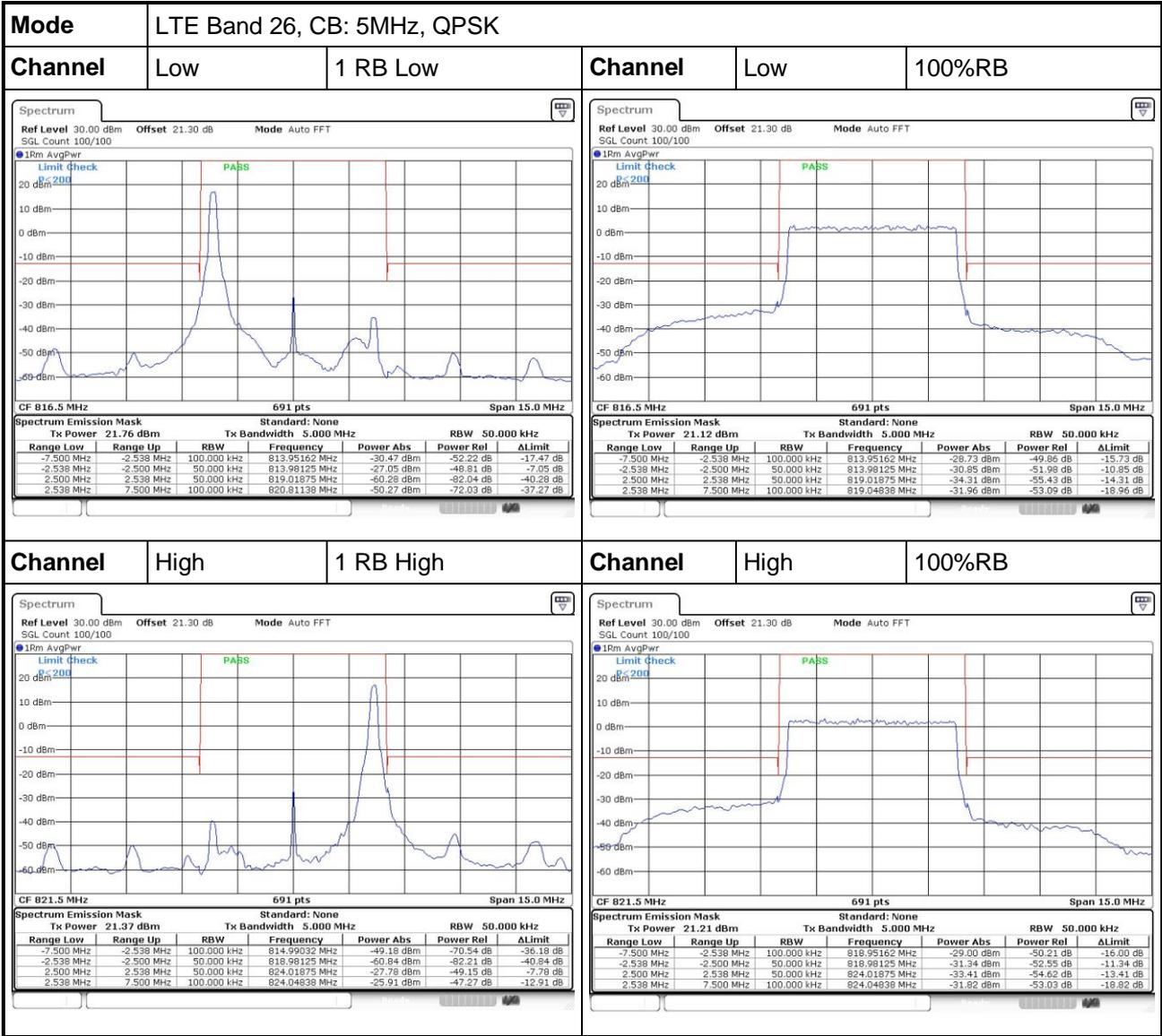
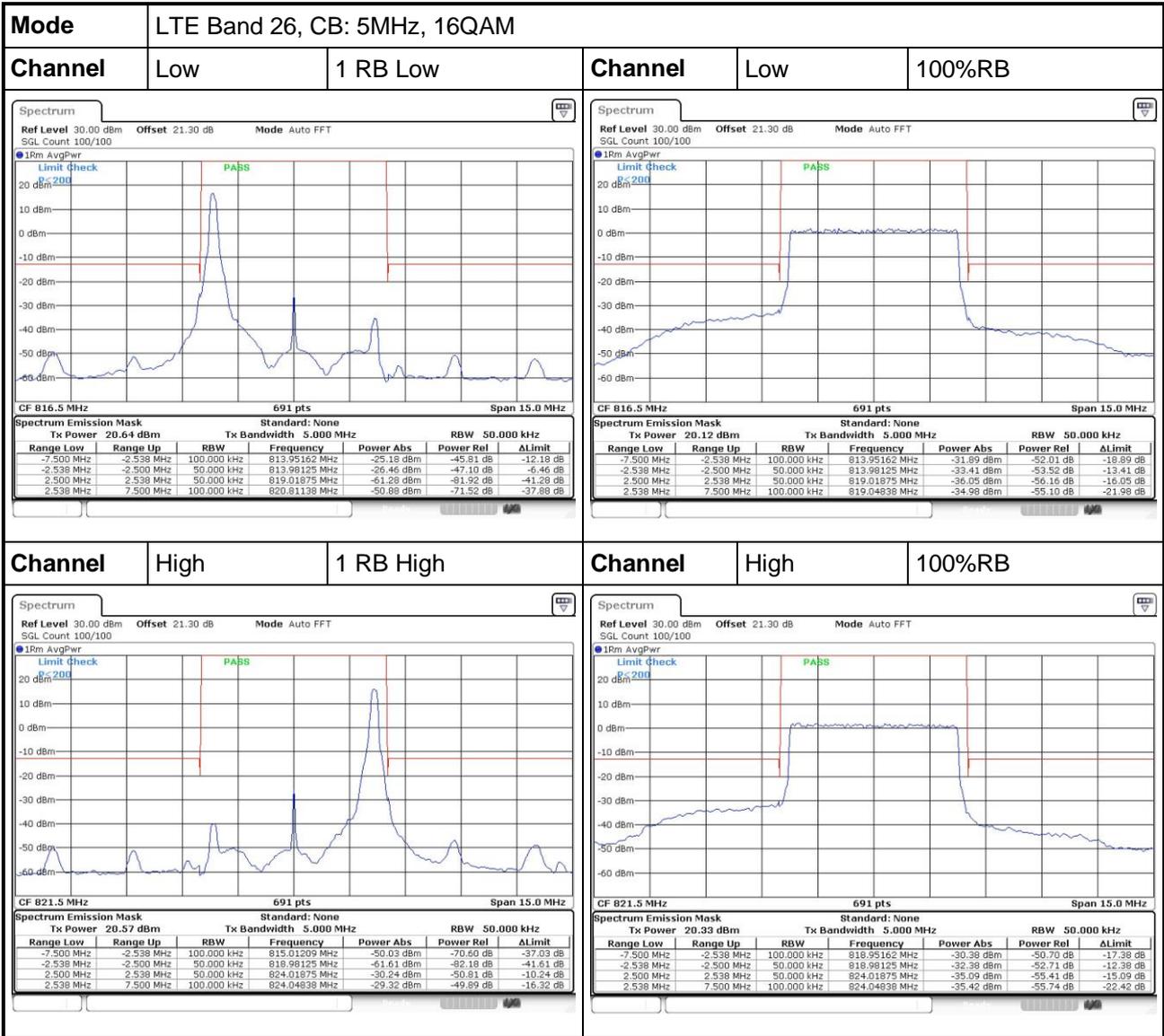
