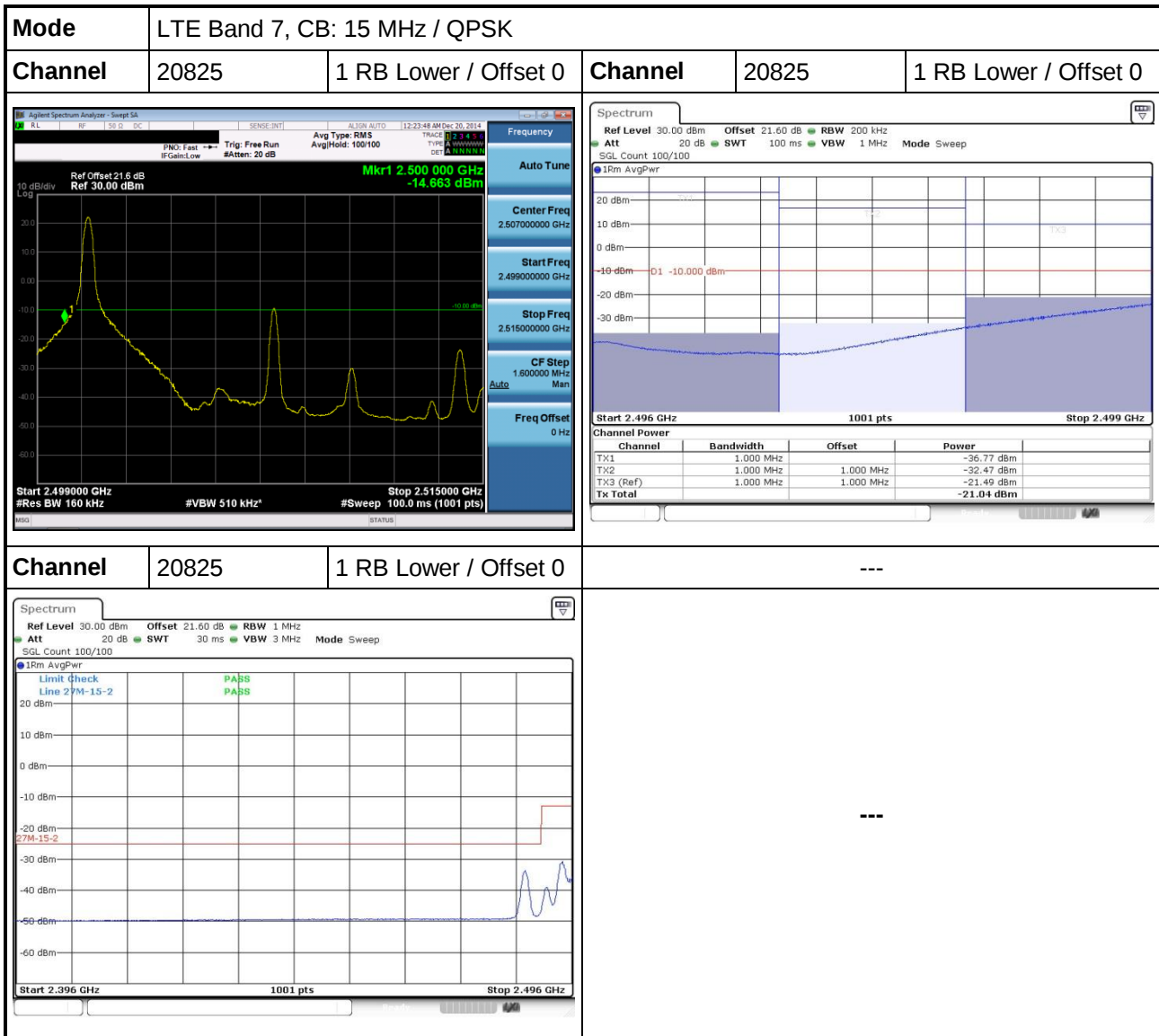
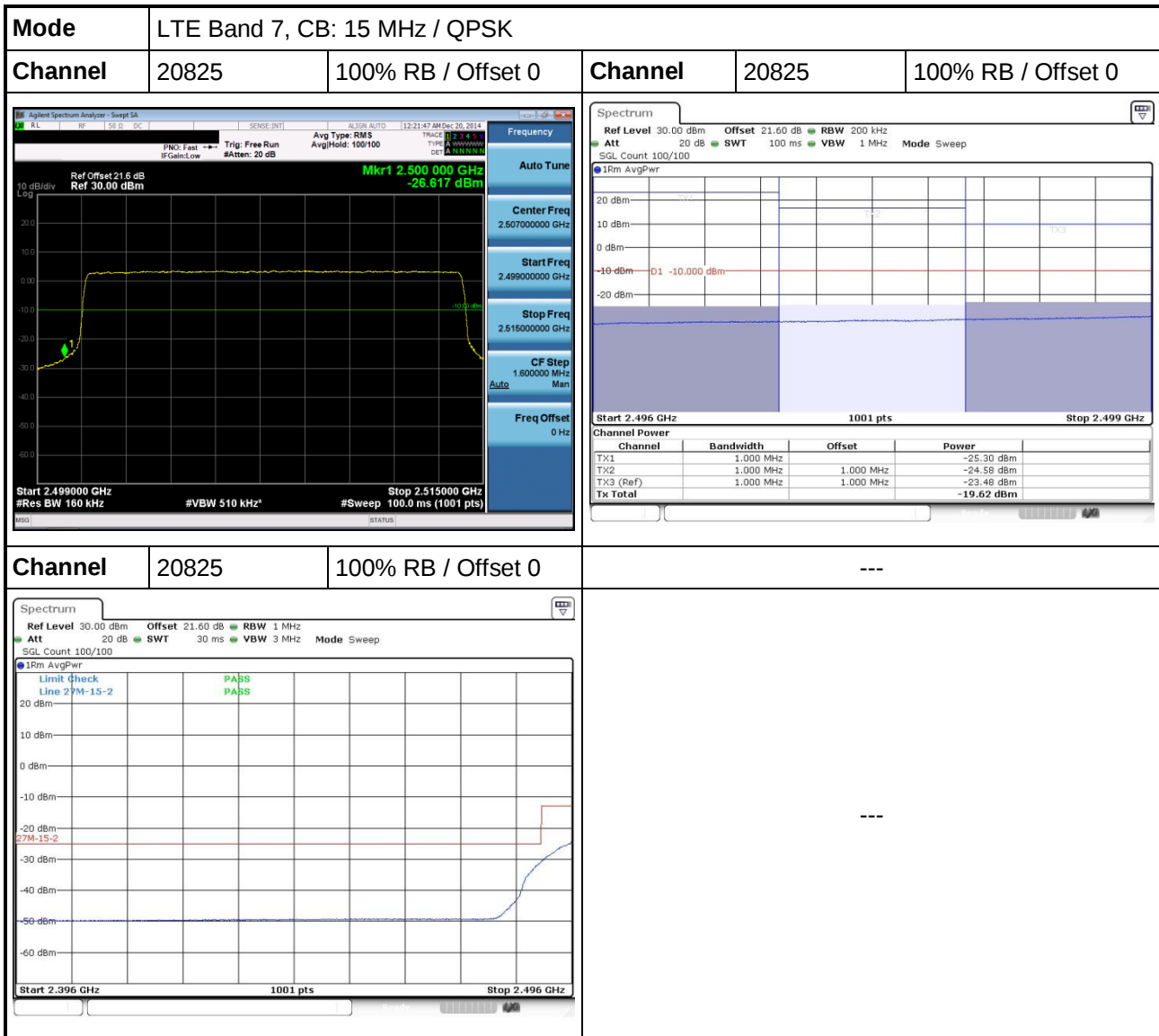
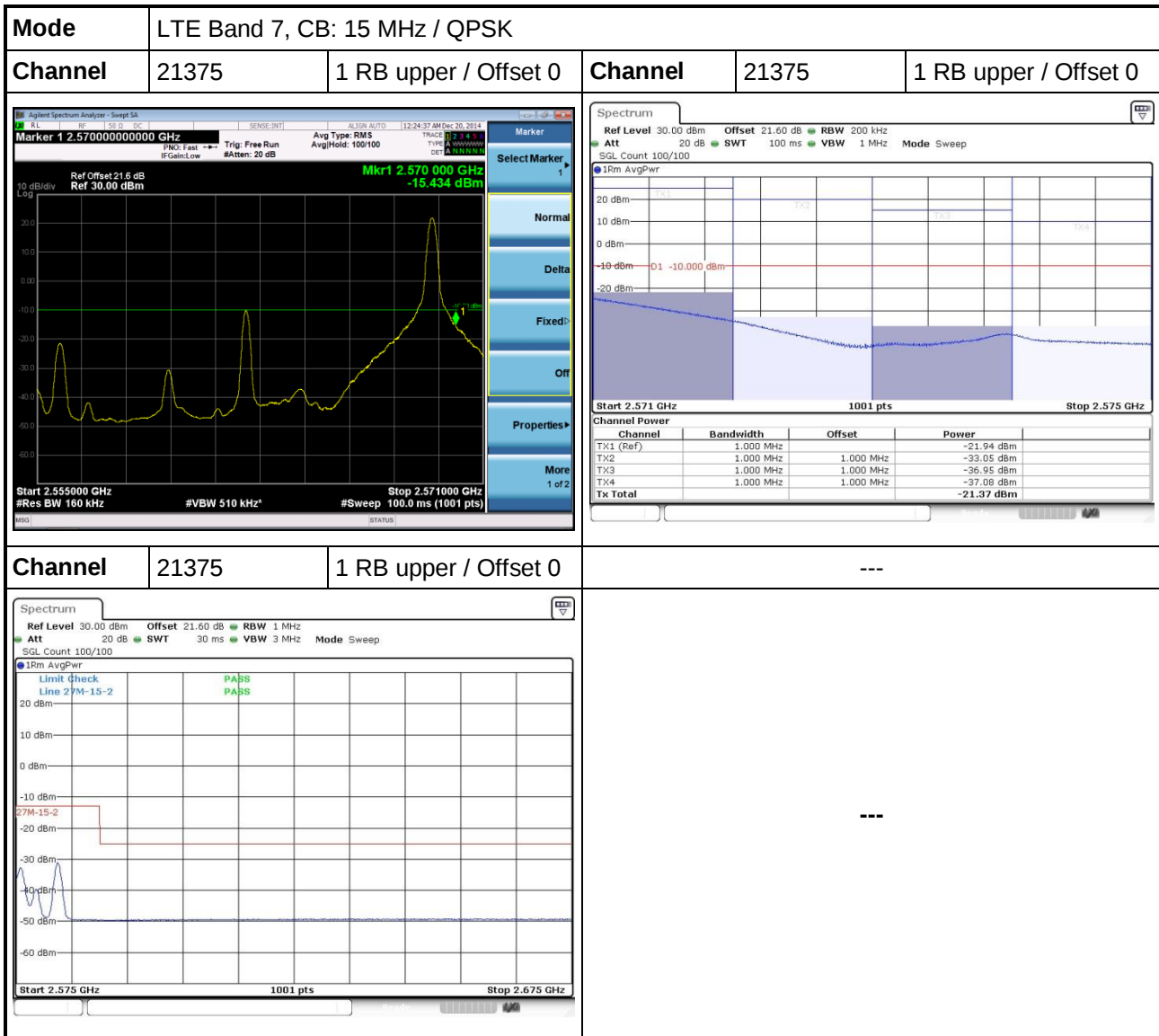
