Band

LTE4

1.4MHz

16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG
Project #: 15I20405
Date: 4/9/2015
Test Engineer: R.Alegre
Configuration: EUT Only
Location: Chamber C
Mode: LTE_16QAM Band 4 Fundamentals, 1.4MHz Bandwidth

Test Equpment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1710.70	16.54	V	0.9	8.2	23.81	30.0	-6.2	
1710.70	21.03	H	0.9	8.2	28.30	30.0	-1.7	
Mid Ch								
1732.50	16.95	V	0.9	8.2	24.22	30.0	-5.8	
1732.50	20.85	H	0.9	8.2	28.12	30.0	-1.9	
High Ch								
1754.30	16.84	V	0.9	8.1	24.03	30.0	-6.0	
1754.30	20.67	H	0.9	8.1	27.86	30.0	-2.1	

Band

LTE4

1.4MHz

QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: LG
Project #: 15I20405
Date: 4/9/2015
Test Engineer: R.Alegre
Configuration: EUT Only
Location: Chamber C
Mode: LTE_QPSK Band 4 Fundamentals, 1.4MHz Bandwidth

Test Equpment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1710.70	17.51	V	0.9	8.2	24.78	30.0	-5.2	
1710.70	21.78	H	0.9	8.2	29.05	30.0	-0.9	
Mid Ch								
1732.50	17.93	V	0.9	8.2	25.20	30.0	-4.8	
1732.50	21.62	H	0.9	8.2	28.89	30.0	-1.1	
High Ch								
1754.30	17.67	V	0.9	8.1	24.86	30.0	-5.1	
1754.30	21.55	H	0.9	8.1	28.74	30.0	-1.3	

GSM

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company:	LG
Project #:	15I20405
Date:	4/4/215
Test Engineer:	Charles Vergonio
Configuration:	EUT Only
Location:	Chamber C
Mode:	EGPRS 1900

Test Equipment:
Receiving: Horn T119 and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

Band

GSM 1900

EGPRS

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1850.20	5.96	V	0.9	8.0	13.07	33.0	-19.9	
1850.20	19.81	H	0.9	8.0	26.92	33.0	-6.1	
Mid Ch								
1880.00	6.91	V	0.9	8.0	14.02	33.0	-19.0	
1880.00	21.48	H	0.9	8.0	28.59	33.0	-4.4	
High Ch								
1909.80	5.82	V	0.9	8.0	12.93	33.0	-20.1	
1909.80	21.36	H	0.9	8.0	28.47	33.0	-4.5	

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

Band

GSM 1900

GPRS

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company:	LG
Project #:	15I20405
Date:	4/4/215
Test Engineer:	Charles Vergonio
Configuration:	EUT Only
Location:	Chamber C
Mode:	GPRS 1900

Test Equipment:
Receiving: Horn T119 and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1850.20	9.14	V	0.9	8.0	16.25	33.0	-16.8	
1850.20	23.92	H	0.9	8.0	31.03	33.0	-2.0	
Mid Ch								
1880.00	8.91	V	0.9	8.0	16.02	33.0	-17.0	
1880.00	23.16	H	0.9	8.0	30.27	33.0	-2.7	
High Ch								
1909.80	9.11	V	0.9	8.0	16.22	33.0	-16.8	
1909.80	24.25	H	0.9	8.0	31.36	33.0	-1.6	

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

Band

GSM 850

EGPRS

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: LG
Project #: 15I20405
Date: 04/04/15
Test Engineer: Charels Vergonio
Configuration: EUT Only Z Position
Mode: EGPRS850

Test Equipment:
Receiving: Sunol T185, and 3m Chamber C N-type Cable
Substitution: Dipole T273, 4ft SMA Cable Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
824.20	27.25	V	0.9	0.0	26.35	38.5	-12.1	
824.20	14.51	H	0.9	0.0	13.61	38.5	-24.8	
Mid Ch								
836.60	27.76	V	0.9	0.0	26.86	38.5	-11.6	
836.60	14.55	H	0.9	0.0	13.65	38.5	-24.8	
High Ch								
848.80	26.91	V	0.9	0.0	26.01	38.5	-12.4	
848.80	14.17	H	0.9	0.0	13.27	38.5	-25.2	

Rev. 3.17.11
Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm

Band

GSM850

GPRS

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: LG
Project #: 15I20405
Date: 04/04/15
Test Engineer: Charels Vergonio
Configuration: EUT Only Z Position
Mode: GPRS850

Test Equipment:
Receiving: Sunol T185, and 3m Chamber C N-type Cable
Substitution: Dipole T273, 4ft SMA Cable Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
824.20	32.66	V	0.9	0.0	31.76	38.5	-6.7	
824.20	20.26	H	0.9	0.0	19.36	38.5	-19.1	
Mid Ch								
836.60	32.78	V	0.9	0.0	31.88	38.5	-6.6	
836.60	19.72	H	0.9	0.0	18.82	38.5	-19.6	
High Ch								
848.80	31.93	V	0.9	0.0	31.03	38.5	-7.4	
848.80	19.27	H	0.9	0.0	18.37	38.5	-20.1	

Rev. 3.17.11
Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm

WCDMA

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: LG
Project #: 15I20405
Date: 4/4/2015
Test Engineer: Charles Vergonio
Configuration: EUT Only
Mode: HSDPA B2

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

Band

Band 2

HSDPA

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1852.40	6.17	V	0.9	8.0	13.28	33.0	-19.7	
1852.40	18.25	H	0.9	8.0	25.36	33.0	-7.6	
Mid Ch								
1880.00	6.32	V	0.9	8.0	13.43	33.0	-19.6	
1880.00	17.92	H	0.9	8.0	25.03	33.0	-8.0	
High Ch								
1907.60	6.69	V	0.9	8.0	13.80	33.0	-19.2	
1907.60	18.96	H	0.9	8.0	26.07	33.0	-6.9	

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

Band

Band 2

REL99

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: LG
Project #: 15I20405
Date: 4/4/2015
Test Engineer: Charles Vergonio
Configuration: EUT Only
Mode: Rel99 B2

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1852.40	6.17	V	0.9	8.0	13.28	33.0	-19.7	
1852.40	18.36	H	0.9	8.0	25.47	33.0	-7.5	
Mid Ch								
1880.00	6.44	V	0.9	8.0	13.55	33.0	-19.5	
1880.00	18.17	H	0.9	8.0	25.28	33.0	-7.7	
High Ch								
1907.60	6.85	V	0.9	8.0	13.96	33.0	-19.0	
1907.60	19.15	H	0.9	8.0	26.26	33.0	-6.7	

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

Band

Band 5

HSDPA

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: LG
Project #: 15I20405
Date: 04/04/15
Test Engineer: Charles Vergonio
Configuration: EUT Only Z Position
Mode: HSDPA B5 FUND

Test Equipment:
Receiving: Sunol T185, and 3m Chamber C N-type Cable
Substitution: Dipole T273, 4ft SMA Cable Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
826.40	22.24	V	0.9	0.0	21.34	38.5	-17.1	
826.40	9.59	H	0.9	0.0	8.69	38.5	-29.8	
Mid Ch								
836.60	22.53	V	0.9	0.0	21.63	38.5	-16.8	
836.60	9.81	H	0.9	0.0	8.91	38.5	-29.5	
High Ch								
846.60	22.13	V	0.9	0.0	21.23	38.5	-17.2	
846.60	9.25	H	0.9	0.0	8.35	38.5	-30.1	

Rev. 3.17.11
Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm

Band

Band 5

REL99

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: LG
Project #: 15I20405
Date: 04/04/15
Test Engineer: Charles Vergonio
Configuration: EUT Only Z Position
Mode: REL99 B5 FUND

Test Equipment:
Receiving: Sunol T185, and 3m Chamber C N-type Cable
Substitution: Dipole T273, 4ft SMA Cable Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
826.40	22.28	V	0.9	0.0	21.38	38.5	-17.1	
826.40	9.74	H	0.9	0.0	8.84	38.5	-29.6	
Mid Ch								
836.60	22.62	V	0.9	0.0	21.72	38.5	-16.7	
836.60	9.89	H	0.9	0.0	8.99	38.5	-29.5	
High Ch								
846.60	22.31	V	0.9	0.0	21.41	38.5	-17.0	
846.60	9.37	H	0.9	0.0	8.47	38.5	-30.0	

Rev. 3.17.11
Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm

CDMA

Band

BC1

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber B

Company:	LG
Project #:	15I20405
Date:	4/11/215
Test Engineer:	Charles Vergonio
Configuration:	EUT Only
Location:	Chamber B
Mode:	CDMA BC1 EVDO

Test Equipment:
Receiving: Horn T345 and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1851.25	6.21	V	0.9	8.0	13.32	33.0	-19.7	
1851.25	18.90	H	0.9	8.0	26.01	33.0	-7.0	
Mid Ch								
1880.00	6.71	V	0.9	8.0	13.82	33.0	-19.2	
1880.00	19.01	H	0.9	8.0	26.12	33.0	-6.9	
High Ch								
1908.75	6.46	V	0.9	8.0	13.57	33.0	-19.4	
1908.75	19.39	H	0.9	8.0	26.50	33.0	-6.5	

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

Band

BC1

1xRTT

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber B

Company:	LG
Project #:	15I20405
Date:	4/11/215
Test Engineer:	Charles Vergonio
Configuration:	EUT Only
Location:	Chamber B
Mode:	CDMA BC1 RTT

Test Equipment:
Receiving: Horn T345 and Chamber B SMA Cables
Substitution: Horn T59 Substitution, 4ft SMA Cable Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
1851.25	6.32	V	0.9	8.0	13.43	33.0	-19.6	
1851.25	18.91	H	0.9	8.0	26.02	33.0	-7.0	
Mid Ch								
1880.00	6.81	V	0.9	8.0	13.92	33.0	-19.1	
1880.00	19.21	H	0.9	8.0	26.32	33.0	-6.7	
High Ch								
1908.75	6.56	V	0.9	8.0	13.67	33.0	-19.3	
1908.75	19.49	H	0.9	8.0	26.60	33.0	-6.4	

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

Band

BC0

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber B

Company: LG
Project #: 15I20405
Date: 04/11/15
Test Engineer: Charles Vergonio
Configuration: EUT Only Z Position
Mode: CDMA BC0 EVDO FUND

Test Equipment:
Receiving: Sunol T243, and 3m Chamber B N-type Cable
Substitution: Dipole T273, 4ft SMA Cable Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
824.70	23.47	V	0.9	0.0	22.57	38.5	-15.9	
824.70	11.23	H	0.9	0.0	10.33	38.5	-28.1	
Mid Ch								
836.52	23.68	V	0.9	0.0	22.78	38.5	-15.7	
836.52	11.42	H	0.9	0.0	10.52	38.5	-27.9	
High Ch								
848.31	23.64	V	0.9	0.0	22.74	38.5	-15.7	
848.31	11.50	H	0.9	0.0	10.60	38.5	-27.8	

Rev. 3.17.11
Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm

Band

BC0

1xRTT

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber B

Company: LG
Project #: 15I20405
Date: 04/11/15
Test Engineer: Charles Vergonio
Configuration: EUT Only Z Position
Mode: CDMA BC0 RTT FUND

Test Equipment:
Receiving: Sunol T243, and 3m Chamber B N-type Cable
Substitution: Dipole T273, 4ft SMA Cable Warehouse.

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
824.70	23.54	V	0.9	0.0	22.64	38.5	-15.8	
824.70	11.43	H	0.9	0.0	10.53	38.5	-27.9	
Mid Ch								
836.52	23.66	V	0.9	0.0	22.76	38.5	-15.7	
836.52	11.34	H	0.9	0.0	10.44	38.5	-28.0	
High Ch								
848.31	23.77	V	0.9	0.0	22.87	38.5	-15.6	
848.31	11.38	H	0.9	0.0	10.48	38.5	-28.0	

Rev. 3.17.11
Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm

12.1.3.1. LTE (MID CHANNEL ONLY)

Band
LTE13
10MHz
QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: LG
Project #: 15I20405
Date: 4/13/2015
Test Engineer: Jude Semana
Configuration: EUT + Smart Cover + Dock (Spot Check)
Mode: LTE_QPSK Band 13 Fundamentals, 10MHz Bandwidth

Test Equipment:
Receiving: Horn T899, and Chamber G SMA Cables
Substitution: Horn T273, Xft SMA Cable (SN # SERIALNUMBER) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Mid Ch								
782.00	19.03	V	0.9	0.0	18.13	34.8	-16.6	
782.00	7.00	H	0.9	0.0	6.10	34.8	-28.7	

Rev. 3.17.11
Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm

Band

LTE12

3MHz

QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG
Project #:	15I20405
Date:	4/13/2015
Test Engineer:	Jude Semana
Configuration:	EUT + Smart Cover + Dock (Spot Check)
Location:	Chamber G
Mode:	LTE_QPSK Band 12 Fundamentals, 3MHz Bandwidth

Test Equpment:
Receiving: Horn T899, and Chamber G SMA Cables
Substitution: Horn T273, Xft SMA Cable (SN # SERIALNUMBER) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
700.50	0.00	V	0.9	0.0	0.00	38.5	0.0	
700.50	0.00	H	0.9	0.0	0.00	38.5	0.0	
Mid Ch								
707.50	15.90	V	0.9	0.0	15.00	38.5	-23.5	
707.50	18.50	H	0.9	0.0	17.60	38.5	-20.9	
High Ch								
714.50	0.00	V	0.9	0.0	0.00	38.5	0.0	
714.50	0.00	H	0.9	0.0	0.00	38.5	0.0	

Band

LTE5

1.4MHz

QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG
Project #:	15I20405
Date:	4/13/2015
Test Engineer:	Jude Semana
Configuration:	EUT + Smart Cover + Dock (Spot Check)
Location:	Chamber G
Mode:	LTE_QPSK Band 5 Fundamentals, 1.4MHz Bandwidth

Test Equpment:
Receiving: Horn T899, and Chamber G SMA Cables
Substitution: Horn T273, Xft SMA Cable (SN # SERIALNUMBER) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
824.70	0.00	V	0.9	0.0	0.00	38.5	0.0	
824.70	0.00	H	0.9	0.0	0.00	38.5	0.0	
Mid Ch								
836.50	18.90	V	0.9	0.0	18.00	38.5	-20.5	
836.50	25.20	H	0.9	0.0	24.30	38.5	-14.2	
High Ch								
848.30	0.00	V	0.9	0.0	0.00	38.5	0.0	
848.30	0.00	H	0.9	0.0	0.00	38.5	0.0	

Band

LTE4

20MHz

QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG
Project #:	15I20405
Date:	4/13/2015
Test Engineer:	Jude Semana
Configuration:	EUT + Smart Cover + Dock (Spot Check)
Location:	Chamber G
Mode:	LTE_QPSK Band 4 Fundamentals, 20MHz Bandwidth

Test Equpment:
Receiving: Horn T711, and Chamber G SMA Cables
Substitution: Horn T60, Xft SMA Cable (SN # SERIALNUMBER) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1720.00	0.00	V	0.9	8.2	0.00	30.0	0.0	
1720.00	0.00	H	0.9	8.2	0.00	30.0	0.0	
Mid Ch								
1732.50	17.10	V	0.9	8.2	24.37	30.0	-5.6	
1732.50	21.30	H	0.9	8.2	28.57	30.0	-1.4	
High Ch								
1745.00	0.00	V	0.9	8.1	0.00	30.0	0.0	
1745.00	0.00	H	0.9	8.1	0.00	30.0	0.0	

Band

LTE25

5MHz

QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	LG
Project #:	15I20405
Date:	4/13/2015
Test Engineer:	Jude Semana
Configuration:	EUT + Smart Cover + Dock (Spot Check)
Location:	Chamber G
Mode:	LTE_QPSK Band 25 Fundamentals, 5MHz Bandwidth

Test Equpment:
Receiving: Horn T711, and Chamber G SMA Cables
Substitution: Horn T60, Xft SMA Cable (SN # SERIALNUMBER) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
1852.50	0.00	V	0.9	8.0	0.00	33.0	0.0	
1852.50	0.00	H	0.9	8.0	0.00	33.0	0.0	
Mid Ch								
1882.50	13.88	V	0.9	8.0	20.99	33.0	-12.0	
1882.50	19.07	H	0.9	8.0	26.18	33.0	-6.8	
High Ch								
1912.50	0.00	V	0.9	8.0	0.00	33.0	0.0	
1912.50	0.00	H	0.9	8.0	0.00	33.0	0.0	

