

WCDMA Band 5

WCDMA Band 5 REL99	UL Verification Services, Inc. High Frequency Substitution Measurement																																																																																										
	Company: Samsung Project #: 4788869685 Date: 2019-02-12 Test Engineer: 45585 Configuration: EUT, Z-Position Location: Chamber 2 Mode: Rel99 Band 5 Fundamentals <u>Test Equipment:</u> Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 2.5m SMA-type Cable																																																																																										
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WCDMA Band 5 HSDPA	UL Verification Services, Inc. High Frequency Substitution Measurement																																																																																										
	Company: Samsung Project #: 4788869685 Date: 2019-02-13 Test Engineer: 45585 Configuration: EUT, Z-Position Location: Chamber 2 Mode: HSDPA Band 5 Fundamentals <u>Test Equipment:</u> Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 2.5m SMA-type Cable																																																																																										
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WCDMA Band 2

WCDMA Band 2 REL99	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-08 Test Engineer: 45585 Configuration: EUT, X-Position Location: Chamber 2 Mode: Rel99 Band 2 Fundamentals <u>Test Equipment:</u> Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 2.5m SMA-type Cable								
	f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Delta	Notes
	MHz	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)	
	Low Ch								
	1852.40	7.11	V	4.5	9.4	12.01	33.0	-21.0	
	1852.40	15.74	H	4.5	9.4	20.64	33.0	-12.4	
	Mid Ch								
	1880.00	6.56	V	4.5	9.2	11.22	33.0	-21.8	
	1880.00	17.44	H	4.5	9.2	22.11	33.0	-10.9	
	High Ch								
	1907.60	5.52	V	4.6	9.0	9.91	33.0	-23.1	
	1907.60	16.76	H	4.6	9.0	21.15	33.0	-11.8	
WCDMA Band 2 HSDPA	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-08 Test Engineer: 45585 Configuration: EUT, X-Position Location: Chamber 2 Mode: HSDPA Band 2 Fundamentals <u>Test Equipment:</u> Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 2.5m SMA-type Cable								
	f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Delta	Notes
	MHz	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)	
	Low Ch								
	1852.40	6.77	V	4.5	9.4	11.67	33.0	-21.3	
	1852.40	15.44	H	4.5	9.4	20.34	33.0	-12.7	
	Mid Ch								
	1880.00	7.98	V	4.5	9.2	12.64	33.0	-20.4	
	1880.00	17.44	H	4.5	9.2	22.11	33.0	-10.9	
	High Ch								
	1907.60	5.28	V	4.6	9.0	9.67	33.0	-23.3	
	1907.60	16.57	H	4.6	9.0	20.96	33.0	-12.0	

LTE Band 5

LTE Band 5 10MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-01 Test Engineer: 47989 Configuration: EUT / X-Position Location: Chamber 1 Mode: LTE_QPSK Band 5 Fundamentals, 10MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-750, and Chamber 1 SMA Cables Substitution: Dipole 3121_DB4, 2.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	829.00	17.29	V	3.0	-1.5	12.81	38.5	-25.7	
	829.00	24.00	H	3.0	-1.5	19.52	38.5	-19.0	
	Mid Ch								
	836.50	14.78	V	3.0	-1.4	10.32	38.5	-28.2	
	836.50	22.57	H	3.0	-1.4	18.11	38.5	-20.4	
High Ch									
844.00	13.85	V	3.1	-1.4	9.40	38.5	-29.1		
844.00	22.62	H	3.1	-1.4	18.17	38.5	-20.3		
LTE Band 5 10MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-01 Test Engineer: 47989 Configuration: EUT / X-Position Location: Chamber 1 Mode: LTE_16QAM Band 5 Fundamentals, 10MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-750, and Chamber 1 SMA Cables Substitution: Dipole 3121_DB4, 2.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	829.00	15.86	V	3.0	-1.5	11.38	38.5	-27.1	
	829.00	22.59	H	3.0	-1.5	18.11	38.5	-20.4	
	Mid Ch								
	836.50	13.45	V	3.0	-1.4	8.99	38.5	-29.5	
	836.50	21.61	H	3.0	-1.4	17.15	38.5	-21.4	
High Ch									
844.00	12.27	V	3.1	-1.4	7.82	38.5	-30.7		
844.00	22.56	H	3.1	-1.4	18.11	38.5	-20.4		

LTE Band 5 5MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-01 Test Engineer: 47989 Configuration: EUT / X-Position Location: Chamber 1 Mode: LTE_QPSK Band 5 Fundamentals, 5MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-750, and Chamber 1 SMA Cables Substitution: Dipole 3121_DB4, 2.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	826.50	14.59	V	3.0	-1.5	10.11	38.5	-28.4	
	826.50	23.79	H	3.0	-1.5	19.31	38.5	-19.2	
	Mid Ch								
	836.50	14.71	V	3.0	-1.4	10.25	38.5	-28.3	
	836.50	24.07	H	3.0	-1.4	19.61	38.5	-18.9	
High Ch									
846.50	13.53	V	3.1	-1.4	9.08	38.5	-29.4		
846.50	19.85	H	3.1	-1.4	15.40	38.5	-23.1		
LTE Band 5 5MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-01 Test Engineer: 47989 Configuration: EUT / X-Position Location: Chamber 1 Mode: LTE_16QAM Band 5 Fundamentals, 5MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-750, and Chamber 1 SMA Cables Substitution: Dipole 3121_DB4, 2.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	826.50	13.42	V	3.0	-1.5	8.94	38.5	-29.6	
	826.50	22.49	H	3.0	-1.5	18.01	38.5	-20.5	
	Mid Ch								
	836.50	13.45	V	3.0	-1.4	8.99	38.5	-29.5	
	836.50	22.81	H	3.0	-1.4	18.35	38.5	-20.2	
High Ch									
846.50	12.16	V	3.1	-1.4	7.71	38.5	-30.8		
846.50	19.12	H	3.1	-1.4	14.67	38.5	-23.8		