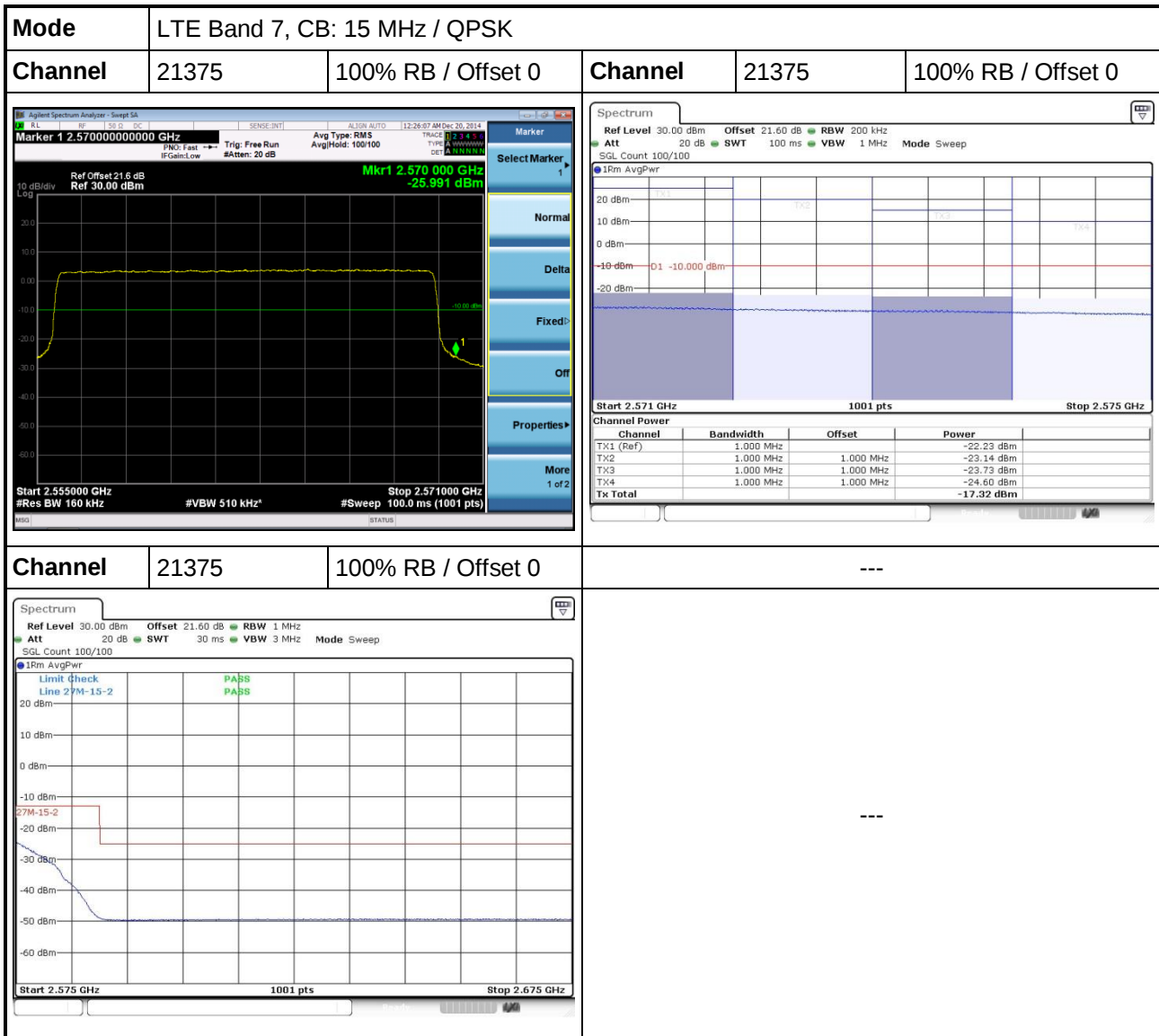
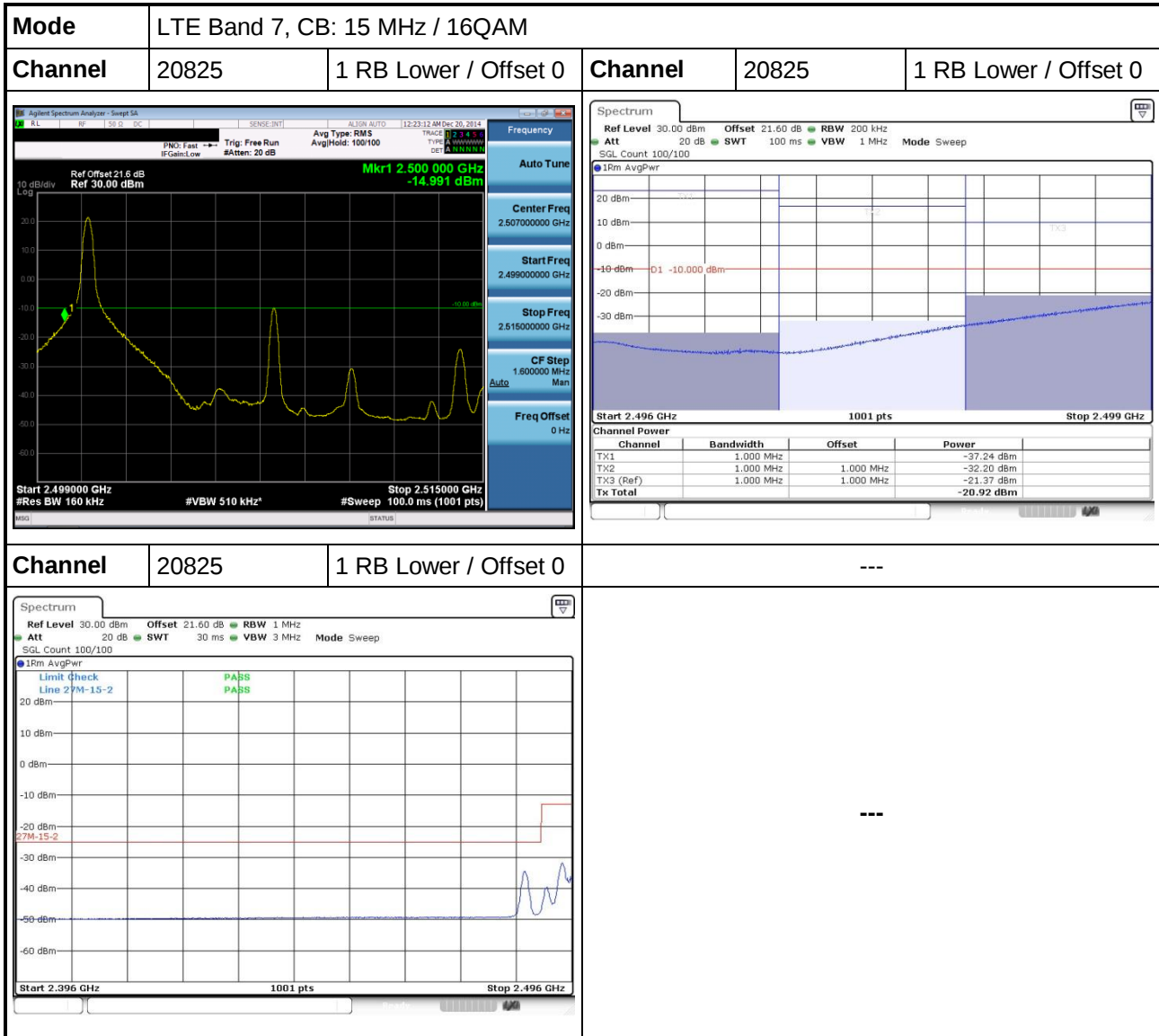


