

LTE Band 5 10MHz QPSK M2	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-07-01 Test Engineer: 20881 Configuration: EUT, Z-Position_Full Folded Location: Chamber 2 Mode: LTE_QPSK Band 5 Fundamentals, 10MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	829.00	16.16	V	3.0	-0.9	12.20	38.5	-26.3	
	829.00	11.73	H	3.0	-0.9	7.78	38.5	-30.7	
	Mid Ch								
	836.50	17.00	V	3.0	-0.9	13.07	38.5	-25.4	
	836.50	12.19	H	3.0	-0.9	8.25	38.5	-30.2	
High Ch									
844.00	17.93	V	3.0	-0.9	14.01	38.5	-24.5		
844.00	12.40	H	3.0	-0.9	8.48	38.5	-30.0		
LTE Band 5 10MHz 16QAM M2	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-07-01 Test Engineer: 20881 Configuration: EUT, Z-Position_Full Folded Location: Chamber 2 Mode: LTE_16QAM Band 5 Fundamentals, 10MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	829.00	15.09	V	3.0	-0.9	11.13	38.5	-27.4	
	829.00	10.66	H	3.0	-0.9	6.71	38.5	-31.8	
	Mid Ch								
	836.50	15.87	V	3.0	-0.9	11.94	38.5	-26.6	
	836.50	11.01	H	3.0	-0.9	7.07	38.5	-31.4	
High Ch									
844.00	16.30	V	3.0	-0.9	12.38	38.5	-26.1		
844.00	11.41	H	3.0	-0.9	7.49	38.5	-31.0		

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LTE Band 5 3MHz QPSK M2	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung								
	Project #: 4789497384								
	Date: 2020-07-01								
	Test Engineer: 20881								
	Configuration: EUT, Z-Position_Full Folded								
	Location: Chamber 2								
	Mode: LTE_QPSK Band 5 Fundamentals, 3MHz Bandwidth								
	Test Equipment:								
	Receiving: VULB9163-749, and Chamber 2 SMA Cables								
Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable									
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	825.50	16.33	V	3.0	-0.9	12.37	38.5	-26.1	
	825.50	11.52	H	3.0	-0.9	7.56	38.5	-30.9	
	Mid Ch								
	836.50	17.08	V	3.0	-0.9	13.15	38.5	-25.4	
	836.50	12.10	H	3.0	-0.9	8.16	38.5	-30.3	
	High Ch								
	847.50	17.99	V	3.1	-0.9	14.07	38.5	-24.4	
	847.50	12.33	H	3.1	-0.9	8.41	38.5	-30.1	
LTE Band 5 3MHz 16QAM M2	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung								
	Project #: 4789497384								
	Date: 2020-07-01								
	Test Engineer: 20881								
	Configuration: EUT, Z-Position_Full Folded								
	Location: Chamber 2								
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	Test Equipment:								
	Receiving: VULB9163-749, and Chamber 2 SMA Cables								
Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable									
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	825.50	15.00	V	3.0	-0.9	11.04	38.5	-27.5	
	825.50	10.43	H	3.0	-0.9	6.47	38.5	-32.0	
	Mid Ch								
	836.50	15.96	V	3.0	-0.9	12.03	38.5	-26.5	
	836.50	11.04	H	3.0	-0.9	7.10	38.5	-31.4	
	High Ch								
	847.50	16.97	V	3.1	-0.9	13.05	38.5	-25.4	
	847.50	11.42	H	3.1	-0.9	7.50	38.5	-31.0	

LTE Band 5 1.4MHz QPSK M2	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-07-01 Test Engineer: 20881 Configuration: EUT, Z-Position_Full Folded Location: Chamber 2 Mode: LTE_QPSK Band 5 Fundamentals, 1.4MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	824.70	16.14	V	3.0	-1.0	12.18	38.5	-26.3	
	824.70	11.13	H	3.0	-1.0	7.16	38.5	-31.3	
	Mid Ch								
	836.50	16.94	V	3.0	-0.9	13.01	38.5	-25.5	
	836.50	12.17	H	3.0	-0.9	8.23	38.5	-30.3	
High Ch									
848.30	17.79	V	3.0	-0.9	13.88	38.5	-24.6		
848.30	12.03	H	3.0	-0.9	8.12	38.5	-30.4		
LTE Band 5 1.4MHz 16QAM M2	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-07-01 Test Engineer: 20881 Configuration: EUT, Z-Position_Full Folded Location: Chamber 2 Mode: LTE_16QAM Band 5 Fundamentals, 1.4MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	824.70	15.06	V	3.0	-1.0	11.10	38.5	-27.4	
	824.70	10.06	H	3.0	-1.0	6.09	38.5	-32.4	
	Mid Ch								
	836.50	15.82	V	3.0	-0.9	11.89	38.5	-26.6	
	836.50	11.40	H	3.0	-0.9	7.46	38.5	-31.0	
High Ch									
848.30	16.76	V	3.0	-0.9	12.85	38.5	-25.6		
848.30	11.07	H	3.0	-0.9	7.16	38.5	-31.3		

LTE Band 12

LTE Band 12 10MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-23 Test Engineer: 20896 Configuration: EUT / Z-Position_full folded Location: Chamber 2 Mode: LTE_QPSK Band 12 Fundamentals, 10MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	704.00	20.18	V	2.8	-1.1	16.34	34.8	-18.5	
	704.00	11.33	H	2.8	-1.1	7.49	34.8	-27.3	
	Mid Ch								
	707.50	19.96	V	2.8	-1.1	16.12	34.8	-18.7	
	707.50	11.32	H	2.8	-1.1	7.48	34.8	-27.3	
High Ch									
711.00	19.55	V	2.8	-1.1	15.70	34.8	-19.1		
711.00	11.67	H	2.8	-1.1	7.82	34.8	-27.0		
LTE Band 12 10MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-23 Test Engineer: 20896 Configuration: EUT / Z-Position_full folded Location: Chamber 2 Mode: LTE_16QAM Band 12 Fundamentals, 10MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	704.00	18.69	V	2.8	-1.1	14.85	34.8	-19.9	
	704.00	10.21	H	2.8	-1.1	6.37	34.8	-28.4	
	Mid Ch								
	707.50	18.75	V	2.8	-1.1	14.91	34.8	-19.9	
	707.50	10.40	H	2.8	-1.1	6.56	34.8	-28.2	
High Ch									
711.00	18.54	V	2.8	-1.1	14.69	34.8	-20.1		
711.00	10.54	H	2.8	-1.1	6.69	34.8	-28.1		

LTE Band 12 5MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
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	Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	701.50	20.02	V	2.8	-1.1	16.18	34.8	-18.6	
	701.50	11.34	H	2.8	-1.1	7.51	34.8	-27.3	
	Mid Ch								
	707.50	19.39	V	2.8	-1.1	15.55	34.8	-19.3	
	707.50	11.79	H	2.8	-1.1	7.95	34.8	-26.9	
High Ch									
713.50	19.46	V	2.8	-1.1	15.60	34.8	-19.2		
713.50	11.45	H	2.8	-1.1	7.59	34.8	-27.2		
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	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	701.50	18.13	V	2.8	-1.1	14.29	34.8	-20.5	
	701.50	10.53	H	2.8	-1.1	6.70	34.8	-28.1	
	Mid Ch								
	707.50	18.64	V	2.8	-1.1	14.80	34.8	-20.0	
	707.50	10.67	H	2.8	-1.1	6.83	34.8	-28.0	
High Ch									
713.50	18.51	V	2.8	-1.1	14.65	34.8	-20.1		
713.50	10.59	H	2.8	-1.1	6.73	34.8	-28.1		

LTE Band 12 3MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-24 Test Engineer: 20881 Configuration: EUT, Z-Position_Full Folded Location: Chamber 2 Mode: LTE_QPSK Band 12 Fundamentals, 3MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	700.50	19.89	V	2.8	-1.1	16.06	34.8	-18.7	
	700.50	10.90	H	2.8	-1.1	7.07	34.8	-27.7	
	Mid Ch								
	707.50	19.58	V	2.8	-1.1	15.74	34.8	-19.1	
	707.50	11.19	H	2.8	-1.1	7.35	34.8	-27.5	
High Ch									
714.50	19.64	V	2.8	-1.1	15.78	34.8	-19.0		
714.50	11.08	H	2.8	-1.1	7.22	34.8	-27.6		
LTE Band 12 3MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
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	Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	700.50	19.14	V	2.8	-1.1	15.31	34.8	-19.5	
	700.50	9.84	H	2.8	-1.1	6.01	34.8	-28.8	
	Mid Ch								
	707.50	18.68	V	2.8	-1.1	14.84	34.8	-20.0	
	707.50	10.10	H	2.8	-1.1	6.26	34.8	-28.5	
High Ch									
714.50	18.62	V	2.8	-1.1	14.76	34.8	-20.0		
714.50	9.79	H	2.8	-1.1	5.93	34.8	-28.9		

LTE Band 12 1.4MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-24 Test Engineer: 20881 Configuration: EUT, Z-Position_Full Folded Location: Chamber 2 Mode: LTE_QPSK Band 12 Fundamentals, 1.4MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	699.70	19.81	V	2.8	-1.1	15.97	34.8	-18.8	
	699.70	10.84	H	2.8	-1.1	7.01	34.8	-27.8	
	Mid Ch								
	707.50	19.76	V	2.8	-1.1	15.92	34.8	-18.9	
	707.50	11.07	H	2.8	-1.1	7.23	34.8	-27.6	
High Ch									
715.30	19.74	V	2.8	-1.1	15.87	34.8	-18.9		
715.30	10.87	H	2.8	-1.1	7.00	34.8	-27.8		
LTE Band 12 1.4MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-24 Test Engineer: 20881 Configuration: EUT, Z-Position_Full Folded Location: Chamber 2 Mode: LTE_16QAM Band 12 Fundamentals, 1.4MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	699.70	18.64	V	2.8	-1.1	14.80	34.8	-20.0	
	699.70	9.79	H	2.8	-1.1	5.96	34.8	-28.8	
	Mid Ch								
	707.50	18.37	V	2.8	-1.1	14.53	34.8	-20.3	
	707.50	10.14	H	2.8	-1.1	6.30	34.8	-28.5	
High Ch									
715.30	18.79	V	2.8	-1.1	14.92	34.8	-19.9		
715.30	10.04	H	2.8	-1.1	6.17	34.8	-28.6		

LTE Band 13

LTE Band 13 10MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement																																											
	<p> Company: Samsung Project #: 4789497384 Date: 2020-06-30 Test Engineer: 20882 Configuration: EUT, X-Position_Open Location: Chamber 1 Mode: LTE_QPSK Band 13 Fundamentals, 10MHz Bandwidth </p> <p> Test Equipment: Receiving: VULB9163-750, and Chamber 1 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable </p> <table border="1"> <thead> <tr> <th>f MHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBd)</th> <th>ERP (dBm)</th> <th>Limit (dBm)</th> <th>Delta (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td>Mid Ch</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>782.00</td> <td>18.41</td> <td>V</td> <td>2.9</td> <td>-1.1</td> <td>14.42</td> <td>34.8</td> <td>-20.3</td> <td></td> </tr> <tr> <td>782.00</td> <td>23.23</td> <td>H</td> <td>2.9</td> <td>-1.1</td> <td>19.24</td> <td>34.8</td> <td>-15.5</td> <td></td> </tr> </tbody> </table>									f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	Mid Ch									782.00	18.41	V	2.9	-1.1	14.42	34.8	-20.3		782.00	23.23	H	2.9	-1.1	19.24	34.8	-15.5
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes																																				
Mid Ch																																												
782.00	18.41	V	2.9	-1.1	14.42	34.8	-20.3																																					
782.00	23.23	H	2.9	-1.1	19.24	34.8	-15.5																																					
LTE Band 13 10MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement																																											
	<p> Company: Samsung Project #: 4789497384 Date: 2020-06-30 Test Engineer: 20882 Configuration: EUT, X-Position_Open Location: Chamber 1 Mode: LTE_16QAM Band 13 Fundamentals, 10MHz Bandwidth </p> <p> Test Equipment: Receiving: VULB9163-750, and Chamber 1 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable </p> <table border="1"> <thead> <tr> <th>f MHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBd)</th> <th>ERP (dBm)</th> <th>Limit (dBm)</th> <th>Delta (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td>Mid Ch</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>782.00</td> <td>17.40</td> <td>V</td> <td>2.9</td> <td>-1.1</td> <td>13.41</td> <td>34.8</td> <td>-21.4</td> <td></td> </tr> <tr> <td>782.00</td> <td>22.42</td> <td>H</td> <td>2.9</td> <td>-1.1</td> <td>18.43</td> <td>34.8</td> <td>-16.3</td> <td></td> </tr> </tbody> </table>									f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	Mid Ch									782.00	17.40	V	2.9	-1.1	13.41	34.8	-21.4		782.00	22.42	H	2.9	-1.1	18.43	34.8	-16.3
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes																																				
Mid Ch																																												
782.00	17.40	V	2.9	-1.1	13.41	34.8	-21.4																																					
782.00	22.42	H	2.9	-1.1	18.43	34.8	-16.3																																					

