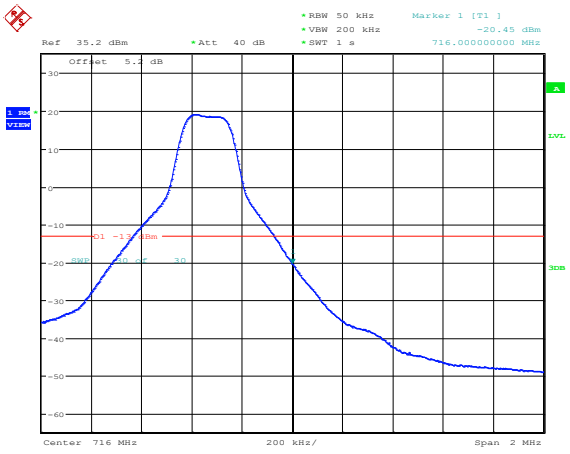
Band12_5MHz_QPSK_23035_1RB#0



Band12_5MHz_QPSK_23035_25RB#0



Band12_5MHz_QPSK_23155_1RB#24



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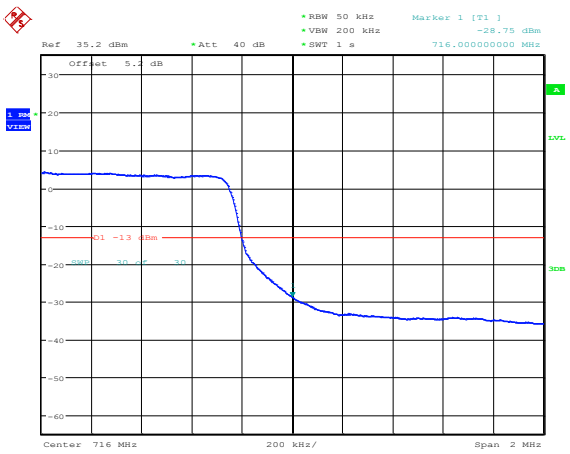
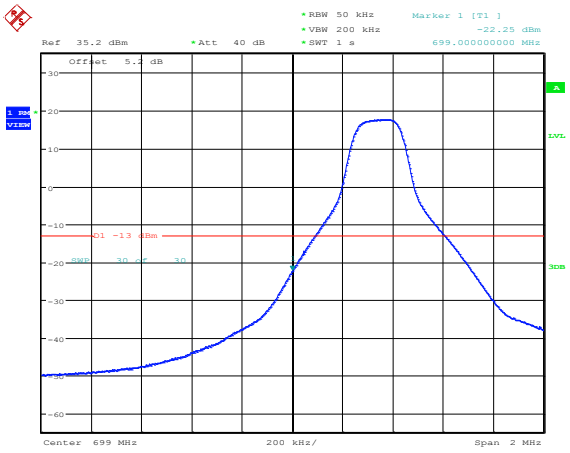
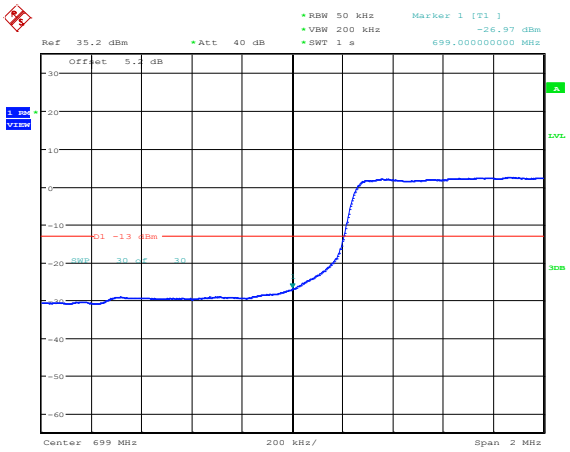


