

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
LTE Band 12 3MHz QPSK	Company: Samsung Project #: 4788371667 Date: 2018-03-15 Test Engineer: 45574 Configuration: EUT / AC Adapter / Earphone, Z-Position Location: Chamber 3 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	-13.9	V	3.0	41.7	1.0	-54.6	-13.0	-41.6		
	2101.50	2.6	V	3.0	42.0	1.0	-38.3	-13.0	-25.3		
	2802.00	-11.0	V	3.0	41.5	1.0	-51.4	-13.0	-38.4		
	3502.50	5.7	V	3.0	41.0	1.0	-34.3	-13.0	-21.3		
	4203.00	-4.0	V	3.0	40.6	1.0	-43.6	-13.0	-30.6		
	1401.00	-16.4	H	3.0	41.7	1.0	-57.1	-13.0	-44.1		
	2101.50	0.8	H	3.0	42.0	1.0	-40.1	-13.0	-27.1		
	2802.00	-11.9	H	3.0	41.5	1.0	-52.3	-13.0	-39.3		
	3502.50	5.5	H	3.0	41.0	1.0	-34.5	-13.0	-21.5		
	4203.00	-6.4	H	3.0	40.6	1.0	-46.0	-13.0	-33.0		
	Mid Ch, 707.5MHz										
	1415.00	-17.2	V	3.0	41.7	1.0	-57.8	-13.0	-44.8		
	2122.50	-4.5	V	3.0	41.9	1.0	-45.5	-13.0	-32.5		
	2830.00	-14.6	V	3.0	41.4	1.0	-55.1	-13.0	-42.1		
	3537.50	0.0	V	3.0	41.0	1.0	-39.9	-13.0	-26.9		
	4245.00	-10.5	V	3.0	40.5	1.0	-50.0	-13.0	-37.0		
	1415.00	-16.4	H	3.0	41.7	1.0	-57.0	-13.0	-44.0		
	2122.50	-6.0	H	3.0	41.9	1.0	-47.0	-13.0	-34.0		
	2830.00	-15.7	H	3.0	41.4	1.0	-56.2	-13.0	-43.2		
	3537.50	-0.1	H	3.0	41.0	1.0	-40.0	-13.0	-27.0		
	4245.00	-10.8	H	3.0	40.5	1.0	-50.3	-13.0	-37.3		
	High Ch, 714.5MHz										
1429.00	-14.7	V	3.0	41.7	1.0	-55.4	-13.0	-42.4			
2143.50	-4.0	V	3.0	41.9	1.0	-44.9	-13.0	-31.9			
2858.00	-8.9	V	3.0	41.4	1.0	-49.3	-13.0	-36.3			
3572.50	6.2	V	3.0	40.9	1.0	-33.7	-13.0	-20.7			
4287.00	-5.6	V	3.0	40.5	1.0	-45.2	-13.0	-32.2			
1429.00	-16.2	H	3.0	41.7	1.0	-56.9	-13.0	-43.9			
2143.50	-5.0	H	3.0	41.9	1.0	-46.0	-13.0	-33.0			
2858.00	-11.0	H	3.0	41.4	1.0	-51.4	-13.0	-38.4			
3572.50	5.7	H	3.0	40.9	1.0	-34.3	-13.0	-21.3			
4287.00	-7.0	H	3.0	40.5	1.0	-46.5	-13.0	-33.5			
LTE Band 12 3MHz 16QAM	Company: Samsung Project #: 4788371667 Date: 2018-03-15 Test Engineer: 45574 Configuration: EUT / AC Adapter / Earphone, Z-Position Location: Chamber 3 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	-18.7	V	3.0	41.7	1.0	-59.3	-13.0	-46.3		
	2101.50	2.1	V	3.0	42.0	1.0	-38.8	-13.0	-25.8		
	2802.00	-11.8	V	3.0	41.5	1.0	-52.3	-13.0	-39.3		
	3502.50	-10.0	V	3.0	41.0	1.0	-50.0	-13.0	-37.0		
	4203.00	-5.1	V	3.0	40.6	1.0	-44.7	-13.0	-31.7		
	1401.00	-16.1	H	3.0	41.7	1.0	-56.8	-13.0	-43.8		
	2101.50	-1.1	H	3.0	42.0	1.0	-42.0	-13.0	-29.0		
	2802.00	-11.6	H	3.0	41.5	1.0	-52.1	-13.0	-39.1		
