

Appendix B.15

E-UTRA Band 71

Table of Contents

1. MAIN TEST INSTRUMENTS.....	3
2. MEASUREMENT UNCERTAINTY	3
3. EFFECTIVE (ISOTROPIC) RADIATED POWER.....	4
3.1. TEST RESULT	4
4. PEAK-TO-AVERAGE RATIO(CCDF)	9
4.1. TEST RESULT	9
4.2. TEST PLOTS	9
5. MODULATION CHARACTERISTICS	12
5.1. TEST BAND = LTE BAND 71.....	12
5.2. TEST MODE = LTE /TM1 20MHZ	12
5.2.1. TEST CHANNEL = MCH.....	12
5.3. TEST MODE = LTE /TM2 20MHZ	13
5.3.1. TEST CHANNEL = MCH.....	13
6. 26DB BANDWIDTH AND OCCUPIED BANDWIDTH	14
6.1. TEST RESULT	14
6.2. TEST PLOTS	15
7. BAND EDGE COMPLIANCE	23
7.1. TEST PLOTS	23
8. SPURIOUS EMISSION AT ANTENNA TERMINAL	34
8.1. TEST PLOTS	34
9. FREQUENCY STABILITY	39
9.1. FREQUENCY VS VOLTAGE	39
9.2. FREQUENCY VS TEMPERATURE.....	40

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
Band71	5MHz	QPSK	133147	1RB#0	23.36	25.21	34.77	PASS
Band71	5MHz	QPSK	133147	1RB#12	23.04	24.89	34.77	PASS
Band71	5MHz	QPSK	133147	1RB#24	23.55	25.40	34.77	PASS
Band71	5MHz	QPSK	133147	12RB#0	22.23	24.08	34.77	PASS
Band71	5MHz	QPSK	133147	12RB#6	22.24	24.09	34.77	PASS
Band71	5MHz	QPSK	133147	12RB#13	22.18	24.03	34.77	PASS
Band71	5MHz	QPSK	133147	25RB#0	22.35	24.20	34.77	PASS
Band71	5MHz	QPSK	133297	1RB#0	23.28	25.13	34.77	PASS
Band71	5MHz	QPSK	133297	1RB#12	23.23	25.08	34.77	PASS
Band71	5MHz	QPSK	133297	1RB#24	23.14	24.99	34.77	PASS
Band71	5MHz	QPSK	133297	12RB#0	22.37	24.22	34.77	PASS
Band71	5MHz	QPSK	133297	12RB#6	22.29	24.14	34.77	PASS
Band71	5MHz	QPSK	133297	12RB#13	22.35	24.20	34.77	PASS
Band71	5MHz	QPSK	133297	25RB#0	22.3	24.15	34.77	PASS
Band71	5MHz	QPSK	133447	1RB#0	23.19	25.04	34.77	PASS
Band71	5MHz	QPSK	133447	1RB#12	23.11	24.96	34.77	PASS
Band71	5MHz	QPSK	133447	1RB#24	22.73	24.58	34.77	PASS
Band71	5MHz	QPSK	133447	12RB#0	22.37	24.22	34.77	PASS
Band71	5MHz	QPSK	133447	12RB#6	22.2	24.05	34.77	PASS
Band71	5MHz	QPSK	133447	12RB#13	22.2	24.05	34.77	PASS
Band71	5MHz	QPSK	133447	25RB#0	22.38	24.23	34.77	PASS
Band71	5MHz	16QAM	133147	1RB#0	22.58	24.43	34.77	PASS
Band71	5MHz	16QAM	133147	1RB#12	22.59	24.44	34.77	PASS
Band71	5MHz	16QAM	133147	1RB#24	22.53	24.38	34.77	PASS
Band71	5MHz	16QAM	133147	12RB#0	21.18	23.03	34.77	PASS
Band71	5MHz	16QAM	133147	12RB#6	21.31	23.16	34.77	PASS
Band71	5MHz	16QAM	133147	12RB#13	21.24	23.09	34.77	PASS
Band71	5MHz	16QAM	133147	25RB#0	21.3	23.15	34.77	PASS
Band71	5MHz	16QAM	133297	1RB#0	22.7	24.55	34.77	PASS
Band71	5MHz	16QAM	133297	1RB#12	22.5	24.35	34.77	PASS
Band71	5MHz	16QAM	133297	1RB#24	22.73	24.58	34.77	PASS
Band71	5MHz	16QAM	133297	12RB#0	21.34	23.19	34.77	PASS
Band71	5MHz	16QAM	133297	12RB#6	21.28	23.13	34.77	PASS
Band71	5MHz	16QAM	133297	12RB#13	21.3	23.15	34.77	PASS
Band71	5MHz	16QAM	133297	25RB#0	21.24	23.09	34.77	PASS
Band71	5MHz	16QAM	133447	1RB#0	22.48	24.33	34.77	PASS
Band71	5MHz	16QAM	133447	1RB#12	22.29	24.14	34.77	PASS

Band71	5MHz	16QAM	133447	1RB#24	22.38	24.23	34.77	PASS
Band71	5MHz	16QAM	133447	12RB#0	21.2	23.05	34.77	PASS
Band71	5MHz	16QAM	133447	12RB#6	21.09	22.94	34.77	PASS
Band71	5MHz	16QAM	133447	12RB#13	21.17	23.02	34.77	PASS
Band71	5MHz	16QAM	133447	25RB#0	21.18	23.03	34.77	PASS
Band71	10MHz	QPSK	133172	1RB#0	23.25	25.10	34.77	PASS
Band71	10MHz	QPSK	133172	1RB#24	24.22	26.07	34.77	PASS
Band71	10MHz	QPSK	133172	1RB#49	22.73	24.58	34.77	PASS
Band71	10MHz	QPSK	133172	25RB#0	22.43	24.28	34.77	PASS
Band71	10MHz	QPSK	133172	25RB#12	22.54	24.39	34.77	PASS
Band71	10MHz	QPSK	133172	25RB#25	22.37	24.22	34.77	PASS
Band71	10MHz	QPSK	133172	50RB#0	22.05	23.90	34.77	PASS
Band71	10MHz	QPSK	133297	1RB#0	23.49	25.34	34.77	PASS
Band71	10MHz	QPSK	133297	1RB#24	23.41	25.26	34.77	PASS
Band71	10MHz	QPSK	133297	1RB#49	22.87	24.72	34.77	PASS
Band71	10MHz	QPSK	133297	25RB#0	22.56	24.41	34.77	PASS
Band71	10MHz	QPSK	133297	25RB#12	22.28	24.13	34.77	PASS
Band71	10MHz	QPSK	133297	25RB#25	22.31	24.16	34.77	PASS
Band71	10MHz	QPSK	133297	50RB#0	22.4	24.25	34.77	PASS
Band71	10MHz	QPSK	133422	1RB#0	23.16	25.01	34.77	PASS
Band71	10MHz	QPSK	133422	1RB#24	23.5	25.35	34.77	PASS
Band71	10MHz	QPSK	133422	1RB#49	22.48	24.33	34.77	PASS
Band71	10MHz	QPSK	133422	25RB#0	22.25	24.10	34.77	PASS
Band71	10MHz	QPSK	133422	25RB#12	22.33	24.18	34.77	PASS
Band71	10MHz	QPSK	133422	25RB#25	21.97	23.82	34.77	PASS
Band71	10MHz	QPSK	133422	50RB#0	22.17	24.02	34.77	PASS
Band71	10MHz	16QAM	133172	1RB#0	22.53	24.38	34.77	PASS
Band71	10MHz	16QAM	133172	1RB#24	22.4	24.25	34.77	PASS
Band71	10MHz	16QAM	133172	1RB#49	22.52	24.37	34.77	PASS
Band71	10MHz	16QAM	133172	25RB#0	21.34	23.19	34.77	PASS
Band71	10MHz	16QAM	133172	25RB#12	21.31	23.16	34.77	PASS
Band71	10MHz	16QAM	133172	25RB#25	21.3	23.15	34.77	PASS
Band71	10MHz	16QAM	133172	50RB#0	21.36	23.21	34.77	PASS
Band71	10MHz	16QAM	133297	1RB#0	22.83	24.68	34.77	PASS
Band71	10MHz	16QAM	133297	1RB#24	22.57	24.42	34.77	PASS
Band71	10MHz	16QAM	133297	1RB#49	22.47	24.32	34.77	PASS
Band71	10MHz	16QAM	133297	25RB#0	21.44	23.29	34.77	PASS
Band71	10MHz	16QAM	133297	25RB#12	21.32	23.17	34.77	PASS
Band71	10MHz	16QAM	133297	25RB#25	21.24	23.09	34.77	PASS
Band71	10MHz	16QAM	133297	50RB#0	21.33	23.18	34.77	PASS
Band71	10MHz	16QAM	133422	1RB#0	22.7	24.55	34.77	PASS
Band71	10MHz	16QAM	133422	1RB#24	22.49	24.34	34.77	PASS
Band71	10MHz	16QAM	133422	1RB#49	22.36	24.21	34.77	PASS
Band71	10MHz	16QAM	133422	25RB#0	21.13	22.98	34.77	PASS

Band71	10MHz	16QAM	133422	25RB#12	21.18	23.03	34.77	PASS
Band71	10MHz	16QAM	133422	25RB#25	21.2	23.05	34.77	PASS
Band71	10MHz	16QAM	133422	50RB#0	21.22	23.07	34.77	PASS
Band71	15MHz	QPSK	133197	1RB#0	23.48	25.33	34.77	PASS
Band71	15MHz	QPSK	133197	1RB#38	24.15	26.00	34.77	PASS
Band71	15MHz	QPSK	133197	1RB#74	22.48	24.33	34.77	PASS
Band71	15MHz	QPSK	133197	36RB#0	22.29	24.14	34.77	PASS
Band71	15MHz	QPSK	133197	36RB#18	22.53	24.38	34.77	PASS
Band71	15MHz	QPSK	133197	36RB#39	21.9	23.75	34.77	PASS
Band71	15MHz	QPSK	133197	75RB#0	22.31	24.16	34.77	PASS
Band71	15MHz	QPSK	133297	1RB#0	23.46	25.31	34.77	PASS
Band71	15MHz	QPSK	133297	1RB#38	22.86	24.71	34.77	PASS
Band71	15MHz	QPSK	133297	1RB#74	23.16	25.01	34.77	PASS
Band71	15MHz	QPSK	133297	36RB#0	22.37	24.22	34.77	PASS
Band71	15MHz	QPSK	133297	36RB#18	22.11	23.96	34.77	PASS
Band71	15MHz	QPSK	133297	36RB#39	22.18	24.03	34.77	PASS
Band71	15MHz	QPSK	133297	75RB#0	22.14	23.99	34.77	PASS
Band71	15MHz	QPSK	133397	1RB#0	22.9	24.75	34.77	PASS
Band71	15MHz	QPSK	133397	1RB#38	23.86	25.71	34.77	PASS
Band71	15MHz	QPSK	133397	1RB#74	22.57	24.42	34.77	PASS
Band71	15MHz	QPSK	133397	36RB#0	22.36	24.21	34.77	PASS
Band71	15MHz	QPSK	133397	36RB#18	22.13	23.98	34.77	PASS
Band71	15MHz	QPSK	133397	36RB#39	22.12	23.97	34.77	PASS
Band71	15MHz	QPSK	133397	75RB#0	22.19	24.04	34.77	PASS
Band71	15MHz	16QAM	133197	1RB#0	22.62	24.47	34.77	PASS
Band71	15MHz	16QAM	133197	1RB#38	22.51	24.36	34.77	PASS
Band71	15MHz	16QAM	133197	1RB#74	22.39	24.24	34.77	PASS
Band71	15MHz	16QAM	133197	36RB#0	21.42	23.27	34.77	PASS
Band71	15MHz	16QAM	133197	36RB#18	21.29	23.14	34.77	PASS
Band71	15MHz	16QAM	133197	36RB#39	21.27	23.12	34.77	PASS
Band71	15MHz	16QAM	133197	75RB#0	21.13	22.98	34.77	PASS
Band71	15MHz	16QAM	133297	1RB#0	22.77	24.62	34.77	PASS
Band71	15MHz	16QAM	133297	1RB#38	22.39	24.24	34.77	PASS
Band71	15MHz	16QAM	133297	1RB#74	22.47	24.32	34.77	PASS
Band71	15MHz	16QAM	133297	36RB#0	21.31	23.16	34.77	PASS
Band71	15MHz	16QAM	133297	36RB#18	21.07	22.92	34.77	PASS
Band71	15MHz	16QAM	133297	36RB#39	21.21	23.06	34.77	PASS
Band71	15MHz	16QAM	133297	75RB#0	21.09	22.94	34.77	PASS
Band71	15MHz	16QAM	133397	1RB#0	22.61	24.46	34.77	PASS
Band71	15MHz	16QAM	133397	1RB#38	22.47	24.32	34.77	PASS
Band71	15MHz	16QAM	133397	1RB#74	22.48	24.33	34.77	PASS
Band71	15MHz	16QAM	133397	36RB#0	21.23	23.08	34.77	PASS
Band71	15MHz	16QAM	133397	36RB#18	21.17	23.02	34.77	PASS
Band71	15MHz	16QAM	133397	36RB#39	21.16	23.01	34.77	PASS

