FCC ID: PY7-29752M

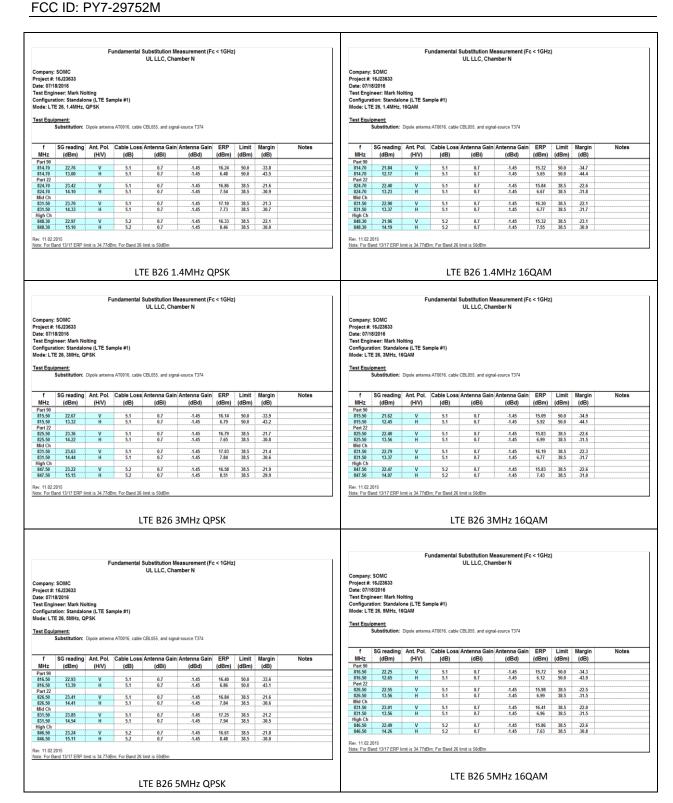
LTE Band 26-Part 90

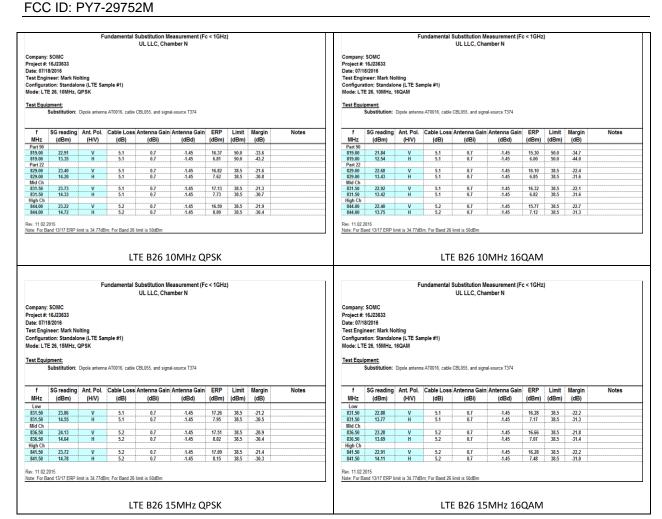
D)A/ /B/II-)	Mode	DD/DD Cino	£(\$411=\	ERP		
BW (MHz)	Mode	RB/RB Size	f(MHz)	dBm	mW	
1.4	QPSK	1/0	814.7	16.24	42.07	
	16QAM	1/0	814.7	15.32	34.04	
3	QPSK	1/0	815.5	16.14	41.11	
3	16QAM	1/0	815.5	15.09	32.28	
5	QPSK	1/0	816.5	16.40	43.65	
5	16QAM	1/0	816.5	15.72	37.33	
10	QPSK	1/0	819	16.37	43.35	
10	16QAM	1/0	819	15.30	33.88	

