

WCDMA Band 5

WCDMA

Band 5

REL99

UL Korea, Ltd Suwon Laboratory

Above 1GHz High Frequency Substitution Measurement

Company: Samsung

Project #: 4788217835

Date: 11-20-17

Test Engineer: 47989

Configuration: EUT / AC Adapter / Earphone / Y Position

Mode: Tx, REL99,850MHz

Chamber

Chamber 2

Pre-amplifier

AFS42

Filter

Filter 1

Limit

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	-18.0	V	3.0	38.2	1.0	-55.2	-13.0	-42.2	
2.4790	-15.7	V	3.0	38.8	1.0	-53.5	-13.0	-40.5	
3.3056	-14.7	V	3.0	39.4	1.0	-53.1	-13.0	-40.1	
1.6520	-17.7	H	3.0	38.2	1.0	-55.0	-13.0	-42.0	
2.4790	-15.7	H	3.0	38.8	1.0	-53.5	-13.0	-40.5	
3.3056	-14.6	H	3.0	39.4	1.0	-53.0	-13.0	-40.0	
Mid Ch, 836.6MHz									
1.6732	-17.4	V	3.0	38.2	1.0	-54.7	-13.0	-41.7	
2.5098	-15.5	V	3.0	38.8	1.0	-53.3	-13.0	-40.3	
3.3464	-14.3	V	3.0	39.5	1.0	-52.8	-13.0	-39.8	
1.6732	-17.1	H	3.0	38.2	1.0	-54.4	-13.0	-41.4	
2.5098	-13.6	H	3.0	38.8	1.0	-51.5	-13.0	-38.5	
3.3464	-14.0	H	3.0	39.5	1.0	-52.4	-13.0	-39.4	
High Ch, 846.6MHz									
1.6932	-16.1	V	3.0	38.2	1.0	-53.4	-13.0	-40.4	
2.5390	-15.0	V	3.0	38.9	1.0	-52.8	-13.0	-39.8	
3.3860	-13.9	V	3.0	39.5	1.0	-52.4	-13.0	-39.4	
1.6932	-17.6	H	3.0	38.2	1.0	-54.9	-13.0	-41.9	
2.5390	-14.8	H	3.0	38.9	1.0	-52.7	-13.0	-39.7	
3.3860	-14.1	H	3.0	39.5	1.0	-52.6	-13.0	-39.6	

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 #: 4788217835

Date: 11-20-17

Test Engineer: 47989

Configuration: EUT / AC Adapter / Earphone / Y Position

Mode: Tx, HSDPA,850MHz

Chamber

Chamber 2

Pre-amplifier

AFS42

Filter

Filter 1

Limit

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	-18.3	V	3.0	38.2	1.0	-55.6	-13.0	-42.6	
2.4790	-15.4	V	3.0	38.8	1.0	-53.2	-13.0	-40.2	
3.3056	-13.9	V	3.0	39.4	1.0	-52.3	-13.0	-39.3	
1.6520	-18.0	H	3.0	38.2	1.0	-55.2	-13.0	-42.2	
2.4790	-15.3	H	3.0	38.8	1.0	-53.1	-13.0	-40.1	
3.3056	-14.2	H	3.0	39.4	1.0	-52.6	-13.0	-39.6	
Mid Ch, 836.6MHz									
1.6732	-17.5	V	3.0	38.2	1.0	-54.7	-13.0	-41.7	
2.5098	-15.1	V	3.0	38.8	1.0	-52.9	-13.0	-39.9	
3.3464	-14.2	V	3.0	39.5	1.0	-52.7	-13.0	-39.7	
1.6732	-17.8	H	3.0	38.2	1.0	-55.0	-13.0	-42.0	
2.5098	-15.4	H	3.0	38.8	1.0	-53.2	-13.0	-40.2	
3.3464	-14.4	H	3.0	39.5	1.0	-52.8	-13.0	-39.8	
High Ch, 846.6MHz									
1.6932	-17.4	V	3.0	38.2	1.0	-54.6	-13.0	-41.6	
2.5390	-15.5	V	3.0	38.9	1.0	-53.3	-13.0	-40.3	
3.3860	-13.5	V	3.0	39.5	1.0	-52.0	-13.0	-39.0	
1.6932	-17.9	H	3.0	38.2	1.0	-55.2	-13.0	-42.2	
2.5390	-16.5	H	3.0	38.9	1.0	-54.3	-13.0	-41.3	
3.3860	-13.8	H	3.0	39.5	1.0	-52.3	-13.0	-39.3	