Band71	15MHz	16QAM	133397	75RB#0	21.21	23.06	34.77	PASS
Band71	20MHz	QPSK	133222	1RB#0	23.41	25.26	34.77	PASS
Band71	20MHz	QPSK	133222	1RB#49	23.85	25.70	34.77	PASS
Band71	20MHz	QPSK	133222	1RB#99	22.17	24.02	34.77	PASS
Band71	20MHz	QPSK	133222	50RB#0	22.59	24.44	34.77	PASS
Band71	20MHz	QPSK	133222	50RB#25	22.27	24.12	34.77	PASS
Band71	20MHz	QPSK	133222	50RB#50	22.15	24.00	34.77	PASS
Band71	20MHz	QPSK	133222	100RB#0	22.34	24.19	34.77	PASS
Band71	20MHz	QPSK	133322	1RB#0	23.59	25.44	34.77	PASS
Band71	20MHz	QPSK	133322	1RB#49	22.99	24.84	34.77	PASS
Band71	20MHz	QPSK	133322	1RB#99	22.92	24.77	34.77	PASS
Band71	20MHz	QPSK	133322	50RB#0	22.28	24.13	34.77	PASS
Band71	20MHz	QPSK	133322	50RB#25	22.15	24.00	34.77	PASS
Band71	20MHz	QPSK	133322	50RB#50	22.14	23.99	34.77	PASS
Band71	20MHz	QPSK	133322	100RB#0	22.21	24.06	34.77	PASS
Band71	20MHz	QPSK	133372	1RB#0	23.31	25.16	34.77	PASS
Band71	20MHz	QPSK	133372	1RB#49	23.87	25.72	34.77	PASS
Band71	20MHz	QPSK	133372	1RB#99	22.36	24.21	34.77	PASS
Band71	20MHz	QPSK	133372	50RB#0	22.18	24.03	34.77	PASS
Band71	20MHz	QPSK	133372	50RB#25	22.27	24.12	34.77	PASS
Band71	20MHz	QPSK	133372	50RB#50	22.13	23.98	34.77	PASS
Band71	20MHz	QPSK	133372	100RB#0	22.15	24.00	34.77	PASS
Band71	20MHz	16QAM	133222	1RB#0	22.78	24.63	34.77	PASS
Band71	20MHz	16QAM	133222	1RB#49	22.52	24.37	34.77	PASS
Band71	20MHz	16QAM	133222	1RB#99	22.52	24.37	34.77	PASS
Band71	20MHz	16QAM	133222	50RB#0	21.22	23.07	34.77	PASS
Band71	20MHz	16QAM	133222	50RB#25	21.15	23.00	34.77	PASS
Band71	20MHz	16QAM	133222	50RB#50	21.09	22.94	34.77	PASS
Band71	20MHz	16QAM	133222	100RB#0	21.37	23.22	34.77	PASS
Band71	20MHz	16QAM	133322	1RB#0	22.83	24.68	34.77	PASS
Band71	20MHz	16QAM	133322	1RB#49	22.35	24.20	34.77	PASS
Band71	20MHz	16QAM	133322	1RB#99	22.41	24.26	34.77	PASS
Band71	20MHz	16QAM	133322	50RB#0	21.24	23.09	34.77	PASS
Band71	20MHz	16QAM	133322	50RB#25	21.09	22.94	34.77	PASS
Band71	20MHz	16QAM	133322	50RB#50	21.17	23.02	34.77	PASS
Band71	20MHz	16QAM	133322	100RB#0	21.21	23.06	34.77	PASS
Band71	20MHz	16QAM	133372	1RB#0	22.89	24.74	34.77	PASS
Band71	20MHz	16QAM	133372	1RB#49	22.44	24.29	34.77	PASS
Band71	20MHz	16QAM	133372	1RB#99	22.54	24.39	34.77	PASS
Band71	20MHz	16QAM	133372	50RB#0	21.14	22.99	34.77	PASS
Band71	20MHz	16QAM	133372	50RB#25	21.18	23.03	34.77	PASS
Band71	20MHz	16QAM	133372	50RB#50	21.16	23.01	34.77	PASS
Band71	20MHz	16QAM	133372	100RB#0	21.27	23.12	34.77	PASS

Remark:

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

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

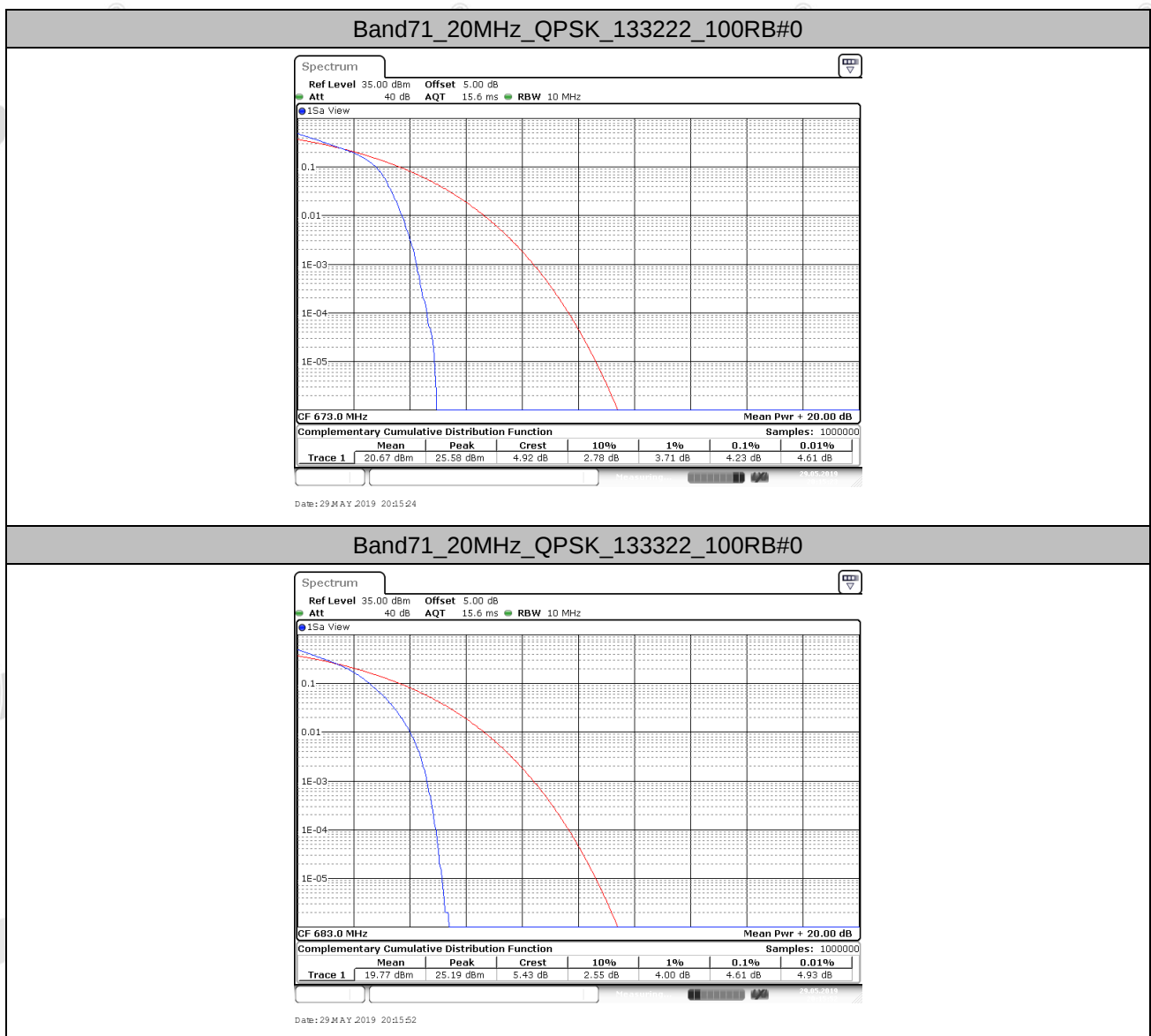
$$\text{EIRP [dBm]} = \text{Conducted Power [dBm]} + \text{Gain [dBi]}$$

4. Peak-to-Average Ratio(CCDF)

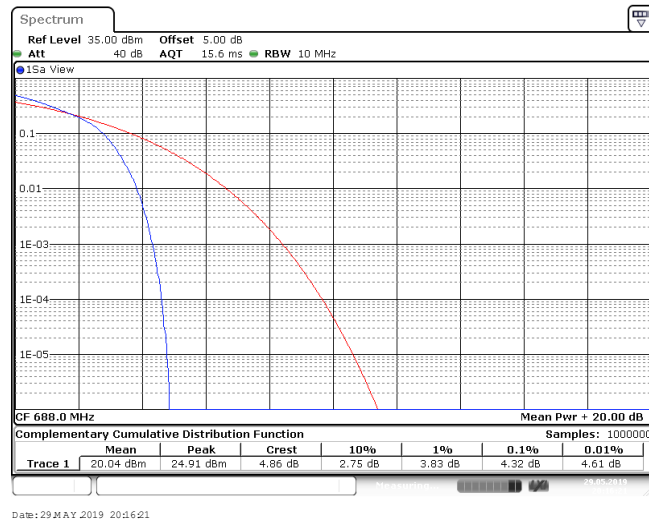
4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band71	20MHz	QPSK	133222	100RB#0	4.23	13	PASS
Band71	20MHz	QPSK	133322	100RB#0	4.61	13	PASS
Band71	20MHz	QPSK	133372	100RB#0	4.32	13	PASS
Band71	20MHz	16QAM	133222	100RB#0	5.97	13	PASS
Band71	20MHz	16QAM	133322	100RB#0	6.06	13	PASS
Band71	20MHz	16QAM	133372	100RB#0	6.00	13	PASS