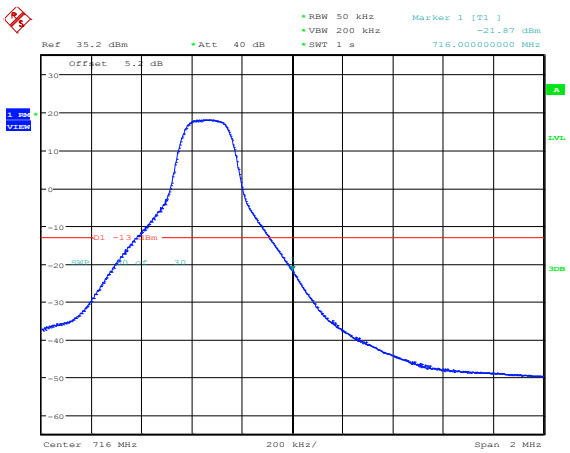
Band12_5MHz_16QAM_23035_1RB#0



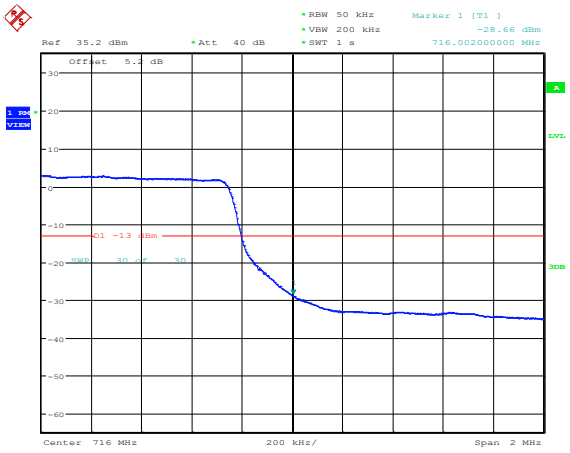
Band12_5MHz_16QAM_23035_25RB#0



Band12_5MHz_16QAM_23155_1RB#24

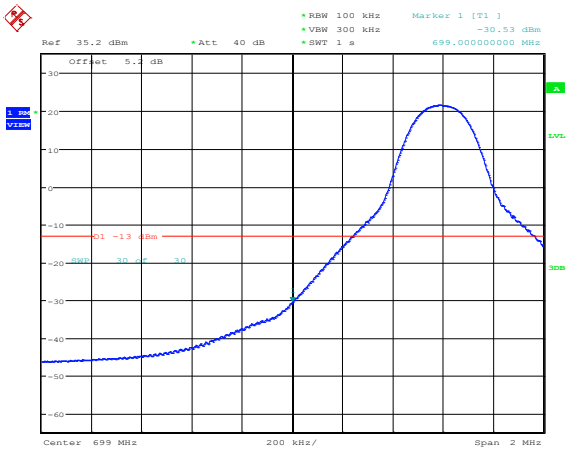


Band12_5MHz_16QAM_23155_25RB#0



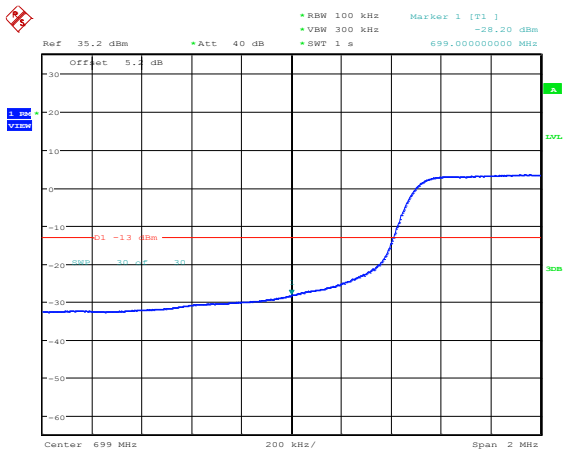
Date: 20.DEC.2018 13:29:51

Band12_10MHz_QPSK_23060_1RB#0



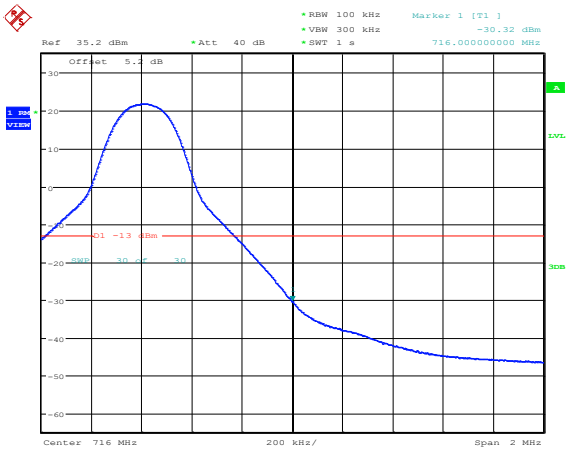
