

UL Verification Services, Inc.									
Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4788506351							
Date:		2018-06-19							
Test Engineer:		47989							
Configuration:		EUT / AC Adapter / Earphone, Y-Position							
Location:		Chamber 1							
Mode:		LTE_QPSK Band 12 Harmonics, 3MHz Bandwidth							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 700.5MHz									
1401.00	-7.1	V	3.0	43.8	1.0	-49.9	-13.0	-36.9	
2101.50	-12.8	V	3.0	43.3	1.0	-55.1	-13.0	-42.1	
2802.00	-14.4	V	3.0	43.5	1.0	-56.9	-13.0	-43.9	
3502.50	-11.4	V	3.0	43.7	1.0	-54.1	-13.0	-41.1	
4203.00	-14.8	V	3.0	43.9	1.0	-57.6	-13.0	-44.6	
1401.00	-12.0	H	3.0	43.8	1.0	-54.8	-13.0	-41.8	
2101.50	-16.0	H	3.0	43.3	1.0	-58.3	-13.0	-45.3	
2802.00	-19.9	H	3.0	43.5	1.0	-62.4	-13.0	-49.4	
3502.50	-17.9	H	3.0	43.7	1.0	-60.6	-13.0	-47.6	
4203.00	-18.3	H	3.0	43.9	1.0	-61.1	-13.0	-48.1	
Mid Ch, 707.5MHz									
1415.00	-12.1	V	3.0	43.8	1.0	-54.9	-13.0	-41.9	
2122.50	-19.1	V	3.0	43.3	1.0	-61.5	-13.0	-48.5	
2830.00	-16.5	V	3.0	43.5	1.0	-59.0	-13.0	-46.0	
3537.50	-15.8	V	3.0	43.7	1.0	-58.5	-13.0	-45.5	
4245.00	-18.6	V	3.0	43.9	1.0	-61.4	-13.0	-48.4	
1415.00	-20.2	H	3.0	43.8	1.0	-62.9	-13.0	-49.9	
2122.50	-21.6	H	3.0	43.3	1.0	-63.9	-13.0	-50.9	
2830.00	-21.0	H	3.0	43.5	1.0	-63.5	-13.0	-50.5	
3537.50	-18.5	H	3.0	43.7	1.0	-61.2	-13.0	-48.2	
4245.00	-20.0	H	3.0	43.9	1.0	-62.9	-13.0	-49.9	
High Ch, 714.5MHz									
1429.00	-10.0	V	3.0	43.8	1.0	-52.7	-13.0	-39.7	
2143.50	-22.3	V	3.0	43.3	1.0	-64.7	-13.0	-51.7	
2858.00	-10.5	V	3.0	43.5	1.0	-53.0	-13.0	-40.0	
3572.50	-7.4	V	3.0	43.7	1.0	-50.1	-13.0	-37.1	
4287.00	-14.3	V	3.0	43.8	1.0	-57.2	-13.0	-44.2	
1429.00	-16.3	H	3.0	43.8	1.0	-59.1	-13.0	-46.1	
2143.50	-23.4	H	3.0	43.3	1.0	-65.7	-13.0	-52.7	
2858.00	-17.3	H	3.0	43.5	1.0	-59.8	-13.0	-46.8	
3572.50	-14.7	H	3.0	43.7	1.0	-57.5	-13.0	-44.5	
4287.00	-19.1	H	3.0	43.8	1.0	-61.9	-13.0	-48.9	

LTE
 Band 12
 3MHz
 QPSK

UL Verification Services, Inc.									
Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4788506351							
Date:		2018-06-19							
Test Engineer:		47989							
Configuration:		EUT / AC Adapter / Earphone, Y-Position							
Location:		Chamber 1							
Mode:		LTE_16QAM Band 12 Harmonics, 3MHz Bandwidth							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 700.5MHz									
1401.00	-8.8	V	3.0	43.8	1.0	-51.6	-13.0	-38.6	
2101.50	-14.2	V	3.0	43.3	1.0	-56.5	-13.0	-43.5	
2802.00	-14.9	V	3.0	43.5	1.0	-57.4	-13.0	-44.4	
3502.50	-12.5	V	3.0	43.7	1.0	-55.2	-13.0	-42.2	
4203.00	-15.8	V	3.0	43.9	1.0	-58.7	-13.0	-45.7	
1401.00	-13.2	H	3.0	43.8	1.0	-56.0	-13.0	-43.0	
2101.50	-17.2	H	3.0	43.3	1.0	-59.6	-13.0	-46.6	
2802.00	-20.2	H	3.0	43.5	1.0	-62.7	-13.0	-49.7	
3502.50	-18.7	H	3.0	43.7	1.0	-61.4	-13.0	-48.4	
4203.00	-18.5	H	3.0	43.9	1.0	-61.3	-13.0	-48.3	
Mid Ch, 707.5MHz									
1415.00	-13.4	V	3.0	43.8	1.0	-56.1	-13.0	-43.1	
2122.50	-20.1	V	3.0	43.3	1.0	-62.4	-13.0	-49.4	
2830.00	-17.7	V	3.0	43.5	1.0	-60.2	-13.0	-47.2	
3537.50	-16.7	V	3.0	43.7	1.0	-59.4	-13.0	-46.4	
4245.00	-18.8	V	3.0	43.9	1.0	-61.6	-13.0	-48.6	
1415.00	-20.8	H	3.0	43.8	1.0	-63.6	-13.0	-50.6	
2122.50	-22.2	H	3.0	43.3	1.0	-64.5	-13.0	-51.5	
2830.00	-21.1	H	3.0	43.5	1.0	-63.6	-13.0	-50.6	
3537.50	-18.8	H	3.0	43.7	1.0	-61.6	-13.0	-48.6	
4245.00	-20.2	H	3.0	43.9	1.0	-63.0	-13.0	-50.0	
High Ch, 714.5MHz									
1429.00	-10.6	V	3.0	43.8	1.0	-53.4	-13.0	-40.4	
2143.50	-22.0	V	3.0	43.3	1.0	-64.4	-13.0	-51.4	
2858.00	-11.7	V	3.0	43.5	1.0	-54.2	-13.0	-41.2	
3572.50	-8.8	V	3.0	43.7	1.0	-51.5	-13.0	-38.5	
4287.00	-15.2	V	3.0	43.8	1.0	-58.1	-13.0	-45.1	
1429.00	-16.7	H	3.0	43.8	1.0	-59.5	-13.0	-46.5	
2143.50	-23.3	H	3.0	43.3	1.0	-65.7	-13.0	-52.7	
2858.00	-18.0	H	3.0	43.5	1.0	-60.5	-13.0	-47.5	
3572.50	-16.2	H	3.0	43.7	1.0	-58.9	-13.0	-45.9	
4287.00	-19.3	H	3.0	43.8	1.0	-62.1	-13.0	-49.1	

LTE
 Band 12
 3MHz
 16QAM

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4788506351							
Date:		2018-06-19							
Test Engineer:		47989							
Configuration:		EUT / AC Adapter / Earphone, Y-Position							
Location:		Chamber 1							
Mode:		LTE_QPSK Band 12 Harmonics, 1.4MHz Bandwidth							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 699.7MHz									
1399.40	-6.9	V	3.0	43.8	1.0	-49.7	-13.0	-36.7	
2099.10	-11.4	V	3.0	43.3	1.0	-53.7	-13.0	-40.7	
