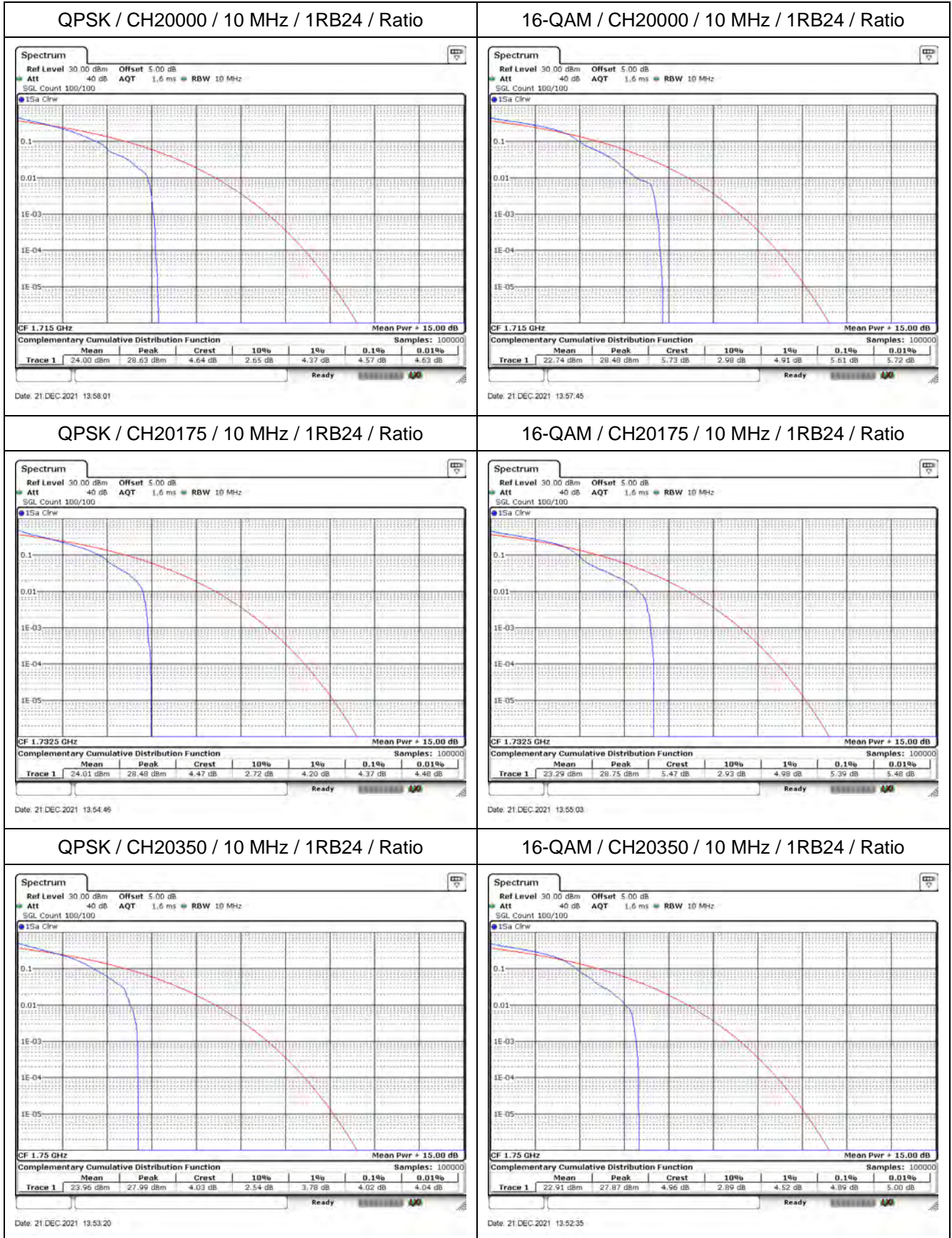
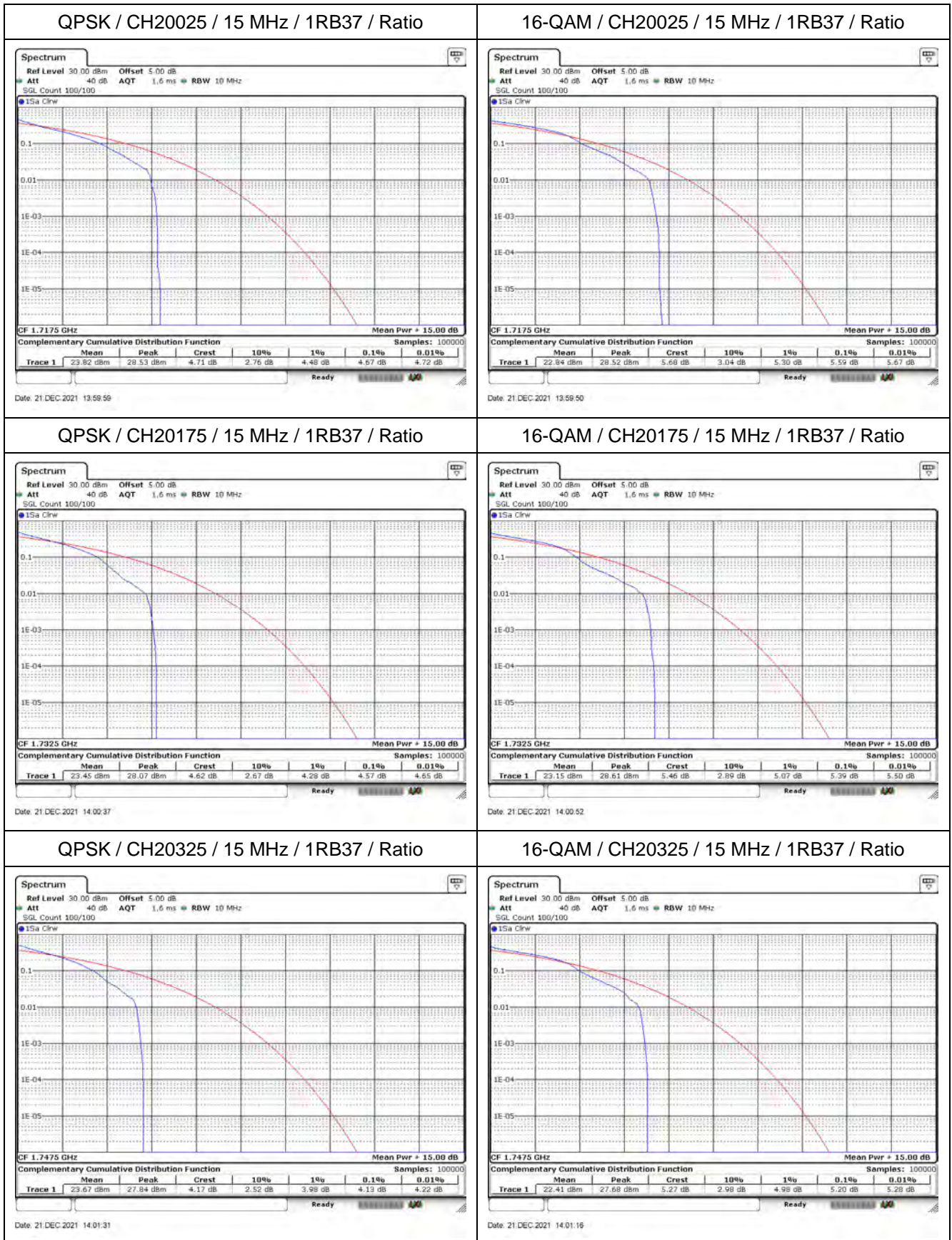


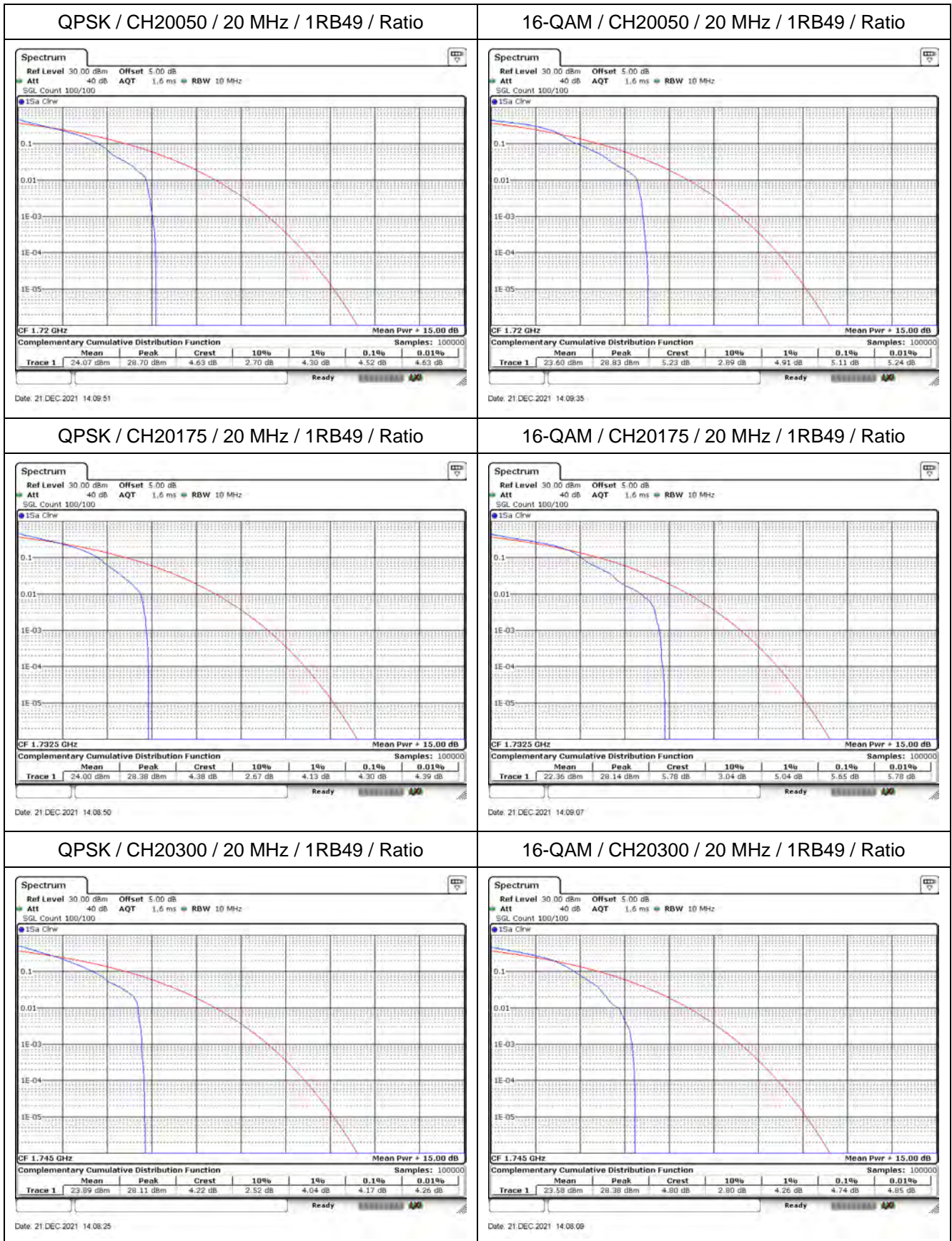
LTE Band 4



LTE Band 4



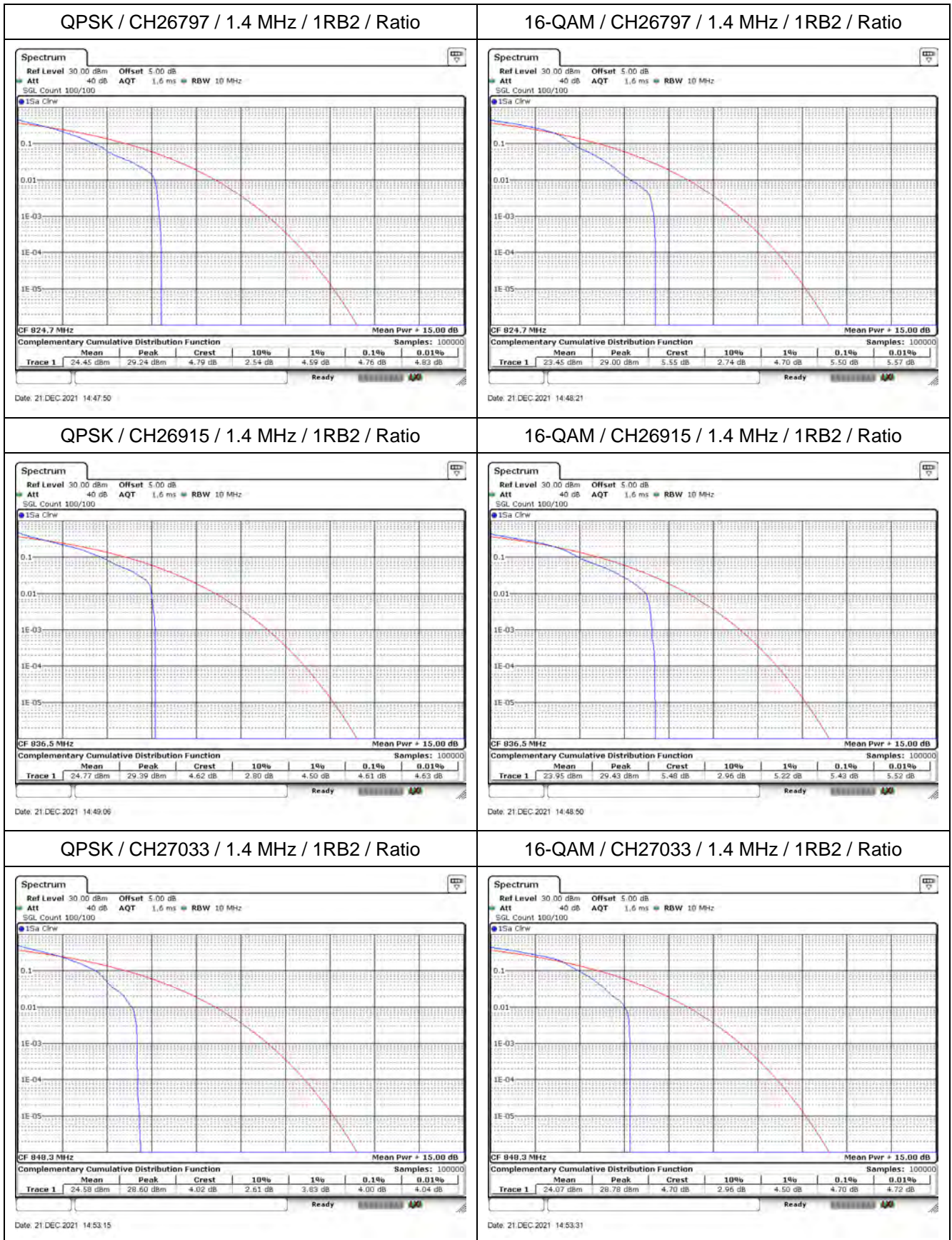
LTE Band 4



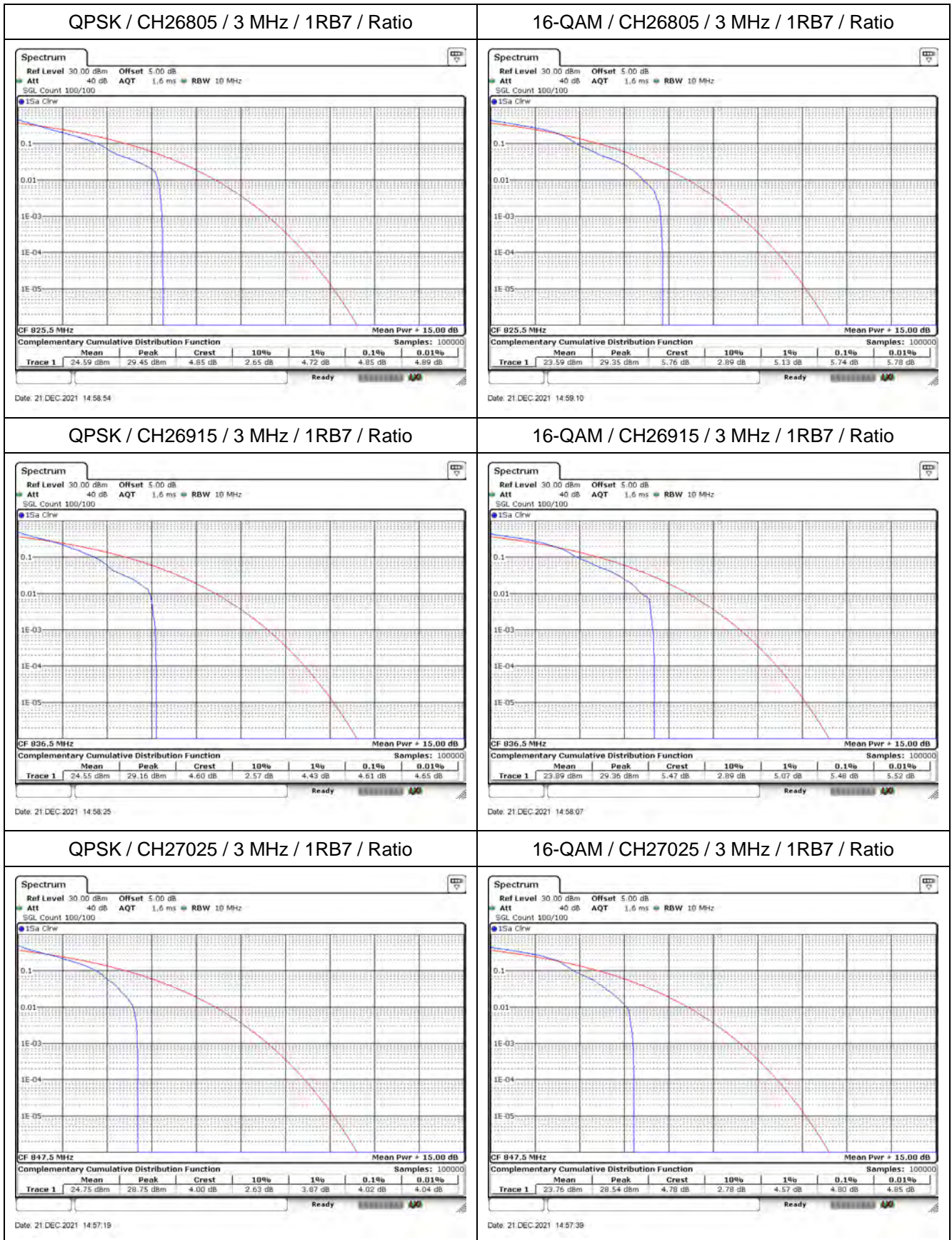
**Mode 3: LTE Band 5/26 (Part 22)**

BW	Channel	Freq. (MHz)	Modulation	Peak (dBm)	Average (dBm)	PAPR (dB)
1.4 MHz	26797	824.7	QPSK	29.24	24.45	4.76
			16-QAM	29.00	23.45	5.50
	26915	836.5	QPSK	29.39	24.77	4.61
			16-QAM	29.43	23.95	5.43
	27033	848.3	QPSK	28.60	24.58	4.00
			16-QAM	28.78	24.07	4.70
3 MHz	26805	825.5	QPSK	29.45	24.59	4.85
			16-QAM	29.35	23.59	5.74
	26915	836.5	QPSK	29.16	24.55	4.61
			16-QAM	29.36	23.89	5.48
	27025	847.5	QPSK	28.75	24.75	4.02
			16-QAM	28.54	23.76	4.80
5 MHz	26815	826.5	QPSK	29.20	24.29	4.89
			16-QAM	29.20	23.54	5.65
	26915	836.5	QPSK	29.12	24.57	4.54
			16-QAM	29.15	23.86	5.30
	27015	846.5	QPSK	28.77	24.51	4.26
			16-QAM	28.68	23.64	5.02
10 MHz	26840	829	QPSK	29.75	24.86	4.83
			16-QAM	29.58	23.57	5.91
	26915	836.5	QPSK	29.40	24.84	4.48
			16-QAM	29.91	24.60	5.24
	26990	844	QPSK	29.37	24.86	4.48
			16-QAM	29.61	24.34	5.26
15 MHz	26865	831.5	QPSK	29.79	24.94	4.80
			16-QAM	29.37	23.52	5.78
	26915	836.5	QPSK	29.10	24.51	4.57
			16-QAM	29.84	24.57	5.24
	26965	841.5	QPSK	29.21	24.62	4.57
			16-QAM	28.86	23.27	5.54