LTE Band 5 3MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-01 Test Engineer: 47989 Configuration: EUT / X-Position Location: Chamber 1 Mode: LTE_QPSK Band 5 Fundamentals, 3MHz Bandwidth								
	Test Equipment Receiving: VULB9163-750, and Chamber 1 SMA Cables Substitution: Dipole 3121_DB4, 2.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	825.50	14.38	V	3.0	-1.5	9.90	38.5	-28.6	
	825.50	23.19	H	3.0	-1.5	18.71	38.5	-19.8	
	Mid Ch								
	836.50	13.83	V	3.0	-1.4	9.37	38.5	-29.1	
	836.50	23.00	H	3.0	-1.4	18.54	38.5	-20.0	
High Ch									
847.50	12.31	V	3.1	-1.4	7.87	38.5	-30.6		
847.50	22.23	H	3.1	-1.4	17.78	38.5	-20.7		
LTE Band 5 3MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-01 Test Engineer: 47989 Configuration: EUT / X-Position Location: Chamber 1 Mode: LTE_16QAM Band 5 Fundamentals, 3MHz Bandwidth								
	Test Equipment Receiving: VULB9163-750, and Chamber 1 SMA Cables Substitution: Dipole 3121_DB4, 2.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	825.50	12.89	V	3.0	-1.5	8.41	38.5	-30.1	
	825.50	21.67	H	3.0	-1.5	17.19	38.5	-21.3	
	Mid Ch								
	836.50	12.41	V	3.0	-1.4	7.95	38.5	-30.6	
	836.50	21.58	H	3.0	-1.4	17.12	38.5	-21.4	
High Ch									
847.50	11.27	V	3.1	-1.4	6.83	38.5	-31.7		
847.50	21.10	H	3.1	-1.4	16.65	38.5	-21.8		

LTE Band 5 1.4MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-01 Test Engineer: 47989 Configuration: EUT / X-Position Location: Chamber 1 Mode: LTE_QPSK Band 5 Fundamentals, 1.4MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-750, and Chamber 1 SMA Cables Substitution: Dipole 3121_DB4, 2.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	824.70	14.28	V	3.0	-1.5	9.79	38.5	-28.7	
	824.70	23.33	H	3.0	-1.5	18.84	38.5	-19.7	
	Mid Ch								
	836.50	14.47	V	3.0	-1.4	10.01	38.5	-28.5	
	836.50	23.34	H	3.0	-1.4	18.88	38.5	-19.6	
High Ch									
848.30	12.25	V	3.1	-1.4	7.81	38.5	-30.7		
848.30	22.30	H	3.1	-1.4	17.86	38.5	-20.6		
LTE Band 5 1.4MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-01 Test Engineer: 47989 Configuration: EUT / X-Position Location: Chamber 1 Mode: LTE_16QAM Band 5 Fundamentals, 1.4MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-750, and Chamber 1 SMA Cables Substitution: Dipole 3121_DB4, 2.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	824.70	13.00	V	3.0	-1.5	8.51	38.5	-30.0	
	824.70	22.14	H	3.0	-1.5	17.65	38.5	-20.8	
	Mid Ch								
	836.50	13.01	V	3.0	-1.4	8.55	38.5	-30.0	
	836.50	21.83	H	3.0	-1.4	17.37	38.5	-21.1	
High Ch									
848.30	10.83	V	3.1	-1.4	6.39	38.5	-32.1		
848.30	21.28	H	3.1	-1.4	16.84	38.5	-21.7		

LTE Band 41

LTE Band 41 20MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-12 Test Engineer: 45585 Configuration: EUT / X-Position Location: Chamber 2 Mode: LTE_QPSK Band 41 Fundamentals, 20MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 2.5m SMA-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								
	2506.00	15.02	V	5.2	10.1	19.85	33.0	-13.2	
	2506.00	17.25	H	5.2	10.1	22.08	33.0	-10.9	
	Mid Ch								
	2593.00	16.52	V	5.3	10.0	21.16	33.0	-11.8	
	2593.00	17.28	H	5.3	10.0	21.92	33.0	-11.1	
	High Ch								
	2680.00	15.43	V	5.4	10.0	20.02	33.0	-13.0	
2680.00	15.23	H	5.4	10.0	19.82	33.0	-13.2		
LTE Band 41 20MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-12 Test Engineer: 45585 Configuration: EUT / X-Position Location: Chamber 2 Mode: LTE_16QAM Band 41 Fundamentals, 20MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 2.5m SMA-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								
	2506.00	14.12	V	5.2	10.1	18.95	33.0	-14.1	
	2506.00	16.35	H	5.2	10.1	21.18	33.0	-11.8	
	Mid Ch								
	2593.00	15.99	V	5.3	10.0	20.63	33.0	-12.4	
	2593.00	16.78	H	5.3	10.0	21.42	33.0	-11.6	
	High Ch								
	2680.00	13.90	V	5.4	10.0	18.49	33.0	-14.5	
2680.00	14.78	H	5.4	10.0	19.37	33.0	-13.6		