12.1.3.2. GSM (MID CHANNEL ONLY)

Band

GSM

1900

GPRS

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company:	LG
Project #:	15I20405
Date:	4/13/2015
Test Engineer:	Jude Semana
Configuration:	EUT + Smart Cover + Dock (Spot Check)
Location:	Chamber G
Mode:	GPRS1900

Test Equpment:
Receiving: Horn T711, and Chamber G SMA Cables
Substitution: Horn T60, Xft SMA Cable (SN # SERIALNUMBER) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	N
Low Ch								
1850.20		V	0.9	8.0		33.0		
1850.20		H	0.9	8.0		33.0		
Mid Ch								
1880.00	19.52	V	0.9	8.0	26.63	33.0	-6.4	
1880.00	22.50	H	0.9	8.0	29.61	33.0	-3.4	
High Ch								
1909.80		V	0.9	8.0		33.0		
1909.80		H	0.9	8.0		33.0		

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

Band

GSM

850

GPRS

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company:	LG
Project #:	15I20405
Date:	4/13/2015
Engineer:	Jude Semana
figuration:	EUT + Smart Cover + Dock (Spot Check)
Location:	Chamber G
Mode:	GPRS850

Test Equpment:
Receiving: Horn T899, and Chamber G SMA Cables
Substitution: Horn T273, Xft SMA Cable (SN # SERIALNUMBER) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
824.20		V	0.9	0.0		38.5		
824.20		H	0.9	0.0		38.5		
Mid Ch								
836.60	31.20	V	0.9	0.0	30.30	38.5	-8.1	
836.60	19.00	H	0.9	0.0	18.10	38.5	-20.3	
High Ch								
848.80		V	0.9	0.0		38.5		
848.80		H	0.9	0.0		38.5		

Rev. 3.17.11
Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm

12.1.3.3. WCDMA (MID CHANNEL ONLY)

Band 2 REL99

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber G

Company:	LG
Project #:	15I20405
Date:	4/13/2015
Test Engineer:	Jude Semana
Configuration:	EUT + Smart Cover + Dock (Spot Check)
Mode:	Rel99 B2

Test Equipment:
Receiving: Horn T711, and Chamber G SMA Cables
Substitution: Horn T60, Xft SMA Cable (SN # SERIALNUMBER) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	N
Low Ch								
1852.40		V	0.9	8.0		33.0		
1852.40		H	0.9	8.0		33.0		
Mid Ch								
1880.00	14.01	V	0.9	8.0	21.12	33.0	-11.9	
1880.00	17.70	H	0.9	8.0	24.81	33.0	-8.2	
High Ch								
1907.60		V	0.9	8.0		33.0		
1907.60		H	0.9	8.0		33.0		

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

Band 5 REL99

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber C

Company: LG
Project #: 15I20405
Date: 4/13/2015
Test Engineer: Jude Semana
Configuration: EUT + Smart Cover + Dock (Spot Check)
Mode: REL99 B5 FUND

Test Equipment:
Receiving: Horn T899, and Chamber G SMA Cables
Substitution: Horn T273, Xft SMA Cable (SN # SERIALNUMBER) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
826.40		V	0.9	0.0		38.5		
826.40		H	0.9	0.0		38.5		
Mid Ch								
836.60	21.17	V	0.9	0.0	20.27	38.5	-18.2	
836.60	9.20	H	0.9	0.0	8.30	38.5	-30.1	
High Ch								
846.60		V	0.9	0.0		38.5		
846.60		H	0.9	0.0		38.5		

Rev. 3.17.11
Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm

CDMA

BC1

RTT

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber G

Company:	LG
Project #:	15I20405
Date:	4/15/2015
Test Engineer:	Jude Semana
Configuration:	EUT + Smart Cover + Charging Dock
Location:	Chamber G
Mode:	CDMA BC1 RTT

Test Equipment:
Receiving: Horn T711, and Chamber G SMA Cables
Substitution: Horn T60, Xft SMA Cable (SN # SERIALNUMBER) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	N
Low Ch								
1851.25		V	0.9	8.0		33.0		
1851.25		H	0.9	8.0		33.0		
Mid Ch								
1880.00	2.44	V	0.9	8.0	9.55	33.0	-23.5	
1880.00	19.09	H	0.9	8.0	26.20	33.0	-6.8	
High Ch								
1908.75		V	0.9	8.0		33.0		
1908.75		H	0.9	8.0		33.0		

Rev. 3.17.11
Note: For Band 4 EIRP limit is 30dBm

CDMA

BC0

RTT

High Frequency Substitution Measurement
UL Verification Services, Inc. Chamber G

Company:	LG
Project #:	15I20405
Date:	4/15/2015
Engineer:	Jude Semana
figuration:	EUT + Smart Cover + Charging Dock
Location:	Chamber G
Mode:	CDMA BC0 RTT

Test Equipment:
Receiving: Horn T899, and Chamber G SMA Cables
Substitution: Horn T273, Xft SMA Cable (SN # SERIALNUMBER) Warehouse

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
824.70		V	0.9	0.0		38.5		
824.70		H	0.9	0.0		38.5		
Mid Ch								
836.52	23.11	V	0.9	0.0	22.21	38.5	-16.2	
836.52	10.83	H	0.9	0.0	9.93	38.5	-28.5	
High Ch								
848.31		V	0.9	0.0		38.5		
848.31		H	0.9	0.0		38.5		

Rev. 3.17.11
Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm

12.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

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

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.

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.

RESULTS

12.2.1. SPURIOUS RADIATION PLOTS

LTE Band 25

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Location: Chamber G
Mode: LTE_16QAM Band 25 Harmonics, 20MHz Bandwidth

Band: LTE25 20MHz 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, 1860									
3720.00	-16.9	V	3.0	35.8	1.0	-51.8	-13.0	-38.8	
5580.00	-9.4	V	3.0	35.5	1.0	-43.9	-13.0	-30.9	
7440.00	-11.5	V	3.0	35.7	1.0	-46.2	-13.0	-33.2	
3720.00	-15.9	H	3.0	35.8	1.0	-50.7	-13.0	-37.7	
5580.00	-13.0	H	3.0	35.5	1.0	-47.5	-13.0	-34.5	
7440.00	-11.4	H	3.0	35.7	1.0	-46.1	-13.0	-33.1	
Mid Ch, 1882.5									
3765.00	-16.5	V	3.0	35.8	1.0	-51.3	-13.0	-38.3	
5647.50	-13.3	V	3.0	35.5	1.0	-47.8	-13.0	-34.8	
7530.00	-12.3	V	3.0	35.7	1.0	-47.1	-13.0	-34.1	
3765.00	-17.9	H	3.0	35.8	1.0	-52.7	-13.0	-39.7	
5647.50	-14.5	H	3.0	35.5	1.0	-49.0	-13.0	-36.0	
7530.00	-11.1	H	3.0	35.7	1.0	-45.8	-13.0	-32.8	
High Ch, 1905									
3810.00	-10.9	V	3.0	35.8	1.0	-45.7	-13.0	-32.7	
5715.00	-11.4	V	3.0	35.5	1.0	-45.9	-13.0	-32.9	
7620.00	-12.1	V	3.0	35.8	1.0	-46.8	-13.0	-33.8	
3810.00	-9.6	H	3.0	35.8	1.0	-44.4	-13.0	-31.4	
5715.00	-12.6	H	3.0	35.5	1.0	-47.1	-13.0	-34.1	
7620.00	-11.0	H	3.0	35.8	1.0	-45.8	-13.0	-32.8	

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Location: Chamber G
Mode: LTE_QPSK Band 25 Harmonics, 20MHz 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, 1860									
LTE25	3720.00	-16.7	V	3.0	35.8	1.0	-51.6	-13.0	-38.6	
	5580.00	-9.8	V	3.0	35.5	1.0	-44.3	-13.0	-31.3	
20MHz	7440.00	-12.5	V	3.0	35.7	1.0	-47.2	-13.0	-34.2	
	3720.00	-15.8	H	3.0	35.8	1.0	-50.6	-13.0	-37.6	
QPSK	5580.00	-12.4	H	3.0	35.5	1.0	-46.9	-13.0	-33.9	
	7440.00	-10.9	H	3.0	35.7	1.0	-45.7	-13.0	-32.7	
	Mid Ch, 1882.5									
	3765.00	-15.5	V	3.0	35.8	1.0	-50.3	-13.0	-37.3	
	5647.50	-13.3	V	3.0	35.5	1.0	-47.8	-13.0	-34.8	
	7530.00	-12.3	V	3.0	35.7	1.0	-47.1	-13.0	-34.1	
	3765.00	-17.6	H	3.0	35.8	1.0	-52.4	-13.0	-39.4	
	5647.50	-13.9	H	3.0	35.5	1.0	-48.4	-13.0	-35.4	
	7530.00	-11.4	H	3.0	35.7	1.0	-46.2	-13.0	-33.2	
	High Ch, 1905									
	3810.00	-10.9	V	3.0	35.8	1.0	-45.7	-13.0	-32.7	
	5715.00	-11.2	V	3.0	35.5	1.0	-45.7	-13.0	-32.7	
	7620.00	-12.0	V	3.0	35.8	1.0	-46.7	-13.0	-33.7	
	3810.00	-10.5	H	3.0	35.8	1.0	-45.3	-13.0	-32.3	
	5715.00	-12.9	H	3.0	35.5	1.0	-47.4	-13.0	-34.4	
	7620.00	-11.5	H	3.0	35.8	1.0	-46.2	-13.0	-33.2	

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Location: Chamber G
Mode: LTE_16QAM Band 25 Harmonics, 15MHz 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, 1857.5									
LTE25	3715.00	-17.7	V	3.0	35.8	1.0	-52.5	-13.0	-39.5	
	5572.50	-10.7	V	3.0	35.5	1.0	-45.2	-13.0	-32.2	
15MHz	7430.00	-11.8	V	3.0	35.7	1.0	-46.6	-13.0	-33.6	
	3715.00	-15.6	H	3.0	35.8	1.0	-50.5	-13.0	-37.5	
16QAM	5572.50	-13.6	H	3.0	35.5	1.0	-48.1	-13.0	-35.1	
	7430.00	-10.5	H	3.0	35.7	1.0	-45.3	-13.0	-32.3	
	Mid Ch, 1882.5									
	3765.00	-17.1	V	3.0	35.8	1.0	-51.9	-13.0	-38.9	
	5647.50	-12.9	V	3.0	35.5	1.0	-47.4	-13.0	-34.4	
	7530.00	-12.4	V	3.0	35.7	1.0	-47.1	-13.0	-34.1	
	3765.00	-15.3	H	3.0	35.8	1.0	-50.2	-13.0	-37.2	
	5647.50	-13.1	H	3.0	35.5	1.0	-47.6	-13.0	-34.6	
	7530.00	-11.3	H	3.0	35.7	1.0	-46.0	-13.0	-33.0	
	High Ch, 1907.5									
	3815.00	-8.4	V	3.0	35.8	1.0	-43.1	-13.0	-30.1	
	5722.50	-14.0	V	3.0	35.5	1.0	-48.5	-13.0	-35.5	
	7630.00	-12.7	V	3.0	35.8	1.0	-47.4	-13.0	-34.4	
	3815.00	-11.2	H	3.0	35.8	1.0	-46.0	-13.0	-33.0	
	5722.50	-12.2	H	3.0	35.5	1.0	-46.7	-13.0	-33.7	
	7630.00	-10.8	H	3.0	35.8	1.0	-45.6	-13.0	-32.6	

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Location: Chamber G
Mode: LTE_QPSK Band 25 Harmonics, 15MHz 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, 1857.5									
LTE25	3715.00	-17.5	V	3.0	35.8	1.0	-52.3	-13.0	-39.3	
	5572.50	-10.4	V	3.0	35.5	1.0	-44.9	-13.0	-31.9	
15MHz	7430.00	-12.1	V	3.0	35.7	1.0	-46.9	-13.0	-33.9	
	3715.00	-14.8	H	3.0	35.8	1.0	-49.6	-13.0	-36.6	
QPSK	5572.50	-13.1	H	3.0	35.5	1.0	-47.6	-13.0	-34.6	
	7430.00	-10.9	H	3.0	35.7	1.0	-45.6	-13.0	-32.6	
	Mid Ch, 1882.5									
	3765.00	-17.0	V	3.0	35.8	1.0	-51.8	-13.0	-38.8	
	5647.50	-13.2	V	3.0	35.5	1.0	-47.6	-13.0	-34.6	
	7530.00	-12.7	V	3.0	35.7	1.0	-47.4	-13.0	-34.4	
	3765.00	-14.6	H	3.0	35.8	1.0	-49.4	-13.0	-36.4	
	5647.50	-13.3	H	3.0	35.5	1.0	-47.8	-13.0	-34.8	
	7530.00	-11.6	H	3.0	35.7	1.0	-46.4	-13.0	-33.4	
	High Ch, 1907.5									
	3815.00	-8.4	V	3.0	35.8	1.0	-43.2	-13.0	-30.2	
	5722.50	-14.0	V	3.0	35.5	1.0	-48.5	-13.0	-35.5	
	7630.00	-12.9	V	3.0	35.8	1.0	-47.6	-13.0	-34.6	
	3815.00	-9.1	H	3.0	35.8	1.0	-43.9	-13.0	-30.9	
	5722.50	-13.7	H	3.0	35.5	1.0	-48.2	-13.0	-35.2	
	7630.00	-11.8	H	3.0	35.8	1.0	-46.5	-13.0	-33.5	

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Location: Chamber G
Mode: LTE_16QAM Band 25 Harmonics, 10MHz 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, 1855									
LTE25	3710.00	-16.0	V	3.0	35.9	1.0	-50.9	-13.0	-37.9	
	5565.00	-8.8	V	3.0	35.5	1.0	-43.2	-13.0	-30.2	
10MHz	7420.00	-12.0	V	3.0	35.7	1.0	-46.7	-13.0	-33.7	
	3710.00	-14.9	H	3.0	35.9	1.0	-49.7	-13.0	-36.7	
16QAM	5565.00	-12.7	H	3.0	35.5	1.0	-47.1	-13.0	-34.1	
	7420.00	-11.2	H	3.0	35.7	1.0	-45.9	-13.0	-32.9	
	Mid Ch, 1882.5									
	3765.00	-17.0	V	3.0	35.8	1.0	-51.8	-13.0	-38.8	
	5647.50	-8.8	V	3.0	35.5	1.0	-43.3	-13.0	-30.3	
	7530.00	-12.3	V	3.0	35.7	1.0	-47.0	-13.0	-34.0	
	3765.00	-12.6	H	3.0	35.8	1.0	-47.4	-13.0	-34.4	
	5647.50	-13.2	H	3.0	35.5	1.0	-47.7	-13.0	-34.7	
	7530.00	-11.3	H	3.0	35.7	1.0	-46.0	-13.0	-33.0	
	High Ch, 1912									
	3824.00	-14.3	V	3.0	35.8	1.0	-49.1	-13.0	-36.1	
	5736.00	-10.7	V	3.0	35.5	1.0	-45.2	-13.0	-32.2	
	7648.00	-12.5	V	3.0	35.8	1.0	-47.2	-13.0	-34.2	
	3824.00	-7.2	H	3.0	35.8	1.0	-42.0	-13.0	-29.0	
	5736.00	-13.5	H	3.0	35.5	1.0	-48.0	-13.0	-35.0	
	7648.00	-11.2	H	3.0	35.8	1.0	-46.0	-13.0	-33.0	

