

Fundamental Substitution Measurement (Fc < 1GHz) UL LLC, Chamber N								
Company: Sony Project #: 11139405 Date: 2016-03-30 Test Engineer: Brian Kiewra Configuration: Standalone (LTE Sample #1 Z-Axis) Mode: LTE 26, 10MHz, QPSK								
Test Equipment: Substitution: Dipole antenna AT0016, cable CBL055, and signal-source T374								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Part 90								
819.00	24.11	V	5.3	-1.60	17.26	50.0	-32.7	
819.00	13.19	H	5.3	-1.60	6.34	50.0	-43.7	
Part 22								
829.00	24.24	V	5.3	-1.50	17.44	38.5	-21.0	
829.00	13.77	H	5.3	-1.50	6.97	38.5	-31.5	
Mid Ch								
831.50	23.80	V	5.3	-1.47	17.01	38.5	-21.4	
831.50	13.04	H	5.3	-1.47	6.25	38.5	-32.2	
High Ch								
844.00	24.51	V	5.3	-1.32	17.85	38.5	-20.6	
844.00	13.90	H	5.3	-1.32	7.24	38.5	-31.2	
Rev. 11.02.2015 Note: For Band 13/17 ERP limit is 34.77dBm. For Band 26 limit is 50dBm								

LTE B26 10MHz QPSK

Fundamental Substitution Measurement (Fc < 1GHz) UL LLC, Chamber N								
Company: Sony Project #: 11139405 Date: 2016-03-30 Test Engineer: Brian Kiewra Configuration: Standalone (LTE Sample #1 Z-Axis) Mode: LTE 26, 10MHz, 16QAM								
Test Equipment: Substitution: Dipole antenna AT0016, cable CBL055, and signal-source T374								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Part 90								
819.00	23.18	V	5.3	-1.60	16.33	50.0	-33.7	
819.00	12.50	H	5.3	-1.60	5.65	50.0	-44.4	
Part 22								
829.00	23.57	V	5.3	-1.50	16.77	38.5	-21.7	
829.00	12.74	H	5.3	-1.50	5.94	38.5	-32.5	
Mid Ch								
831.50	22.86	V	5.3	-1.47	16.07	38.5	-22.4	
831.50	11.50	H	5.3	-1.47	4.71	38.5	-33.7	
High Ch								
844.00	23.24	V	5.3	-1.32	16.58	38.5	-21.9	
844.00	13.21	H	5.3	-1.32	6.55	38.5	-31.9	
Rev. 11.02.2015 Note: For Band 13/17 ERP limit is 34.77dBm. For Band 26 limit is 50dBm								

LTE B26 10MHz 16QAM

Fundamental Substitution Measurement (Fc < 1GHz) UL LLC, Chamber N								
Company: Sony Project #: 11139405 Date: 2016-03-30 Test Engineer: Brian Kiewra Configuration: Standalone (LTE Sample #1 Z-Axis) Mode: LTE 26, 15MHz, QPSK								
Test Equipment: Substitution: Dipole antenna AT0016, cable CBL055, and signal-source T374								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
831.50	24.46	V	5.3	-1.47	17.67	38.5	-20.8	
831.50	13.99	H	5.3	-1.47	7.20	38.5	-31.2	
Mid Ch								
836.50	24.24	V	5.3	-1.47	17.45	38.5	-21.0	
836.50	13.70	H	5.3	-1.47	6.91	38.5	-31.5	
High Ch								
841.50	25.01	V	5.3	-1.35	18.33	38.5	-20.1	
841.50	14.45	H	5.3	-1.35	7.77	38.5	-30.7	
Rev. 11.02.2015 Note: For Band 13/17 ERP limit is 34.77dBm. For Band 26 limit is 50dBm								

LTE B26 15MHz QPSK

Fundamental Substitution Measurement (Fc < 1GHz) UL LLC, Chamber N								
Company: Sony Project #: 11139405 Date: 2016-03-30 Test Engineer: Brian Kiewra Configuration: Standalone (LTE Sample #1 Z-Axis) Mode: LTE 26, 15MHz, 16QAM								
Test Equipment: Substitution: Dipole antenna AT0016, cable CBL055, and signal-source T374								
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
831.50	23.34	V	5.3	-1.47	16.55	38.5	-21.9	
831.50	13.53	H	5.3	-1.47	6.74	38.5	-31.7	
Mid Ch								
836.50	23.29	V	5.3	-1.47	16.50	38.5	-21.9	
836.50	12.78	H	5.3	-1.47	5.99	38.5	-32.5	
High Ch								
841.50	22.82	V	5.3	-1.35	16.14	38.5	-22.3	
841.50	13.33	H	5.3	-1.35	6.65	38.5	-31.8	
Rev. 11.02.2015 Note: For Band 13/17 ERP limit is 34.77dBm. For Band 26 limit is 50dBm								

LTE B26 15MHz 16QAM

LTE Band 41

BW (MHz)	Mode	RB/RB Size	f(MHz)	EIRP	
				dBm	mW
5	QPSK	1/0	2498.5	20.02	100.46
5	QPSK	1/0	2593.0	19.39	86.90
5	QPSK	1/0	2687.5	18.85	76.74
5	16QAM	1/0	2498.5	20.12	102.80
5	16QAM	1/0	2593.0	19.49	88.92
5	16QAM	1/0	2687.5	18.84	76.56
10	QPSK	1/0	2501.0	19.85	96.61
10	QPSK	1/0	2593.0	19.23	83.75
10	QPSK	1/0	2685.0	18.93	78.16
10	16QAM	1/0	2501.0	19.86	96.83
10	16QAM	1/0	2593.0	19.26	84.33
10	16QAM	1/0	2685.0	18.96	78.70
15	QPSK	1/0	2503.5	20.10	102.33
15	QPSK	1/0	2593.0	18.00	63.10
15	QPSK	1/0	2682.5	18.31	67.76
15	16QAM	1/0	2503.5	20.25	105.93
15	16QAM	1/0	2593.0	18.31	67.76
15	16QAM	1/0	2682.5	18.42	69.50
20	QPSK	1/0	2506.0	20.22	105.20
20	QPSK	1/0	2593.0	18.42	69.50
20	QPSK	1/0	2680.0	18.11	64.71
20	16QAM	1/0	2506.0	20.28	106.66
20	16QAM	1/0	2593.0	18.55	71.61
20	16QAM	1/0	2680.0	18.12	64.86

Fundamental Substitution Measurement (Fc > 1GHz) UL LLC, Chamber N									
Company: SOMC Project #: 11139405 Date: 03/31/2016 Test Engineer: Mark Nolting Configuration: Standalone (LTE Sample #2 Y-Axis) Mode: LTE41, 5MHz, QPSK									
Test Equipment: Substitution: Horn antenna AT0078, cable CBL055, and signal-source T374									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes	
Low Ch									
2498.50	23.36	V	9.7	5.5	19.11	33.0	-13.9	PK Detector	
2498.50	24.28	H	9.7	5.5	20.02	33.0	-13.0		
IC Low Ch									
2502.50	24.15	V	9.8	5.5	19.90	33.0	-13.1	PK Detector	
2502.50	24.88	H	9.8	5.5	20.63	33.0	-12.4		
Mid Ch									
2593.00	21.91	V	10.0	5.8	17.68	33.0	-15.3	PK Detector	
2593.00	23.62	H	10.0	5.8	19.39	33.0	-13.6		
High Ch									
2687.50	22.79	V	10.2	6.0	18.66	33.0	-14.3	PK Detector	
2687.50	22.98	H	10.2	6.0	18.85	33.0	-14.1		
Rev. 11.02.2015 Note: For Band 4 EIRP limit is 30dBm									

LTE B41 5MHz QPSK

Fundamental Substitution Measurement (Fc > 1GHz) UL LLC, Chamber N									
Company: SOMC Project #: 11139405 Date: 03/31/2016 Test Engineer: Mark Nolting Configuration: Standalone (LTE Sample #2 Y-Axis) Mode: LTE41, 5MHz, 16-QAM									
Test Equipment: Substitution: Horn antenna AT0078, cable CBL055, and signal-source T374									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes	
Low Ch									
2498.50	23.36	V	9.7	5.5	19.11	33.0	-13.9	PK Detector	
2498.50	24.37	H	9.7	5.5	20.12	33.0	-12.9		
IC Low Ch									
2502.50	22.77	V	9.8	5.5	18.52	33.0	-14.5	PK Detector	
2502.50	23.79	H	9.8	5.5	19.54	33.0	-13.5		
Mid Ch									
2593.00	21.96	V	10.0	5.8	17.73	33.0	-15.3	PK Detector	
2593.00	23.73	H	10.0	5.8	19.49	33.0	-13.5		
High Ch									
2687.50	22.79	V	10.2	6.0	18.67	33.0	-14.3	PK Detector	
2687.50	22.97	H	10.2	6.0	18.84	33.0	-14.2		
Rev. 11.02.2015 Note: For Band 4 EIRP limit is 30dBm									

LTE B41 5MHz 16QAM

Fundamental Substitution Measurement (Fc > 1GHz) UL LLC, Chamber N									
Company: SOMC Project #: 11139405 Date: 03/31/2016 Test Engineer: Mark Nolting Configuration: Standalone (LTE Sample #1 Y-Axis) Mode: LTE41, 10MHz, QPSK									
Test Equipment: Substitution: Horn antenna AT0078, cable CBL055, and signal-source T374									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes	
Low Ch									
2501.00	22.86	V	9.8	5.5	18.61	33.0	-14.4	PK Detector	
2501.00	24.10	H	9.8	5.5	19.85	33.0	-13.2		
IC Low Ch									
2505.00	22.35	V	9.8	5.5	18.09	33.0	-14.9	PK Detector	
2505.00	24.38	H	9.8	5.5	20.12	33.0	-12.9		
Mid Ch									
2593.00	23.30	V	10.0	5.8	19.07	33.0	-13.9	PK Detector	
2593.00	23.46	H	10.0	5.8	19.23	33.0	-13.8		
High Ch									
2685.00	22.84	V	10.2	6.0	18.69	33.0	-14.3	PK Detector	
2685.00	23.08	H	10.2	6.0	18.93	33.0	-14.1		
Rev. 11.02.2015 Note: For Band 4 EIRP limit is 30dBm									

LTE B41 10MHz QPSK

Fundamental Substitution Measurement (Fc > 1GHz) UL LLC, Chamber N									
Company: SOMC Project #: 11139405 Date: 03/31/2016 Test Engineer: Mark Nolting Configuration: Standalone (LTE Sample #1 Y-Axis) Mode: LTE41, 10MHz, 16-QAM									
Test Equipment: Substitution: Horn antenna AT0078, cable CBL055, and signal-source T374									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes	
Low Ch									
2501.00	22.82	V	9.8	5.5	18.57	33.0	-14.4	PK Detector	
2501.00	24.11	H	9.8	5.5	19.86	33.0	-13.1		
IC Low Ch									
2505.00	22.36	V	9.8	5.5	18.10	33.0	-14.9	PK Detector	
2505.00	24.41	H	9.8	5.5	20.15	33.0	-12.8		
Mid Ch									
2593.00	23.33	V	10.0	5.8	19.10	33.0	-13.9	PK Detector	
2593.00	23.49	H	10.0	5.8	19.26	33.0	-13.7		
High Ch									
2685.00	22.87	V	10.2	6.0	18.73	33.0	-14.3	PK Detector	
2685.00	23.11	H	10.2	6.0	18.96	33.0	-14.0		
Rev. 11.02.2015 Note: For Band 4 EIRP limit is 30dBm									

LTE B41 10MHz 16QAM

Fundamental Substitution Measurement (Fc > 1GHz) UL LLC, Chamber N									
Company: SOMC Project #: 11139405 Date: 03/31/2016 Test Engineer: Mark Nolting Configuration: Standalone (LTE Sample #1 Y-Axis) Mode: LTE41, 15MHz, QPSK									
Test Equipment: Substitution: Horn antenna AT0078, cable CBL055, and signal-source T374									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes	
Low Ch									
2503.50	23.31	V	9.8	5.5	19.05	33.0	-13.9	PK Detector	
2503.50	24.36	H	9.8	5.5	20.10	33.0	-12.9		
IC Low Ch									
2507.50	22.83	V	9.8	5.5	18.57	33.0	-14.4	PK Detector	
2507.50	24.48	H	9.8	5.5	20.22	33.0	-12.8		
Mid Ch									
2593.00	20.91	V	10.0	5.8	16.68	33.0	-16.3	PK Detector	
2593.00	22.24	H	10.0	5.8	18.00	33.0	-15.0		
High Ch									
2682.50	20.72	V	10.2	6.0	16.55	33.0	-16.4	PK Detector	
2682.50	22.47	H	10.2	6.0	18.31	33.0	-14.7		
Rev. 11.02.2015 Note: For Band 4 EIRP limit is 30dBm									

LTE B41 15MHz QPSK

Fundamental Substitution Measurement (Fc > 1GHz) UL LLC, Chamber N									
Company: SOMC Project #: 11139405 Date: 03/31/2016 Test Engineer: Mark Nolting Configuration: Standalone (LTE Sample #1 Y-Axis) Mode: LTE41, 15MHz, 16-QAM									
Test Equipment: Substitution: Horn antenna AT0078, cable CBL055, and signal-source T374									
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes	
Low Ch									
2503.50	23.42	V	9.8	5.5	19.17	33.0	-13.8	PK Detector	
2503.50	24.51	H	9.8	5.5	20.25	33.0	-12.7		
IC Low Ch									
2507.50	21.64	V	9.8	5.5	17.38	33.0	-15.6	PK Detector	
2507.50	24.71	H	9.8	5.5	20.45	33.0	-12.6		
Mid Ch									
2593.00	21.15	V	10.0	5.8	16.92	33.0	-16.1	PK Detector	
2593.00	22.55	H	10.0	5.8	18.31	33.0	-14.7		
High Ch									
2682.50	20.80	V	10.2	6.0	16.63	33.0	-16.4	PK Detector	
2682.50	22.59	H	10.2	6.0	18.42	33.0	-14.6		
Rev. 11.02.2015 Note: For Band 4 EIRP limit is 30dBm									

LTE B41 15MHz 16QAM

Fundamental Substitution Measurement (Fc > 1GHz)
 UL LLC, Chamber N

Company: SOMC
 Project #: 11139405
 Date: 03/31/2016
 Test Engineer: Mark Nolting
 Configuration: Standalone (LTE Sample #1 Y-Axis)
 Mode: LTE41, 20MHz, QPSK

Test Equipment:
 Substitution: Horn antenna AT0078, cable CBL055, and signal-source T374

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
2506.00	23.72	V	9.8	5.5	19.46	33.0	-13.5	PK Detector
2506.00	24.47	H	9.8	5.5	20.22	33.0	-12.8	
IC Low Ch								
2510.00	21.77	V	9.8	5.5	17.50	33.0	-15.5	PK Detector
2510.00	22.76	H	9.8	5.5	18.49	33.0	-14.5	
Mid Ch								
2593.00	21.54	V	10.0	5.8	17.31	33.0	-15.7	PK Detector
2593.00	22.65	H	10.0	5.8	18.42	33.0	-14.6	
High Ch								
2680.00	21.87	V	10.2	6.0	17.70	33.0	-15.3	PK Detector
2680.00	22.29	H	10.2	6.0	18.11	33.0	-14.9	

Rev: 11.02.2015
 Note: For Band 4 EIRP limit is 30dBm

LTE B41 20MHz QPSK

Fundamental Substitution Measurement (Fc > 1GHz)
 UL LLC, Chamber N

Company: SOMC
 Project #: 11139405
 Date: 03/31/2016
 Test Engineer: Mark Nolting
 Configuration: Standalone (LTE Sample #1 Y-Axis)
 Mode: LTE41, 20MHz, 16-QAM

Test Equipment:
 Substitution: Horn antenna AT0078, cable CBL055, and signal-source T374

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch								
2506.00	23.81	V	9.8	5.5	19.55	33.0	-13.5	PK Detector
2506.00	24.54	H	9.8	5.5	20.28	33.0	-12.7	
IC Low Ch								
2510.00	22.05	V	9.8	5.5	17.78	33.0	-15.2	PK Detector
2510.00	24.97	H	9.8	5.5	20.70	33.0	-12.3	
Mid Ch								
2593.00	21.67	V	10.0	5.8	17.44	33.0	-15.6	PK Detector
2593.00	22.78	H	10.0	5.8	18.55	33.0	-14.5	
High Ch								
2680.00	21.96	V	10.2	6.0	17.78	33.0	-15.2	PK Detector
2680.00	22.29	H	10.2	6.0	18.12	33.0	-14.9	

Rev: 11.02.2015
 Note: For Band 4 EIRP limit is 30dBm

LTE B41 20MHz 16QAM

14.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238, §27.53 and §90.691

LIMIT

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: (m)(4) (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

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

14.2.1. SPURIOUS RADIATION PLOTS

GSM

High Frequency Substitution Measurement UL RTP Radiated Chamber										
Company: SOMC Project #: 11139405 Date: 2016-04-11 Test Engineer: Mark Notting Configuration: EUT w/ AC Adaptor and Headphones (Sample #2312244 Z-Axis) Mode: GSM850 Test Equipment: Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable										
EIRP										
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (dBi)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	
Low Channel (824.2MHz)										
1.85	36.7	H	3.0	-13.3	39.9	1.0	-52.2	-13.0	-39.2	
2.47	42.7	H	3.0	-16.1	39.3	1.0	-54.4	-13.0	-41.4	
3.39	64.4	H	3.0	-15.1	39.5	1.0	-53.5	-13.0	-40.5	
1.65	59.9	V	3.0	-13.9	39.9	1.0	-52.8	-13.0	-39.8	
2.47	42.7	V	3.0	-15.9	39.3	1.0	-53.3	-13.0	-40.3	
3.39	64.7	V	3.0	-14.9	39.5	1.0	-53.0	-13.0	-40.0	
Mid Channel (836.6MHz)										
1.67	36.4	H	3.0	-12.8	39.9	1.0	-51.7	-13.0	-39.7	
2.51	42.7	H	3.0	-15.9	39.2	1.0	-54.1	-13.0	-41.1	
3.35	64.2	H	3.0	-14.7	39.5	1.0	-53.3	-13.0	-40.3	
1.67	36.6	V	3.0	-13.4	39.9	1.0	-52.3	-13.0	-39.3	
2.51	42.1	V	3.0	-14.3	39.2	1.0	-52.8	-13.0	-39.8	
3.35	64.4	V	3.0	-14.1	39.5	1.0	-52.6	-13.0	-39.6	
High Channel (848.8MHz)										
1.70	36.9	H	3.0	-13.2	40.0	1.0	-52.1	-13.0	-39.1	
2.55	42.8	H	3.0	-15.8	39.2	1.0	-54.1	-13.0	-41.1	
3.40	64.6	H	3.0	-15.2	39.5	1.0	-53.7	-13.0	-40.7	
1.70	38.9	V	3.0	-13.5	40.0	1.0	-52.5	-13.0	-39.5	
2.55	42.5	V	3.0	-14.5	39.2	1.0	-52.8	-13.0	-39.8	
3.40	64.5	V	3.0	-14.1	39.5	1.0	-52.7	-13.0	-39.7	

Rev: 03 19 15

GSM850 GPRS

High Frequency Substitution Measurement UL RTP Radiated Chamber										
Company: SOMC Project #: 11139405 Date: 2016-04-11 Test Engineer: Mark Notting Configuration: EUT w/ AC Adaptor and Headphones (Sample #2312244 Z-Axis) Mode: GSM850 Test Equipment: Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable										
EIRP										
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (dBi)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	
Low Channel (824.2MHz)										
1.85	37.3	H	3.0	-13.9	39.9	1.0	-52.7	-13.0	-39.7	
2.47	43.1	H	3.0	-16.5	39.3	1.0	-54.8	-13.0	-41.8	
3.39	64.3	H	3.0	-15.6	39.5	1.0	-53.5	-13.0	-40.5	
1.65	59.4	V	3.0	-14.4	39.9	1.0	-52.3	-13.0	-39.3	
2.47	43.1	V	3.0	-15.4	39.3	1.0	-53.7	-13.0	-40.7	
3.39	64.8	V	3.0	-14.6	39.5	1.0	-53.0	-13.0	-40.0	
Mid Channel (836.6MHz)										
1.67	37.0	H	3.0	-13.4	39.9	1.0	-52.3	-13.0	-39.3	
2.51	43.4	H	3.0	-16.6	39.2	1.0	-54.8	-13.0	-41.8	
3.35	64.6	H	3.0	-15.1	39.5	1.0	-53.6	-13.0	-40.6	
1.67	36.8	V	3.0	-13.6	39.9	1.0	-52.6	-13.0	-39.6	
2.51	42.9	V	3.0	-14.3	39.2	1.0	-52.3	-13.0	-39.3	
3.35	64.7	V	3.0	-14.4	39.5	1.0	-52.9	-13.0	-39.9	
High Channel (848.8MHz)										
1.70	37.6	H	3.0	-13.2	40.0	1.0	-52.2	-13.0	-39.2	
2.55	43.3	H	3.0	-16.3	39.2	1.0	-54.8	-13.0	-41.8	
3.40	64.8	H	3.0	-15.2	39.5	1.0	-53.8	-13.0	-40.8	
1.70	39.4	V	3.0	-14.6	40.0	1.0	-53.6	-13.0	-40.6	
2.55	43.4	V	3.0	-15.2	39.2	1.0	-53.7	-13.0	-40.7	
3.40	64.6	V	3.0	-14.2	39.5	1.0	-52.8	-13.0	-39.8	

