

Appendix B.5

E-UTRA Band 5

1. Main Test Instruments

RE in Chamber					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date	Cal.Due date
				(yyyy-mm-dd)	(yyyy-mm-dd)
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018/3/13	2021/3/12
Spectrum Analyzer (20Hz-43GHz)	Rohde & Schwarz	FSU43	SEM004-08	2019/3/2	2020/3/1
BiConiLog Antenna (26-3000MHz)	ETS-Lindgren	3142C	SEM003-01	2017/6/27	2020/6/26
Horn Antenna (800MHz-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2018/4/13	2021/4/12
Horn Antenna (15-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2017/10/17	2020/10/16
Amplifier (0.1-1300MHz)	HP	8447D	SEM005-02	2018/9/2	2019/9/2
Low Noise Amplifier (100MHz-18GHz)	Black Diamond Series	BDLNA-0118-352810	SEM005-05	2018/9/2	2019/9/2
Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	EMC2063	2018/10/20	2019/10/19
Pre-amplifier (26-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2019/3/2	2020/3/1
Band filter	N/A	N/A	N/A	N/A	N/A
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2019/6/12	2020/6/11
Wideband Radio Communication Tester	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	Cal.Due date
				(yyyy-mm-dd)	(yyyy-mm-dd)
Dual Output Mobile Communication DC Source	Agilent Technologies Inc	66311B	W009-09	2018/11/2	2019/11/1
Signal Analyzer	Rohde & Schwarz	FSV	W005-02	2019/3/2	2020/3/1
Coaxial Cable	SGS	N/A	SEM031-01	2019/6/12	2020/6/11
Attenuator	Weinschel Associates	WA41	SEM021-09	N/A	N/A
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2018/11/2	2019/11/1
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	HTC-1	W006-17	2018/11/2	2019/11/1
Temperature Chamber	GIANT FORCE	ICT-150-40-CP-AR	W027-03	2018/11/2	2019/11/1
Wideband Radio Communication Tester	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]	$U = \pm 0.37$ dB
Bandwidth	Magnitude [%]	$U = \pm 0.2\%$
Band Edge Compliance	Disturbance Power [dBm]	$U = \pm 2.0$ dB
Spurious Emissions, Conducted	Disturbance Power [dBm]	$U = \pm 2.0$ dB
Frequency Stability	Frequency Accuracy [ppm]	$U = \pm 0.24$ ppm

3. Effective (Isotropic) Radiated Power

3.1. Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Conducted Power(dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	23.89	21.14	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	24.02	21.27	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	23.85	21.10	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#0	23.99	21.24	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#1	24.02	21.27	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#3	23.96	21.21	38.45	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	23.00	20.25	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	23.85	21.10	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	24.00	21.25	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	23.86	21.11	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#0	23.96	21.21	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#1	24.02	21.27	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#3	23.95	21.20	38.45	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	23.04	20.29	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	23.99	21.24	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	24.16	21.41	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	24.04	21.29	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#0	24.13	21.38	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#1	24.21	21.46	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#3	24.18	21.43	38.45	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	23.21	20.46	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	23.11	20.36	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	23.22	20.47	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	23.04	20.29	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#0	23.15	20.40	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#1	23.17	20.42	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#3	23.12	20.37	38.45	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	22.11	19.36	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	23.13	20.38	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#2	23.31	20.56	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	23.23	20.48	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#0	23.11	20.36	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#1	23.14	20.39	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#3	23.11	20.36	38.45	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	22.13	19.38	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	23.12	20.37	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#2	23.24	20.49	38.45	PASS

Band5	1.4MHz	16QAM	20643	1RB#5	23.15	20.40	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#0	23.11	20.36	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#1	23.19	20.44	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#3	23.13	20.38	38.45	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	22.23	19.48	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#0	23.95	21.20	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#8	23.88	21.13	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#14	23.89	21.14	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#0	22.97	20.22	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#4	23.00	20.25	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#7	22.94	20.19	38.45	PASS
Band5	3MHz	QPSK	20415	15RB#0	22.97	20.22	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#0	23.93	21.18	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#8	23.91	21.16	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#14	23.91	21.16	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#0	23.00	20.25	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#4	23.04	20.29	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#7	23.01	20.26	38.45	PASS
Band5	3MHz	QPSK	20525	15RB#0	23.01	20.26	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#0	24.01	21.26	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#8	24.04	21.29	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#14	24.07	21.32	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#0	23.11	20.36	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#4	23.15	20.40	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#7	23.12	20.37	38.45	PASS
Band5	3MHz	QPSK	20635	15RB#0	23.15	20.40	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#0	23.32	20.57	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#8	23.17	20.42	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#14	23.21	20.46	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#0	22.07	19.32	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#4	22.06	19.31	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#7	22.00	19.25	38.45	PASS
Band5	3MHz	16QAM	20415	15RB#0	21.96	19.21	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#0	23.21	20.46	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#8	23.16	20.41	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#14	23.24	20.49	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#0	22.06	19.31	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#4	22.08	19.33	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#7	22.11	19.36	38.45	PASS
Band5	3MHz	16QAM	20525	15RB#0	22.02	19.27	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#0	23.21	20.46	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#8	23.21	20.46	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#14	23.31	20.56	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#0	22.15	19.40	38.45	PASS

Band5	3MHz	16QAM	20635	8RB#4	22.18	19.43	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#7	22.12	19.37	38.45	PASS
Band5	3MHz	16QAM	20635	15RB#0	22.11	19.36	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#0	23.83	21.08	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#12	24.01	21.26	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#24	23.79	21.04	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#0	22.96	20.21	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#6	23.01	20.26	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#13	22.99	20.24	38.45	PASS
Band5	5MHz	QPSK	20425	25RB#0	22.98	20.23	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#0	23.84	21.09	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#12	24.06	21.31	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#24	23.80	21.05	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#0	23.05	20.30	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#6	23.07	20.32	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#13	22.98	20.23	38.45	PASS
Band5	5MHz	QPSK	20525	25RB#0	23.05	20.30	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#0	23.90	21.15	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#12	24.19	21.44	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#24	23.96	21.21	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#0	23.08	20.33	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#6	23.14	20.39	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#13	23.07	20.32	38.45	PASS
Band5	5MHz	QPSK	20625	25RB#0	23.11	20.36	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#0	23.19	20.44	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#12	23.21	20.46	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#24	22.97	20.22	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#0	22.01	19.26	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#6	22.05	19.30	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#13	22.02	19.27	38.45	PASS
Band5	5MHz	16QAM	20425	25RB#0	21.97	19.22	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#0	23.10	20.35	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#12	23.31	20.56	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#24	23.11	20.36	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#0	22.08	19.33	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#6	22.10	19.35	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#13	22.01	19.26	38.45	PASS
Band5	5MHz	16QAM	20525	25RB#0	22.08	19.33	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#0	23.10	20.35	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#12	23.24	20.49	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#24	23.16	20.41	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#0	22.05	19.30	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#6	22.13	19.38	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#13	22.03	19.28	38.45	PASS

Band5	5MHz	16QAM	20625	25RB#0	22.08	19.33	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#0	23.94	21.19	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#24	24.01	21.26	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#49	23.87	21.12	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#0	22.98	20.23	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#12	23.04	20.29	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#25	23.02	20.27	38.45	PASS
Band5	10MHz	QPSK	20450	50RB#0	23.02	20.27	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#0	23.91	21.16	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#24	24.06	21.31	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#49	23.96	21.21	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#0	23.14	20.39	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#12	23.09	20.34	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#25	23.05	20.30	38.45	PASS
Band5	10MHz	QPSK	20525	50RB#0	23.13	20.38	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#0	23.97	21.22	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#24	24.11	21.36	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#49	24.08	21.33	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#0	23.14	20.39	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#12	23.19	20.44	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#25	23.18	20.43	38.45	PASS
Band5	10MHz	QPSK	20600	50RB#0	23.19	20.44	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#0	23.27	20.52	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#24	23.29	20.54	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#49	23.20	20.45	38.45	PASS
Band5	10MHz	16QAM	20450	25RB#0	21.99	19.24	38.45	PASS
Band5	10MHz	16QAM	20450	25RB#12	22.02	19.27	38.45	PASS
Band5	10MHz	16QAM	20450	25RB#25	22.01	19.26	38.45	PASS
Band5	10MHz	16QAM	20450	50RB#0	22.01	19.26	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#0	23.21	20.46	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#24	23.32	20.57	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#49	23.17	20.42	38.45	PASS
Band5	10MHz	16QAM	20525	25RB#0	22.12	19.37	38.45	PASS
Band5	10MHz	16QAM	20525	25RB#12	22.09	19.34	38.45	PASS
Band5	10MHz	16QAM	20525	25RB#25	22.07	19.32	38.45	PASS
Band5	10MHz	16QAM	20525	50RB#0	22.12	19.37	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#0	23.24	20.49	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#24	23.29	20.54	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#49	23.23	20.48	38.45	PASS
Band5	10MHz	16QAM	20600	25RB#0	22.12	19.37	38.45	PASS
Band5	10MHz	16QAM	20600	25RB#12	22.19	19.44	38.45	PASS
Band5	10MHz	16QAM	20600	25RB#25	22.18	19.43	38.45	PASS
Band5	10MHz	16QAM	20600	50RB#0	22.15	19.40	38.45	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)

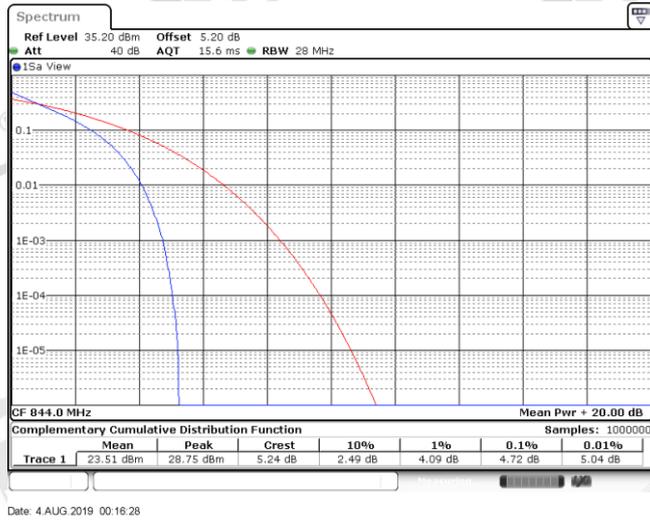
4.1. Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band5	10MHz	QPSK	20450	50RB#0	5.36	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	5.25	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	4.72	13	PASS
Band5	10MHz	16QAM	20450	50RB#0	6.06	13	PASS
Band5	10MHz	16QAM	20525	50RB#0	6.03	13	PASS
Band5	10MHz	16QAM	20600	50RB#0	5.54	13	PASS

