LTE

Band 41

10MHz

QPSK

UL Korea, Ltd Suwon Laboratory
Above 1GHz High Frequency Substitution Measurement

Company: Samsung
Project #: 16K23301
Date: 04-23-16
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Ear Phone / X-Position
Mode: TX, LTE BAND 41, 10MHz BW, QPSK

Chamber	Pre-amplifer	Filter	Limit
Chamber 2	AFS42	Filter 1	FCC Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (2560 MHz)									
5.1200	-17.0	V	3.0	40.9	1.0	-56.9	-25.0	-31.9	
7.6800	-15.2	V	3.0	40.6	1.0	-54.8	-25.0	-29.8	
10.2400	-10.9	V	3.0	39.5	1.0	-49.5	-25.0	-24.5	
5.1200	-17.0	H	3.0	40.9	1.0	-56.9	-25.0	-31.9	
7.6800	-15.3	H	3.0	40.6	1.0	-54.9	-25.0	-29.9	
10.2400	-13.6	H	3.0	39.5	1.0	-52.1	-25.0	-27.1	
Mid Ch, (2605 MHz)									
5.2100	-16.2	V	3.0	40.9	1.0	-56.1	-25.0	-31.1	
7.8150	-14.8	V	3.0	40.6	1.0	-54.4	-25.0	-29.4	
10.4200	-10.4	V	3.0	39.4	1.0	-48.8	-25.0	-23.8	
5.2100	-16.7	H	3.0	40.9	1.0	-56.6	-25.0	-31.6	
7.8150	-15.4	H	3.0	40.6	1.0	-54.9	-25.0	-29.9	
10.4200	-12.9	H	3.0	39.4	1.0	-51.2	-25.0	-26.2	
High Ch, (2650 MHz)									
5.3000	-17.0	V	3.0	40.9	1.0	-56.9	-25.0	-31.9	
7.9500	-14.1	V	3.0	40.5	1.0	-53.6	-25.0	-28.6	
10.6000	-10.7	V	3.0	39.2	1.0	-49.0	-25.0	-24.0	
5.3000	-17.1	H	3.0	40.9	1.0	-57.0	-25.0	-32.0	
7.9500	-13.9	H	3.0	40.5	1.0	-53.4	-25.0	-28.4	
10.6000	-12.1	H	3.0	39.2	1.0	-50.4	-25.0	-25.4	

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

LTE

Band 41

10MHz

16QAM

UL Korea, Ltd Suwon Laboratory
Above 1GHz High Frequency Substitution Measurement

Company: Samsung
Project #: 16K23301
Date: 04-23-16
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Ear Phone / X-Position
Mode: TX, LTE BAND 41, 10MHz BW,16QAM

Chamber	Pre-amplifer	Filter	Limit
Chamber 2	AFS42	Filter 1	FCC Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (2560 MHz)									
5.1200	-18.0	V	3.0	40.9	1.0	-57.9	-25.0	-32.9	
7.6800	-15.3	V	3.0	40.6	1.0	-54.9	-25.0	-29.9	
10.2400	-11.4	V	3.0	39.5	1.0	-49.9	-25.0	-24.9	
5.1200	-17.8	H	3.0	40.9	1.0	-57.7	-25.0	-32.7	
7.6800	-15.5	H	3.0	40.6	1.0	-55.1	-25.0	-30.1	
10.2400	-14.2	H	3.0	39.5	1.0	-52.7	-25.0	-27.7	
Mid Ch, (2605 MHz)									
5.2100	-16.8	V	3.0	40.9	1.0	-56.6	-25.0	-31.6	
7.8150	-15.0	V	3.0	40.6	1.0	-54.5	-25.0	-29.5	
10.4200	-10.8	V	3.0	39.4	1.0	-49.2	-25.0	-24.2	
5.2100	-17.5	H	3.0	40.9	1.0	-57.4	-25.0	-32.4	
7.8150	-15.5	H	3.0	40.6	1.0	-55.1	-25.0	-30.1	
10.4200	-13.6	H	3.0	39.4	1.0	-52.0	-25.0	-27.0	
High Ch, (2650 MHz)									
5.3000	-17.8	V	3.0	40.9	1.0	-57.6	-25.0	-32.6	
7.9500	-14.4	V	3.0	40.5	1.0	-53.8	-25.0	-28.8	
10.6000	-11.4	V	3.0	39.2	1.0	-49.6	-25.0	-24.6	
5.3000	-17.3	H	3.0	40.9	1.0	-57.2	-25.0	-32.2	
7.9500	-14.0	H	3.0	40.5	1.0	-53.5	-25.0	-28.5	
10.6000	-12.4	H	3.0	39.2	1.0	-50.7	-25.0	-25.7	

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

UL Korea, Ltd. Suwon Laboratory FORM ID: FCC_22/24/27
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea TEL: (031) 337-9902 FAX: (031) 213-5433
UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

