

Appendix B.7

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]	$U = \pm 0.37$ dB
Bandwidth	Magnitude [%]	$U = \pm 0.2\%$
Band Edge Compliance	Disturbance Power [dBm]	$U = \pm 2.0$ dB
Spurious Emissions, Conducted	Disturbance Power [dBm]	$U = \pm 2.0$ dB
Frequency Stability	Frequency Accuracy [ppm]	$U = \pm 0.24$ 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	23.69	18.54	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	23.84	18.69	34.77	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	23.70	18.55	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#0	23.78	18.63	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#1	23.83	18.68	34.77	PASS
Band12	1.4MHz	QPSK	23017	3RB#3	23.81	18.66	34.77	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	22.77	17.62	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	23.67	18.52	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#2	23.78	18.63	34.77	PASS
Band12	1.4MHz	QPSK	23095	1RB#5	23.69	18.54	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#0	23.78	18.63	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#1	23.83	18.68	34.77	PASS
Band12	1.4MHz	QPSK	23095	3RB#3	23.80	18.65	34.77	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	22.78	17.63	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	23.63	18.48	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	23.75	18.60	34.77	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	23.66	18.51	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#0	23.74	18.59	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#1	23.79	18.64	34.77	PASS
Band12	1.4MHz	QPSK	23173	3RB#3	23.75	18.60	34.77	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	22.74	17.59	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	23.07	17.92	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	23.22	18.07	34.77	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	23.04	17.89	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#0	22.96	17.81	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#1	23.00	17.85	34.77	PASS
Band12	1.4MHz	16QAM	23017	3RB#3	22.87	17.72	34.77	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	21.94	16.79	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	22.97	17.82	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#2	23.08	17.93	34.77	PASS
Band12	1.4MHz	16QAM	23095	1RB#5	22.96	17.81	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#0	22.95	17.80	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#1	22.97	17.82	34.77	PASS
Band12	1.4MHz	16QAM	23095	3RB#3	22.99	17.84	34.77	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	21.93	16.78	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	22.88	17.73	34.77	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	23.06	17.91	34.77	PASS

Band12	1.4MHz	16QAM	23173	1RB#5	22.91	17.76	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#0	22.91	17.76	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#1	22.91	17.76	34.77	PASS
Band12	1.4MHz	16QAM	23173	3RB#3	22.90	17.75	34.77	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	21.85	16.70	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#0	23.75	18.60	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#8	23.77	18.62	34.77	PASS
Band12	3MHz	QPSK	23025	1RB#14	23.76	18.61	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#0	22.74	17.59	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#4	22.81	17.66	34.77	PASS
Band12	3MHz	QPSK	23025	8RB#7	22.76	17.61	34.77	PASS
Band12	3MHz	QPSK	23025	15RB#0	22.75	17.60	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#0	23.70	18.55	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#8	23.71	18.56	34.77	PASS
Band12	3MHz	QPSK	23095	1RB#14	23.71	18.56	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#0	22.73	17.58	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#4	22.82	17.67	34.77	PASS
Band12	3MHz	QPSK	23095	8RB#7	22.75	17.60	34.77	PASS
Band12	3MHz	QPSK	23095	15RB#0	22.71	17.56	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#0	23.67	18.52	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#8	23.66	18.51	34.77	PASS
Band12	3MHz	QPSK	23165	1RB#14	23.68	18.53	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#0	22.71	17.56	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#4	22.72	17.57	34.77	PASS
Band12	3MHz	QPSK	23165	8RB#7	22.69	17.54	34.77	PASS
Band12	3MHz	QPSK	23165	15RB#0	22.65	17.50	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#0	23.06	17.91	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#8	23.12	17.97	34.77	PASS
Band12	3MHz	16QAM	23025	1RB#14	23.08	17.93	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#0	21.87	16.72	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#4	21.93	16.78	34.77	PASS
Band12	3MHz	16QAM	23025	8RB#7	21.88	16.73	34.77	PASS
Band12	3MHz	16QAM	23025	15RB#0	21.80	16.65	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#0	22.98	17.83	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#8	23.04	17.89	34.77	PASS
Band12	3MHz	16QAM	23095	1RB#14	23.07	17.92	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#0	21.86	16.71	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#4	21.89	16.74	34.77	PASS
Band12	3MHz	16QAM	23095	8RB#7	21.86	16.71	34.77	PASS
Band12	3MHz	16QAM	23095	15RB#0	21.79	16.64	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#0	22.90	17.75	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#8	23.04	17.89	34.77	PASS
Band12	3MHz	16QAM	23165	1RB#14	23.03	17.88	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#0	21.85	16.70	34.77	PASS

Band12	3MHz	16QAM	23165	8RB#4	21.84	16.69	34.77	PASS
Band12	3MHz	16QAM	23165	8RB#7	21.81	16.66	34.77	PASS
Band12	3MHz	16QAM	23165	15RB#0	21.70	16.55	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#0	23.62	18.47	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#12	23.92	18.77	34.77	PASS
Band12	5MHz	QPSK	23035	1RB#24	23.62	18.47	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#0	22.77	17.62	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#6	22.81	17.66	34.77	PASS
Band12	5MHz	QPSK	23035	12RB#13	22.72	17.57	34.77	PASS
Band12	5MHz	QPSK	23035	25RB#0	22.71	17.56	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#0	23.63	18.48	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#12	23.90	18.75	34.77	PASS
Band12	5MHz	QPSK	23095	1RB#24	23.57	18.42	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#0	22.73	17.58	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#6	22.83	17.68	34.77	PASS
Band12	5MHz	QPSK	23095	12RB#13	22.74	17.59	34.77	PASS
Band12	5MHz	QPSK	23095	25RB#0	22.74	17.59	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#0	23.58	18.43	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#12	23.83	18.68	34.77	PASS
Band12	5MHz	QPSK	23155	1RB#24	23.56	18.41	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#0	22.76	17.61	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#6	22.76	17.61	34.77	PASS
Band12	5MHz	QPSK	23155	12RB#13	22.59	17.44	34.77	PASS
Band12	5MHz	QPSK	23155	25RB#0	22.66	17.51	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#0	22.88	17.73	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#12	23.21	18.06	34.77	PASS
Band12	5MHz	16QAM	23035	1RB#24	22.92	17.77	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#0	21.85	16.70	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#6	21.88	16.73	34.77	PASS
Band12	5MHz	16QAM	23035	12RB#13	21.81	16.66	34.77	PASS
Band12	5MHz	16QAM	23035	25RB#0	21.77	16.62	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#0	23.00	17.85	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#12	23.22	18.07	34.77	PASS
Band12	5MHz	16QAM	23095	1RB#24	22.89	17.74	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#0	21.83	16.68	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#6	21.90	16.75	34.77	PASS
Band12	5MHz	16QAM	23095	12RB#13	21.82	16.67	34.77	PASS
Band12	5MHz	16QAM	23095	25RB#0	21.80	16.65	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#0	22.86	17.71	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#12	23.18	18.03	34.77	PASS
Band12	5MHz	16QAM	23155	1RB#24	22.85	17.70	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#0	21.79	16.64	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#6	21.82	16.67	34.77	PASS
Band12	5MHz	16QAM	23155	12RB#13	21.67	16.52	34.77	PASS

Band12	5MHz	16QAM	23155	25RB#0	21.73	16.58	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#0	23.75	18.60	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#24	23.83	18.68	34.77	PASS
Band12	10MHz	QPSK	23060	1RB#49	23.70	18.55	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#0	22.85	17.70	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#12	22.79	17.64	34.77	PASS
Band12	10MHz	QPSK	23060	25RB#25	22.80	17.65	34.77	PASS
Band12	10MHz	QPSK	23060	50RB#0	22.85	17.70	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#0	23.74	18.59	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#24	23.79	18.64	34.77	PASS
Band12	10MHz	QPSK	23095	1RB#49	23.66	18.51	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#0	22.81	17.66	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#12	22.76	17.61	34.77	PASS
Band12	10MHz	QPSK	23095	25RB#25	22.79	17.64	34.77	PASS
Band12	10MHz	QPSK	23095	50RB#0	22.82	17.67	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#0	23.71	18.56	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#24	23.78	18.63	34.77	PASS
Band12	10MHz	QPSK	23130	1RB#49	23.63	18.48	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#0	22.73	17.58	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#12	22.72	17.57	34.77	PASS
Band12	10MHz	QPSK	23130	25RB#25	22.62	17.47	34.77	PASS
Band12	10MHz	QPSK	23130	50RB#0	22.65	17.50	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#0	22.97	17.82	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#24	23.17	18.02	34.77	PASS
Band12	10MHz	16QAM	23060	1RB#49	23.04	17.89	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#0	21.90	16.75	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#12	21.86	16.71	34.77	PASS
Band12	10MHz	16QAM	23060	25RB#25	21.86	16.71	34.77	PASS
Band12	10MHz	16QAM	23060	50RB#0	21.88	16.73	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#0	23.10	17.95	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#24	23.18	18.03	34.77	PASS
Band12	10MHz	16QAM	23095	1RB#49	23.03	17.88	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#0	21.85	16.70	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#12	21.80	16.65	34.77	PASS
Band12	10MHz	16QAM	23095	25RB#25	21.83	16.68	34.77	PASS
Band12	10MHz	16QAM	23095	50RB#0	21.87	16.72	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#0	23.00	17.85	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#24	23.02	17.87	34.77	PASS
Band12	10MHz	16QAM	23130	1RB#49	22.94	17.79	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#0	21.77	16.62	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#12	21.77	16.62	34.77	PASS
Band12	10MHz	16QAM	23130	25RB#25	21.65	16.50	34.77	PASS
Band12	10MHz	16QAM	23130	50RB#0	21.72	16.57	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)

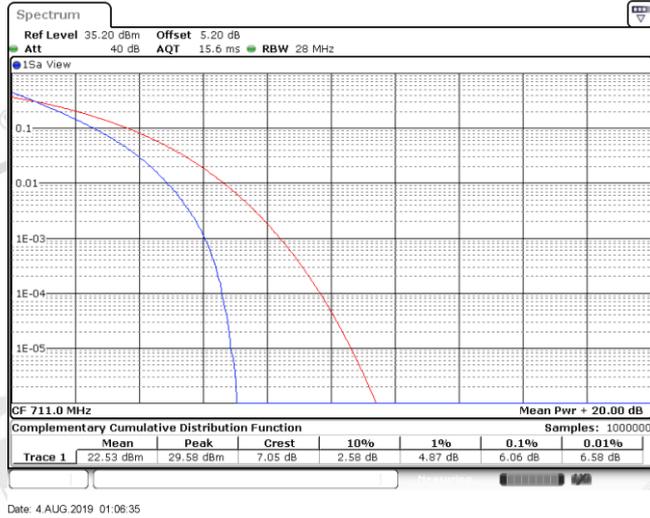
4.1. Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band12	10MHz	QPSK	23060	50RB#0	6.20	13	PASS
Band12	10MHz	QPSK	23095	50RB#0	6.09	13	PASS
Band12	10MHz	QPSK	23130	50RB#0	6.06	13	PASS
Band12	10MHz	16QAM	23060	50RB#0	6.70	13	PASS
Band12	10MHz	16QAM	23095	50RB#0	6.75	13	PASS
Band12	10MHz	16QAM	23130	50RB#0	6.70	13	PASS

