

LTE Band 17

LTE Band 17 10MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement																																																																																																	
	Company: Samsung																																																																																																	
	Project #: 4788312331																																																																																																	
	Date: 2018-01-22																																																																																																	
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	Project #:		4788312331						
	Date:		2018-01-22						
	Test Engineer:		47989						
	Configuration:		EUT / Z-Position						
	Location:		Chamber 2						
	Mode:		LTE_QPSK Band 17 Fundamentals, 5MHz Bandwidth						
	Test Equipment:		Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 3m N-type Cable						
	f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Delta	Notes
	MHz	(dBm)	(H/V)	(dB)	(dBd)	(dBm)	(dBm)	(dB)	
	Low Ch								
	706.50	17.31	V	0.9	-1.6	14.85	34.8	-19.9	
706.50	-4.99	H	0.9	-1.6	-7.45	34.8	-42.2		
Mid Ch									
710.00	17.63	V	0.9	-1.6	15.16	34.8	-19.6		
710.00	-4.50	H	0.9	-1.6	-6.97	34.8	-41.7		
High Ch									
713.50	17.90	V	0.9	-1.6	15.43	34.8	-19.3		
713.50	-4.74	H	0.9	-1.6	-7.22	34.8	-42.0		
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	f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Delta	Notes
	MHz	(dBm)	(H/V)	(dB)	(dBd)	(dBm)	(dBm)	(dB)	
	Low Ch								
	706.50	16.61	V	0.9	-1.6	14.15	34.8	-20.6	
706.50	-6.06	H	0.9	-1.6	-8.52	34.8	-43.3		
Mid Ch									
710.00	16.46	V	0.9	-1.6	13.99	34.8	-20.8		
710.00	-5.52	H	0.9	-1.6	-7.99	34.8	-42.8		
High Ch									
713.50	16.68	V	0.9	-1.6	14.21	34.8	-20.6		
713.50	-5.98	H	0.9	-1.6	-8.46	34.8	-43.2		

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	Low Ch								
	826.50	22.10	V	1.0	-1.5	19.68	38.5	-18.8	
	826.50	4.51	H	1.0	-1.5	2.09	38.5	-36.4	
	Mid Ch								
	836.50	21.15	V	1.0	-1.4	18.77	38.5	-19.7	
	836.50	5.22	H	1.0	-1.4	2.84	38.5	-35.7	
High Ch									
846.50	20.11	V	1.0	-1.4	17.76	38.5	-20.7		
846.50	4.31	H	1.0	-1.4	1.96	38.5	-36.5		
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	826.50	21.13	V	1.0	-1.5	18.71	38.5	-19.8	
	826.50	3.46	H	1.0	-1.5	1.04	38.5	-37.5	
	Mid Ch								
	836.50	20.14	V	1.0	-1.4	17.76	38.5	-20.7	
	836.50	4.12	H	1.0	-1.4	1.74	38.5	-36.8	
High Ch									
846.50	19.32	V	1.0	-1.4	16.97	38.5	-21.5		
846.50	3.45	H	1.0	-1.4	1.10	38.5	-37.4		

LTE Band 5 3MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement																																																																																																	
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LTE Band 4

LTE Band 4 20MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung								
	Project #: 4788312331								
	Date: 2018-02-01								
	Test Engineer: 47989								
	Configuration: EUT / X-Position								
	Location: Chamber 2								
	Mode: LTE_QPSK Band 4 Fundamentals, 20MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00161451], 3m N-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1720.00	14.62	V	4.3	9.5	19.79	30.0	-10.2	
1720.00	14.44	H	4.3	9.5	19.61	30.0	-10.4		
Mid Ch									
1732.50	14.54	V	4.3	9.5	19.74	30.0	-10.3		
1732.50	15.04	H	4.3	9.5	20.24	30.0	-9.8		
High Ch									
1745.00	12.76	V	4.4	9.6	17.98	30.0	-12.0		
1745.00	15.19	H	4.4	9.6	20.41	30.0	-9.6		
LTE Band 4 20MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung								
	Project #: 4788312331								
	Date: 2018-02-01								
	Test Engineer: 47989								
	Configuration: EUT / X-Position								
	Location: Chamber 2								
	Mode: LTE_16QAM Band 4 Fundamentals, 20MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00161451], 3m N-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1720.00	13.71	V	4.3	9.5	18.88	30.0	-11.1	
1720.00	13.50	H	4.3	9.5	18.67	30.0	-11.3		
Mid Ch									
1732.50	13.55	V	4.3	9.5	18.75	30.0	-11.3		
1732.50	14.05	H	4.3	9.5	19.25	30.0	-10.7		
High Ch									
1745.00	11.80	V	4.4	9.6	17.02	30.0	-13.0		
1745.00	14.23	H	4.4	9.6	19.45	30.0	-10.6		

LTE Band 4 15MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788312331 Date: 2018-02-01 Test Engineer: 47989 Configuration: EUT / X-Position Location: Chamber 2 Mode: LTE_QPSK Band 4 Fundamentals, 15MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00161451], 3m N-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1717.50	13.27	V	4.3	9.5	18.44	30.0	-11.6	
	1717.50	14.83	H	4.3	9.5	19.99	30.0	-10.0	
	Mid Ch								
	1732.50	12.70	V	4.3	9.5	17.90	30.0	-12.1	
	1732.50	14.31	H	4.3	9.5	19.51	30.0	-10.5	
High Ch									
1747.50	13.58	V	4.4	9.6	18.81	30.0	-11.2		
1747.50	15.18	H	4.4	9.6	20.41	30.0	-9.6		
LTE Band 4 15MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
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	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00161451], 3m N-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1717.50	12.27	V	4.3	9.5	17.44	30.0	-12.6	
	1717.50	13.84	H	4.3	9.5	19.00	30.0	-11.0	
	Mid Ch								
	1732.50	11.71	V	4.3	9.5	16.91	30.0	-13.1	
	1732.50	15.28	H	4.3	9.5	20.48	30.0	-9.5	
High Ch									
1747.50	12.60	V	4.4	9.6	17.83	30.0	-12.2		
1747.50	14.21	H	4.4	9.6	19.44	30.0	-10.6		

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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	10.57	V	4.5	9.5	15.56	33.0	-17.4																																																																																											
1852.50	14.57	H	4.5	9.5	19.56	33.0	-13.4																																																																																											
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1880.00	11.08	V	4.5	9.2	15.76	33.0	-17.2																																																																																											
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LTE Band 2 3MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788312331 Date: 2018-01-23 Test Engineer: 45585 Configuration: EUT / X-Position Location: Chamber 1 Mode: LTE_QPSK Band 2 Fundamentals, 3MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00161451], 3m N-type Cable								
	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	11.52	V	4.5	9.5	16.52	33.0	-16.5	
	1851.50	13.70	H	4.5	9.5	18.70	33.0	-14.3	
	Mid Ch								
	1880.00	11.09	V	4.5	9.2	15.77	33.0	-17.2	
	1880.00	13.17	H	4.5	9.2	17.85	33.0	-15.2	
High Ch									
1908.50	11.43	V	4.6	8.9	15.76	33.0	-17.2		
1908.50	13.89	H	4.6	8.9	18.21	33.0	-14.8		
LTE Band 2 3MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788312331 Date: 2018-01-23 Test Engineer: 45585 Configuration: EUT / X-Position Location: Chamber 1 Mode: LTE_16QAM Band 2 Fundamentals, 3MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00161451], 3m N-type Cable								
	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	10.47	V	4.5	9.5	15.47	33.0	-17.5	
	1851.50	12.71	H	4.5	9.5	17.71	33.0	-15.3	
	Mid Ch								
	1880.00	10.02	V	4.5	9.2	14.70	33.0	-18.3	
	1880.00	12.07	H	4.5	9.2	16.75	33.0	-16.3	
High Ch									
1908.50	10.42	V	4.6	8.9	14.75	33.0	-18.3		
1908.50	12.86	H	4.6	8.9	17.18	33.0	-15.8		