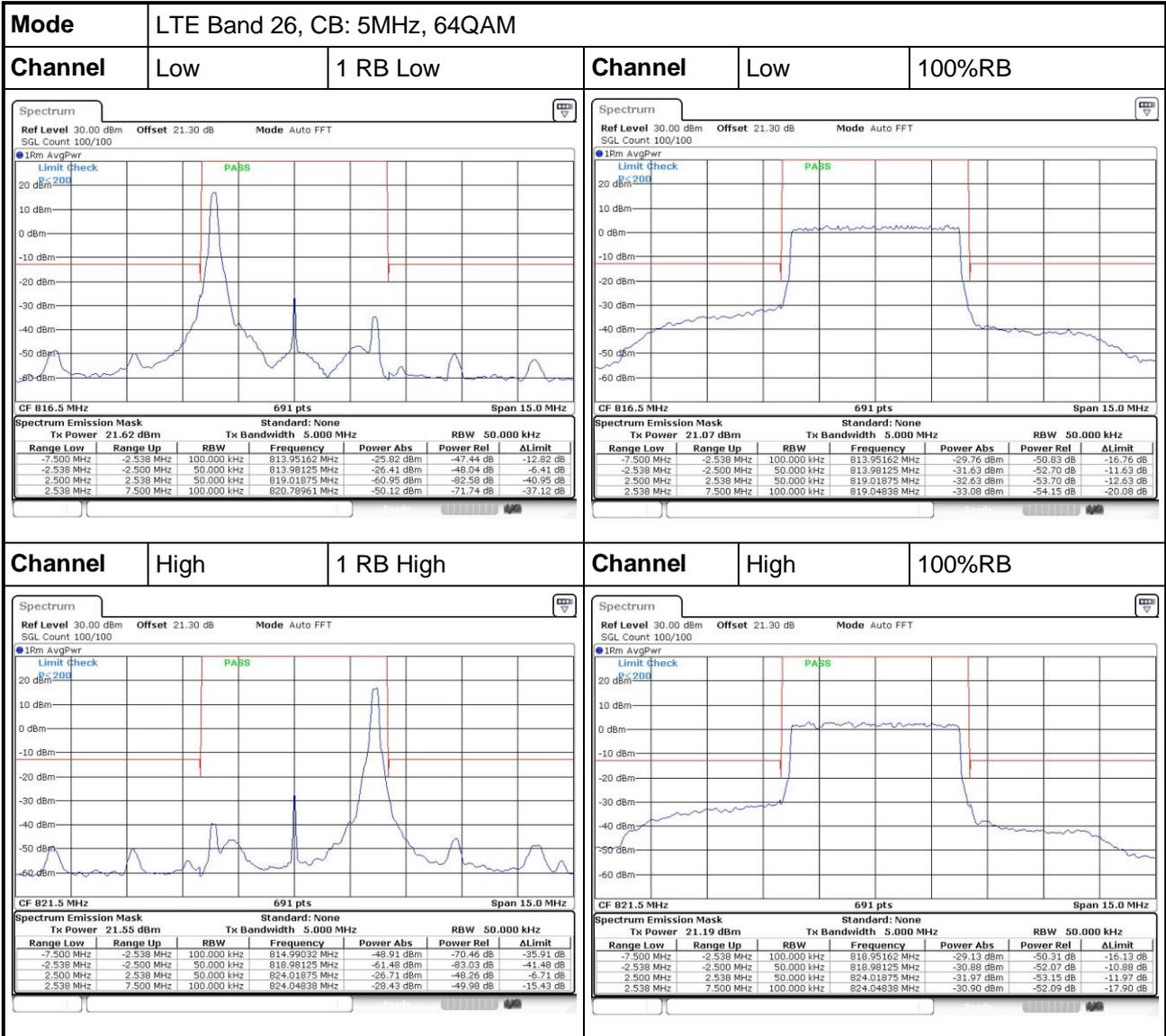