LTE Band 13 5MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-30 Test Engineer: 20882 Configuration: EUT, X-Position_Open Location: Chamber 1 Mode: LTE_QPSK Band 13 Fundamentals, 5MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-750, and Chamber 1 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	779.50	18.98	V	2.9	-1.1	15.00	34.8	-19.8	
	779.50	23.47	H	2.9	-1.1	19.49	34.8	-15.3	
	Mid Ch								
	782.00	18.84	V	2.9	-1.1	14.85	34.8	-19.9	
	782.00	23.56	H	2.9	-1.1	19.57	34.8	-15.2	
High Ch									
784.50	18.92	V	2.9	-1.1	14.93	34.8	-19.8		
784.50	23.53	H	2.9	-1.1	19.54	34.8	-15.2		
LTE Band 13 5MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-30 Test Engineer: 20882 Configuration: EUT, X-Position_Open Location: Chamber 1 Mode: LTE_16QAM Band 13 Fundamentals, 5MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-750, and Chamber 1 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	779.50	17.09	V	2.9	-1.1	13.11	34.8	-21.7	
	779.50	22.12	H	2.9	-1.1	18.14	34.8	-16.6	
	Mid Ch								
	782.00	18.13	V	2.9	-1.1	14.14	34.8	-20.6	
	782.00	22.64	H	2.9	-1.1	18.65	34.8	-16.1	
High Ch									
784.50	18.37	V	2.9	-1.1	14.38	34.8	-20.4		
784.50	23.39	H	2.9	-1.1	19.40	34.8	-15.4		

LTE Band 25

LTE Band 25 20MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement										
	Company:		Samsung								
	Project #:		4789497384								
	Date:		2020-06-22								
	Test Engineer:		20881								
	Configuration:		EUT, Z-Position_Open								
	Location:		Chamber 1								
	Mode:		LTE_QPSK Band 25 Fundamentals, 20MHz Bandwidth								
	Test Equipment:		Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables								
			Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes			
Low Ch											
1860.00	15.04	V	4.5	9.4	19.97	33.0	-13.0				
1860.00	16.26	H	4.5	9.4	21.18	33.0	-11.8				
Mid Ch											
1882.50	14.75	V	4.5	9.3	19.50	33.0	-13.5				
1882.50	17.05	H	4.5	9.3	21.80	33.0	-11.2				
High Ch											
1905.00	15.72	V	4.6	9.1	20.27	33.0	-12.7				
1905.00	18.27	H	4.6	9.1	22.82	33.0	-10.2				

LTE Band 25 20MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement										
	Company:		Samsung								
	Project #:		4789497384								
	Date:		2020-06-22								
	Test Engineer:		20881								
	Configuration:		EUT, Z-Position_Open								
	Location:		Chamber 1								
	Mode:		LTE_16QAM Band 25 Fundamentals, 20MHz Bandwidth								
	Test Equipment:		Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables								
			Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes			
Low Ch											
1860.00	14.10	V	4.5	9.4	19.03	33.0	-14.0				
1860.00	15.30	H	4.5	9.4	20.22	33.0	-12.8				
Mid Ch											
1882.50	13.81	V	4.5	9.3	18.56	33.0	-14.4				
1882.50	16.09	H	4.5	9.3	20.84	33.0	-12.2				
High Ch											
1905.00	14.66	V	4.6	9.1	19.21	33.0	-13.8				
1905.00	17.08	H	4.6	9.1	21.63	33.0	-11.4				

LTE Band 25 15MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-22 Test Engineer: 20882 Configuration: EUT, Z-Position_Open Location: Chamber 1 Mode: LTE_QPSK Band 25 Fundamentals, 15MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Delta	Notes
	MHz	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)	
	Low Ch								
	1857.50	14.76	V	4.5	9.5	19.71	33.0	-13.3	
	1857.50	16.59	H	4.5	9.5	21.54	33.0	-11.5	
	Mid Ch								
	1882.50	15.13	V	4.5	9.3	19.88	33.0	-13.1	
1882.50	16.77	H	4.5	9.3	21.52	33.0	-11.5		
High Ch									
1907.50	17.83	V	4.6	9.1	22.35	33.0	-10.7		
1907.50	18.89	H	4.6	9.1	23.41	33.0	-9.6		
LTE Band 25 15MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-22 Test Engineer: 20882 Configuration: EUT, Z-Position_Open Location: Chamber 1 Mode: LTE_16QAM Band 25 Fundamentals, 15MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Delta	Notes
	MHz	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)	
	Low Ch								
	1857.50	13.92	V	4.5	9.5	18.87	33.0	-14.1	
	1857.50	15.53	H	4.5	9.5	20.48	33.0	-12.5	
	Mid Ch								
	1882.50	14.04	V	4.5	9.3	18.79	33.0	-14.2	
1882.50	15.71	H	4.5	9.3	20.46	33.0	-12.5		
High Ch									
1907.50	16.70	V	4.6	9.1	21.22	33.0	-11.8		
1907.50	17.73	H	4.6	9.1	22.25	33.0	-10.8		

LTE Band 25 10MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-22 Test Engineer: 20882 Configuration: EUT, Z-Position_Open Location: Chamber 1 Mode: LTE_QPSK Band 25 Fundamentals, 10MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1855.00	14.76	V	4.5	9.5	19.73	33.0	-13.3	
	1855.00	15.53	H	4.5	9.5	20.50	33.0	-12.5	
	Mid Ch								
	1882.50	15.09	V	4.5	9.3	19.84	33.0	-13.2	
	1882.50	16.47	H	4.5	9.3	21.22	33.0	-11.8	
High Ch									
1910.00	17.42	V	4.6	9.1	21.90	33.0	-11.1		
1910.00	18.42	H	4.6	9.1	22.91	33.0	-10.1		
LTE Band 25 10MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-22 Test Engineer: 20882 Configuration: EUT, Z-Position_Open Location: Chamber 1 Mode: LTE_16QAM Band 25 Fundamentals, 10MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1855.00	13.72	V	4.5	9.5	18.69	33.0	-14.3	
	1855.00	14.42	H	4.5	9.5	19.39	33.0	-13.6	
	Mid Ch								
	1882.50	14.21	V	4.5	9.3	18.96	33.0	-14.0	
	1882.50	15.56	H	4.5	9.3	20.31	33.0	-12.7	
High Ch									
1910.00	16.39	V	4.6	9.1	20.87	33.0	-12.1		
1910.00	17.67	H	4.6	9.1	22.16	33.0	-10.8		

LTE Band 25 5MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-22 Test Engineer: 20882 Configuration: EUT, Z-Position_Open Location: Chamber 1 Mode: LTE_QPSK Band 25 Fundamentals, 5MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1852.50	14.89	V	4.5	9.5	19.88	33.0	-13.1	
	1852.50	16.61	H	4.5	9.5	21.60	33.0	-11.4	
	Mid Ch								
	1882.50	14.05	V	4.5	9.3	18.80	33.0	-14.2	
	1882.50	16.70	H	4.5	9.3	21.45	33.0	-11.6	
High Ch									
1912.50	15.95	V	4.6	9.0	20.41	33.0	-12.6		
1912.50	18.27	H	4.6	9.0	22.73	33.0	-10.3		
LTE Band 25 5MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-22 Test Engineer: 20882 Configuration: EUT, Z-Position_Open Location: Chamber 1 Mode: LTE_16QAM Band 25 Fundamentals, 5MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1852.50	13.72	V	4.5	9.5	18.71	33.0	-14.3	
	1852.50	15.75	H	4.5	9.5	20.74	33.0	-12.3	
	Mid Ch								
	1882.50	13.31	V	4.5	9.3	18.06	33.0	-14.9	
	1882.50	16.06	H	4.5	9.3	20.81	33.0	-12.2	
High Ch									
1912.50	14.87	V	4.6	9.0	19.33	33.0	-13.7		
1912.50	17.11	H	4.6	9.0	21.57	33.0	-11.4		

LTE Band 25 3MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-22 Test Engineer: 20882 Configuration: EUT, Z-Position_Open Location: Chamber 1 Mode: LTE_QPSK Band 25 Fundamentals, 3MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1851.50	14.52	V	4.5	9.5	19.52	33.0	-13.5	
	1851.50	16.34	H	4.5	9.5	21.34	33.0	-11.7	
	Mid Ch								
	1882.50	15.47	V	4.5	9.3	20.22	33.0	-12.8	
	1882.50	17.24	H	4.5	9.3	21.99	33.0	-11.0	
High Ch									
1913.50	14.99	V	4.6	9.0	19.43	33.0	-13.6		
1913.50	17.59	H	4.6	9.0	22.03	33.0	-11.0		
LTE Band 25 3MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-22 Test Engineer: 20882 Configuration: EUT, Z-Position_Open Location: Chamber 1 Mode: LTE_16QAM Band 25 Fundamentals, 3MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1851.50	13.42	V	4.5	9.5	18.42	33.0	-14.6	
	1851.50	15.33	H	4.5	9.5	20.33	33.0	-12.7	
	Mid Ch								
	1882.50	13.04	V	4.5	9.3	17.79	33.0	-15.2	
	1882.50	15.84	H	4.5	9.3	20.59	33.0	-12.4	
High Ch									
1913.50	14.55	V	4.6	9.0	18.99	33.0	-14.0		
1913.50	16.87	H	4.6	9.0	21.31	33.0	-11.7		

LTE Band 25 1.4MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-22 Test Engineer: 20882 Configuration: EUT, Z-Position_Open Location: Chamber 1 Mode: LTE_QPSK Band 25 Fundamentals, 1.4MHz Bandwidth <u>Test Equipment:</u> Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Delta	Notes
	MHz	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)	
	Low Ch								
	1850.70	14.60	V	4.5	9.5	19.60	33.0	-13.4	
	1850.70	16.27	H	4.5	9.5	21.27	33.0	-11.7	
	Mid Ch								
	1882.50	15.61	V	4.5	9.3	20.36	33.0	-12.6	
	1882.50	16.85	H	4.5	9.3	21.60	33.0	-11.4	
	High Ch								
	1914.30	14.64	V	4.6	9.0	19.07	33.0	-13.9	
	1914.30	17.42	H	4.6	9.0	21.85	33.0	-11.1	
LTE Band 25 1.4MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-22 Test Engineer: 20882 Configuration: EUT, Z-Position_Open Location: Chamber 1 Mode: LTE_16QAM Band 25 Fundamentals, 1.4MHz Bandwidth <u>Test Equipment:</u> Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Delta	Notes
	MHz	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)	
	Low Ch								
	1850.70	13.39	V	4.5	9.5	18.39	33.0	-14.6	
	1850.70	15.14	H	4.5	9.5	20.14	33.0	-12.9	
	Mid Ch								
	1882.50	14.56	V	4.5	9.3	19.31	33.0	-13.7	
	1882.50	15.65	H	4.5	9.3	20.40	33.0	-12.6	
	High Ch								
	1914.30	13.86	V	4.6	9.0	18.29	33.0	-14.7	
	1914.30	16.54	H	4.6	9.0	20.97	33.0	-12.0	

LTE Band 26

f MHz		SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
821.50		18.57	V	3.0	-1.0	14.60	50.0	-35.4	Part 90
821.50		23.61	H	3.0	-1.0	19.64	50.0	-30.4	Part 90

UL Verification Services, Inc. High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4789497384							
Date:		2020-06-30							
Test Engineer:		20896							
Configuration:		EUT, X-Position_Open							
Location:		Chamber 2							
Mode:		LTE_QPSK Band 26 Fundamentals, 15MHz Bandwidth							
Test Equipment:									
Receiving: VULB9163-749, and Chamber 2 SMA Cables									
Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable									

UL Verification Services, Inc. High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4789497384							
Date:		2020-06-30							
Test Engineer:		20896							
Configuration:		EUT, X-Position_Open							
Location:		Chamber 2							
Mode:		LTE_QPSK Band 26 Fundamentals, 15MHz Bandwidth							
Test Equipment:									
Receiving: VULB9163-749, and Chamber 2 SMA Cables									
Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable									

f MHz		SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Mid Ch									
831.50		17.60	V	3.0	-0.9	13.65	38.5	-24.9	
831.50		22.38	H	3.0	-0.9	18.43	38.5	-20.1	
High Ch									
841.50		16.89	V	3.0	-0.9	12.96	38.5	-25.5	
841.50		21.18	H	3.0	-0.9	17.26	38.5	-21.2	

LTE
 Band 26
 15MHz
 QPSK

		UL Verification Services, Inc. High Frequency Substitution Measurement								
LTE Band 26 15MHz 16QAM		Company: Samsung Project #: 4789497384 Date: 2020-06-30 Test Engineer: 20896 Configuration: EUT, X-Position_Open Location: Chamber 2 Mode: LTE_16QAM Band 26 Fundamentals, 15MHz Bandwidth Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
		Low Ch								
		821.50	17.54	V	3.0	-1.0	13.57	50.0	-36.4	Part 90
		821.50	22.69	H	3.0	-1.0	18.72	50.0	-31.3	Part 90
		UL Verification Services, Inc. High Frequency Substitution Measurement Company: Samsung Project #: 4789497384 Date: 2020-06-30 Test Engineer: 20896 Configuration: EUT, X-Position_Open Location: Chamber 2 Mode: LTE_16QAM Band 26 Fundamentals, 15MHz Bandwidth Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
		Mid Ch								
		831.50	16.56	V	3.0	-0.9	12.61	38.5	-25.9	
		831.50	21.36	H	3.0	-0.9	17.41	38.5	-21.1	
High Ch										
841.50	16.34	V	3.0	-0.9	12.41	38.5	-26.1			
841.50	20.88	H	3.0	-0.9	16.96	38.5	-21.5			

