9.1.2. WCDMA

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: Rel99 Band 5 Harmonics

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.4MHz									
1652.80	-27.5	V	3.0	37.0	1.0	-63.5	-13.0	-50.5	
2479.20	-23.5	V	3.0	36.4	1.0	-58.9	-13.0	-45.9	
3305.60	-21.3	V	3.0	36.1	1.0	-56.4	-13.0	-43.4	
1652.80	-27.9	H	3.0	37.0	1.0	-63.9	-13.0	-50.9	
2479.20	-22.8	H	3.0	36.4	1.0	-58.2	-13.0	-45.2	
3305.60	-21.6	H	3.0	36.1	1.0	-56.8	-13.0	-43.8	
Mid Ch, 836.6MHz									
1673.20	-27.5	V	3.0	37.0	1.0	-63.5	-13.0	-50.5	
2509.80	-23.0	V	3.0	36.4	1.0	-58.4	-13.0	-45.4	
3346.40	-20.7	V	3.0	36.1	1.0	-55.9	-13.0	-42.9	
1673.20	-27.7	H	3.0	37.0	1.0	-63.7	-13.0	-50.7	
2509.80	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
3346.40	-21.6	H	3.0	36.1	1.0	-56.7	-13.0	-43.7	
High Ch, 846.6MHz									
1693.20	-27.3	V	3.0	37.0	1.0	-63.3	-13.0	-50.3	
2539.80	-22.5	V	3.0	36.4	1.0	-57.9	-13.0	-44.9	
3386.40	-21.5	V	3.0	36.1	1.0	-56.5	-13.0	-43.5	
1693.20	-27.3	H	3.0	37.0	1.0	-63.3	-13.0	-50.3	
2539.80	-22.3	H	3.0	36.4	1.0	-57.7	-13.0	-44.7	
3386.40	-21.6	H	3.0	36.1	1.0	-56.6	-13.0	-43.6	

WCDMA Band 5 Rel 99

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: HSDPA Band 5 Harmonics

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.4MHz									
1652.80	-27.4	V	3.0	37.0	1.0	-63.4	-13.0	-50.4	
2479.20	-23.4	V	3.0	36.4	1.0	-58.8	-13.0	-45.8	
3305.60	-21.4	V	3.0	36.1	1.0	-56.6	-13.0	-43.6	
1652.80	-27.8	H	3.0	37.0	1.0	-63.8	-13.0	-50.8	
2479.20	-23.0	H	3.0	36.4	1.0	-58.5	-13.0	-45.5	
3305.60	-21.8	H	3.0	36.1	1.0	-57.0	-13.0	-44.0	
Mid Ch, 836.6MHz									
1673.20	-27.5	V	3.0	37.0	1.0	-63.5	-13.0	-50.5	
2509.80	-22.7	V	3.0	36.4	1.0	-58.1	-13.0	-45.1	
3346.40	-20.5	V	3.0	36.1	1.0	-55.6	-13.0	-42.6	
1673.20	-27.7	H	3.0	37.0	1.0	-63.7	-13.0	-50.7	
2509.80	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
3346.40	-21.5	H	3.0	36.1	1.0	-56.6	-13.0	-43.6	
High Ch, 846.6MHz									
1693.20	-27.3	V	3.0	37.0	1.0	-63.3	-13.0	-50.3	
2539.80	-22.4	V	3.0	36.4	1.0	-57.8	-13.0	-44.8	
3386.40	-21.4	V	3.0	36.1	1.0	-56.5	-13.0	-43.5	
1693.20	-27.2	H	3.0	37.0	1.0	-63.2	-13.0	-50.2	
2539.80	-22.3	H	3.0	36.4	1.0	-57.7	-13.0	-44.7	
3386.40	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	

WCDMA Band 5 HSDPA

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9.1.3. LTE BAND 4

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/17/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 4 Harmonics, 1.4MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1710.7MHz									
3421.40	-20.2	V	3.0	36.1	1.0	-55.2	-13.0	-42.2	
5132.10	-16.6	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6842.80	-15.0	V	3.0	35.7	1.0	-49.7	-13.0	-36.7	
3421.40	-19.9	H	3.0	36.1	1.0	-55.0	-13.0	-42.0	
5132.10	-16.6	H	3.0	35.4	1.0	-51.1	-13.0	-38.1	
6842.80	-14.9	H	3.0	35.7	1.0	-49.6	-13.0	-36.6	
Mid Ch, 1732.5MHz									
3465.00	-20.1	V	3.0	36.0	1.0	-55.1	-13.0	-42.1	
5197.50	-16.5	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6930.00	-15.0	V	3.0	35.7	1.0	-49.7	-13.0	-36.7	
3465.00	-19.8	H	3.0	36.0	1.0	-54.9	-13.0	-41.9	
5197.50	-16.8	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
6930.00	-15.1	H	3.0	35.7	1.0	-49.8	-13.0	-36.8	
High Ch, 1754.3MHz									
3508.60	-20.1	V	3.0	36.0	1.0	-55.1	-13.0	-42.1	
5262.90	-16.6	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
7017.20	-15.0	V	3.0	35.7	1.0	-49.7	-13.0	-36.7	
3508.60	-19.8	H	3.0	36.0	1.0	-54.8	-13.0	-41.8	
5262.90	-16.7	H	3.0	35.4	1.0	-51.1	-13.0	-38.1	
7017.20	-14.7	H	3.0	35.7	1.0	-49.3	-13.0	-36.3	

LTE B4 1.4MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/17/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 4 Harmonics, 1.4MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1710.7MHz									
3421.40	-19.9	V	3.0	36.1	1.0	-55.0	-13.0	-42.0	
5132.10	-16.3	V	3.0	35.4	1.0	-50.7	-13.0	-37.7	
6842.80	-15.3	V	3.0	35.7	1.0	-50.0	-13.0	-37.0	
3421.40	-20.0	H	3.0	36.1	1.0	-55.0	-13.0	-42.0	
5132.10	-17.0	H	3.0	35.4	1.0	-51.4	-13.0	-38.4	
6842.80	-15.2	H	3.0	35.7	1.0	-49.9	-13.0	-36.9	
Mid Ch, 1732.5MHz									
3465.00	-20.0	V	3.0	36.0	1.0	-55.0	-13.0	-42.0	
5197.50	-16.9	V	3.0	35.4	1.0	-51.3	-13.0	-38.3	
6930.00	-15.4	V	3.0	35.7	1.0	-50.1	-13.0	-37.1	
3465.00	-20.2	H	3.0	36.0	1.0	-55.2	-13.0	-42.2	
5197.50	-16.7	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
6930.00	-15.2	H	3.0	35.7	1.0	-49.8	-13.0	-36.8	
High Ch, 1754.3MHz									
3508.60	-20.1	V	3.0	36.0	1.0	-55.1	-13.0	-42.1	
5262.90	-16.6	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
7017.20	-15.2	V	3.0	35.7	1.0	-49.9	-13.0	-36.9	
3508.60	-19.7	H	3.0	36.0	1.0	-54.7	-13.0	-41.7	
5262.90	-16.8	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
7017.20	-15.0	H	3.0	35.7	1.0	-49.7	-13.0	-36.7	

LTE B4 1.4MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/17/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 4 Harmonics, 3MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1711.5MHz									
3423.00	-20.2	V	3.0	36.1	1.0	-55.2	-13.0	-42.2	
5134.50	-16.6	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6846.00	-15.2	V	3.0	35.7	1.0	-49.9	-13.0	-36.9	
3423.00	-20.0	H	3.0	36.1	1.0	-55.1	-13.0	-42.1	
5134.50	-16.7	H	3.0	35.4	1.0	-51.1	-13.0	-38.1	
6846.00	-15.0	H	3.0	35.7	1.0	-49.7	-13.0	-36.7	
Mid Ch, 1732.5MHz									
3465.00	-20.1	V	3.0	36.0	1.0	-55.1	-13.0	-42.1	
5197.50	-16.5	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6930.00	-15.0	V	3.0	35.7	1.0	-49.7	-13.0	-36.7	
3465.00	-20.2	H	3.0	36.0	1.0	-55.2	-13.0	-42.2	
5197.50	-16.8	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
6930.00	-15.4	H	3.0	35.7	1.0	-50.1	-13.0	-37.1	
High Ch, 1753.5MHz									
3507.00	-20.3	V	3.0	36.0	1.0	-55.3	-13.0	-42.3	
5260.50	-16.6	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
7014.00	-15.0	V	3.0	35.7	1.0	-49.7	-13.0	-36.7	
3507.00	-20.2	H	3.0	36.0	1.0	-55.2	-13.0	-42.2	
5260.50	-16.9	H	3.0	35.4	1.0	-51.3	-13.0	-38.3	
7014.00	-14.8	H	3.0	35.7	1.0	-49.5	-13.0	-36.5	

LTE B4 3MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/17/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 4 Harmonics, 3MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1711.5MHz									
3423.00	-20.0	V	3.0	36.1	1.0	-55.0	-13.0	-42.0	
5134.50	-16.3	V	3.0	35.4	1.0	-50.7	-13.0	-37.7	
6846.00	-15.4	V	3.0	35.7	1.0	-50.1	-13.0	-37.1	
3423.00	-20.0	H	3.0	36.1	1.0	-55.0	-13.0	-42.0	
5134.50	-17.0	H	3.0	35.4	1.0	-51.4	-13.0	-38.4	
6846.00	-15.3	H	3.0	35.7	1.0	-49.9	-13.0	-36.9	
Mid Ch, 1732.5MHz									
3465.00	-20.0	V	3.0	36.0	1.0	-55.0	-13.0	-42.0	
5197.50	-16.7	V	3.0	35.4	1.0	-51.1	-13.0	-38.1	
6930.00	-15.4	V	3.0	35.7	1.0	-50.1	-13.0	-37.1	
3465.00	-20.3	H	3.0	36.0	1.0	-55.4	-13.0	-42.4	
5197.50	-16.7	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
6930.00	-15.2	H	3.0	35.7	1.0	-49.8	-13.0	-36.8	
High Ch, 1753.5MHz									
3507.00	-20.1	V	3.0	36.0	1.0	-55.1	-13.0	-42.1	
5260.50	-16.5	V	3.0	35.4	1.0	-50.9	-13.0	-37.9	
7014.00	-15.3	V	3.0	35.7	1.0	-49.9	-13.0	-36.9	
3507.00	-19.7	H	3.0	36.0	1.0	-54.7	-13.0	-41.7	
5260.50	-16.8	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
7014.00	-15.0	H	3.0	35.7	1.0	-49.7	-13.0	-36.7	

