

**11.1.2. ERP/EIRP DATA**

**LTE Band 5**

		High Frequency Substitution Measurement UL Korea, Ltd. Suwon Laboratory Chamber 2							
LTE Band 5 10MHz QPSK	Company: Samsung Project #: 16K23792 Date: 08-17-16 Test Engineer: JH Park Configuration: EUT ONLY, X Position Mode: TX, LTE BAND 5, 10MHz BW,QPSK  <b>Test Equipment:</b> 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	0.46	V	1.1	-1.5	-2.12	38.5	-40.6	
	829.00	-7.24	H	1.1	-1.5	-9.82	38.5	-48.3	
	Mid Ch								
	836.50	-0.84	V	1.1	-1.4	-3.34	38.5	-41.8	
	836.50	-7.43	H	1.1	-1.4	-9.93	38.5	-48.4	
	High Ch								
	844.00	-2.47	V	1.1	-1.3	-4.86	38.5	-43.3	
844.00	-7.82	H	1.1	-1.3	-10.24	38.5	-48.7		
		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	Company: Samsung Project #: 16K23792 Date: 08-17-16 Test Engineer: JH Park Configuration: EUT ONLY, X Position Mode: LTE5 10MHz FUND 16QAM  <b>Test Equipment:</b> 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	-0.52	V	1.1	-1.5	-3.10	38.5	-41.6	
	829.00	-8.25	H	1.1	-1.5	-10.83	38.5	-49.3	
	Mid Ch								
	836.50	-1.81	V	1.1	-1.4	-4.32	38.5	-42.8	
	836.50	-8.38	H	1.1	-1.4	-10.89	38.5	-49.3	
	High Ch								
	844.00	-3.50	V	1.1	-1.3	-5.92	38.5	-44.4	
844.00	-8.83	H	1.1	-1.3	-11.25	38.5	-49.7		
		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 5MHz QPSK	Company:		Samsung								
	Project #:		16K23792								
	Date:		08-17-16								
	Test Engineer:		JH Park								
	Configuration:		EUT ONLY, X Position								
	Mode:		LTE5 5MHz FUND QPSK								
	<u>Test Equipment:</u>										
	Receiving:		VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT)								
	Substitution:		Dipole S/N: 00164753, 3m SMA Cable Warehouse.								
			<b>f</b>	<b>SG reading</b>	<b>Ant. Pol.</b>	<b>Cable Loss</b>	<b>Antenna Gain</b>	<b>ERP</b>	<b>Limit</b>	<b>Margin</b>	<b>Notes</b>
			<b>MHz</b>	<b>(dBm)</b>	<b>(H/V)</b>	<b>(dB)</b>	<b>(dBd)</b>	<b>(dBm)</b>	<b>(dBm)</b>	<b>(dB)</b>	
			Low Ch								
		826.50	-0.88	V	1.1	-1.5	-3.48	38.5	-41.9		
		826.50	-8.16	H	1.1	-1.5	-10.76	38.5	-49.2		
		Mid Ch									
		836.50	-1.00	V	1.1	-1.4	-3.50	38.5	-41.9		
		836.50	-8.41	H	1.1	-1.4	-10.91	38.5	-49.4		
		High Ch									
		846.50	-2.56	V	1.6	-1.3	-5.44	38.5	-43.9		
		846.50	-8.88	H	1.6	-1.3	-11.76	38.5	-50.2		
		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 5MHz 16QAM	Company:		Samsung								
	Project #:		16K23792								
	Date:		08-17-16								
	Test Engineer:		JH Park								
	Configuration:		EUT ONLY, X Position								
	Mode:		LTE5 5MHz FUND 16QAM								
	<u>Test Equipment:</u>										
	Receiving:		VULB9163-749, and 3m Chamber N-type Cable (Setup this one for testing EUT)								
	Substitution:		Dipole S/N: 00164753, 3m SMA Cable Warehouse.								