Rev: 03 19 15

GSM850 EGPRS

High Frequency Substitution Measurement UL RTP Radiated Chamber										
Company: SOMC Project #: 11139405 Date: 2016-04-11 Test Engineer: Brian Klewra Configuration: EUT w/ AC Adaptor and Headphones (Sample #2312244 Y-Axis) Mode: GSM1900 Test Equipment: Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable										
EIRP										
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (dBi)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	
Low Channel (1850.2MHz)										
3.70	42.3	H	3.0	-12.0	39.7	1.0	-50.8	-13.0	-37.8	
5.55	57.4	H	3.0	-3.8	40.1	1.0	-42.9	-13.0	-29.9	
7.40	65.6	H	3.0	-9.3	39.0	1.0	-47.2	-13.0	-34.2	
3.70	43.3	V	3.0	-12.5	39.7	1.0	-51.3	-13.0	-38.3	
5.55	54.3	V	3.0	-1.0	40.1	1.0	-40.9	-13.0	-27.9	
7.40	64.7	V	3.0	-8.6	39.0	1.0	-46.5	-13.0	-33.5	
Mid Channel (1880.9)										
3.76	43.3	H	3.0	-12.9	39.8	1.0	-51.0	-13.0	-38.8	
5.64	59.4	H	3.0	-1.7	40.0	1.0	-40.8	-13.0	-27.8	
7.52	65.9	H	3.0	-9.4	38.9	1.0	-47.4	-13.0	-34.4	
3.76	43.2	V	3.0	-12.3	39.8	1.0	-51.1	-13.0	-38.1	
5.64	54.6	V	3.0	-1.1	40.0	1.0	-40.2	-13.0	-27.2	
7.52	66.6	V	3.0	-10.4	38.9	1.0	-48.3	-13.0	-35.3	
High Channel (1909.8MHz)										
5.82	42.6	H	3.0	-12.0	39.8	1.0	-50.8	-13.0	-37.8	
5.73	56.3	H	3.0	-2.5	40.0	1.0	-41.4	-13.0	-28.4	
7.64	65.2	H	3.0	-8.6	38.9	1.0	-46.5	-13.0	-33.5	
5.82	42.6	V	3.0	-11.7	39.8	1.0	-50.5	-13.0	-37.5	
5.73	56.5	V	3.0	-4.8	40.0	1.0	-43.8	-13.0	-30.8	
7.64	65.4	V	3.0	-9.0	38.9	1.0	-46.9	-13.0	-33.9	

Rev: 03 19 15

GSM1900 GPRS

High Frequency Substitution Measurement UL RTP Radiated Chamber										
Company: SOMC Project #: 11139405 Date: 2016-04-11 Test Engineer: Brian Klewra Configuration: EUT w/ AC Adaptor and Headphones (Sample #2312244 Y-Axis) Mode: GSM1900 Test Equipment: Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable										
EIRP										
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (dBi)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	
Low Channel (1850.2MHz)										
3.70	43.0	H	3.0	-12.2	39.7	1.0	-51.0	-13.0	-38.0	
5.55	59.1	H	3.0	-5.6	40.1	1.0	-44.7	-13.0	-31.7	
7.40	66.2	H	3.0	-9.8	39.0	1.0	-47.8	-13.0	-34.8	
3.70	43.1	V	3.0	-12.4	39.7	1.0	-51.1	-13.0	-38.1	
5.55	57.6	V	3.0	-4.2	40.1	1.0	-43.3	-13.0	-30.3	
7.40	65.7	V	3.0	-9.6	39.0	1.0	-47.6	-13.0	-34.6	
Mid Channel (1880.9)										
3.76	42.7	H	3.0	-12.3	39.8	1.0	-51.1	-13.0	-38.1	
5.64	59.9	H	3.0	-6.3	40.0	1.0	-45.3	-13.0	-32.3	
7.52	66.0	H	3.0	-9.5	38.9	1.0	-47.5	-13.0	-34.5	
3.76	43.1	V	3.0	-12.2	39.8	1.0	-51.0	-13.0	-38.0	
5.64	59.2	V	3.0	-5.7	40.0	1.0	-44.8	-13.0	-31.8	
7.52	65.1	V	3.0	-9.9	38.9	1.0	-48.8	-13.0	-35.8	
High Channel (1909.8MHz)										
5.82	42.9	H	3.0	-12.3	39.8	1.0	-51.1	-13.0	-38.1	
5.73	57.4	H	3.0	-7.6	40.0	1.0	-46.5	-13.0	-33.5	
7.64	64.4	H	3.0	-8.8	38.9	1.0	-46.7	-13.0	-33.7	
5.82	42.9	V	3.0	-11.8	39.8	1.0	-50.8	-13.0	-37.8	
5.73	60.7	V	3.0	-7.1	40.0	1.0	-46.0	-13.0	-33.0	
7.64	65.3	V	3.0	-8.9	38.9	1.0	-46.8	-13.0	-33.8	

Rev: 03 19 15

GSM1900 EGPRS

WCDMA

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-11
 Test Engineer: Brian Kiwra
 Configuration: EUT w/ AC Adaptor and Headphones (Sample #2312244 Y-Axis)
 Mode: HSDPA 1000MHz
 Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1852.48MHz)									
3.71	61.7	H	3.0	11.4	39.7	1.0	-50.3	-13.0	-37.1
3.76	63.4	H	3.0	9.0	40.1	1.0	-49.0	-13.0	-36.0
7.41	65.0	H	3.0	8.6	39.0	1.0	-46.6	-13.0	-33.8
3.71	61.4	V	3.0	10.6	39.7	1.0	-49.4	-13.0	-36.4
3.76	62.6	V	3.0	9.2	40.1	1.0	-48.3	-13.0	-35.2
7.41	64.5	V	3.0	126.6	39.0	1.0	-62.7	-13.0	-99.7
Mid Channel (1880.00)									
3.76	61.5	H	3.0	11.1	39.8	1.0	-49.8	-13.0	-36.8
5.64	63.2	H	3.0	9.5	40.0	1.0	-48.5	-13.0	-35.5
7.52	65.0	H	3.0	8.5	39.9	1.0	-46.5	-13.0	-33.5
3.76	62.5	V	3.0	11.7	39.8	1.0	-50.5	-13.0	-37.5
5.64	62.7	V	3.0	9.2	40.0	1.0	-48.2	-13.0	-35.2
7.52	64.7	V	3.0	8.4	39.9	1.0	-46.4	-13.0	-33.4
High Channel (1907.68MHz)									
3.82	61.5	H	3.0	11.1	39.8	1.0	-49.9	-13.0	-36.9
5.72	63.8	H	3.0	9.0	40.0	1.0	-47.9	-13.0	-34.8
7.63	63.8	H	3.0	7.2	39.9	1.0	-45.1	-13.0	-32.1
3.82	61.1	V	3.0	10.2	39.8	1.0	-49.0	-13.0	-36.0
5.72	61.7	V	3.0	8.0	40.0	1.0	-47.0	-13.0	-34.0
7.63	64.7	V	3.0	8.3	39.9	1.0	-46.2	-13.0	-33.2

Rev: 03.19.15

B2 REL99

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-11
 Test Engineer: Brian Kiwra
 Configuration: EUT w/ AC Adaptor and Headphones (Sample #2312244 Y-Axis)
 Mode: HSDPA 1000MHz
 Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1852.48MHz)									
3.71	62.0	H	3.0	11.7	39.7	1.0	-50.4	-13.0	-37.4
3.76	63.4	H	3.0	9.3	40.1	1.0	-49.0	-13.0	-36.0
7.41	63.8	H	3.0	7.4	39.0	1.0	-45.3	-13.0	-32.3
3.71	61.6	V	3.0	10.8	39.7	1.0	-49.5	-13.0	-36.5
3.76	63.3	V	3.0	9.9	40.1	1.0	-49.0	-13.0	-36.0
7.41	64.6	V	3.0	8.5	39.0	1.0	-46.5	-13.0	-33.5
Mid Channel (1880.00)									
3.76	62.1	H	3.0	11.6	39.8	1.0	-50.4	-13.0	-37.4
5.64	63.1	H	3.0	9.5	40.0	1.0	-48.5	-13.0	-35.5
7.52	64.9	H	3.0	8.4	39.9	1.0	-46.3	-13.0	-33.3
3.76	62.2	V	3.0	11.4	39.8	1.0	-50.1	-13.0	-37.1
5.64	62.3	V	3.0	8.9	40.0	1.0	-47.8	-13.0	-34.8
7.52	65.0	V	3.0	8.8	39.9	1.0	-46.7	-13.0	-33.7
High Channel (1907.68MHz)									
3.82	61.7	H	3.0	11.1	39.8	1.0	-49.9	-13.0	-36.9
5.72	63.7	H	3.0	9.0	40.0	1.0	-47.9	-13.0	-34.9
7.63	63.7	H	3.0	7.1	39.9	1.0	-45.0	-13.0	-32.0
3.82	61.4	V	3.0	9.6	39.8	1.0	-48.4	-13.0	-35.4
5.72	62.5	V	3.0	8.9	40.0	1.0	-47.9	-13.0	-34.9
7.63	64.6	V	3.0	8.3	39.9	1.0	-46.2	-13.0	-33.2

Rev: 03.19.15

B2 HSDPA

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-11
 Test Engineer: Mark Notting
 Configuration: EUT w/ AC Adaptor and Headphones (Sample #2312244 Y-Axis)
 Mode: HSDPA 1700MHz
 Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1732.48MHz)									
3.47	64.1	H	3.0	14.5	39.6	1.0	-53.0	-13.0	-40.0
5.14	63.3	H	3.0	10.4	40.3	1.0	-49.7	-13.0	-36.7
6.85	64.7	H	3.0	9.0	39.2	1.0	-47.2	-13.0	-34.2
3.47	64.4	V	3.0	14.0	39.6	1.0	-52.6	-13.0	-39.6
5.14	63.7	V	3.0	11.0	40.3	1.0	-50.3	-13.0	-37.3
6.85	65.0	V	3.0	9.8	39.2	1.0	-47.8	-13.0	-34.8
Mid Channel (1732.48MHz)									
3.47	63.7	H	3.0	13.9	39.6	1.0	-52.9	-13.0	-39.5
5.20	63.0	H	3.0	10.1	40.3	1.0	-49.4	-13.0	-36.4
6.93	65.5	H	3.0	9.7	39.1	1.0	-47.8	-13.0	-34.8
3.47	64.0	V	3.0	13.6	39.6	1.0	-52.1	-13.0	-39.1
5.20	63.3	V	3.0	10.8	40.3	1.0	-49.2	-13.0	-36.2
6.93	65.3	V	3.0	9.8	39.1	1.0	-47.9	-13.0	-34.9
High Channel (1732.48MHz)									
3.51	64.2	H	3.0	14.3	39.6	1.0	-53.0	-13.0	-40.0
5.26	63.5	H	3.0	10.3	40.3	1.0	-49.8	-13.0	-36.8
7.01	64.7	H	3.0	8.8	39.1	1.0	-46.3	-13.0	-33.3
3.51	64.3	V	3.0	13.8	39.6	1.0	-52.4	-13.0	-39.4
5.26	64.5	V	3.0	11.5	40.3	1.0	-49.3	-13.0	-36.3
7.01	65.7	V	3.0	10.1	39.1	1.0	-48.1	-13.0	-35.1

Rev: 03.19.15

B4 REL99

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-11
 Test Engineer: Mark Notting
 Configuration: EUT w/ AC Adaptor and Headphones (Sample #2312244 Y-Axis)
 Mode: HSDPA 1700MHz
 Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1732.48MHz)									
3.47	64.2	H	3.0	14.6	39.6	1.0	-53.2	-13.0	-40.2
5.14	63.2	H	3.0	10.3	40.3	1.0	-49.6	-13.0	-36.6
6.85	65.2	H	3.0	9.2	39.2	1.0	-47.7	-13.0	-34.7
3.47	64.2	V	3.0	13.8	39.6	1.0	-52.4	-13.0	-39.4
5.14	64.0	V	3.0	11.3	40.3	1.0	-50.6	-13.0	-37.6
6.85	65.4	V	3.0	10.1	39.2	1.0	-48.2	-13.0	-35.2
Mid Channel (1732.48MHz)									
3.47	63.9	H	3.0	14.1	39.6	1.0	-52.7	-13.0	-39.7
5.20	63.5	H	3.0	10.5	40.3	1.0	-49.8	-13.0	-36.8
6.93	65.6	H	3.0	9.8	39.1	1.0	-47.9	-13.0	-34.9
3.47	64.1	V	3.0	13.6	39.6	1.0	-52.2	-13.0	-39.2
5.20	63.7	V	3.0	10.8	40.3	1.0	-49.2	-13.0	-36.2
6.93	65.3	V	3.0	9.8	39.1	1.0	-47.9	-13.0	-34.9
High Channel (1732.48MHz)									
3.51	64.4	H	3.0	14.2	39.6	1.0	-52.8	-13.0	-39.8
5.26	63.5	H	3.0	10.5	40.3	1.0	-49.8	-13.0	-36.8
7.01	64.8	H	3.0	9.2	39.1	1.0	-47.5	-13.0	-34.5
3.51	64.1	V	3.0	13.6	39.6	1.0	-52.2	-13.0	-39.2
5.26	64.2	V	3.0	11.3	40.3	1.0	-49.3	-13.0	-36.3
7.01	65.0	V	3.0	10.4	39.1	1.0	-47.5	-13.0	-34.5

Rev: 03.19.15

B4 HSDPA

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-11
 Test Engineer: Mark Notting
 Configuration: EUT w/ AC Adaptor and Headphones (Sample #2312244 Z-Axis)
 Mode: HSDPA 800MHz
 Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (826.4MHz)									
1.85	62.5	H	3.0	19.0	39.9	1.0	-57.8	-13.0	-44.8
2.40	64.3	H	3.0	17.6	39.3	1.0	-55.9	-13.0	-42.9
3.31	65.0	H	3.0	15.6	39.5	1.0	-54.1	-13.0	-41.1
1.85	61.8	V	3.0	16.8	39.9	1.0	-55.7	-13.0	-42.7
2.40	64.4	V	3.0	16.7	39.3	1.0	-55.6	-13.0	-42.6
3.31	65.0	V	3.0	14.2	39.5	1.0	-53.2	-13.0	-40.2
Mid Channel (836.4MHz)									
1.67	61.9	H	3.0	18.3	39.9	1.0	-57.2	-13.0	-44.2
2.51	64.8	H	3.0	17.4	39.2	1.0	-55.6	-13.0	-42.6
3.35	65.2	H	3.0	15.8	39.5	1.0	-54.3	-13.0	-41.3
1.67	61.3	V	3.0	16.1	39.9	1.0	-55.8	-13.0	-42.8
2.51	63.4	V	3.0	15.6	39.2	1.0	-53.9	-13.0	-40.9
3.35	64.8	V	3.0	14.5	39.5	1.0	-53.0	-13.0	-40.0
High Channel (846.4MHz)									
1.89	61.4	H	3.0	18.1	39.9	1.0	-57.1	-13.0	-44.1
2.54	64.7	H	3.0	17.8	39.2	1.0	-56.0	-13.0	-43.0
3.39	64.5	H	3.0	14.9	39.5	1.0	-53.5	-13.0	-40.5
1.89	61.7	V	3.0	16.4	39.9	1.0	-55.3	-13.0	-42.3
2.54	64.4	V	3.0	16.5	39.2	1.0	-54.7	-13.0	-41.7
3.39	65.1	V	3.0	14.7	39.5	1.0	-53.3	-13.0	-40.3

Rev: 03.19.15

B5 REL99

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-11
 Test Engineer: Mark Notting
 Configuration: EUT w/ AC Adaptor and Headphones (Sample #2312244 Z-Axis)
 Mode: HSDPA 800MHz
 Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (826.4MHz)									
1.85	62.4	H	3.0	19.0	39.9	1.0	-57.9	-13.0	-44.9
2.40	64.6	H	3.0	18.0	39.3	1.0	-56.3	-13.0	-43.3
3.31	65.2	H	3.0	16.4	39.5	1.0	-54.4	-13.0	-41.4
1.85	61.4	V	3.0	16.4	39.9	1.0	-55.3	-13.0	-42.3
2.40	64.9								

LTE Band 2

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 2, 1.4MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1850 MHz)									
3.76	64.6	H	3.0	14.2	39.7	1.0	53.9	13.0	40.9
5.95	62.5	H	3.0	9.0	40.1	1.0	49.1	13.0	36.1
7.40	66.9	H	3.0	10.6	39.0	1.0	49.6	13.0	36.6
3.76	64.0	V	3.0	13.3	39.7	1.0	52.0	13.0	39.0
5.95	62.2	V	3.0	8.8	40.1	1.0	47.9	13.0	34.9
7.40	67.5	V	3.0	11.4	39.0	1.0	49.4	13.0	36.4
Mid Channel (1880MHz)									
3.76	65.5	H	3.0	13.0	39.8	1.0	51.8	13.0	38.8
5.94	61.6	H	3.0	7.8	40.0	1.0	48.8	13.0	35.8
7.52	67.3	H	3.0	10.8	38.9	1.0	48.7	13.0	35.7
3.76	64.1	V	3.0	13.3	39.8	1.0	52.1	13.0	39.1
5.94	63.0	V	3.0	9.5	40.0	1.0	48.5	13.0	35.5
7.52	68.4	V	3.0	12.2	38.9	1.0	49.1	13.0	36.1
High Channel (1900.3MHz)									
3.82	64.9	H	3.0	13.0	39.8	1.0	51.8	13.0	38.8
5.73	64.9	H	3.0	11.0	40.0	1.0	50.0	13.0	37.0
7.64	68.8	H	3.0	10.4	38.9	1.0	47.8	13.0	34.8
3.82	64.0	V	3.0	13.1	39.8	1.0	52.0	13.0	39.0
5.73	65.1	V	3.0	11.4	40.0	1.0	50.4	13.0	37.4
7.64	67.2	V	3.0	10.8	38.9	1.0	48.7	13.0	35.7

Rev: 10.28.15

LTE B2 1.4MHz QPSK

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 2, 1.4MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1850 MHz)									
3.76	64.6	H	3.0	14.2	39.7	1.0	53.9	13.0	40.9
5.95	63.2	H	3.0	9.6	40.1	1.0	49.7	13.0	36.7
7.40	67.4	H	3.0	10.6	39.0	1.0	49.6	13.0	36.6
3.76	64.3	V	3.0	13.6	39.7	1.0	52.3	13.0	39.3
5.95	62.1	V	3.0	8.7	40.1	1.0	47.8	13.0	34.8
7.40	67.2	V	3.0	11.1	39.0	1.0	49.1	13.0	36.1
Mid Channel (1880MHz)									
3.76	65.2	H	3.0	12.7	39.8	1.0	51.5	13.0	38.5
5.94	62.4	H	3.0	8.4	40.0	1.0	47.5	13.0	34.5
7.52	68.3	H	3.0	11.8	38.9	1.0	49.7	13.0	36.7
3.76	64.8	V	3.0	14.0	39.8	1.0	52.8	13.0	39.8
5.94	63.1	V	3.0	9.6	40.0	1.0	48.6	13.0	35.6
7.52	67.1	V	3.0	10.9	38.9	1.0	48.8	13.0	35.8
High Channel (1900.3MHz)									
3.82	65.2	H	3.0	13.8	39.8	1.0	52.6	13.0	39.6
5.73	65.2	H	3.0	11.4	40.0	1.0	50.4	13.0	37.4
7.64	67.6	H	3.0	10.9	38.9	1.0	48.8	13.0	35.8
3.82	64.4	V	3.0	12.5	39.8	1.0	51.3	13.0	38.3
5.73	65.8	V	3.0	11.2	40.0	1.0	50.1	13.0	37.1
7.64	67.5	V	3.0	11.1	38.9	1.0	49.0	13.0	36.0

Rev: 10.28.15

LTE B2 1.4MHz 16QAM

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 2, 3MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1850 MHz)									
3.76	64.9	H	3.0	14.8	39.7	1.0	53.1	13.0	40.1
5.95	63.1	H	3.0	9.8	40.1	1.0	48.7	13.0	35.7
7.41	66.8	H	3.0	10.5	39.0	1.0	48.4	13.0	35.4
3.76	63.7	V	3.0	13.0	39.7	1.0	51.7	13.0	38.7
5.95	62.3	V	3.0	8.9	40.1	1.0	48.0	13.0	35.0
7.41	67.4	V	3.0	11.3	39.0	1.0	49.2	13.0	36.2
Mid Channel (1880MHz)									
3.76	64.6	H	3.0	14.1	39.8	1.0	52.9	13.0	39.9
5.94	62.8	H	3.0	8.7	40.0	1.0	47.7	13.0	34.7
7.52	67.8	H	3.0	11.3	38.9	1.0	49.3	13.0	36.3
3.76	64.8	V	3.0	14.0	39.8	1.0	52.8	13.0	39.8
5.94	62.7	V	3.0	9.2	40.0	1.0	48.3	13.0	35.3
7.52	68.6	V	3.0	10.8	38.9	1.0	49.5	13.0	36.5
High Channel (1900.3MHz)									
3.82	64.2	H	3.0	13.6	39.8	1.0	52.5	13.0	39.5
5.73	64.9	H	3.0	11.1	40.0	1.0	50.1	13.0	37.1
7.63	67.3	H	3.0	10.6	38.9	1.0	48.5	13.0	35.5
3.82	64.5	V	3.0	13.6	39.8	1.0	52.5	13.0	39.5
5.73	65.9	V	3.0	11.3	40.0	1.0	50.4	13.0	37.4
7.63	67.7	V	3.0	11.4	38.9	1.0	49.3	13.0	36.3

