

Appendix B

E-UTRA BAND 41

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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	2018/4/2	2019/4/1
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	2018/4/2	2019/4/1
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	Anristu	MT8821C	6201462742	2018/5/2	2019/5/1
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	W005-02	2018/3/13	2019/3/12

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	2018/9/15	2019/9/15
Signal Analyzer	Rohde & Schwarz	FSV	W025-05	2018/3/13	2019/3/12
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	2018/9/2	2019/9/2
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	HTC-1	W006-17	2018/9/10	2019/9/10
Temperature Chamber	GIANT FORCE	ICT-150-40-CP-AR	W027-03	2018/11/27	2019/11/27
Wideband Radio Communication Tester	Anristu	MT8821C	6201462742	2018/5/2	2019/5/1
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	W005-02	2018/3/13	2019/3/12

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)	EIRP (dBm)	limit (dBm)	Verdict
Band41	5MHz	QPSK	39675	1RB#0	22.88	21.57	33.00	PASS
Band41	5MHz	QPSK	39675	1RB#12	23.10	21.79	33.00	PASS
Band41	5MHz	QPSK	39675	1RB#24	22.74	21.43	33.00	PASS
Band41	5MHz	QPSK	39675	12RB#0	21.86	20.55	33.00	PASS
Band41	5MHz	QPSK	39675	12RB#6	21.96	20.65	33.00	PASS
Band41	5MHz	QPSK	39675	12RB#13	21.91	20.60	33.00	PASS
Band41	5MHz	QPSK	39675	25RB#0	21.97	20.66	33.00	PASS
Band41	5MHz	QPSK	40620	1RB#0	23.08	21.77	33.00	PASS
Band41	5MHz	QPSK	40620	1RB#12	23.42	22.11	33.00	PASS
Band41	5MHz	QPSK	40620	1RB#24	23.15	21.84	33.00	PASS
Band41	5MHz	QPSK	40620	12RB#0	22.28	20.97	33.00	PASS
Band41	5MHz	QPSK	40620	12RB#6	22.29	20.98	33.00	PASS
Band41	5MHz	QPSK	40620	12RB#13	22.17	20.86	33.00	PASS
Band41	5MHz	QPSK	40620	25RB#0	22.22	20.91	33.00	PASS
Band41	5MHz	QPSK	41565	1RB#0	23.19	21.88	33.00	PASS
Band41	5MHz	QPSK	41565	1RB#12	23.50	22.19	33.00	PASS
Band41	5MHz	QPSK	41565	1RB#24	23.32	22.01	33.00	PASS
Band41	5MHz	QPSK	41565	12RB#0	22.39	21.08	33.00	PASS
Band41	5MHz	QPSK	41565	12RB#6	22.49	21.18	33.00	PASS
Band41	5MHz	QPSK	41565	12RB#13	22.34	21.03	33.00	PASS
Band41	5MHz	QPSK	41565	25RB#0	22.34	21.03	33.00	PASS
Band41	5MHz	16QAM	39675	1RB#0	21.42	20.11	33.00	PASS
Band41	5MHz	16QAM	39675	1RB#12	21.61	20.30	33.00	PASS
Band41	5MHz	16QAM	39675	1RB#24	21.37	20.06	33.00	PASS
Band41	5MHz	16QAM	39675	12RB#0	20.85	19.54	33.00	PASS
Band41	5MHz	16QAM	39675	12RB#6	20.94	19.63	33.00	PASS
Band41	5MHz	16QAM	39675	12RB#13	20.96	19.65	33.00	PASS
Band41	5MHz	16QAM	39675	25RB#0	20.75	19.44	33.00	PASS
Band41	5MHz	16QAM	40620	1RB#0	21.62	20.31	33.00	PASS
Band41	5MHz	16QAM	40620	1RB#12	21.83	20.52	33.00	PASS
Band41	5MHz	16QAM	40620	1RB#24	21.75	20.44	33.00	PASS
Band41	5MHz	16QAM	40620	12RB#0	21.25	19.94	33.00	PASS
Band41	5MHz	16QAM	40620	12RB#6	21.03	19.72	33.00	PASS
Band41	5MHz	16QAM	40620	12RB#13	21.12	19.81	33.00	PASS
Band41	5MHz	16QAM	40620	25RB#0	20.76	19.45	33.00	PASS
Band41	5MHz	16QAM	41565	1RB#0	21.71	20.40	33.00	PASS

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Band41	5MHz	16QAM	41565	1RB#12	22.12	20.81	33.00	PASS
Band41	5MHz	16QAM	41565	1RB#24	21.93	20.62	33.00	PASS
Band41	5MHz	16QAM	41565	12RB#0	21.18	19.87	33.00	PASS
Band41	5MHz	16QAM	41565	12RB#6	21.34	20.03	33.00	PASS
Band41	5MHz	16QAM	41565	12RB#13	21.19	19.88	33.00	PASS
Band41	5MHz	16QAM	41565	25RB#0	20.75	19.44	33.00	PASS
Band41	10MHz	QPSK	39700	1RB#0	22.95	21.64	33.00	PASS
Band41	10MHz	QPSK	39700	1RB#24	23.51	22.20	33.00	PASS
Band41	10MHz	QPSK	39700	1RB#49	23.04	21.73	33.00	PASS
Band41	10MHz	QPSK	39700	25RB#0	22.14	20.83	33.00	PASS
Band41	10MHz	QPSK	39700	25RB#12	22.10	20.79	33.00	PASS
Band41	10MHz	QPSK	39700	25RB#25	22.12	20.81	33.00	PASS
Band41	10MHz	QPSK	39700	50RB#0	22.06	20.75	33.00	PASS
Band41	10MHz	QPSK	40620	1RB#0	23.28	21.97	33.00	PASS
Band41	10MHz	QPSK	40620	1RB#24	23.87	22.56	33.00	PASS
Band41	10MHz	QPSK	40620	1RB#49	23.25	21.94	33.00	PASS
Band41	10MHz	QPSK	40620	25RB#0	22.46	21.15	33.00	PASS
Band41	10MHz	QPSK	40620	25RB#12	22.33	21.02	33.00	PASS
Band41	10MHz	QPSK	40620	25RB#25	22.15	20.84	33.00	PASS
Band41	10MHz	QPSK	40620	50RB#0	22.30	20.99	33.00	PASS
Band41	10MHz	QPSK	41540	1RB#0	23.18	21.87	33.00	PASS
Band41	10MHz	QPSK	41540	1RB#24	23.66	22.35	33.00	PASS
Band41	10MHz	QPSK	41540	1RB#49	23.03	21.72	33.00	PASS
Band41	10MHz	QPSK	41540	25RB#0	21.71	20.40	33.00	PASS
Band41	10MHz	QPSK	41540	25RB#12	22.47	21.16	33.00	PASS
Band41	10MHz	QPSK	41540	25RB#25	22.27	20.96	33.00	PASS
Band41	10MHz	QPSK	41540	50RB#0	22.30	20.99	33.00	PASS
Band41	10MHz	16QAM	39700	1RB#0	21.65	20.34	33.00	PASS
Band41	10MHz	16QAM	39700	1RB#24	21.82	20.51	33.00	PASS
Band41	10MHz	16QAM	39700	1RB#49	21.45	20.14	33.00	PASS
Band41	10MHz	16QAM	39700	27RB#0	20.76	19.45	33.00	PASS
Band41	10MHz	16QAM	40620	1RB#0	21.68	20.37	33.00	PASS
Band41	10MHz	16QAM	40620	1RB#24	22.09	20.78	33.00	PASS
Band41	10MHz	16QAM	40620	1RB#49	21.48	20.17	33.00	PASS
Band41	10MHz	16QAM	40620	27RB#0	20.78	19.47	33.00	PASS
Band41	10MHz	16QAM	41540	1RB#0	21.72	20.41	33.00	PASS
Band41	10MHz	16QAM	41540	1RB#24	22.26	20.95	33.00	PASS
Band41	10MHz	16QAM	41540	1RB#49	21.94	20.63	33.00	PASS
Band41	10MHz	16QAM	41540	27RB#0	20.75	19.44	33.00	PASS
Band41	15MHz	QPSK	39725	1RB#0	22.90	21.59	33.00	PASS
Band41	15MHz	QPSK	39725	1RB#38	23.12	21.81	33.00	PASS
Band41	15MHz	QPSK	39725	1RB#74	22.84	21.53	33.00	PASS
Band41	15MHz	QPSK	39725	36RB#0	21.74	20.43	33.00	PASS
Band41	15MHz	QPSK	39725	36RB#18	21.78	20.47	33.00	PASS

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Band41	15MHz	QPSK	39725	36RB#39	21.77	20.46	33.00	PASS
Band41	15MHz	QPSK	39725	75RB#0	21.76	20.45	33.00	PASS
Band41	15MHz	QPSK	40620	1RB#0	22.79	21.48	33.00	PASS
Band41	15MHz	QPSK	40620	1RB#38	23.10	21.79	33.00	PASS
Band41	15MHz	QPSK	40620	1RB#74	22.90	21.59	33.00	PASS
Band41	15MHz	QPSK	40620	36RB#0	22.34	21.03	33.00	PASS
Band41	15MHz	QPSK	40620	36RB#18	22.23	20.92	33.00	PASS
Band41	15MHz	QPSK	40620	36RB#39	22.10	20.79	33.00	PASS
Band41	15MHz	QPSK	40620	75RB#0	21.75	20.44	33.00	PASS
Band41	15MHz	QPSK	41515	1RB#0	23.07	21.76	33.00	PASS
Band41	15MHz	QPSK	41515	1RB#38	23.45	22.14	33.00	PASS
Band41	15MHz	QPSK	41515	1RB#74	23.21	21.90	33.00	PASS
Band41	15MHz	QPSK	41515	36RB#0	22.21	20.90	33.00	PASS
Band41	15MHz	QPSK	41515	36RB#18	22.51	21.20	33.00	PASS
Band41	15MHz	QPSK	41515	36RB#39	22.23	20.92	33.00	PASS
Band41	15MHz	QPSK	41515	75RB#0	21.71	20.40	33.00	PASS
Band41	15MHz	16QAM	39725	1RB#0	21.29	19.98	33.00	PASS
Band41	15MHz	16QAM	39725	1RB#38	21.65	20.34	33.00	PASS
Band41	15MHz	16QAM	39725	1RB#74	21.33	20.02	33.00	PASS
Band41	15MHz	16QAM	39725	27RB#0	20.72	19.41	33.00	PASS
Band41	15MHz	16QAM	40620	1RB#0	21.73	20.42	33.00	PASS
Band41	15MHz	16QAM	40620	1RB#38	21.57	20.26	33.00	PASS
Band41	15MHz	16QAM	40620	1RB#74	21.47	20.16	33.00	PASS
Band41	15MHz	16QAM	40620	27RB#0	20.74	19.43	33.00	PASS
Band41	15MHz	16QAM	41515	1RB#0	21.58	20.27	33.00	PASS
Band41	15MHz	16QAM	41515	1RB#38	22.06	20.75	33.00	PASS
Band41	15MHz	16QAM	41515	1RB#74	21.60	20.29	33.00	PASS
Band41	15MHz	16QAM	41515	27RB#0	20.75	19.44	33.00	PASS
Band41	20MHz	QPSK	39750	1RB#0	22.77	21.46	33.00	PASS
Band41	20MHz	QPSK	39750	1RB#49	23.33	22.02	33.00	PASS
Band41	20MHz	QPSK	39750	1RB#99	22.74	21.43	33.00	PASS
Band41	20MHz	QPSK	39750	50RB#0	22.10	20.79	33.00	PASS
Band41	20MHz	QPSK	39750	50RB#25	22.04	20.73	33.00	PASS
Band41	20MHz	QPSK	39750	50RB#50	21.90	20.59	33.00	PASS
Band41	20MHz	QPSK	39750	100RB#0	21.72	20.41	33.00	PASS
Band41	20MHz	QPSK	40620	1RB#0	22.72	21.41	33.00	PASS
Band41	20MHz	QPSK	40620	1RB#49	23.70	22.39	33.00	PASS
Band41	20MHz	QPSK	40620	1RB#99	23.13	21.82	33.00	PASS
Band41	20MHz	QPSK	40620	50RB#0	22.36	21.05	33.00	PASS
Band41	20MHz	QPSK	40620	50RB#25	21.75	20.44	33.00	PASS
Band41	20MHz	QPSK	40620	50RB#50	21.72	20.41	33.00	PASS
Band41	20MHz	QPSK	40620	100RB#0	21.72	20.41	33.00	PASS
Band41	20MHz	QPSK	41490	1RB#0	23.14	21.83	33.00	PASS
Band41	20MHz	QPSK	41490	1RB#49	23.40	22.09	33.00	PASS

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Band41	20MHz	QPSK	41490	1RB#99	22.94	21.63	33.00	PASS
Band41	20MHz	QPSK	41490	50RB#0	22.28	20.97	33.00	PASS
Band41	20MHz	QPSK	41490	50RB#25	22.17	20.86	33.00	PASS
Band41	20MHz	QPSK	41490	50RB#50	22.20	20.89	33.00	PASS
Band41	20MHz	QPSK	41490	100RB#0	21.80	20.49	33.00	PASS
Band41	20MHz	16QAM	39750	1RB#0	21.34	20.03	33.00	PASS
Band41	20MHz	16QAM	39750	1RB#49	21.70	20.39	33.00	PASS
Band41	20MHz	16QAM	39750	1RB#99	21.23	19.92	33.00	PASS
Band41	20MHz	16QAM	39750	27RB#0	20.70	19.39	33.00	PASS
Band41	20MHz	16QAM	40620	1RB#0	21.72	20.41	33.00	PASS
Band41	20MHz	16QAM	40620	1RB#49	22.01	20.70	33.00	PASS
Band41	20MHz	16QAM	40620	1RB#99	21.43	20.12	33.00	PASS
Band41	20MHz	16QAM	40620	27RB#0	20.71	19.40	33.00	PASS
Band41	20MHz	16QAM	41490	1RB#0	21.76	20.45	33.00	PASS
Band41	20MHz	16QAM	41490	1RB#49	22.13	20.82	33.00	PASS
Band41	20MHz	16QAM	41490	1RB#99	21.42	20.11	33.00	PASS
Band41	20MHz	16QAM	41490	27RB#0	20.78	19.47	33.00	PASS