Rev. 03.03.09

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

WCDMA Band 2

WCDMA Band 2 REL99	<div><div>UL Korea, Ltd Suwon Laboratory</div><div>Above 1GHz High Frequency Substitution Measurement</div><div><div>Company:</div><div>Samsung</div><div>Project #:</div><div>4788217835</div><div>Date:</div><div>11-16-17</div><div>Test Engineer:</div><div>45585</div><div>Configuration:</div><div>EUT / AC Adapter / Earphone / X Position</div><div>Mode:</div><div>Tx, REL99,1900MHz</div></div><div><div><div>Chamber</div><div>Chamber 2</div></div><div><div>Pre-amplifier</div><div>AFS42</div></div><div><div>Filter</div><div>Filter 1</div></div><div><div>Limit</div><div>Part 24</div></div></div><table><tr><th>f GHz</th><th>SG reading (dBm)</th><th>Ant. Pol. (H/V)</th><th>Distance (m)</th><th>Preamp (dB)</th><th>Filter (dB)</th><th>EIRP (dBm)</th><th>Limit (dBm)</th><th>Delta (dB)</th><th>Notes</th></tr><tr><td colspan="10">Low Ch, 1852.4MHz</td></tr><tr><td>3.7048</td><td>-11.9</td><td>V</td><td>3.0</td><td>39.7</td><td>1.0</td><td>-50.5</td><td>-13.0</td><td>-37.5</td><td></td></tr><tr><td>5.5572</td><td>-9.7</td><td>V</td><td>3.0</td><td>39.9</td><td>1.0</td><td>-48.6</td><td>-13.0</td><td>-35.6</td><td></td></tr><tr><td>7.4096</td><td>-6.0</td><td>V</td><td>3.0</td><td>39.4</td><td>1.0</td><td>-44.5</td><td>-13.0</td><td>-31.5</td><td></td></tr><tr><td>3.7048</td><td>-12.1</td><td>H</td><td>3.0</td><td>39.7</td><td>1.0</td><td>-50.7</td><td>-13.0</td><td>-37.7</td><td></td></tr><tr><td>5.5572</td><td>-9.9</td><td>H</td><td>3.0</td><td>39.9</td><td>1.0</td><td>-48.8</td><td>-13.0</td><td>-35.8</td><td></td></tr><tr><td>7.4096</td><td>-7.3</td><td>H</td><td>3.0</td><td>39.4</td><td>1.0</td><td>-45.7</td><td>-13.0</td><td>-32.7</td><td></td></tr><tr><td colspan="10">Mid Ch, 1880MHz</td></tr><tr><td>3.7600</td><td>-11.9</td><td>V</td><td>3.0</td><td>39.7</td><td>1.0</td><td>-50.6</td><td>-13.0</td><td>-37.6</td><td></td></tr><tr><td>5.6400</td><td>-11.2</td><td>V</td><td>3.0</td><td>40.0</td><td>1.0</td><td>-50.2</td><td>-13.0</td><td>-37.2</td><td></td></tr><tr><td>7.5200</td><td>-10.0</td><td>V</td><td>3.0</td><td>39.4</td><td>1.0</td><td>-48.4</td><td>-13.0</td><td>-35.4</td><td></td></tr><tr><td>3.7600</td><td>-12.1</td><td>H</td><td>3.0</td><td>39.7</td><td>1.0</td><td>-50.8</td><td>-13.0</td><td>-37.8</td><td></td></tr><tr><td>5.6400</td><td>-10.1</td><td>H</td><td>3.0</td><td>40.0</td><td>1.0</td><td>-49.0</td><td>-13.0</td><td>-36.0</td><td></td></tr><tr><td>7.5200</td><td>-9.5</td><td>H</td><td>3.0</td><td>39.4</td><td>1.0</td><td>-47.9</td><td>-13.0</td><td>-34.9</td><td></td></tr><tr><td colspan="10">High Ch, 