LTE B4 3MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/17/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 4 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1712.5MHz									
3425.00	-20.3	V	3.0	36.1	1.0	-55.4	-13.0	-42.4	
5137.50	-16.9	V	3.0	35.4	1.0	-51.4	-13.0	-38.4	
6850.00	-15.2	V	3.0	35.7	1.0	-49.9	-13.0	-36.9	
3425.00	-20.0	H	3.0	36.1	1.0	-55.1	-13.0	-42.1	
5137.50	-16.7	H	3.0	35.4	1.0	-51.1	-13.0	-38.1	
6850.00	-15.0	H	3.0	35.7	1.0	-49.7	-13.0	-36.7	
Mid Ch, 1732.5MHz									
3465.00	-20.1	V	3.0	36.0	1.0	-55.1	-13.0	-42.1	
5197.50	-16.5	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6930.00	-15.0	V	3.0	35.7	1.0	-49.7	-13.0	-36.7	
3465.00	-20.2	H	3.0	36.0	1.0	-55.2	-13.0	-42.2	
5197.50	-16.8	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
6930.00	-15.4	H	3.0	35.7	1.0	-50.0	-13.0	-37.0	
High Ch, 1752.5MHz									
3505.00	-20.3	V	3.0	36.0	1.0	-55.3	-13.0	-42.3	
5257.50	-16.6	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
7010.00	-15.0	V	3.0	35.7	1.0	-49.7	-13.0	-36.7	
3505.00	-20.2	H	3.0	36.0	1.0	-55.2	-13.0	-42.2	
5257.50	-16.9	H	3.0	35.4	1.0	-51.4	-13.0	-38.4	
7010.00	-14.8	H	3.0	35.7	1.0	-49.5	-13.0	-36.5	

LTE B4 5MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/17/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 4 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1712.5MHz									
3425.00	-20.1	V	3.0	36.1	1.0	-55.2	-13.0	-42.2	
5137.50	-16.3	V	3.0	35.4	1.0	-50.7	-13.0	-37.7	
6850.00	-15.4	V	3.0	35.7	1.0	-50.0	-13.0	-37.0	
3425.00	-20.0	H	3.0	36.1	1.0	-55.1	-13.0	-42.1	
5137.50	-17.1	H	3.0	35.4	1.0	-51.5	-13.0	-38.5	
6850.00	-15.5	H	3.0	35.7	1.0	-50.1	-13.0	-37.1	
Mid Ch, 1732.5MHz									
3465.00	-20.1	V	3.0	36.0	1.0	-55.2	-13.0	-42.2	
5197.50	-16.9	V	3.0	35.4	1.0	-51.3	-13.0	-38.3	
6930.00	-15.4	V	3.0	35.7	1.0	-50.1	-13.0	-37.1	
3465.00	-20.2	H	3.0	36.0	1.0	-55.2	-13.0	-42.2	
5197.50	-17.2	H	3.0	35.4	1.0	-51.6	-13.0	-38.6	
6930.00	-15.4	H	3.0	35.7	1.0	-50.0	-13.0	-37.0	
High Ch, 1752.5MHz									
3505.00	-20.1	V	3.0	36.0	1.0	-55.1	-13.0	-42.1	
5257.50	-16.6	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
7010.00	-15.2	V	3.0	35.7	1.0	-49.9	-13.0	-36.9	
3505.00	-20.0	H	3.0	36.0	1.0	-55.0	-13.0	-42.0	
5257.50	-16.7	H	3.0	35.4	1.0	-51.1	-13.0	-38.1	
7010.00	-15.4	H	3.0	35.7	1.0	-50.1	-13.0	-37.1	

LTE B4 5MHz QPSK

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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/17/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 4 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1715MHz									
3430.00	-20.0	V	3.0	36.1	1.0	-55.1	-13.0	-42.1	
5145.00	-16.9	V	3.0	35.4	1.0	-51.3	-13.0	-38.3	
6860.00	-15.0	V	3.0	35.7	1.0	-49.7	-13.0	-36.7	
3430.00	-20.1	H	3.0	36.1	1.0	-55.2	-13.0	-42.2	
5145.00	-16.6	H	3.0	35.4	1.0	-51.1	-13.0	-38.1	
6860.00	-15.0	H	3.0	35.7	1.0	-49.7	-13.0	-36.7	
Mid Ch, 1732.5MHz									
3465.00	-19.9	V	3.0	36.0	1.0	-55.0	-13.0	-42.0	
5197.50	-16.7	V	3.0	35.4	1.0	-51.2	-13.0	-38.2	
6930.00	-15.2	V	3.0	35.7	1.0	-49.9	-13.0	-36.9	
3465.00	-20.2	H	3.0	36.0	1.0	-55.2	-13.0	-42.2	
5197.50	-17.0	H	3.0	35.4	1.0	-51.4	-13.0	-38.4	
6930.00	-15.3	H	3.0	35.7	1.0	-50.0	-13.0	-37.0	
High Ch, 1750MHz									
3500.00	-20.1	V	3.0	36.0	1.0	-55.1	-13.0	-42.1	
5250.00	-16.6	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
7000.00	-15.1	V	3.0	35.7	1.0	-49.7	-13.0	-36.7	
3500.00	-19.7	H	3.0	36.0	1.0	-54.7	-13.0	-41.7	
5250.00	-17.0	H	3.0	35.4	1.0	-51.4	-13.0	-38.4	
7000.00	-14.6	H	3.0	35.7	1.0	-49.3	-13.0	-36.3	

LTE B4 10MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/17/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 4 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1715MHz									
3430.00	-20.1	V	3.0	36.1	1.0	-55.2	-13.0	-42.2	
5145.00	-17.0	V	3.0	35.4	1.0	-51.5	-13.0	-38.5	
6860.00	-15.6	V	3.0	35.7	1.0	-50.3	-13.0	-37.3	
3430.00	-20.5	H	3.0	36.1	1.0	-55.6	-13.0	-42.6	
5145.00	-17.0	H	3.0	35.4	1.0	-51.4	-13.0	-38.4	
6860.00	-15.5	H	3.0	35.7	1.0	-50.1	-13.0	-37.1	
Mid Ch, 1732.5MHz									
3465.00	-20.2	V	3.0	36.0	1.0	-55.3	-13.0	-42.3	
5197.50	-17.1	V	3.0	35.4	1.0	-51.5	-13.0	-38.5	
6930.00	-15.1	V	3.0	35.7	1.0	-49.8	-13.0	-36.8	
3465.00	-20.1	H	3.0	36.0	1.0	-55.1	-13.0	-42.1	
5197.50	-17.2	H	3.0	35.4	1.0	-51.6	-13.0	-38.6	
6930.00	-15.6	H	3.0	35.7	1.0	-50.3	-13.0	-37.3	
High Ch, 1750MHz									
3500.00	-20.3	V	3.0	36.0	1.0	-55.3	-13.0	-42.3	
5250.00	-16.6	V	3.0	35.4	1.0	-51.1	-13.0	-38.1	
7000.00	-15.4	V	3.0	35.7	1.0	-50.1	-13.0	-37.1	
3500.00	-20.1	H	3.0	36.0	1.0	-55.1	-13.0	-42.1	
5250.00	-17.1	H	3.0	35.4	1.0	-51.5	-13.0	-38.5	
7000.00	-15.2	H	3.0	35.7	1.0	-49.8	-13.0	-36.8	

LTE B4 10MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/17/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 4 Harmonics, 15MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1717.5MHz									
3435.00	-20.4	V	3.0	36.1	1.0	-55.5	-13.0	-42.5	
5152.50	-16.7	V	3.0	35.4	1.0	-51.1	-13.0	-38.1	
6870.00	-15.3	V	3.0	35.7	1.0	-50.0	-13.0	-37.0	
3435.00	-20.1	H	3.0	36.1	1.0	-55.2	-13.0	-42.2	
5152.50	-16.6	H	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6870.00	-15.4	H	3.0	35.7	1.0	-50.1	-13.0	-37.1	
Mid Ch, 1732.5MHz									
3465.00	-20.3	V	3.0	36.0	1.0	-55.3	-13.0	-42.3	
5197.50	-16.7	V	3.0	35.4	1.0	-51.2	-13.0	-38.2	
6930.00	-15.2	V	3.0	35.7	1.0	-49.9	-13.0	-36.9	
3465.00	-20.3	H	3.0	36.0	1.0	-55.3	-13.0	-42.3	
5197.50	-17.1	H	3.0	35.4	1.0	-51.5	-13.0	-38.5	
6930.00	-15.4	H	3.0	35.7	1.0	-50.1	-13.0	-37.1	
High Ch, 1747.5MHz									
3495.00	-20.1	V	3.0	36.0	1.0	-55.2	-13.0	-42.2	
5242.50	-16.6	V	3.0	35.4	1.0	-51.1	-13.0	-38.1	
6990.00	-15.6	V	3.0	35.7	1.0	-50.3	-13.0	-37.3	
3495.00	-19.7	H	3.0	36.0	1.0	-54.7	-13.0	-41.7	
5242.50	-17.0	H	3.0	35.4	1.0	-51.4	-13.0	-38.4	
6990.00	-14.6	H	3.0	35.7	1.0	-49.3	-13.0	-36.3	

LTE B4 15MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/17/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 4 Harmonics, 15MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1717.5MHz									
3435.00	-20.2	V	3.0	36.1	1.0	-55.3	-13.0	-42.3	
5152.50	-17.1	V	3.0	35.4	1.0	-51.5	-13.0	-38.5	
6870.00	-15.5	V	3.0	35.7	1.0	-50.2	-13.0	-37.2	
3435.00	-20.1	H	3.0	36.1	1.0	-55.2	-13.0	-42.2	
5152.50	-16.6	H	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6870.00	-15.6	H	3.0	35.7	1.0	-50.3	-13.0	-37.3	
Mid Ch, 1732.5MHz									
3465.00	-20.1	V	3.0	36.0	1.0	-55.1	-13.0	-42.1	
5197.50	-17.1	V	3.0	35.4	1.0	-51.5	-13.0	-38.5	
6930.00	-15.2	V	3.0	35.7	1.0	-49.9	-13.0	-36.9	
3465.00	-20.3	H	3.0	36.0	1.0	-55.3	-13.0	-42.3	
5197.50	-17.1	H	3.0	35.4	1.0	-51.5	-13.0	-38.5	
6930.00	-15.5	H	3.0	35.7	1.0	-50.2	-13.0	-37.2	
High Ch, 1747.5MHz									
3495.00	-20.4	V	3.0	36.0	1.0	-55.4	-13.0	-42.4	
5242.50	-16.8	V	3.0	35.4	1.0	-51.3	-13.0	-38.3	
6990.00	-15.6	V	3.0	35.7	1.0	-50.3	-13.0	-37.3	
3495.00	-19.7	H	3.0	36.0	1.0	-54.7	-13.0	-41.7	
5242.50	-17.0	H	3.0	35.4	1.0	-51.4	-13.0	-38.4	
6990.00	-15.2	H	3.0	35.7	1.0	-49.9	-13.0	-36.9	