			<b>f</b>	<b>SG reading</b>	<b>Ant. Pol.</b>	<b>Cable Loss</b>	<b>Antenna Gain</b>	<b>ERP</b>	<b>Limit</b>	<b>Margin</b>	<b>Notes</b>
			<b>MHz</b>	<b>(dBm)</b>	<b>(H/V)</b>	<b>(dB)</b>	<b>(dBd)</b>	<b>(dBm)</b>	<b>(dBm)</b>	<b>(dB)</b>	
			Low Ch								
		826.50	-1.83	V	1.1	-1.5	-4.43	38.5	-42.9		
		826.50	-9.16	H	1.1	-1.5	-11.76	38.5	-50.2		
		Mid Ch									
		836.50	-1.95	V	1.1	-1.4	-4.45	38.5	-42.9		
		836.50	-9.37	H	1.1	-1.4	-11.87	38.5	-50.3		
		High Ch									
		846.50	-3.56	V	1.1	-1.3	-5.95	38.5	-44.4		
		846.50	-9.85	H	1.1	-1.3	-12.24	38.5	-50.7		
		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 QPSK	<b>Company:</b> Samsung <b>Project #:</b> 16K23792 <b>Date:</b> 08-17-16 <b>Test Engineer:</b> JH Park <b>Configuration:</b> EUT ONLY, X Position <b>Mode:</b> LTE5 3MHz FUND QPSK  <b>Test Equipment:</b> 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								
	825.50	0.27	V	1.1	-1.5	-2.33	38.5	-40.8	
	825.50	-8.47	H	1.1	-1.5	-11.07	38.5	-49.5	
	Mid Ch								
	836.50	-0.99	V	1.1	-1.4	-3.49	38.5	-41.9	
	836.50	-7.69	H	1.1	-1.4	-10.19	38.5	-48.6	
	High Ch								
	847.50	-2.55	V	1.6	-1.3	-5.43	38.5	-43.9	
	847.50	-7.04	H	1.6	-1.3	-9.92	38.5	-48.4	
	Rev. 3.17.11 Note: For Band 13/17 ERP limit is 34.77dBm; For Band 26 limit is 50dBm								
	LTE Band 5 3MHz 16QAM	<b>Company:</b> Samsung <b>Project #:</b> 16K23792 <b>Date:</b> 08-17-16 <b>Test Engineer:</b> JH Park <b>Configuration:</b> EUT ONLY, X Position <b>Mode:</b> LTE5 3MHz FUND 16QAM  <b>Test Equipment:</b> 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									
825.50		-0.79	V	1.1	-1.5	-3.39	38.5	-41.8	
825.50		-9.48	H	1.1	-1.5	-12.08	38.5	-50.5	
Mid Ch									
836.50		-2.07	V	1.1	-1.4	-4.57	38.5	-43.0	
836.50		-8.78	H	1.1	-1.4	-11.28	38.5	-49.7	
High Ch									
847.50		-3.56	V	1.1	-1.3	-5.95	38.5	-44.4	
847.50		-8.04	H	1.1	-1.3	-10.43	38.5	-48.9	
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 #:		16K23792							
	Date:		08-17-16							
	Test Engineer:		JH Park							
	Configuration:		EUT ONLY, X Position							
	Mode:		LTE5 1.4MHz FUND QPSK							
	<b>Test Equipment:</b>									
	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	-1.50	V	1.1	-1.5	-4.10	38.5	-42.6		
	824.70	-9.28	H	1.1	-1.5	-11.88	38.5	-50.3		
	Mid Ch									
836.50	-3.31	V	1.1	-1.4	-5.81	38.5	-44.3			
836.50	-9.74	H	1.1	-1.4	-12.24	38.5	-50.7			
High Ch										
848.30	-4.29	V	1.6	-1.3	-7.17	38.5	-45.6			
848.30	-10.59	H	1.6	-1.3	-13.47	38.5	-51.9			
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 16QAM	Company:		Samsung							
	Project #:		16K23792							
	Date:		08-17-16							
	Test Engineer:		JH Park							
	Configuration:		EUT ONLY, X Position							
	Mode:		LTE5 1.4MHz FUND 16QAM							