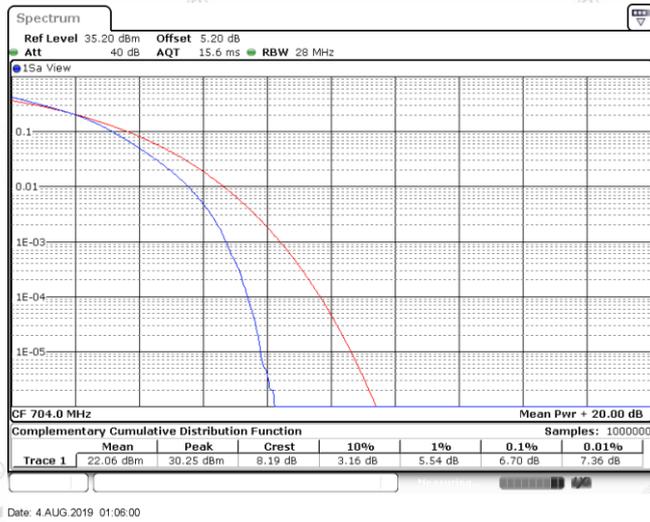
4.2. Test Plots



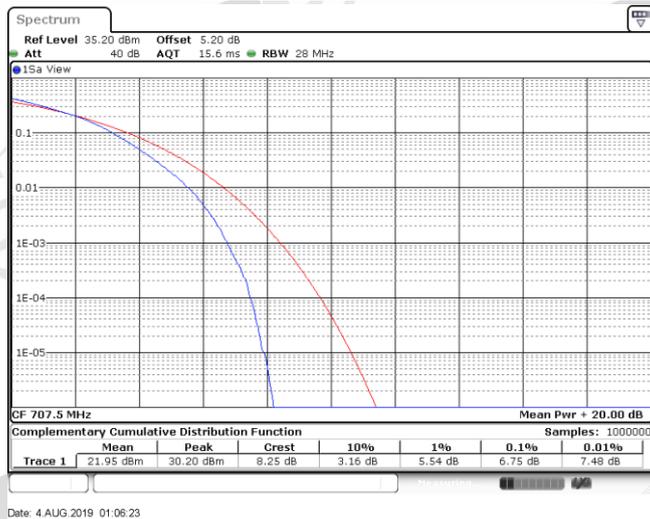
Band12_10MHz_QPSK_23130_50RB#0

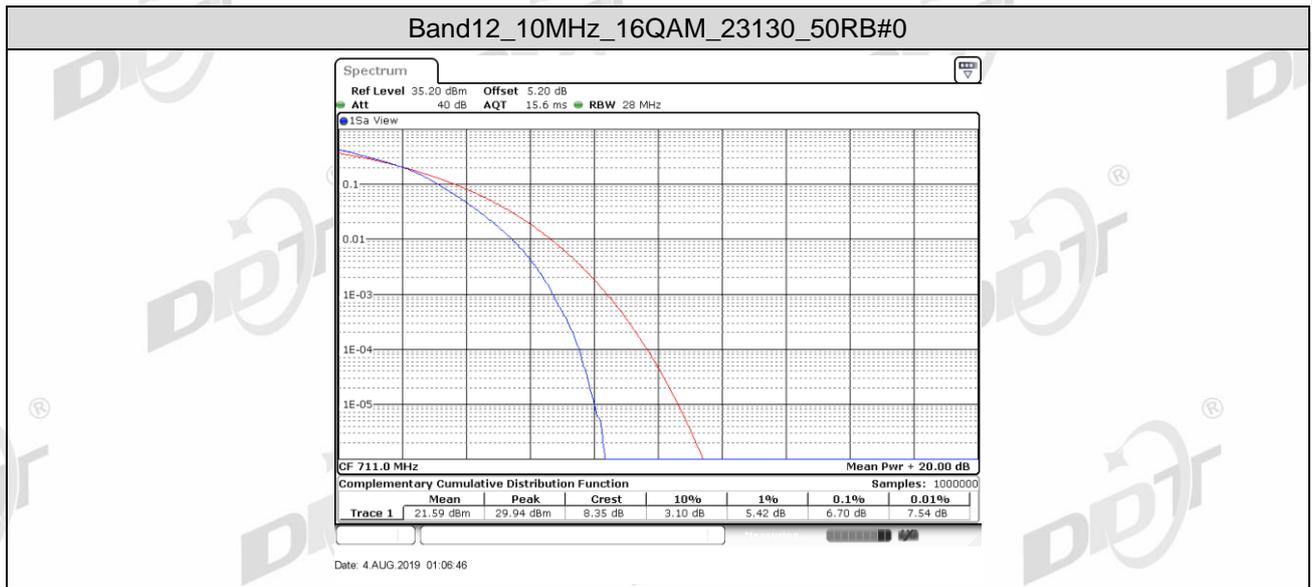


Band12_10MHz_16QAM_23060_50RB#0



Band12_10MHz_16QAM_23095_50RB#0



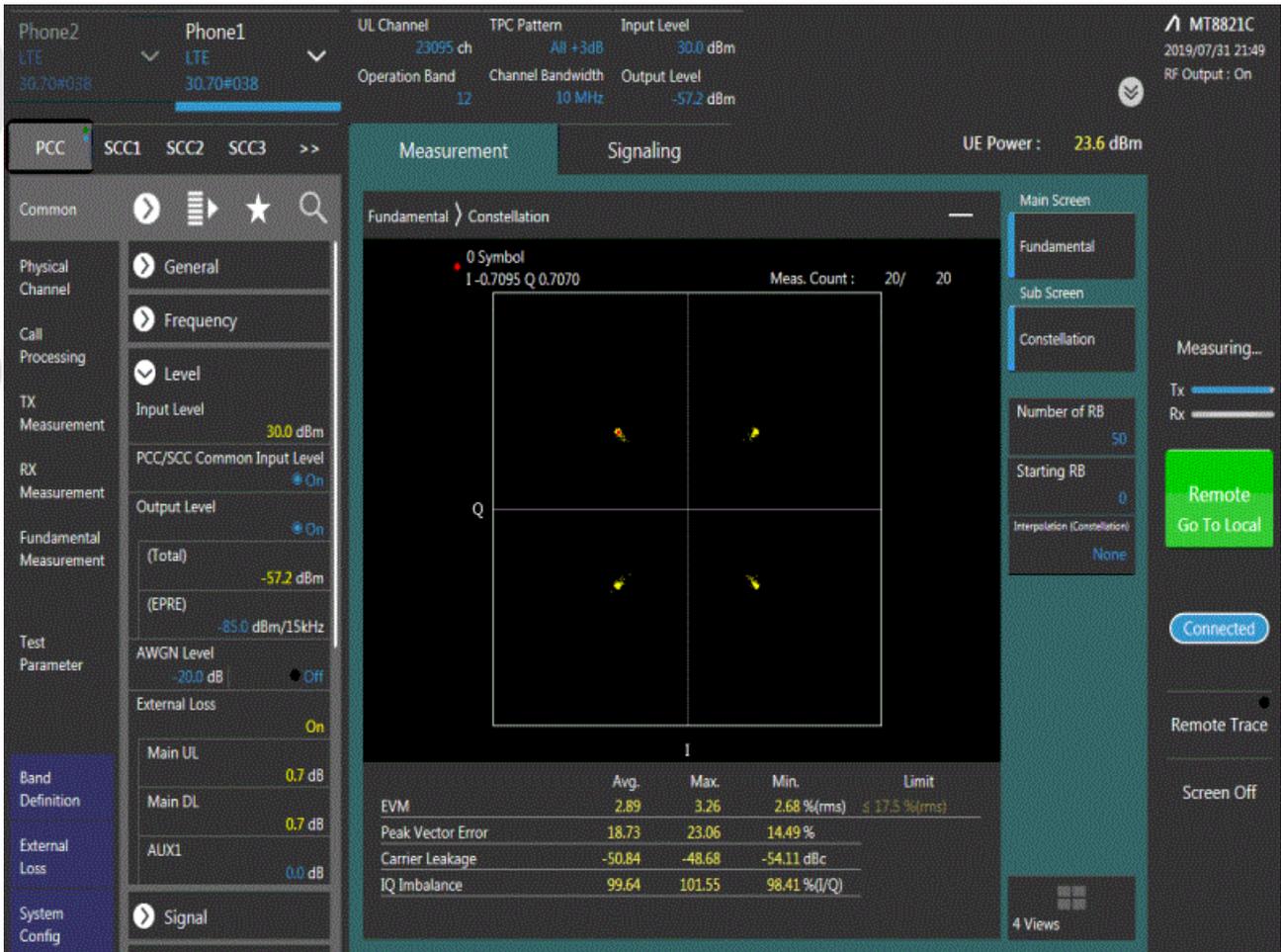


5. Modulation Characteristics

5.1. Test Band = LTE Band 12

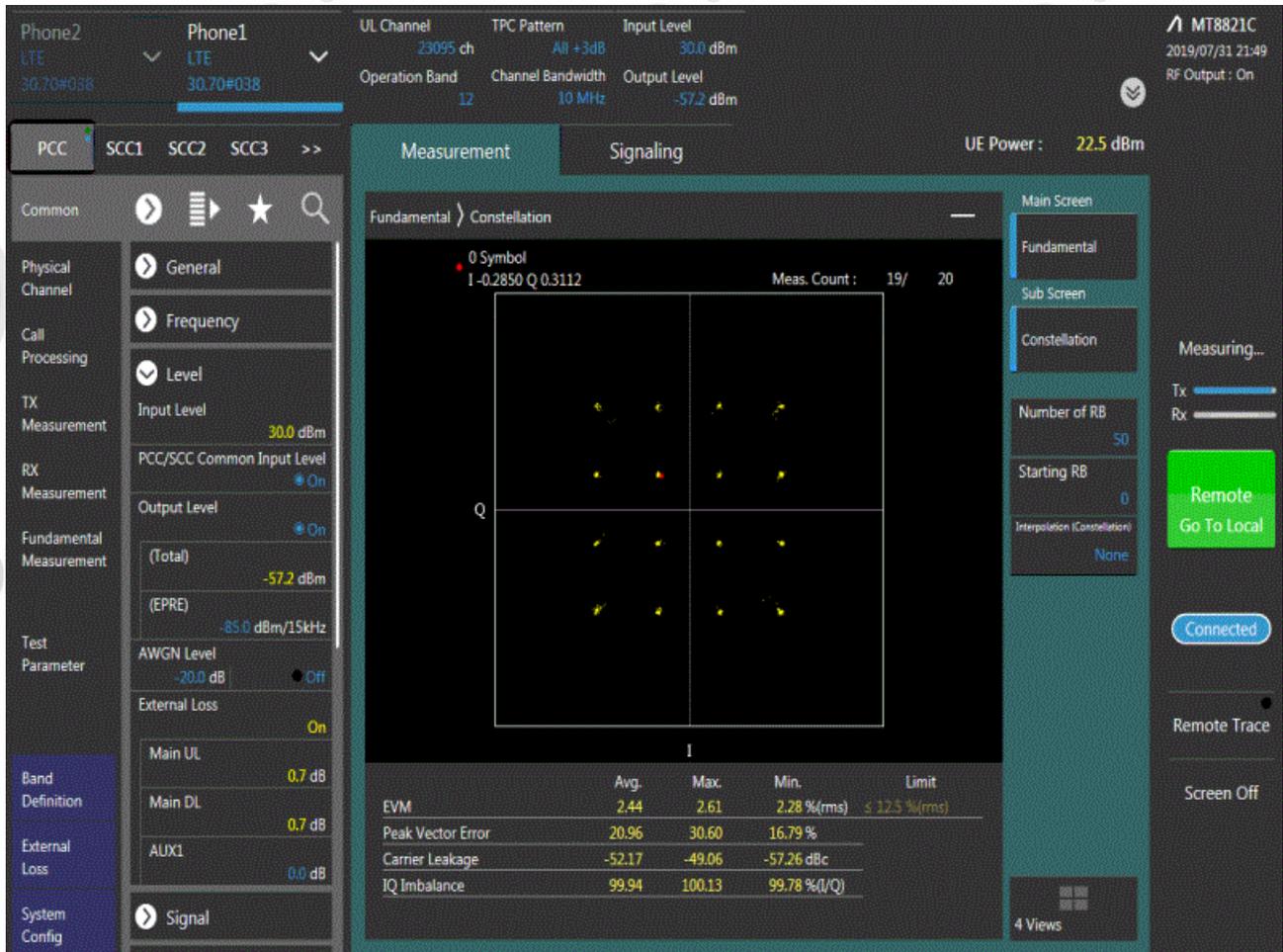
5.2. Test Mode = LTE /TM1 10MHz

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

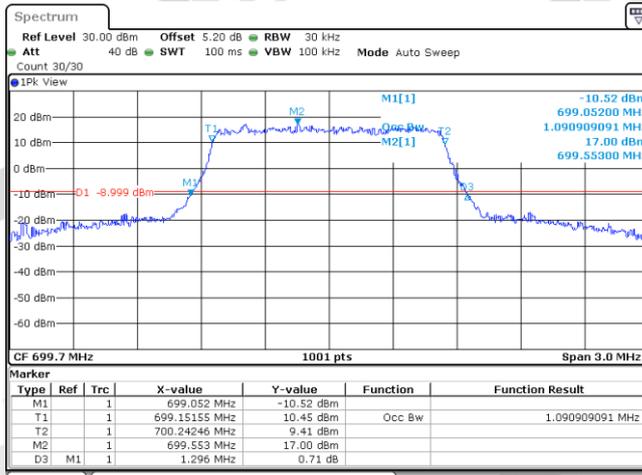
6.1. Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band12	1.4MHz	QPSK	23017	6RB#0	1.088	1.257	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	1.091	1.269	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	1.094	1.302	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	1.091	1.296	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	1.094	1.299	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	1.091	1.287	PASS
Band12	3MHz	QPSK	23025	15RB#0	2.685	2.916	PASS
Band12	3MHz	QPSK	23095	15RB#0	2.685	2.916	PASS
Band12	3MHz	QPSK	23165	15RB#0	2.697	2.916	PASS
Band12	3MHz	16QAM	23025	15RB#0	2.673	2.898	PASS
Band12	3MHz	16QAM	23095	15RB#0	2.679	2.910	PASS
Band12	3MHz	16QAM	23165	15RB#0	2.679	2.916	PASS
Band12	5MHz	QPSK	23035	25RB#0	4.476	5.030	PASS
Band12	5MHz	QPSK	23095	25RB#0	4.486	5.050	PASS
Band12	5MHz	QPSK	23155	25RB#0	4.486	5.040	PASS