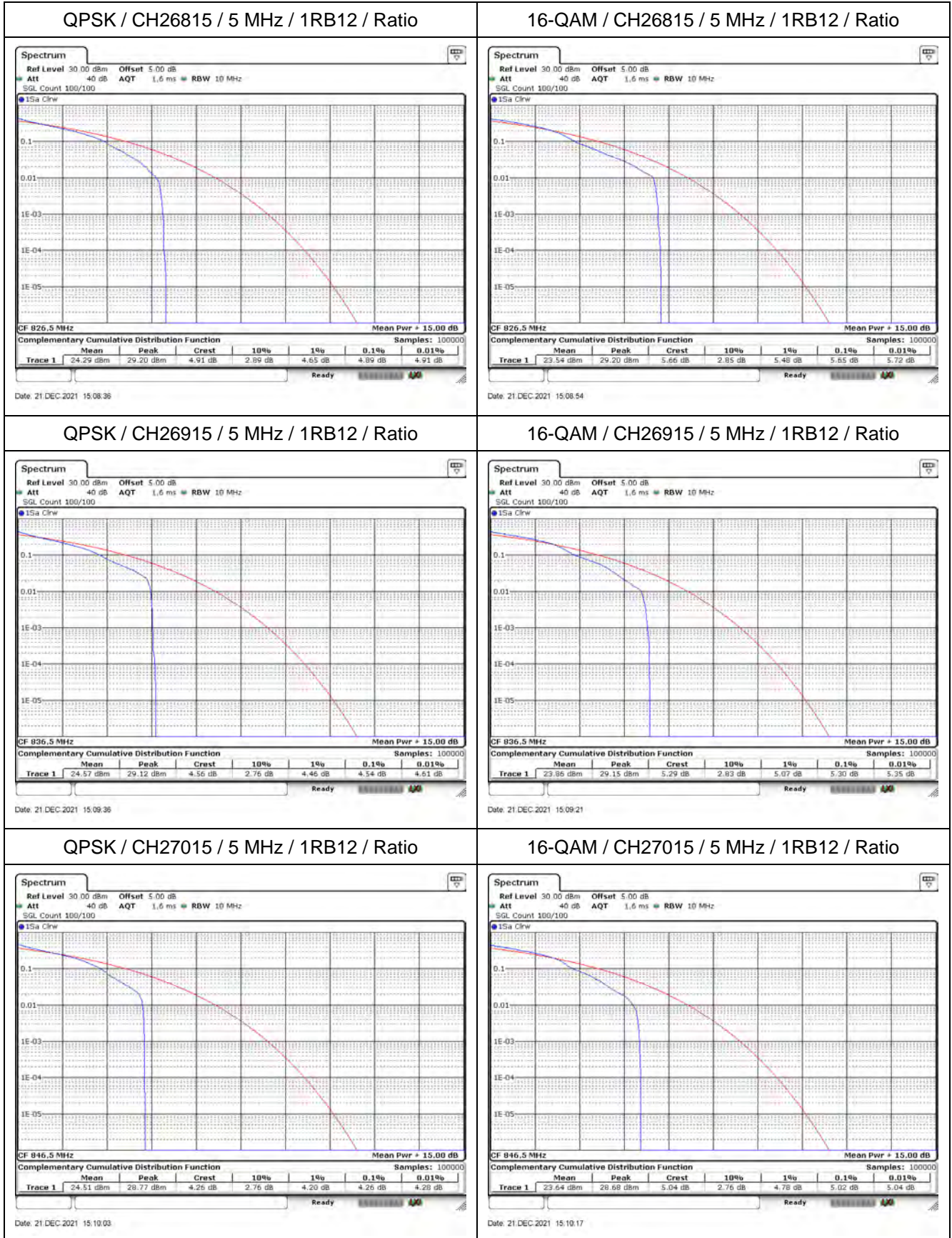
LTE Band 26



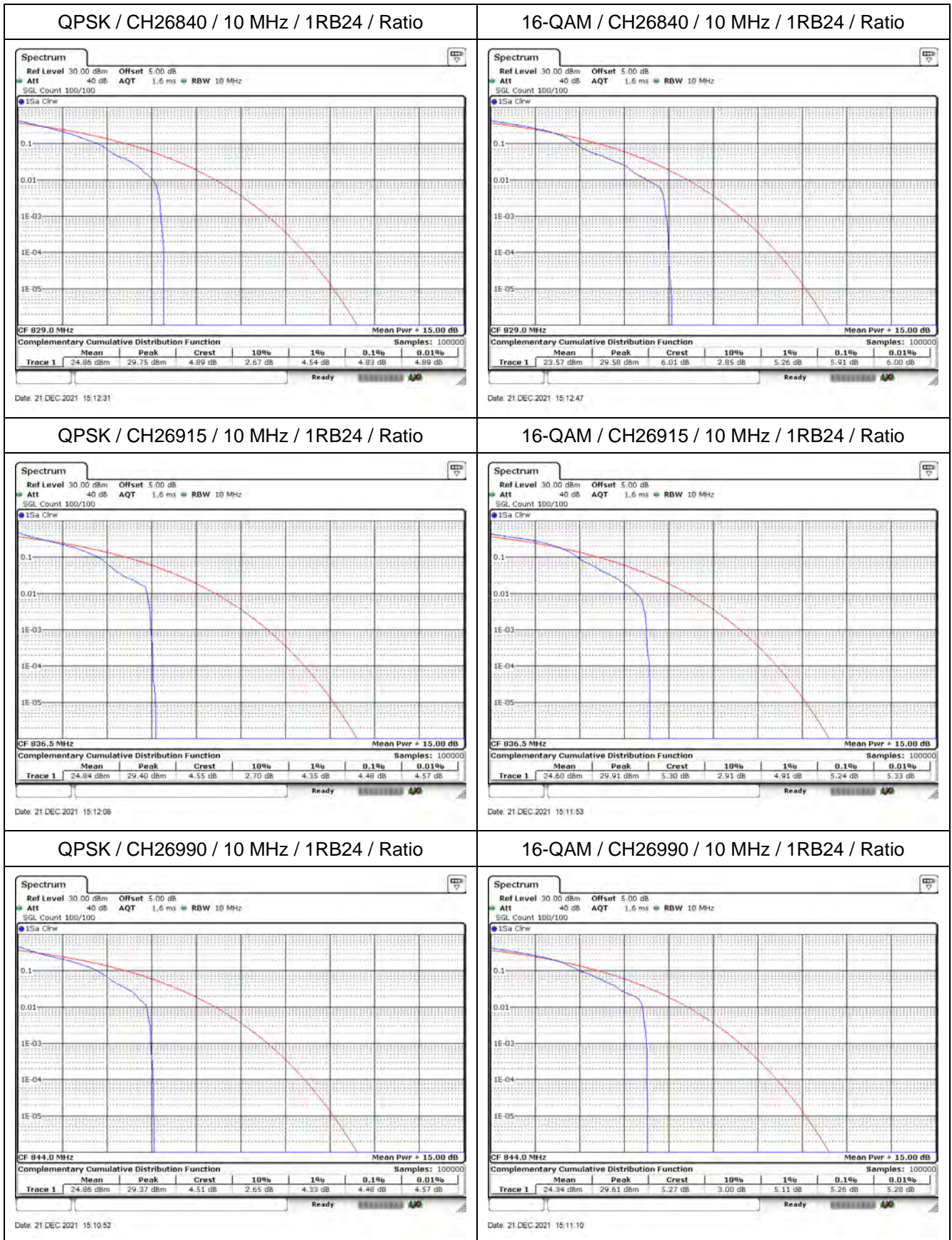
LTE Band 26



LTE Band 26

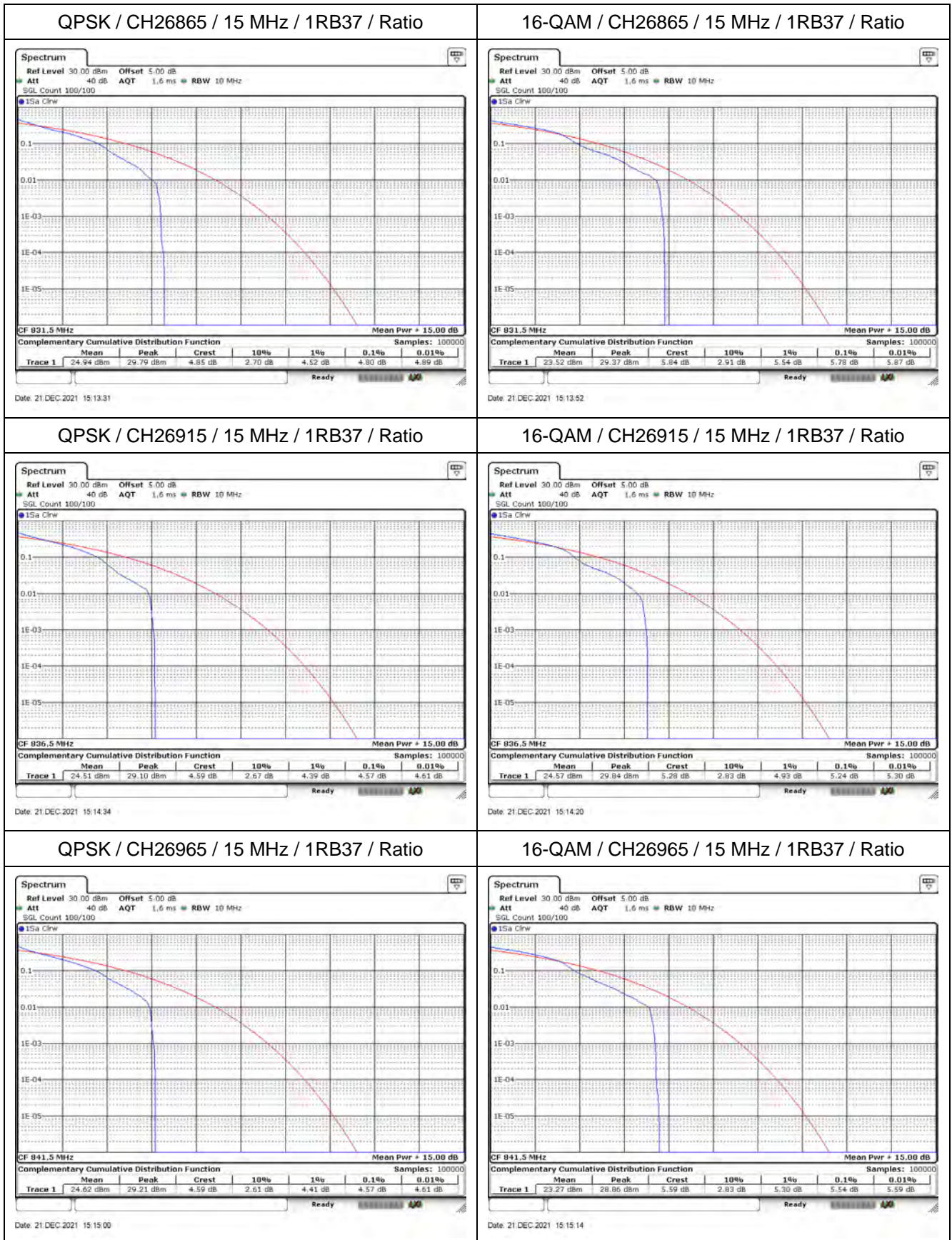


LTE Band 26





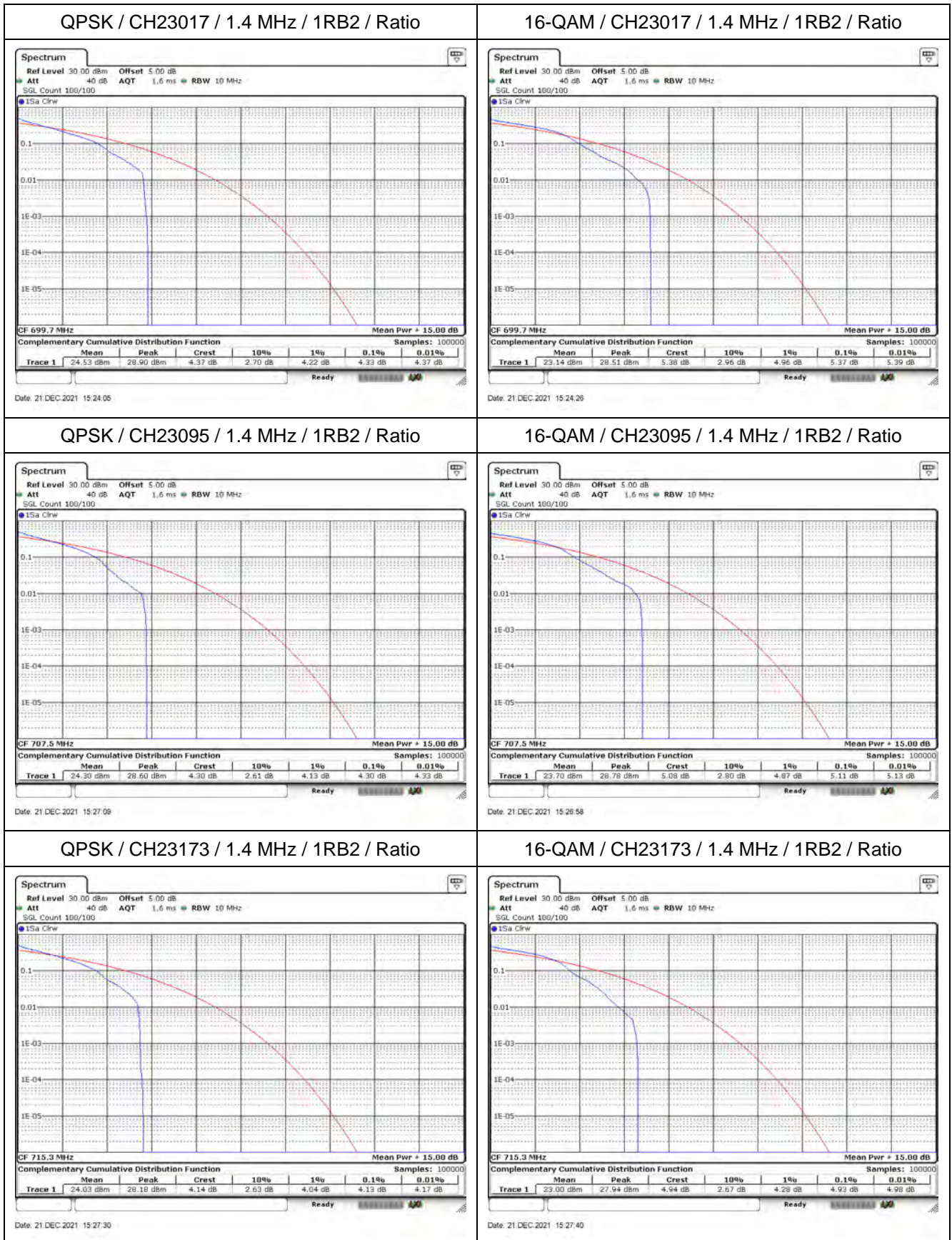
LTE Band 26



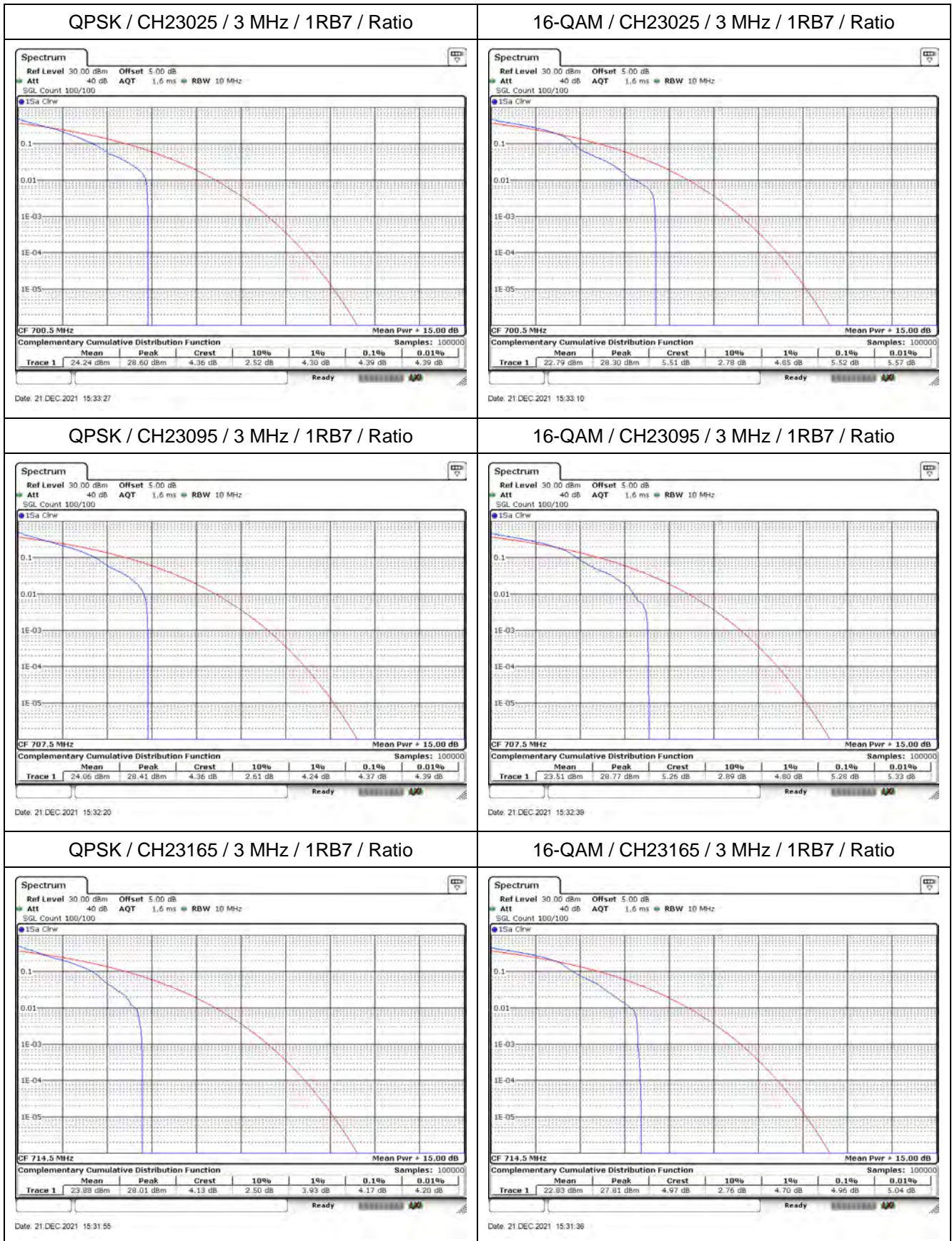
**Mode 4: LTE Band 12**

BW	Channel	Freq. (MHz)	Modulation	Peak (dBm)	Average (dBm)	PAPR (dB)
1.4 MHz	23017	699.7	QPSK	28.90	24.53	4.33
			16-QAM	28.51	23.14	5.37
	23097	707.5	QPSK	28.60	24.30	4.30
			16-QAM	28.78	23.70	5.11
	23173	715.3	QPSK	28.18	24.03	4.13
			16-QAM	27.94	23.00	4.93
3 MHz	23025	700.5	QPSK	28.60	24.24	4.39
			16-QAM	28.30	22.79	5.52
	23095	707.5	QPSK	28.41	24.06	4.37
			16-QAM	28.77	23.51	5.28
	23165	714.5	QPSK	28.01	23.88	4.17
			16-QAM	27.81	22.83	4.96
5 MHz	23035	701.5	QPSK	28.61	24.24	4.37
			16-QAM	28.22	22.84	5.39
	23095	707.5	QPSK	28.44	24.11	4.33
			16-QAM	28.43	23.44	4.96
	23155	713.5	QPSK	28.15	23.91	4.24
			16-QAM	28.02	22.86	5.20
10 MHz	23060	704	QPSK	28.55	24.17	4.35
			16-QAM	28.54	23.21	5.30
	23095	707.5	QPSK	28.47	24.16	4.26
			16-QAM	28.68	23.39	5.24
	23130	711	QPSK	28.46	24.08	4.35
			16-QAM	28.04	22.77	5.22

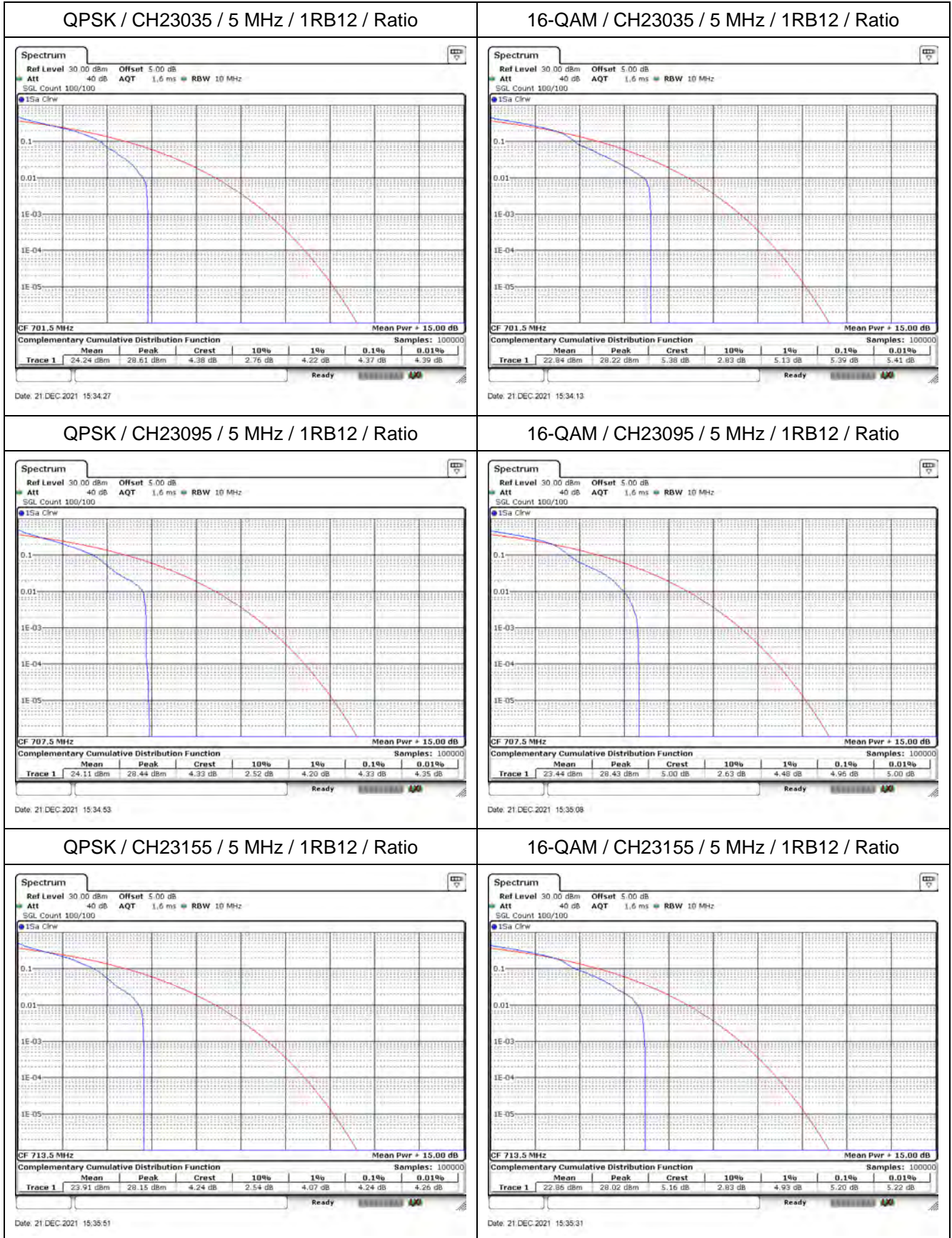
LTE Band 12



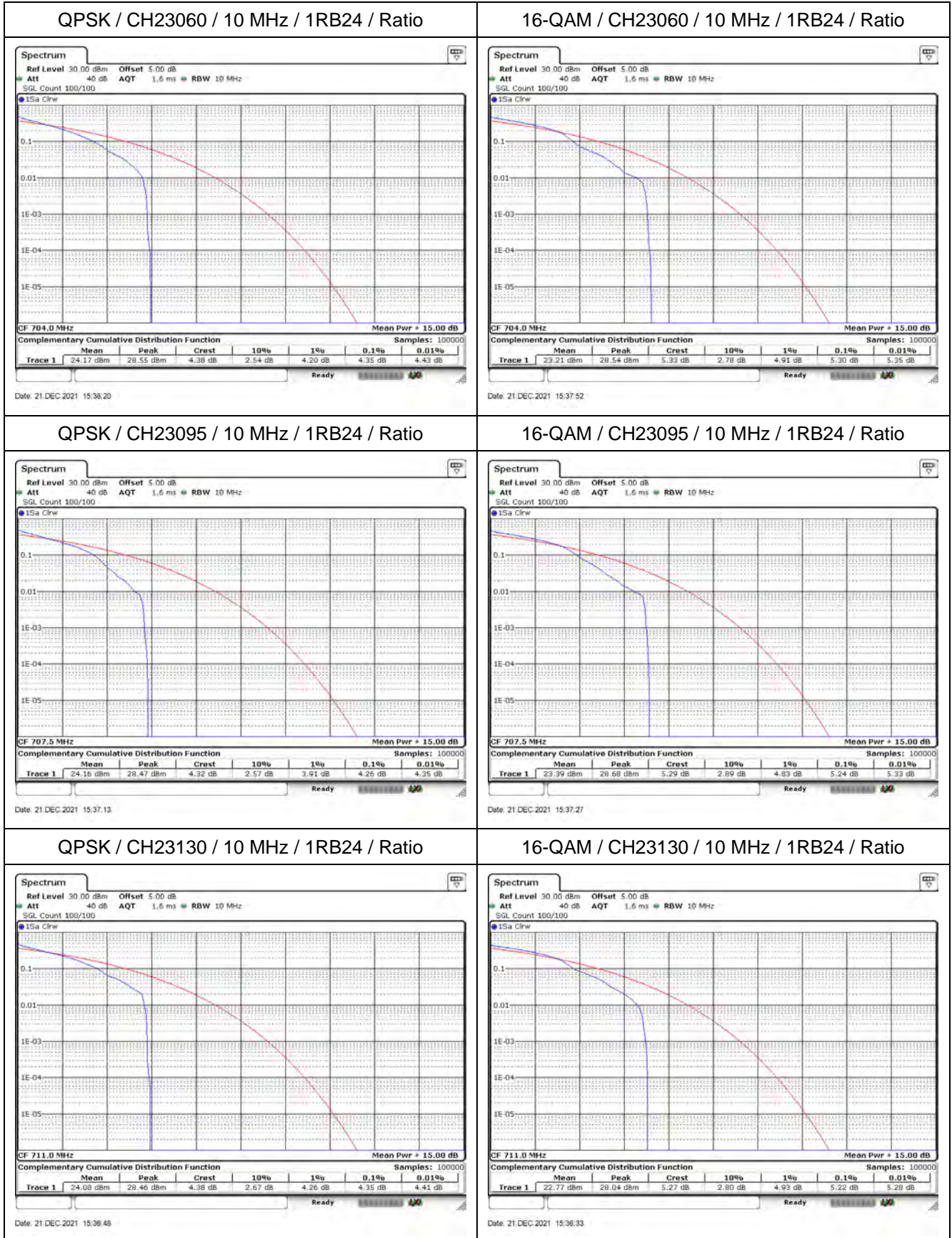
LTE Band 12



LTE Band 12



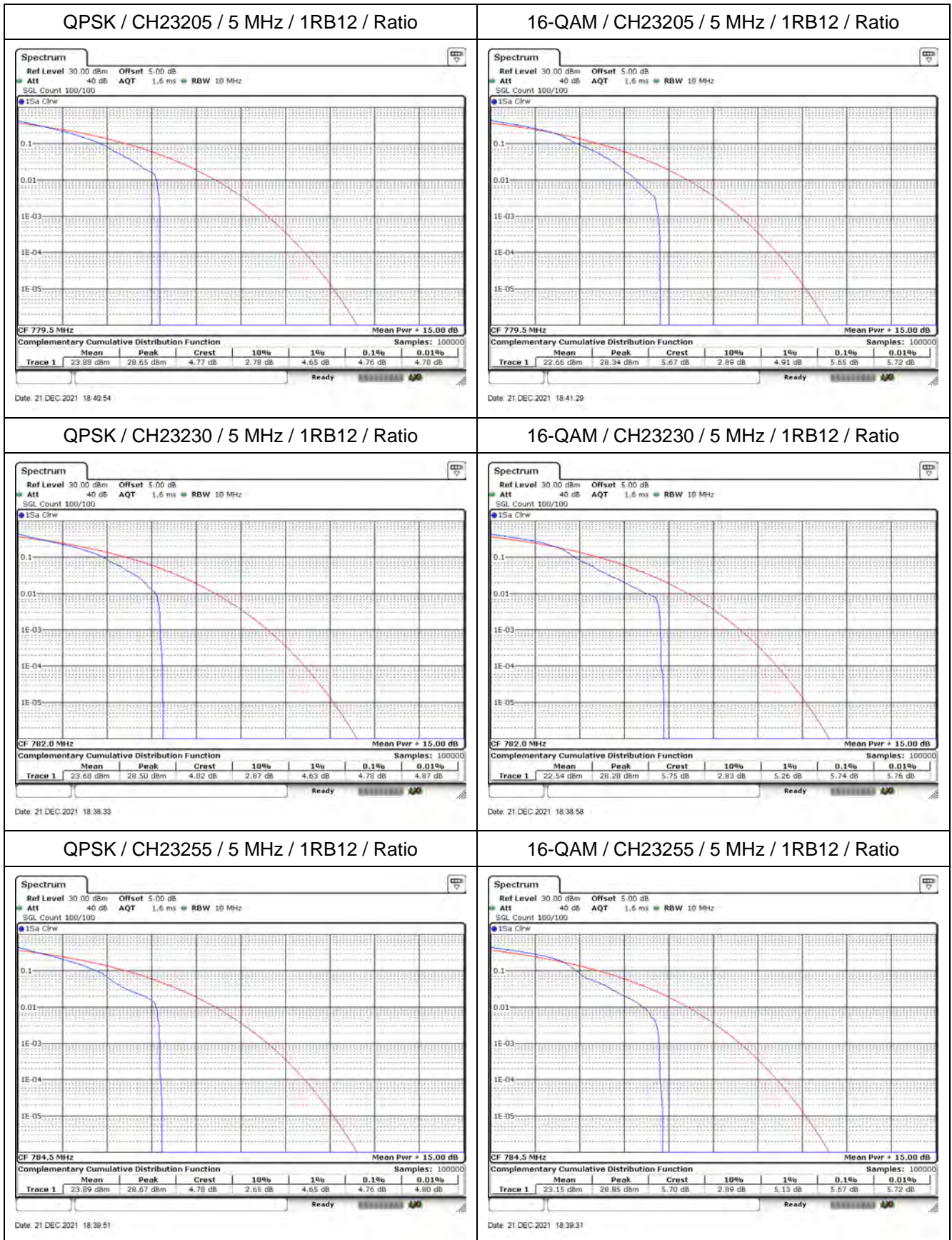
LTE Band 12



**Mode 5: LTE Band 13**

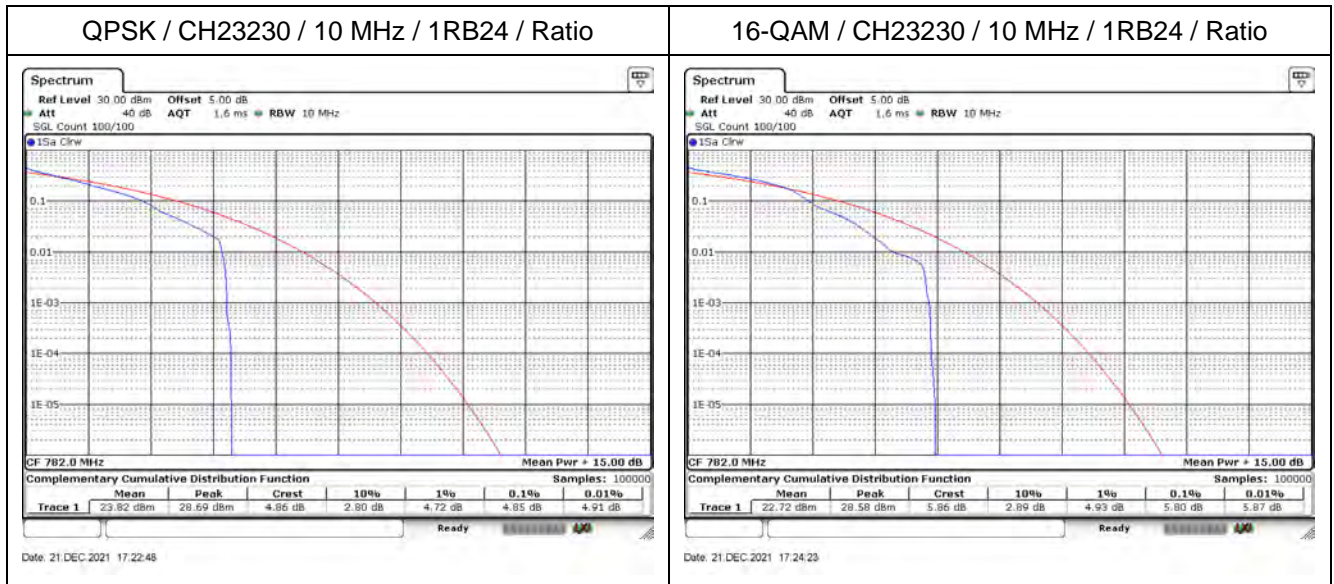
BW	Channel	Freq. (MHz)	Modulation	Peak (dBm)	Average (dBm)	PAPR (dB)
5 MHz	23205	779.5	QPSK	28.65	23.88	4.76
			16-QAM	28.34	22.66	5.65
	23230	782	QPSK	28.50	23.68	4.78
			16-QAM	28.28	22.54	5.74
	23255	784.5	QPSK	28.67	23.89	4.76
			16-QAM	28.85	23.15	5.67
10 MHz	23230	782	QPSK	28.69	23.82	4.85
			16-QAM	28.58	22.72	5.80

LTE Band 13





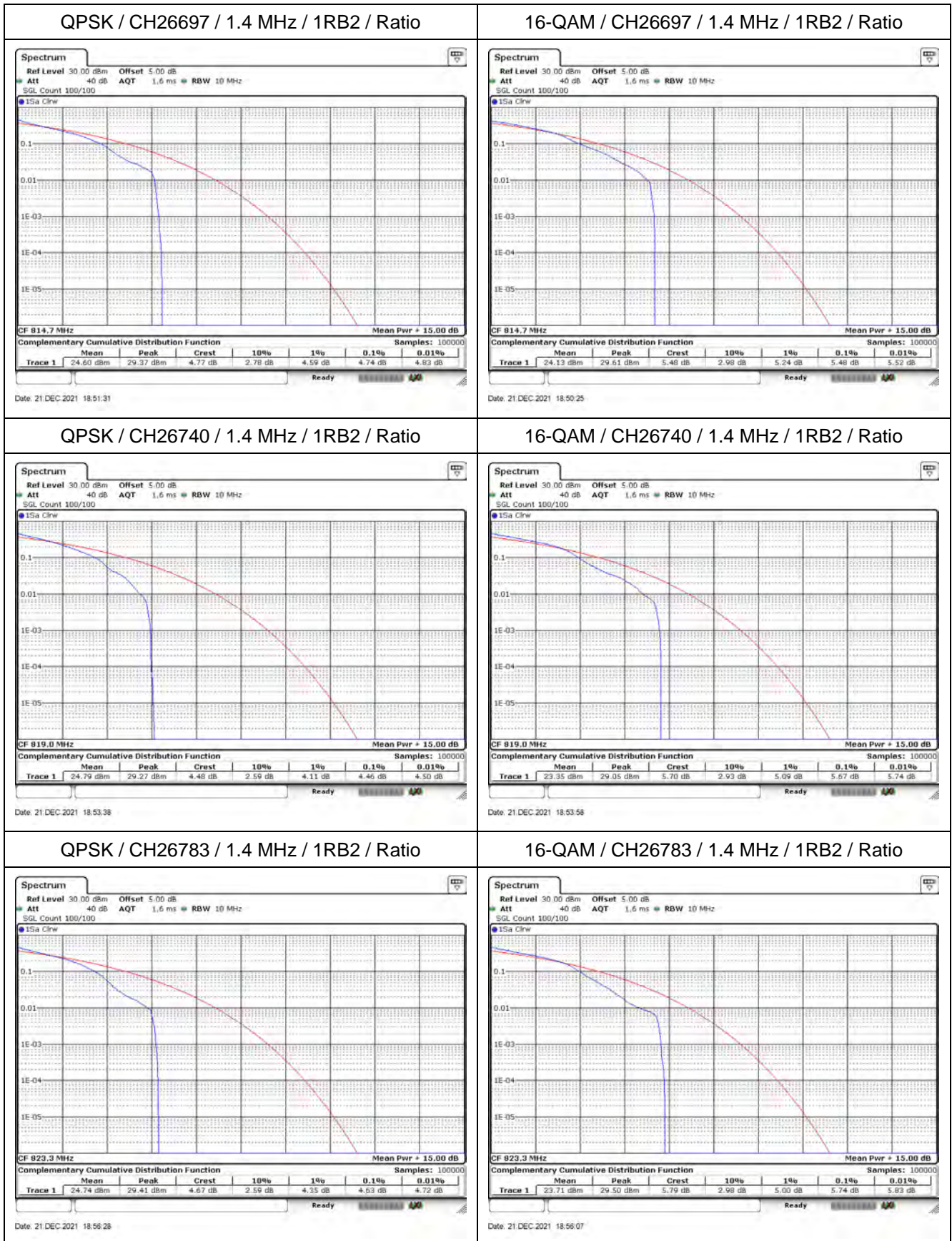
LTE Band 13



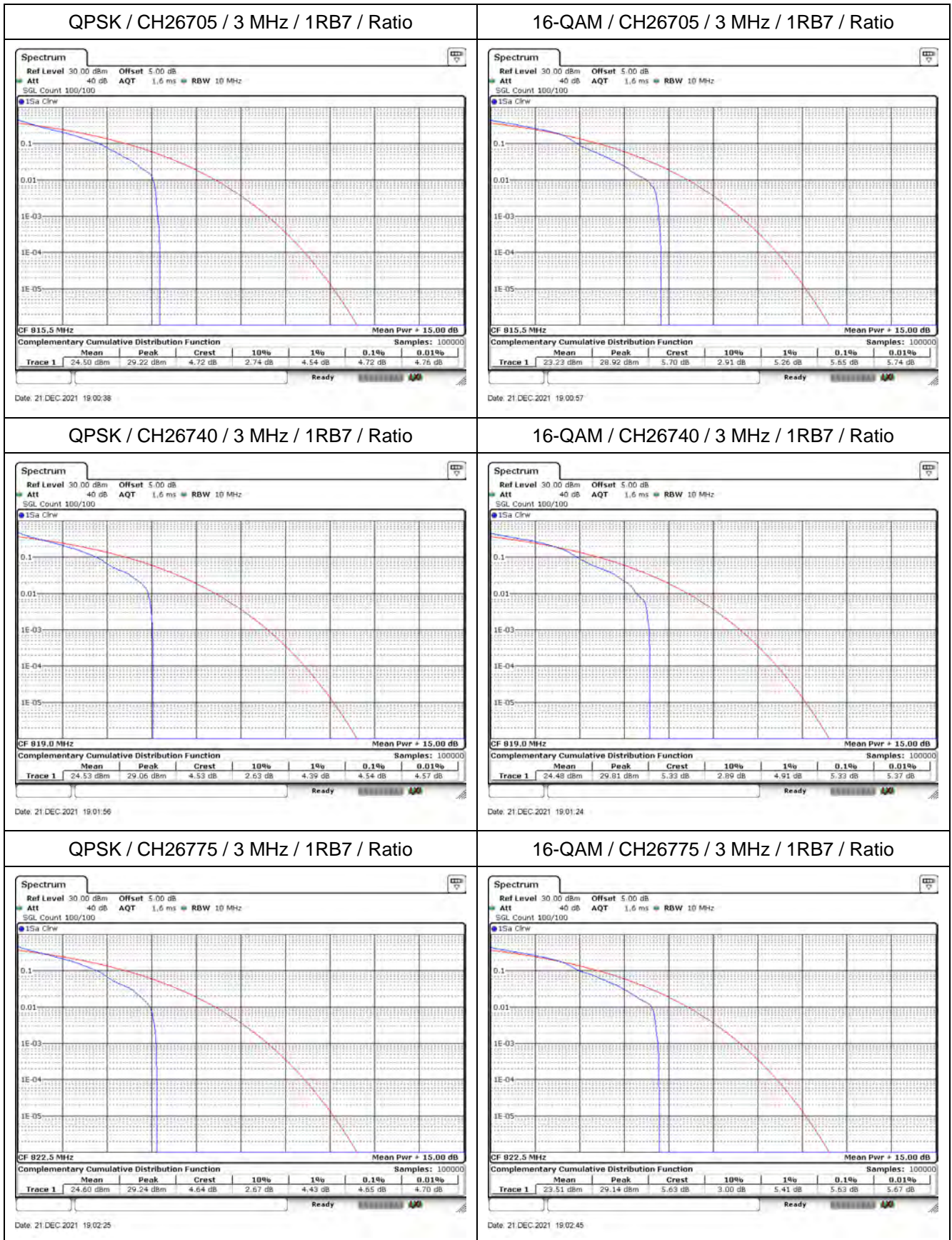
**Mode 6: LTE Band 26 (Part 90)**

BW	Channel	Freq. (MHz)	Modulation	Peak (dBm)	Average (dBm)	PAPR (dB)
1.4 MHz	26697	814.7	QPSK	29.37	24.60	4.74
			16-QAM	29.61	24.13	5.48
	26740	819	QPSK	29.27	24.79	4.46
			16-QAM	29.05	23.35	5.67
	26783	823.3	QPSK	29.41	24.74	4.63
			16-QAM	29.50	23.71	5.74
3 MHz	26705	815.5	QPSK	29.22	24.50	4.72
			16-QAM	28.92	23.23	5.65
	26740	819	QPSK	29.06	24.53	4.54
			16-QAM	29.81	24.48	5.33
	26775	822.5	QPSK	29.24	24.60	4.65
			16-QAM	29.14	23.51	5.63
5 MHz	26715	816.5	QPSK	28.93	24.19	4.76
			16-QAM	28.55	22.86	5.67
	26740	819	QPSK	29.17	24.55	4.61
			16-QAM	28.89	23.29	5.59
	26765	821.5	QPSK	28.96	24.32	4.63
			16-QAM	28.60	22.79	5.78
10 MHz	26740	819	QPSK	29.29	24.70	4.57
			16-QAM	29.24	23.85	5.33