Rev: 10.28.15

LTE B2 3MHz QPSK

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 2, 3MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1850 MHz)									
3.76	64.6	H	3.0	14.2	39.7	1.0	53.9	13.0	40.9
5.95	62.6	H	3.0	9.5	40.1	1.0	48.6	13.0	35.6
7.41	66.3	H	3.0	10.9	39.0	1.0	49.5	13.0	36.5
3.76	64.1	V	3.0	13.3	39.7	1.0	52.0	13.0	39.0
5.95	62.8	V	3.0	9.2	40.1	1.0	48.3	13.0	35.3
7.41	67.5	V	3.0	11.4	39.0	1.0	49.4	13.0	36.4
Mid Channel (1880MHz)									
3.76	65.0	H	3.0	14.5	39.8	1.0	53.3	13.0	40.3
5.94	62.6	H	3.0	9.0	40.0	1.0	48.0	13.0	35.0
7.52	67.8	H	3.0	11.2	38.9	1.0	49.4	13.0	36.4
3.76	64.8	V	3.0	14.0	39.8	1.0	52.7	13.0	39.7
5.94	63.1	V	3.0	9.6	40.0	1.0	48.6	13.0	35.6
7.52	68.2	V	3.0	10.9	38.9	1.0	49.5	13.0	36.5
High Channel (1900.3MHz)									
3.82	63.7	H	3.0	13.1	39.8	1.0	51.9	13.0	38.9
5.73	64.8	H	3.0	10.5	40.0	1.0	49.4	13.0	36.4
7.63	67.7	H	3.0	11.1	38.9	1.0	49.0	13.0	36.0
3.82	64.7	V	3.0	13.8	39.8	1.0	52.6	13.0	39.6
5.73	65.4	V	3.0	11.2	40.0	1.0	50.2	13.0	37.2
7.63	68.1	V	3.0	11.8	38.9	1.0	49.7	13.0	36.7

Rev: 10.28.15

LTE B2 3MHz 16QAM

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 2, 6MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1850 MHz)									
3.71	64.9	H	3.0	14.2	39.7	1.0	52.9	13.0	39.9
5.96	62.7	H	3.0	9.2	40.1	1.0	48.3	13.0	35.3
7.41	67.1	H	3.0	10.7	39.0	1.0	48.6	13.0	35.6
3.71	64.2	V	3.0	13.4	39.7	1.0	52.2	13.0	39.2
5.96	62.1	V	3.0	8.7	40.1	1.0	47.8	13.0	34.8
7.41	66.8	V	3.0	10.7	39.0	1.0	48.6	13.0	35.6
Mid Channel (1880MHz)									
3.76	64.8	H	3.0	14.3	39.8	1.0	53.1	13.0	40.1
5.94	62.6	H	3.0	9.0	40.0	1.0	48.0	13.0	35.0
7.52	67.4	H	3.0	10.9	38.9	1.0	48.9	13.0	35.9
3.76	64.8	V	3.0	14.0	39.8	1.0	52.7	13.0	39.7
5.94	62.5	V	3.0	9.7	40.0	1.0	48.7	13.0	35.7
7.52	68.0	V	3.0	11.2	38.9	1.0	49.7	13.0	36.7
High Channel (1907.5MHz)									
3.82	63.6	H	3.0	13.1	39.8	1.0	51.9	13.0	38.9
5.72	64.8	H	3.0	11.0	40.0	1.0	50.0	13.0	37.0
7.63	67.4	H	3.0	10.8	38.9	1.0	48.7	13.0	35.7
3.82	64.7	V	3.0	13.8	39.8	1.0	52.6	13.0	39.6
5.72	65.9	V	3.0	11.2	40.0	1.0	50.2	13.0	37.2
7.63	67.5	V	3.0	10.9	38.9	1.0	49.0	13.0	36.0

Rev: 10.28.15

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 2, 6MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1850 MHz)									
3.71	64.8	H	3.0	14.3	39.7	1.0	53.1	13.0	40.1
5.96	62.6	H	3.0	9.1	40.1	1.0	48.2	13.0	35.2
7.41	67.2	H	3.0	10.8	39.0	1.0	48.8	13.0	35.8
3.71	64.0	V	3.0	13.2	39.7	1.0	52.0		

LTE B2 5MHz QPSK

High Frequency Substitution Measurement
UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 2, 10MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1855MHz)									
3.71	64.2	H	3.0	13.9	39.7	1.0	-52.8	-13.0	-39.6
5.57	62.0	H	3.0	8.0	40.1	1.0	-47.8	-13.0	-34.1
7.42	67.2	H	3.0	10.9	39.0	1.0	-48.8	-13.0	-35.0
Mid Channel (1880MHz)									
3.76	64.9	H	3.0	14.0	39.8	1.0	-52.8	-13.0	-39.8
5.64	62.5	H	3.0	8.8	40.0	1.0	-47.9	-13.0	-34.9
7.52	67.7	H	3.0	11.2	38.9	1.0	-49.2	-13.0	-36.2
High Channel (1905MHz)									
3.81	64.8	H	3.0	14.2	39.8	1.0	-53.0	-13.0	-40.0
5.72	65.3	H	3.0	11.5	40.0	1.0	-50.5	-13.0	-37.5
7.62	67.2	H	3.0	10.8	38.9	1.0	-48.8	-13.0	-35.6

Rev. 10.28.15

LTE B2 5MHz 16QAM

High Frequency Substitution Measurement
UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 2, 10MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1855MHz)									
3.71	63.8	H	3.0	13.4	39.7	1.0	-52.7	-13.0	-39.2
5.57	62.3	H	3.0	8.8	40.1	1.0	-47.8	-13.0	-34.8
7.42	67.5	H	3.0	11.2	39.0	1.0	-49.2	-13.0	-36.1
Mid Channel (1880MHz)									
3.76	64.8	H	3.0	14.3	39.8	1.0	-53.1	-13.0	-40.1
5.64	62.7	H	3.0	9.0	40.0	1.0	-48.0	-13.0	-35.0
7.52	68.6	H	3.0	12.1	38.9	1.0	-50.1	-13.0	-37.1
High Channel (1905MHz)									
3.81	64.7	H	3.0	14.1	39.8	1.0	-52.9	-13.0	-39.9
5.72	65.4	H	3.0	11.6	40.0	1.0	-50.5	-13.0	-37.9
7.62	67.3	H	3.0	10.9	38.9	1.0	-48.7	-13.0	-35.7

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LTE B2 10MHz QPSK

High Frequency Substitution Measurement
UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 2, 10MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1857.5MHz)									
3.72	62.6	H	3.0	13.3	39.8	1.0	-52.8	-13.0	-39.6
5.57	62.3	H	3.0	8.8	40.1	1.0	-47.8	-13.0	-34.8
7.43	67.2	H	3.0	10.8	39.0	1.0	-48.8	-13.0	-35.6
Mid Channel (1880MHz)									
3.76	65.6	H	3.0	15.1	39.8	1.0	-53.9	-13.0	-40.9
5.64	63.0	H	3.0	9.3	40.0	1.0	-49.2	-13.0	-36.0
7.52	68.7	H	3.0	12.2	38.9	1.0	-50.1	-13.0	-37.1
High Channel (1902.5MHz)									
3.81	64.9	H	3.0	14.7	39.8	1.0	-53.4	-13.0	-40.4
5.71	64.7	H	3.0	10.9	40.0	1.0	-49.9	-13.0	-36.9
7.61	67.4	H	3.0	10.8	38.9	1.0	-48.7	-13.0	-35.6

Rev. 10.28.15

LTE B2 10MHz 16QAM

High Frequency Substitution Measurement
UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 2, 10MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1857.5MHz)									
3.72	63.9	H	3.0	13.5	39.8	1.0	-52.3	-13.0	-39.3
5.57	63.0	H	3.0	9.4	40.1	1.0	-48.0	-13.0	-35.0
7.43	67.0	H	3.0	10.6	39.0	1.0	-48.6	-13.0	-35.6
Mid Channel (1880MHz)									
3.76	65.6	H	3.0	15.1	39.8	1.0	-53.9	-13.0	-40.9
5.64	63.7	H	3.0	9.6	40.0	1.0	-49.0	-13.0	-36.0
7.52	68.0	H	3.0	11.5	38.9	1.0	-49.4	-13.0	-36.4
High Channel (1902.5MHz)									
3.81	64.8	H	3.0	14.8	39.8	1.0	-53.7	-13.0	-40.7
5.71	64.9	H	3.0	11.0	40.0	1.0	-50.0	-13.0	-37.0
7.61	67.3	H	3.0	10.9	38.9	1.0	-48.6	-13.0	-35.6

Rev. 10.28.15

LTE B2 15MHz QPSK

High Frequency Substitution Measurement
UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 2, 20MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1860MHz)									
3.72	65.3	H	3.0	15.9	39.8	1.0	-52.7	-13.0	-39.7
5.58	62.2	H	3.0	9.7	40.1	1.0	-47.7	-13.0	-34.7
7.44	67.6	H	3.0	11.3	39.0	1.0	-49.1	-13.0	-36.1
Mid Channel (1880MHz)									
3.76	65.9	H	3.0	16.3	39.8	1.0	-54.0	-13.0	-41.0
5.64	62.7	H	3.0	10.0	40.0	1.0	-49.0	-13.0	-36.0
7.52	68.4	H	3.0	11.9	38.9	1.0	-49.8	-13.0	-36.8
High Channel (1900MHz)									
3.80	65.1	H	3.0	14.5	39.8	1.0	-53.3	-13.0	-40.3
5.70	65.0	H	3.0	11.2	40.0	1.0	-50.4	-13.0	-37.4
7.60	67.4	H	3.0	10.9	38.9	1.0	-48.8	-13.0	-35.8

Rev. 10.28.15

LTE B2 15MHz 16QAM

High Frequency Substitution Measurement
UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 2, 20MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1860MHz)									
3.72	64.7	H	3.0	14.3	39.8	1.0	-53.1	-13.0	-40.1
5.58	62.1	H	3.0	8.5	40.1	1.0	-47.6	-13.0	-34.6
7.44	67.3	H	3.0	10.8	39.0	1.0	-48.7	-13.0	-35.7
Mid Channel (1880MHz)									
3.76	65.4	H	3.0	15.1	39.8	1.0	-53.8	-13.0	-40.8
5.64	63.4	H	3.0	10.0	40.0	1.0	-49.0	-13.0	-36.0
7.52	68.0	H	3.0	11.6	38.9	1.0	-49.5	-13.0	-36.5
High Channel (1900MHz)									
3.80	64.9	H	3.0	14.3	39.8	1.0	-53.1	-13.0	-40.1
5.70	65.2	H	3.0	11.6	40.0	1.0	-50.6	-13.0	-37.6
7.60	67.2	H	3.0	10.6	38.9	1.0	-48.5	-13.0	-35.5

Rev. 10.28.15

LTE B2 20MHz QPSK	LTE B2 20MHz 16QAM
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LTE Band 4

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 4, 1.4MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1710.5MHz)									
3.42	43.8	H	3.0	14.1	39.6	1.0	-52.7	-13.0	-39.7
5.13	42.6	H	3.0	9.8	40.3	1.0	-49.1	-13.0	-39.1
6.84	64.8	H	3.0	9.1	39.2	1.0	-47.3	-13.0	-34.3
3.42	42.0	V	3.0	-11.6	39.6	1.0	-50.2	-13.0	-37.2
5.13	39.8	V	3.0	7.0	40.3	1.0	-49.3	-13.0	-33.3
6.84	64.2	V	3.0	8.9	39.2	1.0	-47.0	-13.0	-34.0
Mid Channel (1732.5MHz)									
3.47	43.3	H	3.0	13.5	39.6	1.0	-52.1	-13.0	-39.1
5.20	40.3	H	3.0	7.3	40.3	1.0	-46.7	-13.0	-33.7
6.93	64.3	H	3.0	8.5	39.1	1.0	-45.6	-13.0	-33.6
3.47	42.9	V	3.0	12.4	39.6	1.0	-51.0	-13.0	-38.0
5.20	42.6	V	3.0	9.8	40.3	1.0	-49.2	-13.0	-36.2
6.93	64.1	V	3.0	8.6	39.1	1.0	-46.7	-13.0	-33.7
High Channel (1754.5MHz)									
3.51	43.9	H	3.0	14.0	39.6	1.0	-52.6	-13.0	-39.6
5.26	42.4	H	3.0	8.9	40.3	1.0	-47.7	-13.0	-34.7
7.02	63.4	H	3.0	7.4	39.1	1.0	-45.5	-13.0	-32.5
3.51	43.2	V	3.0	12.7	39.6	1.0	-51.3	-13.0	-38.3
5.26	43.1	V	3.0	10.2	40.3	1.0	-49.5	-13.0	-36.5
7.02	65.4	V	3.0	10.1	39.1	1.0	-48.2	-13.0	-35.2

Rev: 10.28.16

LTE B4 1.4MHz QPSK

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 4, 1.4MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1710.5MHz)									
3.42	43.9	H	3.0	14.2	39.6	1.0	-52.8	-13.0	-39.8
5.13	42.4	H	3.0	9.6	40.3	1.0	-49.2	-13.0	-35.9
6.84	65.5	H	3.0	9.8	39.2	1.0	-49.0	-13.0	-35.0
3.42	43.1	V	3.0	-12.7	39.6	1.0	-51.3	-13.0	-38.3
5.13	39.7	V	3.0	6.9	40.3	1.0	-46.2	-13.0	-33.2
6.84	63.7	V	3.0	8.4	39.2	1.0	-46.4	-13.0	-33.5
Mid Channel (1732.5MHz)									
3.47	43.5	H	3.0	13.7	39.6	1.0	-52.3	-13.0	-39.3
5.20	39.7	H	3.0	6.7	40.3	1.0	-46.1	-13.0	-33.1
6.93	64.8	H	3.0	9.0	39.1	1.0	-46.1	-13.0	-34.1
3.47	43.1	V	3.0	12.6	39.6	1.0	-51.2	-13.0	-38.2
5.20	42.3	V	3.0	10.2	40.3	1.0	-49.4	-13.0	-36.4
6.93	64.2	V	3.0	8.7	39.1	1.0	-46.8	-13.0	-33.8
High Channel (1754.5MHz)									
3.51	44.0	H	3.0	14.1	39.6	1.0	-52.7	-13.0	-39.7
5.26	42.4	H	3.0	8.9	40.3	1.0	-47.7	-13.0	-34.7
7.02	64.4	H	3.0	7.5	39.1	1.0	-45.5	-13.0	-32.5
3.51	43.6	V	3.0	13.1	39.6	1.0	-51.7	-13.0	-38.7
5.26	42.9	V	3.0	10.0	40.3	1.0	-49.3	-13.0	-36.3
7.02	65.7	V	3.0	10.1	39.1	1.0	-48.2	-13.0	-35.2

Rev: 10.28.16

LTE B4 1.4MHz 16QAM

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 4, 3MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1711.5MHz)									
3.42	44.4	H	3.0	14.4	39.6	1.0	-53.0	-13.0	-40.0
5.14	44.4	H	3.0	8.5	40.3	1.0	-49.8	-13.0	-35.8
6.85	65.4	H	3.0	9.7	39.2	1.0	-47.9	-13.0	-34.9
3.42	44.4	V	3.0	14.0	39.6	1.0	-52.6	-13.0	-39.6
5.14	42.7	V	3.0	9.9	40.3	1.0	-49.2	-13.0	-36.2
6.85	64.6	V	3.0	9.2	39.2	1.0	-47.4	-13.0	-34.4
Mid Channel (1732.5MHz)									
3.47	43.6	H	3.0	13.8	39.6	1.0	-52.4	-13.0	-39.4
5.20	39.4	H	3.0	9.5	40.3	1.0	-48.8	-13.0	-34.8
6.93	65.6	H	3.0	9.8	39.1	1.0	-47.9	-13.0	-34.9
3.47	44.0	V	3.0	13.5	39.6	1.0	-52.1	-13.0	-39.1
5.20	42.1	V	3.0	11.6	40.3	1.0	-49.2	-13.0	-36.2
6.93	64.3	V	3.0	8.8	39.1	1.0	-46.9	-13.0	-33.9
High Channel (1753.5MHz)									
3.51	43.9	H	3.0	14.0	39.6	1.0	-52.6	-13.0	-39.6
5.26	42.1	H	3.0	9.0	40.3	1.0	-48.3	-13.0	-35.3
7.01	65.3	H	3.0	9.4	39.1	1.0	-47.4	-13.0	-34.4
3.51	43.6	V	3.0	13.1	39.6	1.0	-51.7	-13.0	-38.7
5.26	42.4	V	3.0	9.4	40.3	1.0	-48.7	-13.0	-35.7
7.01	64.4	V	3.0	8.8	39.1	1.0	-46.9	-13.0	-33.9

Rev: 10.28.16

LTE B4 3MHz QPSK

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 4, 3MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1711.5MHz)									
3.42	44.4	H	3.0	14.8	39.6	1.0	-53.4	-13.0	-40.4
5.14	44.2	H	3.0	7.3	40.3	1.0	-46.6	-13.0	-33.6
6.85	65.2	H	3.0	9.5	39.2	1.0	-47.7	-13.0	-34.7
3.42	43.8	V	3.0	13.4	39.6	1.0	-51.0	-13.0	-38.0
5.14	41.3	V	3.0	8.5	40.3	1.0	-47.8	-13.0	-34.8
6.85	64.5	V	3.0	10.0	39.2	1.0	-48.3	-13.0	-35.3
Mid Channel (1732.5MHz)									
3.47	44.4	H	3.0	14.7	39.6	1.0	-52.7	-13.0	-40.3
5.20	39.6	H	3.0	9.7	40.3	1.0	-49.0	-13.0	-35.6
6.93	64.4	H	3.0	8.6	39.1	1.0	-46.7	-13.0	-33.7
3.47	43.8	V	3.0	13.4	39.6	1.0	-52.0	-13.0	-39.0
5.20	42.1	V	3.0	11.6	40.3	1.0	-49.2	-13.0	-36.2
6.93	65.6	V	3.0	10.1	39.1	1.0	-48.2	-13.0	-35.2
High Channel (1753.5MHz)									
3.51	43.9	H	3.0	13.9	39.6	1.0	-52.5	-13.0	-39.5
5.26	42.1	H	3.0	9.1	40.3	1.0	-47.4	-13.0	-34.4
7.01	65.0	H	3.0	9.1	39.1	1.0	-47.1	-13.0	-34.1
3.51	43.1	V	3.0	12.6	39.6	1.0	-51.2	-13.0	-38.2
5.26	41.8	V	3.0	8.9	40.3	1.0	-48.1	-13.0	-35.1
7.01	64.9	V	3.0	9.3	39.1	1.0	-47.4	-13.0	-34.4

Rev: 10.28.16

LTE B4 3MHz 16QAM

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 4, 3MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1712.5MHz)									
3.43	44.2	H	3.0	14.5	39.6	1.0	-53.1	-13.0	-40.1
5.14	41.9	H	3.0	9.1	40.3	1.0	-48.4	-13.0	-35.4
6.85	64.8	H	3.0	9.1	39.2	1.0	-47.2	-13.0	-34.2
3.43	44.8	V	3.0	14.4	39.6	1.0	-52.9	-13.0	-39.9
5.14	41.7	V	3.0	9.0	40.3	1.0	-48.3	-13.0	-35.3
6.85	65.4	V	3.0	10.1	39.2	1.0	-48.2	-13.0	-35.2
Mid Channel (1732.5MHz)									
3.47	43.4	H	3.0	13.7	39.6	1.0	-52.3	-13.0	-39.3
5.20	40.7	H	3.0	7.7	40.3	1.0	-47.1	-13.0	-34.1
6.93	65.6	H	3.0	9.7	39.1	1.0	-47.9	-13.0	-34.9
3.47	43.6	V	3.0	13.1	39.6	1.0	-51.7	-13.0	-38.7
5.20	41.1	V	3.0	8.5	40.3	1.0	-47.9	-13.0	-34.9
6.93	65.3	V	3.0	9.6	39.1	1.0	-47.6	-13.0	-34.6
High Channel (1752.5MHz)									
3.51	44.6	H	3.0	14.2	39.6	1.0	-53.4	-13.0	-40.4
5.26	42.3	H	3.0	7.7	40.3	1.0	-48.7	-13.0	-35.7
7.01	64.9	H	3.0	8.9	39.1	1.0	-47.7	-13.0	-34.7
3.51	44.7	V	3.0	14.2	39.6	1.0	-52.8	-13.0	-39.8
5.26	42.3	V	3.0	10.4	40.3	1.0	-49.7	-13.0	-36.7
7.01	65.5	V	3.0	9.8	39.1	1.0	-47.9	-13.0	-34.9

Rev: 10.28.16

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 4, 3MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1712.5MHz)									
3.43	44.4	H	3.0	14.7	39.6	1.0	-53.3	-13.0	-40.3
5.14	42.4	H	3.0	9.5	40.3	1.0	-48.8	-13.0	-35.8
6.85	64.1	H	3.0	8.4	39.2	1.0	-46.5	-13.0	-33.5
3.43	44.1	V	3.0	13.7	39.6	1.0	-52.2	-13	

