

Appendix B.4

E-UTRA Band 12

1. Main Test Instruments

RE in Chamber					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date	Cal.Due date
				(yyyy-mm-dd)	(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	2019/6/12	2020/6/11
Wideband Radio Communication Tester	Anristu	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	Cal.Due date
				(yyyy-mm-dd)	(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	2019/6/12	2020/6/11
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	Anristu	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	22.79	18.84	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	23.03	19.08	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	22.99	19.04	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#0	22.92	18.97	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#1	23.11	19.16	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#3	23.22	19.27	34.77	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	21.90	17.95	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	22.89	18.94	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#2	23.05	19.1	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#5	22.97	19.02	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#0	23.08	19.13	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#1	23.13	19.18	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#3	23.05	19.1	34.77	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	22.07	18.12	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	23.06	19.11	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	23.02	19.07	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	22.93	18.98	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#0	22.93	18.98	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#1	23.11	19.16	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#3	23.21	19.26	34.77	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	22.00	18.05	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	21.53	17.58	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	21.60	17.65	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	21.63	17.68	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#0	22.15	18.2	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#1	22.03	18.08	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#3	22.02	18.07	34.77	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	21.21	17.26	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	21.71	17.76	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#2	21.89	17.94	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#5	21.77	17.82	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#0	22.27	18.32	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#1	22.10	18.15	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#3	22.14	18.19	34.77	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	21.14	17.19	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	21.72	17.77	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	21.91	17.96	34.77	PASS

Band12	1.4MHz	16QAM	23173	1RB#5	21.68	17.73	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#0	22.23	18.28	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#1	22.20	18.25	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#3	22.13	18.18	34.77	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	20.86	16.91	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#0	22.87	18.92	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#8	23.19	19.24	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#14	23.01	19.06	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#0	21.86	17.91	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#4	22.22	18.27	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#7	22.03	18.08	34.77	PASS
Band12	3MHz	QPSK	23025	15RB#0	22.12	18.17	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#0	23.01	19.06	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#8	22.78	18.83	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#14	23.16	19.21	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#0	21.97	18.02	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#4	22.18	18.23	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#7	22.01	18.06	34.77	PASS
Band12	3MHz	QPSK	23095	15RB#0	21.91	17.96	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#0	23.25	19.3	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#8	22.82	18.87	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#14	23.29	19.34	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#0	22.11	18.16	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#4	22.08	18.13	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#7	22.09	18.14	34.77	PASS
Band12	3MHz	QPSK	23165	15RB#0	22.11	18.16	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#0	21.28	17.33	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#8	21.58	17.63	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#14	21.66	17.71	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#0	20.91	16.96	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#4	21.35	17.4	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#7	21.41	17.46	34.77	PASS
Band12	3MHz	16QAM	23025	15RB#0	21.10	17.15	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#0	21.72	17.77	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#8	21.72	17.77	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#14	21.64	17.69	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#0	20.95	17	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#4	21.21	17.26	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#7	20.98	17.03	34.77	PASS
Band12	3MHz	16QAM	23095	15RB#0	20.92	16.97	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#0	21.80	17.85	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#8	21.86	17.91	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#14	21.67	17.72	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#0	21.54	17.59	34.77	PASS

Band12	3MHz	16QAM	23165	8RB#4	21.30	17.35	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#7	21.41	17.46	34.77	PASS
Band12	3MHz	16QAM	23165	15RB#0	21.14	17.19	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#0	22.83	18.88	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#12	23.24	19.29	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#24	23.07	19.12	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#0	22.08	18.13	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#6	22.14	18.19	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#13	21.92	17.97	34.77	PASS
Band12	5MHz	QPSK	23035	25RB#0	21.95	18	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#0	23.06	19.11	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#12	22.67	18.72	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#24	23.31	19.36	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#0	21.80	17.85	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#6	22.10	18.15	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#13	22.11	18.16	34.77	PASS
Band12	5MHz	QPSK	23095	25RB#0	21.94	17.99	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#0	23.11	19.16	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#12	22.86	18.91	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#24	23.06	19.11	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#0	22.17	18.22	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#6	21.91	17.96	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#13	21.99	18.04	34.77	PASS
Band12	5MHz	QPSK	23155	25RB#0	22.11	18.16	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#0	21.57	17.62	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#12	22.24	18.29	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#24	21.69	17.74	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#0	21.08	17.13	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#6	21.17	17.22	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#13	20.97	17.02	34.77	PASS
Band12	5MHz	16QAM	23035	25RB#0	21.13	17.18	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#0	21.63	17.68	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#12	22.03	18.08	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#24	21.66	17.71	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#0	21.04	17.09	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#6	20.87	16.92	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#13	20.89	16.94	34.77	PASS
Band12	5MHz	16QAM	23095	25RB#0	20.94	16.99	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#0	21.68	17.73	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#12	22.13	18.18	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#24	21.50	17.55	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#0	21.03	17.08	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#6	21.03	17.08	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#13	20.91	16.96	34.77	PASS

Band12	5MHz	16QAM	23155	25RB#0	20.97	17.02	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#0	22.86	18.91	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#24	23.00	19.05	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#49	22.63	18.68	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#0	22.13	18.18	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#12	21.87	17.92	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#25	21.78	17.83	34.77	PASS
Band12	10MHz	QPSK	23060	50RB#0	22.01	18.06	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#0	23.07	19.12	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#24	22.77	18.82	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#49	23.63	19.68	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#0	21.96	18.01	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#12	21.95	18	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#25	22.28	18.33	34.77	PASS
Band12	10MHz	QPSK	23095	50RB#0	22.01	18.06	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#0	23.04	19.09	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#24	23.69	19.74	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#49	22.85	18.9	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#0	21.92	17.97	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#12	22.46	18.51	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#25	22.09	18.14	34.77	PASS
Band12	10MHz	QPSK	23130	50RB#0	21.99	18.04	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#0	21.56	17.61	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#24	21.75	17.8	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#49	21.68	17.73	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#0	20.91	16.96	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#12	21.04	17.09	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#25	20.89	16.94	34.77	PASS
Band12	10MHz	16QAM	23060	50RB#0	21.12	17.17	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#0	21.68	17.73	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#24	21.96	18.01	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#49	21.64	17.69	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#0	21.10	17.15	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#12	20.97	17.02	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#25	20.94	16.99	34.77	PASS
Band12	10MHz	16QAM	23095	50RB#0	21.08	17.13	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#0	21.56	17.61	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#24	21.80	17.85	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#49	21.65	17.7	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#0	21.07	17.12	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#12	21.03	17.08	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#25	20.98	17.03	34.77	PASS
Band12	10MHz	16QAM	23130	50RB#0	21.09	17.14	34.77	PASS

Remark:

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

$$\text{ERP [dBm]} = \text{Conducted Power [dBm]} + \text{Gain [dBd]}$$

$$\text{EIRP [dBm]} = \text{Conducted Power [dBm]} + \text{Gain [dBi]}$$

4. Peak-to-Average Ratio(CCDF)

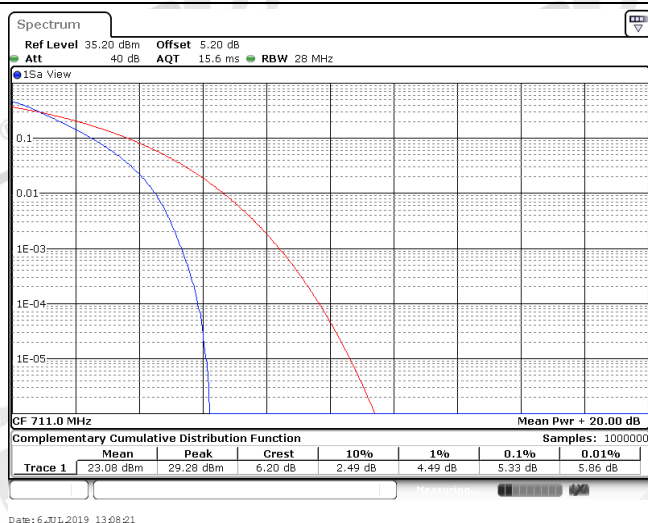
4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band12	10MHz	QPSK	23060	50RB#0	5.13	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	5.33	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	5.33	13	PASS
Band12	10MHz	16QAM	23060	50RB#0	5.94	13	PASS
Band12	10MHz	16QAM	23095	50RB#0	6.06	13	PASS
Band12	10MHz	16QAM	23130	50RB#0	6.09	13	PASS