2798.80	-11.0	V	3.0	43.5	1.0	-53.5	-13.0	-40.5	
3498.50	-8.1	V	3.0	43.7	1.0	-50.8	-13.0	-37.8	
4198.20	-13.7	V	3.0	43.9	1.0	-56.5	-13.0	-43.5	
1399.40	-10.1	H	3.0	43.8	1.0	-52.9	-13.0	-39.9	
2099.10	-12.6	H	3.0	43.3	1.0	-55.0	-13.0	-42.0	
2798.80	-17.8	H	3.0	43.5	1.0	-60.2	-13.0	-47.2	
3498.50	-11.9	H	3.0	43.7	1.0	-54.6	-13.0	-41.6	
4198.20	-18.6	H	3.0	43.9	1.0	-61.5	-13.0	-48.5	
Mid Ch, 707.5MHz									
1415.00	-12.6	V	3.0	43.8	1.0	-55.3	-13.0	-42.3	
2122.50	-18.3	V	3.0	43.3	1.0	-60.7	-13.0	-47.7	
2830.00	-16.5	V	3.0	43.5	1.0	-59.0	-13.0	-46.0	
3537.50	-14.7	V	3.0	43.7	1.0	-57.4	-13.0	-44.4	
4245.00	-18.4	V	3.0	43.9	1.0	-61.2	-13.0	-48.2	
1415.00	-16.6	H	3.0	43.8	1.0	-59.4	-13.0	-46.4	
2122.50	-22.7	H	3.0	43.3	1.0	-65.1	-13.0	-52.1	
2830.00	-21.0	H	3.0	43.5	1.0	-63.5	-13.0	-50.5	
3537.50	-18.5	H	3.0	43.7	1.0	-61.2	-13.0	-48.2	
4245.00	-20.0	H	3.0	43.9	1.0	-62.8	-13.0	-49.8	
High Ch, 715.3MHz									
1430.60	-11.1	V	3.0	43.8	1.0	-53.9	-13.0	-40.9	
2145.90	-21.2	V	3.0	43.3	1.0	-63.5	-13.0	-50.5	
2861.20	-8.8	V	3.0	43.5	1.0	-51.3	-13.0	-38.3	
3576.50	-7.5	V	3.0	43.7	1.0	-50.2	-13.0	-37.2	
4291.80	-13.5	V	3.0	43.8	1.0	-56.3	-13.0	-43.3	
1430.60	-16.8	H	3.0	43.8	1.0	-59.5	-13.0	-46.5	
2145.90	-22.6	H	3.0	43.3	1.0	-64.9	-13.0	-51.9	
2861.20	-16.0	H	3.0	43.5	1.0	-58.5	-13.0	-45.5	
3576.50	-12.9	H	3.0	43.7	1.0	-55.6	-13.0	-42.6	
4291.80	-18.9	H	3.0	43.8	1.0	-61.7	-13.0	-48.7	

LTE
 Band 12
 1.4MHz
 QPSK

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement											
LTE Band 12 1.4MHz 16QAM		Company: Samsung Project #: 4788506351 Date: 2018-06-19 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, Y-Position Location: Chamber 1 Mode: LTE_16QAM Band 12 Harmonics, 1.4MHz Bandwidth									
		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
		Low Ch, 699.7MHz									
		1399.40	-8.2	V	3.0	43.8	1.0	-51.0	-13.0	-38.0	
		2099.10	-12.2	V	3.0	43.3	1.0	-54.5	-13.0	-41.5	
		2798.80	-13.0	V	3.0	43.5	1.0	-55.5	-13.0	-42.5	
3498.50	-9.9	V	3.0	43.7	1.0	-52.6	-13.0	-39.6			
4198.20	-14.6	V	3.0	43.9	1.0	-57.5	-13.0	-44.5			
1399.40	-11.0	H	3.0	43.8	1.0	-53.8	-13.0	-40.8			
2099.10	-13.7	H	3.0	43.3	1.0	-56.1	-13.0	-43.1			
2798.80	-18.6	H	3.0	43.5	1.0	-61.1	-13.0	-48.1			
3498.50	-12.9	H	3.0	43.7	1.0	-55.6	-13.0	-42.6			
4198.20	-18.8	H	3.0	43.9	1.0	-61.7	-13.0	-48.7			
Mid Ch, 707.5MHz											