	3502.50	5.4	H	3.0	41.0	1.0	-34.6	-13.0	-21.6		
	4203.00	-6.7	H	3.0	40.6	1.0	-46.3	-13.0	-33.3		
	Mid Ch, 707.5MHz										
	1415.00	-17.4	V	3.0	41.7	1.0	-58.1	-13.0	-45.1		
	2122.50	-3.8	V	3.0	41.9	1.0	-44.8	-13.0	-31.8		
	2830.00	-14.5	V	3.0	41.4	1.0	-55.0	-13.0	-42.0		
	3537.50	-1.8	V	3.0	41.0	1.0	-41.8	-13.0	-28.8		
	4245.00	-11.5	V	3.0	40.5	1.0	-51.0	-13.0	-38.0		
	1415.00	-20.8	H	3.0	41.7	1.0	-61.4	-13.0	-48.4		
	2122.50	-5.5	H	3.0	41.9	1.0	-46.5	-13.0	-33.5		
	2830.00	-15.5	H	3.0	41.4	1.0	-56.0	-13.0	-43.0		
	3537.50	-1.5	H	3.0	41.0	1.0	-41.5	-13.0	-28.5		
	4245.00	-12.7	H	3.0	40.5	1.0	-52.2	-13.0	-39.2		
	High Ch, 714.5MHz										
1429.00	-15.1	V	3.0	41.7	1.0	-55.8	-13.0	-42.8			
2143.50	-2.4	V	3.0	41.9	1.0	-43.3	-13.0	-30.3			
2858.00	-9.4	V	3.0	41.4	1.0	-49.8	-13.0	-36.8			
3572.50	4.7	V	3.0	40.9	1.0	-35.3	-13.0	-22.3			
4287.00	-6.2	V	3.0	40.5	1.0	-45.7	-13.0	-32.7			
1429.00	-17.4	H	3.0	41.7	1.0	-58.1	-13.0	-45.1			
2143.50	-3.7	H	3.0	41.9	1.0	-44.6	-13.0	-31.6			
2858.00	-10.5	H	3.0	41.4	1.0	-50.9	-13.0	-37.9			
3572.50	4.6	H	3.0	40.9	1.0	-35.4	-13.0	-22.4			
4287.00	-8.3	H	3.0	40.5	1.0	-47.8	-13.0	-34.8			

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
		Company: Samsung									
		Project #: 4788371667									
		Date: 2018-03-15									
		Test Engineer: 45574									
		Configuration: EUT / AC Adapter / Earphone, Z-Position									
		Location: Chamber 3									
		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	-14.4	V	3.0	41.7	1.0	-55.0	-13.0	-42.0			
2099.10	-8.1	V	3.0	42.0	1.0	-50.1	-13.0	-37.1			
2798.80	3.6	V	3.0	41.5	1.0	-36.8	-13.0	-23.8			
3798.50	-15.4	V	3.0	40.8	1.0	-55.2	-13.0	-42.2			
4198.20	-4.3	V	3.0	40.6	1.0	-43.9	-13.0	-30.9			
1399.40	-15.4	H	3.0	41.7	1.0	-56.0	-13.0	-43.0			
2099.10	-4.6	H	3.0	42.0	1.0	-45.6	-13.0	-32.6			
2798.80	-12.4	H	3.0	41.5	1.0	-52.9	-13.0	-39.9			
3798.50	-17.9	H	3.0	40.8	1.0	-57.7	-13.0	-44.7			
4198.20	-6.5	H	3.0	40.6	1.0	-46.0	-13.0	-33.0			
Mid Ch, 707.5MHz											
1415.00	-18.1	V	3.0	41.7	1.0	-58.8	-13.0	-45.8			
2122.50	-5.8	V	3.0	41.9	1.0	-46.7	-13.0	-33.7			
2830.00	-14.4	V	3.0	41.4	1.0	-54.8	-13.0	-41.8			
3537.50	-1.3	V	3.0	41.0	1.0	-41.3	-13.0	-28.3			
4245.00	-10.2	V	3.0	40.5	1.0	-49.7	-13.0	-36.7			
1415.00	-18.7	H	3.0	41.7	1.0	-59.3	-13.0	-46.3			
2122.50	-5.9	H	3.0	41.9	1.0	-46.9	-13.0	-33.9			
2830.00	-17.3	H	3.0	41.4	1.0	-57.7	-13.0	-44.7			