Date: 20.DEC.2018 13:31:35

Band12_10MHz_QPSK_23060_50RB#0

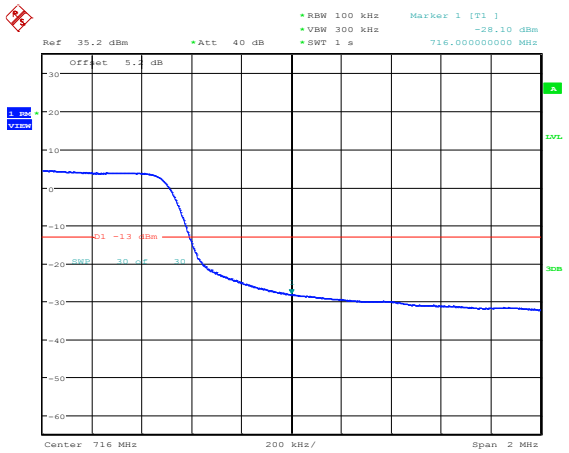


Date: 20.DEC.2018 13:32:19

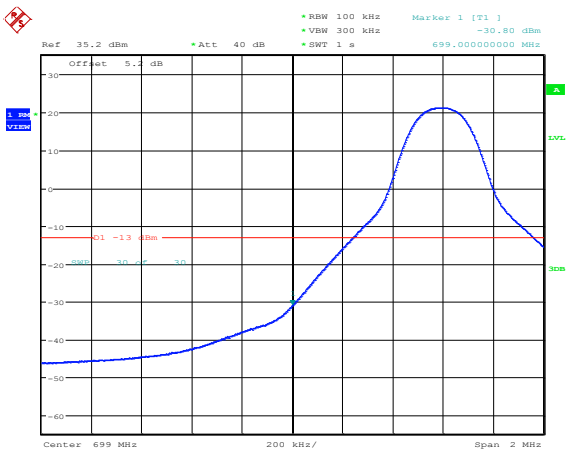
Band12_10MHz_QPSK_23130_1RB#49



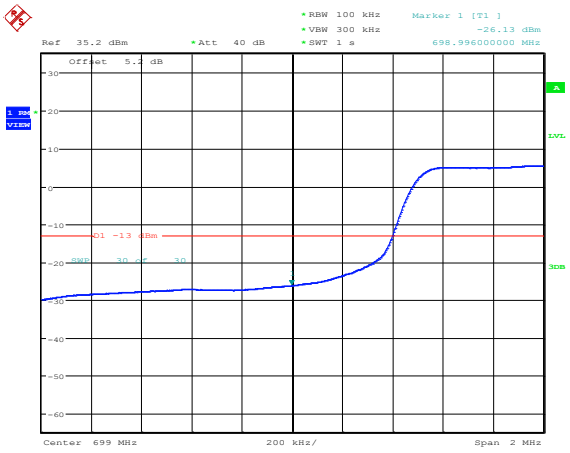
Band12_10MHz_QPSK_23130_50RB#0



Band12_10MHz_16QAM_23060_1RB#0

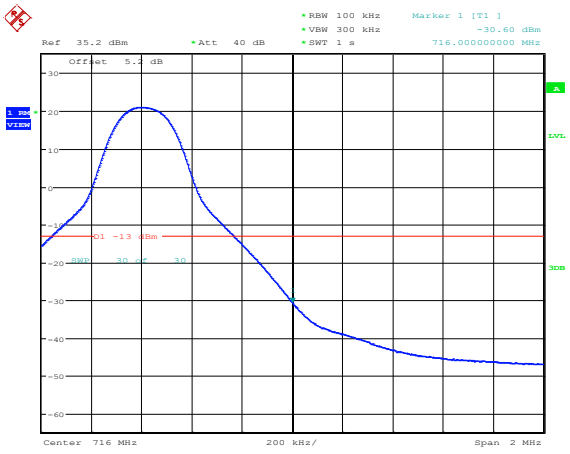


Band12_10MHz_16QAM_23060_27RB#0



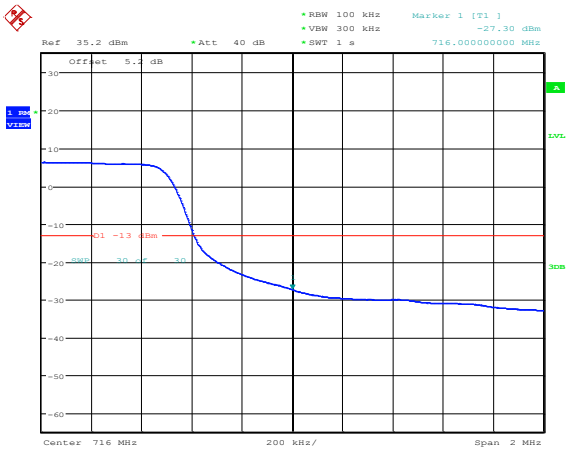