LTE B4 15MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/17/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 4 Harmonics, 20MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1720MHz									
3440.00	-20.1	V	3.0	36.0	1.0	-55.2	-13.0	-42.2	
5160.00	-16.5	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6880.00	-15.1	V	3.0	35.7	1.0	-49.8	-13.0	-36.8	
3440.00	-19.8	H	3.0	36.0	1.0	-54.9	-13.0	-41.9	
5160.00	-16.6	H	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6880.00	-15.3	H	3.0	35.7	1.0	-50.0	-13.0	-37.0	
Mid Ch, 1732.5MHz									
3465.00	-20.2	V	3.0	36.0	1.0	-55.3	-13.0	-42.3	
5197.50	-16.5	V	3.0	35.4	1.0	-50.9	-13.0	-37.9	
6930.00	-15.1	V	3.0	35.7	1.0	-49.8	-13.0	-36.8	
3465.00	-20.0	H	3.0	36.0	1.0	-55.0	-13.0	-42.0	
5197.50	-17.0	H	3.0	35.4	1.0	-51.4	-13.0	-38.4	
6930.00	-15.1	H	3.0	35.7	1.0	-49.8	-13.0	-36.8	
High Ch, 1745MHz									
3490.00	-19.9	V	3.0	36.0	1.0	-54.9	-13.0	-41.9	
5235.00	-16.6	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6980.00	-15.5	V	3.0	35.7	1.0	-50.1	-13.0	-37.1	
3490.00	-19.8	H	3.0	36.0	1.0	-54.8	-13.0	-41.8	
5235.00	-16.6	H	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6980.00	-14.4	H	3.0	35.7	1.0	-49.0	-13.0	-36.0	

LTE B4 20MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/17/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 4 Harmonics, 20MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1720MHz									
3440.00	-20.5	V	3.0	36.0	1.0	-55.6	-13.0	-42.6	
5160.00	-16.9	V	3.0	35.4	1.0	-51.3	-13.0	-38.3	
6880.00	-15.0	V	3.0	35.7	1.0	-49.7	-13.0	-36.7	
3440.00	-19.6	H	3.0	36.0	1.0	-54.7	-13.0	-41.7	
5160.00	-16.9	H	3.0	35.4	1.0	-51.3	-13.0	-38.3	
6880.00	-15.6	H	3.0	35.7	1.0	-50.3	-13.0	-37.3	
Mid Ch, 1732.5MHz									
3465.00	-20.0	V	3.0	36.0	1.0	-55.0	-13.0	-42.0	
5197.50	-16.9	V	3.0	35.4	1.0	-51.4	-13.0	-38.4	
6930.00	-14.9	V	3.0	35.7	1.0	-49.6	-13.0	-36.6	
3465.00	-19.8	H	3.0	36.0	1.0	-54.9	-13.0	-41.9	
5197.50	-17.2	H	3.0	35.4	1.0	-51.6	-13.0	-38.6	
6930.00	-15.4	H	3.0	35.7	1.0	-50.0	-13.0	-37.0	
High Ch, 1745MHz									
3490.00	-20.0	V	3.0	36.0	1.0	-55.0	-13.0	-42.0	
5235.00	-16.5	V	3.0	35.4	1.0	-50.9	-13.0	-37.9	
6980.00	-15.4	V	3.0	35.7	1.0	-50.0	-13.0	-37.0	
3490.00	-20.0	H	3.0	36.0	1.0	-55.0	-13.0	-42.0	
5235.00	-16.6	H	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6980.00	-14.7	H	3.0	35.7	1.0	-49.4	-13.0	-36.4	

LTE B4 20MHz 16QAM

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9.1.4. LTE BAND 5

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 5 Harmonics, 1.4MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7MHz									
1649.40	-28.7	V	3.0	37.0	1.0	-64.7	-13.0	-51.7	
2474.10	-23.6	V	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3298.80	-21.6	V	3.0	36.2	1.0	-56.7	-13.0	-43.7	
1649.40	-28.0	H	3.0	37.0	1.0	-64.0	-13.0	-51.0	
2474.10	-24.0	H	3.0	36.4	1.0	-59.5	-13.0	-46.5	
3298.80	-21.7	H	3.0	36.2	1.0	-56.8	-13.0	-43.8	
Mid Ch, 836.5MHz									
1673.00	-28.2	V	3.0	37.0	1.0	-64.2	-13.0	-51.2	
2509.50	-23.4	V	3.0	36.4	1.0	-58.8	-13.0	-45.8	
3346.00	-21.3	V	3.0	36.1	1.0	-56.4	-13.0	-43.4	
1673.00	-27.6	H	3.0	37.0	1.0	-63.6	-13.0	-50.6	
2509.50	-23.9	H	3.0	36.4	1.0	-59.3	-13.0	-46.3	
3346.00	-21.6	H	3.0	36.1	1.0	-56.8	-13.0	-43.8	
High Ch, 848.3MHz									
1696.60	-28.1	V	3.0	37.0	1.0	-64.1	-13.0	-51.1	
2544.90	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3393.20	-21.2	V	3.0	36.1	1.0	-56.3	-13.0	-43.3	
1696.60	-27.2	H	3.0	37.0	1.0	-63.2	-13.0	-50.2	
2544.90	-23.9	H	3.0	36.4	1.0	-59.3	-13.0	-46.3	
3393.20	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	

LTE B5 1.4MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 5 Harmonics, 1.4MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7MHz									
1649.40	-28.7	V	3.0	37.0	1.0	-64.8	-13.0	-51.8	
2474.10	-23.7	V	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3298.80	-21.5	V	3.0	36.2	1.0	-56.7	-13.0	-43.7	
1649.40	-27.9	H	3.0	37.0	1.0	-64.0	-13.0	-51.0	
2474.10	-24.1	H	3.0	36.4	1.0	-59.5	-13.0	-46.5	
3298.80	-21.8	H	3.0	36.2	1.0	-56.9	-13.0	-43.9	
Mid Ch, 836.5MHz									
1673.00	-28.4	V	3.0	37.0	1.0	-64.4	-13.0	-51.4	
2509.50	-23.5	V	3.0	36.4	1.0	-58.9	-13.0	-45.9	
3346.00	-21.7	V	3.0	36.1	1.0	-56.9	-13.0	-43.9	
1673.00	-27.5	H	3.0	37.0	1.0	-63.5	-13.0	-50.5	
2509.50	-23.7	H	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3346.00	-21.6	H	3.0	36.1	1.0	-56.7	-13.0	-43.7	
High Ch, 848.3MHz									
1696.60	-28.1	V	3.0	37.0	1.0	-64.1	-13.0	-51.1	
2544.90	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3393.20	-21.4	V	3.0	36.1	1.0	-56.5	-13.0	-43.5	
1696.60	-27.1	H	3.0	37.0	1.0	-63.1	-13.0	-50.1	
2544.90	-23.9	H	3.0	36.4	1.0	-59.3	-13.0	-46.3	
3393.20	-21.5	H	3.0	36.1	1.0	-56.6	-13.0	-43.6	

LTE B5 1.4MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 5 Harmonics, 3MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 825.5MHz									
1651.00	-28.7	V	3.0	37.0	1.0	-64.7	-13.0	-51.7	
2476.50	-23.7	V	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3302.00	-21.2	V	3.0	36.2	1.0	-56.4	-13.0	-43.4	
1651.00	-27.8	H	3.0	37.0	1.0	-63.9	-13.0	-50.9	
2476.50	-23.8	H	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3302.00	-21.5	H	3.0	36.2	1.0	-56.7	-13.0	-43.7	
Mid Ch, 836.5MHz									
1673.00	-27.8	V	3.0	37.0	1.0	-63.8	-13.0	-50.8	
2509.50	-23.5	V	3.0	36.4	1.0	-58.9	-13.0	-45.9	
3346.00	-21.5	V	3.0	36.1	1.0	-56.7	-13.0	-43.7	
1673.00	-27.6	H	3.0	37.0	1.0	-63.6	-13.0	-50.6	
2509.50	-23.9	H	3.0	36.4	1.0	-59.3	-13.0	-46.3	
3346.00	-21.6	H	3.0	36.1	1.0	-56.7	-13.0	-43.7	
High Ch, 847.5MHz									
1695.00	-28.1	V	3.0	37.0	1.0	-64.0	-13.0	-51.0	
2542.50	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3390.00	-21.4	V	3.0	36.1	1.0	-56.5	-13.0	-43.5	
1695.00	-26.9	H	3.0	37.0	1.0	-62.9	-13.0	-49.9	
2542.50	-23.9	H	3.0	36.4	1.0	-59.3	-13.0	-46.3	
3390.00	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	

LTE B5 3MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 5 Harmonics, 3MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 825.5MHz									
1651.00	-28.7	V	3.0	37.0	1.0	-64.7	-13.0	-51.7	
2476.50	-23.7	V	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3302.00	-21.5	V	3.0	36.2	1.0	-56.7	-13.0	-43.7	
1651.00	-27.8	H	3.0	37.0	1.0	-63.9	-13.0	-50.9	
2476.50	-23.7	H	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3302.00	-21.2	H	3.0	36.2	1.0	-56.4	-13.0	-43.4	
Mid Ch, 836.5MHz									
1673.00	-27.5	V	3.0	37.0	1.0	-63.5	-13.0	-50.5	
2509.50	-23.7	V	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3346.00	-21.2	V	3.0	36.1	1.0	-56.4	-13.0	-43.4	
1673.00	-27.6	H	3.0	37.0	1.0	-63.6	-13.0	-50.6	
2509.50	-23.9	H	3.0	36.4	1.0	-59.3	-13.0	-46.3	
3346.00	-21.7	H	3.0	36.1	1.0	-56.8	-13.0	-43.8	
High Ch, 847.5MHz									
1695.00	-28.1	V	3.0	37.0	1.0	-64.1	-13.0	-51.1	
2542.50	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3390.00	-21.5	V	3.0	36.1	1.0	-56.6	-13.0	-43.6	
1695.00	-26.9	H	3.0	37.0	1.0	-62.9	-13.0	-49.9	
2542.50	-23.7	H	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3390.00	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	

LTE B5 3MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 5 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.5MHz									
1653.00	-28.4	V	3.0	37.0	1.0	-64.5	-13.0	-51.5	
2479.50	-23.8	V	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3306.00	-21.3	V	3.0	36.1	1.0	-56.5	-13.0	-43.5	
1653.00	-27.9	H	3.0	37.0	1.0	-63.9	-13.0	-50.9	
2479.50	-23.8	H	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3306.00	-22.2	H	3.0	36.1	1.0	-57.4	-13.0	-44.4	
Mid Ch, 836.5MHz									
1673.00	-27.7	V	3.0	37.0	1.0	-63.7	-13.0	-50.7	
2509.50	-23.1	V	3.0	36.4	1.0	-58.5	-13.0	-45.5	
3346.00	-21.3	V	3.0	36.1	1.0	-56.4	-13.0	-43.4	
1673.00	-27.5	H	3.0	37.0	1.0	-63.5	-13.0	-50.5	
2509.50	-23.7	H	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3346.00	-21.7	H	3.0	36.1	1.0	-56.8	-13.0	-43.8	
High Ch, 846.5MHz									
1693.00	-28.3	V	3.0	37.0	1.0	-64.3	-13.0	-51.3	
2539.50	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3386.00	-21.5	V	3.0	36.1	1.0	-56.6	-13.0	-43.6	
1693.00	-26.9	H	3.0	37.0	1.0	-62.9	-13.0	-49.9	
2539.50	-23.8	H	3.0	36.4	1.0	-59.3	-13.0	-46.3	
3386.00	-21.5	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	