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Location: Chamber G
Mode: LTE_QPSK Band 25 Harmonics, 10MHz 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, 1855									
LTE25	3710.00	-13.2	V	3.0	35.9	1.0	-48.0	-13.0	-35.0	
	5565.00	-11.1	V	3.0	35.5	1.0	-45.6	-13.0	-32.6	
10MHz	7420.00	-5.7	V	3.0	35.7	1.0	-40.4	-13.0	-27.4	
	3710.00	-14.7	H	3.0	35.9	1.0	-49.5	-13.0	-36.5	
QPSK	5565.00	-12.2	H	3.0	35.5	1.0	-46.7	-13.0	-33.7	
	7420.00	-10.4	H	3.0	35.7	1.0	-45.1	-13.0	-32.1	
	Mid Ch, 1882.5									
	3765.00	-13.6	V	3.0	35.8	1.0	-48.4	-13.0	-35.4	
	5647.50	-8.8	V	3.0	35.5	1.0	-43.3	-13.0	-30.3	
	7530.00	-13.0	V	3.0	35.7	1.0	-47.7	-13.0	-34.7	
	3765.00	-11.8	H	3.0	35.8	1.0	-46.6	-13.0	-33.6	
	5647.50	-13.2	H	3.0	35.5	1.0	-47.7	-13.0	-34.7	
	7530.00	-11.8	H	3.0	35.7	1.0	-46.6	-13.0	-33.6	
	High Ch, 1912									
	3824.00	-7.8	V	3.0	35.8	1.0	-42.6	-13.0	-29.6	
	5736.00	-10.6	V	3.0	35.5	1.0	-45.1	-13.0	-32.1	
	7648.00	-12.6	V	3.0	35.8	1.0	-47.3	-13.0	-34.3	
	3824.00	-8.3	H	3.0	35.8	1.0	-43.1	-13.0	-30.1	
	5736.00	-12.8	H	3.0	35.5	1.0	-47.3	-13.0	-34.3	
	7648.00	-10.8	H	3.0	35.8	1.0	-45.6	-13.0	-32.6	

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Location: Chamber G
Mode: LTE_16QAM Band 25 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, 1852.5									
LTE25	3705.00	-19.1	V	3.0	35.9	1.0	-53.9	-13.0	-40.9	
	5557.50	-14.2	V	3.0	35.5	1.0	-48.7	-13.0	-35.7	
5MHz	7410.00	-11.8	V	3.0	35.7	1.0	-46.5	-13.0	-33.5	
	3705.00	-19.4	H	3.0	35.9	1.0	-54.2	-13.0	-41.2	
16QAM	5557.50	-13.5	H	3.0	35.5	1.0	-47.9	-13.0	-34.9	
	7410.00	-11.3	H	3.0	35.7	1.0	-46.0	-13.0	-33.0	
	Mid Ch, 1882.5									
	3765.00	-17.6	V	3.0	35.8	1.0	-52.5	-13.0	-39.5	
	5647.50	-13.5	V	3.0	35.5	1.0	-48.0	-13.0	-35.0	
	7530.00	-12.7	V	3.0	35.7	1.0	-47.4	-13.0	-34.4	
	3765.00	-17.8	H	3.0	35.8	1.0	-52.6	-13.0	-39.6	
	5647.50	-13.9	H	3.0	35.5	1.0	-48.4	-13.0	-35.4	
	7530.00	-11.6	H	3.0	35.7	1.0	-46.3	-13.0	-33.3	
	High Ch, 1912.5									
	3825.00	-17.1	V	3.0	35.8	1.0	-51.9	-13.0	-38.9	
	5737.50	-12.5	V	3.0	35.5	1.0	-47.0	-13.0	-34.0	
	7650.00	-12.1	V	3.0	35.8	1.0	-46.8	-13.0	-33.8	
	3825.00	-17.0	H	3.0	35.8	1.0	-51.8	-13.0	-38.8	
	5737.50	-13.2	H	3.0	35.5	1.0	-47.7	-13.0	-34.7	
	7650.00	-11.1	H	3.0	35.8	1.0	-45.9	-13.0	-32.9	

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Location: Chamber G
Mode: LTE_QPSK Band 25 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
LTE25 5MHz QPSK	Low Ch, 1852.5									
	3705.00	-19.0	V	3.0	35.9	1.0	-53.8	-13.0	-40.8	
	5557.50	-14.4	V	3.0	35.5	1.0	-48.9	-13.0	-35.9	
	7410.00	-11.8	V	3.0	35.7	1.0	-46.5	-13.0	-33.5	
	3705.00	-18.6	H	3.0	35.9	1.0	-53.5	-13.0	-40.5	
	5557.50	-14.0	H	3.0	35.5	1.0	-48.5	-13.0	-35.5	
	7410.00	-11.3	H	3.0	35.7	1.0	-46.0	-13.0	-33.0	
	Mid Ch, 1882.5									
	3765.00	-17.7	V	3.0	35.8	1.0	-52.5	-13.0	-39.5	
	5647.50	-13.8	V	3.0	35.5	1.0	-48.3	-13.0	-35.3	
	7530.00	-13.0	V	3.0	35.7	1.0	-47.7	-13.0	-34.7	
	3765.00	-17.6	H	3.0	35.8	1.0	-52.4	-13.0	-39.4	
	5647.50	-13.8	H	3.0	35.5	1.0	-48.3	-13.0	-35.3	
	7530.00	-11.4	H	3.0	35.7	1.0	-46.2	-13.0	-33.2	
	High Ch, 1912.5									
	3825.00	107.4	V	3.0	35.8	1.0	72.6	-13.0	85.6	
	5737.50	-14.4	V	3.0	35.5	1.0	-48.9	-13.0	-35.9	
	7650.00	-12.0	V	3.0	35.8	1.0	-46.7	-13.0	-33.7	
	3825.00	-17.5	H	3.0	35.8	1.0	-52.2	-13.0	-39.2	
	5737.50	-13.8	H	3.0	35.5	1.0	-48.3	-13.0	-35.3	
	7650.00	-10.4	H	3.0	35.8	1.0	-45.2	-13.0	-32.2	

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Location: Chamber G
Mode: LTE_16QAM Band 25 Harmonics, 3MHz 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, 1851.5									
LTE25	3703.00	-16.7	V	3.0	35.9	1.0	-51.5	-13.0	-38.5	
	5554.50	-14.0	V	3.0	35.5	1.0	-48.5	-13.0	-35.5	
3MHz	7406.00	-11.9	V	3.0	35.7	1.0	-46.6	-13.0	-33.6	
	3703.00	-16.9	H	3.0	35.9	1.0	-51.8	-13.0	-38.8	
16QAM	5554.50	-13.9	H	3.0	35.5	1.0	-48.3	-13.0	-35.3	
	7406.00	-10.6	H	3.0	35.7	1.0	-45.3	-13.0	-32.3	
	Mid Ch, 1882.5									
	3765.00	-17.0	V	3.0	35.8	1.0	-51.8	-13.0	-38.8	
	5647.50	-14.3	V	3.0	35.5	1.0	-48.8	-13.0	-35.8	
	7530.00	-12.4	V	3.0	35.7	1.0	-47.2	-13.0	-34.2	
	3765.00	-18.2	H	3.0	35.8	1.0	-53.0	-13.0	-40.0	
	5647.50	-13.7	H	3.0	35.5	1.0	-48.2	-13.0	-35.2	
	7530.00	-11.0	H	3.0	35.7	1.0	-45.7	-13.0	-32.7	
	High Ch, 1913.5									
	3827.00	-16.4	V	3.0	35.8	1.0	-51.2	-13.0	-38.2	
	5740.50	-14.2	V	3.0	35.5	1.0	-48.7	-13.0	-35.7	
	7654.00	-12.0	V	3.0	35.8	1.0	-46.7	-13.0	-33.7	
	3827.00	-17.5	H	3.0	35.8	1.0	-52.2	-13.0	-39.2	
	5740.50	-13.5	H	3.0	35.5	1.0	-48.0	-13.0	-35.0	
	7654.00	-11.3	H	3.0	35.8	1.0	-46.1	-13.0	-33.1	

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Location: Chamber G
Mode: LTE_QPSK Band 25 Harmonics, 3MHz 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, 1851.5									
LTE25	3703.00	-18.2	V	3.0	35.9	1.0	-53.0	-13.0	-40.0	
	5554.50	-13.5	V	3.0	35.5	1.0	-48.0	-13.0	-35.0	
3MHz	7406.00	-11.6	V	3.0	35.7	1.0	-46.4	-13.0	-33.4	
	3703.00	-17.3	H	3.0	35.9	1.0	-52.2	-13.0	-39.2	
QPSK	5554.50	-13.5	H	3.0	35.5	1.0	-47.9	-13.0	-34.9	
	7406.00	-11.4	H	3.0	35.7	1.0	-46.2	-13.0	-33.2	
	Mid Ch, 1882.5									
	3765.00	-16.9	V	3.0	35.8	1.0	-51.7	-13.0	-38.7	
	5647.50	-14.9	V	3.0	35.5	1.0	-49.4	-13.0	-36.4	
	7530.00	-12.8	V	3.0	35.7	1.0	-47.5	-13.0	-34.5	
	3765.00	-17.2	H	3.0	35.8	1.0	-52.0	-13.0	-39.0	
	5647.50	-13.8	H	3.0	35.5	1.0	-48.3	-13.0	-35.3	
	7530.00	-12.1	H	3.0	35.7	1.0	-46.8	-13.0	-33.8	
	High Ch, 1913.5									
	3827.00	-16.8	V	3.0	35.8	1.0	-51.6	-13.0	-38.6	
	5740.50	-14.0	V	3.0	35.5	1.0	-48.5	-13.0	-35.5	
	7654.00	-11.7	V	3.0	35.8	1.0	-46.5	-13.0	-33.5	
	3827.00	-17.2	H	3.0	35.8	1.0	-52.0	-13.0	-39.0	
	5740.50	-13.2	H	3.0	35.5	1.0	-47.7	-13.0	-34.7	
	7654.00	-10.4	H	3.0	35.8	1.0	-45.2	-13.0	-32.2	

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Location: Chamber G
Mode: LTE_16QAM Band 25 Harmonics, 1.4MHz Bandwidth

Band
LTE25
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, 1850.7									
3701.40	-18.6	V	3.0	35.9	1.0	-53.4	-13.0	-40.4	
5552.10	-14.2	V	3.0	35.5	1.0	-48.6	-13.0	-35.6	
7402.80	-11.7	V	3.0	35.7	1.0	-46.4	-13.0	-33.4	
3701.40	-17.8	H	3.0	35.9	1.0	-52.6	-13.0	-39.6	
5552.10	-13.3	H	3.0	35.5	1.0	-47.7	-13.0	-34.7	
7402.80	-10.7	H	3.0	35.7	1.0	-45.5	-13.0	-32.5	
Mid Ch, 1882.5									
3765.00	-17.8	V	3.0	35.8	1.0	-52.6	-13.0	-39.6	
5647.50	-13.8	V	3.0	35.5	1.0	-48.2	-13.0	-35.2	
7530.00	-12.5	V	3.0	35.7	1.0	-47.2	-13.0	-34.2	
3765.00	-17.4	H	3.0	35.8	1.0	-52.2	-13.0	-39.2	
5647.50	-13.4	H	3.0	35.5	1.0	-47.9	-13.0	-34.9	
7530.00	-11.4	H	3.0	35.7	1.0	-46.2	-13.0	-33.2	
High Ch, 1914.3									
3828.60	-17.4	V	3.0	35.8	1.0	-52.2	-13.0	-39.2	
5742.90	-13.4	V	3.0	35.5	1.0	-47.9	-13.0	-34.9	
7657.20	-11.8	V	3.0	35.8	1.0	-46.5	-13.0	-33.5	
3828.60	-18.0	H	3.0	35.8	1.0	-52.8	-13.0	-39.8	
5742.90	-13.0	H	3.0	35.5	1.0	-47.5	-13.0	-34.5	
7657.20	-12.1	H	3.0	35.8	1.0	-46.9	-13.0	-33.9	

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Location: Chamber G
Mode: LTE_QPSK Band 25 Harmonics, 1.4MHz 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, 1850.7									
LTE25	3701.40	-18.5	V	3.0	35.9	1.0	-53.4	-13.0	-40.4	
	5552.10	-13.7	V	3.0	35.5	1.0	-48.2	-13.0	-35.2	
1.4MHz	7402.80	-11.3	V	3.0	35.7	1.0	-46.0	-13.0	-33.0	
	3701.40	-18.7	H	3.0	35.9	1.0	-53.6	-13.0	-40.6	
QPSK	5552.10	-13.9	H	3.0	35.5	1.0	-48.3	-13.0	-35.3	
	7402.80	-11.1	H	3.0	35.7	1.0	-45.9	-13.0	-32.9	
	Mid Ch, 1882.5									
	3765.00	-16.4	V	3.0	35.8	1.0	-51.2	-13.0	-38.2	
	5647.50	-14.3	V	3.0	35.5	1.0	-48.8	-13.0	-35.8	
	7530.00	-11.6	V	3.0	35.7	1.0	-46.4	-13.0	-33.4	
	3765.00	-17.9	H	3.0	35.8	1.0	-52.7	-13.0	-39.7	
	5647.50	-13.5	H	3.0	35.5	1.0	-48.0	-13.0	-35.0	
	7530.00	-11.7	H	3.0	35.7	1.0	-46.4	-13.0	-33.4	
	High Ch, 1914.3									
	3828.60	-17.5	V	3.0	35.8	1.0	-52.2	-13.0	-39.2	
	5742.90	-14.4	V	3.0	35.5	1.0	-48.9	-13.0	-35.9	
	7657.20	-11.7	V	3.0	35.8	1.0	-46.5	-13.0	-33.5	
	3828.60	-16.9	H	3.0	35.8	1.0	-51.7	-13.0	-38.7	
	5742.90	-12.8	H	3.0	35.5	1.0	-47.3	-13.0	-34.3	
	7657.20	-11.5	H	3.0	35.8	1.0	-46.2	-13.0	-33.2	

LTE Band 13

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS
Location: Chamber C
Mode: LTE_16QAM Band 13 Harmonics, 10MHz Bandwidth

Band
LTE13
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, 782									
	0.0	V	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.3	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.3	1.0	0.0	-13.0	0.0	
Mid Ch, 782									
1564.00	-27.4	V	3.0	37.1	1.0	-63.6	-13.0	-50.6	
2346.00	-21.3	V	3.0	36.5	1.0	-56.8	-13.0	-43.8	
3128.00	-19.5	V	3.0	36.3	1.0	-54.8	-13.0	-41.8	
1564.00	-28.4	H	3.0	37.1	1.0	-64.5	-13.0	-51.5	
2346.00	-22.6	H	3.0	36.5	1.0	-58.1	-13.0	-45.1	
3128.00	-19.1	H	3.0	36.3	1.0	-54.4	-13.0	-41.4	
High Ch, 782									
	0.0	V	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.3	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.3	1.0	0.0	-13.0	0.0	

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS
Location: Chamber C
Mode: LTE_QPSK Band 13 Harmonics, 10MHz Bandwidth

Band
LTE13
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, 782									
	0.0	V	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.3	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.3	1.0	0.0	-13.0	0.0	
Mid Ch, 782									
1564.00	-27.7	V	3.0	37.1	1.0	-63.8	-13.0	-50.8	
2346.00	-21.9	V	3.0	36.5	1.0	-57.4	-13.0	-44.4	
3128.00	-18.6	V	3.0	36.3	1.0	-53.9	-13.0	-40.9	
1564.00	-27.9	H	3.0	37.1	1.0	-64.0	-13.0	-51.0	
2346.00	-22.5	H	3.0	36.5	1.0	-58.0	-13.0	-45.0	
3128.00	-18.9	H	3.0	36.3	1.0	-54.2	-13.0	-41.2	
High Ch, 782									
	0.0	V	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	V	3.0	36.3	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	37.1	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.5	1.0	0.0	-13.0	0.0	
	0.0	H	3.0	36.3	1.0	0.0	-13.0	0.0	

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

Company:	LG Electronics
Project #:	15I20405
Date:	04/05/15
Test Engineer:	Jude Semana
Configuration:	EUT w/ AC Adapter + HS
Mode:	LTE13_5M_16QAM

Band
LTE13
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, 779.5									
1559.00	-25.4	V	3.0	37.0	1.0	-61.4	-13.0	-48.4	
2338.50	-21.1	V	3.0	36.4	1.0	-56.5	-13.0	-43.5	
3118.00	-18.3	V	3.0	36.2	1.0	-53.5	-13.0	-40.5	
1559.00	-26.1	H	3.0	37.0	1.0	-62.1	-13.0	-49.1	
2338.50	-22.3	H	3.0	36.4	1.0	-57.7	-13.0	-44.7	
3118.00	-18.9	H	3.0	36.2	1.0	-54.1	-13.0	-41.1	
Mid Ch, 782									
1564.00	-27.1	V	3.0	37.0	1.0	-63.1	-13.0	-50.1	
2346.00	-20.9	V	3.0	36.4	1.0	-56.3	-13.0	-43.3	
3128.00	-18.8	V	3.0	36.1	1.0	-53.9	-13.0	-40.9	
1564.00	-26.4	H	3.0	37.0	1.0	-62.4	-13.0	-49.4	
2346.00	-22.8	H	3.0	36.4	1.0	-58.2	-13.0	-45.2	
3128.00	-18.5	H	3.0	36.1	1.0	-53.6	-13.0	-40.6	
High Ch, 784.5									
1569.00	-25.8	V	3.0	37.0	1.0	-61.7	-13.0	-48.7	
2353.50	-20.4	V	3.0	36.4	1.0	-55.8	-13.0	-42.8	
3138.00	-18.9	V	3.0	36.1	1.0	-54.0	-13.0	-41.0	
1569.00	-26.0	H	3.0	37.0	1.0	-62.0	-13.0	-49.0	
2353.50	-22.9	H	3.0	36.4	1.0	-58.3	-13.0	-45.3	
3138.00	-18.8	H	3.0	36.1	1.0	-53.8	-13.0	-40.8	

