

NTS Silicon Valley www.nts.com 41039 Boyce Road Fremont, CA 94538 510-578-3500 Phone 510-440-9525 Fax

EMC Test Report

Application for FCC Grant of Equipment Authorization

FCC Part 15, Subpart E

Model: C61W-700 Wireless RVU Client

FCC ID:	PGRC61W
APPLICANT:	ARRIS 310 Providence Mine Road Nevada City, CA 95959
TEST SITE(S):	National Technical Systems - Silicon Valley 41039 Boyce Road. Fremont, CA. 94538-2435
IC SITE REGISTRATION #:	2845B-4, 2845B-7
REPORT DATE:	March 27, 2017
REISSUE DATE:	May 10, 2017
FINAL TEST DATES:	February 6, 28, March 1, 2, 3, 6, 7, 8, 13, 14, May 1, 2, and 10, 2017
TOTAL NUMBER OF PAGES:	247



National Technical Systems - Silicon Valley is accredited by the A2LA, certificate number 0214.26, to perform the test(s) listed in this report, except where noted otherwise. This report and the information contained herein represent the results of testing test articles identified and selected by the client performed to specifications and/or procedures selected by the client. National Technical Systems (NTS) makes no representations, expressed or implied, that such testing is adequate (or inadequate) to demonstrate efficiency, performance, reliability, or any other characteristic of the articles being tested, or similar products. This report should not be relied upon as an endorsement or certification by NTS of the equipment tested, nor does it represent any statement whatsoever as to its merchantability or fitness of the test article, or similar products, for a particular purpose. This report shall not be reproduced except in full



Report Date: March 27, 2017

VALIDATING SIGNATORIES

PROGRAM MGR

Mark E Hill Staff Engineer

TECHNICAL REVIEWER:

Mark E Hill Staff Engineer

FINAL REPORT PREPARER:

David Guidotti Senior Technical Writer

QUALITY ASSURANCE DELEGATE

lan

Gary Izard Technical Writer

REVISION HISTORY

Rev#	Date	Comments	Modified By
-	March 27, 2017	First release	
1.0	May 10, 2017	Added 15.B data to demonstrate compliance with spurious emissions limits below 1GHz. Updated spurious emissions.	MEH
2.0	May 10, 2017	Updated spurious emissions	MEH
3.0	May 10, 2017	Added Frequency Stability results	MEH

TABLE OF CONTENTS

VALIDATING SIGNATORIES	2
REVISION HISTORY	3
TABLE OF CONTENTS	
SCOPE	
OBJECTIVE	
STATEMENT OF COMPLIANCE	
DEVIATIONS FROM THE STANDARDS	
TEST RESULTS SUMMARY	
UNII / LELAN DEVICES MEASUREMENT UNCERTAINTIES	
EQUIPMENT UNDER TEST (EUT) DETAILS GENERAL	
OTHER EUT DETAILS	
ANTENNA SYSTEM	11
ENCLOSURE	
MODIFICATIONS	
SUPPORT EQUIPMENT	12
EUT INTERFACE PORTS	
EUT OPERATION	
TEST SITE	14
GENERAL INFORMATION	14
CONDUCTED EMISSIONS CONSIDERATIONS	
RADIATED EMISSIONS CONSIDERATIONS	
MEASUREMENT INSTRUMENTATION	
RECEIVER SYSTEM INSTRUMENT CONTROL COMPUTER	15
LINE IMPEDANCE STABILIZATION NETWORK (LISN)	
FILTERS/ATTENUATORS	
ANTENNAS	
ANTENNA MAST AND EQUIPMENT TURNTABLE	16
INSTRUMENT CALIBRATION	
TEST PROCEDURES	17
EUT AND CABLE PLACEMENT	17
CONDUCTED EMISSIONS	
RADIATED EMISSIONS	
RADIATED EMISSIONS	
CONDUCTED EMISSIONS FROM ANTENNA PORT BANDWIDTH MEASUREMENTS	
SPECIFICATION LIMITS AND SAMPLE CALCULATIONS	
CONDUCTED EMISSIONS SPECIFICATION LIMITS: FCC 15.207; FCC 15.107(A), RSS GEN	
GENERAL TRANSMITTER RADIATED EMISSIONS SPECIFICATION LIMITS	
FCC 15.407 (A) OUTPUT POWER LIMITS	24
SPURIOUS EMISSIONS LIMITS –UNII AND LELAN DEVICES	
SAMPLE CALCULATIONS - CONDUCTED EMISSIONS	
SAMPLE CALCULATIONS - RADIATED EMISSIONS	
SAMPLE CALCULATIONS - FIELD STRENGTH TO EIRP CONVERSION	
APPENDIX A TEST EQUIPMENT CALIBRATION DATA	
APPENDIX B TEST DATA	30
END OF REPORT	247

SCOPE

An electromagnetic emissions test has been performed on the ARRIS model C61W-700 Wireless RVU Client, pursuant to the following rules:

FCC Part 15, Subpart E requirements for UNII Devices

Conducted and radiated emissions data has been collected, reduced, and analyzed within this report in accordance with measurement guidelines set forth in the following reference standards and as outlined in National Technical Systems - Silicon Valley test procedures:

FCC General UNII Test Procedures KDB789033

The intentional radiator above has been tested in a simulated typical installation to demonstrate compliance with the relevant Industry Canada performance and procedural standards.

Final system data was gathered in a mode that tended to maximize emissions by varying orientation of EUT, orientation of power and I/O cabling, antenna search height, and antenna polarization.

Every practical effort was made to perform an impartial test using appropriate test equipment of known calibration. All pertinent factors have been applied to reach the determination of compliance.

OBJECTIVE

The primary objective of the manufacturer is compliance with the regulations outlined in the previous section.

Prior to marketing in the USA, all unlicensed transmitters and transceivers require certification. Receive-only devices operating between 30 MHz and 960 MHz are subject to either certification or a manufacturer's declaration of conformity, with all other receive-only devices exempt from the technical requirements.

Certification is a procedure where the manufacturer submits test data and technical information to a certification body and receives a certificate or grant of equipment authorization upon successful completion of the certification body's review of the submitted documents. Once the equipment authorization has been obtained, the label indicating compliance must be attached to all identical units, which are subsequently manufactured.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product which may result in increased emissions should be checked to ensure compliance has been maintained (i.e., printed circuit board layout changes, different line filter, different power supply, harnessing or I/O cable changes, etc.).

STATEMENT OF COMPLIANCE

The tested sample of ARRIS model C61W-700 Wireless RVU Client complied with the requirements of the following regulations:

FCC Part 15, Subpart E requirements for UNII Devices

Maintenance of compliance is the responsibility of the manufacturer. Any modifications to the product should be assessed to determine their potential impact on the compliance status of the device with respect to the standards detailed in this test report.

The test results recorded herein are based on a single type test of ARRIS model C61W-700 Wireless RVU Client and therefore apply only to the tested sample. The sample was selected and prepared by Mark Rieger of ARRIS.

DEVIATIONS FROM THE STANDARDS

No deviations were made from the published requirements listed in the scope of this report.

TEST RESULTS SUMMARY

UNII / LELAN DEVICES

OPERATION IN THE 5.15 – 5.25 GHZ BAND – MOBILE AND PORTABLE CLIENT DEVICE

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.407 (a) (1) (iv)		Output Power	a: 21.7 dBm (147.8 mW) n20: 22 dBm (158.5 mW) n40: 23.4 dBm (217.6 mW) ac80: 21 dBm (126.2 mW)	24 dBm (250 mW)	Complies
15.407 (a) (1) (iv)		Power Spectral Density	a: 10.3 dBm/MHz n20: 10.3 dBm/MHz n40: 10 dBm/MHz ac80: 4.1 dBm/MHz	11 dBm/MHz	Complies
15.407(b) (1) / 15.209		Spurious Emissions	53.8 dBµV/m @ 5150.0 MHz (-0.2 dB)	Refer to the limits section for restricted bands, all others -27 dBm/MHz EIRP	Complies

Report Date: March 27, 2017

OPERATION IN THE 5.25 – 5.35 GHZ BAND

FCC Rule Part	-	Description	Measured Value / Comments	Limit / Requirement	Result (margin)
15.407(a) (2)	-	26dB Bandwidth	> 20MHz for all modes	N/A – limits output power if < 20MHz	N/A
15.407(a) (2)	-	Output Power	a: 22.0 dBm (157 mW) n20: 22.2 dBm (165 mW) n40: 23.8 dBm (241.3 mW) ac80: 20.4 dBm (108.5 mW)	24 dBm (250 mW)	Complies
15.407(a) (2) - Power Spectral Densit		Power Spectral Density	a: 10.4 dBm/MHz n20: 10.4 dBm/MHz n40: 10.3 dBm/MHz ac80: 2.8 dBm/MHz	11 dBm/MHz	Complies
15.407(b) (2) / 15.209 - Sp		Spurious Emissions	53.9 dBµV/m @ 5350.3 MHz (-0.1 dB)	Refer to the limits section for restricted bands, all others -27 dBm/MHz EIRP	Complies

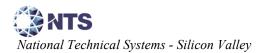


OPERATION IN THE 5.47 – 5.725 GHZ BAND

FCC Rule Part	-	Description	Measured Value / Comments	Limit / Requirement	Result (margin)
15.407(a) (2)	-	26dB Bandwidth	Power limit reduced for those channels with 26dB BW < 20MHz	N/A – limits output power if < 20MHz	N/A
15.407(a) (2)	-	Output Power	a: 21.9 dBm (156 mW) n20: 22.4 dBm (173 mW) n40: 23.9 dBm (243 mW) ac80: 23.8 dBm (241 mW)	24 dBm (250 mW)	Complies
15.407(a) (2)	-	Power Spectral Density	a: 10.2 dBm/MHz n20: 10.1 dBm/MHz n40: 9.8 dBm/MHz ac80: 10 dBm/MHz	11 dBm/MHz	Complies
15.407(b) (3) / 15.209	-	Spurious Emissions	53.8 dBµV/m @ 5470.0 MHz (-0.2 dB)	Refer to the limits section for restricted bands, all others -27 dBm/MHz EIRP	Complies

OPERATION IN THE 5.725 – 5.85 GHZ BAND

FCC Rule Part	-	Description	Measured Value / Comments	Limit / Requirement	Result (margin)
15.407(e)	-	6dB Bandwidth	>500kHz for all modes	<= 500 kHz	Complies
15.407(a) (3)	-	Output Power (multipoint systems)	a: 28.5 dBm (709.2 mW) n20: 28.6 dBm (725 mW) n40: 28.5 dBm (707 mW) ac80: 25.3 dBm (342 mW)	30 dBm (1 W) EIRP <= 4W	Complies
15.407(a) (3)	-	Power Spectral Density	a: 17.4 dBm/MHz n20: 17.2 dBm/MHz n40: 14.1 dBm/MHz ac80: 7.9 dBm/MHz	30 dBm / 500 kHz	Complies
15.407(b) (4) (i) / 15.209 - Spurious Emissio		Spurious Emissions	68.2 dBµV/m @ 5633.1 MHz (-0.1 dB)	Refer to the limits section	Complies



REQUIREMENTS FOR ALL U-NII/LELAN BANDS

FCC Rule Part	-	Description	Measured Value / Comments	Limit / Requirement	Result
15.407	-	Modulation	Digital Modulation is used	Digital modulation is required	Complies
15.31 (m)	-	Channel Selection	Emissions tested at outermost and middle channels in each band	Device was tested on the top, bottom and center channels in each band	N/A
15.407 (c)	-	Operation in the absence of information to transmit	Operation is discontinued in the absence of information	Device shall automatically discontinue operation in the absence of information to transmit	Complies
15.407 (g)	-	Frequency Stability	Frequency stability is better than 20 ppm. Refer to operational description.	Signal shall remain within the allocated band	Complies
15.407 (h1)	-	Transmit Power Control	TCP mechanism is discussed in the Operational Description	The U-NII device shall have the capability to operate with a mean EIRP value lower than 24dBm (250mW)	Complies
15.407 (h2)	-	Dynamic frequency Selection (device without radar detection)	Refer to separate test report, reference R103981	Channel move time < 10s Channel closing transmission time < 260ms	Complies

GENERAL REQUIREMENTS APPLICABLE TO ALL BANDS

FCC Rule Part	RSS Rule part	Description	Measured Value / Comments	Limit / Requirement	Result (margin)
15.203	-	RF Connector	Antennas are internal	Unique or integral antenna required	Complies
15.407 (b) (6)	-	AC Conducted Emissions	46.3 dBµV @ 0.532 MHz (-9.7 dB)	Refer to page 22	Complies
15.247 (i) 15.407 (f)	-	RF Exposure Requirements	Refer to MPE calculations in separate exhibit	Refer to OET 65, FCC Part 1 and RSS 102	Complies



MEASUREMENT UNCERTAINTIES

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level and were calculated in accordance with UKAS document LAB 34.

Measurement Type	Measurement Unit	Frequency Range	Expanded Uncertainty
RF power, conducted (power meter)	dBm	25 to 7000 MHz	± 0.52 dB
RF power, conducted (Spectrum analyzer)	dBm	25 to 7000 MHz	± 0.7 dB
Conducted emission of transmitter	dBm	25 to 26500 MHz	± 0.7 dB
Conducted emission of receiver	dBm	25 to 26500 MHz	± 0.7 dB
Radiated emission (substitution method)	dBm	25 to 26500 MHz	± 2.5 dB
Radiated emission (field strength)	dDu\//m	25 to 1000 MHz	± 3.6 dB
Radiated emission (lield strength)	dBµV/m	1000 to 40000 MHz	± 6.0 dB
Conducted Emissions (AC Power)	dBµV	0.15 to 30 MHz	± 2.4 dB

EQUIPMENT UNDER TEST (EUT) DETAILS

GENERAL

The ARRIS model C61W-700 Wireless RVU Client is a high definition set top box, with RF4CE. Since the EUT would be placed on a tabletop during operation, the EUT was treated as tabletop equipment during testing to simulate the end-user environment. The electrical rating of the EUT is 100-120 Volts, 60 Hz, 0.5 Amps.

The sample was received on January 25, 2017 and tested on February 6, 28, March 1, 2, 3, 6, 7, 8, 13, 14, May 1, 2, and 10, 2017. The EUT consisted of the following component(s):

Company	Model	Description	Serial Number	FCC ID
ARRIS	C61W-700	DirecTV Home Client	Refer to test results	PGAC61W
DirecTV	ESP10R4-15	AC/DC Power Supply	CL10G160R4900	

OTHER EUT DETAILS

5GHz radio – 802.11an/ac (20/40/80MHz)

Only transmits in 4Tx mode, supports 1 to 4 spatial streams Beamforming supported for 11n/ac 20, 40, 80MHz operation Simultaneous transmission of RF4CEand 5GHz supported.

