

Appendix B.4

E-UTRA Band 5

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
Band5	1.4MHz	QPSK	20407	1RB#0	23.23	17.08	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	23.44	17.29	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	23.32	17.17	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#0	23.33	17.18	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#1	23.36	17.21	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#3	23.41	17.26	38.45	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	22.38	16.23	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	23.43	17.28	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	23.65	17.50	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	23.44	17.29	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#0	23.39	17.24	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#1	23.54	17.39	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#3	23.56	17.41	38.45	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	22.44	16.29	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	23.24	17.09	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	23.51	17.36	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	23.28	17.13	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#0	23.36	17.21	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#1	23.49	17.34	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#3	23.32	17.17	38.45	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	22.45	16.30	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	22.46	16.31	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	22.46	16.31	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	22.37	16.22	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#0	22.27	16.12	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#1	22.42	16.27	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#3	22.36	16.21	38.45	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	21.31	15.16	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	22.12	15.97	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#2	22.46	16.31	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	22.39	16.24	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#0	22.32	16.17	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#1	22.53	16.38	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#3	22.48	16.33	38.45	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	21.33	15.18	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	22.18	16.03	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#2	22.52	16.37	38.45	PASS

Band5	1.4MHz	16QAM	20643	1RB#5	22.10	15.95	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#0	22.18	16.03	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#1	22.65	16.50	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#3	22.23	16.08	38.45	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	21.45	15.30	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#0	23.33	17.18	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#8	23.53	17.38	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#14	23.15	17.00	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#0	22.49	16.34	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#4	22.40	16.25	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#7	22.40	16.25	38.45	PASS
Band5	3MHz	QPSK	20415	15RB#0	22.36	16.21	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#0	23.35	17.20	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#8	23.63	17.48	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#14	23.33	17.18	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#0	22.44	16.29	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#4	22.55	16.40	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#7	22.56	16.41	38.45	PASS
Band5	3MHz	QPSK	20525	15RB#0	22.46	16.31	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#0	23.21	17.06	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#8	23.49	17.34	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#14	23.30	17.15	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#0	22.38	16.23	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#4	22.33	16.18	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#7	22.51	16.36	38.45	PASS
Band5	3MHz	QPSK	20635	15RB#0	22.30	16.15	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#0	22.23	16.08	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#8	22.27	16.12	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#14	21.96	15.81	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#0	21.37	15.22	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#4	21.29	15.14	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#7	21.31	15.16	38.45	PASS
Band5	3MHz	16QAM	20415	15RB#0	21.18	15.03	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#0	22.38	16.23	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#8	22.38	16.23	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#14	22.22	16.07	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#0	21.23	15.08	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#4	21.41	15.26	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#7	21.38	15.23	38.45	PASS
Band5	3MHz	16QAM	20525	15RB#0	21.34	15.19	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#0	22.08	15.93	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#8	22.30	16.15	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#14	22.00	15.85	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#0	21.37	15.22	38.45	PASS

Band5	3MHz	16QAM	20635	8RB#4	21.29	15.14	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#7	21.25	15.10	38.45	PASS
Band5	3MHz	16QAM	20635	15RB#0	21.26	15.11	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#0	23.32	17.17	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#12	23.59	17.44	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#24	23.20	17.05	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#0	22.51	16.36	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#6	22.39	16.24	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#13	22.25	16.10	38.45	PASS
Band5	5MHz	QPSK	20425	25RB#0	22.38	16.23	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#0	23.31	17.16	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#12	23.80	17.65	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#24	23.38	17.23	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#0	22.45	16.30	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#6	22.58	16.43	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#13	22.45	16.30	38.45	PASS
Band5	5MHz	QPSK	20525	25RB#0	22.31	16.16	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#0	23.24	17.09	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#12	23.43	17.28	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#24	23.44	17.29	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#0	22.49	16.34	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#6	22.38	16.23	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#13	22.34	16.19	38.45	PASS
Band5	5MHz	QPSK	20625	25RB#0	22.50	16.35	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#0	22.24	16.09	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#12	22.47	16.32	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#24	22.10	15.95	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#0	21.47	15.32	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#6	21.30	15.15	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#13	21.18	15.03	38.45	PASS
Band5	5MHz	16QAM	20425	25RB#0	21.24	15.09	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#0	22.04	15.89	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#12	22.74	16.59	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#24	22.14	15.99	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#0	21.19	15.04	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#6	21.54	15.39	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#13	21.23	15.08	38.45	PASS
Band5	5MHz	16QAM	20525	25RB#0	21.44	15.29	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#0	21.94	15.79	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#12	22.05	15.90	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#24	22.27	16.12	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#0	21.39	15.24	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#6	21.19	15.04	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#13	21.20	15.05	38.45	PASS

Band5	5MHz	16QAM	20625	25RB#0	21.39	15.24	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#0	23.40	17.25	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#24	23.77	17.62	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#49	23.04	16.89	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#0	22.57	16.42	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#12	22.39	16.24	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#25	22.22	16.07	38.45	PASS
Band5	10MHz	QPSK	20450	50RB#0	22.54	16.39	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#0	23.27	17.12	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#24	24.05	17.90	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#49	23.19	17.04	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#0	22.43	16.28	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#12	22.46	16.31	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#25	22.32	16.17	38.45	PASS
Band5	10MHz	QPSK	20525	50RB#0	22.31	16.16	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#0	23.24	17.09	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#24	23.85	17.70	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#49	22.92	16.77	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#0	22.61	16.46	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#12	22.47	16.32	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#25	22.28	16.13	38.45	PASS
Band5	10MHz	QPSK	20600	50RB#0	22.38	16.23	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#0	22.36	16.21	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#24	22.31	16.16	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#49	22.19	16.04	38.45	PASS
Band5	10MHz	16QAM	20450	27RB#0	21.26	15.11	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#0	21.99	15.84	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#24	22.55	16.40	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#49	22.11	15.96	38.45	PASS
Band5	10MHz	16QAM	20525	27RB#0	21.53	15.38	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#0	21.93	15.78	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#24	22.07	15.92	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#49	22.27	16.12	38.45	PASS
Band5	10MHz	16QAM	20600	27RB#0	21.32	15.17	38.45	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]

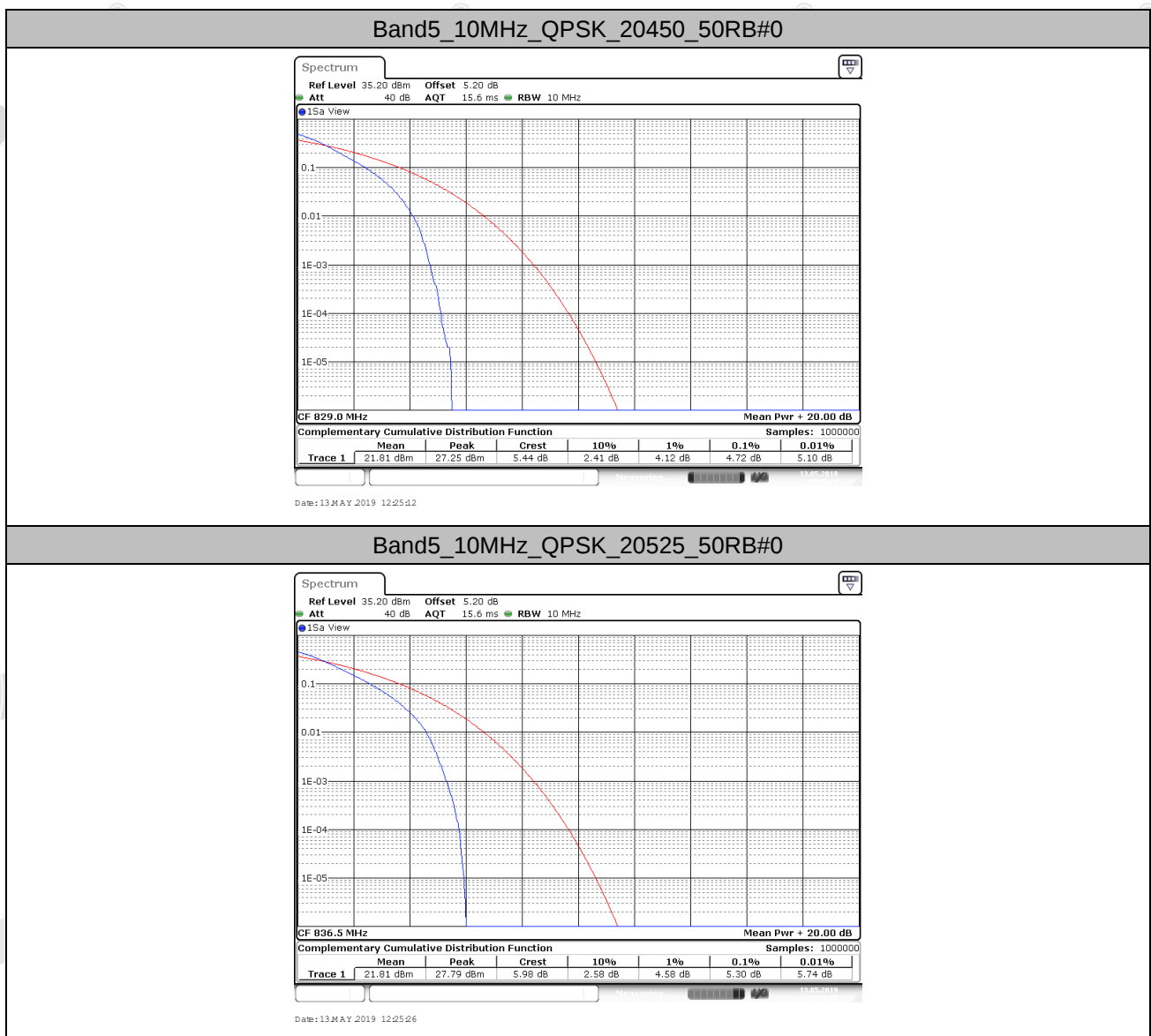
EIRP [dBm] = Conducted Power [dBm] + Gain [dBi]

4. Peak-to-Average Ratio(CCDF)

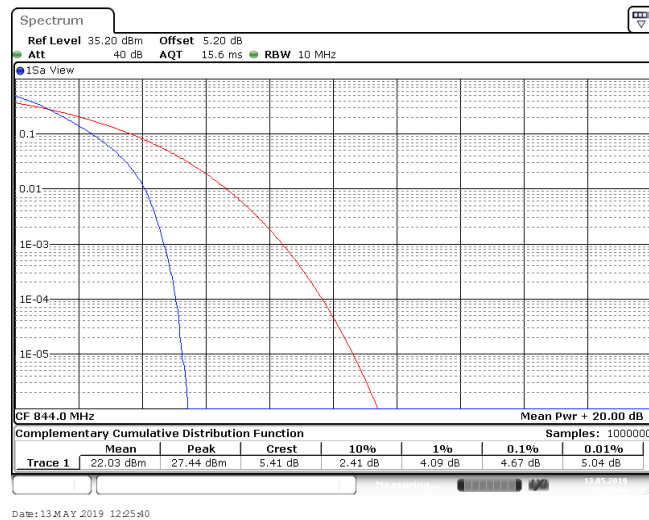
4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band5	10MHz	QPSK	20450	50RB#0	4.72	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	5.30	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	4.67	13	PASS
Band5	10MHz	16QAM	20450	27RB#0	6.00	13	PASS
Band5	10MHz	16QAM	20525	27RB#0	6.03	13	PASS
Band5	10MHz	16QAM	20600	27RB#0	6.35	13	PASS