LTE

Band 41

5MHz

QPSK

UL Korea, Ltd Suwon Laboratory
Above 1GHz High Frequency Substitution Measurement

Company: Samsung
Project #: 16K23301
Date: 04-23-16
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Ear Phone / X-Position
Mode: TX, LTE BAND 41, 5MHz BW, QPSK

Chamber	Pre-amplifer	Filter	Limit
Chamber 2	AFS42	Filter 1	FCC Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (2557.5 MHz)									
5.1150	-17.0	V	3.0	40.9	1.0	-56.9	-25.0	-31.9	
7.6725	-15.1	V	3.0	40.6	1.0	-54.7	-25.0	-29.7	
10.2300	-10.9	V	3.0	39.5	1.0	-49.4	-25.0	-24.4	
5.1150	-16.9	H	3.0	40.9	1.0	-56.8	-25.0	-31.8	
7.6725	-15.2	H	3.0	40.6	1.0	-54.9	-25.0	-29.9	
10.2300	-13.5	H	3.0	39.5	1.0	-52.1	-25.0	-27.1	
Mid Ch, (2605 MHz)									
5.2100	-16.2	V	3.0	40.9	1.0	-56.1	-25.0	-31.1	
7.8150	-14.7	V	3.0	40.6	1.0	-54.3	-25.0	-29.3	
10.4200	-10.3	V	3.0	39.4	1.0	-48.6	-25.0	-23.6	
5.2100	-16.6	H	3.0	40.9	1.0	-56.5	-25.0	-31.5	
7.8150	-15.3	H	3.0	40.6	1.0	-54.9	-25.0	-29.9	
10.4200	-12.8	H	3.0	39.4	1.0	-51.1	-25.0	-26.1	
High Ch, (2652.5 MHz)									
5.3050	-16.9	V	3.0	40.9	1.0	-56.8	-25.0	-31.8	
7.9575	-14.0	V	3.0	40.5	1.0	-53.5	-25.0	-28.5	
10.6100	-10.6	V	3.0	39.2	1.0	-48.9	-25.0	-23.9	
5.3050	-17.0	H	3.0	40.9	1.0	-56.9	-25.0	-31.9	
7.9575	-13.8	H	3.0	40.5	1.0	-53.3	-25.0	-28.3	
10.6100	-12.0	H	3.0	39.2	1.0	-50.2	-25.0	-25.2	

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

LTE

Band 41

5MHz

16QAM

UL Korea, Ltd Suwon Laboratory
Above 1GHz High Frequency Substitution Measurement

Company: Samsung
Project #: 16K23301
Date: 04-23-16
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Ear Phone / X-Position
Mode: TX, LTE BAND 41, 5MHz BW,16QAM

Chamber	Pre-amplifer	Filter	Limit
Chamber 2	AFS42	Filter 1	FCC Part 27

f GHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, (2557.5 MHz)									
5.1150	-17.4	V	3.0	40.9	1.0	-57.3	-25.0	-32.3	
7.6725	-15.3	V	3.0	40.6	1.0	-54.9	-25.0	-29.9	
10.2300	-11.3	V	3.0	39.5	1.0	-49.9	-25.0	-24.9	
5.1150	-17.9	H	3.0	40.9	1.0	-57.8	-25.0	-32.8	
7.6725	-15.4	H	3.0	40.6	1.0	-55.0	-25.0	-30.0	
10.2300	-14.3	H	3.0	39.5	1.0	-52.8	-25.0	-27.8	
Mid Ch, (2605 MHz)									
5.2100	-16.4	V	3.0	40.9	1.0	-56.3	-25.0	-31.3	
7.8150	-15.0	V	3.0	40.6	1.0	-54.5	-25.0	-29.5	
10.4200	-11.2	V	3.0	39.4	1.0	-49.6	-25.0	-24.6	
5.2100	-17.1	H	3.0	40.9	1.0	-57.0	-25.0	-32.0	
7.8150	-15.4	H	3.0	40.6	1.0	-55.0	-25.0	-30.0	
10.4200	-13.5	H	3.0	39.4	1.0	-51.9	-25.0	-26.9	
High Ch, (2652.5 MHz)									
5.3050	-17.3	V	3.0	40.9	1.0	-57.2	-25.0	-32.2	
7.9575	-14.3	V	3.0	40.5	1.0	-53.7	-25.0	-28.7	
10.6100	-11.2	V	3.0	39.2	1.0	-49.4	-25.0	-24.4	
5.3050	-17.7	H	3.0	40.9	1.0	-57.5	-25.0	-32.5	
7.9575	-14.0	H	3.0	40.5	1.0	-53.5	-25.0	-28.5	
10.6100	-12.6	H	3.0	39.2	1.0	-50.9	-25.0	-25.9	

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.