LTE Band 41 15MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-12 Test Engineer: 45585 Configuration: EUT / X-Position Location: Chamber 2 Mode: LTE_QPSK Band 41 Fundamentals, 15MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 2.5m SMA-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								
	2503.50	16.99	V	5.2	10.1	21.82	33.0	-11.2	
	2503.50	16.52	H	5.2	10.1	21.35	33.0	-11.6	
	Mid Ch								
	2593.00	15.19	V	5.3	10.0	19.83	33.0	-13.2	
	2593.00	17.54	H	5.3	10.0	22.18	33.0	-10.8	
High Ch									
2682.50	15.97	V	5.4	10.0	20.57	33.0	-12.4		
2682.50	15.37	H	5.4	10.0	19.97	33.0	-13.0		
LTE Band 41 15MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-12 Test Engineer: 45585 Configuration: EUT / X-Position Location: Chamber 2 Mode: LTE_16QAM Band 41 Fundamentals, 15MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 2.5m SMA-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								
	2503.50	16.20	V	5.2	10.1	21.03	33.0	-12.0	
	2503.50	15.74	H	5.2	10.1	20.57	33.0	-12.4	
	Mid Ch								
	2593.00	14.96	V	5.3	10.0	19.60	33.0	-13.4	
	2593.00	17.66	H	5.3	10.0	22.30	33.0	-10.7	
High Ch									
2682.50	15.79	V	5.4	10.0	20.39	33.0	-12.6		
2682.50	15.16	H	5.4	10.0	19.76	33.0	-13.2		

LTE Band 41 10MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-12 Test Engineer: 45585 Configuration: EUT / X-Position Location: Chamber 2 Mode: LTE_QPSK Band 41 Fundamentals, 10MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 2.5m SMA-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								
	2501.00	17.55	V	5.2	10.1	22.39	33.0	-10.6	
	2501.00	17.17	H	5.2	10.1	22.01	33.0	-11.0	
	Mid Ch								
	2593.00	15.52	V	5.3	10.0	20.16	33.0	-12.8	
	2593.00	17.23	H	5.3	10.0	21.87	33.0	-11.1	
	High Ch								
	2685.00	15.71	V	5.4	10.0	20.30	33.0	-12.7	
2685.00	15.06	H	5.4	10.0	19.65	33.0	-13.4		
LTE Band 41 10MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-12 Test Engineer: 45585 Configuration: EUT / X-Position Location: Chamber 2 Mode: LTE_16QAM Band 41 Fundamentals, 10MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 2.5m SMA-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								
	2501.00	16.58	V	5.2	10.1	21.42	33.0	-11.6	
	2501.00	16.16	H	5.2	10.1	21.00	33.0	-12.0	
	Mid Ch								
	2593.00	14.72	V	5.3	10.0	19.36	33.0	-13.6	
	2593.00	17.04	H	5.3	10.0	21.68	33.0	-11.3	
	High Ch								
	2685.00	15.98	V	5.4	10.0	20.57	33.0	-12.4	
2685.00	15.28	H	5.4	10.0	19.87	33.0	-13.1		

LTE Band 41 5MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-12 Test Engineer: 45585 Configuration: EUT / X-Position Location: Chamber 2 Mode: LTE_QPSK Band 41 Fundamentals, 5MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 2.5m SMA-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								
	2498.50	16.30	V	5.2	10.1	21.14	33.0	-11.9	
	2498.50	17.15	H	5.2	10.1	21.99	33.0	-11.0	
	Mid Ch								
	2593.00	15.82	V	5.3	10.0	20.46	33.0	-12.5	
	2593.00	17.36	H	5.3	10.0	22.00	33.0	-11.0	
High Ch									
2687.50	15.65	V	5.4	10.0	20.25	33.0	-12.8		
2687.50	15.91	H	5.4	10.0	20.51	33.0	-12.5		
LTE Band 41 5MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4788869685 Date: 2019-02-12 Test Engineer: 45585 Configuration: EUT / X-Position Location: Chamber 2 Mode: LTE_16QAM Band 41 Fundamentals, 5MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 2.5m SMA-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								
	2498.50	15.04	V	5.2	10.1	19.88	33.0	-13.1	
	2498.50	15.83	H	5.2	10.1	20.67	33.0	-12.3	
	Mid Ch								
	2593.00	15.06	V	5.3	10.0	19.70	33.0	-13.3	
	2593.00	16.61	H	5.3	10.0	21.25	33.0	-11.8	
High Ch									
2687.50	14.76	V	5.4	10.0	19.36	33.0	-13.6		
2687.50	15.00	H	5.4	10.0	19.60	33.0	-13.4		

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(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.

