

Appendix B.5

E-UTRA Band 12

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	2019/3/2	2020/3/1
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	2019/3/2	2020/3/1
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	2019/4/3	2020/4/3
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	W005-02	2019/1/13	2020/1/12
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	2018/11/2	2019/11/1
Signal Analyzer	Rohde & Schwarz	FSV	W005-02	2019/3/2	2020/3/1
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	2018/11/2	2019/11/1
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	HTC-1	W006-17	2018/11/2	2019/11/1
Temperature Chamber	GIANT FORCE	ICT-150-40-CP-AR	W027-03	2018/11/2	2019/11/1
Wideband Radio Communication Tester	Anritsu	MT8821C	6201462742	2019/3/2	2020/3/1
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	W005-02	2018/11/2	2019/11/1

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	Conducted Power(dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band12	1.4MHz	QPSK	23017	1RB#0	23.13	16.98	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	23.33	17.18	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	23.18	17.03	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#0	23.26	17.11	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#1	23.30	17.15	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#3	23.22	17.07	34.77	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	22.28	16.13	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	23.36	17.21	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#2	23.55	17.40	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#5	23.44	17.29	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#0	23.39	17.24	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#1	23.49	17.34	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#3	23.27	17.12	34.77	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	22.49	16.34	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	23.20	17.05	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	23.46	17.31	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	23.43	17.28	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#0	23.23	17.08	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#1	23.38	17.23	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#3	23.42	17.27	34.77	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	22.39	16.24	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	22.18	16.03	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	22.20	16.05	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	22.10	15.95	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#0	22.10	15.95	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#1	22.28	16.13	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#3	22.18	16.03	34.77	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	21.15	15.00	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	22.36	16.21	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#2	22.39	16.24	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#5	22.35	16.20	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#0	22.31	16.16	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#1	22.47	16.32	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#3	22.31	16.16	34.77	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	21.33	15.18	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	22.12	15.97	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	22.47	16.32	34.77	PASS

Band12	1.4MHz	16QAM	23173	1RB#5	22.42	16.27	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#0	22.27	16.12	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#1	22.37	16.22	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#3	22.38	16.23	34.77	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	21.25	15.10	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#0	23.19	17.04	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#8	23.40	17.25	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#14	23.03	16.88	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#0	22.38	16.23	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#4	22.25	16.10	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#7	22.12	15.97	34.77	PASS
Band12	3MHz	QPSK	23025	15RB#0	22.26	16.11	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#0	23.29	17.14	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#8	23.67	17.52	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#14	23.34	17.19	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#0	22.45	16.30	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#4	22.58	16.43	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#7	22.47	16.32	34.77	PASS
Band12	3MHz	QPSK	23095	15RB#0	22.36	16.21	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#0	23.27	17.12	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#8	23.20	17.05	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#14	23.28	17.13	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#0	22.42	16.27	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#4	22.23	16.08	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#7	22.26	16.11	34.77	PASS
Band12	3MHz	QPSK	23165	15RB#0	22.42	16.27	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#0	22.00	15.85	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#8	22.06	15.91	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#14	21.85	15.70	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#0	21.20	15.05	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#4	21.12	14.97	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#7	21.02	14.87	34.77	PASS
Band12	3MHz	16QAM	23025	15RB#0	21.17	15.02	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#0	22.41	16.26	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#8	22.54	16.39	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#14	22.31	16.16	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#0	21.31	15.16	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#4	21.36	15.21	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#7	21.32	15.17	34.77	PASS
Band12	3MHz	16QAM	23095	15RB#0	21.31	15.16	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#0	22.23	16.08	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#8	21.93	15.78	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#14	22.40	16.25	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#0	21.28	15.13	34.77	PASS

Band12	3MHz	16QAM	23165	8RB#4	21.13	14.98	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#7	21.12	14.97	34.77	PASS
Band12	3MHz	16QAM	23165	15RB#0	21.23	15.08	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#0	23.14	16.99	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#12	23.35	17.20	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#24	23.14	16.99	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#0	22.42	16.27	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#6	22.16	16.01	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#13	21.93	15.78	34.77	PASS
Band12	5MHz	QPSK	23035	25RB#0	22.27	16.12	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#0	23.07	16.92	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#12	24.05	17.90	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#24	23.45	17.30	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#0	22.30	16.15	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#6	22.65	16.50	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#13	22.46	16.31	34.77	PASS
Band12	5MHz	QPSK	23095	25RB#0	22.31	16.16	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#0	23.22	17.07	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#12	23.33	17.18	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#24	23.32	17.17	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#0	22.41	16.26	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#6	22.29	16.14	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#13	22.10	15.95	34.77	PASS
Band12	5MHz	QPSK	23155	25RB#0	22.31	16.16	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#0	22.02	15.87	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#12	22.26	16.11	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#24	21.96	15.81	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#0	21.26	15.11	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#6	21.16	15.01	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#13	20.93	14.78	34.77	PASS
Band12	5MHz	16QAM	23035	25RB#0	20.89	14.74	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#0	21.68	15.53	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#12	22.73	16.58	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#24	22.32	16.17	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#0	21.20	15.05	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#6	21.51	15.36	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#13	21.23	15.08	34.77	PASS
Band12	5MHz	16QAM	23095	25RB#0	21.22	15.07	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#0	21.98	15.83	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#12	22.24	16.09	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#24	21.97	15.82	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#0	21.31	15.16	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#6	21.20	15.05	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#13	21.03	14.88	34.77	PASS

Band12	5MHz	16QAM	23155	25RB#0	21.03	14.88	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#0	23.23	17.08	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#24	23.47	17.32	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#49	22.98	16.83	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#0	22.39	16.24	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#12	22.28	16.13	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#25	22.14	15.99	34.77	PASS
Band12	10MHz	QPSK	23060	50RB#0	22.37	16.22	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#0	22.99	16.84	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#24	23.99	17.84	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#49	22.97	16.82	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#0	22.36	16.21	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#12	22.59	16.44	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#25	22.32	16.17	34.77	PASS
Band12	10MHz	QPSK	23095	50RB#0	22.26	16.11	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#0	23.27	17.12	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#24	23.98	17.83	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#49	22.63	16.48	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#0	22.50	16.35	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#12	22.42	16.27	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#25	22.08	15.93	34.77	PASS
Band12	10MHz	QPSK	23130	50RB#0	22.36	16.21	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#0	21.98	15.83	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#24	22.07	15.92	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#49	21.91	15.76	34.77	PASS
Band12	10MHz	16QAM	23060	27RB#0	20.95	14.80	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#0	21.68	15.53	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#24	22.80	16.65	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#49	21.92	15.77	34.77	PASS
Band12	10MHz	16QAM	23095	27RB#0	20.93	14.78	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#0	21.77	15.62	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#24	22.81	16.66	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#49	21.72	15.57	34.77	PASS
Band12	10MHz	16QAM	23130	27RB#0	20.89	14.74	34.77	PASS

Remark:

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

ERP [dBm] = Conducted Power [dBm] + Gain [dBd]

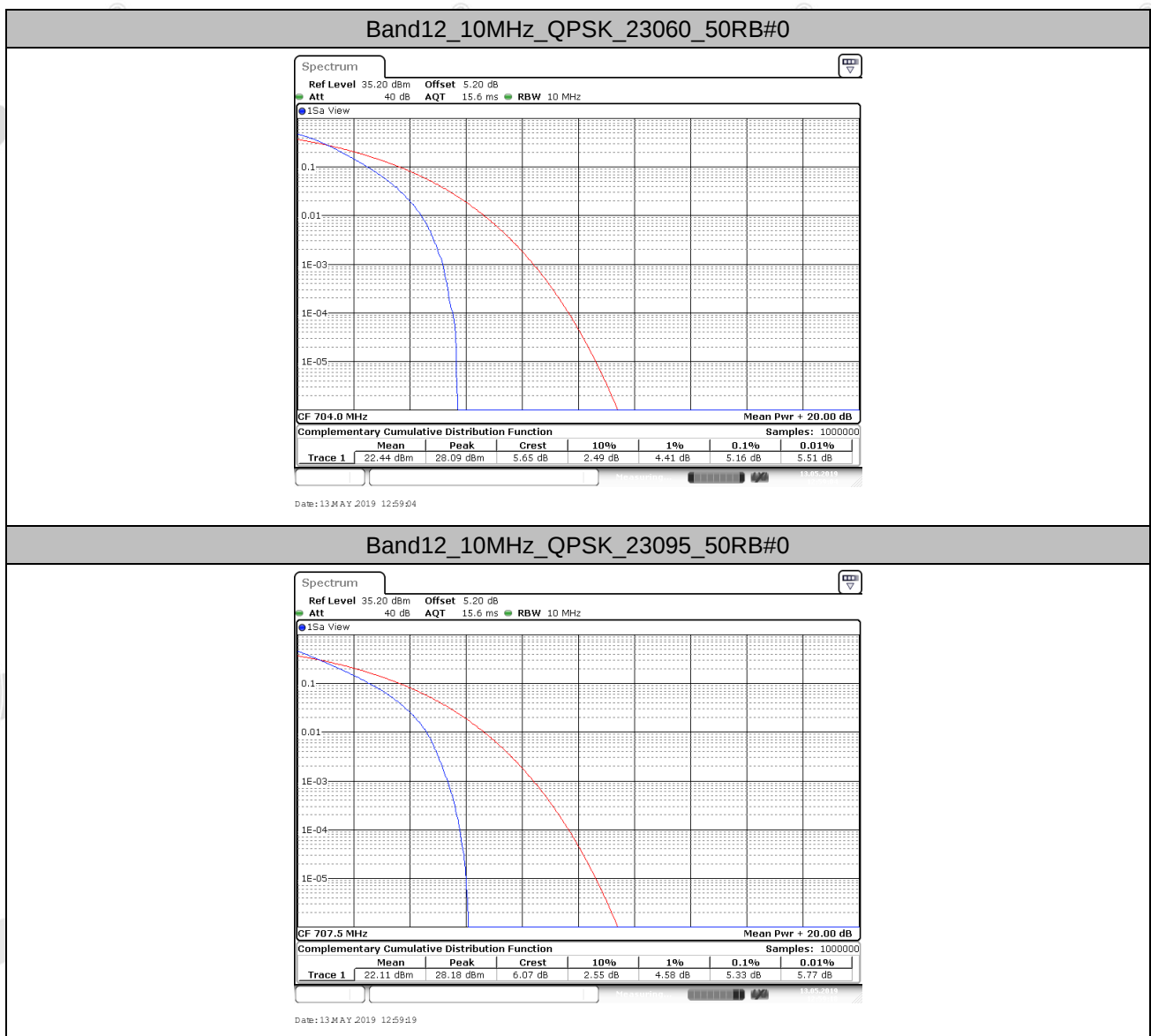
EIRP [dBm] = Conducted Power [dBm] + Gain [dBi]

4. Peak-to-Average Ratio(CCDF)

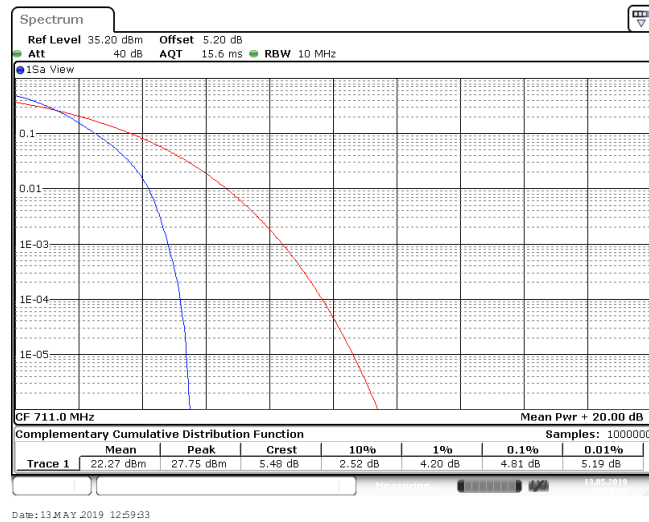
4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band12	10MHz	QPSK	23060	50RB#0	5.16	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	5.33	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	4.81	13	PASS
Band12	10MHz	16QAM	23060	27RB#0	5.68	13	PASS
Band12	10MHz	16QAM	23095	27RB#0	5.68	13	PASS
Band12	10MHz	16QAM	23130	27RB#0	5.68	13	PASS