ANTENNA SYSTEM

5GHz – four stamped metal antennas.

ENCLOSURE

The EUT enclosure is primarily constructed of plastic. It measures approximately 18 cm wide by 12 cm deep by 3 cm high.

MODIFICATIONS

No modifications were made to the EUT during the time the product was at NTS Silicon Valley.

SUPPORT EQUIPMENT

The following equipment was used as support equipment for testing:

Configuration #1					
Company	Model	Description	Serial Number	FCC ID	
JVC	EM39FT	TV	TA1SEI042503850	-	

	Co	nfiguration #2		
Company	Model	Description	Serial Number	FCC ID
Toshiba	24SL415U	TV	B46193T06429C1	-

The following equipment was used as remote support equipment for emissions testing: Configuration #1

	001	inguiation in i		
Company	Model	Description	Serial Number	FCC ID
Dell	M4600	Precision laptop	F9N0MQ1	

	Cot	nfiguration #2		
Company	Model	Description	Serial Number	FCC ID
Dell	Latitude	Precision laptop	E6540	

EUT INTERFACE PORTS

The I/O cabling configuration during testing was as follows:

		EUI			
Port	Connected To	Cable(s)			
1 OIT	Connected 10	Description	Shielded or Unshielded	Length(m)	
Serial*	USB	Serial	Shielded	5	
A/V	TV input	RCA	Shielded	1	
HDMI	TV Input	HDMI	Shielded	1	
Digital Audio (SPDIF)	75 Ohm Terminated	RCA	Shielded	1	
USB	USB Stick	USB	Shielded	1	
DC power Input	AC/DC power Output	2Wire	Unshielded	1	
AC/DC Adapter	AC Mains	2Wire	Unshielded	0.8	

* - temporary internal connection to allow for configuration of radios

Project number JD102669 Reissue Date: May 10, 2017

Additional on Support Equipment				
Port	Connected To	Cable(s)		
1 OIL		Description	Shielded or Unshielded	Length(m)
DC to RF Adapter Input	AC/DC Output	2Wire	Unshielded	1
Laptop DC Input	AC/DC Output	2Wire	Unshielded	1
AC/DC Adapter (x2)	AC Mains	2Wire	Unshielded	1
TV AC input	AC Mains	2Wire	Unshielded	1.5

Report Date: March 27, 2017

Additional on Support Equipment

EUT OPERATION

The EUT was configured to transmit continuously at the maximum output power. For AC conducted emissions, the RF4CE radio was configured for transmit at 2450MHz, while the 802.11 radio was configured for transmit at 5200MHz, 20MHz, MCS0.

TEST SITE

GENERAL INFORMATION

Final test measurements were taken at the test sites listed below. Pursuant to section 2.948 of the FCC's Rules and section 3.3 of RSP-100, construction, calibration, and equipment data has been filed with the Commission and with industry Canada.

Site	Designation / Reg FCC	istration Numbers Canada	Location
Chamber 4	US0027	2845B-4	41039 Boyce Road
Chamber 7	US0027	2845B-7	Fremont, CA 94538-2435

ANSI C63.4 recommends that ambient noise at the test site be at least 6 dB below the allowable limits. Ambient levels are below this requirement. The test site(s) contain separate areas for radiated and conducted emissions testing. Considerable engineering effort has been expended to ensure that the facilities conform to all pertinent requirements of ANSI C63.4.

CONDUCTED EMISSIONS CONSIDERATIONS

Conducted emissions testing is performed in conformance with ANSI C63.10. Measurements are made with the EUT connected to the public power network through a nominal, standardized RF impedance, which is provided by a line impedance stabilization network, known as a LISN. A LISN is inserted in series with each current-carrying conductor in the EUT power cord.

RADIATED EMISSIONS CONSIDERATIONS

The FCC has determined that radiation measurements made in a shielded enclosure are not suitable for determining levels of radiated emissions. Radiated measurements are performed in an open field environment or in a semi-anechoic chamber. The test sites are maintained free of conductive objects within the CISPR defined elliptical area incorporated in ANSI C63.4 guidelines and meet the Normalized Site Attenuation (NSA) requirements of ANSI C63.4.

MEASUREMENT INSTRUMENTATION

RECEIVER SYSTEM

An EMI receiver as specified in CISPR 16-1-1 is used for emissions measurements. The receivers used can measure over the frequency range of 9 kHz up to 2000 MHz. These receivers allow both ease of measurement and high accuracy to be achieved. The receivers have Peak, Average, and CISPR (Quasi-peak) detectors built into their design so no external adapters are necessary. The receiver automatically sets the required bandwidth for the CISPR detector used during measurements. If the repetition frequency of the signal being measured is below 20Hz, peak measurements are made in lieu of Quasi-Peak measurements.

For measurements above the frequency range of the receivers, a spectrum analyzer is utilized because it provides visibility of the entire spectrum along with the precision and versatility required to support engineering analysis. Average measurements above 1000MHz are performed on the spectrum analyzer using the linear-average method with a resolution bandwidth of 1 MHz and a video bandwidth of 10 Hz, unless the signal is pulsed in which case the average (or video) bandwidth of the measuring instrument is reduced to onset of pulse desensitization and then increased.

INSTRUMENT CONTROL COMPUTER

Software is used to view and convert receiver measurements to the field strength at an antenna or voltage developed at the LISN measurement port, which is then compared directly with the appropriate specification limit. This provides faster, more accurate readings by performing the conversions described under Sample Calculations within the Test Procedures section of this report. Results are printed in a graphic and/or tabular format, as appropriate. A personal computer is used to record all measurements made with the receivers. The software used for radiated and conducted emissions measurements is NTS EMI Test Software (rev 2.10)

LINE IMPEDANCE STABILIZATION NETWORK (LISN)

Line conducted measurements utilize a fifty microhenry Line Impedance Stabilization Network as the monitoring point. The LISN used also contains a 250 uH CISPR adapter. This network provides for calibrated radio frequency noise measurements by the design of the internal low pass and high pass filters on the EUT and measurement ports, respectively.



FILTERS/ATTENUATORS

External filters and precision attenuators are often connected between the receiving antenna or LISN and the receiver. This eliminates saturation effects and non-linear operation due to high amplitude transient events.

ANTENNAS

A loop antenna is used below 30 MHz. For the measurement range 30 MHz to 1000 MHz either a combination of a biconical antenna and a log periodic or a bi-log antenna is used. Above 1000 MHz, horn antennas are used. The antenna calibration factors to convert the received voltage to an electric field strength are included with appropriate cable loss and amplifier gain factors to determine an overall site factor, which is then programmed into the test receivers or incorporated into the test software.

ANTENNA MAST AND EQUIPMENT TURNTABLE

The antennas used to measure the radiated electric field strength are mounted on a nonconductive antenna mast equipped with a motor-drive to vary the antenna height. Measurements below 30 MHz are made with the loop antenna at a fixed height of 1m above the ground plane.

ANSI C63.10 specifies that the test height above ground for table mounted devices shall be 80 centimeters for measurements below 1GHz, and 1.5m for measurements above 1GHz. Floor mounted equipment shall be placed on the ground plane if the device is normally used on a conductive floor or separated from the ground plane by insulating material from 3 to 12 mm if the device is normally used on a non-conductive floor as specified in ANSI C63.4. During radiated measurements, the EUT is positioned on a motorized turntable in conformance with this requirement.

INSTRUMENT CALIBRATION

All test equipment is regularly checked to ensure that performance is maintained in accordance with the manufacturer's specifications. All antennas are calibrated at regular intervals with respect to tuned half-wave dipoles. An exhibit of this report contains the list of test equipment used and calibration information.

TEST PROCEDURES

EUT AND CABLE PLACEMENT

The regulations require that interconnecting cables be connected to the available ports of the unit and that the placement of the unit and the attached cables simulate the worst case orientation that can be expected from a typical installation, so far as practicable. To this end, the position of the unit and associated cabling is varied within the guidelines of ANSI C63.10, and the worst-case orientation is used for final measurements.

CONDUCTED EMISSIONS

Conducted emissions are measured at the plug end of the power cord supplied with the EUT. Excess power cord length is wrapped in a bundle between 30 and 40 centimeters in length near the center of the cord. Preliminary measurements are made to determine the highest amplitude emission relative to the specification limit for all the modes of operation. Placement of system components and varying of cable positions are performed in each mode. A final peak mode scan is then performed in the position and mode for which the highest emission was noted on all current carrying conductors of the power cord.

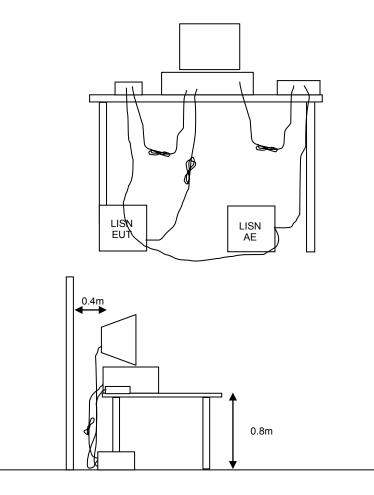


Figure 1 Typical Conducted Emissions Test Configuration



RADIATED EMISSIONS

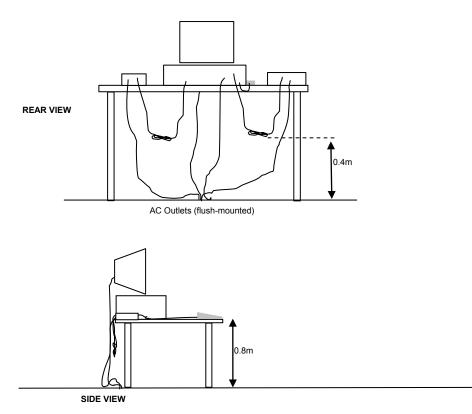
A preliminary scan of the radiated emissions is performed in which all significant EUT frequencies are identified with the system in a nominal configuration. At least two scans are performed, one scan for each antenna polarization (horizontal and vertical; loop parallel and perpendicular to the EUT). During the preliminary scans, the EUT is rotated through 360°, the antenna height is varied (for measurements above 30 MHz) and cable positions are varied to determine the highest emission relative to the limit. Preliminary scans may be performed in a fully anechoic chamber for the purposes of identifying the frequencies of the highest emissions from the EUT.

A speaker is provided in the receiver to aid in discriminating between EUT and ambient emissions. Other methods used during the preliminary scan for EUT emissions involve scanning with near field magnetic loops, monitoring I/O cables with RF current clamps, and cycling power to the EUT.

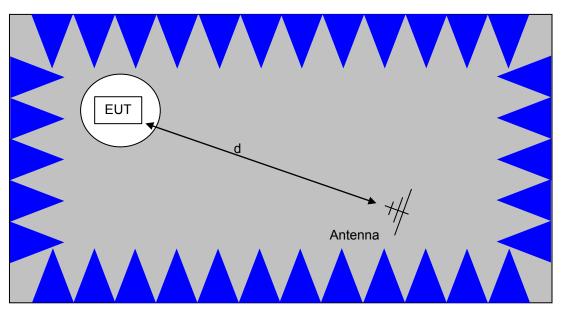
Final maximization is a phase in which the highest amplitude emissions identified in the spectral search are viewed while the EUT azimuth angle is varied from 0 to 360 degrees relative to the receiving antenna. The azimuth, which results in the highest emission is then maintained while varying the antenna height from one to four meters (for measurements above 30 MHz, measurements below 30 MHz are made with the loop antenna at a fixed height of 1m). The result is the identification of the highest amplitude for each of the highest peaks. Each recorded level is corrected in the receiver using appropriate factors for cables, connectors, antennas, and preamplifier gain.

When testing above 18 GHz, the receive antenna is located at 1 meter from the EUT and the antenna height is restricted to a maximum of 2.5 meters.



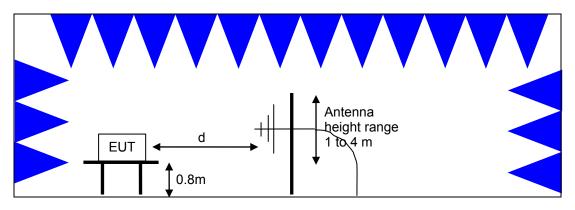


Typical Test Configuration for Radiated Field Strength Measurements



The anechoic materials on the walls and ceiling ensure compliance with the normalized site attenuation requirements of CISPR 16 / CISPR 22 / ANSI C63.4 for an alternate test site at the measurement distances used.

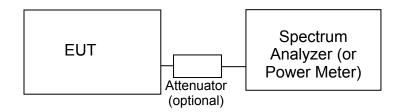
Floor-standing equipment is placed on the floor with insulating supports between the unit and the ground plane.



<u>Test Configuration for Radiated Field Strength Measurements</u> <u>Semi-Anechoic Chamber, Plan and Side Views</u>

CONDUCTED EMISSIONS FROM ANTENNA PORT

Direct measurements of power, bandwidth and power spectral density are performed, where possible, with the antenna port of the EUT connected to either the power meter or spectrum analyzer via a suitable attenuator and/or filter. These are used to ensure that the front end of the measurement instrument is not overloaded by the fundamental transmission.



Test Configuration for Antenna Port Measurements

Measurement bandwidths (video and resolution) are set in accordance with the relevant standards and NTS Silicon Valley's test procedures for the type of radio being tested. When power measurements are made using a resolution bandwidth less than the signal bandwidth the power is calculated by summing the power across the signal bandwidth using either the analyzer channel power function or by capturing the trace data and calculating the power using software. In both cases the summed power is corrected to account for the equivalent noise bandwidth (ENBW) of the resolution bandwidth used.

If power averaging is used (typically for certain digital modulation techniques), the EUT is configured to transmit continuously. Power averaging is performed using either the built-in function of the analyzer or, if the analyzer does not feature power averaging, using external software. In both cases the average power is calculated over a number of sweeps (typically 100). When the EUT cannot be configured to continuously transmit then either the analyzer is configured to perform a gated sweep to ensure that the power is averaged over periods that the device is transmitting or power averaging is disabled and a max-hold feature is used.

If a power meter is used to make output power measurements the sensor head type (peak or average) is stated in the test data table.

BANDWIDTH MEASUREMENTS

The 6dB, 20dB, 26dB and/or 99% signal bandwidth are measured using the bandwidths recommended by ANSI C63.10 and RSS GEN.

SPECIFICATION LIMITS AND SAMPLE CALCULATIONS

The limits for conducted emissions are given in units of microvolts, and the limits for radiated emissions are given in units of microvolts per meter at a specified test distance. Data is measured in the logarithmic form of decibels relative to one microvolt, or dB microvolts (dBuV). For radiated emissions, the measured data is converted to the field strength at the antenna in dB microvolts per meter (dBuV/m). The results are then converted to the linear forms of uV and uV/m for comparison to published specifications.