1415.00	-13.6	V	3.0	43.8	1.0	-56.4	-13.0	-43.4			
2122.50	-19.3	V	3.0	43.3	1.0	-61.6	-13.0	-48.6			
2830.00	-17.2	V	3.0	43.5	1.0	-59.7	-13.0	-46.7			
3537.50	-15.3	V	3.0	43.7	1.0	-58.0	-13.0	-45.0			
4245.00	-18.9	V	3.0	43.9	1.0	-61.7	-13.0	-48.7			
1415.00	-17.4	H	3.0	43.8	1.0	-60.1	-13.0	-47.1			
2122.50	-22.3	H	3.0	43.3	1.0	-64.6	-13.0	-51.6			
2830.00	-21.3	H	3.0	43.5	1.0	-63.8	-13.0	-50.8			
3537.50	-18.8	H	3.0	43.7	1.0	-61.5	-13.0	-48.5			
4245.00	-20.1	H	3.0	43.9	1.0	-62.9	-13.0	-49.9			
High Ch, 715.3MHz											
1430.60	-11.7	V	3.0	43.8	1.0	-54.5	-13.0	-41.5			
2145.90	-22.0	V	3.0	43.3	1.0	-64.3	-13.0	-51.3			
2861.20	-10.3	V	3.0	43.5	1.0	-52.8	-13.0	-39.8			
3576.50	-8.1	V	3.0	43.7	1.0	-50.9	-13.0	-37.9			
4291.80	-14.6	V	3.0	43.8	1.0	-57.5	-13.0	-44.5			
1430.60	-17.2	H	3.0	43.8	1.0	-60.0	-13.0	-47.0			
2145.90	-22.7	H	3.0	43.3	1.0	-65.0	-13.0	-52.0			
2861.20	-16.7	H	3.0	43.5	1.0	-59.2	-13.0	-46.2			
3576.50	-14.1	H	3.0	43.7	1.0	-56.8	-13.0	-43.8			
4291.80	-18.0	H	3.0	43.8	1.0	-60.9	-13.0	-47.9			

LTE Band 41

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
		Company: Samsung Project #: 4788506351 Date: 2018-06-22 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, Z-Position Location: Chamber 1 Mode: LTE_QPSK Band 41 Harmonics, 20MHz Bandwidth										
LTE Band 41 20MHz QPSK		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
	Low Ch, 2506MHz											
		5012.00	-12.3	V	3.0	43.8	1.0	-55.1	-25.0	-30.1		
		7518.00	-14.8	V	3.0	42.5	1.0	-56.3	-25.0	-31.3		
		10024.00	-6.1	V	3.0	40.6	1.0	-45.6	-25.0	-20.6		
		5012.00	-12.2	H	3.0	43.8	1.0	-55.0	-25.0	-30.0		
		7518.00	-14.7	H	3.0	42.5	1.0	-56.1	-25.0	-31.1		
		10024.00	-3.0	H	3.0	40.6	1.0	-42.6	-25.0	-17.6		
	Mid Ch, 2593MHz											
		5186.00	-7.8	V	3.0	43.8	1.0	-50.6	-25.0	-25.6		
		7779.00	-14.8	V	3.0	42.3	1.0	-56.1	-25.0	-31.1		
		10372.00	-10.6	V	3.0	40.7	1.0	-50.3	-25.0	-25.3		
		5186.00	-10.9	H	3.0	43.8	1.0	-53.7	-25.0	-28.7		
		7779.00	-7.9	H	3.0	42.3	1.0	-49.2	-25.0	-24.2		
		10372.00	-10.4	H	3.0	40.7	1.0	-50.1	-25.0	-25.1		
	High Ch, 2680MHz											
		5360.00	-10.1	V	3.0	43.7	1.0	-52.8	-25.0	-27.8		
		8040.00	-15.1	V	3.0	42.2	1.0	-56.3	-25.0	-31.3		
		10720.00	-11.1	V	3.0	40.8	1.0	-50.9	-25.0	-25.9		
		5360.00	-13.3	H	3.0	43.7	1.0	-56.1	-25.0	-31.1		
		8040.00	-7.6	H	3.0	42.2	1.0	-48.7	-25.0	-23.7		