		UL Verification Services, Inc. High Frequency Substitution Measurement							
		Company:	Samsung						
		Project #:	4789497384						
		Date:	2020-06-30						
		Test Engineer:	20896						
		Configuration:	EUT, X-Position_Open						
		Location:	Chamber 2						
		Mode:	LTE_QPSK Band 26 Fundamentals, 10MHz Bandwidth						
		Test Equipment:							
		Receiving: VULB9163-749, and Chamber 2 SMA Cables							
		Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch									
819.00	18.53	V	3.0	-1.0	14.55	50.0	-35.4	Part 90	
819.00	23.35	H	3.0	-1.0	19.37	50.0	-30.6	Part 90	
LTE									
Band 26									
10MHz									
QPSK									
		UL Verification Services, Inc. High Frequency Substitution Measurement							
		Company:	Samsung						
		Project #:	4789497384						
		Date:	2020-06-30						
		Test Engineer:	20896						
		Configuration:	EUT, X-Position_Open						
		Location:	Chamber 2						
		Mode:	LTE_QPSK Band 26 Fundamentals, 10MHz Bandwidth						
		Test Equipment:							
		Receiving: VULB9163-749, and Chamber 2 SMA Cables							
		Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch									
829.00	16.93	V	3.0	-0.9	12.97	38.5	-25.5		
829.00	22.00	H	3.0	-0.9	18.05	38.5	-20.5		
Mid Ch									
831.50	17.97	V	3.0	-0.9	14.02	38.5	-24.5		
831.50	22.48	H	3.0	-0.9	18.53	38.5	-20.0		
High Ch									
844.00	17.31	V	3.0	-0.9	13.39	38.5	-25.1		
844.00	21.74	H	3.0	-0.9	17.82	38.5	-20.7		

		UL Verification Services, Inc. High Frequency Substitution Measurement							
		Company:	Samsung						
		Project #:	4789497384						
		Date:	2020-06-30						
		Test Engineer:	20896						
		Configuration:	EUT, X-Position_Open						
		Location:	Chamber 2						
		Mode:	LTE_16QAM Band 26 Fundamentals, 10MHz Bandwidth						
		Test Equipment:							
		Receiving: VULB9163-749, and Chamber 2 SMA Cables							
		Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch									
819.00	17.36	V	3.0	-1.0	13.38	50.0	-36.6	Part 90	
819.00	22.42	H	3.0	-1.0	18.44	50.0	-31.6	Part 90	
LTE									
Band 26									
10MHz									
16QAM									
		UL Verification Services, Inc. High Frequency Substitution Measurement							
		Company:	Samsung						
		Project #:	4789497384						
		Date:	2020-06-30						
		Test Engineer:	20896						
		Configuration:	EUT, X-Position_Open						
		Location:	Chamber 2						
		Mode:	LTE_16QAM Band 26 Fundamentals, 10MHz Bandwidth						
		Test Equipment:							
		Receiving: VULB9163-749, and Chamber 2 SMA Cables							
		Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch									
829.00	15.98	V	3.0	-0.9	12.02	38.5	-26.5		
829.00	21.00	H	3.0	-0.9	17.05	38.5	-21.5		
Mid Ch									
831.50	16.43	V	3.0	-0.9	12.48	38.5	-26.0		
831.50	21.19	H	3.0	-0.9	17.24	38.5	-21.3		
High Ch									
844.00	16.03	V	3.0	-0.9	12.11	38.5	-26.4		
844.00	20.26	H	3.0	-0.9	16.34	38.5	-22.2		

LTE Band 26 5MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement																																																																																																	
	Company:		Samsung																																																																																															
	Project #:		4789497384																																																																																															
	Date:		2020-06-30																																																																																															
	Test Engineer:		20896																																																																																															
	Configuration:		EUT, X-Position_Open																																																																																															
	Location:		Chamber 2																																																																																															
	Mode:		LTE_QPSK Band 26 Fundamentals, 5MHz Bandwidth																																																																																															
	Test Equipment:		Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable																																																																																															
	<table border="1"> <thead> <tr> <th>f MHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBd)</th> <th>ERP (dBm)</th> <th>Limit (dBm)</th> <th>Delta (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>816.50</td> <td>18.04</td> <td>V</td> <td>3.0</td> <td>-1.0</td> <td>14.06</td> <td>50.0</td> <td>-35.9</td> <td>Part 90</td> </tr> <tr> <td>816.50</td> <td>23.12</td> <td>H</td> <td>3.0</td> <td>-1.0</td> <td>19.14</td> <td>50.0</td> <td>-30.9</td> <td>Part 90</td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>821.50</td> <td>18.45</td> <td>V</td> <td>3.0</td> <td>-1.0</td> <td>14.48</td> <td>50.0</td> <td>-35.5</td> <td>Part 90</td> </tr> <tr> <td>821.50</td> <td>23.40</td> <td>H</td> <td>3.0</td> <td>-1.0</td> <td>19.43</td> <td>50.0</td> <td>-30.6</td> <td>Part 90</td> </tr> </tbody> </table>									f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	Low Ch									816.50	18.04	V	3.0	-1.0	14.06	50.0	-35.9	Part 90	816.50	23.12	H	3.0	-1.0	19.14	50.0	-30.9	Part 90	Mid Ch									821.50	18.45	V	3.0	-1.0	14.48	50.0	-35.5	Part 90	821.50	23.40	H	3.0	-1.0	19.43	50.0	-30.6	Part 90																										
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816.50	23.12	H	3.0	-1.0	19.14	50.0	-30.9	Part 90																																																																																										
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Test Engineer:		20881																																																																																																
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f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes																																																																																										
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826.50	17.60	V	3.0	-0.9	13.64	38.5	-24.9																																																																																											
826.50	22.75	H	3.0	-0.9	18.79	38.5	-19.7																																																																																											
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831.50	17.85	V	3.0	-0.9	13.90	38.5	-24.6																																																																																											
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UL Verification Services, Inc. High Frequency Substitution Measurement								
Company:		Samsung						
Project #:		4789497384						
Date:		2020-06-30						
Test Engineer:		20896						
Configuration:		EUT, X-Position_Open						
Location:		Chamber 2						
Mode:		LTE_16QAM Band 26 Fundamentals, 5MHz Bandwidth						
Test Equipment:								
Receiving: VULB9163-749, and Chamber 2 SMA Cables								
Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
816.50	16.73	V	3.0	-1.0	12.75	50.0	-37.2	Part 90
816.50	21.56	H	3.0	-1.0	17.58	50.0	-32.4	Part 90
Mid Ch								
821.50	17.47	V	3.0	-1.0	13.50	50.0	-36.5	Part 90
821.50	22.40	H	3.0	-1.0	18.43	50.0	-31.6	Part 90
LTE								
Band 26								
5MHz								
16QAM								
UL Verification Services, Inc. High Frequency Substitution Measurement								
Company:		Samsung						
Project #:		4789497384						
Date:		2020-06-29						
Test Engineer:		20881						
Configuration:		EUT, X-Position_Open						
Location:		Chamber 2						
Mode:		LTE_16QAM Band 26 Fundamentals, 5MHz Bandwidth						
Test Equipment:								
Receiving: VULB9163-749, and Chamber 2 SMA Cables								
Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
826.50	17.15	V	3.0	-0.9	13.19	38.5	-25.3	
826.50	21.53	H	3.0	-0.9	17.57	38.5	-20.9	
Mid Ch								
831.50	17.71	V	3.0	-0.9	13.76	38.5	-24.7	
831.50	21.77	H	3.0	-0.9	17.82	38.5	-20.7	
High Ch								
846.50	16.27	V	3.0	-0.9	12.36	38.5	-26.1	
846.50	21.21	H	3.0	-0.9	17.29	38.5	-21.2	

UL Verification Services, Inc. High Frequency Substitution Measurement								
Company:		Samsung						
Project #:		4789497384						
Date:		2020-06-30						
Test Engineer:		20896						
Configuration:		EUT, X-Position_Open						
Location:		Chamber 2						
Mode:		LTE_QPSK Band 26 Fundamentals, 3MHz Bandwidth						
Test Equipment:								
Receiving: VULB9163-749, and Chamber 2 SMA Cables								
Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
815.50	18.01	V	3.0	-1.0	14.02	50.0	-36.0	Part 90
815.50	22.69	H	3.0	-1.0	18.70	50.0	-31.3	Part 90
Mid Ch								
822.50	18.42	V	3.0	-1.0	14.46	50.0	-35.5	Part 90
822.50	23.51	H	3.0	-1.0	19.55	50.0	-30.5	Part 90
LTE Band 26 3MHz QPSK								
UL Verification Services, Inc. High Frequency Substitution Measurement								
Company:		Samsung						
Project #:		4789497384						
Date:		2020-06-29						
Test Engineer:		20881						
Configuration:		EUT, X-Position_Open						
Location:		Chamber 2						
Mode:		LTE_QPSK Band 26 Fundamentals, 3MHz Bandwidth						
Test Equipment:								
Receiving: VULB9163-749, and Chamber 2 SMA Cables								
Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
825.50	19.26	V	3.0	-0.9	15.30	38.5	-23.2	
825.50	24.21	H	3.0	-0.9	20.25	38.5	-18.3	
Mid Ch								
831.50	17.93	V	3.0	-0.9	13.98	38.5	-24.5	
831.50	22.78	H	3.0	-0.9	18.83	38.5	-19.7	
High Ch								
847.50	17.62	V	3.1	-0.9	13.70	38.5	-24.8	
847.50	22.35	H	3.1	-0.9	18.43	38.5	-20.1	

UL Verification Services, Inc. High Frequency Substitution Measurement									
LTE Band 26 3MHz 16QAM	Company: Samsung Project #: 4789497384 Date: 2020-06-30 Test Engineer: 20896 Configuration: EUT, X-Position_Open Location: Chamber 2 Mode: LTE_16QAM Band 26 Fundamentals, 3MHz Bandwidth								
	Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	815.50	17.14	V	3.0	-1.0	13.15	50.0	-36.8	Part 90
	815.50	21.59	H	3.0	-1.0	17.60	50.0	-32.4	Part 90
	Mid Ch								
	822.50	17.54	V	3.0	-1.0	13.58	50.0	-36.4	Part 90
	822.50	22.45	H	3.0	-1.0	18.49	50.0	-31.5	Part 90
	UL Verification Services, Inc. High Frequency Substitution Measurement								
Company: Samsung Project #: 4789497384 Date: 2020-06-29 Test Engineer: 20881 Configuration: EUT, X-Position_Open Location: Chamber 2 Mode: LTE_16QAM Band 26 Fundamentals, 3MHz Bandwidth									
Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch									
825.50	18.47	V	3.0	-0.9	14.51	50.0	-35.5		
825.50	23.26	H	3.0	-0.9	19.30	50.0	-30.7		
Mid Ch									
831.50	17.15	V	3.0	-0.9	13.20	38.5	-25.3		
831.50	21.77	H	3.0	-0.9	17.82	38.5	-20.7		
High Ch									
847.50	16.74	V	3.1	-0.9	12.82	38.5	-25.7		
847.50	21.24	H	3.1	-0.9	17.32	38.5	-21.2		

UL Verification Services, Inc. High Frequency Substitution Measurement									
LTE Band 26 1.4MHz QPSK	Company: Samsung Project #: 4789497384 Date: 2020-06-30 Test Engineer: 20896 Configuration: EUT, X-Position_Open Location: Chamber 2 Mode: LTE_QPSK Band 26 Fundamentals, 1.4MHz Bandwidth Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	814.70	18.13	V	3.0	-1.0	14.14	50.0	-35.9	Part 90
	814.70	22.38	H	3.0	-1.0	18.40	50.0	-31.6	Part 90
	Mid Ch								
	823.30	18.28	V	3.0	-1.0	14.31	50.0	-35.7	Part 90
	823.30	23.36	H	3.0	-1.0	19.39	50.0	-30.6	Part 90
	UL Verification Services, Inc. High Frequency Substitution Measurement Company: Samsung Project #: 4789497384 Date: 2020-06-29 Test Engineer: 20881 Configuration: EUT, X-Position_Open Location: Chamber 2 Mode: LTE_QPSK Band 26 Fundamentals, 1.4MHz Bandwidth Test Equipment: Receiving: VULB9163-749, and Chamber 2 SMA Cables Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch									
824.70	18.56	V	3.0	-1.0	14.60	38.5	-23.9		
824.70	23.87	H	3.0	-1.0	19.90	38.5	-18.6		
Mid Ch									
831.50	17.24	V	3.0	-0.9	13.29	38.5	-25.2		
831.50	22.54	H	3.0	-0.9	18.59	38.5	-19.9		
High Ch									
848.30	17.02	V	3.0	-0.9	13.11	38.5	-25.4		
848.30	22.01	H	3.0	-0.9	18.10	38.5	-20.4		

UL Verification Services, Inc. High Frequency Substitution Measurement								
Company:		Samsung						
Project #:		4789497384						
Date:		2020-06-30						
Test Engineer:		20896						
Configuration:		EUT, X-Position_Open						
Location:		Chamber 2						
Mode:		LTE_16QAM Band 26 Fundamentals, 1.4MHz Bandwidth						
Test Equipment:								
Receiving: VULB9163-749, and Chamber 2 SMA Cables								
Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
814.70	16.88	V	3.0	-1.0	12.89	50.0	-37.1	Part 90
814.70	21.32	H	3.0	-1.0	17.34	50.0	-32.7	Part 90
Mid Ch								
823.30	17.17	V	3.0	-1.0	13.20	50.0	-36.8	Part 90
823.30	22.46	H	3.0	-1.0	18.49	50.0	-31.5	Part 90
LTE Band 26 1.4MHz 16QAM								
UL Verification Services, Inc. High Frequency Substitution Measurement								
Company:		Samsung						
Project #:		4789497384						
Date:		2020-06-29						
Test Engineer:		20881						
Configuration:		EUT, X-Position_Open						
Location:		Chamber 2						
Mode:		LTE_16QAM Band 26 Fundamentals, 1.4MHz Bandwidth						
Test Equipment:								
Receiving: VULB9163-749, and Chamber 2 SMA Cables								
Substitution: Dipole 3121_DB4, 8.5m SMA-type Cable								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch								
824.70	17.56	V	3.0	-1.0	13.60	38.5	-24.9	
824.70	22.56	H	3.0	-1.0	18.59	38.5	-19.9	
Mid Ch								
831.50	16.34	V	3.0	-0.9	12.39	38.5	-26.1	
831.50	21.56	H	3.0	-0.9	17.61	38.5	-20.9	
High Ch								
848.30	15.74	V	3.0	-0.9	11.83	38.5	-26.7	
848.30	20.76	H	3.0	-0.9	16.85	38.5	-21.7	

