12.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, §27.53 and §90.691

LIMIT

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

Part 27: (m)(4) (4) For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

TEST PROCEDURE

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

MODES TESTED

GSM, WCDMA, CDMA, and LTE

RESULTS

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12.2.1. SPURIOUS RADIATION PLOTS

GSM

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

Company: LG Electronics
Project #: 15I21235
Date: 7/14/2015
Test Engineer: A. Escamilla
Configuration: X-pos EUT w/ AC Adapter + Headset
Location: Chamber C
Mode: GPRS 1900 MHz Harmonics

Band

GSM 1900

EGPRS

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.2									
3700.40	-20.1	V	3.0	35.9	1.0	-55.0	-13.0	-42.0	
5550.60	-17.3	V	3.0	35.5	1.0	-51.8	-13.0	-38.8	
7400.80	-13.8	V	3.0	35.7	1.0	-48.5	-13.0	-35.5	
3700.40	-22.0	H	3.0	35.9	1.0	-56.8	-13.0	-43.8	
5550.60	-11.8	H	3.0	35.5	1.0	-46.3	-13.0	-33.3	
7400.80	-13.3	H	3.0	35.7	1.0	-48.0	-13.0	-35.0	
Mid Ch, 1880									
3760.00	-20.2	V	3.0	35.8	1.0	-55.0	-13.0	-42.0	
5640.00	-17.6	V	3.0	35.5	1.0	-52.1	-13.0	-39.1	
7520.00	-14.3	V	3.0	35.7	1.0	-49.0	-13.0	-36.0	
3760.00	-20.9	H	3.0	35.8	1.0	-55.7	-13.0	-42.7	
5640.00	-12.0	H	3.0	35.5	1.0	-46.5	-13.0	-33.5	
7520.00	-12.9	H	3.0	35.7	1.0	-47.6	-13.0	-34.6	
High Ch, 1909.8									
3819.60	-20.2	V	3.0	35.8	1.0	-54.9	-13.0	-41.9	
5729.40	-15.9	V	3.0	35.5	1.0	-50.4	-13.0	-37.4	
7639.20	-14.0	V	3.0	35.8	1.0	-48.8	-13.0	-35.8	
3819.60	-20.8	H	3.0	35.8	1.0	-55.5	-13.0	-42.5	
5729.40	-11.0	H	3.0	35.5	1.0	-45.5	-13.0	-32.5	
7639.20	-12.0	H	3.0	35.8	1.0	-46.7	-13.0	-33.7	

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701H
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888

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

Company: LG Electronics
Project #: 15I21235
Date: 7/14/2015
Test Engineer: A. Escamilla
Configuration: X-pos EUT w/ AC Adapter + Headset
Location: Chamber C
Mode: EGPRS 1900 MHz Harmonics

Band

GSM 1900

GPRS

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.2									
3700.40	-20.3	V	3.0	35.9	1.0	-55.2	-13.0	-42.2	
5550.60	-15.3	V	3.0	35.5	1.0	-49.7	-13.0	-36.7	
7400.80	-14.1	V	3.0	35.7	1.0	-48.9	-13.0	-35.9	
3700.40	-20.8	H	3.0	35.9	1.0	-55.6	-13.0	-42.6	
5550.60	-15.5	H	3.0	35.5	1.0	-50.0	-13.0	-37.0	
7400.80	-13.4	H	3.0	35.7	1.0	-48.2	-13.0	-35.2	
Mid Ch, 1880									
3760.00	-20.1	V	3.0	35.8	1.0	-54.9	-13.0	-41.9	
5640.00	-15.0	V	3.0	35.5	1.0	-49.5	-13.0	-36.5	
7520.00	-13.8	V	3.0	35.7	1.0	-48.6	-13.0	-35.6	
3760.00	-21.5	H	3.0	35.8	1.0	-56.3	-13.0	-43.3	
5640.00	-16.8	H	3.0	35.5	1.0	-51.3	-13.0	-38.3	
7520.00	-13.7	H	3.0	35.7	1.0	-48.4	-13.0	-35.4	
High Ch, 1909.8									
3819.60	-19.6	V	3.0	35.8	1.0	-54.4	-13.0	-41.4	
5729.40	-16.0	V	3.0	35.5	1.0	-50.5	-13.0	-37.5	
7639.20	-13.9	V	3.0	35.8	1.0	-48.6	-13.0	-35.6	
3819.60	-20.3	H	3.0	35.8	1.0	-55.1	-13.0	-42.1	
5729.40	-16.2	H	3.0	35.5	1.0	-50.7	-13.0	-37.7	
7639.20	-13.0	H	3.0	35.8	1.0	-47.8	-13.0	-34.8	

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

Company: LG Electronics
Project #: 15I21235
Date: 7/14/2015
Test Engineer: A. Escamilla
Configuration: X-pos EUT w/ AC Adapter + Headset
Location: Chamber C
Mode: EGPRS 850 MHz Harmonics

Band

GSM 850

EGPRS

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.2									
1648.40	-14.8	V	3.0	37.0	1.0	-50.9	-13.0	-37.9	
2472.60	-4.6	V	3.0	36.4	1.0	-40.0	-13.0	-27.0	
3296.80	-12.9	V	3.0	36.2	1.0	-48.0	-13.0	-35.0	
1648.40	-19.7	H	3.0	37.0	1.0	-55.8	-13.0	-42.8	
2472.60	-6.1	H	3.0	36.4	1.0	-41.6	-13.0	-28.6	
3296.80	-15.1	H	3.0	36.2	1.0	-50.3	-13.0	-37.3	
Mid Ch, 836.6									
1673.20	-18.0	V	3.0	37.0	1.0	-54.0	-13.0	-41.0	
2509.80	-16.3	V	3.0	36.4	1.0	-51.7	-13.0	-38.7	
3346.40	-20.4	V	3.0	36.1	1.0	-55.5	-13.0	-42.5	
1673.20	-19.9	H	3.0	37.0	1.0	-55.9	-13.0	-42.9	
2509.80	-17.0	H	3.0	36.4	1.0	-52.5	-13.0	-39.5	
3346.40	-21.9	H	3.0	36.1	1.0	-57.1	-13.0	-44.1	
High Ch, 848.8									
1697.60	-27.5	V	3.0	37.0	1.0	-63.4	-13.0	-50.4	
2546.40	-22.6	V	3.0	36.4	1.0	-58.0	-13.0	-45.0	
3395.20	-21.8	V	3.0	36.1	1.0	-56.8	-13.0	-43.8	
1697.60	-27.3	H	3.0	37.0	1.0	-63.3	-13.0	-50.3	
2546.40	-23.9	H	3.0	36.4	1.0	-59.3	-13.0	-46.3	
3395.20	-23.0	H	3.0	36.1	1.0	-58.1	-13.0	-45.1	

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

Company: LG Electronics
Project #: 15I21235
Date: 7/14/2015
Test Engineer: A. Escamilla
Configuration: X-pos EUT w/ AC Adapter + Headset
Location: Chamber C
Mode: GPRS 850 MHz Harmonics

Band

GSM 850

GPRS

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.2									
1648.40	-15.7	V	3.0	37.0	1.0	-51.7	-13.0	-38.7	
2472.60	-6.9	V	3.0	36.4	1.0	-42.3	-13.0	-29.3	
3296.80	-12.9	V	3.0	36.2	1.0	-48.0	-13.0	-35.0	
1648.40	-17.3	H	3.0	37.0	1.0	-53.3	-13.0	-40.3	
2472.60	-17.4	H	3.0	36.4	1.0	-52.8	-13.0	-39.8	
3296.80	-22.0	H	3.0	36.2	1.0	-57.2	-13.0	-44.2	
Mid Ch, 836.6									
1673.20	-19.0	V	3.0	37.0	1.0	-55.0	-13.0	-42.0	
2509.80	-16.5	V	3.0	36.4	1.0	-51.9	-13.0	-38.9	
3346.40	-20.8	V	3.0	36.1	1.0	-55.9	-13.0	-42.9	
1673.20	-21.2	H	3.0	37.0	1.0	-57.2	-13.0	-44.2	
2509.80	-20.9	H	3.0	36.4	1.0	-56.3	-13.0	-43.3	
3346.40	-17.0	H	3.0	36.1	1.0	-52.1	-13.0	-39.1	
High Ch, 848.8									
1697.60	-26.4	V	3.0	37.0	1.0	-62.4	-13.0	-49.4	
2546.40	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3395.20	-21.6	V	3.0	36.1	1.0	-56.7	-13.0	-43.7	
1697.60	-27.7	H	3.0	37.0	1.0	-63.7	-13.0	-50.7	
2546.40	-24.4	H	3.0	36.4	1.0	-59.8	-13.0	-46.8	
3395.20	-22.8	H	3.0	36.1	1.0	-57.9	-13.0	-44.9	

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WCDMA

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

Company: LG Electronics
Project #: 15I21235
Date: 7/14/2015
Test Engineer: A. Escamilla
Configuration: X-pos EUT w/ AC Adapter + Headset
Location: Chamber C
Mode: HSDPA Band 2 Harmonics

Band

Band 2

HSDPA

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	-15.4	V	3.0	35.9	1.0	-50.2	-13.0	-37.2	
5557.20	-15.7	V	3.0	35.5	1.0	-50.2	-13.0	-37.2	
7409.60	-14.3	V	3.0	35.7	1.0	-49.0	-13.0	-36.0	
3704.80	-16.2	H	3.0	35.9	1.0	-51.1	-13.0	-38.1	
5557.20	-16.6	H	3.0	35.5	1.0	-51.1	-13.0	-38.1	
7409.60	-12.3	H	3.0	35.7	1.0	-47.0	-13.0	-34.0	
Mid Ch, 1880									
3760.00	-14.1	V	3.0	35.8	1.0	-48.9	-13.0	-35.9	
5640.00	-17.6	V	3.0	35.5	1.0	-52.1	-13.0	-39.1	
7520.00	-11.0	V	3.0	35.7	1.0	-45.8	-13.0	-32.8	
3760.00	-15.2	H	3.0	35.8	1.0	-50.0	-13.0	-37.0	
5640.00	-17.4	H	3.0	35.5	1.0	-51.9	-13.0	-38.9	
7520.00	-11.0	H	3.0	35.7	1.0	-45.7	-13.0	-32.7	
High Ch, 1907.6									
3815.20	-14.1	V	3.0	35.8	1.0	-48.9	-13.0	-35.9	
5722.80	-16.3	V	3.0	35.5	1.0	-50.8	-13.0	-37.8	
7630.40	-13.9	V	3.0	35.8	1.0	-48.7	-13.0	-35.7	
3815.20	-15.9	H	3.0	35.8	1.0	-50.6	-13.0	-37.6	
5722.80	-15.4	H	3.0	35.5	1.0	-49.9	-13.0	-36.9	
7630.40	-11.8	H	3.0	35.8	1.0	-46.5	-13.0	-33.5	

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

Company: LG Electronics
Project #: 15I21235
Date: 7/14/2015
Test Engineer: A. Escamilla
Configuration: X-pos EUT w/ AC Adapter + Headset
Location: Chamber C
Mode: Rel99 Band 2 Harmonics

Band

Band 2

REL99

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	-13.6	V	3.0	35.9	1.0	-48.5	-13.0	-35.5	
5557.20	-7.7	V	3.0	35.5	1.0	-42.1	-13.0	-29.1	
7409.60	-14.9	V	3.0	35.7	1.0	-49.7	-13.0	-36.7	
3704.80	-18.1	H	3.0	35.9	1.0	-53.0	-13.0	-40.0	
5557.20	-17.2	H	3.0	35.5	1.0	-51.6	-13.0	-38.6	
7409.60	-12.8	H	3.0	35.7	1.0	-47.5	-13.0	-34.5	
Mid Ch, 1880									
3760.00	-13.7	V	3.0	35.8	1.0	-48.5	-13.0	-35.5	
5640.00	-16.9	V	3.0	35.5	1.0	-51.4	-13.0	-38.4	
7520.00	-13.5	V	3.0	35.7	1.0	-48.2	-13.0	-35.2	
3760.00	-13.2	H	3.0	35.8	1.0	-48.0	-13.0	-35.0	
5640.00	-16.2	H	3.0	35.5	1.0	-50.7	-13.0	-37.7	
7520.00	-13.2	H	3.0	35.7	1.0	-47.9	-13.0	-34.9	
High Ch, 1907.6									
3815.20	-14.4	V	3.0	35.8	1.0	-49.1	-13.0	-36.1	
5722.80	-14.7	V	3.0	35.5	1.0	-49.2	-13.0	-36.2	
7630.40	-13.9	V	3.0	35.8	1.0	-48.6	-13.0	-35.6	
3815.20	-15.5	H	3.0	35.8	1.0	-50.3	-13.0	-37.3	
5722.80	-16.2	H	3.0	35.5	1.0	-50.7	-13.0	-37.7	
7630.40	-12.6	H	3.0	35.8	1.0	-47.3	-13.0	-34.3	

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Band

Band 4

HSDPA

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

Company: LG Electronics
Project #: 15I21235
Date: 7/14/2015
Test Engineer: A. Escamilla
Configuration: X-pos EUT w/ AC Adapter + Headset
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	-19.1	V	3.0	35.9	1.0	-53.9	-13.0	-40.9	
5137.20	-16.8	V	3.0	35.5	1.0	-51.2	-13.0	-38.2	
6849.60	-12.6	V	3.0	35.7	1.0	-47.3	-13.0	-34.3	
3424.80	-15.1	H	3.0	35.9	1.0	-49.9	-13.0	-36.9	
5137.20	-15.7	H	3.0	35.5	1.0	-50.2	-13.0	-37.2	
6849.60	-11.7	H	3.0	35.7	1.0	-46.5	-13.0	-33.5	
Mid Ch, 1732.6									
3465.20	-19.0	V	3.0	35.8	1.0	-53.8	-13.0	-40.8	
5197.80	-15.9	V	3.0	35.5	1.0	-50.4	-13.0	-37.4	
6930.40	-12.8	V	3.0	35.7	1.0	-47.6	-13.0	-34.6	
3465.20	-14.1	H	3.0	35.8	1.0	-48.9	-13.0	-35.9	
5197.80	-16.4	H	3.0	35.5	1.0	-50.9	-13.0	-37.9	
6930.40	-10.8	H	3.0	35.7	1.0	-45.5	-13.0	-32.5	
High Ch, 1752.6									
3505.20	-19.1	V	3.0	35.8	1.0	-53.9	-13.0	-40.9	
5257.80	-15.7	V	3.0	35.5	1.0	-50.2	-13.0	-37.2	
7010.40	-13.3	V	3.0	35.8	1.0	-48.0	-13.0	-35.0	
3505.20	-14.0	H	3.0	35.8	1.0	-48.8	-13.0	-35.8	
5257.80	-15.2	H	3.0	35.5	1.0	-49.7	-13.0	-36.7	
7010.40	-10.9	H	3.0	35.8	1.0	-45.7	-13.0	-32.7	

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Band

Band 4

REL99

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

Company: LG Electronics
Project #: 15I21235
Date: 7/14/2015
Test Engineer: A. Escamilla
Configuration: X-pos EUT w/ AC Adapter + Headset
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	-14.7	V	3.0	35.9	1.0	-49.5	-13.0	-36.5	
5137.20	-16.1	V	3.0	35.5	1.0	-50.5	-13.0	-37.5	
6849.60	-13.3	V	3.0	35.7	1.0	-48.0	-13.0	-35.0	
3424.80	-13.6	H	3.0	35.9	1.0	-48.4	-13.0	-35.4	
5137.20	-15.5	H	3.0	35.5	1.0	-50.0	-13.0	-37.0	
6849.60	-11.9	H	3.0	35.7	1.0	-46.6	-13.0	-33.6	
Mid Ch, 1732.6									
3465.20	-13.7	V	3.0	35.8	1.0	-48.5	-13.0	-35.5	
5197.80	-16.8	V	3.0	35.5	1.0	-51.3	-13.0	-38.3	
6930.40	-12.6	V	3.0	35.7	1.0	-47.3	-13.0	-34.3	
3465.20	-12.7	H	3.0	35.8	1.0	-47.5	-13.0	-34.5	
5197.80	-15.0	H	3.0	35.5	1.0	-49.5	-13.0	-36.5	
6930.40	-12.0	H	3.0	35.7	1.0	-46.7	-13.0	-33.7	
High Ch, 1752.6									
3505.20	-13.5	V	3.0	35.8	1.0	-48.2	-13.0	-35.2	
5257.80	-15.0	V	3.0	35.5	1.0	-49.5	-13.0	-36.5	
7010.40	-13.9	V	3.0	35.8	1.0	-48.7	-13.0	-35.7	
3505.20	-13.6	H	3.0	35.8	1.0	-48.4	-13.0	-35.4	
5257.80	-16.9	H	3.0	35.5	1.0	-51.4	-13.0	-38.4	
7010.40	-12.1	H	3.0	35.8	1.0	-46.8	-13.0	-33.8	

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Band

Band 5

HSDPA

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

Company: LG Electronics
Project #: 15I21235
Date: 7/14/2015
Test Engineer: A. Escamilla
Configuration: X-pos EUT w/ AC Adapter + Headset
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	-27.5	V	3.0	37.0	1.0	-63.5	-13.0	-50.5	
2479.20	-22.6	V	3.0	36.4	1.0	-58.0	-13.0	-45.0	
3305.60	-20.4	V	3.0	36.1	1.0	-55.5	-13.0	-42.5	
1652.80	-28.2	H	3.0	37.0	1.0	-64.3	-13.0	-51.3	
2479.20	-24.5	H	3.0	36.4	1.0	-59.9	-13.0	-46.9	
3305.60	-21.9	H	3.0	36.1	1.0	-57.0	-13.0	-44.0	
Mid Ch, 836.6									
1673.20	-27.2	V	3.0	37.0	1.0	-63.2	-13.0	-50.2	
2509.80	-22.7	V	3.0	36.4	1.0	-58.1	-13.0	-45.1	
3346.40	-19.9	V	3.0	36.1	1.0	-55.1	-13.0	-42.1	
1673.20	-27.2	H	3.0	37.0	1.0	-63.1	-13.0	-50.1	
2509.80	-23.8	H	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3346.40	-21.0	H	3.0	36.1	1.0	-56.1	-13.0	-43.1	
High Ch, 846.6									
1693.20	-26.8	V	3.0	37.0	1.0	-62.7	-13.0	-49.7	
2539.80	-23.5	V	3.0	36.4	1.0	-58.9	-13.0	-45.9	
3386.40	-20.9	V	3.0	36.1	1.0	-56.0	-13.0	-43.0	
1693.20	-27.6	H	3.0	37.0	1.0	-63.6	-13.0	-50.6	
2539.80	-23.1	H	3.0	36.4	1.0	-58.5	-13.0	-45.5	
3386.40	-20.4	H	3.0	36.1	1.0	-55.5	-13.0	-42.5	

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701H
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Band

Band 5

REL99

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

Company: LG Electronics
Project #: 15I21235
Date: 7/14/2015
Test Engineer: A. Escamilla
Configuration: X-pos EUT w/ AC Adapter + Headset
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	-28.2	V	3.0	37.0	1.0	-64.2	-13.0	-51.2	
2479.20	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3305.60	-20.8	V	3.0	36.1	1.0	-55.9	-13.0	-42.9	
1652.80	-27.5	H	3.0	37.0	1.0	-63.5	-13.0	-50.5	
2479.20	-24.6	H	3.0	36.4	1.0	-60.1	-13.0	-47.1	
3305.60	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	
Mid Ch, 836.6									
1673.20	-27.0	V	3.0	37.0	1.0	-63.0	-13.0	-50.0	
2509.80	-22.5	V	3.0	36.4	1.0	-57.9	-13.0	-44.9	
3346.40	-20.9	V	3.0	36.1	1.0	-56.0	-13.0	-43.0	
1673.20	-27.6	H	3.0	37.0	1.0	-63.6	-13.0	-50.6	
2509.80	-24.1	H	3.0	36.4	1.0	-59.5	-13.0	-46.5	
3346.40	-21.0	H	3.0	36.1	1.0	-56.1	-13.0	-43.1	
High Ch, 846.6									
1693.20	-27.2	V	3.0	37.0	1.0	-63.1	-13.0	-50.1	
2539.80	-22.4	V	3.0	36.4	1.0	-57.8	-13.0	-44.8	
3386.40	-21.3	V	3.0	36.1	1.0	-56.4	-13.0	-43.4	
1693.20	-28.2	H	3.0	37.0	1.0	-64.2	-13.0	-51.2	
2539.80	-24.4	H	3.0	36.4	1.0	-59.8	-13.0	-46.8	
3386.40	-20.6	H	3.0	36.1	1.0	-55.7	-13.0	-42.7	

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701H
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CDMA

UL Verification Services Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I21235
Date: 7/21/2015
Test Engineer: R.Alegre
Configuration: EUT w/ AC Adapter + HS
Mode: EVDO BC1

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

Band

BC1

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1851.25 MHz									
3.703	-11.9	H	3.0	35.4	1.0	-46.3	-13.0	-33.3	
5.554	-13.3	H	3.0	34.7	1.0	-47.0	-13.0	-34.0	
7.405	-11.7	H	3.0	34.9	1.0	-45.6	-13.0	-32.6	
3.703	-10.3	V	3.0	35.4	1.0	-44.7	-13.0	-31.7	
5.554	-16.3	V	3.0	34.7	1.0	-50.0	-13.0	-37.0	
7.405	-13.4	V	3.0	34.9	1.0	-47.3	-13.0	-34.3	
Mid Ch, 1880 MHz									
3.760	-11.6	H	3.0	35.3	1.0	-45.9	-13.0	-32.9	
5.640	-16.1	H	3.0	34.7	1.0	-49.9	-13.0	-36.9	
7.520	-12.4	H	3.0	34.9	1.0	-46.3	-13.0	-33.3	
3.760	-15.5	V	3.0	35.3	1.0	-49.9	-13.0	-36.9	
5.640	-14.5	V	3.0	34.7	1.0	-48.2	-13.0	-35.2	
7.520	-12.9	V	3.0	34.9	1.0	-46.8	-13.0	-33.8	
High Ch, 1908.75 MHz									
3.818	-19.2	H	3.0	35.3	1.0	-53.5	-13.0	-40.5	
5.726	-13.3	H	3.0	34.7	1.0	-47.0	-13.0	-34.0	
7.635	-12.3	H	3.0	34.9	1.0	-46.3	-13.0	-33.3	
3.818	-15.3	V	3.0	35.3	1.0	-49.6	-13.0	-36.6	
5.726	-15.7	V	3.0	34.7	1.0	-49.4	-13.0	-36.4	
7.635	-13.3	V	3.0	34.9	1.0	-47.3	-13.0	-34.3	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

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UL Verification Services Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I21235
Date: 7/21/2015
Test Engineer: R.Alegre
Configuration: EUT w/ AC Adapter + HS
Mode: RTT BC1 HARM

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

Band

BC1

1xRTT

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1851.25 MHz									
3.703	-12.4	H	3.0	35.4	1.0	-46.8	-13.0	-33.8	
5.554	-12.7	H	3.0	34.7	1.0	-46.4	-13.0	-33.4	
7.405	-12.5	H	3.0	34.9	1.0	-46.4	-13.0	-33.4	
3.703	-10.1	V	3.0	35.4	1.0	-44.5	-13.0	-31.5	
5.554	-16.4	V	3.0	34.7	1.0	-50.1	-13.0	-37.1	
7.405	-13.3	V	3.0	34.9	1.0	-47.2	-13.0	-34.2	
Mid Ch, 1880 MHz									
3.760	-11.1	H	3.0	35.3	1.0	-45.5	-13.0	-32.5	
5.640	-16.5	H	3.0	34.7	1.0	-50.2	-13.0	-37.2	
7.520	-12.7	H	3.0	34.9	1.0	-46.6	-13.0	-33.6	
3.760	-15.3	V	3.0	35.3	1.0	-49.7	-13.0	-36.7	
5.640	-14.6	V	3.0	34.7	1.0	-48.3	-13.0	-35.3	
7.520	-12.8	V	3.0	34.9	1.0	-46.8	-13.0	-33.8	
High Ch, 1908.75 MHz									
3.818	-19.4	H	3.0	35.3	1.0	-53.7	-13.0	-40.7	
5.726	-13.5	H	3.0	34.7	1.0	-47.2	-13.0	-34.2	
7.635	-12.0	H	3.0	34.9	1.0	-45.9	-13.0	-32.9	
3.818	-15.3	V	3.0	35.3	1.0	-49.6	-13.0	-36.6	
5.726	-15.8	V	3.0	34.7	1.0	-49.6	-13.0	-36.6	
7.635	-13.1	V	3.0	34.9	1.0	-47.0	-13.0	-34.0	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701H
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UL Verification Services Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I21235
Date: 7/21/2015
Test Engineer: R.Alegre
Configuration: EUT w/ AC Adapter + HS
Mode: EVDO BC0