Date: 20.DEC.2018 18:49:56

Band12_10MHz_16QAM_23130_1RB#49



Date: 20.DEC.2018 18:50:46

Band12_10MHz_16QAM_23130_27RB#23



Date: 20.DEC.2018 18:51:35

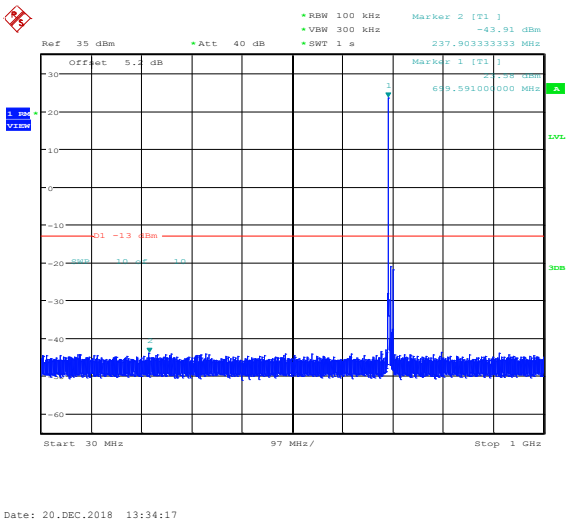
6. Spurious Emission at Antenna Terminal

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.

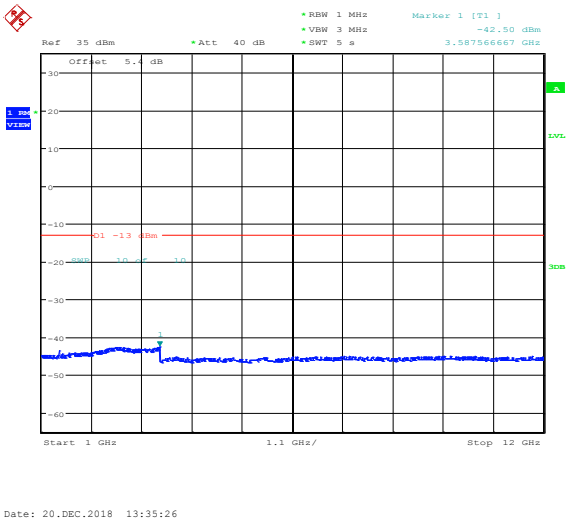
Remark2: only the worst case data displayed in this report.