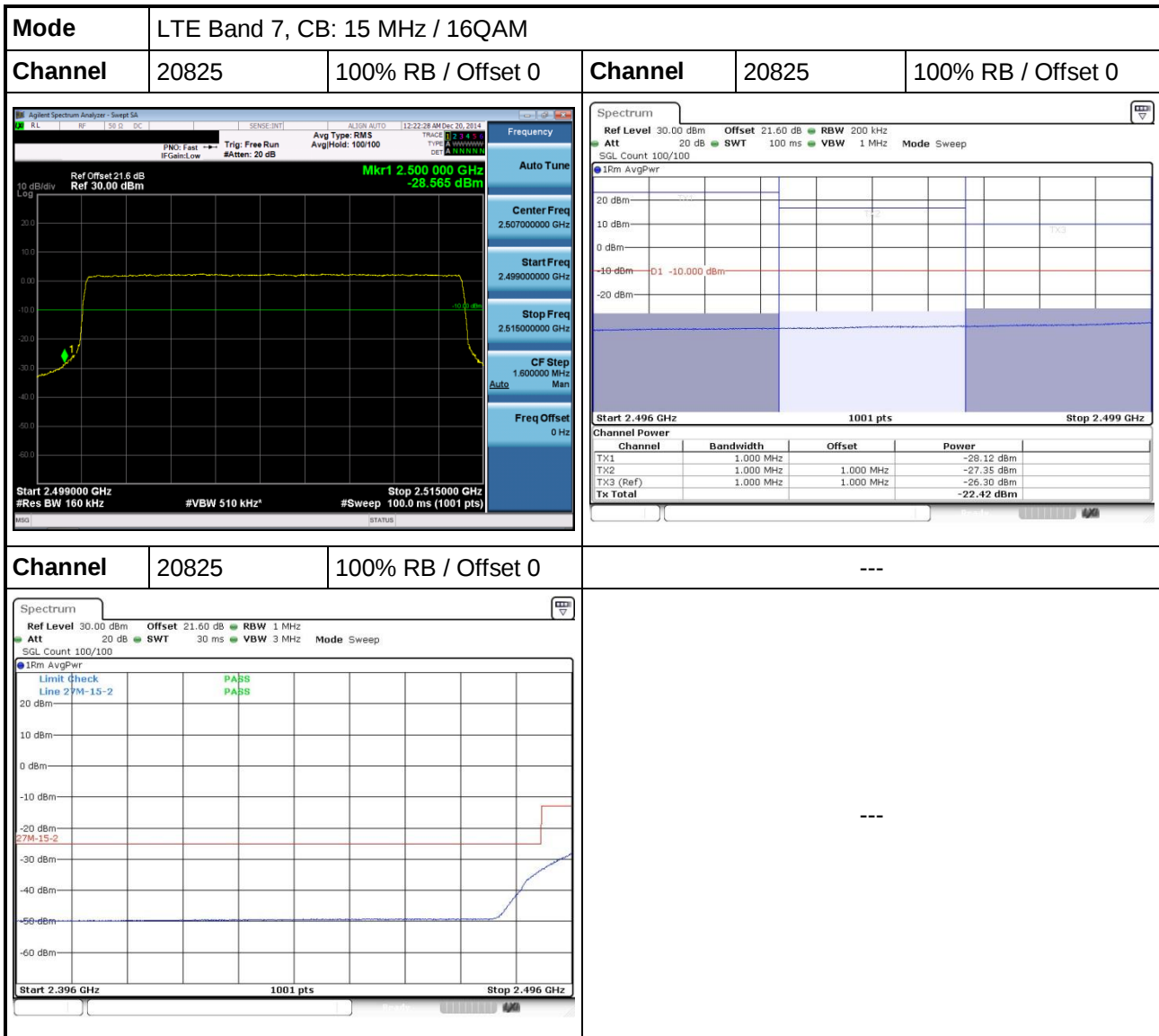


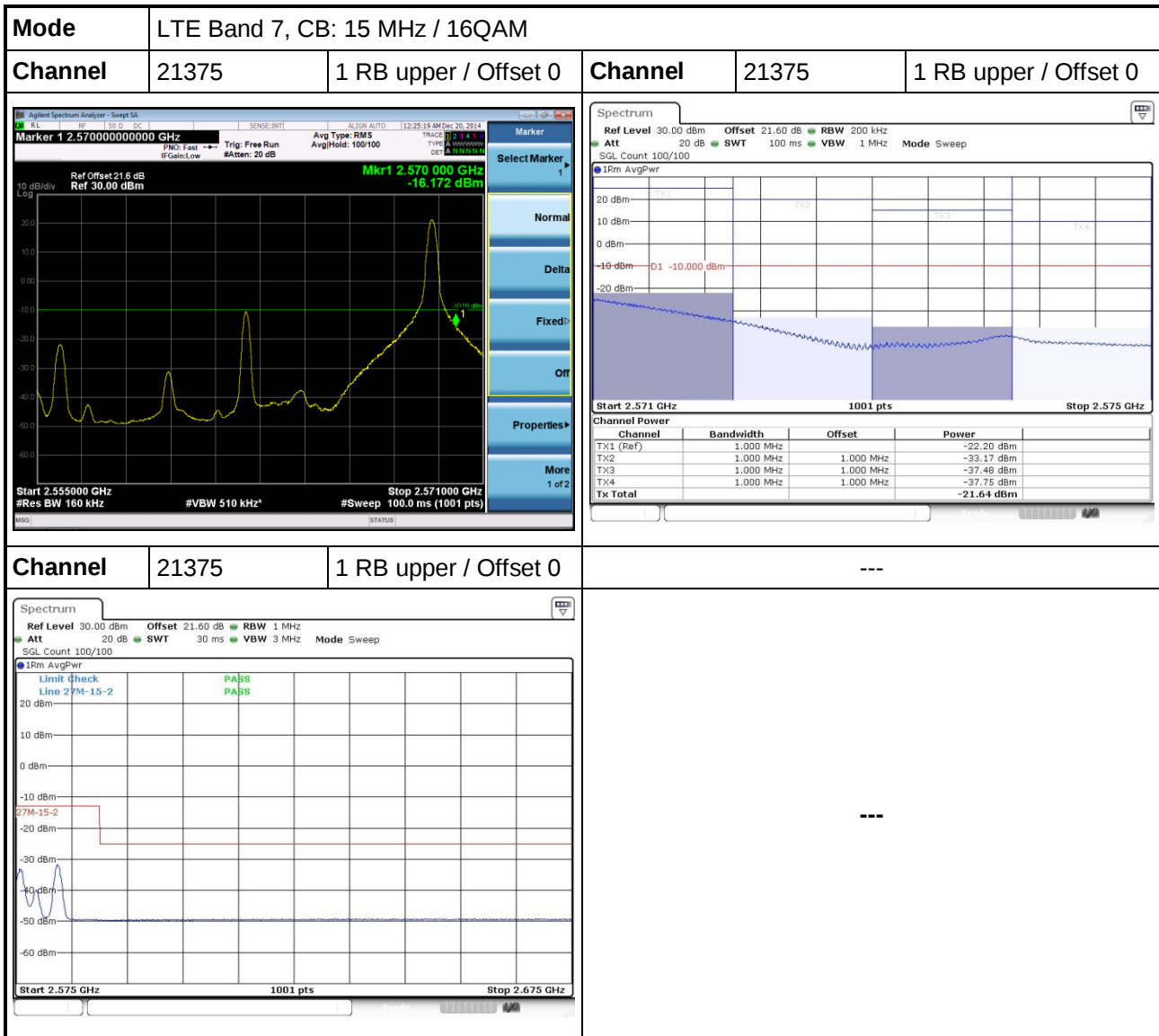


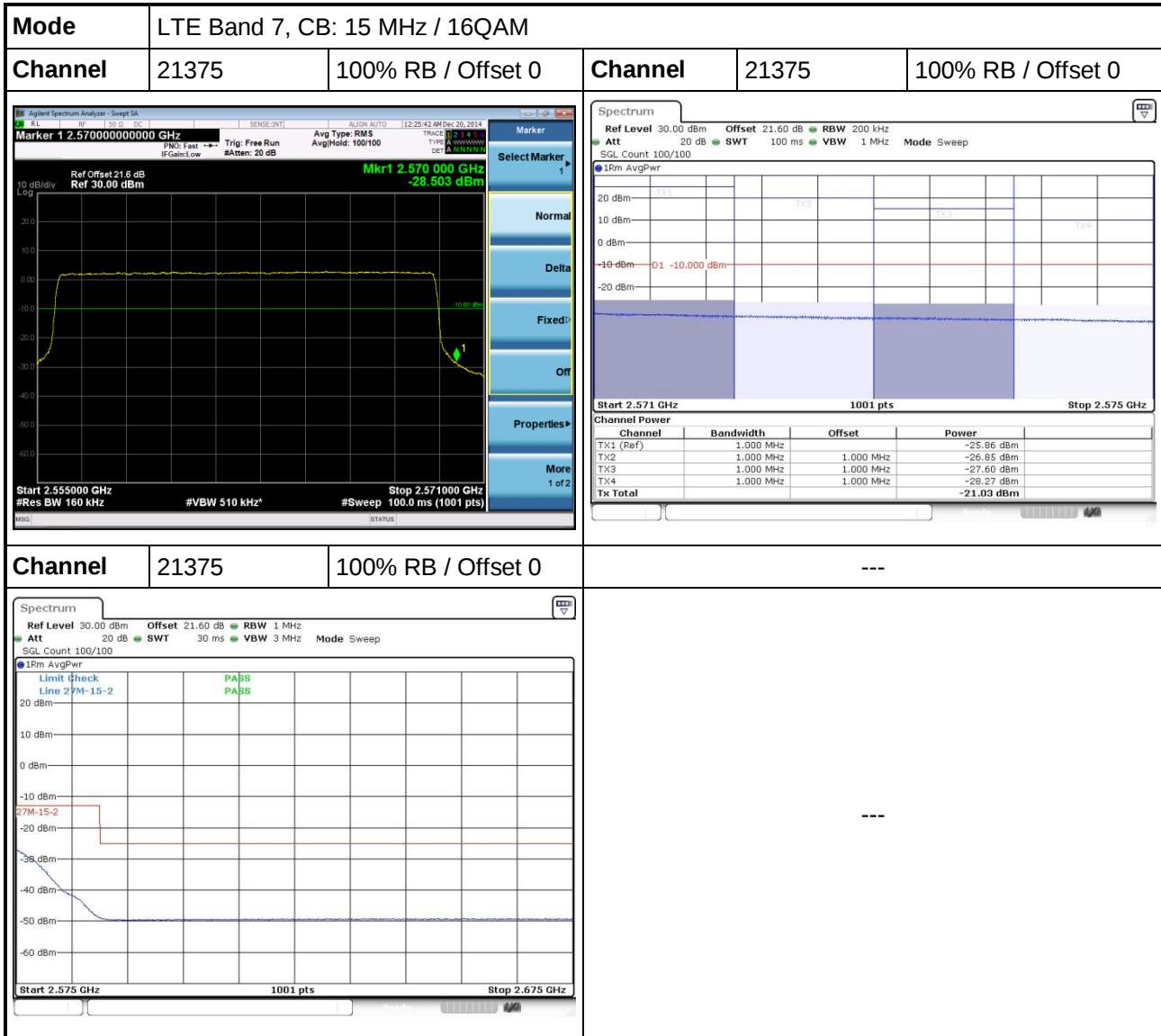


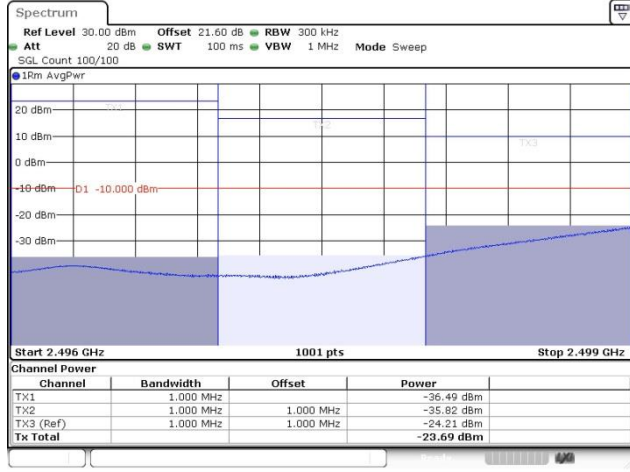
