

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement								
		Company: Samsung Project #: 4788312331 Date: 2018-02-05 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, X Position Location: Chamber 2 Mode: LTE_QPSK Band 4 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, 1715MHz										
3430.00	-7.4	V	3.0	39.5	1.0	-45.9	-13.0	-32.9		
5145.00	-9.7	V	3.0	39.8	1.0	-48.5	-13.0	-35.5		
6860.00	-4.4	V	3.0	39.7	1.0	-43.1	-13.0	-30.1		
8575.00	-0.9	V	3.0	39.0	1.0	-38.8	-13.0	-25.8		
3430.00	-6.1	H	3.0	39.5	1.0	-44.6	-13.0	-31.6		
5145.00	-9.8	H	3.0	39.8	1.0	-48.6	-13.0	-35.6		
6860.00	-5.8	H	3.0	39.7	1.0	-44.5	-13.0	-31.5		
8575.00	-7.4	H	3.0	39.0	1.0	-45.3	-13.0	-32.3		
Mid Ch, 1732.5MHz										
3465.00	-6.8	V	3.0	39.5	1.0	-45.3	-13.0	-32.3		
5197.50	-9.3	V	3.0	39.8	1.0	-48.1	-13.0	-35.1		
6930.00	-3.6	V	3.0	39.7	1.0	-42.3	-13.0	-29.3		
8662.50	-4.2	V	3.0	38.9	1.0	-42.1	-13.0	-29.1		
3465.00	-6.1	H	3.0	39.5	1.0	-44.7	-13.0	-31.7		
5197.50	-10.8	H	3.0	39.8	1.0	-49.7	-13.0	-36.7		
6930.00	-6.6	H	3.0	39.7	1.0	-45.2	-13.0	-32.2		
8662.50	-6.6	H	3.0	38.9	1.0	-44.6	-13.0	-31.6		
High Ch, 1750MHz										
3500.00	-11.1	V	3.0	39.5	1.0	-49.7	-13.0	-36.7		
5250.00	-11.6	V	3.0	39.8	1.0	-50.5	-13.0	-37.5		
7000.00	-3.9	V	3.0	39.6	1.0	-42.5	-13.0	-29.5		
8750.00	0.8	V	3.0	38.9	1.0	-37.1	-13.0	-24.1		
3500.00	-8.1	H	3.0	39.5	1.0	-46.7	-13.0	-33.7		
5250.00	-11.2	H	3.0	39.8	1.0	-50.1	-13.0	-37.1		
7000.00	-7.5	H	3.0	39.6	1.0	-46.1	-13.0	-33.1		
8750.00	-1.8	H	3.0	38.9	1.0	-39.7	-13.0	-26.7		
LTE Band 4 10MHz QPSK										
		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement								
		Company: Samsung Project #: 4788312331 Date: 2018-02-05 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, X Position Location: Chamber 2 Mode: LTE_16QAM Band 4 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, 1715MHz										
3430.00	-7.8	V	3.0	39.5	1.0	-46.3	-13.0	-33.3		
5145.00	-9.9	V	3.0	39.8	1.0	-48.7	-13.0	-35.7		
6860.00	-5.3	V	3.0	39.7	1.0	-43.9	-13.0	-30.9		
8575.00	-3.3	V	3.0	39.0	1.0	-41.3	-13.0	-28.3		
3430.00	-6.1	H	3.0	39.5	1.0	-44.6	-13.0	-31.6		
5145.00	-11.0	H	3.0	39.8	1.0	-49.8	-13.0	-36.8		
6860.00	-4.7	H	3.0	39.7	1.0	-43.4	-13.0	-30.4		
8575.00	-7.5	H	3.0	39.0	1.0	-45.5	-13.0	-32.5		
Mid Ch, 1732.5MHz										
3465.00	-7.9	V	3.0	39.5	1.0	-46.4	-13.0	-33.4		
5197.50	-9.5	V	3.0	39.8	1.0	-48.3	-13.0	-35.3		
6930.00	-3.6	V	3.0	39.7	1.0	-42.3	-13.0	-29.3		
8662.50	-4.2	V	3.0	38.9	1.0	-42.1	-13.0	-29.1		
3465.00	-5.6	H	3.0	39.5	1.0	-44.1	-13.0	-31.1		
5197.50	-11.3	H	3.0	39.8	1.0	-50.1	-13.0	-37.1		
6930.00	-6.3	H	3.0	39.7	1.0	-45.0	-13.0	-32.0		
8662.50	-7.3	H	3.0	38.9	1.0	-45.2	-13.0	-32.2		
High Ch, 1750MHz										
3500.00	-11.2	V	3.0	39.5	1.0	-49.8	-13.0	-36.8		
5250.00	-11.8	V	3.0	39.8	1.0	-50.6	-13.0	-37.6		
7000.00	-5.8	V	3.0	39.6	1.0	-44.5	-13.0	-31.5		
8750.00	0.2	V	3.0	38.9	1.0	-37.7	-13.0	-24.7		
3500.00	-8.3	H	3.0	39.5	1.0	-46.8	-13.0	-33.8		
5250.00	-12.0	H	3.0	39.8	1.0	-50.9	-13.0	-37.9		
7000.00	-6.9	H	3.0	39.6	1.0	-45.5	-13.0	-32.5		
8750.00	-1.4	H	3.0	38.9	1.0	-39.3	-13.0	-26.3		
LTE Band 4 10MHz 16QAM										

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement								
