WCDMA Band 5

WCDMA

Band 5
REL99

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

Company: Samsung
Project #: 4787833362
Date: 01-19-17
Test Engineer: Chan Park
Configuration: EUT / AC Adapter / Earphone, X Position
Mode: Tx, REL99,850MHz

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, 826.40MHz									
1.6520	-16.4	V	3.0	38.2	1.0	-53.6	-13.0	-40.6	
2.4790	-21.0	V	3.0	38.8	1.0	-58.8	-13.0	-45.8	
3.3056	-20.4	V	3.0	39.4	1.0	-58.9	-13.0	-45.9	
1.6520	-8.1	H	3.0	38.2	1.0	-45.3	-13.0	-32.3	
2.4790	-20.6	H	3.0	38.8	1.0	-58.4	-13.0	-45.4	
3.3056	-20.4	H	3.0	39.4	1.0	-58.9	-13.0	-45.9	
Mid Ch, 836.6MHz									
1.6732	-11.2	V	3.0	38.2	1.0	-48.5	-13.0	-35.5	
2.5098	-19.8	V	3.0	38.8	1.0	-57.6	-13.0	-44.6	
3.3464	-20.4	V	3.0	39.5	1.0	-58.8	-13.0	-45.8	
1.6732	-7.1	H	3.0	38.2	1.0	-44.4	-13.0	-31.4	
2.5098	-15.1	H	3.0	38.8	1.0	-53.0	-13.0	-40.0	
3.3464	-20.4	H	3.0	39.5	1.0	-58.8	-13.0	-45.8	
High Ch, 846.6MHz									
1.6932	-10.2	V	3.0	38.2	1.0	-47.5	-13.0	-34.5	
2.5390	-17.8	V	3.0	38.9	1.0	-55.7	-13.0	-42.7	
3.3860	-20.4	V	3.0	39.5	1.0	-58.9	-13.0	-45.9	
1.6932	-7.4	H	3.0	38.2	1.0	-44.7	-13.0	-31.7	
2.5390	-13.4	H	3.0	38.9	1.0	-51.3	-13.0	-38.3	
3.3860	-20.3	H	3.0	39.5	1.0	-58.8	-13.0	-45.8	

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

WCDMA

Band 5
HSDPA

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

Company: Samsung
Project #: 4787833362
Date: 01-19-17
Test Engineer: Chan Park
Configuration: EUT / AC Adapter / Earphone, X Position
Mode: Tx, HSDPA,850MHz

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, 826.40MHz									
1.6520	-16.4	V	3.0	38.2	1.0	-53.7	-13.0	-40.7	
2.4790	-21.9	V	3.0	38.8	1.0	-59.7	-13.0	-46.7	
3.3056	-20.4	V	3.0	39.4	1.0	-58.8	-13.0	-45.8	
1.6520	-8.5	H	3.0	38.2	1.0	-45.7	-13.0	-32.7	
2.4790	-22.5	H	3.0	38.8	1.0	-60.3	-13.0	-47.3	
3.3056	-20.5	H	3.0	39.4	1.0	-58.9	-13.0	-45.9	
Mid Ch, 836.6MHz									
1.6732	-10.9	V	3.0	38.2	1.0	-48.2	-13.0	-35.2	
2.5098	-21.7	V	3.0	38.8	1.0	-59.5	-13.0	-46.5	
3.3464	-20.4	V	3.0	39.5	1.0	-58.9	-13.0	-45.9	
1.6732	-7.4	H	3.0	38.2	1.0	-44.6	-13.0	-31.6	
2.5098	-21.4	H	3.0	38.8	1.0	-59.2	-13.0	-46.2	
3.3464	-20.4	H	3.0	39.5	1.0	-58.8	-13.0	-45.8	
High Ch, 846.6MHz									
1.6932	-10.7	V	3.0	38.2	1.0	-48.0	-13.0	-35.0	
2.5390	-21.4	V	3.0	38.9	1.0	-59.3	-13.0	-46.3	
3.3860	-20.3	V	3.0	39.5	1.0	-58.8	-13.0	-45.8	
1.6932	-7.6	H	3.0	38.2	1.0	-44.9	-13.0	-31.9	
2.5390	-21.1	H	3.0	38.9	1.0	-58.9	-13.0	-45.9	
3.3860	-20.4	H	3.0	39.5	1.0	-58.8	-13.0	-45.8	