LTE B5 5MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 5 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.5MHz									
1653.00	-28.6	V	3.0	37.0	1.0	-64.7	-13.0	-51.7	
2479.50	-23.8	V	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3306.00	-21.3	V	3.0	36.1	1.0	-56.5	-13.0	-43.5	
1653.00	-27.8	H	3.0	37.0	1.0	-63.9	-13.0	-50.9	
2479.50	-23.8	H	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3306.00	-22.4	H	3.0	36.1	1.0	-57.6	-13.0	-44.6	
Mid Ch, 836.5MHz									
1673.00	-27.8	V	3.0	37.0	1.0	-63.8	-13.0	-50.8	
2509.50	-23.0	V	3.0	36.4	1.0	-58.4	-13.0	-45.4	
3346.00	-21.7	V	3.0	36.1	1.0	-56.9	-13.0	-43.9	
1673.00	-27.6	H	3.0	37.0	1.0	-63.6	-13.0	-50.6	
2509.50	-23.7	H	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3346.00	-21.7	H	3.0	36.1	1.0	-56.8	-13.0	-43.8	
High Ch, 846.5MHz									
1693.00	-28.3	V	3.0	37.0	1.0	-64.3	-13.0	-51.3	
2539.50	-23.3	V	3.0	36.4	1.0	-58.8	-13.0	-45.8	
3386.00	-21.5	V	3.0	36.1	1.0	-56.5	-13.0	-43.5	
1693.00	-27.0	H	3.0	37.0	1.0	-62.9	-13.0	-49.9	
2539.50	-23.9	H	3.0	36.4	1.0	-59.3	-13.0	-46.3	
3386.00	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	

LTE B5 5MHz 16QAM

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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 5 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 829MHz									
1658.00	-28.3	V	3.0	37.0	1.0	-64.3	-13.0	-51.3	
2487.00	-23.6	V	3.0	36.4	1.0	-59.0	-13.0	-46.0	
3316.00	-21.3	V	3.0	36.1	1.0	-56.5	-13.0	-43.5	
1658.00	-27.7	H	3.0	37.0	1.0	-63.7	-13.0	-50.7	
2487.00	-23.7	H	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3316.00	-22.4	H	3.0	36.1	1.0	-57.5	-13.0	-44.5	
Mid Ch, 836.5MHz									
1673.00	-27.6	V	3.0	37.0	1.0	-63.6	-13.0	-50.6	
2509.50	-23.0	V	3.0	36.4	1.0	-58.4	-13.0	-45.4	
3346.00	-21.7	V	3.0	36.1	1.0	-56.8	-13.0	-43.8	
1673.00	-27.5	H	3.0	37.0	1.0	-63.5	-13.0	-50.5	
2509.50	-23.7	H	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3346.00	-21.6	H	3.0	36.1	1.0	-56.7	-13.0	-43.7	
High Ch, 844MHz									
1688.00	-28.3	V	3.0	37.0	1.0	-64.3	-13.0	-51.3	
2532.00	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3376.00	-21.4	V	3.0	36.1	1.0	-56.5	-13.0	-43.5	
1688.00	-27.0	H	3.0	37.0	1.0	-62.9	-13.0	-49.9	
2532.00	-23.8	H	3.0	36.4	1.0	-59.3	-13.0	-46.3	
3376.00	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	

LTE B5 10MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 5 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 829MHz									
1658.00	-28.5	V	3.0	37.0	1.0	-64.5	-13.0	-51.5	
2487.00	-23.8	V	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3316.00	-21.3	V	3.0	36.1	1.0	-56.4	-13.0	-43.4	
1658.00	-27.8	H	3.0	37.0	1.0	-63.8	-13.0	-50.8	
2487.00	-23.8	H	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3316.00	-22.6	H	3.0	36.1	1.0	-57.7	-13.0	-44.7	
Mid Ch, 836.5MHz									
1673.00	-27.7	V	3.0	37.0	1.0	-63.7	-13.0	-50.7	
2509.50	-23.4	V	3.0	36.4	1.0	-58.8	-13.0	-45.8	
3346.00	-21.6	V	3.0	36.1	1.0	-56.8	-13.0	-43.8	
1673.00	-27.4	H	3.0	37.0	1.0	-63.4	-13.0	-50.4	
2509.50	-23.6	H	3.0	36.4	1.0	-59.0	-13.0	-46.0	
3346.00	-21.3	H	3.0	36.1	1.0	-56.4	-13.0	-43.4	
High Ch, 844MHz									
1688.00	-28.1	V	3.0	37.0	1.0	-64.0	-13.0	-51.0	
2532.00	-23.8	V	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3376.00	-21.5	V	3.0	36.1	1.0	-56.6	-13.0	-43.6	
1688.00	-27.1	H	3.0	37.0	1.0	-63.0	-13.0	-50.0	
2532.00	-23.8	H	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3376.00	-21.6	H	3.0	36.1	1.0	-56.7	-13.0	-43.7	

LTE B5 10MHz 16QAM

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9.1.5. LTE BAND 7

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 7 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2502.5MHz									
5005.00	-17.3	V	3.0	35.5	1.0	-51.8	-25.0	-26.8	
7507.50	-14.2	V	3.0	35.7	1.0	-49.0	-25.0	-24.0	
10010.00	-11.4	V	3.0	36.0	1.0	-46.4	-25.0	-21.4	
5005.00	-17.6	H	3.0	35.5	1.0	-52.0	-25.0	-27.0	
7507.50	-14.9	H	3.0	35.7	1.0	-49.7	-25.0	-24.7	
10010.00	-11.7	H	3.0	36.0	1.0	-46.7	-25.0	-21.7	
Mid Ch, 2535MHz									
5070.00	-16.8	V	3.0	35.4	1.0	-51.3	-25.0	-26.3	
7605.00	-13.8	V	3.0	35.8	1.0	-48.6	-25.0	-23.6	
10140.00	-11.2	V	3.0	36.0	1.0	-46.2	-25.0	-21.2	
5070.00	-17.0	H	3.0	35.4	1.0	-51.4	-25.0	-26.4	
7605.00	-14.8	H	3.0	35.8	1.0	-49.5	-25.0	-24.5	
10140.00	-11.5	H	3.0	36.0	1.0	-46.4	-25.0	-21.4	
High Ch, 2567.5MHz									
5135.00	-17.0	V	3.0	35.4	1.0	-51.5	-25.0	-26.5	
7702.50	-13.9	V	3.0	35.8	1.0	-48.7	-25.0	-23.7	
10270.00	-11.1	V	3.0	35.9	1.0	-46.0	-25.0	-21.0	
5135.00	-16.9	H	3.0	35.4	1.0	-51.3	-25.0	-26.3	
7702.50	-14.6	H	3.0	35.8	1.0	-49.3	-25.0	-24.3	
10270.00	-11.4	H	3.0	35.9	1.0	-46.3	-25.0	-21.3	

LTE B7 5MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 7 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2502.5MHz									
5005.00	-17.6	V	3.0	35.5	1.0	-52.0	-25.0	-27.0	
7507.50	-14.3	V	3.0	35.7	1.0	-49.0	-25.0	-24.0	
10010.00	-11.3	V	3.0	36.0	1.0	-46.3	-25.0	-21.3	
5005.00	-17.6	H	3.0	35.5	1.0	-52.0	-25.0	-27.0	
7507.50	-14.8	H	3.0	35.7	1.0	-49.6	-25.0	-24.6	
10010.00	-11.7	H	3.0	36.0	1.0	-46.7	-25.0	-21.7	
Mid Ch, 2535MHz									
5070.00	-16.9	V	3.0	35.4	1.0	-51.3	-25.0	-26.3	
7605.00	-13.9	V	3.0	35.8	1.0	-48.6	-25.0	-23.6	
10140.00	-11.2	V	3.0	36.0	1.0	-46.2	-25.0	-21.2	
5070.00	-16.9	H	3.0	35.4	1.0	-51.3	-25.0	-26.3	
7605.00	-14.8	H	3.0	35.8	1.0	-49.5	-25.0	-24.5	
10140.00	-11.5	H	3.0	36.0	1.0	-46.5	-25.0	-21.5	
High Ch, 2567.5MHz									
5135.00	-16.5	V	3.0	35.4	1.0	-50.9	-25.0	-25.9	
7702.50	-14.3	V	3.0	35.8	1.0	-49.1	-25.0	-24.1	
10270.00	-11.0	V	3.0	35.9	1.0	-45.9	-25.0	-20.9	
5135.00	-17.3	H	3.0	35.4	1.0	-51.7	-25.0	-26.7	
7702.50	-14.6	H	3.0	35.8	1.0	-49.4	-25.0	-24.4	
10270.00	-11.4	H	3.0	35.9	1.0	-46.3	-25.0	-21.3	

LTE B7 5MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 7 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2505MHz									
5010.00	-17.2	V	3.0	35.5	1.0	-51.7	-25.0	-26.7	
7515.00	-14.3	V	3.0	35.7	1.0	-49.0	-25.0	-24.0	
10020.00	-11.4	V	3.0	36.0	1.0	-46.4	-25.0	-21.4	
5010.00	-17.6	H	3.0	35.5	1.0	-52.0	-25.0	-27.0	
7515.00	-14.9	H	3.0	35.7	1.0	-49.6	-25.0	-24.6	
10020.00	-11.6	H	3.0	36.0	1.0	-46.6	-25.0	-21.6	
Mid Ch, 2535MHz									
5070.00	-16.8	V	3.0	35.4	1.0	-51.3	-25.0	-26.3	
7605.00	-12.9	V	3.0	35.8	1.0	-47.6	-25.0	-22.6	
10140.00	-10.9	V	3.0	36.0	1.0	-45.8	-25.0	-20.8	
5070.00	-17.0	H	3.0	35.4	1.0	-51.4	-25.0	-26.4	
7605.00	-14.7	H	3.0	35.8	1.0	-49.5	-25.0	-24.5	
10140.00	-11.5	H	3.0	36.0	1.0	-46.4	-25.0	-21.4	
High Ch, 2565MHz									
5130.00	-17.0	V	3.0	35.4	1.0	-51.5	-25.0	-26.5	
7695.00	-13.9	V	3.0	35.8	1.0	-48.7	-25.0	-23.7	
10260.00	-11.1	V	3.0	35.9	1.0	-46.0	-25.0	-21.0	
5130.00	-16.9	H	3.0	35.4	1.0	-51.3	-25.0	-26.3	
7695.00	-14.6	H	3.0	35.8	1.0	-49.4	-25.0	-24.4	
10260.00	-11.3	H	3.0	35.9	1.0	-46.2	-25.0	-21.2	