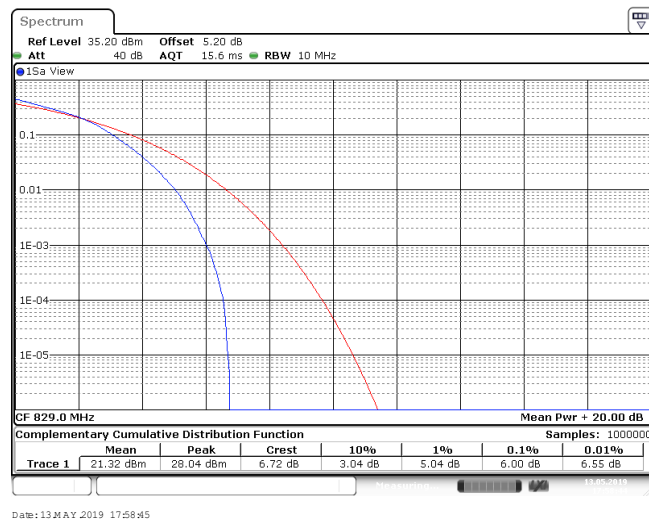
4.2. Test Plots



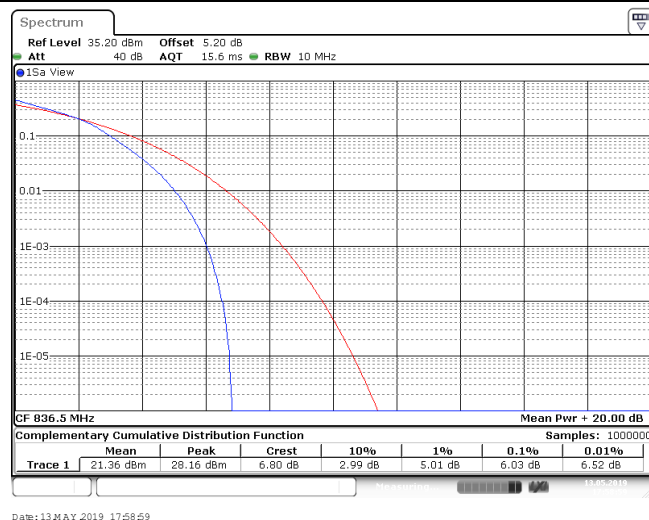
Band5_10MHz_QPSK_20600_50RB#0



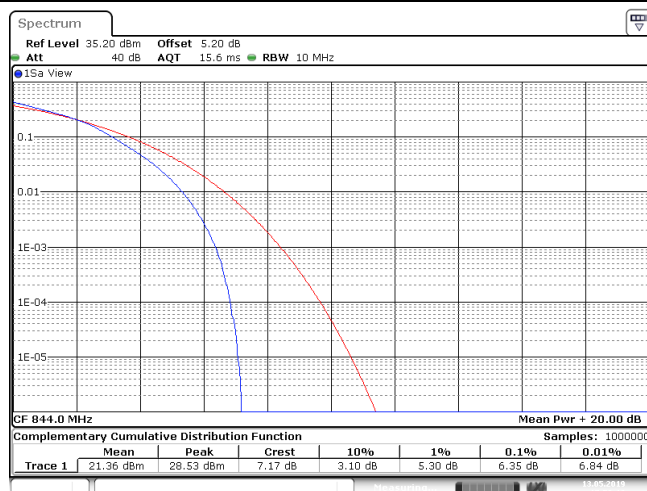
Band5_10MHz_16QAM_20450_27RB#0



Band5_10MHz_16QAM_20525_27RB#0



Band5_10MHz_16QAM_20600_27RB#0



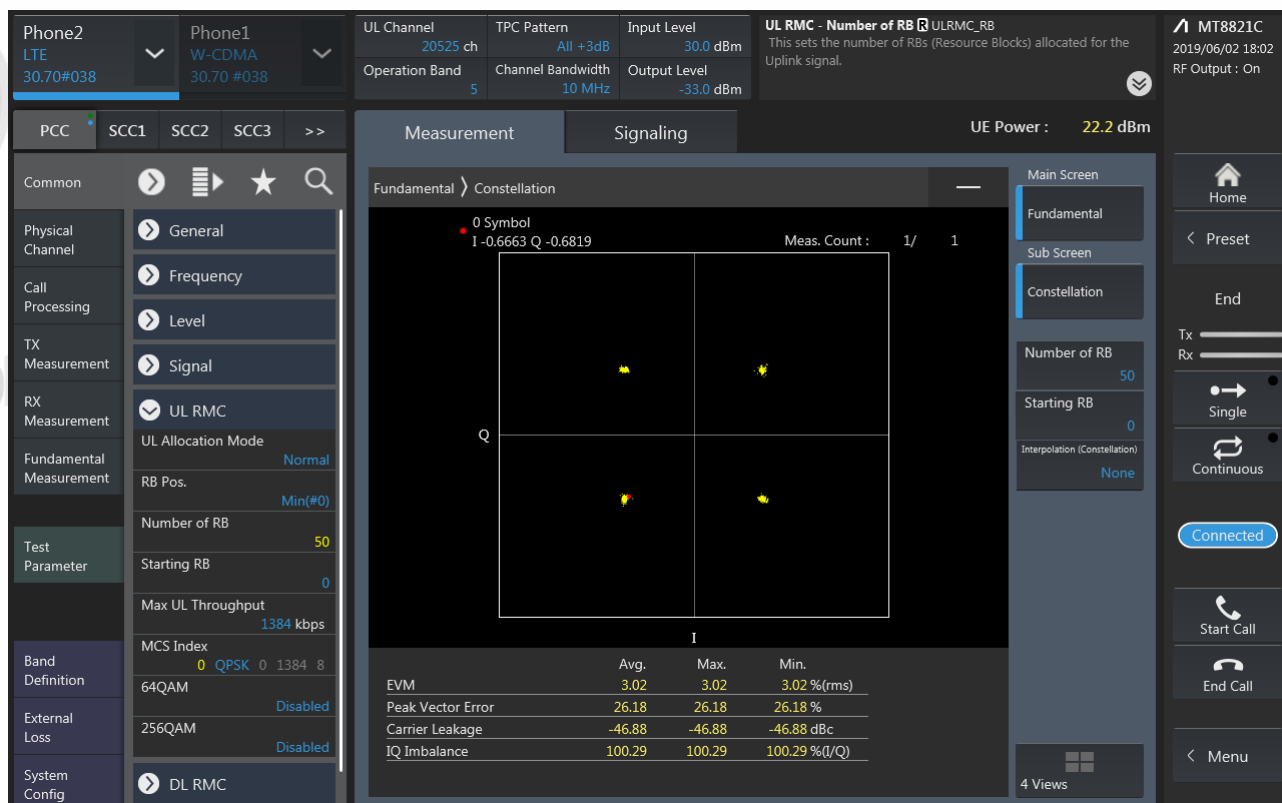
Date: 13 MAY 2019 17:59:44

5. Modulation Characteristics

5.1. Test BAND = LTE Band 5

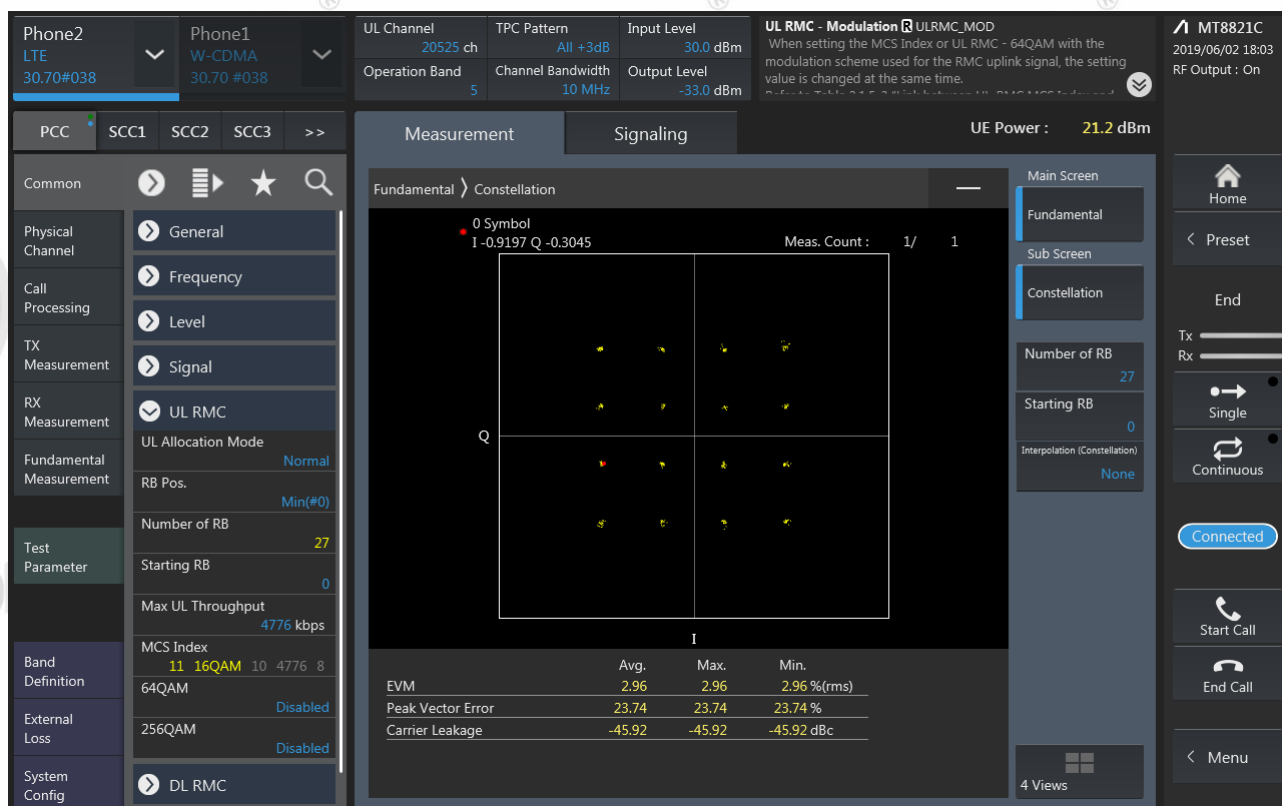
5.2. Test Mode = LTE /TM1 10MHz

5.2.1. Test Channel = MCH



5.3. Test Mode = LTE /TM2 10MHz

5.3.1. Test Channel = MCH



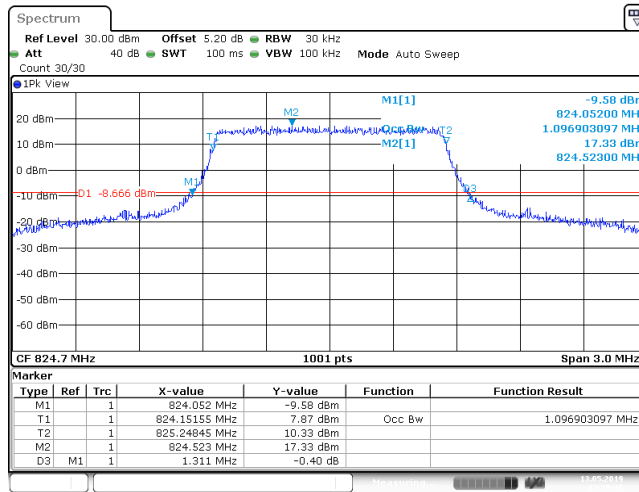
6. 26dB Bandwidth and Occupied Bandwidth

6.1. Test Result

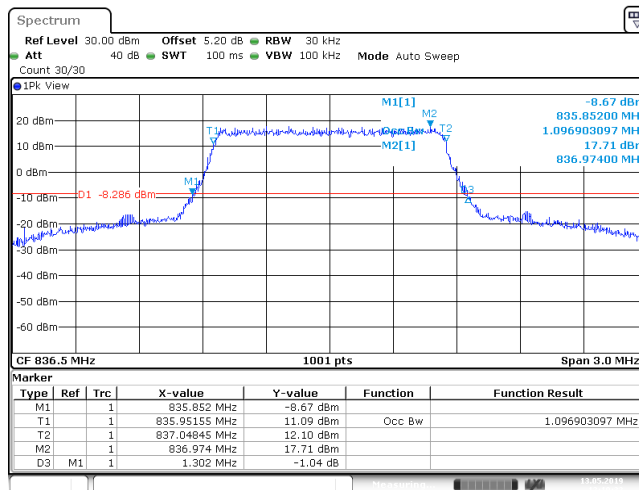
BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.097	1.311	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.097	1.302	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.097	1.293	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.097	1.338	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.097	1.311	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.094	1.308	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.697	2.982	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.697	3.000	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.697	2.994	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.697	2.976	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.697	2.994	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.697	2.994	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.476	4.880	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.476	4.890	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.476	4.910	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.476	4.880	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.476	4.890	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.476	4.910	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.931	9.700	PASS
Band5	10MHz	QPSK	20525	50RB#0	8.931	9.700	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.911	9.680	PASS
Band5	10MHz	16QAM	20450	27RB#0	4.855	5.680	PASS
Band5	10MHz	16QAM	20525	27RB#0	4.855	5.700	PASS
Band5	10MHz	16QAM	20600	27RB#0	4.855	5.660	PASS

