

Appendix B.7

E-UTRA Band 12

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1. Main Test Instruments

RE in Chamber					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018/3/13	2021/3/12
Spectrum Analyzer (20Hz-43GHz)	Rohde & Schwarz	FSU43	SEM004-08	2018/4/2	2019/4/1
BiConiLog Antenna (26-3000MHz)	ETS-Lindgren	3142C	SEM003-01	2017/6/27	2020/6/26
Horn Antenna (800MHz-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2018/4/13	2021/4/12
Horn Antenna (15-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2017/10/17	2020/10/16
Amplifier (0.1-1300MHz)	HP	8447D	SEM005-02	2018/9/2	2019/9/2
Low Noise Amplifier (100MHz-18GHz)	Black Diamond Series	BDLNA-0118-352810	SEM005-05	2018/9/2	2019/9/2
Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	EMC2063	2018/10/20	2019/10/19
Pre-amplifier (26-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2018/4/2	2019/4/1
Band filter	N/A	N/A	N/A	N/A	N/A
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2018/7/12	2019/7/11
Wideband Radio Communication Tester	Anritsu	MT8821C	6201462742	2018/5/2	2019/5/1
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	W005-02	2018/3/13	2019/3/12

RF conducted test					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy-mm-dd)	Cal.Due date (yyyy-mm-dd)
Dual Output Mobile Communication DC Source	Agilent Technologies Inc	66311B	W009-09	2018/9/15	2019/9/15
Signal Analyzer	Rohde & Schwarz	FSV	W025-05	2018/3/13	2019/3/12
Coaxial Cable	SGS	N/A	SEM031-01	2018/7/12	2019/7/11
Attenuator	Weinschel Associates	WA41	SEM021-09	N/A	N/A
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2018/9/2	2019/9/2
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	HTC-1	W006-17	2018/9/10	2019/9/10
Temperature Chamber	GIANT FORCE	ICT-150-40-CP-AR	W027-03	2018/11/27	2019/11/27
Wideband Radio Communication Tester	Anritsu	MT8821C	6201462742	2018/5/2	2019/5/1
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	W005-02	2018/3/13	2019/3/12

2. Measurement Uncertainty

For a 95% confidence level ($k = 2$), the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 as following:

Test Item	Extended Uncertainty	Data
Transmit Output Power Data	Power [dBm]	$U = \pm 0.37 \text{ dB}$
Bandwidth	Magnitude [%]	$U = \pm 0.2\%$
Band Edge Compliance	Disturbance Power [dBm]	$U = \pm 2.0 \text{ dB}$
Spurious Emissions, Conducted	Disturbance Power [dBm]	$U = \pm 2.0 \text{ dB}$
Frequency Stability	Frequency Accuracy [ppm]	$U = \pm 0.24 \text{ ppm}$

3. Effective (Isotropic) Radiated Power

3.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	ERP (dBm)	Result (dBm)	Verdict
Band12	1.4MHz	QPSK	23017	1RB#0	23.44	17.97	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	23.71	18.24	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	23.63	18.16	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#0	23.51	18.04	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#1	23.71	18.24	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#3	23.74	18.27	34.77	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	22.72	17.25	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	23.43	17.96	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#2	23.66	18.19	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#5	23.63	18.16	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#0	23.51	18.04	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#1	23.87	18.40	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#3	23.72	18.25	34.77	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	22.76	17.29	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	23.61	18.14	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	23.82	18.35	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	23.91	18.44	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#0	23.61	18.14	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#1	23.88	18.41	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#3	23.72	18.25	34.77	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	22.89	17.42	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	22.08	16.61	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	22.42	16.95	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	22.26	16.79	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#0	22.69	17.22	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#1	22.91	17.44	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#3	22.77	17.30	34.77	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	21.77	16.30	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	22.17	16.70	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#2	22.43	16.96	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#5	22.33	16.86	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#0	22.82	17.35	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#1	22.89	17.42	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#3	23.00	17.53	34.77	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	21.65	16.18	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	22.38	16.91	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	22.84	17.37	34.77	PASS

Band12	1.4MHz	16QAM	23173	1RB#5	22.32	16.85	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#0	22.99	17.52	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#1	22.81	17.34	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#3	22.73	17.26	34.77	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	21.90	16.43	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#0	23.49	18.02	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#8	23.88	18.41	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#14	23.59	18.12	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#0	22.61	17.14	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#4	22.90	17.43	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#7	22.60	17.13	34.77	PASS
Band12	3MHz	QPSK	23025	15RB#0	22.74	17.27	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#0	23.63	18.16	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#8	23.52	18.05	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#14	23.56	18.09	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#0	22.67	17.20	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#4	22.76	17.29	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#7	22.82	17.35	34.77	PASS
Band12	3MHz	QPSK	23095	15RB#0	22.70	17.23	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#0	23.79	18.32	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#8	23.77	18.30	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#14	23.49	18.02	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#0	22.72	17.25	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#4	23.00	17.53	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#7	22.83	17.36	34.77	PASS
Band12	3MHz	QPSK	23165	15RB#0	22.80	17.33	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#0	22.61	17.14	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#8	22.36	16.89	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#14	22.28	16.81	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#0	21.76	16.29	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#4	21.64	16.17	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#7	21.65	16.18	34.77	PASS
Band12	3MHz	16QAM	23025	15RB#0	21.78	16.31	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#0	22.42	16.95	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#8	22.40	16.93	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#14	22.30	16.83	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#0	21.62	16.15	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#4	21.59	16.12	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#7	21.55	16.08	34.77	PASS
Band12	3MHz	16QAM	23095	15RB#0	21.77	16.30	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#0	22.53	17.06	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#8	22.32	16.85	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#14	22.38	16.91	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#0	21.78	16.31	34.77	PASS

Band12	3MHz	16QAM	23165	8RB#4	21.77	16.30	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#7	21.60	16.13	34.77	PASS
Band12	3MHz	16QAM	23165	15RB#0	21.77	16.30	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#0	23.35	17.88	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#12	23.85	18.38	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#24	23.47	18.00	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#0	22.68	17.21	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#6	22.68	17.21	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#13	22.51	17.04	34.77	PASS
Band12	5MHz	QPSK	23035	25RB#0	22.49	17.02	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#0	23.57	18.10	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#12	23.68	18.21	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#24	23.38	17.91	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#0	22.63	17.16	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#6	22.75	17.28	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#13	22.58	17.11	34.77	PASS
Band12	5MHz	QPSK	23095	25RB#0	22.60	17.13	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#0	23.73	18.26	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#12	23.91	18.44	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#24	23.60	18.13	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#0	22.84	17.37	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#6	22.89	17.42	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#13	22.77	17.30	34.77	PASS
Band12	5MHz	QPSK	23155	25RB#0	22.81	17.34	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#0	22.12	16.65	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#12	22.42	16.95	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#24	22.23	16.76	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#0	21.60	16.13	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#6	21.71	16.24	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#13	21.44	15.97	34.77	PASS
Band12	5MHz	16QAM	23035	25RB#0	21.63	16.16	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#0	22.21	16.74	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#12	22.37	16.90	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#24	22.42	16.95	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#0	21.67	16.20	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#6	21.78	16.31	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#13	21.60	16.13	34.77	PASS
Band12	5MHz	16QAM	23095	25RB#0	21.57	16.10	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#0	22.51	17.04	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#12	22.84	17.37	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#24	22.25	16.78	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#0	21.80	16.33	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#6	22.00	16.53	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#13	21.77	16.30	34.77	PASS

Band12	5MHz	16QAM	23155	25RB#0	21.75	16.28	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#0	23.29	17.82	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#24	24.06	18.59	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#49	23.12	17.65	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#0	22.90	17.43	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#12	22.73	17.26	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#25	22.48	17.01	34.77	PASS
Band12	10MHz	QPSK	23060	50RB#0	22.60	17.13	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#0	23.40	17.93	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#24	24.11	18.64	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#49	23.23	17.76	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#0	22.80	17.33	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#12	22.82	17.35	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#25	22.57	17.10	34.77	PASS
Band12	10MHz	QPSK	23095	50RB#0	22.67	17.20	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#0	23.36	17.89	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#24	24.23	18.76	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#49	23.16	17.69	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#0	22.83	17.36	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#12	22.93	17.46	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#25	22.59	17.12	34.77	PASS
Band12	10MHz	QPSK	23130	50RB#0	22.72	17.25	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#0	22.26	16.79	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#24	22.65	17.18	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#49	22.11	16.64	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#0	21.77	16.30	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#12	21.71	16.24	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#25	21.70	16.23	34.77	PASS
Band12	10MHz	16QAM	23060	50RB#0	21.66	16.19	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#0	22.06	16.59	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#24	22.44	16.97	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#49	22.59	17.12	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#0	21.71	16.24	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#12	21.70	16.23	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#25	21.75	16.28	34.77	PASS
Band12	10MHz	16QAM	23095	50RB#0	21.63	16.16	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#0	22.11	16.64	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#24	22.17	16.70	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#49	22.50	17.03	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#0	21.63	16.16	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#12	21.91	16.44	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#25	21.73	16.26	34.77	PASS
Band12	10MHz	16QAM	23130	50RB#0	21.79	16.32	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,

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

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

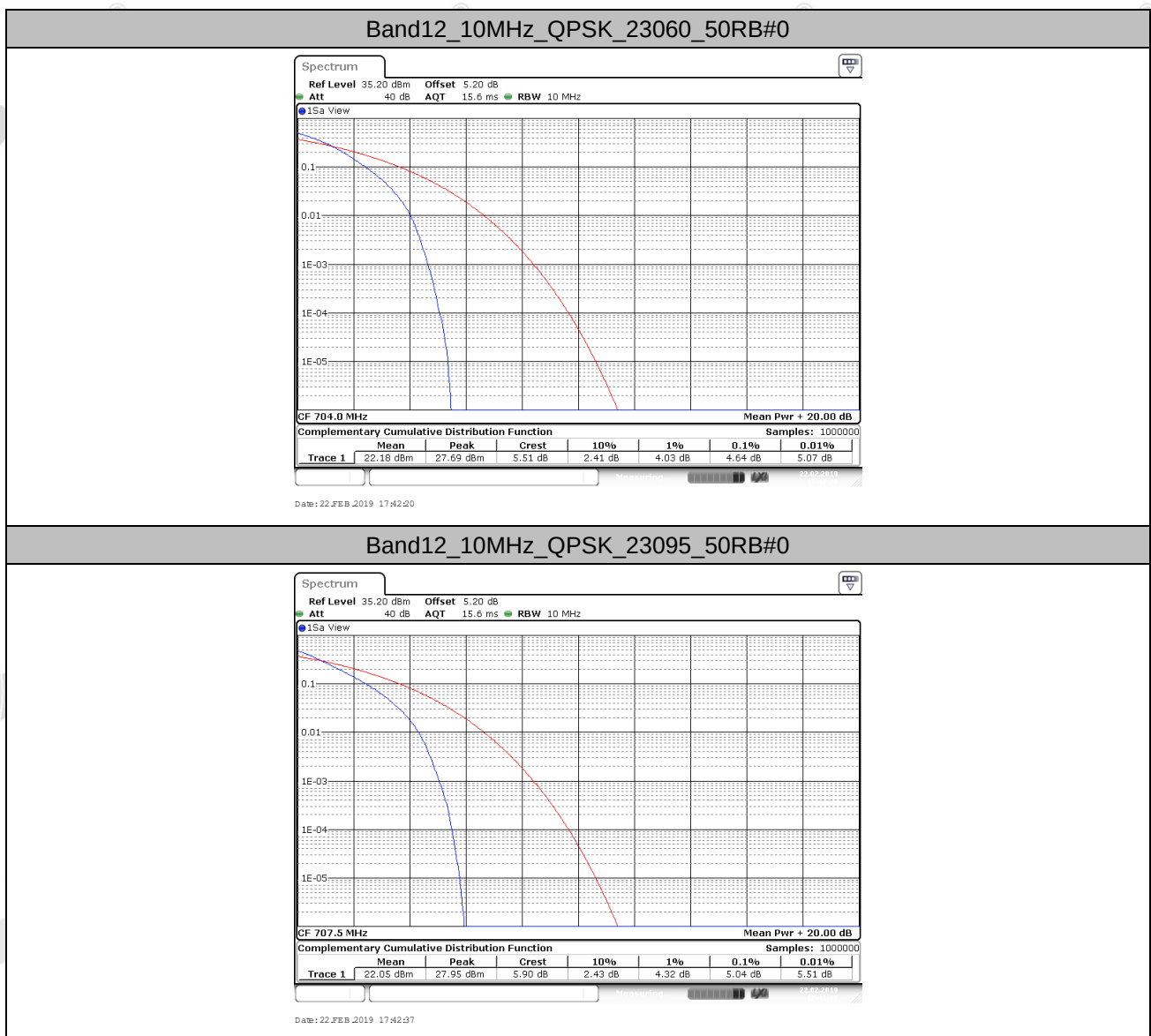
b: SGP=Signal Generator Level

4. Peak-to-Average Ratio(CCDF)

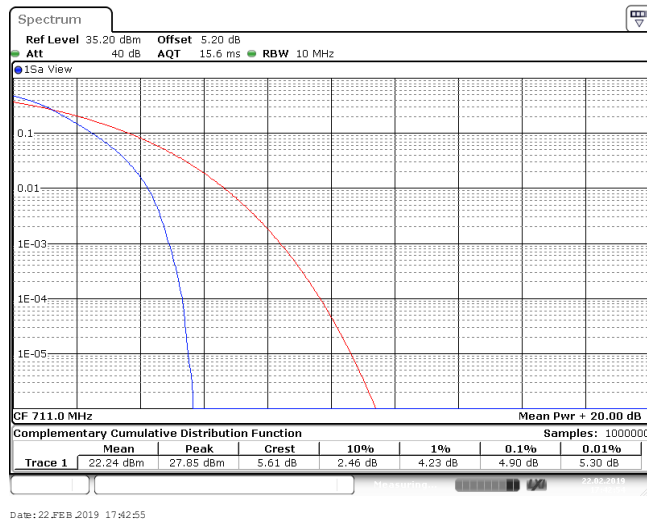
4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band12	10MHz	QPSK	23060	50RB#0	4.64	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	5.04	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	4.90	13	PASS
Band12	10MHz	16QAM	23060	50RB#0	5.68	13	PASS
Band12	10MHz	16QAM	23095	50RB#0	5.83	13	PASS
Band12	10MHz	16QAM	23130	50RB#0	5.83	13	PASS