1907.6MHz</td></tr><tr><td>3.8152</td><td>-10.3</td><td>V</td><td>3.0</td><td>39.7</td><td>1.0</td><td>-49.0</td><td>-13.0</td><td>-36.0</td><td></td></tr><tr><td>5.7228</td><td>-11.4</td><td>V</td><td>3.0</td><td>40.0</td><td>1.0</td><td>-50.4</td><td>-13.0</td><td>-37.4</td><td></td></tr><tr><td>7.6304</td><td>-7.1</td><td>V</td><td>3.0</td><td>39.3</td><td>1.0</td><td>-45.4</td><td>-13.0</td><td>-32.4</td><td></td></tr><tr><td>3.8152</td><td>-10.6</td><td>H</td><td>3.0</td><td>39.7</td><td>1.0</td><td>-49.3</td><td>-13.0</td><td>-36.3</td><td></td></tr><tr><td>5.7228</td><td>-10.9</td><td>H</td><td>3.0</td><td>40.0</td><td>1.0</td><td>-49.9</td><td>-13.0</td><td>-36.9</td><td></td></tr><tr><td>7.6304</td><td>-8.8</td><td>H</td><td>3.0</td><td>39.3</td><td>1.0</td><td>-47.1</td><td>-13.0</td><td>-34.1</td><td></td></tr><tr><td colspan="10">Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.</td></tr></table></div>	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	39.7	1.0	-50.5	-13.0	-37.5		5.5572	-9.7	V	3.0	39.9	1.0	-48.6	-13.0	-35.6		7.4096	-6.0	V	3.0	39.4	1.0	-44.5	-13.0	-31.5		3.7048	-12.1	H	3.0	39.7	1.0	-50.7	-13.0	-37.7		5.5572	-9.9	H	3.0	39.9	1.0	-48.8	-13.0	-35.8		7.4096	-7.3	H	3.0	39.4	1.0	-45.7	-13.0	-32.7		Mid Ch, 1880MHz										3.7600	-11.9	V	3.0	39.7	1.0	-50.6	-13.0	-37.6		5.6400	-11.2	V	3.0	40.0	1.0	-50.2	-13.0	-37.2		7.5200	-10.0	V	3.0	39.4	1.0	-48.4	-13.0	-35.4		3.7600	-12.1	H	3.0	39.7	1.0	-50.8	-13.0	-37.8		5.6400	-10.1	H	3.0	40.0	1.0	-49.0	-13.0	-36.0		7.5200	-9.5	H	3.0	39.4	1.0	-47.9	-13.0	-34.9		High Ch, 1907.6MHz										3.8152	-10.3	V	3.0	39.7	1.0	-49.0	-13.0	-36.0		5.7228	-11.4	V	3.0	40.0	1.0	-50.4	-13.0	-37.4		7.6304	-7.1	V	3.0	39.3	1.0	-45.4	-13.0	-32.4		3.8152	-10.6	H	3.0	39.7	1.0	-49.3	-13.0	-36.3		5.7228	-10.9	H	3.0	40.0	1.0	-49.9	-13.0	-36.9		7.6304	-8.8	H	3.0	39.3	1.0	-47.1	-13.0	-34.1		Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.									
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WCDMA Band 2 HSDPA	<div><div>UL Korea, Ltd Suwon Laboratory</div><div>Above 1GHz High Frequency Substitution Measurement</div><div><div>Company:</div><div>Samsung</div><div>Project #:</div><div>4788217835</div><div>Date:</div><div>11-16-17</div><div>Test Engineer:</div><div>45585</div><div>Configuration:</div><div>EUT / AC Adapter / Earphone / X Position</div><div>Mode:</div><div>Tx, HSDPA,1900MHz</div></div><div><div><div>Chamber</div><div>Chamber 2</div></div><div><div>Pre-amplifier</div><div>AFS42</div></div><div><div>Filter</div><div>Filter 1</div></div><div><div>Limit</div><div>Part 24</div></div></div><table><tr><th>f GHz</th><th>SG reading (dBm)</th><th>Ant. Pol. (H/V)</th><th>Distance (m)</th><th>Preamp (dB)</th><th>Filter (dB)</th><th>EIRP (dBm)</th><th>Limit (dBm)</th><th>Delta (dB)</th><th>Notes</th></tr><tr><td colspan="10">Low Ch, 1852.4MHz</td></tr><tr><td>3.7048</td><td>-12.6</td><td>V</td><td>3.0</td><td>39.7</td><td>1.0</td><td>-51.2</td><td>-13.0</td><td>-38.2</td><td></td></tr><tr><td>5.5572</td><td>-10.2</td><td>V</td><td>3.0</td><td>39.9</td><td>1.0</td><td>-49.2</td><td>-13.0</td><td>-36.2</td><td></td></tr><tr><td>7.4096</td><td>-5.6</td><td>V</td><td>3.0</td><td>39.4</td><td>1.0</td><td>-44.1</td><td>-13.0</td><td>-31.1</td><td></td></tr><tr><td>3.7048</td><td>-11.8</td><td>H</td><td>3.0</td><td>39.7</td><td>1.0</td><td>-50.4</td><td>-13.0</td><td>-37.4</td><td></td></tr><tr><td>5.5572</td><td>-9.8</td><td>H</td><td>3.0</td><td>39.9</td><td>1.0</td><td>-48.7</td><td>-13.0</td><td>-35.7</td><td></td></tr><tr><td>7.4096</td><td>-7.9</td><td>H</td><td>3.0</td><td>39.4</td><td>1.0</td><td>-46.3</td><td>-13.0</td><td>-33.3</td><td></td></tr><tr><td