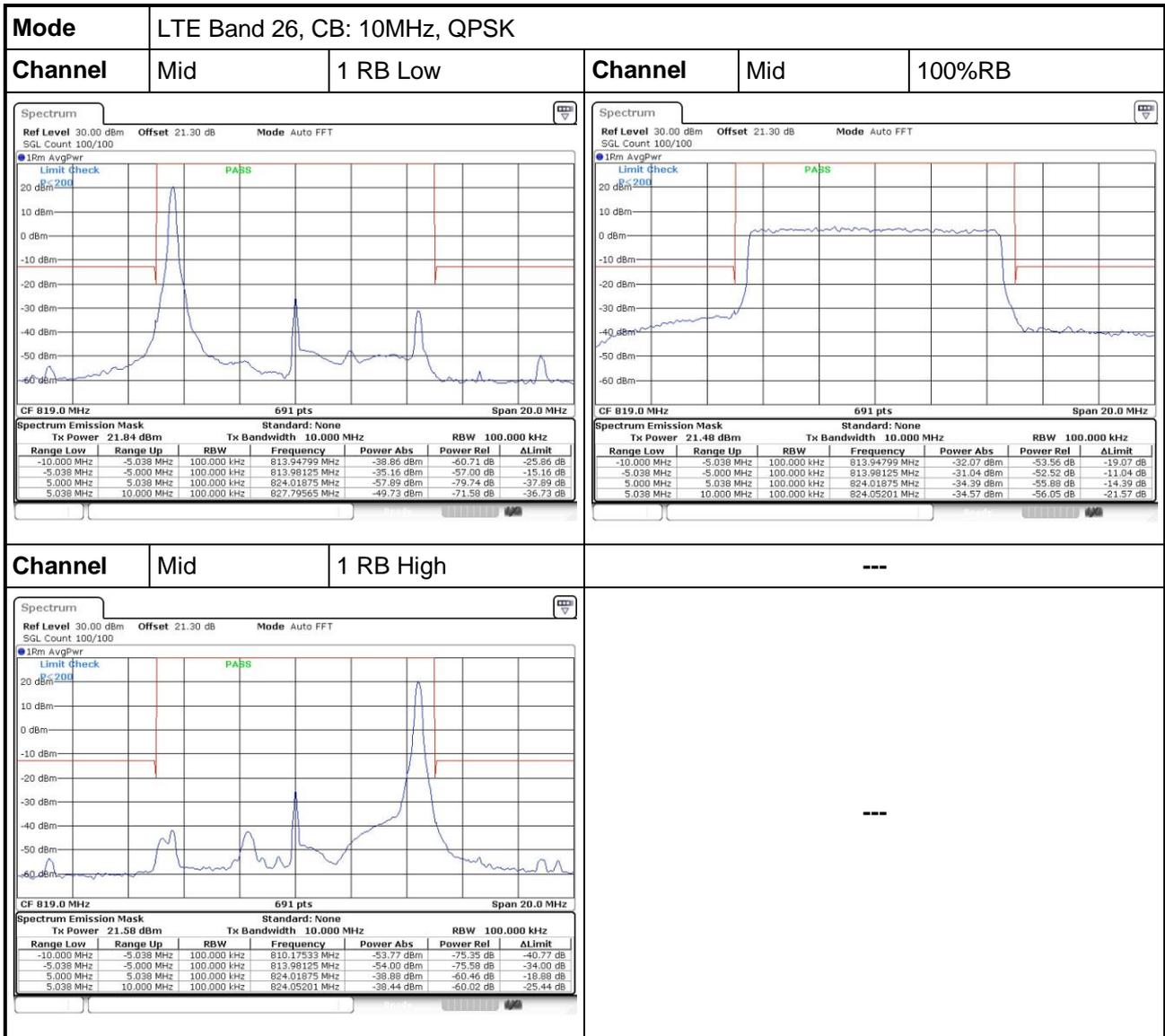
LTE Band 26, CB: 5MHz

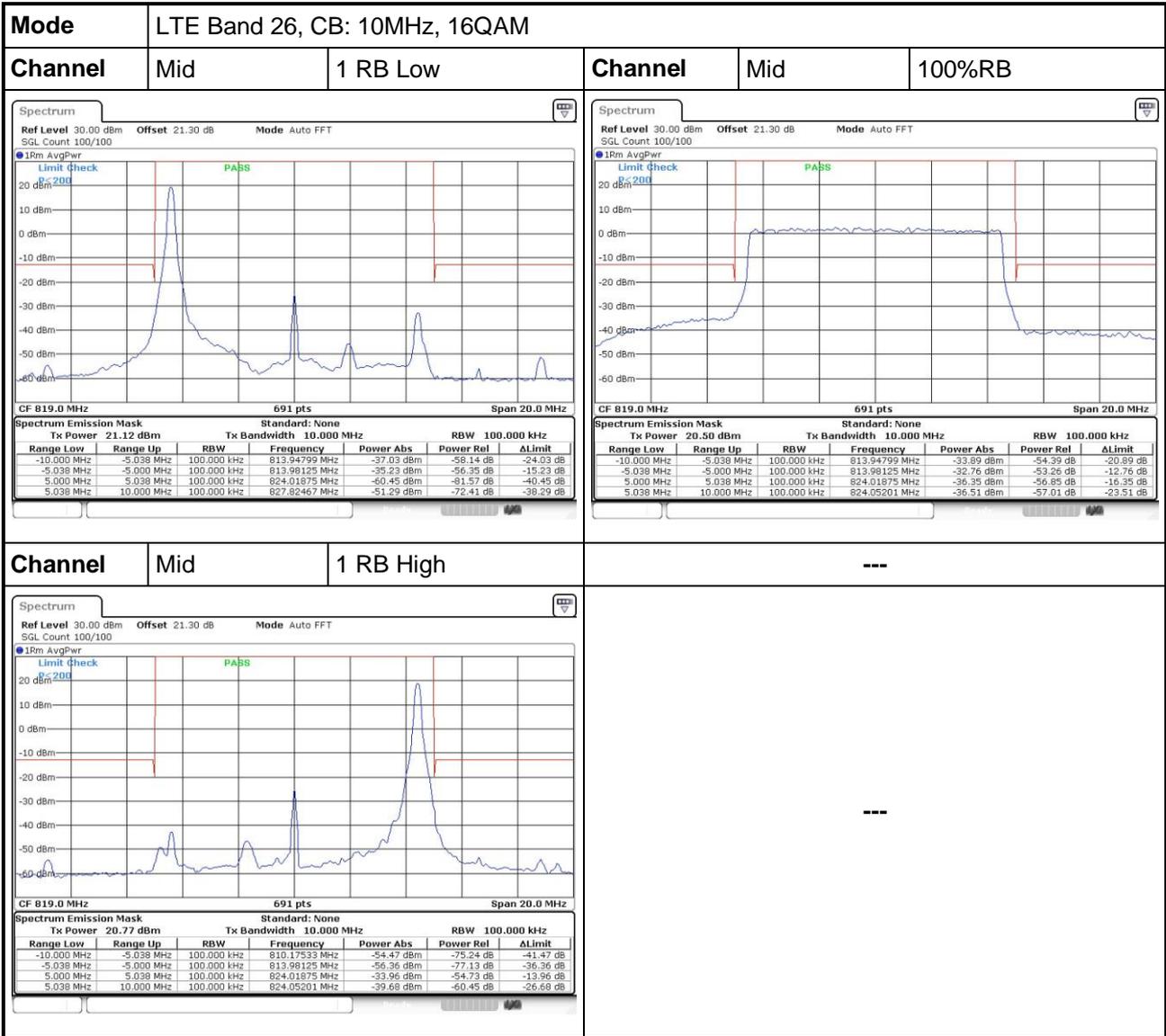


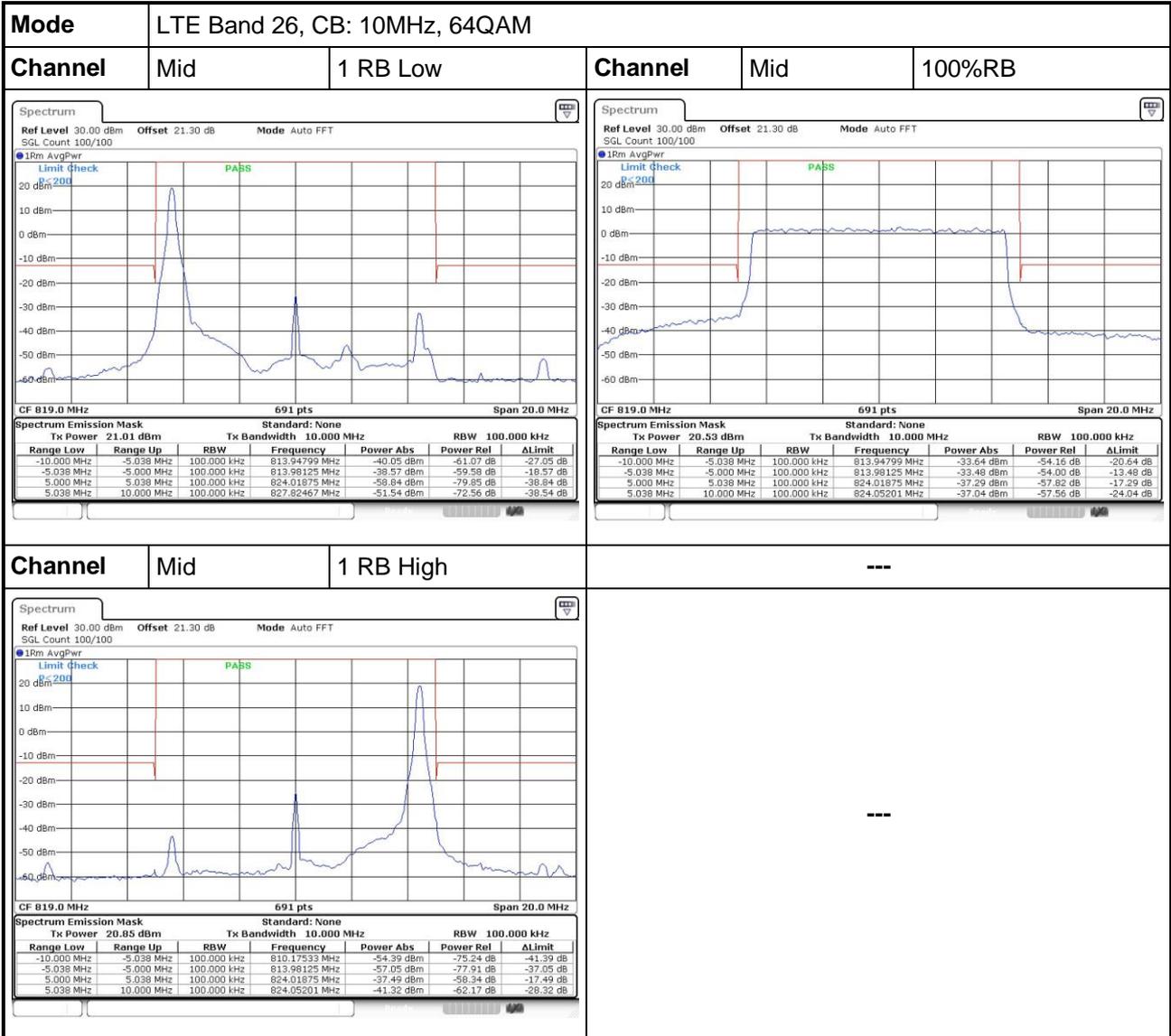




LTE Band 26, CB: 10MHz







3.5 Occupied Bandwidth

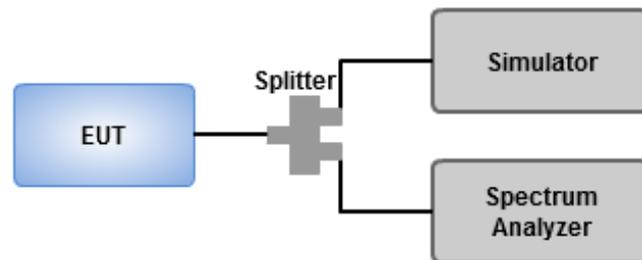
3.5.1 Test Procedures

1. Set as below setting for LTE mode

Bandwidth (MHz)	RBW (kHz)	VBW (KHz)
1.4	20	62
3	33	100
5	51	160