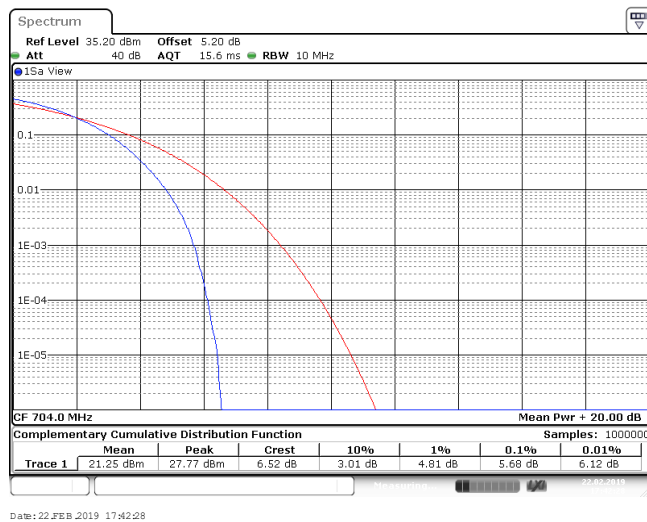
4.2. Test Plots



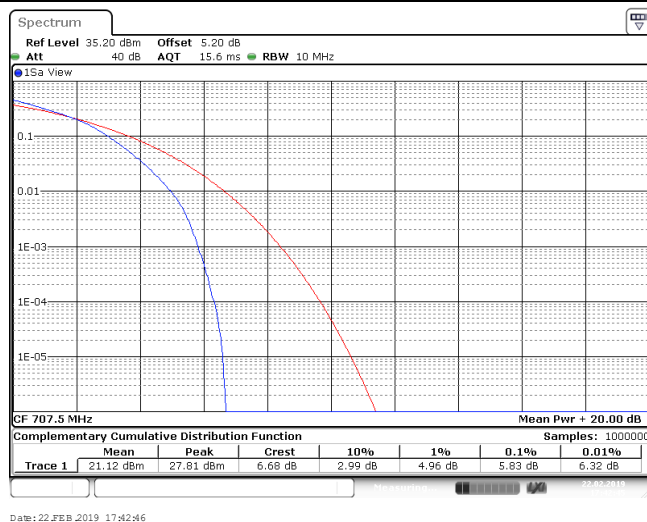
Band12_10MHz_QPSK_23130_50RB#0



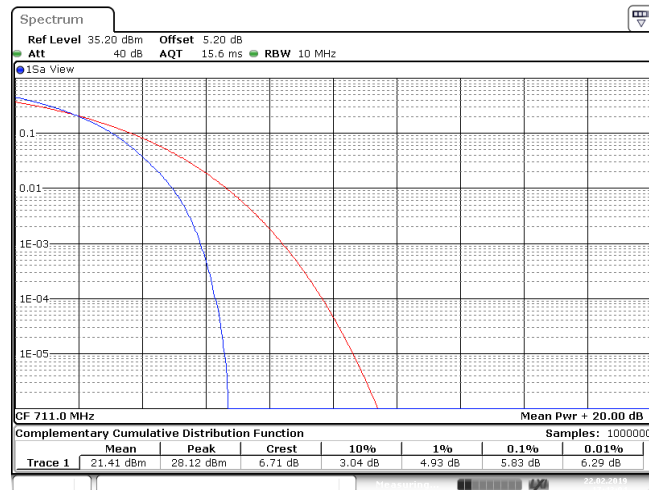
Band12_10MHz_16QAM_23060_50RB#0



Band12_10MHz_16QAM_23095_50RB#0



Band12_10MHz_16QAM_23130_50RB#0



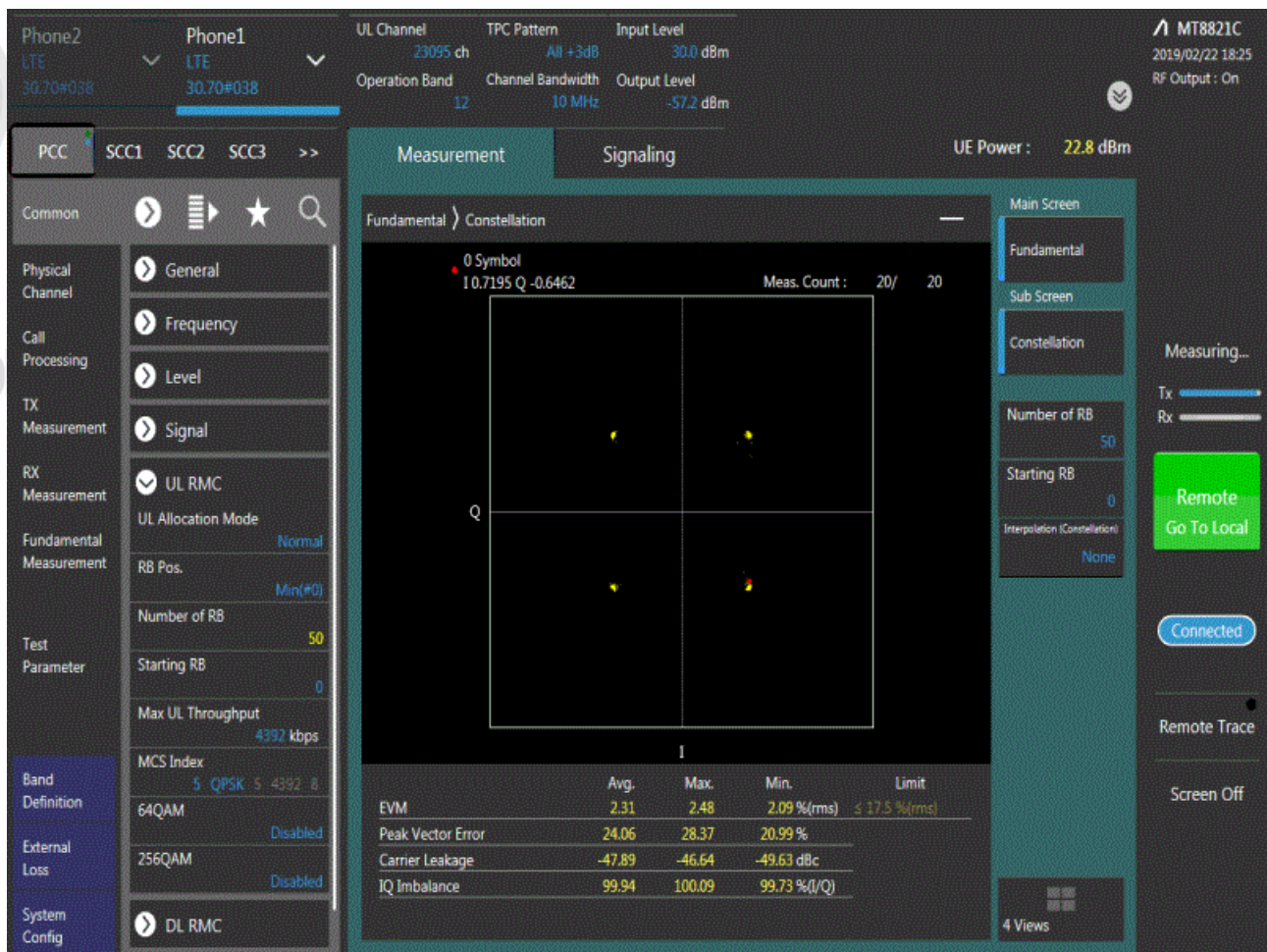
Date: 22_FEB_2019 17:43:04

5. Modulation Characteristics

5.1. Test BAND = LTE Band 12

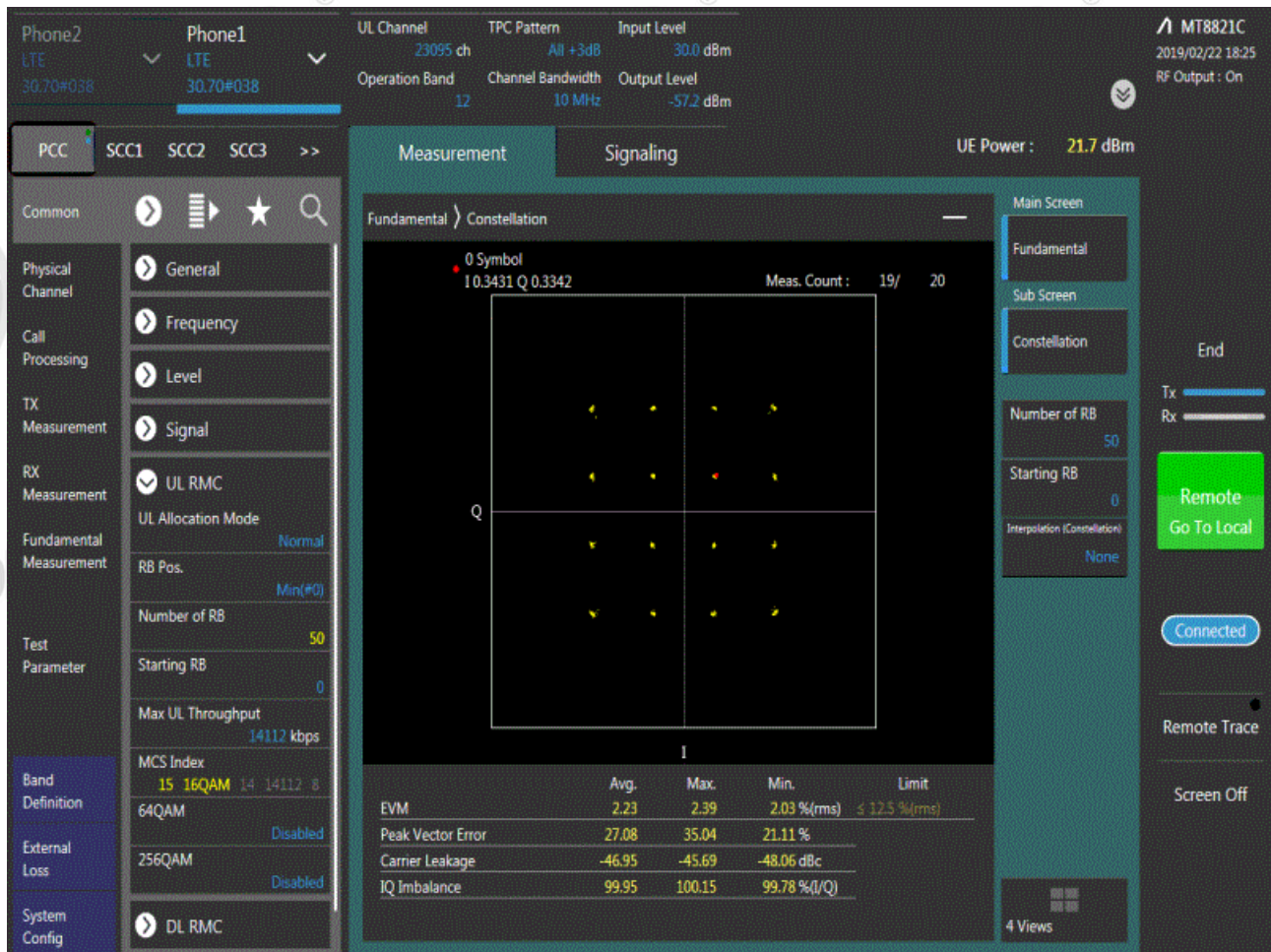
5.2. Test Mode = LTE /TM1 10MHz

5.2.1. Test Channel = MCH



5.3. Test Mode = LTE /TM2 10MHz

5.3.1. Test Channel = MCH



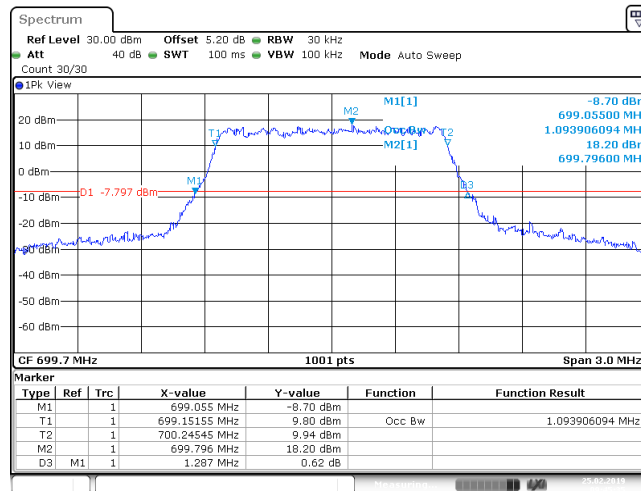
6. 26dB Bandwidth and Occupied Bandwidth

6.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	1.094	1.287	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.097	1.305	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.094	1.311	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.091	1.296	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.091	1.287	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.091	1.305	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.691	2.988	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.697	2.994	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.691	3.000	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.685	2.976	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.691	2.976	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.679	2.964	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.456	4.900	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.476	4.960	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.466	4.890	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.476	4.940	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.486	4.970	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.476	4.950	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.891	9.620	PASS
Band12	10MHz	QPSK	23095	50RB#0	8.931	9.740	PASS
Band12	10MHz	QPSK	23130	50RB#0	8.931	9.680	PASS
Band12	10MHz	16QAM	23060	50RB#0	8.891	9.660	PASS
Band12	10MHz	16QAM	23095	50RB#0	8.951	9.740	PASS
Band12	10MHz	16QAM	23130	50RB#0	8.931	9.720	PASS

