Band

LTE4

10MHz

QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/4/2015
Test Engineer: R.Alegre
Configuration: EUT Only
Location: Chamber A
Mode: LTE_QPSK Band 4 Fundamentals, 10MHz Bandwidth

Test Equpment:
Receiving: Horn T711, and Chamber A 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								
1715.00	8.55	V	0.9	8.2	15.82	30.0	-14.2	
1715.00	15.70	H	0.9	8.2	22.97	30.0	-7.0	
Mid Ch								
1732.50	8.55	V	0.9	8.2	15.82	30.0	-14.2	
1732.50	15.89	H	0.9	8.2	23.16	30.0	-6.8	
High Ch								
1750.00	8.59	V	0.9	8.1	15.78	30.0	-14.2	
1750.00	16.10	H	0.9	8.1	23.29	30.0	-6.7	

Band

LTE4

5MHz

16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/4/2015
Test Engineer: R.Alegre
Configuration: EUT Only
Location: Chamber A
Mode: LTE_16QAM Band 4 Fundamentals, 5MHz Bandwidth

Test Equpment:
Receiving: Horn T711, and Chamber A 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								
1712.50	7.47	V	0.9	8.2	14.81	30.0	-15.2	
1712.50	14.73	H	0.9	8.2	22.07	30.0	-7.9	
Mid Ch								
1732.50	7.31	V	0.9	8.2	14.58	30.0	-15.4	
1732.50	15.05	H	0.9	8.2	22.32	30.0	-7.7	
High Ch								
1752.50	7.62	V	0.9	8.1	14.82	30.0	-15.2	
1752.50	15.20	H	0.9	8.1	22.40	30.0	-7.6	

Band

LTE4

5MHz

QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/4/2015
Test Engineer: R.Alegre
Configuration: EUT Only
Location: Chamber A
Mode: LTE_QPSK Band 4 Fundamentals, 5MHz Bandwidth

Test Equpment:
Receiving: Horn T711, and Chamber A 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								
1712.50	8.50	V	0.9	8.2	15.84	30.0	-14.2	
1712.50	15.56	H	0.9	8.2	22.90	30.0	-7.1	
Mid Ch								
1732.50	8.44	V	0.9	8.2	15.71	30.0	-14.3	
1732.50	15.88	H	0.9	8.2	23.15	30.0	-6.8	
High Ch								
1752.50	8.72	V	0.9	8.1	15.92	30.0	-14.1	
1752.50	16.17	H	0.9	8.1	23.37	30.0	-6.6	

Band

LTE4

3MHz

16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/4/2015
Test Engineer: R.Alegre
Configuration: EUT Only
Location: Chamber A
Mode: LTE_16QAM Band 4 Fundamentals, 3MHz Bandwidth

Test Equpment:
Receiving: Horn T711, and Chamber A 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								
1711.50	7.45	V	0.9	8.2	14.80	30.0	-15.2	
1711.50	14.75	H	0.9	8.2	22.10	30.0	-7.9	
Mid Ch								
1732.50	7.41	V	0.9	8.2	14.68	30.0	-15.3	
1732.50	15.11	H	0.9	8.2	22.38	30.0	-7.6	
High Ch								
1753.50	7.66	V	0.9	8.1	14.85	30.0	-15.1	
1753.50	15.41	H	0.9	8.1	22.60	30.0	-7.4	

Band

LTE4

3MHz

QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/4/2015
Test Engineer: R.Alegre
Configuration: EUT Only
Location: Chamber A
Mode: LTE_QPSK Band 4 Fundamentals, 3MHz Bandwidth

Test Equpment:
Receiving: Horn T711, and Chamber A 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								
1711.50	8.48	V	0.9	8.2	15.83	30.0	-14.2	
1711.50	15.58	H	0.9	8.2	22.93	30.0	-7.1	
Mid Ch								
1732.50	8.41	V	0.9	8.2	15.68	30.0	-14.3	
1732.50	15.99	H	0.9	8.2	23.26	30.0	-6.7	
High Ch								
1753.50	8.73	V	0.9	8.1	15.92	30.0	-14.1	
1753.50	16.17	H	0.9	8.1	23.36	30.0	-6.6	

Band

LTE4

1.4MHz

16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/4/2015
Test Engineer: R.Alegre
Configuration: EUT Only
Location: Chamber A
Mode: LTE_16QAM Band 4 Fundamentals, 1.4MHz Bandwidth

Test Equpment:
Receiving: Horn T711, and Chamber A 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	7.40	V	0.9	8.2	14.67	30.0	-15.3	
1710.70	14.72	H	0.9	8.2	21.99	30.0	-8.0	
Mid Ch								
1732.50	7.34	V	0.9	8.2	14.61	30.0	-15.4	
1732.50	15.10	H	0.9	8.2	22.37	30.0	-7.6	
High Ch								
1754.30	7.61	V	0.9	8.1	14.80	30.0	-15.2	
1754.30	15.26	H	0.9	8.1	22.45	30.0	-7.5	

Band

LTE4

1.4MHz

QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/4/2015
Test Engineer: R.Alegre
Configuration: EUT Only
Location: Chamber A
Mode: LTE_QPSK Band 4 Fundamentals, 1.4MHz Bandwidth

Test Equpment:
Receiving: Horn T711, and Chamber A 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	8.45	V	0.9	8.2	15.72	30.0	-14.3	
1710.70	15.67	H	0.9	8.2	22.94	30.0	-7.1	
Mid Ch								
1732.50	8.66	V	0.9	8.2	15.93	30.0	-14.1	
1732.50	15.90	H	0.9	8.2	23.17	30.0	-6.8	
High Ch								
1754.30	8.55	V	0.9	8.1	15.74	30.0	-14.3	
1754.30	16.20	H	0.9	8.1	23.39	30.0	-6.6	

LTE Band 2

Band

LTE2

20MHz

16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/3/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Location: Chamber C
Mode: LTE_16QAM Band 2 Fundamentals, 20MHz Bandwidth

Test Equpment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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								
1860.00	13.81	V	0.9	8.5	21.47	33.0	-11.5	
1860.00	16.55	H	0.9	8.5	24.21	33.0	-8.8	
Mid Ch								
1880.00	10.73	V	0.9	8.5	18.38	33.0	-14.6	
1880.00	16.87	H	0.9	8.5	24.52	33.0	-8.5	
High Ch								
1900.00	10.56	V	0.9	8.5	18.25	33.0	-14.7	
1900.00	17.11	H	0.9	8.5	24.80	33.0	-8.2	

Band

LTE2

20MHz

QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/3/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Location: Chamber C
Mode: LTE_QPSK Band 2 Fundamentals, 20MHz Bandwidth

Test Equpment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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								
1860.00	14.42	V	0.9	8.5	22.08	33.0	-10.9	
1860.00	17.36	H	0.9	8.5	25.02	33.0	-8.0	
Mid Ch								
1880.00	11.64	V	0.9	8.5	19.29	33.0	-13.7	
1880.00	17.45	H	0.9	8.5	25.10	33.0	-7.9	
High Ch								
1900.00	11.39	V	0.9	8.5	19.08	33.0	-13.9	
1900.00	17.87	H	0.9	8.5	25.56	33.0	-7.4	

Band

LTE2

15MHz

16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/3/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Location: Chamber C
Mode: LTE_16QAM Band 2 Fundamentals, 15MHz Bandwidth

Test Equpment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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								
1857.50	13.09	V	0.9	8.5	20.75	33.0	-12.3	
1857.50	16.08	H	0.9	8.5	23.74	33.0	-9.3	
Mid Ch								
1880.00	12.67	V	0.9	8.5	20.32	33.0	-12.7	
1880.00	16.36	H	0.9	8.5	24.01	33.0	-9.0	
High Ch								
1902.50	10.46	V	0.9	8.5	18.15	33.0	-14.8	
1902.50	16.20	H	0.9	8.5	23.89	33.0	-9.1	

Band

LTE2

15MHz

QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/3/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Location: Chamber C
Mode: LTE_QPSK Band 2 Fundamentals, 15MHz Bandwidth

Test Equpment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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								
1857.50	13.97	V	0.9	8.5	21.63	33.0	-11.4	
1857.50	17.06	H	0.9	8.5	24.72	33.0	-8.3	
Mid Ch								
1880.00	13.44	V	0.9	8.5	21.09	33.0	-11.9	
1880.00	16.98	H	0.9	8.5	24.63	33.0	-8.4	
High Ch								
1902.50	11.23	V	0.9	8.5	18.92	33.0	-14.1	
1902.50	17.06	H	0.9	8.5	24.75	33.0	-8.2	

Band

LTE2

10MHz

16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/3/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Location: Chamber C
Mode: LTE_16QAM Band 2 Fundamentals, 10MHz Bandwidth

Test Equpment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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								
1855.00	14.32	V	0.9	8.5	21.98	33.0	-11.0	
1855.00	16.70	H	0.9	8.5	24.36	33.0	-8.6	
Mid Ch								
1880.00	10.32	V	0.9	8.5	17.97	33.0	-15.0	
1880.00	16.84	H	0.9	8.5	24.49	33.0	-8.5	
High Ch								
1905.00	11.21	V	0.9	8.5	18.90	33.0	-14.1	
1905.00	15.45	H	0.9	8.5	23.14	33.0	-9.9	

Band

LTE2

10MHz

QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/3/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Location: Chamber C
Mode: LTE_QPSK Band 2 Fundamentals, 10MHz Bandwidth

Test Equpment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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								
1855.00	15.07	V	0.9	8.5	22.73	33.0	-10.3	
1855.00	17.51	H	0.9	8.5	25.17	33.0	-7.8	
Mid Ch								
1880.00	11.08	V	0.9	8.5	18.73	33.0	-14.3	
1880.00	17.58	H	0.9	8.5	25.23	33.0	-7.8	
High Ch								
1905.00	11.98	V	0.9	8.5	19.67	33.0	-13.3	
1905.00	16.33	H	0.9	8.5	24.02	33.0	-9.0	

Band

LTE2

5MHz

16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/3/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Location: Chamber C
Mode: LTE_16QAM Band 2 Fundamentals, 5MHz Bandwidth

Test Equpment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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								
1852.50	14.21	V	0.9	8.5	21.87	33.0	-11.1	
1852.50	17.04	H	0.9	8.5	24.70	33.0	-8.3	
Mid Ch								
1880.00	12.80	V	0.9	8.5	20.45	33.0	-12.6	
1880.00	15.98	H	0.9	8.5	23.63	33.0	-9.4	
High Ch								
1907.50	10.97	V	0.9	8.5	18.66	33.0	-14.3	
1907.50	15.80	H	0.9	8.5	23.49	33.0	-9.5	

Band

LTE2

5MHz

QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company:	Sony
Project #:	15U20030
Date:	3/3/2015
Test Engineer:	O. Stoelting
Configuration:	X-pos EUT only
Location:	Chamber C
Mode:	LTE_QPSK Band 2 Fundamentals, 5MHz Bandwidth

Test Equpment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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								
1852.50	14.95	V	0.9	8.5	22.61	33.0	-10.4	
1852.50	17.51	H	0.9	8.5	25.17	33.0	-7.8	
Mid Ch								
1880.00	13.54	V	0.9	8.5	21.19	33.0	-11.8	
1880.00	16.64	H	0.9	8.5	24.29	33.0	-8.7	
High Ch								
1907.50	11.78	V	0.9	8.5	19.47	33.0	-13.5	
1907.50	16.59	H	0.9	8.5	24.28	33.0	-8.7	

Band

LTE2

3MHz

16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/3/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Location: Chamber C
Mode: LTE_16QAM Band 2 Fundamentals, 3MHz Bandwidth

Test Equpment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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								
1851.50	11.17	V	0.9	8.5	18.83	33.0	-14.2	
1851.50	17.17	H	0.9	8.5	24.83	33.0	-8.2	
Mid Ch								
1880.00	11.78	V	0.9	8.5	19.43	33.0	-13.6	
1880.00	16.96	H	0.9	8.5	24.61	33.0	-8.4	
High Ch								
1908.50	10.75	V	0.9	8.5	18.44	33.0	-14.6	
1908.50	16.37	H	0.9	8.5	24.06	33.0	-8.9	

Band

LTE2

3MHz

QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/3/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Location: Chamber C
Mode: LTE_QPSK Band 2 Fundamentals, 3MHz Bandwidth

Test Equpment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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								
1851.50	11.84	V	0.9	8.5	19.50	33.0	-13.5	
1851.50	18.00	H	0.9	8.5	25.66	33.0	-7.3	
Mid Ch								
1880.00	12.59	V	0.9	8.5	20.24	33.0	-12.8	
1880.00	17.82	H	0.9	8.5	25.47	33.0	-7.5	
High Ch								
1908.50	11.57	V	0.9	8.5	19.26	33.0	-13.7	
1908.50	17.20	H	0.9	8.5	24.89	33.0	-8.1	

Band

LTE2

1.4MHz

16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/3/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Location: Chamber C
Mode: LTE_16QAM Band 2 Fundamentals, 1.4MHz Bandwidth

Test Equpment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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								
1850.70	14.31	V	0.9	8.5	21.97	33.0	-11.0	
1850.70	16.69	H	0.9	8.5	24.35	33.0	-8.7	
Mid Ch								
1880.00	13.38	V	0.9	8.5	21.03	33.0	-12.0	
1880.00	16.74	H	0.9	8.5	24.39	33.0	-8.6	
High Ch								
1909.30	12.76	V	0.9	8.5	20.45	33.0	-12.5	
1909.30	15.92	H	0.9	8.5	23.61	33.0	-9.4	

Band

LTE2

1.4MHz

QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/3/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Location: Chamber C
Mode: LTE_QPSK Band 2 Fundamentals, 1.4MHz Bandwidth

Test Equpment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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								
1850.70	14.67	V	0.9	8.5	22.33	33.0	-10.7	
1850.70	17.41	H	0.9	8.5	25.07	33.0	-7.9	
Mid Ch								
1880.00	13.90	V	0.9	8.5	21.55	33.0	-11.5	
1880.00	17.20	H	0.9	8.5	24.85	33.0	-8.2	
High Ch								
1909.30	13.28	V	0.9	8.5	20.97	33.0	-12.0	
1909.30	16.58	H	0.9	8.5	24.27	33.0	-8.7	

WCDMA

Band

Band 2

HSDPA

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

Company: Sony
Project #: 15U20030
Date: 3/3/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT only
Mode: HSDPA B2

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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	4.65	V	0.9	8.5	12.31	33.0	-20.7	
1852.40	14.55	H	0.9	8.5	22.21	33.0	-10.8	
Mid Ch								
1880.00	5.68	V	0.9	8.5	13.33	33.0	-19.7	
1880.00	15.91	H	0.9	8.5	23.56	33.0	-9.4	
High Ch								
1907.60	6.61	V	0.9	8.5	14.30	33.0	-18.7	
1907.60	16.12	H	0.9	8.5	23.81	33.0	-9.2	

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: Sony
Project #: 15U20030
Date: 4/4/2015
Test Engineer: S.Tran
Configuration: X-pos EUT only
Mode: REL99 B2

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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	4.67	V	0.9	8.5	12.33	33.0	-20.7	
1852.40	15.90	H	0.9	8.5	23.56	33.0	-9.4	
Mid Ch								
1880.00	5.70	V	0.9	8.5	13.35	33.0	-19.7	
1880.00	17.58	H	0.9	8.5	25.23	33.0	-7.8	
High Ch								
1907.60	6.60	V	0.9	8.5	14.29	33.0	-18.7	
1907.60	16.73	H	0.9	8.5	24.42	33.0	-8.6	

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: Sony
Project #: 15I20030
Date: 03/05/15
Test Engineer: Charles Vergonio
Configuration: EUT Y-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	22.27	V	0.9	0.0	21.37	38.5	-17.1	
826.40	13.76	H	0.9	0.0	12.86	38.5	-25.6	
Mid Ch								
836.60	22.44	V	0.9	0.0	21.54	38.5	-16.9	
836.60	13.31	H	0.9	0.0	12.41	38.5	-26.0	
High Ch								
846.60	22.70	V	0.9	0.0	21.80	38.5	-16.6	
846.60	14.00	H	0.9	0.0	13.10	38.5	-25.3	

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: Sony
Project #: 15I20030
Date: 03/05/15
Test Engineer: Charles Vergonio
Configuration: EUT Y-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	22.39	V	0.9	0.0	21.49	38.5	-17.0	
826.40	13.97	H	0.9	0.0	13.07	38.5	-25.4	
Mid Ch								
836.60	22.60	V	0.9	0.0	21.70	38.5	-16.7	
836.60	13.54	H	0.9	0.0	12.64	38.5	-25.8	
High Ch								
846.60	22.95	V	0.9	0.0	22.05	38.5	-16.4	
846.60	14.34	H	0.9	0.0	13.44	38.5	-25.0	

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

GSM

Band

GSM 1900

EGPRS

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

Company: Sony
Project #: 15U20030
Date: 4/4/2015
Test Engineer: S.Tran
Configuration: X-pos EUT only
Mode: EGPRS 1900