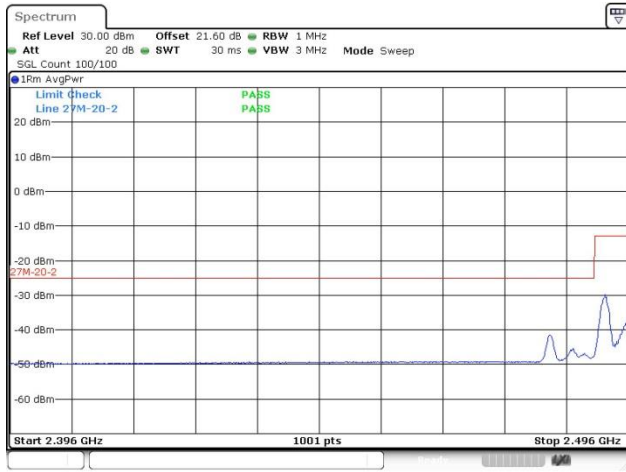


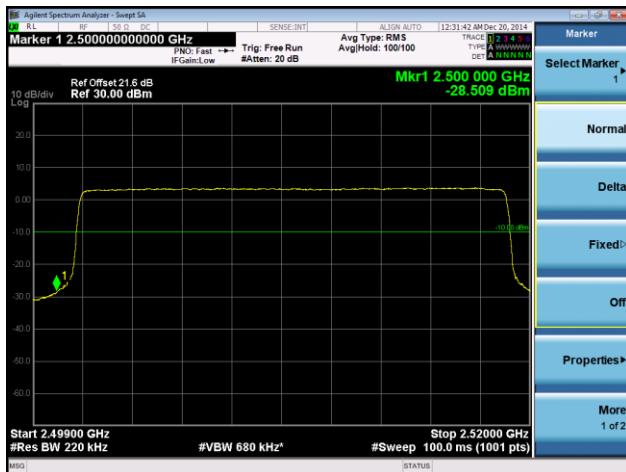
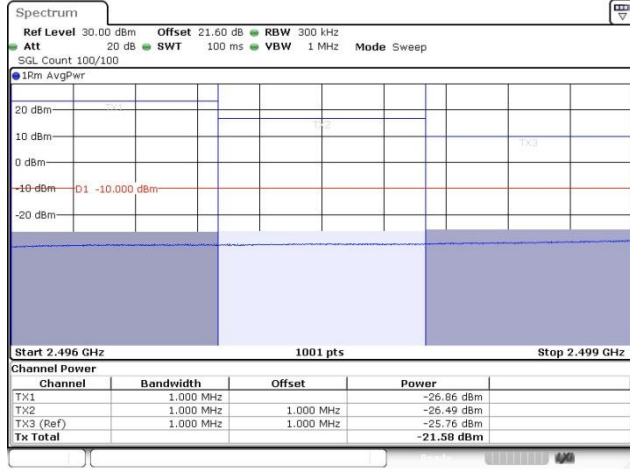
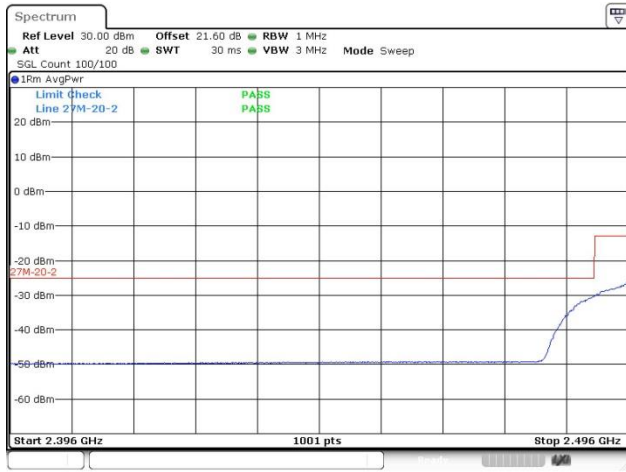