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

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WCDMA Band 2

WCDMA

Band 2
REL99

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

Company: Samsung
Project #: 4787833362
Date: 01-18-17
Test Engineer: JH Park
Configuration: EUT / AC Adapter / Earphone / Z Position
Mode: Tx, REL99,1900MHz

Chamber	Pre-amplifer	Filter	Limit
Chamber 2	AFS42	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, 1852.4MHz									
3.7048	-18.9	V	3.0	39.7	1.0	-57.5	-13.0	-44.5	
5.5572	-18.5	V	3.0	39.9	1.0	-57.5	-13.0	-44.5	
7.4096	-17.4	V	3.0	39.4	1.0	-55.8	-13.0	-42.8	
3.7048	-15.9	H	3.0	39.7	1.0	-54.5	-13.0	-41.5	
5.5572	-18.7	H	3.0	39.9	1.0	-57.7	-13.0	-44.7	
7.4096	-17.2	H	3.0	39.4	1.0	-55.7	-13.0	-42.7	
Mid Ch, 1880MHz									
3.7600	-19.2	V	3.0	39.7	1.0	-57.9	-13.0	-44.9	
5.6400	-18.4	V	3.0	40.0	1.0	-57.4	-13.0	-44.4	
7.5200	-17.4	V	3.0	39.4	1.0	-55.8	-13.0	-42.8	
3.7600	-16.0	H	3.0	39.7	1.0	-54.7	-13.0	-41.7	
5.6400	-18.4	H	3.0	40.0	1.0	-57.3	-13.0	-44.3	
7.5200	-17.5	H	3.0	39.4	1.0	-55.9	-13.0	-42.9	
High Ch, 1907.6MHz									
3.8152	-16.4	V	3.0	39.7	1.0	-55.1	-13.0	-42.1	
5.7228	-18.6	V	3.0	40.0	1.0	-57.6	-13.0	-44.6	
7.6304	-16.9	V	3.0	39.3	1.0	-55.2	-13.0	-42.2	
3.8152	-13.5	H	3.0	39.7	1.0	-52.2	-13.0	-39.2	
5.7228	-17.5	H	3.0	40.0	1.0	-56.5	-13.0	-43.5	
7.6304	-16.9	H	3.0	39.3	1.0	-55.3	-13.0	-42.3	

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

WCDMA

Band 2
HSDPA

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

Company: Samsung
Project #: 4787833362
Date: 01-18-17
Test Engineer: JH Park
Configuration: EUT / AC Adapter / Earphone / Z Position
Mode: Tx, HSDPA,1900MHz

Chamber	Pre-amplifer	Filter	Limit
Chamber 2	AFS42	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, 1852.4MHz									
3.7048	-18.9	V	3.0	39.7	1.0	-57.6	-13.0	-44.6	
5.5572	-18.7	V	3.0	39.9	1.0	-57.6	-13.0	-44.6	
7.4096	-17.3	V	3.0	39.4	1.0	-55.7	-13.0	-42.7	
3.7048	-15.8	H	3.0	39.7	1.0	-54.5	-13.0	-41.5	
5.5572	-18.6	H	3.0	39.9	1.0	-57.6	-13.0	-44.6	
7.4096	-17.3	H	3.0	39.4	1.0	-55.7	-13.0	-42.7	
Mid Ch, 1880MHz									
3.7600	-19.1	V	3.0	39.7	1.0	-57.8	-13.0	-44.8	
5.6400	-18.4	V	3.0	40.0	1.0	-57.3	-13.0	-44.3	
7.5200	-17.4	V	3.0	39.4	1.0	-55.8	-13.0	-42.8	
3.7600	-16.1	H	3.0	39.7	1.0	-54.8	-13.0	-41.8	
5.6400	-18.5	H	3.0	40.0	1.0	-57.5	-13.0	-44.5	
7.5200	-17.4	H	3.0	39.4	1.0	-55.7	-13.0	-42.7	
High Ch, 1907.6MHz									
3.8152	-16.5	V	3.0	39.7	1.0	-55.2	-13.0	-42.2	
5.7228	-18.9	V	3.0	40.0	1.0	-57.9	-13.0	-44.9	
7.6304	-16.9	V	3.0	39.3	1.0	-55.3	-13.0	-42.3	
3.8152	-12.9	H	3.0	39.7	1.0	-51.6	-13.0	-38.6	
5.7228	-17.7	H	3.0	40.0	1.0	-56.7	-13.0	-43.7	
7.6304	-17.0	H	3.0	39.3	1.0	-55.3	-13.0	-42.3	

