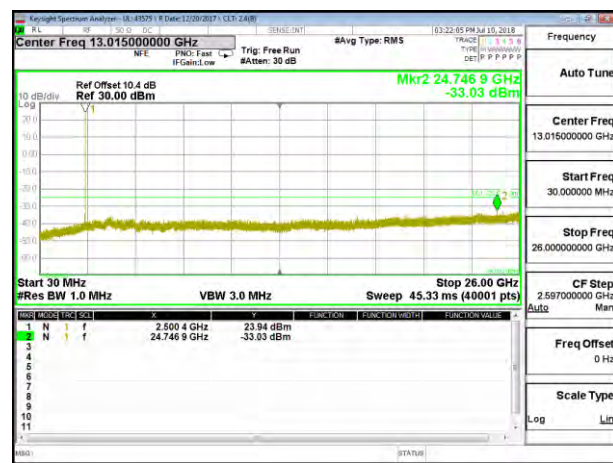
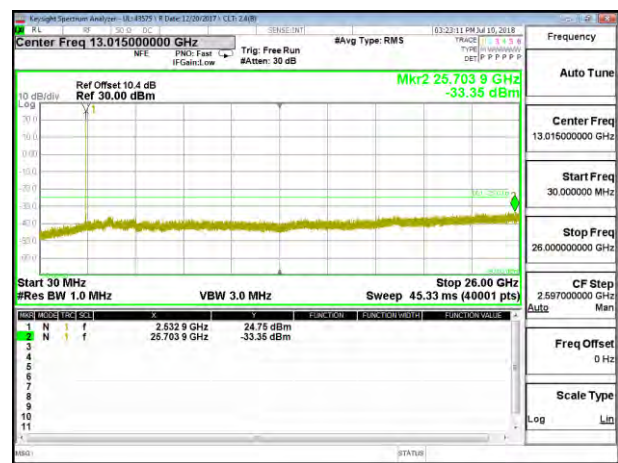