4.2. Test Plots



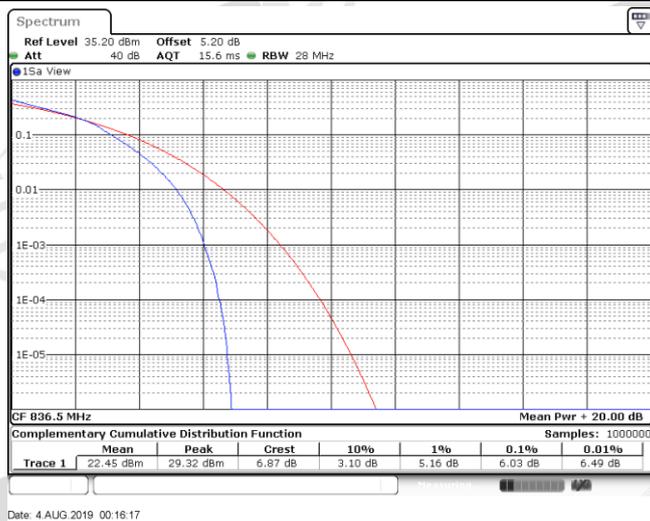
Band5_10MHz_QPSK_20600_50RB#0

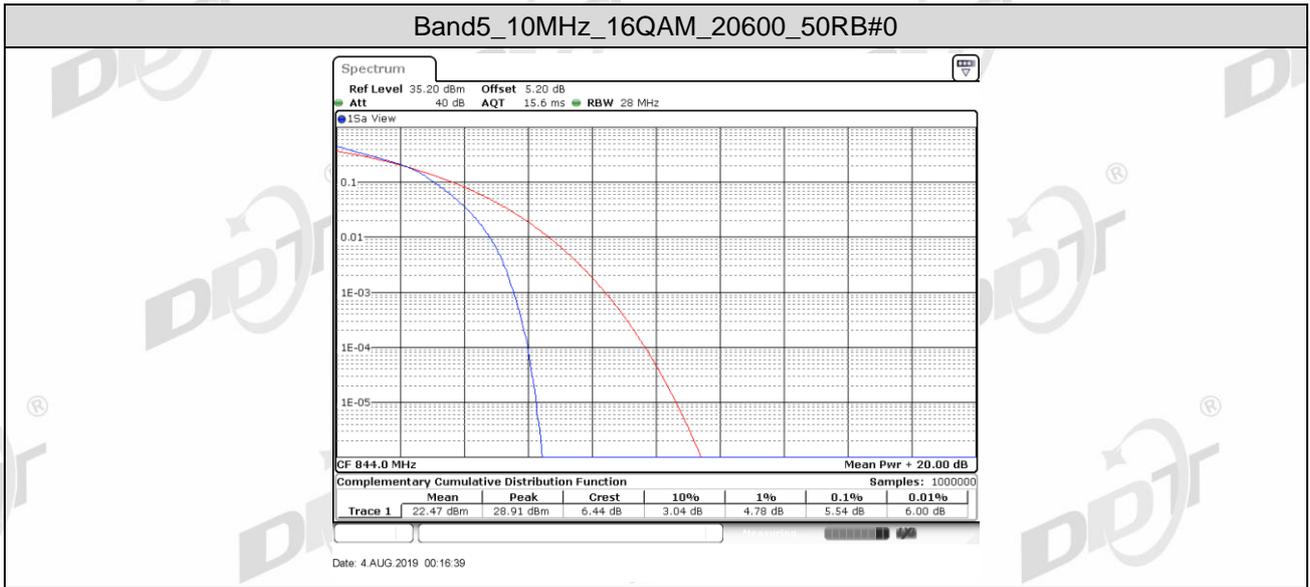


Band5_10MHz_16QAM_20450_50RB#0



Band5_10MHz_16QAM_20525_50RB#0



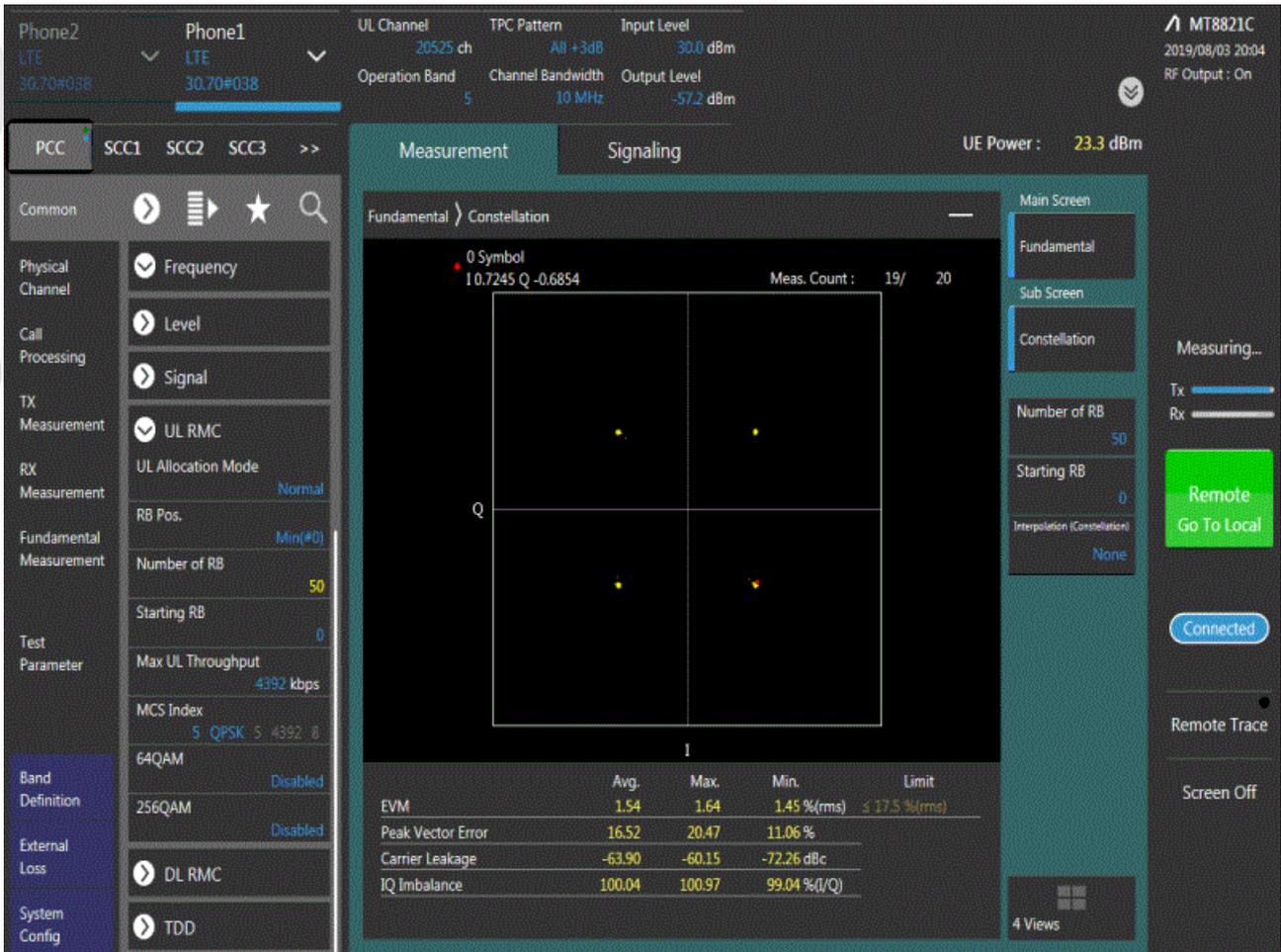


5. Modulation Characteristics

5.1. Test Band = LTE Band 5

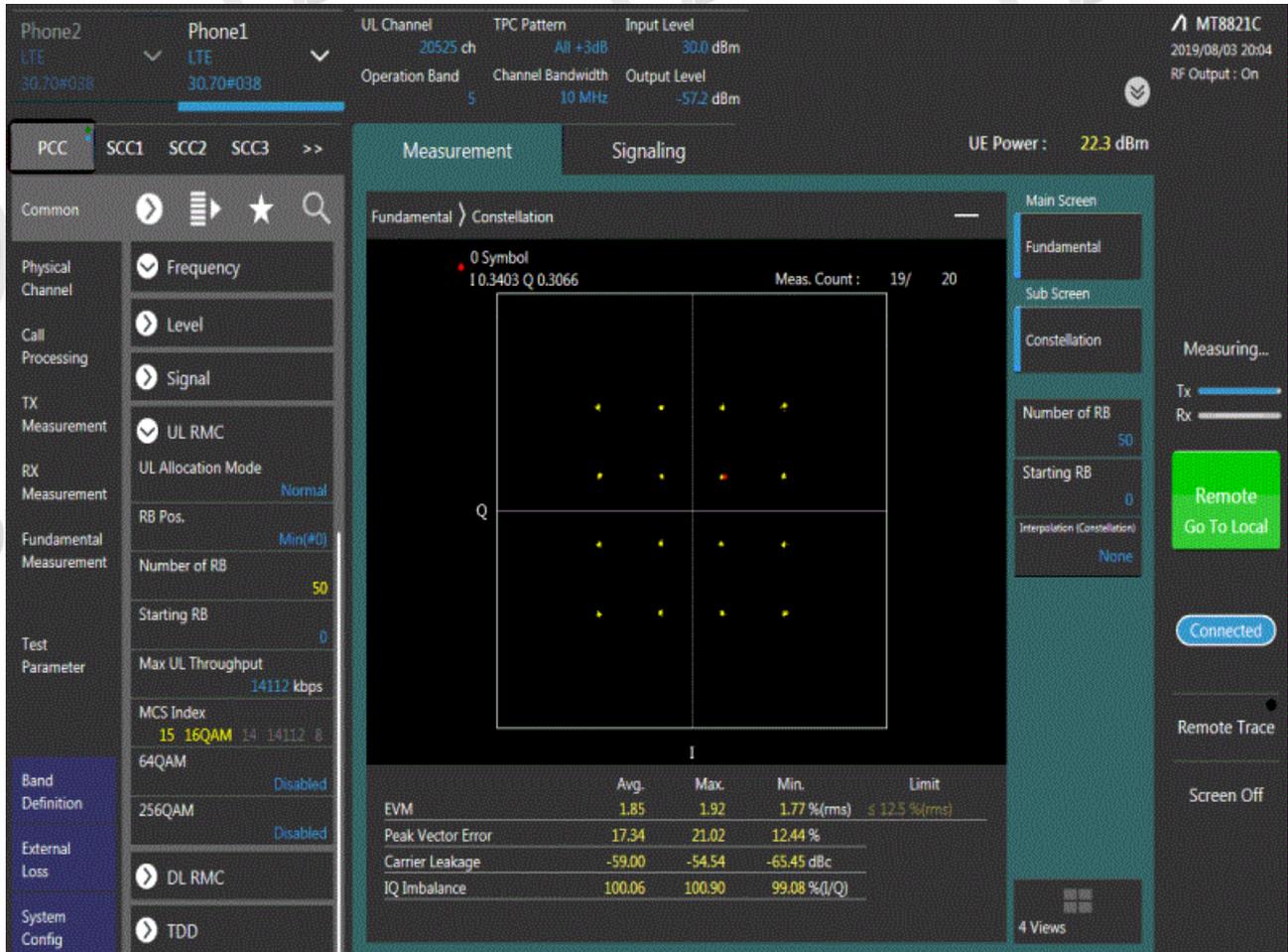
5.2. Test Mode = LTE /TM1 10MHz

5.2.1. Test Channel = MCH



5.3. Test Mode = LTE /TM2 10MHz

5.3.1. Test Channel = MCH

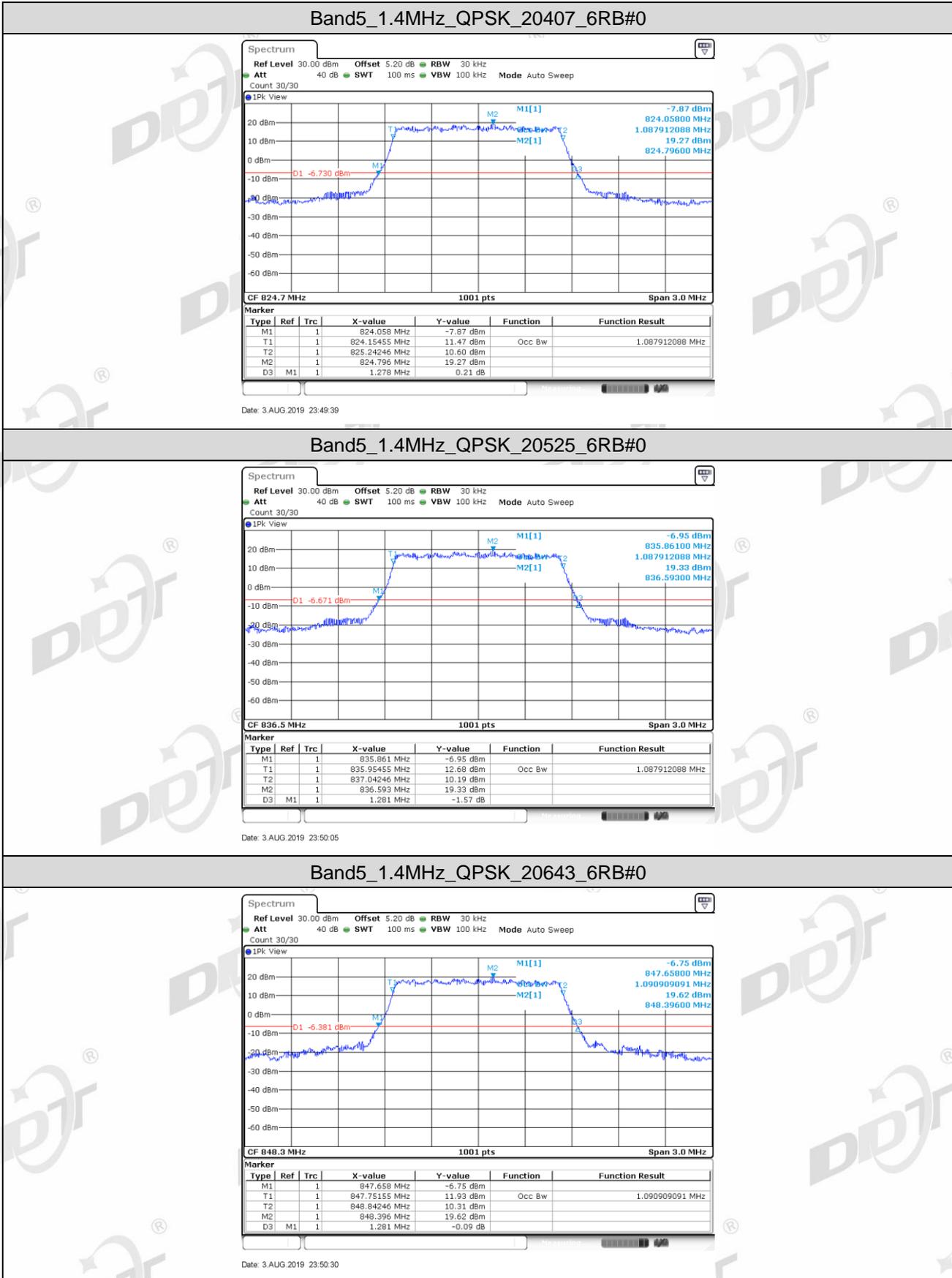


6. 26dB Bandwidth and Occupied Bandwidth

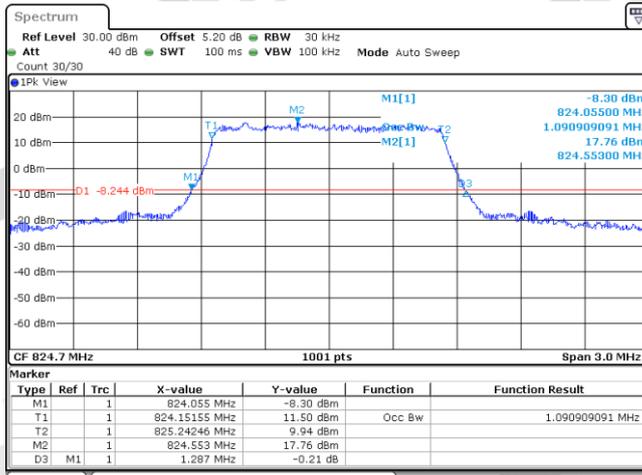
6.1. Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.088	1.278	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.088	1.281	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.091	1.281	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.091	1.287	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.091	1.284	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.091	1.284	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.691	2.922	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.691	2.922	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.691	2.934	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.679	2.904	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.679	2.910	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.673	2.904	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.476	4.850	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.476	4.840	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.466	4.820	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.486	4.870	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.486	4.870	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.486	4.860	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.911	9.580	PASS
Band5	10MHz	QPSK	20525	50RB#0	8.951	9.640	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.911	9.600	PASS
Band5	10MHz	16QAM	20450	50RB#0	8.911	9.600	PASS
Band5	10MHz	16QAM	20525	50RB#0	8.951	9.640	PASS
Band5	10MHz	16QAM	20600	50RB#0	8.911	9.600	PASS

