11.2.1. SPURIOUS RADIATION PLOTS

GSM 850

GSM

GSM850
GPRS

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

Company: Samsung
Project #: 15K22555
Date: 01-05-16
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Earphone / Z Position
Mode: GPRS 850 MHz

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, 824.2MHz									
1.6484	-3.5	V	3.0	39.1	1.0	-41.6	-13.0	-28.6	
2.4726	-2.5	V	3.0	39.5	1.0	-41.0	-13.0	-28.0	
3.2968	-5.8	V	3.0	40.1	1.0	-44.9	-13.0	-31.9	
1.6484	-4.4	H	3.0	39.1	1.0	-42.5	-13.0	-29.5	
2.4726	-1.7	H	3.0	39.5	1.0	-40.2	-13.0	-27.2	
3.2968	-16.2	H	3.0	40.1	1.0	-55.3	-13.0	-42.3	
Mid Ch, 836.6MHz									
1.6730	-3.4	V	3.0	39.1	1.0	-41.5	-13.0	-28.5	
2.5098	-3.1	V	3.0	39.5	1.0	-41.6	-13.0	-28.6	
3.3464	-11.9	V	3.0	40.1	1.0	-51.1	-13.0	-38.1	
1.6730	-3.5	H	3.0	39.1	1.0	-41.6	-13.0	-28.6	
2.5098	-3.4	H	3.0	39.5	1.0	-41.9	-13.0	-28.9	
3.3464	-13.7	H	3.0	40.1	1.0	-52.8	-13.0	-39.8	
High Ch, 848.8MHz									
1.6976	-3.1	V	3.0	39.1	1.0	-41.2	-13.0	-28.2	
2.5466	-1.6	V	3.0	39.6	1.0	-40.2	-13.0	-27.2	
3.3952	-3.6	V	3.0	40.2	1.0	-42.8	-13.0	-29.8	
1.6976	-2.5	H	3.0	39.1	1.0	-40.6	-13.0	-27.6	
2.5466	-3.0	H	3.0	39.6	1.0	-41.6	-13.0	-28.6	
3.3952	-9.9	H	3.0	40.2	1.0	-49.1	-13.0	-36.1	

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

GSM

GSM850
EGPRS

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

Company: Samsung
Project #: 15K22555
Date: 01-05-16
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Earphone / Z Position
Mode: EGPRS 850 MHz

Chamber	Pre-amplifer	Filter	Limit
Chamber 1	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, 824.2MHz									
1.6484	-13.7	V	3.0	39.1	1.0	-51.8	-13.0	-38.8	
2.4726	-14.9	V	3.0	39.5	1.0	-53.5	-13.0	-40.5	
3.2968	-12.4	V	3.0	40.1	1.0	-51.5	-13.0	-38.5	
1.6484	-15.1	H	3.0	39.1	1.0	-53.2	-13.0	-40.2	
2.4726	-14.0	H	3.0	39.5	1.0	-52.5	-13.0	-39.5	
3.2968	-17.6	H	3.0	40.1	1.0	-56.7	-13.0	-43.7	
Mid Ch, 836.6MHz									
1.6730	-15.0	V	3.0	39.1	1.0	-53.1	-13.0	-40.1	
2.5098	-14.7	V	3.0	39.5	1.0	-53.3	-13.0	-40.3	
3.3464	-13.3	V	3.0	40.1	1.0	-52.5	-13.0	-39.5	
1.6730	-15.0	H	3.0	39.1	1.0	-53.1	-13.0	-40.1	
2.5098	-12.6	H	3.0	39.5	1.0	-51.1	-13.0	-38.1	
3.3464	-15.6	H	3.0	40.1	1.0	-54.8	-13.0	-41.8	
High Ch, 848.8MHz									
1.6976	-17.5	V	3.0	39.1	1.0	-55.7	-13.0	-42.7	
2.5466	-12.0	V	3.0	39.6	1.0	-50.6	-13.0	-37.6	
3.3952	-14.0	V	3.0	40.2	1.0	-53.2	-13.0	-40.2	
1.6976	-15.7	H	3.0	39.1	1.0	-53.8	-13.0	-40.8	
2.5466	-13.1	H	3.0	39.6	1.0	-51.7	-13.0	-38.7	
3.3952	-17.1	H	3.0	40.2	1.0	-56.3	-13.0	-43.3	

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

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GSM 1900

GSM

GSM1900
GPRS

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

Company: Samsung
Project #: 15K22555
Date: 12-24-15
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Earphone, X Position
Mode: GPRS 1900

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, 1850.2MHz									
3.7004	1.4	V	3.0	40.5	1.0	-38.0	-13.0	-25.0	
5.5506	6.1	V	3.0	40.8	1.0	-33.7	-13.0	-20.7	
7.4008	8.8	V	3.0	40.8	1.0	-30.9	-13.0	-17.9	
3.7000	-2.4	H	3.0	40.5	1.0	-41.9	-13.0	-28.9	
5.5506	4.6	H	3.0	40.8	1.0	-35.3	-13.0	-22.3	
7.4008	7.9	H	3.0	40.8	1.0	-31.9	-13.0	-18.9	
Mid Ch, 1880.0MHz									
3.7600	3.9	V	3.0	40.5	1.0	-35.7	-13.0	-22.7	
5.6400	6.1	V	3.0	40.8	1.0	-33.7	-13.0	-20.7	
7.5200	4.5	V	3.0	40.7	1.0	-35.2	-13.0	-22.2	
3.7600	1.5	H	3.0	40.5	1.0	-38.0	-13.0	-25.0	
5.6400	4.8	H	3.0	40.8	1.0	-35.0	-13.0	-22.0	
7.5200	1.2	H	3.0	40.7	1.0	-38.5	-13.0	-25.5	
High Ch, 1909.8 MHz									
3.8196	2.4	V	3.0	40.6	1.0	-37.2	-13.0	-24.2	
5.7294	6.3	V	3.0	40.8	1.0	-33.5	-13.0	-20.5	
7.6392	4.1	V	3.0	40.7	1.0	-35.5	-13.0	-22.5	
3.8196	-0.2	H	3.0	40.6	1.0	-39.8	-13.0	-26.8	
5.7294	3.6	H	3.0	40.8	1.0	-36.1	-13.0	-23.1	
7.6392	2.5	H	3.0	40.7	1.0	-37.2	-13.0	-24.2	

