

TEST REPORT

PART 96 MEASUREMENT REPORT

Applicant Name:

Samsung Electronics Co., Ltd.
129, Samsung-ro,
Yeongtong-gu, Suwon-si
Gyeonggi-do, 16677, Korea

Date of Testing:

01/03/2023 – 02/15/2023

Test Site/Location:

Element Lab., Suwon,
Yongin-si, Gyeonggi-do, Korea

Test Report Serial No.:

8K22121601-00-R2.A3L

FCC ID: A3LSOG2201

APPLICANT: Samsung Electronics Co., Ltd.

Application Type: Certification

Model: SOG2201-G30

EUT Type: Smallcell (SOG2201)

FCC Classification: Citizens Band Category B Devices (CBD)

FCC Rule Part(s): 96

Test Procedure(s): ANSI C63.26-2015, KDB 971168 D01 v03r01,
KDB 940660 D01 v03, KDB 662911 D01 v02r01

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.



Prepared by Jonathan Jang
Test Engineer



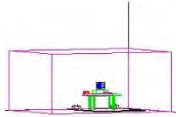
Reviewed by Charles Shin
Technical Manager

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T A B L E O F C O N T E N T S

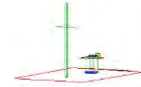
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FCC Rule Part 96



Mode	Total Bandwidth (MHz)	Tx Frequency (MHz)	Max. PSD (dBm/1MHz)	Max. EIRP (dBm/10MHz)	Max. EIRP /Entire Band Width (dBm)	Max. EIRP /Entire Band Width (W)	Emission Designator	Modulation
n48_1C_10M	10	3550 - 3700	36.27	45.38	45.38	34.51	8M64G7D	QPSK
			36.40	45.40	45.40	34.67	8M64W7D	QAM
n48_1C_20M	20		33.07	42.70	45.43	34.91	18M3G7D	QPSK
			33.16	42.77	45.68	36.98	18M3W7D	QAM
n48_1C_30M	30		31.23	40.92	45.43	34.91	28M0G7D	QPSK
			31.19	41.12	45.62	36.48	28M0W7D	QAM
n48_1C_40M	40		30.02	38.99	45.10	32.66	38M0G7D	QPSK
			30.26	39.77	45.46	36.39	37M9W7D	QAM
n48_2C_10M+10M	20		33.47	43.06	45.78	37.84	18M5G7D	QPSK
			33.57	43.04	45.80	38.02	18M6W7D	QAM
n48_2C_10M+20M	30		31.47	41.43	45.46	35.16	28M3G7D	QPSK
			31.36	41.45	45.40	34.67	28M3W7D	QAM
n48_2C_20M+20M	40		29.95	40.17	45.13	32.58	38M1G7D	QPSK
			30.07	39.94	45.32	34.04	38M1W7D	QAM
n48_2C_30M+10M	40		30.57	40.03	45.67	36.90	38M1G7D	QPSK
			30.45	40.16	45.50	35.48	38M2W7D	QAM
n48_2C_40M+40M	80		27.38	36.61	45.07	32.14	77M4G7D	QPSK
			27.38	36.70	45.13	32.58	77M4W7D	QAM

EUT Overview

Notes:

For EUT overview, listing only the highest measured EIRP for each bandwidth emission designator.

Total Power shown in the table above are the full conducted average output power that will appear on the Grant of Authorization.

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1.0 REVISION RECORD

Issue Number	Issued Date	Revision History
8K22121601-00.A3L	02/16/2023	Initial Issue
8K22121601-00-R1.A3L	02/16/2023	Revision due to updated EUT information table
8K22121601-00-R2.A3L	02/24/2023	Revision due to updated Antenna gain information

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2.0 INTRODUCTION

2.1 Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada.

2.2 Element Test Location

These measurement tests were conducted at the Element Materials Technology Suwon. Ltd. facility located at (#1407) 13, Heungdeok 1-ro, Giheung-gu, Yongin-si, Gyeonggi-do 16954, Korea.

2.3 Test Facility / Accreditation

Measurements were performed at Element Materials Technology Suwon Lab located in Yongin-si, Gyeonggi, Korea.

- Element Materials Technology Suwon is an ISO 17025-2017 accredited test facility under the American Association for Laboratory Accreditation(A2LA) with Certificate number 2041.04 for Specific Absorption Rate (SAR), where applicable, and Electromagnetic Compatibility (EMC) testing for FCC and Innovation, Science, and Economic Development Canada rules.
- Element Materials Technology Suwon facility is accredited, designated, and recognized in accordance with the provision of Radio Wave Act and International Standard ISO/IEC 17025:2017 under the National Radio Research Agency.
 - Designation Number / CABID: KR0169
 - Test Firm Registration Number of FCC: 417945
 - Test Firm Registration Number of IC: 26168

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3.0 PRODUCT INFORMATION

3.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Smallcell (SOG2201) FCC ID: A3LSOG2201**.
Per FCC Part 96, this device is evaluated under Citizens Band Category B Devices (CBD).

3.2 Device Capabilities

This device supports the following conditional features and filter information:

EUT Type:	Smallcell (SOG2201)		
Model Name:	SOG2201-G30		
Test Device Serial No:	SFG-AEU09V01CM		
Device Capabilities:	5G NR		
Operating Band/Frequency Range:	Band	Tx (Downlink)	Rx (Uplink)
	n48:	3550 MHz to 3700 MHz	3550 MHz to 3700 MHz
Supported Modulation:	QPSK, 16QAM, 64QAM, 256QAM		
Supported Number of Carriers and Channel Bandwidth:	NR: 10, 20, 30 and 40MHz bandwidth modes for 5G NR Band n48 with up to 2CC aggregated of Max. Bandwidth 80 MHz.		
Supported Configurations:	Single carrier, Multi-carrier		
Maximum Output Power:	2.5 W/unit		
Antenna Configuration:	2 Sectors (4 Zones)		
RF Chain:	2T2R, 4T4R, 8T8R		
Number of Antenna ports:	8		
Antenna Gain:	Max 12 dBi		
Input Voltage:	44 - 90 VAC (HFC)		

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3.3 Test Configuration

The setup is as follows:

- The EUT "SOG2201-G30" is powered by a 60VAC power supply.
- The EUT is connected to a test laptop via an ethernet cable acting as backhaul.
- An RF cable connects the signal analyzer and the EUT Ports for respective measurement.

The EUT was tested per the guidance of ANSI C63.26-2015 and KDB 971168 D01 v03r01. See Section 8.0 of this test report for a description of the radiated and antenna port conducted emissions tests.

Distribution unit (DU) which were used in test, that authorized under the SDoC procedure.

The following information is about configurations of carrier frequency and output power per port declared by the manufacturer.

2T2R EUT Conducted Power setting is the same as 4T4R EUT Conducted Power setting. So with the result of 2T2R, it was calculated for 4T4R operating mode.

* Abbreviations:

- 1C: 1 carrier
- 2C: Contiguous 2 carriers in multi-carrier operation
- 2NC: Non-contiguous 2 carriers in multi-carrier operation

Configuration	No. of Carriers	Total Carrier Bandwidth (MHz)	Carrier Frequency Configuration (MHz)			Rated Conducted Power (dBm/path)
			Lowest	Middle	Highest	
n48_1C_10M	1	10	3555	3625	3695	2T2R, 4T4R 28 dBm/path 8T8R 25 dBm/path
n48_1C_20M	1	20	3560	3625	3690	
n48_1C_30M	1	30	3565	3625	3685	
n48_1C_40M	1	40	3570	3625	3680	
n48_2C_10M+10M	2	20 (10+10)	3555	3620	3685	
n48_2NC_10M+10M			3565	3630	3695	
			3555 + 3695			
n48_2C_10M+20M	2	30 (10+20)	3555	3615	3675	
n48_2NC_10M+20M			3570	3630	3690	
			3555 + 3690			
n48_2C_20M+20M	2	40 (20+20)	3560	3615	3670	
n48_2NC_20M+20M			3580	3635	3690	
			3560 + 3690			
n48_2C_30M+10M	2	40 (30+10)	3565	3620	3675	
n48_2NC_30M+10M			3585	3640	3695	
			3565 + 3695			
n48_2C_40M+40M	2	80 (40+40)	3570	3605	3640	
n48_2NC_40M+40M			3610	3645	3680	
			3570 + 3680			

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3.4 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added, and no modifications were made during testing.

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4.0 DESCRIPTION OF TESTS

4.1 Measurement Procedure

The measurement procedures described in the document titled “American National Standard for Compliance Testing of Transmitter Used in Licensed Radio Service” (ANSI C63.26-2015) and the guidance provided in KDB 971168 D01 v03r01, and KDB 662911 D01 v02r01 and KDB 940660 D01 v03 were used in the measurement of the EUT.

Occupied Bandwidth:

KDB 971168 D01 v03r01 – Section 4.3

ANSI C63.26-2015 – Section 5.4.4

Modulation Characteristics:

ANSI C63.26 - Section 5.3

Conducted Power Measurement and EIRP and PSD

KDB 971168 D01 v03r01 – Section 5.3

KDB 971168 D01 v03r01 – Section 5.4

KDB 662911 D01 v02r01 – Section E)1) In-Band Power Measurements

ANSI C63.26-2015 – Section 5.2.5

ANSI C63.26-2015 – Section 5.2.4

Peak-to-Average Power Ratio:

KDB 971168 D01 v03r01 – Section 5.7

ANSI C63.26-2015 – Section 5.2.3.4

Channel Edge Emissions at Antenna Terminal

KDB 971168 D01 v03r01 – Section 6

KDB 662911 D01 v02r01 – Section E)3) Out-of-Band and Spurious Emission Measurements

a) Absolute Emission Limits

iii) Measure and add $10 \log(N_{ANT})$ dB

ANSI C63.26-2015 – Section 5.7

Spurious and Harmonic Emissions at Antenna Terminal

KDB 971168 D01 v03r01 – Section 6

KDB 662911 D01 v02r01 – Section E)3) Out-of-Band and Spurious Emission Measurements

a) Absolute Emission Limits

iii) Measure and add $10 \log(N_{ANT})$ dB

ANSI C63.26-2015 – Section 5.7

Radiated unwanted emission

KDB 971168 D01 v03r01 – Section 7

ANSI C63.26-2015 – Section 5.8

Frequency Stability / Temperature Variation

KDB 971168 D01 v03r01 – Section 9

ANSI C63.26-2015 – Section 5.6

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4.2 Radiated Spurious Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurement and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. The test site inside the chamber is a 8.5 m(L) x 6.1 m(W) x 5.6 m(H) elliptical, obstruction-free area in accordance with Figure 5.7 of Clause 5 in ANSI C63.4-2014. Absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections for measurements above 1 GHz. For measurements below 1 GHz, the absorbers are removed. Measurement of spurious emissions using floor-standing method. The EUT installed and tested as described in the manufactures instruction manual.

The equipment under test was transmitting while connected to its terminated attenuator and is placed on a pole. The measurement antenna is in the far field of the EUT per formula $2D^2/\lambda$ where D is the larger between the dimension of the measurement antenna and the transmitting antenna of the EUT. In this case, "D" is the largest dimension of the measurement antenna. The EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer.

4.3 Measurement Software

Test item	Name	Version
Conducted Measurement	Node B automation	1.0

4.4 Enviromental Conditions

The temperature is controlled within the range of 15°C to 35°C. The relative humidity is controlled within the range of 10% to 75%. The atmospheric pressure is monitored within the range 86-106kPa (860-1060mbar).

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5.0 MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014. All measurement uncertainty values are shown with a coverage factor of $k = 2$ to indicate a 95% level of confidence. The measurement uncertainty shown below meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Contribution	Expanded Uncertainty ($\pm$ dB)
Conducted Bench Top Measurements	1.37
Radiated Disturbance (<1GHz)	3.94
Radiated Disturbance (>1GHz)	4.75
Radiated Disturbance (>18GHz)	4.84

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6.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST). Measurement antennas used during testing were calibrated in accordance to the requirements of ANSI C63.5-2017.

Manufacture	Model	Description	Cal Date	Cal interval	Cal Due	Serial Number
KEYSIGHT	N9030B	PXA Signal Analyzer	05/11/2021	Annual	05/10/2022	MY57142018
KEYSIGHT	N9020B	MXA Signal Analyzer	10/22/2021	Annua	10/21/2022	MY55470135
SUKSAN TECHNOLOGY	SE-CT-10	Temperature Chamber	07/05/2022	Annual	07/04/2023	191021
Rohde & Schwarz	FSW43	Signal & Spectrum Analyzer	09/15/2021	Annual	09/14/2022	101250
Rohde & Schwarz	ESW	EMI Test Receiver	07/04/2022	Annual	07/03/2023	101761
Rohde & Schwarz	TS-SFUNIT-Rx	Shielded Filter Unit	01/19/2022	Annual	01/18/2023	102151
Schwarzbeck	VULB9162	Broadband TRILOG Antenna	07/13/2021	Biennial	07/12/2023	9162-217
Sunol sciences	DRH-118	Horn Antenna	01/12/2021	Biennial	01/11/2023	A060215
NARDA	180-442A-KF	Horn Antenna	11/23/2022	Biennial	11/22/2024	T058701-03
Qualwave	QFA1820	Attenuator	07/28/2022	Annual	07/27/2023	22265088
Qualwave	QFA1820	Attenuator	07/28/2022	Annual	07/27/2023	22265089
Qualwave	QFA1820	Attenuator	07/28/2022	Annual	07/27/2023	22265090
Qualwave	QFA1820	Attenuator	07/28/2022	Annual	07/27/2023	22265091
Reachline	RL50W40GKF-20	Attenuator	07/05/2022	Annual	07/04/2023	PK00409
Reachline	RL50W40GKF-20	Attenuator	07/05/2022	Annual	07/04/2023	PK00409
Reachline	RL50W40GKF-20	Attenuator	07/05/2022	Annual	07/04/2023	PK00411
Reachline	RL50W40GKF-20	Attenuator	07/05/2022	Annual	07/04/2023	PK00412
WAINWRIGHT	WHW-13000-18000-40000-40CC	High Pass Filter	05/09/2022	Annual	05/08/2023	2

Table 6-1. Test Equipment

Notes:

- For equipment listed above that has a calibration date or calibration due date that falls within the test date range, care was taken to ensure that this equipment was used after the calibration date and before the calibration due date.
- All testing was performed before the calibration due date.

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7.0 SAMPLE CALCULATIONS

Emission Designator

QPSK Modulation

Emission Designator = 8M64G7D

Occupied Bandwidth = 8.64 MHz

G = Phase Modulation

7 = Quantized/Digital Info

D = Data transmission, telemetry, telecommand

QAM Modulation

Emission Designator = 8M64W7D

Occupied Bandwidth = 8.64 MHz

W = Amplitude/Angle Modulated

7 = Quantized/Digital Info

D = Data transmission, telemetry, telecommand

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8.0 TEST RESULTS

8.1 Summary

Company Name: SAMSUNG Electronics Co., Ltd.
 FCC ID: A3LSOG2201
 Type of Radio Equipment: Citizens Band Category B Devices (CBD)
 Mode(s): 5G NR

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
2.1049	Occupied Bandwidth	N/A	CONDUCTED	PASS	Section 8.2
2.1046 96.41(a)	Modulation Characteristics	Digital modulation		PASS	Section 8.3
2.1046 96.41(b)	Power Spectral Density (PSD)	37 dBm/MHz (PSD)		PASS	Section 8.4
2.1046 96.41(b)	Equivalent Isotropic Radiated Power (EIRP)	47 dBm/10MHz (EIRP)		PASS	Section 8.5
96.41(g)	Peak-Average Ratio	≤ 13 dB		PASS	Section 8.6
2.1051 96.41(e)	Out of Band Emissions	Within 0 MHz to 10 MHz above and below the assigned channel ≤ -13 dBm/MHz Greater than 10 MHz above and below the assigned channel ≤ -25 dBm/MHz Any emission below 3530 MHz and above 3720 MHz ≤ -40 dBm/MHz		PASS	Section 8.7
2.1055 96.41(e)	Frequency Stability	Fundamental emissions stay within authorized frequency block		PASS	Section 8.9
2.1051 96.41(e)	Radiated unwanted emission	< -40dBm/MHz	Radiated	PASS	Section 8.8

Table 8-1. Summary of Test Results

Notes:

- 1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots were all taken with a correction table loaded into the analyzer.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables and attenuators.

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8.2 Occupied Bandwidth

Test Overview

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be. All measured modes of operation were investigated, and the worst case configuration results are reported in this section.

