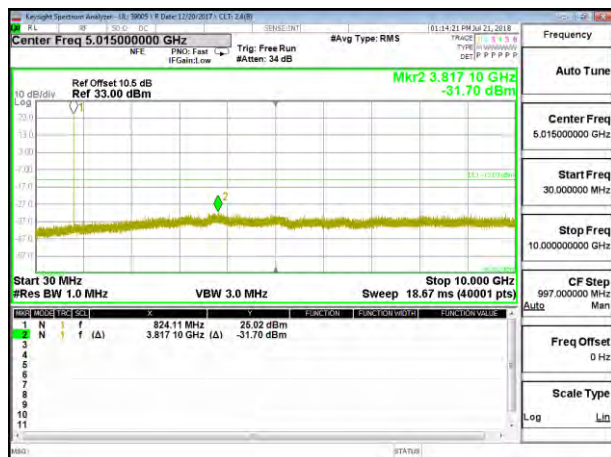
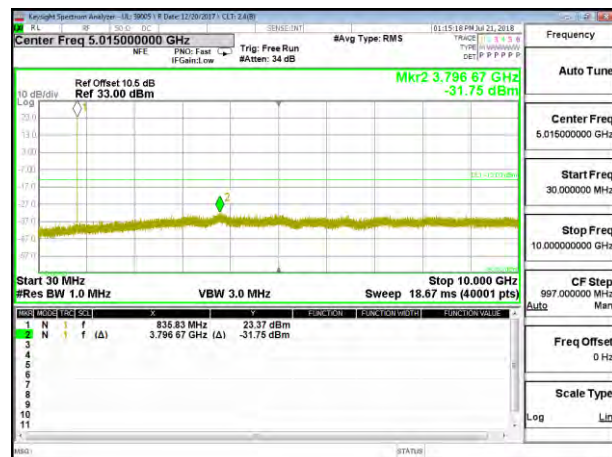


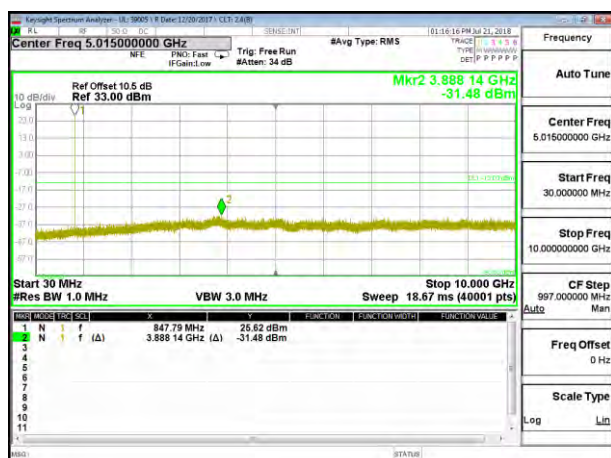
8.3.7. LTE BAND 5



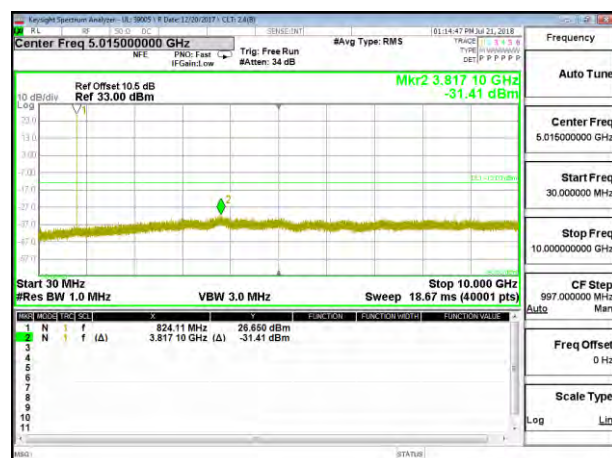
LTE B5 1.4MHz QPSK Low Channel RB1-0



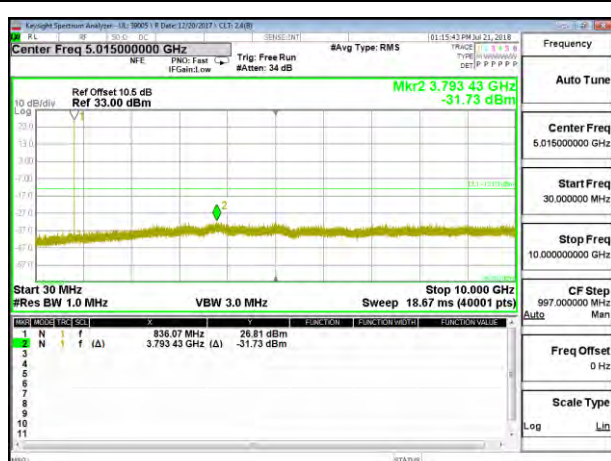
LTE B5 1.4MHz QPSK Mid Channel RB1-0



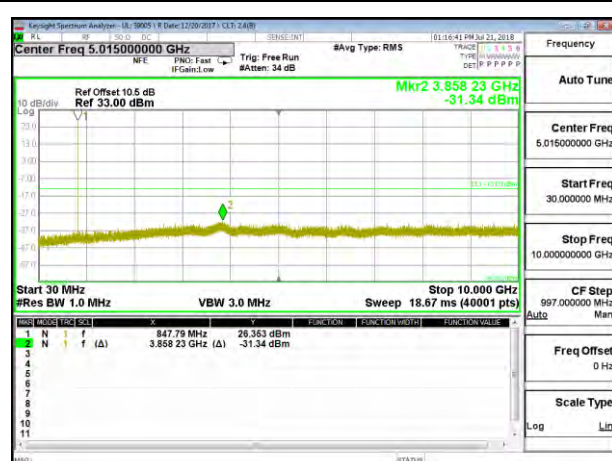
LTE B5 1.4MHz QPSK High Channel RB1-0



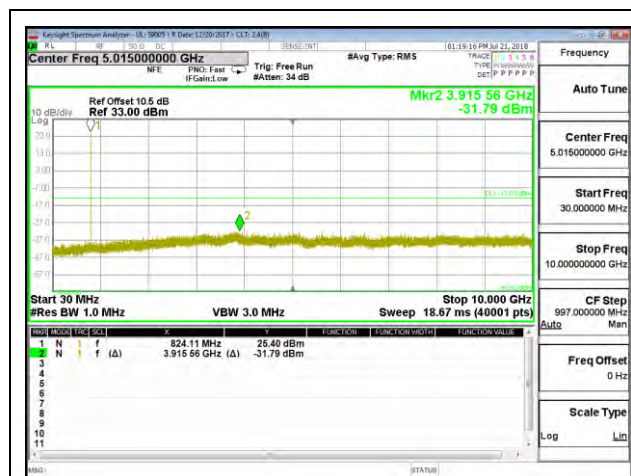
LTE B5 1.4MHz 16QAM Low Channel RB1-0



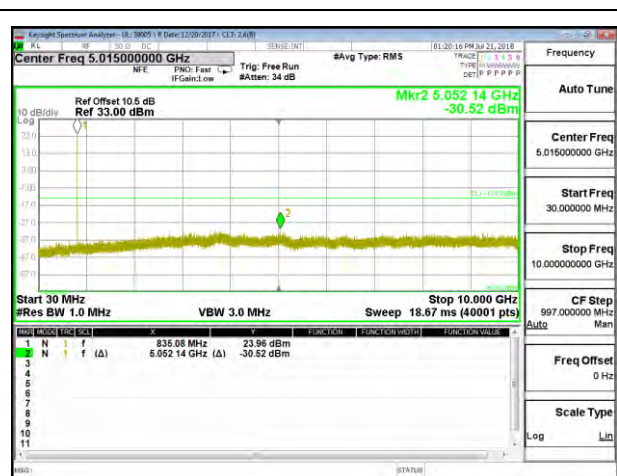
LTE B5 1.4MHz 16QAM Mid Channel RB1-0



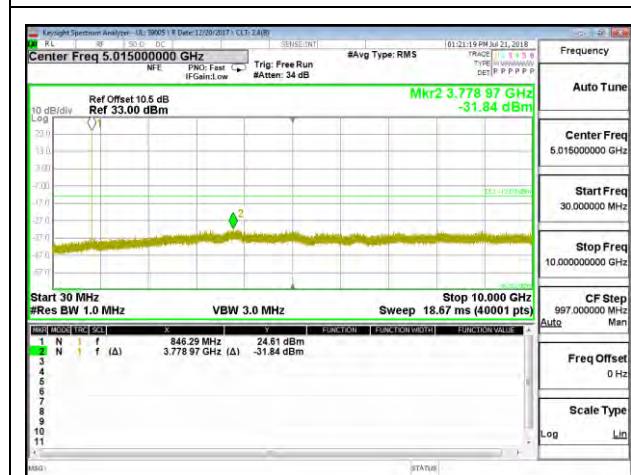
LTE B5 1.4MHz 16QAM High Channel RB1-0



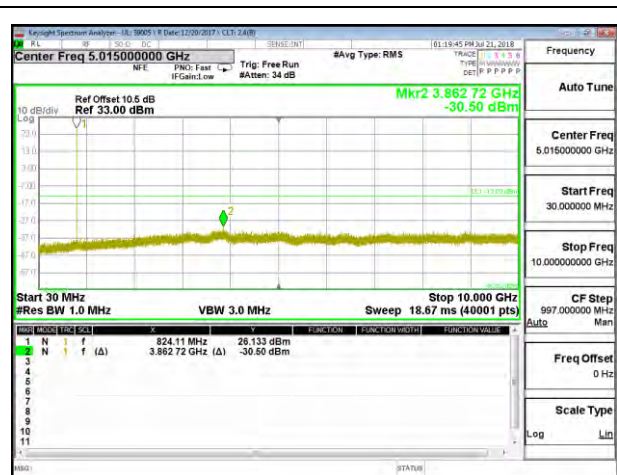
LTE B5 3MHz QPSK Low Channel RB1-0



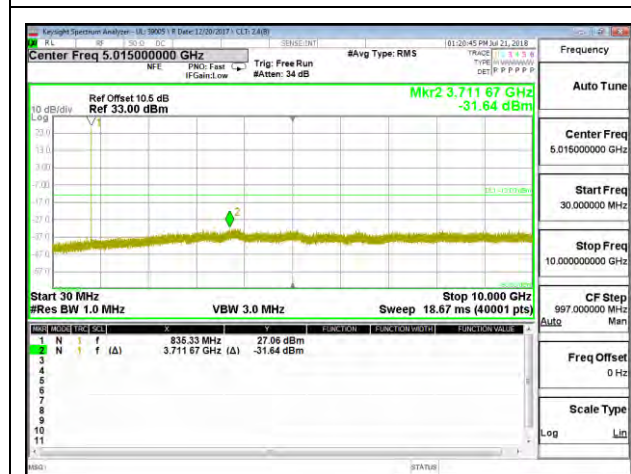
LTE B5 3MHz QPSK Mid Channel RB1-0



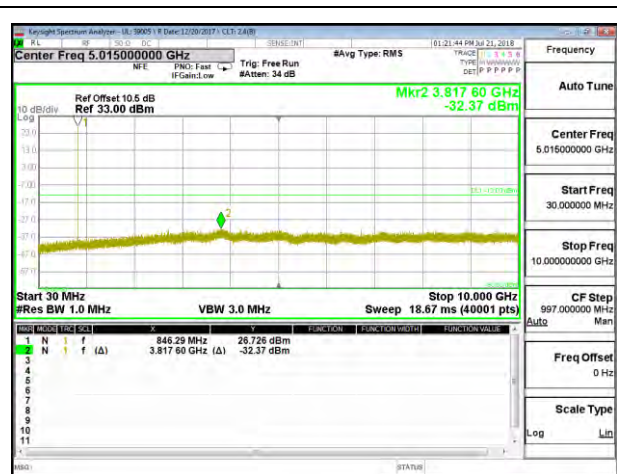
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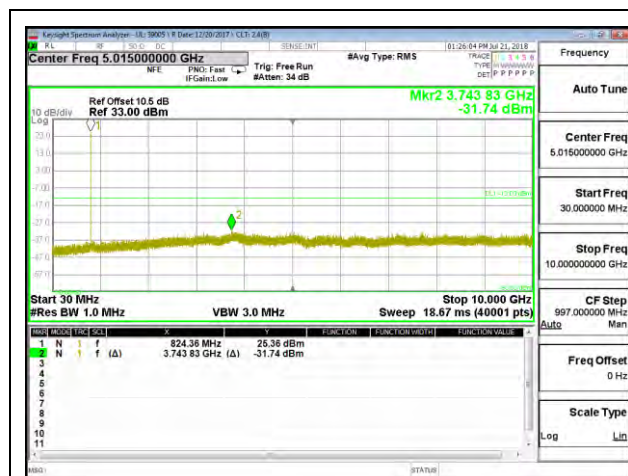
LTE B5 3MHz 16QAM Low Channel RB1-0



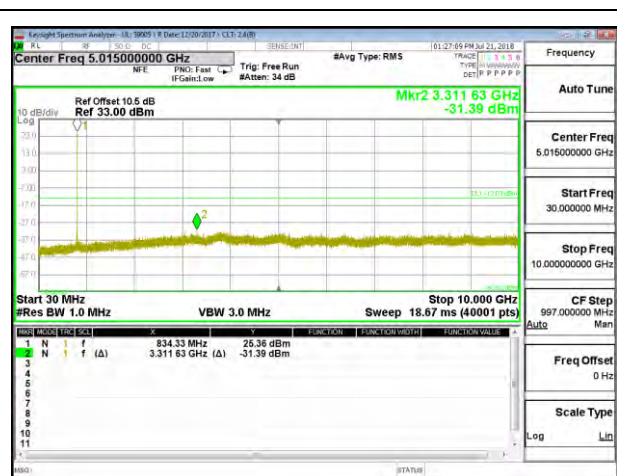
LTE B5 3MHz 16QAM Mid Channel RB1-0



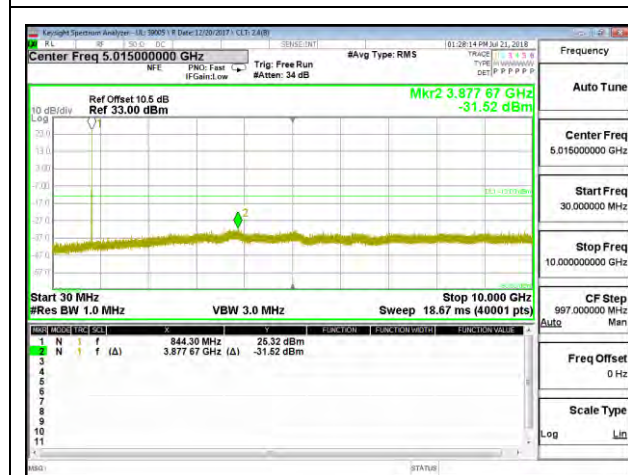
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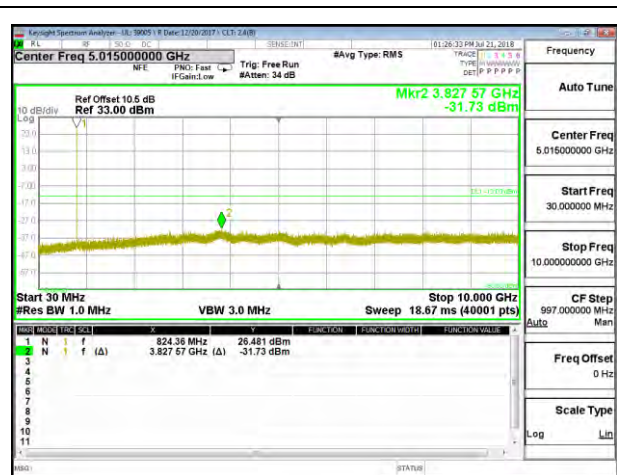
LTE B5 5MHz QPSK Low Channel RB1-0



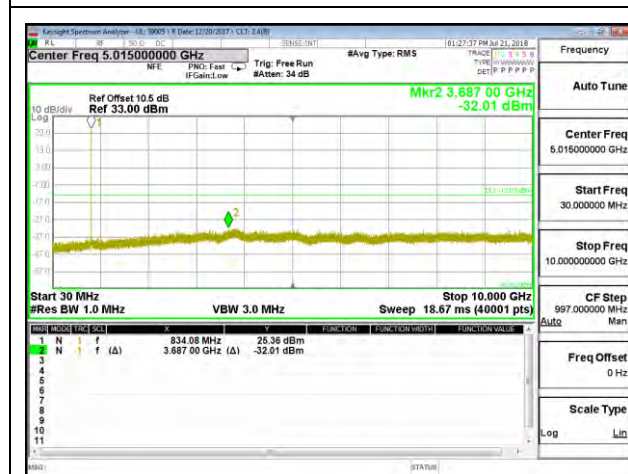
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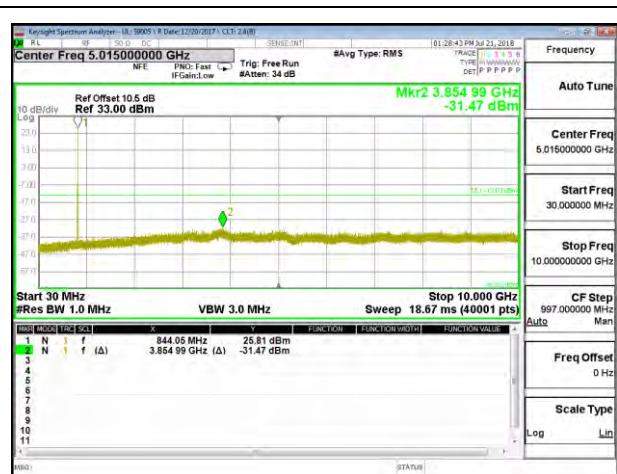
LTE B5 5MHz QPSK High Channel RB1-0



