Appendix B

E-UTRA BAND 5

CONTENT

1. Effective (Isotropic) Radiated Power

1.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	23.47	11.02	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	23.49	11.04	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	23.46	11.01	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#0	23.57	11.12	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#1	23.61	11.16	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#3	23.66	11.21	38.45	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	22.50	10.05	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	23.41	10.96	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	23.66	11.21	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	23.43	10.98	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#0	23.52	11.07	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#1	23.56	11.11	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#3	23.62	11.17	38.45	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	22.41	9.96	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	23.42	10.97	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	23.56	11.11	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	23.31	10.86	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#0	23.75	11.30	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#1	23.61	11.16	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#3	23.48	11.03	38.45	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	22.61	10.16	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	21.97	9.52	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	22.58	10.13	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	21.93	9.48	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#0	22.57	10.12	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#1	22.68	10.23	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#3	22.62	10.17	38.45	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	21.64	9.19	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	21.98	9.53	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#2	21.88	9.43	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	21.80	9.35	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#0	22.60	10.15	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#1	22.63	10.18	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#3	22.62	10.17	38.45	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	21.38	8.93	38.45	PASS

Band5	1.4MHz	16QAM	20643	1RB#0	22.08	9.63	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#2	22.06	9.61	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	21.96	9.51	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#0	22.81	10.36	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#1	22.66	10.21	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#3	22.60	10.15	38.45	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	21.70	9.25	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#0	23.78	11.33	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#8	23.33	10.88	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#14	23.63	11.18	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#0	22.64	10.19	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#4	22.48	10.03	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#7	22.61	10.16	38.45	PASS
Band5	3MHz	QPSK	20415	15RB#0	22.47	10.02	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#0	23.65	11.20	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#8	23.32	10.87	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#14	23.57	11.12	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#0	22.53	10.08	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#4	22.62	10.17	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#7	22.58	10.13	38.45	PASS
Band5	3MHz	QPSK	20525	15RB#0	22.58	10.13	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#0	23.55	11.10	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#8	23.50	11.05	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#14	23.50	11.05	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#0	22.48	10.03	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#4	22.73	10.28	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#7	22.50	10.05	38.45	PASS
Band5	3MHz	QPSK	20635	15RB#0	22.51	10.06	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#0	22.39	9.94	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#8	22.50	10.05	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#14	22.01	9.56	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#0	21.77	9.32	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#4	21.43	8.98	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#7	21.43	8.98	38.45	PASS
Band5	3MHz	16QAM	20415	15RB#0	21.71	9.26	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#0	21.82	9.37	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#8	21.94	9.49	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#14	21.99	9.54	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#0	21.23	8.78	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#4	21.39	8.94	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#7	21.29	8.84	38.45	PASS
Band5	3MHz	16QAM	20525	15RB#0	21.63	9.18	38.45	PASS

Band5	3MHz	16QAM	20635	1RB#0	22.50	10.05	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#8	21.77	9.32	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#14	21.79	9.34	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#0	21.71	9.26	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#4	21.68	9.23	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#7	21.71	9.26	38.45	PASS
Band5	3MHz	16QAM	20635	15RB#0	21.57	9.12	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#0	23.54	11.09	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#12	23.10	10.65	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#24	23.44	10.99	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#0	22.33	9.88	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#6	22.63	10.18	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#13	22.59	10.14	38.45	PASS
Band5	5MHz	QPSK	20425	25RB#0	22.51	10.06	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#0	23.53	11.08	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#12	23.40	10.95	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#24	23.31	10.86	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#0	22.50	10.05	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#6	22.42	9.97	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#13	22.50	10.05	38.45	PASS
Band5	5MHz	QPSK	20525	25RB#0	22.51	10.06	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#0	23.38	10.93	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#12	23.41	10.96	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#24	23.69	11.24	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#0	22.43	9.98	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#6	22.37	9.92	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#13	22.65	10.20	38.45	PASS
Band5	5MHz	QPSK	20625	25RB#0	22.51	10.06	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#0	22.36	9.91	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#12	22.45	10.00	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#24	22.26	9.81	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#0	21.41	8.96	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#6	21.56	9.11	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#13	21.45	9.00	38.45	PASS
Band5	5MHz	16QAM	20425	25RB#0	21.55	9.10	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#0	21.83	9.38	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#12	21.64	9.19	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#24	22.44	9.99	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#0	21.32	8.87	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#6	21.43	8.98	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#13	21.49	9.04	38.45	PASS
Band5	5MHz	16QAM	20525	25RB#0	21.43	8.98	38.45	PASS

Band5	5MHz	16QAM	20625	1RB#0	21.96	9.51	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#12	22.11	9.66	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#24	21.83	9.38	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#0	21.52	9.07	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#6	21.48	9.03	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#13	21.45	9.00	38.45	PASS
Band5	5MHz	16QAM	20625	25RB#0	21.44	8.99	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#0	23.12	10.67	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#24	23.88	11.43	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#49	23.28	10.83	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#0	22.46	10.01	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#12	22.57	10.12	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#25	22.45	10.00	38.45	PASS
Band5	10MHz	QPSK	20450	50RB#0	22.54	10.09	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#0	23.17	10.72	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#24	23.90	11.45	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#49	22.83	10.38	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#0	22.72	10.27	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#12	22.60	10.15	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#25	22.36	9.91	38.45	PASS
Band5	10MHz	QPSK	20525	50RB#0	22.50	10.05	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#0	23.43	10.98	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#24	23.77	11.32	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#49	23.30	10.85	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#0	22.59	10.14	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#12	22.66	10.21	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#25	22.45	10.00	38.45	PASS
Band5	10MHz	QPSK	20600	50RB#0	22.55	10.10	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#0	21.98	9.53	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#24	21.89	9.44	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#49	21.69	9.24	38.45	PASS
Band5	10MHz	16QAM	20450	27RB#0	21.11	8.66	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#0	21.80	9.35	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#24	22.13	9.68	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#49	21.82	9.37	38.45	PASS
Band5	10MHz	16QAM	20525	27RB#0	21.13	8.68	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#0	21.88	9.43	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#24	21.80	9.35	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#49	21.99	9.54	38.45	PASS
Band5	10MHz	16QAM	20600	27RB#0	21.09	8.64	38.45	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

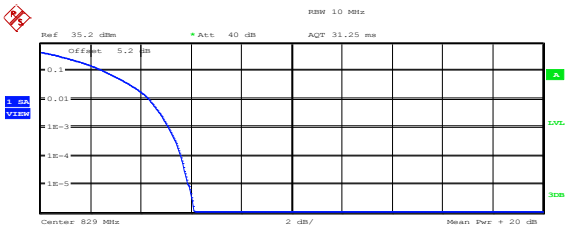
2. Peak-to-Average Ratio(CCDF)

2.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band5	10MHz	QPSK	20450	50RB#0	5.10	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	5.06	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	5.06	13	PASS
Band5	10MHz	16QAM	20450	27RB#0	4.46	13	PASS
Band5	10MHz	16QAM	20525	27RB#0	4.97	13	PASS
Band5	10MHz	16QAM	20600	27RB#0	4.26	13	PASS

2.2. Test Plots

Band5_10MHz_QPSK_20450_50RB#0

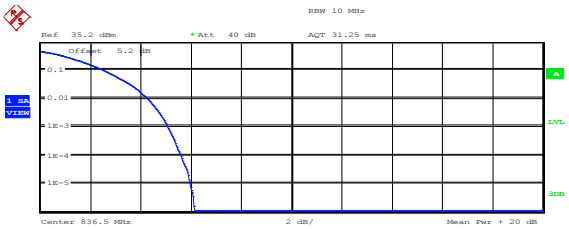


Complementary Cumulative Distribution Function (1000000 samples)

	Trace 1
Mean	22.78 dBm
Peak	28.91 dBm
Crest	6.14 dB
10 %	2.53 dB
1 %	4.29 dB
.1 %	5.10 dB
.01 %	5.58 dB

Date: 20.DEC.2018 19:18:54

Band5_10MHz_QPSK_20525_50RB#0

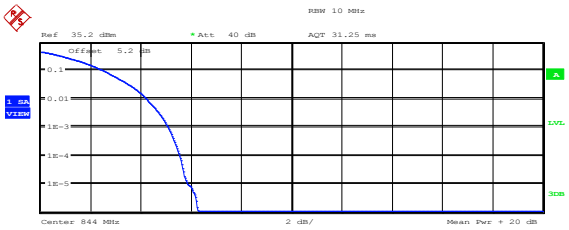


Complementary Cumulative Distribution Function (1000000 samples)

	Trace 1
Mean	22.77 dBm
Peak	28.91 dBm
Crest	6.14 dB
10 %	2.50 dB
1 %	4.23 dB
.1 %	5.06 dB
.01 %	5.58 dB

Date: 20.DEC.2018 19:19:05

Band5_10MHz_QPSK_20600_50RB#0

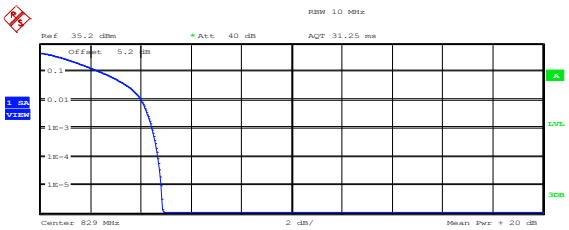


Complementary Cumulative Distribution Function (1000000 samples)

	Trace 1
Mean	22.69 dBm
Peak	28.98 dBm
Crest	6.29 dB
10 %	2.50 dB
1 %	4.20 dB
.1 %	5.06 dB
.01 %	5.54 dB

Date: 20.DEC.2018 19:19:17

Band5_10MHz_16QAM_20450_27RB#0

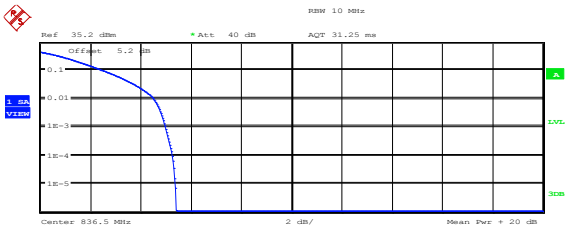


Complementary Cumulative Distribution Function (1000000 samples)

	Trace 1
Mean	22.40 dBm
Peak	27.29 dBm
Crest	4.89 dB
10 %	2.37 dB
1 %	4.01 dB
.1 %	4.46 dB
.01 %	4.68 dB

Date: 20.DEC.2018 18:45:05

Band5_10MHz_16QAM_20525_27RB#0

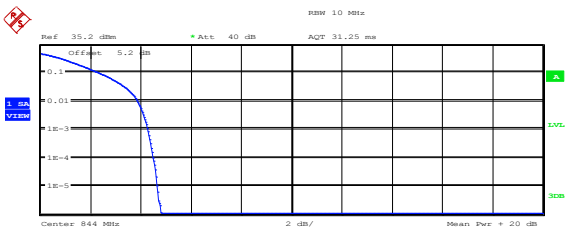


Complementary Cumulative Distribution Function (1000000 samples)

	Trace 1
Mean	22.38 dBm
Peak	27.78 dBm
Crest	5.40 dB
10 %	2.50 dB
1 %	4.49 dB
.1 %	4.97 dB
.01 %	5.26 dB

