



# Appendix B

## E-UTRA BAND 5

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## 1. Effective (Isotropic) Radiated Power

### 1.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	22.95	15.70	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	22.91	15.66	38.45	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	22.77	15.52	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#0	22.84	15.59	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#1	22.94	15.69	38.45	PASS
Band5	1.4MHz	QPSK	20407	3RB#3	23.02	15.77	38.45	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	21.74	14.49	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	22.89	15.64	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	22.64	15.39	38.45	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	22.75	15.50	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#0	22.88	15.63	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#1	23.11	15.86	38.45	PASS
Band5	1.4MHz	QPSK	20525	3RB#3	22.89	15.64	38.45	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	22.01	14.76	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	22.68	15.43	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	22.80	15.55	38.45	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	22.59	15.34	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#0	22.73	15.48	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#1	22.63	15.38	38.45	PASS
Band5	1.4MHz	QPSK	20643	3RB#3	22.58	15.33	38.45	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	21.64	14.39	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	21.33	14.08	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	21.25	14.00	38.45	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	21.84	14.59	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#0	21.93	14.68	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#1	22.01	14.76	38.45	PASS
Band5	1.4MHz	16QAM	20407	3RB#3	22.07	14.82	38.45	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	20.83	13.58	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	21.83	14.58	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#2	21.72	14.47	38.45	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	21.47	14.22	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#0	22.12	14.87	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#1	22.05	14.80	38.45	PASS
Band5	1.4MHz	16QAM	20525	3RB#3	22.18	14.93	38.45	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	21.17	13.92	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	21.48	14.23	38.45	PASS



Band5	1.4MHz	16QAM	20643	1RB#2	21.44	14.19	38.45	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	21.76	14.51	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#0	21.73	14.48	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#1	21.77	14.52	38.45	PASS
Band5	1.4MHz	16QAM	20643	3RB#3	21.71	14.46	38.45	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	20.85	13.60	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#0	22.97	15.72	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#8	22.95	15.70	38.45	PASS
Band5	3MHz	QPSK	20415	1RB#14	22.92	15.67	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#0	21.81	14.56	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#4	21.68	14.43	38.45	PASS
Band5	3MHz	QPSK	20415	8RB#7	21.68	14.43	38.45	PASS
Band5	3MHz	QPSK	20415	15RB#0	21.72	14.47	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#0	22.91	15.66	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#8	22.84	15.59	38.45	PASS
Band5	3MHz	QPSK	20525	1RB#14	22.59	15.34	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#0	22.00	14.75	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#4	22.01	14.76	38.45	PASS
Band5	3MHz	QPSK	20525	8RB#7	21.84	14.59	38.45	PASS
Band5	3MHz	QPSK	20525	15RB#0	21.86	14.61	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#0	22.49	15.24	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#8	22.99	15.74	38.45	PASS
Band5	3MHz	QPSK	20635	1RB#14	22.72	15.47	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#0	21.86	14.61	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#4	21.95	14.70	38.45	PASS
Band5	3MHz	QPSK	20635	8RB#7	21.68	14.43	38.45	PASS
Band5	3MHz	QPSK	20635	15RB#0	21.61	14.36	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#0	21.56	14.31	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#8	21.37	14.12	38.45	PASS
Band5	3MHz	16QAM	20415	1RB#14	21.43	14.18	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#0	20.77	13.52	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#4	20.59	13.34	38.45	PASS
Band5	3MHz	16QAM	20415	8RB#7	20.56	13.31	38.45	PASS
Band5	3MHz	16QAM	20415	15RB#0	20.77	13.52	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#0	21.79	14.54	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#8	21.43	14.18	38.45	PASS
Band5	3MHz	16QAM	20525	1RB#14	21.52	14.27	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#0	20.79	13.54	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#4	20.73	13.48	38.45	PASS
Band5	3MHz	16QAM	20525	8RB#7	20.69	13.44	38.45	PASS
Band5	3MHz	16QAM	20525	15RB#0	20.84	13.59	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#0	21.33	14.08	38.45	PASS



Band5	3MHz	16QAM	20635	1RB#8	21.16	13.91	38.45	PASS
Band5	3MHz	16QAM	20635	1RB#14	21.49	14.24	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#0	20.63	13.38	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#4	20.57	13.32	38.45	PASS
Band5	3MHz	16QAM	20635	8RB#7	20.57	13.32	38.45	PASS
Band5	3MHz	16QAM	20635	15RB#0	20.54	13.29	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#0	22.67	15.42	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#12	23.10	15.85	38.45	PASS
Band5	5MHz	QPSK	20425	1RB#24	22.69	15.44	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#0	21.57	14.32	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#6	21.80	14.55	38.45	PASS
Band5	5MHz	QPSK	20425	12RB#13	21.86	14.61	38.45	PASS
Band5	5MHz	QPSK	20425	25RB#0	21.74	14.49	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#0	22.62	15.37	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#12	22.62	15.37	38.45	PASS
Band5	5MHz	QPSK	20525	1RB#24	22.37	15.12	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#0	22.00	14.75	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#6	21.75	14.50	38.45	PASS
Band5	5MHz	QPSK	20525	12RB#13	21.71	14.46	38.45	PASS
Band5	5MHz	QPSK	20525	25RB#0	21.78	14.53	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#0	22.64	15.39	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#12	22.88	15.63	38.45	PASS
Band5	5MHz	QPSK	20625	1RB#24	22.46	15.21	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#0	21.55	14.30	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#6	21.71	14.46	38.45	PASS
Band5	5MHz	QPSK	20625	12RB#13	21.70	14.45	38.45	PASS
Band5	5MHz	QPSK	20625	25RB#0	21.66	14.41	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#0	21.28	14.03	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#12	21.70	14.45	38.45	PASS
Band5	5MHz	16QAM	20425	1RB#24	21.21	13.96	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#0	20.50	13.25	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#6	20.89	13.64	38.45	PASS
Band5	5MHz	16QAM	20425	12RB#13	20.68	13.43	38.45	PASS
Band5	5MHz	16QAM	20425	25RB#0	20.81	13.56	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#0	21.24	13.99	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#12	21.80	14.55	38.45	PASS
Band5	5MHz	16QAM	20525	1RB#24	21.23	13.98	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#0	20.75	13.50	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#6	20.68	13.43	38.45	PASS
Band5	5MHz	16QAM	20525	12RB#13	20.51	13.26	38.45	PASS
Band5	5MHz	16QAM	20525	25RB#0	20.85	13.60	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#0	21.25	14.00	38.45	PASS



Band5	5MHz	16QAM	20625	1RB#12	21.31	14.06	38.45	PASS
Band5	5MHz	16QAM	20625	1RB#24	21.46	14.21	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#0	20.60	13.35	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#6	20.74	13.49	38.45	PASS
Band5	5MHz	16QAM	20625	12RB#13	20.58	13.33	38.45	PASS
Band5	5MHz	16QAM	20625	25RB#0	20.66	13.41	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#0	22.66	15.41	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#24	23.54	16.29	38.45	PASS
Band5	10MHz	QPSK	20450	1RB#49	22.68	15.43	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#0	21.88	14.63	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#12	22.10	14.85	38.45	PASS
Band5	10MHz	QPSK	20450	25RB#25	21.76	14.51	38.45	PASS
Band5	10MHz	QPSK	20450	50RB#0	21.71	14.46	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#0	22.74	15.49	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#24	22.75	15.50	38.45	PASS
Band5	10MHz	QPSK	20525	1RB#49	22.31	15.06	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#0	22.10	14.85	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#12	21.79	14.54	38.45	PASS
Band5	10MHz	QPSK	20525	25RB#25	21.47	14.22	38.45	PASS
Band5	10MHz	QPSK	20525	50RB#0	21.89	14.64	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#0	22.67	15.42	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#24	23.20	15.95	38.45	PASS
Band5	10MHz	QPSK	20600	1RB#49	22.47	15.22	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#0	21.68	14.43	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#12	22.01	14.76	38.45	PASS
Band5	10MHz	QPSK	20600	25RB#25	21.79	14.54	38.45	PASS
Band5	10MHz	QPSK	20600	50RB#0	21.64	14.39	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#0	21.07	13.82	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#24	21.46	14.21	38.45	PASS
Band5	10MHz	16QAM	20450	1RB#49	21.20	13.95	38.45	PASS
Band5	10MHz	16QAM	20450	25RB#0	20.88	13.63	38.45	PASS
Band5	10MHz	16QAM	20450	25RB#12	20.98	13.73	38.45	PASS
Band5	10MHz	16QAM	20450	25RB#25	20.82	13.57	38.45	PASS
Band5	10MHz	16QAM	20450	50RB#0	20.65	13.40	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#0	21.24	13.99	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#24	21.93	14.68	38.45	PASS
Band5	10MHz	16QAM	20525	1RB#49	21.78	14.53	38.45	PASS
Band5	10MHz	16QAM	20525	25RB#0	20.82	13.57	38.45	PASS
Band5	10MHz	16QAM	20525	25RB#12	20.77	13.52	38.45	PASS
Band5	10MHz	16QAM	20525	25RB#25	20.75	13.50	38.45	PASS
Band5	10MHz	16QAM	20525	50RB#0	20.89	13.64	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#0	21.71	14.46	38.45	PASS

Band5	10MHz	16QAM	20600	1RB#24	21.24	13.99	38.45	PASS
Band5	10MHz	16QAM	20600	1RB#49	21.45	14.20	38.45	PASS
Band5	10MHz	16QAM	20600	25RB#0	20.74	13.49	38.45	PASS
Band5	10MHz	16QAM	20600	25RB#12	20.79	13.54	38.45	PASS
Band5	10MHz	16QAM	20600	25RB#25	20.72	13.47	38.45	PASS
Band5	10MHz	16QAM	20600	50RB#0	20.66	13.41	38.45	PASS

Remark:

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

$$ERP [dBm] = SGP [dBm] - Cable Loss [dB] + Gain [dBd]$$

$$EIRP [dBm] = SGP [dBm] - Cable Loss [dB] + Gain [dBi]$$

b: SGP=Signal Generator Level

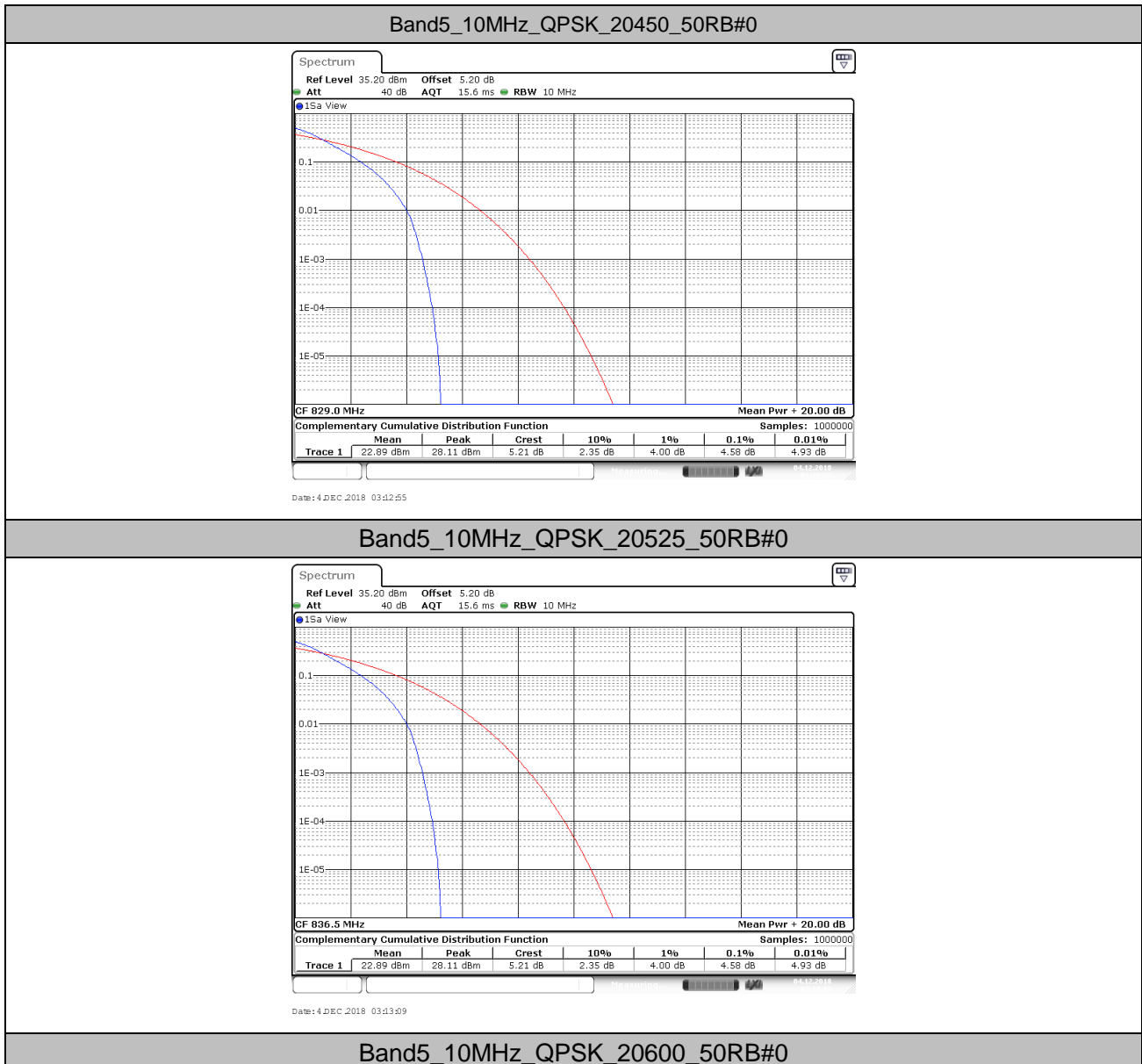


## 2. Peak-to-Average Ratio(CCDF)

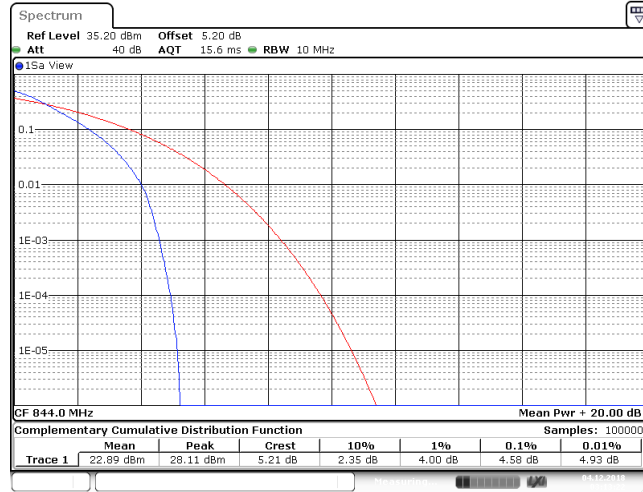
### 2.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band5	10MHz	QPSK	20450	50RB#0	4.58	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	4.58	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	4.58	13	PASS
Band5	10MHz	16QAM	20450	50RB#0	4.58	13	PASS
Band5	10MHz	16QAM	20525	50RB#0	4.58	13	PASS
Band5	10MHz	16QAM	20600	50RB#0	4.58	13	PASS