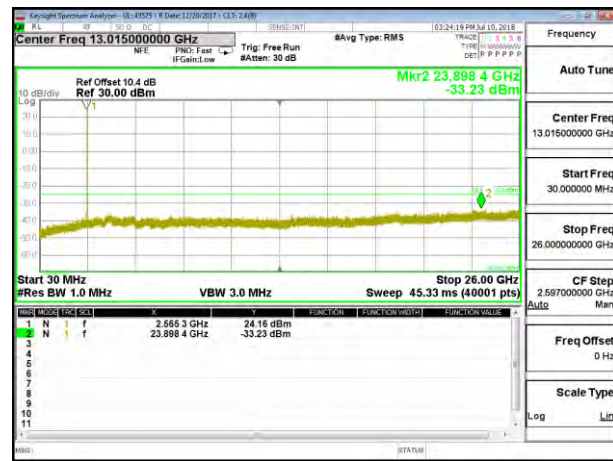
8.3.6. LTE BAND 7



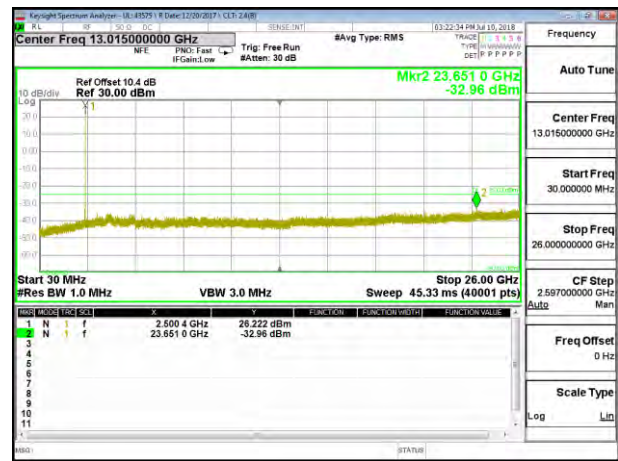
LTE B7 5MHz QPSK Low Channel RB1-0



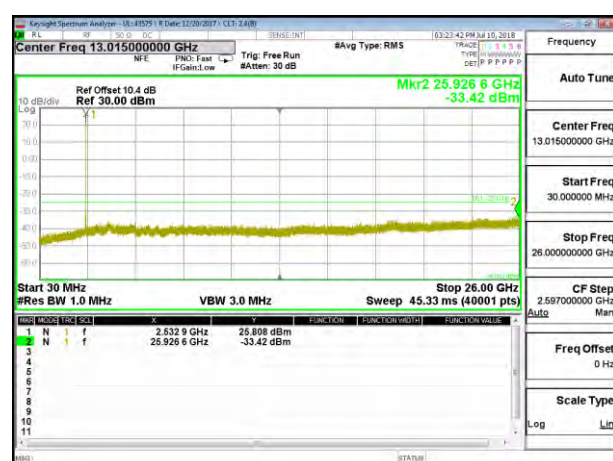
LTE B7 5MHz QPSK Mid Channel RB1-0



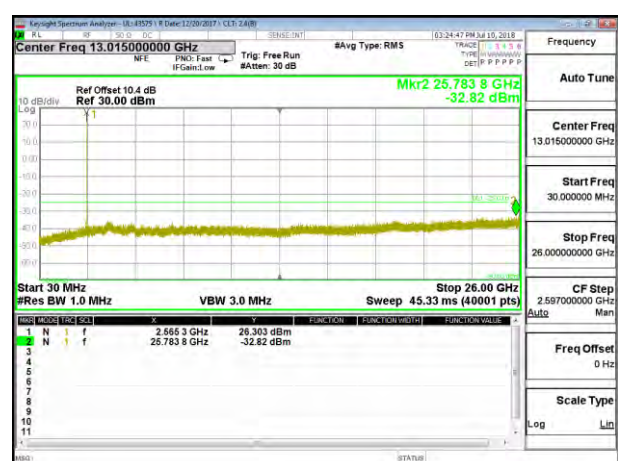
LTE B7 5MHz QPSK High Channel RB1-0



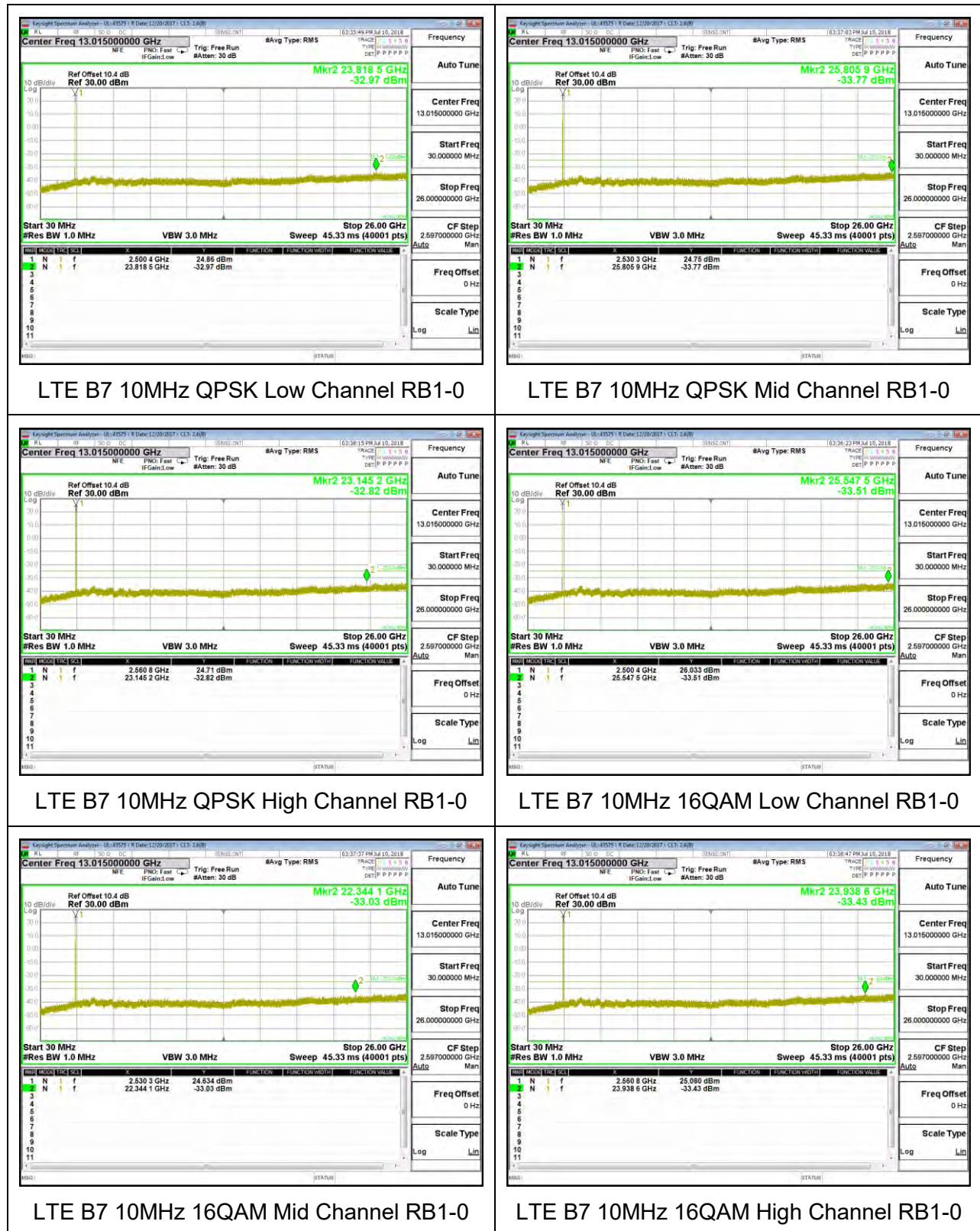
LTE B7 5MHz 16QAM Low Channel RB1-0

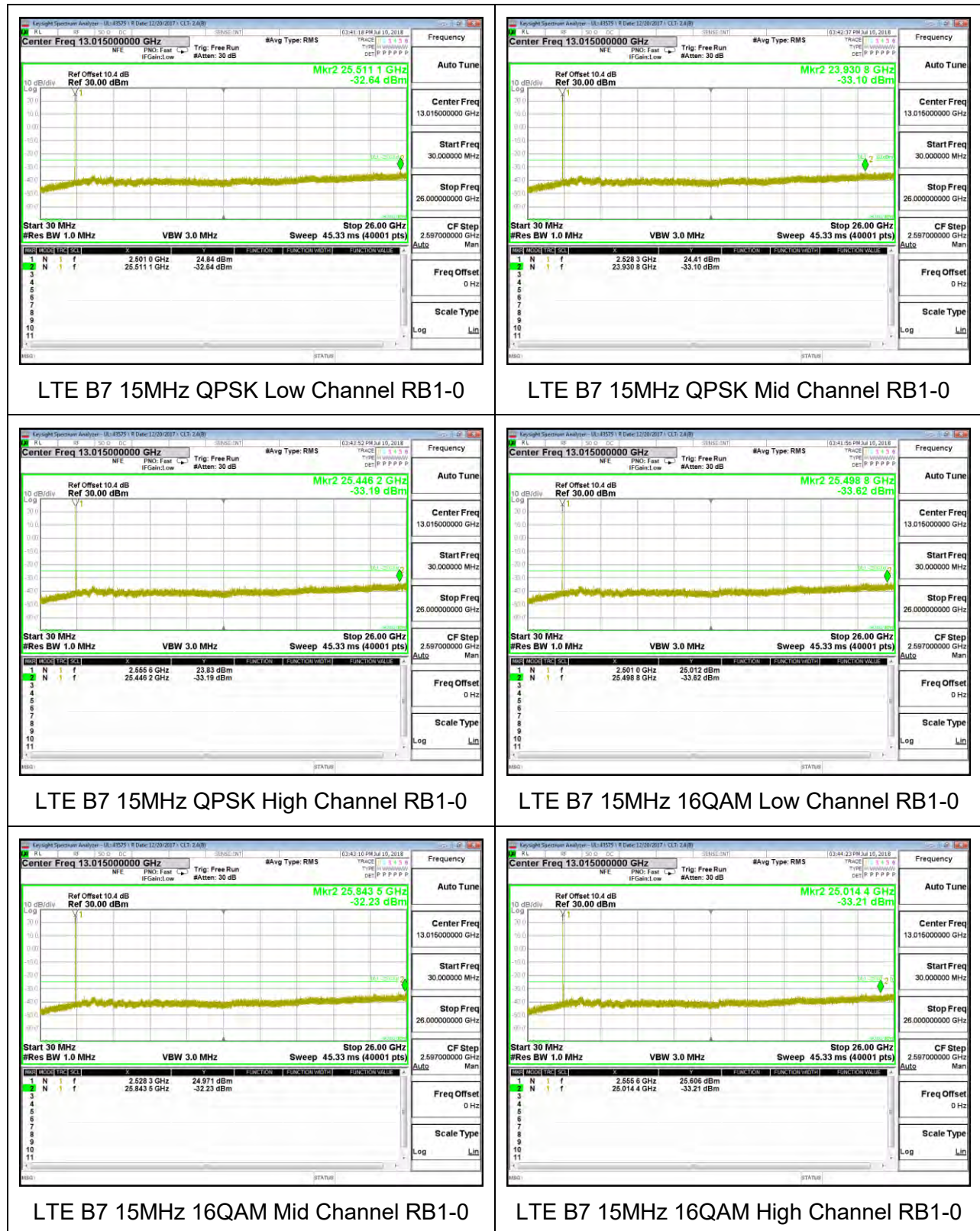


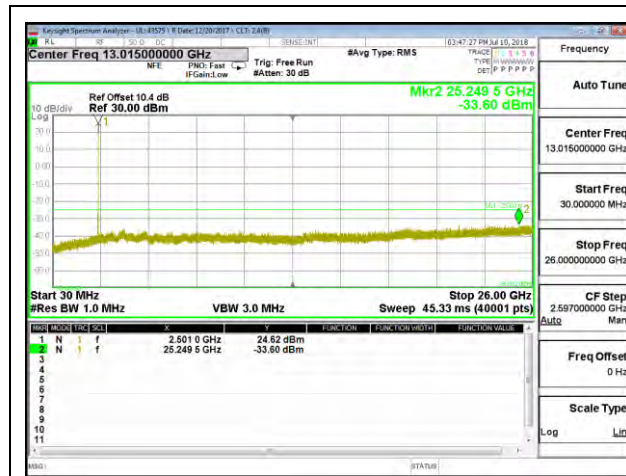
LTE B7 5MHz 16QAM Mid Channel RB1-0



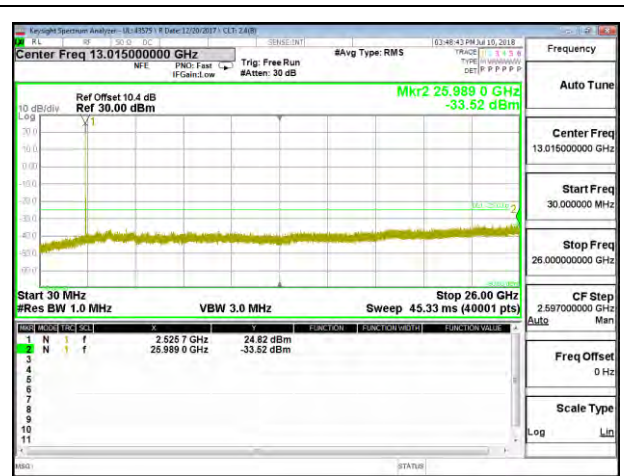
LTE B7 5MHz 16QAM High Channel RB1-0



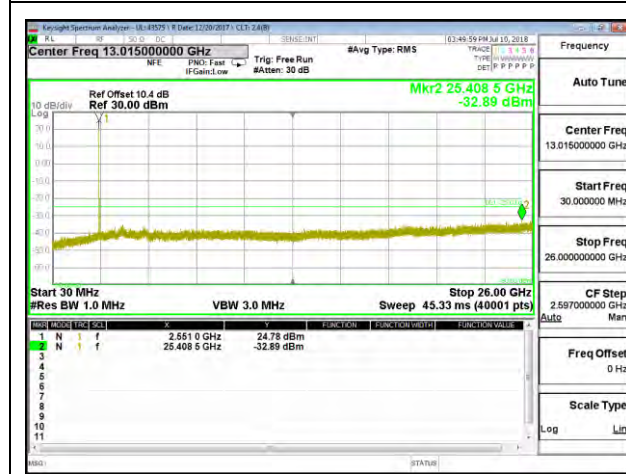




LTE B7 20MHz QPSK Low Channel RB1-0



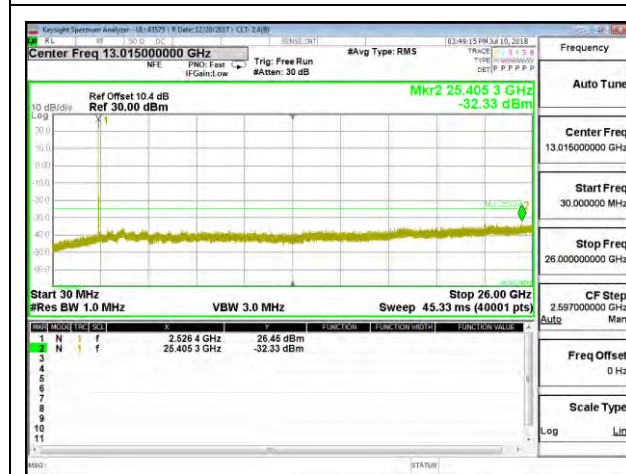
LTE B7 20MHz QPSK Mid Channel RB1-0



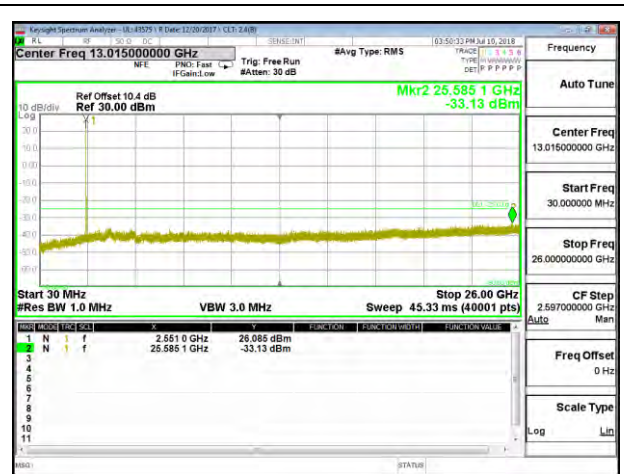
LTE B7 20MHz QPSK High Channel RB1-0



LTE B7 20MHz 16QAM Low Channel RB1-0

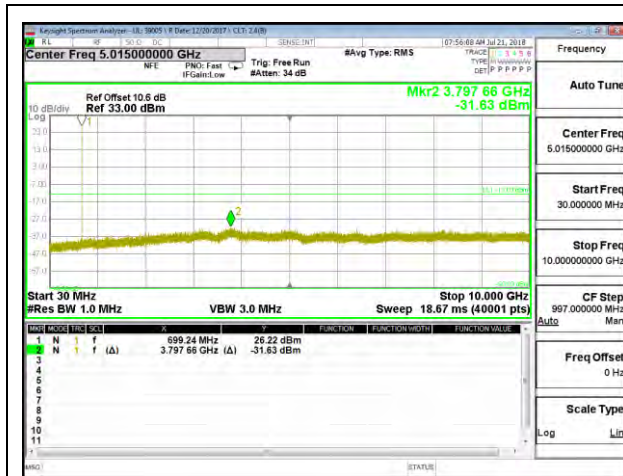


LTE B7 20MHz 16QAM Mid Channel RB1-0

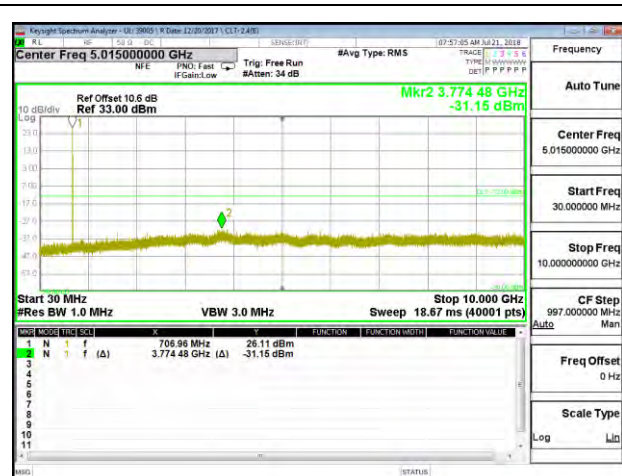


LTE B7 20MHz 16QAM High Channel RB1-0

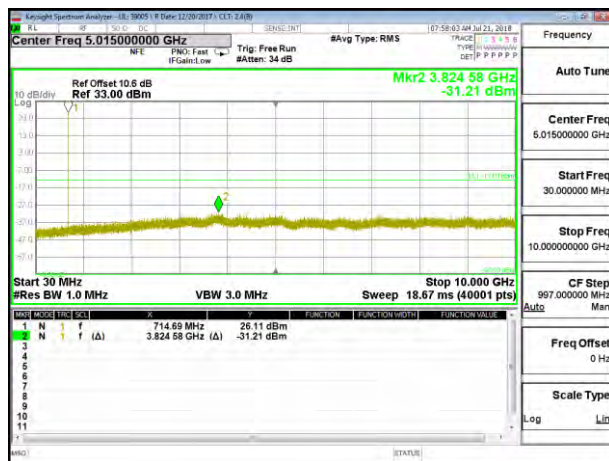
8.3.7. LTE BAND 12



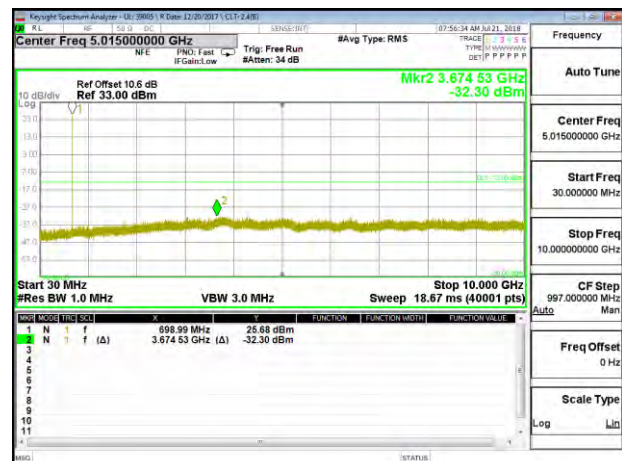
LTE B12 1.4MHz QPSK Low Channel RB1-0



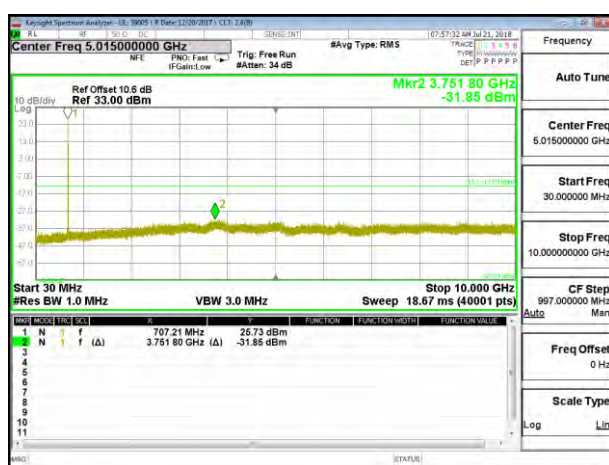
LTE B12 1.4MHz QPSK Mid Channel RB1-0



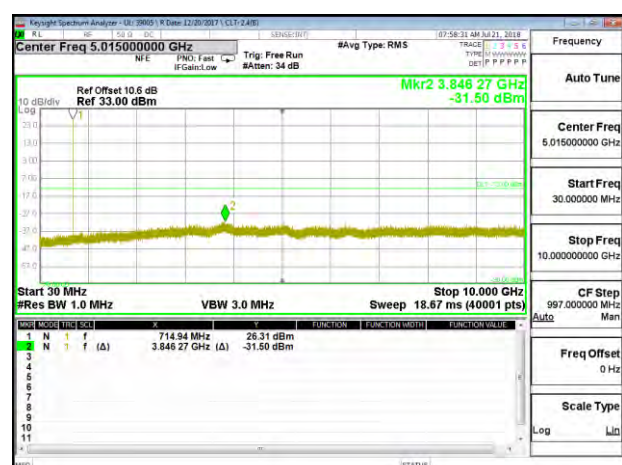
LTE B12 1.4MHz QPSK High Channel RB1-0