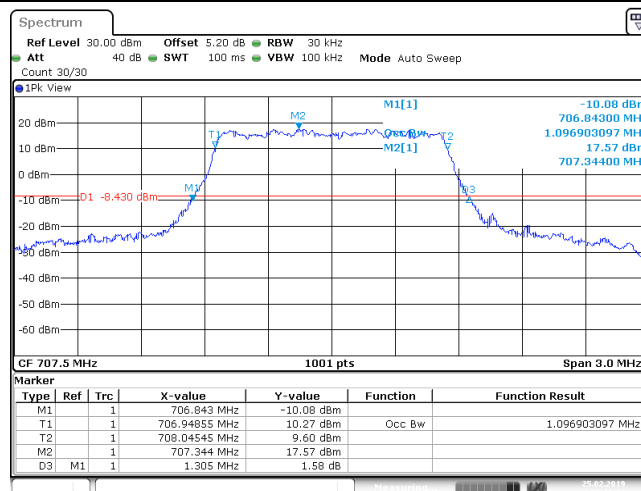
6.2. Test Plots

Band12_1.4MHz_QPSK_23017_6RB#0



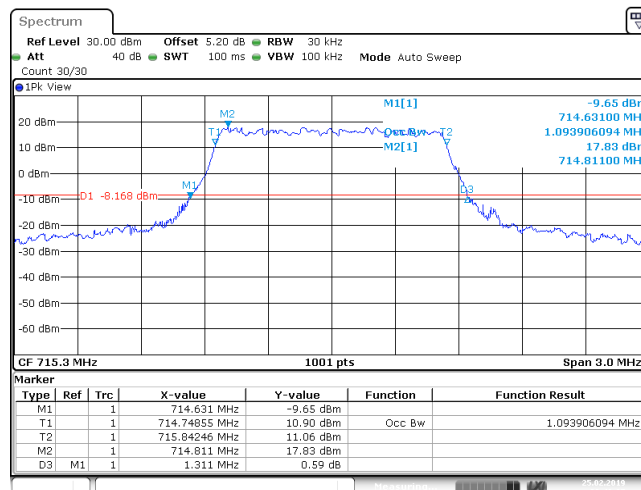
Date: 25 FEB 2019 09:45:35

Band12_1.4MHz_QPSK_23095_6RB#0



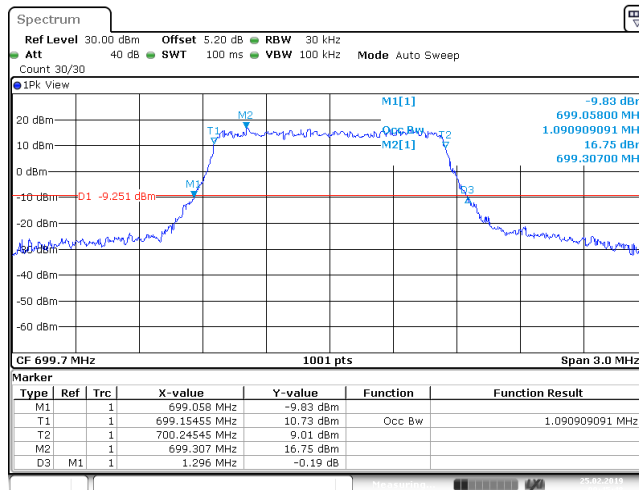
Date: 25 FEB 2019 09:46:01

Band12_1.4MHz_QPSK_23173_6RB#0



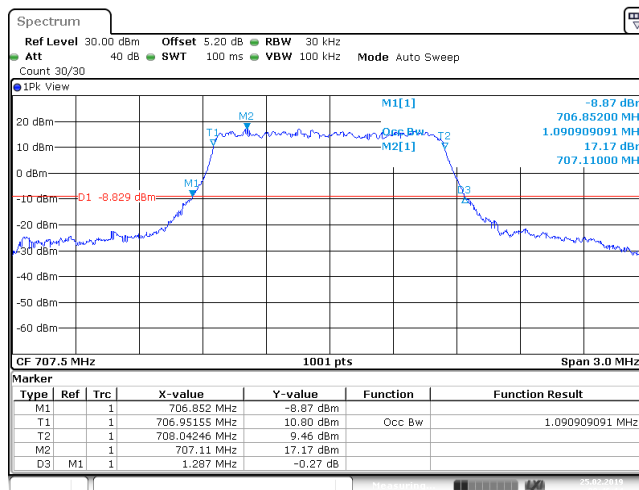
Date: 25 FEB 2019 09:46:27

Band12_1.4MHz_16QAM_23017_6RB#0



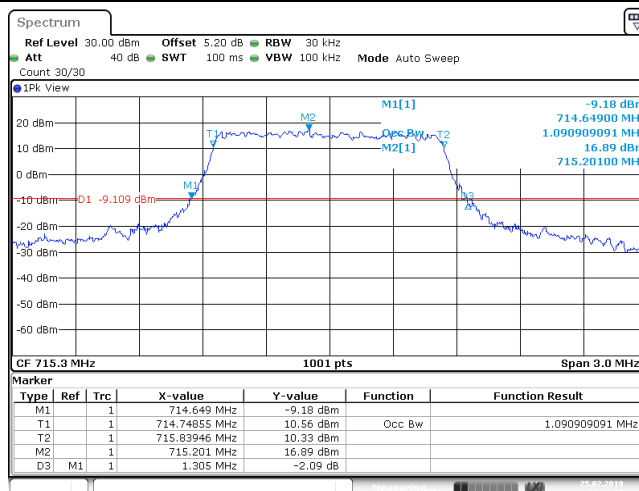
Date: 25 FEB 2019 09:45:48

Band12_1.4MHz_16QAM_23095_6RB#0



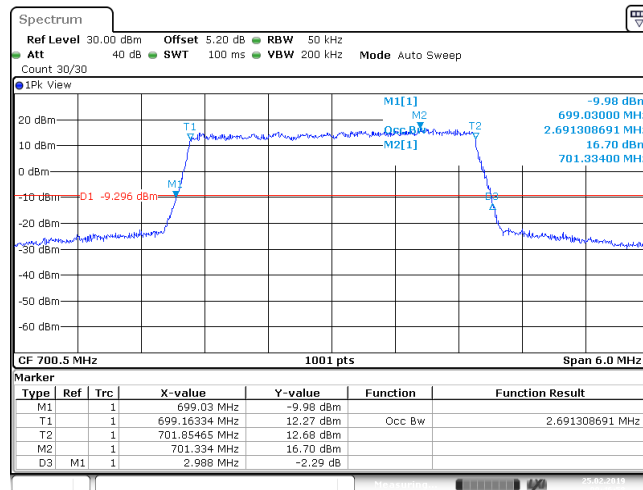
Date: 25 FEB 2019 09:46:14

Band12_1.4MHz_16QAM_23173_6RB#0



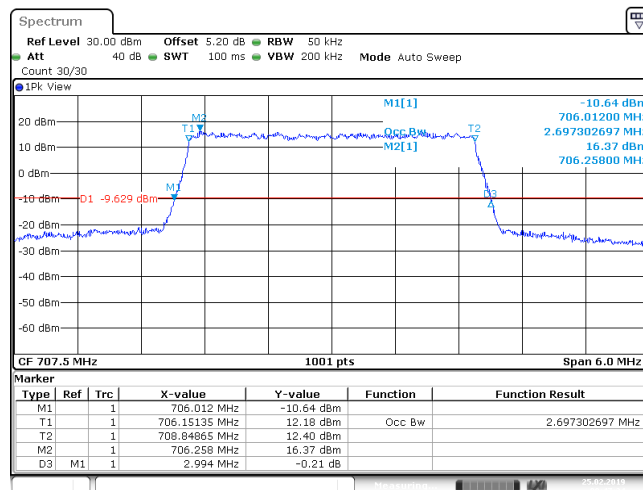
Date: 25 FEB 2019 09:46:40

Band12_3MHz_QPSK_23025_15RB#0



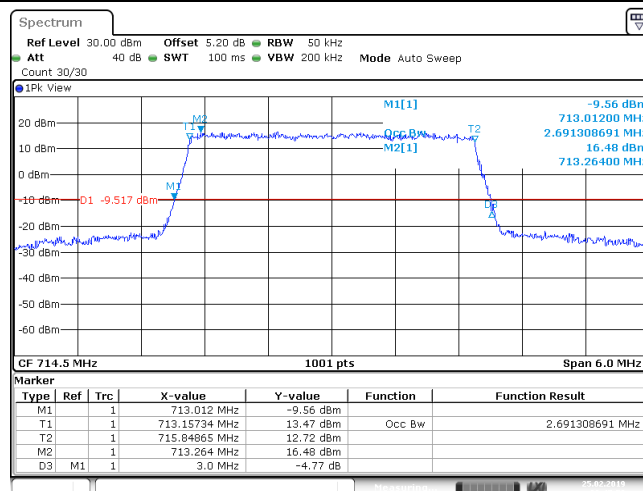
Date: 25 FEB 2019 09:46:59

Band12_3MHz_QPSK_23095_15RB#0



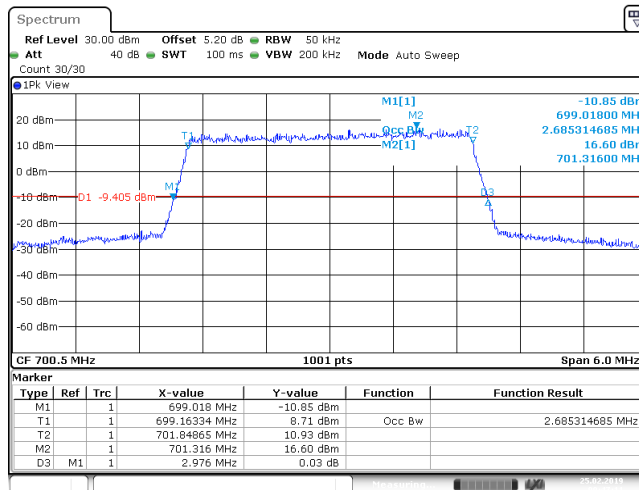
Date: 25 FEB 2019 09:47:25

Band12_3MHz_QPSK_23165_15RB#0



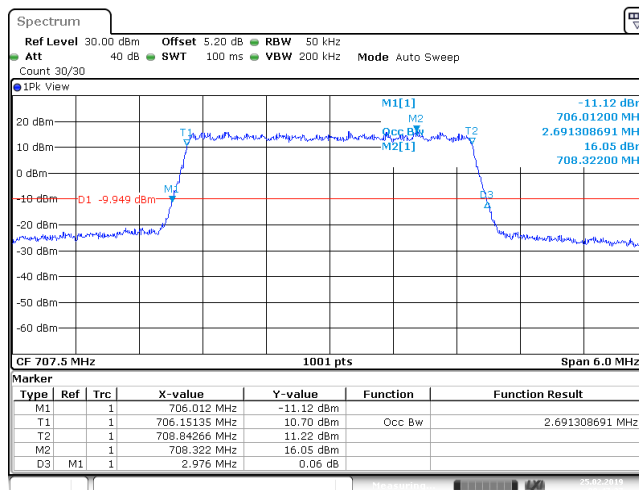
Date: 25 FEB 2019 09:47:51