LTE Band 41

LTE Band 41 20MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement										
	Company:		Samsung								
	Project #:		4789497384								
	Date:		2020-07-14								
	Test Engineer:		20890								
	Configuration:		EUT, X-Position_half folded								
	Location:		Chamber 1								
	Mode:		LTE_QPSK Band 41 Fundamentals, 20MHz Bandwidth								
	Test Equipment:		Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables								
			Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes			
Low Ch											
2506.00	19.27	V	5.2	9.9	23.94	33.0	-9.1				
2506.00	24.50	H	5.2	9.9	29.17	33.0	-3.8				
Mid Ch											
2593.00	17.38	V	5.3	9.8	21.84	33.0	-11.2				
2593.00	24.29	H	5.3	9.8	28.76	33.0	-4.2				
High Ch											
2680.00	15.09	V	5.4	9.8	19.45	33.0	-13.6				
2680.00	21.20	H	5.4	9.8	25.56	33.0	-7.4				

LTE Band 41 20MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement										
	Company:		Samsung								
	Project #:		4789497384								
	Date:		2020-07-14								
	Test Engineer:		20890								
	Configuration:		EUT, X-Position_half folded								
	Location:		Chamber 1								
	Mode:		LTE_16QAM Band 41 Fundamentals, 20MHz Bandwidth								
	Test Equipment:		Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables								
			Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes			
Low Ch											
2506.00	18.43	V	5.2	9.9	23.10	33.0	-9.9				
2506.00	23.69	H	5.2	9.9	28.36	33.0	-4.6				
Mid Ch											
2593.00	17.28	V	5.3	9.8	21.74	33.0	-11.3				
2593.00	23.54	H	5.3	9.8	28.01	33.0	-5.0				
High Ch											
2680.00	15.36	V	5.4	9.8	19.72	33.0	-13.3				
2680.00	21.99	H	5.4	9.8	26.35	33.0	-6.7				

LTE Band 41 15MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-07-14 Test Engineer: 20890 Configuration: EUT, X-Position_half folded Location: Chamber 1 Mode: LTE_QPSK Band 41 Fundamentals, 15MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	2503.50	19.47	V	5.2	9.9	24.14	33.0	-8.9	
	2503.50	23.22	H	5.2	9.9	27.90	33.0	-5.1	
	Mid Ch								
	2593.00	17.71	V	5.3	9.8	22.17	33.0	-10.8	
	2593.00	24.42	H	5.3	9.8	28.89	33.0	-4.1	
High Ch									
2682.50	15.04	V	5.4	9.8	19.40	33.0	-13.6		
2682.50	21.65	H	5.4	9.8	26.01	33.0	-7.0		
LTE Band 41 15MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-07-14 Test Engineer: 20890 Configuration: EUT, X-Position_half folded Location: Chamber 1 Mode: LTE_16QAM Band 41 Fundamentals, 15MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	2503.50	18.14	V	5.2	9.9	22.81	33.0	-10.2	
	2503.50	22.34	H	5.2	9.9	27.02	33.0	-6.0	
	Mid Ch								
	2593.00	17.17	V	5.3	9.8	21.63	33.0	-11.4	
	2593.00	23.22	H	5.3	9.8	27.69	33.0	-5.3	
High Ch									
2682.50	14.91	V	5.4	9.8	19.27	33.0	-13.7		
2682.50	22.10	H	5.4	9.8	26.46	33.0	-6.5		

LTE Band 41 10MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-07-14 Test Engineer: 20890 Configuration: EUT, X-Position_half folded Location: Chamber 1 Mode: LTE_QPSK Band 41 Fundamentals, 10MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	2501.00	18.29	V	5.2	9.9	22.97	33.0	-10.0	
	2501.00	22.71	H	5.2	9.9	27.39	33.0	-5.6	
	Mid Ch								
	2593.00	18.00	V	5.3	9.8	22.46	33.0	-10.5	
	2593.00	24.14	H	5.3	9.8	28.61	33.0	-4.4	
High Ch									
2685.00	14.82	V	5.5	9.8	19.18	33.0	-13.8		
2685.00	21.28	H	5.5	9.8	25.64	33.0	-7.4		
LTE Band 41 10MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-07-14 Test Engineer: 20890 Configuration: EUT, X-Position_half folded Location: Chamber 1 Mode: LTE_16QAM Band 41 Fundamentals, 10MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	2501.00	17.44	V	5.2	9.9	22.12	33.0	-10.9	
	2501.00	21.87	H	5.2	9.9	26.55	33.0	-6.4	
	Mid Ch								
	2593.00	17.98	V	5.3	9.8	22.44	33.0	-10.6	
	2593.00	23.38	H	5.3	9.8	27.85	33.0	-5.2	
High Ch									
2685.00	14.81	V	5.5	9.8	19.17	33.0	-13.8		
2685.00	20.87	H	5.5	9.8	25.23	33.0	-7.8		

LTE Band 41 5MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-07-14 Test Engineer: 20890 Configuration: EUT, X-Position_half folded Location: Chamber 1 Mode: LTE_QPSK Band 41 Fundamentals, 5MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	2498.50	18.35	V	5.2	9.9	23.04	33.0	-10.0	
	2498.50	23.27	H	5.2	9.9	27.95	33.0	-5.0	
	Mid Ch								
	2593.00	17.97	V	5.3	9.8	22.43	33.0	-10.6	
	2593.00	23.79	H	5.3	9.8	28.26	33.0	-4.7	
High Ch									
2687.50	15.62	V	5.5	9.8	19.98	33.0	-13.0		
2687.50	21.38	H	5.5	9.8	25.74	33.0	-7.3		
LTE Band 41 5MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-07-14 Test Engineer: 20890 Configuration: EUT, X-Position_half folded Location: Chamber 1 Mode: LTE_16QAM Band 41 Fundamentals, 5MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168717], and Chamber 1 SMA Cables Substitution: Horn 3115[00167211], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	2498.50	17.10	V	5.2	9.9	21.79	33.0	-11.2	
	2498.50	22.06	H	5.2	9.9	26.74	33.0	-6.3	
	Mid Ch								
	2593.00	16.74	V	5.3	9.8	21.20	33.0	-11.8	
	2593.00	22.90	H	5.3	9.8	27.37	33.0	-5.6	
High Ch									
2687.50	15.29	V	5.5	9.8	19.65	33.0	-13.3		
2687.50	21.06	H	5.5	9.8	25.42	33.0	-7.6		

LTE Band 66

LTE Band 66 20MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-29 Test Engineer: 20881 Configuration: EUT, X-Position_Open Location: Chamber 2 Mode: LTE_QPSK Band 66 Fundamentals, 20MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1720.00	17.39	V	4.3	9.4	22.41	30.0	-7.6	
	1720.00	19.54	H	4.3	9.4	24.56	30.0	-5.4	
	Mid Ch								
	1745.00	16.65	V	4.4	9.4	21.74	30.0	-8.3	
	1745.00	19.39	H	4.4	9.4	24.48	30.0	-5.5	
High Ch									
1770.00	15.63	V	4.4	9.5	20.73	30.0	-9.3		
1770.00	18.37	H	4.4	9.5	23.47	30.0	-6.5		
LTE Band 66 20MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-29 Test Engineer: 20896 Configuration: EUT/ X-Position_Open Location: Chamber 2 Mode: LTE_16QAM Band 66 Fundamentals, 20MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1720.00	16.29	V	4.3	9.4	21.31	30.0	-8.7	
	1720.00	18.59	H	4.3	9.4	23.61	30.0	-6.4	
	Mid Ch								
	1745.00	15.72	V	4.4	9.4	20.81	30.0	-9.2	
	1745.00	18.51	H	4.4	9.4	23.60	30.0	-6.4	
High Ch									
1770.00	14.60	V	4.4	9.5	19.70	30.0	-10.3		
1770.00	17.11	H	4.4	9.5	22.21	30.0	-7.8		

LTE Band 66 15MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-29 Test Engineer: 20881 Configuration: EUT, X-Position_Open Location: Chamber 2 Mode: LTE_QPSK Band 66 Fundamentals, 15MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1717.50	17.66	V	4.3	9.3	22.68	30.0	-7.3	
	1717.50	19.77	H	4.3	9.3	24.79	30.0	-5.2	
	Mid Ch								
	1745.00	16.13	V	4.4	9.4	21.22	30.0	-8.8	
	1745.00	19.15	H	4.4	9.4	24.24	30.0	-5.8	
High Ch									
1772.50	15.44	V	4.4	9.5	20.53	30.0	-9.5		
1772.50	18.54	H	4.4	9.5	23.63	30.0	-6.4		
LTE Band 66 15MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-29 Test Engineer: 20896 Configuration: EUT/ X-Position_Open Location: Chamber 2 Mode: LTE_16QAM Band 66 Fundamentals, 15MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1717.50	16.72	V	4.3	9.3	21.74	30.0	-8.3	
	1717.50	19.00	H	4.3	9.3	24.02	30.0	-6.0	
	Mid Ch								
	1745.00	15.13	V	4.4	9.4	20.22	30.0	-9.8	
	1745.00	18.17	H	4.4	9.4	23.26	30.0	-6.7	
High Ch									
1772.50	14.78	V	4.4	9.5	19.87	30.0	-10.1		
1772.50	17.62	H	4.4	9.5	22.71	30.0	-7.3		

LTE Band 66 10MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-29 Test Engineer: 20896 Configuration: EUT/ X-Position_Open Location: Chamber 2 Mode: LTE_QPSK Band 66 Fundamentals, 10MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1715.00	16.83	V	4.3	9.3	21.84	30.0	-8.2	
	1715.00	19.76	H	4.3	9.3	24.77	30.0	-5.2	
	Mid Ch								
	1745.00	16.68	V	4.4	9.4	21.77	30.0	-8.2	
	1745.00	19.73	H	4.4	9.4	24.82	30.0	-5.2	
High Ch									
1775.00	15.23	V	4.4	9.5	20.33	30.0	-9.7		
1775.00	17.62	H	4.4	9.5	22.72	30.0	-7.3		
LTE Band 66 10MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-29 Test Engineer: 20896 Configuration: EUT / X-Position_Open Location: Chamber 2 Mode: LTE_16QAM Band 66 Fundamentals, 10MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1715.00	15.79	V	4.3	9.3	20.80	30.0	-9.2	
	1715.00	18.54	H	4.3	9.3	23.55	30.0	-6.4	
	Mid Ch								
	1745.00	15.39	V	4.4	9.4	20.48	30.0	-9.5	
	1745.00	18.38	H	4.4	9.4	23.47	30.0	-6.5	
High Ch									
1775.00	15.94	V	4.4	9.5	21.04	30.0	-9.0		
1775.00	17.40	H	4.4	9.5	22.50	30.0	-7.5		

LTE Band 66 5MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement																																																																																																
	<p> Company: Samsung Project #: 4789497384 Date: 2020-06-29 Test Engineer: 20896 Configuration: EUT/ X-Position_Open Location: Chamber 2 Mode: LTE_QPSK Band 66 Fundamentals, 5MHz Bandwidth </p> <p> Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 8.5m SMA-type Cable </p> <table border="1"> <thead> <tr> <th>f MHz</th> <th>SG reading (dBm)</th> <th>Ant. Pol. (H/V)</th> <th>Cable Loss (dB)</th> <th>Antenna Gain (dBi)</th> <th>EIRP (dBm)</th> <th>Limit (dBm)</th> <th>Delta (dB)</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td colspan="9">Low Ch</td> </tr> <tr> <td>1712.50</td> <td>15.94</td> <td>V</td> <td>4.3</td> <td>9.3</td> <td>20.94</td> <td>30.0</td> <td>-9.1</td> <td></td> </tr> <tr> <td>1712.50</td> <td>19.05</td> <td>H</td> <td>4.3</td> <td>9.3</td> <td>24.05</td> <td>30.0</td> <td>-5.9</td> <td></td> </tr> <tr> <td colspan="9">Mid Ch</td> </tr> <tr> <td>1745.00</td> <td>16.34</td> <td>V</td> <td>4.4</td> <td>9.4</td> <td>21.43</td> <td>30.0</td> <td>-8.6</td> <td></td> </tr> <tr> <td>1745.00</td> <td>19.30</td> <td>H</td> <td>4.4</td> <td>9.4</td> <td>24.39</td> <td>30.0</td> <td>-5.6</td> <td></td> </tr> <tr> <td colspan="9">High Ch</td> </tr> <tr> <td>1777.50</td> <td>16.54</td> <td>V</td> <td>4.4</td> <td>9.5</td> <td>21.64</td> <td>30.0</td> <td>-8.4</td> <td></td> </tr> <tr> <td>1777.50</td> <td>18.04</td> <td>H</td> <td>4.4</td> <td>9.5</td> <td>23.14</td> <td>30.0</td> <td>-6.9</td> <td></td> </tr> </tbody> </table>								f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	Low Ch									1712.50	15.94	V	4.3	9.3	20.94	30.0	-9.1		1712.50	19.05	H	4.3	9.3	24.05	30.0	-5.9		Mid Ch									1745.00	16.34	V	4.4	9.4	21.43	30.0	-8.6		1745.00	19.30	H	4.4	9.4	24.39	30.0	-5.6		High Ch									1777.50	16.54	V	4.4	9.5	21.64	30.0	-8.4		1777.50	18.04	H	4.4	9.5	23.14	30.0	-6.9
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f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes																																																																																									
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LTE Band 66 3MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-29 Test Engineer: 20896 Configuration: EUT/ X-Position_Open Location: Chamber 2 Mode: LTE_QPSK Band 66 Fundamentals, 3MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1711.50	16.04	V	4.3	9.3	21.05	30.0	-9.0	
	1711.50	18.79	H	4.3	9.3	23.80	30.0	-6.2	
	Mid Ch								
	1745.00	16.44	V	4.4	9.4	21.53	30.0	-8.5	
	1745.00	19.56	H	4.4	9.4	24.65	30.0	-5.4	
High Ch									
1778.50	16.87	V	4.4	9.5	21.97	30.0	-8.0		
1778.50	18.09	H	4.4	9.5	23.19	30.0	-6.8		
LTE Band 66 3MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-29 Test Engineer: 20896 Configuration: EUT / X-Position_Open Location: Chamber 2 Mode: LTE_16QAM Band 66 Fundamentals, 3MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1711.50	15.17	V	4.3	9.3	20.18	30.0	-9.8	
	1711.50	18.10	H	4.3	9.3	23.11	30.0	-6.9	
	Mid Ch								
	1745.00	15.51	V	4.4	9.4	20.60	30.0	-9.4	
	1745.00	18.16	H	4.4	9.4	23.25	30.0	-6.8	
High Ch									
1778.50	16.09	V	4.4	9.5	21.19	30.0	-8.8		
1778.50	17.04	H	4.4	9.5	22.14	30.0	-7.9		