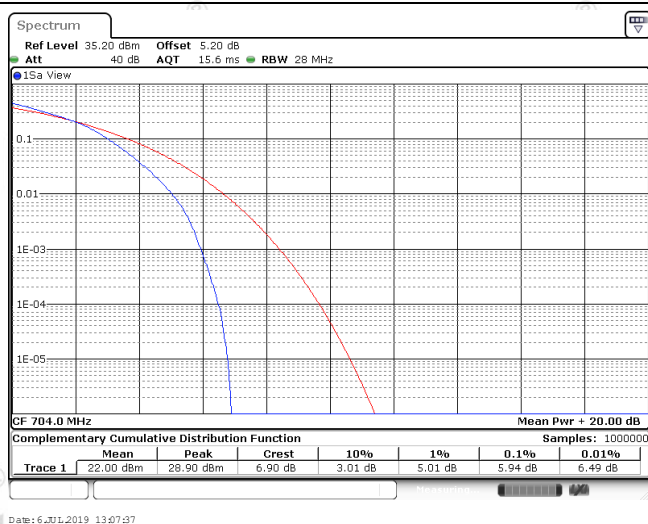
4.2. Test Plots



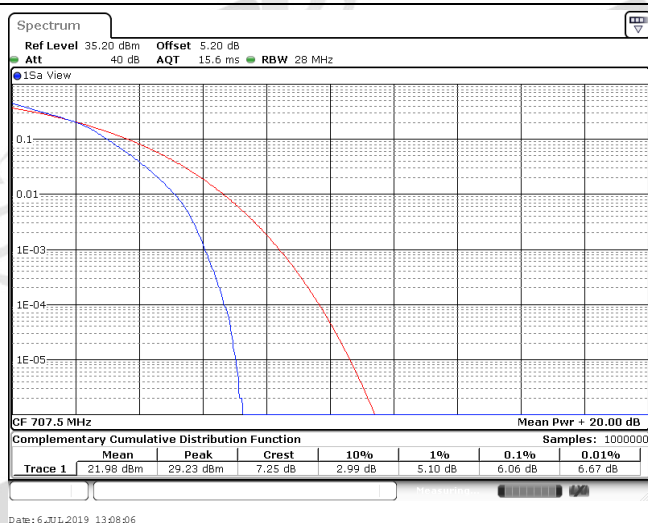
Band12_10MHz_QPSK_23130_50RB#0



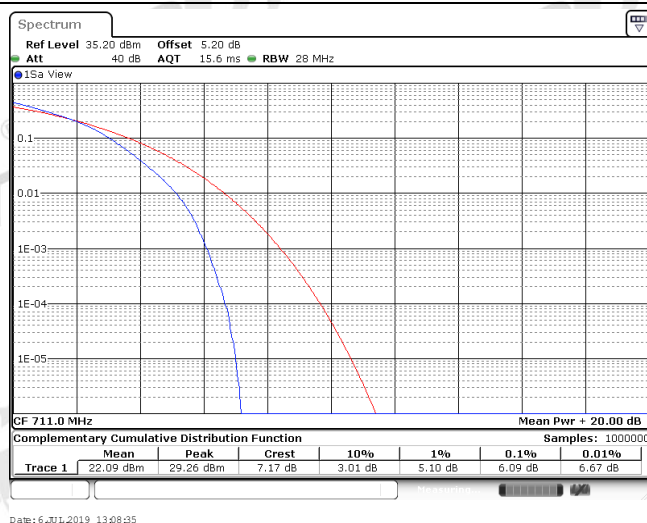
Band12_10MHz_16QAM_23060_50RB#0



Band12_10MHz_16QAM_23095_50RB#0



Band12_10MHz_16QAM_23130_50RB#0

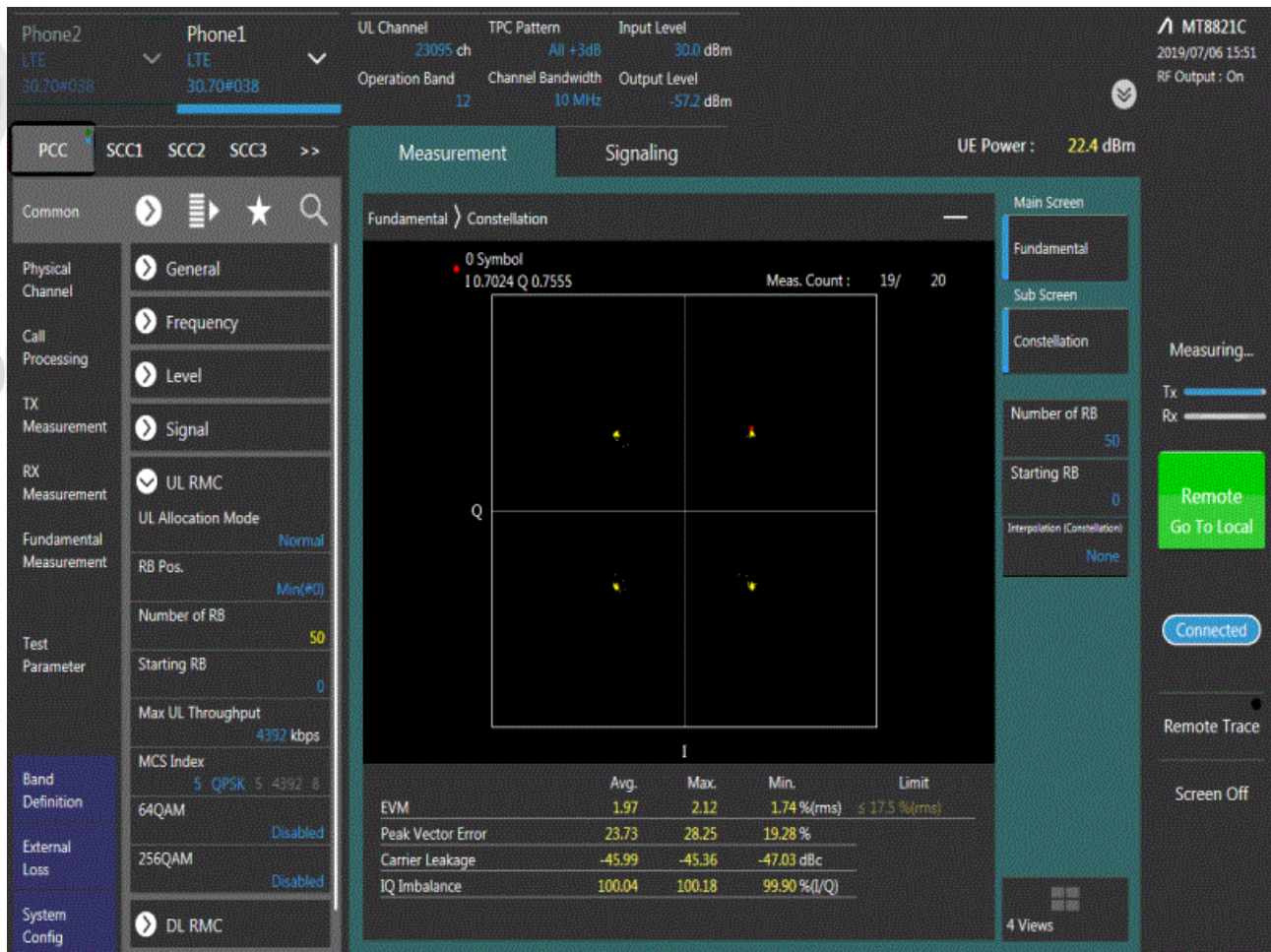


5. Modulation Characteristics

5.1. Test BAND = LTE Band 12

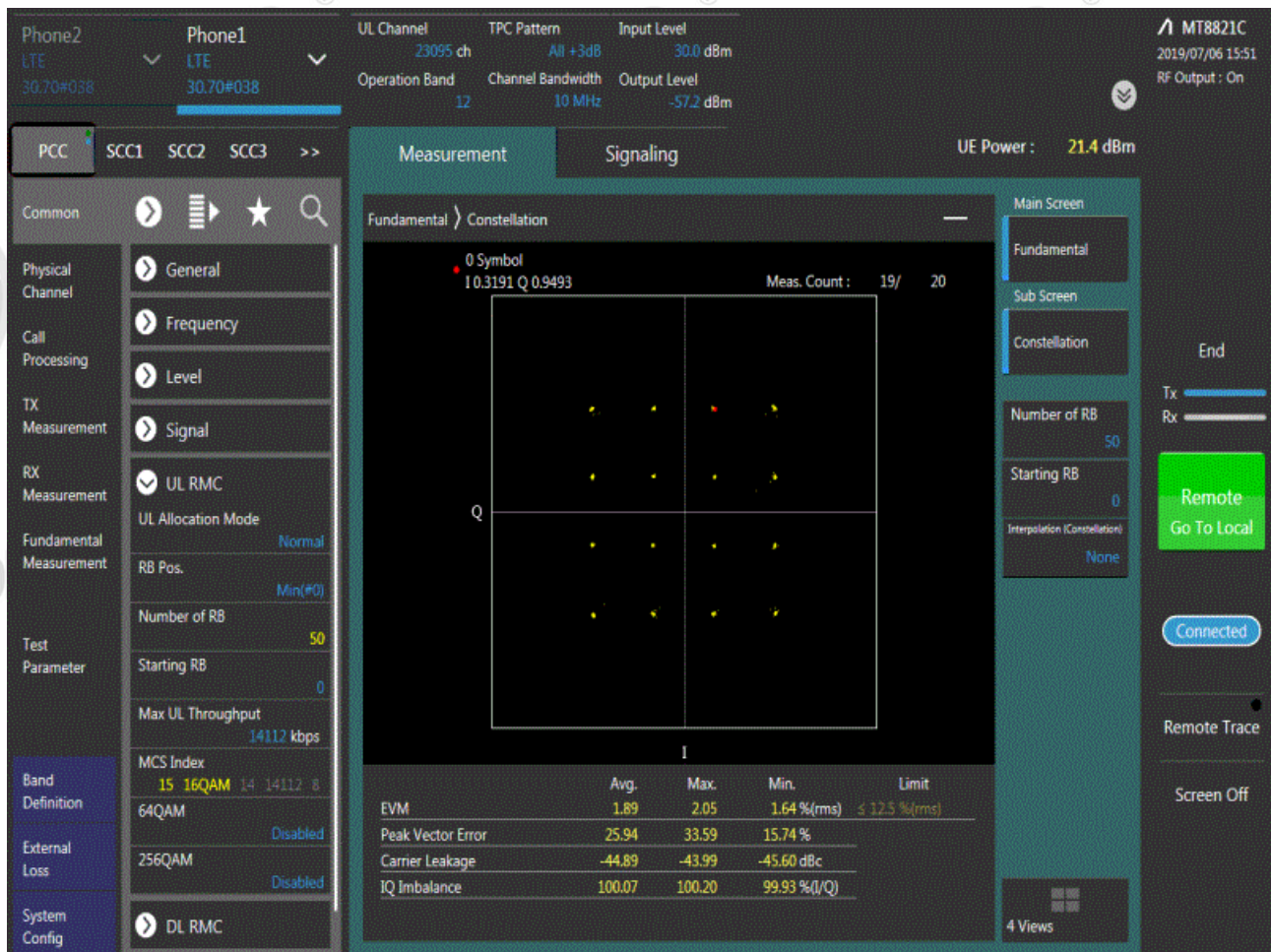
5.2. Test Mode = LTE /TM1 10MHz

5.2.1. Test Channel = MCH



5.3. Test Mode = LTE /TM2 10MHz

5.3.1. Test Channel = MCH



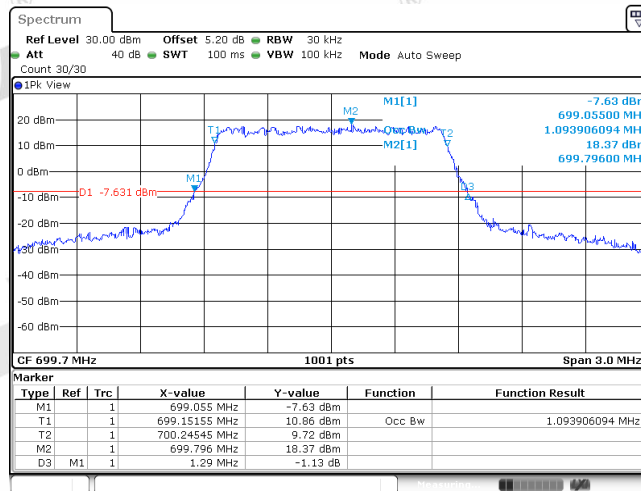
6. 26dB Bandwidth and Occupied Bandwidth

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	1.290	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.094	1.293	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.091	1.296	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.091	1.293	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.094	1.287	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.088	1.290	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.697	2.982	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.691	2.988	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.697	3.000	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.691	2.964	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.685	2.982	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.685	2.976	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.466	4.920	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.476	4.940	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.466	4.920	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.486	4.940	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.496	4.940	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.476	4.950	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.891	9.700	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	50RB#0	8.891	9.700	PASS
Band12	10MHz	16QAM	23095	50RB#0	8.911	9.780	PASS
Band12	10MHz	16QAM	23130	50RB#0	8.911	9.740	PASS