		Company: Samsung Project #: 4788312331 Date: 2018-02-01 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, X Position Location: Chamber 2 Mode: LTE_QPSK Band 4 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, 1712.5MHz										
3425.00	-7.7	V	3.0	39.5	1.0	-46.2	-13.0	-33.2		
5137.50	-9.8	V	3.0	39.8	1.0	-48.6	-13.0	-35.6		
6850.00	-3.3	V	3.0	39.7	1.0	-42.0	-13.0	-29.0		
8562.50	0.1	V	3.0	39.0	1.0	-37.8	-13.0	-24.8		
3425.00	-3.8	H	3.0	39.5	1.0	-42.3	-13.0	-29.3		
5137.50	-9.3	H	3.0	39.8	1.0	-48.2	-13.0	-35.2		
6850.00	-5.7	H	3.0	39.7	1.0	-44.4	-13.0	-31.4		
8562.50	-6.7	H	3.0	39.0	1.0	-44.6	-13.0	-31.6		
Mid Ch, 1732.5MHz										
3465.00	-9.3	V	3.0	39.5	1.0	-47.8	-13.0	-34.8		
5197.50	-10.8	V	3.0	39.8	1.0	-49.7	-13.0	-36.7		
6930.00	-5.2	V	3.0	39.7	1.0	-43.8	-13.0	-30.8		
8662.50	-5.0	V	3.0	38.9	1.0	-42.9	-13.0	-29.9		
3465.00	-8.6	H	3.0	39.5	1.0	-47.1	-13.0	-34.1		
5197.50	-10.8	H	3.0	39.8	1.0	-49.6	-13.0	-36.6		
6930.00	-7.0	H	3.0	39.7	1.0	-45.7	-13.0	-32.7		
8662.50	-7.3	H	3.0	38.9	1.0	-45.2	-13.0	-32.2		
High Ch, 1752.5MHz										
3505.00	-9.3	V	3.0	39.5	1.0	-47.9	-13.0	-34.9		
5257.50	-11.3	V	3.0	39.8	1.0	-50.1	-13.0	-37.1		
7010.00	-2.2	V	3.0	39.6	1.0	-40.8	-13.0	-27.8		
8762.50	1.9	V	3.0	38.9	1.0	-36.0	-13.0	-23.0		
3505.00	-9.9	H	3.0	39.5	1.0	-48.4	-13.0	-35.4		
5257.50	-11.3	H	3.0	39.8	1.0	-50.2	-13.0	-37.2		
7010.00	-6.2	H	3.0	39.6	1.0	-44.8	-13.0	-31.8		
8762.50	-3.2	H	3.0	38.9	1.0	-41.1	-13.0	-28.1		
		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement								
		Company: Samsung Project #: 4788312331 Date: 2018-02-01 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, X Position Location: Chamber 2 Mode: LTE_16QAM Band 4 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, 1712.5MHz										
3425.00	-7.3	V	3.0	39.5	1.0	-45.8	-13.0	-32.8		
5137.50	0.0	V	3.0	39.8	1.0	-38.8	-13.0	-25.8		
6850.00	0.0	V	3.0	39.7	1.0	-38.7	-13.0	-25.7		
8562.50	0.0	V	3.0	39.0	1.0	-38.0	-13.0	-25.0		
3425.00	-3.3	H	3.0	39.5	1.0	-41.8	-13.0	-28.8		
5137.50	-9.3	H	3.0	39.8	1.0	-48.2	-13.0	-35.2		
6850.00	-5.1	H	3.0	39.7	1.0	-43.8	-13.0	-30.8		
8562.50	-6.8	H	3.0	39.0	1.0	-44.8	-13.0	-31.8		
Mid Ch, 1732.5MHz										
3465.00	-9.4	V	3.0	39.5	1.0	-47.9	-13.0	-34.9		
5197.50	-10.0	V	3.0	39.8	1.0	-48.8	-13.0	-35.8		
6930.00	-5.9	V	3.0	39.7	1.0	-44.6	-13.0	-31.6		
8662.50	-6.1	V	3.0	38.9	1.0	-44.0	-13.0	-31.0		
3465.00	-8.3	H	3.0	39.5	1.0	-46.8	-13.0	-33.8		
5197.50	-10.7	H	3.0	39.8	1.0	-49.5	-13.0	-36.5		
6930.00	-7.4	H	3.0	39.7	1.0	-46.1	-13.0	-33.1		
8662.50	-7.4	H	3.0	38.9	1.0	-45.3	-13.0	-32.3		
High Ch, 1752.5MHz										
3505.00	0.0	V	3.0	39.5	1.0	-38.5	-13.0	-25.5		
5257.50	0.0	V	3.0	39.8	1.0	-38.8	-13.0	-25.8		
7010.00	0.0	V	3.0	39.6	1.0	-38.6	-13.0	-25.6		
8762.50	0.0	V	3.0	38.9	1.0	-37.9	-13.0	-24.9		
3505.00	0.0	H	3.0	39.5	1.0	-38.5	-13.0	-25.5		
5257.50	0.0	H	3.0	39.8	1.0	-38.8	-13.0	-25.8		
7010.00	0.0	H	3.0	39.6	1.0	-38.6	-13.0	-25.6		
8762.50	0.0	H	3.0	38.9	1.0	-37.9	-13.0	-24.9		

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
		Company: Samsung Project #: 4788312331 Date: 2018-02-01 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, X Position Location: Chamber 2 Mode: LTE_QPSK Band 4 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