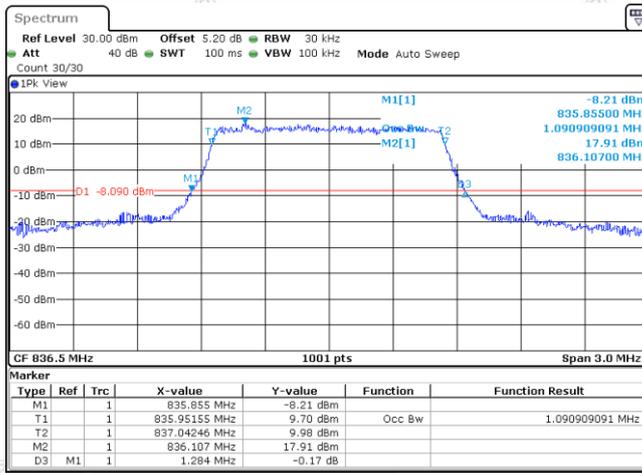
6.2. Test Plots



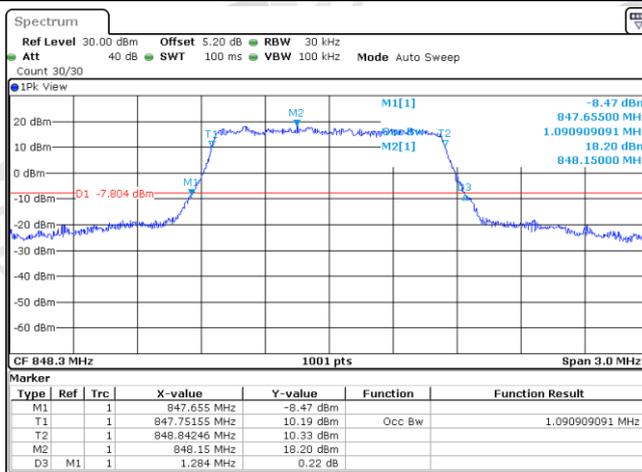
Band5_1.4MHz_16QAM_20407_6RB#0



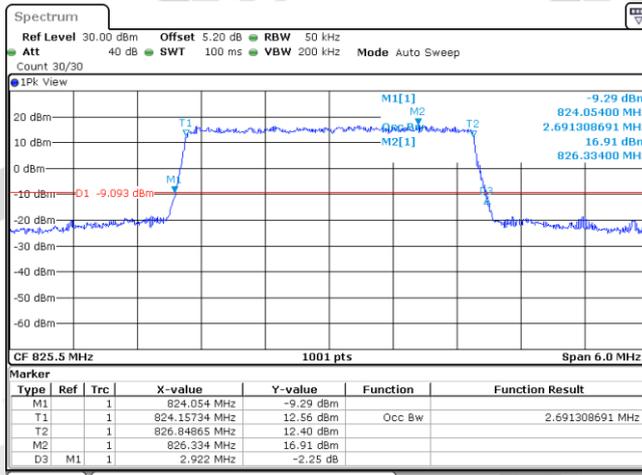
Band5_1.4MHz_16QAM_20525_6RB#0



Band5_1.4MHz_16QAM_20643_6RB#0

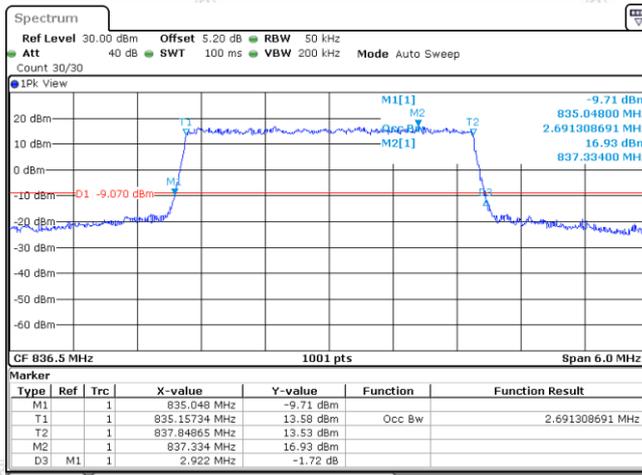


Band5_3MHz_QPSK_20415_15RB#0



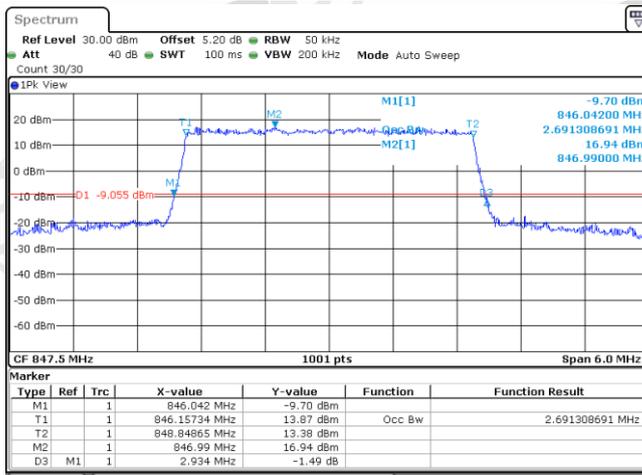
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Band5_3MHz_QPSK_20525_15RB#0



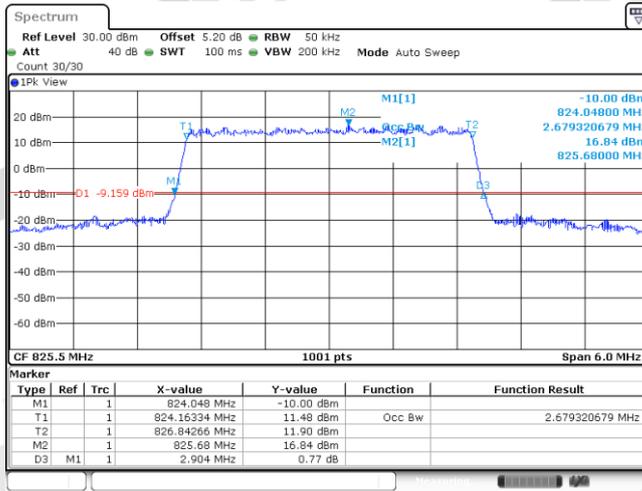
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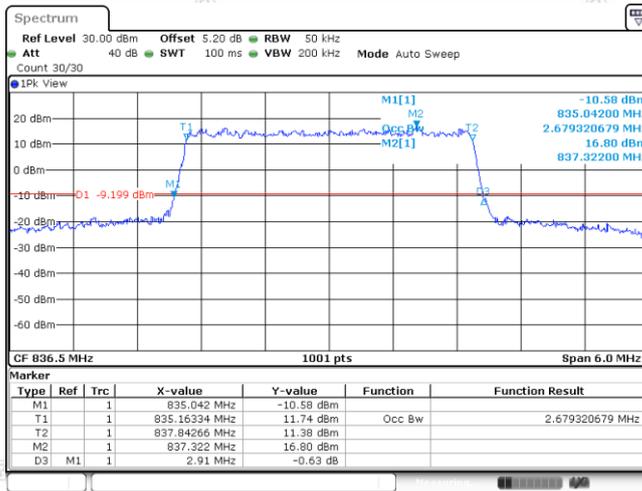
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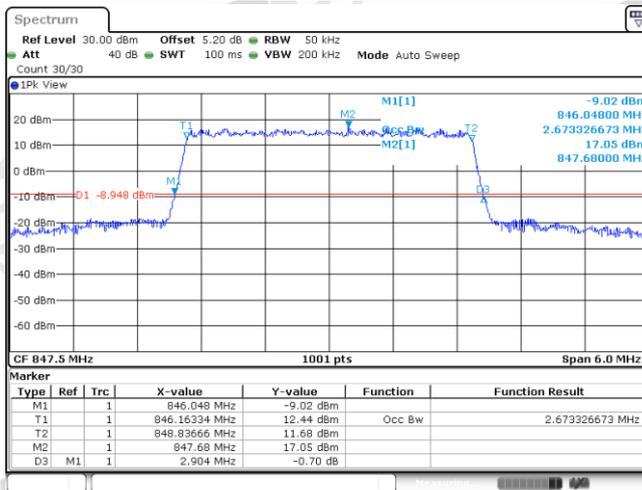
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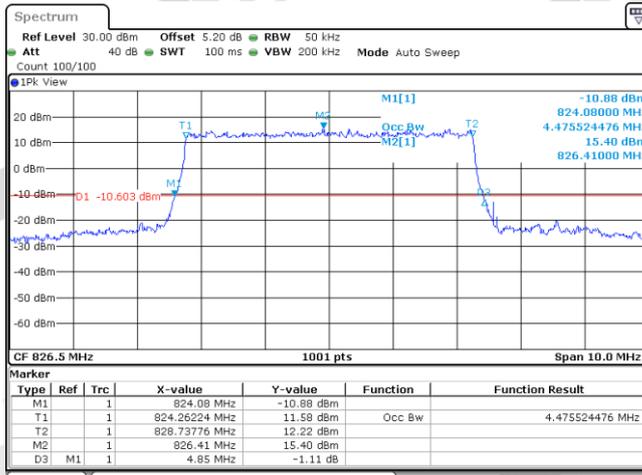
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Band5_3MHz_16QAM_20635_15RB#0

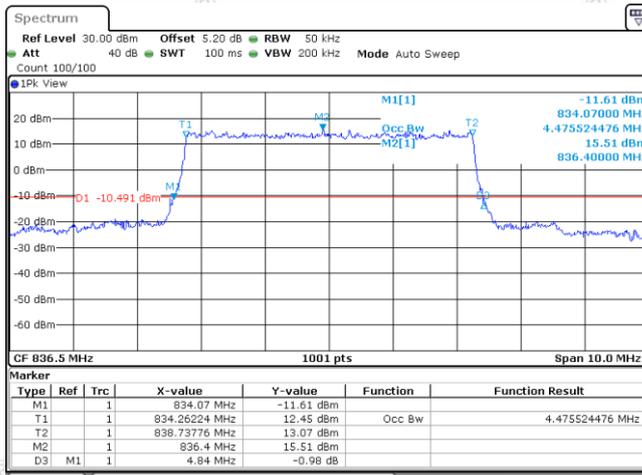


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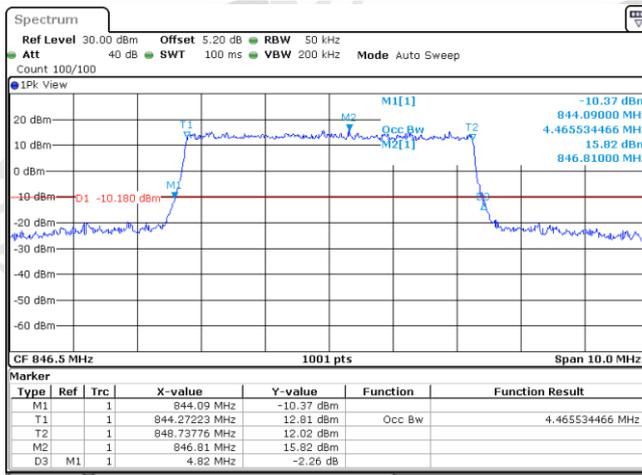
Band5_5MHz_QPSK_20425_25RB#0