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

GSM

GSM1900
EGPRS

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

Company: Samsung
Project #: 15K22555
Date: 12-24-15
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Earphone, X Position
Mode: EGPRS 1900 MHz

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, 1850.2MHz									
3.7004	1.0	V	3.0	40.5	1.0	-38.4	-13.0	-25.4	
5.5506	5.6	V	3.0	40.8	1.0	-34.2	-13.0	-21.2	
7.4008	8.3	V	3.0	40.8	1.0	-31.4	-13.0	-18.4	
3.7000	-1.7	H	3.0	40.5	1.0	-41.1	-13.0	-28.1	
5.5500	5.3	H	3.0	40.8	1.0	-34.5	-13.0	-21.5	
7.4000	8.1	H	3.0	40.8	1.0	-31.7	-13.0	-18.7	
Mid Ch, 1880.0MHz									
3.7600	3.3	V	3.0	40.5	1.0	-36.2	-13.0	-23.2	
5.6400	5.8	V	3.0	40.8	1.0	-34.0	-13.0	-21.0	
7.5200	4.8	V	3.0	40.7	1.0	-34.9	-13.0	-21.9	
3.7600	1.1	H	3.0	40.5	1.0	-38.5	-13.0	-25.5	
5.6400	4.6	H	3.0	40.8	1.0	-35.2	-13.0	-22.2	
7.5200	0.8	H	3.0	40.7	1.0	-38.9	-13.0	-25.9	
High Ch, 1909.8 MHz									
3.8196	2.1	V	3.0	40.6	1.0	-37.5	-13.0	-24.5	
5.7294	5.8	V	3.0	40.8	1.0	-34.0	-13.0	-21.0	
7.6392	3.5	V	3.0	40.7	1.0	-36.2	-13.0	-23.2	
3.8196	0.0	H	3.0	40.6	1.0	-39.6	-13.0	-26.6	
5.7294	3.9	H	3.0	40.8	1.0	-35.9	-13.0	-22.9	
7.6392	2.5	H	3.0	40.7	1.0	-37.2	-13.0	-24.2	

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

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WCDMA Band 5

WCDMA

Band 5
REL99

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

Company: Samsung
Project #: 15K22555
Date: 12-30-15
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Earphone / Z 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	-10.3	V	3.0	39.1	1.0	-48.4	-13.0	-35.4	
2.4790	-15.9	V	3.0	39.5	1.0	-54.4	-13.0	-41.4	
3.3056	-14.6	V	3.0	40.1	1.0	-53.7	-13.0	-40.7	
1.6520	-6.2	H	3.0	39.1	1.0	-44.3	-13.0	-31.3	
2.4790	-16.4	H	3.0	39.5	1.0	-54.9	-13.0	-41.9	
3.3056	-15.9	H	3.0	40.1	1.0	-55.0	-13.0	-42.0	
Mid Ch, 836.6MHz									
1.6732	-13.4	V	3.0	39.1	1.0	-51.5	-13.0	-38.5	
2.5098	-16.5	V	3.0	39.5	1.0	-55.1	-13.0	-42.1	
3.3464	-13.8	V	3.0	40.1	1.0	-52.9	-13.0	-39.9	
1.6732	-11.1	H	3.0	39.1	1.0	-49.3	-13.0	-36.3	
2.5098	-17.3	H	3.0	39.5	1.0	-55.8	-13.0	-42.8	
3.3464	-16.0	H	3.0	40.1	1.0	-55.1	-13.0	-42.1	
High Ch, 846.6MHz									
1.6932	-12.5	V	3.0	39.1	1.0	-50.6	-13.0	-37.6	
2.5390	-17.0	V	3.0	39.6	1.0	-55.5	-13.0	-42.5	
3.3860	-14.9	V	3.0	40.2	1.0	-54.1	-13.0	-41.1	
1.6932	-8.5	H	3.0	39.1	1.0	-46.6	-13.0	-33.6	
2.5390	-17.3	H	3.0	39.6	1.0	-55.8	-13.0	-42.8	
3.3860	-16.1	H	3.0	40.2	1.0	-55.2	-13.0	-42.2	