LTE Band 2 1.4MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788312331 Date: 2018-01-23 Test Engineer: 45585 Configuration: EUT / X-Position Location: Chamber 1 Mode: LTE_QPSK Band 2 Fundamentals, 1.4MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00161451], 3m N-type Cable								
	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	8.29	V	4.5	9.5	13.29	33.0	-19.7	
	1850.70	11.49	H	4.5	9.5	16.50	33.0	-16.5	
	Mid Ch								
	1880.00	9.02	V	4.5	9.2	13.70	33.0	-19.3	
	1880.00	11.21	H	4.5	9.2	15.89	33.0	-17.1	
High Ch									
1909.30	9.03	V	4.6	8.9	13.34	33.0	-19.7		
1909.30	9.71	H	4.6	8.9	14.02	33.0	-19.0		
LTE Band 2 1.4MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788312331 Date: 2018-01-23 Test Engineer: 45585 Configuration: EUT / X-Position Location: Chamber 1 Mode: LTE_16QAM Band 2 Fundamentals, 1.4MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00161451], 3m N-type Cable								
	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	7.37	V	4.5	9.5	12.37	33.0	-20.6	
	1850.70	10.59	H	4.5	9.5	15.60	33.0	-17.4	
	Mid Ch								
	1880.00	8.06	V	4.5	9.2	12.74	33.0	-20.3	
	1880.00	10.19	H	4.5	9.2	14.87	33.0	-18.1	
High Ch									
1909.30	8.02	V	4.6	8.9	12.33	33.0	-20.7		
1909.30	8.65	H	4.6	8.9	12.96	33.0	-20.0		

10.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

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

LIMIT

Part 22.917(a) & Part 24.238(a) & Part 27.53(g),(h) - The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

TEST PROCEDURE

ANSI / TIA / EIA 603E Clause 2.2.12; ESU40 setting reference to 971168 D01 v03

For peak power measurement with a ESU40:

- a) Set the RBW = 100 KHz for emission below 1GHz and 1MHz for emissions above 1GHz
- b) Set VBW $\geq 3 \times$ RBW;
- c) Set span ≥ 1.5 times the OBW;
- d) Sweep time = auto couple;
- e) Detector = peak (RMS for average measurement);
- f) Ensure that the number of measurement points \geq span/RBW;
- g) Trace mode = max hold;

NOTE : Radiated spurious emissions were investigated below 30MHz, 30MHz – 1GHz and above 1GHz. There were no emissions found on below 30MHz and 30MHz – 1GHz.

RESULTS

10.2.1. SPURIOUS RADIATION PLOTS

GSM 850

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
GSM GSM850 GPRS	Company: Samsung Project #: 4788312331 Date: 2018-01-25 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z Position Location: Chamber 2 Mode: GPRS 850 MHz Harmonics										
	Low Ch, 824.2MHz										
	1648.40	-5.8	V	3.0	38.2	1.0	-43.0	-13.0	-30.0		
	2472.60	-8.3	V	3.0	38.8	1.0	-47.1	-13.0	-34.1		
	3296.80	-12.5	V	3.0	39.4	1.0	-50.9	-13.0	-37.9		
	4121.00	-12.1	V	3.0	39.8	2.0	-49.9	-13.0	-36.9		
	1648.40	-4.6	H	3.0	38.2	1.0	-41.8	-13.0	-28.8		
	2472.60	-7.3	H	3.0	38.8	1.0	-45.1	-13.0	-32.1		
	3296.80	-10.6	H	3.0	39.4	1.0	-49.0	-13.0	-36.0		
	4121.00	-10.3	H	3.0	39.8	2.0	-48.2	-13.0	-35.2		
	Mid Ch, 836.6MHz										
	1673.20	-6.2	V	3.0	38.2	1.0	-43.5	-13.0	-30.5		
	2509.80	-8.9	V	3.0	38.8	1.0	-46.8	-13.0	-33.8		
	3346.40	-13.5	V	3.0	39.5	1.0	-51.9	-13.0	-38.9		
	4183.00	-11.1	V	3.0	39.8	2.0	-48.9	-13.0	-35.9		
	1673.20	-3.8	H	3.0	38.2	1.0	-41.0	-13.0	-28.0		
	2509.80	-12.4	H	3.0	38.8	1.0	-50.2	-13.0	-37.2		
	3346.40	-11.2	H	3.0	39.5	1.0	-49.6	-13.0	-36.6		
	4183.00	-10.3	H	3.0	39.8	2.0	-48.1	-13.0	-35.1		
	High Ch, 848.8MHz										
	1697.60	-7.8	V	3.0	38.2	1.0	-45.0	-13.0	-32.0		
	2546.40	-6.1	V	3.0	38.9	1.0	-44.0	-13.0	-31.0		
	3395.20	-13.2	V	3.0	39.5	1.0	-51.7	-13.0	-38.7		
	4244.00	-9.9	V	3.0	39.8	2.0	-47.7	-13.0	-34.7		
	1697.60	-5.9	H	3.0	38.2	1.0	-43.2	-13.0	-30.2		
	2546.40	-15.3	H	3.0	38.9	1.0	-53.2	-13.0	-40.2		
	3395.20	-13.1	H	3.0	39.5	1.0	-51.6	-13.0	-38.6		
	4244.00	-8.9	H	3.0	39.8	2.0	-46.7	-13.0	-33.7		
	GSM GSM850 EGPRS	Company: Samsung Project #: 4788312331 Date: 2018-01-25 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z Position Location: Chamber 2 Mode: EGPRS 850 MHz Harmonics									
		Low Ch, 824.2MHz									
		1648.40	-7.6	V	3.0	38.2	1.0	-44.8	-13.0	-31.8	
		2472.60	-11.5	V	3.0	38.8	1.0	-49.3	-13.0	-36.3	
		3296.80	-14.3	V	3.0	39.4	1.0	-52.8	-13.0	-39.8	
		4121.00	-13.8	V	3.0	39.8	2.0	-51.6	-13.0	-38.6	
		1648.40	-5.6	H	3.0	38.2	1.0	-42.8	-13.0	-29.8	
		2472.60	-10.1	H	3.0	38.8	1.0	-47.9	-13.0	-34.9	
		3296.80	-12.9	H	3.0	39.4	1.0	-51.4	-13.0	-38.4	
		4121.00	-10.6	H	3.0	39.8	2.0	-48.4	-13.0	-35.4	
		Mid Ch, 836.6MHz									
		1673.20	-9.7	V	3.0	38.2	1.0	-46.9	-13.0	-33.9	
		2509.80	-12.6	V	3.0	38.8	1.0	-50.5	-13.0	-37.5	
		3346.40	-14.2	V	3.0	39.5	1.0	-52.7	-13.0	-39.7	
		4183.00	-12.1	V	3.0	39.8	1.0	-50.9	-13.0	-37.9	
		1673.20	-8.6	H	3.0	38.2	1.0	-45.8	-13.0	-32.8	
		2509.80	-15.5	H	3.0	38.8	1.0	-53.3	-13.0	-40.3	
3346.40		-14.7	H	3.0	39.5	1.0	-53.2	-13.0	-40.2		
4183.00		-10.3	H	3.0	39.8	1.0	-49.2	-13.0	-36.2		
High Ch, 848.8MHz											
1697.60		-7.7	V	3.0	38.2	1.0	-44.9	-13.0	-31.9		
2546.40		-11.1	V	3.0	38.9	1.0	-49.0	-13.0	-36.0		
3395.20		-13.7	V	3.0	39.5	1.0	-52.2	-13.0	-39.2		
2148.00		-16.1	V	3.0	38.5	1.0	-53.7	-13.0	-40.7		
1697.60		-6.5	H	3.0	38.2	1.0	-43.8	-13.0	-30.8		
2546.40		-11.7	H	3.0	38.9	1.0	-49.6	-13.0	-36.6		
3395.20		-13.9	H	3.0	39.5	1.0	-52.4	-13.0	-39.4		
4244.00		-11.8	H	3.0	39.8	2.0	-49.7	-13.0	-36.7		