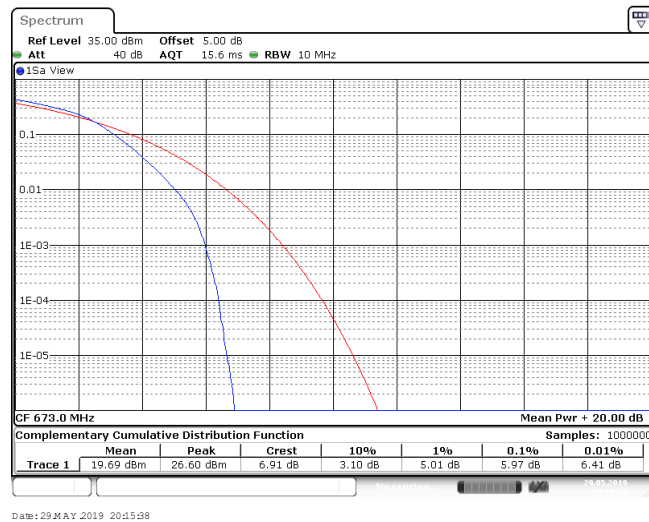
4.2. Test Plots



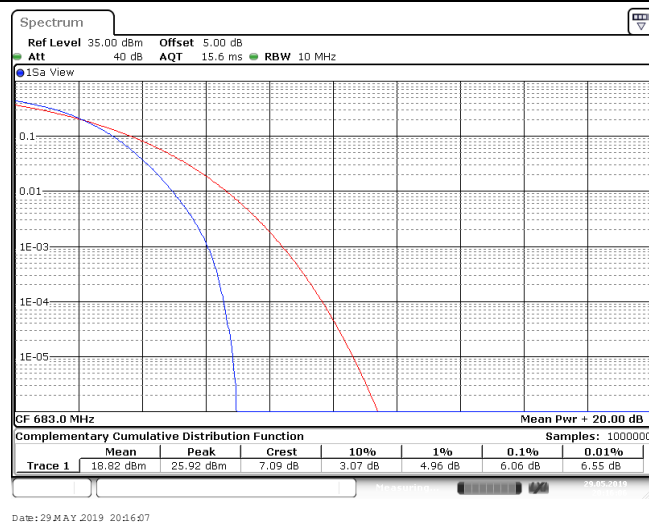
Band71_20MHz_QPSK_133372_100RB#0



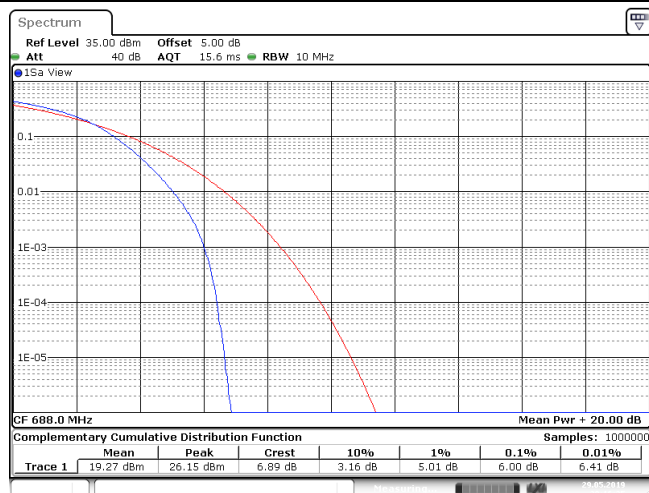
Band71_20MHz_16QAM_133222_100RB#0



Band71_20MHz_16QAM_133322_100RB#0



Band71_20MHz_16QAM_133372_100RB#0



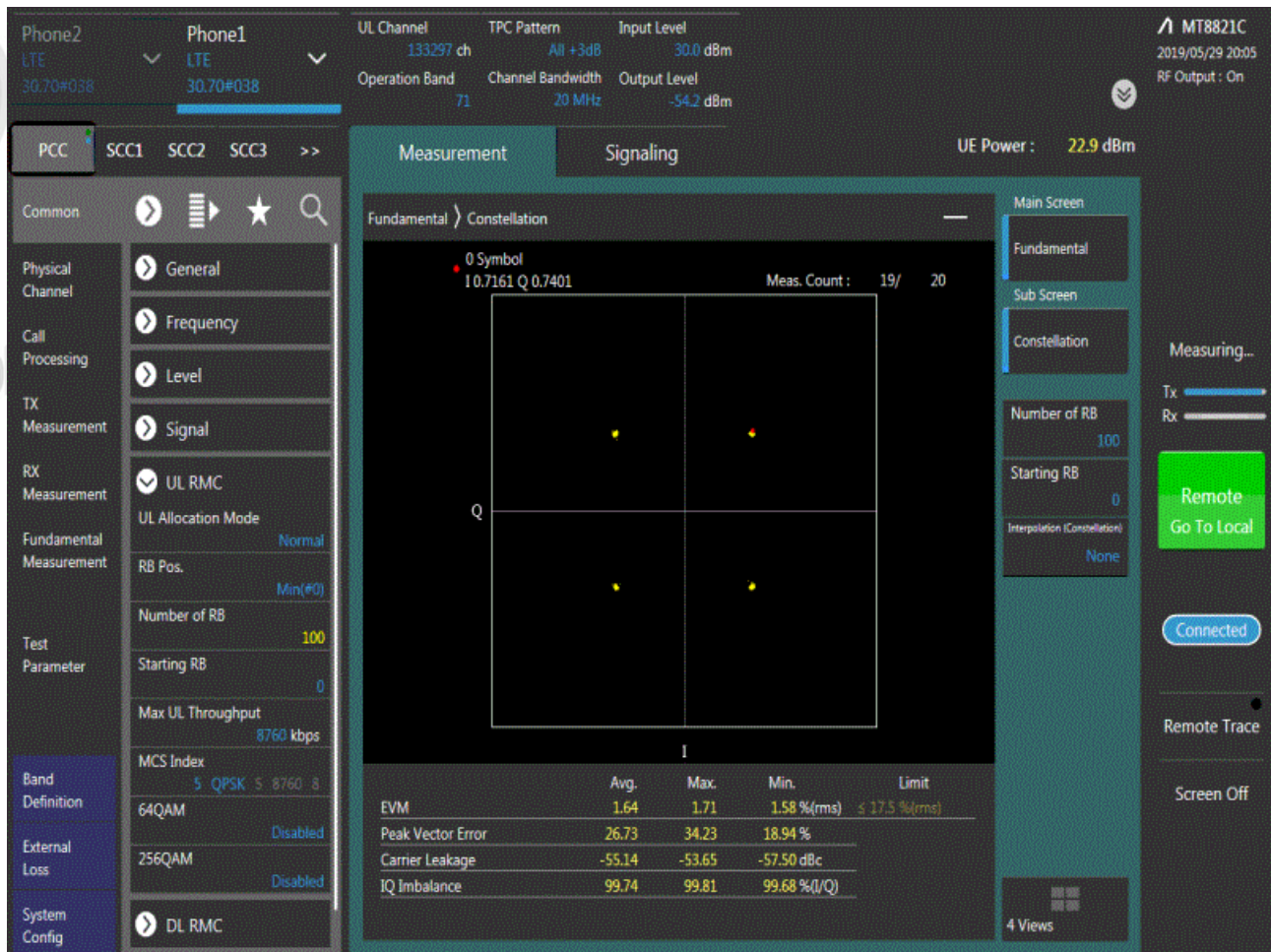
Date: 29 MAY 2019 20:16:35

5. Modulation Characteristics

5.1. Test BAND = LTE Band 71

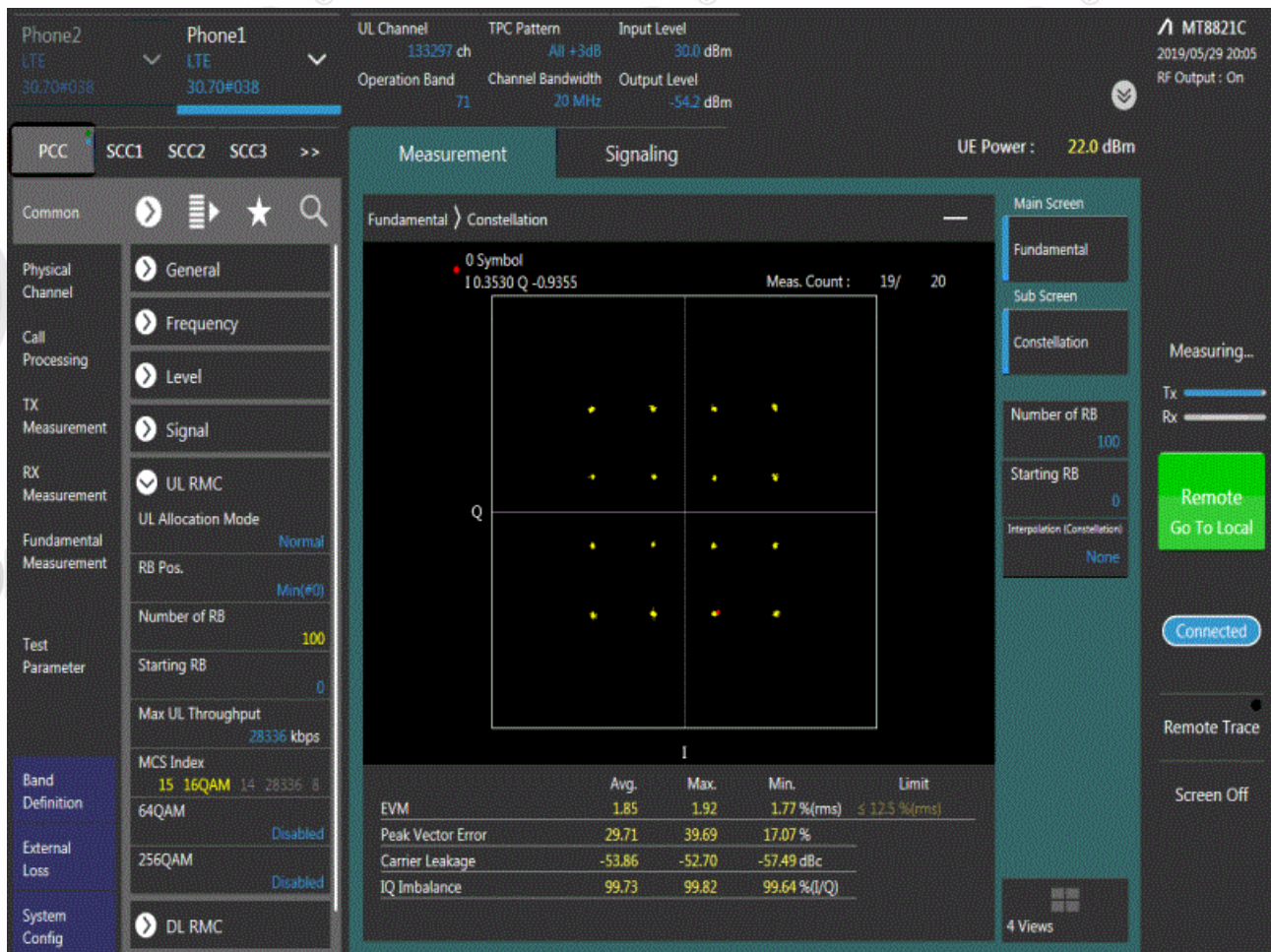
5.2. Test Mode = LTE /TM1 20MHz

5.2.1. Test Channel = MCH



5.3. Test Mode = LTE /TM2 20MHz

5.3.1. Test Channel = MCH



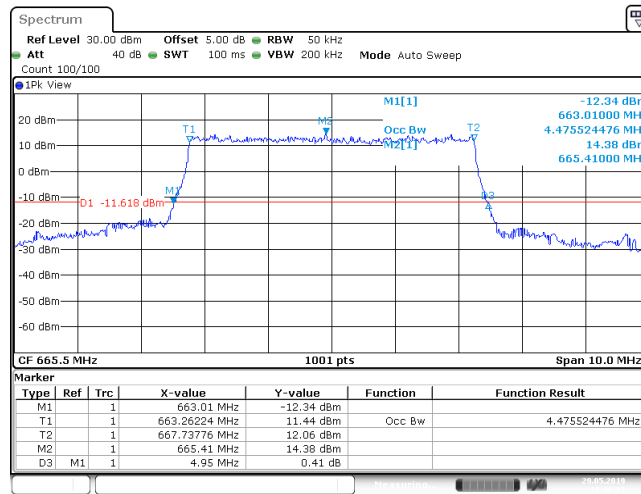
6. 26dB Bandwidth and Occupied Bandwidth

6.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band71	5MHz	QPSK	133147	25RB#0	4.476	4.950	PASS
Band71	5MHz	QPSK	133297	25RB#0	4.476	4.940	PASS
Band71	5MHz	QPSK	133447	25RB#0	4.476	4.910	PASS
Band71	5MHz	16QAM	133147	25RB#0	4.486	4.970	PASS
Band71	5MHz	16QAM	133297	25RB#0	4.486	4.950	PASS
Band71	5MHz	16QAM	133447	25RB#0	4.486	4.940	PASS
Band71	10MHz	QPSK	133172	50RB#0	8.951	9.760	PASS
Band71	10MHz	QPSK	133297	50RB#0	8.931	9.720	PASS
Band71	10MHz	QPSK	133422	50RB#0	8.891	9.720	PASS
Band71	10MHz	16QAM	133172	50RB#0	8.951	9.780	PASS
Band71	10MHz	16QAM	133297	50RB#0	8.931	9.700	PASS
Band71	10MHz	16QAM	133422	50RB#0	8.911	9.640	PASS
Band71	15MHz	QPSK	133197	75RB#0	13.457	14.790	PASS
Band71	15MHz	QPSK	133297	75RB#0	13.487	14.760	PASS
Band71	15MHz	QPSK	133397	75RB#0	13.427	14.700	PASS
Band71	15MHz	16QAM	133197	75RB#0	13.457	14.730	PASS
Band71	15MHz	16QAM	133297	75RB#0	13.487	14.790	PASS
Band71	15MHz	16QAM	133397	75RB#0	13.397	14.670	PASS
Band71	20MHz	QPSK	133222	100RB#0	17.862	19.440	PASS
Band71	20MHz	QPSK	133322	100RB#0	17.942	19.560	PASS
Band71	20MHz	QPSK	133372	100RB#0	17.862	19.480	PASS
Band71	20MHz	16QAM	133222	100RB#0	17.822	19.320	PASS
Band71	20MHz	16QAM	133322	100RB#0	17.942	19.440	PASS
Band71	20MHz	16QAM	133372	100RB#0	17.862	19.400	PASS