LTE B4 5MHz QPSK

High Frequency Substitution Measurement
UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kievra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 4, 10MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1715MHz)									
3.44	63.8	H	3.0	14.1	39.6	1.0	-52.7	-13.0	-39.7
5.15	60.3	H	3.0	7.5	40.3	1.0	-48.8	-13.0	-33.8
6.86	65.1	H	3.0	9.4	39.2	1.0	-47.6	-13.0	-34.6
3.44	63.9	V	3.0	13.5	39.6	1.0	-52.6	-13.0	-39.8
5.15	63.9	V	3.0	11.1	40.3	1.0	-50.4	-13.0	-37.0
6.86	65.3	V	3.0	9.9	39.2	1.0	-48.1	-13.0	-35.1
Mid Channel (1732.5MHz)									
3.47	63.6	H	3.0	13.9	39.6	1.0	-52.5	-13.0	-39.5
5.20	60.2	H	3.0	7.3	40.3	1.0	-48.6	-13.0	-33.6
6.93	65.5	H	3.0	9.7	39.1	1.0	-47.8	-13.0	-34.8
3.47	63.8	V	3.0	13.3	39.6	1.0	-51.8	-13.0	-38.9
5.20	60.1	V	3.0	7.3	40.3	1.0	-48.6	-13.0	-33.6
6.93	66.1	V	3.0	10.6	39.1	1.0	-48.7	-13.0	-35.7
High Channel (1750MHz)									
3.50	64.2	H	3.0	14.3	39.6	1.0	-52.9	-13.0	-39.9
5.25	61.9	H	3.0	8.8	40.3	1.0	-48.1	-13.0	-35.1
7.00	66.7	H	3.0	9.9	39.2	1.0	-47.6	-13.0	-34.6
3.50	64.3	V	3.0	13.8	39.6	1.0	-52.4	-13.0	-39.3
5.25	62.8	V	3.0	9.9	40.3	1.0	-49.2	-13.0	-36.2
7.00	65.4	V	3.0	9.8	39.1	1.0	-47.8	-13.0	-34.8

Rev. 10.28.15

LTE B4 5MHz 16QAM

High Frequency Substitution Measurement
UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kievra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 4, 10MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1715MHz)									
3.44	64.1	H	3.0	14.4	39.6	1.0	-53.0	-13.0	-40.0
5.15	60.9	H	3.0	8.0	40.3	1.0	-47.3	-13.0	-34.3
6.86	65.4	H	3.0	9.7	39.2	1.0	-47.7	-13.0	-34.5
3.44	63.9	V	3.0	13.5	39.6	1.0	-52.1	-13.0	-39.1
5.15	63.4	V	3.0	10.6	40.3	1.0	-50.0	-13.0	-37.0
6.86	65.2	V	3.0	9.8	39.2	1.0	-48.0	-13.0	-35.0
Mid Channel (1732.5MHz)									
3.47	63.9	H	3.0	14.1	39.6	1.0	-52.7	-13.0	-39.7
5.20	60.7	H	3.0	8.0	40.3	1.0	-47.6	-13.0	-33.6
6.93	64.2	H	3.0	9.3	39.1	1.0	-48.4	-13.0	-33.4
3.47	63.5	V	3.0	13.1	39.6	1.0	-51.7	-13.0	-38.7
5.20	62.0	V	3.0	8.9	40.3	1.0	-48.3	-13.0	-34.2
6.93	65.1	V	3.0	9.6	39.1	1.0	-47.7	-13.0	-34.7
High Channel (1750MHz)									
3.50	64.1	H	3.0	13.8	39.6	1.0	-52.4	-13.0	-39.4
5.25	61.4	H	3.0	8.4	40.3	1.0	-47.6	-13.0	-34.6
7.00	66.9	H	3.0	9.6	39.2	1.0	-47.5	-13.0	-34.5
3.50	64.1	V	3.0	13.6	39.6	1.0	-52.3	-13.0	-39.3
5.25	63.2	V	3.0	10.3	40.3	1.0	-49.6	-13.0	-36.6
7.00	64.9	V	3.0	9.3	39.1	1.0	-47.4	-13.0	-34.4

Rev. 10.28.15

LTE B4 10MHz QPSK

High Frequency Substitution Measurement
UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kievra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 4, 10MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1717.5MHz)									
3.44	64.3	H	3.0	14.6	39.6	1.0	-53.2	-13.0	-40.2
5.15	61.5	H	3.0	8.7	40.3	1.0	-48.0	-13.0	-35.0
6.87	65.5	H	3.0	9.7	39.2	1.0	-47.8	-13.0	-34.8
3.44	63.9	V	3.0	13.5	39.6	1.0	-52.1	-13.0	-39.1
5.15	62.4	V	3.0	9.6	40.3	1.0	-48.0	-13.0	-35.0
6.87	65.1	V	3.0	9.7	39.2	1.0	-47.8	-13.0	-34.8
Mid Channel (1732.5MHz)									
3.47	63.8	H	3.0	14.0	39.6	1.0	-52.6	-13.0	-39.6
5.20	61.1	H	3.0	8.2	40.3	1.0	-47.6	-13.0	-34.6
6.93	65.1	H	3.0	9.3	39.1	1.0	-47.4	-13.0	-34.4
3.47	63.7	V	3.0	13.2	39.6	1.0	-51.8	-13.0	-38.8
5.20	62.3	V	3.0	9.5	40.3	1.0	-48.8	-13.0	-35.8
6.93	64.5	V	3.0	9.0	39.1	1.0	-47.1	-13.0	-34.1
High Channel (1747.5MHz)									
3.50	64.3	H	3.0	14.3	39.6	1.0	-52.8	-13.0	-39.8
5.24	61.6	H	3.0	8.6	40.3	1.0	-47.9	-13.0	-34.9
6.99	65.4	H	3.0	9.5	39.1	1.0	-47.6	-13.0	-34.6
3.50	64.4	V	3.0	13.9	39.6	1.0	-52.6	-13.0	-39.6
5.24	62.8	V	3.0	9.9	40.3	1.0	-49.2	-13.0	-36.2
6.99	65.5	V	3.0	9.9	39.1	1.0	-48.0	-13.0	-35.0

Rev. 10.28.15

LTE B4 10MHz 16QAM

High Frequency Substitution Measurement
UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kievra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 4, 10MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1717.5MHz)									
3.44	64.6	H	3.0	15.0	39.6	1.0	-53.5	-13.0	-40.5
5.15	61.5	H	3.0	8.6	40.3	1.0	-47.9	-13.0	-34.9
6.87	65.1	H	3.0	9.4	39.2	1.0	-47.6	-13.0	-34.6
3.44	63.8	V	3.0	13.3	39.6	1.0	-51.9	-13.0	-38.9
5.15	62.4	V	3.0	9.6	40.3	1.0	-48.0	-13.0	-35.0
6.87	65.5	V	3.0	10.1	39.2	1.0	-48.2	-13.0	-35.2
Mid Channel (1732.5MHz)									
3.47	64.0	H	3.0	14.3	39.6	1.0	-52.9	-13.0	-39.9
5.20	60.8	H	3.0	7.9	40.3	1.0	-47.2	-13.0	-34.2
6.93	65.3	H	3.0	9.5	39.1	1.0	-47.6	-13.0	-34.6
3.47	64.1	V	3.0	13.6	39.6	1.0	-52.2	-13.0	-39.2
5.20	61.7	V	3.0	8.9	40.3	1.0	-48.2	-13.0	-35.2
6.93	64.1	V	3.0	8.6	39.1	1.0	-46.7	-13.0	-33.7
High Channel (1747.5MHz)									
3.50	64.2	H	3.0	13.6	39.6	1.0	-52.3	-13.0	-39.3
5.24	61.7	H	3.0	8.7	40.3	1.0	-47.5	-13.0	-34.5
6.99	65.7	H	3.0	9.8	39.1	1.0	-47.9	-13.0	-34.9
3.50	64.2	V	3.0	13.7	39.6	1.0	-52.3	-13.0	-39.3
5.24	62.2	V	3.0	9.8	40.3	1.0	-49.1	-13.0	-35.7
6.99	65.2	V	3.0	9.6	39.1	1.0	-47.7	-13.0	-34.7

Rev. 10.28.15

LTE B4 15MHz QPSK

High Frequency Substitution Measurement
UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kievra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 4, 20MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1720MHz)									
3.44	63.8	H	3.0	14.1	39.6	1.0	-52.7	-13.0	-39.7
5.16	60.7	H	3.0	7.8	40.3	1.0	-47.1	-13.0	-34.1
6.88	65.0	H	3.0	10.3	39.1	1.0	-48.4	-13.0	-35.4
3.44	63.3	V	3.0	12.9	39.6	1.0	-51.5	-13.0	-38.5
5.16	61.2	V	3.0	8.5	40.3	1.0	-47.8	-13.0	-34.8
6.88	65.1	V	3.0	9.7	39.1	1.0	-47.8	-13.0	-34.8
Mid Channel (1732.5MHz)									
3.47	63.6	H	3.0	13.8	39.6	1.0	-52.4	-13.0	-39.4
5.20	60.5	H	3.0	8.3	40.3	1.0	-47.6	-13.0	-34.6
6.93	65.1	H	3.0	9.2	39.1	1.0	-47.4	-13.0	-34.4
3.47	64.2	V	3.0	13.8	39.6	1.0	-52.4	-13.0	-39.4
5.20	61.0	V	3.0	8.2	40.3	1.0	-47.6	-13.0	-34.6
6.93	64.7	V	3.0	9.2	39.1	1.0	-47.3	-13.0	-34.3
High Channel (1745MHz)									
3.49	64.1	H	3.0	14.3	39.6	1.0	-52.9	-13.0	-39.9
5.24	61.6	H	3.0	8.6	40.3	1.0	-47.9	-13.0	-34.9
6.98	65.2	H	3.0	9.5	39.1	1.0	-47.4	-13.0	-34.4
3.49	63.5	V	3.0	13.0	39.6	1.0	-51.6	-13.0	-38.6
5.24	60.9	V	3.0	7.7	40.3	1.0	-47.8	-13.0	-34.8
6.98	65.6	V	3.0	10.0	39.1	1.0	-48.1	-13.0	-35.1

Rev. 10.28.15

LTE B4 15MHz 16QAM

High Frequency Substitution Measurement
UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kievra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 4, 20MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (1720MHz)									
3.44	64.0	H	3.0	14.3	39.6	1.0	-53.0	-13.0	-40.0
5.16	60.6	H	3.0	7.7	40.3	1.0	-47.0	-13.0	-34.0
6.88	65.0	H	3.0	9.9	39.1	1.0	-48.0	-13.0	-35.0
3.44	63.5	V	3.0	13.1	39.6	1.0	-51.6	-13.0	-38.6
5.16	63.1	V	3.0	10.4	40.3	1.0	-49.7	-13.0	-36.7
6.88	65.5	V							

LTE B4 20MHz QPSK	LTE B4 20MHz 16QAM
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LTE Band 5

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 5, 1.4MHz QPSK
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (824.7MHz)									
1.65	-61.4	H	3.0	16.0	39.9	1.0	-56.8	-13.0	-43.8
2.47	-62.4	H	3.0	15.8	39.3	1.0	-54.1	-13.0	-41.1
3.30	-62.4	H	3.0	13.0	39.5	1.0	-51.5	-13.0	-38.5
1.65	-61.8	V	3.0	16.8	39.9	1.0	-55.7	-13.0	-42.7
2.47	-62.9	V	3.0	15.2	39.3	1.0	-52.5	-13.0	-40.5
3.30	-63.5	V	3.0	13.2	39.5	1.0	-51.7	-13.0	-38.7
Mid Channel (836.5MHz)									
1.67	-61.2	H	3.0	18.1	39.9	1.0	-57.1	-13.0	-44.1
2.51	-62.6	H	3.0	15.8	39.2	1.0	-54.1	-13.0	-41.1
3.35	-63.9	H	3.0	14.4	39.5	1.0	-52.9	-13.0	-39.9
1.67	-62.3	V	3.0	17.1	39.9	1.0	-56.0	-13.0	-43.0
2.51	-61.6	V	3.0	13.8	39.2	1.0	-52.1	-13.0	-39.1
3.35	-63.1	V	3.0	12.8	39.5	1.0	-51.3	-13.0	-38.3
High Channel (848.3MHz)									
1.70	-60.6	H	3.0	16.8	40.0	1.0	-55.8	-13.0	-42.8
2.54	-62.7	H	3.0	15.0	39.2	1.0	-53.3	-13.0	-40.3
3.39	-62.3	H	3.0	12.7	39.5	1.0	-51.3	-13.0	-38.3
1.70	-60.7	V	3.0	14.4	40.0	1.0	-53.3	-13.0	-40.3
2.54	-62.3	V	3.0	14.4	39.2	1.0	-52.6	-13.0	-39.6
3.39	-63.0	V	3.0	12.6	39.5	1.0	-51.2	-13.0	-38.2

Rev: 10.28.15

LTE B5 1.4MHz QPSK

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 5, 1.4MHz 16QAM
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (824.7MHz)									
1.65	-61.4	H	3.0	16.0	39.9	1.0	-56.9	-13.0	-43.9
2.47	-62.8	H	3.0	16.2	39.3	1.0	-56.2	-13.0	-43.2
3.30	-63.3	H	3.0	14.6	39.5	1.0	-52.4	-13.0	-39.4
1.65	-61.2	V	3.0	16.2	39.9	1.0	-56.1	-13.0	-43.1
2.47	-63.3	V	3.0	15.7	39.3	1.0	-54.0	-13.0	-41.0
3.30	-63.1	V	3.0	13.6	39.5	1.0	-51.4	-13.0	-38.4
Mid Channel (836.5MHz)									
1.67	-61.2	H	3.0	18.1	39.9	1.0	-57.0	-13.0	-44.0
2.51	-63.2	H	3.0	16.4	39.2	1.0	-54.6	-13.0	-41.6
3.35	-63.3	H	3.0	13.8	39.5	1.0	-52.4	-13.0	-39.4
1.67	-62.3	V	3.0	17.1	39.9	1.0	-56.0	-13.0	-43.0
2.51	-62.0	V	3.0	14.2	39.2	1.0	-52.5	-13.0	-39.5
3.35	-64.0	V	3.0	13.7	39.5	1.0	-52.2	-13.0	-39.2
High Channel (848.3MHz)									
1.70	-61.6	H	3.0	17.8	40.0	1.0	-56.8	-13.0	-43.8
2.54	-62.7	H	3.0	15.0	39.2	1.0	-53.2	-13.0	-40.2
3.39	-62.1	H	3.0	12.6	39.5	1.0	-51.1	-13.0	-38.1
1.70	-60.9	V	3.0	13.6	40.0	1.0	-52.5	-13.0	-39.5
2.54	-62.7	V	3.0	14.2	39.2	1.0	-52.4	-13.0	-39.4
3.39	-62.9	V	3.0	12.5	39.5	1.0	-51.1	-13.0	-38.1

Rev: 10.28.15

LTE B5 1.4MHz 16QAM

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 5, 3MHz QPSK
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (825.5MHz)									
1.65	-60.6	H	3.0	17.4	39.9	1.0	-56.3	-13.0	-43.3
2.48	-63.0	H	3.0	16.3	39.3	1.0	-54.6	-13.0	-41.6
3.30	-62.7	H	3.0	13.3	39.5	1.0	-51.8	-13.0	-38.8
1.65	-61.6	V	3.0	16.6	39.9	1.0	-55.5	-13.0	-42.5
2.48	-62.8	V	3.0	15.1	39.3	1.0	-53.4	-13.0	-40.4
3.30	-63.8	V	3.0	13.5	39.5	1.0	-52.0	-13.0	-39.0
Mid Channel (836.5MHz)									
1.67	-61.2	H	3.0	17.6	39.9	1.0	-56.5	-13.0	-43.5
2.51	-62.7	H	3.0	15.9	39.2	1.0	-54.1	-13.0	-41.1
3.35	-63.2	H	3.0	13.7	39.5	1.0	-52.2	-13.0	-39.2
1.67	-61.8	V	3.0	16.6	39.9	1.0	-55.5	-13.0	-42.5
2.51	-62.9	V	3.0	15.0	39.2	1.0	-52.8	-13.0	-39.8
3.35	-63.7	V	3.0	13.4	39.5	1.0	-51.9	-13.0	-38.9
High Channel (847.5MHz)									
1.70	-60.7	H	3.0	17.0	40.0	1.0	-55.9	-13.0	-42.9
2.54	-63.1	H	3.0	16.2	39.2	1.0	-54.4	-13.0	-41.4
3.39	-62.9	H	3.0	13.0	39.5	1.0	-51.8	-13.0	-38.8
1.70	-61.2	V	3.0	15.8	40.0	1.0	-54.8	-13.0	-41.8
2.54	-62.6	V	3.0	14.6	39.2	1.0	-52.9	-13.0	-39.9
3.39	-62.7	V	3.0	12.4	39.5	1.0	-50.9	-13.0	-37.9

Rev: 10.28.15

LTE B5 3MHz QPSK

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 5, 3MHz 16QAM
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (825.5MHz)									
1.65	-61.7	H	3.0	18.2	39.9	1.0	-57.1	-13.0	-44.1
2.48	-62.6	H	3.0	16.0	39.3	1.0	-54.2	-13.0	-41.2
3.30	-63.4	H	3.0	13.6	39.5	1.0	-52.5	-13.0	-39.5
1.65	-62.3	V	3.0	17.2	39.9	1.0	-56.1	-13.0	-43.1
2.48	-62.9	V	3.0	15.3	39.3	1.0	-53.3	-13.0	-40.3
3.30	-63.7	V	3.0	13.5	39.5	1.0	-52.0	-13.0	-39.0
Mid Channel (836.5MHz)									
1.67	-61.0	H	3.0	17.4	39.9	1.0	-56.3	-13.0	-43.3
2.51	-62.3	H	3.0	15.4	39.2	1.0	-53.7	-13.0	-40.7
3.35	-63.4	H	3.0	13.9	39.5	1.0	-52.4	-13.0	-39.4
1.67	-61.3	V	3.0	16.1	39.9	1.0	-55.0	-13.0	-42.0
2.51	-62.9	V	3.0	15.2	39.2	1.0	-52.6	-13.0	-39.6
3.35	-62.4	V	3.0	12.1	39.5	1.0	-50.6	-13.0	-37.6
High Channel (847.5MHz)									
1.70	-60.8	H	3.0	16.3	40.0	1.0	-55.2	-13.0	-42.2
2.54	-63.0	H	3.0	14.0	39.2	1.0	-54.3	-13.0	-41.3
3.39	-62.8	H	3.0	12.8	39.5	1.0	-52.5	-13.0	-39.5
1.70	-60.7	V	3.0	15.3	40.0	1.0	-54.3	-13.0	-41.3
2.54	-62.7	V	3.0	14.2	39.2	1.0	-52.4	-13.0	-39.4
3.39	-63.1	V	3.0	12.7	39.5	1.0	-51.2	-13.0	-38.2

Rev: 10.28.15

LTE B5 3MHz 16QAM

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 5, 5MHz QPSK
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (826.5MHz)									
1.65	-61.6	H	3.0	18.4	39.9	1.0	-57.3	-13.0	-44.3
2.48	-63.0	H	3.0	16.3	39.3	1.0	-54.6	-13.0	-41.6
3.31	-63.1	H	3.0	13.7	39.5	1.0	-52.5	-13.0	-39.5
1.65	-61.2	V	3.0	16.2	39.9	1.0	-55.1	-13.0	-42.1
2.48	-61.8	V	3.0	14.1	39.3	1.0	-52.4	-13.0	-39.4
3.31	-63.4	V	3.0	13.5	39.5	1.0	-51.7	-13.0	-38.7
Mid Channel (836.5MHz)									
1.67	-61.6	H	3.0	18.0	39.9	1.0	-56.9	-13.0	-43.9
2.51	-62.7	H	3.0	15.9	39.2	1.0	-54.1	-13.0	-41.1
3.35	-63.1	H	3.0	13.6	39.5	1.0	-52.2	-13.0	-39.2
1.67	-61.4	V	3.0	16.2	39.9	1.0	-55.1	-13.0	-42.1
2.51	-61.1	V	3.0	13.2	39.2	1.0	-51.5	-13.0	-38.5
3.35	-63.2	V	3.0	12.9	39.5	1.0	-51.4	-13.0	-38.4
High Channel (846.5MHz)									
1.70	-61.0	H	3.0	18.3	39.9	1.0	-55.3	-13.0	-42.3
2.54	-63.0	H	3.0	16.0	39.2	1.0	-54.3	-13.0	-41.3
3.39	-63.1	H	3.0	13.8	39.5	1.0	-51.9	-13.0	-38.9
1.70	-61.1	V	3.0	15.8	39.9	1.0	-54.7	-13.0	-41.7
2.54	-61.8	V	3.0	13.9	39.2	1.0	-52.1	-13.0	-39.1
3.39	-63.1	V	3.0	12.7	39.5	1.0	-51.2	-13.0	-38.2

Rev: 10.28.15

LTE B5 5MHz QPSK

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 5, 5MHz 16QAM
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (826.5MHz)									
1.65	-61.6	H	3.0	18.2	39.9	1.0	-57.1	-13.0	-44.1
2.48	-63.0	H	3.0	16.3	39.3	1.0	-54.6	-13.0	-41.6
3.31	-62.6	H	3.0	14.3	39.5	1.0	-52.7	-13.0	-39.7
1.65	-61.5								