10	100	300

2. Detector = Peak, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Using occupied bandwidth measurement function of spectrum analyzer to measure occupied bandwidth

3.5.2 Test Setup



3.5.3 Test Result of Occupied Bandwidth

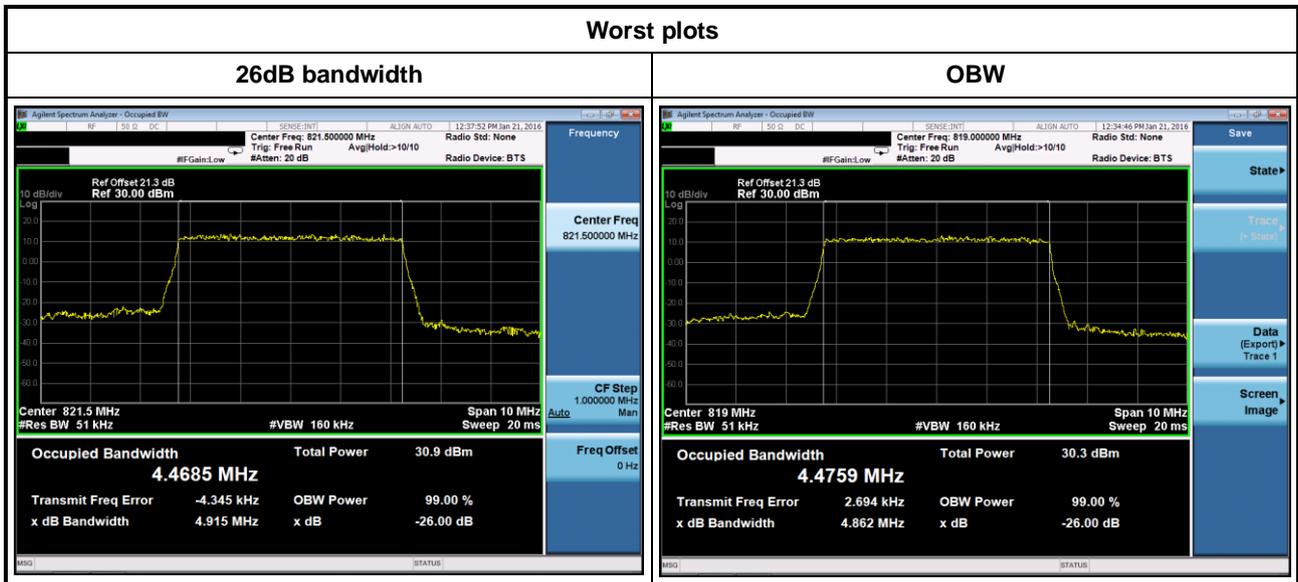
Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
LTE Band 26	1.4	QPSK	26697	814.7	1.228	1.08
LTE Band 26	1.4	QPSK	26740	819.0	1.214	1.08
LTE Band 26	1.4	QPSK	26783	823.3	1.227	1.08
LTE Band 26	1.4	16QAM	26697	814.7	1.219	1.08
LTE Band 26	1.4	16QAM	26740	819.0	1.221	1.08
LTE Band 26	1.4	16QAM	26783	823.3	1.224	1.08
LTE Band 26	1.4	64QAM	26697	814.7	1.224	1.08
LTE Band 26	1.4	64QAM	26740	819.0	1.222	1.08
LTE Band 26	1.4	64QAM	26783	823.3	1.222	1.08



Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
LTE Band 26	3	QPSK	26705	815.5	2.933	2.68
LTE Band 26	3	QPSK	26740	819.0	2.944	2.68
LTE Band 26	3	QPSK	26775	822.5	2.932	2.68
LTE Band 26	3	16QAM	26705	815.5	2.934	2.68
LTE Band 26	3	16QAM	26740	819.0	2.932	2.68
LTE Band 26	3	16QAM	26775	822.5	2.934	2.68
LTE Band 26	3	64QAM	26705	815.5	2.931	2.68
LTE Band 26	3	64QAM	26740	819.0	2.951	2.69
LTE Band 26	3	64QAM	26775	822.5	2.944	2.69



Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
LTE Band 26	5	QPSK	26715	816.5	4.881	4.46
LTE Band 26	5	QPSK	26740	819.0	4.898	4.46
LTE Band 26	5	QPSK	26765	821.5	4.915	4.47
LTE Band 26	5	16QAM	26715	816.5	4.488	4.47
LTE Band 26	5	16QAM	26740	819.0	4.488	4.47
LTE Band 26	5	16QAM	26765	821.5	4.881	4.47
LTE Band 26	5	64QAM	26715	816.5	4.874	4.48
LTE Band 26	5	64QAM	26740	819.0	4.862	4.48
LTE Band 26	5	64QAM	26765	821.5	4.855	4.46



Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	26dB BW (MHz)	99% OBW (MHz)
LTE Band 26	10	QPSK	26740	819.0	9.596	8.92
LTE Band 26	10	16QAM	26740	819.0	9.610	8.91
LTE Band 26	10	64QAM	26740	819.0	9.702	8.93