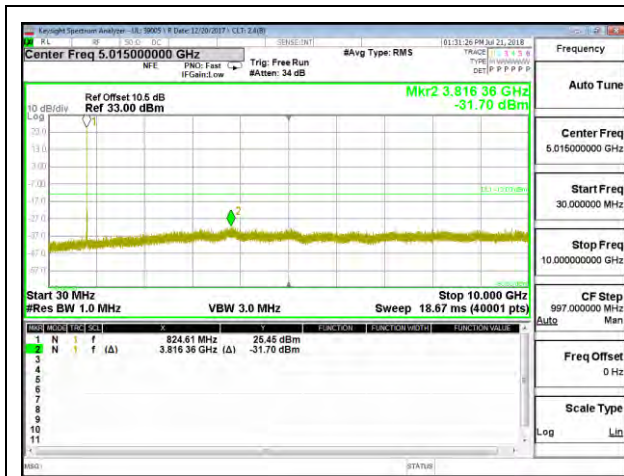
LTE B5 5MHz 16QAM Low Channel RB1-0



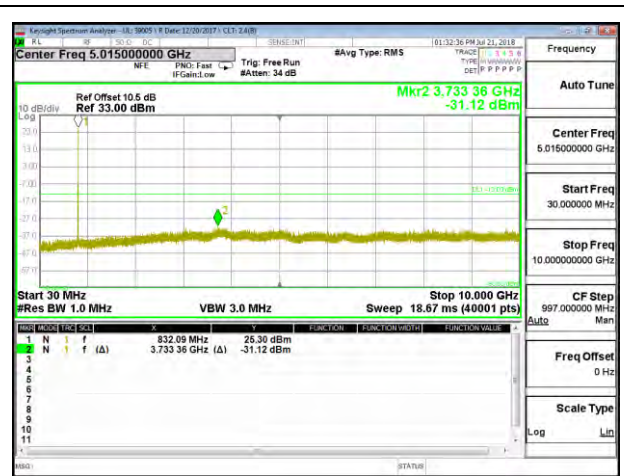
LTE B5 5MHz 16QAM Mid Channel RB1-0



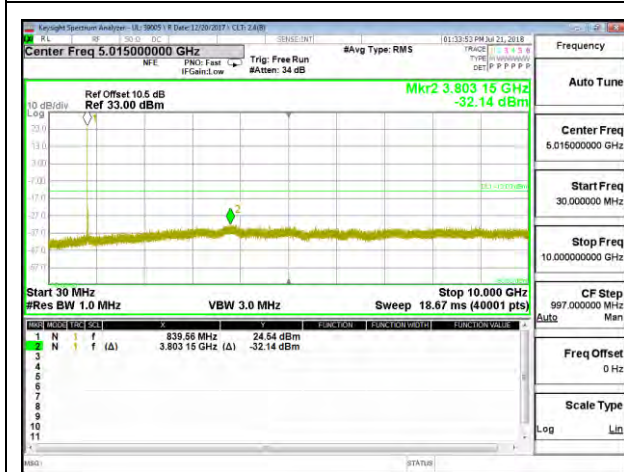
LTE B5 5MHz 16QAM High Channel RB1-0



LTE B5 10MHz QPSK Low Channel RB1-0



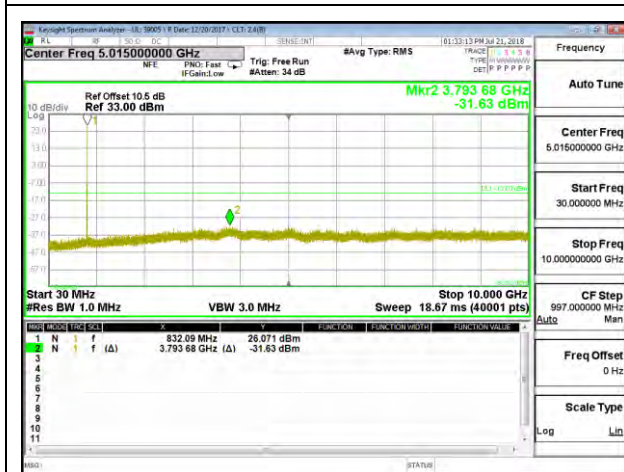
LTE B5 10MHz QPSK Mid Channel RB1-0



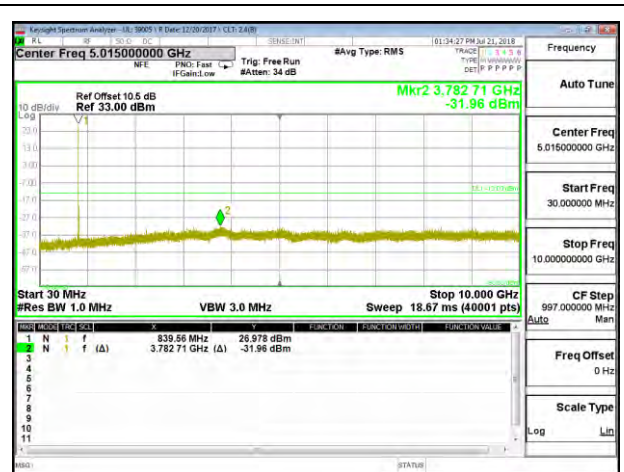
LTE B5 10MHz QPSK High Channel RB1-0



LTE B5 10MHz 16QAM Low Channel RB1-0

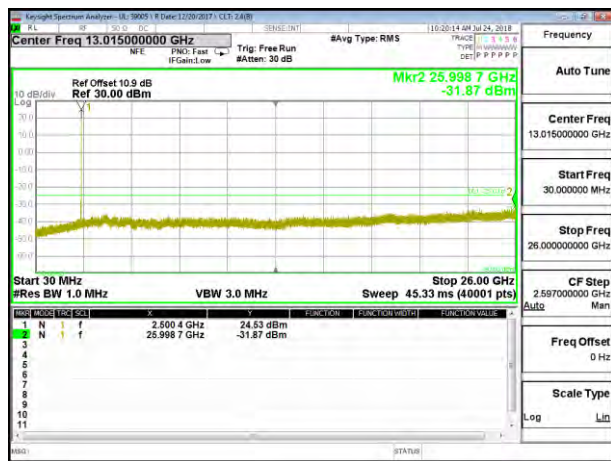


LTE B5 10MHz 16QAM Mid Channel RB1-0

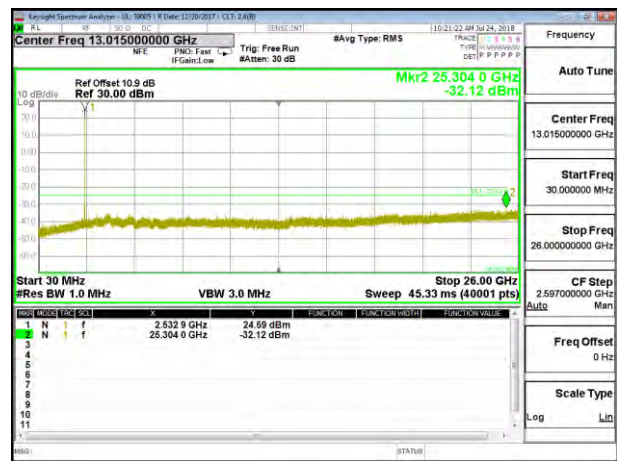


LTE B5 10MHz 16QAM High Channel RB1-0

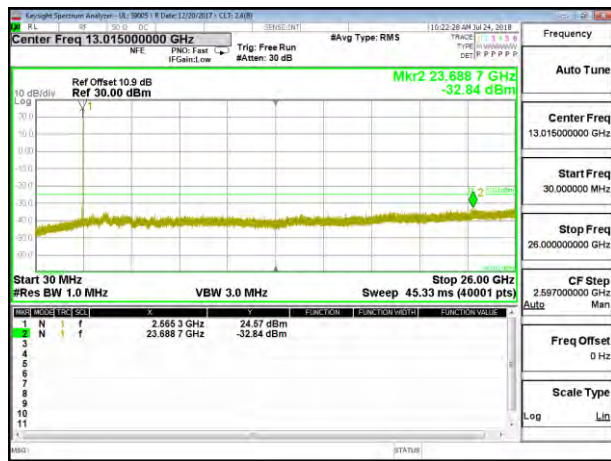
8.3.8. LTE BAND 7



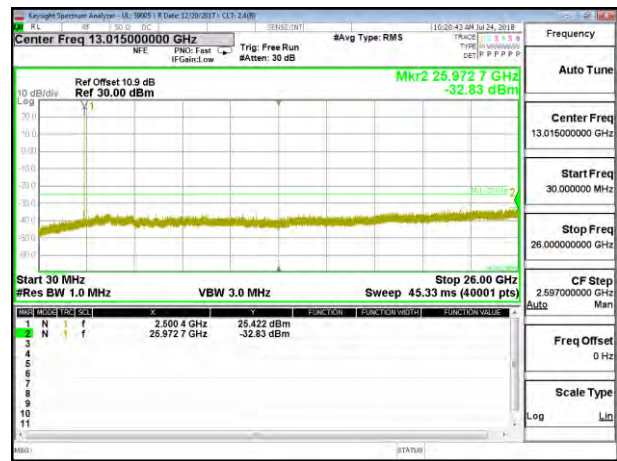
LTE B7 5MHz QPSK Low Channel RB1-0



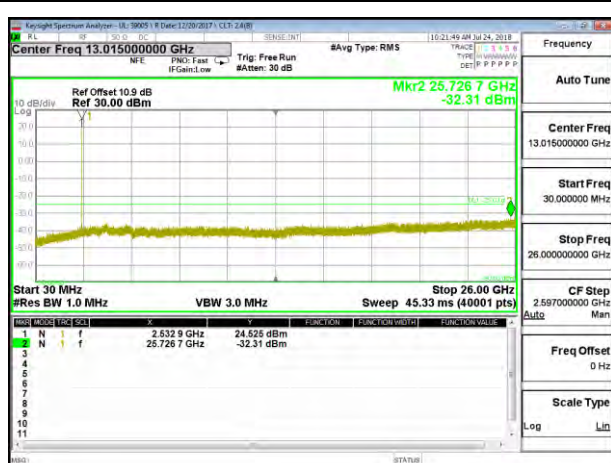
LTE B7 5MHz QPSK Mid Channel RB1-0



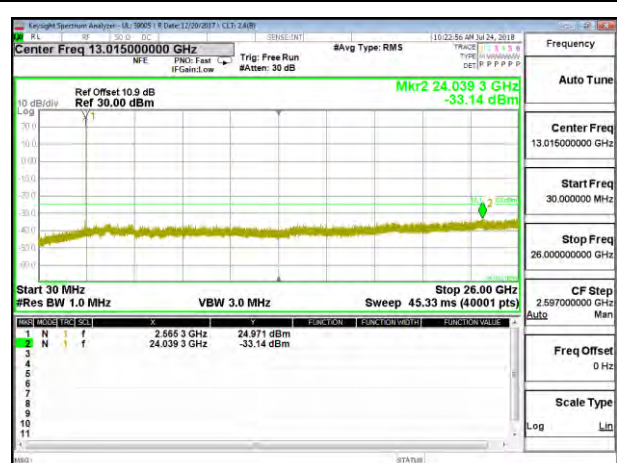
LTE B7 5MHz QPSK High Channel RB1-0



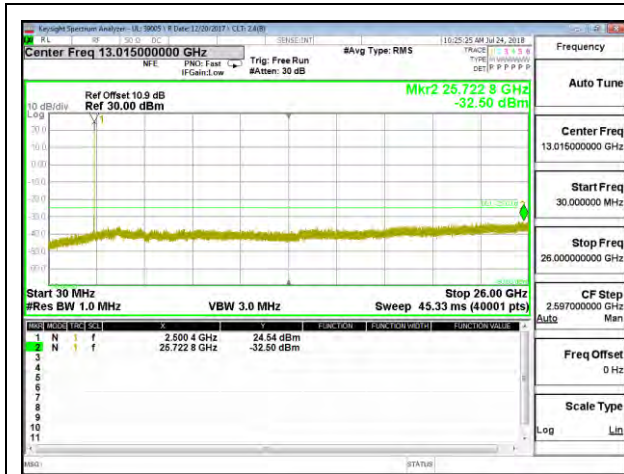
LTE B7 5MHz 16QAM Low Channel RB1-0



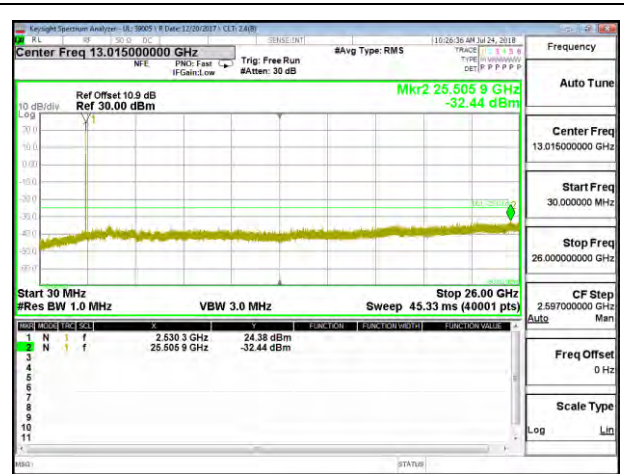
LTE B7 5MHz 16QAM Mid Channel RB1-0



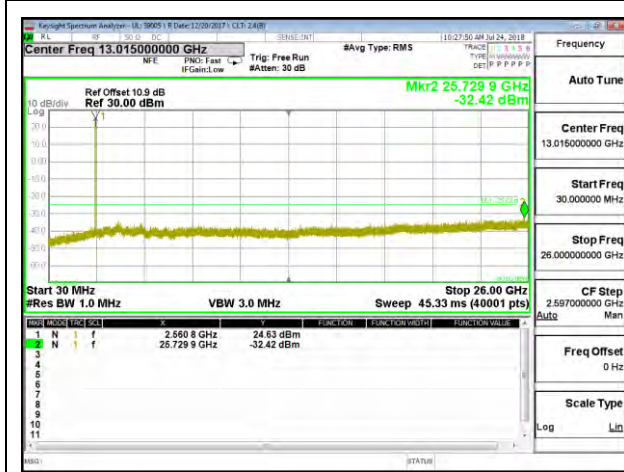
LTE B7 5MHz 16QAM High Channel RB1-0



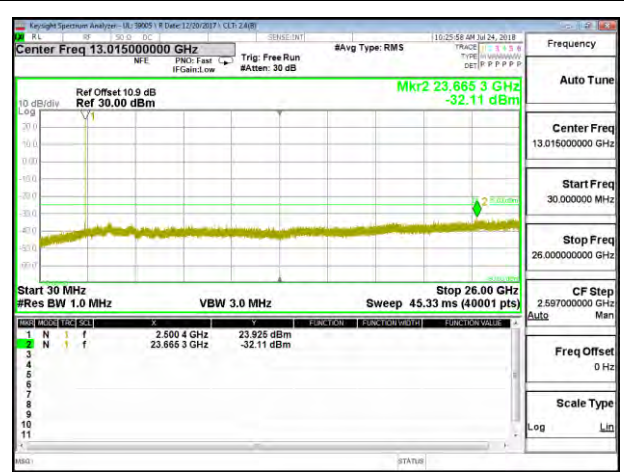
LTE B7 10MHz QPSK Low Channel RB1-0



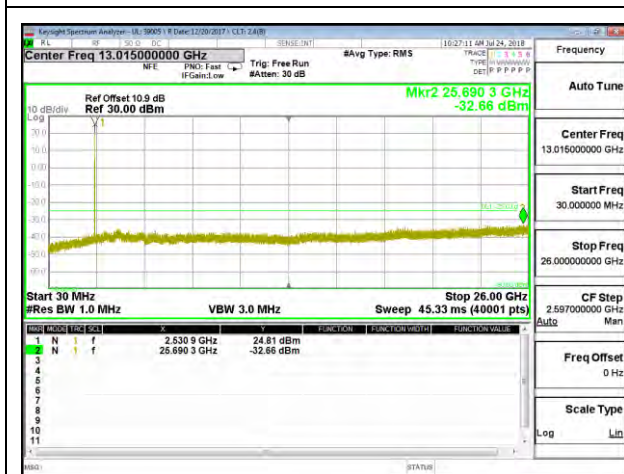
LTE B7 10MHz QPSK Mid Channel RB1-0



LTE B7 10MHz QPSK High Channel RB1-0



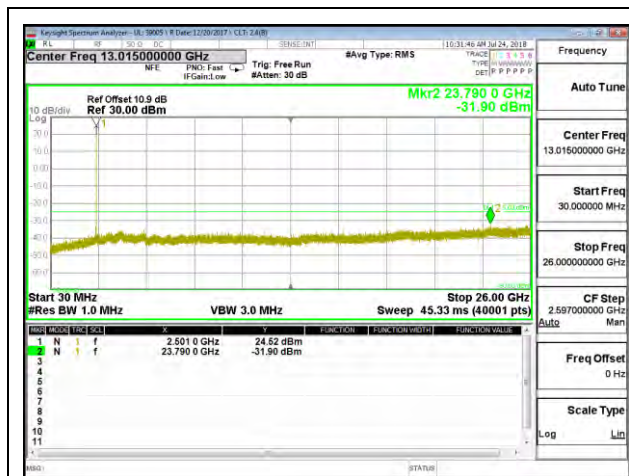
LTE B7 10MHz 16QAM Low Channel RB1-0



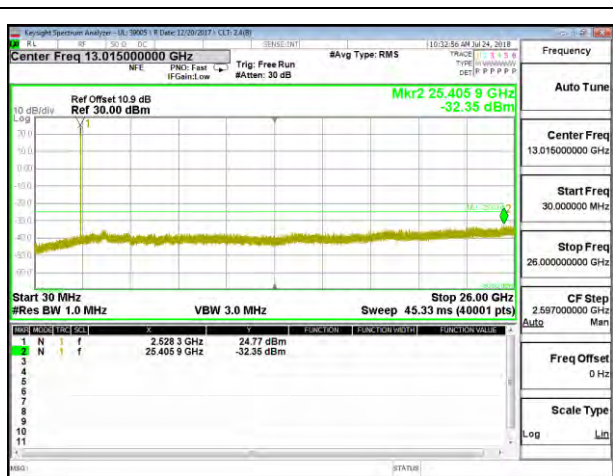
LTE B7 10MHz 16QAM Mid Channel RB1-0



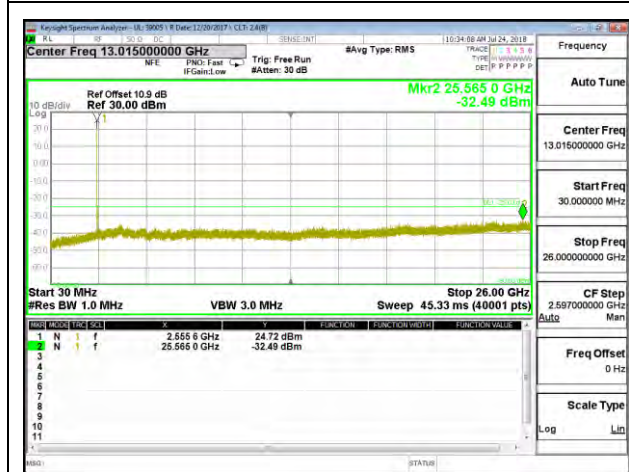
LTE B7 10MHz 16QAM High Channel RB1-0



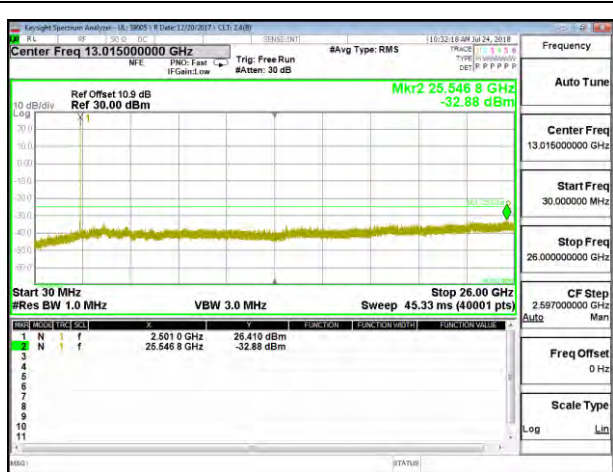
LTE B7 15MHz QPSK Low Channel RB1-0



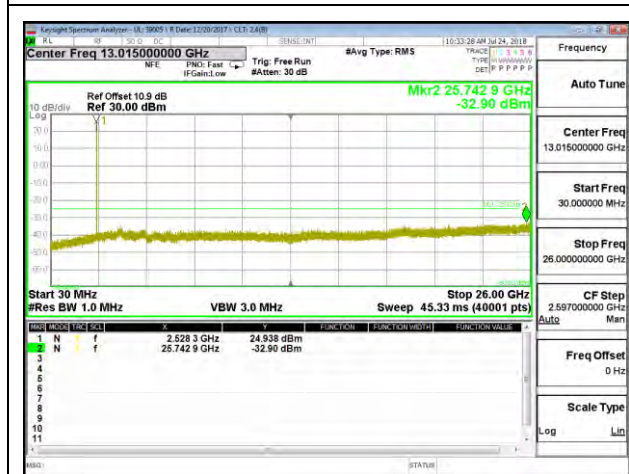
LTE B7 15MHz QPSK Mid Channel RB1-0



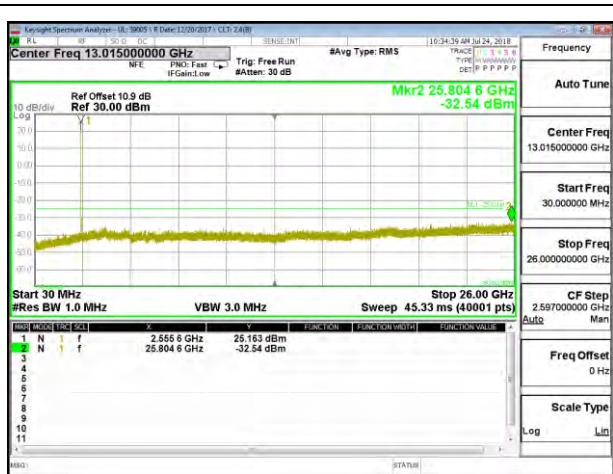
LTE B7 15MHz QPSK High Channel RB1-0



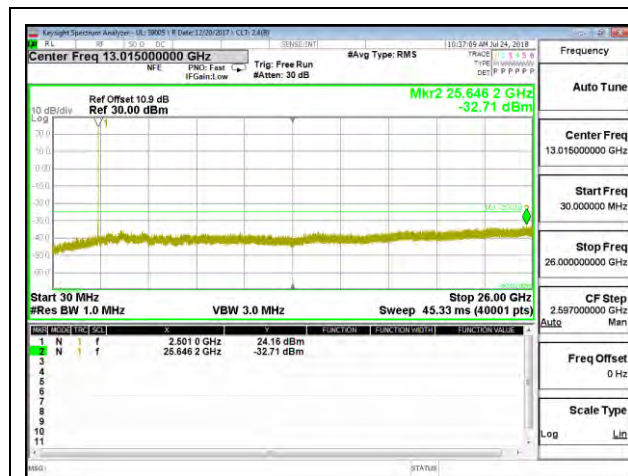
LTE B7 15MHz 16QAM Low Channel RB1-0



LTE B7 15MHz 16QAM Mid Channel RB1-0



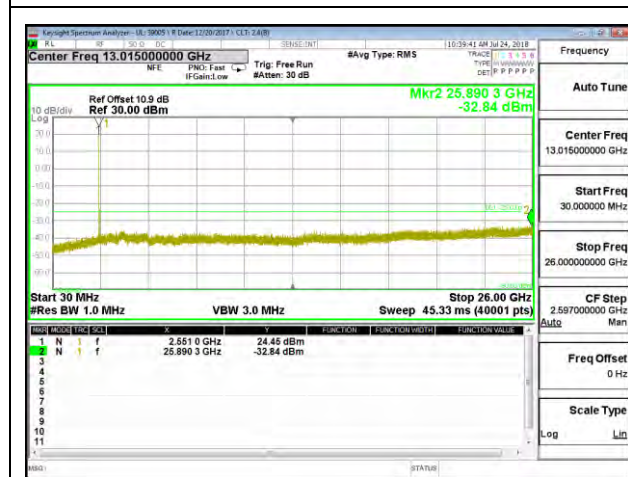
LTE B7 15MHz 16QAM High Channel RB1-0



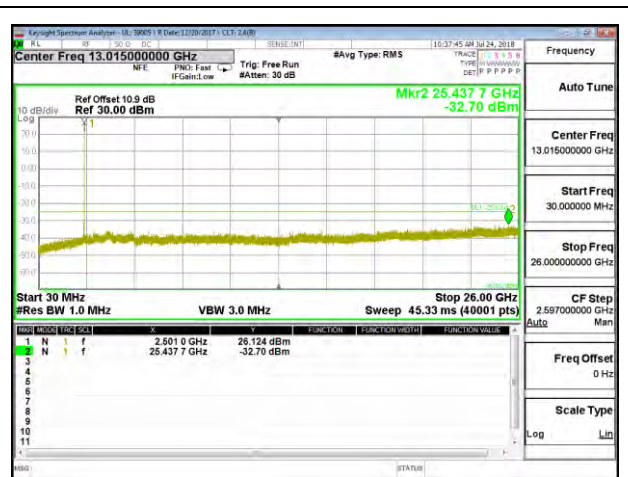
LTE B7 20MHz QPSK Low Channel RB1-0