LTE B7 10MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 7 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2505MHz									
5010.00	-17.5	V	3.0	35.5	1.0	-51.9	-25.0	-26.9	
7515.00	-14.3	V	3.0	35.7	1.0	-49.0	-25.0	-24.0	
10020.00	-11.2	V	3.0	36.0	1.0	-46.3	-25.0	-21.3	
5010.00	-17.6	H	3.0	35.5	1.0	-52.1	-25.0	-27.1	
7515.00	-14.9	H	3.0	35.7	1.0	-49.6	-25.0	-24.6	
10020.00	-11.6	H	3.0	36.0	1.0	-46.6	-25.0	-21.6	
Mid Ch, 2535MHz									
5070.00	-16.9	V	3.0	35.4	1.0	-51.4	-25.0	-26.4	
7605.00	-13.7	V	3.0	35.8	1.0	-48.5	-25.0	-23.5	
10140.00	-11.2	V	3.0	36.0	1.0	-46.2	-25.0	-21.2	
5070.00	-16.9	H	3.0	35.4	1.0	-51.4	-25.0	-26.4	
7605.00	-14.8	H	3.0	35.8	1.0	-49.5	-25.0	-24.5	
10140.00	-11.5	H	3.0	36.0	1.0	-46.5	-25.0	-21.5	
High Ch, 2565MHz									
5130.00	-16.6	V	3.0	35.4	1.0	-51.1	-25.0	-26.1	
7695.00	-14.3	V	3.0	35.8	1.0	-49.1	-25.0	-24.1	
10260.00	-11.0	V	3.0	35.9	1.0	-45.9	-25.0	-20.9	
5130.00	-17.3	H	3.0	35.4	1.0	-51.7	-25.0	-26.7	
7695.00	-14.6	H	3.0	35.8	1.0	-49.4	-25.0	-24.4	
10260.00	-11.3	H	3.0	35.9	1.0	-46.2	-25.0	-21.2	

LTE B7 10MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 7 Harmonics, 15MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2507.5MHz									
5015.00	-17.2	V	3.0	35.5	1.0	-51.7	-25.0	-26.7	
7522.50	-14.2	V	3.0	35.7	1.0	-48.9	-25.0	-23.9	
10030.00	-11.0	V	3.0	36.0	1.0	-46.0	-25.0	-21.0	
5015.00	-17.5	H	3.0	35.5	1.0	-51.9	-25.0	-26.9	
7522.50	-14.9	H	3.0	35.7	1.0	-49.6	-25.0	-24.6	
10030.00	-11.7	H	3.0	36.0	1.0	-46.7	-25.0	-21.7	
Mid Ch, 2535MHz									
5070.00	-16.9	V	3.0	35.4	1.0	-51.4	-25.0	-26.4	
7605.00	-13.2	V	3.0	35.8	1.0	-48.0	-25.0	-23.0	
10140.00	-10.9	V	3.0	36.0	1.0	-45.9	-25.0	-20.9	
5070.00	-16.8	H	3.0	35.4	1.0	-51.2	-25.0	-26.2	
7605.00	-14.7	H	3.0	35.8	1.0	-49.5	-25.0	-24.5	
10140.00	-11.4	H	3.0	36.0	1.0	-46.4	-25.0	-21.4	
High Ch, 2562.5MHz									
5125.00	-16.9	V	3.0	35.4	1.0	-51.4	-25.0	-26.4	
7687.50	-14.1	V	3.0	35.8	1.0	-48.8	-25.0	-23.8	
10250.00	-11.1	V	3.0	35.9	1.0	-46.0	-25.0	-21.0	
5125.00	-17.0	H	3.0	35.4	1.0	-51.4	-25.0	-26.4	
7687.50	-14.6	H	3.0	35.8	1.0	-49.4	-25.0	-24.4	
10250.00	-11.4	H	3.0	35.9	1.0	-46.3	-25.0	-21.3	

LTE B7 15MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 7 Harmonics, 15MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2507.5MHz									
5015.00	-17.3	V	3.0	35.5	1.0	-51.7	-25.0	-26.7	
7522.50	-14.3	V	3.0	35.7	1.0	-49.1	-25.0	-24.1	
10030.00	-11.0	V	3.0	36.0	1.0	-46.0	-25.0	-21.0	
5015.00	-17.4	H	3.0	35.5	1.0	-51.9	-25.0	-26.9	
7522.50	-14.8	H	3.0	35.7	1.0	-49.6	-25.0	-24.6	
10030.00	-11.7	H	3.0	36.0	1.0	-46.7	-25.0	-21.7	
Mid Ch, 2535MHz									
5070.00	-17.0	V	3.0	35.4	1.0	-51.5	-25.0	-26.5	
7605.00	-13.4	V	3.0	35.8	1.0	-48.2	-25.0	-23.2	
10140.00	-11.0	V	3.0	36.0	1.0	-46.0	-25.0	-21.0	
5070.00	-17.0	H	3.0	35.4	1.0	-51.5	-25.0	-26.5	
7605.00	-14.5	H	3.0	35.8	1.0	-49.2	-25.0	-24.2	
10140.00	-11.3	H	3.0	36.0	1.0	-46.3	-25.0	-21.3	
High Ch, 2562.5MHz									
5125.00	-16.8	V	3.0	35.4	1.0	-51.3	-25.0	-26.3	
7687.50	-14.0	V	3.0	35.8	1.0	-48.8	-25.0	-23.8	
10250.00	-11.1	V	3.0	35.9	1.0	-46.0	-25.0	-21.0	
5125.00	-17.2	H	3.0	35.4	1.0	-51.6	-25.0	-26.6	
7687.50	-14.7	H	3.0	35.8	1.0	-49.4	-25.0	-24.4	
10250.00	-11.5	H	3.0	35.9	1.0	-46.4	-25.0	-21.4	

LTE B7 15MHz 16QAM

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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 7 Harmonics, 20MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2510MHz									
5020.00	-17.3	V	3.0	35.5	1.0	-51.7	-25.0	-26.7	
7530.00	-14.4	V	3.0	35.7	1.0	-49.1	-25.0	-24.1	
10040.00	-11.1	V	3.0	36.0	1.0	-46.1	-25.0	-21.1	
5020.00	-17.4	H	3.0	35.5	1.0	-51.9	-25.0	-26.9	
7530.00	-14.8	H	3.0	35.7	1.0	-49.5	-25.0	-24.5	
10040.00	-11.6	H	3.0	36.0	1.0	-46.6	-25.0	-21.6	
Mid Ch, 2535MHz									
5070.00	-17.0	V	3.0	35.4	1.0	-51.4	-25.0	-26.4	
7605.00	-13.5	V	3.0	35.8	1.0	-48.3	-25.0	-23.3	
10140.00	-11.0	V	3.0	36.0	1.0	-45.9	-25.0	-20.9	
5070.00	-16.9	H	3.0	35.4	1.0	-51.4	-25.0	-26.4	
7605.00	-14.6	H	3.0	35.8	1.0	-49.3	-25.0	-24.3	
10140.00	-11.2	H	3.0	36.0	1.0	-46.2	-25.0	-21.2	
High Ch, 2560MHz									
5120.00	-16.8	V	3.0	35.4	1.0	-51.2	-25.0	-26.2	
7680.00	-14.0	V	3.0	35.8	1.0	-48.7	-25.0	-23.7	
10240.00	-10.9	V	3.0	35.9	1.0	-45.8	-25.0	-20.8	
5120.00	-16.9	H	3.0	35.4	1.0	-51.3	-25.0	-26.3	
7680.00	-14.4	H	3.0	35.8	1.0	-49.1	-25.0	-24.1	
10240.00	-11.3	H	3.0	35.9	1.0	-46.2	-25.0	-21.2	

LTE B7 20MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 7 Harmonics, 20MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2510MHz									
5020.00	-17.1	V	3.0	35.5	1.0	-51.6	-25.0	-26.6	
7530.00	-14.2	V	3.0	35.7	1.0	-48.9	-25.0	-23.9	
10040.00	-10.7	V	3.0	36.0	1.0	-45.7	-25.0	-20.7	
5020.00	-17.1	H	3.0	35.5	1.0	-51.6	-25.0	-26.6	
7530.00	-14.8	H	3.0	35.7	1.0	-49.5	-25.0	-24.5	
10040.00	-11.6	H	3.0	36.0	1.0	-46.6	-25.0	-21.6	
Mid Ch, 2535MHz									
5070.00	-16.9	V	3.0	35.4	1.0	-51.3	-25.0	-26.3	
7605.00	-13.4	V	3.0	35.8	1.0	-48.2	-25.0	-23.2	
10140.00	-11.0	V	3.0	36.0	1.0	-46.0	-25.0	-21.0	
5070.00	-16.9	H	3.0	35.4	1.0	-51.4	-25.0	-26.4	
7605.00	-14.6	H	3.0	35.8	1.0	-49.4	-25.0	-24.4	
10140.00	-11.2	H	3.0	36.0	1.0	-46.2	-25.0	-21.2	
High Ch, 2560MHz									
5120.00	-16.7	V	3.0	35.4	1.0	-51.1	-25.0	-26.1	
7680.00	-13.4	V	3.0	35.8	1.0	-48.1	-25.0	-23.1	
10240.00	-10.5	V	3.0	35.9	1.0	-45.4	-25.0	-20.4	
5120.00	-16.9	H	3.0	35.4	1.0	-51.4	-25.0	-26.4	
7680.00	-14.4	H	3.0	35.8	1.0	-49.2	-25.0	-24.2	
10240.00	-11.4	H	3.0	35.9	1.0	-46.3	-25.0	-21.3	

LTE B7 20MHz 16QAM

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9.1.6. LTE BAND 12

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/16/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 12 Harmonics, 1.4MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 699.7MHz									
1399.40	-29.6	V	3.0	37.4	1.0	-66.0	-13.0	-53.0	
2099.10	-22.3	V	3.0	36.6	1.0	-57.9	-13.0	-44.9	
2798.80	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8	
1399.40	-29.9	H	3.0	37.4	1.0	-66.2	-13.0	-53.2	
2099.10	-22.3	H	3.0	36.6	1.0	-57.9	-13.0	-44.9	
2798.80	-22.2	H	3.0	36.4	1.0	-57.6	-13.0	-44.6	
Mid Ch, 707.5MHz									
1415.00	-29.4	V	3.0	37.4	1.0	-65.8	-13.0	-52.8	
2122.50	-22.2	V	3.0	36.6	1.0	-57.7	-13.0	-44.7	
2830.00	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8	
1415.00	-29.7	H	3.0	37.4	1.0	-66.0	-13.0	-53.0	
2122.50	-22.3	H	3.0	36.6	1.0	-57.8	-13.0	-44.8	
2830.00	-22.1	H	3.0	36.4	1.0	-57.5	-13.0	-44.5	
High Ch, 715.3MHz									
1430.60	-29.2	V	3.0	37.3	1.0	-65.5	-13.0	-52.5	
2145.90	-23.7	V	3.0	36.6	1.0	-59.3	-13.0	-46.3	
2861.20	-22.1	V	3.0	36.4	1.0	-57.5	-13.0	-44.5	
1430.60	-29.6	H	3.0	37.3	1.0	-66.0	-13.0	-53.0	
2145.90	-23.8	H	3.0	36.6	1.0	-59.4	-13.0	-46.4	
2861.20	-22.3	H	3.0	36.4	1.0	-57.7	-13.0	-44.7	