### 2.2. Test Plots

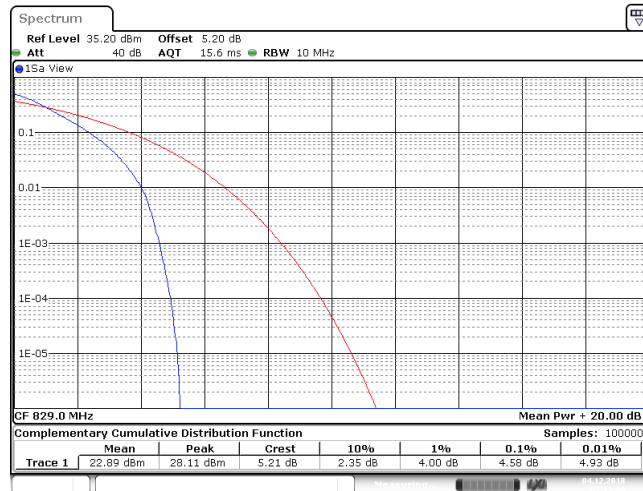






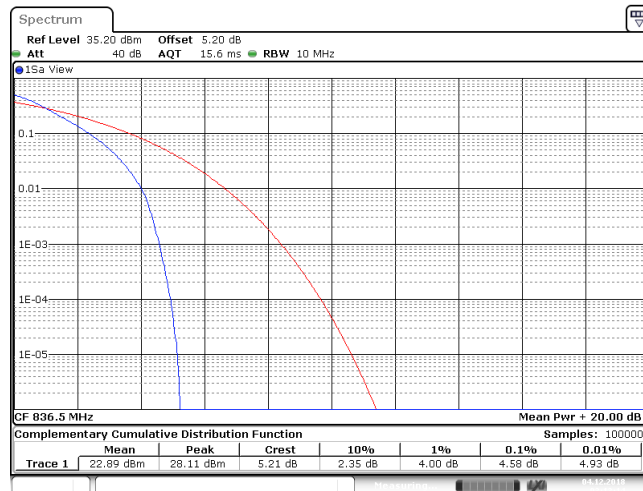
Date: 4 DEC 2018 03:13:23

**Band5\_10MHz\_16QAM\_20450\_50RB#0**



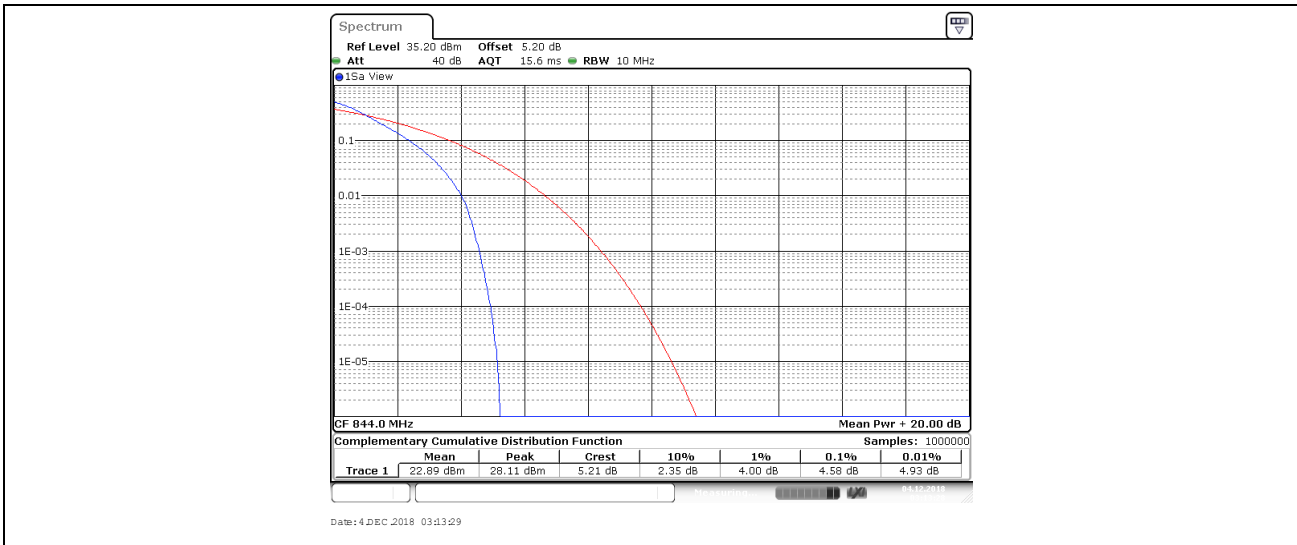
Date: 4 DEC 2018 03:13:41

**Band5\_10MHz\_16QAM\_20525\_50RB#0**



Date: 4 DEC 2018 03:13:15

**Band5\_10MHz\_16QAM\_20600\_50RB#0**

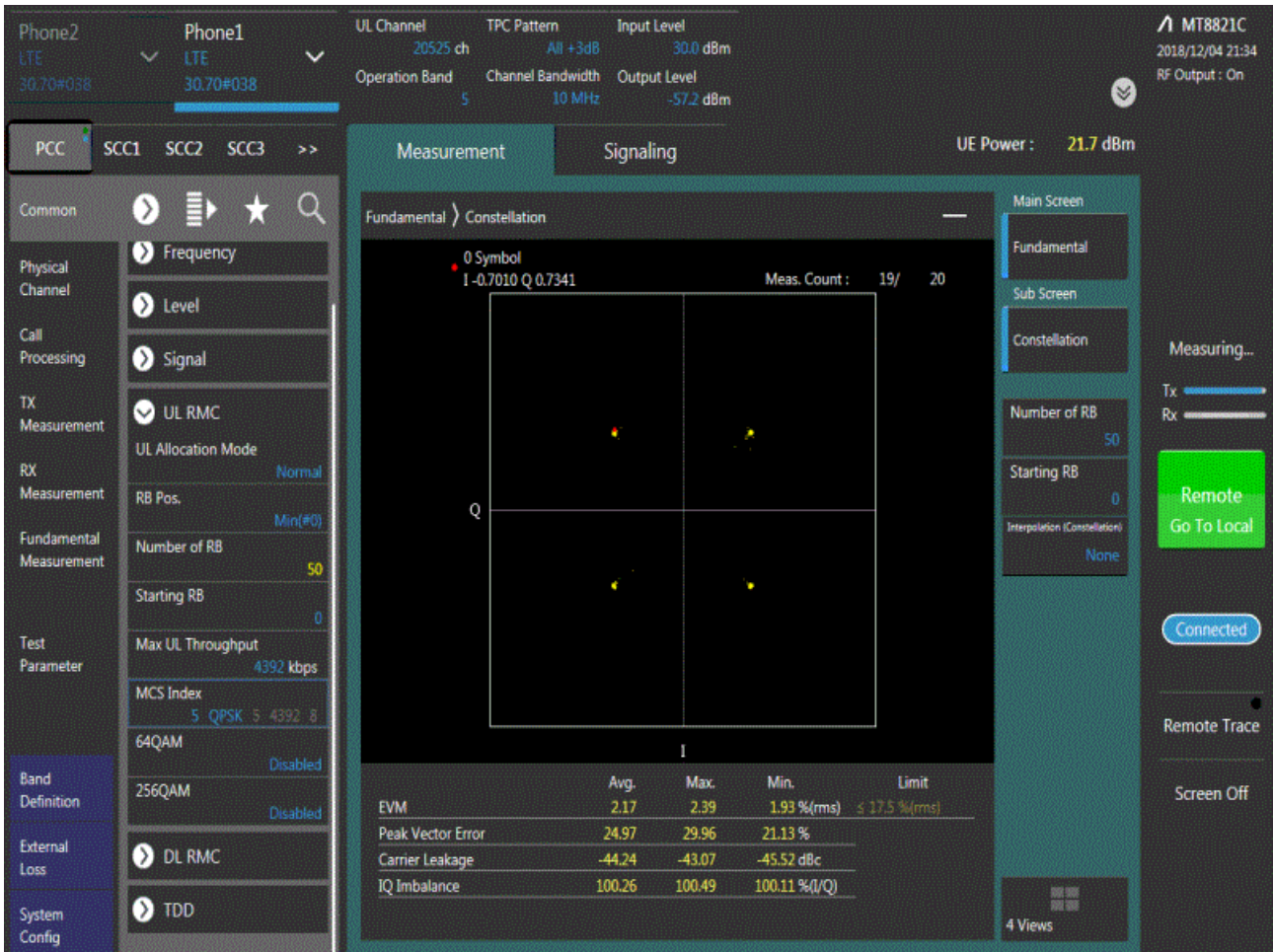


### 3. Modulation Characteristics

#### 3.1. Test BAND = LTE BAND5

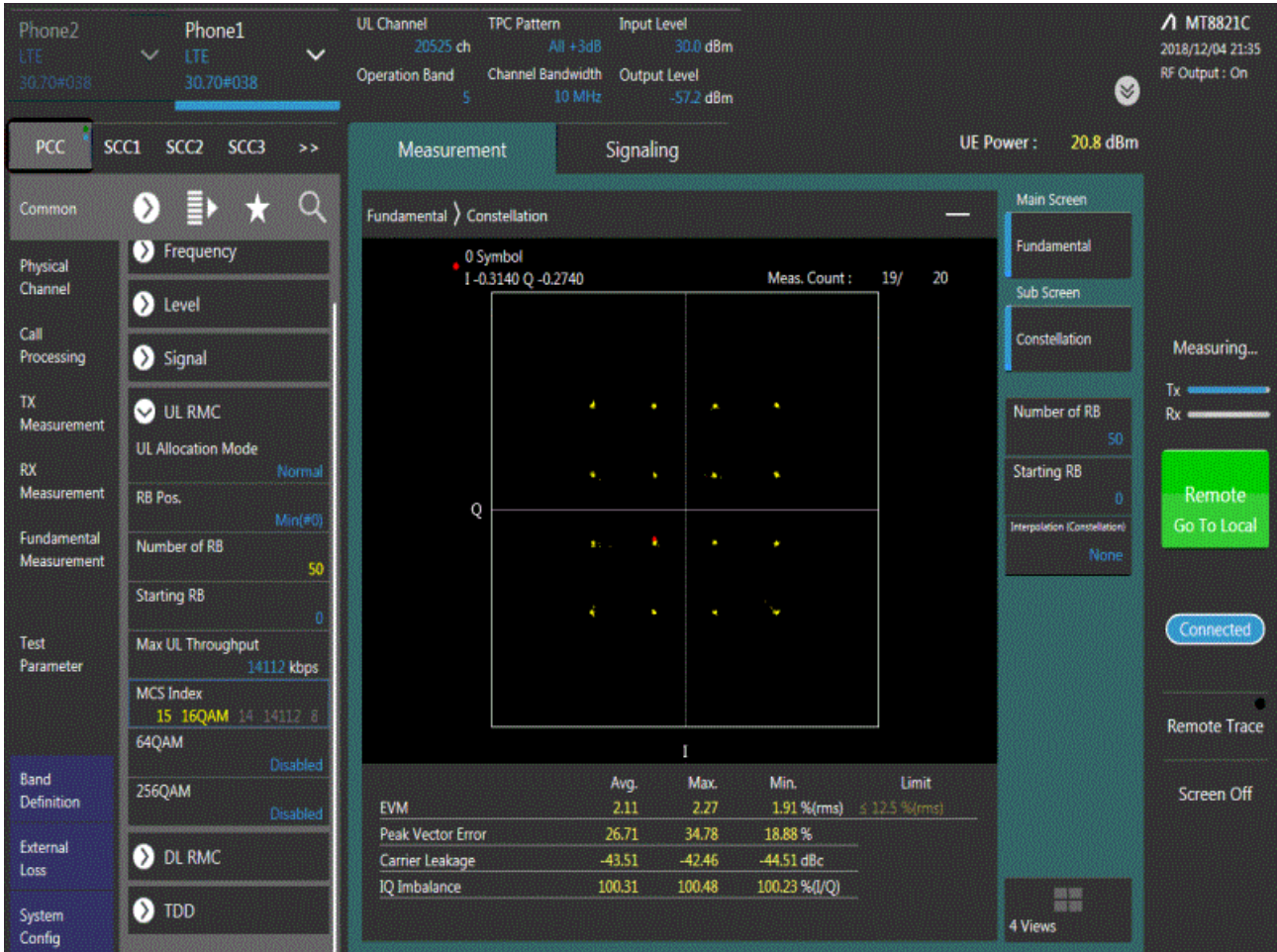
#### 3.1.1. Test Mode = LTE /TM1 10MHZ

#### 3.1.1.1. Test Channel = MCH



### 3.1.2. Test Mode = LTE /TM2 10MHz

#### 3.1.2.1. Test Channel = MCH

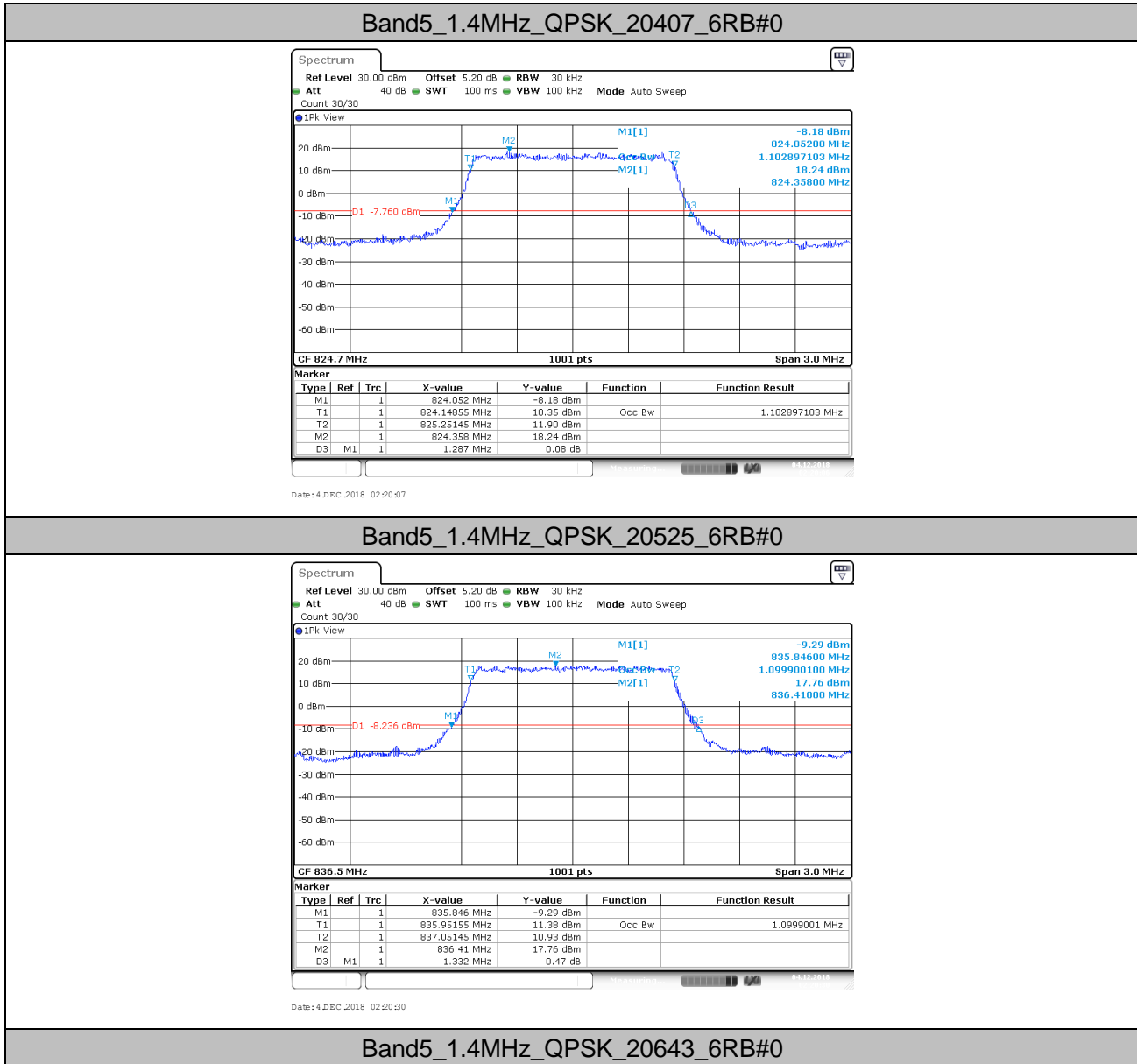


## 4. 26dB Bandwidth and Occupied Bandwidth

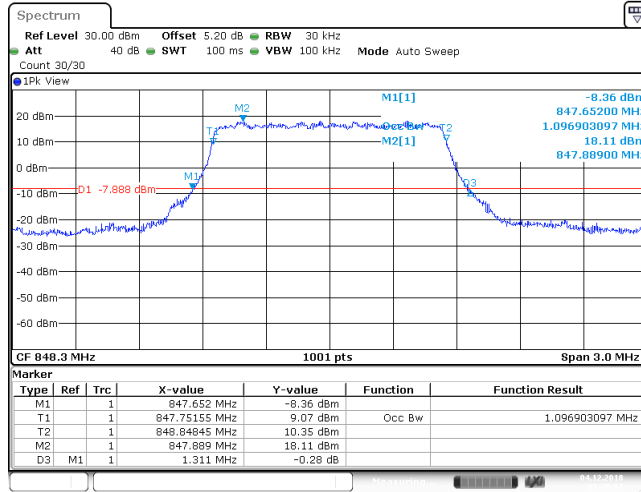
### 4.1. Test Result

BAND	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.103	1.287	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.1	1.332	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.097	1.311	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.097	1.296	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.091	1.296	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.1	1.311	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.697	2.982	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.697	2.976	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.697	2.970	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.691	2.976	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.697	3.000	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.697	2.994	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.486	4.960	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.466	4.940	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.486	4.950	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.476	4.860	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.476	4.960	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.486	4.940	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.931	9.800	PASS
Band5	10MHz	QPSK	20525	50RB#0	8.891	9.720	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.931	9.800	PASS
Band5	10MHz	16QAM	20450	50RB#0	8.931	9.740	PASS
Band5	10MHz	16QAM	20525	50RB#0	8.931	9.700	PASS
Band5	10MHz	16QAM	20600	50RB#0	8.931	9.680	PASS