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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	13.61	V	0.9	8.5	21.27	33.0	-11.7	
1850.20	19.27	H	0.9	8.5	26.93	33.0	-6.1	
Mid Ch								
1880.00	18.10	V	0.9	8.5	25.75	33.0	-7.3	
1880.00	20.86	H	0.9	8.5	28.51	33.0	-4.5	
High Ch								
1909.80	14.90	V	0.9	8.5	22.59	33.0	-10.4	
1909.80	20.76	H	0.9	8.5	28.45	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: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: Charles Vergonio
Configuration: X-pos EUT only
Mode: GPRS 1900

Test Equipment:
Receiving: Horn T119, and Chamber C SMA Cables
Substitution: Horn T72 Substitution, T1096 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	19.45	V	0.9	8.5	27.11	33.0	-5.9	
1850.20	22.50	H	0.9	8.5	30.16	33.0	-2.8	
Mid Ch								
1880.00	20.20	V	0.9	8.5	27.85	33.0	-5.2	
1880.00	24.98	H	0.9	8.5	32.63	33.0	-0.4	
High Ch								
1909.80	19.98	V	0.9	8.5	27.67	33.0	-5.3	
1909.80	25.12	H	0.9	8.5	32.81	33.0	-0.2	

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: Sony
Project #: 15I20030
Date: 04/04/15
Test Engineer: S.Tran
Configuration: EUT Y-position
Mode: EGPRS850

Test Equipment:
Receiving: Hybrid T185, and Chamber C N-type Cable
Substitution: Dipole T273, 8ft 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	24.40	V	0.9	0.0	23.50	38.5	-15.0	
824.20	17.72	H	0.9	0.0	16.82	38.5	-21.6	
Mid Ch								
836.60	25.42	V	0.9	0.0	24.52	38.5	-13.9	
836.60	17.44	H	0.9	0.0	16.54	38.5	-21.9	
High Ch								
848.80	24.48	V	0.9	0.0	23.58	38.5	-14.9	
848.80	17.50	H	0.9	0.0	16.60	38.5	-21.8	

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

Band

GSM 850

GPRS

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

Company: Sony
Project #: 15I20030
Date: 03/05/15
Test Engineer: Charles Vergonio
Configuration: EUT Y-position
Mode: GPRS850

Test Equipment:
Receiving: Hybrid T185, and Chamber C N-type Cable
Substitution: Dipole T273, 8ft 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	30.37	V	0.9	0.0	29.47	38.5	-9.0	
824.20	21.92	H	0.9	0.0	21.02	38.5	-17.4	
Mid Ch								
836.60	30.07	V	0.9	0.0	29.17	38.5	-9.3	
836.60	21.19	H	0.9	0.0	20.29	38.5	-18.2	
High Ch								
848.80	31.31	V	0.9	0.0	30.41	38.5	-8.0	
848.80	22.27	H	0.9	0.0	21.37	38.5	-17.1	

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

11.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917(a), §24.238 (a), §27. 53 (g)

LIMITS

Part 22.917(a) & Part 24.238(a) The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

Part 27.53(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

TEST PROCEDURE

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

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

MODES TESTED

GSM, WCDMA, and LTE

RESULTS

11.2.1. SPURIOUS RADIATION PLOTS

LTE Band 17

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT + Charger
Mode: LTE17 10M 16QAM HARM

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 27

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,709MHz									
LTE17	1.418	-26.5	V	3.0	37.8	1.0	-63.2	-13.0	-50.2	
	2.127	-21.2	V	3.0	36.7	1.0	-56.9	-13.0	-43.9	
10MHz	2.836	-19.4	V	3.0	36.2	1.0	-54.6	-13.0	-41.6	
	1.418	-25.6	H	3.0	37.8	1.0	-62.4	-13.0	-49.4	
	2.127	-22.3	H	3.0	36.7	1.0	-58.0	-13.0	-45.0	
16QAM	2.836	-19.7	H	3.0	36.2	1.0	-54.9	-13.0	-41.9	
	Mid Ch,710MHz									
	1.420	-25.7	V	3.0	37.8	1.0	-62.5	-13.0	-49.5	
	2.130	-21.2	V	3.0	36.7	1.0	-56.9	-13.0	-43.9	
	2.840	-19.4	V	3.0	36.2	1.0	-54.6	-13.0	-41.6	
	1.420	-26.3	H	3.0	37.8	1.0	-63.1	-13.0	-50.1	
	2.130	-22.1	H	3.0	36.7	1.0	-57.8	-13.0	-44.8	
	2.840	-20.1	H	3.0	36.2	1.0	-55.3	-13.0	-42.3	
	High Ch, 711MHz									
	1.422	-26.8	V	3.0	37.8	1.0	-63.5	-13.0	-50.5	
	2.133	-21.4	V	3.0	36.7	1.0	-57.1	-13.0	-44.1	
	2.844	-18.9	V	3.0	36.2	1.0	-54.1	-13.0	-41.1	
	1.422	-26.8	H	3.0	37.8	1.0	-63.6	-13.0	-50.6	
	2.133	-21.8	H	3.0	36.7	1.0	-57.5	-13.0	-44.5	
	2.844	-20.1	H	3.0	36.2	1.0	-55.2	-13.0	-42.2	

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

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT + Charger
Mode: LTE17 10M QPSK HARM

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 27

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,709MHz									
LTE17	1.418	-26.6	V	3.0	37.8	1.0	-63.4	-13.0	-50.4	
	2.127	-21.2	V	3.0	36.7	1.0	-56.9	-13.0	-43.9	
10MHz	2.836	-19.5	V	3.0	36.2	1.0	-54.7	-13.0	-41.7	
	1.418	-26.4	H	3.0	37.8	1.0	-63.2	-13.0	-50.2	
	2.127	-21.7	H	3.0	36.7	1.0	-57.4	-13.0	-44.4	
QPSK	2.836	-19.5	H	3.0	36.2	1.0	-54.7	-13.0	-41.7	
	Mid Ch,710MHz									
	1.420	-26.7	V	3.0	37.8	1.0	-63.5	-13.0	-50.5	
	2.130	-21.4	V	3.0	36.7	1.0	-57.0	-13.0	-44.0	
	2.840	-19.2	V	3.0	36.2	1.0	-54.4	-13.0	-41.4	
	1.420	-26.3	H	3.0	37.8	1.0	-63.1	-13.0	-50.1	
	2.130	-22.1	H	3.0	36.7	1.0	-57.8	-13.0	-44.8	
	2.840	-19.8	H	3.0	36.2	1.0	-55.0	-13.0	-42.0	
	High Ch, 711MHz									
	1.422	-26.0	V	3.0	37.8	1.0	-62.8	-13.0	-49.8	
	2.133	-21.4	V	3.0	36.7	1.0	-57.1	-13.0	-44.1	
	2.844	-19.3	V	3.0	36.2	1.0	-54.5	-13.0	-41.5	
	1.422	-25.9	H	3.0	37.8	1.0	-62.7	-13.0	-49.7	
	2.133	-21.8	H	3.0	36.7	1.0	-57.5	-13.0	-44.5	
	2.844	-20.0	H	3.0	36.2	1.0	-55.2	-13.0	-42.2	

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

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT + Charger
Mode: LTE17 5M 16QAM HARM

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 27

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,706.5MHz									
LTE17	1.413	-27.0	V	3.0	37.8	1.0	-63.8	-13.0	-50.8	
	2.120	-21.0	V	3.0	36.7	1.0	-56.7	-13.0	-43.7	
5MHz	2.283	-20.6	V	3.0	36.6	1.0	-56.1	-13.0	-43.1	
	1.413	-25.9	H	3.0	37.8	1.0	-62.7	-13.0	-49.7	
	2.120	-21.7	H	3.0	36.7	1.0	-57.4	-13.0	-44.4	
16QAM	2.283	-22.2	H	3.0	36.6	1.0	-57.7	-13.0	-44.7	
	Mid Ch,710MHz									
	1.420	-26.6	V	3.0	37.8	1.0	-63.4	-13.0	-50.4	
	2.130	-20.7	V	3.0	36.7	1.0	-56.4	-13.0	-43.4	
	2.840	-19.0	V	3.0	36.2	1.0	-54.2	-13.0	-41.2	
	1.420	-26.0	H	3.0	37.8	1.0	-62.7	-13.0	-49.7	
	2.130	-22.0	H	3.0	36.7	1.0	-57.7	-13.0	-44.7	
	2.840	-19.6	H	3.0	36.2	1.0	-54.8	-13.0	-41.8	
	High Ch, 713.5MHz									
	1.427	-26.6	V	3.0	37.7	1.0	-63.4	-13.0	-50.4	
	2.141	-20.8	V	3.0	36.7	1.0	-56.5	-13.0	-43.5	
	2.854	-19.5	V	3.0	36.2	1.0	-54.7	-13.0	-41.7	
	1.427	-26.3	H	3.0	37.7	1.0	-63.0	-13.0	-50.0	
	2.141	-21.9	H	3.0	36.7	1.0	-57.5	-13.0	-44.5	
	2.854	-19.8	H	3.0	36.2	1.0	-55.0	-13.0	-42.0	

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

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT + Charger
Mode: LTE17 5M QPSK HARM

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 27

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,706.5MHz									
LTE17	1.413	-26.0	V	3.0	37.8	1.0	-62.8	-13.0	-49.8	
	2.120	-21.5	V	3.0	36.7	1.0	-57.2	-13.0	-44.2	
5MHz	2.283	-21.1	V	3.0	36.6	1.0	-56.7	-13.0	-43.7	
	1.413	-26.5	H	3.0	37.8	1.0	-63.3	-13.0	-50.3	
	2.120	-21.9	H	3.0	36.7	1.0	-57.6	-13.0	-44.6	
QPSK	2.283	-21.6	H	3.0	36.6	1.0	-57.1	-13.0	-44.1	
	Mid Ch,710MHz									
	1.420	-26.5	V	3.0	37.8	1.0	-63.3	-13.0	-50.3	
	2.130	-21.1	V	3.0	36.7	1.0	-56.8	-13.0	-43.8	
	2.840	-19.1	V	3.0	36.2	1.0	-54.2	-13.0	-41.2	
	1.420	-26.5	H	3.0	37.8	1.0	-63.2	-13.0	-50.2	
	2.130	-22.3	H	3.0	36.7	1.0	-58.0	-13.0	-45.0	
	2.840	-19.3	H	3.0	36.2	1.0	-54.5	-13.0	-41.5	
	High Ch, 713.5MHz									
	1.427	-26.9	V	3.0	37.7	1.0	-63.6	-13.0	-50.6	
	2.141	-21.2	V	3.0	36.7	1.0	-56.9	-13.0	-43.9	
	2.854	-19.2	V	3.0	36.2	1.0	-54.4	-13.0	-41.4	
	1.427	-26.9	H	3.0	37.7	1.0	-63.6	-13.0	-50.6	
	2.141	-22.2	H	3.0	36.7	1.0	-57.9	-13.0	-44.9	
	2.854	-20.0	H	3.0	36.2	1.0	-55.1	-13.0	-42.1	

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

LTE Band 12

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

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT AC charger and HS
Location: Chamber A
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	-12.9	V	3.0	37.4	1.0	-49.3	-13.0	-36.3	
2112.00	-28.2	V	3.0	36.6	1.0	-63.7	-13.0	-50.7	
2816.00	-27.5	V	3.0	36.4	1.0	-62.9	-13.0	-49.9	
1408.00	-11.4	H	3.0	37.4	1.0	-47.7	-13.0	-34.7	
2112.00	-29.6	H	3.0	36.6	1.0	-65.2	-13.0	-52.2	
2816.00	-28.5	H	3.0	36.4	1.0	-63.9	-13.0	-50.9	
Mid Ch,707.5									
1415.00	-10.7	V	3.0	37.3	1.0	-47.1	-13.0	-34.1	
2122.50	-22.3	V	3.0	36.6	1.0	-57.9	-13.0	-44.9	
2830.00	-27.6	V	3.0	36.4	1.0	-63.0	-13.0	-50.0	
1415.00	-8.7	H	3.0	37.3	1.0	-45.1	-13.0	-32.1	
2122.50	-25.6	H	3.0	36.6	1.0	-61.2	-13.0	-48.2	
2830.00	-28.5	H	3.0	36.4	1.0	-63.9	-13.0	-50.9	
High Ch,711									
1422.00	-10.4	V	3.0	37.3	1.0	-46.7	-13.0	-33.7	
2133.00	-25.6	V	3.0	36.6	1.0	-61.1	-13.0	-48.1	
2844.00	-23.1	V	3.0	36.4	1.0	-58.5	-13.0	-45.5	
1422.00	-10.4	H	3.0	37.3	1.0	-46.7	-13.0	-33.7	
2133.00	-27.7	H	3.0	36.6	1.0	-63.3	-13.0	-50.3	
2844.00	-26.3	H	3.0	36.4	1.0	-61.6	-13.0	-48.6	

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

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT AC charger and HS
Location: Chamber A
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	-13.9	V	3.0	37.4	1.0	-50.3	-13.0	-37.3	
2112.00	-27.7	V	3.0	36.6	1.0	-63.2	-13.0	-50.2	
2816.00	-27.5	V	3.0	36.4	1.0	-62.9	-13.0	-49.9	
1408.00	-12.0	H	3.0	37.4	1.0	-48.4	-13.0	-35.4	
2112.00	-29.5	H	3.0	36.6	1.0	-65.1	-13.0	-52.1	
2816.00	-28.5	H	3.0	36.4	1.0	-63.9	-13.0	-50.9	
Mid Ch,707.5									
1415.00	-11.2	V	3.0	37.3	1.0	-47.6	-13.0	-34.6	
2122.50	-22.3	V	3.0	36.6	1.0	-57.8	-13.0	-44.8	
2830.00	-27.6	V	3.0	36.4	1.0	-63.0	-13.0	-50.0	
1415.00	-10.1	H	3.0	37.3	1.0	-46.5	-13.0	-33.5	
2122.50	-25.9	H	3.0	36.6	1.0	-61.4	-13.0	-48.4	
2830.00	-28.6	H	3.0	36.4	1.0	-63.9	-13.0	-50.9	
High Ch,711									
1422.00	-11.7	V	3.0	37.3	1.0	-48.0	-13.0	-35.0	
2133.00	-25.8	V	3.0	36.6	1.0	-61.4	-13.0	-48.4	
2844.00	-27.3	V	3.0	36.4	1.0	-62.7	-13.0	-49.7	
1422.00	-11.8	H	3.0	37.3	1.0	-48.1	-13.0	-35.1	
2133.00	-27.3	H	3.0	36.6	1.0	-62.9	-13.0	-49.9	
2844.00	-28.0	H	3.0	36.4	1.0	-63.4	-13.0	-50.4	

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

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT AC charger and HS
Location: Chamber A
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	-5.5	V	3.0	37.4	1.0	-41.8	-13.0	-28.8	
2104.50	-25.1	V	3.0	36.6	1.0	-60.7	-13.0	-47.7	
2806.00	-27.5	V	3.0	36.4	1.0	-62.9	-13.0	-49.9	
1403.00	-12.0	H	3.0	37.4	1.0	-48.3	-13.0	-35.3	
2104.50	-29.6	H	3.0	36.6	1.0	-65.2	-13.0	-52.2	
2806.00	-28.5	H	3.0	36.4	1.0	-63.9	-13.0	-50.9	
Mid Ch, 707.50									
1415.00	-4.0	V	3.0	37.3	1.0	-40.3	-13.0	-27.3	
2122.50	-16.8	V	3.0	36.6	1.0	-52.3	-13.0	-39.3	
2830.00	-27.5	V	3.0	36.4	1.0	-62.8	-13.0	-49.8	
1415.00	-5.9	H	3.0	37.3	1.0	-42.2	-13.0	-29.2	
2122.50	-22.5	H	3.0	36.6	1.0	-58.1	-13.0	-45.1	
2830.00	-28.4	H	3.0	36.4	1.0	-63.8	-13.0	-50.8	
High Ch, 713.50									
1427.00	-12.1	V	3.0	37.3	1.0	-48.4	-13.0	-35.4	
2140.50	-27.0	V	3.0	36.6	1.0	-62.6	-13.0	-49.6	
2854.00	-27.7	V	3.0	36.4	1.0	-63.1	-13.0	-50.1	
1427.00	-13.2	H	3.0	37.3	1.0	-49.5	-13.0	-36.5	
2140.50	-23.2	H	3.0	36.6	1.0	-58.8	-13.0	-45.8	
2854.00	-28.4	H	3.0	36.4	1.0	-63.7	-13.0	-50.7	