BC0

BC0
1xRTT

UL Korea, Ltd Suwon Laboratory
Above 1GHz High Frequency Substitution Measurement

Company: Samsung
Project #: 16K23301
Date: 05-02-16
Test Engineer: Chan Park
Configuration: EUT / AC Adapter / Earphone, X Position
Mode: CDMA RTT BC0

Chamber	Pre-amplifer	Filter	Limit
Chamber 2	AFS42	Filter 1	Part 22

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									
1.64940	-13.7	V	3.0	39.1	1.0	-51.8	-13.0	-38.8	
2.47410	-2.4	V	3.0	39.5	1.0	-41.0	-13.0	-28.0	
3.29880	-15.7	V	3.0	40.1	1.0	-54.8	-13.0	-41.8	
1.64940	-16.7	H	3.0	39.1	1.0	-54.8	-13.0	-41.8	
2.47410	-3.1	H	3.0	39.5	1.0	-41.6	-13.0	-28.6	
3.29880	-15.9	H	3.0	40.1	1.0	-55.0	-13.0	-42.0	
Mid Ch, 836.52MHz									
1.67304	-11.2	V	3.0	39.1	1.0	-49.3	-13.0	-36.3	
2.50956	1.3	V	3.0	39.5	1.0	-37.2	-13.0	-24.2	
3.34608	-15.0	V	3.0	40.1	1.0	-54.1	-13.0	-41.1	
1.67304	-14.0	H	3.0	39.1	1.0	-52.1	-13.0	-39.1	
2.50956	-1.5	H	3.0	39.5	1.0	-40.1	-13.0	-27.1	
3.34608	-15.2	H	3.0	40.1	1.0	-54.3	-13.0	-41.3	
High Ch, 848.31MHz									
1.69662	-11.5	V	3.0	39.1	1.0	-49.6	-13.0	-36.6	
2.54493	3.5	V	3.0	39.6	1.0	-35.1	-13.0	-22.1	
3.39324	-14.8	V	3.0	40.2	1.0	-54.0	-13.0	-41.0	
1.69662	-14.9	H	3.0	39.1	1.0	-53.1	-13.0	-40.1	
2.54493	2.4	H	3.0	39.6	1.0	-36.2	-13.0	-23.2	
3.39324	-15.3	H	3.0	40.2	1.0	-54.4	-13.0	-41.4	

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

BC0
EVDO Rel.0

UL Korea, Ltd Suwon Laboratory
Above 1GHz High Frequency Substitution Measurement

Company: Samsung
Project #: 16K23301
Date: 05-02-16
Test Engineer: Chan Park
Configuration: EUT / AC Adapter / Earphone, X Position
Mode: CDMA EVDO BC0

Chamber	Pre-amplifer	Filter	Limit
Chamber 2	AFS42	Filter 1	Part 22

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									
1.64940	-17.3	V	3.0	39.1	1.0	-55.4	-13.0	-42.4	
2.47410	3.3	V	3.0	39.5	1.0	-35.2	-13.0	-22.2	
3.29880	2.0	V	3.0	40.1	1.0	-37.1	-13.0	-24.1	
1.64940	-18.2	H	3.0	39.1	1.0	-56.3	-13.0	-43.3	
2.47410	-0.1	H	3.0	39.5	1.0	-38.6	-13.0	-25.6	
3.29880	-16.3	H	3.0	40.1	1.0	-55.4	-13.0	-42.4	
Mid Ch, 836.52MHz									
1.67304	-13.8	V	3.0	39.1	1.0	-51.9	-13.0	-38.9	
2.50956	2.5	V	3.0	39.5	1.0	-36.1	-13.0	-23.1	
3.34608	-15.6	V	3.0	40.1	1.0	-54.7	-13.0	-41.7	
1.67304	-17.1	H	3.0	39.1	1.0	-55.3	-13.0	-42.3	
2.50956	-1.4	H	3.0	39.5	1.0	-40.0	-13.0	-27.0	
3.34608	-15.8	H	3.0	40.1	1.0	-55.0	-13.0	-42.0	
High Ch, 848.31MHz									
1.69662	-14.0	V	3.0	39.1	1.0	-52.2	-13.0	-39.2	
2.54493	1.3	V	3.0	39.6	1.0	-37.2	-13.0	-24.2	
3.39324	-15.5	V	3.0	40.2	1.0	-54.7	-13.0	-41.7	
1.69662	-13.4	H	3.0	39.1	1.0	-51.5	-13.0	-38.5	
2.54493	-1.7	H	3.0	39.6	1.0	-40.2	-13.0	-27.2	
3.39324	-15.8	H	3.0	40.2	1.0	-55.0	-13.0	-42.0	

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

UL Korea, Ltd. Confidential
This report shall not be reproduced except in full, without the written approval of UL Korea, Ltd.