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

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LTE Band 5

LTE Band 5 10MHz QPSK

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

Company: Samsung
Project #: 4787833362
Date: 01-19-17
Test Engineer: JH Park
Configuration: EUT / AC Adapter / Earphone, X Position
Mode: TX, LTE BAND 5, 10MHz BW,QPSK

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 Channel (829MHz)									
1.6580	-8.7	V	3.0	38.2	1.0	-45.9	-13.0	-32.9	
2.4870	-18.2	V	3.0	38.8	1.0	-56.0	-13.0	-43.0	
3.3160	-19.8	V	3.0	39.4	1.0	-58.2	-13.0	-45.2	
1.6580	1.3	H	3.0	38.2	1.0	-36.0	-13.0	-23.0	
2.4870	-11.6	H	3.0	38.8	1.0	-49.4	-13.0	-36.4	
3.3160	-18.8	H	3.0	39.4	1.0	-57.2	-13.0	-44.2	
Mid Channel (836.5MHz)									
1.6730	-6.7	V	3.0	38.2	1.0	-43.9	-13.0	-30.9	
2.5090	-15.8	V	3.0	38.8	1.0	-53.6	-13.0	-40.6	
3.3460	-20.3	V	3.0	39.5	1.0	-58.8	-13.0	-45.8	
1.6730	-1.6	H	3.0	38.2	1.0	-38.8	-13.0	-25.8	
2.5090	-9.9	H	3.0	38.8	1.0	-47.8	-13.0	-34.8	
3.3460	-20.9	H	3.0	39.5	1.0	-59.4	-13.0	-46.4	
High Channel (844MHz)									
1.6880	-9.0	V	3.0	38.2	1.0	-46.3	-13.0	-33.3	
2.5320	-20.1	V	3.0	38.9	1.0	-58.0	-13.0	-45.0	
3.3760	-20.3	V	3.0	39.5	1.0	-58.7	-13.0	-45.7	
1.6880	-2.9	H	3.0	38.2	1.0	-40.2	-13.0	-27.2	
2.5320	-15.4	H	3.0	38.9	1.0	-53.3	-13.0	-40.3	
3.3760	-20.6	H	3.0	39.5	1.0	-59.0	-13.0	-46.0	

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

LTE Band 5 10MHz 16QAM

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

Company: Samsung
Project #: 4787833362
Date: 01-19-17
Test Engineer: JH Park
Configuration: EUT / AC Adapter / Earphone, X Position
Mode: TX, LTE BAND 5, 10MHz BW,16QAM

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 Channel (829MHz)									
1.6580	-9.3	V	3.0	38.2	1.0	-46.6	-13.0	-33.6	
2.4870	-18.9	V	3.0	38.8	1.0	-56.7	-13.0	-43.7	
3.3160	-20.0	V	3.0	39.4	1.0	-58.4	-13.0	-45.4	
1.6580	1.1	H	3.0	38.2	1.0	-36.1	-13.0	-23.1	
2.4870	-12.1	H	3.0	38.8	1.0	-49.9	-13.0	-36.9	
3.3160	-19.4	H	3.0	39.4	1.0	-57.9	-13.0	-44.9	
Mid Channel (836.5MHz)									
1.6730	-6.6	V	3.0	38.2	1.0	-43.8	-13.0	-30.8	
2.5090	-16.2	V	3.0	38.8	1.0	-54.1	-13.0	-41.1	
3.3460	-19.6	V	3.0	39.5	1.0	-58.0	-13.0	-45.0	
1.6730	-1.7	H	3.0	38.2	1.0	-39.0	-13.0	-26.0	
2.5090	-10.9	H	3.0	38.8	1.0	-48.8	-13.0	-35.8	
3.3460	-20.2	H	3.0	39.5	1.0	-58.6	-13.0	-45.6	
High Channel (844MHz)									
1.6880	-9.5	V	3.0	38.2	1.0	-46.8	-13.0	-33.8	
2.5320	-20.7	V	3.0	38.9	1.0	-58.6	-13.0	-45.6	
3.3760	-20.4	V	3.0	39.5	1.0	-58.9	-13.0	-45.9	
1.6880	-2.9	H	3.0	38.2	1.0	-40.2	-13.0	-27.2	
2.5320	-15.7	H	3.0	38.9	1.0	-53.6	-13.0	-40.6	
3.3760	-20.9	H	3.0	39.5	1.0	-59.4	-13.0	-46.4	