6.2. Test Plots

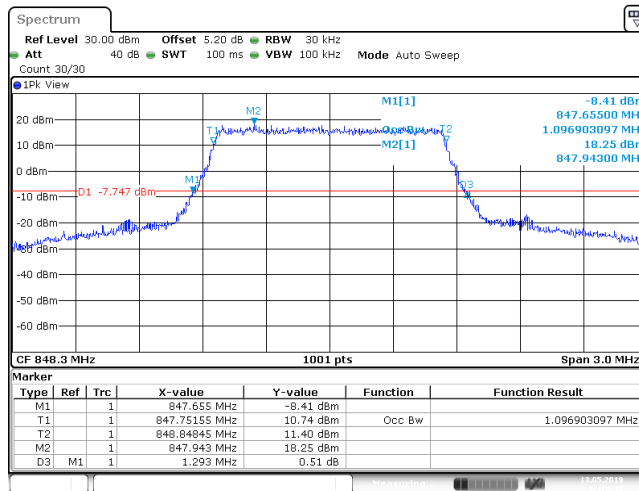
Band5_1.4MHz_QPSK_20407_6RB#0



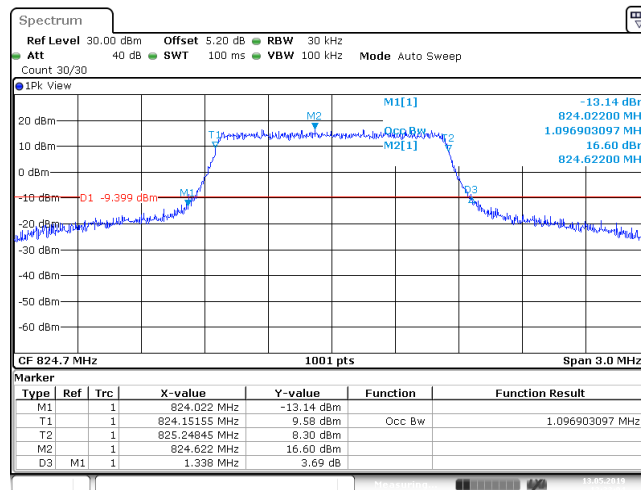
Band5_1.4MHz_QPSK_20525_6RB#0



Band5_1.4MHz_QPSK_20643_6RB#0

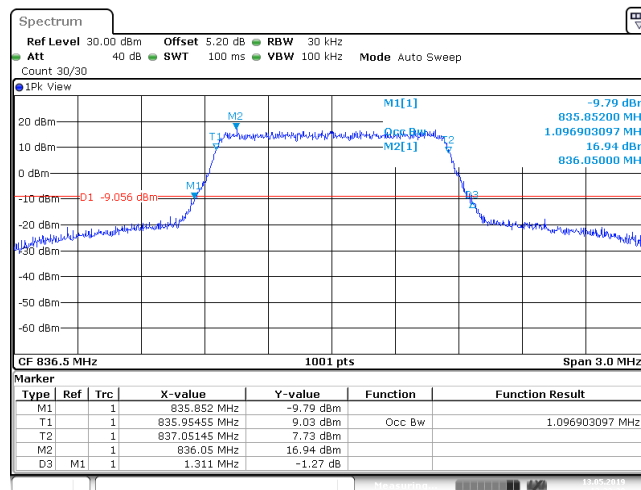


Band5_1.4MHz_16QAM_20407_6RB#0



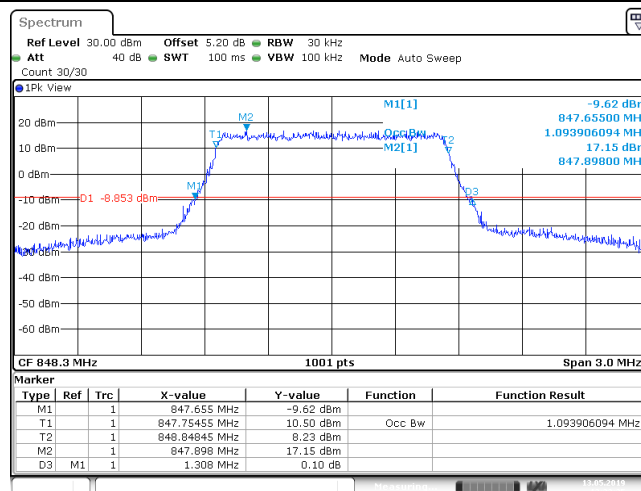
Date: 13 MAY 2019 12:33:04

Band5_1.4MHz_16QAM_20525_6RB#0



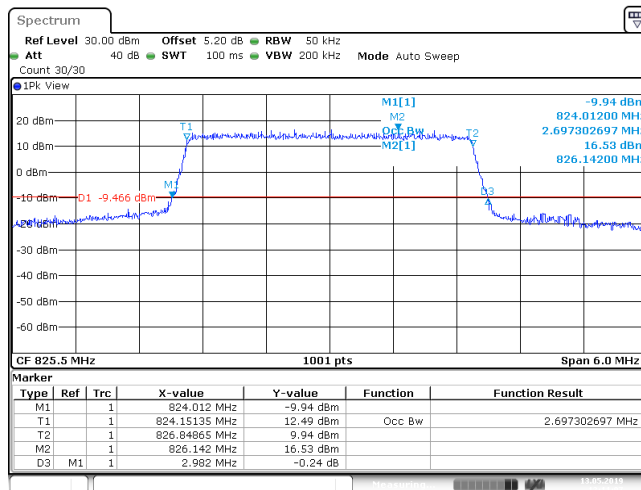
Date: 13 MAY 2019 12:33:20

Band5_1.4MHz_16QAM_20643_6RB#0



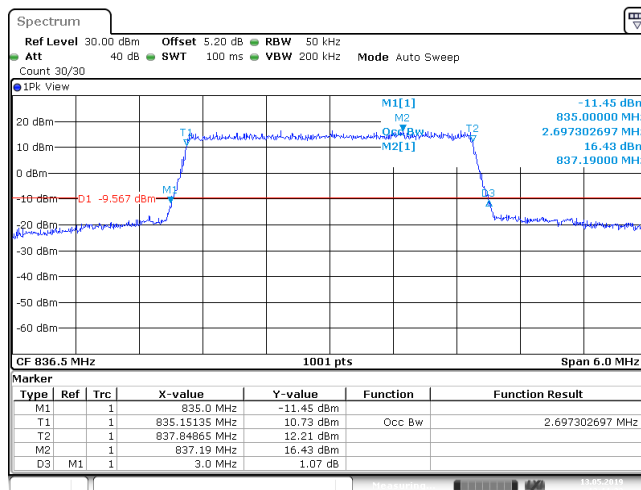
Date: 13 MAY 2019 12:33:36

Band5_3MHz_QPSK_20415_15RB#0



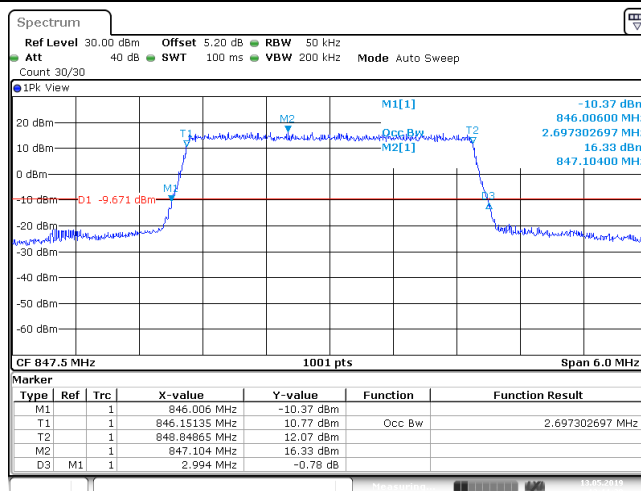
Date: 13 MAY 2019 12:41:57

Band5_3MHz_QPSK_20525_15RB#0



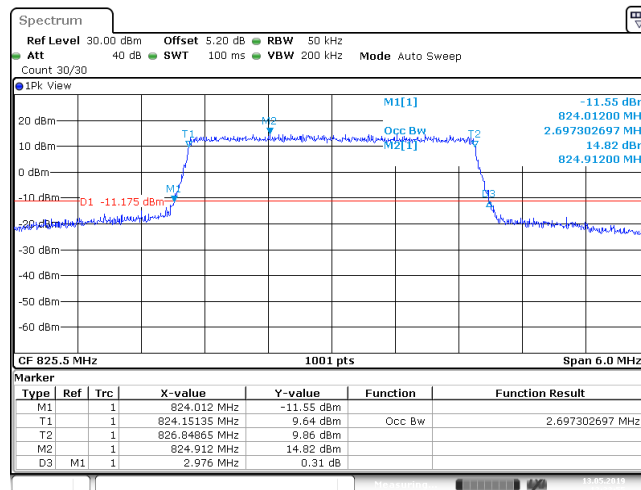
Date: 13 MAY 2019 12:41:23

Band5_3MHz_QPSK_20635_15RB#0



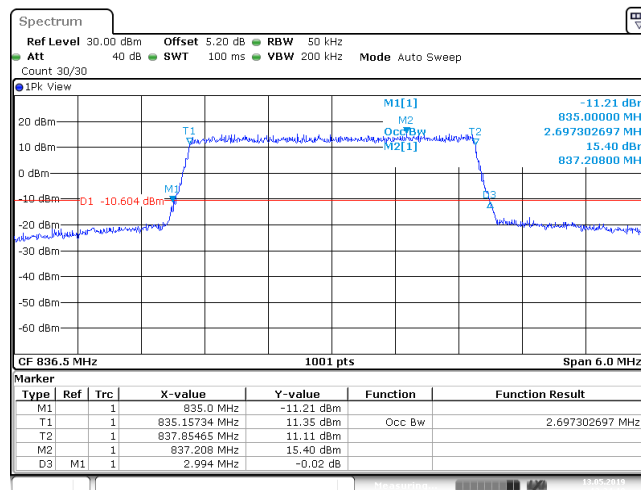
Date: 13 MAY 2019 12:41:39

Band5_3MHz_16QAM_20415_15RB#0



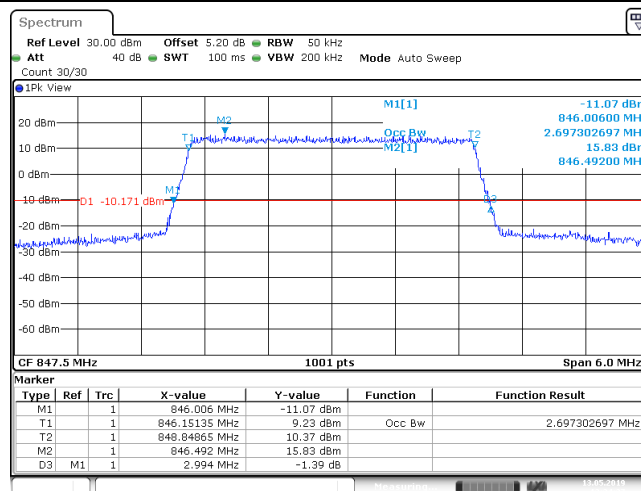
Date: 13 MAY 2019 12:33:55

Band5_3MHz_16QAM_20525_15RB#0



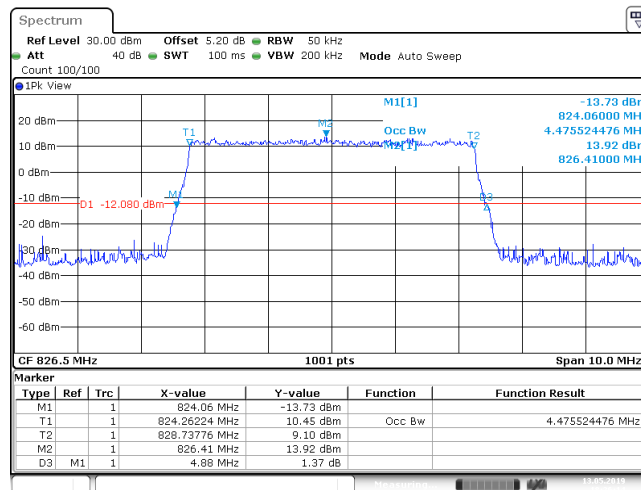