**4.2. Test Plots**

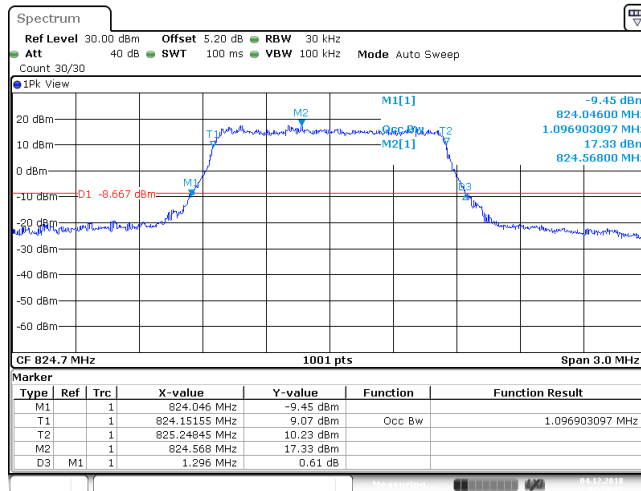






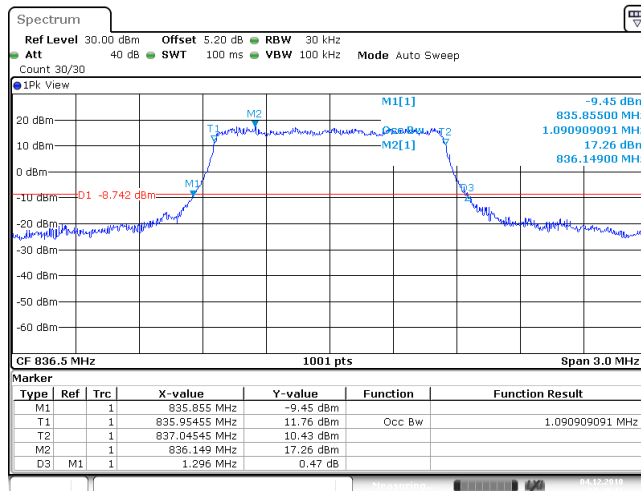
Date: 4 DEC 2018 02:20:54

**Band5\_1.4MHz\_16QAM\_20407\_6RB#0**



Date: 4 DEC 2018 02:20:17

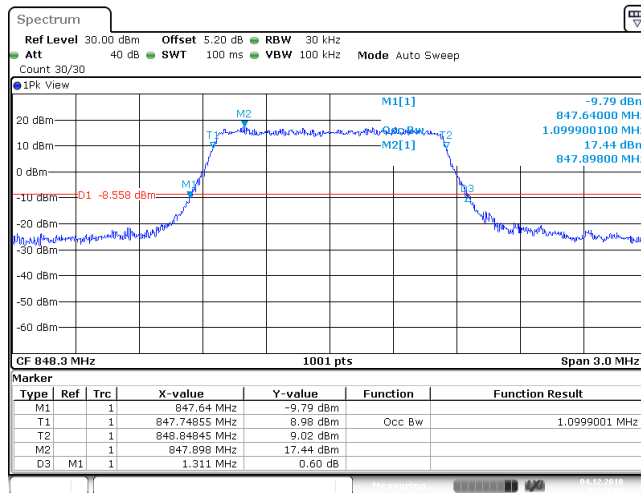
**Band5\_1.4MHz\_16QAM\_20525\_6RB#0**



Date: 4 DEC 2018 02:20:41

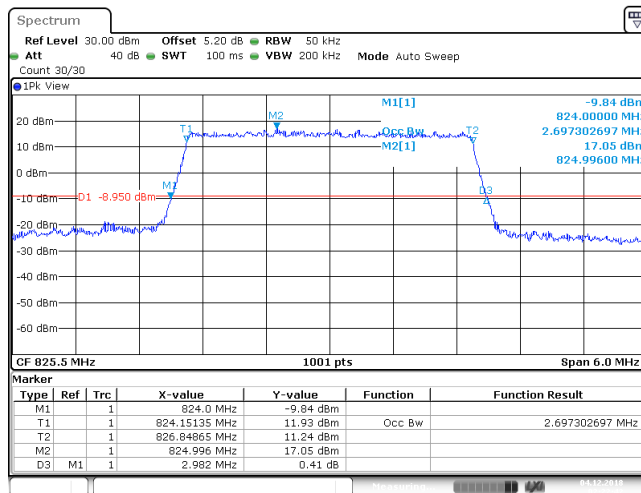
**Band5\_1.4MHz\_16QAM\_20643\_6RB#0**





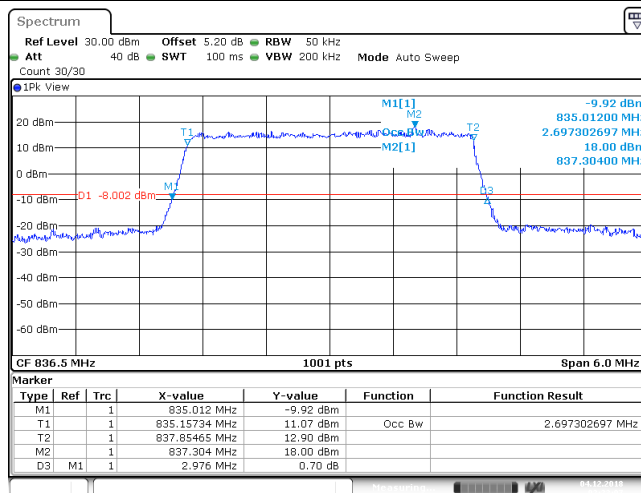
Date: 4 DEC 2018 02:21:04

**Band5\_3MHz\_QPSK\_20415\_15RB#0**



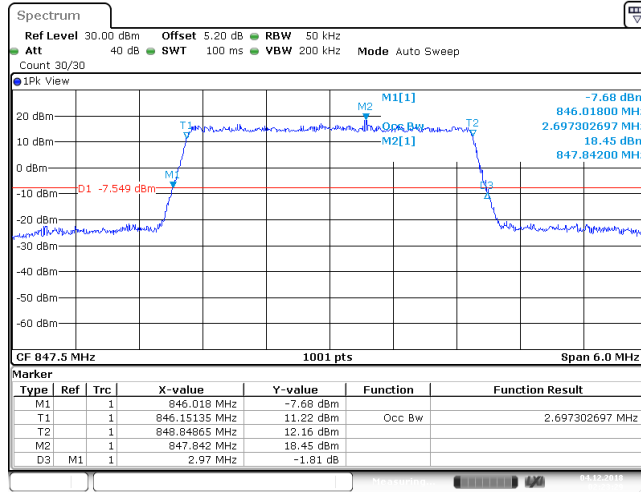
Date: 4 DEC 2018 02:22:43

**Band5\_3MHz\_QPSK\_20525\_15RB#0**



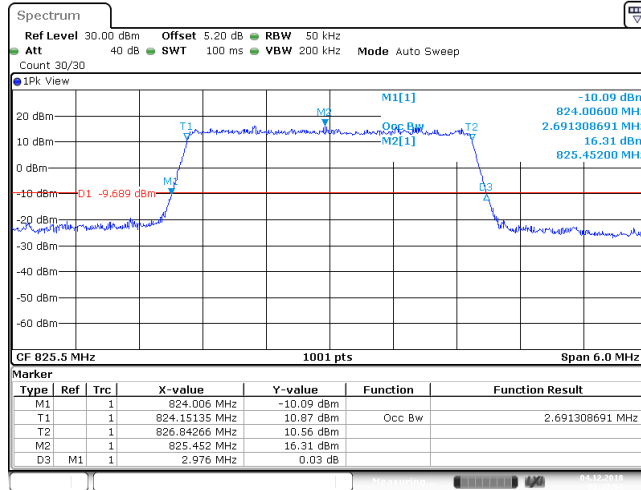
Date: 4 DEC 2018 02:23:07

**Band5\_3MHz\_QPSK\_20635\_15RB#0**



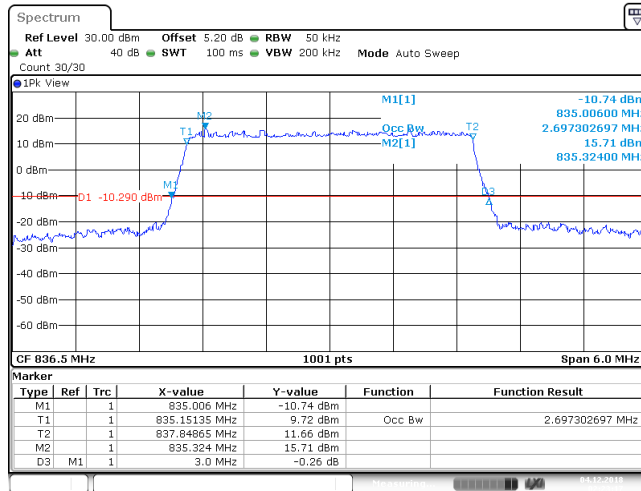
Date: 4 DEC 2018 02:23:30

**Band5\_3MHz\_16QAM\_20415\_15RB#0**



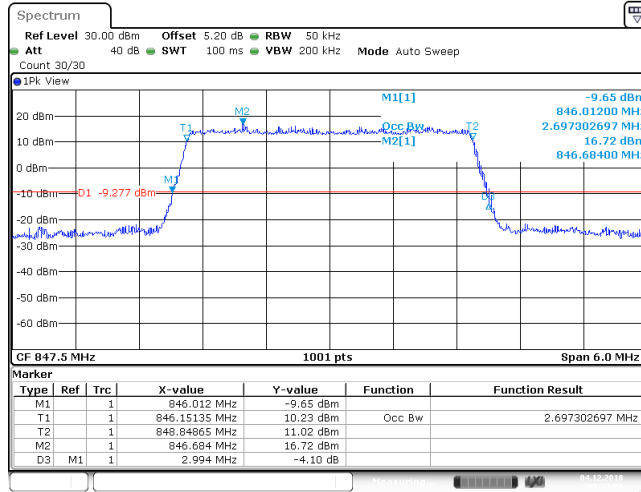
Date: 4 DEC 2018 02:22:54

**Band5\_3MHz\_16QAM\_20525\_15RB#0**



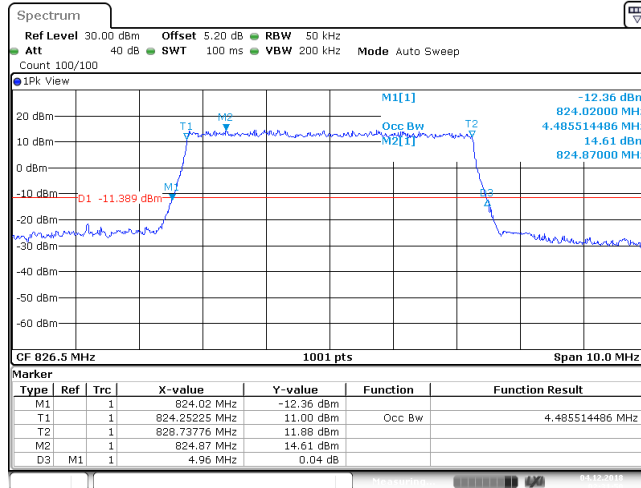
Date: 4 DEC 2018 02:23:17

**Band5\_3MHz\_16QAM\_20635\_15RB#0**



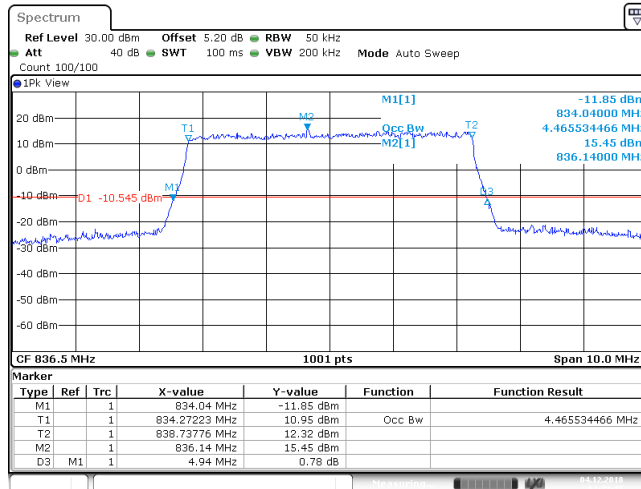
Date: 4 DEC 2018 02:23:40