Date: 20.DEC.2018 18:46:15

Band5_10MHz_16QAM_20600_27RB#0



Complementary Cumulative Distribution Function (1000000 samples)

	Trace 1
Mean	22.31 dBm
Peak	27.15 dBm
Crest	4.84 dB
10 %	2.34 dB
1 %	3.85 dB
.1 %	4.26 dB
.01 %	4.49 dB

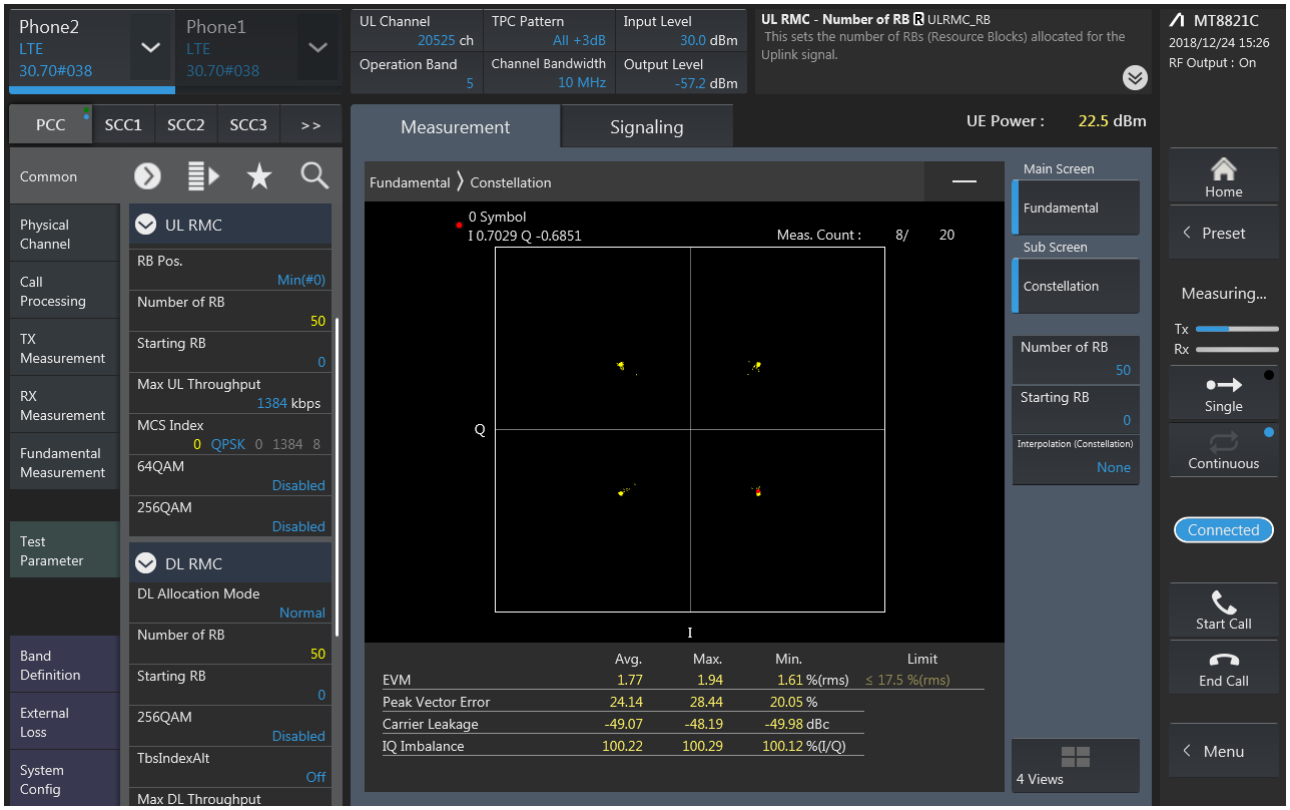
Date: 20.DEC.2018 18:47:06

3. Modulation Characteristics

3.1. Test BAND = LTE BAND5

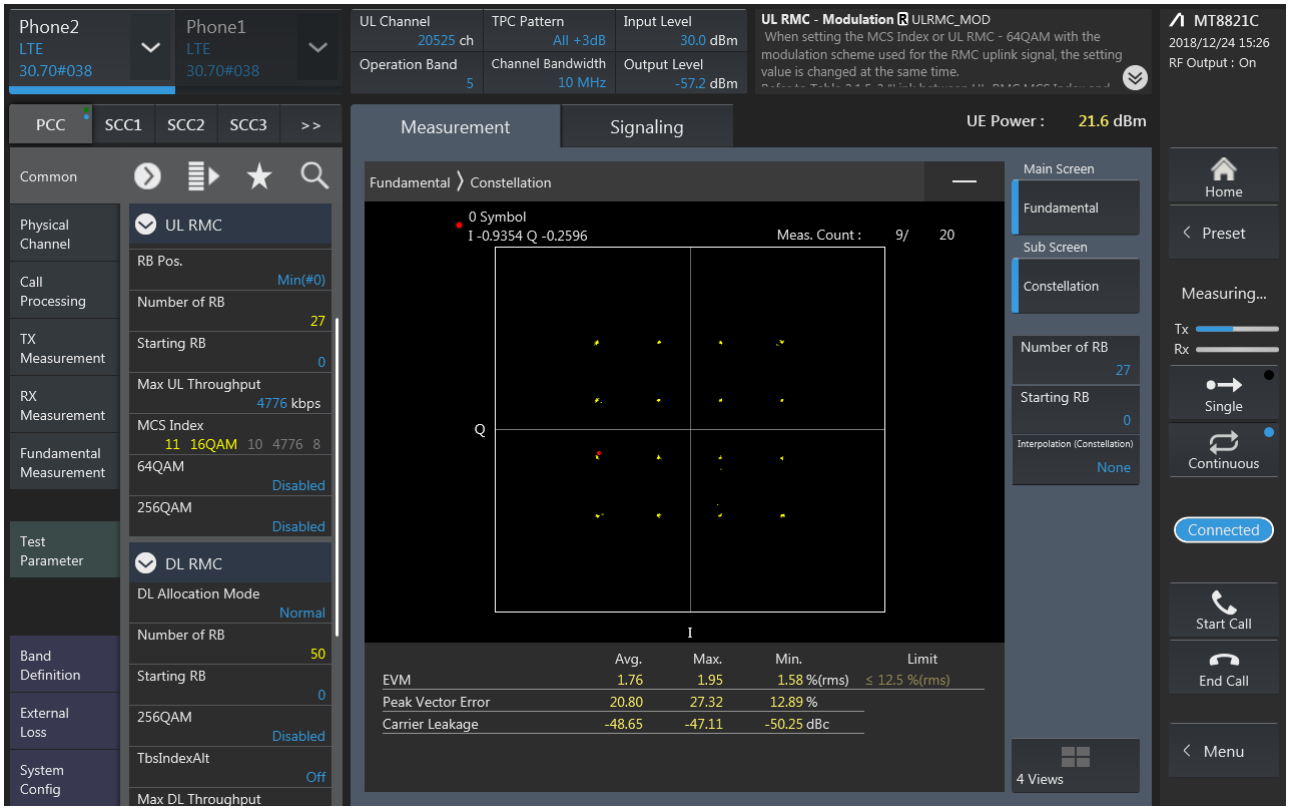
3.1.1. Test Mode = LTE /TM1 10MHz

3.1.1.1. Test Channel = MCH



3.1.2. Test Mode = LTE /TM2 10MHz

3.1.2.1. Test Channel = MCH

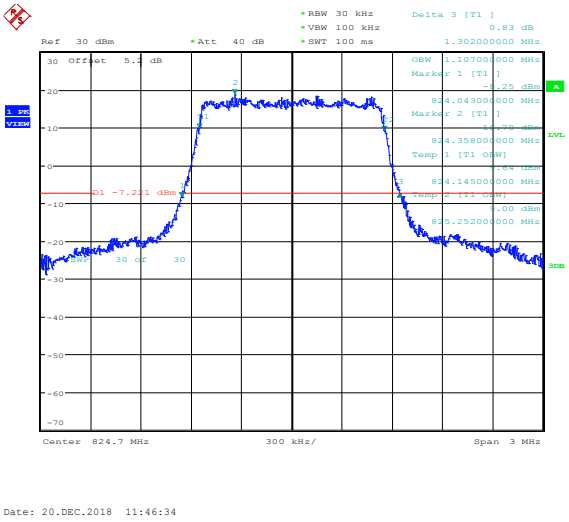


4. 26dB Bandwidth and Occupied Bandwidth

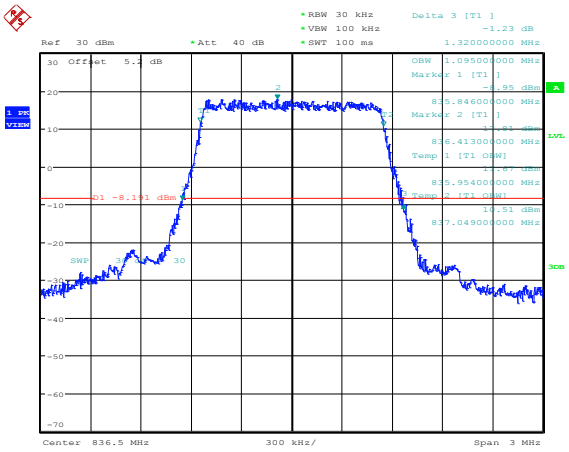
4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.107	1.302	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.095	1.320	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.101	1.323	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.101	1.332	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.092	1.287	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.104	1.314	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.700	2.988	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.694	2.982	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.700	2.970	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.700	2.994	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.700	2.982	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.700	3.006	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.490	4.970	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.470	4.910	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.490	4.950	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.480	4.930	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.480	4.960	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.480	4.950	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.940	9.760	PASS
Band5	10MHz	QPSK	20525	50RB#0	8.920	9.740	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.960	9.820	PASS
Band5	10MHz	16QAM	20450	27RB#0	4.880	5.760	PASS
Band5	10MHz	16QAM	20525	27RB#0	4.880	5.640	PASS
Band5	10MHz	16QAM	20600	27RB#0	4.860	5.660	PASS