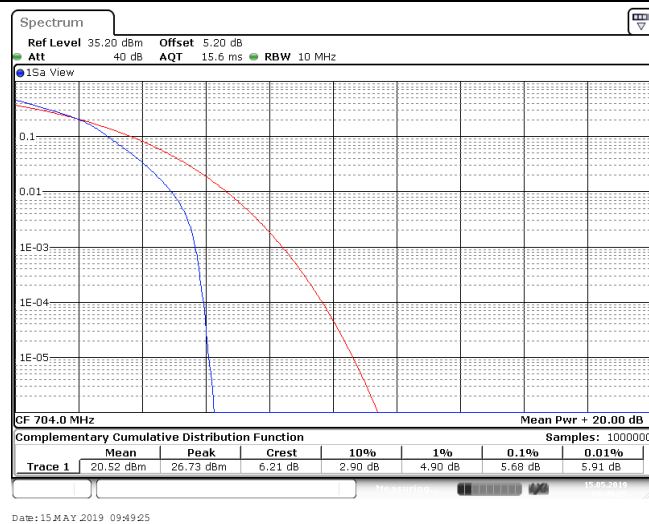
4.2. Test Plots



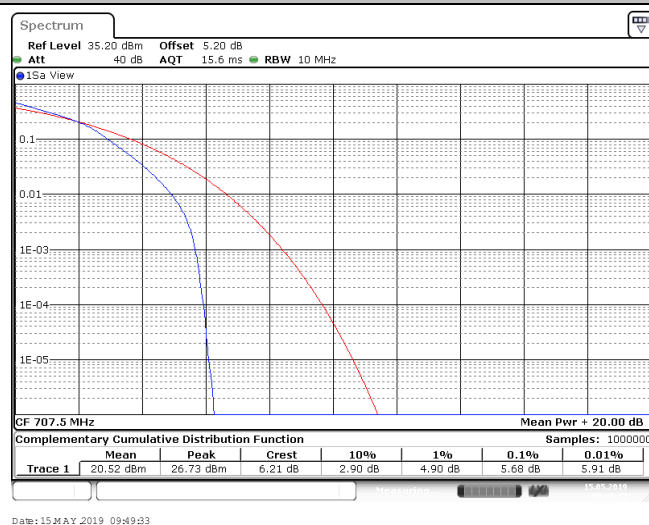
Band12_10MHz_QPSK_23130_50RB#0



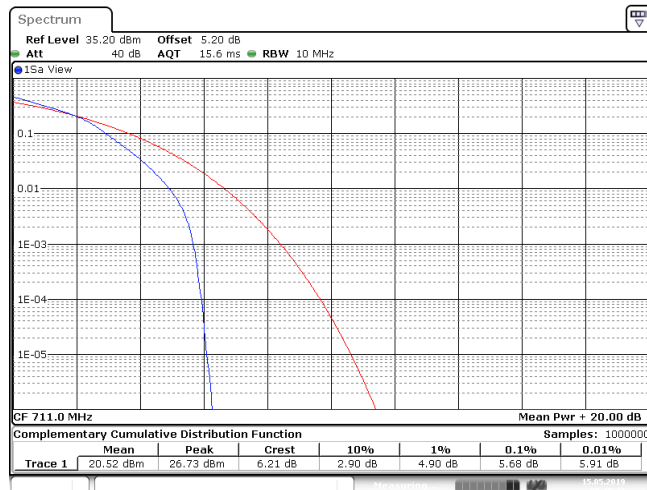
Band12_10MHz_16QAM_23060_27RB#0



Band12_10MHz_16QAM_23095_27RB#0



Band12_10MHz_16QAM_23130_27RB#0



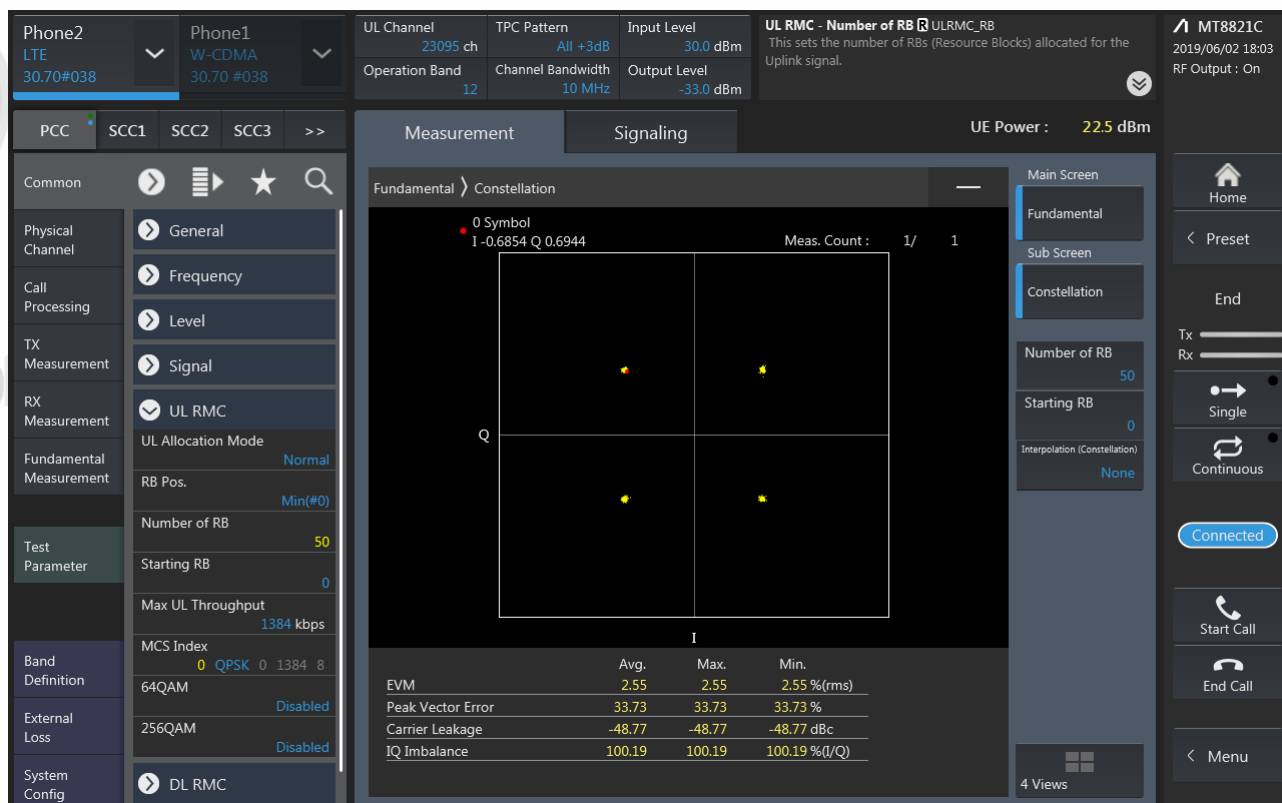
Date: 15 MAY 2019 09:49:41

5. Modulation Characteristics

5.1. Test BAND = LTE Band 12

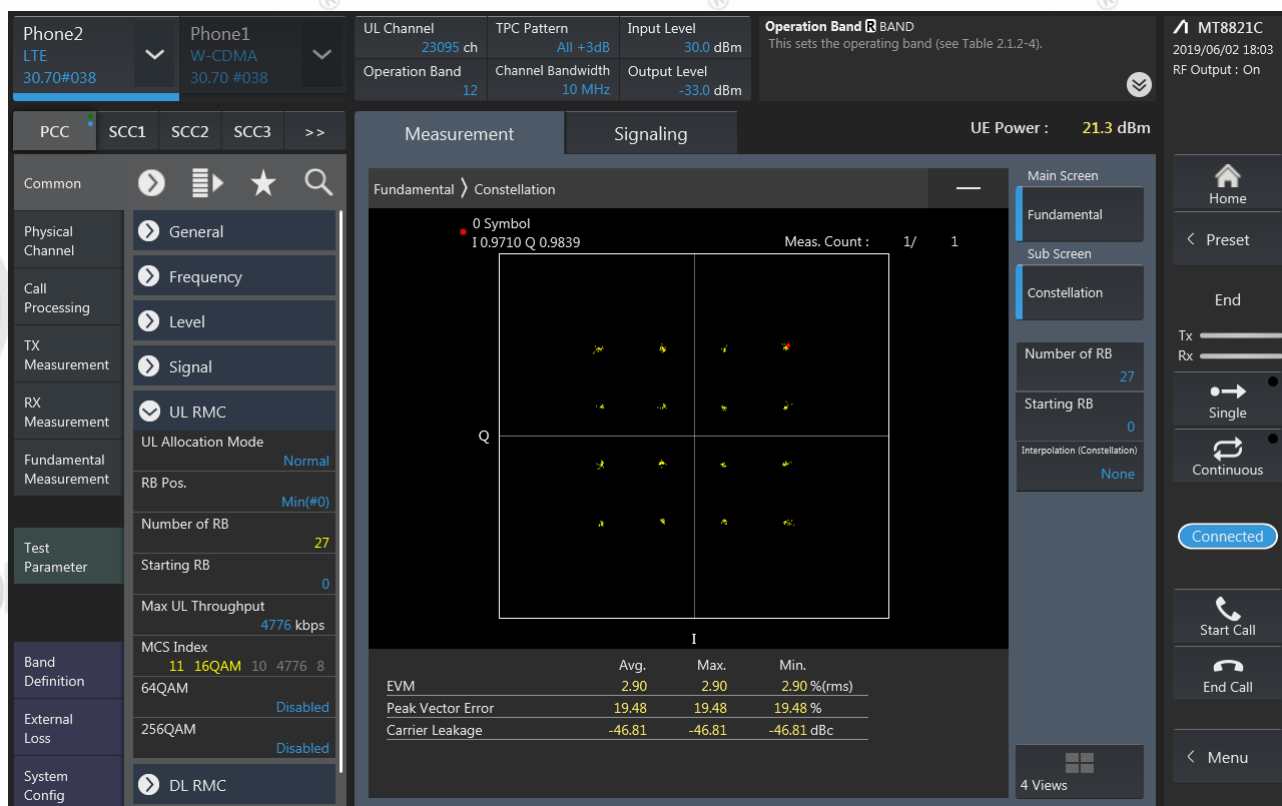
5.2. Test Mode = LTE /TM1 10MHz

5.2.1. Test Channel = MCH



5.3. Test Mode = LTE /TM2 10MHz

5.3.1. Test Channel = MCH



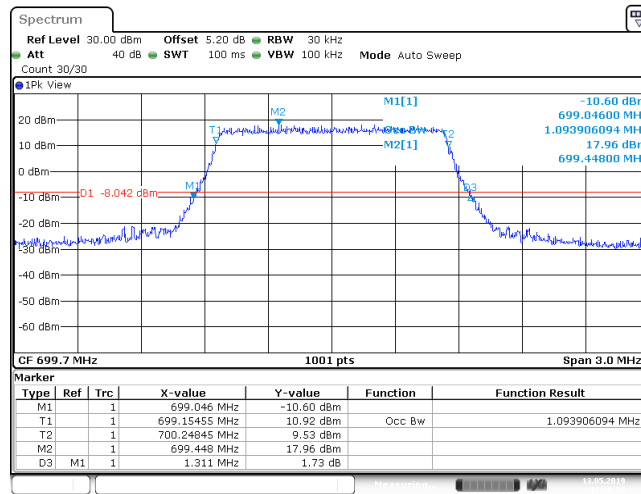
6. 26dB Bandwidth and Occupied Bandwidth

6.1. Test Result

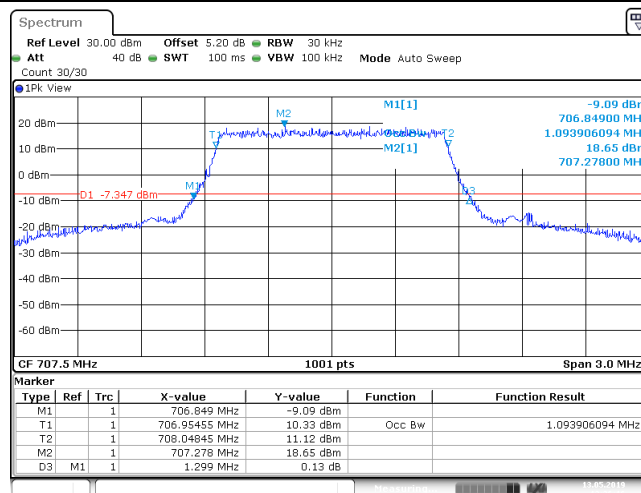
BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	1.094	1.311	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.094	1.299	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.094	1.287	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.088	1.242	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.091	1.233	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.085	1.239	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.697	2.970	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.697	2.988	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.697	2.982	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.685	2.988	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.685	2.988	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.685	2.982	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.466	4.910	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.476	4.900	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.476	4.890	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.486	4.920	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.496	4.920	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.476	4.920	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.931	9.620	PASS
Band12	10MHz	QPSK	23095	50RB#0	8.931	9.720	PASS
Band12	10MHz	QPSK	23130	50RB#0	8.931	9.680	PASS
Band12	10MHz	16QAM	23060	27RB#0	4.855	5.640	PASS
Band12	10MHz	16QAM	23095	27RB#0	4.855	5.660	PASS
Band12	10MHz	16QAM	23130	27RB#0	4.855	5.660	PASS