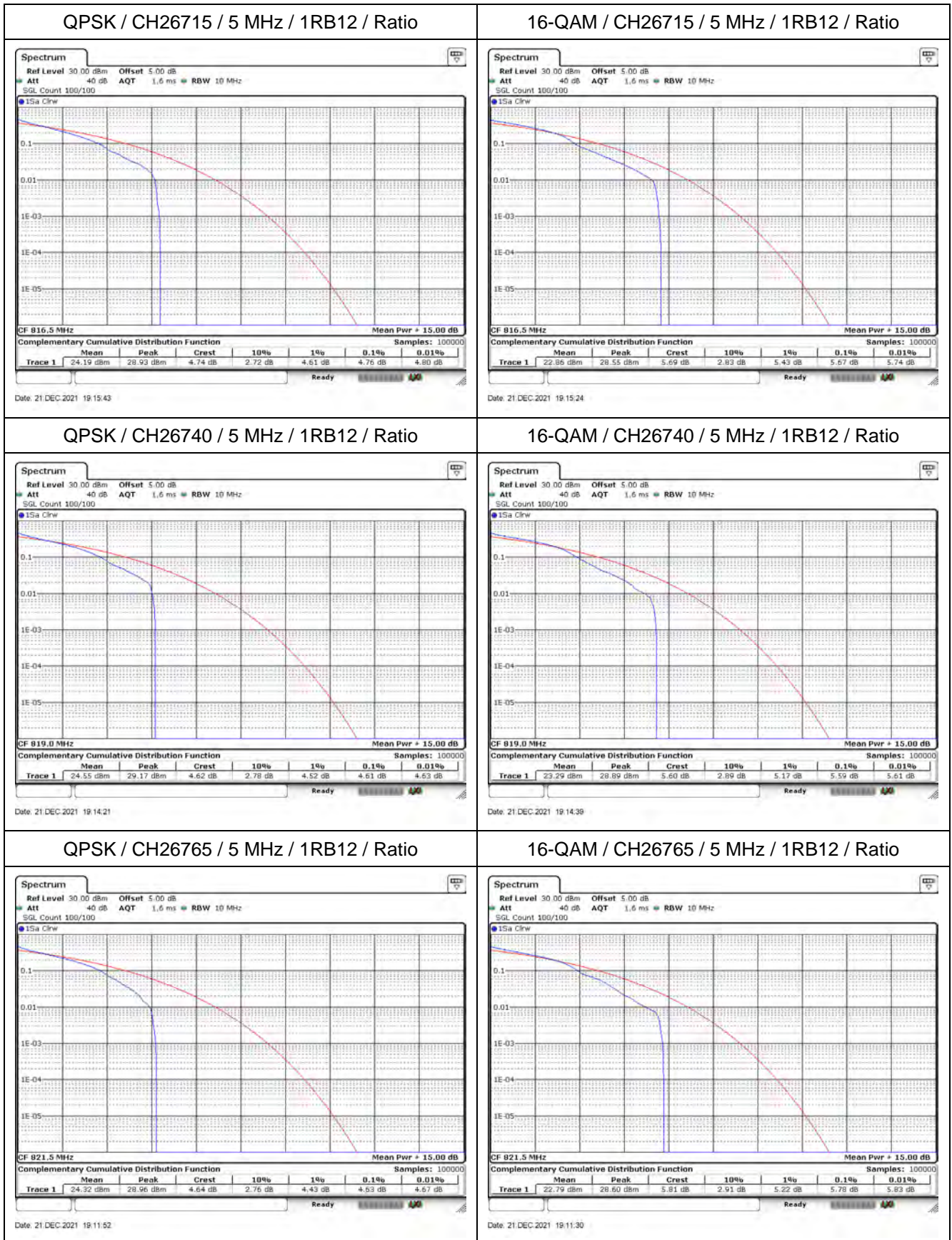
LTE Band 26



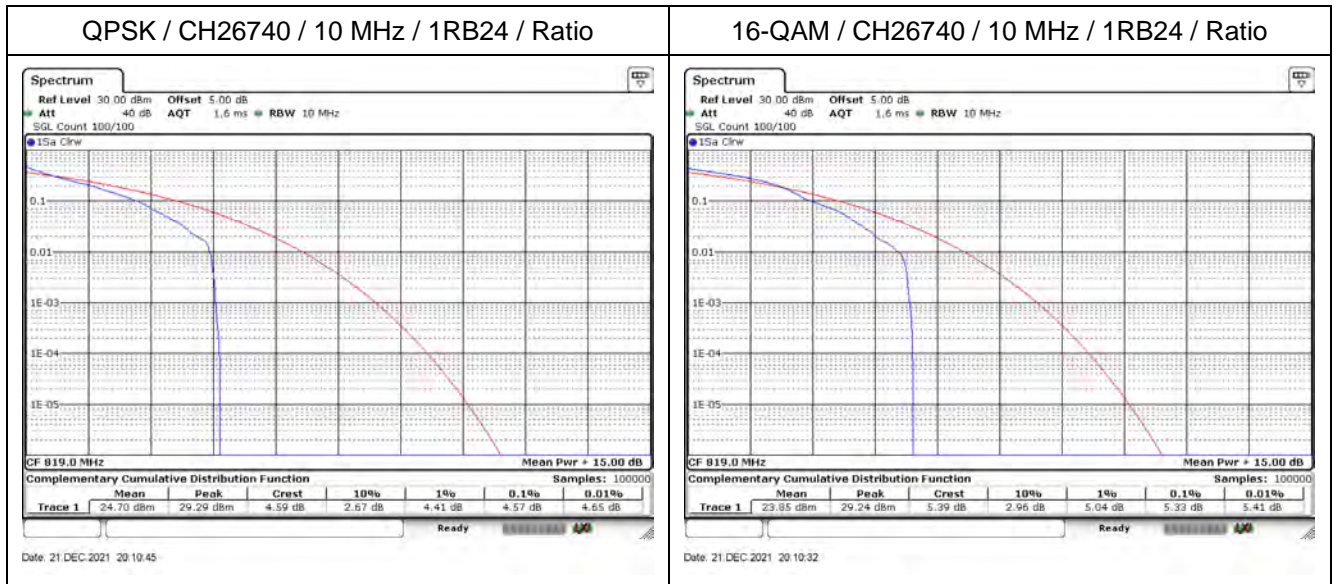
LTE Band 26



LTE Band 26



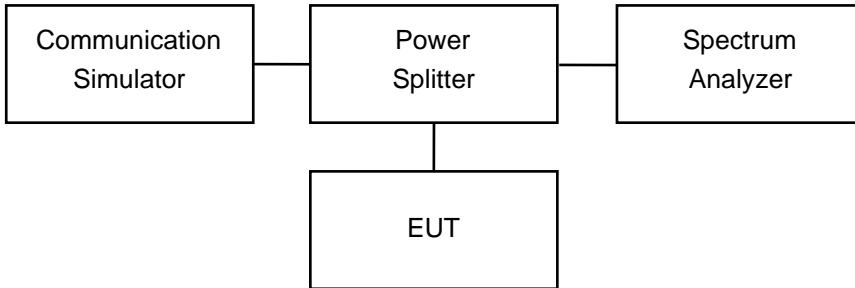
LTE Band 26



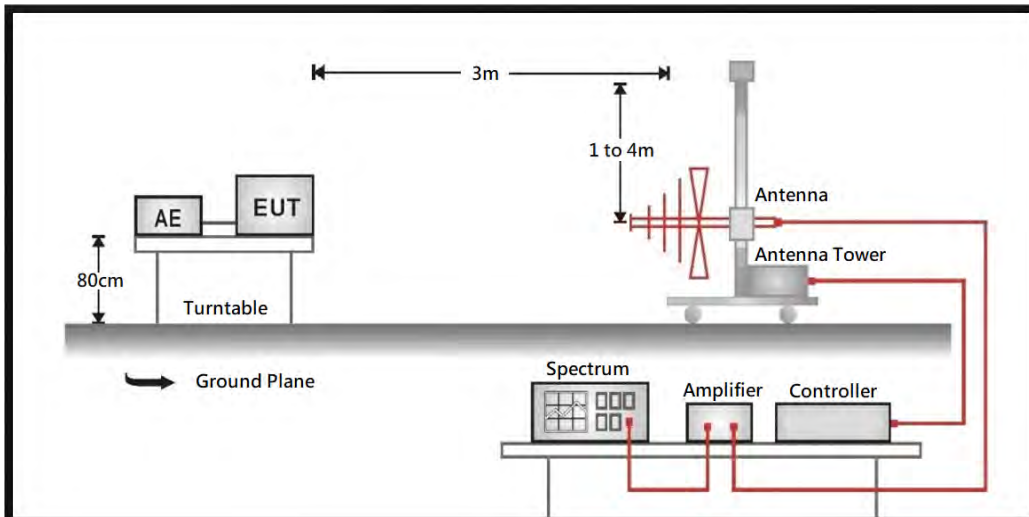
## 6. Spurious Emissions

### 6.1. Test Setup

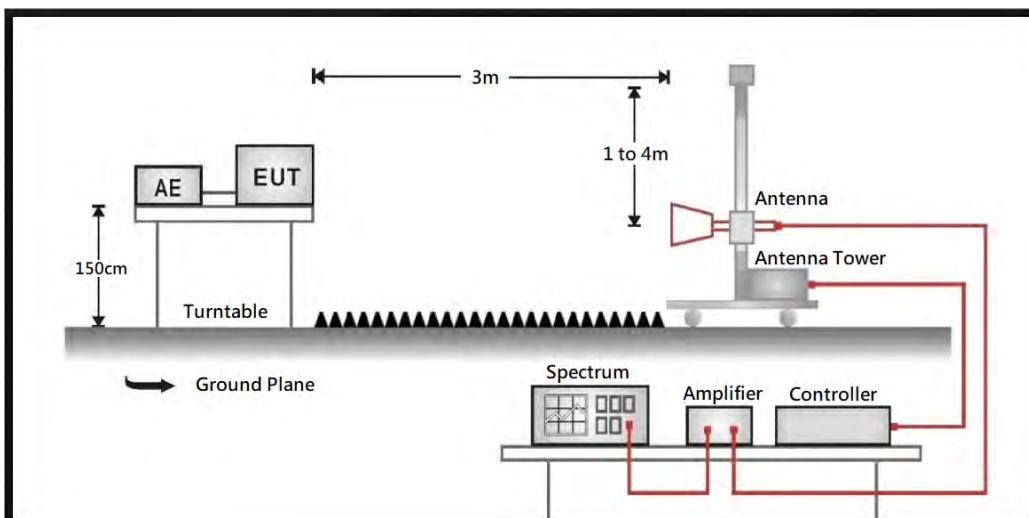
Conducted Spurious Measurement



Radiated Spurious Measurement: Below 1GHz



Radiated Spurious Measurement: Above 1GHz



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## 6.2. Test Procedure

### **Conducted Spurious Measurement:**

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. The path loss was compensated to the results for each measurement. The resolution bandwidth of the spectrum analyzer was set at 1 MHz, sufficient scans were taken to show the out of band Emission if any up to 10<sup>th</sup> harmonic.

### **Radiated Spurious Measurement:**

The EUT and its simulators are placed on a turn table which is 0.8 or 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations. The resolution bandwidth of the spectrum analyzer was set at 1 MHz, sufficient scans were taken to show the out of band Emission if any up to 10th harmonic. Taking the record of maximum spurious emission.

## 6.3. Test Methodology and Reference Procedures

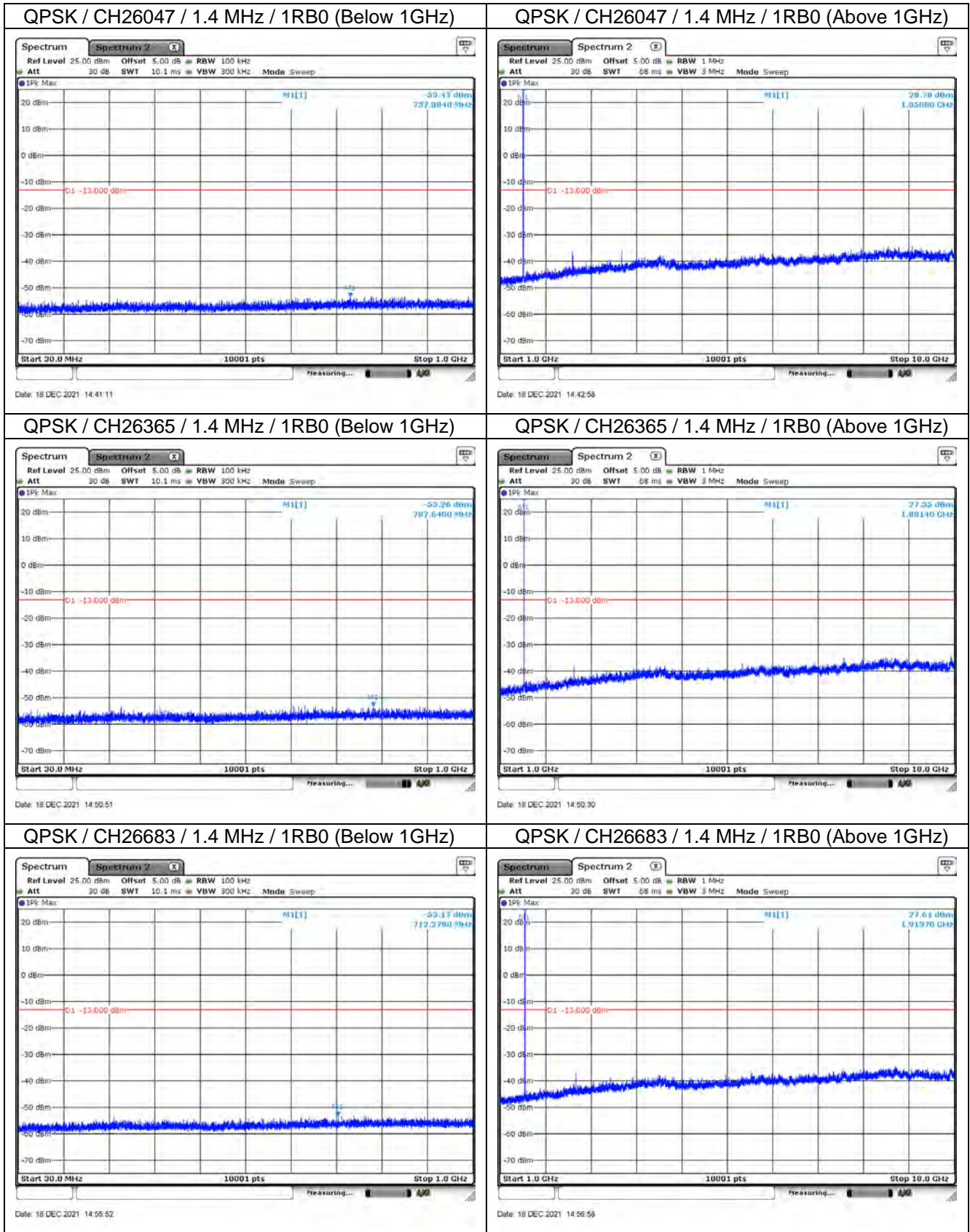
KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI C63.26-2015