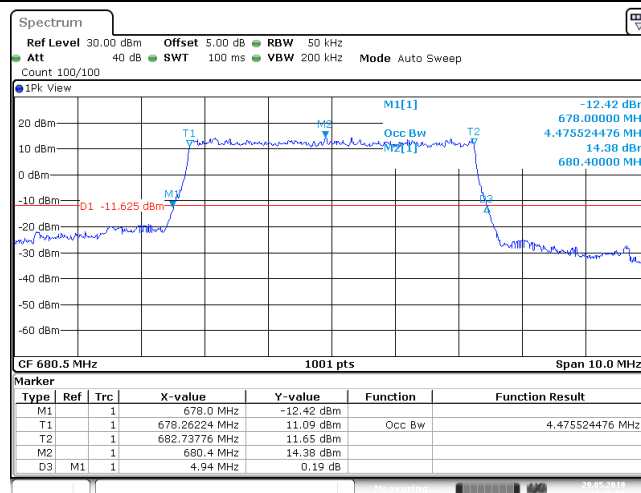
6.2. Test Plots

Band71_5MHz_QPSK_133147_25RB#0



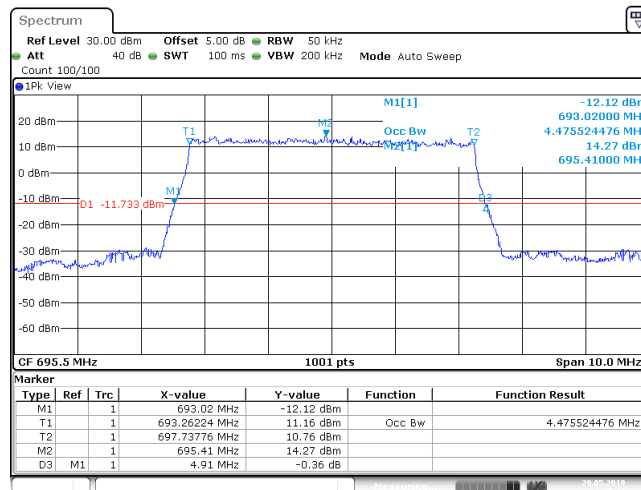
Date: 29 MAY 2019 19:46:11

Band71_5MHz_QPSK_133297_25RB#0



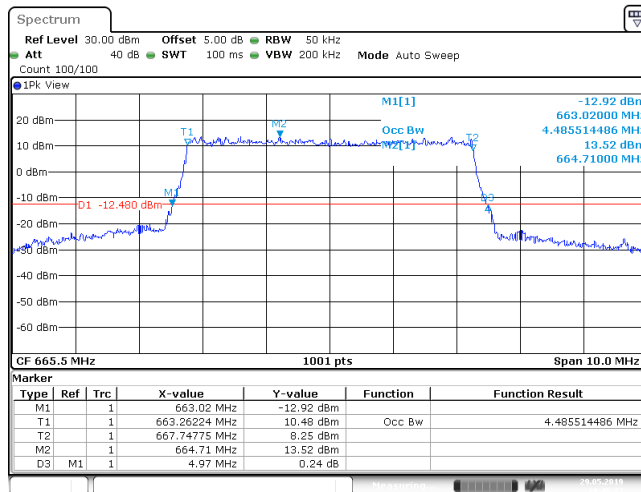
Date: 29 MAY 2019 19:46:57

Band71_5MHz_QPSK_133447_25RB#0

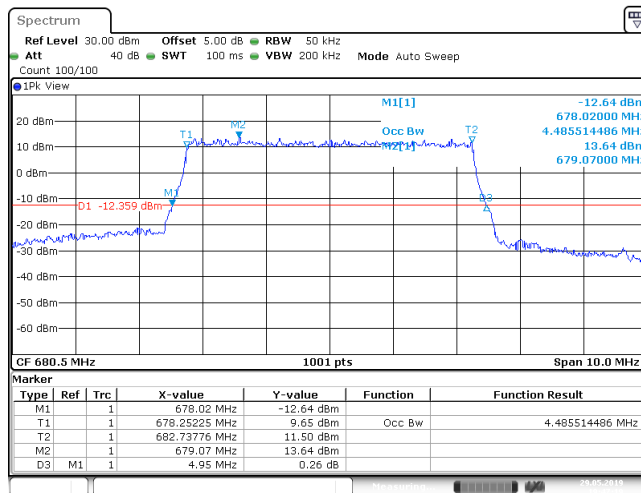


Date: 29 MAY 2019 19:47:42

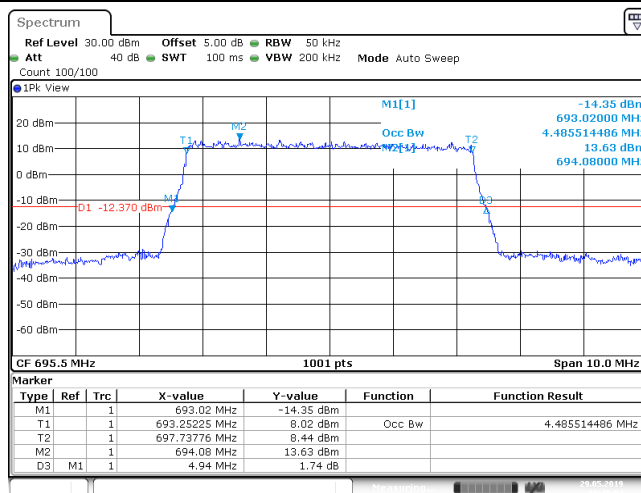
Band71_5MHz_16QAM_133147_25RB#0



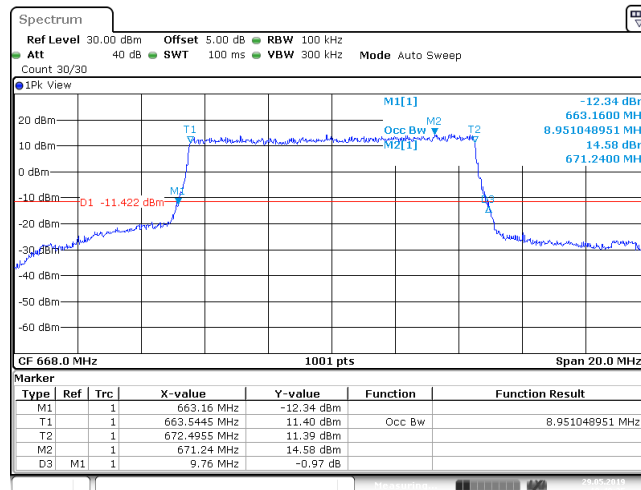
Band71_5MHz_16QAM_133297_25RB#0



Band71_5MHz_16QAM_133447_25RB#0

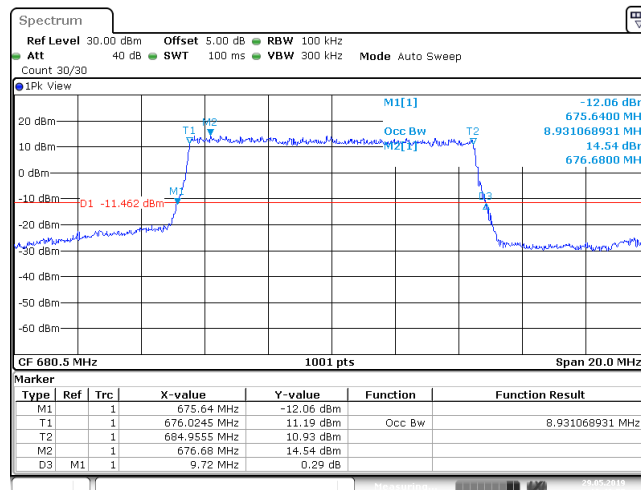


Band71_10MHz_QPSK_133172_50RB#0



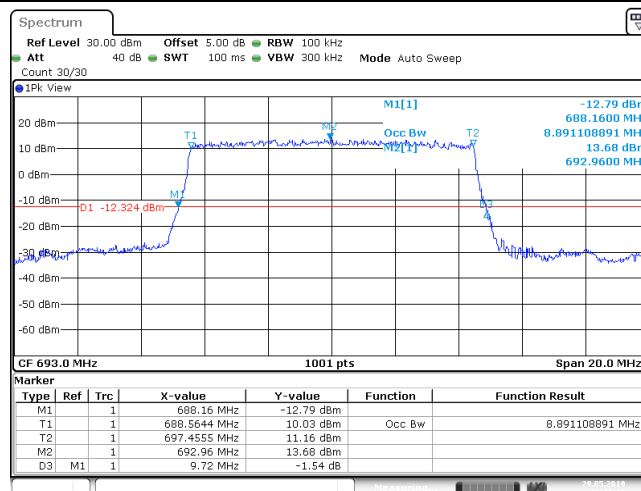
Date: 29 MAY 2019 19:48:25

Band71_10MHz_QPSK_133297_50RB#0



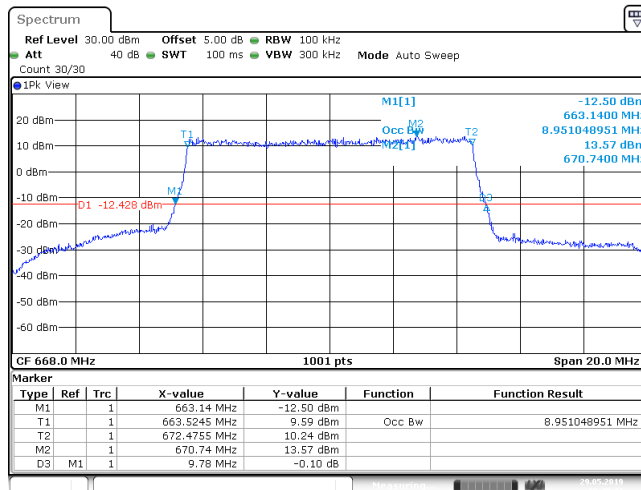
Date: 29 MAY 2019 19:48:57

Band71_10MHz_QPSK_133422_50RB#0



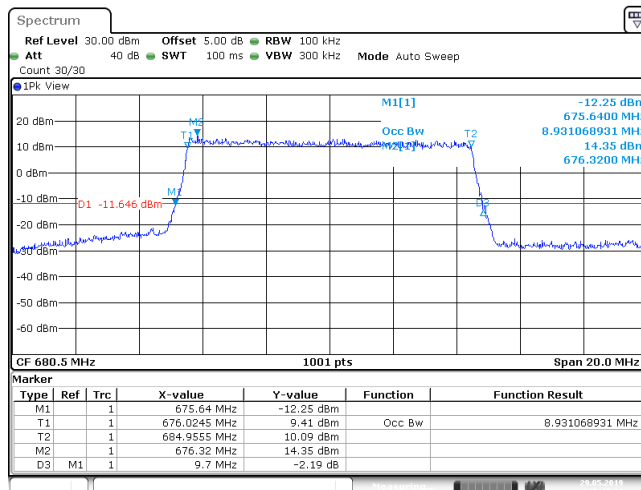
Date: 29 MAY 2019 19:49:29

Band71_10MHz_16QAM_133172_50RB#0



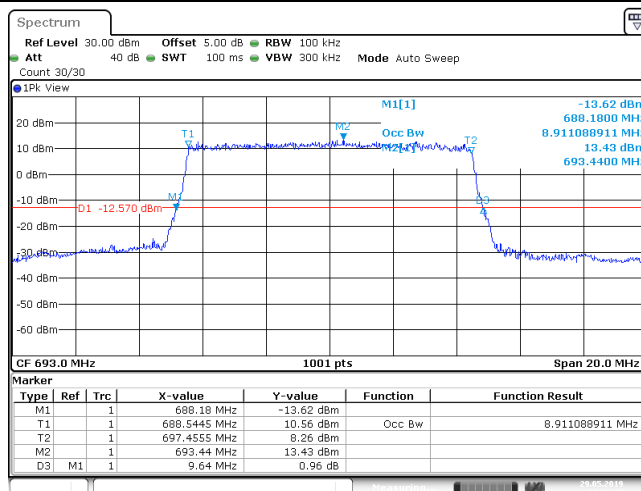
Date: 29 MAY 2019 19:48:41

Band71_10MHz_16QAM_133297_50RB#0



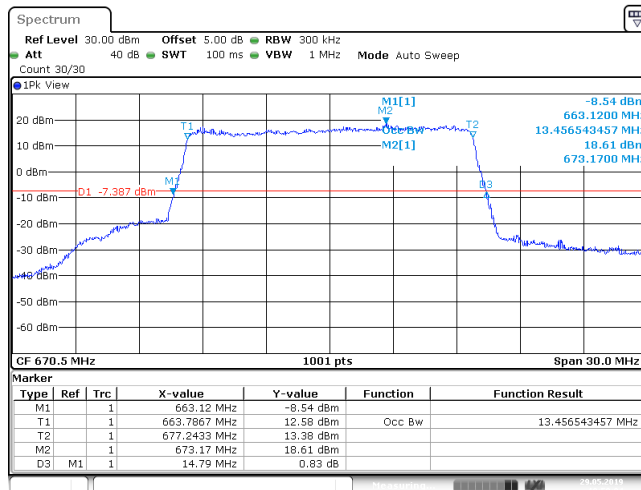
Date: 29 MAY 2019 19:49:13

Band71_10MHz_16QAM_133422_50RB#0



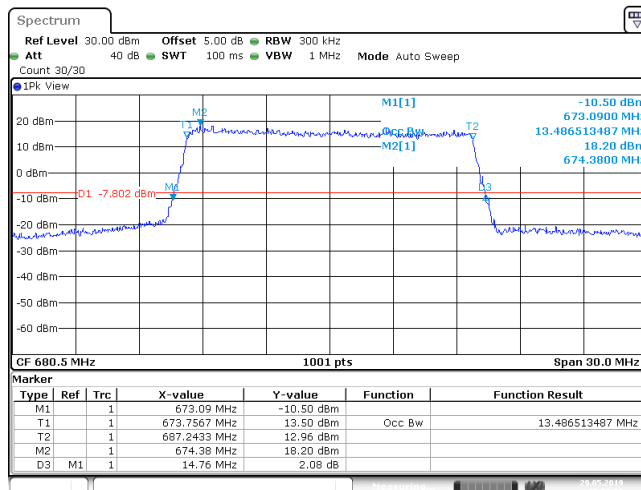
Date: 29 MAY 2019 19:49:44

Band71_15MHz_QPSK_133197_75RB#0