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS
Mode: LTE13_5M_QPSK

Band
LTE13
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, 779.5									
1559.00	-26.3	V	3.0	37.0	1.0	-62.3	-13.0	-49.3	
2338.50	-20.5	V	3.0	36.4	1.0	-55.9	-13.0	-42.9	
3118.00	-19.4	V	3.0	36.2	1.0	-54.6	-13.0	-41.6	
1559.00	-26.7	H	3.0	37.0	1.0	-62.7	-13.0	-49.7	
2338.50	-23.2	H	3.0	36.4	1.0	-58.6	-13.0	-45.6	
3118.00	-18.1	H	3.0	36.2	1.0	-53.3	-13.0	-40.3	
Mid Ch, 782									
1564.00	-26.9	V	3.0	37.0	1.0	-62.9	-13.0	-49.9	
2346.00	-20.4	V	3.0	36.4	1.0	-55.8	-13.0	-42.8	
3128.00	-18.7	V	3.0	36.1	1.0	-53.8	-13.0	-40.8	
1564.00	-25.6	H	3.0	37.0	1.0	-61.6	-13.0	-48.6	
2346.00	-22.9	H	3.0	36.4	1.0	-58.3	-13.0	-45.3	
3128.00	-18.3	H	3.0	36.1	1.0	-53.4	-13.0	-40.4	
High Ch, 784.5									
1569.00	-25.8	V	3.0	37.0	1.0	-61.8	-13.0	-48.8	
2353.50	-20.5	V	3.0	36.4	1.0	-55.9	-13.0	-42.9	
3138.00	-18.8	V	3.0	36.1	1.0	-53.9	-13.0	-40.9	
1569.00	-25.4	H	3.0	37.0	1.0	-61.4	-13.0	-48.4	
2353.50	-22.4	H	3.0	36.4	1.0	-57.8	-13.0	-44.8	
3138.00	-18.7	H	3.0	36.1	1.0	-53.8	-13.0	-40.8	

LTE Band 12

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ 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	-29.1	V	3.0	37.4	1.0	-65.5	-13.0	-52.5	
2112.00	-22.5	V	3.0	36.6	1.0	-58.1	-13.0	-45.1	
2816.00	-21.2	V	3.0	36.4	1.0	-56.6	-13.0	-43.6	
1408.00	-28.4	H	3.0	37.4	1.0	-64.8	-13.0	-51.8	
2112.00	-23.5	H	3.0	36.6	1.0	-59.0	-13.0	-46.0	
2816.00	-22.3	H	3.0	36.4	1.0	-57.6	-13.0	-44.6	
Mid Ch,707.5									
1415.00	-29.1	V	3.0	37.3	1.0	-65.4	-13.0	-52.4	
2122.50	-22.8	V	3.0	36.6	1.0	-58.4	-13.0	-45.4	
2830.00	-21.2	V	3.0	36.4	1.0	-56.5	-13.0	-43.5	
1415.00	-28.0	H	3.0	37.3	1.0	-64.4	-13.0	-51.4	
2122.50	-23.9	H	3.0	36.6	1.0	-59.5	-13.0	-46.5	
2830.00	-21.8	H	3.0	36.4	1.0	-57.2	-13.0	-44.2	
High Ch,711									
1422.00	-29.1	V	3.0	37.3	1.0	-65.4	-13.0	-52.4	
2133.00	-23.0	V	3.0	36.6	1.0	-58.6	-13.0	-45.6	
2844.00	-21.1	V	3.0	36.4	1.0	-56.5	-13.0	-43.5	
1422.00	-27.8	H	3.0	37.3	1.0	-64.1	-13.0	-51.1	
2133.00	-23.9	H	3.0	36.6	1.0	-59.4	-13.0	-46.4	
2844.00	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ 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	-28.3	V	3.0	37.4	1.0	-64.6	-13.0	-51.6	
2112.00	-22.9	V	3.0	36.6	1.0	-58.4	-13.0	-45.4	
2816.00	-20.9	V	3.0	36.4	1.0	-56.3	-13.0	-43.3	
1408.00	-27.8	H	3.0	37.4	1.0	-64.1	-13.0	-51.1	
2112.00	-23.5	H	3.0	36.6	1.0	-59.0	-13.0	-46.0	
2816.00	-21.6	H	3.0	36.4	1.0	-56.9	-13.0	-43.9	
Mid Ch,707.5									
1415.00	-28.5	V	3.0	37.3	1.0	-64.8	-13.0	-51.8	
2122.50	-22.3	V	3.0	36.6	1.0	-57.8	-13.0	-44.8	
2830.00	-21.2	V	3.0	36.4	1.0	-56.6	-13.0	-43.6	
1415.00	-27.8	H	3.0	37.3	1.0	-64.1	-13.0	-51.1	
2122.50	-23.8	H	3.0	36.6	1.0	-59.4	-13.0	-46.4	
2830.00	-22.6	H	3.0	36.4	1.0	-58.0	-13.0	-45.0	
High Ch,711									
1422.00	-28.9	V	3.0	37.3	1.0	-65.2	-13.0	-52.2	
2133.00	-23.6	V	3.0	36.6	1.0	-59.2	-13.0	-46.2	
2844.00	-22.6	V	3.0	36.4	1.0	-58.0	-13.0	-45.0	
1422.00	-26.4	H	3.0	37.3	1.0	-62.8	-13.0	-49.8	
2133.00	-22.9	H	3.0	36.6	1.0	-58.4	-13.0	-45.4	
2844.00	-22.1	H	3.0	36.4	1.0	-57.5	-13.0	-44.5	

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ 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	-28.8	V	3.0	37.4	1.0	-65.2	-13.0	-52.2	
2104.50	-23.1	V	3.0	36.6	1.0	-58.6	-13.0	-45.6	
2806.00	-21.6	V	3.0	36.4	1.0	-57.0	-13.0	-44.0	
1403.00	-28.0	H	3.0	37.4	1.0	-64.4	-13.0	-51.4	
2104.50	-23.3	H	3.0	36.6	1.0	-58.9	-13.0	-45.9	
2806.00	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
Mid Ch, 707.50									
1415.00	-28.0	V	3.0	37.3	1.0	-64.4	-13.0	-51.4	
2122.50	-22.1	V	3.0	36.6	1.0	-57.7	-13.0	-44.7	
2830.00	-21.1	V	3.0	36.4	1.0	-56.5	-13.0	-43.5	
1415.00	-27.7	H	3.0	37.3	1.0	-64.0	-13.0	-51.0	
2122.50	-23.3	H	3.0	36.6	1.0	-58.9	-13.0	-45.9	
2830.00	-22.6	H	3.0	36.4	1.0	-58.0	-13.0	-45.0	
High Ch, 713.50									
1427.00	-28.8	V	3.0	37.3	1.0	-65.2	-13.0	-52.2	
2140.50	-22.7	V	3.0	36.6	1.0	-58.2	-13.0	-45.2	
2854.00	-20.8	V	3.0	36.4	1.0	-56.2	-13.0	-43.2	
1427.00	-27.9	H	3.0	37.3	1.0	-64.2	-13.0	-51.2	
2140.50	-24.2	H	3.0	36.6	1.0	-59.8	-13.0	-46.8	
2854.00	-22.6	H	3.0	36.4	1.0	-58.0	-13.0	-45.0	

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ 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	-28.6	V	3.0	37.4	1.0	-65.0	-13.0	-52.0	
2104.50	-22.6	V	3.0	36.6	1.0	-58.1	-13.0	-45.1	
2806.00	-20.1	V	3.0	36.4	1.0	-55.5	-13.0	-42.5	
1403.00	-27.7	H	3.0	37.4	1.0	-64.1	-13.0	-51.1	
2104.50	-24.3	H	3.0	36.6	1.0	-59.8	-13.0	-46.8	
2806.00	-22.7	H	3.0	36.4	1.0	-58.0	-13.0	-45.0	
Mid Ch, 707.50									
1415.00	-29.0	V	3.0	37.3	1.0	-65.3	-13.0	-52.3	
2122.50	-22.5	V	3.0	36.6	1.0	-58.0	-13.0	-45.0	
2830.00	-21.1	V	3.0	36.4	1.0	-56.5	-13.0	-43.5	
1415.00	-27.2	H	3.0	37.3	1.0	-63.6	-13.0	-50.6	
2122.50	-23.9	H	3.0	36.6	1.0	-59.5	-13.0	-46.5	
2830.00	-21.6	H	3.0	36.4	1.0	-57.0	-13.0	-44.0	
High Ch, 713.50									
1427.00	-28.8	V	3.0	37.3	1.0	-65.1	-13.0	-52.1	
2140.50	-22.7	V	3.0	36.6	1.0	-58.2	-13.0	-45.2	
2854.00	-21.3	V	3.0	36.4	1.0	-56.7	-13.0	-43.7	
1427.00	-27.8	H	3.0	37.3	1.0	-64.1	-13.0	-51.1	
2140.50	-23.4	H	3.0	36.6	1.0	-59.0	-13.0	-46.0	
2854.00	-22.0	H	3.0	36.4	1.0	-57.4	-13.0	-44.4	

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ 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	-28.7	V	3.0	37.4	1.0	-65.1	-13.0	-52.1	
2101.50	-22.3	V	3.0	36.6	1.0	-57.8	-13.0	-44.8	
2802.00	-21.3	V	3.0	36.4	1.0	-56.6	-13.0	-43.6	
1401.00	-27.5	H	3.0	37.4	1.0	-63.9	-13.0	-50.9	
2101.50	-23.8	H	3.0	36.6	1.0	-59.3	-13.0	-46.3	
2802.00	-22.2	H	3.0	36.4	1.0	-57.6	-13.0	-44.6	
Mid Ch, 707.50									
1415.00	-28.3	V	3.0	37.3	1.0	-64.6	-13.0	-51.6	
2122.00	-22.5	V	3.0	36.6	1.0	-58.1	-13.0	-45.1	
2830.00	-20.9	V	3.0	36.4	1.0	-56.3	-13.0	-43.3	
1415.00	-27.4	H	3.0	37.3	1.0	-63.8	-13.0	-50.8	
2122.00	-22.6	H	3.0	36.6	1.0	-58.2	-13.0	-45.2	
2830.00	-21.3	H	3.0	36.4	1.0	-56.7	-13.0	-43.7	
High Ch, 714.5									
1429.00	-28.2	V	3.0	37.3	1.0	-64.5	-13.0	-51.5	
2143.50	-22.3	V	3.0	36.6	1.0	-57.9	-13.0	-44.9	
2858.00	-21.9	V	3.0	36.4	1.0	-57.3	-13.0	-44.3	
1429.00	-27.0	H	3.0	37.3	1.0	-63.4	-13.0	-50.4	
2143.50	-23.6	H	3.0	36.6	1.0	-59.2	-13.0	-46.2	
2858.00	-22.0	H	3.0	36.4	1.0	-57.4	-13.0	-44.4	

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ 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	-28.9	V	3.0	37.4	1.0	-65.3	-13.0	-52.3	
2101.50	-22.6	V	3.0	36.6	1.0	-58.2	-13.0	-45.2	
2802.00	-21.6	V	3.0	36.4	1.0	-57.0	-13.0	-44.0	
1401.00	-28.0	H	3.0	37.4	1.0	-64.3	-13.0	-51.3	
2101.50	-22.7	H	3.0	36.6	1.0	-58.2	-13.0	-45.2	
2802.00	-22.2	H	3.0	36.4	1.0	-57.6	-13.0	-44.6	
Mid Ch, 707.50									
1415.00	-29.8	V	3.0	37.3	1.0	-66.1	-13.0	-53.1	
2122.00	-22.4	V	3.0	36.6	1.0	-57.9	-13.0	-44.9	
2830.00	-20.3	V	3.0	36.4	1.0	-55.7	-13.0	-42.7	
1415.00	-27.9	H	3.0	37.3	1.0	-64.3	-13.0	-51.3	
2122.00	-23.2	H	3.0	36.6	1.0	-58.8	-13.0	-45.8	
2830.00	-22.3	H	3.0	36.4	1.0	-57.6	-13.0	-44.6	
High Ch, 714.5									
1429.00	-28.8	V	3.0	37.3	1.0	-65.2	-13.0	-52.2	
2143.50	-22.9	V	3.0	36.6	1.0	-58.5	-13.0	-45.5	
2858.00	-21.1	V	3.0	36.4	1.0	-56.4	-13.0	-43.4	
1429.00	-27.7	H	3.0	37.3	1.0	-64.1	-13.0	-51.1	
2143.50	-23.8	H	3.0	36.6	1.0	-59.3	-13.0	-46.3	
2858.00	-22.0	H	3.0	36.4	1.0	-57.3	-13.0	-44.3	

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ 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	-28.7	V	3.0	37.4	1.0	-65.1	-13.0	-52.1	
2099.10	-23.1	V	3.0	36.6	1.0	-58.7	-13.0	-45.7	
2798.80	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8	
1399.40	-27.5	H	3.0	37.4	1.0	-63.9	-13.0	-50.9	
2099.10	-24.2	H	3.0	36.6	1.0	-59.7	-13.0	-46.7	
2798.80	-22.6	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
Mid Ch, 707.50									
1415.00	-29.6	V	3.0	37.3	1.0	-66.0	-13.0	-53.0	
2122.00	-22.6	V	3.0	36.6	1.0	-58.1	-13.0	-45.1	
2830.00	-22.0	V	3.0	36.4	1.0	-57.4	-13.0	-44.4	
1415.00	-27.4	H	3.0	37.3	1.0	-63.7	-13.0	-50.7	
2122.00	-24.2	H	3.0	36.6	1.0	-59.8	-13.0	-46.8	
2830.00	-22.1	H	3.0	36.4	1.0	-57.5	-13.0	-44.5	
High Ch, 715.3									
1430.60	-27.5	V	3.0	37.3	1.0	-63.8	-13.0	-50.8	
2145.90	-22.8	V	3.0	36.6	1.0	-58.4	-13.0	-45.4	
2861.20	-20.6	V	3.0	36.4	1.0	-56.0	-13.0	-43.0	
1430.60	-27.8	H	3.0	37.3	1.0	-64.2	-13.0	-51.2	
2145.90	-23.2	H	3.0	36.6	1.0	-58.8	-13.0	-45.8	
2861.20	-21.9	H	3.0	36.4	1.0	-57.3	-13.0	-44.3	

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS
Location: Chamber C
Mode: LTE_QPSK Band 12 Harmonics, 1.4MHz 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, 699.7									
LTE12	1399.40	-28.5	V	3.0	37.4	1.0	-64.9	-13.0	-51.9	
	2099.10	-22.9	V	3.0	36.6	1.0	-58.5	-13.0	-45.5	
	2798.80	-20.6	V	3.0	36.4	1.0	-56.0	-13.0	-43.0	
1.4MHz	1399.40	-27.3	H	3.0	37.4	1.0	-63.7	-13.0	-50.7	
	2099.10	-23.7	H	3.0	36.6	1.0	-59.2	-13.0	-46.2	
QPSK	2798.80	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
	Mid Ch, 707.50									
	1415.00	-29.0	V	3.0	37.3	1.0	-65.3	-13.0	-52.3	
	2122.00	-22.8	V	3.0	36.6	1.0	-58.4	-13.0	-45.4	
	2830.00	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8	
	1415.00	-27.6	H	3.0	37.3	1.0	-64.0	-13.0	-51.0	
	2122.00	-22.8	H	3.0	36.6	1.0	-58.4	-13.0	-45.4	
	2830.00	-22.6	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
	High Ch, 715.3									
	1430.60	-29.3	V	3.0	37.3	1.0	-65.6	-13.0	-52.6	
	2145.90	-22.2	V	3.0	36.6	1.0	-57.8	-13.0	-44.8	
	2861.20	-21.2	V	3.0	36.4	1.0	-56.6	-13.0	-43.6	
	1430.60	-27.8	H	3.0	37.3	1.0	-64.2	-13.0	-51.2	
	2145.90	-23.5	H	3.0	36.6	1.0	-59.1	-13.0	-46.1	
	2861.20	-22.0	H	3.0	36.4	1.0	-57.4	-13.0	-44.4	