colspan="10">Mid Ch, 1880MHz</td></tr><tr><td>3.7600</td><td>-12.8</td><td>V</td><td>3.0</td><td>39.7</td><td>1.0</td><td>-51.4</td><td>-13.0</td><td>-38.4</td><td></td></tr><tr><td>5.6400</td><td>-11.0</td><td>V</td><td>3.0</td><td>40.0</td><td>1.0</td><td>-49.9</td><td>-13.0</td><td>-36.9</td><td></td></tr><tr><td>7.5200</td><td>-8.9</td><td>V</td><td>3.0</td><td>39.4</td><td>1.0</td><td>-47.2</td><td>-13.0</td><td>-34.2</td><td></td></tr><tr><td>3.7600</td><td>-12.6</td><td>H</td><td>3.0</td><td>39.7</td><td>1.0</td><td>-51.3</td><td>-13.0</td><td>-38.3</td><td></td></tr><tr><td>5.6400</td><td>-10.8</td><td>H</td><td>3.0</td><td>40.0</td><td>1.0</td><td>-49.8</td><td>-13.0</td><td>-36.8</td><td></td></tr><tr><td>7.5200</td><td>-9.5</td><td>H</td><td>3.0</td><td>39.4</td><td>1.0</td><td>-47.9</td><td>-13.0</td><td>-34.9</td><td></td></tr><tr><td colspan="10">High Ch, 1907.6MHz</td></tr><tr><td>3.8152</td><td>-9.9</td><td>V</td><td>3.0</td><td>39.7</td><td>1.0</td><td>-48.6</td><td>-13.0</td><td>-35.6</td><td></td></tr><tr><td>5.7228</td><td>-10.7</td><td>V</td><td>3.0</td><td>40.0</td><td>1.0</td><td>-49.7</td><td>-13.0</td><td>-36.7</td><td></td></tr><tr><td>7.6304</td><td>-7.0</td><td>V</td><td>3.0</td><td>39.3</td><td>1.0</td><td>-45.4</td><td>-13.0</td><td>-32.4</td><td></td></tr><tr><td>3.8152</td><td>-10.5</td><td>H</td><td>3.0</td><td>39.7</td><td>1.0</td><td>-49.2</td><td>-13.0</td><td>-36.2</td><td></td></tr><tr><td>5.7228</td><td>-10.5</td><td>H</td><td>3.0</td><td>40.0</td><td>1.0</td><td>-49.5</td><td>-13.0</td><td>-36.5</td><td></td></tr><tr><td>7.6304</td><td>-8.9</td><td>H</td><td>3.0</td><td>39.3</td><td>1.0</td><td>-47.2</td><td>-13.0</td><td>-34.2</td><td></td></tr><tr><td colspan="10">Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.</td></tr></table></div>	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	-12.6	V	3.0	39.7	1.0	-51.2	-13.0	-38.2		5.5572	-10.2	V	3.0	39.9	1.0	-49.2	-13.0	-36.2		7.4096	-5.6	V	3.0	39.4	1.0	-44.1	-13.0	-31.1		3.7048	-11.8	H	3.0	39.7	1.0	-50.4	-13.0	-37.4		5.5572	-9.8	H	3.0	39.9	1.0	-48.7	-13.0	-35.7		7.4096	-7.9	H	3.0	39.4	1.0	-46.3	-13.0	-33.3		Mid Ch, 1880MHz										3.7600	-12.8	V	3.0	39.7	1.0	-51.4	-13.0	-38.4		5.6400	-11.0	V	3.0	40.0	1.0	-49.9	-13.0	-36.9		7.5200	-8.9	V	3.0	39.4	1.0	-47.2	-13.0	-34.2		3.7600	-12.6	H	3.0	39.7	1.0	-51.3	-13.0	-38.3		5.6400	-10.8	H	3.0	40.0	1.0	-49.8	-13.0	-36.8		7.5200	-9.5	H	3.0	39.4	1.0	-47.9	-13.0	-34.9		High Ch, 1907.6MHz										3.8152	-9.9	V	3.0	39.7	1.0	-48.6	-13.0	-35.6		5.7228	-10.7	V	3.0	40.0	1.0	-49.7	-13.0	-36.7		7.6304	-7.0	V	3.0	39.3	1.0	-45.4	-13.0	-32.4		3.8152	-10.5	H	3.0	39.7	1.0	-49.2	-13.0	-36.2		5.7228	-10.5	H	3.0	40.0	1.0	-49.5	-13.0	-36.5		7.6304	-8.9	H	3.0	39.3	1.0	-47.2	-13.0	-34.2		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 #: 4788217835