Band12	5MHz	16QAM	23035	25RB#0	4.486	5.080	PASS
Band12	5MHz	16QAM	23095	25RB#0	4.486	5.080	PASS
Band12	5MHz	16QAM	23155	25RB#0	4.496	5.110	PASS
Band12	10MHz	QPSK	23060	50RB#0	8.971	9.920	PASS
Band12	10MHz	QPSK	23095	50RB#0	8.951	9.880	PASS
Band12	10MHz	QPSK	23130	50RB#0	8.911	9.800	PASS
Band12	10MHz	16QAM	23060	50RB#0	8.951	9.860	PASS
Band12	10MHz	16QAM	23095	50RB#0	8.951	9.860	PASS
Band12	10MHz	16QAM	23130	50RB#0	8.911	9.820	PASS

6.2. Test Plots

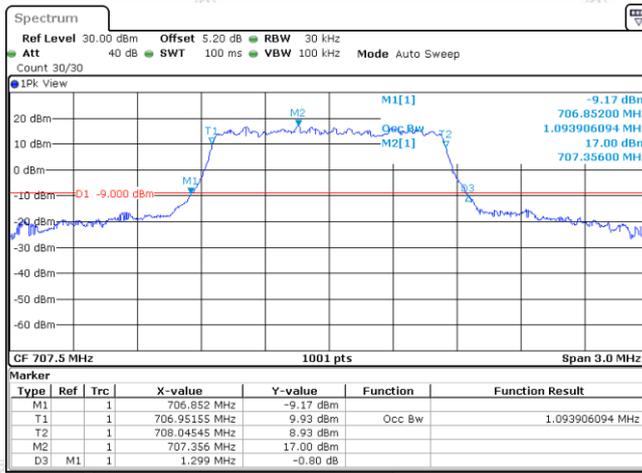


Band12_1.4MHz_16QAM_23017_6RB#0



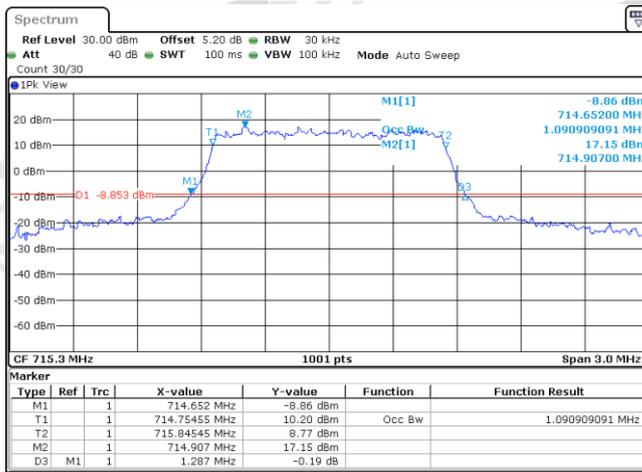
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Band12_1.4MHz_16QAM_23095_6RB#0



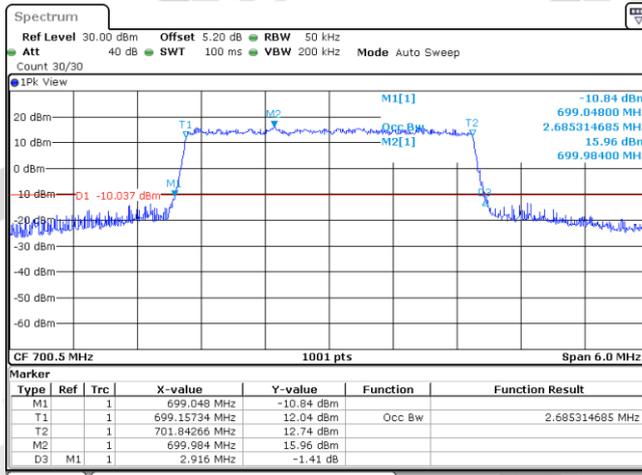
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Band12_1.4MHz_16QAM_23173_6RB#0



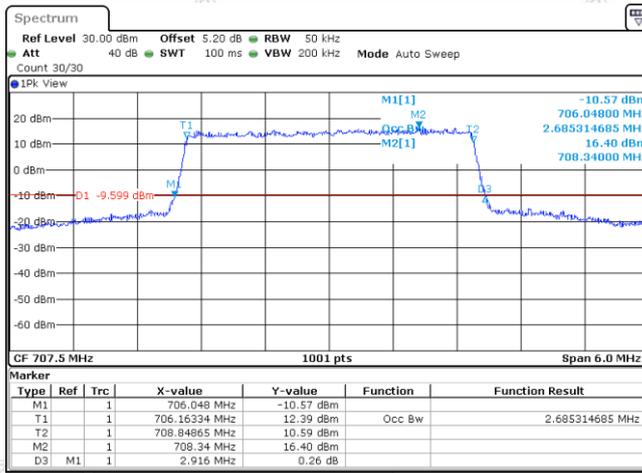
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Band12_3MHz_QPSK_23025_15RB#0



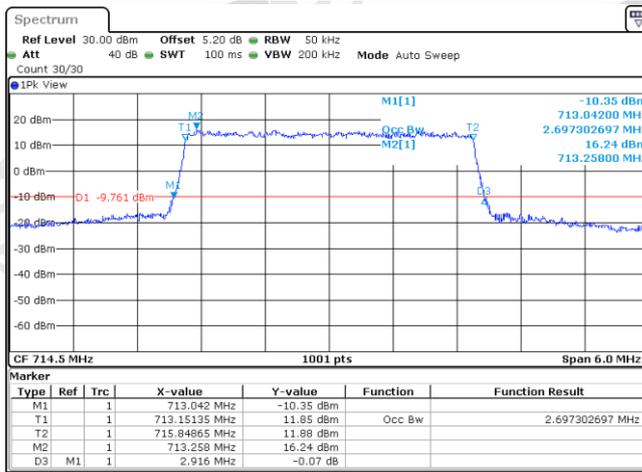
Date: 4 AUG 2019 00:41:08

Band12_3MHz_QPSK_23095_15RB#0



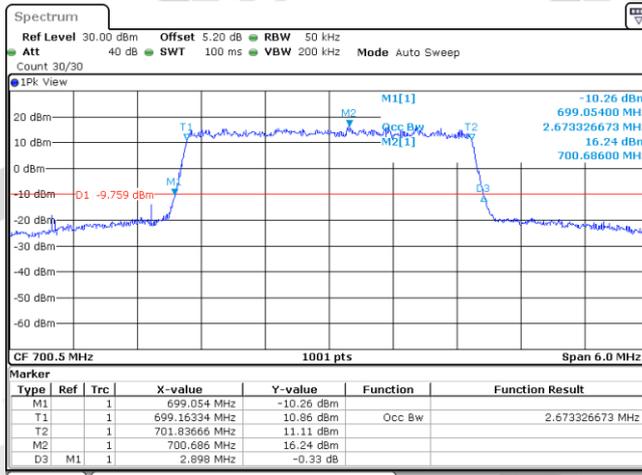
Date: 4 AUG 2019 00:41:34

Band12_3MHz_QPSK_23165_15RB#0



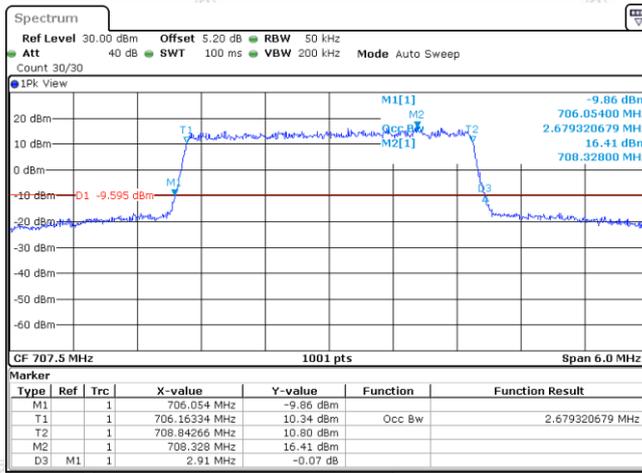
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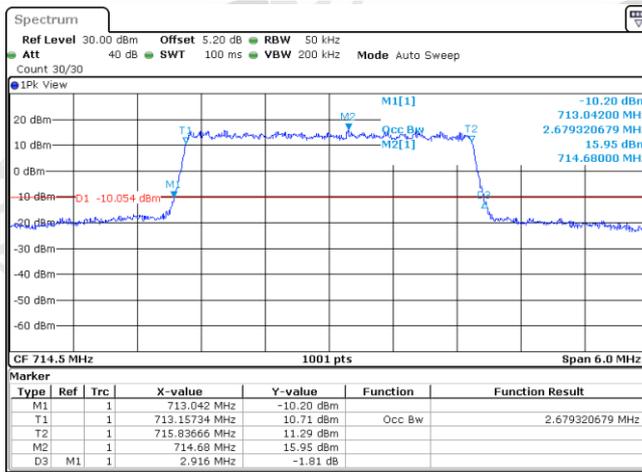
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Band12_3MHz_16QAM_23095_15RB#0