LTE Band 5

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS
Mode: LTE5 10MHz 16QAM HARM

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

Band: LTE5 10MHz 16QAM

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 829MHz									
1.658	-26.4	V	3.0	37.4	1.0	-62.8	-13.0	-49.8	
2.487	-19.2	V	3.0	36.4	1.0	-54.5	-13.0	-41.5	
3.316	-20.4	V	3.0	35.8	1.0	-55.2	-13.0	-42.2	
1.658	-25.9	H	3.0	37.4	1.0	-62.3	-13.0	-49.3	
2.487	-24.3	H	3.0	36.4	1.0	-59.7	-13.0	-46.7	
3.316	-21.7	H	3.0	35.8	1.0	-56.5	-13.0	-43.5	
Mid Ch, 836.5MHz									
1.673	-26.3	V	3.0	37.3	1.0	-62.7	-13.0	-49.7	
2.510	-21.2	V	3.0	36.4	1.0	-56.5	-13.0	-43.5	
3.346	-21.2	V	3.0	35.8	1.0	-55.9	-13.0	-42.9	
1.673	-26.2	H	3.0	37.3	1.0	-62.5	-13.0	-49.5	
2.510	-22.7	H	3.0	36.4	1.0	-58.0	-13.0	-45.0	
3.346	-21.5	H	3.0	35.8	1.0	-56.2	-13.0	-43.2	
High Ch, 844MHz									
1.688	-25.2	V	3.0	37.3	1.0	-61.5	-13.0	-48.5	
2.532	-21.3	V	3.0	36.3	1.0	-56.6	-13.0	-43.6	
3.376	-20.4	V	3.0	35.7	1.0	-55.1	-13.0	-42.1	
1.688	-25.6	H	3.0	37.3	1.0	-61.9	-13.0	-48.9	
2.532	-22.7	H	3.0	36.3	1.0	-58.1	-13.0	-45.1	
3.376	-20.4	H	3.0	35.7	1.0	-55.1	-13.0	-42.1	

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS
Mode: LTE5 10MHz QPSK HARM

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

Band LTE5 10MHz QPSK

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	(dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 829MHz									
1.658	-26.6	V	3.0	37.4	1.0	-63.0	-13.0	-50.0	
2.487	-20.4	V	3.0	36.4	1.0	-55.8	-13.0	-42.8	
3.316	-21.2	V	3.0	35.8	1.0	-56.0	-13.0	-43.0	
1.658	-26.7	H	3.0	37.4	1.0	-63.1	-13.0	-50.1	
2.487	-21.5	H	3.0	36.4	1.0	-56.9	-13.0	-43.9	
3.316	-21.1	H	3.0	35.8	1.0	-55.8	-13.0	-42.8	
Mid Ch, 836.5MHz									
1.673	-25.4	V	3.0	37.3	1.0	-61.8	-13.0	-48.8	
2.510	-21.0	V	3.0	36.4	1.0	-56.3	-13.0	-43.3	
3.346	-20.5	V	3.0	35.8	1.0	-55.2	-13.0	-42.2	
1.673	-26.6	H	3.0	37.3	1.0	-62.9	-13.0	-49.9	
2.510	-22.3	H	3.0	36.4	1.0	-57.7	-13.0	-44.7	
3.346	-21.2	H	3.0	35.8	1.0	-56.0	-13.0	-43.0	
High Ch, 844 MHz									
1.688	-25.6	V	3.0	37.3	1.0	-62.0	-13.0	-49.0	
2.532	-20.6	V	3.0	36.3	1.0	-56.0	-13.0	-43.0	
3.376	-19.6	V	3.0	35.7	1.0	-54.3	-13.0	-41.3	
1.688	-25.7	H	3.0	37.3	1.0	-62.0	-13.0	-49.0	
2.532	-23.4	H	3.0	36.3	1.0	-58.8	-13.0	-45.8	
3.376	-19.9	H	3.0	35.7	1.0	-54.6	-13.0	-41.6	

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS
Mode: LTE5 5M 16QAM

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

Band: LTE5 5MHz 16QAM

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.5MHz									
1.653	-26.0	V	3.0	37.4	1.0	-62.3	-13.0	-49.3	
2.480	-20.7	V	3.0	36.4	1.0	-56.1	-13.0	-43.1	
3.306	-19.7	V	3.0	35.8	1.0	-54.5	-13.0	-41.5	
1.653	-26.1	H	3.0	37.4	1.0	-62.5	-13.0	-49.5	
2.480	-22.4	H	3.0	36.4	1.0	-57.8	-13.0	-44.8	
3.306	-19.7	H	3.0	35.8	1.0	-54.5	-13.0	-41.5	
Mid Ch, 836.5MHz									
1.673	-25.1	V	3.0	37.3	1.0	-61.5	-13.0	-48.5	
2.510	-20.1	V	3.0	36.4	1.0	-55.5	-13.0	-42.5	
3.346	-21.4	V	3.0	35.8	1.0	-56.1	-13.0	-43.1	
1.673	-33.0	H	3.0	37.3	1.0	-69.4	-13.0	-56.4	
2.510	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
3.346	-20.7	H	3.0	35.8	1.0	-55.5	-13.0	-42.5	
High Ch, 846.5MHz									
1.693	-26.5	V	3.0	37.3	1.0	-62.8	-13.0	-49.8	
2.540	-20.7	V	3.0	36.3	1.0	-56.1	-13.0	-43.1	
3.386	-20.7	V	3.0	35.7	1.0	-55.4	-13.0	-42.4	
1.693	-26.6	H	3.0	37.3	1.0	-62.9	-13.0	-49.9	
2.540	-22.9	H	3.0	36.3	1.0	-58.2	-13.0	-45.2	
3.386	-21.2	H	3.0	35.7	1.0	-55.9	-13.0	-42.9	

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS
Mode: LTE5 5M QPSK

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

Band
LTE5
5MHz
QPSK

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.5MHz									
1.653	-25.8	V	3.0	37.4	1.0	-62.2	-13.0	-49.2	
2.480	-21.1	V	3.0	36.4	1.0	-56.5	-13.0	-43.5	
3.306	-20.9	V	3.0	35.8	1.0	-55.7	-13.0	-42.7	
1.653	-25.9	H	3.0	37.4	1.0	-62.3	-13.0	-49.3	
2.480	-22.6	H	3.0	36.4	1.0	-58.0	-13.0	-45.0	
3.306	-20.7	H	3.0	35.8	1.0	-55.5	-13.0	-42.5	
Mid Ch, 836.5MHz									
1.673	-25.8	V	3.0	37.3	1.0	-62.1	-13.0	-49.1	
2.510	-19.8	V	3.0	36.4	1.0	-55.1	-13.0	-42.1	
3.346	-21.1	V	3.0	35.8	1.0	-55.9	-13.0	-42.9	
1.673	-26.1	H	3.0	37.3	1.0	-62.5	-13.0	-49.5	
2.510	-21.9	H	3.0	36.4	1.0	-57.3	-13.0	-44.3	
3.346	-21.7	H	3.0	35.8	1.0	-56.5	-13.0	-43.5	
High Ch, 846.5MHz									
1.693	-26.1	V	3.0	37.3	1.0	-62.4	-13.0	-49.4	
2.540	-20.4	V	3.0	36.3	1.0	-55.7	-13.0	-42.7	
3.386	-20.9	V	3.0	35.7	1.0	-55.6	-13.0	-42.6	
1.693	-26.2	H	3.0	37.3	1.0	-62.5	-13.0	-49.5	
2.540	-22.6	H	3.0	36.3	1.0	-58.0	-13.0	-45.0	
3.386	-18.5	H	3.0	35.7	1.0	-53.2	-13.0	-40.2	

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS
Mode: LTE2_3M_16QAM

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

Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	(dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch, 825.5MHz									
LTE5	1.651	-26.2	V	3.0	37.4	1.0	-62.6	-13.0	-49.6	
	2.477	-19.9	V	3.0	36.4	1.0	-55.3	-13.0	-42.3	
3MHz	3.302	-21.7	V	3.0	35.8	1.0	-56.5	-13.0	-43.5	
	1.651	-26.4	H	3.0	37.4	1.0	-62.7	-13.0	-49.7	
16QAM	2.477	-21.4	H	3.0	36.4	1.0	-56.8	-13.0	-43.8	
	3.302	-21.1	H	3.0	35.8	1.0	-55.9	-13.0	-42.9	
	Mid Ch, 836.5MHz									
	1.673	-25.3	V	3.0	37.3	1.0	-61.7	-13.0	-48.7	
	2.510	-22.2	V	3.0	36.4	1.0	-57.5	-13.0	-44.5	
	3.346	-18.3	V	3.0	35.8	1.0	-53.0	-13.0	-40.0	
	1.673	-25.8	H	3.0	37.3	1.0	-62.2	-13.0	-49.2	
	2.510	-23.6	H	3.0	36.4	1.0	-59.0	-13.0	-46.0	
	3.346	-18.8	H	3.0	35.8	1.0	-53.5	-13.0	-40.5	
	High Ch, 847.5 MHz									
	1.695	-25.5	V	3.0	37.3	1.0	-61.8	-13.0	-48.8	
	2.543	-21.2	V	3.0	36.3	1.0	-56.5	-13.0	-43.5	
	3.390	-21.0	V	3.0	35.7	1.0	-55.7	-13.0	-42.7	
	1.695	-25.9	H	3.0	37.3	1.0	-62.2	-13.0	-49.2	
	2.543	-22.6	H	3.0	36.3	1.0	-58.0	-13.0	-45.0	
	3.390	-21.4	H	3.0	35.7	1.0	-56.2	-13.0	-43.2	

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

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS
Mode: LTE2_3M_QPSK

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

Band
LTE5
3MHz
QPSK

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	(dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 825.5MHz									
1.651	-26.3	V	3.0	37.4	1.0	-62.7	-13.0	-49.7	
2.477	-20.0	V	3.0	36.4	1.0	-55.4	-13.0	-42.4	
3.302	-20.6	V	3.0	35.8	1.0	-55.4	-13.0	-42.4	
1.651	-26.7	H	3.0	37.4	1.0	-63.1	-13.0	-50.1	
2.477	-22.1	H	3.0	36.4	1.0	-57.5	-13.0	-44.5	
3.302	-21.5	H	3.0	35.8	1.0	-56.3	-13.0	-43.3	
Mid Ch, 836.5MHz									
1.673	-24.9	V	3.0	37.3	1.0	-61.2	-13.0	-48.2	
2.510	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8	
3.346	-18.9	V	3.0	35.8	1.0	-53.7	-13.0	-40.7	
1.673	-25.8	H	3.0	37.3	1.0	-62.1	-13.0	-49.1	
2.510	-22.9	H	3.0	36.4	1.0	-58.3	-13.0	-45.3	
3.346	-19.6	H	3.0	35.8	1.0	-54.3	-13.0	-41.3	
High Ch, 847.5 MHz									
1.695	-24.9	V	3.0	37.3	1.0	-61.2	-13.0	-48.2	
2.543	-20.8	V	3.0	36.3	1.0	-56.1	-13.0	-43.1	
3.390	-21.2	V	3.0	35.7	1.0	-55.9	-13.0	-42.9	
1.695	-26.0	H	3.0	37.3	1.0	-62.3	-13.0	-49.3	
2.543	-21.6	H	3.0	36.3	1.0	-56.9	-13.0	-43.9	
3.390	-21.3	H	3.0	35.7	1.0	-56.0	-13.0	-43.0	

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS
Mode: LTE5 1.4MHz 16QAM HARM

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

Band: LTE5 1.4MHz 16QAM

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	(dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7MHz									
1.649	-26.4	V	3.0	37.4	1.0	-62.8	-13.0	-49.8	
2.474	-20.7	V	3.0	36.4	1.0	-56.1	-13.0	-43.1	
3.299	-20.7	V	3.0	35.8	1.0	-55.5	-13.0	-42.5	
1.649	-27.3	H	3.0	37.4	1.0	-63.6	-13.0	-50.6	
2.474	-21.9	H	3.0	36.4	1.0	-57.3	-13.0	-44.3	
3.299	-21.1	H	3.0	35.8	1.0	-55.9	-13.0	-42.9	
Mid Ch, 836.5MHz									
1.673	-25.5	V	3.0	37.3	1.0	-61.8	-13.0	-48.8	
2.510	-22.3	V	3.0	36.4	1.0	-57.6	-13.0	-44.6	
3.346	-20.1	V	3.0	35.8	1.0	-54.8	-13.0	-41.8	
1.673	-25.9	H	3.0	37.3	1.0	-62.3	-13.0	-49.3	
2.510	-23.5	H	3.0	36.4	1.0	-58.8	-13.0	-45.8	
3.346	-20.9	H	3.0	35.8	1.0	-55.6	-13.0	-42.6	
High Ch, 848.3 MHz									
1.697	-25.1	V	3.0	37.3	1.0	-61.4	-13.0	-48.4	
2.545	-21.1	V	3.0	36.3	1.0	-56.5	-13.0	-43.5	
3.393	-21.2	V	3.0	35.7	1.0	-55.9	-13.0	-42.9	
1.697	-24.8	H	3.0	37.3	1.0	-61.1	-13.0	-48.1	
2.545	-22.6	H	3.0	36.3	1.0	-57.9	-13.0	-44.9	
3.393	-20.6	H	3.0	35.7	1.0	-55.3	-13.0	-42.3	

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

Company: LG Electronics
Project #: 15I20405
Date: 04/05/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adapter + HS
Mode: LTE5_1.4M_QPSK

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

Band
LTE5
1.4MHz
QPSK

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	(dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 829MHz									
1.649	-26.4	V	3.0	37.4	1.0	-62.7	-13.0	-49.7	
2.474	-20.6	V	3.0	36.4	1.0	-55.9	-13.0	-42.9	
3.299	-21.1	V	3.0	35.8	1.0	-55.9	-13.0	-42.9	
1.649	-27.0	H	3.0	37.4	1.0	-63.4	-13.0	-50.4	
2.474	-21.6	H	3.0	36.4	1.0	-57.0	-13.0	-44.0	
3.299	-21.1	H	3.0	35.8	1.0	-55.9	-13.0	-42.9	
Mid Ch, 836.5MHz									
1.673	-25.7	V	3.0	37.3	1.0	-62.1	-13.0	-49.1	
2.510	-22.3	V	3.0	36.4	1.0	-57.7	-13.0	-44.7	
3.346	-20.2	V	3.0	35.8	1.0	-54.9	-13.0	-41.9	
1.673	-26.1	H	3.0	37.3	1.0	-62.4	-13.0	-49.4	
2.510	-23.6	H	3.0	36.4	1.0	-59.0	-13.0	-46.0	
3.346	-20.9	H	3.0	35.8	1.0	-55.6	-13.0	-42.6	
High Ch, 844 MHz									
1.697	-26.0	V	3.0	37.3	1.0	-62.3	-13.0	-49.3	
2.545	-21.2	V	3.0	36.3	1.0	-56.6	-13.0	-43.6	
3.393	-21.0	V	3.0	35.7	1.0	-55.7	-13.0	-42.7	
1.697	-26.0	H	3.0	37.3	1.0	-62.3	-13.0	-49.3	
2.545	-21.4	H	3.0	36.3	1.0	-56.7	-13.0	-43.7	
3.393	-21.3	H	3.0	35.7	1.0	-56.0	-13.0	-43.0	

LTE Band 4

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

Company:	LG
Project #:	15I20405
Date:	4/6/2015
Test Engineer:	Jude Semana
Configuration:	EUT + Charger + Headset
Location:	Chamber G
Mode:	LTE_16QAM Band 4 Harmonics, 20MHz Bandwidth