High Frequency Substitution Measurement
UL, RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 5, 10MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (MHz)	SA reading (dBm)	Ant. Pol. (dBi)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (#29MHz)									
1.96	61.4	H	3.0	16.0	39.9	1.0	-56.6	-13.0	-43.9
2.49	62.3	H	3.0	15.6	39.3	1.0	-53.8	-13.0	-40.8
3.32	63.8	H	3.0	14.4	39.5	1.0	-52.8	-13.0	-39.9
1.66	61.6	V	3.0	16.5	39.9	1.0	-55.4	-13.0	-42.4
2.49	60.7	V	3.0	13.0	39.3	1.0	-51.2	-13.0	-38.2
3.32	63.6	V	3.0	13.3	39.5	1.0	-51.8	-13.0	-38.8
Mid Channel (#36.9MHz)									
1.67	62.0	H	3.0	16.5	39.9	1.0	-57.4	-13.0	-44.4
2.51	63.3	H	3.0	16.4	39.2	1.0	-54.7	-13.0	-41.7
3.35	63.8	H	3.0	14.4	39.5	1.0	-52.8	-13.0	-39.9
1.67	61.6	V	3.0	16.4	39.9	1.0	-55.3	-13.0	-42.3
2.51	61.5	V	3.0	13.8	39.2	1.0	-51.9	-13.0	-38.9
3.35	63.6	V	3.0	13.3	39.5	1.0	-51.8	-13.0	-38.8
High Channel (#44MHz)									
1.69	61.3	H	3.0	17.6	39.9	1.0	-56.6	-13.0	-43.6
2.53	63.3	H	3.0	16.4	39.2	1.0	-54.8	-13.0	-41.8
3.38	63.1	H	3.0	13.6	39.5	1.0	-52.1	-13.0	-39.1
1.69	61.6	V	3.0	16.3	39.9	1.0	-55.2	-13.0	-42.2
2.53	62.6	V	3.0	14.7	39.2	1.0	-52.9	-13.0	-39.9
3.38	63.1	V	3.0	17.8	39.5	1.0	-51.3	-13.0	-38.3

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LTE B5 10MHz QPSK

High Frequency Substitution Measurement
UL, RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 5, 10MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (MHz)	SA reading (dBm)	Ant. Pol. (dBi)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (#29MHz)									
1.96	61.8	H	3.0	16.3	39.9	1.0	-57.2	-13.0	-44.2
2.49	63.5	H	3.0	16.7	39.3	1.0	-55.0	-13.0	-42.0
3.32	63.6	H	3.0	14.2	39.5	1.0	-52.7	-13.0	-39.7
1.66	61.8	V	3.0	16.8	39.9	1.0	-55.7	-13.0	-42.7
2.49	62.3	V	3.0	14.5	39.3	1.0	-52.8	-13.0	-39.8
3.32	62.8	V	3.0	12.5	39.5	1.0	-51.0	-13.0	-38.0
Mid Channel (#36.9MHz)									
1.67	62.0	H	3.0	16.5	39.9	1.0	-57.4	-13.0	-44.4
2.51	62.9	H	3.0	16.1	39.2	1.0	-54.4	-13.0	-41.4
3.35	63.8	H	3.0	14.3	39.5	1.0	-52.8	-13.0	-39.8
1.67	61.7	V	3.0	16.5	39.9	1.0	-55.4	-13.0	-42.4
2.51	61.4	V	3.0	13.6	39.2	1.0	-51.8	-13.0	-38.8
3.35	64.0	V	3.0	13.7	39.5	1.0	-52.2	-13.0	-39.2
High Channel (#44MHz)									
1.69	60.6	H	3.0	17.2	39.9	1.0	-53.5	-13.0	-40.5
2.53	62.2	H	3.0	15.2	39.2	1.0	-52.3	-13.0	-39.3
3.38	63.3	H	3.0	13.8	39.5	1.0	-52.3	-13.0	-39.3
1.69	61.4	V	3.0	16.1	39.9	1.0	-55.0	-13.0	-42.0
2.53	63.1	V	3.0	15.1	39.2	1.0	-53.4	-13.0	-40.4
3.38	63.5	V	3.0	13.2	39.5	1.0	-51.8	-13.0	-38.8

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LTE B5 10MHz 16QAM

LTE Band 7

**High Frequency Substitution Measurement
 UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notting
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 X-Axis)
 Mode: LTE Band 7, 6MHz QPSK
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B7

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2507.5MHz)									
5.01	64.2	H	3.0	11.6	40.3	1.0	-50.8	-25.0	-29.8
7.01	66.7	H	3.0	10.2	38.9	1.0	-48.2	-25.0	-23.2
10.01	67.9	H	3.0	8.7	38.3	1.0	-46.0	-25.0	-21.0
5.01	64.5	V	3.0	11.9	40.3	1.0	-51.2	-25.0	-26.2
7.01	67.4	V	3.0	11.2	38.9	1.0	-49.1	-25.0	-24.1
10.01	68.7	V	3.0	9.4	38.3	1.0	-46.8	-25.0	-21.8
Mid Channel (2535MHz)									
5.07	65.9	H	3.0	11.2	40.3	1.0	-50.5	-25.0	-25.5
7.01	66.6	H	3.0	10.0	38.9	1.0	-47.9	-25.0	-22.9
10.14	69.2	H	3.0	9.8	38.3	1.0	-47.2	-25.0	-22.2
5.07	63.1	V	3.0	10.5	40.3	1.0	-49.7	-25.0	-24.7
7.01	66.3	V	3.0	10.2	38.9	1.0	-49.1	-25.0	-23.1
10.14	69.1	V	3.0	9.8	38.3	1.0	-47.1	-25.0	-22.1
High Channel (2567.5MHz)									
5.13	65.6	H	3.0	12.8	40.3	1.0	-52.1	-25.0	-27.1
7.01	66.5	H	3.0	9.9	38.9	1.0	-46.6	-25.0	-21.6
10.27	68.3	H	3.0	8.8	38.3	1.0	-46.2	-25.0	-21.2
5.13	64.8	V	3.0	11.7	40.3	1.0	-52.0	-25.0	-27.0
7.01	67.8	V	3.0	11.2	38.9	1.0	-49.2	-25.0	-24.2
10.27	69.0	V	3.0	9.6	38.3	1.0	-46.9	-25.0	-21.9

Rev: 10.28.15

LTE B7 5MHz QPSK

**High Frequency Substitution Measurement
 UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notting
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 X-Axis)
 Mode: LTE Band 7, 5MHz 16QAM
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B7

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2507.5MHz)									
5.01	64.2	H	3.0	12.1	40.3	1.0	-51.4	-25.0	-26.4
7.01	66.5	H	3.0	10.6	38.9	1.0	-48.5	-25.0	-23.5
10.01	68.8	H	3.0	9.5	38.3	1.0	-46.9	-25.0	-21.9
5.01	64.4	V	3.0	11.8	40.3	1.0	-51.1	-25.0	-26.1
7.01	67.9	V	3.0	11.5	38.9	1.0	-49.5	-25.0	-24.5
10.01	68.7	V	3.0	9.4	38.3	1.0	-46.8	-25.0	-21.8
Mid Channel (2535MHz)									
5.07	64.4	H	3.0	10.7	40.3	1.0	-50.6	-25.0	-25.6
7.01	66.3	H	3.0	9.9	38.9	1.0	-47.8	-25.0	-22.8
10.14	69.3	H	3.0	9.9	38.3	1.0	-47.0	-25.0	-22.0
5.07	63.9	V	3.0	10.2	40.3	1.0	-49.2	-25.0	-24.2
7.01	67.4	V	3.0	11.1	38.9	1.0	-49.0	-25.0	-24.0
10.14	69.4	V	3.0	10.1	38.3	1.0	-47.4	-25.0	-22.4
High Channel (2567.5MHz)									
5.13	65.4	H	3.0	12.2	40.3	1.0	-51.5	-25.0	-26.5
7.01	67.4	H	3.0	9.7	38.9	1.0	-46.7	-25.0	-21.7
10.27	69.7	H	3.0	10.2	38.3	1.0	-47.5	-25.0	-22.5
5.13	64.8	V	3.0	12.1	40.3	1.0	-51.4	-25.0	-26.4
7.01	67.9	V	3.0	11.5	38.9	1.0	-49.4	-25.0	-24.4
10.27	69.5	V	3.0	10.0	38.3	1.0	-47.4	-25.0	-22.4

Rev: 10.28.15

LTE B7 5MHz 16QAM

**High Frequency Substitution Measurement
 UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notting
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 X-Axis)
 Mode: LTE Band 7, 10MHz QPSK
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B7

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2507.5MHz)									
5.01	65.3	H	3.0	12.6	40.3	1.0	-51.9	-25.0	-26.9
7.02	66.7	H	3.0	10.2	38.9	1.0	-48.1	-25.0	-23.1
10.02	68.2	H	3.0	9.1	38.3	1.0	-46.4	-25.0	-21.4
5.01	64.4	V	3.0	11.8	40.3	1.0	-51.1	-25.0	-26.1
7.02	67.5	V	3.0	11.3	38.9	1.0	-49.2	-25.0	-24.2
10.02	68.7	V	3.0	9.5	38.3	1.0	-46.8	-25.0	-21.8
Mid Channel (2535MHz)									
5.07	64.8	H	3.0	12.0	40.3	1.0	-51.3	-25.0	-26.3
7.01	66.6	H	3.0	10.0	38.9	1.0	-48.0	-25.0	-23.0
10.14	69.3	H	3.0	9.9	38.3	1.0	-47.2	-25.0	-22.2
5.07	64.6	V	3.0	11.9	40.3	1.0	-51.2	-25.0	-26.2
7.01	67.9	V	3.0	11.8	38.9	1.0	-49.1	-25.0	-24.1
10.14	69.3	V	3.0	9.9	38.3	1.0	-47.2	-25.0	-22.2
High Channel (2567.5MHz)									
5.13	64.8	H	3.0	8.9	40.3	1.0	-48.2	-25.0	-23.2
7.01	65.6	H	3.0	8.9	38.9	1.0	-48.0	-25.0	-23.0
10.26	68.3	H	3.0	9.8	38.3	1.0	-46.9	-25.0	-21.9
5.13	64.3	V	3.0	11.6	40.3	1.0	-50.8	-25.0	-25.8
7.01	67.8	V	3.0	11.1	38.9	1.0	-48.9	-25.0	-23.9
10.26	68.9	V	3.0	9.5	38.3	1.0	-46.8	-25.0	-21.8

Rev: 10.28.15

LTE B7 10MHz QPSK

**High Frequency Substitution Measurement
 UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notting
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 X-Axis)
 Mode: LTE Band 7, 10MHz 16QAM
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B7

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2507.5MHz)									
5.01	64.7	H	3.0	12.1	40.3	1.0	-51.3	-25.0	-26.3
7.02	67.1	H	3.0	10.6	38.9	1.0	-48.5	-25.0	-23.5
10.02	69.5	H	3.0	9.1	38.3	1.0	-46.7	-25.0	-21.7
5.01	64.9	V	3.0	12.0	40.3	1.0	-51.4	-25.0	-26.4
7.02	67.2	V	3.0	11.0	38.9	1.0	-48.9	-25.0	-23.9
10.02	69.0	V	3.0	9.4	38.3	1.0	-46.7	-25.0	-21.7
Mid Channel (2535MHz)									
5.07	64.2	H	3.0	11.4	40.3	1.0	-50.7	-25.0	-25.7
7.01	66.8	H	3.0	10.6	38.9	1.0	-49.0	-25.0	-24.0
10.14	68.8	H	3.0	9.5	38.3	1.0	-46.8	-25.0	-21.8
5.07	62.5	V	3.0	9.9	40.3	1.0	-49.2	-25.0	-24.2
7.01	67.4	V	3.0	11.4	38.9	1.0	-49.1	-25.0	-24.1
10.14	69.0	V	3.0	9.6	38.3	1.0	-46.9	-25.0	-21.9
High Channel (2567.5MHz)									
5.13	64.4	H	3.0	8.6	40.3	1.0	-47.9	-25.0	-22.9
7.01	65.3	H	3.0	8.6	38.9	1.0	-48.0	-25.0	-23.0
10.26	68.2	H	3.0	9.5	38.3	1.0	-46.9	-25.0	-21.9
5.13	64.5	V	3.0	11.8	40.3	1.0	-51.1	-25.0	-26.1
7.01	67.1	V	3.0	11.6	38.9	1.0	-49.5	-25.0	-24.5
10.26	68.7	V	3.0	9.3	38.3	1.0	-46.6	-25.0	-21.6

Rev: 10.28.15

LTE B7 10MHz 16QAM

**High Frequency Substitution Measurement
 UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notting
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 X-Axis)
 Mode: LTE Band 7, 15MHz QPSK
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B7

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2507.5MHz)									
5.02	64.2	H	3.0	12.1	40.3	1.0	-51.4	-25.0	-26.4
7.02	66.0	H	3.0	9.5	38.9	1.0	-47.5	-25.0	-22.5
10.03	66.4	H	3.0	9.2	38.3	1.0	-46.5	-25.0	-21.5
5.02	64.0	V	3.0	11.5	40.3	1.0	-50.7	-25.0	-25.7
7.02	67.7	V	3.0	11.3	38.9	1.0	-49.4	-25.0	-24.4
10.03	68.9	V	3.0	9.7	38.3	1.0	-47.0	-25.0	-22.0
Mid Channel (2535MHz)									
5.07	64.5	H	3.0	11.2	40.3	1.0	-51.0	-25.0	-26.0
7.01	66.4	H	3.0	9.8	38.9	1.0	-47.7	-25.0	-22.7
10.14	69.4	H	3.0	10.0	38.3	1.0	-47.3	-25.0	-22.3
5.07	64.0	V	3.0	11.4	40.3	1.0	-50.7	-25.0	-25.7
7.01	67.4	V	3.0	11.0	38.9	1.0	-49.9	-25.0	-24.9
10.14	69.6	V	3.0	10.2	38.3	1.0	-47.6	-25.0	-22.6
High Channel (2567.5MHz)									
5.13	64.8	H	3.0	12.1	40.3	1.0	-51.4	-25.0	-26.4
7.01	66.2	H	3.0	9.5	38.9	1.0	-47.3	-25.0	-22.3
10.25	69.5	H	3.0	10.0	38.3	1.0	-47.3	-25.0	-22.3
5.13	64.9	V	3.0	12.1	40.3	1.0	-51.4	-25.0	-26.4
7.01	67.5	V	3.0	11.0	38.9	1.0	-49.0	-25.0	-24.0
10.25	69.3	V	3.0	9.9	38.3	1.0	-47.2	-25.0	-22.2

Rev: 10.28.15

LTE B7 15MHz QPSK

**High Frequency Substitution Measurement
 UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notting
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 X-Axis)
 Mode: LTE Band 7, 15MHz 16QAM
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B7

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2507.5MHz)									
5.01	64.4	H	3.0	11.8	40.3	1.0	-51.1	-25.0	-26.1
7.02	66.9	H	3.0	10.4	38.9	1.0	-48.4	-25.0	-23.4
10.03	68.4	H	3.0	9.2	38.3	1.0	-46.5	-25.0	-21.5
5.02									

High Frequency Substitution Measurement
UL, RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Nolting
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 X-Axis)
 Mode: LTE Band 7, 20MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B7

Frequency (MHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2510MHz)									
5.92	65.4	H	3.0	12.7	40.3	1.0	-52.0	-25.0	-27.0
7.53	67.0	H	3.0	10.5	38.9	1.0	-48.4	-25.0	-23.4
10.04	66.6	H	3.0	9.4	38.3	1.0	-45.7	-25.0	-21.7
5.92	64.1	V	3.0	11.5	40.3	1.0	-50.8	-25.0	-25.8
7.53	67.4	V	3.0	11.2	38.9	1.0	-49.1	-25.0	-24.1
10.04	66.1	V	3.0	8.9	38.3	1.0	-46.2	-25.0	-21.2
Mid Channel (2535MHz)									
5.97	65.1	H	3.0	12.4	40.3	1.0	-51.7	-25.0	-26.7
7.61	66.5	H	3.0	9.9	38.9	1.0	-47.8	-25.0	-22.8
10.14	68.9	H	3.0	9.6	38.3	1.0	-45.9	-25.0	-21.9
5.97	64.7	V	3.0	12.1	40.3	1.0	-51.4	-25.0	-26.4
7.61	67.5	V	3.0	11.1	38.9	1.0	-49.1	-25.0	-24.1
10.14	69.0	V	3.0	9.7	38.3	1.0	-47.0	-25.0	-22.0
High Channel (2560MHz)									
5.12	64.6	H	3.0	11.8	40.3	1.0	-51.1	-25.0	-26.1
7.68	67.5	H	3.0	10.8	38.9	1.0	-48.7	-25.0	-23.7
10.24	69.2	H	3.0	9.7	38.3	1.0	-47.0	-25.0	-22.0
5.12	64.9	V	3.0	12.2	40.3	1.0	-51.5	-25.0	-26.5
7.68	66.7	V	3.0	10.2	38.9	1.0	-48.1	-25.0	-23.1
10.24	69.5	V	3.0	9.1	38.3	1.0	-46.4	-25.0	-21.4

Rev. 10.28.16

LTE B7 20MHz QPSK

High Frequency Substitution Measurement
UL, RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Nolting
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 X-Axis)
 Mode: LTE Band 7, 20MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B7

Frequency (MHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2510MHz)									
5.92	64.7	H	3.0	-12.1	40.3	1.0	-51.4	-25.0	-26.4
7.53	67.3	H	3.0	-10.8	38.9	1.0	-48.8	-25.0	-23.8
10.04	66.7	H	3.0	-9.4	38.3	1.0	-46.8	-25.0	-21.8
5.92	64.7	V	3.0	-12.1	40.3	1.0	-51.4	-25.0	-26.4
7.53	67.6	V	3.0	-11.6	38.9	1.0	-49.5	-25.0	-24.5
10.04	66.8	V	3.0	-9.6	38.3	1.0	-46.9	-25.0	-21.9
Mid Channel (2535MHz)									
5.97	65.2	H	3.0	-12.4	40.3	1.0	-51.7	-25.0	-26.7
7.61	67.0	H	3.0	-10.4	38.9	1.0	-48.1	-25.0	-23.1
10.14	69.0	H	3.0	-9.6	38.3	1.0	-47.0	-25.0	-22.0
5.97	64.3	V	3.0	-11.7	40.3	1.0	-51.0	-25.0	-26.0
7.61	67.9	V	3.0	-10.6	38.9	1.0	-48.5	-25.0	-23.5
10.14	68.9	V	3.0	-9.6	38.3	1.0	-46.9	-25.0	-21.9
High Channel (2560MHz)									
5.12	65.1	H	3.0	-11.7	40.3	1.0	-51.0	-25.0	-26.0
7.68	67.9	H	3.0	-11.1	38.9	1.0	-49.0	-25.0	-24.0
10.24	69.7	H	3.0	-10.3	38.3	1.0	-47.6	-25.0	-22.6
5.12	65.1	V	3.0	-12.4	40.3	1.0	-51.7	-25.0	-26.7
7.68	68.0	V	3.0	-11.6	38.9	1.0	-49.5	-25.0	-24.5
10.24	68.4	V	3.0	-9.0	38.3	1.0	-46.3	-25.0	-21.3

Rev. 10.28.16

LTE B7 20MHz 16QAM

LTE Band 12

High Frequency Substitution Measurement
 UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 12, 1.4MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

ERRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	ERRP @ TX Ant End (dBm)	Preamp	Attenuator	ERRP	Limit	Delta
Low Channel (699.5MHz)									
1.40	39.2	H	3.0	17.4	39.9	1.0	-56.3	-13.0	-43.3
2.10	39.9	H	3.0	16.8	40.2	1.0	-56.0	-13.0	-43.0
2.80	62.8	H	3.0	14.9	39.3	1.0	-53.2	-13.0	-40.2
1.40	39.6	V	3.0	16.2	39.9	1.0	-55.2	-13.0	-42.2
2.10	42.5	V	3.0	15.0	40.2	1.0	-54.2	-13.0	-41.2
2.80	63.0	V	3.0	14.6	39.3	1.0	-52.5	-13.0	-39.5
Mid Channel (707.5MHz)									
1.42	37.2	H	3.0	15.2	39.9	1.0	-54.1	-13.0	-41.1
2.12	42.3	H	3.0	16.2	40.1	1.0	-55.4	-13.0	-42.4
2.83	62.9	H	3.0	14.3	39.3	1.0	-52.5	-13.0	-39.5
1.42	38.4	V	3.0	15.0	39.9	1.0	-53.9	-13.0	-40.9
2.12	42.3	V	3.0	15.1	40.1	1.0	-54.1	-13.0	-41.1
2.83	62.0	V	3.0	12.8	39.3	1.0	-51.1	-13.0	-38.1
High Channel (715.5MHz)									
1.43	37.8	H	3.0	15.8	39.8	1.0	-54.7	-13.0	-41.7
2.13	42.5	H	3.0	16.8	40.1	1.0	-55.7	-13.0	-42.7
2.86	63.0	H	3.0	14.9	39.3	1.0	-53.1	-13.0	-40.1
1.43	40.0	V	3.0	16.4	39.8	1.0	-55.3	-13.0	-42.3
2.13	42.1	V	3.0	15.7	40.1	1.0	-54.7	-13.0	-41.7
2.86	62.1	V	3.0	13.8	39.3	1.0	-52.1	-13.0	-39.1