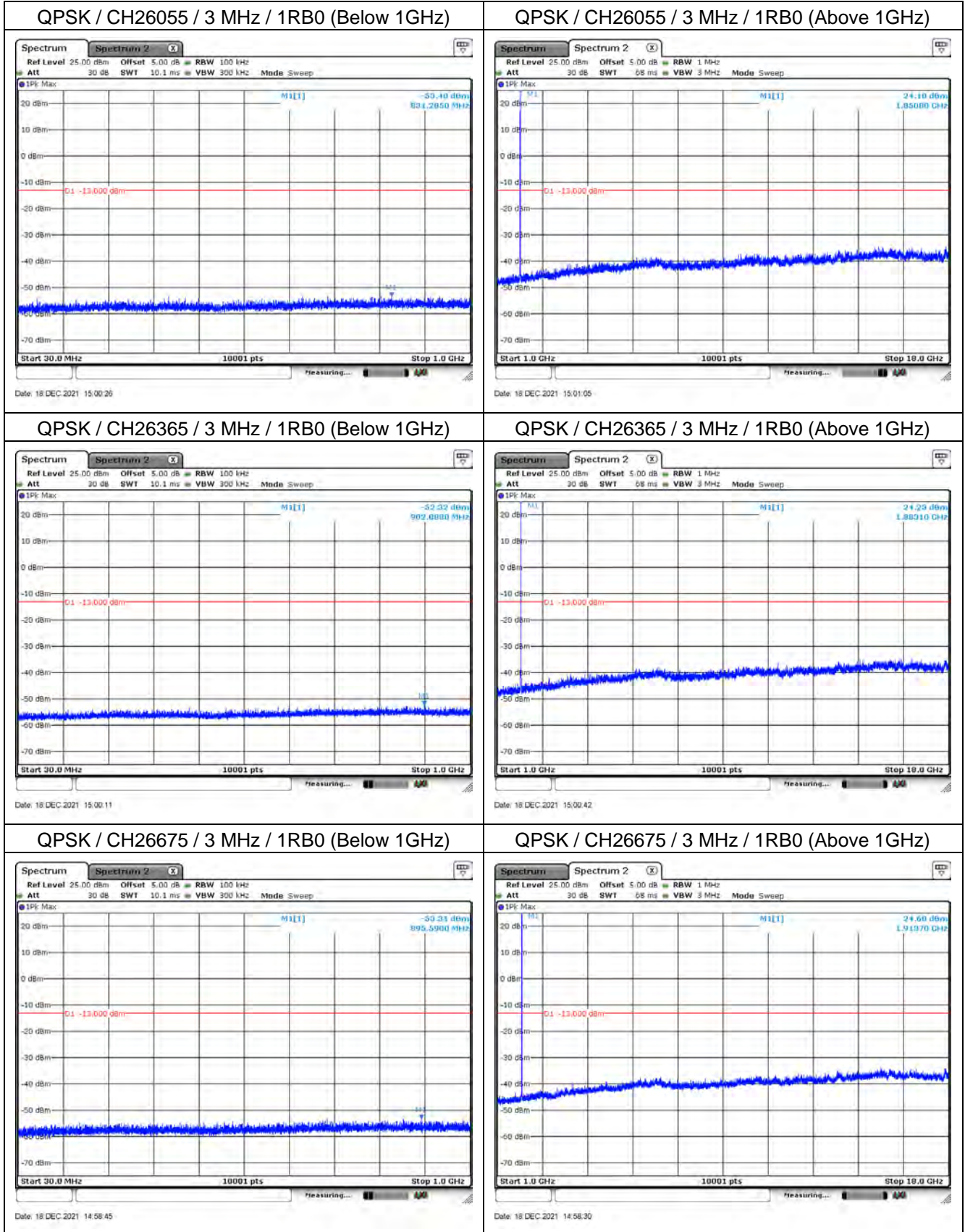


### 6.4. Test Result of Conducted Spurious Emission

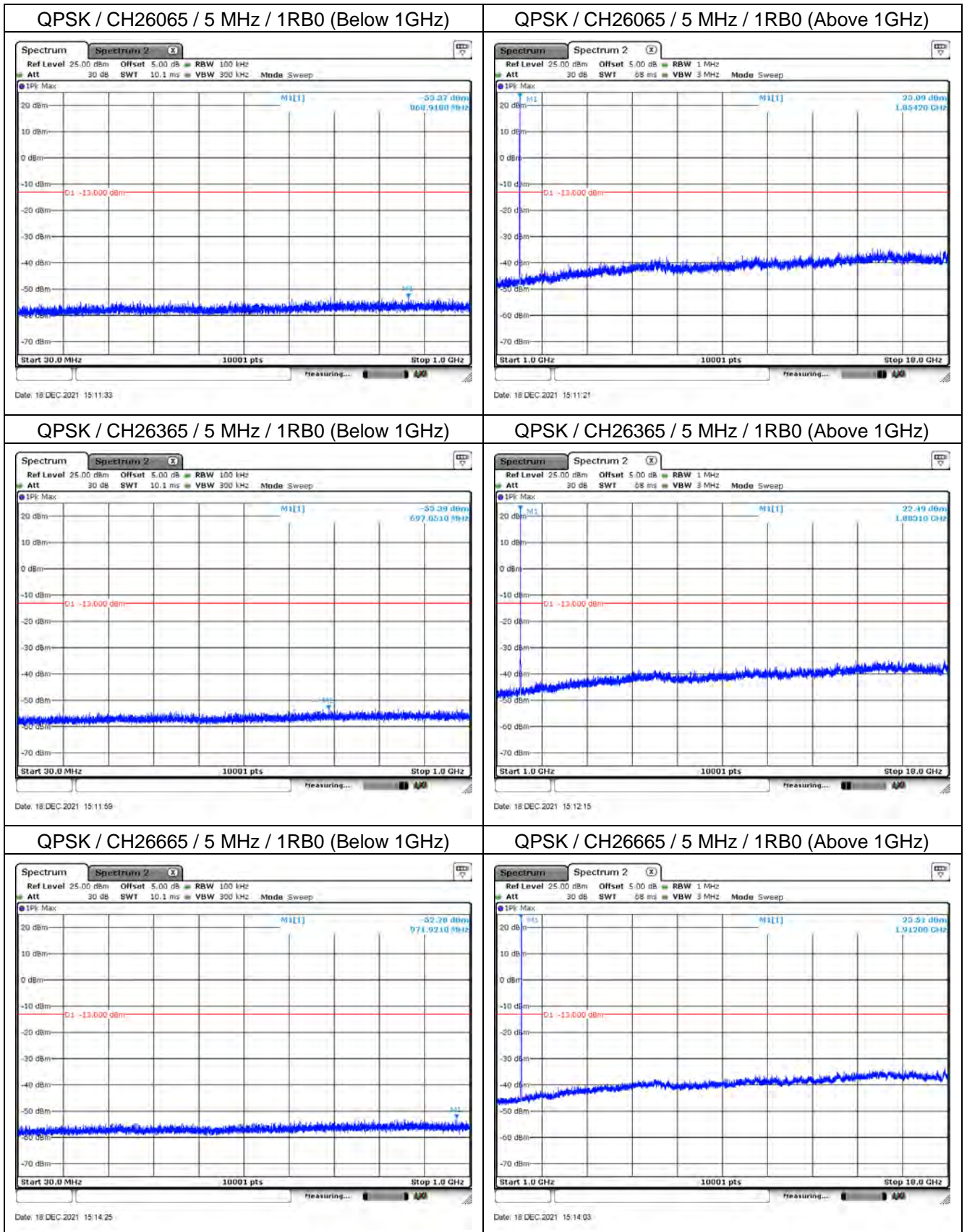
Mode 1: LTE Band 2/25  
 LTE Band 25



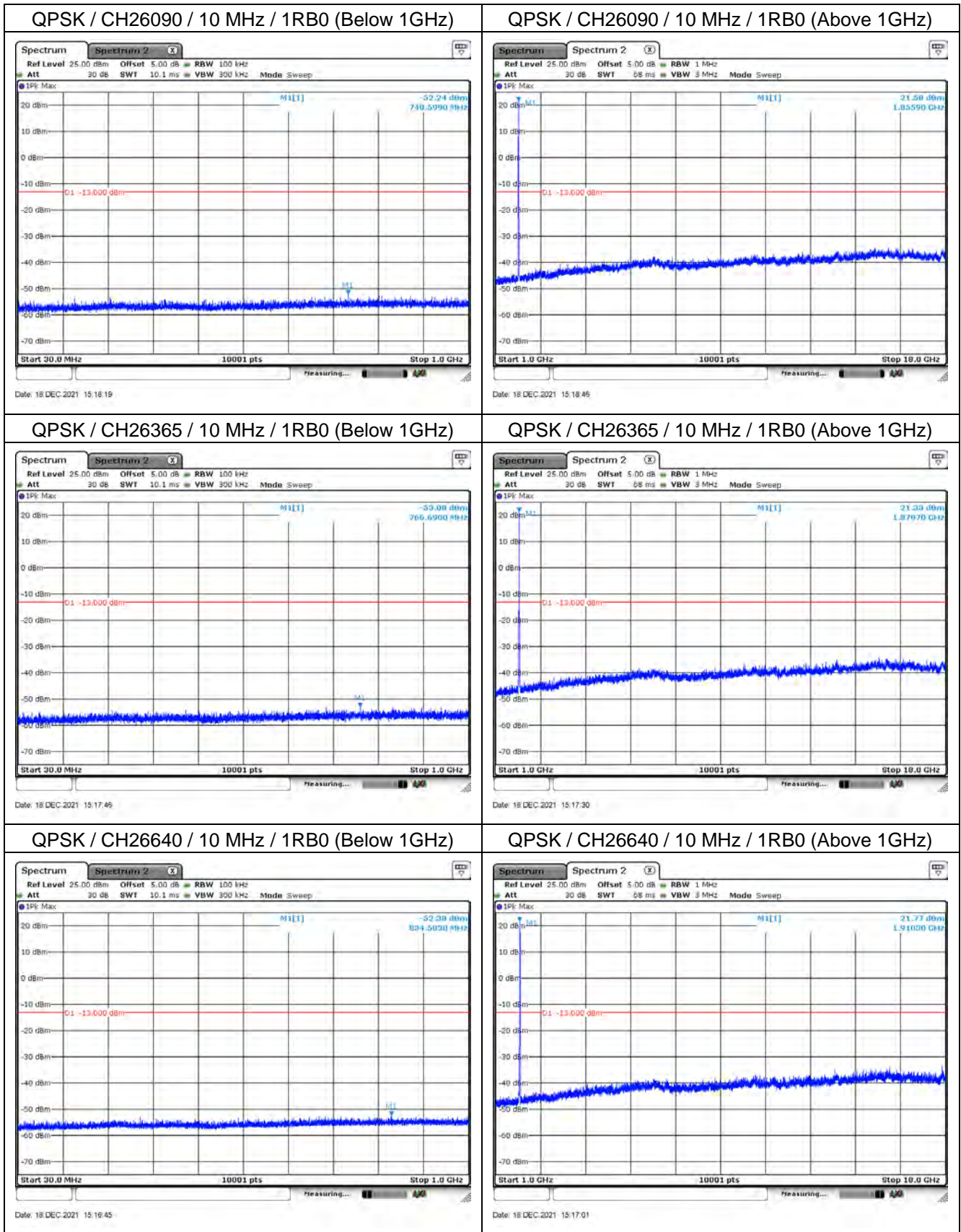
LTE Band 25



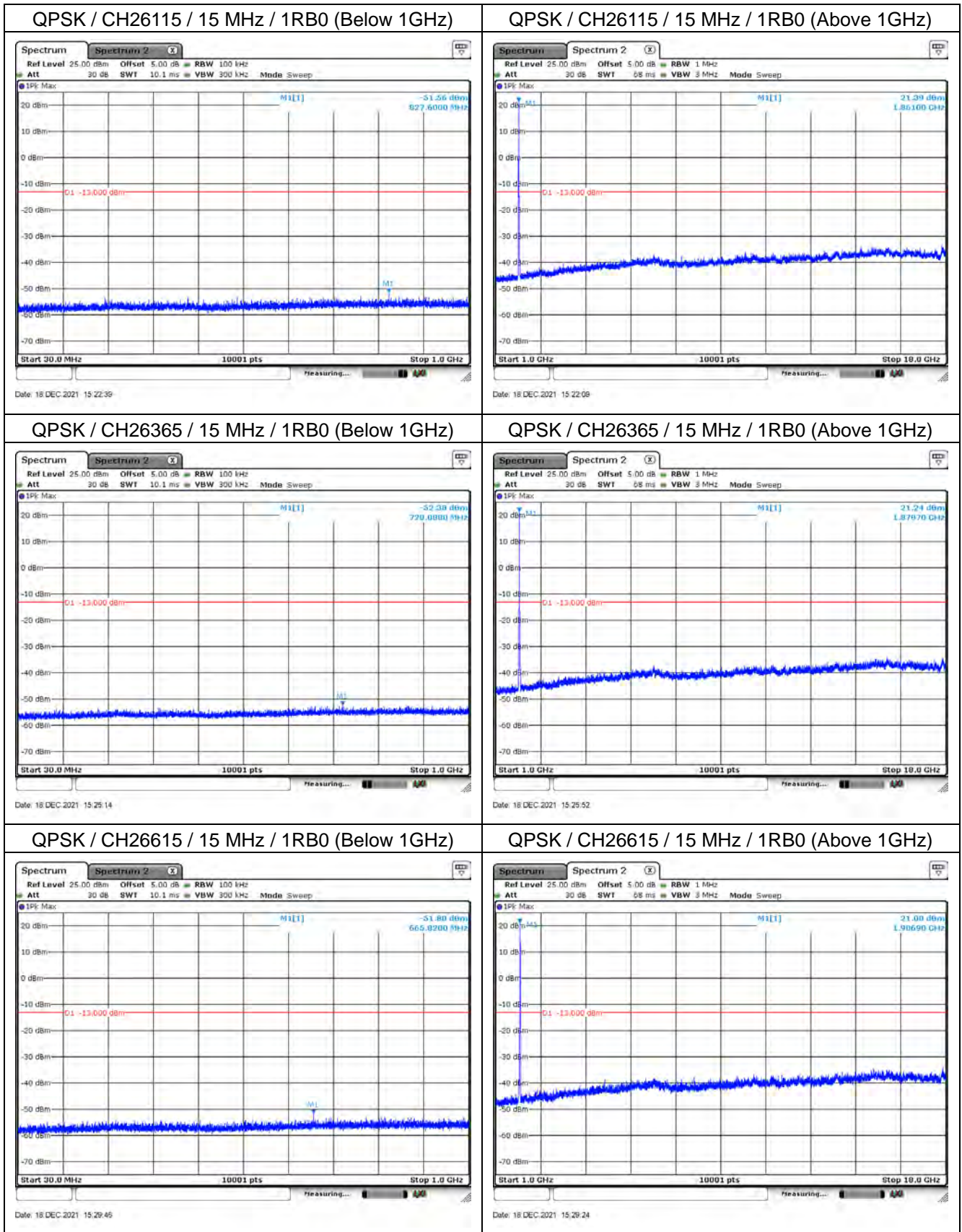
LTE Band 25



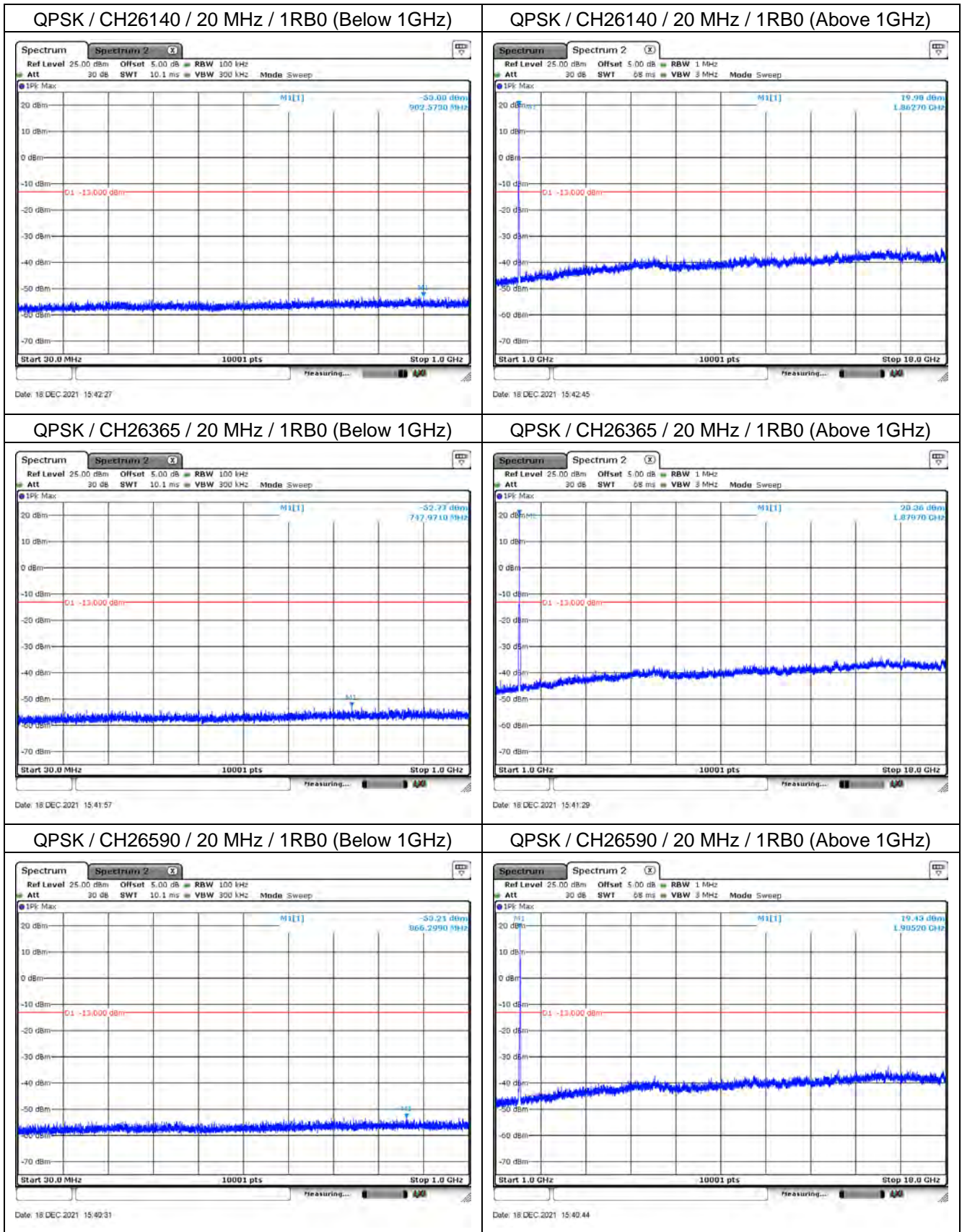
LTE Band 25



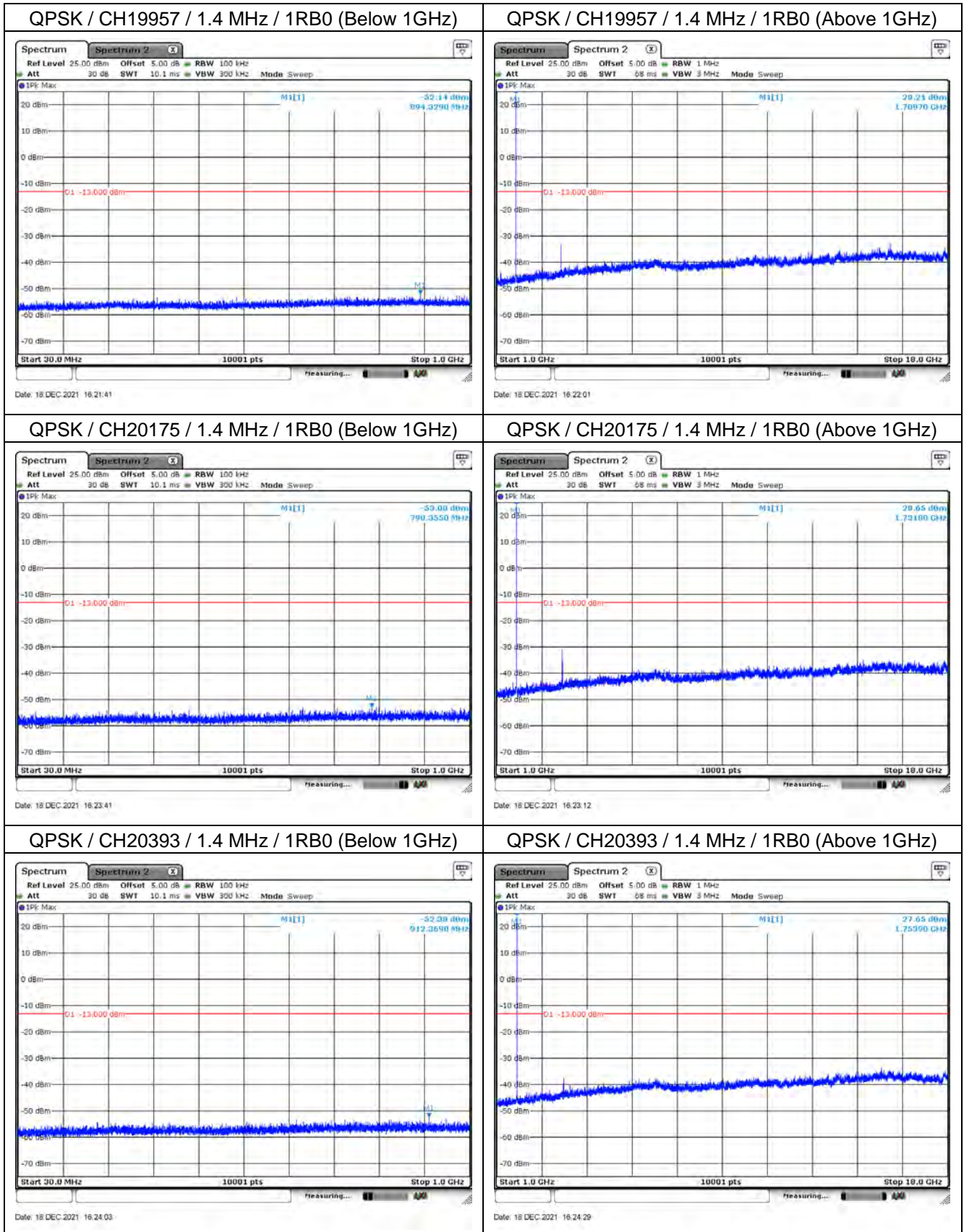
LTE Band 25



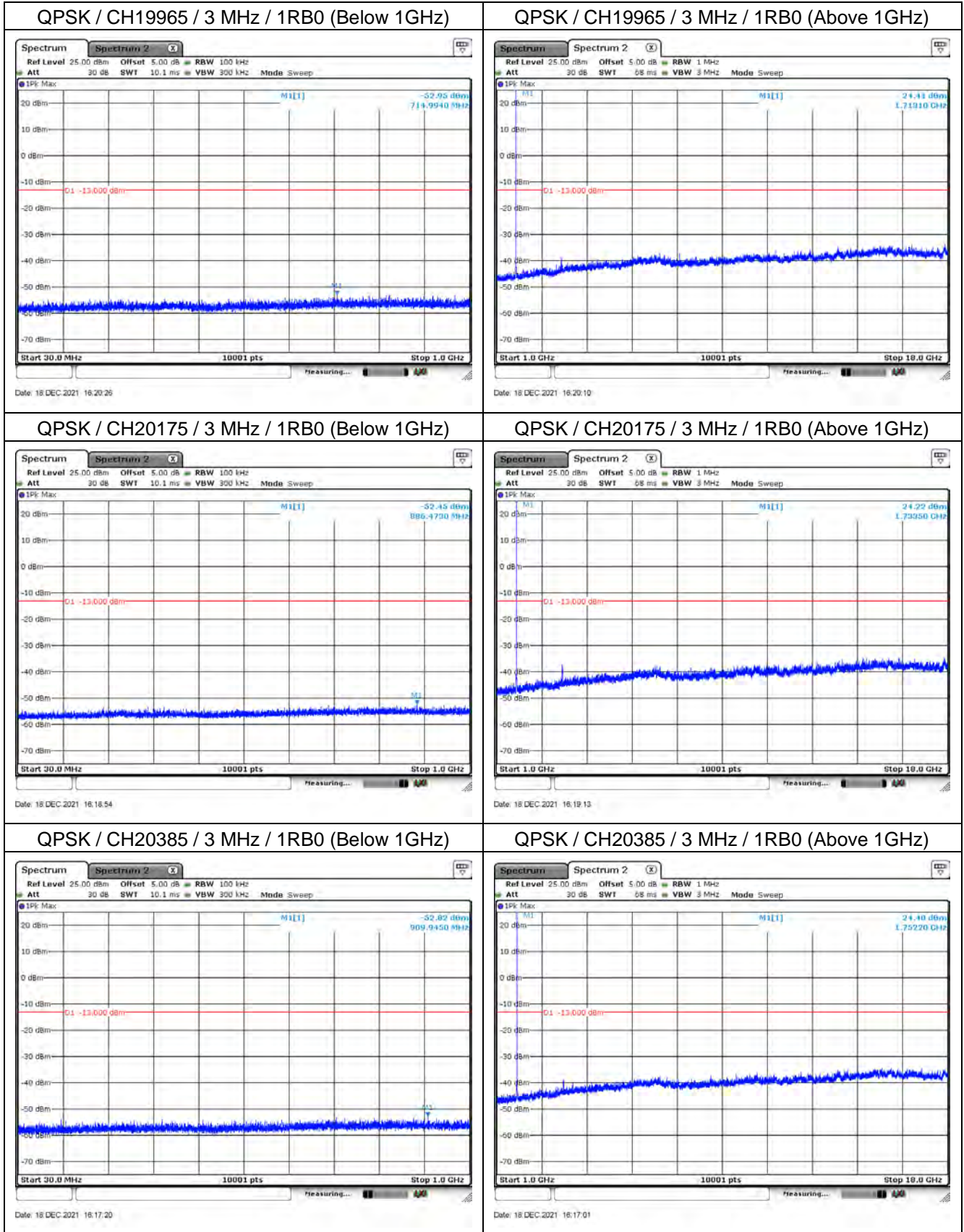
LTE Band 25



**Mode 2: LTE Band 4**  
 LTE Band 4

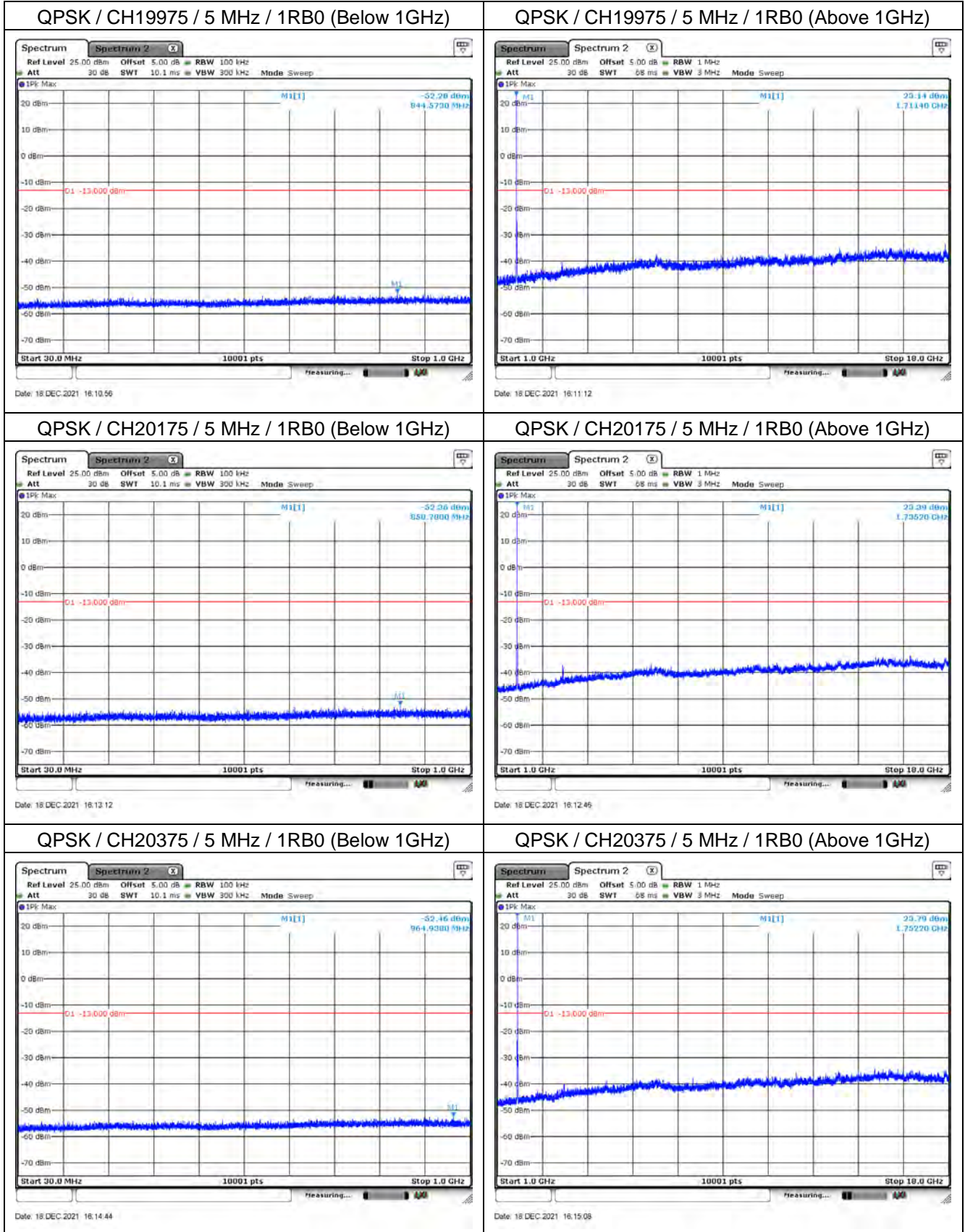


LTE Band 4

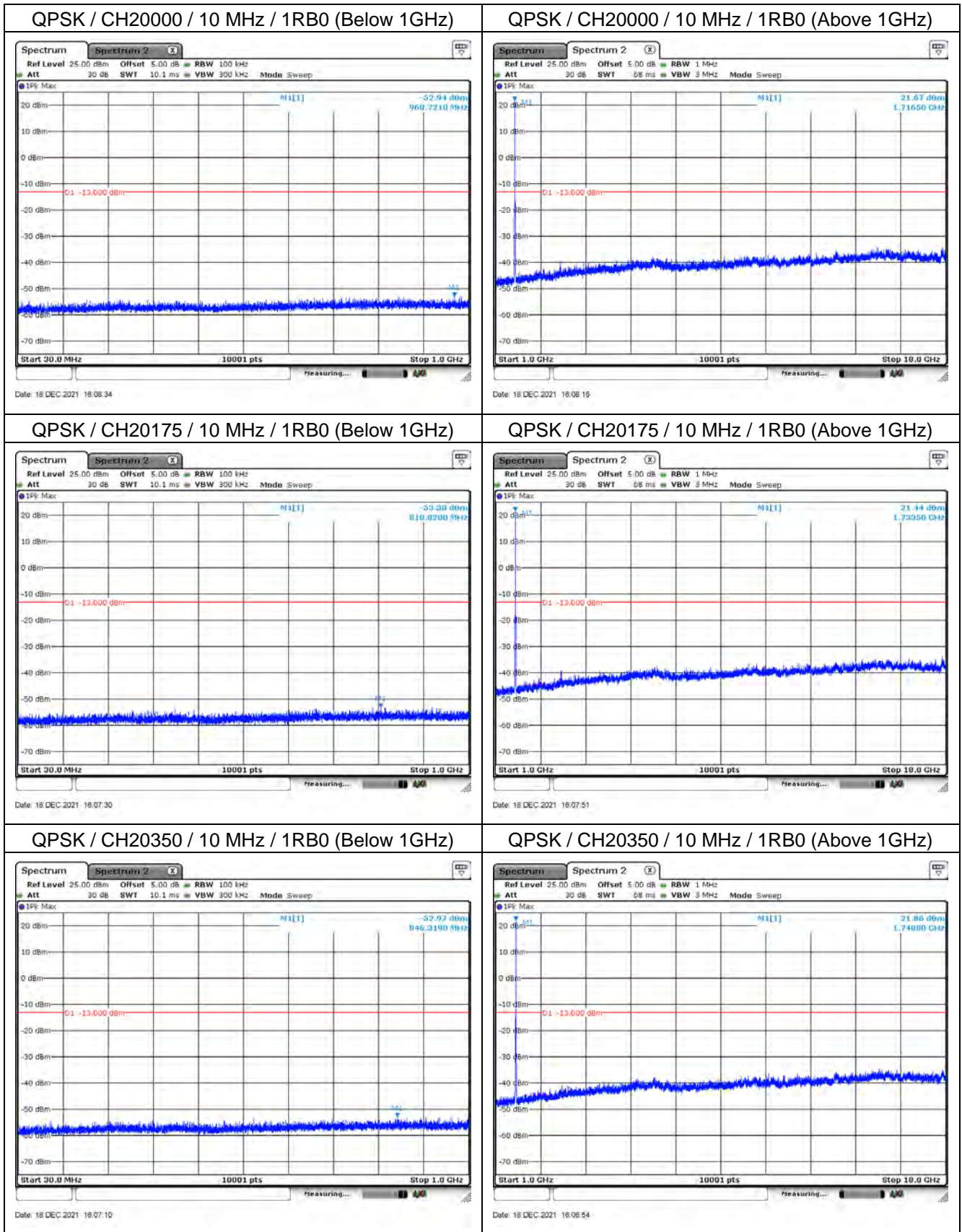




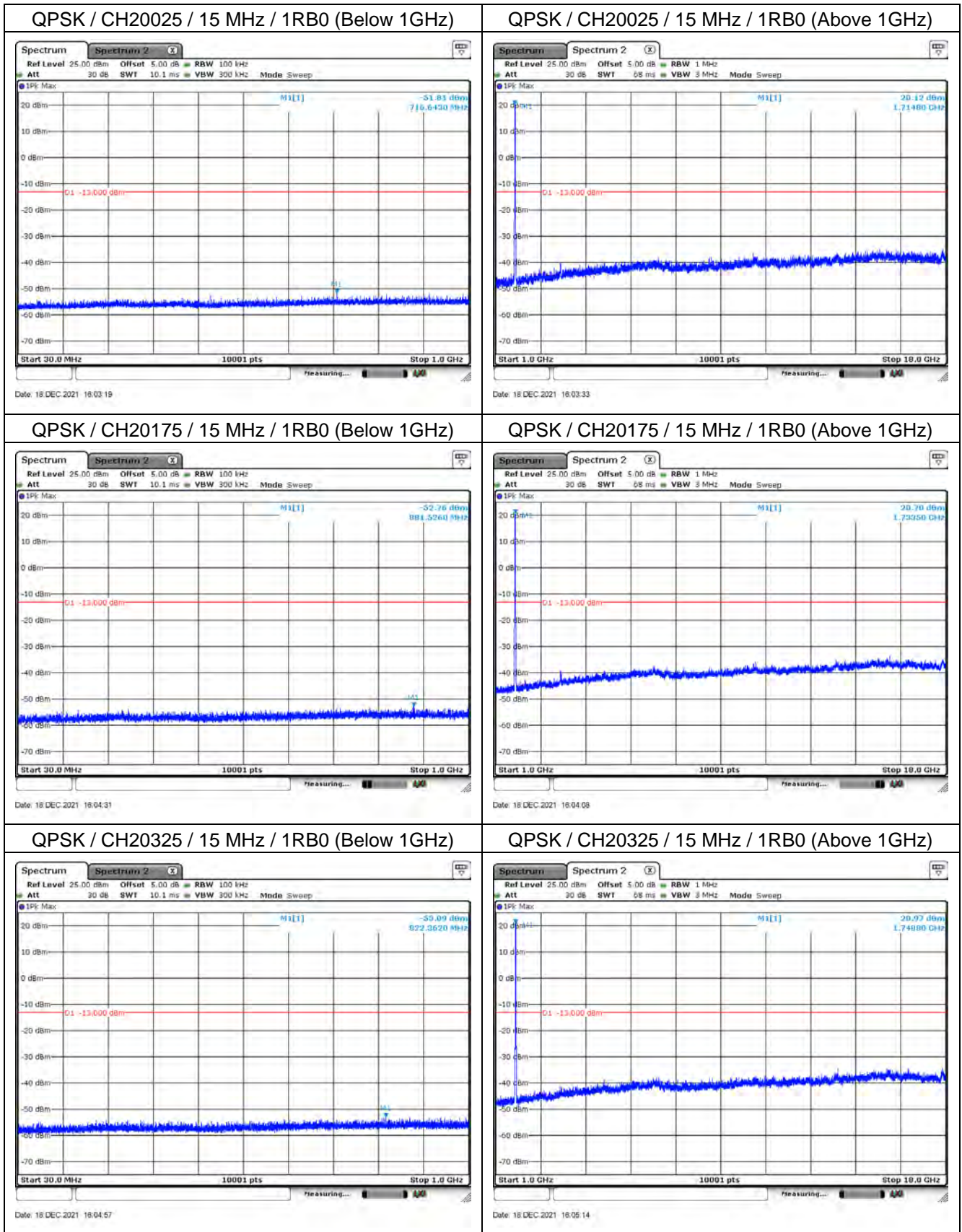
LTE Band 4



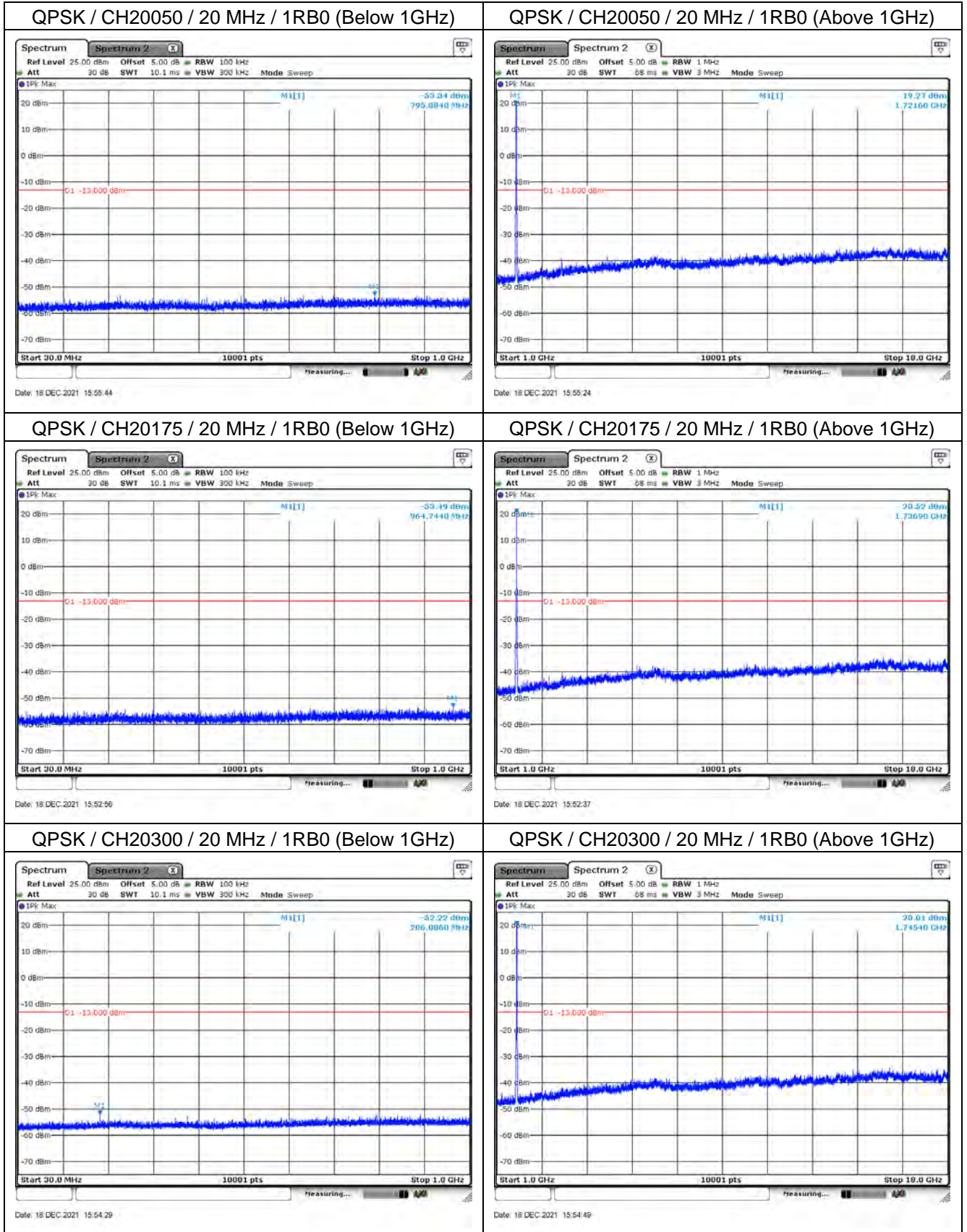
LTE Band 4



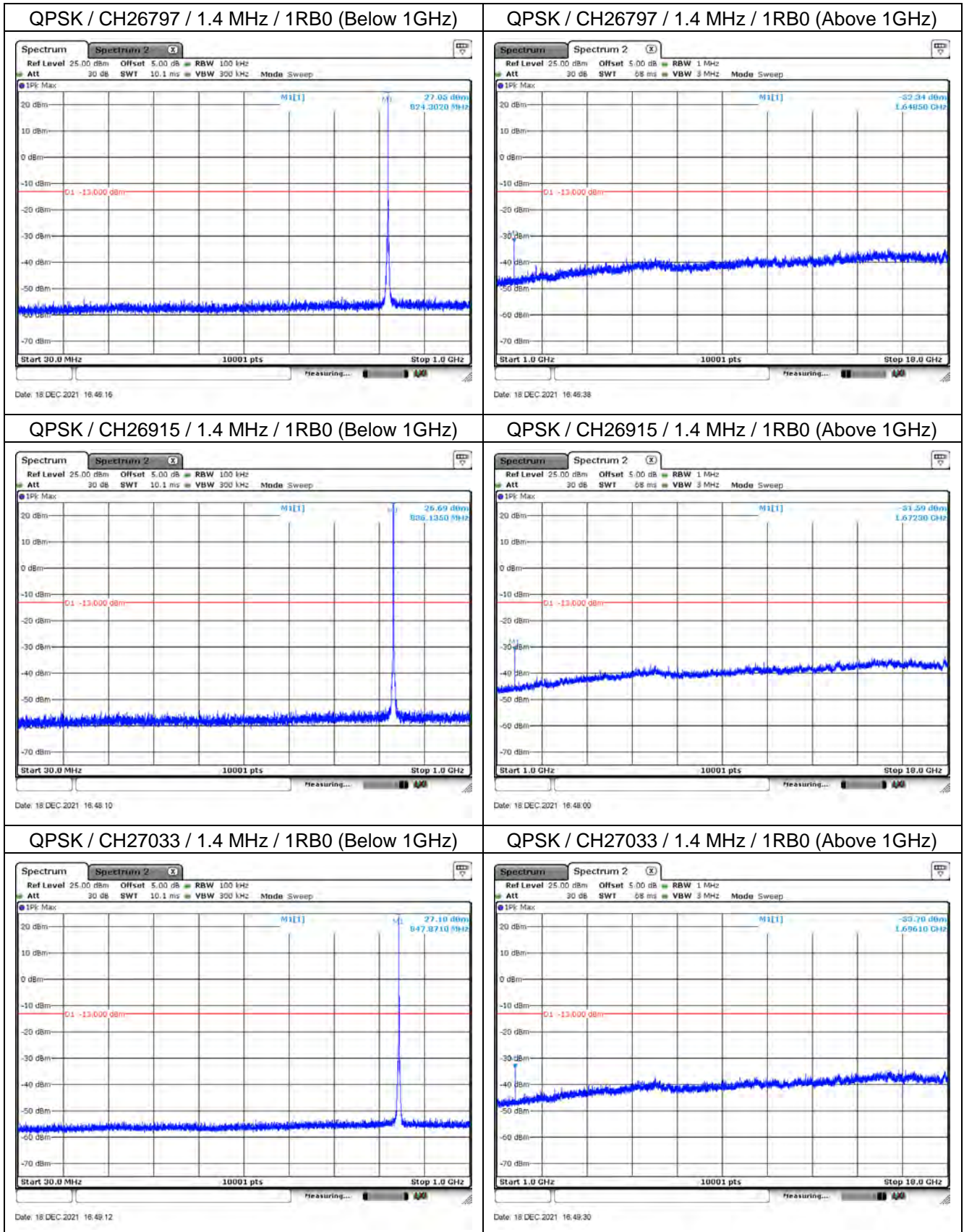
LTE Band 4



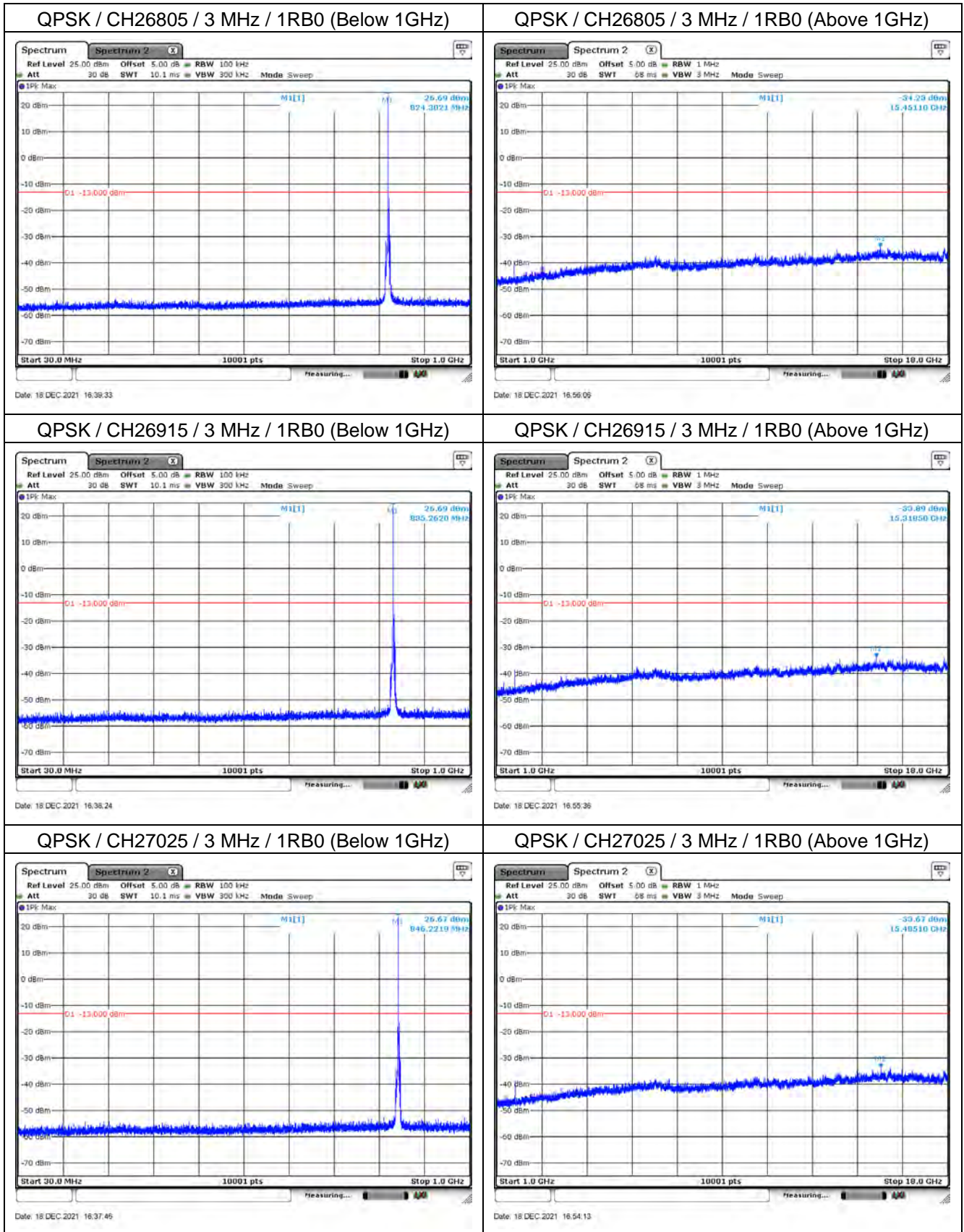
LTE Band 4



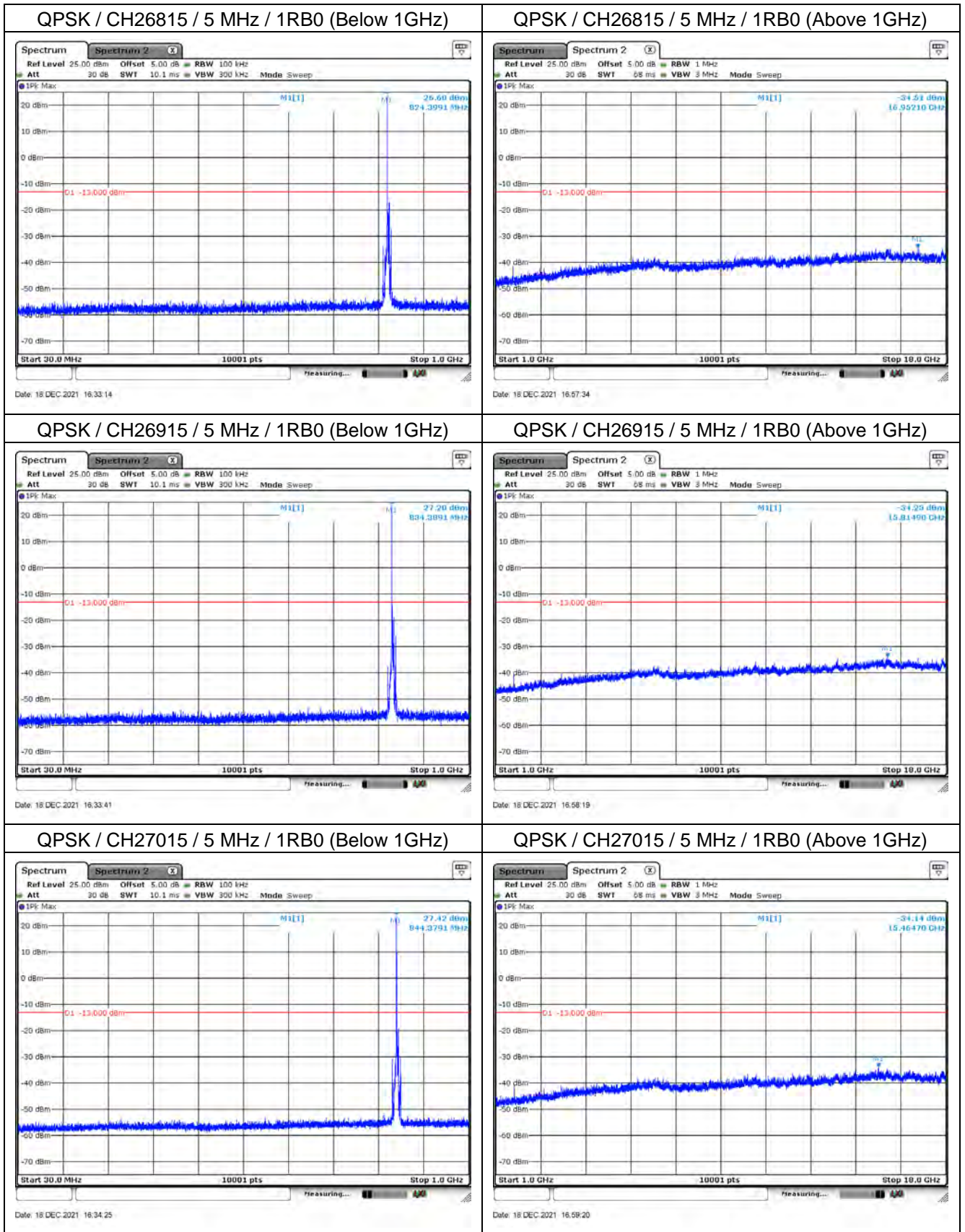
**Mode 3: LTE Band 5/26 (Part 22)**  
**LTE Band 26**