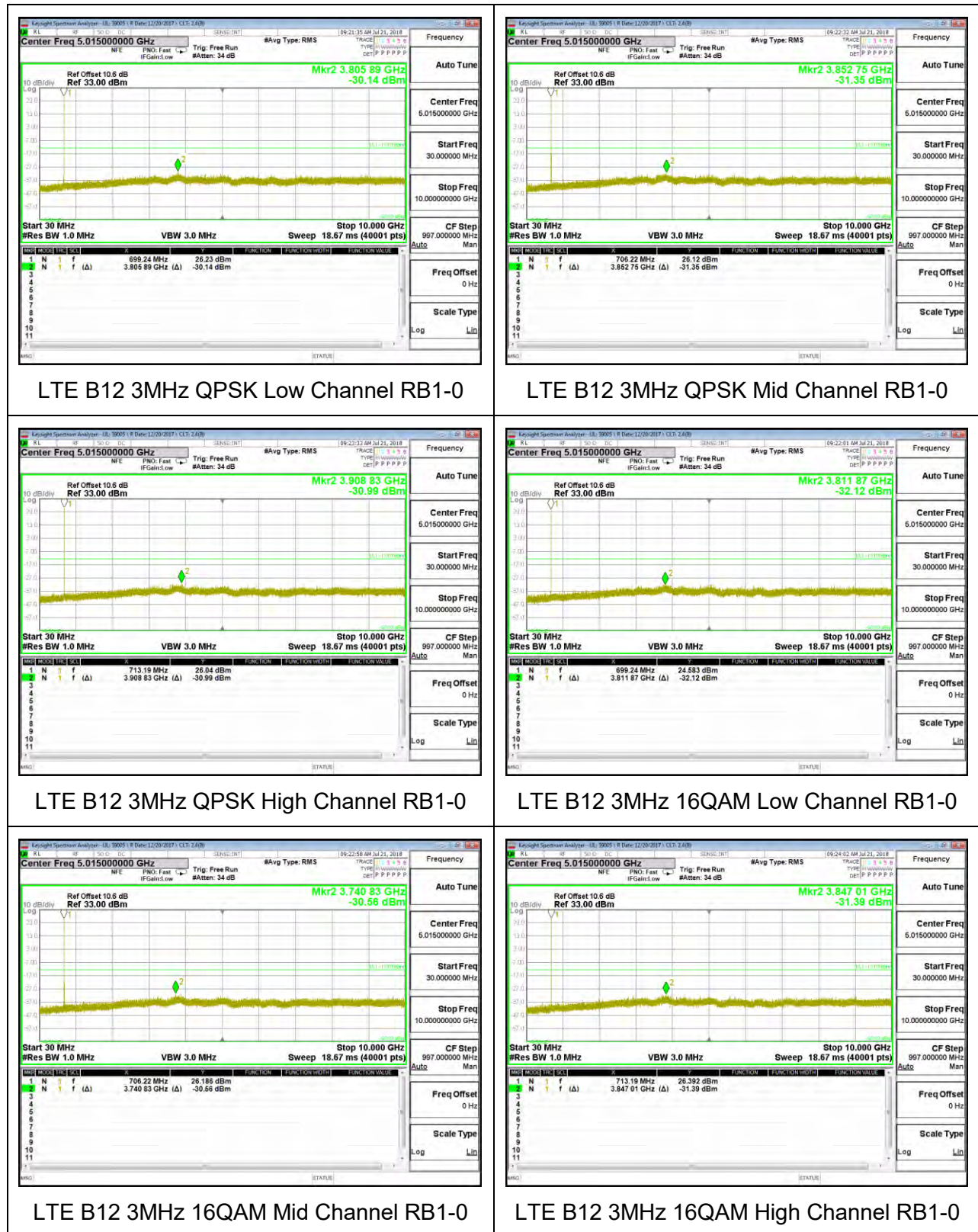
LTE B12 1.4MHz 16QAM Low Channel RB1-0

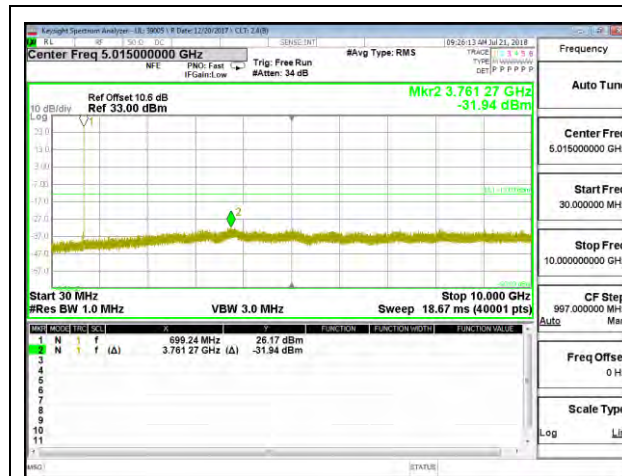


LTE B12 1.4MHz 16QAM Mid Channel RB1-0

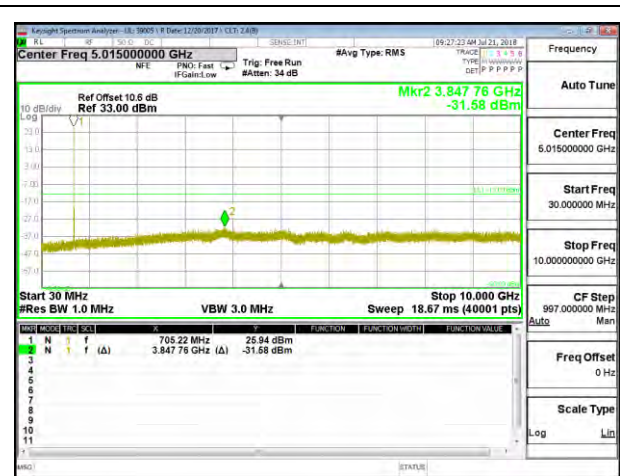


LTE B12 1.4MHz 16QAM High Channel RB1-0

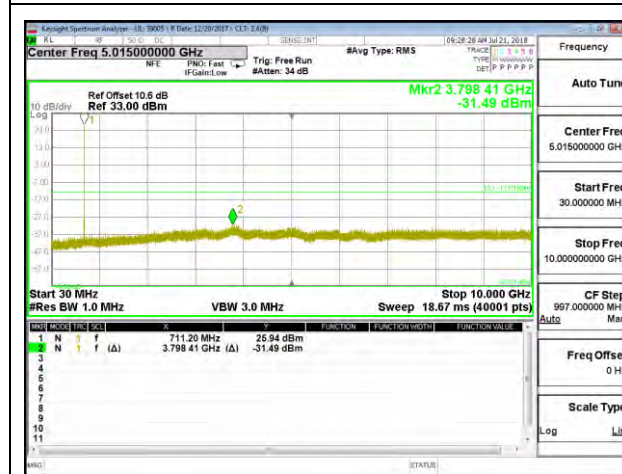




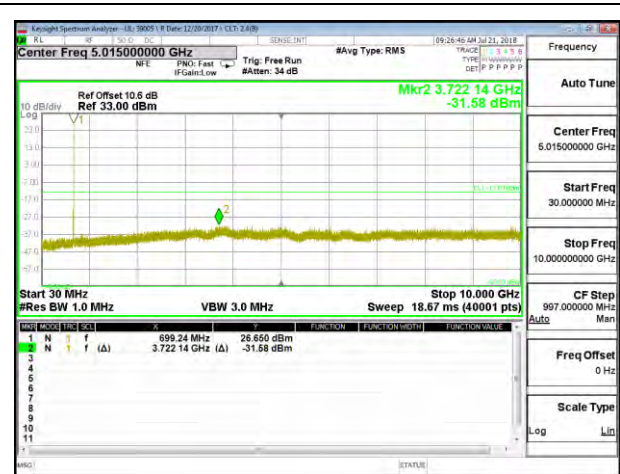
LTE B12 5MHz QPSK Low Channel RB1-0



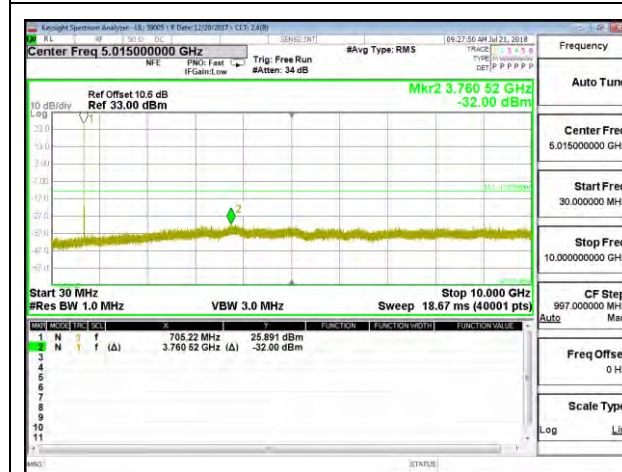
LTE B12 5MHz QPSK Mid Channel RB1-0



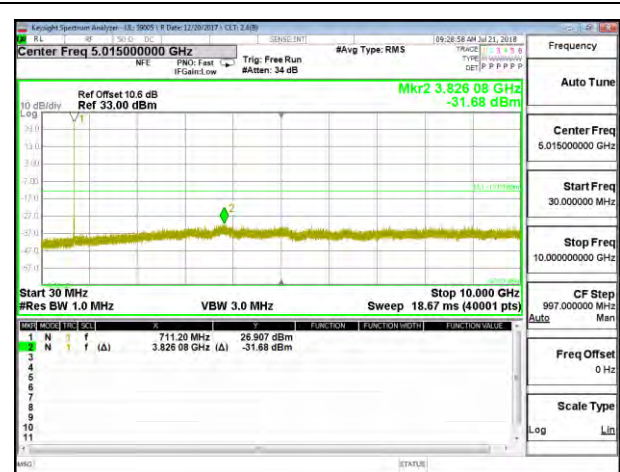
LTE B12 5MHz QPSK High Channel RB1-0



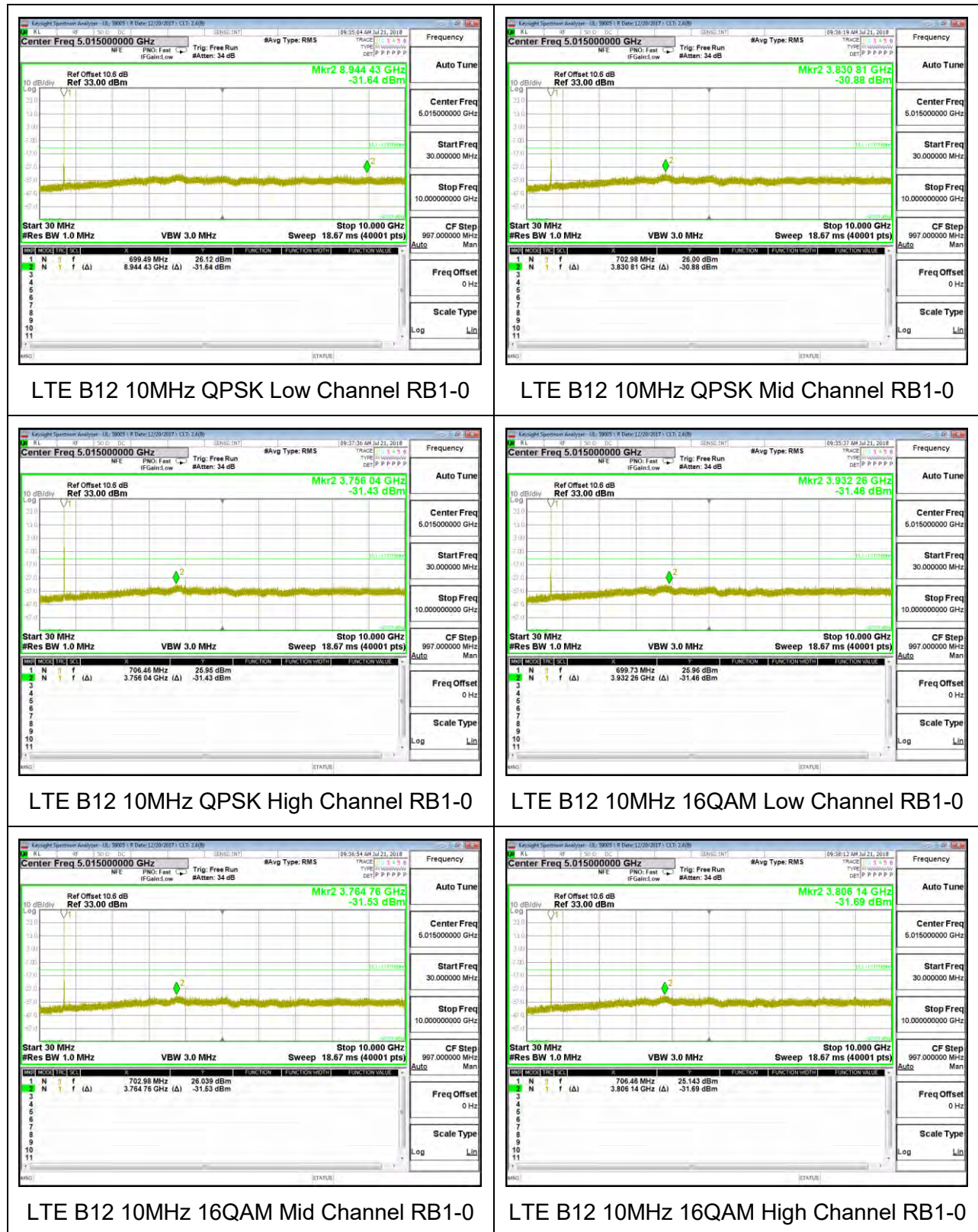
LTE B12 5MHz 16QAM Low Channel RB1-0



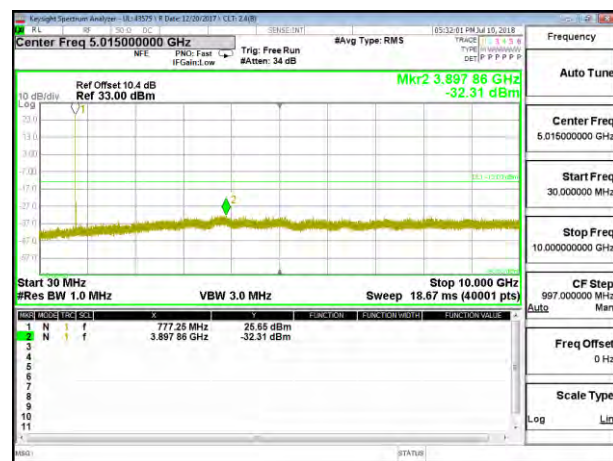
LTE B12 5MHz 16QAM Mid Channel RB1-0



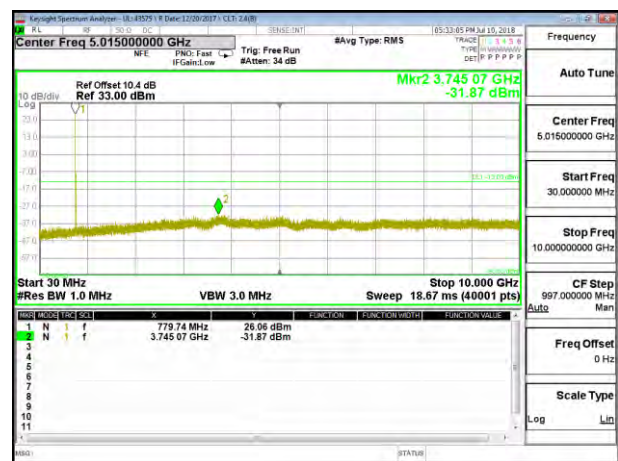
LTE B12 5MHz 16QAM High Channel RB1-0



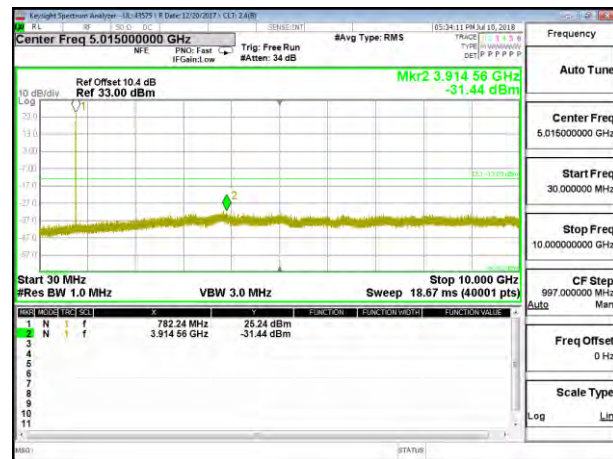
8.3.8. LTE BAND 13



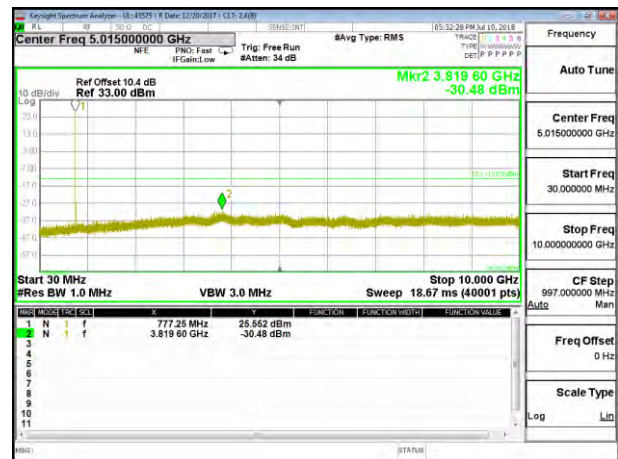
LTE B13 5MHz QPSK Low Channel RB1-0



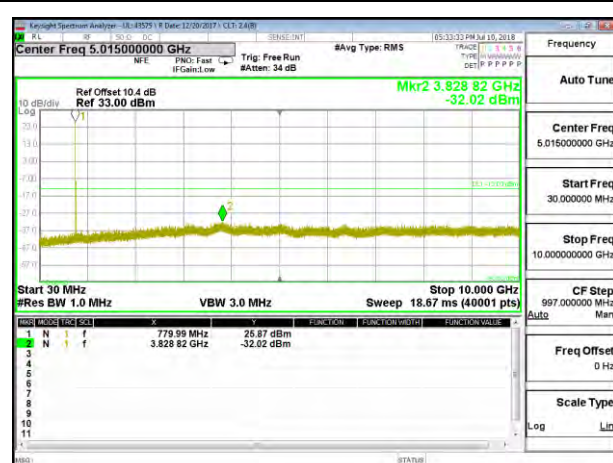
LTE B13 5MHz QPSK Mid Channel RB1-0



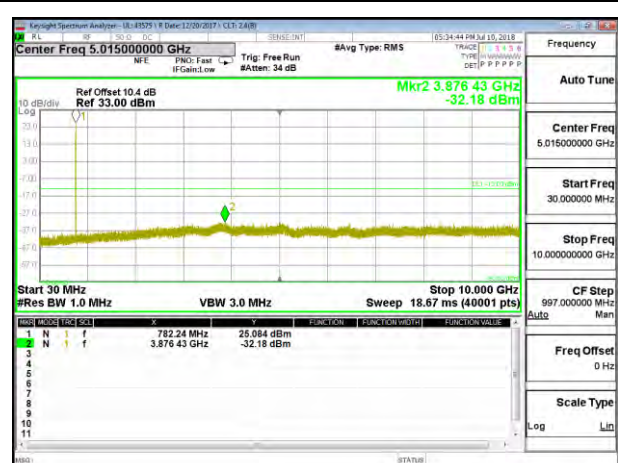
LTE B13 5MHz QPSK High Channel RB1-0



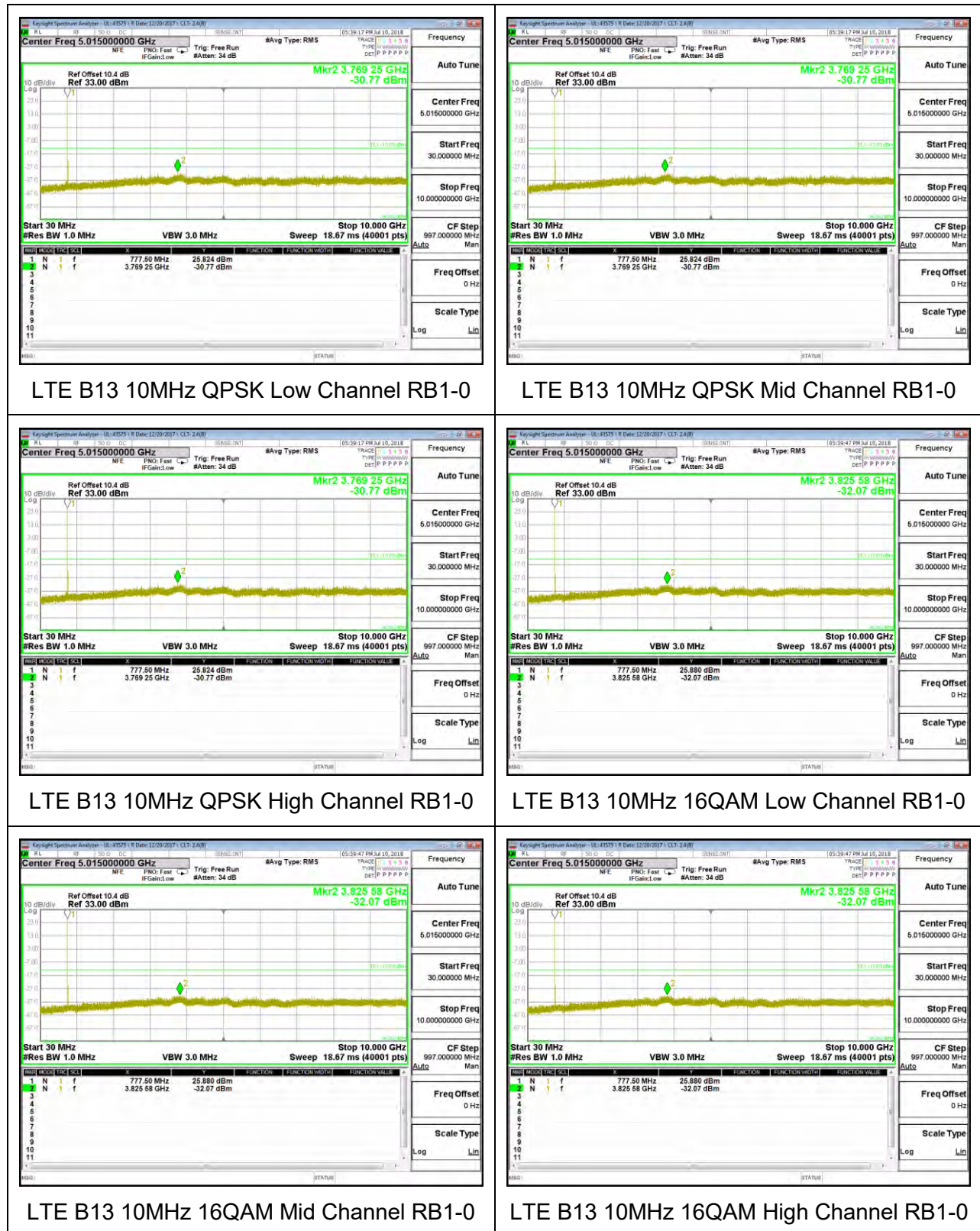
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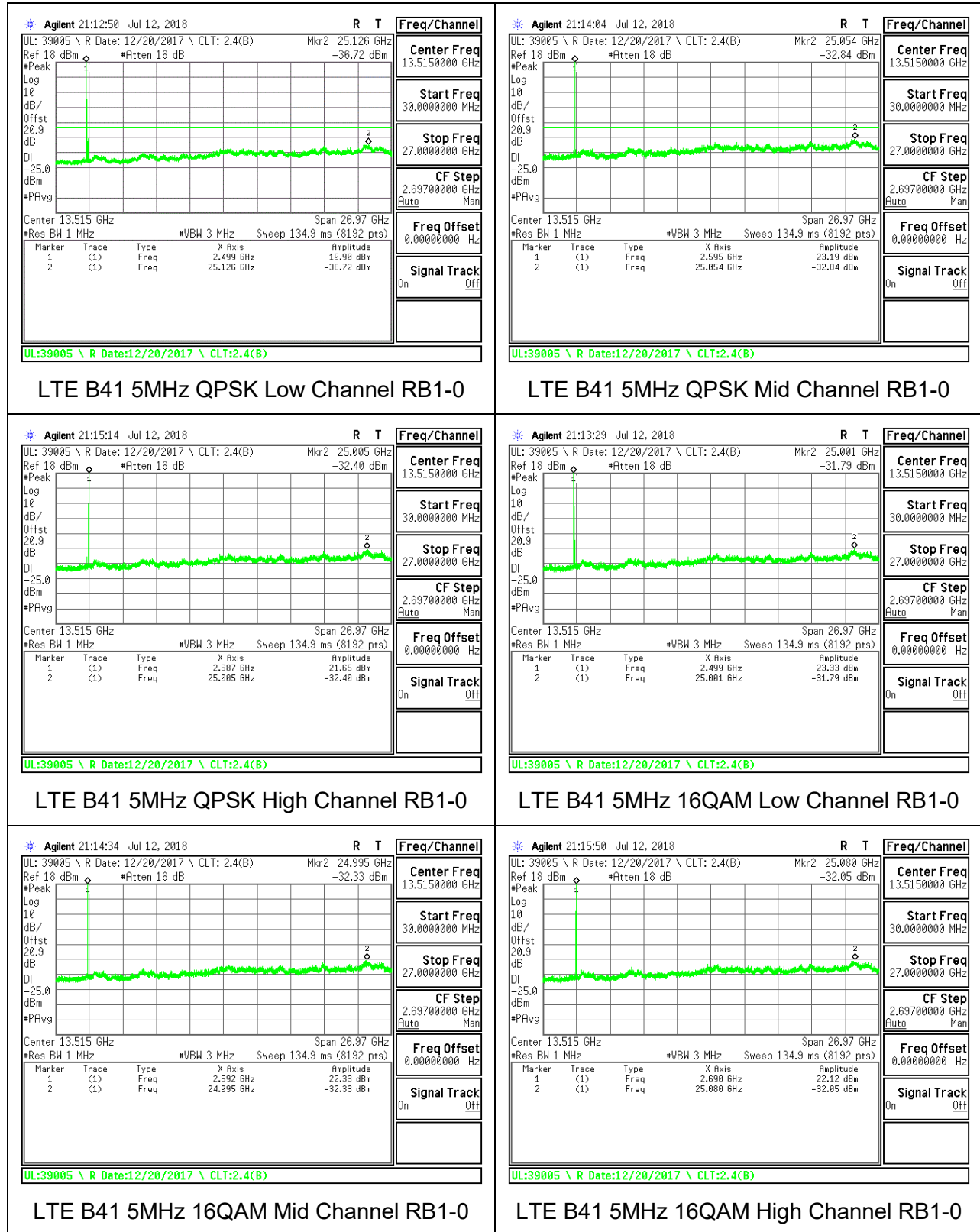
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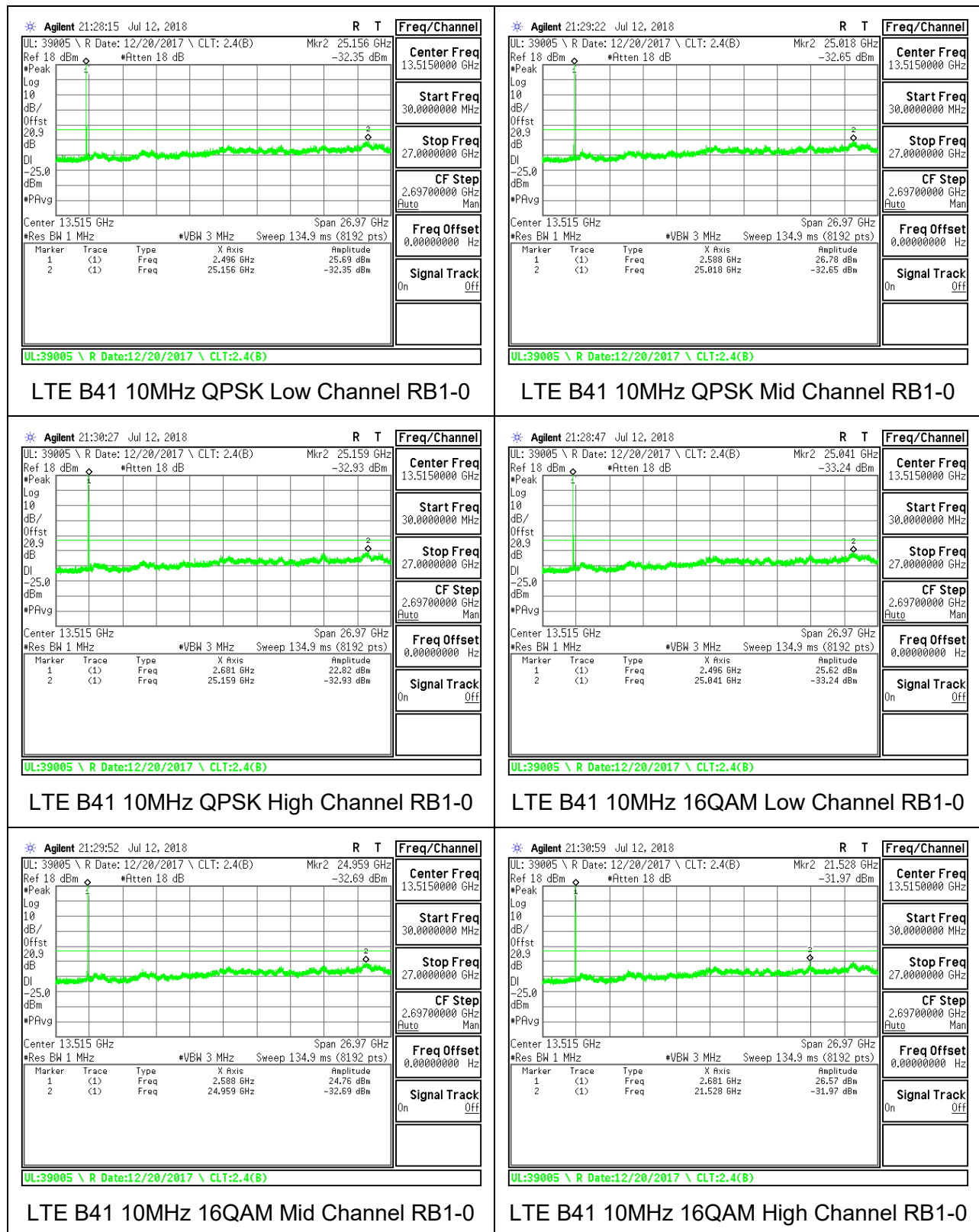