6.1. Test Plots

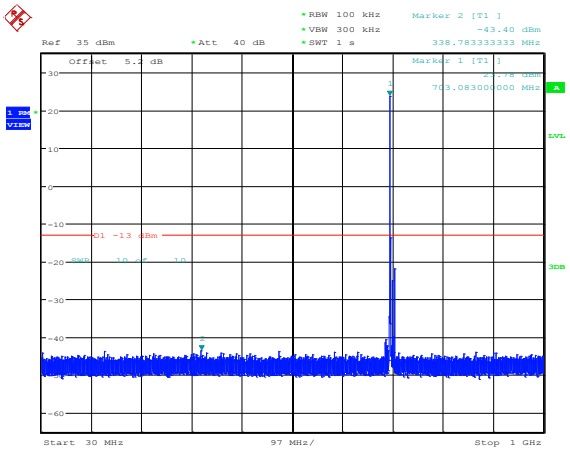
Band12_10MHz_QPSK_23060_1RB#0



Band12_10MHz_QPSK_23060_1RB#0

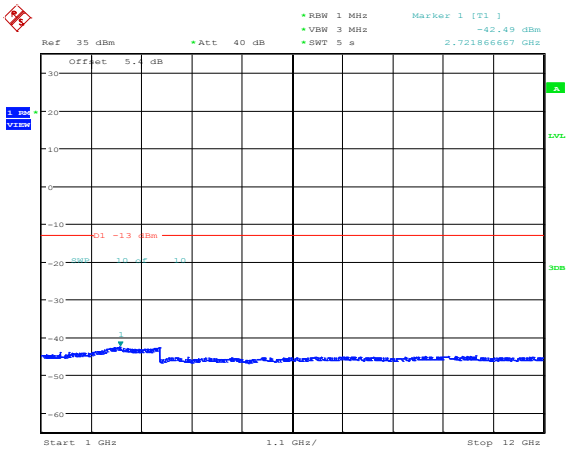


Band12_10MHz_QPSK_23095_1RB#0



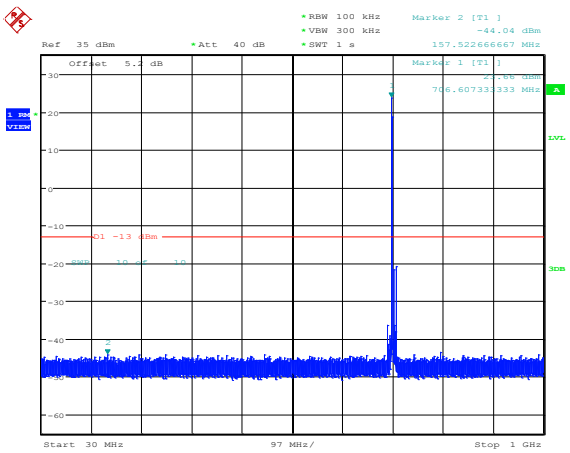
Date: 20.DEC.2018 13:35:47

Band12_10MHz_QPSK_23095_1RB#0



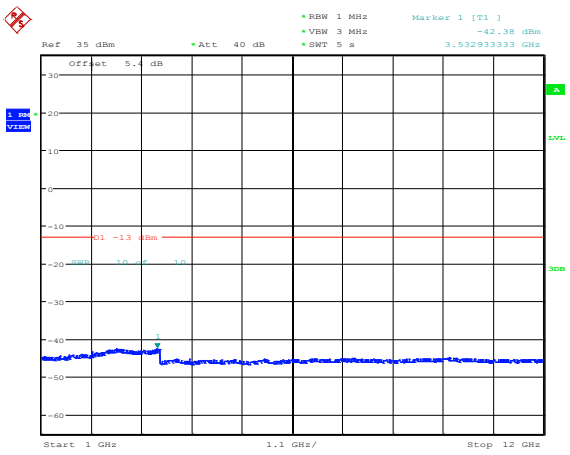
Date: 20.DEC.2018 13:36:56

Band12_10MHz_QPSK_23130_1RB#0



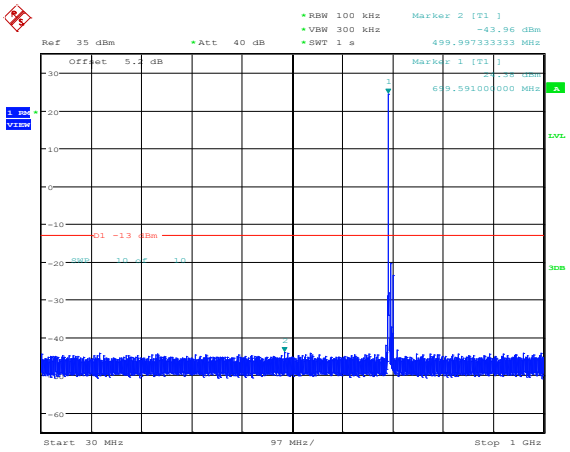
Date: 20.DEC.2018 13:37:21

Band12_10MHz_QPSK_23130_1RB#0



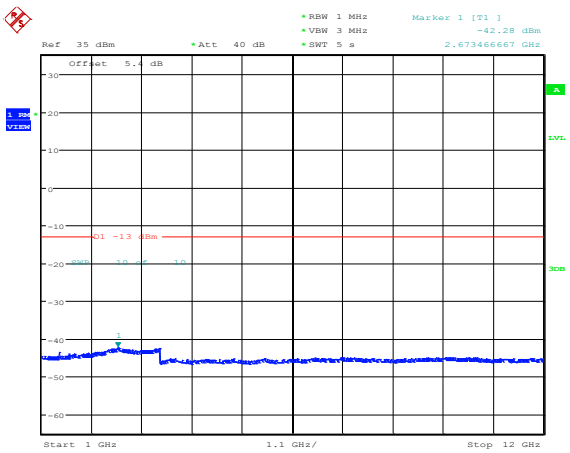
Date: 20.DEC.2018 13:38:30

Band12_10MHz_16QAM_23060_1RB#0



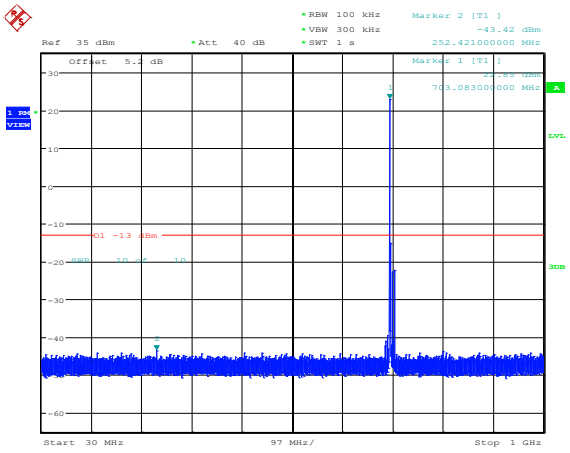
Date: 20.DEC.2018 18:51:58

Band12_10MHz_16QAM_23060_1RB#0



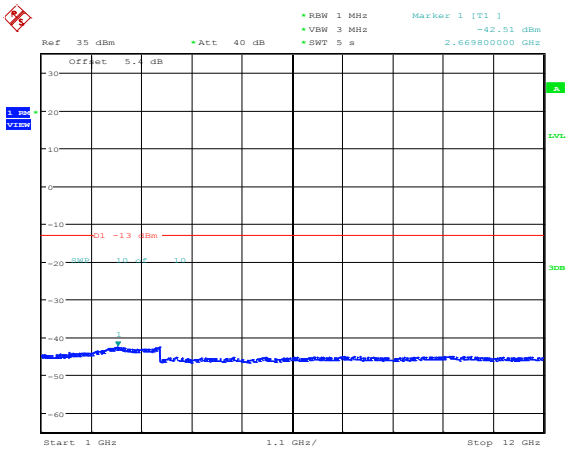
Date: 20.DEC.2018 18:53:07