Part 27.53:

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

TEST PROCEDURE

ANSI / TIA / EIA 603 E Clause 2.2.12; ESU40 setting reference to 971168 D01 v03r01

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 = rms;
- f) Ensure that the number of measurement points \geq span/RBW;
- g) Trace mode = average(WCDMA, LTE), Maxhold(GSM, LTE Band41)

RESULTS

See the following pages.

NOTE : Please refer to section 5.4 for bandwidth and RB setting about LTE bands.

10.2.1. SPURIOUS RADIATION PLOTS

GSM850

		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
GSM850 GPRS	Company: Samsung Project #: 4788869685 Date: 2019-02-13 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z-Position Location: Chamber 1 Mode: GPRS 850 MHz Harmonics										
	Low Ch, 824.2MHz										
		1648.40	4.9	V	3.0	43.6	1.0	-37.7	-13.0	-24.7	
		2472.60	-4.3	V	3.0	43.4	1.0	-46.7	-13.0	-33.7	
		3296.80	-8.6	V	3.0	43.6	1.0	-51.2	-13.0	-38.2	
		1648.40	4.2	H	3.0	43.6	1.0	-38.4	-13.0	-25.4	
		2472.60	-2.7	H	3.0	43.4	1.0	-45.1	-13.0	-32.1	
		3296.80	-8.0	H	3.0	43.6	1.0	-50.7	-13.0	-37.7	
	Mid Ch, 836.6MHz										
		1673.20	5.5	V	3.0	43.6	1.0	-37.1	-13.0	-24.1	
		2509.80	-5.8	V	3.0	43.4	1.0	-48.2	-13.0	-35.2	
		3346.40	-9.1	V	3.0	43.6	1.0	-51.7	-13.0	-38.7	
		1673.20	3.9	H	3.0	43.6	1.0	-38.7	-13.0	-25.7	
		2509.80	-4.1	H	3.0	43.4	1.0	-46.5	-13.0	-33.5	
		3346.40	-7.8	H	3.0	43.6	1.0	-50.5	-13.0	-37.5	
	High Ch, 848.8MHz										
		1697.60	7.6	V	3.0	43.6	1.0	-35.0	-13.0	-22.0	
		2546.40	-5.8	V	3.0	43.4	1.0	-48.3	-13.0	-35.3	
		3395.20	-9.0	V	3.0	43.7	1.0	-51.6	-13.0	-38.6	
		1697.60	8.8	H	3.0	43.6	1.0	-33.8	-13.0	-20.8	
		2546.40	-4.0	H	3.0	43.4	1.0	-46.4	-13.0	-33.4	
		3395.20	-7.3	H	3.0	43.7	1.0	-50.0	-13.0	-37.0	

		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
GSM850 EGPRS	Company: Samsung Project #: 4788869685 Date: 2019-02-13 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z-Position Location: Chamber 1 Mode: EGPRS 850 MHz Harmonics										
	Low Ch, 824.2MHz										
		1648.40	-2.8	V	3.0	43.6	1.0	-45.4	-13.0	-32.4	
		2472.60	-11.2	V	3.0	43.4	1.0	-53.6	-13.0	-40.6	
		3296.80	-9.7	V	3.0	43.6	1.0	-52.4	-13.0	-39.4	
		1648.40	-1.3	H	3.0	43.6	1.0	-43.9	-13.0	-30.9	
		2472.60	-12.0	H	3.0	43.4	1.0	-54.4	-13.0	-41.4	
		3296.80	-9.8	H	3.0	43.6	1.0	-52.4	-13.0	-39.4	
	Mid Ch, 836.6MHz										
		1673.20	-2.8	V	3.0	43.6	1.0	-45.4	-13.0	-32.4	
		2509.80	-11.2	V	3.0	43.4	1.0	-53.6	-13.0	-40.6	
		3346.40	-9.6	V	3.0	43.6	1.0	-52.3	-13.0	-39.3	
		1673.20	-4.9	H	3.0	43.6	1.0	-47.5	-13.0	-34.5	
		2509.80	-11.2	H	3.0	43.4	1.0	-53.7	-13.0	-40.7	
		3346.40	-9.7	H	3.0	43.6	1.0	-52.4	-13.0	-39.4	
	High Ch, 848.8MHz										
		1697.60	-2.5	V	3.0	43.6	1.0	-45.1	-13.0	-32.1	
		2546.40	-11.1	V	3.0	43.4	1.0	-53.5	-13.0	-40.5	
		3395.20	-8.9	V	3.0	43.7	1.0	-51.6	-13.0	-38.6	
		1697.60	-3.6	H	3.0	43.6	1.0	-46.2	-13.0	-33.2	
		2546.40	-12.1	H	3.0	43.4	1.0	-54.5	-13.0	-41.5	
		3395.20	-8.9	H	3.0	43.7	1.0	-51.5	-13.0	-38.5	