	<b>Test Equipment:</b>									
	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	-2.42	V	1.1	-1.5	-5.02	38.5	-43.5		
	824.70	-10.21	H	1.1	-1.5	-12.81	38.5	-51.3		
	Mid Ch									
836.50	-4.30	V	1.1	-1.4	-6.80	38.5	-45.2			
836.50	-10.71	H	1.1	-1.4	-13.21	38.5	-51.7			
High Ch										
848.30	-5.21	V	1.1	-1.3	-7.60	38.5	-46.0			
848.30	-11.54	H	1.1	-1.3	-13.93	38.5	-52.4			
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

### LIMIT

Part 22.917(a) 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

#### LTE Band 5

		UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement									
LTE Band 5 10MHz QPSK		Company: Samsung									
		Project #: 16K23792									
		Date: 08-18-22									
		Test Engineer: YH Lim									
		Configuration: EUT / AC Adapter / Earphone, X 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	-17.7	V	3.0	39.1	1.0	-55.8	-13.0	-42.8	
		2.4870	-17.4	V	3.0	39.5	1.0	-55.9	-13.0	-42.9	
		3.3160	-15.5	V	3.0	40.1	1.0	-54.7	-13.0	-41.7	
		1.6580	-21.1	H	3.0	39.1	1.0	-59.2	-13.0	-46.2	
		2.4870	-18.6	H	3.0	39.5	1.0	-57.1	-13.0	-44.1	
		3.3160	-20.3	H	3.0	40.1	1.0	-59.4	-13.0	-46.4	
		Mid Channel (836.5MHz)									
		1.6730	-20.0	V	3.0	39.1	1.0	-58.1	-13.0	-45.1	
		2.5090	-16.7	V	3.0	39.5	1.0	-55.2	-13.0	-42.2	
		3.3460	-17.5	V	3.0	40.1	1.0	-56.6	-13.0	-43.6	
		1.6730	-19.0	H	3.0	39.1	1.0	-57.1	-13.0	-44.1	
		2.5090	-17.0	H	3.0	39.5	1.0	-55.6	-13.0	-42.6	
		3.3460	-21.0	H	3.0	40.1	1.0	-60.1	-13.0	-47.1	
		High Channel (844MHz)									
		1.6880	-20.0	V	3.0	39.1	1.0	-58.1	-13.0	-45.1	
		2.5320	-17.6	V	3.0	39.5	1.0	-56.1	-13.0	-43.1	
		3.3760	-16.5	V	3.0	40.2	1.0	-55.7	-13.0	-42.7	
		1.6880	-19.2	H	3.0	39.1	1.0	-57.3	-13.0	-44.3	
		2.5320	-13.5	H	3.0	39.5	1.0	-52.1	-13.0	-39.1	
		3.3760	-20.8	H	3.0	40.2	1.0	-60.0	-13.0	-47.0	
		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 #: 16K23792									
		Date: 08-18-22									
		Test Engineer: YH Lim									
		Configuration: EUT / AC Adapter / Earphone, X 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	-19.2	V	3.0	39.1	1.0	-57.3	-13.0	-44.3	
		2.4870	-17.9	V	3.0	39.5	1.0	-56.4	-13.0	-43.4	
		3.3160	-17.2	V	3.0	40.1	1.0	-56.3	-13.0	-43.3	
		1.6580	-22.1	H	3.0	39.1	1.0	-60.2	-13.0	-47.2	
		2.4870	-19.0	H	3.0	39.5	1.0	-57.6	-13.0	-44.6	
		3.3160	-20.5	H	3.0	40.1	1.0	-59.6	-13.0	-46.6	
		Mid Channel (836.5MHz)									
		1.6730	-21.1	V	3.0	39.1	1.0	-59.2	-13.0	-46.2	
		2.5090	-16.6	V	3.0	39.5	1.0	-55.2	-13.0	-42.2	
		3.3460	-18.4	V	3.0	40.1	1.0	-57.6	-13.0	-44.6	
		1.6730	-20.7	H	3.0	39.1	1.0	-58.8	-13.0	-45.8	
		2.5090	-18.0	H	3.0	39.5	1.0	-56.5	-13.0	-43.5	
		3.3460	-21.1	H	3.0	40.1	1.0	-60.2	-13.0	-47.2	
		High Channel (844MHz)									