Band12_10MHz_16QAM_23095_1RB#0



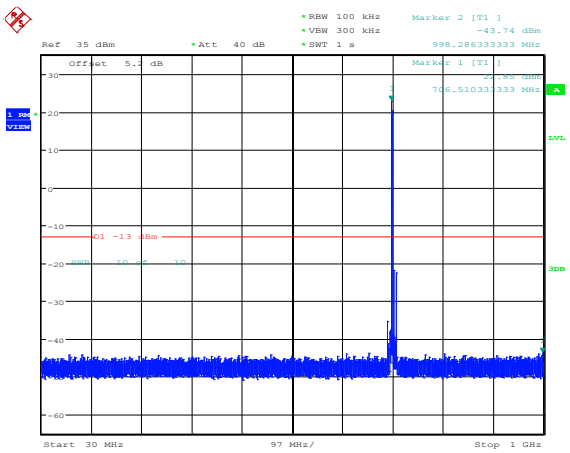
Date: 20.DEC.2018 19:12:24

Band12_10MHz_16QAM_23095_1RB#0



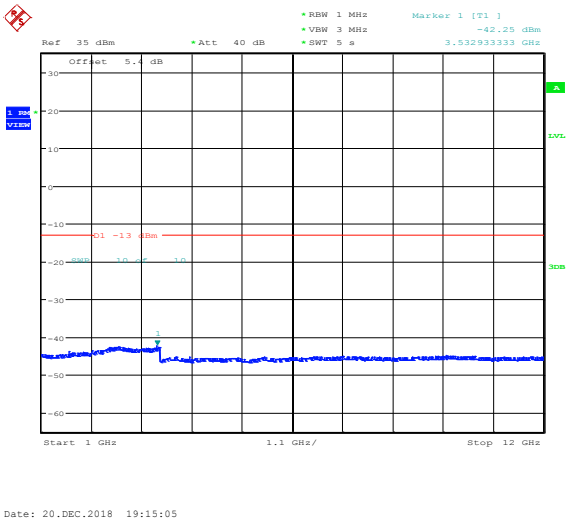
Date: 20.DEC.2018 19:13:33

Band12_10MHz_16QAM_23130_1RB#0



Date: 20.DEC.2018 19:13:56

Band12_10MHz_16QAM_23130_1RB#0



7. Field Strength of Spurious Radiation

7.1. Test BAND = LTE BAND 12

7.1.1. Test Mode =LTE/TM1 10MHz

7.1.1.1. Test Channel = LCH 1RB#0

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
111.713333	-81.48	-13.00	68.48	Vertical
1399.000000	-59.76	-13.00	46.76	Vertical
2099.000000	-50.42	-13.00	37.42	Vertical
3497.737500	-66.88	-13.00	53.88	Vertical
4197.300000	-65.23	-13.00	52.23	Vertical
6952.162500	-64.61	-13.00	51.61	Vertical
56.646667	-76.99	-13.00	63.99	Horizontal
1399.000000	-66.70	-13.00	53.70	Horizontal
2099.000000	-56.85	-13.00	43.85	Horizontal
3497.737500	-63.03	-13.00	50.03	Horizontal
4197.300000	-65.92	-13.00	52.92	Horizontal
6061.500000	-64.68	-13.00	51.68	Horizontal

7.1.1.2. Test Channel = MCH 1RB#0

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
106.113333	-81.24	-13.00	68.24	Vertical
1406.000000	-62.00	-13.00	49.00	Vertical
2109.500000	-51.41	-13.00	38.41	Vertical
3514.800000	-65.62	-13.00	52.62	Vertical
4218.262500	-65.22	-13.00	52.22	Vertical
7951.537500	-63.30	-13.00	50.30	Vertical
55.993333	-77.35	-13.00	64.35	Horizontal
1406.000000	-67.08	-13.00	54.08	Horizontal
2109.500000	-61.67	-13.00	48.67	Horizontal
2581.000000	-55.20	-13.00	42.20	Horizontal
3515.287500	-62.19	-13.00	49.19	Horizontal
4218.262500	-65.47	-13.00	52.47	Horizontal