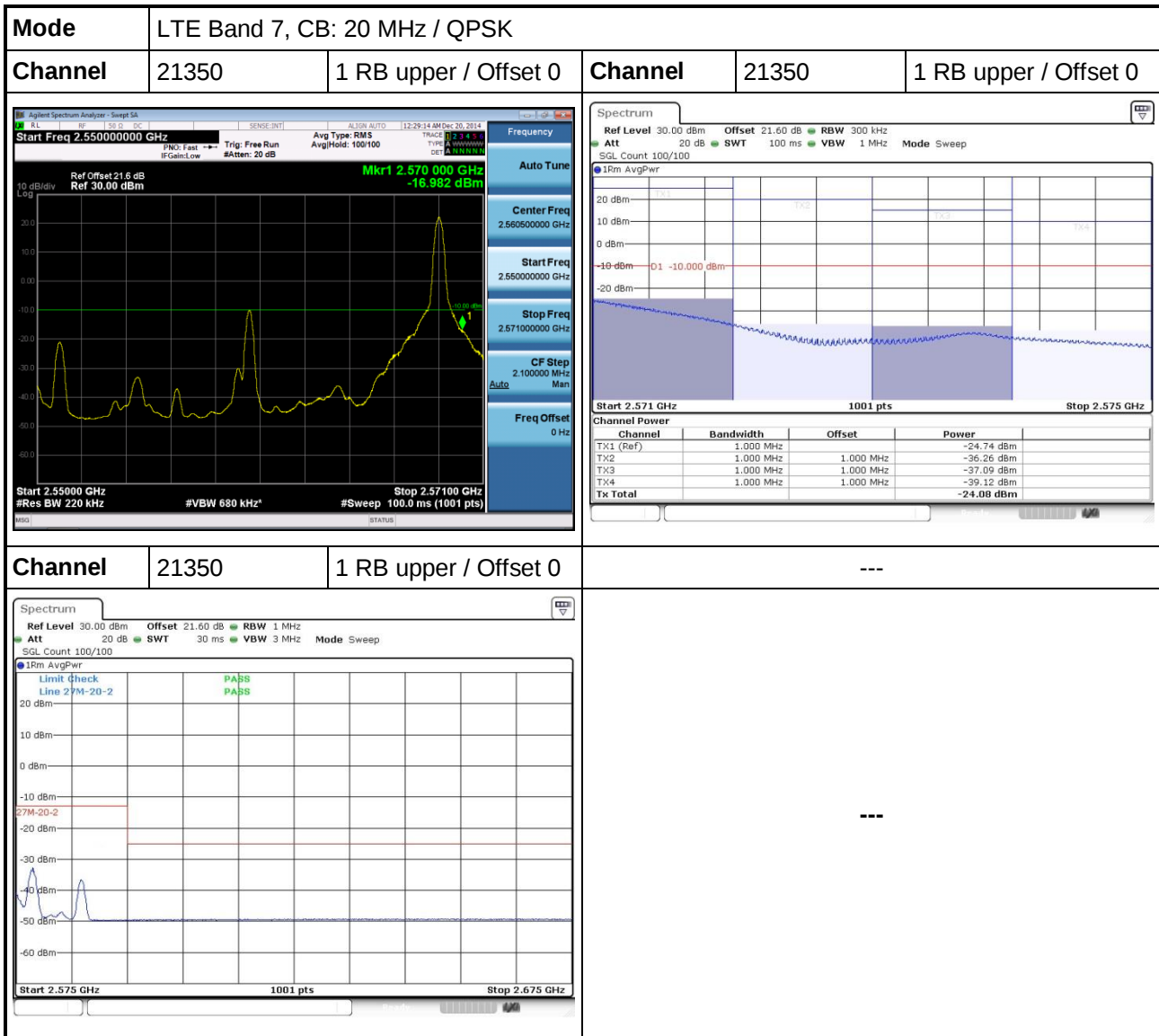


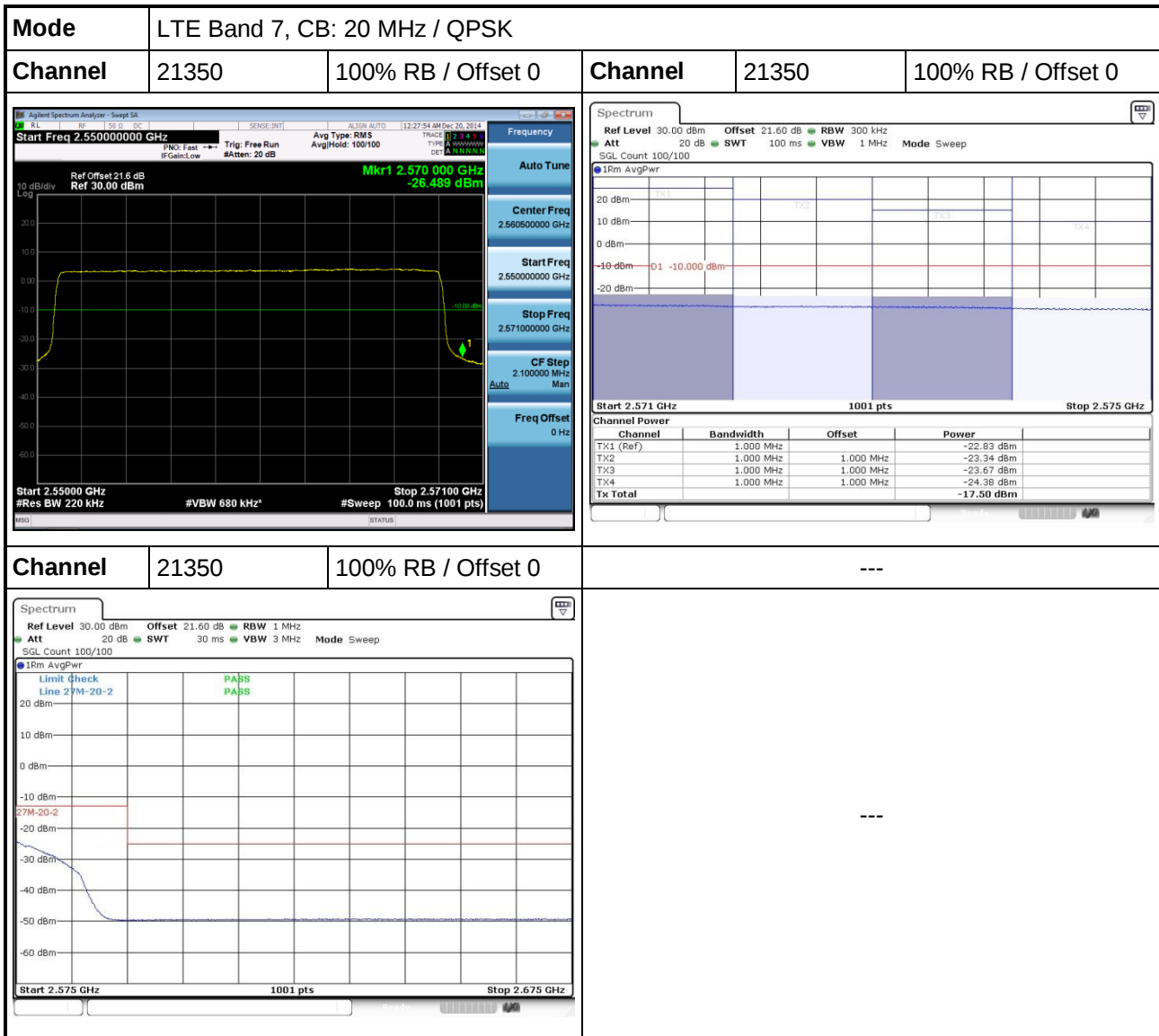


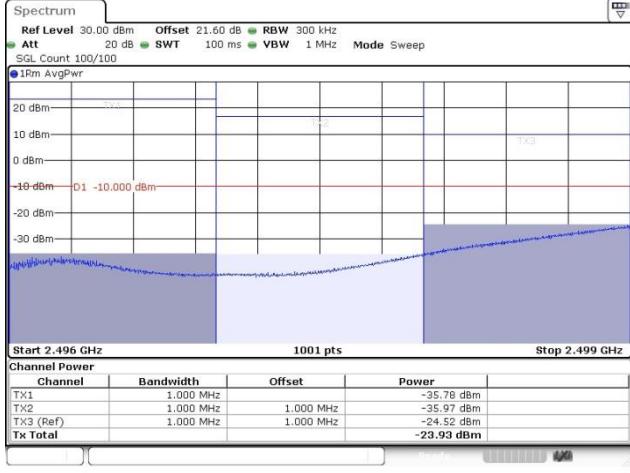
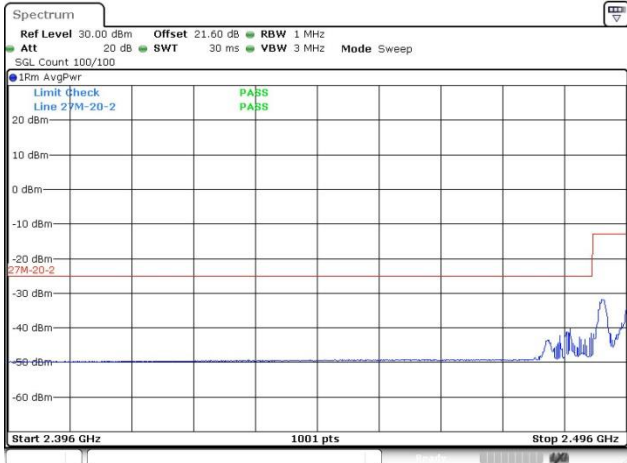