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

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT AC charger and HS
Location: Chamber A
Mode: LTE_QPSK Band 12 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, 701.50									
LTE12	1403.00	-5.2	V	3.0	37.4	1.0	-41.5	-13.0	-28.5	
	2104.50	-25.0	V	3.0	36.6	1.0	-60.5	-13.0	-47.5	
5MHz	2806.00	-27.3	V	3.0	36.4	1.0	-62.7	-13.0	-49.7	
	1403.00	-12.3	H	3.0	37.4	1.0	-48.7	-13.0	-35.7	
QPSK	2104.50	-29.6	H	3.0	36.6	1.0	-65.2	-13.0	-52.2	
	2806.00	-28.4	H	3.0	36.4	1.0	-63.8	-13.0	-50.8	
	Mid Ch, 707.50									
	1415.00	-5.0	V	3.0	37.3	1.0	-41.4	-13.0	-28.4	
	2122.50	-16.2	V	3.0	36.6	1.0	-51.8	-13.0	-38.8	
	2830.00	-27.4	V	3.0	36.4	1.0	-62.8	-13.0	-49.8	
	1415.00	-6.1	H	3.0	37.3	1.0	-42.5	-13.0	-29.5	
	2122.50	-22.7	H	3.0	36.6	1.0	-58.2	-13.0	-45.2	
	2830.00	-28.3	H	3.0	36.4	1.0	-63.7	-13.0	-50.7	
	High Ch, 713.50									
	1427.00	-12.7	V	3.0	37.3	1.0	-49.0	-13.0	-36.0	
	2140.50	-26.6	V	3.0	36.6	1.0	-62.2	-13.0	-49.2	
	2854.00	-27.5	V	3.0	36.4	1.0	-62.9	-13.0	-49.9	
	1427.00	-13.0	H	3.0	37.3	1.0	-49.3	-13.0	-36.3	
	2140.50	-22.9	H	3.0	36.6	1.0	-58.4	-13.0	-45.4	
	2854.00	-28.5	H	3.0	36.4	1.0	-63.8	-13.0	-50.8	

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

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT AC charger and HS
Location: Chamber A
Mode: LTE_16QAM Band 12 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
LTE12	Low Ch, 700.5									
3MHz	1401.00	-4.9	V	3.0	37.4	1.0	-41.3	-13.0	-28.3	
16QAM	2101.50	-23.6	V	3.0	36.6	1.0	-59.1	-13.0	-46.1	
	2802.00	-27.8	V	3.0	36.4	1.0	-63.2	-13.0	-50.2	
	1401.00	-3.1	H	3.0	37.4	1.0	-39.5	-13.0	-26.5	
	2101.50	-27.8	H	3.0	36.6	1.0	-63.3	-13.0	-50.3	
	2802.00	-28.7	H	3.0	36.4	1.0	-64.0	-13.0	-51.0	
	Mid Ch, 707.50									
	1415.00	-3.5	V	3.0	37.3	1.0	-39.9	-13.0	-26.9	
	2122.00	-17.4	V	3.0	36.6	1.0	-53.0	-13.0	-40.0	
	2830.00	-27.5	V	3.0	36.4	1.0	-62.8	-13.0	-49.8	
	1415.00	-2.7	H	3.0	37.3	1.0	-39.0	-13.0	-26.0	
	2122.00	-20.7	H	3.0	36.6	1.0	-56.3	-13.0	-43.3	
	2830.00	-28.4	H	3.0	36.4	1.0	-63.7	-13.0	-50.7	
	High Ch, 714.5									
	1429.00	-1.3	V	3.0	37.3	1.0	-37.6	-13.0	-24.6	
	2143.50	-23.3	V	3.0	36.6	1.0	-58.8	-13.0	-45.8	
	2858.00	-27.0	V	3.0	36.4	1.0	-62.4	-13.0	-49.4	
	1429.00	-1.8	H	3.0	37.3	1.0	-38.1	-13.0	-25.1	
	2143.50	-27.0	H	3.0	36.6	1.0	-62.6	-13.0	-49.6	
	2858.00	-28.1	H	3.0	36.4	1.0	-63.5	-13.0	-50.5	

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

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT AC charger and HS
Location: Chamber A
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	-5.7	V	3.0	37.4	1.0	-42.1	-13.0	-29.1	
2101.50	-24.0	V	3.0	36.6	1.0	-59.5	-13.0	-46.5	
2802.00	-27.5	V	3.0	36.4	1.0	-62.9	-13.0	-49.9	
1401.00	-4.1	H	3.0	37.4	1.0	-40.4	-13.0	-27.4	
2101.50	-27.5	H	3.0	36.6	1.0	-63.1	-13.0	-50.1	
2802.00	-28.7	H	3.0	36.4	1.0	-64.1	-13.0	-51.1	
Mid Ch, 707.50									
1415.00	-4.6	V	3.0	37.3	1.0	-40.9	-13.0	-27.9	
2122.00	-17.5	V	3.0	36.6	1.0	-53.1	-13.0	-40.1	
2830.00	-27.4	V	3.0	36.4	1.0	-62.8	-13.0	-49.8	
1415.00	-4.0	H	3.0	37.3	1.0	-40.3	-13.0	-27.3	
2122.00	-20.6	H	3.0	36.6	1.0	-56.2	-13.0	-43.2	
2830.00	-28.4	H	3.0	36.4	1.0	-63.7	-13.0	-50.7	
High Ch, 714.5									
1429.00	-1.4	V	3.0	37.3	1.0	-37.8	-13.0	-24.8	
2143.50	-23.5	V	3.0	36.6	1.0	-59.1	-13.0	-46.1	
2858.00	-27.1	V	3.0	36.4	1.0	-62.4	-13.0	-49.4	
1429.00	-2.6	H	3.0	37.3	1.0	-39.0	-13.0	-26.0	
2143.50	-27.5	H	3.0	36.6	1.0	-63.1	-13.0	-50.1	
2858.00	-28.2	H	3.0	36.4	1.0	-63.5	-13.0	-50.5	

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

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT AC charger and HS
Location: Chamber A
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	-5.6	V	3.0	37.4	1.0	-42.0	-13.0	-29.0	
2099.10	-26.2	V	3.0	36.6	1.0	-61.7	-13.0	-48.7	
2798.80	-27.0	V	3.0	36.4	1.0	-62.3	-13.0	-49.3	
1399.40	-3.3	H	3.0	37.4	1.0	-39.7	-13.0	-26.7	
2099.10	-28.3	H	3.0	36.6	1.0	-63.9	-13.0	-50.9	
2798.80	-28.7	H	3.0	36.4	1.0	-64.1	-13.0	-51.1	
Mid Ch, 707.50									
1415.00	-3.4	V	3.0	37.3	1.0	-39.7	-13.0	-26.7	
2122.00	-20.4	V	3.0	36.6	1.0	-56.0	-13.0	-43.0	
2830.00	-27.5	V	3.0	36.4	1.0	-62.9	-13.0	-49.9	
1415.00	-3.6	H	3.0	37.3	1.0	-40.0	-13.0	-27.0	
2122.00	-24.2	H	3.0	36.6	1.0	-59.8	-13.0	-46.8	
2830.00	-28.3	H	3.0	36.4	1.0	-63.7	-13.0	-50.7	
High Ch, 715.3									
1430.60	-1.0	V	3.0	37.3	1.0	-37.4	-13.0	-24.4	
2145.90	-23.9	V	3.0	36.6	1.0	-59.4	-13.0	-46.4	
2861.20	-26.1	V	3.0	36.4	1.0	-61.5	-13.0	-48.5	
1430.60	-3.2	H	3.0	37.3	1.0	-39.5	-13.0	-26.5	
2145.90	-28.4	H	3.0	36.6	1.0	-63.9	-13.0	-50.9	
2861.20	-28.2	H	3.0	36.4	1.0	-63.6	-13.0	-50.6	

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

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT AC charger and HS
Location: Chamber A
Mode: LTE_QPSK Band 12 Harmonics, 1.4MHz Bandwidth

Band: LTE12 1.4MHz QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 699.7									
1399.40	-5.6	V	3.0	37.4	1.0	-42.0	-13.0	-29.0	
2099.10	-26.4	V	3.0	36.6	1.0	-61.9	-13.0	-48.9	
2798.80	-27.3	V	3.0	36.4	1.0	-62.6	-13.0	-49.6	
1399.40	-4.1	H	3.0	37.4	1.0	-40.4	-13.0	-27.4	
2099.10	-27.1	H	3.0	36.6	1.0	-62.6	-13.0	-49.6	
2798.80	-28.7	H	3.0	36.4	1.0	-64.0	-13.0	-51.0	
Mid Ch, 707.50									
1415.00	-3.7	V	3.0	37.3	1.0	-40.0	-13.0	-27.0	
2122.00	-19.9	V	3.0	36.6	1.0	-55.5	-13.0	-42.5	
2830.00	-27.4	V	3.0	36.4	1.0	-62.8	-13.0	-49.8	
1415.00	-3.8	H	3.0	37.3	1.0	-40.2	-13.0	-27.2	
2122.00	-23.8	H	3.0	36.6	1.0	-59.4	-13.0	-46.4	
2830.00	-28.3	H	3.0	36.4	1.0	-63.6	-13.0	-50.6	
High Ch, 715.3									
1430.60	-1.9	V	3.0	37.3	1.0	-38.2	-13.0	-25.2	
2145.90	-23.3	V	3.0	36.6	1.0	-58.9	-13.0	-45.9	
2861.20	-27.0	V	3.0	36.4	1.0	-62.4	-13.0	-49.4	
1430.60	-2.9	H	3.0	37.3	1.0	-39.2	-13.0	-26.2	
2145.90	-27.2	H	3.0	36.6	1.0	-62.8	-13.0	-49.8	
2861.20	-28.1	H	3.0	36.4	1.0	-63.5	-13.0	-50.5	

LTE Band 7

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT/ AC Charger/ HS
Location: Chamber A
Mode: LTE_16QAM Band 7 Harmonics, 20MHz Bandwidth

Band
LTE7
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, 2510									
5020.00	-20.6	V	3.0	35.5	1.0	-55.1	-25.0	-30.1	
7530.00	-19.1	V	3.0	35.7	1.0	-53.8	-25.0	-28.8	
10040.00	-16.8	V	3.0	36.0	1.0	-51.8	-25.0	-26.8	
5020.00	-20.1	H	3.0	35.5	1.0	-54.6	-25.0	-29.6	
7530.00	-18.0	H	3.0	35.7	1.0	-52.7	-25.0	-27.7	
10040.00	-15.7	H	3.0	36.0	1.0	-50.7	-25.0	-25.7	
Mid Ch, 2535									
5070.00	-19.9	V	3.0	35.4	1.0	-54.4	-25.0	-29.4	
7605.00	-19.0	V	3.0	35.8	1.0	-53.7	-25.0	-28.7	
10140.00	-16.5	V	3.0	36.0	1.0	-51.5	-25.0	-26.5	
5070.00	-19.7	H	3.0	35.4	1.0	-54.2	-25.0	-29.2	
7605.00	-17.9	H	3.0	35.8	1.0	-52.7	-25.0	-27.7	
10140.00	-15.6	H	3.0	36.0	1.0	-50.5	-25.0	-25.5	
High Ch, 2560									
5120.00	-20.2	V	3.0	35.4	1.0	-54.7	-25.0	-29.7	
7680.00	-18.6	V	3.0	35.8	1.0	-53.4	-25.0	-28.4	
10240.00	-16.4	V	3.0	35.9	1.0	-51.3	-25.0	-26.3	
5120.00	-19.0	H	3.0	35.4	1.0	-53.4	-25.0	-28.4	
7680.00	-17.9	H	3.0	35.8	1.0	-52.7	-25.0	-27.7	
10240.00	-15.8	H	3.0	35.9	1.0	-50.7	-25.0	-25.7	

Band
LTE7
20MHz
QPSK

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT/ AC Charger/ HS
Location: Chamber A
Mode: LTE_QPSK Band 7 Harmonics, 20MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2510									
5020.00	-20.4	V	3.0	35.5	1.0	-54.9	-25.0	-29.9	
7530.00	-19.1	V	3.0	35.7	1.0	-53.8	-25.0	-28.8	
10040.00	-16.7	V	3.0	36.0	1.0	-51.8	-25.0	-26.8	
5020.00	-19.9	H	3.0	35.5	1.0	-54.4	-25.0	-29.4	
7530.00	-17.9	H	3.0	35.7	1.0	-52.7	-25.0	-27.7	
10040.00	-15.8	H	3.0	36.0	1.0	-50.8	-25.0	-25.8	
Mid Ch, 2535									
5070.00	-20.3	V	3.0	35.4	1.0	-54.7	-25.0	-29.7	
7605.00	-18.6	V	3.0	35.8	1.0	-53.4	-25.0	-28.4	
10140.00	-16.5	V	3.0	36.0	1.0	-51.4	-25.0	-26.4	
5070.00	-19.8	H	3.0	35.4	1.0	-54.3	-25.0	-29.3	
7605.00	-17.8	H	3.0	35.8	1.0	-52.6	-25.0	-27.6	
10140.00	-15.8	H	3.0	36.0	1.0	-50.8	-25.0	-25.8	
High Ch, 2560									
5120.00	-20.2	V	3.0	35.4	1.0	-54.6	-25.0	-29.6	
7680.00	-18.9	V	3.0	35.8	1.0	-53.6	-25.0	-28.6	
10240.00	-16.4	V	3.0	35.9	1.0	-51.3	-25.0	-26.3	
5120.00	-19.5	H	3.0	35.4	1.0	-53.9	-25.0	-28.9	
7680.00	-17.8	H	3.0	35.8	1.0	-52.5	-25.0	-27.5	
10240.00	-15.7	H	3.0	35.9	1.0	-50.6	-25.0	-25.6	

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT/ AC Charger/ HS
Location: Chamber A
Mode: LTE_16QAM Band 7 Harmonics, 15MHz Bandwidth

Band LTE7 15MHz 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2507.5									
5015.00	-20.4	V	3.0	35.5	1.0	-54.8	-25.0	-29.8	
7522.50	-19.1	V	3.0	35.7	1.0	-53.8	-25.0	-28.8	
10030.00	-16.9	V	3.0	36.0	1.0	-51.9	-25.0	-26.9	
5015.00	-20.0	H	3.0	35.5	1.0	-54.5	-25.0	-29.5	
7522.50	-18.2	H	3.0	35.7	1.0	-52.9	-25.0	-27.9	
10030.00	-15.8	H	3.0	36.0	1.0	-50.8	-25.0	-25.8	
Mid Ch, 2535									
5070.00	-20.3	V	3.0	35.4	1.0	-54.7	-25.0	-29.7	
7605.00	-19.0	V	3.0	35.8	1.0	-53.7	-25.0	-28.7	
10140.00	-16.5	V	3.0	36.0	1.0	-51.5	-25.0	-26.5	
5070.00	-19.7	H	3.0	35.4	1.0	-54.2	-25.0	-29.2	
7605.00	-17.8	H	3.0	35.8	1.0	-52.6	-25.0	-27.6	
10140.00	-15.6	H	3.0	36.0	1.0	-50.5	-25.0	-25.5	
High Ch, 2562.5									
5125.00	-19.7	V	3.0	35.4	1.0	-54.2	-25.0	-29.2	
7687.50	-18.9	V	3.0	35.8	1.0	-53.7	-25.0	-28.7	
10250.00	-16.4	V	3.0	35.9	1.0	-51.3	-25.0	-26.3	
5125.00	-18.3	H	3.0	35.4	1.0	-52.8	-25.0	-27.8	
7687.50	-17.8	H	3.0	35.8	1.0	-52.6	-25.0	-27.6	
10250.00	-15.7	H	3.0	35.9	1.0	-50.6	-25.0	-25.6	

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT/ AC Charger/ HS
Location: Chamber A
Mode: LTE_QPSK Band 7 Harmonics, 15MHz Bandwidth

Band LTE7 15MHz 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, 2507.5									
5015.00	-20.6	V	3.0	35.5	1.0	-55.1	-25.0	-30.1	
7522.50	-19.1	V	3.0	35.7	1.0	-53.8	-25.0	-28.8	
10030.00	-16.7	V	3.0	36.0	1.0	-51.7	-25.0	-26.7	
5015.00	-20.1	H	3.0	35.5	1.0	-54.6	-25.0	-29.6	
7522.50	-18.2	H	3.0	35.7	1.0	-53.0	-25.0	-28.0	
10030.00	-15.8	H	3.0	36.0	1.0	-50.9	-25.0	-25.9	
Mid Ch, 2535									
5070.00	-20.1	V	3.0	35.4	1.0	-54.5	-25.0	-29.5	
7605.00	-18.8	V	3.0	35.8	1.0	-53.6	-25.0	-28.6	
10140.00	-16.4	V	3.0	36.0	1.0	-51.4	-25.0	-26.4	
5070.00	-19.7	H	3.0	35.4	1.0	-54.1	-25.0	-29.1	
7605.00	-17.9	H	3.0	35.8	1.0	-52.6	-25.0	-27.6	
10140.00	-15.8	H	3.0	36.0	1.0	-50.7	-25.0	-25.7	
High Ch, 2562.5									
5125.00	-19.9	V	3.0	35.4	1.0	-54.3	-25.0	-29.3	
7687.50	-18.9	V	3.0	35.8	1.0	-53.6	-25.0	-28.6	
10250.00	-16.5	V	3.0	35.9	1.0	-51.4	-25.0	-26.4	
5125.00	-18.5	H	3.0	35.4	1.0	-52.9	-25.0	-27.9	
7687.50	-17.9	H	3.0	35.8	1.0	-52.6	-25.0	-27.6	
10250.00	-15.7	H	3.0	35.9	1.0	-50.6	-25.0	-25.6	

