

WCDMA

B2 REL99
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/25/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
Mode: Rel99 Band 2 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, 1852.4									
3704.80	-24.4	V	3.0	33.9	1.0	57.2	-13.0	-44.2	
5557.20	-25.9	V	3.0	33.1	1.0	58.0	-13.0	-45.0	
7409.60	-24.1	V	3.0	32.9	1.0	56.0	-13.0	-43.0	
3704.80	-25.1	H	3.0	33.9	1.0	58.0	-13.0	-44.2	
5557.20	-25.5	H	3.0	33.1	1.0	57.6	-13.0	-44.6	
7409.60	-24.1	H	3.0	32.9	1.0	55.9	-13.0	-42.9	
Mid Ch, 1880									
3760.00	-24.0	V	3.0	33.8	1.0	56.9	-13.0	-43.9	
5640.00	-25.3	V	3.0	33.1	1.0	57.4	-13.0	-44.4	
7520.00	-23.6	V	3.0	32.8	1.0	55.4	-13.0	-42.4	
3760.00	-24.4	H	3.0	33.8	1.0	57.2	-13.0	-44.2	
5640.00	-25.5	H	3.0	33.1	1.0	57.6	-13.0	-44.6	
7520.00	-23.6	H	3.0	32.8	1.0	55.4	-13.0	-42.4	
High Ch, 1907.6									
3815.20	-22.6	V	3.0	33.7	1.0	55.4	-13.0	-42.4	
5722.80	-25.3	V	3.0	33.1	1.0	57.4	-13.0	-44.4	
7630.40	-23.8	V	3.0	32.8	1.0	55.7	-13.0	-42.7	
3815.20	-25.2	H	3.0	33.7	1.0	57.9	-13.0	-44.9	
5722.80	-25.2	H	3.0	33.1	1.0	57.3	-13.0	-44.3	
7630.40	-23.9	H	3.0	32.8	1.0	55.7	-13.0	-42.7	

B2 HSDPA
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/25/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
Mode: HSDPA Band 2 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, 1852.4									
3704.80	-24.4	V	3.0	33.9	1.0	57.3	-13.0	-44.3	
5557.20	-24.2	V	3.0	33.1	1.0	56.3	-13.0	-43.3	
7409.60	-24.2	V	3.0	32.9	1.0	56.0	-13.0	-43.0	
3704.80	-24.3	H	3.0	33.9	1.0	57.2	-13.0	-44.2	
5557.20	-23.7	H	3.0	33.1	1.0	55.8	-13.0	-42.8	
7409.60	-24.3	H	3.0	32.9	1.0	56.2	-13.0	-43.2	
Mid Ch, 1880									
3760.00	-23.7	V	3.0	33.8	1.0	56.5	-13.0	-43.5	
5640.00	-22.8	V	3.0	33.1	1.0	54.9	-13.0	-41.9	
7520.00	-23.6	V	3.0	32.8	1.0	55.5	-13.0	-42.5	
3760.00	-24.3	H	3.0	33.8	1.0	57.1	-13.0	-44.1	
5640.00	-25.0	H	3.0	33.1	1.0	57.1	-13.0	-44.1	
7520.00	-23.6	H	3.0	32.8	1.0	55.5	-13.0	-42.5	
High Ch, 1907.6									
3815.20	-21.7	V	3.0	33.7	1.0	54.4	-13.0	-41.4	
5722.80	-24.2	V	3.0	33.1	1.0	56.3	-13.0	-43.3	
7630.40	-23.7	V	3.0	32.8	1.0	55.5	-13.0	-42.5	
3815.20	-23.0	H	3.0	33.7	1.0	55.7	-13.0	-42.7	
5722.80	-23.8	H	3.0	33.1	1.0	55.9	-13.0	-42.9	
7630.40	-23.8	H	3.0	32.8	1.0	55.7	-13.0	-42.7	

B4 REL99
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
Mode: Rel99 Band 4 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, 1712.4									
3424.80	-15.1	V	3.0	34.1	1.0	48.2	-13.0	-35.2	
5137.20	-20.1	V	3.0	33.2	1.0	52.3	-13.0	-39.3	
6849.60	-19.6	V	3.0	32.9	1.0	51.5	-13.0	-38.5	
3424.80	-13.4	H	3.0	34.1	1.0	46.5	-13.0	-33.5	
5137.20	-20.4	H	3.0	33.2	1.0	52.6	-13.0	-39.6	
6849.60	-20.1	H	3.0	32.9	1.0	52.0	-13.0	-39.0	
Mid Ch, 1732.6									
3485.20	-15.9	V	3.0	34.1	1.0	48.0	-13.0	-36.0	
5197.60	-19.8	V	3.0	33.2	1.0	52.0	-13.0	-39.0	
6930.40	-18.9	V	3.0	32.9	1.0	50.8	-13.0	-37.8	
3485.20	-18.3	H	3.0	34.1	1.0	51.4	-13.0	-38.4	
5197.60	-20.9	H	3.0	33.2	1.0	53.1	-13.0	-40.1	
6930.40	-19.6	H	3.0	32.9	1.0	51.5	-13.0	-38.5	
High Ch, 1752.6									
3505.20	-16.1	V	3.0	34.1	1.0	49.1	-13.0	-36.1	
5257.60	-20.7	V	3.0	33.2	1.0	52.9	-13.0	-39.9	
7010.40	-19.1	V	3.0	32.9	1.0	51.0	-13.0	-38.0	
3505.20	-17.3	H	3.0	34.1	1.0	50.3	-13.0	-37.3	
5257.60	-21.5	H	3.0	33.2	1.0	53.7	-13.0	-40.7	
7010.40	-19.2	H	3.0	32.9	1.0	51.1	-13.0	-38.1	

B4 HSDPA
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
Mode: HSDPA Band 4 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, 1712.4									
3424.80	-13.8	V	3.0	34.1	1.0	47.0	-13.0	-34.0	
5137.20	-19.9	V	3.0	33.2	1.0	52.1	-13.0	-39.1	
6849.60	-19.7	V	3.0	32.9	1.0	51.6	-13.0	-38.6	
3424.80	-13.6	H	3.0	34.1	1.0	46.7	-13.0	-33.7	
5137.20	-20.5	H	3.0	33.2	1.0	52.7	-13.0	-39.7	
6849.60	-19.8	H	3.0	32.9	1.0	51.6	-13.0	-38.6	
Mid Ch, 1732.6									
3485.20	-15.1	V	3.0	34.1	1.0	48.2	-13.0	-35.2	
5197.60	-17.9	V	3.0	33.2	1.0	50.1	-13.0	-37.1	
6930.40	-19.4	V	3.0	32.9	1.0	51.3	-13.0	-38.3	
3485.20	-17.7	H	3.0	34.1	1.0	50.8	-13.0	-37.8	
5197.60	-20.1	H	3.0	33.2	1.0	52.2	-13.0	-39.2	
6930.40	-19.2	H	3.0	32.9	1.0	51.1	-13.0	-38.1	
High Ch, 1752.6									
3505.20	-13.0	V	3.0	34.1	1.0	46.0	-13.0	-33.0	
5257.60	-19.5	V	3.0	33.2	1.0	51.6	-13.0	-38.6	
7010.40	-18.6	V	3.0	32.9	1.0	50.5	-13.0	-37.5	
3505.20	-17.7	H	3.0	34.1	1.0	50.8	-13.0	-37.8	
5257.60	-20.7	H	3.0	33.2	1.0	52.9	-13.0	-39.9	
7010.40	-18.9	H	3.0	32.9	1.0	50.8	-13.0	-37.8	

B5 REL99
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
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, 826.4									
1652.80	-25.8	V	3.0	36.4	1.0	61.1	-13.0	-48.1	
2479.20	-24.1	V	3.0	35.0	1.0	58.1	-13.0	-45.1	
3305.60	-22.4	V	3.0	34.3	1.0	55.7	-13.0	-42.7	
1652.80	-27.7	H	3.0	36.4	1.0	63.0	-13.0	-50.0	
2479.20	-24.3	H	3.0	35.0	1.0	58.3	-13.0	-45.3	
3305.60	-22.8	H	3.0	34.3	1.0	56.0	-13.0	-43.0	
Mid Ch, 836.6									
1673.20	-26.5	V	3.0	36.3	1.0	61.8	-13.0	-48.8	
2509.60	-23.6	V	3.0	34.9	1.0	57.6	-13.0	-44.6	
3346.40	-22.9	V	3.0	34.2	1.0	55.3	-13.0	-42.3	
1673.20	-27.5	H	3.0	36.3	1.0	62.8	-13.0	-49.8	
2509.60	-24.5	H	3.0	34.9	1.0	58.4	-13.0	-45.4	
3346.40	-22.4	H	3.0	34.2	1.0	55.6	-13.0	-42.6	
High Ch, 846.6									
1693.20	-27.1	V	3.0	36.3	1.0	62.4	-13.0	-49.4	
2539.80	-24.7	V	3.0	34.9	1.0	58.7	-13.0	-45.7	
3386.40	-22.3	V	3.0	34.2	1.0	55.5	-13.0	-42.5	
1693.20	-27.5	H	3.0	36.3	1.0	62.8	-13.0	-49.8	
2539.80	-24.6	H	3.0	34.9	1.0	58.5	-13.0	-45.5	
3386.40	-22.7	H	3.0	34.2	1.0	55.9	-13.0	-42.9	

B5 HSDPA
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
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, 826.4									
1652.80	-25.5	V	3.0	36.4	1.0	60.9	-13.0	-47.9	
2479.20	-24.2	V	3.0	35.0	1.0	58.2	-13.0	-45.2	
3305.60	-22.5	V	3.0	34.3	1.0	55.7	-13.0	-42.7	
1652.80	-27.5	H	3.0	36.4	1.0	62.8	-13.0	-49.8	
2479.20	-24.5	H	3.0	35.0	1.0	58.5	-13.0	-45.5	
3305.60	-22.8	H	3.0	34.3	1.0	56.1	-13.0	-43.1	
Mid Ch, 836.6									
1673.20	-26.2	V	3.0	36.3	1.0	61.5	-13.0	-48.5	
2509.60	-24.0	V	3.0	34.9	1.0	57.9	-13.0	-44.9	
3346.40	-22.1	V	3.0	34.2	1.0	55.3	-13.0	-42.3	
1673.20	-27.6	H	3.0	36.3	1.0	63.0	-13.0	-50.0	
2509.60	-24.7	H	3.0	34.9	1.0	58.6	-13.0	-45.6	
3346.40	-22.3	H	3.0	34.2	1.0	55.6	-13.0	-42.6	
High Ch, 846.6									
1693.20	-27.1	V	3.0	36.3	1.0	62.4	-13.0	-49.4	
2539.80	-24.2	V	3.0	34.9	1.0	58.1	-13.0	-45.1	
3386.40	-22.4	V	3.0	34.2	1.0	55.6	-13.0	-42.6	
1693.20	-27.2	H	3.0	36.3	1.0	62.5	-13.0	-49.5	
2539.80	-24.4	H	3.0	34.9	1.0	58.3	-13.0	-45.3	
3386.40	-22.6	H	3.0	34.2	1.0	55.8	-13.0	-42.8	