		1.6880	-20.8	V	3.0	39.1	1.0	-58.9	-13.0	-45.9	
		2.5320	-18.3	V	3.0	39.5	1.0	-56.9	-13.0	-43.9	
		3.3760	-17.2	V	3.0	40.2	1.0	-56.3	-13.0	-43.3	
		1.6880	-19.9	H	3.0	39.1	1.0	-58.1	-13.0	-45.1	
		2.5320	-14.9	H	3.0	39.5	1.0	-53.4	-13.0	-40.4	
		3.3760	-21.0	H	3.0	40.2	1.0	-60.2	-13.0	-47.2	
		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 #: 16K23792 Date: 08-18-16 Test Engineer: Chan Park Configuration: EUT / AC Adapter / Earphone, X Position Mode: TX, LTE BAND 5, 5MHz BW, 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 (826.5MHz)										
	1.6530	-21.6	V	3.0	39.1	1.0	-59.7	-13.0	-46.7		
	2.4790	-21.8	V	3.0	39.5	1.0	-60.3	-13.0	-47.3		
	3.3060	-21.0	V	3.0	40.1	1.0	-60.1	-13.0	-47.1		
	1.6530	-20.2	H	3.0	39.1	1.0	-58.3	-13.0	-45.3		
	2.4790	-20.2	H	3.0	39.5	1.0	-58.8	-13.0	-45.8		
	3.3060	-21.7	H	3.0	40.1	1.0	-60.8	-13.0	-47.8		
	Mid Channel (836.5MHz)										
	1.6730	-20.9	V	3.0	39.1	1.0	-59.0	-13.0	-46.0		
	2.5090	-20.4	V	3.0	39.5	1.0	-59.0	-13.0	-46.0		
	3.3460	-15.5	V	3.0	40.1	1.0	-54.6	-13.0	-41.6		
	1.6730	-20.5	H	3.0	39.1	1.0	-58.6	-13.0	-45.6		
	2.5090	-23.5	H	3.0	39.5	1.0	-62.1	-13.0	-49.1		
	3.3460	-21.5	H	3.0	40.1	1.0	-60.7	-13.0	-47.7		
	High Channel (846.5MHz)										
	1.6930	-21.5	V	3.0	39.1	1.0	-59.7	-13.0	-46.7		
	2.5390	-19.0	V	3.0	39.6	1.0	-57.5	-13.0	-44.5		
	3.3860	-15.5	V	3.0	40.2	1.0	-54.7	-13.0	-41.7		
	1.6930	-16.3	H	3.0	39.1	1.0	-54.4	-13.0	-41.4		
	2.5390	-20.8	H	3.0	39.6	1.0	-59.3	-13.0	-46.3		
	3.3860	-21.2	H	3.0	40.2	1.0	-60.4	-13.0	-47.4		
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 #: 16K23792 Date: 08-18-16 Test Engineer: Chan Park Configuration: EUT / AC Adapter / Earphone, X Position Mode: TX, LTE BAND 5, 5MHz BW, 16QAM										
	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 (826.5MHz)										
	1.6530	-23.4	V	3.0	39.1	1.0	-61.5	-13.0	-48.5		
	2.4790	-22.5	V	3.0	39.5	1.0	-61.0	-13.0	-48.0		
	3.3060	-21.1	V	3.0	40.1	1.0	-60.2	-13.0	-47.2		
	1.6530	-21.3	H	3.0	39.1	1.0	-59.4	-13.0	-46.4		
	2.4790	-19.9	H	3.0	39.5	1.0	-58.4	-13.0	-45.4		
	3.3060	-21.7	H	3.0	40.1	1.0	-60.8	-13.0	-47.8		
	Mid Channel (836.5MHz)										
	1.6730	-22.5	V	3.0	39.1	1.0	-60.6	-13.0	-47.6		
	2.5090	-19.9	V	3.0	39.5	1.0	-58.4	-13.0	-45.4		
	3.3460	-17.0	V	3.0	40.1	1.0	-56.1	-13.0	-43.1		
	1.6730	-21.3	H	3.0	39.1	1.0	-59.4	-13.0	-46.4		
	2.5090	-22.9	H	3.0	39.5	1.0	-61.4	-13.0	-48.4		
	3.3460	-19.3	H	3.0	40.1	1.0	-58.4	-13.0	-45.4		
	High Channel (846.5MHz)										
	1.6930	-23.2	V	3.0	39.1	1.0	-61.3	-13.0	-48.3		
	2.5390	-19.3	V	3.0	39.6	1.0	-57.9	-13.0	-44.9		
	3.3860	-16.9	V	3.0	40.2	1.0	-56.1	-13.0	-43.1		
	1.6930	-16.8	H	3.0	39.1	1.0	-55.0	-13.0	-42.0		
	2.5390	-21.2	H	3.0	39.6	1.0	-59.8	-13.0	-46.8		