		10720.00	-10.3	H	3.0	40.8	1.0	-50.1	-25.0	-25.1		
			UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
			Company: Samsung Project #: 4788506351 Date: 2018-06-22 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, Z-Position Location: Chamber 1 Mode: LTE_16QAM Band 41 Harmonics, 20MHz Bandwidth									
	LTE Band 41 20MHz 16QAM		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2506MHz												
		5012.00	-12.6	V	3.0	43.8	1.0	-55.4	-25.0	-30.4		
		7518.00	-14.5	V	3.0	42.5	1.0	-55.9	-25.0	-30.9		
		10024.00	-6.2	V	3.0	40.6	1.0	-45.8	-25.0	-20.8		
		5012.00	-12.5	H	3.0	43.8	1.0	-55.3	-25.0	-30.3		
		7518.00	-14.3	H	3.0	42.5	1.0	-55.7	-25.0	-30.7		
		10024.00	-3.4	H	3.0	40.6	1.0	-43.0	-25.0	-18.0		
Mid Ch, 2593MHz												
		5186.00	-7.3	V	3.0	43.8	1.0	-50.0	-25.0	-25.0		
		7779.00	-14.8	V	3.0	42.3	1.0	-56.1	-25.0	-31.1		
		10372.00	-10.6	V	3.0	40.7	1.0	-50.3	-25.0	-25.3		
		5186.00	-10.8	H	3.0	43.8	1.0	-53.6	-25.0	-28.6		
		7779.00	-8.6	H	3.0	42.3	1.0	-49.9	-25.0	-24.9		
		10372.00	-10.6	H	3.0	40.7	1.0	-50.3	-25.0	-25.3		
High Ch, 2680MHz												
		5360.00	-11.6	V	3.0	43.7	1.0	-54.3	-25.0	-29.3		
		8040.00	-14.6	V	3.0	42.2	1.0	-55.8	-25.0	-30.8		
		10720.00	-11.3	V	3.0	40.8	1.0	-51.0	-25.0	-26.0		
		5360.00	-12.1	H	3.0	43.7	1.0	-54.8	-25.0	-29.8		
		8040.00	-6.2	H	3.0	42.2	1.0	-47.4	-25.0	-22.4		
		10720.00	-10.8	H	3.0	40.8	1.0	-50.6	-25.0	-25.6		

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
LTE Band 41 15MHz QPSK	Company:	Samsung									
	Project #:	4788506351									
	Date:	2018-06-22									
	Test Engineer:	45585									
	Configuration:	EUT / Adapter / Earphone, Z-Position									
	Location:	Chamber 1									
	Mode:	LTE_QPSK Band 41 Harmonics, 15MHz Bandwidth									
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
	Low Ch, 2503.5MHz										
	5007.00	-12.8	V	3.0	43.8	1.0	-55.6	-25.0	-30.6		
	7510.50	-14.7	V	3.0	42.5	1.0	-56.2	-25.0	-31.2		
	10014.00	-5.8	V	3.0	40.6	1.0	-45.4	-25.0	-20.4		
	Mid Ch, 2593MHz										
	5186.00	-8.0	V	3.0	43.8	1.0	-50.7	-25.0	-25.7		
	7779.00	-15.5	V	3.0	42.3	1.0	-56.8	-25.0	-31.8		
	10372.00	-12.0	V	3.0	40.7	1.0	-51.7	-25.0	-26.7		
	5186.00	-8.5	H	3.0	43.8	1.0	-51.2	-25.0	-26.2		
	7779.00	-8.3	H	3.0	42.3	1.0	-49.7	-25.0	-24.7		
	10372.00	-10.0	H	3.0	40.7	1.0	-49.7	-25.0	-24.7		
	High Ch, 2682.5MHz										