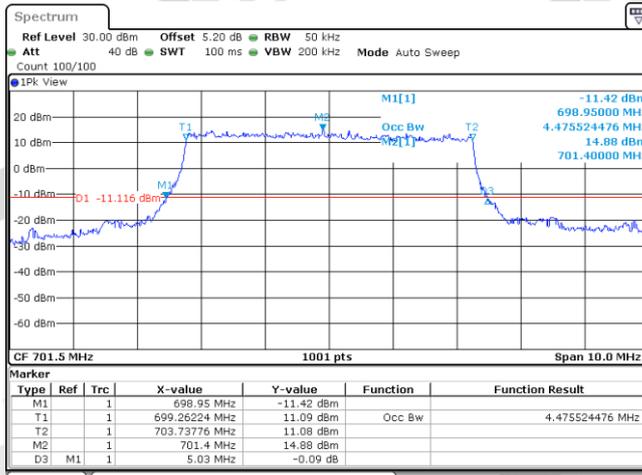
Date: 4 AUG 2019 00:41:46

Band12_3MHz_16QAM_23165_15RB#0



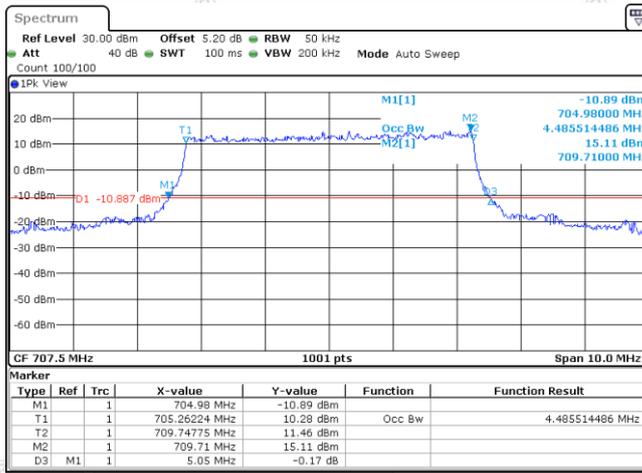
Date: 4 AUG 2019 00:42:12

Band12_5MHz_QPSK_23035_25RB#0



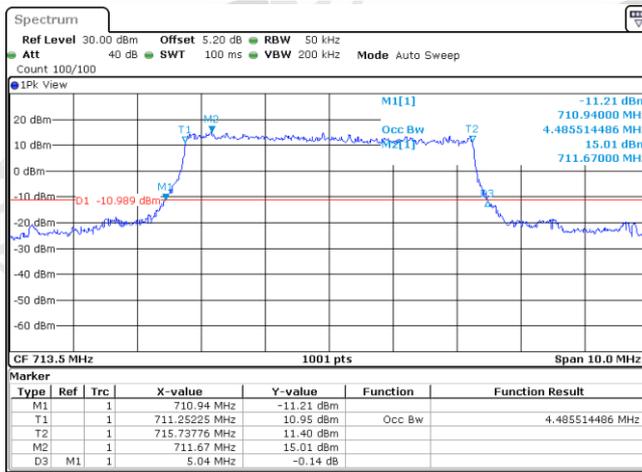
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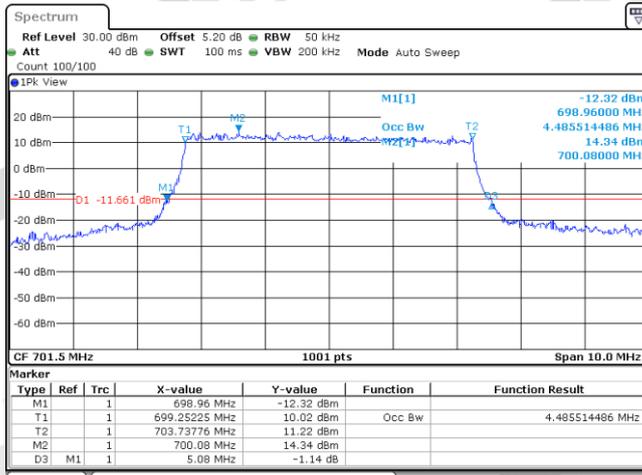
Date: 4 AUG 2019 00:43:17

Band12_5MHz_QPSK_23155_25RB#0



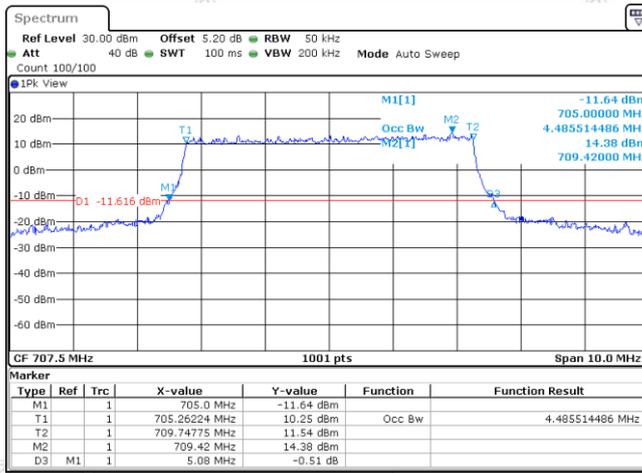
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Band12_5MHz_16QAM_23035_25RB#0



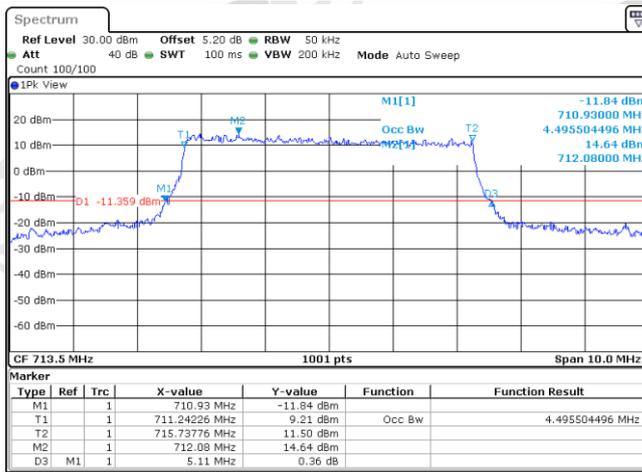
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Band12_5MHz_16QAM_23095_25RB#0



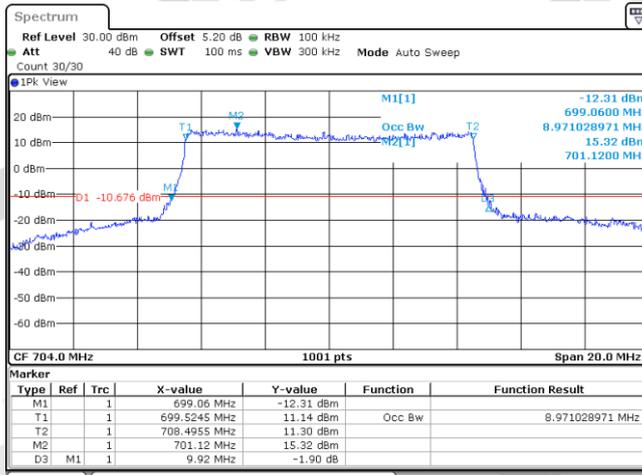
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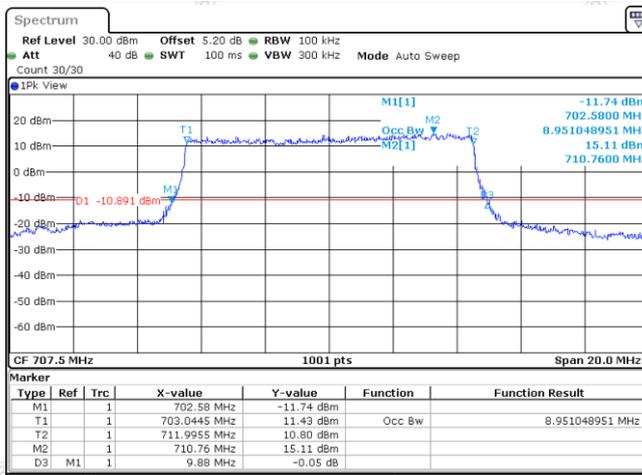
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Band12_10MHz_QPSK_23060_50RB#0



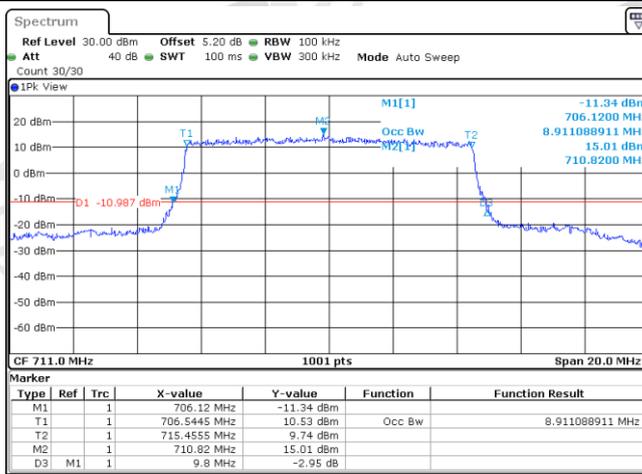
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Band12_10MHz_QPSK_23095_50RB#0



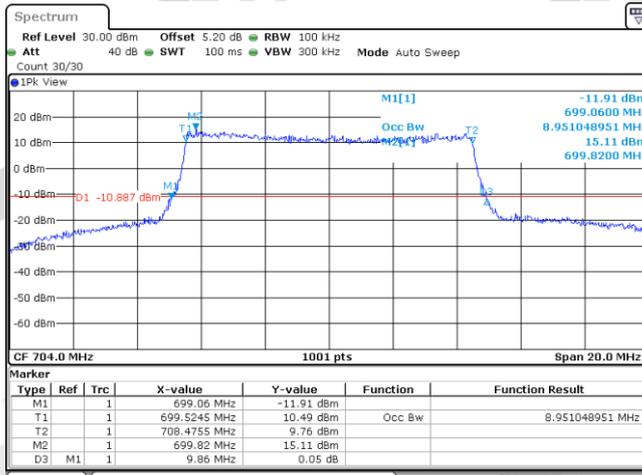
Date: 4 AUG.2019 00:45:00

Band12_10MHz_QPSK_23130_50RB#0



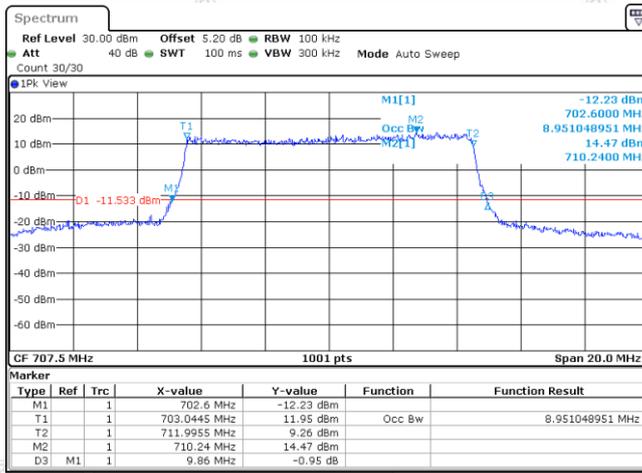
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Band12_10MHz_16QAM_23060_50RB#0