6.2. Test Plots

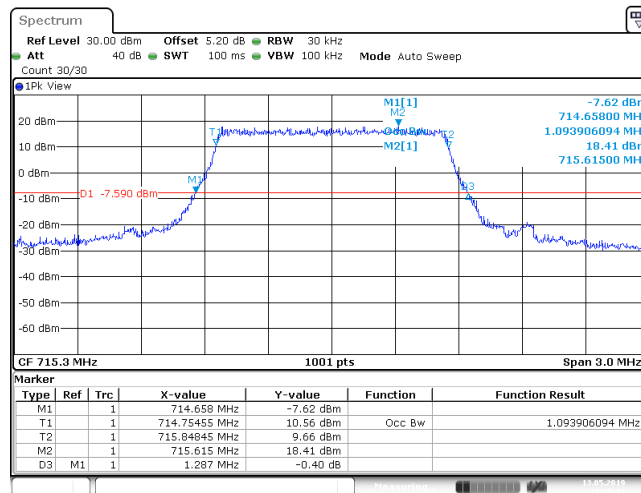
Band12_1.4MHz_QPSK_23017_6RB#0



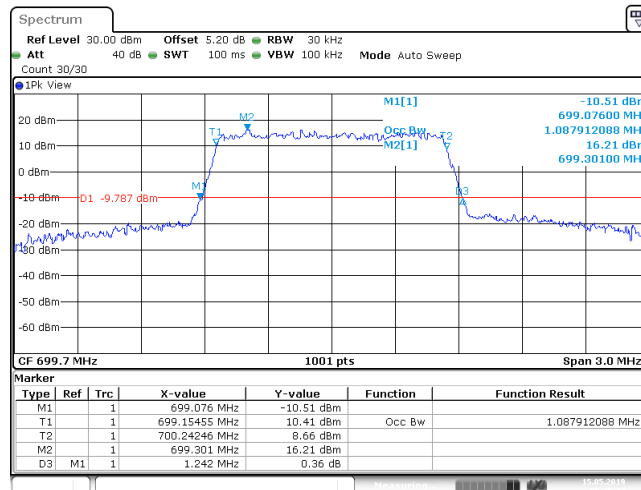
Band12_1.4MHz_QPSK_23095_6RB#0



Band12_1.4MHz_QPSK_23173_6RB#0

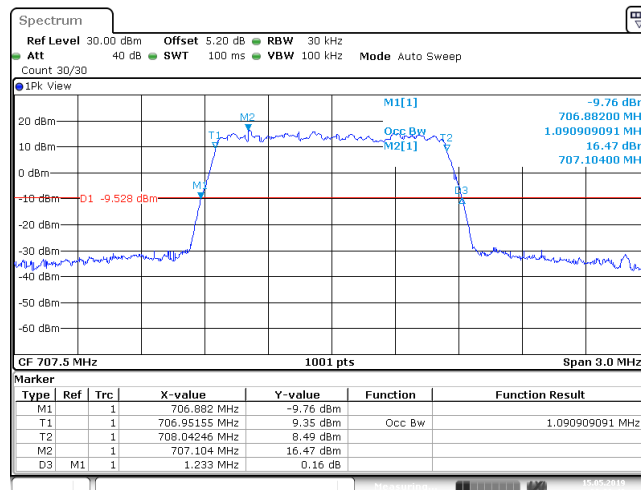


Band12_1.4MHz_16QAM_23017_6RB#0



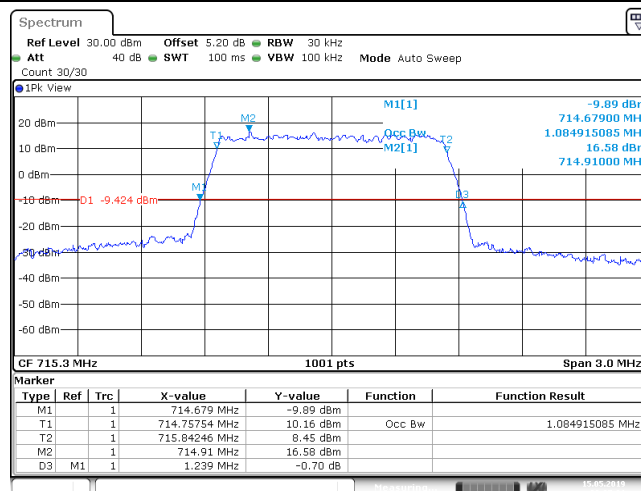
Date: 15 MAY 2019 09:36:35

Band12_1.4MHz_16QAM_23095_6RB#0



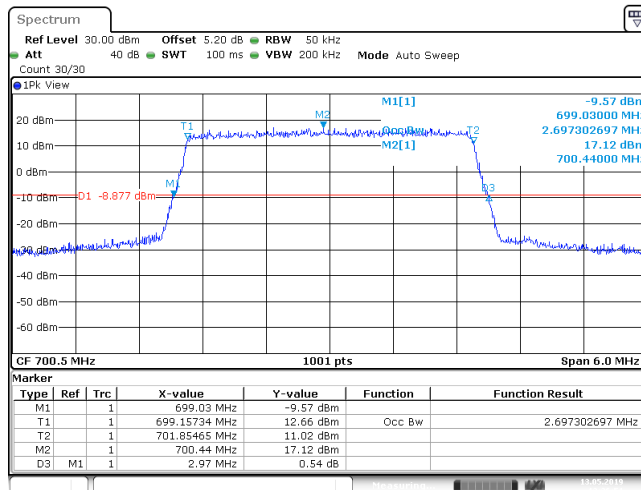
Date: 15 MAY 2019 09:36:48

Band12_1.4MHz_16QAM_23173_6RB#0



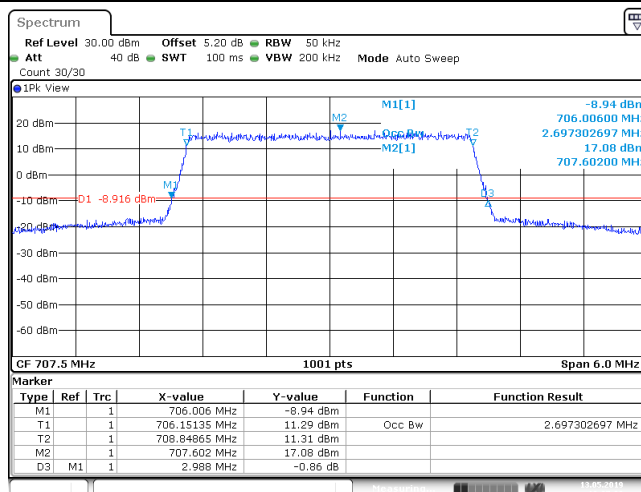
Date: 15 MAY 2019 09:37:01

Band12_3MHz_QPSK_23025_15RB#0



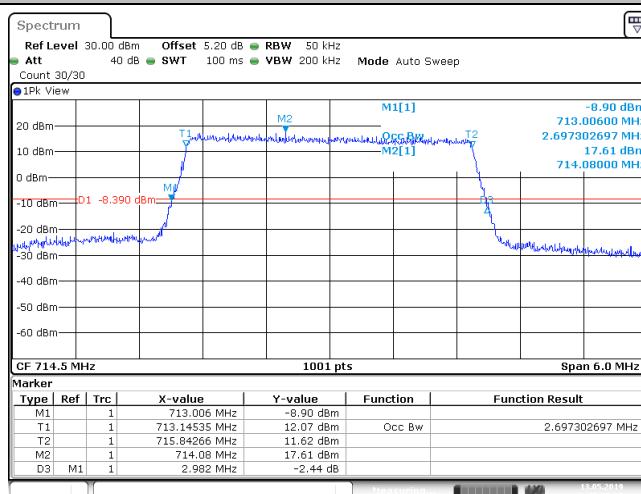
Date: 13 MAY 2019 12:26:52

Band12_3MHz_QPSK_23095_15RB#0



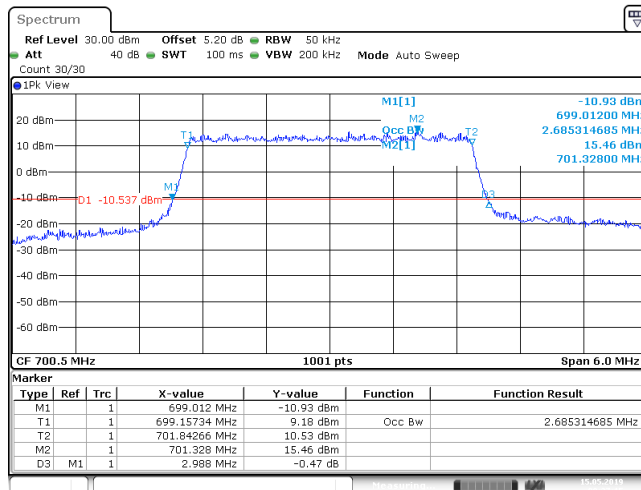
Date: 13 MAY 2019 12:27:08

Band12_3MHz_QPSK_23165_15RB#0



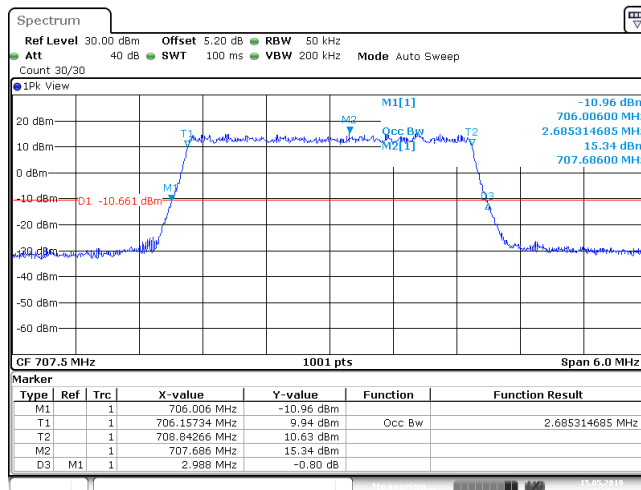
Date: 13 MAY 2019 12:27:24

Band12_3MHz_16QAM_23025_15RB#0



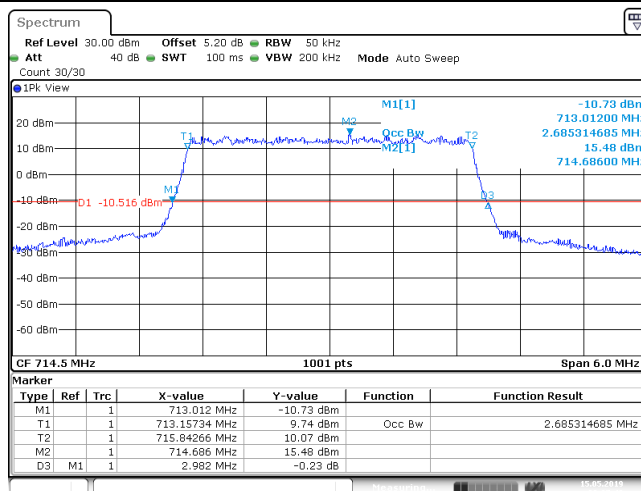
Date: 15 MAY 2019 09:37:15