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 #: 15K22555
Date: 12-30-15
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Earphone / Z 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	-10.6	V	3.0	39.1	1.0	-48.8	-13.0	-35.8	
2.4790	-16.5	V	3.0	39.5	1.0	-55.0	-13.0	-42.0	
3.3056	-14.5	V	3.0	40.1	1.0	-53.6	-13.0	-40.6	
1.6520	-6.4	H	3.0	39.1	1.0	-44.5	-13.0	-31.5	
2.4790	-16.1	H	3.0	39.5	1.0	-54.6	-13.0	-41.6	
3.3056	-15.4	H	3.0	40.1	1.0	-54.5	-13.0	-41.5	
Mid Ch, 836.6MHz									
1.6732	-16.0	V	3.0	39.1	1.0	-54.1	-13.0	-41.1	
2.5098	-17.0	V	3.0	39.5	1.0	-55.6	-13.0	-42.6	
3.3464	-14.7	V	3.0	40.1	1.0	-53.8	-13.0	-40.8	
1.6732	-13.5	H	3.0	39.1	1.0	-51.6	-13.0	-38.6	
2.5098	-17.2	H	3.0	39.5	1.0	-55.7	-13.0	-42.7	
3.3464	-15.7	H	3.0	40.1	1.0	-54.8	-13.0	-41.8	
High Ch, 846.6MHz									
1.6932	-13.2	V	3.0	39.1	1.0	-51.3	-13.0	-38.3	
2.5390	-17.1	V	3.0	39.6	1.0	-55.6	-13.0	-42.6	
3.3860	-15.1	V	3.0	40.2	1.0	-54.2	-13.0	-41.2	
1.6932	-9.9	H	3.0	39.1	1.0	-48.0	-13.0	-35.0	
2.5390	-17.5	H	3.0	39.6	1.0	-56.1	-13.0	-43.1	
3.3860	-15.9	H	3.0	40.2	1.0	-55.1	-13.0	-42.1	

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

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WCDMA Band 4

WCDMA

Band 4
REL99

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

Company: Samsung
Project #: 15K22555
Date: 12-29-15
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Earphone / X Position
Mode: Tx, REL99,1700MHz

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, 1712.4MHz									
3.4248	-12.8	V	3.0	40.2	1.0	-52.1	-13.0	-39.1	
5.1372	-4.1	V	3.0	40.9	1.0	-44.0	-13.0	-31.0	
6.8496	4.9	V	3.0	41.0	1.0	-35.0	-13.0	-22.0	
3.4248	-13.6	H	3.0	40.2	1.0	-52.8	-13.0	-39.8	
5.1372	-5.1	H	3.0	40.9	1.0	-44.9	-13.0	-31.9	
6.8496	1.8	H	3.0	41.0	1.0	-38.2	-13.0	-25.2	
Mid Ch, 1732.6MHz									
3.4652	-12.1	V	3.0	40.3	1.0	-51.4	-13.0	-38.4	
5.1978	-4.6	V	3.0	40.9	1.0	-44.5	-13.0	-31.5	
6.9304	3.2	V	3.0	41.0	1.0	-36.8	-13.0	-23.8	
3.4652	-14.0	H	3.0	40.3	1.0	-53.2	-13.0	-40.2	
5.1978	-2.3	H	3.0	40.9	1.0	-42.1	-13.0	-29.1	
6.9304	0.4	H	3.0	41.0	1.0	-39.6	-13.0	-26.6	
High Ch, 1752.6MHz									
3.5052	-11.9	V	3.0	40.3	1.0	-51.1	-13.0	-38.1	
5.2578	-4.3	V	3.0	40.9	1.0	-44.1	-13.0	-31.1	
7.0104	0.4	V	3.0	41.0	1.0	-39.6	-13.0	-26.6	
3.5052	-11.9	H	3.0	40.3	1.0	-51.2	-13.0	-38.2	
5.2578	-2.3	H	3.0	40.9	1.0	-42.2	-13.0	-29.2	
7.0104	-0.8	H	3.0	41.0	1.0	-40.8	-13.0	-27.8	

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

WCDMA

Band 4
HSDPA

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

Company: Samsung
Project #: 15K22555
Date: 12-29-15
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Earphone / X Position
Mode: Tx, HSDPA,1700MHz

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, 1712.4MHz									
3.4248	-12.8	V	3.0	40.2	1.0	-52.1	-13.0	-39.1	
5.1372	-5.1	V	3.0	40.9	1.0	-45.0	-13.0	-32.0	
6.8496	4.6	V	3.0	41.0	1.0	-35.4	-13.0	-22.4	
3.4248	-13.1	H	3.0	40.2	1.0	-52.3	-13.0	-39.3	
5.1372	-3.9	H	3.0	40.9	1.0	-43.8	-13.0	-30.8	
6.8496	0.6	H	3.0	41.0	1.0	-39.4	-13.0	-26.4	
Mid Ch, 1732.6MHz									
3.4652	-12.4	V	3.0	40.3	1.0	-51.7	-13.0	-38.7	
5.1978	-6.0	V	3.0	40.9	1.0	-45.9	-13.0	-32.9	
6.9304	2.2	V	3.0	41.0	1.0	-37.8	-13.0	-24.8	
3.4652	-14.3	H	3.0	40.3	1.0	-53.6	-13.0	-40.6	
5.1978	-3.7	H	3.0	40.9	1.0	-43.6	-13.0	-30.6	
6.9304	2.2	H	3.0	41.0	1.0	-37.8	-13.0	-24.8	
High Ch, 1752.6MHz									
3.5052	-12.0	V	3.0	40.3	1.0	-51.3	-13.0	-38.3	
5.2578	-5.5	V	3.0	40.9	1.0	-45.4	-13.0	-32.4	
7.0104	-0.8	V	3.0	41.0	1.0	-40.8	-13.0	-27.8	
3.5052	-12.7	H	3.0	40.3	1.0	-52.0	-13.0	-39.0	
5.2578	-3.9	H	3.0	40.9	1.0	-43.8	-13.0	-30.8	
7.0104	-1.8	H	3.0	41.0	1.0	-41.8	-13.0	-28.8	