**Band5\_5MHz\_QPSK\_20425\_25RB#0**



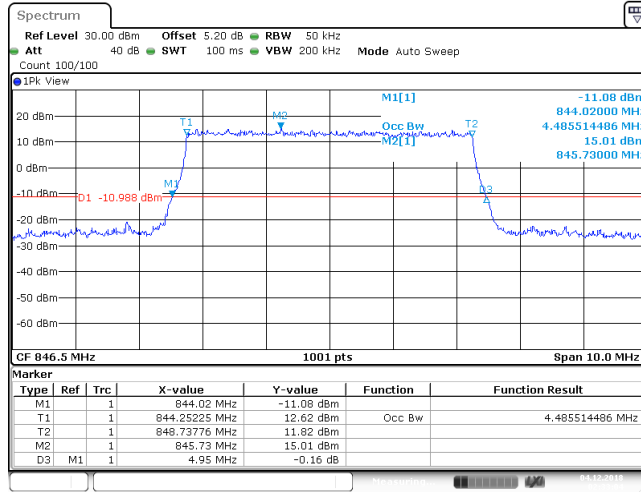
Date: 4 DEC 2018 02:31:51

**Band5\_5MHz\_QPSK\_20525\_25RB#0**



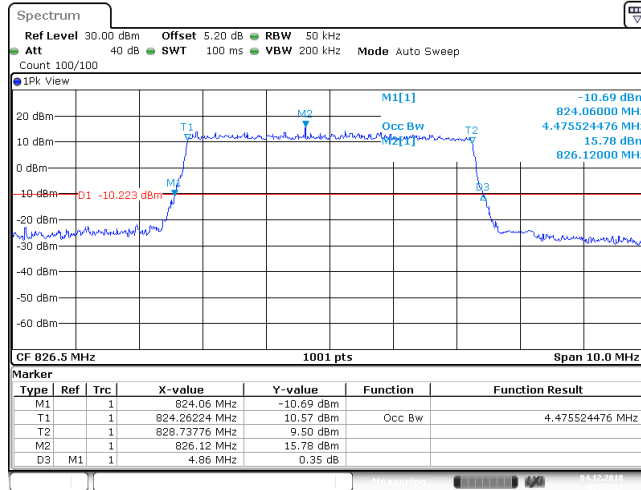
Date: 4 DEC 2018 02:32:27

**Band5\_5MHz\_QPSK\_20625\_25RB#0**



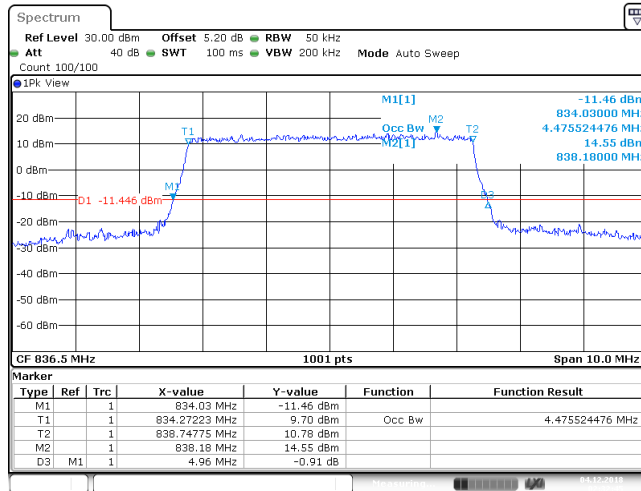
Date: 4 DEC 2018 02:33:04

**Band5\_5MHz\_16QAM\_20425\_25RB#0**



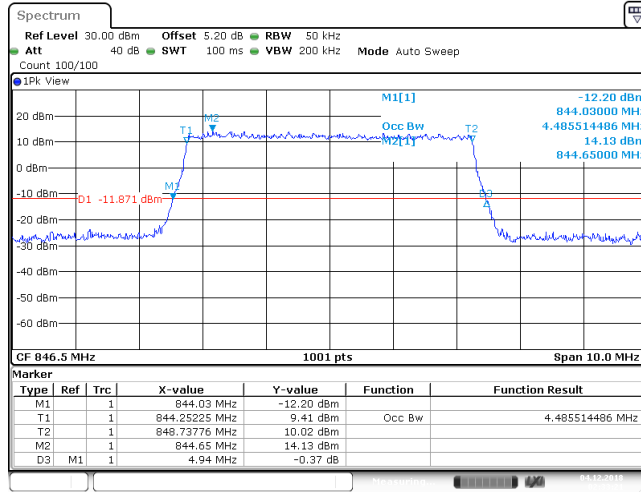
Date: 4 DEC 2018 02:32:08

**Band5\_5MHz\_16QAM\_20525\_25RB#0**



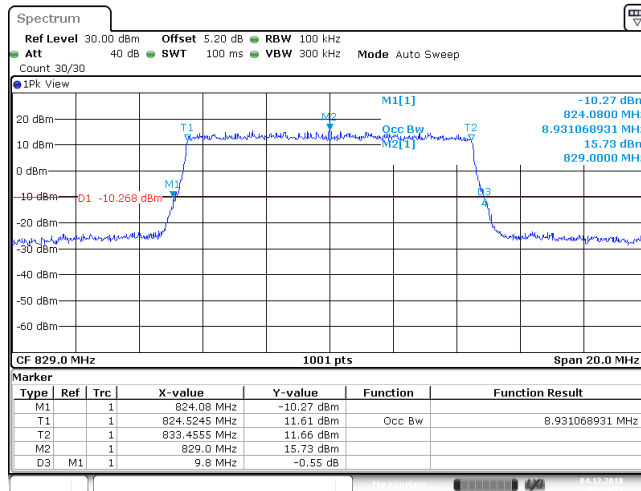
Date: 4 DEC 2018 02:32:45

**Band5\_5MHz\_16QAM\_20625\_25RB#0**



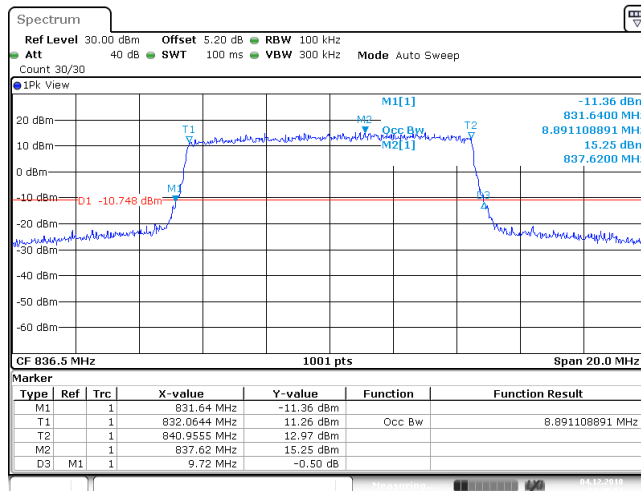
Date: 4 DEC 2018 02:33:21

**Band5\_10MHz\_QPSK\_20450\_50RB#0**



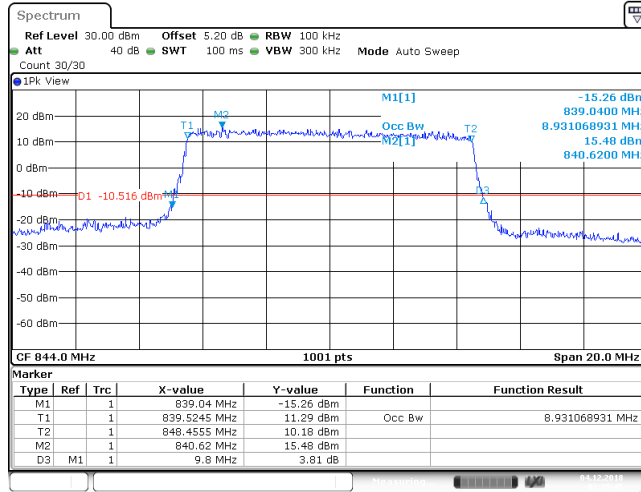
Date: 4 DEC 2018 02:34:59

**Band5\_10MHz\_QPSK\_20525\_50RB#0**

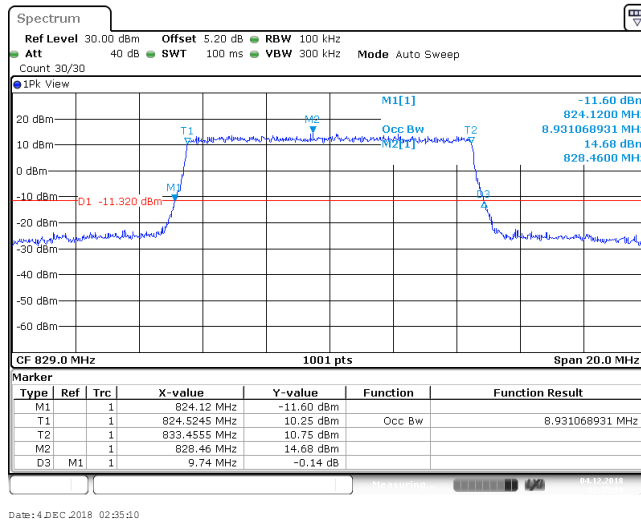


Date: 4 DEC 2018 02:35:23

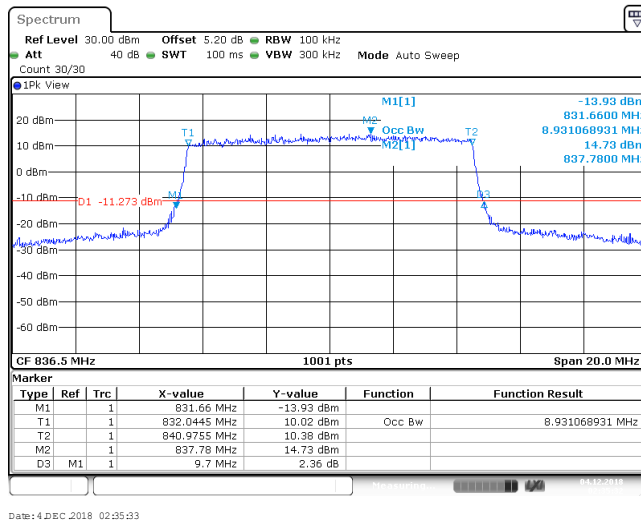
**Band5\_10MHz\_QPSK\_20600\_50RB#0**



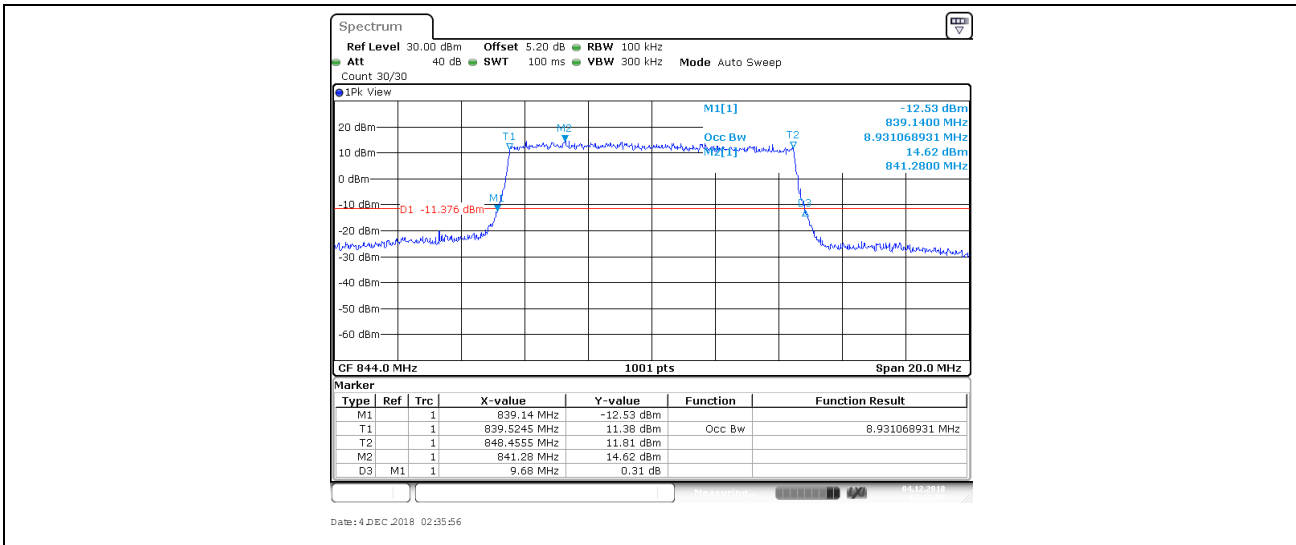
**Band5\_10MHz\_16QAM\_20450\_50RB#0**



**Band5\_10MHz\_16QAM\_20525\_50RB#0**



**Band5\_10MHz\_16QAM\_20600\_50RB#0**

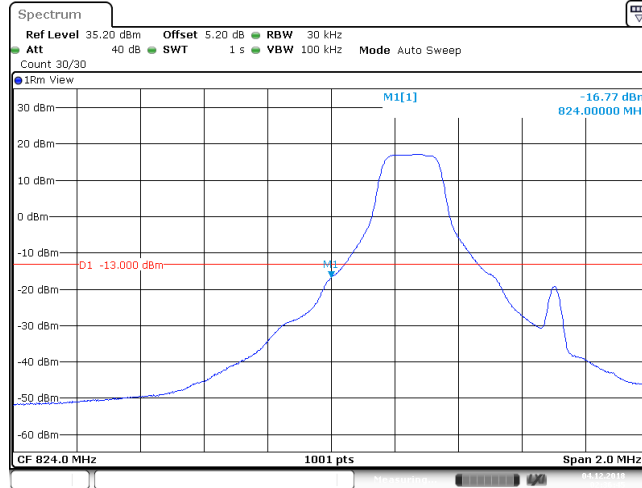