Date: 11-21-17

Test Engineer: 45585

Configuration: EUT / AC Adapter / Earphone, Y Position

Mode: TX, LTE BAND 5, 10MHz BW,QPSK

Chamber

Chamber 2

Pre-amplifier

AFS42

Filter

Filter 1

Limit

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	-46.5	-13.0	-33.5	
2.4870	-15.0	V	3.0	38.8	1.0	-52.8	-13.0	-39.8	
3.3160	-14.1	V	3.0	39.4	1.0	-52.6	-13.0	-39.6	
1.6580	-15.3	H	3.0	38.2	1.0	-52.5	-13.0	-39.5	
2.4870	-16.1	H	3.0	38.8	1.0	-53.9	-13.0	-40.9	
3.3160	-14.0	H	3.0	39.4	1.0	-52.4	-13.0	-39.4	
Mid Channel (836.5MHz)									
1.6730	-5.7	V	3.0	38.2	1.0	-42.9	-13.0	-29.9	
2.5090	-12.0	V	3.0	38.8	1.0	-49.8	-13.0	-36.8	
3.3460	-14.4	V	3.0	39.5	1.0	-52.8	-13.0	-39.8	
1.6730	-10.0	H	3.0	38.2	1.0	-47.2	-13.0	-34.2	
2.5090	-10.6	H	3.0	38.8	1.0	-48.4	-13.0	-35.4	
3.3460	-14.9	H	3.0	39.5	1.0	-53.4	-13.0	-40.4	
High Channel (844MHz)									
1.6880	-7.1	V	3.0	38.2	1.0	-44.4	-13.0	-31.4	
2.5320	-14.8	V	3.0	38.9	1.0	-52.6	-13.0	-39.6	
3.3760	-13.3	V	3.0	39.5	1.0	-51.8	-13.0	-38.8	
1.6880	-13.2	H	3.0	38.2	1.0	-50.4	-13.0	-37.4	
2.5320	-15.3	H	3.0	38.9	1.0	-53.1	-13.0	-40.1	
3.3760	-14.1	H	3.0	39.5	1.0	-52.5	-13.0	-39.5	