LTE Band 4 3MHz QPSK		Low Ch, 1711.5MHz									
		3423.00	-7.9	V	3.0	39.5	1.0	-46.4	-13.0	-33.4	
		5134.50	-10.3	V	3.0	39.8	1.0	-49.1	-13.0	-36.1	
		6846.00	-4.5	V	3.0	39.7	1.0	-43.2	-13.0	-30.2	
		8557.50	-0.4	V	3.0	39.0	1.0	-38.4	-13.0	-25.4	
		3423.00	-5.1	H	3.0	39.5	1.0	-43.6	-13.0	-30.6	
		5134.50	-10.3	H	3.0	39.8	1.0	-49.1	-13.0	-36.1	
		6846.00	-6.6	H	3.0	39.7	1.0	-45.3	-13.0	-32.3	
		8557.50	-5.0	H	3.0	39.0	1.0	-43.0	-13.0	-30.0	
		Mid Ch, 1732.5MHz									
		3465.00	-11.4	V	3.0	39.5	1.0	-49.9	-13.0	-36.9	
		5197.50	-10.5	V	3.0	39.8	1.0	-49.3	-13.0	-36.3	
		6930.00	-3.7	V	3.0	39.7	1.0	-42.4	-13.0	-29.4	
		8662.50	-4.0	V	3.0	38.9	1.0	-42.0	-13.0	-29.0	
		3465.00	-7.8	H	3.0	39.5	1.0	-46.3	-13.0	-33.3	
		5197.50	-10.2	H	3.0	39.8	1.0	-49.1	-13.0	-36.1	
		6930.00	-7.0	H	3.0	39.7	1.0	-45.7	-13.0	-32.7	
		8662.50	-7.0	H	3.0	38.9	1.0	-44.9	-13.0	-31.9	
		High Ch, 1753.5MHz									
		3507.00	-10.2	V	3.0	39.5	1.0	-48.7	-13.0	-35.7	
		5260.50	-11.2	V	3.0	39.8	1.0	-50.0	-13.0	-37.0	
		7014.00	-5.2	V	3.0	39.6	1.0	-43.8	-13.0	-30.8	
		8767.50	-1.2	V	3.0	38.9	1.0	-39.1	-13.0	-26.1	
		3507.00	-8.9	H	3.0	39.5	1.0	-47.5	-13.0	-34.5	
5260.50	-10.4	H	3.0	39.8	1.0	-49.3	-13.0	-36.3			
7014.00	-7.4	H	3.0	39.6	1.0	-46.0	-13.0	-33.0			
8767.50	-1.3	H	3.0	38.9	1.0	-39.2	-13.0	-26.2			
		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
		Company: Samsung Project #: 4788312331 Date: 2018-02-01 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, X Position Location: Chamber 2 Mode: LTE_16QAM Band 4 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
LTE Band 4 3MHz 16QAM		Low Ch, 1711.5MHz									
		3423.00	-8.9	V	3.0	39.5	1.0	-47.4	-13.0	-34.4	
		5134.50	-10.5	V	3.0	39.8	1.0	-49.3	-13.0	-36.3	
		6846.00	-4.3	V	3.0	39.7	1.0	-43.0	-13.0	-30.0	
		8557.50	-0.4	V	3.0	39.0	1.0	-38.4	-13.0	-25.4	
		3423.00	-4.3	H	3.0	39.5	1.0	-42.8	-13.0	-29.8	
		5134.50	-11.0	H	3.0	39.8	1.0	-49.9	-13.0	-36.9	
		6846.00	-7.3	H	3.0	39.7	1.0	-46.0	-13.0	-33.0	
		8557.50	-5.2	H	3.0	39.0	1.0	-43.2	-13.0	-30.2	
		Mid Ch, 1732.5MHz									
		3465.00	-9.5	V	3.0	39.5	1.0	-48.0	-13.0	-35.0	
		5197.50	-10.3	V	3.0	39.8	1.0	-49.1	-13.0	-36.1	
		6930.00	-5.1	V	3.0	39.7	1.0	-43.8	-13.0	-30.8	
		8662.50	-3.9	V	3.0	38.9	1.0	-41.9	-13.0	-28.9	
		3465.00	-8.0	H	3.0	39.5	1.0	-46.5	-13.0	-33.5	
		5197.50	-11.2	H	3.0	39.8	1.0	-50.1	-13.0	-37.1	
		6930.00	-7.7	H	3.0	39.7	1.0	-46.3	-13.0	-33.3	
		8662.50	-6.9	H	3.0	38.9	1.0	-44.9	-13.0	-31.9	
		High Ch, 1753.5MHz									
		3507.00	-10.0	V	3.0	39.5	1.0	-48.5	-13.0	-35.5	
		5260.50	-11.3	V	3.0	39.8	1.0	-50.2	-13.0	-37.2	
		7014.00	-4.8	V	3.0	39.6	1.0	-43.4	-13.0	-30.4	
		8767.50	-2.9	V	3.0	38.9	1.0	-40.8	-13.0	-27.8	
		3507.00	-8.5	H	3.0	39.5	1.0	-47.0	-13.0	-34.0	
5260.50	-10.7	H	3.0	39.8	1.0	-49.6	-13.0	-36.6			
7014.00	-6.9	H	3.0	39.6	1.0	-45.5	-13.0	-32.5			
8767.50	-0.7	H	3.0	38.9	1.0	-38.6	-13.0	-25.6			

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
LTE Band 4 1.4MHz QPSK		Company: Samsung Project #: 4788312331 Date: 2018-02-01 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, X Position Location: Chamber 2 Mode: LTE_QPSK Band 4 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, 1710.7MHz										