GSM1900

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement								
GSM1900 GPRS	Company:	Samsung								
	Project #:	4788869685								
	Date:	2019-02-12								
	Test Engineer:	45585								
	Configuration:	EUT / AC Adapter / Earphone, Z-Position								
	Location:	Chamber 2								
	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	-6.0	V	3.0	39.7	1.0	-44.7	-13.0	-31.7	
	5550.60	-7.3	V	3.0	39.9	1.0	-46.2	-13.0	-33.2	
	7400.80	-5.2	V	3.0	39.4	1.0	-43.7	-13.0	-30.7	
	3700.40	-6.0	H	3.0	39.7	1.0	-44.7	-13.0	-31.7	
	5550.60	-7.5	H	3.0	39.9	1.0	-46.5	-13.0	-33.5	
	7400.80	-6.2	H	3.0	39.4	1.0	-44.7	-13.0	-31.7	
	Mid Ch, 1880MHz									
	3760.00	-4.0	V	3.0	39.7	1.0	-42.7	-13.0	-29.7	
	5640.00	-6.6	V	3.0	40.0	1.0	-45.6	-13.0	-32.6	
	7520.00	-5.3	V	3.0	39.4	1.0	-43.7	-13.0	-30.7	
	3760.00	-4.5	H	3.0	39.7	1.0	-43.2	-13.0	-30.2	
	5640.00	-7.2	H	3.0	40.0	1.0	-46.2	-13.0	-33.2	
	7520.00	-5.9	H	3.0	39.4	1.0	-44.3	-13.0	-31.3	
	High Ch, 1909.8MHz									
	3819.60	-3.6	V	3.0	39.7	1.0	-42.3	-13.0	-29.3	
	5729.40	-7.2	V	3.0	40.0	1.0	-46.2	-13.0	-33.2	
7639.20	-5.2	V	3.0	39.3	1.0	-43.6	-13.0	-30.6		
3819.60	-5.1	H	3.0	39.7	1.0	-43.8	-13.0	-30.8		
5729.40	-7.3	H	3.0	40.0	1.0	-46.3	-13.0	-33.3		
7639.20	-6.2	H	3.0	39.3	1.0	-44.5	-13.0	-31.5		

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement								
GSM1900 EGPRS	Company:	Samsung								
	Project #:	4788869685								
	Date:	2019-02-12								
	Test Engineer:	45585								
	Configuration:	EUT / AC Adapter / Earphone, Y-Position								
	Location:	Chamber 2								
	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	-7.4	V	3.0	39.7	1.0	-46.0	-13.0	-33.0	
	5550.60	-5.8	V	3.0	39.9	1.0	-44.8	-13.0	-31.8	
	7400.80	-3.4	V	3.0	39.4	1.0	-41.8	-13.0	-28.8	
	3700.40	-4.5	H	3.0	39.7	1.0	-43.1	-13.0	-30.1	
	5550.60	-6.3	H	3.0	39.9	1.0	-45.2	-13.0	-32.2	
	7400.80	-4.2	H	3.0	39.4	1.0	-42.6	-13.0	-29.6	
	Mid Ch, 1880MHz									
	3760.00	-7.6	V	3.0	39.7	1.0	-46.3	-13.0	-33.3	
	5640.00	-5.1	V	3.0	40.0	1.0	-44.1	-13.0	-31.1	
	7520.00	-3.4	V	3.0	39.4	1.0	-41.8	-13.0	-28.8	
	3760.00	-2.5	H	3.0	39.7	1.0	-41.2	-13.0	-28.2	
	5640.00	-5.4	H	3.0	40.0	1.0	-44.4	-13.0	-31.4	
	7520.00	-4.2	H	3.0	39.4	1.0	-42.6	-13.0	-29.6	
	High Ch, 1909.8MHz									
	3819.60	-8.2	V	3.0	39.7	1.0	-47.0	-13.0	-34.0	
	5729.40	-5.6	V	3.0	40.0	1.0	-44.6	-13.0	-31.6	
7639.20	-3.9	V	3.0	39.3	1.0	-42.2	-13.0	-29.2		
3819.60	-6.0	H	3.0	39.7	1.0	-44.7	-13.0	-31.7		
5729.40	-5.8	H	3.0	40.0	1.0	-44.8	-13.0	-31.8		
7639.20	-4.7	H	3.0	39.3	1.0	-43.0	-13.0	-30.0		