Rev: 10.28.15

LTE B12 1.4MHz QPSK

High Frequency Substitution Measurement
 UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 12, 1.4MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

ERRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	ERRP @ TX Ant End (dBm)	Preamp	Attenuator	ERRP	Limit	Delta
Low Channel (699.5MHz)									
1.40	39.7	H	3.0	16.8	39.9	1.0	-55.8	-13.0	-42.8
2.10	42.8	H	3.0	16.8	40.2	1.0	-56.0	-13.0	-43.0
2.80	63.3	H	3.0	15.4	39.3	1.0	-53.7	-13.0	-40.7
1.40	40.0	V	3.0	16.6	39.9	1.0	-55.5	-13.0	-42.5
2.10	42.0	V	3.0	14.6	40.2	1.0	-53.7	-13.0	-40.7
2.80	63.3	V	3.0	13.5	39.3	1.0	-52.6	-13.0	-39.6
Mid Channel (707.5MHz)									
1.42	37.2	H	3.0	15.6	39.9	1.0	-54.5	-13.0	-41.5
2.12	42.3	H	3.0	16.3	40.1	1.0	-55.4	-13.0	-42.4
2.83	62.4	H	3.0	14.4	39.3	1.0	-52.4	-13.0	-39.4
1.42	38.9	V	3.0	15.4	39.9	1.0	-54.3	-13.0	-41.3
2.12	42.3	V	3.0	15.1	40.1	1.0	-54.5	-13.0	-41.5
2.83	62.7	V	3.0	13.6	39.3	1.0	-51.8	-13.0	-38.8
High Channel (715.5MHz)									
1.43	37.4	H	3.0	15.4	39.8	1.0	-54.2	-13.0	-41.2
2.13	42.5	H	3.0	16.1	40.1	1.0	-55.1	-13.0	-42.1
2.86	62.8	H	3.0	14.7	39.3	1.0	-53.0	-13.0	-40.0
1.43	40.6	V	3.0	17.1	39.8	1.0	-55.9	-13.0	-42.9
2.13	42.6	V	3.0	15.2	40.1	1.0	-54.2	-13.0	-41.2
2.86	62.9	V	3.0	13.9	39.3	1.0	-52.4	-13.0	-39.4

Rev: 10.28.15

LTE B12 1.4MHz 16QAM

High Frequency Substitution Measurement
 UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 12, 3MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

ERRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	ERRP @ TX Ant End (dBm)	Preamp	Attenuator	ERRP	Limit	Delta
Low Channel (700.5MHz)									
1.40	39.5	H	3.0	18.1	39.9	1.0	-57.1	-13.0	-44.1
2.10	42.2	H	3.0	16.2	40.2	1.0	-55.4	-13.0	-42.4
2.80	63.0	H	3.0	15.1	39.3	1.0	-53.4	-13.0	-40.4
1.40	39.4	V	3.0	16.0	39.9	1.0	-54.8	-13.0	-41.8
2.10	42.5	V	3.0	15.0	40.2	1.0	-54.2	-13.0	-41.2
2.80	62.6	V	3.0	13.8	39.3	1.0	-52.5	-13.0	-39.5
Mid Channel (707.5MHz)									
1.42	37.4	H	3.0	15.5	39.9	1.0	-54.3	-13.0	-41.3
2.12	42.1	H	3.0	17.1	40.1	1.0	-56.2	-13.0	-43.2
2.83	62.9	H	3.0	14.9	39.3	1.0	-53.2	-13.0	-40.2
1.42	38.7	V	3.0	14.2	39.9	1.0	-54.1	-13.0	-41.1
2.12	41.9	V	3.0	14.1	40.1	1.0	-54.1	-13.0	-41.1
2.83	63.0	V	3.0	13.8	39.3	1.0	-52.1	-13.0	-39.1
High Channel (714.5MHz)									
1.43	38.0	H	3.0	16.0	39.9	1.0	-54.9	-13.0	-41.9
2.14	42.5	H	3.0	16.9	40.1	1.0	-55.5	-13.0	-42.5
2.86	62.9	H	3.0	14.7	39.3	1.0	-52.1	-13.0	-39.1
1.43	39.1	V	3.0	15.5	39.9	1.0	-54.4	-13.0	-41.4
2.14	42.6	V	3.0	15.1	40.1	1.0	-54.2	-13.0	-41.2
2.86	63.0	V	3.0	13.7	39.3	1.0	-52.0	-13.0	-39.0

Rev: 10.28.15

LTE B12 3MHz QPSK

High Frequency Substitution Measurement
 UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 12, 3MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

ERRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	ERRP @ TX Ant End (dBm)	Preamp	Attenuator	ERRP	Limit	Delta
Low Channel (700.5MHz)									
1.40	39.9	H	3.0	18.2	39.9	1.0	-57.1	-13.0	-44.1
2.10	42.8	H	3.0	16.8	40.2	1.0	-56.0	-13.0	-43.0
2.80	63.3	H	3.0	15.4	39.3	1.0	-53.7	-13.0	-40.7
1.40	39.6	V	3.0	16.2	39.9	1.0	-55.2	-13.0	-42.2
2.10	42.7	V	3.0	14.7	40.2	1.0	-53.9	-13.0	-40.9
2.80	63.3	V	3.0	14.4	39.3	1.0	-52.5	-13.0	-39.5
Mid Channel (707.5MHz)									
1.42	37.4	H	3.0	15.4	39.9	1.0	-54.3	-13.0	-41.3
2.12	42.1	H	3.0	16.6	40.1	1.0	-55.1	-13.0	-42.1
2.83	63.3	H	3.0	15.3	39.3	1.0	-53.6	-13.0	-40.6
1.42	37.8	V	3.0	14.2	39.9	1.0	-53.1	-13.0	-40.1
2.12	42.1	V	3.0	14.1	40.1	1.0	-53.1	-13.0	-40.1
2.83	62.7	V	3.0	13.1	39.3	1.0	-51.3	-13.0	-38.3
High Channel (714.5MHz)									
1.43	38.0	H	3.0	16.6	39.9	1.0	-54.8	-13.0	-41.8
2.14	42.8	H	3.0	16.8	40.1	1.0	-55.9	-13.0	-42.9
2.86	62.9	H	3.0	14.7	39.3	1.0	-52.4	-13.0	-39.4
1.43	38.4	V	3.0	15.8	39.9	1.0	-54.7	-13.0	-41.7
2.14	43.0	V	3.0	15.6	40.1	1.0	-54.7	-13.0	-41.7
2.86	62.4	V	3.0	13.2	39.3	1.0	-51.4	-13.0	-38.4

Rev: 10.28.15

LTE B12 3MHz 16QAM

High Frequency Substitution Measurement
 UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 12, 3MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

ERRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	ERRP @ TX Ant End (dBm)	Preamp	Attenuator	ERRP	Limit	Delta
Low Channel (701.5MHz)									
1.40	39.1	H	3.0	17.2	39.9	1.0	-56.1	-13.0	-43.1
2.11	41.9	H	3.0	15.8	40.2	1.0	-55.0	-13.0	-42.0
2.81	62.9	H	3.0	15.0	39.3	1.0	-53.3	-13.0	-40.3
1.40	39.1	V	3.0	15.7	39.9	1.0	-54.6	-13.0	-41.6
2.11	41.9	V	3.0	14.4	40.2	1.0	-53.6	-13.0	-40.6
2.81	63.5	V	3.0	14.4	39.3	1.0	-52.7	-13.0	-39.7
Mid Channel (707.5MHz)									
1.42	37.8	H	3.0	15.9	39.9	1.0	-54.8	-13.0	-41.8
2.12	42.5	H	3.0	16.4	40.1	1.0	-55.2	-13.0	-42.2
2.83	62.5	H	3.0	14.5	39.3	1.0	-52.8	-13.0	-39.8
1.42	38.1	V	3.0	14.6	39.9	1.0	-53.5	-13.0	-40.5
2.12	42.9	V	3.0	15.9	40.1	1.0	-54.9	-13.0	-41.9
2.83	62.6	V	3.0	13.4	39.3	1.0	-51.6	-13.0	-38.6
High Channel (713.5MHz)									
1.43	37.8	H	3.0	15.9	39.9	1.0	-53.9	-13.0	-40.9
2.14	43.4	H	3.0	17.3	40.1	1.0	-56.4	-13.0	-43.4
2.85	62.9	H	3.0	14.8	39.3	1.0	-53.4	-13.0	-40.4
1.43	39.1	V	3.0	15.6	39.9	1.0	-54.4	-13.0	-41.4
2.14	43.0	V	3.0	16.6	40.1	1.0	-54.6	-13.0	-41.6
2.85	62.8	V	3.0	13.5	39.3	1.0	-51.8	-13.0	-38.8

Rev: 10.28.15

High Frequency Substitution Measurement
 UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 12, 3MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

ERRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	ERRP @ TX Ant End (dBm)	Preamp	Attenuator	ERRP	Limit	Delta
Low Channel (701.5MHz)									
1.40	39.9	H	3.0	17.2	39.9	1.0	-56.1	-13.0	-43.1
2.11	41.9	H	3.0	15.8	40.2	1.0	-55.0	-13.0	-42.0
2.81	62.9	H	3.0	15.0	39.3	1.0	-53.3	-13.0	-40.3
1.40	39.1	V	3.0	15.7	39.9	1.0	-54.6	-13.0	-41.6
2.11	41.9	V	3.0	14.4	40.2				

LTE B12 5MHz QPSK											LTE B12 5MHz 16QAM										
High Frequency Substitution Measurement UL RTP Radiated Chamber											High Frequency Substitution Measurement UL RTP Radiated Chamber										
Company: SOMC Project #: 11139405 Date: 2016-04-08 Test Engineer: Brian Kiewra Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis) Mode: LTE Band 12, 10MHz QPSK Test Equipment: Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable											Company: SOMC Project #: 11139405 Date: 2016-04-08 Test Engineer: Brian Kiewra Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis) Mode: LTE Band 12, 10MHz 16QAM Test Equipment: Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable										
EIRP											EIRP										
Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta		Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta	
Low Channel (704MHz)																					
1.41	89.6	H	3.0	18.6	39.9	1.0	-57.5	-13.0	-44.5		1.41	89.6	H	3.0	18.6	39.9	1.0	-57.5	-13.0	-44.5	
2.11	82.4	H	3.0	16.3	40.1	1.0	-55.5	-13.0	-42.5		2.11	82.3	H	3.0	16.3	40.1	1.0	-55.4	-13.0	-42.4	
2.82	82.6	H	3.0	14.7	39.3	1.0	-52.8	-13.0	-39.8		2.82	82.5	H	3.0	14.5	39.3	1.0	-52.6	-13.0	-39.6	
1.41	69.0	V	3.0	16.5	39.9	1.0	-55.4	-13.0	-42.4		1.41	69.5	V	3.0	16.6	39.9	1.0	-55.0	-13.0	-42.0	
2.11	82.3	V	3.0	14.9	40.1	1.0	-54.0	-13.0	-41.0		2.11	82.5	V	3.0	15.1	40.1	1.0	-54.3	-13.0	-41.3	
2.82	82.7	V	3.0	13.8	39.3	1.0	-51.9	-13.0	-38.9		2.82	82.9	V	3.0	13.7	39.3	1.0	-52.0	-13.0	-39.0	
Mid Channel (707.5MHz)																					
1.42	97.6	H	3.0	15.6	39.9	1.0	-54.5	-13.0	-41.5		1.42	97.5	H	3.0	15.5	39.9	1.0	-54.4	-13.0	-41.4	
2.12	82.6	H	3.0	16.5	40.1	1.0	-55.6	-13.0	-42.6		2.12	82.5	H	3.0	16.5	40.1	1.0	-55.6	-13.0	-42.6	
2.83	82.5	H	3.0	14.5	39.3	1.0	-52.7	-13.0	-39.7		2.83	83.2	H	3.0	15.1	39.3	1.0	-53.4	-13.0	-40.4	
1.42	69.0	V	3.0	15.5	39.9	1.0	-54.4	-13.0	-41.4		1.42	69.7	V	3.0	15.3	39.9	1.0	-54.2	-13.0	-41.2	
2.12	82.8	V	3.0	15.1	40.1	1.0	-54.3	-13.0	-41.3		2.12	82.5	V	3.0	15.1	40.1	1.0	-54.2	-13.0	-41.2	
2.83	83.3	V	3.0	14.2	39.3	1.0	-52.4	-13.0	-39.4		2.83	82.8	V	3.0	13.7	39.3	1.0	-51.9	-13.0	-38.9	
High Channel (711MHz)																					
1.42	96.4	H	3.0	14.4	39.9	1.0	-53.3	-13.0	-40.3		1.42	96.9	H	3.0	13.8	39.9	1.0	-52.8	-13.0	-39.8	
2.13	82.8	H	3.0	16.7	40.1	1.0	-55.8	-13.0	-42.8		2.13	83.1	H	3.0	17.0	40.1	1.0	-56.1	-13.0	-43.1	
2.84	83.2	H	3.0	15.1	39.3	1.0	-53.4	-13.0	-40.4		2.84	83.6	H	3.0	13.5	39.3	1.0	-51.8	-13.0	-38.8	
1.42	68.5	V	3.0	15.8	39.9	1.0	-53.8	-13.0	-40.8		1.42	68.5	V	3.0	15.8	39.9	1.0	-53.8	-13.0	-40.8	
2.13	83.1	V	3.0	15.6	40.1	1.0	-54.7	-13.0	-41.7		2.13	82.8	V	3.0	15.4	40.1	1.0	-54.5	-13.0	-41.5	
2.84	83.1	V	3.0	13.8	39.3	1.0	-52.1	-13.0	-39.1		2.84	82.4	V	3.0	13.1	39.3	1.0	-51.4	-13.0	-38.4	

LTE Band 13

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 13, 5MHz QPSK
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B13

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (75.5MHz)									
1.96	36.8	H	3.0	16.0	39.7	1.0	-54.8	-40.0	-14.8
2.35	62.8	H	3.0	16.7	39.6	1.0	-55.3	-13.0	-42.3
3.12	62.6	H	3.0	13.1	39.4	1.0	-51.5	-13.0	-38.5
1.96	59.3	V	3.0	14.9	39.7	1.0	-53.6	-40.0	-13.6
2.34	62.3	V	3.0	14.9	39.6	1.0	-53.5	-13.0	-40.5
3.12	62.6	V	3.0	12.5	39.4	1.0	-50.8	-13.0	-37.8
Mid Channel (82MHz)									
1.96	61.0	H	3.0	16.3	39.8	1.0	-57.0	-40.0	-17.0
2.35	63.3	H	3.0	17.2	39.9	1.0	-57.7	-13.0	-42.7
3.13	62.8	H	3.0	13.9	39.4	1.0	-52.3	-13.0	-39.3
1.96	59.3	V	3.0	14.9	39.8	1.0	-53.6	-40.0	-13.6
2.35	62.7	V	3.0	15.3	39.6	1.0	-53.9	-13.0	-40.9
3.13	62.4	V	3.0	12.3	39.4	1.0	-50.7	-13.0	-37.7
High Channel (78.5MHz)									
1.97	61.5	H	3.0	16.7	39.8	1.0	-57.3	-40.0	-17.3
2.35	62.9	H	3.0	16.7	39.6	1.0	-57.3	-13.0	-42.3
3.14	62.7	H	3.0	13.7	39.4	1.0	-52.1	-13.0	-39.1
1.97	61.0	V	3.0	16.6	39.8	1.0	-55.3	-40.0	-15.3
2.35	62.7	V	3.0	15.4	39.6	1.0	-53.9	-13.0	-40.9
3.14	62.6	V	3.0	12.7	39.4	1.0	-51.1	-13.0	-38.1

Rev: 10.28.16

LTE B13 5MHz QPSK

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 13, 5MHz 16QAM
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B13

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (75.5MHz)									
1.96	36.9	H	3.0	16.2	39.7	1.0	-54.9	-40.0	-14.9
2.34	63.0	H	3.0	16.9	39.6	1.0	-55.5	-13.0	-42.5
3.12	62.6	H	3.0	13.7	39.4	1.0	-52.1	-13.0	-39.1
1.96	60.2	V	3.0	15.8	39.7	1.0	-54.5	-40.0	-14.5
2.34	62.2	V	3.0	14.8	39.6	1.0	-53.4	-13.0	-40.4
3.12	61.0	V	3.0	13.6	39.4	1.0	-51.4	-13.0	-38.4
Mid Channel (82MHz)									
1.96	62.7	H	3.0	17.5	39.8	1.0	-56.7	-40.0	-16.7
2.35	62.7	H	3.0	18.5	39.6	1.0	-55.1	-13.0	-42.1
3.13	63.2	H	3.0	14.2	39.4	1.0	-52.6	-13.0	-39.6
1.96	60.1	V	3.0	15.7	39.8	1.0	-54.4	-40.0	-14.4
2.35	62.0	V	3.0	14.6	39.6	1.0	-53.7	-13.0	-40.7
3.13	63.3	V	3.0	13.2	39.4	1.0	-51.6	-13.0	-38.6
High Channel (84.5MHz)									
1.97	61.5	H	3.0	16.7	39.8	1.0	-57.4	-40.0	-17.4
2.35	62.8	H	3.0	16.7	39.6	1.0	-57.2	-13.0	-42.2
3.14	63.0	H	3.0	14.1	39.4	1.0	-52.4	-13.0	-39.4
1.97	62.0	V	3.0	17.5	39.8	1.0	-56.3	-40.0	-16.3
2.35	62.6	V	3.0	15.2	39.6	1.0	-53.8	-13.0	-40.8
3.14	62.5	V	3.0	12.5	39.4	1.0	-50.9	-13.0	-37.9

Rev: 10.28.16

LTE B13 5MHz 16QAM

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 13, 10MHz QPSK
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel ()									
		H							
		H							
		H							
		H							
		V							
		V							
		V							
Mid Channel (82MHz)									
1.96	58.9	H	3.0	16.1	39.8	1.0	-54.9	-13.0	-41.9
2.35	62.8	H	3.0	16.6	39.6	1.0	-55.2	-13.0	-42.2
3.13	62.4	H	3.0	13.4	39.4	1.0	-51.8	-13.0	-38.8
1.96	59.9	V	3.0	15.5	39.8	1.0	-54.2	-13.0	-41.2
2.35	62.9	V	3.0	15.9	39.6	1.0	-54.1	-13.0	-41.1
3.13	62.9	V	3.0	12.8	39.4	1.0	-51.2	-13.0	-38.2
High Channel ()									
		H							
		H							
		H							
		H							
		H							
		V							
		V							
		V							

Rev: 10.28.16

LTE B13 10MHz QPSK

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-07
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 13, 10MHz 16QAM
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel ()									
		H							
		H							
		H							
		H							
		V							
		V							
		V							
Mid Channel (82MHz)									
1.96	59.2	H	3.0	16.4	39.8	1.0	-55.1	-13.0	-42.1
2.35	62.4	H	3.0	16.3	39.6	1.0	-54.8	-13.0	-41.8
3.13	63.0	H	3.0	14.1	39.4	1.0	-52.5	-13.0	-39.5
1.96	61.5	V	3.0	17.1	39.8	1.0	-55.8	-13.0	-42.8
2.35	63.2	V	3.0	15.8	39.6	1.0	-54.4	-13.0	-41.4
3.13	62.9	V	3.0	12.9	39.4	1.0	-51.2	-13.0	-38.2
High Channel ()									
		H							
		H							
		H							
		H							
		H							
		V							
		V							
		V							

Rev: 10.28.16

LTE B13 10MHz 16QAM

LTE Band 17

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 17, 5MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (706MHz)									
1.41	56.5	H	3.0	14.6	39.9	1.0	-53.5	-13.0	-40.9
2.12	62.3	H	3.0	16.3	40.1	1.0	-55.4	-13.0	-42.4
2.83	65.3	H	3.0	17.3	39.3	1.0	-55.6	-13.0	-42.6
1.41	57.5	V	3.0	14.1	39.9	1.0	-53.0	-13.0	-40.0
2.12	62.9	V	3.0	15.9	40.1	1.0	-54.6	-13.0	-41.6
2.83	64.4	V	3.0	15.2	39.3	1.0	-53.5	-13.0	-40.5
Mid Channel (710MHz)									
1.42	54.6	H	3.0	12.6	39.9	1.0	-51.4	-13.0	-38.2
2.13	62.7	H	3.0	16.7	40.1	1.0	-55.8	-13.0	-42.8
2.84	65.6	H	3.0	16.9	39.3	1.0	-55.2	-13.0	-42.2
1.42	56.9	V	3.0	13.4	39.9	1.0	-52.3	-13.0	-39.3
2.13	63.1	V	3.0	15.7	40.1	1.0	-54.7	-13.0	-41.7
2.84	64.9	V	3.0	15.7	39.3	1.0	-54.0	-13.0	-41.0
High Channel (713.5)									
1.43	54.5	H	3.0	12.5	39.9	1.0	-51.4	-13.0	-38.4
2.14	62.6	H	3.0	16.5	40.1	1.0	-55.6	-13.0	-42.6
2.85	65.0	H	3.0	16.9	39.3	1.0	-55.2	-13.0	-42.2
1.43	57.0	V	3.0	13.5	39.9	1.0	-52.3	-13.0	-39.3
2.14	62.8	V	3.0	15.3	40.1	1.0	-54.4	-13.0	-41.4
2.85	64.4	V	3.0	15.1	39.3	1.0	-53.4	-13.0	-40.4