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 #: 15K22555
Date: 12-29-15
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Earphone / X 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	-11.9	V	3.0	40.5	1.0	-51.4	-13.0	-38.4	
5.5572	2.4	V	3.0	40.8	1.0	-37.4	-13.0	-24.4	
7.4096	-3.9	V	3.0	40.8	1.0	-43.6	-13.0	-30.6	
3.7048	-14.0	H	3.0	40.5	1.0	-53.5	-13.0	-40.5	
5.5572	1.6	H	3.0	40.8	1.0	-38.3	-13.0	-25.3	
7.4096	-2.8	H	3.0	40.8	1.0	-42.6	-13.0	-29.6	
Mid Ch, 1880MHz									
3.7600	-10.9	V	3.0	40.5	1.0	-50.5	-13.0	-37.5	
5.6400	-3.0	V	3.0	40.8	1.0	-42.8	-13.0	-29.8	
7.5200	-8.3	V	3.0	40.7	1.0	-48.0	-13.0	-35.0	
3.7600	-14.5	H	3.0	40.5	1.0	-54.0	-13.0	-41.0	
5.6400	-3.3	H	3.0	40.8	1.0	-43.1	-13.0	-30.1	
7.5200	-7.8	H	3.0	40.7	1.0	-47.5	-13.0	-34.5	
High Ch, 1907.6MHz									
3.8152	-8.8	V	3.0	40.6	1.0	-48.4	-13.0	-35.4	
5.7228	-0.8	V	3.0	40.8	1.0	-40.6	-13.0	-27.6	
7.6304	-7.6	V	3.0	40.7	1.0	-47.3	-13.0	-34.3	
3.8152	-9.1	H	3.0	40.6	1.0	-48.7	-13.0	-35.7	
5.7228	-2.8	H	3.0	40.8	1.0	-42.6	-13.0	-29.6	
7.6304	-8.1	H	3.0	40.7	1.0	-47.8	-13.0	-34.8	

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 #: 15K22555
Date: 12-29-15
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Earphone / X 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	-12.3	V	3.0	40.5	1.0	-51.8	-13.0	-38.8	
5.5572	-2.9	V	3.0	40.8	1.0	-42.7	-13.0	-29.7	
7.4096	-5.7	V	3.0	40.8	1.0	-45.5	-13.0	-32.5	
3.7048	-13.6	H	3.0	40.5	1.0	-53.0	-13.0	-40.0	
5.5572	-3.8	H	3.0	40.8	1.0	-43.7	-13.0	-30.7	
7.4096	-5.2	H	3.0	40.8	1.0	-45.0	-13.0	-32.0	
Mid Ch, 1880MHz									
3.7600	-10.8	V	3.0	40.5	1.0	-50.4	-13.0	-37.4	
5.6400	-1.9	V	3.0	40.8	1.0	-41.7	-13.0	-28.7	
7.5200	-8.1	V	3.0	40.7	1.0	-47.8	-13.0	-34.8	
3.7600	-10.1	H	3.0	40.5	1.0	-49.6	-13.0	-36.6	
5.6400	-4.3	H	3.0	40.8	1.0	-44.1	-13.0	-31.1	
7.5200	-8.0	H	3.0	40.7	1.0	-47.7	-13.0	-34.7	
High Ch, 1907.6MHz									
3.8152	-8.7	V	3.0	40.6	1.0	-48.3	-13.0	-35.3	
5.7228	-1.9	V	3.0	40.8	1.0	-41.7	-13.0	-28.7	
7.6304	-7.9	V	3.0	40.7	1.0	-47.5	-13.0	-34.5	
3.8152	-9.7	H	3.0	40.6	1.0	-49.3	-13.0	-36.3	
5.7228	-3.8	H	3.0	40.8	1.0	-43.5	-13.0	-30.5	
7.6304	-8.0	H	3.0	40.7	1.0	-47.7	-13.0	-34.7	

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, 443-823, Korea TEL: (031) 337-9902 FAX: (031) 213-5433
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LTE Band 17

LTE Band 17 10MHz QPSK

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

Company: Samsung
Project #: 15K22555
Date: 01-13-16
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Ear Phone / Z-Position
Mode: TX, LTE BAND 17, 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 Channel (709MHz)									
1.4180	-20.3	V	3.0	39.0	1.0	-58.3	-13.0	-45.3	
2.1270	-14.6	V	3.0	39.3	1.0	-53.0	-13.0	-40.0	
2.8360	-22.5	V	3.0	39.7	1.0	-61.2	-13.0	-48.2	
1.4180	-21.6	H	3.0	39.0	1.0	-59.6	-13.0	-46.6	
2.1270	-5.0	H	3.0	39.3	1.0	-43.3	-13.0	-30.3	
2.8360	-24.1	H	3.0	39.7	1.0	-62.8	-13.0	-49.8	
Mid Channel (710MHz)									
1.4200	-11.2	V	3.0	39.0	1.0	-49.2	-13.0	-36.2	
2.1300	-11.8	V	3.0	39.3	1.0	-50.1	-13.0	-37.1	
2.8400	-20.2	V	3.0	39.7	1.0	-58.9	-13.0	-45.9	
1.4200	-12.8	H	3.0	39.0	1.0	-50.9	-13.0	-37.9	
2.1300	-4.6	H	3.0	39.3	1.0	-42.9	-13.0	-29.9	
2.8400	-23.5	H	3.0	39.7	1.0	-62.3	-13.0	-49.3	
High Channel (711MHz)									
1.4220	-6.4	V	3.0	39.0	1.0	-44.4	-13.0	-31.4	
2.1330	-9.4	V	3.0	39.3	1.0	-47.8	-13.0	-34.8	
2.8440	-19.4	V	3.0	39.7	1.0	-58.1	-13.0	-45.1	
1.4220	-8.4	H	3.0	39.0	1.0	-46.4	-13.0	-33.4	
2.1330	-3.0	H	3.0	39.3	1.0	-41.3	-13.0	-28.3	
2.8440	-23.6	H	3.0	39.7	1.0	-62.3	-13.0	-49.3	