LTE Band 2

1.4MHz QPSK
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/25/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
Mode: LTE_QPSK Band 2 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, 1850.7									
3701.40	-9.8	V	3.0	33.9	1.0	42.7	-13.0	-29.7	
5552.10	-21.5	V	3.0	33.1	1.0	-53.6	-13.0	-40.6	
7402.80	-16.9	V	3.0	32.9	1.0	-50.8	-13.0	-37.8	
3701.40	-16.9	H	3.0	33.9	1.0	-49.7	-13.0	-36.7	
5552.10	-21.6	H	3.0	33.1	1.0	-53.7	-13.0	-40.7	
7402.80	-19.7	H	3.0	32.9	1.0	-51.5	-13.0	-38.5	
Mid Ch, 1880									
3760.00	-16.2	V	3.0	33.8	1.0	49.0	-13.0	-36.0	
5640.00	-15.0	V	3.0	33.1	1.0	47.1	-13.0	-34.1	
7520.00	-17.9	V	3.0	32.8	1.0	49.8	-13.0	-36.8	
3760.00	-16.9	H	3.0	33.8	1.0	51.7	-13.0	-38.7	
5640.00	-16.6	H	3.0	33.1	1.0	50.7	-13.0	-37.7	
7520.00	-19.4	H	3.0	32.8	1.0	51.2	-13.0	-38.2	
High Ch, 1909.3									
3816.00	-17.8	V	3.0	33.7	1.0	50.5	-13.0	-37.5	
5727.90	-21.2	V	3.0	33.1	1.0	53.3	-13.0	-40.3	
7637.20	-19.8	V	3.0	32.8	1.0	51.6	-13.0	-38.6	
3816.00	-18.8	H	3.0	33.7	1.0	51.5	-13.0	-38.5	
5727.90	-21.4	H	3.0	33.1	1.0	53.5	-13.0	-40.5	
7637.20	-20.1	H	3.0	32.8	1.0	51.9	-13.0	-38.9	

1.4MHz 16QAM
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/25/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
Mode: LTE_16QAM Band 2 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, 1850.7									
3701.40	9.7	V	3.0	33.9	1.0	42.5	-13.0	-29.5	
5552.10	-18.8	V	3.0	33.1	1.0	50.9	-13.0	-37.9	
7402.80	-19.6	V	3.0	32.9	1.0	51.4	-13.0	-38.4	
3701.40	-16.1	H	3.0	33.9	1.0	49.0	-13.0	-36.0	
5552.10	-21.7	H	3.0	33.1	1.0	53.8	-13.0	-40.8	
7402.80	-20.0	H	3.0	32.9	1.0	51.9	-13.0	-38.9	
Mid Ch, 1880									
3760.00	-17.1	V	3.0	33.8	1.0	49.9	-13.0	-36.9	
5640.00	-15.0	V	3.0	33.1	1.0	47.1	-13.0	-34.1	
7520.00	-19.4	V	3.0	32.8	1.0	51.3	-13.0	-38.3	
3760.00	-18.9	H	3.0	33.8	1.0	51.7	-13.0	-38.7	
5640.00	-17.0	H	3.0	33.1	1.0	49.1	-13.0	-36.1	
7520.00	-19.3	H	3.0	32.8	1.0	51.2	-13.0	-38.2	
High Ch, 1909.3									
3816.00	-18.6	V	3.0	33.7	1.0	51.3	-13.0	-38.3	
5727.90	-21.4	V	3.0	33.1	1.0	53.4	-13.0	-40.4	
7637.20	-19.1	V	3.0	32.8	1.0	50.9	-13.0	-37.9	
3816.00	-16.8	H	3.0	33.7	1.0	51.5	-13.0	-38.5	
5727.90	-21.2	H	3.0	33.1	1.0	53.2	-13.0	-40.2	
7637.20	-19.6	H	3.0	32.8	1.0	51.4	-13.0	-38.4	

3MHz QPSK
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/25/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
Mode: LTE_QPSK Band 2 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, 1851.5									
3703.00	-17.8	V	3.0	33.9	1.0	50.7	-13.0	-37.7	
5554.50	-21.3	V	3.0	33.1	1.0	53.4	-13.0	-40.4	
7406.00	-20.4	V	3.0	32.9	1.0	52.3	-13.0	-39.3	
3703.00	-13.9	H	3.0	33.9	1.0	46.7	-13.0	-33.7	
5554.50	-21.4	H	3.0	33.1	1.0	53.5	-13.0	-40.5	
7406.00	-20.6	H	3.0	32.9	1.0	52.4	-13.0	-39.4	
Mid Ch, 1880									
3760.00	-18.4	V	3.0	33.8	1.0	51.2	-13.0	-38.2	
5640.00	-21.4	V	3.0	33.1	1.0	53.9	-13.0	-40.9	
7520.00	-20.4	V	3.0	32.8	1.0	52.2	-13.0	-39.2	
3760.00	-21.3	H	3.0	33.8	1.0	54.1	-13.0	-41.1	
5640.00	-21.9	H	3.0	33.1	1.0	54.0	-13.0	-41.0	
7520.00	-19.9	H	3.0	32.8	1.0	51.7	-13.0	-38.7	
High Ch, 1908.5									
3817.00	-17.1	V	3.0	33.7	1.0	49.9	-13.0	-36.9	
5725.50	-21.9	V	3.0	33.1	1.0	53.9	-13.0	-40.9	
7634.00	-19.8	V	3.0	32.8	1.0	51.6	-13.0	-38.6	
3817.00	-14.5	H	3.0	33.7	1.0	47.3	-13.0	-34.3	
5725.50	-18.7	H	3.0	33.1	1.0	50.8	-13.0	-37.8	
7634.00	-19.9	H	3.0	32.8	1.0	51.4	-13.0	-38.4	

3MHz 16QAM
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/25/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
Mode: LTE_16QAM Band 2 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, 1851.5									
3703.00	-16.7	V	3.0	33.9	1.0	49.5	-13.0	-36.5	
5554.50	-21.1	V	3.0	33.1	1.0	53.2	-13.0	-40.2	
7406.00	-20.4	V	3.0	32.9	1.0	52.2	-13.0	-39.2	
3703.00	-12.9	H	3.0	33.9	1.0	45.8	-13.0	-32.8	
5554.50	-21.4	H	3.0	33.1	1.0	53.6	-13.0	-40.6	
7406.00	-20.7	H	3.0	32.9	1.0	52.5	-13.0	-39.5	
Mid Ch, 1880									
3760.00	-21.2	V	3.0	33.8	1.0	54.0	-13.0	-41.0	
5640.00	-20.4	V	3.0	33.1	1.0	52.5	-13.0	-39.5	
7520.00	-19.9	V	3.0	32.8	1.0	51.8	-13.0	-38.8	
3760.00	-20.9	H	3.0	33.8	1.0	53.7	-13.0	-40.7	
5640.00	-21.3	H	3.0	33.1	1.0	53.4	-13.0	-40.4	
7520.00	-19.7	H	3.0	32.8	1.0	51.5	-13.0	-38.5	
High Ch, 1908.5									
3817.00	-16.7	V	3.0	33.7	1.0	49.4	-13.0	-36.4	
5725.50	-21.3	V	3.0	33.1	1.0	53.4	-13.0	-40.4	
7634.00	-19.6	V	3.0	32.8	1.0	51.5	-13.0	-38.5	
3817.00	-15.0	H	3.0	33.7	1.0	47.7	-13.0	-34.7	
5725.50	-19.3	H	3.0	33.1	1.0	51.4	-13.0	-38.4	
7634.00	-19.3	H	3.0	32.8	1.0	51.1	-13.0	-38.1	

5MHz QPSK
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/25/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
Mode: LTE_QPSK Band 2 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, 1852.5									
3705.00	-12.3	V	3.0	33.9	1.0	45.1	-13.0	-32.1	
5557.50	-22.6	V	3.0	33.1	1.0	54.7	-13.0	-41.7	
7410.00	-19.0	V	3.0	32.9	1.0	50.9	-13.0	-37.9	
3705.00	-15.7	H	3.0	33.9	1.0	48.5	-13.0	-35.5	
5557.50	-22.0	H	3.0	33.1	1.0	54.1	-13.0	-41.1	
7410.00	-20.3	H	3.0	32.9	1.0	52.2	-13.0	-39.2	
Mid Ch, 1880									
3760.00	-16.4	V	3.0	33.8	1.0	49.2	-13.0	-36.2	
5640.00	-21.7	V	3.0	33.1	1.0	53.8	-13.0	-40.8	
7520.00	-20.1	V	3.0	32.8	1.0	51.9	-13.0	-38.9	
3760.00	-21.6	H	3.0	33.8	1.0	54.4	-13.0	-41.4	
5640.00	-21.7	H	3.0	33.1	1.0	53.8	-13.0	-40.8	
7520.00	-18.8	H	3.0	32.8	1.0	50.6	-13.0	-37.6	
High Ch, 1907.5									
3815.00	-18.7	V	3.0	33.7	1.0	51.4	-13.0	-38.4	
5722.50	-21.1	V	3.0	33.1	1.0	53.2	-13.0	-40.2	
7630.00	-19.4	V	3.0	32.8	1.0	51.2	-13.0	-38.2	
3815.00	-20.2	H	3.0	33.7	1.0	53.0	-13.0	-40.0	
5722.50	-20.6	H	3.0	33.1	1.0	52.7	-13.0	-39.7	
7630.00	-19.6	H	3.0	32.8	1.0	51.5	-13.0	-38.5	

5MHz 16QAM
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/25/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
Mode: LTE_16QAM Band 2 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, 1852.5									
3705.00	-11.8	V	3.0	33.9	1.0	44.7	-13.0	-31.7	
5557.50	-21.4	V	3.0	33.1	1.0	53.5	-13.0	-40.5	
7410.00	-19.1	V	3.0	32.9	1.0	51.0	-13.0	-38.0	
3705.00	-16.2	H	3.0	33.9	1.0	49.1	-13.0	-36.1	
5557.50	-21.2	H	3.0	33.1	1.0	53.3	-13.0	-40.3	
7410.00	-19.6	H	3.0	32.9	1.0	51.5	-13.0	-38.5	
Mid Ch, 1880									
3760.00	-16.1	V	3.0	33.8	1.0	48.9	-13.0	-35.9	
5640.00	-20.6	V	3.0	33.1	1.0	52.7	-13.0	-39.7	
7520.00	-19.5	V	3.0	32.8	1.0	51.3	-13.0	-38.3	
3760.00	-19.7	H	3.0	33.8	1.0	52.5	-13.0	-39.5	
5640.00	-21.7	H	3.0	33.1	1.0	53.8	-13.0	-40.8	
7520.00	-19.7	H	3.0	32.8	1.0	51.6	-13.0	-38.6	
High Ch, 1907.5									
3815.00	-19.1	V	3.0	33.7	1.0	51.9	-13.0	-38.9	
5722.50	-19.6	V	3.0	33.1	1.0	51.7	-13.0	-38.7	
7630.00	-18.4	V	3.0	32.8	1.0	50.3	-13.0	-37.3	
3815.00	-19.1	H	3.0	33.7	1.0	51.8	-13.0	-38.8	
5722.50	-21.1	H	3.0	33.1	1.0	53.2	-13.0	-40.2	
7630.00	-20.2	H	3.0	32.8	1.0	52.0	-13.0	-39.0	