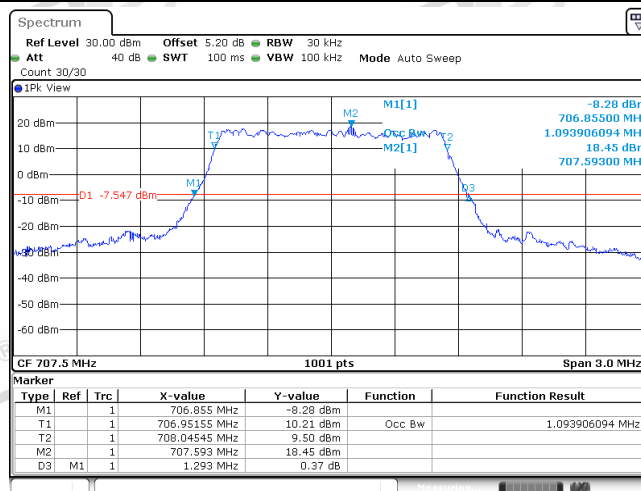
6.2. Test Plots

Band12_1.4MHz_QPSK_23017_6RB#0



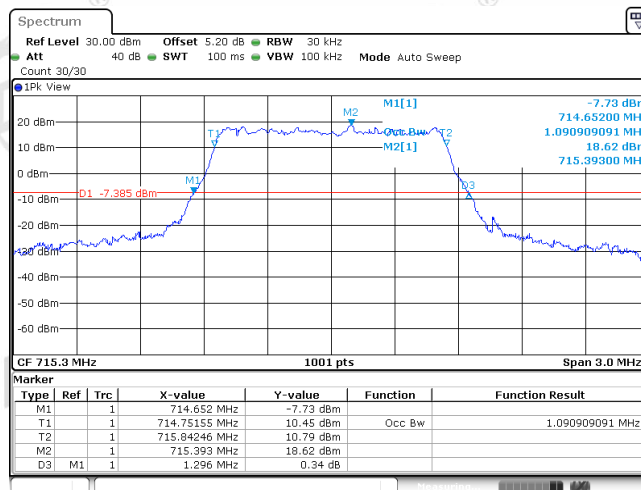
Date: 6 JUL 2019 12:37:59

Band12_1.4MHz_QPSK_23095_6RB#0



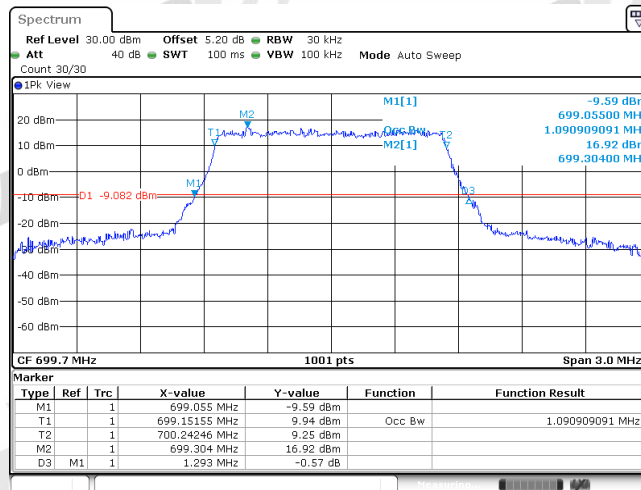
Date: 6 JUL 2019 12:38:31

Band12_1.4MHz_QPSK_23173_6RB#0



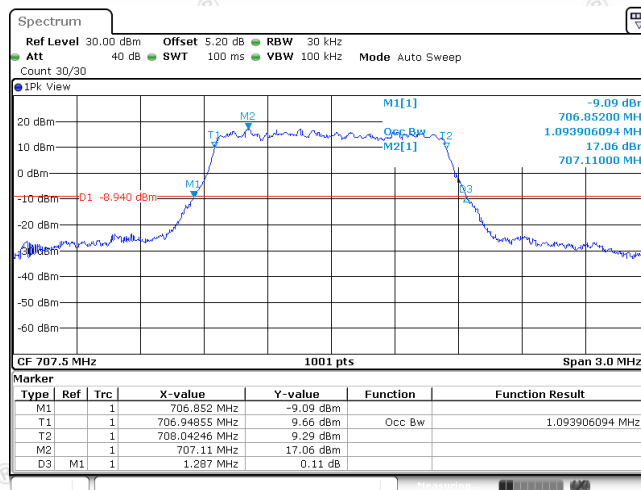
Date: 6 JUL 2019 12:39:03

Band12_1.4MHz_16QAM_23017_6RB#0



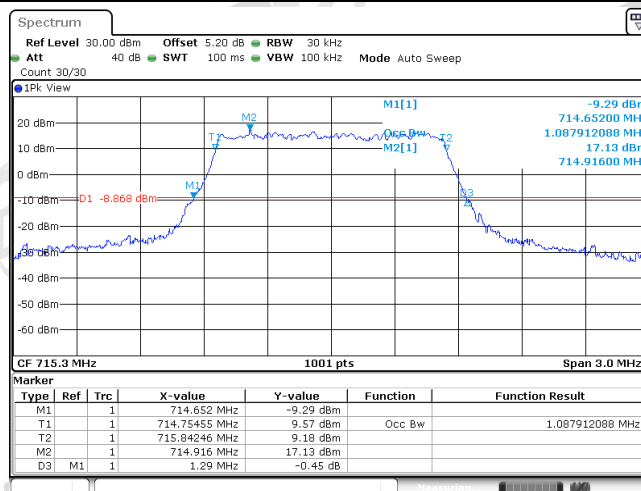
Date: 6 JUL 2019 12:38:15

Band12_1.4MHz_16QAM_23095_6RB#0



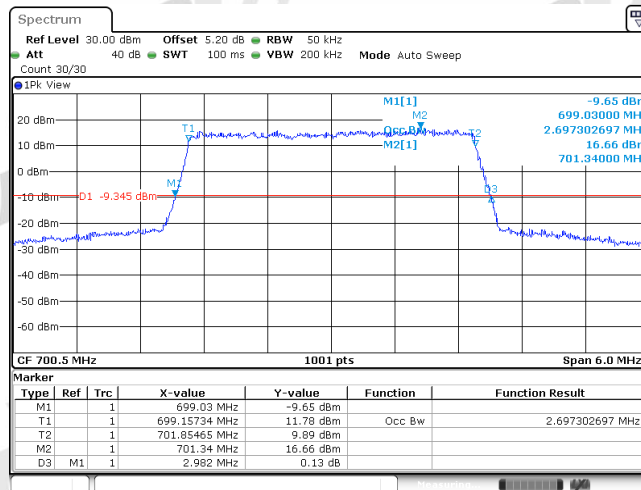
Date: 6 JUL 2019 12:38:47

Band12_1.4MHz_16QAM_23173_6RB#0



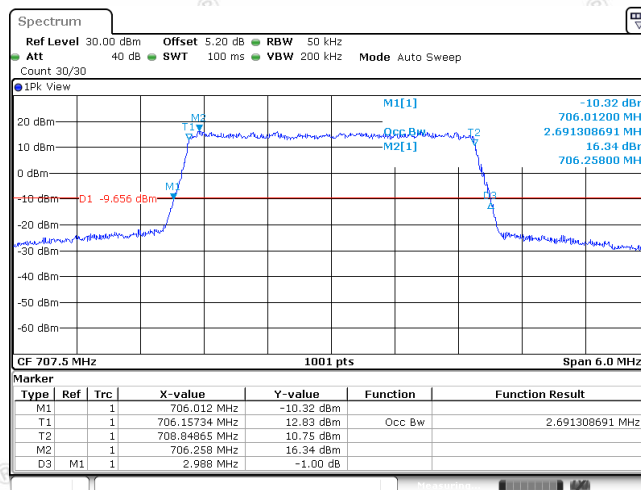
Date: 6 JUL 2019 12:39:19

Band12_3MHz_QPSK_23025_15RB#0



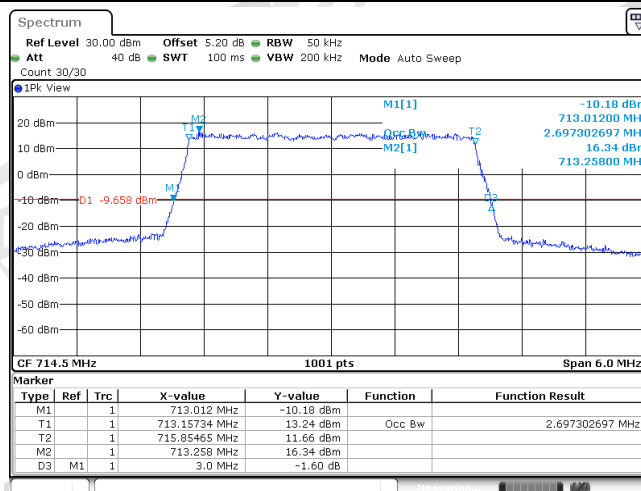
Date: 6 JUL 2019 12:39:40

Band12_3MHz_QPSK_23095_15RB#0



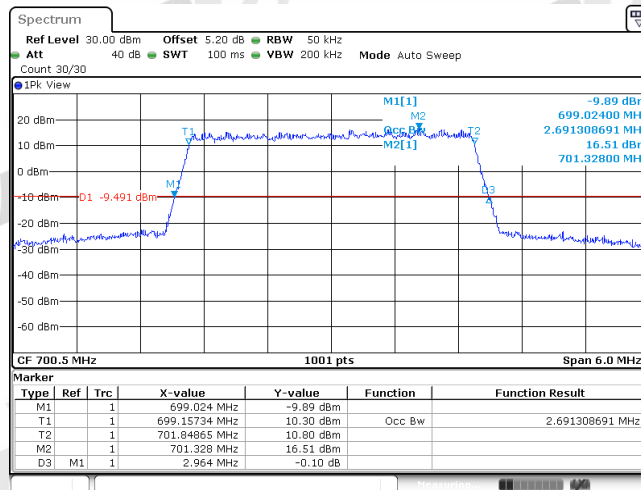
Date: 6 JUL 2019 12:40:12

Band12_3MHz_QPSK_23165_15RB#0



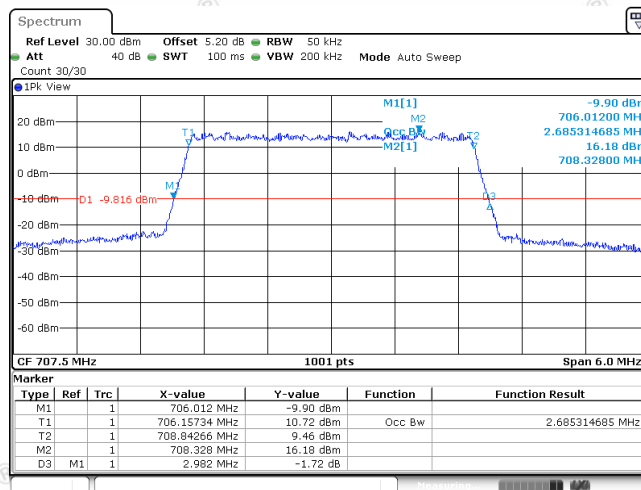