5365.00	-11.6	V	3.0	43.7	1.0	-54.4	-25.0	-29.4			
8047.50	-15.2	V	3.0	42.2	1.0	-56.4	-25.0	-31.4			
10730.00	-12.4	V	3.0	40.8	1.0	-52.2	-25.0	-27.2			
5365.00	-11.2	H	3.0	43.7	1.0	-54.0	-25.0	-29.0			
8047.50	-6.3	H	3.0	42.2	1.0	-47.4	-25.0	-22.4			
10730.00	-10.5	H	3.0	40.8	1.0	-50.3	-25.0	-25.3			
		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
LTE Band 41 15MHz 16QAM	Company:	Samsung									
	Project #:	4788506351									
	Date:	2018-06-22									
	Test Engineer:	45585									
	Configuration:	EUT / Adapter / Earphone, Z-Position									
	Location:	Chamber 1									
	Mode:	LTE_16QAM Band 41 Harmonics, 15MHz Bandwidth									
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
	Low Ch, 2503.5MHz										
	5007.00	-12.6	V	3.0	43.8	1.0	-55.4	-25.0	-30.4		
	7510.50	-14.7	V	3.0	42.5	1.0	-56.1	-25.0	-31.1		
	10014.00	-5.7	V	3.0	40.6	1.0	-45.2	-25.0	-20.2		
	Mid Ch, 2593MHz										
	5186.00	-7.9	V	3.0	43.8	1.0	-50.7	-25.0	-25.7		
	7779.00	-14.8	V	3.0	42.3	1.0	-56.2	-25.0	-31.2		
	10372.00	-10.7	V	3.0	40.7	1.0	-50.4	-25.0	-25.4		
	5186.00	-10.0	H	3.0	43.8	1.0	-52.7	-25.0	-27.7		
	7779.00	-7.8	H	3.0	42.3	1.0	-49.1	-25.0	-24.1		
	10372.00	-9.5	H	3.0	40.7	1.0	-49.1	-25.0	-24.1		
	High Ch, 2682.5MHz										
5365.00	-10.2	V	3.0	43.7	1.0	-52.9	-25.0	-27.9			
8047.50	-14.0	V	3.0	42.2	1.0	-55.2	-25.0	-30.2			
10730.00	-11.9	V	3.0	40.8	1.0	-51.7	-25.0	-26.7			
5365.00	-11.2	H	3.0	43.7	1.0	-53.9	-25.0	-28.9			
8047.50	-6.2	H	3.0	42.2	1.0	-47.4	-25.0	-22.4			
10730.00	-9.9	H	3.0	40.8	1.0	-49.7	-25.0	-24.7			

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement											
LTE Band 41 10MHz QPSK	Company: Samsung Project #: 4788506351 Date: 2018-06-22 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, Z-Position Location: Chamber 1 Mode: LTE_QPSK Band 41 Harmonics, 10MHz Bandwidth										
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
	Low Ch, 2501MHz										
	5002.00	-11.9	V	3.0	43.8	1.0	-54.6	-25.0	-29.6		
	7503.00	-14.4	V	3.0	42.5	1.0	-55.8	-25.0	-30.8		
	10004.00	-5.7	V	3.0	40.6	1.0	-45.3	-25.0	-20.3		
	5002.00	-14.6	H	3.0	43.8	1.0	-57.4	-25.0	-32.4		
	7503.00	-13.4	H	3.0	42.5	1.0	-54.9	-25.0	-29.9		
	10004.00	0.1	H	3.0	40.6	1.0	-39.4	-25.0	-14.4		
	Mid Ch, 2593MHz										
	5186.00	-8.0	V	3.0	43.8	1.0	-50.7	-25.0	-25.7		