10MHz QPSK										
UL Verification Services, Inc.										
Above 1GHz High Frequency Substitution Measurement										
Company:		LG Electronics								
Project #:		1622670								
Date:		1/25/2016								
Test Engineer:		O. Stoelling								
Configuration:		X-pos EUT, HS, AC Charger								
Location:		Chamber C								
Mode:		LTE_QPSK Band 2 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, 1855										
3710.00	-12.5	V	3.0	33.9	1.0	45.4	-13.0	-32.4		
5955.00	-20.9	V	3.0	33.1	1.0	52.9	-13.0	-39.9		
7420.00	-20.7	V	3.0	32.9	1.0	52.5	-13.0	-39.5		
3710.00	-17.9	H	3.0	33.9	1.0	50.8	-13.0	-37.8		
5955.00	-20.6	H	3.0	33.1	1.0	52.8	-13.0	-39.8		
7420.00	-20.7	H	3.0	32.9	1.0	52.5	-13.0	-39.5		
Mid Ch, 1880										
3760.00	-14.5	V	3.0	33.8	1.0	47.3	-13.0	-34.3		
5640.00	-21.9	V	3.0	33.1	1.0	54.0	-13.0	-41.0		
7520.00	-18.8	V	3.0	32.8	1.0	50.7	-13.0	-37.7		
3760.00	-20.2	H	3.0	33.8	1.0	53.0	-13.0	-40.0		
5640.00	-21.6	H	3.0	33.1	1.0	53.7	-13.0	-40.7		
7520.00	-19.6	H	3.0	32.8	1.0	51.4	-13.0	-38.4		
High Ch, 1905										
3810.00	-16.0	V	3.0	33.8	1.0	48.7	-13.0	-35.7		
5715.00	-20.7	V	3.0	33.1	1.0	52.8	-13.0	-39.8		
7620.00	-19.9	V	3.0	32.8	1.0	51.7	-13.0	-38.7		
3810.00	-17.0	H	3.0	33.8	1.0	49.7	-13.0	-36.7		
5715.00	-20.3	H	3.0	33.1	1.0	52.4	-13.0	-39.4		
7620.00	-19.4	H	3.0	32.8	1.0	51.3	-13.0	-38.3		

10MHz 16QAM										
UL Verification Services, Inc.										
Above 1GHz High Frequency Substitution Measurement										
Company:		LG Electronics								
Project #:		1622670								
Date:		1/25/2016								
Test Engineer:		O. Stoelling								
Configuration:		X-pos EUT, HS, AC Charger								
Location:		Chamber C								
Mode:		LTE_16QAM Band 2 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, 1855										
3710.00	-10.8	V	3.0	33.9	1.0	43.7	-13.0	-30.7		
5955.00	-21.9	V	3.0	33.1	1.0	54.0	-13.0	-41.0		
7420.00	-21.0	V	3.0	32.9	1.0	52.9	-13.0	-39.9		
3710.00	-16.1	H	3.0	33.9	1.0	49.0	-13.0	-36.0		
5955.00	-18.8	H	3.0	33.1	1.0	50.9	-13.0	-37.9		
7420.00	-19.6	H	3.0	32.9	1.0	51.5	-13.0	-38.5		
Mid Ch, 1880										
3760.00	-14.7	V	3.0	33.8	1.0	47.5	-13.0	-34.5		
5640.00	-21.1	V	3.0	33.1	1.0	53.2	-13.0	-40.2		
7520.00	-20.2	V	3.0	32.8	1.0	52.1	-13.0	-39.1		
3760.00	-19.6	H	3.0	33.8	1.0	52.4	-13.0	-39.4		
5640.00	-20.9	H	3.0	33.1	1.0	53.0	-13.0	-40.0		
7520.00	-19.9	H	3.0	32.8	1.0	51.8	-13.0	-38.8		
High Ch, 1905										
3810.00	-16.4	V	3.0	33.8	1.0	49.2	-13.0	-36.2		
5715.00	-20.8	V	3.0	33.1	1.0	52.9	-13.0	-39.9		
7620.00	-20.2	V	3.0	32.8	1.0	52.1	-13.0	-39.1		
3810.00	-16.1	H	3.0	33.8	1.0	48.8	-13.0	-35.8		
5715.00	-21.0	H	3.0	33.1	1.0	53.1	-13.0	-40.1		
7620.00	-19.7	H	3.0	32.8	1.0	51.5	-13.0	-38.5		

15MHz QPSK										
UL Verification Services, Inc.										
Above 1GHz High Frequency Substitution Measurement										
Company:		LG Electronics								
Project #:		1622670								
Date:		1/25/2016								
Test Engineer:		O. Stoelling								
Configuration:		X-pos EUT, HS, AC Charger								
Location:		Chamber C								
Mode:		LTE_QPSK Band 2 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, 1857.5										
3715.00	-12.9	V	3.0	33.9	1.0	45.7	-13.0	-32.7		
5972.50	-21.5	V	3.0	33.1	1.0	53.6	-13.0	-40.6		
7430.00	-21.2	V	3.0	32.9	1.0	53.1	-13.0	-40.1		
3715.00	-19.7	H	3.0	33.9	1.0	50.5	-13.0	-39.5		
5972.50	-21.6	H	3.0	33.1	1.0	53.7	-13.0	-40.7		
7430.00	-20.5	H	3.0	32.9	1.0	52.4	-13.0	-39.4		
Mid Ch, 1880										
3760.00	-18.6	V	3.0	33.8	1.0	51.4	-13.0	-38.4		
5640.00	-21.8	V	3.0	33.1	1.0	53.9	-13.0	-40.9		
7520.00	-19.4	V	3.0	32.8	1.0	51.2	-13.0	-38.2		
3760.00	-22.0	H	3.0	33.8	1.0	54.8	-13.0	-41.8		
5640.00	-21.7	H	3.0	33.1	1.0	53.8	-13.0	-40.8		
7520.00	-20.4	H	3.0	32.8	1.0	52.2	-13.0	-39.2		
High Ch, 1902.5										
3805.00	-15.7	V	3.0	33.8	1.0	48.4	-13.0	-35.4		
5707.50	-21.5	V	3.0	33.1	1.0	53.6	-13.0	-40.6		
7610.00	-20.2	V	3.0	32.8	1.0	52.0	-13.0	-39.0		
3805.00	-14.8	H	3.0	33.8	1.0	47.6	-13.0	-34.6		
5707.50	-20.8	H	3.0	33.1	1.0	52.9	-13.0	-39.9		
7610.00	-19.5	H	3.0	32.8	1.0	51.4	-13.0	-38.4		

15MHz 16QAM										
UL Verification Services, Inc.										
Above 1GHz High Frequency Substitution Measurement										
Company:		LG Electronics								
Project #:		1622670								
Date:		1/25/2016								
Test Engineer:		O. Stoelling								
Configuration:		X-pos EUT, HS, AC Charger								
Location:		Chamber C								
Mode:		LTE_16QAM Band 2 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, 1857.5										
3715.00	-12.4	V	3.0	33.9	1.0	45.2	-13.0	-32.2		
5972.50	-21.9	V	3.0	33.1	1.0	54.0	-13.0	-41.0		
7430.00	-19.8	V	3.0	32.9	1.0	51.7	-13.0	-38.7		
3715.00	-17.6	H	3.0	33.9	1.0	50.4	-13.0	-37.4		
5972.50	-21.3	H	3.0	33.1	1.0	53.4	-13.0	-40.4		
7430.00	-19.5	H	3.0	32.9	1.0	51.4	-13.0	-38.4		
Mid Ch, 1880										
3760.00	-18.9	V	3.0	33.8	1.0	51.7	-13.0	-38.7		
5640.00	-21.6	V	3.0	33.1	1.0	50.7	-13.0	-37.7		
7520.00	-19.1	V	3.0	32.8	1.0	51.0	-13.0	-38.0		
3760.00	-21.3	H	3.0	33.8	1.0	54.1	-13.0	-41.1		
5640.00	-22.0	H	3.0	33.1	1.0	54.1	-13.0	-41.1		
7520.00	-19.8	H	3.0	32.8	1.0	51.7	-13.0	-38.7		
High Ch, 1902.5										
3805.00	-16.4	V	3.0	33.8	1.0	49.2	-13.0	-36.2		
5707.50	-21.8	V	3.0	33.1	1.0	53.9	-13.0	-40.9		
7610.00	-19.2	V	3.0	32.8	1.0	51.0	-13.0	-38.0		
3805.00	-15.5	H	3.0	33.8	1.0	48.3	-13.0	-35.3		
5707.50	-20.7	H	3.0	33.1	1.0	52.7	-13.0	-39.7		
7610.00	-20.2	H	3.0	32.8	1.0	52.0	-13.0	-39.0		

20MHz QPSK										
UL Verification Services, Inc.										
Above 1GHz High Frequency Substitution Measurement										
Company:		LG Electronics								
Project #:		1622670								
Date:		1/25/2016								
Test Engineer:		O. Stoelling								
Configuration:		X-pos EUT, HS, AC Charger								
Location:		Chamber C								
Mode:		LTE_QPSK Band 2 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, 1860										
3720.00	-13.8	V	3.0	33.8	1.0	46.6	-13.0	-33.6		
5580.00	-21.6	V	3.0	33.1	1.0	53.7	-13.0	-40.7		
7440.00	-19.5	V	3.0	32.9	1.0	51.4	-13.0	-38.4		
3720.00	-17.9	H	3.0	33.8	1.0	50.7	-13.0	-37.7		
5580.00	-22.0	H	3.0	33.1	1.0	54.1	-13.0	-41.1		
7440.00	-19.3	H	3.0	32.9	1.0	51.2	-13.0	-38.2		
Mid Ch, 1880										
3760.00	-19.9	V	3.0	33.8	1.0	52.7	-13.0	-39.7		
5640.00	-21.6	V	3.0	33.1	1.0	53.7	-13.0	-40.7		
7520.00	-20.3	V	3.0	32.8	1.0	52.1	-13.0	-39.1		
3760.00	-21.5	H	3.0	33.8	1.0	54.3	-13.0	-41.3		
5640.00	-20.9	H	3.0	33.1	1.0	53.0	-13.0	-40.0		
7520.00	-19.8	H	3.0	32.8	1.0	51.6	-13.0	-38.6		
High Ch, 1900										
3800.00	-13.6	V	3.0	33.8	1.0	46.3	-13.0	-33.3		
5700.00	-21.8	V	3.0	33.1	1.0	53.9	-13.0	-40.9		
7600.00	-19.7	V	3.0	32.8	1.0	51.5	-13.0	-38.5		
3800.00	-14.7	H	3.0	33.8	1.0	47.4	-13.0	-34.4		
5700.00	-21.2	H	3.0	33.1	1.0	53.3	-13.0	-40.3		
7600.00	-19.9	H	3.0	32.8	1.0	51.8	-13.0	-38.8		

20MHz 16QAM										
UL Verification Services, Inc.										
Above 1GHz High Frequency Substitution Measurement										
Company:		LG Electronics								
Project #:		1622670								