Date: 13 MAY 2019 12:34:11

Band5_3MHz_16QAM_20635_15RB#0



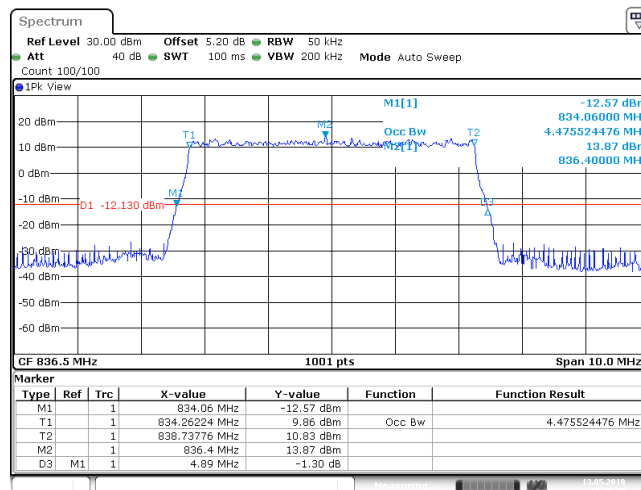
Date: 13 MAY 2019 12:34:27

Band5_5MHz_QPSK_20425_25RB#0



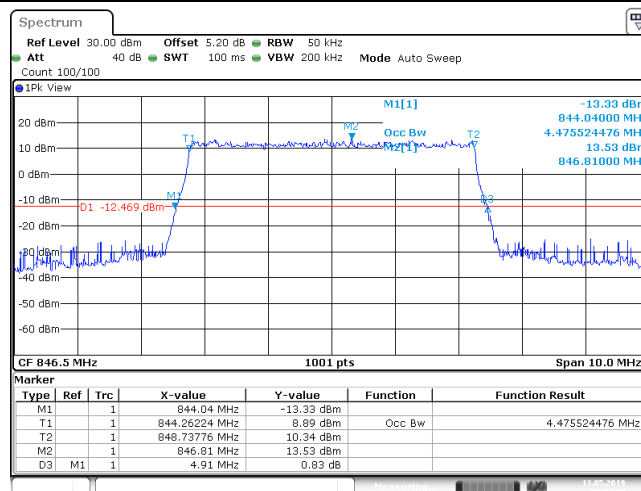
Date: 13 MAY 2019 18:26:15

Band5_5MHz_QPSK_20525_25RB#0



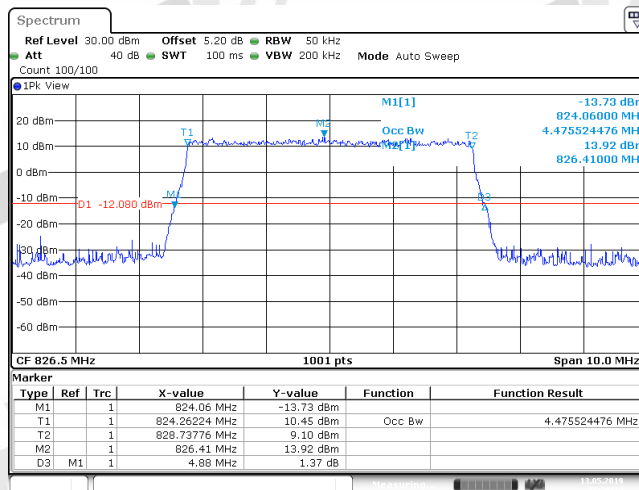
Date: 13 MAY 2019 18:26:38

Band5_5MHz_QPSK_20625_25RB#0



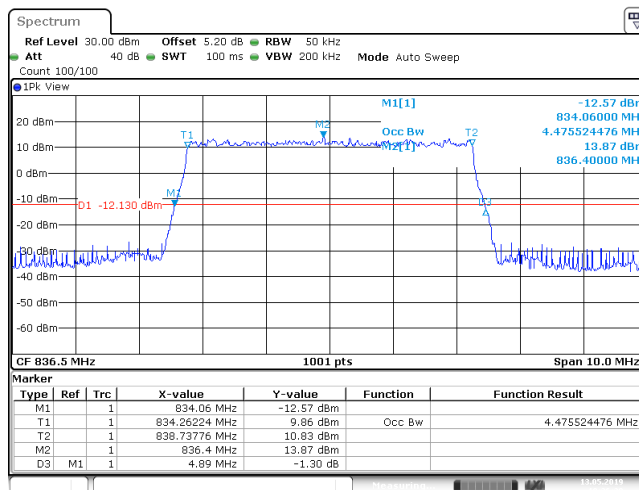
Date: 13 MAY 2019 18:27:01

Band5_5MHz_16QAM_20425_25RB#0



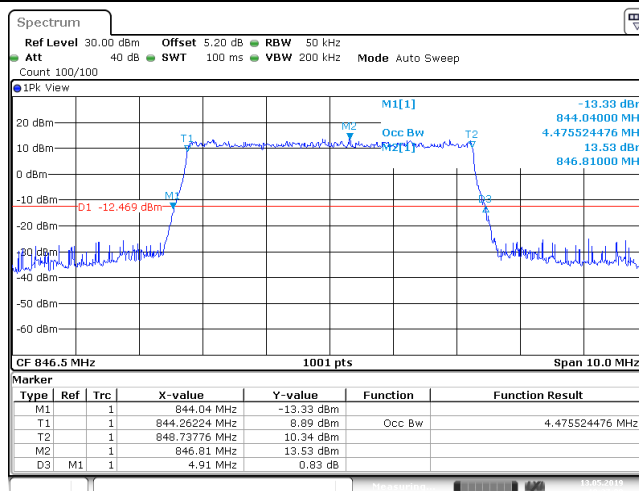
Date: 13 MAY 2019 18:26:15

Band5_5MHz_16QAM_20525_25RB#0



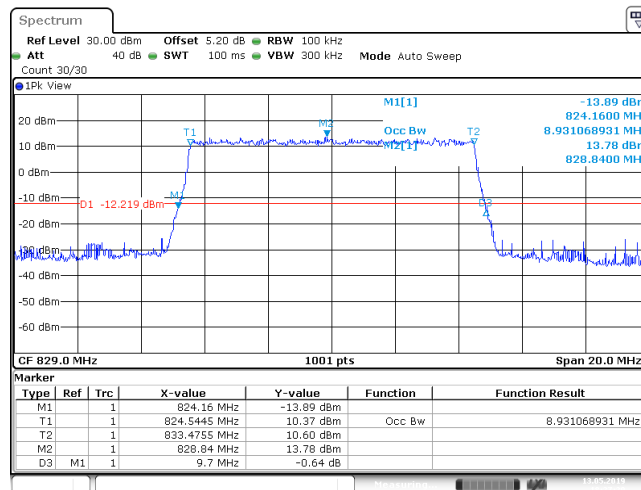
Date: 13 MAY 2019 18:26:38

Band5_5MHz_16QAM_20625_25RB#0



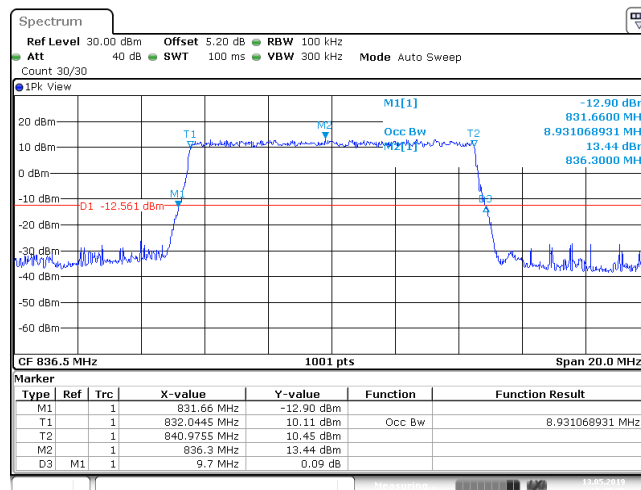
Date: 13 MAY 2019 18:27:01

Band5_10MHz_QPSK_20450_50RB#0



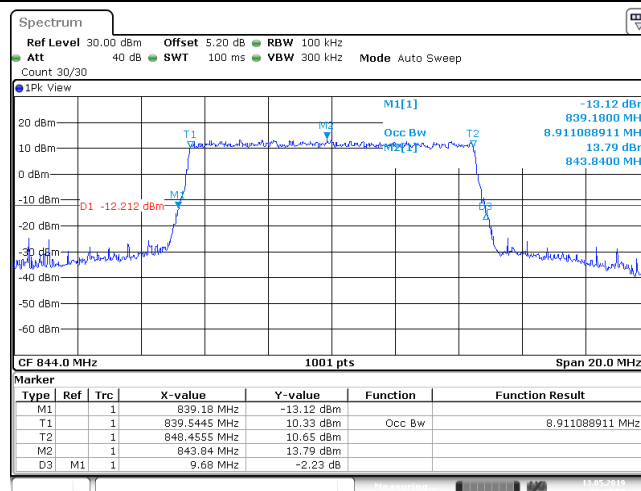
Date: 13 MAY 2019 18:27:20

Band5_10MHz_QPSK_20525_50RB#0



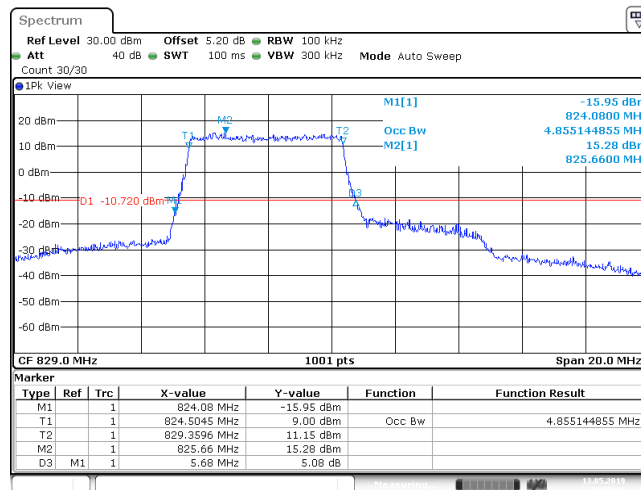
Date: 13 MAY 2019 18:27:36

Band5_10MHz_QPSK_20600_50RB#0



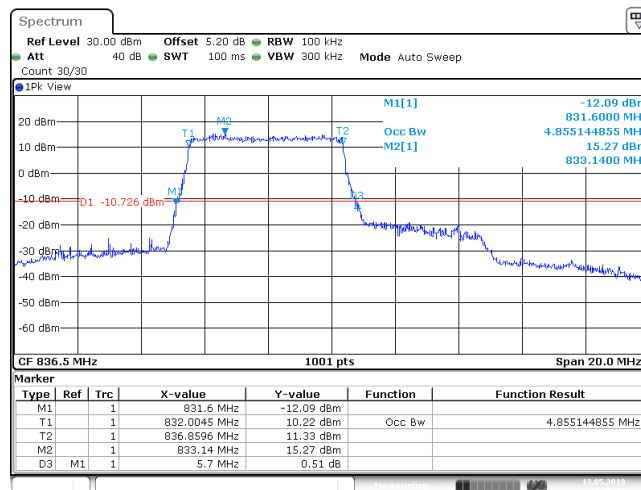