Test Procedure Used

ANSI C63.26 - Section 5.4.4
KDB 971168 D01 v03r01 - Section 4.3

Test Setting

The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The spectrum analyzer settings were as follows:

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5% of the expected OBW
3. VBW $\geq 3 \times$ RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5% of the 99% occupied bandwidth observed in Step 7

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

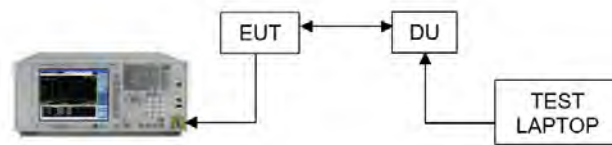


Figure 8-1. Test Instrument & Measurement Setup

Limit

The occupied bandwidth shall not exceed the equipment's channel bandwidth, which is declared by the manufacturer.

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Channel	Sector	Zone	Port	OBW (MHz)			
				QPSK	16QAM	64QAM	256QAM
Low	1	1	1	8.60	8.64	8.61	8.62
			2	8.61	8.60	8.58	8.61
		2	3	8.62	8.60	8.62	8.62
			4	8.59	8.63	8.60	8.63
	2	3	5	8.61	8.60	8.60	8.62
			6	8.64	8.61	8.61	8.63
		4	7	8.60	8.60	8.60	8.59
			8	8.61	8.61	8.60	8.61
Middle	1	1	1	8.61	8.60	8.63	8.61
			2	8.60	8.60	8.60	8.62
		2	3	8.61	8.60	8.60	8.61
			4	8.60	8.60	8.60	8.62
	2	3	5	8.61	8.60	8.63	8.61
			6	8.61	8.59	8.62	8.61
		4	7	8.61	8.61	8.61	8.59
			8	8.62	8.61	8.63	8.61
High	1	1	1	8.62	8.61	8.61	8.61
			2	8.62	8.61	8.61	8.61
		2	3	8.62	8.60	8.60	8.60
			4	8.62	8.62	8.62	8.58
	2	3	5	8.59	8.58	8.62	8.59
			6	8.61	8.62	8.59	8.61
		4	7	8.60	8.59	8.61	8.61
			8	8.60	8.60	8.60	8.61

Table 8-2. Occupied Bandwidth Summary Data (n48_1C_10M)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
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Channel	Sector	Zone	Port	OBW (MHz)			
				QPSK	16QAM	64QAM	256QAM
Low	1	1	1	18.26	18.26	18.22	18.23
			2	18.25	18.22	18.26	18.22
		2	3	18.24	18.22	18.26	18.19
			4	18.25	18.27	18.26	18.25
	2	3	5	18.25	18.22	18.24	18.26
			6	18.26	18.24	18.26	18.19
		4	7	18.24	18.26	18.28	18.23
			8	18.22	18.19	18.31	18.23
Middle	1	1	1	18.22	18.23	18.25	18.24
			2	18.24	18.25	18.24	18.25
		2	3	18.26	18.24	18.24	18.22
			4	18.26	18.21	18.20	18.26
	2	3	5	18.23	18.23	18.26	18.19
			6	18.23	18.23	18.23	18.22
		4	7	18.24	18.22	18.28	18.24
			8	18.24	18.21	18.25	18.22
High	1	1	1	18.25	18.23	18.22	18.24
			2	18.23	18.25	18.26	18.23
		2	3	18.23	18.21	18.24	18.24
			4	18.20	18.23	18.25	18.21
	2	3	5	18.23	18.24	18.22	18.23
			6	18.25	18.23	18.21	18.23
		4	7	18.24	18.22	18.26	18.24
			8	18.25	18.25	18.24	18.23

Table 8-3. Occupied Bandwidth Summary Data (n48_1C_20M)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
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Channel	Sector	Zone	Port	OBW (MHz)			
				QPSK	16QAM	64QAM	256QAM
Low	1	1	1	27.89	27.84	27.88	27.84
			2	27.88	27.84	27.89	27.92
		2	3	27.89	27.90	27.93	27.90
			4	27.98	27.87	27.94	27.86
	2	3	5	27.91	27.87	27.94	27.83
			6	27.89	27.90	27.91	27.92
		4	7	27.94	27.88	27.86	27.90
			8	27.92	27.88	27.85	27.90
Middle	1	1	1	27.84	27.86	27.85	27.85
			2	27.87	27.86	27.90	27.89
		2	3	27.90	27.87	27.84	27.84
			4	27.88	27.84	27.85	27.91
	2	3	5	27.84	27.90	27.80	27.86
			6	27.87	27.90	27.83	27.91
		4	7	27.83	27.84	27.83	27.87
			8	27.85	27.87	27.88	27.81
High	1	1	1	27.92	27.84	27.82	27.80
			2	27.87	27.84	27.83	27.87
		2	3	27.88	27.84	27.87	27.85
			4	27.85	27.83	27.86	27.81
	2	3	5	27.91	27.87	27.82	27.82
			6	27.86	27.87	27.88	27.82
		4	7	27.88	27.85	27.90	27.85
			8	27.89	27.86	27.87	27.88

Table 8-4. Occupied Bandwidth Summary Data (n48_1C_30M)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
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Channel	Sector	Zone	Port	OBW (MHz)			
				QPSK	16QAM	64QAM	256QAM
Low	1	1	1	37.77	37.80	37.82	37.82
			2	37.88	37.90	37.86	37.82
		2	3	37.82	37.85	37.85	37.77
			4	37.86	37.84	37.88	37.86
	2	3	5	37.87	37.85	37.90	37.86
			6	37.86	37.84	37.89	37.81
		4	7	37.87	37.83	37.88	37.81
			8	37.95	37.88	37.83	37.84
Middle	1	1	1	37.80	37.84	37.86	37.93
			2	37.87	37.83	37.94	37.80
		2	3	37.85	37.85	37.90	37.93
			4	37.85	37.83	37.84	37.79
	2	3	5	37.84	37.83	37.84	37.83
			6	37.91	37.85	37.81	37.88
		4	7	37.89	37.82	37.86	37.87
			8	37.95	37.85	37.84	37.81
High	1	1	1	37.87	37.82	37.83	37.77
			2	37.89	37.80	37.82	37.83
		2	3	37.87	37.83	37.89	37.82
			4	37.79	37.84	37.84	37.84
	2	3	5	37.84	37.80	37.87	37.82
			6	37.87	37.81	37.84	37.80
		4	7	37.90	37.88	37.84	37.83
			8	37.83	37.81	37.86	37.81

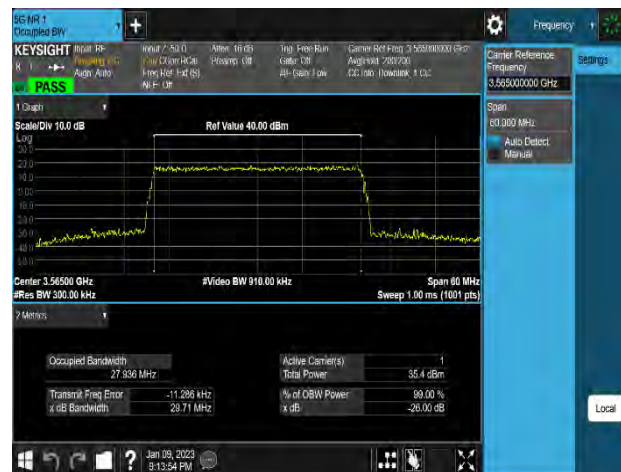
Table 8-5. Occupied Bandwidth Summary Data (n48_1C_40M)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
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Configuration	Channel	OBW (MHz)	
		QPSK	16QAM
NR_2C_10M+10M	Middle	18.51	18.55
NR_2C_10M+20M	Middle	28.27	28.29
NR_2C_20M+20M	Middle	38.06	38.09
NR_2C_30M+10M	Middle	38.10	38.15
NR_2C_40M+40M	Middle	77.43	77.40

Table 8-6. Occupied Bandwidth Summary Data (n48_Multi Carrier)

FCC: A3LSOG2201			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Plot 8-7. Occupied Bandwidth Plot
(n48_1C_40M_QPSK - Low Channel, Port 8)



Plot 8-8. Occupied Bandwidth Plot
(n48_1C_40M_64QAM - Mid Channel, Port 2)



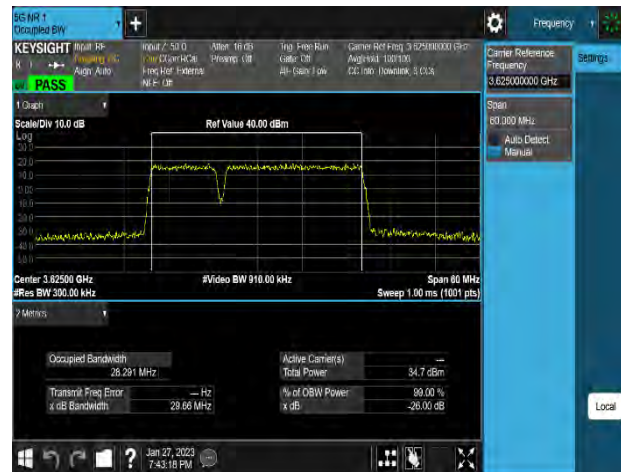
Plot 8-9. Occupied Bandwidth Plot
(n48_2C_10M+10M_QPSK - Mid Channel, Port 1)



Plot 8-10. Occupied Bandwidth Plot
(n48_2C_10M+10M_16QAM - Mid Channel, Port 1)

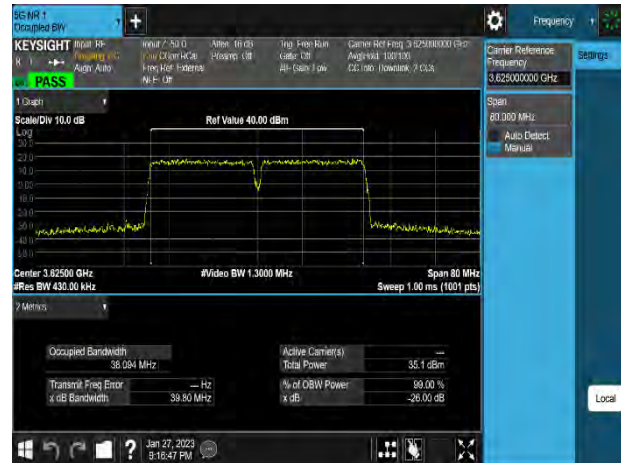


Plot 8-11. Occupied Bandwidth Plot
(n48_2C_10M+20M_QPSK - Mid Channel, Port 1)



Plot 8-12. Occupied Bandwidth Plot
(n48_2C_10M+20M_16QAM - Mid Channel, Port 1)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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8.3 Modulation Characteristics

Test Overview

Verification of a curve or equivalent data that shows that the equipment will meet the modulation requirements of the rules under which the equipment is to be licensed.

Test Procedure Used

ANSI C63.26 - Section 5.3

Test Setting

The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The spectrum analyzer setting was modulation analyzer mode.

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

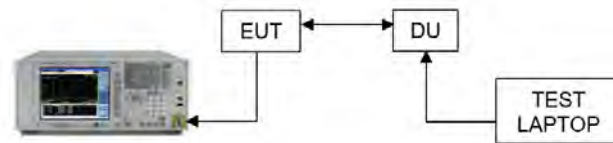


Figure 8-2. Test Instrument & Measurement Setup

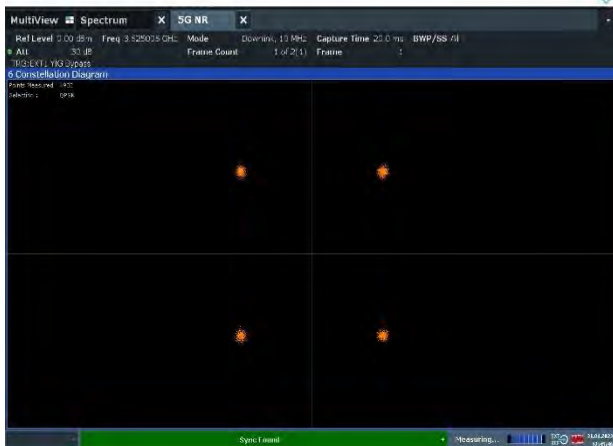
Limit

Systems operating in the Citizens Broadband Radio Service must use digital modulation techniques.

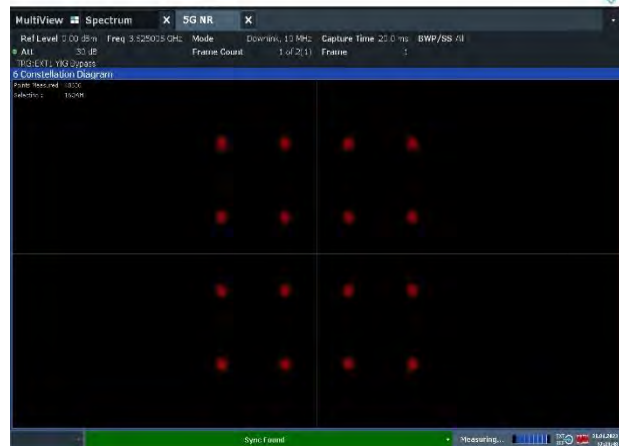
Test Notes

Systems operating used digital modulation techniques.

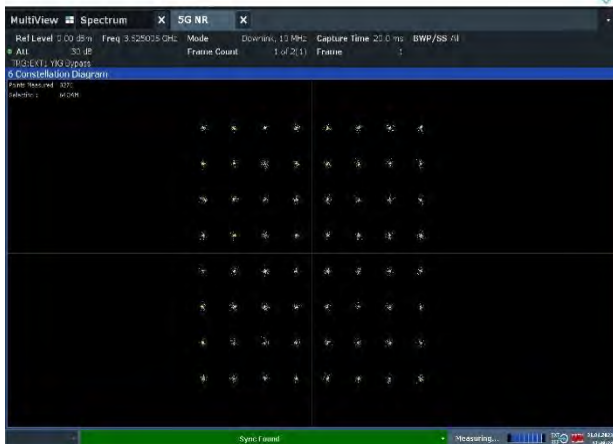
FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K22121601-00-R2.A3L	Test Dates: 01/03/2023 – 02/15/2023	EUT Type: Smallcell (SOG2201)		Page 24 of 289



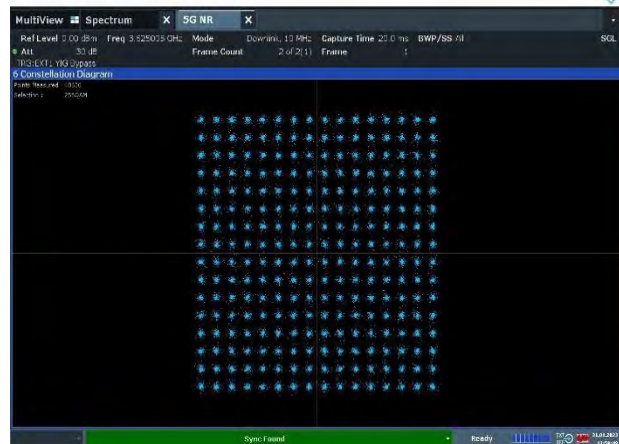
Plot 8-19. Modulation Characteristics Plot
(n48_1C_10M_QPSK Modulation)



Plot 8-20. Modulation Characteristics Plot
(n48_1C_10M_16QAM Modulation)



Plot 8-21. Modulation Characteristics Plot
(n48_1C_10M_64QAM Modulation)



Plot 8-22. Modulation Characteristics Plot
(n48_1C_10M_256QAM Modulation)

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8.4 Power Spectral Density

Test Overview

A transmitter port of EUT is connected to the input of a signal analyzer. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Procedure Used

ANSI C63.26 - Section 5.2.4
ANSI C63.26 - Section 5.2.5
KDB 971168 D01 v03r01 - Section 5.3

ANSI C63.26 - Section 6.4.3.2.3
KDB 662911 D01 v02r01
- Section E)2) In-Band Power Spectral Density (PSD) Measurements
b) Measure and sum spectral maxima across the outputs.

Test Setting

The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The spectrum analyzer settings were as follows:

The PSD is measured following the same procedures described in 5.2.4.4 of ANSI C63.26 for measuring the total average power, but with the RBW set to the reference bandwidth specified by the applicable regulatory requirement, and by using the marker function to identify the maximum PSD instead of summing the power across the OBW. If the fundamental measurement condition cannot be realized, then one of the alternative procedures in 5.2.4.4.2 or 5.2.4.4.3 should be selected, based on whether the transmitter duty cycle is constant (variations $\leq \pm 2\%$) or non-constant (variations $> \pm 2\%$), respectively.