WCDMA Band 5

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
WCDMA Band 5 REL99	Company: Samsung Project #: 4788869685 Date: 2019-02-13 Test Engineer: 45585 Configuration: EUT / AC Adapter / Earphone 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	-13.8	V	3.0	38.2	1.0	-51.0	-13.0	-38.0			
	2479.20	-12.8	V	3.0	38.8	1.0	-50.6	-13.0	-37.6			
	3305.60	-10.2	V	3.0	39.4	1.0	-48.6	-13.0	-35.6			
	1652.80	-11.8	H	3.0	38.2	1.0	-49.0	-13.0	-36.0			
	2479.20	-13.4	H	3.0	38.8	1.0	-51.2	-13.0	-38.2			
	3305.60	-10.5	H	3.0	39.4	1.0	-48.9	-13.0	-35.9			
	Mid Ch, 836.6MHz											
	1673.20	-13.9	V	3.0	38.2	1.0	-51.2	-13.0	-38.2			
	2509.80	-12.8	V	3.0	38.8	1.0	-50.6	-13.0	-37.6			
	3346.40	-10.3	V	3.0	39.5	1.0	-48.7	-13.0	-35.7			
	1673.20	-11.9	H	3.0	38.2	1.0	-49.1	-13.0	-36.1			
	2509.80	-13.3	H	3.0	38.8	1.0	-51.2	-13.0	-38.2			
	3346.40	-10.5	H	3.0	39.5	1.0	-48.9	-13.0	-35.9			
	High Ch, 846.6MHz											
	1693.20	-14.7	V	3.0	38.2	1.0	-52.0	-13.0	-39.0			
	2539.80	-12.6	V	3.0	38.9	1.0	-50.5	-13.0	-37.5			
	3386.40	-10.0	V	3.0	39.5	1.0	-48.5	-13.0	-35.5			
	1693.20	-12.7	H	3.0	38.2	1.0	-50.0	-13.0	-37.0			
	2539.80	-13.2	H	3.0	38.9	1.0	-51.0	-13.0	-38.0			
	3386.40	-10.3	H	3.0	39.5	1.0	-48.8	-13.0	-35.8			
	WCDMA Band 5 HSDPA	Company: Samsung Project #: 4788869685 Date: 2019-02-13 Test Engineer: 45585 Configuration: EUT / AC Adapter / Earphone, X-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	-15.0	V	3.0	38.2	1.0	-52.2	-13.0	-39.2		
		2479.20	-12.9	V	3.0	38.8	1.0	-50.7	-13.0	-37.7		
		3305.60	-10.3	V	3.0	39.4	1.0	-48.7	-13.0	-35.7		
		1652.80	-13.4	H	3.0	38.2	1.0	-50.6	-13.0	-37.6		
		2479.20	-13.3	H	3.0	38.8	1.0	-51.1	-13.0	-38.1		
		3305.60	-10.5	H	3.0	39.4	1.0	-48.9	-13.0	-35.9		
		Mid Ch, 836.6MHz										
		1673.20	-13.2	V	3.0	38.2	1.0	-50.5	-13.0	-37.5		
2509.80		-12.5	V	3.0	38.8	1.0	-50.4	-13.0	-37.4			
3346.40		-9.9	V	3.0	39.5	1.0	-48.4	-13.0	-35.4			
1673.20		-12.2	H	3.0	38.2	1.0	-49.5	-13.0	-36.5			
2509.80		-13.3	H	3.0	38.8	1.0	-51.1	-13.0	-38.1			
3346.40		-10.1	H	3.0	39.5	1.0	-48.6	-13.0	-35.6			
High Ch, 846.6MHz												
1693.20		-15.2	V	3.0	38.2	1.0	-52.4	-13.0	-39.4			
2539.80		-12.7	V	3.0	38.9	1.0	-50.5	-13.0	-37.5			
3386.40		-10.0	V	3.0	39.5	1.0	-48.5	-13.0	-35.5			
1693.20		-14.5	H	3.0	38.2	1.0	-51.7	-13.0	-38.7			
2539.80		-12.9	H	3.0	38.9	1.0	-50.8	-13.0	-37.8			
3386.40		-10.2	H	3.0	39.5	1.0	-48.7	-13.0	-35.7			

WCDMA Band 2

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
WCDMA Band 2 REL99		Company: Samsung		Project #: 4788869685		Date: 2019-02-08		Test Engineer: 45585		Configuration: EUT / AC Adapter / Earphone, X-Position	
		Location: Chamber 2		Mode: Rel99 Band 2 Harmonics							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		
Low Ch, 1852.4MHz											
3704.80	-11.5	V	3.0	39.7	1.0	-50.1	-13.0	-37.1			
5557.20	-8.4	V	3.0	39.9	1.0	-47.3	-13.0	-34.3			
7409.60	-6.2	V	3.0	39.4	1.0	-44.6	-13.0	-31.6			
9262.00	-4.0	V	3.0	38.8	1.0	-41.7	-13.0	-28.7			
11114.40	0.0	V	3.0	38.5	1.0	-37.6	-13.0	-24.6			
3704.80	-11.7	H	3.0	39.7	1.0	-50.4	-13.0	-37.4			
5557.20	-8.7	H	3.0	39.9	1.0	-47.7	-13.0	-34.7			
7409.60	-7.1	H	3.0	39.4	1.0	-45.6	-13.0	-32.6			
9262.00	-4.8	H	3.0	38.8	1.0	-42.6	-13.0	-29.6			
11114.40	0.0	H	3.0	38.5	1.0	-37.5	-13.0	-24.5			
Mid Ch, 1880MHz											
3760.00	-11.0	V	3.0	39.7	1.0	-49.6	-13.0	-36.6			
5640.00	-8.0	V	3.0	40.0	1.0	-47.0	-13.0	-34.0			
7520.00	-6.2	V	3.0	39.4	1.0	-44.6	-13.0	-31.6			
9400.00	-3.8	V	3.0	38.7	1.0	-41.5	-13.0	-28.5			
11280.00	0.5	V	3.0	38.5	1.0	-37.0	-13.0	-24.0			
3760.00	-11.4	H	3.0	39.7	1.0	-50.1	-13.0	-37.1			
5640.00	-8.4	H	3.0	40.0	1.0	-47.4	-13.0	-34.4			
7520.00	-7.0	H	3.0	39.4	1.0	-45.4	-13.0	-32.4			
9400.00	-4.3	H	3.0	38.7	1.0	-42.1	-13.0	-29.1			
11280.00	0.4	H	3.0	38.5	1.0	-37.1	-13.0	-24.1			
High Ch, 1907.6MHz											
3815.20	-11.0	V	3.0	39.7	1.0	-49.7	-13.0	-36.7			
5722.80	-8.2	V	3.0	40.0	1.0	-47.1	-13.0	-34.1			
7630.40	-6.2	V	3.0	39.3	1.0	-44.6	-13.0	-31.6			
9538.00	-2.6	V	3.0	38.7	1.0	-40.2	-13.0	-27.2			
11445.60	0.8	V	3.0	38.5	1.0	-36.7	-13.0	-23.7			
3815.20	-11.5	H	3.0	39.7	1.0	-50.2	-13.0	-37.2			
5722.80	-8.3	H	3.0	40.0	1.0	-47.3	-13.0	-34.3			
7630.40	-7.0	H	3.0	39.3	1.0	-45.3	-13.0	-32.3			
9538.00	-3.7	H	3.0	38.7	1.0	-41.4	-13.0	-28.4			
11445.60	0.8	H	3.0	38.5	1.0	-36.7	-13.0	-23.7			