Rev: 10.28.16

LTE B17 5MHz QPSK

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 17, 5MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (706MHz)									
1.41	57.1	H	3.0	15.2	39.9	1.0	-54.1	-13.0	-41.1
2.12	63.3	H	3.0	17.2	40.1	1.0	-56.4	-13.0	-43.4
2.83	64.8	H	3.0	16.8	39.3	1.0	-55.1	-13.0	-42.1
1.41	58.7	V	3.0	15.2	39.9	1.0	-54.1	-13.0	-41.1
2.12	63.8	V	3.0	18.3	40.1	1.0	-55.5	-13.0	-42.5
2.83	64.9	V	3.0	15.7	39.3	1.0	-54.6	-13.0	-41.6
Mid Channel (710MHz)									
1.42	54.9	H	3.0	12.9	39.9	1.0	-51.8	-13.0	-38.8
2.13	63.5	H	3.0	17.6	40.1	1.0	-56.6	-13.0	-43.6
2.84	64.7	H	3.0	16.4	39.3	1.0	-55.9	-13.0	-42.9
1.42	57.4	V	3.0	13.8	39.9	1.0	-52.8	-13.0	-39.8
2.13	63.1	V	3.0	15.7	40.1	1.0	-54.7	-13.0	-41.7
2.84	64.8	V	3.0	15.6	39.3	1.0	-53.9	-13.0	-40.9
High Channel (713.5)									
1.43	54.4	H	3.0	12.4	39.9	1.0	-51.2	-13.0	-38.2
2.14	62.6	H	3.0	17.6	40.1	1.0	-56.6	-13.0	-43.6
2.85	64.3	H	3.0	16.2	39.3	1.0	-54.5	-13.0	-41.5
1.43	56.6	V	3.0	13.0	39.9	1.0	-51.9	-13.0	-38.9
2.14	63.5	V	3.0	16.0	40.1	1.0	-55.1	-13.0	-42.1
2.85	64.3	V	3.0	15.2	39.3	1.0	-53.4	-13.0	-40.4

Rev: 10.28.16

LTE B17 5MHz 16QAM

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 17, 10MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (709MHz)									
1.41	56.5	H	3.0	13.6	39.9	1.0	-52.5	-13.0	-39.5
2.12	62.3	H	3.0	16.2	40.1	1.0	-55.3	-13.0	-42.3
2.83	64.9	H	3.0	16.9	39.3	1.0	-55.2	-13.0	-42.2
1.41	58.8	V	3.0	15.3	39.9	1.0	-54.2	-13.0	-41.2
2.12	62.6	V	3.0	15.2	40.1	1.0	-54.3	-13.0	-41.3
2.83	64.3	V	3.0	15.1	39.3	1.0	-53.4	-13.0	-40.4
Mid Channel (710MHz)									
1.42	56.0	H	3.0	14.0	39.9	1.0	-52.9	-13.0	-39.9
2.13	62.0	H	3.0	15.9	40.1	1.0	-55.0	-13.0	-42.0
2.84	64.4	H	3.0	16.3	39.3	1.0	-54.6	-13.0	-41.6
1.42	58.5	V	3.0	15.0	39.9	1.0	-53.8	-13.0	-40.8
2.13	62.6	V	3.0	12.1	40.1	1.0	-51.2	-13.0	-38.2
2.84	62.9	V	3.0	13.7	39.3	1.0	-51.9	-13.0	-38.9
High Channel (711MHz)									
1.42	55.4	H	3.0	13.4	39.9	1.0	-52.3	-13.0	-39.3
2.13	62.1	H	3.0	16.1	40.1	1.0	-55.2	-13.0	-42.2
2.84	64.2	H	3.0	16.1	39.3	1.0	-54.4	-13.0	-41.4
1.42	57.3	V	3.0	13.8	39.9	1.0	-52.7	-13.0	-39.7
2.13	63.2	V	3.0	15.7	40.1	1.0	-54.8	-13.0	-41.8
2.84	64.3	V	3.0	15.1	39.3	1.0	-53.4	-13.0	-40.4

Rev: 10.28.16

LTE B17 10MHz QPSK

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Y-Axis)
 Mode: LTE Band 17, 10MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (709MHz)									
1.41	57.8	H	3.0	14.1	39.9	1.0	-53.0	-13.0	-40.0
2.12	63.6	H	3.0	17.2	40.1	1.0	-56.4	-13.0	-43.4
2.83	64.4	H	3.0	16.3	39.3	1.0	-54.6	-13.0	-41.6
1.41	58.8	V	3.0	15.4	39.9	1.0	-54.2	-13.0	-41.2
2.12	62.9	V	3.0	15.3	40.1	1.0	-54.4	-13.0	-41.4
2.83	64.6	V	3.0	15.4	39.3	1.0	-53.6	-13.0	-40.6
Mid Channel (710MHz)									
1.42	56.0	H	3.0	14.0	39.9	1.0	-52.9	-13.0	-39.9
2.13	62.0	H	3.0	15.9	40.1	1.0	-55.0	-13.0	-42.0
2.84	64.6	H	3.0	16.5	39.3	1.0	-54.8	-13.0	-41.8
1.42	58.6	V	3.0	15.1	39.9	1.0	-54.0	-13.0	-41.0
2.13	62.6	V	3.0	12.1	40.1	1.0	-51.2	-13.0	-38.2
2.84	62.6	V	3.0	13.4	39.3	1.0	-51.7	-13.0	-38.7
High Channel (711MHz)									
1.42	55.1	H	3.0	13.1	39.9	1.0	-52.0	-13.0	-39.0
2.13	62.7	H	3.0	16.6	40.1	1.0	-55.7	-13.0	-42.7
2.84	64.2	H	3.0	16.2	39.3	1.0	-54.4	-13.0	-41.4
1.42	57.6	V	3.0	14.1	39.9	1.0	-53.0	-13.0	-40.0
2.13	62.9	V	3.0	15.5	40.1	1.0	-54.6	-13.0	-41.6
2.84	64.2	V	3.0	15.0	39.3	1.0	-53.3	-13.0	-40.3

Rev: 10.28.16

LTE B17 10MHz 16QAM

LTE Band 26

Company: SOMC
 Project #: 11139405
 Date: 2016-04-10
 Test Engineer: Mark Nitting
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 26 (B26), 1.4MHz QPSK
 Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (B1.7MHz) (Part 905)									
1.84	25.3	H	3.0	18.8	39.9	1.0	57.8	13.0	44.8
2.48	25.3	H	3.0	18.8	39.9	1.0	57.8	13.0	44.8
2.98	25.3	H	3.0	18.8	39.9	1.0	57.8	13.0	44.8
1.83	22.3	V	3.0	17.4	39.9	1.0	56.3	13.0	43.3
2.47	22.3	V	3.0	17.2	39.9	1.0	54.8	13.0	41.8
2.98	24.8	V	3.0	14.6	39.9	1.0	53.1	13.0	40.1
Low Channel (B2.7MHz)									
1.85	22.2	H	3.0	18.8	39.9	1.0	57.7	13.0	44.7
2.47	22.2	H	3.0	18.6	39.9	1.0	54.6	13.0	41.6
2.98	25.0	H	3.0	15.7	39.9	1.0	54.2	13.0	41.2
1.85	22.6	V	3.0	17.8	39.9	1.0	56.5	13.0	43.5
2.47	22.2	V	3.0	18.3	39.9	1.0	54.8	13.0	41.8
2.98	25.1	V	3.0	14.8	39.9	1.0	53.3	13.0	40.3
Mid Channel (B3.5MHz)									
1.86	22.2	H	3.0	18.7	39.9	1.0	57.5	13.0	44.5
2.48	22.9	H	3.0	16.1	39.9	1.0	54.4	13.0	41.4
2.98	25.3	H	3.0	16.1	39.9	1.0	54.4	13.0	41.4
1.86	21.6	V	3.0	16.5	39.9	1.0	55.4	13.0	42.4
2.48	22.9	V	3.0	17.3	39.9	1.0	55.8	13.0	42.8
2.98	25.3	V	3.0	15.1	39.9	1.0	53.5	13.0	40.5
High Channel (B4.3MHz)									
1.84	22.6	H	3.0	18.3	40.0	1.0	57.2	13.0	44.2
2.48	22.6	H	3.0	17.3	39.9	1.0	54.8	13.0	41.8
2.98	25.0	H	3.0	15.0	39.9	1.0	53.5	13.0	40.5
1.84	22.6	V	3.0	15.4	40.0	1.0	54.4	13.0	41.4
2.48	22.6	V	3.0	16.5	39.9	1.0	54.8	13.0	41.8
2.98	24.9	V	3.0	14.5	39.9	1.0	53.1	13.0	40.1

Rev: 10.20.15

LTE B26 1.4MHz QPSK

Company: SOMC
 Project #: 11139405
 Date: 2016-04-10
 Test Engineer: Mark Nitting
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 26 (B26), 1.4MHz 16QAM
 Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (B1.7MHz) (Part 905)									
1.84	25.3	H	3.0	18.8	39.9	1.0	58.0	13.0	45.0
2.48	25.3	H	3.0	18.8	39.9	1.0	58.0	13.0	45.0
2.98	25.3	H	3.0	18.8	39.9	1.0	58.0	13.0	45.0
1.83	22.3	V	3.0	17.4	39.9	1.0	56.3	13.0	43.3
2.47	22.3	V	3.0	17.2	39.9	1.0	54.8	13.0	41.8
2.98	24.8	V	3.0	14.6	39.9	1.0	53.1	13.0	40.1
Low Channel (B2.7MHz)									
1.85	22.2	H	3.0	18.8	39.9	1.0	58.0	13.0	45.0
2.47	22.2	H	3.0	18.6	39.9	1.0	54.6	13.0	41.6
2.98	25.0	H	3.0	15.7	39.9	1.0	54.2	13.0	41.2
1.85	22.6	V	3.0	17.8	39.9	1.0	56.5	13.0	43.5
2.47	22.2	V	3.0	18.3	39.9	1.0	54.8	13.0	41.8
2.98	25.1	V	3.0	14.8	39.9	1.0	53.4	13.0	40.4
Mid Channel (B3.5MHz)									
1.86	22.2	H	3.0	18.7	39.9	1.0	58.0	13.0	45.0
2.48	22.9	H	3.0	16.2	39.9	1.0	54.9	13.0	41.9
2.98	25.3	H	3.0	16.2	39.9	1.0	54.9	13.0	41.9
1.86	21.6	V	3.0	16.5	39.9	1.0	55.5	13.0	42.5
2.48	22.9	V	3.0	17.3	39.9	1.0	55.9	13.0	42.9
2.98	25.3	V	3.0	15.1	39.9	1.0	53.6	13.0	40.6
High Channel (B4.3MHz)									
1.84	22.6	H	3.0	18.5	40.0	1.0	57.4	13.0	44.4
2.48	22.6	H	3.0	17.5	39.9	1.0	54.9	13.0	41.9
2.98	25.0	H	3.0	15.2	39.9	1.0	53.6	13.0	40.6
1.84	22.6	V	3.0	15.4	40.0	1.0	54.4	13.0	41.4
2.48	22.6	V	3.0	16.5	39.9	1.0	54.9	13.0	41.9
2.98	24.9	V	3.0	14.5	39.9	1.0	53.4	13.0	40.4

Rev: 10.20.15

LTE B26 1.4MHz 16QAM

Company: SOMC
 Project #: 11139405
 Date: 2016-04-10
 Test Engineer: Mark Nitting
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 26 (B26), 3MHz QPSK
 Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (B1.5MHz) (Part 905)									
1.85	22.2	H	3.0	18.8	39.9	1.0	57.7	13.0	44.7
2.48	25.3	H	3.0	18.8	39.9	1.0	57.7	13.0	44.7
2.98	25.3	H	3.0	18.8	39.9	1.0	57.7	13.0	44.7
1.83	21.9	V	3.0	17.0	39.9	1.0	55.9	13.0	42.9
2.48	23.9	V	3.0	16.3	39.9	1.0	54.7	13.0	41.7
2.98	26.7	V	3.0	14.5	39.9	1.0	53.2	13.0	40.2
Low Channel (B2.5MHz)									
1.85	22.2	H	3.0	18.8	39.9	1.0	58.1	13.0	45.1
2.48	22.9	H	3.0	17.3	39.9	1.0	54.8	13.0	41.8
2.98	25.0	H	3.0	16.3	39.9	1.0	54.8	13.0	41.8
1.85	21.4	V	3.0	16.4	39.9	1.0	55.3	13.0	42.3
2.48	22.9	V	3.0	16.8	39.9	1.0	54.8	13.0	41.8
2.98	25.2	V	3.0	14.9	39.9	1.0	53.4	13.0	40.4
Mid Channel (B3.5MHz)									
1.86	22.2	H	3.0	18.7	39.9	1.0	57.5	13.0	44.5
2.48	22.9	H	3.0	16.2	39.9	1.0	54.4	13.0	41.4
2.98	25.3	H	3.0	16.2	39.9	1.0	54.4	13.0	41.4
1.86	21.4	V	3.0	16.5	39.9	1.0	55.0	13.0	42.0
2.48	22.9	V	3.0	17.3	39.9	1.0	55.4	13.0	42.4
2.98	25.3	V	3.0	15.2	39.9	1.0	53.9	13.0	40.9
High Channel (B4.5MHz)									
1.84	22.6	H	3.0	18.4	40.0	1.0	57.4	13.0	44.4
2.48	22.6	H	3.0	17.4	39.9	1.0	54.9	13.0	41.9
2.98	25.0	H	3.0	15.1	39.9	1.0	53.6	13.0	40.6
1.84	22.6	V	3.0	15.4	40.0	1.0	54.8	13.0	41.8
2.48	22.6	V	3.0	16.5	39.9	1.0	54.9	13.0	41.9
2.98	24.9	V	3.0	14.5	39.9	1.0	53.5	13.0	40.5

Rev: 10.20.15

LTE B26 3MHz QPSK

Company: SOMC
 Project #: 11139405
 Date: 2016-04-10
 Test Engineer: Mark Nitting
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 26 (B26), 3MHz 16QAM
 Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (B1.5MHz) (Part 905)									
1.85	22.2	H	3.0	18.8	39.9	1.0	57.7	13.0	44.7
2.48	25.3	H	3.0	18.8	39.9	1.0	57.7	13.0	44.7
2.98	25.3	H	3.0	18.8	39.9	1.0	57.7	13.0	44.7
1.83	21.9	V	3.0	17.0	39.9	1.0	55.9	13.0	42.9
2.48	23.9	V	3.0	16.3	39.9	1.0	54.7	13.0	41.7
2.98	26.7	V	3.0	14.5	39.9	1.0	53.2	13.0	40.2
Low Channel (B2.5MHz)									
1.85	22.2	H	3.0	18.8	39.9	1.0	58.1	13.0	45.1
2.48	22.9	H	3.0	17.3	39.9	1.0	54.8	13.0	41.8
2.98	25.0	H	3.0	16.3	39.9	1.0	54.8	13.0	41.8
1.85	21.4	V	3.0	16.4	39.9	1.0	55.3	13.0	42.3
2.48	22.9	V	3.0	16.8	39.9	1.0	54.8	13.0	41.8
2.98	25.2	V	3.0	14.9	39.9	1.0	53.4	13.0	40.4
Mid Channel (B3.5MHz)									
1.86	22.2	H	3.0	18.7	39.9	1.0	57.5	13.0	44.5
2.48	22.9	H	3.0	16.2	39.9	1.0	54.4	13.0	41.4
2.98	25.3	H	3.0	16.2	39.9	1.0	54.4	13.0	41.4
1.86	21.4	V	3.0	16.5	39.9	1.0	55.0	13.0	42.0
2.48	22.9	V	3.0	17.3	39.9	1.0	55.4	13.0	42.4
2.98	25.3	V	3.0	15.2	39.9	1.0	53.9	13.0	40.9
High Channel (B4.5MHz)									
1.84	22.6	H	3.0	18.4	40.0	1.0	57.4	13.0	44.4
2.48	22.6	H	3.0	17.4	39.9	1.0	54.9	13.0	41.9
2.98	25.0	H	3.0	15.1	39.9	1.0	53.6	13.0	40.6
1.84	22.6	V	3.0	15.4	40.0	1.0	54.8	13.0	41.8
2.48	22.6	V	3.0	16.5	39.9	1.0	54.9	13.0	41.9
2.98	24.9	V	3.0	14.5	39.9	1.0	53.5	13.0	40.5

Rev: 10.20.15

LTE B26 3MHz 16QAM

Company: SOMC
 Project #: 11139405
 Date: 2016-04-10
 Test Engineer: Mark Nitting
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 26 (B26), 5MHz QPSK
 Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

EIRP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (B1.5MHz) (Part 905)									
1.85	22.2	H	3.0	18.8	39.9	1.0	57.7	13.0	44.7
2.48	25.3	H	3.0	18.8	39.9	1.0	57.7	13.0	44.7

High Frequency Substitution Measurement
 UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-10
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 26 (B26), 10MHz QPSK

Test Equipment:
 Substitution Horn AT0078 Substitution, and CBL010 SMA Cable

ERP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	ERP @ TX Ant End (dBm)	Preamp	Attenuator	ERP	Limit	Delta
Mid Channel (81.5MHz) (E-UTRA)									
1.84	-82.1	H	3.0	-19.7	39.9	1.0	-57.3	-13.0	-44.3
2.49	-82.6	H	3.0	-17.3	39.9	1.0	-53.8	-13.0	-40.8
3.33	-85.5	H	3.0	-15.9	39.9	1.0	-54.4	-13.0	-41.4
1.84	-82.7	V	3.0	-17.6	39.9	1.0	-56.5	-13.0	-43.5
2.49	-84.0	V	3.0	-16.4	39.9	1.0	-53.7	-13.0	-41.7
3.33	-85.9	V	3.0	-14.3	39.9	1.0	-52.6	-13.0	-39.6
Low Channel (820MHz)									
1.84	-82.6	H	3.0	-16.8	39.9	1.0	-55.1	-13.0	-42.1
2.49	-83.7	H	3.0	-17.0	39.9	1.0	-55.2	-13.0	-42.2
3.33	-85.6	H	3.0	-15.9	39.9	1.0	-54.4	-13.0	-41.4
1.84	-81.8	V	3.0	-16.8	39.9	1.0	-55.7	-13.0	-42.7
2.49	-83.9	V	3.0	-16.6	39.9	1.0	-53.4	-13.0	-40.9
3.33	-85.5	V	3.0	-15.2	39.9	1.0	-53.7	-13.0	-40.7
Mid Channel (811.5MHz)									
1.84	-81.3	H	3.0	-17.0	39.9	1.0	-55.1	-13.0	-42.1
2.49	-82.3	H	3.0	-17.2	39.9	1.0	-55.2	-13.0	-42.2
3.33	-85.3	H	3.0	-15.9	39.9	1.0	-54.4	-13.0	-41.4
1.84	-82.0	V	3.0	-16.9	39.9	1.0	-55.8	-13.0	-42.8
2.49	-83.1	V	3.0	-16.4	39.9	1.0	-53.8	-13.0	-41.8
3.33	-85.9	V	3.0	-15.2	39.9	1.0	-53.7	-13.0	-40.7
High Channel (844MHz)									
1.84	-82.8	H	3.0	-18.3	39.9	1.0	-57.3	-13.0	-44.3
2.49	-84.1	H	3.0	-17.2	39.9	1.0	-54.4	-13.0	-41.4
3.33	-86.5	H	3.0	-14.9	39.9	1.0	-53.4	-13.0	-40.4
1.84	-82.0	V	3.0	-16.7	39.9	1.0	-55.8	-13.0	-42.8
2.49	-83.8	V	3.0	-17.0	39.9	1.0	-55.7	-13.0	-42.7
3.33	-85.9	V	3.0	-15.6	39.9	1.0	-54.1	-13.0	-41.1

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LTE B26 10MHz QPSK

High Frequency Substitution Measurement
 UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-10
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 26 (B26), 10MHz 16QAM