LTE Band 66 1.4MHz QPSK	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-29 Test Engineer: 20896 Configuration: EUT / X-Position_Open Location: Chamber 2 Mode: LTE_QPSK Band 66 Fundamentals, 1.4MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1710.70	15.39	V	4.3	9.3	20.39	30.0	-9.6	
	1710.70	18.42	H	4.3	9.3	23.42	30.0	-6.6	
	Mid Ch								
	1745.00	16.32	V	4.4	9.4	21.41	30.0	-8.6	
	1745.00	18.96	H	4.4	9.4	24.05	30.0	-6.0	
High Ch									
1779.30	16.71	V	4.4	9.5	21.81	30.0	-8.2		
1779.30	18.34	H	4.4	9.5	23.44	30.0	-6.6		
LTE Band 66 1.4MHz 16QAM	UL Verification Services, Inc. High Frequency Substitution Measurement								
	Company: Samsung Project #: 4789497384 Date: 2020-06-29 Test Engineer: 20896 Configuration: EUT / X-Position_Open Location: Chamber 2 Mode: LTE_16QAM Band 66 Fundamentals, 1.4MHz Bandwidth								
	Test Equipment: Receiving: Horn 3117[00168724], and Chamber 2 SMA Cables Substitution: Horn 3115[00167451], 8.5m SMA-type Cable								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch								
	1710.70	14.30	V	4.3	9.3	19.30	30.0	-10.7	
	1710.70	17.99	H	4.3	9.3	22.99	30.0	-7.0	
	Mid Ch								
	1745.00	15.54	V	4.4	9.4	20.63	30.0	-9.4	
	1745.00	18.21	H	4.4	9.4	23.30	30.0	-6.7	
High Ch									
1779.30	15.63	V	4.4	9.5	20.73	30.0	-9.3		
1779.30	17.04	H	4.4	9.5	22.14	30.0	-7.9		

9.6. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, §27.53

LIMIT

Part 22.917(a) & Part 24.238(a) & Part 27.53(h) 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.

Part 27.53:

(c)(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB.

(f) For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB.

(h) The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10} (P)$ dB.

(m) (4) For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

TEST PROCEDURE

ANSI / TIA / EIA 603 E Clause 2.2.12; ESU40 setting reference to 971168 D01 v03r01

For peak power measurement with a ESU40:

- a) Set the RBW = 100 kHz for emission below 1GHz and 1MHz for emissions above 1GHz
- b) Set VBW $\geq 3 \times$ RBW;
- c) Set span ≥ 1.5 times the OBW;
- d) Sweep time = auto couple;
- e) Detector = rms;
- f) Ensure that the number of measurement points \geq span/RBW;
- g) Trace mode = average(WCDMA, LTE), Max hold(GSM, LTE Band41);;

RESULTS

See the following pages.

NOTE : Please refer to section 5.4 for bandwidth and RB setting about LTE.

9.6.1. SPURIOUS RADIATION PLOTS

GSM850

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
		Company: Samsung Project #: 4789497384 Date: 2020-06-22 Test Engineer: 20881 Configuration: EUT / AC Adapter, X-Position_Half Folded Location: Chamber 2 Mode: GPRS 850 MHz Harmonics									
		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
GSM850 GPRS M1	Low Ch, 824.2MHz										
		1648.40	-1.8	V	3.0	40.7	1.0	-41.4	-13.0	-28.4	
		2472.60	-3.1	V	3.0	41.3	1.0	-43.4	-13.0	-30.4	
		3296.80	-9.5	V	3.0	42.0	1.0	-50.5	-13.0	-37.5	
		1648.40	2.3	H	3.0	40.7	1.0	-37.3	-13.0	-24.3	
		2472.60	-6.1	H	3.0	41.3	1.0	-46.4	-13.0	-33.4	
		3296.80	-9.1	H	3.0	42.0	1.0	-50.1	-13.0	-37.1	
	Mid Ch, 836.6MHz										
		1673.20	-0.8	V	3.0	40.7	1.0	-40.5	-13.0	-27.5	
		2509.80	-2.6	V	3.0	41.3	1.0	-42.9	-13.0	-29.9	
		3346.40	-9.2	V	3.0	42.0	1.0	-50.2	-13.0	-37.2	
		1673.20	3.8	H	3.0	40.7	1.0	-35.8	-13.0	-22.8	
		2509.80	-6.1	H	3.0	41.3	1.0	-46.4	-13.0	-33.4	
		3346.40	-8.4	H	3.0	42.0	1.0	-49.5	-13.0	-36.5	
	High Ch, 848.8MHz										
		1697.60	-1.5	V	3.0	40.7	1.0	-41.1	-13.0	-28.1	
		2546.40	-2.0	V	3.0	41.4	1.0	-42.4	-13.0	-29.4	
		3395.20	-9.1	V	3.0	42.0	1.0	-50.1	-13.0	-37.1	
		1697.60	3.6	H	3.0	40.7	1.0	-36.0	-13.0	-23.0	
		2546.40	-5.4	H	3.0	41.4	1.0	-45.8	-13.0	-32.8	
	3395.20	-8.9	H	3.0	42.0	1.0	-50.0	-13.0	-37.0		
		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
		Company: Samsung Project #: 4789497384 Date: 2020-06-22 Test Engineer: 20881 Configuration: EUT / AC Adapter, X-Position_Half Folded Location: Chamber 2 Mode: EGPRS 850 MHz Harmonics									
		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
GSM850 EGPRS M1	Low Ch, 824.2MHz										
		1648.40	-7.8	V	3.0	40.7	1.0	-47.5	-13.0	-34.5	
		2472.60	-9.4	V	3.0	41.3	1.0	-49.7	-13.0	-36.7	
		3296.80	-9.3	V	3.0	42.0	1.0	-50.3	-13.0	-37.3	
		1648.40	-3.4	H	3.0	40.7	1.0	-43.1	-13.0	-30.1	
		2472.60	-11.2	H	3.0	41.3	1.0	-51.4	-13.0	-38.4	
		3296.80	-9.1	H	3.0	42.0	1.0	-50.1	-13.0	-37.1	
	Mid Ch, 836.6MHz										
		1673.20	-10.1	V	3.0	40.7	1.0	-49.8	-13.0	-36.8	
		2509.80	-11.4	V	3.0	41.3	1.0	-51.7	-13.0	-38.7	
		3346.40	-9.2	V	3.0	42.0	1.0	-50.2	-13.0	-37.2	
		1673.20	-6.7	H	3.0	40.7	1.0	-46.3	-13.0	-33.3	
		2509.80	-11.5	H	3.0	41.3	1.0	-51.8	-13.0	-38.8	
		3346.40	-9.1	H	3.0	42.0	1.0	-50.1	-13.0	-37.1	
	High Ch, 848.8MHz										
		1697.60	-3.4	V	3.0	40.7	1.0	-43.0	-13.0	-30.0	
		2546.40	-10.2	V	3.0	41.4	1.0	-50.5	-13.0	-37.5	
		3395.20	-9.3	V	3.0	42.0	1.0	-50.3	-13.0	-37.3	
		1697.60	-5.8	H	3.0	40.7	1.0	-45.4	-13.0	-32.4	
		2546.40	-11.2	H	3.0	41.4	1.0	-51.6	-13.0	-38.6	
	3395.20	-8.9	H	3.0	42.0	1.0	-49.9	-13.0	-36.9		

GSM850

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4789497384							
Date:		2020-06-30							
Test Engineer:		20881							
Configuration:		EUT / AC Adapter, X-Position_Full Folded							
Location:		Chamber 2							
Mode:		GPRS 850 MHz Harmonics							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.2MHz									
1648.40	-5.9	V	3.0	40.7	1.0	-45.6	-13.0	-32.6	
2472.60	-11.9	V	3.0	41.3	1.0	-52.2	-13.0	-39.2	
3296.80	-9.4	V	3.0	42.0	1.0	-50.4	-13.0	-37.4	
1648.40	-1.5	H	3.0	40.7	1.0	-41.2	-13.0	-28.2	
2472.60	-11.8	H	3.0	41.3	1.0	-52.1	-13.0	-39.1	
3296.80	-9.0	H	3.0	42.0	1.0	-50.1	-13.0	-37.1	
Mid Ch, 836.6MHz									
1673.20	-8.1	V	3.0	40.7	1.0	-47.8	-13.0	-34.8	
2509.80	-12.0	V	3.0	41.3	1.0	-52.3	-13.0	-39.3	
3346.40	-8.9	V	3.0	42.0	1.0	-50.0	-13.0	-37.0	
1673.20	-4.6	H	3.0	40.7	1.0	-44.3	-13.0	-31.3	
2509.80	-11.6	H	3.0	41.3	1.0	-52.0	-13.0	-39.0	
3346.40	-8.8	H	3.0	42.0	1.0	-49.8	-13.0	-36.8	
High Ch, 848.8MHz									
1697.60	-11.8	V	3.0	40.7	1.0	-51.4	-13.0	-38.4	
2546.40	-11.8	V	3.0	41.4	1.0	-52.1	-13.0	-39.1	
3395.20	-8.9	V	3.0	42.0	1.0	-49.9	-13.0	-36.9	
1697.60	-8.9	H	3.0	40.7	1.0	-48.5	-13.0	-35.5	
2546.40	-11.5	H	3.0	41.4	1.0	-51.8	-13.0	-38.8	
3395.20	-8.9	H	3.0	42.0	1.0	-49.9	-13.0	-36.9	

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4789497384							
Date:		2020-06-30							
Test Engineer:		20881							
Configuration:		EUT / AC Adapter, X-Position_Full Folded							
Location:		Chamber 2							
Mode:		EGPRS 850 MHz Harmonics							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.2MHz									
1648.40	-12.0	V	3.0	40.7	1.0	-51.7	-13.0	-38.7	
2472.60	-12.0	V	3.0	41.3	1.0	-52.2	-13.0	-39.2	
3296.80	-9.2	V	3.0	42.0	1.0	-50.3	-13.0	-37.3	
1648.40	-12.8	H	3.0	40.7	1.0	-52.5	-13.0	-39.5	
2472.60	-12.0	H	3.0	41.3	1.0	-52.2	-13.0	-39.2	
3296.80	-9.1	H	3.0	42.0	1.0	-50.2	-13.0	-37.2	
Mid Ch, 836.6MHz									
1673.20	-13.5	V	3.0	40.7	1.0	-53.2	-13.0	-40.2	
2509.80	-11.8	V	3.0	41.3	1.0	-52.1	-13.0	-39.1	
3346.40	-9.1	V	3.0	42.0	1.0	-50.1	-13.0	-37.1	
1673.20	-13.9	H	3.0	40.7	1.0	-53.6	-13.0	-40.6	
2509.80	-11.5	H	3.0	41.3	1.0	-51.8	-13.0	-38.8	
3346.40	-8.8	H	3.0	42.0	1.0	-49.9	-13.0	-36.9	
High Ch, 848.8MHz									
1697.60	-14.0	V	3.0	40.7	1.0	-53.6	-13.0	-40.6	
2546.40	-11.9	V	3.0	41.4	1.0	-52.3	-13.0	-39.3	
3395.20	-9.2	V	3.0	42.0	1.0	-50.3	-13.0	-37.3	
1697.60	-14.6	H	3.0	40.7	1.0	-54.3	-13.0	-41.3	
2546.40	-11.7	H	3.0	41.4	1.0	-52.0	-13.0	-39.0	
3395.20	-8.9	H	3.0	42.0	1.0	-50.0	-13.0	-37.0	