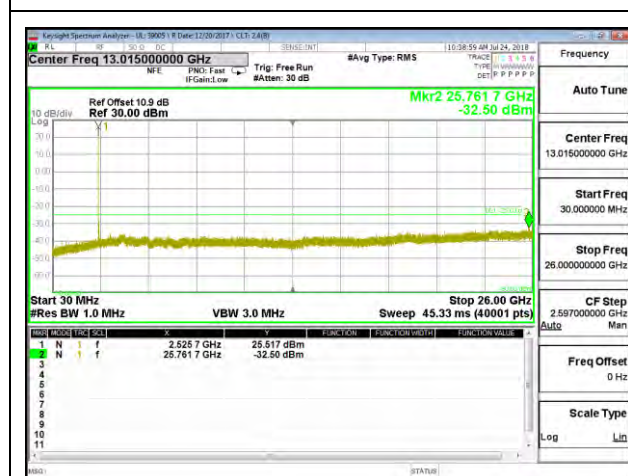
LTE B7 20MHz QPSK Mid Channel RB1-0



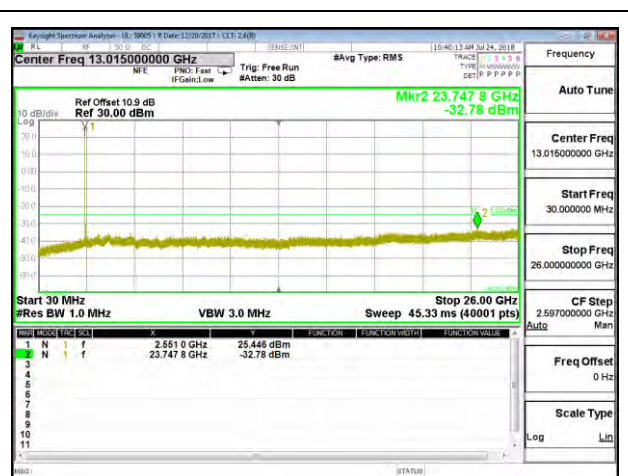
LTE B7 20MHz QPSK High Channel RB1-0



LTE B7 20MHz 16QAM Low Channel RB1-0

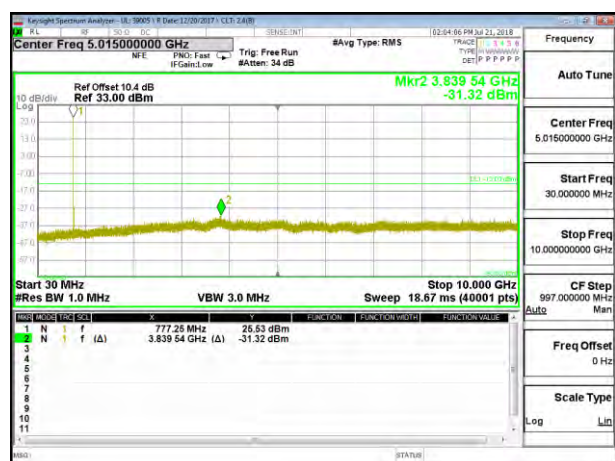


LTE B7 20MHz 16QAM Mid Channel RB1-0

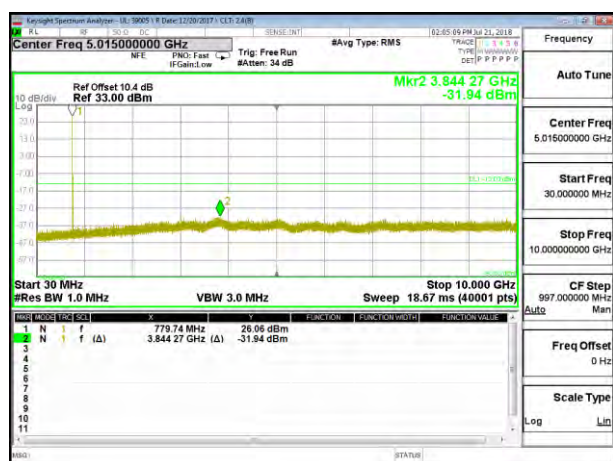


LTE B7 20MHz 16QAM High Channel RB1-0

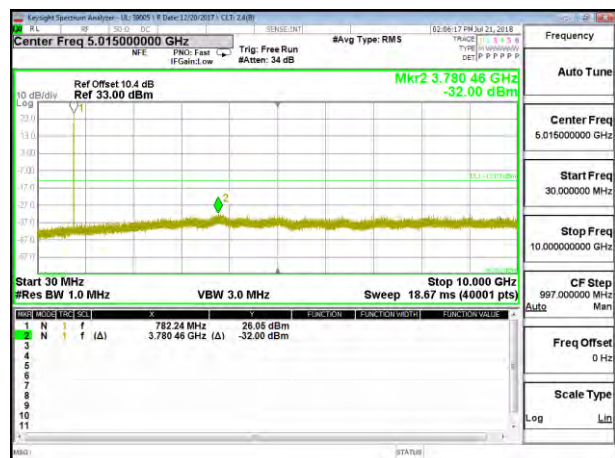
8.3.9. LTE BAND 13



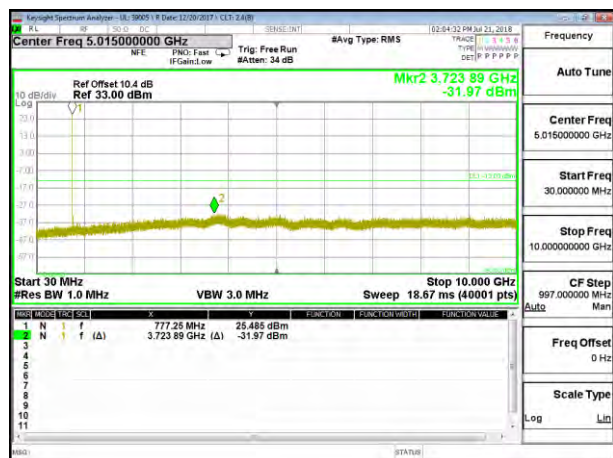
LTE B13 5MHz QPSK Low Channel RB1-0



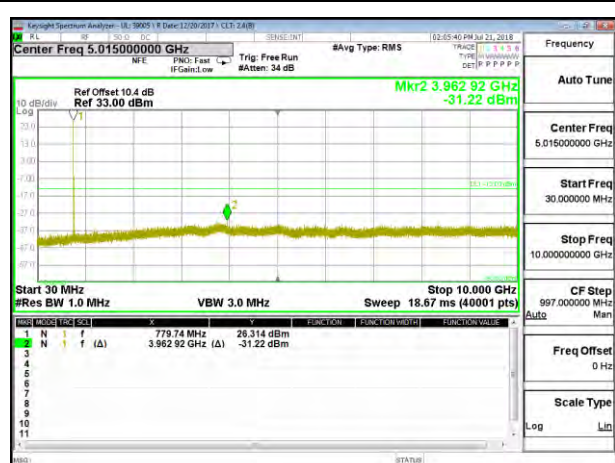
LTE B13 5MHz QPSK Mid Channel RB1-0



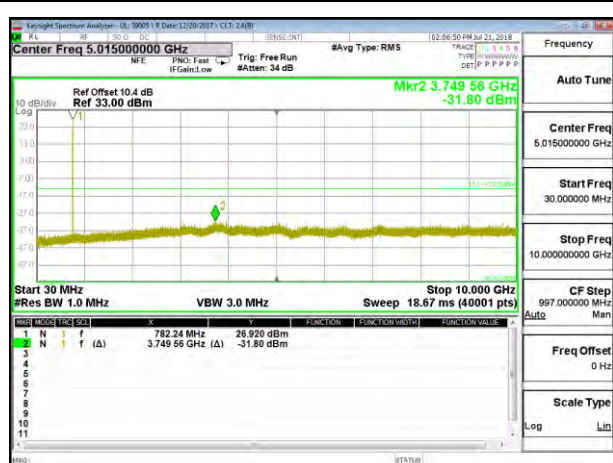
LTE B13 5MHz QPSK High Channel RB1-0



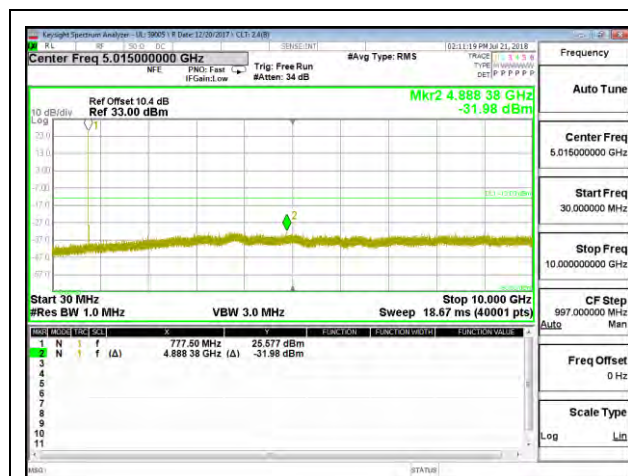
LTE B13 5MHz 16QAM Low Channel RB1-0



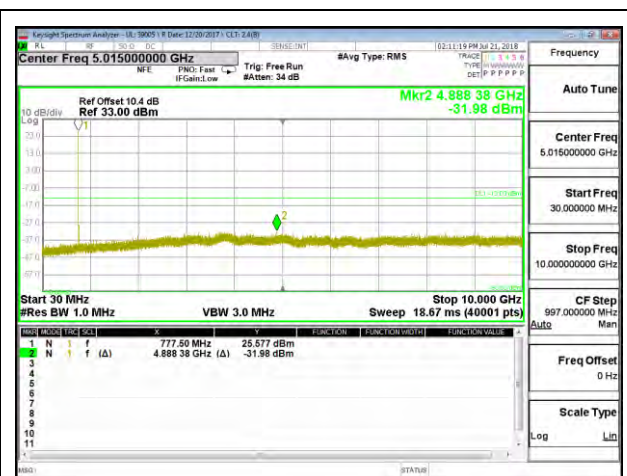
LTE B13 5MHz 16QAM Mid Channel RB1-0



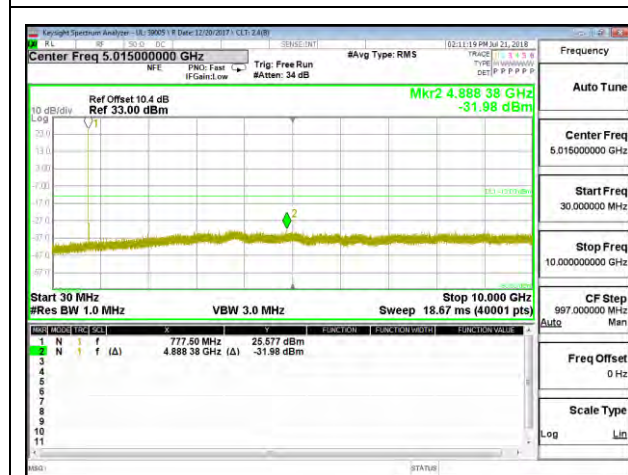
LTE B13 5MHz 16QAM High Channel RB1-0



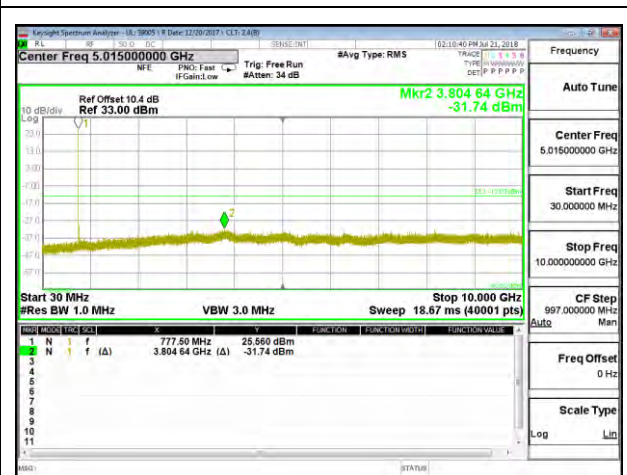
LTE B13 10MHz QPSK Low Channel RB1-0



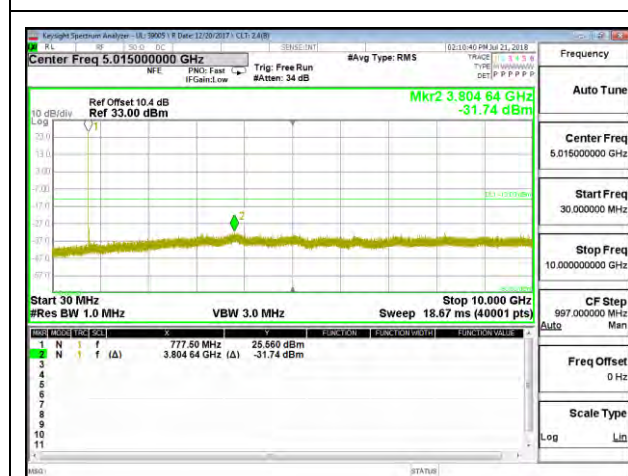
LTE B13 10MHz QPSK Mid Channel RB1-0



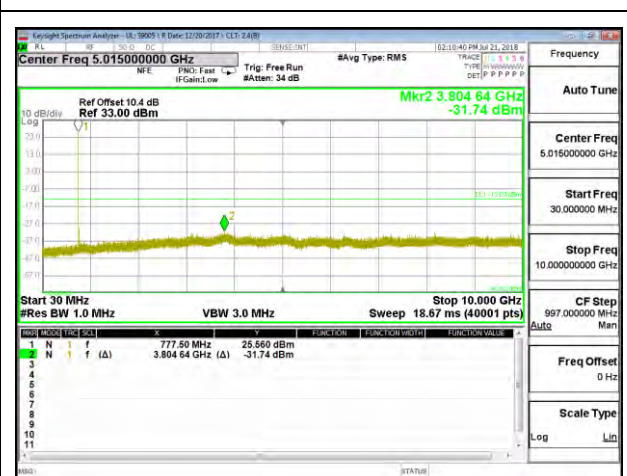
LTE B13 10MHz QPSK High Channel RB1-0



LTE B13 10MHz 16QAM Low Channel RB1-0

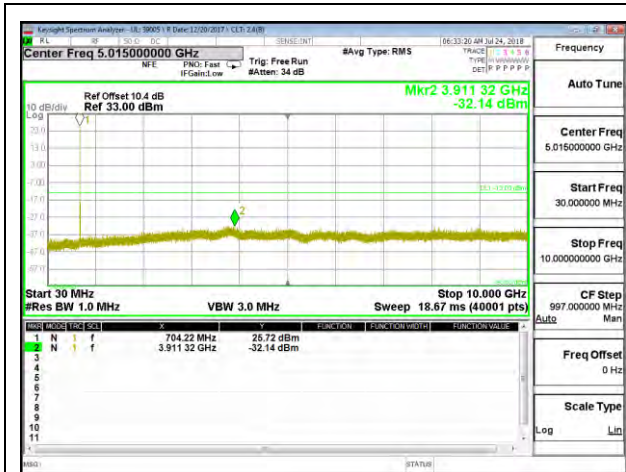


LTE B13 10MHz 16QAM Mid Channel RB1-0

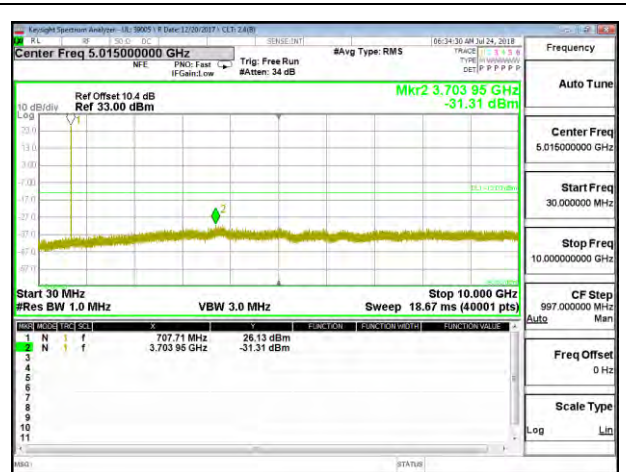


LTE B13 10MHz 16QAM High Channel RB1-0

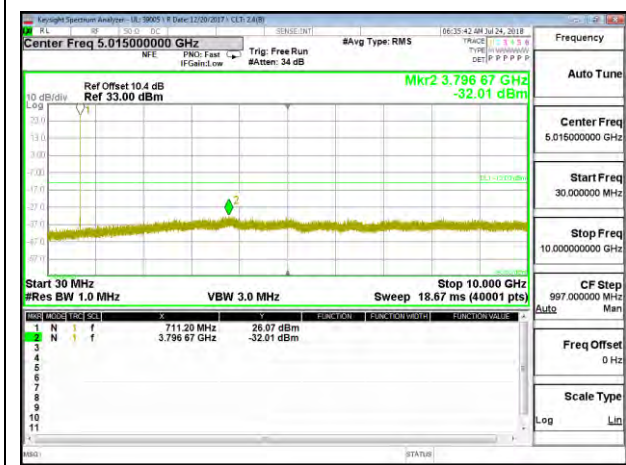
8.3.10. LTE BAND 17



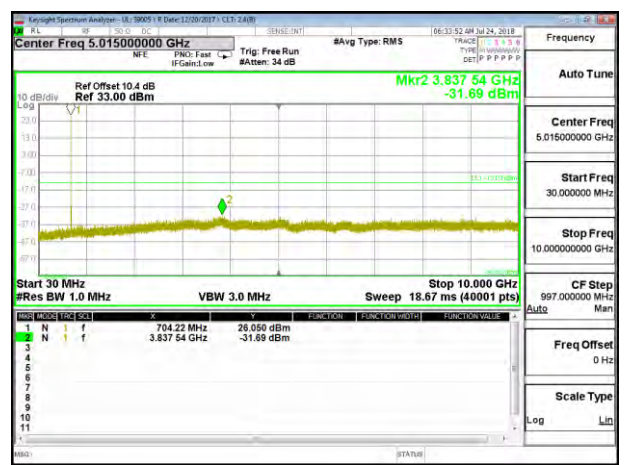
LTE B17 5MHz QPSK Low Channel RB1-0



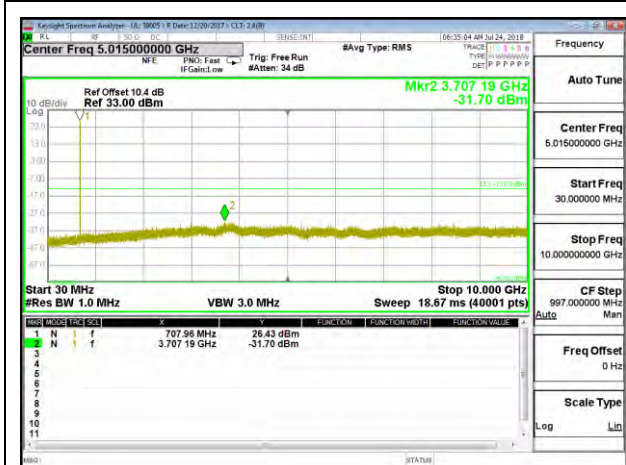
LTE B17 5MHz QPSK Mid Channel RB1-0



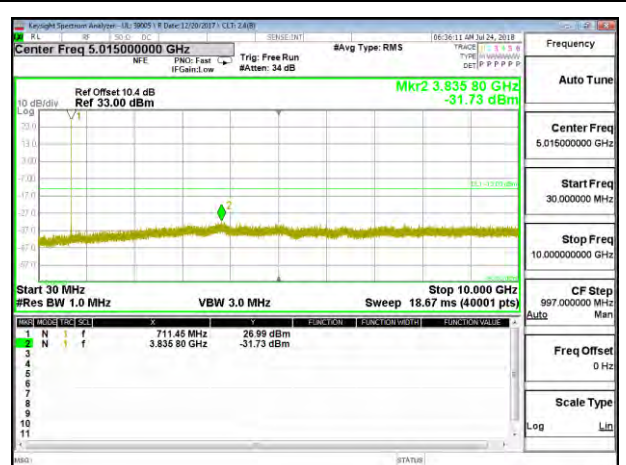
LTE B17 5MHz QPSK High Channel RB1-0



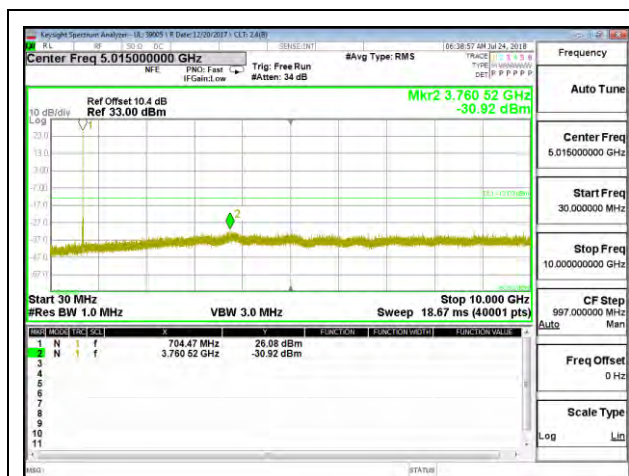
LTE B17 5MHz 16QAM Low Channel RB1-0



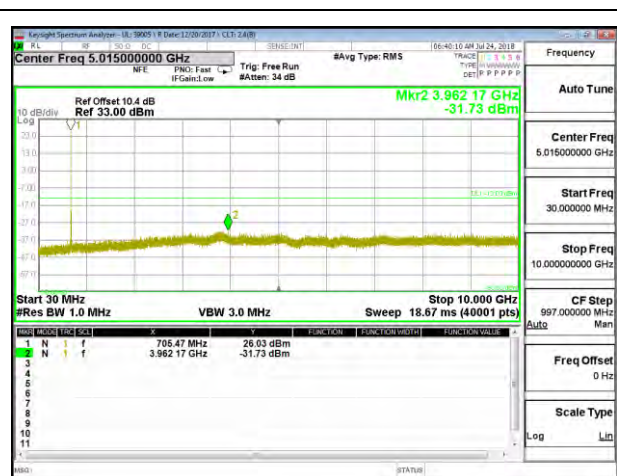
LTE B17 5MHz 16QAM Mid Channel RB1-0



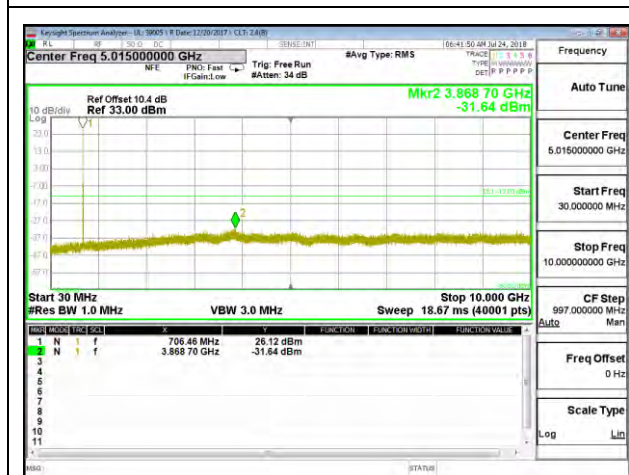
LTE B17 5MHz 16QAM High Channel RB1-0



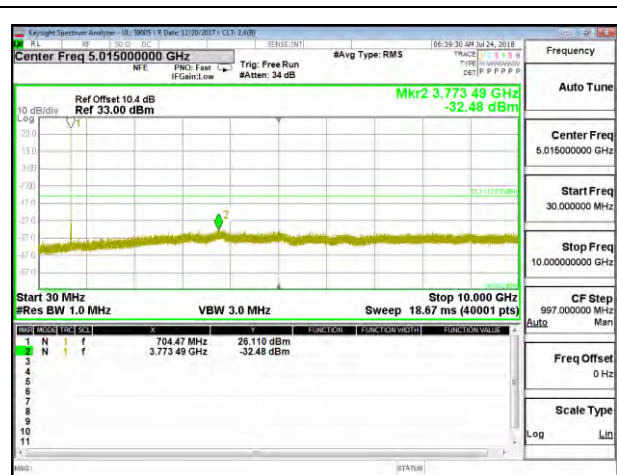
LTE B17 10MHz QPSK Low Channel RB1-0



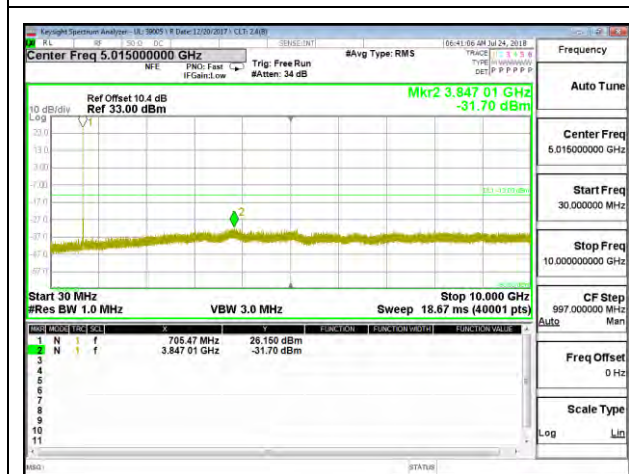
LTE B17 10MHz QPSK Mid Channel RB1-0



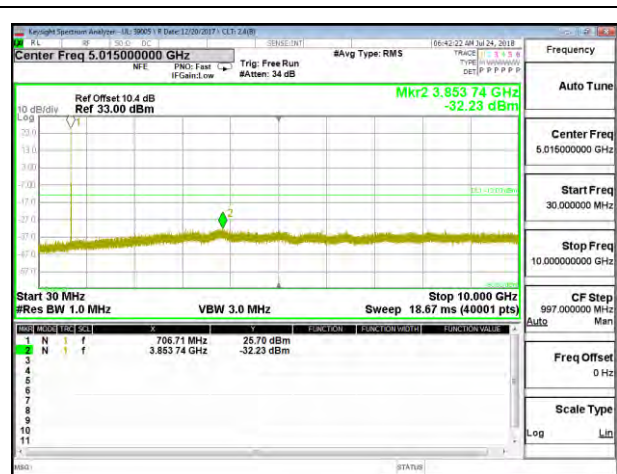
LTE B17 10MHz QPSK High Channel RB1-0