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
WCDMA Band 2 HSDPA		Company: Samsung		Project #: 4788869685		Date: 2019-02-08		Test Engineer: 45585		Configuration: EUT / AC Adapter / Earphone, X-Position	
		Location: Chamber 2		Mode: HSDPA Band 2 Harmonics							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes		
Low Ch, 1852.4MHz											
3704.80	-11.3	V	3.0	39.7	1.0	-50.0	-13.0	-37.0			
5557.20	-8.5	V	3.0	39.9	1.0	-47.4	-13.0	-34.4			
7409.60	-6.3	V	3.0	39.4	1.0	-44.8	-13.0	-31.8			
9262.00	-4.1	V	3.0	38.8	1.0	-41.8	-13.0	-28.8			
11114.40	-0.7	V	3.0	38.5	1.0	-38.2	-13.0	-25.2			
3704.80	-11.8	H	3.0	39.7	1.0	-50.5	-13.0	-37.5			
5557.20	-8.8	H	3.0	39.9	1.0	-47.7	-13.0	-34.7			
7409.60	-7.2	H	3.0	39.4	1.0	-45.6	-13.0	-32.6			
9262.00	-4.9	H	3.0	38.8	1.0	-42.7	-13.0	-29.7			
11114.40	-0.1	H	3.0	38.5	1.0	-37.6	-13.0	-24.6			
Mid Ch, 1880MHz											
3760.00	-10.9	V	3.0	39.7	1.0	-49.6	-13.0	-36.6			
5640.00	-8.1	V	3.0	40.0	1.0	-47.0	-13.0	-34.0			
7520.00	-6.3	V	3.0	39.4	1.0	-44.7	-13.0	-31.7			
9400.00	-3.5	V	3.0	38.7	1.0	-41.3	-13.0	-28.3			
11280.00	0.4	V	3.0	38.5	1.0	-37.1	-13.0	-24.1			
3760.00	-11.3	H	3.0	39.7	1.0	-50.0	-13.0	-37.0			
5640.00	-8.1	H	3.0	40.0	1.0	-47.0	-13.0	-34.0			
7520.00	-7.0	H	3.0	39.4	1.0	-45.4	-13.0	-32.4			
9400.00	-4.4	H	3.0	38.7	1.0	-42.1	-13.0	-29.1			
11280.00	0.3	H	3.0	38.5	1.0	-37.2	-13.0	-24.2			
High Ch, 1907.6MHz											
3815.20	-11.3	V	3.0	39.7	1.0	-50.0	-13.0	-37.0			
5722.80	-8.4	V	3.0	40.0	1.0	-47.3	-13.0	-34.3			
7630.40	-6.5	V	3.0	39.3	1.0	-44.8	-13.0	-31.8			
9538.00	-3.3	V	3.0	38.7	1.0	-41.0	-13.0	-28.0			
11445.60	0.6	V	3.0	38.5	1.0	-36.9	-13.0	-23.9			
3815.20	-11.5	H	3.0	39.7	1.0	-50.2	-13.0	-37.2			
5722.80	-8.4	H	3.0	40.0	1.0	-47.4	-13.0	-34.4			
7630.40	-7.2	H	3.0	39.3	1.0	-45.5	-13.0	-32.5			
9538.00	-3.8	H	3.0	38.7	1.0	-41.5	-13.0	-28.5			
11445.60	0.5	H	3.0	38.5	1.0	-37.0	-13.0	-24.0			