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 #: 4788217835

Date: 11-21-17

Test Engineer: 45585

Configuration: EUT / AC Adapter / Earphone, Y Position

Mode: TX, LTE BAND 5, 10MHz BW,16QAM

Chamber

Chamber 2

Pre-amplifier

AFS42

Filter

Filter 1

Limit

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	-9.4	V	3.0	38.2	1.0	-46.6	-13.0	-33.6	
2.4870	-16.0	V	3.0	38.8	1.0	-53.9	-13.0	-40.9	
3.3160	-13.9	V	3.0	39.4	1.0	-52.4	-13.0	-39.4	
1.6580	-15.6	H	3.0	38.2	1.0	-52.9	-13.0	-39.9	
2.4870	-15.6	H	3.0	38.8	1.0	-53.4	-13.0	-40.4	
3.3160	-14.0	H	3.0	39.4	1.0	-52.4	-13.0	-39.4	
Mid Channel (836.5MHz)									
1.6730	-5.9	V	3.0	38.2	1.0	-43.1	-13.0	-30.1	
2.5090	-11.5	V	3.0	38.8	1.0	-49.3	-13.0	-36.3	
3.3460	-14.4	V	3.0	39.5	1.0	-52.9	-13.0	-39.9	
1.6730	-10.2	H	3.0	38.2	1.0	-47.4	-13.0	-34.4	
2.5090	-10.8	H	3.0	38.8	1.0	-48.6	-13.0	-35.6	
3.3460	-14.6	H	3.0	39.5	1.0	-53.0	-13.0	-40.0	
High Channel (844MHz)									
1.6880	-7.5	V	3.0	38.2	1.0	-44.8	-13.0	-31.8	
2.5320	-15.5	V	3.0	38.9	1.0	-53.4	-13.0	-40.4	
3.3760	-14.3	V	3.0	39.5	1.0	-52.7	-13.0	-39.7	
1.6880	-12.4	H	3.0	38.2	1.0	-49.6	-13.0	-36.6	
2.5320	-15.4	H	3.0	38.9	1.0	-53.3	-13.0	-40.3	
3.3760	-14.7	H	3.0	39.5	1.0	-53.2	-13.0	-40.2	

Rev. 03.03.09

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

LTE Band 5 3MHz QPSK	UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement																																																																																																																																																																																																																																				
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Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.																																																																																																																																																																																																																																					
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2.5425	-13.3	H	3.0	38.9	1.0	-51.2	-13.0	-38.2																																																																																																																																																																																																																													
3.3900	-14.6	H	3.0	39.5	1.0	-53.1	-13.0	-40.1																																																																																																																																																																																																																													
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.																																																																																																																																																																																																																																					