LTE B17 10MHz 16QAM Low Channel RB1-0

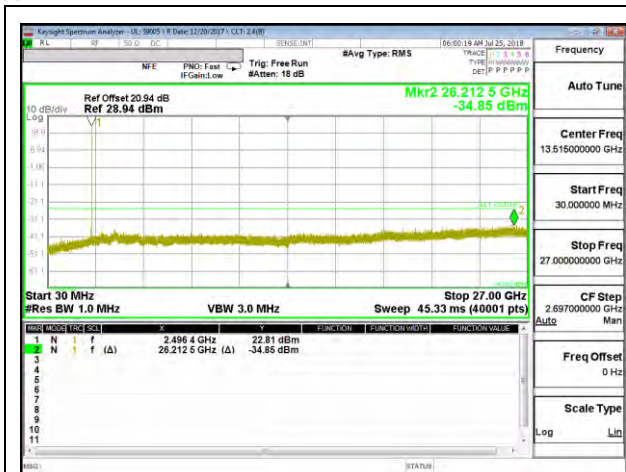


LTE B17 10MHz 16QAM Mid Channel RB1-0

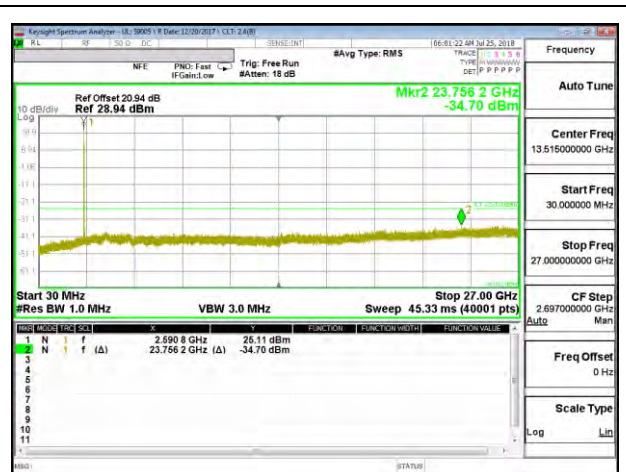


LTE B17 10MHz 16QAM High Channel RB1-0

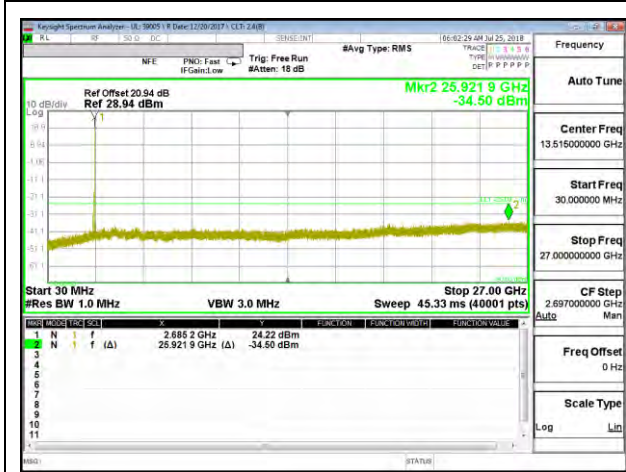
8.3.11. LTE BAND 41



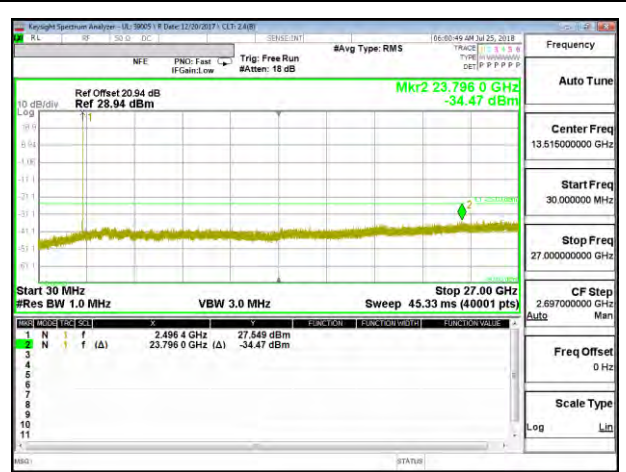
LTE B41 5MHz QPSK Low Channel RB1-0



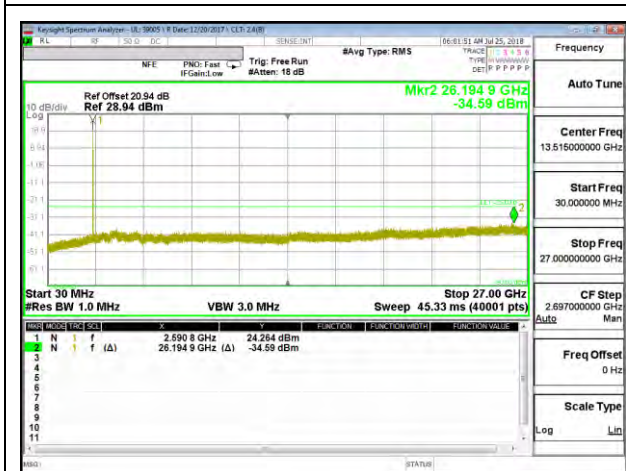
LTE B41 5MHz QPSK Mid Channel RB1-0



LTE B41 5MHz QPSK High Channel RB1-0



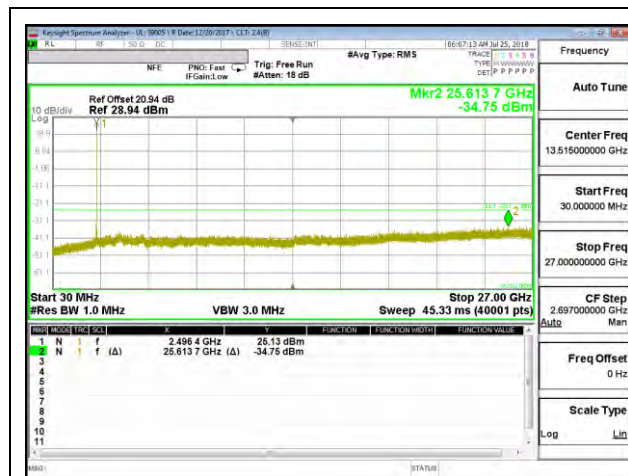
LTE B41 5MHz 16QAM Low Channel RB1-0



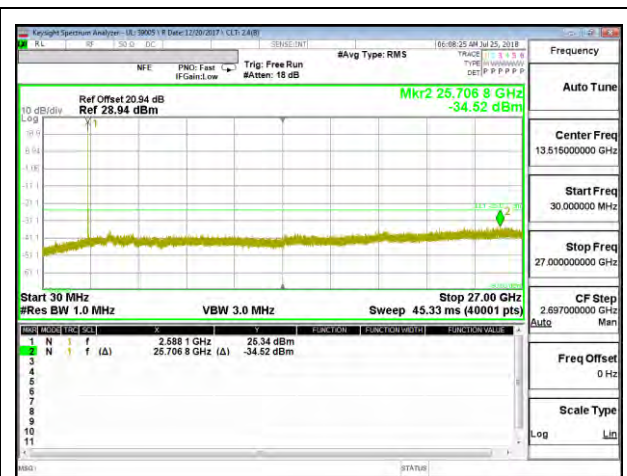
LTE B41 5MHz 16QAM Mid Channel RB1-0



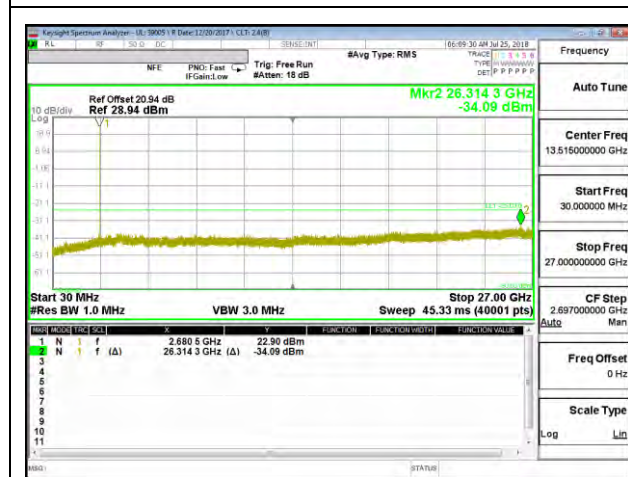
LTE B41 5MHz 16QAM High Channel RB1-0



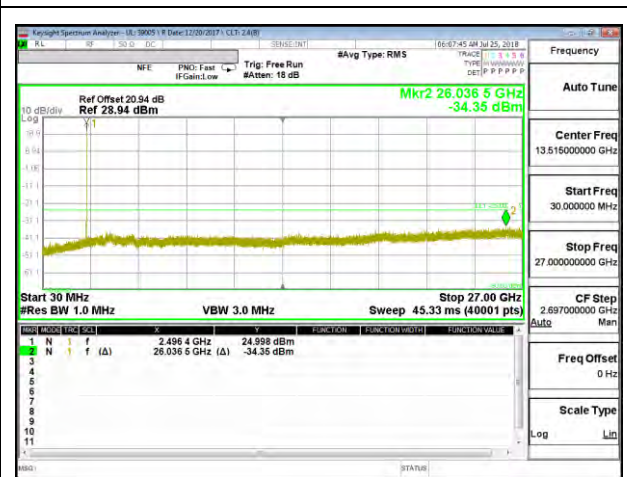
LTE B41 10MHz QPSK Low Channel RB1-0



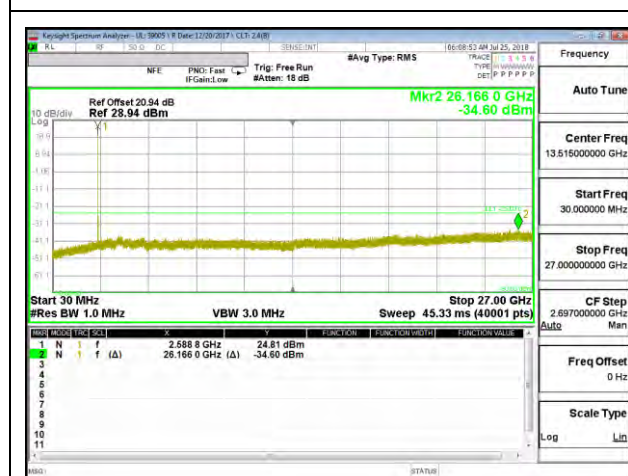
LTE B41 10MHz QPSK Mid Channel RB1-0



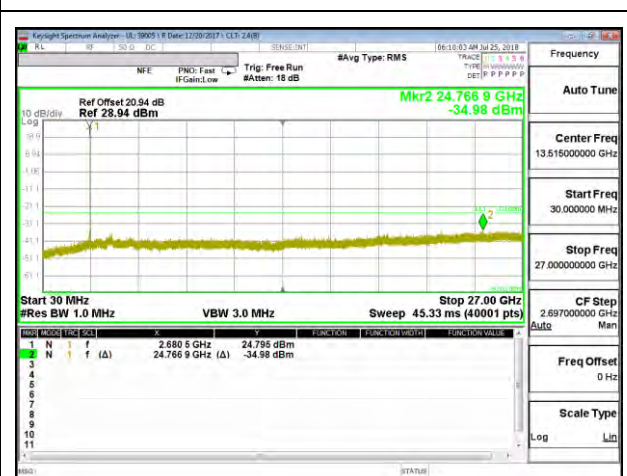
LTE B41 10MHz QPSK High Channel RB1-0



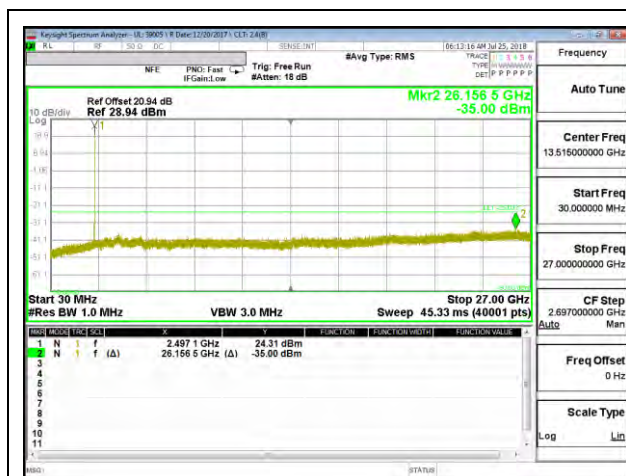
LTE B41 10MHz 16QAM Low Channel RB1-0



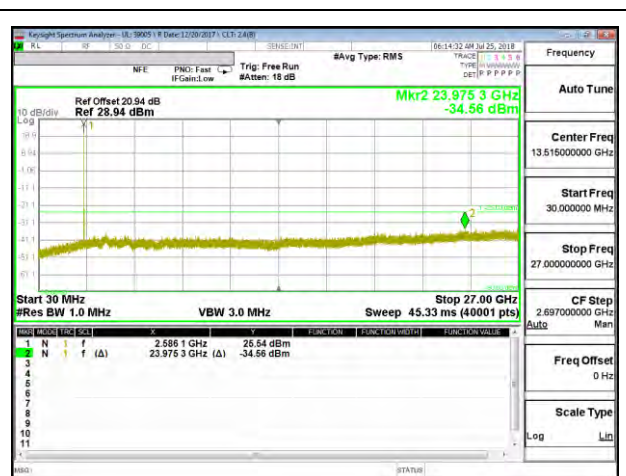
LTE B41 10MHz 16QAM Mid Channel RB1-0



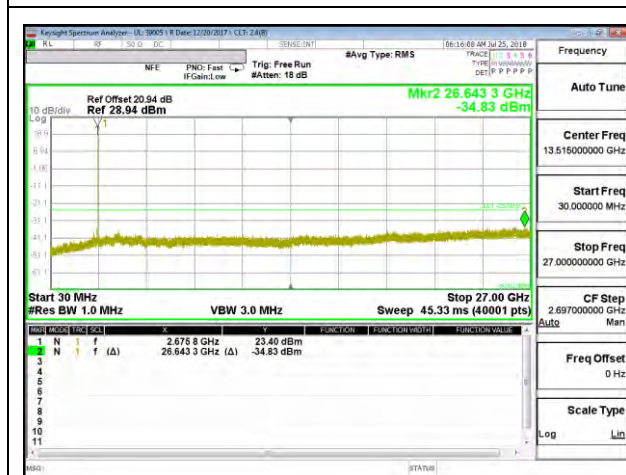
LTE B41 10MHz 16QAM High Channel RB1-0



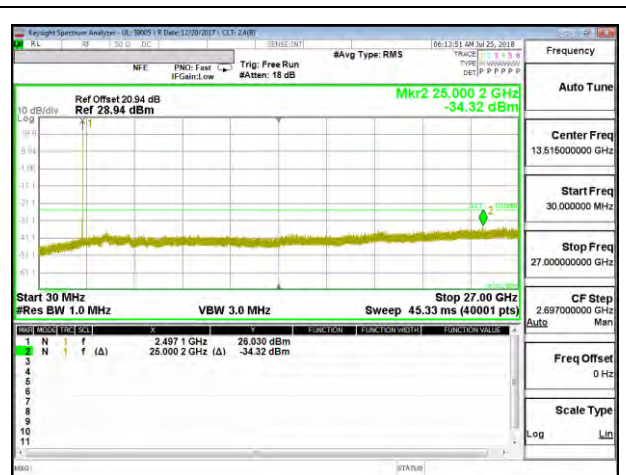
LTE B41 15MHz QPSK Low Channel RB1-0



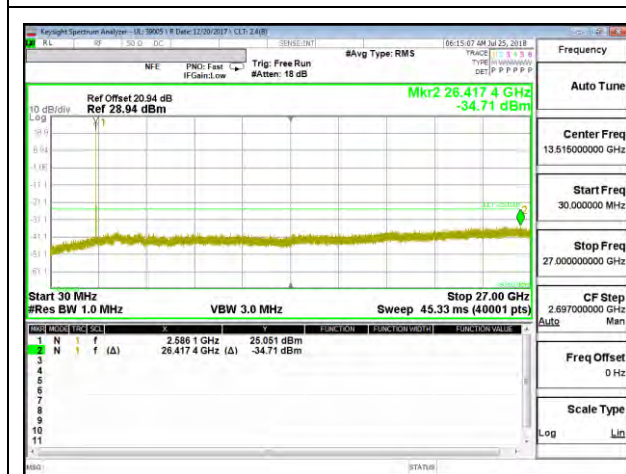
LTE B41 15MHz QPSK Mid Channel RB1-0



LTE B41 15MHz QPSK High Channel RB1-0



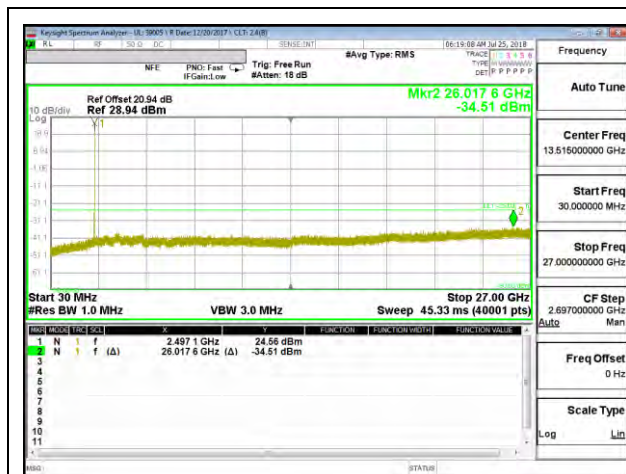
LTE B41 15MHz 16QAM Low Channel RB1-0



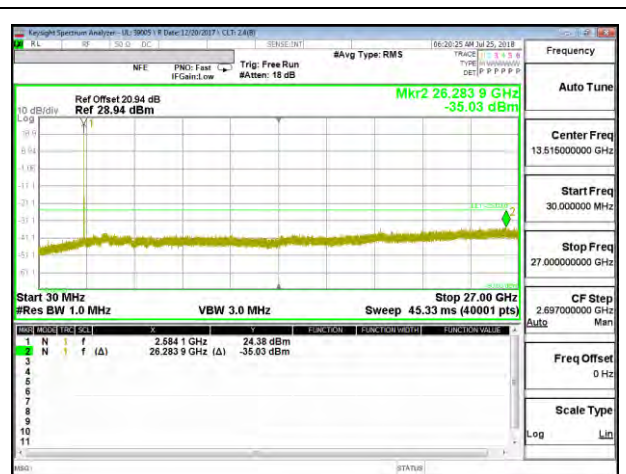
LTE B41 15MHz 16QAM Mid Channel RB1-0



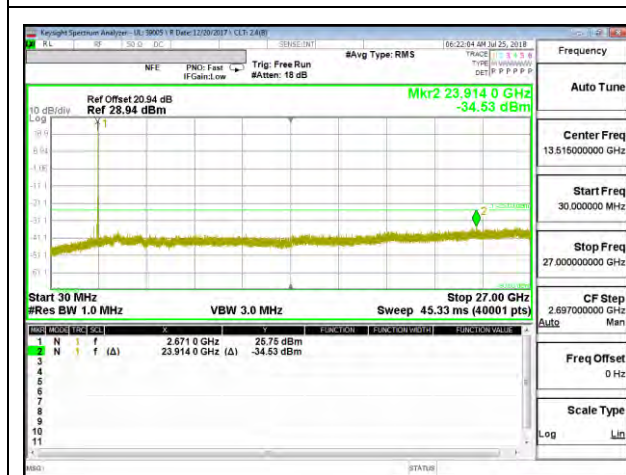
LTE B41 15MHz 16QAM High Channel RB1-0



LTE B41 20MHz QPSK Low Channel RB1-0



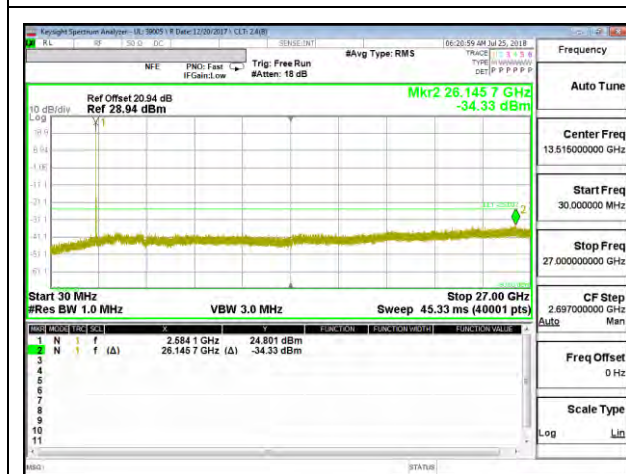
LTE B41 20MHz QPSK Mid Channel RB1-0



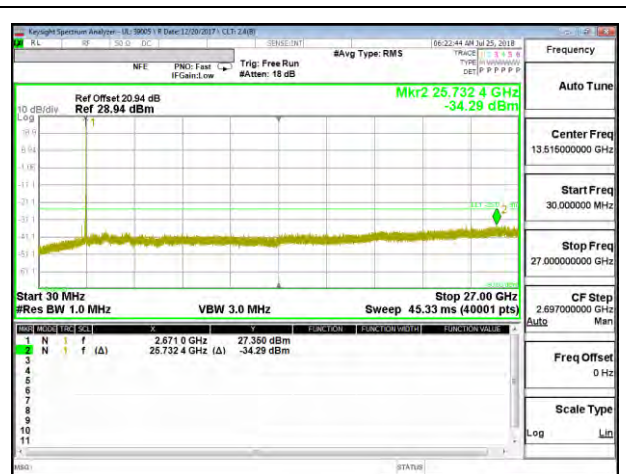
LTE B41 20MHz QPSK High Channel RB1-0



LTE B41 20MHz 16QAM Low Channel RB1-0



LTE B41 20MHz 16QAM Mid Channel RB1-0



LTE B41 20MHz 16QAM High Channel RB1-0

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
- WCDMA Band 2
- WCDMA Band 4
- LTE Band 4
- LTE Band 5
- LTE Band 7
- LTE Band 13
- LTE Band 17
- LTE Band 41

RESULTS

See the following pages.