LTE B12 1.4MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/16/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 12 Harmonics, 1.4MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 699.7MHz									
1399.40	-29.6	V	3.0	37.4	1.0	-65.9	-13.0	-52.9	
2099.10	-22.3	V	3.0	36.6	1.0	-57.9	-13.0	-44.9	
2798.80	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8	
1399.40	-30.2	H	3.0	37.4	1.0	-66.5	-13.0	-53.5	
2099.10	-22.3	H	3.0	36.6	1.0	-57.9	-13.0	-44.9	
2798.80	-22.4	H	3.0	36.4	1.0	-57.8	-13.0	-44.8	
Mid Ch, 707.5MHz									
1415.00	-29.7	V	3.0	37.4	1.0	-66.1	-13.0	-53.1	
2122.50	-22.6	V	3.0	36.6	1.0	-58.2	-13.0	-45.2	
2830.00	-21.5	V	3.0	36.4	1.0	-56.9	-13.0	-43.9	
1415.00	-29.7	H	3.0	37.4	1.0	-66.1	-13.0	-53.1	
2122.50	-22.3	H	3.0	36.6	1.0	-57.9	-13.0	-44.9	
2830.00	-22.1	H	3.0	36.4	1.0	-57.5	-13.0	-44.5	
High Ch, 715.3MHz									
1430.60	-29.2	V	3.0	37.3	1.0	-65.5	-13.0	-52.5	
2145.90	-23.7	V	3.0	36.6	1.0	-59.3	-13.0	-46.3	
2861.20	-21.8	V	3.0	36.4	1.0	-57.2	-13.0	-44.2	
1430.60	-29.6	H	3.0	37.3	1.0	-65.9	-13.0	-52.9	
2145.90	-23.6	H	3.0	36.6	1.0	-59.1	-13.0	-46.1	
2861.20	-22.3	H	3.0	36.4	1.0	-57.7	-13.0	-44.7	

LTE B12 1.4MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/16/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 12 Harmonics, 3MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 700.5MHz									
1401.00	-29.1	V	3.0	37.4	1.0	-65.5	-13.0	-52.5	
2101.50	-23.3	V	3.0	36.6	1.0	-58.9	-13.0	-45.9	
2802.00	-21.8	V	3.0	36.4	1.0	-57.2	-13.0	-44.2	
1401.00	-30.0	H	3.0	37.4	1.0	-66.4	-13.0	-53.4	
2101.50	-22.3	H	3.0	36.6	1.0	-57.9	-13.0	-44.9	
2802.00	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
Mid Ch, 707.5MHz									
1415.00	-29.8	V	3.0	37.4	1.0	-66.2	-13.0	-53.2	
2122.50	-23.6	V	3.0	36.6	1.0	-59.2	-13.0	-46.2	
2830.00	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8	
1415.00	-30.1	H	3.0	37.4	1.0	-66.5	-13.0	-53.5	
2122.50	-23.6	H	3.0	36.6	1.0	-59.2	-13.0	-46.2	
2830.00	-22.4	H	3.0	36.4	1.0	-57.8	-13.0	-44.8	
High Ch, 714.5MHz									
1429.00	-29.3	V	3.0	37.3	1.0	-65.6	-13.0	-52.6	
2143.50	-23.6	V	3.0	36.6	1.0	-59.1	-13.0	-46.1	
2858.00	-22.1	V	3.0	36.4	1.0	-57.5	-13.0	-44.5	
1429.00	-29.7	H	3.0	37.3	1.0	-66.0	-13.0	-53.0	
2143.50	-23.8	H	3.0	36.6	1.0	-59.4	-13.0	-46.4	
2858.00	-22.3	H	3.0	36.4	1.0	-57.7	-13.0	-44.7	

LTE B12 3MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/16/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 12 Harmonics, 3MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 700.5MHz									
1401.00	-29.4	V	3.0	37.4	1.0	-65.8	-13.0	-52.8	
2101.50	-23.5	V	3.0	36.6	1.0	-59.1	-13.0	-46.1	
2802.00	-21.8	V	3.0	36.4	1.0	-57.2	-13.0	-44.2	
1401.00	-29.8	H	3.0	37.4	1.0	-66.2	-13.0	-53.2	
2101.50	-23.4	H	3.0	36.6	1.0	-59.0	-13.0	-46.0	
2802.00	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
Mid Ch, 707.5MHz									
1415.00	-30.2	V	3.0	37.4	1.0	-66.5	-13.0	-53.5	
2122.50	-23.4	V	3.0	36.6	1.0	-58.9	-13.0	-45.9	
2830.00	-22.0	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
1415.00	-30.1	H	3.0	37.4	1.0	-66.5	-13.0	-53.5	
2122.50	-23.6	H	3.0	36.6	1.0	-59.2	-13.0	-46.2	
2830.00	-22.8	H	3.0	36.4	1.0	-58.2	-13.0	-45.2	
High Ch, 714.5MHz									
1429.00	-29.6	V	3.0	37.3	1.0	-65.9	-13.0	-52.9	
2143.50	-23.4	V	3.0	36.6	1.0	-58.9	-13.0	-45.9	
2858.00	-22.1	V	3.0	36.4	1.0	-57.5	-13.0	-44.5	
1429.00	-29.7	H	3.0	37.3	1.0	-66.0	-13.0	-53.0	
2143.50	-23.7	H	3.0	36.6	1.0	-59.3	-13.0	-46.3	
2858.00	-22.4	H	3.0	36.4	1.0	-57.8	-13.0	-44.8	

LTE B12 3MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/16/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 12 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 701.5MHz									
1403.00	-30.0	V	3.0	37.4	1.0	-66.4	-13.0	-53.4	
2104.50	-23.6	V	3.0	36.6	1.0	-59.1	-13.0	-46.1	
2806.00	-21.9	V	3.0	36.4	1.0	-57.2	-13.0	-44.2	
1403.00	-29.9	H	3.0	37.4	1.0	-66.3	-13.0	-53.3	
2104.50	-23.4	H	3.0	36.6	1.0	-59.0	-13.0	-46.0	
2806.00	-22.4	H	3.0	36.4	1.0	-57.8	-13.0	-44.8	
Mid Ch, 707.5MHz									
1415.00	-30.2	V	3.0	37.4	1.0	-66.5	-13.0	-53.5	
2122.50	-23.7	V	3.0	36.6	1.0	-59.3	-13.0	-46.3	
2830.00	-22.0	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
1415.00	-30.1	H	3.0	37.4	1.0	-66.5	-13.0	-53.5	
2122.50	-23.6	H	3.0	36.6	1.0	-59.2	-13.0	-46.2	
2830.00	-22.9	H	3.0	36.4	1.0	-58.3	-13.0	-45.3	
High Ch, 713.5MHz									
1427.00	-29.8	V	3.0	37.3	1.0	-66.1	-13.0	-53.1	
2140.50	-23.6	V	3.0	36.6	1.0	-59.1	-13.0	-46.1	
2854.00	-22.1	V	3.0	36.4	1.0	-57.5	-13.0	-44.5	
1427.00	-29.7	H	3.0	37.3	1.0	-66.1	-13.0	-53.1	
2140.50	-23.7	H	3.0	36.6	1.0	-59.3	-13.0	-46.3	
2854.00	-22.8	H	3.0	36.4	1.0	-58.2	-13.0	-45.2	

LTE B12 5MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/16/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 12 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 701.5MHz									
1403.00	-30.1	V	3.0	37.4	1.0	-66.5	-13.0	-53.5	
2104.50	-23.5	V	3.0	36.6	1.0	-59.1	-13.0	-46.1	
2806.00	-21.7	V	3.0	36.4	1.0	-57.1	-13.0	-44.1	
1403.00	-30.2	H	3.0	37.4	1.0	-66.6	-13.0	-53.6	
2104.50	-23.7	H	3.0	36.6	1.0	-59.3	-13.0	-46.3	
2806.00	-22.7	H	3.0	36.4	1.0	-58.1	-13.0	-45.1	
Mid Ch, 707.5MHz									
1415.00	-30.0	V	3.0	37.4	1.0	-66.4	-13.0	-53.4	
2122.50	-23.9	V	3.0	36.6	1.0	-59.5	-13.0	-46.5	
2830.00	-22.6	V	3.0	36.4	1.0	-58.0	-13.0	-45.0	
1415.00	-30.1	H	3.0	37.4	1.0	-66.5	-13.0	-53.5	
2122.50	-23.7	H	3.0	36.6	1.0	-59.3	-13.0	-46.3	
2830.00	-23.0	H	3.0	36.4	1.0	-58.4	-13.0	-45.4	
High Ch, 713.5MHz									
1427.00	-29.7	V	3.0	37.3	1.0	-66.0	-13.0	-53.0	
2140.50	-23.8	V	3.0	36.6	1.0	-59.4	-13.0	-46.4	
2854.00	-22.4	V	3.0	36.4	1.0	-57.8	-13.0	-44.8	
1427.00	-29.8	H	3.0	37.3	1.0	-66.1	-13.0	-53.1	
2140.50	-23.9	H	3.0	36.6	1.0	-59.5	-13.0	-46.5	
2854.00	-23.0	H	3.0	36.4	1.0	-58.4	-13.0	-45.4	

LTE B12 5MHz 16QAM

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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/16/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 12 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 704MHz									
1408.00	-29.4	V	3.0	37.4	1.0	-65.8	-13.0	-52.8	
2112.00	-23.4	V	3.0	36.6	1.0	-59.0	-13.0	-46.0	
2816.00	-22.5	V	3.0	36.4	1.0	-57.9	-13.0	-44.9	
1408.00	-29.7	H	3.0	37.4	1.0	-66.0	-13.0	-53.0	
2112.00	-23.3	H	3.0	36.6	1.0	-58.9	-13.0	-45.9	
2816.00	-22.6	H	3.0	36.4	1.0	-58.0	-13.0	-45.0	
Mid Ch, 707.5MHz									
1415.00	-29.6	V	3.0	37.4	1.0	-65.9	-13.0	-52.9	
2122.50	-23.5	V	3.0	36.6	1.0	-59.1	-13.0	-46.1	
2830.00	-22.1	V	3.0	36.4	1.0	-57.5	-13.0	-44.5	
1415.00	-29.6	H	3.0	37.4	1.0	-65.9	-13.0	-52.9	
2122.50	-23.4	H	3.0	36.6	1.0	-59.0	-13.0	-46.0	
2830.00	-22.8	H	3.0	36.4	1.0	-58.2	-13.0	-45.2	
High Ch, 711MHz									
1422.00	-29.8	V	3.0	37.3	1.0	-66.2	-13.0	-53.2	
2133.00	-23.6	V	3.0	36.6	1.0	-59.1	-13.0	-46.1	
2844.00	-22.5	V	3.0	36.4	1.0	-57.9	-13.0	-44.9	
1422.00	-29.8	H	3.0	37.3	1.0	-66.1	-13.0	-53.1	
2133.00	-23.8	H	3.0	36.6	1.0	-59.4	-13.0	-46.4	
2844.00	-23.1	H	3.0	36.4	1.0	-58.5	-13.0	-45.5	