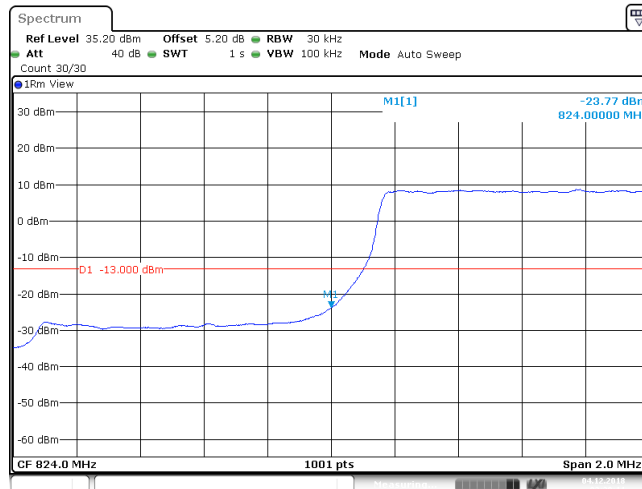
## 5. Band Edge Compliance

### 5.1. Test Plots

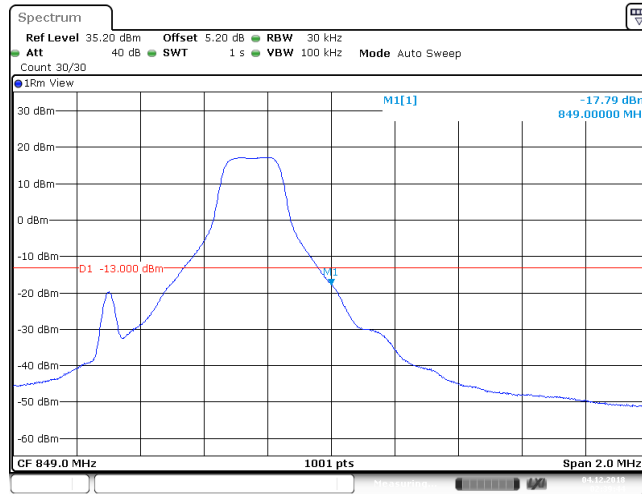
**Band5\_1.4MHz\_QPSK\_20407\_1RB#0**



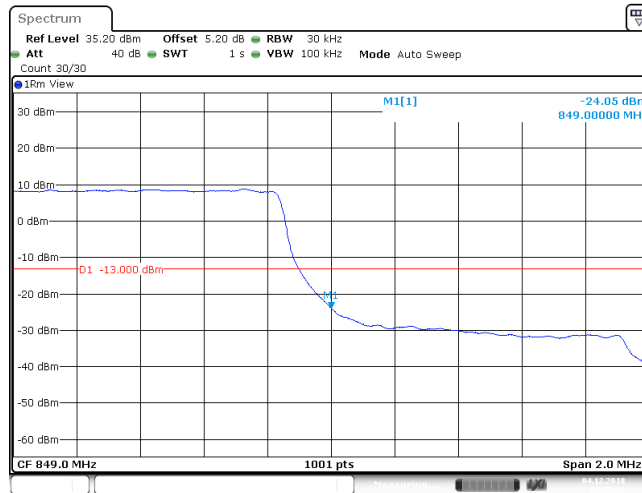
**Band5\_1.4MHz\_QPSK\_20407\_6RB#0**



**Band5\_1.4MHz\_QPSK\_20643\_1RB#5**



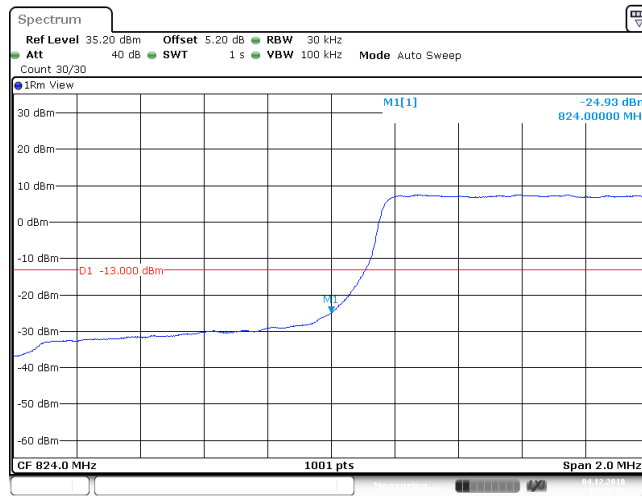
**Band5\_1.4MHz\_QPSK\_20643\_6RB#0**



**Band5\_1.4MHz\_16QAM\_20407\_1RB#0**

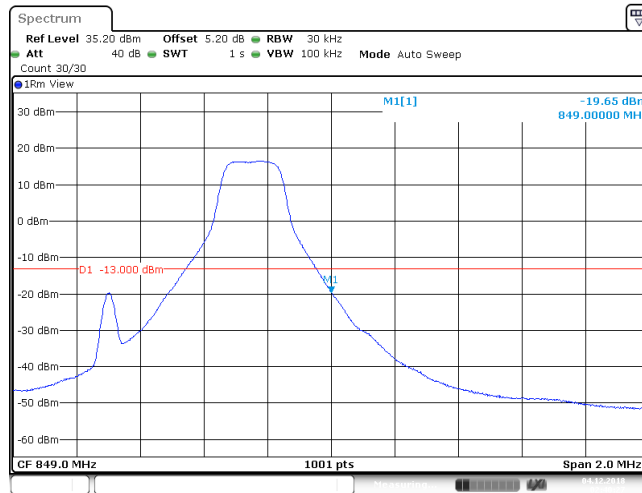


**Band5\_1.4MHz\_16QAM\_20407\_6RB#0**



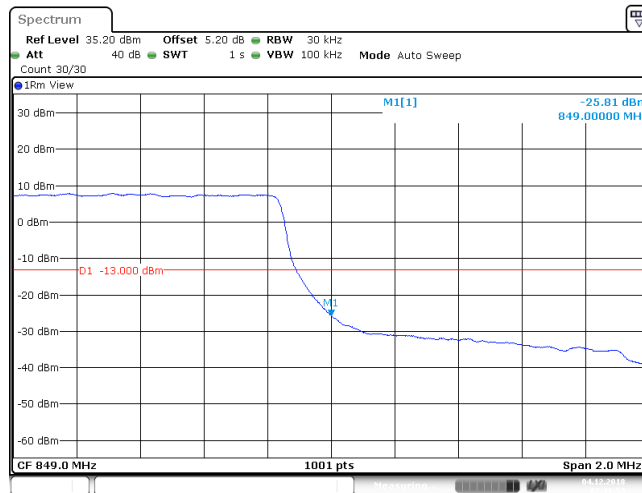
Date: 4 DEC 2018 02:38:55

**Band5\_1.4MHz\_16QAM\_20643\_1RB#5**



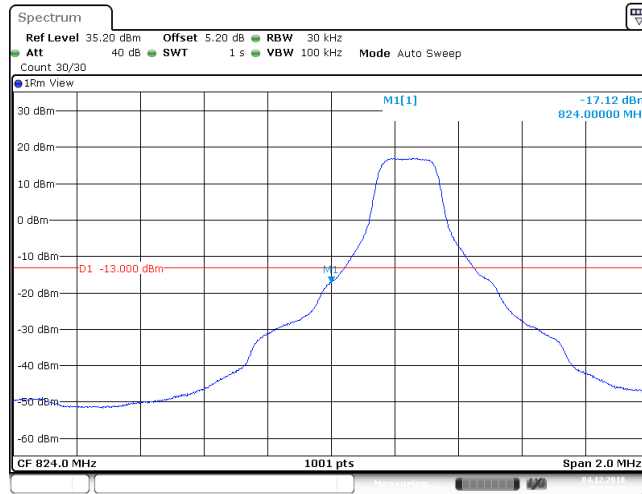
Date: 4 DEC 2018 02:40:27

**Band5\_1.4MHz\_16QAM\_20643\_6RB#0**



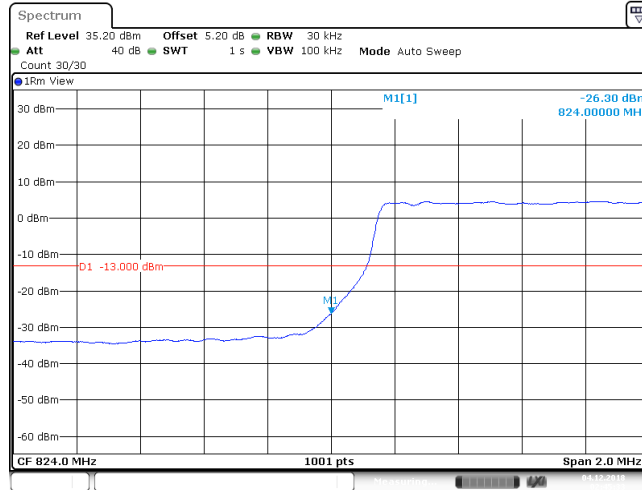
Date: 4 DEC 2018 02:41:54

**Band5\_3MHz\_QPSK\_20415\_1RB#0**



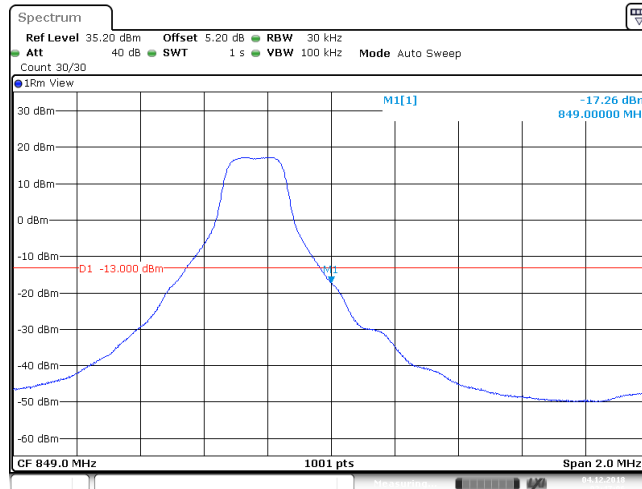
Date: 4.DEC.2018 02:44:08

**Band5\_3MHz\_QPSK\_20415\_15RB#0**



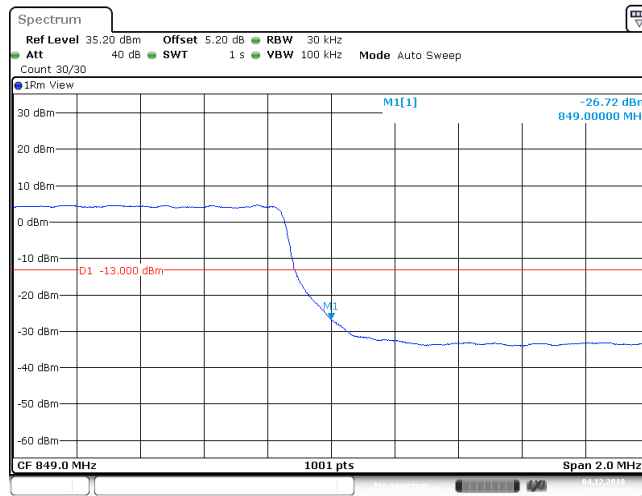
Date: 4.DEC.2018 02:45:34

**Band5\_3MHz\_QPSK\_20635\_1RB#14**



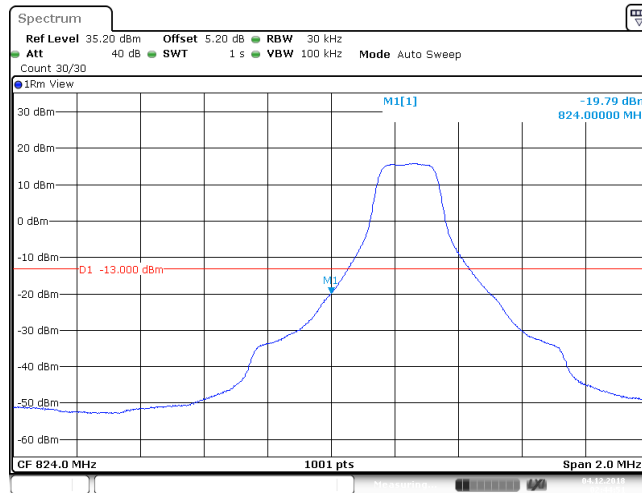
Date: 4.DEC.2018 02:47:06