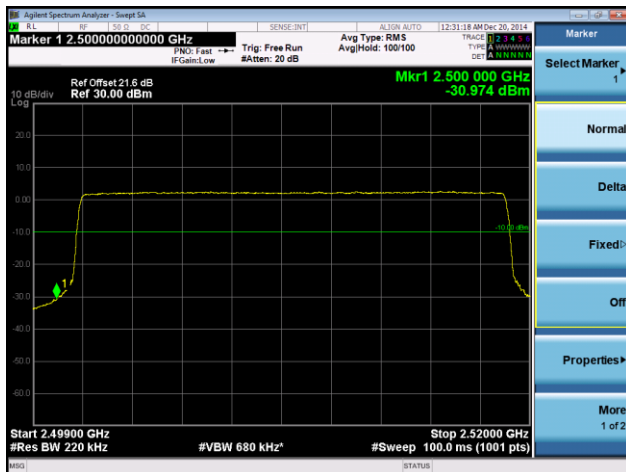
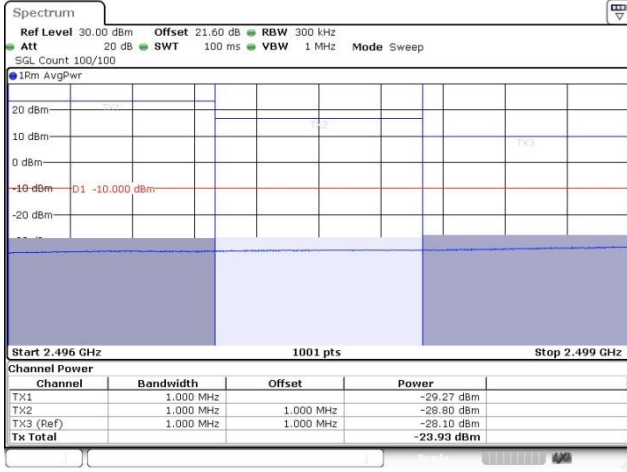
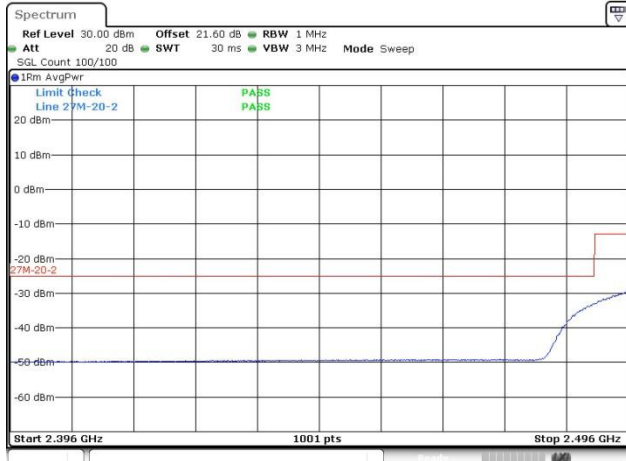
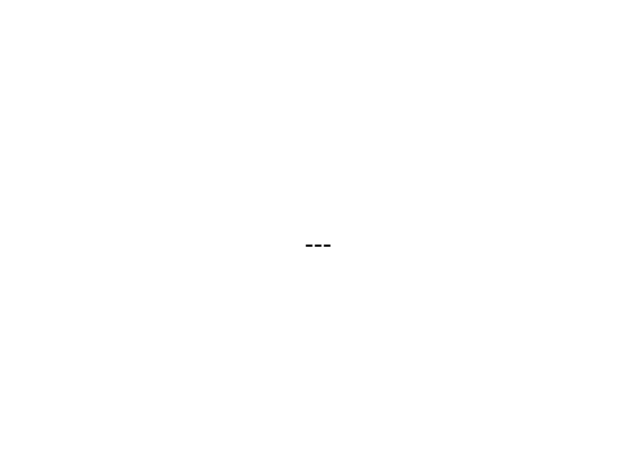
Mode		LTE Band 7, CB: 20 MHz / QPSK					
Channel		20850	1 RB Lower / Offset 0	Channel		20850	1 RB Lower / Offset 0
							
Channel		20850	1 RB Lower / Offset 0	---			
							

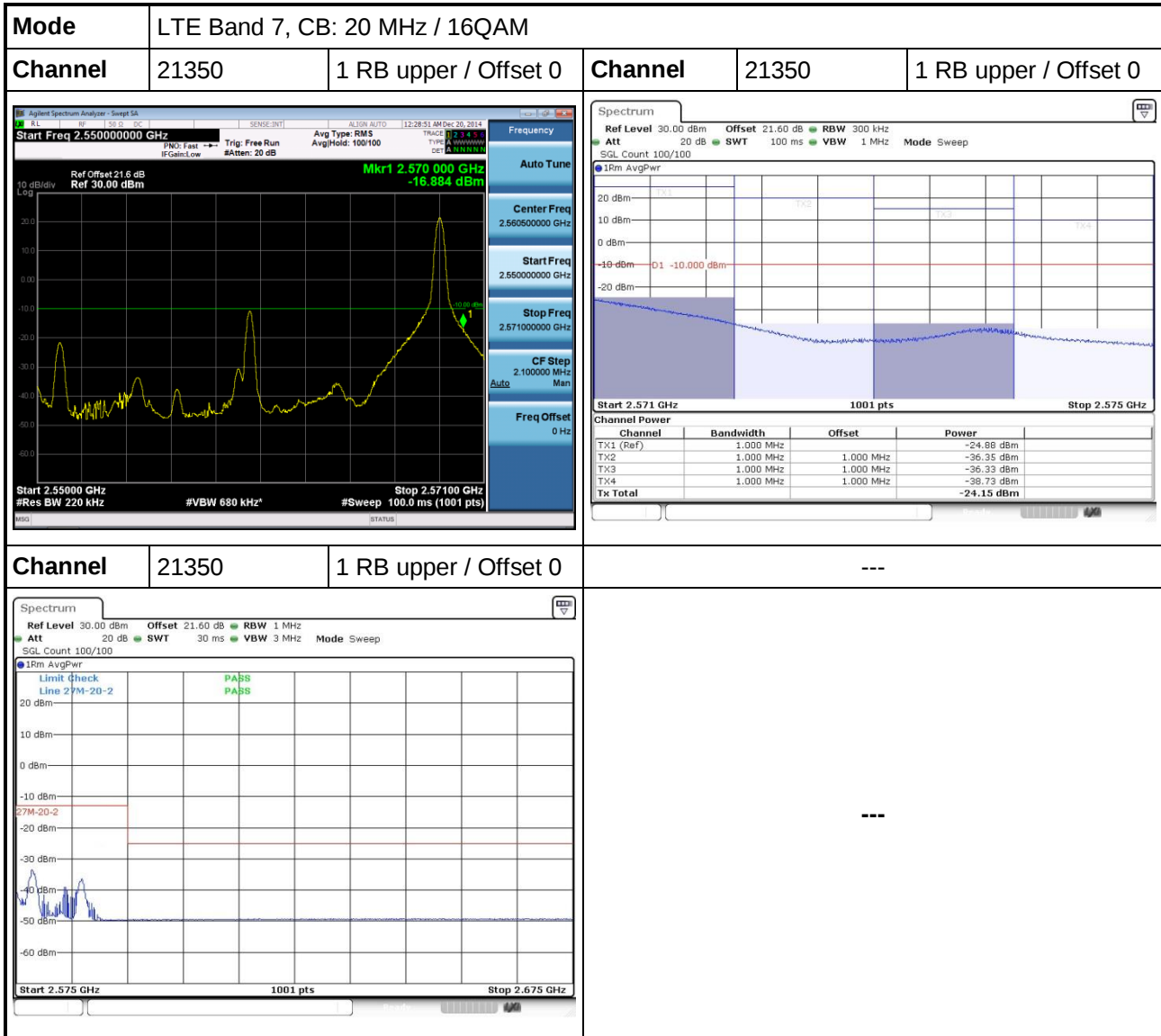
Mode		LTE Band 7, CB: 20 MHz / QPSK					
Channel		20850	100% RB / Offset 0	Channel		20850	100% RB / Offset 0
							