Remark:

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

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

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

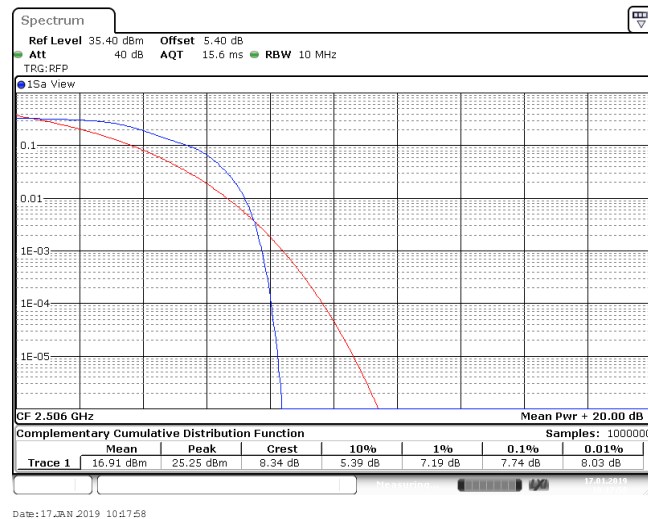
4. Peak-to-Average Ratio(CCDF)

4.1. Test Result

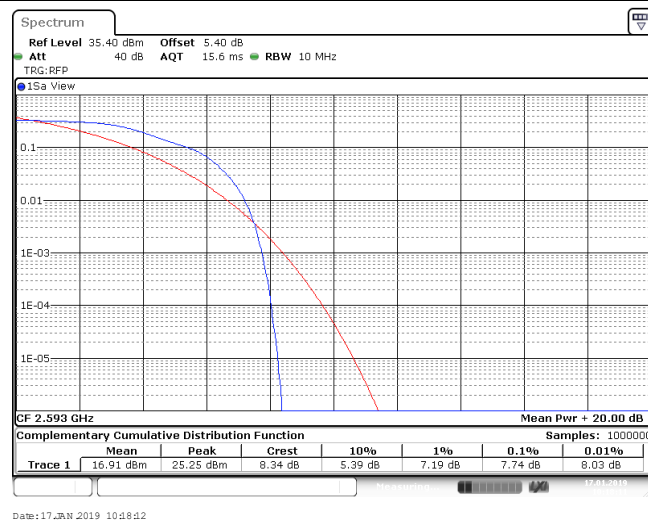
BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band41	20MHz	QPSK	39750	100RB#0	7.74	13	PASS
Band41	20MHz	QPSK	40620	100RB#0	7.74	13	PASS
Band41	20MHz	QPSK	41490	100RB#0	7.74	13	PASS
Band41	20MHz	16QAM	39750	27RB#0	7.74	13	PASS
Band41	20MHz	16QAM	40620	27RB#0	7.74	13	PASS
Band41	20MHz	16QAM	41490	27RB#0	7.74	13	PASS

4.2. Test Plots

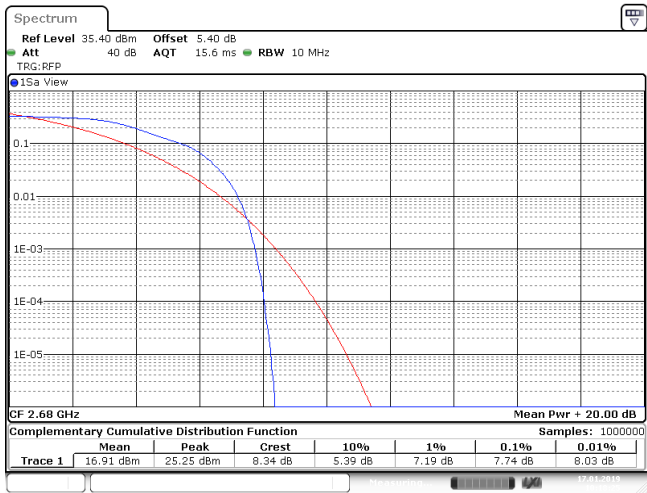
Band41_20MHz_QPSK_39750_100RB#0



Band41_20MHz_QPSK_40620_100RB#0

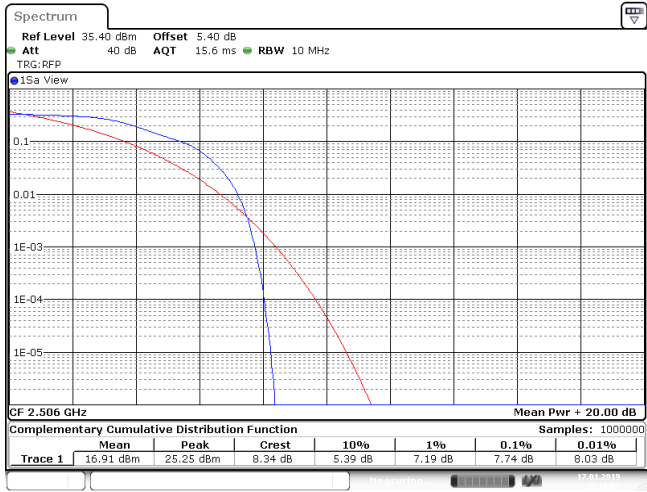


Band41_20MHz_QPSK_41490_100RB#0



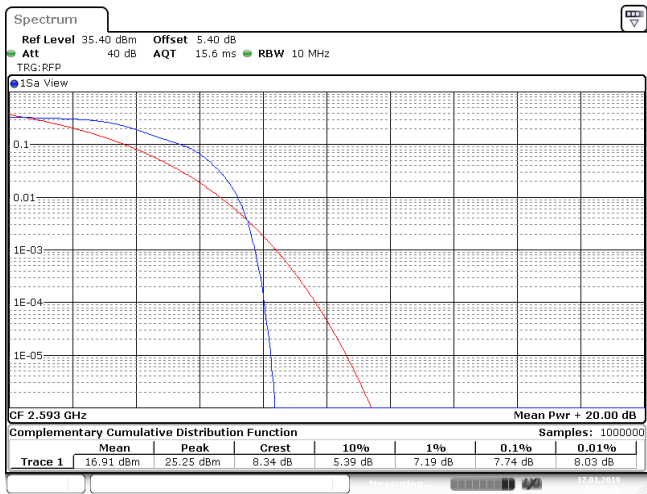
Date:17_JAN 2019 10:18:25

Band41_20MHz_16QAM_39750_27RB#0



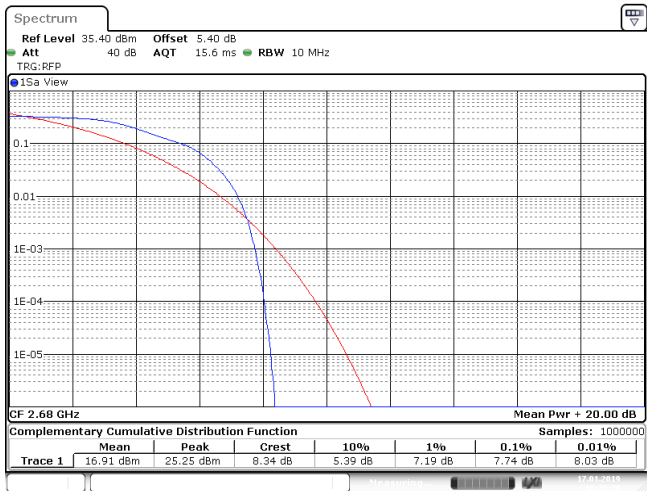
Date:17_JAN 2019 10:18:04

Band41_20MHz_16QAM_40620_27RB#0



Date:17_JAN 2019 10:18:17

Band41_20MHz_16QAM_41490_27RB#0



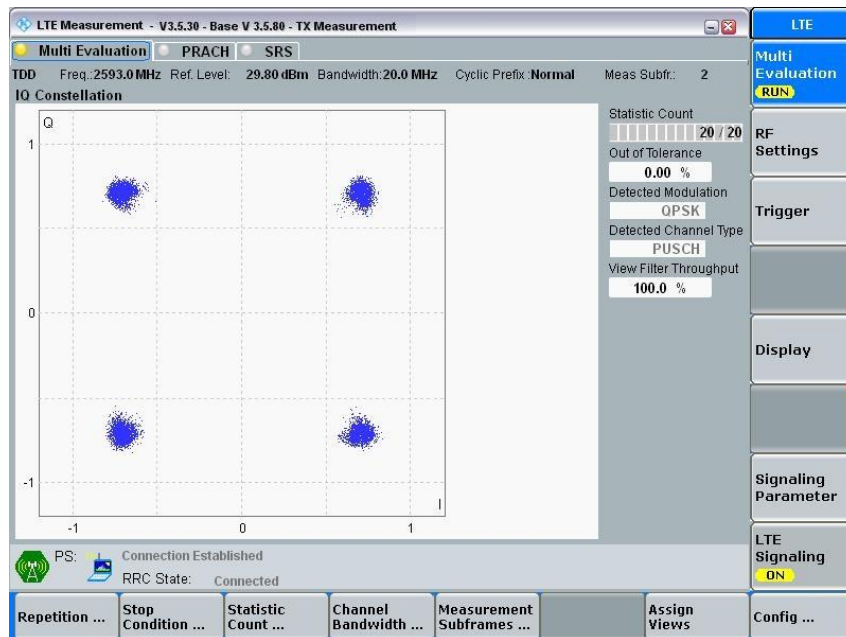
Date: 17 JAN 2019 10:18:30

5. Modulation Characteristics

5.1. Test BAND = LTE BAND41

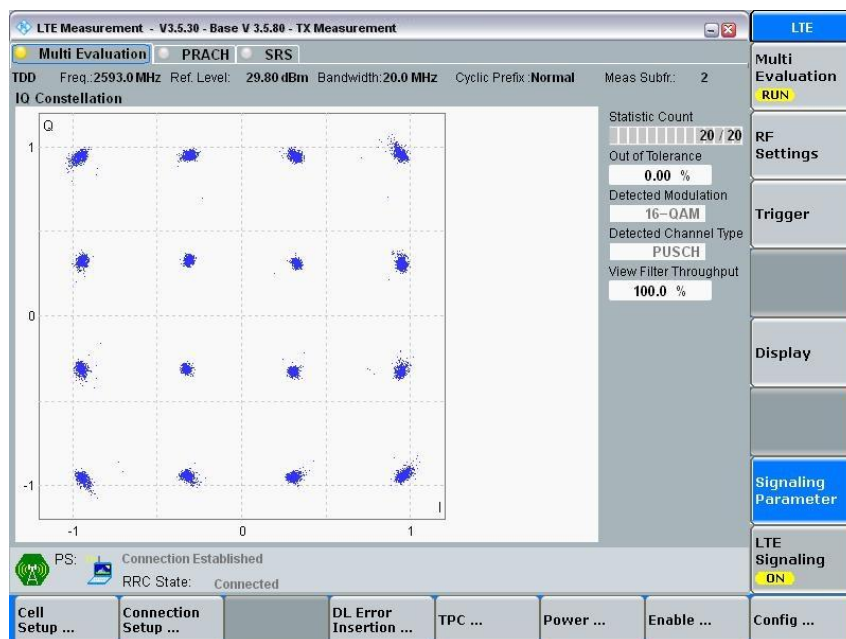
5.1.1. Test Mode = LTE /TM1 20MHz

5.1.1.1. Test Channel = MCH



5.1.2. Test Mode = LTE /TM2 20MHz

5.1.2.1. Test Channel = MCH



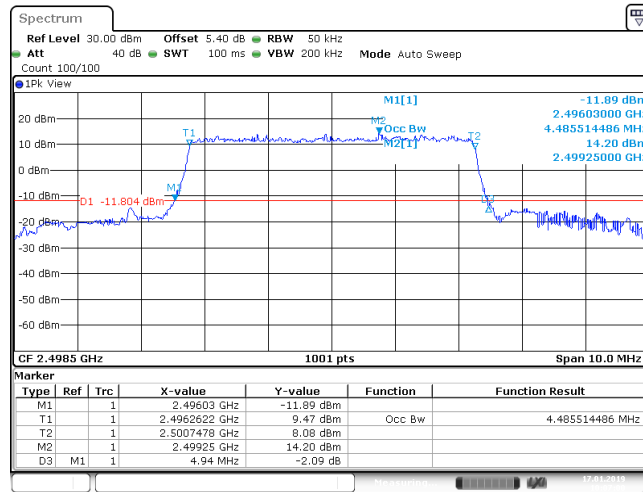
6. 26dB Bandwidth and Occupied Bandwidth

6.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band41	5MHz	QPSK	39675	25RB#0	4.486	4.940	PASS
Band41	5MHz	QPSK	40620	25RB#0	4.466	4.930	PASS
Band41	5MHz	QPSK	41565	25RB#0	4.486	4.920	PASS
Band41	5MHz	16QAM	39675	25RB#0	4.476	5.050	PASS
Band41	5MHz	16QAM	40620	25RB#0	4.476	4.920	PASS
Band41	5MHz	16QAM	41565	25RB#0	4.466	4.930	PASS
Band41	10MHz	QPSK	39700	50RB#0	8.931	10.580	PASS
Band41	10MHz	QPSK	40620	50RB#0	8.951	10.020	PASS
Band41	10MHz	QPSK	41540	50RB#0	8.931	9.840	PASS
Band41	10MHz	16QAM	39700	27RB#0	4.875	5.960	PASS
Band41	10MHz	16QAM	40620	27RB#0	4.875	5.960	PASS
Band41	10MHz	16QAM	41540	27RB#0	4.875	5.760	PASS
Band41	15MHz	QPSK	39725	75RB#0	13.516	17.610	PASS
Band41	15MHz	QPSK	40620	75RB#0	13.457	17.040	PASS
Band41	15MHz	QPSK	41515	75RB#0	13.427	15.090	PASS
Band41	15MHz	16QAM	39725	27RB#0	5.185	6.870	PASS
Band41	15MHz	16QAM	40620	27RB#0	5.185	7.020	PASS
Band41	15MHz	16QAM	41515	27RB#0	5.155	7.770	PASS
Band41	20MHz	QPSK	39750	100RB#0	17.902	19.480	PASS
Band41	20MHz	QPSK	40620	100RB#0	17.862	20.080	PASS
Band41	20MHz	QPSK	41490	100RB#0	17.862	19.440	PASS
Band41	20MHz	16QAM	39750	27RB#0	5.110	6.474	PASS
Band41	20MHz	16QAM	40620	27RB#0	5.195	6.593	PASS
Band41	20MHz	16QAM	41490	27RB#0	5.274	6.953	PASS