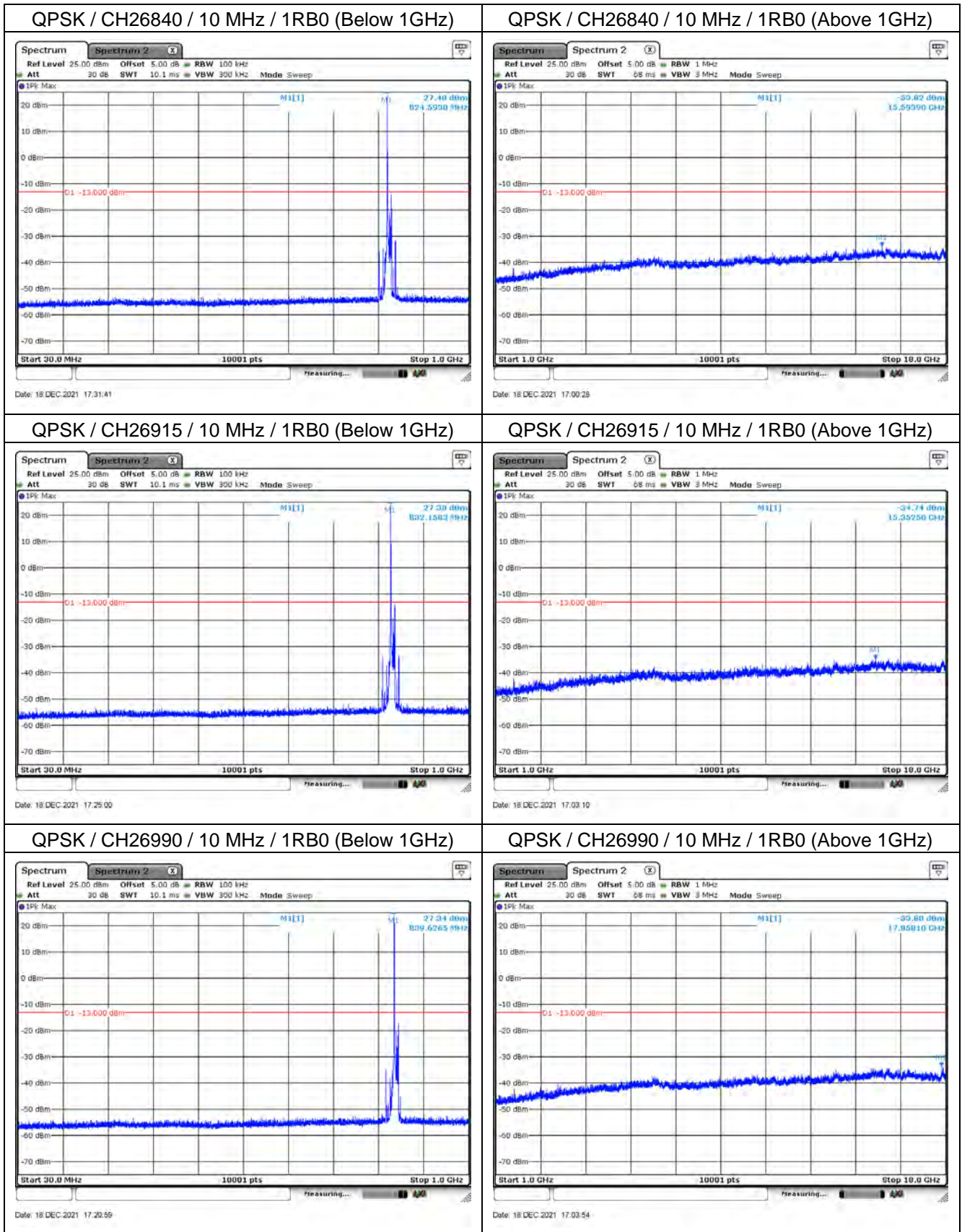
LTE Band 26



LTE Band 26

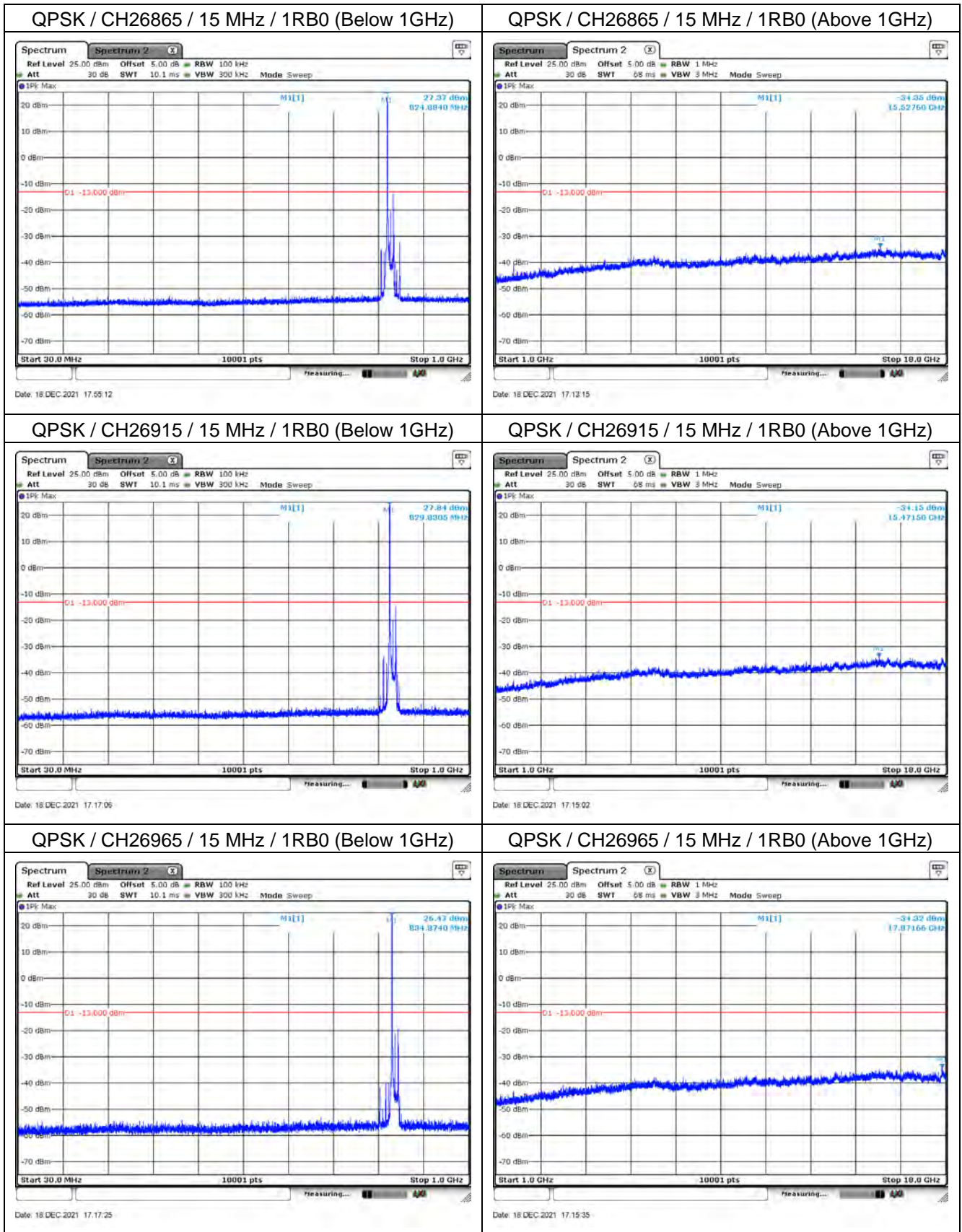


LTE Band 26

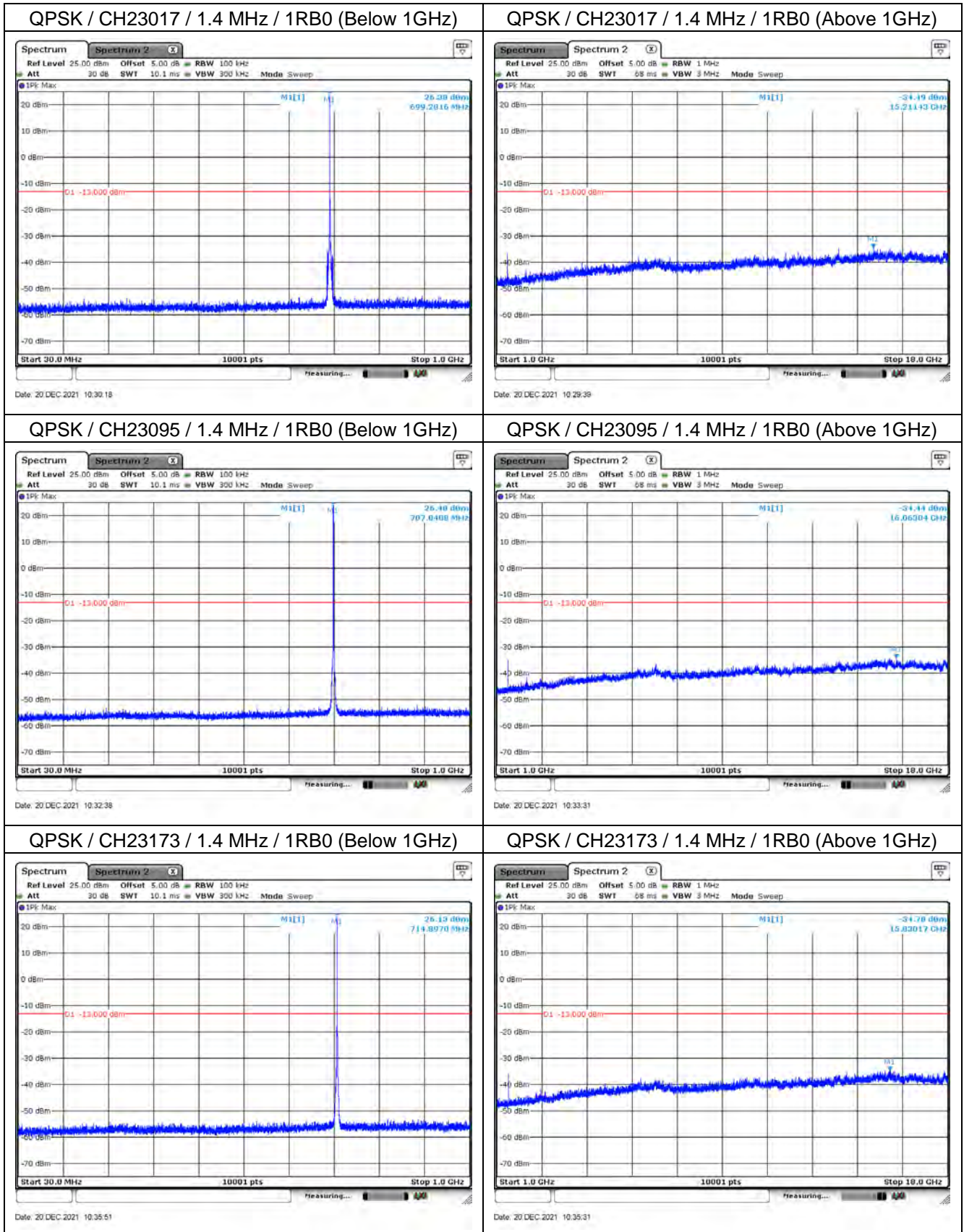




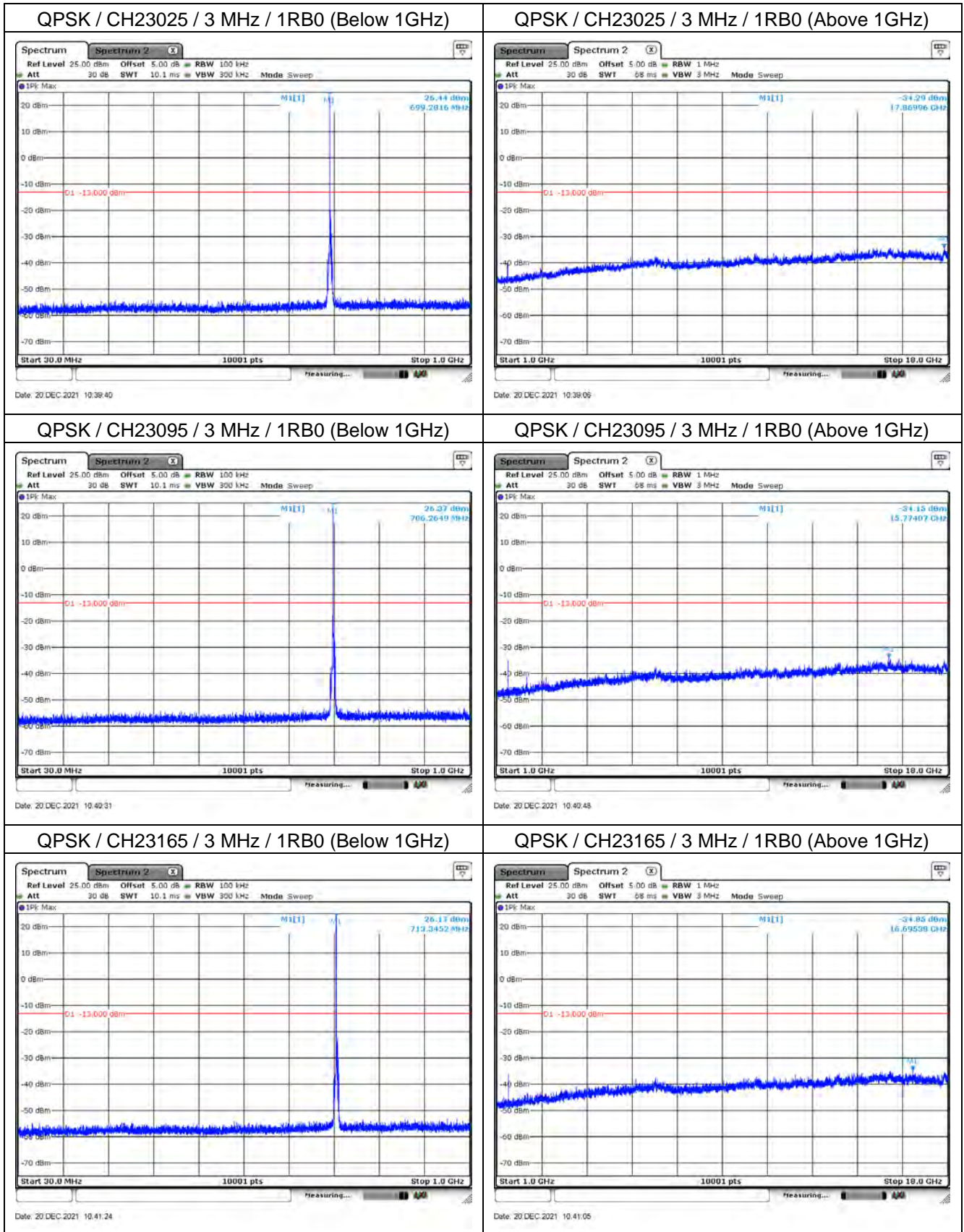
LTE Band 26



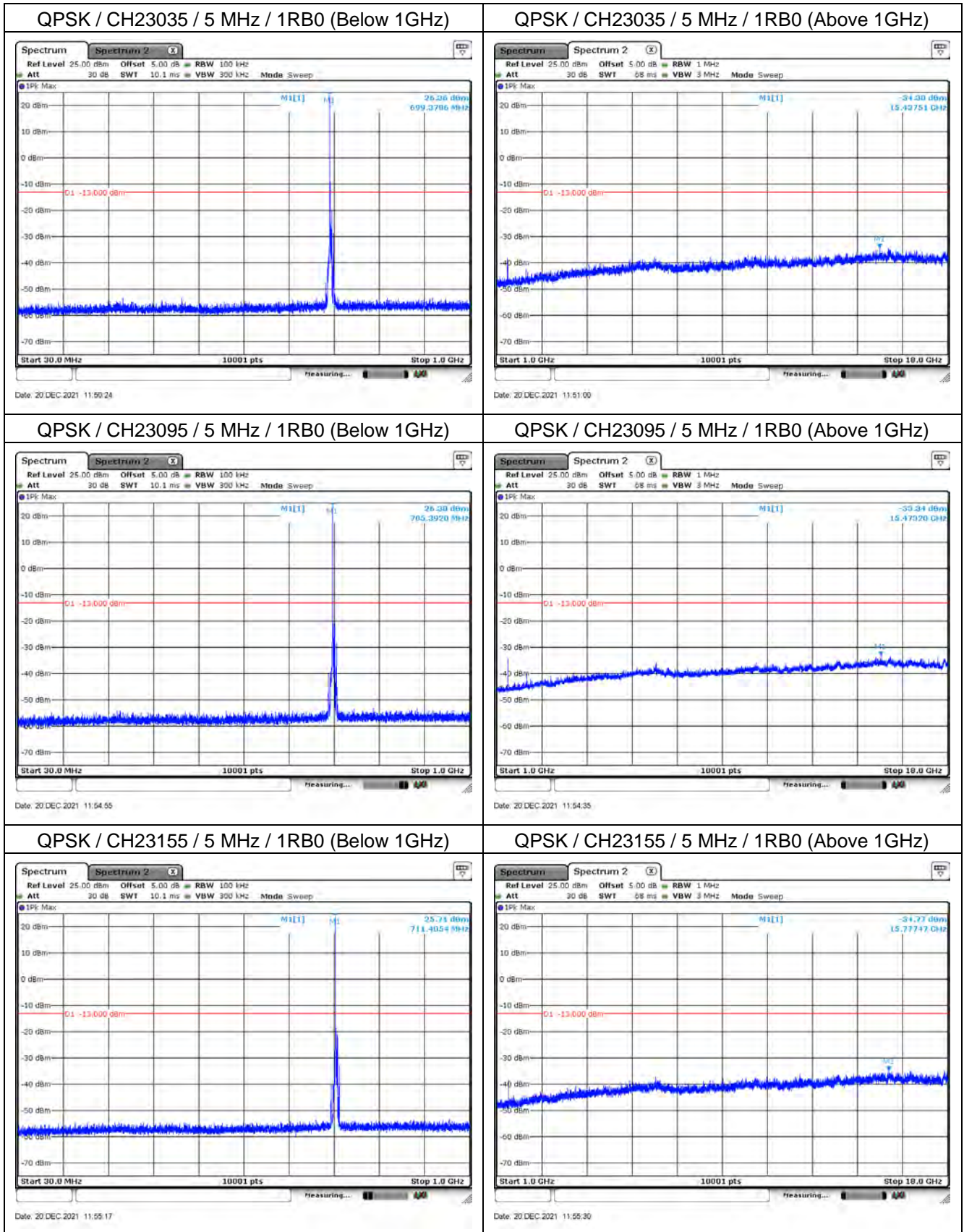
**Mode 4: LTE Band 12**  
 LTE Band 12



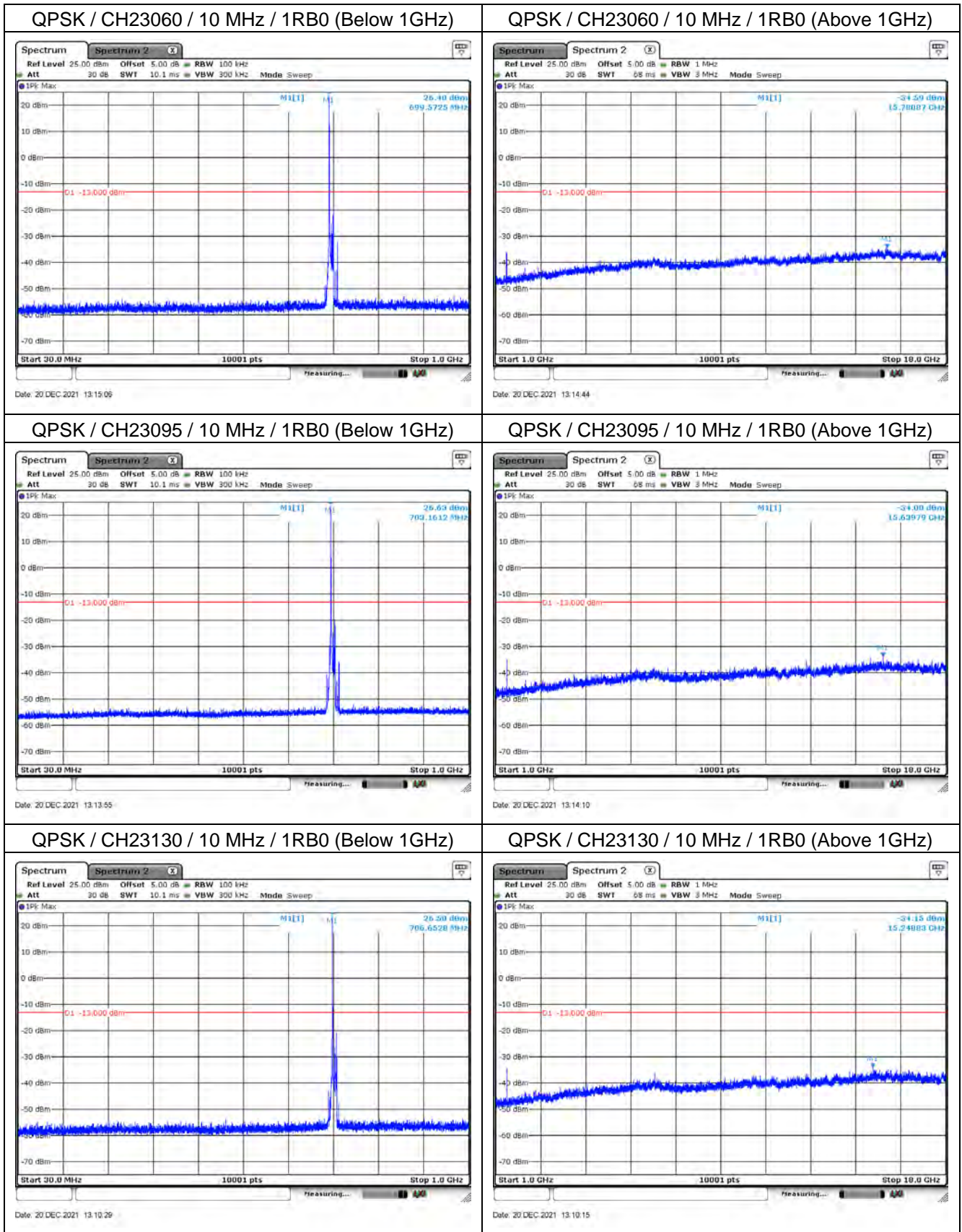
LTE Band 12



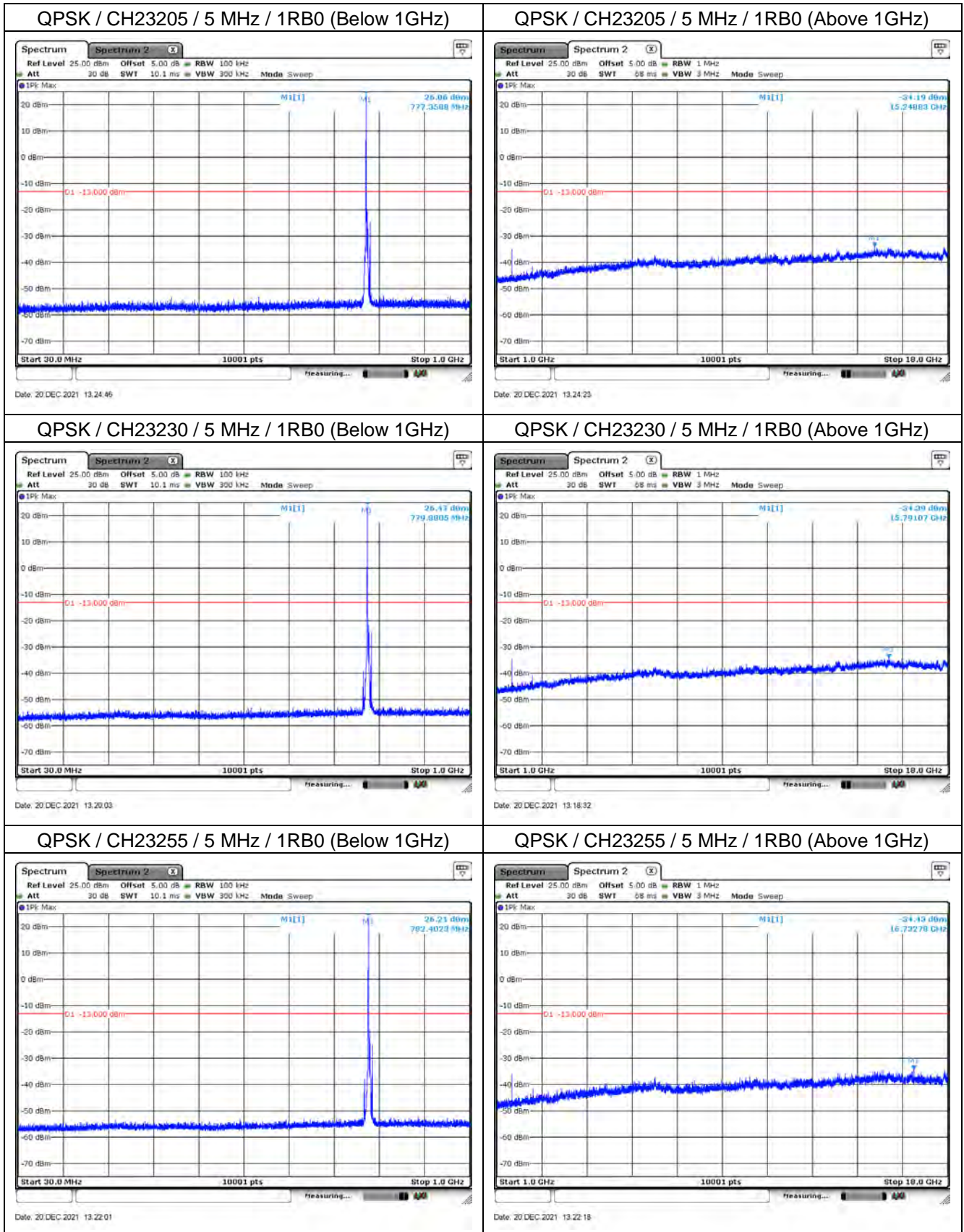
LTE Band 12



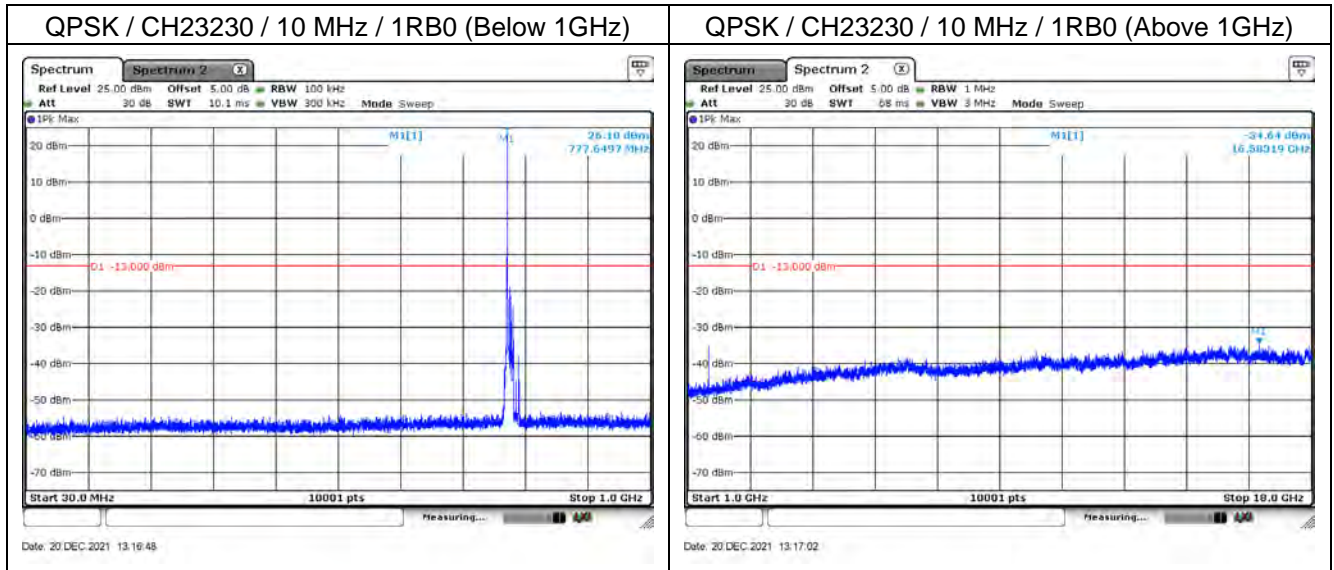
LTE Band 12



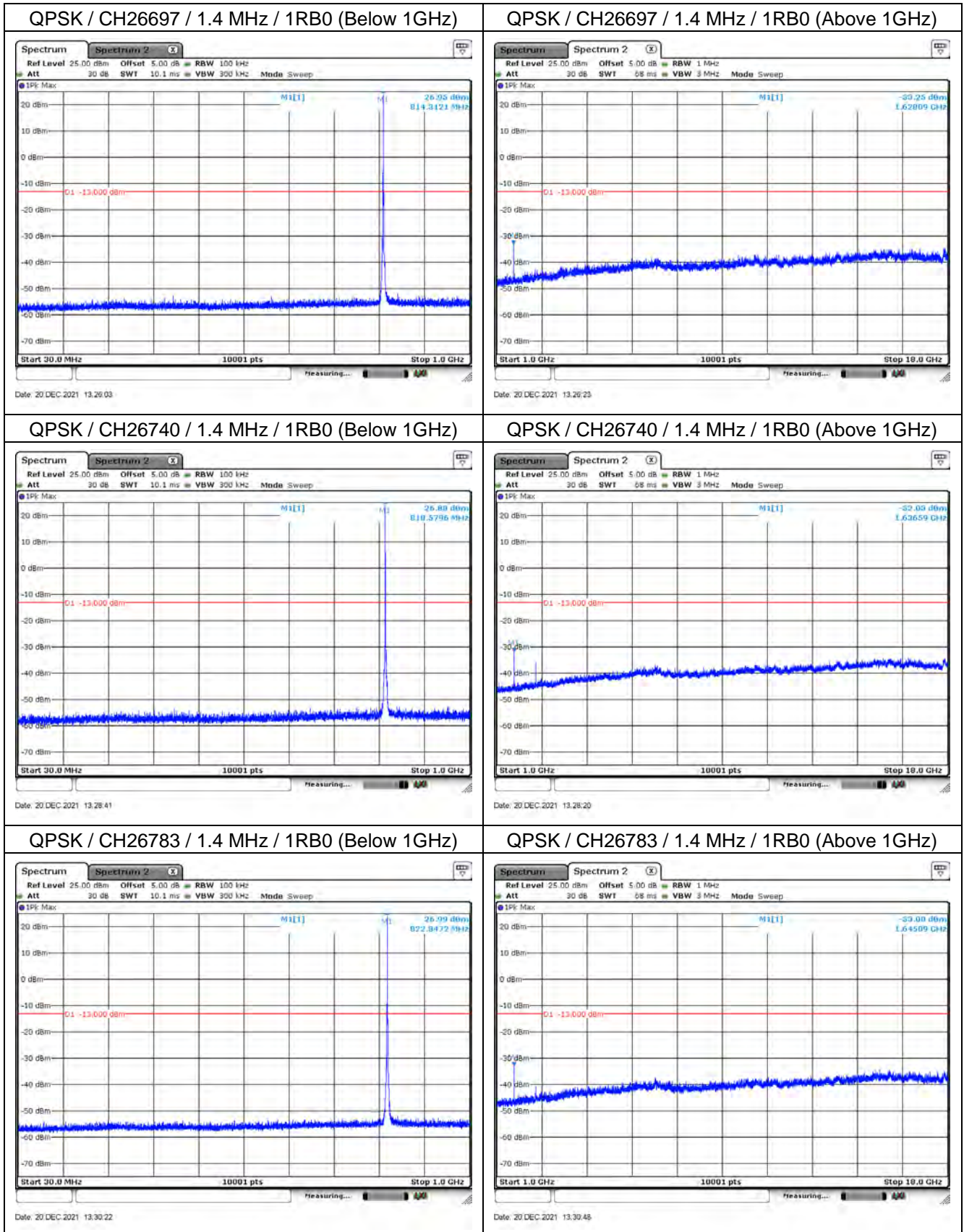
**Mode 5: LTE Band 13**  
 LTE Band 13



LTE Band 13

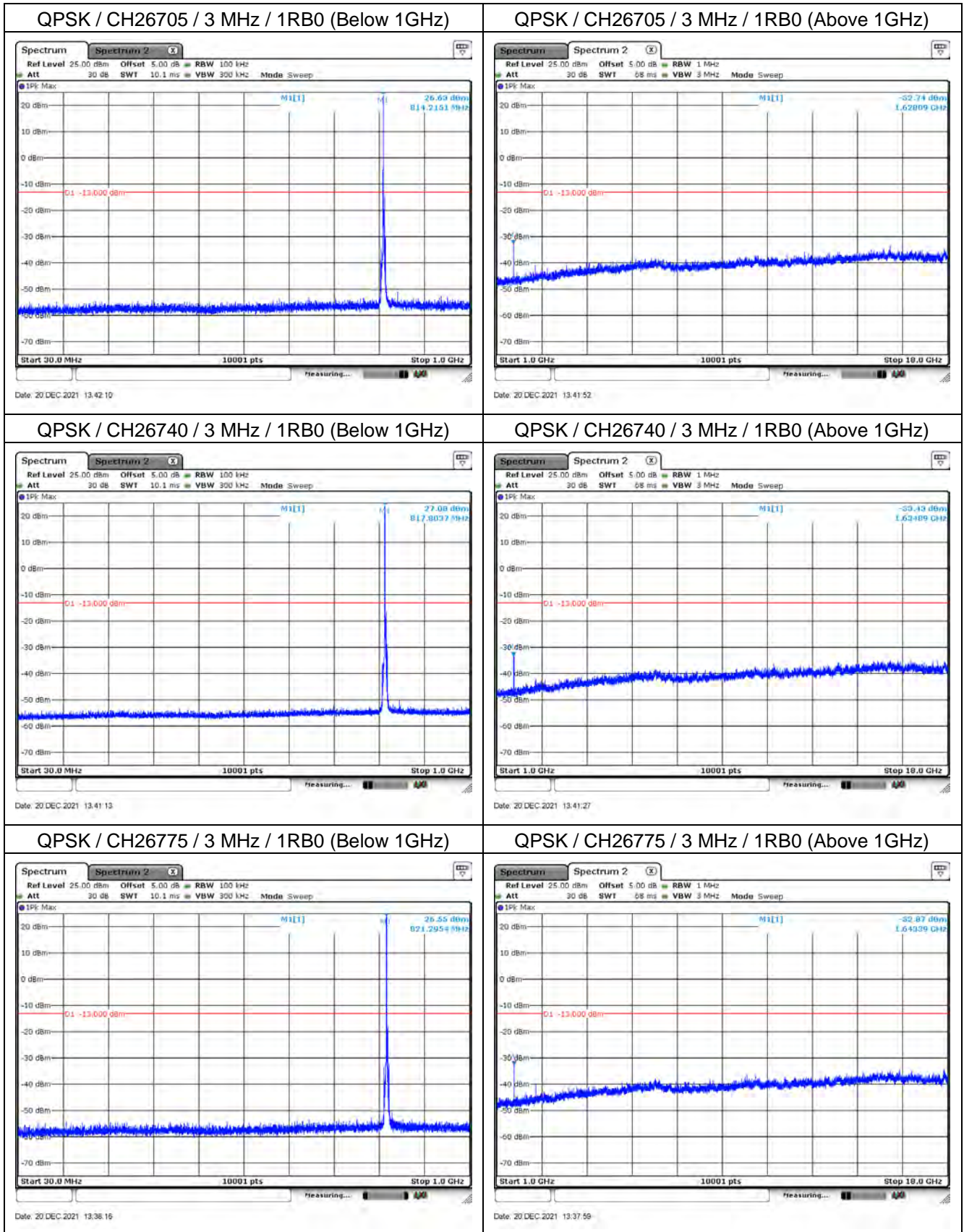