GSM1900

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4789497384							
Date:		2020-06-29							
Test Engineer:		20881							
Configuration:		EUT / AC Adapter, X-Position_Open							
Location:		Chamber 1							
Mode:		GPRS 1900 MHz Harmonics							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.2MHz									
3700.40	-9.6	V	3.0	45.4	1.0	-54.0	-13.0	-41.0	
5550.60	-6.6	V	3.0	45.3	1.0	-50.9	-13.0	-37.9	
7400.80	-4.3	V	3.0	44.1	1.0	-47.5	-13.0	-34.5	
3700.40	-9.9	H	3.0	45.4	1.0	-54.3	-13.0	-41.3	
5550.60	-7.0	H	3.0	45.3	1.0	-51.3	-13.0	-38.3	
7400.80	-4.3	H	3.0	44.1	1.0	-47.5	-13.0	-34.5	
Mid Ch, 1880MHz									
3760.00	-9.6	V	3.0	45.4	1.0	-54.0	-13.0	-41.0	
5640.00	-6.5	V	3.0	45.3	1.0	-50.8	-13.0	-37.8	
7520.00	-4.3	V	3.0	44.1	1.0	-47.4	-13.0	-34.4	
3760.00	-9.8	H	3.0	45.4	1.0	-54.2	-13.0	-41.2	
5640.00	-6.7	H	3.0	45.3	1.0	-51.0	-13.0	-38.0	
7520.00	-4.2	H	3.0	44.1	1.0	-47.2	-13.0	-34.2	
High Ch, 1909.8MHz									
3819.60	-9.3	V	3.0	45.4	1.0	-53.8	-13.0	-40.8	
5729.40	-6.7	V	3.0	45.3	1.0	-51.0	-13.0	-38.0	
7639.20	-4.2	V	3.0	44.0	1.0	-47.3	-13.0	-34.3	
3819.60	-9.9	H	3.0	45.4	1.0	-54.3	-13.0	-41.3	
5729.40	-6.6	H	3.0	45.3	1.0	-50.9	-13.0	-37.9	
7639.20	-4.0	H	3.0	44.0	1.0	-47.0	-13.0	-34.0	

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4789497384							
Date:		2020-06-29							
Test Engineer:		20881							
Configuration:		EUT / AC Adapter, X-Position_Open							
Location:		Chamber 1							
Mode:		EGPRS 1900 MHz Harmonics							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.2MHz									
3700.40	-9.5	V	3.0	45.4	1.0	-53.9	-13.0	-40.9	
5550.60	-6.6	V	3.0	45.3	1.0	-50.9	-13.0	-37.9	
7400.80	-4.3	V	3.0	44.1	1.0	-47.4	-13.0	-34.4	
3700.40	-9.9	H	3.0	45.4	1.0	-54.3	-13.0	-41.3	
5550.60	-7.0	H	3.0	45.3	1.0	-51.3	-13.0	-38.3	
7400.80	-4.2	H	3.0	44.1	1.0	-47.4	-13.0	-34.4	
Mid Ch, 1880MHz									
3760.00	-9.4	V	3.0	45.4	1.0	-53.9	-13.0	-40.9	
5640.00	-6.5	V	3.0	45.3	1.0	-50.8	-13.0	-37.8	
7520.00	-4.3	V	3.0	44.1	1.0	-47.4	-13.0	-34.4	
3760.00	-10.0	H	3.0	45.4	1.0	-54.4	-13.0	-41.4	
5640.00	-6.8	H	3.0	45.3	1.0	-51.1	-13.0	-38.1	
7520.00	-4.1	H	3.0	44.1	1.0	-47.2	-13.0	-34.2	
High Ch, 1909.8MHz									
3819.60	-9.5	V	3.0	45.4	1.0	-54.0	-13.0	-41.0	
5729.40	-6.7	V	3.0	45.3	1.0	-51.0	-13.0	-38.0	
7639.20	-4.2	V	3.0	44.0	1.0	-47.2	-13.0	-34.2	
3819.60	-9.9	H	3.0	45.4	1.0	-54.3	-13.0	-41.3	
5729.40	-6.9	H	3.0	45.3	1.0	-51.2	-13.0	-38.2	
7639.20	-3.8	H	3.0	44.0	1.0	-46.9	-13.0	-33.9	

WCDMA Band 5

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
Company: Samsung Project #: 4789497384 Date: 2020-06-30 Test Engineer: 20881 Configuration: EUT / AC Adapter, X-Position_Open Location: Chamber 1 Mode: Rel99 Band 5 Harmonics										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 826.4MHz										
1652.80	-13.9	V	3.0	45.2	1.0	-58.1	-13.0	-45.1		
2479.20	-10.7	V	3.0	45.0	1.0	-54.7	-13.0	-41.7		
3305.60	-8.5	V	3.0	45.3	1.0	-52.8	-13.0	-39.8		
Mid Ch, 836.6MHz										
1673.20	-13.6	V	3.0	45.2	1.0	-57.8	-13.0	-44.8		
2509.80	-10.5	V	3.0	45.0	1.0	-54.6	-13.0	-41.6		
3346.40	-8.0	V	3.0	45.3	1.0	-52.3	-13.0	-39.3		
1673.20	-12.8	H	3.0	45.2	1.0	-57.0	-13.0	-44.0		
2509.80	-10.1	H	3.0	45.0	1.0	-54.2	-13.0	-41.2		
3346.40	-8.0	H	3.0	45.3	1.0	-52.2	-13.0	-39.2		
High Ch, 846.6MHz										
1693.20	-13.6	V	3.0	45.2	1.0	-57.8	-13.0	-44.8		
2539.80	-10.5	V	3.0	45.0	1.0	-54.6	-13.0	-41.6		
3386.40	-7.9	V	3.0	45.3	1.0	-52.1	-13.0	-39.1		
1693.20	-12.5	H	3.0	45.2	1.0	-56.7	-13.0	-43.7		
2539.80	-9.8	H	3.0	45.0	1.0	-53.8	-13.0	-40.8		
3386.40	-8.2	H	3.0	45.3	1.0	-52.5	-13.0	-39.5		
Company: Samsung Project #: 4789497384 Date: 2020-06-30 Test Engineer: 20881 Configuration: EUT / AC Adapter, X-Position_Open Location: Chamber 1 Mode: HSDPA Band 5 Harmonics										
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 826.4MHz										
1652.80	-13.9	V	3.0	45.2	1.0	-58.1	-13.0	-45.1		
2479.20	-10.4	V	3.0	45.0	1.0	-54.5	-13.0	-41.5		
3305.60	-8.4	V	3.0	45.3	1.0	-52.7	-13.0	-39.7		
1652.80	-12.8	H	3.0	45.2	1.0	-57.1	-13.0	-44.1		
2479.20	-9.9	H	3.0	45.0	1.0	-53.9	-13.0	-40.9		
3305.60	-8.6	H	3.0	45.3	1.0	-52.9	-13.0	-39.9		
Mid Ch, 836.6MHz										
1673.20	-13.8	V	3.0	45.2	1.0	-57.9	-13.0	-44.9		
2509.80	-10.4	V	3.0	45.0	1.0	-54.4	-13.0	-41.4		
3346.40	-8.1	V	3.0	45.3	1.0	-52.4	-13.0	-39.4		
1673.20	-12.7	H	3.0	45.2	1.0	-56.9	-13.0	-43.9		
2509.80	-10.0	H	3.0	45.0	1.0	-54.0	-13.0	-41.0		
3346.40	-8.2	H	3.0	45.3	1.0	-52.4	-13.0	-39.4		
High Ch, 846.6MHz										
1693.20	-13.7	V	3.0	45.2	1.0	-57.8	-13.0	-44.8		
2539.80	-10.6	V	3.0	45.0	1.0	-54.6	-13.0	-41.6		
3386.40	-7.8	V	3.0	45.3	1.0	-52.1	-13.0	-39.1		
1693.20	-12.8	H	3.0	45.2	1.0	-56.9	-13.0	-43.9		
2539.80	-10.1	H	3.0	45.0	1.0	-54.1	-13.0	-41.1		
3386.40	-7.9	H	3.0	45.3	1.0	-52.2	-13.0	-39.2		

WCDMA Band 5

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
Company:		Samsung								
Project #:		4789497384								
Date:		2020-07-03								
Test Engineer:		20881								
Configuration:		EUT / AC Adapter, Z-Position_Full Folded								
Location:		Chamber 1								
Mode:		Rel99 Band 5 Harmonics								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 826.4MHz										
1652.80	-14.8	V	3.0	45.2	1.0	-59.1	-13.0	-46.1		
2479.20	-11.6	V	3.0	45.0	1.0	-55.6	-13.0	-42.6		
3305.60	-9.4	V	3.0	45.3	1.0	-53.6	-13.0	-40.6		
REL99										
1652.80	-14.0	H	3.0	45.2	1.0	-58.2	-13.0	-45.2		
2479.20	-10.9	H	3.0	45.0	1.0	-55.0	-13.0	-42.0		
3305.60	-9.6	H	3.0	45.3	1.0	-53.9	-13.0	-40.9		
M2										
Mid Ch, 836.6MHz										
1673.20	-14.7	V	3.0	45.2	1.0	-58.9	-13.0	-45.9		
2509.80	-11.6	V	3.0	45.0	1.0	-55.6	-13.0	-42.6		
3346.40	-9.0	V	3.0	45.3	1.0	-53.3	-13.0	-40.3		
1673.20	-13.9	H	3.0	45.2	1.0	-58.1	-13.0	-45.1		
2509.80	-11.0	H	3.0	45.0	1.0	-55.0	-13.0	-42.0		
3346.40	-9.1	H	3.0	45.3	1.0	-53.4	-13.0	-40.4		
High Ch, 846.6MHz										
1693.20	-14.6	V	3.0	45.2	1.0	-58.8	-13.0	-45.8		
2539.80	-11.5	V	3.0	45.0	1.0	-55.5	-13.0	-42.5		
3386.40	-8.9	V	3.0	45.3	1.0	-53.2	-13.0	-40.2		
1693.20	-13.8	H	3.0	45.2	1.0	-57.9	-13.0	-44.9		
2539.80	-11.0	H	3.0	45.0	1.0	-55.0	-13.0	-42.0		
3386.40	-9.1	H	3.0	45.3	1.0	-53.4	-13.0	-40.4		

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement										
Company:		Samsung								
Project #:		4789497384								
Date:		2020-07-03								
Test Engineer:		20881								
Configuration:		EUT / AC Adapter, Z-Position_Full Folded								
Location:		Chamber 1								
Mode:		HSDPA Band 5 Harmonics								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes	
Low Ch, 826.4MHz										
1652.80	-14.9	V	3.0	45.2	1.0	-59.1	-13.0	-46.1		
2479.20	-11.5	V	3.0	45.0	1.0	-55.6	-13.0	-42.6		
3305.60	-9.5	V	3.0	45.3	1.0	-53.7	-13.0	-40.7		
HSDPA										
1652.80	-14.0	H	3.0	45.2	1.0	-58.2	-13.0	-45.2		
2479.20	-10.9	H	3.0	45.0	1.0	-54.9	-13.0	-41.9		
3305.60	-9.6	H	3.0	45.3	1.0	-53.9	-13.0	-40.9		
M2										
Mid Ch, 836.6MHz										
1673.20	-14.7	V	3.0	45.2	1.0	-58.9	-13.0	-45.9		
2509.80	-11.6	V	3.0	45.0	1.0	-55.7	-13.0	-42.7		
3346.40	-8.8	V	3.0	45.3	1.0	-53.1	-13.0	-40.1		
1673.20	-13.8	H	3.0	45.2	1.0	-58.0	-13.0	-45.0		
2509.80	-11.0	H	3.0	45.0	1.0	-55.1	-13.0	-42.1		
3346.40	-9.2	H	3.0	45.3	1.0	-53.4	-13.0	-40.4		
High Ch, 846.6MHz										
1693.20	-14.7	V	3.0	45.2	1.0	-58.8	-13.0	-45.8		
2539.80	-11.5	V	3.0	45.0	1.0	-55.6	-13.0	-42.6		
3386.40	-8.9	V	3.0	45.3	1.0	-53.2	-13.0	-40.2		
1693.20	-13.8	H	3.0	45.2	1.0	-57.9	-13.0	-44.9		
2539.80	-11.0	H	3.0	45.0	1.0	-55.0	-13.0	-42.0		
3386.40	-9.1	H	3.0	45.3	1.0	-53.4	-13.0	-40.4		

WCDMA Band 4

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4789497384							
Date:		2020-06-23							
Test Engineer:		20882							
Configuration:		EUT / AC Adapter, X-Position_Open							
Location:		Chamber 1							
Mode:		Rel99 Band 4 Harmonics							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1712.4MHz									
3424.80	-8.1	V	3.0	45.3	1.0	-52.4	-13.0	-39.4	
5137.20	-7.6	V	3.0	45.3	1.0	-51.8	-13.0	-38.8	
6849.60	-5.3	V	3.0	44.5	1.0	-48.8	-13.0	-35.8	
3424.80	-8.2	H	3.0	45.3	1.0	-52.5	-13.0	-39.5	
5137.20	-7.8	H	3.0	45.3	1.0	-52.1	-13.0	-39.1	
6849.60	-5.4	H	3.0	44.5	1.0	-48.9	-13.0	-35.9	
Mid Ch, 1732.6MHz									
3465.20	-7.8	V	3.0	45.3	1.0	-52.1	-13.0	-39.1	
5197.80	-7.5	V	3.0	45.3	1.0	-51.8	-13.0	-38.8	
6930.40	-5.5	V	3.0	44.4	1.0	-48.9	-13.0	-35.9	
3465.20	-8.0	H	3.0	45.3	1.0	-52.3	-13.0	-39.3	
5197.80	-7.8	H	3.0	45.3	1.0	-52.1	-13.0	-39.1	
6930.40	-5.4	H	3.0	44.4	1.0	-48.8	-13.0	-35.8	
High Ch, 1752.6MHz									
3505.20	-7.3	V	3.0	45.3	1.0	-51.7	-13.0	-38.7	
5257.80	-7.1	V	3.0	45.3	1.0	-51.4	-13.0	-38.4	
7010.40	-4.9	V	3.0	44.4	1.0	-48.3	-13.0	-35.3	
3505.20	-7.4	H	3.0	45.3	1.0	-51.7	-13.0	-38.7	
5257.80	-7.5	H	3.0	45.3	1.0	-51.8	-13.0	-38.8	
7010.40	-5.0	H	3.0	44.4	1.0	-48.4	-13.0	-35.4	