Date: 13 MAY 2019 18:27:52

Band5_10MHz_16QAM_20450_27RB#0



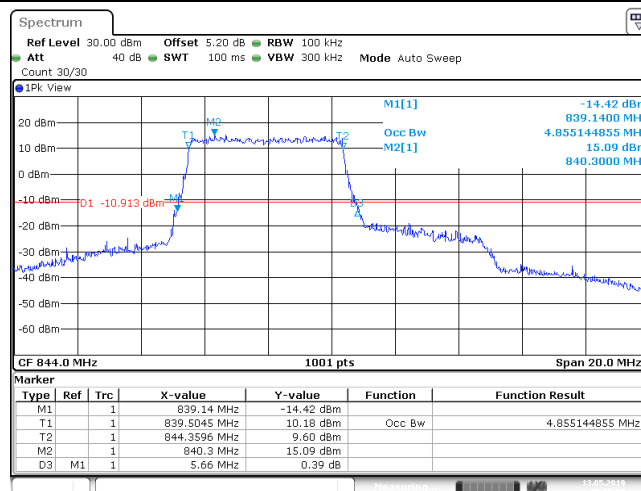
Date: 13 MAY 2019 18:35:28

Band5_10MHz_16QAM_20525_27RB#0



Date: 13 MAY 2019 18:35:44

Band5_10MHz_16QAM_20600_27RB#0

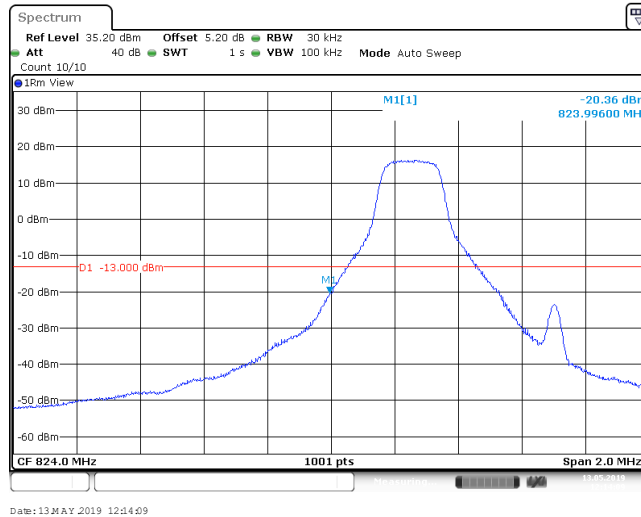


Date: 13 MAY 2019 18:36:00

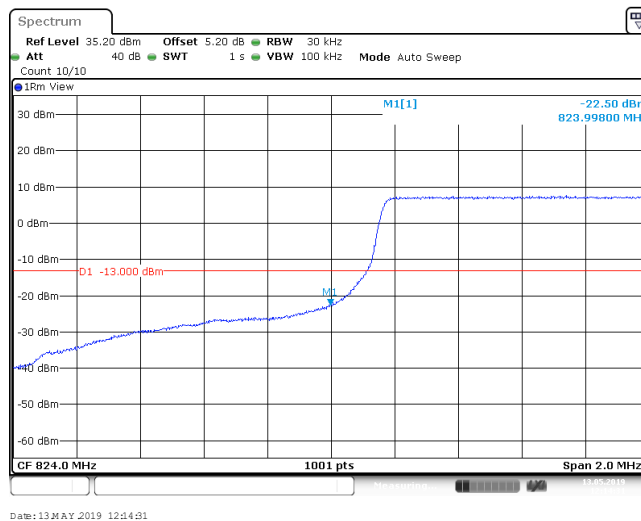
7. Band Edge Compliance

7.1. Test Plots

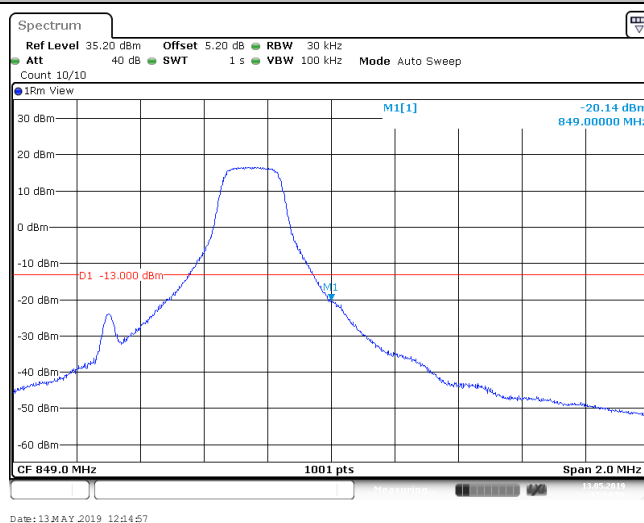
Band5_1.4MHz_QPSK_20407_1RB#0



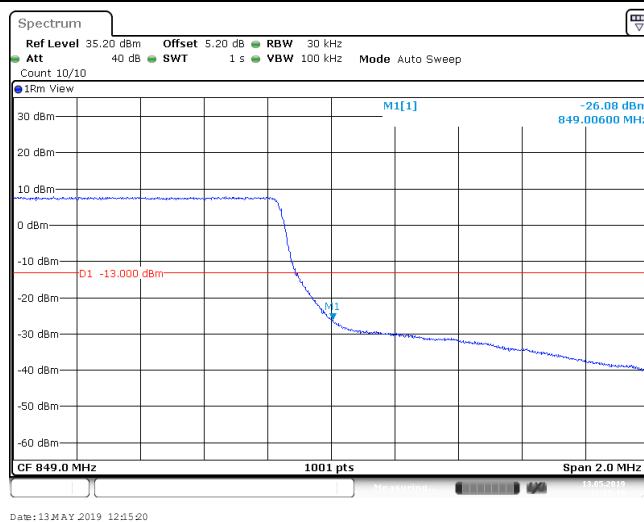
Band5_1.4MHz_QPSK_20407_6RB#0



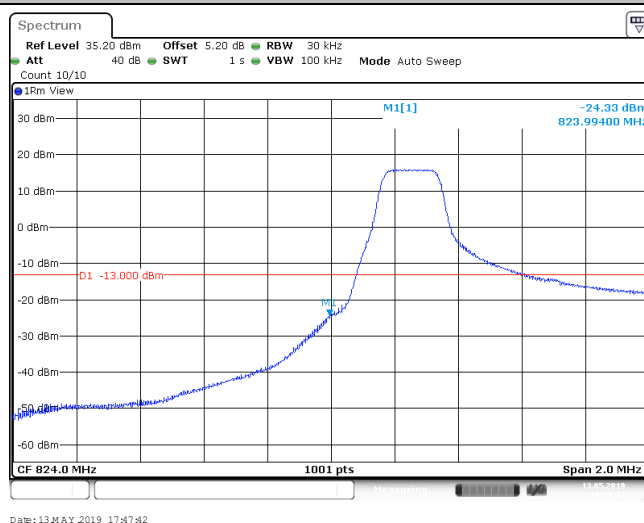
Band5_1.4MHz_QPSK_20643_1RB#5



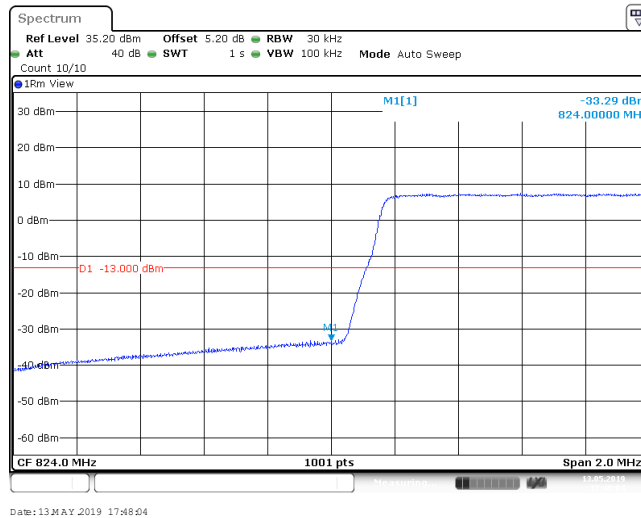
Band5_1.4MHz_QPSK_20643_6RB#0



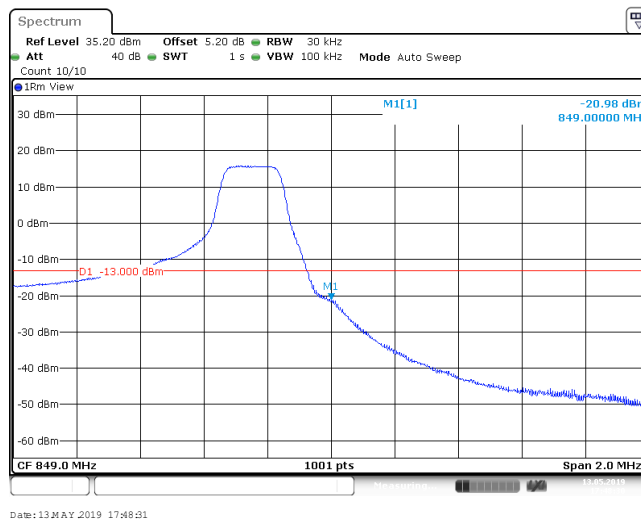
Band5_1.4MHz_16QAM_20407_1RB#0



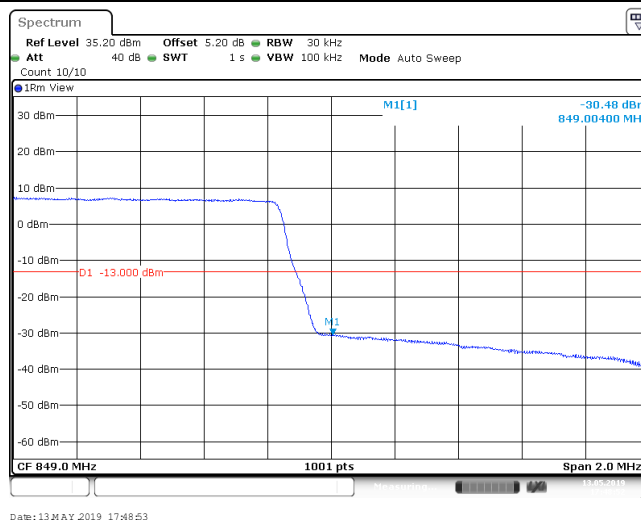
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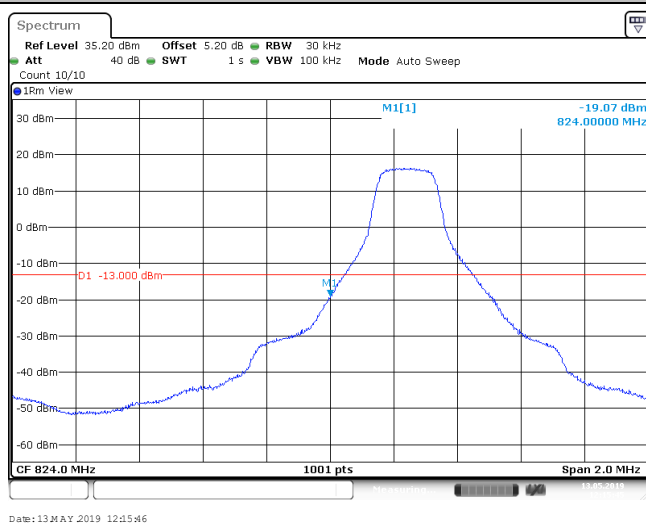
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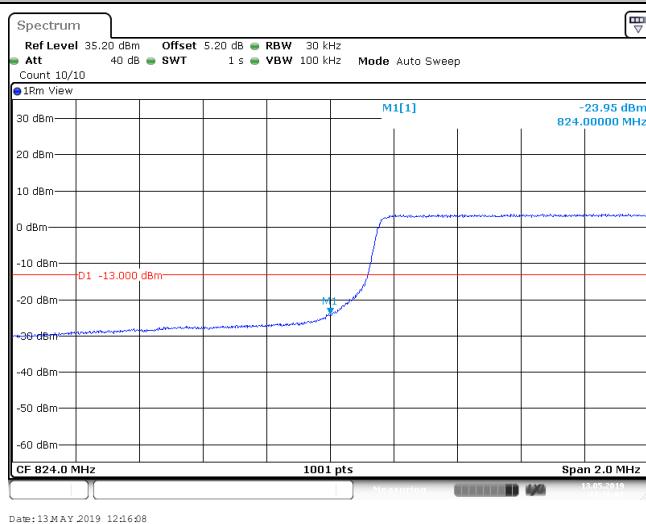
Band5_1.4MHz_16QAM_20643_6RB#0