Band12_3MHz_16QAM_23025_15RB#0



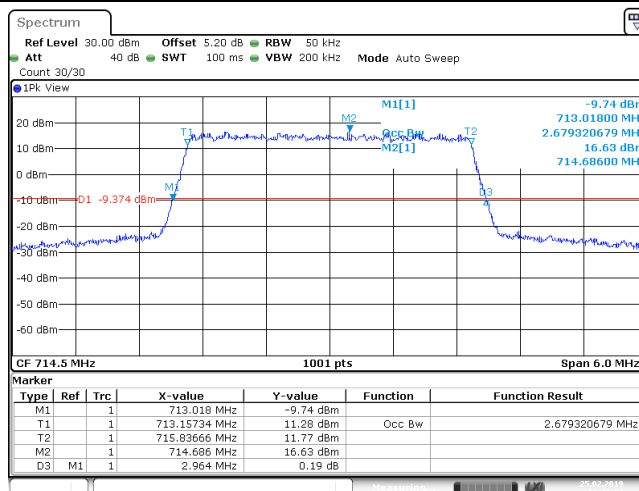
Date: 25 FEB 2019 09:47:11

Band12_3MHz_16QAM_23095_15RB#0



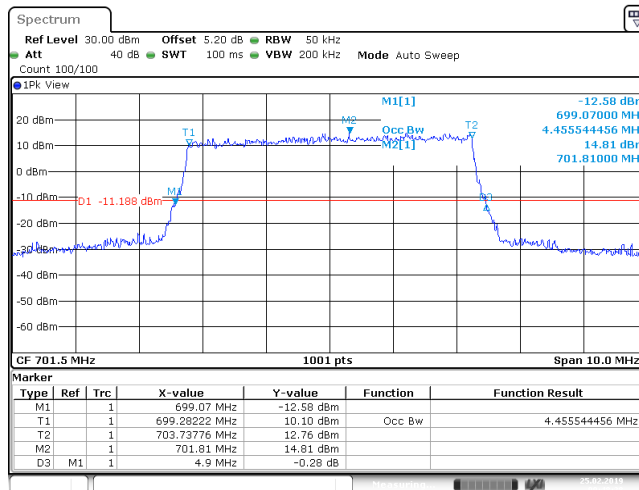
Date: 25 FEB 2019 09:47:38

Band12_3MHz_16QAM_23165_15RB#0



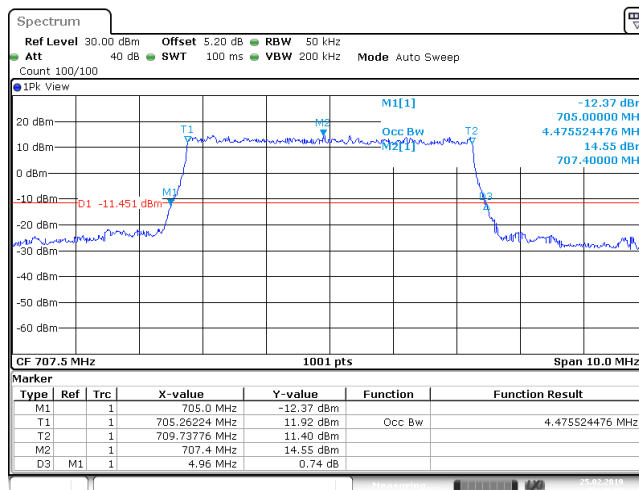
Date: 25 FEB 2019 09:48:04

Band12_5MHz_QPSK_23035_25RB#0



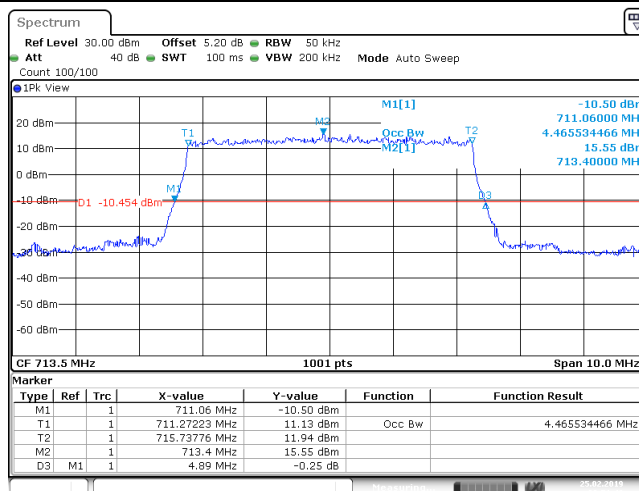
Date: 25.FEB.2019 09:48:29

Band12_5MHz_QPSK_23095_25RB#0



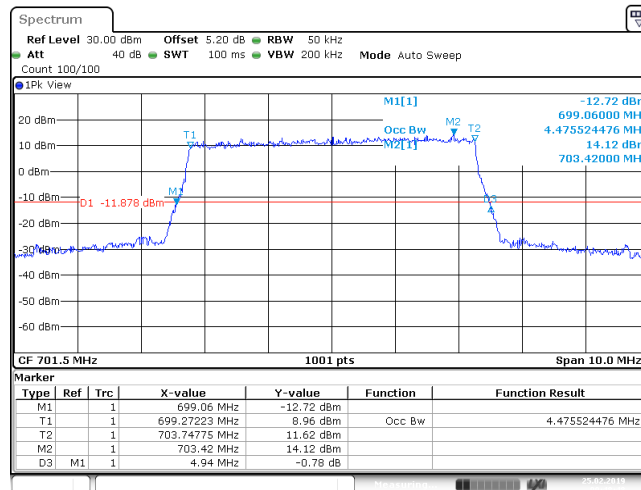
Date: 25.FEB.2019 09:49:09

Band12_5MHz_QPSK_23155_25RB#0



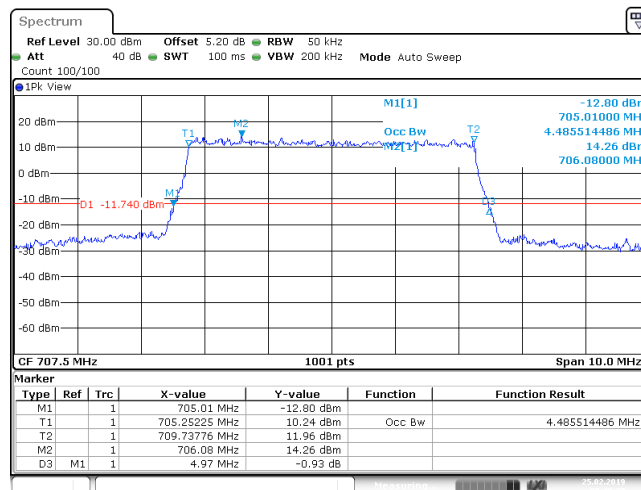
Date: 25.FEB.2019 09:51:42

Band12_5MHz_16QAM_23035_25RB#0



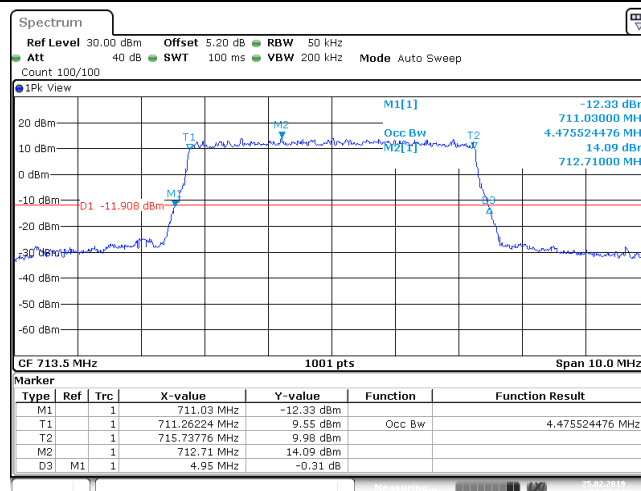
Date: 25 FEB 2019 09:48:48

Band12_5MHz_16QAM_23095_25RB#0



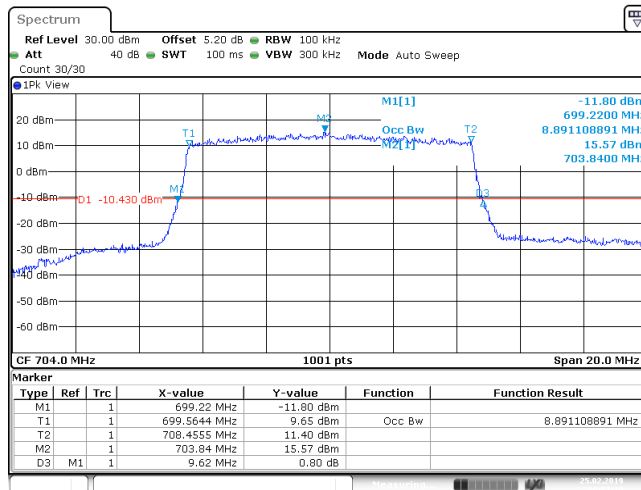
Date: 25 FEB 2019 09:49:29

Band12_5MHz_16QAM_23155_25RB#0



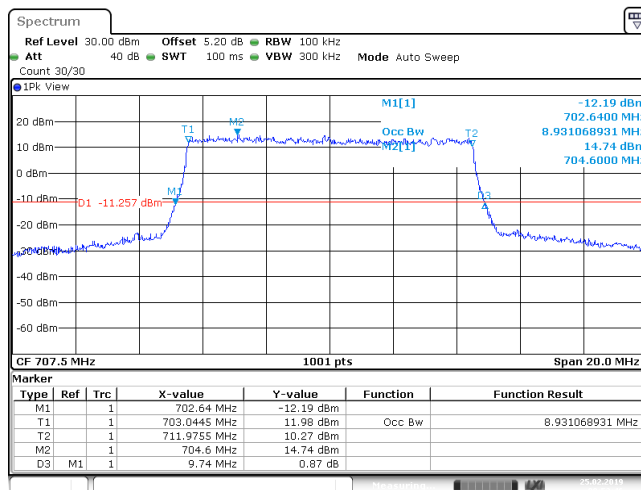
Date: 25 FEB 2019 09:52:02

Band12_10MHz_QPSK_23060_50RB#0



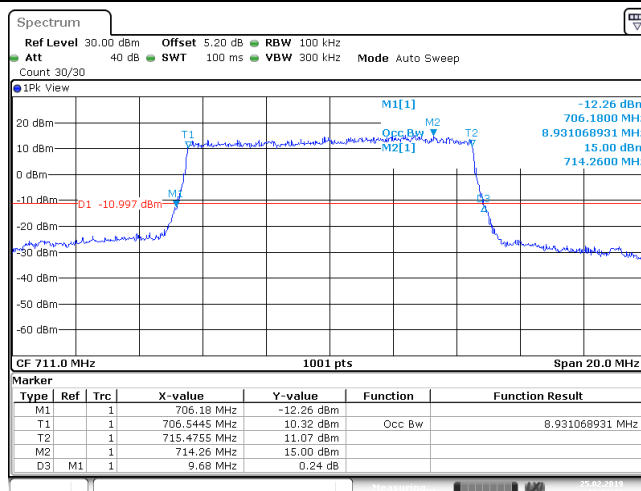
Date: 25 FEB 2019 09:52:20