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 22

Band

BC0

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7MHz									
1.649	-27.4	H	3.0	37.4	1.0	-63.8	-13.0	-50.8	
2.474	-17.2	H	3.0	36.4	1.0	-52.6	-13.0	-39.6	
3.299	-22.1	H	3.0	35.8	1.0	-56.9	-13.0	-43.9	
1.649	-28.3	V	3.0	37.4	1.0	-64.7	-13.0	-51.7	
2.474	-20.7	V	3.0	36.4	1.0	-56.1	-13.0	-43.1	
3.299	-21.1	V	3.0	35.8	1.0	-55.9	-13.0	-42.9	
Mid Ch, 836.52MHz									
1.673	-24.8	H	3.0	37.3	1.0	-61.1	-13.0	-48.1	
2.510	-23.6	H	3.0	36.4	1.0	-59.0	-13.0	-46.0	
3.346	-21.5	H	3.0	35.8	1.0	-56.3	-13.0	-43.3	
1.673	-27.7	V	3.0	37.3	1.0	-64.0	-13.0	-51.0	
2.510	-18.2	V	3.0	36.4	1.0	-53.6	-13.0	-40.6	
3.346	-21.7	V	3.0	35.8	1.0	-56.4	-13.0	-43.4	
High Ch, 848.31MHz									
1.697	-26.1	H	3.0	37.3	1.0	-62.4	-13.0	-49.4	
2.545	-23.0	H	3.0	36.3	1.0	-58.3	-13.0	-45.3	
3.393	-21.9	H	3.0	35.7	1.0	-56.6	-13.0	-43.6	
1.697	-27.3	V	3.0	37.3	1.0	-63.6	-13.0	-50.6	
2.545	-15.3	V	3.0	36.3	1.0	-50.7	-13.0	-37.7	
3.393	-22.0	V	3.0	35.7	1.0	-56.7	-13.0	-43.7	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701H
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UL Verification Services Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I21235
Date: 7/21/2015
Test Engineer: R.Alegre
Configuration: EUT w/ AC Adapter + HS
Mode: RTT BC0

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 22

Band

BC0

1xRTT

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7MHz									
1.649	-27.4	H	3.0	37.4	1.0	-63.8	-13.0	-50.8	
2.474	-17.1	H	3.0	36.4	1.0	-52.5	-13.0	-39.5	
3.299	-22.2	H	3.0	35.8	1.0	-57.0	-13.0	-44.0	
1.649	-28.1	V	3.0	37.4	1.0	-64.5	-13.0	-51.5	
2.474	-20.6	V	3.0	36.4	1.0	-56.0	-13.0	-43.0	
3.299	-21.2	V	3.0	35.8	1.0	-56.0	-13.0	-43.0	
Mid Ch, 836.52MHz									
1.673	-24.8	H	3.0	37.3	1.0	-61.2	-13.0	-48.2	
2.510	-23.6	H	3.0	36.4	1.0	-58.9	-13.0	-45.9	
3.346	-21.5	H	3.0	35.8	1.0	-56.2	-13.0	-43.2	
1.673	-27.6	V	3.0	37.3	1.0	-64.0	-13.0	-51.0	
2.510	-18.5	V	3.0	36.4	1.0	-53.8	-13.0	-40.8	
3.346	-21.7	V	3.0	35.8	1.0	-56.4	-13.0	-43.4	
High Ch, 848.31MHz									
1.697	-26.1	H	3.0	37.3	1.0	-62.4	-13.0	-49.4	
2.545	-22.9	H	3.0	36.3	1.0	-58.2	-13.0	-45.2	
3.393	-21.9	H	3.0	35.7	1.0	-56.6	-13.0	-43.6	
1.697	-27.4	V	3.0	37.3	1.0	-63.7	-13.0	-50.7	
2.545	-15.1	V	3.0	36.3	1.0	-50.5	-13.0	-37.5	
3.393	-21.9	V	3.0	35.7	1.0	-56.6	-13.0	-43.6	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

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UL Verification Services Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I21235
Date: 7/21/2015
Test Engineer: R.Alegre
Configuration: EUT w/ AC Adapter + HS
Mode: EVDO BC10

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 22

Band

BC10

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 817.9MHz									
1.636	-26.9	H	3.0	37.4	1.0	-63.3	-13.0	-50.3	
2.454	-17.8	H	3.0	36.4	1.0	-53.2	-13.0	-40.2	
3.272	-22.4	H	3.0	35.8	1.0	-57.2	-13.0	-44.2	
1.636	-28.0	V	3.0	37.4	1.0	-64.4	-13.0	-51.4	
2.454	-23.5	V	3.0	36.4	1.0	-58.9	-13.0	-45.9	
3.272	-22.3	V	3.0	35.8	1.0	-57.2	-13.0	-44.2	
Mid Ch, 820.50MHz									
1.641	-26.9	H	3.0	37.4	1.0	-63.3	-13.0	-50.3	
2.462	-19.3	H	3.0	36.4	1.0	-54.7	-13.0	-41.7	
3.282	-21.9	H	3.0	35.8	1.0	-56.8	-13.0	-43.8	
1.641	-28.0	V	3.0	37.4	1.0	-64.4	-13.0	-51.4	
2.462	-21.9	V	3.0	36.4	1.0	-57.3	-13.0	-44.3	
3.282	-21.7	V	3.0	35.8	1.0	-56.5	-13.0	-43.5	
High Ch, 823.10MHz									
1.646	-27.2	H	3.0	37.4	1.0	-63.5	-13.0	-50.5	
2.469	-19.6	H	3.0	36.4	1.0	-55.0	-13.0	-42.0	
3.292	-21.8	H	3.0	35.8	1.0	-56.6	-13.0	-43.6	
1.646	-28.1	V	3.0	37.4	1.0	-64.5	-13.0	-51.5	
2.469	-18.9	V	3.0	36.4	1.0	-54.3	-13.0	-41.3	
3.292	-21.9	V	3.0	35.8	1.0	-56.7	-13.0	-43.7	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701H
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UL Verification Services Chamber C
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I21235
Date: 7/21/2015
Test Engineer: R.Alegre
Configuration: EUT w/ AC Adapter + HS
Mode: RTT BC10

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 22

Band

BC10

1xRTT

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 817.9MHz									
1.636	-26.8	H	3.0	37.4	1.0	-63.2	-13.0	-50.2	
2.454	-17.6	H	3.0	36.4	1.0	-53.0	-13.0	-40.0	
3.272	-22.4	H	3.0	35.8	1.0	-57.3	-13.0	-44.3	
1.636	-28.0	V	3.0	37.4	1.0	-64.4	-13.0	-51.4	
2.454	-23.7	V	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3.272	-22.1	V	3.0	35.8	1.0	-56.9	-13.0	-43.9	
Mid Ch, 820.50MHz									
1.641	-26.7	H	3.0	37.4	1.0	-63.1	-13.0	-50.1	
2.462	-19.1	H	3.0	36.4	1.0	-54.5	-13.0	-41.5	
3.282	-21.8	H	3.0	35.8	1.0	-56.6	-13.0	-43.6	
1.641	-27.9	V	3.0	37.4	1.0	-64.3	-13.0	-51.3	
2.462	-22.0	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
3.282	-21.8	V	3.0	35.8	1.0	-56.6	-13.0	-43.6	
High Ch, 823.10MHz									
1.646	-27.2	H	3.0	37.4	1.0	-63.6	-13.0	-50.6	
2.469	-19.3	H	3.0	36.4	1.0	-54.7	-13.0	-41.7	
3.292	-21.6	H	3.0	35.8	1.0	-56.4	-13.0	-43.4	
1.646	-28.0	V	3.0	37.4	1.0	-64.4	-13.0	-51.4	
2.469	-19.0	V	3.0	36.4	1.0	-54.4	-13.0	-41.4	
3.292	-21.7	V	3.0	35.8	1.0	-56.5	-13.0	-43.5	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

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LTE Band 2

Band

LTE2

20MHz

16QAM

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_16QAM 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	-18.2	V	3.0	35.8	1.0	-53.0	-13.0	-40.0	
5580.00	-16.6	V	3.0	35.5	1.0	-51.1	-13.0	-38.1	
7440.00	-16.4	V	3.0	35.7	1.0	-51.1	-13.0	-38.1	
3720.00	-18.2	H	3.0	35.8	1.0	-53.1	-13.0	-40.1	
5580.00	-15.3	H	3.0	35.5	1.0	-49.7	-13.0	-36.7	
7440.00	-15.0	H	3.0	35.7	1.0	-49.7	-13.0	-36.7	
Mid Ch, 1880									
3760.00	-18.4	V	3.0	35.8	1.0	-53.2	-13.0	-40.2	
5640.00	-17.4	V	3.0	35.5	1.0	-51.8	-13.0	-38.8	
7520.00	-15.2	V	3.0	35.7	1.0	-50.0	-13.0	-37.0	
3760.00	-18.7	H	3.0	35.8	1.0	-53.5	-13.0	-40.5	
5640.00	-17.4	H	3.0	35.5	1.0	-51.8	-13.0	-38.8	
7520.00	-14.6	H	3.0	35.7	1.0	-49.3	-13.0	-36.3	
High Ch, 1900									
3800.00	-17.1	V	3.0	35.8	1.0	-51.9	-13.0	-38.9	
5700.00	-17.3	V	3.0	35.5	1.0	-51.8	-13.0	-38.8	
7600.00	-14.7	V	3.0	35.8	1.0	-49.5	-13.0	-36.5	
3800.00	-17.7	H	3.0	35.8	1.0	-52.5	-13.0	-39.5	
5700.00	-16.4	H	3.0	35.5	1.0	-50.9	-13.0	-37.9	
7600.00	-14.6	H	3.0	35.8	1.0	-49.4	-13.0	-36.4	

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Band

LTE2

20MHz

QPSK

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
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	-18.4	V	3.0	35.8	1.0	-53.3	-13.0	-40.3	
5580.00	-17.0	V	3.0	35.5	1.0	-51.4	-13.0	-38.4	
7440.00	-15.5	V	3.0	35.7	1.0	-50.2	-13.0	-37.2	
3720.00	-18.6	H	3.0	35.8	1.0	-53.4	-13.0	-40.4	
5580.00	-15.9	H	3.0	35.5	1.0	-50.4	-13.0	-37.4	
7440.00	-14.4	H	3.0	35.7	1.0	-49.2	-13.0	-36.2	
Mid Ch, 1880									
3760.00	-16.2	V	3.0	35.8	1.0	-51.0	-13.0	-38.0	
5640.00	-16.5	V	3.0	35.5	1.0	-51.0	-13.0	-38.0	
7520.00	-15.4	V	3.0	35.7	1.0	-50.1	-13.0	-37.1	
3760.00	-18.4	H	3.0	35.8	1.0	-53.2	-13.0	-40.2	
5640.00	-16.9	H	3.0	35.5	1.0	-51.4	-13.0	-38.4	
7520.00	-14.0	H	3.0	35.7	1.0	-48.8	-13.0	-35.8	
High Ch, 1900									
3800.00	-17.7	V	3.0	35.8	1.0	-52.5	-13.0	-39.5	
5700.00	-16.8	V	3.0	35.5	1.0	-51.3	-13.0	-38.3	
7600.00	-15.7	V	3.0	35.8	1.0	-50.5	-13.0	-37.5	
3800.00	-18.6	H	3.0	35.8	1.0	-53.4	-13.0	-40.4	
5700.00	-16.3	H	3.0	35.5	1.0	-50.8	-13.0	-37.8	
7600.00	-14.3	H	3.0	35.8	1.0	-49.1	-13.0	-36.1	

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701H
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Band

LTE2

15MHz

16QAM

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
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	-18.2	V	3.0	35.8	1.0	-53.0	-13.0	-40.0	
5572.50	-16.1	V	3.0	35.5	1.0	-50.5	-13.0	-37.5	
7430.00	-16.0	V	3.0	35.7	1.0	-50.8	-13.0	-37.8	
3715.00	-18.5	H	3.0	35.8	1.0	-53.3	-13.0	-40.3	
5572.50	-14.6	H	3.0	35.5	1.0	-49.1	-13.0	-36.1	
7430.00	-14.7	H	3.0	35.7	1.0	-49.4	-13.0	-36.4	
Mid Ch, 1880									
3760.00	-18.9	V	3.0	35.8	1.0	-53.7	-13.0	-40.7	
5640.00	-17.7	V	3.0	35.5	1.0	-52.2	-13.0	-39.2	
7520.00	-14.4	V	3.0	35.7	1.0	-49.2	-13.0	-36.2	
3760.00	-18.7	H	3.0	35.8	1.0	-53.6	-13.0	-40.6	
5640.00	-16.2	H	3.0	35.5	1.0	-50.7	-13.0	-37.7	
7520.00	-13.8	H	3.0	35.7	1.0	-48.6	-13.0	-35.6	
High Ch, 1902.5									
3805.00	-18.1	V	3.0	35.8	1.0	-52.8	-13.0	-39.8	
5707.50	-16.6	V	3.0	35.5	1.0	-51.1	-13.0	-38.1	
7610.00	-15.3	V	3.0	35.8	1.0	-50.0	-13.0	-37.0	
3805.00	-17.6	H	3.0	35.8	1.0	-52.4	-13.0	-39.4	
5707.50	-17.0	H	3.0	35.5	1.0	-51.5	-13.0	-38.5	
7610.00	-14.1	H	3.0	35.8	1.0	-48.8	-13.0	-35.8	

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Band

LTE2

15MHz

QPSK

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
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	-17.5	V	3.0	35.8	1.0	-52.4	-13.0	-39.4	
5572.50	-16.5	V	3.0	35.5	1.0	-51.0	-13.0	-38.0	
7430.00	-16.0	V	3.0	35.7	1.0	-50.7	-13.0	-37.7	
3715.00	-18.8	H	3.0	35.8	1.0	-53.7	-13.0	-40.7	
5572.50	-15.1	H	3.0	35.5	1.0	-49.5	-13.0	-36.5	
7430.00	-14.8	H	3.0	35.7	1.0	-49.6	-13.0	-36.6	
Mid Ch, 1880									
3760.00	-18.4	V	3.0	35.8	1.0	-53.2	-13.0	-40.2	
5640.00	-17.8	V	3.0	35.5	1.0	-52.3	-13.0	-39.3	
7520.00	-15.6	V	3.0	35.7	1.0	-50.4	-13.0	-37.4	
3760.00	-17.1	H	3.0	35.8	1.0	-51.9	-13.0	-38.9	
5640.00	-16.2	H	3.0	35.5	1.0	-50.7	-13.0	-37.7	
7520.00	-14.7	H	3.0	35.7	1.0	-49.5	-13.0	-36.5	
High Ch, 1902.5									
3805.00	-18.6	V	3.0	35.8	1.0	-53.3	-13.0	-40.3	
5707.50	-17.4	V	3.0	35.5	1.0	-51.9	-13.0	-38.9	
7610.00	-13.4	V	3.0	35.8	1.0	-48.1	-13.0	-35.1	
3805.00	-17.7	H	3.0	35.8	1.0	-52.5	-13.0	-39.5	
5707.50	-15.9	H	3.0	35.5	1.0	-50.4	-13.0	-37.4	
7610.00	-14.6	H	3.0	35.8	1.0	-49.4	-13.0	-36.4	

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701H
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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I21235
Date: 7/16/2015
Test Engineer: D. Mun
Configuration: EUT w/ AC Charger + HS
Location: Chamber A
Mode: LTE_16QAM Band 2 Harmonics, 10MHz Bandwidth

Band
LTE2
10MHz
16QAM

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	-18.5	V	3.0	35.9	1.0	-53.3	-13.0	-40.3	
5565.00	-17.5	V	3.0	35.5	1.0	-52.0	-13.0	-39.0	
7420.00	-15.0	V	3.0	35.7	1.0	-49.8	-13.0	-36.8	
3710.00	-19.1	H	3.0	35.9	1.0	-53.9	-13.0	-40.9	
5565.00	-17.1	H	3.0	35.5	1.0	-51.6	-13.0	-38.6	
7420.00	-13.9	H	3.0	35.7	1.0	-48.6	-13.0	-35.6	
Mid Ch, 1880									
3760.00	-18.9	V	3.0	35.8	1.0	-53.7	-13.0	-40.7	
5640.00	-17.4	V	3.0	35.5	1.0	-51.9	-13.0	-38.9	
7520.00	-14.8	V	3.0	35.7	1.0	-49.6	-13.0	-36.6	
3760.00	-18.3	H	3.0	35.8	1.0	-53.1	-13.0	-40.1	
5640.00	-16.4	H	3.0	35.5	1.0	-50.9	-13.0	-37.9	
7520.00	-14.3	H	3.0	35.7	1.0	-49.1	-13.0	-36.1	
High Ch, 1905									
3810.00	-17.1	V	3.0	35.8	1.0	-51.9	-13.0	-38.9	
5715.00	-17.4	V	3.0	35.5	1.0	-51.9	-13.0	-38.9	
7620.00	-14.6	V	3.0	35.8	1.0	-49.4	-13.0	-36.4	
3810.00	-19.0	H	3.0	35.8	1.0	-53.8	-13.0	-40.8	
5715.00	-16.8	H	3.0	35.5	1.0	-51.3	-13.0	-38.3	
7620.00	-13.7	H	3.0	35.8	1.0	-48.5	-13.0	-35.5	

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

Company: LG Electronics
Project #: 15I21235
Date: 7/16/2015
Test Engineer: D. Mun
Configuration: EUT w/ AC Charger + HS
Location: Chamber A
Mode: LTE_QPSK Band 2 Harmonics, 10MHz Bandwidth

Band
LTE2
10MHz
QPSK

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	-18.6	V	3.0	35.9	1.0	-53.4	-13.0	-40.4	
5565.00	-16.6	V	3.0	35.5	1.0	-51.1	-13.0	-38.1	
7420.00	-13.9	V	3.0	35.7	1.0	-48.6	-13.0	-35.6	
3710.00	-18.5	H	3.0	35.9	1.0	-53.4	-13.0	-40.4	
5565.00	-17.0	H	3.0	35.5	1.0	-51.5	-13.0	-38.5	
7420.00	-14.7	H	3.0	35.7	1.0	-49.4	-13.0	-36.4	
Mid Ch, 1880									
3760.00	-18.6	V	3.0	35.8	1.0	-53.4	-13.0	-40.4	
5640.00	-17.2	V	3.0	35.5	1.0	-51.7	-13.0	-38.7	
7520.00	-15.6	V	3.0	35.7	1.0	-50.4	-13.0	-37.4	
3760.00	-18.2	H	3.0	35.8	1.0	-53.0	-13.0	-40.0	
5640.00	-17.0	H	3.0	35.5	1.0	-51.5	-13.0	-38.5	
7520.00	-14.0	H	3.0	35.7	1.0	-48.7	-13.0	-35.7	
High Ch, 1905									
3810.00	-18.0	V	3.0	35.8	1.0	-52.8	-13.0	-39.8	
5715.00	-17.4	V	3.0	35.5	1.0	-51.9	-13.0	-38.9	
7620.00	-14.7	V	3.0	35.8	1.0	-49.4	-13.0	-36.4	
3810.00	-18.3	H	3.0	35.8	1.0	-53.0	-13.0	-40.0	
5715.00	-16.2	H	3.0	35.5	1.0	-50.7	-13.0	-37.7	
7620.00	-13.7	H	3.0	35.8	1.0	-48.4	-13.0	-35.4	

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_16QAM Band 2 Harmonics, 5MHz Bandwidth

Band
LTE2
5MHz
16QAM

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	-18.5	V	3.0	35.9	1.0	-53.4	-13.0	-40.4	
5557.50	-16.3	V	3.0	35.5	1.0	-50.8	-13.0	-37.8	
7410.00	-16.3	V	3.0	35.7	1.0	-51.0	-13.0	-38.0	
3705.00	-17.9	H	3.0	35.9	1.0	-52.8	-13.0	-39.8	
5557.50	-15.4	H	3.0	35.5	1.0	-49.9	-13.0	-36.9	
7410.00	-14.3	H	3.0	35.7	1.0	-49.1	-13.0	-36.1	
Mid Ch, 1880									
3760.00	-18.9	V	3.0	35.8	1.0	-53.7	-13.0	-40.7	
5640.00	-17.8	V	3.0	35.5	1.0	-52.3	-13.0	-39.3	
7520.00	-15.8	V	3.0	35.7	1.0	-50.5	-13.0	-37.5	
3760.00	-18.2	H	3.0	35.8	1.0	-53.0	-13.0	-40.0	
5640.00	-17.3	H	3.0	35.5	1.0	-51.8	-13.0	-38.8	
7520.00	-14.6	H	3.0	35.7	1.0	-49.3	-13.0	-36.3	
High Ch, 1907.5									
3815.00	-17.7	V	3.0	35.8	1.0	-52.5	-13.0	-39.5	
5722.50	-17.1	V	3.0	35.5	1.0	-51.6	-13.0	-38.6	
7630.00	-14.9	V	3.0	35.8	1.0	-49.6	-13.0	-36.6	
3815.00	-17.9	H	3.0	35.8	1.0	-52.7	-13.0	-39.7	
5722.50	-16.6	H	3.0	35.5	1.0	-51.1	-13.0	-38.1	
7630.00	-14.4	H	3.0	35.8	1.0	-49.2	-13.0	-36.2	

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_QPSK Band 2 Harmonics, 5MHz Bandwidth

Band LTE2 5MHz QPSK

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	-17.1	V	3.0	35.9	1.0	-51.9	-13.0	-38.9	
5557.50	-16.5	V	3.0	35.5	1.0	-51.0	-13.0	-38.0	
7410.00	-15.7	V	3.0	35.7	1.0	-50.5	-13.0	-37.5	
3705.00	-18.6	H	3.0	35.9	1.0	-53.4	-13.0	-40.4	
5557.50	-15.1	H	3.0	35.5	1.0	-49.6	-13.0	-36.6	
7410.00	-14.7	H	3.0	35.7	1.0	-49.4	-13.0	-36.4	
Mid Ch, 1880									
3760.00	-19.1	V	3.0	35.8	1.0	-53.9	-13.0	-40.9	
5640.00	-17.1	V	3.0	35.5	1.0	-51.6	-13.0	-38.6	
7520.00	-15.8	V	3.0	35.7	1.0	-50.6	-13.0	-37.6	
3760.00	-18.2	H	3.0	35.8	1.0	-53.0	-13.0	-40.0	
5640.00	-16.3	H	3.0	35.5	1.0	-50.8	-13.0	-37.8	
7520.00	-14.0	H	3.0	35.7	1.0	-48.8	-13.0	-35.8	
High Ch, 1907.5									
3815.00	-17.5	V	3.0	35.8	1.0	-52.3	-13.0	-39.3	
5722.50	-16.7	V	3.0	35.5	1.0	-51.2	-13.0	-38.2	
7630.00	-15.9	V	3.0	35.8	1.0	-50.7	-13.0	-37.7	
3815.00	-18.0	H	3.0	35.8	1.0	-52.7	-13.0	-39.7	
5722.50	-15.6	H	3.0	35.5	1.0	-50.1	-13.0	-37.1	
7630.00	-13.7	H	3.0	35.8	1.0	-48.4	-13.0	-35.4	