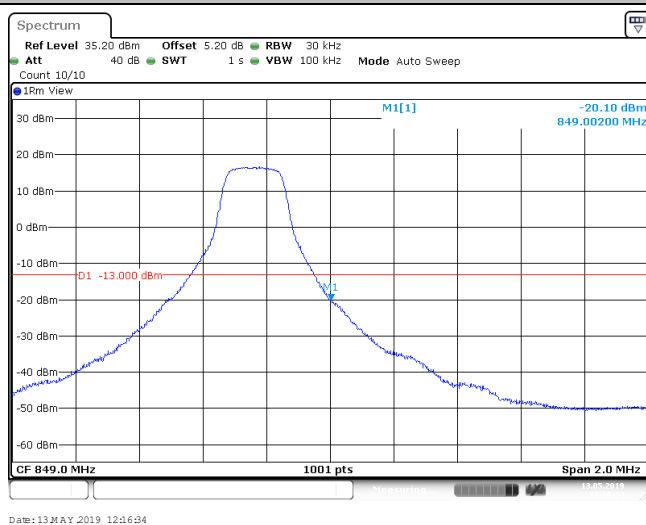
Band5_3MHz_QPSK_20415_1RB#0



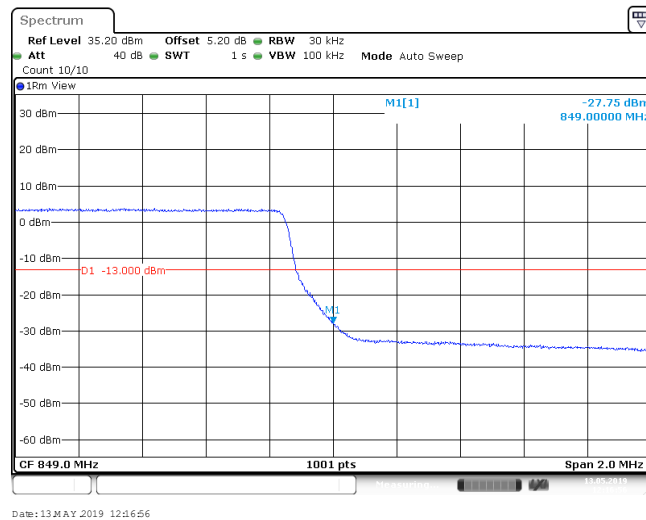
Band5_3MHz_QPSK_20415_15RB#0



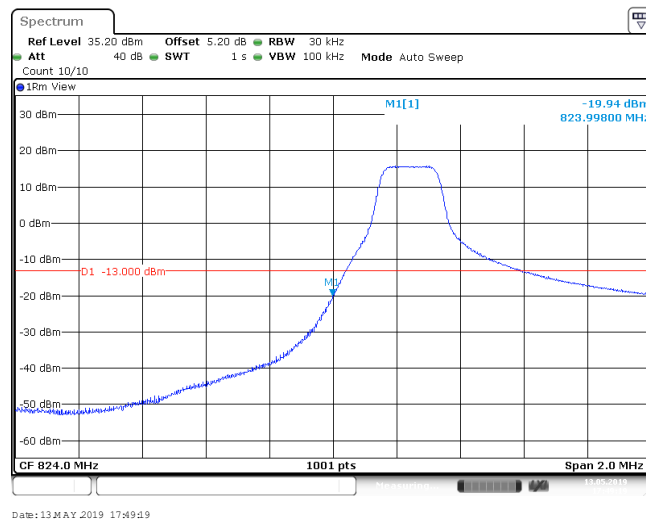
Band5_3MHz_QPSK_20635_1RB#14



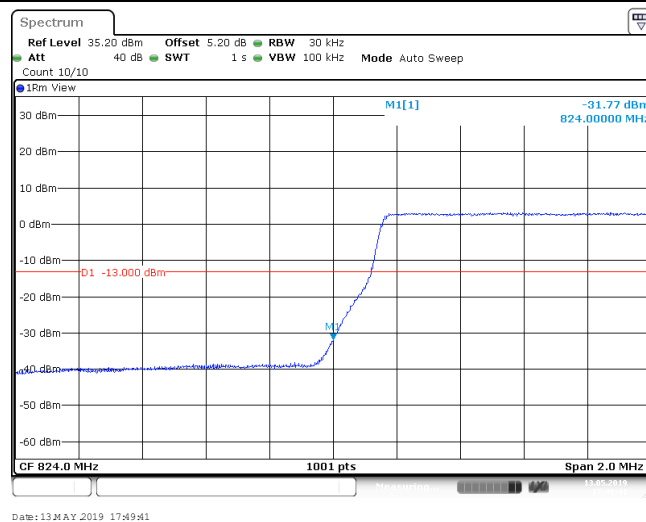
Band5_3MHz_QPSK_20635_15RB#0



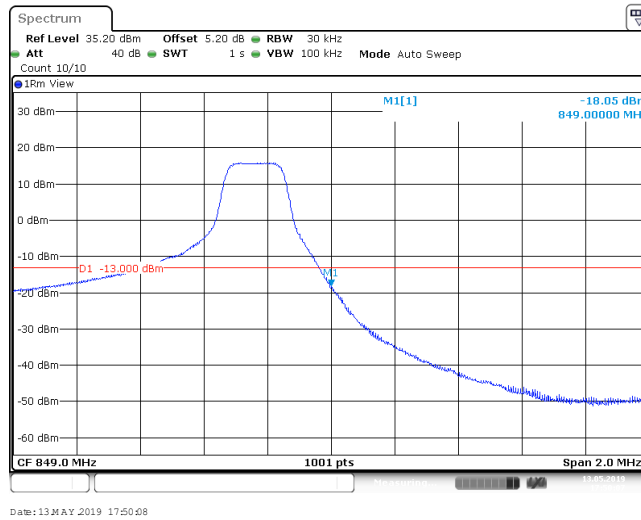
Band5_3MHz_16QAM_20415_1RB#0



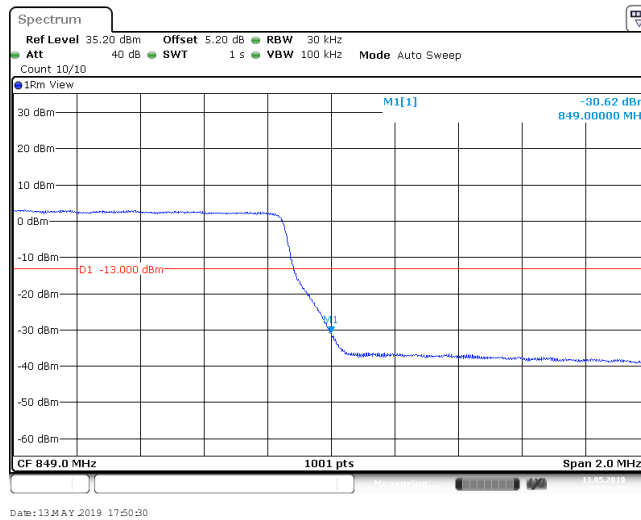
Band5_3MHz_16QAM_20415_15RB#0



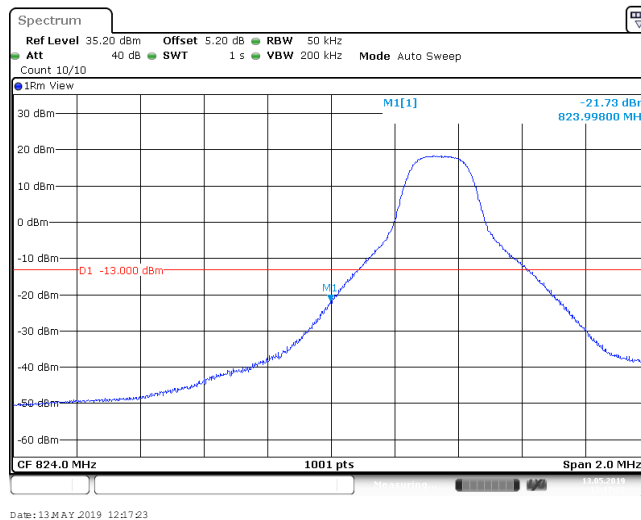
Band5_3MHz_16QAM_20635_1RB#14



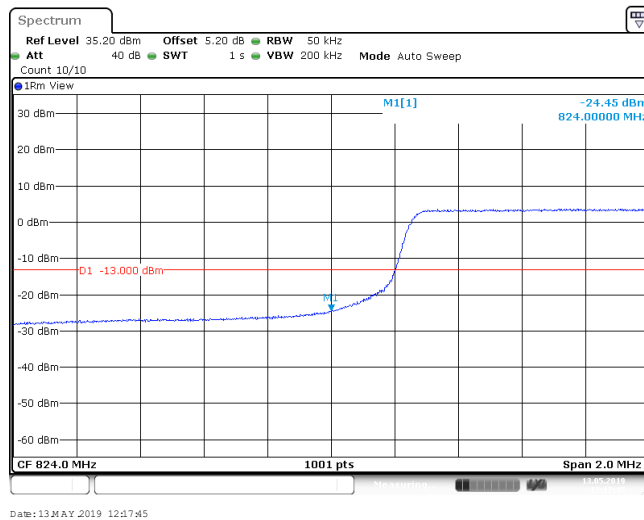
Band5_3MHz_16QAM_20635_15RB#0



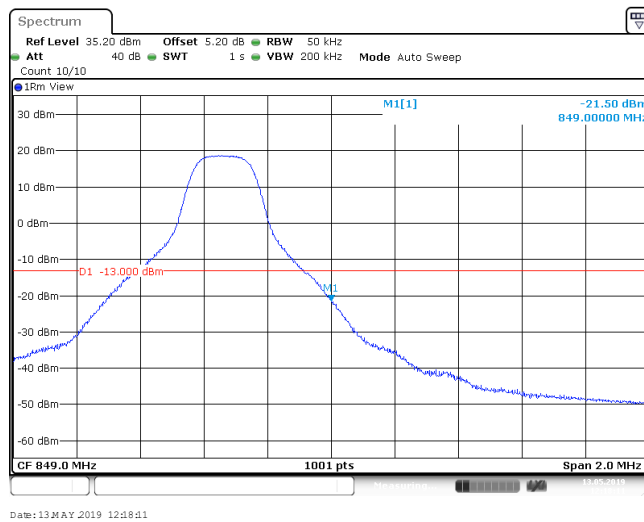
Band5_5MHz_QPSK_20425_1RB#0



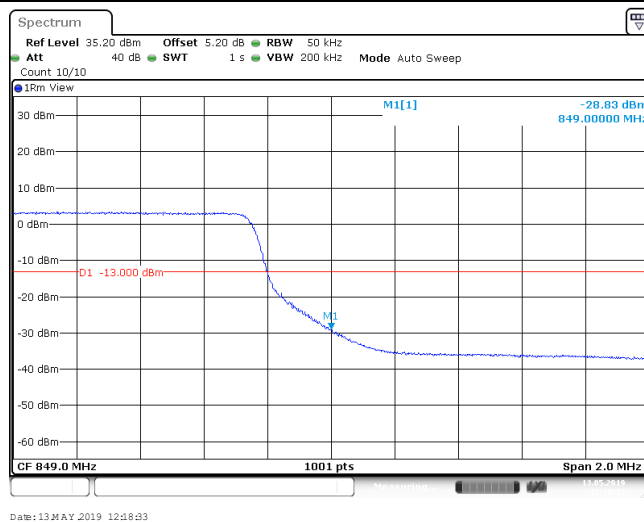
Band5_5MHz_QPSK_20425_25RB#0



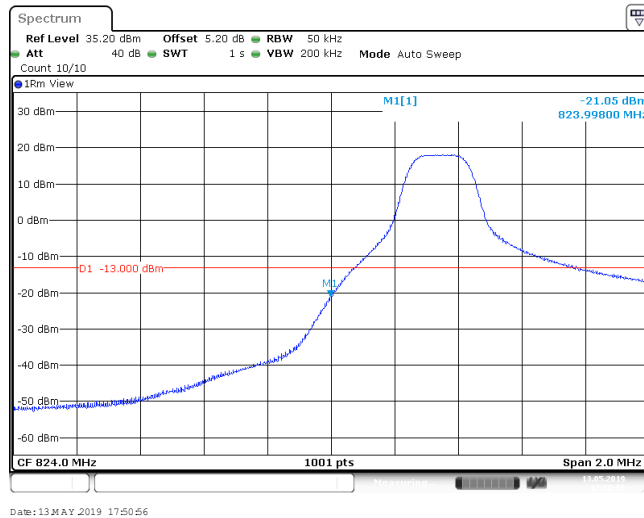
Band5_5MHz_QPSK_20625_1RB#24



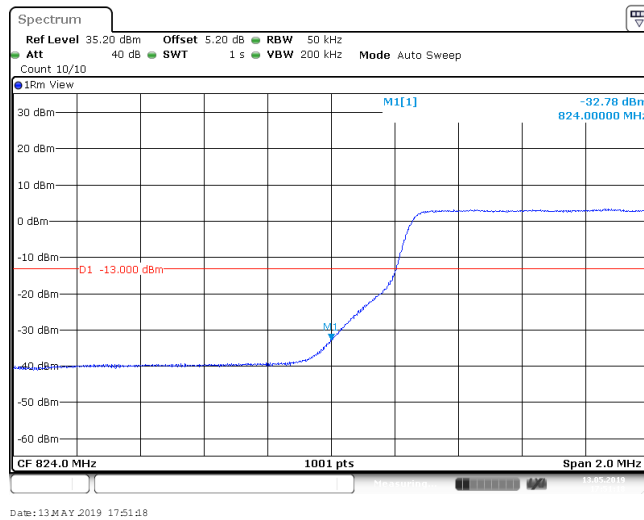
Band5_5MHz_QPSK_20625_25RB#0



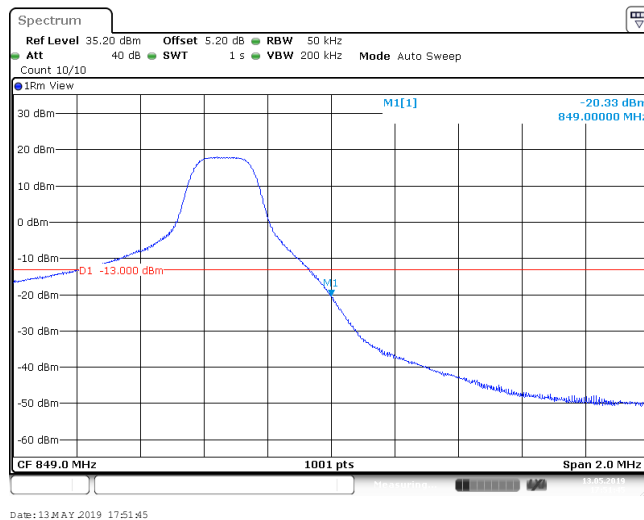
Band5_5MHz_16QAM_20425_1RB#0



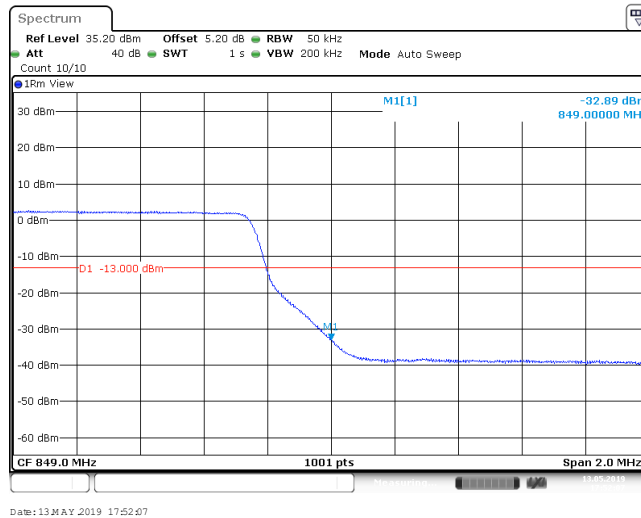
Band5_5MHz_16QAM_20425_25RB#0



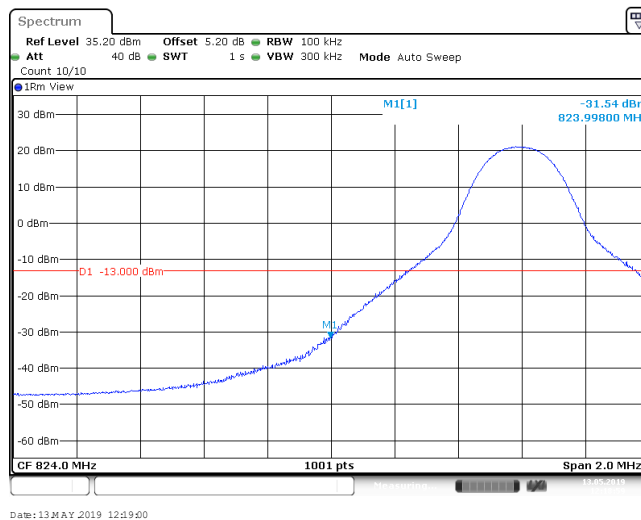
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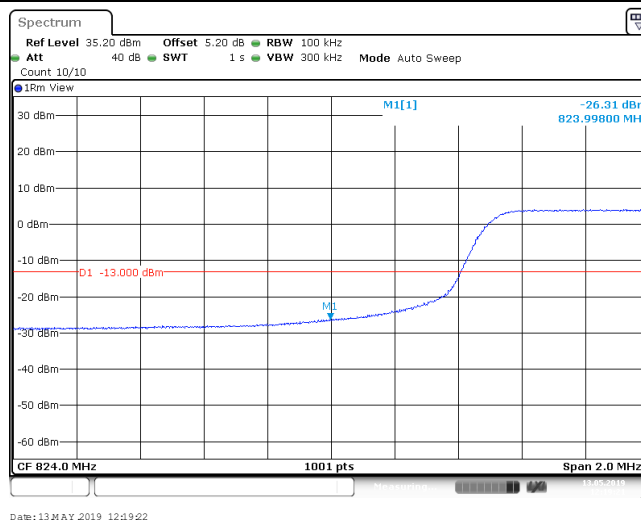
Band5_5MHz_16QAM_20625_25RB#0