Date: 6 JUL 2019 12:40:43

Band12_3MHz_16QAM_23025_15RB#0



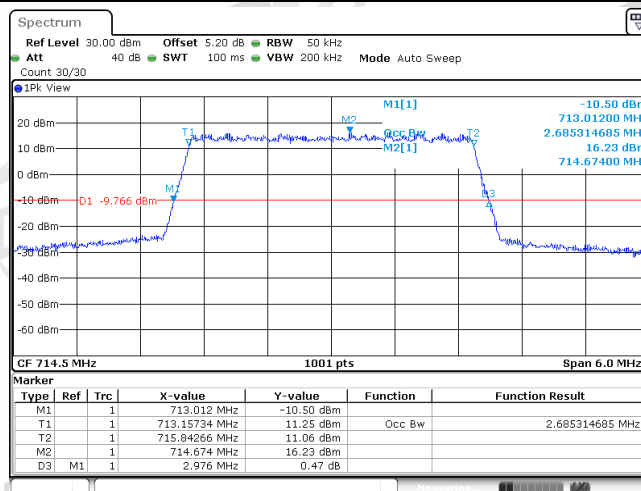
Date: 6 JUL 2019 12:39:56

Band12_3MHz_16QAM_23095_15RB#0



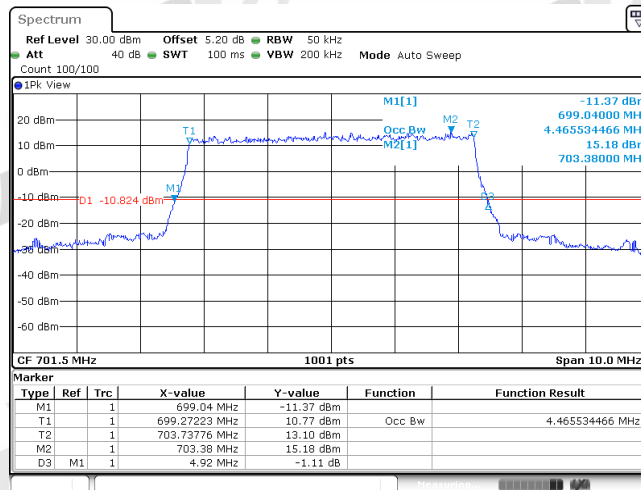
Date: 6 JUL 2019 12:40:27

Band12_3MHz_16QAM_23165_15RB#0



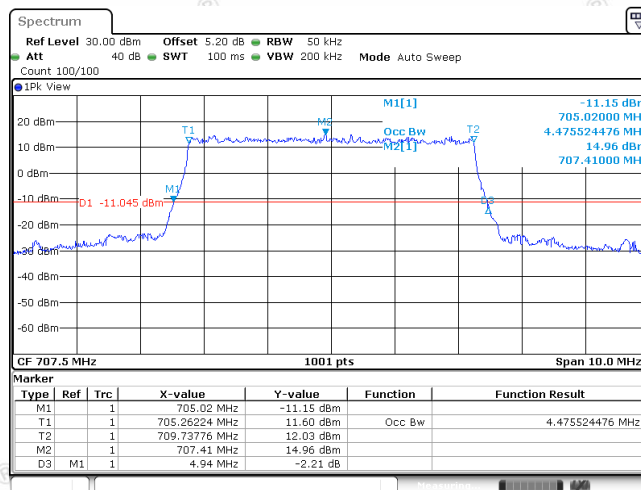
Date: 6 JUL 2019 12:40:59

Band12_5MHz_QPSK_23035_25RB#0



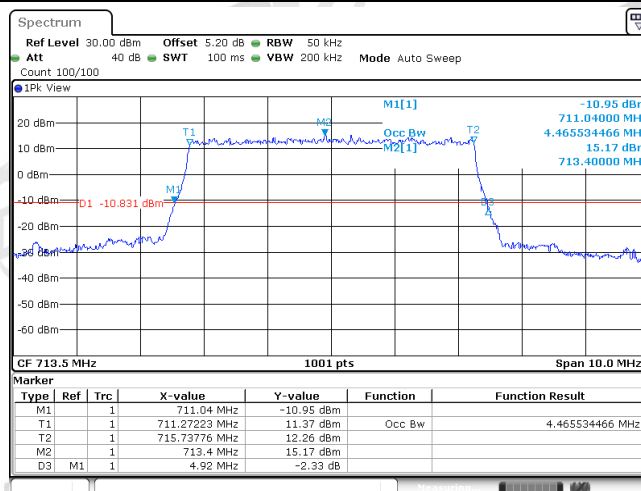
Date: 6 JUL 2019 12:41:27

Band12_5MHz_QPSK_23095_25RB#0



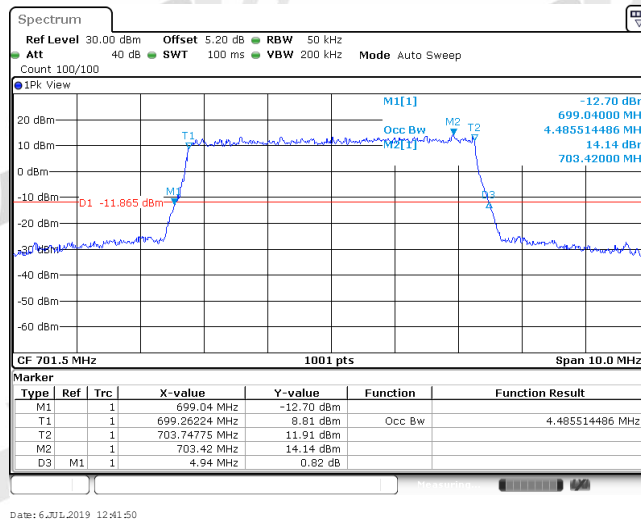
Date: 6 JUL 2019 12:42:13

Band12_5MHz_QPSK_23155_25RB#0

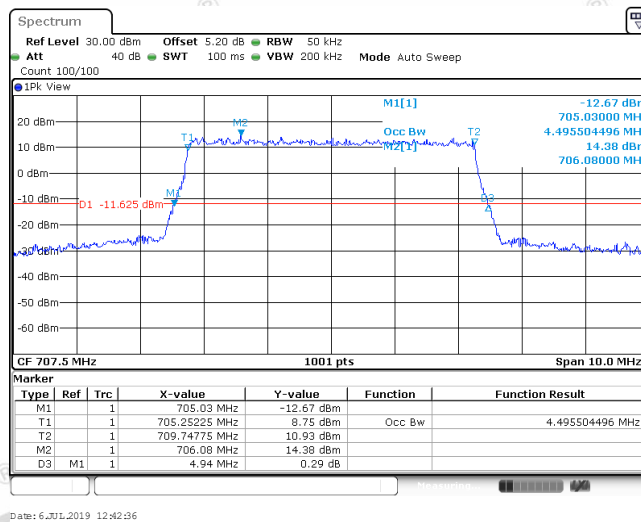


Date: 6 JUL 2019 12:42:59

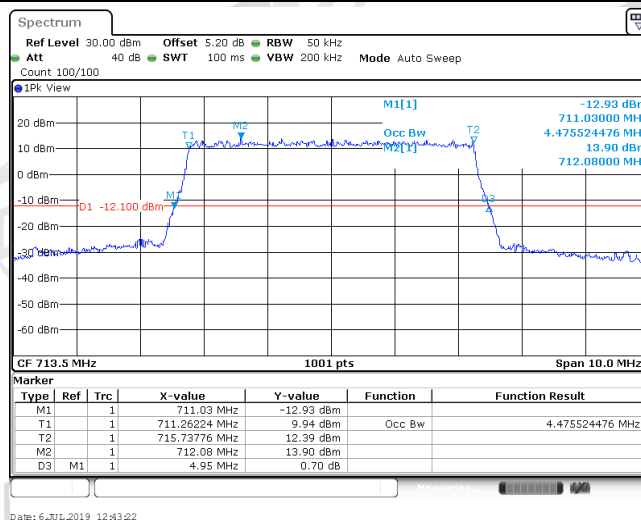
Band12_5MHz_16QAM_23035_25RB#0



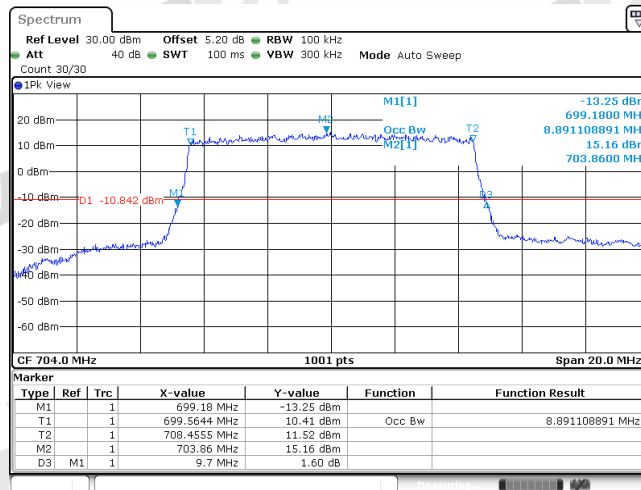
Band12_5MHz_16QAM_23095_25RB#0



Band12_5MHz_16QAM_23155_25RB#0

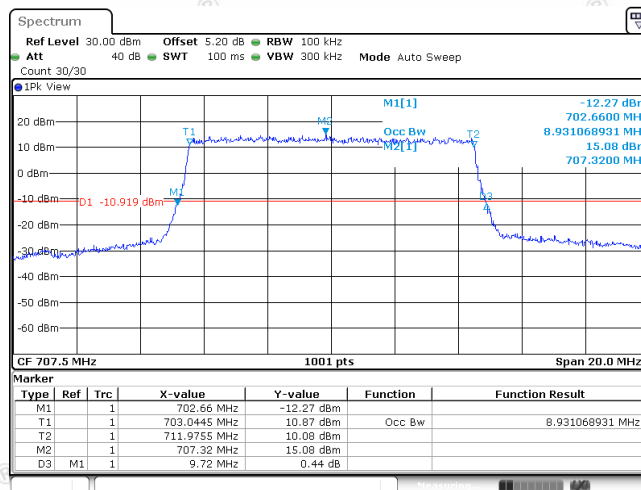


Band12_10MHz_QPSK_23060_50RB#0



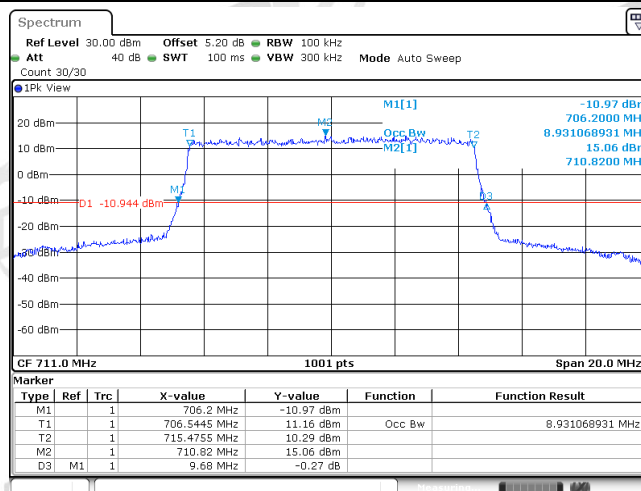