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Band

LTE2

3MHz

16QAM

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
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	-18.9	V	3.0	35.9	1.0	-53.7	-13.0	-40.7	
5554.50	-16.3	V	3.0	35.5	1.0	-50.7	-13.0	-37.7	
7406.00	-15.0	V	3.0	35.7	1.0	-49.7	-13.0	-36.7	
3703.00	-18.4	H	3.0	35.9	1.0	-53.2	-13.0	-40.2	
5554.50	-15.0	H	3.0	35.5	1.0	-49.5	-13.0	-36.5	
7406.00	-14.3	H	3.0	35.7	1.0	-49.1	-13.0	-36.1	
Mid Ch, 1880									
3760.00	-16.2	V	3.0	35.8	1.0	-51.1	-13.0	-38.1	
5640.00	-15.5	V	3.0	35.5	1.0	-50.0	-13.0	-37.0	
7520.00	-13.0	V	3.0	35.7	1.0	-47.8	-13.0	-34.8	
3760.00	-16.4	H	3.0	35.8	1.0	-51.2	-13.0	-38.2	
5640.00	-15.1	H	3.0	35.5	1.0	-49.6	-13.0	-36.6	
7520.00	-12.5	H	3.0	35.7	1.0	-47.2	-13.0	-34.2	
High Ch, 1908.5									
3817.00	-18.1	V	3.0	35.8	1.0	-52.9	-13.0	-39.9	
5725.50	-13.5	V	3.0	35.5	1.0	-48.0	-13.0	-35.0	
7634.00	-15.9	V	3.0	35.8	1.0	-50.7	-13.0	-37.7	
3817.00	-18.1	H	3.0	35.8	1.0	-52.9	-13.0	-39.9	
5725.50	-15.8	H	3.0	35.5	1.0	-50.3	-13.0	-37.3	
7634.00	-14.0	H	3.0	35.8	1.0	-48.7	-13.0	-35.7	

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Band

LTE2

3MHz

QPSK

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
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	35.9	1.0	-52.6	-13.0	-39.6	
5554.50	-16.1	V	3.0	35.5	1.0	-50.6	-13.0	-37.6	
7406.00	-15.3	V	3.0	35.7	1.0	-50.0	-13.0	-37.0	
3703.00	-19.0	H	3.0	35.9	1.0	-53.9	-13.0	-40.9	
5554.50	-15.5	H	3.0	35.5	1.0	-49.9	-13.0	-36.9	
7406.00	-14.5	H	3.0	35.7	1.0	-49.2	-13.0	-36.2	
Mid Ch, 1880									
3760.00	-14.8	V	3.0	35.8	1.0	-49.6	-13.0	-36.6	
5640.00	-15.0	V	3.0	35.5	1.0	-49.5	-13.0	-36.5	
7520.00	-12.5	V	3.0	35.7	1.0	-47.2	-13.0	-34.2	
3760.00	-16.6	H	3.0	35.8	1.0	-51.5	-13.0	-38.5	
5640.00	-14.7	H	3.0	35.5	1.0	-49.1	-13.0	-36.1	
7520.00	-12.2	H	3.0	35.7	1.0	-46.9	-13.0	-33.9	
High Ch, 1908.5									
3817.00	-18.4	V	3.0	35.8	1.0	-53.2	-13.0	-40.2	
5725.50	-13.2	V	3.0	35.5	1.0	-47.7	-13.0	-34.7	
7634.00	-14.2	V	3.0	35.8	1.0	-49.0	-13.0	-36.0	
3817.00	-17.5	H	3.0	35.8	1.0	-52.3	-13.0	-39.3	
5725.50	-16.1	H	3.0	35.5	1.0	-50.6	-13.0	-37.6	
7634.00	-13.9	H	3.0	35.8	1.0	-48.6	-13.0	-35.6	

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Band

LTE2

1.4MHz

16QAM

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
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	-16.6	V	3.0	35.9	1.0	-51.5	-13.0	-38.5	
5552.10	-11.7	V	3.0	35.5	1.0	-46.2	-13.0	-33.2	
7402.80	-13.2	V	3.0	35.7	1.0	-47.9	-13.0	-34.9	
3701.40	-16.1	H	3.0	35.9	1.0	-50.9	-13.0	-37.9	
5552.10	-13.3	H	3.0	35.5	1.0	-47.8	-13.0	-34.8	
7402.80	-12.3	H	3.0	35.7	1.0	-47.0	-13.0	-34.0	
Mid Ch, 1880									
3760.00	-16.5	V	3.0	35.8	1.0	-44.7	-13.0	-31.7	
5640.00	-14.7	V	3.0	35.5	1.0	-49.2	-13.0	-36.2	
7520.00	-13.0	V	3.0	35.7	1.0	-47.8	-13.0	-34.8	
3760.00	-17.3	H	3.0	35.8	1.0	-52.1	-13.0	-39.1	
5640.00	-14.8	H	3.0	35.5	1.0	-49.3	-13.0	-36.3	
7520.00	-11.2	H	3.0	35.7	1.0	-45.9	-13.0	-32.9	
High Ch, 1909.3									
3818.60	-15.6	V	3.0	35.8	1.0	-50.4	-13.0	-37.4	
5727.90	-9.4	V	3.0	35.5	1.0	-43.9	-13.0	-30.9	
7637.20	-13.0	V	3.0	35.8	1.0	-47.7	-13.0	-34.7	
3818.60	-16.5	H	3.0	35.8	1.0	-51.3	-13.0	-38.3	
5727.90	-12.9	H	3.0	35.5	1.0	-47.4	-13.0	-34.4	
7637.20	-12.0	H	3.0	35.8	1.0	-46.7	-13.0	-33.7	

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Band

LTE2

1.4MHz

QPSK

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
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	-15.5	V	3.0	35.9	1.0	-50.4	-13.0	-37.4	
5552.10	-12.4	V	3.0	35.5	1.0	-46.9	-13.0	-33.9	
7402.80	-13.0	V	3.0	35.7	1.0	-47.7	-13.0	-34.7	
3701.40	-16.0	H	3.0	35.9	1.0	-50.9	-13.0	-37.9	
5552.10	-13.7	H	3.0	35.5	1.0	-48.2	-13.0	-35.2	
7402.80	-12.4	H	3.0	35.7	1.0	-47.1	-13.0	-34.1	
Mid Ch, 1880									
3760.00	-16.4	V	3.0	35.8	1.0	-51.2	-13.0	-38.2	
5640.00	-14.4	V	3.0	35.5	1.0	-48.9	-13.0	-35.9	
7520.00	-12.9	V	3.0	35.7	1.0	-47.7	-13.0	-34.7	
3760.00	-16.5	H	3.0	35.8	1.0	-51.3	-13.0	-38.3	
5640.00	-15.1	H	3.0	35.5	1.0	-49.6	-13.0	-36.6	
7520.00	-12.2	H	3.0	35.7	1.0	-47.0	-13.0	-34.0	
High Ch, 1909.3									
3818.60	-15.4	V	3.0	35.8	1.0	-50.2	-13.0	-37.2	
5727.90	-9.4	V	3.0	35.5	1.0	-43.9	-13.0	-30.9	
7637.20	-12.9	V	3.0	35.8	1.0	-47.6	-13.0	-34.6	
3818.60	-16.7	H	3.0	35.8	1.0	-51.5	-13.0	-38.5	
5727.90	-11.6	H	3.0	35.5	1.0	-46.1	-13.0	-33.1	
7637.20	-10.9	H	3.0	35.8	1.0	-45.7	-13.0	-32.7	

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LTE Band 4

Band

LTE4

20MHz

16QAM

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

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: X-Pos, EUT Only
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	-18.3	V	3.0	36.0	1.0	-53.3	-13.0	-40.3	
5160.00	-16.0	V	3.0	35.4	1.0	-50.4	-13.0	-37.4	
6880.00	-14.3	V	3.0	35.7	1.0	-49.0	-13.0	-36.0	
3440.00	-18.5	H	3.0	36.0	1.0	-53.5	-13.0	-40.5	
5160.00	-17.0	H	3.0	35.4	1.0	-51.4	-13.0	-38.4	
6880.00	-13.1	H	3.0	35.7	1.0	-47.8	-13.0	-34.8	
Mid Ch, 1732.5									
3465.00	-19.6	V	3.0	36.0	1.0	-54.6	-13.0	-41.6	
5197.50	-17.1	V	3.0	35.4	1.0	-51.5	-13.0	-38.5	
6930.00	-14.1	V	3.0	35.7	1.0	-48.8	-13.0	-35.8	
3465.00	-18.0	H	3.0	36.0	1.0	-53.1	-13.0	-40.1	
5197.50	-15.3	H	3.0	35.4	1.0	-49.8	-13.0	-36.8	
6930.00	-12.9	H	3.0	35.7	1.0	-47.5	-13.0	-34.5	
High Ch, 1745									
3490.00	-19.6	V	3.0	36.0	1.0	-54.7	-13.0	-41.7	
5235.00	-16.6	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6980.00	-13.4	V	3.0	35.7	1.0	-48.1	-13.0	-35.1	
3490.00	-18.2	H	3.0	36.0	1.0	-53.3	-13.0	-40.3	
5235.00	-15.9	H	3.0	35.4	1.0	-50.3	-13.0	-37.3	
6980.00	-11.5	H	3.0	35.7	1.0	-46.2	-13.0	-33.2	

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Band

LTE4

20MHz

QPSK

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

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: X-Pos, EUT Only
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	-17.2	V	3.0	36.0	1.0	-52.2	-13.0	-39.2	
5160.00	-16.2	V	3.0	35.4	1.0	-50.7	-13.0	-37.7	
6880.00	-14.1	V	3.0	35.7	1.0	-48.8	-13.0	-35.8	
3440.00	-18.3	H	3.0	36.0	1.0	-53.4	-13.0	-40.4	
5160.00	-16.2	H	3.0	35.4	1.0	-50.7	-13.0	-37.7	
6880.00	-13.2	H	3.0	35.7	1.0	-47.9	-13.0	-34.9	
Mid Ch, 1732.5									
3465.00	-16.6	V	3.0	36.0	1.0	-51.7	-13.0	-38.7	
5197.50	-16.0	V	3.0	35.4	1.0	-50.4	-13.0	-37.4	
6930.00	-12.6	V	3.0	35.7	1.0	-47.3	-13.0	-34.3	
3465.00	-19.7	H	3.0	36.0	1.0	-54.7	-13.0	-41.7	
5197.50	-16.0	H	3.0	35.4	1.0	-50.5	-13.0	-37.5	
6930.00	-11.9	H	3.0	35.7	1.0	-46.6	-13.0	-33.6	
High Ch, 1745									
3490.00	-18.5	V	3.0	36.0	1.0	-53.5	-13.0	-40.5	
5235.00	-15.5	V	3.0	35.4	1.0	-49.9	-13.0	-36.9	
6980.00	-13.6	V	3.0	35.7	1.0	-48.3	-13.0	-35.3	
3490.00	-19.9	H	3.0	36.0	1.0	-55.0	-13.0	-42.0	
5235.00	-16.4	H	3.0	35.4	1.0	-50.8	-13.0	-37.8	
6980.00	-12.9	H	3.0	35.7	1.0	-47.6	-13.0	-34.6	

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Band

LTE4

15MHz

16QAM

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

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: X-Pos, EUT Only
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	-20.2	V	3.0	36.1	1.0	-55.2	-13.0	-42.2	
5152.50	-16.8	V	3.0	35.4	1.0	-51.2	-13.0	-38.2	
6870.00	-13.9	V	3.0	35.7	1.0	-48.6	-13.0	-35.6	
3435.00	-18.7	H	3.0	36.1	1.0	-53.8	-13.0	-40.8	
5152.50	-15.4	H	3.0	35.4	1.0	-49.8	-13.0	-36.8	
6870.00	-12.6	H	3.0	35.7	1.0	-47.2	-13.0	-34.2	
Mid Ch, 1732.5									
3465.00	-18.2	V	3.0	36.0	1.0	-53.2	-13.0	-40.2	
5197.50	-15.6	V	3.0	35.4	1.0	-50.0	-13.0	-37.0	
6930.00	-13.8	V	3.0	35.7	1.0	-48.4	-13.0	-35.4	
3465.00	-19.7	H	3.0	36.0	1.0	-54.8	-13.0	-41.8	
5197.50	-14.9	H	3.0	35.4	1.0	-49.3	-13.0	-36.3	
6930.00	-13.0	H	3.0	35.7	1.0	-47.7	-13.0	-34.7	
High Ch, 1747.5									
3495.00	-18.7	V	3.0	36.0	1.0	-53.8	-13.0	-40.8	
5242.50	-15.6	V	3.0	35.4	1.0	-50.0	-13.0	-37.0	
6990.00	-13.7	V	3.0	35.7	1.0	-48.3	-13.0	-35.3	
3495.00	-20.6	H	3.0	36.0	1.0	-55.6	-13.0	-42.6	
5242.50	-16.8	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
6990.00	-13.3	H	3.0	35.7	1.0	-48.0	-13.0	-35.0	

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Band

LTE4

15MHz

QPSK

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

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: X-Pos, EUT Only
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	-19.9	V	3.0	36.1	1.0	-54.9	-13.0	-41.9	
5152.50	-16.5	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6870.00	-12.7	V	3.0	35.7	1.0	-47.3	-13.0	-34.3	
3435.00	-18.4	H	3.0	36.1	1.0	-53.5	-13.0	-40.5	
5152.50	-14.5	H	3.0	35.4	1.0	-49.0	-13.0	-36.0	
6870.00	-11.6	H	3.0	35.7	1.0	-46.3	-13.0	-33.3	
Mid Ch, 1732.5									
3465.00	-19.6	V	3.0	36.0	1.0	-54.6	-13.0	-41.6	
5197.50	-16.7	V	3.0	35.4	1.0	-51.1	-13.0	-38.1	
6930.00	-15.3	V	3.0	35.7	1.0	-50.0	-13.0	-37.0	
3465.00	-19.8	H	3.0	36.0	1.0	-54.9	-13.0	-41.9	
5197.50	-16.2	H	3.0	35.4	1.0	-50.6	-13.0	-37.6	
6930.00	-12.6	H	3.0	35.7	1.0	-47.3	-13.0	-34.3	
High Ch, 1747.5									
3495.00	-18.5	V	3.0	36.0	1.0	-53.6	-13.0	-40.6	
5242.50	-16.1	V	3.0	35.4	1.0	-50.5	-13.0	-37.5	
6990.00	-13.8	V	3.0	35.7	1.0	-48.5	-13.0	-35.5	
3495.00	-18.6	H	3.0	36.0	1.0	-53.6	-13.0	-40.6	
5242.50	-15.3	H	3.0	35.4	1.0	-49.7	-13.0	-36.7	
6990.00	-12.1	H	3.0	35.7	1.0	-46.8	-13.0	-33.8	

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Band

LTE4

10MHz

16QAM

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
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, 1715									
3430.00	-20.2	V	3.0	36.1	1.0	-55.2	-13.0	-42.2	
5145.00	-16.1	V	3.0	35.4	1.0	-50.5	-13.0	-37.5	
6860.00	-16.7	V	3.0	35.7	1.0	-51.3	-13.0	-38.3	
3430.00	-21.2	H	3.0	36.1	1.0	-56.3	-13.0	-43.3	
5145.00	-16.8	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
6860.00	-15.5	H	3.0	35.7	1.0	-50.1	-13.0	-37.1	
Mid Ch, 1732.5									
3465.00	-17.9	V	3.0	36.0	1.0	-52.9	-13.0	-39.9	
5197.50	-17.0	V	3.0	35.4	1.0	-51.4	-13.0	-38.4	
6930.00	-15.8	V	3.0	35.7	1.0	-50.5	-13.0	-37.5	
3465.00	-18.5	H	3.0	36.0	1.0	-53.6	-13.0	-40.6	
5197.50	-16.7	H	3.0	35.4	1.0	-51.1	-13.0	-38.1	
6930.00	-15.9	H	3.0	35.7	1.0	-50.6	-13.0	-37.6	
High Ch, 1750									
3500.00	-14.1	V	3.0	36.0	1.0	-49.1	-13.0	-36.1	
5250.00	-17.7	V	3.0	35.4	1.0	-52.1	-13.0	-39.1	
7000.00	-16.8	V	3.0	35.7	1.0	-51.5	-13.0	-38.5	
3500.00	-16.4	H	3.0	36.0	1.0	-51.5	-13.0	-38.5	
5250.00	-16.3	H	3.0	35.4	1.0	-50.8	-13.0	-37.8	
7000.00	-15.9	H	3.0	35.7	1.0	-50.6	-13.0	-37.6	

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Band

LTE4

10MHz

QPSK

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
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, 1715									
3430.00	-21.5	V	3.0	36.1	1.0	-56.6	-13.0	-43.6	
5145.00	-16.5	V	3.0	35.4	1.0	-50.9	-13.0	-37.9	
6860.00	-15.4	V	3.0	35.7	1.0	-50.1	-13.0	-37.1	
3430.00	-19.8	H	3.0	36.1	1.0	-54.9	-13.0	-41.9	
5145.00	-15.8	H	3.0	35.4	1.0	-50.3	-13.0	-37.3	
6860.00	-15.1	H	3.0	35.7	1.0	-49.8	-13.0	-36.8	
Mid Ch, 1732.5									
3465.00	-17.0	V	3.0	36.0	1.0	-52.1	-13.0	-39.1	
5197.50	-17.5	V	3.0	35.4	1.0	-51.9	-13.0	-38.9	
6930.00	-15.6	V	3.0	35.7	1.0	-50.3	-13.0	-37.3	
3465.00	-18.8	H	3.0	36.0	1.0	-53.8	-13.0	-40.8	
5197.50	-16.5	H	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6930.00	-13.9	H	3.0	35.7	1.0	-48.6	-13.0	-35.6	
High Ch, 1750									
3500.00	-13.1	V	3.0	36.0	1.0	-48.1	-13.0	-35.1	
5250.00	-16.4	V	3.0	35.4	1.0	-50.8	-13.0	-37.8	
7000.00	-16.5	V	3.0	35.7	1.0	-51.1	-13.0	-38.1	
3500.00	-16.8	H	3.0	36.0	1.0	-51.8	-13.0	-38.8	
5250.00	-16.8	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
7000.00	-16.0	H	3.0	35.7	1.0	-50.7	-13.0	-37.7	

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_16QAM Band 4 Harmonics, 5MHz Bandwidth

Band
LTE4
5MHz
16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1712.5									
3425.00	-18.9	V	3.0	36.1	1.0	-54.0	-13.0	-41.0	
5137.50	-16.9	V	3.0	35.4	1.0	-51.3	-13.0	-38.3	
6850.00	-15.9	V	3.0	35.7	1.0	-50.6	-13.0	-37.6	
3425.00	-21.1	H	3.0	36.1	1.0	-56.2	-13.0	-43.2	
5137.50	-16.8	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
6850.00	-14.6	H	3.0	35.7	1.0	-49.2	-13.0	-36.2	
Mid Ch, 1732.5									
3465.00	-19.7	V	3.0	36.0	1.0	-54.7	-13.0	-41.7	
5197.50	-17.5	V	3.0	35.4	1.0	-51.9	-13.0	-38.9	
6930.00	-16.5	V	3.0	35.7	1.0	-51.2	-13.0	-38.2	
3465.00	-21.4	H	3.0	36.0	1.0	-56.4	-13.0	-43.4	
5197.50	-17.2	H	3.0	35.4	1.0	-51.7	-13.0	-38.7	
6930.00	-14.8	H	3.0	35.7	1.0	-49.5	-13.0	-36.5	
High Ch, 1752.5									
3505.00	-13.2	V	3.0	36.0	1.0	-48.2	-13.0	-35.2	
5257.50	-17.6	V	3.0	35.4	1.0	-52.0	-13.0	-39.0	
7010.00	-17.1	V	3.0	35.7	1.0	-51.8	-13.0	-38.8	
3505.00	-18.2	H	3.0	36.0	1.0	-53.2	-13.0	-40.2	
5257.50	-16.2	H	3.0	35.4	1.0	-50.6	-13.0	-37.6	
7010.00	-16.1	H	3.0	35.7	1.0	-50.7	-13.0	-37.7	

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_QPSK Band 4 Harmonics, 5MHz Bandwidth

Band LTE4 5MHz QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1712.5									
3425.00	-19.3	V	3.0	36.1	1.0	-54.4	-13.0	-41.4	
5137.50	-16.8	V	3.0	35.4	1.0	-51.2	-13.0	-38.2	
6850.00	-16.5	V	3.0	35.7	1.0	-51.2	-13.0	-38.2	
3425.00	-21.8	H	3.0	36.1	1.0	-56.9	-13.0	-43.9	
5137.50	-16.8	H	3.0	35.4	1.0	-51.3	-13.0	-38.3	
6850.00	-15.0	H	3.0	35.7	1.0	-49.7	-13.0	-36.7	
Mid Ch, 1732.5									
3465.00	-20.7	V	3.0	36.0	1.0	-55.7	-13.0	-42.7	
5197.50	-17.6	V	3.0	35.4	1.0	-52.0	-13.0	-39.0	
6930.00	-16.8	V	3.0	35.7	1.0	-51.5	-13.0	-38.5	
3465.00	-21.2	H	3.0	36.0	1.0	-56.2	-13.0	-43.2	
5197.50	-16.9	H	3.0	35.4	1.0	-51.4	-13.0	-38.4	
6930.00	-15.0	H	3.0	35.7	1.0	-49.7	-13.0	-36.7	
High Ch, 1752.5									
3505.00	-13.4	V	3.0	36.0	1.0	-48.4	-13.0	-35.4	
5257.50	-16.7	V	3.0	35.4	1.0	-51.2	-13.0	-38.2	
7010.00	-17.1	V	3.0	35.7	1.0	-51.8	-13.0	-38.8	
3505.00	-17.4	H	3.0	36.0	1.0	-52.4	-13.0	-39.4	
5257.50	-17.5	H	3.0	35.4	1.0	-52.0	-13.0	-39.0	
7010.00	-15.1	H	3.0	35.7	1.0	-49.8	-13.0	-36.8	

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Band

LTE4

3MHz

16QAM

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
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, 1711.5									
3423.00	-22.1	V	3.0	36.1	1.0	-57.1	-13.0	-44.1	
5134.50	-17.2	V	3.0	35.4	1.0	-51.7	-13.0	-38.7	
6846.00	-16.2	V	3.0	35.7	1.0	-50.8	-13.0	-37.8	
3423.00	-18.0	H	3.0	36.1	1.0	-53.1	-13.0	-40.1	
5134.50	-15.8	H	3.0	35.4	1.0	-50.3	-13.0	-37.3	
6846.00	-15.6	H	3.0	35.7	1.0	-50.2	-13.0	-37.2	
Mid Ch, 1732.5									
3465.00	-20.3	V	3.0	36.0	1.0	-55.3	-13.0	-42.3	
5197.50	-16.6	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6930.00	-16.6	V	3.0	35.7	1.0	-51.3	-13.0	-38.3	
3465.00	-17.4	H	3.0	36.0	1.0	-52.4	-13.0	-39.4	
5197.50	-15.9	H	3.0	35.4	1.0	-50.3	-13.0	-37.3	
6930.00	-14.6	H	3.0	35.7	1.0	-49.2	-13.0	-36.2	
High Ch, 1753.5									
3507.00	-17.7	V	3.0	36.0	1.0	-52.7	-13.0	-39.7	
5260.50	-17.4	V	3.0	35.4	1.0	-51.8	-13.0	-38.8	
7014.00	-15.7	V	3.0	35.7	1.0	-50.4	-13.0	-37.4	
3507.00	-13.8	H	3.0	36.0	1.0	-48.8	-13.0	-35.8	
5260.50	-17.0	H	3.0	35.4	1.0	-51.4	-13.0	-38.4	
7014.00	-15.9	H	3.0	35.7	1.0	-50.6	-13.0	-37.6	