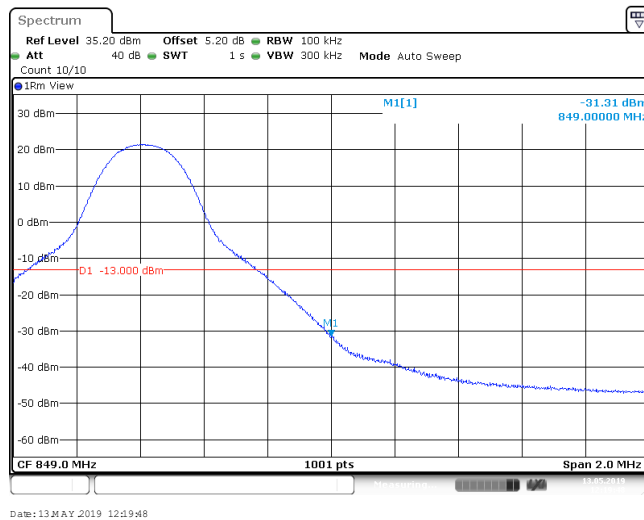
Band5_10MHz_QPSK_20450_1RB#0



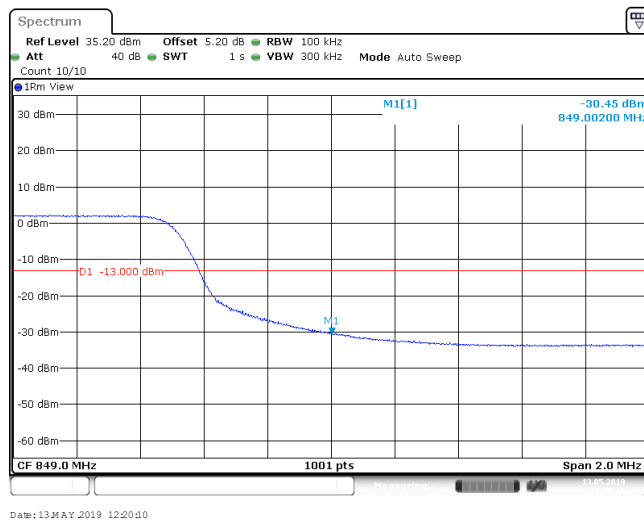
Band5_10MHz_QPSK_20450_50RB#0



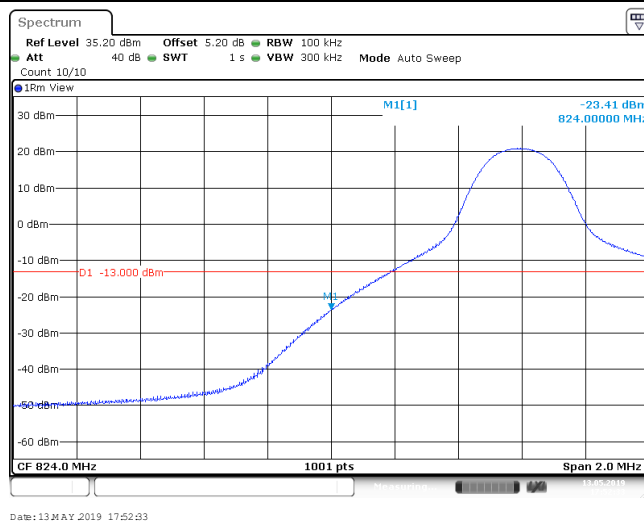
Band5_10MHz_QPSK_20600_1RB#49



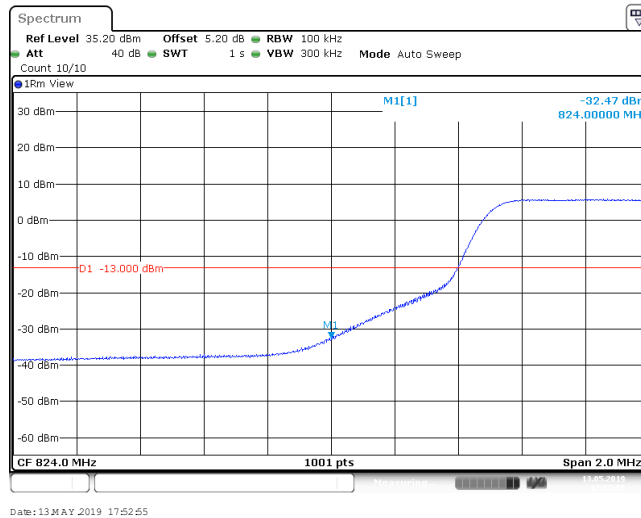
Band5_10MHz_QPSK_20600_50RB#0



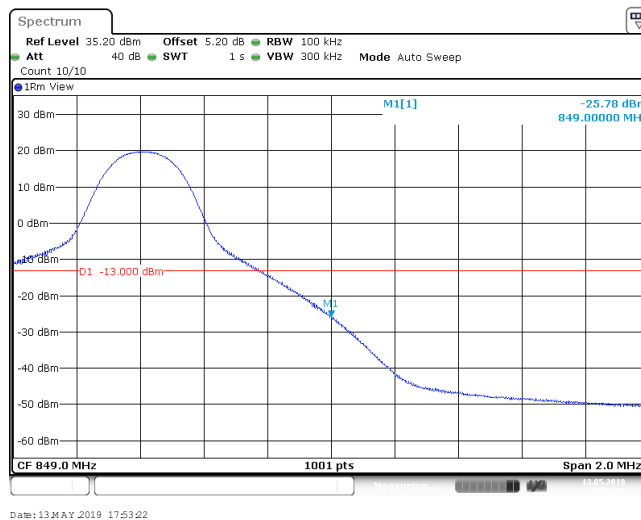
Band5_10MHz_16QAM_20450_1RB#0



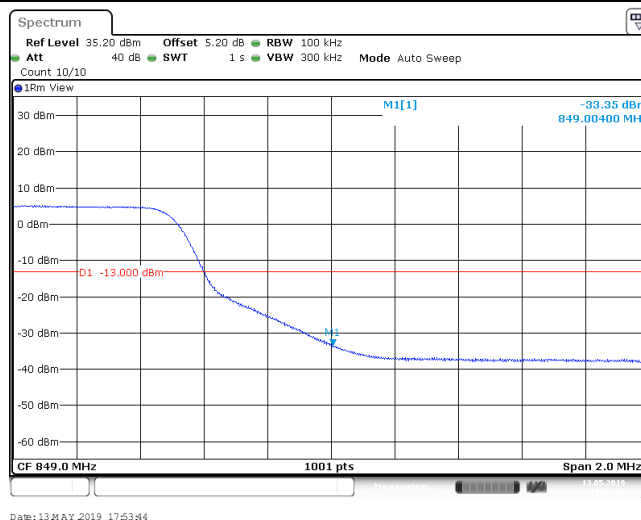
Band5_10MHz_16QAM_20450_27RB#0



Band5_10MHz_16QAM_20600_1RB#49



Band5_10MHz_16QAM_20600_27RB#23

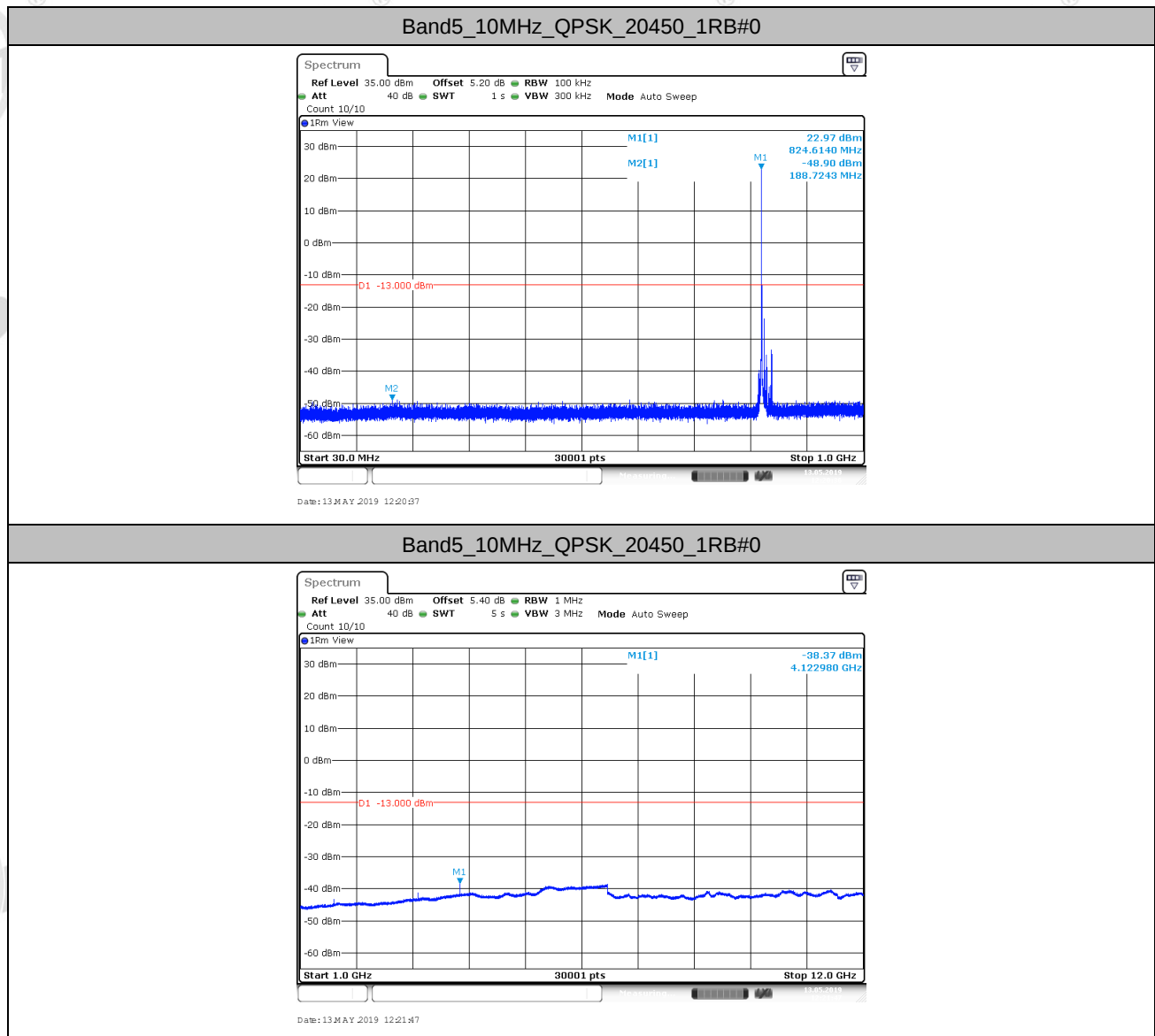


8. Spurious Emission at Antenna Terminal

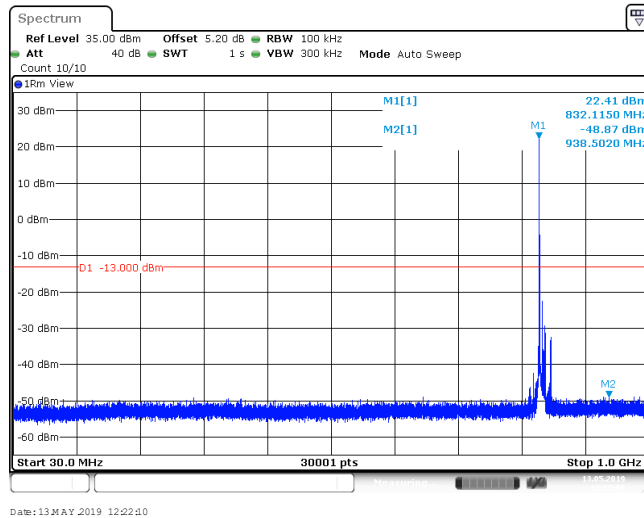
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =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