Band12_3MHz_16QAM_23095_15RB#0



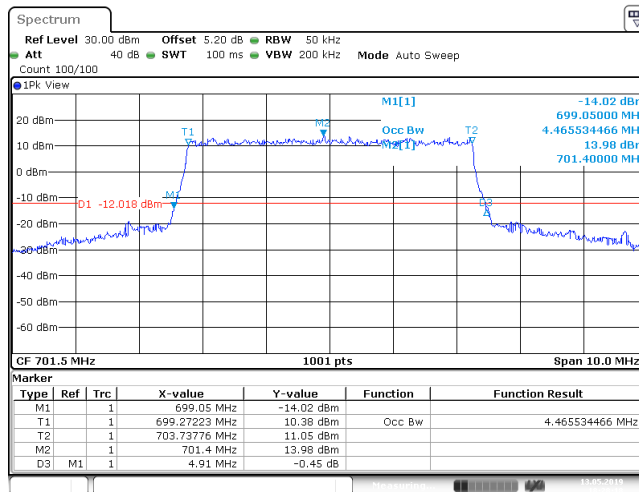
Date: 15 MAY 2019 09:37:28

Band12_3MHz_16QAM_23165_15RB#0



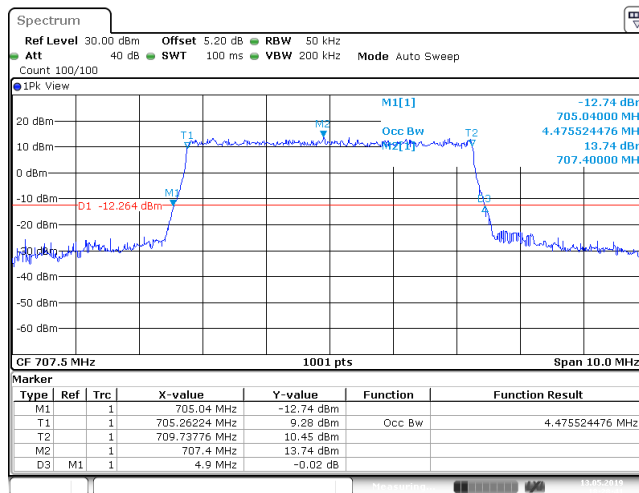
Date: 15 MAY 2019 09:37:41

Band12_5MHz_QPSK_23035_25RB#0



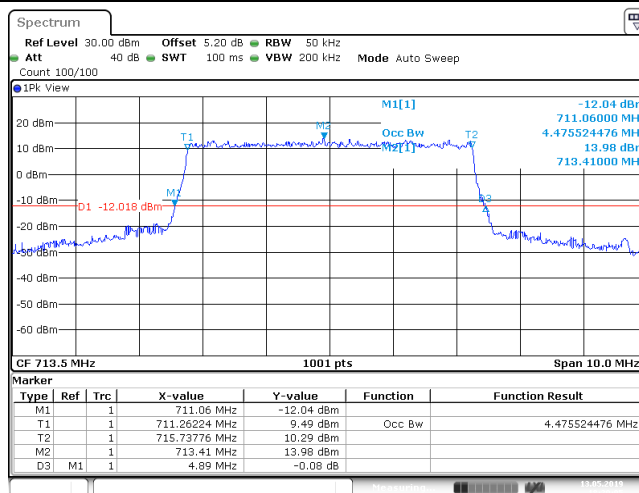
Date: 13 MAY 2019 18:28:19

Band12_5MHz_QPSK_23095_25RB#0



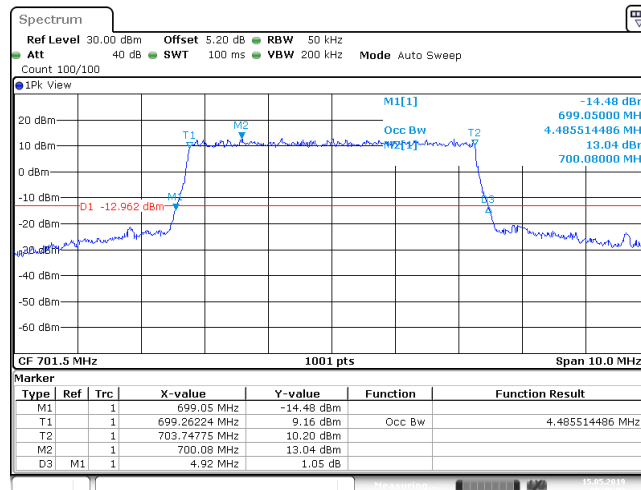
Date: 13 MAY 2019 18:28:42

Band12_5MHz_QPSK_23155_25RB#0



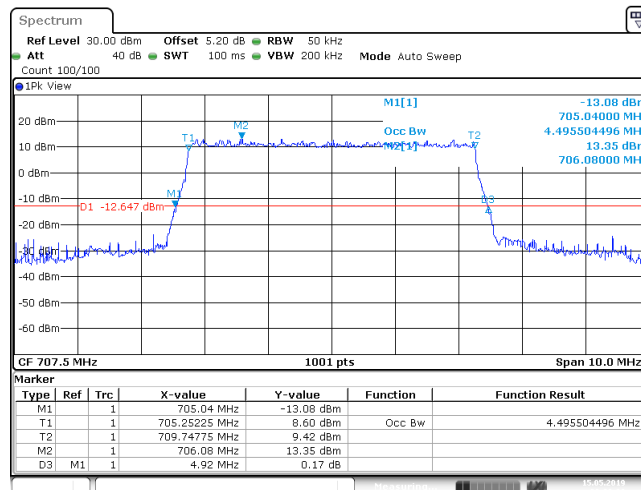
Date: 13 MAY 2019 18:29:05

Band12_5MHz_16QAM_23035_25RB#0



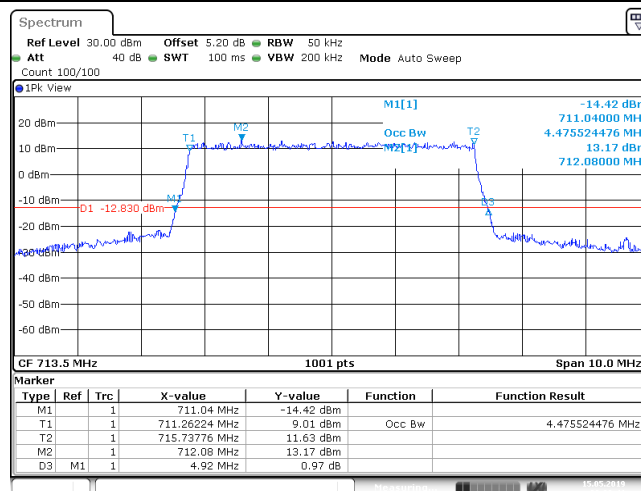
Date: 15 MAY 2019 09:38:22

Band12_5MHz_16QAM_23095_25RB#0



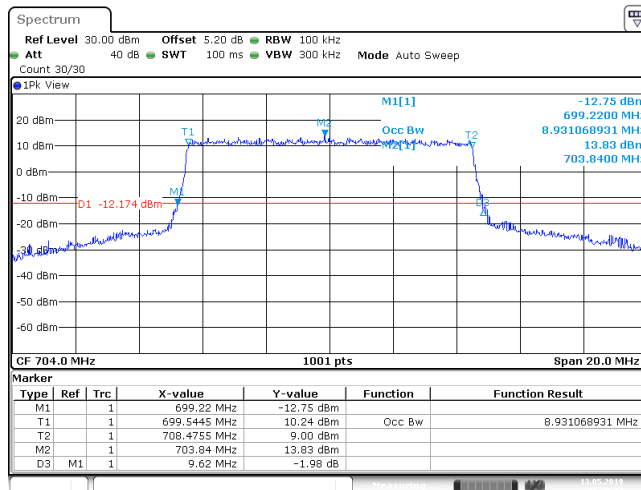
Date: 15 MAY 2019 09:38:22

Band12_5MHz_16QAM_23155_25RB#0



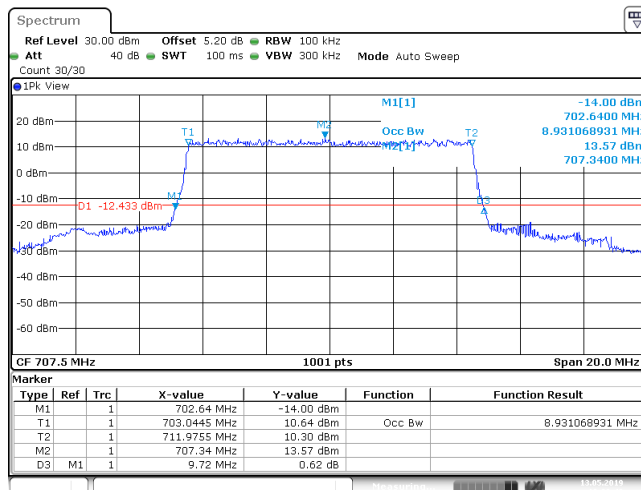
Date: 15 MAY 2019 09:38:42

Band12_10MHz_QPSK_23060_50RB#0



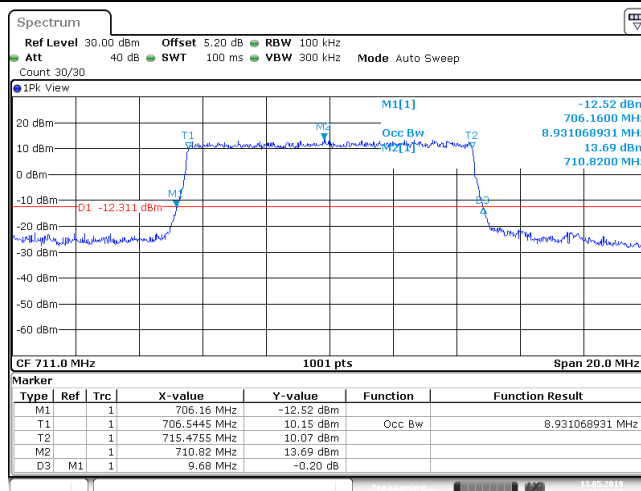
Date: 13 MAY 2019 18:29:24

Band12_10MHz_QPSK_23095_50RB#0



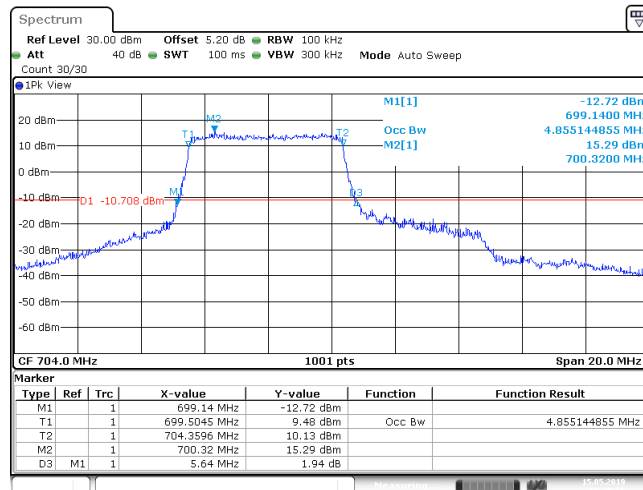