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

LTE Band 17 10MHz 16QAM

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

Company: Samsung
Project #: 15K22555
Date: 01-13-16
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Ear Phone / Z-Position
Mode: TX, LTE BAND 17, 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 Channel (709MHz)									
1.4180	-20.8	V	3.0	39.0	1.0	-58.9	-13.0	-45.9	
2.1270	-16.1	V	3.0	39.3	1.0	-54.4	-13.0	-41.4	
2.8360	-23.0	V	3.0	39.7	1.0	-61.7	-13.0	-48.7	
1.4180	-22.6	H	3.0	39.0	1.0	-60.6	-13.0	-47.6	
2.1270	-6.4	H	3.0	39.3	1.0	-44.7	-13.0	-31.7	
2.8360	-23.8	H	3.0	39.7	1.0	-62.5	-13.0	-49.5	
Mid Channel (710MHz)									
1.4200	-14.7	V	3.0	39.0	1.0	-52.7	-13.0	-39.7	
2.1300	-12.6	V	3.0	39.3	1.0	-50.9	-13.0	-37.9	
2.8400	-21.2	V	3.0	39.7	1.0	-59.9	-13.0	-46.9	
1.4200	-15.0	H	3.0	39.0	1.0	-53.0	-13.0	-40.0	
2.1300	-5.2	H	3.0	39.3	1.0	-43.5	-13.0	-30.5	
2.8400	-24.0	H	3.0	39.7	1.0	-62.7	-13.0	-49.7	
High Channel (711MHz)									
1.4220	-8.8	V	3.0	39.0	1.0	-46.9	-13.0	-33.9	
2.1330	-10.5	V	3.0	39.3	1.0	-48.8	-13.0	-35.8	
2.8440	-20.7	V	3.0	39.7	1.0	-59.4	-13.0	-46.4	
1.4220	-9.8	H	3.0	39.0	1.0	-47.8	-13.0	-34.8	
2.1330	-4.5	H	3.0	39.3	1.0	-42.9	-13.0	-29.9	
2.8440	-23.8	H	3.0	39.7	1.0	-62.6	-13.0	-49.6	

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

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LTE Band 17 5MHz QPSK

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

Company: Samsung
Project #: 15K22555
Date: 01-13-16
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Ear Phone / Z-Position
Mode: TX, LTE BAND 17, 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 Channel (706.5MHz)									
1.4130	-15.5	V	3.0	39.0	1.0	-53.5	-13.0	-40.5	
2.1195	-10.6	V	3.0	39.3	1.0	-48.9	-13.0	-35.9	
2.8260	-22.3	V	3.0	39.7	1.0	-61.0	-13.0	-48.0	
1.4130	-17.2	H	3.0	39.0	1.0	-55.2	-13.0	-42.2	
2.1195	-3.0	H	3.0	39.3	1.0	-41.3	-13.0	-28.3	
2.8260	-24.2	H	3.0	39.7	1.0	-62.9	-13.0	-49.9	
Mid Channel (710MHz)									
1.4200	-8.8	V	3.0	39.0	1.0	-46.8	-13.0	-33.8	
2.1300	-11.2	V	3.0	39.3	1.0	-49.5	-13.0	-36.5	
2.8400	-21.1	V	3.0	39.7	1.0	-59.8	-13.0	-46.8	
1.4200	-12.8	H	3.0	39.0	1.0	-50.8	-13.0	-37.8	
2.1300	-6.7	H	3.0	39.3	1.0	-45.1	-13.0	-32.1	
2.8400	-24.0	H	3.0	39.7	1.0	-62.7	-13.0	-49.7	
High Channel (713.5MHz)									
1.4270	-19.6	V	3.0	39.0	1.0	-57.6	-13.0	-44.6	
2.1405	-7.7	V	3.0	39.3	1.0	-46.1	-13.0	-33.1	
2.8540	-18.3	V	3.0	39.7	1.0	-57.1	-13.0	-44.1	
1.4270	-17.8	H	3.0	39.0	1.0	-55.8	-13.0	-42.8	
2.1405	-1.9	H	3.0	39.3	1.0	-40.2	-13.0	-27.2	
2.8540	-15.6	H	3.0	39.7	1.0	-54.3	-13.0	-41.3	

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

LTE Band 17 5MHz 16QAM

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

Company: Samsung
Project #: 15K22555
Date: 01-13-16
Test Engineer: Steven Kim
Configuration: EUT / AC Adapter / Ear Phone / Z-Position
Mode: TX, LTE BAND 17, 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 Channel (706.5MHz)									
1.4130	-16.6	V	3.0	39.0	1.0	-54.6	-13.0	-41.6	
2.1195	-12.2	V	3.0	39.3	1.0	-50.5	-13.0	-37.5	
2.8260	-22.7	V	3.0	39.7	1.0	-61.4	-13.0	-48.4	
1.4130	-18.0	H	3.0	39.0	1.0	-56.0	-13.0	-43.0	
2.1195	-5.2	H	3.0	39.3	1.0	-43.5	-13.0	-30.5	
2.8260	-24.2	H	3.0	39.7	1.0	-62.9	-13.0	-49.9	
Mid Channel (710MHz)									
1.4200	-12.6	V	3.0	39.0	1.0	-50.6	-13.0	-37.6	
2.1300	-11.9	V	3.0	39.3	1.0	-50.3	-13.0	-37.3	
2.8400	-21.8	V	3.0	39.7	1.0	-60.6	-13.0	-47.6	
1.4200	-16.8	H	3.0	39.0	1.0	-54.8	-13.0	-41.8	
2.1300	-7.7	H	3.0	39.3	1.0	-46.0	-13.0	-33.0	
2.8400	-24.1	H	3.0	39.7	1.0	-62.8	-13.0	-49.8	
High Channel (713.5MHz)									
1.4270	-19.2	V	3.0	39.0	1.0	-57.2	-13.0	-44.2	
2.1405	-8.5	V	3.0	39.3	1.0	-46.8	-13.0	-33.8	
2.8540	-18.5	V	3.0	39.7	1.0	-57.2	-13.0	-44.2	
1.4270	-17.7	H	3.0	39.0	1.0	-55.7	-13.0	-42.7	
2.1405	-2.3	H	3.0	39.3	1.0	-40.7	-13.0	-27.7	
2.8540	-16.0	H	3.0	39.7	1.0	-54.7	-13.0	-41.7	