1. Conducted power measurements are performed using the signal analyzer's "SA mode" measurement capability for signals with continuous operation.
2. Set span to $2 \times$ to $3 \times$ the OBW.
3. Set RBW = 1 MHz (the reference bandwidth)
4. Set VBW $\geq 3 \times$ RBW.
5. Set number of measurement points in sweep $\geq 2 \times$ span / RBW.
6. Sweep time:
 - a) Set $\geq$ auto-couple, and enable trace averaging, or
 - b) Set $\geq [10 \times (\text{number of points in sweep}) \times (\text{transmission symbol period})]$ and enable a single sweep (automation-compatible) measurement. The sweep time should never be faster than the auto-coupled sweep time.
7. Detector = power averaging (rms).
8. The trace was allowed to stabilize
9. Use the peak marker function to determine the maximum amplitude level. ($=P_{\text{Meas}}$)
10. The relevant equation for determining the maximum EIRP from the measured RF output power is given in Equation as follows:

$$\text{EIRP} = P_{\text{Meas}} + G_T$$
 where
 G_T : gain of the transmitting antenna, in dBi (EIRP).

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Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

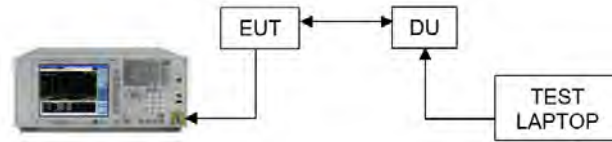


Figure 8-3. Test Instrument & Measurement Setup

Limit

Category B CBSD : 37 dBm/MHz

Test Notes

- Consider the following factors for MIMO Power Spectral Density:
The power spectral density is measured as dBm / MHz, with the resolution bandwidth of 1 MHz PSDs are summed up in linear using the measure-and-sum technique defined in KDB 971168 D01 v03r01 - Section E) 2).
- All modes of operation were investigated and the worst configuration result plots are reported in each RF chain.
- Periodic trigger was used with gating ON. Gate sweep time, Gate delay and gate length were set accordingly to capture ON time of the transmission.
- PSD per port (dBm/MHz) is converted to a linear value (mW). A summation of linear powers for all ports gives us the total MIMO conducted Power (mW). We convert this back to logarithmic scale for further PSD calculations.
- Antenna Gains (dBi) provided by the client.
- Directional gain calculations were performed on the individual gains in specific direction across all directions.
- Applied antenna gain as below:

Mode		Rated Conductive Power		Total Directional Antenna Gain(dBi)	Rated EIRP (dBm/Unit)
Active Zone	Active Antenna path	Path (dBm)	Unit (dBm)		
1	2T	28	31	11 ±1	43
2	4T	28	34	10 ±1	45
4	8T	25	34	7 ±1	42

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8. Sample Calculation:

Let us assume the following numbers:

- a) Total MIMO Conducted PSD as 144.39 mW
- b) Antenna Gain = 12.00 dBi

Factors		Value	Unit
Summed MIMO Conducted PSD (linear sum)		144.39	mW
Summed MIMO Conducted PSD (dBm)	$= 10 * \log (144.39) =$	21.60	dBm/MHz
Antenna Gain		12.00	dB
e.i.r.p PSD		33.60	dBm/MHz
Limit		37.00	dBm/MHz
Margin = Limit - e.i.r.p PSD	$= 33.60 - 37.00 =$	-3.40	dB

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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	18.56	18.67	18.59	18.54
		2	18.61	18.71	18.63	18.57
Total MIMO Conducted PSD (mW/MHz)			144.39	147.92	145.22	143.39
Total MIMO Conducted PSD (dBm/MHz)			21.60	21.70	21.62	21.57
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			33.60	33.70	33.62	33.57
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-3.40	-3.30	-3.38	-3.43
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	18.62	18.71	18.64	18.55
		4	18.53	18.65	18.55	18.45
Total MIMO Conducted PSD (mW/MHz)			144.06	147.58	144.73	141.60
Total MIMO Conducted PSD (dBm/MHz)			21.59	21.69	21.61	21.51
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			33.59	33.69	33.61	33.51
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-3.41	-3.31	-3.39	-3.49
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	18.72	18.76	18.74	18.78
		6	18.63	18.64	18.63	18.67
Total MIMO Conducted PSD (mW/MHz)			147.44	148.28	147.81	149.05
Total MIMO Conducted PSD (dBm/MHz)			21.69	21.71	21.70	21.73
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			33.69	33.71	33.70	33.73
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-3.31	-3.29	-3.30	-3.27
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	18.50	18.52	18.49	18.53
		8	18.61	18.63	18.59	18.69
Total MIMO Conducted PSD (mW/MHz)			143.41	144.07	142.91	145.25
Total MIMO Conducted PSD (dBm/MHz)			21.57	21.59	21.55	21.62
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			33.57	33.59	33.55	33.62
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-3.43	-3.41	-3.45	-3.38

Table 8-7. Power Spectral Density Table (n48_1C_10M_Low Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	18.74	18.84	18.70	18.95
		2	18.78	18.88	18.73	18.96
Total MIMO Conducted PSD (mW/MHz)			150.33	153.83	148.78	157.23
Total MIMO Conducted PSD (dBm/MHz)			21.77	21.87	21.73	21.97
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			33.77	33.87	33.73	33.97
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-3.23	-3.13	-3.27	-3.03
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	18.80	18.79	18.74	19.04
		4	18.87	18.79	18.74	18.99
Total MIMO Conducted PSD (mW/MHz)			152.95	151.37	149.63	159.42
Total MIMO Conducted PSD (dBm/MHz)			21.85	21.80	21.75	22.03
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			33.85	33.80	33.75	34.03
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-3.15	-3.20	-3.25	-2.97
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	19.33	19.43	19.42	19.49
		6	19.40	19.47	19.47	19.56
Total MIMO Conducted PSD (mW/MHz)			172.80	176.21	176.01	179.29
Total MIMO Conducted PSD (dBm/MHz)			22.38	22.46	22.46	22.54
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			34.38	34.46	34.46	34.54
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-2.62	-2.54	-2.54	-2.46
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	19.07	19.21	19.15	19.19
		8	19.20	19.27	19.22	19.27
Total MIMO Conducted PSD (mW/MHz)			163.90	167.90	165.78	167.51
Total MIMO Conducted PSD (dBm/MHz)			22.15	22.25	22.20	22.24
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			34.15	34.25	34.20	34.24
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-2.85	-2.75	-2.80	-2.76

Table 8-8. Power Spectral Density Table (n48_1C_10M_Mid Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K22121601-00-R2.A3L	Test Dates: 01/03/2023 – 02/15/2023	EUT Type: Smallcell (SOG2201)		Page 30 of 289

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	18.50	18.39	18.54	18.49
		2	18.49	18.49	18.59	18.58
Total MIMO Conducted PSD (mW/MHz)			141.43	139.66	143.73	142.74
Total MIMO Conducted PSD (dBm/MHz)			21.51	21.45	21.58	21.55
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			33.51	33.45	33.58	33.55
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-3.49	-3.55	-3.42	-3.45
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	18.43	18.45	18.64	18.51
		4	18.44	18.39	18.59	18.51
Total MIMO Conducted PSD (mW/MHz)			139.49	139.01	145.39	141.92
Total MIMO Conducted PSD (dBm/MHz)			21.45	21.43	21.63	21.52
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			33.45	33.43	33.63	33.52
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-3.55	-3.57	-3.37	-3.48
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	18.80	18.86	18.81	18.81
		6	18.82	18.87	18.82	18.83
Total MIMO Conducted PSD (mW/MHz)			152.07	154.00	152.24	152.42
Total MIMO Conducted PSD (dBm/MHz)			21.82	21.88	21.83	21.83
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			33.82	33.88	33.83	33.83
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-3.18	-3.12	-3.17	-3.17
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	18.71	18.70	18.67	18.66
		8	18.64	18.65	18.62	18.60
Total MIMO Conducted PSD (mW/MHz)			147.42	147.41	146.40	145.89
Total MIMO Conducted PSD (dBm/MHz)			21.69	21.69	21.66	21.64
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			33.69	33.69	33.66	33.64
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-3.31	-3.31	-3.34	-3.36

Table 8-9. Power Spectral Density Table (n48_1C_10M_High Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K22121601-00-R2.A3L	Test Dates: 01/03/2023 – 02/15/2023	EUT Type: Smallcell (SOG2201)		Page 31 of 289

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	15.35	15.36	15.35	15.41
		2	15.36	15.38	15.35	15.44
Total MIMO Conducted PSD (mW/MHz)			68.63	68.87	68.55	69.75
Total MIMO Conducted PSD (dBm/MHz)			18.37	18.38	18.36	18.44
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.37	30.38	30.36	30.44
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-6.63	-6.62	-6.64	-6.56
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	15.59	15.65	15.60	15.68
		4	15.30	15.36	15.36	15.40
Total MIMO Conducted PSD (mW/MHz)			70.11	71.08	70.66	71.66
Total MIMO Conducted PSD (dBm/MHz)			18.46	18.52	18.49	18.55
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.46	30.52	30.49	30.55
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-6.54	-6.48	-6.51	-6.45
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	15.56	15.61	15.55	15.61
		6	15.91	15.92	15.88	15.94
Total MIMO Conducted PSD (mW/MHz)			74.97	75.48	74.62	75.66
Total MIMO Conducted PSD (dBm/MHz)			18.75	18.78	18.73	18.79
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.75	30.78	30.73	30.79
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-6.25	-6.22	-6.27	-6.21
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	15.31	15.33	15.31	15.38
		8	15.42	15.46	15.41	15.47
Total MIMO Conducted PSD (mW/MHz)			68.80	69.28	68.72	69.75
Total MIMO Conducted PSD (dBm/MHz)			18.38	18.41	18.37	18.44
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.38	30.41	30.37	30.44
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-6.62	-6.59	-6.63	-6.56

Table 8-10. Power Spectral Density Table (n48_1C_20M_Low Channel_2T)

FCC: A3LSOG2201			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K22121601-00-R2.A3L	Test Dates: 01/03/2023 – 02/15/2023	EUT Type: Smallcell (SOG2201)	Page 32 of 289		

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	15.95	15.81	15.83	15.88
		2	15.89	15.84	15.90	15.91
Total MIMO Conducted PSD (mW/MHz)			78.17	76.48	77.19	77.72
Total MIMO Conducted PSD (dBm/MHz)			18.93	18.84	18.88	18.91
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.93	30.84	30.88	30.91
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-6.07	-6.16	-6.12	-6.09
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	16.35	16.22	16.20	16.22
		4	15.98	15.87	16.00	16.02
Total MIMO Conducted PSD (mW/MHz)			82.78	80.52	81.50	81.87
Total MIMO Conducted PSD (dBm/MHz)			19.18	19.06	19.11	19.13
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			31.18	31.06	31.11	31.13
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-5.82	-5.94	-5.89	-5.87
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	15.99	15.99	16.20	16.02
		6	16.51	16.50	16.52	16.54
Total MIMO Conducted PSD (mW/MHz)			84.49	84.39	86.56	85.08
Total MIMO Conducted PSD (dBm/MHz)			19.27	19.26	19.37	19.30
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			31.27	31.26	31.37	31.30
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-5.73	-5.74	-5.63	-5.70
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	15.58	15.69	15.71	15.95
		8	15.61	15.79	15.79	16.02
Total MIMO Conducted PSD (mW/MHz)			72.53	75.00	75.17	79.35
Total MIMO Conducted PSD (dBm/MHz)			18.61	18.75	18.76	19.00
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.61	30.75	30.76	31.00
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-6.39	-6.25	-6.24	-6.00

Table 8-11. Power Spectral Density Table (n48_1C_20M_Mid Channel_2T)

FCC: A3LSOG2201			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K22121601-00-R2.A3L	Test Dates: 01/03/2023 – 02/15/2023	EUT Type: Smallcell (SOG2201)	Page 33 of 289		

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	15.34	15.34	15.41	15.45
		2	15.40	15.39	15.45	15.51
Total MIMO Conducted PSD (mW/MHz)			68.87	68.79	69.83	70.64
Total MIMO Conducted PSD (dBm/MHz)			18.38	18.38	18.44	18.49
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.38	30.38	30.44	30.49
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-6.62	-6.62	-6.56	-6.51
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	15.91	15.89	15.96	15.24
		4	15.47	15.49	15.54	15.58
Total MIMO Conducted PSD (mW/MHz)			74.23	74.21	75.26	69.56
Total MIMO Conducted PSD (dBm/MHz)			18.71	18.70	18.77	18.42
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.71	30.70	30.77	30.42
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-6.29	-6.30	-6.23	-6.58
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	15.60	15.63	15.64	15.59
		6	16.06	16.10	16.10	16.10
Total MIMO Conducted PSD (mW/MHz)			76.67	77.30	77.38	76.96
Total MIMO Conducted PSD (dBm/MHz)			18.85	18.88	18.89	18.86
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.85	30.88	30.89	30.86
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-6.15	-6.12	-6.11	-6.14
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	15.53	15.55	15.57	15.59
		8	15.45	15.50	15.49	15.50
Total MIMO Conducted PSD (mW/MHz)			70.80	71.37	71.46	71.71
Total MIMO Conducted PSD (dBm/MHz)			18.50	18.54	18.54	18.56
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.50	30.54	30.54	30.56
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-6.50	-6.46	-6.46	-6.44

Table 8-12. Power Spectral Density Table (n48_1C_20M_High Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K22121601-00-R2.A3L	Test Dates: 01/03/2023 – 02/15/2023	EUT Type: Smallcell (SOG2201)		Page 34 of 289

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	13.55	13.57	13.66	13.62
		2	13.58	13.60	13.67	13.67
Total MIMO Conducted PSD (mW/MHz)			45.45	45.66	46.51	46.30
Total MIMO Conducted PSD (dBm/MHz)			16.58	16.60	16.68	16.66
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.58	28.60	28.68	28.66
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-8.42	-8.40	-8.32	-8.34
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	13.89	13.98	13.98	13.98
		4	13.52	13.61	13.60	13.60
Total MIMO Conducted PSD (mW/MHz)			46.98	47.96	47.91	47.91
Total MIMO Conducted PSD (dBm/MHz)			16.72	16.81	16.80	16.80
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.72	28.81	28.80	28.80
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-8.28	-8.19	-8.20	-8.20
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	13.93	13.90	13.96	13.91
		6	14.48	14.51	14.52	14.53
Total MIMO Conducted PSD (mW/MHz)			52.77	52.80	53.20	52.98
Total MIMO Conducted PSD (dBm/MHz)			17.22	17.23	17.26	17.24
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			29.22	29.23	29.26	29.24
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-7.78	-7.77	-7.74	-7.76
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	13.62	13.56	13.66	13.59
		8	13.69	13.71	13.76	13.67
Total MIMO Conducted PSD (mW/MHz)			46.40	46.19	47.00	46.14
Total MIMO Conducted PSD (dBm/MHz)			16.67	16.65	16.72	16.64
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.67	28.65	28.72	28.64
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-8.33	-8.35	-8.28	-8.36

Table 8-13. Power Spectral Density Table (n48_1C_30M_Low Channel_2T)

FCC: A3LSOG2201			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K22121601-00-R2.A3L	Test Dates: 01/03/2023 – 02/15/2023	EUT Type: Smallcell (SOG2201)	Page 35 of 289		

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	13.87	13.91	13.91	13.97
		2	13.90	13.95	14.00	14.02
Total MIMO Conducted PSD (mW/MHz)			48.93	49.44	49.72	50.18
Total MIMO Conducted PSD (dBm/MHz)			16.90	16.94	16.97	17.01
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.90	28.94	28.97	29.01
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-8.10	-8.06	-8.03	-7.99
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	14.26	14.25	14.27	14.30
		4	13.98	14.01	13.99	14.07
Total MIMO Conducted PSD (mW/MHz)			51.67	51.78	51.79	52.44
Total MIMO Conducted PSD (dBm/MHz)			17.13	17.14	17.14	17.20
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			29.13	29.14	29.14	29.20
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-7.87	-7.86	-7.86	-7.80
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	14.19	14.20	14.25	14.22
		6	14.33	14.33	14.41	14.35
Total MIMO Conducted PSD (mW/MHz)			53.34	53.40	54.21	53.65
Total MIMO Conducted PSD (dBm/MHz)			17.27	17.28	17.34	17.30
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			29.27	29.28	29.34	29.30
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-7.73	-7.72	-7.66	-7.70
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	14.12	14.00	13.96	13.94
		8	14.20	14.07	14.05	14.00
Total MIMO Conducted PSD (mW/MHz)			52.13	50.65	50.30	49.89
Total MIMO Conducted PSD (dBm/MHz)			17.17	17.05	17.02	16.98
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			29.17	29.05	29.02	28.98
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-7.83	-7.95	-7.98	-8.02

Table 8-14. Power Spectral Density Table (n48_1C_30M_Mid Channel_2T)

FCC: A3LSOG2201			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K22121601-00-R2.A3L	Test Dates: 01/03/2023 – 02/15/2023	EUT Type: Smallcell (SOG2201)	Page 36 of 289		