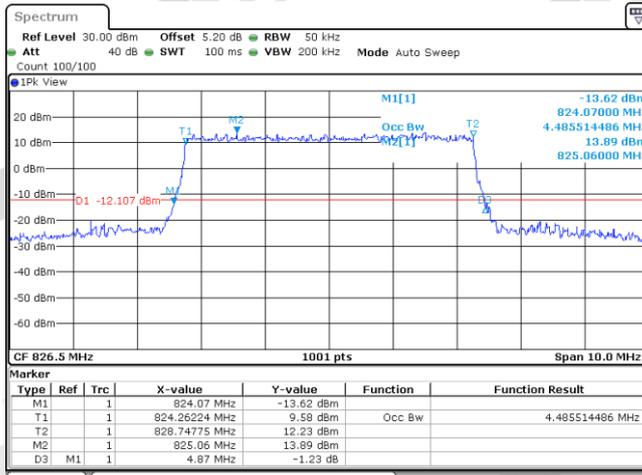
Band5_5MHz_QPSK_20525_25RB#0



Band5_5MHz_QPSK_20625_25RB#0

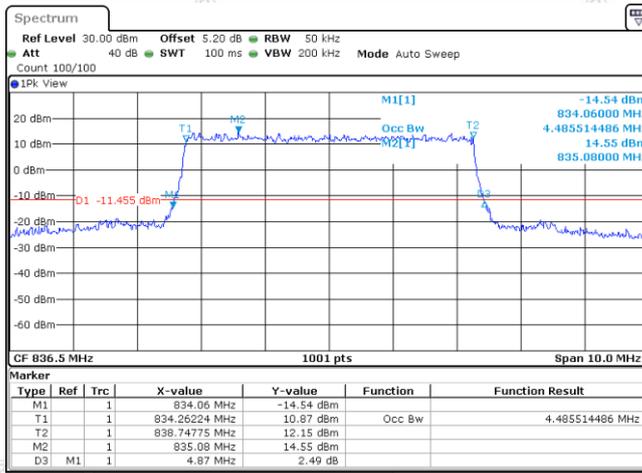


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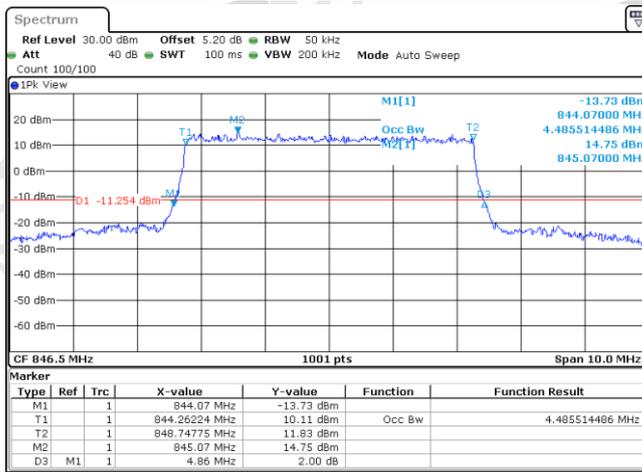
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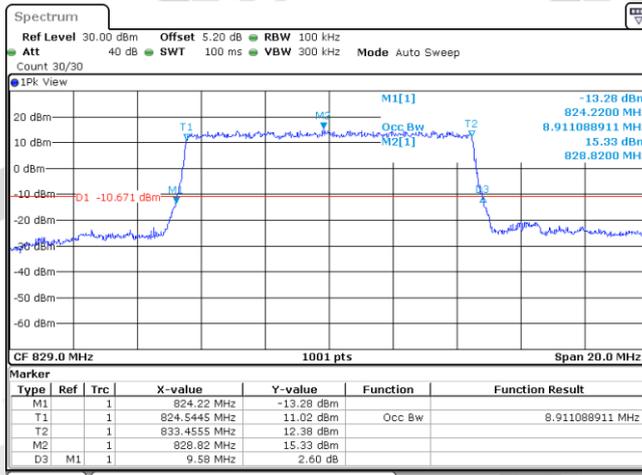
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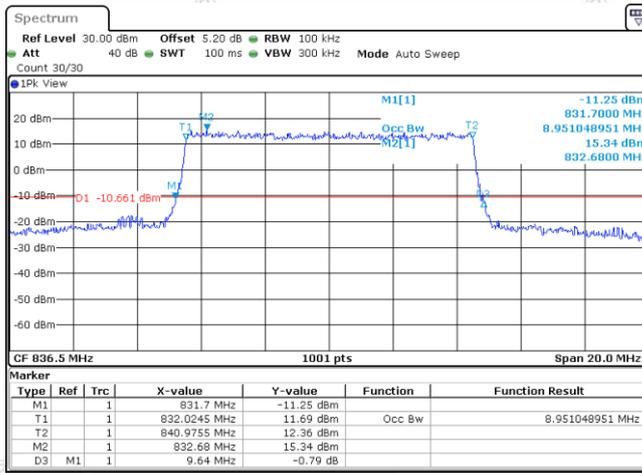
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Band5_10MHz_QPSK_20450_50RB#0



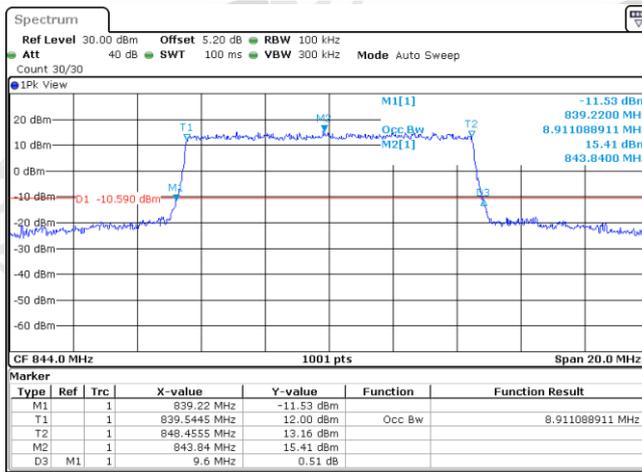
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Band5_10MHz_QPSK_20525_50RB#0



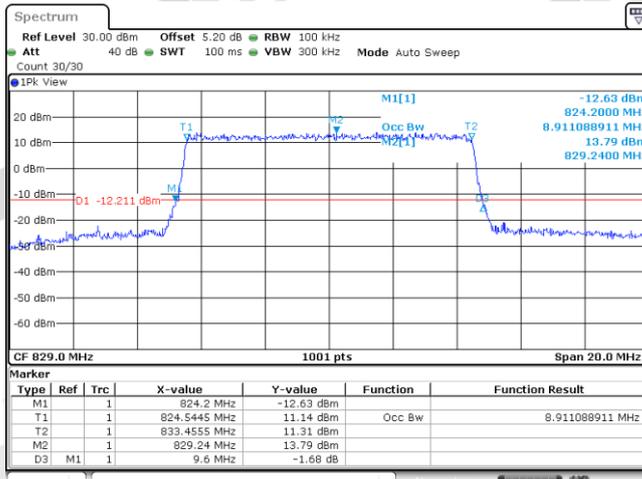
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Band5_10MHz_QPSK_20600_50RB#0

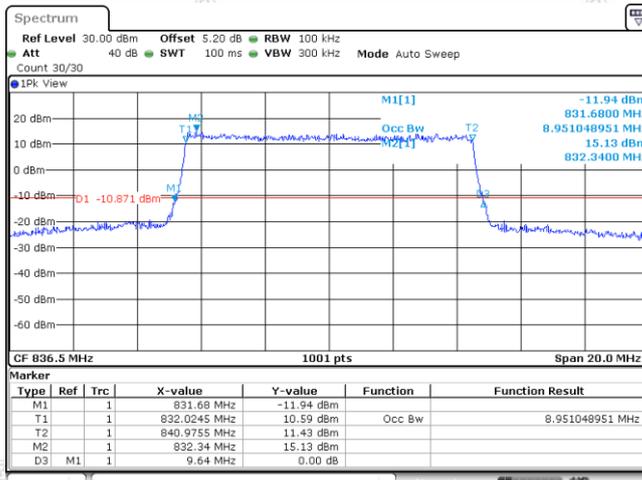


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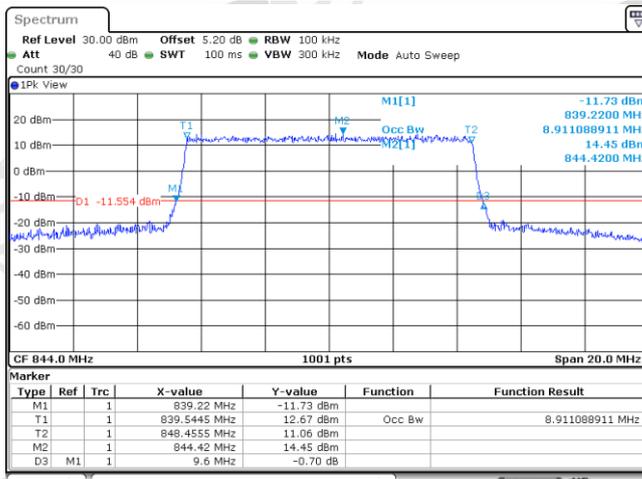
Band5_10MHz_16QAM_20450_50RB#0



Band5_10MHz_16QAM_20525_50RB#0



Band5_10MHz_16QAM_20600_50RB#0

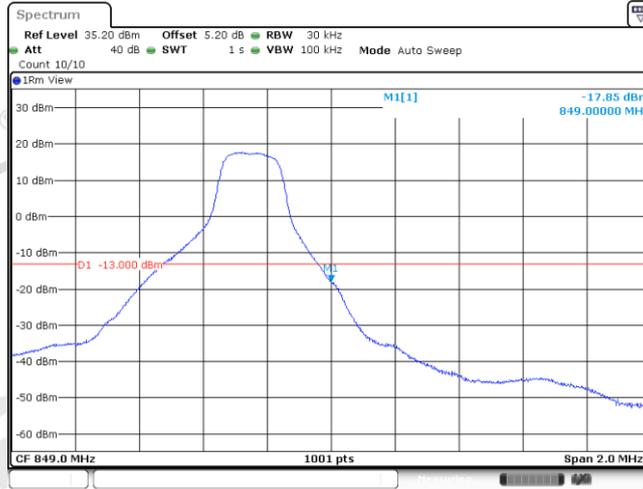


7. Band Edge Compliance

7.1. Test Plots



Band5_1.4MHz_QPSK_20643_1RB#5



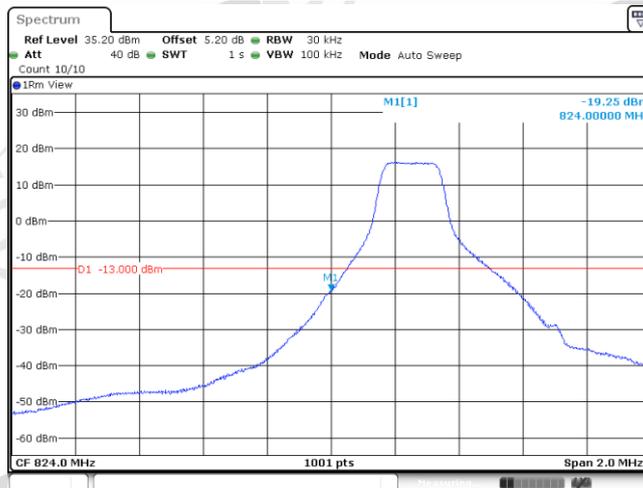
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Band5_1.4MHz_QPSK_20643_6RB#0