LTE B12 10MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/16/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 12 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 704MHz									
1408.00	-29.6	V	3.0	37.4	1.0	-66.0	-13.0	-53.0	
2112.00	-23.7	V	3.0	36.6	1.0	-59.3	-13.0	-46.3	
2816.00	-23.0	V	3.0	36.4	1.0	-58.4	-13.0	-45.4	
1408.00	-29.9	H	3.0	37.4	1.0	-66.3	-13.0	-53.3	
2112.00	-23.3	H	3.0	36.6	1.0	-58.9	-13.0	-45.9	
2816.00	-22.6	H	3.0	36.4	1.0	-58.0	-13.0	-45.0	
Mid Ch, 707.5MHz									
1415.00	-29.3	V	3.0	37.4	1.0	-65.6	-13.0	-52.6	
2122.50	-23.5	V	3.0	36.6	1.0	-59.1	-13.0	-46.1	
2830.00	-22.0	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
1415.00	-29.2	H	3.0	37.4	1.0	-65.6	-13.0	-52.6	
2122.50	-23.4	H	3.0	36.6	1.0	-59.0	-13.0	-46.0	
2830.00	-22.8	H	3.0	36.4	1.0	-58.2	-13.0	-45.2	
High Ch, 711MHz									
1422.00	-29.9	V	3.0	37.3	1.0	-66.2	-13.0	-53.2	
2133.00	-23.6	V	3.0	36.6	1.0	-59.2	-13.0	-46.2	
2844.00	-22.5	V	3.0	36.4	1.0	-57.9	-13.0	-44.9	
1422.00	-29.8	H	3.0	37.3	1.0	-66.1	-13.0	-53.1	
2133.00	-23.9	H	3.0	36.6	1.0	-59.4	-13.0	-46.4	
2844.00	-23.1	H	3.0	36.4	1.0	-58.5	-13.0	-45.5	

LTE B12 10MHz 16QAM

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9.1.7. LTE BAND 13

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/16/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 13 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 782MHz									
1564.00	0.0	V	3.0	37.1	1.0	-36.1	-13.0	-23.1	
2346.00	0.0	V	3.0	36.5	1.0	-35.5	-13.0	-22.5	
3128.00	0.0	V	3.0	36.3	1.0	-35.3	-13.0	-22.3	
1564.00	0.0	H	3.0	37.1	1.0	-36.1	-13.0	-23.1	
2346.00	0.0	H	3.0	36.5	1.0	-35.5	-13.0	-22.5	
3128.00	0.0	H	3.0	36.3	1.0	-35.3	-13.0	-22.3	
Mid Ch, 782MHz									
1564.00	-28.6	V	3.0	37.1	1.0	-64.7	-13.0	-51.7	
2346.00	-24.2	V	3.0	36.5	1.0	-59.7	-13.0	-46.7	
3128.00	-22.6	V	3.0	36.3	1.0	-57.9	-13.0	-44.9	
1564.00	-28.6	H	3.0	37.1	1.0	-64.7	-13.0	-51.7	
2346.00	-23.8	H	3.0	36.5	1.0	-59.3	-13.0	-46.3	
3128.00	-22.2	H	3.0	36.3	1.0	-57.5	-13.0	-44.5	
High Ch, 782MHz									
1564.00	0.0	V	3.0	37.1	1.0	-36.1	-13.0	-23.1	
2346.00	0.0	V	3.0	36.5	1.0	-35.5	-13.0	-22.5	
3128.00	0.0	V	3.0	36.3	1.0	-35.3	-13.0	-22.3	
1564.00	0.0	H	3.0	37.1	1.0	-36.1	-13.0	-23.1	
2346.00	0.0	H	3.0	36.5	1.0	-35.5	-13.0	-22.5	
3128.00	0.0	H	3.0	36.3	1.0	-35.3	-13.0	-22.3	

LTE B13 5MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/16/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 13 Harmon 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 779.5									
1564.00	-28.5	V	3.0	37.1	1.0	-64.7	-13.0	-51.7	
2346.00	-24.3	V	3.0	36.5	1.0	-59.8	-13.0	-46.8	
3128.00	-22.8	V	3.0	36.3	1.0	-58.1	-13.0	-45.1	
1564.00	-28.7	H	3.0	37.1	1.0	-64.8	-13.0	-51.8	
2346.00	-24.0	H	3.0	36.5	1.0	-59.5	-13.0	-46.5	
3128.00	-22.8	H	3.0	36.3	1.0	-58.1	-13.0	-45.1	
Mid Ch, 782MHz									
1564.00	-28.7	V	3.0	37.1	1.0	-64.8	-13.0	-51.8	
2346.00	-24.4	V	3.0	36.5	1.0	-59.8	-13.0	-46.8	
3128.00	-22.8	V	3.0	36.3	1.0	-58.1	-13.0	-45.1	
1564.00	-28.6	H	3.0	37.1	1.0	-64.7	-13.0	-51.7	
2346.00	-23.9	H	3.0	36.5	1.0	-59.4	-13.0	-46.4	
3128.00	-22.2	H	3.0	36.3	1.0	-57.5	-13.0	-44.5	
High Ch, 784.5									
1564.00	-28.4	V	3.0	37.1	1.0	-64.5	-13.0	-51.5	
2346.00	-24.4	V	3.0	36.5	1.0	-59.9	-13.0	-46.9	
3128.00	-23.2	V	3.0	36.3	1.0	-58.4	-13.0	-45.4	
1564.00	-28.8	H	3.0	37.1	1.0	-64.9	-13.0	-51.9	
2346.00	-24.3	H	3.0	36.5	1.0	-59.8	-13.0	-46.8	
3128.00	-22.4	H	3.0	36.3	1.0	-57.7	-13.0	-44.7	

LTE B13 5MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/16/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 13 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Mid Ch, 782MHz									
1564.00	-28.6	V	3.0	37.1	1.0	-64.7	-13.0	-51.7	
2346.00	-24.2	V	3.0	36.5	1.0	-59.7	-13.0	-46.7	
3128.00	-22.6	V	3.0	36.3	1.0	-57.9	-13.0	-44.9	
1564.00	-28.6	H	3.0	37.1	1.0	-64.7	-13.0	-51.7	
2346.00	-23.8	H	3.0	36.5	1.0	-59.3	-13.0	-46.3	
3128.00	-22.2	H	3.0	36.3	1.0	-57.5	-13.0	-44.5	

LTE B13 10MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/16/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 13 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Mid Ch, 782MHz									
1564.00	-28.6	V	3.0	37.1	1.0	-64.7	-13.0	-51.7	
2346.00	-24.2	V	3.0	36.5	1.0	-59.7	-13.0	-46.7	
3128.00	-22.6	V	3.0	36.3	1.0	-57.9	-13.0	-44.9	
1564.00	-28.5	H	3.0	37.1	1.0	-64.7	-13.0	-51.7	
2346.00	-24.2	H	3.0	36.5	1.0	-59.7	-13.0	-46.7	
3128.00	-22.2	H	3.0	36.3	1.0	-57.5	-13.0	-44.5	

LTE B13 10MHz 16QAM

9.1.8. LTE BAND 17

LTE Band 17 (Frequency range: 704-716 MHz) is covered by LTE Band 12 (Frequency range: 699-716 MHz) due to similar frequency range, same maximum tune-up limit and same channel bandwidth (5 & 10 MHz).

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9.1.9. LTE BAND 41

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 41 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2498.5MHz									
4997.00	-17.3	V	3.0	35.5	1.0	-51.7	-25.0	-26.7	
7495.50	-14.3	V	3.0	35.7	1.0	-49.0	-25.0	-24.0	
9994.00	-11.1	V	3.0	36.0	1.0	-46.1	-25.0	-21.1	
4997.00	-17.3	H	3.0	35.5	1.0	-51.8	-25.0	-26.8	
7495.50	-14.0	H	3.0	35.7	1.0	-48.8	-25.0	-23.8	
9994.00	-11.4	H	3.0	36.0	1.0	-46.4	-25.0	-21.4	
Mid Ch, 2593MHz									
5186.00	-16.6	V	3.0	35.4	1.0	-51.0	-25.0	-26.0	
7779.00	-13.6	V	3.0	35.8	1.0	-48.4	-25.0	-23.4	
10372.00	-10.9	V	3.0	35.8	1.0	-45.8	-25.0	-20.8	
5186.00	-16.7	H	3.0	35.4	1.0	-51.1	-25.0	-26.1	
7779.00	-14.5	H	3.0	35.8	1.0	-49.3	-25.0	-24.3	
10372.00	-11.3	H	3.0	35.8	1.0	-46.1	-25.0	-21.1	
High Ch, 2687.5MHz									
5375.00	-16.6	V	3.0	35.4	1.0	-51.1	-25.0	-26.1	
8062.50	-13.6	V	3.0	35.8	1.0	-48.4	-25.0	-23.4	
10750.00	-10.6	V	3.0	35.7	1.0	-45.2	-25.0	-20.2	
5375.00	-16.4	H	3.0	35.4	1.0	-50.9	-25.0	-25.9	
8062.50	-14.1	H	3.0	35.8	1.0	-49.0	-25.0	-24.0	
10750.00	-10.6	H	3.0	35.7	1.0	-45.3	-25.0	-20.3	

LTE B41 5MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 41 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2498.5MHz									
4997.00	-17.4	V	3.0	35.5	1.0	-51.9	-25.0	-26.9	
7495.50	-14.2	V	3.0	35.7	1.0	-48.9	-25.0	-23.9	
9994.00	-11.0	V	3.0	36.0	1.0	-46.0	-25.0	-21.0	
4997.00	-17.2	H	3.0	35.5	1.0	-51.6	-25.0	-26.6	
7495.50	-14.0	H	3.0	35.7	1.0	-48.8	-25.0	-23.8	
9994.00	-11.4	H	3.0	36.0	1.0	-46.4	-25.0	-21.4	
Mid Ch, 2593MHz									
5186.00	-16.8	V	3.0	35.4	1.0	-51.2	-25.0	-26.2	
7779.00	-13.6	V	3.0	35.8	1.0	-48.3	-25.0	-23.3	
10372.00	-11.0	V	3.0	35.8	1.0	-45.8	-25.0	-20.8	
5186.00	-16.7	H	3.0	35.4	1.0	-51.1	-25.0	-26.1	
7779.00	-14.5	H	3.0	35.8	1.0	-49.3	-25.0	-24.3	
10372.00	-11.3	H	3.0	35.8	1.0	-46.1	-25.0	-21.1	
High Ch, 2687.5MHz									
5375.00	-16.7	V	3.0	35.4	1.0	-51.1	-25.0	-26.1	
8062.50	-13.6	V	3.0	35.8	1.0	-48.4	-25.0	-23.4	
10750.00	-10.6	V	3.0	35.7	1.0	-45.3	-25.0	-20.3	
5375.00	-16.4	H	3.0	35.4	1.0	-50.9	-25.0	-25.9	
8062.50	-14.2	H	3.0	35.8	1.0	-49.0	-25.0	-24.0	
10750.00	-10.6	H	3.0	35.7	1.0	-45.3	-25.0	-20.3	

