

LTE Band 5

		High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2								
LTE Band 5 10MHz QPSK	Company:	Samsung								
	Project #:	16K22598								
	Date:	01-18-16								
	Test Engineer:	Steven.Kim								
	Configuration:	EUT ONLY, X Position								
	Mode:	TX, LTE BAND 5, 10MHz BW,QPSK								
	Test Equipment:		Receiving: VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse.							
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes	
	Low Ch									
	829.00	9.88	V	1.1	-1.5	7.30	38.5	-31.2		
	829.00	22.52	H	1.1	-1.5	19.94	38.5	-18.5		
	Mid Ch									
	836.50	8.70	V	1.1	-1.4	6.21	38.5	-32.2		
	836.50	23.38	H	1.1	-1.4	20.89	38.5	-17.6		
	High Ch									
844.00	8.14	V	1.1	-1.3	5.75	38.5	-32.7			
844.00	23.25	H	1.1	-1.3	20.83	38.5	-17.6			
Rev. 3.17.11 Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm										
LTE Band 5 10MHz 16QAM	High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2									
	Company:	Samsung								
	Project #:	16K22598								
	Date:	01-18-16								
	Test Engineer:	Steven.Kim								
	Configuration:	EUT ONLY, X Position								
	Mode:	LTE5 10MHz FUND 16QAM								
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	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes	
	Low Ch									
	829.00	8.76	V	1.1	-1.5	6.18	38.5	-32.3		
	829.00	21.38	H	1.1	-1.5	18.80	38.5	-19.7		
	Mid Ch									
	836.50	7.65	V	1.1	-1.4	5.14	38.5	-33.3		
	836.50	22.35	H	1.1	-1.4	19.84	38.5	-18.6		
High Ch										
844.00	7.06	V	1.1	-1.3	4.64	38.5	-33.8			
844.00	22.18	H	1.1	-1.3	19.76	38.5	-18.7			
Rev. 3.17.11 Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm										

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LTE Band 5 3MHz QPSK	Company:	Samsung							
	Project #:	16K22598							
	Date:	01-18-16							
	Test Engineer:	Steven.Kim							
	Configuration:	EUT ONLY, X Position							
	Mode:	LTE5 3MHz FUND QPSK							
	Test Equipment:								
	Receiving:		VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT)						
	Substitution:		Dipole S/N: 00164753, 3m SMA Cable Warehouse.						
		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
	Low Ch								
	825.50	13.91	V	1.1	-1.5	11.31	38.5	-27.1	
	825.50	22.74	H	1.1	-1.5	20.14	38.5	-18.3	
	Mid Ch								
	836.50	7.45	V	1.1	-1.4	4.96	38.5	-33.5	
	836.50	23.55	H	1.1	-1.4	21.06	38.5	-17.4	
	High Ch								
	847.50	7.95	V	1.6	-1.3	5.07	38.5	-33.4	
	847.50	23.72	H	1.6	-1.3	20.84	38.5	-17.6	
Rev. 3.17.11		Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm							
		High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2							
LTE Band 5 3MHz 16QAM	Company:	Samsung							
	Project #:	16K22598							
	Date:	01-18-16							
	Test Engineer:	Steven.Kim							
	Configuration:	EUT ONLY, X Position							
	Mode:	LTE5 3MHz FUND 16QAM							
	Test Equipment:								
	Receiving:		VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT)						
	Substitution:		Dipole S/N: 00164753, 3m SMA Cable Warehouse.						
		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
	Low Ch								
	825.50	12.86	V	1.1	-1.5	10.26	38.5	-28.2	
	825.50	21.53	H	1.1	-1.5	18.93	38.5	-19.5	
	Mid Ch								
	836.50	6.40	V	1.1	-1.4	3.90	38.5	-34.5	
	836.50	22.52	H	1.1	-1.4	20.03	38.5	-18.4	
	High Ch								
	847.50	6.89	V	1.1	-1.3	4.51	38.5	-33.9	
	847.50	22.63	H	1.1	-1.3	20.24	38.5	-18.2	
Rev. 3.17.11		Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm							

		High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2							
LTE Band 5 1.4MHz QPSK	Company: Samsung Project #: 16K22598 Date: 01-18-16 Test Engineer: Steven.Kim Configuration: EUT ONLY, X Position Mode: LTE5 1.4MHz FUND QPSK								
	Test Equipment: Receiving: VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse.								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
	Low Ch								
	824.70	6.63	V	1.1	-1.5	4.03	38.5	-34.4	
	824.70	20.62	H	1.1	-1.5	18.02	38.5	-20.4	
	Mid Ch								
	836.50	3.57	V	1.1	-1.4	1.08	38.5	-37.4	
	836.50	20.68	H	1.1	-1.4	18.19	38.5	-20.3	
	High Ch								
	848.30	2.53	V	1.6	-1.3	-0.35	38.5	-38.8	
	848.30	20.77	H	1.6	-1.3	17.89	38.5	-20.6	
Rev. 3.17.11 Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm									
LTE Band 5 1.4MHz 16QAM	Company: Samsung Project #: 16K22598 Date: 01-18-16 Test Engineer: Steven.Kim Configuration: EUT ONLY, X Position Mode: LTE5 1.4MHz FUND 16QAM								
	Test Equipment: Receiving: VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT) Substitution: Dipole S/N: 00164753, 3m SMA Cable Warehouse.								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
	Low Ch								
	824.70	5.59	V	1.1	-1.5	2.99	38.5	-35.5	
	824.70	19.61	H	1.1	-1.5	17.01	38.5	-21.4	
	Mid Ch								
	836.50	2.40	V	1.1	-1.4	-0.10	38.5	-38.5	
	836.50	19.58	H	1.1	-1.4	17.09	38.5	-21.4	
	High Ch								
	848.30	1.55	V	1.1	-1.3	-0.83	38.5	-39.3	
	848.30	19.71	H	1.1	-1.3	17.33	38.5	-21.1	
Rev. 3.17.11 Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm									

11.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238 and §27. 53

LIMIT

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.