		3421.40	-7.7	V	3.0	39.5	1.0	-46.2	-13.0	-33.2		
		5132.10	-10.6	V	3.0	39.8	1.0	-49.4	-13.0	-36.4		
		6842.80	-2.8	V	3.0	39.7	1.0	-41.5	-13.0	-28.5		
		8553.50	1.0	V	3.0	39.0	1.0	-37.0	-13.0	-24.0		
		3421.40	-4.2	H	3.0	39.5	1.0	-42.7	-13.0	-29.7		
		5132.10	-11.1	H	3.0	39.8	1.0	-49.9	-13.0	-36.9		
		6842.80	-6.8	H	3.0	39.7	1.0	-45.5	-13.0	-32.5		
		8553.50	-6.5	H	3.0	39.0	1.0	-44.5	-13.0	-31.5		
		Mid Ch, 1732.5MHz										
		3465.00	-8.2	V	3.0	39.5	1.0	-46.7	-13.0	-33.7		
		5197.50	-10.0	V	3.0	39.8	1.0	-48.8	-13.0	-35.8		
		6930.00	-4.1	V	3.0	39.7	1.0	-42.8	-13.0	-29.8		
		8662.50	-5.5	V	3.0	38.9	1.0	-43.4	-13.0	-30.4		
		3465.00	-8.3	H	3.0	39.5	1.0	-46.9	-13.0	-33.9		
		5197.50	-11.4	H	3.0	39.8	1.0	-50.2	-13.0	-37.2		
		6930.00	-8.2	H	3.0	39.7	1.0	-46.8	-13.0	-33.8		
		8662.50	-6.7	H	3.0	38.9	1.0	-44.7	-13.0	-31.7		
		High Ch, 1754.3MHz										
		3508.60	-11.2	V	3.0	39.5	1.0	-49.8	-13.0	-36.8		
		5262.90	-11.7	V	3.0	39.8	1.0	-50.6	-13.0	-37.6		
		7017.20	-2.8	V	3.0	39.6	1.0	-41.4	-13.0	-28.4		
		8771.50	-1.3	V	3.0	38.9	1.0	-39.2	-13.0	-26.2		
		3508.60	-8.8	H	3.0	39.5	1.0	-47.4	-13.0	-34.4		
		5262.90	-10.8	H	3.0	39.8	1.0	-49.6	-13.0	-36.6		
		7017.20	-6.2	H	3.0	39.6	1.0	-44.9	-13.0	-31.9		
		8771.50	-0.9	H	3.0	38.9	1.0	-38.8	-13.0	-25.8		
				UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement								
				Company: Samsung Project #: 4788312331 Date: 2018-02-01 Test Engineer: 47989 Configuration: EUT / AC Adapter / Earphone, X Position Location: Chamber 2 Mode: LTE_16QAM Band 4 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, 1710.7MHz										
		3421.40	-8.1	V	3.0	39.5	1.0	-46.6	-13.0	-33.6		
		5132.10	-10.7	V	3.0	39.8	1.0	-49.5	-13.0	-36.5		
		6842.80	-2.3	V	3.0	39.7	1.0	-41.0	-13.0	-28.0		
		8553.50	0.6	V	3.0	39.0	1.0	-37.4	-13.0	-24.4		
		3421.40	-4.4	H	3.0	39.5	1.0	-42.9	-13.0	-29.9		
		5132.10	-9.4	H	3.0	39.8	1.0	-48.2	-13.0	-35.2		
		6842.80	-6.7	H	3.0	39.7	1.0	-45.4	-13.0	-32.4		
		8553.50	-6.6	H	3.0	39.0	1.0	-44.6	-13.0	-31.6		
		Mid Ch, 1732.5MHz										
		3465.00	-8.5	V	3.0	39.5	1.0	-47.1	-13.0	-34.1		
5197.50	-10.6	V	3.0	39.8	1.0	-49.5	-13.0	-36.5				
6930.00	-3.6	V	3.0	39.7	1.0	-42.3	-13.0	-29.3				
8662.50	-5.7	V	3.0	38.9	1.0	-43.6	-13.0	-30.6				
3465.00	-8.5	H	3.0	39.5	1.0	-47.0	-13.0	-34.0				
5197.50	-11.1	H	3.0	39.8	1.0	-49.9	-13.0	-36.9				
6930.00	-8.5	H	3.0	39.7	1.0	-47.1	-13.0	-34.1				
8662.50	-7.9	H	3.0	38.9	1.0	-45.8	-13.0	-32.8				
High Ch, 1754.3MHz												
3508.60	-9.9	V	3.0	39.5	1.0	-48.4	-13.0	-35.4				
5262.90	-11.7	V	3.0	39.8	1.0	-50.6	-13.0	-37.6				
7017.20	-2.4	V	3.0	39.6	1.0	-41.0	-13.0	-28.0				
8771.50	-1.3	V	3.0	38.9	1.0	-39.2	-13.0	-26.2				
3508.60	-8.8	H	3.0	39.5	1.0	-47.3	-13.0	-34.3				
5262.90	-10.4	H	3.0	39.8	1.0	-49.2	-13.0	-36.2				
7017.20	-6.4	H	3.0	39.6	1.0	-45.0	-13.0	-32.0				
8771.50	-0.8	H	3.0	38.9	1.0	-38.7	-13.0	-25.7				

LTE Band 2

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