LTE
Band 5
1.4MHz
QPSK

UL Korea, Ltd Suwon Laboratory

Above 1GHz High Frequency Substitution Measurement

Company: Samsung

Project #: 4788217835

Date: 11-20-17

Test Engineer: 47989

Configuration: EUT / AC Adapter / Earphone, Y Position

Mode: TX, LTE BAND 5, 1.4MHz BW,QPSK

Chamber

Chamber 2

Pre-amplifier

AFS42

Filter

Filter 1

Limit

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	-16.7	V	3.0	38.2	1.0	-53.9	-13.0	-40.9	
2.4741	-12.0	V	3.0	38.8	1.0	-49.8	-13.0	-36.8	
3.2988	-14.9	V	3.0	39.4	1.0	-53.3	-13.0	-40.3	
1.6494	-14.1	H	3.0	38.2	1.0	-51.4	-13.0	-38.4	
2.4741	-11.9	H	3.0	38.8	1.0	-49.7	-13.0	-36.7	
3.2988	-15.2	H	3.0	39.4	1.0	-53.6	-13.0	-40.6	
Mid Channel (836.5MHz)									
1.6730	-15.9	V	3.0	38.2	1.0	-53.2	-13.0	-40.2	
2.5090	-11.4	V	3.0	38.8	1.0	-49.2	-13.0	-36.2	
3.3460	-13.2	V	3.0	39.5	1.0	-51.6	-13.0	-38.6	
1.6730	-12.7	H	3.0	38.2	1.0	-50.0	-13.0	-37.0	
2.5090	-10.4	H	3.0	38.8	1.0	-48.2	-13.0	-35.2	
3.3460	-14.0	H	3.0	39.5	1.0	-52.4	-13.0	-39.4	
High Channel (848.3MHz)									
1.6966	-16.3	V	3.0	38.2	1.0	-53.6	-13.0	-40.6	
2.5449	-12.5	V	3.0	38.9	1.0	-50.4	-13.0	-37.4	
3.3932	-14.4	V	3.0	39.5	1.0	-52.9	-13.0	-39.9	
1.6966	-16.6	H	3.0	38.2	1.0	-53.8	-13.0	-40.8	
2.5449	-13.4	H	3.0	38.9	1.0	-51.2	-13.0	-38.2	
3.3932	-13.9	H	3.0	39.5	1.0	-52.4	-13.0	-39.4	

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 #: 4788217835

Date: 11-20-17

Test Engineer: 47989

Configuration: EUT / AC Adapter / Earphone, Y Position

Mode: TX, LTE BAND 5, 1.4MHz BW,16QAM

Chamber

Chamber 2

Pre-amplifier

AFS42

Filter

Filter 1

Limit

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	-16.5	V	3.0	38.2	1.0	-53.8	-13.0	-40.8	
2.4741	-11.9	V	3.0	38.8	1.0	-49.7	-13.0	-36.7	
3.2988	-15.0	V	3.0	39.4	1.0	-53.4	-13.0	-40.4	
1.6494	-14.9	H	3.0	38.2	1.0	-52.1	-13.0	-39.1	
2.4741	-11.8	H	3.0	38.8	1.0	-49.6	-13.0	-36.6	
3.2988	-15.3	H	3.0	39.4	1.0	-53.8	-13.0	-40.8	
Mid Channel (836.5MHz)									
1.6730	-16.1	V	3.0	38.2	1.0	-53.3	-13.0	-40.3	
2.5090	-11.1	V	3.0	38.8	1.0	-48.9	-13.0	-35.9	
3.3460	-15.1	V	3.0	39.5	1.0	-53.5	-13.0	-40.5	
1.6730	-13.7	H	3.0	38.2	1.0	-51.0	-13.0	-38.0	
2.5090	-10.4	H	3.0	38.8	1.0	-48.2	-13.0	-35.2	
3.3460	-14.2	H	3.0	39.5	1.0	-52.7	-13.0	-39.7	
High Channel (848.3MHz)									
1.6966	-16.7	V	3.0	38.2	1.0	-53.9	-13.0	-40.9	
2.5449	-12.5	V	3.0	38.9	1.0	-50.3	-13.0	-37.3	
3.3932	-14.6	V	3.0	39.5	1.0	-53.0	-13.0	-40.0	
1.6966	-17.5	H	3.0	38.2	1.0	-54.7	-13.0	-41.7	
2.5449	-12.2	H	3.0	38.9	1.0	-50.1	-13.0	-37.1	
3.3932	-14.1	H	3.0	39.5	1.0	-52.6	-13.0	-39.6	

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