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

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LTE
Band 5
5MHz
QPSK

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

Company: Samsung
Project #: 4787833362
Date: 01-19-17
Test Engineer: JH Park
Configuration: EUT / AC Adapter / Earphone, X Position
Mode: TX, LTE BAND 5, 5MHz BW,QPSK

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 Channel (826.5MHz)									
1.6530	-12.2	V	3.0	38.2	1.0	-49.4	-13.0	-36.4	
2.4790	-14.3	V	3.0	38.8	1.0	-52.1	-13.0	-39.1	
3.3060	-20.3	V	3.0	39.4	1.0	-58.7	-13.0	-45.7	
1.6530	-1.7	H	3.0	38.2	1.0	-38.9	-13.0	-25.9	
2.4790	-10.1	H	3.0	38.8	1.0	-47.9	-13.0	-34.9	
3.3060	-20.3	H	3.0	39.4	1.0	-58.7	-13.0	-45.7	
Mid Channel (836.5MHz)									
1.6730	-6.7	V	3.0	38.2	1.0	-44.0	-13.0	-31.0	
2.5090	-16.5	V	3.0	38.8	1.0	-54.4	-13.0	-41.4	
3.3460	-20.3	V	3.0	39.5	1.0	-58.8	-13.0	-45.8	
1.6730	-2.1	H	3.0	38.2	1.0	-39.3	-13.0	-26.3	
2.5090	-11.2	H	3.0	38.8	1.0	-49.0	-13.0	-36.0	
3.3460	-20.7	H	3.0	39.5	1.0	-59.2	-13.0	-46.2	
High Channel (846.5MHz)									
1.6930	-5.8	V	3.0	38.2	1.0	-43.1	-13.0	-30.1	
2.5390	-21.8	V	3.0	38.9	1.0	-59.7	-13.0	-46.7	
3.3860	-20.6	V	3.0	39.5	1.0	-59.1	-13.0	-46.1	
1.6930	-0.7	H	3.0	38.2	1.0	-37.9	-13.0	-24.9	
2.5390	-18.5	H	3.0	38.9	1.0	-56.4	-13.0	-43.4	
3.3860	-21.1	H	3.0	39.5	1.0	-59.5	-13.0	-46.5	

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

LTE
Band 5
5MHz
16QAM

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

Company: Samsung
Project #: 4787833362
Date: 01-19-17
Test Engineer: JH Park
Configuration: EUT / AC Adapter / Earphone, X Position
Mode: TX, LTE BAND 5, 5MHz BW,16QAM

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 Channel (826.5MHz)									
1.6530	-13.1	V	3.0	38.2	1.0	-50.3	-13.0	-37.3	
2.4790	-16.0	V	3.0	38.8	1.0	-53.8	-13.0	-40.8	
3.3060	-21.0	V	3.0	39.4	1.0	-59.4	-13.0	-46.4	
1.6530	-1.9	H	3.0	38.2	1.0	-39.1	-13.0	-26.1	
2.4790	-11.7	H	3.0	38.8	1.0	-49.5	-13.0	-36.5	
3.3060	-20.8	H	3.0	39.4	1.0	-59.2	-13.0	-46.2	
Mid Channel (836.5MHz)									
1.6730	-6.6	V	3.0	38.2	1.0	-43.9	-13.0	-30.9	
2.5090	-16.5	V	3.0	38.8	1.0	-54.3	-13.0	-41.3	
3.3460	-20.8	V	3.0	39.5	1.0	-59.2	-13.0	-46.2	
1.6730	-1.9	H	3.0	38.2	1.0	-39.1	-13.0	-26.1	
2.5090	-12.0	H	3.0	38.8	1.0	-49.8	-13.0	-36.8	
3.3460	-20.1	H	3.0	39.5	1.0	-58.6	-13.0	-45.6	
High Channel (846.5MHz)									
1.6930	-5.9	V	3.0	38.2	1.0	-43.2	-13.0	-30.2	
2.5390	-21.8	V	3.0	38.9	1.0	-59.7	-13.0	-46.7	
3.3860	-21.4	V	3.0	39.5	1.0	-59.9	-13.0	-46.9	
1.6930	-0.8	H	3.0	38.2	1.0	-38.0	-13.0	-25.0	
2.5390	-18.7	H	3.0	38.9	1.0	-56.5	-13.0	-43.5	
3.3860	-20.8	H	3.0	39.5	1.0	-59.3	-13.0	-46.3	