LTE Band 2 20MHz QPSK	Company: Samsung Project #: 4788312331 Date: 2018-02-05 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, X-Position Location: Chamber 1 Mode: LTE_QPSK Band 2 Harmonics, 20MHz 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, 1860MHz											
	3720.00	5.7	V	3.0	43.8	1.0	-37.1	-13.0	-24.1			
	5580.00	0.3	V	3.0	43.7	1.0	-42.4	-13.0	-29.4			
	7440.00	6.2	V	3.0	42.5	1.0	-35.3	-13.0	-22.3			
	3720.00	3.7	H	3.0	43.8	1.0	-39.0	-13.0	-26.0			
	5580.00	-0.1	H	3.0	43.7	1.0	-42.8	-13.0	-29.8			
	7440.00	0.3	H	3.0	42.5	1.0	-41.2	-13.0	-28.2			
	Mid Ch, 1880MHz											
	3760.00	5.6	V	3.0	43.8	1.0	-37.2	-13.0	-24.2			
	5640.00	-1.6	V	3.0	43.7	1.0	-44.3	-13.0	-31.3			
	7520.00	5.7	V	3.0	42.5	1.0	-35.7	-13.0	-22.7			
	3760.00	4.0	H	3.0	43.8	1.0	-38.7	-13.0	-25.7			
	5640.00	-4.2	H	3.0	43.7	1.0	-46.9	-13.0	-33.9			
	7520.00	-0.1	H	3.0	42.5	1.0	-41.6	-13.0	-28.6			
	High Ch, 1900MHz											
	3800.00	5.0	V	3.0	43.8	1.0	-37.8	-13.0	-24.8			
	5700.00	-0.8	V	3.0	43.7	1.0	-43.5	-13.0	-30.5			
	7600.00	6.9	V	3.0	42.4	1.0	-34.5	-13.0	-21.5			
	3800.00	-0.6	H	3.0	43.8	1.0	-43.4	-13.0	-30.4			
	5700.00	-4.0	H	3.0	43.7	1.0	-46.7	-13.0	-33.7			
	7600.00	2.3	H	3.0	42.4	1.0	-39.1	-13.0	-26.1			
			UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
	LTE Band 2 20MHz 16QAM	Company: Samsung Project #: 4788312331 Date: 2018-02-05 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, X-Position Location: Chamber 1 Mode: LTE_16QAM Band 2 Harmonics, 20MHz 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, 1860MHz												
3720.00		5.9	V	3.0	43.8	1.0	-36.8	-13.0	-23.8			
5580.00		-0.1	V	3.0	43.7	1.0	-42.8	-13.0	-29.8			
7440.00		5.8	V	3.0	42.5	1.0	-35.7	-13.0	-22.7			
3720.00		3.5	H	3.0	43.8	1.0	-39.3	-13.0	-26.3			
5580.00		-0.1	H	3.0	43.7	1.0	-42.8	-13.0	-29.8			
7440.00		0.8	H	3.0	42.5	1.0	-40.7	-13.0	-27.7			
Mid Ch, 1880MHz												
3760.00		5.3	V	3.0	43.8	1.0	-37.5	-13.0	-24.5			
5640.00		-2.7	V	3.0	43.7	1.0	-45.4	-13.0	-32.4			
7520.00		5.4	V	3.0	42.5	1.0	-36.1	-13.0	-23.1			
3760.00		3.0	H	3.0	43.8	1.0	-39.8	-13.0	-26.8			
5640.00		-4.0	H	3.0	43.7	1.0	-46.7	-13.0	-33.7			
7520.00		-0.4	H	3.0	42.5	1.0	-41.8	-13.0	-28.8			
High Ch, 1900MHz												
3800.00		5.0	V	3.0	43.8	1.0	-37.8	-13.0	-24.8			
5700.00		-2.5	V	3.0	43.7	1.0	-45.2	-13.0	-32.2			
7600.00		6.4	V	3.0	42.4	1.0	-35.0	-13.0	-22.0			
3800.00		-1.6	H	3.0	43.8	1.0	-44.4	-13.0	-31.4			
5700.00		-3.3	H	3.0	43.7	1.0	-46.0	-13.0	-33.0			
7600.00		2.0	H	3.0	42.4	1.0	-39.4	-13.0	-26.4			

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
		Company: Samsung Project #: 4788312331 Date: 2018-02-02 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, X-Position Location: Chamber 1 Mode: LTE_QPSK Band 2 Harmonics, 15MHz Bandwidth										
LTE Band 2 15MHz 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, 1857.5MHz											
		3715.00	4.0	V	3.0	43.8	1.0	-38.8	-13.0	-25.8		
		5572.50	-1.1	V	3.0	43.7	1.0	-43.8	-13.0	-30.8		
		7430.00	8.8	V	3.0	42.5	1.0	-32.7	-13.0	-19.7		
		3715.00	0.8	H	3.0	43.8	1.0	-42.0	-13.0	-29.0		
		5572.50	-1.7	H	3.0	43.7	1.0	-44.5	-13.0	-31.5		
		7430.00	0.6	H	3.0	42.5	1.0	-40.9	-13.0	-27.9		
	Mid Ch, 1880MHz											
		3760.00	4.4	V	3.0	43.8	1.0	-38.4	-13.0	-25.4		
		5640.00	-3.5	V	3.0	43.7	1.0	-46.2	-13.0	-33.2		