FCC ID: PY7-29752M

LTE Band 26-Part 22

BW (MHz)	Mode	DD /DD Ci-c	f(MHz)	ERP			
BVV (IVITZ)	iviode	RB/RB Size	i(ivinz)	dBm	mW		
		1/0	824.7	16.86	48.53		
	QPSK	1/0	831.5	17.10	51.29		
1.4		1/0	848.3	16.33	42.95		
1.4		1/0	824.7	15.84	38.37		
	16QAM	1/0	831.5	16.30	42.66		
		1/0	848.3	15.32	34.04		
		1/0	825.5	16.79	47.75		
	QPSK	1/0	831.5	17.03	50.47		
3		1/0	847.5	16.58	45.50		
3		1/0	825.5	15.83	38.28		
	16QAM	1/0	831.5	16.19	41.59		
		1/0	847.5	15.83	38.28		
	QPSK	1/0	826.5	16.84	48.31		
		1/0	831.5	17.25	53.09		
5		1/0	846.5	16.61	45.81		
3		1/0	826.5	15.98	39.63		
	16QAM	1/0	831.5	16.41	43.75		
		1/0	846.5	15.86	38.55		
		1/0	829	16.82	48.08		
	QPSK	1/0	831.5	17.13	51.64		
10		1/0	844	16.59	45.60		
10		1/0	829	16.10	40.74		
	16QAM	1/0	831.5	16.32	42.85		
		1/0	844	15.77	37.76		
		1/0	831.5	17.26	53.21		
	QPSK	1/0	836.5	17.51	56.36		
15		1/0	841.5	17.09	51.17		
13		1/0	831.5	16.28	42.46		
	16QAM	1/0	836.5	16.66	46.34		
		1/0	841.5	16.28	42.46		

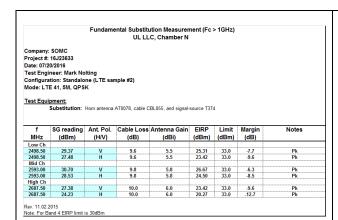




FCC ID: PY7-29752M

LTE Band 41

D14/ / N411-1	Mode	RB/RB Size	£(0.411-)	EIRP (PEAK)			
BW (MHz)	BW (WINZ) WIOGE		f(MHz)	dBm	mW		
		1/0	2498.5	25.31	339.63		
	QPSK 16QAM	1/0	2593	26.67	464.52		
5		1/0	2687.5	23.42	219.79		
Э		1/0	2498.5	25.37	344.35		
		1/0	2593	26.65	462.81		
		1/0	2687.5	23.44	220.80		
		1/0	2501	25.25	334.97		
	QPSK	1/0	2593	26.44	440.55		
10		1/0	2685	23.12	205.12		
10		1/0	2501	25.23	333.43		
	16QAM	1/0	2593	26.44	440.55		
		1/0	2685	23.33	215.28		
		1/0	2503.5	25.03	318.42		
	QPSK	1/0	2593	26.63	460.26		
15		1/0	2682.5	23.46	221.82		
13		1/0	2503.5	25.12	325.09		
	16QAM	1/0	2593	26.58	454.99		
		1/0	2682.5	23.64	231.21		
		1/0	2506	25.37	344.35		
	QPSK	1/0	2593	26.55	451.86		
20		1/0	2680	23.35	216.27		
20		1/0	2506	25.44	349.95		
	16QAM	1/0	2593	26.53	449.78		
		1/0	2680	23.53	225.42		