Band: LTE4 20MHz 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, 1720									
3440.00	-13.6	V	3.0	36.0	1.0	-48.6	-13.0	-35.6	
5160.00	-11.9	V	3.0	35.4	1.0	-46.3	-13.0	-33.3	
6880.00	-11.6	V	3.0	35.7	1.0	-46.3	-13.0	-33.3	
3440.00	-10.8	H	3.0	36.0	1.0	-45.9	-13.0	-32.9	
5160.00	-11.8	H	3.0	35.4	1.0	-46.3	-13.0	-33.3	
6880.00	-9.0	H	3.0	35.7	1.0	-43.6	-13.0	-30.6	
Mid Ch, 1732.5									
3465.00	-15.1	V	3.0	36.0	1.0	-50.1	-13.0	-37.1	
5197.50	-11.3	V	3.0	35.4	1.0	-45.7	-13.0	-32.7	
6930.00	-11.5	V	3.0	35.7	1.0	-46.2	-13.0	-33.2	
3465.00	-12.0	H	3.0	36.0	1.0	-47.1	-13.0	-34.1	
5197.50	-11.4	H	3.0	35.4	1.0	-45.9	-13.0	-32.9	
6930.00	-10.0	H	3.0	35.7	1.0	-44.7	-13.0	-31.7	
High Ch, 1745									
3490.00	-13.9	V	3.0	36.0	1.0	-48.9	-13.0	-35.9	
5235.00	-11.3	V	3.0	35.4	1.0	-45.7	-13.0	-32.7	
6980.00	-11.1	V	3.0	35.7	1.0	-45.8	-13.0	-32.8	
3490.00	-11.0	H	3.0	36.0	1.0	-46.0	-13.0	-33.0	
5235.00	-10.7	H	3.0	35.4	1.0	-45.1	-13.0	-32.1	
6980.00	-9.9	H	3.0	35.7	1.0	-44.6	-13.0	-31.6	

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

Company: LG
Project #: 15I20405
Date: 4/6/2015
Test Engineer: Jude Semana
Configuration: EUT + Charger + Headset
Location: Chamber G
Mode: LTE_QPSK Band 4 Harmonics, 20MHz 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, 1720									
LTE4	3440.00	-13.0	V	3.0	36.0	1.0	-48.1	-13.0	-35.1	
	5160.00	-11.5	V	3.0	35.4	1.0	-45.9	-13.0	-32.9	
20MHz	6880.00	-11.6	V	3.0	35.7	1.0	-46.2	-13.0	-33.2	
	3440.00	-10.1	H	3.0	36.0	1.0	-45.1	-13.0	-32.1	
QPSK	5160.00	-11.0	H	3.0	35.4	1.0	-45.4	-13.0	-32.4	
	6880.00	-10.4	H	3.0	35.7	1.0	-45.0	-13.0	-32.0	
	Mid Ch, 1732.5									
	3465.00	-15.4	V	3.0	36.0	1.0	-50.5	-13.0	-37.5	
	5197.50	-11.4	V	3.0	35.4	1.0	-45.8	-13.0	-32.8	
	6930.00	-11.3	V	3.0	35.7	1.0	-46.0	-13.0	-33.0	
	3465.00	-11.7	H	3.0	36.0	1.0	-46.8	-13.0	-33.8	
	5197.50	-11.6	H	3.0	35.4	1.0	-46.0	-13.0	-33.0	
	6930.00	-9.8	H	3.0	35.7	1.0	-44.5	-13.0	-31.5	
	High Ch, 1745									
	3490.00	-13.3	V	3.0	36.0	1.0	-48.4	-13.0	-35.4	
	5235.00	-11.3	V	3.0	35.4	1.0	-45.7	-13.0	-32.7	
	6980.00	-11.4	V	3.0	35.7	1.0	-46.1	-13.0	-33.1	
	3490.00	-10.7	H	3.0	36.0	1.0	-45.7	-13.0	-32.7	
	5235.00	-10.7	H	3.0	35.4	1.0	-45.1	-13.0	-32.1	
	6980.00	-9.2	H	3.0	35.7	1.0	-43.9	-13.0	-30.9	

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

Company: LG
Project #: 15I20405
Date: 4/6/2015
Test Engineer: Jude Semana
Configuration: EUT + Charger + Headset
Location: Chamber G
Mode: LTE_16QAM Band 4 Harmonics, 15MHz 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, 1717.5									
LTE4	3435.00	-12.5	V	3.0	36.1	1.0	-47.5	-13.0	-34.5	
	5152.50	-12.4	V	3.0	35.4	1.0	-46.8	-13.0	-33.8	
	6870.00	-11.9	V	3.0	35.7	1.0	-46.5	-13.0	-33.5	
15MHz	3435.00	-10.0	H	3.0	36.1	1.0	-45.0	-13.0	-32.0	
	5152.50	-11.3	H	3.0	35.4	1.0	-45.8	-13.0	-32.8	
16QAM	6870.00	-9.9	H	3.0	35.7	1.0	-44.6	-13.0	-31.6	
	Mid Ch, 1732.5									
	3465.00	-15.2	V	3.0	36.0	1.0	-50.3	-13.0	-37.3	
	5197.50	-10.7	V	3.0	35.4	1.0	-45.2	-13.0	-32.2	
	6930.00	-11.5	V	3.0	35.7	1.0	-46.1	-13.0	-33.1	
	3465.00	-10.2	H	3.0	36.0	1.0	-45.2	-13.0	-32.2	
	5197.50	-10.9	H	3.0	35.4	1.0	-45.3	-13.0	-32.3	
	6930.00	-10.1	H	3.0	35.7	1.0	-44.7	-13.0	-31.7	
	High Ch, 1747.5									
	3495.00	-13.1	V	3.0	36.0	1.0	-48.1	-13.0	-35.1	
	5242.50	-9.7	V	3.0	35.4	1.0	-44.1	-13.0	-31.1	
	6990.00	-11.3	V	3.0	35.7	1.0	-46.0	-13.0	-33.0	
	3495.00	-9.6	H	3.0	36.0	1.0	-44.6	-13.0	-31.6	
	5242.50	-11.1	H	3.0	35.4	1.0	-45.6	-13.0	-32.6	
	6990.00	-9.8	H	3.0	35.7	1.0	-44.5	-13.0	-31.5	

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

Company:	LG
Project #:	15I20405
Date:	4/6/2015
Test Engineer:	Jude Semana
Configuration:	EUT + Charger + Headset
Location:	Chamber G
Mode:	LTE_QPSK Band 4 Harmonics, 15MHz 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, 1717.5									
LTE4	3435.00	-12.2	V	3.0	36.1	1.0	-47.2	-13.0	-34.2	
	5152.50	-11.9	V	3.0	35.4	1.0	-46.3	-13.0	-33.3	
15MHz	6870.00	-11.2	V	3.0	35.7	1.0	-45.9	-13.0	-32.9	
	3435.00	-9.6	H	3.0	36.1	1.0	-44.7	-13.0	-31.7	
QPSK	5152.50	-12.5	H	3.0	35.4	1.0	-47.0	-13.0	-34.0	
	6870.00	-10.0	H	3.0	35.7	1.0	-44.6	-13.0	-31.6	
	Mid Ch, 1732.5									
	3465.00	-15.0	V	3.0	36.0	1.0	-50.0	-13.0	-37.0	
	5197.50	-11.5	V	3.0	35.4	1.0	-45.9	-13.0	-32.9	
	6930.00	-11.9	V	3.0	35.7	1.0	-46.6	-13.0	-33.6	
	3465.00	-11.0	H	3.0	36.0	1.0	-46.0	-13.0	-33.0	
	5197.50	-11.2	H	3.0	35.4	1.0	-45.6	-13.0	-32.6	
	6930.00	-9.0	H	3.0	35.7	1.0	-43.7	-13.0	-30.7	
	High Ch, 1747.5									
	3495.00	-13.7	V	3.0	36.0	1.0	-48.7	-13.0	-35.7	
	5242.50	-10.3	V	3.0	35.4	1.0	-44.7	-13.0	-31.7	
	6990.00	-11.3	V	3.0	35.7	1.0	-46.0	-13.0	-33.0	
	3495.00	-9.5	H	3.0	36.0	1.0	-44.5	-13.0	-31.5	
	5242.50	-11.5	H	3.0	35.4	1.0	-46.0	-13.0	-33.0	
	6990.00	-9.0	H	3.0	35.7	1.0	-43.7	-13.0	-30.7	

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

Company: LG
Project #: 15I20405
Date: 4/6/2015
Test Engineer: Jude Semana
Configuration: EUT + Charger + Headset
Location: Chamber G
Mode: LTE_16QAM Band 4 Harmonics, 10MHz 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, 1715									
LTE4	3430.00	-12.8	V	3.0	36.1	1.0	-47.9	-13.0	-34.9	
	5145.00	-11.0	V	3.0	35.4	1.0	-45.4	-13.0	-32.4	
10MHz	6860.00	-10.9	V	3.0	35.7	1.0	-45.6	-13.0	-32.6	
	3430.00	-10.1	H	3.0	36.1	1.0	-45.2	-13.0	-32.2	
16QAM	5145.00	-12.0	H	3.0	35.4	1.0	-46.4	-13.0	-33.4	
	6860.00	-9.5	H	3.0	35.7	1.0	-44.1	-13.0	-31.1	
	Mid Ch, 1732.5									
	3465.00	-14.5	V	3.0	36.0	1.0	-49.5	-13.0	-36.5	
	5197.50	-11.8	V	3.0	35.4	1.0	-46.2	-13.0	-33.2	
	6930.00	-11.3	V	3.0	35.7	1.0	-46.0	-13.0	-33.0	
	3465.00	-13.0	H	3.0	36.0	1.0	-48.0	-13.0	-35.0	
	5197.50	-11.4	H	3.0	35.4	1.0	-45.8	-13.0	-32.8	
	6930.00	-9.2	H	3.0	35.7	1.0	-43.9	-13.0	-30.9	
	High Ch, 1750									
	3500.00	-12.7	V	3.0	36.0	1.0	-47.7	-13.0	-34.7	
	5250.00	-7.7	V	3.0	35.4	1.0	-42.1	-13.0	-29.1	
	7000.00	-10.9	V	3.0	35.7	1.0	-45.6	-13.0	-32.6	
	3500.00	-8.3	H	3.0	36.0	1.0	-43.3	-13.0	-30.3	
	5250.00	-11.0	H	3.0	35.4	1.0	-45.5	-13.0	-32.5	
	7000.00	-9.4	H	3.0	35.7	1.0	-44.1	-13.0	-31.1	

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

Company: LG
Project #: 15I20405
Date: 4/6/2015
Test Engineer: Jude Semana
Configuration: EUT + Charger + Headset
Location: Chamber G
Mode: LTE_QPSK Band 4 Harmonics, 10MHz Bandwidth

Band
LTE4
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, 1715									
3430.00	-12.9	V	3.0	36.1	1.0	-48.0	-13.0	-35.0	
5145.00	-11.6	V	3.0	35.4	1.0	-46.0	-13.0	-33.0	
6860.00	-11.4	V	3.0	35.7	1.0	-46.0	-13.0	-33.0	
3430.00	-9.4	H	3.0	36.1	1.0	-44.5	-13.0	-31.5	
5145.00	-11.8	H	3.0	35.4	1.0	-46.2	-13.0	-33.2	
6860.00	-9.8	H	3.0	35.7	1.0	-44.4	-13.0	-31.4	
Mid Ch, 1732.5									
3465.00	-14.4	V	3.0	36.0	1.0	-49.5	-13.0	-36.5	
5197.50	-12.3	V	3.0	35.4	1.0	-46.7	-13.0	-33.7	
6930.00	-11.3	V	3.0	35.7	1.0	-46.0	-13.0	-33.0	
3465.00	-14.5	H	3.0	36.0	1.0	-49.5	-13.0	-36.5	
5197.50	-11.1	H	3.0	35.4	1.0	-45.5	-13.0	-32.5	
6930.00	-9.7	H	3.0	35.7	1.0	-44.4	-13.0	-31.4	
High Ch, 1750									
3500.00	-12.8	V	3.0	36.0	1.0	-47.8	-13.0	-34.8	
5250.00	-10.3	V	3.0	35.4	1.0	-44.8	-13.0	-31.8	
7000.00	-11.2	V	3.0	35.7	1.0	-45.9	-13.0	-32.9	
3500.00	-8.6	H	3.0	36.0	1.0	-43.6	-13.0	-30.6	
5250.00	-11.0	H	3.0	35.4	1.0	-45.5	-13.0	-32.5	
7000.00	-9.2	H	3.0	35.7	1.0	-43.8	-13.0	-30.8	

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

Company: LG
Project #: 15I20405
Date: 4/6/2015
Test Engineer: Jude Semana
Configuration: EUT + Charger + Headset
Location: Chamber G
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	-15.5	V	3.0	36.1	1.0	-50.6	-13.0	-37.6	
5137.50	-15.7	V	3.0	35.4	1.0	-50.1	-13.0	-37.1	
6850.00	-15.6	V	3.0	35.7	1.0	-50.3	-13.0	-37.3	
3425.00	-12.6	H	3.0	36.1	1.0	-47.7	-13.0	-34.7	
5137.50	-16.7	H	3.0	35.4	1.0	-51.1	-13.0	-38.1	
6850.00	-14.7	H	3.0	35.7	1.0	-49.4	-13.0	-36.4	
Mid Ch, 1732.5									
3465.00	-14.4	V	3.0	36.0	1.0	-49.4	-13.0	-36.4	
5197.50	-10.3	V	3.0	35.4	1.0	-44.7	-13.0	-31.7	
6930.00	-11.3	V	3.0	35.7	1.0	-46.0	-13.0	-33.0	
3465.00	-7.6	H	3.0	36.0	1.0	-42.7	-13.0	-29.7	
5197.50	-11.2	H	3.0	35.4	1.0	-45.6	-13.0	-32.6	
6930.00	-9.1	H	3.0	35.7	1.0	-43.8	-13.0	-30.8	
High Ch, 1752.5									
3505.00	-10.6	V	3.0	36.0	1.0	-45.6	-13.0	-32.6	
5257.50	-10.3	V	3.0	35.4	1.0	-44.8	-13.0	-31.8	
7010.00	-11.8	V	3.0	35.7	1.0	-46.5	-13.0	-33.5	
3505.00	-6.9	H	3.0	36.0	1.0	-41.9	-13.0	-28.9	
5257.50	-11.3	H	3.0	35.4	1.0	-45.8	-13.0	-32.8	
7010.00	-9.6	H	3.0	35.7	1.0	-44.3	-13.0	-31.3	

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

Company: LG
Project #: 15I20405
Date: 4/6/2015
Test Engineer: Jude Semana
Configuration: EUT + Charger + Headset
Location: Chamber G
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	-12.8	V	3.0	36.1	1.0	-47.8	-13.0	-34.8	
5137.50	-15.5	V	3.0	35.4	1.0	-49.9	-13.0	-36.9	
6850.00	-15.9	V	3.0	35.7	1.0	-50.6	-13.0	-37.6	
3425.00	-12.7	H	3.0	36.1	1.0	-47.8	-13.0	-34.8	
5137.50	-16.3	H	3.0	35.4	1.0	-50.7	-13.0	-37.7	
6850.00	-14.2	H	3.0	35.7	1.0	-48.9	-13.0	-35.9	
Mid Ch, 1732.5									
3465.00	-13.8	V	3.0	36.0	1.0	-48.9	-13.0	-35.9	
5197.50	-10.2	V	3.0	35.4	1.0	-44.7	-13.0	-31.7	
6930.00	-11.2	V	3.0	35.7	1.0	-45.9	-13.0	-32.9	
3465.00	-7.8	H	3.0	36.0	1.0	-42.8	-13.0	-29.8	
5197.50	-11.3	H	3.0	35.4	1.0	-45.7	-13.0	-32.7	
6930.00	-10.0	H	3.0	35.7	1.0	-44.7	-13.0	-31.7	
High Ch, 1752.5									
3505.00	-11.3	V	3.0	36.0	1.0	-46.3	-13.0	-33.3	
5257.50	-10.2	V	3.0	35.4	1.0	-44.6	-13.0	-31.6	
7010.00	-10.3	V	3.0	35.7	1.0	-45.0	-13.0	-32.0	
3505.00	-7.1	H	3.0	36.0	1.0	-42.1	-13.0	-29.1	
5257.50	-10.1	H	3.0	35.4	1.0	-44.5	-13.0	-31.5	
7010.00	-9.1	H	3.0	35.7	1.0	-43.8	-13.0	-30.8	