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	13.60	13.67	13.70	13.69
		2	13.67	13.72	13.74	13.79
Total MIMO Conducted PSD (mW/MHz)			46.19	46.83	47.10	47.32
Total MIMO Conducted PSD (dBm/MHz)			16.65	16.71	16.73	16.75
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.65	28.71	28.73	28.75
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-8.35	-8.29	-8.27	-8.25
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	14.16	14.21	14.21	14.20
		4	13.72	13.82	13.79	13.80
Total MIMO Conducted PSD (mW/MHz)			49.61	50.46	50.30	50.29
Total MIMO Conducted PSD (dBm/MHz)			16.96	17.03	17.02	17.01
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.96	29.03	29.02	29.01
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-8.04	-7.97	-7.98	-7.99
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	13.77	13.74	13.81	13.75
		6	14.30	14.25	14.32	14.35
Total MIMO Conducted PSD (mW/MHz)			50.74	50.27	51.08	50.94
Total MIMO Conducted PSD (dBm/MHz)			17.05	17.01	17.08	17.07
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			29.05	29.01	29.08	29.07
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-7.95	-7.99	-7.92	-7.93
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	13.67	13.68	13.71	13.71
		8	13.59	13.61	13.64	13.58
Total MIMO Conducted PSD (mW/MHz)			46.14	46.30	46.62	46.30
Total MIMO Conducted PSD (dBm/MHz)			16.64	16.66	16.69	16.66
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.64	28.66	28.69	28.66
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-8.36	-8.34	-8.31	-8.34

Table 8-15. Power Spectral Density Table (n48_1C_30M_High Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K22121601-00-R2.A3L	Test Dates: 01/03/2023 – 02/15/2023	EUT Type: Smallcell (SOG2201)		Page 37 of 289

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	12.58	12.67	13.02	13.09
		2	12.64	12.70	13.10	13.21
Total MIMO Conducted PSD (mW/MHz)			36.48	37.11	40.46	41.31
Total MIMO Conducted PSD (dBm/MHz)			15.62	15.70	16.07	16.16
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.62	27.70	28.07	28.16
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-9.38	-9.30	-8.93	-8.84
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	12.90	12.99	13.36	13.50
		4	12.52	12.57	13.08	13.16
Total MIMO Conducted PSD (mW/MHz)			37.36	37.98	42.00	43.09
Total MIMO Conducted PSD (dBm/MHz)			15.72	15.80	16.23	16.34
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.72	27.80	28.23	28.34
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-9.28	-9.20	-8.77	-8.66
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	12.97	13.25	13.53	13.21
		6	13.18	13.39	13.33	13.59
Total MIMO Conducted PSD (mW/MHz)			40.61	42.96	44.07	43.80
Total MIMO Conducted PSD (dBm/MHz)			16.09	16.33	16.44	16.41
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.09	28.33	28.44	28.41
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-8.91	-8.67	-8.56	-8.59
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	12.85	12.85	12.79	12.97
		8	12.98	12.97	12.96	13.12
Total MIMO Conducted PSD (mW/MHz)			39.14	39.09	38.78	40.33
Total MIMO Conducted PSD (dBm/MHz)			15.93	15.92	15.89	16.06
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.93	27.92	27.89	28.06
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-9.07	-9.08	-9.11	-8.94

Table 8-16. Power Spectral Density Table (n48_1C_40M_Low Channel_2T)

FCC: A3LSOG2201			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	12.82	12.75	12.44	12.70
		2	12.91	12.88	12.60	12.77
Total MIMO Conducted PSD (mW/MHz)			38.69	38.25	35.74	37.54
Total MIMO Conducted PSD (dBm/MHz)			15.88	15.83	15.53	15.75
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.88	27.83	27.53	27.75
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-9.12	-9.17	-9.47	-9.25
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	13.10	13.07	12.82	13.05
		4	12.97	12.96	12.64	12.82
Total MIMO Conducted PSD (mW/MHz)			40.23	40.05	37.51	39.33
Total MIMO Conducted PSD (dBm/MHz)			16.05	16.03	15.74	15.95
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.05	28.03	27.74	27.95
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-8.95	-8.97	-9.26	-9.05
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	12.65	12.84	12.74	12.99
		6	13.32	13.02	12.87	13.13
Total MIMO Conducted PSD (mW/MHz)			39.89	39.28	38.16	40.47
Total MIMO Conducted PSD (dBm/MHz)			16.01	15.94	15.82	16.07
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.01	27.94	27.82	28.07
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-8.99	-9.06	-9.18	-8.93
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	12.43	12.69	12.51	12.69
		8	12.49	12.72	12.58	12.75
Total MIMO Conducted PSD (mW/MHz)			35.24	37.28	35.94	37.41
Total MIMO Conducted PSD (dBm/MHz)			15.47	15.72	15.56	15.73
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.47	27.72	27.56	27.73
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-9.53	-9.28	-9.44	-9.27

Table 8-17. Power Spectral Density Table (n48_1C_40M_Mid Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	12.27	12.35	12.25	12.20
		2	12.38	12.48	12.30	12.39
Total MIMO Conducted PSD (mW/MHz)			34.16	34.88	33.77	33.93
Total MIMO Conducted PSD (dBm/MHz)			15.34	15.43	15.29	15.31
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.34	27.43	27.29	27.31
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-9.66	-9.57	-9.71	-9.69
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	12.77	12.86	12.72	12.80
		4	12.25	12.30	12.30	12.30
Total MIMO Conducted PSD (mW/MHz)			35.71	36.30	35.69	36.04
Total MIMO Conducted PSD (dBm/MHz)			15.53	15.60	15.53	15.57
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.53	27.60	27.53	27.57
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-9.47	-9.40	-9.47	-9.43
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	12.44	12.51	12.48	12.50
		6	13.05	13.07	13.08	13.09
Total MIMO Conducted PSD (mW/MHz)			37.72	38.10	38.02	38.15
Total MIMO Conducted PSD (dBm/MHz)			15.77	15.81	15.80	15.82
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.77	27.81	27.80	27.82
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-9.23	-9.19	-9.20	-9.18
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	12.35	12.42	12.36	12.39
		8	12.28	12.37	12.32	12.35
Total MIMO Conducted PSD (mW/MHz)			34.08	34.72	34.28	34.52
Total MIMO Conducted PSD (dBm/MHz)			15.33	15.41	15.35	15.38
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.33	27.41	27.35	27.38
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-9.67	-9.59	-9.65	-9.62

Table 8-18. Power Spectral Density Table (n48_1C_40M_High Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	15.58	15.69
		2	15.66	15.55
Total MIMO Conducted PSD (mW/MHz)			72.93	73.02
Total MIMO Conducted PSD (dBm/MHz)			18.63	18.63
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.63	30.63
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.37	-6.37
Sector	Zone	Port	QPSK	16QAM
1	2	3	15.69	15.76
		4	15.57	15.59
Total MIMO Conducted PSD (mW/MHz)			73.08	73.83
Total MIMO Conducted PSD (dBm/MHz)			18.64	18.68
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.64	30.68
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.36	-6.32
Sector	Zone	Port	QPSK	16QAM
2	3	5	15.84	15.90
		6	15.79	15.78
Total MIMO Conducted PSD (mW/MHz)			76.35	76.80
Total MIMO Conducted PSD (dBm/MHz)			18.83	18.85
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.83	30.85
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.17	-6.15
Sector	Zone	Port	QPSK	16QAM
2	4	7	15.56	15.62
		8	15.67	15.70
Total MIMO Conducted PSD (mW/MHz)			72.81	73.60
Total MIMO Conducted PSD (dBm/MHz)			18.62	18.67
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.62	30.67
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.38	-6.33

Table 8-19. Power Spectral Density Table (n48_2C_10M+10M_Low Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	15.79	16.08
		2	15.80	16.15
Total MIMO Conducted PSD (mW/MHz)			75.95	81.75
Total MIMO Conducted PSD (dBm/MHz)			18.81	19.12
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.81	31.12
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.19	-5.88
Sector	Zone	Port	QPSK	16QAM
1	2	3	16.21	16.27
		4	15.87	16.20
Total MIMO Conducted PSD (mW/MHz)			80.41	84.03
Total MIMO Conducted PSD (dBm/MHz)			19.05	19.24
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			31.05	31.24
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-5.95	-5.76
Sector	Zone	Port	QPSK	16QAM
2	3	5	16.56	16.63
		6	16.69	16.70
Total MIMO Conducted PSD (mW/MHz)			91.97	92.72
Total MIMO Conducted PSD (dBm/MHz)			19.64	19.67
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			31.64	31.67
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-5.36	-5.33
Sector	Zone	Port	QPSK	16QAM
2	4	7	16.31	16.38
		8	16.24	16.47
Total MIMO Conducted PSD (mW/MHz)			84.89	87.81
Total MIMO Conducted PSD (dBm/MHz)			19.29	19.44
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			31.29	31.44
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-5.71	-5.56

Table 8-20. Power Spectral Density Table (n48_2C_10M+10M_Mid Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	15.50	15.66
		2	15.53	15.69
Total MIMO Conducted PSD (mW/MHz)			71.21	73.83
Total MIMO Conducted PSD (dBm/MHz)			18.53	18.68
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.53	30.68
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.47	-6.32
Sector	Zone	Port	QPSK	16QAM
1	2	3	15.57	15.76
		4	15.40	15.68
Total MIMO Conducted PSD (mW/MHz)			70.70	74.66
Total MIMO Conducted PSD (dBm/MHz)			18.49	18.73
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.49	30.73
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.51	-6.27
Sector	Zone	Port	QPSK	16QAM
2	3	5	15.89	15.97
		6	15.95	16.02
Total MIMO Conducted PSD (mW/MHz)			78.15	79.54
Total MIMO Conducted PSD (dBm/MHz)			18.93	19.01
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.93	31.01
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.07	-5.99
Sector	Zone	Port	QPSK	16QAM
2	4	7	15.72	15.85
		8	15.73	15.82
Total MIMO Conducted PSD (mW/MHz)			74.67	76.69
Total MIMO Conducted PSD (dBm/MHz)			18.73	18.85
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			30.73	30.85
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.27	-6.15

Table 8-21. Power Spectral Density Table (n48_2C_10M+10M_High Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	13.78	13.74
		2	13.82	13.82
Total MIMO Conducted PSD (mW/MHz)			47.98	47.76
Total MIMO Conducted PSD (dBm/MHz)			16.81	16.79
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.81	28.79
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-8.19	-8.21
Sector	Zone	Port	QPSK	16QAM
1	2	3	13.73	14.06
		4	13.74	13.81
Total MIMO Conducted PSD (mW/MHz)			47.29	49.48
Total MIMO Conducted PSD (dBm/MHz)			16.75	16.94
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.75	28.94
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-8.25	-8.06
Sector	Zone	Port	QPSK	16QAM
2	3	5	13.92	13.90
		6	14.08	14.07
Total MIMO Conducted PSD (mW/MHz)			50.20	50.10
Total MIMO Conducted PSD (dBm/MHz)			17.01	17.00
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			29.01	29.00
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.99	-8.00
Sector	Zone	Port	QPSK	16QAM
2	4	7	13.66	13.68
		8	13.76	13.76
Total MIMO Conducted PSD (mW/MHz)			46.98	47.05
Total MIMO Conducted PSD (dBm/MHz)			16.72	16.73
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.72	28.73
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-8.28	-8.27

Table 8-22. Power Spectral Density Table (n48_2C_10M+20M_Low Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	14.32	13.97
		2	14.44	14.05
Total MIMO Conducted PSD (mW/MHz)			54.82	50.37
Total MIMO Conducted PSD (dBm/MHz)			17.39	17.02
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			29.39	29.02
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.61	-7.98
Sector	Zone	Port	QPSK	16QAM
1	2	3	14.64	14.39
		4	14.41	14.13
Total MIMO Conducted PSD (mW/MHz)			56.75	53.34
Total MIMO Conducted PSD (dBm/MHz)			17.54	17.27
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			29.54	29.27
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.46	-7.73
Sector	Zone	Port	QPSK	16QAM
2	3	5	14.37	14.45
		6	14.39	14.45
Total MIMO Conducted PSD (mW/MHz)			54.83	55.69
Total MIMO Conducted PSD (dBm/MHz)			17.39	17.46
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			29.39	29.46
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.61	-7.54
Sector	Zone	Port	QPSK	16QAM
2	4	7	14.12	14.20
		8	14.22	14.26
Total MIMO Conducted PSD (mW/MHz)			52.22	52.94
Total MIMO Conducted PSD (dBm/MHz)			17.18	17.24
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			29.18	29.24
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.82	-7.76

Table 8-23. Power Spectral Density Table (n48_2C_10M+20M_Mid Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	13.67	13.79
		2	13.76	13.81
Total MIMO Conducted PSD (mW/MHz)			47.01	47.98
Total MIMO Conducted PSD (dBm/MHz)			16.72	16.81
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.72	28.81
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-8.28	-8.19
Sector	Zone	Port	QPSK	16QAM
1	2	3	13.91	13.97
		4	13.81	13.77
Total MIMO Conducted PSD (mW/MHz)			48.60	48.75
Total MIMO Conducted PSD (dBm/MHz)			16.87	16.88
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.87	28.88
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-8.13	-8.12
Sector	Zone	Port	QPSK	16QAM
2	3	5	13.99	14.03
		6	14.17	14.18
Total MIMO Conducted PSD (mW/MHz)			51.19	51.45
Total MIMO Conducted PSD (dBm/MHz)			17.09	17.11
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			29.09	29.11
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.91	-7.89
Sector	Zone	Port	QPSK	16QAM
2	4	7	13.82	13.83
		8	13.79	13.85
Total MIMO Conducted PSD (mW/MHz)			48.03	48.41
Total MIMO Conducted PSD (dBm/MHz)			16.81	16.85
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.81	28.85
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-8.19	-8.15

Table 8-24. Power Spectral Density Table (n48_2C_10M+20M_High Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	12.82	12.92
		2	12.85	12.99
Total MIMO Conducted PSD (mW/MHz)			38.43	39.50
Total MIMO Conducted PSD (dBm/MHz)			15.85	15.97
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.85	27.97
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.15	-9.03
Sector	Zone	Port	QPSK	16QAM
1	2	3	13.13	12.93
		4	12.80	12.76
Total MIMO Conducted PSD (mW/MHz)			39.62	38.51
Total MIMO Conducted PSD (dBm/MHz)			15.98	15.86
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.98	27.86
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.02	-9.14
Sector	Zone	Port	QPSK	16QAM
2	3	5	12.97	13.16
		6	13.23	13.32
Total MIMO Conducted PSD (mW/MHz)			40.82	42.17
Total MIMO Conducted PSD (dBm/MHz)			16.11	16.25
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.11	28.25
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-8.89	-8.75
Sector	Zone	Port	QPSK	16QAM
2	4	7	12.67	12.82
		8	12.81	12.89
Total MIMO Conducted PSD (mW/MHz)			37.56	38.56
Total MIMO Conducted PSD (dBm/MHz)			15.75	15.86
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.75	27.86
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.25	-9.14

Table 8-25. Power Spectral Density Table (n48_2C_20M+20M_Low Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	12.59	12.66
		2	12.75	12.77
Total MIMO Conducted PSD (mW/MHz)			36.97	37.38
Total MIMO Conducted PSD (dBm/MHz)			15.68	15.73
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.68	27.73
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.32	-9.27
Sector	Zone	Port	QPSK	16QAM
1	2	3	13.01	12.71
		4	12.73	12.80
Total MIMO Conducted PSD (mW/MHz)			38.75	37.68
Total MIMO Conducted PSD (dBm/MHz)			15.88	15.76
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.88	27.76
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.12	-9.24
Sector	Zone	Port	QPSK	16QAM
2	3	5	12.92	13.01
		6	12.84	13.09
Total MIMO Conducted PSD (mW/MHz)			38.82	40.36
Total MIMO Conducted PSD (dBm/MHz)			15.89	16.06
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.89	28.06
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.11	-8.94
Sector	Zone	Port	QPSK	16QAM
2	4	7	12.73	12.67
		8	12.78	12.74
Total MIMO Conducted PSD (mW/MHz)			37.73	37.25
Total MIMO Conducted PSD (dBm/MHz)			15.77	15.71
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.77	27.71
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.23	-9.29