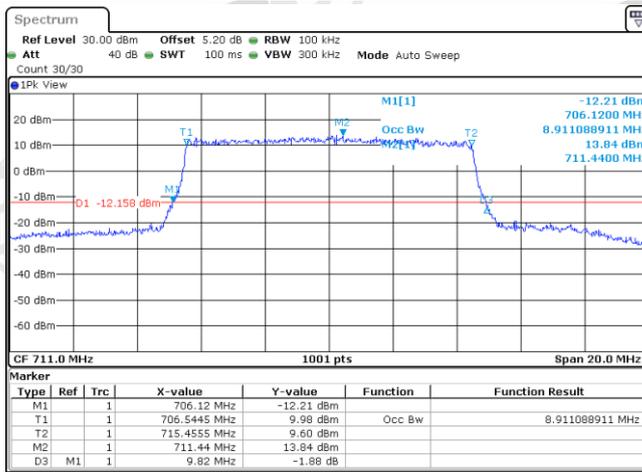
Date: 4 AUG 2019 00:44:47

Band12_10MHz_16QAM_23095_50RB#0



Date: 4 AUG 2019 00:45:13

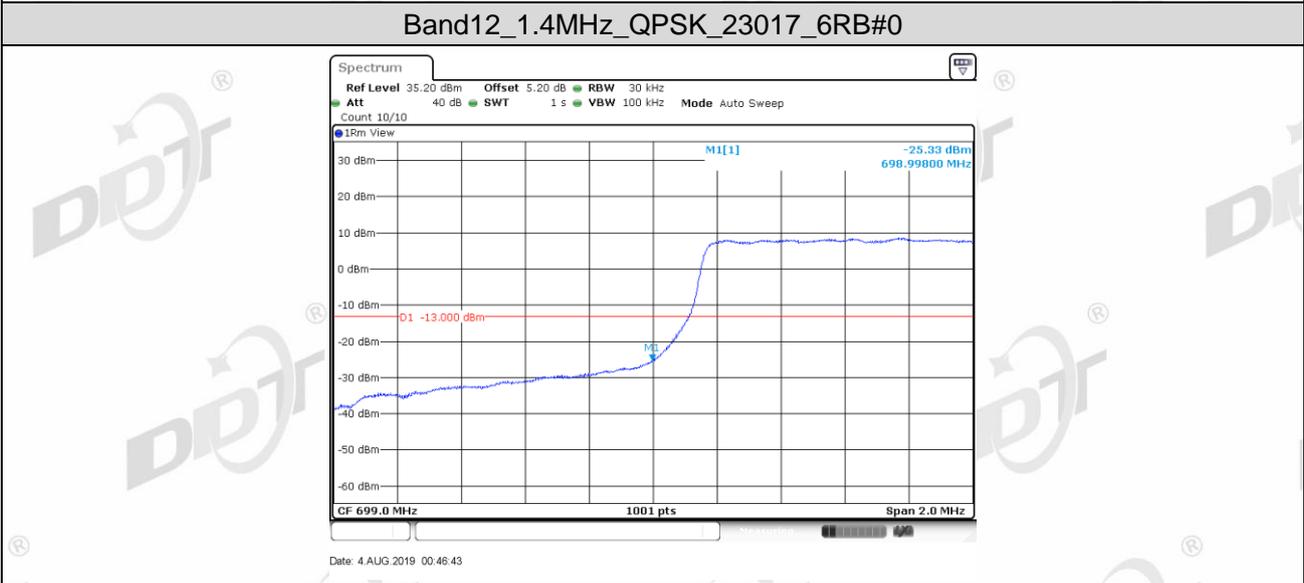
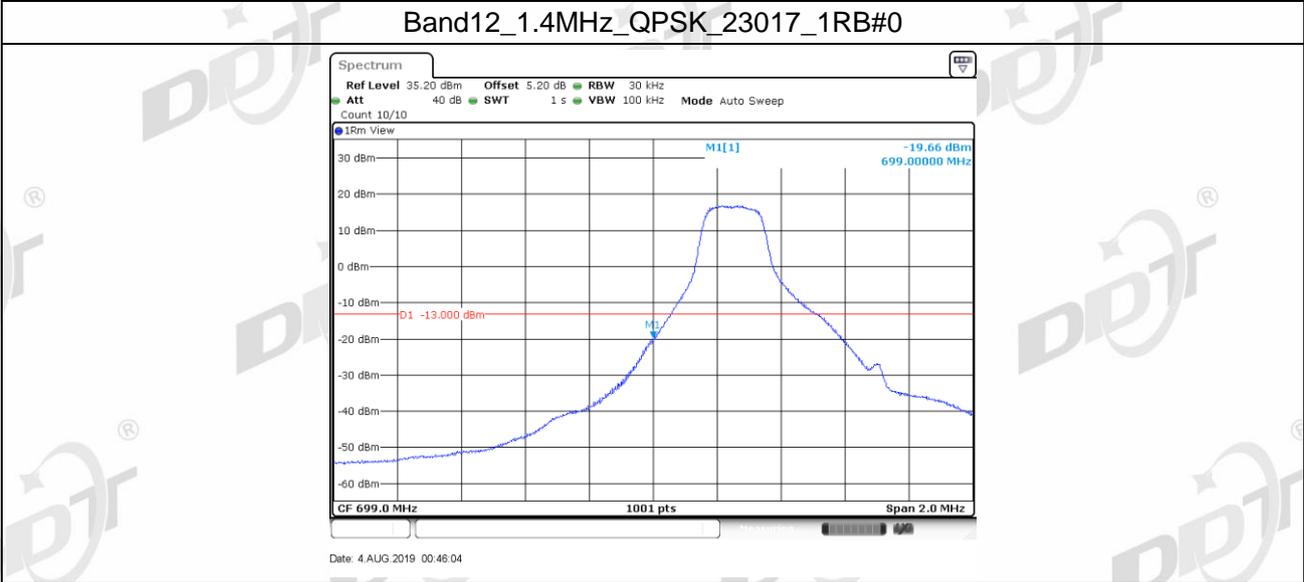
Band12_10MHz_16QAM_23130_50RB#0



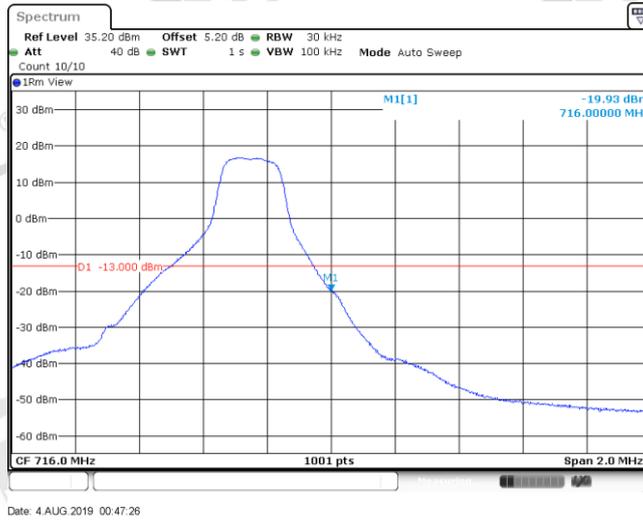
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7. Band Edge Compliance

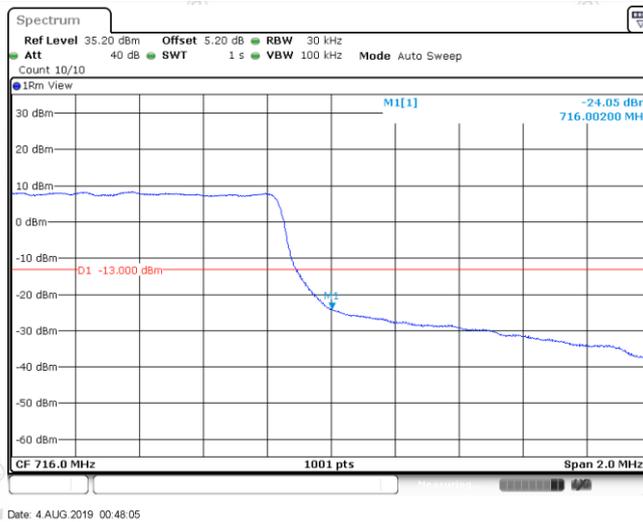
7.1. Test Plots



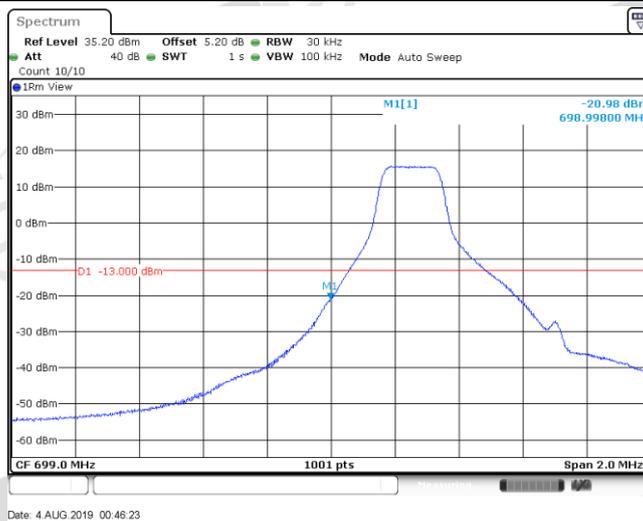
Band12_1.4MHz_QPSK_23173_1RB#5



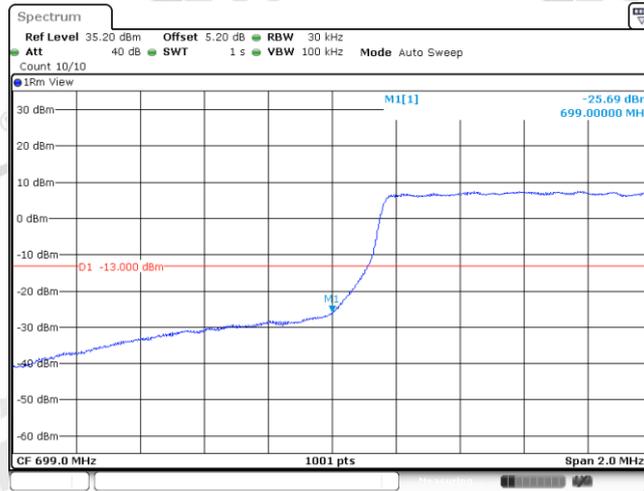
Band12_1.4MHz_QPSK_23173_6RB#0



Band12_1.4MHz_16QAM_23017_1RB#0



Band12_1.4MHz_16QAM_23017_6RB#0



Date: 4 AUG 2019 00:47:03

Band12_1.4MHz_16QAM_23173_1RB#5



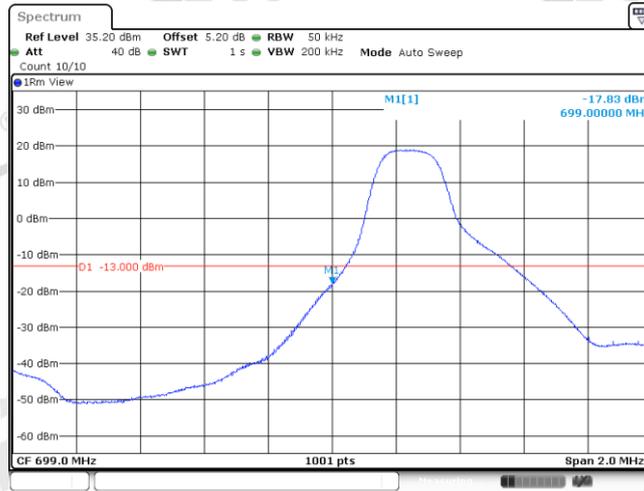
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Band12_1.4MHz_16QAM_23173_6RB#0