8.4.1. GSM

ID:	39005	Date:	7/20/18
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GPRS 850MHz

Limit		824	849	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	824.0276	848.9730		
Extreme (50C)		824.0276	848.9730	21.2	0.03
Extreme (40C)		824.0276	848.9730	22.0	0.03
Extreme (30C)		824.0276	848.9730	21.2	0.03
Extreme (10C)		824.0276	848.9730	21.0	0.03
Extreme (0C)		824.0276	848.9730	20.2	0.02
Extreme (-10C)		824.0276	848.9730	21.0	0.03
Extreme (-20C)		824.0276	848.9730	22.2	0.03
Extreme (-30C)		824.0276	848.9730	22.3	0.03
20C		15%	824.0276	848.9730	21.9
	-15%	824.0276	848.9730	22.5	0.03
	End Point	824.0276	848.9730	23.0	0.03

GPRS 1900MHz

Limit		1850	1910	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	1850.0275	1909.9725		
Extreme (50C)		1850.0275	1909.9725	16.3	0.01
Extreme (40C)		1850.0275	1909.9725	16.3	0.01
Extreme (30C)		1850.0275	1909.9725	13.5	0.01
Extreme (10C)		1850.0275	1909.9725	14.2	0.01
Extreme (0C)		1850.0275	1909.9725	14.3	0.01
Extreme (-10C)		1850.0275	1909.9725	15.4	0.01
Extreme (-20C)		1850.0275	1909.9725	15.9	0.01
Extreme (-30C)		1850.0275	1909.9725	15.1	0.01
20C		15%	1850.0275	1909.9725	15.2
	-15%	1850.0275	1909.9725	16.9	0.01
	End Point	1850.0275	1909.9725	18.3	0.01

8.4.2. WCDMA

ID:	39005	Date:	7/20/18
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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	824.1350	848.8650		
Extreme (50C)		824.1350	848.8650	-1.4	0.00
Extreme (40C)		824.1350	848.8650	-1.4	0.00
Extreme (30C)		824.1350	848.8650	-1.6	0.00
Extreme (10C)		824.1350	848.8650	-1.5	0.00
Extreme (0C)		824.1350	848.8650	-2.1	0.00
Extreme (-10C)		824.1350	848.8650	-1.9	0.00
Extreme (-20C)		824.1350	848.8650	-1.8	0.00
Extreme (-30C)		824.1350	848.8650	-2.0	0.00
20C	15%	824.1350	848.8650	-1.4	0.00
	-15%	824.1350	848.8650	-2.5	0.00
	End Point	824.1350	848.8650	-2.1	0.00

WCDMA Rel99 BAND2

Limit		1850	1910	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	1850.1580	1909.8400		
Extreme (50C)		1850.1580	1909.8400	11.1	0.01
Extreme (40C)		1850.1580	1909.8400	10.3	0.01
Extreme (30C)		1850.1580	1909.8400	10.3	0.01
Extreme (10C)		1850.1580	1909.8400	12.2	0.01
Extreme (0C)		1850.1580	1909.8400	15.0	0.01
Extreme (-10C)		1850.1580	1909.8400	16.2	0.01
Extreme (-20C)		1850.1580	1909.8400	16.8	0.01
Extreme (-30C)		1850.1580	1909.8400	15.6	0.01
20C	15%	1850.1580	1909.8400	15.9	0.01
	-15%	1850.1580	1909.8400	15.2	0.01
	End Point	1850.1580	1909.8400	14.2	0.01

WCDMA Rel99 BAND4

Limit		1710	1755	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	1710.1350	1754.8700		
Extreme (50C)		1710.1350	1754.8700	9.6	0.01
Extreme (40C)		1710.1350	1754.8700	9.9	0.01
Extreme (30C)		1710.1350	1754.8700	10.4	0.01
Extreme (10C)		1710.1350	1754.8700	10.4	0.01
Extreme (0C)		1710.1350	1754.8700	11.4	0.01
Extreme (-10C)		1710.1350	1754.8700	9.9	0.01
Extreme (-20C)		1710.1350	1754.8700	9.6	0.01
Extreme (-30C)		1710.1350	1754.8700	11.0	0.01
20C	15%	1710.1350	1754.8700	10.8	0.01
	-15%	1710.1350	1754.8700	11.4	0.01
	End Point	1710.1350	1754.8700	12.2	0.01

8.4.3. LTE BAND 4

QPSK (20MHz BANDWIDTH)

ID:	39005	Date:	7/20/18		
Limit		1710	1755	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	1710.8200	1754.1600		
Extreme (50C)		1710.8200	1754.1600	9.1	0.005
Extreme (40C)		1710.8200	1754.1600	9.6	0.006
Extreme (30C)		1710.8200	1754.1600	9.3	0.005
Extreme (10C)		1710.8200	1754.1600	9.0	0.005
Extreme (0C)		1710.8200	1754.1600	9.3	0.005
Extreme (-10C)		1710.8200	1754.1600	8.6	0.005
Extreme (-20C)		1710.8200	1754.1600	8.4	0.005
Extreme (-30C)		1710.8200	1754.1600	9.0	0.005
20C	15%	1710.8200	1754.1600	9.6	0.006
	-15%	1710.8200	1754.1600	9.4	0.005
	End Point	1710.8200	1754.1600	8.8	0.005

8.4.4. LTE BAND 5

QPSK (10MHz BANDWIDTH)

ID:	39005	Date:	7/21/18		
Limit		824	849	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	824.4000	848.5900		
Extreme (50C)		824.4000	848.5900	-7.1	-0.009
Extreme (40C)		824.4000	848.5900	-7.1	-0.008
Extreme (30C)		824.4000	848.5900	-7.2	-0.009
Extreme (10C)		824.4000	848.5900	-7.6	-0.009
Extreme (0C)		824.4000	848.5900	-8.1	-0.010
Extreme (-10C)		824.4000	848.5900	-7.7	-0.009
Extreme (-20C)		824.4000	848.5900	-7.3	-0.009
Extreme (-30C)		824.4000	848.5900	-7.1	-0.009
20C	15%	824.4000	848.5900	-7.9	-0.009
	-15%	824.4000	848.5900	-7.2	-0.009
	End Point	824.4000	848.5900	-8.1	-0.010

8.4.5. LTE BAND 7

QPSK (20MHz BANDWIDTH)

ID:	39005	Date:	7/21/18		
Limit		2500	2570	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	2500.8600	2569.1400		
Extreme (50C)		2500.8600	2569.1400	-12.5	-0.005
Extreme (40C)		2500.8600	2569.1400	-11.9	-0.005
Extreme (30C)		2500.8600	2569.1400	-12.7	-0.005
Extreme (10C)		2500.8600	2569.1400	-11.9	-0.005
Extreme (0C)		2500.8600	2569.1400	-11.5	-0.005
Extreme (-10C)		2500.8600	2569.1400	-11.5	-0.005
Extreme (-20C)		2500.8600	2569.1400	-12.5	-0.005
Extreme (-30C)		2500.8600	2569.1400	-13.7	-0.005
20C	15%	2500.8600	2569.1400	-13.3	-0.005
	-15%	2500.8600	2569.1400	-13.2	-0.005
	End Point	2500.8600	2569.1400	-14.2	-0.006

8.4.6. LTE BAND 13

QPSK (10MHz BANDWIDTH)

ID:	39005	Date:	7/21/18		
Limit		777	787	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	777.1500	786.8500		
Extreme (50C)		777.1500	786.8500	6.4	0.008
Extreme (40C)		777.1500	786.8500	6.5	0.008
Extreme (30C)		777.1500	786.8500	6.7	0.009
Extreme (10C)		777.1500	786.8500	6.5	0.008
Extreme (0C)		777.1500	786.8500	7.9	0.010
Extreme (-10C)		777.1500	786.8500	8.4	0.011
Extreme (-20C)		777.1500	786.8500	5.5	0.007
Extreme (-30C)		777.1500	786.8500	5.0	0.006
20C	15%	777.1500	786.8500	5.8	0.007
	-15%	777.1500	786.8500	6.4	0.008
	End Point	777.1500	786.8500	6.0	0.008

8.4.7. LTE BAND 17

QPSK (10MHz BANDWIDTH)

ID:	39005	Date:	7/23/18		
Limit		704	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	704.4000	715.5900		
Extreme (50C)		704.4000	715.5900	2.8	0.004
Extreme (40C)		704.4000	715.5900	3.4	0.005
Extreme (30C)		704.4000	715.5900	4.2	0.006
Extreme (10C)		704.4000	715.5900	2.7	0.004
Extreme (0C)		704.4000	715.5900	3.7	0.005
Extreme (-10C)		704.4000	715.5900	3.5	0.005
Extreme (-20C)		704.4000	715.5900	4.2	0.006
Extreme (-30C)		704.4000	715.5900	3.9	0.005
20C	15%	704.4000	715.5900	4.2	0.006
	-15%	704.4000	715.5900	3.5	0.005
	End Point	704.4000	715.5900	5.0	0.007

8.4.8. LTE BAND 41

QPSK (20MHz BANDWIDTH)

ID:	39005	Date:	7/23/18		
Limit		2496	2690	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ -13dBm (MHz)	F high @ -13dBm (MHz)		
Temperature	Voltage				
Normal (20C)	Normal	2496.7800	2689.2400		
Extreme (50C)		2496.7800	2689.2400	10.8	0.004
Extreme (40C)		2496.7800	2689.2400	9.6	0.004
Extreme (30C)		2496.7800	2689.2400	10.4	0.004
Extreme (10C)		2496.7800	2689.2400	8.7	0.003
Extreme (0C)		2496.7800	2689.2400	8.7	0.003
Extreme (-10C)		2496.7800	2689.2400	10.5	0.004
Extreme (-20C)		2496.7800	2689.2400	12.4	0.005
Extreme (-30C)		2496.7800	2689.2400	11.7	0.004
20C	15%	2496.7800	2689.2400	11.5	0.004
	-15%	2496.7800	2689.2400	11.6	0.004
	End Point	2496.7800	2689.2400	12.3	0.005

8.5. PEAK TO AVERAGE RATIO

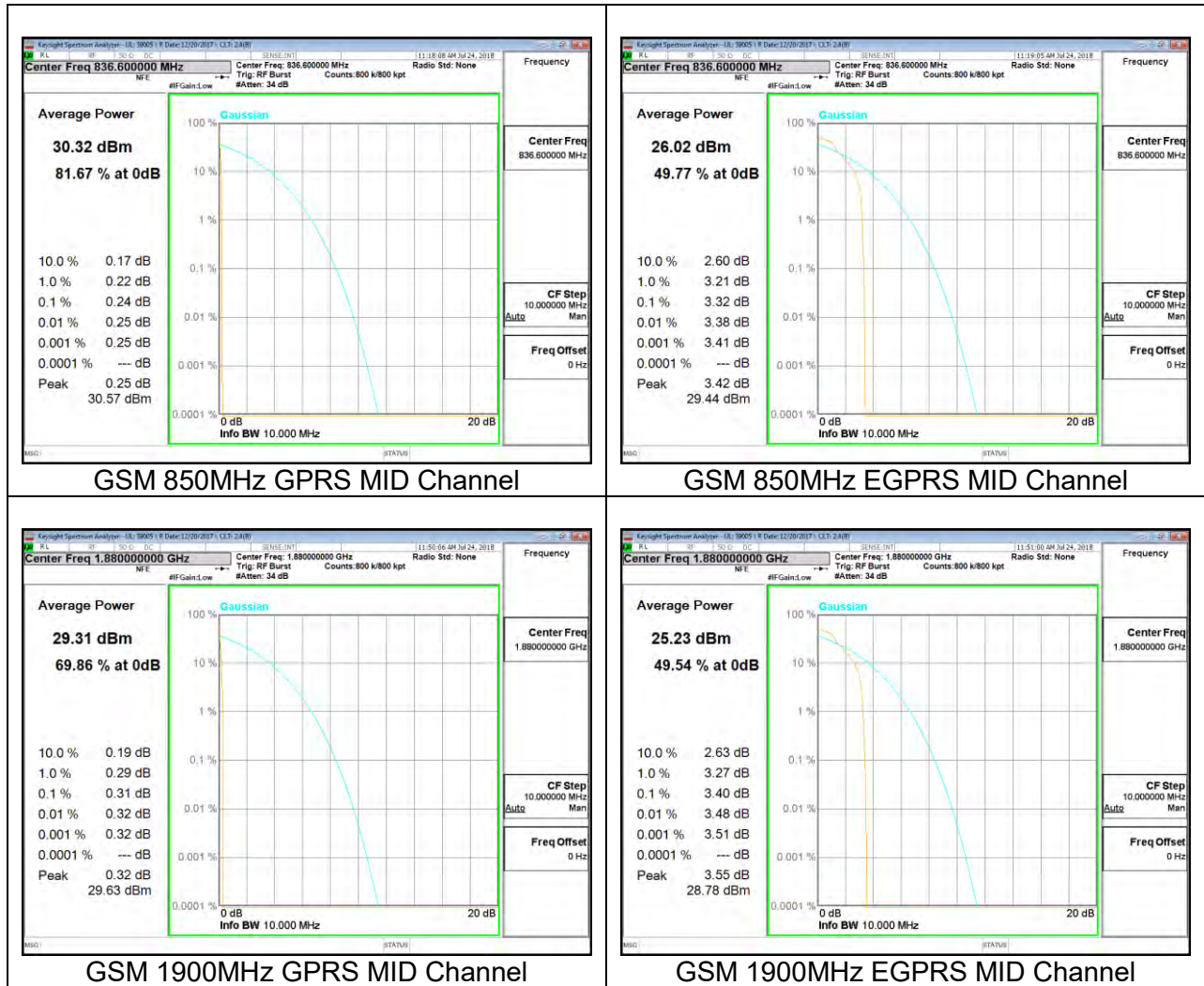
LIMIT

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.

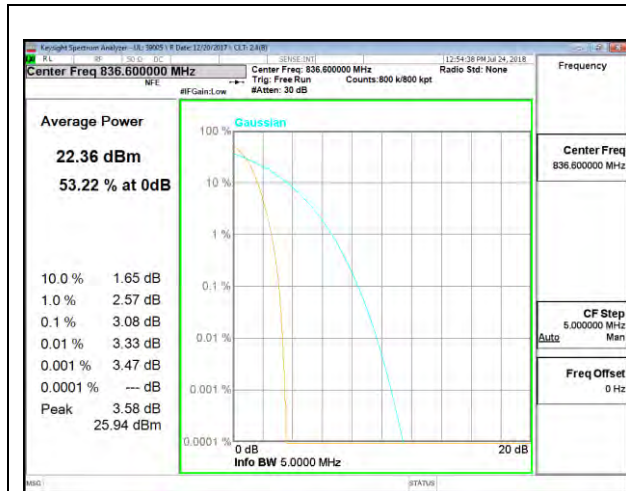
RESULT

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.