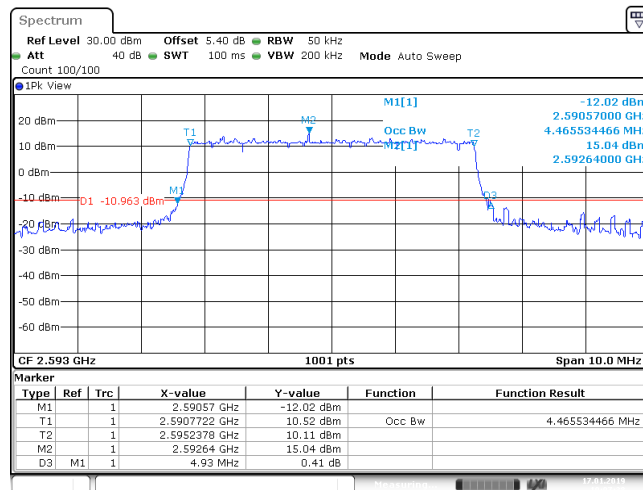
6.2. Test Plots

Band41_5MHz_QPSK_39675_25RB#0



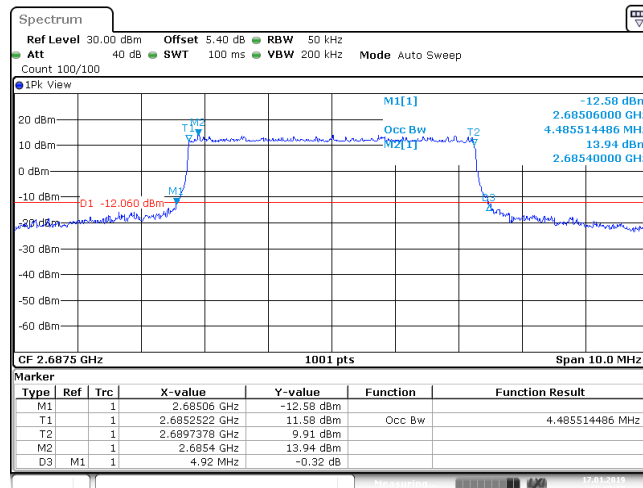
Date: 17 JAN 2019 10:07:01

Band41_5MHz_QPSK_40620_25RB#0



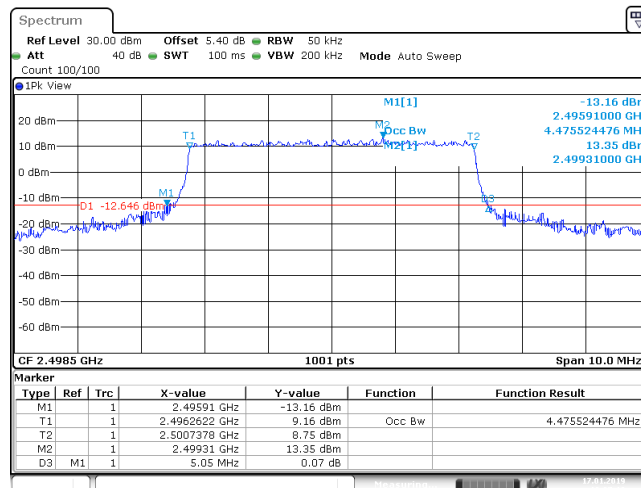
Date: 17 JAN 2019 10:07:38

Band41_5MHz_QPSK_41565_25RB#0



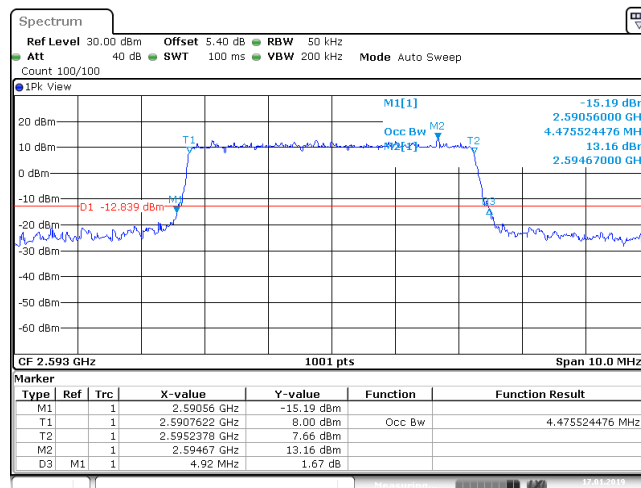
Date: 17 JAN 2019 10:08:16

Band41_5MHz_16QAM_39675_25RB#0



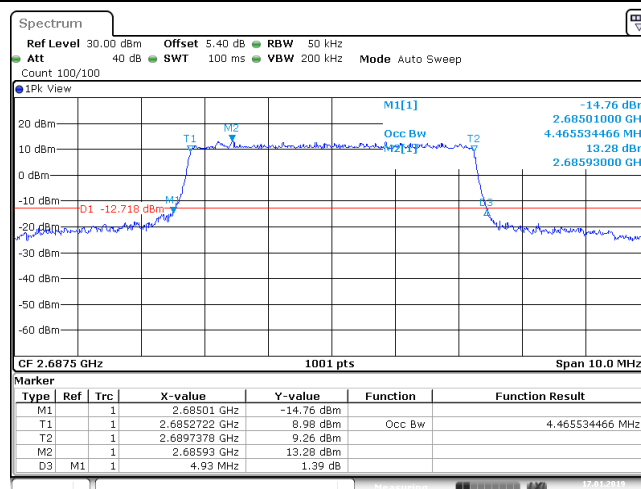
Date:17_JAN 2019 10:07:18

Band41_5MHz_16QAM_40620_25RB#0



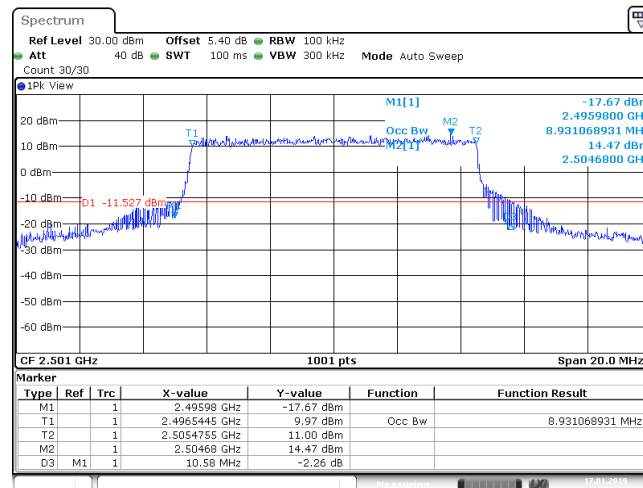
Date:17_JAN 2019 10:07:56

Band41_5MHz_16QAM_41565_25RB#0



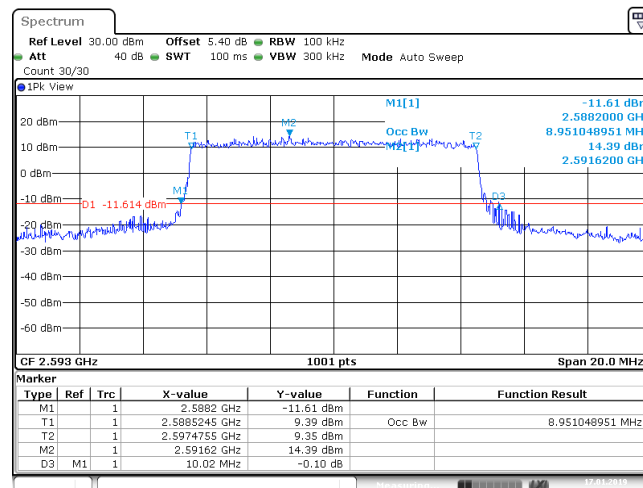
Date:17_JAN 2019 10:08:34

Band41_10MHz_QPSK_39700_50RB#0



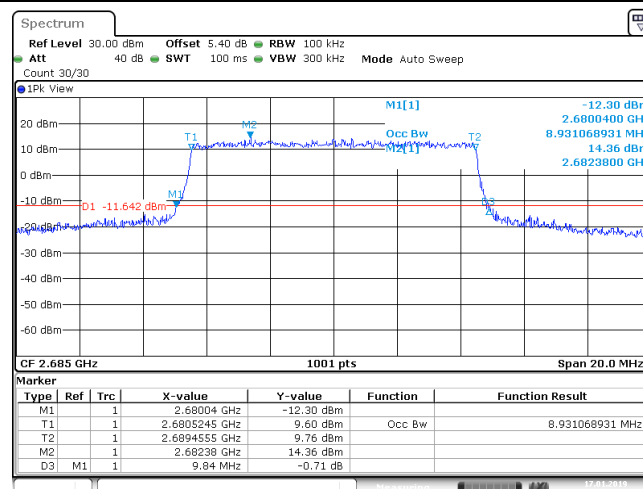
Date:17_JAN 2019 10:09:41

Band41_10MHz_QPSK_40620_50RB#0



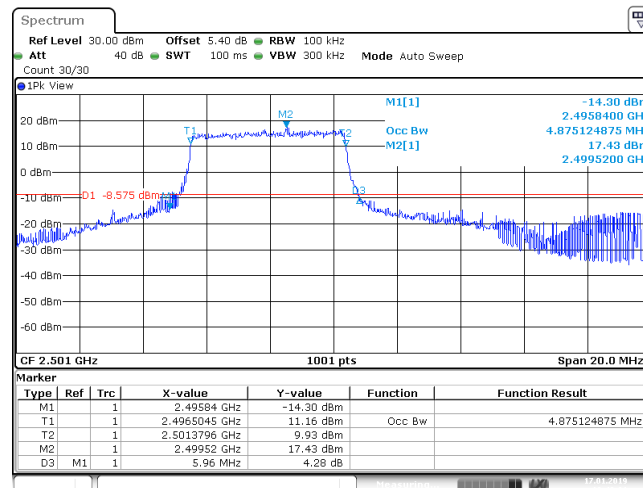
Date:17_JAN 2019 10:10:03

Band41_10MHz_QPSK_41540_50RB#0

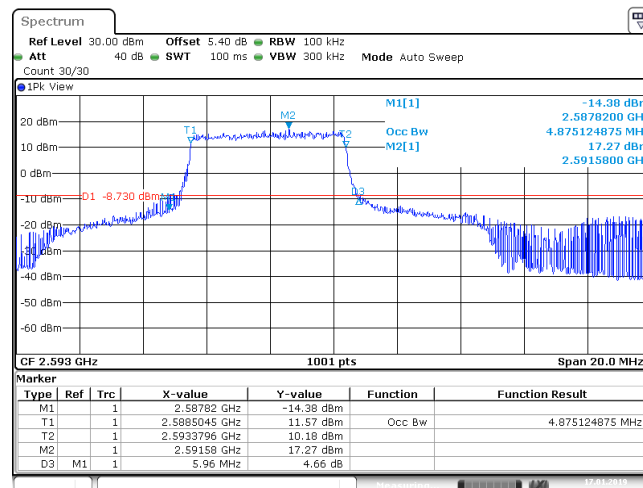


Date:17_JAN 2019 10:10:26

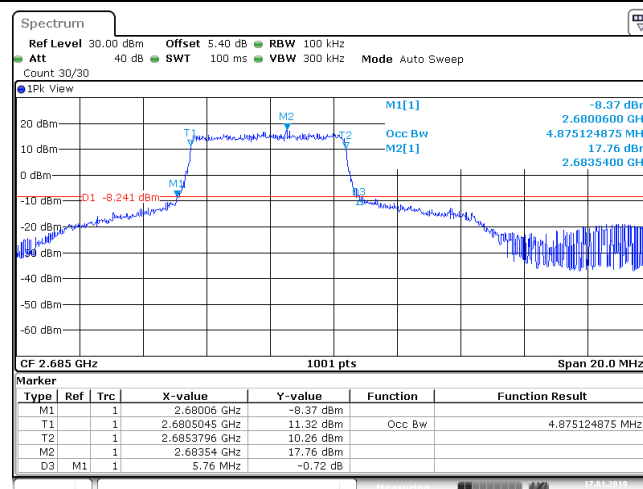
Band41_10MHz_16QAM_39700_27RB#0