Date: 13 MAY 2019 18:29:40

Band12_10MHz_QPSK_23130_50RB#0



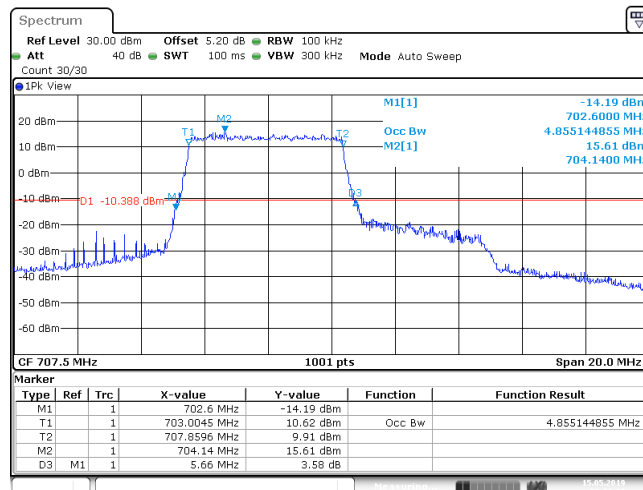
Date: 13 MAY 2019 18:29:56

Band12_10MHz_16QAM_23060_27RB#0



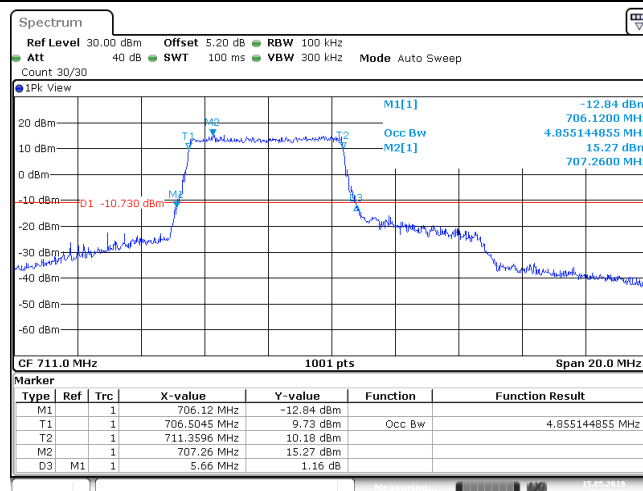
Date: 15 MAY 2019 09:38:56

Band12_10MHz_16QAM_23095_27RB#0



Date: 15 MAY 2019 09:39:09

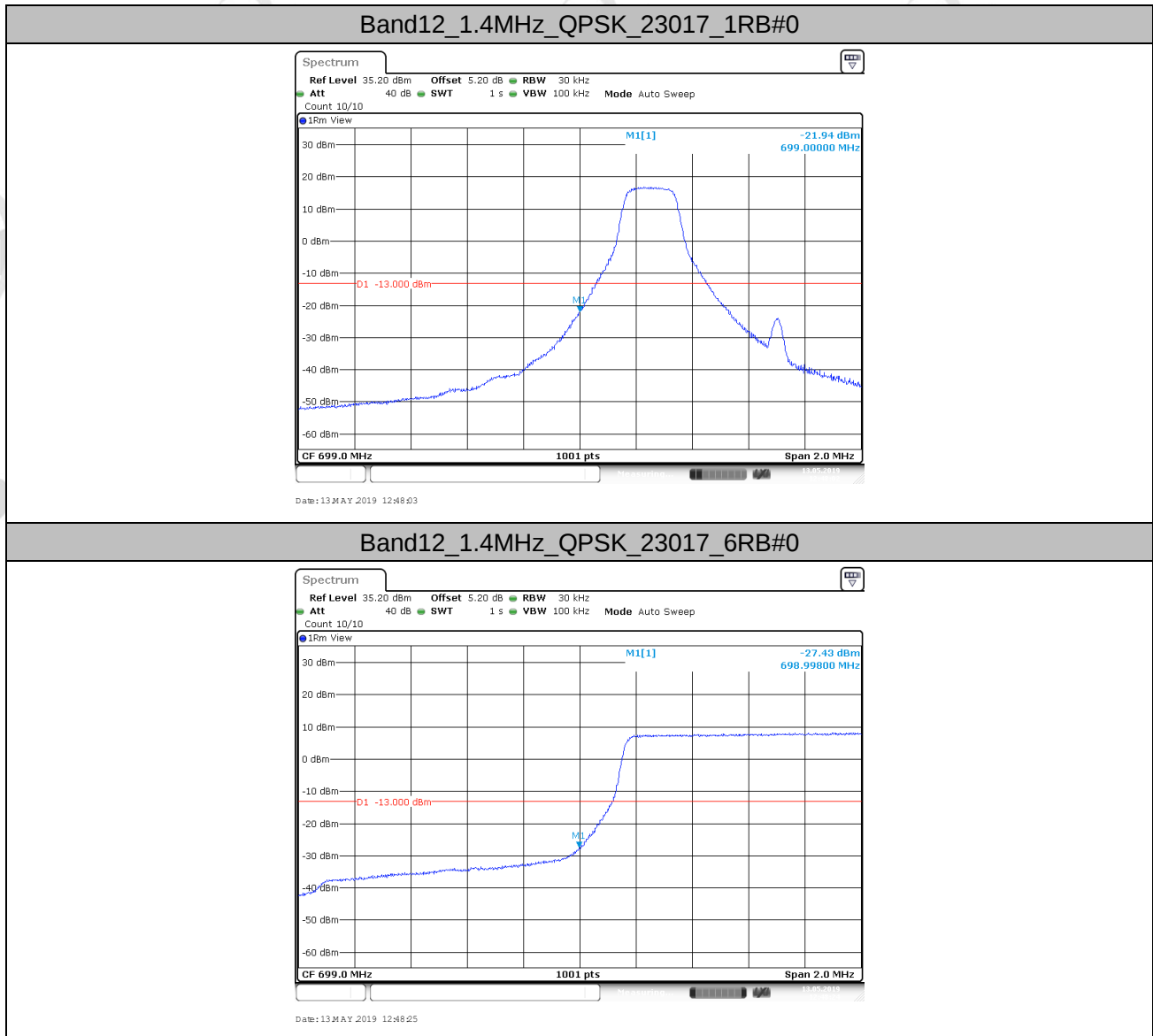
Band12_10MHz_16QAM_23130_27RB#0



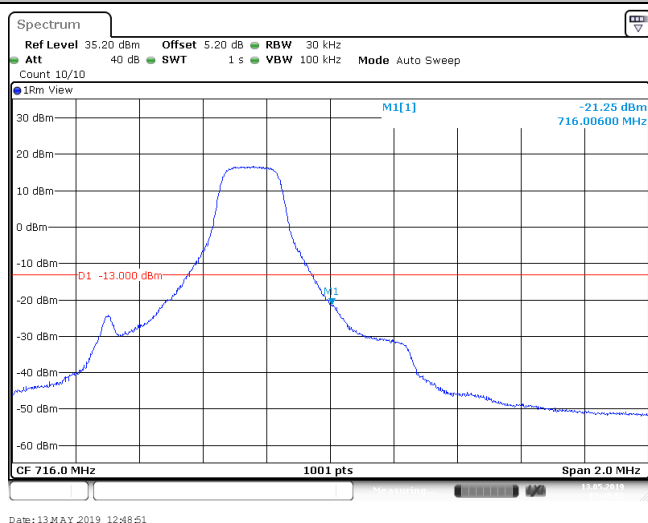
Date: 15 MAY 2019 09:39:22

7. Band Edge Compliance

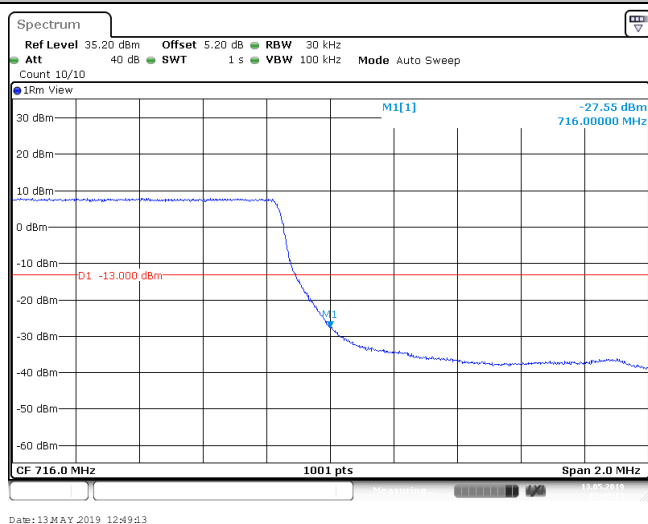
7.1. Test Plots



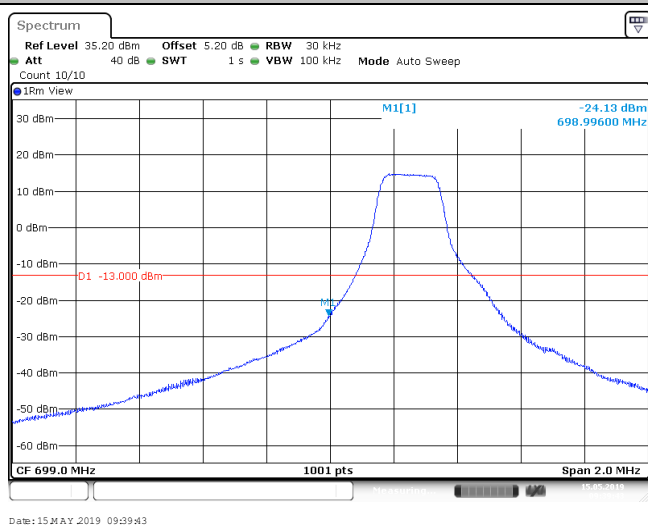
Band12_1.4MHz_QPSK_23173_1RB#5



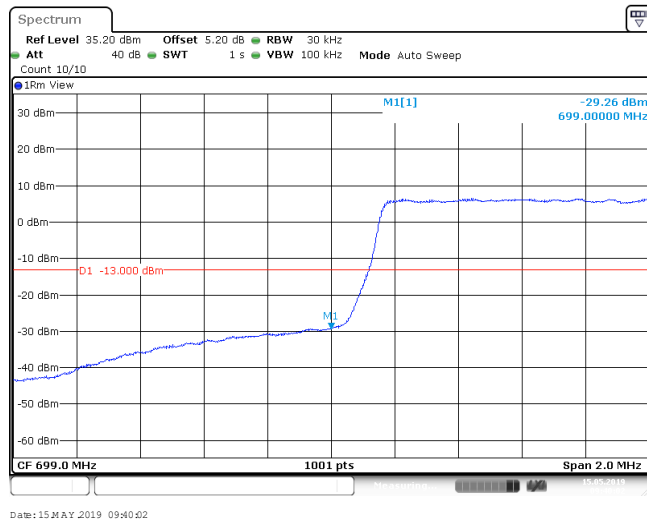
Band12_1.4MHz_QPSK_23173_6RB#0



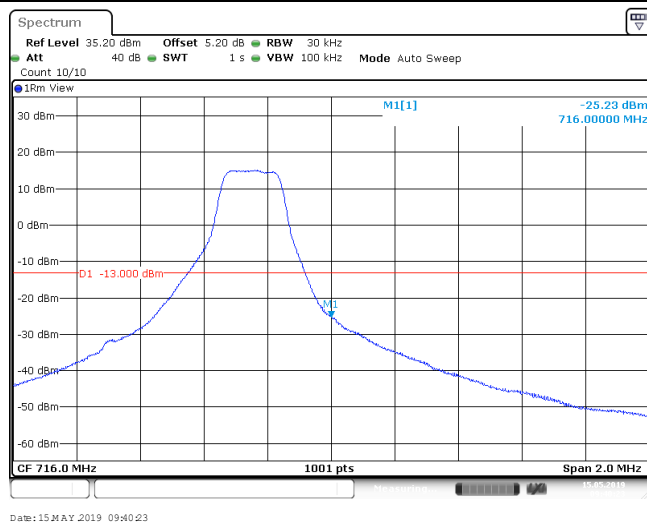
Band12_1.4MHz_16QAM_23017_1RB#0



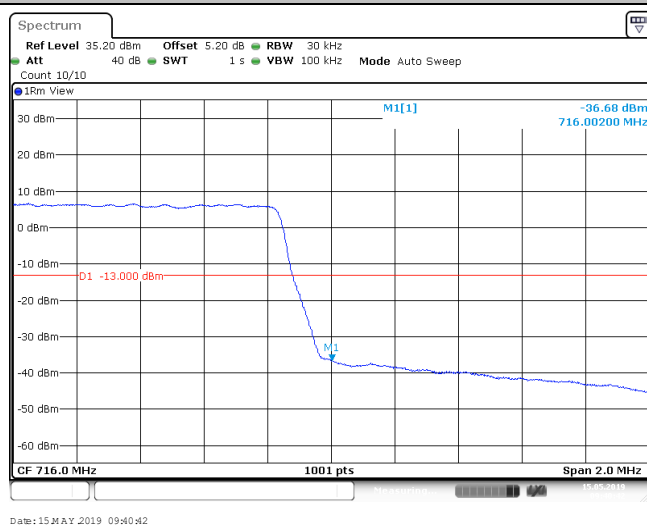
Band12_1.4MHz_16QAM_23017_6RB#0



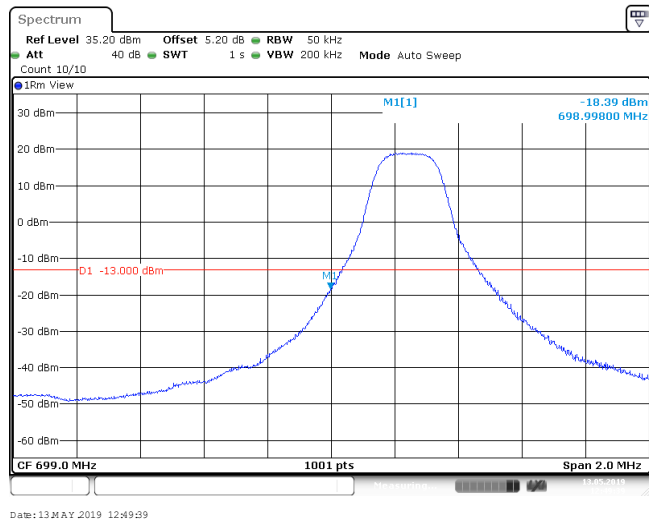
Band12_1.4MHz_16QAM_23173_1RB#5



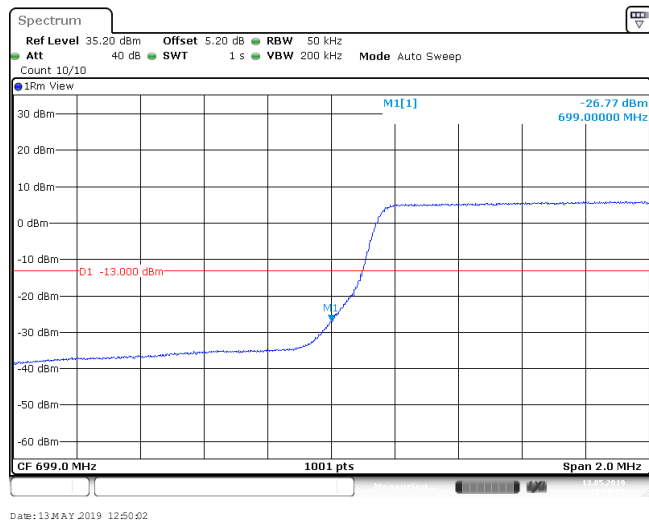
Band12_1.4MHz_16QAM_23173_6RB#0