Date: 3.AUG.2019 23:57:58

Band5_1.4MHz_16QAM_20407_1RB#0



Date: 3.AUG.2019 23:56:16

Band5_1.4MHz_16QAM_20407_6RB#0



Date: 3.AUG.2019 23:56:55

Band5_1.4MHz_16QAM_20643_1RB#5



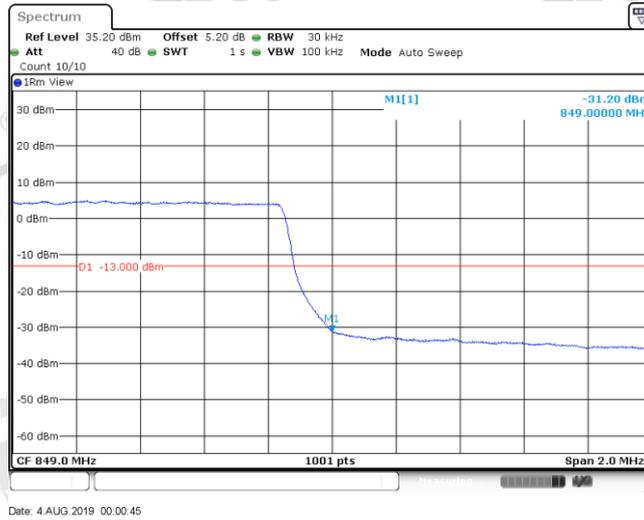
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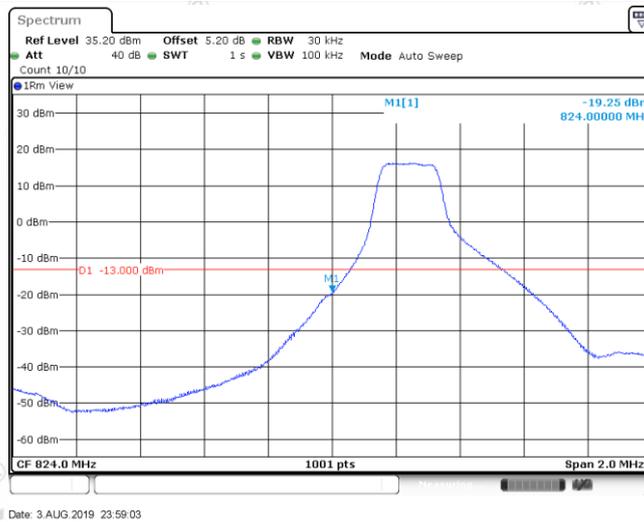


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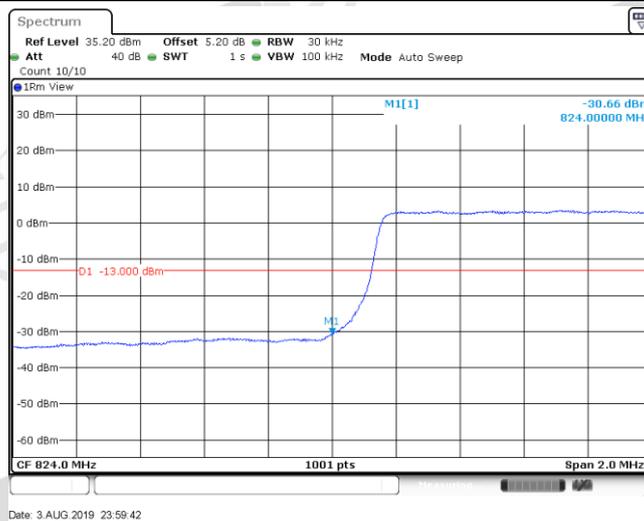
Band5_3MHz_QPSK_20635_15RB#0



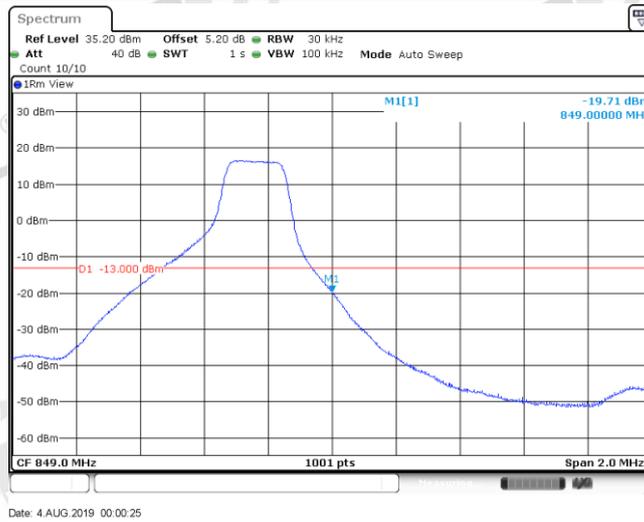
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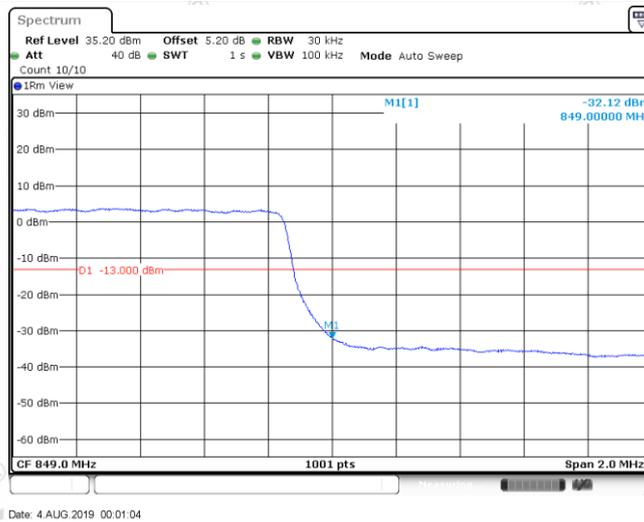
Band5_3MHz_16QAM_20415_15RB#0



Band5_3MHz_16QAM_20635_1RB#14



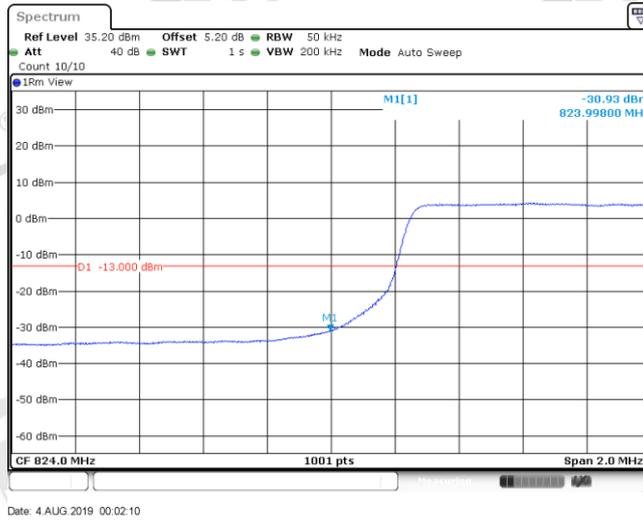
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Band5_5MHz_QPSK_20425_1RB#0

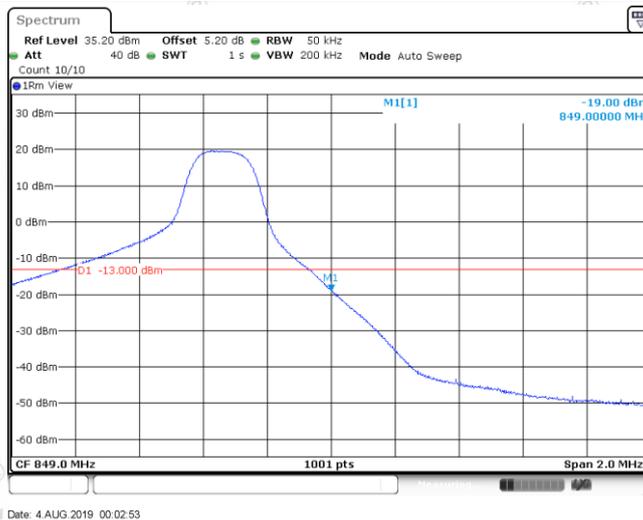


Band5_5MHz_QPSK_20425_25RB#0



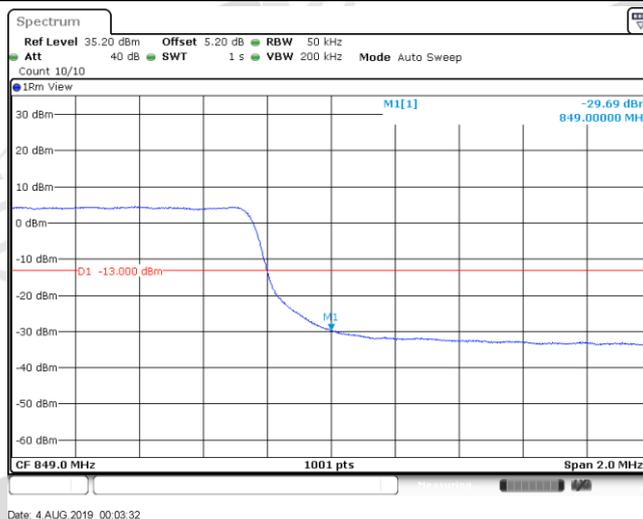
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Band5_5MHz_QPSK_20625_1RB#24



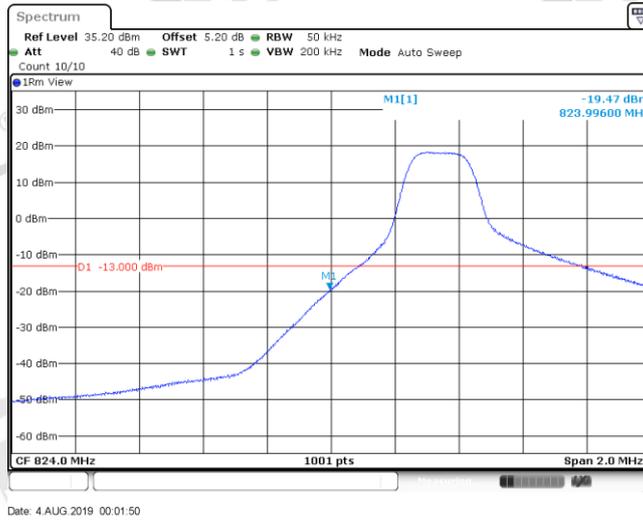
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Band5_5MHz_QPSK_20625_25RB#0