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Band

LTE4

3MHz

QPSK

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
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, 1711.5									
3423.00	-21.1	V	3.0	36.1	1.0	-56.2	-13.0	-43.2	
5134.50	-16.7	V	3.0	35.4	1.0	-51.2	-13.0	-38.2	
6846.00	-15.7	V	3.0	35.7	1.0	-50.3	-13.0	-37.3	
3423.00	-18.5	H	3.0	36.1	1.0	-53.6	-13.0	-40.6	
5134.50	-16.3	H	3.0	35.4	1.0	-50.8	-13.0	-37.8	
6846.00	-15.3	H	3.0	35.7	1.0	-49.9	-13.0	-36.9	
Mid Ch, 1732.5									
3465.00	-20.5	V	3.0	36.0	1.0	-55.5	-13.0	-42.5	
5197.50	-16.5	V	3.0	35.4	1.0	-50.9	-13.0	-37.9	
6930.00	-16.2	V	3.0	35.7	1.0	-50.9	-13.0	-37.9	
3465.00	-16.9	H	3.0	36.0	1.0	-51.9	-13.0	-38.9	
5197.50	-16.2	H	3.0	35.4	1.0	-50.6	-13.0	-37.6	
6930.00	-15.6	H	3.0	35.7	1.0	-50.2	-13.0	-37.2	
High Ch, 1753.5									
3507.00	-19.1	V	3.0	36.0	1.0	-54.1	-13.0	-41.1	
5260.50	-18.0	V	3.0	35.4	1.0	-52.4	-13.0	-39.4	
7014.00	-17.5	V	3.0	35.7	1.0	-52.2	-13.0	-39.2	
3507.00	-13.7	H	3.0	36.0	1.0	-48.7	-13.0	-35.7	
5260.50	-16.8	H	3.0	35.4	1.0	-51.2	-13.0	-38.2	
7014.00	-14.9	H	3.0	35.7	1.0	-49.6	-13.0	-36.6	

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_16QAM Band 4 Harmonics, 1.4MHz Bandwidth

Band
LTE4
1.4MHz
16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1710.7									
3421.40	-21.4	V	3.0	36.1	1.0	-56.5	-13.0	-43.5	
5132.10	-17.5	V	3.0	35.4	1.0	-51.9	-13.0	-38.9	
6842.80	-17.2	V	3.0	35.7	1.0	-51.8	-13.0	-38.8	
3421.40	-17.3	H	3.0	36.1	1.0	-52.4	-13.0	-39.4	
5132.10	-16.3	H	3.0	35.4	1.0	-50.7	-13.0	-37.7	
6842.80	-15.6	H	3.0	35.7	1.0	-50.3	-13.0	-37.3	
Mid Ch, 1732.5									
3465.00	-17.9	V	3.0	36.0	1.0	-52.9	-13.0	-39.9	
5197.50	-18.2	V	3.0	35.4	1.0	-52.7	-13.0	-39.7	
6930.00	-15.7	V	3.0	35.7	1.0	-50.4	-13.0	-37.4	
3465.00	-21.9	H	3.0	36.0	1.0	-56.9	-13.0	-43.9	
5197.50	-17.3	H	3.0	35.4	1.0	-51.7	-13.0	-38.7	
6930.00	-15.4	H	3.0	35.7	1.0	-50.1	-13.0	-37.1	
High Ch, 1754.3									
3508.60	-20.4	V	3.0	36.0	1.0	-55.4	-13.0	-42.4	
5262.90	-17.8	V	3.0	35.4	1.0	-52.2	-13.0	-39.2	
7017.20	-17.4	V	3.0	35.7	1.0	-52.1	-13.0	-39.1	
3508.60	-19.7	H	3.0	36.0	1.0	-54.7	-13.0	-41.7	
5262.90	-16.3	H	3.0	35.4	1.0	-50.7	-13.0	-37.7	
7017.20	-16.0	H	3.0	35.7	1.0	-50.7	-13.0	-37.7	

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Band

LTE4

1.4MHz

QPSK

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
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, 1710.7									
3421.40	-21.3	V	3.0	36.1	1.0	-56.4	-13.0	-43.4	
5132.10	-16.6	V	3.0	35.4	1.0	-51.0	-13.0	-38.0	
6842.80	-16.5	V	3.0	35.7	1.0	-51.2	-13.0	-38.2	
3421.40	-22.1	H	3.0	36.1	1.0	-57.2	-13.0	-44.2	
5132.10	-16.4	H	3.0	35.4	1.0	-50.9	-13.0	-37.9	
6842.80	-14.4	H	3.0	35.7	1.0	-49.1	-13.0	-36.1	
Mid Ch, 1732.5									
3465.00	-17.9	V	3.0	36.0	1.0	-52.9	-13.0	-39.9	
5197.50	-16.9	V	3.0	35.4	1.0	-51.3	-13.0	-38.3	
6930.00	-16.6	V	3.0	35.7	1.0	-51.3	-13.0	-38.3	
3465.00	-21.4	H	3.0	36.0	1.0	-56.4	-13.0	-43.4	
5197.50	-17.2	H	3.0	35.4	1.0	-51.7	-13.0	-38.7	
6930.00	-15.2	H	3.0	35.7	1.0	-49.9	-13.0	-36.9	
High Ch, 1754.3									
3508.60	-19.6	V	3.0	36.0	1.0	-54.6	-13.0	-41.6	
5262.90	-17.7	V	3.0	35.4	1.0	-52.1	-13.0	-39.1	
7017.20	-16.8	V	3.0	35.7	1.0	-51.5	-13.0	-38.5	
3508.60	-20.1	H	3.0	36.0	1.0	-55.1	-13.0	-42.1	
5262.90	-17.3	H	3.0	35.4	1.0	-51.7	-13.0	-38.7	
7017.20	-15.6	H	3.0	35.7	1.0	-50.2	-13.0	-37.2	

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LTE Band 5

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_16QAM Band 5 Harmonics, 10MHz Bandwidth

Band

LTE5

10MHz

16QAM

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	-23.4	V	3.0	36.4	1.0	-58.9	-13.0	-45.9	
3316.00	-21.7	V	3.0	36.2	1.0	-56.8	-13.0	-43.8	
1658.00	-27.1	H	3.0	37.0	1.0	-63.1	-13.0	-50.1	
2487.00	-25.8	H	3.0	36.4	1.0	-61.2	-13.0	-48.2	
3316.00	-21.9	H	3.0	36.2	1.0	-57.1	-13.0	-44.1	
Mid Ch, 836.5									
1673.00	-24.1	V	3.0	37.0	1.0	-60.2	-13.0	-47.2	
2509.50	-23.8	V	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3346.00	-20.8	V	3.0	36.1	1.0	-55.9	-13.0	-42.9	
1673.00	-26.5	H	3.0	37.0	1.0	-62.5	-13.0	-49.5	
2509.50	-24.9	H	3.0	36.4	1.0	-60.3	-13.0	-47.3	
3346.00	-22.0	H	3.0	36.1	1.0	-57.1	-13.0	-44.1	
High Ch, 844									
1688.00	-26.7	V	3.0	37.0	1.0	-62.7	-13.0	-49.7	
2532.00	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3376.00	-21.6	V	3.0	36.1	1.0	-56.7	-13.0	-43.7	
1688.00	-26.8	H	3.0	37.0	1.0	-62.7	-13.0	-49.7	
2532.00	-24.1	H	3.0	36.4	1.0	-59.5	-13.0	-46.5	
3376.00	-21.0	H	3.0	36.1	1.0	-56.1	-13.0	-43.1	

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Band

LTE5

10MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, 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	-24.9	V	3.0	37.0	1.0	-60.9	-13.0	-47.9	
2487.00	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3316.00	-21.5	V	3.0	36.2	1.0	-56.7	-13.0	-43.7	
1658.00	-27.0	H	3.0	37.0	1.0	-63.0	-13.0	-50.0	
2487.00	-25.7	H	3.0	36.4	1.0	-61.1	-13.0	-48.1	
3316.00	-21.8	H	3.0	36.2	1.0	-56.9	-13.0	-43.9	
Mid Ch, 836.5									
1673.00	-24.0	V	3.0	37.0	1.0	-60.0	-13.0	-47.0	
2509.50	-23.7	V	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3346.00	-20.6	V	3.0	36.1	1.0	-55.8	-13.0	-42.8	
1673.00	-26.4	H	3.0	37.0	1.0	-62.4	-13.0	-49.4	
2509.50	-24.7	H	3.0	36.4	1.0	-60.2	-13.0	-47.2	
3346.00	-21.9	H	3.0	36.1	1.0	-57.0	-13.0	-44.0	
High Ch, 844									
1688.00	-26.6	V	3.0	37.0	1.0	-62.6	-13.0	-49.6	
2532.00	-23.2	V	3.0	36.4	1.0	-58.6	-13.0	-45.6	
3376.00	-21.5	V	3.0	36.1	1.0	-56.6	-13.0	-43.6	
1688.00	-26.6	H	3.0	37.0	1.0	-62.6	-13.0	-49.6	
2532.00	-24.0	H	3.0	36.4	1.0	-59.4	-13.0	-46.4	
3376.00	-20.8	H	3.0	36.1	1.0	-55.9	-13.0	-42.9	

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Band

LTE5

5MHz

16QAM

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 826.5									
1653.00	-28.6	V	3.0	37.0	1.0	-64.6	-13.0	-51.6	
2479.50	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3306.00	-22.1	V	3.0	36.2	1.0	-57.3	-13.0	-44.3	
1653.00	-26.4	H	3.0	37.0	1.0	-62.4	-13.0	-49.4	
2479.50	-25.3	H	3.0	36.4	1.0	-60.8	-13.0	-47.8	
3306.00	-20.8	H	3.0	36.2	1.0	-56.0	-13.0	-43.0	
Mid Ch, 836.5									
1673.00	-23.8	V	3.0	37.0	1.0	-59.8	-13.0	-46.8	
2509.50	-23.1	V	3.0	36.4	1.0	-58.5	-13.0	-45.5	
3346.00	-22.3	V	3.0	36.1	1.0	-57.4	-13.0	-44.4	
1673.00	-25.7	H	3.0	37.0	1.0	-61.7	-13.0	-48.7	
2509.50	-25.6	H	3.0	36.4	1.0	-61.1	-13.0	-48.1	
3346.00	-21.6	H	3.0	36.1	1.0	-56.8	-13.0	-43.8	
High Ch, 846.5									
1693.00	-27.8	V	3.0	37.0	1.0	-63.8	-13.0	-50.8	
2539.50	-23.9	V	3.0	36.4	1.0	-59.3	-13.0	-46.3	
3386.00	-21.4	V	3.0	36.1	1.0	-56.5	-13.0	-43.5	
1693.00	-27.3	H	3.0	37.0	1.0	-63.3	-13.0	-50.3	
2539.50	-25.0	H	3.0	36.4	1.0	-60.4	-13.0	-47.4	
3386.00	-21.8	H	3.0	36.1	1.0	-56.9	-13.0	-43.9	

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Band

LTE5

5MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 826.5									
1653.00	-28.4	V	3.0	37.0	1.0	-64.5	-13.0	-51.5	
2479.50	-23.1	V	3.0	36.4	1.0	-58.6	-13.0	-45.6	
3306.00	-22.0	V	3.0	36.2	1.0	-57.1	-13.0	-44.1	
1653.00	-26.2	H	3.0	37.0	1.0	-62.2	-13.0	-49.2	
2479.50	-25.2	H	3.0	36.4	1.0	-60.6	-13.0	-47.6	
3306.00	-20.6	H	3.0	36.2	1.0	-55.8	-13.0	-42.8	
Mid Ch, 836.5									
1673.00	-23.7	V	3.0	37.0	1.0	-59.7	-13.0	-46.7	
2509.50	-22.9	V	3.0	36.4	1.0	-58.3	-13.0	-45.3	
3346.00	-22.1	V	3.0	36.1	1.0	-57.2	-13.0	-44.2	
1673.00	-25.5	H	3.0	37.0	1.0	-61.6	-13.0	-48.6	
2509.50	-25.5	H	3.0	36.4	1.0	-60.9	-13.0	-47.9	
3346.00	-21.5	H	3.0	36.1	1.0	-56.6	-13.0	-43.6	
High Ch, 846.5									
1693.00	-27.6	V	3.0	37.0	1.0	-63.6	-13.0	-50.6	
2539.50	-23.7	V	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3386.00	-21.3	V	3.0	36.1	1.0	-56.3	-13.0	-43.3	
1693.00	-27.1	H	3.0	37.0	1.0	-63.1	-13.0	-50.1	
2539.50	-24.8	H	3.0	36.4	1.0	-60.2	-13.0	-47.2	
3386.00	-21.6	H	3.0	36.1	1.0	-56.7	-13.0	-43.7	

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_16QAM Band 6 Harmonics, 3MHz Bandwidth

Band

LTE5

3MHz

16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 825.5									
1651.00	-22.9	V	3.0	37.0	1.0	-58.9	-13.0	-45.9	
2476.50	-23.6	V	3.0	36.4	1.0	-59.0	-13.0	-46.0	
3302.00	-22.1	V	3.0	36.2	1.0	-57.2	-13.0	-44.2	
1651.00	-28.2	H	3.0	37.0	1.0	-64.3	-13.0	-51.3	
2476.50	-25.3	H	3.0	36.4	1.0	-60.7	-13.0	-47.7	
3302.00	-22.2	H	3.0	36.2	1.0	-57.4	-13.0	-44.4	
Mid Ch, 836.5									
1673.00	-28.0	V	3.0	37.0	1.0	-64.0	-13.0	-51.0	
2509.50	-23.6	V	3.0	36.4	1.0	-59.0	-13.0	-46.0	
3346.00	-21.7	V	3.0	36.1	1.0	-56.9	-13.0	-43.9	
1673.00	-28.3	H	3.0	37.0	1.0	-64.3	-13.0	-51.3	
2509.50	-24.9	H	3.0	36.4	1.0	-60.4	-13.0	-47.4	
3346.00	-21.5	H	3.0	36.1	1.0	-56.6	-13.0	-43.6	
High Ch, 847.5									
1695.00	-26.0	V	3.0	37.0	1.0	-61.9	-13.0	-48.9	
2542.50	-24.0	V	3.0	36.4	1.0	-59.5	-13.0	-46.5	
3390.00	-21.5	V	3.0	36.1	1.0	-56.6	-13.0	-43.6	
1695.00	-27.1	H	3.0	37.0	1.0	-63.1	-13.0	-50.1	
2542.50	-25.1	H	3.0	36.4	1.0	-60.5	-13.0	-47.5	
3390.00	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	

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Band

LTE5

3MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 825.5									
1651.00	-22.8	V	3.0	37.0	1.0	-58.8	-13.0	-45.8	
2476.50	-23.5	V	3.0	36.4	1.0	-58.9	-13.0	-45.9	
3302.00	-21.9	V	3.0	36.2	1.0	-57.1	-13.0	-44.1	
1651.00	-28.1	H	3.0	37.0	1.0	-64.1	-13.0	-51.1	
2476.50	-25.2	H	3.0	36.4	1.0	-60.6	-13.0	-47.6	
3302.00	-22.1	H	3.0	36.2	1.0	-57.3	-13.0	-44.3	
Mid Ch, 836.5									
1673.00	-27.9	V	3.0	37.0	1.0	-63.9	-13.0	-50.9	
2509.50	-23.5	V	3.0	36.4	1.0	-58.9	-13.0	-45.9	
3346.00	-21.6	V	3.0	36.1	1.0	-56.7	-13.0	-43.7	
1673.00	-28.2	H	3.0	37.0	1.0	-64.2	-13.0	-51.2	
2509.50	-24.8	H	3.0	36.4	1.0	-60.2	-13.0	-47.2	
3346.00	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	
High Ch, 847.5									
1695.00	-25.8	V	3.0	37.0	1.0	-61.8	-13.0	-48.8	
2542.50	-23.9	V	3.0	36.4	1.0	-59.3	-13.0	-46.3	
3390.00	-21.4	V	3.0	36.1	1.0	-56.5	-13.0	-43.5	
1695.00	-27.0	H	3.0	37.0	1.0	-63.0	-13.0	-50.0	
2542.50	-25.0	H	3.0	36.4	1.0	-60.4	-13.0	-47.4	
3390.00	-21.3	H	3.0	36.1	1.0	-56.4	-13.0	-43.4	

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Band

LTE5

1.4MHz

16QAM

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 824.7									
1649.40	-22.9	V	3.0	37.0	1.0	-58.9	-13.0	-45.9	
2474.10	-23.9	V	3.0	36.4	1.0	-59.4	-13.0	-46.4	
3298.80	-21.6	V	3.0	36.2	1.0	-56.7	-13.0	-43.7	
1649.40	-24.8	H	3.0	37.0	1.0	-60.8	-13.0	-47.8	
2474.10	-25.5	H	3.0	36.4	1.0	-60.9	-13.0	-47.9	
3298.80	-21.7	H	3.0	36.2	1.0	-56.9	-13.0	-43.9	
Mid Ch, 836.5									
1673.00	-25.6	V	3.0	37.0	1.0	-61.6	-13.0	-48.6	
2509.50	-23.5	V	3.0	36.4	1.0	-58.9	-13.0	-45.9	
3346.00	-21.4	V	3.0	36.1	1.0	-56.5	-13.0	-43.5	
1673.00	-26.0	H	3.0	37.0	1.0	-62.0	-13.0	-49.0	
2509.50	-24.9	H	3.0	36.4	1.0	-60.3	-13.0	-47.3	
3346.00	-21.5	H	3.0	36.1	1.0	-56.6	-13.0	-43.6	
High Ch, 848.3									
1696.60	-27.0	V	3.0	37.0	1.0	-62.9	-13.0	-49.9	
2544.90	-24.6	V	3.0	36.4	1.0	-60.0	-13.0	-47.0	
3393.20	-21.9	V	3.0	36.1	1.0	-57.0	-13.0	-44.0	
1696.60	-26.6	H	3.0	37.0	1.0	-62.6	-13.0	-49.6	
2544.90	-25.5	H	3.0	36.4	1.0	-60.9	-13.0	-47.9	
3393.20	-22.1	H	3.0	36.1	1.0	-57.2	-13.0	-44.2	

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Band

LTE5

1.4MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 824.7									
1649.40	-22.6	V	3.0	37.0	1.0	-58.7	-13.0	-45.7	
2474.10	-23.7	V	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3298.80	-21.4	V	3.0	36.2	1.0	-56.5	-13.0	-43.5	
1649.40	-24.6	H	3.0	37.0	1.0	-60.6	-13.0	-47.6	
2474.10	-25.3	H	3.0	36.4	1.0	-60.7	-13.0	-47.7	
3298.80	-21.5	H	3.0	36.2	1.0	-56.7	-13.0	-43.7	
Mid Ch, 836.5									
1673.00	-25.4	V	3.0	37.0	1.0	-61.4	-13.0	-48.4	
2509.50	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3346.00	-21.2	V	3.0	36.1	1.0	-56.3	-13.0	-43.3	
1673.00	-25.8	H	3.0	37.0	1.0	-61.8	-13.0	-48.8	
2509.50	-24.7	H	3.0	36.4	1.0	-60.1	-13.0	-47.1	
3346.00	-21.3	H	3.0	36.1	1.0	-56.4	-13.0	-43.4	
High Ch, 848.3									
1696.60	-26.8	V	3.0	37.0	1.0	-62.7	-13.0	-49.7	
2544.90	-24.3	V	3.0	36.4	1.0	-59.8	-13.0	-46.8	
3393.20	-21.7	V	3.0	36.1	1.0	-56.8	-13.0	-43.8	
1696.60	-26.4	H	3.0	37.0	1.0	-62.4	-13.0	-49.4	
2544.90	-25.3	H	3.0	36.4	1.0	-60.7	-13.0	-47.7	
3393.20	-21.9	H	3.0	36.1	1.0	-57.0	-13.0	-44.0	

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LTE Band 7

Band

LTE7

20MHz

16QAM

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 2510									
5020.00	-18.2	V	3.0	35.5	1.0	-52.6	-25.0	-27.6	
7530.00	-15.2	V	3.0	35.7	1.0	-49.9	-25.0	-24.9	
10040.00	-12.3	V	3.0	36.0	1.0	-47.3	-25.0	-22.3	
5020.00	-17.4	H	3.0	35.5	1.0	-51.8	-25.0	-26.8	
7530.00	-13.3	H	3.0	35.7	1.0	-48.0	-25.0	-23.0	
10040.00	-11.9	H	3.0	36.0	1.0	-46.9	-25.0	-21.9	
Mid Ch, 2535									
5070.00	-17.1	V	3.0	35.4	1.0	-51.5	-25.0	-26.5	
7605.00	-14.2	V	3.0	35.8	1.0	-48.9	-25.0	-23.9	
10140.00	-12.6	V	3.0	36.0	1.0	-47.6	-25.0	-22.6	
5070.00	-17.5	H	3.0	35.4	1.0	-51.9	-25.0	-26.9	
7605.00	-12.1	H	3.0	35.8	1.0	-46.9	-25.0	-21.9	
10140.00	-11.3	H	3.0	36.0	1.0	-46.3	-25.0	-21.3	
High Ch, 2560									
5120.00	-18.1	V	3.0	35.4	1.0	-52.5	-25.0	-27.5	
7680.00	-13.8	V	3.0	35.8	1.0	-48.5	-25.0	-23.5	
10240.00	-12.5	V	3.0	35.9	1.0	-47.4	-25.0	-22.4	
5120.00	-17.5	H	3.0	35.4	1.0	-52.0	-25.0	-27.0	
7680.00	-12.6	H	3.0	35.8	1.0	-47.4	-25.0	-22.4	
10240.00	-10.7	H	3.0	35.9	1.0	-45.6	-25.0	-20.6	

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Band

LTE7

20MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 2510									
5020.00	-17.9	V	3.0	35.5	1.0	-52.3	-25.0	-27.3	
7530.00	-14.8	V	3.0	35.7	1.0	-49.5	-25.0	-24.5	
10040.00	-12.7	V	3.0	36.0	1.0	-47.7	-25.0	-22.7	
5020.00	-17.4	H	3.0	35.5	1.0	-51.8	-25.0	-26.8	
7530.00	-13.1	H	3.0	35.7	1.0	-47.8	-25.0	-22.8	
10040.00	-11.5	H	3.0	36.0	1.0	-46.5	-25.0	-21.5	
Mid Ch, 2535									
5070.00	-17.9	V	3.0	35.4	1.0	-52.3	-25.0	-27.3	
7605.00	-14.1	V	3.0	35.8	1.0	-48.9	-25.0	-23.9	
10140.00	-11.8	V	3.0	36.0	1.0	-46.8	-25.0	-21.8	
5070.00	-17.2	H	3.0	35.4	1.0	-51.7	-25.0	-26.7	
7605.00	-12.1	H	3.0	35.8	1.0	-46.9	-25.0	-21.9	
10140.00	-10.9	H	3.0	36.0	1.0	-45.9	-25.0	-20.9	
High Ch, 2560									
5120.00	-17.9	V	3.0	35.4	1.0	-52.4	-25.0	-27.4	
7680.00	-13.7	V	3.0	35.8	1.0	-48.5	-25.0	-23.5	
10240.00	-12.1	V	3.0	35.9	1.0	-47.0	-25.0	-22.0	
5120.00	-16.7	H	3.0	35.4	1.0	-51.1	-25.0	-26.1	
7680.00	-12.5	H	3.0	35.8	1.0	-47.3	-25.0	-22.3	
10240.00	-10.5	H	3.0	35.9	1.0	-45.4	-25.0	-20.4	