Date: 6 JUL 2019 12:43:42

Band12_10MHz_QPSK_23095_50RB#0



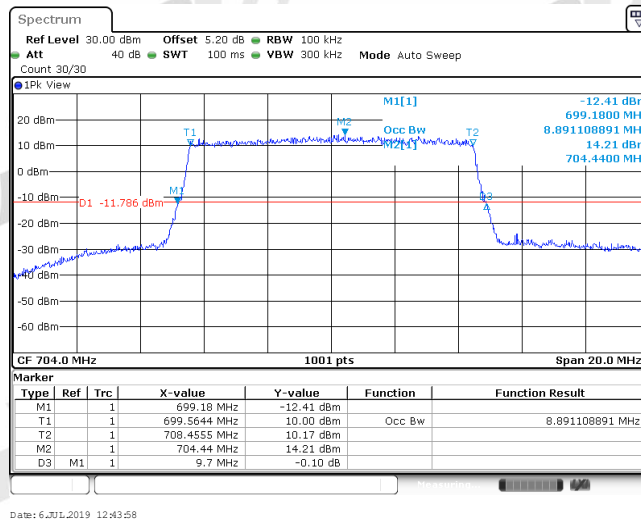
Date: 6 JUL 2019 12:44:14

Band12_10MHz_QPSK_23130_50RB#0

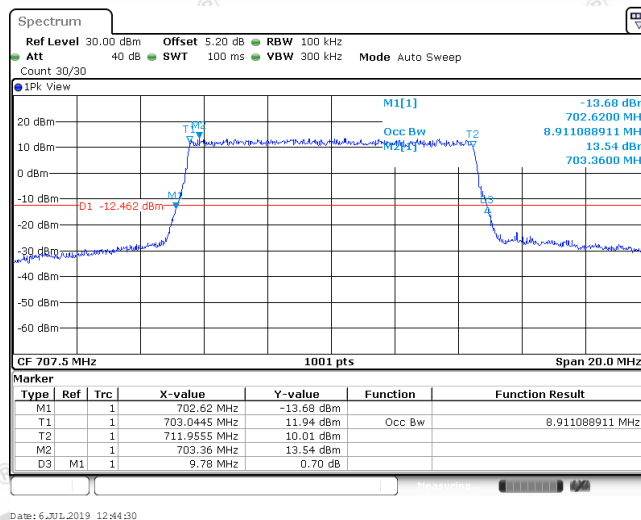


Date: 6 JUL 2019 12:44:46

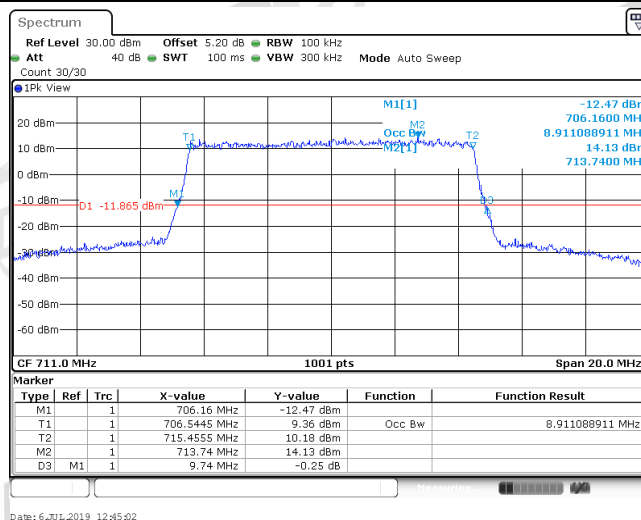
Band12_10MHz_16QAM_23060_50RB#0



Band12_10MHz_16QAM_23095_50RB#0



Band12_10MHz_16QAM_23130_50RB#0

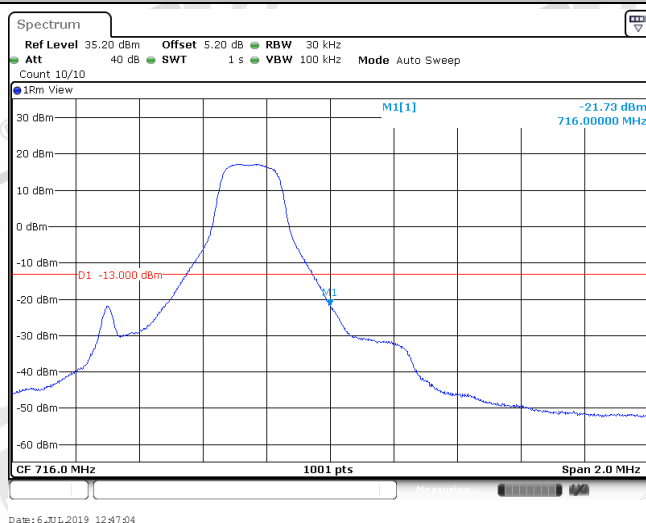


7. Band Edge Compliance

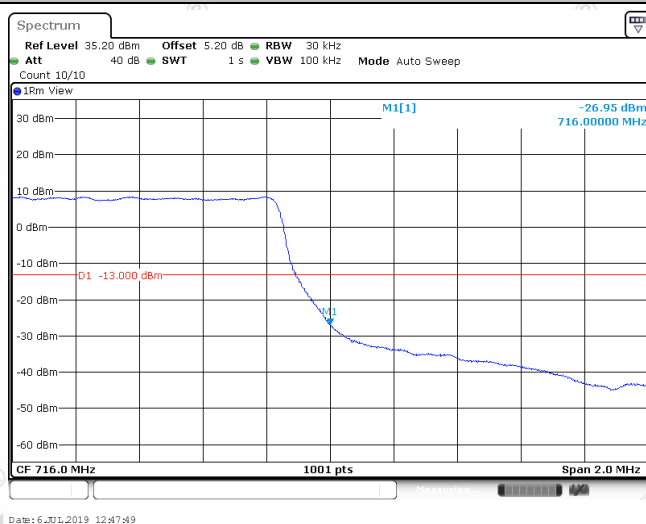
7.1. Test Plots



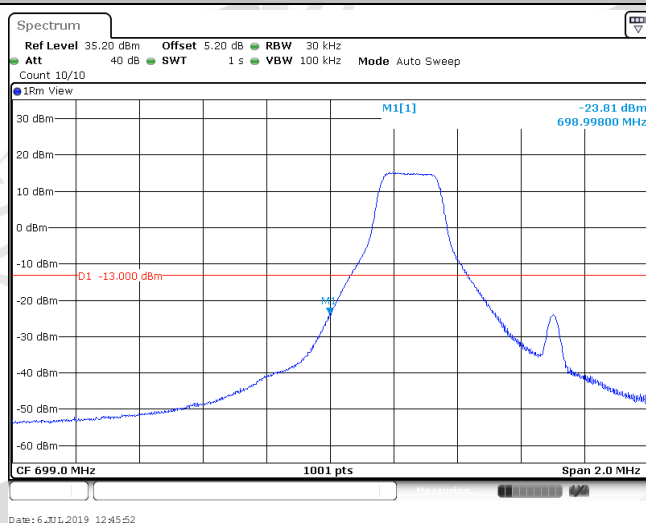
Band12_1.4MHz_QPSK_23173_1RB#5



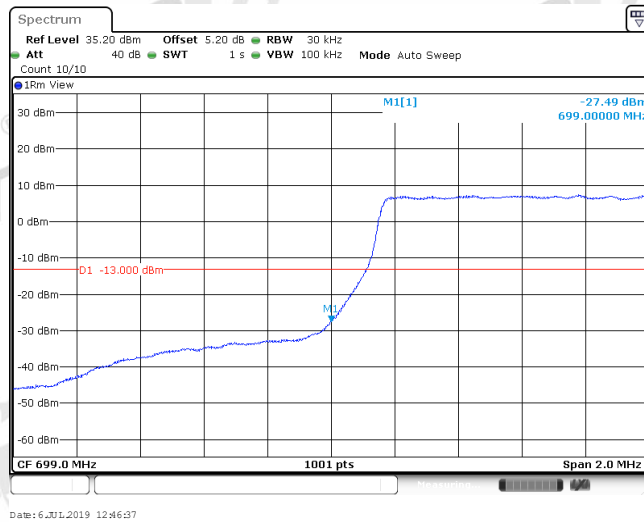
Band12_1.4MHz_QPSK_23173_6RB#0



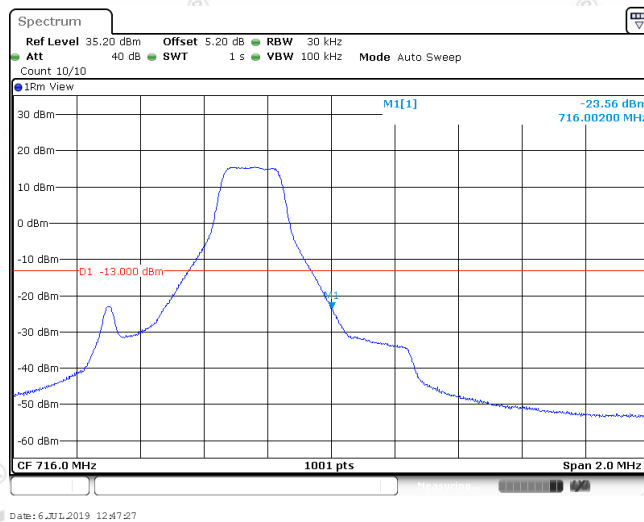
Band12_1.4MHz_16QAM_23017_1RB#0



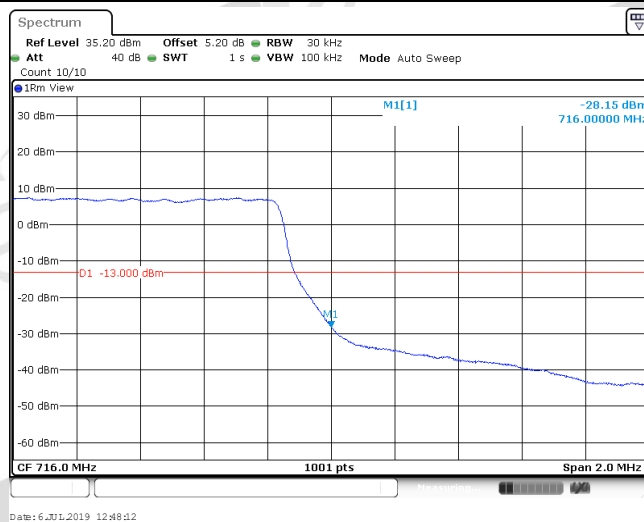
Band12_1.4MHz_16QAM_23017_6RB#0



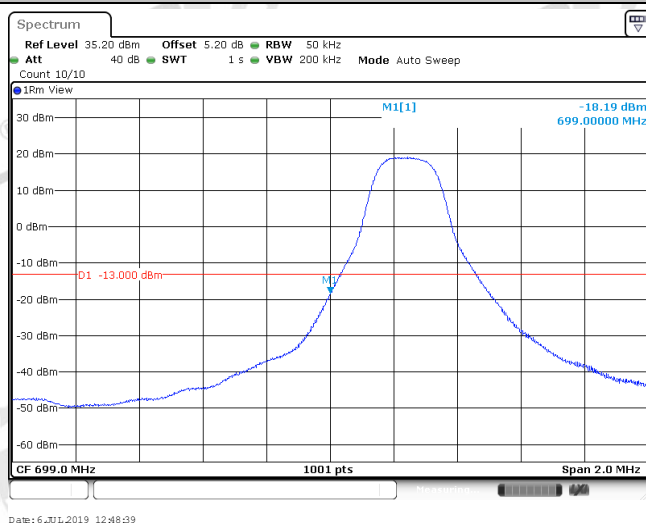
Band12_1.4MHz_16QAM_23173_1RB#5



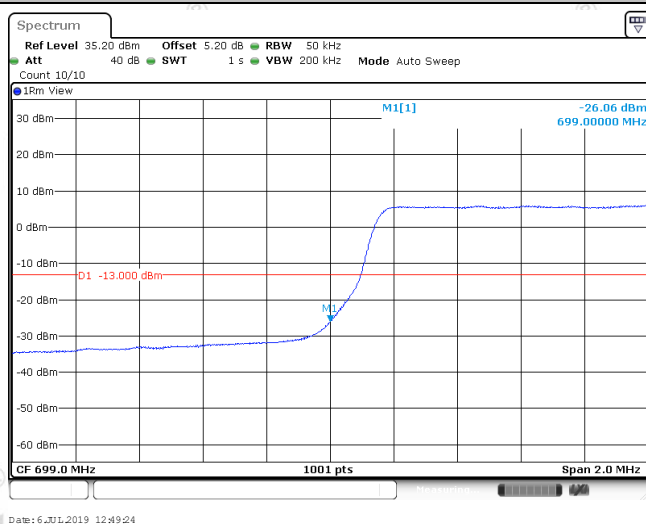
Band12_1.4MHz_16QAM_23173_6RB#0