LTE Band 4

1.4MHz QPSK
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: Jude Semana
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber C
Mode: LTE_QPSK Band 4 Harmonics, 1.4MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1710.7									
3421.40	-15.7	V	3.0	36.1	1.0	-50.8	-13.0	-37.8	
5132.10	-14.5	V	3.0	35.4	1.0	-49.0	-13.0	-36.0	
6842.00	-12.7	V	3.0	35.7	1.0	-47.3	-13.0	-34.3	
3421.40	-16.1	H	3.0	36.1	1.0	-51.2	-13.0	-38.2	
5132.10	-14.8	H	3.0	35.4	1.0	-49.2	-13.0	-36.2	
6842.00	-10.3	H	3.0	35.7	1.0	-44.9	-13.0	-31.9	
Mid Ch, 1732.5									
3465.00	-14.7	V	3.0	36.0	1.0	-49.7	-13.0	-36.7	
5197.50	-13.7	V	3.0	35.4	1.0	-48.1	-13.0	-35.1	
6930.00	-12.6	V	3.0	35.7	1.0	-47.2	-13.0	-34.2	
3465.00	-15.0	H	3.0	36.0	1.0	-50.1	-13.0	-37.1	
5197.50	-12.6	H	3.0	35.4	1.0	-47.1	-13.0	-34.1	
6930.00	-10.7	H	3.0	35.7	1.0	-45.4	-13.0	-32.4	
High Ch, 1754.3									
3508.00	-15.7	V	3.0	36.0	1.0	-50.7	-13.0	-37.7	
5262.90	-11.1	V	3.0	35.4	1.0	-45.5	-13.0	-32.5	
7017.20	-11.1	V	3.0	35.7	1.0	-45.8	-13.0	-32.8	
3508.00	-16.3	H	3.0	36.0	1.0	-51.2	-13.0	-38.2	
5262.90	-10.4	H	3.0	35.4	1.0	-44.8	-13.0	-31.8	
7017.20	-9.8	H	3.0	35.7	1.0	-44.5	-13.0	-31.5	

1.4MHz 16QAM
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: Jude Semana
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber C
Mode: LTE_16QAM Band 4 Harmonics, 1.4MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1710.7									
3421.40	-16.0	V	3.0	36.1	1.0	-51.1	-13.0	-38.1	
5132.10	-14.9	V	3.0	35.4	1.0	-49.4	-13.0	-36.4	
6842.00	-11.0	V	3.0	35.7	1.0	-45.7	-13.0	-32.7	
3421.40	-15.8	H	3.0	36.1	1.0	-50.9	-13.0	-37.9	
5132.10	-14.9	H	3.0	35.4	1.0	-49.3	-13.0	-36.3	
6842.00	-10.0	H	3.0	35.7	1.0	-44.7	-13.0	-31.7	
Mid Ch, 1732.5									
3465.00	-14.7	V	3.0	36.0	1.0	-49.8	-13.0	-36.8	
5197.50	-13.6	V	3.0	35.4	1.0	-48.0	-13.0	-35.0	
6930.00	-12.3	V	3.0	35.7	1.0	-46.9	-13.0	-33.9	
3465.00	-13.9	H	3.0	36.0	1.0	-48.9	-13.0	-35.9	
5197.50	-13.0	H	3.0	35.4	1.0	-47.4	-13.0	-34.4	
6930.00	-10.5	H	3.0	35.7	1.0	-45.2	-13.0	-32.2	
High Ch, 1754.3									
3508.00	-15.5	V	3.0	36.0	1.0	-50.5	-13.0	-37.5	
5262.90	-11.4	V	3.0	35.4	1.0	-45.8	-13.0	-32.8	
7017.20	-11.5	V	3.0	35.7	1.0	-46.1	-13.0	-33.1	
3508.00	-16.4	H	3.0	36.0	1.0	-51.4	-13.0	-38.4	
5262.90	-10.0	H	3.0	35.4	1.0	-44.5	-13.0	-31.5	
7017.20	-10.3	H	3.0	35.7	1.0	-44.9	-13.0	-31.9	

3MHz QPSK
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: Jude Semana
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber C
Mode: LTE_QPSK Band 4 Harmonics, 3MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1711.5									
3423.00	-15.6	V	3.0	36.1	1.0	-50.7	-13.0	-37.7	
5134.50	-15.1	V	3.0	35.4	1.0	-49.6	-13.0	-36.6	
6846.00	-12.7	V	3.0	35.7	1.0	-47.4	-13.0	-34.4	
3423.00	-15.2	H	3.0	36.1	1.0	-50.3	-13.0	-37.3	
5134.50	-14.6	H	3.0	35.4	1.0	-49.1	-13.0	-36.1	
6846.00	-10.1	H	3.0	35.7	1.0	-44.8	-13.0	-31.8	
Mid Ch, 1732.5									
3465.00	-14.7	V	3.0	36.0	1.0	-49.8	-13.0	-36.8	
5197.50	-13.8	V	3.0	35.4	1.0	-48.3	-13.0	-35.3	
6930.00	-12.2	V	3.0	35.7	1.0	-46.9	-13.0	-33.9	
3465.00	-15.1	H	3.0	36.0	1.0	-50.2	-13.0	-37.2	
5197.50	-13.3	H	3.0	35.4	1.0	-47.9	-13.0	-34.9	
6930.00	-10.8	H	3.0	35.7	1.0	-45.5	-13.0	-32.5	
High Ch, 1753.5									
3507.00	-16.1	V	3.0	36.0	1.0	-51.1	-13.0	-38.1	
5260.50	-10.7	V	3.0	35.4	1.0	-45.2	-13.0	-32.2	
7014.00	-11.5	V	3.0	35.7	1.0	-46.2	-13.0	-33.2	
3507.00	-16.2	H	3.0	36.0	1.0	-51.2	-13.0	-38.2	
5260.50	-9.6	H	3.0	35.4	1.0	-44.1	-13.0	-31.1	
7014.00	-9.6	H	3.0	35.7	1.0	-44.3	-13.0	-31.3	

3MHz 16QAM
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: Jude Semana
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber C
Mode: LTE_16QAM Band 4 Harmonics, 3MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1711.5									
3423.00	-15.8	V	3.0	36.1	1.0	-50.8	-13.0	-37.8	
5134.50	-15.3	V	3.0	35.4	1.0	-49.7	-13.0	-36.7	
6846.00	-12.5	V	3.0	35.7	1.0	-47.1	-13.0	-34.1	
3423.00	-15.3	H	3.0	36.1	1.0	-50.4	-13.0	-37.4	
5134.50	-14.7	H	3.0	35.4	1.0	-49.1	-13.0	-36.1	
6846.00	-10.3	H	3.0	35.7	1.0	-45.0	-13.0	-32.0	
Mid Ch, 1732.5									
3465.00	-15.0	V	3.0	36.0	1.0	-50.0	-13.0	-37.0	
5197.50	-14.0	V	3.0	35.4	1.0	-48.4	-13.0	-35.4	
6930.00	-11.8	V	3.0	35.7	1.0	-46.5	-13.0	-33.5	
3465.00	-15.4	H	3.0	36.0	1.0	-50.4	-13.0	-37.4	
5197.50	-13.6	H	3.0	35.4	1.0	-48.0	-13.0	-35.0	
6930.00	-10.8	H	3.0	35.7	1.0	-45.5	-13.0	-32.5	
High Ch, 1753.5									
3507.00	-16.1	V	3.0	36.0	1.0	-51.1	-13.0	-38.1	
5260.50	-11.0	V	3.0	35.4	1.0	-45.1	-13.0	-32.1	
7014.00	-11.4	V	3.0	35.7	1.0	-46.1	-13.0	-33.1	
3507.00	-16.2	H	3.0	36.0	1.0	-51.2	-13.0	-38.2	
5260.50	-9.7	H	3.0	35.4	1.0	-44.2	-13.0	-31.2	
7014.00	-9.5	H	3.0	35.7	1.0	-44.2	-13.0	-31.2	

5MHz QPSK
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: Jude Semana
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber C
Mode: LTE_QPSK Band 4 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1712.5									
3425.00	-15.2	V	3.0	36.1	1.0	-50.3	-13.0	-37.3	
5137.50	-14.6	V	3.0	35.4	1.0	-49.0	-13.0	-36.0	
6850.00	-12.0	V	3.0	35.7	1.0	-46.7	-13.0	-33.7	
3425.00	-15.5	H	3.0	36.1	1.0	-50.6	-13.0	-37.6	
5137.50	-13.6	H	3.0	35.4	1.0	-48.1	-13.0	-35.1	
6850.00	-9.7	H	3.0	35.7	1.0	-44.3	-13.0	-31.3	
Mid Ch, 1732.5									
3465.00	-15.4	V	3.0	36.0	1.0	-50.5	-13.0	-37.5	
5197.50	-13.5	V	3.0	35.4	1.0	-47.9	-13.0	-34.9	
6930.00	-12.8	V	3.0	35.7	1.0	-47.5	-13.0	-34.5	
3465.00	-15.2	H	3.0	36.0	1.0	-50.3	-13.0	-37.3	
5197.50	-12.9	H	3.0	35.4	1.0	-47.4	-13.0	-34.4	
6930.00	-10.9	H	3.0	35.7	1.0	-45.6	-13.0	-32.6	
High Ch, 1752.5									
3505.00	-16.0	V	3.0	36.0	1.0	-51.0	-13.0	-38.0	
5257.50	-11.2	V	3.0	35.4	1.0	-45.6	-13.0	-32.6	
7010.00	-11.2	V	3.0	35.7	1.0	-45.9	-13.0	-32.9	
3505.00	-15.9	H	3.0	36.0	1.0	-50.9	-13.0	-37.9	
5257.50	-9.6	H	3.0	35.4	1.0	-44.0	-13.0	-31.0	
7010.00	-10.0	H	3.0	35.7	1.0	-44.6	-13.0	-31.6	

5MHz 16QAM
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: Jude Semana
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber C
Mode: LTE_16QAM Band 4 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1712.5									
3425.00	-15.5	V	3.0	36.1	1.0	-50.5	-13.0	-37.5	
5137.50	-15.0	V	3.0	35.4	1.0	-49.5	-13.0	-36.5	
6850.00	-12.1	V	3.0	35.7	1.0	-46.7	-13.0	-33.7	
3425.00	-15.3	H	3.0	36.1	1.0	-50.3	-13.0	-37.3	
5137.50	-13.7	H	3.0	35.4	1.0	-48.1	-13.0	-35.1	
6850.00	-10.1	H	3.0	35.7	1.0	-44.8	-13.0	-31.8	
Mid Ch, 1732.5									
3465.00	-15.6	V	3.0	36.0	1.0	-50.6	-13.0	-37.6	
5197.50	-13.8	V	3.0	35.4	1.0	-48.2	-13.0	-35.2	
6930.00	-13.1	V	3.0	35.7	1.0	-47.8	-13.0	-34.8	
3465.00	-15.1	H	3.0	36.0	1.0	-50.1	-13.0	-37.1	
5197.50	-13.0	H	3.0	35.4	1.0	-47.4	-13.0	-34.4	
6930.00	-11.1	H	3.0	35.7	1.0	-45.8	-13.0	-32.8	
High Ch, 1752.5									
3505.00	-16.1	V	3.0	36.0	1.0	-51.1	-13.0	-38.1	
5257.50	-11.7	V	3.0	35.4	1.0	-46.1	-13.0	-33.1	
7010.00	-11.6	V	3.0	35.7	1.0	-46.3	-13.0	-33.3	
3505.00	-16.2	H	3.0	36.0	1.0	-51.2	-13.0	-38.2	
5257.50	-9.6	H	3.0	35.4	1.0	-44.0	-13.0	-31.0	
7010.00	-10.3	H	3.0	35.7	1.0	-44.9	-13.0	-31.9	