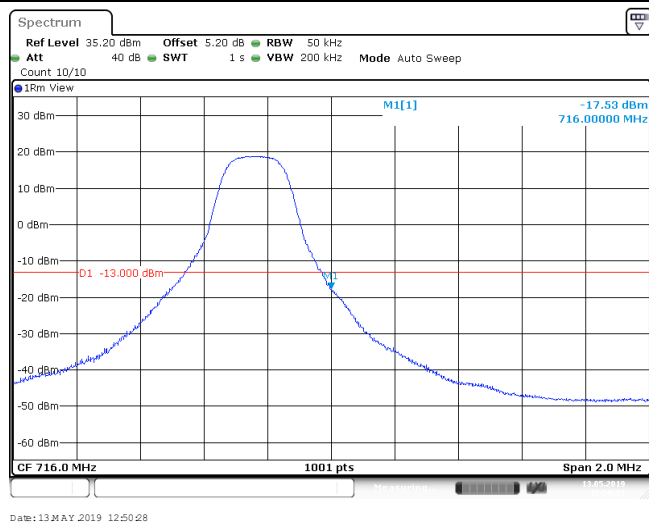
Band12_3MHz_QPSK_23025_1RB#0



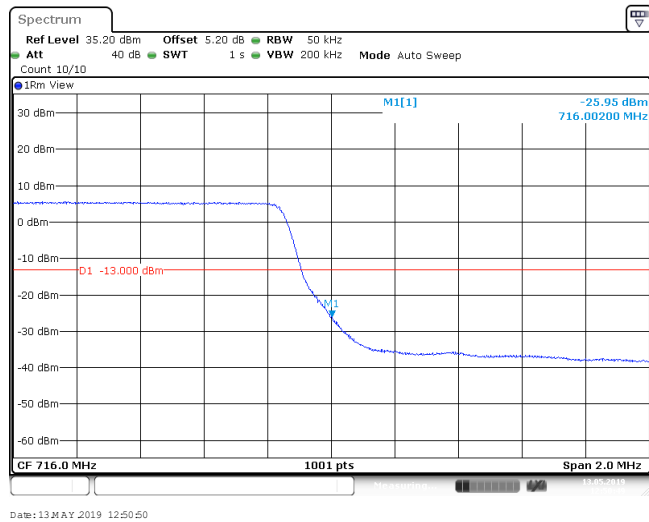
Band12_3MHz_QPSK_23025_15RB#0



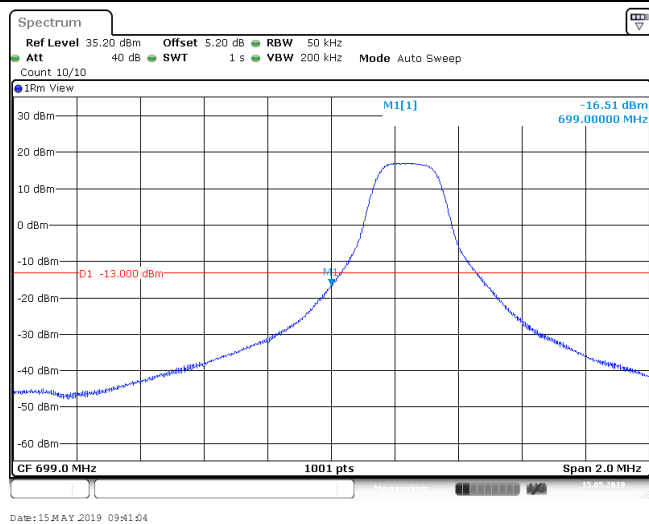
Band12_3MHz_QPSK_23165_1RB#14



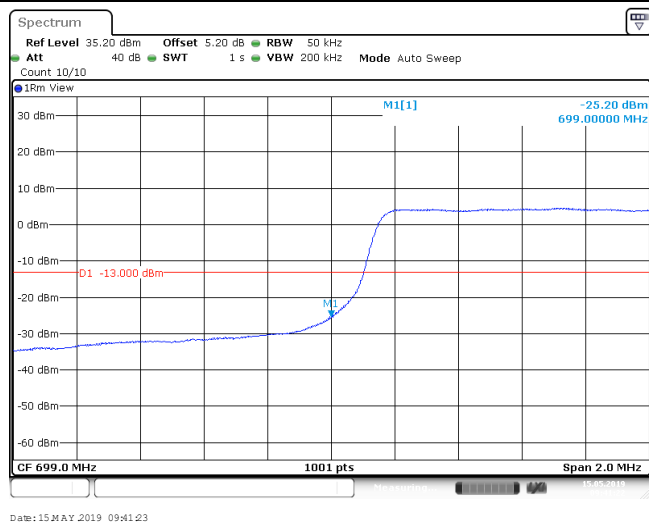
Band12_3MHz_QPSK_23165_15RB#0



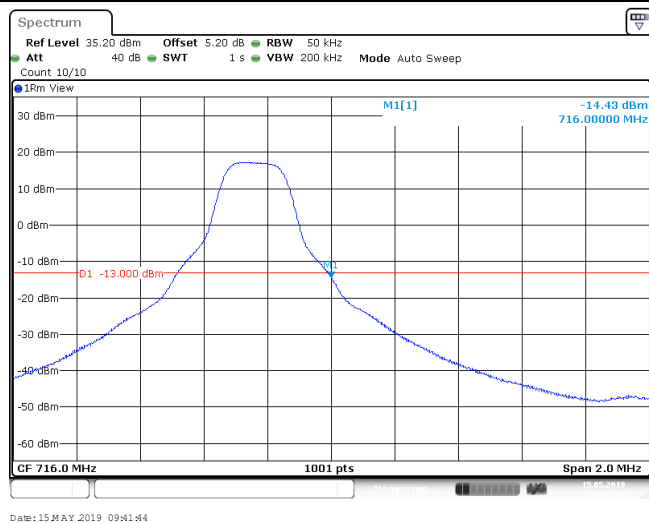
Band12_3MHz_16QAM_23025_1RB#0



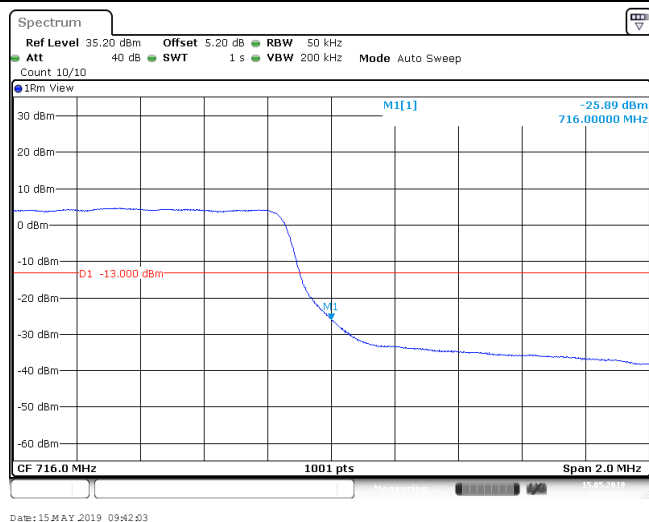
Band12_3MHz_16QAM_23025_15RB#0



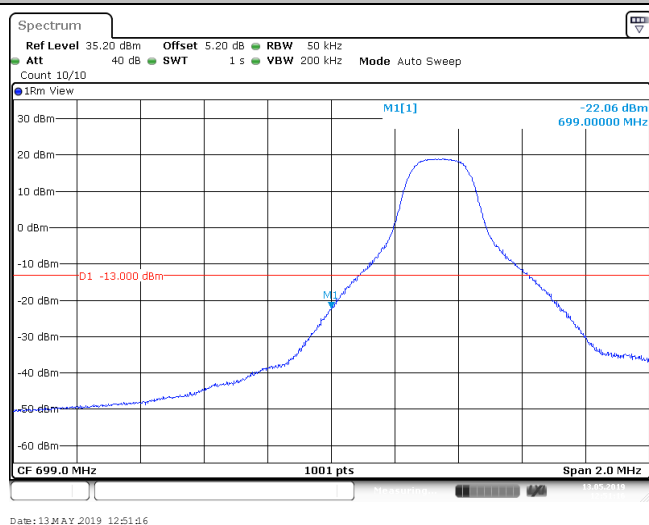
Band12_3MHz_16QAM_23165_1RB#14



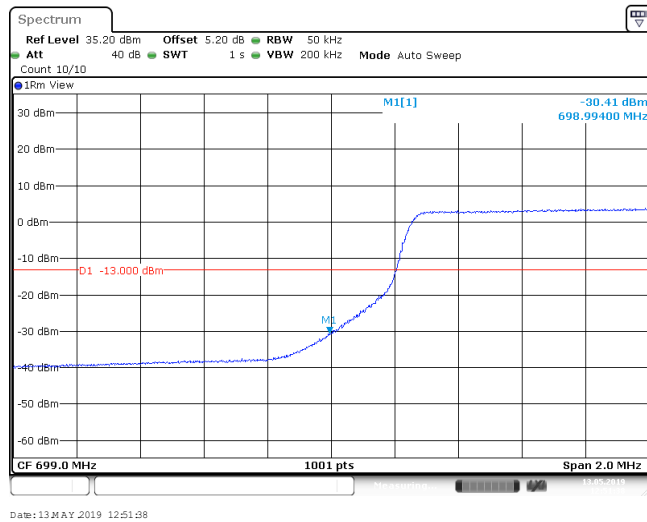
Band12_3MHz_16QAM_23165_15RB#0



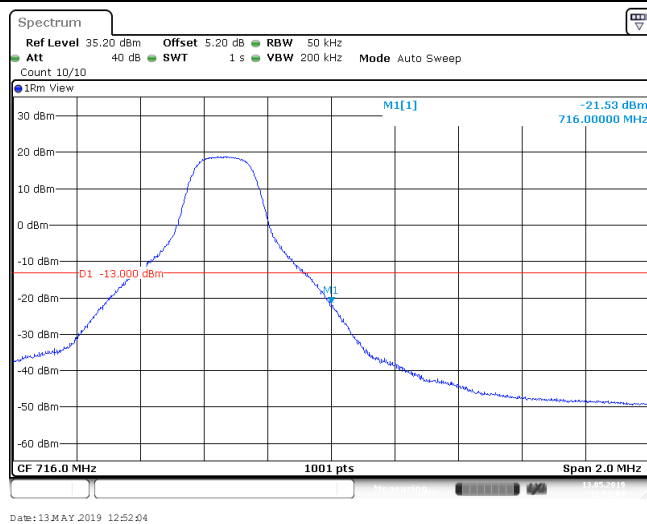
Band12_5MHz_QPSK_23035_1RB#0



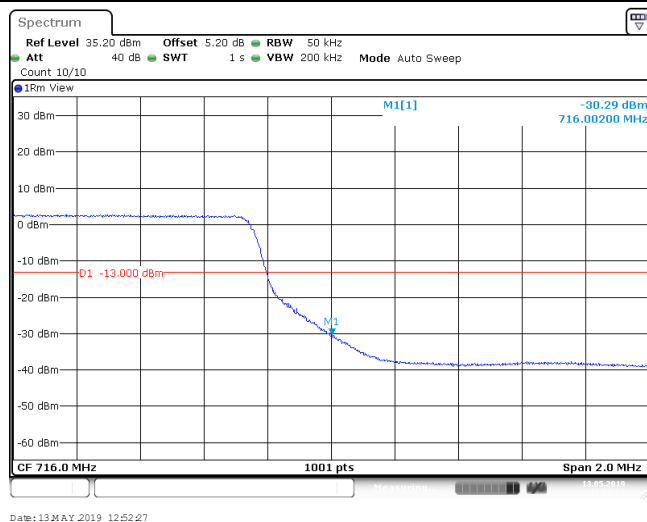
Band12_5MHz_QPSK_23035_25RB#0



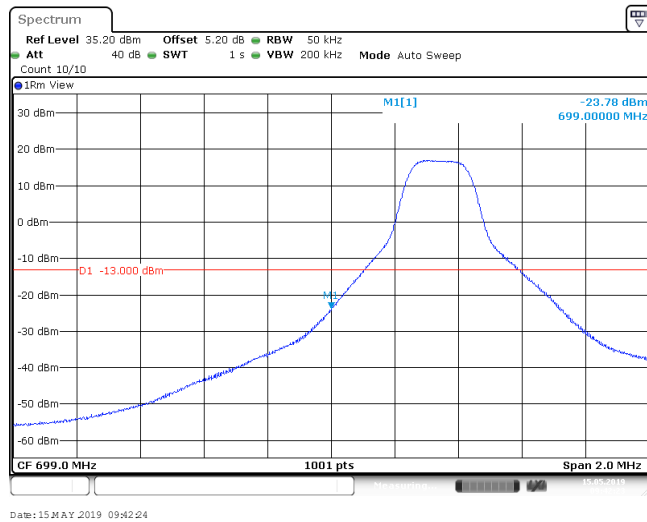
Band12_5MHz_QPSK_23155_1RB#24



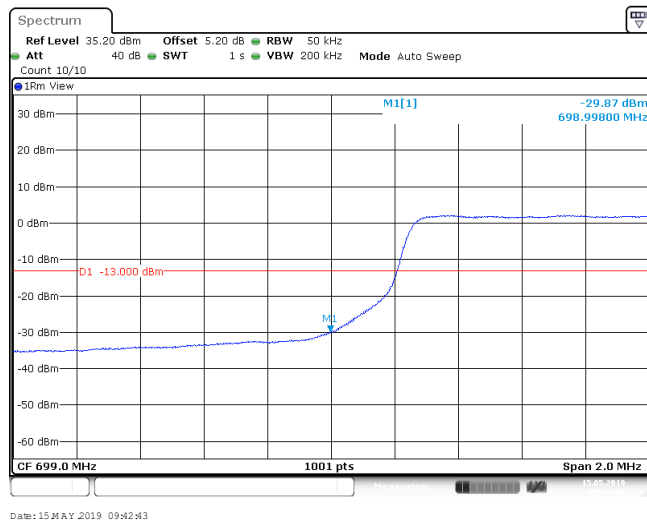
Band12_5MHz_QPSK_23155_25RB#0



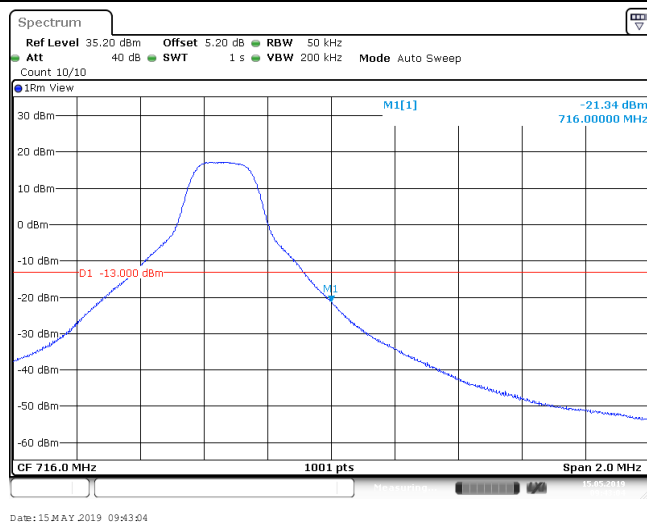
Band12_5MHz_16QAM_23035_1RB#0