LTE Band 5

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement											
LTE Band 5 5MHz QPSK		Company: Samsung Project #: 4788869685 Date: 2019-02-01 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Z-Position Location: Chamber 1 Mode: LTE_QPSK Band 5 Harmonics, 5MHz Bandwidth									
		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
		Low Ch, 826.5MHz									
		1653.00	-6.0	V	3.0	43.6	1.0	-48.6	-13.0	-35.6	
		2479.50	-12.4	V	3.0	43.4	1.0	-54.8	-13.0	-41.8	
		3306.00	-10.6	V	3.0	43.6	1.0	-53.3	-13.0	-40.3	
		1653.00	-5.0	H	3.0	43.6	1.0	-47.6	-13.0	-34.6	
		2479.50	-13.1	H	3.0	43.4	1.0	-55.5	-13.0	-42.5	
		3306.00	-10.8	H	3.0	43.6	1.0	-53.5	-13.0	-40.5	
		Mid Ch, 836.5MHz									
1673.00	-7.9	V	3.0	43.6	1.0	-50.5	-13.0	-37.5			
2509.50	-12.5	V	3.0	43.4	1.0	-54.9	-13.0	-41.9			
3346.00	-10.7	V	3.0	43.6	1.0	-53.3	-13.0	-40.3			
1673.00	-6.8	H	3.0	43.6	1.0	-49.4	-13.0	-36.4			
2509.50	-13.1	H	3.0	43.4	1.0	-55.5	-13.0	-42.5			
3346.00	-10.7	H	3.0	43.6	1.0	-53.4	-13.0	-40.4			
High Ch, 846.5MHz											
1693.00	-7.4	V	3.0	43.6	1.0	-49.9	-13.0	-36.9			
2539.50	-12.4	V	3.0	43.4	1.0	-54.8	-13.0	-41.8			
3386.00	-10.1	V	3.0	43.7	1.0	-52.7	-13.0	-39.7			
1693.00	-7.2	H	3.0	43.6	1.0	-49.7	-13.0	-36.7			
2539.50	-12.8	H	3.0	43.4	1.0	-55.3	-13.0	-42.3			
3386.00	-10.1	H	3.0	43.7	1.0	-52.8	-13.0	-39.8			

LTE Band 41

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4788869685							
Date:		2019-02-12							
Test Engineer:		45585							
Configuration:		EUT / AC Adapter / Earphone / X-Position							
Location:		Chamber 2							
Mode:		LTE_QPSK Band 41 Harmonics, 10MHz Bandwidth							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2501MHz									
5002.00	-14.8	V	3.0	39.8	1.0	-53.5	-25.0	-28.5	
7503.00	-5.9	V	3.0	39.4	1.0	-44.3	-25.0	-19.3	
10004.00	-11.8	V	3.0	38.6	1.0	-49.3	-25.0	-24.3	
12505.00	-3.3	V	3.0	39.0	1.0	-41.3	-25.0	-16.3	
15006.00	-5.9	V	3.0	41.3	1.0	-46.2	-25.0	-21.2	
5002.00	-15.8	H	3.0	39.8	1.0	-54.6	-25.0	-29.6	
7503.00	-6.4	H	3.0	39.4	1.0	-44.8	-25.0	-19.8	
10004.00	-11.7	H	3.0	38.6	1.0	-49.3	-25.0	-24.3	
12505.00	-7.7	H	3.0	39.0	1.0	-45.6	-25.0	-20.6	
15006.00	-6.4	H	3.0	41.3	1.0	-46.7	-25.0	-21.7	
Mid Ch, 2593MHz									
5186.00	-12.7	V	3.0	39.8	1.0	-51.6	-25.0	-26.6	
7779.00	-2.9	V	3.0	39.3	1.0	-41.2	-25.0	-16.2	
10372.00	-5.3	V	3.0	38.6	1.0	-42.8	-25.0	-17.8	
12965.00	4.6	V	3.0	39.4	1.0	-33.8	-25.0	-8.8	
15558.00	-1.8	V	3.0	41.1	1.0	-41.9	-25.0	-16.9	
5186.00	-13.0	H	3.0	39.8	1.0	-51.8	-25.0	-26.8	
7779.00	-2.3	H	3.0	39.3	1.0	-40.5	-25.0	-15.5	
10372.00	-5.8	H	3.0	38.6	1.0	-43.4	-25.0	-18.4	
12965.00	-4.7	H	3.0	39.4	1.0	-43.1	-25.0	-18.1	
15558.00	-6.2	H	3.0	41.1	1.0	-46.3	-25.0	-21.3	
High Ch, 2685MHz									
5370.00	-8.8	V	3.0	39.9	1.0	-47.7	-25.0	-22.7	
8055.00	-3.9	V	3.0	39.2	1.0	-42.0	-25.0	-17.0	
10740.00	-4.1	V	3.0	38.5	1.0	-41.7	-25.0	-16.7	
13425.00	-4.4	V	3.0	39.8	1.0	-43.2	-25.0	-18.2	
16110.00	-5.2	V	3.0	40.9	1.0	-45.1	-25.0	-20.1	
5370.00	-11.6	H	3.0	39.9	1.0	-50.5	-25.0	-25.5	
8055.00	-6.6	H	3.0	39.2	1.0	-44.7	-25.0	-19.7	
10740.00	-9.8	H	3.0	38.5	1.0	-47.3	-25.0	-22.3	
13425.00	-8.0	H	3.0	39.8	1.0	-46.8	-25.0	-21.8	
16110.00	-5.4	H	3.0	40.9	1.0	-45.3	-25.0	-20.3	

LTE
 Band 41
 10MHz
 QPSK