

LTE Band 5

		UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement										
LTE Band 5 10MHz QPSK	Company: Samsung Project #: 16K22741 Date: 02-16-16 Test Engineer: Steven Kim 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	-19.1	V	3.0	39.1	1.0	-57.2	-13.0	-44.2	
			2.4870	-22.8	V	3.0	39.5	1.0	-61.3	-13.0	-48.3	
			3.3160	-21.7	V	3.0	40.1	1.0	-60.8	-13.0	-47.8	
			1.6580	-18.3	H	3.0	39.1	1.0	-56.4	-13.0	-43.4	
			2.4870	-22.3	H	3.0	39.5	1.0	-60.8	-13.0	-47.8	
			3.3160	-22.1	H	3.0	40.1	1.0	-61.2	-13.0	-48.2	
			Mid Channel (836.5MHz)									
			1.6730	-18.4	V	3.0	39.1	1.0	-56.5	-13.0	-43.5	
			2.5095	-23.8	V	3.0	39.5	1.0	-62.3	-13.0	-49.3	
			3.3460	-21.9	V	3.0	40.1	1.0	-61.1	-13.0	-48.1	
			1.6730	-22.5	H	3.0	39.1	1.0	-60.7	-13.0	-47.7	
			2.5095	-24.1	H	3.0	39.5	1.0	-62.7	-13.0	-49.7	
		3.3460	-22.2	H	3.0	40.1	1.0	-61.3	-13.0	-48.3		
		High Channel (844MHz)										
		1.6880	-8.4	V	3.0	39.1	1.0	-46.6	-13.0	-33.6		
		2.5320	-20.9	V	3.0	39.5	1.0	-59.5	-13.0	-46.5		
		3.3760	-22.3	V	3.0	40.2	1.0	-61.5	-13.0	-48.5		
		1.6880	-12.9	H	3.0	39.1	1.0	-51.0	-13.0	-38.0		
		2.5320	-22.8	H	3.0	39.5	1.0	-61.4	-13.0	-48.4		
		3.3760	-22.6	H	3.0	40.2	1.0	-61.7	-13.0	-48.7		
		Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.										
LTE Band 5 10MHz 16QAM	Company: Samsung Project #: 16K22741 Date: 02-16-16 Test Engineer: Steven Kim 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	-20.1	V	3.0	39.1	1.0	-58.2	-13.0	-45.2	
			2.4870	-23.1	V	3.0	39.5	1.0	-61.6	-13.0	-48.6	
			3.3160	-21.7	V	3.0	40.1	1.0	-60.8	-13.0	-47.8	
			1.6580	-19.1	H	3.0	39.1	1.0	-57.2	-13.0	-44.2	
			2.4870	-22.5	H	3.0	39.5	1.0	-61.0	-13.0	-48.0	
			3.3160	-22.2	H	3.0	40.1	1.0	-61.3	-13.0	-48.3	
			Mid Channel (836.5MHz)									
			1.6730	-18.5	V	3.0	39.1	1.0	-56.6	-13.0	-43.6	
			2.5095	-23.8	V	3.0	39.5	1.0	-62.3	-13.0	-49.3	
			3.3460	-22.1	V	3.0	40.1	1.0	-61.2	-13.0	-48.2	
			1.6730	-22.4	H	3.0	39.1	1.0	-60.5	-13.0	-47.5	
			2.5095	-24.3	H	3.0	39.5	1.0	-62.8	-13.0	-49.8	
		3.3460	-22.4	H	3.0	40.1	1.0	-61.5	-13.0	-48.5		
		High Channel (844MHz)										
		1.6880	-9.3	V	3.0	39.1	1.0	-47.4	-13.0	-34.4		
		2.5320	-21.2	V	3.0	39.5	1.0	-59.7	-13.0	-46.7		
		3.3760	-22.4	V	3.0	40.2	1.0	-61.6	-13.0	-48.6		
		1.6880	-13.9	H	3.0	39.1	1.0	-52.0	-13.0	-39.0		
		2.5320	-23.0	H	3.0	39.5	1.0	-61.5	-13.0	-48.5		
		3.3760	-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.										

		UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement										
LTE Band 5 5MHz QPSK	Company: Samsung Project #: 16K22741 Date: 02-16-16 Test Engineer: Steven Kim Configuration: EUT / AC Adapter / Earphone, Y 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	-17.1	V	3.0	39.1	1.0	-55.2	-13.0	-42.2			
	2.4790	-19.5	V	3.0	39.5	1.0	-58.0	-13.0	-45.0			
	3.3060	-22.1	V	3.0	40.1	1.0	-61.2	-13.0	-48.2			
	1.6530	-23.3	H	3.0	39.1	1.0	-61.4	-13.0	-48.4			
	2.4790	-13.9	H	3.0	39.5	1.0	-52.4	-13.0	-39.4			
	3.3060	-22.2	H	3.0	40.1	1.0	-61.3	-13.0	-48.3			
	Mid Channel (836.5MHz)											
	1.6730	-17.9	V	3.0	39.1	1.0	-56.0	-13.0	-43.0			
	2.5095	-20.2	V	3.0	39.5	1.0	-58.7	-13.0	-45.7			
	3.3460	-21.4	V	3.0	40.1	1.0	-60.6	-13.0	-47.6			
	1.6730	-17.9	H	3.0	39.1	1.0	-56.0	-13.0	-43.0			
	2.5095	-16.0	H	3.0	39.5	1.0	-54.6	-13.0	-41.6			
	3.3460	-21.3	H	3.0	40.1	1.0	-60.4	-13.0	-47.4			
	High Channel (846.5MHz)											
	1.6930	-6.4	V	3.0	39.1	1.0	-44.5	-13.0	-31.5			
	2.5395	-19.3	V	3.0	39.6	1.0	-57.8	-13.0	-44.8			
	3.3860	-21.6	V	3.0	40.2	1.0	-60.8	-13.0	-47.8			
	1.6930	-9.6	H	3.0	39.1	1.0	-47.7	-13.0	-34.7			
	2.5395	-15.9	H	3.0	39.6	1.0	-54.4	-13.0	-41.4			
	3.3860	-22.1	H	3.0	40.2	1.0	-61.3	-13.0	-48.3			
	Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.											
LTE Band 5 5MHz 16QAM	Company: Samsung Project #: 16K22741 Date: 02-16-16 Test Engineer: Steven Kim Configuration: EUT / AC Adapter / Earphone, Y 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	-17.5	V	3.0	39.1	1.0	-55.6	-13.0	-42.6			
	2.4790	-20.0	V	3.0	39.5	1.0	-58.5	-13.0	-45.5			
	3.3060	-22.2	V	3.0	40.1	1.0	-61.3	-13.0	-48.3			
	1.6530	-23.8	H	3.0	39.1	1.0	-61.9	-13.0	-48.9			
	2.4790	-14.8	H	3.0	39.5	1.0	-53.3	-13.0	-40.3			
	3.3060	-22.3	H	3.0	40.1	1.0	-61.4	-13.0	-48.4			
	Mid Channel (836.5MHz)											
	1.6730	-18.3	V	3.0	39.1	1.0	-56.4	-13.0	-43.4			
	2.5095	-20.3	V	3.0	39.5	1.0	-58.9	-13.0	-45.9			
	3.3460	-21.5	V	3.0	40.1	1.0	-60.7	-13.0	-47.7			
	1.6730	-19.8	H	3.0	39.1	1.0	-57.9	-13.0	-44.9			
	2.5095	-17.9	H	3.0	39.5	1.0	-56.4	-13.0	-43.4			
	3.3460	-21.5	H	3.0	40.1	1.0	-60.6	-13.0	-47.6			
	High Channel (846.5MHz)											
	1.6930	-8.2	V	3.0	39.1	1.0	-46.3	-13.0	-33.3			
	2.5395	-20.2	V	3.0	39.6	1.0	-58.7	-13.0	-45.7			
	3.3860	-21.7	V	3.0	40.2	1.0	-60.8	-13.0	-47.8			
	1.6930	-11.1	H	3.0	39.1	1.0	-49.2	-13.0	-36.2			
	2.5395	-16.8	H	3.0	39.6	1.0	-55.4	-13.0	-42.4			
	3.3860	-22.1	H	3.0	40.2	1.0	-61.3	-13.0	-48.3			