**Mode 6: LTE Band 26 (Part 90)**  
 LTE Band 26

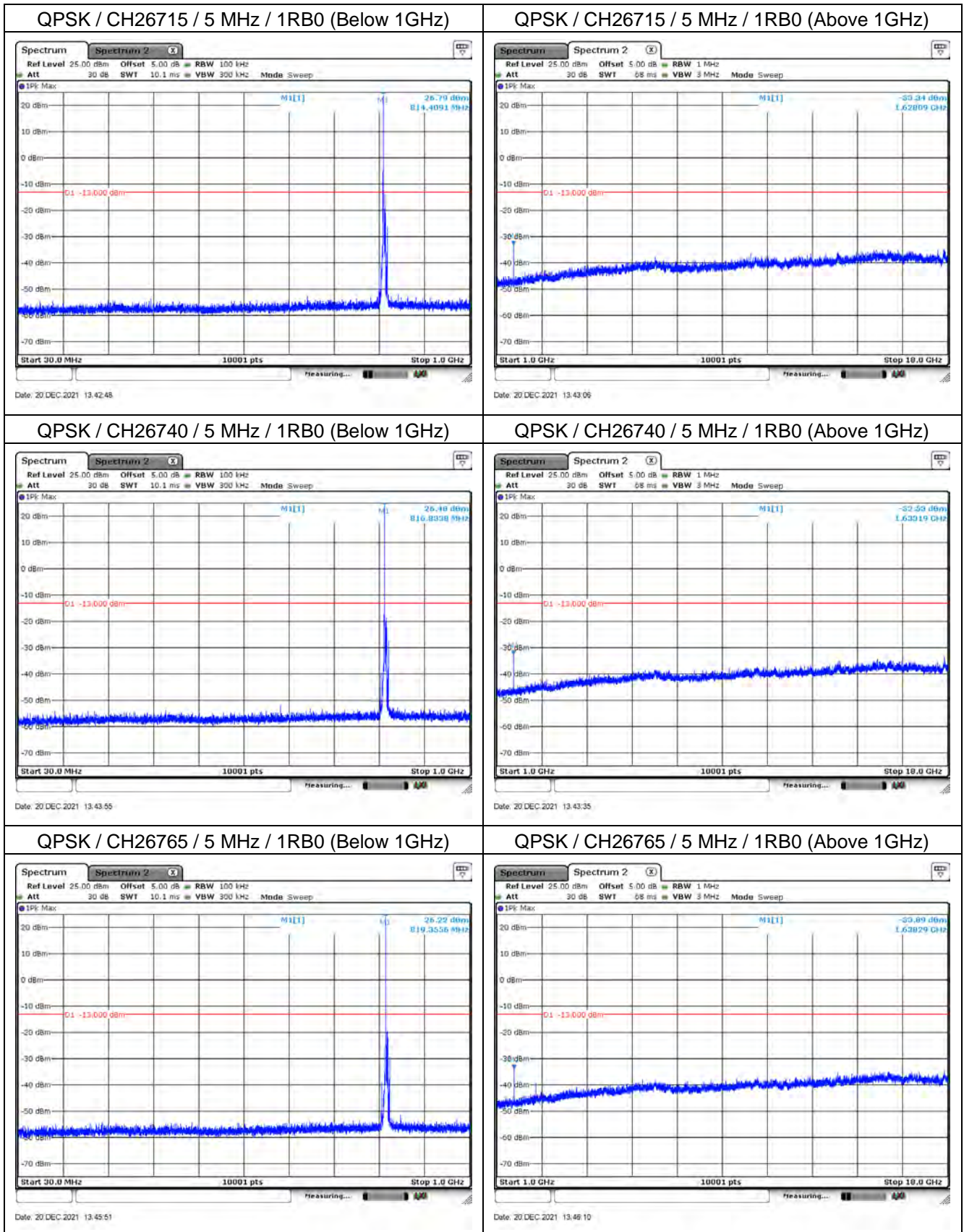




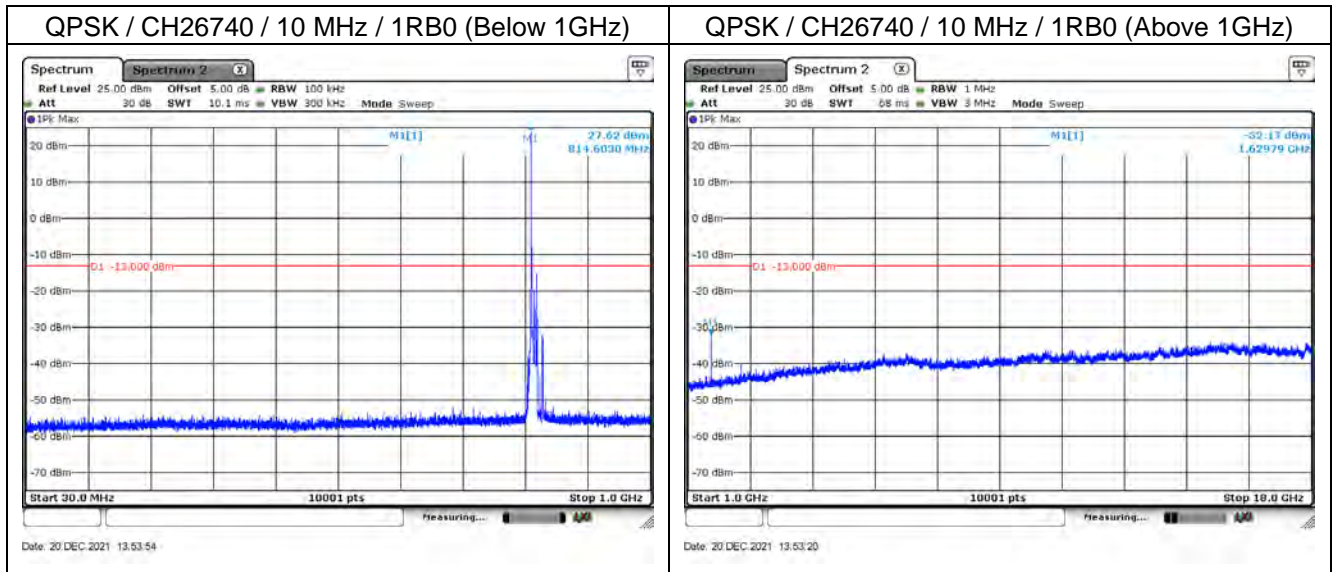
LTE Band 26



LTE Band 26

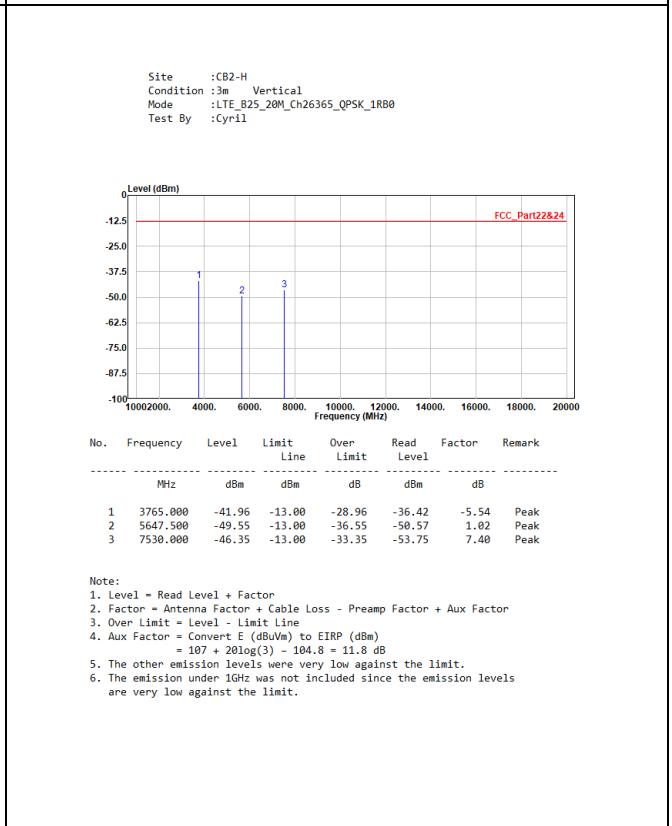
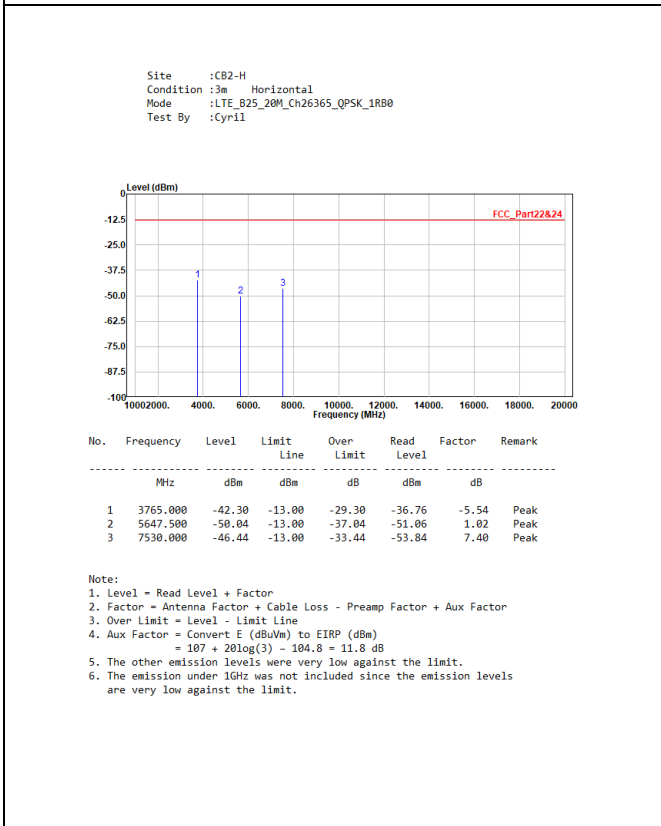
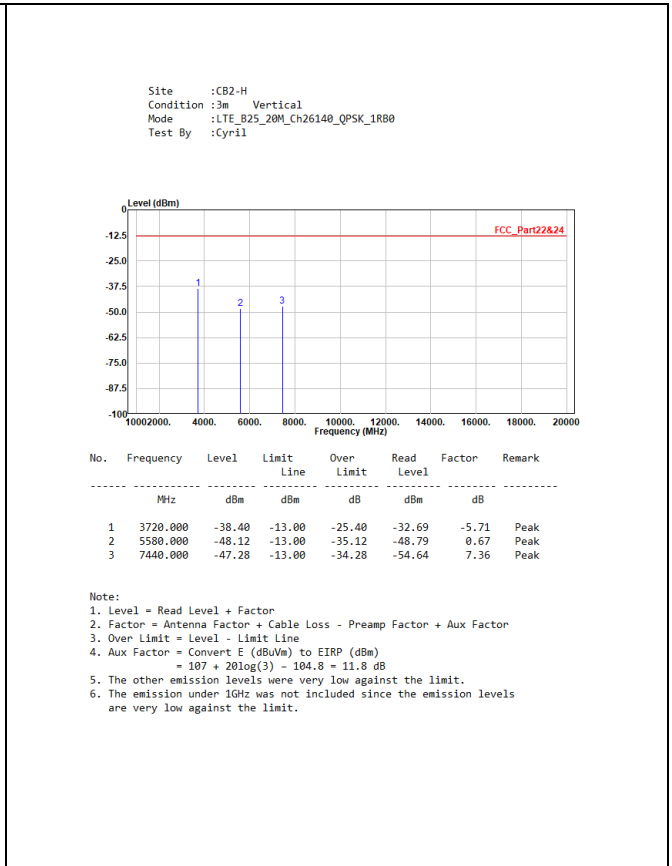
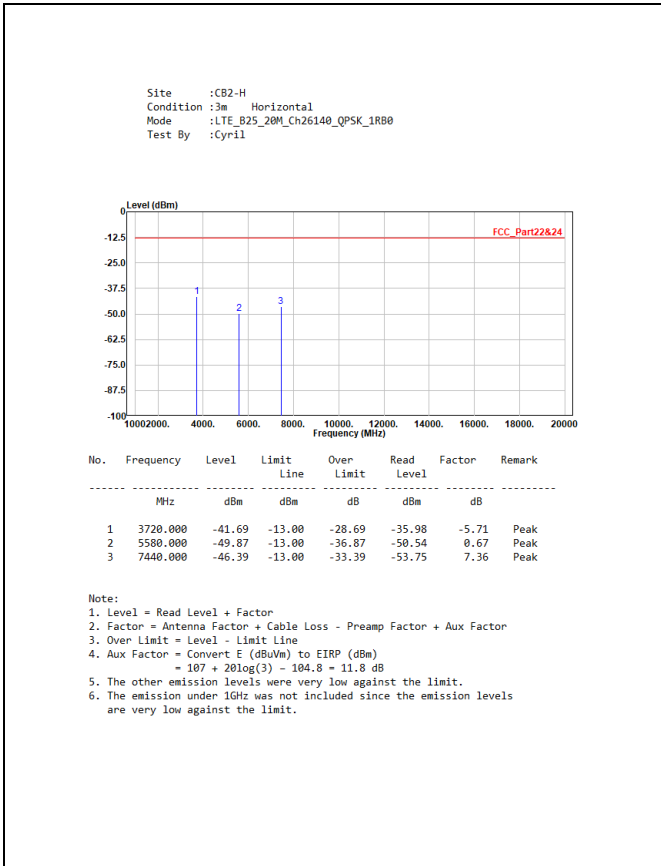


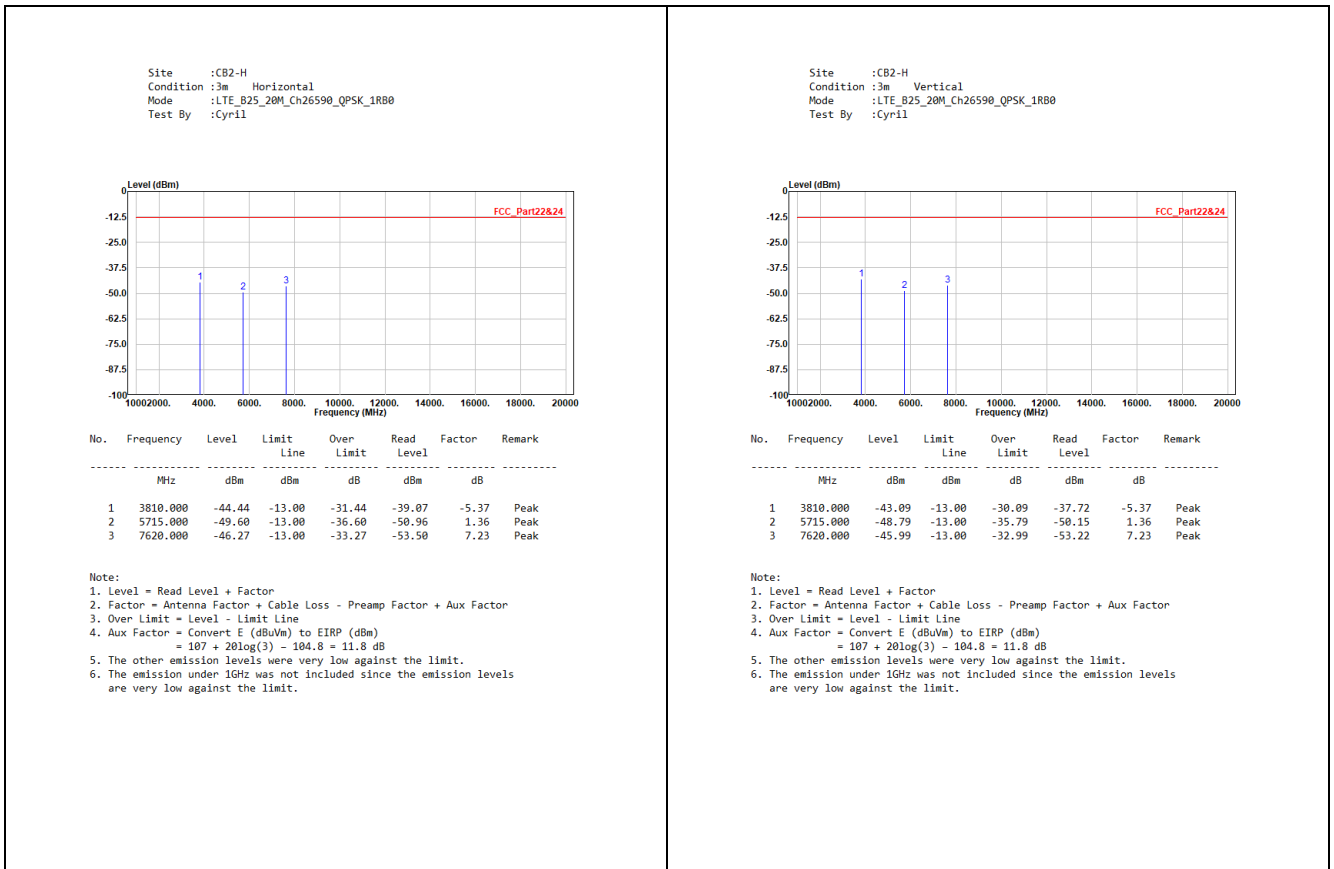
LTE Band 26



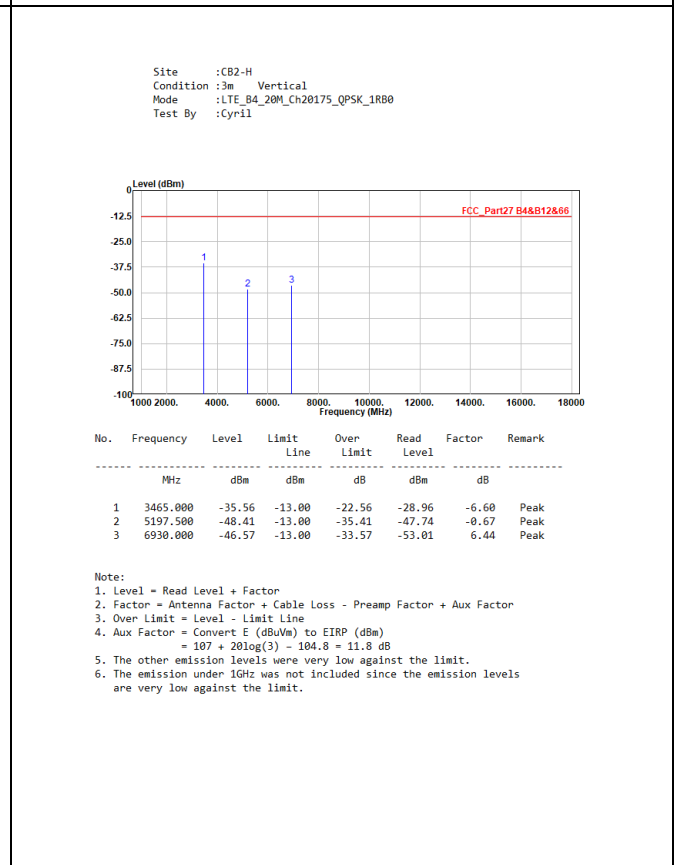
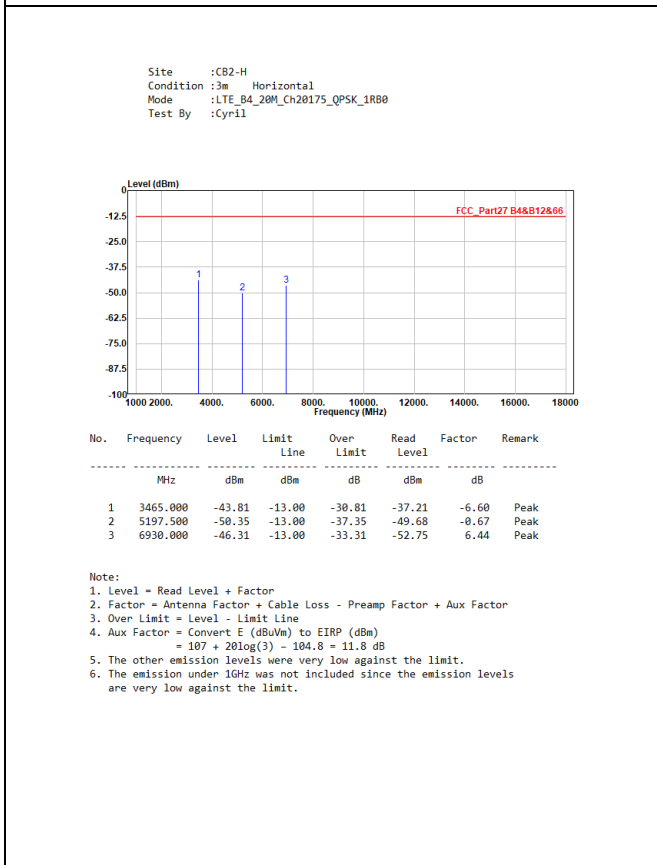
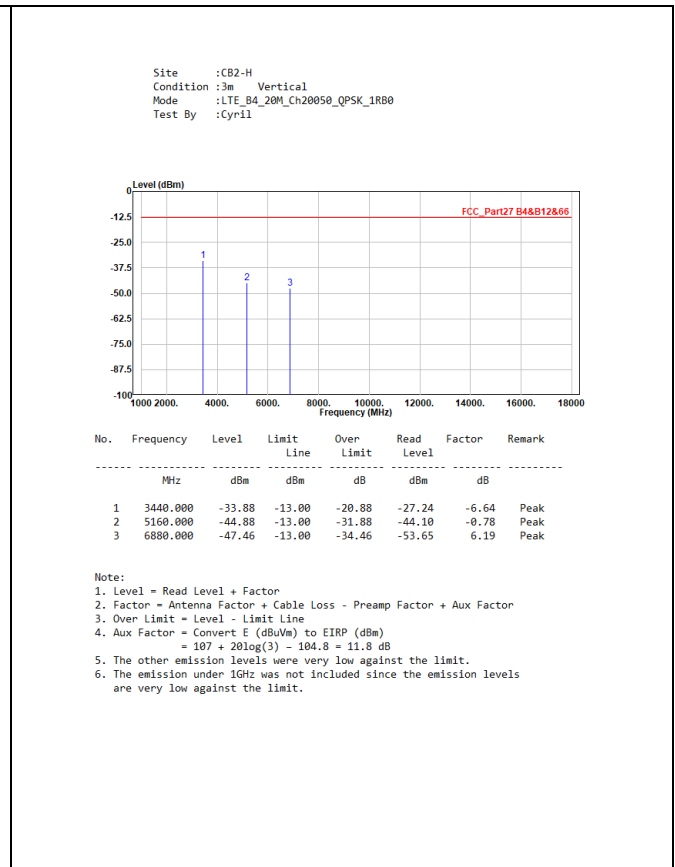
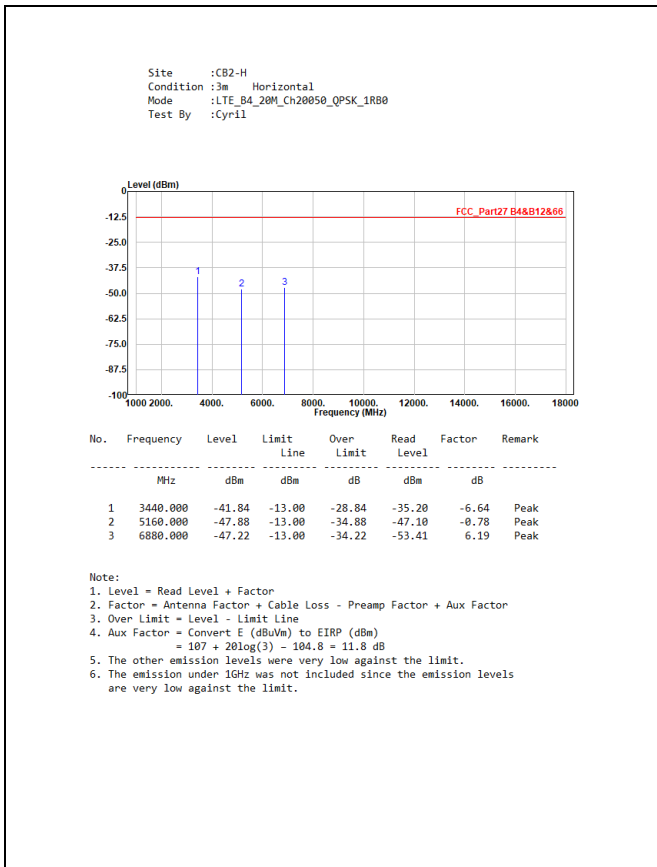
### 6.5. Test Result of Radiated Spurious Emission