3.6 Peak to Average Ratio

3.6.1 Limit of Peak to Average Ratio

Peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

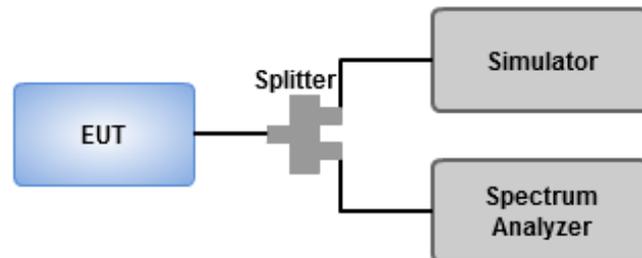
3.6.2 Test Procedures

1. Enable CCDF function of spectrum analyzer and set as below setting for LTE mode

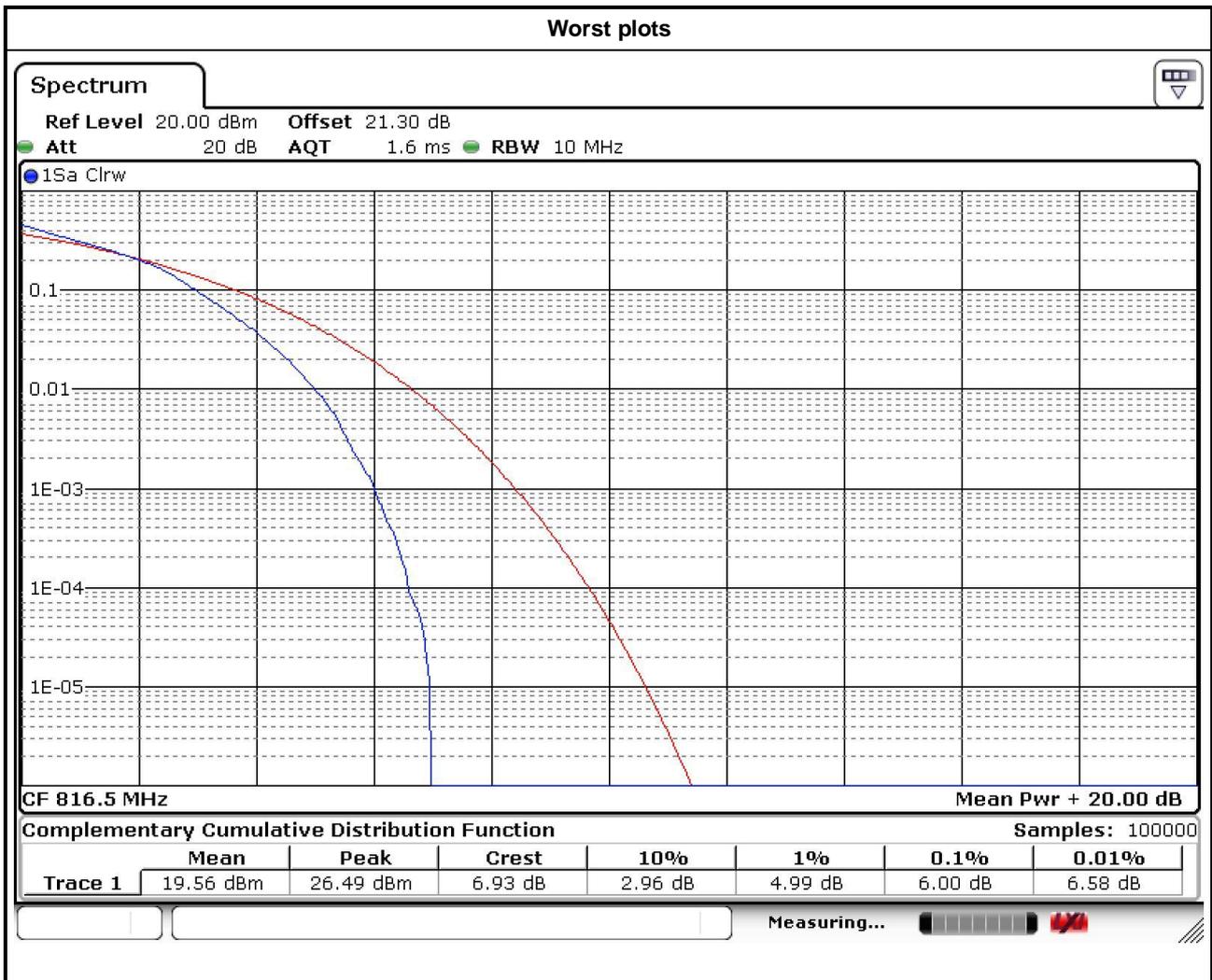
Bandwidth (MHz)	RBW
1.4	5 MHz
3	10 MHz
5	10 MHz
10	20 MHz

2. Set the number of counts to a value that stabilizes the measured CCDF curve.
3. Record the maximum PAPR level associated with a probability of 0.1%.