TEST PROCEDURE

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

RESULTS

11.2.1. SPURIOUS RADIATION PLOTS

WCDMA Band 5

		UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement										
WCDMA Band 5 REL99	Company: Samsung Project #: 16K22598 Date: 01-20-16 Test Engineer: Steven Kim Configuration: EUT / AC Adapter / Earphone / X 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)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes		
	Low Ch, 826.40MHz											
	1.6520	-14.1	V	3.0	39.1	1.0	-52.2	-13.0	-39.2			
	2.4790	-13.6	V	3.0	39.5	1.0	-52.2	-13.0	-39.2			
	3.3056	-14.8	V	3.0	40.1	1.0	-53.9	-13.0	-40.9			
	1.6520	-14.7	H	3.0	39.1	1.0	-52.8	-13.0	-39.8			
	2.4790	-15.1	H	3.0	39.5	1.0	-53.6	-13.0	-40.6			
	3.3056	-14.8	H	3.0	40.1	1.0	-53.9	-13.0	-40.9			
	Mid Ch, 836.6MHz											
	1.6732	-15.8	V	3.0	39.1	1.0	-53.9	-13.0	-40.9			
	2.5098	-16.6	V	3.0	39.5	1.0	-55.1	-13.0	-42.1			
	3.3464	-15.1	V	3.0	40.1	1.0	-54.2	-13.0	-41.2			
	1.6732	-14.2	H	3.0	39.1	1.0	-52.3	-13.0	-39.3			
	2.5098	-17.3	H	3.0	39.5	1.0	-55.8	-13.0	-42.8			
	3.3464	-15.7	H	3.0	40.1	1.0	-54.9	-13.0	-41.9			
	High Ch, 846.6MHz											
	1.6932	-14.7	V	3.0	39.1	1.0	-52.9	-13.0	-39.9			
	2.5390	-16.3	V	3.0	39.6	1.0	-54.8	-13.0	-41.8			
	3.3860	-15.1	V	3.0	40.2	1.0	-54.3	-13.0	-41.3			
	1.6932	-14.7	H	3.0	39.1	1.0	-52.8	-13.0	-39.8			
	2.5390	-16.9	H	3.0	39.6	1.0	-55.5	-13.0	-42.5			
	3.3860	-15.6	H	3.0	40.2	1.0	-54.8	-13.0	-41.8			
	Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.											
	WCDMA Band 5 HSDPA	Company: Samsung Project #: 16K22598 Date: 01-20-16 Test Engineer: Steven Kim Configuration: EUT / AC Adapter / Earphone / X 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)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes		
Low Ch, 826.40MHz												
1.6520		-14.7	V	3.0	39.1	1.0	-52.8	-13.0	-39.8			
2.4790		-15.3	V	3.0	39.5	1.0	-53.8	-13.0	-40.8			
3.3056		-15.7	V	3.0	40.1	1.0	-54.8	-13.0	-41.8			
1.6520		-18.0	H	3.0	39.1	1.0	-56.1	-13.0	-43.1			
2.4790		-16.5	H	3.0	39.5	1.0	-55.0	-13.0	-42.0			
3.3056		-15.9	H	3.0	40.1	1.0	-55.0	-13.0	-42.0			
Mid Ch, 836.6MHz												
1.6732		-13.3	V	3.0	39.1	1.0	-51.4	-13.0	-38.4			
2.5098		-17.3	V	3.0	39.5	1.0	-55.8	-13.0	-42.8			
3.3464		-15.6	V	3.0	40.1	1.0	-54.8	-13.0	-41.8			
1.6732		-15.0	H	3.0	39.1	1.0	-53.2	-13.0	-40.2			
2.5098		-17.8	H	3.0	39.5	1.0	-56.3	-13.0	-43.3			
3.3464		-15.9	H	3.0	40.1	1.0	-55.1	-13.0	-42.1			
High Ch, 846.6MHz												
1.6932		-15.6	V	3.0	39.1	1.0	-53.7	-13.0	-40.7			
2.5390		-16.9	V	3.0	39.6	1.0	-55.4	-13.0	-42.4			
3.3860		-15.3	V	3.0	40.2	1.0	-54.5	-13.0	-41.5			
1.6932		-15.7	H	3.0	39.1	1.0	-53.8	-13.0	-40.8			
2.5390		-17.1	H	3.0	39.6	1.0	-55.7	-13.0	-42.7			
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WCDMA Band 2