	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 5 3MHz QPSK	Company: Samsung Project #: 16K22741 Date: 02-15-16 Test Engineer: Steven Kim Configuration: EUT / AC Adapter / Earphone, Y 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	-18.3	V	3.0	39.1	1.0	-56.4	-13.0	-43.4		
		2.4675	-20.0	V	3.0	39.5	1.0	-58.5	-13.0	-45.5		
		3.3020	-21.4	V	3.0	40.1	1.0	-60.5	-13.0	-47.5		
		1.6510	-21.1	H	3.0	39.1	1.0	-59.2	-13.0	-46.2		
		2.4675	-17.0	H	3.0	39.5	1.0	-55.5	-13.0	-42.5		
		3.3020	-22.3	H	3.0	40.1	1.0	-61.4	-13.0	-48.4		
		Mid Channel (836.5MHz)										
		1.6730	-17.6	V	3.0	39.1	1.0	-55.7	-13.0	-42.7		
		2.5090	-18.5	V	3.0	39.5	1.0	-57.0	-13.0	-44.0		
		3.3460	-22.0	V	3.0	40.1	1.0	-61.2	-13.0	-48.2		
		1.6730	-19.8	H	3.0	39.1	1.0	-57.9	-13.0	-44.9		
		2.5090	-16.5	H	3.0	39.5	1.0	-55.0	-13.0	-42.0		
		3.3460	-22.1	H	3.0	40.1	1.0	-61.2	-13.0	-48.2		
		High Channel (847.5MHz)										
		1.6950	-11.6	V	3.0	39.1	1.0	-49.7	-13.0	-36.7		
		2.5425	-17.7	V	3.0	39.6	1.0	-56.2	-13.0	-43.2		
		3.3900	-21.8	V	3.0	40.2	1.0	-61.0	-13.0	-48.0		
		1.6950	-12.4	H	3.0	39.1	1.0	-50.5	-13.0	-37.5		
		2.5425	-9.7	H	3.0	39.6	1.0	-48.2	-13.0	-35.2		
		3.3900	-22.2	H	3.0	40.2	1.0	-61.4	-13.0	-48.4		
		Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.										
LTE Band 5 3MHz 16QAM	Company: Samsung Project #: 16K22741 Date: 02-15-16 Test Engineer: Steven Kim Configuration: EUT / AC Adapter / Earphone, Y 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	-18.7	V	3.0	39.1	1.0	-56.8	-13.0	-43.8		
		2.4765	-20.6	V	3.0	39.5	1.0	-59.1	-13.0	-46.1		
		3.3020	-21.9	V	3.0	40.1	1.0	-61.0	-13.0	-48.0		
		1.6510	-22.1	H	3.0	39.1	1.0	-60.2	-13.0	-47.2		
		2.4765	-17.5	H	3.0	39.5	1.0	-56.0	-13.0	-43.0		
		3.3020	-22.5	H	3.0	40.1	1.0	-61.6	-13.0	-48.6		
		Mid Channel (836.5MHz)										
		1.6730	-19.7	V	3.0	39.1	1.0	-57.8	-13.0	-44.8		
		2.5090	-20.0	V	3.0	39.5	1.0	-58.5	-13.0	-45.5		
		3.3460	-22.1	V	3.0	40.1	1.0	-61.3	-13.0	-48.3		
		1.6730	-21.5	H	3.0	39.1	1.0	-59.7	-13.0	-46.7		
		2.5090	-18.5	H	3.0	39.5	1.0	-57.0	-13.0	-44.0		
		3.3460	-22.2	H	3.0	40.1	1.0	-61.4	-13.0	-48.4		
		High Channel (847.5MHz)										
		1.6950	-14.0	V	3.0	39.1	1.0	-52.2	-13.0	-39.2		
		2.5425	-19.4	V	3.0	39.6	1.0	-58.0	-13.0	-45.0		
		3.3900	-21.9	V	3.0	40.2	1.0	-61.1	-13.0	-48.1		
		1.6950	-15.1	H	3.0	39.1	1.0	-53.2	-13.0	-40.2		
		2.5425	-12.7	H	3.0	39.6	1.0	-51.3	-13.0	-38.3		
		3.3900	-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.										