4.2. Test Plots

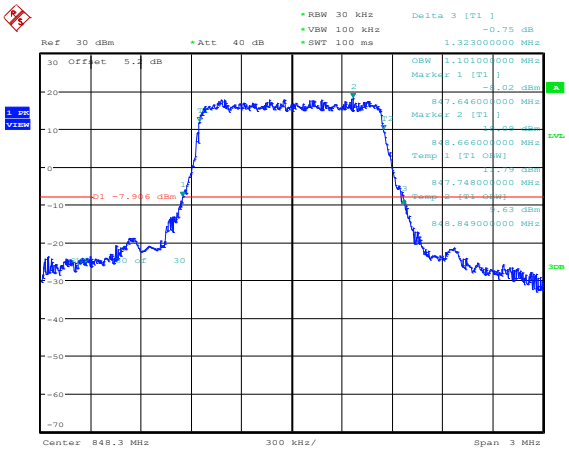
Band5_1.4MHz_QPSK_20407_6RB#0


Date: 20.DEC.2018 11:46:34

Band5_1.4MHz_QPSK_20525_6RB#0


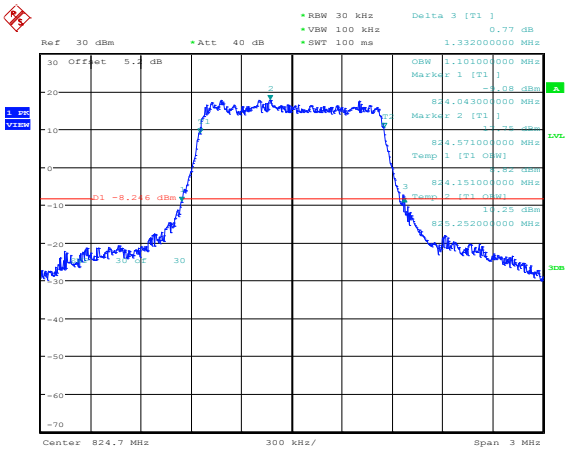
Date: 20.DEC.2018 11:46:57

Band5_1.4MHz_QPSK_20643_6RB#0



Date: 20.DEC.2018 11:47:21

Band5_1.4MHz_16QAM_20407_6RB#0



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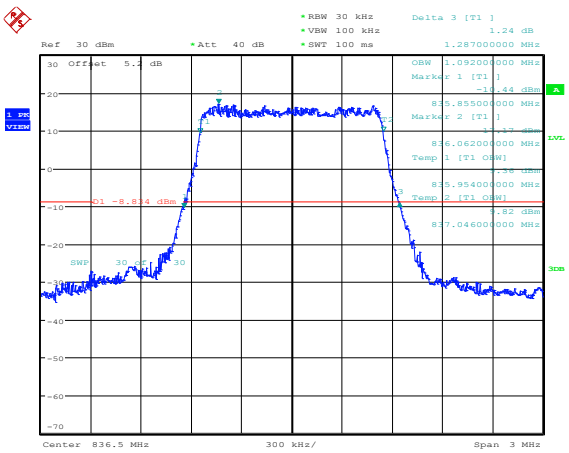
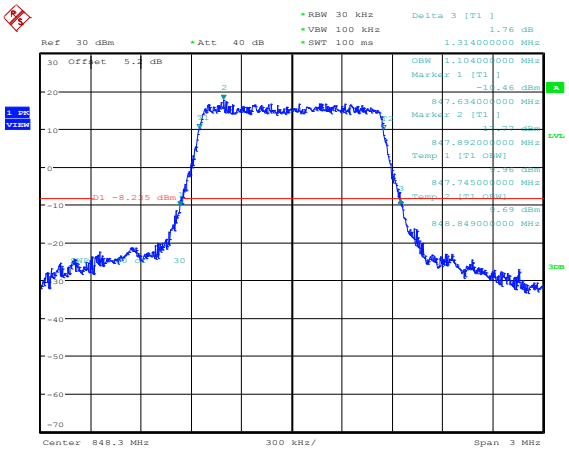


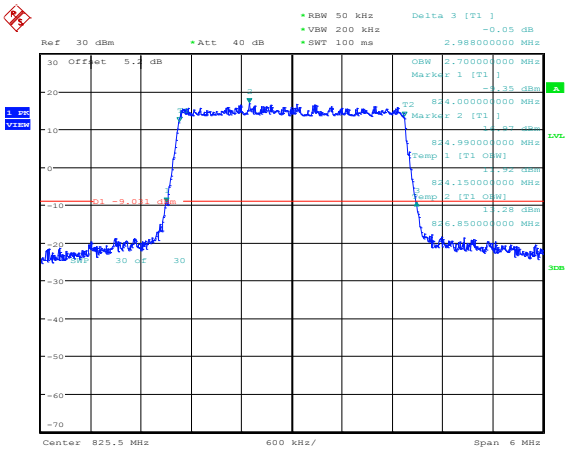
Date: 20.DEC.2018 11:47:08

Band5_1.4MHz_16QAM_20643_6RB#0



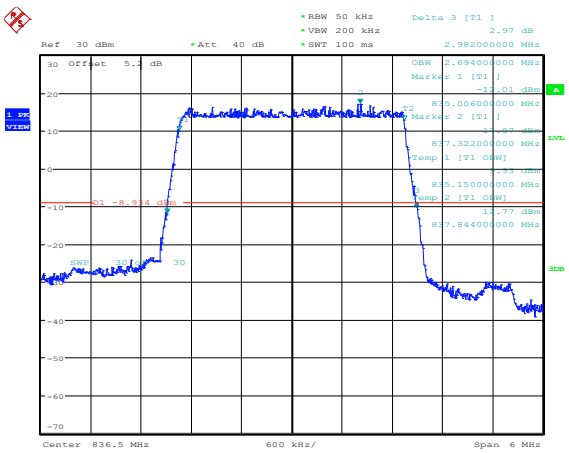
Date: 20.DEC.2018 11:47:31

Band5_3MHz_QPSK_20415_15RB#0



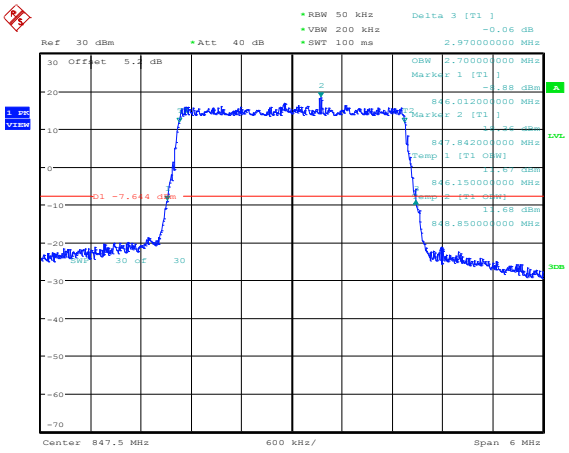
Date: 20.DEC.2018 11:48:09

Band5_3MHz_QPSK_20525_15RB#0

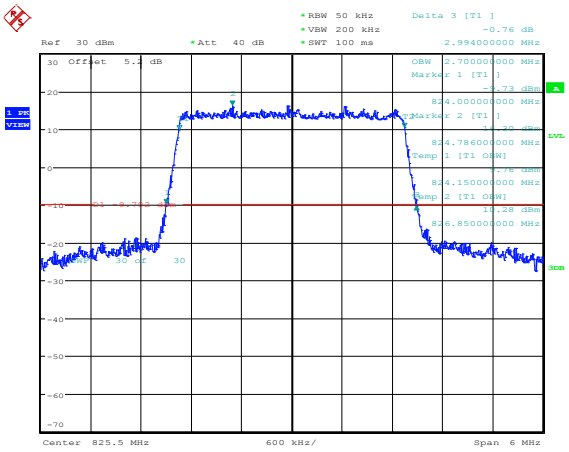


Date: 20.DEC.2018 11:48:33

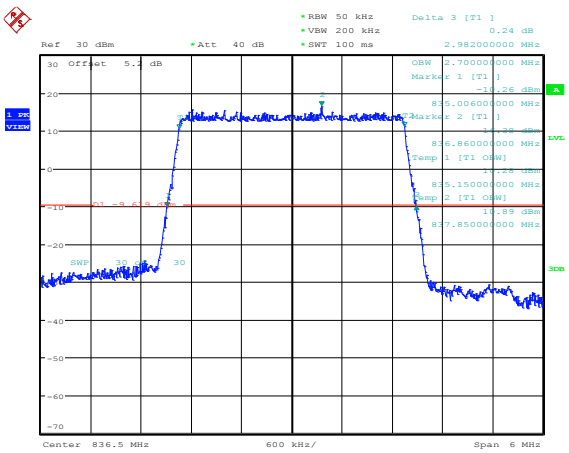
Band5_3MHz_QPSK_20635_15RB#0



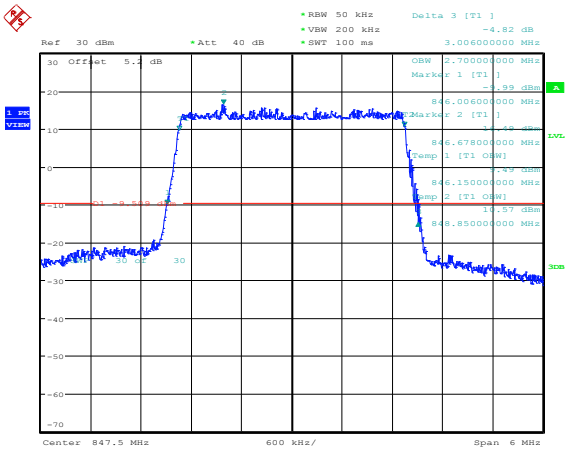
Band5_3MHz_16QAM_20415_15RB#0



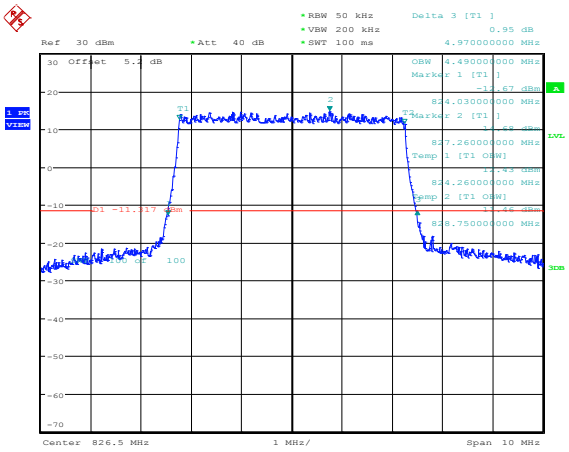
Band5_3MHz_16QAM_20525_15RB#0



Band5_3MHz_16QAM_20635_15RB#0



Band5_5MHz_QPSK_20425_25RB#0



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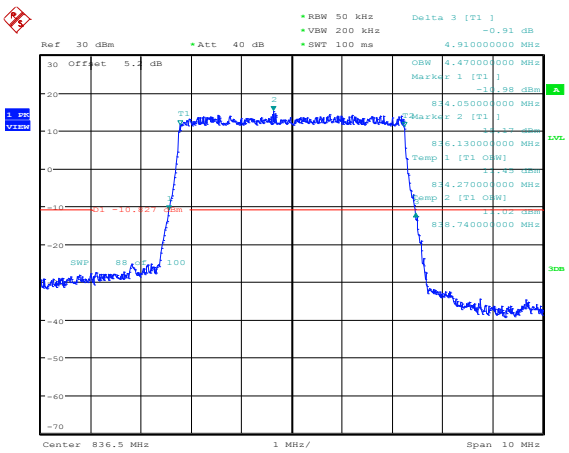

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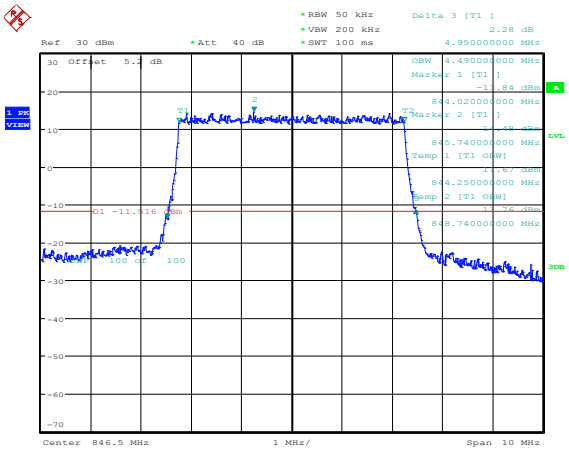
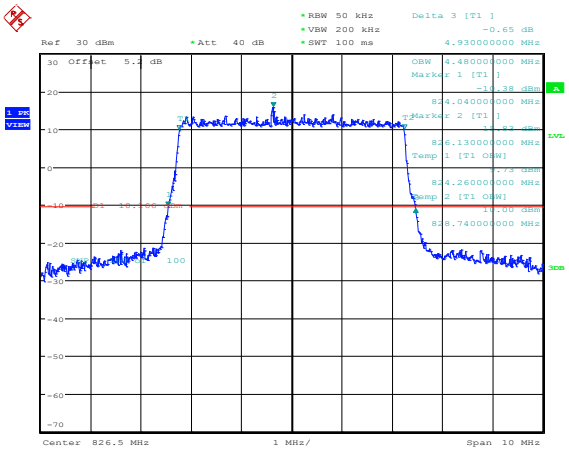