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	5.5572	-6.3	V	3.0	40.8	1.0	-46.1	-13.0	-33.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	7.4096	-8.3	V	3.0	40.8	1.0	-49.1	-13.0	-36.1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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	5.5572	-10.2	H	3.0	40.8	1.0	-50.0	-13.0	-37.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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	7.5200	-1.7	V	3.0	40.7	1.0	-41.4	-13.0	-28.4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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	3.8152	-11.9	V	3.0	40.6	1.0	-51.5	-13.0	-38.5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	5.7228	-3.6	V	3.0	40.8	1.0	-43.4	-13.0	-30.4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	7.6304	-8.2	V	3.0	40.7	1.0	-47.8	-13.0	-34.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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WCDMA Band 2 HSDPA	Company: Samsung Project #: 16K22598 Date: 01-21-16 Test Engineer: Steven Kim Configuration: EUT / AC Adapter / Earphone / X Position Mode: Tx, HSDPA,1900MHz	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">Chamber Chamber 2</div> <div style="border: 1px solid black; padding: 2px;">Pre-amplifier AFS42</div> <div style="border: 1px solid black; padding: 2px;">Filter Filter 1</div> <div style="border: 1px solid black; padding: 2px;">Limit Part 24</div> </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <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> </thead> <tbody> <tr><td colspan="10">Low Ch, 1852.4MHz</td></tr> <tr><td>3.7048</td><td>-10.8</td><td>V</td><td>3.0</td><td>40.5</td><td>1.0</td><td>-50.3</td><td>-13.0</td><td>-37.3</td><td></td></tr> <tr><td>5.5572</td><td>-6.1</td><td>V</td><td>3.0</td><td>40.8</td><td>1.0</td><td>-45.9</td><td>-13.0</td><td>-32.9</td><td></td></tr> <tr><td>7.4096</td><td>-8.3</td><td>V</td><td>3.0</td><td>40.8</td><td>1.0</td><td>-49.1</td><td>-13.0</td><td>-36.1</td><td></td></tr> <tr><td>3.7048</td><td>-14.7</td><td>H</td><td>3.0</td><td>40.5</td><td>1.0</td><td>-54.2</td><td>-13.0</td><td>-41.2</td><td></td></tr> <tr><td>5.5572</td><td>-10.2</td><td>H</td><td>3.0</td><td>40.8</td><td>1.0</td><td>-50.0</td><td>-13.0</td><td>-37.0</td><td></td></tr> <tr><td>7.4096</td><td>-8.0</td><td>H</td><td>3.0</td><td>40.8</td><td>1.0</td><td>-48.8</td><td>-13.0</td><td>-35.8</td><td></td></tr> <tr><td colspan="10">Mid Ch, 1880MHz</td></tr> <tr><td>3.7600</td><td>0.6</td><td>V</td><td>3.0</td><td>40.5</td><td>1.0</td><td>-38.9</td><td>-13.0</td><td>-25.9</td><td></td></tr> <tr><td>5.6400</td><td>3.0</td><td>V</td><td>3.0</td><td>40.8</td><td>1.0</td><td>-36.8</td><td>-13.0</td><td>-23.8</td><td></td></tr> <tr><td>7.5200</td><td>7.3</td><td>V</td><td>3.0</td><td>40.7</td><td>1.0</td><td>-32.4</td><td>-13.0</td><td>-19.4</td><td></td></tr> <tr><td>3.7600</td><td>0.1</td><td>H</td><td>3.0</td><td>40.5</td><td>1.0</td><td>-39.5</td><td>-13.0</td><td>-26.5</td><td></td></tr> <tr><td>5.6400</td><td>-0.5</td><td>H</td><td>3.0</td><td>40.8</td><td>1.0</td><td>-40.3</td><td>-13.0</td><td>-27.3</td><td></td></tr> <tr><td>7.5200</td><td>1.9</td><td>H</td><td>3.0</td><td>40.7</td><td>1.0</td><td>-37.8</td><td>-13.0</td><td>-24.8</td><td></td></tr> <tr><td colspan="10">High Ch, 1907.6MHz</td></tr> <tr><td>3.8152</td><td>-10.8</td><td>V</td><td>3.0</td><td>40.6</td><td>1.0</td><td>-50.4</td><td>-13.0</td><td>-37.4</td><td></td></tr> <tr><td>5.7228</td><td>-3.8</td><td>V</td><td>3.0</td><td>40.8</td><td>1.0</td><td>-43.6</td><td>-13.0</td><td>-30.6</td><td></td></tr> <tr><td>7.6304</td><td>-9.5</td><td>V</td><td>3.0</td><td>40.7</td><td>1.0</td><td>-49.2</td><td>-13.0</td><td>-36.2</td><td></td></tr> <tr><td>3.8152</td><td>-10.3</td><td>H</td><td>3.0</td><td>40.6</td><td>1.0</td><td>-49.9</td><td>-13.0</td><td>-36.9</td><td></td></tr> <tr><td>5.7228</td><td>-9.4</td><td>H</td><td>3.0</td><td>40.8</td><td>1.0</td><td>-49.2</td><td>-13.0</td><td>-36.2</td><td></td></tr> <tr><td>7.6304</td><td>-8.4</td><td>H</td><td>3.0</td><td>40.7</td><td>1.0</td><td>-48.0</td><td>-13.0</td><td>-35.0</td><td></td></tr> <tr> <td colspan="2"></td> <td colspan="9"> Rev. 03.03.09 Note: No other emissions were detected above the system noise floor. </td> </tr> </tbody> </table>									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	-10.8	V	3.0	40.5	1.0	-50.3	-13.0	-37.3		5.5572	-6.1	V	3.0	40.8	1.0	-45.9	-13.0	-32.9		7.4096	-8.3	V	3.0	40.8	1.0	-49.1	-13.0	-36.1		3.7048	-14.7	H	3.0	40.5	1.0	-54.2	-13.0	-41.2		5.5572	-10.2	H	3.0	40.8	1.0	-50.0	-13.0	-37.0		7.4096	-8.0	H	3.0	40.8	1.0	-48.8	-13.0	-35.8		Mid Ch, 1880MHz										3.7600	0.6	V	3.0	40.5	1.0	-38.9	-13.0	-25.9		5.6400	3.0	V	3.0	40.8	1.0	-36.8	-13.0	-23.8		7.5200	7.3	V	3.0	40.7	1.0	-32.4	-13.0	-19.4		3.7600	0.1	H	3.0	40.5	1.0	-39.5	-13.0	-26.5		5.6400	-0.5	H	3.0	40.8	1.0	-40.3	-13.0	-27.3		7.5200	1.9	H	3.0	40.7	1.0	-37.8	-13.0	-24.8		High Ch, 1907.6MHz										3.8152	-10.8	V	3.0	40.6	1.0	-50.4	-13.0	-37.4		5.7228	-3.8	V	3.0	40.8	1.0	-43.6	-13.0	-30.6		7.6304	-9.5	V	3.0	40.7	1.0	-49.2	-13.0	-36.2		3.8152	-10.3	H	3.0	40.6	1.0	-49.9	-13.0	-36.9		5.7228	-9.4	H	3.0	40.8	1.0	-49.2	-13.0	-36.2		7.6304	-8.4	H	3.0	40.7	1.0	-48.0	-13.0	-35.0				Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.																																																																																																																																																																																																																																																										
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	5.5572	-6.1	V	3.0	40.8	1.0	-45.9	-13.0	-32.9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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	3.7600	0.6	V	3.0	40.5	1.0	-38.9	-13.0	-25.9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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	7.5200	1.9	H	3.0	40.7	1.0	-37.8	-13.0	-24.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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LTE Band 17

		UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement										
LTE Band 17 10MHz QPSK		Company: Samsung										
		Project #: 16K22598										
		Date: 01-21-16										
		Test Engineer: Steven.Kim										
		Configuration: EUT / AC Adapter / Ear Phone / Z-Position										
		Mode: TX LTE BAND 17, 10MHz BW, QPSK										
		Chamber: Chamber 2		Pre-amplifier: AFS42		Filter: Filter 1		Limit: FCC Part 27				
		f GHz	SGreading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
		Low Channel (709MHz)										
		1.4180	-2.0	V	3.0	39.0	1.0	-40.0	-13.0	-27.0		
		2.1270	-17.9	V	3.0	39.3	1.0	-56.2	-13.0	-43.2		
		2.8360	-23.3	V	3.0	39.7	1.0	-62.0	-13.0	-49.0		
		1.4180	-2.3	H	3.0	39.0	1.0	-40.3	-13.0	-27.3		
		2.1270	-22.4	H	3.0	39.3	1.0	-60.7	-13.0	-47.7		
		2.8360	-23.8	H	3.0	39.7	1.0	-62.5	-13.0	-49.5		
		Mid Channel (710MHz)										
		1.4200	-9.4	V	3.0	39.0	1.0	-47.4	-13.0	-34.4		
		2.1300	-23.0	V	3.0	39.3	1.0	-61.3	-13.0	-48.3		
		2.8400	-22.3	V	3.0	39.7	1.0	-61.0	-13.0	-48.0		
		1.4200	-2.5	H	3.0	39.0	1.0	-40.5	-13.0	-27.5		
		2.1300	-22.6	H	3.0	39.3	1.0	-60.9	-13.0	-47.9		
		2.8400	-23.3	H	3.0	39.7	1.0	-62.1	-13.0	-49.1		
		High Channel (711MHz)										
		1.4220	-8.7	V	3.0	39.0	1.0	-46.7	-13.0	-33.7		
		2.1330	-22.1	V	3.0	39.3	1.0	-60.5	-13.0	-47.5		
		2.8440	-23.4	V	3.0	39.7	1.0	-62.1	-13.0	-49.1		
		1.4220	-2.0	H	3.0	39.0	1.0	-40.0	-13.0	-27.0		
		2.1330	-23.4	H	3.0	39.3	1.0	-61.7	-13.0	-48.7		
		2.8440	-23.3	H	3.0	39.7	1.0	-62.0	-13.0	-49.0		
		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 #: 16K22598										
		Date: 01-21-16										
		Test Engineer: Steven.Kim										
		Configuration: EUT / AC Adapter / Ear Phone / Z-Position										
		Mode: TX LTE BAND 17, 10MHz BW, 16QAM										
		Chamber: Chamber 2		Pre-amplifier: AFS42		Filter: Filter 1		Limit: FCC Part 27				
		f GHz	SGreading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
		Low Channel (709MHz)										
		1.4180	-3.6	V	3.0	39.0	1.0	-41.6	-13.0	-28.6		
		2.1270	-18.8	V	3.0	39.3	1.0	-57.2	-13.0	-44.2		
		2.8360	-23.0	V	3.0	39.7	1.0	-61.7	-13.0	-48.7		
		1.4180	-3.4	H	3.0	39.0	1.0	-41.4	-13.0	-28.4		
		2.1270	-21.8	H	3.0	39.3	1.0	-60.1	-13.0	-47.1		
		2.8360	-24.0	H	3.0	39.7	1.0	-62.7	-13.0	-49.7		
		Mid Channel (710MHz)										
		1.4200	-10.9	V	3.0	39.0	1.0	-48.9	-13.0	-35.9		
		2.1300	-23.3	V	3.0	39.3	1.0	-61.6	-13.0	-48.6		
		2.8400	-22.7	V	3.0	39.7	1.0	-61.4	-13.0	-48.4		
		1.4200	-4.3	H	3.0	39.0	1.0	-42.3	-13.0	-29.3		
		2.1300	-23.4	H	3.0	39.3	1.0	-61.7	-13.0	-48.7		
		2.8400	-23.5	H	3.0	39.7	1.0	-62.2	-13.0	-49.2		
		High Channel (711MHz)										
		1.4220	-10.5	V	3.0	39.0	1.0	-48.5	-13.0	-35.5		
		2.1330	-22.5	V	3.0	39.3	1.0	-60.9	-13.0	-47.9		
		2.8440	-23.6	V	3.0	39.7	1.0	-62.3	-13.0	-49.3		
		1.4220	-3.2	H	3.0	39.0	1.0	-41.2	-13.0	-28.2		
		2.1330	-23.6	H	3.0	39.3	1.0	-62.0	-13.0	-49.0		
		2.8440	-23.5	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.										

		UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement									
LTE Band 17 5MHz QPSK	Company:	Samsung									
	Project #:	16K22598									
	Date:	01-21-16									
	Test Engineer:	Steven.Kim									
	Configuration:	EUT / AC Adapter / Ear Phone / Z-Position									
	Mode:	TX, LTE BAND 17, 5MHz BW, QPSK									
			Chamber		Pre-amplifier		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	-10.3	V	3.0	39.0	1.0	-48.3	-13.0	-35.3		
	2.1195	-21.2	V	3.0	39.3	1.0	-59.5	-13.0	-46.5		
	2.8260	-22.6	V	3.0	39.7	1.0	-61.3	-13.0	-48.3		
	1.4130	-10.4	H	3.0	39.0	1.0	-48.4	-13.0	-35.4		
	2.1195	-19.6	H	3.0	39.3	1.0	-57.9	-13.0	-44.9		
	2.8260	-23.4	H	3.0	39.7	1.0	-62.1	-13.0	-49.1		
	Mid Channel (710MHz)										
	1.4200	-8.9	V	3.0	39.0	1.0	-46.9	-13.0	-33.9		
	2.1300	-21.9	V	3.0	39.3	1.0	-60.2	-13.0	-47.2		
	2.8400	-21.3	V	3.0	39.7	1.0	-60.0	-13.0	-47.0		
1.4200	-2.5	H	3.0	39.0	1.0	-40.5	-13.0	-27.5			
2.1300	-23.8	H	3.0	39.3	1.0	-62.2	-13.0	-49.2			
2.8400	-23.5	H	3.0	39.7	1.0	-62.3	-13.0	-49.3			
High Channel (713.5MHz)											
1.4270	-8.5	V	3.0	39.0	1.0	-46.5	-13.0	-33.5			
2.1405	-20.7	V	3.0	39.3	1.0	-59.0	-13.0	-46.0			
2.8540	-23.3	V	3.0	39.7	1.0	-62.0	-13.0	-49.0			
1.4270	-5.8	H	3.0	39.0	1.0	-43.8	-13.0	-30.8			
2.1405	-21.4	H	3.0	39.3	1.0	-59.7	-13.0	-46.7			
2.8540	-23.7	H	3.0	39.7	1.0	-62.4	-13.0	-49.4			
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 #:	16K22598									
	Date:	01-21-16									
	Test Engineer:	Steven.Kim									
	Configuration:	EUT / AC Adapter / Ear Phone / Z-Position									
	Mode:	TX, LTE BAND 17, 5MHz BW, 16QAM									
			Chamber		Pre-amplifier		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	7.6	V	3.0	39.0	1.0	-30.4	-13.0	-17.4		
	2.1195	-22.1	V	3.0	39.3	1.0	-60.5	-13.0	-47.5		
	2.8260	-23.1	V	3.0	39.7	1.0	-61.8	-13.0	-48.8		
	1.4130	-12.2	H	3.0	39.0	1.0	-50.2	-13.0	-37.2		
	2.1195	-21.1	H	3.0	39.3	1.0	-59.4	-13.0	-46.4		
	2.8260	-23.6	H	3.0	39.7	1.0	-62.4	-13.0	-49.4		
	Mid Channel (710MHz)										
	1.4200	-10.3	V	3.0	39.0	1.0	-48.3	-13.0	-35.3		
	2.1300	-22.2	V	3.0	39.3	1.0	-60.6	-13.0	-47.6		
2.8400	-21.6	V	3.0	39.7	1.0	-60.3	-13.0	-47.3			
1.4200	-3.8	H	3.0	39.0	1.0	-41.9	-13.0	-28.9			
2.1300	-24.2	H	3.0	39.3	1.0	-62.6	-13.0	-49.6			
2.8400	-23.6	H	3.0	39.7	1.0	-62.4	-13.0	-49.4			
High Channel (713.5MHz)											
1.4270	-10.5	V	3.0	39.0	1.0	-48.5	-13.0	-35.5			
2.1405	-21.4	V	3.0	39.3	1.0	-59.8	-13.0	-46.8			
2.8540	-23.0	V	3.0	39.7	1.0	-61.8	-13.0	-48.8			
1.4270	-7.8	H	3.0	39.0	1.0	-45.9	-13.0	-32.9			
2.1405	-22.2	H	3.0	39.3	1.0	-60.5	-13.0	-47.5			
2.8540	-24.0	H	3.0	39.7	1.0	-62.7	-13.0	-49.7			
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.											