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Band

LTE7

15MHz

16QAM

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 2507.5									
5015.00	-18.3	V	3.0	35.5	1.0	-52.8	-25.0	-27.8	
7522.50	-15.1	V	3.0	35.7	1.0	-49.9	-25.0	-24.9	
10030.00	-12.2	V	3.0	36.0	1.0	-47.2	-25.0	-22.2	
5015.00	-17.5	H	3.0	35.5	1.0	-52.0	-25.0	-27.0	
7522.50	-13.3	H	3.0	35.7	1.0	-48.1	-25.0	-23.1	
10030.00	-11.9	H	3.0	36.0	1.0	-47.0	-25.0	-22.0	
Mid Ch, 2535									
5070.00	-17.1	V	3.0	35.4	1.0	-51.6	-25.0	-26.6	
7605.00	-14.3	V	3.0	35.8	1.0	-49.0	-25.0	-24.0	
10140.00	-12.8	V	3.0	36.0	1.0	-47.7	-25.0	-22.7	
5070.00	-17.4	H	3.0	35.4	1.0	-51.9	-25.0	-26.9	
7605.00	-12.1	H	3.0	35.8	1.0	-46.9	-25.0	-21.9	
10140.00	-11.5	H	3.0	36.0	1.0	-46.4	-25.0	-21.4	
High Ch, 2562.5									
5125.00	-18.1	V	3.0	35.4	1.0	-52.5	-25.0	-27.5	
7687.50	-13.8	V	3.0	35.8	1.0	-48.6	-25.0	-23.6	
10250.00	-12.4	V	3.0	35.9	1.0	-47.3	-25.0	-22.3	
5125.00	-17.4	H	3.0	35.4	1.0	-51.9	-25.0	-26.9	
7687.50	-12.6	H	3.0	35.8	1.0	-47.3	-25.0	-22.3	
10250.00	-10.9	H	3.0	35.9	1.0	-45.9	-25.0	-20.9	

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Band

LTE7

15MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 2507.5									
5015.00	-17.8	V	3.0	35.5	1.0	-52.3	-25.0	-27.3	
7522.50	-14.7	V	3.0	35.7	1.0	-49.4	-25.0	-24.4	
10030.00	-12.7	V	3.0	36.0	1.0	-47.7	-25.0	-22.7	
5015.00	-17.3	H	3.0	35.5	1.0	-51.7	-25.0	-26.7	
7522.50	-13.2	H	3.0	35.7	1.0	-47.9	-25.0	-22.9	
10030.00	-11.5	H	3.0	36.0	1.0	-46.5	-25.0	-21.5	
Mid Ch, 2535									
5070.00	-17.9	V	3.0	35.4	1.0	-52.3	-25.0	-27.3	
7605.00	-14.1	V	3.0	35.8	1.0	-48.8	-25.0	-23.8	
10140.00	-11.9	V	3.0	36.0	1.0	-46.9	-25.0	-21.9	
5070.00	-17.1	H	3.0	35.4	1.0	-51.5	-25.0	-26.5	
7605.00	-12.0	H	3.0	35.8	1.0	-46.7	-25.0	-21.7	
10140.00	-10.7	H	3.0	36.0	1.0	-45.7	-25.0	-20.7	
High Ch, 2562.5									
5125.00	-17.8	V	3.0	35.4	1.0	-52.2	-25.0	-27.2	
7687.50	-13.6	V	3.0	35.8	1.0	-48.4	-25.0	-23.4	
10250.00	-12.0	V	3.0	35.9	1.0	-46.9	-25.0	-21.9	
5125.00	-16.6	H	3.0	35.4	1.0	-51.1	-25.0	-26.1	
7687.50	-12.4	H	3.0	35.8	1.0	-47.2	-25.0	-22.2	
10250.00	-10.5	H	3.0	35.9	1.0	-45.5	-25.0	-20.5	

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_16QAM Band 7 Harmonics, 10MHz Bandwidth

Band
LTE7
10MHz
16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2505									
5010.00	-18.4	V	3.0	35.5	1.0	-52.8	-25.0	-27.8	
7515.00	-14.8	V	3.0	35.7	1.0	-49.5	-25.0	-24.5	
10020.00	-12.1	V	3.0	36.0	1.0	-47.2	-25.0	-22.2	
5010.00	-17.4	H	3.0	35.5	1.0	-51.9	-25.0	-26.9	
7515.00	-13.4	H	3.0	35.7	1.0	-48.1	-25.0	-23.1	
10020.00	-11.7	H	3.0	36.0	1.0	-46.7	-25.0	-21.7	
Mid Ch, 2535									
5070.00	-17.2	V	3.0	35.4	1.0	-51.7	-25.0	-26.7	
7605.00	-14.3	V	3.0	35.8	1.0	-49.1	-25.0	-24.1	
10140.00	-12.9	V	3.0	36.0	1.0	-47.8	-25.0	-22.8	
5070.00	-17.4	H	3.0	35.4	1.0	-51.8	-25.0	-26.8	
7605.00	-12.1	H	3.0	35.8	1.0	-46.8	-25.0	-21.8	
10140.00	-11.4	H	3.0	36.0	1.0	-46.4	-25.0	-21.4	
High Ch, 2565									
5130.00	-18.0	V	3.0	35.4	1.0	-52.5	-25.0	-27.5	
7695.00	-13.6	V	3.0	35.8	1.0	-48.4	-25.0	-23.4	
10260.00	-12.0	V	3.0	35.9	1.0	-46.9	-25.0	-21.9	
5130.00	-17.4	H	3.0	35.4	1.0	-51.8	-25.0	-26.8	
7695.00	-12.3	H	3.0	35.8	1.0	-47.1	-25.0	-22.1	
10260.00	-10.9	H	3.0	35.9	1.0	-45.8	-25.0	-20.8	

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_QPSK Band 7 Harmonics, 10MHz Bandwidth

Band LTE7 10MHz QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2505									
5010.00	-17.9	V	3.0	35.5	1.0	-52.3	-25.0	-27.3	
7515.00	-14.7	V	3.0	35.7	1.0	-49.5	-25.0	-24.5	
10020.00	-12.8	V	3.0	36.0	1.0	-47.8	-25.0	-22.8	
5010.00	-17.3	H	3.0	35.5	1.0	-51.8	-25.0	-26.8	
7515.00	-13.1	H	3.0	35.7	1.0	-47.9	-25.0	-22.9	
10020.00	-11.5	H	3.0	36.0	1.0	-46.5	-25.0	-21.5	
Mid Ch, 2535									
5070.00	-17.8	V	3.0	35.4	1.0	-52.2	-25.0	-27.2	
7605.00	-14.2	V	3.0	35.8	1.0	-49.0	-25.0	-24.0	
10140.00	-12.0	V	3.0	36.0	1.0	-47.0	-25.0	-22.0	
5070.00	-17.1	H	3.0	35.4	1.0	-51.6	-25.0	-26.6	
7605.00	-12.1	H	3.0	35.8	1.0	-46.9	-25.0	-21.9	
10140.00	-10.8	H	3.0	36.0	1.0	-45.7	-25.0	-20.7	
High Ch, 2565									
5130.00	-17.7	V	3.0	35.4	1.0	-52.1	-25.0	-27.1	
7695.00	-13.9	V	3.0	35.8	1.0	-48.7	-25.0	-23.7	
10260.00	-12.1	V	3.0	35.9	1.0	-47.0	-25.0	-22.0	
5130.00	-17.5	H	3.0	35.4	1.0	-51.9	-25.0	-26.9	
7695.00	-12.0	H	3.0	35.8	1.0	-46.7	-25.0	-21.7	
10260.00	-10.6	H	3.0	35.9	1.0	-45.5	-25.0	-20.5	

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Band

LTE7

5MHz

16QAM

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 2502.5									
5005.00	-18.5	V	3.0	35.5	1.0	-52.9	-25.0	-27.9	
7507.50	-15.0	V	3.0	35.7	1.0	-49.8	-25.0	-24.8	
10010.00	-12.5	V	3.0	36.0	1.0	-47.5	-25.0	-22.5	
5005.00	-17.1	H	3.0	35.5	1.0	-51.5	-25.0	-26.5	
7507.50	-13.2	H	3.0	35.7	1.0	-48.0	-25.0	-23.0	
10010.00	-11.5	H	3.0	36.0	1.0	-46.5	-25.0	-21.5	
Mid Ch, 2535									
5070.00	-17.2	V	3.0	35.4	1.0	-51.6	-25.0	-26.6	
7605.00	-14.2	V	3.0	35.8	1.0	-49.0	-25.0	-24.0	
10140.00	-12.9	V	3.0	36.0	1.0	-47.8	-25.0	-22.8	
5070.00	-17.5	H	3.0	35.4	1.0	-51.9	-25.0	-26.9	
7605.00	-11.9	H	3.0	35.8	1.0	-46.7	-25.0	-21.7	
10140.00	-11.2	H	3.0	36.0	1.0	-46.2	-25.0	-21.2	
High Ch, 2567.5									
5135.00	-17.9	V	3.0	35.4	1.0	-52.3	-25.0	-27.3	
7702.50	-13.6	V	3.0	35.8	1.0	-48.4	-25.0	-23.4	
10270.00	-12.1	V	3.0	35.9	1.0	-47.0	-25.0	-22.0	
5135.00	-17.2	H	3.0	35.4	1.0	-51.6	-25.0	-26.6	
7702.50	-12.2	H	3.0	35.8	1.0	-47.0	-25.0	-22.0	
10270.00	-10.9	H	3.0	35.9	1.0	-45.8	-25.0	-20.8	

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_QPSK Band 7 Harmonics, 5MHz Bandwidth

Band LTE7 5MHz QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2502.5									
5005.00	-18.1	V	3.0	35.5	1.0	-52.5	-25.0	-27.5	
7507.50	-14.7	V	3.0	35.7	1.0	-49.4	-25.0	-24.4	
10010.00	-12.8	V	3.0	36.0	1.0	-47.8	-25.0	-22.8	
5005.00	-17.3	H	3.0	35.5	1.0	-51.7	-25.0	-26.7	
7507.50	-13.0	H	3.0	35.7	1.0	-47.8	-25.0	-22.8	
10010.00	-11.6	H	3.0	36.0	1.0	-46.6	-25.0	-21.6	
Mid Ch, 2535									
5070.00	-17.6	V	3.0	35.4	1.0	-52.0	-25.0	-27.0	
7605.00	-14.3	V	3.0	35.8	1.0	-49.1	-25.0	-24.1	
10140.00	-11.9	V	3.0	36.0	1.0	-46.9	-25.0	-21.9	
5070.00	-17.1	H	3.0	35.4	1.0	-51.6	-25.0	-26.6	
7605.00	-12.0	H	3.0	35.8	1.0	-46.8	-25.0	-21.8	
10140.00	-10.9	H	3.0	36.0	1.0	-45.8	-25.0	-20.8	
High Ch, 2567.5									
5135.00	-17.6	V	3.0	35.4	1.0	-52.1	-25.0	-27.1	
7702.50	-13.4	V	3.0	35.8	1.0	-48.2	-25.0	-23.2	
10270.00	-11.8	V	3.0	35.9	1.0	-46.7	-25.0	-21.7	
5135.00	-17.5	H	3.0	35.4	1.0	-52.0	-25.0	-27.0	
7702.50	-12.0	H	3.0	35.8	1.0	-46.8	-25.0	-21.8	
10270.00	-10.7	H	3.0	35.9	1.0	-45.6	-25.0	-20.6	

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701H
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LTE Band 12

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

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: EUT , AC Adapter /HS
Location: Chamber C
Mode: LTE_16QAM Band 12 Harmonics, 10MHz Bandwidth

Band
LTE12
10MHz
16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch,704									
1408.00	-30.2	V	3.0	37.4	1.0	-66.5	-13.0	-53.5	
2112.00	-18.2	V	3.0	36.6	1.0	-53.8	-13.0	-40.8	
2816.00	-22.1	V	3.0	36.4	1.0	-57.5	-13.0	-44.5	
1408.00	-29.5	H	3.0	37.4	1.0	-65.9	-13.0	-52.9	
2112.00	-20.0	H	3.0	36.6	1.0	-55.6	-13.0	-42.6	
2816.00	-23.2	H	3.0	36.4	1.0	-58.6	-13.0	-45.6	
Mid Ch,707.5									
1415.00	-30.2	V	3.0	37.3	1.0	-66.6	-13.0	-53.6	
2122.50	-19.3	V	3.0	36.6	1.0	-54.9	-13.0	-41.9	
2830.00	-22.6	V	3.0	36.4	1.0	-58.0	-13.0	-45.0	
1415.00	-29.0	H	3.0	37.3	1.0	-65.3	-13.0	-52.3	
2122.50	-19.1	H	3.0	36.6	1.0	-54.7	-13.0	-41.7	
2830.00	-22.8	H	3.0	36.4	1.0	-58.2	-13.0	-45.2	
High Ch,711									
1422.00	-29.1	V	3.0	37.3	1.0	-65.4	-13.0	-52.4	
2133.00	-18.0	V	3.0	36.6	1.0	-53.6	-13.0	-40.6	
2844.00	-21.9	V	3.0	36.4	1.0	-57.3	-13.0	-44.3	
1422.00	-28.9	H	3.0	37.3	1.0	-65.3	-13.0	-52.3	
2133.00	-19.7	H	3.0	36.6	1.0	-55.3	-13.0	-42.3	
2844.00	-22.7	H	3.0	36.4	1.0	-58.1	-13.0	-45.1	

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701H
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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: EUT , AC Adapter /HS
Location: Chamber C
Mode: LTE_QPSK Band 12 Harmonics, 10MHz Bandwidth

Band
LTE12
10MHz
QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch,704									
1408.00	-29.7	V	3.0	37.4	1.0	-66.0	-13.0	-53.0	
2112.00	-16.8	V	3.0	36.6	1.0	-52.4	-13.0	-39.4	
2816.00	-21.6	V	3.0	36.4	1.0	-56.9	-13.0	-43.9	
1408.00	-28.9	H	3.0	37.4	1.0	-65.3	-13.0	-52.3	
2112.00	-19.3	H	3.0	36.6	1.0	-54.9	-13.0	-41.9	
2816.00	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
Mid Ch,707.5									
1415.00	-30.0	V	3.0	37.3	1.0	-66.4	-13.0	-53.4	
2122.50	-17.9	V	3.0	36.6	1.0	-53.5	-13.0	-40.5	
2830.00	-22.0	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
1415.00	-29.2	H	3.0	37.3	1.0	-65.6	-13.0	-52.6	
2122.50	-19.4	H	3.0	36.6	1.0	-54.9	-13.0	-41.9	
2830.00	-22.3	H	3.0	36.4	1.0	-57.6	-13.0	-44.6	
High Ch,711									
1422.00	-30.0	V	3.0	37.3	1.0	-66.3	-13.0	-53.3	
2133.00	-17.2	V	3.0	36.6	1.0	-52.8	-13.0	-39.8	
2844.00	-21.5	V	3.0	36.4	1.0	-56.9	-13.0	-43.9	
1422.00	-29.3	H	3.0	37.3	1.0	-65.6	-13.0	-52.6	
2133.00	-19.2	H	3.0	36.6	1.0	-54.8	-13.0	-41.8	
2844.00	-22.7	H	3.0	36.4	1.0	-58.1	-13.0	-45.1	

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701H
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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: EUT , AC Adapter /HS
Location: Chamber C
Mode: LTE_16QAM Band 12 Harmonics, 5MHz Bandwidth

Band
LTE12
5MHz
16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 701.50									
1403.00	-30.6	V	3.0	37.4	1.0	-67.0	-13.0	-54.0	
2104.50	-18.3	V	3.0	36.6	1.0	-53.8	-13.0	-40.8	
2806.00	-22.0	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
1403.00	-29.2	H	3.0	37.4	1.0	-65.6	-13.0	-52.6	
2104.50	-21.2	H	3.0	36.6	1.0	-56.8	-13.0	-43.8	
2806.00	-23.1	H	3.0	36.4	1.0	-58.4	-13.0	-45.4	
Mid Ch, 707.50									
1415.00	-30.6	V	3.0	37.3	1.0	-67.0	-13.0	-54.0	
2122.50	-18.4	V	3.0	36.6	1.0	-53.9	-13.0	-40.9	
2830.00	-22.2	V	3.0	36.4	1.0	-57.6	-13.0	-44.6	
1415.00	-29.1	H	3.0	37.3	1.0	-65.5	-13.0	-52.5	
2122.50	-20.7	H	3.0	36.6	1.0	-56.3	-13.0	-43.3	
2830.00	-23.2	H	3.0	36.4	1.0	-58.5	-13.0	-45.5	
High Ch, 713.50									
1427.00	-30.3	V	3.0	37.3	1.0	-66.6	-13.0	-53.6	
2140.50	-18.1	V	3.0	36.6	1.0	-53.6	-13.0	-40.6	
2854.00	-21.9	V	3.0	36.4	1.0	-57.3	-13.0	-44.3	
1427.00	-29.1	H	3.0	37.3	1.0	-65.4	-13.0	-52.4	
2140.50	-19.2	H	3.0	36.6	1.0	-54.7	-13.0	-41.7	
2854.00	-22.0	H	3.0	36.4	1.0	-57.4	-13.0	-44.4	

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

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: EUT , AC Adapter /HS
Location: Chamber C
Mode: LTE_QPSK Band 12 Harmonics, 5MHz Bandwidth

Band
LTE12
5MHz
QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 701.50									
1403.00	-30.0	V	3.0	37.4	1.0	-66.4	-13.0	-53.4	
2104.50	-17.0	V	3.0	36.6	1.0	-52.6	-13.0	-39.6	
2806.00	-21.9	V	3.0	36.4	1.0	-57.3	-13.0	-44.3	
1403.00	-29.7	H	3.0	37.4	1.0	-66.1	-13.0	-53.1	
2104.50	-21.1	H	3.0	36.6	1.0	-56.7	-13.0	-43.7	
2806.00	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
Mid Ch, 707.50									
1415.00	-30.3	V	3.0	37.3	1.0	-66.7	-13.0	-53.7	
2122.50	-18.2	V	3.0	36.6	1.0	-53.7	-13.0	-40.7	
2830.00	-21.1	V	3.0	36.4	1.0	-56.5	-13.0	-43.5	
1415.00	-29.1	H	3.0	37.3	1.0	-65.5	-13.0	-52.5	
2122.50	-19.9	H	3.0	36.6	1.0	-55.4	-13.0	-42.4	
2830.00	-23.0	H	3.0	36.4	1.0	-58.4	-13.0	-45.4	
High Ch, 713.50									
1427.00	-30.0	V	3.0	37.3	1.0	-66.3	-13.0	-53.3	
2140.50	-18.0	V	3.0	36.6	1.0	-53.5	-13.0	-40.5	
2854.00	-21.3	V	3.0	36.4	1.0	-56.7	-13.0	-43.7	
1427.00	-28.9	H	3.0	37.3	1.0	-65.2	-13.0	-52.2	
2140.50	-19.9	H	3.0	36.6	1.0	-55.5	-13.0	-42.5	
2854.00	-23.0	H	3.0	36.4	1.0	-58.4	-13.0	-45.4	

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

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: EUT , AC Adapter /HS
Location: Chamber C
Mode: LTE_16QAM Band 12 Harmonics, 3MHz Bandwidth

Band
LTE12
3MHz
16QAM

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	-30.1	V	3.0	37.4	1.0	-66.5	-13.0	-53.5	
2101.50	-14.8	V	3.0	36.6	1.0	-50.4	-13.0	-37.4	
2802.00	-22.0	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
1401.00	-28.2	H	3.0	37.4	1.0	-64.6	-13.0	-51.6	
2101.50	-24.3	H	3.0	36.6	1.0	-59.9	-13.0	-46.9	
2802.00	-22.9	H	3.0	36.4	1.0	-58.3	-13.0	-45.3	
Mid Ch, 707.50									
1415.00	-30.7	V	3.0	37.3	1.0	-67.1	-13.0	-54.1	
2122.00	-17.6	V	3.0	36.6	1.0	-53.1	-13.0	-40.1	
2830.00	-22.2	V	3.0	36.4	1.0	-57.6	-13.0	-44.6	
1415.00	-29.4	H	3.0	37.3	1.0	-65.7	-13.0	-52.7	
2122.00	-19.6	H	3.0	36.6	1.0	-55.1	-13.0	-42.1	
2830.00	-23.3	H	3.0	36.4	1.0	-58.7	-13.0	-45.7	
High Ch, 714.5									
1429.00	-30.6	V	3.0	37.3	1.0	-66.9	-13.0	-53.9	
2143.50	-18.3	V	3.0	36.6	1.0	-53.9	-13.0	-40.9	
2858.00	-22.0	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
1429.00	-29.8	H	3.0	37.3	1.0	-66.1	-13.0	-53.1	
2143.50	-18.7	H	3.0	36.6	1.0	-54.3	-13.0	-41.3	
2858.00	-23.1	H	3.0	36.4	1.0	-58.5	-13.0	-45.5	

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

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: EUT , AC Adapter /HS
Location: Chamber C
Mode: LTE_QPSK Band 12 Harmonics, 3MHz Bandwidth

Band
LTE12
3MHz
QPSK

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	-30.3	V	3.0	37.4	1.0	-66.7	-13.0	-53.7	
2101.50	-16.1	V	3.0	36.6	1.0	-51.7	-13.0	-38.7	
2802.00	-22.1	V	3.0	36.4	1.0	-57.5	-13.0	-44.5	
1401.00	-28.7	H	3.0	37.4	1.0	-65.1	-13.0	-52.1	
2101.50	-24.6	H	3.0	36.6	1.0	-60.2	-13.0	-47.2	
2802.00	-22.8	H	3.0	36.4	1.0	-58.2	-13.0	-45.2	
Mid Ch, 707.50									
1415.00	-30.1	V	3.0	37.3	1.0	-66.5	-13.0	-53.5	
2122.00	-17.2	V	3.0	36.6	1.0	-52.7	-13.0	-39.7	
2830.00	-21.7	V	3.0	36.4	1.0	-57.1	-13.0	-44.1	
1415.00	-28.2	H	3.0	37.3	1.0	-64.6	-13.0	-51.6	
2122.00	-19.2	H	3.0	36.6	1.0	-54.8	-13.0	-41.8	
2830.00	-22.3	H	3.0	36.4	1.0	-57.7	-13.0	-44.7	
High Ch, 714.5									
1429.00	-30.6	V	3.0	37.3	1.0	-66.9	-13.0	-53.9	
2143.50	-19.6	V	3.0	36.6	1.0	-55.2	-13.0	-42.2	
2858.00	-20.8	V	3.0	36.4	1.0	-56.1	-13.0	-43.1	
1429.00	-29.4	H	3.0	37.3	1.0	-65.8	-13.0	-52.8	
2143.50	-18.6	H	3.0	36.6	1.0	-54.2	-13.0	-41.2	
2858.00	-22.7	H	3.0	36.4	1.0	-58.1	-13.0	-45.1	

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

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: EUT , AC Adapter /HS
Location: Chamber C
Mode: LTE_16QAM Band 12 Harmonics, 1.4MHz Bandwidth

Band
LTE12
1.4MHz
16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 699.7									
1399.40	-30.6	V	3.0	37.4	1.0	-67.0	-13.0	-54.0	
2099.10	-19.7	V	3.0	36.6	1.0	-55.2	-13.0	-42.2	
2798.80	-22.4	V	3.0	36.4	1.0	-57.8	-13.0	-44.8	
1399.40	-29.8	H	3.0	37.4	1.0	-66.1	-13.0	-53.1	
2099.10	-19.9	H	3.0	36.6	1.0	-55.4	-13.0	-42.4	
2798.80	-23.5	H	3.0	36.4	1.0	-58.9	-13.0	-45.9	
Mid Ch, 707.50									
1415.00	-30.5	V	3.0	37.3	1.0	-66.9	-13.0	-53.9	
2122.00	-17.8	V	3.0	36.6	1.0	-53.4	-13.0	-40.4	
2830.00	-22.0	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
1415.00	-29.4	H	3.0	37.3	1.0	-65.8	-13.0	-52.8	
2122.00	-21.8	H	3.0	36.6	1.0	-57.4	-13.0	-44.4	
2830.00	-22.9	H	3.0	36.4	1.0	-58.2	-13.0	-45.2	
High Ch, 715.3									
1430.60	-30.8	V	3.0	37.3	1.0	-67.1	-13.0	-54.1	
2145.90	-18.0	V	3.0	36.6	1.0	-53.6	-13.0	-40.6	
2861.20	-22.1	V	3.0	36.4	1.0	-57.5	-13.0	-44.5	
1430.60	-29.5	H	3.0	37.3	1.0	-65.8	-13.0	-52.8	
2145.90	-20.9	H	3.0	36.6	1.0	-56.5	-13.0	-43.5	
2861.20	-23.1	H	3.0	36.4	1.0	-58.5	-13.0	-45.5	