GSM 1900

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
GSM GSM1900 GPRS	Company: Samsung Project #: 4788312331 Date: 2018-02-02 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, X-Position Location: Chamber 1 Mode: GPRS 1900 MHz Harmonics										
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
	Low Ch, 1850.2MHz										
	3700.40	3.9	V	3.0	43.8	1.0	-38.9	-13.0	-25.9		
	5550.60	-3.6	V	3.0	43.7	1.0	-46.3	-13.0	-33.3		
	7400.80	-4.4	V	3.0	42.5	1.0	-46.0	-13.0	-33.0		
	3700.40	4.1	H	3.0	43.8	1.0	-38.6	-13.0	-25.6		
	5550.60	-3.9	H	3.0	43.7	1.0	-46.6	-13.0	-33.6		
	7400.80	-3.2	H	3.0	42.5	1.0	-44.7	-13.0	-31.7		
	Mid Ch, 1880MHz										
	3760.00	4.4	V	3.0	43.8	1.0	-38.4	-13.0	-25.4		
	5640.00	-3.4	V	3.0	43.7	1.0	-46.1	-13.0	-33.1		
	7520.00	-3.5	V	3.0	42.5	1.0	-45.0	-13.0	-32.0		
	3760.00	3.2	H	3.0	43.8	1.0	-39.6	-13.0	-26.6		
	5640.00	-4.0	H	3.0	43.7	1.0	-46.7	-13.0	-33.7		
	7520.00	-2.9	H	3.0	42.5	1.0	-44.4	-13.0	-31.4		
	High Ch, 1909.8MHz										
	3819.60	0.4	V	3.0	43.8	1.0	-42.4	-13.0	-29.4		
	5729.40	-2.7	V	3.0	43.7	1.0	-45.4	-13.0	-32.4		
	7639.20	-4.8	V	3.0	42.4	1.0	-46.2	-13.0	-33.2		
	3819.60	0.0	H	3.0	43.8	1.0	-42.8	-13.0	-29.8		
	5729.40	-4.3	H	3.0	43.7	1.0	-47.0	-13.0	-34.0		
	7639.20	-4.0	H	3.0	42.4	1.0	-45.4	-13.0	-32.4		
	UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
GSM GSM1900 EGPRS	Company: Samsung Project #: 4788312331 Date: 2018-02-02 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, X-Position Location: Chamber 1 Mode: EGPRS 1900 MHz Harmonics										
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
	Low Ch, 1850.2MHz										
	3700.40	2.3	V	3.0	43.8	1.0	-40.5	-13.0	-27.5		
	5550.60	-5.8	V	3.0	43.7	1.0	-48.5	-13.0	-35.5		
	7400.80	-4.3	V	3.0	42.5	1.0	-45.8	-13.0	-32.8		
	3700.40	2.5	H	3.0	43.8	1.0	-40.3	-13.0	-27.3		
	5550.60	-6.1	H	3.0	43.7	1.0	-48.8	-13.0	-35.8		
	7400.80	-4.5	H	3.0	42.5	1.0	-46.0	-13.0	-33.0		
	Mid Ch, 1880MHz										
	3760.00	2.3	V	3.0	43.8	1.0	-40.5	-13.0	-27.5		
	5640.00	-4.6	V	3.0	43.7	1.0	-47.3	-13.0	-34.3		
	7520.00	-3.7	V	3.0	42.5	1.0	-45.2	-13.0	-32.2		
	3760.00	1.2	H	3.0	43.8	1.0	-41.5	-13.0	-28.5		
	5640.00	-5.6	H	3.0	43.7	1.0	-48.3	-13.0	-35.3		
	7520.00	-4.0	H	3.0	42.5	1.0	-45.5	-13.0	-32.5		
	High Ch, 1909.8MHz										
	3819.60	-1.6	V	3.0	43.8	1.0	-44.4	-13.0	-31.4		
	5729.40	-4.5	V	3.0	43.7	1.0	-47.2	-13.0	-34.2		
	7639.20	-4.6	V	3.0	42.4	1.0	-46.0	-13.0	-33.0		
	3819.60	-2.0	H	3.0	43.8	1.0	-44.8	-13.0	-31.8		
	5729.40	-4.3	H	3.0	43.7	1.0	-47.0	-13.0	-34.0		
	7639.20	-3.9	H	3.0	42.4	1.0	-45.2	-13.0	-32.2		

WCDMA Band 5

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
WCDMA Band 5 REL99	Company: Samsung Project #: 4788312331 Date: 2018-01-25 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z Position Location: Chamber 2 Mode: Rel99 Band 5 Harmonics										
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
	Low Ch, 826.4MHz										
	1652.80	-14.9	V	3.0	38.2	1.0	-52.2	-13.0	-39.2		
	2479.20	-13.8	V	3.0	38.8	1.0	-51.7	-13.0	-38.7		
	3305.60	-13.8	V	3.0	39.4	1.0	-52.2	-13.0	-39.2		
	1652.80	-15.8	H	3.0	38.2	1.0	-53.0	-13.0	-40.0		
	2479.20	-13.2	H	3.0	38.8	1.0	-51.0	-13.0	-38.0		
	3305.60	-14.2	H	3.0	39.4	1.0	-52.6	-13.0	-39.6		
	Mid Ch, 836.6MHz										
	1673.20	-15.0	V	3.0	38.2	1.0	-52.2	-13.0	-39.2		
	2509.80	-13.8	V	3.0	38.8	1.0	-51.7	-13.0	-38.7		
	3346.40	-14.1	V	3.0	39.5	1.0	-52.6	-13.0	-39.6		
	1673.20	-14.3	H	3.0	38.2	1.0	-51.5	-13.0	-38.5		
	2509.80	-15.1	H	3.0	38.8	1.0	-53.0	-13.0	-40.0		
	3346.40	-14.4	H	3.0	39.5	1.0	-52.8	-13.0	-39.8		
	High Ch, 846.6MHz										
	1693.20	-13.4	V	3.0	38.2	1.0	-50.7	-13.0	-37.7		
	2539.80	-14.2	V	3.0	38.9	1.0	-52.1	-13.0	-39.1		
	3386.40	-13.1	V	3.0	39.5	1.0	-51.6	-13.0	-38.6		
	1693.20	-13.6	H	3.0	38.2	1.0	-50.8	-13.0	-37.8		
	2539.80	-15.0	H	3.0	38.9	1.0	-52.8	-13.0	-39.8		
	3386.40	-13.9	H	3.0	39.5	1.0	-52.4	-13.0	-39.4		
	WCDMA Band 5 HSDPA	Company: Samsung Project #: 4788312331 Date: 2018-01-25 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z Position Location: Chamber 2 Mode: HSDPA Band 5 Harmonics									
f MHz		SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 826.4MHz											
1652.80		-15.4	V	3.0	38.2	1.0	-52.6	-13.0	-39.6		
2479.20		-14.2	V	3.0	38.8	1.0	-52.0	-13.0	-39.0		
3305.60		-13.8	V	3.0	39.4	1.0	-52.3	-13.0	-39.3		
1652.80		-16.3	H	3.0	38.2	1.0	-53.5	-13.0	-40.5		
2479.20		-13.0	H	3.0	38.8	1.0	-50.9	-13.0	-37.9		
3305.60		-14.2	H	3.0	39.4	1.0	-52.6	-13.0	-39.6		
Mid Ch, 836.6MHz											
1673.20		-15.2	V	3.0	38.2	1.0	-52.4	-13.0	-39.4		
2509.80		-14.5	V	3.0	38.8	1.0	-52.3	-13.0	-39.3		
3346.40		-14.2	V	3.0	39.5	1.0	-52.7	-13.0	-39.7		
1673.20		-13.9	H	3.0	38.2	1.0	-51.2	-13.0	-38.2		
2509.80		-15.6	H	3.0	38.8	1.0	-53.5	-13.0	-40.5		
3346.40		-14.5	H	3.0	39.5	1.0	-53.0	-13.0	-40.0		
High Ch, 846.6MHz											
1693.20		-14.3	V	3.0	38.2	1.0	-51.5	-13.0	-38.5		
2539.80		-14.2	V	3.0	38.9	1.0	-52.1	-13.0	-39.1		
3386.40		-13.8	V	3.0	39.5	1.0	-52.3	-13.0	-39.3		
1693.20		-13.9	H	3.0	38.2	1.0	-51.1	-13.0	-38.1		
2539.80		-15.3	H	3.0	38.9	1.0	-53.2	-13.0	-40.2		
3386.40		-13.9	H	3.0	39.5	1.0	-52.4	-13.0	-39.4		