Test Equipment:
 Substitution Horn AT0078 Substitution, and CBL010 SMA Cable

ERP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	ERP @ TX Ant End (dBm)	Preamp	Attenuator	ERP	Limit	Delta
Mid Channel (815MHz) (E-UTRA)									
1.84	-82.2	H	3.0	-19.0	39.9	1.0	-56.7	-13.0	-43.7
2.49	-83.1	H	3.0	-17.6	39.9	1.0	-53.9	-13.0	-40.9
3.33	-85.7	H	3.0	-16.2	39.9	1.0	-54.6	-13.0	-41.6
1.84	-82.7	V	3.0	-17.6	39.9	1.0	-56.6	-13.0	-43.6
2.49	-84.7	V	3.0	-16.0	39.9	1.0	-54.9	-13.0	-41.9
3.33	-85.8	V	3.0	-14.6	39.9	1.0	-53.1	-13.0	-40.1
Low Channel (820MHz)									
1.84	-82.7	H	3.0	-18.6	39.9	1.0	-57.5	-13.0	-44.5
2.49	-83.9	H	3.0	-17.2	39.9	1.0	-55.5	-13.0	-42.5
3.33	-85.5	H	3.0	-16.1	39.9	1.0	-54.6	-13.0	-41.6
1.84	-82.0	V	3.0	-17.5	39.9	1.0	-56.4	-13.0	-43.4
2.49	-84.0	V	3.0	-16.6	39.9	1.0	-53.9	-13.0	-40.9
3.33	-85.0	V	3.0	-14.7	39.9	1.0	-53.9	-13.0	-40.9
Mid Channel (811.5MHz)									
1.84	-81.7	H	3.0	-18.2	39.9	1.0	-57.1	-13.0	-44.1
2.49	-82.6	H	3.0	-17.2	39.9	1.0	-55.2	-13.0	-42.2
3.33	-85.5	H	3.0	-16.1	39.9	1.0	-54.6	-13.0	-41.6
1.84	-81.0	V	3.0	-16.1	39.9	1.0	-55.4	-13.0	-42.4
2.49	-83.1	V	3.0	-17.1	39.9	1.0	-54.4	-13.0	-41.4
3.33	-85.0	V	3.0	-15.7	39.9	1.0	-54.2	-13.0	-41.2
High Channel (844MHz)									
1.84	-82.7	H	3.0	-18.2	39.9	1.0	-57.1	-13.0	-44.1
2.49	-84.7	H	3.0	-17.2	39.9	1.0	-55.3	-13.0	-42.3
3.33	-86.5	H	3.0	-14.9	39.9	1.0	-53.4	-13.0	-40.4
1.84	-82.1	V	3.0	-16.8	39.9	1.0	-55.8	-13.0	-42.8
2.49	-83.8	V	3.0	-17.0	39.9	1.0	-55.7	-13.0	-42.7
3.33	-85.9	V	3.0	-15.6	39.9	1.0	-54.1	-13.0	-41.1

Rev: 10.28.15

LTE B26 10MHz 16QAM

High Frequency Substitution Measurement
 UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-10
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 26, 15MHz QPSK

Test Equipment:
 Substitution Horn AT0078 Substitution, and CBL010 SMA Cable

ERP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	ERP @ TX Ant End (dBm)	Preamp	Attenuator	ERP	Limit	Delta	Notes
Low Channel (836.5MHz)										
1.84	-81.9	H	3.0	-19.4	39.9	1.0	-57.3	-13.0	-44.3	
2.49	-82.9	H	3.0	-17.8	39.9	1.0	-56.8	-13.0	-43.8	
3.33	-85.7	H	3.0	-16.3	39.9	1.0	-54.8	-13.0	-41.8	
1.84	-81.9	V	3.0	-16.5	39.9	1.0	-56.4	-13.0	-43.4	
2.49	-83.5	V	3.0	-15.8	39.9	1.0	-55.0	-13.0	-42.0	
3.33	-86.2	V	3.0	-15.3	39.9	1.0	-54.4	-13.0	-41.4	
Mid Channel (836.5MHz)										
1.84	-82.7	H	3.0	-17.1	39.9	1.0	-56.0	-13.0	-43.0	
2.51	-83.9	H	3.0	-17.0	39.9	1.0	-56.3	-13.0	-43.3	
3.33	-85.5	H	3.0	-15.8	39.9	1.0	-54.5	-13.0	-41.5	
1.84	-81.2	V	3.0	-16.8	39.9	1.0	-56.0	-13.0	-43.0	
2.51	-84.5	V	3.0	-16.8	39.9	1.0	-56.0	-13.0	-43.0	
3.33	-85.9	V	3.0	-15.6	39.9	1.0	-54.1	-13.0	-41.1	
High Channel (841.5MHz)										
1.84	-82.7	H	3.0	-17.0	39.9	1.0	-56.0	-13.0	-43.0	
2.52	-83.4	H	3.0	-17.0	39.9	1.0	-56.8	-13.0	-43.8	
3.37	-85.1	H	3.0	-15.6	39.9	1.0	-54.1	-13.0	-41.1	
1.84	-82.2	V	3.0	-17.0	39.9	1.0	-56.9	-13.0	-43.9	
2.52	-83.9	V	3.0	-16.8	39.9	1.0	-56.2	-13.0	-43.2	
3.37	-85.1	V	3.0	-14.8	39.9	1.0	-53.5	-13.0	-40.5	

Rev: 10.28.15

LTE B26 15MHz QPSK

High Frequency Substitution Measurement
 UL RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-20
 Test Engineer: Mark Notling
 Configuration: EUT w/ AC Adaptor and Earbuds (Sample #2312247 Z-Axis)
 Mode: LTE Band 26, 15MHz 16QAM

Test Equipment:
 Substitution Horn AT0078 Substitution, and CBL010 SMA Cable

ERP

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (H/V)	Distance	ERP @ TX Ant End (dBm)	Preamp	Attenuator	ERP	Limit	Delta	Notes
Low Channel (836.5MHz)										
1.84	-82.7	H	3.0	-18.6	39.9	1.0	-57.5	-13.0	-44.5	
2.49	-83.6	H	3.0	-17.6	39.9	1.0	-56.7	-13.0	-43.7	
3.33	-85.5	H	3.0	-15.9	39.9	1.0	-54.4	-13.0	-41.4	
1.84	-81.8	V	3.0	-16.7	39.9	1.0	-56.6	-13.0	-43.6	
2.49	-84.3	V	3.0	-16.5	39.9	1.0	-54.8	-13.0	-41.8	
3.33	-85.5	V	3.0	-15.2	39.9	1.0	-53.7	-13.0	-40.7	
Mid Channel (836.5MHz)										
1.84	-82.7	H	3.0	-17.1	39.9	1.0	-56.0	-13.0	-43.0	
2.51	-83.9	H	3.0	-17.1	39.9	1.0	-56.0	-13.0	-43.0	
3.33	-85.5	H	3.0	-15.8	39.9	1.0	-54.5	-13.0	-41.5	
1.84	-81.2	V	3.0	-16.1	39.9	1.0	-55.0	-13.0	-42.0	
2.51	-84.8	V	3.0	-16.9	39.9	1.0	-55.2	-13.0	-42.2	
3.33	-86.1	V	3.0	-15.8	39.9	1.0	-54.3	-13.0	-41.3	
High Channel (841.5MHz)										
1.84	-82.7	H	3.0	-17.6	39.9	1.0	-56.5	-13.0	-43.5	
2.52	-83.7	H	3.0	-16.8	39.9	1.0	-56.1	-13.0	-43.1	
3.37	-85.2	H	3.0	-15.7	39.9	1.0	-54.2	-13.0	-41.2	
1.84	-82.1	V	3.0	-16.8	39.9	1.0	-56.8	-13.0	-43.8	
2.52	-83.8	V	3.0	-16.6	39.9	1.0	-56.8	-13.0	-43.8	
3.37	-85.7	V	3.0	-15.3	39.9	1.0	-53.9	-13.0	-40.9	

Rev: 10.28.15

LTE B26 15MHz 16QAM

LTE Band 41

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 41, 5MHz QPSK
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B41

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2496.5MHz)									
5.00	63.5	H	3.0	10.9	40.3	1.0	-50.1	-25.0	-25.1
7.50	65.9	H	3.0	9.4	38.9	1.0	-47.4	-25.0	-22.4
9.99	65.9	H	3.0	6.8	38.3	1.0	-44.1	-25.0	-19.1
5.00	63.0	V	3.0	10.4	40.3	1.0	-49.7	-25.0	-24.7
7.50	65.6	V	3.0	9.4	38.9	1.0	-47.3	-25.0	-22.3
9.99	66.7	V	3.0	7.5	38.3	1.0	-44.8	-25.0	-19.8
Mid Channel (2503MHz)									
5.19	62.8	H	3.0	9.5	40.3	1.0	-49.8	-25.0	-24.8
7.78	63.7	H	3.0	6.9	38.9	1.0	-44.8	-25.0	-19.8
10.37	65.2	H	3.0	5.6	38.3	1.0	-43.9	-25.0	-17.9
5.19	62.2	V	3.0	9.4	40.3	1.0	-48.8	-25.0	-23.8
7.78	65.3	V	3.0	9.0	38.9	1.0	-46.8	-25.0	-21.8
10.37	64.6	V	3.0	5.0	38.3	1.0	-42.3	-25.0	-17.3
High Channel (2687.5MHz)									
5.37	64.8	H	3.0	11.6	40.2	1.0	-50.8	-25.0	-25.8
8.05	64.8	H	3.0	8.8	38.8	1.0	-46.2	-25.0	-21.2
10.73	66.4	H	3.0	6.3	38.3	1.0	-43.7	-25.0	-18.7
5.37	64.4	V	3.0	11.5	40.2	1.0	-50.7	-25.0	-25.7
8.05	65.1	V	3.0	8.2	38.8	1.0	-46.0	-25.0	-21.0
10.73	66.1	V	3.0	6.2	38.3	1.0	-43.5	-25.0	-18.5

Rev: 10.28.15

LTE B41 5MHz QPSK

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 41, 5MHz 16QAM
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B41

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2496.5MHz)									
5.00	63.2	H	3.0	10.6	40.3	1.0	-49.9	-25.0	-24.9
7.50	65.2	H	3.0	8.8	38.9	1.0	-46.7	-25.0	-21.7
9.99	66.0	H	3.0	6.9	38.3	1.0	-44.2	-25.0	-19.2
5.00	63.3	V	3.0	10.8	40.3	1.0	-50.0	-25.0	-25.0
7.50	66.1	V	3.0	9.9	38.9	1.0	-47.9	-25.0	-22.9
9.99	66.4	V	3.0	7.2	38.3	1.0	-44.5	-25.0	-19.5
Mid Channel (2503MHz)									
5.19	63.5	H	3.0	10.5	40.3	1.0	-49.6	-25.0	-24.6
7.78	65.3	H	3.0	8.6	38.9	1.0	-46.4	-25.0	-21.4
10.37	66.1	H	3.0	6.5	38.3	1.0	-43.8	-25.0	-18.8
5.19	63.2	V	3.0	10.4	40.3	1.0	-49.7	-25.0	-24.7
7.78	65.3	V	3.0	8.6	38.9	1.0	-46.5	-25.0	-21.5
10.37	66.1	V	3.0	6.5	38.3	1.0	-43.8	-25.0	-18.8
High Channel (2687.5MHz)									
5.37	64.8	H	3.0	11.6	40.2	1.0	-50.8	-25.0	-25.8
8.05	64.8	H	3.0	8.8	38.8	1.0	-46.2	-25.0	-21.2
10.73	66.4	H	3.0	6.3	38.3	1.0	-43.7	-25.0	-18.7
5.37	64.9	V	3.0	10.8	40.2	1.0	-50.5	-25.0	-25.5
8.05	64.5	V	3.0	7.7	38.8	1.0	-45.0	-25.0	-20.0
10.73	65.7	V	3.0	5.7	38.3	1.0	-43.0	-25.0	-18.0

Rev: 10.28.15

LTE B41 5MHz 16QAM

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 41, 10MHz QPSK
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B41

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2501MHz)									
5.00	63.6	H	3.0	11.0	40.3	1.0	-50.2	-25.0	-25.2
7.50	66.6	H	3.0	10.1	38.9	1.0	-48.1	-25.0	-23.1
10.00	66.4	H	3.0	7.2	38.3	1.0	-44.5	-25.0	-19.5
5.00	63.1	V	3.0	10.6	40.3	1.0	-49.5	-25.0	-24.5
7.50	66.5	V	3.0	10.4	38.9	1.0	-48.4	-25.0	-23.4
10.00	66.7	V	3.0	7.5	38.3	1.0	-44.8	-25.0	-19.8
Mid Channel (2503MHz)									
5.19	62.9	V	3.0	10.1	40.3	1.0	-49.4	-25.0	-24.4
7.78	66.1	H	3.0	9.4	38.9	1.0	-47.6	-25.0	-22.6
10.37	65.8	H	3.0	6.2	38.3	1.0	-43.5	-25.0	-18.5
5.19	62.9	V	3.0	10.1	40.3	1.0	-49.4	-25.0	-24.4
7.78	66.1	V	3.0	9.4	38.9	1.0	-47.6	-25.0	-22.6
10.37	65.5	V	3.0	6.9	38.3	1.0	-44.2	-25.0	-19.2
High Channel (2685MHz)									
5.37	64.9	H	3.0	11.7	40.2	1.0	-50.8	-25.0	-25.8
8.05	65.7	H	3.0	8.7	38.8	1.0	-46.5	-25.0	-21.5
10.74	67.4	H	3.0	7.3	38.3	1.0	-44.1	-25.0	-19.1
5.37	64.9	V	3.0	11.8	40.2	1.0	-51.0	-25.0	-26.0
8.05	66.5	V	3.0	9.4	38.8	1.0	-47.4	-25.0	-22.4
10.74	66.7	V	3.0	6.8	38.3	1.0	-44.1	-25.0	-19.1

Rev: 10.28.15

LTE B41 10MHz QPSK

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 41, 10MHz 16QAM
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B41

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2501MHz)									
5.00	63.7	H	3.0	10.7	40.3	1.0	-50.0	-25.0	-25.0
7.50	66.1	H	3.0	9.7	38.9	1.0	-47.6	-25.0	-22.6
10.00	66.7	H	3.0	7.3	38.3	1.0	-44.6	-25.0	-19.6
5.00	63.6	V	3.0	11.0	40.3	1.0	-50.3	-25.0	-25.3
7.50	66.1	V	3.0	10.8	38.9	1.0	-47.8	-25.0	-22.8
10.00	66.1	V	3.0	7.9	38.3	1.0	-44.2	-25.0	-19.2
Mid Channel (2503MHz)									
5.19	63.7	H	3.0	10.7	40.3	1.0	-50.1	-25.0	-25.1
7.78	66.8	H	3.0	9.8	38.9	1.0	-47.7	-25.0	-22.7
10.37	66.8	H	3.0	7.2	38.3	1.0	-44.5	-25.0	-19.5
5.19	62.5	V	3.0	9.7	40.3	1.0	-49.0	-25.0	-24.0
7.78	66.8	V	3.0	9.7	38.9	1.0	-47.7	-25.0	-22.7
10.37	66.5	V	3.0	7.4	38.3	1.0	-44.8	-25.0	-19.8
High Channel (2685MHz)									
5.37	64.9	H	3.0	12.2	40.2	1.0	-51.4	-25.0	-26.4
8.05	65.9	H	3.0	9.9	38.8	1.0	-47.0	-25.0	-21.7
10.74	67.4	H	3.0	7.7	38.3	1.0	-44.0	-25.0	-19.0
5.37	64.2	V	3.0	11.1	40.2	1.0	-50.3	-25.0	-25.3
8.05	66.0	V	3.0	10.2	38.8	1.0	-47.2	-25.0	-22.2
10.74	66.8	V	3.0	6.7	38.3	1.0	-44.0	-25.0	-19.0

Rev: 10.28.15

LTE B41 10MHz 16QAM

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 41, 15MHz QPSK
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B41

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2503.5MHz)									
5.01	63.2	H	3.0	10.6	40.3	1.0	-49.9	-25.0	-24.9
7.51	65.9	H	3.0	9.4	38.9	1.0	-47.4	-25.0	-22.4
10.01	67.0	H	3.0	7.8	38.3	1.0	-45.3	-25.0	-20.3
5.01	63.9	V	3.0	11.4	40.3	1.0	-50.7	-25.0	-25.7
7.51	66.0	V	3.0	9.8	38.9	1.0	-47.8	-25.0	-22.8
10.01	66.6	V	3.0	7.4	38.3	1.0	-44.7	-25.0	-19.7
Mid Channel (2503MHz)									
5.19	62.5	H	3.0	9.5	40.3	1.0	-49.9	-25.0	-23.9
7.78	66.0	H	3.0	9.2	38.9	1.0	-47.1	-25.0	-21.1
10.37	66.1	H	3.0	6.4	38.3	1.0	-43.7	-25.0	-18.7
5.19	63.7	V	3.0	10.9	40.3	1.0	-50.2	-25.0	-25.2
7.78	64.8	V	3.0	8.3	38.9	1.0	-46.1	-25.0	-21.1
10.37	67.0	V	3.0	7.4	38.3	1.0	-44.1	-25.0	-19.1
High Channel (2682.5MHz)									
5.37	64.9	H	3.0	11.9	40.2	1.0	-51.1	-25.0	-26.1
8.05	65.5	H	3.0	8.4	38.8	1.0	-46.2	-25.0	-21.2
10.73	66.4	H	3.0	6.4	38.3	1.0	-43.5	-25.0	-18.5
5.37	64.3	V	3.0	11.2	40.2	1.0	-50.5	-25.0	-25.5
8.05	65.7	V	3.0	8.9	38.8	1.0	-46.7	-25.0	-21.7
10.73	66.8	V	3.0	6.9	38.3	1.0	-44.2	-25.0	-19.2

Rev: 10.28.15

LTE B41 15MHz QPSK

**High Frequency Substitution Measurement
UL RTP Radiated Chamber**

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kiewra
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 41, 15MHz 16QAM
Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B41

Frequency (GHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2503.5MHz)									
5.01	64.0	H	3.0	11.4	40.3	1.0	-50.6	-25.0	-25.6
7.51	65.0	H	3.0	8.6	38.9	1.0	-46.5	-25.0	-21.5
10.01	66.0	H	3.0	7.3	38.3	1.0	-44.5	-25.0	-19.5
5.01	63.7	V	3.0	11.2					

High Frequency Substitution Measurement
UL, RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kleura
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 41, 20MHz QPSK

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B41

Frequency (MHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2500MHz)									
5.91	62.7	H	3.0	11.1	40.3	1.0	50.4	25.0	25.4
7.52	66.1	H	3.0	9.6	38.9	1.0	47.6	25.0	22.6
10.02	67.0	H	3.0	7.8	38.3	1.0	45.1	25.0	20.1
5.91	64.0	V	3.0	11.4	40.3	1.0	50.7	25.0	25.7
7.52	66.3	V	3.0	10.1	38.9	1.0	48.0	25.0	23.0
10.02	66.2	V	3.0	6.9	38.3	1.0	44.3	25.0	19.3
Mid Channel (2593MHz)									
5.19	63.0	H	3.0	10.0	40.3	1.0	49.4	25.0	24.4
7.78	65.9	H	3.0	9.1	38.9	1.0	47.0	25.0	22.0
10.37	66.1	H	3.0	6.4	38.3	1.0	43.7	25.0	18.7
5.19	63.5	V	3.0	10.7	40.3	1.0	50.0	25.0	25.0
7.78	65.0	V	3.0	8.5	38.9	1.0	46.3	25.0	21.3
10.37	66.8	V	3.0	7.2	38.3	1.0	44.5	25.0	19.5
High Channel (2680MHz)									
5.36	65.0	H	3.0	11.8	40.2	1.0	51.0	25.0	26.0
8.04	66.4	H	3.0	9.4	38.8	1.0	47.2	25.0	22.2
10.72	66.5	H	3.0	6.4	38.3	1.0	43.7	25.0	18.7
5.36	64.5	V	3.0	11.5	40.2	1.0	50.7	25.0	25.7
8.04	65.5	V	3.0	8.7	38.8	1.0	46.5	25.0	21.5
10.72	66.4	V	3.0	6.4	38.3	1.0	43.8	25.0	18.8

Rev. 10.28.16

LTE B41 20MHz QPSK

High Frequency Substitution Measurement
UL, RTP Radiated Chamber

Company: SOMC
 Project #: 11139405
 Date: 2016-04-08
 Test Engineer: Brian Kleura
 Configuration: EUT w/ AC Adaptor and Headphones (Sample # 2312247 Y-Axis)
 Mode: LTE Band 41, 20MHz 16QAM

Test Equipment:
 Substitution: Horn AT0078 Substitution, and CBL010 SMA Cable

LTE B41

Frequency (MHz)	SA reading (dBm)	Ant. Pol. (HV)	Distance	EIRP @ TX Ant End (dBm)	Preamp	Attenuator	EIRP	Limit	Delta
Low Channel (2500MHz)									
5.91	62.7	H	3.0	11.1	40.3	1.0	50.4	25.0	25.4
7.52	66.1	H	3.0	9.6	38.9	1.0	47.6	25.0	22.6
10.02	67.0	H	3.0	7.8	38.3	1.0	45.1	25.0	20.1
5.91	64.0	V	3.0	11.4	40.3	1.0	50.7	25.0	25.7
7.52	66.3	V	3.0	10.1	38.9	1.0	48.0	25.0	23.0
10.02	66.2	V	3.0	6.9	38.3	1.0	44.3	25.0	19.3
Mid Channel (2593MHz)									
5.19	63.0	H	3.0	10.0	40.3	1.0	49.4	25.0	24.4
7.78	65.9	H	3.0	9.1	38.9	1.0	47.0	25.0	22.0
10.37	66.1	H	3.0	6.4	38.3	1.0	43.7	25.0	18.7
5.19	63.5	V	3.0	10.7	40.3	1.0	50.0	25.0	25.0
7.78	65.0	V	3.0	8.5	38.9	1.0	46.3	25.0	21.3
10.37	66.8	V	3.0	7.2	38.3	1.0	44.5	25.0	19.5
High Channel (2680MHz)									
5.36	65.0	H	3.0	11.8	40.2	1.0	51.0	25.0	26.0
8.04	66.4	H	3.0	9.4	38.8	1.0	47.2	25.0	22.2
10.72	66.5	H	3.0	6.4	38.3	1.0	43.7	25.0	18.7
5.36	64.5	V	3.0	11.5	40.2	1.0	50.7	25.0	25.7
8.04	65.5	V	3.0	8.7	38.8	1.0	46.5	25.0	21.5
10.72	66.4	V	3.0	6.4	38.3	1.0	43.8	25.0	18.8

Rev. 10.28.16

LTE B41 20MHz 16QAM