Date: 4 AUG 2019 00:48:25

Band12_3MHz_QPSK_23025_1RB#0



Date: 4 AUG 2019 00:48:51

Band12_3MHz_QPSK_23025_15RB#0



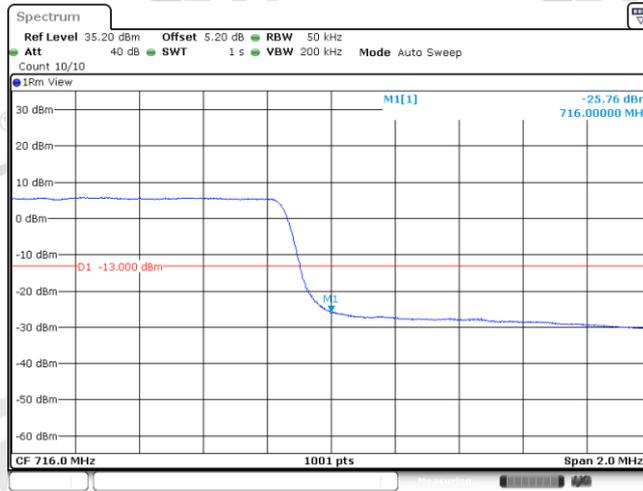
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Band12_3MHz_QPSK_23165_1RB#14



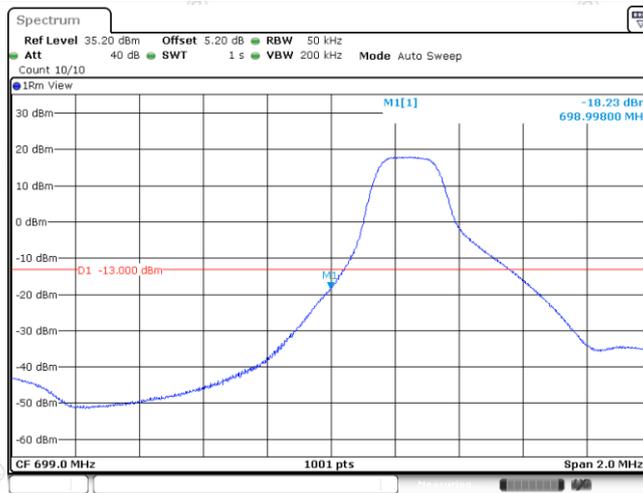
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Band12_3MHz_QPSK_23165_15RB#0



Date: 4 AUG 2019 00:50:53

Band12_3MHz_16QAM_23025_1RB#0



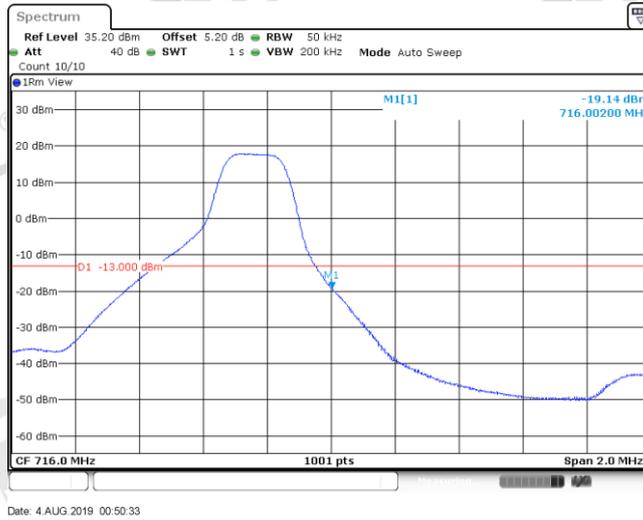
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Band12_3MHz_16QAM_23025_15RB#0

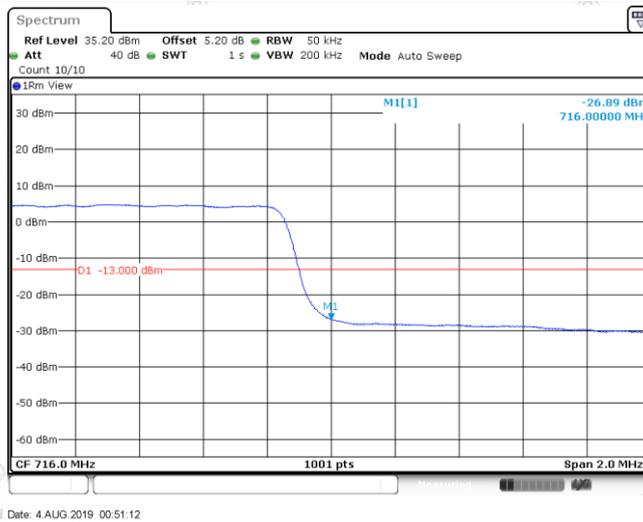


Date: 4 AUG 2019 00:49:50

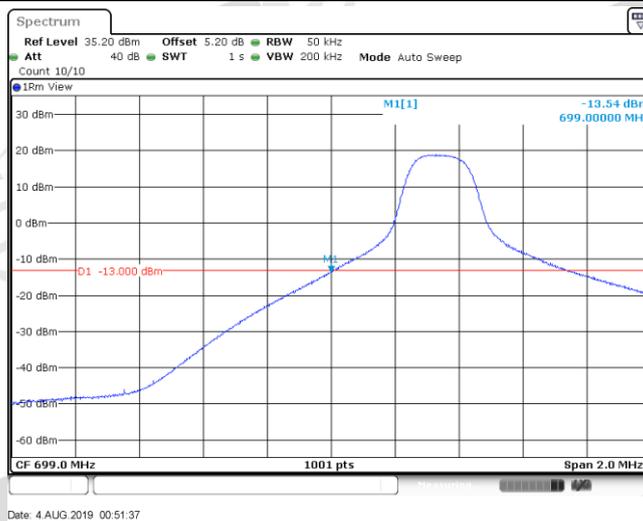
Band12_3MHz_16QAM_23165_1RB#14



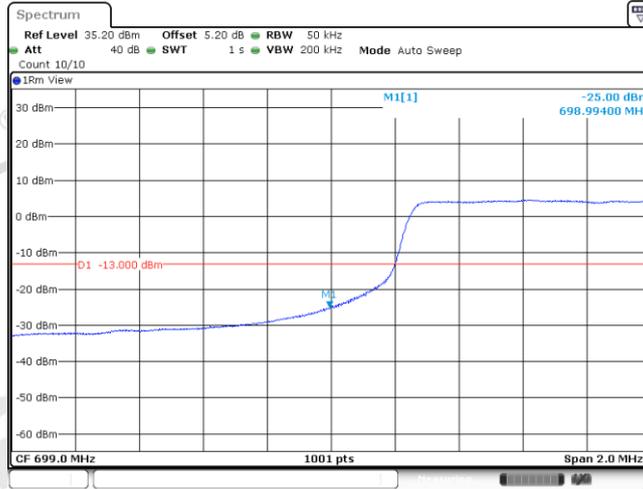
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Band12_5MHz_QPSK_23035_1RB#0

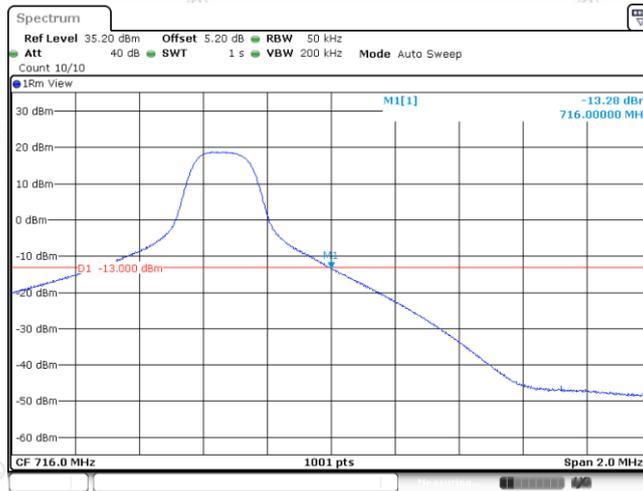


Band12_5MHz_QPSK_23035_25RB#0



Date: 4 AUG 2019 00:52:17

Band12_5MHz_QPSK_23155_1RB#24



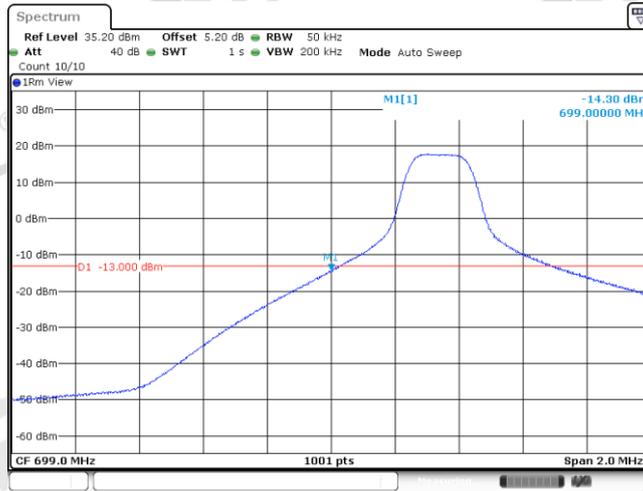
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Band12_5MHz_QPSK_23155_25RB#0



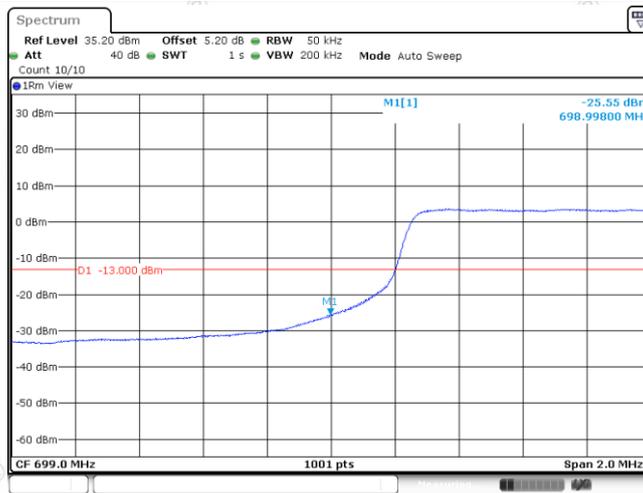
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Band12_5MHz_16QAM_23035_1RB#0



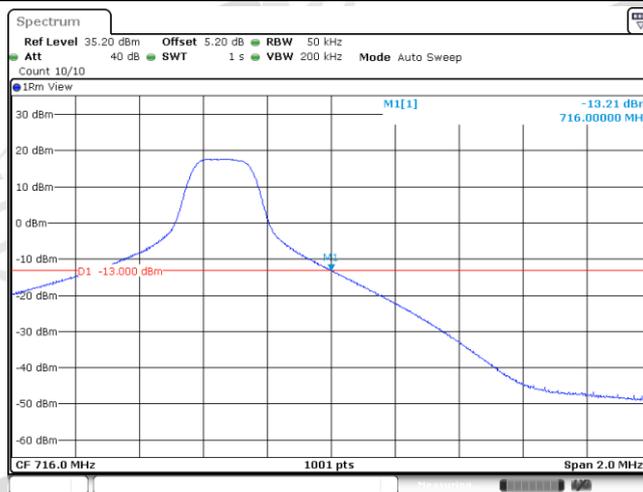
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Band12_5MHz_16QAM_23035_25RB#0



Date: 4 AUG 2019 00:52:38

Band12_5MHz_16QAM_23155_1RB#24



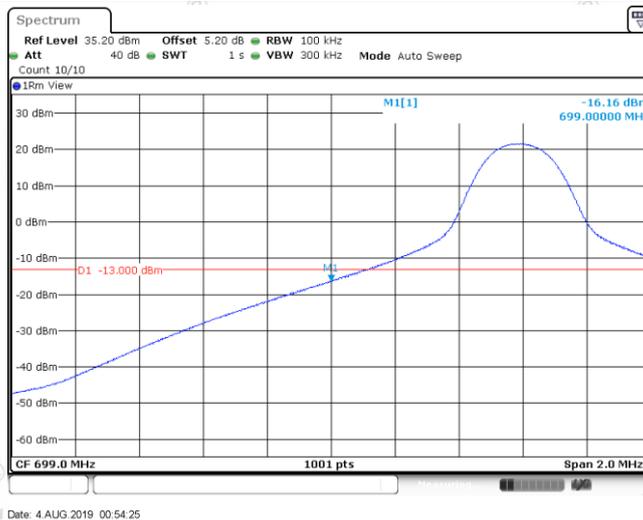
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Band12_5MHz_16QAM_23155_25RB#0