#### Mode 1: LTE Band 2/25

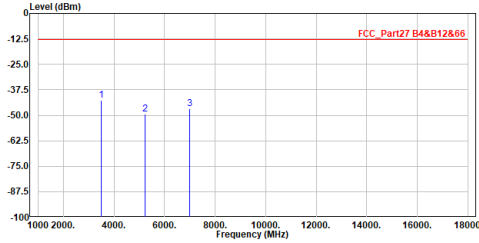




**Mode 2: LTE Band 4**



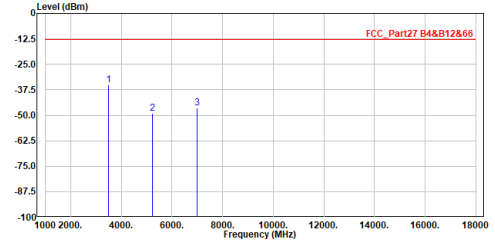
Site :CB2-H  
 Condition :3m Horizontal  
 Mode :LTE\_B4\_20M\_Ch20300\_QPSK\_1RB0  
 Test By :Cyril



No.	Frequency MHz	Level dBm	Limit Line dBm	Over Limit dB	Read Level dBm	Factor dB	Remark
1	3490.000	-42.62	-13.00	-29.62	-36.04	-6.58	Peak
2	5235.000	-49.56	-13.00	-36.56	-49.00	-0.56	Peak
3	6980.000	-46.92	-13.00	-33.92	-53.62	6.70	Peak

Note:  
 1. Level = Read Level + Factor  
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor  
 3. Over Limit = Level - Limit Line  
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)  
 = 107 + 20log(3) - 104.8 = 11.8 dB  
 5. The other emission levels were very low against the limit.  
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

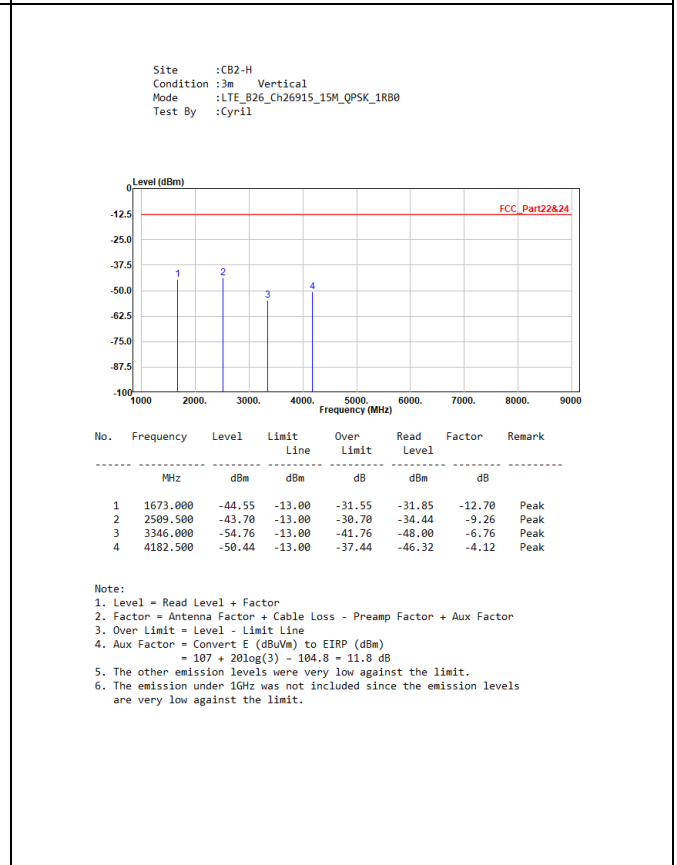
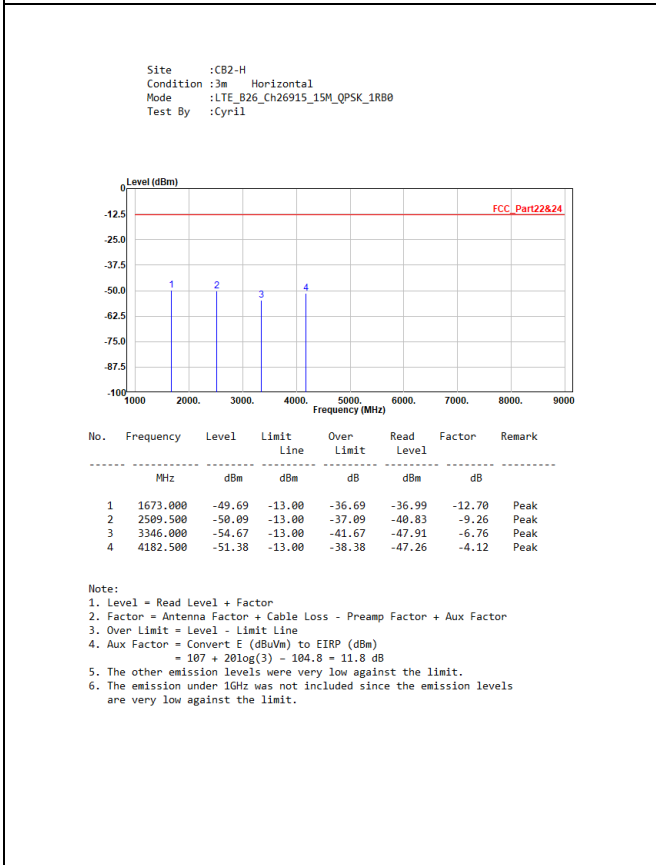
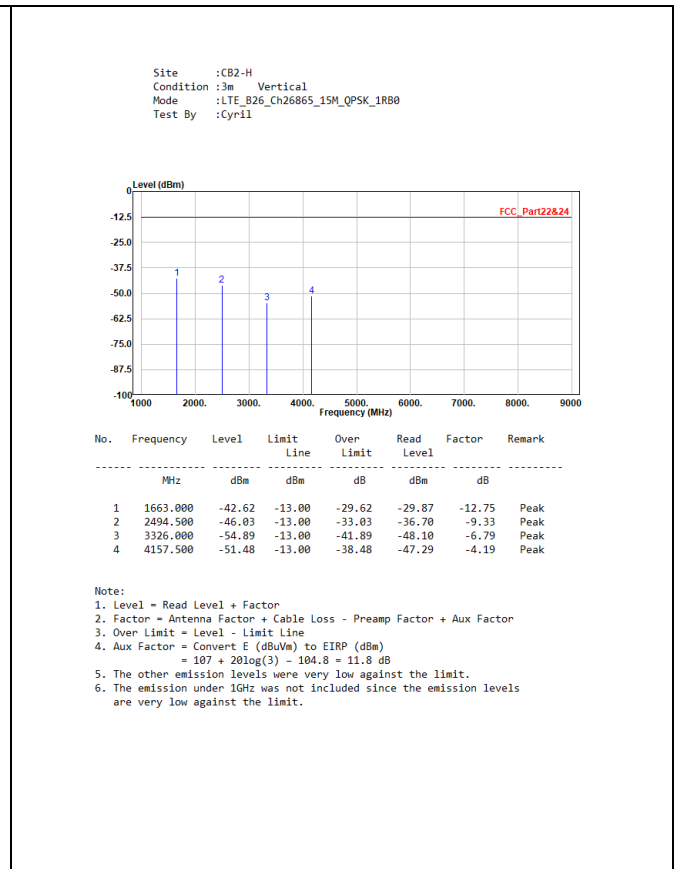
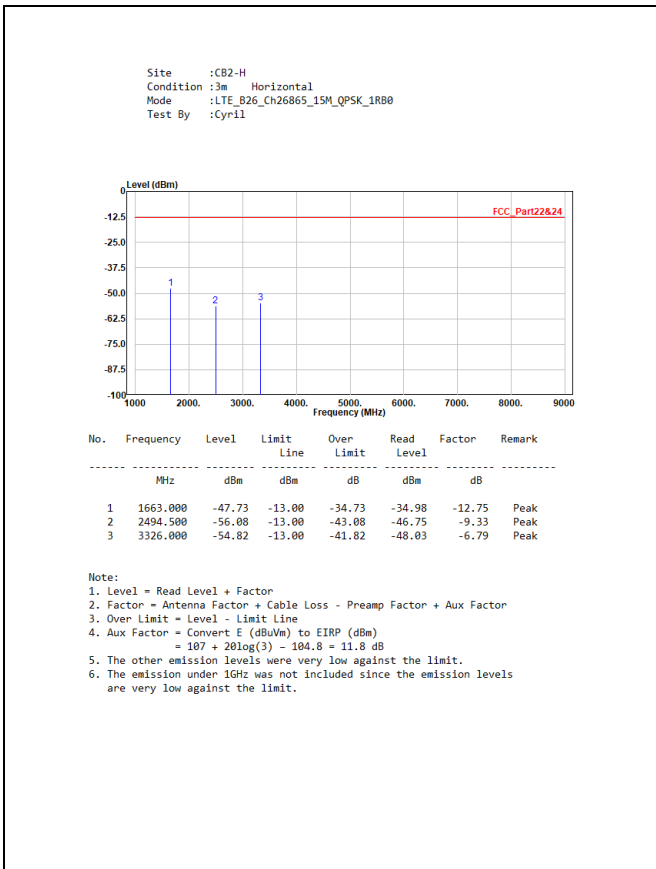
Site :CB2-H  
 Condition :3m Vertical  
 Mode :LTE\_B4\_20M\_Ch20300\_QPSK\_1RB0  
 Test By :Cyril



No.	Frequency MHz	Level dBm	Limit Line dBm	Over Limit dB	Read Level dBm	Factor dB	Remark
1	3490.000	-34.91	-13.00	-21.91	-28.33	-6.58	Peak
2	5235.000	-49.09	-13.00	-36.09	-48.53	-0.56	Peak
3	6980.000	-46.57	-13.00	-33.57	-53.27	6.70	Peak

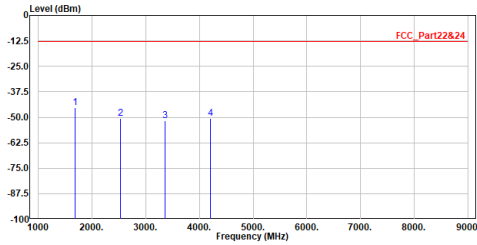
Note:  
 1. Level = Read Level + Factor  
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor  
 3. Over Limit = Level - Limit Line  
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)  
 = 107 + 20log(3) - 104.8 = 11.8 dB  
 5. The other emission levels were very low against the limit.  
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

**Mode 3: LTE Band 5/26 (Part 22)**





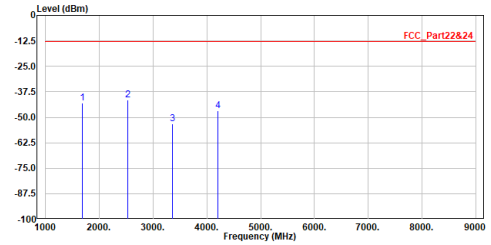
Site :CB2-H  
 Condition :3m Horizontal  
 Mode :LTE\_B26\_Ch26965\_15M\_QPSK\_1R80  
 Test By :Cyril



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1683.000	-45.36	-13.00	-32.36	-32.69	-12.67	Peak
2	2524.500	-50.70	-13.00	-37.70	-41.51	-9.19	Peak
3	3366.000	-51.58	-13.00	-38.58	-44.85	-6.73	Peak
4	4207.500	-50.68	-13.00	-37.68	-46.64	-4.04	Peak

Note:  
 1. Level = Read Level + Factor  
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor  
 3. Over Limit = Level - Limit Line  
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)  
               = 107 + 20log(3) - 104.8 = 11.8 dB  
 5. The other emission levels were very low against the limit.  
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

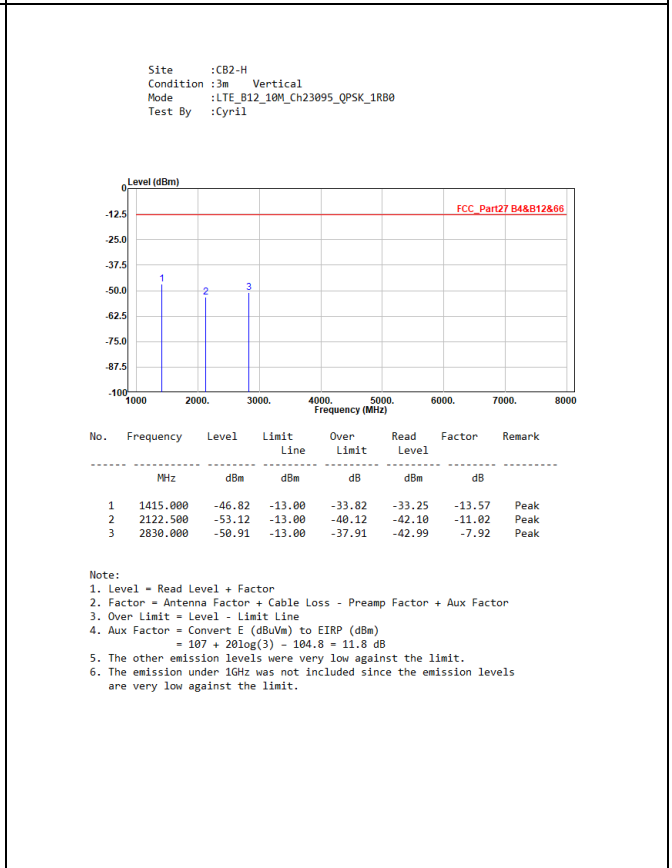
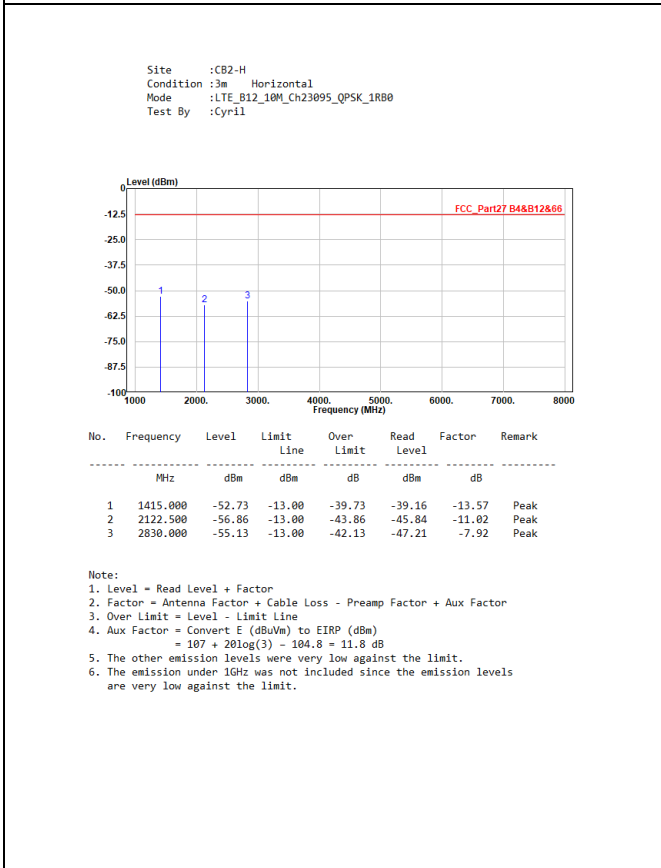
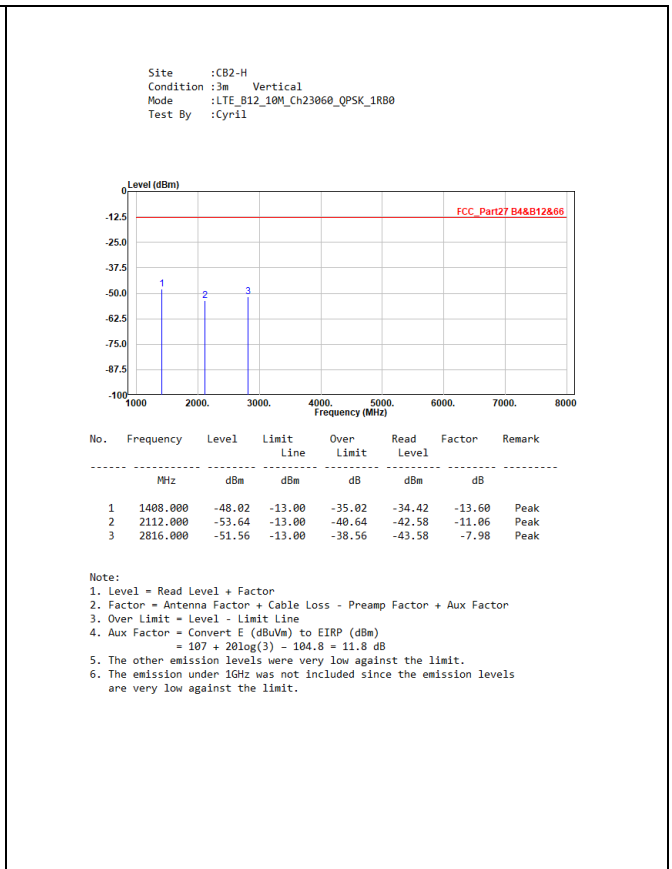
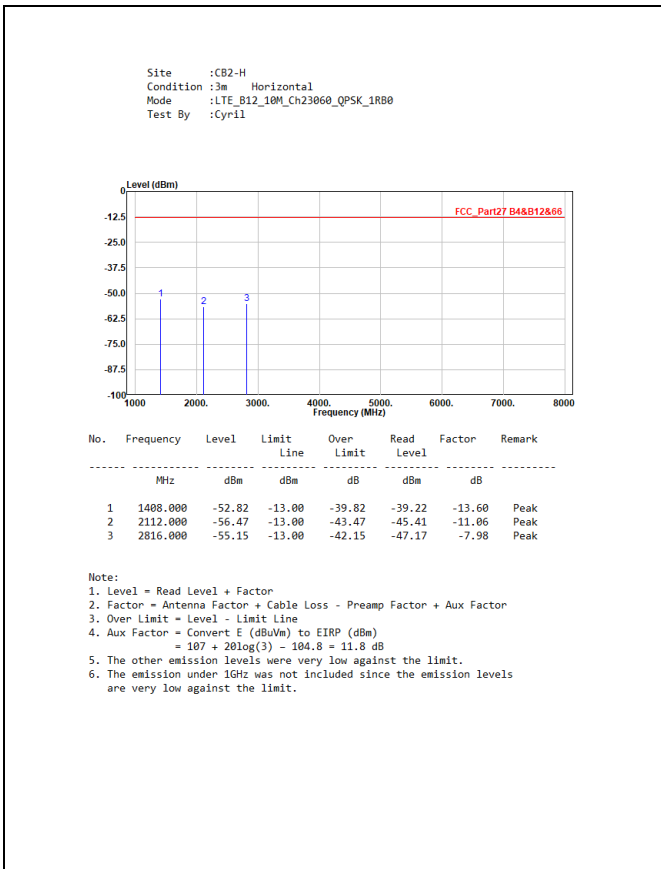
Site :CB2-H  
 Condition :3m Vertical  
 Mode :LTE\_B26\_Ch26965\_15M\_QPSK\_1R80  
 Test By :Cyril



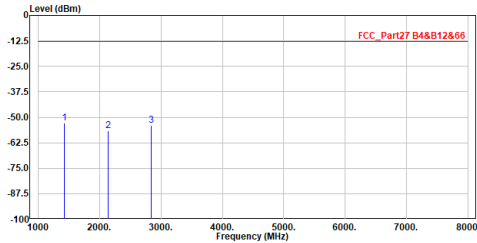
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1683.000	-42.94	-13.00	-29.94	-30.27	-12.67	Peak
2	2524.500	-41.34	-13.00	-28.34	-32.15	-9.19	Peak
3	3366.000	-53.13	-13.00	-40.13	-46.40	-6.73	Peak
4	4207.500	-46.67	-13.00	-33.67	-42.63	-4.04	Peak

Note:  
 1. Level = Read Level + Factor  
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor  
 3. Over Limit = Level - Limit Line  
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)  
               = 107 + 20log(3) - 104.8 = 11.8 dB  
 5. The other emission levels were very low against the limit.  
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

**Mode 4: LTE Band 12**



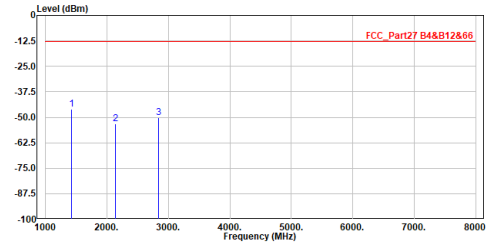
Site :CB2-H  
 Condition :3m Horizontal  
 Mode :LTE\_B12\_10M\_Ch23130\_QPSK\_1RB0  
 Test By :Cyril



No.	Frequency MHz	Level dBm	Limit Line dBm	Over Limit dB	Read Level dBm	Factor dB	Remark
1	1422.000	-52.67	-13.00	-39.67	-39.12	-13.55	Peak
2	2133.000	-56.71	-13.00	-43.71	-45.75	-10.96	Peak
3	2844.000	-53.97	-13.00	-40.97	-46.12	-7.85	Peak

Note:  
 1. Level = Read Level + Factor  
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor  
 3. Over Limit = Level - Limit Line  
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)  
 = 107 + 20log(3) - 104.8 = 11.8 dB  
 5. The other emission levels were very low against the limit.  
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

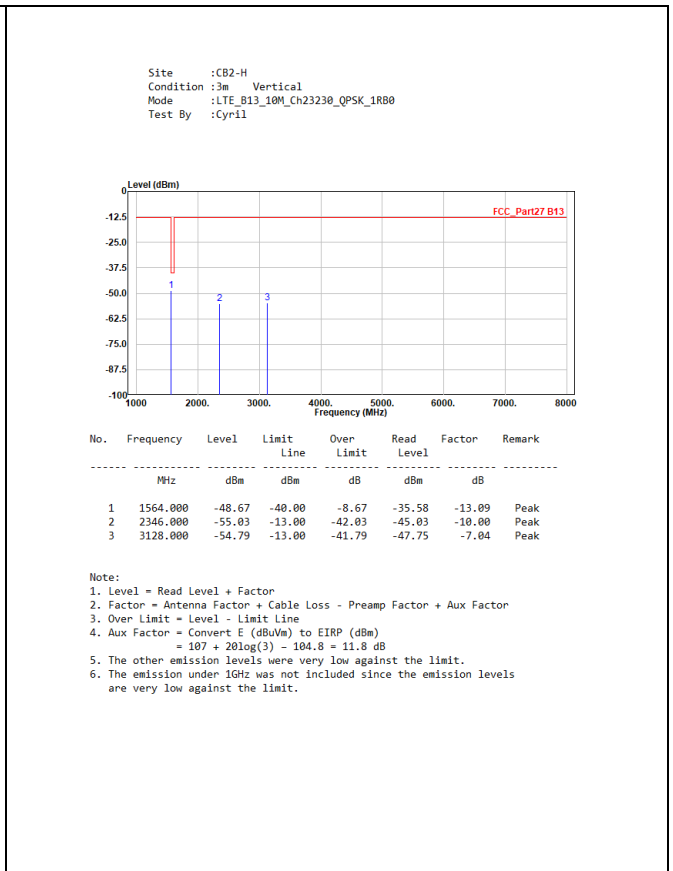
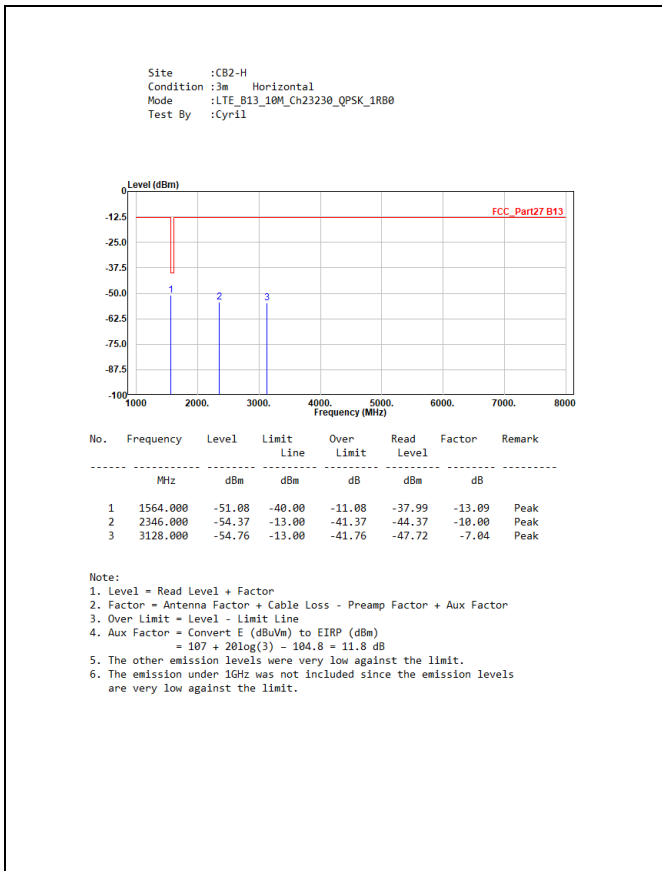
Site :CB2-H  
 Condition :3m Vertical  
 Mode :LTE\_B12\_10M\_Ch23130\_QPSK\_1RB0  
 Test By :Cyril



No.	Frequency MHz	Level dBm	Limit Line dBm	Over Limit dB	Read Level dBm	Factor dB	Remark
1	1422.000	-46.05	-13.00	-33.05	-32.50	-13.55	Peak
2	2133.000	-53.06	-13.00	-40.06	-42.10	-10.96	Peak
3	2844.000	-50.31	-13.00	-37.31	-42.46	-7.85	Peak

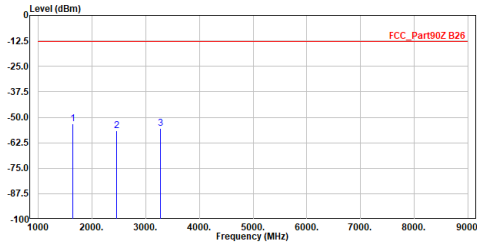
Note:  
 1. Level = Read Level + Factor  
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor  
 3. Over Limit = Level - Limit Line  
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)  
 = 107 + 20log(3) - 104.8 = 11.8 dB  
 5. The other emission levels were very low against the limit.  
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

**Mode 5: LTE Band 13**



**Mode 6: LTE Band 26 (Part 90)**

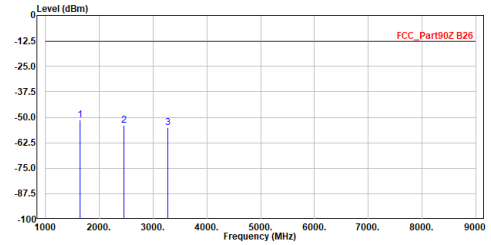
Site :CB2-H  
 Condition :3m Horizontal  
 Mode :LTE\_B26\_10M\_Ch26740\_QPSK\_1RB0  
 Test By :Cyril



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1638.000	-53.10	-13.00	-40.10	-40.27	-12.83	Peak
2	2457.000	-56.74	-13.00	-43.74	-47.24	-9.50	Peak
3	3276.000	-55.28	-13.00	-42.28	-48.42	-6.86	Peak

Note:  
 1. Level = Read Level + Factor  
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor  
 3. Over Limit = Level - Limit Line  
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)  
 $= 107 + 20\log(3) - 104.8 = 11.8$  dB  
 5. The other emission levels were very low against the limit.  
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :CB2-H  
 Condition :3m Vertical  
 Mode :LTE\_B26\_10M\_Ch26740\_QPSK\_1RB0  
 Test By :Cyril

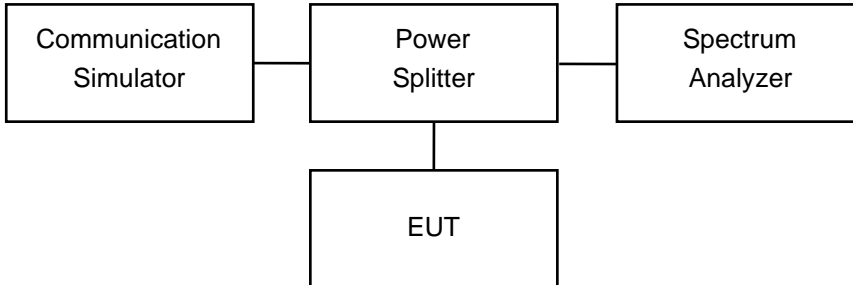


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1638.000	-51.33	-13.00	-38.33	-38.50	-12.83	Peak
2	2457.000	-54.03	-13.00	-41.03	-44.53	-9.50	Peak
3	3276.000	-55.21	-13.00	-42.21	-48.35	-6.86	Peak

Note:  
 1. Level = Read Level + Factor  
 2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor  
 3. Over Limit = Level - Limit Line  
 4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)  
 $= 107 + 20\log(3) - 104.8 = 11.8$  dB  
 5. The other emission levels were very low against the limit.  
 6. The emission under 1GHz was not included since the emission levels are very low against the limit.

## 7. Conducted Band Edge

### 7.1. Test Setup



### 7.2. Test Procedure

1. The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. The path loss was compensated to the results for each measurement.
2. In the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions.