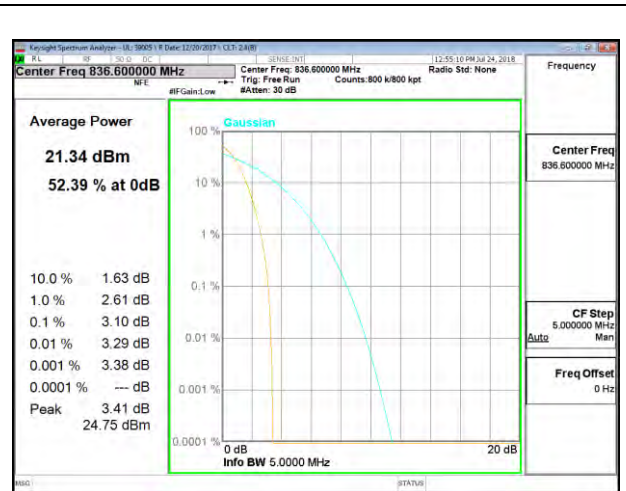
8.5.1. GSM



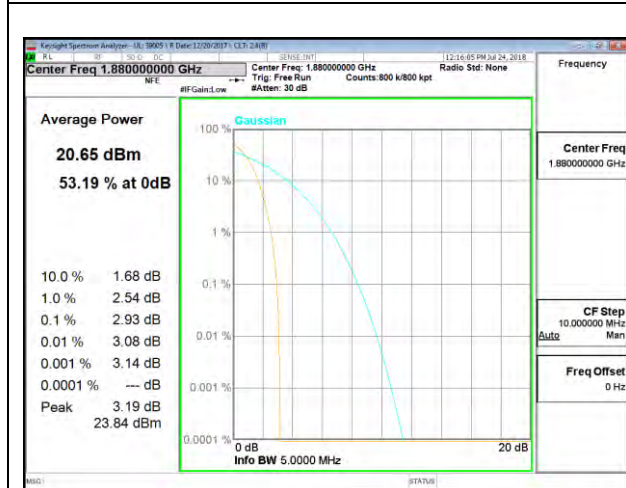
8.5.2. WCDMA



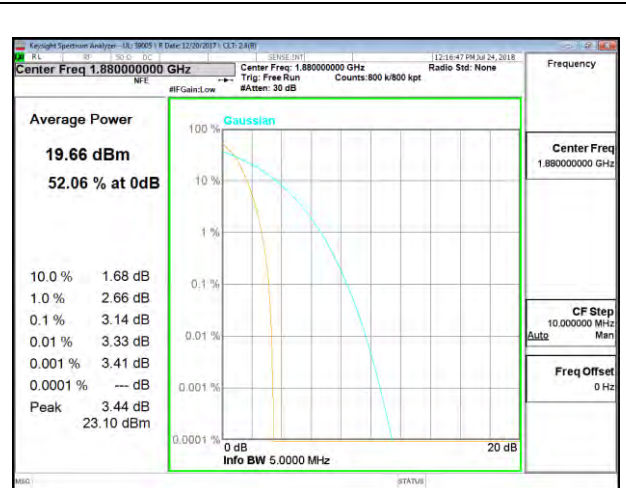
WCDMA BAND5 Rel99 MID Channel



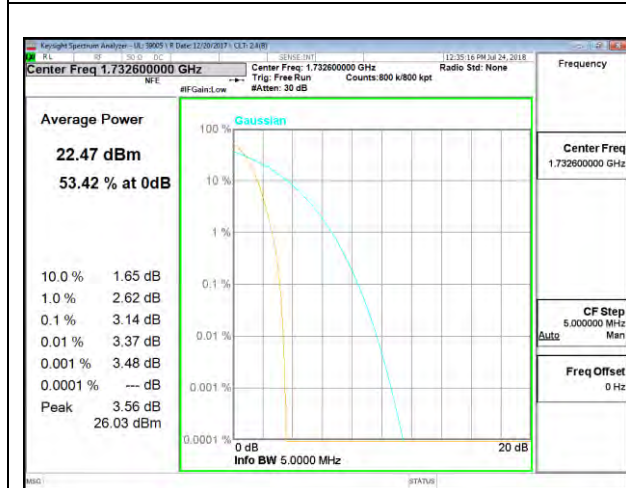
WCDMA BAND5 HSDPA MID Channel



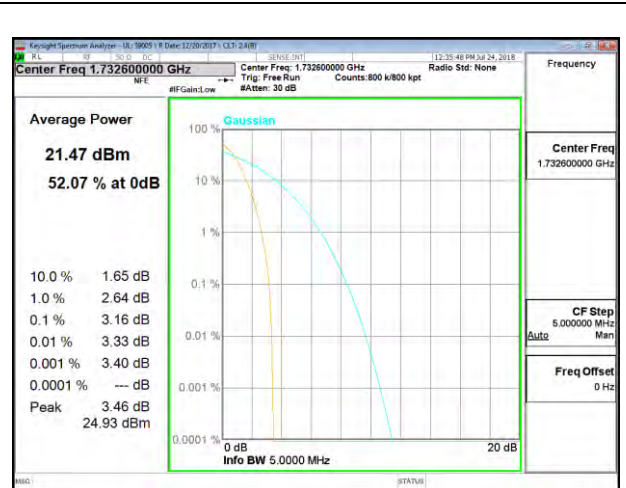
WCDMA BAND2 Rel99 MID Channel



WCDMA BAND2 HSDPA MID Channel



WCDMA BAND4 Rel99 MID Channel

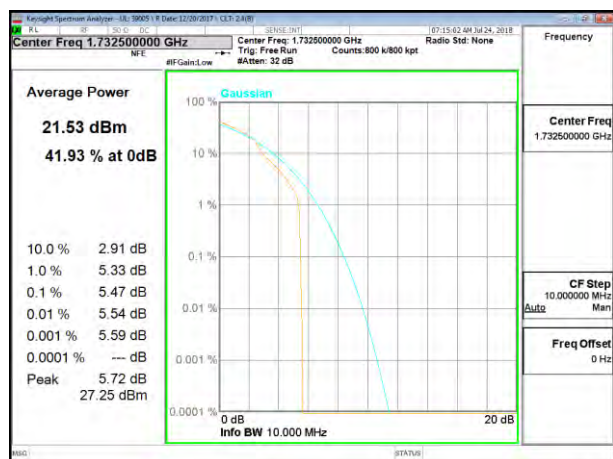


WCDMA BAND4 HSDPA MID Channel

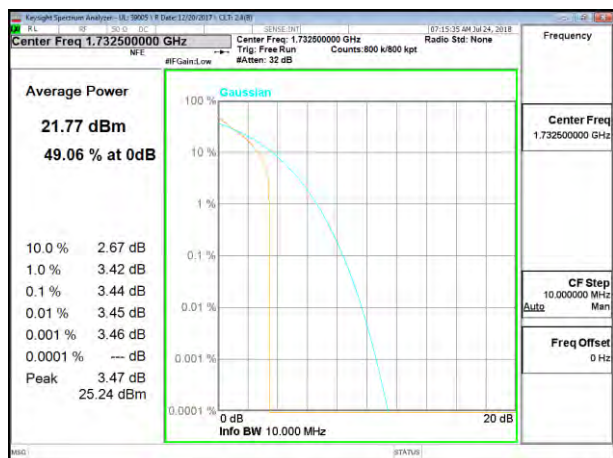
8.5.3. LTE BAND 4



LTE B4 1.4MHz QPSK Mid Channel



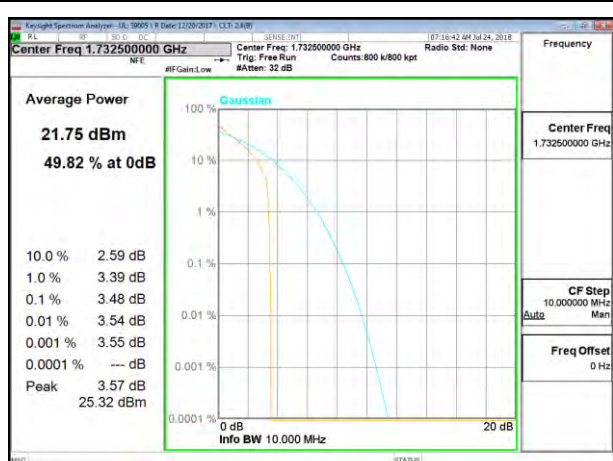
LTE B4 1.4MHz 16QAM Mid Channel



LTE B4 3MHz QPSK Mid Channel



LTE B4 3MHz 16QAM Mid Channel



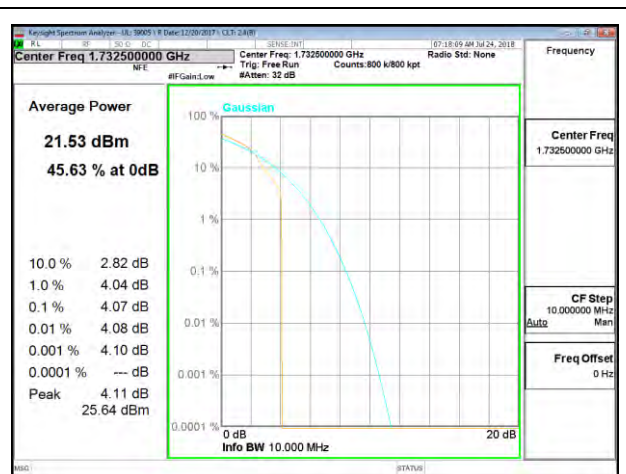
LTE B4 5MHz QPSK Mid Channel



LTE B4 5MHz 16QAM Mid Channel



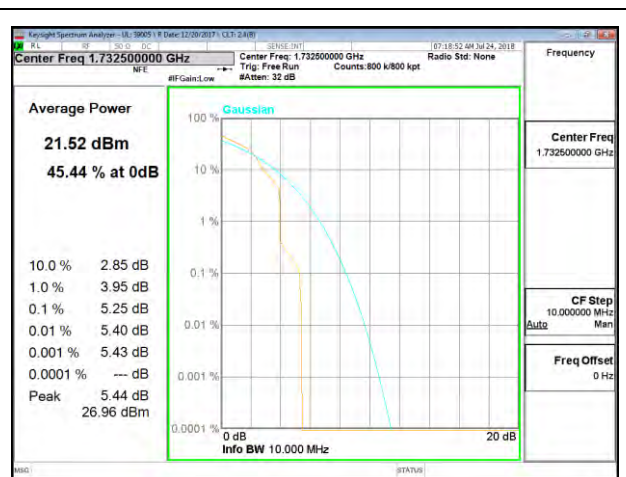
LTE B4 10MHz QPSK Mid Channel



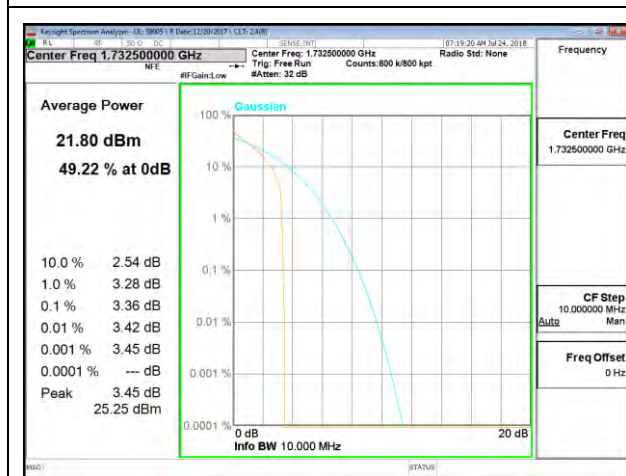
LTE B4 10MHz 16QAM Mid Channel



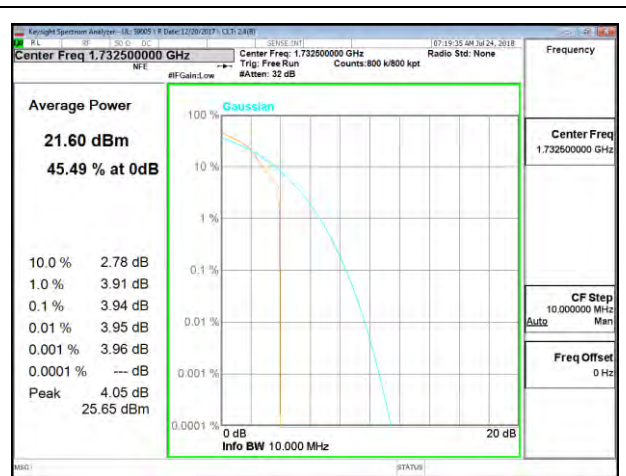
LTE B4 15MHz QPSK Mid Channel



LTE B4 15MHz 16QAM Mid Channel



LTE B4 20MHz QPSK Mid Channel



LTE B4 20MHz 16QAM Mid Channel

8.5.4. LTE BAND 5



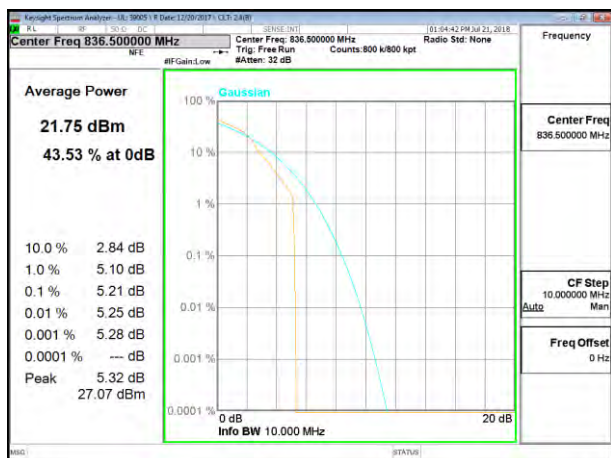
LTE B5 1.4MHz QPSK Mid Channel



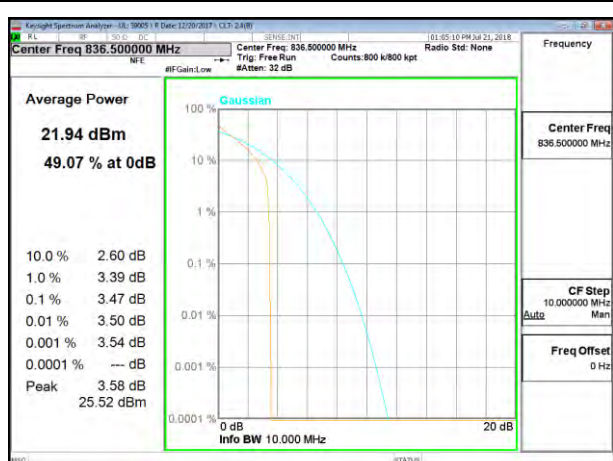
LTE B5 1.4MHz 16QAM Mid Channel



LTE B5 3MHz QPSK Mid Channel



LTE B5 3MHz 16QAM Mid Channel



LTE B5 5MHz QPSK Mid Channel



LTE B5 5MHz 16QAM Mid Channel

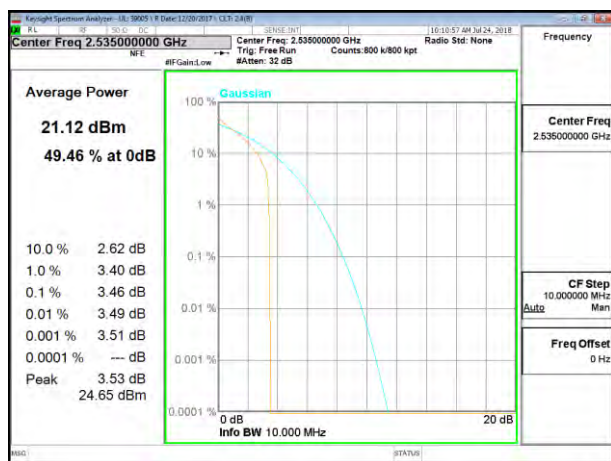


LTE B5 10MHz QPSK Mid Channel

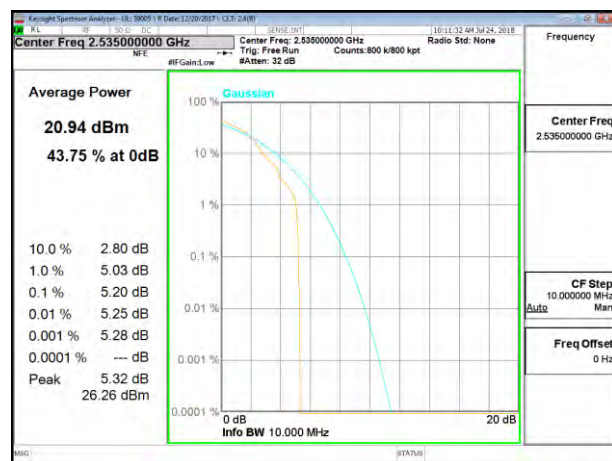


LTE B5 10MHz 16QAM Mid Channel

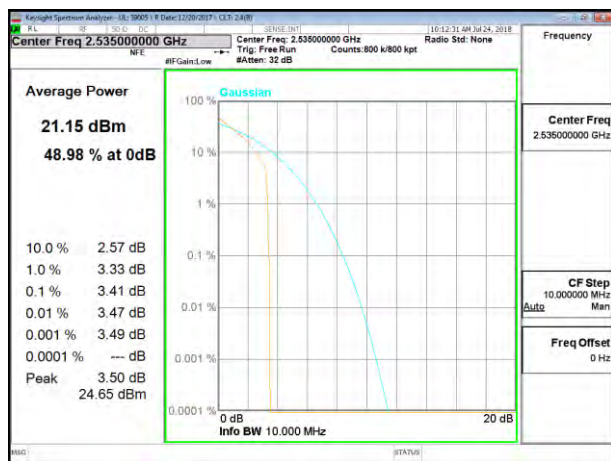
8.5.5. LTE BAND 7



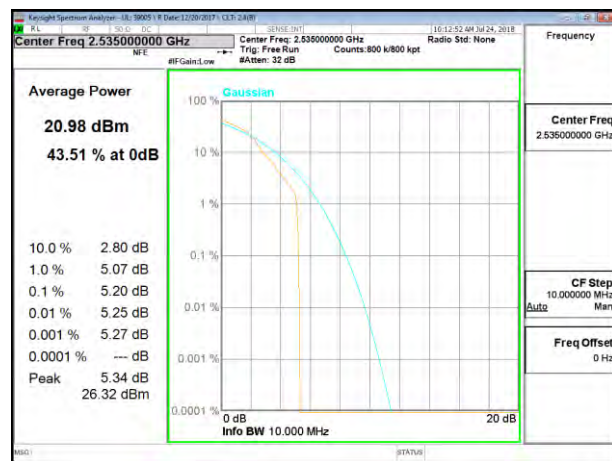
LTE B7 5MHz QPSK Mid Channel



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

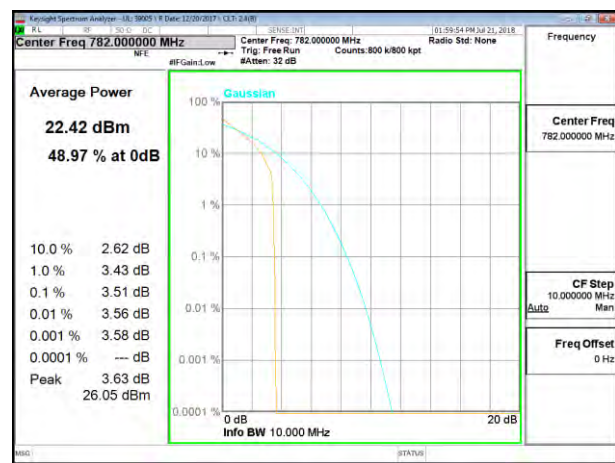


LTE B7 20MHz QPSK Mid Channel

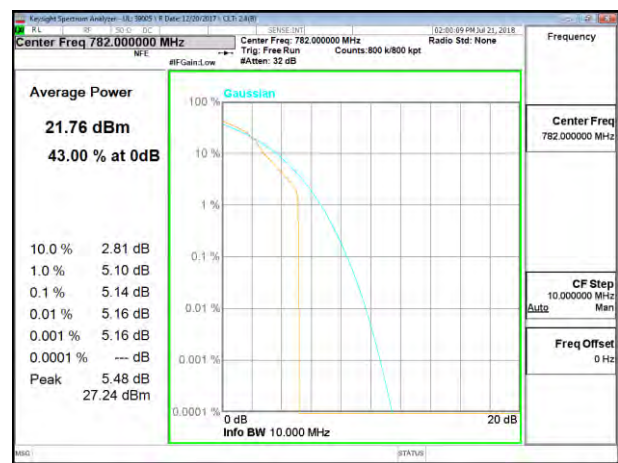


LTE B7 20MHz 16QAM Mid Channel

8.5.6. LTE BAND 13



LTE B13 5MHz QPSK Mid Channel



LTE B13 5MHz 16QAM Mid Channel



LTE B13 10MHz QPSK Mid Channel

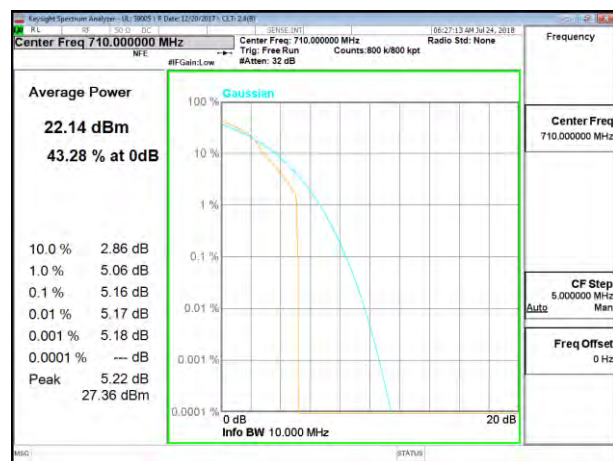


LTE B13 10MHz 16QAM Mid Channel

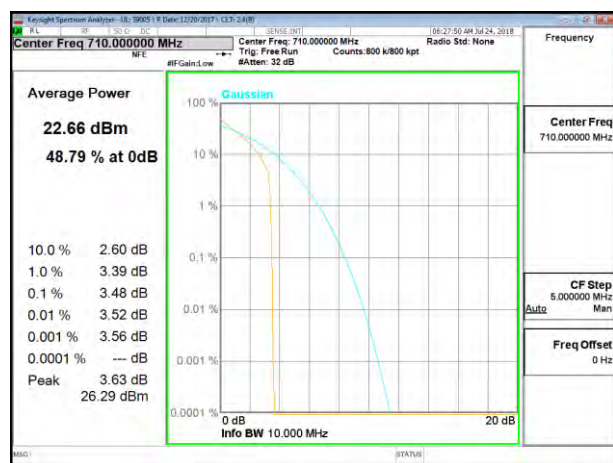
8.5.7. LTE BAND 17



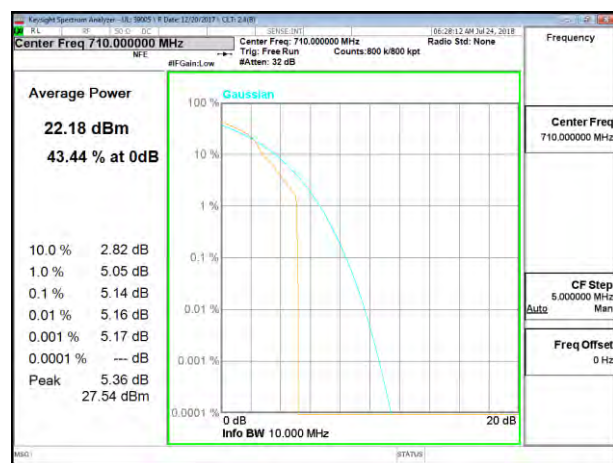
LTE B17 5MHz QPSK Mid Channel



LTE B17 5MHz 16QAM Mid Channel

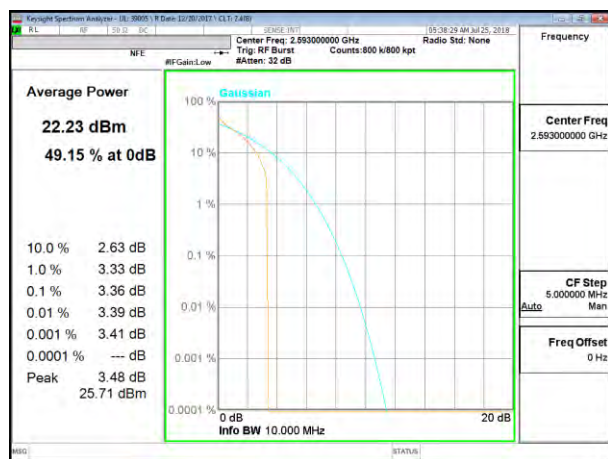


LTE B17 10MHz QPSK Mid Channel

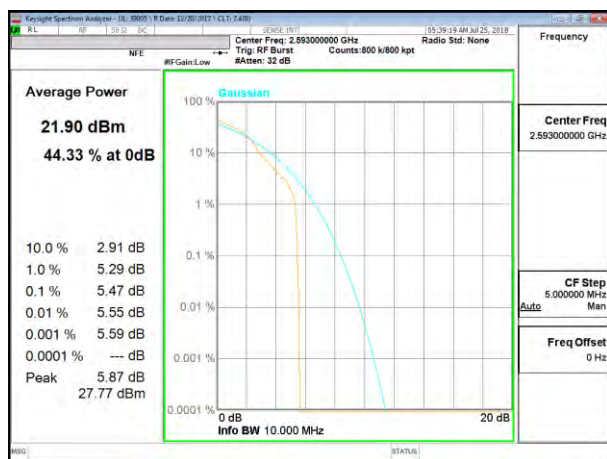


LTE B17 10MHz 16QAM Mid Channel

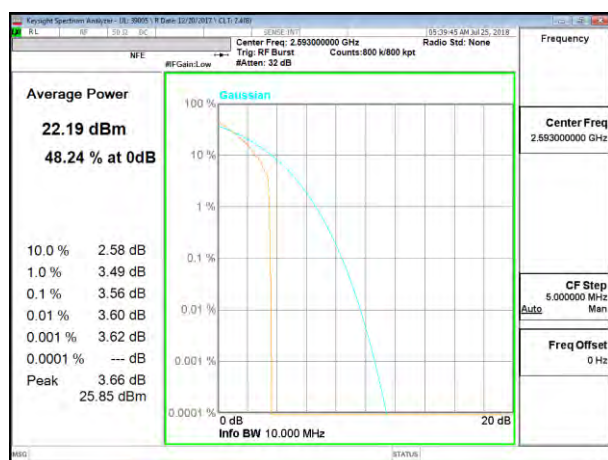
8.5.8. LTE BAND 41



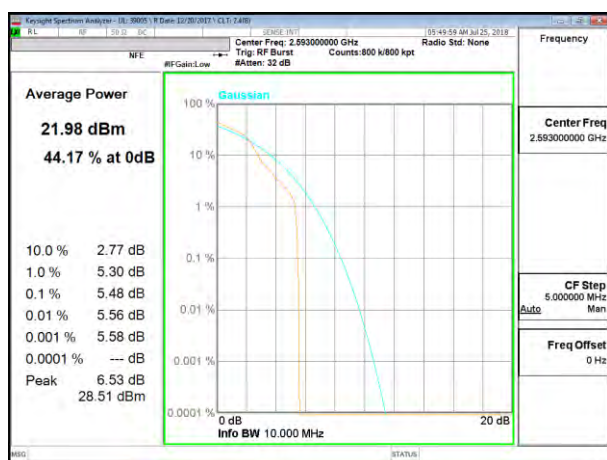
LTE B41 5MHz QPSK Mid Channel



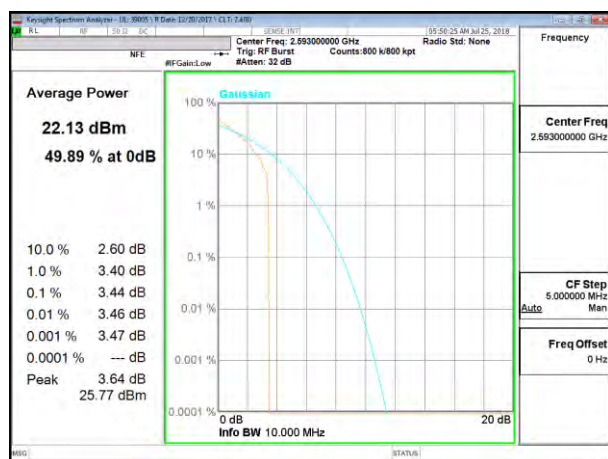
LTE B41 5MHz 16QAM Mid Channel



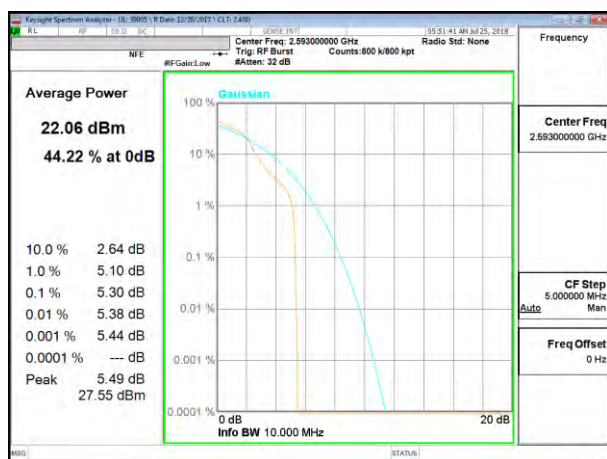
LTE B41 10MHz QPSK Mid Channel



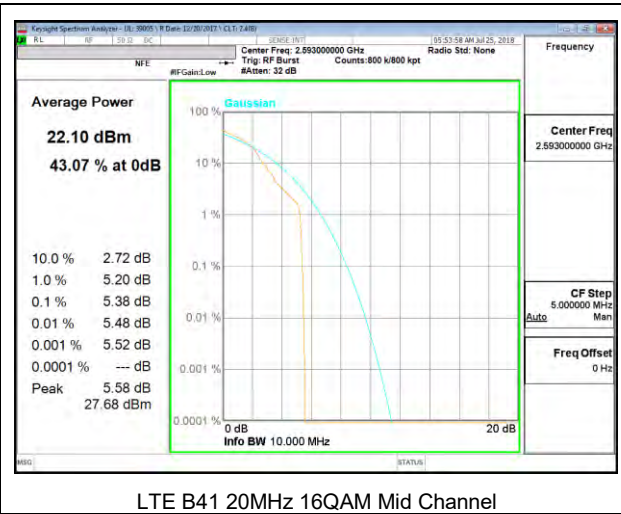
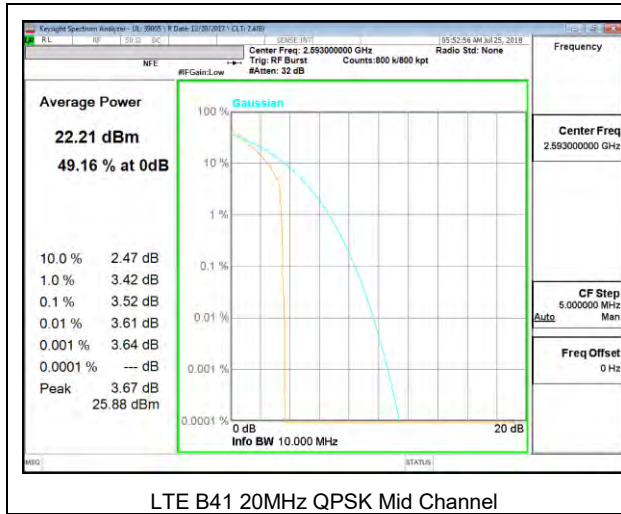
LTE B41 10MHz 16QAM Mid Channel