WCDMA Band 4

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
WCDMA Band 4 REL99	Company:		Samsung								
	Project #:		4788312331								
	Date:		2018-01-26								
	Test Engineer:		47989								
	Configuration:		EUT / AC Adapter / Earphone, XPosition								
	Location:		Chamber 2								
	Mode:		Rel99 Band 4 Harmonics								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
	Low Ch, 1712.4MHz										
	3424.80	-9.2	V	3.0	39.5	1.0	-47.7	-13.0	-34.7		
	5137.20	-11.2	V	3.0	39.8	1.0	-50.0	-13.0	-37.0		
	6849.60	-6.9	V	3.0	39.7	1.0	-45.6	-13.0	-32.6		
	3424.80	-8.0	H	3.0	39.5	1.0	-46.5	-13.0	-33.5		
	5137.20	-11.6	H	3.0	39.8	1.0	-50.4	-13.0	-37.4		
	6849.60	-8.4	H	3.0	39.7	1.0	-47.1	-13.0	-34.1		
	Mid Ch, 1732.6MHz										
	3465.20	-9.8	V	3.0	39.5	1.0	-48.3	-13.0	-35.3		
	5197.80	-10.9	V	3.0	39.8	1.0	-49.8	-13.0	-36.8		
	6930.40	-8.1	V	3.0	39.7	1.0	-46.7	-13.0	-33.7		
	3465.20	-9.3	H	3.0	39.5	1.0	-47.8	-13.0	-34.8		
	5197.80	-11.0	H	3.0	39.8	1.0	-49.8	-13.0	-36.8		
	6930.40	-7.4	H	3.0	39.7	1.0	-46.0	-13.0	-33.0		
	High Ch, 1752.6MHz										
	3505.20	-11.1	V	3.0	39.5	1.0	-49.7	-13.0	-36.7		
	5257.80	-11.2	V	3.0	39.8	1.0	-50.1	-13.0	-37.1		
7010.40	-5.9	V	3.0	39.6	1.0	-44.5	-13.0	-31.5			
3505.20	-10.8	H	3.0	39.5	1.0	-49.3	-13.0	-36.3			
5257.80	-11.7	H	3.0	39.8	1.0	-50.5	-13.0	-37.5			
7010.40	-7.1	H	3.0	39.6	1.0	-45.8	-13.0	-32.8			
UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement											
Company:		Samsung									
Project #:		4788312331									
Date:		2018-01-26									
Test Engineer:		47989									
Configuration:		EUT / AC Adapter / Earphone, XPosition									
Location:		Chamber 2									
Mode:		HSDPA Band 4 Harmonics									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		
Low Ch, 1712.4MHz											
3424.80	-9.7	V	3.0	39.5	1.0	-48.2	-13.0	-35.2			
5137.20	-11.2	V	3.0	39.8	1.0	-50.0	-13.0	-37.0			
6849.60	-7.4	V	3.0	39.7	1.0	-46.1	-13.0	-33.1			
3424.80	-7.1	H	3.0	39.5	1.0	-45.6	-13.0	-32.6			
5137.20	-11.3	H	3.0	39.8	1.0	-50.1	-13.0	-37.1			
6849.60	-8.9	H	3.0	39.7	1.0	-47.5	-13.0	-34.5			
Mid Ch, 1732.6MHz											
3465.20	-10.5	V	3.0	39.5	1.0	-49.0	-13.0	-36.0			
5197.80	-11.1	V	3.0	39.8	1.0	-49.9	-13.0	-36.9			
6930.40	-8.4	V	3.0	39.7	1.0	-47.1	-13.0	-34.1			
3465.20	-9.5	H	3.0	39.5	1.0	-48.0	-13.0	-35.0			
5197.80	-11.2	H	3.0	39.8	1.0	-50.0	-13.0	-37.0			
6930.40	-8.2	H	3.0	39.7	1.0	-46.8	-13.0	-33.8			
High Ch, 1752.6MHz											
3505.20	-11.6	V	3.0	39.5	1.0	-50.1	-13.0	-37.1			
5257.80	-11.5	V	3.0	39.8	1.0	-50.4	-13.0	-37.4			
7010.40	-6.4	V	3.0	39.6	1.0	-45.0	-13.0	-32.0			
3505.20	-11.4	H	3.0	39.5	1.0	-49.9	-13.0	-36.9			
5257.80	-11.2	H	3.0	39.8	1.0	-50.1	-13.0	-37.1			
7010.40	-7.2	H	3.0	39.6	1.0	-45.8	-13.0	-32.8			

WCDMA Band 2

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
WCDMA Band 2 REL99	Company: Samsung Project #: 4788312331 Date: 2018-01-30 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, XPosition Location: Chamber 2 Mode: Rel99 Band 2 Harmonics										
	Low Ch, 1852.4MHz 3704.80 -8.5 V 3.0 39.7 1.0 -47.2 -13.0 -34.2 5557.20 -10.6 V 3.0 39.9 1.0 -49.5 -13.0 -36.5 7409.60 -7.8 V 3.0 39.4 1.0 -46.3 -13.0 -33.3 3704.80 -6.9 H 3.0 39.7 1.0 -45.5 -13.0 -32.5 5557.20 -10.8 H 3.0 39.9 1.0 -49.7 -13.0 -36.7 7409.60 -7.2 H 3.0 39.4 1.0 -45.6 -13.0 -32.6										
	Mid Ch, 1880MHz 3760.00 -3.7 V 3.0 39.7 1.0 -42.4 -13.0 -29.4 5640.00 -11.0 V 3.0 40.0 1.0 -49.9 -13.0 -36.9 7520.00 -8.8 V 3.0 39.4 1.0 -47.2 -13.0 -34.2 3760.00 -6.5 H 3.0 39.7 1.0 -45.1 -13.0 -32.1 5640.00 -10.7 H 3.0 40.0 1.0 -49.7 -13.0 -36.7 7520.00 -8.0 H 3.0 39.4 1.0 -46.4 -13.0 -33.4										
	High Ch, 1907.6MHz 3815.20 -6.9 V 3.0 39.7 1.0 -45.6 -13.0 -32.6 5722.80 -10.3 V 3.0 40.0 1.0 -49.3 -13.0 -36.3 7630.40 -6.4 V 3.0 39.3 1.0 -44.7 -13.0 -31.7 3815.20 -7.3 H 3.0 39.7 1.0 -46.0 -13.0 -33.0 5722.80 -10.7 H 3.0 40.0 1.0 -49.7 -13.0 -36.7 7630.40 -7.7 H 3.0 39.3 1.0 -46.1 -13.0 -33.1										
	WCDMA Band 2 HSDPA	Company: Samsung Project #: 4788312331 Date: 2018-01-30 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, XPosition Location: Chamber 2 Mode: HSDPA Band 2 Harmonics									
		Low Ch, 1852.4MHz 3704.80 -8.6 V 3.0 39.7 1.0 -47.3 -13.0 -34.3 5557.20 -10.7 V 3.0 39.9 1.0 -49.7 -13.0 -36.7 7409.60 -8.0 V 3.0 39.4 1.0 -46.4 -13.0 -33.4 3704.80 -6.4 H 3.0 39.7 1.0 -45.0 -13.0 -32.0 5557.20 -10.9 H 3.0 39.9 1.0 -49.8 -13.0 -36.8 7409.60 -7.3 H 3.0 39.4 1.0 -45.7 -13.0 -32.7									
		Mid Ch, 1880MHz 3760.00 -3.9 V 3.0 39.7 1.0 -42.6 -13.0 -29.6 5640.00 -11.2 V 3.0 40.0 1.0 -50.2 -13.0 -37.2 7520.00 -8.9 V 3.0 39.4 1.0 -47.3 -13.0 -34.3 3760.00 -6.6 H 3.0 39.7 1.0 -45.3 -13.0 -32.3 5640.00 -10.5 H 3.0 40.0 1.0 -49.4 -13.0 -36.4 7520.00 -8.1 H 3.0 39.4 1.0 -46.5 -13.0 -33.5									
		High Ch, 1907.6MHz 3815.20 -6.5 V 3.0 39.7 1.0 -45.2 -13.0 -32.2 5722.80 -10.7 V 3.0 40.0 1.0 -49.6 -13.0 -36.6 7630.40 -6.9 V 3.0 39.3 1.0 -45.2 -13.0 -32.2 3815.20 -7.0 H 3.0 39.7 1.0 -45.7 -13.0 -32.7 5722.80 -10.9 H 3.0 40.0 1.0 -49.8 -13.0 -36.8 7630.40 -8.1 H 3.0 39.3 1.0 -46.4 -13.0 -33.4									