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

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: EUT , AC Adapter /HS
Location: Chamber C
Mode: LTE_QPSK Band 12 Harmonics, 1.4MHz Bandwidth

Band
LTE12
1.4MHz
QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 699.7									
1399.40	-30.0	V	3.0	37.4	1.0	-66.3	-13.0	-53.3	
2099.10	-18.7	V	3.0	36.6	1.0	-54.2	-13.0	-41.2	
2798.80	-21.8	V	3.0	36.4	1.0	-57.1	-13.0	-44.1	
1399.40	-28.9	H	3.0	37.4	1.0	-65.3	-13.0	-52.3	
2099.10	-21.1	H	3.0	36.6	1.0	-56.6	-13.0	-43.6	
2798.80	-24.0	H	3.0	36.4	1.0	-59.3	-13.0	-46.3	
Mid Ch, 707.50									
1415.00	-29.1	V	3.0	37.3	1.0	-65.4	-13.0	-52.4	
2122.00	-17.6	V	3.0	36.6	1.0	-53.2	-13.0	-40.2	
2830.00	-21.7	V	3.0	36.4	1.0	-57.1	-13.0	-44.1	
1415.00	-29.5	H	3.0	37.3	1.0	-65.8	-13.0	-52.8	
2122.00	-20.5	H	3.0	36.6	1.0	-56.0	-13.0	-43.0	
2830.00	-23.4	H	3.0	36.4	1.0	-58.8	-13.0	-45.8	
High Ch, 715.3									
1430.60	-30.6	V	3.0	37.3	1.0	-66.9	-13.0	-53.9	
2145.90	-17.8	V	3.0	36.6	1.0	-53.4	-13.0	-40.4	
2861.20	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8	
1430.60	-28.2	H	3.0	37.3	1.0	-64.5	-13.0	-51.5	
2145.90	-19.8	H	3.0	36.6	1.0	-55.4	-13.0	-42.4	
2861.20	-23.2	H	3.0	36.4	1.0	-58.6	-13.0	-45.6	

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LTE Band 13

Band

LTE13

10MHz

16QAM

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 782									
1564.00	-29.0	V	3.0	37.1	1.0	-65.1	-13.0	-52.1	
2346.00	-24.6	V	3.0	36.5	1.0	-60.1	-13.0	-47.1	
3128.00	-22.4	V	3.0	36.3	1.0	-57.7	-13.0	-44.7	
1564.00	-29.2	H	3.0	37.1	1.0	-65.3	-13.0	-52.3	
2346.00	-25.3	H	3.0	36.5	1.0	-60.8	-13.0	-47.8	
3128.00	-22.0	H	3.0	36.3	1.0	-57.3	-13.0	-44.3	

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Band

LTE13

10MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 782									
1564.00	-28.9	V	3.0	37.1	1.0	-65.0	-13.0	-52.0	
2346.00	-24.5	V	3.0	36.5	1.0	-60.0	-13.0	-47.0	
3128.00	-22.3	V	3.0	36.3	1.0	-57.6	-13.0	-44.6	
1564.00	-29.1	H	3.0	37.1	1.0	-65.2	-13.0	-52.2	
2346.00	-25.3	H	3.0	36.5	1.0	-60.8	-13.0	-47.8	
3128.00	-21.9	H	3.0	36.3	1.0	-57.2	-13.0	-44.2	

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Band

LTE13

5MHz

16QAM

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_16QAM Band 13 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, 779.5									
1559.00	-28.5	V	3.0	37.1	1.0	-64.6	-13.0	-51.6	
2338.50	-24.5	V	3.0	36.5	1.0	-60.0	-13.0	-47.0	
3118.00	-22.3	V	3.0	36.3	1.0	-57.6	-13.0	-44.6	
1559.00	-29.5	H	3.0	37.1	1.0	-65.7	-13.0	-52.7	
2338.50	-25.6	H	3.0	36.5	1.0	-61.1	-13.0	-48.1	
3118.00	-22.7	H	3.0	36.3	1.0	-58.0	-13.0	-45.0	
Mid Ch, 782									
1564.00	-29.2	V	3.0	37.1	1.0	-65.4	-13.0	-52.4	
2346.00	-24.2	V	3.0	36.5	1.0	-59.7	-13.0	-46.7	
3128.00	-22.1	V	3.0	36.3	1.0	-57.3	-13.0	-44.3	
1564.00	-28.8	H	3.0	37.1	1.0	-64.9	-13.0	-51.9	
2346.00	-25.5	H	3.0	36.5	1.0	-61.0	-13.0	-48.0	
3128.00	-25.0	H	3.0	36.3	1.0	-60.3	-13.0	-47.3	
High Ch, 784.5									
1569.00	-28.9	V	3.0	37.1	1.0	-65.0	-13.0	-52.0	
2353.50	-24.6	V	3.0	36.5	1.0	-60.1	-13.0	-47.1	
3138.00	-22.3	V	3.0	36.3	1.0	-57.6	-13.0	-44.6	
1569.00	-29.6	H	3.0	37.1	1.0	-65.7	-13.0	-52.7	
2353.50	-26.2	H	3.0	36.5	1.0	-61.7	-13.0	-48.7	
3138.00	-22.2	H	3.0	36.3	1.0	-57.5	-13.0	-44.5	

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Band

LTE13

5MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_QPSK Band 13 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, 779.5									
1559.00	-28.4	V	3.0	37.1	1.0	-64.5	-13.0	-51.5	
2338.50	-24.4	V	3.0	36.5	1.0	-59.9	-13.0	-46.9	
3118.00	-22.2	V	3.0	36.3	1.0	-57.5	-13.0	-44.5	
1559.00	-29.4	H	3.0	37.1	1.0	-65.6	-13.0	-52.6	
2338.50	-25.5	H	3.0	36.5	1.0	-61.0	-13.0	-48.0	
3118.00	-22.6	H	3.0	36.3	1.0	-57.9	-13.0	-44.9	
Mid Ch, 782									
1564.00	-29.1	V	3.0	37.1	1.0	-65.2	-13.0	-52.2	
2346.00	-24.0	V	3.0	36.5	1.0	-59.5	-13.0	-46.5	
3128.00	-21.9	V	3.0	36.3	1.0	-57.2	-13.0	-44.2	
1564.00	-28.7	H	3.0	37.1	1.0	-64.8	-13.0	-51.8	
2346.00	-25.3	H	3.0	36.5	1.0	-60.8	-13.0	-47.8	
3128.00	-24.9	H	3.0	36.3	1.0	-60.2	-13.0	-47.2	
High Ch, 784.5									
1569.00	-28.7	V	3.0	37.1	1.0	-64.9	-13.0	-51.9	
2353.50	-24.5	V	3.0	36.5	1.0	-60.0	-13.0	-47.0	
3138.00	-22.2	V	3.0	36.3	1.0	-57.4	-13.0	-44.4	
1569.00	-29.4	H	3.0	37.1	1.0	-65.6	-13.0	-52.6	
2353.50	-26.1	H	3.0	36.5	1.0	-61.6	-13.0	-48.6	
3138.00	-22.1	H	3.0	36.3	1.0	-57.4	-13.0	-44.4	

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LTE Band 17

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

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: EUT , AC Adapter /HS
Location: Chamber C
Mode: LTE_16QAM Band 17 Harmonics, 10MHz Bandwidth

Band: LTE17 10MHz 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 709									
1418.00	-30.2	V	3.0	37.4	1.0	-66.5	-13.0	-53.5	
2127.00	-18.2	V	3.0	36.6	1.0	-53.8	-13.0	-40.8	
2836.00	-22.1	V	3.0	36.4	1.0	-57.5	-13.0	-44.5	
1418.00	-29.5	H	3.0	37.4	1.0	-65.9	-13.0	-52.9	
2127.00	-20.0	H	3.0	36.6	1.0	-55.6	-13.0	-42.6	
2836.00	-23.2	H	3.0	36.4	1.0	-58.6	-13.0	-45.6	
Mid Ch, 710									
1420.00	-30.2	V	3.0	37.3	1.0	-66.6	-13.0	-53.6	
2130.00	-19.3	V	3.0	36.6	1.0	-54.9	-13.0	-41.9	
2840.00	-22.6	V	3.0	36.4	1.0	-58.0	-13.0	-45.0	
1420.00	-29.0	H	3.0	37.3	1.0	-65.3	-13.0	-52.3	
2130.00	-19.1	H	3.0	36.6	1.0	-54.7	-13.0	-41.7	
2840.00	-22.8	H	3.0	36.4	1.0	-58.2	-13.0	-45.2	
High Ch, 711									
1422.00	-29.1	V	3.0	37.3	1.0	-65.4	-13.0	-52.4	
2133.00	-18.0	V	3.0	36.6	1.0	-53.6	-13.0	-40.6	
2844.00	-21.9	V	3.0	36.4	1.0	-57.3	-13.0	-44.3	
1422.00	-28.9	H	3.0	37.3	1.0	-65.3	-13.0	-52.3	
2133.00	-19.7	H	3.0	36.6	1.0	-55.3	-13.0	-42.3	
2844.00	-22.7	H	3.0	36.4	1.0	-58.1	-13.0	-45.1	

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

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: EUT , AC Adapter /HS
Location: Chamber C
Mode: LTE_QPSK Band 17 Harmonics, 10MHz Bandwidth

Band
LTE17
10MHz
QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 709									
1418.00	-29.7	V	3.0	37.4	1.0	-66.0	-13.0	-53.0	
2127.00	-16.8	V	3.0	36.6	1.0	-52.4	-13.0	-39.4	
2836.00	-21.6	V	3.0	36.4	1.0	-56.9	-13.0	-43.9	
1418.00	-28.9	H	3.0	37.4	1.0	-65.3	-13.0	-52.3	
2127.00	-19.3	H	3.0	36.6	1.0	-54.9	-13.0	-41.9	
2836.00	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
Mid Ch, 710									
1420.00	-30.0	V	3.0	37.3	1.0	-66.4	-13.0	-53.4	
2130.00	-17.9	V	3.0	36.6	1.0	-53.5	-13.0	-40.5	
2840.00	-22.0	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
1420.00	-29.2	H	3.0	37.3	1.0	-65.6	-13.0	-52.6	
2130.00	-19.4	H	3.0	36.6	1.0	-54.9	-13.0	-41.9	
2840.00	-22.3	H	3.0	36.4	1.0	-57.6	-13.0	-44.6	
High Ch, 711									
1422.00	-30.0	V	3.0	37.3	1.0	-66.3	-13.0	-53.3	
2133.00	-17.2	V	3.0	36.6	1.0	-52.8	-13.0	-39.8	
2844.00	-21.5	V	3.0	36.4	1.0	-56.9	-13.0	-43.9	
1422.00	-29.3	H	3.0	37.3	1.0	-65.6	-13.0	-52.6	
2133.00	-19.2	H	3.0	36.6	1.0	-54.8	-13.0	-41.8	
2844.00	-22.7	H	3.0	36.4	1.0	-58.1	-13.0	-45.1	

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

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: EUT , AC Adapter /HS
Location: Chamber C
Mode: LTE_16QAM Band 32 Harmonics, 5MHz Bandwidth

Band
LTE17
5MHz
16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 706.5									
1413.00	-30.6	V	3.0	37.4	1.0	-67.0	-13.0	-54.0	
2119.50	-18.3	V	3.0	36.6	1.0	-53.8	-13.0	-40.8	
2826.00	-22.0	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
1413.00	-29.2	H	3.0	37.4	1.0	-65.6	-13.0	-52.6	
2119.50	-21.2	H	3.0	36.6	1.0	-56.8	-13.0	-43.8	
2826.00	-23.1	H	3.0	36.4	1.0	-58.4	-13.0	-45.4	
Mid Ch, 710									
1420.00	-30.6	V	3.0	37.3	1.0	-67.0	-13.0	-54.0	
2130.00	-18.4	V	3.0	36.6	1.0	-53.9	-13.0	-40.9	
2840.00	-22.2	V	3.0	36.4	1.0	-57.6	-13.0	-44.6	
1420.00	-29.1	H	3.0	37.3	1.0	-65.5	-13.0	-52.5	
2130.00	-20.7	H	3.0	36.6	1.0	-56.3	-13.0	-43.3	
2840.00	-23.2	H	3.0	36.4	1.0	-58.5	-13.0	-45.5	
High Ch, 713.5									
1427.00	-30.3	V	3.0	37.3	1.0	-66.6	-13.0	-53.6	
2140.50	-18.1	V	3.0	36.6	1.0	-53.6	-13.0	-40.6	
2854.00	-21.9	V	3.0	36.4	1.0	-57.3	-13.0	-44.3	
1427.00	-29.1	H	3.0	37.3	1.0	-65.4	-13.0	-52.4	
2140.50	-19.2	H	3.0	36.6	1.0	-54.7	-13.0	-41.7	
2854.00	-22.0	H	3.0	36.4	1.0	-57.4	-13.0	-44.4	

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

Company: LG
Project #: 15I21235
Date: 7/22/2015
Test Engineer: A. Escamilla
Configuration: EUT , AC Adapter /HS
Location: Chamber C
Mode: LTE_QPSK Band 32 Harmonics, 5MHz Bandwidth

Band	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch, 706.5									
LTE17	1413.00	-30.0	V	3.0	37.4	1.0	-66.4	-13.0	-53.4	
	2119.50	-17.0	V	3.0	36.6	1.0	-52.6	-13.0	-39.6	
5MHz	2826.00	-21.9	V	3.0	36.4	1.0	-57.3	-13.0	-44.3	
	1413.00	-29.7	H	3.0	37.4	1.0	-66.1	-13.0	-53.1	
QPSK	2119.50	-21.1	H	3.0	36.6	1.0	-56.7	-13.0	-43.7	
	2826.00	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
	Mid Ch, 710									
	1420.00	-30.3	V	3.0	37.3	1.0	-66.7	-13.0	-53.7	
	2130.00	-18.2	V	3.0	36.6	1.0	-53.7	-13.0	-40.7	
	2840.00	-21.1	V	3.0	36.4	1.0	-56.5	-13.0	-43.5	
	1420.00	-29.1	H	3.0	37.3	1.0	-65.5	-13.0	-52.5	
	2130.00	-19.9	H	3.0	36.6	1.0	-55.4	-13.0	-42.4	
	2840.00	-23.0	H	3.0	36.4	1.0	-58.4	-13.0	-45.4	
	High Ch, 713.5									
	1427.00	-30.0	V	3.0	37.3	1.0	-66.3	-13.0	-53.3	
	2140.50	-18.0	V	3.0	36.6	1.0	-53.5	-13.0	-40.5	
	2854.00	-21.3	V	3.0	36.4	1.0	-56.7	-13.0	-43.7	
	1427.00	-28.9	H	3.0	37.3	1.0	-65.2	-13.0	-52.2	
	2140.50	-19.9	H	3.0	36.6	1.0	-55.5	-13.0	-42.5	
	2854.00	-23.0	H	3.0	36.4	1.0	-58.4	-13.0	-45.4	

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LTE Band 25

Band

LTE25

20MHz

16QAM

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_16QAM Band 25 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	-18.2	V	3.0	35.8	1.0	-53.0	-13.0	-40.0	
5580.00	-16.6	V	3.0	35.5	1.0	-51.1	-13.0	-38.1	
7440.00	-16.4	V	3.0	35.7	1.0	-51.1	-13.0	-38.1	
3720.00	-18.2	H	3.0	35.8	1.0	-53.1	-13.0	-40.1	
5580.00	-15.3	H	3.0	35.5	1.0	-49.7	-13.0	-36.7	
7440.00	-15.0	H	3.0	35.7	1.0	-49.7	-13.0	-36.7	
Mid Ch, 1882.5									
3765.00	-18.4	V	3.0	35.8	1.0	-53.2	-13.0	-40.2	
5647.50	-17.4	V	3.0	35.5	1.0	-51.8	-13.0	-38.8	
7530.00	-15.2	V	3.0	35.7	1.0	-50.0	-13.0	-37.0	
3765.00	-18.7	H	3.0	35.8	1.0	-53.5	-13.0	-40.5	
5647.50	-17.4	H	3.0	35.5	1.0	-51.8	-13.0	-38.8	
7530.00	-14.6	H	3.0	35.7	1.0	-49.3	-13.0	-36.3	
High Ch, 1905									
3810.00	-17.1	V	3.0	35.8	1.0	-51.9	-13.0	-38.9	
5715.00	-17.3	V	3.0	35.5	1.0	-51.8	-13.0	-38.8	
7620.00	-14.7	V	3.0	35.8	1.0	-49.5	-13.0	-36.5	
3810.00	-17.7	H	3.0	35.8	1.0	-52.5	-13.0	-39.5	
5715.00	-16.4	H	3.0	35.5	1.0	-50.9	-13.0	-37.9	
7620.00	-14.6	H	3.0	35.8	1.0	-49.4	-13.0	-36.4	

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Band

LTE25

20MHz

QPSK

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_QPSK Band 25 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	-18.4	V	3.0	35.8	1.0	-53.3	-13.0	-40.3	
5580.00	-17.0	V	3.0	35.5	1.0	-51.4	-13.0	-38.4	
7440.00	-15.5	V	3.0	35.7	1.0	-50.2	-13.0	-37.2	
3720.00	-18.6	H	3.0	35.8	1.0	-53.4	-13.0	-40.4	
5580.00	-15.9	H	3.0	35.5	1.0	-50.4	-13.0	-37.4	
7440.00	-14.4	H	3.0	35.7	1.0	-49.2	-13.0	-36.2	
Mid Ch, 1882.5									
3765.00	-16.2	V	3.0	35.8	1.0	-51.0	-13.0	-38.0	
5647.50	-16.5	V	3.0	35.5	1.0	-51.0	-13.0	-38.0	
7530.00	-15.4	V	3.0	35.7	1.0	-50.1	-13.0	-37.1	
3765.00	-18.4	H	3.0	35.8	1.0	-53.2	-13.0	-40.2	
5647.50	-16.9	H	3.0	35.5	1.0	-51.4	-13.0	-38.4	
7530.00	-14.0	H	3.0	35.7	1.0	-48.8	-13.0	-35.8	
High Ch, 1905									
3810.00	-17.7	V	3.0	35.8	1.0	-52.5	-13.0	-39.5	
5715.00	-16.8	V	3.0	35.5	1.0	-51.3	-13.0	-38.3	
7620.00	-15.7	V	3.0	35.8	1.0	-50.5	-13.0	-37.5	
3810.00	-18.6	H	3.0	35.8	1.0	-53.4	-13.0	-40.4	
5715.00	-16.3	H	3.0	35.5	1.0	-50.8	-13.0	-37.8	
7620.00	-14.3	H	3.0	35.8	1.0	-49.1	-13.0	-36.1	

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701H
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UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_16QAM Band 25 Harmonics, 15MHz Bandwidth

Band
LTE25
15MHz
16QAM

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	-18.2	V	3.0	35.8	1.0	-53.0	-13.0	-40.0	
5572.50	-16.1	V	3.0	35.5	1.0	-50.5	-13.0	-37.5	
7430.00	-16.0	V	3.0	35.7	1.0	-50.8	-13.0	-37.8	
3715.00	-18.5	H	3.0	35.8	1.0	-53.3	-13.0	-40.3	
5572.50	-14.6	H	3.0	35.5	1.0	-49.1	-13.0	-36.1	
7430.00	-14.7	H	3.0	35.7	1.0	-49.4	-13.0	-36.4	
Mid Ch, 1882.5									
3815.00	-18.9	V	3.0	35.8	1.0	-53.7	-13.0	-40.7	
5722.50	-17.7	V	3.0	35.5	1.0	-52.2	-13.0	-39.2	
7630.00	-14.4	V	3.0	35.7	1.0	-49.2	-13.0	-36.2	
3815.00	-18.7	H	3.0	35.8	1.0	-53.6	-13.0	-40.6	
5722.50	-16.2	H	3.0	35.5	1.0	-50.7	-13.0	-37.7	
7630.00	-13.8	H	3.0	35.7	1.0	-48.6	-13.0	-35.6	
High Ch, 1907.5									
3815.00	-18.1	V	3.0	35.8	1.0	-52.8	-13.0	-39.8	
5722.50	-16.6	V	3.0	35.5	1.0	-51.1	-13.0	-38.1	
7630.00	-15.3	V	3.0	35.8	1.0	-50.0	-13.0	-37.0	
3815.00	-17.6	H	3.0	35.8	1.0	-52.4	-13.0	-39.4	
5722.50	-17.0	H	3.0	35.5	1.0	-51.5	-13.0	-38.5	
7630.00	-14.1	H	3.0	35.8	1.0	-48.8	-13.0	-35.8	

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Band

LTE25

15MHz

QPSK

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_QPSK Band 25 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	-17.5	V	3.0	35.8	1.0	-52.4	-13.0	-39.4	
5572.50	-16.5	V	3.0	35.5	1.0	-51.0	-13.0	-38.0	
7430.00	-16.0	V	3.0	35.7	1.0	-50.7	-13.0	-37.7	
3715.00	-18.8	H	3.0	35.8	1.0	-53.7	-13.0	-40.7	
5572.50	-15.1	H	3.0	35.5	1.0	-49.5	-13.0	-36.5	
7430.00	-14.8	H	3.0	35.7	1.0	-49.6	-13.0	-36.6	
Mid Ch, 1882.5									
3765.00	-18.4	V	3.0	35.8	1.0	-53.2	-13.0	-40.2	
5647.50	-17.8	V	3.0	35.5	1.0	-52.3	-13.0	-39.3	
7530.00	-15.6	V	3.0	35.7	1.0	-50.4	-13.0	-37.4	
3765.00	-17.1	H	3.0	35.8	1.0	-51.9	-13.0	-38.9	
5647.50	-16.2	H	3.0	35.5	1.0	-50.7	-13.0	-37.7	
7530.00	-14.7	H	3.0	35.7	1.0	-49.5	-13.0	-36.5	
High Ch, 1907.5									
3815.00	-18.6	V	3.0	35.8	1.0	-53.3	-13.0	-40.3	
5722.50	-17.4	V	3.0	35.5	1.0	-51.9	-13.0	-38.9	
7630.00	-13.4	V	3.0	35.8	1.0	-48.1	-13.0	-35.1	
3815.00	-17.7	H	3.0	35.8	1.0	-52.5	-13.0	-39.5	
5722.50	-15.9	H	3.0	35.5	1.0	-50.4	-13.0	-37.4	
7630.00	-14.6	H	3.0	35.8	1.0	-49.4	-13.0	-36.4	