		Tundame		ution Measurer .C, Chamber N	nent (FC	> 1GHZ)		
ompany:	SOMC							
roject #:	16J23633							
ate: 07/2	0/2016							
est Engi	neer: Mark No	ltina						
	tion: Standalo		nple #2)					
	E 41, 5M, 16Q/							
ioue. Li								
	nment							
est Equi								
est Equi		Horn antenna	AT0078, cable C	BL055, and signal-	source T374	4		
est Equi		Horn antenna	AT0078, cable C	BL055, and signal-	source T374	4		
est Equi		Horn antenna	AT0078, cable C	BL055, and signal-	source T374	4		
est Equi		Horn antenna Ant. Pol.	,	BL055, and signal-	source T374	4 Limit	Margin	Notes
est Equi	Substitution:		,				Margin (dB)	Notes
est Equi	Substitution: SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP (dBm)	Limit		Notes
f MHz Low Ch 2498.50	Substitution: SG reading	Ant. Pol.	Cable Loss (dB)	Antenna Gain	EIRP	Limit		Notes Pk
f MHz Low Ch	Substitution: SG reading (dBm)	Ant. Pol.	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	(dB)	
f MHz Low Ch 2498.50	Substitution: SG reading (dBm) 29.43	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	(dB) -7.6	Pk
f MHz Low Ch 2498.50 2498.50	Substitution: SG reading (dBm) 29.43	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	(dB) -7.6	Pk
f MHz Low Ch 2498.50 2498.50 Mid Ch	SG reading (dBm) 29.43 27.53	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi) 5.5 5.5	EIRP (dBm) 25.37 23.47	Limit (dBm) 33.0 33.0	-7.6 -9.5	Pk Pk
f MHz Low Ch 2498.50 2498.50 Mid Ch 2593.00	SG reading (dBm) 29.43 27.53	Ant. Pol. (H/V) V H	Cable Loss (dB) 9.6 9.6	Antenna Gain (dBi) 5.5 5.5	EIRP (dBm) 25.37 23.47 26.65	Limit (dBm) 33.0 33.0 33.0	-7.6 -9.5	Pk Pk Pk
f MHz Low Ch 2498.50 2498.50 Mid Ch 2593.00 2593.00	SG reading (dBm) 29.43 27.53	Ant. Pol. (H/V) V H	Cable Loss (dB) 9.6 9.6	Antenna Gain (dBi) 5.5 5.5	EIRP (dBm) 25.37 23.47 26.65	Limit (dBm) 33.0 33.0 33.0	-7.6 -9.5	Pk Pk Pk

LTE B41 5MHz QPSK	

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

Date: 07/20/2016
Test Engineer: Mark Nolting
Configuration: Standalone (LTE sample #2)
Mode: LTE 41, 10M, QPSK

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

MHz (dB Low Ch 2501.00 29.	, ,	(dB)	(dBi)	(dBm)	(dBm)	(dB)	
2501.00 29.	31 V						
	31 V						
		9.6	5.5	25.25	33.0	-7.7	Pk
2501.00 27.	79 H	9.6	5.5	23.73	33.0	-9.3	Pk
Mid Ch							
2593.00 30.	47 V	9.8	5.8	26.44	33.0	-6.6	Pk
2593.00 28.	71 H	9.8	5.8	24.67	33.0	-8.3	Pk
High Ch							
2685.00 27.	09 V	10.0	6.0	23.12	33.0	-9.9	Pk
2685.00 24.	41 H	10.0	6.0	20.45	33.0	-12.6	Pk

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

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

LTE B41 5MHz 16QAM

Toget #. 1822383 Date: 07/20/2016 Test Engineer: Mark Nolting Configuration: Standalone (LTE sample #2) Mode: LTE 41, 10M, 16QAM

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

f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Margin	Notes	
MHz	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)		
Low Ch									
2501.00	29.29	V	9.6	5.5	25.23	33.0	-7.8	Pk	
2501.00	27.76	Н	9.6	5.5	23.70	33.0	-9.3	Pk	
Mid Ch									
2593.00	30.47	V	9.8	5.8	26.44	33.0	-6.6	Pk	
2593.00	28.76	Н	9.8	5.8	24.73	33.0	-8.3	Pk	
High Ch									
2685.00	27.29	V	10.0	6.0	23.33	33.0	-9.7	Pk	
2685.00	24.58	Н	10.0	6.0	20.61	33.0	-12.4	Pk	

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 #: 16J23633 Date: 07/20/2016 Test Engineer: Mark Nolting Configuration: Standalone (LTE sample #2) Mode: LTE 41, 15M, QPSK

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

f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Margin	Notes
MHz	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)	
Low Ch								
2503.50	29.09	V	9.6	5.5	25.03	33.0	-8.0	Pk
2503.50	27.75	Н	9.6	5.5	23.69	33.0	-9.3	Pk
Mid Ch						1		
2593.00	30.66	V	9.8	5.8	26.63	33.0	-6.4	Pk
2593.00	29.07	Н	9.8	5.8	25.04	33.0	-8.0	Pk
High Ch								
2682.50	27.42	V	10.0	6.0	23.46	33.0	-9.5	Pk
2682.50	24.79	Н	10.0	6.0	20.83	33.0	-12.2	Pk