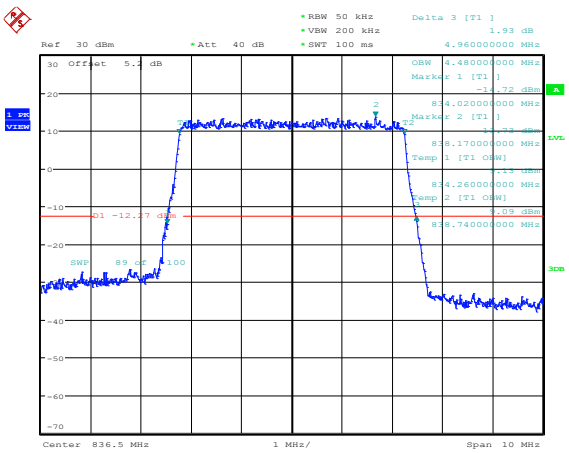
Date: 20.DEC.2018 11:51:28

Band5_5MHz_16QAM_20425_25RB#0



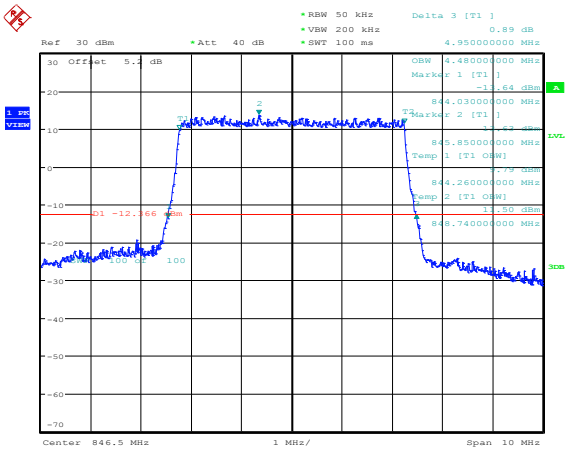
Date: 20.DEC.2018 11:50:30

Band5_5MHz_16QAM_20525_25RB#0



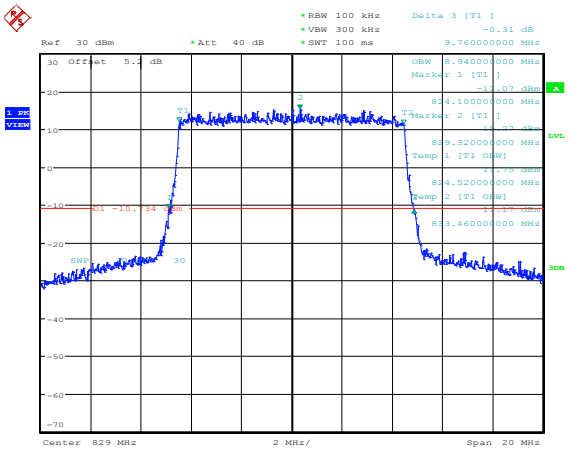
Date: 20.DEC.2018 11:51:08

Band5_5MHz_16QAM_20625_25RB#0



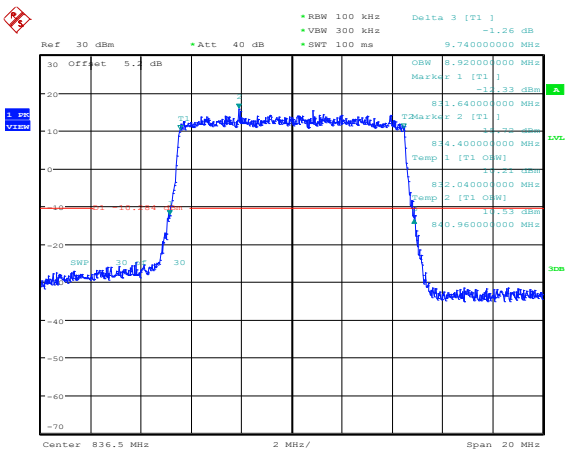
Date: 20.DEC.2018 11:51:46

Band5_10MHz_QPSK_20450_50RB#0



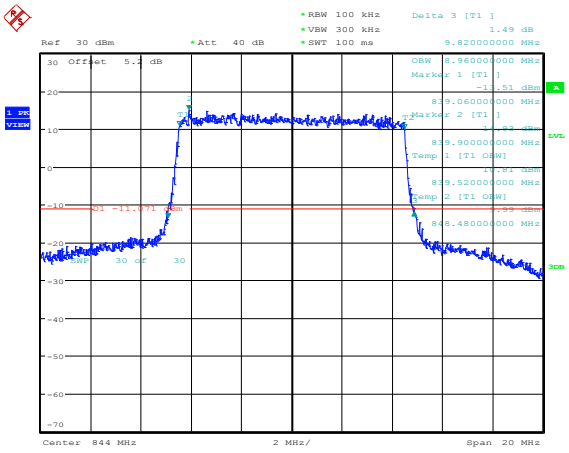
Date: 20.DEC.2018 11:52:33

Band5_10MHz_QPSK_20525_50RB#0



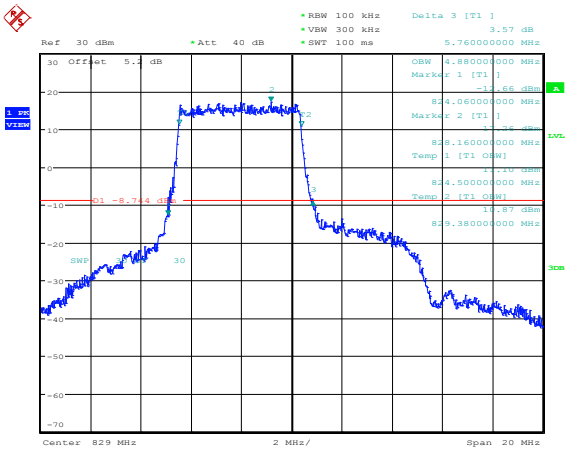
Date: 20.DEC.2018 11:52:45

Band5_10MHz_QPSK_20600_50RB#0



Date: 20.DEC.2018 11:52:58

Band5_10MHz_QPSK_20450_27RB#0



Date: 20.DEC.2018 18:19:45

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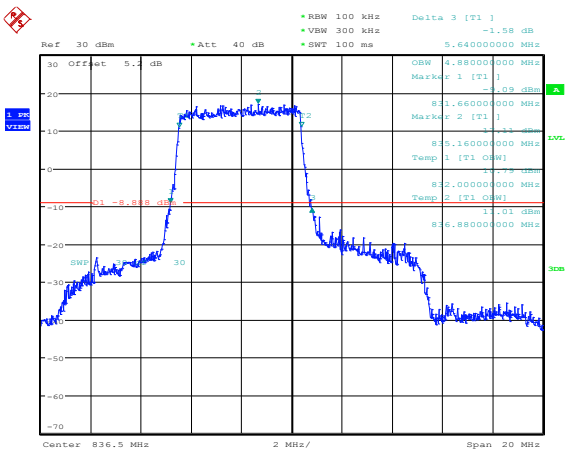
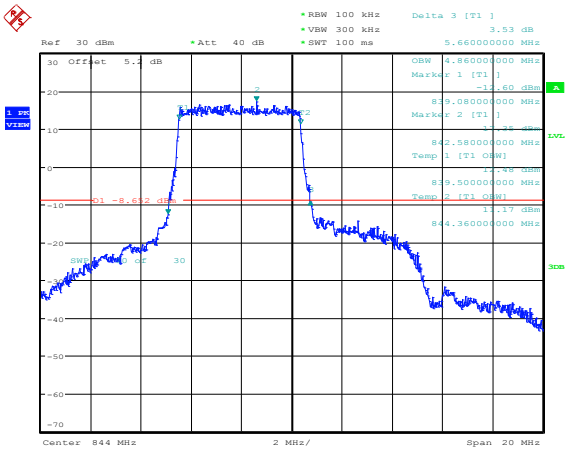


Date: 20.DEC.2018 18:19:58

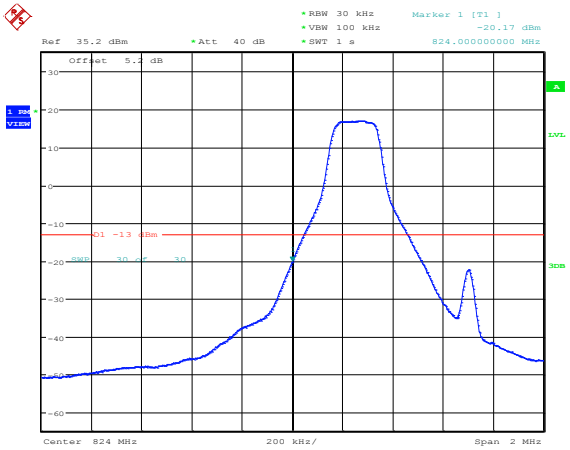
Band5_10MHz_QPSK_20600_27RB#0



5. Band Edge Compliance

5.1. Test Plots

Band5_1.4MHz_QPSK_20407_1RB#0



Date: 20.DEC.2018 11:53:51

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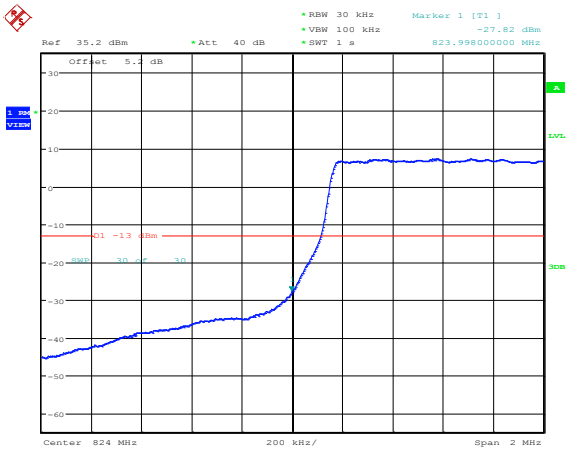
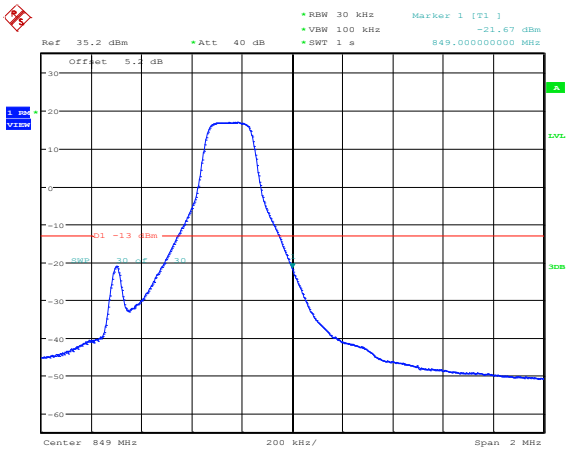
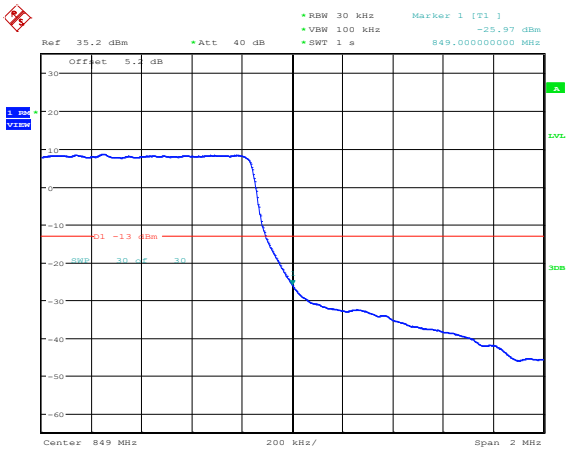