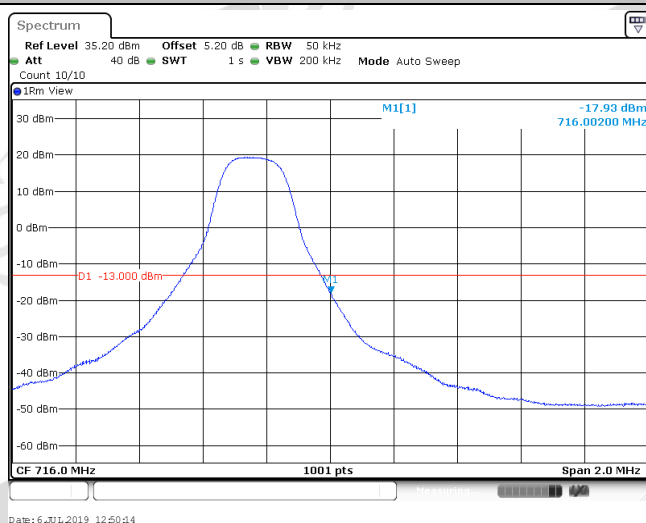
Band12_3MHz_QPSK_23025_1RB#0



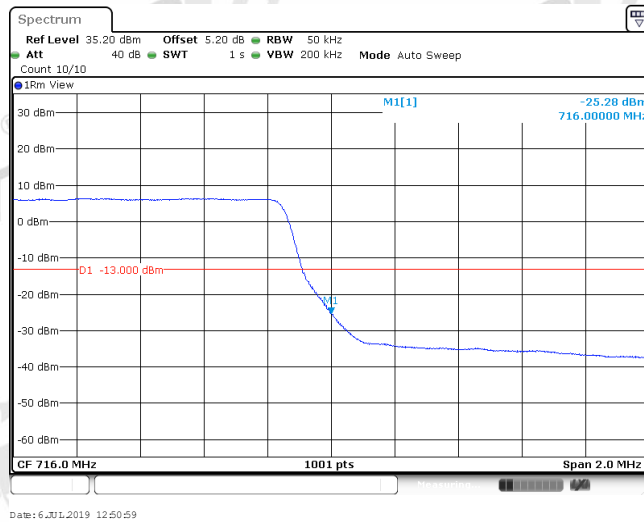
Band12_3MHz_QPSK_23025_15RB#0



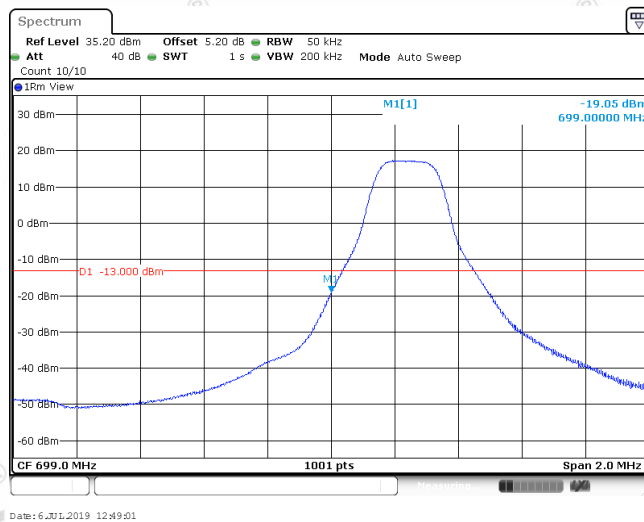
Band12_3MHz_QPSK_23165_1RB#14



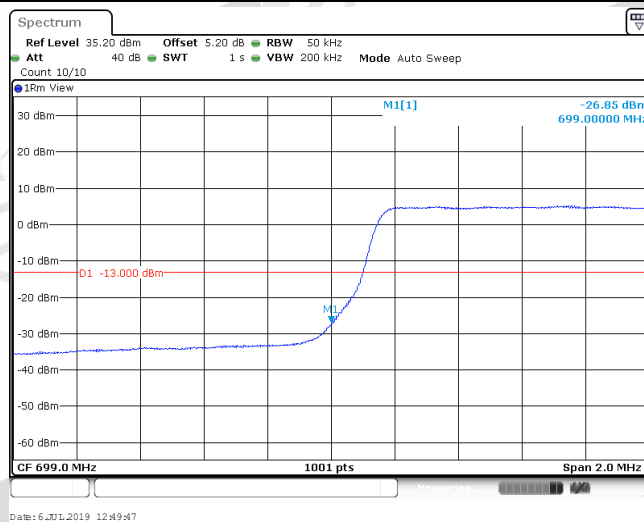
Band12_3MHz_QPSK_23165_15RB#0



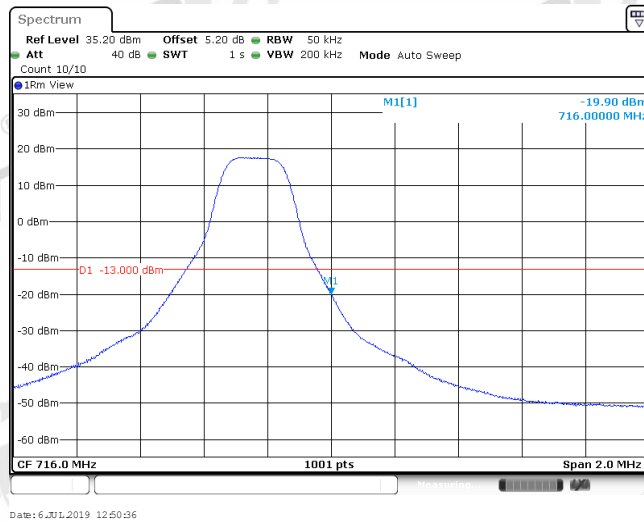
Band12_3MHz_16QAM_23025_1RB#0



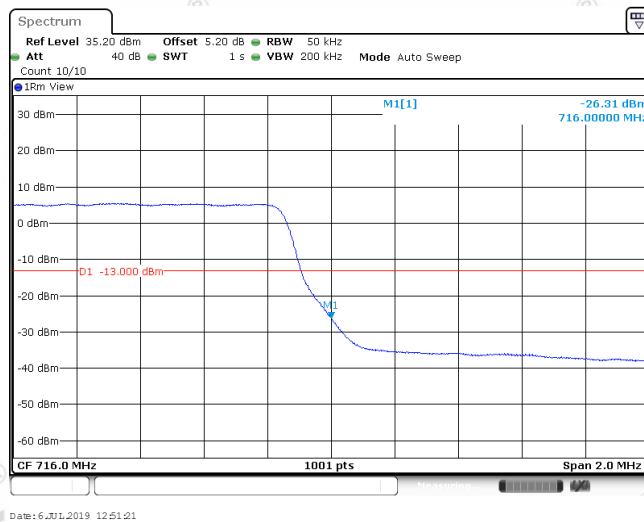
Band12_3MHz_16QAM_23025_15RB#0



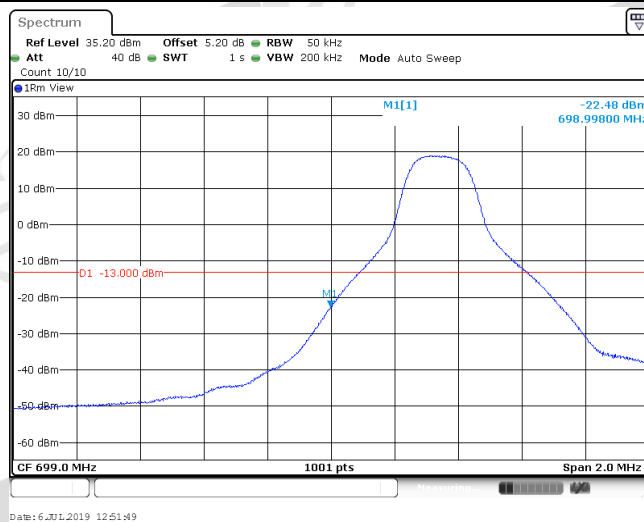
Band12_3MHz_16QAM_23165_1RB#14



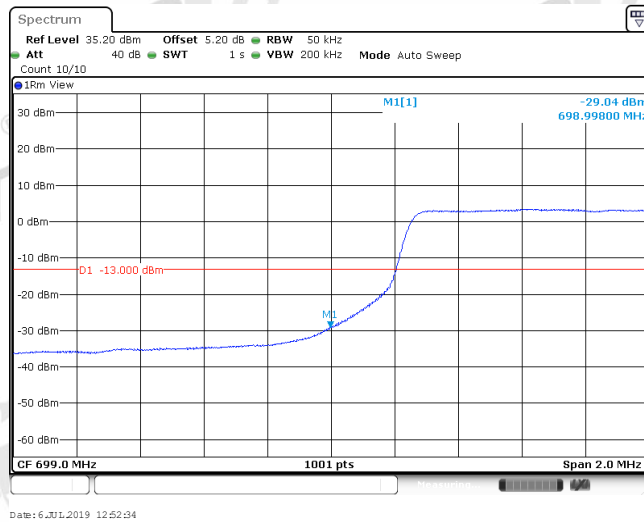
Band12_3MHz_16QAM_23165_15RB#0



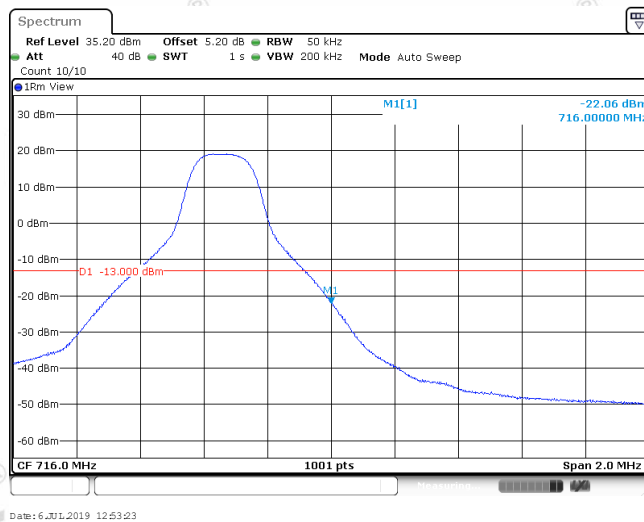
Band12_5MHz_QPSK_23035_1RB#0



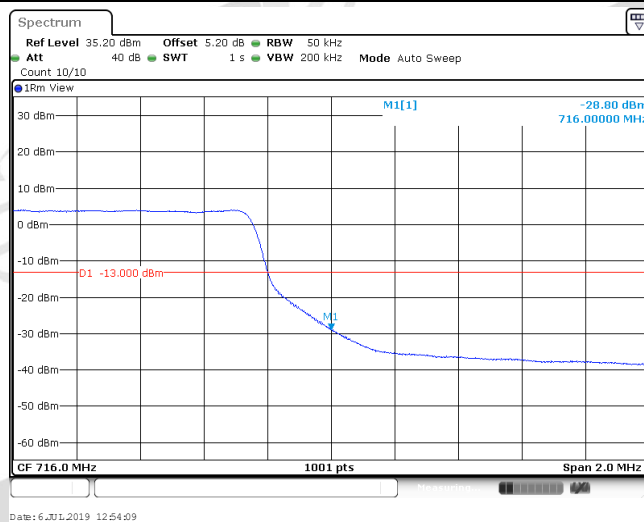
Band12_5MHz_QPSK_23035_25RB#0



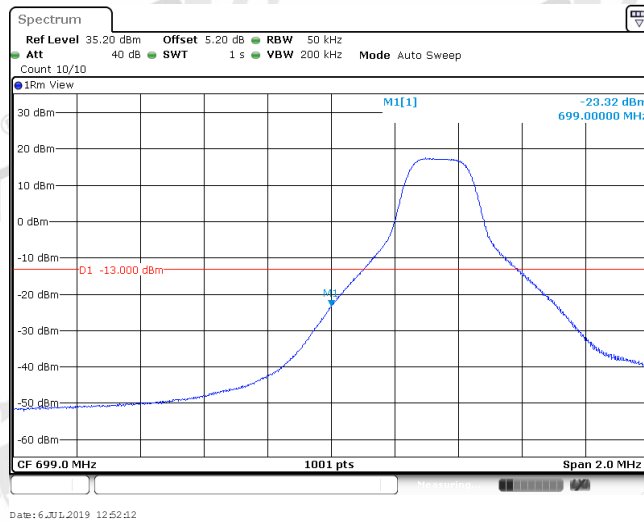
Band12_5MHz_QPSK_23155_1RB#24



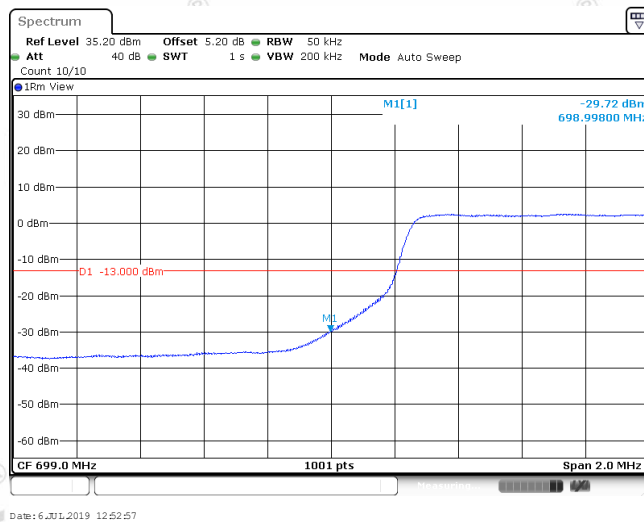
Band12_5MHz_QPSK_23155_25RB#0



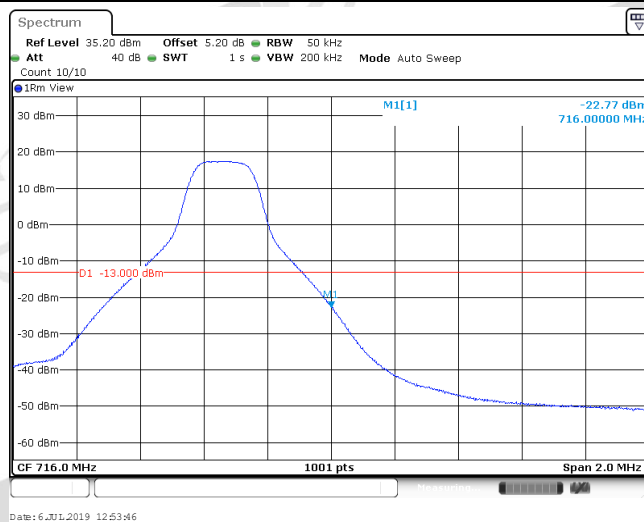
Band12_5MHz_16QAM_23035_1RB#0