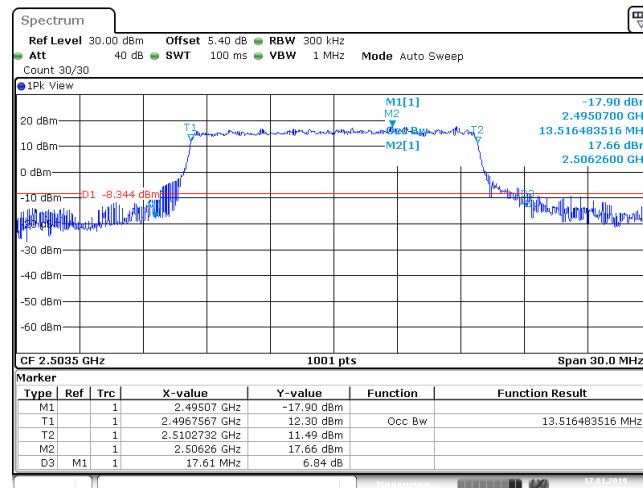
Band41_10MHz_16QAM_40620_27RB#0



Band41_10MHz_16QAM_41540_27RB#0

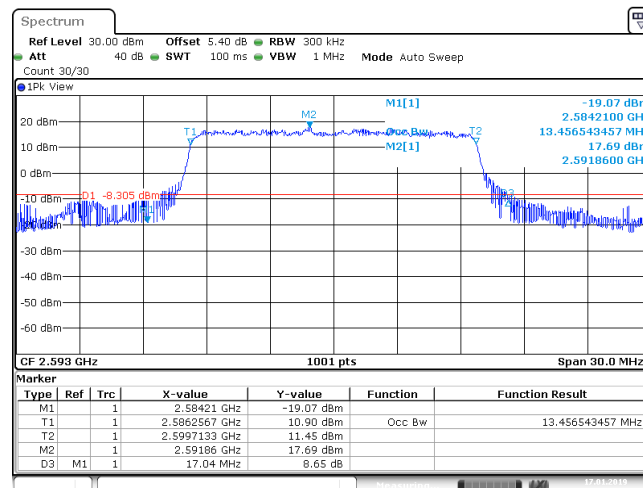


Band41_15MHz_QPSK_39725_75RB#0



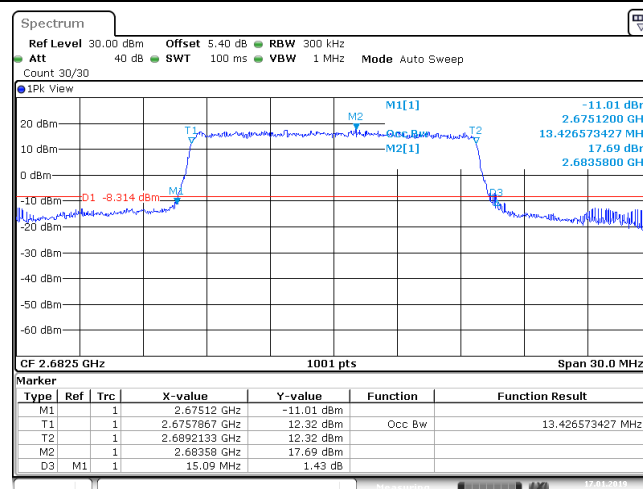
Date:17_JAN 2019 10:11:36

Band41_15MHz_QPSK_40620_75RB#0



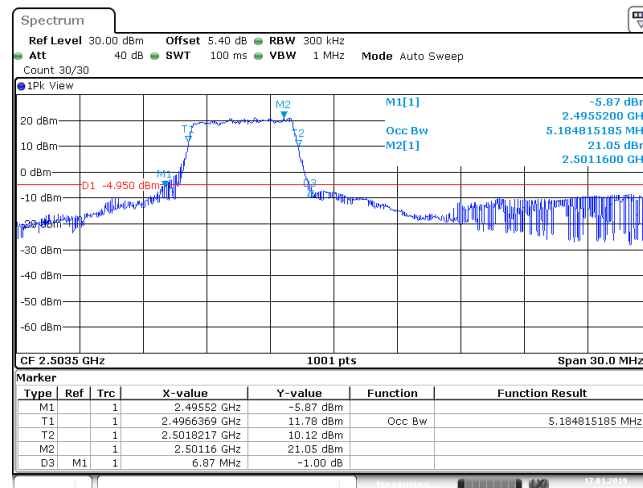
Date:17_JAN 2019 10:11:59

Band41_15MHz_QPSK_41515_75RB#0



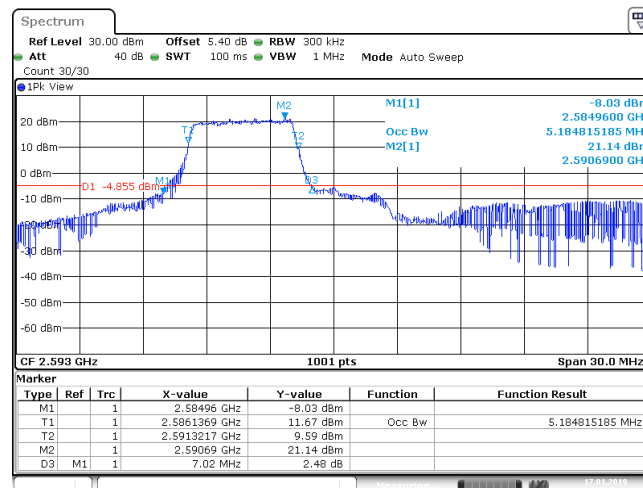
Date:17_JAN 2019 10:12:21

Band41_15MHz_16QAM_39725_27RB#0



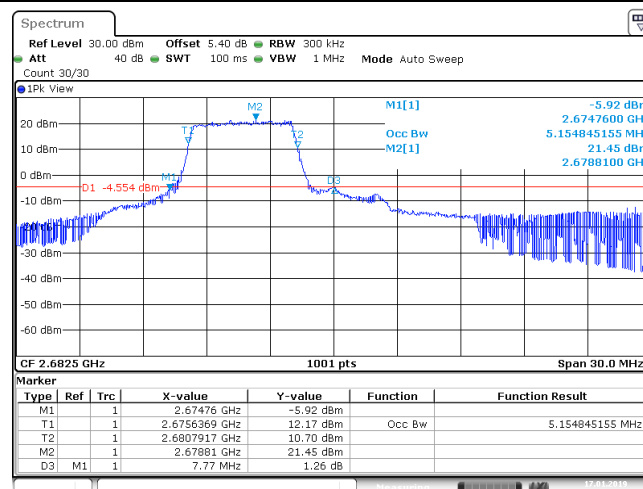
Date:17 JAN 2019 12:50:41

Band41_15MHz_16QAM_40620_27RB#0



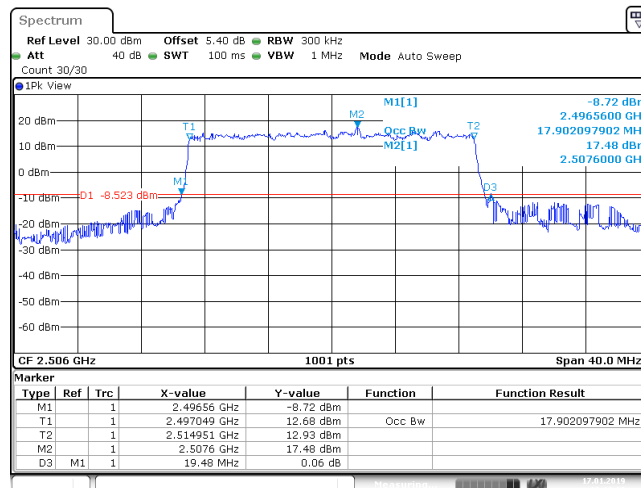
Date:17 JAN 2019 12:50:54

Band41_15MHz_16QAM_41515_27RB#0



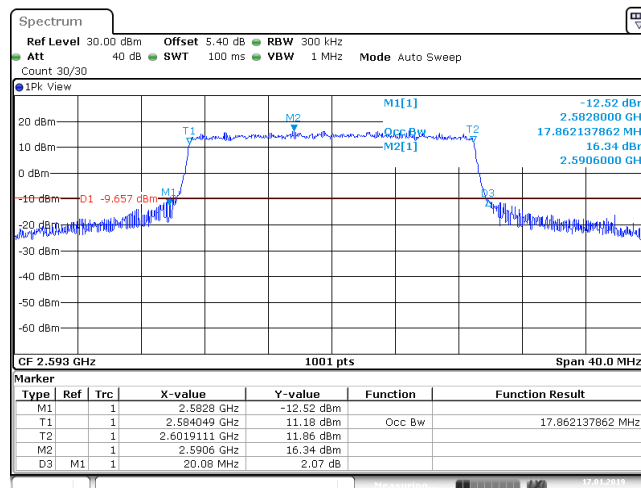
Date:17 JAN 2019 12:51:08

Band41_20MHz_QPSK_39750_100RB#0



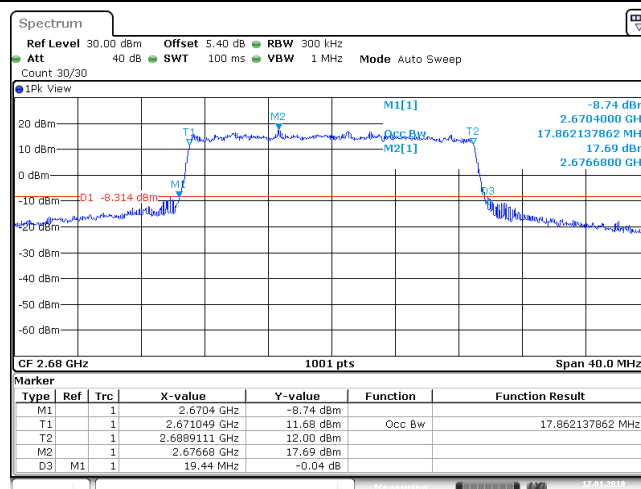
Date:17 JAN 2019 10:33:32

Band41_20MHz_QPSK_40620_100RB#0



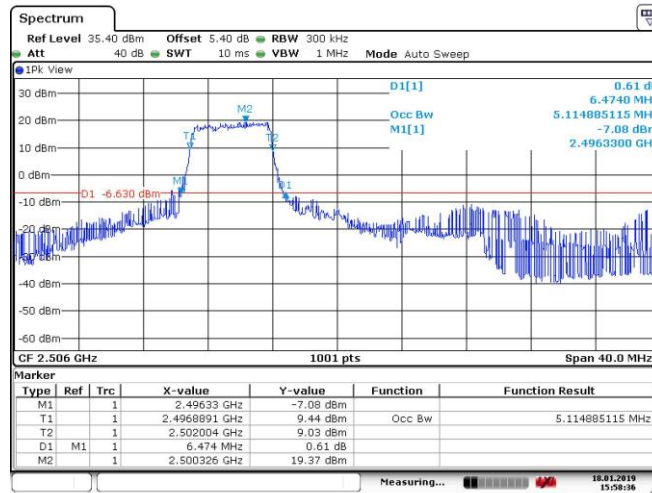
Date:17 JAN 2019 10:33:53

Band41_20MHz_QPSK_41490_100RB#0



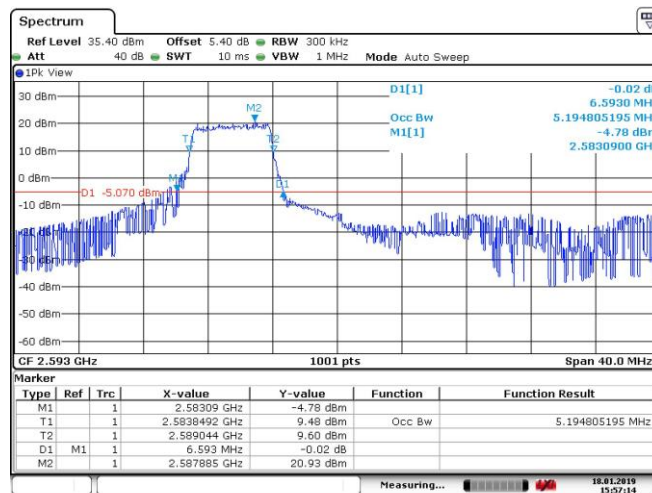
Date:17 JAN 2019 10:34:55