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

Company: LG
Project #: 15I20405
Date: 4/6/2015
Test Engineer: Jude Semana
Configuration: EUT + Charger + Headset
Location: Chamber G
Mode: LTE_16QAM Band 4 Harmonics, 3MHz 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, 1711.5									
LTE4	3423.00	-10.4	V	3.0	36.1	1.0	-45.4	-13.0	-32.4	
	5134.50	-11.6	V	3.0	35.4	1.0	-46.1	-13.0	-33.1	
3MHz	6846.00	-11.4	V	3.0	35.7	1.0	-46.0	-13.0	-33.0	
	3423.00	-7.0	H	3.0	36.1	1.0	-42.1	-13.0	-29.1	
16QAM	5134.50	-11.3	H	3.0	35.4	1.0	-45.7	-13.0	-32.7	
	6846.00	-9.8	H	3.0	35.7	1.0	-44.5	-13.0	-31.5	
	Mid Ch, 1732.5									
	3465.00	-14.0	V	3.0	36.0	1.0	-49.0	-13.0	-36.0	
	5197.50	-9.9	V	3.0	35.4	1.0	-44.3	-13.0	-31.3	
	6930.00	-11.2	V	3.0	35.7	1.0	-45.9	-13.0	-32.9	
	3465.00	-5.8	H	3.0	36.0	1.0	-40.8	-13.0	-27.8	
	5197.50	-11.2	H	3.0	35.4	1.0	-45.6	-13.0	-32.6	
	6930.00	-9.2	H	3.0	35.7	1.0	-43.9	-13.0	-30.9	
	High Ch, 1753.5									
	3507.00	-13.7	V	3.0	36.0	1.0	-48.7	-13.0	-35.7	
	5260.50	-11.4	V	3.0	35.4	1.0	-45.8	-13.0	-32.8	
	7014.00	-10.8	V	3.0	35.7	1.0	-45.5	-13.0	-32.5	
	3507.00	-7.9	H	3.0	36.0	1.0	-42.9	-13.0	-29.9	
	5260.50	-10.5	H	3.0	35.4	1.0	-45.0	-13.0	-32.0	
	7014.00	-9.3	H	3.0	35.7	1.0	-44.0	-13.0	-31.0	

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

Company: LG
Project #: 15I20405
Date: 4/6/2015
Test Engineer: Jude Semana
Configuration: EUT + Charger + Headset
Location: Chamber G
Mode: LTE_QPSK Band 4 Harmonics, 3MHz 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, 1711.5									
LTE4	3423.00	-6.9	V	3.0	36.1	1.0	-42.0	-13.0	-29.0	
	5134.50	-10.7	V	3.0	35.4	1.0	-45.1	-13.0	-32.1	
3MHz	6846.00	-11.5	V	3.0	35.7	1.0	-46.1	-13.0	-33.1	
	3423.00	-7.3	H	3.0	36.1	1.0	-42.3	-13.0	-29.3	
QPSK	5134.50	-11.2	H	3.0	35.4	1.0	-45.7	-13.0	-32.7	
	6846.00	-9.4	H	3.0	35.7	1.0	-44.1	-13.0	-31.1	
	Mid Ch, 1732.5									
	3465.00	-6.7	V	3.0	36.0	1.0	-41.7	-13.0	-28.7	
	5197.50	-10.4	V	3.0	35.4	1.0	-44.8	-13.0	-31.8	
	6930.00	-10.9	V	3.0	35.7	1.0	-45.5	-13.0	-32.5	
	3465.00	-5.7	H	3.0	36.0	1.0	-40.7	-13.0	-27.7	
	5197.50	-11.0	H	3.0	35.4	1.0	-45.4	-13.0	-32.4	
	6930.00	-9.8	H	3.0	35.7	1.0	-44.5	-13.0	-31.5	
	High Ch, 1753.5									
	3507.00	-8.8	V	3.0	36.0	1.0	-43.8	-13.0	-30.8	
	5260.50	-10.5	V	3.0	35.4	1.0	-44.9	-13.0	-31.9	
	7014.00	-10.7	V	3.0	35.7	1.0	-45.4	-13.0	-32.4	
	3507.00	-8.5	H	3.0	36.0	1.0	-43.5	-13.0	-30.5	
	5260.50	-10.0	H	3.0	35.4	1.0	-44.4	-13.0	-31.4	
	7014.00	-9.2	H	3.0	35.7	1.0	-43.8	-13.0	-30.8	

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

Company: LG
Project #: 15I20405
Date: 4/6/2015
Test Engineer: Jude Semana
Configuration: EUT + Charger + Headset
Location: Chamber G
Mode: LTE_16QAM Band 4 Harmonics, 1.4MHz 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, 1710.7									
LTE4	3421.40	-9.5	V	3.0	36.1	1.0	-44.6	-13.0	-31.6	
	5132.10	-11.9	V	3.0	35.4	1.0	-46.4	-13.0	-33.4	
1.4MHz	6842.80	-12.6	V	3.0	35.7	1.0	-47.2	-13.0	-34.2	
	3421.40	-6.4	H	3.0	36.1	1.0	-41.5	-13.0	-28.5	
16QAM	5132.10	-12.9	H	3.0	35.4	1.0	-47.4	-13.0	-34.4	
	6842.80	-10.0	H	3.0	35.7	1.0	-44.6	-13.0	-31.6	
	Mid Ch, 1732.5									
	3465.00	-13.9	V	3.0	36.0	1.0	-48.9	-13.0	-35.9	
	5197.50	-9.5	V	3.0	35.4	1.0	-43.9	-13.0	-30.9	
	6930.00	-11.5	V	3.0	35.7	1.0	-46.2	-13.0	-33.2	
	3465.00	-4.1	H	3.0	36.0	1.0	-39.2	-13.0	-26.2	
	5197.50	-11.4	H	3.0	35.4	1.0	-45.8	-13.0	-32.8	
	6930.00	-10.2	H	3.0	35.7	1.0	-44.9	-13.0	-31.9	
	High Ch, 1754.3									
	3508.60	-16.1	V	3.0	36.0	1.0	-51.1	-13.0	-38.1	
	5262.90	-14.1	V	3.0	35.4	1.0	-48.6	-13.0	-35.6	
	7017.20	-15.7	V	3.0	35.7	1.0	-50.4	-13.0	-37.4	
	3508.60	-9.7	H	3.0	36.0	1.0	-44.7	-13.0	-31.7	
	5262.90	-13.8	H	3.0	35.4	1.0	-48.2	-13.0	-35.2	
	7017.20	-14.5	H	3.0	35.7	1.0	-49.2	-13.0	-36.2	

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

Company:	LG
Project #:	15I20405
Date:	4/6/2015
Test Engineer:	Jude Semana
Configuration:	EUT + Charger + Headset
Location:	Chamber G
Mode:	LTE_QPSK Band 4 Harmonics, 1.4MHz Bandwidth

Band	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
LTE4	Low Ch, 1710.7									
1.4MHz	3421.40	-5.7	V	3.0	36.1	1.0	-40.7	-13.0	-27.7	
	5132.10	-11.5	V	3.0	35.4	1.0	-45.9	-13.0	-32.9	
QPSK	6842.80	-12.7	V	3.0	35.7	1.0	-47.4	-13.0	-34.4	
	3421.40	-6.7	H	3.0	36.1	1.0	-41.7	-13.0	-28.7	
	5132.10	-12.1	H	3.0	35.4	1.0	-46.5	-13.0	-33.5	
	6842.80	-10.1	H	3.0	35.7	1.0	-44.8	-13.0	-31.8	
	Mid Ch, 1732.5									
	3465.00	-14.0	V	3.0	36.0	1.0	-49.1	-13.0	-36.1	
	5197.50	-8.8	V	3.0	35.4	1.0	-43.2	-13.0	-30.2	
	6930.00	-10.9	V	3.0	35.7	1.0	-45.5	-13.0	-32.5	
	3465.00	-4.4	H	3.0	36.0	1.0	-39.4	-13.0	-26.4	
	5197.50	-9.9	H	3.0	35.4	1.0	-44.3	-13.0	-31.3	
	6930.00	-10.1	H	3.0	35.7	1.0	-44.8	-13.0	-31.8	
	High Ch, 1754.3									
	3508.60	-9.6	V	3.0	36.0	1.0	-44.6	-13.0	-31.6	
	5262.90	-14.5	V	3.0	35.4	1.0	-48.9	-13.0	-35.9	
	7017.20	-16.1	V	3.0	35.7	1.0	-50.7	-13.0	-37.7	
	3508.60	-9.9	H	3.0	36.0	1.0	-44.9	-13.0	-31.9	
	5262.90	-14.5	H	3.0	35.4	1.0	-48.9	-13.0	-35.9	
	7017.20	-13.6	H	3.0	35.7	1.0	-48.3	-13.0	-35.3	

GSM

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Mode: EGPRS 1900

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

Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
GSM 1900 EGPRS	Low Ch, 1850.2MHz									
	3.700	-17.8	V	3.0	35.4	1.0	-52.2	-13.0	-39.2	
	5.551	-5.3	V	3.0	34.7	1.0	-39.1	-13.0	-26.1	
	7.401	-7.0	V	3.0	34.9	1.0	-40.9	-13.0	-27.9	
	3.700	-17.6	H	3.0	35.4	1.0	-52.0	-13.0	-39.0	
	5.551	-13.4	H	3.0	34.7	1.0	-47.2	-13.0	-34.2	
	7.401	-10.1	H	3.0	34.9	1.0	-44.1	-13.0	-31.1	
	Mid Ch, 1880.0MHz									
	3.760	-18.3	V	3.0	35.3	1.0	-52.6	-13.0	-39.6	
	5.640	-9.3	V	3.0	34.7	1.0	-43.0	-13.0	-30.0	
	7.520	-7.3	V	3.0	34.9	1.0	-41.2	-13.0	-28.2	
	3.760	-17.5	H	3.0	35.3	1.0	-51.8	-13.0	-38.8	
	5.640	-4.8	H	3.0	34.7	1.0	-38.5	-13.0	-25.5	
	7.520	-9.7	H	3.0	34.9	1.0	-43.6	-13.0	-30.6	
	High Ch, 1909.8MHz									
	3.820	-15.5	V	3.0	35.3	1.0	-49.8	-13.0	-36.8	
	5.729	-11.0	V	3.0	34.7	1.0	-44.8	-13.0	-31.8	
	7.639	-8.2	V	3.0	35.0	1.0	-42.1	-13.0	-29.1	
	3.820	-16.2	H	3.0	35.3	1.0	-50.5	-13.0	-37.5	
	5.729	-11.8	H	3.0	34.7	1.0	-45.6	-13.0	-32.6	
	7.639	-9.4	H	3.0	35.0	1.0	-43.3	-13.0	-30.3	

Rev. 03.03.09

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Mode: GPRS1900

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

Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
GSM 1900 GPRS	Low Ch, 1850.2MHz									
	3.700	-17.1	V	3.0	35.4	1.0	-51.5	-13.0	-38.5	
	5.551	-4.9	V	3.0	34.7	1.0	-38.6	-13.0	-25.6	
	7.401	-5.2	V	3.0	34.9	1.0	-39.1	-13.0	-26.1	
	3.700	-17.3	H	3.0	35.4	1.0	-51.7	-13.0	-38.7	
	5.551	-13.2	H	3.0	34.7	1.0	-46.9	-13.0	-33.9	
	7.401	-9.9	H	3.0	34.9	1.0	-43.9	-13.0	-30.9	
	Mid Ch, 1880.0MHz									
	3.760	-14.6	V	3.0	35.3	1.0	-49.0	-13.0	-36.0	
	5.640	-9.4	V	3.0	34.7	1.0	-43.2	-13.0	-30.2	
	7.520	-7.4	V	3.0	34.9	1.0	-41.3	-13.0	-28.3	
	3.760	-17.1	H	3.0	35.3	1.0	-51.4	-13.0	-38.4	
	5.640	-7.5	H	3.0	34.7	1.0	-41.2	-13.0	-28.2	
	7.520	-8.3	H	3.0	34.9	1.0	-42.2	-13.0	-29.2	
	High Ch, 1909.8MHz									
	3.820	-13.6	V	3.0	35.3	1.0	-47.9	-13.0	-34.9	
	5.729	-9.1	V	3.0	34.7	1.0	-42.9	-13.0	-29.9	
	7.639	-7.3	V	3.0	35.0	1.0	-41.3	-13.0	-28.3	
	3.820	-15.9	H	3.0	35.3	1.0	-50.2	-13.0	-37.2	
	5.729	-11.2	H	3.0	34.7	1.0	-44.9	-13.0	-31.9	
	7.639	-8.5	H	3.0	35.0	1.0	-42.5	-13.0	-29.5	

UL Verification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Mode: EGPRS 850

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

Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
GSM 850	Low Ch, 824.2MHz									
EGPRS	1.648	-26.1	V	3.0	37.4	1.0	-62.5	-13.0	-49.5	
	2.473	-20.6	V	3.0	36.4	1.0	-56.0	-13.0	-43.0	
	3.297	-20.9	V	3.0	35.8	1.0	-55.7	-13.0	-42.7	
	1.648	-26.3	H	3.0	37.4	1.0	-62.7	-13.0	-49.7	
	2.473	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
	3.297	-21.5	H	3.0	35.8	1.0	-56.3	-13.0	-43.3	
	Mid Ch, 836.6MHz									
	1.673	-25.9	V	3.0	37.3	1.0	-62.2	-13.0	-49.2	
	2.510	-21.1	V	3.0	36.4	1.0	-56.4	-13.0	-43.4	
	3.346	-20.5	V	3.0	35.8	1.0	-55.3	-13.0	-42.3	
	1.673	-25.9	H	3.0	37.3	1.0	-62.2	-13.0	-49.2	
	2.510	-23.0	H	3.0	36.4	1.0	-58.4	-13.0	-45.4	
	3.346	-20.6	H	3.0	35.8	1.0	-55.4	-13.0	-42.4	
	High Ch, 848.8MHz									
	1.698	-25.5	V	3.0	37.3	1.0	-61.8	-13.0	-48.8	
	2.547	-21.9	V	3.0	36.3	1.0	-57.3	-13.0	-44.3	
	3.395	-20.8	V	3.0	35.7	1.0	-55.5	-13.0	-42.5	
	1.698	-25.7	H	3.0	37.3	1.0	-62.0	-13.0	-49.0	
	2.547	-22.9	H	3.0	36.3	1.0	-58.2	-13.0	-45.2	
	3.395	-20.9	H	3.0	35.7	1.0	-55.6	-13.0	-42.6	

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

UL Verification Services
Above 1GHz High Frequency Substitution Measurement

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT w/ AC Charger + HS
Mode: GPRS 850

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

Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch, 824.2MHz									
GSM850	1.648	-26.0	V	3.0	37.4	1.0	-62.3	-13.0	-49.3	
	2.473	-20.7	V	3.0	36.4	1.0	-56.1	-13.0	-43.1	
	3.297	-21.1	V	3.0	35.8	1.0	-55.9	-13.0	-42.9	
GPRS	1.648	-25.8	H	3.0	37.4	1.0	-62.2	-13.0	-49.2	
	2.473	-22.3	H	3.0	36.4	1.0	-57.7	-13.0	-44.7	
	3.297	-21.2	H	3.0	35.8	1.0	-56.0	-13.0	-43.0	
	Mid Ch, 836.6MHz									
	1.673	-25.7	V	3.0	37.3	1.0	-62.0	-13.0	-49.0	
	2.510	-20.9	V	3.0	36.4	1.0	-56.2	-13.0	-43.2	
	3.346	-19.9	V	3.0	35.8	1.0	-54.7	-13.0	-41.7	
	1.673	-25.8	H	3.0	37.3	1.0	-62.1	-13.0	-49.1	
	2.510	-22.7	H	3.0	36.4	1.0	-58.1	-13.0	-45.1	
	3.346	-21.1	H	3.0	35.8	1.0	-55.8	-13.0	-42.8	
	High Ch, 848.8MHz									
	1.698	-24.9	V	3.0	37.3	1.0	-61.2	-13.0	-48.2	
	2.547	-22.2	V	3.0	36.3	1.0	-57.6	-13.0	-44.6	
	3.395	-20.1	V	3.0	35.7	1.0	-54.8	-13.0	-41.8	
	1.698	-25.4	H	3.0	37.3	1.0	-61.7	-13.0	-48.7	
	2.547	-23.3	H	3.0	36.3	1.0	-58.7	-13.0	-45.7	
	3.395	-20.3	H	3.0	35.7	1.0	-55.0	-13.0	-42.0	