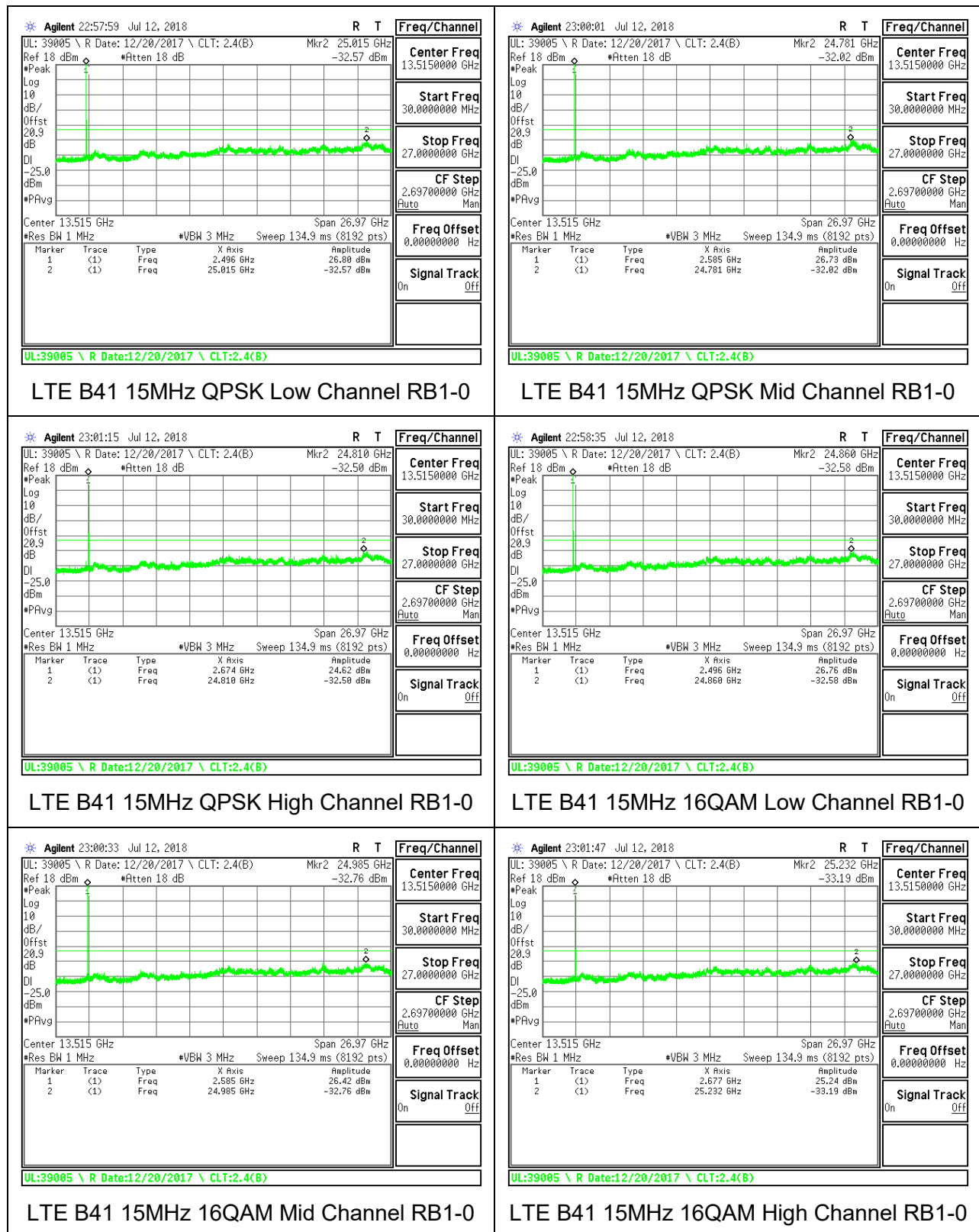
LTE B13 5MHz 16QAM High Channel RB1-0

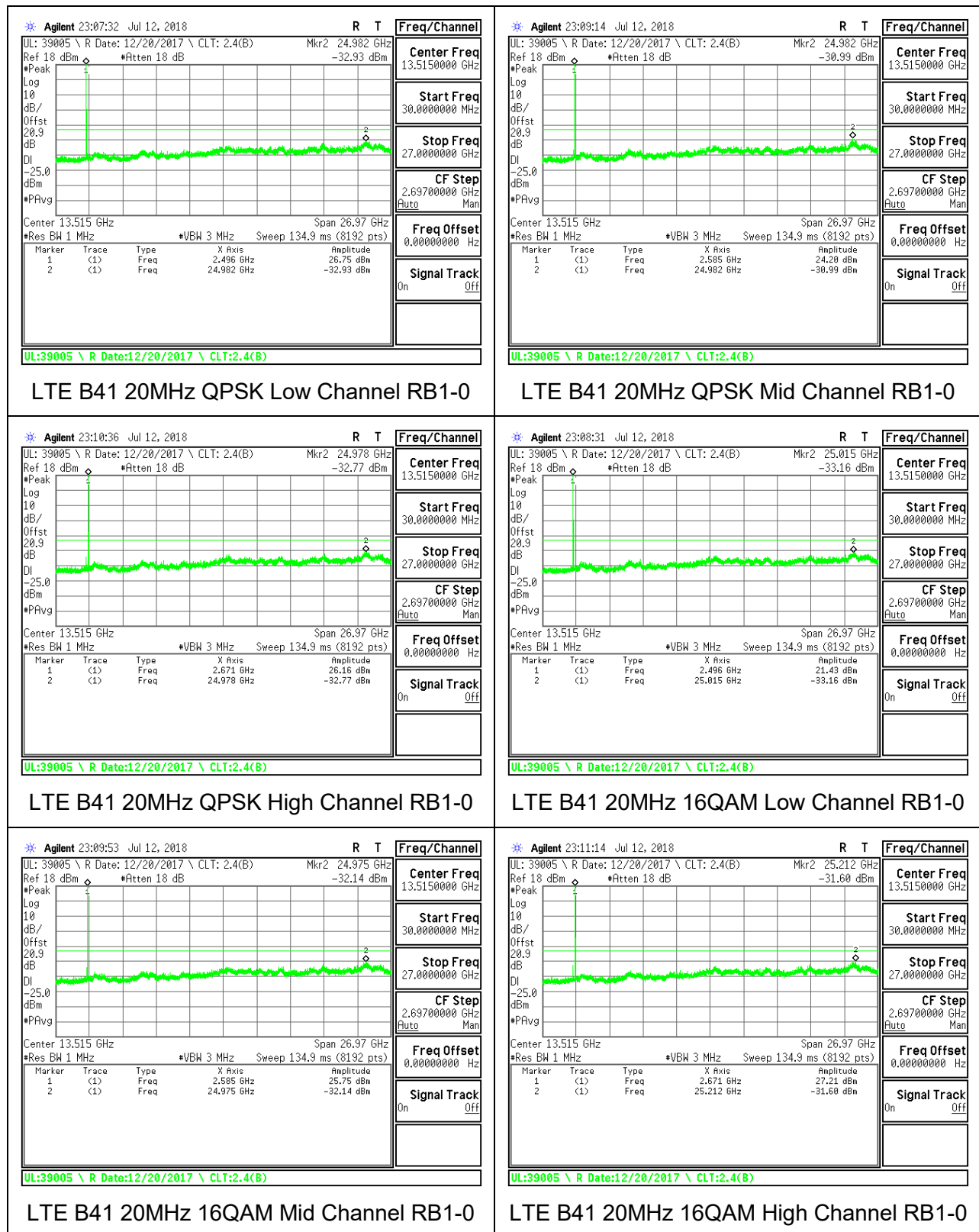


8.3.9. LTE BAND 41









8.4. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235, and §27.54

LIMITS

FCC: §22.355

The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

FCC: §24.235 & §27.54

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

- Temp. = -30°C to $+50^{\circ}\text{C}$
- Voltage = (85% - 115%)
Low voltage, 3.23VDC, Normal, 3.8VDC and High voltage, 4.37VDC.
End Voltage, 3.2VDC.

Frequency Stability vs Temperature:

The EUT is placed inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until $+50^{\circ}\text{C}$ is reached.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

MODES TESTED

- GSM 850
- GSM 1900
- WCDMA Band 5
- LTE Band 4
- LTE Band 5
- LTE Band 7
- LTE Band 12
- LTE Band 13
- LTE Band 17
- LTE Band 41

RESULTS

See the following pages.

8.4.1. GSM

ID:	39005	Date:	7/16/18
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GPRS GSM850

Limit		824	849	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	824.0255	848.9695		
Extreme (50C)		824.0255	848.9695	21.6	0.03
Extreme (40C)		824.0255	848.9695	21.0	0.03
Extreme (30C)		824.0255	848.9695	20.6	0.02
Extreme (10C)		824.0255	848.9695	21.0	0.03
Extreme (0C)		824.0255	848.9695	20.2	0.02
Extreme (-10C)		824.0255	848.9695	22.7	0.03
Extreme (-20C)		824.0255	848.9695	22.4	0.03
Extreme (-30C)		824.0255	848.9695	23.2	0.03
20C	15%	824.0255	848.9695	22.2	0.03
	-15%	824.0255	848.9695	23.2	0.03
	End Point	824.0255	848.9695	21.6	0.03

GPRS GSM1900

Limit		1850	1910	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	1850.0260	1909.9730		
Extreme (50C)		1850.0260	1909.9730	15.9	0.01
Extreme (40C)		1850.0260	1909.9730	16.1	0.01
Extreme (30C)		1850.0260	1909.9730	14.4	0.01
Extreme (10C)		1850.0260	1909.9730	13.9	0.01
Extreme (0C)		1850.0260	1909.9730	14.2	0.01
Extreme (-10C)		1850.0260	1909.9730	15.3	0.01
Extreme (-20C)		1850.0260	1909.9730	16.2	0.01
Extreme (-30C)		1850.0260	1909.9730	15.5	0.01
20C	15%	1850.0260	1909.9730	15.7	0.01
	-15%	1850.0260	1909.9730	17.5	0.01
	End Point	1850.0260	1909.9730	18.3	0.01

8.4.2. WCDMA

ID:	39005	Date:	7/16/18
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WCDMA Rel99 BAND5

Limit		824	849	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	824.1300	848.8600		
Extreme (50C)		824.1300	848.8600	-1.3	0.00
Extreme (40C)		824.1300	848.8600	-1.3	0.00
Extreme (30C)		824.1300	848.8600	-1.5	0.00
Extreme (10C)		824.1300	848.8600	-1.6	0.00
Extreme (0C)		824.1300	848.8600	-2.0	0.00
Extreme (-10C)		824.1300	848.8600	-1.6	0.00
Extreme (-20C)		824.1300	848.8600	-1.8	0.00
Extreme (-30C)		824.1300	848.8600	-2.0	0.00
20C	15%	824.1300	848.8600	2.0	0.00
	-15%	824.1300	848.8600	3.3	0.00
	End Point	824.1300	848.8600	3.5	0.00

8.4.3. LTE BAND 4

39005	Date:	7/17/18
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QPSK (20MHz BANDWIDTH)

Limit		1710	1755	Delta (Hz)	Frequency Stability (ppm)	
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)			
Temperature	Voltage					
Normal (20C)		Normal	1710.8400	1754.1600		
Extreme (50C)			1710.8400	1754.1600	9.4	0.005
Extreme (40C)			1710.8400	1754.1600	9.2	0.005
Extreme (30C)			1710.8400	1754.1600	9.0	0.005
Extreme (10C)			1710.8400	1754.1600	8.3	0.005
Extreme (0C)			1710.8400	1754.1600	7.8	0.005
Extreme (-10C)			1710.8400	1754.1600	7.5	0.004
Extreme (-20C)			1710.8400	1754.1600	7.5	0.004
Extreme (-30C)			1710.8400	1754.1600	7.9	0.005
20C	15%	1710.8400	1754.1600	9.3	0.005	
	-15%	1710.8400	1754.1600	9.0	0.005	
	End Point	1710.8400	1754.1600	8.5	0.005	

8.4.4. LTE BAND 5

ID:	39005	Date:	7/17/18
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QPSK (10MHz BANDWIDTH)

Limit		824	849	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	824.4070	848.5800		
Extreme (50C)		824.4070	848.5800	-7.3	-0.009
Extreme (40C)		824.4070	848.5800	-7.3	-0.009
Extreme (30C)		824.4070	848.5800	-7.2	-0.009
Extreme (10C)		824.4070	848.5800	-8.0	-0.010
Extreme (0C)		824.4070	848.5800	-8.2	-0.010
Extreme (-10C)		824.4070	848.5800	-7.0	-0.008
Extreme (-20C)		824.4070	848.5800	-7.0	-0.008
Extreme (-30C)		824.4070	848.5800	-8.5	-0.010
20C	15%	824.4070	848.5800	-7.8	-0.009
	-15%	824.4070	848.5800	-6.7	-0.008
	End Point	824.4070	848.5800	-8.2	-0.010

8.4.5. LTE BAND 7

ID:	39005	Date:	7/17/18
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QPSK (20MHz BANDWIDTH)

Limit		2500	2570	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	2500.8530	2569.1600		
Extreme (50C)		2500.8530	2569.1600	-13.2	-0.005
Extreme (40C)		2500.8530	2569.1600	-11.3	-0.004
Extreme (30C)		2500.8530	2569.1600	-12.6	-0.005
Extreme (10C)		2500.8530	2569.1600	-13.5	-0.005
Extreme (0C)		2500.8530	2569.1600	-10.2	-0.004
Extreme (-10C)		2500.8530	2569.1600	-11.2	-0.004
Extreme (-20C)		2500.8530	2569.1600	-14.9	-0.006
Extreme (-30C)		2500.8530	2569.1600	-15.0	-0.006
20C	15%	2500.8530	2569.1600	-14.7	-0.006
	-15%	2500.8530	2569.1600	-15.3	-0.006
	End Point	2500.8530	2569.1600	-14.4	-0.006

8.4.6. LTE BAND 12

ID:	39005	Date:	7/17/18
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QPSK (10MHz BANDWIDTH)

Limit		699	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	699.4200	715.5930		
Extreme (50C)		699.4200	715.5930	5.0	0.01
Extreme (40C)		699.4200	715.5930	4.2	0.01
Extreme (30C)		699.4200	715.5930	4.4	0.01
Extreme (10C)		699.4200	715.5930	3.1	0.00
Extreme (0C)		699.4200	715.5930	3.2	0.00
Extreme (-10C)		699.4200	715.5930	4.7	0.01
Extreme (-20C)		699.4200	715.5930	4.9	0.01
Extreme (-30C)		699.4200	715.5930	3.9	0.01
20C	15%	699.4200	715.5930	4.4	0.01
	-15%	699.4200	715.5930	3.8	0.01
	End Point	699.4200	715.5930	4.6	0.01

8.4.7. LTE BAND 13

ID:	39005	Date:	7/15/18
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QPSK (10MHz BANDWIDTH)

Limit		777	787	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	777.1500	786.8470		
Extreme (50C)		777.1500	786.8470	6.9	0.009
Extreme (40C)		777.1500	786.8470	6.4	0.008
Extreme (30C)		777.1500	786.8470	6.1	0.008
Extreme (10C)		777.1500	786.8470	6.2	0.008
Extreme (0C)		777.1500	786.8470	4.0	0.005
Extreme (-10C)		777.1500	786.8470	5.2	0.007
Extreme (-20C)		777.1500	786.8470	3.7	0.005
Extreme (-30C)		777.1500	786.8470	4.3	0.006
20C	15%	777.1500	786.8470	4.2	0.005
	-15%	777.1500	786.8470	3.8	0.005
	End Point	777.1500	786.8470	5.2	0.007

8.4.8. LTE BAND 17

ID:	39005	Date:	7/15/18
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QPSK (10MHz BANDWIDTH)

Limit		704	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	704.4070	715.5930		
Extreme (50C)		704.4070	715.5930	2.3	0.003
Extreme (40C)		704.4070	715.5930	2.5	0.003
Extreme (30C)		704.4070	715.5930	3.2	0.005
Extreme (10C)		704.4070	715.5930	2.2	0.003
Extreme (0C)		704.4070	715.5930	2.2	0.003
Extreme (-10C)		704.4070	715.5930	2.3	0.003
Extreme (-20C)		704.4070	715.5930	4.0	0.006
Extreme (-30C)		704.4070	715.5930	3.6	0.005
20C	15%	704.4070	715.5930	3.2	0.005
	-15%	704.4070	715.5930	2.4	0.003
	End Point	704.4070	715.5930	2.9	0.004

8.4.9. LTE BAND 41

ID:	39005	Date:	7/15/18
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QPSK (20MHz BANDWIDTH)

Limit		2496	2690	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	2496.6130	2689.3730		
Extreme (50C)		2496.6130	2689.3730	12.1	0.005
Extreme (40C)		2496.6130	2689.3730	12.5	0.005
Extreme (30C)		2496.6130	2689.3730	11.5	0.004
Extreme (10C)		2496.6130	2689.3730	10.9	0.004
Extreme (0C)		2496.6130	2689.3730	9.8	0.004
Extreme (-10C)		2496.6130	2689.3730	11.0	0.004
Extreme (-20C)		2496.6130	2689.3730	11.8	0.005
Extreme (-30C)		2496.6130	2689.3730	11.3	0.004
20C	15%	2496.6130	2689.3730	10.6	0.004
	-15%	2496.6130	2689.3730	11.4	0.004
	End Point	2496.6130	2689.3730	11.2	0.004

8.5. PEAK TO AVERAGE RATIO

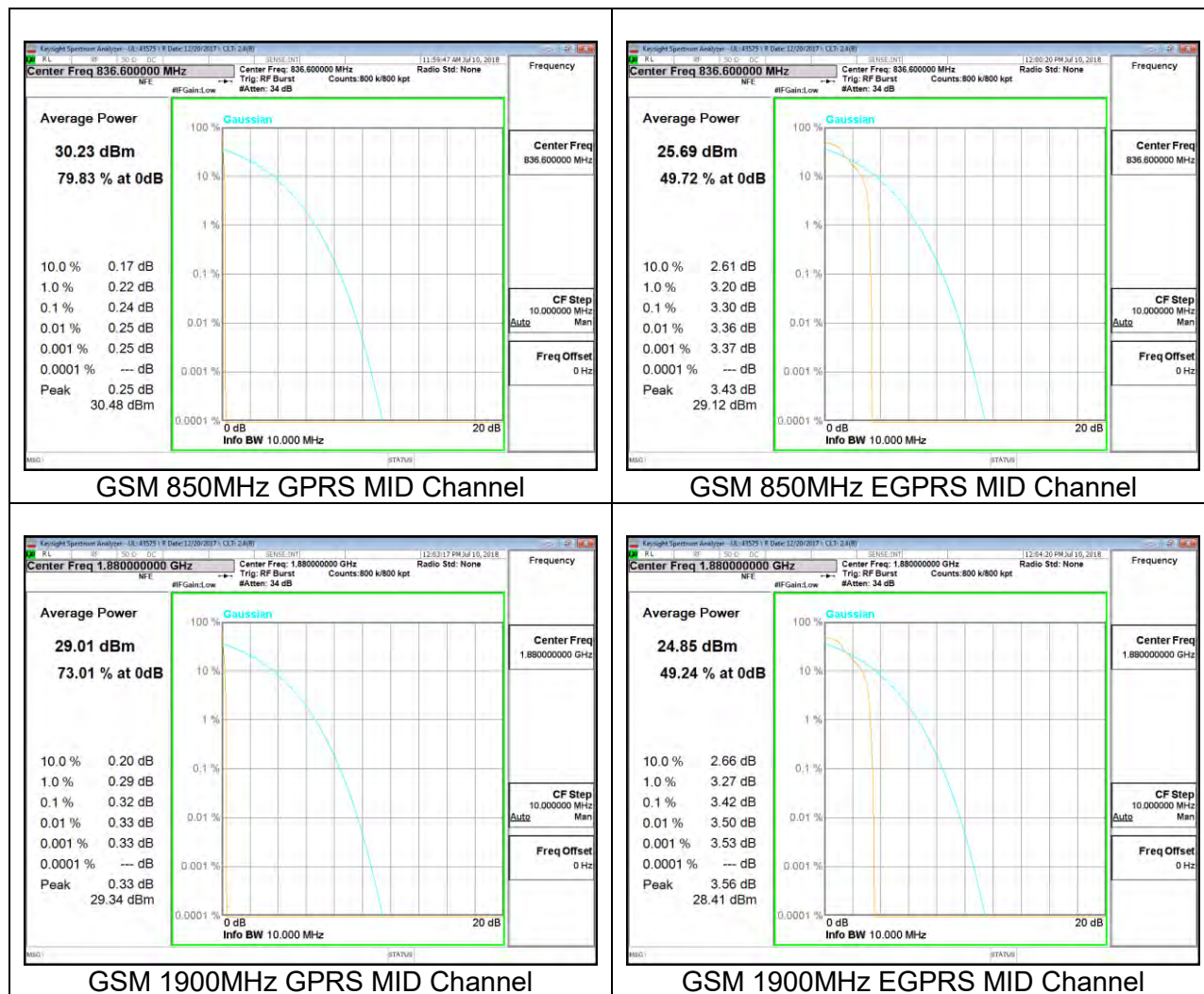
LIMIT

In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

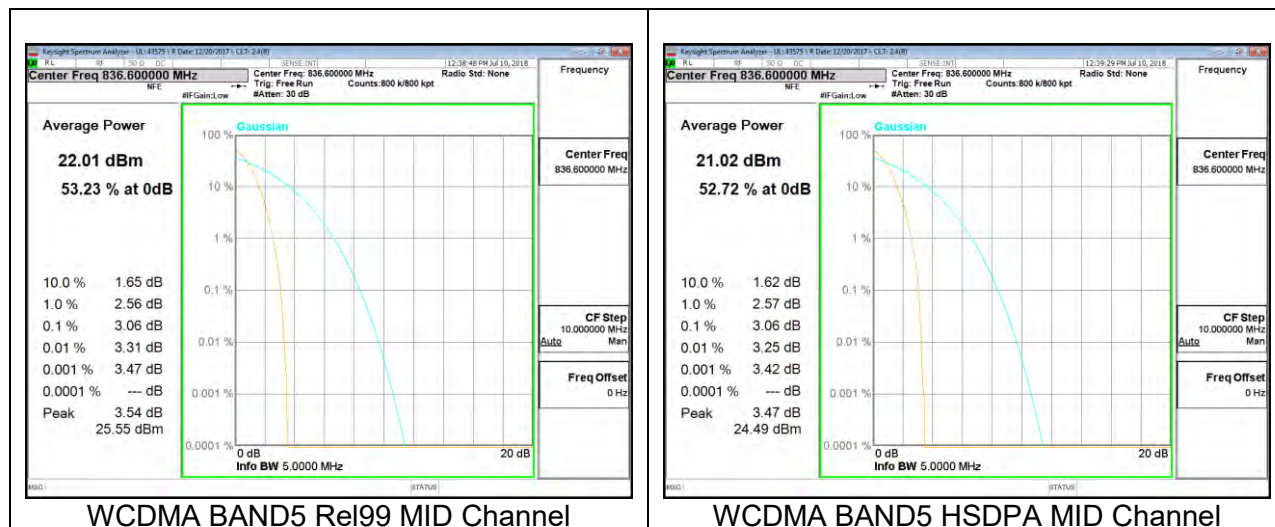
RESULT

Full resource block (FRB) for each bandwidth was used to measure as the worst case. The results from all CCDF measurements are passed with 13dB peak-to-average power ratio criteria.