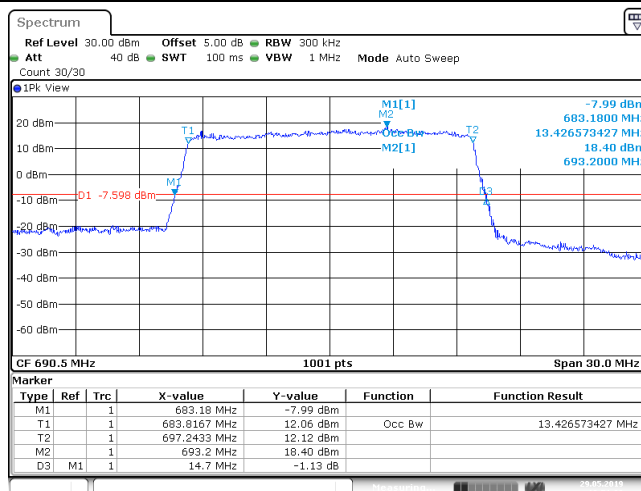
Date: 29 MAY 2019 19:50:05

Band71_15MHz_QPSK_133297_75RB#0



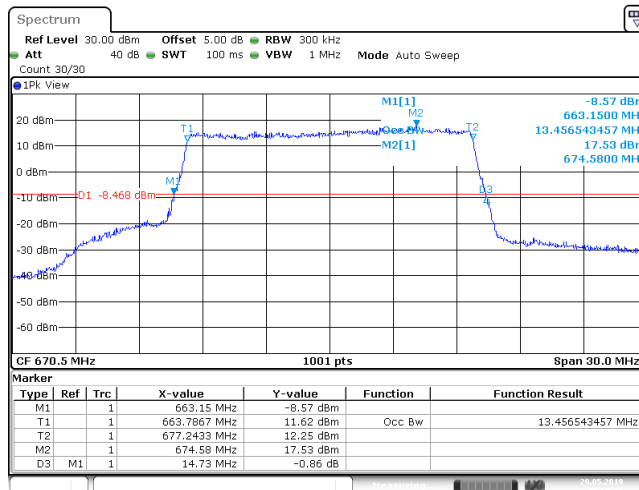
Date: 29 MAY 2019 19:50:36

Band71_15MHz_QPSK_133397_75RB#0



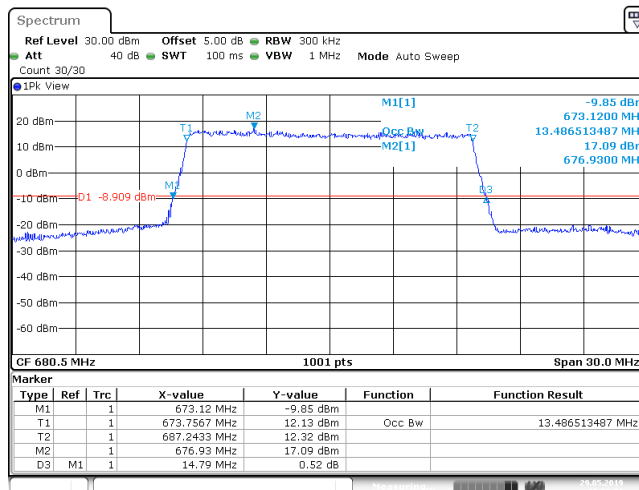
Date: 29 MAY 2019 19:51:08

Band71_15MHz_16QAM_133197_75RB#0



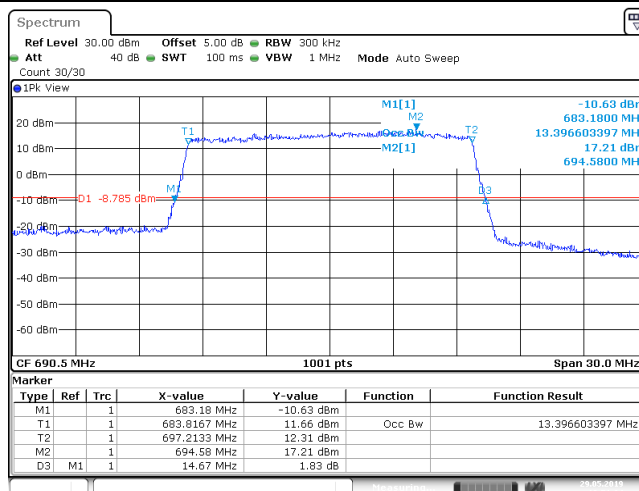
Date: 29 MAY 2019 19:50:20

Band71_15MHz_16QAM_133297_75RB#0



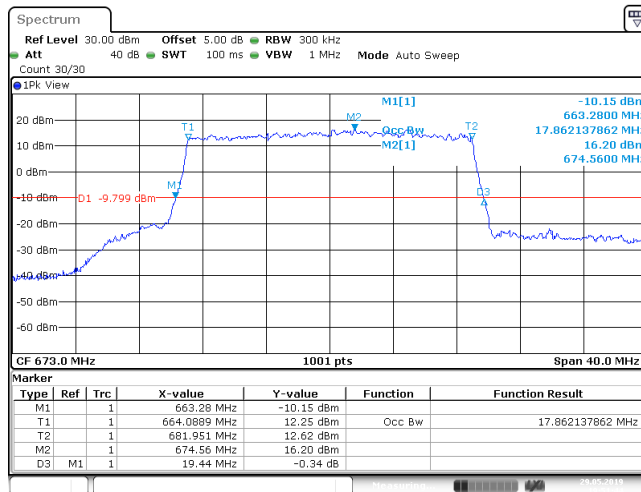
Date: 29 MAY 2019 19:50:52

Band71_15MHz_16QAM_133397_75RB#0



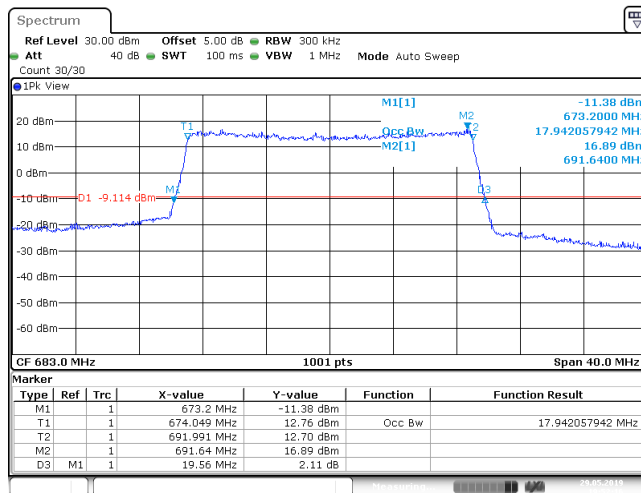
Date: 29 MAY 2019 19:51:24

Band71_20MHz_QPSK_133222_100RB#0



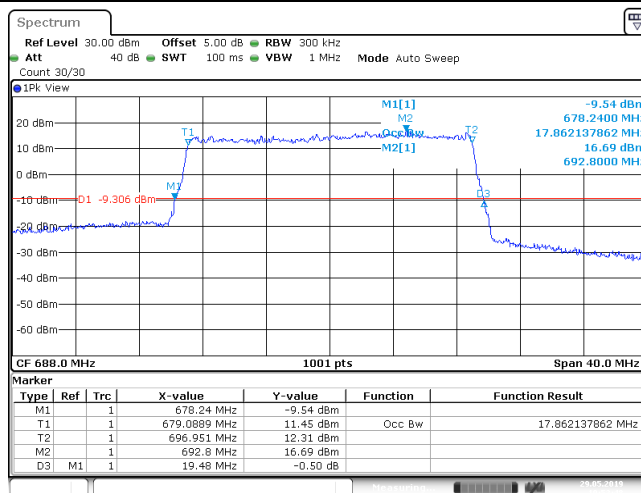
Date: 29 MAY 2019 19:51:45

Band71_20MHz_QPSK_133322_100RB#0



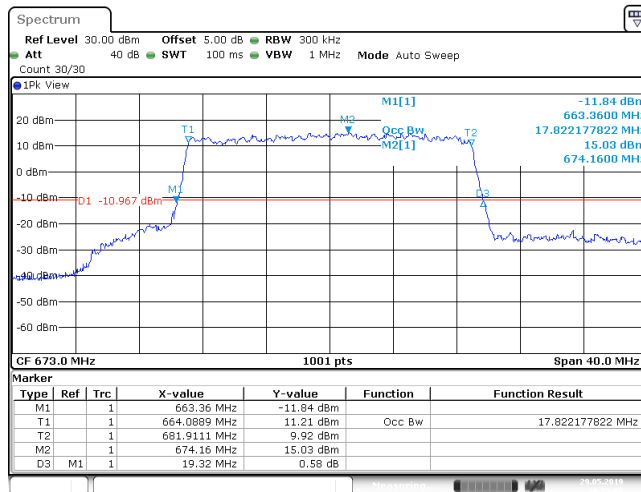
Date: 29 MAY 2019 19:52:16

Band71_20MHz_QPSK_133372_100RB#0



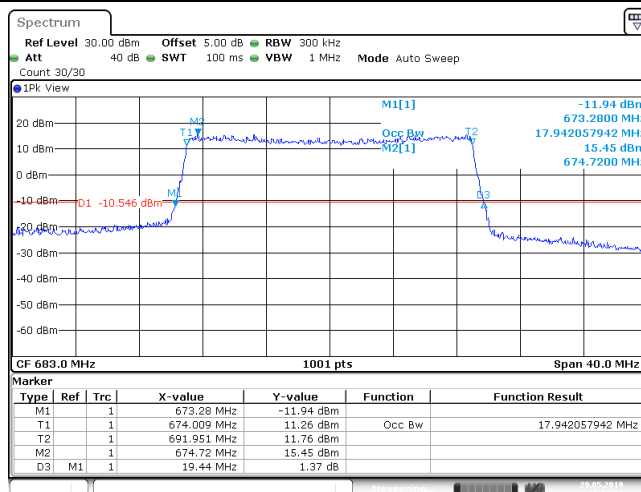
Date: 29 MAY 2019 19:52:48

Band71_20MHz_16QAM_133222_100RB#0



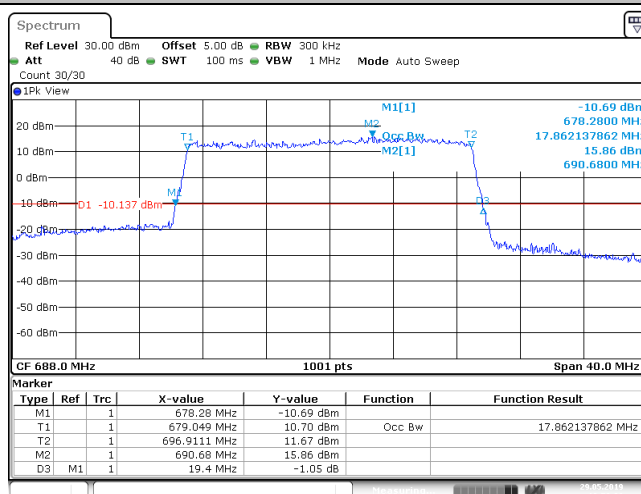
Date: 29 MAY 2019 19:52:01

Band71_20MHz_16QAM_133322_100RB#0



Date: 29 MAY 2019 19:52:32

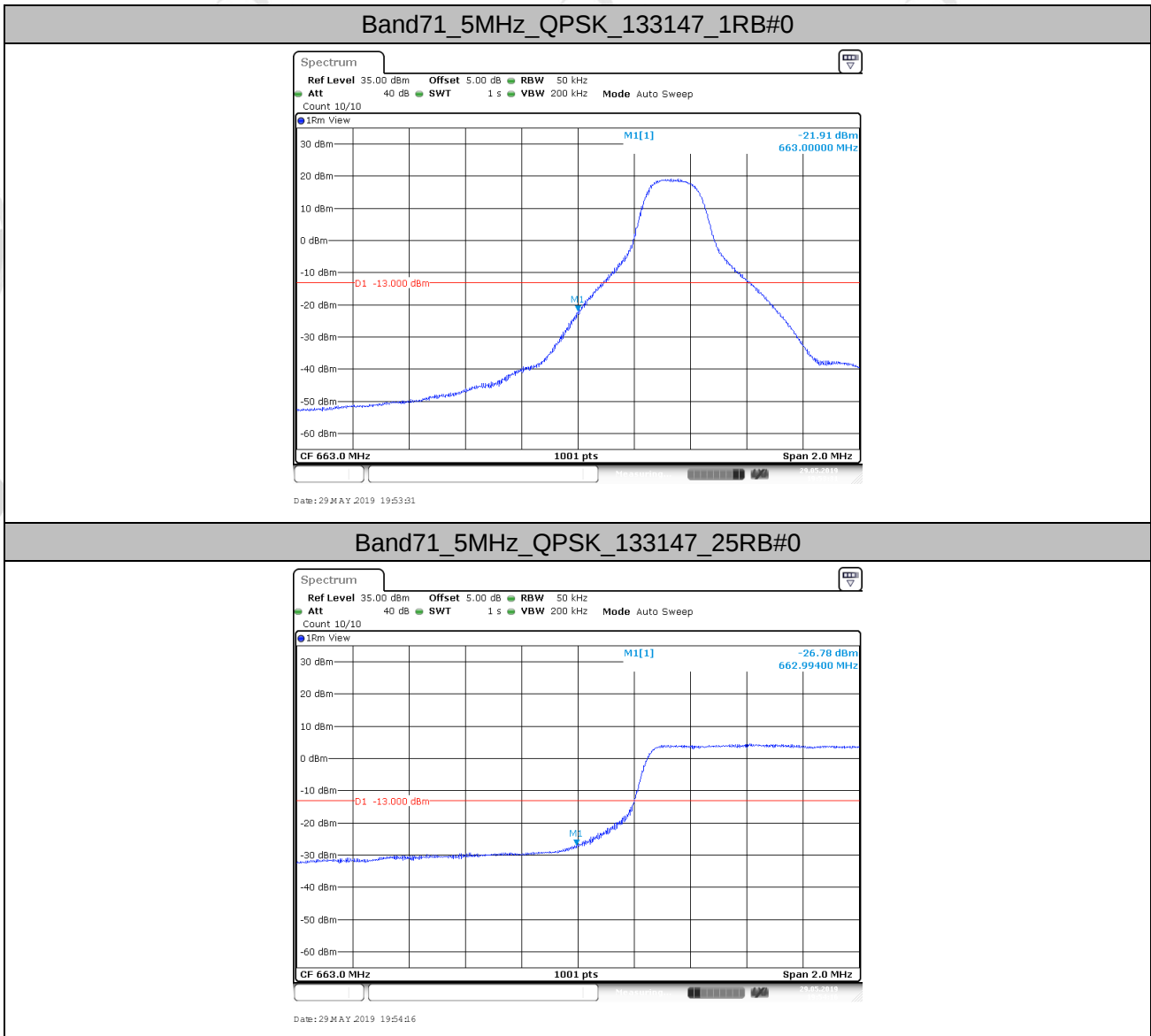
Band71_20MHz_16QAM_133372_100RB#0



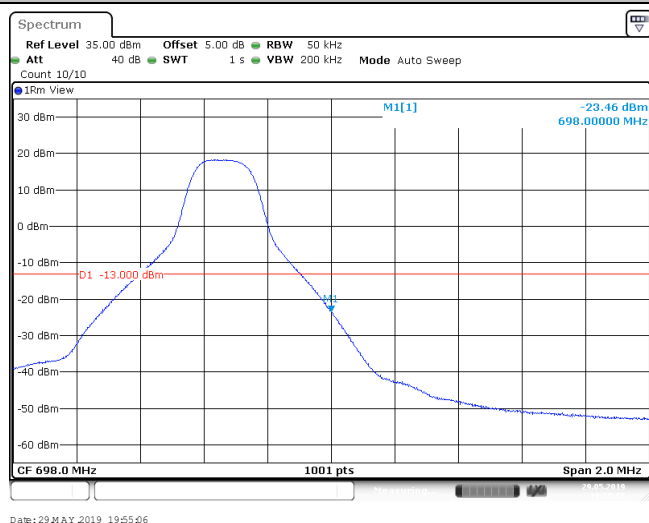
Date: 29 MAY 2019 19:53:04