Band41_20MHz_16QAM_39750_27RB#0



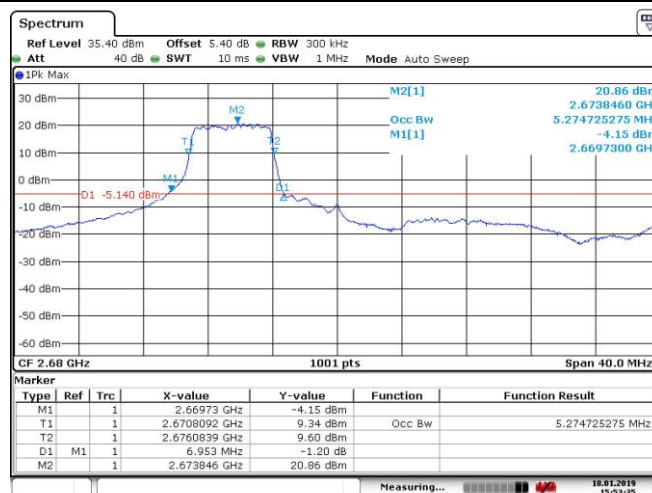
Date: 18.JAN.2019 15:58:36

Band41_20MHz_16QAM_40620_27RB#0



Date: 18.JAN.2019 15:57:14

Band41_20MHz_16QAM_41490_27RB#0

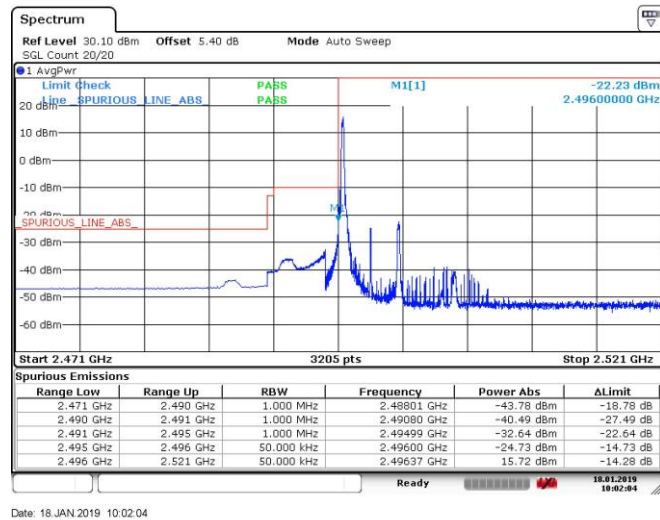


Date: 18.JAN.2019 15:53:35

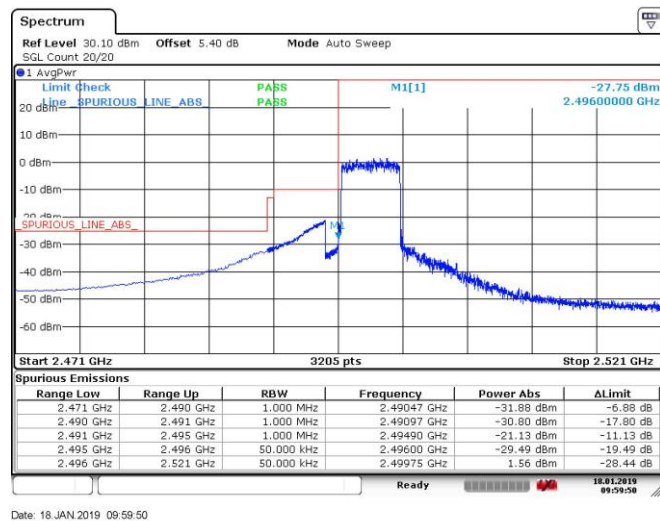
7. Band Edge Compliance

7.1. Test Plots

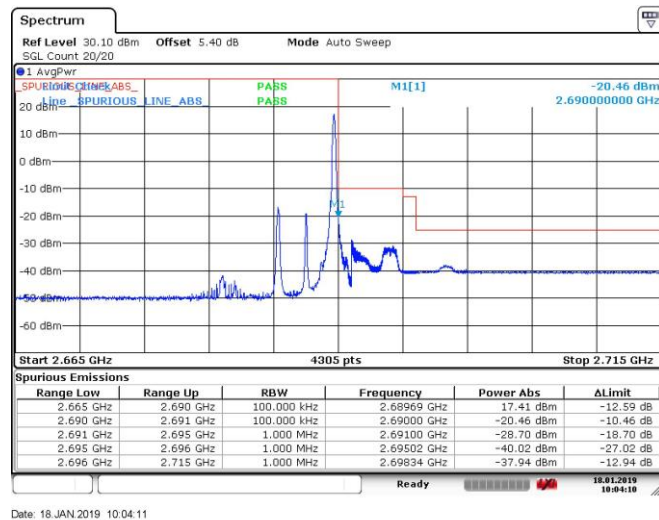
BAND 41_5MHz_QPSK_39675_1RB#0



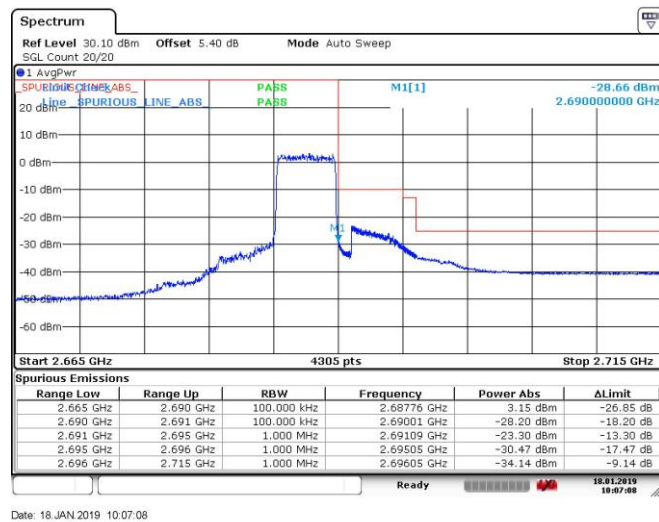
BAND 41_5MHz_QPSK_39675_25RB#0



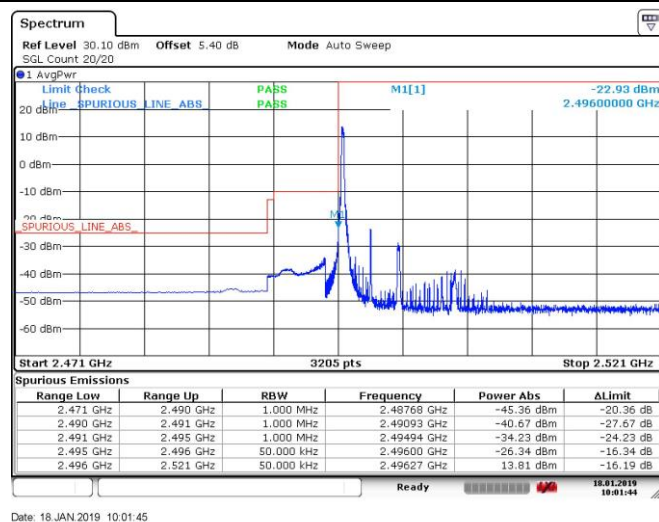
BAND 41_5MHz_QPSK_41565_1RB#24



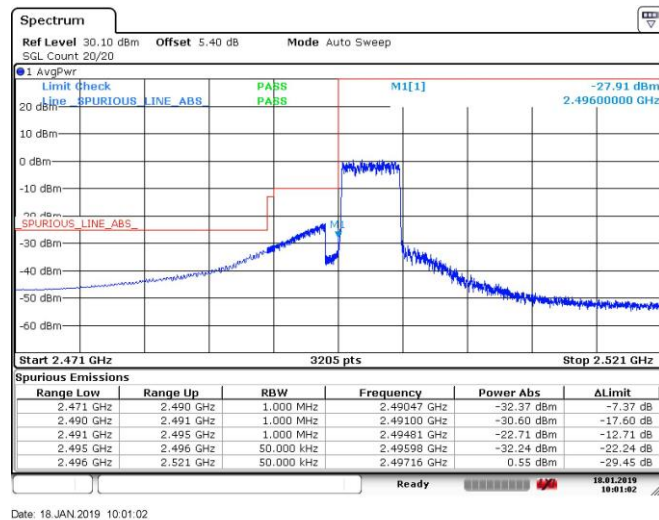
BAND 41_5MHz_QPSK_41565_25RB#0



BAND 41_5MHz_16QAM_39675_1RB#0

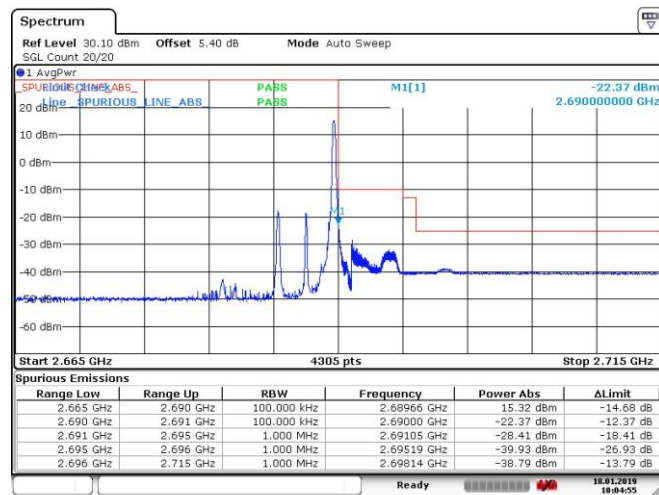


BAND 41_5MHz_16QAM_39675_25RB#0



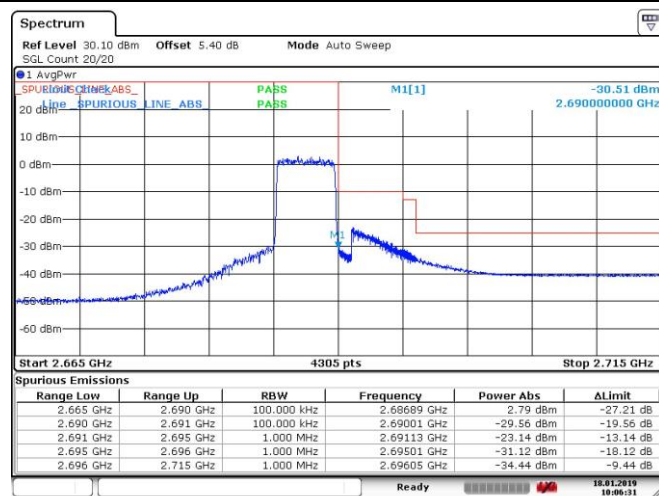
Date: 18.JAN.2019 10:01:02

BAND 41_5MHz_16QAM_41565_1RB#24



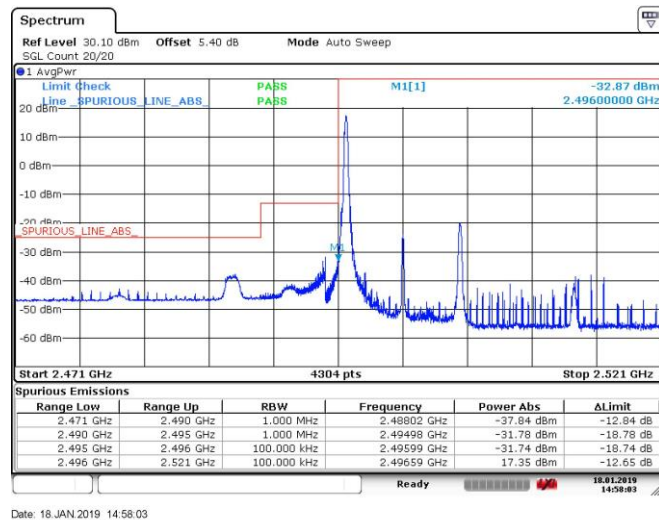
Date: 18.JAN.2019 10:04:55

BAND 41_5MHz_16QAM_41565_25RB#0

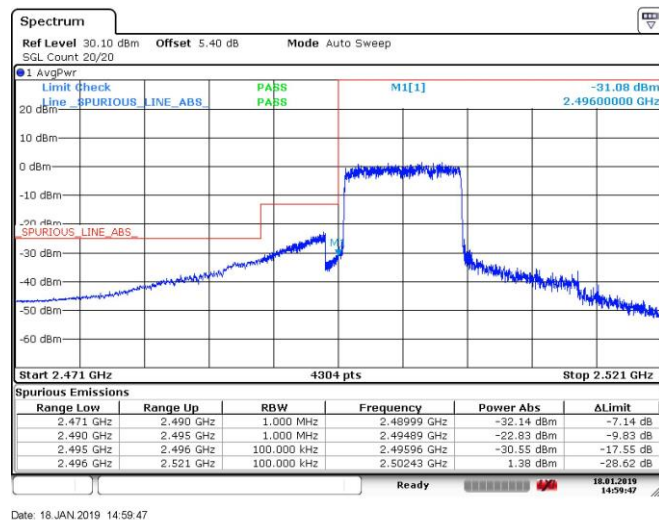


Date: 18.JAN.2019 10:06:32

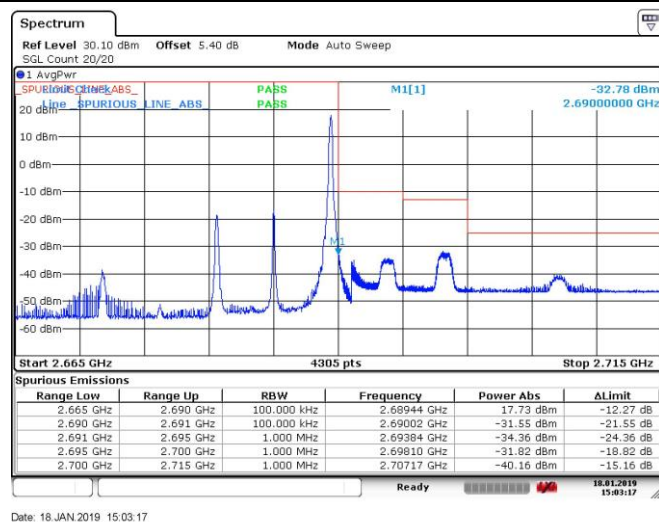