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 #: 15K22555
Date: 01-12-16
Test Engineer: Steven.Kim
Configuration: EUT / AC Adapter / Earphone, Z 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	-11.0	V	3.0	39.1	1.0	-49.1	-13.0	-36.1	
2.4870	-19.0	V	3.0	39.5	1.0	-57.5	-13.0	-44.5	
3.3160	-11.7	V	3.0	40.1	1.0	-50.8	-13.0	-37.8	
1.6580	-6.4	H	3.0	39.1	1.0	-44.5	-13.0	-31.5	
2.4870	-17.8	H	3.0	39.5	1.0	-56.3	-13.0	-43.3	
3.3160	-18.9	H	3.0	40.1	1.0	-58.0	-13.0	-45.0	
Mid Channel (836.5MHz)									
1.6730	-14.1	V	3.0	39.1	1.0	-52.2	-13.0	-39.2	
2.5090	-21.1	V	3.0	39.5	1.0	-59.6	-13.0	-46.6	
3.3460	-10.4	V	3.0	40.1	1.0	-49.5	-13.0	-36.5	
1.6730	-9.2	H	3.0	39.1	1.0	-47.3	-13.0	-34.3	
2.5090	-19.6	H	3.0	39.5	1.0	-58.1	-13.0	-45.1	
3.3460	-19.7	H	3.0	40.1	1.0	-58.8	-13.0	-45.8	
High Channel (844MHz)									
1.6880	-12.7	V	3.0	39.1	1.0	-50.9	-13.0	-37.9	
2.5320	-20.1	V	3.0	39.5	1.0	-58.7	-13.0	-45.7	
3.3760	-12.3	V	3.0	40.2	1.0	-51.5	-13.0	-38.5	
1.6880	-8.9	H	3.0	39.1	1.0	-47.0	-13.0	-34.0	
2.5320	-18.4	H	3.0	39.5	1.0	-57.0	-13.0	-44.0	
3.3760	-18.8	H	3.0	40.2	1.0	-58.0	-13.0	-45.0	

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 #: 15K22555
Date: 01-12-16
Test Engineer: Steven.Kim
Configuration: EUT / AC Adapter / Earphone, Z 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	-12.0	V	3.0	39.1	1.0	-50.1	-13.0	-37.1	
2.4870	-19.9	V	3.0	39.5	1.0	-58.4	-13.0	-45.4	
3.3160	-12.6	V	3.0	40.1	1.0	-51.7	-13.0	-38.7	
1.6580	-8.3	H	3.0	39.1	1.0	-46.4	-13.0	-33.4	
2.4870	-18.6	H	3.0	39.5	1.0	-57.1	-13.0	-44.1	
3.3160	-20.5	H	3.0	40.1	1.0	-59.6	-13.0	-46.6	
Mid Channel (836.5MHz)									
1.6730	-14.8	V	3.0	39.1	1.0	-52.9	-13.0	-39.9	
2.5090	-22.2	V	3.0	39.5	1.0	-60.7	-13.0	-47.7	
3.3460	-12.6	V	3.0	40.1	1.0	-51.8	-13.0	-38.8	
1.6730	-10.3	H	3.0	39.1	1.0	-48.4	-13.0	-35.4	
2.5090	-20.4	H	3.0	39.5	1.0	-58.9	-13.0	-45.9	
3.3460	-19.8	H	3.0	40.1	1.0	-59.0	-13.0	-46.0	
High Channel (844MHz)									
1.6880	-13.8	V	3.0	39.1	1.0	-52.0	-13.0	-39.0	
2.5320	-21.0	V	3.0	39.5	1.0	-59.6	-13.0	-46.6	
3.3760	-13.3	V	3.0	40.2	1.0	-52.4	-13.0	-39.4	
1.6880	-11.1	H	3.0	39.1	1.0	-49.2	-13.0	-36.2	
2.5320	-20.9	H	3.0	39.5	1.0	-59.4	-13.0	-46.4	
3.3760	-19.6	H	3.0	40.2	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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LTE Band 5 5MHz QPSK