	7779.00	-15.4	V	3.0	42.3	1.0	-56.7	-25.0	-31.7		
	10372.00	-11.5	V	3.0	40.7	1.0	-51.2	-25.0	-26.2		
	5186.00	-9.9	H	3.0	43.8	1.0	-52.7	-25.0	-27.7		
	7779.00	-10.4	H	3.0	42.3	1.0	-51.7	-25.0	-26.7		
	10372.00	-9.8	H	3.0	40.7	1.0	-49.5	-25.0	-24.5		
	High Ch, 2685MHz										
	5370.00	-9.7	V	3.0	43.7	1.0	-52.4	-25.0	-27.4		
	8055.00	-15.7	V	3.0	42.2	1.0	-56.9	-25.0	-31.9		
	10740.00	-12.8	V	3.0	40.8	1.0	-52.6	-25.0	-27.6		
	5370.00	-10.8	H	3.0	43.7	1.0	-53.6	-25.0	-28.6		
	8055.00	-6.2	H	3.0	42.2	1.0	-47.3	-25.0	-22.3		
	10740.00	-13.9	H	3.0	40.8	1.0	-53.7	-25.0	-28.7		
	UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
	LTE Band 41 10MHz 16QAM	Company: Samsung Project #: 4788506351 Date: 2018-06-22 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, Z-Position Location: Chamber 1 Mode: LTE_16QAM Band 41 Harmonics, 10MHz Bandwidth									
f MHz		SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 2501MHz											
5002.00		-11.4	V	3.0	43.8	1.0	-54.2	-25.0	-29.2		
7503.00		-14.6	V	3.0	42.5	1.0	-56.1	-25.0	-31.1		
10004.00		-5.5	V	3.0	40.6	1.0	-45.0	-25.0	-20.0		
5002.00		-12.1	H	3.0	43.8	1.0	-54.9	-25.0	-29.9		
7503.00		-14.0	H	3.0	42.5	1.0	-55.4	-25.0	-30.4		
10004.00		0.5	H	3.0	40.6	1.0	-39.0	-25.0	-14.0		
Mid Ch, 2593MHz											
5186.00		-8.1	V	3.0	43.8	1.0	-50.9	-25.0	-25.9		
7779.00		-15.2	V	3.0	42.3	1.0	-56.5	-25.0	-31.5		
10372.00		-10.7	V	3.0	40.7	1.0	-50.4	-25.0	-25.4		
5186.00		-10.2	H	3.0	43.8	1.0	-53.0	-25.0	-28.0		
7779.00		-10.3	H	3.0	42.3	1.0	-51.6	-25.0	-26.6		
10372.00		-10.0	H	3.0	40.7	1.0	-49.7	-25.0	-24.7		
High Ch, 2685MHz											
5370.00		-10.5	V	3.0	43.7	1.0	-53.2	-25.0	-28.2		
8055.00		-14.2	V	3.0	42.2	1.0	-55.4	-25.0	-30.4		
10740.00		-13.6	V	3.0	40.8	1.0	-53.4	-25.0	-28.4		
5370.00		-10.4	H	3.0	43.7	1.0	-53.1	-25.0	-28.1		
8055.00		-6.5	H	3.0	42.2	1.0	-47.7	-25.0	-22.7		
10740.00		-14.3	H	3.0	40.8	1.0	-54.1	-25.0	-29.1		

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
LTE Band 41 5MHz QPSK	Company:		Samsung								
	Project #:		4788506351								
	Date:		2018-06-22								
	Test Engineer:		45585								
	Configuration:		EUT / Adapter / Earphone, Z-Position								
	Location:		Chamber 1								
	Mode:		LTE_QPSK Band 41 Harmonics, 5MHz Bandwidth								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
	Low Ch, 2498.5MHz										