LTE B41 15MHz QPSK Mid Channel



LTE B41 15MHz 16QAM Mid Channel



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 = -40 dBm/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
- WCDMA Band 2
- WCDMA Band 4
- LTE Band 4
- LTE Band 5
- LTE Band 7
- LTE Band 13
- LTE Band 17
- 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 #:		12395502										
Date:		07/23/18										
Test Engineer:		43575										
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												
1.644	-67.53	Pk	28.6	-34.4	10.3	-63.03	-13	-50.03	0-360	150	H	
2.473	-66.97	Pk	32.3	-32.7	10.9	-56.47	-13	-43.47	0-360	150	H	
3.306	-69.53	Pk	32.9	-31.4	10.8	-57.23	-13	-44.23	0-360	150	H	
1.65	-69.28	Pk	28.7	-34.3	10.9	-63.98	-13	-50.98	0-360	150	V	
2.47	-68.55	Pk	32.3	-32.7	11.1	-57.85	-13	-44.85	0-360	150	V	
3.293	-70.2	Pk	32.9	-31.3	10.9	-57.7	-13	-44.7	0-360	150	V	
Mid Channel												
1.677	-67.46	Pk	28.8	-34.1	9.9	-62.86	-13	-49.86	0-360	150	H	
2.51	-62.96	Pk	32.3	-32.7	10.1	-53.26	-13	-40.26	0-360	150	H	
3.345	-69.52	Pk	32.9	-31.5	10.6	-57.52	-13	-44.52	0-360	150	H	
1.668	-67.31	Pk	28.8	-34.1	11.2	-61.41	-13	-48.41	0-360	150	V	
2.51	-64.42	Pk	32.3	-32.7	11.5	-53.32	-13	-40.32	0-360	150	V	
3.342	-70.26	Pk	32.9	-31.5	10.8	-58.06	-13	-45.06	0-360	150	V	
High Channel												
1.697	-67.81	Pk	28.9	-34.1	11.5	-61.51	-13	-48.51	0-360	150	H	
2.546	-65.76	Pk	32.3	-32.6	10.1	-55.96	-13	-42.96	0-360	150	H	
3.391	-69.97	Pk	32.8	-31.7	11.1	-57.77	-13	-44.77	0-360	150	H	
1.701	-68.03	Pk	28.9	-34.1	11.7	-61.53	-13	-48.53	0-360	150	V	
2.546	-63.7	Pk	32.3	-32.6	10.9	-53.1	-13	-40.1	0-360	150	V	
3.394	-69.69	Pk	32.8	-31.7	11.2	-57.39	-13	-44.39	0-360	150	V	

Company:		SOMC										
Project #:		12395502										
Date:		07/23/18										
Test Engineer:		43575										
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												
1.653	-68.2	Pk	28.7	-34.3	10.2	-63.6	-13	-50.6	0-360	150	H	
2.468	-68.89	Pk	32.3	-32.7	10.9	-58.39	-13	-45.39	0-360	150	H	
3.292	-70.48	Pk	32.9	-31.3	10.8	-58.08	-13	-45.08	0-360	150	H	
1.652	-69.6	Pk	28.7	-34.3	11.1	-64.1	-13	-51.1	0-360	150	V	
2.466	-68.03	Pk	32.3	-32.7	11	-57.43	-13	-44.43	0-360	150	V	
3.293	-69.93	Pk	32.9	-31.3	10.9	-57.43	-13	-44.43	0-360	150	V	
Mid Channel												
1.683	-67.3	Pk	28.8	-34.1	10.1	-62.5	-13	-49.5	0-360	150	H	
2.51	-68.56	Pk	32.3	-32.7	10.1	-58.86	-13	-45.86	0-360	150	H	
3.341	-69.98	Pk	32.9	-31.5	10.6	-57.98	-13	-44.98	0-360	150	H	
1.673	-67.44	Pk	28.8	-34.1	11.3	-61.44	-13	-48.44	0-360	150	V	
2.509	-68.96	Pk	32.3	-32.7	11.5	-57.86	-13	-44.86	0-360	150	V	
3.348	-70.62	Pk	32.9	-31.4	10.7	-58.42	-13	-45.42	0-360	150	V	
High Channel												
1.687	-66.98	Pk	28.9	-34.1	10.5	-61.68	-13	-48.68	0-360	150	H	
2.546	-65.59	Pk	32.3	-32.6	10.1	-55.79	-13	-42.79	0-360	150	H	
3.394	-69.76	Pk	32.8	-31.7	11.1	-57.56	-13	-44.56	0-360	150	H	
1.694	-68.29	Pk	28.9	-34.2	11.9	-61.69	-13	-48.69	0-360	150	V	
2.546	-63.77	Pk	32.3	-32.6	10.9	-53.17	-13	-40.17	0-360	150	V	
3.392	-69.26	Pk	32.8	-31.7	11.1	-57.06	-13	-44.06	0-360	150	V	

Company:		SOMC									
Project #:		12395502									
Date:		7/23/18									
Test Engineer:		43575									
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											
3.696	-70.9	Pk	33.1	-30.9	10.9	-57.8	-13	-44.8	0-360	151	H
5.545	-71.83	Pk	34.6	-28.3	10.6	-54.93	-13	-41.93	0-360	151	H
7.401	-74.4	Pk	35.7	-25.9	10.4	-54.2	-13	-41.2	0-360	151	H
3.69	-70.01	Pk	33.1	-30.9	11.2	-56.61	-13	-43.61	0-360	151	V
5.537	-72.7	Pk	34.6	-28.4	10.7	-55.8	-13	-42.8	0-360	151	V
7.396	-74.5	Pk	35.7	-26	10.8	-54	-13	-41	0-360	151	V
Mid Channel											
3.772	-71.12	Pk	33.6	-30.8	10.5	-57.82	-13	-44.82	0-360	151	H
5.671	-72.05	Pk	34.8	-28.6	10.5	-55.35	-13	-42.35	0-360	151	H
7.505	-75.02	Pk	35.7	-25.5	10.6	-54.22	-13	-41.22	0-360	151	H
3.752	-71.18	Pk	33.5	-30.7	10.8	-57.58	-13	-44.58	0-360	151	V
5.648	-71.86	Pk	34.8	-28.6	10.6	-55.06	-13	-42.06	0-360	151	V
7.513	-75.18	Pk	35.7	-25.4	10.8	-54.08	-13	-41.08	0-360	151	V
High Channel											
3.838	-70.97	Pk	33.7	-30.4	10.6	-57.07	-13	-44.07	0-360	152	H
5.736	-72.24	Pk	35	-28.7	10.5	-55.44	-13	-42.44	0-360	152	H
7.667	-74.82	Pk	35.8	-25.3	10.4	-53.92	-13	-40.92	0-360	152	H
3.822	-70.43	Pk	33.7	-30.4	10.4	-56.73	-13	-43.73	0-360	152	V
5.719	-72.21	Pk	34.9	-28.6	10.3	-55.61	-13	-42.61	0-360	152	V
7.642	-74.24	Pk	35.8	-25.4	10.5	-53.34	-13	-40.34	0-360	152	V

Company:		SOMC									
Project #:		12395502									
Date:		7/23/18									
Test Engineer:		43575									
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											
3.695	-70.87	Pk	33.1	-30.9	10.9	-57.77	-13	-42.06	0-360	152	H
5.523	-71.76	Pk	34.6	-28.6	10.7	-55.06	-13	-41.36	0-360	152	H
7.436	-74.56	Pk	35.7	-25.9	10.4	-54.36	-13	-36.65	0-360	152	H
3.699	-70.79	Pk	33.1	-30.9	11.1	-57.49	-13	-42.7	0-360	152	V
5.533	-72.7	Pk	34.6	-28.4	10.8	-55.7	-13	-41.03	0-360	152	V
7.394	-74.73	Pk	35.7	-25.9	10.9	-54.03	-13	-44.77	0-360	152	V
Mid Channel											
3.764	-70.8	Pk	33.5	-30.7	10.3	-57.7	-13	-44.7	0-360	152	H
5.669	-72.1	Pk	34.8	-28.6	10.5	-55.4	-13	-42.4	0-360	152	H
7.539	-74.71	Pk	35.7	-25.5	10.3	-54.21	-13	-41.21	0-360	152	H
3.751	-71.49	Pk	33.5	-30.8	10.8	-57.99	-13	-44.99	0-360	152	V
5.626	-72.61	Pk	34.8	-28.3	10.6	-55.51	-13	-42.51	0-360	152	V
7.518	-75.04	Pk	35.7	-25.4	10.7	-54.04	-13	-41.04	0-360	152	V
High Channel											
3.831	-70.42	Pk	33.7	-30.4	10.5	-56.62	-13	-43.62	0-360	152	H
5.726	-72.74	Pk	34.9	-28.6	10.5	-55.94	-13	-42.94	0-360	152	H
7.632	-74.97	Pk	35.8	-25.4	10.5	-54.07	-13	-41.07	0-360	152	H
3.826	-70.75	Pk	33.7	-30.3	10.5	-56.85	-13	-43.85	0-360	152	V
5.728	-72.67	Pk	34.9	-28.6	10.6	-55.77	-13	-42.77	0-360	152	V
7.634	-74.1	Pk	35.8	-25.4	10.6	-53.1	-13	-40.1	0-360	152	V

9.1.2. WCDMA

Company:		SOMC										
Project #:		12395502										
Date:		07/23/18										
Test Engineer:		43575										
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												
1.654	-68.88	Pk	28.7	-34.3	10.2	-64.28	-13	-51.28	0-360	150	H	
2.475	-69.64	Pk	32.3	-32.7	10.9	-59.14	-13	-46.14	0-360	150	H	
3.307	-70.61	Pk	32.9	-31.4	10.8	-58.31	-13	-45.31	0-360	150	H	
1.652	-67.98	Pk	28.7	-34.3	11.1	-62.48	-13	-49.48	0-360	150	V	
2.475	-70.38	Pk	32.3	-32.7	11	-59.78	-13	-46.78	0-360	150	V	
3.305	-69.71	Pk	32.9	-31.4	11.3	-56.91	-13	-43.91	0-360	150	V	
Mid Channel												
1.683	-67.79	Pk	28.8	-34.1	10.1	-62.99	-13	-49.99	0-360	150	H	
2.509	-68.49	Pk	32.3	-32.7	10.1	-58.79	-13	-45.79	0-360	150	H	
3.348	-69.88	Pk	32.9	-31.4	10.5	-57.88	-13	-44.88	0-360	150	H	
1.683	-68.07	Pk	28.8	-34.1	11.3	-62.07	-13	-49.07	0-360	150	V	
2.509	-69.73	Pk	32.3	-32.7	11.5	-58.63	-13	-45.63	0-360	150	V	
3.348	-69.96	Pk	32.9	-31.4	10.7	-57.76	-13	-44.76	0-360	150	V	
High Channel												
1.692	-68.39	Pk	28.9	-34.2	11.2	-62.49	-13	-49.49	0-360	150	H	
2.545	-69.19	Pk	32.3	-32.6	10.1	-59.39	-13	-46.39	0-360	150	H	
3.377	-70.14	Pk	32.8	-31.7	10.9	-58.14	-13	-45.14	0-360	150	H	
1.691	-67.41	Pk	28.9	-34.2	11.9	-60.81	-13	-47.81	0-360	150	V	
2.543	-69.86	Pk	32.3	-32.7	10.6	-59.66	-13	-46.66	0-360	150	V	
3.39	-70.01	Pk	32.8	-31.7	11.1	-57.81	-13	-44.81	0-360	150	V	

Company:		SOMC										
Project #:		12395502										
Date:		07/23/18										
Test Engineer:		43575										
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												
1.642	-67.94	Pk	28.6	-34.4	10.5	-63.24	-13	-50.24	0-360	150	H	
2.483	-69.32	Pk	32.3	-32.7	10.4	-59.32	-13	-46.32	0-360	150	H	
3.309	-70.43	Pk	32.9	-31.5	10.8	-58.23	-13	-45.23	0-360	150	H	
1.64	-69.56	Pk	28.5	-34.4	11.5	-63.96	-13	-50.96	0-360	150	V	
2.476	-68.02	Pk	32.3	-32.8	10.9	-57.62	-13	-44.62	0-360	150	V	
3.302	-69.93	Pk	32.9	-31.4	11.1	-57.33	-13	-44.33	0-360	150	V	
Mid Channel												
1.684	-68.3	Pk	28.8	-34.1	10.1	-63.5	-13	-50.5	0-360	150	H	
2.508	-68.78	Pk	32.3	-32.7	10.1	-59.08	-13	-46.08	0-360	150	H	
3.338	-69.36	Pk	32.9	-31.4	10.7	-57.16	-13	-44.16	0-360	150	H	
1.677	-67.31	Pk	28.8	-34.1	11.2	-61.41	-13	-48.41	0-360	150	V	
2.511	-70.2	Pk	32.3	-32.7	11.5	-59.1	-13	-46.1	0-360	150	V	
3.349	-70.49	Pk	32.9	-31.5	10.7	-58.39	-13	-45.39	0-360	150	V	
High Channel												
1.783	-63.28	Pk	30.1	-33.9	11.7	-55.38	-13	-42.38	0-360	150	H	
2.543	-68.89	Pk	32.3	-32.7	10	-59.29	-13	-46.29	0-360	150	H	
3.389	-70.25	Pk	32.8	-31.7	11	-58.15	-13	-45.15	0-360	150	H	
1.785	-65.09	Pk	30.2	-33.9	11.3	-57.49	-13	-44.49	0-360	150	V	
2.544	-68.34	Pk	32.3	-32.7	10.7	-58.04	-13	-45.04	0-360	150	V	
3.389	-70.43	Pk	32.8	-31.7	11.1	-58.23	-13	-45.23	0-360	150	V	

Company:		SOMC									
Project #:		12395502									
Date:		7/23/18									
Test Engineer:		43575									
Configuration:		EUT+ Support Equipment									
Mode:		REL99 B2									
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											
3.689	-69.99	Pk	33.1	-30.9	11.1	-56.69	-13	-43.69	0-360	151	H
5.526	-71.22	Pk	34.6	-28.6	10.6	-54.62	-13	-41.62	0-360	151	H
7.408	-74.16	Pk	35.7	-26	10.4	-54.06	-13	-41.06	0-360	151	H
3.695	-70.85	Pk	33.1	-30.9	11.2	-57.45	-13	-44.45	0-360	151	V
5.544	-72.05	Pk	34.6	-28.3	10.9	-54.85	-13	-41.85	0-360	151	V
7.395	-74.98	Pk	35.7	-26	10.8	-54.48	-13	-41.48	0-360	151	V
Mid Channel											
3.757	-70.94	Pk	33.5	-30.7	10.4	-57.74	-13	-44.74	0-360	152	H
5.623	-72.41	Pk	34.8	-28.3	10.6	-55.31	-13	-42.31	0-360	152	H
7.491	-75.2	Pk	35.7	-25.6	10.4	-54.7	-13	-41.7	0-360	152	H
3.75	-71.62	Pk	33.5	-30.8	10.8	-58.12	-13	-45.12	0-360	152	V
5.622	-73.44	Pk	34.8	-28.3	10.8	-56.14	-13	-43.14	0-360	152	V
7.514	-74.98	Pk	35.7	-25.4	10.7	-53.98	-13	-40.98	0-360	152	V
High Channel											
3.82	-70.57	Pk	33.7	-30.5	10.1	-57.27	-13	-44.27	0-360	152	H
5.735	-72.38	Pk	35	-28.7	10.4	-55.68	-13	-42.68	0-360	152	H
7.629	-74.09	Pk	35.8	-25.4	10.4	-53.29	-13	-40.29	0-360	152	H
3.806	-70.59	Pk	33.7	-30.9	10.3	-57.49	-13	-44.49	0-360	152	V
5.722	-72.97	Pk	34.9	-28.6	10.4	-56.27	-13	-43.27	0-360	152	V
7.629	-75.3	Pk	35.8	-25.4	10.6	-54.3	-13	-41.3	0-360	152	V

Company:		SOMC									
Project #:		12395502									
Date:		7/23/18									
Test Engineer:		43575									
Configuration:		EUT+ Support Equipment									
Mode:		HSDPA B2									
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											
3.687	-69.81	Pk	33.1	-30.9	11.1	-56.51	-13	-43.51	0-360	152	H
5.552	-73.08	Pk	34.6	-28.2	10.7	-55.98	-13	-42.98	0-360	152	H
7.385	-73.17	Pk	35.7	-26	10.4	-53.07	-13	-40.07	0-360	152	H
3.712	-70.57	Pk	33.2	-31.1	10.8	-57.67	-13	-44.67	0-360	152	V
5.542	-72.63	Pk	34.6	-28.3	10.8	-55.53	-13	-42.53	0-360	152	V
7.398	-74.96	Pk	35.7	-26	10.6	-54.66	-13	-41.66	0-360	152	V
Mid Channel											
3.744	-70.47	Pk	33.4	-30.9	10.5	-57.47	-13	-44.47	0-360	152	H
5.621	-71.86	Pk	34.8	-28.3	10.6	-54.76	-13	-41.76	0-360	152	H
7.527	-73.92	Pk	35.7	-25.4	10.3	-53.32	-13	-40.32	0-360	152	H
3.755	-71.11	Pk	33.5	-30.7	10.8	-57.51	-13	-44.51	0-360	152	V
5.635	-71.95	Pk	34.8	-28.4	10.7	-54.85	-13	-41.85	0-360	152	V
7.522	-73.94	Pk	35.7	-25.4	10.7	-52.94	-13	-39.94	0-360	152	V
High Channel											
3.824	-70.51	Pk	33.7	-30.4	10.2	-57.01	-13	-44.01	0-360	151	H
5.722	-73.53	Pk	34.9	-28.6	10.2	-57.03	-13	-44.03	0-360	151	H
7.621	-74.26	Pk	35.7	-25.5	10.4	-53.66	-13	-40.66	0-360	151	H
3.811	-71.11	Pk	33.7	-30.8	10.3	-57.91	-13	-44.91	0-360	151	V
5.718	-71.86	Pk	34.9	-28.6	10.3	-55.26	-13	-42.26	0-360	151	V
7.624	-74.26	Pk	35.7	-25.5	10.5	-53.56	-13	-40.56	0-360	151	V

Company:	SOMC
Project #:	12395502
Date:	7/24/18
Test Engineer:	43575
Configuration:	EUT+ Support Equipment
Mode:	REL99 B4
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											
3.423	-70.33	Pk	32.9	-31.4	11	-57.83	-13	-44.83	0-360	151	H
5.134	-71.43	Pk	34.4	-29.1	10.1	-56.03	-13	-43.03	0-360	151	H
6.832	-72.97	Pk	35.6	-26.8	10.5	-53.67	-13	-40.67	0-360	151	H
3.42	-70.15	Pk	32.8	-31.5	11.2	-57.65	-13	-44.65	0-360	151	V
5.114	-70.42	Pk	34.4	-29.4	10.8	-54.62	-13	-41.62	0-360	151	V
6.811	-73.48	Pk	35.6	-26.9	10.6	-54.18	-13	-41.18	0-360	151	V
Mid Channel											
3.486	-70.21	Pk	33	-30.9	11	-57.11	-13	-44.11	0-360	152	H
5.189	-72.16	Pk	34.4	-29.2	10.5	-56.46	-13	-43.46	0-360	152	H
6.936	-73.87	Pk	35.7	-26.4	10.4	-54.17	-13	-41.17	0-360	152	H
3.467	-69.83	Pk	32.9	-31.2	10.9	-57.23	-13	-44.23	0-360	152	V
5.21	-72.37	Pk	34.4	-29.1	10.7	-56.37	-13	-43.37	0-360	152	V
6.933	-73.8	Pk	35.7	-26.4	10.5	-54	-13	-41	0-360	152	V
High Channel											
3.496	-70.34	Pk	33	-30.9	11.2	-57.04	-13	-44.04	0-360	151	H
5.253	-72.05	Pk	34.3	-29.3	10.6	-56.45	-13	-43.45	0-360	151	H
7.032	-73.16	Pk	35.7	-26.6	10.2	-53.86	-13	-40.86	0-360	151	H
3.496	-70.34	Pk	33	-30.9	11.2	-57.04	-13	-44.04	0-360	151	H
5.253	-72.05	Pk	34.3	-29.3	10.6	-56.45	-13	-43.45	0-360	151	H
7.032	-73.16	Pk	35.7	-26.6	10.2	-53.86	-13	-40.86	0-360	151	H

Company:	SOMC
Project #:	12395502
Date:	7/24/18
Test Engineer:	43575
Configuration:	EUT+ Support Equipment
Mode:	HSDPA B4
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											
3.43	-70.36	Pk	32.9	-31.5	11	-57.96	-13	-44.96	0-360	151	H
5.144	-71.43	Pk	34.4	-29.2	10.2	-56.03	-13	-43.03	0-360	151	H
6.831	-72.78	Pk	35.6	-26.8	10.5	-53.48	-13	-40.48	0-360	151	H
3.425	-70.2	Pk	32.9	-31.4	11.1	-57.6	-13	-44.6	0-360	151	V
5.135	-71.35	Pk	34.4	-29.2	10.5	-55.65	-13	-42.65	0-360	151	V
6.834	-73.07	Pk	35.6	-26.8	10.6	-53.67	-13	-40.67	0-360	151	V
Mid Channel											
3.46	-70.9	Pk	32.9	-31.3	11	-58.3	-13	-45.3	0-360	152	H
5.201	-72.3	Pk	34.4	-29.1	10.6	-56.4	-13	-43.4	0-360	152	H
6.927	-74.79	Pk	35.7	-26.4	10.4	-55.09	-13	-42.09	0-360	152	H
3.465	-70.89	Pk	32.9	-31.2	10.9	-58.29	-13	-45.29	0-360	152	V
5.195	-72.37	Pk	34.4	-29.1	10.3	-56.77	-13	-43.77	0-360	152	V
6.937	-74.38	Pk	35.7	-26.5	10.6	-54.58	-13	-41.58	0-360	152	V
High Channel											
3.505	-70.22	Pk	33	-31	11.1	-57.12	-13	-44.12	0-360	152	H
5.278	-72.43	Pk	34.4	-28.9	11.1	-55.83	-13	-42.83	0-360	152	H
7.024	-73.16	Pk	35.7	-26.6	10.1	-53.96	-13	-40.96	0-360	152	H
3.496	-70.87	Pk	33	-30.8	11	-57.67	-13	-44.67	0-360	152	V
5.254	-72.66	Pk	34.3	-29.2	10.7	-56.86	-13	-43.86	0-360	152	V
7.007	-73.17	Pk	35.8	-26.4	10.5	-53.27	-13	-40.27	0-360	152	V

9.1.3. LTE BAND 4

Company:	SOMC
Project #:	12395502
Date:	7/25/18
Test Engineer:	43575
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											
3.438	-69.79	Pk	32.9	-31.5	10.8	-57.59	-13	-44.59	0-360	152	H
5.176	-71.94	Pk	34.4	-29.4	10.4	-56.54	-13	-43.54	0-360	152	H
6.879	-73.35	Pk	35.7	-26.8	10.4	-54.05	-13	-41.05	0-360	152	H
3.443	-70.98	Pk	32.9	-31.6	11.1	-58.58	-13	-45.58	0-360	152	V
5.162	-71.1	Pk	34.4	-29.5	10.8	-55.4	-13	-42.4	0-360	152	V
6.887	-73.48	Pk	35.7	-26.9	10.7	-53.98	-13	-40.98	0-360	152	V
Mid Channel											
3.476	-68.76	Pk	33	-31	10.8	-55.96	-13	-42.96	0-360	151	H
5.201	-72.94	Pk	34.4	-29.1	10.6	-57.04	-13	-44.04	0-360	151	H
6.93	-73.55	Pk	35.7	-26.4	10.3	-53.95	-13	-40.95	0-360	151	H
3.461	-70.39	Pk	32.9	-31.3	11	-57.79	-13	-44.79	0-360	151	V
5.203	-71.75	Pk	34.4	-29.1	10.7	-55.75	-13	-42.75	0-360	151	V
6.937	-74.71	Pk	35.7	-26.5	10.6	-54.91	-13	-41.91	0-360	151	V
High Channel											
3.486	-69.55	Pk	33	-30.9	11	-56.45	-13	-43.45	0-360	152	H
5.227	-71.95	Pk	34.3	-29.4	10.6	-56.45	-13	-43.45	0-360	152	H
6.999	-73.89	Pk	35.8	-26.4	10.3	-54.19	-13	-41.19	0-360	152	H
3.491	-70.72	Pk	33	-30.9	11	-57.62	-13	-44.62	0-360	152	V
5.233	-71.84	Pk	34.3	-29.4	10.7	-56.24	-13	-43.24	0-360	152	V
6.982	-73.98	Pk	35.7	-26.5	10.5	-54.28	-13	-41.28	0-360	152	V