		UL Korea, Ltd Suwon Laboratory Above 1GHz High Frequency Substitution Measurement									
LTE Band 5 1.4MHz QPSK	Company: Samsung Project #: 16K22741 Date: 02-15-16 Test Engineer: Steven Kim 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	-23.4	V	3.0	39.1	1.0	-61.5	-13.0	-48.5		
	2.4741	-18.9	V	3.0	39.5	1.0	-57.4	-13.0	-44.4		
	3.2988	-21.5	V	3.0	40.1	1.0	-60.6	-13.0	-47.6		
	1.6494	-23.0	H	3.0	39.1	1.0	-61.1	-13.0	-48.1		
	2.4741	-18.5	H	3.0	39.5	1.0	-57.0	-13.0	-44.0		
	3.2988	-22.1	H	3.0	40.1	1.0	-61.2	-13.0	-48.2		
	Mid Channel (836.5MHz)										
	1.6730	-18.4	V	3.0	39.1	1.0	-56.5	-13.0	-43.5		
	2.5090	-21.0	V	3.0	39.5	1.0	-59.5	-13.0	-46.5		
	3.3460	-21.4	V	3.0	40.1	1.0	-60.5	-13.0	-47.5		
	1.6730	-21.4	H	3.0	39.1	1.0	-59.5	-13.0	-46.5		
	2.5090	-19.2	H	3.0	39.5	1.0	-57.8	-13.0	-44.8		
	3.3460	-21.1	H	3.0	40.1	1.0	-60.3	-13.0	-47.3		
	High Channel (848.3MHz)										
	1.6966	-9.0	V	3.0	39.1	1.0	-47.1	-13.0	-34.1		
	2.5449	-16.9	V	3.0	39.6	1.0	-55.4	-13.0	-42.4		
	3.3932	-21.1	V	3.0	40.2	1.0	-60.2	-13.0	-47.2		
1.6966	-12.7	H	3.0	39.1	1.0	-50.8	-13.0	-37.8			
2.5449	-13.8	H	3.0	39.6	1.0	-52.3	-13.0	-39.3			
3.3932	-21.9	H	3.0	40.2	1.0	-61.1	-13.0	-48.1			
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.											
LTE Band 5 1.4MHz 16QAM	Company: Samsung Project #: 16K22741 Date: 02-15-16 Test Engineer: Steven Kim 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	-23.7	V	3.0	39.1	1.0	-61.8	-13.0	-48.8		
	2.4741	-19.3	V	3.0	39.5	1.0	-57.8	-13.0	-44.8		
	3.2988	-21.8	V	3.0	40.1	1.0	-60.9	-13.0	-47.9		
	1.6494	-23.1	H	3.0	39.1	1.0	-61.3	-13.0	-48.3		
	2.4741	-19.0	H	3.0	39.5	1.0	-57.5	-13.0	-44.5		
	3.2988	-22.3	H	3.0	40.1	1.0	-61.4	-13.0	-48.4		
	Mid Channel (836.5MHz)										
	1.6730	-21.3	V	3.0	39.1	1.0	-59.4	-13.0	-46.4		
	2.5090	-21.2	V	3.0	39.5	1.0	-59.8	-13.0	-46.8		
	3.3460	-21.8	V	3.0	40.1	1.0	-60.9	-13.0	-47.9		
	1.6730	-23.7	H	3.0	39.1	1.0	-61.8	-13.0	-48.8		
	2.5090	-20.6	H	3.0	39.5	1.0	-59.2	-13.0	-46.2		
	3.3460	-21.6	H	3.0	40.1	1.0	-60.7	-13.0	-47.7		
	High Channel (848.3MHz)										
	1.6966	-9.5	V	3.0	39.1	1.0	-47.6	-13.0	-34.6		
	2.5449	-17.1	V	3.0	39.6	1.0	-55.7	-13.0	-42.7		
	3.3932	-21.3	V	3.0	40.2	1.0	-60.5	-13.0	-47.5		
1.6966	-13.9	H	3.0	39.1	1.0	-52.0	-13.0	-39.0			
2.5449	-14.8	H	3.0	39.6	1.0	-53.3	-13.0	-40.3			
3.3932	-21.9	H	3.0	40.2	1.0	-61.1	-13.0	-48.1			
Rev. 03.03.09 Note: No other emissions were detected above the system noise floor.											