For reference, converting the specification limits from linear to decibel form is accomplished by taking the base ten logarithm, then multiplying by 20. These limits in both linear and logarithmic form are as follows:

CONDUCTED EMISSIONS SPECIFICATION LIMITS: FCC 15.207; FCC 15.107(a), RSS GEN

The table below shows the limits for the emissions on the AC power line from an intentional radiator and a receiver.

Frequency (MHz)	Average Limit (dBuV)	Quasi Peak Limit (dBuV)
0.150 to 0.500	Linear decrease on logarithmic frequency axis between 56.0 and 46.0	Linear decrease on logarithmic frequency axis between 66.0 and 56.0
0.500 to 5.000	46.0	56.0
5.000 to 30.000	50.0	60.0

GENERAL TRANSMITTER RADIATED EMISSIONS SPECIFICATION LIMITS

The table below shows the limits for the spurious emissions from transmitters that fall in restricted bands¹.

Report Date: March 27, 2017

Frequency Range (MHz)	Limit (uV/m)	Limit (dBuV/m @ 3m)
0.009-0.490	2400/F _{KHz} @ 300m	67.6-20*log ₁₀ (F _{KHz}) @ 300m
0.490-1.705	24000/F _{KHz} @ 30m	87.6-20*log ₁₀ (F _{KHz}) @ 30m
1.705 to 30	30 @ 30m	29.5 @ 30m
30 to 88	100 @ 3m	40 @ 3m
88 to 216	150 @ 3m	43.5 @ 3m
216 to 960	200 @ 3m	46.0 @ 3m
Above 960	500 @ 3m	54.0 @ 3m

¹ The restricted bands are detailed in FCC 15.205 and RSS-Gen Table 6

FCC 15.407 (a) OUTPUT POWER LIMITS

The table below shows the limits for output power and output power density. For the 5250-5350 and 5470-5725 MHz bands, where the signal bandwidth is less than 20 MHz the maximum output power is reduced to the power spectral density limit plus 10 times the log of the bandwidth (in MHz).

Report Date: March 27, 2017

Operating Frequency (MHz)	Output Power	Power Spectral Density
5150 – 5250	250 mW (24 dBm)	11 dBm/MHz
5250 – 5350 and 5470-5725	250 mW (24 dBm)	11 dBm/MHz
5725 – 5825	1 Watt (30 dBm)	30 dBm/500kHz

For system using antennas with gains exceeding 6dBi, the output power and power spectral density limits are reduced by 1dB for every dB the antenna gain exceeds 6dBi.

SPURIOUS EMISSIONS LIMITS – UNII and LELAN DEVICES

The spurious emissions limits for signals below 1GHz are the FCC/RSS-Gen general limits. For emissions above 1GHz, signals in restricted bands are subject to the FCC/RSS-Gen general limits. All other signals have a limit of -27dBm/MHz, which is field strength of 68.3dBuV/m/MHz at a distance of 3m.

For devices operating in the 5725-5850 MHz bands under the LELAN/UNII rules, all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

SAMPLE CALCULATIONS - CONDUCTED EMISSIONS

Receiver readings are compared directly to the conducted emissions specification limit (decibel form) as follows:

 $R_r - S = M$ where: $R_r =$ Receiver Reading in dBuV S = Specification Limit in dBuV M = Margin to Specification in +/- dB

SAMPLE CALCULATIONS - RADIATED EMISSIONS

Receiver readings are compared directly to the specification limit (decibel form). The receiver internally corrects for cable loss, preamplifier gain, and antenna factor. The calculations are in the reverse direction of the actual signal flow, thus cable loss is added and the amplifier gain is subtracted. The Antenna Factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

A distance factor, when used for electric field measurements above 30MHz, is calculated by using the following formula:

 $F_{d} = 20*LOG_{10} (D_{m}/D_{s})$ where: $F_{d} = Distance Factor in dB$ $D_{m} = Measurement Distance in meters$ $D_{s} = Specification Distance in meters$

For electric field measurements below 30MHz the extrapolation factor is either determined by making measurements at multiple distances or a theoretical value is calculated using the formula:

 $F_d = 40*LOG_{10} (D_m/D_s)$

Measurement Distance is the distance at which the measurements were taken and Specification Distance is the distance at which the specification limits are based. The antenna factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

The margin of a given emission peak relative to the limit is calculated as follows:

$$\begin{array}{rcl} R_c &=& R_r \,+\, F_d \\ & \text{and} \\ M &=& R_c \,-\, L_S \\ & \text{where:} \\ & R_r &=& \text{Receiver Reading in dBuV/m} \\ & F_d &=& \text{Distance Factor in dB} \\ & R_c &=& \text{Corrected Reading in dBuV/m} \\ & L_S &=& \text{Specification Limit in dBuV/m} \end{array}$$

M = Margin in dB Relative to Spec

SAMPLE CALCULATIONS - FIELD STRENGTH TO EIRP CONVERSION

Where the radiated electric field strength is expressed in terms of the equivalent isotropic radiated power (eirp), or where a field strength measurement of output power is made in lieu of a direct measurement, the following formula is used to convert between eirp and field strength at a distance of d (meters) from the equipment under test:

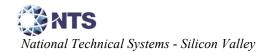
 $E = \frac{1000000 \sqrt{30 P}}{d}$ microvolts per meter

where P is the eirp (Watts)

For a measurement at 3m the conversion from a logarithmic value for field strength (dBuV/m) to an eirp power (dBm) is -95.3dB.

Appendix A Test Equipment Calibration Data

Manufacturer	Description	Model	<u>Asset #</u>	<u>Calibrated</u>	<u>Cal Due</u>
NTS EMCO EMCO Rohde & Schwarz Rohde & Schwarz	ns - AC Power Ports, 06-Feb-17 NTS EMI Software (rev 2.10) LISN, 10 kHz-100 MHz LISN, 10 kHz-100 MHz Pulse Limiter EMI Test Receiver, 20 Hz-7 GHz	N/A 3825/2 3825/2 ESH3 Z2 ESIB7	0 1292 1293 1401 9482	8/1/2016 6/7/2016 2/3/2017 10/28/2016	N/A 8/1/2017 6/7/2017 2/3/2018 10/28/2017
National Technical	, 1,000 - 40,000 MHz, 28-Feb-17 NTS EMI Software (rev 2.10)	N/A	0		N/A
Systems HP / Miteq	SA40 R Head HF preAmplifier, 18-40 GHz	TTA1840-45-5P- HG-S	1145	8/24/2016	8/24/2017
Hewlett Packard	(w/1148) Spectrum Analyzer (SA40) Red 30 Hz -40 GHz	8564E (84125C)	1148	10/31/2016	11/1/2017
A. H. Systems	Purple System Horn, 18- 40GHz	SAS-574, p/n: 2581	2160	8/28/2014	8/28/2017
Micro-Tronics	Band Reject Filter, 5150-5350	BRC50703-02	2251	9/19/2016	9/19/2017
EMCO	Antenna, Horn, 1-18 GHz	3115	2870	8/31/2015	8/31/2017
Radiated Emissions, HP / Miteq	, 1000 - 40,000 MHz, 01-Mar-17 SA40 R Head HF preAmplifier, 18-40 GHz (w/1148)	TTA1840-45-5P- HG-S	1145	8/24/2016	8/24/2017
Hewlett Packard	Spectrum Analyzer (SA40) Red 30 Hz -40 GHz	8564E (84125C)	1148	10/31/2016	11/1/2017
Micro-Tronics	Band Reject Filter, 5725-5875 MHz 12GHz	BRC50705-02	1682	5/9/2016	5/9/2017
Hewlett Packard	Microwave Preamplifier, 1- 26.5GHz	8449B	1780	9/30/2016	9/30/2017
A. H. Systems	Purple System Horn, 18- 40GHz	SAS-574, p/n: 2581	2160	8/28/2014	8/28/2017
EMCO Rohde & Schwarz	Antenna, Horn, 1-18 GHz EMI Test Receiver, 20 Hz-7 GHz	3115 ESIB 7	2870 9482	8/31/2015 10/28/2016	8/31/2017 10/28/2017
National Technical	, BE, 1,000 - 6,000 MHz, 02-Ma NTS EMI Software (rev 2.10)	r- 17 N/A	0		N/A
Systems Agilent Technologies	PSA, Spectrum Analyzer, (installed options, 111, 115, 123, 1DS, B7J, HYX,	E4446A	2139	6/24/2016	6/24/2017
National Technical	, BE, 1,000 - 6,000 MHz, 06-Mar NTS EMI Software (rev 2.10)	-17 N/A	0		N/A
Systems EMCO Rohde & Schwarz	Antenna, Horn, 1-18 GHz EMI Test Receiver, 20 Hz-7 GHz	3115 ESIB 7	2870 9482	8/31/2015 10/28/2016	8/31/2017 10/28/2017



Project number JD102669 Reissue Date: May 10, 2017

	ystems - Silicon Valley Repor	t Date: March 27, 20		Project number eissue Date: Ma	
Manufacturer Redicted Emissions	<u>Description</u> BE, 1,000 - 6,000 MHz, 07-Mar	Model	<u>Asset #</u>	Calibrated	Cal Due
National Technical Systems	NTS EMI Software (rev 2.10)	N/A	0		N/A
EMCO Rohde & Schwarz	Antenna, Horn, 1-18 GHz EMI Test Receiver, 20 Hz-7 GHz	3115 ESIB 7	2870 9482	8/31/2015 10/28/2016	8/31/2017 10/28/2017
	30 - 1,000 MHz, 08-Mar-17				
Sunol Sciences Com-Power	Biconilog, 30-3000 MHz Preamplifier, 30-1000 MHz	JB3 PA-103	1549 1632	6/2/2015 3/8/2017	6/2/2017 3/8/2018
Rohde & Schwarz	EMI Test Receiver, 20 Hz-7 GHz	ESIB 7	9482	10/28/2016	10/28/2017
	1000 - 40,000 MHz, 08-Mar-17				
HP / Miteq	SA40 R Head HF preAmplifier, 18-40 GHz (w/1148)	TTA1840-45-5P- HG-S	1145	8/24/2016	8/24/2017
Hewlett Packard	Spectrum Analyzer (SA40) Red 30 Hz -40 GHz	8564E (84125C)	1148	10/31/2016	11/1/2017
Micro-Tronics	Band Reject Filter, 5725-5875 MHz 12GHz	BRC50705-02	1682	5/9/2016	5/9/2017
Hewlett Packard	Microwave Preamplifier, 1- 26.5GHz	8449B	1780	9/30/2016	9/30/2017
A. H. Systems	Purple System Horn, 18- 40GHz	SAS-574, p/n: 2581	2160	8/28/2014	8/28/2017
Micro-Tronics	Band Reject Filter, 2400-2500 MHz 18GHz	BRM50702-02	2238	10/14/2016	10/14/2017
Micro-Tronics	Band Reject Filter, 5150-5350 MHz	BRC50703-02	2251	9/19/2016	9/19/2017
Micro-Tronics	High Pass Filter 6400 MHz - 18000 MHz	HPM50112	2739	10/7/2016	10/7/2017
EMCO	Antenna, Horn, 1-18 GHz	3115	2870	8/31/2015	8/31/2017
Radio Antenna Port (Rohde & Schwarz	(Power and Spurious Emission Signal Analyzer 20 Hz - 26.5 GHz	is), 13-Mar-17 FSQ26	2327	6/17/2016	6/17/2017
Agilent Technologies	USB Average Power Sensor	U2001A	2442	1/5/2017	1/5/2018
Radio Antenna Port (Rohde & Schwarz	(Power and Spurious Emission Signal Analyzer 20 Hz - 26.5	is), 14-Mar-17 FSQ26	2327	6/17/2016	6/17/2017
	GHz				
Agilent Technologies	USB Average Power Sensor	U2001A	2442	1/5/2017	1/5/2018
Radiated Emissions,	1000-6500 MHz, 01-May-17				
Rohde & Schwarz	EMI Test Receiver, 20 Hz-40 GHz	ESI 40	2493	17-Mar-17	17-Mar-18
EMCO	Antenna, Horn, 1-18 GHz	3115	2870	31-Aug-15	31-Aug-17
Radio Antenna Port (Rohde & Schwarz	(Power), 02-May-17 Signal Analyzer 20 Hz - 26.5 GHz	FSQ26	2327	17-Jun-16	17-Jun-17
Frequency Stability, Watlow	02-May-17 Temp Chamber (w/ F4 Watlow Controller)	F4	2170	08-Jul-16	08-Jul-17



Project number JD102669 Reissue Date: May 10, 2017

Manufacturer
Rohde & Schwarz

<u>Description</u> Signal Analyzer 20 Hz - 26.5 GHz

<u>Model</u> FSQ26 Asset #

2327

Report Date: March 27, 2017

<u>Calibrated</u>	<u>Cal Due</u>
17-Jun-16	17-Jun-17



Appendix B Test Data

T103891 Pages 31 - 246



EMC Test Data

Client:	ARRIS	Job Number:	JD102669
Product	C61W	T-Log Number:	T103891
System Configuration:	-	Project Manager:	
Contact:	Mark Rieger	Project Coordinator:	-
Emissions Standard(s):	FCC 15.B / FCC 15.247 / 15.E	Class:	В
Immunity Standard(s):	-	Environment:	-