10MHz QPSK

10MHz 16QAM

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

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: Jude Semana
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber C
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, 1715									
3430.00	-15.1	V	3.0	36.1	1.0	-50.1	-13.0	-37.1	
5145.00	-14.8	V	3.0	35.4	1.0	-49.3	-13.0	-36.3	
6860.00	-12.5	V	3.0	35.7	1.0	-47.2	-13.0	-34.2	
3430.00	-14.8	H	3.0	36.1	1.0	-49.9	-13.0	-36.9	
5145.00	-14.2	H	3.0	35.4	1.0	-48.6	-13.0	-35.6	
6860.00	-10.6	H	3.0	35.7	1.0	-45.3	-13.0	-32.3	
Mid Ch, 1732.5									
3465.00	-14.8	V	3.0	36.0	1.0	-49.8	-13.0	-36.8	
5197.50	-13.7	V	3.0	35.4	1.0	-48.1	-13.0	-35.1	
6930.00	-11.3	V	3.0	35.7	1.0	-46.0	-13.0	-33.0	
3465.00	-14.6	H	3.0	36.0	1.0	-49.6	-13.0	-36.6	
5197.50	-12.4	H	3.0	35.4	1.0	-46.8	-13.0	-33.8	
6930.00	-9.9	H	3.0	35.7	1.0	-44.6	-13.0	-31.6	
High Ch, 1750									
3500.00	-16.0	V	3.0	36.0	1.0	-51.0	-13.0	-38.0	
5250.00	-10.5	V	3.0	35.4	1.0	-44.9	-13.0	-31.9	
7000.00	-11.4	V	3.0	35.7	1.0	-46.1	-13.0	-33.1	
3500.00	-15.9	H	3.0	36.0	1.0	-50.9	-13.0	-37.9	
5250.00	-10.5	H	3.0	35.4	1.0	-45.0	-13.0	-32.0	
7000.00	-9.3	H	3.0	35.7	1.0	-43.9	-13.0	-30.9	

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

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: Jude Semana
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber C
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, 1715									
3430.00	-15.0	V	3.0	36.1	1.0	-50.1	-13.0	-37.1	
5145.00	-14.9	V	3.0	35.4	1.0	-49.3	-13.0	-36.3	
6860.00	-12.4	V	3.0	35.7	1.0	-47.1	-13.0	-34.1	
3430.00	-15.1	H	3.0	36.1	1.0	-50.1	-13.0	-37.1	
5145.00	-14.2	H	3.0	35.4	1.0	-48.7	-13.0	-35.7	
6860.00	-10.6	H	3.0	35.7	1.0	-45.3	-13.0	-32.3	
Mid Ch, 1732.5									
3465.00	-14.2	V	3.0	36.0	1.0	-49.2	-13.0	-36.2	
5197.50	-13.1	V	3.0	35.4	1.0	-47.5	-13.0	-34.5	
6930.00	-11.4	V	3.0	35.7	1.0	-46.1	-13.0	-33.1	
3465.00	-14.6	H	3.0	36.0	1.0	-49.6	-13.0	-36.6	
5197.50	-12.7	H	3.0	35.4	1.0	-47.1	-13.0	-34.1	
6930.00	-10.6	H	3.0	35.7	1.0	-45.2	-13.0	-32.2	
High Ch, 1750									
3500.00	-15.9	V	3.0	36.0	1.0	-50.9	-13.0	-37.9	
5250.00	-10.3	V	3.0	35.4	1.0	-44.7	-13.0	-31.7	
7000.00	-12.1	V	3.0	35.7	1.0	-46.8	-13.0	-33.8	
3500.00	-15.8	H	3.0	36.0	1.0	-50.8	-13.0	-37.8	
5250.00	-10.8	H	3.0	35.4	1.0	-45.2	-13.0	-32.2	
7000.00	-9.7	H	3.0	35.7	1.0	-44.4	-13.0	-31.4	

15MHz QPSK
UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: RZ
Configuration: EUT with HS/AC (X-Position)
Location: Chamber C
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, 1717.5									
3435.00	-12.7	V	3.0	36.1	1.0	-47.7	-13.0	-34.7	
5152.50	-16.1	V	3.0	35.4	1.0	-50.5	-13.0	-37.5	
6870.00	-14.9	V	3.0	35.7	1.0	-49.6	-13.0	-36.6	
3435.00	-10.4	H	3.0	36.1	1.0	-45.5	-13.0	-32.5	
5152.50	-17.0	H	3.0	35.4	1.0	-51.4	-13.0	-38.4	
6870.00	-15.1	H	3.0	35.7	1.0	-49.8	-13.0	-36.8	
Mid Ch, 1732.5									
3465.00	-17.2	V	3.0	36.0	1.0	-52.2	-13.0	-39.2	
5197.50	-17.3	V	3.0	35.4	1.0	-51.7	-13.0	-38.7	
6930.00	-14.5	V	3.0	35.7	1.0	-49.2	-13.0	-36.2	
3465.00	-15.1	H	3.0	36.0	1.0	-50.1	-13.0	-37.1	
5197.50	-15.6	H	3.0	35.4	1.0	-50.0	-13.0	-37.0	
6930.00	-13.1	H	3.0	35.7	1.0	-47.8	-13.0	-34.8	
High Ch, 1747.5									
3495.00	-13.7	V	3.0	36.0	1.0	-48.7	-13.0	-35.7	
5242.50	-16.8	V	3.0	35.4	1.0	-51.2	-13.0	-38.2	
6990.00	-14.3	V	3.0	35.7	1.0	-49.0	-13.0	-36.0	
3495.00	-13.3	H	3.0	36.0	1.0	-48.3	-13.0	-35.3	
5242.50	-15.9	H	3.0	35.4	1.0	-50.3	-13.0	-37.3	
6990.00	-13.8	H	3.0	35.7	1.0	-48.5	-13.0	-35.5	

15MHz 16QAM
UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: Jude Semana
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber C
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, 1717.5									
3435.00	-14.7	V	3.0	36.1	1.0	-49.7	-13.0	-36.7	
5152.50	-13.6	V	3.0	35.4	1.0	-48.0	-13.0	-35.0	
6870.00	-10.9	V	3.0	35.7	1.0	-45.5	-13.0	-32.5	
3435.00	-14.7	H	3.0	36.1	1.0	-49.8	-13.0	-36.8	
5152.50	-13.1	H	3.0	35.4	1.0	-47.6	-13.0	-34.6	
6870.00	-21.2	H	3.0	35.7	1.0	-13.5	-13.0	-0.5	
Mid Ch, 1732.5									
3465.00	-15.0	V	3.0	36.0	1.0	-50.4	-13.0	-37.4	
5197.50	-13.7	V	3.0	35.4	1.0	-48.1	-13.0	-35.1	
6930.00	-11.5	V	3.0	35.7	1.0	-46.1	-13.0	-33.1	
3465.00	-14.7	H	3.0	36.0	1.0	-49.7	-13.0	-36.7	
5197.50	-11.7	H	3.0	35.4	1.0	-46.1	-13.0	-33.1	
6930.00	-9.8	H	3.0	35.7	1.0	-44.5	-13.0	-31.5	
High Ch, 1747.5									
3495.00	-16.1	V	3.0	36.0	1.0	-51.1	-13.0	-38.1	
5242.50	-11.0	V	3.0	35.4	1.0	-45.5	-13.0	-32.5	
6990.00	-10.9	V	3.0	35.7	1.0	-45.6	-13.0	-32.6	
3495.00	-15.6	H	3.0	36.0	1.0	-50.6	-13.0	-37.6	
5242.50	-9.6	H	3.0	35.4	1.0	-44.1	-13.0	-31.1	
6990.00	-9.6	H	3.0	35.7	1.0	-44.5	-13.0	-31.5	

20MHz QPSK
UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: RZ
Configuration: EUT with HS/AC (X-Position)
Location: Chamber C
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, 1720									
3440.00	-11.1	V	3.0	36.0	1.0	-46.2	-13.0	-33.2	
5160.00	-16.7	V	3.0	35.4	1.0	-51.1	-13.0	-38.1	
6880.00	-15.6	V	3.0	35.7	1.0	-50.3	-13.0	-37.3	
3440.00	-11.6	H	3.0	36.0	1.0	-46.6	-13.0	-33.6	
5160.00	-16.5	H	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6880.00	-14.8	H	3.0	35.7	1.0	-49.6	-13.0	-36.6	
Mid Ch, 1732.5									
3465.00	-17.5	V	3.0	36.0	1.0	-52.5	-13.0	-39.5	
5197.50	-16.3	V	3.0	35.4	1.0	-50.7	-13.0	-37.7	
6930.00	-14.8	V	3.0	35.7	1.0	-49.5	-13.0	-36.5	
3465.00	-15.4	H	3.0	36.0	1.0	-50.4	-13.0	-37.4	
5197.50	-14.8	H	3.0	35.4	1.0	-49.3	-13.0	-36.3	
6930.00	-12.4	H	3.0	35.7	1.0	-48.1	-13.0	-35.1	
High Ch, 1745									
3490.00	-14.9	V	3.0	36.0	1.0	-50.0	-13.0	-37.0	
5235.00	-16.4	V	3.0	35.4	1.0	-50.9	-13.0	-37.9	
6980.00	-14.1	V	3.0	35.7	1.0	-48.8	-13.0	-35.8	
3490.00	-12.6	H	3.0	36.0	1.0	-47.6	-13.0	-34.6	
5235.00	-16.7	H	3.0	35.4	1.0	-51.1	-13.0	-38.1	
6980.00	-13.0	H	3.0	35.7	1.0	-47.7	-13.0	-34.7	

20MHz 16QAM
UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: Jude Semana
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber C
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, 1720									
3440.00	-14.9	V	3.0	36.0	1.0	-50.0	-13.0	-37.0	
5160.00	-14.0	V	3.0	35.4	1.0	-48.4	-13.0	-35.4	
6880.00	-11.0	V	3.0	35.7	1.0	-45.7	-13.0	-32.7	
3440.00	-14.8	H	3.0	36.0	1.0	-49.9	-13.0	-36.9	
5160.00	-13.3	H	3.0	35.4	1.0	-47.7	-13.0	-34.7	
6880.00	-8.9	H	3.0	35.7	1.0	-43.6	-13.0	-30.6	
Mid Ch, 1732.5									
3465.00	-14.9	V	3.0	36.0	1.0	-50.0	-13.0	-37.0	
5197.50	-13.6	V	3.0	35.4	1.0	-48.0	-13.0	-35.0	
6930.00	-11.3	V	3.0	35.7	1.0	-46.0	-13.0	-33.0	
3465.00	-15.2	H	3.0	36.0	1.0	-50.2	-13.0	-37.2	
5197.50	-11.8	H	3.0	35.4	1.0	-46.2	-13.0	-33.2	
6930.00	-10.2	H	3.0	35.7	1.0	-44.9	-13.0	-31.9	
High Ch, 1745									
3490.00	-15.6	V	3.0	36.0	1.0	-50.6	-13.0	-37.6	
5235.00	-11.3	V	3.0	35.4	1.0	-45.7	-13.0	-32.7	
6980.00	-11.2	V	3.0	35.7	1.0	-45.8	-13.0	-32.8	
3490.00	-14.8	H	3.0	36.0	1.0	-49.8	-13.0	-36.8	
5235.00	-9.6	H	3.0	35.4	1.0	-44.0	-13.0	-31.0	
6980.00	-9.7	H	3.0	35.7	1.0	-44.4	-13.0	-31.4	