	4997.00	-13.8	V	3.0	43.8	1.0	-56.6	-25.0	-31.6		
	7495.50	-14.8	V	3.0	42.5	1.0	-56.3	-25.0	-31.3		
	9994.00	-6.5	V	3.0	40.6	1.0	-46.0	-25.0	-21.0		
	4997.00	-13.1	H	3.0	43.8	1.0	-55.9	-25.0	-30.9		
	7495.50	-10.4	H	3.0	42.5	1.0	-51.9	-25.0	-26.9		
	9994.00	-0.1	H	3.0	40.6	1.0	-39.6	-25.0	-14.6		
	Mid Ch, 2593MHz										
	5186.00	-8.0	V	3.0	43.8	1.0	-50.8	-25.0	-25.8		
	7779.00	-15.2	V	3.0	42.3	1.0	-56.5	-25.0	-31.5		
	10372.00	-8.8	V	3.0	40.7	1.0	-48.5	-25.0	-23.5		
	5186.00	-11.2	H	3.0	43.8	1.0	-54.0	-25.0	-29.0		
7779.00	-7.4	H	3.0	42.3	1.0	-48.7	-25.0	-23.7			
10372.00	-8.1	H	3.0	40.7	1.0	-47.8	-25.0	-22.8			
High Ch, 2687.5MHz											
5375.00	-10.8	V	3.0	43.7	1.0	-53.5	-25.0	-28.5			
8062.50	-14.6	V	3.0	42.2	1.0	-55.8	-25.0	-30.8			
10750.00	-14.2	V	3.0	40.8	1.0	-54.0	-25.0	-29.0			
5375.00	-9.7	H	3.0	43.7	1.0	-52.4	-25.0	-27.4			
8062.50	-6.9	H	3.0	42.2	1.0	-48.0	-25.0	-23.0			
10750.00	-14.2	H	3.0	40.8	1.0	-54.0	-25.0	-29.0			
		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
LTE Band 41 5MHz 16QAM	Company:		Samsung								
	Project #:		4788506351								
	Date:		2018-06-22								
	Test Engineer:		45585								
	Configuration:		EUT / Adapter / Earphone, Z-Position								
	Location:		Chamber 1								
	Mode:		LTE_16QAM Band 41 Harmonics, 5MHz Bandwidth								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
	Low Ch, 2498.5MHz										
	4997.00	-14.2	V	3.0	43.8	1.0	-57.0	-25.0	-32.0		
	7495.50	-14.8	V	3.0	42.5	1.0	-56.3	-25.0	-31.3		
	9994.00	-6.4	V	3.0	40.6	1.0	-46.0	-25.0	-21.0		
	4997.00	-12.2	H	3.0	43.8	1.0	-55.0	-25.0	-30.0		
	7495.50	-11.0	H	3.0	42.5	1.0	-52.5	-25.0	-27.5		
	9994.00	-0.4	H	3.0	40.6	1.0	-40.0	-25.0	-15.0		
	Mid Ch, 2593MHz										
	5186.00	-7.8	V	3.0	43.8	1.0	-50.5	-25.0	-25.5		
	7779.00	-15.6	V	3.0	42.3	1.0	-56.9	-25.0	-31.9		
	10372.00	-9.2	V	3.0	40.7	1.0	-48.9	-25.0	-23.9		
	5186.00	-11.3	H	3.0	43.8	1.0	-54.1	-25.0	-29.1		
7779.00	-8.8	H	3.0	42.3	1.0	-50.1	-25.0	-25.1			
10372.00	-8.1	H	3.0	40.7	1.0	-47.8	-25.0	-22.8			
High Ch, 2687.5MHz											
5375.00	-11.6	V	3.0	43.7	1.0	-54.4	-25.0	-29.4			
8062.50	-14.1	V	3.0	42.2	1.0	-55.3	-25.0	-30.3			
10750.00	-15.0	V	3.0	40.8	1.0	-54.7	-25.0	-29.7			
5375.00	-10.3	H	3.0	43.7	1.0	-53.0	-25.0	-28.0			
8062.50	-6.7	H	3.0	42.2	1.0	-47.9	-25.0	-22.9			
10750.00	-14.4	H	3.0	40.8	1.0	-54.2	-25.0	-29.2			