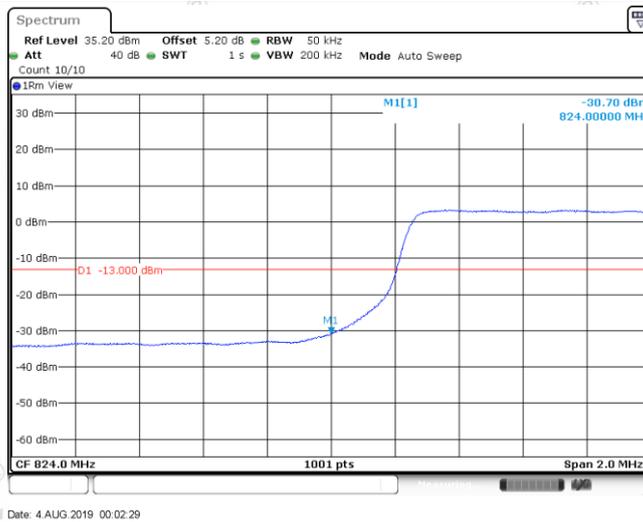


Date: 4 AUG 2019 00:03:32

Band5_5MHz_16QAM_20425_1RB#0



Band5_5MHz_16QAM_20425_25RB#0



Band5_5MHz_16QAM_20625_1RB#24



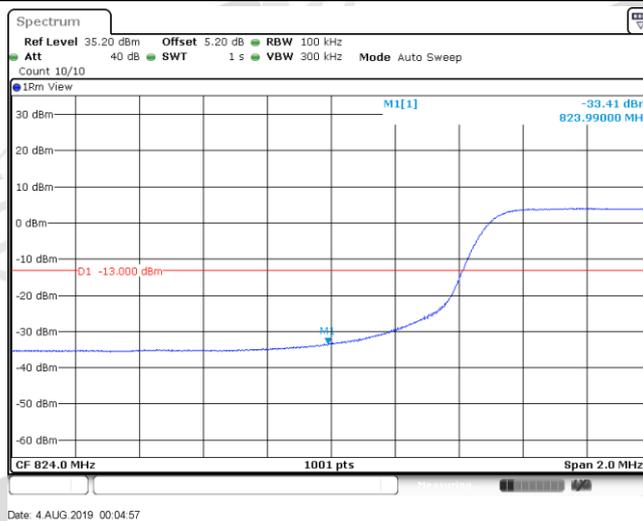
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Band5_10MHz_QPSK_20450_1RB#0



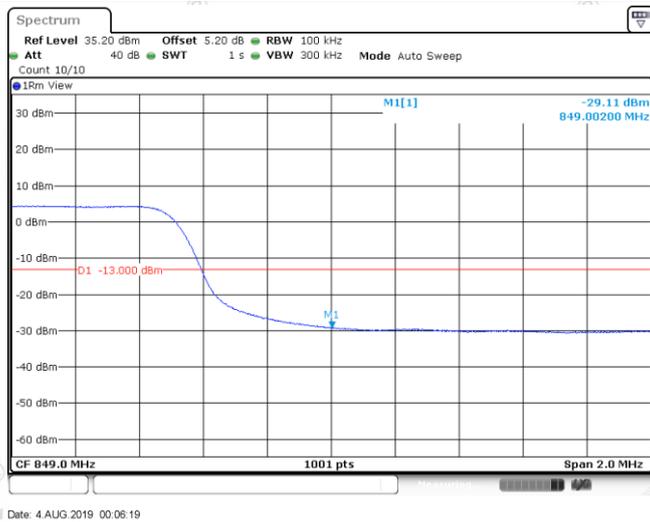
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Band5_10MHz_QPSK_20600_1RB#49



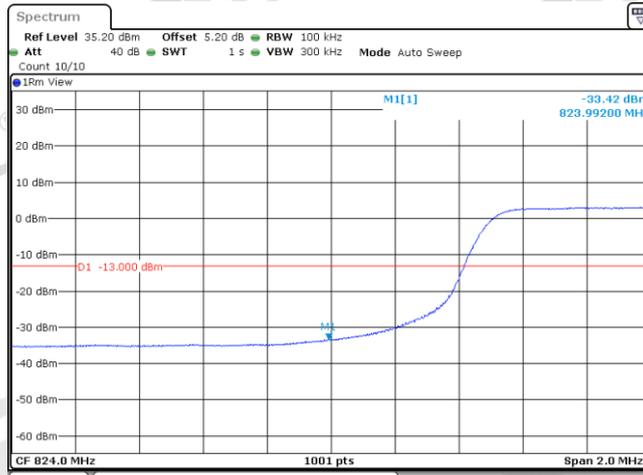
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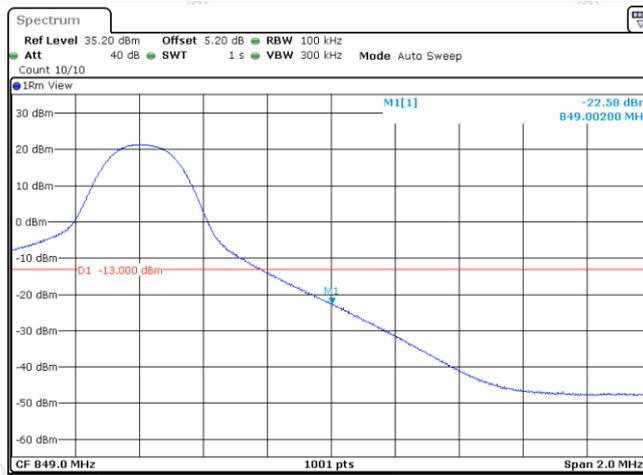
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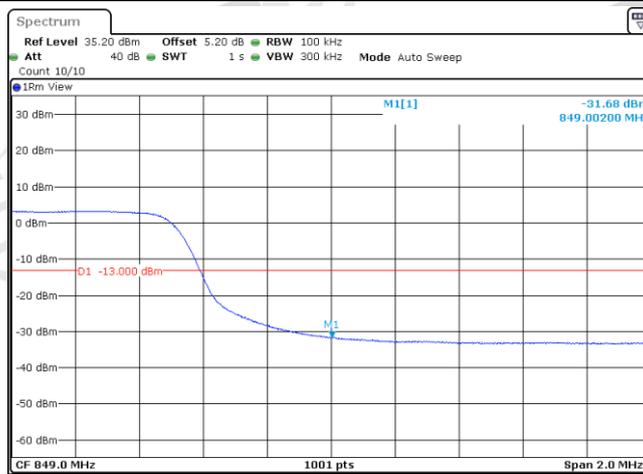
Band5_10MHz_16QAM_20450_50RB#0



Band5_10MHz_16QAM_20600_1RB#49



Band5_10MHz_16QAM_20600_50RB#0



8. Spurious Emission at Antenna Terminal

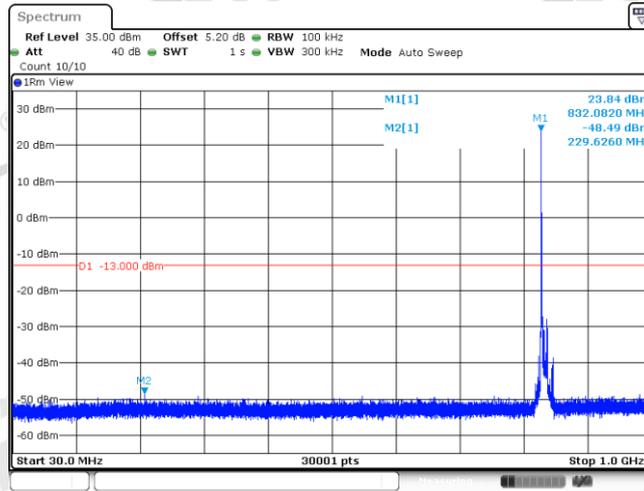
Remark1: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points =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

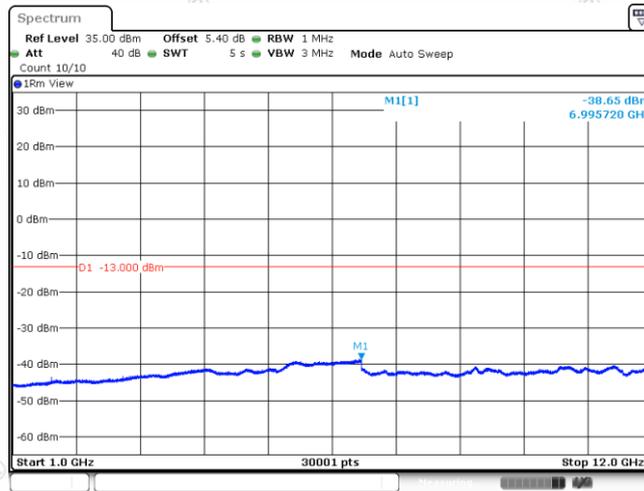


Band5_10MHz_QPSK_20525_1RB#0



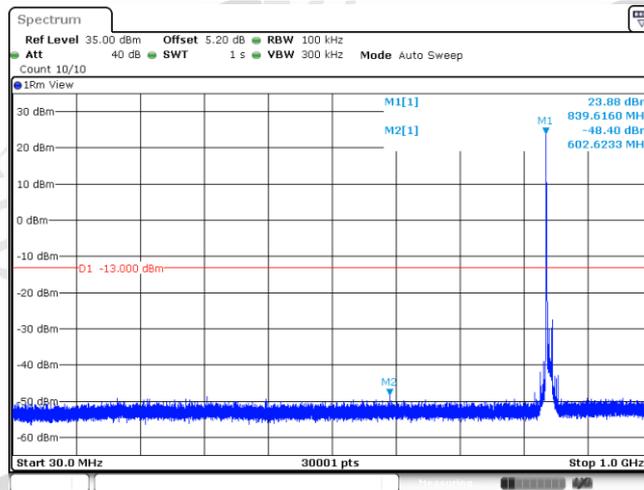
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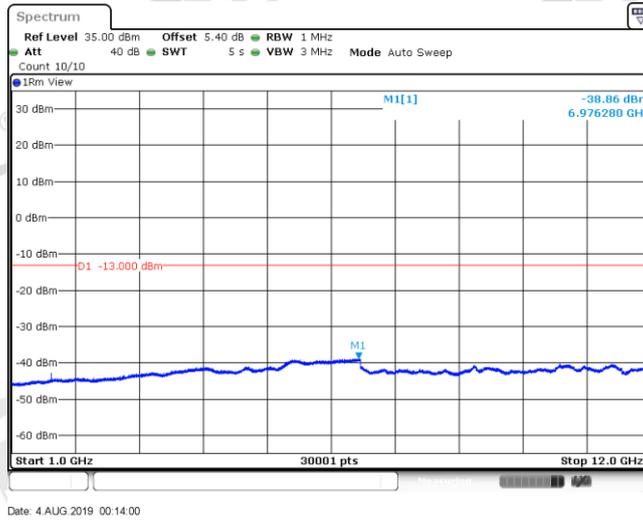
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Band5_10MHz_QPSK_20600_1RB#0