7. Band Edge Compliance

7.1. Test Plots



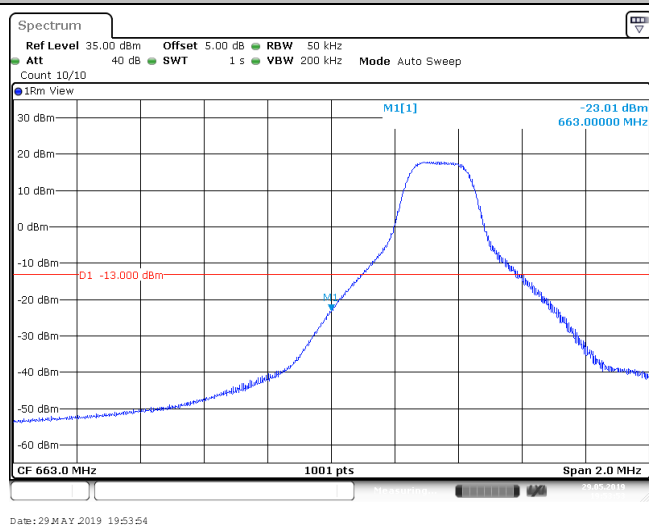
Band71_5MHz_QPSK_133447_1RB#24



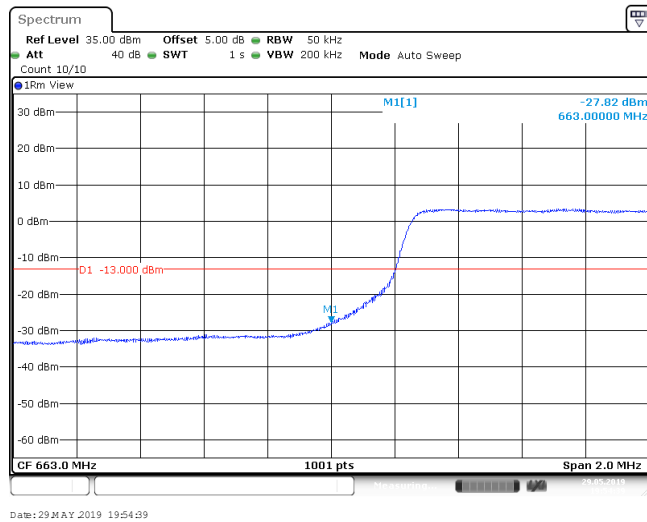
Band71_5MHz_QPSK_133447_25RB#0



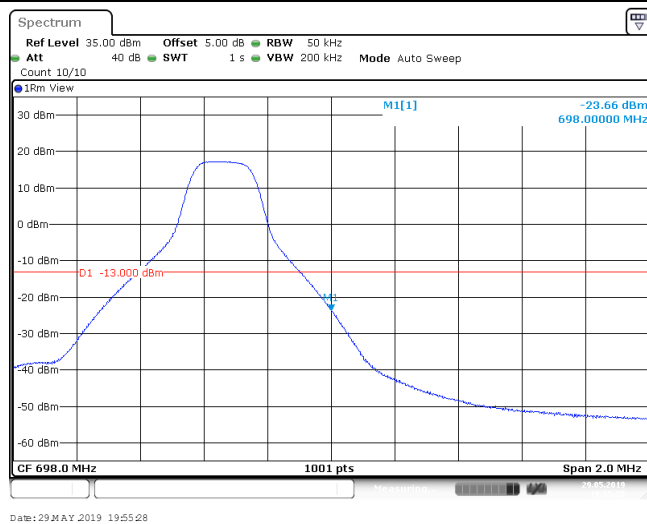
Band71_5MHz_16QAM_133147_1RB#0



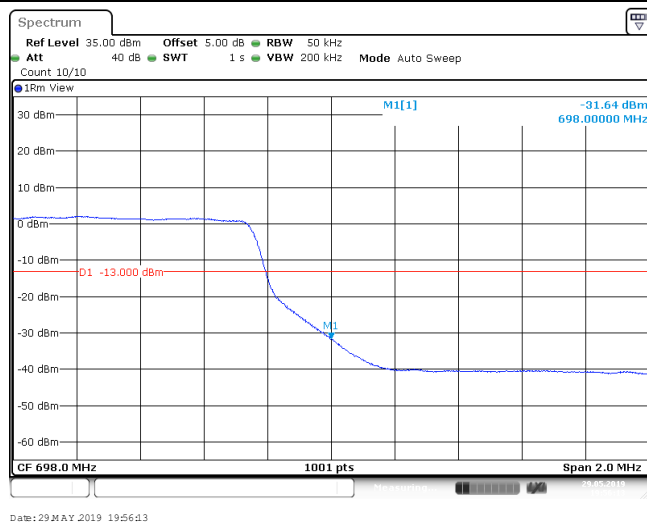
Band71_5MHz_16QAM_133147_25RB#0



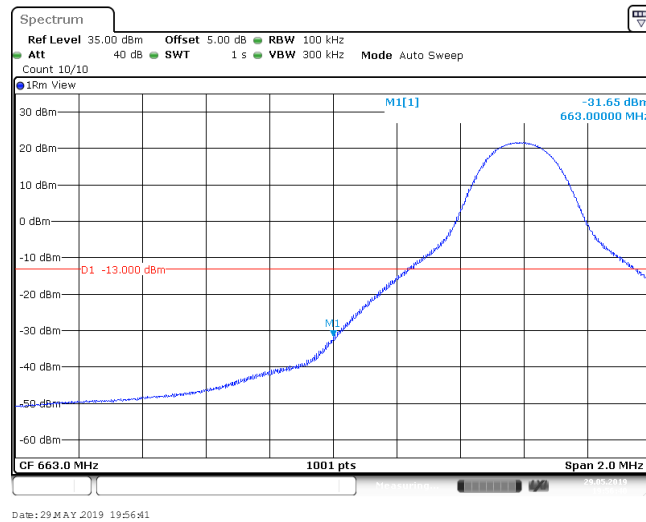
Band71_5MHz_16QAM_133447_1RB#24



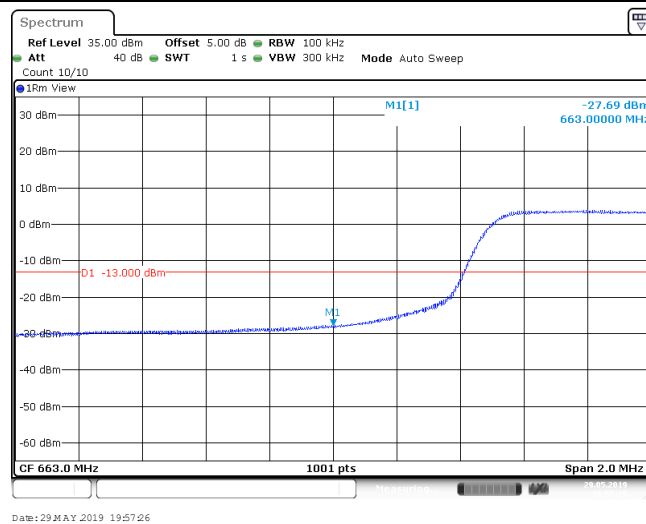
Band71_5MHz_16QAM_133447_25RB#0



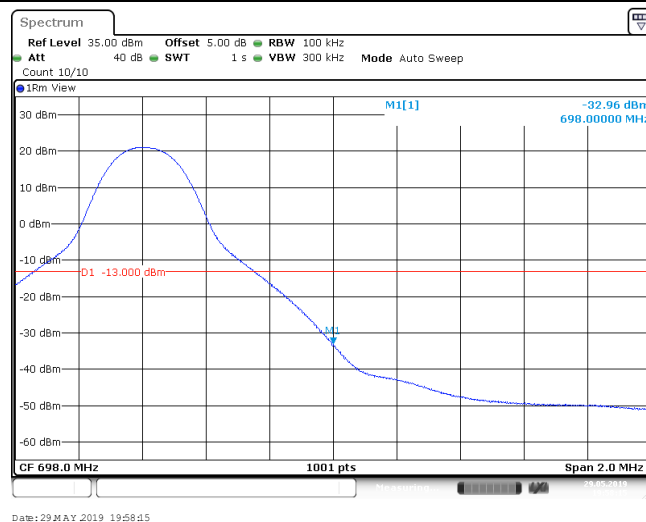
Band71_10MHz_QPSK_133172_1RB#0



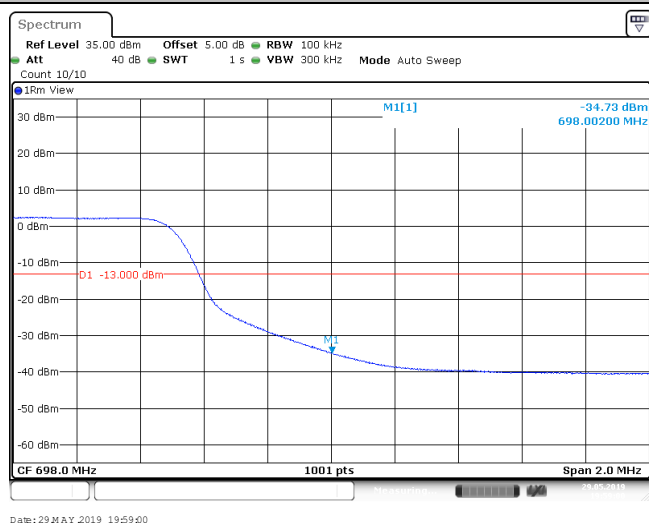
Band71_10MHz_QPSK_133172_50RB#0



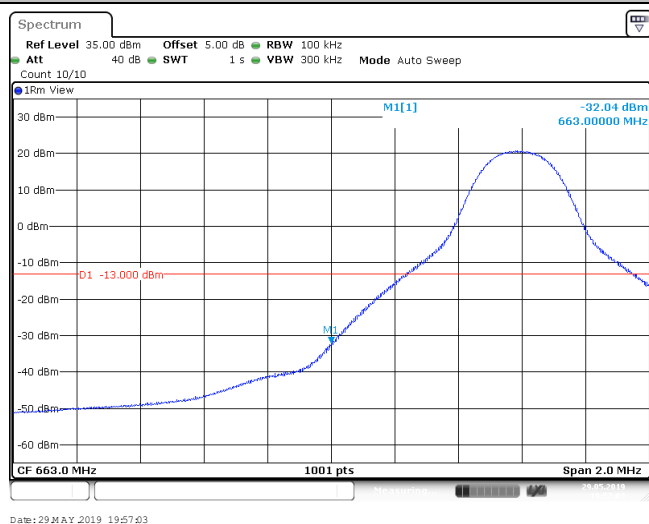
Band71_10MHz_QPSK_133422_1RB#49



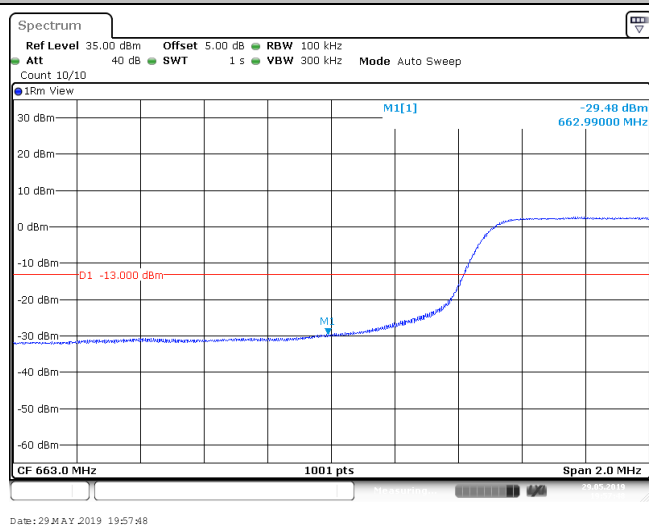
Band71_10MHz_QPSK_133422_50RB#0



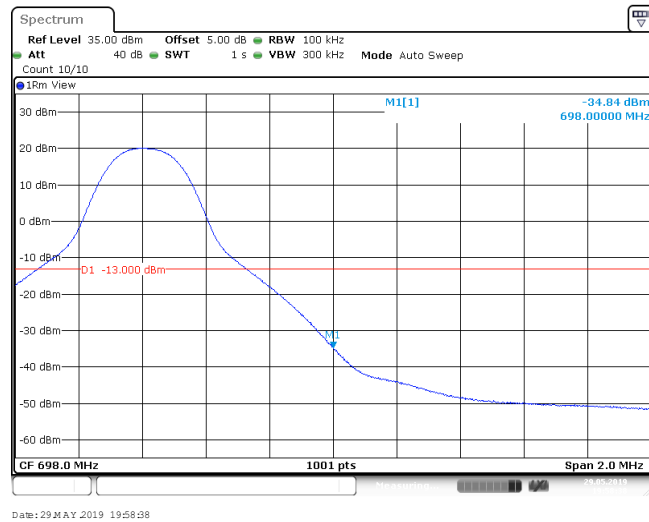
Band71_10MHz_16QAM_133172_1RB#0



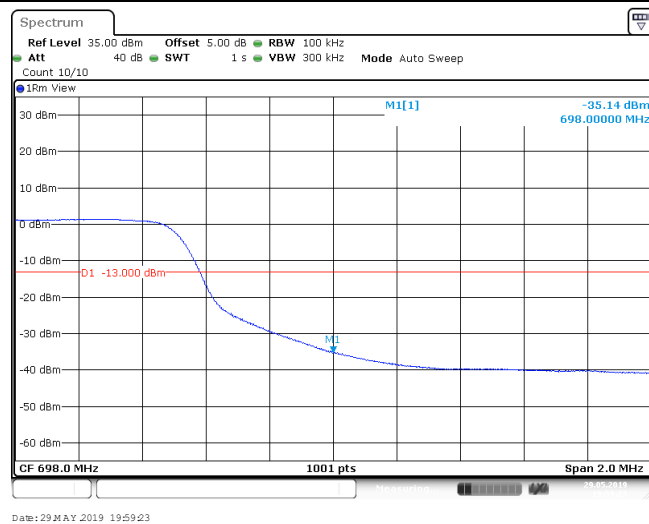
Band71_10MHz_16QAM_133172_50RB#0



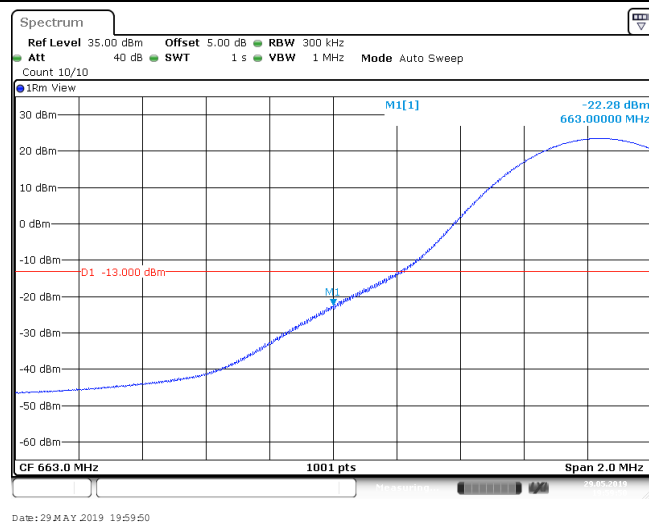
Band71_10MHz_16QAM_133422_1RB#49



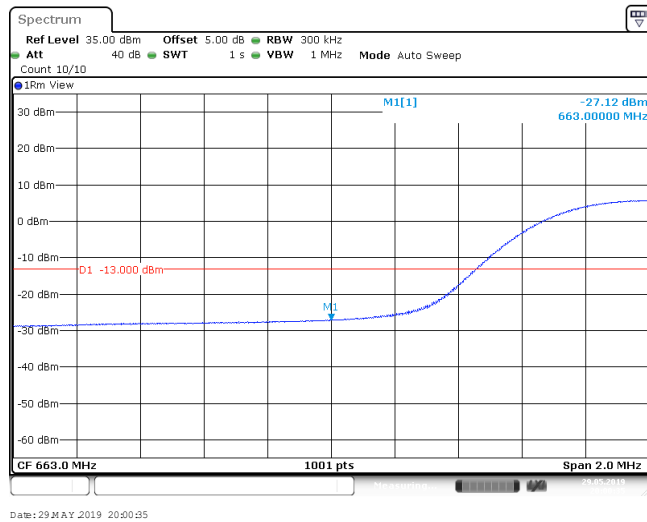
Band71_10MHz_16QAM_133422_50RB#0



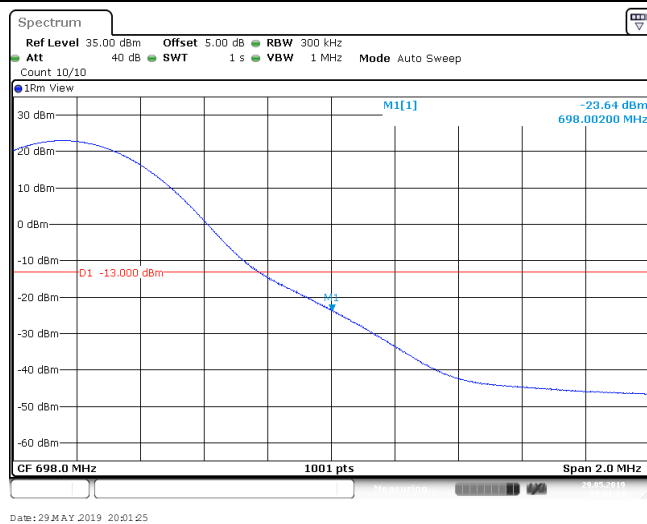
Band71_15MHz_QPSK_133197_1RB#0



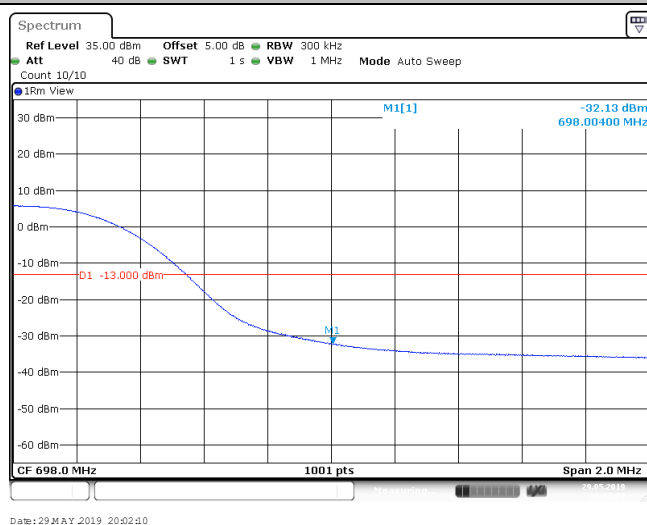
Band71_15MHz_QPSK_133197_75RB#0