**Band5\_3MHz\_QPSK\_20635\_15RB#0**



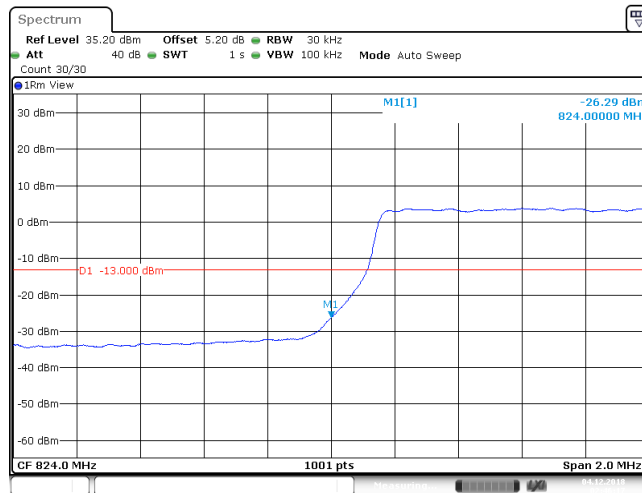
Date: 4 DEC 2018 02:48:33

**Band5\_3MHz\_16QAM\_20415\_1RB#0**



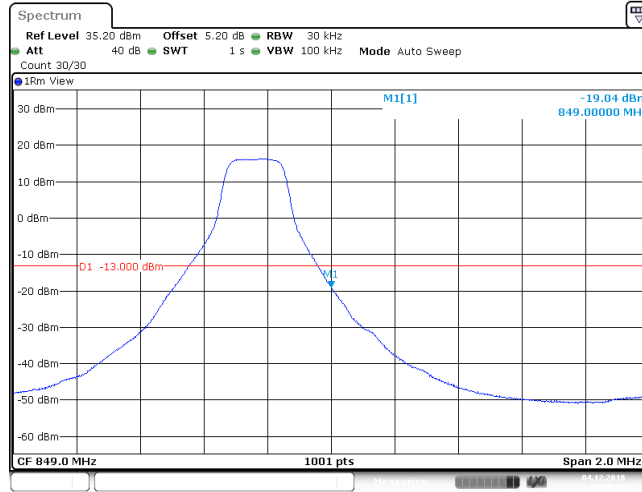
Date: 4 DEC 2018 02:44:51

**Band5\_3MHz\_16QAM\_20415\_15RB#0**



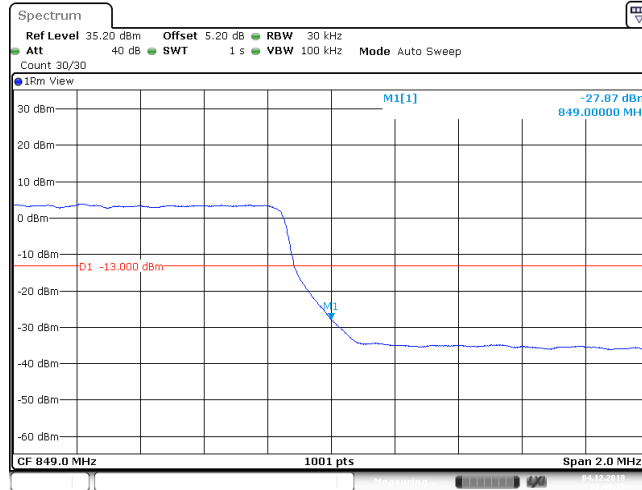
Date: 4 DEC 2018 02:46:17

**Band5\_3MHz\_16QAM\_20635\_1RB#14**



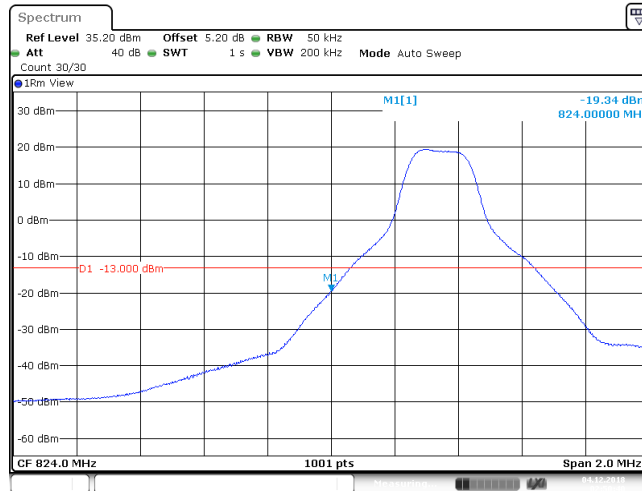
Date: 4 DEC 2018 02:47:49

**Band5\_3MHz\_16QAM\_20635\_15RB#0**



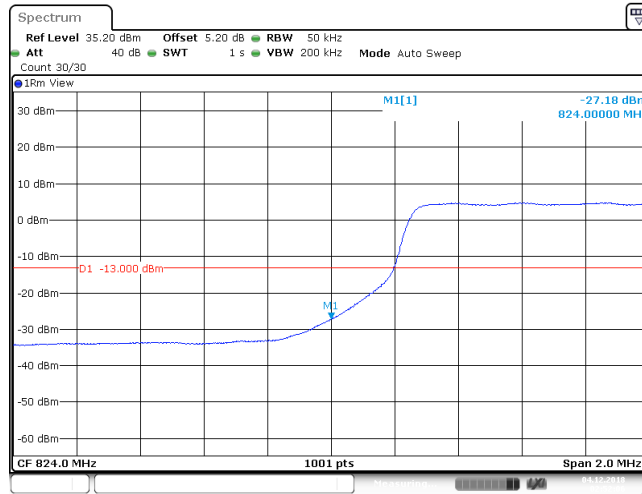
Date: 4 DEC 2018 02:49:16

**Band5\_5MHz\_QPSK\_20425\_1RB#0**



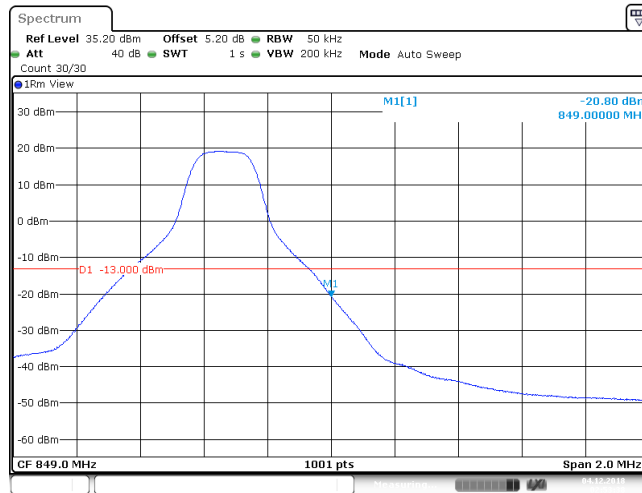
Date: 4 DEC 2018 02:50:40

**Band5\_5MHz\_QPSK\_20425\_25RB#0**



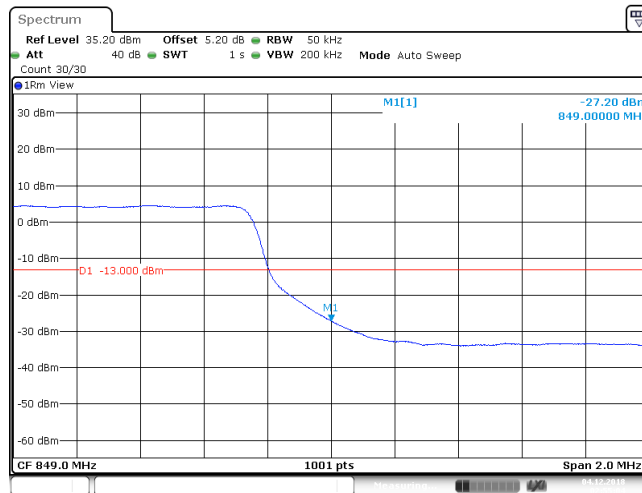
Date: 4.DEC.2018 02:52:06

**Band5\_5MHz\_QPSK\_20625\_1RB#24**



Date: 4.DEC.2018 02:53:38

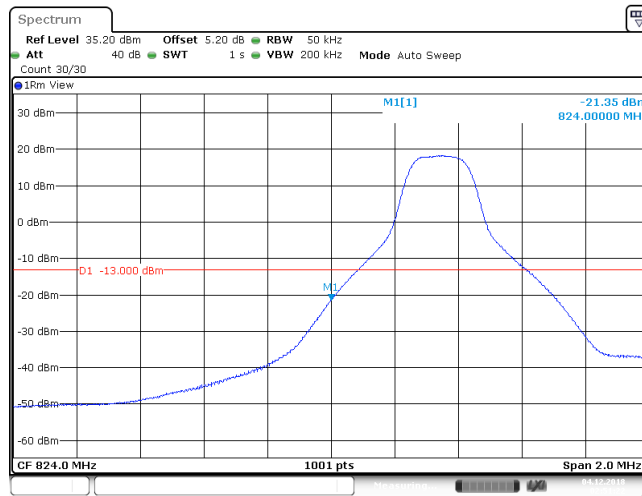
**Band5\_5MHz\_QPSK\_20625\_25RB#0**



Date: 4.DEC.2018 02:55:05

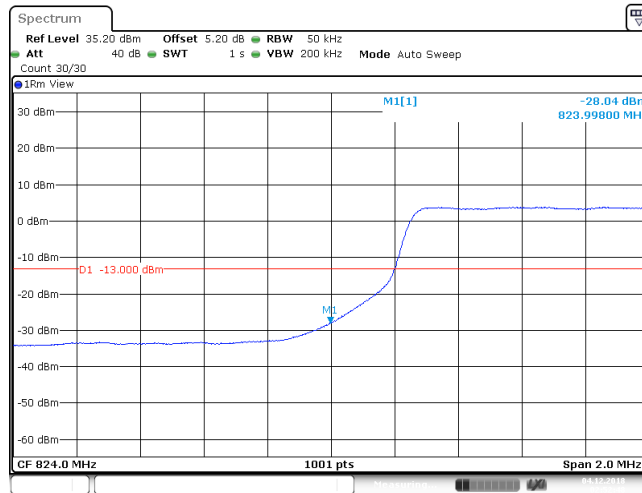
**Band5\_5MHz\_16QAM\_20425\_1RB#0**





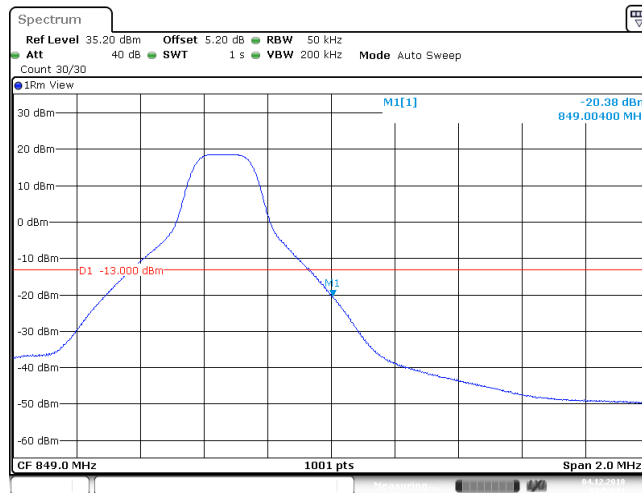
Date: 4 DEC 2018 02:51:23

**Band5\_5MHz\_16QAM\_20425\_25RB#0**



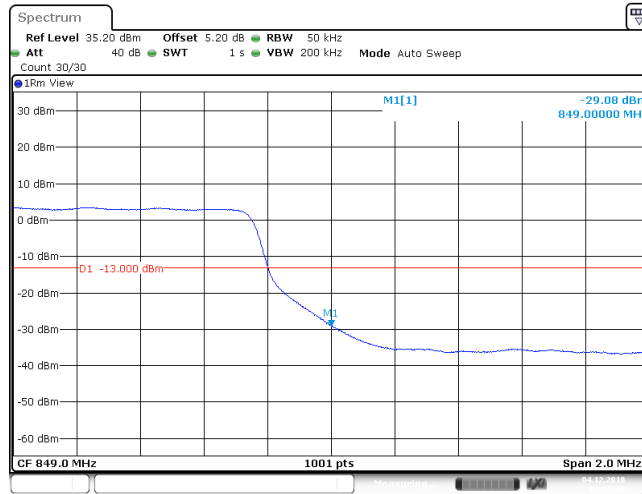