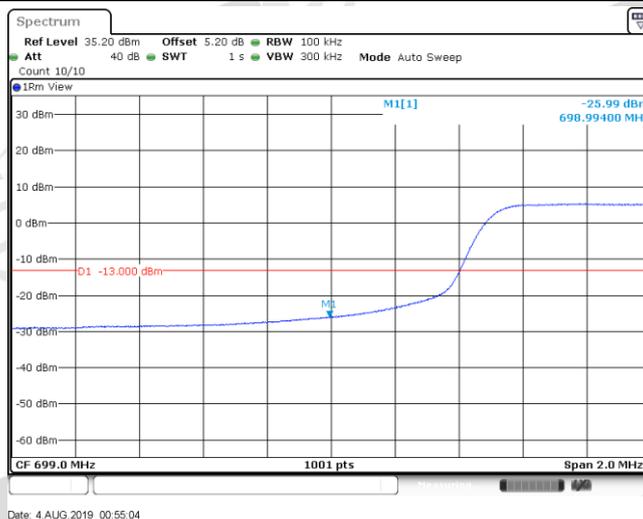
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Band12_10MHz_QPSK_23060_1RB#0



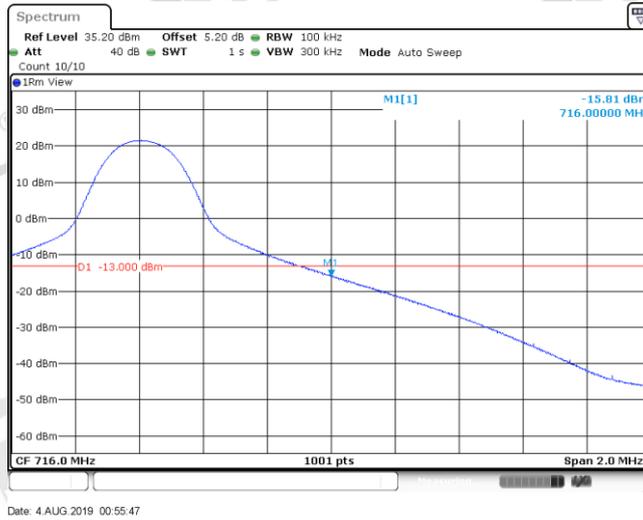
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Band12_10MHz_QPSK_23060_50RB#0

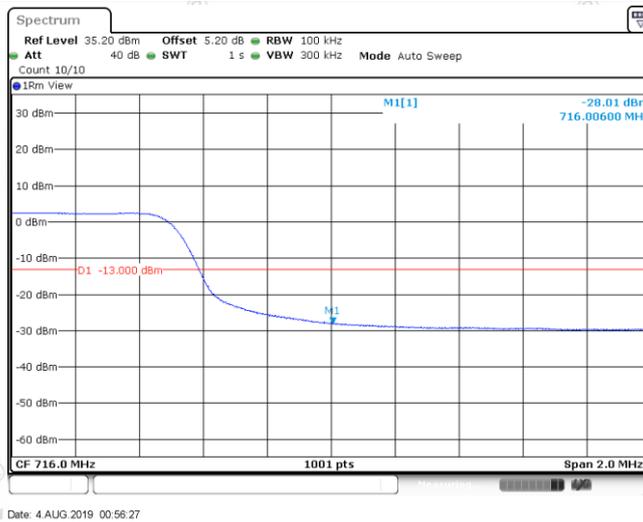


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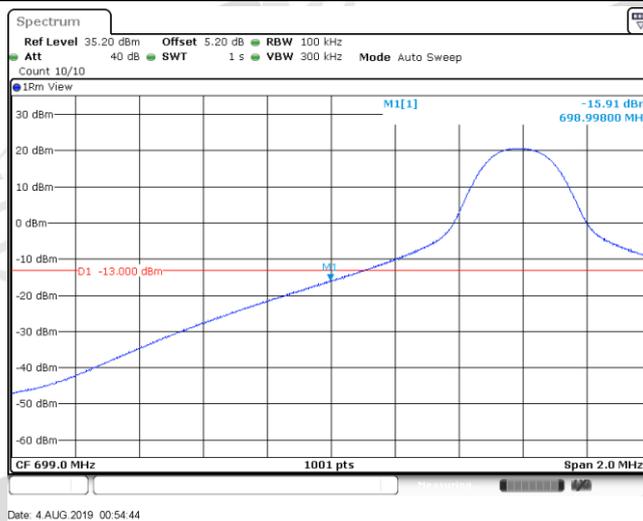
Band12_10MHz_QPSK_23130_1RB#49



Band12_10MHz_QPSK_23130_50RB#0



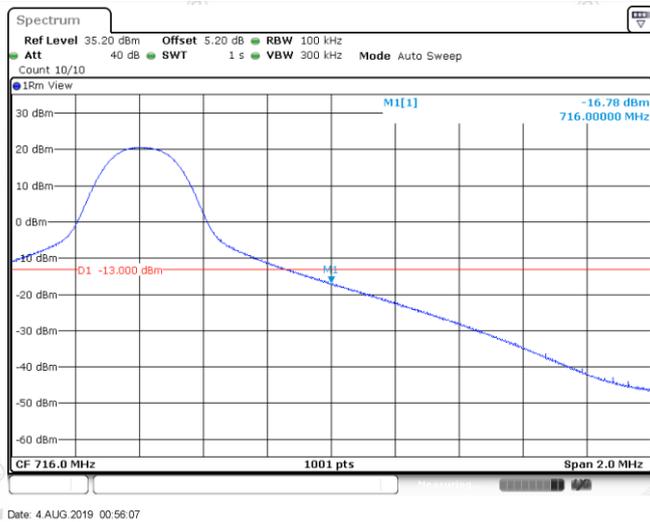
Band12_10MHz_16QAM_23060_1RB#0



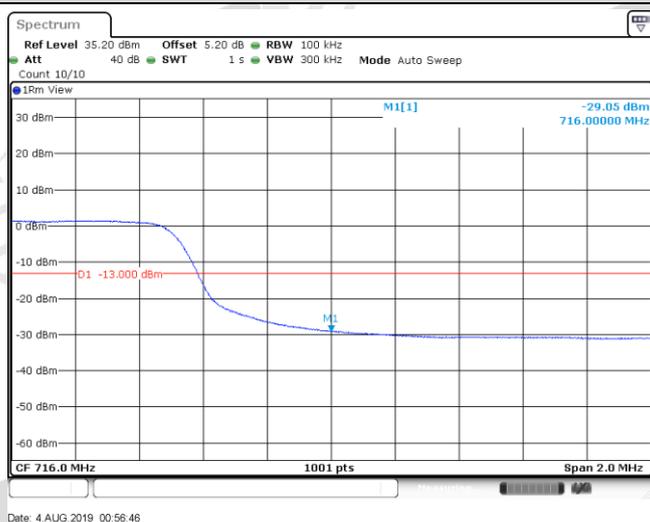
Band12_10MHz_16QAM_23060_50RB#0



Band12_10MHz_16QAM_23130_1RB#49



Band12_10MHz_16QAM_23130_50RB#0



8. Spurious Emission at Antenna Terminal

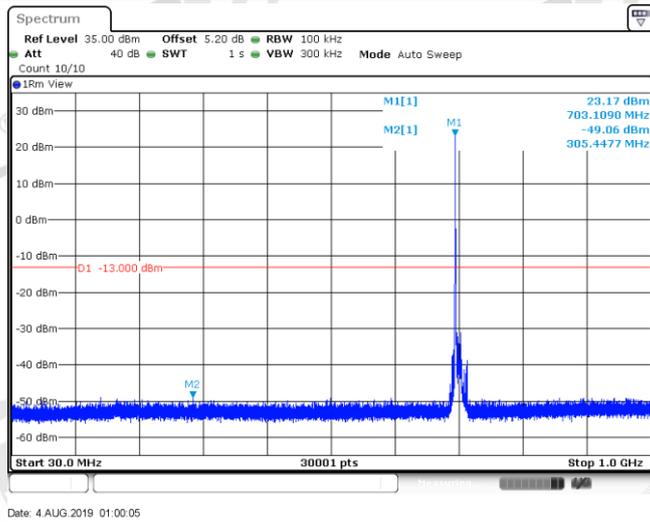
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =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