LTE B41 15MHz QPSK

Fundamental Substitution Measurement (Fc > 1GHz)

LTE B41 10MHz 16QAM

UL LLC, Chamber N

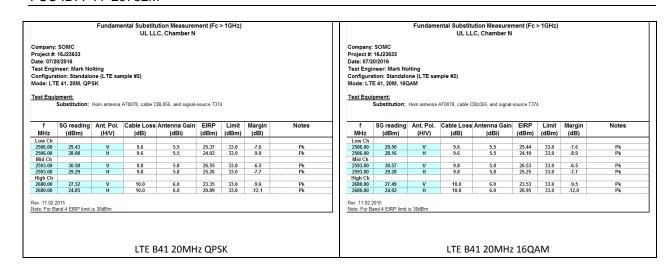
Company: SOMC Project #: 16J23633 Date: 07/20/2016 Test Engineer: Mark Nolting Configuration: Standalone (LTE sample #2) Mode: LTE 41, 15M, 16QAM

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

f	SG reading	Ant. Pol.	Cable Loss	Antenna Gain	EIRP	Limit	Margin	Notes
MHz	(dBm)	(H/V)	(dB)	(dBi)	(dBm)	(dBm)	(dB)	
Low Ch								
2503.50	29.18	V	9.6	5.5	25.12	33.0	-7.9	Pk
2503.50	27.77	Н	9.6	5.5	23.71	33.0	-9.3	Pk
Mid Ch								
2593.00	30.62	V	9.8	5.8	26.58	33.0	-6.4	Pk
2593.00	29.02	Н	9.8	5.8	24.99	33.0	-8.0	Pk
High Ch								
2682.50	27.60	V	10.0	6.0	23.64	33.0	-9.4	Pk
2682.50	24.96	Н	10.0	6.0	21.00	33.0	-12.0	Pk

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

LTE B41 15MHz 16QAM



FCC ID: PY7-29752M

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 that 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

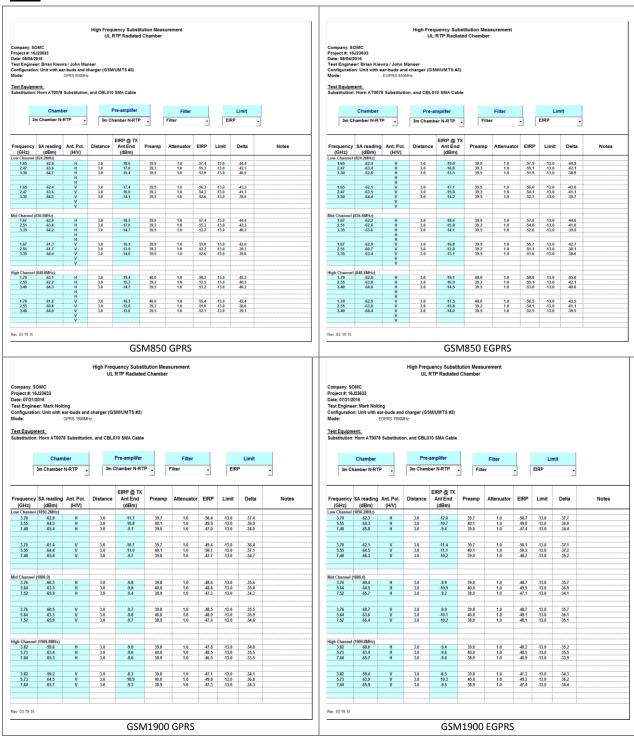
For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth 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.