		7520.00	5.4	V	3.0	42.5	1.0	-36.0	-13.0	-23.0		
		3760.00	3.7	H	3.0	43.8	1.0	-39.1	-13.0	-26.1		
		5640.00	-2.7	H	3.0	43.7	1.0	-45.4	-13.0	-32.4		
		7520.00	-0.1	H	3.0	42.5	1.0	-41.5	-13.0	-28.5		
	High Ch, 1902.5MHz											
		3805.00	2.4	V	3.0	43.8	1.0	-40.4	-13.0	-27.4		
		5707.50	-3.3	V	3.0	43.7	1.0	-46.0	-13.0	-33.0		
		7610.00	5.8	V	3.0	42.4	1.0	-35.6	-13.0	-22.6		
		3805.00	0.6	H	3.0	43.8	1.0	-42.3	-13.0	-29.3		
		5707.50	-4.8	H	3.0	43.7	1.0	-47.5	-13.0	-34.5		
		7610.00	-2.6	H	3.0	42.4	1.0	-44.0	-13.0	-31.0		
			UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
			Company: Samsung Project #: 4788312331 Date: 2018-02-02 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, X-Position Location: Chamber 1 Mode: LTE_16QAM Band 2 Harmonics, 15MHz Bandwidth									
	LTE Band 2 15MHz 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, 1857.5MHz										
			3715.00	3.8	V	3.0	43.8	1.0	-38.9	-13.0	-25.9	
			5572.50	-1.0	V	3.0	43.7	1.0	-43.7	-13.0	-30.7	
		7430.00	8.5	V	3.0	42.5	1.0	-33.0	-13.0	-20.0		
		3715.00	1.5	H	3.0	43.8	1.0	-41.2	-13.0	-28.2		
		5572.50	-2.0	H	3.0	43.7	1.0	-44.7	-13.0	-31.7		
		7430.00	0.1	H	3.0	42.5	1.0	-41.4	-13.0	-28.4		
Mid Ch, 1880MHz												
		3760.00	3.5	V	3.0	43.8	1.0	-39.3	-13.0	-26.3		
		5640.00	-3.9	V	3.0	43.7	1.0	-46.6	-13.0	-33.6		
		7520.00	5.7	V	3.0	42.5	1.0	-35.8	-13.0	-22.8		
		3760.00	3.7	H	3.0	43.8	1.0	-39.1	-13.0	-26.1		
		5640.00	-3.8	H	3.0	43.7	1.0	-46.5	-13.0	-33.5		
		7520.00	0.2	H	3.0	42.5	1.0	-41.2	-13.0	-28.2		
High Ch, 1902.5MHz												
		3805.00	3.5	V	3.0	43.8	1.0	-39.3	-13.0	-26.3		
		5707.50	-2.6	V	3.0	43.7	1.0	-45.3	-13.0	-32.3		
		7610.00	5.1	V	3.0	42.4	1.0	-36.3	-13.0	-23.3		
		3805.00	0.3	H	3.0	43.8	1.0	-42.5	-13.0	-29.5		
		5707.50	-4.3	H	3.0	43.7	1.0	-47.0	-13.0	-34.0		
		7610.00	-3.2	H	3.0	42.4	1.0	-44.6	-13.0	-31.6		

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
		Company: Samsung Project #: 4788312331 Date: 2018-02-02 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, X-Position Location: Chamber 1 Mode: LTE_QPSK Band 2 Hamonics, 10MHz Bandwidth										
LTE Band 2 10MHz 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, 1855MHz											
		3710.00	3.1	V	3.0	43.8	1.0		-39.7	-13.0	-26.7	
		5565.00	0.1	V	3.0	43.7	1.0		-42.6	-13.0	-29.6	
		7420.00	6.2	V	3.0	42.5	1.0		-35.3	-13.0	-22.3	
		3710.00	3.1	H	3.0	43.8	1.0		-39.6	-13.0	-26.6	
		5565.00	-0.8	H	3.0	43.7	1.0		-43.6	-13.0	-30.6	
		7420.00	4.1	H	3.0	42.5	1.0		-37.4	-13.0	-24.4	
	Mid Ch, 1880MHz											
		3760.00	3.9	V	3.0	43.8	1.0		-38.9	-13.0	-25.9	
		5640.00	-1.6	V	3.0	43.7	1.0		-44.3	-13.0	-31.3	
		7520.00	3.9	V	3.0	42.5	1.0		-37.6	-13.0	-24.6	
		3760.00	3.8	H	3.0	43.8	1.0		-39.0	-13.0	-26.0	
		5640.00	-3.6	H	3.0	43.7	1.0		-46.3	-13.0	-33.3	
		7520.00	-1.6	H	3.0	42.5	1.0		-43.1	-13.0	-30.1	
	High Ch, 1905MHz											
		3810.00	2.3	V	3.0	43.8	1.0		-40.5	-13.0	-27.5	
		5715.00	-3.4	V	3.0	43.7	1.0		-46.1	-13.0	-33.1	
		7620.00	6.0	V	3.0	42.4	1.0		-35.4	-13.0	-22.4	
		3810.00	-0.4	H	3.0	43.8	1.0		-43.2	-13.0	-30.2	
		5715.00	-4.9	H	3.0	43.7	1.0		-47.6	-13.0	-34.6	
		7620.00	-0.6	H	3.0	42.4	1.0		-42.0	-13.0	-29.0	
			UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