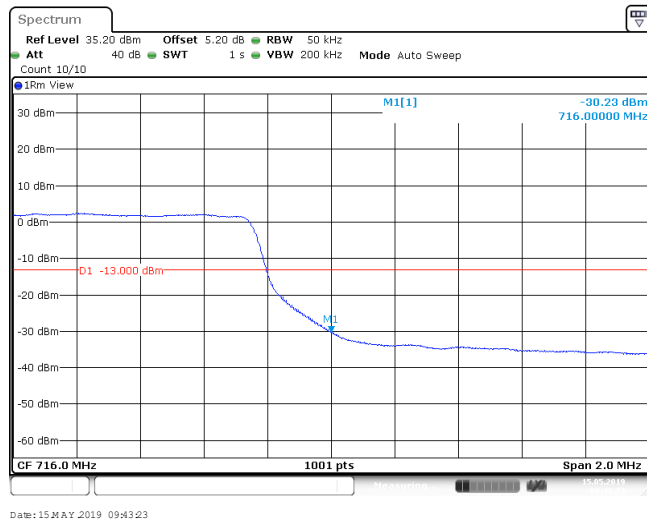
Band12_5MHz_16QAM_23035_25RB#0



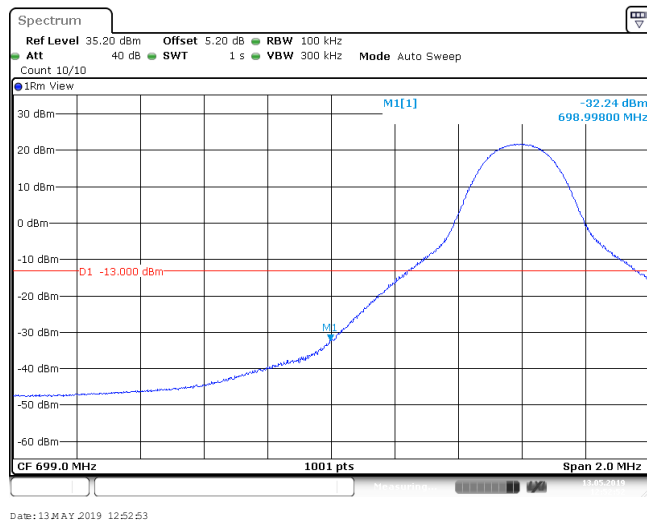
Band12_5MHz_16QAM_23155_1RB#24



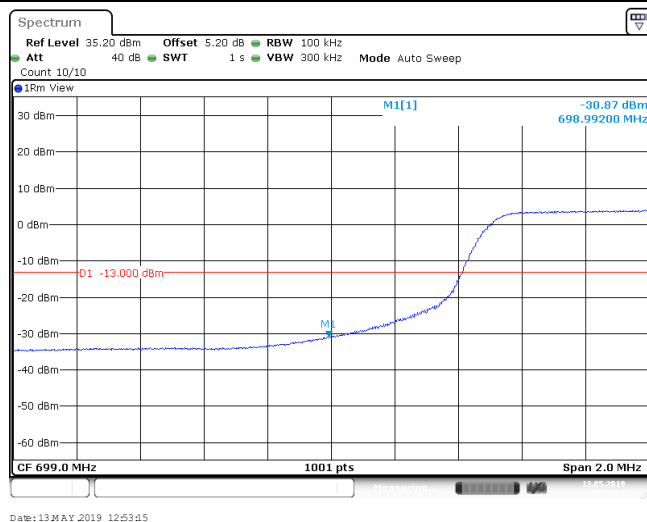
Band12_5MHz_16QAM_23155_25RB#0



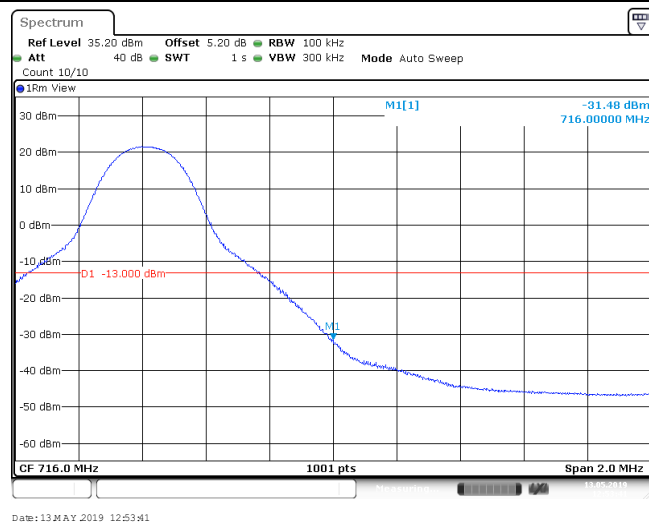
Band12_10MHz_QPSK_23060_1RB#0



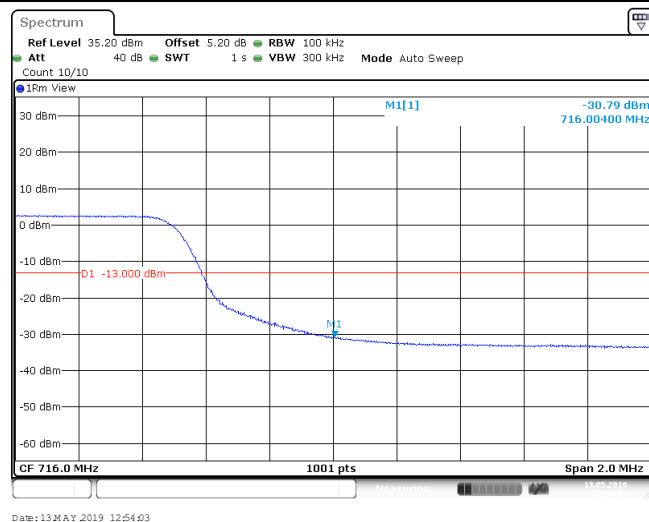
Band12_10MHz_QPSK_23060_50RB#0



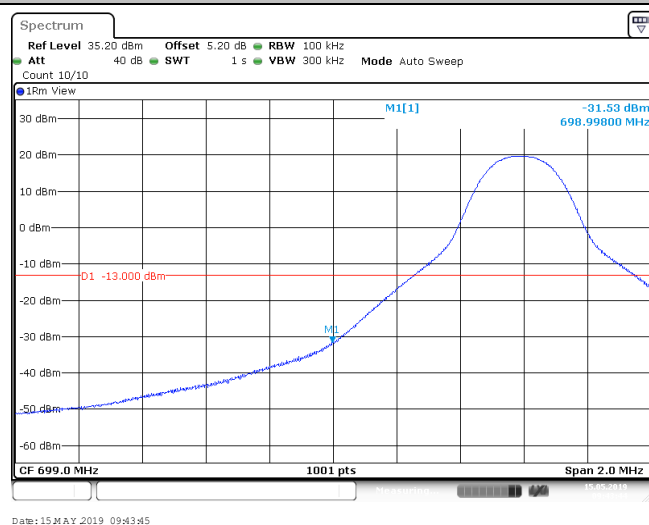
Band12_10MHz_QPSK_23130_1RB#49



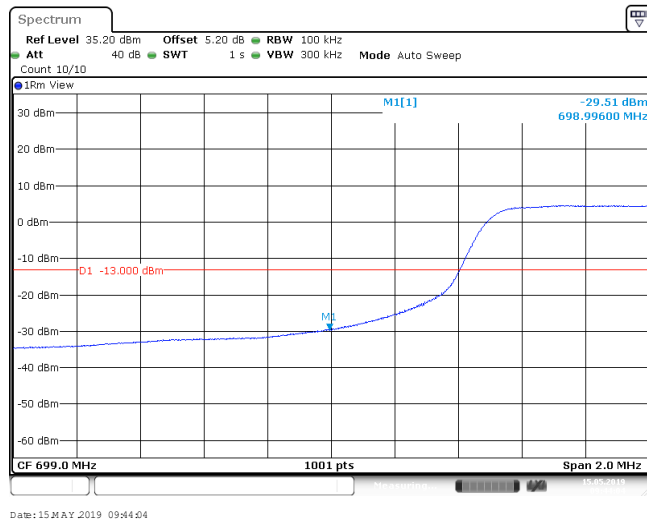
Band12_10MHz_QPSK_23130_50RB#0



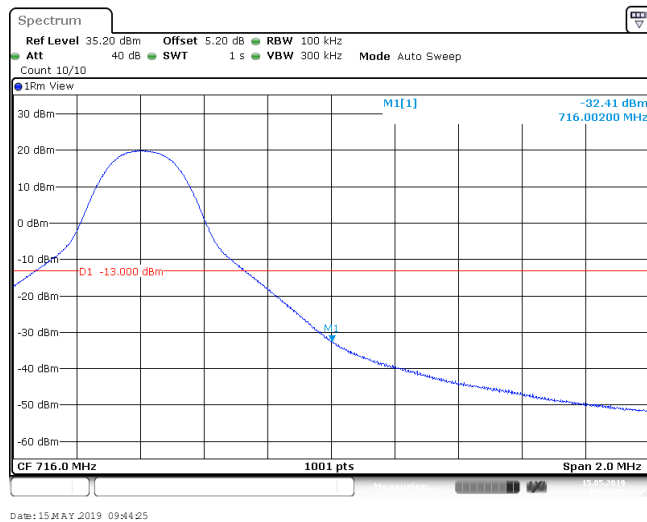
Band12_10MHz_16QAM_23060_1RB#0



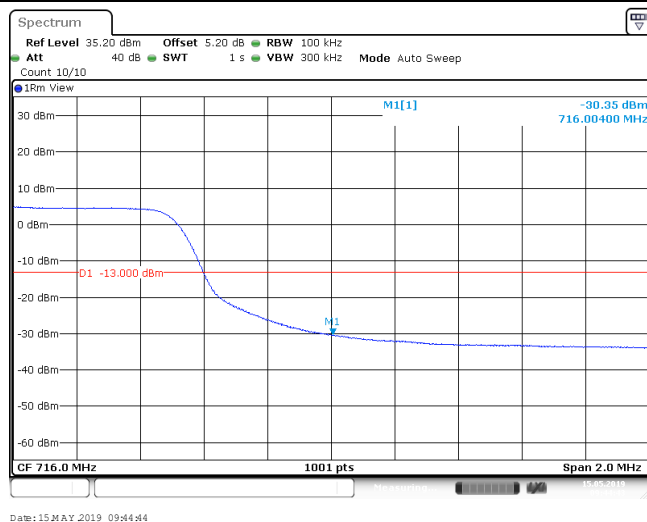
Band12_10MHz_16QAM_23060_27RB#0



Band12_10MHz_16QAM_23130_1RB#49



Band12_10MHz_16QAM_23130_27RB#23

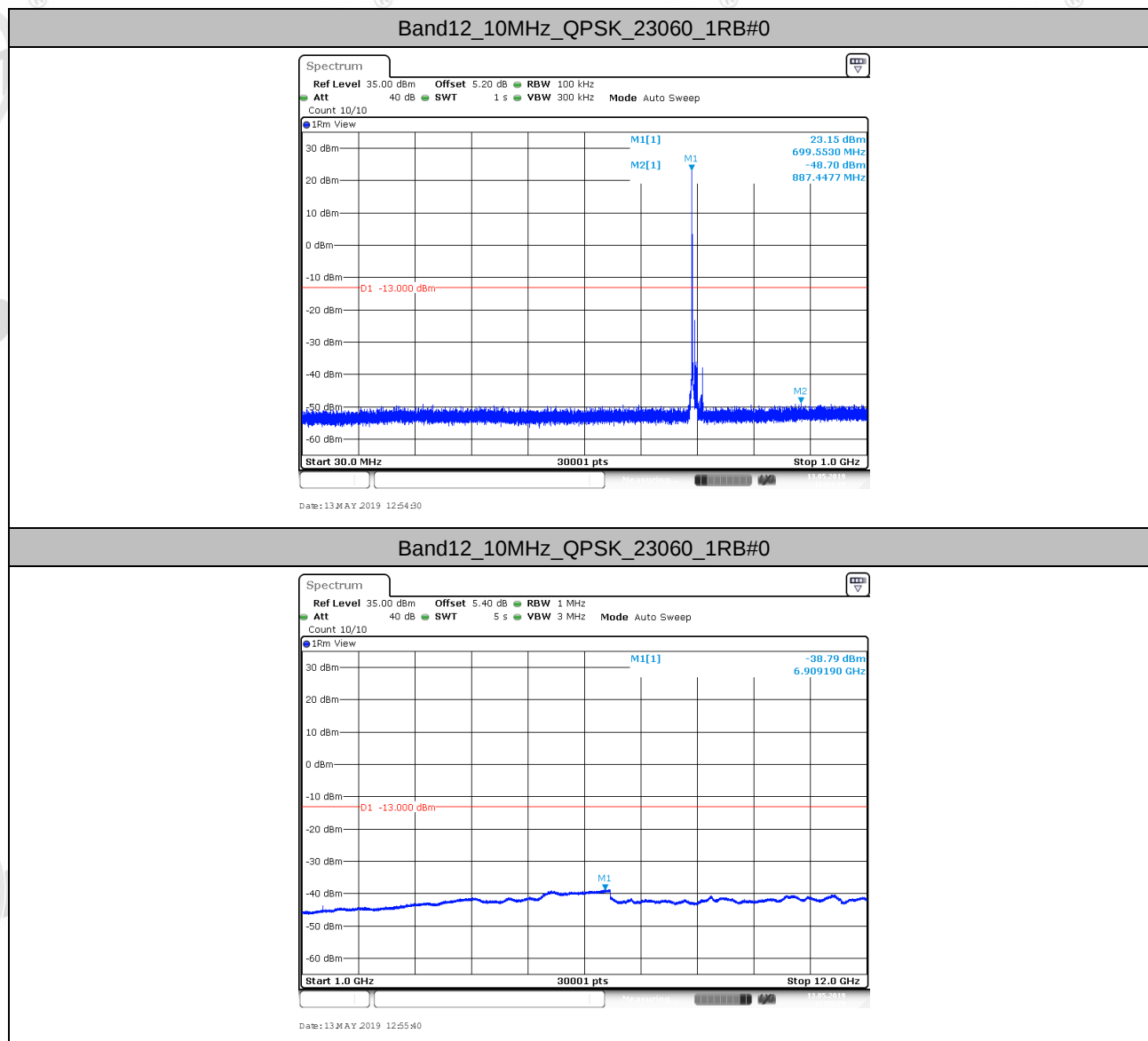


8. Spurious Emission at Antenna Terminal

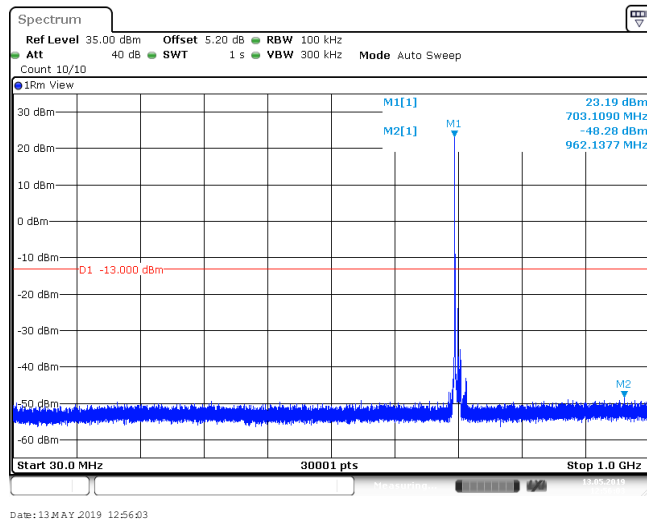
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =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