LTE Band 5

		UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement									
		Company: Samsung		Project #: 16K22598		Date: 01-21-16		Test Engineer: Steven.Kim		Configuration: EUT / AC Adapter / Earphone, X Position	
LTE Band 5 10MHz QPSK		Chamber		Pre-amplifier		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	-21.2	V	3.0	39.1	1.0	-59.3	-13.0	-46.3			
2.4870	-16.5	V	3.0	39.5	1.0	-55.0	-13.0	-42.0			
3.3160	-21.6	V	3.0	40.1	1.0	-60.7	-13.0	-47.7			
1.6580	-18.5	H	3.0	39.1	1.0	-56.6	-13.0	-43.6			
2.4870	-15.8	H	3.0	39.5	1.0	-54.4	-13.0	-41.4			
3.3160	-21.7	H	3.0	40.1	1.0	-60.8	-13.0	-47.8			
Mid Channel (836.5MHz)											
1.6730	-15.6	V	3.0	39.1	1.0	-53.7	-13.0	-40.7			
2.5090	-22.4	V	3.0	39.5	1.0	-60.9	-13.0	-47.9			
3.3460	-21.7	V	3.0	40.1	1.0	-60.8	-13.0	-47.8			
1.6730	-9.3	H	3.0	39.1	1.0	-47.4	-13.0	-34.4			
2.5090	-22.6	H	3.0	39.5	1.0	-61.2	-13.0	-48.2			
3.3460	-21.8	H	3.0	40.1	1.0	-60.9	-13.0	-47.9			
High Channel (844MHz)											
1.6880	-19.9	V	3.0	39.1	1.0	-58.1	-13.0	-45.1			
2.5320	-23.7	V	3.0	39.5	1.0	-62.2	-13.0	-49.2			
3.3760	-21.8	V	3.0	40.2	1.0	-60.9	-13.0	-47.9			
1.6880	-16.4	H	3.0	39.1	1.0	-54.5	-13.0	-41.5			
2.5320	-18.6	H	3.0	39.5	1.0	-57.1	-13.0	-44.1			
3.3760	-22.4	H	3.0	40.2	1.0	-61.6	-13.0	-48.6			
		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 #: 16K22598		Date: 01-21-16		Test Engineer: Steven.Kim		Configuration: EUT / AC Adapter / Earphone, X Position	
		Chamber		Pre-amplifier		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	-22.0	V	3.0	39.1	1.0	-60.1	-13.0	-47.1			
2.4870	-17.6	V	3.0	39.5	1.0	-56.1	-13.0	-43.1			
3.3160	-21.7	V	3.0	40.1	1.0	-60.8	-13.0	-47.8			
1.6580	-19.3	H	3.0	39.1	1.0	-57.5	-13.0	-44.5			
2.4870	-17.2	H	3.0	39.5	1.0	-55.7	-13.0	-42.7			
3.3160	-21.9	H	3.0	40.1	1.0	-61.0	-13.0	-48.0			
Mid Channel (836.5MHz)											
1.6730	-17.1	V	3.0	39.1	1.0	-55.3	-13.0	-42.3			
2.5090	-22.8	V	3.0	39.5	1.0	-61.3	-13.0	-48.3			
3.3460	-21.6	V	3.0	40.1	1.0	-60.8	-13.0	-47.8			
1.6730	-10.5	H	3.0	39.1	1.0	-48.7	-13.0	-35.7			
2.5090	-23.0	H	3.0	39.5	1.0	-61.5	-13.0	-48.5			
3.3460	-21.9	H	3.0	40.1	1.0	-61.0	-13.0	-48.0			
High Channel (844MHz)											
1.6880	-20.4	V	3.0	39.1	1.0	-58.5	-13.0	-45.5			
2.5320	-23.7	V	3.0	39.5	1.0	-62.3	-13.0	-49.3			
3.3760	-22.3	V	3.0	40.2	1.0	-61.5	-13.0	-48.5			
1.6880	-17.4	H	3.0	39.1	1.0	-55.6	-13.0	-42.6			
2.5320	-19.7	H	3.0	39.5	1.0	-58.2	-13.0	-45.2			
3.3760	-22.6	H	3.0	40.2	1.0	-61.8	-13.0	-48.8			
		Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.									

		UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement									
LTE Band 5 5MHz QPSK		Company: Samsung									
		Project #: 16K22598									
		Date: 01-20-16									
		Test Engineer: Steven.Kim									
		Configuration: EUT / AC Adapter / Earphone, X Position									
		Mode: TX LTE BAND 5, 5MHz 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 (826.5MHz)									
		1.6530	-15.1	V	3.0	39.1	1.0	-53.2	-13.0	-40.2	
		2.4790	-21.1	V	3.0	39.5	1.0	-59.7	-13.0	-46.7	
		3.3060	-22.9	V	3.0	40.1	1.0	-62.0	-13.0	-49.0	
		1.6530	-17.1	H	3.0	39.1	1.0	-55.2	-13.0	-42.2	
		2.4790	-16.4	H	3.0	39.5	1.0	-54.9	-13.0	-41.9	
		3.3060	-23.0	H	3.0	40.1	1.0	-62.1	-13.0	-49.1	
		Mid Channel (836.5MHz)									
		1.6730	-18.4	V	3.0	39.1	1.0	-56.5	-13.0	-43.5	
		2.5090	-24.5	V	3.0	39.5	1.0	-63.0	-13.0	-50.0	
		3.3460	-22.4	V	3.0	40.1	1.0	-61.6	-13.0	-48.6	
		1.6730	-14.8	H	3.0	39.1	1.0	-53.0	-13.0	-40.0	
		2.5090	-23.1	H	3.0	39.5	1.0	-61.6	-13.0	-48.6	
		3.3460	-23.0	H	3.0	40.1	1.0	-62.1	-13.0	-49.1	
		High Channel (846.5MHz)									
		1.6930	-18.4	V	3.0	39.1	1.0	-56.5	-13.0	-43.5	
		2.5390	-21.3	V	3.0	39.6	1.0	-59.9	-13.0	-46.9	
		3.3860	-22.7	V	3.0	40.2	1.0	-61.9	-13.0	-48.9	
		1.6930	-13.8	H	3.0	39.1	1.0	-52.0	-13.0	-39.0	
		2.5390	-21.4	H	3.0	39.6	1.0	-60.0	-13.0	-47.0	
		3.3860	-23.0	H	3.0	40.2	1.0	-62.2	-13.0	-49.2	
		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 #: 16K22598									
		Date: 01-20-16									
		Test Engineer: Steven.Kim									
		Configuration: EUT / AC Adapter / Earphone, X Position									
		Mode: TX LTE BAND 5, 5MHz 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 (826.5MHz)									
		1.6530	-16.8	V	3.0	39.1	1.0	-54.9	-13.0	-41.9	
		2.4790	-22.4	V	3.0	39.5	1.0	-60.9	-13.0	-47.9	
		3.3060	-22.7	V	3.0	40.1	1.0	-61.8	-13.0	-48.8	
		1.6530	-18.2	H	3.0	39.1	1.0	-56.3	-13.0	-43.3	
		2.4790	-17.8	H	3.0	39.5	1.0	-56.3	-13.0	-43.3	
		3.3060	-23.0	H	3.0	40.1	1.0	-62.1	-13.0	-49.1	
		Mid Channel (836.5MHz)									
		1.6730	-19.5	V	3.0	39.1	1.0	-57.6	-13.0	-44.6	
		2.5090	-24.5	V	3.0	39.5	1.0	-63.0	-13.0	-50.0	
		3.3460	-22.7	V	3.0	40.1	1.0	-61.9	-13.0	-48.9	
		1.6730	-13.8	H	3.0	39.1	1.0	-51.9	-13.0	-38.9	
		2.5090	-23.9	H	3.0	39.5	1.0	-62.4	-13.0	-49.4	
		3.3460	-23.1	H	3.0	40.1	1.0	-62.2	-13.0	-49.2	
		High Channel (846.5MHz)									
		1.6930	-19.8	V	3.0	39.1	1.0	-58.0	-13.0	-45.0	
		2.5390	-22.6	V	3.0	39.6	1.0	-61.2	-13.0	-48.2	
		3.3860	-22.7	V	3.0	40.2	1.0	-61.9	-13.0	-48.9	
		1.6930	-15.3	H	3.0	39.1	1.0	-53.4	-13.0	-40.4	
		2.5390	-22.7	H	3.0	39.6	1.0	-61.2	-13.0	-48.2	
		3.3860	-22.9	H	3.0	40.2	1.0	-62.1	-13.0	-49.1	
		Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.									

		UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement										
LTE Band 5 3MHz QPSK	Company: Samsung Project #: 16K22598 Date: 01-20-16 Test Engineer: Steven.Kim Configuration: EUT / AC Adapter / Earphone, X Position Mode: TX LTE BAND 5, 3MHz 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 (825.5MHz)									
			1.6510	-15.5	V	3.0	39.1	1.0	-53.6	-13.0	-40.6	
			2.4675	-24.2	V	3.0	39.5	1.0	-62.7	-13.0	-49.7	
			3.3020	-22.7	V	3.0	40.1	1.0	-61.8	-13.0	-48.8	
			1.6510	-15.4	H	3.0	39.1	1.0	-53.5	-13.0	-40.5	
			2.4675	-24.9	H	3.0	39.5	1.0	-63.4	-13.0	-50.4	
			3.3020	-23.0	H	3.0	40.1	1.0	-62.1	-13.0	-49.1	
			Mid Channel (836.5MHz)									
		1.6730	-17.2	V	3.0	39.1	1.0	-55.3	-13.0	-42.3		
		2.5090	-23.9	V	3.0	39.5	1.0	-62.5	-13.0	-49.5		
		3.3460	-22.8	V	3.0	40.1	1.0	-61.9	-13.0	-48.9		
		1.6730	-12.1	H	3.0	39.1	1.0	-50.2	-13.0	-37.2		
		2.5090	-24.0	H	3.0	39.5	1.0	-62.6	-13.0	-49.6		
		3.3460	-23.0	H	3.0	40.1	1.0	-62.1	-13.0	-49.1		
		High Channel (847.5MHz)										
		1.6950	-13.8	V	3.0	39.1	1.0	-51.9	-13.0	-38.9		
		2.5425	-23.7	V	3.0	39.6	1.0	-62.3	-13.0	-49.3		
		3.3900	-22.4	V	3.0	40.2	1.0	-61.6	-13.0	-48.6		
		1.6950	-11.6	H	3.0	39.1	1.0	-49.7	-13.0	-36.7		
		2.5425	-22.1	H	3.0	39.6	1.0	-60.6	-13.0	-47.6		
		3.3900	-22.9	H	3.0	40.2	1.0	-62.1	-13.0	-49.1		
		Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.										
LTE Band 5 3MHz 16QAM	Company: Samsung Project #: 16K22598 Date: 01-20-16 Test Engineer: Steven.Kim Configuration: EUT / AC Adapter / Earphone, X Position Mode: TX LTE BAND 5, 3MHz 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 (825.5MHz)									
			1.6510	-17.6	V	3.0	39.1	1.0	-55.7	-13.0	-42.7	
			2.4675	-24.8	V	3.0	39.5	1.0	-63.3	-13.0	-50.3	
			3.3020	-22.9	V	3.0	40.1	1.0	-62.0	-13.0	-49.0	
			1.6510	-17.0	H	3.0	39.1	1.0	-55.1	-13.0	-42.1	
			2.4675	-25.2	H	3.0	39.5	1.0	-63.7	-13.0	-50.7	
			3.3020	-23.2	H	3.0	40.1	1.0	-62.3	-13.0	-49.3	
			Mid Channel (836.5MHz)									
		1.6730	-18.6	V	3.0	39.1	1.0	-56.7	-13.0	-43.7		
		2.5090	-24.1	V	3.0	39.5	1.0	-62.6	-13.0	-49.6		
		3.3460	-22.6	V	3.0	40.1	1.0	-61.8	-13.0	-48.8		
		1.6730	-13.2	H	3.0	39.1	1.0	-51.4	-13.0	-38.4		
		2.5090	-24.4	H	3.0	39.5	1.0	-62.9	-13.0	-49.9		
		3.3460	-23.0	H	3.0	40.1	1.0	-62.1	-13.0	-49.1		
		High Channel (847.5MHz)										
		1.6950	-15.2	V	3.0	39.1	1.0	-53.4	-13.0	-40.4		
		2.5425	-24.4	V	3.0	39.6	1.0	-63.0	-13.0	-50.0		
		3.3900	-22.5	V	3.0	40.2	1.0	-61.6	-13.0	-48.6		
		1.6950	-13.0	H	3.0	39.1	1.0	-51.2	-13.0	-38.2		
		2.5425	-22.7	H	3.0	39.6	1.0	-61.2	-13.0	-48.2		
		3.3900	-22.9	H	3.0	40.2	1.0	-62.1	-13.0	-49.1		
		Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.										

		UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement									
LTE Band 5 1.4MHz QPSK	Company: Samsung Project #: 16K22598 Date: 01-20-16 Test Engineer: Steven.Kim Configuration: EUT / AC Adapter / Earphone, X 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	-20.9	V	3.0	39.1	1.0	-59.0	-13.0	-46.0		
	2.4741	-15.9	V	3.0	39.5	1.0	-54.5	-13.0	-41.5		
	3.2988	-22.1	V	3.0	40.1	1.0	-61.2	-13.0	-48.2		
	1.6494	-15.9	H	3.0	39.1	1.0	-54.0	-13.0	-41.0		
	2.4741	-19.7	H	3.0	39.5	1.0	-58.3	-13.0	-45.3		
	3.2988	-22.9	H	3.0	40.1	1.0	-62.0	-13.0	-49.0		
	Mid Channel (836.5MHz)										
1.6730	-19.0	V	3.0	39.1	1.0	-57.1	-13.0	-44.1			
2.5090	-24.3	V	3.0	39.5	1.0	-62.9	-13.0	-49.9			
3.3460	-22.4	V	3.0	40.1	1.0	-61.5	-13.0	-48.5			
1.6730	-12.8	H	3.0	39.1	1.0	-50.9	-13.0	-37.9			
2.5090	-24.6	H	3.0	39.5	1.0	-63.1	-13.0	-50.1			
3.3460	-23.0	H	3.0	40.1	1.0	-62.1	-13.0	-49.1			
High Channel (848.3MHz)											
1.6966	-9.8	V	3.0	39.1	1.0	-47.9	-13.0	-34.9			
2.5449	-23.7	V	3.0	39.6	1.0	-62.3	-13.0	-49.3			
3.3932	-22.4	V	3.0	40.2	1.0	-61.6	-13.0	-48.6			
1.6966	-11.8	H	3.0	39.1	1.0	-49.9	-13.0	-36.9			
2.5449	-22.5	H	3.0	39.6	1.0	-61.0	-13.0	-48.0			
3.3932	-22.6	H	3.0	40.2	1.0	-61.8	-13.0	-48.8			
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.											
LTE Band 5 1.4MHz 16QAM	Company: Samsung Project #: 16K22598 Date: 01-20-16 Test Engineer: Steven.Kim Configuration: EUT / AC Adapter / Earphone, X 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	-22.1	V	3.0	39.1	1.0	-60.2	-13.0	-47.2		
	2.4741	-17.1	V	3.0	39.5	1.0	-55.6	-13.0	-42.6		
	3.2988	-22.5	V	3.0	40.1	1.0	-61.6	-13.0	-48.6		
	1.6494	-17.1	H	3.0	39.1	1.0	-55.2	-13.0	-42.2		
	2.4741	-20.9	H	3.0	39.5	1.0	-59.4	-13.0	-46.4		
	3.2988	-22.9	H	3.0	40.1	1.0	-62.0	-13.0	-49.0		
	Mid Channel (836.5MHz)										
1.6730	-20.2	V	3.0	39.1	1.0	-58.3	-13.0	-45.3			
2.5090	-24.5	V	3.0	39.5	1.0	-63.0	-13.0	-50.0			
3.3460	-22.6	V	3.0	40.1	1.0	-61.8	-13.0	-48.8			
1.6730	-13.9	H	3.0	39.1	1.0	-52.1	-13.0	-39.1			
2.5090	-24.6	H	3.0	39.5	1.0	-63.2	-13.0	-50.2			
3.3460	-23.0	H	3.0	40.1	1.0	-62.1	-13.0	-49.1			
High Channel (848.3MHz)											
1.6966	-11.1	V	3.0	39.1	1.0	-49.3	-13.0	-36.3			
2.5449	-23.9	V	3.0	39.6	1.0	-62.4	-13.0	-49.4			
3.3932	-22.4	V	3.0	40.2	1.0	-61.6	-13.0	-48.6			
1.6966	-12.9	H	3.0	39.1	1.0	-51.0	-13.0	-38.0			
2.5449	-23.2	H	3.0	39.6	1.0	-61.8	-13.0	-48.8			
3.3932	-22.7	H	3.0	40.2	1.0	-61.9	-13.0	-48.9			
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.											