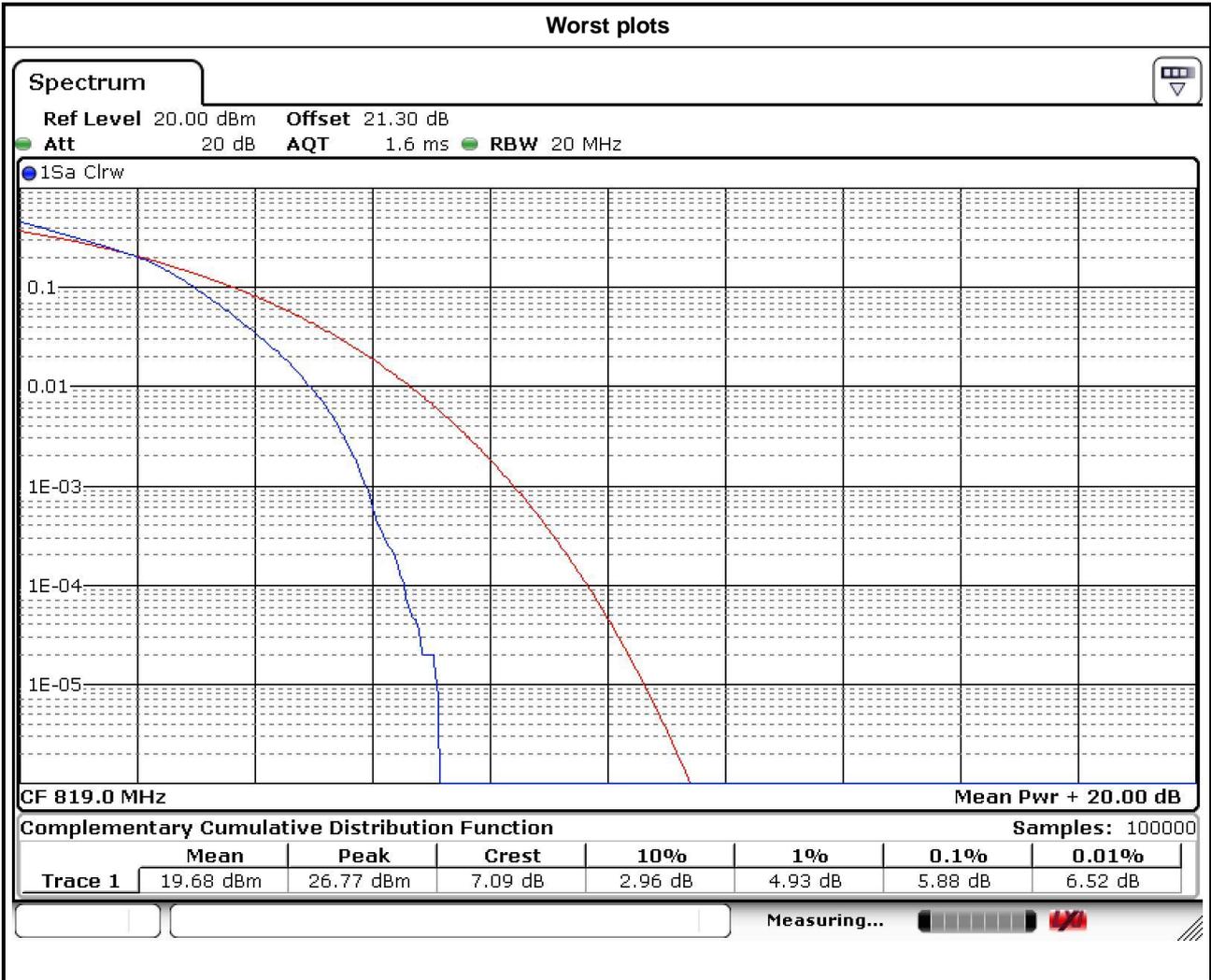
3.6.3 Test Setup



Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	Peak to Average ratio (dB)
LTE Band 26	5	QPSK	26715	816.5	5.16
LTE Band 26	5	QPSK	26740	819.0	5.28
LTE Band 26	5	QPSK	26765	821.5	5.30
LTE Band 26	5	16QAM	26715	816.5	5.91
LTE Band 26	5	16QAM	26740	819.0	5.97
LTE Band 26	5	16QAM	26765	821.5	5.97
LTE Band 26	5	64QAM	26715	816.5	6.00
LTE Band 26	5	64QAM	26740	819.0	5.94
LTE Band 26	5	64QAM	26765	821.5	5.97



Mode	CB (MHz)	Modulation	Channel	Frequency (MHz)	Peak to Average ratio (dB)
LTE Band 26	10	QPSK	26740	819.0	5.07
LTE Band 26	10	16QAM	26740	819.0	5.86
LTE Band 26	10	64QAM	26740	819.0	5.88



3.7 Frequency Stability

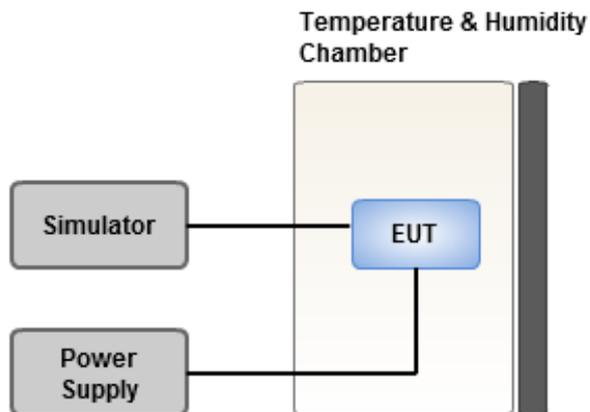
3.7.1 Limit of Frequency Stability

The frequency stability shall be less +/- 2.5ppm.

3.7.2 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 -40~60°C and voltage range is from lowest to highest working voltage.
4. Link up EUT and simulator. Confirm frequency drift value of simulator and record it.

3.7.3 Test Setup



3.7.4 Test Result of Frequency Stability

LTE Band 26, CB: 1.4MHz			
Temperature (°C)	Voltage (ac)	Frequency Drift (ppm)	Limit (ppm)
60	120	0.031	2.5
50	120	0.029	2.5
40	120	0.027	2.5
30	120	0.028	2.5
20	120	0.032	2.5
10	120	0.027	2.5
0	120	0.022	2.5
-10	120	0.023	2.5
-20	120	0.020	2.5
-30	120	0.028	2.5
-40	120	0.026	2.5
20	138	0.032	2.5
20	102	0.027	2.5

LTE Band 26, CB: 3MHz			
Temperature (°C)	Voltage (ac)	Frequency Drift (ppm)	Limit (ppm)
60	120	0.027	2.5
50	120	0.028	2.5
40	120	0.026	2.5
30	120	0.024	2.5
20	120	0.022	2.5
10	120	0.023	2.5
0	120	0.020	2.5
-10	120	0.026	2.5
-20	120	0.027	2.5
-30	120	0.028	2.5
-40	120	0.023	2.5
20	138	0.031	2.5
20	102	0.026	2.5

LTE Band 26, CB: 5MHz			
Temperature (°C)	Voltage (ac)	Frequency Drift (ppm)	Limit (ppm)
60	120	0.031	2.5
50	120	0.027	2.5
40	120	0.026	2.5
30	120	0.023	2.5
20	120	0.022	2.5
10	120	0.028	2.5
0	120	0.026	2.5
-10	120	0.023	2.5
-20	120	0.022	2.5
-30	120	0.020	2.5
-40	120	0.022	2.5
20	138	0.028	2.5
20	102	0.027	2.5

LTE Band 26, CB: 10MHz			
Temperature (°C)	Voltage (ac)	Frequency Drift (ppm)	Limit (ppm)
60	120	0.028	2.5
50	120	0.027	2.5
40	120	0.026	2.5
30	120	0.023	2.5
20	120	0.022	2.5
10	120	0.020	2.5
0	120	0.026	2.5
-10	120	0.027	2.5
-20	120	0.020	2.5
-30	120	0.022	2.5
-40	120	0.023	2.5
20	138	0.032	2.5
20	102	0.027	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>.

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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

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Email: ICC_Service@icertifi.com.tw

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