LTE Band 17

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
LTE Band 17 10MHz QPSK	Company: Samsung Project #: 4788312331 Date: 2018-01-29 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z Position Location: Chamber 2 Mode: LTE_QPSK Band 17 Harmonics, 10MHz Bandwidth										
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
	Low Ch, 709MHz										
	1418.00	-7.5	V	3.0	38.1	1.0	-44.6	-13.0	-31.6		
	2127.00	-14.2	V	3.0	38.5	1.0	-51.7	-13.0	-38.7		
	2836.00	-15.5	V	3.0	39.1	1.0	-53.6	-13.0	-40.6		
	1418.00	-9.8	H	3.0	38.1	1.0	-46.9	-13.0	-33.9		
	2127.00	-15.1	H	3.0	38.5	1.0	-52.6	-13.0	-39.6		
	2836.00	-14.7	H	3.0	39.1	1.0	-52.8	-13.0	-39.8		
	Mid Ch, 710MHz										
	1420.00	-7.6	V	3.0	38.1	1.0	-44.7	-13.0	-31.7		
	2130.00	-14.5	V	3.0	38.5	1.0	-52.0	-13.0	-39.0		
	2840.00	-14.3	V	3.0	39.1	1.0	-52.4	-13.0	-39.4		
	1420.00	-10.5	H	3.0	38.1	1.0	-47.7	-13.0	-34.7		
	2130.00	-14.2	H	3.0	38.5	1.0	-51.8	-13.0	-38.8		
	2840.00	-14.7	H	3.0	39.1	1.0	-52.8	-13.0	-39.8		
	High Ch, 711MHz										
	1422.00	-6.9	V	3.0	38.1	1.0	-44.0	-13.0	-31.0		
	2133.00	-13.2	V	3.0	38.5	1.0	-50.7	-13.0	-37.7		
	2844.00	-14.6	V	3.0	39.1	1.0	-52.7	-13.0	-39.7		
	1422.00	-8.1	H	3.0	38.1	1.0	-45.2	-13.0	-32.2		
	2133.00	-15.0	H	3.0	38.5	1.0	-52.5	-13.0	-39.5		
	2844.00	-15.3	H	3.0	39.1	1.0	-53.4	-13.0	-40.4		
	LTE Band 17 10MHz 16QAM	Company: Samsung Project #: 4788312331 Date: 2018-01-29 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z Position Location: Chamber 2 Mode: LTE_16QAM Band 17 Harmonics, 10MHz Bandwidth									
		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
		Low Ch, 709MHz									
		1418.00	-8.2	V	3.0	38.1	1.0	-45.4	-13.0	-32.4	
		2127.00	-13.4	V	3.0	38.5	1.0	-50.9	-13.0	-37.9	
		2836.00	-15.4	V	3.0	39.1	1.0	-53.5	-13.0	-40.5	
		1418.00	-10.1	H	3.0	38.1	1.0	-47.3	-13.0	-34.3	
2127.00		-14.9	H	3.0	38.5	1.0	-52.4	-13.0	-39.4		
2836.00		-14.9	H	3.0	39.1	1.0	-53.1	-13.0	-40.1		
Mid Ch, 710MHz											
1420.00		-7.6	V	3.0	38.1	1.0	-44.7	-13.0	-31.7		
2130.00		-14.4	V	3.0	38.5	1.0	-51.9	-13.0	-38.9		
2840.00		-14.4	V	3.0	39.1	1.0	-52.5	-13.0	-39.5		
1420.00		-10.2	H	3.0	38.1	1.0	-47.3	-13.0	-34.3		
2130.00		-15.0	H	3.0	38.5	1.0	-52.5	-13.0	-39.5		
2840.00		-14.5	H	3.0	39.1	1.0	-52.7	-13.0	-39.7		
High Ch, 711MHz											
1422.00		-7.0	V	3.0	38.1	1.0	-44.2	-13.0	-31.2		
2133.00		-13.3	V	3.0	38.5	1.0	-50.8	-13.0	-37.8		
2844.00		-14.8	V	3.0	39.1	1.0	-52.9	-13.0	-39.9		
1422.00		-7.5	H	3.0	38.1	1.0	-44.6	-13.0	-31.6		
2133.00		-14.3	H	3.0	38.5	1.0	-51.8	-13.0	-38.8		
2844.00		-14.8	H	3.0	39.1	1.0	-53.0	-13.0	-40.0		

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
LTE Band 17 5MHz QPSK	Company: Samsung Project #: 4788312331 Date: 2018-01-29 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z Position Location: Chamber 2 Mode: LTE_QPSK Band 17 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, 706.5MHz											
	1413.00	-8.6	V	3.0	38.1	1.0	-45.7	-13.0	-32.7			
	2119.50	-13.5	V	3.0	38.5	1.0	-51.0	-13.0	-38.0			
	2826.00	-14.8	V	3.0	39.1	1.0	-52.9	-13.0	-39.9			
	1413.00	-11.6	H	3.0	38.1	1.0	-48.7	-13.0	-35.7			
	2119.50	-16.4	H	3.0	38.5	1.0	-53.9	-13.0	-40.9			
	2826.00	-15.1	H	3.0	39.1	1.0	-53.2	-13.0	-40.2			
	Mid Ch, 710MHz											
	1420.00	-8.1	V	3.0	38.1	1.0	-45.2	-13.0	-32.2			
	2130.00	-13.3	V	3.0	38.5	1.0	-50.8	-13.0	-37.8			
	2840.00	-14.7	V	3.0	39.1	1.0	-52.8	-13.0	-39.8			
	1420.00	-8.0	H	3.0	38.1	1.0	-45.2	-13.0	-32.2			
	2130.00	-13.4	H	3.0	38.5	1.0	-50.9	-13.0	-37.9			
	2840.00	-13.9	H	3.0	39.1	1.0	-52.0	-13.0	-39.0			
	High Ch, 713.5MHz											
	1427.00	-8.1	V	3.0	38.1	1.0	-45.2	-13.0	-32.2			
	2140.50	-14.7	V	3.0	38.5	1.0	-52.2	-13.0	-39.2			
	2854.00	-15.5	V	3.0	39.1	1.0	-53.6	-13.0	-40.6			
	1427.00	-8.0	H	3.0	38.1	1.0	-45.1	-13.0	-32.1			
	2140.50	-15.4	H	3.0	38.5	1.0	-52.9	-13.0	-39.9			
	2854.00	-14.6	H	3.0	39.1	1.0	-52.7	-13.0	-39.7			
			UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
	LTE Band 17 5MHz 16QAM	Company: Samsung Project #: 4788312331 Date: 2018-01-29 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z Position Location: Chamber 2 Mode: LTE_16QAM Band 17 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, 706.5MHz										
		1413.00	-8.7	V	3.0	38.1	1.0	-45.9	-13.0	-32.9		
2119.50		-14.2	V	3.0	38.5	1.0	-51.7	-13.0	-38.7			
2826.00		-14.5	V	3.0	39.1	1.0	-52.6	-13.0	-39.6			
1413.00		-11.8	H	3.0	38.1	1.0	-48.9	-13.0	-35.9			
2119.50		-16.8	H	3.0	38.5	1.0	-54.3	-13.0	-41.3			
2826.00		-15.5	H	3.0	39.1	1.0	-53.6	-13.0	-40.6			
Mid Ch, 710MHz												
1420.00		-8.1	V	3.0	38.1	1.0	-45.2	-13.0	-32.2			
2130.00		-14.3	V	3.0	38.5	1.0	-51.8	-13.0	-38.8			
2840.00		-14.6	V	3.0	39.1	1.0	-52.7	-13.0	-39.7			
1420.00		-7.4	H	3.0	38.1	1.0	-44.5	-13.0	-31.5			
2130.00		-15.0	H	3.0	38.5	1.0	-52.5	-13.0	-39.5			
2840.00		-12.9	H	3.0	39.1	1.0	-51.0	-13.0	-38.0			
High Ch, 713.5MHz												
1427.00		-7.3	V	3.0	38.1	1.0	-44.4	-13.0	-31.4			
2140.50		-14.9	V	3.0	38.5	1.0	-52.5	-13.0	-39.5			
2854.00		-15.1	V	3.0	39.1	1.0	-53.2	-13.0	-40.2			
1427.00		-8.8	H	3.0	38.1	1.0	-45.9	-13.0	-32.9			
2140.50		-15.5	H	3.0	38.5	1.0	-53.0	-13.0	-40.0			
2854.00		-14.7	H	3.0	39.1	1.0	-52.8	-13.0	-39.8			