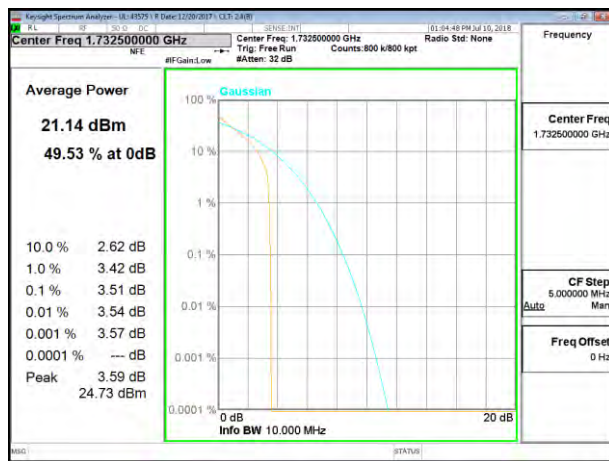
8.5.1. GSM



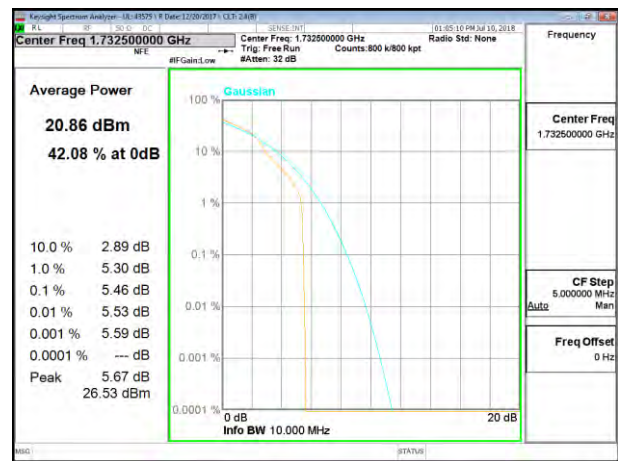
8.5.2. WCDMA



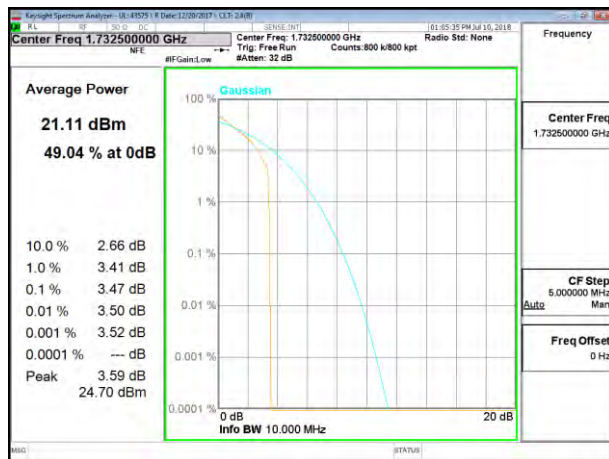
8.5.3. LTE BAND 4



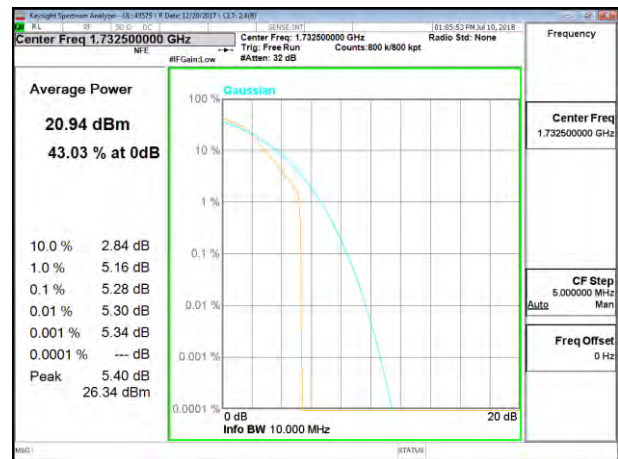
LTE B4 1.4MHz QPSK Mid Channel



LTE B4 1.4MHz 16QAM Mid Channel



LTE B4 3MHz QPSK Mid Channel



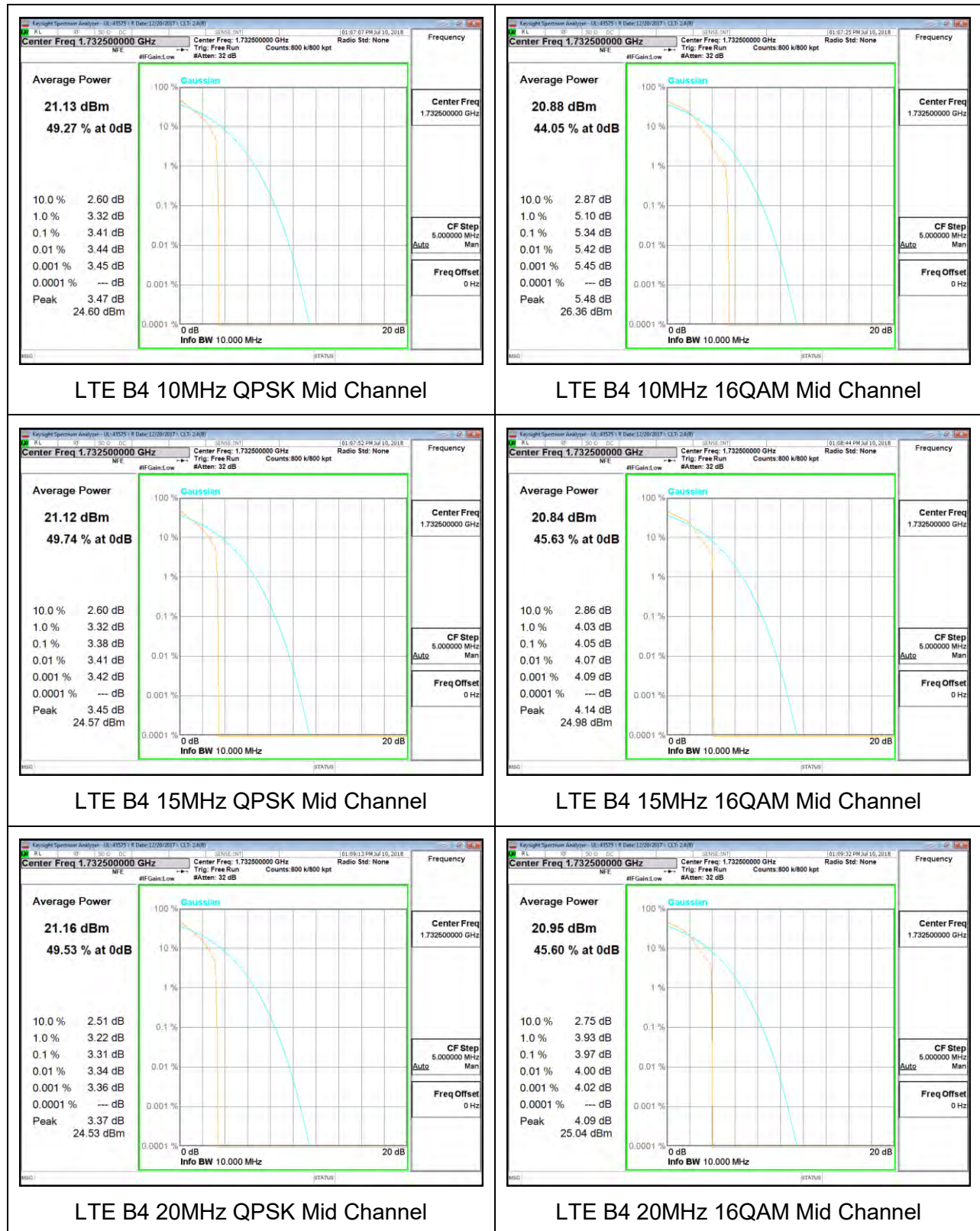
LTE B4 3MHz 16QAM Mid Channel



LTE B4 5MHz QPSK Mid Channel



LTE B4 5MHz 16QAM Mid Channel



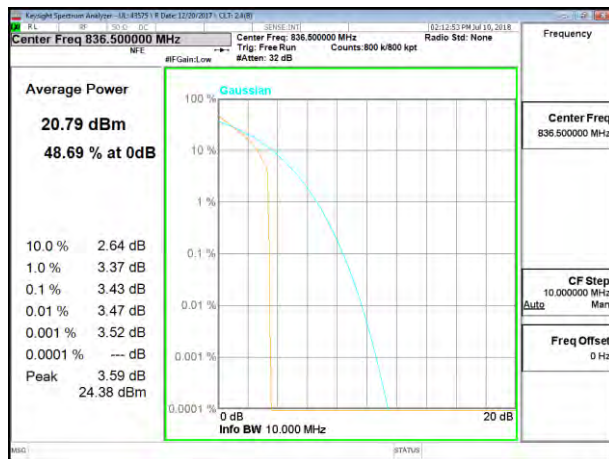
8.5.4. LTE BAND 5



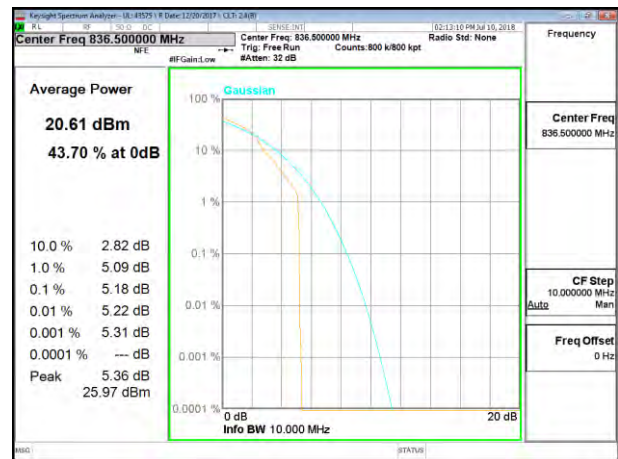
LTE B5 1.4MHz QPSK Mid Channel



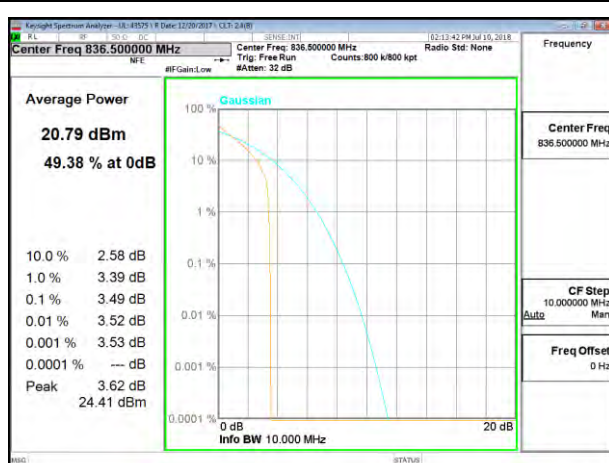
LTE B5 1.4MHz 16QAM Mid Channel



LTE B5 3MHz QPSK Mid Channel



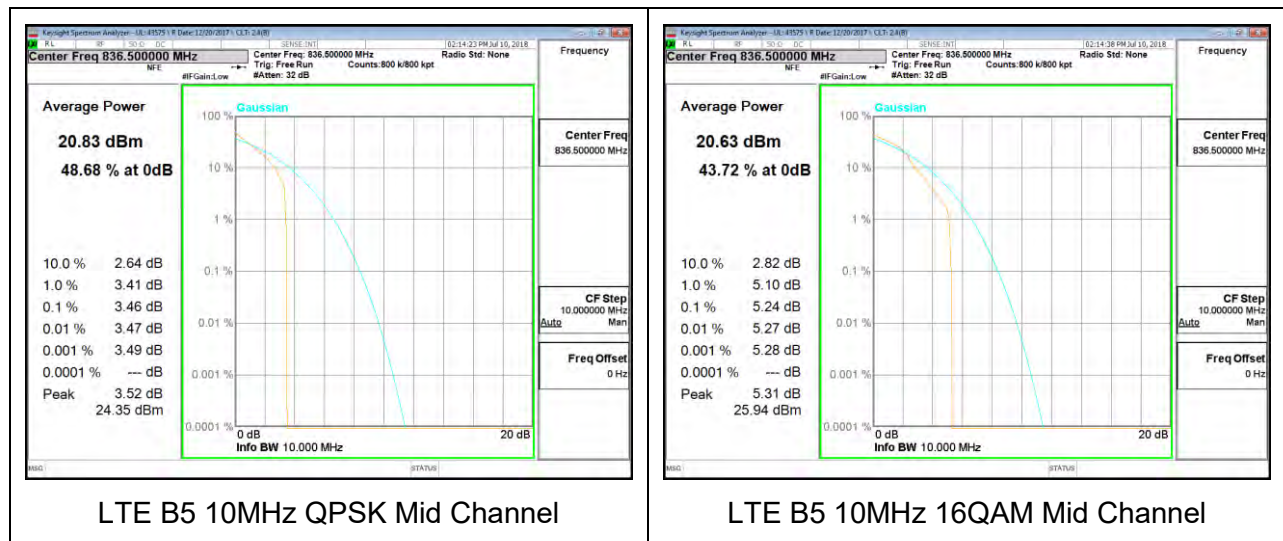
LTE B5 3MHz 16QAM Mid Channel



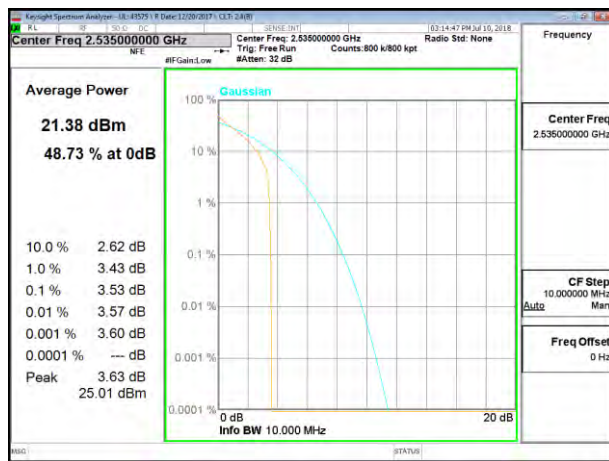
LTE B5 5MHz QPSK Mid Channel



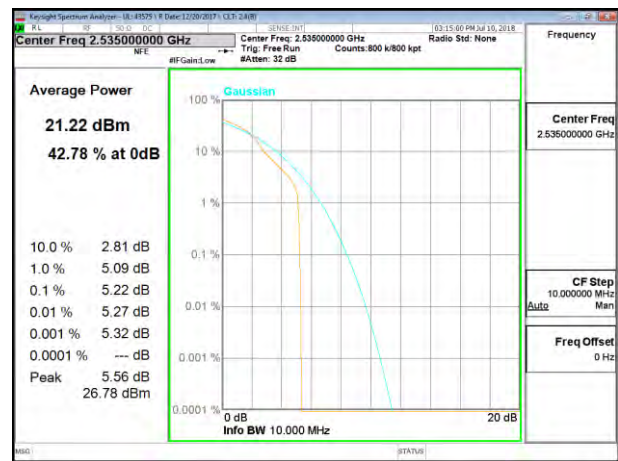
LTE B5 5MHz 16QAM Mid Channel



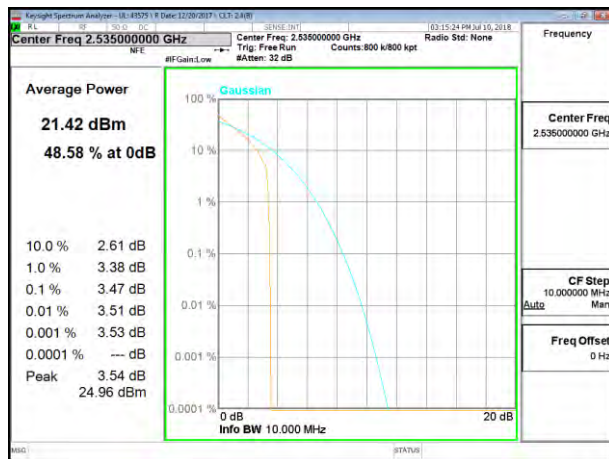
8.5.5. LTE BAND 7



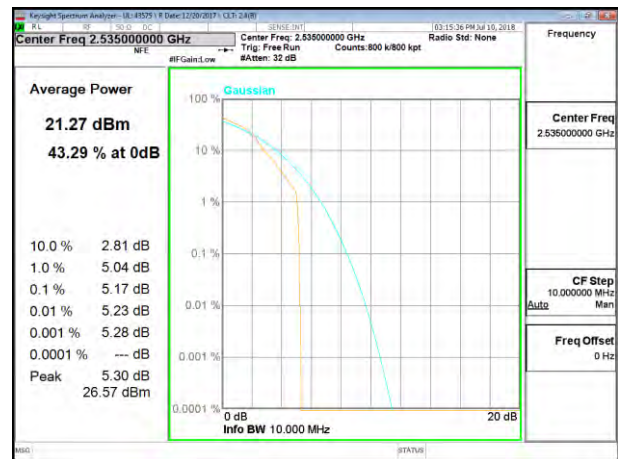
LTE B7 5MHz QPSK Mid Channel



LTE B7 5MHz 16QAM Mid Channel



LTE B7 10MHz QPSK Mid Channel



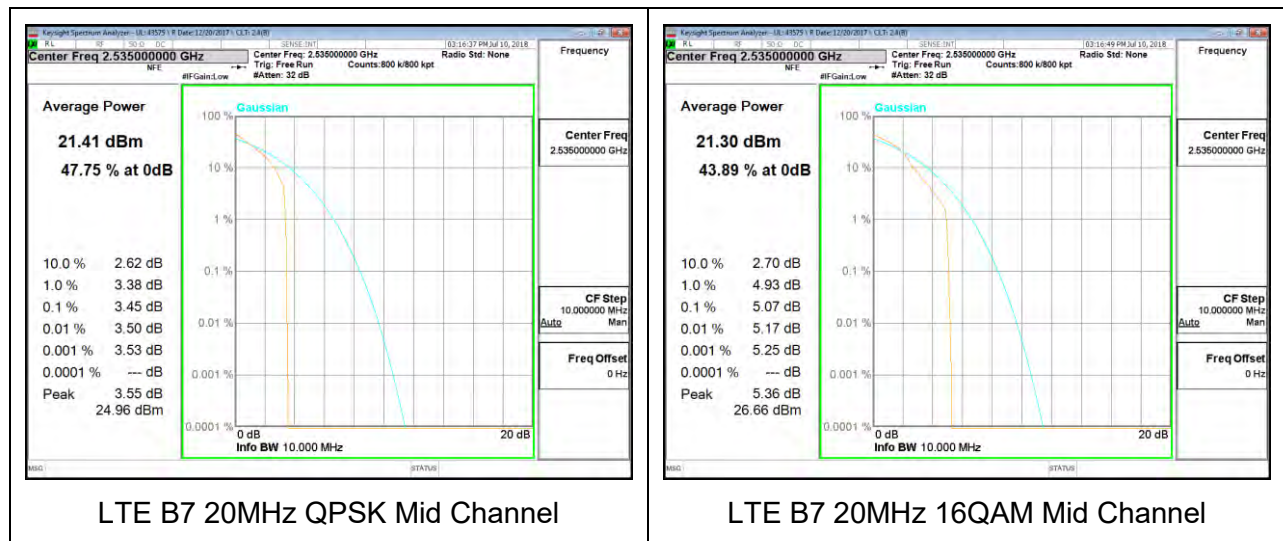