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4789497384							
Date:		2020-06-23							
Test Engineer:		20882							
Configuration:		EUT / AC Adapter, X-Position_Open							
Location:		Chamber 1							
Mode:		HSDPA Band 4 Harmonics							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1712.4MHz									
3424.80	-8.1	V	3.0	45.3	1.0	-52.4	-13.0	-39.4	
5137.20	-7.4	V	3.0	45.3	1.0	-51.7	-13.0	-38.7	
6849.60	-5.0	V	3.0	44.5	1.0	-48.5	-13.0	-35.5	
3424.80	-8.4	H	3.0	45.3	1.0	-52.7	-13.0	-39.7	
5137.20	-7.8	H	3.0	45.3	1.0	-52.1	-13.0	-39.1	
6849.60	-5.3	H	3.0	44.5	1.0	-48.8	-13.0	-35.8	
Mid Ch, 1732.6MHz									
3465.20	-7.8	V	3.0	45.3	1.0	-52.2	-13.0	-39.2	
5197.80	-7.2	V	3.0	45.3	1.0	-51.5	-13.0	-38.5	
6930.40	-5.3	V	3.0	44.4	1.0	-48.8	-13.0	-35.8	
3465.20	-7.3	H	3.0	45.3	1.0	-51.7	-13.0	-38.7	
5197.80	-7.7	H	3.0	45.3	1.0	-52.0	-13.0	-39.0	
6930.40	-5.4	H	3.0	44.4	1.0	-48.8	-13.0	-35.8	
High Ch, 1752.6MHz									
3505.20	-7.1	V	3.0	45.3	1.0	-51.5	-13.0	-38.5	
5257.80	-7.0	V	3.0	45.3	1.0	-51.3	-13.0	-38.3	
7010.40	-4.7	V	3.0	44.4	1.0	-48.1	-13.0	-35.1	
3505.20	-7.3	H	3.0	45.3	1.0	-51.7	-13.0	-38.7	
5257.80	-7.4	H	3.0	45.3	1.0	-51.7	-13.0	-38.7	
7010.40	-4.8	H	3.0	44.4	1.0	-48.2	-13.0	-35.2	

WCDMA Band 2

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4789497384							
Date:		2020-06-23							
Test Engineer:		20882							
Configuration:		EUT / AC Adapter, X-Position_Open							
Location:		Chamber 1							
Mode:		Rel99 Band 2 Harmonics							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1852.4MHz									
3704.80	-10.4	V	3.0	45.4	1.0	-54.8	-13.0	-41.8	
5557.20	-7.7	V	3.0	45.3	1.0	-52.0	-13.0	-39.0	
7409.60	-5.2	V	3.0	44.1	1.0	-48.3	-13.0	-35.3	
3704.80	-10.8	H	3.0	45.4	1.0	-55.2	-13.0	-42.2	
5557.20	-8.0	H	3.0	45.3	1.0	-52.3	-13.0	-39.3	
7409.60	-5.2	H	3.0	44.1	1.0	-48.3	-13.0	-35.3	
Mid Ch, 1880MHz									
3760.00	-10.4	V	3.0	45.4	1.0	-54.8	-13.0	-41.8	
5640.00	-7.4	V	3.0	45.3	1.0	-51.6	-13.0	-38.6	
7520.00	-5.2	V	3.0	44.1	1.0	-48.3	-13.0	-35.3	
3760.00	-10.8	H	3.0	45.4	1.0	-55.2	-13.0	-42.2	
5640.00	-7.6	H	3.0	45.3	1.0	-51.9	-13.0	-38.9	
7520.00	-5.0	H	3.0	44.1	1.0	-48.1	-13.0	-35.1	
High Ch, 1907.6MHz									
3815.20	-10.5	V	3.0	45.4	1.0	-54.9	-13.0	-41.9	
5722.80	-7.6	V	3.0	45.3	1.0	-51.9	-13.0	-38.9	
7630.40	-5.0	V	3.0	44.0	1.0	-48.0	-13.0	-35.0	
3815.20	-10.8	H	3.0	45.4	1.0	-55.2	-13.0	-42.2	
5722.80	-7.8	H	3.0	45.3	1.0	-52.0	-13.0	-39.0	
7630.40	-4.9	H	3.0	44.0	1.0	-47.9	-13.0	-34.9	

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4789497384							
Date:		2020-06-23							
Test Engineer:		20882							
Configuration:		EUT / AC Adapter, X-Position_Open							
Location:		Chamber 1							
Mode:		HSDPA Band 2 Harmonics							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1852.4MHz									
3704.80	-10.4	V	3.0	45.4	1.0	-54.8	-13.0	-41.8	
5557.20	-7.8	V	3.0	45.3	1.0	-52.1	-13.0	-39.1	
7409.60	-5.2	V	3.0	44.1	1.0	-48.3	-13.0	-35.3	
3704.80	-10.9	H	3.0	45.4	1.0	-55.3	-13.0	-42.3	
5557.20	-7.9	H	3.0	45.3	1.0	-52.2	-13.0	-39.2	
7409.60	-5.2	H	3.0	44.1	1.0	-48.3	-13.0	-35.3	
Mid Ch, 1880MHz									
3760.00	-10.5	V	3.0	45.4	1.0	-54.9	-13.0	-41.9	
5640.00	-7.3	V	3.0	45.3	1.0	-51.6	-13.0	-38.6	
7520.00	-5.1	V	3.0	44.1	1.0	-48.2	-13.0	-35.2	
3760.00	-10.7	H	3.0	45.4	1.0	-55.1	-13.0	-42.1	
5640.00	-7.5	H	3.0	45.3	1.0	-51.8	-13.0	-38.8	
7520.00	-4.9	H	3.0	44.1	1.0	-48.0	-13.0	-35.0	
High Ch, 1907.6MHz									
3815.20	-10.5	V	3.0	45.4	1.0	-55.0	-13.0	-42.0	
5722.80	-7.6	V	3.0	45.3	1.0	-51.9	-13.0	-38.9	
7630.40	-5.0	V	3.0	44.0	1.0	-48.0	-13.0	-35.0	
3815.20	-10.7	H	3.0	45.4	1.0	-55.2	-13.0	-42.2	
5722.80	-7.7	H	3.0	45.3	1.0	-52.0	-13.0	-39.0	
7630.40	-4.9	H	3.0	44.0	1.0	-47.9	-13.0	-34.9	

LTE Band 5

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
		Company: Samsung Project #: 4789497384 Date: 2020-07-01 Test Engineer: 20896 Configuration: EUT / AC Adapter, Z-Position_half folded Location: Chamber 2 Mode: LTE_QPSK Band 5 Harmonics, 5MHz Bandwidth									
LTE	Band 5	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
		Low Ch, 826.5MHz									
		1653.00	-15.3	V	3.0	40.7	1.0	-55.0	-13.0	-42.0	
		2479.50	-12.9	V	3.0	41.3	1.0	-53.2	-13.0	-40.2	
		3306.00	-10.4	V	3.0	42.0	1.0	-51.5	-13.0	-38.5	
		1653.00	-15.6	H	3.0	40.7	1.0	-55.3	-13.0	-42.3	
		2479.50	-12.6	H	3.0	41.3	1.0	-52.9	-13.0	-39.9	
		3306.00	-10.1	H	3.0	42.0	1.0	-51.1	-13.0	-38.1	
		Mid Ch, 836.5MHz									
		1673.00	-14.7	V	3.0	40.7	1.0	-54.4	-13.0	-41.4	
		2509.50	-12.3	V	3.0	41.3	1.0	-52.6	-13.0	-39.6	
		3346.00	-9.6	V	3.0	42.0	1.0	-50.6	-13.0	-37.6	
		1673.00	-15.6	H	3.0	40.7	1.0	-55.3	-13.0	-42.3	
		2509.50	-12.1	H	3.0	41.3	1.0	-52.4	-13.0	-39.4	
		3346.00	-9.0	H	3.0	42.0	1.0	-50.1	-13.0	-37.1	
		High Ch, 846.5MHz									
		1693.00	-15.3	V	3.0	40.7	1.0	-55.0	-13.0	-42.0	
		2539.50	-12.7	V	3.0	41.4	1.0	-53.1	-13.0	-40.1	
		3386.00	-10.2	V	3.0	42.0	1.0	-51.3	-13.0	-38.3	
		1693.00	-16.2	H	3.0	40.7	1.0	-55.8	-13.0	-42.8	
		2539.50	-12.6	H	3.0	41.4	1.0	-53.0	-13.0	-40.0	
		3386.00	-10.0	H	3.0	42.0	1.0	-51.0	-13.0	-38.0	

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
		Company: Samsung Project #: 4789497384 Date: 2020-07-01 Test Engineer: 20881 Configuration: EUT / AC Adapter, Z-Position_Full Folded Location: Chamber 2 Mode: LTE_QPSK Band 5 Harmonics, 5MHz Bandwidth									
LTE	Band 5	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
		Low Ch, 826.5MHz									
		1653.00	-14.9	V	3.0	40.7	1.0	-54.6	-13.0	-41.6	
		2479.50	-11.9	V	3.0	41.3	1.0	-52.2	-13.0	-39.2	
		3306.00	-9.1	V	3.0	42.0	1.0	-50.1	-13.0	-37.1	
		1653.00	-15.7	H	3.0	40.7	1.0	-55.3	-13.0	-42.3	
		2479.50	-12.2	H	3.0	41.3	1.0	-52.5	-13.0	-39.5	
		3306.00	-8.6	H	3.0	42.0	1.0	-49.6	-13.0	-36.6	
		Mid Ch, 836.5MHz									
		1673.00	-14.4	V	3.0	40.7	1.0	-54.1	-13.0	-41.1	
		2509.50	-12.8	V	3.0	41.3	1.0	-53.1	-13.0	-40.1	
		3346.00	-9.1	V	3.0	42.0	1.0	-50.1	-13.0	-37.1	
		1673.00	-15.5	H	3.0	40.7	1.0	-55.2	-13.0	-42.2	
		2509.50	-12.2	H	3.0	41.3	1.0	-52.6	-13.0	-39.6	
		3346.00	-9.2	H	3.0	42.0	1.0	-50.3	-13.0	-37.3	
		High Ch, 846.5MHz									
		1693.00	-14.7	V	3.0	40.7	1.0	-54.4	-13.0	-41.4	
		2539.50	-11.9	V	3.0	41.4	1.0	-52.2	-13.0	-39.2	
		3386.00	-8.5	V	3.0	42.0	1.0	-49.5	-13.0	-36.5	
		1693.00	-15.6	H	3.0	40.7	1.0	-55.3	-13.0	-42.3	
		2539.50	-12.4	H	3.0	41.4	1.0	-52.7	-13.0	-39.7	
		3386.00	-9.1	H	3.0	42.0	1.0	-50.1	-13.0	-37.1	

LTE Band 12

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement											
LTE Band 12 10MHz QPSK		Company:		Samsung							
		Project #:		4789497384							
		Date:		2020-06-24							
		Test Engineer:		20881							
		Configuration:		EUT / AC Adapter, Z-Position_Half Folded							
		Location:		Chamber 2							
		Mode:		LTE_QPSK Band 12 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, 704MHz									
		1408.00	-14.8	V	3.0	40.7	1.0	-54.5	-13.0	-41.5	
2112.00	-14.1	V	3.0	40.8	1.0	-53.8	-13.0	-40.8			
2816.00	-11.9	V	3.0	41.8	1.0	-52.7	-13.0	-39.7			
1408.00	-16.4	H	3.0	40.7	1.0	-56.1	-13.0	-43.1			
2112.00	-14.2	H	3.0	40.8	1.0	-54.0	-13.0	-41.0			
2816.00	-11.8	H	3.0	41.8	1.0	-52.5	-13.0	-39.5			
Mid Ch, 707.5MHz											
1415.00	-14.8	V	3.0	40.7	1.0	-54.5	-13.0	-41.5			
2122.50	-13.6	V	3.0	40.8	1.0	-53.4	-13.0	-40.4			
2830.00	-11.7	V	3.0	41.8	1.0	-52.5	-13.0	-39.5			
1415.00	-16.5	H	3.0	40.7	1.0	-56.2	-13.0	-43.2			
2122.50	-13.4	H	3.0	40.8	1.0	-53.2	-13.0	-40.2			
2830.00	-11.5	H	3.0	41.8	1.0	-52.3	-13.0	-39.3			
High Ch, 711MHz											
1422.00	-16.1	V	3.0	40.7	1.0	-55.8	-13.0	-42.8			
2133.00	-14.1	V	3.0	40.8	1.0	-53.9	-13.0	-40.9			
2844.00	-11.5	V	3.0	41.8	1.0	-52.3	-13.0	-39.3			
1422.00	-17.3	H	3.0	40.7	1.0	-57.0	-13.0	-44.0			
2133.00	-14.2	H	3.0	40.8	1.0	-54.0	-13.0	-41.0			
2844.00	-11.3	H	3.0	41.8	1.0	-52.1	-13.0	-39.1			