			Company: Samsung Project #: 4788312331 Date: 2018-02-02 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, X-Position Location: Chamber 1 Mode: LTE_16QAM Band 2 Hamonics, 10MHz Bandwidth									
	LTE Band 2 10MHz 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, 1855MHz										
			3710.00	2.9	V	3.0	43.8	1.0		-39.9	-13.0	-26.9
		5565.00	0.0	V	3.0	43.7	1.0		-42.7	-13.0	-29.7	
		7420.00	6.1	V	3.0	42.5	1.0		-35.4	-13.0	-22.4	
		3710.00	2.6	H	3.0	43.8	1.0		-40.2	-13.0	-27.2	
		5565.00	-0.3	H	3.0	43.7	1.0		-43.0	-13.0	-30.0	
		7420.00	4.6	H	3.0	42.5	1.0		-36.9	-13.0	-23.9	
Mid Ch, 1880MHz												
		3760.00	4.0	V	3.0	43.8	1.0		-38.8	-13.0	-25.8	
		5640.00	-2.6	V	3.0	43.7	1.0		-45.3	-13.0	-32.3	
		7520.00	3.3	V	3.0	42.5	1.0		-38.1	-13.0	-25.1	
		3760.00	3.8	H	3.0	43.8	1.0		-38.9	-13.0	-25.9	
		5640.00	-2.1	H	3.0	43.7	1.0		-44.8	-13.0	-31.8	
		7520.00	-1.7	H	3.0	42.5	1.0		-43.1	-13.0	-30.1	
High Ch, 1905MHz												
		3810.00	2.7	V	3.0	43.8	1.0		-40.1	-13.0	-27.1	
		5715.00	-3.8	V	3.0	43.7	1.0		-46.5	-13.0	-33.5	
		7620.00	5.9	V	3.0	42.4	1.0		-35.5	-13.0	-22.5	
		3810.00	-0.9	H	3.0	43.8	1.0		-43.7	-13.0	-30.7	
		5715.00	-4.2	H	3.0	43.7	1.0		-46.9	-13.0	-33.9	
		7620.00	-0.5	H	3.0	42.4	1.0		-41.9	-13.0	-28.9	

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
LTE Band 2 5MHz QPSK	Company: Samsung Project #: 4788312331 Date: 2018-02-02 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, X-Position Location: Chamber 1 Mode: LTE_QPSK Band 2 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, 1852.5MHz										
	3705.00	2.9	V	3.0	43.8	1.0	-39.9	-13.0	-26.9		
	5557.50	-0.5	V	3.0	43.7	1.0	-43.2	-13.0	-30.2		
	7410.00	5.1	V	3.0	42.5	1.0	-36.4	-13.0	-23.4		
	3705.00	3.9	H	3.0	43.8	1.0	-38.8	-13.0	-25.8		
	5557.50	-1.4	H	3.0	43.7	1.0	-44.1	-13.0	-31.1		
	7410.00	3.0	H	3.0	42.5	1.0	-38.5	-13.0	-25.5		
	Mid Ch, 1880MHz										
	3760.00	2.6	V	3.0	43.8	1.0	-40.2	-13.0	-27.2		
	5640.00	-3.5	V	3.0	43.7	1.0	-46.2	-13.0	-33.2		
	7520.00	4.7	V	3.0	42.5	1.0	-36.7	-13.0	-23.7		
	3760.00	4.9	H	3.0	43.8	1.0	-37.8	-13.0	-24.8		
	5640.00	-2.8	H	3.0	43.7	1.0	-45.5	-13.0	-32.5		
	7520.00	-0.3	H	3.0	42.5	1.0	-41.7	-13.0	-28.7		
	High Ch, 1907.5MHz										
	3815.00	0.9	V	3.0	43.8	1.0	-42.0	-13.0	-29.0		
	5722.50	-3.9	V	3.0	43.7	1.0	-46.6	-13.0	-33.6		
	7630.00	4.8	V	3.0	42.4	1.0	-36.6	-13.0	-23.6		
	3815.00	-0.8	H	3.0	43.8	1.0	-43.6	-13.0	-30.6		
	5722.50	-3.4	H	3.0	43.7	1.0	-46.1	-13.0	-33.1		
	7630.00	-0.7	H	3.0	42.4	1.0	-42.1	-13.0	-29.1		
			UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement								
	LTE Band 2 5MHz 16QAM	Company: Samsung Project #: 4788312331 Date: 2018-02-02 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, X-Position Location: Chamber 1 Mode: LTE_16QAM Band 2 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, 1852.5MHz									
3705.00		4.2	V	3.0	43.8	1.0	-38.5	-13.0	-25.5		
5557.50		-0.6	V	3.0	43.7	1.0	-43.3	-13.0	-30.3		
7410.00		6.2	V	3.0	42.5	1.0	-35.3	-13.0	-22.3		
3705.00		3.5	H	3.0	43.8	1.0	-39.2	-13.0	-26.2		
5557.50		-1.7	H	3.0	43.7	1.0	-44.4	-13.0	-31.4		
7410.00		3.6	H	3.0	42.5	1.0	-38.0	-13.0	-25.0		
Mid Ch, 1880MHz											