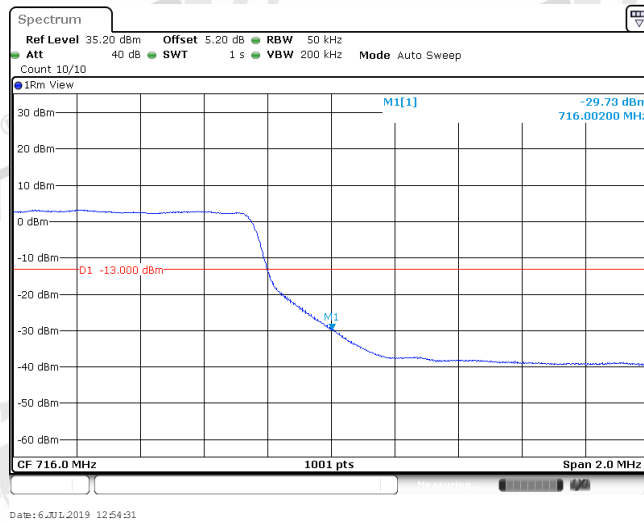
Band12_5MHz_16QAM_23035_25RB#0



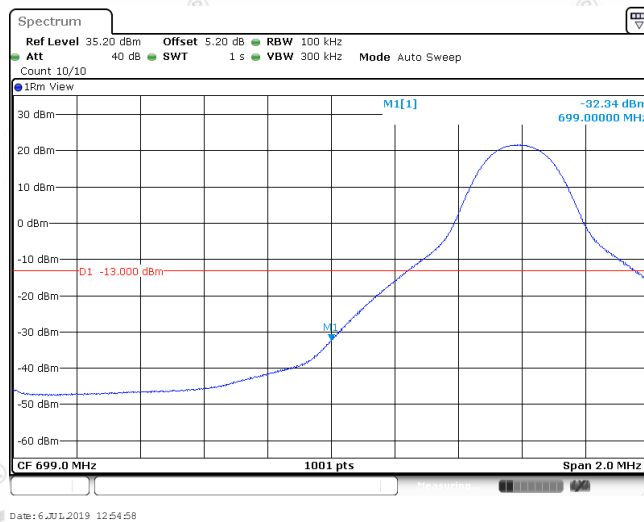
Band12_5MHz_16QAM_23155_1RB#24



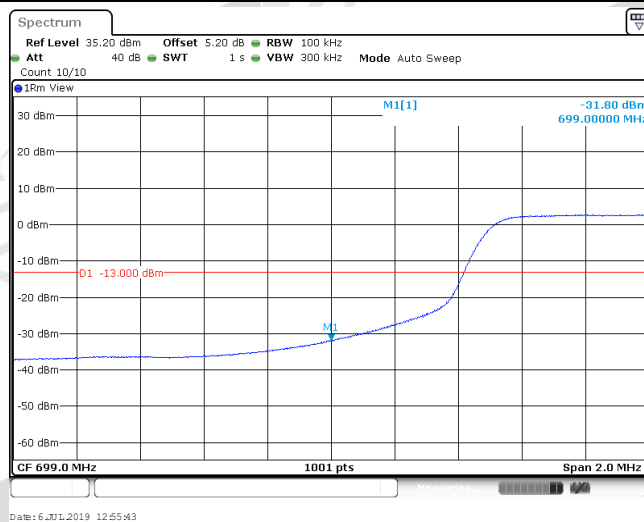
Band12_5MHz_16QAM_23155_25RB#0



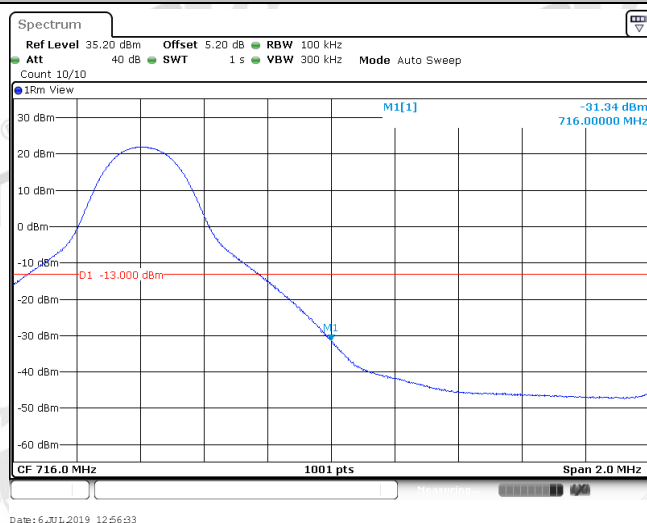
Band12_10MHz_QPSK_23060_1RB#0



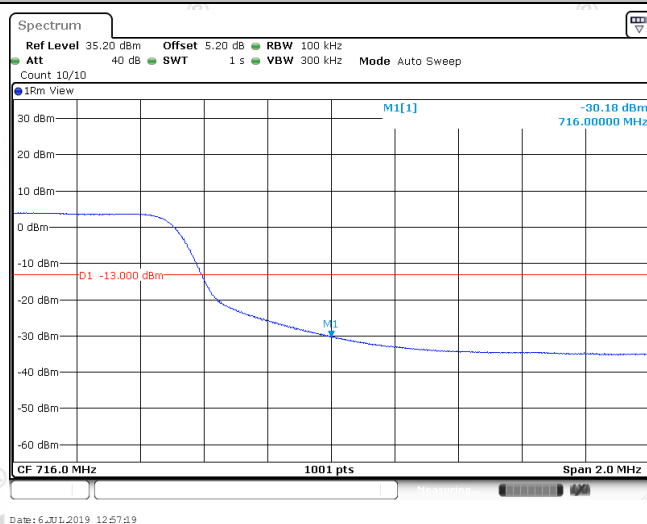
Band12_10MHz_QPSK_23060_50RB#0



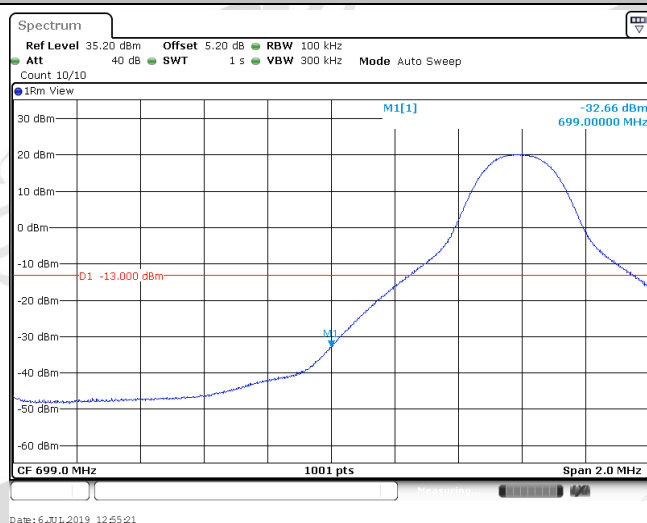
Band12_10MHz_QPSK_23130_1RB#49



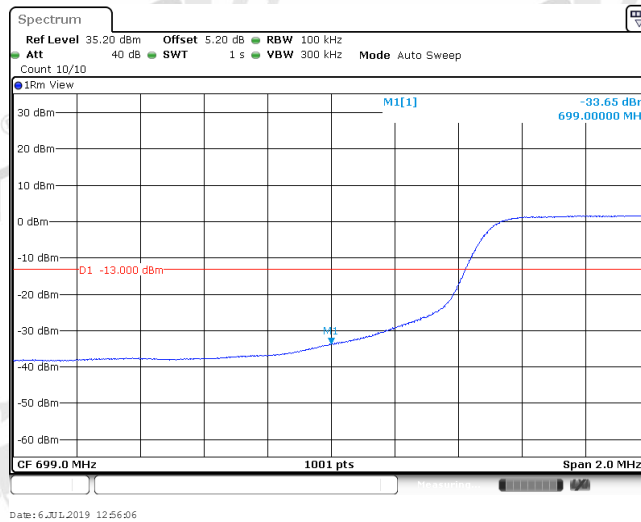
Band12_10MHz_QPSK_23130_50RB#0



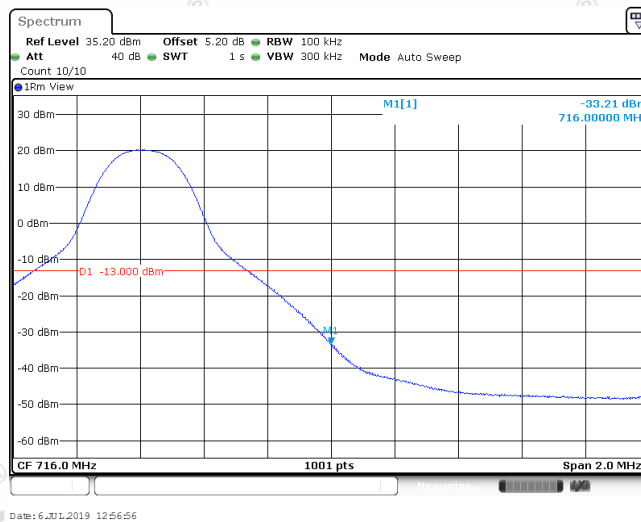
Band12_10MHz_16QAM_23060_1RB#0



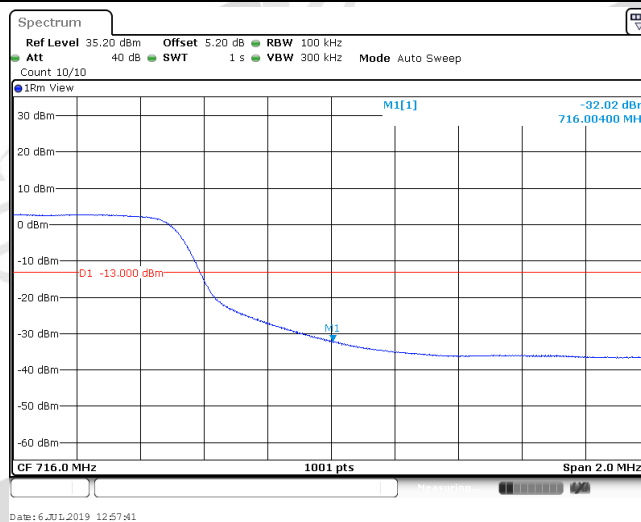
Band12_10MHz_16QAM_23060_50RB#0



Band12_10MHz_16QAM_23130_1RB#49



Band12_10MHz_16QAM_23130_50RB#0



8. Spurious Emission at Antenna Terminal

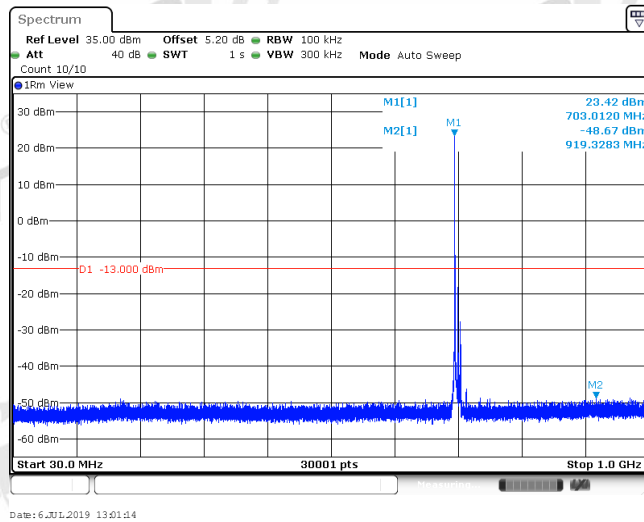
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =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