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
		Company: Samsung Project #: 4788312331 Date: 2018-01-31 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z Position Location: Chamber 2 Mode: LTE_QPSK Band 5 Harmonics, 5MHz Bandwidth										
LTE Band 5 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, 826.5MHz											
		1653.00	-11.7	V	3.0	38.2	1.0	-48.9	-13.0	-35.9		
		2479.50	-10.2	V	3.0	38.8	1.0	-48.0	-13.0	-35.0		
		3306.00	-14.1	V	3.0	39.4	1.0	-52.6	-13.0	-39.6		
		1653.00	-11.1	H	3.0	38.2	1.0	-48.3	-13.0	-35.3		
		2479.50	-13.7	H	3.0	38.8	1.0	-51.5	-13.0	-38.5		
		3306.00	0.0	H	3.0	39.4	1.0	-38.4	-13.0	-25.4		
	Mid Ch, 836.5MHz											
		1673.00	-11.4	V	3.0	38.2	1.0	-48.7	-13.0	-35.7		
		2509.50	-12.0	V	3.0	38.8	1.0	-49.9	-13.0	-36.9		
		3346.00	-13.1	V	3.0	39.5	1.0	-51.6	-13.0	-38.6		
		1673.00	-9.2	H	3.0	38.2	1.0	-46.4	-13.0	-33.4		
		2509.50	-13.1	H	3.0	38.8	1.0	-51.0	-13.0	-38.0		
		3346.00	-14.5	H	3.0	39.5	1.0	-53.0	-13.0	-40.0		
	High Ch, 846.5MHz											
		1693.00	-10.6	V	3.0	38.2	1.0	-47.8	-13.0	-34.8		
		2539.50	-12.4	V	3.0	38.9	1.0	-50.3	-13.0	-37.3		
		3386.00	-13.4	V	3.0	39.5	1.0	-51.9	-13.0	-38.9		
		1693.00	-10.2	H	3.0	38.2	1.0	-47.5	-13.0	-34.5		
		2539.50	-11.8	H	3.0	38.9	1.0	-49.6	-13.0	-36.6		
		3386.00	-14.9	H	3.0	39.5	1.0	-53.4	-13.0	-40.4		
			UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
			Company: Samsung Project #: 4788312331 Date: 2018-01-31 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z Position Location: Chamber 2 Mode: LTE_16QAM Band 5 Harmonics, 5MHz Bandwidth									
LTE Band 5 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, 826.5MHz											
		1653.00	-13.1	V	3.0	38.2	1.0	-50.3	-13.0	-37.3		
		2479.50	-11.0	V	3.0	38.8	1.0	-48.8	-13.0	-35.8		
		3306.00	-14.3	V	3.0	39.4	1.0	-52.7	-13.0	-39.7		
		1653.00	-11.7	H	3.0	38.2	1.0	-48.9	-13.0	-35.9		
		2479.50	-13.3	H	3.0	38.8	1.0	-51.1	-13.0	-38.1		
		3306.00	-14.0	H	3.0	39.4	1.0	-52.4	-13.0	-39.4		
	Mid Ch, 836.5MHz											
		1673.00	-12.6	V	3.0	38.2	1.0	-49.9	-13.0	-36.9		
		2509.50	-13.1	V	3.0	38.8	1.0	-50.9	-13.0	-37.9		
		3346.00	-13.4	V	3.0	39.5	1.0	-51.9	-13.0	-38.9		
		1673.00	-9.4	H	3.0	38.2	1.0	-46.6	-13.0	-33.6		
		2509.50	-13.6	H	3.0	38.8	1.0	-51.4	-13.0	-38.4		
		3346.00	-14.4	H	3.0	39.5	1.0	-52.8	-13.0	-39.8		
	High Ch, 846.5MHz											
		1693.00	-11.2	V	3.0	38.2	1.0	-48.4	-13.0	-35.4		
		2539.50	-12.4	V	3.0	38.9	1.0	-50.3	-13.0	-37.3		
		3386.00	-13.8	V	3.0	39.5	1.0	-52.3	-13.0	-39.3		
		1693.00	-10.2	H	3.0	38.2	1.0	-47.5	-13.0	-34.5		
		2539.50	-12.2	H	3.0	38.9	1.0	-50.0	-13.0	-37.0		
		3386.00	-14.7	H	3.0	39.5	1.0	-53.2	-13.0	-40.2		

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
		Company: Samsung Project #: 4788312331 Date: 2018-01-30 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z Position Location: Chamber 2 Mode: LTE_QPSK Band 5 Hamonics, 3MHz Bandwidth									
LTE Band 5 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, 825.5MHz										
		1651.00	-11.9	V	3.0	38.2	1.0	-49.1	-13.0	-36.1	
		2476.50	-10.1	V	3.0	38.8	1.0	-47.9	-13.0	-34.9	
		3302.00	-13.6	V	3.0	39.4	1.0	-52.0	-13.0	-39.0	
		1651.00	-9.1	H	3.0	38.2	1.0	-46.3	-13.0	-33.3	
		2476.50	-13.4	H	3.0	38.8	1.0	-51.2	-13.0	-38.2	
		3302.00	-13.9	H	3.0	39.4	1.0	-52.3	-13.0	-39.3	
	Mid Ch, 836.5MHz										
		1673.00	-12.5	V	3.0	38.2	1.0	-49.7	-13.0	-36.7	
		2509.50	-12.7	V	3.0	38.8	1.0	-50.6	-13.0	-37.6	
		3346.00	-14.2	V	3.0	39.5	1.0	-52.6	-13.0	-39.6	
		1673.00	-11.3	H	3.0	38.2	1.0	-48.5	-13.0	-35.5	
		2509.50	-14.8	H	3.0	38.8	1.0	-52.7	-13.0	-39.7	
		3346.00	-14.8	H	3.0	39.5	1.0	-53.2	-13.0	-40.2	
	High Ch, 847.5MHz										
		1695.00	-7.1	V	3.0	38.2	1.0	-44.3	-13.0	-31.3	
		2542.50	-9.9	V	3.0	38.9	1.0	-47.7	-13.0	-34.7	
		3390.00	-13.5	V	3.0	39.5	1.0	-52.0	-13.0	-39.0	
		1695.00	-6.5	H	3.0	38.2	1.0	-43.8	-13.0	-30.8	
		2542.50	-13.9	H	3.0	38.9	1.0	-51.7	-13.0	-38.7	
		3390.00	-13.2	H	3.0	39.5	1.0	-51.7	-13.0	-38.7	
			UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement								
			Company: Samsung Project #: 4788312331 Date: 2018-01-30 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z Position Location: Chamber 2 Mode: LTE_16QAM Band 5 Hamonics, 3MHz Bandwidth								
LTE Band 5 3MHz 16QAM		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch, 825.5MHz										
		1651.00	-11.9	V	3.0	38.2	1.0	-49.1	-13.0	-36.1	
		2476.50	-10.7	V	3.0	38.8	1.0	-48.5	-13.0	-35.5	
		3302.00	-13.7	V	3.0	39.4	1.0	-52.1	-13.0	-39.1	
		1651.00	-9.2	H	3.0	38.2	1.0	-46.4	-13.0	-33.4	
		2476.50	-13.6	H	3.0	38.8	1.0	-51.4	-13.0	-38.4	
		3302.00	-14.2	H	3.0	39.4	1.0	-52.6	-13.0	-39.6	
	Mid Ch, 836.5MHz										
		1673.00	-13.2	V	3.0	38.2	1.0	-50.4	-13.0	-37.4	
		2509.50	-12.7	V	3.0	38.8	1.0	-50.5	-13.0	-37.5	
		3346.00	-13.3	V	3.0	39.5	1.0	-51.7	-13.0	-38.7	
		1673.00	-12.1	H	3.0	38.2	1.0	-49.3	-13.0	-36.3	
		2509.50	-15.1	H	3.0	38.8	1.0	-53.0	-13.0	-40.0	
		3346.00	-14.9	H	3.0	39.5	1.0	-53.3	-13.0	-40.3	
	High Ch, 847.5MHz										
		1695.00	-6.9	V	3.0	38.2	1.0	-44.2	-13.0	-31.2	
		2542.50	-10.1	V	3.0	38.9	1.0	-47.9	-13.0	-34.9	
		3390.00	-14.1	V	3.0	39.5	1.0	-52.6	-13.0	-39.6	
		1695.00	-7.5	H	3.0	38.2	1.0	-44.8	-13.0	-31.8	
		2542.50	-14.2	H	3.0	38.9	1.0	-52.1	-13.0	-39.1	
		3390.00	-13.3	H	3.0	39.5	1.0	-51.8	-13.0	-38.8	