Table 8-26. Power Spectral Density Table (n48_2C_20M+20M_Mid Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	12.34	12.46
		2	12.45	12.45
Total MIMO Conducted PSD (mW/MHz)			34.70	35.19
Total MIMO Conducted PSD (dBm/MHz)			15.40	15.46
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.40	27.46
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.60	-9.54
Sector	Zone	Port	QPSK	16QAM
1	2	3	12.45	12.48
		4	12.43	12.45
Total MIMO Conducted PSD (mW/MHz)			35.07	35.28
Total MIMO Conducted PSD (dBm/MHz)			15.45	15.48
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.45	27.48
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.55	-9.52
Sector	Zone	Port	QPSK	16QAM
2	3	5	12.57	12.61
		6	12.68	12.66
Total MIMO Conducted PSD (mW/MHz)			36.58	36.70
Total MIMO Conducted PSD (dBm/MHz)			15.63	15.65
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.63	27.65
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.37	-9.35
Sector	Zone	Port	QPSK	16QAM
2	4	7	12.48	12.52
		8	12.40	12.47
Total MIMO Conducted PSD (mW/MHz)			35.08	35.51
Total MIMO Conducted PSD (dBm/MHz)			15.45	15.50
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.45	27.50
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.55	-9.50

Table 8-27. Power Spectral Density Table (n48_2C_20M+20M_High Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	13.24	13.25
		2	13.51	13.36
Total MIMO Conducted PSD (mW/MHz)			43.53	42.78
Total MIMO Conducted PSD (dBm/MHz)			16.39	16.31
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.39	28.31
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-8.61	-8.69
Sector	Zone	Port	QPSK	16QAM
1	2	3	13.67	13.65
		4	13.18	13.21
Total MIMO Conducted PSD (mW/MHz)			44.04	44.11
Total MIMO Conducted PSD (dBm/MHz)			16.44	16.45
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.44	28.45
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-8.56	-8.55
Sector	Zone	Port	QPSK	16QAM
2	3	5	13.60	13.37
		6	13.85	13.85
Total MIMO Conducted PSD (mW/MHz)			47.17	45.99
Total MIMO Conducted PSD (dBm/MHz)			16.74	16.63
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.74	28.63
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-8.26	-8.37
Sector	Zone	Port	QPSK	16QAM
2	4	7	13.29	13.20
		8	13.43	13.27
Total MIMO Conducted PSD (mW/MHz)			43.35	42.14
Total MIMO Conducted PSD (dBm/MHz)			16.37	16.25
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.37	28.25
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-8.63	-8.75

Table 8-28. Power Spectral Density Table (n48_2C_30M+10M_Low Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	12.76	12.87
		2	12.86	13.04
Total MIMO Conducted PSD (mW/MHz)			38.19	39.50
Total MIMO Conducted PSD (dBm/MHz)			15.82	15.97
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.82	27.97
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.18	-9.03
Sector	Zone	Port	QPSK	16QAM
1	2	3	13.20	13.36
		4	12.75	12.92
Total MIMO Conducted PSD (mW/MHz)			39.73	41.25
Total MIMO Conducted PSD (dBm/MHz)			15.99	16.15
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.99	28.15
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.01	-8.85
Sector	Zone	Port	QPSK	16QAM
2	3	5	13.10	12.80
		6	13.36	13.37
Total MIMO Conducted PSD (mW/MHz)			42.10	40.77
Total MIMO Conducted PSD (dBm/MHz)			16.24	16.10
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			28.24	28.10
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-8.76	-8.90
Sector	Zone	Port	QPSK	16QAM
2	4	7	12.80	12.68
		8	12.84	12.77
Total MIMO Conducted PSD (mW/MHz)			38.29	37.47
Total MIMO Conducted PSD (dBm/MHz)			15.83	15.74
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.83	27.74
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.17	-9.26

Table 8-29. Power Spectral Density Table (n48_2C_30M+10M_Mid Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	12.54	12.51
		2	12.60	12.62
Total MIMO Conducted PSD (mW/MHz)			36.12	36.13
Total MIMO Conducted PSD (dBm/MHz)			15.58	15.58
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.58	27.58
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.42	-9.42
Sector	Zone	Port	QPSK	16QAM
1	2	3	12.51	12.48
		4	12.53	12.54
Total MIMO Conducted PSD (mW/MHz)			35.70	35.64
Total MIMO Conducted PSD (dBm/MHz)			15.53	15.52
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.53	27.52
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.47	-9.48
Sector	Zone	Port	QPSK	16QAM
2	3	5	12.70	12.49
		6	12.74	12.79
Total MIMO Conducted PSD (mW/MHz)			37.41	36.77
Total MIMO Conducted PSD (dBm/MHz)			15.73	15.65
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.73	27.65
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.27	-9.35
Sector	Zone	Port	QPSK	16QAM
2	4	7	12.51	12.37
		8	12.50	12.45
Total MIMO Conducted PSD (mW/MHz)			35.61	34.84
Total MIMO Conducted PSD (dBm/MHz)			15.52	15.42
Ant. Gain (dBi)			12.00	12.00
e.i.r.p PSD (dBm/MHz)			27.52	27.42
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.48	-9.58

Table 8-30. Power Spectral Density Table (n48_2C_30M+10M_High Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	9.76	9.88	9.88	10.04
		2	9.78	9.92	9.95	10.15
Total MIMO Conducted PSD (mW/MHz)			18.96	19.54	19.60	20.44
Total MIMO Conducted PSD (dBm/MHz)			12.78	12.91	12.92	13.11
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			24.78	24.91	24.92	25.11
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-12.22	-12.09	-12.08	-11.89
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	10.03	10.08	10.23	10.40
		4	9.70	9.78	9.95	10.10
Total MIMO Conducted PSD (mW/MHz)			19.40	19.69	20.42	21.18
Total MIMO Conducted PSD (dBm/MHz)			12.88	12.94	13.10	13.26
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			24.88	24.94	25.10	25.26
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-12.12	-12.06	-11.90	-11.74
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	10.43	10.42	9.97	9.98
		6	10.68	10.65	10.23	10.30
Total MIMO Conducted PSD (mW/MHz)			22.74	22.64	20.47	20.66
Total MIMO Conducted PSD (dBm/MHz)			13.57	13.55	13.11	13.15
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			25.57	25.55	25.11	25.15
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-11.43	-11.45	-11.89	-11.85
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	10.09	10.08	9.69	9.70
		8	10.21	10.26	9.84	9.78
Total MIMO Conducted PSD (mW/MHz)			20.70	20.80	18.96	18.84
Total MIMO Conducted PSD (dBm/MHz)			13.16	13.18	12.78	12.75
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			25.16	25.18	24.78	24.75
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-11.84	-11.82	-12.22	-12.25

Table 8-31. Power Spectral Density Table (n48_2C_40M+40M_Low Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	9.72	9.58	9.61	9.65
		2	9.90	9.67	9.78	9.73
Total MIMO Conducted PSD (mW/MHz)			19.15	18.35	18.65	18.63
Total MIMO Conducted PSD (dBm/MHz)			12.82	12.64	12.71	12.70
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			24.82	24.64	24.71	24.70
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-12.18	-12.36	-12.29	-12.30
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	10.17	9.84	9.90	9.92
		4	10.04	9.66	9.71	9.71
Total MIMO Conducted PSD (mW/MHz)			20.49	18.89	19.12	19.17
Total MIMO Conducted PSD (dBm/MHz)			13.12	12.76	12.81	12.83
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			25.12	24.76	24.81	24.83
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-11.88	-12.24	-12.19	-12.17
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	9.89	10.03	9.77	9.88
		6	10.05	10.22	9.87	9.97
Total MIMO Conducted PSD (mW/MHz)			19.88	20.57	19.20	19.65
Total MIMO Conducted PSD (dBm/MHz)			12.99	13.13	12.83	12.93
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			24.99	25.13	24.83	24.93
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-12.01	-11.87	-12.17	-12.07
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	9.59	9.57	9.50	9.62
		8	9.73	9.72	9.58	9.72
Total MIMO Conducted PSD (mW/MHz)			18.50	18.42	17.98	18.55
Total MIMO Conducted PSD (dBm/MHz)			12.67	12.65	12.55	12.68
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			24.67	24.65	24.55	24.68
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-12.33	-12.35	-12.45	-12.32

Table 8-32. Power Spectral Density Table (n48_2C_40M+40M_Mid Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K22121601-00-R2.A3L	Test Dates: 01/03/2023 – 02/15/2023	EUT Type: Smallcell (SOG2201)		Page 54 of 289

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	9.48	9.55	9.67	9.74
		2	9.61	9.63	9.74	9.86
Total MIMO Conducted PSD (mW/MHz)			18.01	18.18	18.69	19.10
Total MIMO Conducted PSD (dBm/MHz)			12.55	12.60	12.72	12.81
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			24.55	24.60	24.72	24.81
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-12.45	-12.40	-12.28	-12.19
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	9.85	9.90	10.02	10.11
		4	9.58	9.71	9.74	9.86
Total MIMO Conducted PSD (mW/MHz)			18.74	19.13	19.47	19.95
Total MIMO Conducted PSD (dBm/MHz)			12.73	12.82	12.89	13.00
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			24.73	24.82	24.89	25.00
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-12.27	-12.18	-12.11	-12.00
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	9.76	9.88	9.76	9.59
		6	10.00	10.15	10.10	9.83
Total MIMO Conducted PSD (mW/MHz)			19.45	20.06	19.70	18.71
Total MIMO Conducted PSD (dBm/MHz)			12.89	13.02	12.94	12.72
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			24.89	25.02	24.94	24.72
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-12.11	-11.98	-12.06	-12.28
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	9.52	9.62	9.55	9.26
		8	9.42	9.69	9.70	9.34
Total MIMO Conducted PSD (mW/MHz)			17.70	18.49	18.35	17.02
Total MIMO Conducted PSD (dBm/MHz)			12.48	12.67	12.64	12.31
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p PSD (dBm/MHz)			24.48	24.67	24.64	24.31
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-12.52	-12.33	-12.36	-12.69

Table 8-33. Power Spectral Density Table (n48_2C_40M+40M_High Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	18.56	18.67	18.59	18.54
		2	18.61	18.71	18.63	18.57
	2	3	18.62	18.71	18.64	18.55
		4	18.53	18.65	18.55	18.45
Total MIMO Conducted PSD (mW/MHz)			288.45	295.51	289.95	284.99
Total MIMO Conducted PSD (dBm/MHz)			24.60	24.71	24.62	24.55
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			35.60	35.71	35.62	35.55
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-1.40	-1.29	-1.38	-1.45
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	18.72	18.76	18.74	18.78
		6	18.63	18.64	18.63	18.67
	4	7	18.50	18.52	18.49	18.53
		8	18.61	18.63	18.59	18.69
Total MIMO Conducted PSD (mW/MHz)			290.82	292.34	290.67	294.38
Total MIMO Conducted PSD (dBm/MHz)			24.64	24.66	24.63	24.69
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			35.64	35.66	35.63	35.69
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-1.36	-1.34	-1.37	-1.31

Table 8-34. Power Spectral Density Table (n48_1C_10M_Low Channel)

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	18.74	18.84	18.70	18.95
		2	18.78	18.88	18.73	18.96
	2	3	18.80	18.79	18.74	19.04
		4	18.87	18.79	18.74	18.99
Total MIMO Conducted PSD (mW/MHz)			303.27	305.19	298.41	316.65
Total MIMO Conducted PSD (dBm/MHz)			24.82	24.85	24.75	25.01
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			35.82	35.85	35.75	36.01
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-1.18	-1.15	-1.25	-0.99
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	19.33	19.43	19.42	19.49
		6	19.40	19.47	19.47	19.56
	4	7	19.07	19.21	19.15	19.19
		8	19.20	19.27	19.22	19.27
Total MIMO Conducted PSD (mW/MHz)			336.70	344.11	341.79	346.80
Total MIMO Conducted PSD (dBm/MHz)			25.27	25.37	25.34	25.40
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			36.27	36.37	36.34	36.40
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-0.73	-0.63	-0.66	-0.60

Table 8-35. Power Spectral Density Table (n48_1C_10M_Mid Channel_4T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	18.50	18.39	18.54	18.49
		2	18.49	18.49	18.59	18.58
	2	3	18.43	18.45	18.64	18.51
		4	18.44	18.39	18.59	18.51
Total MIMO Conducted PSD (mW/MHz)			280.91	278.66	289.12	284.66
Total MIMO Conducted PSD (dBm/MHz)			24.49	24.45	24.61	24.54
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			35.49	35.45	35.61	35.54
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-1.51	-1.55	-1.39	-1.46
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	18.80	18.86	18.81	18.81
		6	18.82	18.87	18.82	18.83
	4	7	18.71	18.70	18.67	18.66
		8	18.64	18.65	18.62	18.60
Total MIMO Conducted PSD (mW/MHz)			299.48	301.42	298.64	298.31
Total MIMO Conducted PSD (dBm/MHz)			24.76	24.79	24.75	24.75
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			35.76	35.79	35.75	35.75
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-1.24	-1.21	-1.25	-1.25

Table 8-36. Power Spectral Density Table (n48_1C_10M_High Channel_4T)

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	15.35	15.36	15.35	15.41
		2	15.36	15.38	15.35	15.44
	2	3	15.59	15.65	15.60	15.68
		4	15.30	15.36	15.36	15.40
Total MIMO Conducted PSD (mW/MHz)			138.74	139.95	139.22	141.40
Total MIMO Conducted PSD (dBm/MHz)			21.42	21.46	21.44	21.50
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			32.42	32.46	32.44	32.50
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-4.58	-4.54	-4.56	-4.50
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	15.56	15.61	15.55	15.61
		6	15.91	15.92	15.88	15.94
	4	7	15.31	15.33	15.31	15.38
		8	15.42	15.46	15.41	15.47
Total MIMO Conducted PSD (mW/MHz)			143.77	144.75	143.33	145.41
Total MIMO Conducted PSD (dBm/MHz)			21.58	21.61	21.56	21.63
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			32.58	32.61	32.56	32.63
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-4.42	-4.39	-4.44	-4.37

Table 8-37. Power Spectral Density Table (n48_1C_20M_Low Channel_4T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	15.95	15.81	15.83	15.88
		2	15.89	15.84	15.90	15.91
	2	3	16.35	16.22	16.20	16.22
		4	15.98	15.87	16.00	16.02
Total MIMO Conducted PSD (mW/MHz)			160.95	156.99	158.68	159.59
Total MIMO Conducted PSD (dBm/MHz)			22.07	21.96	22.01	22.03
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			33.07	32.96	33.01	33.03
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-3.93	-4.04	-3.99	-3.97
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	15.99	15.99	16.20	16.02
		6	16.51	16.50	16.52	16.54
	4	7	15.58	15.69	15.71	15.95
		8	15.61	15.79	15.79	16.02
Total MIMO Conducted PSD (mW/MHz)			157.02	159.39	161.73	164.43
Total MIMO Conducted PSD (dBm/MHz)			21.96	22.02	22.09	22.16
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			32.96	33.02	33.09	33.16
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-4.04	-3.98	-3.91	-3.84

Table 8-38. Power Spectral Density Table (n48_1C_20M_Mid Channel_4T)

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	15.34	15.34	15.41	15.45
		2	15.40	15.39	15.45	15.51
	2	3	15.91	15.89	15.96	15.24
		4	15.47	15.49	15.54	15.58
Total MIMO Conducted PSD (mW/MHz)			143.10	143.01	145.08	140.20
Total MIMO Conducted PSD (dBm/MHz)			21.56	21.55	21.62	21.47
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			32.56	32.55	32.62	32.47
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-4.44	-4.45	-4.38	-4.53
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	15.60	15.63	15.64	15.59
		6	16.06	16.10	16.10	16.10
	4	7	15.53	15.55	15.57	15.59
		8	15.45	15.50	15.49	15.50
Total MIMO Conducted PSD (mW/MHz)			147.47	148.67	148.84	148.67
Total MIMO Conducted PSD (dBm/MHz)			21.69	21.72	21.73	21.72
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			32.69	32.72	32.73	32.72
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-4.31	-4.28	-4.27	-4.28

Table 8-39. Power Spectral Density Table (n48_1C_20M_High Channel_4T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	13.55	13.57	13.66	13.62
		2	13.58	13.60	13.67	13.67
	2	3	13.89	13.98	13.98	13.98
		4	13.52	13.61	13.60	13.60
Total MIMO Conducted PSD (mW/MHz)			92.43	93.62	94.42	94.21
Total MIMO Conducted PSD (dBm/MHz)			19.66	19.71	19.75	19.74
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			30.66	30.71	30.75	30.74
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-6.34	-6.29	-6.25	-6.26
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	13.93	13.90	13.96	13.91
		6	14.48	14.51	14.52	14.53
	4	7	13.62	13.56	13.66	13.59
		8	13.69	13.71	13.76	13.67
Total MIMO Conducted PSD (mW/MHz)			99.17	98.99	100.20	99.12
Total MIMO Conducted PSD (dBm/MHz)			19.96	19.96	20.01	19.96
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			30.96	30.96	31.01	30.96
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-6.04	-6.04	-5.99	-6.04

Table 8-40. Power Spectral Density Table (n48_1C_30M_Low Channel_4T)