Band12_10MHz_QPSK_23095_50RB#0



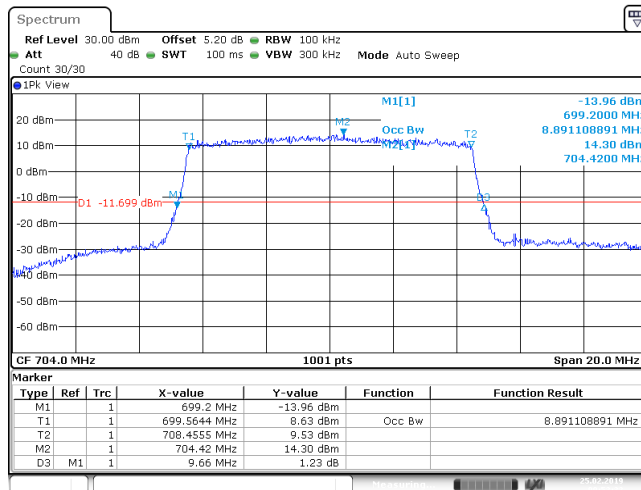
Date: 25 FEB 2019 09:52:46

Band12_10MHz_QPSK_23130_50RB#0



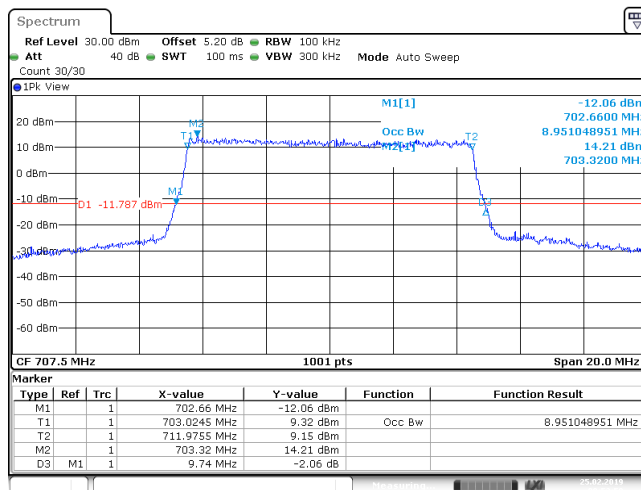
Date: 25 FEB 2019 09:53:13

Band12_10MHz_16QAM_23060_50RB#0



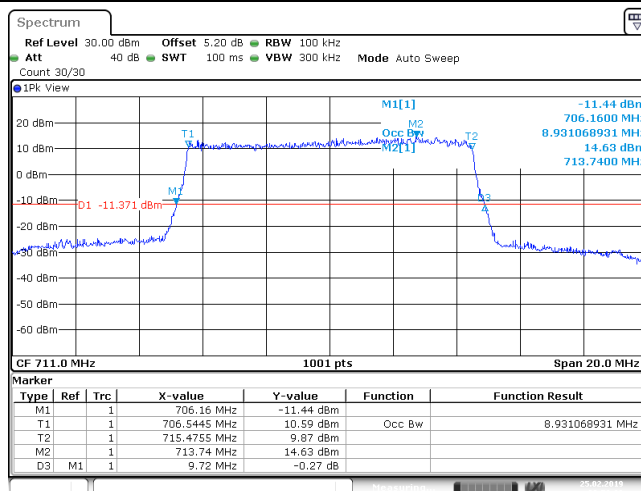
Date: 25 FEB 2019 09:52:33

Band12_10MHz_16QAM_23095_50RB#0



Date: 25 FEB 2019 09:52:59

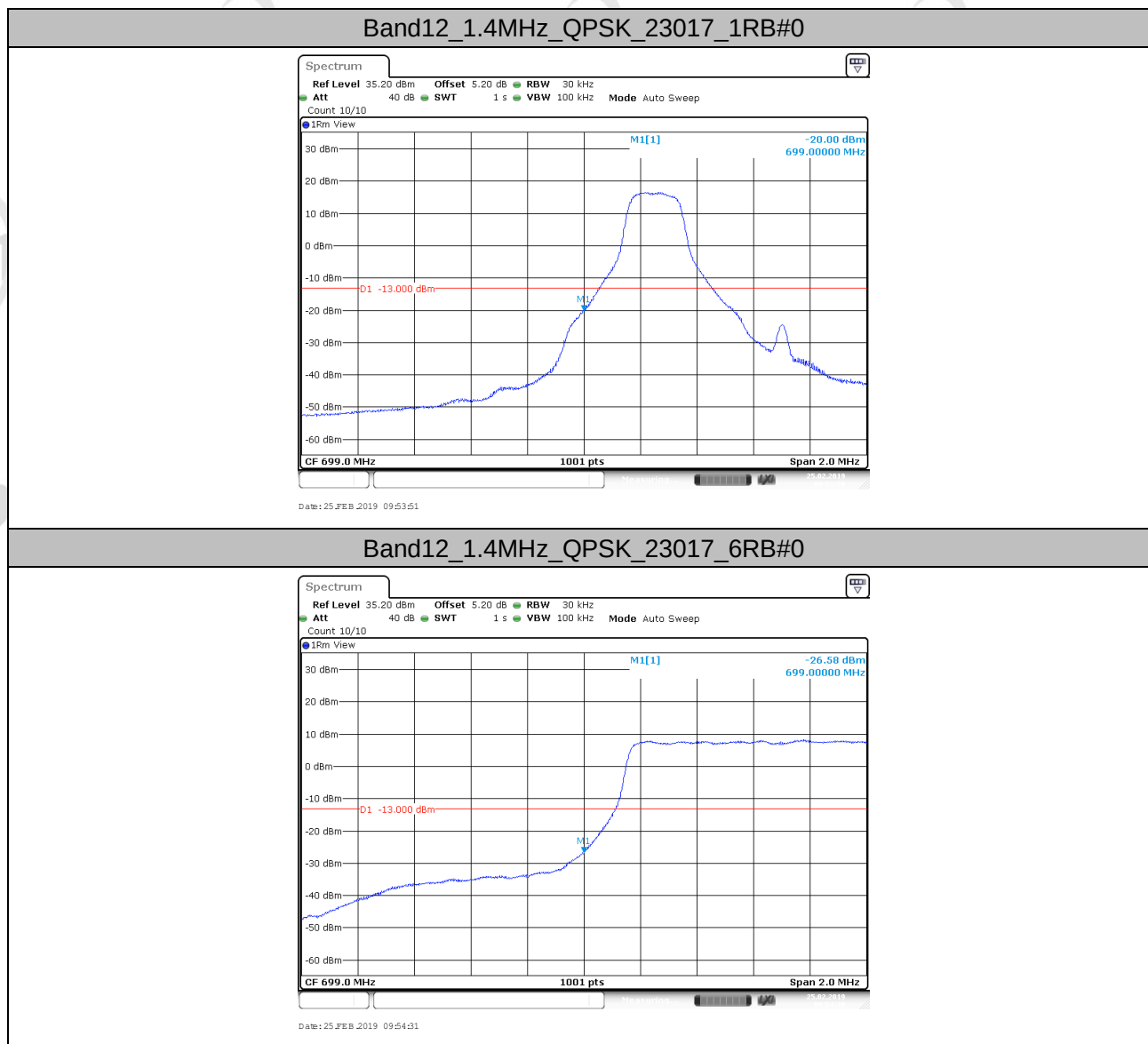
Band12_10MHz_16QAM_23130_50RB#0



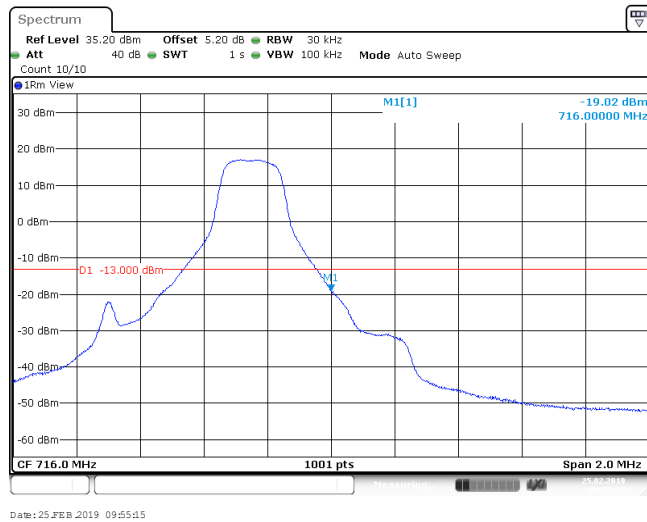
Date: 25 FEB 2019 09:53:26

7. Band Edge Compliance

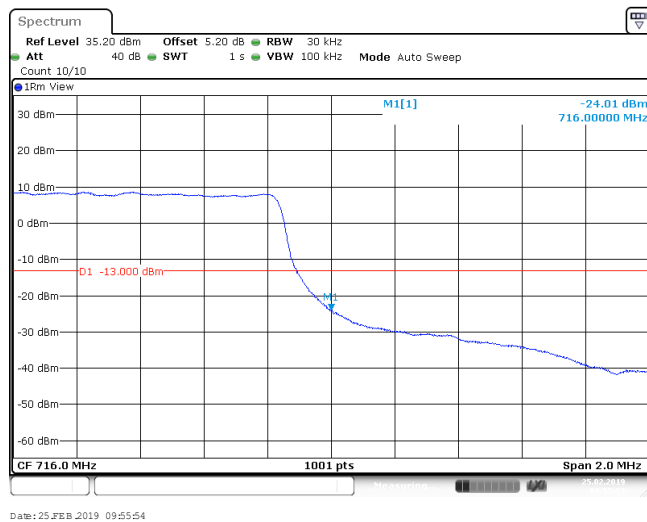
7.1. Test Plots



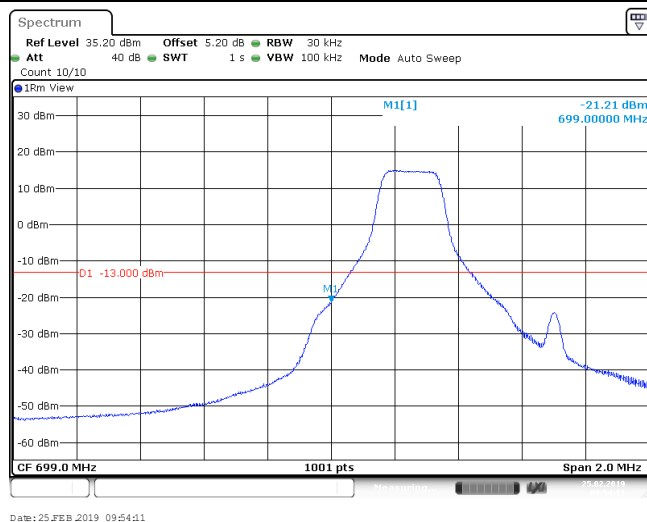
Band12_1.4MHz_QPSK_23173_1RB#5



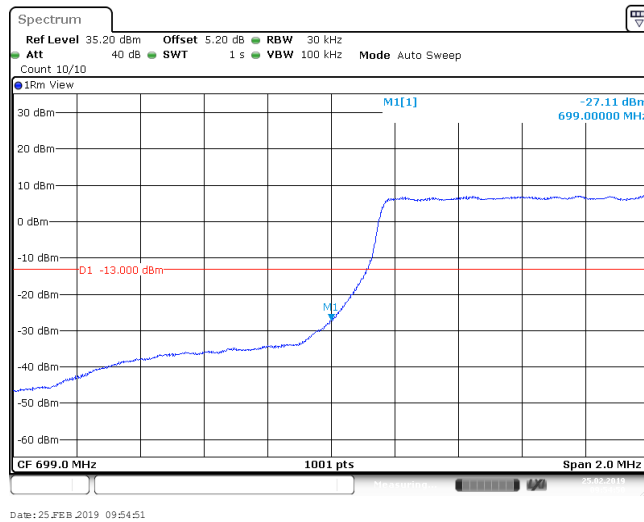
Band12_1.4MHz_QPSK_23173_6RB#0



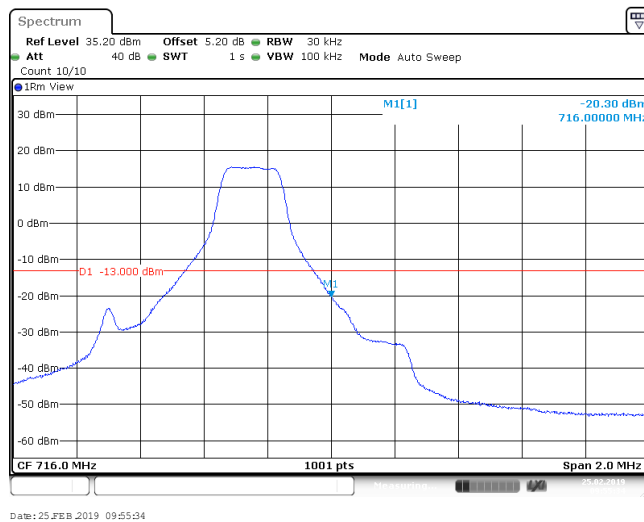
Band12_1.4MHz_16QAM_23017_1RB#0



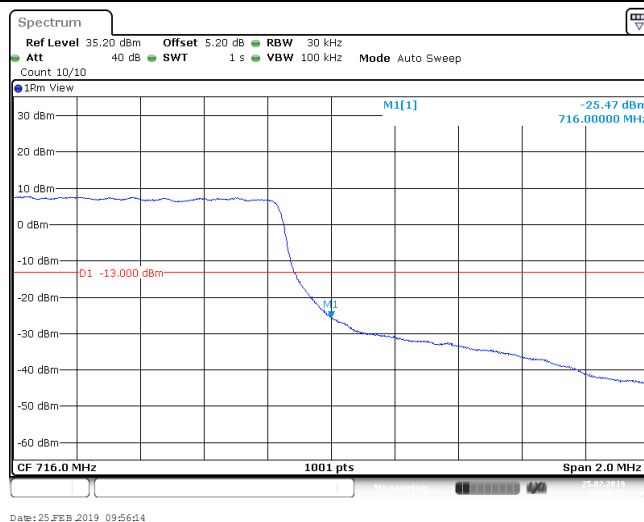
Band12_1.4MHz_16QAM_23017_6RB#0



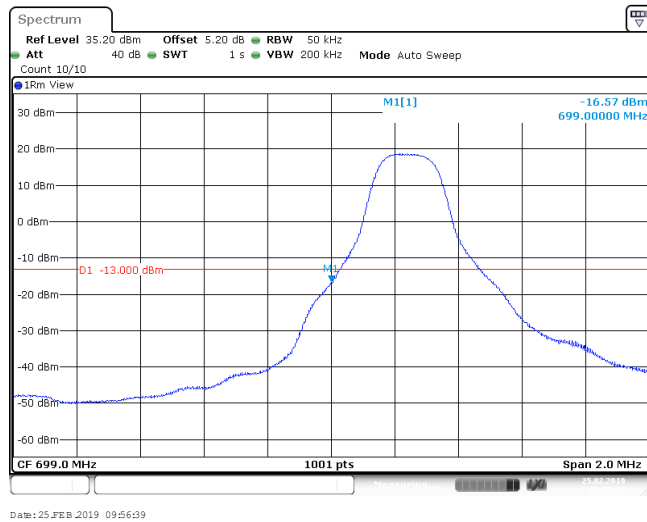
Band12_1.4MHz_16QAM_23173_1RB#5