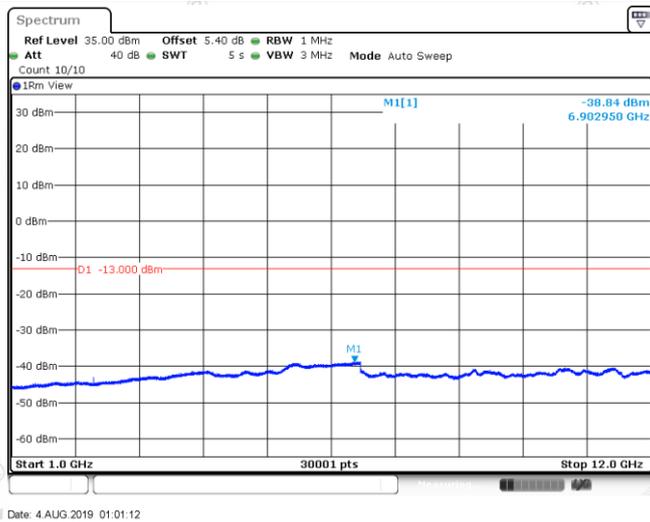
8.1. Test Plots



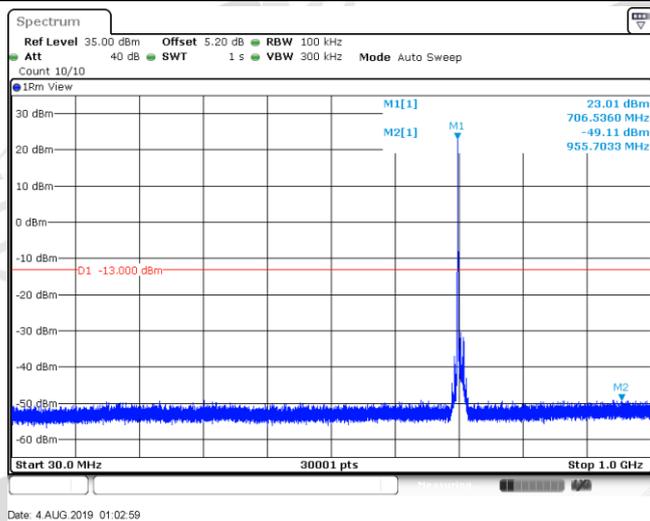
Band12_10MHz_QPSK_23095_1RB#0



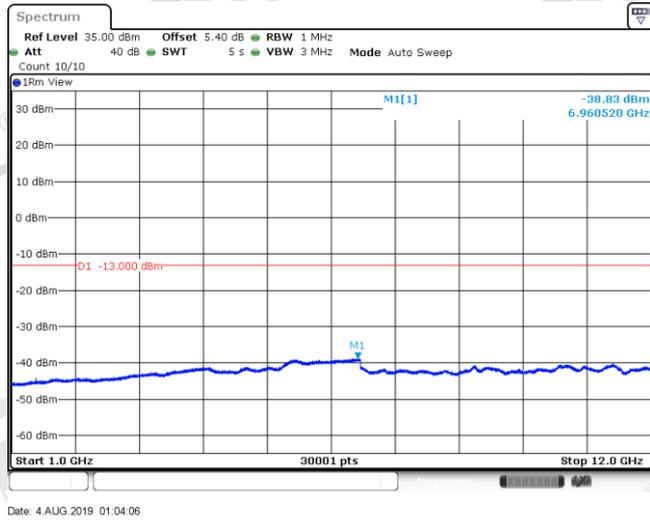
Band12_10MHz_QPSK_23095_1RB#0



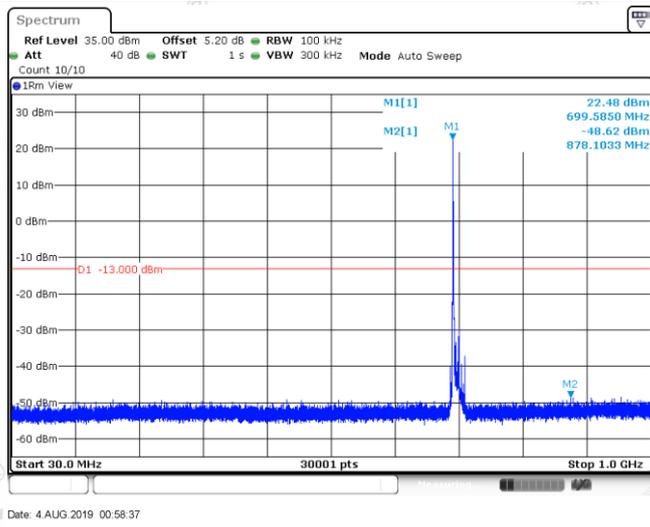
Band12_10MHz_QPSK_23130_1RB#0



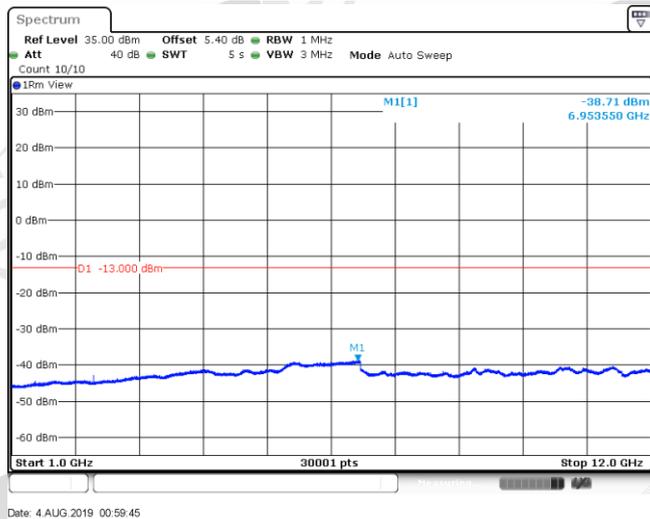
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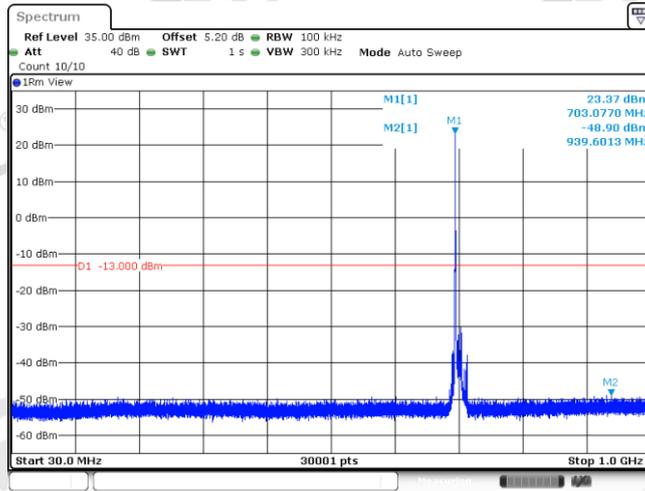
Band12_10MHz_16QAM_23060_1RB#0



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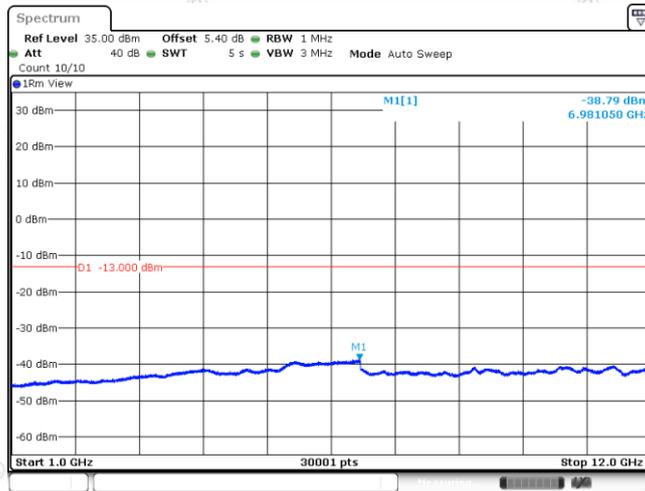


Band12_10MHz_16QAM_23095_1RB#0



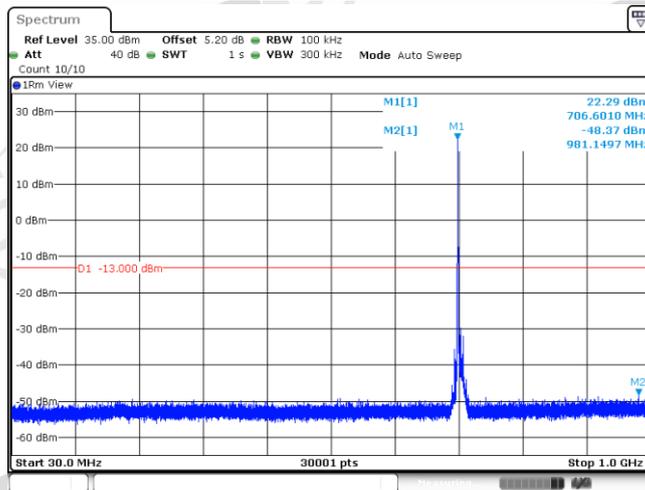
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Band12_10MHz_16QAM_23095_1RB#0

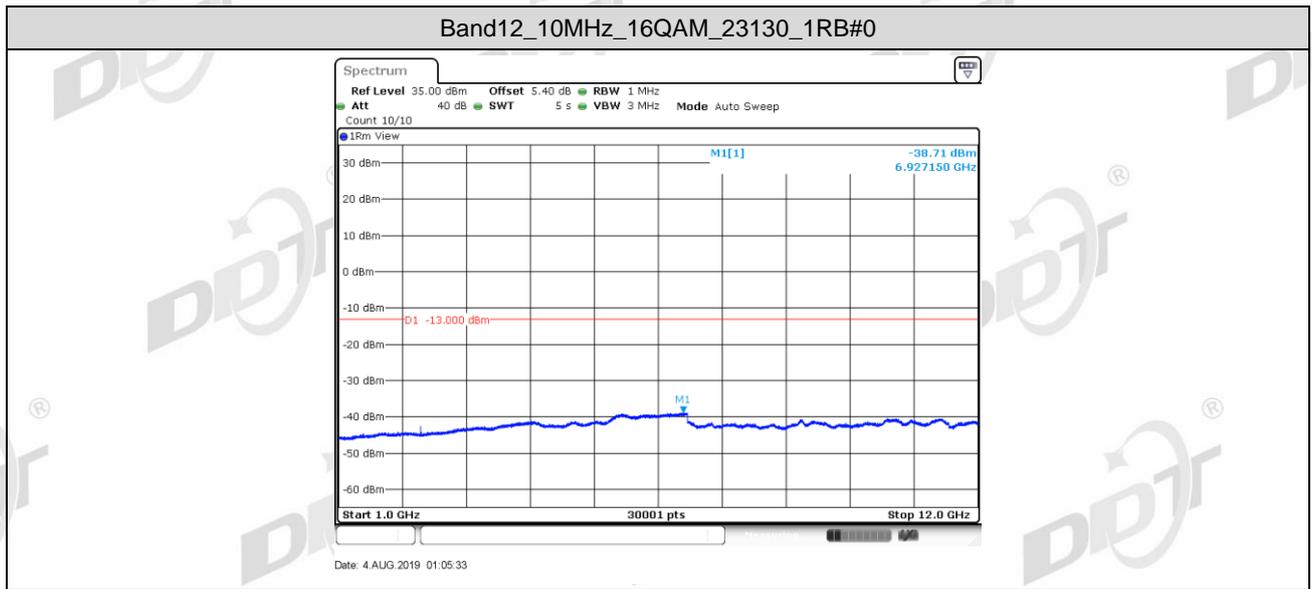


Date: 4.AUG.2019 01:02:39

Band12_10MHz_16QAM_23130_1RB#0



Date: 4.AUG.2019 01:04:26



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	-1.20	-0.001705	±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	-3.80	-0.005398	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VL	NT	-5.80	-0.008198	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VN	NT	-2.60	-0.003675	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	VH	NT	-5.50	-0.007774	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VL	NT	-4.60	-0.006470	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VN	NT	-5.80	-0.008158	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	VH	NT	-6.40	-0.009001	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VL	NT	-4.00	-0.005682	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VN	NT	0.90	0.001278	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	VH	NT	-4.50	-0.006392	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VL	NT	-1.00	-0.001413	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VN	NT	-4.50	-0.006360	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	VH	NT	-5.10	-0.007208	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VL	NT	-8.10	-0.011392	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VN	NT	-8.80	-0.012377	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	VH	NT	-4.20	-0.005907	±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	-5.30	-0.007528	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	-20	-4.70	-0.006676	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	0	-5.70	-0.008097	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	10	-8.60	-0.012216	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	20	-5.10	-0.007244	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	30	-2.40	-0.003409	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	40	-1.90	-0.002699	±2.5	PASS
Band12	10MHz	QPSK	23060	50RB#0	NV	50	-4.90	-0.006960	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-30	-6.10	-0.008622	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	-20	-5.90	-0.008339	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	0	-6.00	-0.008481	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	10	-9.80	-0.013852	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	20	-4.90	-0.006926	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	30	-6.40	-0.009046	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	40	-2.30	-0.003251	±2.5	PASS
Band12	10MHz	QPSK	23095	50RB#0	NV	50	-6.60	-0.009329	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-30	-2.90	-0.004079	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	-20	-1.90	-0.002672	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	0	-0.40	-0.000563	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	10	-3.50	-0.004923	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	20	-7.00	-0.009845	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	30	-6.50	-0.009142	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	40	-8.10	-0.011392	±2.5	PASS
Band12	10MHz	QPSK	23130	50RB#0	NV	50	-7.60	-0.010689	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	-30	-5.20	-0.007386	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	-20	-4.40	-0.006250	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	0	-8.20	-0.011648	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	10	-8.00	-0.011364	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	20	-7.30	-0.010369	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	30	-11.10	-0.015767	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	40	-7.70	-0.010938	±2.5	PASS
Band12	10MHz	16QAM	23060	50RB#0	NV	50	-7.90	-0.011222	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	-30	-5.40	-0.007633	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	-20	-1.40	-0.001979	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	0	-1.00	-0.001413	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	10	-1.20	-0.001696	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	20	-1.00	-0.001413	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	30	-6.40	-0.009046	±2.5	PASS
Band12	10MHz	16QAM	23095	50RB#0	NV	40	-6.40	-0.009046	±2.5	PASS

Band12	10MHz	16QAM	23095	50RB#0	NV	50	-8.90	-0.012580	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	-30	-3.60	-0.005063	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	-20	-1.10	-0.001547	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	0	-3.50	-0.004923	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	10	-4.40	-0.006188	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	20	-3.70	-0.005204	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	30	-4.10	-0.005767	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	40	-0.70	-0.000985	±2.5	PASS
Band12	10MHz	16QAM	23130	50RB#0	NV	50	-3.30	-0.004641	±2.5	PASS

The End