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Band

LTE25

10MHz

16QAM

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_16QAM Band 25 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	-17.8	V	3.0	35.9	1.0	-52.7	-13.0	-39.7	
5565.00	-16.0	V	3.0	35.5	1.0	-50.5	-13.0	-37.5	
7420.00	-16.7	V	3.0	35.7	1.0	-51.5	-13.0	-38.5	
3710.00	-17.6	H	3.0	35.9	1.0	-52.4	-13.0	-39.4	
5565.00	-15.7	H	3.0	35.5	1.0	-50.1	-13.0	-37.1	
7420.00	-15.1	H	3.0	35.7	1.0	-49.8	-13.0	-36.8	
Mid Ch, 1882.5									
3765.00	-18.0	V	3.0	35.8	1.0	-52.9	-13.0	-39.9	
5647.50	-17.4	V	3.0	35.5	1.0	-51.9	-13.0	-38.9	
7530.00	-15.4	V	3.0	35.7	1.0	-50.1	-13.0	-37.1	
3765.00	-19.3	H	3.0	35.8	1.0	-54.1	-13.0	-41.1	
5647.50	-17.3	H	3.0	35.5	1.0	-51.7	-13.0	-38.7	
7530.00	-13.8	H	3.0	35.7	1.0	-48.6	-13.0	-35.6	
High Ch, 1910									
3820.00	-15.5	V	3.0	35.8	1.0	-50.3	-13.0	-37.3	
5730.00	-15.8	V	3.0	35.5	1.0	-50.3	-13.0	-37.3	
7640.00	-15.3	V	3.0	35.8	1.0	-50.1	-13.0	-37.1	
3820.00	-18.0	H	3.0	35.8	1.0	-52.8	-13.0	-39.8	
5730.00	-15.5	H	3.0	35.5	1.0	-50.0	-13.0	-37.0	
7640.00	-14.0	H	3.0	35.8	1.0	-48.8	-13.0	-35.8	

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Band

LTE25

10MHz

QPSK

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_QPSK Band 25 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	-18.0	V	3.0	35.9	1.0	-52.8	-13.0	-39.8	
5565.00	-15.0	V	3.0	35.5	1.0	-49.5	-13.0	-36.5	
7420.00	-15.9	V	3.0	35.7	1.0	-50.6	-13.0	-37.6	
3710.00	-17.9	H	3.0	35.9	1.0	-52.7	-13.0	-39.7	
5565.00	-15.7	H	3.0	35.5	1.0	-50.2	-13.0	-37.2	
7420.00	-14.8	H	3.0	35.7	1.0	-49.5	-13.0	-36.5	
Mid Ch, 1882.5									
3765.00	-18.4	V	3.0	35.8	1.0	-53.2	-13.0	-40.2	
5647.50	-17.5	V	3.0	35.5	1.0	-52.0	-13.0	-39.0	
7530.00	-15.6	V	3.0	35.7	1.0	-50.3	-13.0	-37.3	
3765.00	-19.1	H	3.0	35.8	1.0	-53.9	-13.0	-40.9	
5647.50	-17.3	H	3.0	35.5	1.0	-51.8	-13.0	-38.8	
7530.00	-14.7	H	3.0	35.7	1.0	-49.5	-13.0	-36.5	
High Ch, 1910									
3820.00	-16.3	V	3.0	35.8	1.0	-51.0	-13.0	-38.0	
5730.00	-16.6	V	3.0	35.5	1.0	-51.1	-13.0	-38.1	
7640.00	-14.5	V	3.0	35.8	1.0	-49.3	-13.0	-36.3	
3820.00	-16.7	H	3.0	35.8	1.0	-51.5	-13.0	-38.5	
5730.00	-16.0	H	3.0	35.5	1.0	-50.5	-13.0	-37.5	
7640.00	-14.1	H	3.0	35.8	1.0	-48.9	-13.0	-35.9	

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Band

LTE25

5MHz

16QAM

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_16QAM Band 25 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	-18.5	V	3.0	35.9	1.0	-53.4	-13.0	-40.4	
5557.50	-16.3	V	3.0	35.5	1.0	-50.8	-13.0	-37.8	
7410.00	-16.3	V	3.0	35.7	1.0	-51.0	-13.0	-38.0	
3705.00	-17.9	H	3.0	35.9	1.0	-52.8	-13.0	-39.8	
5557.50	-15.4	H	3.0	35.5	1.0	-49.9	-13.0	-36.9	
7410.00	-14.3	H	3.0	35.7	1.0	-49.1	-13.0	-36.1	
Mid Ch, 1882.5									
3765.00	-18.9	V	3.0	35.8	1.0	-53.7	-13.0	-40.7	
5647.50	-17.8	V	3.0	35.5	1.0	-52.3	-13.0	-39.3	
7530.00	-15.8	V	3.0	35.7	1.0	-50.5	-13.0	-37.5	
3765.00	-18.2	H	3.0	35.8	1.0	-53.0	-13.0	-40.0	
5647.50	-17.3	H	3.0	35.5	1.0	-51.8	-13.0	-38.8	
7530.00	-14.6	H	3.0	35.7	1.0	-49.3	-13.0	-36.3	
High Ch, 1912.5									
3825.00	-17.7	V	3.0	35.8	1.0	-52.5	-13.0	-39.5	
5737.50	-17.1	V	3.0	35.5	1.0	-51.6	-13.0	-38.6	
7650.00	-14.9	V	3.0	35.8	1.0	-49.6	-13.0	-36.6	
3825.00	-17.9	H	3.0	35.8	1.0	-52.7	-13.0	-39.7	
5737.50	-16.6	H	3.0	35.5	1.0	-51.1	-13.0	-38.1	
7650.00	-14.4	H	3.0	35.8	1.0	-49.2	-13.0	-36.2	

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Band

LTE25

5MHz

QPSK

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_QPSK Band 25 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	-17.1	V	3.0	35.9	1.0	-51.9	-13.0	-38.9	
5557.50	-16.5	V	3.0	35.5	1.0	-51.0	-13.0	-38.0	
7410.00	-15.7	V	3.0	35.7	1.0	-50.5	-13.0	-37.5	
3705.00	-18.6	H	3.0	35.9	1.0	-53.4	-13.0	-40.4	
5557.50	-15.1	H	3.0	35.5	1.0	-49.6	-13.0	-36.6	
7410.00	-14.7	H	3.0	35.7	1.0	-49.4	-13.0	-36.4	
Mid Ch, 1882.5									
3765.00	-19.1	V	3.0	35.8	1.0	-53.9	-13.0	-40.9	
5647.50	-17.1	V	3.0	35.5	1.0	-51.6	-13.0	-38.6	
7530.00	-15.8	V	3.0	35.7	1.0	-50.6	-13.0	-37.6	
3765.00	-18.2	H	3.0	35.8	1.0	-53.0	-13.0	-40.0	
5647.50	-16.3	H	3.0	35.5	1.0	-50.8	-13.0	-37.8	
7530.00	-14.0	H	3.0	35.7	1.0	-48.8	-13.0	-35.8	
High Ch, 1912.5									
3825.00	-17.5	V	3.0	35.8	1.0	-52.3	-13.0	-39.3	
5737.50	-16.7	V	3.0	35.5	1.0	-51.2	-13.0	-38.2	
7650.00	-15.9	V	3.0	35.8	1.0	-50.7	-13.0	-37.7	
3825.00	-18.0	H	3.0	35.8	1.0	-52.7	-13.0	-39.7	
5737.50	-15.6	H	3.0	35.5	1.0	-50.1	-13.0	-37.1	
7650.00	-13.7	H	3.0	35.8	1.0	-48.4	-13.0	-35.4	

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Band

LTE25

3MHz

16QAM

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_16QAM Band 25 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	-18.9	V	3.0	35.9	1.0	-53.7	-13.0	-40.7	
5554.50	-16.3	V	3.0	35.5	1.0	-50.7	-13.0	-37.7	
7406.00	-15.0	V	3.0	35.7	1.0	-49.7	-13.0	-36.7	
3703.00	-18.4	H	3.0	35.9	1.0	-53.2	-13.0	-40.2	
5554.50	-15.0	H	3.0	35.5	1.0	-49.5	-13.0	-36.5	
7406.00	-14.3	H	3.0	35.7	1.0	-49.1	-13.0	-36.1	
Mid Ch, 1882.5									
3765.00	-16.2	V	3.0	35.8	1.0	-51.1	-13.0	-38.1	
5647.50	-15.5	V	3.0	35.5	1.0	-50.0	-13.0	-37.0	
7530.00	-13.0	V	3.0	35.7	1.0	-47.8	-13.0	-34.8	
3765.00	-16.4	H	3.0	35.8	1.0	-51.2	-13.0	-38.2	
5647.50	-15.1	H	3.0	35.5	1.0	-49.6	-13.0	-36.6	
7530.00	-12.5	H	3.0	35.7	1.0	-47.2	-13.0	-34.2	
High Ch, 1913.5									
3827.00	-18.1	V	3.0	35.8	1.0	-52.9	-13.0	-39.9	
5740.50	-13.5	V	3.0	35.5	1.0	-48.0	-13.0	-35.0	
7654.00	-15.9	V	3.0	35.8	1.0	-50.7	-13.0	-37.7	
3827.00	-18.1	H	3.0	35.8	1.0	-52.9	-13.0	-39.9	
5740.50	-15.8	H	3.0	35.5	1.0	-50.3	-13.0	-37.3	
7654.00	-14.0	H	3.0	35.8	1.0	-48.7	-13.0	-35.7	

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Band

LTE25

3MHz

QPSK

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_QPSK Band 25 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	35.9	1.0	-52.6	-13.0	-39.6	
5554.50	-16.1	V	3.0	35.5	1.0	-50.6	-13.0	-37.6	
7406.00	-15.3	V	3.0	35.7	1.0	-50.0	-13.0	-37.0	
3703.00	-19.0	H	3.0	35.9	1.0	-53.9	-13.0	-40.9	
5554.50	-15.5	H	3.0	35.5	1.0	-49.9	-13.0	-36.9	
7406.00	-14.5	H	3.0	35.7	1.0	-49.2	-13.0	-36.2	
Mid Ch, 1882.5									
3765.00	-14.8	V	3.0	35.8	1.0	-49.6	-13.0	-36.6	
5647.50	-15.0	V	3.0	35.5	1.0	-49.5	-13.0	-36.5	
7530.00	-12.5	V	3.0	35.7	1.0	-47.2	-13.0	-34.2	
3765.00	-16.6	H	3.0	35.8	1.0	-51.5	-13.0	-38.5	
5647.50	-14.7	H	3.0	35.5	1.0	-49.1	-13.0	-36.1	
7530.00	-12.2	H	3.0	35.7	1.0	-46.9	-13.0	-33.9	
High Ch, 1913.5									
3827.00	-18.4	V	3.0	35.8	1.0	-53.2	-13.0	-40.2	
5740.50	-13.2	V	3.0	35.5	1.0	-47.7	-13.0	-34.7	
7654.00	-14.2	V	3.0	35.8	1.0	-49.0	-13.0	-36.0	
3827.00	-17.5	H	3.0	35.8	1.0	-52.3	-13.0	-39.3	
5740.50	-16.1	H	3.0	35.5	1.0	-50.6	-13.0	-37.6	
7654.00	-13.9	H	3.0	35.8	1.0	-48.6	-13.0	-35.6	

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Band

LTE25

1.4MHz

16QAM

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_16QAM Band 25 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	-16.6	V	3.0	35.9	1.0	-51.5	-13.0	-38.5	
5552.10	-11.7	V	3.0	35.5	1.0	-46.2	-13.0	-33.2	
7402.80	-13.2	V	3.0	35.7	1.0	-47.9	-13.0	-34.9	
3701.40	-16.1	H	3.0	35.9	1.0	-50.9	-13.0	-37.9	
5552.10	-13.3	H	3.0	35.5	1.0	-47.8	-13.0	-34.8	
7402.80	-12.3	H	3.0	35.7	1.0	-47.0	-13.0	-34.0	
Mid Ch, 1882.5									
3765.00	-16.5	V	3.0	35.8	1.0	-44.7	-13.0	-31.7	
5647.50	-14.7	V	3.0	35.5	1.0	-49.2	-13.0	-36.2	
7530.00	-13.0	V	3.0	35.7	1.0	-47.8	-13.0	-34.8	
3765.00	-17.3	H	3.0	35.8	1.0	-52.1	-13.0	-39.1	
5647.50	-14.8	H	3.0	35.5	1.0	-49.3	-13.0	-36.3	
7530.00	-11.2	H	3.0	35.7	1.0	-45.9	-13.0	-32.9	
High Ch, 1914.3									
3828.60	-15.6	V	3.0	35.8	1.0	-50.4	-13.0	-37.4	
5742.90	-9.4	V	3.0	35.5	1.0	-43.9	-13.0	-30.9	
7657.20	-13.0	V	3.0	35.8	1.0	-47.7	-13.0	-34.7	
3828.60	-16.5	H	3.0	35.8	1.0	-51.3	-13.0	-38.3	
5742.90	-12.9	H	3.0	35.5	1.0	-47.4	-13.0	-34.4	
7657.20	-12.0	H	3.0	35.8	1.0	-46.7	-13.0	-33.7	

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Band

LTE25

1.4MHz

QPSK

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

Company: LG
Project #: 15I21235
Date: 7/14/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT, Ac Charger, Headset
Location: Chamber A
Mode: LTE_QPSK Band 25 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	-15.5	V	3.0	35.9	1.0	-50.4	-13.0	-37.4	
5552.10	-12.4	V	3.0	35.5	1.0	-46.9	-13.0	-33.9	
7402.80	-13.0	V	3.0	35.7	1.0	-47.7	-13.0	-34.7	
3701.40	-16.0	H	3.0	35.9	1.0	-50.9	-13.0	-37.9	
5552.10	-13.7	H	3.0	35.5	1.0	-48.2	-13.0	-35.2	
7402.80	-12.4	H	3.0	35.7	1.0	-47.1	-13.0	-34.1	
Mid Ch, 1882.5									
3765.00	-16.4	V	3.0	35.8	1.0	-51.2	-13.0	-38.2	
5647.50	-14.4	V	3.0	35.5	1.0	-48.9	-13.0	-35.9	
7530.00	-12.9	V	3.0	35.7	1.0	-47.7	-13.0	-34.7	
3765.00	-16.5	H	3.0	35.8	1.0	-51.3	-13.0	-38.3	
5647.50	-15.1	H	3.0	35.5	1.0	-49.6	-13.0	-36.6	
7530.00	-12.2	H	3.0	35.7	1.0	-47.0	-13.0	-34.0	
High Ch, 1914.3									
3828.60	-15.4	V	3.0	35.8	1.0	-50.2	-13.0	-37.2	
5742.90	-9.4	V	3.0	35.5	1.0	-43.9	-13.0	-30.9	
7657.20	-12.9	V	3.0	35.8	1.0	-47.6	-13.0	-34.6	
3828.60	-16.7	H	3.0	35.8	1.0	-51.5	-13.0	-38.5	
5742.90	-11.6	H	3.0	35.5	1.0	-46.1	-13.0	-33.1	
7657.20	-10.9	H	3.0	35.8	1.0	-45.7	-13.0	-32.7	

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LTE Band 26

Band

LTE26

15MHz

16QAM

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_16QAM Band 26 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
Mid Ch, 831.5									
1663.00	-26.6	V	3.0	37.0	1.0	-62.6	-13.0	-49.6	
2494.50	-23.7	V	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3326.00	-21.1	V	3.0	36.2	1.0	-56.3	-13.0	-43.3	
1663.00	-27.1	H	3.0	37.0	1.0	-63.1	-13.0	-50.1	
2494.50	-25.0	H	3.0	36.4	1.0	-60.4	-13.0	-47.4	
3326.00	-21.5	H	3.0	36.2	1.0	-56.7	-13.0	-43.7	
Mid Ch, 836.5									
1673.00	-24.5	V	3.0	37.0	1.0	-60.5	-13.0	-47.5	
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	-27.1	H	3.0	37.0	1.0	-63.1	-13.0	-50.1	
2509.50	-25.2	H	3.0	36.4	1.0	-60.7	-13.0	-47.7	
3346.00	-24.2	H	3.0	36.1	1.0	-59.4	-13.0	-46.4	
High Ch, 841.5									
1683.00	-26.7	V	3.0	37.0	1.0	-62.7	-13.0	-49.7	
2524.50	-23.0	V	3.0	36.4	1.0	-58.4	-13.0	-45.4	
3366.00	-19.4	V	3.0	36.1	1.0	-54.5	-13.0	-41.5	
1683.00	-26.9	H	3.0	37.0	1.0	-62.9	-13.0	-49.9	
2524.50	-24.9	H	3.0	36.4	1.0	-60.3	-13.0	-47.3	
3366.00	-21.5	H	3.0	36.1	1.0	-56.6	-13.0	-43.6	

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Band

LTE26

15MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_QPSK Band 26 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
Mid Ch, 831.5									
1663.00	-26.5	V	3.0	37.0	1.0	-62.5	-13.0	-49.5	
2494.50	-23.6	V	3.0	36.4	1.0	-59.0	-13.0	-46.0	
3326.00	-21.0	V	3.0	36.2	1.0	-56.2	-13.0	-43.2	
1663.00	-27.0	H	3.0	37.0	1.0	-63.0	-13.0	-50.0	
2494.50	-24.9	H	3.0	36.4	1.0	-60.3	-13.0	-47.3	
3326.00	-21.4	H	3.0	36.2	1.0	-56.5	-13.0	-43.5	
Mid Ch, 836.5									
1673.00	-24.4	V	3.0	37.0	1.0	-60.4	-13.0	-47.4	
2509.50	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3346.00	-21.5	V	3.0	36.1	1.0	-56.7	-13.0	-43.7	
1673.00	-27.0	H	3.0	37.0	1.0	-63.0	-13.0	-50.0	
2509.50	-25.1	H	3.0	36.4	1.0	-60.6	-13.0	-47.6	
3346.00	-24.1	H	3.0	36.1	1.0	-59.3	-13.0	-46.3	
High Ch, 841.5									
1683.00	-26.6	V	3.0	37.0	1.0	-62.6	-13.0	-49.6	
2524.50	-22.9	V	3.0	36.4	1.0	-58.3	-13.0	-45.3	
3366.00	-19.3	V	3.0	36.1	1.0	-54.4	-13.0	-41.4	
1683.00	-26.8	H	3.0	37.0	1.0	-62.8	-13.0	-49.8	
2524.50	-24.8	H	3.0	36.4	1.0	-60.2	-13.0	-47.2	
3366.00	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_16QAM Band 26 Harmonics, 10MHz Bandwidth

Band
LTE26
10MHz
16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 819									
1638.00	-25.0	V	3.0	37.0	1.0	-61.0	-13.0	-48.0	
2457.00	-23.4	V	3.0	36.4	1.0	-58.9	-13.0	-45.9	
3276.00	-21.7	V	3.0	36.2	1.0	-56.8	-13.0	-43.8	
1638.00	-27.1	H	3.0	37.0	1.0	-63.1	-13.0	-50.1	
2457.00	-25.8	H	3.0	36.4	1.0	-61.2	-13.0	-48.2	
3276.00	-21.9	H	3.0	36.2	1.0	-57.1	-13.0	-44.1	
Mid Ch, 831.5									
1663.00	-24.1	V	3.0	37.0	1.0	-60.2	-13.0	-47.2	
2494.50	-23.8	V	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3326.00	-20.8	V	3.0	36.1	1.0	-55.9	-13.0	-42.9	
1663.00	-26.5	H	3.0	37.0	1.0	-62.5	-13.0	-49.5	
2494.50	-24.9	H	3.0	36.4	1.0	-60.3	-13.0	-47.3	
3326.00	-22.0	H	3.0	36.1	1.0	-57.1	-13.0	-44.1	
High Ch, 844									
1688.00	-26.7	V	3.0	37.0	1.0	-62.7	-13.0	-49.7	
2532.00	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3376.00	-21.6	V	3.0	36.1	1.0	-56.7	-13.0	-43.7	
1688.00	-26.8	H	3.0	37.0	1.0	-62.7	-13.0	-49.7	
2532.00	-24.1	H	3.0	36.4	1.0	-59.5	-13.0	-46.5	
3376.00	-21.0	H	3.0	36.1	1.0	-56.1	-13.0	-43.1	

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Band

LTE26

10MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_QPSK Band 26 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, 819									
1638.00	-24.9	V	3.0	37.0	1.0	-60.9	-13.0	-47.9	
2457.00	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3276.00	-21.5	V	3.0	36.2	1.0	-56.7	-13.0	-43.7	
1638.00	-27.0	H	3.0	37.0	1.0	-63.0	-13.0	-50.0	
2457.00	-25.7	H	3.0	36.4	1.0	-61.1	-13.0	-48.1	
3276.00	-21.8	H	3.0	36.2	1.0	-56.9	-13.0	-43.9	
Mid Ch, 831.5									
1663.00	-24.0	V	3.0	37.0	1.0	-60.0	-13.0	-47.0	
2494.50	-23.7	V	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3326.00	-20.6	V	3.0	36.1	1.0	-55.8	-13.0	-42.8	
1663.00	-26.4	H	3.0	37.0	1.0	-62.4	-13.0	-49.4	
2494.50	-24.7	H	3.0	36.4	1.0	-60.2	-13.0	-47.2	
3326.00	-21.9	H	3.0	36.1	1.0	-57.0	-13.0	-44.0	
High Ch, 844									
1688.00	-26.6	V	3.0	37.0	1.0	-62.6	-13.0	-49.6	
2532.00	-23.2	V	3.0	36.4	1.0	-58.6	-13.0	-45.6	
3376.00	-21.5	V	3.0	36.1	1.0	-56.6	-13.0	-43.6	
1688.00	-26.6	H	3.0	37.0	1.0	-62.6	-13.0	-49.6	
2532.00	-24.0	H	3.0	36.4	1.0	-59.4	-13.0	-46.4	
3376.00	-20.8	H	3.0	36.1	1.0	-55.9	-13.0	-42.9	

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_16QAM Band 26 Harmonics, 5MHz Bandwidth

Band
LTE26
5MHz
16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 816.5									
1633.00	-28.6	V	3.0	37.0	1.0	-64.6	-13.0	-51.6	
2449.50	-23.3	V	3.0	36.4	1.0	-58.7	-13.0	-45.7	
3266.00	-22.1	V	3.0	36.2	1.0	-57.3	-13.0	-44.3	
1633.00	-26.4	H	3.0	37.0	1.0	-62.4	-13.0	-49.4	
2449.50	-25.3	H	3.0	36.4	1.0	-60.8	-13.0	-47.8	
3266.00	-20.8	H	3.0	36.2	1.0	-56.0	-13.0	-43.0	
Mid Ch, 831.5									
1663.00	-23.8	V	3.0	37.0	1.0	-59.8	-13.0	-46.8	
2494.50	-23.1	V	3.0	36.4	1.0	-58.5	-13.0	-45.5	
3326.00	-22.3	V	3.0	36.1	1.0	-57.4	-13.0	-44.4	
1663.00	-25.7	H	3.0	37.0	1.0	-61.7	-13.0	-48.7	
2494.50	-25.6	H	3.0	36.4	1.0	-61.1	-13.0	-48.1	
3326.00	-21.6	H	3.0	36.1	1.0	-56.8	-13.0	-43.8	
High Ch, 846.5									
1693.00	-27.8	V	3.0	37.0	1.0	-63.8	-13.0	-50.8	
2539.50	-23.9	V	3.0	36.4	1.0	-59.3	-13.0	-46.3	
3386.00	-21.4	V	3.0	36.1	1.0	-56.5	-13.0	-43.5	
1693.00	-27.3	H	3.0	37.0	1.0	-63.3	-13.0	-50.3	
2539.50	-25.0	H	3.0	36.4	1.0	-60.4	-13.0	-47.4	
3386.00	-21.8	H	3.0	36.1	1.0	-56.9	-13.0	-43.9	