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

WCDMA

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: X Position, AC Charger + Headset
Mode: HSDPA B2

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T343 8449B	Filter 1	Part 24

Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Band 2	Low Ch, 1852.4MHz									
HSDPA	3.704	-16.1	V	3.0	35.4	1.0	-50.5	-13.0	-37.5	
	5.557	-10.9	V	3.0	34.7	1.0	-44.6	-13.0	-31.6	
	7.409	-12.3	V	3.0	34.9	1.0	-46.2	-13.0	-33.2	
	3.704	-13.4	H	3.0	35.4	1.0	-47.8	-13.0	-34.8	
	5.557	-13.0	H	3.0	34.7	1.0	-46.7	-13.0	-33.7	
	7.409	-10.5	H	3.0	34.9	1.0	-44.5	-13.0	-31.5	
	Mid Ch, 1880.0MHz									
	3.760	-14.3	V	3.0	35.3	1.0	-48.6	-13.0	-35.6	
	5.640	-11.7	V	3.0	34.7	1.0	-45.4	-13.0	-32.4	
	7.520	-12.1	V	3.0	34.9	1.0	-46.0	-13.0	-33.0	
	3.760	-16.1	H	3.0	35.3	1.0	-50.4	-13.0	-37.4	
	5.640	-11.0	H	3.0	34.7	1.0	-44.7	-13.0	-31.7	
	7.520	-11.5	H	3.0	34.9	1.0	-45.5	-13.0	-32.5	
	High Ch, 1907.6 MHz									
	3.815	-6.5	V	3.0	35.3	1.0	-40.8	-13.0	-27.8	
	5.723	-9.3	V	3.0	34.7	1.0	-43.0	-13.0	-30.0	
	7.630	-11.6	V	3.0	34.9	1.0	-45.6	-13.0	-32.6	
	3.815	-5.1	H	3.0	35.3	1.0	-39.4	-13.0	-26.4	
	5.723	-11.7	H	3.0	34.7	1.0	-45.4	-13.0	-32.4	
	7.630	-10.1	H	3.0	34.9	1.0	-44.0	-13.0	-31.0	

Rev. 03.03.09

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: X Position, AC Charger + Headset
Mode: REL99 B2

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T343 8449B	Filter 1	Part 24

Band	f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Band 2	Low Ch, 1852.4MHz									
	3.704	-13.1	V	3.0	35.4	1.0	-47.5	-13.0	-34.5	
REL99	5.557	-10.7	V	3.0	34.7	1.0	-44.4	-13.0	-31.4	
	7.409	-11.5	V	3.0	34.9	1.0	-45.4	-13.0	-32.4	
	3.704	-13.3	H	3.0	35.4	1.0	-47.7	-13.0	-34.7	
	5.557	-11.2	H	3.0	34.7	1.0	-44.9	-13.0	-31.9	
	7.409	-10.8	H	3.0	34.9	1.0	-44.7	-13.0	-31.7	
	Mid Ch, 1880.0MHz									
	3.760	-12.6	V	3.0	35.3	1.0	-46.9	-13.0	-33.9	
	5.640	-11.7	V	3.0	34.7	1.0	-45.4	-13.0	-32.4	
	7.520	-12.8	V	3.0	34.9	1.0	-46.8	-13.0	-33.8	
	3.760	-12.8	H	3.0	35.3	1.0	-47.2	-13.0	-34.2	
	5.640	-12.3	H	3.0	34.7	1.0	-46.0	-13.0	-33.0	
	7.520	-10.9	H	3.0	34.9	1.0	-44.9	-13.0	-31.9	
	High Ch, 1907.6 MHz									
	3.815	-3.7	V	3.0	35.3	1.0	-38.0	-13.0	-25.0	
	5.723	-10.0	V	3.0	34.7	1.0	-43.8	-13.0	-30.8	
	7.630	-12.1	V	3.0	34.9	1.0	-46.0	-13.0	-33.0	
	3.815	-5.3	H	3.0	35.3	1.0	-39.6	-13.0	-26.6	
	5.723	-12.5	H	3.0	34.7	1.0	-46.2	-13.0	-33.2	
	7.630	-10.8	H	3.0	34.9	1.0	-44.8	-13.0	-31.8	

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

Band

Band 5

HSDPA

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT + Charger + HS
Location: Chamber G
Mode: HSDPA Band 5 Harmonics

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.4									
1652.80	-25.7	V	3.0	37.0	1.0	-61.7	-13.0	-48.7	
2479.20	-22.1	V	3.0	36.4	1.0	-57.5	-13.0	-44.5	
3305.60	-18.8	V	3.0	36.1	1.0	-54.0	-13.0	-41.0	
1652.80	-25.5	H	3.0	37.0	1.0	-61.5	-13.0	-48.5	
2479.20	-24.0	H	3.0	36.4	1.0	-59.4	-13.0	-46.4	
3305.60	-18.0	H	3.0	36.1	1.0	-53.1	-13.0	-40.1	
Mid Ch, 836.6									
1673.20	-25.6	V	3.0	37.0	1.0	-61.6	-13.0	-48.6	
2509.80	-20.7	V	3.0	36.4	1.0	-56.1	-13.0	-43.1	
3346.40	-20.4	V	3.0	36.1	1.0	-55.5	-13.0	-42.5	
1673.20	-24.8	H	3.0	37.0	1.0	-60.7	-13.0	-47.7	
2509.80	-21.7	H	3.0	36.4	1.0	-57.1	-13.0	-44.1	
3346.40	-19.7	H	3.0	36.1	1.0	-54.9	-13.0	-41.9	
High Ch, 846.6									
1693.20	-24.1	V	3.0	37.0	1.0	-60.0	-13.0	-47.0	
2539.80	-20.5	V	3.0	36.4	1.0	-55.9	-13.0	-42.9	
3386.40	-17.7	V	3.0	36.1	1.0	-52.8	-13.0	-39.8	
1693.20	-24.7	H	3.0	37.0	1.0	-60.7	-13.0	-47.7	
2539.80	-22.4	H	3.0	36.4	1.0	-57.8	-13.0	-44.8	
3386.40	-18.2	H	3.0	36.1	1.0	-53.3	-13.0	-40.3	

Band

Band 5

REL99

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

Company: LG Electronics
Project #: 15I20405
Date: 4/2/2015
Test Engineer: Jude Semana
Configuration: EUT + Charger + HS
Location: Chamber G
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	-26.0	V	3.0	37.0	1.0	-62.0	-13.0	-49.0	
2479.20	-21.4	V	3.0	36.4	1.0	-56.8	-13.0	-43.8	
3305.60	-21.3	V	3.0	36.1	1.0	-56.4	-13.0	-43.4	
1652.80	-26.7	H	3.0	37.0	1.0	-62.7	-13.0	-49.7	
2479.20	-23.1	H	3.0	36.4	1.0	-58.5	-13.0	-45.5	
3305.60	-21.0	H	3.0	36.1	1.0	-56.2	-13.0	-43.2	
Mid Ch, 836.6									
1673.20	-25.5	V	3.0	37.0	1.0	-61.5	-13.0	-48.5	
2509.80	-21.3	V	3.0	36.4	1.0	-56.7	-13.0	-43.7	
3346.40	-21.2	V	3.0	36.1	1.0	-56.3	-13.0	-43.3	
1673.20	-26.0	H	3.0	37.0	1.0	-62.0	-13.0	-49.0	
2509.80	-23.0	H	3.0	36.4	1.0	-58.4	-13.0	-45.4	
3346.40	-20.9	H	3.0	36.1	1.0	-56.0	-13.0	-43.0	
High Ch, 846.6									
1693.20	-25.3	V	3.0	37.0	1.0	-61.3	-13.0	-48.3	
2539.80	-21.5	V	3.0	36.4	1.0	-56.9	-13.0	-43.9	
3386.40	-20.7	V	3.0	36.1	1.0	-55.8	-13.0	-42.8	
1693.20	-25.4	H	3.0	37.0	1.0	-61.4	-13.0	-48.4	
2539.80	-23.1	H	3.0	36.4	1.0	-58.5	-13.0	-45.5	
3386.40	-21.4	H	3.0	36.1	1.0	-56.5	-13.0	-43.5	

CDMA

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

Company: LG
Project #: 15I20405
Date: 04/11/15
Test Engineer: Charles Vergonio
Configuration: EUT w/ AC Adapter + HS
Mode: EVDO BC1

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T34 8449B	Filter 1	Part 24

Band	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									
BC1	3.703	-7.4	H	3.0	35.4	1.0	-41.8	-13.0	-28.8	
	5.554	-6.8	H	3.0	34.7	1.0	-40.5	-13.0	-27.5	
	7.405	-11.6	H	3.0	34.9	1.0	-45.5	-13.0	-32.5	
	3.703	-9.0	V	3.0	35.4	1.0	-43.4	-13.0	-30.4	
	5.554	-4.3	V	3.0	34.7	1.0	-38.0	-13.0	-25.0	
	7.405	-13.3	V	3.0	34.9	1.0	-47.2	-13.0	-34.2	
	Mid Ch, 1880 MHz									
	3.760	-6.0	H	3.0	35.3	1.0	-40.4	-13.0	-27.4	
	5.640	-3.7	H	3.0	34.7	1.0	-37.4	-13.0	-24.4	
	7.520	-11.7	H	3.0	34.9	1.0	-45.6	-13.0	-32.6	
	3.760	-9.2	V	3.0	35.3	1.0	-43.5	-13.0	-30.5	
	5.640	-3.0	V	3.0	34.7	1.0	-36.8	-13.0	-23.8	
	7.520	-13.1	V	3.0	34.9	1.0	-47.0	-13.0	-34.0	
	High Ch, 1908.75 MHz									
	3.818	-1.0	H	3.0	35.3	1.0	-35.3	-13.0	-22.3	
	5.726	-4.0	H	3.0	34.7	1.0	-37.8	-13.0	-24.8	
	7.635	-11.5	H	3.0	34.9	1.0	-45.4	-13.0	-32.4	
	3.818	-1.9	V	3.0	35.3	1.0	-36.2	-13.0	-23.2	
	5.726	-13.9	V	3.0	34.7	1.0	-47.7	-13.0	-34.7	
	7.635	-12.9	V	3.0	34.9	1.0	-46.8	-13.0	-33.8	

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

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

Company: LG
Project #: 15I20405
Date: 04/11/15
Test Engineer: Charles Vergonio
Configuration: EUT w/ AC Adapter + HS
Mode: RTT BC1 HARM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	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	-7.1	H	3.0	35.4	1.0	-41.5	-13.0	-28.5	
5.554	-6.2	H	3.0	34.7	1.0	-39.9	-13.0	-26.9	
7.405	-12.6	H	3.0	34.9	1.0	-46.5	-13.0	-33.5	
3.703	-9.6	V	3.0	35.4	1.0	-44.0	-13.0	-31.0	
5.554	-4.9	V	3.0	34.7	1.0	-38.6	-13.0	-25.6	
7.405	-13.4	V	3.0	34.9	1.0	-47.3	-13.0	-34.3	
Mid Ch, 1880 MHz									
3.760	-5.1	H	3.0	35.3	1.0	-39.5	-13.0	-26.5	
5.640	-3.4	H	3.0	34.7	1.0	-37.1	-13.0	-24.1	
7.520	-11.6	H	3.0	34.9	1.0	-45.5	-13.0	-32.5	
3.760	-9.3	V	3.0	35.3	1.0	-43.6	-13.0	-30.6	
5.640	-3.1	V	3.0	34.7	1.0	-36.8	-13.0	-23.8	
7.520	-13.0	V	3.0	34.9	1.0	-47.0	-13.0	-34.0	
High Ch, 1908.75 MHz									
3.818	-1.0	H	3.0	35.3	1.0	-35.3	-13.0	-22.3	
5.726	-2.0	H	3.0	34.7	1.0	-35.8	-13.0	-22.8	
7.635	-11.1	H	3.0	34.9	1.0	-45.1	-13.0	-32.1	
3.818	-2.0	V	3.0	35.3	1.0	-36.3	-13.0	-23.3	
5.726	-14.1	V	3.0	34.7	1.0	-47.8	-13.0	-34.8	
7.635	-13.2	V	3.0	34.9	1.0	-47.1	-13.0	-34.1	

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

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

Company: LG
Project #: 15I20405
Date: 04/11/15
Test Engineer: Charles Vergonio
Configuration: EUT w/ AC Adapter + HS
Mode: EVDO BC0

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	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	-27.2	H	3.0	37.4	1.0	-63.5	-13.0	-50.5	
2.474	-24.3	H	3.0	36.4	1.0	-59.7	-13.0	-46.7	
3.299	-21.5	H	3.0	35.8	1.0	-56.3	-13.0	-43.3	
1.649	-25.6	V	3.0	37.4	1.0	-61.9	-13.0	-48.9	
2.474	-18.9	V	3.0	36.4	1.0	-54.3	-13.0	-41.3	
3.299	-20.5	V	3.0	35.8	1.0	-55.3	-13.0	-42.3	
Mid Ch, 836.52MHz									
1.673	-25.2	H	3.0	37.3	1.0	-61.6	-13.0	-48.6	
2.510	-24.7	H	3.0	36.4	1.0	-60.1	-13.0	-47.1	
3.346	-21.3	H	3.0	35.8	1.0	-56.1	-13.0	-43.1	
1.673	-25.3	V	3.0	37.3	1.0	-61.7	-13.0	-48.7	
2.510	-18.7	V	3.0	36.4	1.0	-54.1	-13.0	-41.1	
3.346	-20.2	V	3.0	35.8	1.0	-55.0	-13.0	-42.0	
High Ch, 848.31MHz									
1.697	-22.7	H	3.0	37.3	1.0	-59.0	-13.0	-46.0	
2.545	-24.5	H	3.0	36.3	1.0	-59.8	-13.0	-46.8	
3.393	-20.5	H	3.0	35.7	1.0	-55.2	-13.0	-42.2	
1.697	-17.4	V	3.0	37.3	1.0	-53.7	-13.0	-40.7	
2.545	-19.7	V	3.0	36.3	1.0	-55.0	-13.0	-42.0	
3.393	-20.9	V	3.0	35.7	1.0	-55.7	-13.0	-42.7	

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

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

Company: LG
Project #: 15I20405
Date: 04/11/15
Test Engineer: Charles Vergonio
Configuration: EUT w/ AC Adapter + HS
Mode: RTT BC0

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	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	-27.6	H	3.0	37.4	1.0	-64.0	-13.0	-51.0	
2.474	-24.5	H	3.0	36.4	1.0	-59.9	-13.0	-46.9	
3.299	-21.2	H	3.0	35.8	1.0	-56.0	-13.0	-43.0	
1.649	-26.7	V	3.0	37.4	1.0	-63.0	-13.0	-50.0	
2.474	-18.5	V	3.0	36.4	1.0	-53.9	-13.0	-40.9	
3.299	-20.2	V	3.0	35.8	1.0	-55.0	-13.0	-42.0	
Mid Ch, 836.52MHz									
1.673	-26.0	H	3.0	37.3	1.0	-62.3	-13.0	-49.3	
2.510	-23.8	H	3.0	36.4	1.0	-59.2	-13.0	-46.2	
3.346	-20.7	H	3.0	35.8	1.0	-55.4	-13.0	-42.4	
1.673	-26.0	V	3.0	37.3	1.0	-62.4	-13.0	-49.4	
2.510	-18.5	V	3.0	36.4	1.0	-53.9	-13.0	-40.9	
3.346	-20.3	V	3.0	35.8	1.0	-55.1	-13.0	-42.1	
High Ch, 848.31MHz									
1.697	-23.4	H	3.0	37.3	1.0	-59.7	-13.0	-46.7	
2.545	-24.4	H	3.0	36.3	1.0	-59.8	-13.0	-46.8	
3.393	-20.3	H	3.0	35.7	1.0	-55.0	-13.0	-42.0	
1.697	-21.0	V	3.0	37.3	1.0	-57.3	-13.0	-44.3	
2.545	-18.9	V	3.0	36.3	1.0	-54.3	-13.0	-41.3	
3.393	-20.4	V	3.0	35.7	1.0	-55.1	-13.0	-42.1	

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