EMC Test Data

For The

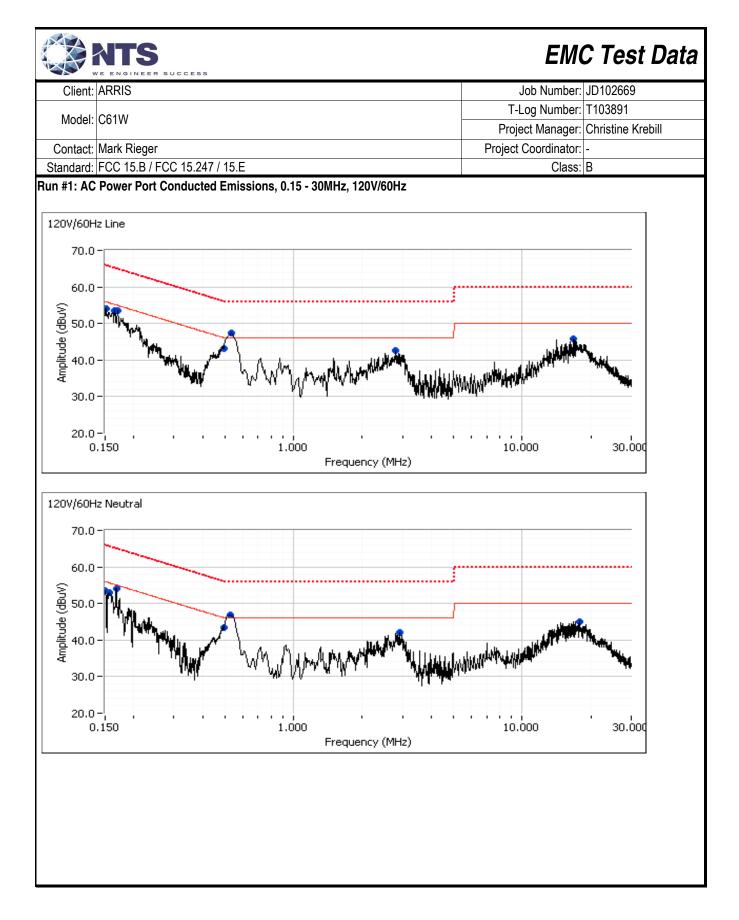
ARRIS

Product

C61W

Date of Last Test: 3/15/2017

Job Number: JD102669 T-Log Number: T103891 Project Manager: Christine Krebill ect Coordinator: - Class: B mber) of the EUT with respect to the Hz ber, 40 cm from a vertical coupling plane upport equipment was located outside of pugh metal conduit and when possible
Project Manager: Christine Krebill ect Coordinator: - Class: B mber) of the EUT with respect to the Hz ber, 40 cm from a vertical coupling plane upport equipment was located outside of
ect Coordinator: - Class: B mber) of the EUT with respect to the Hz ber, 40 cm from a vertical coupling plane upport equipment was located outside of
Class: B mber) of the EUT with respect to the Hz ber, 40 cm from a vertical coupling plane upport equipment was located outside of
<i>mber)</i> of the EUT with respect to the Hz ber, 40 cm from a vertical coupling plane upport equipment was located outside of
of the EUT with respect to the Hz ber, 40 cm from a vertical coupling plane upport equipment was located outside of
Hz ber, 40 cm from a vertical coupling plane upport equipment was located outside of
ber, 40 cm from a vertical coupling plane upport equipment was located outside of
ber, 40 cm from a vertical coupling plane upport equipment was located outside of
ber, 40 cm from a vertical coupling plane upport equipment was located outside of
upport equipment was located outside of
lt Margin
46.3 dBµV @ 0.532 MHz (-9.7 dB)



		RSUCCESS					EM	C Test Dat
Client:	ARRIS						Job Number:	JD102669
							T-Log Number:	T103891
Model:	C61W						Project Manager:	
Contact:	Mark Riege	r					Project Coordinator:	
	-	FCC 15.247	/ 15.E				Class:	
				-scan (neak	readings v	s. average lim		_
Frequency	Level	AC	Clas		Detector	Comments		
MHz	dBµV	Line	Limit	Margin	QP/Ave			
0.171	53.5	Line 1	54.9	-1.4	Peak			
0.165	53.6	Line 1	55.2	-1.6	Peak			
0.151	54.0	Line 1	55.9	-1.9	Peak			
0.494	43.2	Line 1	46.1	-2.9	Peak			
2.806	42.6	Line 1	46.0	-3.4	Peak			
0.532	47.4	Line 1	46.0	1.4	Peak			
16.810	45.8	Line 1	50.0	-4.2	Peak			
0.168	54.0	Neutral	55.0	-1.0	Peak			
0.151	53.4	Neutral	56.0	-2.6	Peak			
0.157	53.0	Neutral	55.7	-2.7	Peak			
0.494	43.5	Neutral	46.1	-2.6	Peak			
2.917	42.0	Neutral	46.0	-4.0	Peak			
0.525	46.8	Neutral	46.0	0.8	Peak			
0.020								
17.772	44.9	Neutral	50.0	-5.1	Peak			
17.772 Final quasi Frequency	- peak and a Level	verage read AC	i ngs Clas	ss B	Detector	Comments		
17.772 Final quasi Frequency MHz	-peak and a Level dBμV	verage read i AC Line	i ngs Cla: Limit	ss B Margin	Detector QP/Ave			
17.772 Final quasi Frequency MHz 0.532	-peak and a Level dBμV 46.3	verage readi AC Line Line 1	i ngs Clas Limit 56.0	ss B Margin -9.7	Detector QP/Ave QP	QP (1.00s)		
17.772 Final quasi Frequency MHz 0.532 0.525	- peak and a Level dBμV 46.3 45.7	verage readi AC Line Line 1 Neutral	i ngs Clas Limit 56.0 56.0	ss B Margin -9.7 -10.3	Detector QP/Ave QP QP	QP (1.00s) QP (1.00s)		
17.772 Final quasi Frequency MHz 0.532 0.525 0.532	-peak and a Level dBμV 46.3 45.7 35.3	verage readi AC Line Line 1 Neutral Line 1	i ngs Clas Limit 56.0 56.0 46.0	ss B Margin - 9.7 -10.3 -10.7	Detector QP/Ave QP QP AVG	QP (1.00s) QP (1.00s) AVG (0.10s)		
17.772 Final quasi Frequency MHz 0.532 0.525 0.532 0.525	-peak and a Level dBμV 46.3 45.7 35.3 33.7	verage readi AC Line Line 1 Neutral Line 1 Neutral	i ngs Cla: Limit 56.0 56.0 46.0 46.0	ss B <u>Margin</u> - 9.7 -10.3 -10.7 -12.3	Detector QP/Ave QP QP AVG AVG	QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s)		
17.772 Final quasi Frequency MHz 0.532 0.525 0.532 0.525 0.525 0.494	-peak and a Level dBμV 46.3 45.7 35.3 33.7 42.3	verage readi AC Line Line 1 Neutral Line 1 Neutral Line 1	ings Clas Limit 56.0 56.0 46.0 46.0 56.1	ss B <u>Margin</u> - 9.7 -10.3 -10.7 -12.3 -13.8	Detector QP/Ave QP QP AVG AVG QP	QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s)		
17.772 Frequency MHz 0.532 0.525 0.532 0.525 0.494 0.494	-peak and a Level dBμV 46.3 45.7 35.3 33.7 42.3 42.0	verage readi AC Line Line 1 Neutral Line 1 Neutral Line 1 Neutral	ings Clas Limit 56.0 56.0 46.0 46.0 56.1 56.1	ss B Margin - 9.7 -10.3 -10.7 -12.3 -13.8 -14.1	Detector QP/Ave QP QP AVG AVG QP QP	QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s)		
17.772 Frequency MHz 0.532 0.525 0.532 0.525 0.494 0.494 0.494	-peak and a Level dBμV 46.3 45.7 35.3 33.7 42.3 42.0 31.1	verage readi AC Line Line 1 Neutral Line 1 Neutral Neutral Neutral Neutral	ings Limit 56.0 56.0 46.0 46.0 56.1 56.1 46.1	ss B Margin - 9.7 -10.3 -10.7 -12.3 -13.8 -14.1 -15.0	Detector QP/Ave QP AVG AVG QP QP AVG	QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) AVG (0.10s)		
17.772 Frequency MHz 0.532 0.525 0.525 0.525 0.494 0.494 0.494 0.494	-peak and a Level dBμV 46.3 45.7 35.3 33.7 42.3 42.0 31.1 30.7	verage readi AC Line Line 1 Neutral Line 1 Neutral Neutral Neutral Line 1	ings Limit 56.0 56.0 46.0 46.0 56.1 56.1 46.1 46.1	ss B Margin - 9.7 -10.3 -10.7 -12.3 -13.8 -14.1 -15.0 -15.4	Detector QP/Ave QP AVG AVG QP QP AVG AVG	QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s)		
17.772 Frequency MHz 0.532 0.525 0.532 0.525 0.494 0.494 0.494 0.494 0.494 0.165	-peak and a Level dBμV 46.3 45.7 35.3 33.7 42.3 42.0 31.1 30.7 48.3	verage readi AC Line Line 1 Neutral Line 1 Neutral Neutral Neutral Line 1 Line 1 Line 1	ings Limit 56.0 56.0 46.0 46.0 56.1 56.1 46.1 46.1 65.2	ss B <u>Aargin</u> -10.3 -10.7 -12.3 -13.8 -14.1 -15.0 -15.4 -16.9	Detector QP/Ave QP AVG AVG QP QP AVG AVG QP	QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s)		
17.772 Final quasi Frequency MHz 0.532 0.525 0.525 0.525 0.494 0.494 0.494 0.494	-peak and a Level dBμV 46.3 45.7 35.3 33.7 42.3 42.0 31.1 30.7	verage readi AC Line 1 Neutral Line 1 Neutral Line 1 Neutral Neutral Line 1 Line 1 Neutral	ings Limit 56.0 56.0 46.0 46.0 56.1 56.1 46.1 46.1	ss B Margin - 9.7 -10.3 -10.7 -12.3 -13.8 -14.1 -15.0 -15.4	Detector QP/Ave QP AVG AVG QP QP AVG AVG	QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s)		
17.772 inal quasi Frequency MHz 0.532 0.525 0.525 0.494 0.494 0.494 0.165 0.168 0.171	-peak and a Level dBμV 46.3 45.7 35.3 33.7 42.3 42.0 31.1 30.7 48.3 47.8 47.1	verage readi AC Line Line 1 Neutral Line 1 Neutral Line 1 Neutral Line 1 Line 1 Line 1 Line 1	ings Clas Limit 56.0 46.0 46.0 56.1 56.1 46.1 46.1 46.1 46.1 65.2 65.1 64.9	ss B <u>Margin</u> -10.3 -10.7 -12.3 -13.8 -14.1 -15.0 -15.4 -16.9 -17.3 -17.8	Detector QP/Ave QP AVG AVG QP QP AVG AVG AVG QP QP	QP (1.00s) QP (1.00s) AVG (0.10s) QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) QP (1.00s)		
17.772 inal quasi Frequency MHz 0.532 0.525 0.525 0.494 0.494 0.494 0.494 0.165 0.168 0.171 2.806	-peak and a Level dBμV 46.3 45.7 35.3 33.7 42.3 42.0 31.1 30.7 48.3 47.8 47.1 38.1	verage readi AC Line Line 1 Neutral Line 1 Neutral Line 1 Line 1 Line 1 Line 1 Line 1 Line 1	ings Clas Limit 56.0 56.0 46.0 46.0 56.1 56.1 46.1 46.1 46.1 65.2 65.1 64.9 56.0	ss B Margin -9.7 -10.3 -10.7 -12.3 -13.8 -14.1 -15.0 -15.4 -16.9 -17.3 -17.8 -17.9	Detector QP/Ave QP AVG AVG QP QP QP AVG AVG AVG QP QP QP QP QP	QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s)		
17.772 inal quasi Frequency MHz 0.532 0.525 0.525 0.494 0.494 0.494 0.165 0.168 0.171 2.806 0.157	-peak and a Level dBμV 46.3 45.7 35.3 33.7 42.3 42.0 31.1 30.7 48.3 47.8 47.1 38.1 47.1	verage readi AC Line Line 1 Neutral Line 1 Neutral Line 1 Line 1 Line 1 Line 1 Line 1 Line 1 Neutral	ings Clas Limit 56.0 46.0 46.0 56.1 56.1 46.1 46.1 46.1 65.2 65.1 64.9 56.0 65.6	ss B Margin -9.7 -10.3 -10.7 -12.3 -13.8 -14.1 -15.0 -15.4 -16.9 -17.3 -17.8 -17.9 -18.5	Detector QP/Ave QP AVG AVG QP QP AVG AVG AVG QP QP QP QP QP	QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s)		
17.772 inal quasi Frequency MHz 0.532 0.525 0.525 0.494 0.494 0.494 0.494 0.165 0.168 0.171 2.806	-peak and a Level dBμV 46.3 45.7 35.3 33.7 42.3 42.0 31.1 30.7 48.3 47.8 47.1 38.1	verage readi AC Line Line 1 Neutral Line 1 Neutral Line 1 Line 1 Line 1 Line 1 Line 1 Line 1	ings Clas Limit 56.0 56.0 46.0 46.0 56.1 56.1 46.1 46.1 46.1 65.2 65.1 64.9 56.0	ss B Margin -9.7 -10.3 -10.7 -12.3 -13.8 -14.1 -15.0 -15.4 -16.9 -17.3 -17.8 -17.9	Detector QP/Ave QP AVG AVG QP QP QP AVG AVG QP QP QP QP QP QP	QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s)		
17.772 Final quasi Frequency MHz 0.532 0.525 0.525 0.494 0.494 0.494 0.165 0.168 0.171 2.806 0.157 0.151	-peak and a Level dBμV 46.3 45.7 35.3 33.7 42.3 42.0 31.1 30.7 48.3 47.8 47.1 38.1 47.1 46.8	verage readi AC Line Line 1 Neutral Line 1 Neutral Line 1 Line 1 Line 1 Line 1 Line 1 Line 1 Line 1 Neutral Line 1 Neutral Line 1	ings Clas Limit 56.0 46.0 46.0 56.1 56.1 46.1 46.1 46.1 65.2 65.1 64.9 56.0 65.6 65.9	ss B Margin -9.7 -10.3 -10.7 -12.3 -13.8 -14.1 -15.0 -15.4 -16.9 -17.3 -17.8 -17.8 -17.9 -18.5 -19.1	Detector QP/Ave QP AVG AVG QP QP AVG AVG AVG QP QP QP QP QP QP QP QP	QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s)		
17.772 Final quasi Frequency MHz 0.525 0.525 0.525 0.494 0.494 0.494 0.165 0.168 0.171 2.806 0.157 0.151 2.917	-peak and a Level dBμV 46.3 45.7 35.3 33.7 42.3 42.0 31.1 30.7 48.3 47.8 47.1 38.1 47.1 46.8 46.6 36.7	verage readi AC Line Line 1 Neutral Line 1 Neutral Line 1 Line 1 Line 1 Line 1 Line 1 Line 1 Line 1 Neutral Neutral Neutral Neutral Neutral Neutral	ings Clas Limit 56.0 46.0 46.0 56.1 56.1 46.1 46.1 46.1 46.1 65.2 65.1 64.9 56.0 65.6 65.9 65.9 56.0	ss B <u>Margin</u> -10.3 -10.7 -12.3 -13.8 -14.1 -15.0 -15.4 -16.9 -17.3 -17.8 -17.8 -17.9 -18.5 -19.1 -19.3 -19.3	Detector QP/Ave QP AVG AVG QP QP AVG AVG AVG QP QP QP QP QP QP QP QP QP QP QP QP	QP (1.00s) QP (1.00s) AVG (0.10s) QP (1.00s) QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s)		
17.772 inal quasi Frequency MHz 0.532 0.525 0.525 0.494 0.494 0.494 0.165 0.168 0.171 2.806 0.151 2.917 2.806	-peak and a Level dBµV 46.3 45.7 35.3 33.7 42.3 42.0 31.1 30.7 48.3 47.8 47.1 38.1 47.1 38.1 47.1 46.8 46.6 36.7 25.5	verage readi AC Line Line 1 Neutral Line 1 Neutral Line 1 Line 1 Line 1 Line 1 Neutral Line 1 Neutral Neutral Line 1 Neutral Line 1 Neutral Line 1	ings Clas Limit 56.0 56.0 46.0 46.0 56.1 56.1 46.1 46.1 46.1 65.2 65.1 64.9 56.0 65.6 65.9 65.9 56.0 46.1 46.1 46.1 46.1 46.2 65.2 65.1 65.2 65.0 46.0 46.0 46.0 46.0 46.0 46.0 46.0 46.1 46.1 46.1 46.1 46.2 46.0 46.0 46.0 46.0 46.0 46.0 46.0 46.0 46.0 46.1 46.1 46.1 46.2 56.0 46.0 46.0 46.0 46.0 46.0 46.0 46.0 46.1 46.1 46.0	ss B Margin -9.7 -10.3 -10.7 -12.3 -13.8 -14.1 -15.0 -15.4 -16.9 -17.3 -17.8 -17.9 -18.5 -19.1 -19.3 -19.3 -20.5	Detector QP/Ave QP AVG AVG QP QP AVG AVG QP QP QP QP QP QP QP QP QP QP	QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) AVG (0.10s)		
17.772 inal quasi Frequency MHz 0.525 0.525 0.525 0.494 0.494 0.494 0.165 0.168 0.171 2.806 0.157 0.151 2.917	-peak and a Level dBμV 46.3 45.7 35.3 33.7 42.3 42.0 31.1 30.7 48.3 47.8 47.1 38.1 47.1 46.8 46.6 36.7	verage readi AC Line Line 1 Neutral Line 1 Neutral Line 1 Line 1 Line 1 Line 1 Line 1 Neutral Line 1 Neutral Neutral Line 1 Neutral Line 1 Neutral Line 1 Neutral Line 1 Neutral Line 1 Neutral	ings Clas Limit 56.0 46.0 46.0 56.1 56.1 46.1 46.1 46.1 46.1 65.2 65.1 64.9 56.0 65.6 65.9 65.9 56.0	ss B <u>Margin</u> -10.3 -10.7 -12.3 -13.8 -14.1 -15.0 -15.4 -16.9 -17.3 -17.8 -17.8 -17.9 -18.5 -19.1 -19.3 -19.3	Detector QP/Ave QP AVG AVG QP QP AVG AVG QP QP QP QP QP QP QP QP QP QP QP QP QP	QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s)		
17.772 Final quasi Frequency MHz 0.532 0.525 0.525 0.494 0.494 0.494 0.494 0.494 0.494 0.494 0.165 0.165 0.168 0.171 2.806 0.157 0.151 2.917 2.806 17.772	-peak and a Level dBμV 46.3 45.7 35.3 33.7 42.3 42.0 31.1 30.7 48.3 47.8 47.1 38.1 47.1 46.8 46.6 36.7 25.5 38.8	verage readi AC Line Line 1 Neutral Line 1 Neutral Line 1 Line 1 Line 1 Line 1 Neutral Line 1 Neutral Neutral Line 1 Neutral Line 1 Neutral Line 1	ings Class Limit 56.0 46.0 46.0 46.1 46.1 46.1 46.1 46.1 65.2 65.1 64.9 56.0 65.6 65.9 65.9 56.0 46.0 46.0 65.9 65.9 65.9 56.0 46.0 65.9 65.9 56.0 46.0 60.0 60.0	ss B Margin -9.7 -10.3 -10.7 -12.3 -13.8 -14.1 -15.0 -15.4 -16.9 -17.3 -17.8 -17.9 -18.5 -19.1 -19.3 -19.3 -20.5 -21.2	Detector QP/Ave QP AVG AVG QP QP QP QP QP QP QP QP QP QP QP QP QP	QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) AVG (0.10s) AVG (0.10s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) AVG (0.10s)		