3.3860	-21.3	H	3.0	40.2	1.0	-60.5	-13.0	-47.5			
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 #: 16K23792										
	Date: 08-18-16										
	Test Engineer: JH Park										
	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	-17.4	V	3.0	39.1	1.0	-55.5	-13.0	-42.5		
	2.4765	-20.1	V	3.0	39.5	1.0	-58.6	-13.0	-45.6		
	3.3020	-19.9	V	3.0	40.1	1.0	-59.0	-13.0	-46.0		
	1.6510	-17.8	H	3.0	39.1	1.0	-55.9	-13.0	-42.9		
	2.4765	-18.5	H	3.0	39.5	1.0	-57.1	-13.0	-44.1		
	3.3020	-20.3	H	3.0	40.1	1.0	-59.4	-13.0	-46.4		
Mid Channel (836.5MHz)											
1.6730	-23.4	V	3.0	39.1	1.0	-61.5	-13.0	-48.5			
2.5090	-16.9	V	3.0	39.5	1.0	-55.4	-13.0	-42.4			
3.3460	-15.8	V	3.0	40.1	1.0	-54.9	-13.0	-41.9			
1.6730	-17.9	H	3.0	39.1	1.0	-56.0	-13.0	-43.0			
2.5090	-19.4	H	3.0	39.5	1.0	-57.9	-13.0	-44.9			
3.3460	-19.8	H	3.0	40.1	1.0	-59.0	-13.0	-46.0			
High Channel (847.5MHz)											
1.6950	-17.6	V	3.0	39.1	1.0	-55.7	-13.0	-42.7			
2.5425	-18.1	V	3.0	39.6	1.0	-56.6	-13.0	-43.6			
3.3900	-14.9	V	3.0	40.2	1.0	-54.1	-13.0	-41.1			
1.6950	-16.8	H	3.0	39.1	1.0	-55.0	-13.0	-42.0			
2.5425	-19.8	H	3.0	39.6	1.0	-58.3	-13.0	-45.3			
3.3900	-19.4	H	3.0	40.2	1.0	-58.6	-13.0	-45.6			
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									
Company: Samsung											
Project #: 16K23792											
Date: 08-18-16											
Test Engineer: JH Park											
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	-18.2	V	3.0	39.1	1.0	-56.3	-13.0	-43.3			
2.4765	-20.0	V	3.0	39.5	1.0	-58.5	-13.0	-45.5			
3.3020	-19.9	V	3.0	40.1	1.0	-59.0	-13.0	-46.0			
1.6510	-19.0	H	3.0	39.1	1.0	-57.1	-13.0	-44.1			
2.4765	-17.7	H	3.0	39.5	1.0	-56.2	-13.0	-43.2			
3.3020	-20.0	H	3.0	40.1	1.0	-59.1	-13.0	-46.1			
Mid Channel (836.5MHz)											
1.6730	-23.4	V	3.0	39.1	1.0	-61.5	-13.0	-48.5			
2.5090	-17.3	V	3.0	39.5	1.0	-55.8	-13.0	-42.8			
3.3460	-17.0	V	3.0	40.1	1.0	-56.1	-13.0	-43.1			
1.6730	-18.7	H	3.0	39.1	1.0	-56.8	-13.0	-43.8			
2.5090	-20.5	H	3.0	39.5	1.0	-59.1	-13.0	-46.1			
3.3460	-20.3	H	3.0	40.1	1.0	-59.5	-13.0	-46.5			
High Channel (847.5MHz)											
1.6950	-20.0	V	3.0	39.1	1.0	-58.1	-13.0	-45.1			
2.5425	-19.3	V	3.0	39.6	1.0	-57.9	-13.0	-44.9			
3.3900	-15.7	V	3.0	40.2	1.0	-54.9	-13.0	-41.9			
1.6950	-16.8	H	3.0	39.1	1.0	-54.9	-13.0	-41.9			
2.5425	-20.0	H	3.0	39.6	1.0	-58.5	-13.0	-45.5			
3.3900	-20.0	H	3.0	40.2	1.0	-59.2	-13.0	-46.2			
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 #: 16K23792 Date: 08-18-16 Test Engineer: YH Lim Configuration: EUT / AC Adapter / Earphone, XPosition Mode: TX, LTE BAND 5, 1.4MHz BW, QPSK	<input type="text" value="Chamber"/>		<input type="text" value="Pre-amplifier"/>		<input type="text" value="Filter"/>		<input type="text" value="Limit"/>			