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT/ AC Charger/ HS
Location: Chamber A
Mode: LTE_16QAM Band 7 Harmonics, 10MHz Bandwidth

Band LTE7 10MHz 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2505									
5010.00	-20.6	V	3.0	35.5	1.0	-55.1	-25.0	-30.1	
7515.00	-19.2	V	3.0	35.7	1.0	-54.0	-25.0	-29.0	
10020.00	-16.8	V	3.0	36.0	1.0	-51.8	-25.0	-26.8	
5010.00	-20.0	H	3.0	35.5	1.0	-54.5	-25.0	-29.5	
7515.00	-15.3	H	3.0	35.7	1.0	-50.0	-25.0	-25.0	
10020.00	-15.9	H	3.0	36.0	1.0	-50.9	-25.0	-25.9	
Mid Ch, 2535									
5070.00	-20.2	V	3.0	35.4	1.0	-54.7	-25.0	-29.7	
7605.00	-18.9	V	3.0	35.8	1.0	-53.6	-25.0	-28.6	
10140.00	-16.4	V	3.0	36.0	1.0	-51.4	-25.0	-26.4	
5070.00	-19.8	H	3.0	35.4	1.0	-54.3	-25.0	-29.3	
7605.00	-17.9	H	3.0	35.8	1.0	-52.6	-25.0	-27.6	
10140.00	-15.6	H	3.0	36.0	1.0	-50.6	-25.0	-25.6	
High Ch, 2565									
5130.00	-17.8	V	3.0	35.4	1.0	-52.2	-25.0	-27.2	
7695.00	-19.0	V	3.0	35.8	1.0	-53.8	-25.0	-28.8	
10260.00	-16.4	V	3.0	35.9	1.0	-51.3	-25.0	-26.3	
5130.00	-16.9	H	3.0	35.4	1.0	-51.3	-25.0	-26.3	
7695.00	-17.8	H	3.0	35.8	1.0	-52.6	-25.0	-27.6	
10260.00	-15.8	H	3.0	35.9	1.0	-50.7	-25.0	-25.7	

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT/ AC Charger/ HS
Location: Chamber A
Mode: LTE_QPSK Band 7 Harmonics, 10MHz Bandwidth

Band LTE7 10MHz QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2505									
5010.00	-20.4	V	3.0	35.5	1.0	-54.9	-25.0	-29.9	
7515.00	-19.3	V	3.0	35.7	1.0	-54.1	-25.0	-29.1	
10020.00	-16.8	V	3.0	36.0	1.0	-51.8	-25.0	-26.8	
5010.00	-19.8	H	3.0	35.5	1.0	-54.3	-25.0	-29.3	
7515.00	-18.0	H	3.0	35.7	1.0	-52.8	-25.0	-27.8	
10020.00	-16.0	H	3.0	36.0	1.0	-51.0	-25.0	-26.0	
Mid Ch, 2535									
5070.00	-20.1	V	3.0	35.4	1.0	-54.5	-25.0	-29.5	
7605.00	-19.0	V	3.0	35.8	1.0	-53.8	-25.0	-28.8	
10140.00	-16.3	V	3.0	36.0	1.0	-51.3	-25.0	-26.3	
5070.00	-19.7	H	3.0	35.4	1.0	-54.1	-25.0	-29.1	
7605.00	-17.9	H	3.0	35.8	1.0	-52.6	-25.0	-27.6	
10140.00	-15.7	H	3.0	36.0	1.0	-50.7	-25.0	-25.7	
High Ch, 2565									
5130.00	-18.0	V	3.0	35.4	1.0	-52.5	-25.0	-27.5	
7695.00	-19.0	V	3.0	35.8	1.0	-53.8	-25.0	-28.8	
10260.00	-16.3	V	3.0	35.9	1.0	-51.2	-25.0	-26.2	
5130.00	-17.5	H	3.0	35.4	1.0	-51.9	-25.0	-26.9	
7695.00	-17.7	H	3.0	35.8	1.0	-52.5	-25.0	-27.5	
10260.00	-15.8	H	3.0	35.9	1.0	-50.7	-25.0	-25.7	

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT/ AC Charger/ HS
Location: Chamber A
Mode: LTE_16QAM Band 7 Harmonics, 5MHz Bandwidth

Band LTE7 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, 2502.5									
5005.00	-20.7	V	3.0	35.5	1.0	-55.1	-25.0	-30.1	
7507.50	-19.1	V	3.0	35.7	1.0	-53.9	-25.0	-28.9	
10010.00	-16.9	V	3.0	36.0	1.0	-51.9	-25.0	-26.9	
5005.00	-19.8	H	3.0	35.5	1.0	-54.3	-25.0	-29.3	
7507.50	-18.0	H	3.0	35.7	1.0	-52.7	-25.0	-27.7	
10010.00	-16.1	H	3.0	36.0	1.0	-51.1	-25.0	-26.1	
Mid Ch, 2535									
5070.00	-20.1	V	3.0	35.4	1.0	-54.5	-25.0	-29.5	
7605.00	-18.8	V	3.0	35.8	1.0	-53.6	-25.0	-28.6	
10140.00	-16.5	V	3.0	36.0	1.0	-51.5	-25.0	-26.5	
5070.00	-19.5	H	3.0	35.4	1.0	-53.9	-25.0	-28.9	
7605.00	-17.7	H	3.0	35.8	1.0	-52.5	-25.0	-27.5	
10140.00	-15.7	H	3.0	36.0	1.0	-50.6	-25.0	-25.6	
High Ch, 2567.5									
5135.00	-16.3	V	3.0	35.4	1.0	-50.8	-25.0	-25.8	
7702.50	-18.8	V	3.0	35.8	1.0	-53.6	-25.0	-28.6	
10270.00	-16.5	V	3.0	35.9	1.0	-51.4	-25.0	-26.4	
5135.00	-16.9	H	3.0	35.4	1.0	-51.3	-25.0	-26.3	
7702.50	-17.8	H	3.0	35.8	1.0	-52.5	-25.0	-27.5	
10270.00	-15.7	H	3.0	35.9	1.0	-50.6	-25.0	-25.6	

Band
LTE7
5MHz
QPSK

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/6/2015
Test Engineer: O. Stoelting
Configuration: X-pos EUT/ AC Charger/ HS
Location: Chamber A
Mode: LTE_QPSK Band 7 Harmonics, 5MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2502.5									
5005.00	-20.4	V	3.0	35.5	1.0	-54.8	-25.0	-29.8	
7507.50	-19.1	V	3.0	35.7	1.0	-53.8	-25.0	-28.8	
10010.00	-16.8	V	3.0	36.0	1.0	-51.8	-25.0	-26.8	
5005.00	-19.9	H	3.0	35.5	1.0	-54.4	-25.0	-29.4	
7507.50	-18.1	H	3.0	35.7	1.0	-52.9	-25.0	-27.9	
10010.00	-15.9	H	3.0	36.0	1.0	-50.9	-25.0	-25.9	
Mid Ch, 2535									
5070.00	-20.1	V	3.0	35.4	1.0	-54.6	-25.0	-29.6	
7605.00	-18.6	V	3.0	35.8	1.0	-53.4	-25.0	-28.4	
10140.00	-16.2	V	3.0	36.0	1.0	-51.2	-25.0	-26.2	
5070.00	-19.8	H	3.0	35.4	1.0	-54.2	-25.0	-29.2	
7605.00	-17.9	H	3.0	35.8	1.0	-52.6	-25.0	-27.6	
10140.00	-15.7	H	3.0	36.0	1.0	-50.7	-25.0	-25.7	
High Ch, 2567.5									
5135.00	-16.0	V	3.0	35.4	1.0	-50.4	-25.0	-25.4	
7702.50	-18.7	V	3.0	35.8	1.0	-53.4	-25.0	-28.4	
10270.00	-16.5	V	3.0	35.9	1.0	-51.4	-25.0	-26.4	
5135.00	-17.0	H	3.0	35.4	1.0	-51.4	-25.0	-26.4	
7702.50	-17.5	H	3.0	35.8	1.0	-52.3	-25.0	-27.3	
10270.00	-15.7	H	3.0	35.9	1.0	-50.6	-25.0	-25.6	

LTE Band 5

UL Verification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT + Charger
Mode: LTE5 16QAM 10MHz Harm

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, 829MHz									
LTE5	1.658	-23.7	V	3.0	37.4	1.0	-60.1	-13.0	-47.1	
	2.487	-18.9	V	3.0	36.4	1.0	-54.2	-13.0	-41.2	
10MHz	3.316	-18.3	V	3.0	35.8	1.0	-53.1	-13.0	-40.1	
	1.658	-23.9	H	3.0	37.4	1.0	-60.3	-13.0	-47.3	
	2.487	-20.1	H	3.0	36.4	1.0	-55.4	-13.0	-42.4	
16QAM	3.316	-18.7	H	3.0	35.8	1.0	-53.5	-13.0	-40.5	
	Mid Ch, 836.5MHz									
	1.673	-23.4	V	3.0	37.3	1.0	-59.7	-13.0	-46.7	
	2.510	-19.3	V	3.0	36.4	1.0	-54.6	-13.0	-41.6	
	3.346	-18.7	V	3.0	35.8	1.0	-53.4	-13.0	-40.4	
	1.673	-24.0	H	3.0	37.3	1.0	-60.3	-13.0	-47.3	
	2.510	-21.0	H	3.0	36.4	1.0	-56.4	-13.0	-43.4	
	3.346	-18.4	H	3.0	35.8	1.0	-53.1	-13.0	-40.1	
	High Ch, 844MHz									
	1.688	-23.5	V	3.0	37.3	1.0	-59.9	-13.0	-46.9	
	2.532	-19.9	V	3.0	36.3	1.0	-55.2	-13.0	-42.2	
	3.376	-18.7	V	3.0	35.7	1.0	-53.4	-13.0	-40.4	
	1.688	-24.0	H	3.0	37.3	1.0	-60.3	-13.0	-47.3	
	2.532	-21.5	H	3.0	36.3	1.0	-56.8	-13.0	-43.8	
	3.376	-18.9	H	3.0	35.7	1.0	-53.7	-13.0	-40.7	

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: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT + Charger
Mode: LTE5 QPSK 10MHz 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)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 829MHz									
1.658	-23.9	V	3.0	37.4	1.0	-60.2	-13.0	-47.2	
2.487	-18.6	V	3.0	36.4	1.0	-54.0	-13.0	-41.0	
3.316	-18.5	V	3.0	35.8	1.0	-53.3	-13.0	-40.3	
1.658	-24.3	H	3.0	37.4	1.0	-60.6	-13.0	-47.6	
2.487	-20.6	H	3.0	36.4	1.0	-56.0	-13.0	-43.0	
3.316	-19.4	H	3.0	35.8	1.0	-54.2	-13.0	-41.2	
Mid Ch, 836.5MHz									
1.673	-23.7	V	3.0	37.3	1.0	-60.0	-13.0	-47.0	
2.510	-19.5	V	3.0	36.4	1.0	-54.9	-13.0	-41.9	
3.346	-18.0	V	3.0	35.8	1.0	-52.8	-13.0	-39.8	
1.673	-23.5	H	3.0	37.3	1.0	-59.8	-13.0	-46.8	
2.510	-19.9	H	3.0	36.4	1.0	-55.3	-13.0	-42.3	
3.346	-18.8	H	3.0	35.8	1.0	-53.5	-13.0	-40.5	
High Ch, 844MHz									
1.688	-23.4	V	3.0	37.3	1.0	-59.7	-13.0	-46.7	
2.532	-19.2	V	3.0	36.3	1.0	-54.5	-13.0	-41.5	
3.376	-18.9	V	3.0	35.7	1.0	-53.6	-13.0	-40.6	
1.688	-23.3	H	3.0	37.3	1.0	-59.6	-13.0	-46.6	
2.532	-21.0	H	3.0	36.3	1.0	-56.4	-13.0	-43.4	
3.376	-17.8	H	3.0	35.7	1.0	-52.5	-13.0	-39.5	

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: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: LTE5 16QAM 5MHz Harm

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	-24.0	V	3.0	37.4	1.0	-60.4	-13.0	-47.4	
2.480	-18.7	V	3.0	36.4	1.0	-54.1	-13.0	-41.1	
3.306	-18.5	V	3.0	35.8	1.0	-53.3	-13.0	-40.3	
1.653	-24.3	H	3.0	37.4	1.0	-60.7	-13.0	-47.7	
2.480	-20.6	H	3.0	36.4	1.0	-56.0	-13.0	-43.0	
3.306	-19.7	H	3.0	35.8	1.0	-54.5	-13.0	-41.5	
Mid Ch, 836.5MHz									
1.673	-23.7	V	3.0	37.3	1.0	-60.0	-13.0	-47.0	
2.510	-19.3	V	3.0	36.4	1.0	-54.6	-13.0	-41.6	
3.346	-18.5	V	3.0	35.8	1.0	-53.2	-13.0	-40.2	
1.673	-24.1	H	3.0	37.3	1.0	-60.4	-13.0	-47.4	
2.510	-21.1	H	3.0	36.4	1.0	-56.5	-13.0	-43.5	
3.346	-19.5	H	3.0	35.8	1.0	-54.2	-13.0	-41.2	
High Ch, 846.5MHz									
1.693	-22.3	V	3.0	37.3	1.0	-58.6	-13.0	-45.6	
2.540	-19.1	V	3.0	36.3	1.0	-54.4	-13.0	-41.4	
3.386	-18.0	V	3.0	35.7	1.0	-52.7	-13.0	-39.7	
1.693	-23.5	H	3.0	37.3	1.0	-59.8	-13.0	-46.8	
2.540	-21.0	H	3.0	36.3	1.0	-56.3	-13.0	-43.3	
3.386	-18.3	H	3.0	35.7	1.0	-53.0	-13.0	-40.0	

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: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT w/ AC Adaptor + HS, X-pos
Mode: LTE5 QPSK 5MHz Harm

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	-23.9	V	3.0	37.4	1.0	-60.2	-13.0	-47.2	
2.480	-18.2	V	3.0	36.4	1.0	-53.6	-13.0	-40.6	
3.306	-18.5	V	3.0	35.8	1.0	-53.3	-13.0	-40.3	
1.653	-23.8	H	3.0	37.4	1.0	-60.2	-13.0	-47.2	
2.480	-19.6	H	3.0	36.4	1.0	-54.9	-13.0	-41.9	
3.306	-19.8	H	3.0	35.8	1.0	-54.6	-13.0	-41.6	
Mid Ch, 836.5MHz									
1.673	-23.6	V	3.0	37.3	1.0	-59.9	-13.0	-46.9	
2.510	-19.3	V	3.0	36.4	1.0	-54.7	-13.0	-41.7	
3.346	-19.0	V	3.0	35.8	1.0	-53.8	-13.0	-40.8	
1.673	-23.7	H	3.0	37.3	1.0	-60.1	-13.0	-47.1	
2.510	-21.1	H	3.0	36.4	1.0	-56.4	-13.0	-43.4	
3.346	-19.2	H	3.0	35.8	1.0	-54.0	-13.0	-41.0	
High Ch, 846.5MHz									
1.693	-23.1	V	3.0	37.3	1.0	-59.4	-13.0	-46.4	
2.540	-19.0	V	3.0	36.3	1.0	-54.4	-13.0	-41.4	
3.386	-18.4	V	3.0	35.7	1.0	-53.1	-13.0	-40.1	
1.693	-23.2	H	3.0	37.3	1.0	-59.5	-13.0	-46.5	
2.540	-20.9	H	3.0	36.3	1.0	-56.2	-13.0	-43.2	
3.386	-18.6	H	3.0	35.7	1.0	-53.3	-13.0	-40.3	

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: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT + Charger
Mode: LTE5 16QAM 3MHz Harm

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

Band: LTE5 3MHz 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, 825.5MHz									
1.651	-23.5	V	3.0	37.4	1.0	-59.9	-13.0	-46.9	
2.477	-18.7	V	3.0	36.4	1.0	-54.0	-13.0	-41.0	
3.302	-18.9	V	3.0	35.8	1.0	-53.7	-13.0	-40.7	
1.651	-25.0	H	3.0	37.4	1.0	-61.4	-13.0	-48.4	
2.477	-19.6	H	3.0	36.4	1.0	-55.0	-13.0	-42.0	
3.302	-19.5	H	3.0	35.8	1.0	-54.2	-13.0	-41.2	
Mid Ch, 836.5MHz									
1.673	-23.6	V	3.0	37.3	1.0	-59.9	-13.0	-46.9	
2.510	-19.3	V	3.0	36.4	1.0	-54.7	-13.0	-41.7	
3.346	-18.2	V	3.0	35.8	1.0	-53.0	-13.0	-40.0	
1.673	-23.9	H	3.0	37.3	1.0	-60.3	-13.0	-47.3	
2.510	-21.0	H	3.0	36.4	1.0	-56.3	-13.0	-43.3	
3.346	-18.5	H	3.0	35.8	1.0	-53.2	-13.0	-40.2	
High Ch, 847.5MHz									
1.695	-22.9	V	3.0	37.3	1.0	-59.2	-13.0	-46.2	
2.543	-19.5	V	3.0	36.3	1.0	-54.8	-13.0	-41.8	
3.390	-17.7	V	3.0	35.7	1.0	-52.4	-13.0	-39.4	
1.695	-23.4	H	3.0	37.3	1.0	-59.7	-13.0	-46.7	
2.543	-21.5	H	3.0	36.3	1.0	-56.8	-13.0	-43.8	
3.390	-18.9	H	3.0	35.7	1.0	-53.6	-13.0	-40.6	