Date: 4 DEC 2018 02:52:49

**Band5\_5MHz\_16QAM\_20625\_1RB#24**

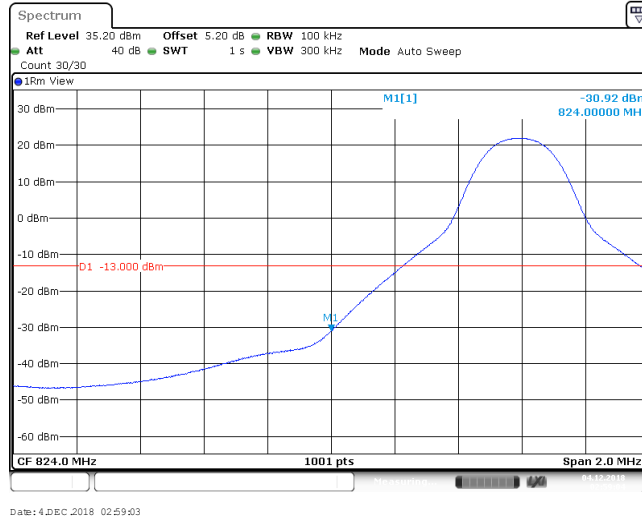


Date: 4 DEC 2018 02:54:22

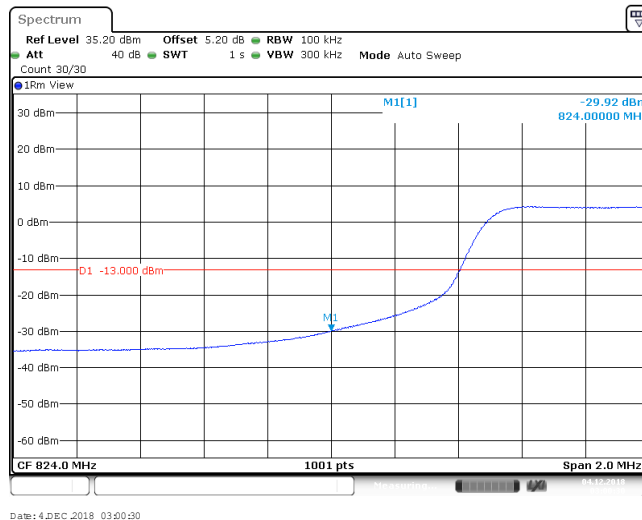
**Band5\_5MHz\_16QAM\_20625\_25RB#0**



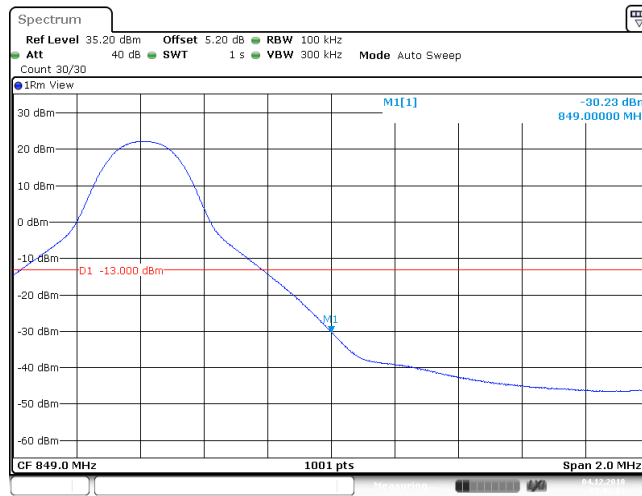
**Band5\_10MHz\_QPSK\_20450\_1RB#0**



**Band5\_10MHz\_QPSK\_20450\_50RB#0**

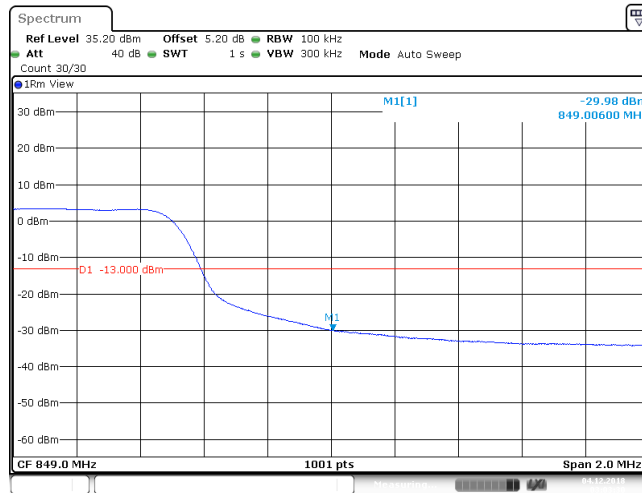


**Band5\_10MHz\_QPSK\_20600\_1RB#49**



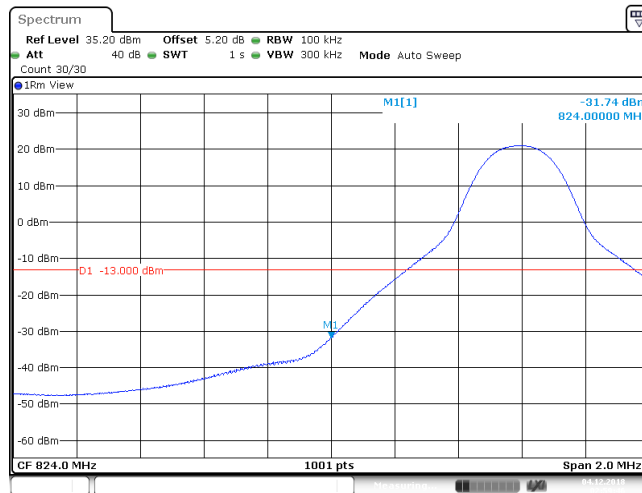
Date: 4 DEC 2018 03:02:03

**Band5\_10MHz\_QPSK\_20600\_50RB#0**



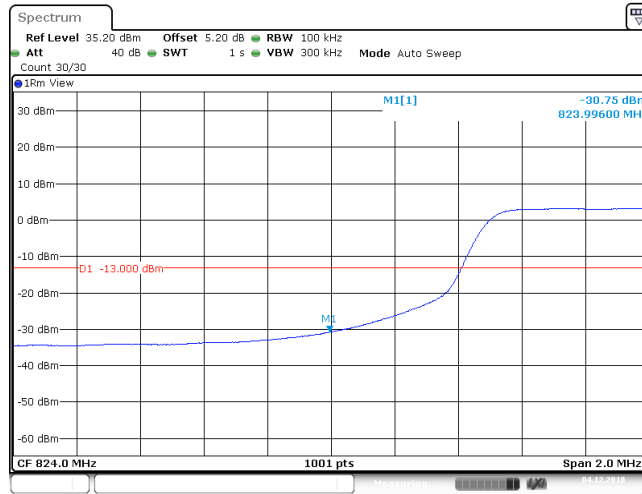
Date: 4 DEC 2018 03:03:30

**Band5\_10MHz\_16QAM\_20450\_1RB#0**



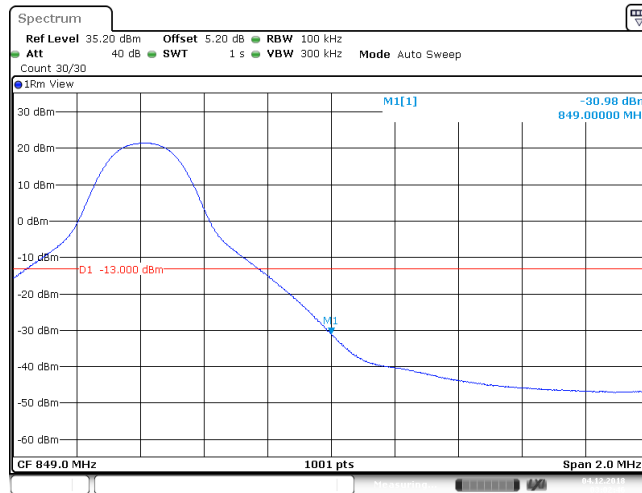
Date: 4 DEC 2018 02:59:47

**Band5\_10MHz\_16QAM\_20450\_50RB#0**



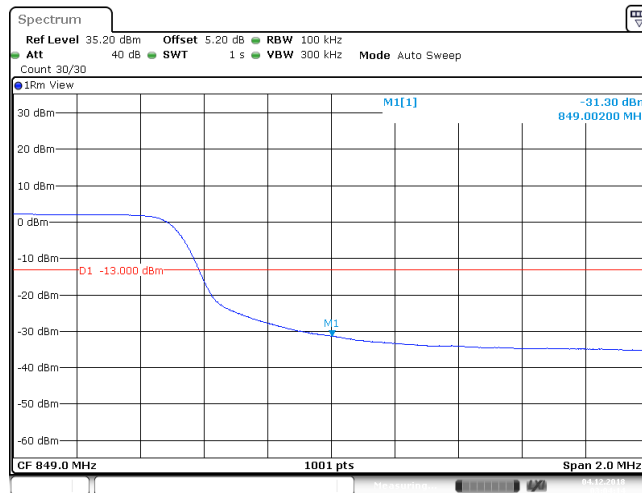
Date: 4 DEC 2018 03:01:14

**Band5\_10MHz\_16QAM\_20600\_1RB#49**



Date: 4 DEC 2018 03:02:46

**Band5\_10MHz\_16QAM\_20600\_50RB#0**



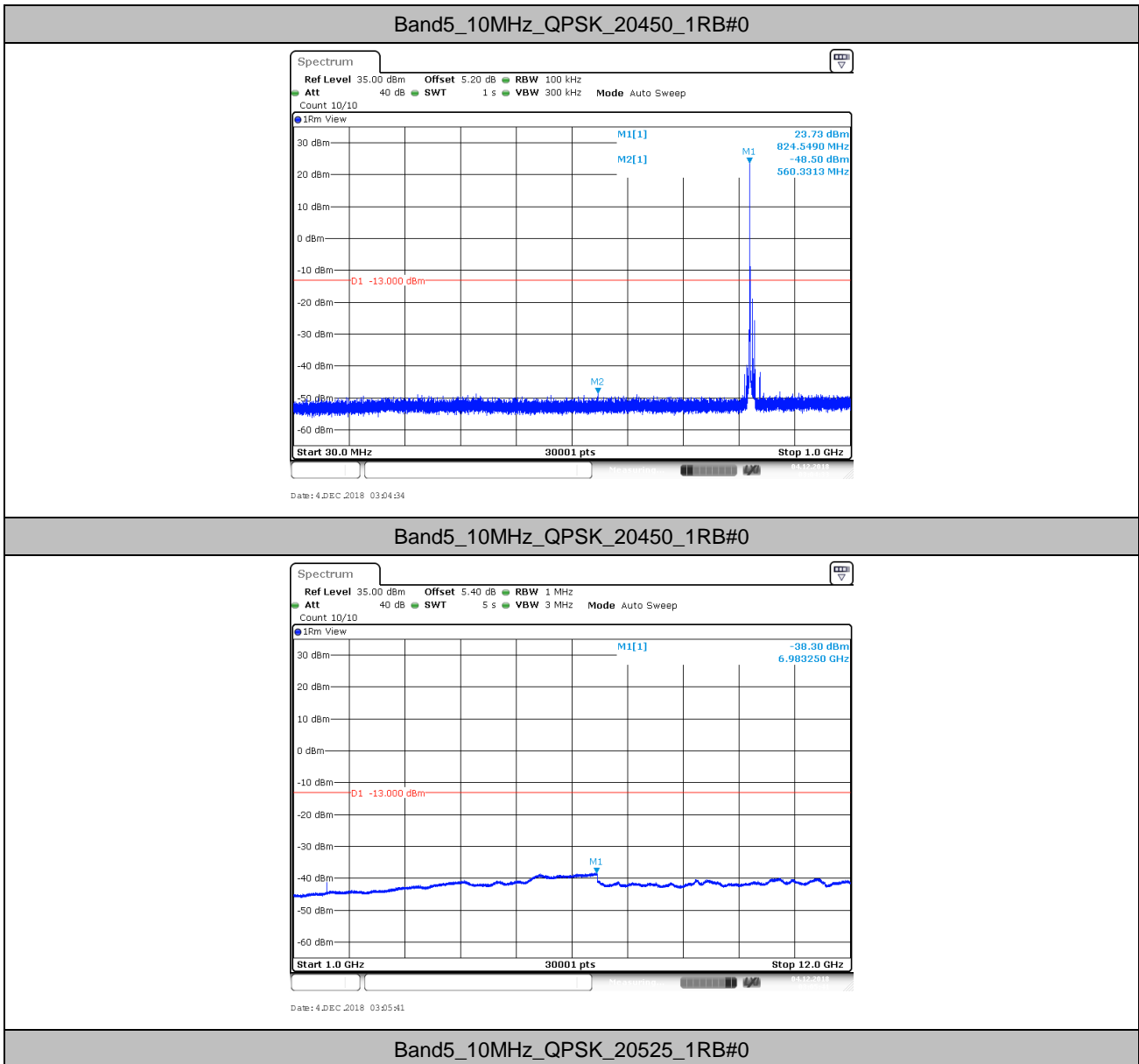
Date: 4 DEC 2018 03:04:14

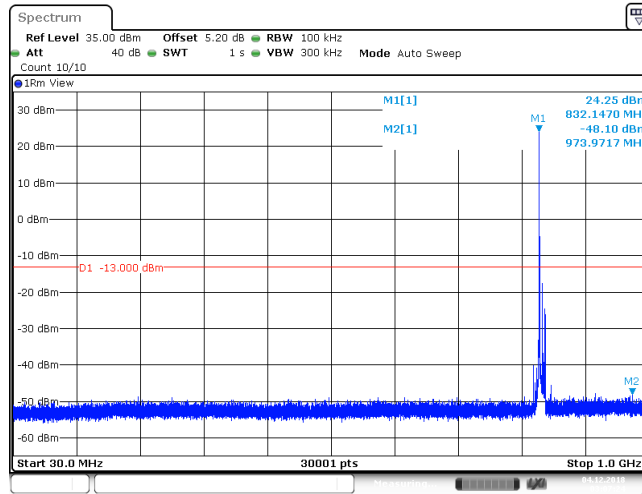
## 6. Spurious Emission at Antenna Terminal

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.