LTE Band 5

1.4MHz QPSK
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
 Project #: 16I22670
 Date: 1/26/2016
 Test Engineer: Jude Semana
 Configuration: X-pos EUT, Ac Charger, Headset
 Location: Chamber C
 Mode: LTE_QPSK Band 5 Harmonics, 1.4MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7									
1649.40	-24.5	V	3.0	37.0	1.0	-60.5	-13.0	-47.5	
2474.10	-17.4	V	3.0	36.4	1.0	-52.9	-13.0	-39.9	
3298.00	-18.9	V	3.0	36.2	1.0	-54.1	-13.0	-41.1	
1649.40	-24.2	H	3.0	37.0	1.0	-60.3	-13.0	-47.3	
2474.10	-19.9	H	3.0	36.4	1.0	-55.4	-13.0	-42.4	
3298.00	-19.4	H	3.0	36.2	1.0	-54.6	-13.0	-41.6	
Mid Ch, 836.5									
1673.00	-23.7	V	3.0	37.0	1.0	-59.7	-13.0	-46.7	
2509.50	-17.5	V	3.0	36.4	1.0	-53.0	-13.0	-40.0	
3346.00	-18.8	V	3.0	36.1	1.0	-53.9	-13.0	-40.9	
1673.00	-23.9	H	3.0	37.0	1.0	-59.9	-13.0	-46.9	
2509.50	-20.6	H	3.0	36.4	1.0	-56.0	-13.0	-43.0	
3346.00	-18.9	H	3.0	36.1	1.0	-54.0	-13.0	-41.0	
High Ch, 848.3									
1696.60	-23.8	V	3.0	37.0	1.0	-59.8	-13.0	-46.8	
2544.90	-19.0	V	3.0	36.4	1.0	-54.4	-13.0	-41.4	
3393.20	-18.3	V	3.0	36.1	1.0	-53.4	-13.0	-40.4	
1696.60	-22.8	H	3.0	37.0	1.0	-59.5	-13.0	-46.5	
2544.90	-21.0	H	3.0	36.4	1.0	-56.4	-13.0	-43.4	
3393.20	-18.3	H	3.0	36.1	1.0	-53.4	-13.0	-40.4	

1.4MHz 16QAM
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
 Project #: 16I22670
 Date: 1/26/2016
 Test Engineer: Jude Semana
 Configuration: X-pos EUT, Ac Charger, Headset
 Location: Chamber C
 Mode: LTE_16QAM Band 5 Harmonics, 1.4MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7									
1649.40	-24.9	V	3.0	37.0	1.0	-60.9	-13.0	-47.9	
2474.10	-18.8	V	3.0	36.4	1.0	-54.2	-13.0	-41.2	
3298.00	-19.3	V	3.0	36.2	1.0	-54.4	-13.0	-41.4	
1649.40	-24.5	H	3.0	37.0	1.0	-60.6	-13.0	-47.6	
2474.10	-20.2	H	3.0	36.4	1.0	-55.6	-13.0	-42.6	
3298.00	-19.9	H	3.0	36.2	1.0	-55.1	-13.0	-42.1	
Mid Ch, 836.5									
1673.00	-24.4	V	3.0	37.0	1.0	-60.4	-13.0	-47.4	
2509.50	-19.0	V	3.0	36.4	1.0	-54.4	-13.0	-41.4	
3346.00	-19.2	V	3.0	36.1	1.0	-54.3	-13.0	-41.3	
1673.00	-24.0	H	3.0	37.0	1.0	-60.0	-13.0	-47.0	
2509.50	-21.0	H	3.0	36.4	1.0	-56.4	-13.0	-43.4	
3346.00	-18.4	H	3.0	36.1	1.0	-53.6	-13.0	-40.6	
High Ch, 848.3									
1696.60	-24.1	V	3.0	37.0	1.0	-60.1	-13.0	-47.1	
2544.90	-19.3	V	3.0	36.4	1.0	-54.7	-13.0	-41.7	
3393.20	-18.6	V	3.0	36.1	1.0	-53.7	-13.0	-40.7	
1696.60	-24.2	H	3.0	37.0	1.0	-60.1	-13.0	-47.1	
2544.90	-21.9	H	3.0	36.4	1.0	-57.3	-13.0	-44.3	
3393.20	-18.4	H	3.0	36.1	1.0	-53.5	-13.0	-40.5	

3MHz QPSK
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
 Project #: 16I22670
 Date: 1/26/2016
 Test Engineer: Jude Semana
 Configuration: X-pos EUT, Ac Charger, Headset
 Location: Chamber C
 Mode: LTE_QPSK Band 5 Harmonics, 3MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 829.5									
1651.00	-24.5	V	3.0	37.0	1.0	-60.5	-13.0	-47.5	
2476.50	-17.6	V	3.0	36.4	1.0	-53.0	-13.0	-40.0	
3302.00	-18.2	V	3.0	36.2	1.0	-53.4	-13.0	-40.4	
1651.00	-23.8	H	3.0	37.0	1.0	-59.8	-13.0	-46.8	
2476.50	-19.2	H	3.0	36.4	1.0	-54.7	-13.0	-41.7	
3302.00	-18.4	H	3.0	36.2	1.0	-53.6	-13.0	-40.6	
Mid Ch, 836.5									
1673.00	-23.5	V	3.0	37.0	1.0	-59.5	-13.0	-46.5	
2509.50	-18.4	V	3.0	36.4	1.0	-53.8	-13.0	-40.8	
3346.00	-18.8	V	3.0	36.1	1.0	-53.9	-13.0	-40.9	
1673.00	-23.4	H	3.0	37.0	1.0	-59.4	-13.0	-46.4	
2509.50	-20.2	H	3.0	36.4	1.0	-56.6	-13.0	-43.6	
3346.00	-18.5	H	3.0	36.1	1.0	-53.6	-13.0	-40.6	
High Ch, 847.5									
1695.00	-22.4	V	3.0	37.0	1.0	-58.4	-13.0	-45.4	
2542.50	-18.2	V	3.0	36.4	1.0	-53.6	-13.0	-40.6	
3390.00	-18.0	V	3.0	36.1	1.0	-53.1	-13.0	-40.1	
1695.00	-22.8	H	3.0	37.0	1.0	-58.8	-13.0	-45.8	
2542.50	-20.1	H	3.0	36.4	1.0	-55.5	-13.0	-42.5	
3390.00	-18.3	H	3.0	36.1	1.0	-53.4	-13.0	-40.4	

3MHz 16QAM
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
 Project #: 16I22670
 Date: 1/26/2016
 Test Engineer: Jude Semana
 Configuration: X-pos EUT, Ac Charger, Headset
 Location: Chamber C
 Mode: LTE_16QAM Band 5 Harmonics, 3MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 829.5									
1651.00	-25.1	V	3.0	37.0	1.0	-61.1	-13.0	-48.1	
2476.50	-18.0	V	3.0	36.4	1.0	-53.4	-13.0	-40.4	
3302.00	-18.4	V	3.0	36.2	1.0	-53.6	-13.0	-40.6	
1651.00	-25.2	H	3.0	37.0	1.0	-61.2	-13.0	-48.2	
2476.50	-19.4	H	3.0	36.4	1.0	-54.8	-13.0	-41.8	
3302.00	-18.5	H	3.0	36.2	1.0	-53.7	-13.0	-40.7	
Mid Ch, 836.5									
1673.00	-23.9	V	3.0	37.0	1.0	-59.9	-13.0	-46.9	
2509.50	-19.0	V	3.0	36.4	1.0	-54.4	-13.0	-41.4	
3346.00	-19.0	V	3.0	36.1	1.0	-54.1	-13.0	-41.1	
1673.00	-23.9	H	3.0	37.0	1.0	-59.9	-13.0	-46.9	
2509.50	-21.8	H	3.0	36.4	1.0	-57.2	-13.0	-44.2	
3346.00	-18.6	H	3.0	36.1	1.0	-53.7	-13.0	-40.7	
High Ch, 847.5									
1695.00	-22.7	V	3.0	37.0	1.0	-59.6	-13.0	-46.6	
2542.50	-18.5	V	3.0	36.4	1.0	-53.9	-13.0	-40.9	
3390.00	-18.6	V	3.0	36.1	1.0	-53.7	-13.0	-40.7	
1695.00	-24.1	H	3.0	37.0	1.0	-60.1	-13.0	-47.1	
2542.50	-20.7	H	3.0	36.4	1.0	-56.1	-13.0	-43.1	
3390.00	-18.3	H	3.0	36.1	1.0	-53.4	-13.0	-40.4	

5MHz QPSK
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
 Project #: 16I22670
 Date: 1/26/2016
 Test Engineer: Jude Semana
 Configuration: X-pos EUT, Ac Charger, Headset
 Location: Chamber C
 Mode: LTE_QPSK Band 5 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.5									
1653.00	-24.4	V	3.0	37.0	1.0	-60.4	-13.0	-47.4	
2479.50	-17.4	V	3.0	36.4	1.0	-52.8	-13.0	-39.8	
3306.00	-18.3	V	3.0	36.1	1.0	-53.4	-13.0	-40.4	
1653.00	-24.3	H	3.0	37.0	1.0	-60.3	-13.0	-47.3	
2479.50	-20.1	H	3.0	36.4	1.0	-55.5	-13.0	-42.5	
3306.00	-18.5	H	3.0	36.1	1.0	-53.7	-13.0	-40.7	
Mid Ch, 836.5									
1673.00	-23.9	V	3.0	37.0	1.0	-59.9	-13.0	-46.9	
2509.50	-18.2	V	3.0	36.4	1.0	-53.6	-13.0	-40.6	
3346.00	-18.2	V	3.0	36.1	1.0	-53.3	-13.0	-40.3	
1673.00	-23.8	H	3.0	37.0	1.0	-59.8	-13.0	-46.8	
2509.50	-20.4	H	3.0	36.4	1.0	-55.8	-13.0	-42.8	
3346.00	-18.2	H	3.0	36.1	1.0	-53.3	-13.0	-40.3	
High Ch, 846.5									
1693.00	-23.7	V	3.0	37.0	1.0	-59.7	-13.0	-46.7	
2539.50	-17.7	V	3.0	36.4	1.0	-53.1	-13.0	-40.1	
3386.00	-17.7	V	3.0	36.1	1.0	-52.8	-13.0	-39.8	
1693.00	-23.9	H	3.0	37.0	1.0	-59.9	-13.0	-46.9	
2539.50	-20.4	H	3.0	36.4	1.0	-55.8	-13.0	-42.8	
3386.00	-17.7	H	3.0	36.1	1.0	-52.8	-13.0	-39.8	