### 7.3. Test Methodology and Reference Procedures

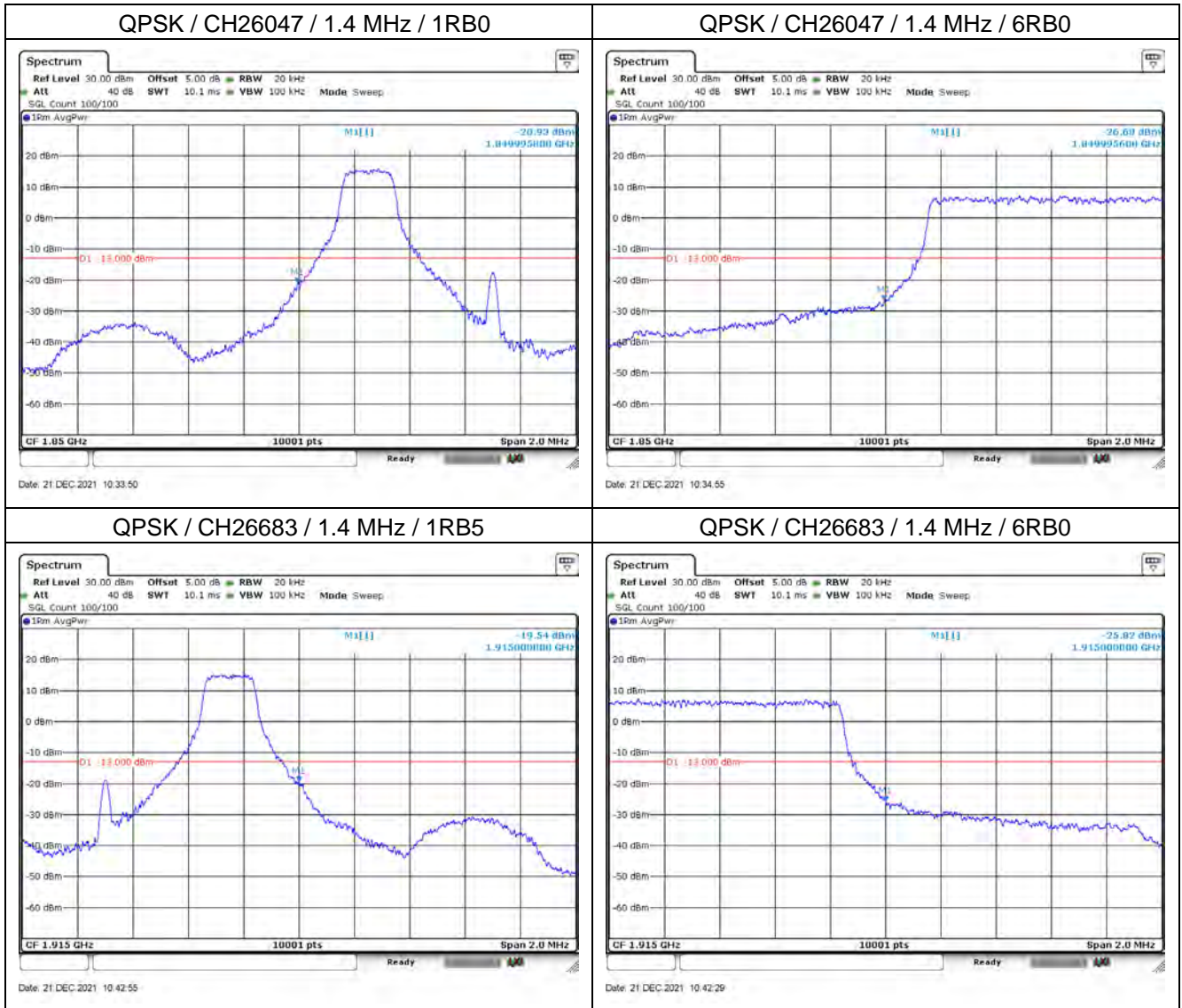
KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI C63.26-2015

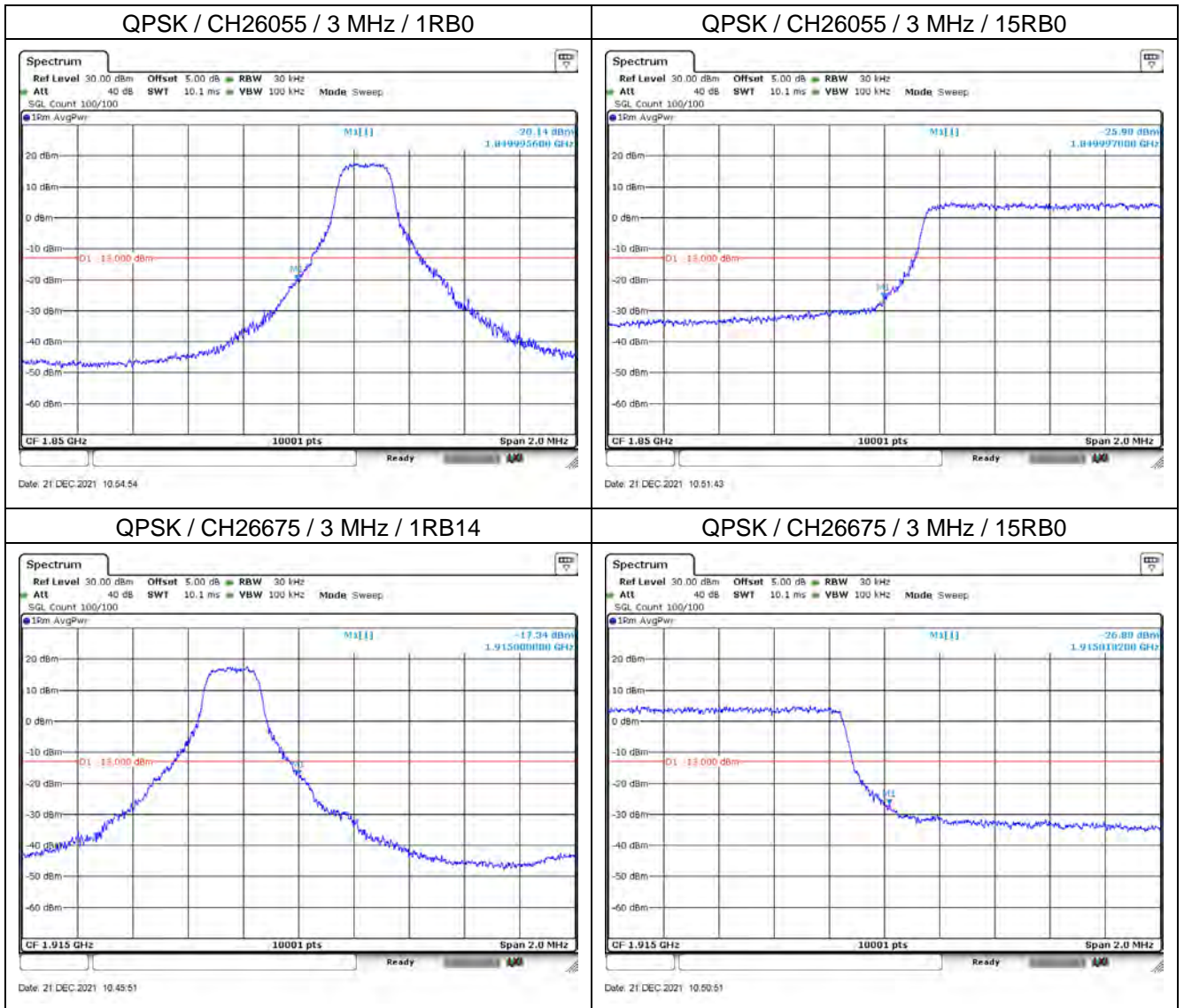
### 7.4. Test Result of Conducted Band Edge

#### Mode 1: LTE Band 2/25

#### LTE Band 25

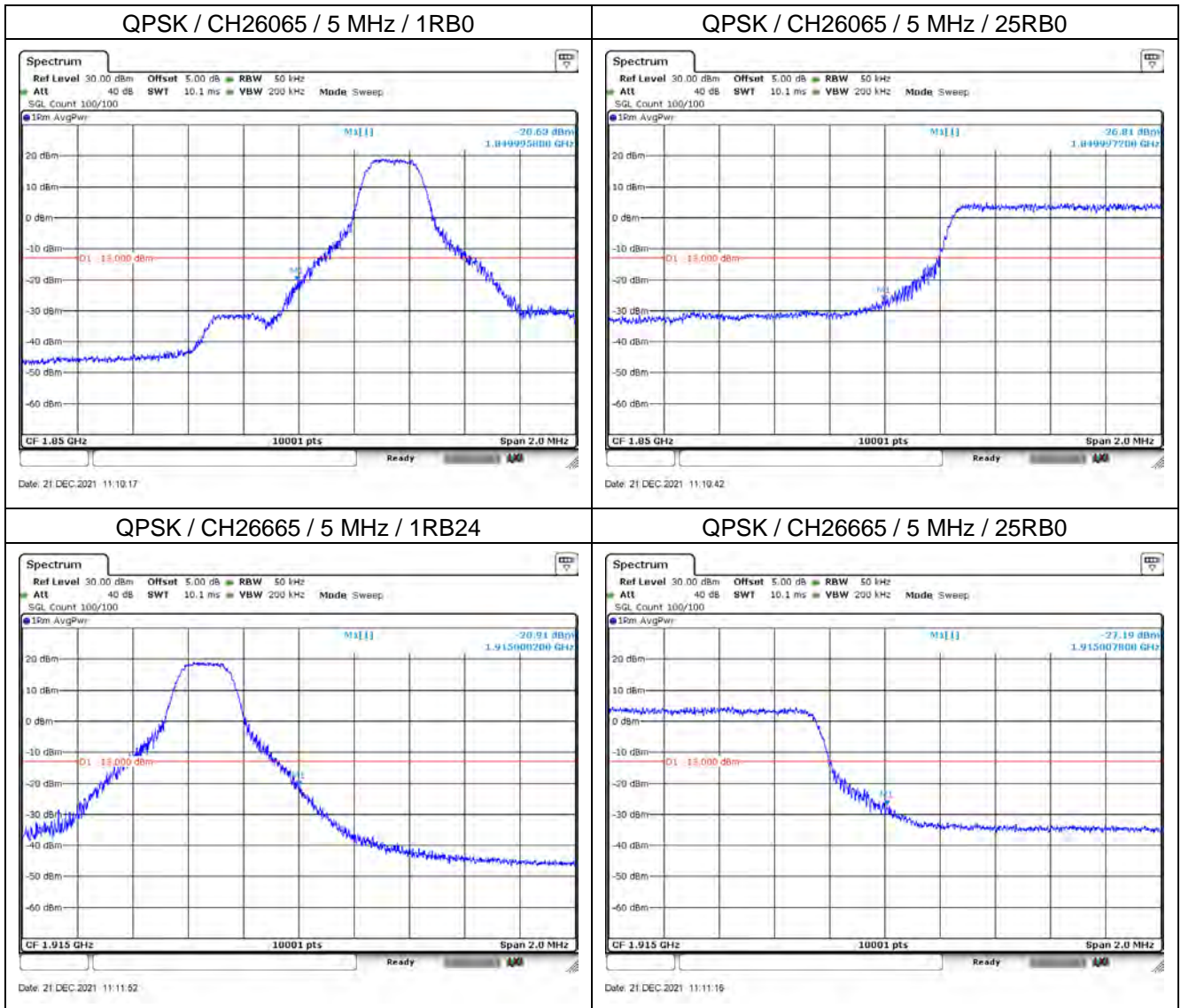


LTE Band 25

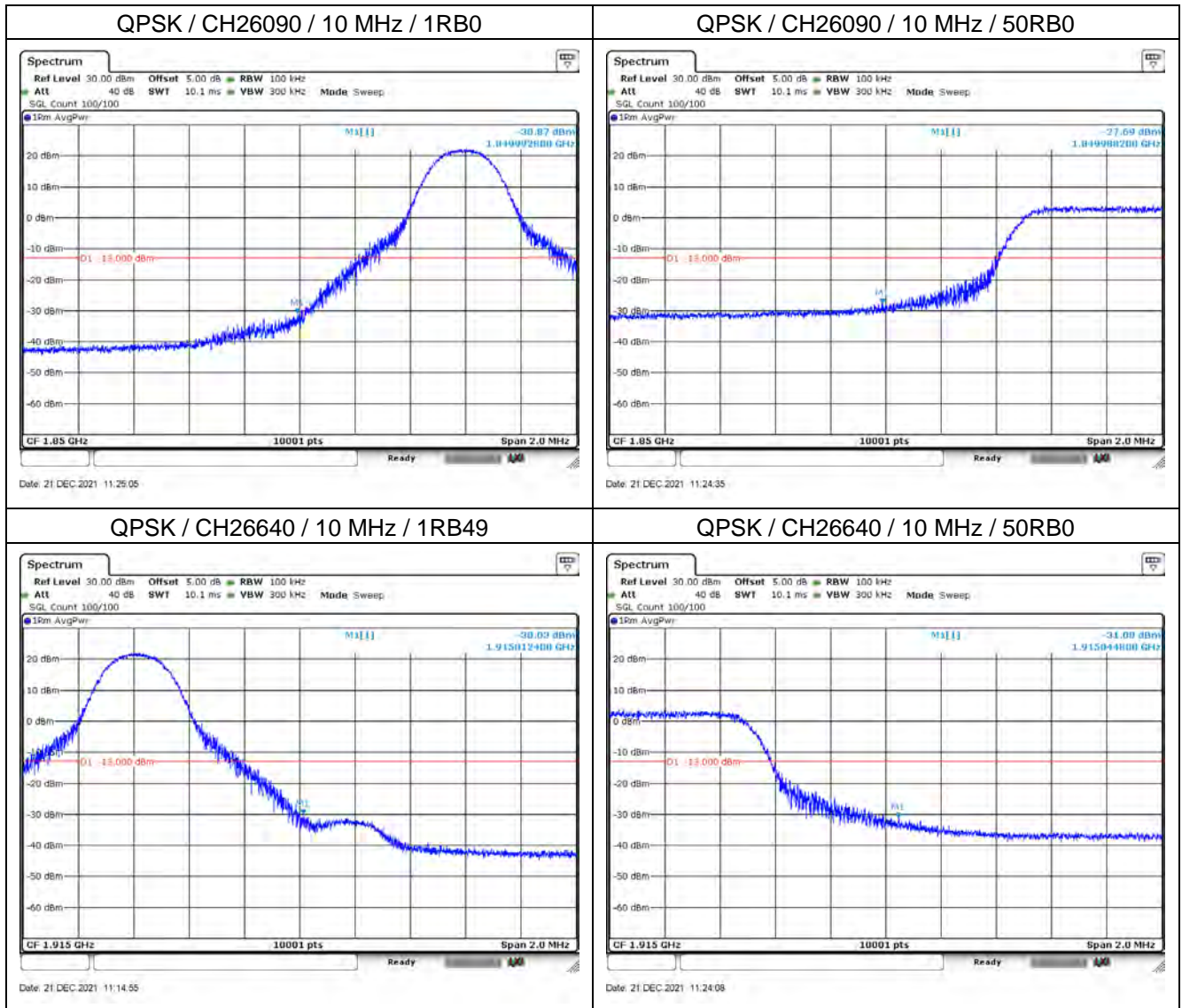




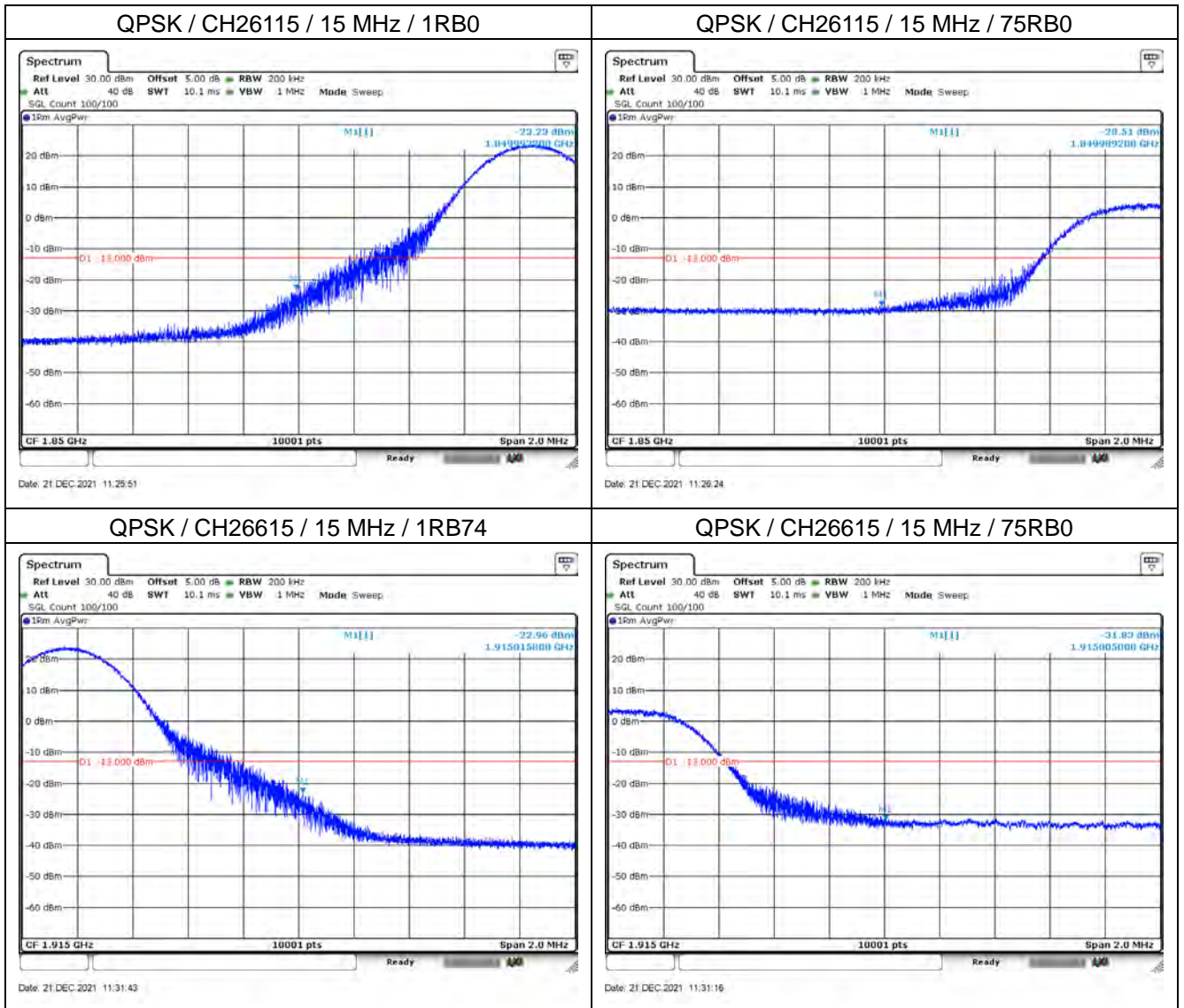
LTE Band 25



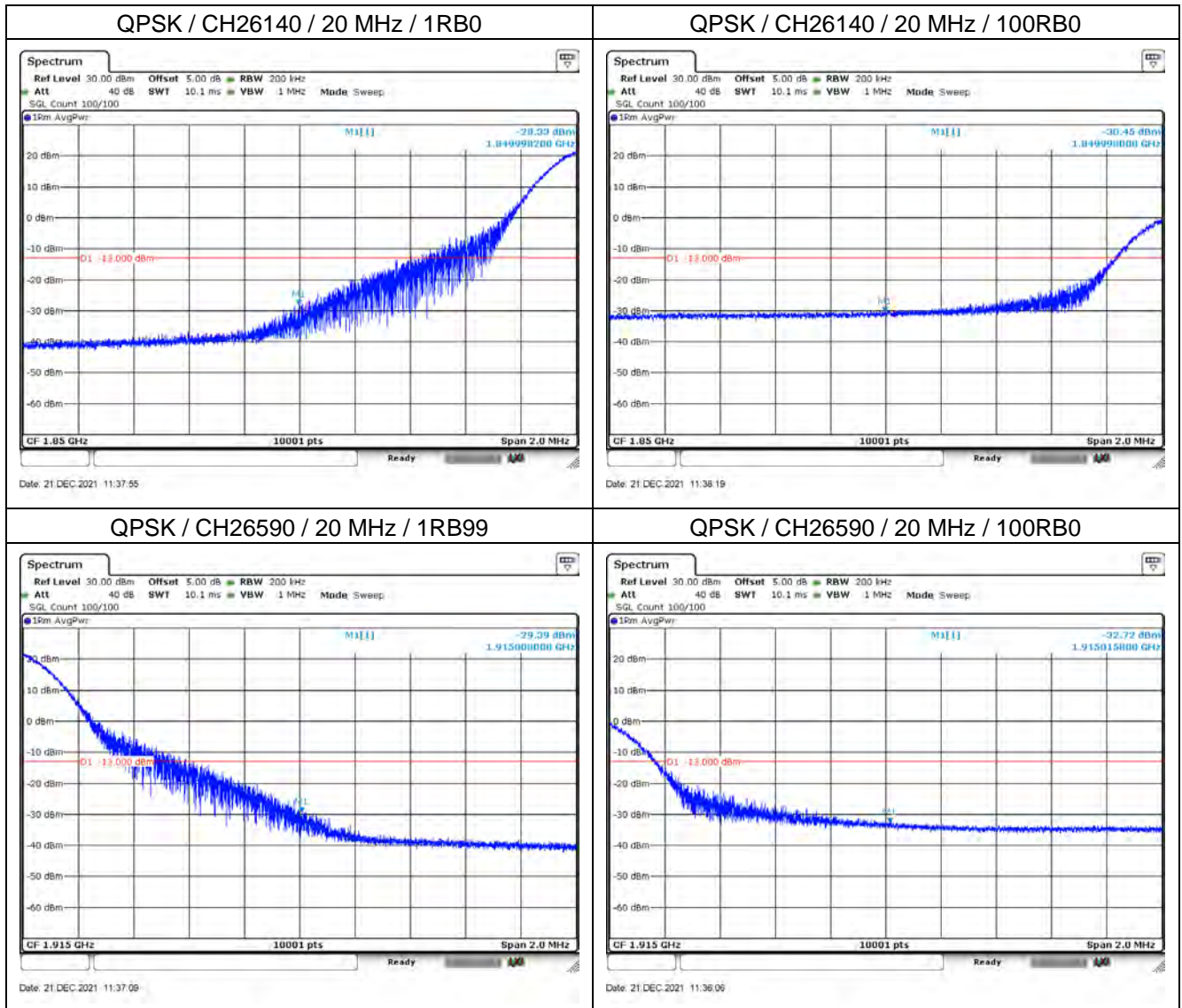
LTE Band 25



LTE Band 25

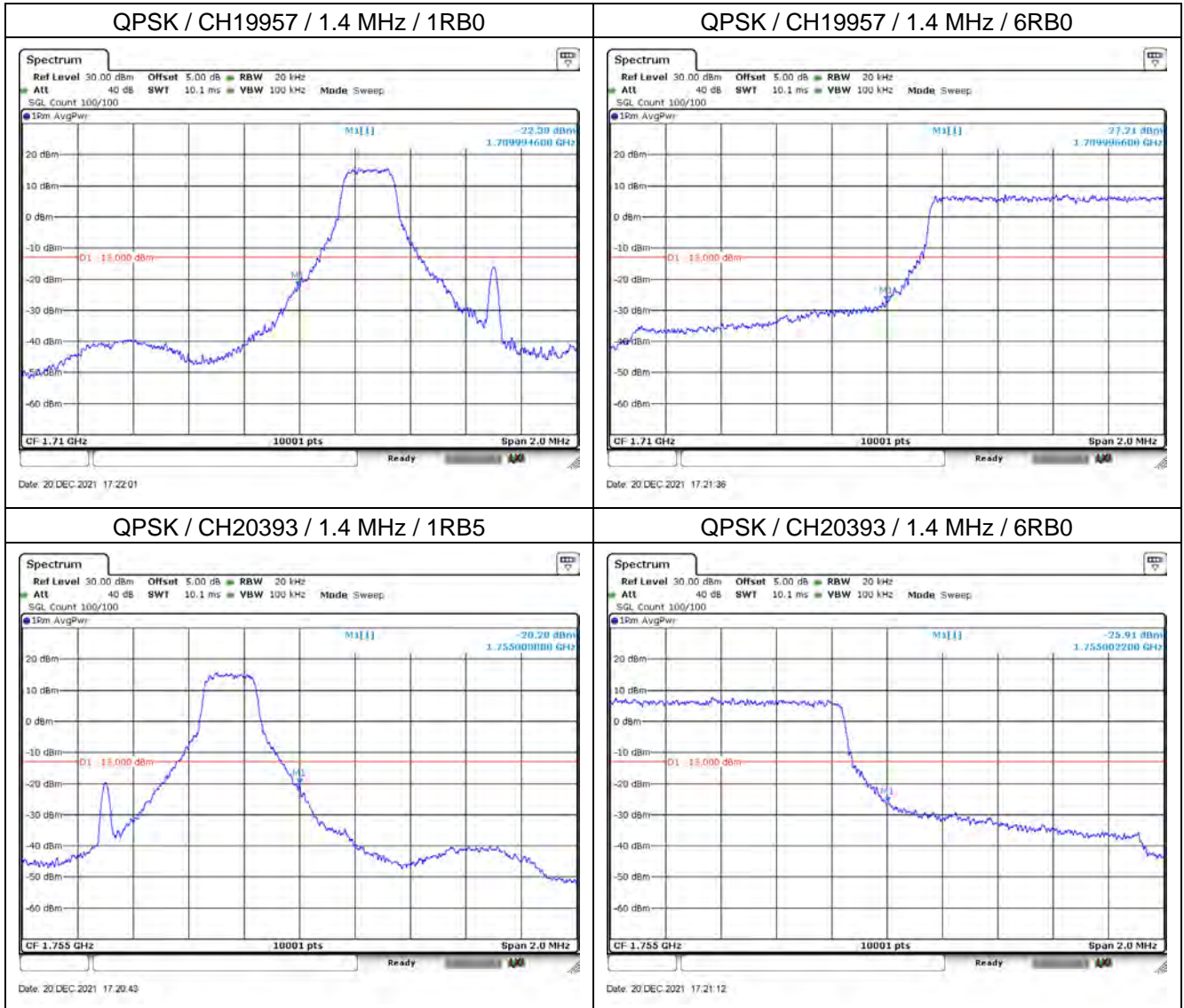


LTE Band 25

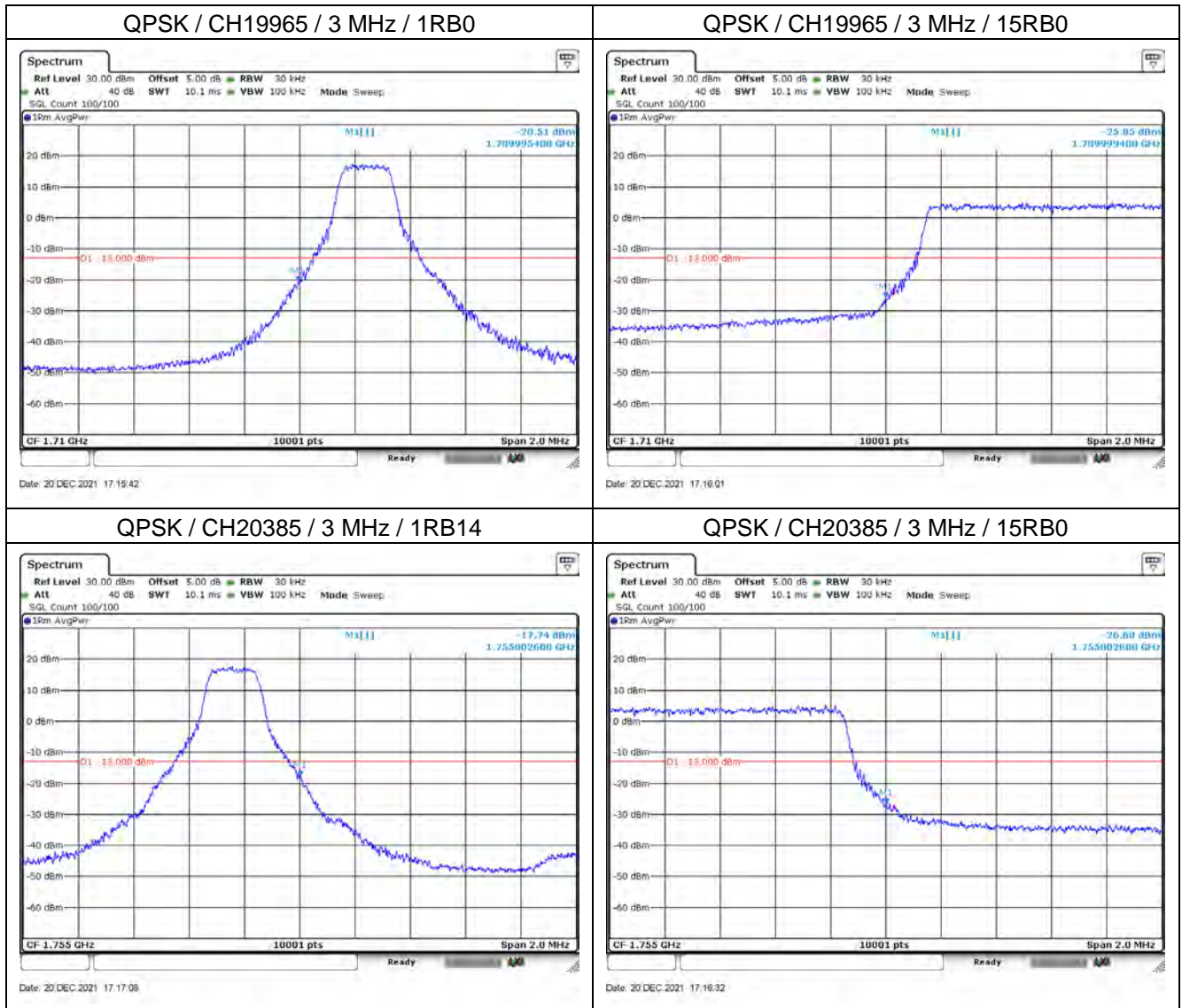


**Mode 2: LTE Band 4**

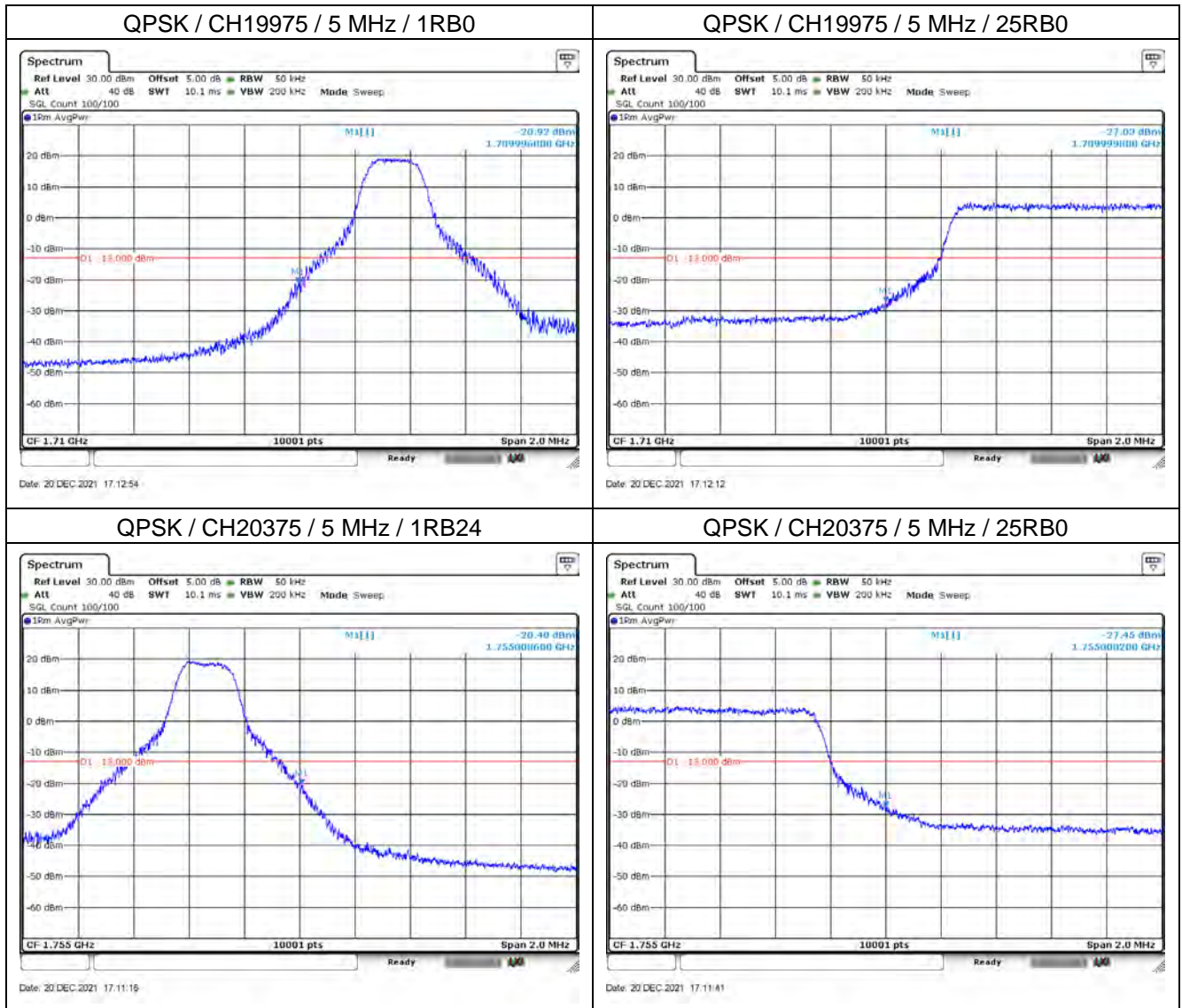
LTE Band 4



LTE Band 4



LTE Band 4



LTE Band 4