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	13.87	13.91	13.91	13.97
		2	13.90	13.95	14.00	14.02
	2	3	14.26	14.25	14.27	14.30
		4	13.98	14.01	13.99	14.07
Total MIMO Conducted PSD (mW/MHz)			100.60	101.22	101.51	102.62
Total MIMO Conducted PSD (dBm/MHz)			20.03	20.05	20.07	20.11
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			31.03	31.05	31.07	31.11
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-5.97	-5.95	-5.93	-5.89
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	14.19	14.20	14.25	14.22
		6	14.33	14.33	14.41	14.35
	4	7	14.12	14.00	13.96	13.94
		8	14.20	14.07	14.05	14.00
Total MIMO Conducted PSD (mW/MHz)			105.47	104.05	104.51	103.54
Total MIMO Conducted PSD (dBm/MHz)			20.23	20.17	20.19	20.15
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			31.23	31.17	31.19	31.15
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-5.77	-5.83	-5.81	-5.85

Table 8-41. Power Spectral Density Table (n48_1C_30M_Mid Channel_4T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	13.60	13.67	13.70	13.69
		2	13.67	13.72	13.74	13.79
	2	3	14.16	14.21	14.21	14.20
		4	13.72	13.82	13.79	13.80
Total MIMO Conducted PSD (mW/MHz)			95.80	97.29	97.40	97.61
Total MIMO Conducted PSD (dBm/MHz)			19.81	19.88	19.89	19.90
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			30.81	30.88	30.89	30.90
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-6.19	-6.12	-6.11	-6.10
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	13.77	13.74	13.81	13.75
		6	14.30	14.25	14.32	14.35
	4	7	13.67	13.68	13.71	13.71
		8	13.59	13.61	13.64	13.58
Total MIMO Conducted PSD (mW/MHz)			96.88	96.56	97.70	97.24
Total MIMO Conducted PSD (dBm/MHz)			19.86	19.85	19.90	19.88
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			30.86	30.85	30.90	30.88
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-6.14	-6.15	-6.10	-6.12

Table 8-42. Power Spectral Density Table (n48_1C_30M_High Channel_4T)

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	12.58	12.67	13.02	13.09
		2	12.64	12.70	13.10	13.21
	2	3	12.90	12.99	13.36	13.50
		4	12.52	12.57	13.08	13.16
Total MIMO Conducted PSD (mW/MHz)			73.84	75.09	82.46	84.40
Total MIMO Conducted PSD (dBm/MHz)			18.68	18.76	19.16	19.26
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			29.68	29.76	30.16	30.26
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-7.32	-7.24	-6.84	-6.74
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	12.97	13.25	13.53	13.21
		6	13.18	13.39	13.33	13.59
	4	7	12.85	12.85	12.79	12.97
		8	12.98	12.97	12.96	13.12
Total MIMO Conducted PSD (mW/MHz)			79.75	82.05	82.85	84.12
Total MIMO Conducted PSD (dBm/MHz)			19.02	19.14	19.18	19.25
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			30.02	30.14	30.18	30.25
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-6.98	-6.86	-6.82	-6.75

Table 8-43. Power Spectral Density Table (n48_1C_40M_Low Channel_4T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	12.82	12.75	12.44	12.70
		2	12.91	12.88	12.60	12.77
	2	3	13.10	13.07	12.82	13.05
		4	12.97	12.96	12.64	12.82
Total MIMO Conducted PSD (mW/MHz)			78.92	78.29	73.24	76.87
Total MIMO Conducted PSD (dBm/MHz)			18.97	18.94	18.65	18.86
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			29.97	29.94	29.65	29.86
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-7.03	-7.06	-7.35	-7.14
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	12.65	12.84	12.74	12.99
		6	13.32	13.02	12.87	13.13
	4	7	12.43	12.69	12.51	12.69
		8	12.49	12.72	12.58	12.75
Total MIMO Conducted PSD (mW/MHz)			75.13	76.56	74.09	77.88
Total MIMO Conducted PSD (dBm/MHz)			18.76	18.84	18.70	18.91
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			29.76	29.84	29.70	29.91
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-7.24	-7.16	-7.30	-7.09

Table 8-44. Power Spectral Density Table (n48_1C_40M_Mid Channel_4T)

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	12.27	12.35	12.25	12.20
		2	12.38	12.48	12.30	12.39
	2	3	12.77	12.86	12.72	12.80
		4	12.25	12.30	12.30	12.30
Total MIMO Conducted PSD (mW/MHz)			69.88	71.18	69.46	69.97
Total MIMO Conducted PSD (dBm/MHz)			18.44	18.52	18.42	18.45
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			29.44	29.52	29.42	29.45
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-7.56	-7.48	-7.58	-7.55
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	12.44	12.51	12.48	12.50
		6	13.05	13.07	13.08	13.09
	4	7	12.35	12.42	12.36	12.39
		8	12.28	12.37	12.32	12.35
Total MIMO Conducted PSD (mW/MHz)			71.81	72.82	72.30	72.67
Total MIMO Conducted PSD (dBm/MHz)			18.56	18.62	18.59	18.61
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			29.56	29.62	29.59	29.61
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-7.44	-7.38	-7.41	-7.39

Table 8-45. Power Spectral Density Table (n48_1C_40M_High Channel_4T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	15.58	15.69
		2	15.66	15.55
	2	3	15.69	15.76
		4	15.57	15.59
Total MIMO Conducted PSD (mW/MHz)			146.08	146.85
Total MIMO Conducted PSD (dBm/MHz)			21.65	21.67
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			32.65	32.67
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-4.35	-4.33
Sector	Zone	Port	QPSK	16QAM
2	3	5	15.84	15.90
		6	15.79	15.78
	4	7	15.56	15.62
		8	15.67	15.70
Total MIMO Conducted PSD (mW/MHz)			149.17	150.38
Total MIMO Conducted PSD (dBm/MHz)			21.74	21.77
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			32.74	32.77
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-4.26	-4.23

Table 8-46. Power Spectral Density Table (n48_2C_10M+10M_Low Channel_4T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	15.79	16.08
		2	15.80	16.15
	2	3	16.21	16.27
		4	15.87	16.20
Total MIMO Conducted PSD (mW/MHz)			156.37	165.81
Total MIMO Conducted PSD (dBm/MHz)			21.94	22.20
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			32.94	33.20
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-4.06	-3.80
Sector	Zone	Port	QPSK	16QAM
2	3	5	16.56	16.63
		6	16.69	16.70
	4	7	16.31	16.38
		8	16.24	16.47
Total MIMO Conducted PSD (mW/MHz)			176.78	180.61
Total MIMO Conducted PSD (dBm/MHz)			22.47	22.57
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			33.47	33.57
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-3.53	-3.43

Table 8-47. Power Spectral Density Table (n48_2C_10M+10M_Mid Channel_4T)

FCC: A3LSOG2201	 		MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	15.50	15.66
		2	15.53	15.69
	2	3	15.57	15.76
		4	15.40	15.68
Total MIMO Conducted PSD (mW/MHz)			141.94	148.53
Total MIMO Conducted PSD (dBm/MHz)			21.52	21.72
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			32.52	32.72
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.51	-6.27
Sector	Zone	Port	QPSK	16QAM
2	3	5	15.89	15.97
		6	15.95	16.02
	4	7	15.72	15.85
		8	15.73	15.82
Total MIMO Conducted PSD (mW/MHz)			152.91	156.18
Total MIMO Conducted PSD (dBm/MHz)			21.84	21.94
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			32.84	32.94
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-4.16	-4.06

Table 8-48. Power Spectral Density Table (n48_2C_10M+10M_High Channel_4T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	13.78	13.74
		2	13.82	13.82
	2	3	13.73	14.06
		4	13.74	13.81
Total MIMO Conducted PSD (mW/MHz)			95.24	97.27
Total MIMO Conducted PSD (dBm/MHz)			19.79	19.88
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			30.79	30.88
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.21	-6.12
Sector	Zone	Port	QPSK	16QAM
2	3	5	13.92	13.90
		6	14.08	14.07
	4	7	13.66	13.68
		8	13.76	13.76
Total MIMO Conducted PSD (mW/MHz)			97.24	97.18
Total MIMO Conducted PSD (dBm/MHz)			19.88	19.88
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			30.88	30.88
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.12	-6.12

Table 8-49. Power Spectral Density Table (n48_2C_10M+20M_Low Channel_4T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	14.32	13.97
		2	14.44	14.05
	2	3	14.64	14.39
		4	14.41	14.13
Total MIMO Conducted PSD (mW/MHz)			111.55	103.72
Total MIMO Conducted PSD (dBm/MHz)			20.47	20.16
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			31.47	31.16
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-5.53	-5.84
Sector	Zone	Port	QPSK	16QAM
2	3	5	14.37	14.45
		6	14.39	14.45
	4	7	14.12	14.20
		8	14.22	14.26
Total MIMO Conducted PSD (mW/MHz)			107.08	108.69
Total MIMO Conducted PSD (dBm/MHz)			20.30	20.36
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			31.30	31.36
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-5.70	-5.64

Table 8-50. Power Spectral Density Table (n48_2C_10M+20M_Mid Channel_4T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	13.67	13.79
		2	13.76	13.81
	2	3	13.91	13.97
		4	13.81	13.77
Total MIMO Conducted PSD (mW/MHz)			95.70	96.75
Total MIMO Conducted PSD (dBm/MHz)			19.81	19.86
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			30.81	30.86
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.19	-6.14
Sector	Zone	Port	QPSK	16QAM
2	3	5	13.99	14.03
		6	14.17	14.18
	4	7	13.82	13.83
		8	13.79	13.85
Total MIMO Conducted PSD (mW/MHz)			99.21	99.90
Total MIMO Conducted PSD (dBm/MHz)			19.97	20.00
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			30.97	31.00
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.03	-6.00

Table 8-51. Power Spectral Density Table (n48_2C_10M+20M_High Channel_4T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	12.82	12.92
		2	12.85	12.99
	2	3	13.13	12.93
		4	12.80	12.76
Total MIMO Conducted PSD (mW/MHz)			78.03	78.01
Total MIMO Conducted PSD (dBm/MHz)			18.92	18.92
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			29.92	29.92
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.08	-7.08
Sector	Zone	Port	QPSK	16QAM
2	3	5	12.97	13.16
		6	13.23	13.32
	4	7	12.67	12.82
		8	12.81	12.89
Total MIMO Conducted PSD (mW/MHz)			78.44	80.78
Total MIMO Conducted PSD (dBm/MHz)			18.95	19.07
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			29.95	30.07
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.05	-6.93

Table 8-52. Power Spectral Density Table (n48_2C_20M+20M_Low Channel_4T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	12.59	12.66
		2	12.75	12.77
	2	3	13.01	12.71
		4	12.73	12.80
Total MIMO Conducted PSD (mW/MHz)			75.74	75.09
Total MIMO Conducted PSD (dBm/MHz)			18.79	18.76
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			29.79	29.76
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.21	-7.24
Sector	Zone	Port	QPSK	16QAM
2	3	5	12.92	13.01
		6	12.84	13.09
	4	7	12.73	12.67
		8	12.78	12.74
Total MIMO Conducted PSD (mW/MHz)			76.54	77.65
Total MIMO Conducted PSD (dBm/MHz)			18.84	18.90
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			29.84	29.90
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.16	-7.10

Table 8-53. Power Spectral Density Table (n48_2C_20M+20M_Mid Channel_4T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	12.34	12.46
		2	12.45	12.45
	2	3	12.45	12.48
		4	12.43	12.45
Total MIMO Conducted PSD (mW/MHz)			69.80	70.48
Total MIMO Conducted PSD (dBm/MHz)			18.44	18.48
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			29.44	29.48
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.56	-7.52
Sector	Zone	Port	QPSK	16QAM
2	3	5	12.57	12.61
		6	12.68	12.66
	4	7	12.48	12.52
		8	12.40	12.47
Total MIMO Conducted PSD (mW/MHz)			71.69	72.21
Total MIMO Conducted PSD (dBm/MHz)			18.55	18.59
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			29.55	29.59
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.45	-7.41

Table 8-54. Power Spectral Density Table (n48_2C_20M+20M_High Channel_4T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	13.24	13.25
		2	13.51	13.36
	2	3	13.67	13.65
		4	13.18	13.21
Total MIMO Conducted PSD (mW/MHz)			87.60	86.93
Total MIMO Conducted PSD (dBm/MHz)			19.43	19.39
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			30.43	30.39
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.57	-6.61
Sector	Zone	Port	QPSK	16QAM
2	3	5	13.60	13.37
		6	13.85	13.85
	4	7	13.29	13.20
		8	13.43	13.27
Total MIMO Conducted PSD (mW/MHz)			90.53	88.12
Total MIMO Conducted PSD (dBm/MHz)			19.57	19.45
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			30.57	30.45
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.43	-6.55

Table 8-55. Power Spectral Density Table (n48_2C_30M+10M_Low Channel_4T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	12.76	12.87
		2	12.86	13.04
	2	3	13.20	13.36
		4	12.75	12.92
Total MIMO Conducted PSD (mW/MHz)			77.93	80.77
Total MIMO Conducted PSD (dBm/MHz)			18.92	19.07
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			29.92	30.07
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.08	-6.93
Sector	Zone	Port	QPSK	16QAM
2	3	5	13.10	12.80
		6	13.36	13.37
	4	7	12.80	12.68
		8	12.84	12.77
Total MIMO Conducted PSD (mW/MHz)			80.38	78.24
Total MIMO Conducted PSD (dBm/MHz)			19.05	18.93
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			30.05	29.93
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.95	-7.07

Table 8-56. Power Spectral Density Table (n48_2C_30M+10M_Mid Channel_4T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	12.54	12.51
		2	12.60	12.62
	2	3	12.51	12.48
		4	12.53	12.54
Total MIMO Conducted PSD (mW/MHz)			71.87	71.75
Total MIMO Conducted PSD (dBm/MHz)			18.57	18.56
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			29.57	29.56
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.43	-7.44
Sector	Zone	Port	QPSK	16QAM
2	3	5	12.70	12.49
		6	12.74	12.79
	4	7	12.51	12.37
		8	12.50	12.45
Total MIMO Conducted PSD (mW/MHz)			73.02	71.59
Total MIMO Conducted PSD (dBm/MHz)			18.63	18.55
Ant. Gain (dBi)			11.00	11.00
e.i.r.p PSD (dBm/MHz)			29.63	29.55
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.37	-7.45

Table 8-57. Power Spectral Density Table (n48_2C_30M+10M_High Channel_4T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	9.76	9.88	9.88	10.04
		2	9.78	9.92	9.95	10.15
	2	3	10.03	10.08	10.23	10.40
		4	9.70	9.78	9.95	10.10
Total MIMO Conducted PSD (mW/MHz)			38.37	39.24	40.04	41.64
Total MIMO Conducted PSD (dBm/MHz)			15.84	15.94	16.03	16.20
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			26.84	26.94	27.03	27.20
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-10.16	-10.06	-9.97	-9.80
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	10.43	10.42	9.97	9.98
		6	10.68	10.65	10.23	10.30
	4	7	10.09	10.08	9.69	9.70
		8	10.21	10.26	9.84	9.78
Total MIMO Conducted PSD (mW/MHz)			43.44	43.43	39.42	39.51
Total MIMO Conducted PSD (dBm/MHz)			16.38	16.38	15.96	15.97
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			27.38	27.38	26.96	26.97
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-9.62	-9.62	-10.04	-10.03

Table 8-58. Power Spectral Density Table (n48_2C_40M+40M_Low Channel_4T)

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	9.72	9.58	9.61	9.65
		2	9.90	9.67	9.78	9.73
	2	3	10.17	9.84	9.90	9.92
		4	10.04	9.66	9.71	9.71
Total MIMO Conducted PSD (mW/MHz)			39.64	37.23	37.77	37.79
Total MIMO Conducted PSD (dBm/MHz)			15.98	15.71	15.77	15.77
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			26.98	26.71	26.77	26.77
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-10.02	-10.29	-10.23	-10.23
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	9.89	10.03	9.77	9.88
		6	10.05	10.22	9.87	9.97
	4	7	9.59	9.57	9.50	9.62
		8	9.73	9.72	9.58	9.72
Total MIMO Conducted PSD (mW/MHz)			38.36	39.02	37.18	38.20
Total MIMO Conducted PSD (dBm/MHz)			15.84	15.91	15.70	15.82
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			26.84	26.91	26.70	26.82
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-10.16	-10.09	-10.30	-10.18