5MHz 16QAM
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
 Project #: 16I22670
 Date: 1/26/2016
 Test Engineer: Jude Semana
 Configuration: X-pos EUT, Ac Charger, Headset
 Location: Chamber C
 Mode: LTE_16QAM Band 5 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.5									
1653.00	-24.9	V	3.0	37.0	1.0	-61.0	-13.0	-48.0	
2479.50	-18.1	V	3.0	36.4	1.0	-53.5	-13.0	-40.5	
3306.00	-18.9	V	3.0	36.1	1.0	-54.0	-13.0	-41.0	
1653.00	-24.6	H	3.0	37.0	1.0	-60.6	-13.0	-47.6	
2479.50	-20.6	H	3.0	36.4	1.0	-56.0	-13.0	-43.0	
3306.00	-18.9	H	3.0	36.1	1.0	-54.1	-13.0	-41.1	
Mid Ch, 836.5									
1673.00	-24.4	V	3.0	37.0	1.0	-60.4	-13.0	-47.4	
2509.50	-19.0	V	3.0	36.4	1.0	-54.4	-13.0	-41.4	
3346.00	-18.7	V	3.0	36.1	1.0	-53.8	-13.0	-40.8	
1673.00	-24.1	H	3.0	37.0	1.0	-60.1	-13.0	-47.1	
2509.50	-21.4	H	3.0	36.4	1.0	-56.8	-13.0	-43.8	
3346.00	-18.7	H	3.0	36.1	1.0	-53.8	-13.0	-40.8	
High Ch, 846.5									
1693.00	-24.6	V	3.0	37.0	1.0	-60.6	-13.0	-47.6	
2539.50	-17.8	V	3.0	36.4	1.0	-53.2	-13.0	-40.2	
3386.00	-18.0	V	3.0	36.1	1.0	-53.0	-13.0	-40.0	
1693.00	-23.8	H	3.0	37.0	1.0	-59.8	-13.0	-46.8	
2539.50	-20.5	H	3.0	36.4	1.0	-55.9	-13.0	-42.9	
3386.00	-18.5	H	3.0	36.1	1.0	-53.6	-13.0	-40.6	

10MHz QPSK

10MHz 16QAM

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

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: Jude Semana
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber C
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, 829									
1658.00	-24.1	V	3.0	37.0	1.0	-60.1	-13.0	-47.1	
2487.00	-18.2	V	3.0	36.4	1.0	-53.6	-13.0	-40.6	
3316.00	-18.3	V	3.0	36.1	1.0	-53.5	-13.0	-40.5	
1658.00	-24.0	H	3.0	37.0	1.0	-60.0	-13.0	-47.0	
2487.00	-19.8	H	3.0	36.4	1.0	-55.2	-13.0	-42.2	
3316.00	-18.8	H	3.0	36.1	1.0	-53.9	-13.0	-40.9	
Mid Ch, 636.5									
1673.00	-23.9	V	3.0	37.0	1.0	-59.9	-13.0	-46.9	
2509.50	-18.5	V	3.0	36.4	1.0	-53.9	-13.0	-40.9	
3346.00	-18.3	V	3.0	36.1	1.0	-53.4	-13.0	-40.4	
1673.00	-22.5	H	3.0	37.0	1.0	-58.4	-13.0	-45.4	
2509.50	-19.7	H	3.0	36.4	1.0	-55.1	-13.0	-42.1	
3346.00	-18.5	H	3.0	36.1	1.0	-53.6	-13.0	-40.6	
High Ch, 844									
1688.00	-23.4	V	3.0	37.0	1.0	-59.4	-13.0	-46.4	
2532.00	-18.3	V	3.0	36.4	1.0	-53.7	-13.0	-40.7	
3376.00	-18.6	V	3.0	36.1	1.0	-53.7	-13.0	-40.7	
1688.00	-23.0	H	3.0	37.0	1.0	-58.9	-13.0	-45.9	
2532.00	-20.5	H	3.0	36.4	1.0	-55.9	-13.0	-42.9	
3376.00	-18.4	H	3.0	36.1	1.0	-53.5	-13.0	-40.5	

Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: Jude Semana
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber C
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, 829									
1658.00	-25.0	V	3.0	37.0	1.0	-61.0	-13.0	-48.0	
2487.00	-18.1	V	3.0	36.4	1.0	-53.5	-13.0	-40.5	
3316.00	-18.8	V	3.0	36.1	1.0	-54.0	-13.0	-41.0	
1658.00	-24.2	H	3.0	37.0	1.0	-60.2	-13.0	-47.2	
2487.00	-20.1	H	3.0	36.4	1.0	-56.5	-13.0	-43.5	
3316.00	-18.5	H	3.0	36.1	1.0	-53.6	-13.0	-40.6	
Mid Ch, 836.5									
1673.00	-24.5	V	3.0	37.0	1.0	-60.5	-13.0	-47.5	
2509.50	-18.5	V	3.0	36.4	1.0	-53.9	-13.0	-40.9	
3346.00	-17.9	V	3.0	36.1	1.0	-53.0	-13.0	-40.0	
1673.00	-22.6	H	3.0	37.0	1.0	-58.6	-13.0	-45.6	
2509.50	-19.9	H	3.0	36.4	1.0	-55.3	-13.0	-42.3	
3346.00	-18.8	H	3.0	36.1	1.0	-54.0	-13.0	-41.0	
High Ch, 844									
1688.00	-23.4	V	3.0	37.0	1.0	-59.4	-13.0	-46.4	
2532.00	-18.5	V	3.0	36.4	1.0	-53.9	-13.0	-40.9	
3376.00	-18.1	V	3.0	36.1	1.0	-53.2	-13.0	-40.2	
1688.00	-23.3	H	3.0	37.0	1.0	-59.3	-13.0	-46.3	
2532.00	-21.2	H	3.0	36.4	1.0	-56.6	-13.0	-43.6	
3376.00	-18.2	H	3.0	36.1	1.0	-53.3	-13.0	-40.3	

LTE Band 12

1.4MHz QPSK
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
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, 599.7									
1399.40	-19.7	V	3.0	36.5	1.0	-55.2	-13.0	-42.2	
2099.10	-24.0	V	3.0	35.6	1.0	-58.6	-13.0	-45.6	
2798.80	-23.1	V	3.0	34.7	1.0	-56.9	-13.0	-43.9	
1399.40	-16.4	H	3.0	36.5	1.0	-52.2	-13.0	-39.2	
2099.10	-25.0	H	3.0	35.6	1.0	-59.6	-13.0	-46.6	
2798.80	-22.6	H	3.0	34.7	1.0	-56.4	-13.0	-43.4	
Mid Ch, 707.5									
1415.00	-26.5	V	3.0	36.5	1.0	-62.1	-13.0	-49.1	
2122.50	-21.6	V	3.0	35.6	1.0	-56.2	-13.0	-43.2	
2830.00	-22.2	V	3.0	34.7	1.0	-55.9	-13.0	-42.9	
1415.00	-22.2	H	3.0	36.5	1.0	-57.3	-13.0	-44.3	
2122.50	-18.7	H	3.0	35.6	1.0	-53.3	-13.0	-40.3	
2830.00	-23.0	H	3.0	34.7	1.0	-56.7	-13.0	-43.7	
High Ch, 715.3									
1430.60	-26.2	V	3.0	36.5	1.0	-61.7	-13.0	-48.7	
2145.90	-23.2	V	3.0	35.6	1.0	-57.8	-13.0	-44.8	
2861.20	-21.8	V	3.0	34.7	1.0	-55.5	-13.0	-42.5	
1430.60	-21.8	H	3.0	36.5	1.0	-57.3	-13.0	-44.3	
2145.90	-23.8	H	3.0	35.6	1.0	-58.5	-13.0	-45.5	
2861.20	-21.5	H	3.0	34.7	1.0	-55.2	-13.0	-42.2	

1.4MHz 16QAM
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
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, 599.7									
1399.40	-20.2	V	3.0	36.5	1.0	-55.7	-13.0	-42.7	
2099.10	-23.3	V	3.0	35.6	1.0	-57.9	-13.0	-44.9	
2798.80	-23.6	V	3.0	34.7	1.0	-57.3	-13.0	-44.3	
1399.40	-16.4	H	3.0	36.5	1.0	-51.9	-13.0	-38.9	
2099.10	-24.4	H	3.0	35.6	1.0	-59.1	-13.0	-46.1	
2798.80	-23.0	H	3.0	34.7	1.0	-56.8	-13.0	-43.8	
Mid Ch, 707.5									
1415.00	-25.1	V	3.0	36.5	1.0	-60.6	-13.0	-47.6	
2122.50	-21.3	V	3.0	35.6	1.0	-55.9	-13.0	-42.9	
2830.00	-21.9	V	3.0	34.7	1.0	-55.6	-13.0	-42.6	
1415.00	-20.9	H	3.0	36.5	1.0	-56.5	-13.0	-43.5	
2122.50	-17.5	H	3.0	35.6	1.0	-52.1	-13.0	-39.1	
2830.00	-23.5	H	3.0	34.7	1.0	-57.2	-13.0	-44.2	
High Ch, 715.3									
1430.60	-25.5	V	3.0	36.5	1.0	-61.1	-13.0	-48.1	
2145.90	-22.9	V	3.0	35.6	1.0	-57.4	-13.0	-44.4	
2861.20	-22.4	V	3.0	34.7	1.0	-56.0	-13.0	-43.0	
1430.60	-22.9	H	3.0	36.5	1.0	-56.5	-13.0	-43.5	
2145.90	-24.0	H	3.0	35.6	1.0	-58.6	-13.0	-45.6	
2861.20	-21.6	H	3.0	34.7	1.0	-55.2	-13.0	-42.2	

3MHz QPSK
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
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, 700.5									
1401.00	-22.6	V	3.0	36.5	1.0	-58.1	-13.0	-45.1	
2101.50	-23.7	V	3.0	35.6	1.0	-58.3	-13.0	-45.3	
2802.00	-22.3	V	3.0	34.7	1.0	-56.0	-13.0	-43.0	
1401.00	-19.4	H	3.0	36.5	1.0	-54.9	-13.0	-41.9	
2101.50	-24.9	H	3.0	35.6	1.0	-59.6	-13.0	-46.6	
2802.00	-21.3	H	3.0	34.7	1.0	-55.1	-13.0	-42.1	
Mid Ch, 707.5									
1415.00	-28.5	V	3.0	36.5	1.0	-66.1	-13.0	-53.1	
2122.50	-20.1	V	3.0	35.6	1.0	-54.7	-13.0	-41.7	
2830.00	-21.5	V	3.0	34.7	1.0	-55.2	-13.0	-42.2	
1415.00	-20.2	H	3.0	36.5	1.0	-55.7	-13.0	-42.7	
2122.50	-22.0	H	3.0	35.6	1.0	-56.6	-13.0	-43.6	
2830.00	-22.6	H	3.0	34.7	1.0	-56.3	-13.0	-43.3	
High Ch, 714.5									
1429.00	-27.9	V	3.0	36.5	1.0	-63.4	-13.0	-50.4	
2143.50	-22.7	V	3.0	35.6	1.0	-57.3	-13.0	-44.3	
2858.00	-22.8	V	3.0	34.7	1.0	-56.5	-13.0	-43.5	
1429.00	-27.7	H	3.0	36.5	1.0	-63.2	-13.0	-50.2	
2143.50	-24.2	H	3.0	35.6	1.0	-58.7	-13.0	-45.7	
2858.00	-24.0	H	3.0	34.7	1.0	-57.6	-13.0	-44.6	