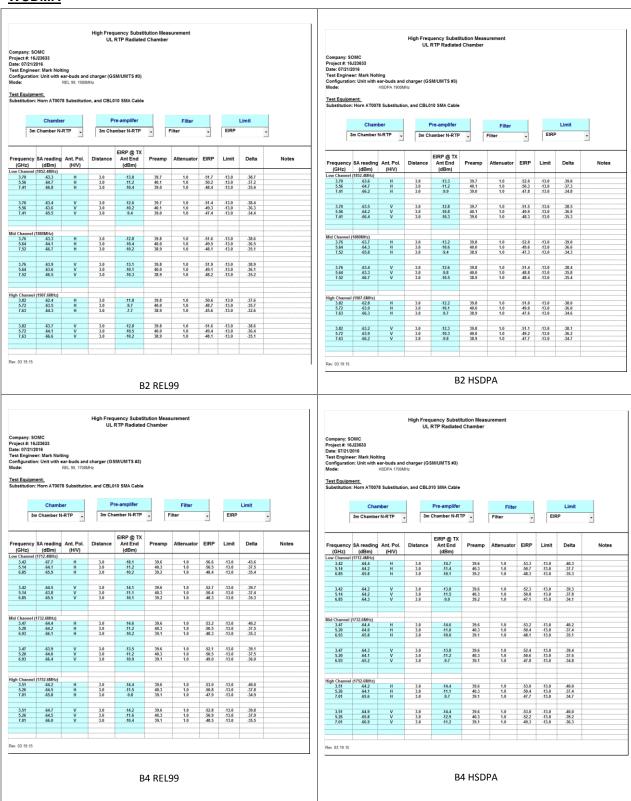
DATE: 8/16/2016

14.2.1. SPURIOUS RADIATION PLOTS

GSM

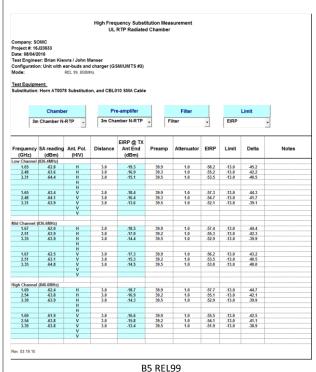


WCDMA

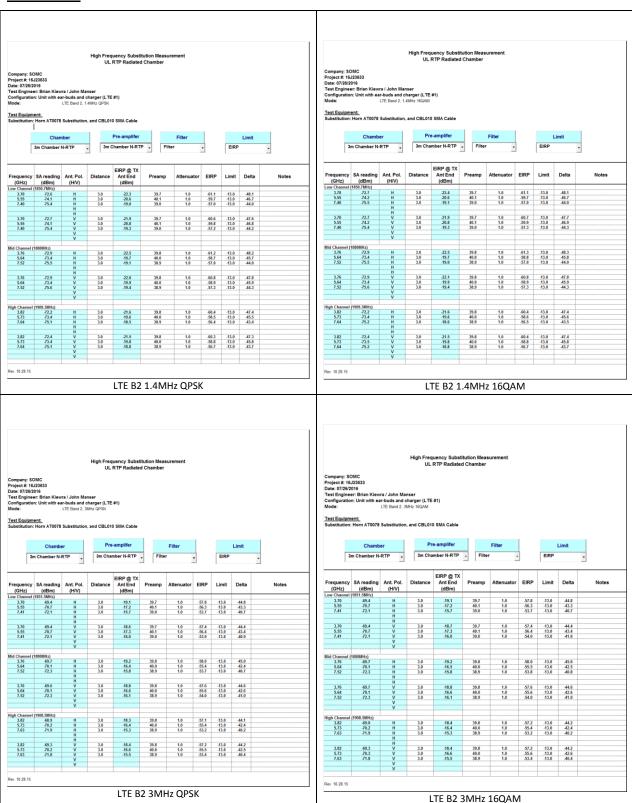


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B5 HSDPA



LTE Band 2



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3m Chamber N-RTP 🗸

3.0 3.0 3.0

3.0 3.0 3.0

3.0 3.0 3.0

Rev. 10.28.15

-16.5 -14.3 -13.8

-16.5 -14.3 -13.1 39.8 40.0 38.9

39.8 40.0 38.9

39.8 40.0 38.9 1.0 1.0 1.0

1.0 -55.3 1.0 -53.2 1.0 -51.0 -13.0 -42.6 -13.0 -41.0 -13.0 -38.5

.55.3 .13.0 .42.3 .53.3 .13.0 .40.3 .51.7 .13.0 .38.7

> .13.0 .42.3 .13.0 .40.2 .13.0 .38.0

.52.4 .13.0 .39.4 .50.4 .13.0 .37.4 .48.1 .13.0 .35.1

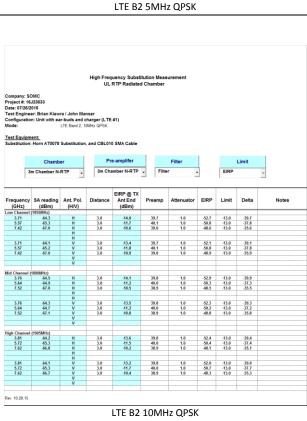
.52.1 .13.0 .39.1 50.6 .13.0 .37.6 48.3 .13.0 .35.3

1.0 1.0 1.0

1.0 1.0 1.0