UL Verification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT + Charger
Mode: LTE5 QPSK 3MHz Harm

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)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 825.5MHz									
1.651	-23.8	V	3.0	37.4	1.0	-60.2	-13.0	-47.2	
2.477	-18.4	V	3.0	36.4	1.0	-53.8	-13.0	-40.8	
3.302	-18.1	V	3.0	35.8	1.0	-52.9	-13.0	-39.9	
1.651	-24.4	H	3.0	37.4	1.0	-60.7	-13.0	-47.7	
2.477	-19.8	H	3.0	36.4	1.0	-55.2	-13.0	-42.2	
3.302	-18.8	H	3.0	35.8	1.0	-53.5	-13.0	-40.5	
Mid Ch, 836.5MHz									
1.673	-23.4	V	3.0	37.3	1.0	-59.7	-13.0	-46.7	
2.510	-19.1	V	3.0	36.4	1.0	-54.5	-13.0	-41.5	
3.346	-18.7	V	3.0	35.8	1.0	-53.4	-13.0	-40.4	
1.673	-23.7	H	3.0	37.3	1.0	-60.1	-13.0	-47.1	
2.510	-20.6	H	3.0	36.4	1.0	-55.9	-13.0	-42.9	
3.346	-18.6	H	3.0	35.8	1.0	-53.3	-13.0	-40.3	
High Ch, 847.5MHz									
1.695	-23.5	V	3.0	37.3	1.0	-59.8	-13.0	-46.8	
2.543	-19.8	V	3.0	36.3	1.0	-55.2	-13.0	-42.2	
3.390	-18.7	V	3.0	35.7	1.0	-53.5	-13.0	-40.5	
1.695	-23.5	H	3.0	37.3	1.0	-59.8	-13.0	-46.8	
2.543	-21.1	H	3.0	36.3	1.0	-56.4	-13.0	-43.4	
3.390	-18.2	H	3.0	35.7	1.0	-53.0	-13.0	-40.0	

UL Verification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT + Charger
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)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7MHz									
1.649	-24.0	V	3.0	37.4	1.0	-60.4	-13.0	-47.4	
2.474	-18.5	V	3.0	36.4	1.0	-53.9	-13.0	-40.9	
3.299	-18.8	V	3.0	35.8	1.0	-53.6	-13.0	-40.6	
1.649	-23.9	H	3.0	37.4	1.0	-60.3	-13.0	-47.3	
2.474	-20.7	H	3.0	36.4	1.0	-56.1	-13.0	-43.1	
3.299	-19.0	H	3.0	35.8	1.0	-53.8	-13.0	-40.8	
Mid Ch, 836.5MHz									
1.673	-23.4	V	3.0	37.3	1.0	-59.7	-13.0	-46.7	
2.510	-18.2	V	3.0	36.4	1.0	-53.6	-13.0	-40.6	
3.346	-17.5	V	3.0	35.8	1.0	-52.3	-13.0	-39.3	
1.673	-23.9	H	3.0	37.3	1.0	-60.3	-13.0	-47.3	
2.510	-20.4	H	3.0	36.4	1.0	-55.7	-13.0	-42.7	
3.346	-18.3	H	3.0	35.8	1.0	-53.0	-13.0	-40.0	
High Ch, 848.3MHz									
1.697	-23.0	V	3.0	37.3	1.0	-59.3	-13.0	-46.3	
2.545	-19.6	V	3.0	36.3	1.0	-54.9	-13.0	-41.9	
3.393	-18.6	V	3.0	35.7	1.0	-53.3	-13.0	-40.3	
1.697	-23.4	H	3.0	37.3	1.0	-59.7	-13.0	-46.7	
2.545	-21.0	H	3.0	36.3	1.0	-56.4	-13.0	-43.4	
3.393	-19.0	H	3.0	35.7	1.0	-53.8	-13.0	-40.8	

UL Verification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT + Charger
Mode: LTE5 1.4MHz QPSK HARM

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)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7MHz									
1.649	-23.6	V	3.0	37.4	1.0	-60.0	-13.0	-47.0	
2.474	-18.5	V	3.0	36.4	1.0	-53.9	-13.0	-40.9	
3.299	-18.8	V	3.0	35.8	1.0	-53.6	-13.0	-40.6	
1.649	-24.0	H	3.0	37.4	1.0	-60.3	-13.0	-47.3	
2.474	-19.7	H	3.0	36.4	1.0	-55.1	-13.0	-42.1	
3.299	-19.1	H	3.0	35.8	1.0	-53.9	-13.0	-40.9	
Mid Ch, 836.5MHz									
1.673	-23.2	V	3.0	37.3	1.0	-59.6	-13.0	-46.6	
2.510	-19.0	V	3.0	36.4	1.0	-54.4	-13.0	-41.4	
3.346	-18.3	V	3.0	35.8	1.0	-53.1	-13.0	-40.1	
1.673	-23.9	H	3.0	37.3	1.0	-60.2	-13.0	-47.2	
2.510	-20.3	H	3.0	36.4	1.0	-55.7	-13.0	-42.7	
3.346	-18.2	H	3.0	35.8	1.0	-52.9	-13.0	-39.9	
High Ch, 848.3MHz									
1.697	-23.4	V	3.0	37.3	1.0	-59.7	-13.0	-46.7	
2.545	-19.2	V	3.0	36.3	1.0	-54.5	-13.0	-41.5	
3.393	-18.0	V	3.0	35.7	1.0	-52.7	-13.0	-39.7	
1.697	-23.6	H	3.0	37.3	1.0	-59.9	-13.0	-46.9	
2.545	-20.3	H	3.0	36.3	1.0	-55.7	-13.0	-42.7	
3.393	-18.9	H	3.0	35.7	1.0	-53.6	-13.0	-40.6	

LTE Band 4

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Location: Chamber B
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	-25.9	V	3.0	36.0	1.0	-61.0	-13.0	-48.0	
5160.00	-20.0	V	3.0	35.4	1.0	-54.5	-13.0	-41.5	
6880.00	-19.4	V	3.0	35.7	1.0	-54.1	-13.0	-41.1	
3440.00	-26.2	H	3.0	36.0	1.0	-61.2	-13.0	-48.2	
5160.00	-19.0	H	3.0	35.4	1.0	-53.4	-13.0	-40.4	
6880.00	-17.9	H	3.0	35.7	1.0	-52.6	-13.0	-39.6	
Mid Ch, 1732.5									
3465.00	-26.3	V	3.0	36.0	1.0	-61.3	-13.0	-48.3	
5197.50	-20.1	V	3.0	35.4	1.0	-54.5	-13.0	-41.5	
6930.00	-19.3	V	3.0	35.7	1.0	-54.0	-13.0	-41.0	
3465.00	-25.4	H	3.0	36.0	1.0	-60.4	-13.0	-47.4	
5197.50	-19.3	H	3.0	35.4	1.0	-53.7	-13.0	-40.7	
6930.00	-17.8	H	3.0	35.7	1.0	-52.4	-13.0	-39.4	
High Ch, 1745									
3490.00	-26.0	V	3.0	36.0	1.0	-61.0	-13.0	-48.0	
5235.00	-20.1	V	3.0	35.4	1.0	-54.5	-13.0	-41.5	
6980.00	-19.0	V	3.0	35.7	1.0	-53.7	-13.0	-40.7	
3490.00	-25.2	H	3.0	36.0	1.0	-60.2	-13.0	-47.2	
5235.00	-19.0	H	3.0	35.4	1.0	-53.5	-13.0	-40.5	
6980.00	-17.6	H	3.0	35.7	1.0	-52.3	-13.0	-39.3	

Band

LTE4

20MHz

QPSK

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Location: Chamber B
Mode: LTE_QPSK Band 4 Harmonics, 20MHz Bandwidth

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1720									
3440.00	-26.0	V	3.0	36.0	1.0	-61.1	-13.0	-48.1	
5160.00	-20.0	V	3.0	35.4	1.0	-54.5	-13.0	-41.5	
6880.00	-19.6	V	3.0	35.7	1.0	-54.3	-13.0	-41.3	
3440.00	-25.9	H	3.0	36.0	1.0	-60.9	-13.0	-47.9	
5160.00	-19.3	H	3.0	35.4	1.0	-53.7	-13.0	-40.7	
6880.00	-18.0	H	3.0	35.7	1.0	-52.6	-13.0	-39.6	
Mid Ch, 1732.5									
3465.00	-26.0	V	3.0	36.0	1.0	-61.0	-13.0	-48.0	
5197.50	-19.3	V	3.0	35.4	1.0	-53.8	-13.0	-40.8	
6930.00	-19.2	V	3.0	35.7	1.0	-53.8	-13.0	-40.8	
3465.00	-25.5	H	3.0	36.0	1.0	-60.6	-13.0	-47.6	
5197.50	-19.5	H	3.0	35.4	1.0	-54.0	-13.0	-41.0	
6930.00	-17.6	H	3.0	35.7	1.0	-52.3	-13.0	-39.3	
High Ch, 1745									
3490.00	-25.9	V	3.0	36.0	1.0	-60.9	-13.0	-47.9	
5235.00	-20.1	V	3.0	35.4	1.0	-54.6	-13.0	-41.6	
6980.00	-19.2	V	3.0	35.7	1.0	-53.9	-13.0	-40.9	
3490.00	-25.1	H	3.0	36.0	1.0	-60.1	-13.0	-47.1	
5235.00	-19.3	H	3.0	35.4	1.0	-53.8	-13.0	-40.8	
6980.00	-17.5	H	3.0	35.7	1.0	-52.2	-13.0	-39.2	

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Location: Chamber B
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	-26.1	V	3.0	36.1	1.0	-61.2	-13.0	-48.2	
	5152.50	-20.2	V	3.0	35.4	1.0	-54.6	-13.0	-41.6	
15MHz	6870.00	-19.5	V	3.0	35.7	1.0	-54.2	-13.0	-41.2	
	3435.00	-26.2	H	3.0	36.1	1.0	-61.2	-13.0	-48.2	
16QAM	5152.50	-19.2	H	3.0	35.4	1.0	-53.6	-13.0	-40.6	
	6870.00	-18.0	H	3.0	35.7	1.0	-52.7	-13.0	-39.7	
	Mid Ch, 1732.5									
	3465.00	-26.3	V	3.0	36.0	1.0	-61.3	-13.0	-48.3	
	5197.50	-20.0	V	3.0	35.4	1.0	-54.4	-13.0	-41.4	
	6930.00	-19.2	V	3.0	35.7	1.0	-53.9	-13.0	-40.9	
	3465.00	-25.8	H	3.0	36.0	1.0	-60.8	-13.0	-47.8	
	5197.50	-19.4	H	3.0	35.4	1.0	-53.8	-13.0	-40.8	
	6930.00	-17.6	H	3.0	35.7	1.0	-52.2	-13.0	-39.2	
	High Ch, 1747.5									
	3495.00	-26.0	V	3.0	36.0	1.0	-61.0	-13.0	-48.0	
	5242.50	-20.3	V	3.0	35.4	1.0	-54.7	-13.0	-41.7	
	6990.00	-19.1	V	3.0	35.7	1.0	-53.8	-13.0	-40.8	
	3495.00	-25.9	H	3.0	36.0	1.0	-60.9	-13.0	-47.9	
	5242.50	-18.6	H	3.0	35.4	1.0	-53.0	-13.0	-40.0	
	6990.00	-17.5	H	3.0	35.7	1.0	-52.2	-13.0	-39.2	

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Location: Chamber B
Mode: LTE_QPSK Band 4 Harmonics, 15MHz Bandwidth

Band: LTE4 15MHz 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, 1717.5									
3435.00	-26.1	V	3.0	36.1	1.0	-61.2	-13.0	-48.2	
5152.50	-20.1	V	3.0	35.4	1.0	-54.5	-13.0	-41.5	
6870.00	-19.4	V	3.0	35.7	1.0	-54.0	-13.0	-41.0	
3435.00	-26.3	H	3.0	36.1	1.0	-61.3	-13.0	-48.3	
5152.50	-19.2	H	3.0	35.4	1.0	-53.7	-13.0	-40.7	
6870.00	-18.0	H	3.0	35.7	1.0	-52.6	-13.0	-39.6	
Mid Ch, 1732.5									
3465.00	-26.3	V	3.0	36.0	1.0	-61.3	-13.0	-48.3	
5197.50	-20.2	V	3.0	35.4	1.0	-54.6	-13.0	-41.6	
6930.00	-19.3	V	3.0	35.7	1.0	-54.0	-13.0	-41.0	
3465.00	-25.9	H	3.0	36.0	1.0	-60.9	-13.0	-47.9	
5197.50	-19.5	H	3.0	35.4	1.0	-54.0	-13.0	-41.0	
6930.00	-17.4	H	3.0	35.7	1.0	-52.0	-13.0	-39.0	
High Ch, 1747.5									
3495.00	-25.8	V	3.0	36.0	1.0	-60.8	-13.0	-47.8	
5242.50	-19.8	V	3.0	35.4	1.0	-54.3	-13.0	-41.3	
6990.00	-19.3	V	3.0	35.7	1.0	-54.0	-13.0	-41.0	
3495.00	-26.1	H	3.0	36.0	1.0	-61.1	-13.0	-48.1	
5242.50	-19.6	H	3.0	35.4	1.0	-54.0	-13.0	-41.0	
6990.00	-17.7	H	3.0	35.7	1.0	-52.3	-13.0	-39.3	

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Configuration: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Location: Chamber B
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	-26.2	V	3.0	36.1	1.0	-61.2	-13.0	-48.2	
	5145.00	-20.3	V	3.0	35.4	1.0	-54.7	-13.0	-41.7	
10MHz	6860.00	-19.7	V	3.0	35.7	1.0	-54.4	-13.0	-41.4	
	3430.00	-26.3	H	3.0	36.1	1.0	-61.4	-13.0	-48.4	
16QAM	5145.00	-19.4	H	3.0	35.4	1.0	-53.8	-13.0	-40.8	
	6860.00	-18.0	H	3.0	35.7	1.0	-52.7	-13.0	-39.7	
	Mid Ch, 1732.5									
	3465.00	-26.1	V	3.0	36.0	1.0	-61.1	-13.0	-48.1	
	5197.50	-20.1	V	3.0	35.4	1.0	-54.5	-13.0	-41.5	
	6930.00	-19.2	V	3.0	35.7	1.0	-53.8	-13.0	-40.8	
	3465.00	-25.2	H	3.0	36.0	1.0	-60.2	-13.0	-47.2	
	5197.50	-18.9	H	3.0	35.4	1.0	-53.3	-13.0	-40.3	
	6930.00	-17.6	H	3.0	35.7	1.0	-52.2	-13.0	-39.2	
	High Ch, 1750									
	3500.00	-26.1	V	3.0	36.0	1.0	-61.1	-13.0	-48.1	
	5250.00	-19.3	V	3.0	35.4	1.0	-53.8	-13.0	-40.8	
	7000.00	-19.1	V	3.0	35.7	1.0	-53.8	-13.0	-40.8	
	3500.00	-26.0	H	3.0	36.0	1.0	-61.1	-13.0	-48.1	
	5250.00	-20.3	H	3.0	35.4	1.0	-54.7	-13.0	-41.7	
	7000.00	-17.3	H	3.0	35.7	1.0	-52.0	-13.0	-39.0	

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Configuration: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Location: Chamber B
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	-26.3	V	3.0	36.1	1.0	-61.3	-13.0	-48.3	
5145.00	-20.2	V	3.0	35.4	1.0	-54.6	-13.0	-41.6	
6860.00	-19.6	V	3.0	35.7	1.0	-54.3	-13.0	-41.3	
3430.00	-26.3	H	3.0	36.1	1.0	-61.4	-13.0	-48.4	
5145.00	-19.5	H	3.0	35.4	1.0	-54.0	-13.0	-41.0	
6860.00	-17.9	H	3.0	35.7	1.0	-52.5	-13.0	-39.5	
Mid Ch, 1732.5									
3465.00	-26.0	V	3.0	36.0	1.0	-61.1	-13.0	-48.1	
5197.50	-20.2	V	3.0	35.4	1.0	-54.6	-13.0	-41.6	
6930.00	-19.3	V	3.0	35.7	1.0	-54.0	-13.0	-41.0	
3465.00	-25.4	H	3.0	36.0	1.0	-60.4	-13.0	-47.4	
5197.50	-19.3	H	3.0	35.4	1.0	-53.8	-13.0	-40.8	
6930.00	-17.5	H	3.0	35.7	1.0	-52.2	-13.0	-39.2	
High Ch, 1750									
3500.00	-26.0	V	3.0	36.0	1.0	-61.0	-13.0	-48.0	
5250.00	-20.0	V	3.0	35.4	1.0	-54.4	-13.0	-41.4	
7000.00	-19.1	V	3.0	35.7	1.0	-53.8	-13.0	-40.8	
3500.00	-26.0	H	3.0	36.0	1.0	-61.0	-13.0	-48.0	
5250.00	-19.2	H	3.0	35.4	1.0	-53.6	-13.0	-40.6	
7000.00	-17.4	H	3.0	35.7	1.0	-52.1	-13.0	-39.1	