3760.00		2.1	V	3.0	43.8	1.0	-40.7	-13.0	-27.7		
5640.00		-3.3	V	3.0	43.7	1.0	-46.0	-13.0	-33.0		
7520.00		4.4	V	3.0	42.5	1.0	-37.0	-13.0	-24.0		
3760.00		4.6	H	3.0	43.8	1.0	-38.2	-13.0	-25.2		
5640.00		-3.5	H	3.0	43.7	1.0	-46.2	-13.0	-33.2		
7520.00		-0.4	H	3.0	42.5	1.0	-41.8	-13.0	-28.8		
High Ch, 1907.5MHz											
3815.00		1.3	V	3.0	43.8	1.0	-41.5	-13.0	-28.5		
5722.50		-2.5	V	3.0	43.7	1.0	-45.2	-13.0	-32.2		
7630.00		4.4	V	3.0	42.4	1.0	-37.0	-13.0	-24.0		
3815.00		-1.5	H	3.0	43.8	1.0	-44.3	-13.0	-31.3		
5722.50		-4.7	H	3.0	43.7	1.0	-47.4	-13.0	-34.4		
7630.00		-0.4	H	3.0	42.4	1.0	-41.8	-13.0	-28.8		

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
LTE Band 2 3MHz QPSK	Company: Samsung Project #: 4788312331 Date: 2018-02-02 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, X-Position Location: Chamber 1 Mode: LTE_QPSK Band 2 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, 1851.5MHz											
	3703.00	2.0	V	3.0	43.8	1.0	-40.8	-13.0	-27.8			
	5554.50	-1.0	V	3.0	43.7	1.0	-43.7	-13.0	-30.7			
	7406.00	8.7	V	3.0	42.5	1.0	-32.8	-13.0	-19.8			
	3703.00	2.5	H	3.0	43.8	1.0	-40.3	-13.0	-27.3			
	5554.50	-0.8	H	3.0	43.7	1.0	-43.5	-13.0	-30.5			
	7406.00	0.8	H	3.0	42.5	1.0	-40.7	-13.0	-27.7			
	Mid Ch, 1880MHz											
	3760.00	3.5	V	3.0	43.8	1.0	-39.3	-13.0	-26.3			
	5640.00	-2.7	V	3.0	43.7	1.0	-45.4	-13.0	-32.4			
	7520.00	3.7	V	3.0	42.5	1.0	-37.8	-13.0	-24.8			
	3760.00	2.6	H	3.0	43.8	1.0	-40.2	-13.0	-27.2			
	5640.00	-2.3	H	3.0	43.7	1.0	-45.0	-13.0	-32.0			
	7520.00	-0.4	H	3.0	42.5	1.0	-41.9	-13.0	-28.9			
	High Ch, 1908.5MHz											
	3817.00	0.8	V	3.0	43.8	1.0	-42.0	-13.0	-29.0			
	5725.50	-3.0	V	3.0	43.7	1.0	-45.7	-13.0	-32.7			
	7634.00	5.2	V	3.0	42.4	1.0	-36.2	-13.0	-23.2			
	3817.00	1.4	H	3.0	43.8	1.0	-41.5	-13.0	-28.5			
	5725.50	-4.3	H	3.0	43.7	1.0	-46.9	-13.0	-33.9			
	7634.00	2.0	H	3.0	42.4	1.0	-39.4	-13.0	-26.4			
			UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
	LTE Band 2 3MHz 16QAM	Company: Samsung Project #: 4788312331 Date: 2018-02-02 Test Engineer: 45585 Configuration: EUT / Adapter / Earphone, X-Position Location: Chamber 1 Mode: LTE_16QAM Band 2 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, 1851.5MHz												
3703.00		-0.6	V	3.0	43.8	1.0	-43.4	-13.0	-30.4			
5554.50		-0.8	V	3.0	43.7	1.0	-43.5	-13.0	-30.5			
7406.00		8.7	V	3.0	42.5	1.0	-32.8	-13.0	-19.8			
3703.00		4.1	H	3.0	43.8	1.0	-38.7	-13.0	-25.7			
5554.50		-1.3	H	3.0	43.7	1.0	-44.0	-13.0	-31.0			
7406.00		0.9	H	3.0	42.5	1.0	-40.6	-13.0	-27.6			
Mid Ch, 1880MHz												
3760.00		3.8	V	3.0	43.8	1.0	-39.0	-13.0	-26.0			
5640.00		-2.8	V	3.0	43.7	1.0	-45.5	-13.0	-32.5			
7520.00		4.6	V	3.0	42.5	1.0	-36.8	-13.0	-23.8			
3760.00		2.8	H	3.0	43.8	1.0	-40.0	-13.0	-27.0			
5640.00		-3.3	H	3.0	43.7	1.0	-46.0	-13.0	-33.0			
7520.00		-1.1	H	3.0	42.5	1.0	-42.5	-13.0	-29.5			
High Ch, 1908.5MHz												
3817.00		0.9	V	3.0	43.8	1.0	-41.9	-13.0	-28.9			
5725.50		-3.6	V	3.0	43.7	1.0	-46.2	-13.0	-33.2			
7634.00		5.1	V	3.0	42.4	1.0	-36.3	-13.0	-23.3			
3817.00		1.6	H	3.0	43.8	1.0	-41.2	-13.0	-28.2			
5725.50		-4.5	H	3.0	43.7	1.0	-47.2	-13.0	-34.2			
7634.00		2.2	H	3.0	42.4	1.0	-39.2	-13.0	-26.2			