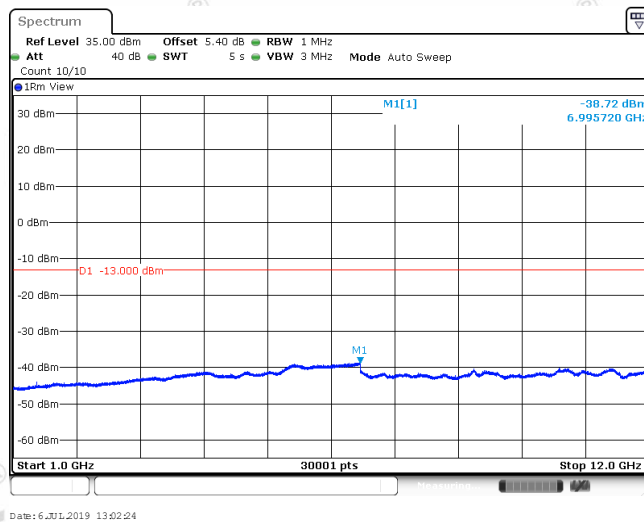
8.1. Test Plots



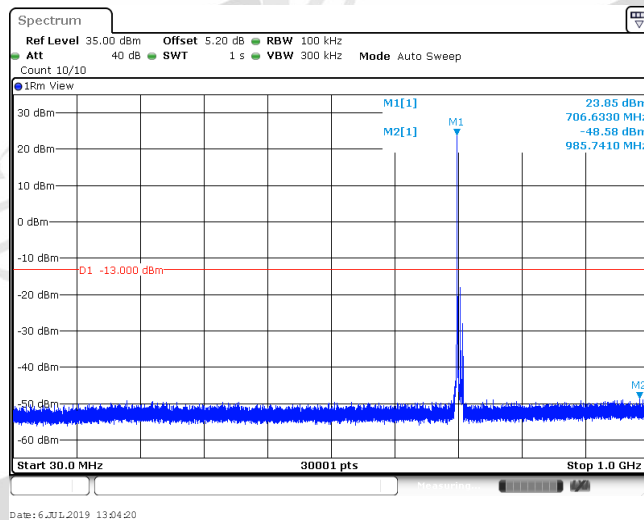
Band12_10MHz_QPSK_23095_1RB#0



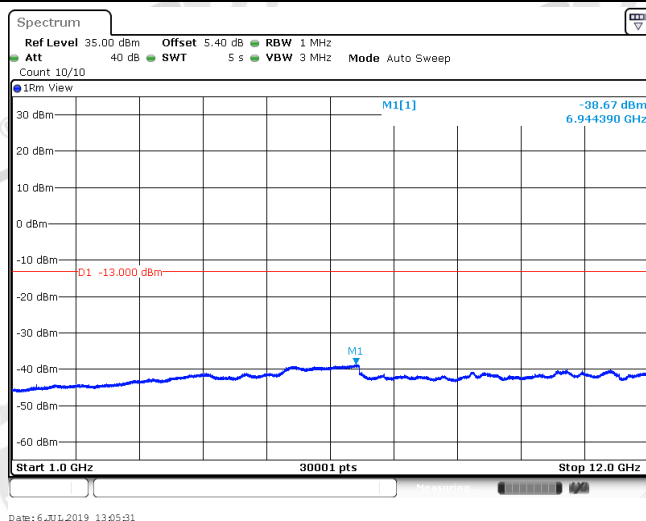
Band12_10MHz_QPSK_23095_1RB#0



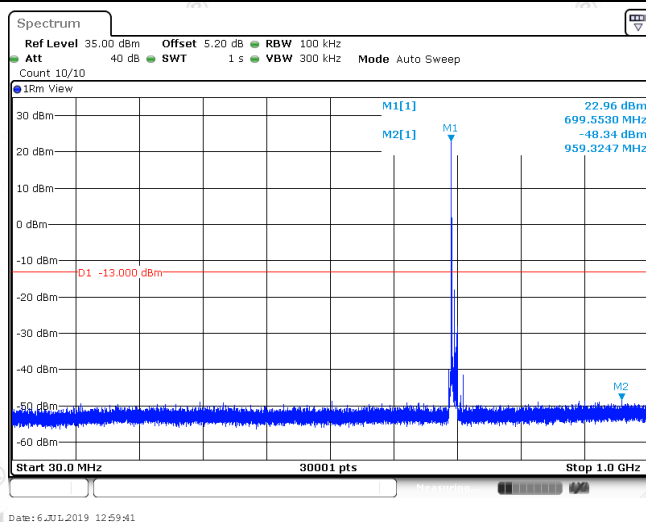
Band12_10MHz_QPSK_23130_1RB#0



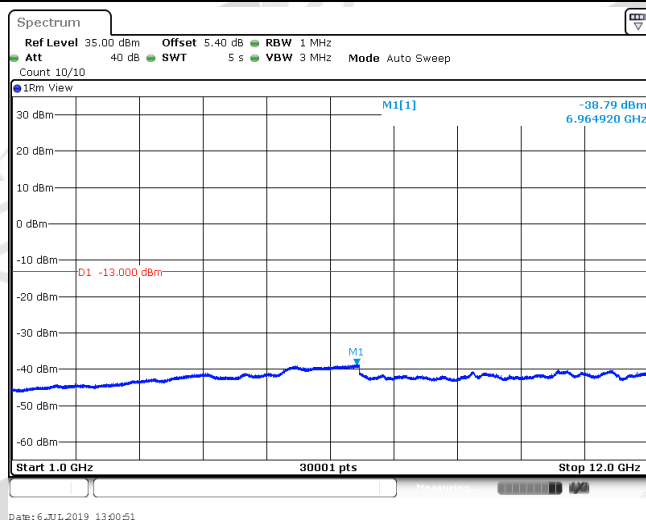
Band12_10MHz_QPSK_23130_1RB#0



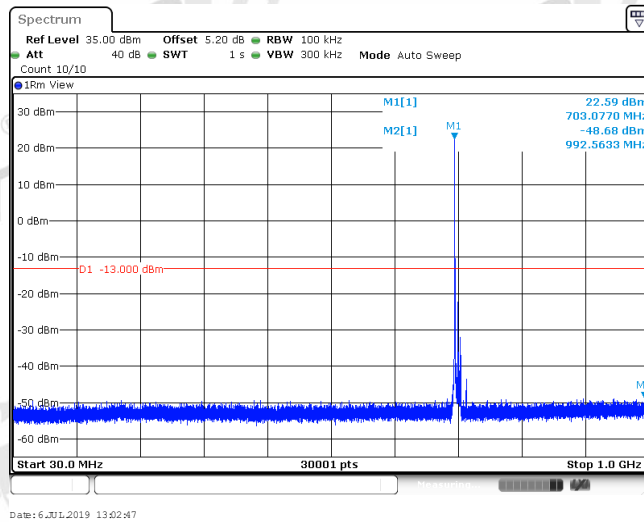
Band12_10MHz_16QAM_23060_1RB#0



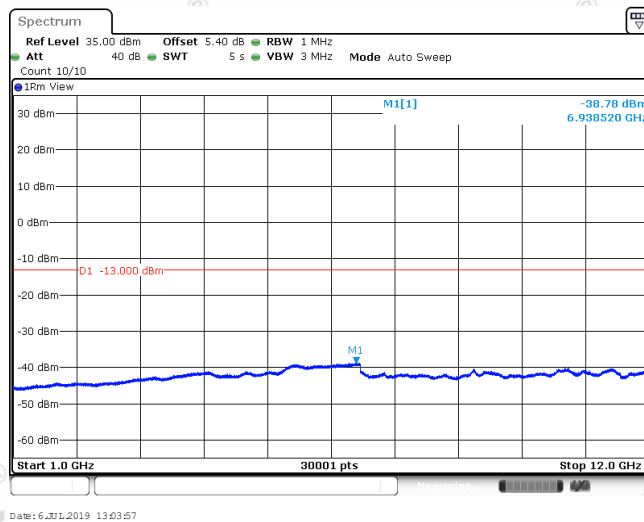
Band12_10MHz_16QAM_23060_1RB#0



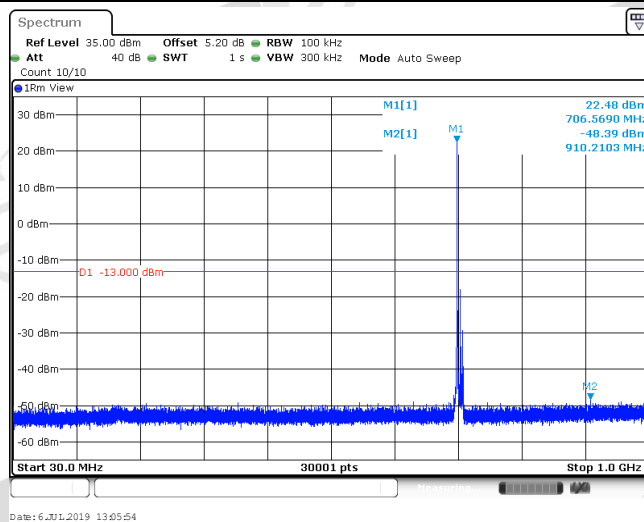
Band12_10MHz_16QAM_23095_1RB#0

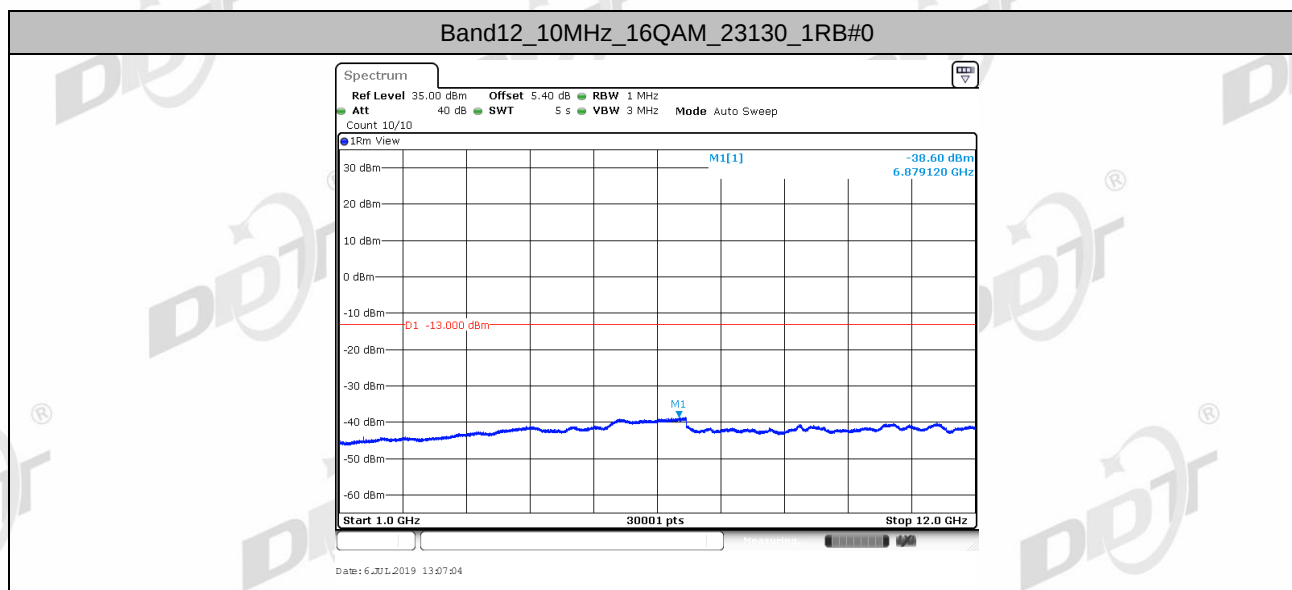


Band12_10MHz_16QAM_23095_1RB#0



Band12_10MHz_16QAM_23130_1RB#0





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	-0.80	-0.001136	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	VH	NT	-1.20	-0.001705	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VL	NT	-0.50	-0.000707	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VN	NT	-0.80	-0.001131	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VH	NT	0.50	0.000707	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VL	NT	-2.00	-0.002813	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VN	NT	-0.10	-0.000141	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VH	NT	-1.00	-0.001406	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VL	NT	0.40	0.000568	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VN	NT	-1.70	-0.002415	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VH	NT	-0.50	-0.000710	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VL	NT	-1.40	-0.001979	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VN	NT	-0.20	-0.000283	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VH	NT	-0.40	-0.000565	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VL	NT	-0.90	-0.001266	±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	-1.20	-0.001688	±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	-0.90	-0.001278	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	0	-0.30	-0.000426	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	10	-0.80	-0.001136	±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	30	-0.50	-0.000710	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	40	-1.50	-0.002131	±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	-1.40	-0.001979	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-20	-0.60	-0.000848	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	0	-1.00	-0.001413	±2.5	PASS

Band12	10MHz	QPSK	23095	50RB#0	NV	10	0.20	0.000283	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	20	-1.30	-0.001837	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	30	-1.40	-0.001979	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	40	-1.30	-0.001837	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	50	-0.70	-0.000989	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-30	-2.30	-0.003235	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-20	-1.20	-0.001688	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	0	-0.90	-0.001266	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	10	-1.90	-0.002672	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	20	-0.30	-0.000422	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	30	-2.30	-0.003235	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	40	-0.90	-0.001266	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	50	-0.70	-0.000985	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	-30	-0.80	-0.001136	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	-20	1.10	0.001563	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	0	-0.40	-0.000568	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	10	-1.10	-0.001563	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	20	-1.30	-0.001847	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	30	0.70	0.000994	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	40	0.90	0.001278	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	50	-0.40	-0.000568	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	-30	-1.30	-0.001837	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	-20	0.30	0.000424	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	0	0.30	0.000424	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	10	0.30	0.000424	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	20	-1.30	-0.001837	±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	40	1.30	0.001837	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	50	-1.00	-0.001413	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	-30	-1.00	-0.001406	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	-20	-0.10	-0.000141	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	0	-1.60	-0.002250	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	10	-0.70	-0.000985	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	20	-0.40	-0.000563	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	30	-1.50	-0.002110	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	40	-1.70	-0.002391	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	50	-0.70	-0.000985	±2.5	PASS

The End