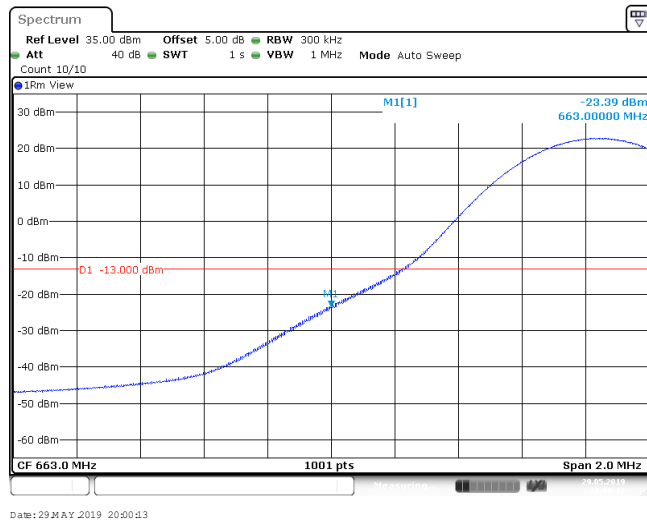
Band71_15MHz_QPSK_133397_1RB#74



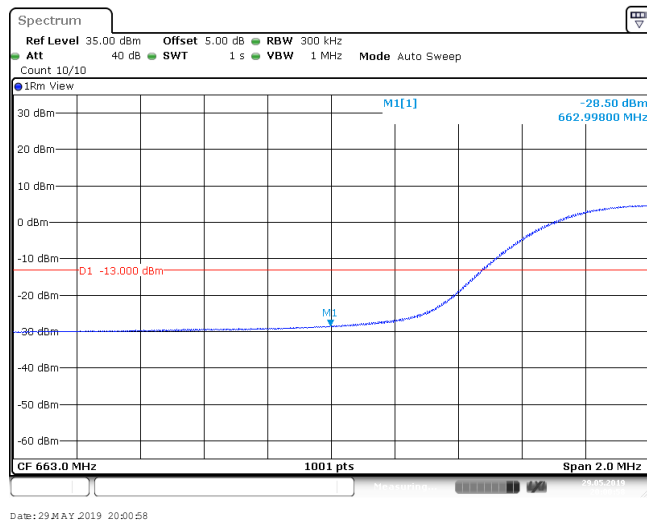
Band71_15MHz_QPSK_133397_75RB#0



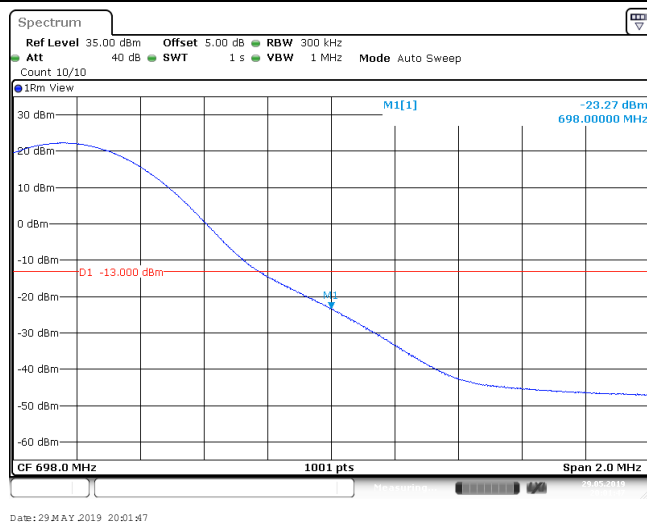
Band71_15MHz_16QAM_133197_1RB#0



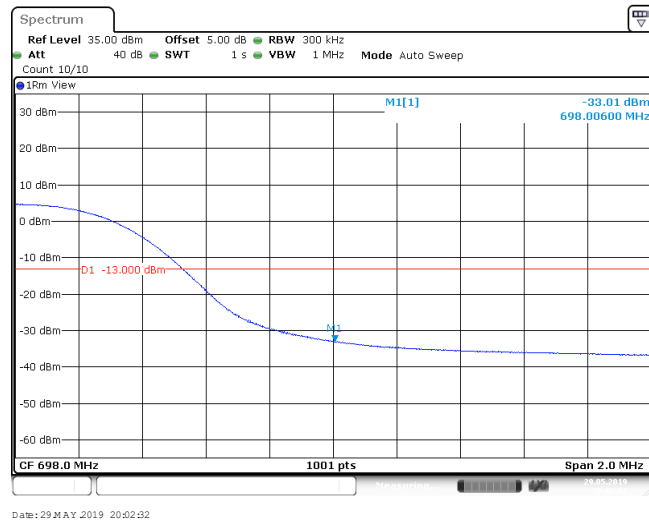
Band71_15MHz_16QAM_133197_75RB#0



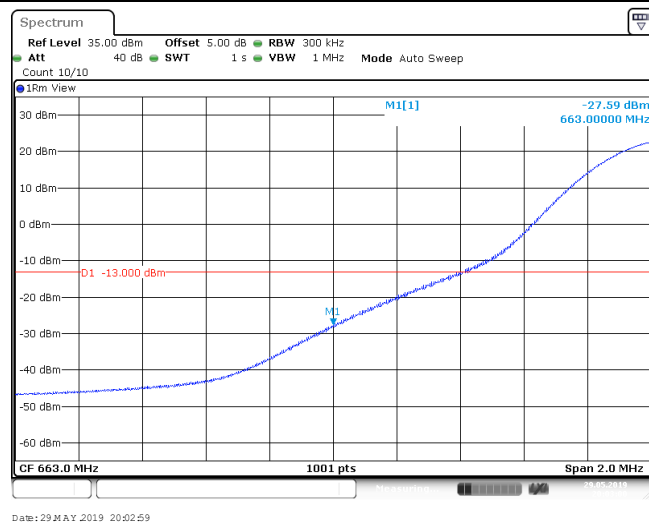
Band71_15MHz_16QAM_133397_1RB#74



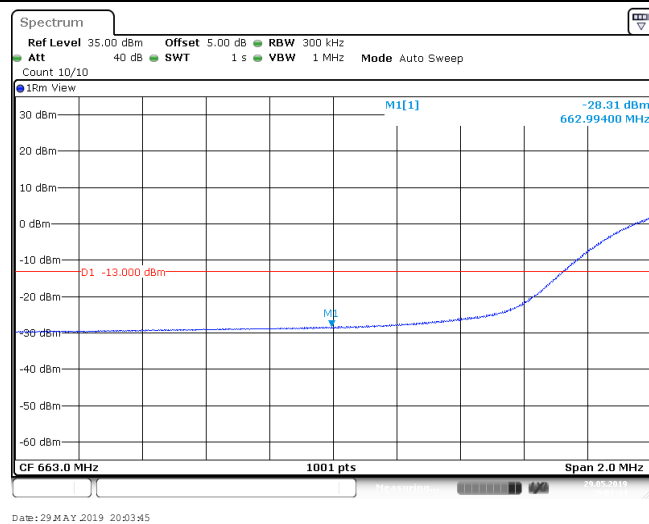
Band71_15MHz_16QAM_133397_75RB#0



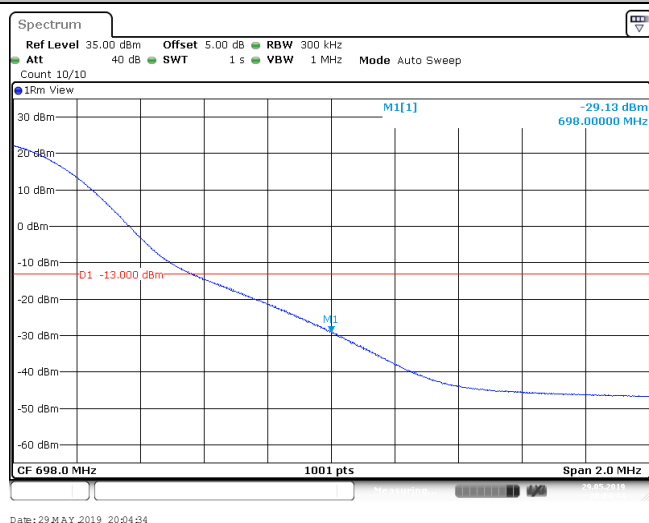
Band71_20MHz_QPSK_133222_1RB#0



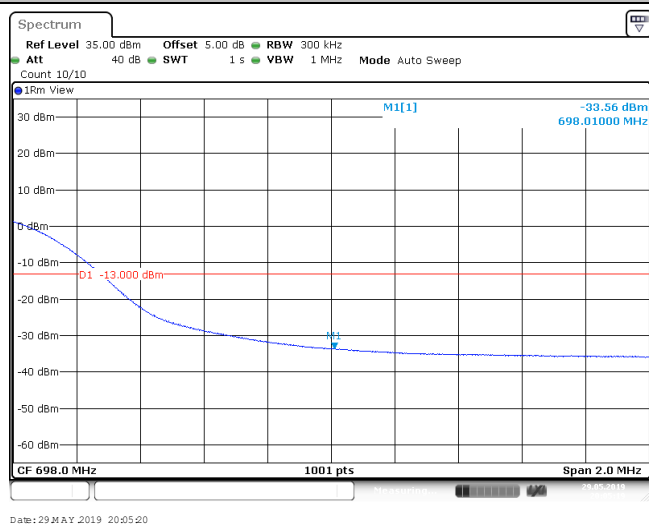
Band71_20MHz_QPSK_133222_100RB#0



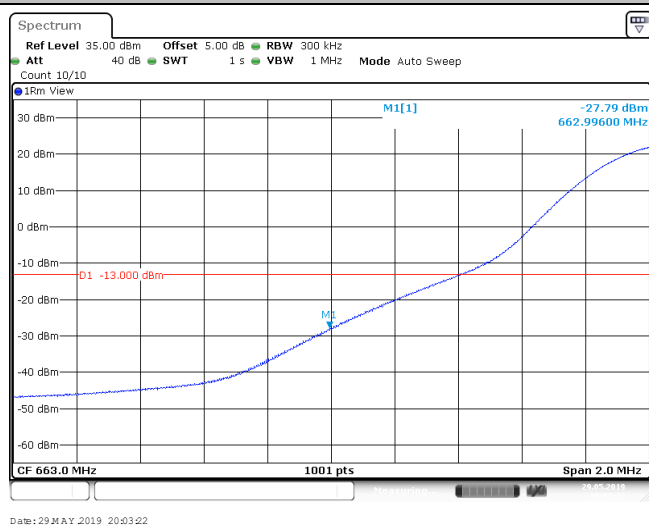
Band71_20MHz_QPSK_133372_1RB#99



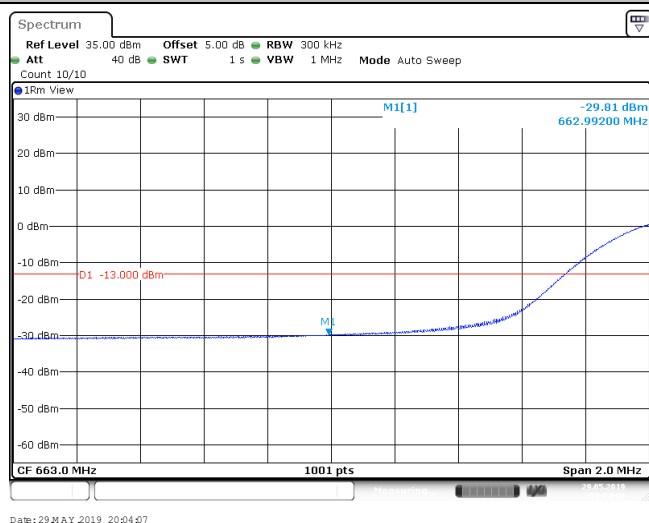
Band71_20MHz_QPSK_133372_100RB#0



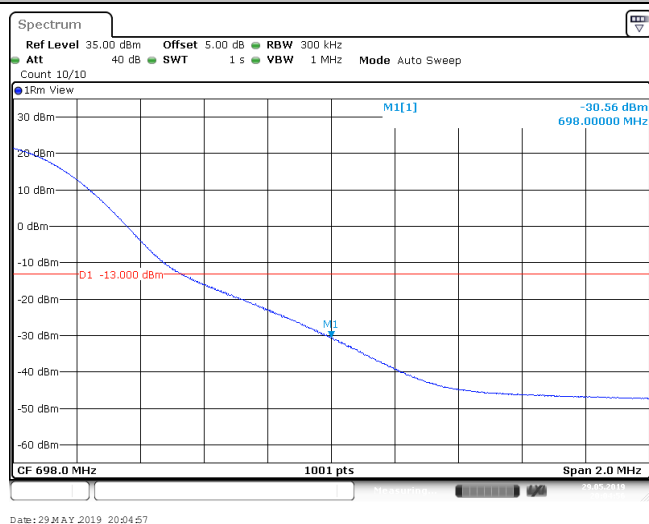
Band71_20MHz_16QAM_133222_1RB#0



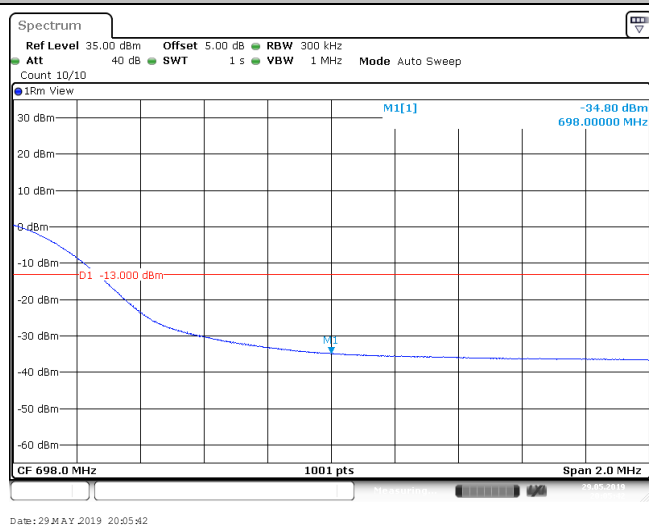
Band71_20MHz_16QAM_133222_100RB#0



Band71_20MHz_16QAM_133372_1RB#99



Band71_20MHz_16QAM_133372_100RB#0

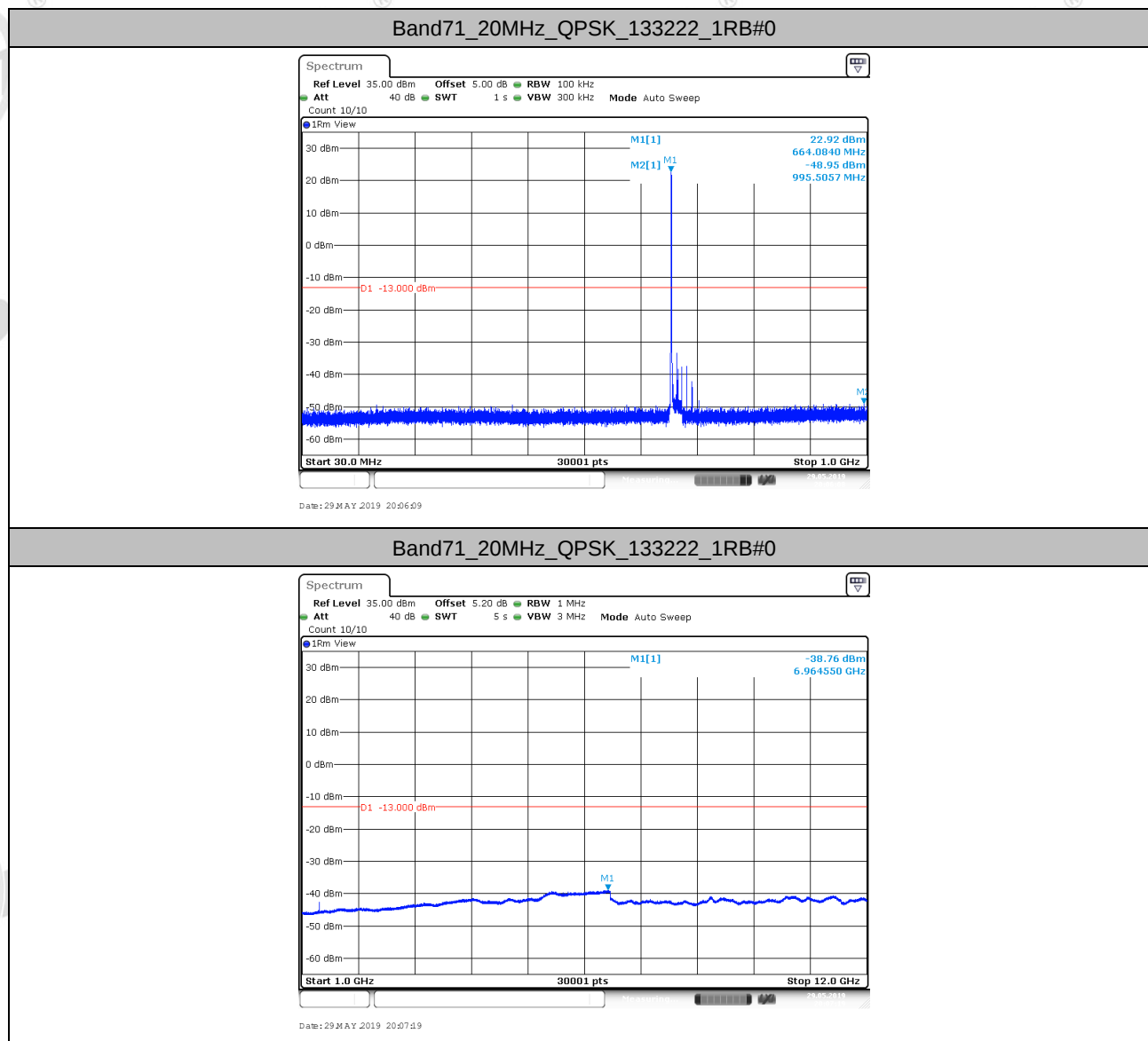


8. Spurious Emission at Antenna Terminal

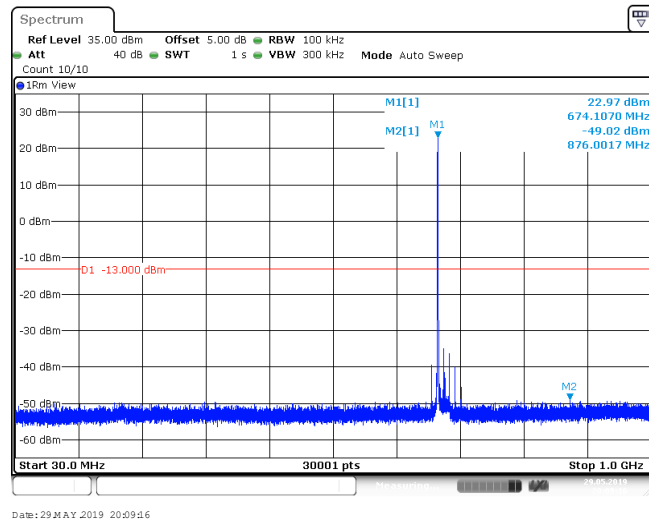
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =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