Channel		20850	100% RB / Offset 0	---			
				---			

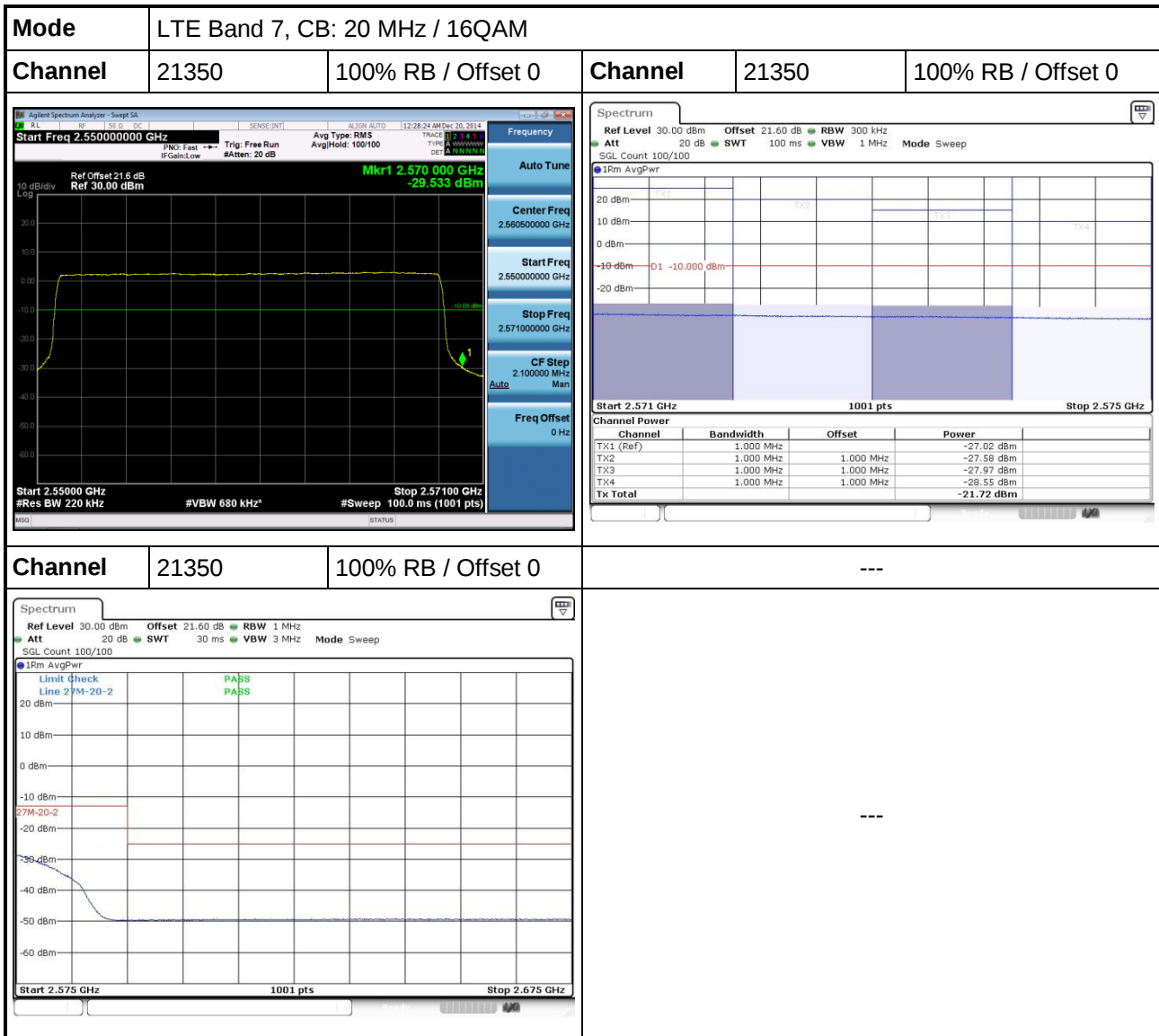




Mode		LTE Band 7, CB: 20 MHz / 16QAM		
Channel		20850	1 RB Lower / Offset 0	Channel 20850 1 RB Lower / Offset 0
				
Channel		20850	1 RB Lower / Offset 0	---
		---		

Mode		LTE Band 7, CB: 20 MHz / 16QAM	
Channel		20850	100% RB / Offset 0
			
Channel		20850	100% RB / Offset 0
			



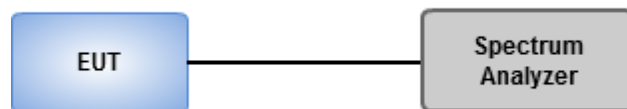


3.5 Occupied and 26 dB Bandwidth

3.5.1 Test Procedures

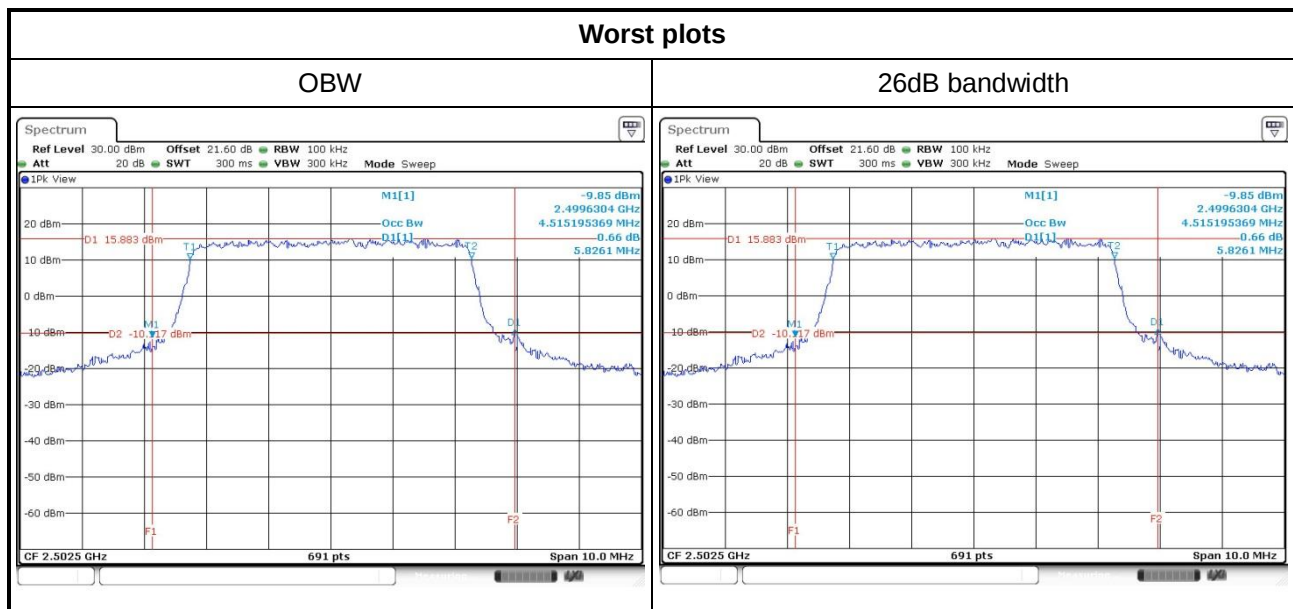
1. Set RBW = 100 / 200 / 200 / 300 kHz, VBW = 300 / 1000 / 1000 / 1000 kHz for channel bandwidth 5 / 10 / 15 / 20 MHz.
2. Set Detector = Peak, Trace mode = max hold, Sweep = auto couple, Allow the trace to stabilize.
3. Using occupied bandwidth measurement function of spectrum analyzer to measure occupied bandwidth.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 26dB relative to the maximum level measured in the fundamental emission.

3.5.2 Test Setup

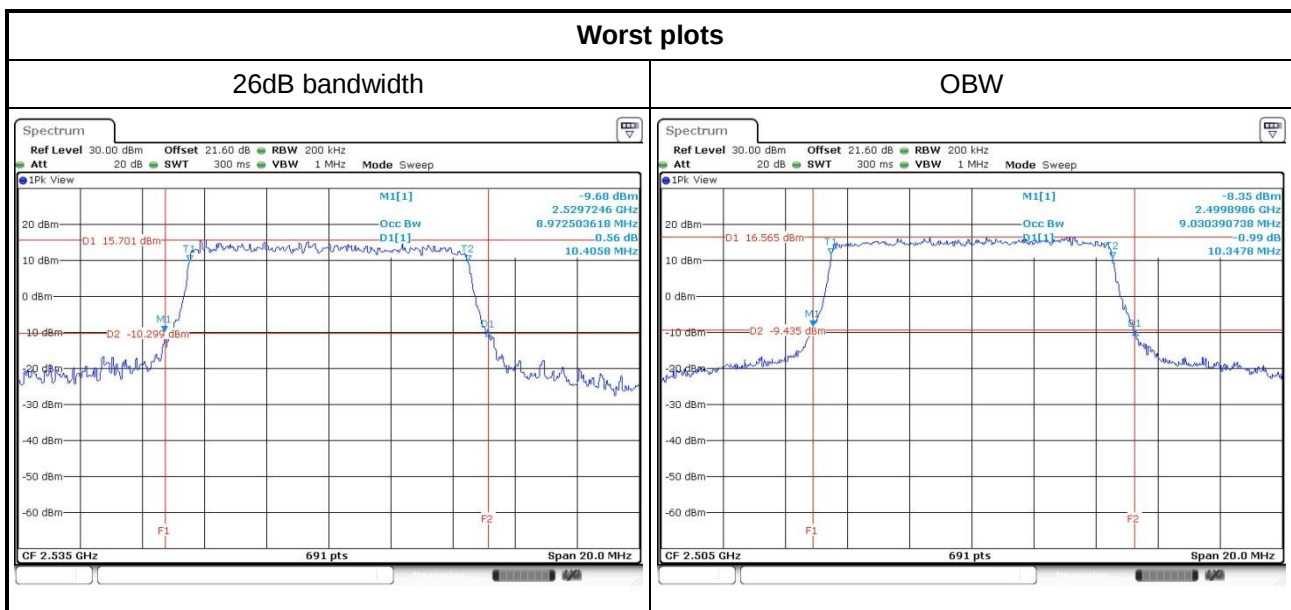


3.5.3 Test Result of Occupied Bandwidth

Channel Bandwidth (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
5	QPSK	20775	2502.5	5.8261	4.52
5	QPSK	21100	2535	5.3913	4.52
5	QPSK	21425	2567.5	5.4203	4.50
5	16QAM	20775	2502.5	5.4058	4.50
5	16QAM	21100	2535	5.1594	4.50
5	16QAM	21425	2567.5	5.2754	4.50