Date: 20.DEC.2018 11:56:22

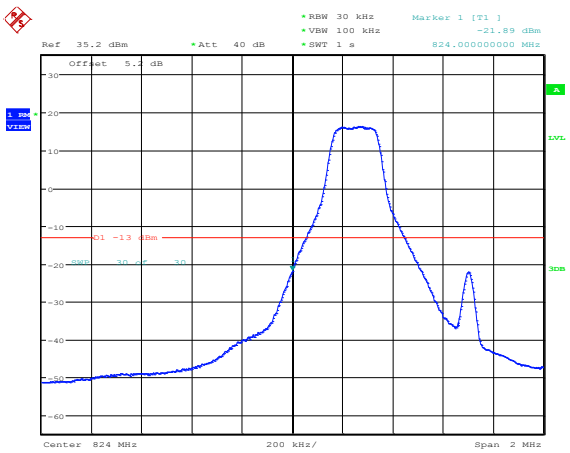
Band5_1.4MHz_QPSK_20643_1RB#5



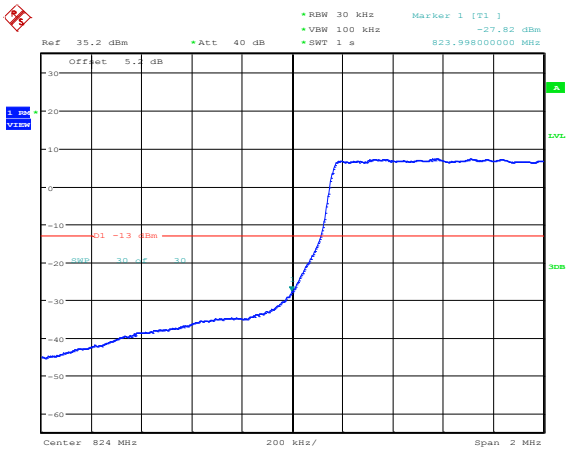
Band5_1.4MHz_QPSK_20643_6RB#0



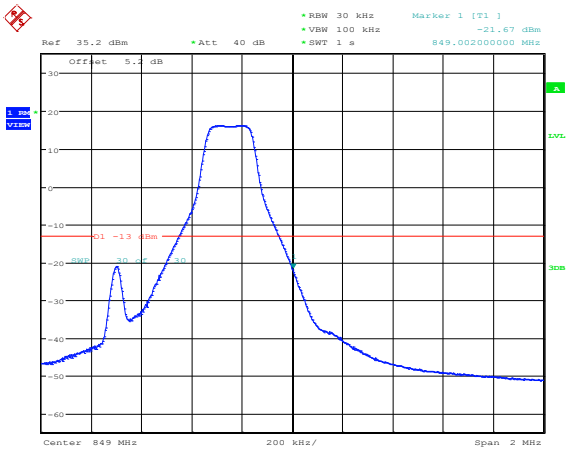
Band5_1.4MHz_16QAM_20407_1RB#0



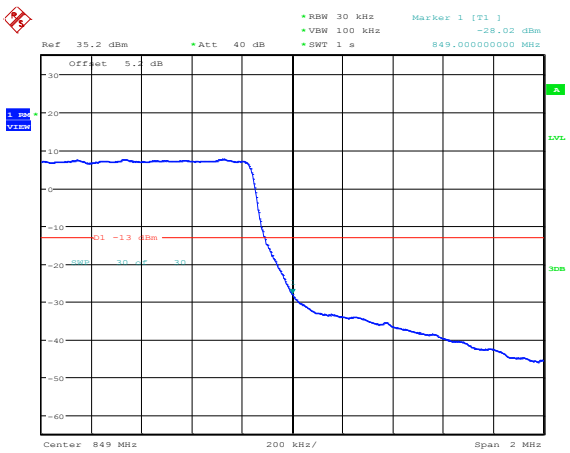
Band5_1.4MHz_16QAM_20407_6RB#0



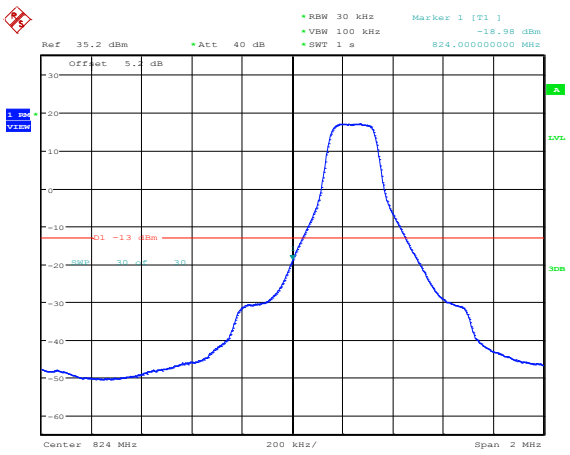
Band5_1.4MHz_16QAM_20643_1RB#5



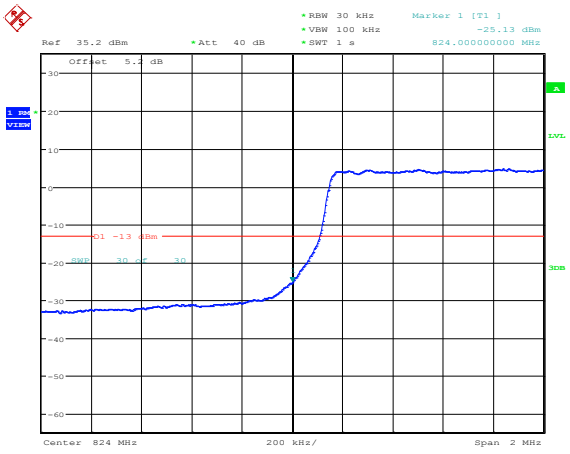
Band5_1.4MHz_16QAM_20643_6RB#0



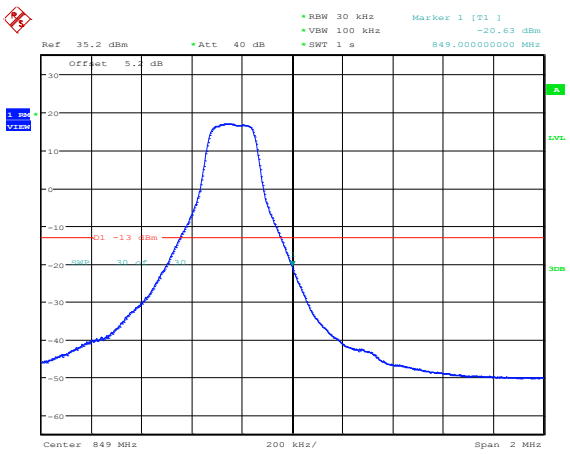
Band5_3MHz_QPSK_20415_1RB#0



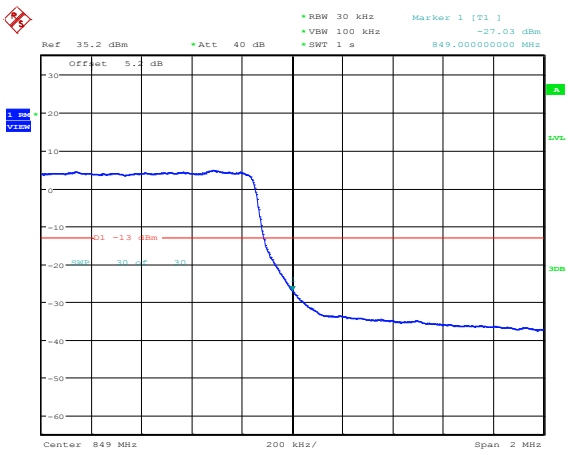
Band5_3MHz_QPSK_20415_15RB#0



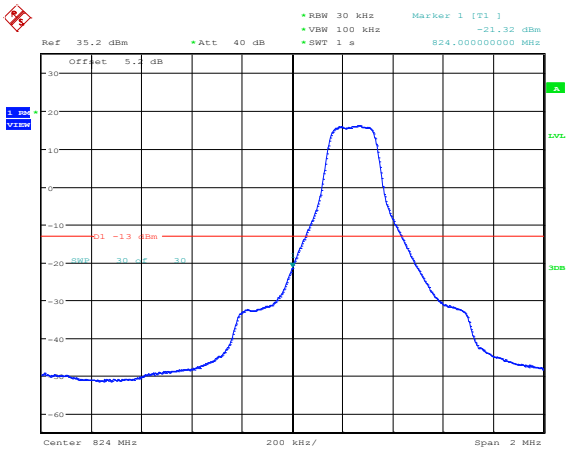
Band5_3MHz_QPSK_20635_1RB#14



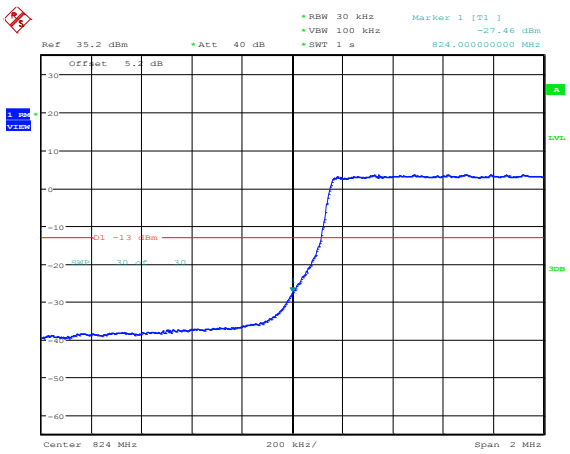
Band5_3MHz_QPSK_20635_15RB#0



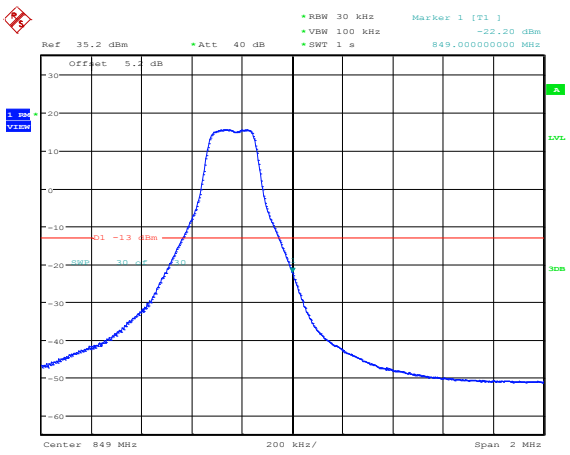
Band5_3MHz_16QAM_20415_1RB#0