BAND 41_10MHz_QPSK_39700_1RB#0



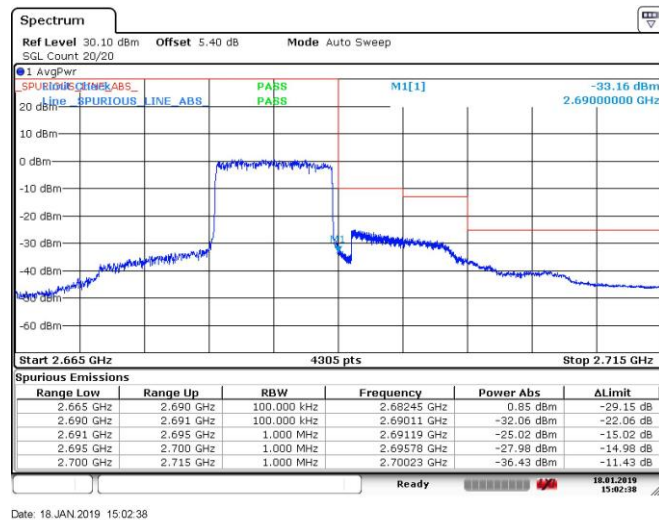
BAND 41_10MHz_QPSK_39700_50RB#0



BAND 41_10MHz_QPSK_41540_1RB#49

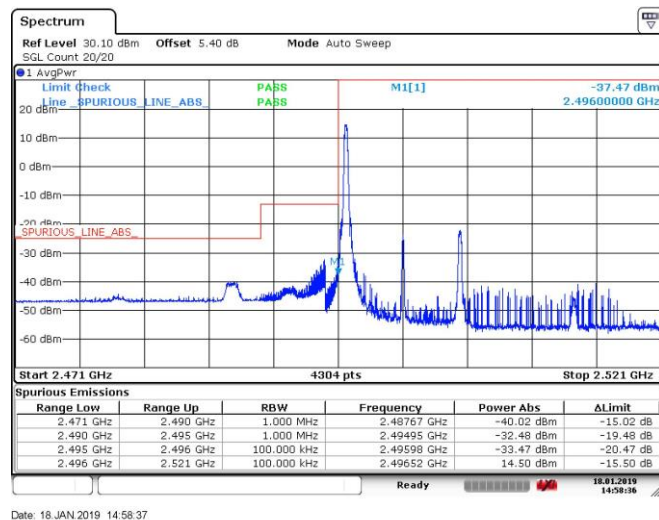


BAND 41_10MHz_QPSK_41540_50RB#0



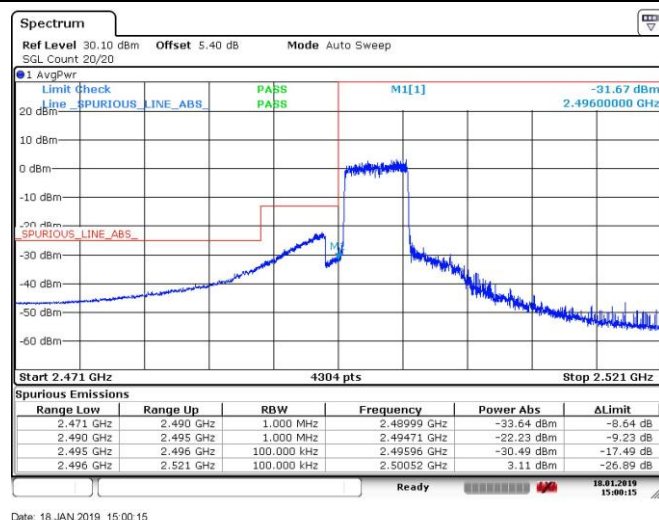
Date: 18.JAN.2019 15:02:38

BAND 41_10MHz_16QAM_39700_1RB#0



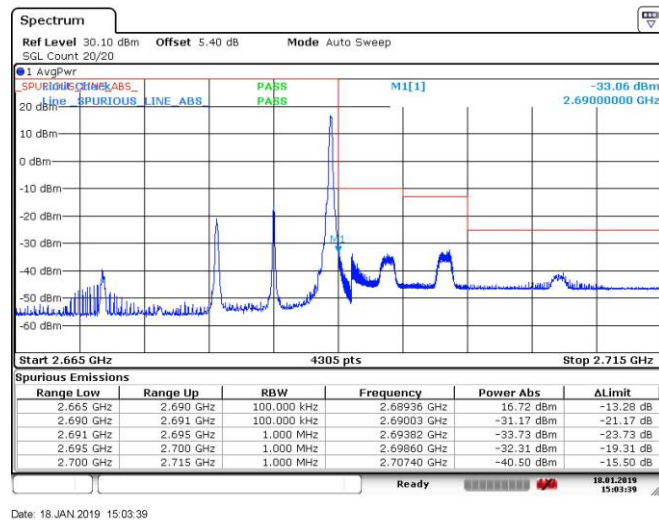
Date: 18.JAN.2019 14:58:37

BAND 41_10MHz_16QAM_39700_27RB#0

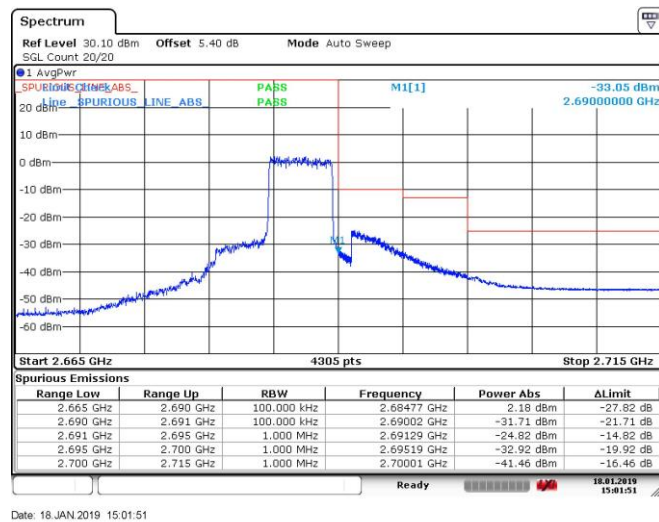


Date: 18.JAN.2019 15:00:15

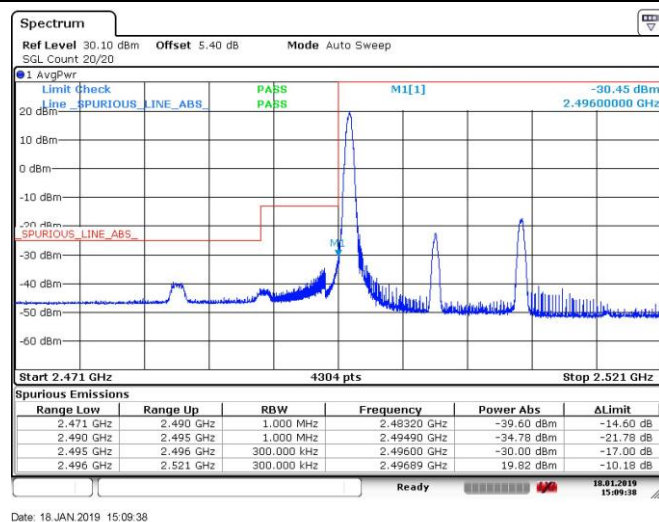
BAND 41_10MHz_16QAM_41540_1RB#49



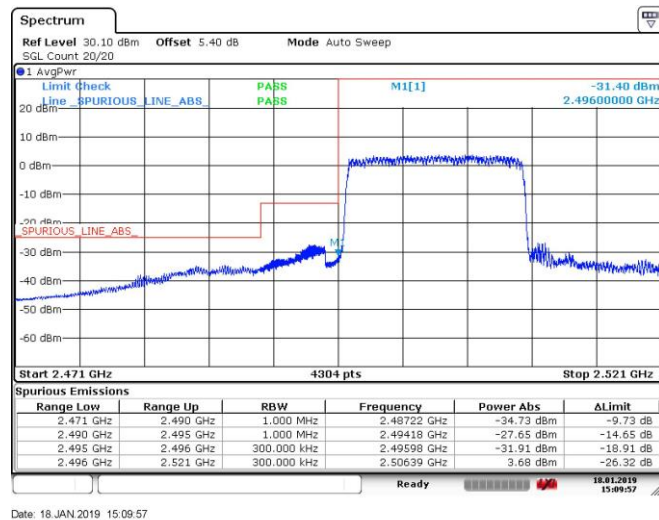
BAND 41_10MHz_16QAM_41540_27RB#23



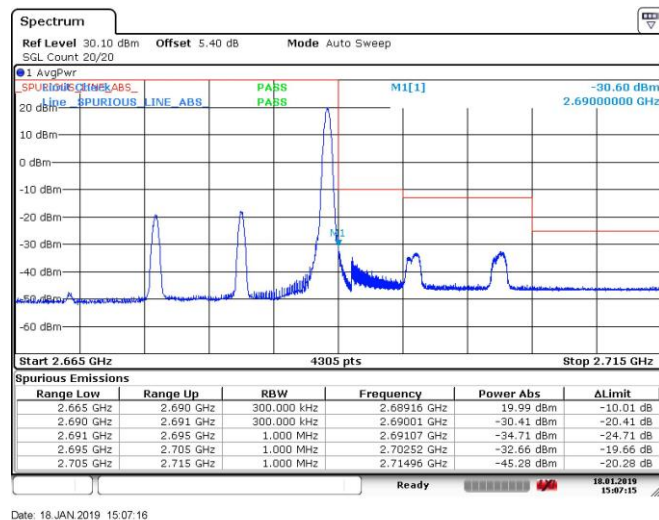
BAND 41_15MHz_QPSK_39725_1RB#0



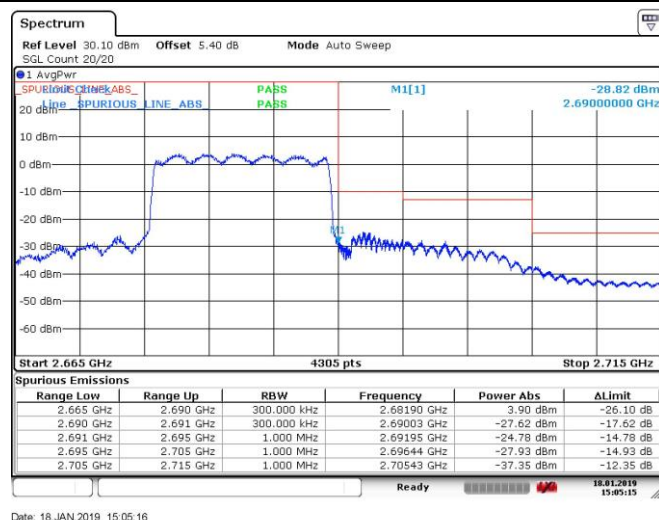
BAND 41_15MHz_QPSK_39725_75RB#0



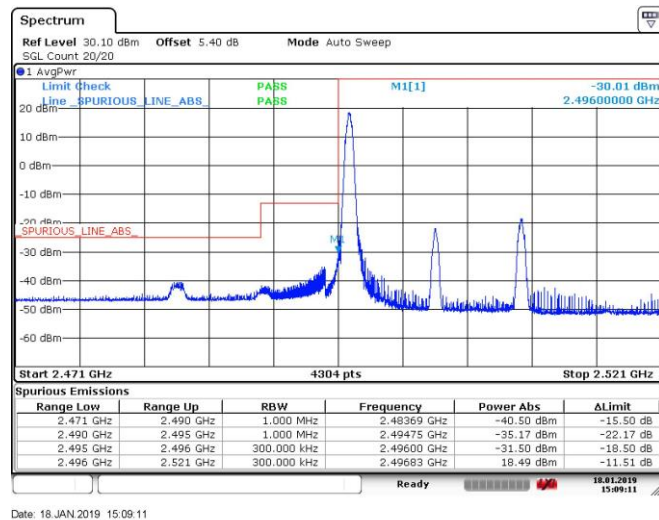
BAND 41_15MHz_QPSK_41515_1RB#74



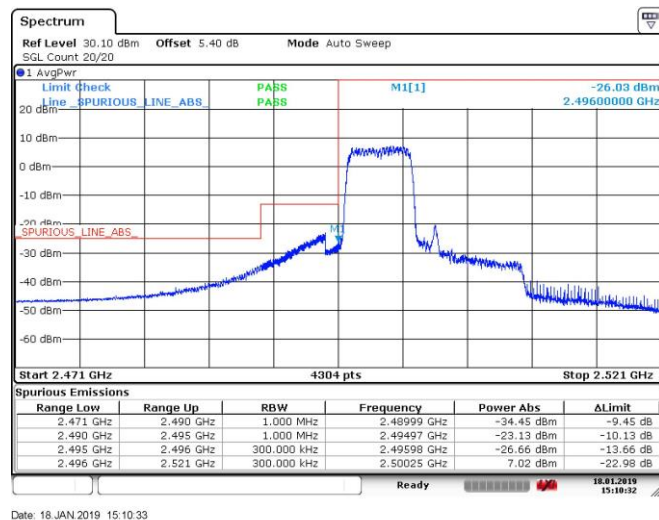
BAND 41_15MHz_QPSK_41515_75RB#0



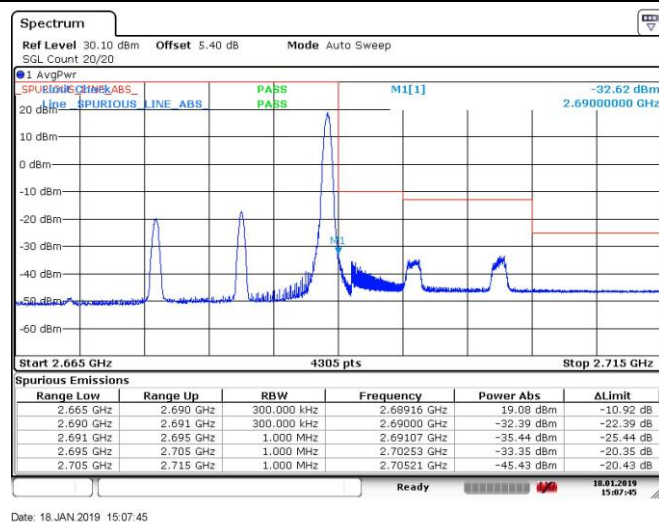
BAND 41_15MHz_16QAM_39725_1RB#0