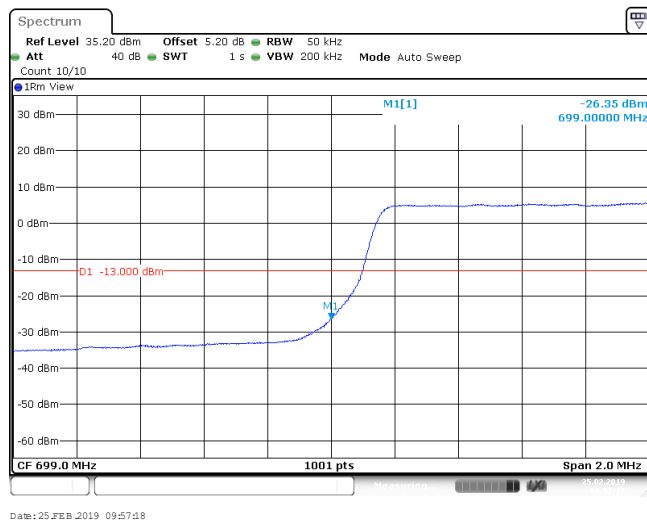
Band12_1.4MHz_16QAM_23173_6RB#0



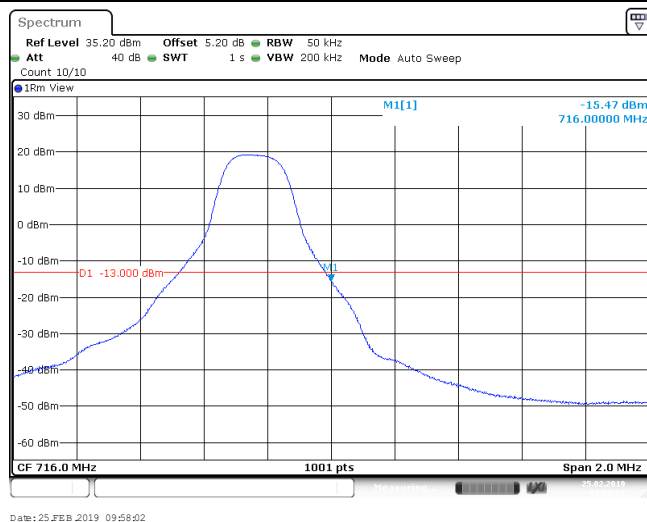
Band12_3MHz_QPSK_23025_1RB#0



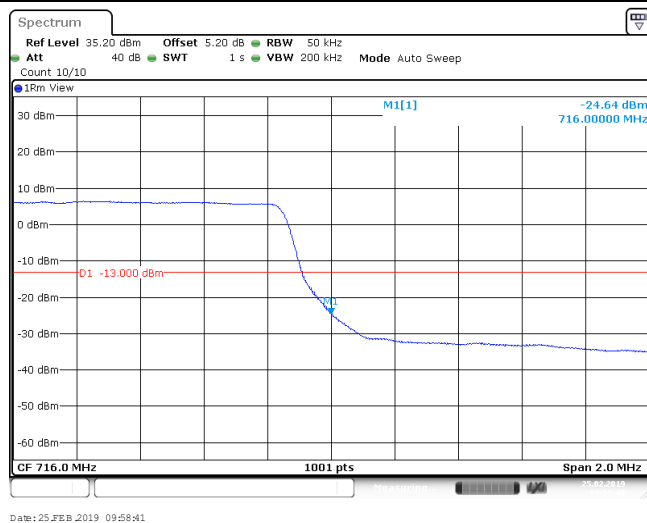
Band12_3MHz_QPSK_23025_15RB#0



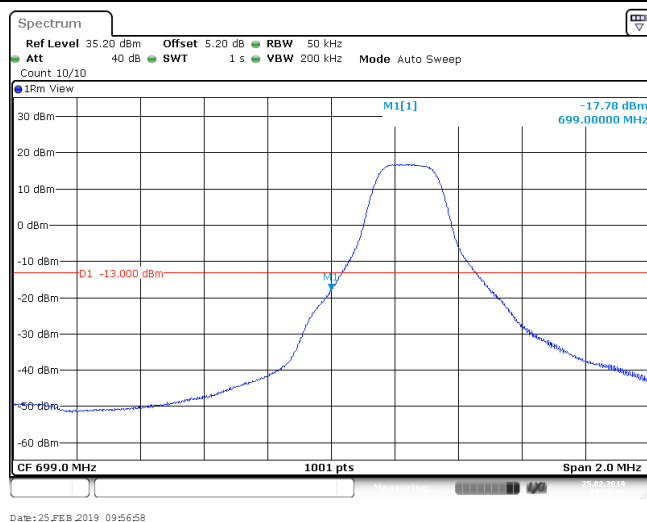
Band12_3MHz_QPSK_23165_1RB#14



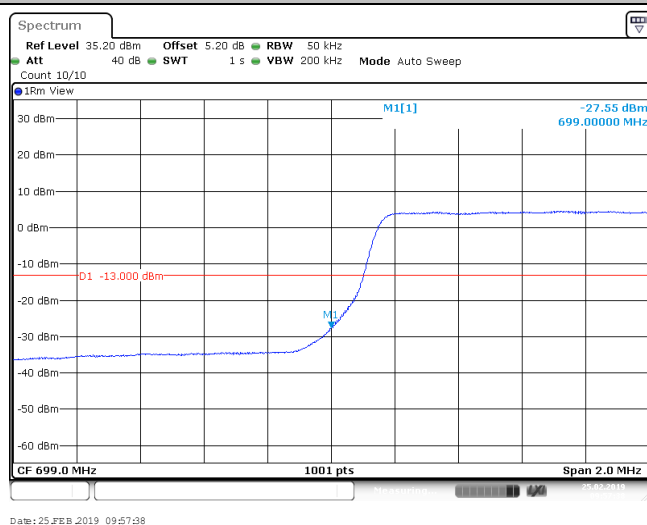
Band12_3MHz_QPSK_23165_15RB#0



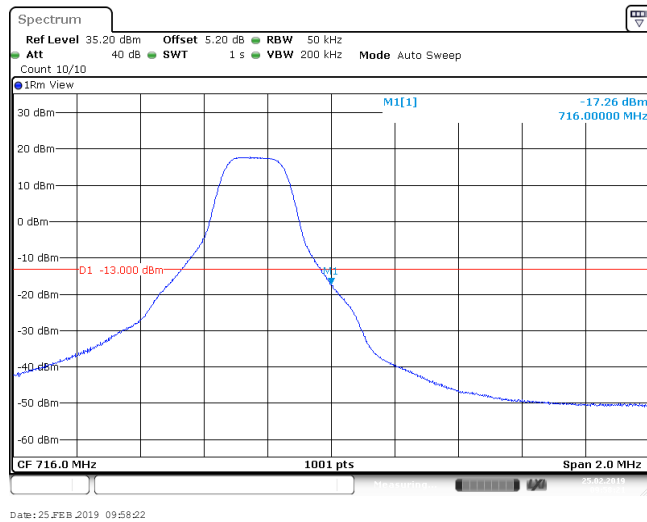
Band12_3MHz_16QAM_23025_1RB#0



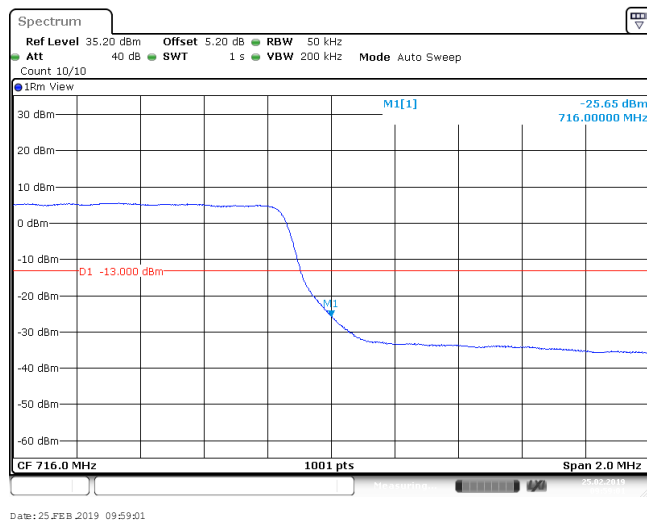
Band12_3MHz_16QAM_23025_15RB#0



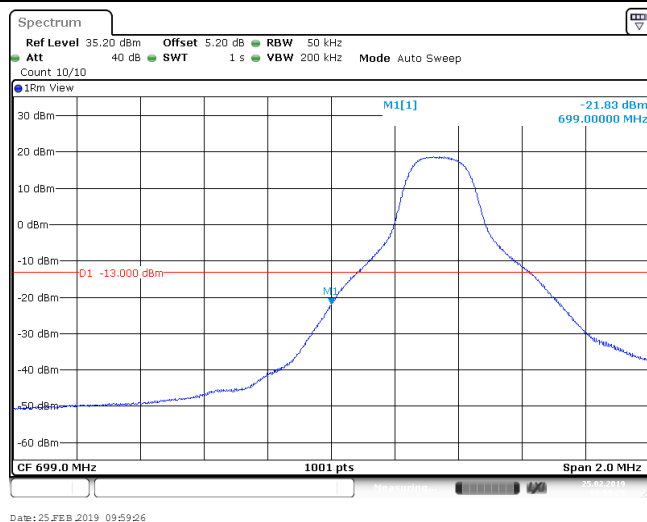
Band12_3MHz_16QAM_23165_1RB#14



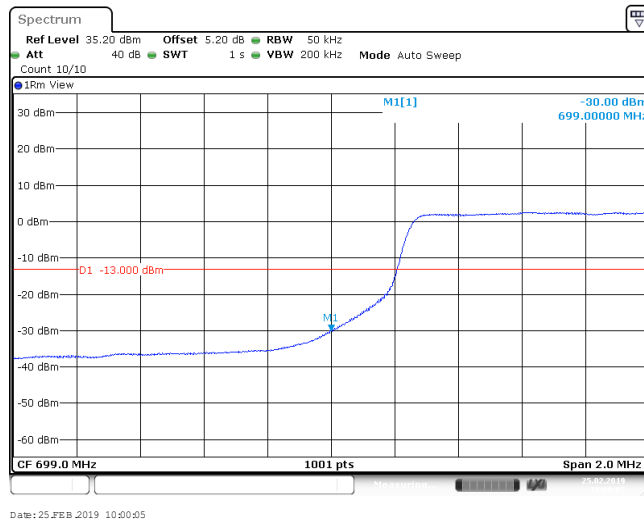
Band12_3MHz_16QAM_23165_15RB#0



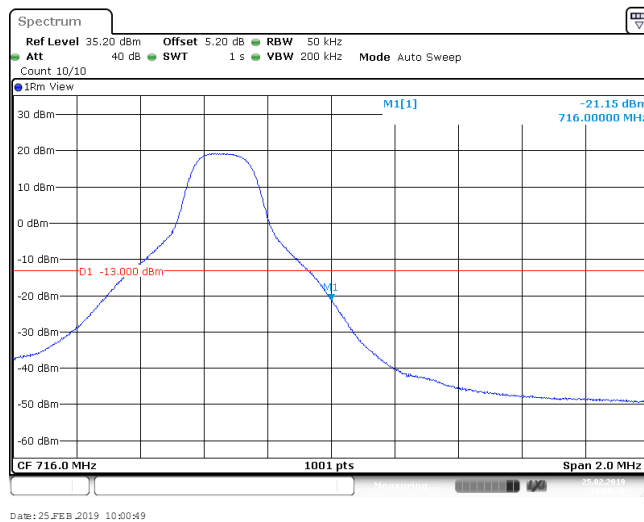
Band12_5MHz_QPSK_23035_1RB#0



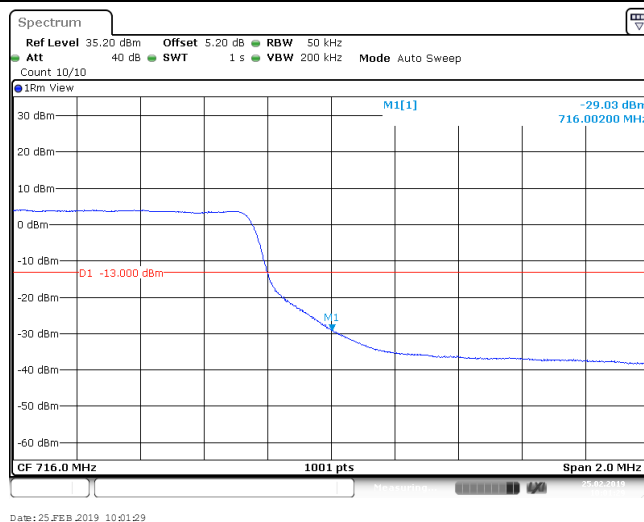
Band12_5MHz_QPSK_23035_25RB#0



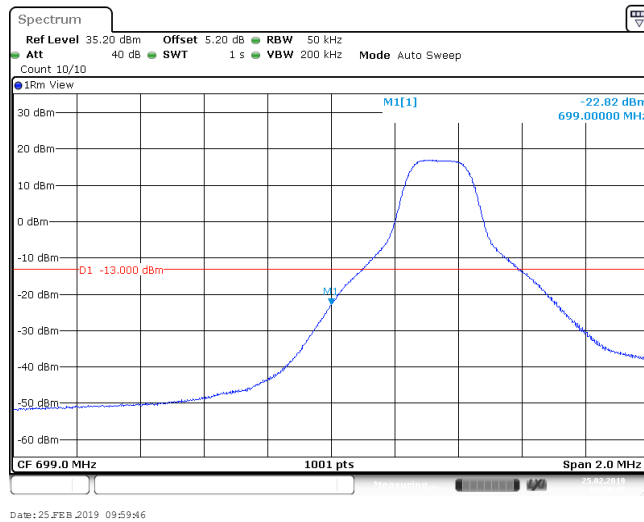
Band12_5MHz_QPSK_23155_1RB#24



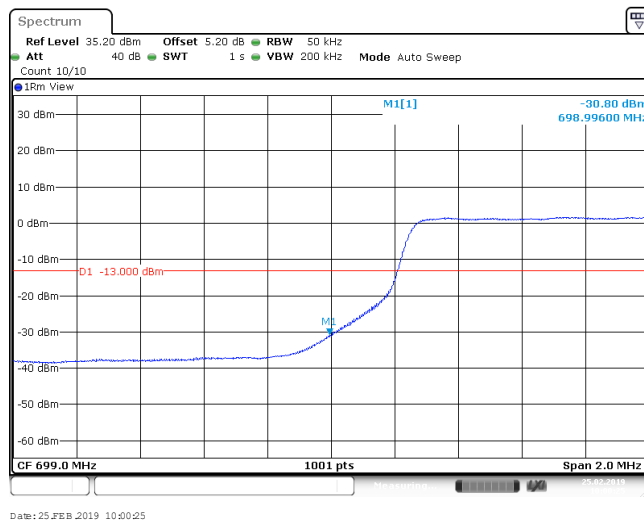
Band12_5MHz_QPSK_23155_25RB#0



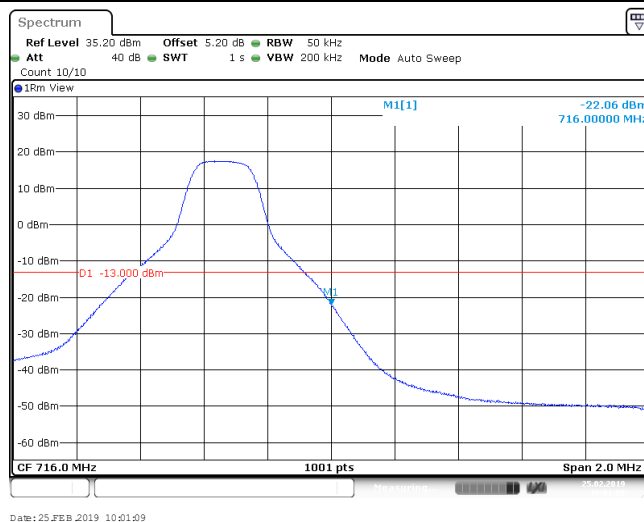