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
LTE Band 5 1.4MHz QPSK	Company: Samsung Project #: 4788312331 Date: 2018-01-30 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z Position Location: Chamber 2 Mode: LTE_QPSK Band 5 Hamonics, 1.4MHz Bandwidth										
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
	Low Ch, 824.7MHz										
	1649.40	-14.6	V	3.0	38.2	1.0	-51.8	-13.0	-38.8		
	2474.10	-11.7	V	3.0	38.8	1.0	-49.5	-13.0	-36.5		
	3298.80	-14.4	V	3.0	39.4	1.0	-52.8	-13.0	-39.8		
	1649.40	-15.3	H	3.0	38.2	1.0	-52.5	-13.0	-39.5		
	2474.10	-13.4	H	3.0	38.8	1.0	-51.2	-13.0	-38.2		
	3298.80	-14.1	H	3.0	39.4	1.0	-52.5	-13.0	-39.5		
	Mid Ch, 836.5MHz										
	1673.00	-11.2	V	3.0	38.2	1.0	-48.4	-13.0	-35.4		
	2509.50	-11.9	V	3.0	38.8	1.0	-49.7	-13.0	-36.7		
	3346.00	-13.9	V	3.0	39.5	1.0	-52.4	-13.0	-39.4		
	1673.00	-12.0	H	3.0	38.2	1.0	-49.2	-13.0	-36.2		
	2509.50	-14.5	H	3.0	38.8	1.0	-52.3	-13.0	-39.3		
	3346.00	-13.5	H	3.0	39.5	1.0	-52.0	-13.0	-39.0		
	High Ch, 848.3MHz										
	1696.60	-7.9	V	3.0	38.2	1.0	-45.1	-13.0	-32.1		
	2544.90	-8.6	V	3.0	38.9	1.0	-46.5	-13.0	-33.5		
	3393.20	-13.6	V	3.0	39.5	1.0	-52.1	-13.0	-39.1		
	1696.60	-6.8	H	3.0	38.2	1.0	-44.0	-13.0	-31.0		
	2544.90	-10.8	H	3.0	38.9	1.0	-48.6	-13.0	-35.6		
	3393.20	-13.9	H	3.0	39.5	1.0	-52.4	-13.0	-39.4		
	LTE Band 5 1.4MHz 16QAM	Company: Samsung Project #: 4788312331 Date: 2018-01-30 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z Position Location: Chamber 2 Mode: LTE_16QAM Band 5 Hamonics, 1.4MHz Bandwidth									
		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.7MHz											
1649.40		-15.1	V	3.0	38.2	1.0	-52.3	-13.0	-39.3		
2474.10		-11.1	V	3.0	38.8	1.0	-48.9	-13.0	-35.9		
3298.80		-14.3	V	3.0	39.4	1.0	-52.7	-13.0	-39.7		
1649.40		-16.1	H	3.0	38.2	1.0	-53.4	-13.0	-40.4		
2474.10		-13.4	H	3.0	38.8	1.0	-51.2	-13.0	-38.2		
3298.80		-14.0	H	3.0	39.4	1.0	-52.4	-13.0	-39.4		
Mid Ch, 836.5MHz											
1673.00		-11.1	V	3.0	38.2	1.0	-48.3	-13.0	-35.3		
2509.50		-12.3	V	3.0	38.8	1.0	-50.2	-13.0	-37.2		
3346.00		-13.2	V	3.0	39.5	1.0	-51.7	-13.0	-38.7		
1673.00		-12.2	H	3.0	38.2	1.0	-49.5	-13.0	-36.5		
2509.50		-14.5	H	3.0	38.8	1.0	-52.3	-13.0	-39.3		
3346.00		-13.8	H	3.0	39.5	1.0	-52.2	-13.0	-39.2		
High Ch, 848.3MHz											
1696.60		-8.6	V	3.0	38.2	1.0	-45.8	-13.0	-32.8		
2544.90		-8.3	V	3.0	38.9	1.0	-46.1	-13.0	-33.1		
3393.20		-13.8	V	3.0	39.5	1.0	-52.2	-13.0	-39.2		
1696.60		-6.8	H	3.0	38.2	1.0	-44.1	-13.0	-31.1		
2544.90		-10.3	H	3.0	38.9	1.0	-48.1	-13.0	-35.1		
3393.20		-13.9	H	3.0	39.5	1.0	-52.4	-13.0	-39.4		

LTE Band 4

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement												
		Company: Samsung Project #: 4788312331 Date: 2018-02-05 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, X Position Location: Chamber 2 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			
LTE Band 4 20MHz QPSK		Low Ch, 1720MHz												
		3440.00	-8.6	V	3.0	39.5	1.0	-47.1	-13.0	-34.1				
		5160.00	-9.6	V	3.0	39.8	1.0	-48.4	-13.0	-35.4				
		6880.00	-4.7	V	3.0	39.7	1.0	-43.4	-13.0	-30.4				
		8600.00	-5.3	V	3.0	39.0	1.0	-43.2	-13.0	-30.2				
		3440.00	-7.0	H	3.0	39.5	1.0	-45.5	-13.0	-32.5				
		5160.00	-10.2	H	3.0	39.8	1.0	-49.1	-13.0	-36.1				
		6880.00	-6.3	H	3.0	39.7	1.0	-45.0	-13.0	-32.0				
		8600.00	-9.0	H	3.0	39.0	1.0	-46.9	-13.0	-33.9				
		Mid Ch, 1732.5MHz												
		3465.00	-9.4	V	3.0	39.5	1.0	-47.9	-13.0	-34.9				
		5197.50	-11.0	V	3.0	39.8	1.0	-49.9	-13.0	-36.9				
		6930.00	-7.6	V	3.0	39.7	1.0	-46.2	-13.0	-33.2				
		8662.50	-6.0	V	3.0	38.9	1.0	-43.9	-13.0	-30.9				
		3465.00	-7.2	H	3.0	39.5	1.0	-45.7	-13.0	-32.7				
		5197.50	-11.3	H	3.0	39.8	1.0	-50.1	-13.0	-37.1				
		6930.00	-7.7	H	3.0	39.7	1.0	-46.4	-13.0	-33.4				
		8662.50	-6.2	H	3.0	38.9	1.0	-44.1	-13.0	-31.1				
		High Ch, 1745MHz												
		3490.00	-9.8	V	3.0	39.5	1.0	-48.3	-13.0	-35.3				
		5235.00	-10.9	V	3.0	39.8	1.0	-49.7	-13.0	-36.7				
		6980.00	-6.7	V	3.0	39.6	1.0	-45.3	-13.0	-32.3				
		8725.00	-3.3	V	3.0	38.9	1.0	-41.2	-13.0	-28.2				
		3490.00	-9.5	H	3.0	39.5	1.0	-48.1	-13.0	-35.1				
		5235.00	-11.7	H	3.0	39.8	1.0	-50.5	-13.0	-37.5				
		6980.00	-7.8	H	3.0	39.6	1.0	-46.4	-13.0	-33.4				
		8725.00	-5.8	H	3.0	38.9	1.0	-43.7	-13.0	-30.7				
				UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
				Company: Samsung Project #: 4788312331 Date: 2018-02-05 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, X Position Location: Chamber 2 Mode: LTE_16QAM Band 4 Harmonics, 20MHz Bandwidth										
				f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
LTE Band 4 20MHz 16QAM		Low Ch, 1720MHz												
		3440.00	-8.1	V	3.0	39.5	1.0	-46.6	-13.0	-33.6				
		5160.00	-9.4	V	3.0	39.8	1.0	-48.2	-13.0	-35.2				
		6880.00	-4.7	V	3.0	39.7	1.0	-43.4	-13.0	-30.4				
		8600.00	-5.3	V	3.0	39.0	1.0	-43.2	-13.0	-30.2				
		3440.00	-8.5	H	3.0	39.5	1.0	-47.0	-13.0	-34.0				
		5160.00	-10.5	H	3.0	39.8	1.0	-49.4	-13.0	-36.4				
		6880.00	-6.5	H	3.0	39.7	1.0	-45.1	-13.0	-32.1				
		8600.00	-9.1	H	3.0	39.0	1.0	-47.1	-13.0	-34.1				
		Mid Ch, 1732.5MHz												
		3465.00	-10.0	V	3.0	39.5	1.0	-48.5	-13.0	-35.5				
		5197.50	-10.2	V	3.0	39.8	1.0	-49.0	-13.0	-36.0				
		6930.00	-7.5	V	3.0	39.7	1.0	-46.2	-13.0	-33.2				
		8662.50	-6.4	V	3.0	38.9	1.0	-44.3	-13.0	-31.3				
		3465.00	-7.3	H	3.0	39.5	1.0	-45.8	-13.0	-32.8				
		5197.50	-11.0	H	3.0	39.8	1.0	-49.9	-13.0	-36.9				
		6930.00	-7.7	H	3.0	39.7	1.0	-46.3	-13.0	-33.3				
		8662.50	-7.0	H	3.0	38.9	1.0	-44.9	-13.0	-31.9				
		High Ch, 1745MHz												
		3490.00	-9.5	V	3.0	39.5	1.0	-48.0	-13.0	-35.0				
		5235.00	-11.2	V	3.0	39.8	1.0	-50.1	-13.0	-37.1				
		6980.00	-6.9	V	3.0	39.6	1.0	-45.5	-13.0	-32.5				
		8725.00	-3.0	V	3.0	38.9	1.0	-40.9	-13.0	-27.9				
		3490.00	-9.4	H	3.0	39.5	1.0	-47.9	-13.0	-34.9				
		5235.00	-12.0	H	3.0	39.8	1.0	-50.8	-13.0	-37.8				
		6980.00	-8.0	H	3.0	39.6	1.0	-46.6	-13.0	-33.6				
		8725.00	-7.0	H	3.0	38.9	1.0	-44.9	-13.0	-31.9				