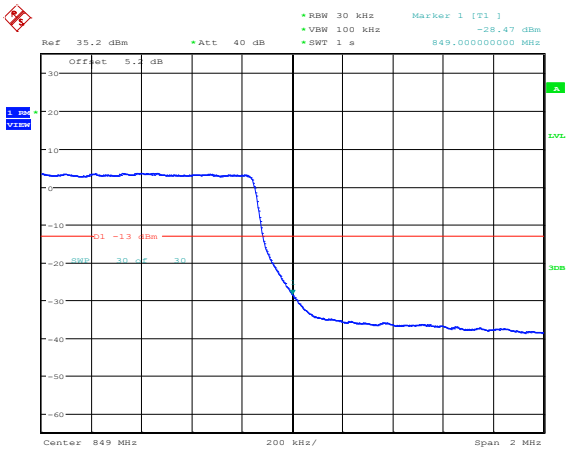
Band5_3MHz_16QAM_20415_15RB#0



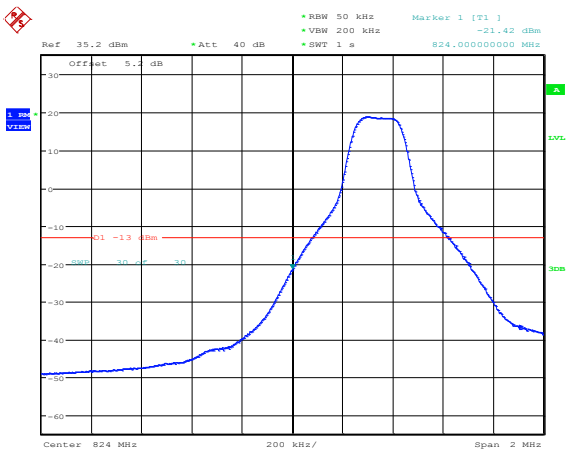
Band5_3MHz_16QAM_20635_1RB#14



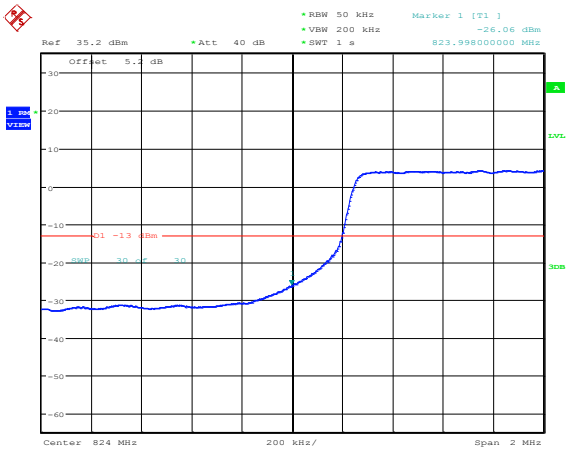
Band5_3MHz_16QAM_20635_15RB#0



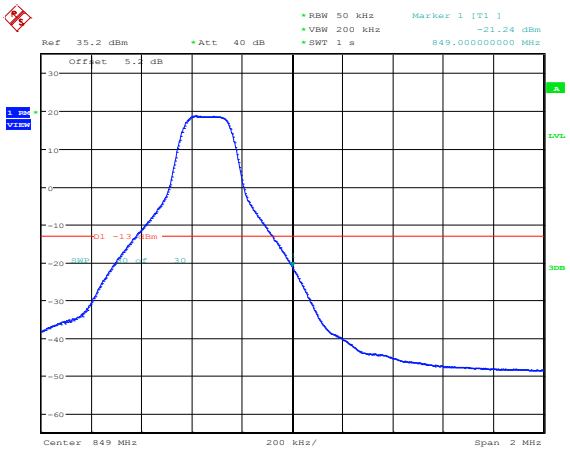
Band5_5MHz_QPSK_20425_1RB#0



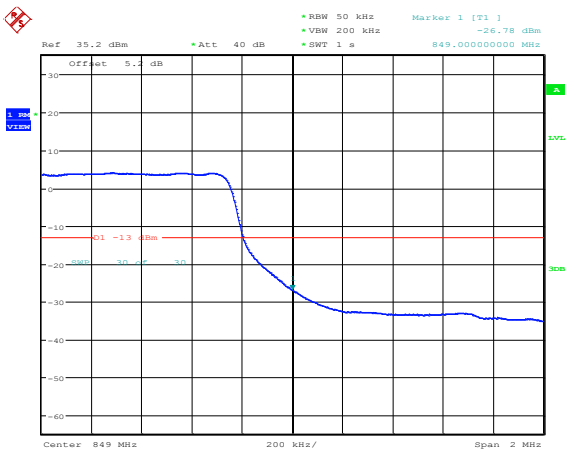
Band5_5MHz_QPSK_20425_25RB#0



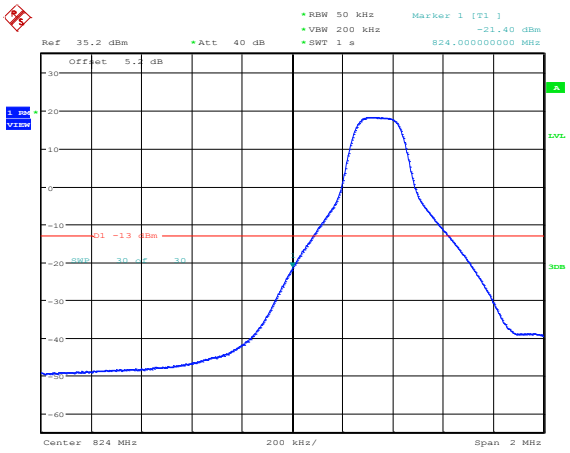
Band5_5MHz_QPSK_20625_1RB#24



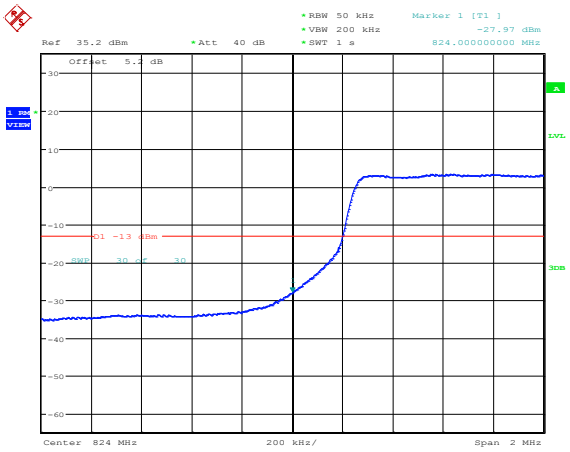
Band5_5MHz_QPSK_20625_25RB#0



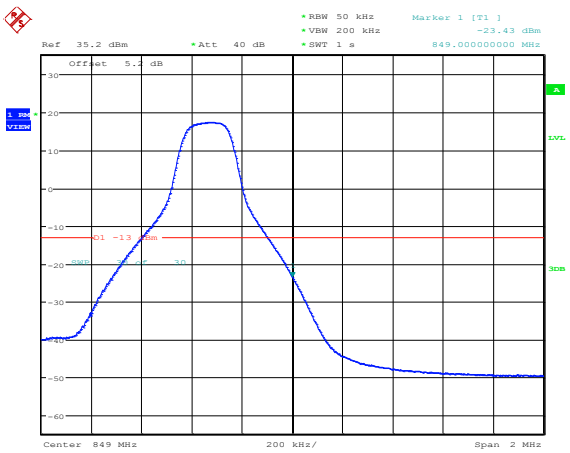
Band5_5MHz_16QAM_20425_1RB#0



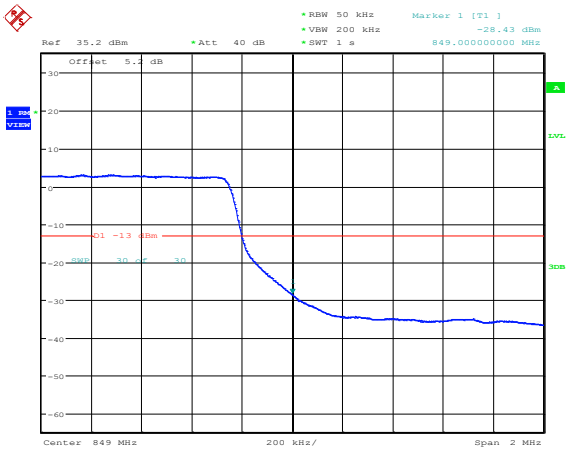
Band5_5MHz_16QAM_20425_25RB#0



Band5_5MHz_16QAM_20625_1RB#24

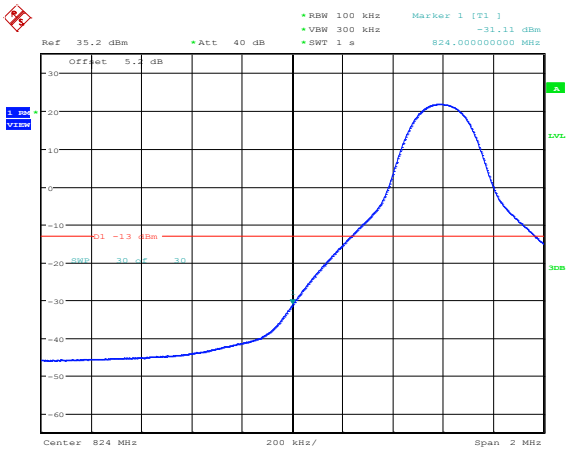


Band5_5MHz_16QAM_20625_25RB#0



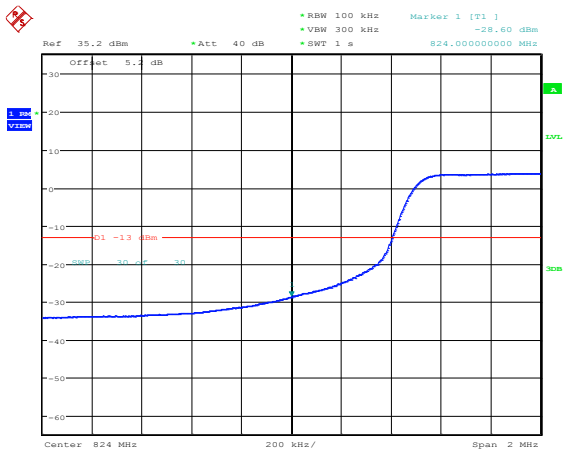
Date: 20.DEC.2018 12:53:34

Band5_10MHz_QPSK_20450_1RB#0