EMC Test Data

Client:	ARRIS	Job Number:	JD102669
Model: C61W	CE1W	T-Log Number:	T103891
	COTW	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	В

Radiated Emissions

(NTS Silicon Valley, Fremont Facility, Semi-Anechoic Chamber)

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 2/6/2017 Test Engineer: Joseph Cadigal Test Location: Fremont Chamber #4 Config. Used: 2 Config Change: none EUT Voltage: 120V/60Hz

General Test Configuration

The EUT and any local support equipment were located on the turntable for radiated emissions testing. Any remote support equipment was located outside the semi-anechoic chamber. Any cables running to remote support equipment were routed through metal conduit and when possible passed through a ferrite clamp upon exiting the chamber.

Radiated emissions tests above 1 GHz to FCC Part 15 were performed <u>with</u> floor absorbers in place in accordance with the test methods of ANSI C63.4 and CISPR 16-1-4.

The test distance and extrapolation factor (if applicable) are detailed under each run description.

Note, preliminary testing indicates that the emissions were maximized by orientation of the EUT and elevation of the measurement antenna. Maximized testing indicated that the emissions were maximized by orientation of the EUT, elevation of the measurement antenna, and manipulation of the EUT's interface cables.

Ambient Conditions:

Temperature:	25 °C
Rel. Humidity:	30 %

Summary of Results

Dum #	Teet Derfermend	Linet	Decult	Margin
Run #	Test Performed	Limit	Result	iviai yili
4	Radiated Emissions			Defende individual nume
1	30 - 1000 MHz, Preliminary	Class B	Eval	Refer to individual runs
0	Radiated Emissions		D	38.0 dBµV/m @ 30.39 MHz (-2.0
Z	30 - 1000 MHz, Maximized	Class B	Pass	dB)
26	Radiated Emissions	FCC Class B	Deer	50.6 dBµV/m @ 7373.4 MHz (-3.4
3b	1 GHz - 12 GHz Maximized	FUC Class B	Pass	dB)



EMC Test Data

Client:	ARRIS	Job Number:	JD102669
Model: C6	CE1W	T-Log Number:	T103891
	COTW	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	В

Modifications Made During Testing

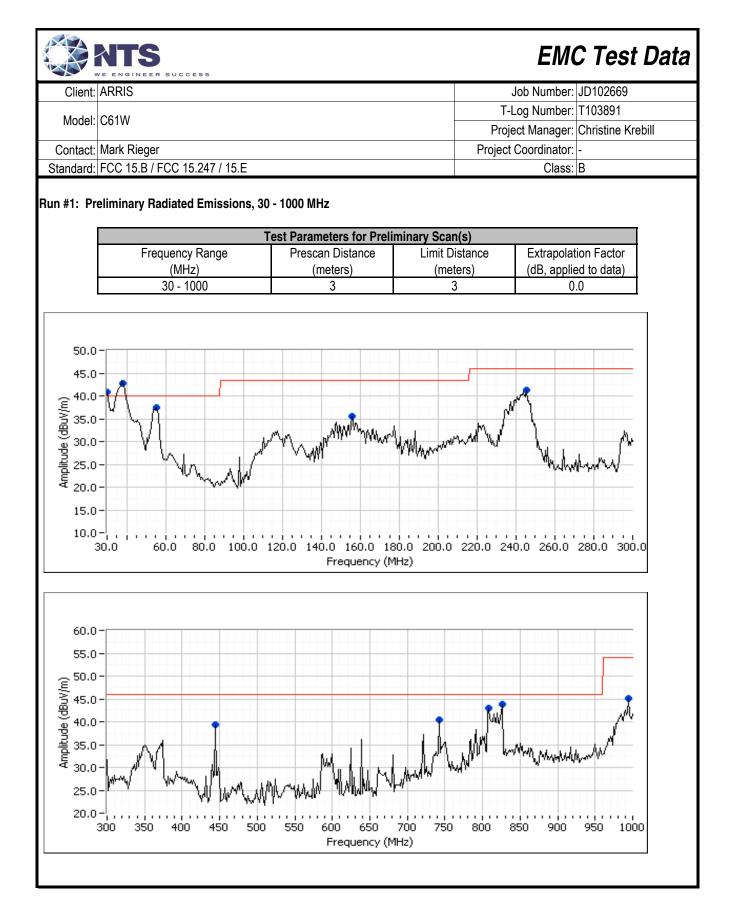
No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Sample Notes

Sample S/N: G62DATB200100 Driver: 20161214_c61w-bcm_v1.24.1.5 Antenna: Internal



	ARRIS	SUCCESS						Job Number: JD102669
							Log Number: T103891	
Model:	C61W							ect Manager: Christine Krebill
0 1 1							-	
	Mark Rieger		_ , ,				Project	Coordinator: -
Standard:	FCC 15.B / F	-CC 15.24	7 / 15.E					Class: B
Preliminary	v peak readir	nas cantu	ed during n	re-scan				
Frequency	Level	Pol		ss B	Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
55.019	37.5	V	40.0	-2.5	Peak	114	1.0	
245.569	41.2	Н	46.0	-4.8	Peak	198	1.0	
37.968	42.7	V	40.0	2.7	Peak	270	1.0	signal from TV
30.392	40.9	V	40.0	0.9	Peak	273	1.0	
155.772	35.6	Н	43.5	-7.9	Peak	349	2.0	
825.151	43.9	V	46.0	-2.1	Peak	191	1.0	
806.668	43.0	V	46.0	-3.0	Peak	217	1.0	
993.909	45.1	Н	54.0	-8.9	Peak	193	1.0	
741.769	40.5	Н	46.0	-5.5	Peak	243	2.0	
445.053	39.4	Н	46.0	-6.6	Peak	153	1.5	
Preliminary	uuasi-neak	readings	(no manipu	lation of FU	T interface c	ables)		
Frequency	Level	Pol		ss B	Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
		V	40.0	-4.7	QP	114	1.0	QP (1.00s)
	35.3					400	1.0	QP (1.00s)
55.019 245.569	35.3 39.1	H	46.0	-6.9	QP	198	1.0	QP(1.00S)
55.019			46.0 40.0	-6.9 1.8	QP QP	198 270	1.0	Signal from TV on
55.019 245.569	39.1	Н						· · · · ·
55.019 245.569 37.968	39.1 41.8	H V	40.0	1.8	QP	270	1.0	Signal from TV on
55.019 245.569 37.968 37.968	39.1 41.8 37.7	H V V	40.0 40.0	1.8 -2.3	QP QP	270 270	1.0 1.0	Signal from TV on Signal from TV off
55.019 245.569 37.968 37.968 30.392	39.1 41.8 37.7 37.4	H V V V	40.0 40.0 40.0	1.8 -2.3 -2.6	QP QP QP	270 270 272	1.0 1.0 1.0	Signal from TV on Signal from TV off QP (1.00s)
55.019 245.569 37.968 37.968 30.392 155.772	39.1 41.8 37.7 37.4 27.8	H V V V	40.0 40.0 40.0 43.5	1.8 -2.3 -2.6 -15.7 -7.2 -8.0	QP QP QP QP	270 270 272 349	1.0 1.0 1.0 2.0	Signal from TV on Signal from TV off QP (1.00s) QP (1.00s)
55.019 245.569 37.968 37.968 30.392 155.772 825.151 806.668 993.909	39.1 41.8 37.7 37.4 27.8 38.8 38.0 37.6	H V V H V H	40.0 40.0 43.5 46.0 46.0 54.0	1.8 -2.3 -2.6 -15.7 -7.2 -8.0 -16.4	QP QP QP QP QP QP QP QP	270 270 272 349 191 217 192	1.0 1.0 2.0 1.0 1.0 1.0 1.0	Signal from TV on Signal from TV off QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s)
55.019 245.569 37.968 37.968 30.392 155.772 825.151 806.668	39.1 41.8 37.7 37.4 27.8 38.8 38.0	H V V H V	40.0 40.0 43.5 46.0 46.0	1.8 -2.3 -2.6 -15.7 -7.2 -8.0	QP QP QP QP QP QP	270 270 272 349 191 217	1.0 1.0 2.0 1.0	Signal from TV on Signal from TV off QP (1.00s) QP (1.00s) QP (1.00s) QP (1.00s)

			ЕМС	C Test Data
Client:	ARRIS	Job	Number:	JD102669
Model:	C611M	T-Log	Number:	T103891
Mouei.	COTW	Project N	Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coc	ordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E		Class:	В
Run #2: Ma	aximized Readings From Run #1	est Parameters for Maximized Reading(s)		

Test Parameters for Maximized Reading(s)						
Frequency Range	Test Distance	Limit Distance	Extrapolation Factor			
(MHz)	(meters)	(meters)	(dB, applied to data)			
30 - 1000	3	3	0.0			

Maximized quasi-peak readings (includes manipulation of EUT interface cables)

		5 1				/		
Frequency	Level	Pol	Clas	ss B	Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
30.392	38.0	V	40.0	-2.0	QP	273	1.0	QP (1.00s)
55.019	35.3	V	40.0	-4.7	QP	113	1.0	QP (1.00s)
245.569	39.1	Н	46.0	-6.9	QP	198	1.0	QP (1.00s)
825.151	38.8	V	46.0	-7.2	QP	191	1.0	QP (1.00s)
445.053	38.3	Н	46.0	-7.7	QP	153	1.4	QP (1.00s)
806.668	38.0	V	46.0	-8.0	QP	217	1.0	QP (1.00s)