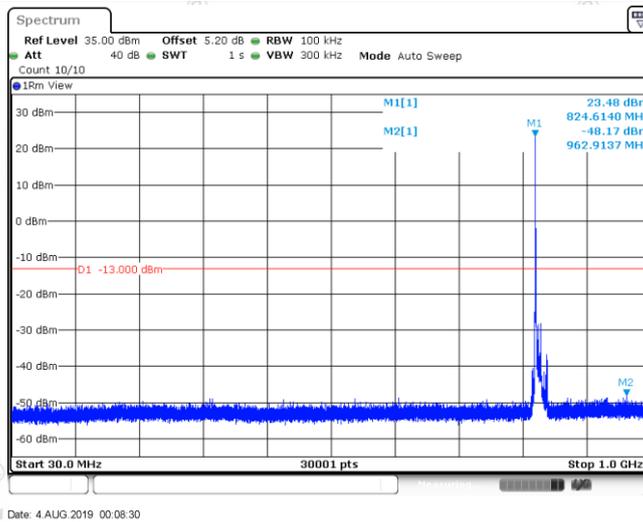


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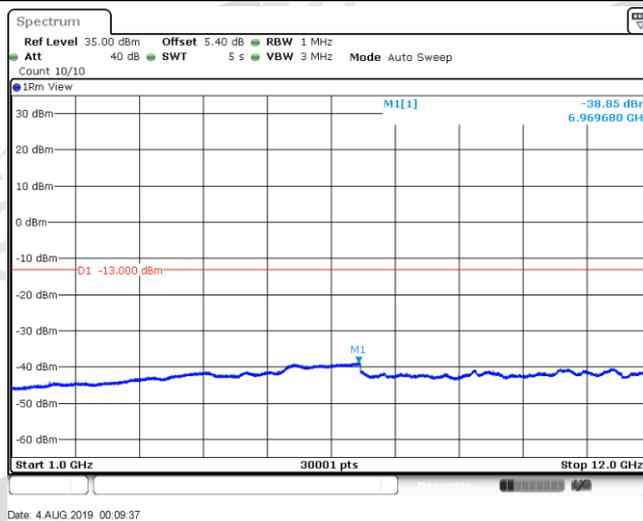
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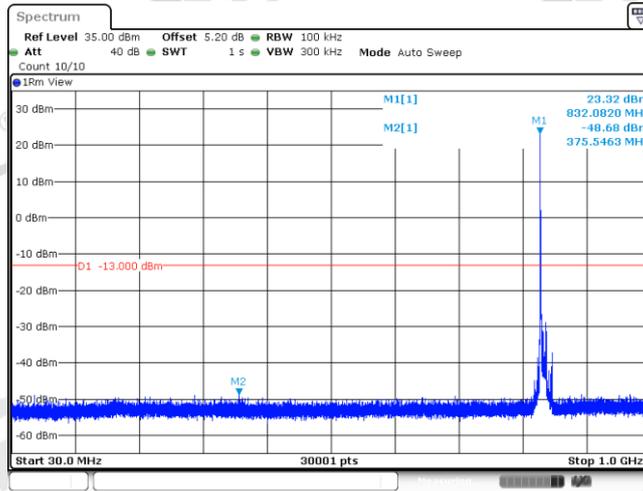
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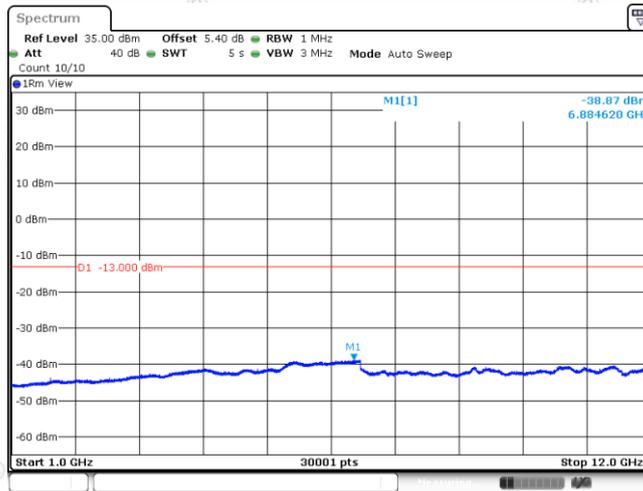
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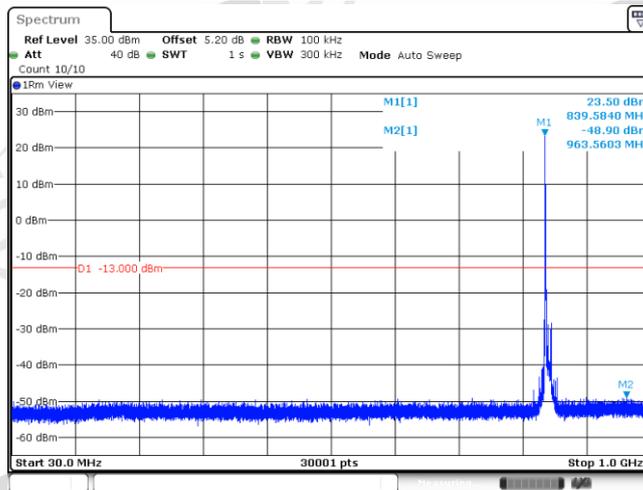
Band5_10MHz_16QAM_20525_1RB#0

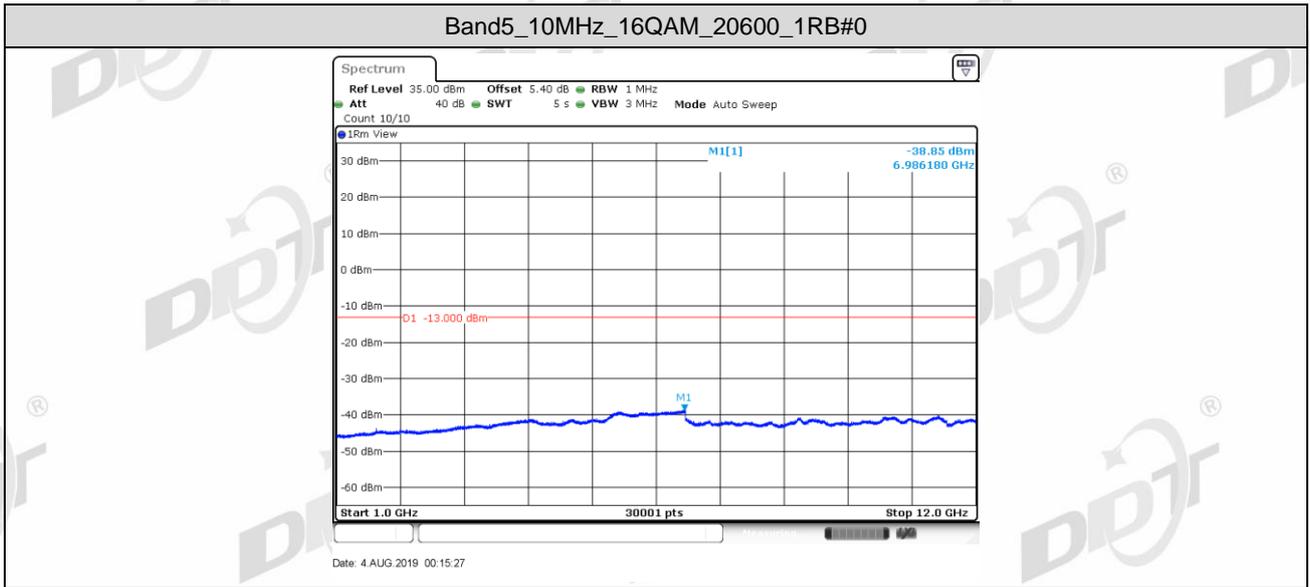


Band5_10MHz_16QAM_20525_1RB#0



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	-2.20	-0.002654	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VN	NT	-3.60	-0.004343	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VH	NT	-10.90	-0.013148	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VL	NT	-7.20	-0.008607	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VN	NT	-6.80	-0.008129	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VH	NT	-5.40	-0.006455	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VL	NT	-5.50	-0.006517	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VN	NT	-4.30	-0.005095	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VH	NT	-5.60	-0.006635	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	VL	NT	-3.50	-0.004222	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	VN	NT	-4.00	-0.004825	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	VH	NT	-6.80	-0.008203	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	VL	NT	-3.30	-0.003945	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	VN	NT	-11.30	-0.013509	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	VH	NT	-2.70	-0.003228	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	VL	NT	-8.30	-0.009834	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	VN	NT	-4.20	-0.004976	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	VH	NT	-4.50	-0.005332	±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	-5.00	-0.006031	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	-20	-4.80	-0.005790	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	0	-7.40	-0.008926	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	10	-9.30	-0.011218	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	20	-5.50	-0.006634	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	30	-10.10	-0.012183	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	40	-6.00	-0.007238	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	50	-2.50	-0.003016	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-30	-9.30	-0.011118	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-20	-4.60	-0.005499	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	0	-7.20	-0.008607	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	10	-5.90	-0.007053	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	20	-4.70	-0.005619	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	30	-6.70	-0.008010	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	40	-2.90	-0.003467	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	50	-9.40	-0.011237	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-30	-5.90	-0.006991	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-20	-8.80	-0.010427	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	0	-9.30	-0.011019	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	10	-10.30	-0.012204	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	20	-10.00	-0.011848	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	30	-5.80	-0.006872	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	40	-7.10	-0.008412	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	50	-6.50	-0.007701	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	-30	-0.50	-0.000603	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	-20	-2.90	-0.003498	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	0	-1.20	-0.001448	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	10	-2.90	-0.003498	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	20	-2.50	-0.003016	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	30	-0.70	-0.000844	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	40	-13.00	-0.015682	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	50	-13.30	-0.016043	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	-30	-2.90	-0.003467	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	-20	-1.70	-0.002032	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	0	-2.00	-0.002391	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	10	-2.60	-0.003108	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	20	-8.20	-0.009803	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	30	-12.00	-0.014345	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	40	-8.70	-0.010400	±2.5	PASS

Band5	10MHz	16QAM	20525	50RB#0	NV	50	-8.00	-0.009564	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	-30	-1.20	-0.001422	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	-20	-8.50	-0.010071	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	0	-4.00	-0.004739	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	10	-3.00	-0.003555	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	20	-6.70	-0.007938	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	30	-4.40	-0.005213	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	40	-1.60	-0.001896	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	50	-8.00	-0.009479	±2.5	PASS

The End