Band12_5MHz_16QAM_23035_1RB#0



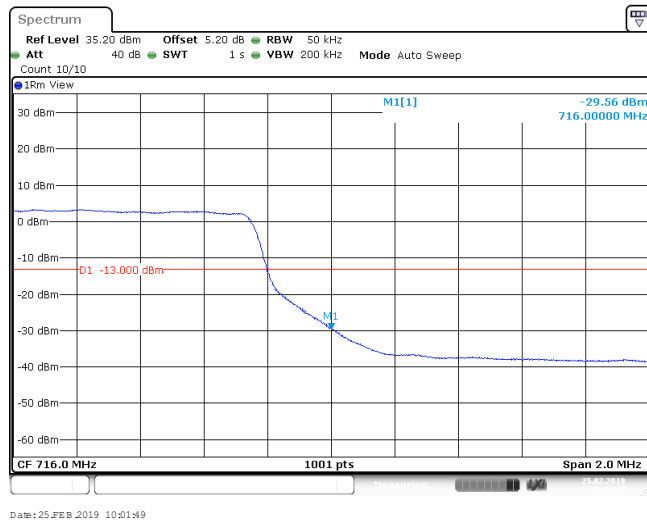
Band12_5MHz_16QAM_23035_25RB#0



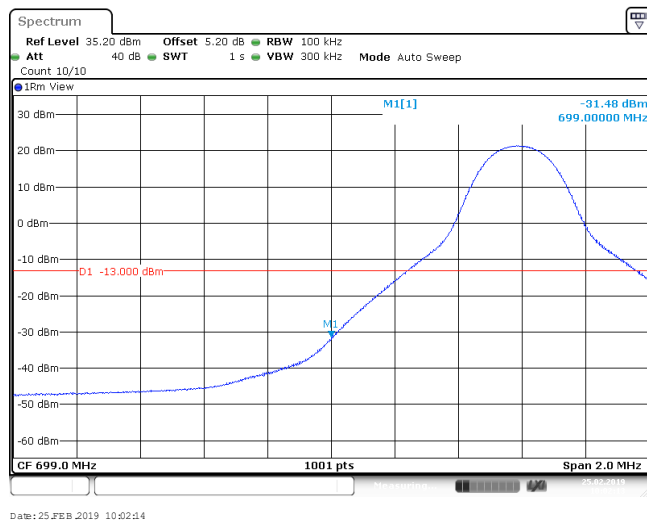
Band12_5MHz_16QAM_23155_1RB#24



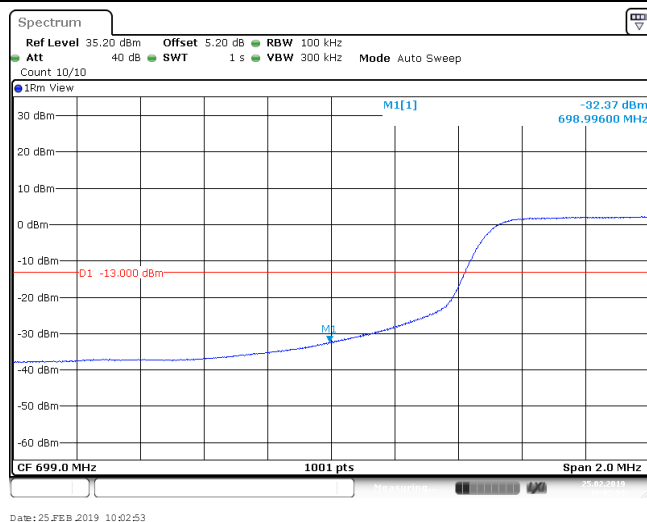
Band12_5MHz_16QAM_23155_25RB#0



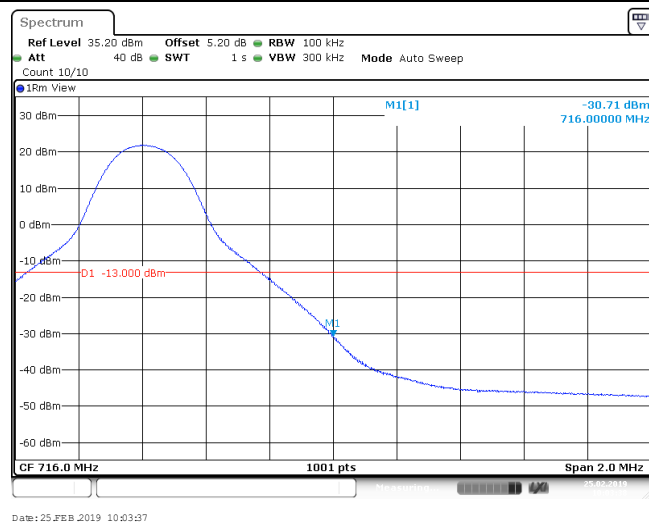
Band12_10MHz_QPSK_23060_1RB#0



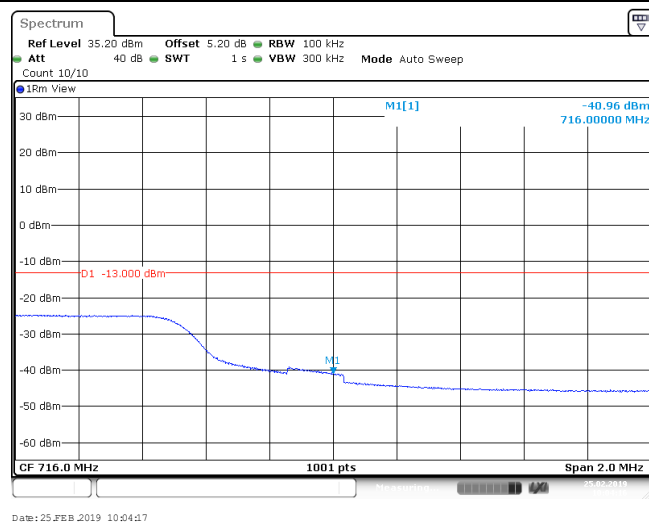
Band12_10MHz_QPSK_23060_50RB#0



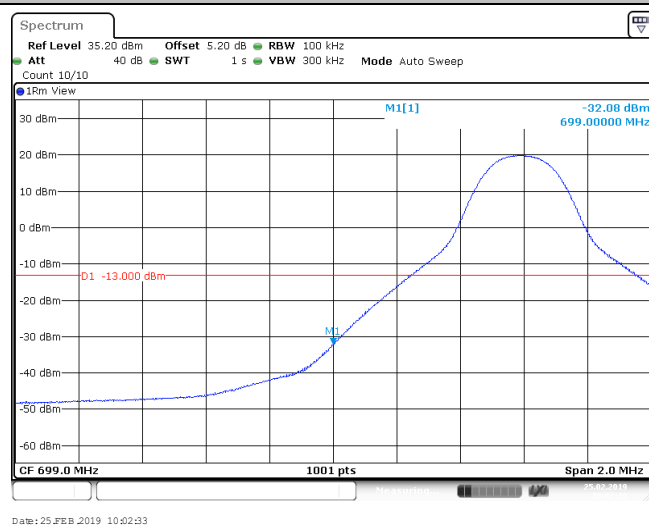
Band12_10MHz_QPSK_23130_1RB#49



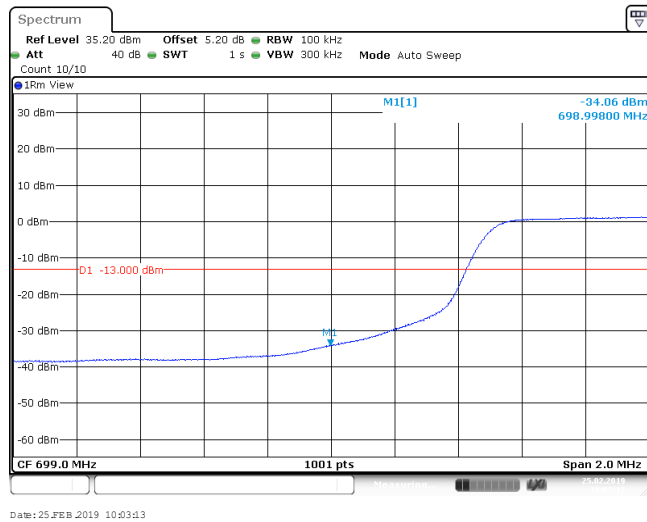
Band12_10MHz_QPSK_23130_50RB#0



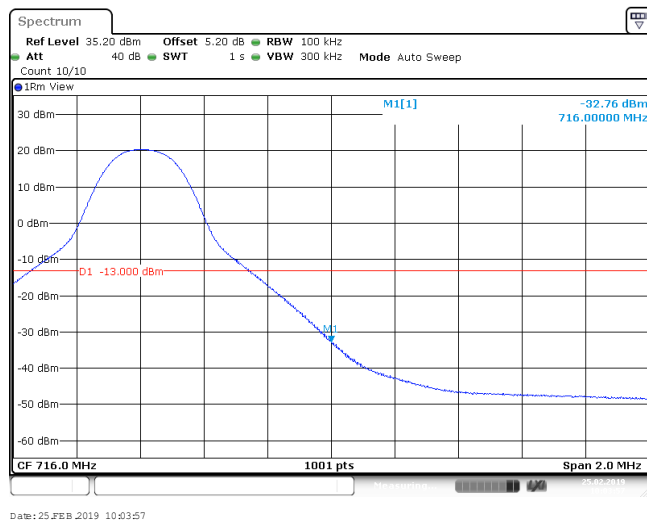
Band12_10MHz_16QAM_23060_1RB#0



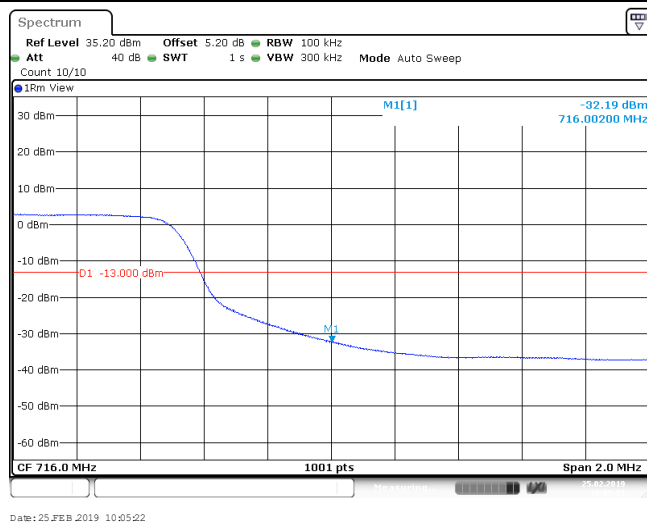
Band12_10MHz_16QAM_23060_50RB#0



Band12_10MHz_16QAM_23130_1RB#49



Band12_10MHz_16QAM_23130_50RB#0

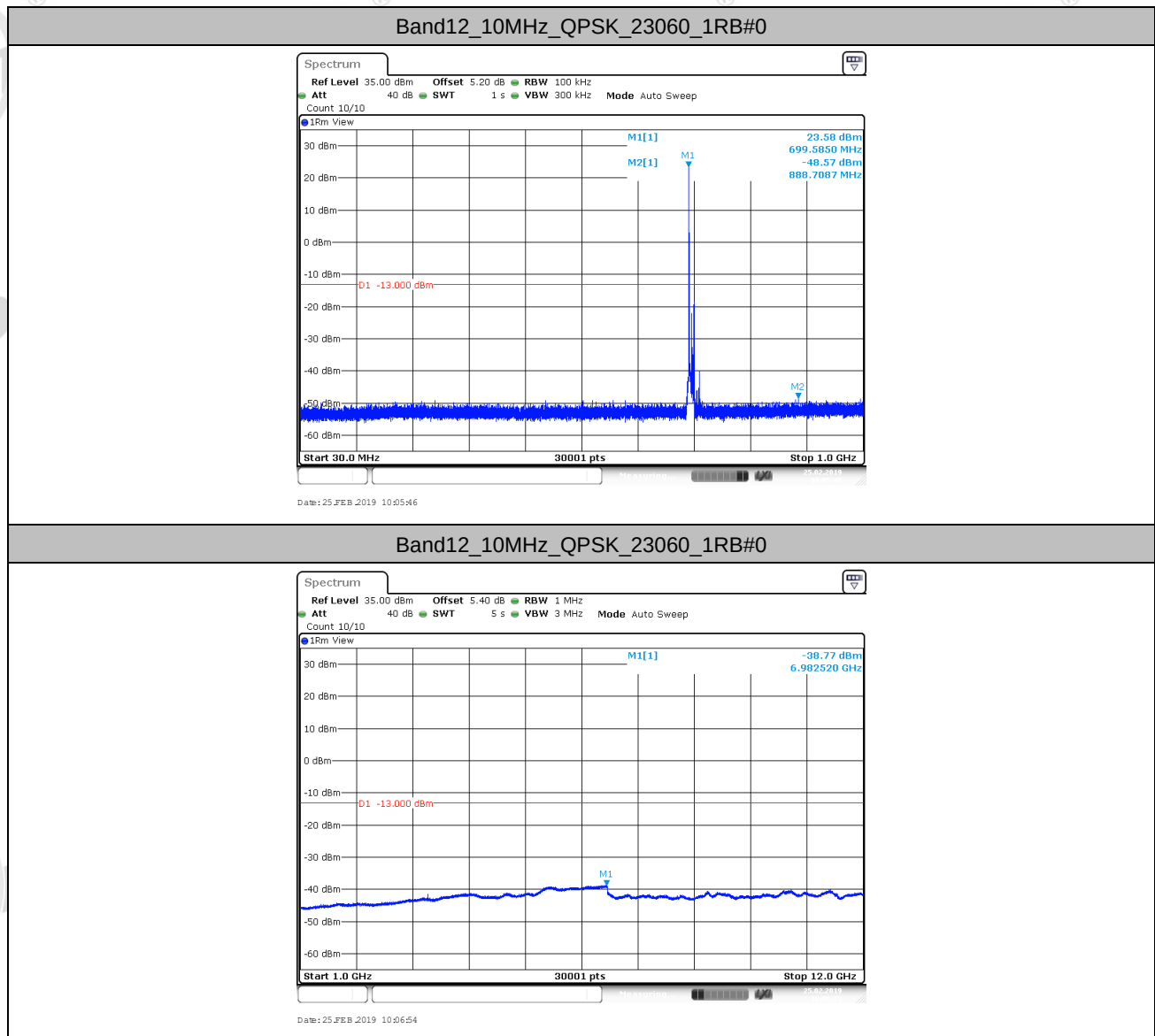


8. Spurious Emission at Antenna Terminal

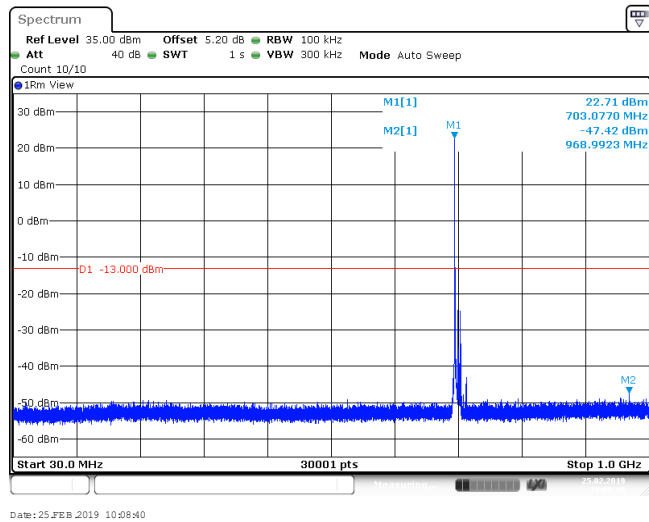
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =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