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

Company: Samsung
Project #: 15K22555
Date: 01-12-16
Test Engineer: Steven.Kim
Configuration: EUT / AC Adapter / Earphone, Z 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	-11.1	V	3.0	39.1	1.0	-49.2	-13.0	-36.2	
2.4790	-19.0	V	3.0	39.5	1.0	-57.5	-13.0	-44.5	
3.3060	-11.8	V	3.0	40.1	1.0	-50.9	-13.0	-37.9	
1.6530	-6.2	H	3.0	39.1	1.0	-44.3	-13.0	-31.3	
2.4790	-17.3	H	3.0	39.5	1.0	-55.9	-13.0	-42.9	
3.3060	-19.1	H	3.0	40.1	1.0	-58.2	-13.0	-45.2	
Mid Channel (836.5MHz)									
1.6730	-13.8	V	3.0	39.1	1.0	-51.9	-13.0	-38.9	
2.5090	-21.5	V	3.0	39.5	1.0	-60.1	-13.0	-47.1	
3.3460	-10.6	V	3.0	40.1	1.0	-49.8	-13.0	-36.8	
1.6730	-9.3	H	3.0	39.1	1.0	-47.4	-13.0	-34.4	
2.5090	-19.9	H	3.0	39.5	1.0	-58.5	-13.0	-45.5	
3.3460	-19.9	H	3.0	40.1	1.0	-59.1	-13.0	-46.1	
High Channel (846.5MHz)									
1.6930	-12.6	V	3.0	39.1	1.0	-50.7	-13.0	-37.7	
2.5390	-19.9	V	3.0	39.6	1.0	-58.5	-13.0	-45.5	
3.3860	-12.5	V	3.0	40.2	1.0	-51.6	-13.0	-38.6	
1.6930	-9.2	H	3.0	39.1	1.0	-47.3	-13.0	-34.3	
2.5390	-18.2	H	3.0	39.6	1.0	-56.8	-13.0	-43.8	
3.3860	-18.6	H	3.0	40.2	1.0	-57.8	-13.0	-44.8	

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 #: 15K22555
Date: 01-12-16
Test Engineer: Steven.Kim
Configuration: EUT / AC Adapter / Earphone, Z 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	-12.0	V	3.0	39.1	1.0	-50.1	-13.0	-37.1	
2.4790	-20.6	V	3.0	39.5	1.0	-59.1	-13.0	-46.1	
3.3060	-12.6	V	3.0	40.1	1.0	-51.7	-13.0	-38.7	
1.6530	-8.3	H	3.0	39.1	1.0	-46.4	-13.0	-33.4	
2.4790	-18.4	H	3.0	39.5	1.0	-56.9	-13.0	-43.9	
3.3060	-20.5	H	3.0	40.1	1.0	-59.6	-13.0	-46.6	
Mid Channel (836.5MHz)									
1.6730	-14.8	V	3.0	39.1	1.0	-52.9	-13.0	-39.9	
2.5090	-22.1	V	3.0	39.5	1.0	-60.6	-13.0	-47.6	
3.3460	-12.4	V	3.0	40.1	1.0	-51.6	-13.0	-38.6	
1.6730	-10.1	H	3.0	39.1	1.0	-48.2	-13.0	-35.2	
2.5090	-20.7	H	3.0	39.5	1.0	-59.2	-13.0	-46.2	
3.3460	-20.0	H	3.0	40.1	1.0	-59.2	-13.0	-46.2	
High Channel (846.5MHz)									
1.6930	-13.8	V	3.0	39.1	1.0	-51.9	-13.0	-38.9	
2.5390	-20.8	V	3.0	39.6	1.0	-59.4	-13.0	-46.4	
3.3860	-13.3	V	3.0	40.2	1.0	-52.5	-13.0	-39.5	
1.6930	-10.8	H	3.0	39.1	1.0	-49.0	-13.0	-36.0	
2.5390	-20.9	H	3.0	39.6	1.0	-59.5	-13.0	-46.5	
3.3860	-19.8	H	3.0	40.2	1.0	-59.0	-13.0	-46.0	

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 #: 15K22555
Date: 01-12-16
Test Engineer: Steven.Kim
Configuration: EUT / AC Adapter / Earphone, Z 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	-11.2	V	3.0	39.1	1.0	-49.3	-13.0	-36.3	
2.4675	-19.3	V	3.0	39.5	1.0	-57.8	-13.0	-44.8	
3.3020	-12.1	V	3.0	40.1	1.0	-51.2	-13.0	-38.2	
1.6510	-6.1	H	3.0	39.1	1.0	-44.2	-13.0	-31.2	
2.4675	-17.5	H	3.0	39.5	1.0	-56.0	-13.0	-43.0	
3.3020	-19.3	H	3.0	40.1	1.0	-58.4	-13.0	-45.4	
Mid Channel (836.5MHz)									
1.6730	-13.7	V	3.0	39.1	1.0	-51.8	-13.0	-38.8	
2.5090	-21.6	V	3.0	39.5	1.0	-60.1	-13.0	-47.1	
3.3460	-10.9	V	3.0	40.1	1.0	-50.0	-13.0	-37.0	
1.6730	-9.2	H	3.0	39.1	1.0	-47.3	-13.0	-34.3	
2.5090	-20.0	H	3.0	39.5	1.0	-58.5	-13.0	-45.5	
3.3460	-19.8	H	3.0	40.1	1.0	-59.0	-13.0	-46.0	
High Channel (847.5MHz)									
1.6950	-12.9	V	3.0	39.1	1.0	-51.0	-13.0	-38.0	
2.5425	-19.8	V	3.0	39.6	1.0	-58.4	-13.0	-45.4	
3.3900	-12.3	V	3.0	40.2	1.0	-51.5	-13.0	-38.5	
1.6950	-9.0	H	3.0	39.1	1.0	-47.2	-13.0	-34.2	
2.5425	-18.3	H	3.0	39.6	1.0	-56.9	-13.0	-43.9	
3.3900	-18.9	H	3.0	40.2	1.0	-58.1	-13.0	-45.1	