	VE ENGINEER	SUCCESS							Test l
Client:	ARRIS							Job Number: J	D102669
M1.1	064144						T-Log Number: T103891		
Model:	COTW				ect Manager: C				
Contact.	Mark Rieger							t Coordinator: -	
	FCC 15.B /		7 / 15 F				110,000	Class: E	
igle pre-	scan coverii eight scan p	ng both EN erformed o	during pre-s d 5GHz radio	FCC Part 1 can to satis		irements			
					ters for Preli		.,	T	
	Fre	quency Ra	nge		Distance	Limit D		Extrapolatio	
		(MHz)			ters)	(met	,	(dB, applied	
	1	000 - 1200	10		3		3	0.0	
100.	0								
							1		
90.	0-								
~ 80.	0-								
Amplitude (dBu//m) 20. 20. 20. 50. 50. 50. 50. 50. 50. 50. 50. 50. 5	0-						••••		
ළ /º.							Ц		
୍ରୁ 60. କୁ	0-						11 -		
檀 50.	0- <u>R</u>		*				ΛT	. •	
₹ 40.	o-N., /V	Want	S. And	ANT AND	ւ Աեհու	N	/ 'hhu	Ladaman	the state of the s
30.	0- 444	0 .	vw	N W W	MAN DAMAN	" WALKER			
20.	0-¦ 1000								
	1000				Frequency (f	MHz)		1	0000 12000
	peak readi	ngs captur	red durina n	re-scan (pe	ak readings	vs. average	limit)		
eliminary					22 and FCC)		,		
		Pol	EN 5502		Detector	Azimuth	Height	Comments	
	Level	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
55022 li	Level dBµV/m	V/11	-	-	Peak	207	1.0	5GHz radio fu	Indamental
<i>55022 li</i> equency		V		0.0	Peak	340	1.6		
55022 li equency MHz 510.000 141.230	dBµV/m 98.8 53.4	V V	54.0	-0.6					
55022 li equency MHz 510.000 141.230 766.610	dBµV/m 98.8 53.4 48.0	V V H	54.0 54.0	-6.0	Peak	177	1.3		
55022 li equency MHz 510.000 141.230 766.610 200.070	dBμV/m 98.8 53.4 48.0 48.3	V V H H	54.0 54.0 54.0	-6.0 -5.7	Peak Peak	221	1.6		
55022 Ii equency MHz 510.000 141.230 766.610 200.070 519.510 519.510	dBμV/m 98.8 53.4 48.0 48.3 45.6	V V H H V	54.0 54.0 54.0 54.0	-6.0 -5.7 -8.4	Peak Peak Peak	221 172	1.6 1.3		
55022 Ii equency MHz 510.000 141.230 766.610 200.070 519.510 372.540	dBµV/m 98.8 53.4 48.0 48.3 45.6 44.8	V V H V V V	54.0 54.0 54.0 54.0 54.0 54.0	-6.0 -5.7 -8.4 -9.2	Peak Peak Peak Peak	221 172 217	1.6 1.3 1.6		
55022 Ii equency MHz 510.000 141.230 766.610 200.070 519.510 519.510	dBμV/m 98.8 53.4 48.0 48.3 45.6	V V H H V	54.0 54.0 54.0 54.0	-6.0 -5.7 -8.4	Peak Peak Peak	221 172	1.6 1.3		

Client:	ARRIS							Job Number:	JD102669
Madali	C61W						T-	Log Number:	T103891
Model:	COTW			Proj	ect Manager:	Christine Krebill			
Contact:	Mark Rieger						Project	Coordinator:	-
Standard:	FCC 15.B / F	-CC 15.24	7 / 15.E					Class:	В
final read	B limit (when	d at 3 mete applicable	ers test dista e) is by defau	nce, unless Ilt a 3m limit	1 1		11.2.17		
requency	1	Pol		lass B	Detector	Azimuth	Height	Comments	
MHz 7373.390	dBμV/m 50.6	v/h V	Limit 54.0	Margin -3.4	Pk/QP/Avg AVG	degrees 182	meters 1.3		
6144.760	50.6 50.0	V	54.0 54.0	- 3.4 -4.0	AVG	339	1.3		/B 10 Hz;Peak /B 10 Hz;Peak
144.760 144.860	49.9	V	54.0 54.0	-4.0	AVG	206	1.0		/B 10 Hz;Peak
6758.980	49.9	V	54.0	-4.1	AVG	32	2.5		/B 10 Hz;Peak
1199.350	40.2	H	54.0	-13.8	AVG	221	1.6	,	/B 10 Hz;Peak
6759.680	38.3	H	54.0	-15.7	AVG	190	1.3		/B 10 Hz;Peak
1768.090	38.1	H	54.0	-15.9	AVG	176	1.2		/B 10 Hz;Peak
1200.360	57.7	Н	74.0	-16.3	PK	221	1.6	· · · · ·	/B 3 MHz;Peak
2371.410	37.6	V	54.0	-16.4	AVG	217	1.6		/B 10 Hz;Peak
371.670	56.4	V	74.0	-17.6	PK	217	1.6	RB 1 MHz;V	/B 3 MHz;Peak
766.570	55.7	Н	74.0	-18.3	PK	176	1.2	RB 1 MHz;V	/B 3 MHz;Peak
3519.970	33.9	V	54.0	-20.1	AVG	172	1.2	RB 1 MHz;V	/B 10 Hz;Peak
/373.750	50.8	Н	74.0	-23.2	PK	182	1.3		/B 3 MHz;Peak
6759.720	48.6	V	74.0	-25.4	PK	32	2.5		/B 3 MHz;Peak
6147.190	47.3	V	74.0	-26.7	PK	206	1.3		/B 3 MHz;Peak
6143.400	47.0	V	74.0	-27.0	PK	339	1.6		/B 3 MHz;Peak
3519.730	46.8	V	74.0	-27.2	PK	172	1.2	RB 1 MHz;V	/B 3 MHz;Peak
ote 1:	For FCC test	ting above	1 GHz, the I	imit is based		ge measuren	nent. In ado		k reading of any

EMC Test Data

Client:	ARRIS	Job Number:	JD102669
Model:	C61W	T-Log Number:	T103891
MOUEI.	COTW	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

RSS-247, FCC 15.247, FCC 15.407 Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

TS

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. For radiated emissions testing the measurement antenna was located 3 meters from the EUT, unless otherwise noted.

Ambient Conditions:

Temperature:	22.4 °C
Rel. Humidity:	41 %

Summary of Results

je anna y	01110041						
Run #	Mode	Channel	Target Power	Passing Power Setting	Test Performed	Limit	Result / Margin
Simultaneou	us Tx operati	on					
	RF4CE	2425MHz	3	3	Radiated Emissions,	FCC 15.209 / 15.247 /	42.5 dBµV/m @ 152.47
1	а	40	90	90	30 - 1000MHz	15 E	MHz (-1.0 dB)
	RF4CE	2425MHz	3	3	Radiated Emissions,	FCC 15.209 / 15.247 /	67.5 dBµV/m @
	а	40	90	86	1 - 40 GHz	15 E	10399.0 MHz (-0.8 dB)
	RF4CE	2475MHz	3	3	Radiated Emissions,	FCC 15.209 / 15.247 /	42.0 dBµV/m @ 152.47
2	а	157	90	90	30 - 1000MHz	15 E	MHz (-1.5 dB)
2	RF4CE	2475MHz	3	3	Radiated Emissions,	FCC 15.209 / 15.247 /	52.7 dBµV/m @
	а	157	90	90	1 - 40 GHz	15 E	11567.8 MHz (-1.3 dB)

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

	ATS	EMO	C Test Data
Client:	ARRIS	Job Number:	JD102669
Model:	C61W	T-Log Number:	T103891
MOUEI.	Corw	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

Procedure Comments:

Measurements performed in accordance with FCC KDB 558074

Peak measurements performed with: RBW=1MHz, VBW=3MHz, peak detector, max hold, auto sweep time Unless otherwise stated/noted, emission has duty cycle ≥ 98% and was measured using RBW=1MHz, VBW=10Hz, peak detector, linear average mode, auto sweep time, max hold.

	Mode	Data Rate	Duty Cycle (x)	Constant DC?	T (ms)	Pwr Cor Factor*	Lin Volt Cor Factor**	Min VBW for FS (Hz)
	RF4CE	-	1.00	Yes	1	0	0	10
1SS	11a	6MB/s	0.99	Yes	1.952	0	0	10

Sample Notes

Sample S/N: G62DA7BU20005B

Driver: -

Antenna: Internal 4x4

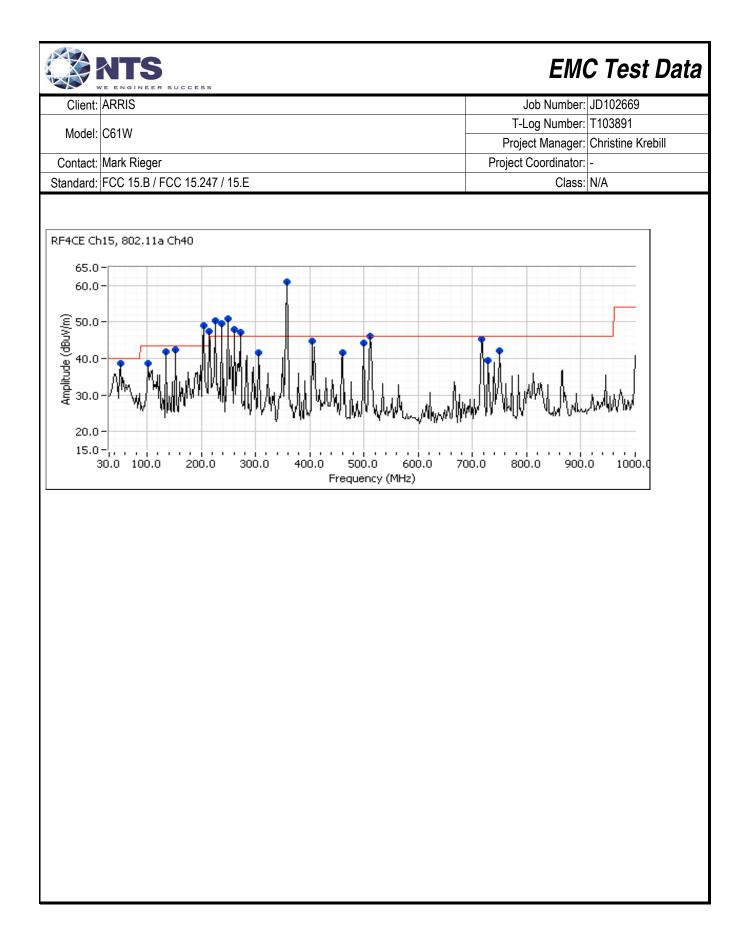
Measurement Specific Notes:

	For emissions outside of the restricted bands the limit is -27dBm/MHz eirp (68.3dBuV/m). The measurement method
Note 1:	required is a peak measurement (RB=1MHz, VB≥3MHz, peak detector). Per KDB 789033 2) c) (i), compliance can be
	demonstrated by meeting the average and peak limits of 15.209, as an alternative.
Note 2:	Emission has constant duty cycle < 98%, average measurement performed: RBW=1MHz, VBW>1/T but not less than 10Hz,
NOLE 2.	peak detector, linear averaging, auto sweep,max hold 50*1/DC traces (method VB of KDB 789033)

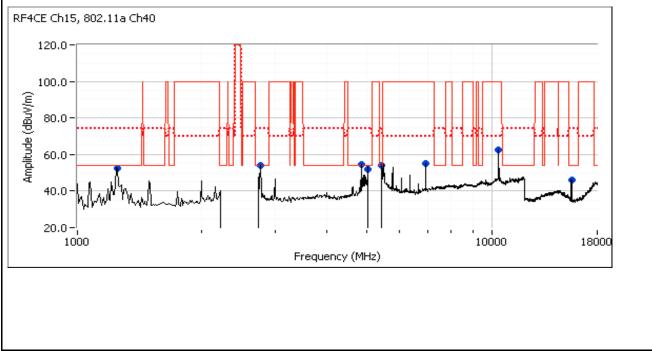
Notes:

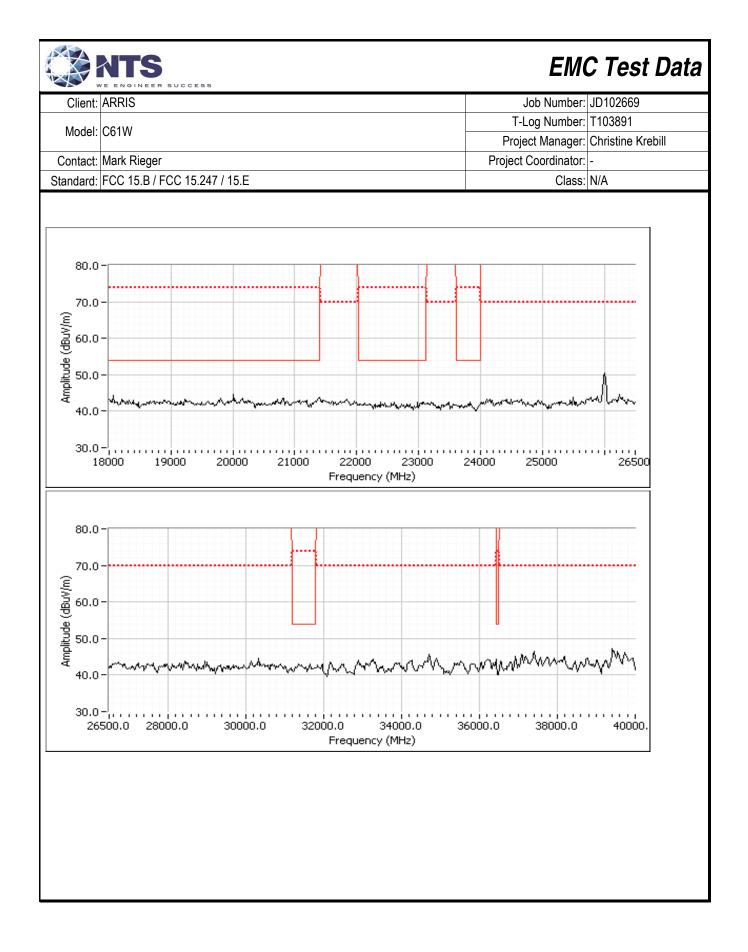
Serial cable connected directly to the motherboard to configure the radio operation. Responsible for non-radio reltated emissions observed below 1GHz. Would not be present during normal use.