3MHz 16QAM
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
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, 700.5									
1401.00	-22.1	V	3.0	36.5	1.0	-57.6	-13.0	-44.6	
2101.50	-23.2	V	3.0	35.6	1.0	-57.8	-13.0	-44.8	
2802.00	-23.1	V	3.0	34.7	1.0	-56.8	-13.0	-43.8	
1401.00	-20.1	H	3.0	36.5	1.0	-55.6	-13.0	-42.6	
2101.50	-24.0	H	3.0	35.6	1.0	-58.6	-13.0	-45.6	
2802.00	-22.0	H	3.0	34.7	1.0	-55.7	-13.0	-42.7	
Mid Ch, 707.5									
1415.00	-28.7	V	3.0	36.5	1.0	-66.2	-13.0	-53.2	
2122.50	-19.5	V	3.0	35.6	1.0	-54.1	-13.0	-41.1	
2830.00	-23.2	V	3.0	34.7	1.0	-56.9	-13.0	-43.9	
1415.00	-21.0	H	3.0	36.5	1.0	-56.5	-13.0	-43.5	
2122.50	-22.0	H	3.0	35.6	1.0	-56.6	-13.0	-43.6	
2830.00	-21.4	H	3.0	34.7	1.0	-55.1	-13.0	-42.1	
High Ch, 714.5									
1429.00	-28.2	V	3.0	36.5	1.0	-63.7	-13.0	-50.7	
2143.50	-22.5	V	3.0	35.6	1.0	-57.0	-13.0	-44.0	
2858.00	-23.2	V	3.0	34.7	1.0	-56.8	-13.0	-43.8	
1429.00	-27.5	H	3.0	36.5	1.0	-63.0	-13.0	-50.0	
2143.50	-24.7	H	3.0	35.6	1.0	-59.2	-13.0	-46.2	
2858.00	-23.9	H	3.0	34.7	1.0	-57.6	-13.0	-44.6	

5MHz QPSK
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
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, 701.5									
1403.00	-22.2	V	3.0	36.5	1.0	-57.7	-13.0	-44.7	
2104.50	-23.4	V	3.0	35.6	1.0	-58.1	-13.0	-45.1	
2806.00	-20.4	V	3.0	34.7	1.0	-57.1	-13.0	-44.1	
1403.00	-17.5	H	3.0	36.5	1.0	-53.0	-13.0	-40.0	
2104.50	-25.4	H	3.0	35.6	1.0	-60.0	-13.0	-47.0	
2806.00	-21.9	H	3.0	34.7	1.0	-55.7	-13.0	-42.7	
Mid Ch, 707.5									
1415.00	-21.2	V	3.0	36.5	1.0	-56.7	-13.0	-43.7	
2122.50	-21.6	V	3.0	35.6	1.0	-56.2	-13.0	-43.2	
2830.00	-21.9	V	3.0	34.7	1.0	-57.6	-13.0	-44.6	
1415.00	-17.9	H	3.0	36.5	1.0	-53.4	-13.0	-40.4	
2122.50	-24.9	H	3.0	35.6	1.0	-59.5	-13.0	-46.5	
2830.00	-23.3	H	3.0	34.7	1.0	-57.0	-13.0	-44.0	
High Ch, 713.5									
1427.00	-23.0	V	3.0	36.5	1.0	-58.6	-13.0	-45.6	
2140.50	-22.4	V	3.0	35.6	1.0	-57.0	-13.0	-44.0	
2854.00	-22.9	V	3.0	34.7	1.0	-56.6	-13.0	-43.6	
1427.00	-18.2	H	3.0	36.5	1.0	-53.8	-13.0	-40.8	
2140.50	-24.7	H	3.0	35.6	1.0	-59.3	-13.0	-46.3	
2854.00	-23.6	H	3.0	34.7	1.0	-57.3	-13.0	-44.3	

5MHz 16QAM
 UL Verification Services, Inc.
 Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 16I22670
Date: 1/26/2016
Test Engineer: O. Stoelling
Configuration: X-pos EUT, HS, AC Charger
Location: Chamber C
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, 701.5									
1403.00	-23.9	V	3.0	36.5	1.0	-59.4	-13.0	-46.4	
2104.50	-23.8	V	3.0	35.6	1.0	-58.5	-13.0	-45.5	
2806.00	-23.0	V	3.0	34.7	1.0	-56.8	-13.0	-43.8	
1403.00	-18.2	H	3.0	36.5	1.0	-53.7	-13.0	-40.7	
2104.50	-24.7	H	3.0	35.6	1.0	-59.3	-13.0	-46.3	
2806.00	-21.7	H	3.0	34.7	1.0	-55.4	-13.0	-42.4	
Mid Ch, 707.5									
1415.00	-21.2	V	3.0	36.5	1.0	-56.7	-13.0	-43.7	
2122.50	-21.8	V	3.0	35.6	1.0	-56.4	-13.0	-43.4	
2830.00	-23.7	V	3.0	34.7	1.0	-57.4	-13.0	-44.4	
1415.00	-18.6	H	3.0	36.5	1.0	-54.1	-13.0	-41.1	
2122.50	-25.1	H	3.0	35.6	1.0	-59.7	-13.0	-46.7	
2830.00	-23.1	H	3.0	34.7	1.0	-56.8	-13.0	-43.8	
High Ch, 713.5									
1427.00	-22.8	V	3.0	36.5	1.0	-58.3	-13.0	-45.3	
2140.50	-23.0	V	3.0	35.6	1.0	-57.5	-13.0	-44.5	
2854.00	-23.2	V	3.0	34.7	1.0	-56.9	-13.0	-43.9	
1427.00	-17.9	H	3.0	36.5	1.0	-53.5	-13.0	-40.5	
2140.50	-24.6	H	3.0	35.6	1.0	-59.1	-13.0	-46.1	
2854.00	-23.6	H	3.0	34.7	1.0	-57.3	-13.0	-44.3	

10MHz QPSK										10MHz 16QAM									
UL Verification Services, Inc.										UL Verification Services, Inc.									
Above 1GHz High Frequency Substitution Measurement										Above 1GHz High Frequency Substitution Measurement									
Company: LQ Electronics					Company: LQ Electronics					Company: LQ Electronics					Company: LQ Electronics				
Project #: 16I22670					Project #: 16I22670					Project #: 16I22670					Project #: 16I22670				
Date: 1/26/2016					Date: 1/26/2016					Date: 1/26/2016					Date: 1/26/2016				
Test Engineer: O. Stoelling					Test Engineer: O. Stoelling					Test Engineer: O. Stoelling					Test Engineer: O. Stoelling				
Configuration: X-pos EUT, HS, AC Charger					Configuration: X-pos EUT, HS, AC Charger					Configuration: X-pos EUT, HS, AC Charger					Configuration: X-pos EUT, HS, AC Charger				
Location: Chamber C					Location: Chamber C					Location: Chamber C					Location: Chamber C				
Mode: LTE_QPSK Band 12 Harmonics, 10MHz Bandwidth					Mode: LTE_QPSK Band 12 Harmonics, 10MHz Bandwidth					Mode: LTE_16QAM Band 12 Harmonics, 10MHz Bandwidth					Mode: LTE_16QAM Band 12 Harmonics, 10MHz Bandwidth				
f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	f MHz	SG reading (dBm)	Ant. Pol. (HV)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 704										Low Ch, 704									
1408.00	-20.6	V	3.0	36.5	1.0	56.2	-13.0	43.2		1408.00	22.1	V	3.0	36.5	1.0	57.6	-13.0	44.6	
2112.00	-24.1	V	3.0	35.6	1.0	58.7	-13.0	45.7		2112.00	23.9	V	3.0	35.6	1.0	58.5	-13.0	45.5	
2816.00	-22.9	V	3.0	34.7	1.0	56.6	-13.0	43.6		2816.00	23.3	V	3.0	34.7	1.0	57.0	-13.0	44.0	
1408.00	-18.5	H	3.0	36.5	1.0	54.0	-13.0	41.0		1408.00	18.1	H	3.0	36.5	1.0	53.7	-13.0	40.7	
2112.00	-23.8	H	3.0	35.6	1.0	58.4	-13.0	45.4		2112.00	24.9	H	3.0	35.6	1.0	59.5	-13.0	46.5	
2816.00	-23.6	H	3.0	34.7	1.0	57.3	-13.0	44.3		2816.00	22.8	H	3.0	34.7	1.0	56.5	-13.0	43.5	
Mid Ch, 707.5										Mid Ch, 707.5									
1415.00	-20.3	V	3.0	36.5	1.0	55.9	-13.0	42.9		1415.00	20.5	V	3.0	36.5	1.0	56.1	-13.0	43.1	
2122.50	-22.1	V	3.0	35.6	1.0	56.7	-13.0	43.7		2122.50	22.0	V	3.0	35.6	1.0	56.6	-13.0	43.6	
2830.00	-23.9	V	3.0	34.7	1.0	57.6	-13.0	44.6		2830.00	23.5	V	3.0	34.7	1.0	57.2	-13.0	44.2	
1415.00	-18.8	H	3.0	36.5	1.0	54.4	-13.0	41.4		1415.00	18.5	H	3.0	36.5	1.0	54.0	-13.0	41.0	
2122.50	-24.7	H	3.0	35.6	1.0	59.3	-13.0	46.3		2122.50	24.8	H	3.0	35.6	1.0	59.4	-13.0	46.4	
2830.00	-24.1	H	3.0	34.7	1.0	57.8	-13.0	44.8		2830.00	23.2	H	3.0	34.7	1.0	56.9	-13.0	43.9	
High Ch, 711										High Ch, 711									
1422.00	-22.0	V	3.0	36.5	1.0	57.5	-13.0	44.5		1422.00	21.1	V	3.0	36.5	1.0	56.6	-13.0	43.6	
2133.00	-22.6	V	3.0	35.6	1.0	57.2	-13.0	44.2		2133.00	22.8	V	3.0	35.6	1.0	57.4	-13.0	44.4	
2844.00	-22.8	V	3.0	34.7	1.0	56.5	-13.0	43.5		2844.00	23.3	V	3.0	34.7	1.0	57.0	-13.0	44.0	
1422.00	-21.6	H	3.0	36.5	1.0	57.2	-13.0	44.2		1422.00	21.3	H	3.0	36.5	1.0	56.9	-13.0	43.9	
2133.00	-24.5	H	3.0	35.6	1.0	59.1	-13.0	46.1		2133.00	24.4	H	3.0	35.6	1.0	59.0	-13.0	46.0	
2844.00	-23.1	H	3.0	34.7	1.0	56.8	-13.0	43.8		2844.00	22.5	H	3.0	34.7	1.0	56.2	-13.0	43.2	