LTE B7 10MHz 16QAM Mid Channel



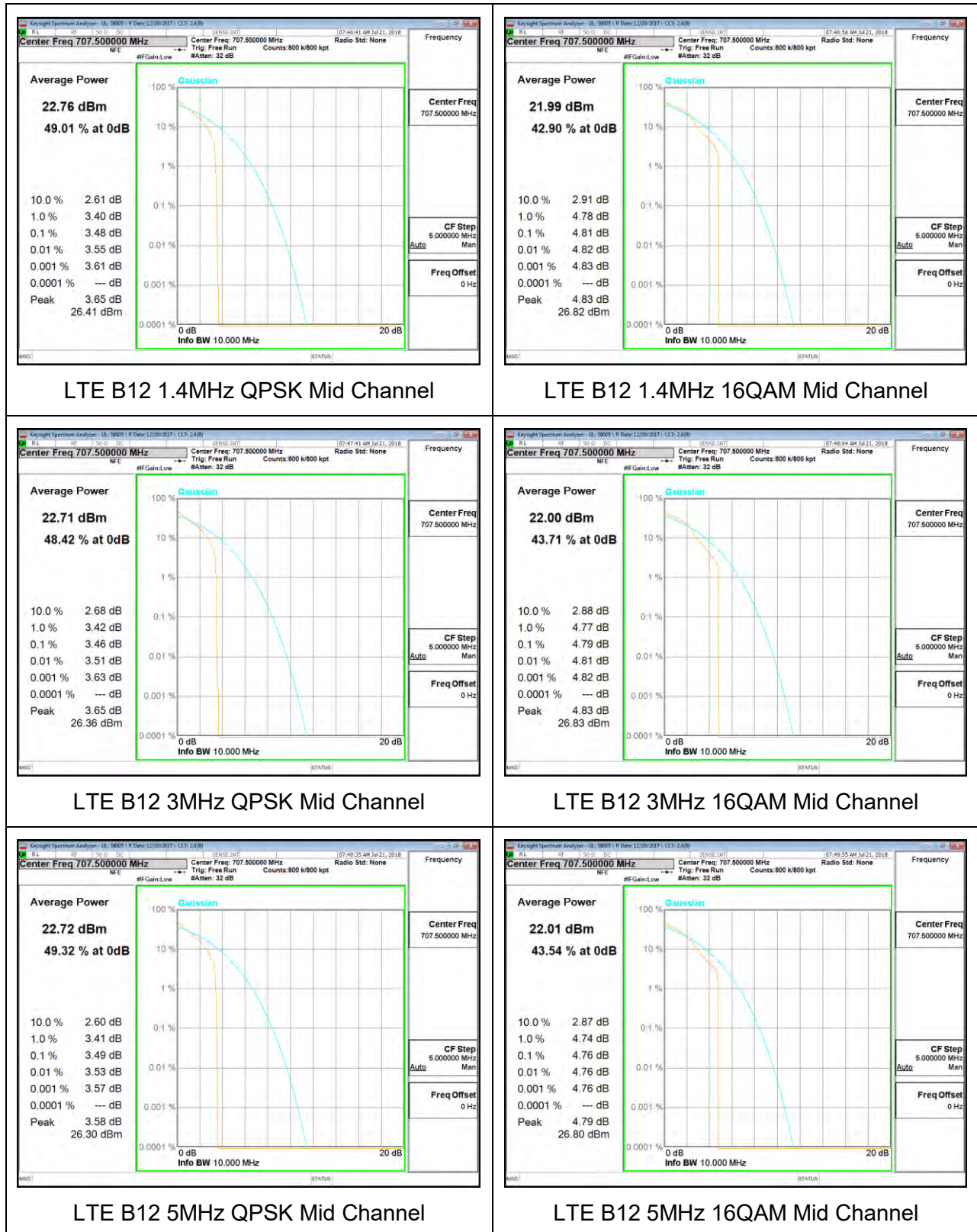
LTE B7 15MHz QPSK Mid Channel

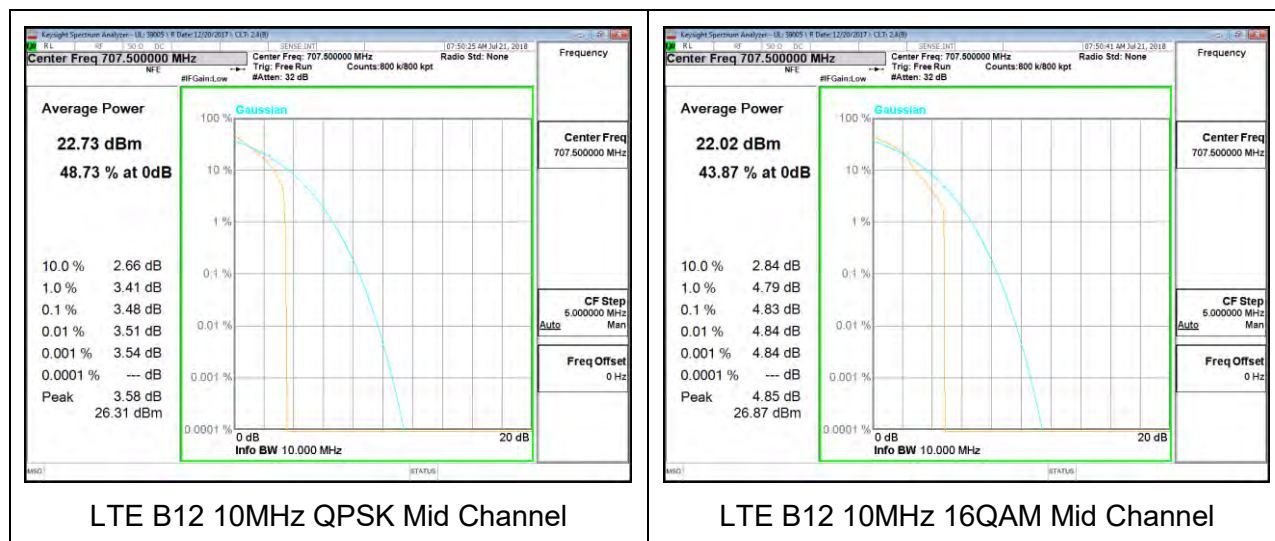


LTE B7 15MHz 16QAM Mid Channel

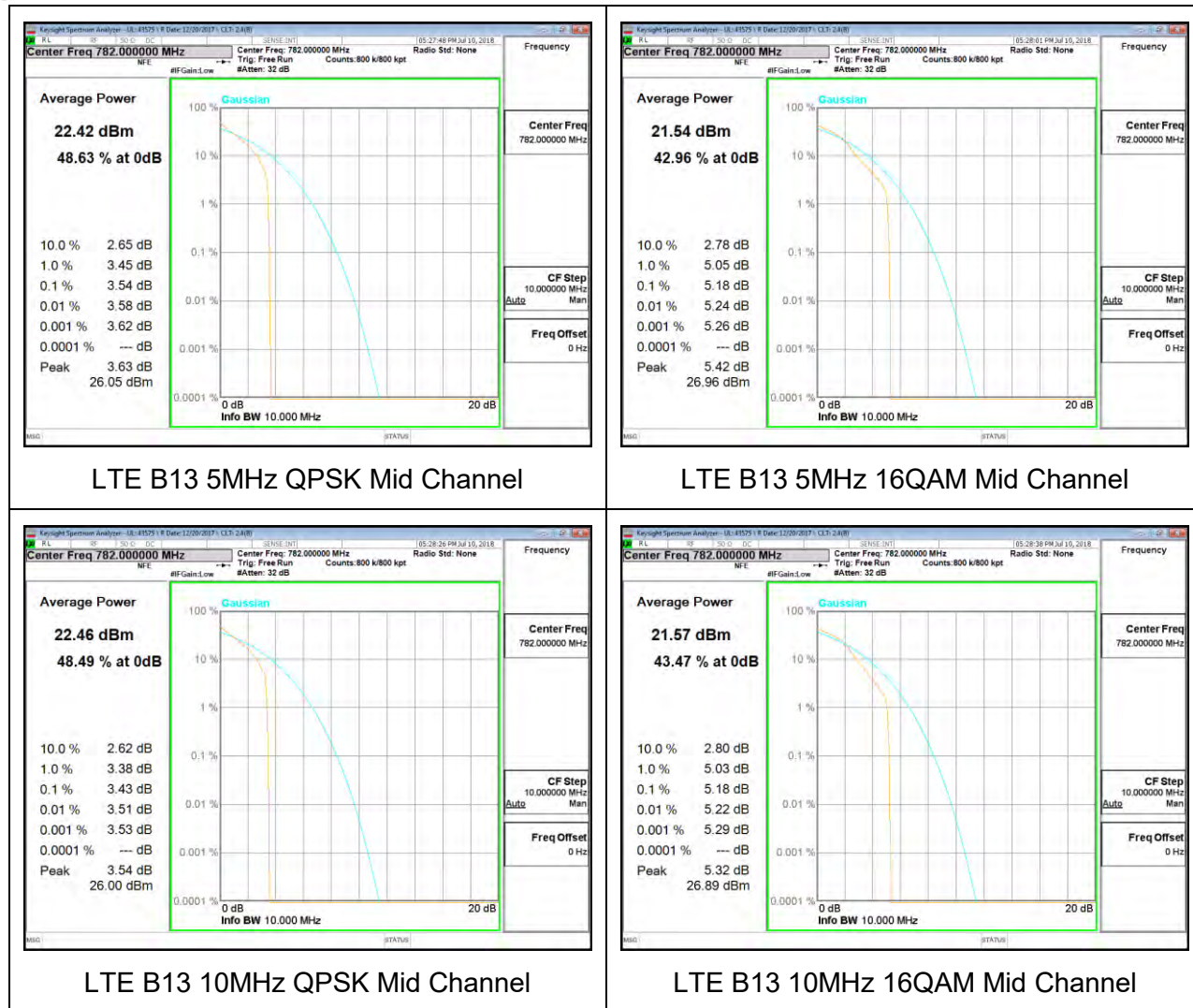


8.5.6. LTE BAND 12

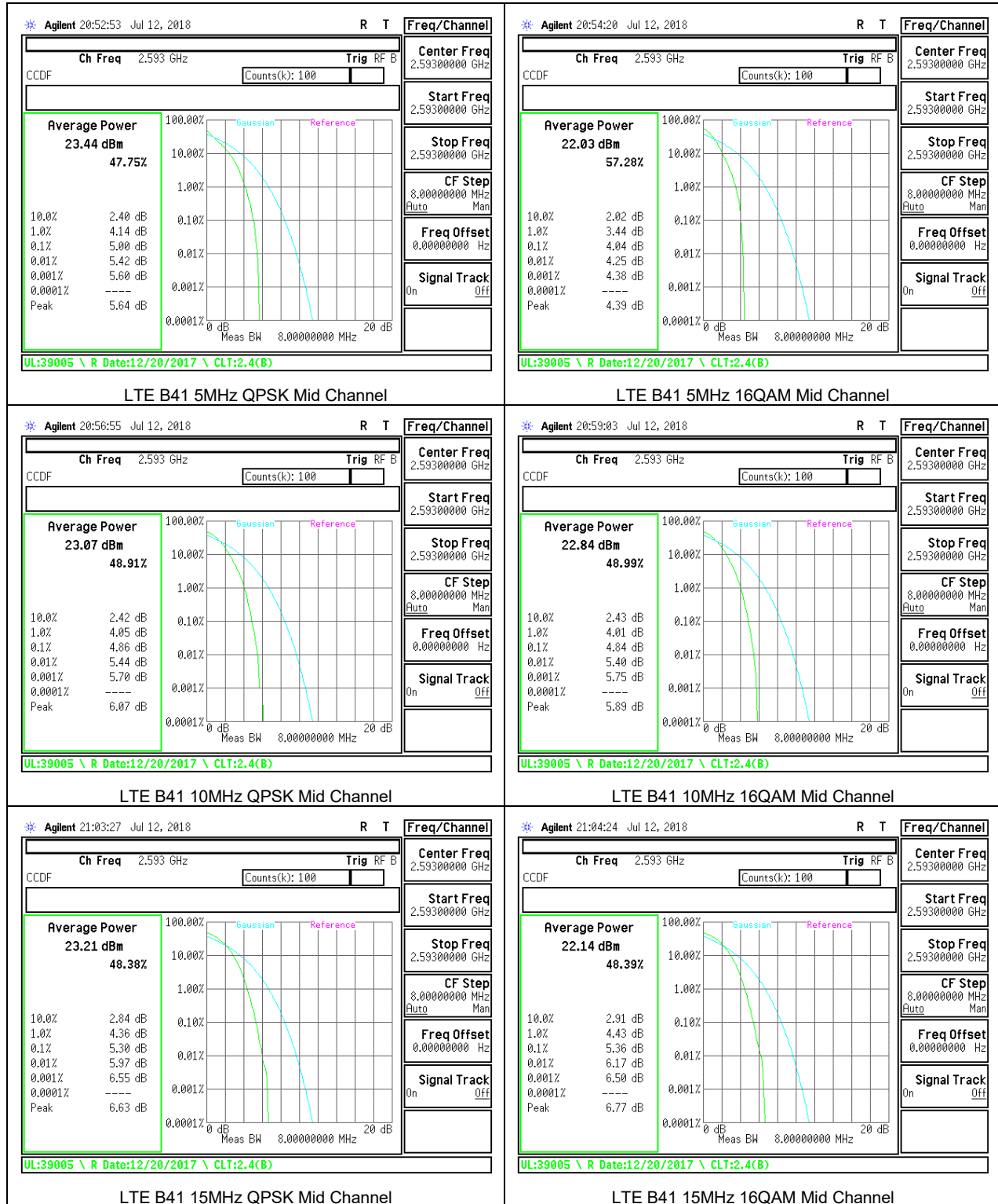


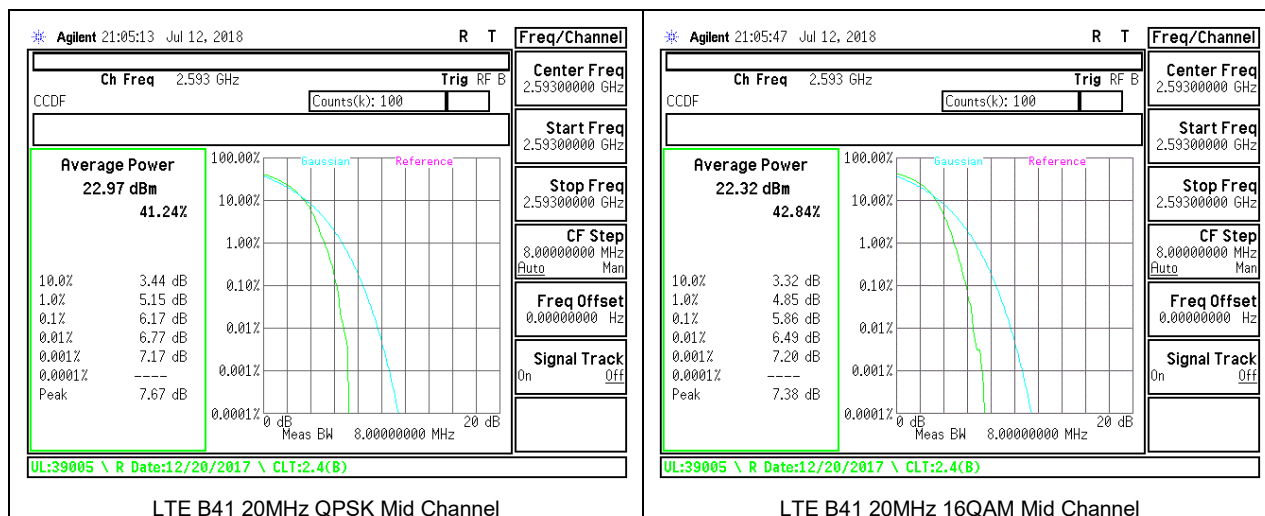


8.5.7. LTE BAND 13



8.5.8. LTE BAND 41





9. RADIATED TEST RESULTS

9.1. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, §27.53

LIMIT

FCC: §22.917(a), §24.238(a), §27.53 (g), (h)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

FCC: §27.53 (Band 13)

(c) The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

(f) Emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals. (-70 dBW/MHz = -40dBm/MHz).

FCC: §27.53 (m) (Band 7, 41)

At least $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section.

TEST PROCEDURE

KDB 971168 D01 v02r02/D02 v01

TIA-603-E, Section 2.2.12.

MODES TESTED

- GSM 850
- GSM 1900
- WCDMA Band 5
- LTE Band 4
- LTE Band 5
- LTE Band 7
- LTE Band 12
- LTE Band 13
- LTE Band 41

NOTE: All bandwidths were tested but only highest bandwidth recorded on the report as worst case.