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Location: Chamber B
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	-26.1	V	3.0	36.1	1.0	-61.2	-13.0	-48.2	
5137.50	-20.0	V	3.0	35.4	1.0	-54.4	-13.0	-41.4	
6850.00	-19.4	V	3.0	35.7	1.0	-54.1	-13.0	-41.1	
3425.00	-25.7	H	3.0	36.1	1.0	-60.7	-13.0	-47.7	
5137.50	-19.5	H	3.0	35.4	1.0	-53.9	-13.0	-40.9	
6850.00	-17.9	H	3.0	35.7	1.0	-52.6	-13.0	-39.6	
Mid Ch, 1732.5									
3465.00	-26.2	V	3.0	36.0	1.0	-61.2	-13.0	-48.2	
5197.50	-19.3	V	3.0	35.4	1.0	-53.7	-13.0	-40.7	
6930.00	-19.0	V	3.0	35.7	1.0	-53.6	-13.0	-40.6	
3465.00	-25.9	H	3.0	36.0	1.0	-60.9	-13.0	-47.9	
5197.50	-19.1	H	3.0	35.4	1.0	-53.5	-13.0	-40.5	
6930.00	-17.5	H	3.0	35.7	1.0	-52.2	-13.0	-39.2	
High Ch, 1752.5									
3505.00	-25.8	V	3.0	36.0	1.0	-60.8	-13.0	-47.8	
5257.50	-20.1	V	3.0	35.4	1.0	-54.6	-13.0	-41.6	
7010.00	-19.2	V	3.0	35.7	1.0	-53.9	-13.0	-40.9	
3505.00	-26.0	H	3.0	36.0	1.0	-61.0	-13.0	-48.0	
5257.50	-19.3	H	3.0	35.4	1.0	-53.7	-13.0	-40.7	
7010.00	-17.5	H	3.0	35.7	1.0	-52.2	-13.0	-39.2	

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Location: Chamber B
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	-26.2	V	3.0	36.1	1.0	-61.2	-13.0	-48.2	
5137.50	-20.1	V	3.0	35.4	1.0	-54.6	-13.0	-41.6	
6850.00	-19.5	V	3.0	35.7	1.0	-54.2	-13.0	-41.2	
3425.00	-25.4	H	3.0	36.1	1.0	-60.5	-13.0	-47.5	
5137.50	-19.4	H	3.0	35.4	1.0	-53.8	-13.0	-40.8	
6850.00	-17.9	H	3.0	35.7	1.0	-52.5	-13.0	-39.5	
Mid Ch, 1732.5									
3465.00	-26.1	V	3.0	36.0	1.0	-61.1	-13.0	-48.1	
5197.50	-19.9	V	3.0	35.4	1.0	-54.3	-13.0	-41.3	
6930.00	-19.2	V	3.0	35.7	1.0	-53.8	-13.0	-40.8	
3465.00	-26.0	H	3.0	36.0	1.0	-61.0	-13.0	-48.0	
5197.50	-19.3	H	3.0	35.4	1.0	-53.7	-13.0	-40.7	
6930.00	-17.5	H	3.0	35.7	1.0	-52.1	-13.0	-39.1	
High Ch, 1752.5									
3505.00	-25.7	V	3.0	36.0	1.0	-60.7	-13.0	-47.7	
5257.50	-20.0	V	3.0	35.4	1.0	-54.4	-13.0	-41.4	
7010.00	-19.0	V	3.0	35.7	1.0	-53.6	-13.0	-40.6	
3505.00	-25.8	H	3.0	36.0	1.0	-60.8	-13.0	-47.8	
5257.50	-19.3	H	3.0	35.4	1.0	-53.7	-13.0	-40.7	
7010.00	-17.1	H	3.0	35.7	1.0	-51.8	-13.0	-38.8	

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Location: Chamber B
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	-26.4	V	3.0	36.1	1.0	-61.5	-13.0	-48.5	
	5134.50	-20.1	V	3.0	35.4	1.0	-54.5	-13.0	-41.5	
3MHz	6846.00	-18.6	V	3.0	35.7	1.0	-53.2	-13.0	-40.2	
	3423.00	-26.8	H	3.0	36.1	1.0	-61.9	-13.0	-48.9	
16QAM	5134.50	-19.7	H	3.0	35.4	1.0	-54.1	-13.0	-41.1	
	6846.00	-17.9	H	3.0	35.7	1.0	-52.6	-13.0	-39.6	
	Mid Ch, 1732.5									
	3465.00	-26.5	V	3.0	36.0	1.0	-61.5	-13.0	-48.5	
	5197.50	-20.1	V	3.0	35.4	1.0	-54.5	-13.0	-41.5	
	6930.00	-18.3	V	3.0	35.7	1.0	-53.0	-13.0	-40.0	
	3465.00	-25.9	H	3.0	36.0	1.0	-60.9	-13.0	-47.9	
	5197.50	-19.7	H	3.0	35.4	1.0	-54.1	-13.0	-41.1	
	6930.00	-17.3	H	3.0	35.7	1.0	-52.0	-13.0	-39.0	
	High Ch, 1753.5									
	3507.00	-26.0	V	3.0	36.0	1.0	-61.0	-13.0	-48.0	
	5260.50	-20.1	V	3.0	35.4	1.0	-54.6	-13.0	-41.6	
	7014.00	-18.2	V	3.0	35.7	1.0	-52.9	-13.0	-39.9	
	3507.00	-26.5	H	3.0	36.0	1.0	-61.5	-13.0	-48.5	
	5260.50	-20.1	H	3.0	35.4	1.0	-54.5	-13.0	-41.5	
	7014.00	-17.1	H	3.0	35.7	1.0	-51.8	-13.0	-38.8	

Compliance Certification Services
bove 1GHz High Frequency Substitution Measureme

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Location: Chamber B
Mode: LTE_QPSK Band 4 Harmonics, 3MHz Bandwidth

Band LTE4 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, 1711.5									
3423.00	-26.5	V	3.0	36.1	1.0	-61.6	-13.0	-48.6	
5134.50	-20.0	V	3.0	35.4	1.0	-54.4	-13.0	-41.4	
6846.00	-18.7	V	3.0	35.7	1.0	-53.4	-13.0	-40.4	
3423.00	-26.7	H	3.0	36.1	1.0	-61.8	-13.0	-48.8	
5134.50	-19.8	H	3.0	35.4	1.0	-54.2	-13.0	-41.2	
6846.00	-18.0	H	3.0	35.7	1.0	-52.6	-13.0	-39.6	
Mid Ch, 1732.5									
3465.00	-26.1	V	3.0	36.0	1.0	-61.2	-13.0	-48.2	
5197.50	-20.2	V	3.0	35.4	1.0	-54.7	-13.0	-41.7	
6930.00	-18.4	V	3.0	35.7	1.0	-53.0	-13.0	-40.0	
3465.00	-26.1	H	3.0	36.0	1.0	-61.1	-13.0	-48.1	
5197.50	-19.8	H	3.0	35.4	1.0	-54.2	-13.0	-41.2	
6930.00	-17.3	H	3.0	35.7	1.0	-52.0	-13.0	-39.0	
High Ch, 1753.5									
3507.00	-26.4	V	3.0	36.0	1.0	-61.4	-13.0	-48.4	
5260.50	-20.4	V	3.0	35.4	1.0	-54.8	-13.0	-41.8	
7014.00	-18.3	V	3.0	35.7	1.0	-53.0	-13.0	-40.0	
3507.00	-26.6	H	3.0	36.0	1.0	-61.6	-13.0	-48.6	
5260.50	-19.9	H	3.0	35.4	1.0	-54.3	-13.0	-41.3	
7014.00	-17.2	H	3.0	35.7	1.0	-51.9	-13.0	-38.9	

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Location: Chamber B
Mode: LTE_16QAM Band 4 Harmonics, 1.4MHz Bandwidth

Band: LTE4 / 1.4MHz / 16QAM

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1710.7									
3421.40	-26.5	V	3.0	36.1	1.0	-61.5	-13.0	-48.5	
5132.10	-20.1	V	3.0	35.4	1.0	-54.5	-13.0	-41.5	
6842.80	-18.8	V	3.0	35.7	1.0	-53.5	-13.0	-40.5	
3421.40	-26.7	H	3.0	36.1	1.0	-61.8	-13.0	-48.8	
5132.10	-19.8	H	3.0	35.4	1.0	-54.3	-13.0	-41.3	
6842.80	-17.8	H	3.0	35.7	1.0	-52.4	-13.0	-39.4	
Mid Ch, 1732.5									
3465.00	-26.5	V	3.0	36.0	1.0	-61.5	-13.0	-48.5	
5197.50	-19.6	V	3.0	35.4	1.0	-54.0	-13.0	-41.0	
6930.00	-18.4	V	3.0	35.7	1.0	-53.0	-13.0	-40.0	
3465.00	-26.0	H	3.0	36.0	1.0	-61.1	-13.0	-48.1	
5197.50	-19.1	H	3.0	35.4	1.0	-53.5	-13.0	-40.5	
6930.00	-17.4	H	3.0	35.7	1.0	-52.1	-13.0	-39.1	
High Ch, 1754.3									
3508.60	-26.2	V	3.0	36.0	1.0	-61.2	-13.0	-48.2	
5262.90	-20.5	V	3.0	35.4	1.0	-54.9	-13.0	-41.9	
7017.20	-18.2	V	3.0	35.7	1.0	-52.8	-13.0	-39.8	
3508.60	-26.5	H	3.0	36.0	1.0	-61.5	-13.0	-48.5	
5262.90	-19.6	H	3.0	35.4	1.0	-54.0	-13.0	-41.0	
7017.20	-17.2	H	3.0	35.7	1.0	-51.9	-13.0	-38.9	

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Location: Chamber B
Mode: LTE_QPSK Band 4 Harmonics, 1.4MHz Bandwidth

Band: LTE4 1.4MHz QPSK

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1710.7									
3421.40	-26.6	V	3.0	36.1	1.0	-61.7	-13.0	-48.7	
5132.10	-20.2	V	3.0	35.4	1.0	-54.6	-13.0	-41.6	
6842.80	-18.8	V	3.0	35.7	1.0	-53.5	-13.0	-40.5	
3421.40	-26.5	H	3.0	36.1	1.0	-61.6	-13.0	-48.6	
5132.10	-19.9	H	3.0	35.4	1.0	-54.3	-13.0	-41.3	
6842.80	-18.0	H	3.0	35.7	1.0	-52.7	-13.0	-39.7	
Mid Ch, 1732.5									
3465.00	-26.5	V	3.0	36.0	1.0	-61.5	-13.0	-48.5	
5197.50	-19.0	V	3.0	35.4	1.0	-53.5	-13.0	-40.5	
6930.00	-18.3	V	3.0	35.7	1.0	-53.0	-13.0	-40.0	
3465.00	-25.7	H	3.0	36.0	1.0	-60.7	-13.0	-47.7	
5197.50	-19.4	H	3.0	35.4	1.0	-53.8	-13.0	-40.8	
6930.00	-17.3	H	3.0	35.7	1.0	-52.0	-13.0	-39.0	
High Ch, 1754.3									
3508.60	-26.3	V	3.0	36.0	1.0	-61.3	-13.0	-48.3	
5262.90	-20.4	V	3.0	35.4	1.0	-54.8	-13.0	-41.8	
7017.20	-18.2	V	3.0	35.7	1.0	-52.8	-13.0	-39.8	
3508.60	-26.7	H	3.0	36.0	1.0	-61.7	-13.0	-48.7	
5262.90	-19.7	H	3.0	35.4	1.0	-54.2	-13.0	-41.2	
7017.20	-17.1	H	3.0	35.7	1.0	-51.8	-13.0	-38.8	

LTE Band 2

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Mode: LTE2_20M_16QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T343 8449B	Filter 1	Part 24

Band: LTE2 20MHz 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, 1860MHz									
3.720	-22.1	V	3.0	35.4	1.0	-56.5	-13.0	-43.5	
5.580	-19.8	V	3.0	34.7	1.0	-53.6	-13.0	-40.6	
7.440	-19.1	V	3.0	34.9	1.0	-53.0	-13.0	-40.0	
3.720	-21.8	H	3.0	35.4	1.0	-56.2	-13.0	-43.2	
5.580	-18.8	H	3.0	34.7	1.0	-52.5	-13.0	-39.5	
7.440	-17.4	H	3.0	34.9	1.0	-51.3	-13.0	-38.3	
Mid Ch, 1880.0MHz									
3.760	-22.0	V	3.0	35.3	1.0	-56.4	-13.0	-43.4	
5.640	-18.5	V	3.0	34.7	1.0	-52.2	-13.0	-39.2	
7.520	-19.3	V	3.0	34.9	1.0	-53.2	-13.0	-40.2	
3.760	-21.8	H	3.0	35.3	1.0	-56.2	-13.0	-43.2	
5.640	-18.9	H	3.0	34.7	1.0	-52.6	-13.0	-39.6	
7.520	-17.5	H	3.0	34.9	1.0	-51.4	-13.0	-38.4	
High Ch, 1900 MHz									
3.800	-22.0	V	3.0	35.3	1.0	-56.3	-13.0	-43.3	
5.700	-19.8	V	3.0	34.7	1.0	-53.5	-13.0	-40.5	
7.600	-18.7	V	3.0	34.9	1.0	-52.7	-13.0	-39.7	
3.800	-21.4	H	3.0	35.3	1.0	-55.7	-13.0	-42.7	
5.700	-17.2	H	3.0	34.7	1.0	-50.9	-13.0	-37.9	
7.600	-17.0	H	3.0	34.9	1.0	-51.0	-13.0	-38.0	

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

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Mode: LTE2_20M_QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T343 8449B	Filter 1	Part 24

Band LTE2 20MHz 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, 1860MHz									
3.720	-22.1	V	3.0	35.4	1.0	-56.4	-13.0	-43.4	
5.580	-19.8	V	3.0	34.7	1.0	-53.5	-13.0	-40.5	
7.440	-19.0	V	3.0	34.9	1.0	-53.0	-13.0	-40.0	
3.720	-21.7	H	3.0	35.4	1.0	-56.0	-13.0	-43.0	
5.580	-19.1	H	3.0	34.7	1.0	-52.8	-13.0	-39.8	
7.440	-17.3	H	3.0	34.9	1.0	-51.3	-13.0	-38.3	
Mid Ch, 1880.0MHz									
3.760	-22.0	V	3.0	35.3	1.0	-56.3	-13.0	-43.3	
5.640	-18.4	V	3.0	34.7	1.0	-52.2	-13.0	-39.2	
7.520	-19.1	V	3.0	34.9	1.0	-53.0	-13.0	-40.0	
3.760	-21.7	H	3.0	35.3	1.0	-56.1	-13.0	-43.1	
5.640	-19.1	H	3.0	34.7	1.0	-52.8	-13.0	-39.8	
7.520	-17.6	H	3.0	34.9	1.0	-51.5	-13.0	-38.5	
High Ch, 1900 MHz									
3.800	-21.8	V	3.0	35.3	1.0	-56.1	-13.0	-43.1	
5.700	-19.7	V	3.0	34.7	1.0	-53.5	-13.0	-40.5	
7.600	-18.8	V	3.0	34.9	1.0	-52.8	-13.0	-39.8	
3.800	-21.6	H	3.0	35.3	1.0	-55.9	-13.0	-42.9	
5.700	-17.5	H	3.0	34.7	1.0	-51.2	-13.0	-38.2	
7.600	-17.3	H	3.0	34.9	1.0	-51.2	-13.0	-38.2	

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

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Mode: LTE2_15M_16QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T343 8449B	Filter 1	Part 24