LTE B13

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4789497384							
Date:		2020-07-03							
Test Engineer:		20881							
Configuration:		EUT / AC Adapter, X-Position_Open							
Location:		Chamber 1							
Mode:		LTE_QPSK Band 13 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, 779.5MHz									
1559.00	-24.5	V	3.0	45.3	1.0	-68.8	-40.0	-28.8	
2338.50	-11.8	V	3.0	45.0	1.0	-55.8	-13.0	-42.8	
3118.00	-9.7	V	3.0	45.2	1.0	-53.8	-13.0	-40.8	
1559.00	-23.7	H	3.0	45.3	1.0	-68.0	-40.0	-28.0	
2338.50	-10.9	H	3.0	45.0	1.0	-54.9	-13.0	-41.9	
3118.00	-9.6	H	3.0	45.2	1.0	-53.8	-13.0	-40.8	
Mid Ch, 782MHz									
1564.00	-24.5	V	3.0	45.3	1.0	-68.7	-40.0	-28.7	
2346.00	-11.8	V	3.0	45.0	1.0	-55.8	-13.0	-42.8	
3128.00	-9.5	V	3.0	45.2	1.0	-53.7	-13.0	-40.7	
1564.00	-23.7	H	3.0	45.3	1.0	-68.0	-40.0	-28.0	
2346.00	-11.0	H	3.0	45.0	1.0	-55.0	-13.0	-42.0	
3128.00	-9.4	H	3.0	45.2	1.0	-53.6	-13.0	-40.6	
High Ch, 784.5MHz									
1569.00	-24.6	V	3.0	45.3	1.0	-68.9	-40.0	-28.9	
2353.50	-11.6	V	3.0	45.0	1.0	-55.6	-13.0	-42.6	
3138.00	-9.4	V	3.0	45.2	1.0	-53.6	-13.0	-40.6	
1569.00	-23.7	H	3.0	45.3	1.0	-68.0	-40.0	-28.0	
2353.50	-11.0	H	3.0	45.0	1.0	-55.0	-13.0	-42.0	
3138.00	-9.5	H	3.0	45.2	1.0	-53.7	-13.0	-40.7	

Note : No narrowband emissions so only applied the -70dBW/MHz (-40dBm/MHz) wideband emission limit for the 1559-1610 MHz band

LTE Band 25

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
		Company:	Samsung								
		Project #:	4789497384								
		Date:	2020-06-26								
		Test Engineer:	20881								
		Configuration:	EUT / AC Adapter, Z-Position_Open								
		Location:	Chamber 1								
		Mode:	LTE_QPSK Band 25 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
LTE Band 25 20MHz QPSK	Low Ch, 1860MHz										
		3720.00	-10.3	V	3.0	45.4	1.0	-54.7	-13.0	-41.7	
		5580.00	-7.5	V	3.0	45.3	1.0	-51.8	-13.0	-38.8	
		7440.00	-5.2	V	3.0	44.1	1.0	-48.3	-13.0	-35.3	
		3720.00	-10.6	H	3.0	45.4	1.0	-55.0	-13.0	-42.0	
		5580.00	-7.9	H	3.0	45.3	1.0	-52.2	-13.0	-39.2	
		7440.00	-5.0	H	3.0	44.1	1.0	-48.1	-13.0	-35.1	
	Mid Ch, 1882.5MHz										
		3765.00	-10.5	V	3.0	45.4	1.0	-54.9	-13.0	-41.9	
		5647.50	-7.4	V	3.0	45.3	1.0	-51.7	-13.0	-38.7	
		7530.00	-5.2	V	3.0	44.1	1.0	-48.3	-13.0	-35.3	
		3765.00	-10.6	H	3.0	45.4	1.0	-55.0	-13.0	-42.0	
		5647.50	-7.6	H	3.0	45.3	1.0	-51.8	-13.0	-38.8	
		7530.00	-5.1	H	3.0	44.1	1.0	-48.2	-13.0	-35.2	
	High Ch, 1905MHz										
		3810.00	-10.4	V	3.0	45.4	1.0	-54.9	-13.0	-41.9	
		5715.00	-7.5	V	3.0	45.3	1.0	-51.8	-13.0	-38.8	
		7620.00	-5.1	V	3.0	44.0	1.0	-48.1	-13.0	-35.1	
	3810.00	-10.8	H	3.0	45.4	1.0	-55.3	-13.0	-42.3		
	5715.00	-7.7	H	3.0	45.3	1.0	-52.0	-13.0	-39.0		
	7620.00	-5.0	H	3.0	44.0	1.0	-48.0	-13.0	-35.0		

LTE Band 26

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement								
		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)
LTE Band 26 (Part 90) 15MHz QPSK	Company: Samsung Project #: 4789497384 Date: 2020-06-30 Test Engineer: 20896 Configuration: EUT / AC Adapter, X-Position_Open Location: Chamber 2 Mode: LTE_QPSK Band 26 Harmonics, 15MHz Bandwidth									
	Low CH, 821.5MHz									
	1643.00	-15.4	V	3.0	40.7	1.0	-55.1	-13.0	-42.1	
	2464.50	-12.9	V	3.0	41.3	1.0	-53.2	-13.0	-40.2	
	3286.00	-10.4	V	3.0	42.0	1.0	-51.4	-13.0	-38.4	
	1643.00	-16.2	H	3.0	40.7	1.0	-55.9	-13.0	-42.9	
	2464.50	-12.8	H	3.0	41.3	1.0	-53.1	-13.0	-40.1	
	3286.00	-10.0	H	3.0	42.0	1.0	-51.1	-13.0	-38.1	

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement								
		f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)
LTE Band 26 (Part 22) 3MHz QPSK	Company: Samsung Project #: 4789497384 Date: 2020-06-30 Test Engineer: 20896 Configuration: EUT / AC Adapter , X-Position_Open Location: Chamber 2 Mode: LTE_QPSK Band 26 Harmonics, 3MHz Bandwidth									
	Low CH, 825.5MHz									
	1651.00	-15.3	V	3.0	40.7	1.0	-54.9	-13.0	-41.9	
	2476.50	-12.9	V	3.0	41.3	1.0	-53.2	-13.0	-40.2	
	3302.00	-10.3	V	3.0	42.0	1.0	-51.3	-13.0	-38.3	
	1651.00	-16.1	H	3.0	40.7	1.0	-55.8	-13.0	-42.8	
	2476.50	-12.8	H	3.0	41.3	1.0	-53.1	-13.0	-40.1	
	3302.00	-10.0	H	3.0	42.0	1.0	-51.0	-13.0	-38.0	
	Mid Ch, 831.5MHz									
	1663.00	-15.3	V	3.0	40.7	1.0	-55.0	-13.0	-42.0	
	2494.50	-12.9	V	3.0	41.3	1.0	-53.2	-13.0	-40.2	
	3326.00	-10.1	V	3.0	42.0	1.0	-51.2	-13.0	-38.2	
	1663.00	-16.1	H	3.0	40.7	1.0	-55.7	-13.0	-42.7	
	2494.50	-12.7	H	3.0	41.3	1.0	-53.0	-13.0	-40.0	
	3326.00	-9.8	H	3.0	42.0	1.0	-50.9	-13.0	-37.9	
	High Ch, 847.5MHz									
	1695.00	-15.3	V	3.0	40.7	1.0	-54.9	-13.0	-41.9	
	2542.50	-12.6	V	3.0	41.4	1.0	-52.9	-13.0	-39.9	
	3390.00	-9.8	V	3.0	42.0	1.0	-50.9	-13.0	-37.9	
	1695.00	-16.0	H	3.0	40.7	1.0	-55.6	-13.0	-42.6	
	2542.50	-12.6	H	3.0	41.4	1.0	-52.9	-13.0	-39.9	
	3390.00	-9.6	H	3.0	42.0	1.0	-50.7	-13.0	-37.7	

LTE Band 41 (PC2)

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4789497384							
Date:		2020-07-15							
Test Engineer:		20882							
Configuration:		EUT / AC Adapter, Y-Position_Open							
Location:		Chamber 1							
Mode:		LTE_QPSK Band 41 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, 2506MHz									
5012.00	1.4	V	3.0	45.3	1.0	-42.8	-25.0	-17.8	
7518.00	6.3	V	3.0	44.1	1.0	-36.8	-25.0	-11.8	
10024.00	-3.3	V	3.0	42.2	1.0	-44.5	-25.0	-19.5	
12530.00	-2.7	V	3.0	43.3	1.0	-44.9	-25.0	-19.9	
15036.00	-6.0	V	3.0	45.3	1.0	-50.3	-25.0	-25.3	
5012.00	-2.7	H	3.0	45.3	1.0	-46.9	-25.0	-21.9	
7518.00	5.6	H	3.0	44.1	1.0	-37.4	-25.0	-12.4	
10024.00	-3.7	H	3.0	42.2	1.0	-44.9	-25.0	-19.9	
12530.00	-4.8	H	3.0	43.3	1.0	-47.1	-25.0	-22.1	
15036.00	-7.1	H	3.0	45.3	1.0	-51.4	-25.0	-26.4	
Mid Ch, 2593MHz									
5186.00	2.5	V	3.0	45.3	1.0	-41.8	-25.0	-16.8	
7779.00	11.4	V	3.0	43.9	1.0	-31.5	-25.0	-6.5	
10372.00	-1.9	V	3.0	42.3	1.0	-43.1	-25.0	-18.1	
12965.00	-0.5	V	3.0	43.6	1.0	-43.1	-25.0	-18.1	
15558.00	-6.3	V	3.0	44.7	1.0	-50.0	-25.0	-25.0	
5186.00	1.5	H	3.0	45.3	1.0	-42.8	-25.0	-17.8	
7779.00	10.5	H	3.0	43.9	1.0	-32.5	-25.0	-7.5	
10372.00	-5.1	H	3.0	42.3	1.0	-46.4	-25.0	-21.4	
12965.00	-1.9	H	3.0	43.6	1.0	-44.5	-25.0	-19.5	
15558.00	-6.6	H	3.0	44.7	1.0	-50.3	-25.0	-25.3	
High Ch, 2680MHz									
5360.00	-3.9	V	3.0	45.3	1.0	-48.2	-25.0	-23.2	
8040.00	9.2	V	3.0	43.8	1.0	-33.6	-25.0	-8.6	
10720.00	-0.8	V	3.0	42.4	1.0	-42.2	-25.0	-17.2	
13400.00	-0.1	V	3.0	44.0	1.0	-43.0	-25.0	-18.0	
16080.00	-6.4	V	3.0	44.1	1.0	-49.4	-25.0	-24.4	
5360.00	-2.1	H	3.0	45.3	1.0	-46.4	-25.0	-21.4	
8040.00	3.1	H	3.0	43.8	1.0	-39.7	-25.0	-14.7	
10720.00	-6.6	H	3.0	42.4	1.0	-48.0	-25.0	-23.0	
13400.00	-2.1	H	3.0	44.0	1.0	-45.1	-25.0	-20.1	
16080.00	-7.0	H	3.0	44.1	1.0	-50.0	-25.0	-25.0	

LTE
 Band 41
 20MHz
 QPSK

LTE Band 66

		UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
		Company:	Samsung								
		Project #:	4789497384								
		Date:	2020-06-29								
		Test Engineer:	20881								
		Configuration:	EUT / AC Adapter, X-Position_Open								
		Location:	Chamber 2								
		Mode:	LTE_QPSK Band 66 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
LTE Band 66 1.4MHz QPSK	Low Ch, 1710.7MHz										
		3421.40	-8.9	V	3.0	42.0	1.0	-50.0	-13.0	-37.0	
		5132.10	-7.8	V	3.0	42.8	1.0	-49.6	-13.0	-36.6	
		6842.80	-6.2	V	3.0	42.7	1.0	-47.9	-13.0	-34.9	
		3421.40	-8.5	H	3.0	42.0	1.0	-49.5	-13.0	-36.5	
		5132.10	-8.0	H	3.0	42.8	1.0	-49.8	-13.0	-36.8	
		6842.80	-6.1	H	3.0	42.7	1.0	-47.8	-13.0	-34.8	
	Mid Ch, 1745MHz										
		3490.00	-8.6	V	3.0	42.0	1.0	-49.6	-13.0	-36.6	
		5235.00	-7.8	V	3.0	42.8	1.0	-49.6	-13.0	-36.6	
		6980.00	-5.9	V	3.0	42.7	1.0	-47.6	-13.0	-34.6	
		3490.00	-8.3	H	3.0	42.0	1.0	-49.3	-13.0	-36.3	
		5235.00	-7.6	H	3.0	42.8	1.0	-49.4	-13.0	-36.4	
		6980.00	-5.4	H	3.0	42.7	1.0	-47.0	-13.0	-34.0	
	High Ch, 1779.3MHz										
		3558.60	-7.6	V	3.0	42.0	1.0	-48.6	-13.0	-35.6	
		5337.90	-7.7	V	3.0	42.8	1.0	-49.5	-13.0	-36.5	
		7117.20	-5.8	V	3.0	42.6	1.0	-47.4	-13.0	-34.4	
		3558.60	-7.6	H	3.0	42.0	1.0	-48.6	-13.0	-35.6	
		5337.90	-7.8	H	3.0	42.8	1.0	-49.6	-13.0	-36.6	
	7117.20	-5.8	H	3.0	42.6	1.0	-47.4	-13.0	-34.4		

LTE Band 2

LTE Band 2(Frequency range: 1850-1910 MHz) is covered by LTE Band 25 (Frequency range: 1850-1915 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

LTE Band 4

LTE Band 4 (Frequency range: 1710-1755 MHz) is covered by LTE Band 66 (Frequency range: 1710-1780 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

LTE Band 17

LTE Band 17 (Frequency range: 704-716 MHz) is covered by LTE Band 12 (Frequency range: 699-716 MHz) due to overlapping frequency range, same maximum tune-up limit and same channel bandwidth.

LTE Band41(PC3)

LTE Band 41(PC3, Frequency range : 2496-2690 MHz) is covered by LTE Band 41(PC2) (Frequency range: 2496-2690 MHz) due to same frequency range, same channel bandwidth and maximum tune-up limit is higher than LTE Band41(PC3).

END OF TEST REPORT