RESULTS

9.1.1. GSM

Company:			SOMC									
Project #:			12380932									
Date:			07/19/18									
Test Engineer:			19497									
Configuration:			EUT+ Support Equipment									
Mode:			GPRS 850									
Chamber #:			Chamber L									
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity	
Low Channel												
1.648	-60.02	Pk	28.6	-34.3	10.1	-55.62	-13	-42.62	0-360	152	H	
2.473	-68.29	Pk	32.3	-32.7	10.9	-57.79	-13	-44.79	0-360	152	H	
3.297	-73.03	Pk	32.9	-31.3	10.6	-60.83	-13	-47.83	0-360	152	H	
1.648	-49.99	Pk	28.6	-34.3	10.9	-44.79	-13	-31.79	0-360	152	V	
2.473	-66.59	Pk	32.3	-32.7	11.1	-55.89	-13	-42.89	0-360	152	V	
3.297	-72.33	Pk	32.9	-31.3	10.8	-59.93	-13	-46.93	0-360	152	V	
Mid Channel												
1.673	-55.44	Pk	28.8	-34.1	9.9	-50.84	-13	-37.84	0-360	152	H	
2.51	-68.05	Pk	32.3	-32.7	10.1	-58.35	-13	-45.35	0-360	152	H	
3.346	-72.33	Pk	32.9	-31.5	10.6	-60.33	-13	-47.33	0-360	152	H	
1.673	-49.88	Pk	28.8	-34.1	11.3	-43.88	-13	-30.88	0-360	152	V	
2.51	-67.64	Pk	32.3	-32.7	11.5	-56.54	-13	-43.54	0-360	152	V	
3.346	-71.94	Pk	32.9	-31.5	10.8	-59.74	-13	-46.74	0-360	152	V	
High Channel												
1.698	-60.07	Pk	28.9	-34.1	11.5	-53.77	-13	-40.77	0-360	152	H	
2.546	-68.83	Pk	32.3	-32.6	10.1	-59.03	-13	-46.03	0-360	152	H	
3.395	-70.6	Pk	32.8	-31.7	11.1	-58.4	-13	-45.4	0-360	152	H	
1.698	-55.37	Pk	28.9	-34.1	11.7	-48.87	-13	-35.87	0-360	152	V	
2.546	-69.91	Pk	32.3	-32.6	10.9	-59.31	-13	-46.31	0-360	152	V	
3.395	-70.32	Pk	32.8	-31.7	11.2	-58.02	-13	-45.02	0-360	152	V	

Company:			SOMC								
Project #:			12380932								
Date:			07/19/18								
Test Engineer:			19497								
Configuration:			EUT+ Support Equipment								
Mode:			EGPRS 850								
Chamber #:			Chamber L								
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Low Channel											
1.648	-69.51	Pk	28.6	-34.3	10.1	-65.11	-13	-52.11	0-360	151	H
2.473	-69.35	Pk	32.3	-32.7	10.9	-58.85	-13	-45.85	0-360	151	H
3.297	-71.09	Pk	32.9	-31.3	10.6	-58.89	-13	-45.89	0-360	151	H
3.297	-71.09	Pk	32.9	-31.3	10.6	-58.89	-13	-45.89	0-360	151	H
1.648	-68.09	Pk	28.6	-34.3	10.9	-62.89	-13	-49.89	0-360	151	V
2.473	-71.45	Pk	32.3	-32.7	11.1	-60.75	-13	-47.75	0-360	151	V
Mid Channel											
1.673	-63.88	Pk	28.8	-34.1	9.9	-59.28	-13	-46.28	0-360	151	H
2.51	-69.54	Pk	32.3	-32.7	10.1	-59.84	-13	-46.84	0-360	151	H
3.346	-71.06	Pk	32.9	-31.5	10.6	-59.06	-13	-46.06	0-360	151	H
1.673	-57.81	Pk	28.8	-34.1	11.3	-51.81	-13	-38.81	0-360	151	V
2.51	-69.58	Pk	32.3	-32.7	11.5	-58.48	-13	-45.48	0-360	151	V
3.346	-71.4	Pk	32.9	-31.5	10.8	-59.2	-13	-46.2	0-360	151	V
High Channel											
1.698	-68.99	Pk	28.9	-34.1	11.5	-62.69	-13	-49.69	0-360	151	H
2.546	-69.48	Pk	32.3	-32.6	10.1	-59.68	-13	-46.68	0-360	151	H
3.395	-71.16	Pk	32.8	-31.7	11.1	-58.96	-13	-45.96	0-360	151	H
1.698	-66.88	Pk	28.9	-34.1	11.7	-60.38	-13	-47.38	0-360	151	V
2.546	-70.62	Pk	32.3	-32.6	10.9	-60.02	-13	-47.02	0-360	151	V
3.395	-72.36	Pk	32.8	-31.7	11.2	-60.06	-13	-47.06	0-360	151	V

Company:		SOMC									
Project #:		12380932									
Date:		07/19/18									
Test Engineer:		19497									
Configuration:		EUT+ Support Equipment									
Mode:		GPRS 1900									
Chamber #:		Chamber L									
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Low Channel											
3.7	-72.36	Pk	33.1	-30.9	10.8	-59.36	-13	-46.36	0-360	152	H
5.55	-72.4	Pk	34.6	-28.2	10.7	-55.3	-13	-42.3	0-360	152	H
7.4	-75.03	Pk	35.7	-26	10.4	-54.93	-13	-41.93	0-360	152	H
3.7	-72.48	Pk	33.1	-30.9	11.1	-59.18	-13	-46.18	0-360	152	V
5.55	-75.12	Pk	34.6	-28.2	10.9	-57.82	-13	-44.82	0-360	152	V
7.4	-76.96	Pk	35.7	-26	10.6	-56.66	-13	-43.66	0-360	152	V
Mid Channel											
3.759	-71.81	Pk	33.5	-30.7	10.4	-58.61	-13	-45.61	0-360	152	H
5.639	-74.3	Pk	34.8	-28.5	10.3	-57.7	-13	-44.7	0-360	152	H
7.519	-76.19	Pk	35.7	-25.4	10.5	-55.39	-13	-42.39	0-360	152	H
3.759	-71.81	Pk	33.5	-30.7	10.7	-58.31	-13	-45.31	0-360	152	V
5.639	-74.03	Pk	34.8	-28.5	10.5	-57.23	-13	-44.23	0-360	152	V
7.519	-76.15	Pk	35.7	-25.4	10.7	-55.15	-13	-42.15	0-360	152	V
High Channel											
3.82	-72.66	Pk	33.7	-30.6	10	-59.56	-13	-46.56	0-360	152	H
5.73	-73.98	Pk	34.9	-28.7	10.4	-57.38	-13	-44.38	0-360	152	H
7.64	-75.56	Pk	35.8	-25.4	10.3	-54.86	-13	-41.86	0-360	152	H
3.82	-72.86	Pk	33.7	-30.5	10.3	-59.36	-13	-46.36	0-360	152	V
5.73	-72.01	Pk	34.9	-28.7	10.6	-55.21	-13	-42.21	0-360	152	V
7.64	-77.5	Pk	35.8	-25.4	10.5	-56.6	-13	-43.6	0-360	152	V

Company:		SOMC									
Project #:		12380932									
Date:		07/19/18									
Test Engineer:		19497									
Configuration:		EUT+ Support Equipment									
Mode:		EGPRS 1900									
Chamber #:		Chamber L									
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Low Channel											
3.7	-72.7	Pk	33.1	-30.9	10.8	-59.7	-13	-46.7	0-360	152	H
5.55	-74.03	Pk	34.6	-28.2	10.7	-56.93	-13	-43.93	0-360	152	H
7.4	-75.45	Pk	35.7	-26	10.4	-55.35	-13	-42.35	0-360	152	H
3.7	-73.6	Pk	33.1	-30.9	11.1	-60.3	-13	-47.3	0-360	152	V
5.55	-73.47	Pk	34.6	-28.2	10.9	-56.17	-13	-43.17	0-360	152	V
7.4	-76.62	Pk	35.7	-26	10.6	-56.32	-13	-43.32	0-360	152	V
Mid Channel											
3.759	-72.33	Pk	33.5	-30.7	10.4	-59.13	-13	-46.13	0-360	151	H
5.639	-73.78	Pk	34.8	-28.5	10.3	-57.18	-13	-44.18	0-360	151	H
7.519	-77.96	Pk	35.7	-25.4	10.5	-57.16	-13	-44.16	0-360	151	H
3.759	-72.51	Pk	33.5	-30.7	10.7	-59.01	-13	-46.01	0-360	151	V
5.639	-74.32	Pk	34.8	-28.5	10.5	-57.52	-13	-44.52	0-360	151	V
7.519	-76.84	Pk	35.7	-25.4	10.7	-55.84	-13	-42.84	0-360	151	V
High Channel											
3.819	-69.54	Pk	33.7	-30.6	10	-56.44	-13	-43.44	0-360	151	H
5.729	-75.49	Pk	34.9	-28.6	10.5	-58.69	-13	-45.69	0-360	151	H
7.638	-76.46	Pk	35.8	-25.4	10.3	-55.76	-13	-42.76	0-360	151	H
3.819	-72.25	Pk	33.7	-30.6	10.3	-58.85	-13	-45.85	0-360	151	V
5.729	-73.58	Pk	34.9	-28.6	10.6	-56.68	-13	-43.68	0-360	151	V
7.638	-76.66	Pk	35.8	-25.4	10.6	-55.66	-13	-42.66	0-360	151	V

9.1.2. WCDMA

Company:			SOMC									
Project #:			12380932									
Date:			07/19/18									
Test Engineer:			19497									
Configuration:			EUT+ Support Equipment									
Mode:			REL99 B5									
Chamber #:			Chamber L									
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity	
Low Channel												
1.653	-70.34	Pk	28.7	-34.3	10.2	-65.74	-13	-52.74	0-360	151	H	
2.48	-70.78	Pk	32.3	-32.7	10.5	-60.68	-13	-47.68	0-360	151	H	
3.306	-71.88	Pk	32.9	-31.4	10.8	-59.58	-13	-46.58	0-360	151	H	
1.653	-64.32	Pk	28.7	-34.3	11.1	-58.82	-13	-45.82	0-360	151	V	
2.48	-71.3	Pk	32.3	-32.7	10.5	-61.2	-13	-48.2	0-360	151	V	
3.306	-71.15	Pk	32.9	-31.4	11.3	-58.35	-13	-45.35	0-360	151	V	
Mid Channel												
1.674	-68.55	Pk	28.8	-34.1	9.9	-63.95	-13	-50.95	0-360	152	H	
2.51	-69.51	Pk	32.3	-32.7	10.1	-59.81	-13	-46.81	0-360	152	H	
3.347	-72.2	Pk	32.9	-31.5	10.6	-60.2	-13	-47.2	0-360	152	H	
1.673	-68.35	Pk	28.8	-34.1	11.3	-62.35	-13	-49.35	0-360	152	V	
2.51	-70.21	Pk	32.3	-32.7	11.5	-59.11	-13	-46.11	0-360	152	V	
3.347	-71.31	Pk	32.9	-31.5	10.7	-59.21	-13	-46.21	0-360	152	V	
High Channel												
1.693	-68.69	Pk	28.9	-34.2	11.3	-62.69	-13	-49.69	0-360	152	H	
2.54	-70.52	Pk	32.3	-32.7	9.8	-61.12	-13	-48.12	0-360	152	H	
3.386	-71.12	Pk	32.8	-31.8	11	-59.12	-13	-46.12	0-360	152	H	
1.693	-66.67	Pk	28.9	-34.2	12	-59.97	-13	-46.97	0-360	152	V	
2.54	-70.71	Pk	32.3	-32.7	10.5	-60.61	-13	-47.61	0-360	152	V	
3.386	-72.15	Pk	32.8	-31.8	11.1	-60.05	-13	-47.05	0-360	152	V	

Company:			SOMC								
Project #:			12380932								
Date:			07/19/18								
Test Engineer:			19497								
Configuration:			EUT+ Support Equipment								
Mode:			HSDPA B5								
Chamber #:			Chamber L								
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Low Channel											
1.653	-67.88	Pk	28.7	-34.3	10.2	-63.28	-13	-50.28	0-360	152	H
2.48	-70.39	Pk	32.3	-32.7	10.5	-60.29	-13	-47.29	0-360	152	H
3.306	-70.9	Pk	32.9	-31.4	10.8	-58.6	-13	-45.6	0-360	152	H
1.653	-65	Pk	28.7	-34.3	11.1	-59.5	-13	-46.5	0-360	152	V
2.48	-72.02	Pk	32.3	-32.7	10.5	-61.92	-13	-48.92	0-360	152	V
3.306	-72.27	Pk	32.9	-31.4	11.3	-59.47	-13	-46.47	0-360	152	V
Mid Channel											
1.673	-69.64	Pk	28.8	-34.1	9.9	-65.04	-13	-52.04	0-360	151	H
2.51	-70.64	Pk	32.3	-32.7	10.1	-60.94	-13	-47.94	0-360	151	H
3.347	-71.2	Pk	32.9	-31.5	10.6	-59.2	-13	-46.2	0-360	151	H
1.673	-66.84	Pk	28.8	-34.1	11.3	-60.84	-13	-47.84	0-360	151	V
2.51	-70.93	Pk	32.3	-32.7	11.5	-59.83	-13	-46.83	0-360	151	V
3.347	-72.24	Pk	32.9	-31.5	10.7	-60.14	-13	-47.14	0-360	151	V
High Channel											
1.693	-69.7	Pk	28.9	-34.2	11.3	-63.7	-13	-50.7	0-360	152	H
2.54	-70.91	Pk	32.3	-32.7	9.8	-61.51	-13	-48.51	0-360	152	H
3.386	-71.59	Pk	32.8	-31.8	11	-59.59	-13	-46.59	0-360	152	H
1.693	-66.87	Pk	28.9	-34.2	12	-60.17	-13	-47.17	0-360	152	V
2.54	-72.05	Pk	32.3	-32.7	10.5	-61.95	-13	-48.95	0-360	152	V
3.386	-71.74	Pk	32.8	-31.8	11.1	-59.64	-13	-46.64	0-360	152	V

9.1.3. LTE BAND 4

Company:		SOMC									
Project #:		12380932									
Date:		07/19/18									
Test Engineer:		19497									
Configuration:		EUT+ Support Equipment									
Mode:		LTE 4 QPSK 20MHz									
Chamber #:		Chamber L									
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Low Channel											
3.435	-69.99	Pk	32.9	-31.5	10.9	-57.69	-13	-44.69	0-360	151	H
5.165	-71.77	Pk	34.4	-29.5	10.6	-56.27	-13	-43.27	0-360	151	H
6.876	-74.51	Pk	35.7	-26.8	10.4	-55.21	-13	-42.21	0-360	151	H
3.435	-70.28	Pk	32.9	-31.5	11	-57.88	-13	-44.88	0-360	151	V
5.146	-71.42	Pk	34.4	-29.3	10.5	-55.82	-13	-42.82	0-360	151	V
6.874	-73.86	Pk	35.7	-26.8	10.7	-54.26	-13	-41.26	0-360	151	V
Mid Channel											
3.475	-70.12	Pk	33	-31	10.8	-57.32	-13	-44.32	0-360	151	H
5.212	-72.8	Pk	34.4	-29.1	10.9	-56.6	-13	-43.6	0-360	151	H
6.931	-74.01	Pk	35.7	-26.4	10.3	-54.41	-13	-41.41	0-360	151	H
3.464	-70.79	Pk	32.9	-31.3	10.9	-58.29	-13	-45.29	0-360	151	V
5.201	-72.86	Pk	34.4	-29.1	10.6	-56.96	-13	-43.96	0-360	151	V
6.932	-74.59	Pk	35.7	-26.4	10.5	-54.79	-13	-41.79	0-360	151	V
High Channel											
3.489	-71.39	Pk	33	-30.9	11.1	-58.19	-13	-45.19	0-360	152	H
5.235	-72.64	Pk	34.3	-29.5	10.5	-57.34	-13	-44.34	0-360	152	H
6.979	-76.6	Pk	35.7	-26.5	10.2	-57.2	-13	-44.2	0-360	152	H
3.489	-71.69	Pk	33	-30.9	11.1	-58.49	-13	-45.49	0-360	152	V
5.235	-73.48	Pk	34.3	-29.5	10.7	-57.98	-13	-44.98	0-360	152	V
6.979	-75.71	Pk	35.7	-26.5	10.4	-56.11	-13	-43.11	0-360	152	V

Company:		SOMC									
Project #:		12380932									
Date:		07/19/18									
Test Engineer:		19497									
Configuration:		EUT+ Support Equipment									
Mode:		LTE 4 16QAM 20MHz									
Chamber #:		Chamber L									
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Low Channel											
3.44	-73.19	Pk	32.9	-31.6	10.8	-61.09	-13	-48.09	0-360	152	H
5.16	-73.54	Pk	34.4	-29.6	10.5	-58.24	-13	-45.24	0-360	152	H
6.879	-75.84	Pk	35.7	-26.8	10.4	-56.54	-13	-43.54	0-360	152	H
3.44	-72.03	Pk	32.9	-31.6	11	-59.73	-13	-46.73	0-360	152	V
5.16	-72.42	Pk	34.4	-29.6	10.7	-56.92	-13	-43.92	0-360	152	V
6.879	-76.89	Pk	35.7	-26.8	10.7	-57.29	-13	-44.29	0-360	152	V
Mid Channel											
3.465	-72.86	Pk	32.9	-31.2	11	-60.16	-13	-47.16	0-360	152	H
5.198	-74.16	Pk	34.4	-29	10.3	-58.46	-13	-45.46	0-360	152	H
6.93	-76.68	Pk	35.7	-26.4	10.3	-57.08	-13	-44.08	0-360	152	H
3.465	-73.5	Pk	32.9	-31.2	10.9	-60.9	-13	-47.9	0-360	152	V
5.198	-73.94	Pk	34.4	-29	10.4	-58.14	-13	-45.14	0-360	152	V
6.93	-76.66	Pk	35.7	-26.4	10.4	-56.96	-13	-43.96	0-360	152	V
High Channel											
3.491	-72.17	Pk	33	-30.9	11.1	-58.97	-13	-45.97	0-360	152	H
5.236	-73.76	Pk	34.3	-29.5	10.5	-58.46	-13	-45.46	0-360	152	H
6.981	-75.22	Pk	35.7	-26.5	10.2	-55.82	-13	-42.82	0-360	152	H
3.491	-71.21	Pk	33	-30.9	11	-58.11	-13	-45.11	0-360	152	V
5.236	-75.08	Pk	34.3	-29.5	10.7	-59.58	-13	-46.58	0-360	152	V
6.981	-74.89	Pk	35.7	-26.5	10.4	-55.29	-13	-42.29	0-360	152	V

9.1.4. LTE BAND 5

Company:		SOMC									
Project #:		12380932									
Date:		07/19/18									
Test Engineer:		19497									
Configuration:		EUT+ Support Equipment									
Mode:		LTE 5 QPSK 10MHz									
Chamber #:		Chamber L									
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Low Channel											
1.658	-69.44	Pk	28.7	-34.2	10.3	-64.64	-13	-51.64	0-360	151	H
2.487	-69.63	Pk	32.3	-32.8	10.2	-59.93	-13	-46.93	0-360	151	H
3.316	-71.74	Pk	32.9	-31.5	10.9	-59.44	-13	-46.44	0-360	151	H
1.658	-70	Pk	28.7	-34.2	11	-64.5	-13	-51.5	0-360	151	V
2.486	-69.66	Pk	32.3	-32.8	10.2	-59.96	-13	-46.96	0-360	151	V
3.315	-72.35	Pk	32.9	-31.5	11.2	-59.75	-13	-46.75	0-360	151	V
Mid Channel											
1.673	-67.77	Pk	28.8	-34.1	9.9	-63.17	-13	-50.17	0-360	152	H
2.509	-69.7	Pk	32.3	-32.7	10.1	-60	-13	-47	0-360	152	H
3.346	-70.89	Pk	32.9	-31.5	10.6	-58.89	-13	-45.89	0-360	152	H
1.673	-69.59	Pk	28.8	-34.1	11.3	-63.59	-13	-50.59	0-360	152	V
2.508	-69.46	Pk	32.3	-32.7	11.4	-58.46	-13	-45.46	0-360	152	V
3.346	-72.4	Pk	32.9	-31.5	10.8	-60.2	-13	-47.2	0-360	152	V
High Channel											
1.688	-69.66	Pk	28.9	-34.1	10.5	-64.36	-13	-51.36	0-360	152	H
2.532	-70.99	Pk	32.3	-32.7	9.9	-61.49	-13	-48.49	0-360	152	H
3.376	-72.06	Pk	32.8	-31.7	10.9	-60.06	-13	-47.06	0-360	152	H
1.687	-70.41	Pk	28.9	-34.1	11.6	-64.01	-13	-51.01	0-360	152	V
2.532	-71.37	Pk	32.3	-32.7	10.8	-60.97	-13	-47.97	0-360	152	V
3.377	-72.25	Pk	32.8	-31.7	11.1	-60.05	-13	-47.05	0-360	152	V