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement								
		Company: Samsung Project #: 4788312331 Date: 2018-02-05 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, X Position Location: Chamber 2 Mode: LTE_QPSK Band 4 Harmonics, 15MHz Bandwidth								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 1717.5MHz										
3435.00	-7.3	V	3.0	39.5	1.0	-45.8	-13.0	-32.8		
5152.50	-8.9	V	3.0	39.8	1.0	-47.7	-13.0	-34.7		
6870.00	-2.8	V	3.0	39.7	1.0	-41.5	-13.0	-28.5		
8587.50	-5.1	V	3.0	39.0	1.0	-43.0	-13.0	-30.0		
3435.00	-6.9	H	3.0	39.5	1.0	-45.4	-13.0	-32.4		
5152.50	-10.3	H	3.0	39.8	1.0	-49.2	-13.0	-36.2		
6870.00	-5.5	H	3.0	39.7	1.0	-44.2	-13.0	-31.2		
8587.50	-6.4	H	3.0	39.0	1.0	-44.4	-13.0	-31.4		
Mid Ch, 1732.5MHz										
3465.00	-8.4	V	3.0	39.5	1.0	-47.0	-13.0	-34.0		
5197.50	-10.9	V	3.0	39.8	1.0	-49.8	-13.0	-36.8		
6930.00	-5.6	V	3.0	39.7	1.0	-44.2	-13.0	-31.2		
8662.50	-6.2	V	3.0	38.9	1.0	-44.1	-13.0	-31.1		
3465.00	-7.5	H	3.0	39.5	1.0	-46.0	-13.0	-33.0		
5197.50	-11.2	H	3.0	39.8	1.0	-50.0	-13.0	-37.0		
6930.00	-6.6	H	3.0	39.7	1.0	-45.2	-13.0	-32.2		
8662.50	-7.4	H	3.0	38.9	1.0	-45.4	-13.0	-32.4		
High Ch, 1747.5MHz										
3495.00	-11.0	V	3.0	39.5	1.0	-49.5	-13.0	-36.5		
5242.50	-11.2	V	3.0	39.8	1.0	-50.1	-13.0	-37.1		
6990.00	-4.8	V	3.0	39.6	1.0	-43.4	-13.0	-30.4		
8737.50	-1.3	V	3.0	38.9	1.0	-39.2	-13.0	-26.2		
3495.00	-8.5	H	3.0	39.5	1.0	-47.0	-13.0	-34.0		
5242.50	-12.2	H	3.0	39.8	1.0	-51.1	-13.0	-38.1		
6990.00	-7.0	H	3.0	39.6	1.0	-45.7	-13.0	-32.7		
8737.50	-5.5	H	3.0	38.9	1.0	-43.4	-13.0	-30.4		
LTE Band 4 15MHz QPSK										
		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement								
		Company: Samsung Project #: 4788312331 Date: 2018-02-05 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, X Position Location: Chamber 2 Mode: LTE_16QAM Band 4 Harmonics, 15MHz Bandwidth								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 1717.5MHz										
3435.00	-7.7	V	3.0	39.5	1.0	-46.3	-13.0	-33.3		
5152.50	-9.7	V	3.0	39.8	1.0	-48.5	-13.0	-35.5		
6870.00	-2.2	V	3.0	39.7	1.0	-40.9	-13.0	-27.9		
8587.50	-6.6	V	3.0	39.0	1.0	-44.5	-13.0	-31.5		
3435.00	-7.1	H	3.0	39.5	1.0	-45.6	-13.0	-32.6		
5152.50	-10.3	H	3.0	39.8	1.0	-49.1	-13.0	-36.1		
6870.00	-4.9	H	3.0	39.7	1.0	-43.6	-13.0	-30.6		
8587.50	-6.6	H	3.0	39.0	1.0	-44.5	-13.0	-31.5		
Mid Ch, 1732.5MHz										
3465.00	-8.5	V	3.0	39.5	1.0	-47.1	-13.0	-34.1		
5197.50	-11.3	V	3.0	39.8	1.0	-50.1	-13.0	-37.1		
6930.00	-5.2	V	3.0	39.7	1.0	-43.9	-13.0	-30.9		
8662.50	-7.2	V	3.0	38.9	1.0	-45.1	-13.0	-32.1		
3465.00	-8.8	H	3.0	39.5	1.0	-47.3	-13.0	-34.3		
5197.50	-11.5	H	3.0	39.8	1.0	-50.3	-13.0	-37.3		
6930.00	-7.5	H	3.0	39.7	1.0	-46.1	-13.0	-33.1		
8662.50	-7.7	H	3.0	38.9	1.0	-45.7	-13.0	-32.7		
High Ch, 1747.5MHz										
3495.00	-11.6	V	3.0	39.5	1.0	-50.2	-13.0	-37.2		
5242.50	-11.4	V	3.0	39.8	1.0	-50.2	-13.0	-37.2		
6990.00	-6.2	V	3.0	39.6	1.0	-44.8	-13.0	-31.8		
8737.50	-0.6	V	3.0	38.9	1.0	-38.5	-13.0	-25.5		
3495.00	-9.2	H	3.0	39.5	1.0	-47.7	-13.0	-34.7		
5242.50	-12.0	H	3.0	39.8	1.0	-50.9	-13.0	-37.9		
6990.00	-7.0	H	3.0	39.6	1.0	-45.7	-13.0	-32.7		
8737.50	-3.4	H	3.0	38.9	1.0	-41.3	-13.0	-28.3		
LTE Band 4 15MHz 16QAM										