Table 8-59. Power Spectral Density Table (n48_2C_40M+40M_Mid Channel_4T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	9.48	9.55	9.67	9.74
		2	9.61	9.63	9.74	9.86
	2	3	9.85	9.90	10.02	10.11
		4	9.58	9.71	9.74	9.86
Total MIMO Conducted PSD (mW/MHz)			36.75	37.33	38.15	39.04
Total MIMO Conducted PSD (dBm/MHz)			15.65	15.72	15.82	15.92
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			26.65	26.72	26.82	26.92
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-10.35	-10.28	-10.18	-10.08
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	9.76	9.88	9.76	9.59
		6	10.00	10.15	10.10	9.83
	4	7	9.52	9.62	9.55	9.26
		8	9.42	9.69	9.70	9.34
Total MIMO Conducted PSD (mW/MHz)			37.17	38.55	38.04	35.74
Total MIMO Conducted PSD (dBm/MHz)			15.70	15.86	15.80	15.53
Ant. Gain (dBi)			11.00	11.00	11.00	11.00
e.i.r.p PSD (dBm/MHz)			26.70	26.86	26.80	26.53
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00	37.00	37.00
Margin (dB)			-10.30	-10.14	-10.20	-10.47

Table 8-60. Power Spectral Density Table (n48_2C_40M+40M_High Channel_4T)

FCC: A3LSOG2201			MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	15.48	15.53
		2	15.58	15.66
	2	3	15.61	15.68
		4	15.64	15.64
2	3	5	15.61	15.70
		6	15.64	15.72
	4	7	15.45	15.52
		8	15.53	15.61
Total MIMO Conducted PSD (mW/MHz)			288.41	292.63
Total MIMO Conducted PSD (dBm/MHz)			24.60	24.66
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			32.60	32.66
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-4.40	-4.34

Table 8-61. Power Spectral Density Table (n48_1C_10M_Low Channel_8T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	15.99	16.01
		2	16.09	16.15
	2	3	16.13	16.20
		4	16.19	16.25
2	3	5	16.10	16.17
		6	16.26	16.33
	4	7	15.96	16.01
		8	16.28	16.31
Total MIMO Conducted PSD (mW/MHz)			327.83	331.85
Total MIMO Conducted PSD (dBm/MHz)			25.16	25.21
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			33.16	33.21
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-3.84	-3.79

Table 8-62. Power Spectral Density Table (n48_1C_10M_Mid Channel_8T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	15.47	15.47
		2	15.64	15.62
	2	3	15.63	15.59
		4	15.66	15.60
2	3	5	15.61	15.60
		6	15.73	15.71
	4	7	15.41	15.38
		8	15.57	15.54
Total MIMO Conducted PSD (mW/MHz)			289.83	287.98
Total MIMO Conducted PSD (dBm/MHz)			24.62	24.59
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			32.62	32.59
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-4.38	-4.41

Table 8-63. Power Spectral Density Table (n48_1C_10M_High Channel_8T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	12.28	12.51
		2	12.39	12.58
	2	3	12.50	12.71
		4	12.33	12.59
2	3	5	12.44	12.64
		6	12.34	12.58
	4	7	12.29	12.52
		8	12.41	12.59
Total MIMO Conducted PSD (mW/MHz)			138.21	145.21
Total MIMO Conducted PSD (dBm/MHz)			21.41	21.62
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			29.41	29.62
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.59	-7.38

Table 8-64. Power Spectral Density Table (n48_1C_20M_Low Channel_8T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	12.80	12.97
		2	12.89	13.07
	2	3	12.92	13.11
		4	12.97	13.18
2	3	5	12.87	13.05
		6	13.08	13.33
	4	7	12.74	12.96
		8	13.01	13.23
Total MIMO Conducted PSD (mW/MHz)			156.41	163.85
Total MIMO Conducted PSD (dBm/MHz)			21.94	22.14
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			29.94	30.14
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.06	-6.86

Table 8-65. Power Spectral Density Table (n48_1C_20M_Mid Channel_8T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	12.28	12.26
		2	12.43	12.41
	2	3	12.49	12.48
		4	12.49	12.48
2	3	5	12.41	12.40
		6	12.49	12.51
	4	7	12.31	12.28
		8	12.41	12.37
Total MIMO Conducted PSD (mW/MHz)			139.45	138.99
Total MIMO Conducted PSD (dBm/MHz)			21.44	21.43
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			29.44	29.43
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.56	-7.57

Table 8-66. Power Spectral Density Table (n48_1C_20M_High Channel_8T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	10.49	10.52
		2	10.63	10.64
	2	3	10.75	10.74
		4	10.55	10.55
2	3	5	10.87	10.82
		6	11.05	11.01
	4	7	10.65	10.64
		8	10.80	10.76
Total MIMO Conducted PSD (mW/MHz)			94.57	94.26
Total MIMO Conducted PSD (dBm/MHz)			19.76	19.74
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			27.76	27.74
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.24	-9.26

Table 8-67. Power Spectral Density Table (n48_1C_30M_Low Channel_8T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	10.75	10.74
		2	10.90	10.85
	2	3	10.93	10.93
		4	11.00	11.09
2	3	5	11.05	11.11
		6	11.13	11.17
	4	7	10.63	10.76
		8	10.89	11.03
Total MIMO Conducted PSD (mW/MHz)			98.71	99.84
Total MIMO Conducted PSD (dBm/MHz)			19.94	19.99
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			27.94	27.99
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.06	-9.01

Table 8-68. Power Spectral Density Table (n48_1C_30M_Mid Channel_8T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	10.50	10.55
		2	10.66	10.71
	2	3	10.73	10.82
		4	10.72	10.80
2	3	5	10.67	10.75
		6	10.83	10.90
	4	7	10.53	10.59
		8	10.66	10.73
Total MIMO Conducted PSD (mW/MHz)			93.20	94.68
Total MIMO Conducted PSD (dBm/MHz)			19.69	19.76
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			27.69	27.76
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.31	-9.24

Table 8-69. Power Spectral Density Table (n48_1C_30M_High Channel_8T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	9.99	9.72
		2	10.11	9.77
	2	3	10.19	9.84
		4	10.01	9.69
2	3	5	10.36	10.08
		6	10.68	10.30
	4	7	10.10	9.78
		8	10.29	9.92
Total MIMO Conducted PSD (mW/MHz)			84.16	78.00
Total MIMO Conducted PSD (dBm/MHz)			19.25	18.92
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			27.25	26.92
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.75	-10.08

Table 8-70. Power Spectral Density Table (n48_1C_40M_Low Channel_8T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	9.57	9.58
		2	9.79	9.66
	2	3	9.71	9.56
		4	9.86	9.62
2	3	5	9.69	9.63
		6	10.07	10.00
	4	7	9.55	9.48
		8	9.77	9.69
Total MIMO Conducted PSD (mW/MHz)			75.57	73.90
Total MIMO Conducted PSD (dBm/MHz)			18.78	18.69
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			26.78	26.69
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-10.22	-10.31

Table 8-71. Power Spectral Density Table (n48_1C_40M_Mid Channel_8T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	9.09	9.15
		2	9.23	9.27
	2	3	9.33	9.35
		4	9.30	9.31
2	3	5	9.33	9.37
		6	9.62	9.62
	4	7	9.20	9.28
		8	9.30	9.33
Total MIMO Conducted PSD (mW/MHz)			68.12	68.65
Total MIMO Conducted PSD (dBm/MHz)			18.33	18.37
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			26.33	26.37
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-10.67	-10.63

Table 8-72. Power Spectral Density Table (n48_1C_40M_High Channel_8T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	12.49	12.50
		2	12.57	12.56
	2	3	12.68	12.67
		4	12.53	12.54
2	3	5	12.66	12.63
		6	12.64	12.66
	4	7	12.46	12.44
		8	12.55	12.53
Total MIMO Conducted PSD (mW/MHz)			144.60	144.44
Total MIMO Conducted PSD (dBm/MHz)			21.60	21.60
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			29.60	29.60
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.40	-7.40

Table 8-73. Power Spectral Density Table (n48_2C_10M+10M_Low Channel_8T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	13.22	12.80
		2	13.33	12.88
	2	3	13.39	12.95
		4	13.46	12.97
2	3	5	13.37	12.94
		6	13.57	13.18
	4	7	13.20	12.81
		8	13.44	13.06
Total MIMO Conducted PSD (mW/MHz)			174.00	157.78
Total MIMO Conducted PSD (dBm/MHz)			22.41	21.98
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			30.41	29.98
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-6.59	-7.02

Table 8-74. Power Spectral Density Table (n48_2C_10M+10M_Mid Channel_8T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	12.42	12.54
		2	12.53	12.64
	2	3	12.59	12.70
		4	12.53	12.64
2	3	5	12.57	12.69
		6	12.67	12.78
	4	7	12.45	12.57
		8	12.51	12.63
Total MIMO Conducted PSD (mW/MHz)			143.41	147.25
Total MIMO Conducted PSD (dBm/MHz)			21.57	21.68
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			29.57	29.68
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-7.43	-7.32

Table 8-75. Power Spectral Density Table (n48_2C_10M+10M_High Channel_8T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	10.54	10.68
		2	10.65	10.78
	2	3	10.68	10.81
		4	10.66	10.80
2	3	5	10.72	10.86
		6	10.95	11.01
	4	7	10.58	10.69
		8	10.65	10.75
Total MIMO Conducted PSD (mW/MHz)			93.54	96.13
Total MIMO Conducted PSD (dBm/MHz)			19.71	19.83
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			27.71	27.83
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.29	-9.17

Table 8-76. Power Spectral Density Table (n48_2C_10M+20M_Low Channel_8T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	11.11	11.14
		2	11.22	11.24
	2	3	11.25	11.31
		4	11.11	11.09
2	3	5	11.15	11.18
		6	11.27	10.82
	4	7	10.98	11.01
		8	11.19	11.25
Total MIMO Conducted PSD (mW/MHz)			104.51	103.82
Total MIMO Conducted PSD (dBm/MHz)			20.19	20.16
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			28.19	28.16
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-8.81	-8.84

Table 8-77. Power Spectral Density Table (n48_2C_10M+20M_Mid Channel_8T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	10.48	10.71
		2	10.61	10.84
	2	3	10.71	11.00
		4	10.55	10.84
2	3	5	10.71	10.97
		6	10.72	11.15
	4	7	10.52	10.74
		8	10.65	10.85
Total MIMO Conducted PSD (mW/MHz)			92.24	98.19
Total MIMO Conducted PSD (dBm/MHz)			19.65	19.92
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			27.65	27.92
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-9.35	-9.08

Table 8-78. Power Spectral Density Table (n48_2C_10M+20M_High Channel_8T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	9.67	10.00
		2	9.76	10.07
	2	3	9.90	10.19
		4	9.77	9.98
2	3	5	10.11	10.27
		6	10.47	10.53
	4	7	9.88	10.03
		8	9.98	10.12
Total MIMO Conducted PSD (mW/MHz)			79.06	82.84
Total MIMO Conducted PSD (dBm/MHz)			18.98	19.18
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			26.98	27.18
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-10.02	-9.82

Table 8-79. Power Spectral Density Table (n48_2C_20M+20M_Low Channel_8T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	9.50	9.80
		2	9.66	9.90
	2	3	9.68	9.99
		4	9.81	10.03
2	3	5	9.74	9.97
		6	10.04	10.22
	4	7	9.57	9.82
		8	9.79	10.08
Total MIMO Conducted PSD (mW/MHz)			75.08	79.61
Total MIMO Conducted PSD (dBm/MHz)			18.76	19.01
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			26.76	27.01
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-10.24	-9.99

Table 8-80. Power Spectral Density Table (n48_2C_20M+20M_Mid Channel_8T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	9.33	9.32
		2	9.45	9.40
	2	3	9.54	9.53
		4	9.55	9.44
2	3	5	9.42	9.42
		6	9.69	9.65
	4	7	9.30	9.23
		8	9.42	9.39
Total MIMO Conducted PSD (mW/MHz)			70.70	70.08
Total MIMO Conducted PSD (dBm/MHz)			18.49	18.46
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			26.49	26.46
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-10.51	-10.54

Table 8-81. Power Spectral Density Table (n48_2C_20M+20M_High Channel_8T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	9.71	9.80
		2	9.88	9.86
	2	3	9.90	9.94
		4	9.74	9.75
2	3	5	10.04	10.09
		6	10.37	10.45
	4	7	9.85	9.88
		8	10.00	10.03
Total MIMO Conducted PSD (mW/MHz)			78.91	79.62
Total MIMO Conducted PSD (dBm/MHz)			18.97	19.01
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			26.97	27.01
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-10.03	-9.99

Table 8-82. Power Spectral Density Table (n48_2C_30M+10M_Low Channel_8T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	9.46	9.69
		2	9.62	9.84
	2	3	9.64	9.80
		4	9.62	9.83
2	3	5	9.70	9.90
		6	10.14	10.36
	4	7	9.53	9.77
		8	9.69	9.94
Total MIMO Conducted PSD (mW/MHz)			74.29	78.08
Total MIMO Conducted PSD (dBm/MHz)			18.71	18.93
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			26.71	26.93
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-10.29	-10.07

Table 8-83. Power Spectral Density Table (n48_2C_30M+10M_Mid Channel_8T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	9.24	9.34
		2	9.38	9.48
	2	3	9.36	9.46
		4	9.32	9.40
2	3	5	9.41	9.47
		6	9.57	9.64
	4	7	9.22	9.26
		8	9.36	9.44
Total MIMO Conducted PSD (mW/MHz)			69.03	70.27
Total MIMO Conducted PSD (dBm/MHz)			18.39	18.47
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			26.39	26.47
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-10.61	-10.53

Table 8-84. Power Spectral Density Table (n48_2C_30M+10M_High Channel_8T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	6.71	6.73
		2	6.82	6.87
	2	3	6.90	6.93
		4	6.51	6.81
2	3	5	6.83	7.05
		6	7.18	7.39
	4	7	6.60	6.82
		8	6.77	6.98
Total MIMO Conducted PSD (mW/MHz)			38.24	39.66
Total MIMO Conducted PSD (dBm/MHz)			15.83	15.98
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			23.83	23.98
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-13.17	-13.02

Table 8-85. Power Spectral Density Table (n48_2C_40M+40M_Low Channel_8T)

Sector	Zone	Port	QPSK	16QAM
1	1	1	6.41	6.50
		2	6.55	6.61
	2	3	6.57	6.65
		4	6.56	6.82
2	3	5	6.61	6.87
		6	6.81	7.09
	4	7	6.42	6.72
		8	6.64	6.91
Total MIMO Conducted PSD (mW/MHz)			36.31	38.07
Total MIMO Conducted PSD (dBm/MHz)			15.60	15.81
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			23.60	23.81
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-13.40	-13.19

Table 8-86. Power Spectral Density Table (n48_2C_40M+40M_Mid Channel_8T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM
1	1	1	6.52	6.44
		2	6.74	6.70
	2	3	6.75	6.69
		4	6.69	6.62
2	3	5	6.59	6.60
		6	7.06	7.08
	4	7	6.55	6.49
		8	6.68	6.63
Total MIMO Conducted PSD (mW/MHz)			37.41	37.06
Total MIMO Conducted PSD (dBm/MHz)			15.73	15.69
Ant. Gain (dBi)			8.00	8.00
e.i.r.p PSD (dBm/MHz)			23.73	23.69
e.i.r.p PSD Limit (dBm/MHz)			37.00	37.00
Margin (dB)			-13.27	-13.31

Table 8-87. Power Spectral Density Table (n48_2C_40M+40M_High Channel_8T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Plot 8-23. Power Spectral Density Plot
(n48_1C_10M_16QAM - Mid Channel_2T, Port 5)



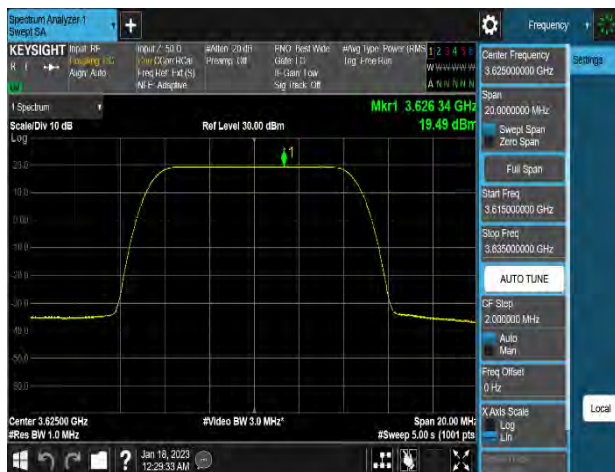
Plot 8-24. Power Spectral Density Plot
(n48_1C_10M_16QAM - Mid Channel_2T, Port 6)



Plot 8-25. Power Spectral Density Plot
(n48_2C_10M+10M_16QAM - Mid Channel_2T, Port 5)



Plot 8-26. Power Spectral Density Plot
(n48_2C_10M+10M_16QAM - Mid Channel_2T, Port 6)