Company:		SOMC									
Project #:		12380932									
Date:		07/19/18									
Test Engineer:		19497									
Configuration:		EUT+ Support Equipment									
Mode:		LTE 5 16QAM 10MHz									
Chamber #:		Chamber L									
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Low Channel											
1.658	-70.37	Pk	28.7	-34.2	10.3	-65.57	-13	-52.57	0-360	151	H
2.486	-70.21	Pk	32.3	-32.8	10.3	-60.41	-13	-47.41	0-360	151	H
3.316	-71.81	Pk	32.9	-31.4	10.9	-59.41	-13	-46.41	0-360	151	H
1.658	-71.11	Pk	28.7	-34.2	11	-65.61	-13	-52.61	0-360	151	V
2.487	-70.2	Pk	32.3	-32.8	10.2	-60.5	-13	-47.5	0-360	151	V
3.316	-72.37	Pk	32.9	-31.5	11.2	-59.77	-13	-46.77	0-360	151	V
Mid Channel											
1.673	-68.9	Pk	28.8	-34.1	9.9	-64.3	-13	-51.3	0-360	152	H
2.507	-70.16	Pk	32.3	-32.7	10	-60.56	-13	-47.56	0-360	152	H
3.347	-71.73	Pk	32.9	-31.5	10.6	-59.73	-13	-46.73	0-360	152	H
1.672	-70.34	Pk	28.8	-34.1	11.3	-64.34	-13	-51.34	0-360	152	V
2.494	-69.16	Pk	32.3	-32.8	10.7	-58.96	-13	-45.96	0-360	152	V
3.346	-71	Pk	32.9	-31.5	10.8	-58.8	-13	-45.8	0-360	152	V
High Channel											
1.688	-68.94	Pk	28.9	-34.1	10.5	-63.64	-13	-50.64	0-360	151	H
2.532	-71.21	Pk	32.3	-32.7	9.9	-61.71	-13	-48.71	0-360	151	H
3.376	-70.8	Pk	32.8	-31.7	10.9	-58.8	-13	-45.8	0-360	151	H
1.688	-69.79	Pk	28.9	-34.1	11.7	-63.29	-13	-50.29	0-360	151	V
2.533	-72.15	Pk	32.3	-32.7	10.8	-61.75	-13	-48.75	0-360	151	V
3.375	-73.22	Pk	32.8	-31.8	11.1	-61.12	-13	-48.12	0-360	151	V

9.1.5. LTE BAND 7

Company:		SOMC									
Project #:		12380932									
Date:		07/19/18									
Test Engineer:		19794									
Configuration:		EUT+ Support Equipment									
Mode:		LTE 7 QPSK 20MHz									
Chamber #:		Chamber L									
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Low Channel											
5.022	-71.54	Pk	34.4	-29.4	10.4	-56.14	-25	-31.14	0-360	151	H
7.526	-74.25	Pk	35.7	-25.4	10.3	-53.65	-25	-28.65	0-360	151	H
10.045	-76.49	Pk	37.2	-21.9	10.4	-50.79	-25	-25.79	0-360	151	H
5.016	-72.3	Pk	34.4	-29.1	10.5	-56.5	-25	-31.5	0-360	151	V
7.522	-75.69	Pk	35.7	-25.4	10.7	-54.69	-25	-29.69	0-360	151	V
10.029	-77.95	Pk	37.2	-21.8	10.6	-51.95	-25	-26.95	0-360	151	V
Mid Channel											
5.068	-71.99	Pk	34.4	-29.2	10.3	-56.49	-25	-31.49	0-360	151	H
7.614	-74.77	Pk	35.7	-25.5	10.4	-54.17	-25	-29.17	0-360	151	H
10.145	-77.33	Pk	37.4	-22	10.5	-51.43	-25	-26.43	0-360	151	H
5.065	-71.83	Pk	34.4	-29.2	10.6	-56.03	-25	-31.03	0-360	151	V
7.598	-75.57	Pk	35.7	-25.4	10.6	-54.67	-25	-29.67	0-360	151	V
10.141	-77.7	Pk	37.4	-22.1	10.6	-51.8	-25	-26.8	0-360	151	V
High Channel											
5.123	-72.43	Pk	34.4	-29.2	10.3	-56.93	-25	-31.93	0-360	152	H
7.694	-74.88	Pk	35.8	-25.3	10.3	-54.08	-25	-29.08	0-360	152	H
10.255	-77.02	Pk	37.5	-22	10.4	-51.12	-25	-26.12	0-360	152	H
5.117	-72.48	Pk	34.4	-29.4	10.7	-56.78	-25	-31.78	0-360	152	V
7.675	-74.99	Pk	35.8	-25.4	10.5	-54.09	-25	-29.09	0-360	152	V
10.249	-76.88	Pk	37.5	-21.9	10.5	-50.78	-25	-25.78	0-360	152	V

Company:		SOMC									
Project #:		12380932									
Date:		07/19/18									
Test Engineer:		39005									
Configuration:		EUT+ Support Equipment									
Mode:		LTE 7 16QAM 20MHz									
Chamber #:		Chamber L									
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Low Channel											
* 5.014	-71.49	Pk	34.4	-29.1	10.4	-55.79	-25	-30.79	0-360	152	H
* 7.516	-74.58	Pk	35.7	-25.4	10.5	-53.78	-25	-28.78	0-360	152	H
10.047	-77.39	Pk	37.2	-21.9	10.4	-51.69	-25	-26.69	0-360	152	H
* 5.019	-72.14	Pk	34.4	-29.3	10.5	-56.54	-25	-31.54	0-360	152	V
* 7.532	-75.22	Pk	35.7	-25.5	10.6	-54.42	-25	-29.42	0-360	152	V
10.046	-77.09	Pk	37.2	-21.9	10.6	-51.19	-25	-26.19	0-360	152	V
Mid Channel											
* 5.081	-71.25	Pk	34.4	-29.5	10.2	-56.15	-25	-31.15	0-360	152	H
* 7.593	-74.89	Pk	35.7	-25.4	10.3	-54.29	-25	-29.29	0-360	152	H
10.155	-75.87	Pk	37.4	-21.9	10.5	-49.87	-25	-24.87	0-360	152	H
* 5.069	-71.5	Pk	34.4	-29.2	10.5	-55.8	-25	-30.8	0-360	152	V
* 7.598	-75.57	Pk	35.7	-25.4	10.6	-54.67	-25	-29.67	0-360	152	V
10.144	-77.08	Pk	37.4	-22	10.7	-50.98	-25	-25.98	0-360	152	V
High Channel											
* 5.116	-72.75	Pk	34.4	-29.4	10.4	-57.35	-25	-32.35	0-360	152	H
* 7.69	-74.27	Pk	35.8	-25.3	10.4	-53.37	-25	-28.37	0-360	152	H
10.26	-77.21	Pk	37.5	-22	10.4	-51.31	-25	-26.31	0-360	152	H
* 5.117	-72.63	Pk	34.4	-29.4	10.6	-57.03	-25	-32.03	0-360	152	V
* 7.673	-75.11	Pk	35.8	-25.3	10.6	-54.01	-25	-29.01	0-360	152	V
10.25	-77.25	Pk	37.5	-21.9	10.5	-51.15	-25	-26.15	0-360	152	V

9.1.6. LTE BAND 12

Company:		SOMC									
Project #:		12380932									
Date:		07/19/18									
Test Engineer:		19497									
Configuration:		EUT+ Support Equipment									
Mode:		LTE 12 QPSK 10MHz									
Chamber #:		Chamber L									
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Low Channel											
1.402	-67.41	Pk	28.9	-34.7	11	-62.21	-13	-49.21	0-360	152	H
2.103	-68.69	Pk	31.3	-33.3	10.3	-60.39	-13	-47.39	0-360	152	H
2.818	-70.36	Pk	32.4	-32.3	11.3	-58.96	-13	-45.96	0-360	152	H
1.405	-67.59	Pk	28.9	-34.7	12.1	-61.29	-13	-48.29	0-360	152	V
2.11	-69.18	Pk	31.3	-33.3	11.2	-59.98	-13	-46.98	0-360	152	V
2.821	-70.2	Pk	32.4	-32.3	11.5	-58.6	-13	-45.6	0-360	152	V
Mid Channel											
1.415	-67.23	Pk	28.8	-34.8	11.2	-62.03	-13	-49.03	0-360	151	H
2.123	-68.97	Pk	31.3	-33.4	10.5	-60.57	-13	-47.57	0-360	151	H
2.825	-69.82	Pk	32.4	-32.3	11.3	-58.42	-13	-45.42	0-360	151	H
1.415	-67.9	Pk	28.8	-34.8	12.1	-61.8	-13	-48.8	0-360	151	V
2.127	-68.46	Pk	31.3	-33.3	11.2	-59.26	-13	-46.26	0-360	151	V
2.834	-69.86	Pk	32.4	-32.3	11.4	-58.36	-13	-45.36	0-360	151	V
High Channel											
1.43	-66.31	Pk	28.8	-34.8	11.2	-61.11	-13	-48.11	0-360	152	H
2.134	-69.23	Pk	31.3	-33.4	10.5	-60.83	-13	-47.83	0-360	152	H
2.839	-68.13	Pk	32.4	-32.3	11.3	-56.73	-13	-43.73	0-360	152	H
1.425	-67.91	Pk	28.8	-34.7	12.3	-61.51	-13	-48.51	0-360	152	V
2.129	-68.97	Pk	31.3	-33.4	11.2	-59.87	-13	-46.87	0-360	152	V
2.84	-69.51	Pk	32.4	-32.3	11.5	-57.91	-13	-44.91	0-360	152	V

Company:		SOMC									
Project #:		12380932									
Date:		07/19/18									
Test Engineer:		19497									
Configuration:		EUT+ Support Equipment									
Mode:		LTE 12 16QAM 10MHz									
Chamber #:		Chamber L									
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Low Channel											
1.418	-67.58	Pk	28.8	-34.7	11.2	-62.28	-13	-49.28	0-360	152	H
2.113	-68.36	Pk	31.3	-33.4	10.4	-60.06	-13	-47.06	0-360	152	H
2.827	-69.3	Pk	32.4	-32.3	11.3	-57.9	-13	-44.9	0-360	152	H
1.411	-67.45	Pk	28.8	-34.8	12.2	-61.25	-13	-48.25	0-360	152	V
2.111	-68.4	Pk	31.3	-33.3	11.2	-59.2	-13	-46.2	0-360	152	V
2.823	-69.06	Pk	32.4	-32.3	11.5	-57.46	-13	-44.46	0-360	152	V
Mid Channel											
1.421	-67.03	Pk	28.8	-34.7	11.2	-61.73	-13	-48.73	0-360	151	H
2.129	-68.62	Pk	31.3	-33.3	10.3	-60.32	-13	-47.32	0-360	151	H
2.841	-69.02	Pk	32.4	-32.3	11.3	-57.62	-13	-44.62	0-360	151	H
1.414	-67.49	Pk	28.8	-34.7	12.2	-61.19	-13	-48.19	0-360	151	V
2.128	-68.35	Pk	31.3	-33.3	11.2	-59.15	-13	-46.15	0-360	151	V
2.834	-69.5	Pk	32.4	-32.3	11.5	-57.9	-13	-44.9	0-360	151	V
High Channel											
1.429	-68.95	Pk	28.7	-34.7	10.8	-64.15	-13	-51.15	0-360	152	H
2.137	-68.32	Pk	31.3	-33.3	10.3	-60.02	-13	-47.02	0-360	152	H
2.842	-69.52	Pk	32.4	-32.3	11.3	-58.12	-13	-45.12	0-360	152	H
1.418	-67.39	Pk	28.7	-34.7	11.6	-61.79	-13	-48.79	0-360	152	V
2.13	-68.03	Pk	31.3	-33.3	11.2	-58.83	-13	-45.83	0-360	152	V
2.845	-69.55	Pk	32.4	-32.3	11.4	-58.05	-13	-45.05	0-360	152	V

9.1.7. LTE BAND 13

Company:			SOMC								
Project #:			12380932								
Date:			07/19/18								
Test Engineer:			39005								
Configuration:			EUT+ Support Equipment								
Mode:			LTE 13 QPSK 10MHz								
Chamber #:			Chamber L								
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Mid Channel											
1.564	-67.86	Pk	28.1	-34.4	11.5	-62.66	-40	-22.66	0-360	152	H
2.342	-69.41	Pk	31.5	-33.1	10.9	-60.11	-13	-47.11	0-360	152	H
3.127	-69.89	Pk	33.2	-31.8	10.7	-57.79	-13	-44.79	0-360	152	H
1.564	-68.22	Pk	28.1	-34.4	11.6	-62.92	-40	-22.92	0-360	152	V
2.343	-69.99	Pk	31.5	-33.1	11.6	-59.99	-13	-46.99	0-360	152	V
3.126	-70.41	Pk	33.2	-31.8	10.9	-58.11	-13	-45.11	0-360	152	V

Company:			SOMC								
Project #:			12380932								
Date:			07/19/18								
Test Engineer:			39005								
Configuration:			EUT+ Support Equipment								
Mode:			LTE 13 16QAM 10MHz								
Chamber #:			Chamber L								
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Mid Channel											
1.567	-68.09	Pk	28.1	-34.4	11.5	-62.89	-40	-22.89	0-360	152	H
2.347	-69.66	Pk	31.5	-33.1	11	-60.26	-13	-47.26	0-360	152	H
3.128	-69.83	Pk	33.2	-31.8	10.7	-57.73	-13	-44.73	0-360	152	H
1.566	-68.62	Pk	28.1	-34.4	11.5	-63.42	-40	-22.42	0-360	152	V
2.346	-69.33	Pk	31.5	-33.1	11.7	-59.23	-13	-46.23	0-360	152	V
3.125	-70.33	Pk	33.2	-31.8	10.9	-58.03	-13	-45.03	0-360	152	V

9.1.8. LTE BAND 41

Company:		SOMC									
Project #:		12380932									
Date:		07/19/18									
Test Engineer:		39005									
Configuration:		EUT+ Support Equipment									
Mode:		LTE 41 QPSK 20MHz									
Chamber #:		Chamber L									
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Low Channel											
5.001	-72.77	Pk	34.4	-28.7	10.4	-56.67	-25	-31.67	0-360	151	H
7.507	-74.47	Pk	35.7	-25.4	10.5	-53.67	-25	-28.67	0-360	151	H
10.007	-77.42	Pk	37.2	-21.6	10.4	-51.42	-25	-26.42	0-360	151	H
5.01	-71.79	Pk	34.4	-29	10.7	-55.69	-25	-30.69	0-360	151	V
7.525	-74.1	Pk	35.7	-25.4	10.6	-53.2	-25	-28.2	0-360	151	V
10.017	-78.29	Pk	37.2	-21.7	10.6	-52.19	-25	-27.19	0-360	151	V
Mid Channel											
5.185	-71.24	Pk	34.4	-29.2	10.5	-55.54	-25	-30.54	0-360	152	H
7.785	-75.11	Pk	35.8	-25.3	10.3	-54.31	-25	-29.31	0-360	152	H
10.362	-76.87	Pk	37.5	-21.4	10.4	-50.37	-25	-25.37	0-360	152	H
5.189	-71.22	Pk	34.4	-29.2	10.6	-55.42	-25	-30.42	0-360	152	V
7.781	-75.86	Pk	35.8	-25.3	10.4	-54.96	-25	-29.96	0-360	152	V
10.369	-77.46	Pk	37.5	-21.3	10.6	-50.66	-25	-25.66	0-360	152	V
High Channel											
5.363	-73.17	Pk	34.5	-28.6	10.6	-56.67	-25	-31.67	0-360	152	H
8.033	-73.89	Pk	35.8	-24.9	10.5	-52.49	-25	-27.49	0-360	152	H
10.701	-76.53	Pk	37.6	-21.9	9.9	-50.93	-25	-25.93	0-360	152	H
5.362	-71.98	Pk	34.5	-28.5	10.9	-55.08	-25	-30.08	0-360	152	V
8.033	-74.79	Pk	35.8	-24.9	10.8	-53.09	-25	-28.09	0-360	152	V
10.72	-77.86	Pk	37.7	-22	10.1	-52.06	-25	-27.06	0-360	152	V

Company:		SOMC									
Project #:		12380932									
Date:		07/19/18									
Test Engineer:		39005									
Configuration:		EUT+ Support Equipment									
Mode:		LTE 41 16QAM 20MHz									
Chamber #:		Chamber L									
Frequency (MHz)	Meter Reading (dBm)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	ETSI 417 TX Below 1GHz	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
Low Channel											
5.004	-71.99	Pk	34.4	-28.7	10.4	-55.89	-25	-30.89	0-360	152	H
7.52	-74.91	Pk	35.7	-25.4	10.5	-54.11	-25	-29.11	0-360	152	H
10.033	-77.4	Pk	37.2	-21.8	10.5	-51.5	-25	-26.5	0-360	152	H
5.008	-71.44	Pk	34.4	-28.9	10.7	-55.24	-25	-30.24	0-360	152	V
7.525	-73.44	Pk	35.7	-25.4	10.6	-52.54	-25	-27.54	0-360	152	V
10.024	-78.5	Pk	37.2	-21.7	10.7	-52.3	-25	-27.3	0-360	152	V
Mid Channel											
5.194	-71.56	Pk	34.4	-29.1	10.2	-56.06	-25	-31.06	0-360	151	H
7.787	-75.57	Pk	35.8	-25.3	10.5	-54.57	-25	-29.57	0-360	151	H
10.376	-76.14	Pk	37.5	-21.3	10.3	-49.64	-25	-24.64	0-360	151	H
5.19	-72.41	Pk	34.4	-29.2	10.6	-56.61	-25	-31.61	0-360	151	V
7.775	-75.83	Pk	35.8	-25.3	10.5	-54.83	-25	-29.83	0-360	151	V
10.369	-77.72	Pk	37.5	-21.3	10.6	-50.92	-25	-25.92	0-360	151	V
High Channel											
5.363	-73.05	Pk	34.5	-28.6	10.6	-56.55	-25	-31.55	0-360	151	H
8.036	-74.82	Pk	35.8	-24.9	10.5	-53.42	-25	-28.42	0-360	151	H
10.716	-77.68	Pk	37.7	-21.9	9.8	-52.08	-25	-27.08	0-360	151	H
5.361	-72.87	Pk	34.5	-28.5	10.9	-55.97	-25	-30.97	0-360	151	V
8.04	-74.09	Pk	35.8	-24.8	10.7	-52.39	-25	-27.39	0-360	151	V
10.73	-77.23	Pk	37.7	-22	10	-51.53	-25	-26.53	0-360	151	V