Client:	ARRIS							Job Number:	JD102669
Madal	CC11M						T-	Log Number:	T103891
Model	C61W						Proj	ect Manager:	Christine Krebill
Contact:	Mark Rieger						Project	Coordinator:	-
	FCC 15.B / F	CC 15.247	/ 15.E					Class:	
Dun #1, D	adiated Spuri	aua Emia	lono						
	Date of Test:				С	onfig. Used:	1		
			digal/R. Varela	as		ifig Change:			
	est Location:	•	-			UT Voltage:			
						-			
	0405141		NA						
Channel: Tx Chain:	2425MHz		Mode:	RF4CE					
ix Unain:	Ant 0		Data Rate:	-					
Channel:	40		Mode:	11a					
Tx Chain:	40 4Tx		Data Rate:	6MB/s					
			2010 10101	0					
Run #1a: 3	0-1000MHz								
F		Dal	15 200 / 15	047/1EF	Detector	A th	l la in hat	0	
Frequency MHz	Level	Pol v/h	+	5.247 / 15E	Detector Pk/QP/Avg	Azimuth	Height	Comments	
152.465	dBμV/m 42.5	V	Limit 43.5	Margin -1.0	Peak	degrees 324	meters 1.0		
51.383	38.7	V	40.0	-1.3	Peak	136	1.0		
101.924	38.6	V	43.5	-4.9	Peak	274	1.0		
134.970	41.9	V	43.5	-1.6	Peak	234	1.0		
204.950	49.1	V	-	-	Peak	0	1.5	Not related t	o Radio
214.669	47.5	V	-	-	Peak	76	1.0	Not related to	
226.333	50.5	Н	-	-	Peak	126	2.5	Not related t	
237.996	49.5	Н	-	-	Peak	155	1.0	Not related t	
249.659	51.0	H	-	-	Peak	71	1.5	Not related to	
261.323 272.986	48.0	H	-	-	Peak	224	3.0	Not related t	
306.032	47.3 41.6	V H	- 46.0	-4.4	Peak Peak	210 338	1.0 1.5	Not related to	
358.517	61.0	<u>н</u> Н	40.0	-4.4	Peak	244	2.0	Not related t	o Radio
405.170	44.8	V	46.0	-1.2	Peak	225	1.0		
461.543	41.6	V	46.0	-4.4	Peak	309	1.0		
500.421	44.2	Ĥ	46.0	-1.8	Peak	220	1.5		
512.084	46.0	Н	-	-	Peak	269	1.5	Not related t	o Radio
716.192	45.2	Н	-	-	Peak	229	1.0	Not related t	o Radio
727.856	39.6	Н	46.0	-6.4	Peak	230	1.5		
749.238	42.2	V	46.0	-3.8	Peak	269	1.0	1	

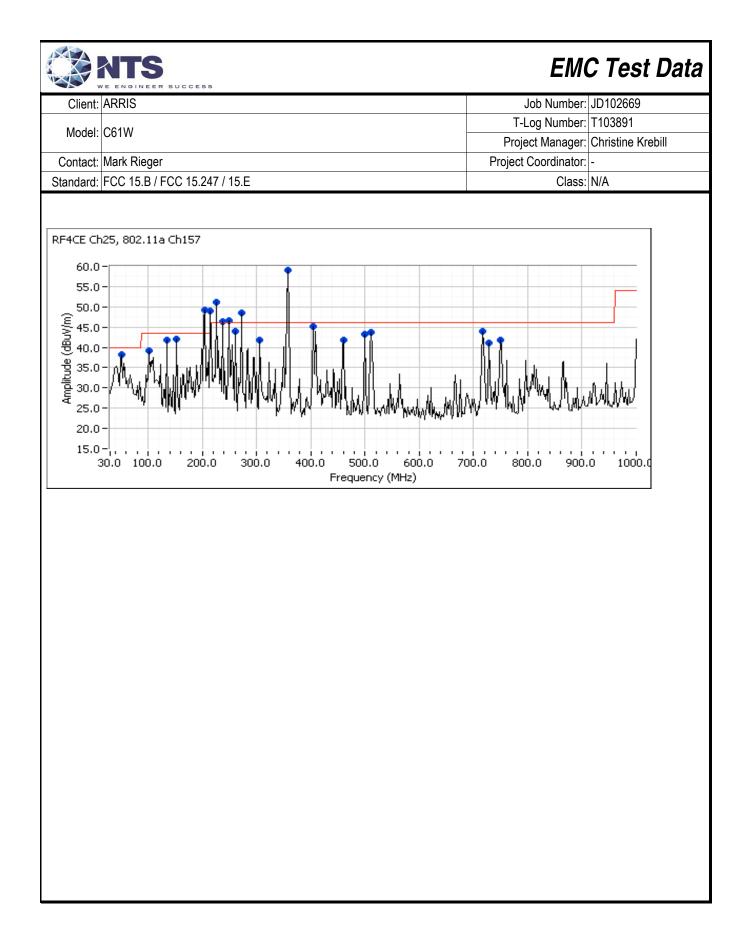


Client	ARRIS							Job Number:	JD102669
								Log Number:	
Model:	C61W						-		
0	Mark Diagon						Project Manager: Christine Kre Project Coordinator: -		
	Mark Rieger						Project		
Standard:	FCC 15.B / F	Class:	N/A						
equency	Level	Pol	15.209	9 / 15E	Detector	Azimuth	Height	Comments	
				1			v	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
q90 2772.430	51.3	Н	54.0	-2.7	AVG	92	1.0	RB 1 MHz·\	/B 10 Hz;Peak
2772.100	60.9	H	74.0	-13.1	PK	92	1.0		/B 3 MHz;Peak
	41.0	H	54.0	-13.0	AVG	186	2.4		/B 10 Hz;Peak
1248.700			74.0	-6.4	PK	186	2.4		/B 3 MHz;Peak
	67.6	Н	74.0						
1249.160		H V	54.0	-2.9	AVG	227	2.0	RB 1 MHz;\	/B 10 Hz;Peak
1249.160 4850.960	67.6		-	-	AVG PK	227 227	2.0 2.0	,	/B 10 Hz;Peak /B 3 MHz;Peak
1249.160 4850.960 4851.180	67.6 51.1	V	54.0	-2.9				RB 1 MHz;\	,
4851.180 5036.410	67.6 51.1 58.5	V V V V	54.0 74.0	-2.9 -15.5	PK AVG PK	227 254 254	2.0	RB 1 MHz;\ RB 1 MHz;\	/B 3 MHz;Peak
1249.160 4850.960 4851.180 5036.410 5035.470 6933.300	67.6 51.1 58.5 51.2 62.2 58.1	V V V V V	54.0 74.0 54.0	-2.9 -15.5 -2.8 -11.8 -10.2	PK AVG	227 254 254 336	2.0 1.5	RB 1 MHz;\ RB 1 MHz;\ RB 1 MHz;\	/B 3 MHz;Peak /B 10 Hz;Peak
1249.160 4850.960 4851.180 5036.410 5035.470 6933.300 5445.680	67.6 51.1 58.5 51.2 62.2 58.1 47.8	V V V V V V	54.0 74.0 54.0 74.0 68.3 54.0	-2.9 -15.5 -2.8 -11.8 -10.2 -6.2	PK AVG PK PK AVG	227 254 254 336 342	2.0 1.5 1.5	RB 1 MHz;\	/B 3 MHz;Peak /B 10 Hz;Peak /B 3 MHz;Peak /B 3 MHz;Peak /B 10 Hz;Peak
1249.160 4850.960 4851.180 5036.410 5035.470 6933.300 5445.680 5445.130	67.6 51.1 58.5 51.2 62.2 58.1 47.8 59.2	V V V V V V V	54.0 74.0 54.0 74.0 68.3 54.0 74.0	-2.9 -15.5 -2.8 -11.8 -10.2 -6.2 -14.8	PK AVG PK PK AVG PK	227 254 254 336 342 342	2.0 1.5 1.5 1.0 1.0 1.0	RB 1 MHz;\	/B 3 MHz;Peak /B 10 Hz;Peak /B 3 MHz;Peak /B 3 MHz;Peak /B 10 Hz;Peak /B 3 MHz;Peak
1249.160 4850.960 4851.180 5036.410 5035.470 6933.300 5445.680 5445.130 15592.560	67.6 51.1 58.5 51.2 62.2 58.1 47.8 59.2 48.5	V V V V V V V V	54.0 74.0 54.0 74.0 68.3 54.0 74.0 54.0	-2.9 -15.5 -2.8 -11.8 -10.2 -6.2 -14.8 -5.5	PK AVG PK AVG PK AVG	227 254 254 336 342 342 10	2.0 1.5 1.5 1.0 1.0 1.0 1.1	RB 1 MHz;\	/B 3 MHz;Peak /B 10 Hz;Peak /B 3 MHz;Peak /B 3 MHz;Peak /B 10 Hz;Peak /B 3 MHz;Peak /B 10 Hz;Peak
	67.6 51.1 58.5 51.2 62.2 58.1 47.8 59.2	V V V V V V V	54.0 74.0 54.0 74.0 68.3 54.0 74.0	-2.9 -15.5 -2.8 -11.8 -10.2 -6.2 -14.8	PK AVG PK PK AVG PK	227 254 254 336 342 342	2.0 1.5 1.5 1.0 1.0 1.0	RB 1 MHz;\ RB 1 MHz;\	/B 3 MHz;Peak /B 10 Hz;Peak /B 3 MHz;Peak /B 3 MHz;Peak /B 10 Hz;Peak /B 3 MHz;Peak

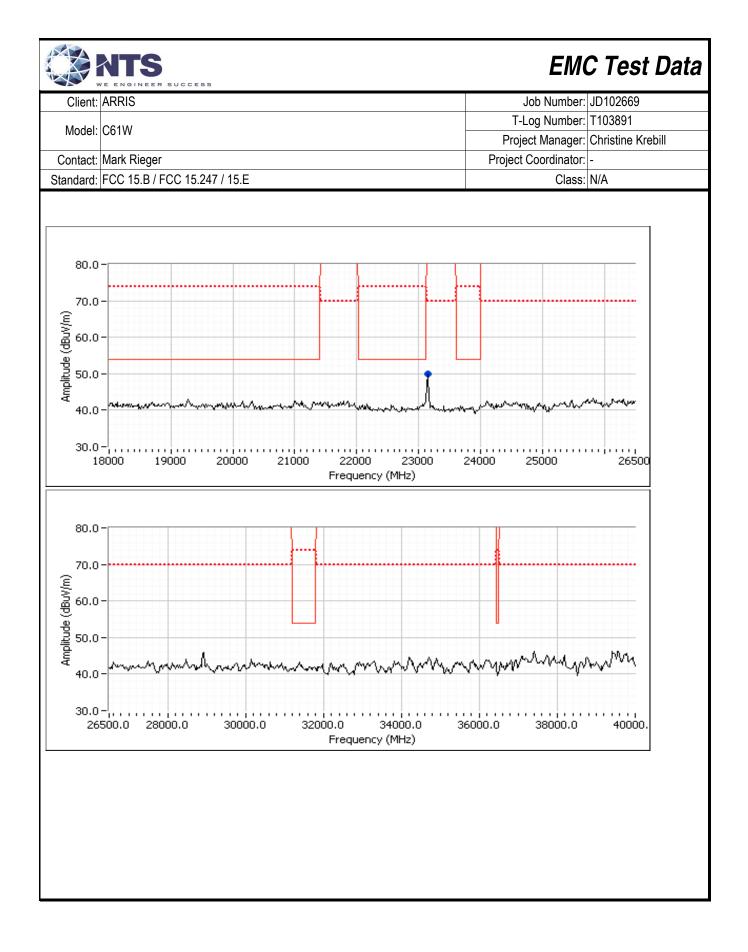




Client	ARRIS	SUCCESS						Job Number: JD102669		
Client								Log Number: T103891		
Model	C61W						Project Manager: Christine Krebill			
Contact	Mark Diagon						-	Coordinator: -		
	Mark Rieger						FIOJECI			
Standard	FCC 15.B / F	-00 15.247	/ 15.E					Class: N/A		
	adiated Spuri									
	Date of Test:					onfig. Used:				
	est Engineer:					fig Change:				
I	est Location:		er#7		E	UT Voltage:	120V/60HZ			
Channel:	2475MHz		Mode:	RF4CE						
Tx Chain:	Ant 0		Data Rate:	-						
Channel:	157		Mode:	11a						
Tx Chain:	4Tx		Data Rate:	6MB/s						
Run #1a: 3	0-1000MHz									
Frequency	Level	Pol	15.209 / 15	5.247 / 15E	Detector	Azimuth	Height	Comments		
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters			
152.465	42.0	V	43.5	-1.5	Peak	299	1.0			
51.383	38.2	V	40.0	-1.8	Peak	126	1.0			
101.924	39.1	V	43.5	-4.4	Peak	348	1.0			
134.970	41.7	V	43.5	-1.8	Peak	259	1.0			
204.950	49.2	V	-	-	Peak	185	1.0	Not related to Radio		
214.669	49.1 51.1	V H	-	-	Peak	27 121	1.0 1.5	Not related to Radio Not related to Radio		
226.333 237.996	46.3	<u>н</u> Н	-	-	Peak Peak	121	2.5	Not related to Radio		
249.659	46.7	<u>н</u> Н	-	-	Peak	334	3.5	Not related to Radio		
261.323	40.7	<u>н</u> Н	46.0	-2.1	Peak	313	2.0			
272.986	48.5	H		-	Peak	120	1.0	Not related to Radio		
306.032	41.7	V	46.0	-4.3	Peak	224	1.5			
358.517	59.0	H	-	-4.0	Peak	224	3.0	Not related to Radio		
405.170	45.1	V	_	_	Peak	210	1.0	Not related to Radio		
461.543	41.7	V	46.0	-4.3	Peak	289	1.0			
500.421	43.2	Ĥ	46.0	-2.8	Peak	215	1.5			
512.084	43.8	V	46.0	-2.2	Peak	304	1.0			
01Z.004	44.0	Ĥ	46.0	-2.0	Peak	254	1.0			
				-5.0	Peak	353	1.0	1		
716.192 727.856	41.0	V	46.0	-5.0	I CUIN					