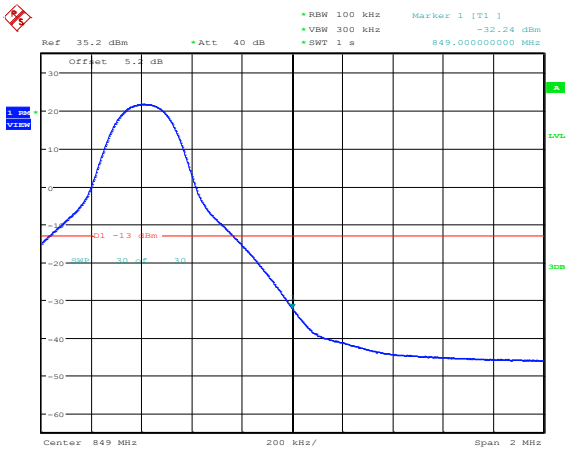
Date: 20.DEC.2018 12:54:48

Band5_10MHz_QPSK_20450_50RB#0

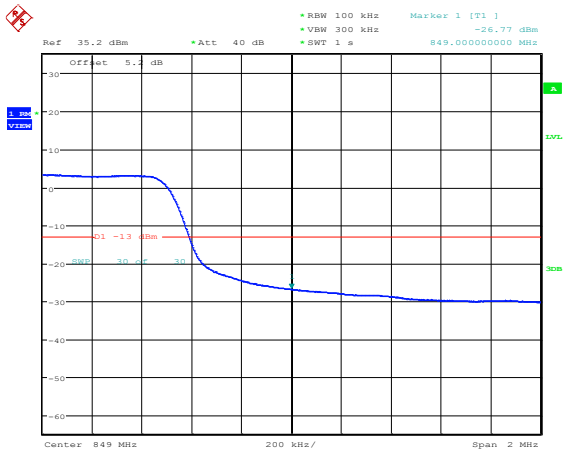


Date: 20.DEC.2018 12:55:32

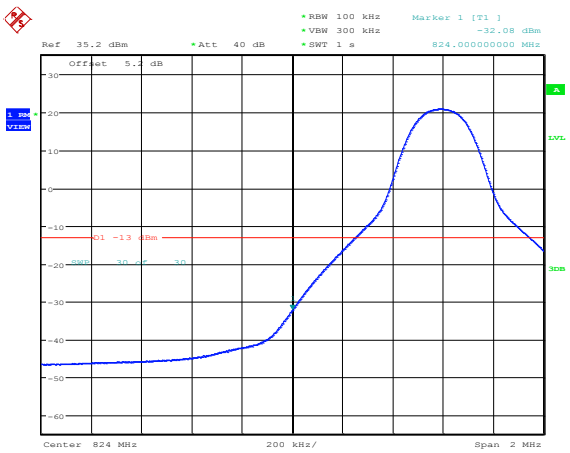
Band5_10MHz_QPSK_20600_1RB#49



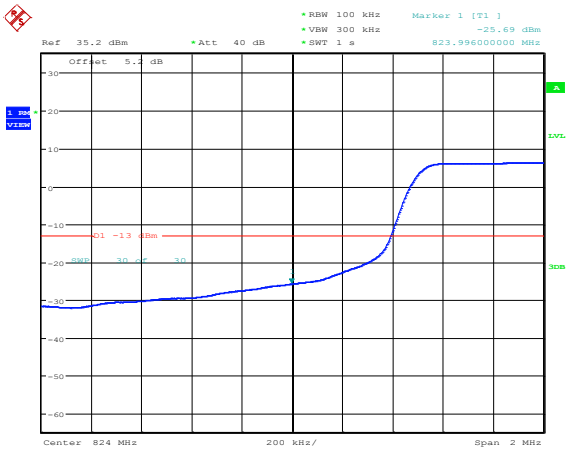
Band5_10MHz_QPSK_20600_50RB#0



Band5_10MHz_16QAM_20450_1RB#0

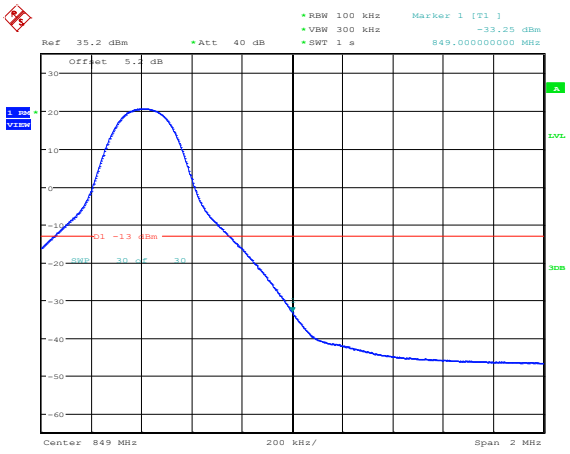


Band5_10MHz_16QAM_20450_27RB#0



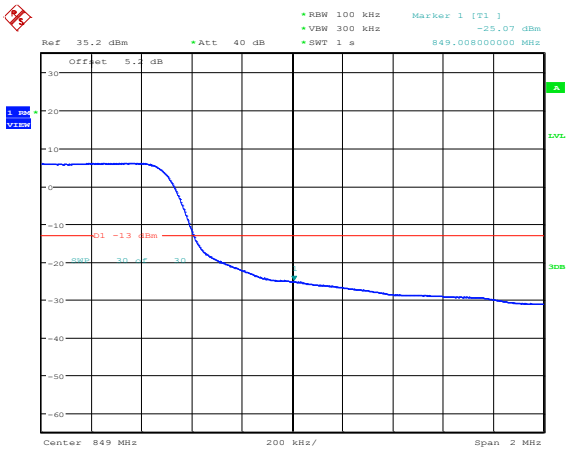
Date: 20.DEC.2018 18:21:50

Band5_10MHz_16QAM_20600_1RB#49



Date: 20.DEC.2018 18:22:41

Band5_10MHz_QPSK_20600_27RB#23



Date: 20.DEC.2018 18:23:28

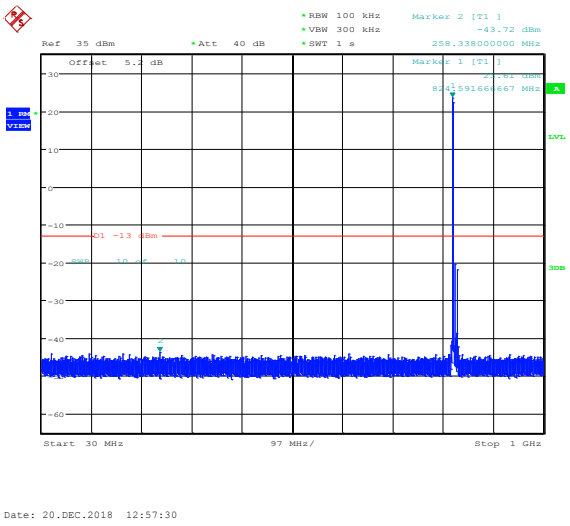
6. Spurious Emission at Antenna Terminal

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.

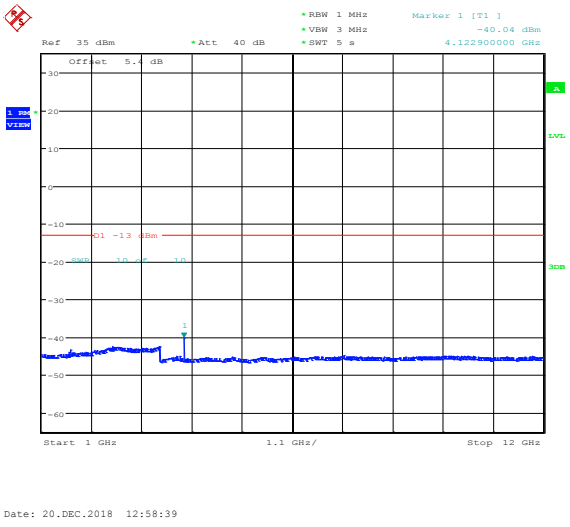
Remark2: only the worst case data displayed in this report.