Plot 8-27. Power Spectral Density Plot
(n48_1C_10M_256QAM - Mid Channel_4T, Port 5)



Plot 8-28. Power Spectral Density Plot
(n48_1C_10M_256QAM - Mid Channel_4T, Port 6)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Plot 8-29. Power Spectral Density Plot
(n48_1C_10M_256QAM - Mid Channel_4T, Port 7)



Plot 8-30. Power Spectral Density Plot
(n48_1C_10M_256QAM - Mid Channel_4T, Port 8)



Plot 8-31. Power Spectral Density Plot
(n48_2C_10M+10M_16QAM - Mid Channel_4T, Port 5)



Plot 8-32. Power Spectral Density Plot
(n48_2C_10M+10M_16QAM - Mid Channel_4T, Port 6)



Plot 8-33. Power Spectral Density Plot
(n48_2C_10M+10M_16QAM - Mid Channel_4T, Port 7)



Plot 8-34. Power Spectral Density Plot
(n48_2C_10M+10M_16QAM - Mid Channel_4T, Port 8)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Plot 8-35. Power Spectral Density Plot
(n48_1C_10M_16QAM - Mid Channel_8T, Port 1)



Plot 8-36. Power Spectral Density Plot
(n48_1C_10M_16QAM - Mid Channel_8T, Port 2)



Plot 8-37. Power Spectral Density Plot
(n48_1C_10M_16QAM - Mid Channel_8T, Port 3)



Plot 8-38. Power Spectral Density Plot
(n48_1C_10M_16QAM - Mid Channel_8T, Port 4)



Plot 8-39. Power Spectral Density Plot
(n48_1C_10M_16QAM - Mid Channel_8T, Port 5)



Plot 8-40. Power Spectral Density Plot
(n48_1C_10M_16QAM - Mid Channel_8T, Port 6)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Plot 8-41. Power Spectral Density Plot
(n48_1C_10M_16QAM - Mid Channel_8T, Port 7)



Plot 8-42. Power Spectral Density Plot
(n48_1C_10M_16QAM - Mid Channel_8T, Port 8)



Plot 8-43. Power Spectral Density Plot
(n48_2C_10M+10M_QPSK - Mid Channel_8T, Port 1)



Plot 8-44. Power Spectral Density Plot
(n48_2C_10M+10M_QPSK - Mid Channel_8T, Port 2)



Plot 8-45. Power Spectral Density Plot
(n48_2C_10M+10M_QPSK - Mid Channel_8T, Port 3)



Plot 8-46. Power Spectral Density Plot
(n48_2C_10M+10M_QPSK - Mid Channel_8T, Port 4)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Plot 8-47. Power Spectral Density Plot
(n48_2C_10M+10M_QPSK - Mid Channel_8T, Port 5)



Plot 8-48. Power Spectral Density Plot
(n48_2C_10M+10M_QPSK - Mid Channel_8T, Port 6)



Plot 8-49. Power Spectral Density Plot
(n48_2C_10M+10M_QPSK - Mid Channel_8T, Port 7)



Plot 8-50. Power Spectral Density Plot
(n48_2C_10M+10M_QPSK - Mid Channel_8T, Port 8)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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8.5 Equivalent Isotropic Radiated Power (EIRP)

Test Overview

A transmitter port of EUT is connected to the input of a signal analyzer. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Description

KDB 971168 D01 v03r01 – Section 5.4

KDB 662911 D01 v02r01 – Section E)1) In-Band Power Measurements

ANSI C63.26-2015 – Section 5.2.4

ANSI C63.26 - Section 5.2.5

The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The spectrum analyzer settings were as follows:

1. Conducted power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. IBW = 10 MHz (the reference bandwidth)
3. RBW = 1 ~ 5% of the expected OBW
4. VBW $\geq 3 \times$ RBW
5. Span = 2 ~ 3 x OBW
6. No. of sweep points $\geq 2 \times$ span / RBW
7. Detector = RMS
8. Trace mode = Trace-Averaging (RMS) set to average over 100 sweeps
9. The trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

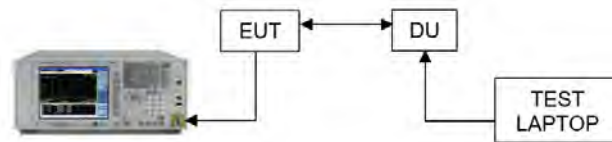


Figure 8-4. Test Instrument & Measurement Setup

Limit

Category B CBSD: 47dBm/10 MHz

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Note

1. Periodic trigger was used with gating ON. Gate sweep time, Gate delay and gate length were set accordingly to capture ON time of the transmission.
2. For Multi carriers, conducted power for each carrier is measured to compare the 1st carrier result and the result of 2nd carrier. After compared, worst measured value is listed on report.
3. MIMO Calculations are done considering output channel power for all ports and respective margins are calculated according to procedures in section 6.4 of ANSI C63.26 and section D of KDB 971168 D01 v03r01.
4. All modes of operation were investigated and the worst configuration result plots are reported in each RF chain.
5. Consider the following factors for MIMO Power:
 - c) Conducted power for each port is measured in dBm.
 - d) Powers are summed up in linear using the measure-and-sum technique defined in KDB 971168 D01 v03r01- Section D.
 - e) Conducted power per port (dBm) is converted to a linear value (mW). A summation of linear powers for all ports gives us the total MIMO conducted power in milliWatts (mW).
6. Antenna Gains (dBi) control value provided by the client.
7. Directional gain calculations were performed on the individual gains in specific direction across all directions.
8. Applied antenna gain as below:

Mode		Rated Conductive Power		Total Directional Antenna Gain(dBi)	Rated EIRP (dBm/Unit)
Active Zone	Active Antenna path	Path (dBm)	Unit (dBm)		
1	2T	28	31	11 ±1	43
2	4T	28	34	10 ±1	45
4	8T	25	34	7 ±1	42

9. Sample Calculation:

Let us assume the following numbers:

- a) Total MIMO Conducted Power as 1198.34 mW
- b) Antenna Gain = 12.00 dBi

Factors	Value	Unit
Summed MIMO Conducted Power (linear sum)	1198.34	mW
Summed MIMO Conducted Power (dBm) = $10 * \log (1198.34) =$	30.79	dBm/10MHz
Antenna Gain	12.00	dBi
e.i.r.p	42.79	dBm/10MHz
Limit	47.00	dBm/10 MHz
Margin = Limit - e.i.r.p = $42.79 - 47.00 =$	-4.21	dB

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	27.71	27.48	27.77	27.73
		2	27.84	27.53	27.80	27.76
Total MIMO Conducted power (mW/10MHz)			1198.34	1126.00	1200.97	1189.96
Total MIMO Conducted power (dBm/10MHz)			30.79	30.52	30.80	30.76
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			42.79	42.52	42.80	42.76
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-4.21	-4.48	-4.20	-4.24
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	27.84	27.50	27.77	27.40
		4	27.68	27.40	27.69	27.32
Total MIMO Conducted power (mW/10MHz)			1194.27	1111.88	1185.90	1089.05
Total MIMO Conducted power (dBm/10MHz)			30.77	30.46	30.74	30.37
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			42.77	42.46	42.74	42.37
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-4.23	-4.54	-4.26	-4.63
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	27.80	27.77	28.06	28.14
		6	27.72	27.68	27.96	28.07
Total MIMO Conducted power (mW/10MHz)			1194.12	1184.55	1264.91	1292.84
Total MIMO Conducted power (dBm/10MHz)			30.77	30.74	31.02	31.12
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			42.77	42.74	43.02	43.12
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-4.23	-4.26	-3.98	-3.88
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	27.54	27.54	27.81	27.89
		8	27.65	27.65	27.84	28.02
Total MIMO Conducted power (mW/10MHz)			1149.65	1149.65	1212.08	1249.05
Total MIMO Conducted power (dBm/10MHz)			30.61	30.61	30.84	30.97
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			42.61	42.61	42.84	42.97
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-4.39	-4.39	-4.16	-4.03

Table 8-88. Equivalent Isotropic Radiated Power Table (n48_1C_10M_Low Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	27.92	27.64	27.67	27.70
		2	27.82	27.68	27.71	27.74
Total MIMO Conducted power (mW/10MHz)			1224.78	1166.90	1174.99	1183.14
Total MIMO Conducted power (dBm/10MHz)			30.88	30.67	30.70	30.73
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			42.88	42.67	42.70	42.73
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-4.12	-4.33	-4.30	-4.27
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	27.79	27.67	27.74	27.80
		4	27.80	27.66	27.59	27.79
Total MIMO Conducted power (mW/10MHz)			1203.73	1168.24	1168.41	1203.73
Total MIMO Conducted power (dBm/10MHz)			30.81	30.68	30.68	30.81
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			42.81	42.68	42.68	42.81
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-4.19	-4.32	-4.32	-4.19
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	28.13	28.15	28.24	28.44
		6	28.61	28.43	28.29	28.39
Total MIMO Conducted power (mW/10MHz)			1376.24	1349.76	1341.33	1388.47
Total MIMO Conducted power (dBm/10MHz)			31.39	31.30	31.28	31.43
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			43.39	43.30	43.28	43.43
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-3.61	-3.70	-3.72	-3.57
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	28.30	27.77	28.03	28.20
		8	28.38	27.79	28.24	28.47
Total MIMO Conducted power (mW/10MHz)			1364.74	1199.59	1302.14	1363.77
Total MIMO Conducted power (dBm/10MHz)			31.35	30.79	31.15	31.35
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			43.35	42.79	43.15	43.35
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-3.65	-4.21	-3.85	-3.65

Table 8-89. Equivalent Isotropic Radiated Power Table (n48_1C_10M_Mid Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	27.92	27.66	27.62	27.46
		2	28.02	27.75	27.46	27.58
Total MIMO Conducted power (mW/10MHz)			1253.31	1179.11	1135.28	1129.98
Total MIMO Conducted power (dBm/10MHz)			30.98	30.72	30.55	30.53
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			42.98	42.72	42.55	42.53
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-4.02	-4.28	-4.45	-4.47
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	27.94	27.68	27.43	27.54
		4	27.89	27.55	27.33	27.45
Total MIMO Conducted power (mW/10MHz)			1237.48	1154.99	1094.10	1123.45
Total MIMO Conducted power (dBm/10MHz)			30.93	30.63	30.39	30.51
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			42.93	42.63	42.39	42.51
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-4.07	-4.37	-4.61	-4.49
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	27.74	27.98	27.45	28.00
		6	27.68	28.02	28.02	28.11
Total MIMO Conducted power (mW/10MHz)			1180.43	1261.93	1189.77	1278.10
Total MIMO Conducted power (dBm/10MHz)			30.72	31.01	30.75	31.07
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			42.72	43.01	42.75	43.07
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-4.28	-3.99	-4.25	-3.93
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	27.61	27.56	27.91	27.97
		8	27.50	27.73	27.85	27.93
Total MIMO Conducted power (mW/10MHz)			1139.11	1163.09	1227.55	1247.48
Total MIMO Conducted power (dBm/10MHz)			30.57	30.66	30.89	30.96
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			42.57	42.66	42.89	42.96
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-4.43	-4.34	-4.11	-4.04

Table 8-90. Equivalent Isotropic Radiated Power Table (n48_1C_10M_High Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K22121601-00-R2.A3L	Test Dates: 01/03/2023 – 02/15/2023	EUT Type: Smallcell (SOG2201)		Page 93 of 289

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	24.59	25.24	24.61	25.55
		2	24.69	25.26	24.86	25.51
Total MIMO Conducted power (mW/10MHz)			582.18	669.93	595.26	714.55
Total MIMO Conducted power (dBm/10MHz)			27.65	28.26	27.75	28.54
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			39.65	40.26	39.75	40.54
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-7.35	-6.74	-7.25	-6.46
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	24.79	25.48	24.84	25.79
		4	24.86	25.26	24.83	25.65
Total MIMO Conducted power (mW/10MHz)			607.50	688.92	608.88	746.60
Total MIMO Conducted power (dBm/10MHz)			27.84	28.38	27.85	28.73
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			39.84	40.38	39.85	40.73
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-7.16	-6.62	-7.15	-6.27
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	24.88	25.44	24.74	25.75
		6	25.17	25.72	25.11	25.29
Total MIMO Conducted power (mW/10MHz)			636.46	723.20	622.19	713.90
Total MIMO Conducted power (dBm/10MHz)			28.04	28.59	27.94	28.54
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			40.04	40.59	39.94	40.54
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-6.96	-6.41	-7.06	-6.46
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	24.54	25.20	24.72	25.40
		8	24.74	25.29	24.89	25.66
Total MIMO Conducted power (mW/10MHz)			582.30	669.20	604.80	714.87
Total MIMO Conducted power (dBm/10MHz)			27.65	28.26	27.82	28.54
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			39.65	40.26	39.82	40.54
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-7.35	-6.74	-7.18	-6.46

Table 8-91. Equivalent Isotropic Radiated Power Table (n48_1C_20M_Low Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	25.56	25.40	25.61	25.71
		2	25.60	25.28	25.68	25.72
Total MIMO Conducted power (mW/10MHz)			722.83	684.02	733.74	745.64
Total MIMO Conducted power (dBm/10MHz)			28.59	28.35	28.66	28.73
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			40.59	40.35	40.66	40.73
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-6.41	-6.65	-6.34	-6.27
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	25.90	25.48	25.63	25.79
		4	25.65	25.25	25.75	25.79
Total MIMO Conducted power (mW/10MHz)			756.33	688.15	741.43	758.63
Total MIMO Conducted power (dBm/10MHz)			28.79	28.38	28.70	28.80
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			40.79	40.38	40.70	40.80
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-6.21	-6.62	-6.30	-6.20
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	25.86	25.41	25.14	25.74
		6	25.36	25.88	25.61	25.98
Total MIMO Conducted power (mW/10MHz)			729.04	734.79	690.50	771.25
Total MIMO Conducted power (dBm/10MHz)			28.63	28.66	28.39	28.87
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			40.63	40.66	40.39	40.87
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-6.37	-6.34	-6.61	-6.13
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	25.50	25.37	25.76	25.29
		8	25.52	25.52	25.75	25.33
Total MIMO Conducted power (mW/10MHz)			711.26	700.80	752.54	679.26
Total MIMO Conducted power (dBm/10MHz)			28.52	28.46	28.77	28.32
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			40.52	40.46	40.77	40.32
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-6.48	-6.54	-6.23	-6.68

Table 8-92. Equivalent Isotropic Radiated Power Table (n48_1C_20M_Mid Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K22121601-00-R2.A3L	Test Dates: 01/03/2023 – 02/15/2023	EUT Type: Smallcell (SOG2201)		Page 95 of 289

Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	1	1	24.37	-38.14	24.62	25.36
		2	24.48	25.00	24.69	25.51
Total MIMO Conducted power (mW/10MHz)			554.07	316.23	584.18	699.19
Total MIMO Conducted power (dBm/10MHz)			27.44	25.00	27.67	28.45
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			39.44	37.00	39.67	40.45
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-7.56	-10.00	-7.33	-6.55
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
1	2	3	24.84	25.41	25.14	25.95
		4	24.55	25.02	24.72	25.49
Total MIMO Conducted power (mW/10MHz)			589.89	665.22	623.07	747.55
Total MIMO Conducted power (dBm/10MHz)			27.71	28.23	27.95	28.74
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			39.71	40.23	39.95	40.74
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-7.29	-6.77	-7.05	-6.26
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	3	5	24.65	25.20	24.85	25.59
		6	25.09	25.66	25.42	25.25
Total MIMO Conducted power (mW/10MHz)			614.59	699.26	653.83	697.21
Total MIMO Conducted power (dBm/10MHz)			27.89	28.45	28.15	28.43
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			39.89	40.45	40.15	40.43
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-7.11	-6.55	-6.85	-6.57
Sector	Zone	Port	QPSK	16QAM	64QAM	256QAM
2	4	7	24.43	25.04	24.78	25.48
		8	24.48	25.06	24.72	25.56
Total MIMO Conducted power (mW/10MHz)			557.88	639.78	597.09	712.93
Total MIMO Conducted power (dBm/10MHz)			27.47	28.06	27.76	28.53
Ant. Gain (dBi)			12.00	12.00	12.00	12.00
e.i.r.p (dBm/10MHz)			39.47	40.06	39.76	40.53
e.i.r.p Limit (dBm/10MHz)			47.00	47.00	47.00	47.00
Margin (dB)			-7.53	-6.94	-7.24	-6.47

Table 8-93. Equivalent Isotropic Radiated Power Table (n48_2C_10M_High Channel_2T)

FCC: A3LSOG2201		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K22121601-00-R2.A3L	Test Dates: 01/03/2023 – 02/15/2023	EUT Type: Smallcell (SOG2201)		Page 96 of 289