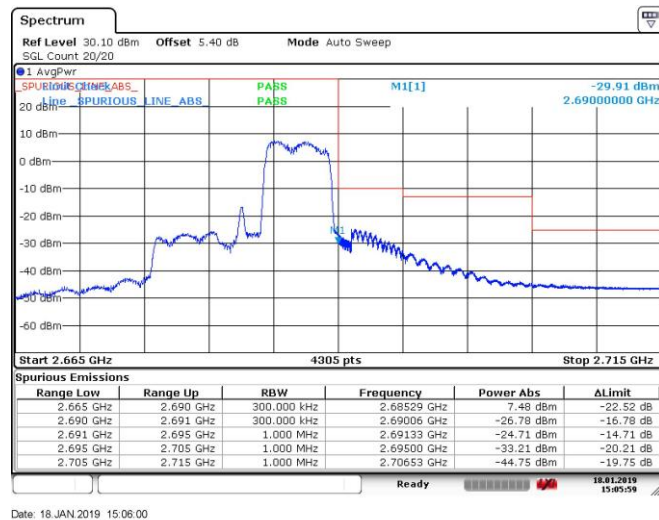
BAND 41_15MHz_16QAM_39725_27RB#0



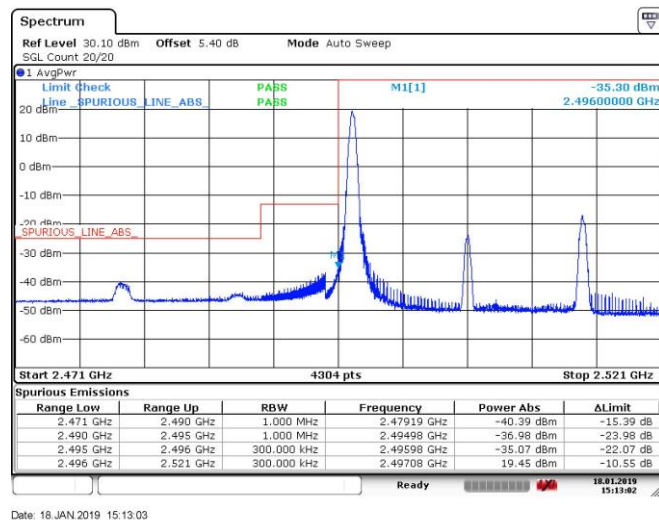
BAND 41_15MHz_16QAM_41515_1RB#74



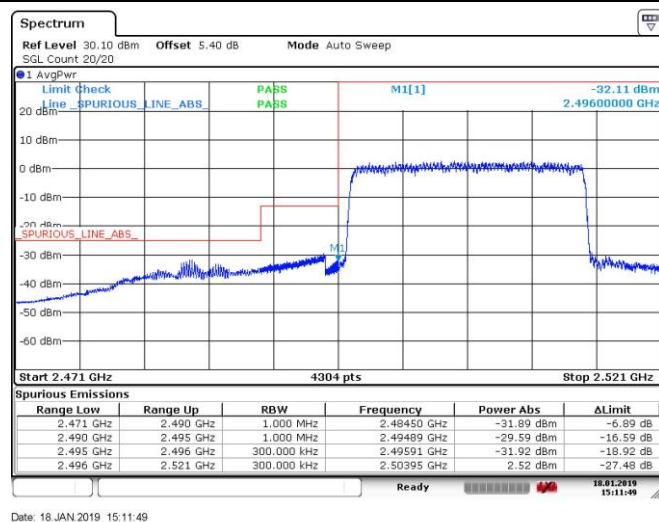
BAND 41_15MHz_16QAM_41515_27RB#48



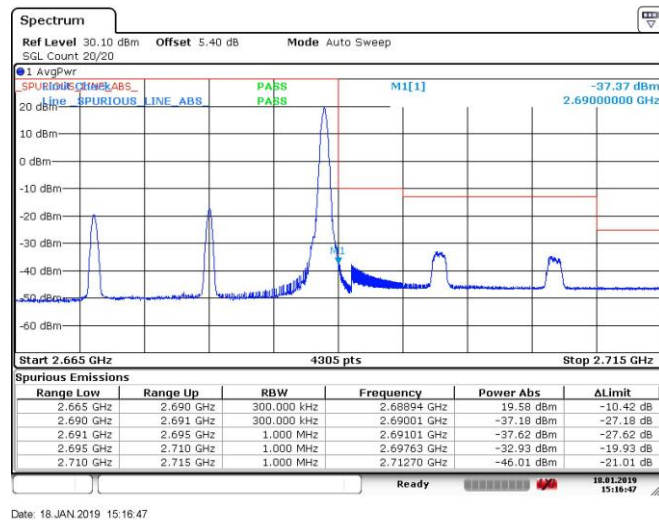
BAND 41_20MHz_QPSK_39750_1RB#0



BAND 41_20MHz_QPSK_39750_100RB#0

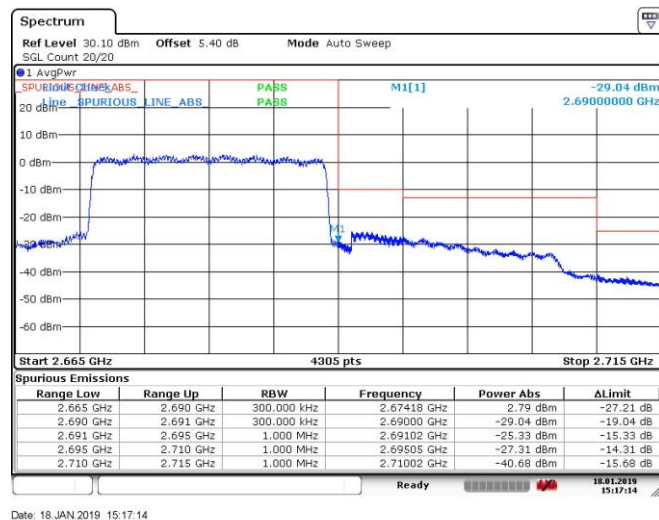


BAND 41_20MHz_QPSK_41490_1RB#99



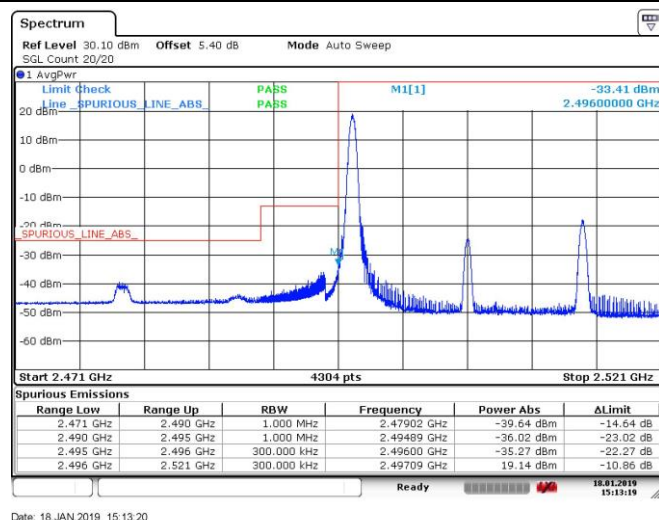
Date: 18.JAN.2019 15:16:47

BAND 41_20MHz_QPSK_41490_100RB#0



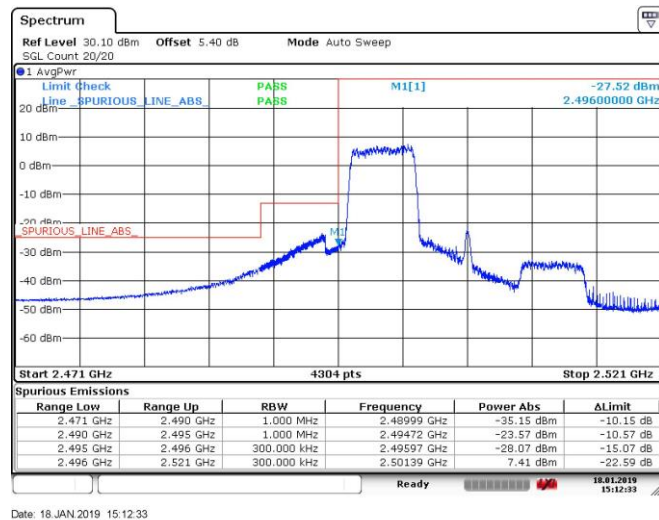
Date: 18.JAN.2019 15:17:14

BAND 41_20MHz_16QAM_39750_1RB#0

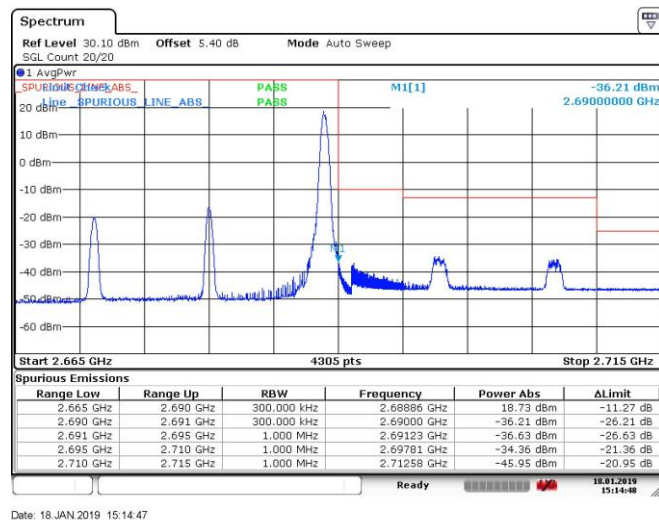


Date: 18.JAN.2019 15:13:20

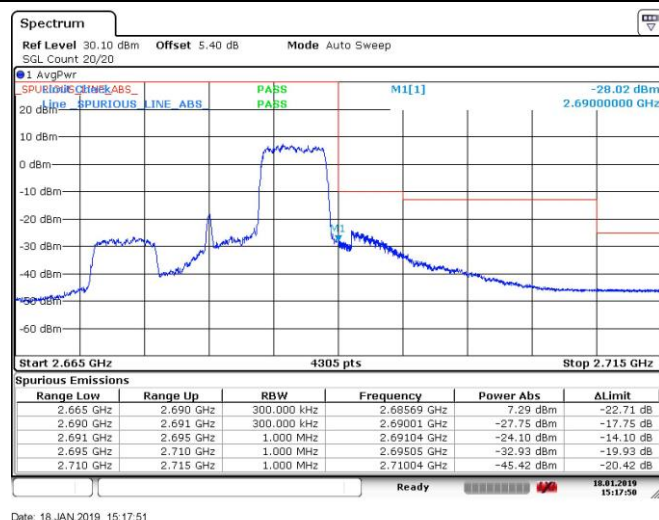
BAND 41_20MHz_16QAM_39750_27RB#0



BAND 41_20MHz_16QAM_41490_1RB#99



BAND 41_20MHz_16QAM_41490_27RB#83

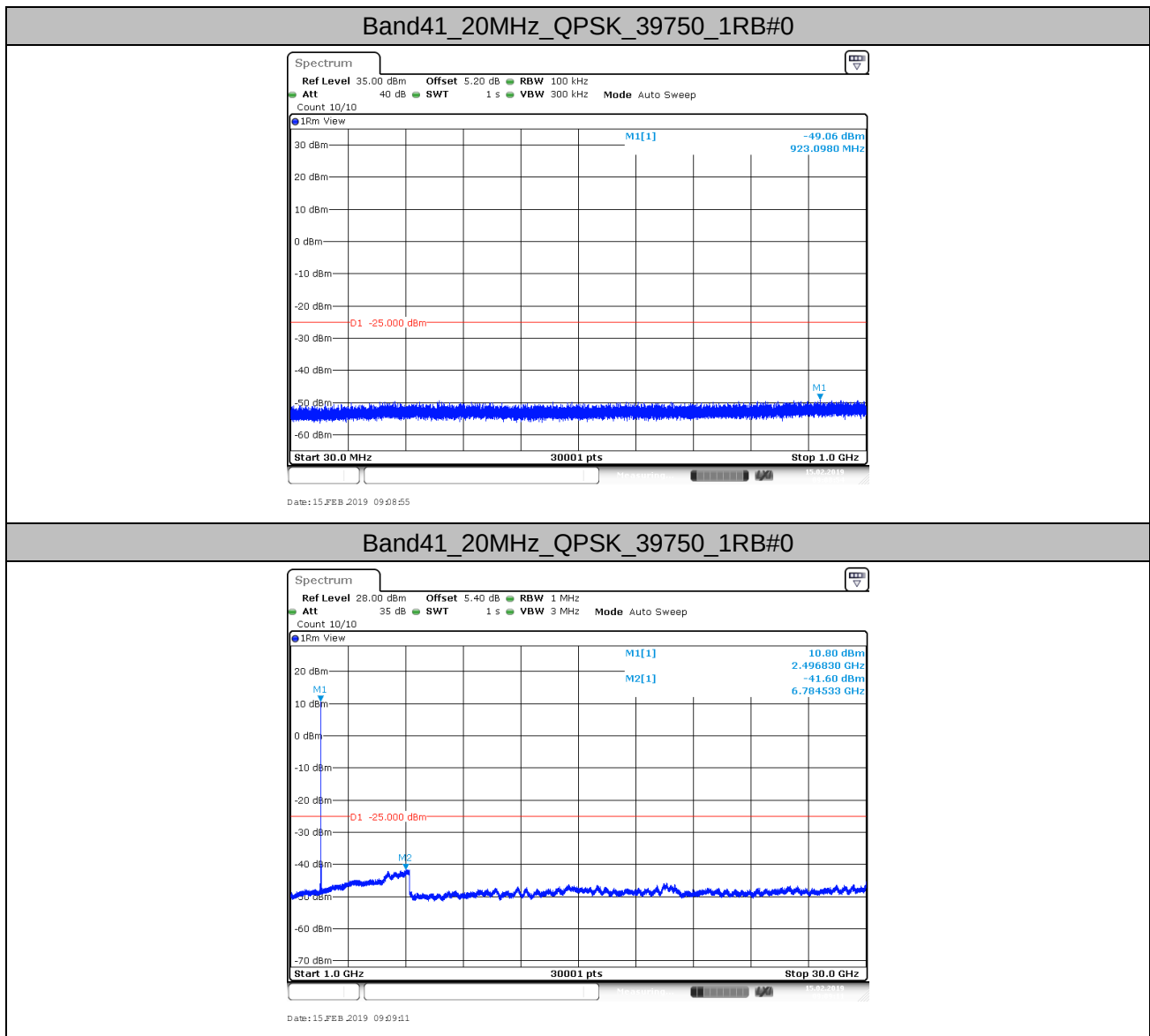


8. Spurious Emission at Antenna Terminal

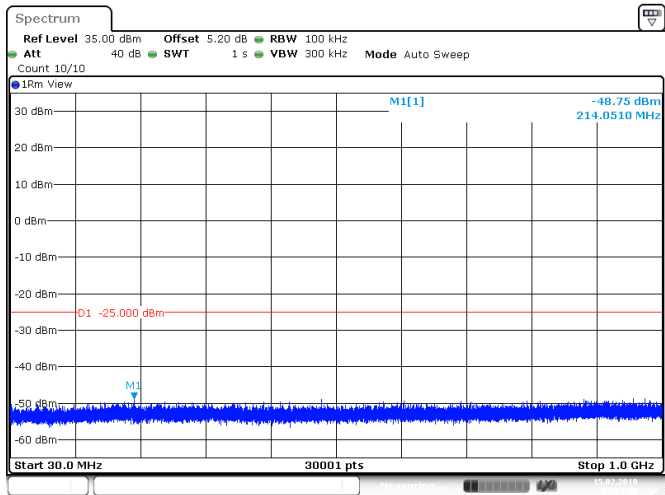
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =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