6.1. Test Plots

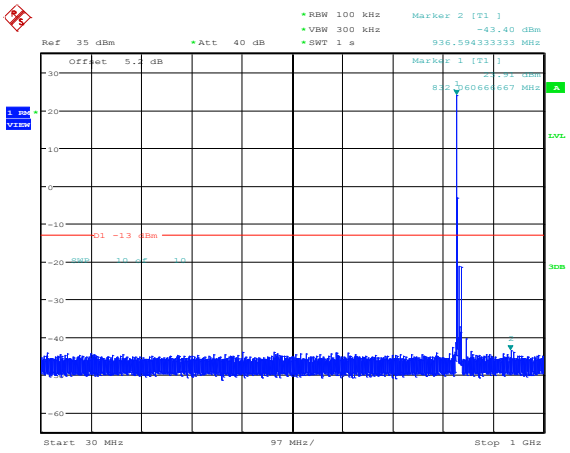
Band5_10MHz_QPSK_20450_1RB#0



Band5_10MHz_QPSK_20450_1RB#0

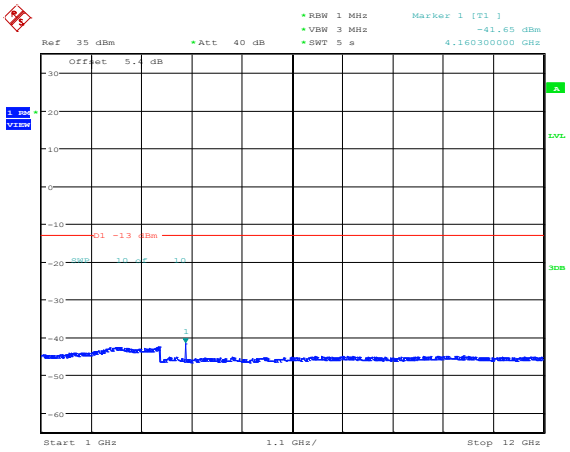


Band5_10MHz_QPSK_20525_1RB#0



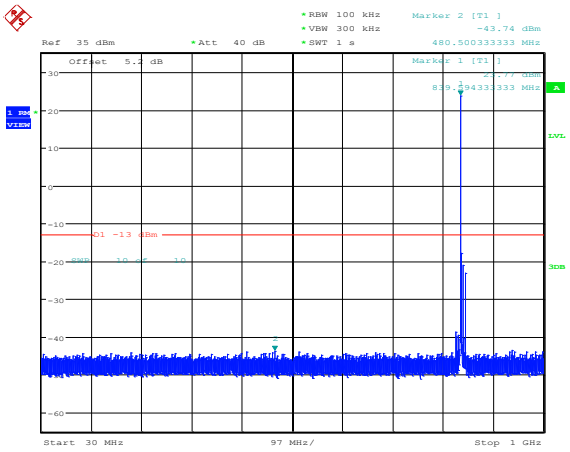
Date: 20.DEC.2018 12:59:00

Band5_10MHz_QPSK_20525_1RB#0



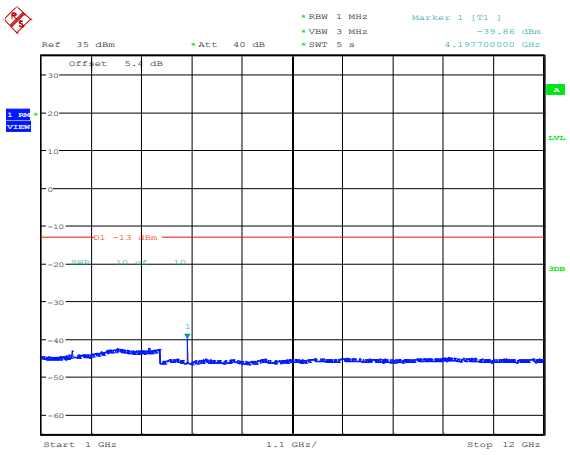
Date: 20.DEC.2018 13:00:09

Band5_10MHz_QPSK_20600_1RB#0



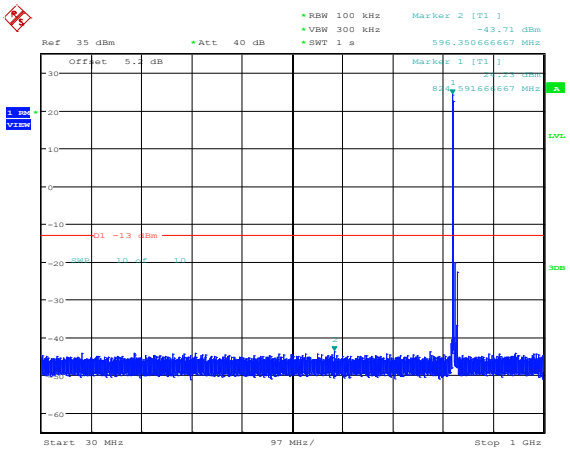
Date: 20.DEC.2018 13:00:30

Band5_10MHz_QPSK_20600_1RB#0



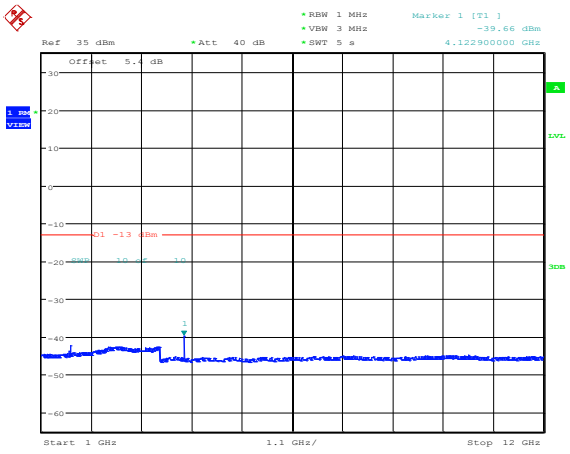
Date: 20.DEC.2018 13:01:39

Band5_10MHz_16QAM_20450_1RB#0



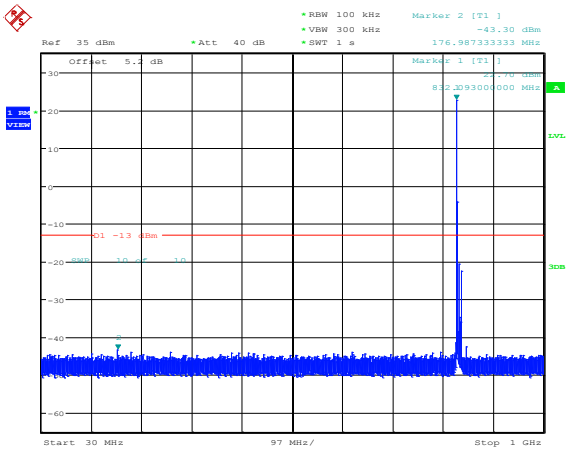
Date: 20.DEC.2018 18:23:52

Band5_10MHz_16QAM_20450_1RB#0



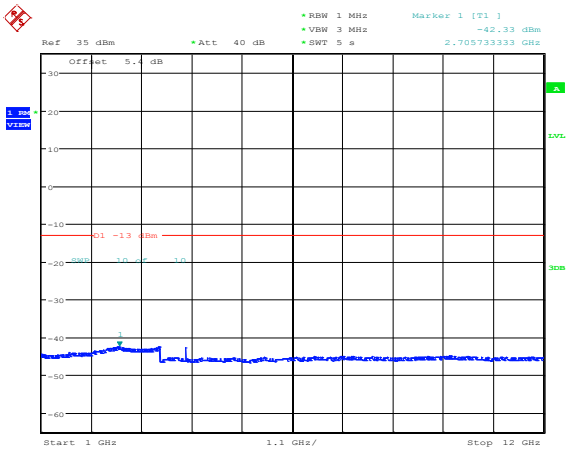
Date: 20.DEC.2018 18:25:01

Band5_10MHz_16QAM_20525_1RB#0



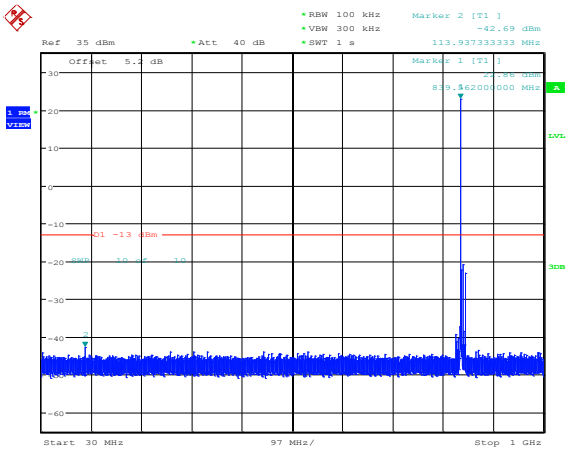
Date: 20.DEC.2018 18:38:02

Band5_10MHz_16QAM_20525_1RB#0



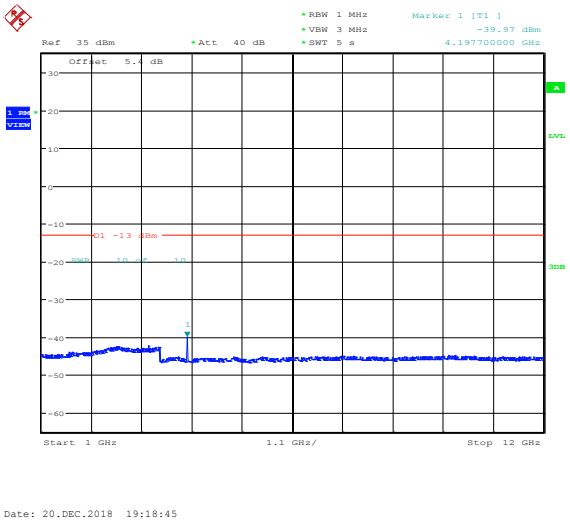
Date: 20.DEC.2018 18:39:27

Band5_10MHz_16QAM_20600_1RB#0



Date: 20.DEC.2018 19:17:36

Band5_10MHz_16QAM_20600_1RB#0



7. Field Strength of Spurious Radiation

7.1. Test BAND = LTE BAND 5

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
109.986667	-81.69	-13.00	68.69	Vertical
1649.000000	-64.69	-13.00	51.69	Vertical
2473.500000	-57.99	-13.00	44.99	Vertical
3298.350000	-66.02	-13.00	53.02	Vertical
4122.712500	-59.24	-13.00	46.24	Vertical
6489.037500	-64.71	-13.00	51.71	Vertical
55.760000	-77.24	-13.00	64.24	Horizontal
1649.500000	-64.23	-13.00	51.23	Horizontal
2473.500000	-56.00	-13.00	43.00	Horizontal
3298.350000	-66.50	-13.00	53.50	Horizontal
4122.712500	-62.59	-13.00	49.59	Horizontal
7933.987500	-63.50	-13.00	50.50	Horizontal

7.1.1.2. Test Channel = MCH 1RB#0

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
127.673333	-80.37	-13.00	67.37	Vertical
1664.000000	-64.32	-13.00	51.32	Vertical
2496.000000	-57.03	-13.00	44.03	Vertical
4160.250000	-63.24	-13.00	50.24	Vertical
6282.337500	-64.81	-13.00	51.81	Vertical
10622.550000	-62.49	-13.00	49.49	Vertical
63.273333	-77.98	-13.00	64.98	Horizontal
110.500000	-83.28	-13.00	70.28	Horizontal
1664.000000	-64.70	-13.00	51.70	Horizontal
2496.000000	-56.96	-13.00	43.96	Horizontal
4294.312500	-66.78	-13.00	53.78	Horizontal
6604.087500	-65.25	-13.00	52.25	Horizontal

7.1.1.3. Test Channel = HCH 1RB#0

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
105.460000	-82.31	-13.00	69.31	Vertical
1679.000000	-63.35	-13.00	50.35	Vertical
2518.500000	-57.45	-13.00	44.45	Vertical
3358.312500	-65.95	-13.00	52.95	Vertical
4197.787500	-60.20	-13.00	47.20	Vertical
7903.762500	-63.71	-13.00	50.71	Vertical
62.620000	-76.97	-13.00	63.97	Horizontal
1679.000000	-56.10	-13.00	43.10	Horizontal
2518.500000	-56.74	-13.00	43.74	Horizontal
3358.312500	-64.79	-13.00	51.79	Horizontal
4197.787500	-61.64	-13.00	48.64	Horizontal
7953.000000	-63.36	-13.00	50.36	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
Band5	10MHz	QPSK	20450	50RB#0	VL	NT	1.00	0.001206	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VN	NT	-1.00	-0.001206	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VH	NT	0.00	0.000000	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VL	NT	-0.30	-0.000359	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VN	NT	-0.20	-0.000239	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VH	NT	-2.10	-0.002510	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VL	NT	-0.10	-0.000118	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VN	NT	-0.20	-0.000237	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VH	NT	-0.20	-0.000237	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	VL	NT	-1.30	-0.001568	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	VN	NT	-1.20	-0.001448	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	VH	NT	-0.20	-0.000241	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	VL	NT	-0.30	-0.000359	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	VN	NT	-1.60	-0.001913	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	VH	NT	0.50	0.000598	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	VL	NT	-1.50	-0.001777	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	VN	NT	-1.10	-0.001303	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	VH	NT	-0.90	-0.001066	±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
Band5	10MHz	QPSK	20450	50RB#0	NV	-30	0.10	0.000121	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	-20	-0.20	-0.000241	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	0	-0.60	-0.000724	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	10	0.50	0.000603	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	20	0.20	0.000241	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	30	0.00	0.000000	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	40	1.20	0.001448	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	50	-0.40	-0.000483	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-30	0.80	0.000956	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-20	-0.90	-0.001076	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	0	-1.40	-0.001674	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	10	0.00	0.000000	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	20	0.40	0.000478	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	30	-0.40	-0.000478	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	40	-0.40	-0.000478	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	50	-2.30	-0.002750	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-30	0.10	0.000118	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-20	0.20	0.000237	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	0	-0.60	-0.000711	±2.5	PASS

Band5	10MHz	QPSK	20600	50RB#0	NV	10	0.20	0.000237	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	20	0.10	0.000118	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	30	-0.70	-0.000829	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	40	-1.70	-0.002014	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	50	-1.30	-0.001540	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	-30	-0.40	-0.000483	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	-20	0.20	0.000241	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	0	-0.80	-0.000965	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	10	0.00	0.000000	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	20	-1.20	-0.001448	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	30	-0.10	-0.000121	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	40	-1.20	-0.001448	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	50	-0.80	-0.000965	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	NV	-30	-2.30	-0.002750	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	NV	-20	-1.90	-0.002271	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	NV	0	-1.70	-0.002032	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	NV	10	-1.90	-0.002271	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	NV	20	-1.90	-0.002271	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	NV	30	-2.10	-0.002510	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	NV	40	-1.40	-0.001674	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	NV	50	-1.40	-0.001674	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	-30	-1.40	-0.001659	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	-20	-1.10	-0.001303	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	0	-0.60	-0.000711	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	10	-1.30	-0.001540	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	20	-0.50	-0.000592	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	30	-0.90	-0.001066	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	40	0.00	0.000000	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	50	-0.60	-0.000711	±2.5	PASS

The End