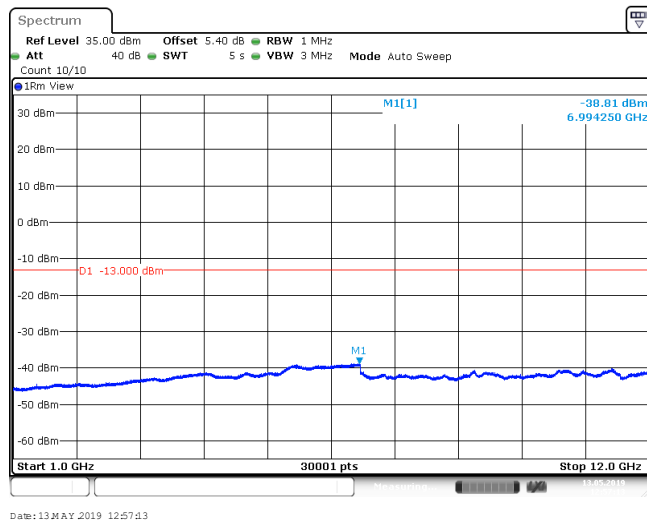
8.1. Test Plots



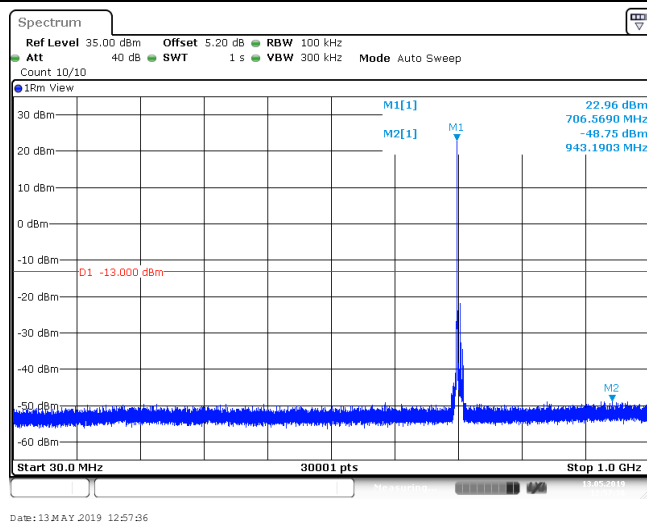
Band12_10MHz_QPSK_23095_1RB#0



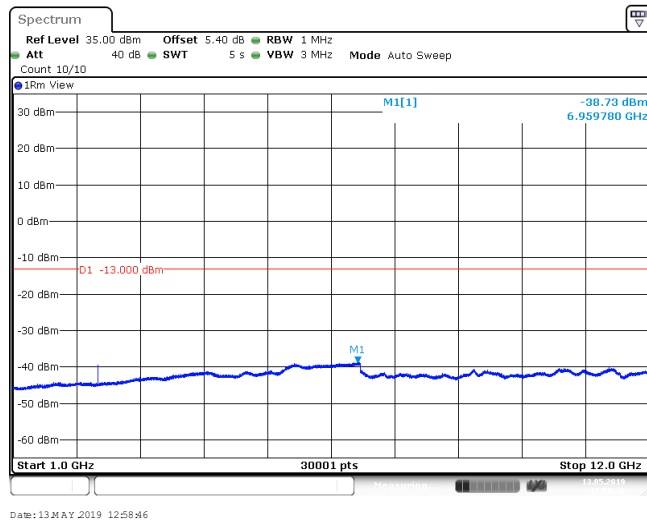
Band12_10MHz_QPSK_23095_1RB#0



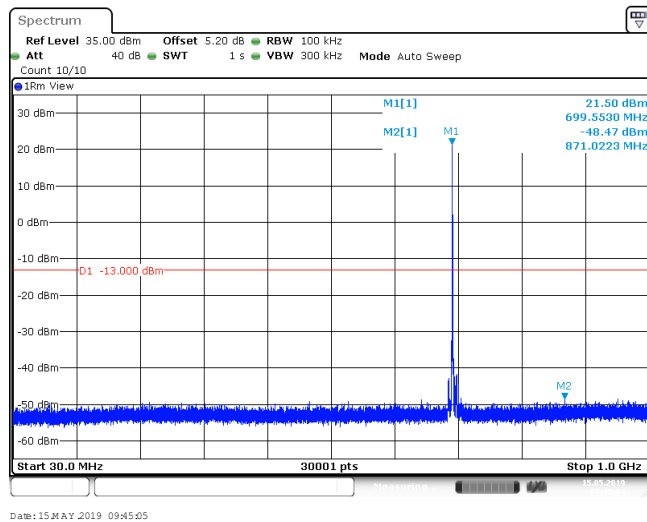
Band12_10MHz_QPSK_23130_1RB#0



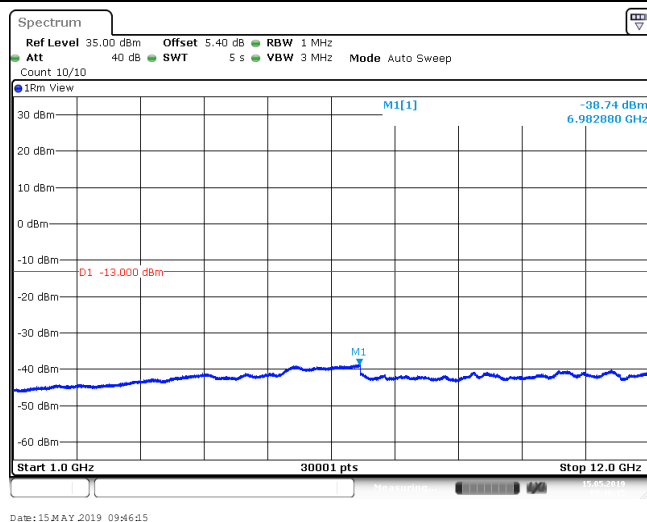
Band12_10MHz_QPSK_23130_1RB#0



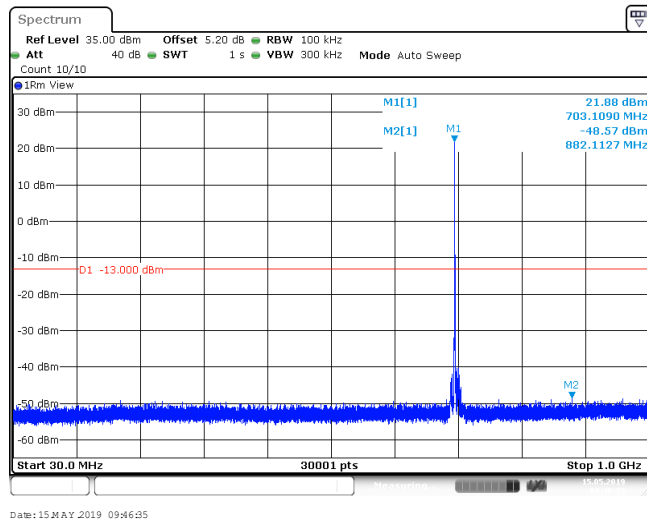
Band12_10MHz_16QAM_23060_1RB#0



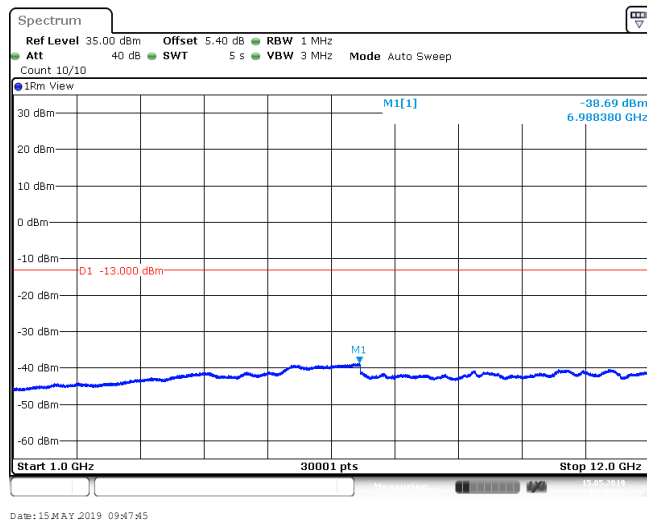
Band12_10MHz_16QAM_23060_1RB#0



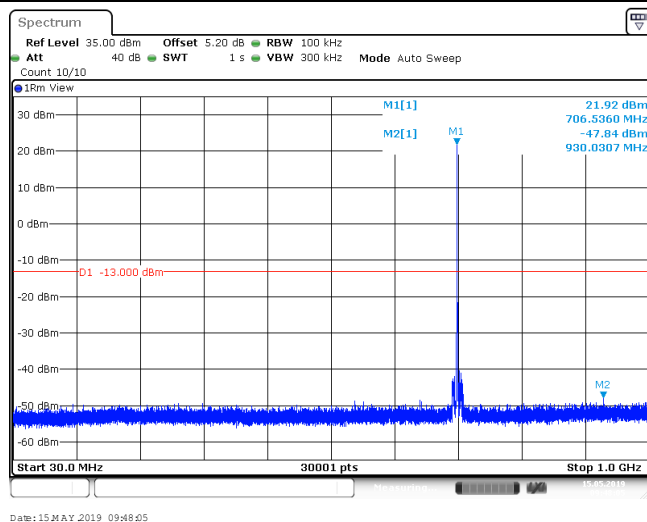
Band12_10MHz_16QAM_23095_1RB#0



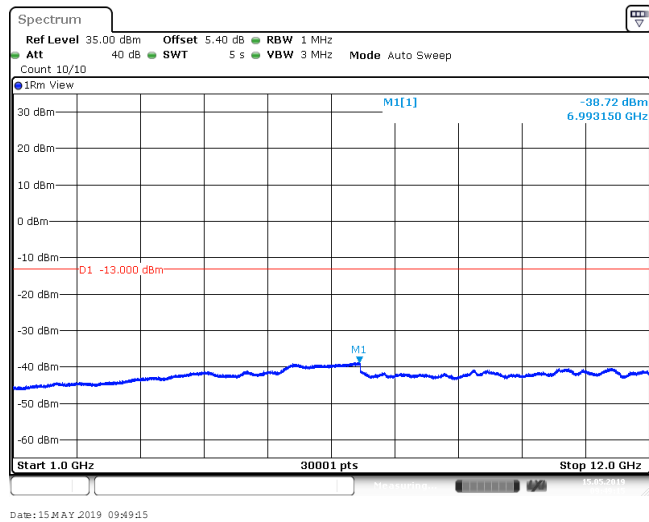
Band12_10MHz_16QAM_23095_1RB#0



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	3.10	0.004403	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	VN	NT	-2.10	-0.002983	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	VH	NT	4.00	0.005682	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VL	NT	-2.70	-0.003816	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VN	NT	-3.80	-0.005371	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VH	NT	-2.20	-0.003110	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VL	NT	2.10	0.002954	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VN	NT	2.40	0.003376	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VH	NT	2.60	0.003657	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	VL	NT	-1.70	-0.002415	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	VN	NT	1.60	0.002273	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	VH	NT	-5.00	-0.007102	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	VL	NT	3.20	0.004523	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	VN	NT	2.90	0.004099	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	VH	NT	-2.70	-0.003816	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	VL	NT	-3.90	-0.005485	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	VN	NT	-3.00	-0.004219	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	VH	NT	-3.30	-0.004641	±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	-2.30	-0.003267	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	-20	-1.00	-0.001420	±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	3.30	0.004688	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	20	-1.50	-0.002131	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	30	0.60	0.000852	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	40	3.80	0.005398	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	50	1.20	0.001705	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-30	-1.70	-0.002403	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-20	-1.80	-0.002544	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	0	0.70	0.000989	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	10	2.00	0.002827	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	20	2.10	0.002968	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	30	1.20	0.001696	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	40	-3.30	-0.004664	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	50	-2.80	-0.003958	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-30	-5.00	-0.007032	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-20	-4.30	-0.006048	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	0	-4.70	-0.006610	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	10	3.70	0.005204	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	20	-5.80	-0.008158	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	30	3.40	0.004782	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	40	3.20	0.004501	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	50	3.00	0.004219	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	-30	-3.70	-0.005256	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	-20	-2.70	-0.003835	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	0	0.30	0.000426	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	10	-5.50	-0.007813	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	20	-3.00	-0.004261	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	30	-0.20	-0.000284	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	40	1.60	0.002273	±2.5	PASS
Band12	10MHz	16QAM	23060	27RB#0	NV	50	2.70	0.003835	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	-30	0.90	0.001272	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	-20	3.00	0.004240	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	0	-3.10	-0.004382	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	10	-4.00	-0.005654	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	20	-3.30	-0.004664	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	30	-3.40	-0.004806	±2.5	PASS
Band12	10MHz	16QAM	23095	27RB#0	NV	40	-2.60	-0.003675	±2.5	PASS

Band12	10MHz	16QAM	23095	27RB#0	NV	50	-0.90	-0.001272	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	-30	-2.60	-0.003657	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	-20	-2.80	-0.003938	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	0	-2.00	-0.002813	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	10	0.30	0.000422	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	20	1.10	0.001547	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	30	1.50	0.002110	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	40	2.20	0.003094	±2.5	PASS
Band12	10MHz	16QAM	23130	27RB#0	NV	50	1.90	0.002672	±2.5	PASS

The End