7.1.1.3. Test Channel = HCH 1RB#0

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
110.313333	-80.98	-13.00	67.98	Vertical
1413.000000	-66.04	-13.00	53.04	Vertical
1765.000000	-63.26	-13.00	50.26	Vertical
2120.000000	-58.18	-13.00	45.18	Vertical
3532.837500	-66.02	-13.00	53.02	Vertical
4239.225000	-65.55	-13.00	52.55	Vertical
63.086667	-77.28	-13.00	64.28	Horizontal
104.293333	-79.74	-13.00	66.74	Horizontal
1413.500000	-67.12	-13.00	54.12	Horizontal
2120.000000	-59.60	-13.00	46.60	Horizontal
3532.837500	-60.22	-13.00	47.22	Horizontal
7951.537500	-63.27	-13.00	50.27	Horizontal

Remark:

1) The disturbance below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the worst case data had been displayed.
2) We have tested all modulation and all Bandwidth , but only the worst case data presented in this report.

8. Frequency Stability

8.1. Frequency Vs Voltage

Voltage										
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band12	10MHz	QPSK	23060	50RB#0	VL	NT	0.80	0.001136	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	VN	NT	0.30	0.000426	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	VH	NT	0.60	0.000852	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VL	NT	0.50	0.000707	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VN	NT	1.40	0.001979	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VH	NT	0.50	0.000707	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VL	NT	-0.30	-0.000422	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VN	NT	-0.30	-0.000422	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VH	NT	-0.80	-0.001125	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	VL	NT	-2.20	-0.003125	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	VN	NT	-1.40	-0.001989	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	VH	NT	-2.50	-0.003551	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	VL	NT	-1.40	-0.001979	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	VN	NT	-0.60	-0.000848	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	VH	NT	-2.30	-0.003251	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	VL	NT	-2.30	-0.003235	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	VN	NT	-3.10	-0.004360	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	VH	NT	-2.40	-0.003376	±2.5	PASS

8.2. Frequency Vs Temperature

Temperature										
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band12	10MHz	QPSK	23060	50RB#0	NV	-30	0.90	0.001278	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	-20	1.20	0.001705	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	0	1.10	0.001563	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	10	1.20	0.001705	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	20	-0.40	-0.000568	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	30	1.00	0.001420	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	40	0.40	0.000568	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	50	0.70	0.000994	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-30	-0.10	-0.000141	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-20	-0.20	-0.000283	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	0	0.40	0.000565	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	10	-0.20	-0.000283	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	20	0.80	0.001131	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	30	0.60	0.000848	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	40	1.30	0.001837	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	50	0.40	0.000565	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-30	-0.50	-0.000703	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-20	-0.50	-0.000703	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	0	0.60	0.000844	±2.5	PASS

Band12	10MHz	QPSK	23130	50RB#0	NV	10	-0.20	-0.000281	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	20	-0.40	-0.000563	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	30	-0.40	-0.000563	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	40	-0.70	-0.000985	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	50	-0.10	-0.000141	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	-30	-0.80	-0.001136	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	-20	-1.10	-0.001563	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	0	-0.40	-0.000568	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	10	-0.60	-0.000852	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	20	-2.20	-0.003125	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	30	-1.00	-0.001420	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	40	0.20	0.000284	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	50	0.00	0.000000	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	-30	-1.90	-0.002686	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	-20	-1.80	-0.002544	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	0	-2.20	-0.003110	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	10	-1.10	-0.001555	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	20	0.00	0.000000	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	30	-0.80	-0.001131	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	40	-1.80	-0.002544	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	50	-2.60	-0.003675	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	-30	-0.90	-0.001266	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	-20	-0.80	-0.001125	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	0	-1.20	-0.001688	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	10	-2.50	-0.003516	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	20	-1.50	-0.002110	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	30	-2.80	-0.003938	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	40	-2.40	-0.003376	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	50	-2.20	-0.003094	±2.5	PASS

The End