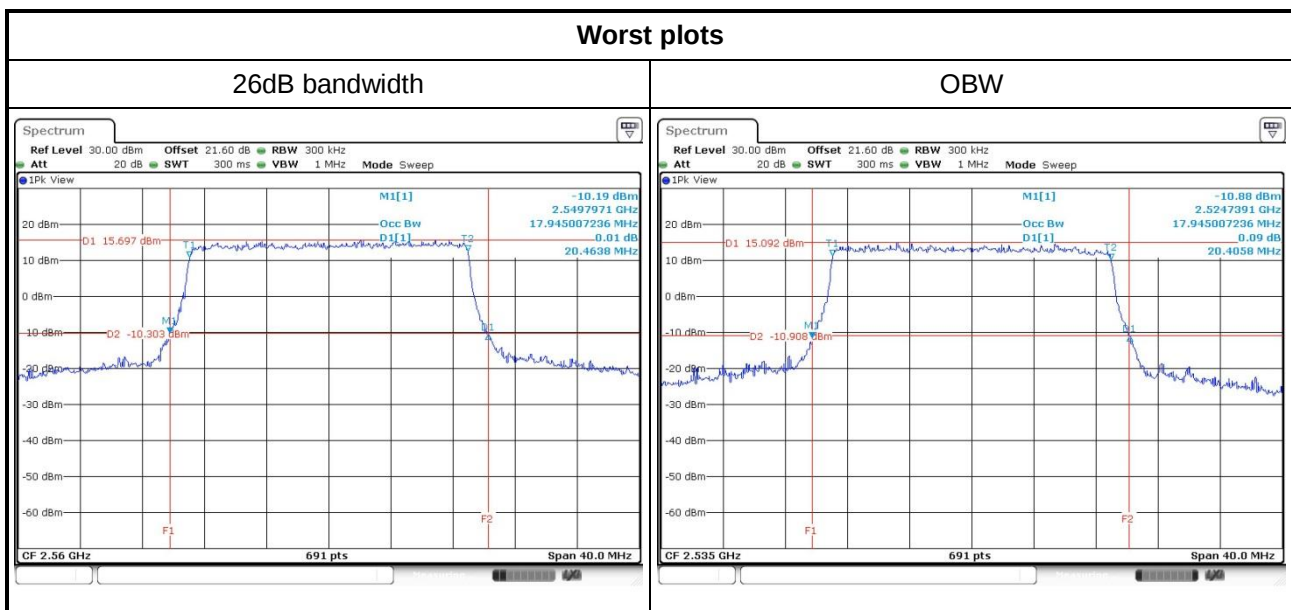
Channel Bandwidth (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
10	QPSK	20800	2505	10.3478	9.03
10	QPSK	21100	2535	10.3478	9.03
10	QPSK	21400	2565	10.3768	9.03
10	16QAM	20800	2505	10.1739	8.97
10	16QAM	21100	2535	10.4058	8.97
10	16QAM	21400	2565	10.2319	8.97



Channel Bandwidth (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
15	QPSK	20825	2507.5	15.6087	13.46
15	QPSK	21100	2535	15.3478	13.46
15	QPSK	21375	2562.5	15.4348	13.46
15	16QAM	20825	2507.5	15.7391	13.46
15	16QAM	21100	2535	15.6957	13.42
15	16QAM	21375	2562.5	15.6087	13.46



Channel Bandwidth (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
20	QPSK	20850	2510	20.2319	17.95
20	QPSK	21100	2535	20.2899	17.95
20	QPSK	21350	2560	20.4638	17.95
20	16QAM	20850	2510	20.3478	17.95
20	16QAM	21100	2535	20.4058	17.95
20	16QAM	21350	2560	20.2899	17.95



3.6 Frequency Stability

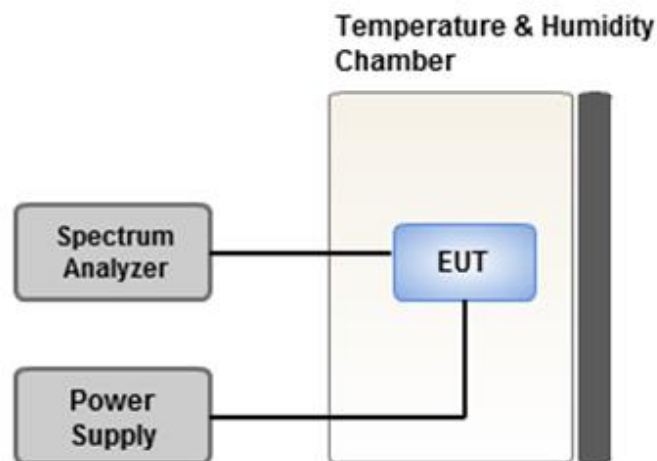
3.6.1 Limit of Frequency Stability

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation

3.6.2 Test Procedures

1. EUT was placed at temperature chamber and connected to an external power supply.
2. Temperature and voltage condition shall be tested to confirm frequency stability.
3. Temperature range is from -30~55°C and voltage range is from lowest to highest working voltage.
4. Tem Link up EUT and simulator. Confirm frequency drift value of simulator and record it.

3.6.3 Test Setup



3.6.4 Test Result of Frequency Stability

LTE Band 7, CB: 5MHz			
Temperature (°C)	Voltage (Vac)	Frequency Drift (ppm)	Limit (ppm)
55	7.4	0.008	2.5
50	7.4	0.009	2.5
40	7.4	0.008	2.5
30	7.4	0.006	2.5
20	7.4	0.007	2.5
10	7.4	0.007	2.5
0	7.4	0.006	2.5
-10	7.4	0.005	2.5
-20	7.4	0.007	2.5
-30	7.4	0.006	2.5
20	8.14	0.007	2.5
20	6.66	0.007	2.5

LTE Band 7, CB: 10MHz			
Temperature (°C)	Voltage (Vac)	Frequency Drift (ppm)	Limit (ppm)
55	7.4	0.010	2.5
50	7.4	0.009	2.5
40	7.4	0.010	2.5
30	7.4	0.009	2.5
20	7.4	0.008	2.5
10	7.4	0.007	2.5
0	7.4	0.008	2.5
-10	7.4	0.007	2.5
-20	7.4	0.006	2.5
-30	7.4	0.007	2.5
20	8.14	0.009	2.5
20	6.66	0.007	2.5

LTE Band 7, CB: 15MHz

Temperature (°C)	Voltage (Vac)	Frequency Drift (ppm)	Limit (ppm)
55	7.4	0.007	2.5
50	7.4	0.009	2.5
40	7.4	0.009	2.5
30	7.4	0.008	2.5
20	7.4	0.008	2.5
10	7.4	0.006	2.5
0	7.4	0.007	2.5
-10	7.4	0.007	2.5
-20	7.4	0.008	2.5
-30	7.4	0.007	2.5
20	8.14	0.009	2.5
20	6.66	0.008	2.5

LTE Band 7, CB: 20MHz

Temperature (°C)	Voltage (Vac)	Frequency Drift (ppm)	Limit (ppm)
55	7.4	0.009	2.5
50	7.4	0.010	2.5
40	7.4	0.009	2.5
30	7.4	0.008	2.5
20	7.4	0.009	2.5
10	7.4	0.009	2.5
0	7.4	0.010	2.5
-10	7.4	0.011	2.5
-20	7.4	0.009	2.5
-30	7.4	0.009	2.5
20	8.14	0.010	2.5
20	6.66	0.008	2.5

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp, it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan Hsiang. Location map can be found on our website <http://www.icertifi.com.tw>.

Linkou

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District, New Taipei City, Taiwan,
R.O.C.

Kwei Shan

Tel: 886-3-271-8666

No. 3-1, Lane 6, Wen San 3rd
St., Kwei Shan Hsiang, Tao
Yuan Hsien 333, Taiwan, R.O.C.

Kwei Shan Site II

Tel: 886-3-271-8640

No. 14-1, Lane 19, Wen San 3rd
St., Kwei Shan Hsiang, Tao
Yuan Hsien 333, Taiwan, R.O.C.

If you have any suggestion, please feel free to contact us as below information

Tel: 886-3-271-8666

Fax: 886-3-318-0155

Email: ICC_Service@icertifi.com.tw

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