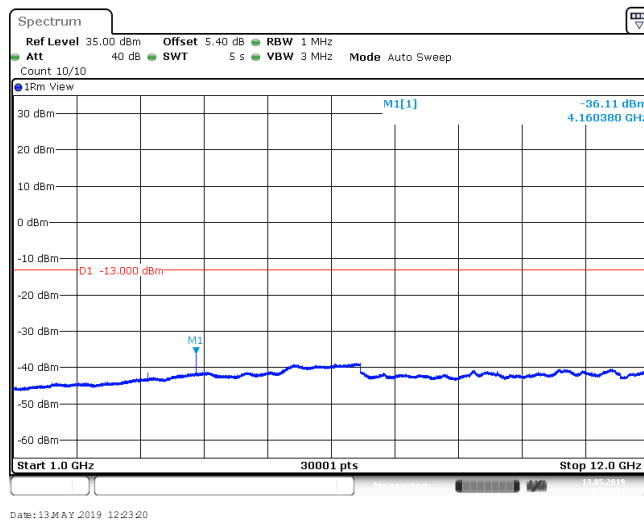
8.1. Test Plots



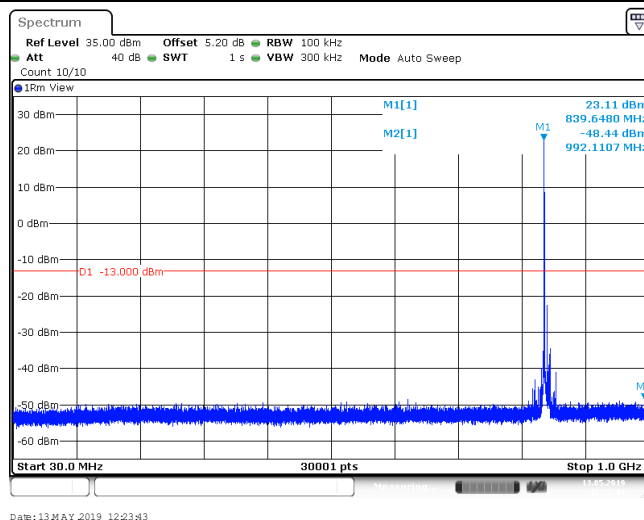
Band5_10MHz_QPSK_20525_1RB#0



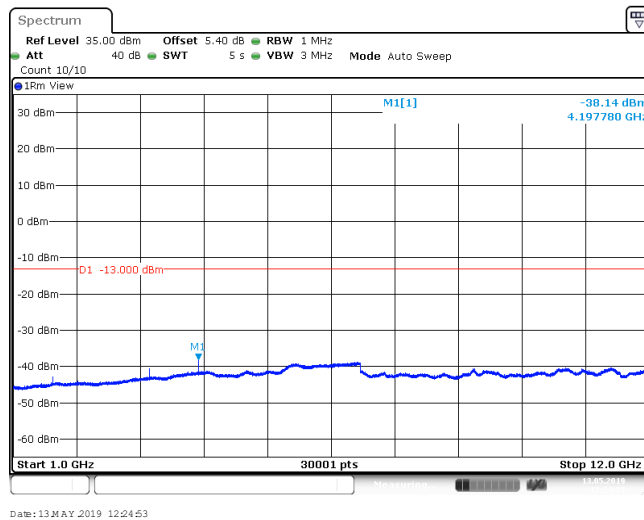
Band5_10MHz_QPSK_20525_1RB#0



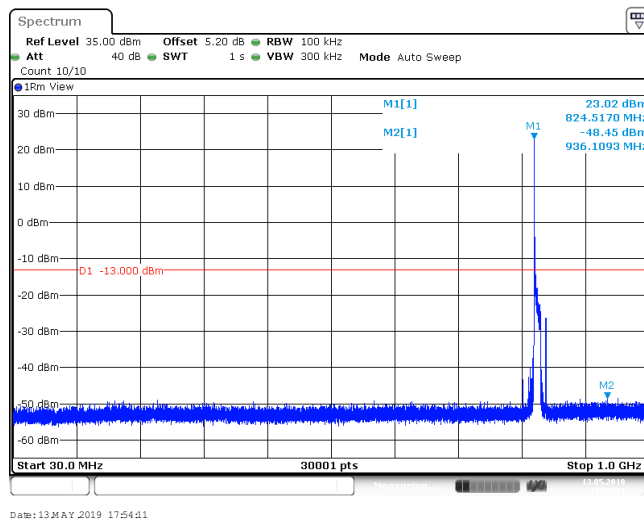
Band5_10MHz_QPSK_20600_1RB#0



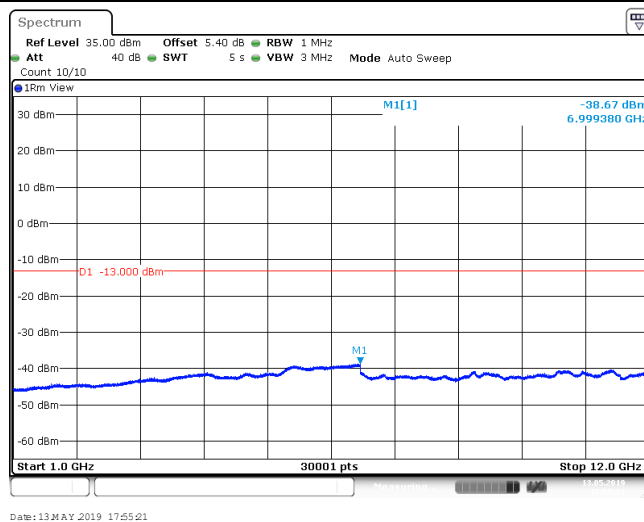
Band5_10MHz_QPSK_20600_1RB#0



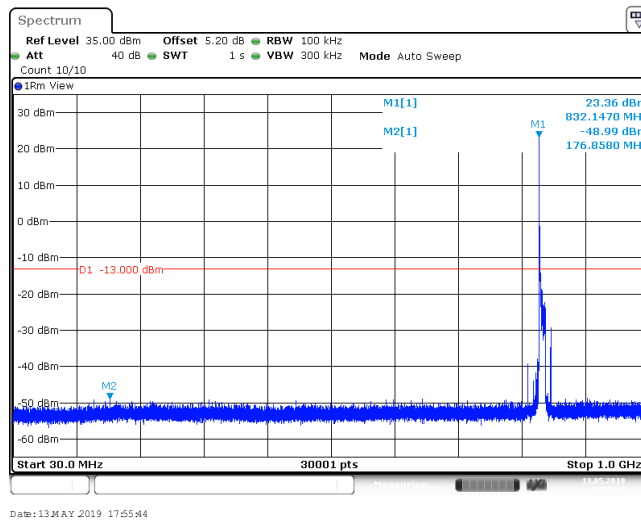
Band5_10MHz_16QAM_20450_1RB#0



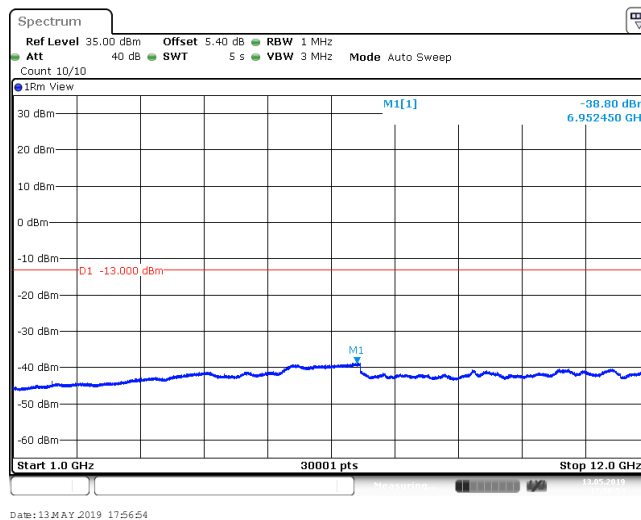
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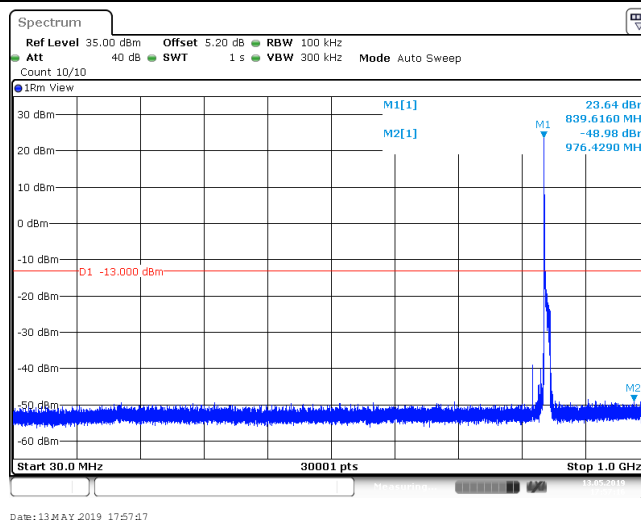
Band5_10MHz_16QAM_20525_1RB#0

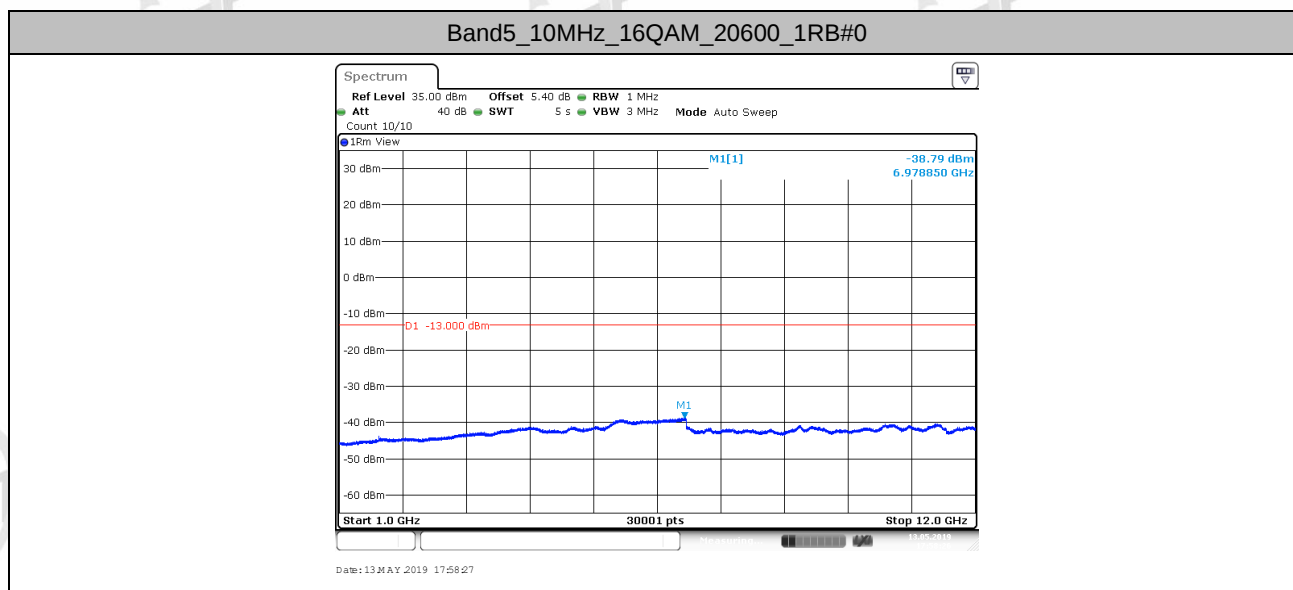


Band5_10MHz_16QAM_20525_1RB#0



Band5_10MHz_16QAM_20600_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
Band5	10MHz	QPSK	20450	50RB#0	VL	NT	-0.90	-0.001086	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VN	NT	4.00	0.004825	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VH	NT	2.70	0.003257	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VL	NT	-3.30	-0.003945	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VN	NT	-2.00	-0.002391	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VH	NT	-1.50	-0.001793	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VL	NT	-3.40	-0.004028	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VN	NT	-2.00	-0.002370	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VH	NT	-3.90	-0.004621	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	VL	NT	7.70	0.009288	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	VN	NT	0.00	0.000000	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	VH	NT	-3.10	-0.003739	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	VL	NT	1.10	0.001315	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	VN	NT	-4.40	-0.005260	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	VH	NT	-7.30	-0.008727	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	VL	NT	0.60	0.000711	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	VN	NT	2.00	0.002370	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	VH	NT	3.80	0.004502	±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
Band5	10MHz	QPSK	20450	50RB#0	NV	-30	-3.00	-0.003619	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	-20	-1.60	-0.001930	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	0	2.80	0.003378	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	10	2.00	0.002413	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	20	0.10	0.000121	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	30	-0.10	-0.000121	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	40	2.10	0.002533	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	50	6.30	0.007600	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-30	-1.00	-0.001195	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-20	1.70	0.002032	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	0	2.00	0.002391	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	10	0.90	0.001076	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	20	2.50	0.002989	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	30	2.90	0.003467	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	40	-2.40	-0.002869	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	50	-4.70	-0.005619	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-30	-2.40	-0.002844	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-20	-1.60	-0.001896	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	0	0.00	0.000000	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	10	0.00	0.000000	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	20	-0.10	-0.000118	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	30	-0.30	-0.000355	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	40	-0.70	-0.000829	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	50	-1.80	-0.002133	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	-30	-1.70	-0.002051	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	-20	5.40	0.006514	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	0	-3.80	-0.004584	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	10	-4.60	-0.005549	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	20	2.60	0.003136	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	30	2.60	0.003136	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	40	3.60	0.004343	±2.5	PASS
Band5	10MHz	16QAM	20450	27RB#0	NV	50	2.20	0.002654	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	NV	-30	2.10	0.002510	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	NV	-20	-3.20	-0.003825	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	NV	0	0.40	0.000478	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	NV	10	0.10	0.000120	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	NV	20	0.50	0.000598	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	NV	30	-0.10	-0.000120	±2.5	PASS
Band5	10MHz	16QAM	20525	27RB#0	NV	40	-0.30	-0.000359	±2.5	PASS

Band5	10MHz	16QAM	20525	27RB#0	NV	50	0.20	0.000239	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	-30	-2.90	-0.003436	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	-20	-2.70	-0.003199	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	0	-1.60	-0.001896	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	10	0.20	0.000237	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	20	3.40	0.004028	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	30	4.10	0.004858	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	40	-4.80	-0.005687	±2.5	PASS
Band5	10MHz	16QAM	20600	27RB#0	NV	50	-4.70	-0.005569	±2.5	PASS

The End