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 #: 15K22555
Date: 01-12-16
Test Engineer: Steven.Kim
Configuration: EUT / AC Adapter / Earphone, Z 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	-12.2	V	3.0	39.1	1.0	-50.3	-13.0	-37.3	
2.4675	-20.4	V	3.0	39.5	1.0	-58.9	-13.0	-45.9	
3.3020	-13.3	V	3.0	40.1	1.0	-52.4	-13.0	-39.4	
1.6510	-8.3	H	3.0	39.1	1.0	-46.4	-13.0	-33.4	
2.4675	-19.5	H	3.0	39.5	1.0	-58.0	-13.0	-45.0	
3.3020	-20.6	H	3.0	40.1	1.0	-59.7	-13.0	-46.7	
Mid Channel (836.5MHz)									
1.6730	-15.4	V	3.0	39.1	1.0	-53.5	-13.0	-40.5	
2.5090	-22.0	V	3.0	39.5	1.0	-60.5	-13.0	-47.5	
3.3460	-12.6	V	3.0	40.1	1.0	-51.8	-13.0	-38.8	
1.6730	-10.7	H	3.0	39.1	1.0	-48.8	-13.0	-35.8	
2.5090	-20.4	H	3.0	39.5	1.0	-58.9	-13.0	-45.9	
3.3460	-20.4	H	3.0	40.1	1.0	-59.6	-13.0	-46.6	
High Channel (847.5MHz)									
1.6950	-13.7	V	3.0	39.1	1.0	-51.8	-13.0	-38.8	
2.5425	-21.0	V	3.0	39.6	1.0	-59.6	-13.0	-46.6	
3.3900	-13.6	V	3.0	40.2	1.0	-52.8	-13.0	-39.8	
1.6950	-11.2	H	3.0	39.1	1.0	-49.3	-13.0	-36.3	
2.5425	-20.3	H	3.0	39.6	1.0	-58.8	-13.0	-45.8	
3.3900	-19.6	H	3.0	40.2	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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LTE Band 5 1.4MHz QPSK

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

Company: Samsung
Project #: 15K22555
Date: 01-12-16
Test Engineer: Steven.Kim
Configuration: EUT / AC Adapter / Earphone, Z 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	-11.3	V	3.0	39.1	1.0	-49.4	-13.0	-36.4	
2.4741	-19.5	V	3.0	39.5	1.0	-58.0	-13.0	-45.0	
3.2988	-12.2	V	3.0	40.1	1.0	-51.3	-13.0	-38.3	
1.6494	-6.2	H	3.0	39.1	1.0	-44.3	-13.0	-31.3	
2.4741	-17.6	H	3.0	39.5	1.0	-56.2	-13.0	-43.2	
3.2988	-19.4	H	3.0	40.1	1.0	-58.5	-13.0	-45.5	
Mid Channel (836.5MHz)									
1.6730	-14.3	V	3.0	39.1	1.0	-52.4	-13.0	-39.4	
2.5090	-21.5	V	3.0	39.5	1.0	-60.0	-13.0	-47.0	
3.3460	-10.8	V	3.0	40.1	1.0	-49.9	-13.0	-36.9	
1.6730	-8.9	H	3.0	39.1	1.0	-47.0	-13.0	-34.0	
2.5090	-19.2	H	3.0	39.5	1.0	-57.8	-13.0	-44.8	
3.3460	-19.7	H	3.0	40.1	1.0	-58.9	-13.0	-45.9	
High Channel (848.3MHz)									
1.6966	-13.0	V	3.0	39.1	1.0	-51.1	-13.0	-38.1	
2.5449	-20.1	V	3.0	39.6	1.0	-58.7	-13.0	-45.7	
3.3932	-12.4	V	3.0	40.2	1.0	-51.6	-13.0	-38.6	
1.6966	-8.9	H	3.0	39.1	1.0	-47.0	-13.0	-34.0	
2.5449	-18.9	H	3.0	39.6	1.0	-57.4	-13.0	-44.4	
3.3932	-19.3	H	3.0	40.2	1.0	-58.5	-13.0	-45.5	

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 #: 15K22555
Date: 01-12-16
Test Engineer: Steven.Kim
Configuration: EUT / AC Adapter / Earphone, Z 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	-12.5	V	3.0	39.1	1.0	-50.6	-13.0	-37.6	
2.4741	-20.1	V	3.0	39.5	1.0	-58.7	-13.0	-45.7	
3.2988	-13.5	V	3.0	40.1	1.0	-52.6	-13.0	-39.6	
1.6494	-8.1	H	3.0	39.1	1.0	-46.2	-13.0	-33.2	
2.4741	-19.4	H	3.0	39.5	1.0	-57.9	-13.0	-44.9	
3.2988	-20.3	H	3.0	40.1	1.0	-59.4	-13.0	-46.4	
Mid Channel (836.5MHz)									
1.6730	-15.5	V	3.0	39.1	1.0	-53.6	-13.0	-40.6	
2.5090	-21.9	V	3.0	39.5	1.0	-60.5	-13.0	-47.5	
3.3460	-12.5	V	3.0	40.1	1.0	-51.6	-13.0	-38.6	
1.6730	-10.7	H	3.0	39.1	1.0	-48.8	-13.0	-35.8	
2.5090	-20.2	H	3.0	39.5	1.0	-58.8	-13.0	-45.8	
3.3460	-20.5	H	3.0	40.1	1.0	-59.7	-13.0	-46.7	
High Channel (848.3MHz)									
1.6966	-14.1	V	3.0	39.1	1.0	-52.2	-13.0	-39.2	
2.5449	-21.0	V	3.0	39.6	1.0	-59.6	-13.0	-46.6	
3.3932	-13.6	V	3.0	40.2	1.0	-52.8	-13.0	-39.8	
1.6966	-11.5	H	3.0	39.1	1.0	-49.7	-13.0	-36.7	
2.5449	-20.1	H	3.0	39.6	1.0	-58.7	-13.0	-45.7	
3.3932	-20.1	H	3.0	40.2	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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