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

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LTE Band 5 3MHz QPSK

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

Company: Samsung
Project #: 4787833362
Date: 01-19-17
Test Engineer: JH Park
Configuration: EUT / AC Adapter / Earphone, X Position
Mode: TX, LTE BAND 5, 3MHz BW,QPSK

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 Channel (825.5MHz)									
1.6510	-9.2	V	3.0	38.2	1.0	-46.5	-13.0	-33.5	
2.4765	-14.7	V	3.0	38.8	1.0	-52.5	-13.0	-39.5	
3.3020	-21.8	V	3.0	39.4	1.0	-60.2	-13.0	-47.2	
1.6510	-3.3	H	3.0	38.2	1.0	-40.5	-13.0	-27.5	
2.4765	-10.9	H	3.0	38.8	1.0	-48.7	-13.0	-35.7	
3.3020	-21.8	H	3.0	39.4	1.0	-60.2	-13.0	-47.2	
Mid Channel (836.5MHz)									
1.6730	-5.8	V	3.0	38.2	1.0	-43.0	-13.0	-30.0	
2.5090	-17.0	V	3.0	38.8	1.0	-54.8	-13.0	-41.8	
3.3460	-20.1	V	3.0	39.5	1.0	-58.6	-13.0	-45.6	
1.6730	-2.1	H	3.0	38.2	1.0	-39.4	-13.0	-26.4	
2.5090	-12.5	H	3.0	38.8	1.0	-50.3	-13.0	-37.3	
3.3460	-20.6	H	3.0	39.5	1.0	-59.0	-13.0	-46.0	
High Channel (847.5MHz)									
1.6950	-7.1	V	3.0	38.2	1.0	-44.4	-13.0	-31.4	
2.5425	-21.4	V	3.0	38.9	1.0	-59.2	-13.0	-46.2	
3.3900	-21.4	V	3.0	39.5	1.0	-59.9	-13.0	-46.9	
1.6950	-0.1	H	3.0	38.2	1.0	-37.3	-13.0	-24.3	
2.5425	-16.4	H	3.0	38.9	1.0	-54.3	-13.0	-41.3	
3.3900	-21.3	H	3.0	39.5	1.0	-59.8	-13.0	-46.8	

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

LTE Band 5 3MHz 16QAM

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

Company: Samsung
Project #: 4787833362
Date: 01-19-17
Test Engineer: JH Park
Configuration: EUT / AC Adapter / Earphone, X Position
Mode: TX, LTE BAND 5, 3MHz BW,16QAM

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 Channel (825.5MHz)									
1.6510	-9.2	V	3.0	38.2	1.0	-46.4	-13.0	-33.4	
2.4765	-15.6	V	3.0	38.8	1.0	-53.4	-13.0	-40.4	
3.3020	-21.7	V	3.0	39.4	1.0	-60.1	-13.0	-47.1	
1.6510	-3.3	H	3.0	38.2	1.0	-40.5	-13.0	-27.5	
2.4765	-10.4	H	3.0	38.8	1.0	-48.2	-13.0	-35.2	
3.3020	-21.8	H	3.0	39.4	1.0	-60.2	-13.0	-47.2	
Mid Channel (836.5MHz)									
1.6730	-5.9	V	3.0	38.2	1.0	-43.1	-13.0	-30.1	
2.5090	-18.3	V	3.0	38.8	1.0	-56.1	-13.0	-43.1	
3.3460	-20.2	V	3.0	39.5	1.0	-58.7	-13.0	-45.7	
1.6730	-1.9	H	3.0	38.2	1.0	-39.1	-13.0	-26.1	
2.5090	-11.6	H	3.0	38.8	1.0	-49.5	-13.0	-36.5	
3.3460	-20.7	H	3.0	39.5	1.0	-59.1	-13.0	-46.1	
High Channel (847.5MHz)									
1.6950	-7.2	V	3.0	38.2	1.0	-44.5	-13.0	-31.5	
2.5425	-21.9	V	3.0	38.9	1.0	-59.7	-13.0	-46.7	
3.3900	-21.3	V	3.0	39.5	1.0	-59.8	-13.0	-46.8	
1.6950	0.3	H	3.0	38.2	1.0	-36.9	-13.0	-23.9	
2.5425	-17.8	H	3.0	38.9	1.0	-55.7	-13.0	-42.7	
3.3900	-21.5	H	3.0	39.5	1.0	-60.0	-13.0	-47.0	