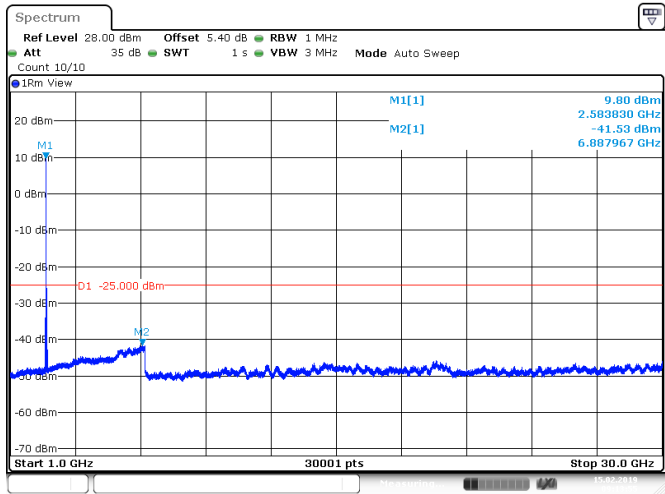


Band41_20MHz_QPSK_40620_1RB#0



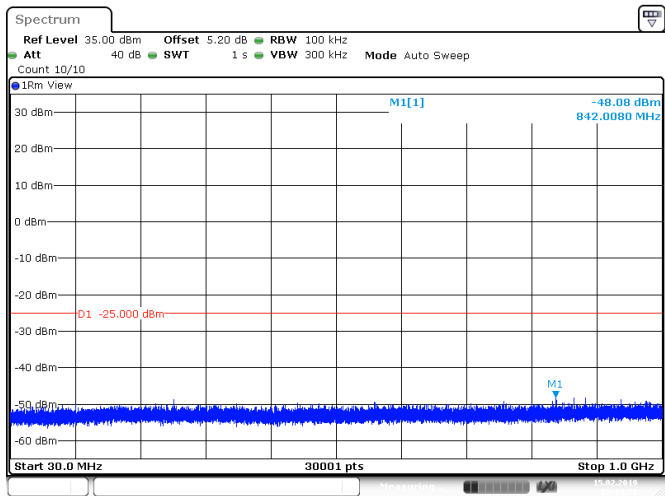
Date: 15.FEB.2019 09:13:40

Band41_20MHz_QPSK_40620_1RB#0



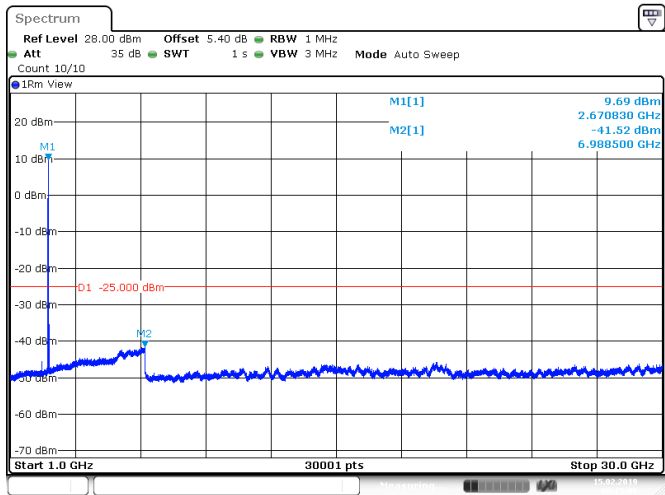
Date: 15.FEB.2019 09:13:56

Band41_20MHz_QPSK_41490_1RB#0



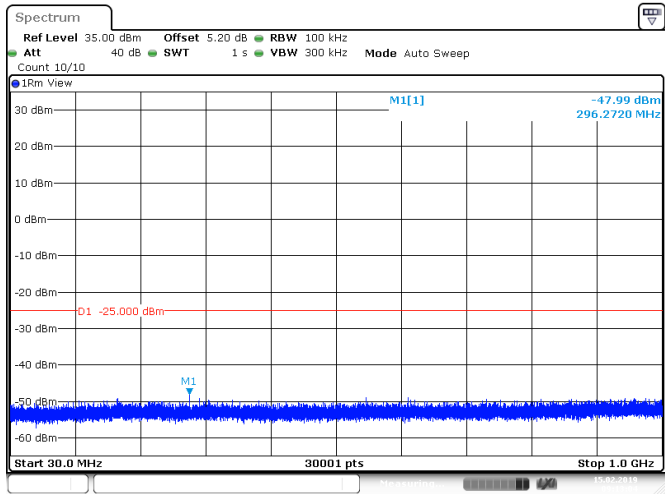
Date: 15.FEB.2019 09:14:50

Band41_20MHz_QPSK_41490_1RB#0



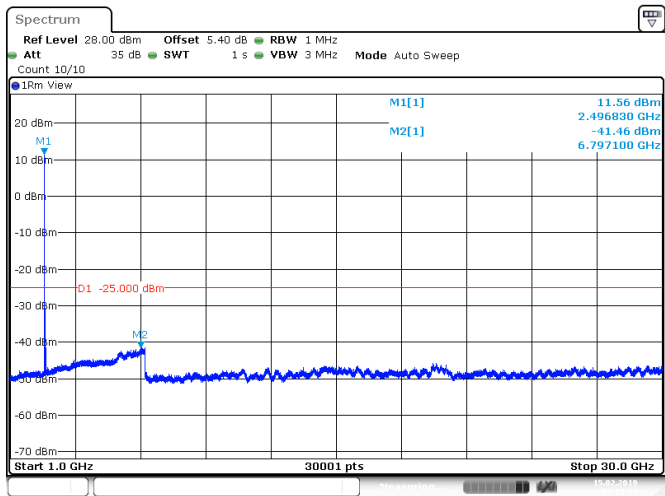
Date: 15.FEB.2019 09:15:06

Band41_20MHz_16QAM_39750_1RB#0



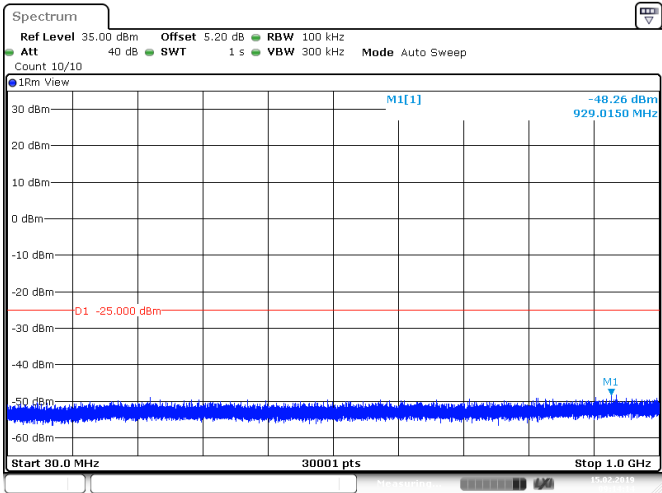
Date: 15.FEB.2019 09:13:05

Band41_20MHz_16QAM_39750_1RB#0



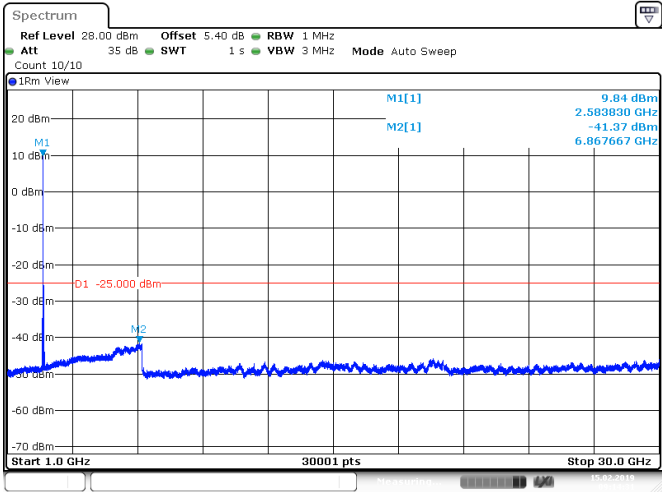
Date: 15.FEB.2019 09:13:21

Band41_20MHz_16QAM_40620_1RB#0



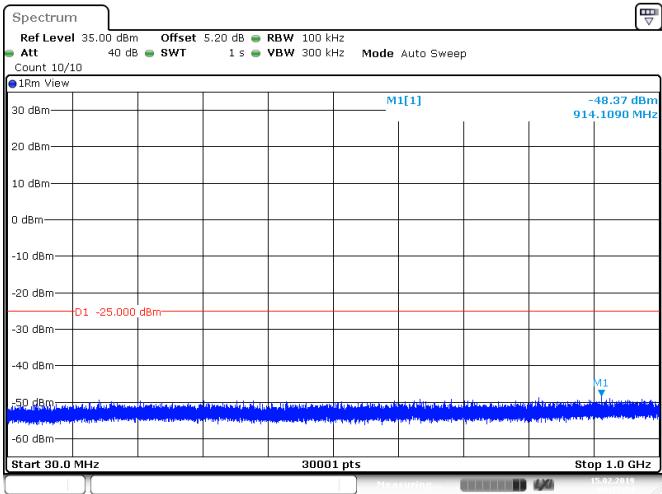
Date: 15.FEB.2019 09:14:15

Band41_20MHz_16QAM_40620_1RB#0



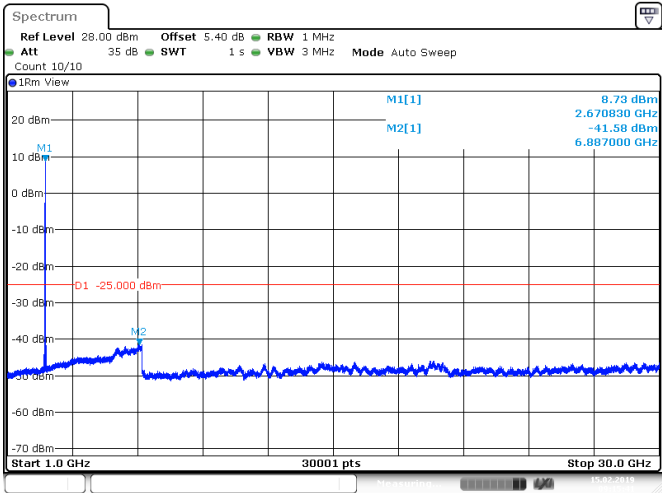
Date: 15.FEB.2019 09:14:31

Band41_20MHz_16QAM_41490_1RB#0



Date: 15.FEB.2019 09:15:25

Band41_20MHz_16QAM_41490_1RB#0



Date: 15.FEB.2019 09:15:41

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
Band41	20MHz	QPSK	39750	100RB#0	VL	NT	-10.51	-0.004192	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	VN	NT	5.99	0.002390	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	VH	NT	12.31	0.004913	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	VL	NT	0.03	0.000011	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	VN	NT	-2.82	-0.001089	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	VH	NT	-14.38	-0.005546	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	VL	NT	-3.50	-0.001305	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	VN	NT	-10.63	-0.003965	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	VH	NT	5.53	0.002062	±2.5	PASS
Band41	20MHz	16QAM	39750	27RB#0	VL	NT	5.26	0.002100	±2.5	PASS
Band41	20MHz	16QAM	39750	27RB#0	VN	NT	-1.19	-0.000476	±2.5	PASS
Band41	20MHz	16QAM	39750	27RB#0	VH	NT	-6.02	-0.002401	±2.5	PASS
Band41	20MHz	16QAM	40620	27RB#0	VL	NT	-1.34	-0.000516	±2.5	PASS
Band41	20MHz	16QAM	40620	27RB#0	VN	NT	0.29	0.000114	±2.5	PASS
Band41	20MHz	16QAM	40620	27RB#0	VH	NT	-2.00	-0.000773	±2.5	PASS
Band41	20MHz	16QAM	41490	27RB#0	VL	NT	-5.72	-0.002134	±2.5	PASS
Band41	20MHz	16QAM	41490	27RB#0	VN	NT	-14.33	-0.005347	±2.5	PASS
Band41	20MHz	16QAM	41490	27RB#0	VH	NT	2.89	0.001078	±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
Band41	20MHz	QPSK	39750	100RB#0	NV	-30	-3.82	-0.001525	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	-20	-9.43	-0.003762	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	0	-3.10	-0.001238	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	10	-1.68	-0.000672	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	20	-10.48	-0.004180	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	30	-3.67	-0.001464	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	40	-12.76	-0.005091	±2.5	PASS
Band41	20MHz	QPSK	39750	100RB#0	NV	50	9.59	0.003828	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	-30	0.76	0.000293	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	-20	-7.43	-0.002866	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	0	12.22	0.004712	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	10	-7.75	-0.002988	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	20	-3.25	-0.001253	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	30	-8.81	-0.003399	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	40	-9.18	-0.003541	±2.5	PASS
Band41	20MHz	QPSK	40620	100RB#0	NV	50	-12.58	-0.004852	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	-30	-5.14	-0.001919	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	-20	5.82	0.002170	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	0	5.97	0.002229	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	10	-11.02	-0.004110	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	20	8.00	0.002986	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	30	-13.01	-0.004856	±2.5	PASS

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Band41	20MHz	QPSK	41490	100RB#0	NV	40	-2.80	-0.001043	±2.5	PASS
Band41	20MHz	QPSK	41490	100RB#0	NV	50	-5.51	-0.002056	±2.5	PASS
Band41	20MHz	16QAM	39750	27RB#0	NV	-30	-9.29	-0.003709	±2.5	PASS
Band41	20MHz	16QAM	39750	27RB#0	NV	-20	3.13	0.001249	±2.5	PASS
Band41	20MHz	16QAM	39750	27RB#0	NV	0	-8.95	-0.003570	±2.5	PASS
Band41	20MHz	16QAM	39750	27RB#0	NV	10	9.48	0.003784	±2.5	PASS
Band41	20MHz	16QAM	39750	27RB#0	NV	20	5.82	0.002323	±2.5	PASS
Band41	20MHz	16QAM	39750	27RB#0	NV	30	2.68	0.001071	±2.5	PASS
Band41	20MHz	16QAM	39750	27RB#0	NV	40	9.47	0.003779	±2.5	PASS
Band41	20MHz	16QAM	39750	27RB#0	NV	50	3.82	0.001524	±2.5	PASS
Band41	20MHz	16QAM	40620	27RB#0	NV	-30	-4.14	-0.001595	±2.5	PASS
Band41	20MHz	16QAM	40620	27RB#0	NV	-20	-6.66	-0.002569	±2.5	PASS
Band41	20MHz	16QAM	40620	27RB#0	NV	0	-3.33	-0.001283	±2.5	PASS
Band41	20MHz	16QAM	40620	27RB#0	NV	10	-1.63	-0.000628	±2.5	PASS
Band41	20MHz	16QAM	40620	27RB#0	NV	20	10.83	0.004177	±2.5	PASS
Band41	20MHz	16QAM	40620	27RB#0	NV	30	-13.30	-0.005131	±2.5	PASS
Band41	20MHz	16QAM	40620	27RB#0	NV	40	7.10	0.002738	±2.5	PASS
Band41	20MHz	16QAM	40620	27RB#0	NV	50	-5.49	-0.002117	±2.5	PASS
Band41	20MHz	16QAM	41490	27RB#0	NV	-30	0.47	0.000176	±2.5	PASS
Band41	20MHz	16QAM	41490	27RB#0	NV	-20	6.19	0.002311	±2.5	PASS
Band41	20MHz	16QAM	41490	27RB#0	NV	0	0.39	0.000145	±2.5	PASS
Band41	20MHz	16QAM	41490	27RB#0	NV	10	-6.62	-0.002470	±2.5	PASS
Band41	20MHz	16QAM	41490	27RB#0	NV	20	-12.87	-0.004804	±2.5	PASS
Band41	20MHz	16QAM	41490	27RB#0	NV	30	-12.11	-0.004519	±2.5	PASS
Band41	20MHz	16QAM	41490	27RB#0	NV	40	-10.58	-0.003947	±2.5	PASS
Band41	20MHz	16QAM	41490	27RB#0	NV	50	0.25	0.000093	±2.5	PASS

The End