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Band

LTE26

5MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_QPSK Band 26 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, 816.5									
1633.00	-28.4	V	3.0	37.0	1.0	-64.5	-13.0	-51.5	
2449.50	-23.1	V	3.0	36.4	1.0	-58.6	-13.0	-45.6	
3266.00	-22.0	V	3.0	36.2	1.0	-57.1	-13.0	-44.1	
1633.00	-26.2	H	3.0	37.0	1.0	-62.2	-13.0	-49.2	
2449.50	-25.2	H	3.0	36.4	1.0	-60.6	-13.0	-47.6	
3266.00	-20.6	H	3.0	36.2	1.0	-55.8	-13.0	-42.8	
Mid Ch, 831.5									
1663.00	-23.7	V	3.0	37.0	1.0	-59.7	-13.0	-46.7	
2494.50	-22.9	V	3.0	36.4	1.0	-58.3	-13.0	-45.3	
3326.00	-22.1	V	3.0	36.1	1.0	-57.2	-13.0	-44.2	
1663.00	-25.5	H	3.0	37.0	1.0	-61.6	-13.0	-48.6	
2494.50	-25.5	H	3.0	36.4	1.0	-60.9	-13.0	-47.9	
3326.00	-21.5	H	3.0	36.1	1.0	-56.6	-13.0	-43.6	
High Ch, 846.5									
1693.00	-27.6	V	3.0	37.0	1.0	-63.6	-13.0	-50.6	
2539.50	-23.7	V	3.0	36.4	1.0	-59.1	-13.0	-46.1	
3386.00	-21.3	V	3.0	36.1	1.0	-56.3	-13.0	-43.3	
1693.00	-27.1	H	3.0	37.0	1.0	-63.1	-13.0	-50.1	
2539.50	-24.8	H	3.0	36.4	1.0	-60.2	-13.0	-47.2	
3386.00	-21.6	H	3.0	36.1	1.0	-56.7	-13.0	-43.7	

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_16QAM Band 26 Harmonics, 3MHz Bandwidth

Band LTE26 3MHz 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 815.5									
1631.00	-22.9	V	3.0	37.0	1.0	-58.9	-13.0	-45.9	
2446.50	-23.6	V	3.0	36.4	1.0	-59.0	-13.0	-46.0	
3262.00	-22.1	V	3.0	36.2	1.0	-57.2	-13.0	-44.2	
1631.00	-28.2	H	3.0	37.0	1.0	-64.3	-13.0	-51.3	
2446.50	-25.3	H	3.0	36.4	1.0	-60.7	-13.0	-47.7	
3262.00	-22.2	H	3.0	36.2	1.0	-57.4	-13.0	-44.4	
Mid Ch, 831.5									
1663.00	-28.0	V	3.0	37.0	1.0	-64.0	-13.0	-51.0	
2494.50	-23.6	V	3.0	36.4	1.0	-59.0	-13.0	-46.0	
3326.00	-21.7	V	3.0	36.1	1.0	-56.9	-13.0	-43.9	
1663.00	-28.3	H	3.0	37.0	1.0	-64.3	-13.0	-51.3	
2494.50	-24.9	H	3.0	36.4	1.0	-60.4	-13.0	-47.4	
3326.00	-21.5	H	3.0	36.1	1.0	-56.6	-13.0	-43.6	
High Ch, 847.5									
1695.00	-26.0	V	3.0	37.0	1.0	-61.9	-13.0	-48.9	
2542.50	-24.0	V	3.0	36.4	1.0	-59.5	-13.0	-46.5	
3390.00	-21.5	V	3.0	36.1	1.0	-56.6	-13.0	-43.6	
1695.00	-27.1	H	3.0	37.0	1.0	-63.1	-13.0	-50.1	
2542.50	-25.1	H	3.0	36.4	1.0	-60.5	-13.0	-47.5	
3390.00	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	

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Band

LTE26

3MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_QPSK Band 26 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, 815.5									
1631.00	-22.8	V	3.0	37.0	1.0	-58.8	-13.0	-45.8	
2446.50	-23.5	V	3.0	36.4	1.0	-58.9	-13.0	-45.9	
3262.00	-21.9	V	3.0	36.2	1.0	-57.1	-13.0	-44.1	
1631.00	-28.1	H	3.0	37.0	1.0	-64.1	-13.0	-51.1	
2446.50	-25.2	H	3.0	36.4	1.0	-60.6	-13.0	-47.6	
3262.00	-22.1	H	3.0	36.2	1.0	-57.3	-13.0	-44.3	
Mid Ch, 831.5									
1663.00	-27.9	V	3.0	37.0	1.0	-63.9	-13.0	-50.9	
2494.50	-23.5	V	3.0	36.4	1.0	-58.9	-13.0	-45.9	
3326.00	-21.6	V	3.0	36.1	1.0	-56.7	-13.0	-43.7	
1663.00	-28.2	H	3.0	37.0	1.0	-64.2	-13.0	-51.2	
2494.50	-24.8	H	3.0	36.4	1.0	-60.2	-13.0	-47.2	
3326.00	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	
High Ch, 847.5									
1695.00	-25.8	V	3.0	37.0	1.0	-61.8	-13.0	-48.8	
2542.50	-23.9	V	3.0	36.4	1.0	-59.3	-13.0	-46.3	
3390.00	-21.4	V	3.0	36.1	1.0	-56.5	-13.0	-43.5	
1695.00	-27.0	H	3.0	37.0	1.0	-63.0	-13.0	-50.0	
2542.50	-25.0	H	3.0	36.4	1.0	-60.4	-13.0	-47.4	
3390.00	-21.3	H	3.0	36.1	1.0	-56.4	-13.0	-43.4	

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_16QAM Band 26 Harmonics, 1.4MHz Bandwidth

Band LTE26 1.4MHz 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 814.7									
1629.40	-23.1	V	3.0	37.1	1.0	-59.1	-13.0	-46.1	
2444.10	-24.1	V	3.0	36.4	1.0	-59.6	-13.0	-46.6	
3258.80	-21.7	V	3.0	36.2	1.0	-56.9	-13.0	-43.9	
1629.40	-25.0	H	3.0	37.1	1.0	-61.0	-13.0	-48.0	
2444.10	-25.7	H	3.0	36.4	1.0	-61.1	-13.0	-48.1	
3258.80	-21.8	H	3.0	36.2	1.0	-57.0	-13.0	-44.0	
Mid Ch, 831.5									
1663.00	-25.7	V	3.0	37.0	1.0	-61.7	-13.0	-48.7	
2494.50	-23.6	V	3.0	36.4	1.0	-59.0	-13.0	-46.0	
3326.00	-21.5	V	3.0	36.1	1.0	-56.6	-13.0	-43.6	
1663.00	-26.1	H	3.0	37.0	1.0	-62.1	-13.0	-49.1	
2494.50	-24.9	H	3.0	36.4	1.0	-60.4	-13.0	-47.4	
3326.00	-21.6	H	3.0	36.1	1.0	-56.7	-13.0	-43.7	
High Ch, 848.3									
1696.60	-27.0	V	3.0	37.0	1.0	-62.9	-13.0	-49.9	
2544.90	-24.6	V	3.0	36.4	1.0	-60.0	-13.0	-47.0	
3393.20	-21.9	V	3.0	36.1	1.0	-57.0	-13.0	-44.0	
1696.60	-26.6	H	3.0	37.0	1.0	-62.6	-13.0	-49.6	
2544.90	-25.5	H	3.0	36.4	1.0	-60.9	-13.0	-47.9	
3393.20	-22.1	H	3.0	36.1	1.0	-57.2	-13.0	-44.2	

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Band

LTE26

1.4MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/19/2015
Test Engineer: S.Tran
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_QPSK Band 26 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, 814.7									
1629.40	-22.9	V	3.0	37.1	1.0	-58.9	-13.0	-45.9	
2444.10	-23.9	V	3.0	36.4	1.0	-59.4	-13.0	-46.4	
3258.80	-21.5	V	3.0	36.2	1.0	-56.7	-13.0	-43.7	
1629.40	-24.8	H	3.0	37.1	1.0	-60.8	-13.0	-47.8	
2444.10	-25.4	H	3.0	36.4	1.0	-60.9	-13.0	-47.9	
3258.80	-21.6	H	3.0	36.2	1.0	-56.8	-13.0	-43.8	
Mid Ch, 831.5									
1663.00	-25.5	V	3.0	37.0	1.0	-61.5	-13.0	-48.5	
2494.50	-23.4	V	3.0	36.4	1.0	-58.8	-13.0	-45.8	
3326.00	-21.3	V	3.0	36.1	1.0	-56.4	-13.0	-43.4	
1663.00	-25.9	H	3.0	37.0	1.0	-61.9	-13.0	-48.9	
2494.50	-24.7	H	3.0	36.4	1.0	-60.1	-13.0	-47.1	
3326.00	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	
High Ch, 848.3									
1696.60	-26.8	V	3.0	37.0	1.0	-62.7	-13.0	-49.7	
2544.90	-24.3	V	3.0	36.4	1.0	-59.8	-13.0	-46.8	
3393.20	-21.7	V	3.0	36.1	1.0	-56.8	-13.0	-43.8	
1696.60	-26.4	H	3.0	37.0	1.0	-62.4	-13.0	-49.4	
2544.90	-25.3	H	3.0	36.4	1.0	-60.7	-13.0	-47.7	
3393.20	-21.9	H	3.0	36.1	1.0	-57.0	-13.0	-44.0	

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LTE Band 41

Band

LTE41

20MHz

16QAM

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 2506									
5012.00	-18.4	V	3.0	35.5	1.0	-52.9	-25.0	-27.9	
7518.00	-13.3	V	3.0	35.7	1.0	-48.1	-25.0	-23.1	
10024.00	-12.1	V	3.0	36.0	1.0	-47.1	-25.0	-22.1	
5012.00	-18.0	H	3.0	35.5	1.0	-52.5	-25.0	-27.5	
7518.00	-12.9	H	3.0	35.7	1.0	-47.7	-25.0	-22.7	
10024.00	-10.5	H	3.0	36.0	1.0	-45.5	-25.0	-20.5	
Mid Ch, 2593									
5186.00	-18.1	V	3.0	35.4	1.0	-52.5	-25.0	-27.5	
7779.00	-12.9	V	3.0	35.8	1.0	-47.7	-25.0	-22.7	
10372.00	-11.1	V	3.0	35.8	1.0	-46.0	-25.0	-21.0	
5186.00	-18.0	H	3.0	35.4	1.0	-52.4	-25.0	-27.4	
7779.00	-12.1	H	3.0	35.8	1.0	-46.9	-25.0	-21.9	
10372.00	-10.4	H	3.0	35.8	1.0	-45.3	-25.0	-20.3	
High Ch, 2680									
5360.00	-17.9	V	3.0	35.4	1.0	-52.3	-25.0	-27.3	
8040.00	-12.7	V	3.0	35.8	1.0	-47.5	-25.0	-22.5	
10720.00	-9.8	V	3.0	35.7	1.0	-44.5	-25.0	-19.5	
5360.00	-16.2	H	3.0	35.4	1.0	-50.6	-25.0	-25.6	
8040.00	-12.1	H	3.0	35.8	1.0	-46.9	-25.0	-21.9	
10720.00	-10.7	H	3.0	35.7	1.0	-45.3	-25.0	-20.3	

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Band

LTE41

20MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 2506									
5012.00	-18.1	V	3.0	35.5	1.0	-52.6	-25.0	-27.6	
7518.00	-13.0	V	3.0	35.7	1.0	-47.8	-25.0	-22.8	
10024.00	-11.9	V	3.0	36.0	1.0	-46.9	-25.0	-21.9	
5012.00	-18.0	H	3.0	35.5	1.0	-52.4	-25.0	-27.4	
7518.00	-13.0	H	3.0	35.7	1.0	-47.8	-25.0	-22.8	
10024.00	-10.3	H	3.0	36.0	1.0	-45.3	-25.0	-20.3	
Mid Ch, 2593									
5186.00	-17.8	V	3.0	35.4	1.0	-52.2	-25.0	-27.2	
7779.00	-12.8	V	3.0	35.8	1.0	-47.5	-25.0	-22.5	
10372.00	-10.9	V	3.0	35.8	1.0	-45.8	-25.0	-20.8	
5186.00	-17.5	H	3.0	35.4	1.0	-51.9	-25.0	-26.9	
7779.00	-12.1	H	3.0	35.8	1.0	-46.8	-25.0	-21.8	
10372.00	-10.2	H	3.0	35.8	1.0	-45.0	-25.0	-20.0	
High Ch, 2680									
5360.00	-17.6	V	3.0	35.4	1.0	-52.0	-25.0	-27.0	
8040.00	-12.7	V	3.0	35.8	1.0	-47.5	-25.0	-22.5	
10720.00	-9.6	V	3.0	35.7	1.0	-44.2	-25.0	-19.2	
5360.00	-16.2	H	3.0	35.4	1.0	-50.7	-25.0	-25.7	
8040.00	-11.8	H	3.0	35.8	1.0	-46.6	-25.0	-21.6	
10720.00	-10.6	H	3.0	35.7	1.0	-45.3	-25.0	-20.3	

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Band

LTE41

15MHz

16QAM

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 2503.5									
5007.00	-18.6	V	3.0	35.5	1.0	-53.0	-25.0	-28.0	
7510.50	-14.3	V	3.0	35.7	1.0	-49.1	-25.0	-24.1	
10014.00	-11.9	V	3.0	36.0	1.0	-47.0	-25.0	-22.0	
5007.00	-17.4	H	3.0	35.5	1.0	-51.9	-25.0	-26.9	
7510.50	-12.5	H	3.0	35.7	1.0	-47.2	-25.0	-22.2	
10014.00	-11.4	H	3.0	36.0	1.0	-46.5	-25.0	-21.5	
Mid Ch, 2593									
5186.00	-18.1	V	3.0	35.4	1.0	-52.5	-25.0	-27.5	
7779.00	-13.0	V	3.0	35.8	1.0	-47.8	-25.0	-22.8	
10372.00	-11.7	V	3.0	35.8	1.0	-46.6	-25.0	-21.6	
5186.00	-17.7	H	3.0	35.4	1.0	-52.1	-25.0	-27.1	
7779.00	-11.9	H	3.0	35.8	1.0	-46.7	-25.0	-21.7	
10372.00	-10.4	H	3.0	35.8	1.0	-45.2	-25.0	-20.2	
High Ch, 2682.5									
5365.00	-17.9	V	3.0	35.4	1.0	-52.3	-25.0	-27.3	
8047.50	-12.9	V	3.0	35.8	1.0	-47.7	-25.0	-22.7	
10730.00	-10.9	V	3.0	35.7	1.0	-45.5	-25.0	-20.5	
5365.00	-17.5	H	3.0	35.4	1.0	-51.9	-25.0	-26.9	
8047.50	-11.8	H	3.0	35.8	1.0	-46.6	-25.0	-21.6	
10730.00	-11.5	H	3.0	35.7	1.0	-46.2	-25.0	-21.2	

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Band

LTE41

15MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 2503.5									
5007.00	-17.3	V	3.0	35.5	1.0	-51.8	-25.0	-26.8	
7510.50	-14.1	V	3.0	35.7	1.0	-48.9	-25.0	-23.9	
10014.00	-11.4	V	3.0	36.0	1.0	-46.4	-25.0	-21.4	
5007.00	-17.3	H	3.0	35.5	1.0	-51.8	-25.0	-26.8	
7510.50	-12.6	H	3.0	35.7	1.0	-47.4	-25.0	-22.4	
10014.00	-10.4	H	3.0	36.0	1.0	-45.4	-25.0	-20.4	
Mid Ch, 2593									
5186.00	-17.8	V	3.0	35.4	1.0	-52.3	-25.0	-27.3	
7779.00	-12.8	V	3.0	35.8	1.0	-47.6	-25.0	-22.6	
10372.00	-11.1	V	3.0	35.8	1.0	-45.9	-25.0	-20.9	
5186.00	-17.7	H	3.0	35.4	1.0	-52.1	-25.0	-27.1	
7779.00	-12.8	H	3.0	35.8	1.0	-47.6	-25.0	-22.6	
10372.00	-9.1	H	3.0	35.8	1.0	-44.0	-25.0	-19.0	
High Ch, 2682.5									
5365.00	-17.6	V	3.0	35.4	1.0	-52.0	-25.0	-27.0	
8047.50	-12.9	V	3.0	35.8	1.0	-47.7	-25.0	-22.7	
10730.00	-10.7	V	3.0	35.7	1.0	-45.4	-25.0	-20.4	
5365.00	-17.4	H	3.0	35.4	1.0	-51.9	-25.0	-26.9	
8047.50	-11.7	H	3.0	35.8	1.0	-46.5	-25.0	-21.5	
10730.00	-11.4	H	3.0	35.7	1.0	-46.0	-25.0	-21.0	

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Band

LTE41

10MHz

16QAM

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 2501									
5002.00	-18.7	V	3.0	35.5	1.0	-53.1	-25.0	-28.1	
7503.00	-14.0	V	3.0	35.7	1.0	-48.8	-25.0	-23.8	
10004.00	-11.8	V	3.0	36.0	1.0	-46.8	-25.0	-21.8	
5002.00	-17.4	H	3.0	35.5	1.0	-51.9	-25.0	-26.9	
7503.00	-12.5	H	3.0	35.7	1.0	-47.2	-25.0	-22.2	
10004.00	-11.3	H	3.0	36.0	1.0	-46.3	-25.0	-21.3	
Mid Ch, 2593									
5186.00	-18.0	V	3.0	35.4	1.0	-52.4	-25.0	-27.4	
7779.00	-13.0	V	3.0	35.8	1.0	-47.8	-25.0	-22.8	
10372.00	-11.4	V	3.0	35.8	1.0	-46.2	-25.0	-21.2	
5186.00	-17.8	H	3.0	35.4	1.0	-52.2	-25.0	-27.2	
7779.00	-11.9	H	3.0	35.8	1.0	-46.7	-25.0	-21.7	
10372.00	-10.4	H	3.0	35.8	1.0	-45.2	-25.0	-20.2	
High Ch, 2685									
5370.00	-17.8	V	3.0	35.4	1.0	-52.3	-25.0	-27.3	
8055.00	-12.9	V	3.0	35.8	1.0	-47.7	-25.0	-22.7	
10740.00	-10.9	V	3.0	35.7	1.0	-45.6	-25.0	-20.6	
5370.00	-17.5	H	3.0	35.4	1.0	-51.9	-25.0	-26.9	
8055.00	-11.9	H	3.0	35.8	1.0	-46.7	-25.0	-21.7	
10740.00	-11.6	H	3.0	35.7	1.0	-46.2	-25.0	-21.2	

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Band

LTE41

10MHz

QPSK

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 2501									
5002.00	-17.4	V	3.0	35.5	1.0	-51.9	-25.0	-26.9	
7503.00	-14.1	V	3.0	35.7	1.0	-48.8	-25.0	-23.8	
10004.00	-11.3	V	3.0	36.0	1.0	-46.4	-25.0	-21.4	
5002.00	-17.3	H	3.0	35.5	1.0	-51.7	-25.0	-26.7	
7503.00	-12.4	H	3.0	35.7	1.0	-47.1	-25.0	-22.1	
10004.00	-11.0	H	3.0	36.0	1.0	-46.0	-25.0	-21.0	
Mid Ch, 2593									
5186.00	-17.9	V	3.0	35.4	1.0	-52.3	-25.0	-27.3	
7779.00	-12.8	V	3.0	35.8	1.0	-47.5	-25.0	-22.5	
10372.00	-11.0	V	3.0	35.8	1.0	-45.9	-25.0	-20.9	
5186.00	-17.6	H	3.0	35.4	1.0	-52.0	-25.0	-27.0	
7779.00	-12.7	H	3.0	35.8	1.0	-47.4	-25.0	-22.4	
10372.00	-9.2	H	3.0	35.8	1.0	-44.0	-25.0	-19.0	
High Ch, 2685									
5370.00	-17.5	V	3.0	35.4	1.0	-51.9	-25.0	-26.9	
8055.00	-12.9	V	3.0	35.8	1.0	-47.7	-25.0	-22.7	
10740.00	-10.8	V	3.0	35.7	1.0	-45.5	-25.0	-20.5	
5370.00	-17.3	H	3.0	35.4	1.0	-51.8	-25.0	-26.8	
8055.00	-11.6	H	3.0	35.8	1.0	-46.4	-25.0	-21.4	
10740.00	-11.3	H	3.0	35.7	1.0	-46.0	-25.0	-21.0	

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Band

LTE41

5MHz

16QAM

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
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, 2498.5									
4997.00	-18.2	V	3.0	35.5	1.0	-52.6	-25.0	-27.6	
7495.50	-13.6	V	3.0	35.7	1.0	-48.4	-25.0	-23.4	
9994.00	-11.9	V	3.0	36.0	1.0	-46.9	-25.0	-21.9	
4997.00	-17.5	H	3.0	35.5	1.0	-52.0	-25.0	-27.0	
7495.50	-12.5	H	3.0	35.7	1.0	-47.2	-25.0	-22.2	
9994.00	-11.3	H	3.0	36.0	1.0	-46.3	-25.0	-21.3	
Mid Ch, 2593									
5186.00	-17.8	V	3.0	35.4	1.0	-52.2	-25.0	-27.2	
7779.00	-13.2	V	3.0	35.8	1.0	-48.0	-25.0	-23.0	
10372.00	-11.4	V	3.0	35.8	1.0	-46.3	-25.0	-21.3	
5186.00	-17.8	H	3.0	35.4	1.0	-52.3	-25.0	-27.3	
7779.00	-11.8	H	3.0	35.8	1.0	-46.6	-25.0	-21.6	
10372.00	-10.3	H	3.0	35.8	1.0	-45.2	-25.0	-20.2	
High Ch, 2687.5									
5375.00	-17.8	V	3.0	35.4	1.0	-52.2	-25.0	-27.2	
8062.50	-13.0	V	3.0	35.8	1.0	-47.8	-25.0	-22.8	
10750.00	-11.0	V	3.0	35.7	1.0	-45.6	-25.0	-20.6	
5375.00	-17.5	H	3.0	35.4	1.0	-51.9	-25.0	-26.9	
8062.50	-12.0	H	3.0	35.8	1.0	-46.8	-25.0	-21.8	
10750.00	-11.2	H	3.0	35.7	1.0	-45.8	-25.0	-20.8	

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

Company: LG Electronics
Project #: 15I21235
Date: 7/11/2015
Test Engineer: R.Alegre
Configuration: EUT , AC Adapter, Headset
Location: Chamber C
Mode: LTE_QPSK Band 41 Harmonics, 5MHz Bandwidth

Band LTE41 5MHz QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2498.5									
4997.00	-17.6	V	3.0	35.5	1.0	-52.0	-25.0	-27.0	
7495.50	-14.0	V	3.0	35.7	1.0	-48.8	-25.0	-23.8	
9994.00	-11.4	V	3.0	36.0	1.0	-46.4	-25.0	-21.4	
4997.00	-17.3	H	3.0	35.5	1.0	-51.7	-25.0	-26.7	
7495.50	-12.5	H	3.0	35.7	1.0	-47.2	-25.0	-22.2	
9994.00	-10.8	H	3.0	36.0	1.0	-45.9	-25.0	-20.9	
Mid Ch, 2593									
5186.00	-17.8	V	3.0	35.4	1.0	-52.2	-25.0	-27.2	
7779.00	-12.6	V	3.0	35.8	1.0	-47.4	-25.0	-22.4	
10372.00	-11.2	V	3.0	35.8	1.0	-46.0	-25.0	-21.0	
5186.00	-17.7	H	3.0	35.4	1.0	-52.1	-25.0	-27.1	
7779.00	-12.0	H	3.0	35.8	1.0	-46.8	-25.0	-21.8	
10372.00	-10.1	H	3.0	35.8	1.0	-45.0	-25.0	-20.0	
High Ch, 2687.5									
5375.00	-17.6	V	3.0	35.4	1.0	-52.0	-25.0	-27.0	
8062.50	-13.0	V	3.0	35.8	1.0	-47.8	-25.0	-22.8	
10750.00	-10.9	V	3.0	35.7	1.0	-45.5	-25.0	-20.5	
5375.00	-17.3	H	3.0	35.4	1.0	-51.7	-25.0	-26.7	
8062.50	-11.8	H	3.0	35.8	1.0	-46.6	-25.0	-21.6	
10750.00	-11.3	H	3.0	35.7	1.0	-45.9	-25.0	-20.9	

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