3.0 3.0 3.0 -13.3 -11.7 -10.4 39.8 40.0 38.9

LTE B2 10MHz 16QAM



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3.81 5.72 7.62

Rev. 10.28.15

3m Chamber N-RTP +

Preamp Attenuator EIRP Limit Delta

1.0 1.0 1.0

1.0 1.0 1.0

39.8 40.0 38.9 50.9 13.0 37.9 48.9 13.0 35.9 47.1 13.0 34.1 50.4 13.0 37.4 49.0 13.0 36.0 47.3 13.0 34.3

50.9 .13.0 .37.9 48.5 .13.0 .35.5 46.8 .13.0 .33.8

-50.5 -13.0 -37.5 -48.6 -13.0 -35.6 -47.1 -13.0 -34.1

.50.8 .13.0 48.8 .13.0 46.5 .13.0

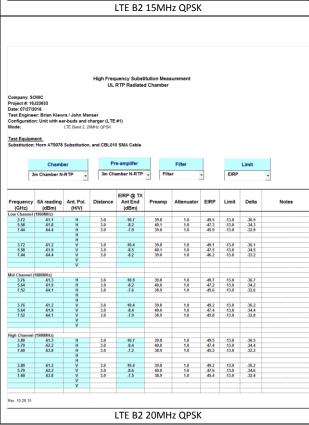
-50.5 -13.0 -37.5 -49.1 -13.0 -36.1 -46.7 -13.0 -33.7

ency SA reading Ant. Pol. Distance Ant End

3.81 5.71 7.61

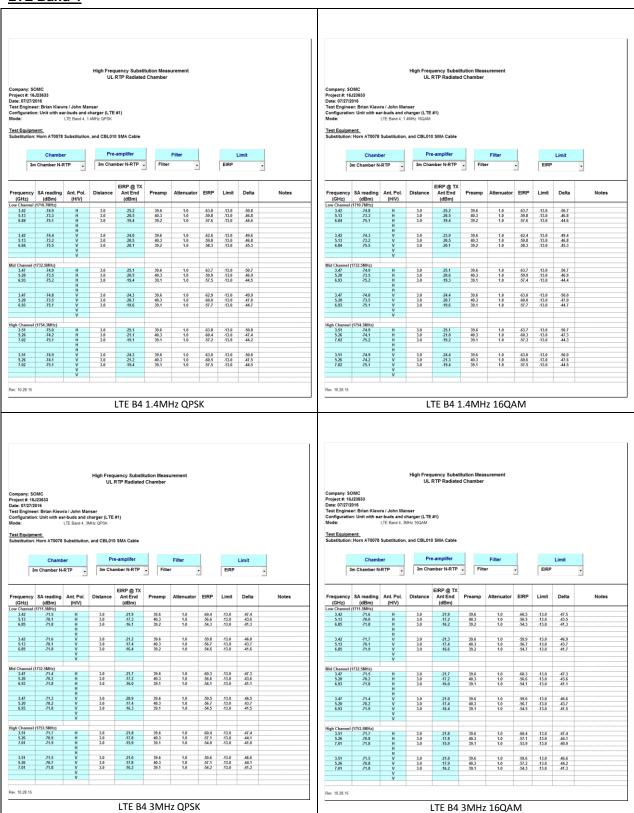
Rev. 10.28.15

LTE B2 20MHz 16QAM



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LTE Band 4



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