LTE B41 5MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 41 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2501MHz									
5002.00	-17.4	V	3.0	35.5	1.0	-51.8	-25.0	-26.8	
7503.00	-14.6	V	3.0	35.7	1.0	-49.3	-25.0	-24.3	
10004.00	-11.7	V	3.0	36.0	1.0	-46.7	-25.0	-21.7	
5002.00	-17.1	H	3.0	35.5	1.0	-51.6	-25.0	-26.6	
7503.00	-13.9	H	3.0	35.7	1.0	-48.7	-25.0	-23.7	
10004.00	-11.3	H	3.0	36.0	1.0	-46.3	-25.0	-21.3	
Mid Ch, 2593MHz									
5186.00	-16.9	V	3.0	35.4	1.0	-51.3	-25.0	-26.3	
7779.00	-13.6	V	3.0	35.8	1.0	-48.3	-25.0	-23.3	
10372.00	-10.7	V	3.0	35.8	1.0	-45.5	-25.0	-20.5	
5186.00	-16.6	H	3.0	35.4	1.0	-51.0	-25.0	-26.0	
7779.00	-13.4	H	3.0	35.8	1.0	-48.1	-25.0	-23.1	
10372.00	-10.3	H	3.0	35.8	1.0	-45.1	-25.0	-20.1	
High Ch, 2685MHz									
5370.00	-17.2	V	3.0	35.4	1.0	-51.7	-25.0	-26.7	
8055.00	-13.5	V	3.0	35.8	1.0	-48.3	-25.0	-23.3	
10740.00	-10.2	V	3.0	35.7	1.0	-44.9	-25.0	-19.9	
5370.00	-16.8	H	3.0	35.4	1.0	-51.3	-25.0	-26.3	
8055.00	-13.3	H	3.0	35.8	1.0	-48.1	-25.0	-23.1	
10740.00	-10.9	H	3.0	35.7	1.0	-45.6	-25.0	-20.6	

LTE B41 10MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 41 Harmonics, 10MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2501MHz									
5002.00	-17.4	V	3.0	35.5	1.0	-51.9	-25.0	-26.9	
7503.00	-14.8	V	3.0	35.7	1.0	-49.5	-25.0	-24.5	
10004.00	-11.5	V	3.0	36.0	1.0	-46.6	-25.0	-21.6	
5002.00	-17.2	H	3.0	35.5	1.0	-51.7	-25.0	-26.7	
7503.00	-13.9	H	3.0	35.7	1.0	-48.6	-25.0	-23.6	
10004.00	-11.4	H	3.0	36.0	1.0	-46.4	-25.0	-21.4	
Mid Ch, 2593MHz									
5186.00	-16.8	V	3.0	35.4	1.0	-51.2	-25.0	-26.2	
7779.00	-13.9	V	3.0	35.8	1.0	-48.7	-25.0	-23.7	
10372.00	-11.0	V	3.0	35.8	1.0	-45.8	-25.0	-20.8	
5186.00	-16.4	H	3.0	35.4	1.0	-50.8	-25.0	-25.8	
7779.00	-12.9	H	3.0	35.8	1.0	-47.7	-25.0	-22.7	
10372.00	-10.7	H	3.0	35.8	1.0	-45.6	-25.0	-20.6	
High Ch, 2685MHz									
5370.00	-17.3	V	3.0	35.4	1.0	-51.8	-25.0	-26.8	
8055.00	-14.2	V	3.0	35.8	1.0	-49.0	-25.0	-24.0	
10740.00	-10.6	V	3.0	35.7	1.0	-45.3	-25.0	-20.3	
5370.00	-17.3	H	3.0	35.4	1.0	-51.7	-25.0	-26.7	
8055.00	-13.2	H	3.0	35.8	1.0	-48.0	-25.0	-23.0	
10740.00	-10.7	H	3.0	35.7	1.0	-45.3	-25.0	-20.3	

LTE B41 10MHz 16QAM

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 41 Harmonics, 15MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2503.5MHz									
5007.00	-17.4	V	3.0	35.5	1.0	-51.9	-25.0	-26.9	
7510.50	-14.6	V	3.0	35.7	1.0	-49.3	-25.0	-24.3	
10014.00	-11.7	V	3.0	36.0	1.0	-46.7	-25.0	-21.7	
5007.00	-17.3	H	3.0	35.5	1.0	-51.7	-25.0	-26.7	
7510.50	-14.0	H	3.0	35.7	1.0	-48.8	-25.0	-23.8	
10014.00	-11.6	H	3.0	36.0	1.0	-46.7	-25.0	-21.7	
Mid Ch, 2593MHz									
5186.00	-16.9	V	3.0	35.4	1.0	-51.3	-25.0	-26.3	
7779.00	-13.7	V	3.0	35.8	1.0	-48.4	-25.0	-23.4	
10372.00	-10.8	V	3.0	35.8	1.0	-45.6	-25.0	-20.6	
5186.00	-16.6	H	3.0	35.4	1.0	-51.1	-25.0	-26.1	
7779.00	-13.4	H	3.0	35.8	1.0	-48.1	-25.0	-23.1	
10372.00	-10.3	H	3.0	35.8	1.0	-45.2	-25.0	-20.2	
High Ch, 2682.5MHz									
5365.00	-17.3	V	3.0	35.4	1.0	-51.8	-25.0	-26.8	
8047.50	-13.6	V	3.0	35.8	1.0	-48.4	-25.0	-23.4	
10730.00	-10.3	V	3.0	35.7	1.0	-45.0	-25.0	-20.0	
5365.00	-16.9	H	3.0	35.4	1.0	-51.3	-25.0	-26.3	
8047.50	-13.7	H	3.0	35.8	1.0	-48.5	-25.0	-23.5	
10730.00	-10.9	H	3.0	35.7	1.0	-45.6	-25.0	-20.6	

LTE B41 15MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 41 Harmonics, 15MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2503.5MHz									
5007.00	-17.4	V	3.0	35.5	1.0	-51.8	-25.0	-26.8	
7510.50	-14.5	V	3.0	35.7	1.0	-49.2	-25.0	-24.2	
10014.00	-11.7	V	3.0	36.0	1.0	-46.7	-25.0	-21.7	
5007.00	-17.3	H	3.0	35.5	1.0	-51.8	-25.0	-26.8	
7510.50	-14.2	H	3.0	35.7	1.0	-49.0	-25.0	-24.0	
10014.00	-11.8	H	3.0	36.0	1.0	-46.8	-25.0	-21.8	
Mid Ch, 2593MHz									
5186.00	-16.6	V	3.0	35.4	1.0	-51.0	-25.0	-26.0	
7779.00	-13.7	V	3.0	35.8	1.0	-48.4	-25.0	-23.4	
10372.00	-10.8	V	3.0	35.8	1.0	-45.6	-25.0	-20.6	
5186.00	-16.8	H	3.0	35.4	1.0	-51.2	-25.0	-26.2	
7779.00	-13.5	H	3.0	35.8	1.0	-48.2	-25.0	-23.2	
10372.00	-10.3	H	3.0	35.8	1.0	-45.2	-25.0	-20.2	
High Ch, 2682.5MHz									
5365.00	-17.5	V	3.0	35.4	1.0	-52.0	-25.0	-27.0	
8047.50	-13.7	V	3.0	35.8	1.0	-48.5	-25.0	-23.5	
10730.00	-10.5	V	3.0	35.7	1.0	-45.2	-25.0	-20.2	
5365.00	-16.7	H	3.0	35.4	1.0	-51.2	-25.0	-26.2	
8047.50	-13.7	H	3.0	35.8	1.0	-48.5	-25.0	-23.5	
10730.00	-10.8	H	3.0	35.7	1.0	-45.5	-25.0	-20.5	

LTE B41 15MHz 16QAM

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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_QPSK Band 41 Harmonics, 20MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2506MHz									
5012.00	-17.4	V	3.0	35.5	1.0	-51.8	-25.0	-26.8	
7518.00	-14.6	V	3.0	35.7	1.0	-49.3	-25.0	-24.3	
10024.00	-11.7	V	3.0	36.0	1.0	-46.7	-25.0	-21.7	
5012.00	-17.3	H	3.0	35.5	1.0	-51.7	-25.0	-26.7	
7518.00	-14.0	H	3.0	35.7	1.0	-48.7	-25.0	-23.7	
10024.00	-11.6	H	3.0	36.0	1.0	-46.6	-25.0	-21.6	
Mid Ch, 2593MHz									
5186.00	-17.1	V	3.0	35.4	1.0	-51.5	-25.0	-26.5	
7779.00	-13.6	V	3.0	35.8	1.0	-48.4	-25.0	-23.4	
10372.00	-11.0	V	3.0	35.8	1.0	-45.8	-25.0	-20.8	
5186.00	-16.8	H	3.0	35.4	1.0	-51.2	-25.0	-26.2	
7779.00	-13.4	H	3.0	35.8	1.0	-48.1	-25.0	-23.1	
10372.00	-10.3	H	3.0	35.8	1.0	-45.2	-25.0	-20.2	
High Ch, 2680MHz									
5360.00	-17.4	V	3.0	35.4	1.0	-51.9	-25.0	-26.9	
8040.00	-13.9	V	3.0	35.8	1.0	-48.7	-25.0	-23.7	
10720.00	-10.6	V	3.0	35.7	1.0	-45.3	-25.0	-20.3	
5360.00	-16.3	H	3.0	35.4	1.0	-50.8	-25.0	-25.8	
8040.00	-13.8	H	3.0	35.8	1.0	-48.6	-25.0	-23.6	
10720.00	-10.8	H	3.0	35.7	1.0	-45.5	-25.0	-20.5	

LTE B41 20MHz QPSK

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: SOMC
Project #: 12132671
Date: 2/15/2018
Test Engineer: 39005 RA
Configuration: EUT + Support Equipment
Location: Chamber A
Mode: LTE_16QAM Band 41 Harmonics, 20MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2506MHz									
5012.00	-17.5	V	3.0	35.5	1.0	-51.9	-25.0	-26.9	
7518.00	-14.7	V	3.0	35.7	1.0	-49.5	-25.0	-24.5	
10024.00	-11.5	V	3.0	36.0	1.0	-46.5	-25.0	-21.5	
5012.00	-17.4	H	3.0	35.5	1.0	-51.8	-25.0	-26.8	
7518.00	-14.0	H	3.0	35.7	1.0	-48.7	-25.0	-23.7	
10024.00	-11.5	H	3.0	36.0	1.0	-46.5	-25.0	-21.5	
Mid Ch, 2593MHz									
5186.00	-17.2	V	3.0	35.4	1.0	-51.6	-25.0	-26.6	
7779.00	-13.6	V	3.0	35.8	1.0	-48.4	-25.0	-23.4	
10372.00	-11.1	V	3.0	35.8	1.0	-45.9	-25.0	-20.9	
5186.00	-17.0	H	3.0	35.4	1.0	-51.4	-25.0	-26.4	
7779.00	-13.3	H	3.0	35.8	1.0	-48.1	-25.0	-23.1	
10372.00	-10.3	H	3.0	35.8	1.0	-45.1	-25.0	-20.1	
High Ch, 2680MHz									
5360.00	-17.6	V	3.0	35.4	1.0	-52.0	-25.0	-27.0	
8040.00	-13.9	V	3.0	35.8	1.0	-48.7	-25.0	-23.7	
10720.00	-10.6	V	3.0	35.7	1.0	-45.3	-25.0	-20.3	
5360.00	-16.4	H	3.0	35.4	1.0	-50.9	-25.0	-25.9	
8040.00	-14.2	H	3.0	35.8	1.0	-49.0	-25.0	-24.0	
10720.00	-10.9	H	3.0	35.7	1.0	-45.5	-25.0	-20.5	

LTE B41 20MHz 16QAM

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