	<input type="text" value="Chamber 2"/>		<input type="text" value="AFS42"/>		<input type="text" value="Filter 1"/>		<input type="text" value="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	-19.2	V	3.0	39.1	1.0	-57.3	-13.0	-44.3		
	2.4741	-20.3	V	3.0	39.5	1.0	-58.8	-13.0	-45.8		
	3.2988	-20.0	V	3.0	40.1	1.0	-59.1	-13.0	-46.1		
	1.6494	-22.0	H	3.0	39.1	1.0	-60.1	-13.0	-47.1		
	2.4741	-23.8	H	3.0	39.5	1.0	-62.3	-13.0	-49.3		
	3.2988	-23.2	H	3.0	40.1	1.0	-62.3	-13.0	-49.3		
	Mid Channel (836.5MHz)										
	1.6730	-22.6	V	3.0	39.1	1.0	-60.7	-13.0	-47.7		
	2.5090	-19.6	V	3.0	39.5	1.0	-58.1	-13.0	-45.1		
	3.3460	-16.5	V	3.0	40.1	1.0	-55.6	-13.0	-42.6		
	1.6730	-20.2	H	3.0	39.1	1.0	-58.3	-13.0	-45.3		
	2.5090	-20.3	H	3.0	39.5	1.0	-58.9	-13.0	-45.9		
	3.3460	-18.2	H	3.0	40.1	1.0	-57.4	-13.0	-44.4		
	High Channel (848.3MHz)										
	1.6966	-17.1	V	3.0	39.1	1.0	-55.2	-13.0	-42.2		
	2.5449	-17.7	V	3.0	39.6	1.0	-56.2	-13.0	-43.2		
	3.3932	-15.8	V	3.0	40.2	1.0	-55.0	-13.0	-42.0		
	1.6966	-17.1	H	3.0	39.1	1.0	-55.3	-13.0	-42.3		
	2.5449	-17.0	H	3.0	39.6	1.0	-55.5	-13.0	-42.5		
	3.3932	-18.6	H	3.0	40.2	1.0	-57.7	-13.0	-44.7		
	Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.										
LTE Band 5 1.4MHz 16QAM	Company: Samsung Project #: 16K23792 Date: 08-18-16 Test Engineer: YH Lim Configuration: EUT / AC Adapter / Earphone, XPosition Mode: TX, LTE BAND 5, 1.4MHz BW, 16QAM	<input type="text" value="Chamber"/>		<input type="text" value="Pre-amplifier"/>		<input type="text" value="Filter"/>		<input type="text" value="Limit"/>			
	<input type="text" value="Chamber 2"/>		<input type="text" value="AFS42"/>		<input type="text" value="Filter 1"/>		<input type="text" value="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	-20.1	V	3.0	39.1	1.0	-58.2	-13.0	-45.2		
	2.4741	-21.0	V	3.0	39.5	1.0	-59.5	-13.0	-46.5		
	3.2988	-20.5	V	3.0	40.1	1.0	-59.6	-13.0	-46.6		
	1.6494	-22.6	H	3.0	39.1	1.0	-60.7	-13.0	-47.7		
	2.4741	-24.6	H	3.0	39.5	1.0	-63.1	-13.0	-50.1		
	3.2988	-23.5	H	3.0	40.1	1.0	-62.6	-13.0	-49.6		
	Mid Channel (836.5MHz)										
	1.6730	-23.1	V	3.0	39.1	1.0	-61.2	-13.0	-48.2		
	2.5090	-20.8	V	3.0	39.5	1.0	-59.3	-13.0	-46.3		
	3.3460	-17.8	V	3.0	40.1	1.0	-57.0	-13.0	-44.0		
	1.6730	-21.4	H	3.0	39.1	1.0	-59.5	-13.0	-46.5		
	2.5090	-20.7	H	3.0	39.5	1.0	-59.2	-13.0	-46.2		
	3.3460	-18.9	H	3.0	40.1	1.0	-58.0	-13.0	-45.0		
	High Channel (848.3MHz)										
	1.6966	-18.4	V	3.0	39.1	1.0	-56.6	-13.0	-43.6		
	2.5449	-18.5	V	3.0	39.6	1.0	-57.0	-13.0	-44.0		
	3.3932	-16.6	V	3.0	40.2	1.0	-55.8	-13.0	-42.8		
	1.6966	-18.2	H	3.0	39.1	1.0	-56.3	-13.0	-43.3		
	2.5449	-18.4	H	3.0	39.6	1.0	-56.9	-13.0	-43.9		
	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.										