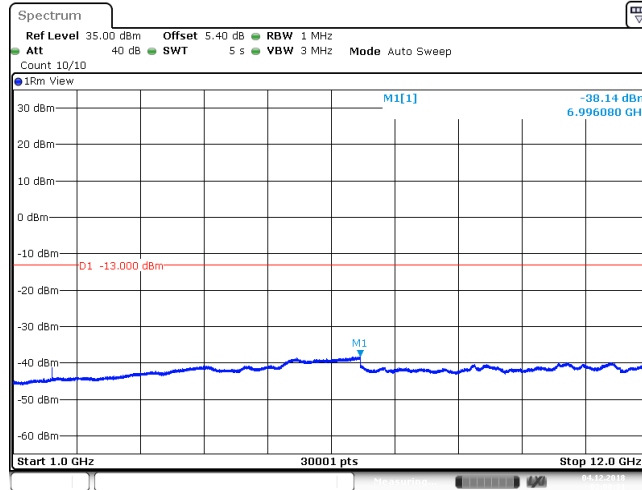
### 6.1. Test Plots





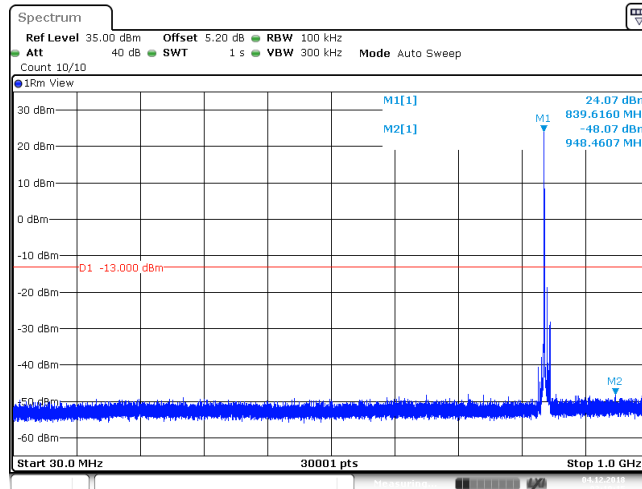
Date: 4 DEC 2018 03:07:25

**Band5\_10MHz\_QPSK\_20525\_1RB#0**



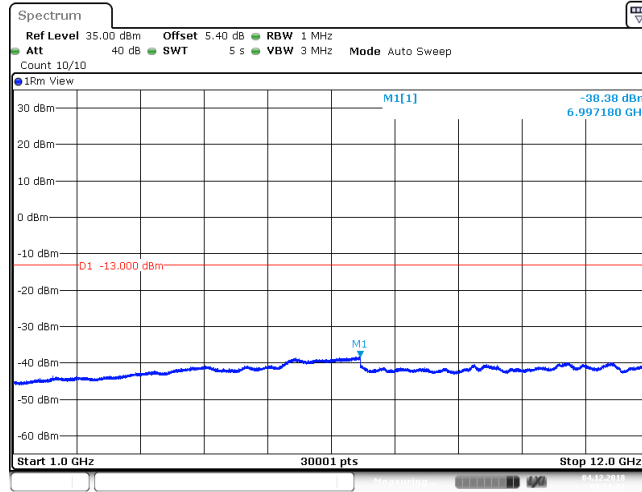
Date: 4 DEC 2018 03:08:02

**Band5\_10MHz\_QPSK\_20600\_1RB#0**



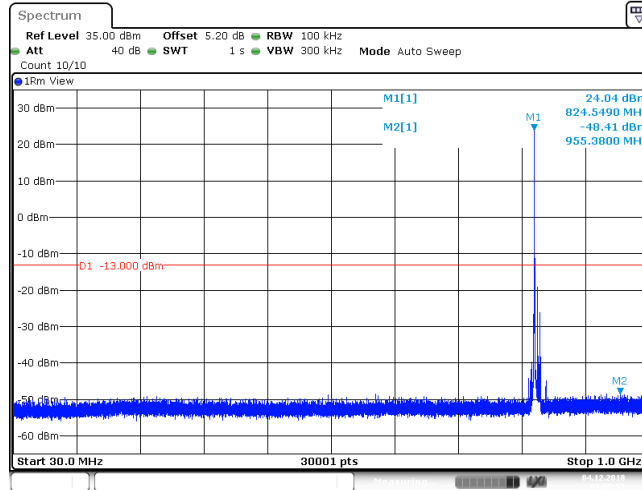
Date: 4 DEC 2018 03:10:15

**Band5\_10MHz\_QPSK\_20600\_1RB#0**



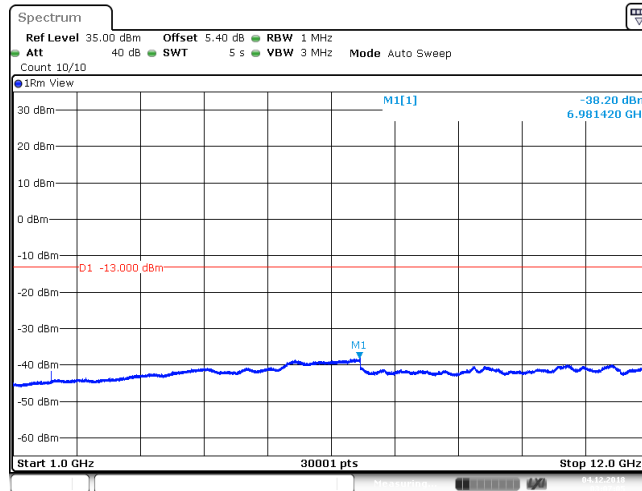
Date: 4 DEC 2018 03:41:22

**Band5\_10MHz\_16QAM\_20450\_1RB#0**



Date: 4 DEC 2018 03:05:58

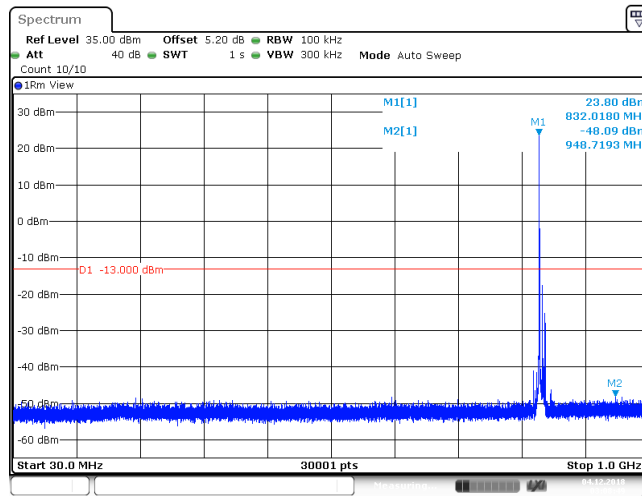
**Band5\_10MHz\_16QAM\_20450\_1RB#0**



Date: 4 DEC 2018 03:07:05

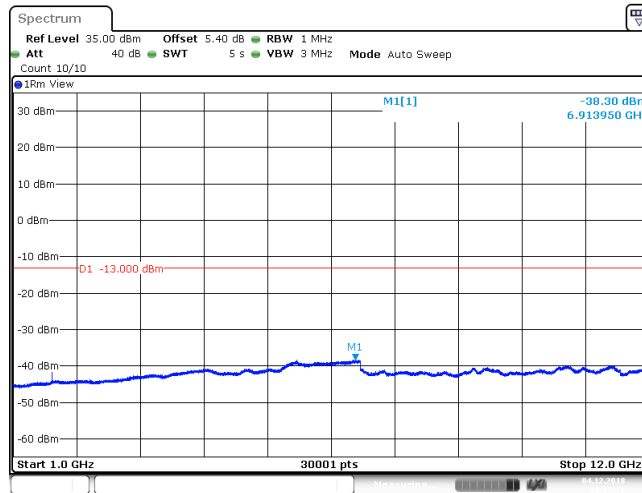
**Band5\_10MHz\_16QAM\_20525\_1RB#0**





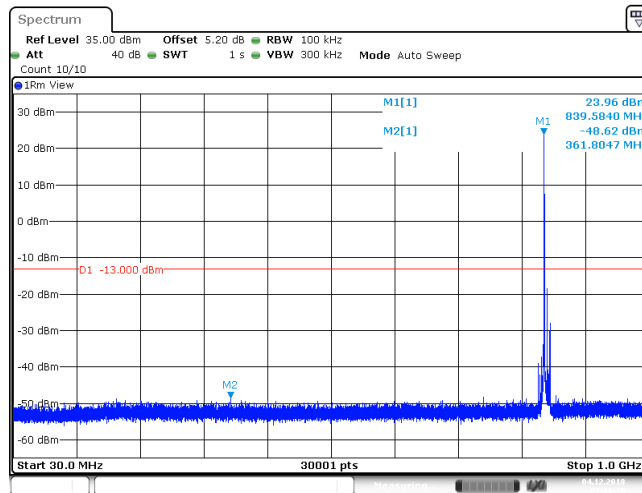
Date: 4 DEC 2018 03:08:49

**Band5\_10MHz\_16QAM\_20525\_1RB#0**



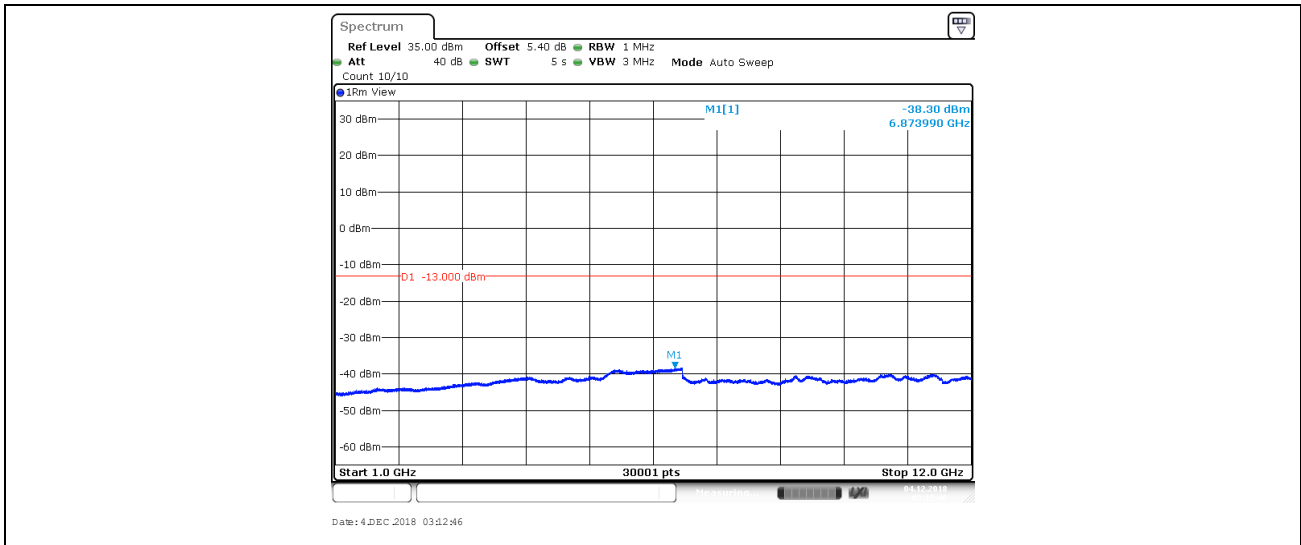
Date: 4 DEC 2018 03:09:56

**Band5\_10MHz\_16QAM\_20600\_1RB#0**



Date: 4 DEC 2018 03:41:39

**Band5\_10MHz\_16QAM\_20600\_1RB#0**



## 7. Field Strength of Spurious Radiation

### 7.1. Test BAND = LTE BAND 5

#### 7.1.1. Test Mode = LTE/TM1 10MHz

##### 7.1.1.1. Test Channel = LCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
71.766667	-79.39	-13.00	66.39	Vertical
132.666667	-77.74	-13.00	64.74	Vertical
1649.000000	-52.53	-13.00	39.53	Vertical
2473.500000	-52.90	-13.00	39.90	Vertical
4947.562500	-65.51	-13.00	52.51	Vertical
7421.137500	-62.05	-13.00	49.05	Vertical
62.200000	-77.39	-13.00	64.39	Horizontal
211.206667	-74.52	-13.00	61.52	Horizontal
1649.000000	-53.84	-13.00	40.84	Horizontal
2473.500000	-54.88	-13.00	41.88	Horizontal
4295.287500	-67.03	-13.00	54.03	Horizontal
6490.012500	-65.17	-13.00	52.17	Horizontal

##### 7.1.1.2. Test Channel = MCH

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
139.153333	-76.66	-13.00	63.66	Vertical
1664.000000	-49.08	-13.00	36.08	Vertical
2496.000000	-55.83	-13.00	42.83	Vertical
3328.087500	-67.79	-13.00	54.79	Vertical
4992.412500	-65.83	-13.00	52.83	Vertical
7488.900000	-58.99	-13.00	45.99	Vertical
56.693333	-77.76	-13.00	64.76	Horizontal
130.893333	-79.20	-13.00	66.20	Horizontal
211.580000	-74.83	-13.00	61.83	Horizontal
1664.000000	-55.67	-13.00	42.67	Horizontal
2496.000000	-53.92	-13.00	40.92	Horizontal
3328.087500	-68.00	-13.00	55.00	Horizontal

**7.1.1.3. Test Channel = HCH**

Frequency (MHz)	Level (dBm)	Limit Line (dBm)	Margin (dB)	Polarization
72.000000	-78.31	-13.00	65.31	Vertical
139.013333	-76.67	-13.00	63.67	Vertical
1679.000000	-52.45	-13.00	39.45	Vertical
2518.500000	-53.73	-13.00	40.73	Vertical
4197.787500	-67.48	-13.00	54.48	Vertical
7556.175000	-63.59	-13.00	50.59	Vertical
63.273333	-77.22	-13.00	64.22	Horizontal
211.160000	-74.61	-13.00	61.61	Horizontal
1679.000000	-52.17	-13.00	39.17	Horizontal
2518.500000	-54.48	-13.00	41.48	Horizontal
3358.312500	-68.70	-13.00	55.70	Horizontal
7975.425000	-63.82	-13.00	50.82	Horizontal

Remark:

- 1) The disturbance below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the worst case data had been displayed.
- 2) We have tested all modulation and all Bandwidth , but only the worst case data presented in this report.

## 8. Frequency Stability

### 8.1. 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	-1.20	-0.001448	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VN	NT	-1.10	-0.001327	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	VH	NT	-0.80	-0.000965	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VL	NT	0.10	0.000120	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VN	NT	-0.30	-0.000359	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	VH	NT	-1.60	-0.001913	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VL	NT	-0.70	-0.000829	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VN	NT	-0.80	-0.000948	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	VH	NT	0.70	0.000829	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	VL	NT	0.10	0.000121	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	VN	NT	-0.70	-0.000844	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	VH	NT	0.00	0.000000	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	VL	NT	-1.20	-0.001435	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	VN	NT	-2.70	-0.003228	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	VH	NT	-1.00	-0.001195	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	VL	NT	0.90	0.001066	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	VN	NT	0.00	0.000000	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	VH	NT	-1.90	-0.002251	±2.5	PASS

### 8.2. 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	-1.10	-0.001327	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	-20	-2.40	-0.002895	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	0	-0.60	-0.000724	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	10	-0.60	-0.000724	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	20	-0.90	-0.001086	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	30	-0.20	-0.000241	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	40	-2.40	-0.002895	±2.5	PASS
Band5	10MHz	QPSK	20450	50RB#0	NV	50	-0.60	-0.000724	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-30	-0.30	-0.000359	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	-20	0.50	0.000598	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	0	-0.90	-0.001076	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	10	-0.30	-0.000359	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	20	-0.30	-0.000359	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	30	-1.50	-0.001793	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	40	0.70	0.000837	±2.5	PASS
Band5	10MHz	QPSK	20525	50RB#0	NV	50	0.00	0.000000	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-30	0.70	0.000829	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	-20	-2.30	-0.002725	±2.5	PASS



Band5	10MHz	QPSK	20600	50RB#0	NV	0	0.40	0.000474	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	10	0.30	0.000355	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	20	-2.00	-0.002370	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	30	-1.20	-0.001422	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	40	-0.70	-0.000829	±2.5	PASS
Band5	10MHz	QPSK	20600	50RB#0	NV	50	-1.30	-0.001540	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	-30	0.60	0.000724	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	-20	-0.60	-0.000724	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	0	0.50	0.000603	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	10	-0.90	-0.001086	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	20	-1.50	-0.001809	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	30	-0.60	-0.000724	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	40	0.50	0.000603	±2.5	PASS
Band5	10MHz	16QAM	20450	50RB#0	NV	50	-1.10	-0.001327	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	-30	-0.40	-0.000478	±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	0.50	0.000598	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	10	0.30	0.000359	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	20	-0.50	-0.000598	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	30	0.80	0.000956	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	40	-0.30	-0.000359	±2.5	PASS
Band5	10MHz	16QAM	20525	50RB#0	NV	50	0.00	0.000000	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	-30	-0.90	-0.001066	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	-20	-0.20	-0.000237	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	0	-0.90	-0.001066	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	10	-0.20	-0.000237	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	20	-0.40	-0.000474	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	30	-1.10	-0.001303	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	40	-0.80	-0.000948	±2.5	PASS
Band5	10MHz	16QAM	20600	50RB#0	NV	50	-1.50	-0.001777	±2.5	PASS

The End