3537.50	0.0	H	3.0	41.0	1.0	-40.0	-13.0	-27.0			
4245.00	-10.8	H	3.0	40.5	1.0	-50.3	-13.0	-37.3			
High Ch, 715.3MHz											
1430.60	-16.2	V	3.0	41.7	1.0	-56.8	-13.0	-43.8			
2145.90	-5.8	V	3.0	41.9	1.0	-46.7	-13.0	-33.7			
2861.20	-8.9	V	3.0	41.4	1.0	-49.3	-13.0	-36.3			
3576.50	-8.8	V	3.0	40.9	1.0	-48.7	-13.0	-35.7			
4291.80	-7.0	V	3.0	40.5	1.0	-46.5	-13.0	-33.5			
1430.60	-18.1	H	3.0	41.7	1.0	-58.8	-13.0	-45.8			
2145.90	-7.3	H	3.0	41.9	1.0	-48.2	-13.0	-35.2			
2861.20	-11.5	H	3.0	41.4	1.0	-51.9	-13.0	-38.9			
3576.50	4.3	H	3.0	40.9	1.0	-35.7	-13.0	-22.7			
4291.80	-8.3	H	3.0	40.5	1.0	-47.8	-13.0	-34.8			

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
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		Configuration: EUT / AC Adapter / Earphone, Z-Position									
		Location: Chamber 3									
		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	-15.0	V	3.0	41.7	1.0	-55.6	-13.0	-42.6			
2099.10	3.2	V	3.0	42.0	1.0	-37.8	-13.0	-24.8			
2798.80	-12.1	V	3.0	41.5	1.0	-52.6	-13.0	-39.6			
3798.50	-15.9	V	3.0	40.8	1.0	-55.7	-13.0	-42.7			
4198.20	-4.8	V	3.0	40.6	1.0	-44.4	-13.0	-31.4			
1399.40	-15.7	H	3.0	41.7	1.0	-56.3	-13.0	-43.3			
2099.10	1.5	H	3.0	42.0	1.0	-39.5	-13.0	-26.5			
2798.80	-13.4	H	3.0	41.5	1.0	-53.8	-13.0	-40.8			
3798.50	-15.5	H	3.0	40.8	1.0	-55.3	-13.0	-42.3			
4198.20	-6.7	H	3.0	40.6	1.0	-46.3	-13.0	-33.3			
Mid Ch, 707.5MHz											
1415.00	-17.0	V	3.0	41.7	1.0	-57.7	-13.0	-44.7			
2122.50	-5.5	V	3.0	41.9	1.0	-46.5	-13.0	-33.5			
2830.00	-14.2	V	3.0	41.4	1.0	-54.7	-13.0	-41.7			
3537.50	-4.2	V	3.0	41.0	1.0	-44.1	-13.0	-31.1			
4245.00	-10.7	V	3.0	40.5	1.0	-50.3	-13.0	-37.3			
1415.00	-17.7	H	3.0	41.7	1.0	-58.4	-13.0	-45.4			
2122.50	-6.2	H	3.0	41.9	1.0	-47.1	-13.0	-34.1			
2830.00	-16.2	H	3.0	41.4	1.0	-56.6	-13.0	-43.6			
3537.50	-3.1	H	3.0	41.0	1.0	-43.1	-13.0	-30.1			
4245.00	-12.0	H	3.0	40.5	1.0	-51.6	-13.0	-38.6			
High Ch, 715.3MHz											
1430.60	-16.6	V	3.0	41.7	1.0	-57.3	-13.0	-44.3			
2145.90	-5.2	V	3.0	41.9	1.0	-46.1	-13.0	-33.1			
2861.20	-9.0	V	3.0	41.4	1.0	-49.4	-13.0	-36.4			
3576.50	6.6	V	3.0	40.9	1.0	-33.4	-13.0	-20.4			
4291.80	-6.7	V	3.0	40.5	1.0	-46.2	-13.0	-33.2			
1430.60	-16.8	H	3.0	41.7	1.0	-57.5	-13.0	-44.5			
2145.90	-6.5	H	3.0	41.9	1.0	-47.4	-13.0	-34.4			
2861.20	-11.5	H	3.0	41.4	1.0	-51.9	-13.0	-38.9			
3576.50	5.0	H	3.0	40.9	1.0	-35.0	-13.0	-22.0			
4291.80	-9.5	H	3.0	40.5	1.0	-49.1	-13.0	-36.1			