Band: LTE2 15MHz 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, 1857.5MHz									
3.715	-22.2	V	3.0	35.4	1.0	-56.6	-13.0	-43.6	
5.572	-20.0	V	3.0	34.7	1.0	-53.7	-13.0	-40.7	
7.424	-19.3	V	3.0	34.9	1.0	-53.2	-13.0	-40.2	
3.715	-21.9	H	3.0	35.4	1.0	-56.3	-13.0	-43.3	
5.572	-18.6	H	3.0	34.7	1.0	-52.3	-13.0	-39.3	
7.424	-17.2	H	3.0	34.9	1.0	-51.1	-13.0	-38.1	
Mid Ch, 1880.0MHz									
3.760	-21.9	V	3.0	35.3	1.0	-56.3	-13.0	-43.3	
5.640	-19.7	V	3.0	34.7	1.0	-53.5	-13.0	-40.5	
7.520	-19.2	V	3.0	34.9	1.0	-53.1	-13.0	-40.1	
3.760	-21.7	H	3.0	35.3	1.0	-56.1	-13.0	-43.1	
5.640	-18.8	H	3.0	34.7	1.0	-52.5	-13.0	-39.5	
7.520	-17.4	H	3.0	34.9	1.0	-51.4	-13.0	-38.4	
High Ch, 1902.5 MHz									
3.805	-21.9	V	3.0	35.3	1.0	-56.2	-13.0	-43.2	
5.707	-19.6	V	3.0	34.7	1.0	-53.4	-13.0	-40.4	
7.610	-18.9	V	3.0	34.9	1.0	-52.9	-13.0	-39.9	
3.805	-21.6	H	3.0	35.3	1.0	-55.9	-13.0	-42.9	
5.707	-17.9	H	3.0	34.7	1.0	-51.6	-13.0	-38.6	
7.610	-17.2	H	3.0	34.9	1.0	-51.1	-13.0	-38.1	

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

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Mode: LTE2_15M_QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T343 8449B	Filter 1	Part 24

Band: LTE2 15MHz 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, 1857.5MHz									
3.715	-22.0	V	3.0	35.4	1.0	-56.4	-13.0	-43.4	
5.572	-19.8	V	3.0	34.7	1.0	-53.5	-13.0	-40.5	
7.424	-19.1	V	3.0	34.9	1.0	-53.0	-13.0	-40.0	
3.715	-21.8	H	3.0	35.4	1.0	-56.1	-13.0	-43.1	
5.572	-18.7	H	3.0	34.7	1.0	-52.4	-13.0	-39.4	
7.424	-17.3	H	3.0	34.9	1.0	-51.2	-13.0	-38.2	
Mid Ch, 1880.0MHz									
3.760	-22.0	V	3.0	35.3	1.0	-56.4	-13.0	-43.4	
5.640	-19.9	V	3.0	34.7	1.0	-53.6	-13.0	-40.6	
7.520	-19.2	V	3.0	34.9	1.0	-53.1	-13.0	-40.1	
3.760	-21.6	H	3.0	35.3	1.0	-56.0	-13.0	-43.0	
5.640	-19.0	H	3.0	34.7	1.0	-52.7	-13.0	-39.7	
7.520	-17.6	H	3.0	34.9	1.0	-51.5	-13.0	-38.5	
High Ch, 1902.5 MHz									
3.805	-22.0	V	3.0	35.3	1.0	-56.2	-13.0	-43.2	
5.707	-19.5	V	3.0	34.7	1.0	-53.2	-13.0	-40.2	
7.610	-18.8	V	3.0	34.9	1.0	-52.7	-13.0	-39.7	
3.805	-21.7	H	3.0	35.3	1.0	-56.0	-13.0	-43.0	
5.707	-18.0	H	3.0	34.7	1.0	-51.8	-13.0	-38.8	
7.610	-17.2	H	3.0	34.9	1.0	-51.1	-13.0	-38.1	

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

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Mode: LTE2_10M_16QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T343 8449B	Filter 1	Part 24

Band LTE2 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, 1855.0MHz									
3.710	-22.2	V	3.0	35.4	1.0	-56.6	-13.0	-43.6	
5.565	-20.0	V	3.0	34.7	1.0	-53.7	-13.0	-40.7	
7.420	-19.1	V	3.0	34.9	1.0	-53.0	-13.0	-40.0	
3.710	-21.7	H	3.0	35.4	1.0	-56.1	-13.0	-43.1	
5.565	-18.9	H	3.0	34.7	1.0	-52.6	-13.0	-39.6	
7.420	-17.4	H	3.0	34.9	1.0	-51.3	-13.0	-38.3	
Mid Ch, 1880.0MHz									
3.760	-21.7	V	3.0	35.3	1.0	-56.1	-13.0	-43.1	
5.640	-19.8	V	3.0	34.7	1.0	-53.6	-13.0	-40.6	
7.520	-19.1	V	3.0	34.9	1.0	-53.0	-13.0	-40.0	
3.760	-21.9	H	3.0	35.3	1.0	-56.2	-13.0	-43.2	
5.640	-19.0	H	3.0	34.7	1.0	-52.7	-13.0	-39.7	
7.520	-17.5	H	3.0	34.9	1.0	-51.4	-13.0	-38.4	
High Ch, 1905 MHz									
3.810	-21.9	V	3.0	35.3	1.0	-56.2	-13.0	-43.2	
5.715	-19.8	V	3.0	34.7	1.0	-53.6	-13.0	-40.6	
7.620	-18.7	V	3.0	34.9	1.0	-52.7	-13.0	-39.7	
3.810	-21.5	H	3.0	35.3	1.0	-55.8	-13.0	-42.8	
5.715	-18.2	H	3.0	34.7	1.0	-51.9	-13.0	-38.9	
7.620	-17.1	H	3.0	34.9	1.0	-51.1	-13.0	-38.1	

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

Band
LTE2
10MHz
QPSK

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Mode: LTE2_10M_QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T343 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1855.0MHz									
3.710	-22.1	V	3.0	35.4	1.0	-56.5	-13.0	-43.5	
5.565	-19.6	V	3.0	34.7	1.0	-53.4	-13.0	-40.4	
7.420	-19.1	V	3.0	34.9	1.0	-53.0	-13.0	-40.0	
3.710	-21.8	H	3.0	35.4	1.0	-56.2	-13.0	-43.2	
5.565	-19.0	H	3.0	34.7	1.0	-52.7	-13.0	-39.7	
7.420	-17.5	H	3.0	34.9	1.0	-51.5	-13.0	-38.5	
Mid Ch, 1880.0MHz									
3.760	-21.5	V	3.0	35.3	1.0	-55.9	-13.0	-42.9	
5.640	-20.0	V	3.0	34.7	1.0	-53.7	-13.0	-40.7	
7.520	-19.1	V	3.0	34.9	1.0	-53.1	-13.0	-40.1	
3.760	-21.7	H	3.0	35.3	1.0	-56.0	-13.0	-43.0	
5.640	-19.1	H	3.0	34.7	1.0	-52.8	-13.0	-39.8	
7.520	-17.7	H	3.0	34.9	1.0	-51.7	-13.0	-38.7	
High Ch, 1905 MHz									
3.810	-22.0	V	3.0	35.3	1.0	-56.3	-13.0	-43.3	
5.715	-19.8	V	3.0	34.7	1.0	-53.5	-13.0	-40.5	
7.620	-18.7	V	3.0	34.9	1.0	-52.6	-13.0	-39.6	
3.810	-21.5	H	3.0	35.3	1.0	-55.8	-13.0	-42.8	
5.715	-18.1	H	3.0	34.7	1.0	-51.8	-13.0	-38.8	
7.620	-16.9	H	3.0	34.9	1.0	-50.9	-13.0	-37.9	

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

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Mode: LTE2_5M_16QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T343 8449B	Filter 1	Part 24

Band LTE2 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, 1852.5MHz									
3.705	-22.2	V	3.0	35.4	1.0	-56.6	-13.0	-43.6	
5.557	-19.9	V	3.0	34.7	1.0	-53.6	-13.0	-40.6	
7.410	-19.0	V	3.0	34.9	1.0	-52.9	-13.0	-39.9	
3.705	-22.0	H	3.0	35.4	1.0	-56.4	-13.0	-43.4	
5.557	-18.9	H	3.0	34.7	1.0	-52.6	-13.0	-39.6	
7.410	-17.2	H	3.0	34.9	1.0	-51.1	-13.0	-38.1	
Mid Ch, 1880.0MHz									
3.760	-22.2	V	3.0	35.3	1.0	-56.5	-13.0	-43.5	
5.640	-19.9	V	3.0	34.7	1.0	-53.6	-13.0	-40.6	
7.520	-19.2	V	3.0	34.9	1.0	-53.1	-13.0	-40.1	
3.760	-21.9	H	3.0	35.3	1.0	-56.2	-13.0	-43.2	
5.640	-19.0	H	3.0	34.7	1.0	-52.7	-13.0	-39.7	
7.520	-17.2	H	3.0	34.9	1.0	-51.1	-13.0	-38.1	
High Ch, 1907.5 MHz									
3.815	-22.0	V	3.0	35.3	1.0	-56.3	-13.0	-43.3	
5.722	-20.1	V	3.0	34.7	1.0	-53.8	-13.0	-40.8	
7.630	-18.8	V	3.0	34.9	1.0	-52.7	-13.0	-39.7	
3.815	-21.5	H	3.0	35.3	1.0	-55.8	-13.0	-42.8	
5.722	-18.7	H	3.0	34.7	1.0	-52.4	-13.0	-39.4	
7.630	-17.1	H	3.0	34.9	1.0	-51.1	-13.0	-38.1	

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

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Mode: LTE2_5M_QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T343 8449B	Filter 1	Part 24

Band LTE2 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, 1852.5MHz									
3.705	-22.3	V	3.0	35.4	1.0	-56.7	-13.0	-43.7	
5.557	-19.9	V	3.0	34.7	1.0	-53.6	-13.0	-40.6	
7.410	-19.1	V	3.0	34.9	1.0	-53.0	-13.0	-40.0	
3.705	-22.0	H	3.0	35.4	1.0	-56.4	-13.0	-43.4	
5.557	-19.2	H	3.0	34.7	1.0	-52.9	-13.0	-39.9	
7.410	-17.2	H	3.0	34.9	1.0	-51.1	-13.0	-38.1	
Mid Ch, 1880.0MHz									
3.760	-22.2	V	3.0	35.3	1.0	-56.5	-13.0	-43.5	
5.640	-20.0	V	3.0	34.7	1.0	-53.7	-13.0	-40.7	
7.520	-19.3	V	3.0	34.9	1.0	-53.2	-13.0	-40.2	
3.760	-21.9	H	3.0	35.3	1.0	-56.2	-13.0	-43.2	
5.640	-19.1	H	3.0	34.7	1.0	-52.8	-13.0	-39.8	
7.520	-17.7	H	3.0	34.9	1.0	-51.6	-13.0	-38.6	
High Ch, 1907.5 MHz									
3.815	-22.0	V	3.0	35.3	1.0	-56.2	-13.0	-43.2	
5.722	-18.3	V	3.0	34.7	1.0	-52.1	-13.0	-39.1	
7.630	-18.7	V	3.0	34.9	1.0	-52.6	-13.0	-39.6	
3.815	-21.5	H	3.0	35.3	1.0	-55.8	-13.0	-42.8	
5.722	-18.8	H	3.0	34.7	1.0	-52.5	-13.0	-39.5	
7.630	-17.1	H	3.0	34.9	1.0	-51.1	-13.0	-38.1	

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

Band

LTE2

3MHz

16QAM

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Mode: LTE2_3M_HARM_16QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T343 8449B	Filter 1	Part 24

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1851.5MHz									
3.703	-22.3	V	3.0	35.4	1.0	-56.7	-13.0	-43.7	
5.554	-20.0	V	3.0	34.7	1.0	-53.8	-13.0	-40.8	
7.406	-19.0	V	3.0	34.9	1.0	-52.9	-13.0	-39.9	
3.703	-21.5	H	3.0	35.4	1.0	-55.9	-13.0	-42.9	
5.554	-18.8	H	3.0	34.7	1.0	-52.5	-13.0	-39.5	
7.406	-17.4	H	3.0	34.9	1.0	-51.3	-13.0	-38.3	
Mid Ch, 1880.0MHz									
3.760	-21.8	V	3.0	35.3	1.0	-56.1	-13.0	-43.1	
5.640	-20.1	V	3.0	34.7	1.0	-53.8	-13.0	-40.8	
7.520	-19.2	V	3.0	34.9	1.0	-53.1	-13.0	-40.1	
3.760	-21.9	H	3.0	35.3	1.0	-56.3	-13.0	-43.3	
5.640	-18.9	H	3.0	34.7	1.0	-52.6	-13.0	-39.6	
7.520	-17.2	H	3.0	34.9	1.0	-51.1	-13.0	-38.1	
High Ch, 1908.5 MHz									
3.817	-21.9	V	3.0	35.3	1.0	-56.1	-13.0	-43.1	
5.725	-19.7	V	3.0	34.7	1.0	-53.5	-13.0	-40.5	
7.634	-18.9	V	3.0	34.9	1.0	-52.8	-13.0	-39.8	
3.817	-21.6	H	3.0	35.3	1.0	-55.9	-13.0	-42.9	
5.725	-17.9	H	3.0	34.7	1.0	-51.6	-13.0	-38.6	
7.634	-17.0	H	3.0	34.9	1.0	-50.9	-13.0	-37.9	

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

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Mode: LTE2_3M_HARM_QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T343 8449B	Filter 1	Part 24

Band LTE2 3MHz 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, 1851.5MHz									
3.703	-22.3	V	3.0	35.4	1.0	-56.7	-13.0	-43.7	
5.554	-19.8	V	3.0	34.7	1.0	-53.5	-13.0	-40.5	
7.406	-19.0	V	3.0	34.9	1.0	-53.0	-13.0	-40.0	
3.703	-21.3	H	3.0	35.4	1.0	-55.7	-13.0	-42.7	
5.554	-19.1	H	3.0	34.7	1.0	-52.8	-13.0	-39.8	
7.406	-17.4	H	3.0	34.9	1.0	-51.3	-13.0	-38.3	
Mid Ch, 1880.0MHz									
3.760	-21.4	V	3.0	35.3	1.0	-55.8	-13.0	-42.8	
5.640	-19.9	V	3.0	34.7	1.0	-53.6	-13.0	-40.6	
7.520	-19.3	V	3.0	34.9	1.0	-53.2	-13.0	-40.2	
3.760	-21.9	H	3.0	35.3	1.0	-56.2	-13.0	-43.2	
5.640	-19.1	H	3.0	34.7	1.0	-52.8	-13.0	-39.8	
7.520	-17.4	H	3.0	34.9	1.0	-51.4	-13.0	-38.4	
High Ch, 1908.5 MHz									
3.817	-21.9	V	3.0	35.3	1.0	-56.2	-13.0	-43.2	
5.725	-15.8	V	3.0	34.7	1.0	-49.5	-13.0	-36.5	
7.634	-18.8	V	3.0	34.9	1.0	-52.7	-13.0	-39.7	
3.817	-21.4	H	3.0	35.3	1.0	-55.7	-13.0	-42.7	
5.725	-15.6	H	3.0	34.7	1.0	-49.3	-13.0	-36.3	
7.634	-17.1	H	3.0	34.9	1.0	-51.0	-13.0	-38.0	

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

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Mode: LTE2_1.4M_HARM_16QAM

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T343 8449B	Filter 1	Part 24

Band LTE2 1.4MHz 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, 1850.7MHz									
3.702	-22.3	V	3.0	35.4	1.0	-56.7	-13.0	-43.7	
5.553	-20.0	V	3.0	34.7	1.0	-53.7	-13.0	-40.7	
7.404	-19.0	V	3.0	34.9	1.0	-53.0	-13.0	-40.0	
3.702	-22.0	H	3.0	35.4	1.0	-56.4	-13.0	-43.4	
5.553	-19.1	H	3.0	34.7	1.0	-52.8	-13.0	-39.8	
7.404	-17.4	H	3.0	34.9	1.0	-51.3	-13.0	-38.3	
Mid Ch, 1880.0MHz									
3.760	-22.1	V	3.0	35.3	1.0	-56.4	-13.0	-43.4	
5.640	-19.9	V	3.0	34.7	1.0	-53.6	-13.0	-40.6	
7.520	-19.1	V	3.0	34.9	1.0	-53.1	-13.0	-40.1	
3.760	-21.9	H	3.0	35.3	1.0	-56.3	-13.0	-43.3	
5.640	-19.2	H	3.0	34.7	1.0	-52.9	-13.0	-39.9	
7.520	-17.5	H	3.0	34.9	1.0	-51.4	-13.0	-38.4	
High Ch, 1909.3 MHz									
3.816	-22.0	V	3.0	35.3	1.0	-56.3	-13.0	-43.3	
5.724	-19.3	V	3.0	34.7	1.0	-53.0	-13.0	-40.0	
7.632	-18.7	V	3.0	34.9	1.0	-52.6	-13.0	-39.6	
3.816	-21.8	H	3.0	35.3	1.0	-56.1	-13.0	-43.1	
5.724	-16.9	H	3.0	34.7	1.0	-50.7	-13.0	-37.7	
7.632	-17.0	H	3.0	34.9	1.0	-50.9	-13.0	-37.9	

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

High Frequency Substitution Measurement
UL Verification Services, Inc.