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

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LTE Band 5 1.4MHz QPSK

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

Company: Samsung
Project #: 4787833362
Date: 01-19-17
Test Engineer: JH Park
Configuration: EUT / AC Adapter / Earphone, X Position
Mode: TX, LTE BAND 5, 1.4MHz BW,QPSK

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 Channel (824.7MHz)									
1.6494	-14.6	V	3.0	38.2	1.0	-51.9	-13.0	-38.9	
2.4741	-14.6	V	3.0	38.8	1.0	-52.4	-13.0	-39.4	
3.2988	-22.0	V	3.0	39.4	1.0	-60.4	-13.0	-47.4	
1.6494	-5.0	H	3.0	38.2	1.0	-42.2	-13.0	-29.2	
2.4741	-10.4	H	3.0	38.8	1.0	-48.2	-13.0	-35.2	
3.2988	-21.7	H	3.0	39.4	1.0	-60.1	-13.0	-47.1	
Mid Channel (836.5MHz)									
1.6730	-8.0	V	3.0	38.2	1.0	-45.2	-13.0	-32.2	
2.5090	-16.2	V	3.0	38.8	1.0	-54.0	-13.0	-41.0	
3.3460	-21.5	V	3.0	39.5	1.0	-59.9	-13.0	-46.9	
1.6730	-1.9	H	3.0	38.2	1.0	-39.1	-13.0	-26.1	
2.5090	-11.6	H	3.0	38.8	1.0	-49.4	-13.0	-36.4	
3.3460	-21.8	H	3.0	39.5	1.0	-60.2	-13.0	-47.2	
High Channel (848.3MHz)									
1.6966	-6.7	V	3.0	38.2	1.0	-44.0	-13.0	-31.0	
2.5449	-20.7	V	3.0	38.9	1.0	-58.6	-13.0	-45.6	
3.3932	-21.0	V	3.0	39.5	1.0	-59.4	-13.0	-46.4	
1.6966	-1.6	H	3.0	38.2	1.0	-38.8	-13.0	-25.8	
2.5449	-13.3	H	3.0	38.9	1.0	-51.2	-13.0	-38.2	
3.3932	-21.2	H	3.0	39.5	1.0	-59.7	-13.0	-46.7	

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

LTE Band 5 1.4MHz 16QAM

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

Company: Samsung
Project #: 4787833362
Date: 01-19-17
Test Engineer: JH Park
Configuration: EUT / AC Adapter / Earphone, X Position
Mode: TX, LTE BAND 5, 1.4MHz BW,16QAM

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 Channel (824.7MHz)									
1.6494	-14.9	V	3.0	38.2	1.0	-52.1	-13.0	-39.1	
2.4741	-15.4	V	3.0	38.8	1.0	-53.2	-13.0	-40.2	
3.2988	-21.8	V	3.0	39.4	1.0	-60.3	-13.0	-47.3	
1.6494	-5.3	H	3.0	38.2	1.0	-42.5	-13.0	-29.5	
2.4741	-11.6	H	3.0	38.8	1.0	-49.4	-13.0	-36.4	
3.2988	-21.4	H	3.0	39.4	1.0	-59.9	-13.0	-46.9	
Mid Channel (836.5MHz)									
1.6730	-7.7	V	3.0	38.2	1.0	-45.0	-13.0	-32.0	
2.5090	-17.3	V	3.0	38.8	1.0	-55.1	-13.0	-42.1	
3.3460	-21.6	V	3.0	39.5	1.0	-60.0	-13.0	-47.0	
1.6730	-1.8	H	3.0	38.2	1.0	-39.0	-13.0	-26.0	
2.5090	-13.0	H	3.0	38.8	1.0	-50.8	-13.0	-37.8	
3.3460	-20.3	H	3.0	39.5	1.0	-58.8	-13.0	-45.8	
High Channel (848.3MHz)									
1.6966	-6.6	V	3.0	38.2	1.0	-43.8	-13.0	-30.8	
2.5449	-20.7	V	3.0	38.9	1.0	-58.6	-13.0	-45.6	
3.3932	-20.8	V	3.0	39.5	1.0	-59.3	-13.0	-46.3	
1.6966	-0.9	H	3.0	38.2	1.0	-38.2	-13.0	-25.2	
2.5449	-15.6	H	3.0	38.9	1.0	-53.5	-13.0	-40.5	
3.3932	-20.5	H	3.0	39.5	1.0	-58.9	-13.0	-45.9	

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

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