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

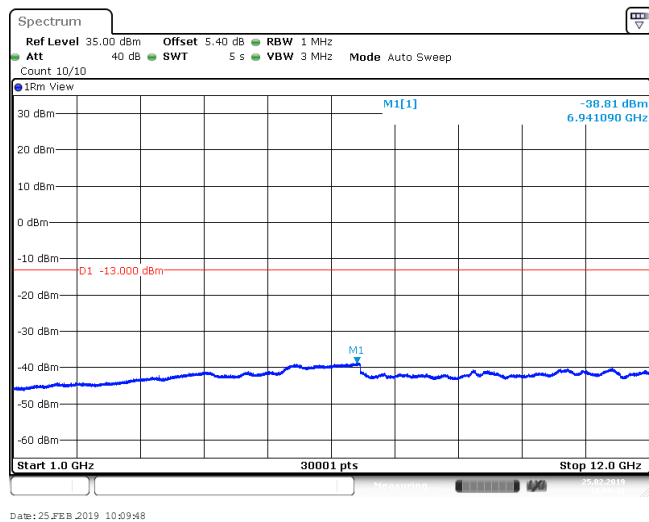
8.1. Test Plots



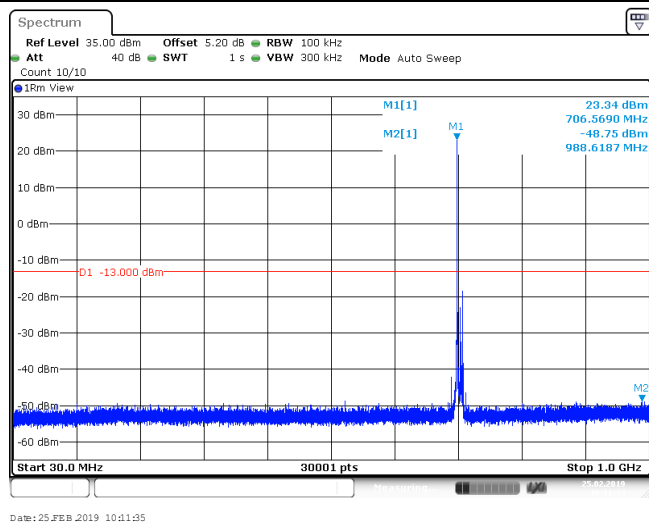
Band12_10MHz_QPSK_23095_1RB#0



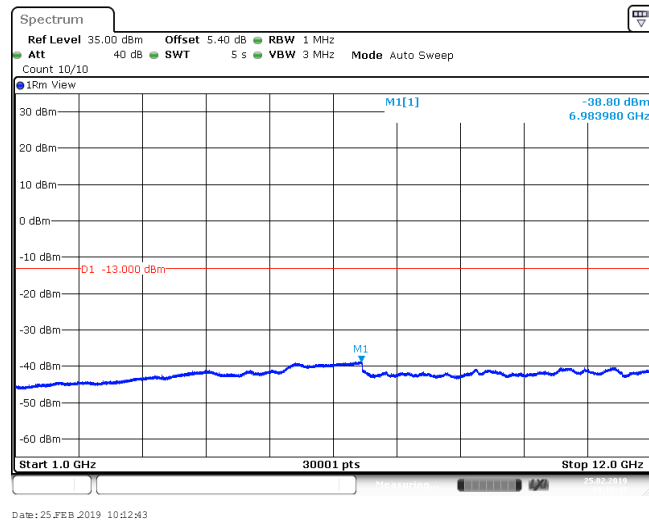
Band12_10MHz_QPSK_23095_1RB#0



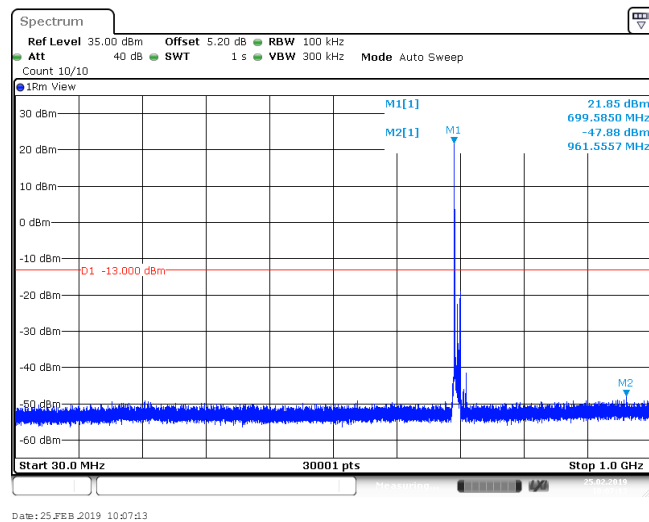
Band12_10MHz_QPSK_23130_1RB#0



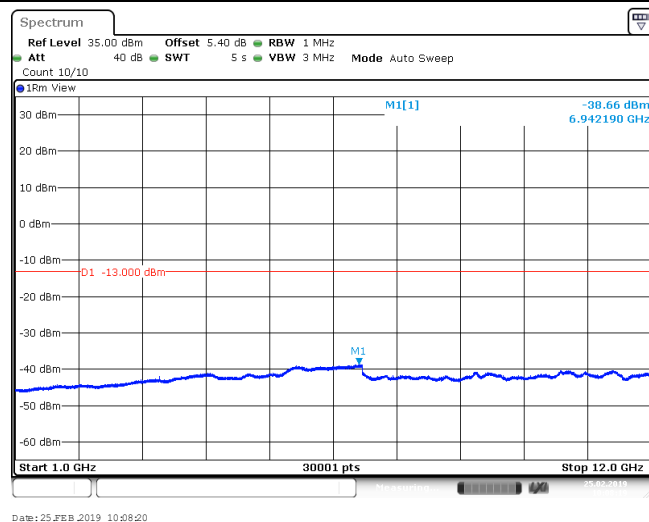
Band12_10MHz_QPSK_23130_1RB#0



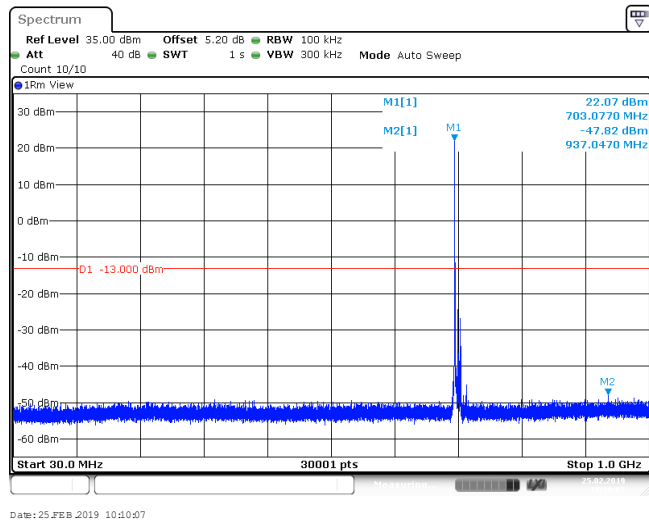
Band12_10MHz_16QAM_23060_1RB#0



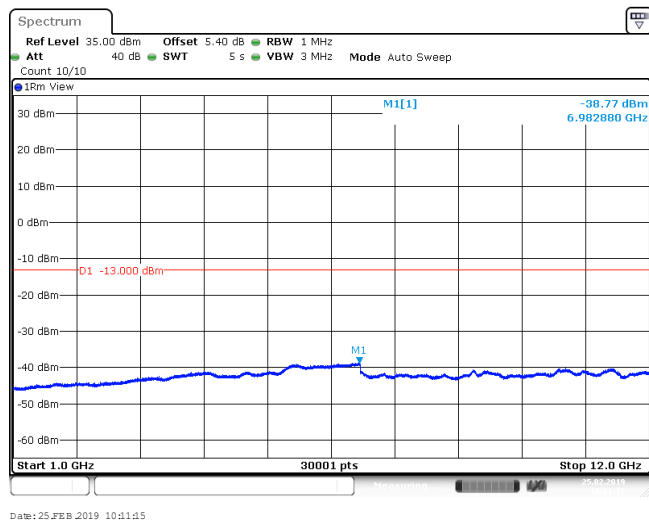
Band12_10MHz_16QAM_23060_1RB#0



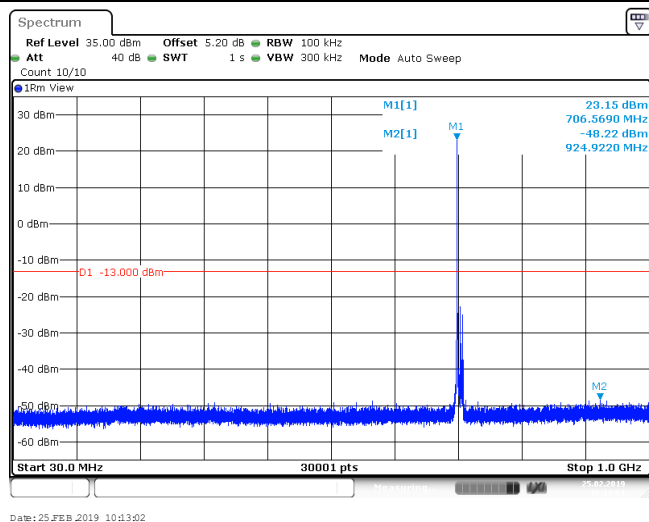
Band12_10MHz_16QAM_23095_1RB#0



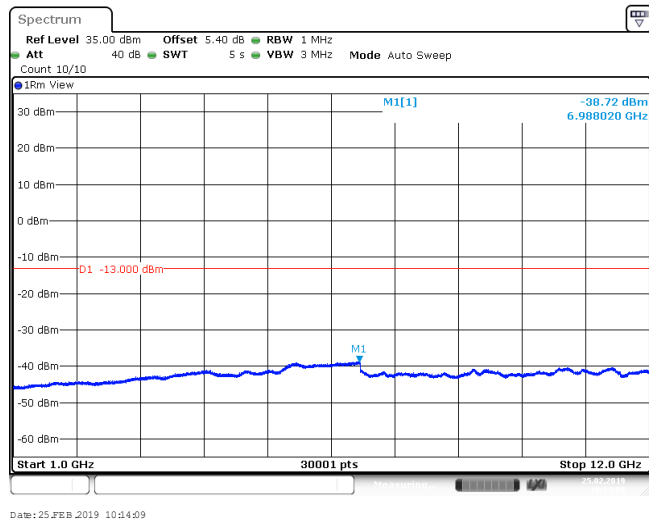
Band12_10MHz_16QAM_23095_1RB#0



Band12_10MHz_16QAM_23130_1RB#0



Band12_10MHz_16QAM_23130_1RB#0



9. Frequency Stability

9.1. Frequency Vs Voltage

Voltage										
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band12	10MHz	QPSK	23060	50RB#0	VL	NT	0.90	0.001278	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	VN	NT	0.70	0.000994	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	VH	NT	0.50	0.000710	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VL	NT	-1.50	-0.002120	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VN	NT	0.80	0.001131	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VH	NT	-0.40	-0.000565	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VL	NT	-1.40	-0.001969	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VN	NT	-2.00	-0.002813	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VH	NT	-0.90	-0.001266	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VL	NT	-0.80	-0.001136	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VN	NT	-0.70	-0.000994	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VH	NT	-1.10	-0.001563	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VL	NT	0.40	0.000565	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VN	NT	0.10	0.000141	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VH	NT	0.30	0.000424	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VL	NT	-1.80	-0.002532	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VN	NT	-1.40	-0.001969	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VH	NT	-2.80	-0.003938	±2.5	PASS

9.2. Frequency Vs Temperature

Temperature										
BAND	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band12	10MHz	QPSK	23060	50RB#0	NV	-30	0.70	0.000994	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	-20	0.30	0.000426	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	0	0.60	0.000852	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	10	0.40	0.000568	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	20	0.20	0.000284	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	30	-0.50	-0.000710	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	40	-0.30	-0.000426	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	50	-0.90	-0.001278	±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	0.30	0.000424	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	0	0.60	0.000848	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	10	-0.90	-0.001272	±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	-0.90	-0.001272	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	40	-0.70	-0.000989	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	50	-0.80	-0.001131	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-30	-1.60	-0.002250	±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	-2.60	-0.003657	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	10	-1.70	-0.002391	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	20	-1.10	-0.001547	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	30	-0.70	-0.000985	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	40	-2.10	-0.002954	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	50	-1.90	-0.002672	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	-30	1.10	0.001563	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	-20	1.20	0.001705	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	0	0.90	0.001278	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	10	0.70	0.000994	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	20	0.90	0.001278	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	30	0.10	0.000142	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	40	-0.40	-0.000568	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	50	-0.20	-0.000284	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	-30	-0.90	-0.001272	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	-20	-0.70	-0.000989	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	0	-0.70	-0.000989	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	10	-0.10	-0.000141	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	20	0.20	0.000283	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	30	0.20	0.000283	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	40	0.20	0.000283	±2.5	PASS

Band12	10MHz	16QAM	23095	50RB#0	NV	50	-0.30	-0.000424	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	-30	-2.00	-0.002813	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	-20	-1.30	-0.001828	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	0	-1.50	-0.002110	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	10	-2.00	-0.002813	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	20	-2.20	-0.003094	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	30	-2.20	-0.003094	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	40	-2.00	-0.002813	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	50	-1.90	-0.002672	±2.5	PASS

The End