Company:	SOMC
Project #:	12395502
Date:	7/25/18
Test Engineer:	43575
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											
3.45	-70.7	Pk	32.9	-31.5	11.1	-58.2	-13	-45.2	0-360	152	H
5.151	-71.63	Pk	34.4	-29.4	10.4	-56.23	-13	-43.23	0-360	152	H
6.88	-74.22	Pk	35.7	-26.8	10.4	-54.92	-13	-41.92	0-360	152	H
3.438	-68.63	Pk	32.9	-31.6	11	-56.33	-13	-43.33	0-360	152	V
5.16	-71.47	Pk	34.4	-29.5	10.7	-55.87	-13	-42.87	0-360	152	V
6.882	-74.25	Pk	35.7	-26.9	10.7	-54.75	-13	-41.75	0-360	152	V
Mid Channel											
3.472	-70.94	Pk	33	-31.1	10.9	-58.14	-13	-45.14	0-360	151	H
5.187	-72.24	Pk	34.4	-29.1	10.5	-56.44	-13	-43.44	0-360	151	H
6.943	-73.31	Pk	35.7	-26.6	10.2	-54.01	-13	-41.01	0-360	151	H
3.464	-70.28	Pk	32.9	-31.2	10.9	-57.68	-13	-44.68	0-360	151	V
5.187	-72.66	Pk	34.4	-29.1	10.6	-56.76	-13	-43.76	0-360	151	V
6.926	-74.59	Pk	35.7	-26.4	10.5	-54.79	-13	-41.79	0-360	151	V
High Channel											
3.494	-69.84	Pk	33	-30.9	11.2	-56.54	-13	-43.54	0-360	151	H
5.244	-72.28	Pk	34.3	-29.4	10.5	-56.88	-13	-43.88	0-360	151	H
6.998	-73.05	Pk	35.8	-26.4	10.3	-53.35	-13	-40.35	0-360	151	H
3.487	-70.98	Pk	33	-30.9	11	-57.88	-13	-44.88	0-360	151	V
5.242	-72.06	Pk	34.3	-29.5	10.6	-56.66	-13	-43.66	0-360	151	V
6.97	-73.89	Pk	35.7	-26.6	10.3	-54.49	-13	-41.49	0-360	151	V

9.1.4. LTE BAND 5

Company:		SOMC									
Project #:		12395502									
Date:		07/25/18									
Test Engineer:		43575									
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											
1.664	-69.2	Pk	28.7	-34.2	10.3	-64.4	-13	-51.4	0-360	150	H
2.478	-69.91	Pk	32.3	-32.8	10.6	-59.81	-13	-46.81	0-360	150	H
3.322	-70.64	Pk	32.9	-31.5	10.9	-58.34	-13	-45.34	0-360	150	H
1.661	-67.01	Pk	28.7	-34.2	10.9	-61.61	-13	-48.61	0-360	150	V
2.482	-69.31	Pk	32.3	-32.7	10.2	-59.51	-13	-46.51	0-360	150	V
3.321	-69.64	Pk	32.9	-31.5	11	-57.24	-13	-44.24	0-360	150	V
Mid Channel											
1.675	-67.7	Pk	28.8	-34.1	9.8	-63.2	-13	-50.2	0-360	150	H
2.518	-68.92	Pk	32.3	-32.7	10.5	-58.82	-13	-45.82	0-360	150	H
3.352	-69.66	Pk	32.9	-31.5	10.5	-57.76	-13	-44.76	0-360	150	H
1.679	-67.1	Pk	28.8	-34.1	11.2	-61.2	-13	-48.2	0-360	150	V
2.507	-69.52	Pk	32.3	-32.7	11.3	-58.62	-13	-45.62	0-360	150	V
3.349	-70.14	Pk	32.9	-31.4	10.7	-57.94	-13	-44.94	0-360	150	V
High Channel											
1.688	-67.35	Pk	28.9	-34.1	10.5	-62.05	-13	-49.05	0-360	150	H
2.524	-69.53	Pk	32.3	-32.6	10.3	-59.53	-13	-46.53	0-360	150	H
3.383	-69.93	Pk	32.8	-31.8	10.9	-58.03	-13	-45.03	0-360	150	H
1.692	-68.13	Pk	28.9	-34.2	11.9	-61.53	-13	-48.53	0-360	150	V
2.531	-69.04	Pk	32.3	-32.6	10.8	-58.54	-13	-45.54	0-360	150	V
3.377	-69.85	Pk	32.8	-31.7	11.1	-57.65	-13	-44.65	0-360	150	V

Company:		SOMC									
Project #:		12395502									
Date:		07/25/18									
Test Engineer:		43575									
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											
1.666	-68.25	Pk	28.8	-34.2	10.2	-63.45	-13	-50.45	0-360	150	H
2.485	-69.71	Pk	32.3	-32.7	10.3	-59.81	-13	-46.81	0-360	150	H
3.315	-69.3	Pk	32.9	-31.5	10.9	-57	-13	-44	0-360	150	H
1.656	-68	Pk	28.7	-34.3	11.1	-62.5	-13	-49.5	0-360	150	V
2.492	-68.48	Pk	32.3	-32.8	10.5	-58.48	-13	-45.48	0-360	150	V
3.313	-70.39	Pk	32.9	-31.5	11.2	-57.79	-13	-44.79	0-360	150	V
Mid Channel											
1.679	-66.98	Pk	28.8	-34.1	9.9	-62.38	-13	-49.38	0-360	150	H
2.507	-69.1	Pk	32.3	-32.7	10	-59.5	-13	-46.5	0-360	150	H
3.341	-70.55	Pk	32.9	-31.4	10.6	-58.45	-13	-45.45	0-360	150	H
1.676	-66.64	Pk	28.8	-34.1	11.3	-60.64	-13	-47.64	0-360	150	V
2.512	-69.53	Pk	32.3	-32.7	11.4	-58.53	-13	-45.53	0-360	150	V
3.35	-69.73	Pk	32.9	-31.5	10.7	-57.63	-13	-44.63	0-360	150	V
High Channel											
1.684	-67.9	Pk	28.9	-34.1	10.2	-62.9	-13	-49.9	0-360	150	H
2.523	-69.17	Pk	32.3	-32.6	10.4	-59.07	-13	-46.07	0-360	150	H
3.37	-69.41	Pk	32.8	-31.7	10.8	-57.51	-13	-44.51	0-360	150	H
1.676	-67.89	Pk	28.8	-34.1	11.3	-61.89	-13	-48.89	0-360	150	V
2.534	-70.28	Pk	32.3	-32.7	10.7	-59.98	-13	-46.98	0-360	150	V
3.379	-69.35	Pk	32.8	-31.7	11.2	-57.05	-13	-44.05	0-360	150	V

9.1.5. LTE BAND 7

Company:	SOMC
Project #:	12395502
Date:	07/25/18
Test Engineer:	43575
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											
5.015	-72.09	Pk	34.4	-29.1	10.4	-56.39	-25	-31.39	0-360	152	H
7.528	-76.14	Pk	35.7	-25.4	10.3	-55.54	-25	-30.54	0-360	152	H
10.03	-78.5	Pk	37.2	-21.8	10.5	-52.6	-25	-27.6	0-360	152	H
5.018	-72.89	Pk	34.4	-29.2	10.5	-57.19	-25	-32.19	0-360	152	V
7.531	-75.37	Pk	35.7	-25.5	10.6	-54.57	-25	-29.57	0-360	152	V
10.035	-77.89	Pk	37.2	-21.8	10.5	-51.99	-25	-26.99	0-360	152	V
Mid Channel											
5.068	-72.74	Pk	34.4	-29.2	10.3	-57.24	-25	-32.24	0-360	152	H
7.612	-73.89	Pk	35.7	-25.5	10.4	-53.29	-25	-28.29	0-360	152	H
10.152	-77.59	Pk	37.4	-21.9	10.6	-51.49	-25	-26.49	0-360	152	H
5.065	-72.79	Pk	34.4	-29.2	10.6	-56.99	-25	-31.99	0-360	152	V
7.602	-75.01	Pk	35.7	-25.5	10.6	-54.21	-25	-29.21	0-360	152	V
10.137	-76.2	Pk	37.3	-22.1	10.5	-50.5	-25	-25.5	0-360	152	V
High Channel											
5.115	-70.63	Pk	34.4	-29.4	10.5	-55.13	-25	-30.13	0-360	152	H
7.67	-74.95	Pk	35.8	-25.3	10.5	-53.95	-25	-28.95	0-360	152	H
10.224	-77.25	Pk	37.5	-21.9	10.5	-51.15	-25	-26.15	0-360	152	H
5.118	-71.83	Pk	34.4	-29.3	10.6	-56.13	-25	-31.13	0-360	152	V
7.674	-76.25	Pk	35.8	-25.3	10.6	-55.15	-25	-30.15	0-360	152	V
10.243	-77.71	Pk	37.5	-21.8	10.6	-51.41	-25	-26.41	0-360	152	V

Company:	SOMC
Project #:	12395502
Date:	07/25/18
Test Engineer:	43575
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											
5.017	-72.24	Pk	34.4	-29.1	10.3	-56.64	-25	-31.64	0-360	152	H
7.517	-75.98	Pk	35.7	-25.4	10.5	-55.18	-25	-30.18	0-360	152	H
10.03	-78.13	Pk	37.2	-21.8	10.5	-52.23	-25	-27.23	0-360	152	H
5.017	-73.86	Pk	34.4	-29.1	10.5	-58.06	-25	-33.06	0-360	152	V
7.537	-76.56	Pk	35.7	-25.5	10.6	-55.76	-25	-30.76	0-360	152	V
10.04	-78.57	Pk	37.2	-21.9	10.6	-52.67	-25	-27.67	0-360	152	V
Mid Channel											
5.066	-72.62	Pk	34.4	-29.2	10.3	-57.12	-25	-32.12	0-360	151	H
7.612	-75.05	Pk	35.7	-25.5	10.4	-54.45	-25	-29.45	0-360	151	H
10.162	-77.41	Pk	37.4	-21.8	10.5	-51.31	-25	-26.31	0-360	151	H
5.068	-73.24	Pk	34.4	-29.2	10.5	-57.54	-25	-32.54	0-360	151	V
7.613	-75.09	Pk	35.7	-25.5	10.6	-54.29	-25	-29.29	0-360	151	V
10.149	-76.75	Pk	37.4	-22	10.7	-50.65	-25	-25.65	0-360	151	V
High Channel											
5.129	-70.82	Pk	34.4	-29.2	10.3	-55.32	-25	-30.32	0-360	151	H
7.683	-74.51	Pk	35.8	-25.4	10.4	-53.71	-25	-28.71	0-360	151	H
10.259	-76.76	Pk	37.5	-22	10.4	-50.86	-25	-25.86	0-360	151	H
5.114	-71.82	Pk	34.4	-29.4	10.8	-56.02	-25	-31.02	0-360	151	V
7.684	-75.44	Pk	35.8	-25.4	10.6	-54.44	-25	-29.44	0-360	151	V
10.241	-78.1	Pk	37.5	-21.8	10.6	-51.8	-25	-26.8	0-360	151	V

9.1.6. LTE BAND 13

Company:	SOMC
Project #:	12395502
Date:	07/25/18
Test Engineer:	43575
Configuration:	EUT+ Support Equipment
Mode:	LTE 13 QPSK 10MHz
Chamber #:	Chamber L

Frequency (GHz)	Meter Reading (dBm)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonic Limit	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.564	-49.83	Pk	28.1	-34.4	11.5	-62.69	-40	-22.69	0-360	150	H
2.346	-66.62	Pk	31.5	-33.1	11	-57.22	-13	-44.22	0-360	150	H
3.123	-69.25	Pk	33.2	-31.8	10.7	-57.15	-13	-44.15	0-360	150	H
1.564	-49.73	Pk	28.1	-34.4	11.6	-62.31	-40	-22.31	0-360	150	V
2.346	-66.34	Pk	31.5	-33.1	11.7	-56.24	-13	-43.24	0-360	150	V
3.129	-69.15	Pk	33.2	-31.7	10.9	-56.75	-13	-43.75	0-360	150	V

Company:	SOMC
Project #:	12395502
Date:	07/25/18
Test Engineer:	43575
Configuration:	EUT+ Support Equipment
Mode:	LTE 13 16QAM 10MHz
Chamber #:	Chamber L

Frequency (GHz)	Meter Reading (dBm)	Det	AF EMC4294 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Amp/Cbl (dB)	Corrected Reading (dBm)	Harmonic Limit	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.564	-49.93	Pk	28.1	-34.4	11.5	-62.66	-40	-22.66	0-360	150	H
2.346	-65.58	Pk	31.5	-33.1	11	-56.18	-13	-43.18	0-360	150	H
3.122	-69.03	Pk	33.2	-31.8	10.7	-56.93	-13	-43.93	0-360	150	H
1.564	-49.86	Pk	28.1	-34.4	11.6	-62.08	-40	-22.08	0-360	150	V
2.346	-64.44	Pk	31.5	-33.1	11.7	-54.34	-13	-41.34	0-360	150	V
3.131	-69.51	Pk	33.1	-31.7	10.9	-57.21	-13	-44.21	0-360	150	V

9.1.7. LTE BAND 17

Company:	SOMC
Project #:	12395502
Date:	07/26/18
Test Engineer:	43575
Configuration:	EUT+ Support Equipment
Mode:	LTE 17 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											
1.411	-67.51	Pk	28.9	-34.7	11	-62.31	-13	-49.31	0-360	150	H
2.12	-67.39	Pk	31.4	-33.2	10.3	-58.89	-13	-45.89	0-360	150	H
2.844	-68.35	Pk	32.4	-32.3	11.3	-56.95	-13	-43.95	0-360	150	H
1.414	-67.59	Pk	28.9	-34.7	12.1	-61.29	-13	-48.29	0-360	150	V
2.132	-67.53	Pk	31.3	-33.4	11.2	-58.43	-13	-45.43	0-360	150	V
2.835	-69.95	Pk	32.5	-32.3	11.4	-58.35	-13	-45.35	0-360	150	V
Mid Channel											
1.424	-68.07	Pk	28.8	-34.7	11	-62.97	-13	-49.97	0-360	150	H
2.129	-67.83	Pk	31.3	-33.3	10.4	-59.43	-13	-46.43	0-360	150	H
2.84	-69.84	Pk	32.4	-32.3	11.3	-58.44	-13	-45.44	0-360	150	H
1.417	-67.85	Pk	28.8	-34.7	12.2	-61.55	-13	-48.55	0-360	150	V
2.129	-68.72	Pk	31.3	-33.3	11.2	-59.52	-13	-46.52	0-360	150	V
2.844	-70.08	Pk	32.4	-32.3	11.4	-58.58	-13	-45.58	0-360	150	V
High Channel											
1.421	-67.64	Pk	28.8	-34.8	11.2	-62.44	-13	-49.44	0-360	150	H
2.138	-68.69	Pk	31.3	-33.4	10.3	-60.49	-13	-47.49	0-360	150	H
2.843	-69.13	Pk	32.4	-32.3	11.3	-57.73	-13	-44.73	0-360	150	H
1.42	-67.11	Pk	28.8	-34.8	12.2	-60.91	-13	-47.91	0-360	150	V
2.138	-69.25	Pk	31.3	-33.4	11.2	-60.15	-13	-47.15	0-360	150	V
2.849	-69.66	Pk	32.4	-32.3	11.5	-58.06	-13	-45.06	0-360	150	V

Company:	SOMC
Project #:	12395502
Date:	07/26/18
Test Engineer:	43575
Configuration:	EUT+ Support Equipment
Mode:	LTE 17 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											
1.408	-67.43	Pk	28.9	-34.6	10.9	-62.23	-13	-49.23	0-360	150	H
2.124	-68.03	Pk	31.3	-33.3	10.2	-59.83	-13	-46.83	0-360	150	H
2.837	-69.65	Pk	32.5	-32.3	11.1	-58.35	-13	-45.35	0-360	150	H
1.42	-68.16	Pk	28.8	-34.8	12.2	-61.96	-13	-48.96	0-360	150	V
2.127	-68.67	Pk	31.3	-33.3	11.2	-59.47	-13	-46.47	0-360	150	V
2.839	-69.5	Pk	32.4	-32.3	11.5	-57.9	-13	-44.9	0-360	150	V
Mid Channel											
1.418	-67.83	Pk	28.8	-34.7	11.2	-62.53	-13	-49.53	0-360	150	H
2.119	-68.85	Pk	31.4	-33.2	10.3	-60.35	-13	-47.35	0-360	150	H
2.849	-70.15	Pk	32.4	-32.3	11.2	-58.85	-13	-45.85	0-360	150	H
1.415	-68.36	Pk	28.9	-34.7	12.1	-62.06	-13	-49.06	0-360	150	V
2.132	-69.53	Pk	31.3	-33.4	11.2	-60.43	-13	-47.43	0-360	150	V
2.838	-68.94	Pk	32.4	-32.3	11.5	-57.34	-13	-44.34	0-360	150	V
High Channel											
1.418	-67.8	Pk	28.8	-34.7	11.2	-62.5	-13	-49.5	0-360	151	H
2.133	-68.48	Pk	31.3	-33.4	10.5	-60.08	-13	-47.08	0-360	151	H
2.846	-69.3	Pk	32.4	-32.3	11.3	-57.9	-13	-44.9	0-360	151	H
1.427	-67	Pk	28.7	-34.7	11.6	-61.4	-13	-48.4	0-360	151	V
2.132	-69.17	Pk	31.3	-33.4	11.2	-60.07	-13	-47.07	0-360	151	V
2.848	-69.22	Pk	32.4	-32.3	11.5	-57.62	-13	-44.62	0-360	151	V

9.1.8. LTE BAND 41

Company:		SOMC										
Project #:		12395502										
Date:		07/26/18										
Test Engineer:		43575										
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												
5.016	-72.13	Pk	34.4	-29.1	10.3	-56.53	-25	-31.53	0-360	152	H	
7.516	-75.05	Pk	35.7	-25.4	10.5	-54.25	-25	-29.25	0-360	152	H	
10.028	-78.58	Pk	37.2	-21.8	10.5	-52.68	-25	-27.68	0-360	152	H	
5.012	-72.43	Pk	34.4	-29	10.7	-56.33	-25	-31.33	0-360	152	V	
7.515	-75.71	Pk	35.7	-25.4	10.8	-54.61	-25	-29.61	0-360	152	V	
10.021	-78.27	Pk	37.2	-21.7	10.6	-52.17	-25	-27.17	0-360	152	V	
Mid Channel												
5.18	-72.04	Pk	34.4	-29.3	10.4	-56.54	-25	-31.54	0-360	152	H	
7.771	-75.35	Pk	35.8	-25.3	10.3	-54.55	-25	-29.55	0-360	152	H	
10.368	-77.74	Pk	37.5	-21.3	10.4	-51.14	-25	-26.14	0-360	152	H	
5.188	-72.81	Pk	34.4	-29.1	10.6	-56.91	-25	-31.91	0-360	152	V	
7.786	-75.61	Pk	35.8	-25.3	10.5	-54.61	-25	-29.61	0-360	152	V	
10.366	-77.16	Pk	37.5	-21.3	10.6	-50.36	-25	-25.36	0-360	152	V	
High Channel												
5.357	-72.63	Pk	34.5	-28.6	10.7	-56.03	-25	-31.03	0-360	152	H	
8.047	-75.85	Pk	35.8	-24.8	10.5	-54.35	-25	-29.35	0-360	152	H	
10.727	-77.5	Pk	37.7	-22	9.8	-52	-25	-27	0-360	152	H	
5.362	-73.63	Pk	34.5	-28.5	10.9	-56.73	-25	-31.73	0-360	152	V	
8.042	-76.02	Pk	35.8	-24.8	10.8	-54.22	-25	-29.22	0-360	152	V	
10.727	-76.76	Pk	37.7	-22	10.1	-50.96	-25	-25.96	0-360	152	V	

Company:		SOMC										
Project #:		12395502										
Date:		07/26/18										
Test Engineer:		43575										
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												
5.009	-72.3	Pk	34.4	-29	10.5	-56.4	-25	-31.4	0-360	152	H	
7.518	-75.67	Pk	35.7	-25.4	10.5	-54.87	-25	-29.87	0-360	152	H	
10.019	-77.44	Pk	37.2	-21.7	10.5	-51.44	-25	-26.44	0-360	152	H	
5.014	-72.64	Pk	34.4	-29.1	10.6	-56.74	-25	-31.74	0-360	152	V	
7.522	-75.82	Pk	35.7	-25.4	10.7	-54.82	-25	-29.82	0-360	152	V	
10.015	-78.15	Pk	37.2	-21.7	10.6	-52.05	-25	-27.05	0-360	152	V	
Mid Channel												
5.183	-72.41	Pk	34.4	-29.2	10.4	-56.81	-25	-31.81	0-360	151	H	
7.792	-75.49	Pk	35.8	-25.2	10.5	-54.39	-25	-29.39	0-360	151	H	
10.354	-77.05	Pk	37.5	-21.6	10.5	-50.65	-25	-25.65	0-360	151	H	
5.182	-71.99	Pk	34.4	-29.3	10.5	-56.39	-25	-31.39	0-360	151	V	
7.785	-74.9	Pk	35.8	-25.3	10.4	-54	-25	-29	0-360	151	V	
10.379	-77.4	Pk	37.5	-21.3	10.4	-50.8	-25	-25.8	0-360	151	V	
High Channel												
5.365	-73.42	Pk	34.5	-28.7	10.6	-57.02	-25	-32.02	0-360	151	H	
8.035	-74.62	Pk	35.8	-24.9	10.5	-53.22	-25	-28.22	0-360	151	H	
10.699	-77.17	Pk	37.6	-21.9	9.9	-51.57	-25	-26.57	0-360	151	H	
5.354	-74.14	Pk	34.5	-28.6	11.1	-57.14	-25	-32.14	0-360	151	V	
8.039	-75.64	Pk	35.8	-24.8	10.7	-53.94	-25	-28.94	0-360	151	V	
10.723	-77.85	Pk	37.7	-22	10.1	-52.05	-25	-27.05	0-360	151	V	