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Mode: LTE2_1.4M_HARM_QPSK

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T343 8449B	Filter 1	Part 24

Band: LTE2 1.4MHz 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, 1850.7MHz									
3.702	-22.3	V	3.0	35.4	1.0	-56.7	-13.0	-43.7	
5.553	-20.0	V	3.0	34.7	1.0	-53.7	-13.0	-40.7	
7.404	-18.8	V	3.0	34.9	1.0	-52.7	-13.0	-39.7	
3.702	-22.1	H	3.0	35.4	1.0	-56.5	-13.0	-43.5	
5.553	-19.0	H	3.0	34.7	1.0	-52.8	-13.0	-39.8	
7.404	-17.5	H	3.0	34.9	1.0	-51.5	-13.0	-38.5	
Mid Ch, 1880.0MHz									
3.760	-22.1	V	3.0	35.3	1.0	-56.4	-13.0	-43.4	
5.640	-20.0	V	3.0	34.7	1.0	-53.7	-13.0	-40.7	
7.520	-19.2	V	3.0	34.9	1.0	-53.1	-13.0	-40.1	
3.760	-21.9	H	3.0	35.3	1.0	-56.2	-13.0	-43.2	
5.640	-19.0	H	3.0	34.7	1.0	-52.8	-13.0	-39.8	
7.520	-17.6	H	3.0	34.9	1.0	-51.6	-13.0	-38.6	
High Ch, 1909.3 MHz									
3.816	-22.1	V	3.0	35.3	1.0	-56.3	-13.0	-43.3	
5.724	-19.8	V	3.0	34.7	1.0	-53.5	-13.0	-40.5	
7.632	-18.8	V	3.0	34.9	1.0	-52.7	-13.0	-39.7	
3.816	-21.7	H	3.0	35.3	1.0	-56.0	-13.0	-43.0	
5.724	-16.3	H	3.0	34.7	1.0	-50.0	-13.0	-37.0	
7.632	-16.8	H	3.0	34.9	1.0	-50.8	-13.0	-37.8	

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: Sony
Project #: 15U20030
Date: 03/04/15
Test Engineer: O. Stoelting
Configuration: EUT/AC Charger/HS
Mode: HSDPA_B2

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

Band: Band 2 HSDPA

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1852.4MHz									
3.705	-18.0	V	3.0	35.4	1.0	-52.4	-13.0	-39.4	
5.557	-15.9	V	3.0	34.7	1.0	-49.7	-13.0	-36.7	
7.410	-15.2	V	3.0	34.9	1.0	-49.1	-13.0	-36.1	
3.705	-18.1	H	3.0	35.4	1.0	-52.5	-13.0	-39.5	
5.557	-15.5	H	3.0	34.7	1.0	-49.3	-13.0	-36.3	
7.410	-13.1	H	3.0	34.9	1.0	-47.0	-13.0	-34.0	
Mid Ch, 1880MHz									
3.760	-17.5	V	3.0	35.3	1.0	-51.8	-13.0	-38.8	
5.640	-16.4	V	3.0	34.7	1.0	-50.1	-13.0	-37.1	
7.520	-14.2	V	3.0	34.9	1.0	-48.1	-13.0	-35.1	
3.760	-17.0	H	3.0	35.3	1.0	-51.3	-13.0	-38.3	
5.640	-15.2	H	3.0	34.7	1.0	-48.9	-13.0	-35.9	
7.520	-12.6	H	3.0	34.9	1.0	-46.5	-13.0	-33.5	
High Ch, 1907.6MHz									
3.815	-16.6	V	3.0	35.3	1.0	-50.9	-13.0	-37.9	
5.723	-15.5	V	3.0	34.7	1.0	-49.2	-13.0	-36.2	
7.630	-13.8	V	3.0	34.9	1.0	-47.7	-13.0	-34.7	
3.815	-18.0	H	3.0	35.3	1.0	-52.3	-13.0	-39.3	
5.723	-15.0	H	3.0	34.7	1.0	-48.7	-13.0	-35.7	
7.630	-12.6	H	3.0	34.9	1.0	-46.5	-13.0	-33.5	

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

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

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Mode: REL99_B2

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

Band: Band 2

REL99

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1852.4MHz									
3.705	-22.4	V	3.0	35.4	1.0	-56.8	-13.0	-43.8	
5.557	-20.1	V	3.0	34.7	1.0	-53.8	-13.0	-40.8	
7.410	-18.4	V	3.0	34.9	1.0	-52.4	-13.0	-39.4	
3.705	-22.5	H	3.0	35.4	1.0	-56.9	-13.0	-43.9	
5.557	-19.6	H	3.0	34.7	1.0	-53.3	-13.0	-40.3	
7.410	-17.5	H	3.0	34.9	1.0	-51.4	-13.0	-38.4	
Mid Ch, 1880MHz									
3.760	-22.2	V	3.0	35.3	1.0	-56.5	-13.0	-43.5	
5.640	-20.0	V	3.0	34.7	1.0	-53.7	-13.0	-40.7	
7.520	-18.6	V	3.0	34.9	1.0	-52.5	-13.0	-39.5	
3.760	-22.5	H	3.0	35.3	1.0	-56.8	-13.0	-43.8	
5.640	-19.3	H	3.0	34.7	1.0	-53.0	-13.0	-40.0	
7.520	-17.3	H	3.0	34.9	1.0	-51.2	-13.0	-38.2	
High Ch, 1907.6MHz									
3.815	-22.0	V	3.0	35.3	1.0	-56.3	-13.0	-43.3	
5.723	-19.8	V	3.0	34.7	1.0	-53.5	-13.0	-40.5	
7.630	-18.2	V	3.0	34.9	1.0	-52.1	-13.0	-39.1	
3.815	-22.4	H	3.0	35.3	1.0	-56.6	-13.0	-43.6	
5.723	-19.2	H	3.0	34.7	1.0	-52.9	-13.0	-39.9	
7.630	-17.0	H	3.0	34.9	1.0	-50.9	-13.0	-37.9	

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

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

Company: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT + Charger
Mode: HSDPA_B5

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, 826.4MHz										
Band 5	1.653	-23.7	V	3.0	37.4	1.0	-60.1	-13.0	-47.1	
	2.479	-18.4	V	3.0	36.4	1.0	-53.8	-13.0	-40.8	
HSDPA	3.306	-19.1	V	3.0	35.8	1.0	-53.8	-13.0	-40.8	
	1.653	-23.4	H	3.0	37.4	1.0	-59.8	-13.0	-46.8	
	2.479	-20.8	H	3.0	36.4	1.0	-56.2	-13.0	-43.2	
	3.306	-19.4	H	3.0	35.8	1.0	-54.2	-13.0	-41.2	
Mid Ch, 836.6MHz										
	1.673	-23.8	V	3.0	37.3	1.0	-60.2	-13.0	-47.2	
	2.510	-19.0	V	3.0	36.4	1.0	-54.4	-13.0	-41.4	
	3.346	-18.0	V	3.0	35.8	1.0	-52.8	-13.0	-39.8	
	1.673	-23.9	H	3.0	37.3	1.0	-60.3	-13.0	-47.3	
	2.510	-20.1	H	3.0	36.4	1.0	-55.5	-13.0	-42.5	
	3.346	-18.2	H	3.0	35.8	1.0	-53.0	-13.0	-40.0	
High Ch, 846.6MHz										
	1.693	-22.6	V	3.0	37.3	1.0	-59.0	-13.0	-46.0	
	2.540	-19.8	V	3.0	36.3	1.0	-55.2	-13.0	-42.2	
	3.386	-18.6	V	3.0	35.7	1.0	-53.4	-13.0	-40.4	
	1.693	-23.1	H	3.0	37.3	1.0	-59.4	-13.0	-46.4	
	2.540	-20.5	H	3.0	36.3	1.0	-55.8	-13.0	-42.8	
	3.386	-18.5	H	3.0	35.7	1.0	-53.2	-13.0	-40.2	

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

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

Company: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT + Charger
Mode: REL99_B5

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

Band

Band 5

REL99

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.4MHz									
1.653	-23.6	V	3.0	37.4	1.0	-60.0	-13.0	-47.0	
2.479	-18.7	V	3.0	36.4	1.0	-54.1	-13.0	-41.1	
3.306	-19.1	V	3.0	35.8	1.0	-53.9	-13.0	-40.9	
1.653	-24.6	H	3.0	37.4	1.0	-60.9	-13.0	-47.9	
2.479	-20.3	H	3.0	36.4	1.0	-55.7	-13.0	-42.7	
3.306	-19.4	H	3.0	35.8	1.0	-54.2	-13.0	-41.2	
Mid Ch, 836.6MHz									
1.673	-23.8	V	3.0	37.3	1.0	-60.1	-13.0	-47.1	
2.510	-18.7	V	3.0	36.4	1.0	-54.1	-13.0	-41.1	
3.346	-17.7	V	3.0	35.8	1.0	-52.4	-13.0	-39.4	
1.673	-23.6	H	3.0	37.3	1.0	-60.0	-13.0	-47.0	
2.510	-20.1	H	3.0	36.4	1.0	-55.5	-13.0	-42.5	
3.346	-19.0	H	3.0	35.8	1.0	-53.8	-13.0	-40.8	
High Ch, 846.6MHz									
1.693	-23.1	V	3.0	37.3	1.0	-59.4	-13.0	-46.4	
2.540	-18.9	V	3.0	36.3	1.0	-54.2	-13.0	-41.2	
3.386	-18.1	V	3.0	35.7	1.0	-52.8	-13.0	-39.8	
1.693	-22.9	H	3.0	37.3	1.0	-59.2	-13.0	-46.2	
2.540	-21.2	H	3.0	36.3	1.0	-56.5	-13.0	-43.5	
3.386	-18.9	H	3.0	35.7	1.0	-53.6	-13.0	-40.6	

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

GSM

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

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Mode: EGPRS1900

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

Band: GSM 1900 EGPRS

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.2MHz									
3.700	-22.5	V	3.0	35.4	1.0	-56.9	-13.0	-43.9	
5.551	-20.1	V	3.0	34.7	1.0	-53.8	-13.0	-40.8	
7.401	-18.4	V	3.0	34.9	1.0	-52.3	-13.0	-39.3	
3.700	-22.2	H	3.0	35.4	1.0	-56.6	-13.0	-43.6	
5.551	-17.8	H	3.0	34.7	1.0	-51.5	-13.0	-38.5	
7.401	-16.1	H	3.0	34.9	1.0	-50.1	-13.0	-37.1	
Mid Ch, 1880.0MHz									
3.760	-22.1	V	3.0	35.3	1.0	-56.4	-13.0	-43.4	
5.640	-20.1	V	3.0	34.7	1.0	-53.8	-13.0	-40.8	
7.520	-18.2	V	3.0	34.9	1.0	-52.2	-13.0	-39.2	
3.760	-22.6	H	3.0	35.3	1.0	-56.9	-13.0	-43.9	
5.640	-19.5	H	3.0	34.7	1.0	-53.2	-13.0	-40.2	
7.520	-17.5	H	3.0	34.9	1.0	-51.4	-13.0	-38.4	
High Ch, 1909.8MHz									
3.820	-22.0	V	3.0	35.3	1.0	-56.2	-13.0	-43.2	
5.729	-20.0	V	3.0	34.7	1.0	-53.7	-13.0	-40.7	
7.639	-17.9	V	3.0	35.0	1.0	-51.8	-13.0	-38.8	
3.820	-22.2	H	3.0	35.3	1.0	-56.5	-13.0	-43.5	
5.729	-19.5	H	3.0	34.7	1.0	-53.2	-13.0	-40.2	
7.639	-17.0	H	3.0	35.0	1.0	-51.0	-13.0	-38.0	

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

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

Company: Sony
Project #: 15U20030
Date: 3/5/2015
Test Engineer: O. Stoelting
Configuration: x-pos EUT/AC Charger/ HS
Mode: GPRS1900

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, 1850.2MHz									
GSM 1900	3.700	-22.6	V	3.0	35.4	1.0	-57.0	-13.0	-44.0	
	5.551	-19.9	V	3.0	34.7	1.0	-53.6	-13.0	-40.6	
	7.401	-18.4	V	3.0	34.9	1.0	-52.3	-13.0	-39.3	
GPRS	3.700	-22.7	H	3.0	35.4	1.0	-57.1	-13.0	-44.1	
	5.551	-19.1	H	3.0	34.7	1.0	-52.8	-13.0	-39.8	
	7.401	-17.6	H	3.0	34.9	1.0	-51.5	-13.0	-38.5	
	Mid Ch, 1880.0MHz									
	3.760	-22.4	V	3.0	35.3	1.0	-56.8	-13.0	-43.8	
	5.640	-19.8	V	3.0	34.7	1.0	-53.5	-13.0	-40.5	
	7.520	-18.5	V	3.0	34.9	1.0	-52.5	-13.0	-39.5	
	3.760	-22.5	H	3.0	35.3	1.0	-56.8	-13.0	-43.8	
	5.640	-17.9	H	3.0	34.7	1.0	-51.6	-13.0	-38.6	
	7.520	-17.5	H	3.0	34.9	1.0	-51.4	-13.0	-38.4	
	High Ch, 1909.8MHz									
	3.820	-22.0	V	3.0	35.3	1.0	-56.3	-13.0	-43.3	
	5.729	-9.6	V	3.0	34.7	1.0	-43.3	-13.0	-30.3	
	7.639	-18.0	V	3.0	35.0	1.0	-51.9	-13.0	-38.9	
	3.820	-22.4	H	3.0	35.3	1.0	-56.7	-13.0	-43.7	
	5.729	-10.8	H	3.0	34.7	1.0	-44.5	-13.0	-31.5	
	7.639	-17.1	H	3.0	35.0	1.0	-51.1	-13.0	-38.1	

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

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

Company: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT + Charger
Mode: EGPRS850 Harm

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

Band: GSM 850 EGPRS

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Not
Low Ch, 824.2MHz									
1.648	-25.5	V	3.0	37.4	1.0	-61.9	-13.0	-48.9	
2.473	-20.0	V	3.0	36.4	1.0	-55.4	-13.0	-42.4	
3.297	-20.9	V	3.0	35.8	1.0	-55.7	-13.0	-42.7	
1.648	-26.2	H	3.0	37.4	1.0	-62.6	-13.0	-49.6	
2.473	-21.4	H	3.0	36.4	1.0	-56.8	-13.0	-43.8	
3.297	-20.8	H	3.0	35.8	1.0	-55.6	-13.0	-42.6	
Mid Ch, 836.6MHz									
1.673	-25.4	V	3.0	37.3	1.0	-61.7	-13.0	-48.7	
2.510	-21.6	V	3.0	36.4	1.0	-57.0	-13.0	-44.0	
3.346	-20.7	V	3.0	35.8	1.0	-55.5	-13.0	-42.5	
1.673	-25.2	H	3.0	37.3	1.0	-61.6	-13.0	-48.6	
2.510	-22.5	H	3.0	36.4	1.0	-57.9	-13.0	-44.9	
3.346	-21.5	H	3.0	35.8	1.0	-56.2	-13.0	-43.2	
High Ch, 848.8MHz									
1.698	-24.8	V	3.0	37.3	1.0	-61.1	-13.0	-48.1	
2.547	-21.6	V	3.0	36.3	1.0	-56.9	-13.0	-43.9	
3.395	-20.2	V	3.0	35.7	1.0	-54.9	-13.0	-41.9	
1.698	-25.0	H	3.0	37.3	1.0	-61.3	-13.0	-48.3	
2.547	-22.9	H	3.0	36.3	1.0	-58.3	-13.0	-45.3	
3.395	-20.2	H	3.0	35.7	1.0	-54.9	-13.0	-41.9	

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

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

Company: Sony
Project #: 15U20030
Date: 03/06/15
Test Engineer: Jude Semana
Configuration: EUT + Charger
Mode: GPRS 850 HARM

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

Band: GSM 850 GPRS

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									
1.648	-25.8	V	3.0	37.4	1.0	-62.2	-13.0	-49.2	
2.473	-19.5	V	3.0	36.4	1.0	-54.9	-13.0	-41.9	
3.297	-20.3	V	3.0	35.8	1.0	-55.1	-13.0	-42.1	
1.648	-25.9	H	3.0	37.4	1.0	-62.3	-13.0	-49.3	
2.473	-22.1	H	3.0	36.4	1.0	-57.5	-13.0	-44.5	
3.297	-20.6	H	3.0	35.8	1.0	-55.4	-13.0	-42.4	
Mid Ch, 836.6MHz									
1.673	-25.8	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	-20.2	V	3.0	35.8	1.0	-55.0	-13.0	-42.0	
1.673	-25.5	H	3.0	37.3	1.0	-61.9	-13.0	-48.9	
2.510	-22.8	H	3.0	36.4	1.0	-58.1	-13.0	-45.1	
3.346	-21.3	H	3.0	35.8	1.0	-56.1	-13.0	-43.1	
High Ch, 848.8MHz									
1.698	-25.0	V	3.0	37.3	1.0	-61.3	-13.0	-48.3	
2.547	-20.7	V	3.0	36.3	1.0	-56.0	-13.0	-43.0	
3.395	-20.3	V	3.0	35.7	1.0	-55.1	-13.0	-42.1	
1.698	-24.2	H	3.0	37.3	1.0	-60.5	-13.0	-47.5	
2.547	-22.5	H	3.0	36.3	1.0	-57.8	-13.0	-44.8	
3.395	-20.5	H	3.0	35.7	1.0	-55.2	-13.0	-42.2	

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