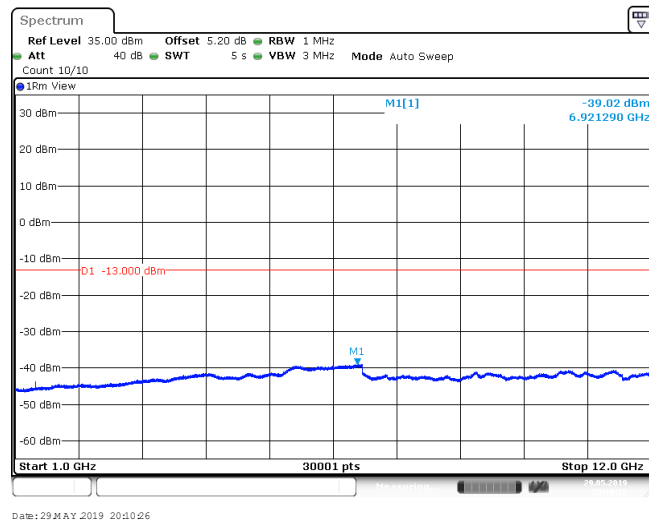
8.1. Test Plots



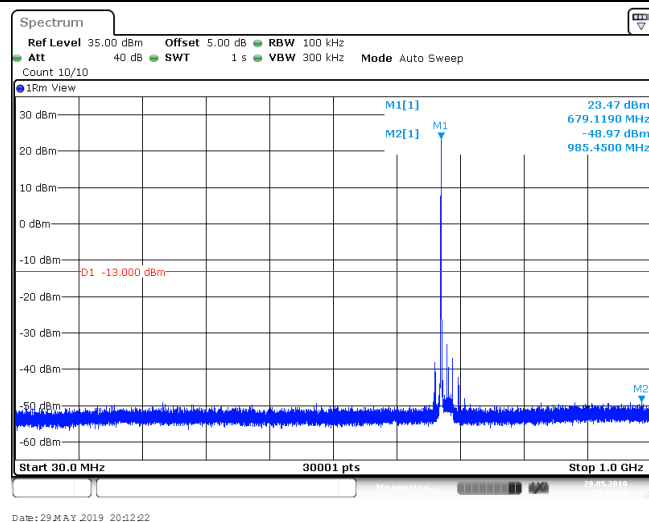
Band71_20MHz_QPSK_133322_1RB#0



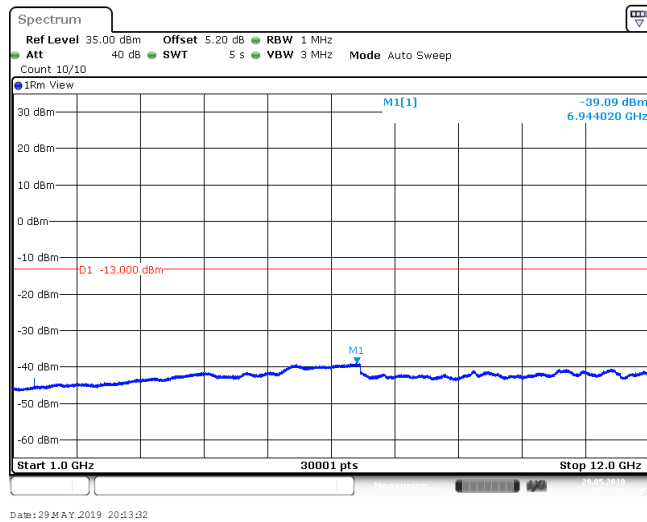
Band71_20MHz_QPSK_133322_1RB#0



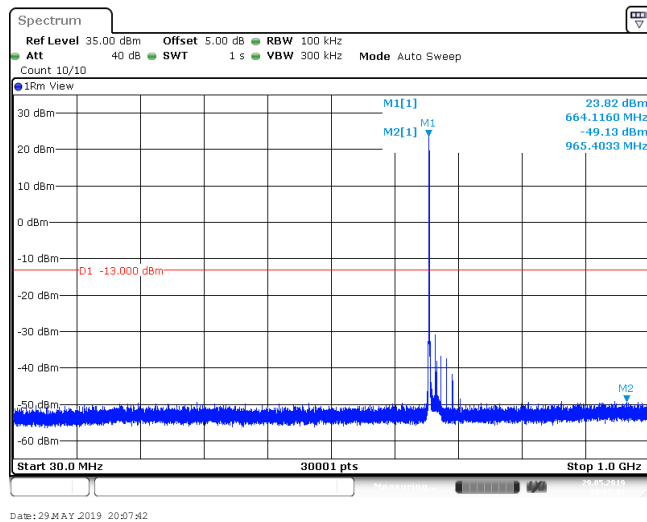
Band71_20MHz_QPSK_133372_1RB#0



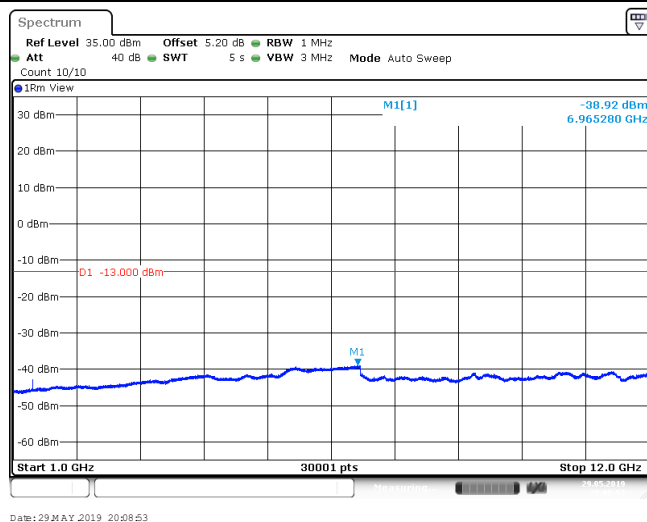
Band71_20MHz_QPSK_133372_1RB#0



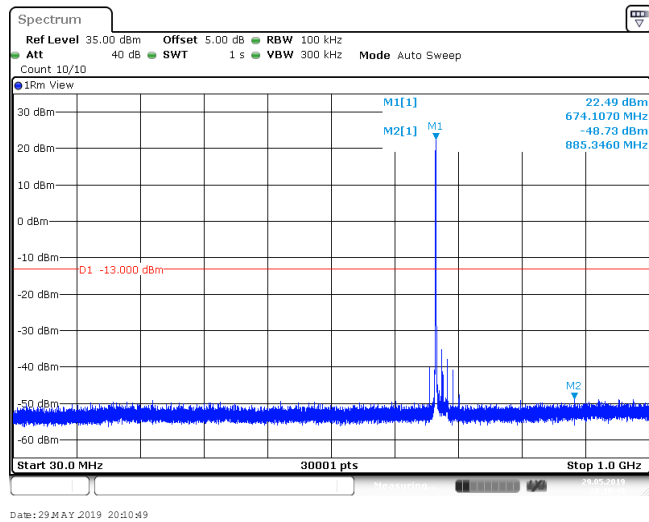
Band71_20MHz_16QAM_133222_1RB#0



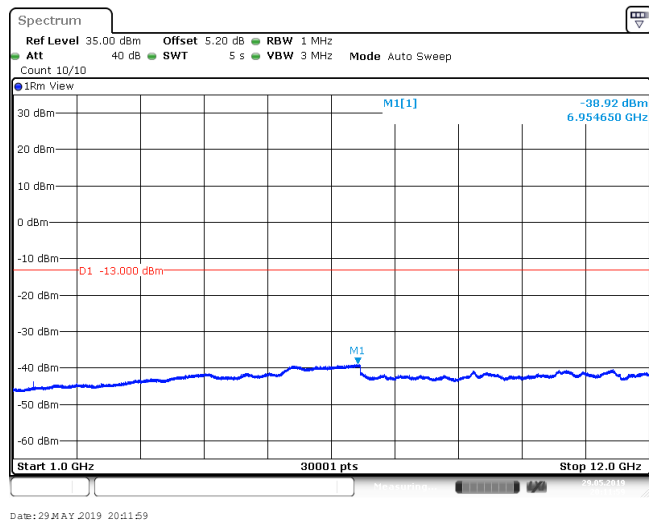
Band71_20MHz_16QAM_133222_1RB#0



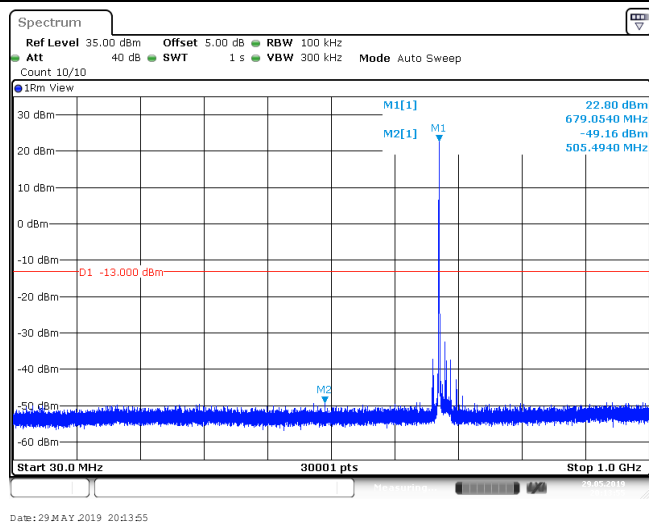
Band71_20MHz_16QAM_133322_1RB#0

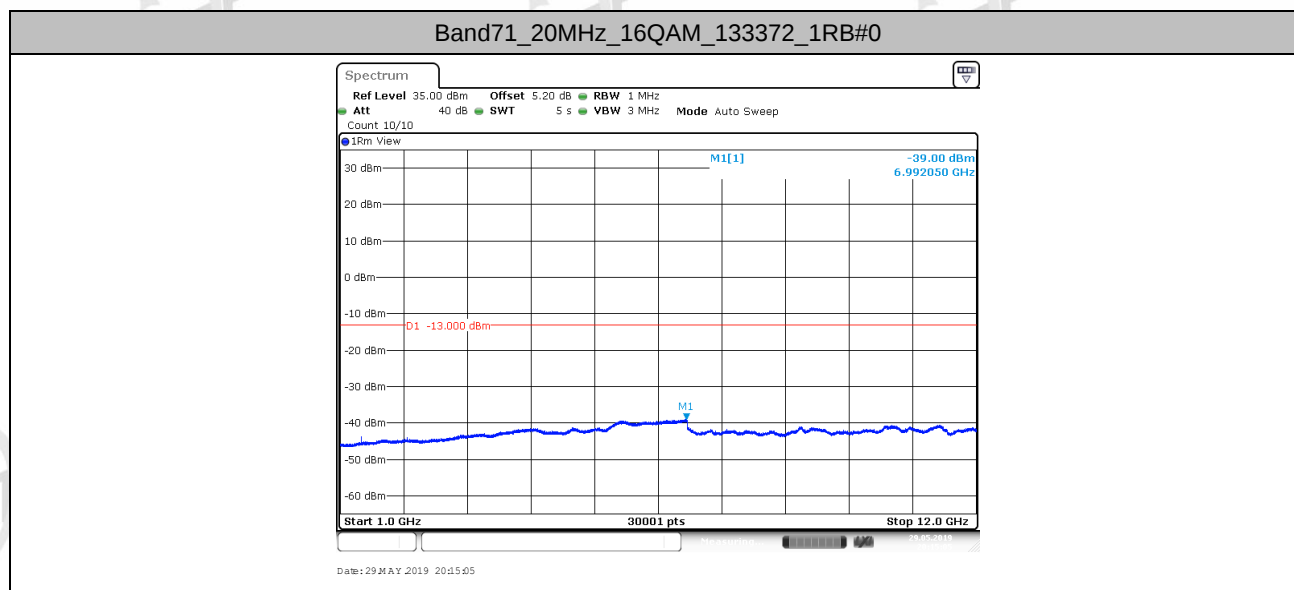


Band71_20MHz_16QAM_133322_1RB#0



Band71_20MHz_16QAM_133372_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
Band71	20MHz	QPSK	133222	100RB#0	VL	NT	-3.50	-0.005201	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	VN	NT	-4.10	-0.006092	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	VH	NT	-2.00	-0.002972	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	VL	NT	1.40	0.002050	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	VN	NT	-1.40	-0.002050	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	VH	NT	0.90	0.001318	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	VL	NT	-2.70	-0.003924	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	VN	NT	-4.00	-0.005814	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	VH	NT	-1.30	-0.001890	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	VL	NT	-0.10	-0.000149	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	VN	NT	-2.50	-0.003715	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	VH	NT	-1.50	-0.002229	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	VL	NT	0.30	0.000439	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	VN	NT	0.90	0.001318	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	VH	NT	0.80	0.001171	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	VL	NT	-0.20	-0.000291	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	VN	NT	-1.90	-0.002762	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	VH	NT	-0.80	-0.001163	±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
Band71	20MHz	QPSK	133222	100RB#0	NV	-30	-0.70	-0.001040	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	NV	-20	-3.10	-0.004606	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	NV	0	-2.60	-0.003863	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	NV	10	-2.70	-0.004012	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	NV	20	-1.30	-0.001932	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	NV	30	-2.60	-0.003863	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	NV	40	-2.80	-0.004160	±2.5	PASS
Band71	20MHz	QPSK	133222	100RB#0	NV	50	-2.00	-0.002972	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	NV	-30	1.70	0.002489	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	NV	-20	-0.20	-0.000293	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	NV	0	1.00	0.001464	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	NV	10	1.60	0.002343	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	NV	20	2.20	0.003221	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	NV	30	1.60	0.002343	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	NV	40	0.50	0.000732	±2.5	PASS
Band71	20MHz	QPSK	133322	100RB#0	NV	50	1.10	0.001611	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	-30	-0.60	-0.000872	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	-20	-3.20	-0.004651	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	0	-2.70	-0.003924	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	10	-4.50	-0.006541	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	20	-1.30	-0.001890	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	30	-3.50	-0.005087	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	40	-2.70	-0.003924	±2.5	PASS
Band71	20MHz	QPSK	133372	100RB#0	NV	50	-2.40	-0.003488	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	-30	-2.70	-0.004012	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	-20	-1.00	-0.001486	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	0	-3.20	-0.004755	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	10	-2.50	-0.003715	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	20	-2.00	-0.002972	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	30	-1.30	-0.001932	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	40	-3.60	-0.005349	±2.5	PASS
Band71	20MHz	16QAM	133222	100RB#0	NV	50	-1.30	-0.001932	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	NV	-30	1.80	0.002635	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	NV	-20	1.80	0.002635	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	NV	0	1.90	0.002782	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	NV	10	0.20	0.000293	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	NV	20	1.30	0.001903	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	NV	30	-0.80	-0.001171	±2.5	PASS
Band71	20MHz	16QAM	133322	100RB#0	NV	40	-0.40	-0.000586	±2.5	PASS

Band71	20MHz	16QAM	133322	100RB#0	NV	50	0.70	0.001025	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	NV	-30	-1.90	-0.002762	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	NV	-20	-1.50	-0.002180	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	NV	0	-2.20	-0.003198	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	NV	10	-2.20	-0.003198	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	NV	20	-1.70	-0.002471	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	NV	30	-2.80	-0.004070	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	NV	40	-2.50	-0.003634	±2.5	PASS
Band71	20MHz	16QAM	133372	100RB#0	NV	50	-1.30	-0.001890	±2.5	PASS

The End