Client: ARRIS Job Number: JD102669 Model: C61W T-Log Number: T103891 Contact: Mark Rieger Project Manager: Christine Krebill Standard: FCC 15.8 / FCC 15.247 / 15.E Class: N/A Run #1b: 1000-40000MHz Frequency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 11567.750 S2.7 V 54.0 -1.3 AVG 356 1.0 RB 1 MHz;VB 3 MHz;Peak 4949.060 47.7 V 54.0 -6.3 AVG 228 1.7 RB 1 MHz;VB 3 MHz;Peak 2722.240 39.6 H 54.0 -12.3 AVG 185 1.0 RB 1 MHz;VB 10 Hz;Peak 2722.240 39.6 H 54.0 -12.3 AVG 185 1.0 RB 1 MHz;VB 3 MHz;Peak 2722.240 36.6 H <th></th> <th></th> <th>SUCCESS</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>EMC Test Data</th>			SUCCESS						EMC Test Data			
Model: Cb1W Project Manager: Christine Krebill Contact: Mark Rieger Project Coordinator: - Standard: FCC 15.8 / FCC 15.247 / 15.E Class: N/A Run #1b: 1000-400000MHz Class: N/A Frequency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 11567.750 52.7 V 54.0 -1.3 AVG 356 1.0 RB 1 MHz;VB 10 Hz;Peak 4949.060 47.7 V 54.0 -6.3 AVG 228 1.7 RB 1 MHz;VB 3 MHz;Peak 2722.240 39.6 H 54.0 -12.3 AVG 185 1.0 RB 1 MHz;VB 3 MHz;Peak 1248.780 41.7 H 54.0 -12.3 AVG 169 1.6 RB 1 MHz;VB 3 MHz;Peak 1248.780 41.7 H 54.0 -12.3 AVG 16	Client:	ARRIS							Job Number: JD102669			
Project Manager: [Chnstme Krebill Contact: Mark Rieger Project Coordinator: Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Run #1b: 1000-40000MHz End								T-	Log Number: T103891			
Contact: Mark Rieger Project Coordinator: Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Run #1b: 1000-400000MHz Standard: Frequency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 11567.750 52.7 V 54.0 -1.3 AVG 356 1.0 RB 1 MHz;VB 10 Hz;Peak 4949.060 47.7 V 54.0 -6.3 AVG 228 1.7 RB 1 MHz;VB 30 MHz;Peak 2722.240 39.6 H 54.0 -14.4 AVG 185 1.0 RB 1 MHz;VB 30 Hz;Peak 2722.510 51.7 H 74.0 -22.3 PK 185 1.0 RB 1 MHz;VB 30 MHz;Peak 1248.804 66.0 H 74.0 -8.0 PK 169 1.6 RB 1 MHz;VB 30 MHz;Peak 1248.840 66.0 H 74.0 -8	Model:	C61W						Proj	ect Manager: Christine Krebill			
Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Run #1b: 1000-40000MHz Frequency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 10 RB 1 MHz;VB 10 Hz;Peak 11567.750 52.7 V 54.0 -1.3 AVG 356 1.0 RB 1 MHz;VB 30 Hz;Peak 4949.060 47.7 V 54.0 -6.3 AVG 228 1.7 RB 1 MHz;VB 30 MHz;Peak 2722.240 38.6 H 54.0 -14.4 AVG 185 1.0 RB 1 MHz;VB 30 MHz;Peak 2722.240 39.6 H 54.0 -14.4 AVG 185 1.0 RB 1 MHz;VB 30 MHz;Peak 2722.510 51.7 H 74.0 -22.3 PK 185 1.0 RB 1 MHz;VB 30 MHz;Peak 1248.840 66.0 H 74.0 -4.0 PK 169 1.6	Contact:	Mark Rieger										
Run #1b: 1000-40000MHz Frequency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 11567.750 52.7 V 54.0 -1.3 AVG 336 1.0 RB 1 MHz;VB 10 Hz;Peak 1968.850 66.2 V 74.0 -7.8 PK 356 1.0 RB 1 MHz;VB 3 MHz;Peak 4949.9060 47.7 V 54.0 -6.3 AVG 228 1.7 RB 1 MHz;VB 3 MHz;Peak 2722.240 39.6 H 54.0 -14.4 AVG 185 1.0 RB 1 MHz;VB 3 MHz;Peak 2722.510 51.7 H 74.0 -22.3 PK 185 1.0 RB 1 MHz;VB 3 MHz;Peak 1248.780 41.7 H 54.0 -12.3 AVG 169 1.6 RB 1 MHz;VB 3 MHz;Peak 6032.760 66.3 V 68.3 -2.5 PK <td></td> <td>_</td> <td>CC 15.247</td> <td>/ 15.E</td> <td></td> <td></td> <td></td> <td>-</td> <td></td>		_	CC 15.247	/ 15.E				-				
MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 11567.750 52.7 V 54.0 -1.3 AVG 356 1.0 RB 1 MHz;VB 10 Hz;Peak 4949.060 47.7 V 54.0 -6.3 AVG 228 1.7 RB 1 MHz;VB 30 MHz;Peak 4949.060 47.7 V 54.0 -6.3 AVG 228 1.7 RB 1 MHz;VB 10 Hz;Peak 4949.060 47.7 V 54.0 -18.8 PK 228 1.7 RB 1 MHz;VB 30 MHz;Peak 2722.240 39.6 H 54.0 -14.4 AVG 185 1.0 RB 1 MHz;VB 3 MHz;Peak 2722.510 51.7 H 74.0 -22.3 PK 185 1.0 RB 1 MHz;VB 3 MHz;Peak 1248.780 41.7 H 54.0 -12.3 AVG 169 1.6 RB 1 MHz;VB 3 MHz;Peak 6032.760 66.3 V 68.3 -2.0 PK 162 1.6 RB 1 M	Run #1b: 1	000-40000M	Hz									
11567.750 52.7 V 54.0 -1.3 AVG 356 1.0 RB 1 MHz;VB 10 Hz;Peak 11568.850 66.2 V 74.0 -7.8 PK 356 1.0 RB 1 MHz;VB 10 Hz;Peak 4949.060 47.7 V 54.0 -6.3 AVG 228 1.7 RB 1 MHz;VB 10 Hz;Peak 4949.030 55.2 V 74.0 -18.8 PK 228 1.7 RB 1 MHz;VB 10 Hz;Peak 2722.240 39.6 H 54.0 -14.4 AVG 185 1.0 RB 1 MHz;VB 10 Hz;Peak 2722.510 51.7 H 74.0 -22.3 PK 185 1.0 RB 1 MHz;VB 10 Hz;Peak 1248.780 41.7 H 54.0 -12.3 AVG 169 1.6 RB 1 MHz;VB 10 Hz;Peak 1248.780 66.0 H 74.0 -8.0 PK 169 1.6 RB 1 MHz;VB 3 MHz;Peak 6032.760 66.3 V 68.3 -2.5 PK 96 1.2 RB 1 MHz;VB 3 MHz;Peak 23142.260 62.6 V 68.3 <t< td=""><td>Frequency</td><td>Level</td><td>Pol</td><td>15.209</td><td>9 / 15E</td><td>Detector</td><td>Azimuth</td><td>Height</td><td>Comments</td></t<>	Frequency	Level	Pol	15.209	9 / 15E	Detector	Azimuth	Height	Comments			
11568.850 66.2 V 74.0 -7.8 PK 356 1.0 RB 1 MHz;VB 3 MHz;Peak 4949.060 47.7 V 54.0 -6.3 AVG 228 1.7 RB 1 MHz;VB 3 MHz;Peak 4949.060 47.7 V 54.0 -18.8 PK 228 1.7 RB 1 MHz;VB 3 MHz;Peak 4949.060 47.7 V 54.0 -14.4 AVG 185 1.0 RB 1 MHz;VB 3 MHz;Peak 2722.240 39.6 H 54.0 -14.4 AVG 185 1.0 RB 1 MHz;VB 10 Hz;Peak 2722.510 51.7 H 74.0 -22.3 PK 185 1.0 RB 1 MHz;VB 10 Hz;Peak 1248.780 41.7 H 54.0 -12.3 AVG 169 1.6 RB 1 MHz;VB 3 MHz;Peak 1248.840 66.0 H 74.0 -8.0 PK 169 1.6 RB 1 MHz;VB 3 MHz;Peak 6032.760 66.3 V 68.3 -2.5 PK 96 1.2 RB 1 MHz;VB 3 MHz;Peak 23142.260 62.6 V 68.3 <t< td=""><td></td><td>dBµV/m</td><td>v/h</td><td>Limit</td><td>Margin</td><td>Pk/QP/Avg</td><td>degrees</td><td></td><td></td></t<>		dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees					
4949.060 47.7 V 54.0 -6.3 AVG 228 1.7 RB 1 MHz;VB 10 Hz;Peak 4948.930 55.2 V 74.0 -18.8 PK 228 1.7 RB 1 MHz;VB 3 MHz;Peak 2722.240 39.6 H 54.0 -14.4 AVG 185 1.0 RB 1 MHz;VB 3 MHz;Peak 2722.240 39.6 H 74.0 -22.3 PK 185 1.0 RB 1 MHz;VB 3 MHz;Peak 2722.510 51.7 H 74.0 -22.3 PK 185 1.0 RB 1 MHz;VB 3 MHz;Peak 1248.780 41.7 H 54.0 -12.3 AVG 169 1.6 RB 1 MHz;VB 3 MHz;Peak 6032.760 66.3 V 68.3 -2.0 PK 169 1.6 RB 1 MHz;VB 3 MHz;Peak 23142.260 62.6 V 68.3 -2.5 PK 96 1.2 RB 1 MHz;VB 3 MHz;Peak 23142.260 62.6 V 68.3 -5.7 PK 4 1.8 RB 1 MHz;VB 3 MHz;Peak 0.0	11567.750		V	54.0	-1.3	AVG		1.0	RB 1 MHz;VB 10 Hz;Peak			
4948.930 55.2 V 74.0 -18.8 PK 228 1.7 RB 1 MHz;VB 3 MHz;Peak 2722.240 39.6 H 54.0 -14.4 AVG 185 1.0 RB 1 MHz;VB 3 MHz;Peak 2722.210 51.7 H 74.0 -22.3 PK 185 1.0 RB 1 MHz;VB 3 MHz;Peak 1248.780 41.7 H 54.0 -12.3 AVG 169 1.6 RB 1 MHz;VB 10 Hz;Peak 1248.840 66.0 H 74.0 -8.0 PK 169 1.6 RB 1 MHz;VB 3 MHz;Peak 6032.760 66.3 V 68.3 -2.0 PK 162 1.6 RB 1 MHz;VB 3 MHz;Peak 5549.810 65.8 V 68.3 -2.5 PK 96 1.2 RB 1 MHz;VB 3 MHz;Peak 23142.260 62.6 V 68.3 -5.7 PK 4 1.8 RB 1 MHz;VB 3 MHz;Peak RF4CE Ch25, 802.11a Ch157	11568.850	66.2		74.0	-7.8	PK		1.0	RB 1 MHz;VB 3 MHz;Peak			
2722.240 39.6 H 54.0 -14.4 AVG 185 1.0 RB 1 MHz;VB 10 Hz;Peak 2722.510 51.7 H 74.0 -22.3 PK 185 1.0 RB 1 MHz;VB 3 MHz;Peak 1248.780 41.7 H 54.0 -12.3 AVG 169 1.6 RB 1 MHz;VB 3 MHz;Peak 1248.840 66.0 H 74.0 -8.0 PK 169 1.6 RB 1 MHz;VB 3 MHz;Peak 6032.760 66.3 V 68.3 -2.0 PK 162 1.6 RB 1 MHz;VB 3 MHz;Peak 5549.810 65.8 V 68.3 -2.5 PK 96 1.2 RB 1 MHz;VB 3 MHz;Peak 23142.260 62.6 V 68.3 -5.7 PK 4 1.8 RB 1 MHz;VB 3 MHz;Peak 00.0 60.0 - 60.0 - - 68.3 -5.7 PK 4 1.8 RB 1 MHz;VB 3 MHz;Peak 0.0 - 60.0 - - 60.0 - - - - - - - - -									RB 1 MHz;VB 10 Hz;Peak			
2722.510 51.7 H 74.0 -22.3 PK 185 1.0 RB 1 MHz;VB 3 MHz;Peak 1248.780 41.7 H 54.0 -12.3 AVG 169 1.6 RB 1 MHz;VB 3 MHz;Peak 1248.840 66.0 H 74.0 -8.0 PK 169 1.6 RB 1 MHz;VB 3 MHz;Peak 6032.760 66.3 V 68.3 -2.0 PK 162 1.6 RB 1 MHz;VB 3 MHz;Peak 5549.810 65.8 V 68.3 -2.5 PK 96 1.2 RB 1 MHz;VB 3 MHz;Peak 23142.260 62.6 V 68.3 -5.7 PK 4 1.8 RB 1 MHz;VB 3 MHz;Peak 0.0												
1248.780 41.7 H 54.0 -12.3 AVG 169 1.6 RB 1 MHz;VB 10 Hz;Peak 1248.840 66.0 H 74.0 -8.0 PK 169 1.6 RB 1 MHz;VB 3 MHz;Peak 6032.760 66.3 V 68.3 -2.0 PK 162 1.6 RB 1 MHz;VB 3 MHz;Peak 5549.810 65.8 V 68.3 -2.5 PK 96 1.2 RB 1 MHz;VB 3 MHz;Peak 23142.260 62.6 V 68.3 -5.7 PK 4 1.8 RB 1 MHz;VB 3 MHz;Peak 0.0												
1248.840 66.0 H 74.0 -8.0 PK 169 1.6 RB 1 MHz;VB 3 MHz;Peak 6032.760 66.3 V 68.3 -2.0 PK 162 1.6 RB 1 MHz;VB 3 MHz;Peak 5549.810 65.8 V 68.3 -2.5 PK 96 1.2 RB 1 MHz;VB 3 MHz;Peak 23142.260 62.6 V 68.3 -5.7 PK 4 1.8 RB 1 MHz;VB 3 MHz;Peak 23142.260 62.6 V 68.3 -5.7 PK 4 1.8 RB 1 MHz;VB 3 MHz;Peak 23142.260 62.6 V 68.3 -5.7 PK 4 1.8 RB 1 MHz;VB 3 MHz;Peak 0.0												
6032.760 66.3 V 68.3 -2.0 PK 162 1.6 RB 1 MHz;VB 3 MHz;Peak 5549.810 65.8 V 68.3 -2.5 PK 96 1.2 RB 1 MHz;VB 3 MHz;Peak 23142.260 62.6 V 68.3 -5.7 PK 4 1.8 RB 1 MHz;VB 3 MHz;Peak RF4CE Ch25, 802.11a Ch157 100.0 -												
5549.810 65.8 V 68.3 -2.5 PK 96 1.2 RB 1 MHz;VB 3 MHz;Peak 23142.260 62.6 V 68.3 -5.7 PK 4 1.8 RB 1 MHz;VB 3 MHz;Peak RF4CE Ch25, 802.11a Ch157 100.0 0.0												
23142.260 62.6 V 68.3 -5.7 PK 4 1.8 RB 1 MHz;VB 3 MHz;Peak												
RF4CE Ch25, 802.11a Ch157												
1000 10000 18000 Frequency (MHz)	RF4CE Ch25, 802.11a Ch157											



EMC Test Data

Client:	ARRIS	Job Number:	JD102669
Model:	CG1W	T-Log Number:	T103891
	COTW	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

FCC 15.407 (UNII) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

TS

SUCCESS

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. For radiated emissions testing the measurement antenna was located 3 meters from the EUT, unless otherwise noted.

Ambient Conditions:

Temperature:	21.3 °C
Rel. Humidity:	38 %

Summary of Results

Run #			Passing Pwr Setting	Test Performed	Limit	Result / Margin	
20MHz Ban	dwith Modes						•
1	а	36 - 5180MHz	1	q74	Restricted Band Edge at 5150 MHz	15.209	53.6 dBµV/m @ 5146.8 MHz (-0.4 dB)
I		40 - 5200MHz	1	q85	Restricted Band Edge at 5150 MHz	15.209	53.3 dBµV/m @ 5149.0 MHz (-0.7 dB)
2		64 - 5320MHz	1	q71	Restricted Band Edge at 5350 MHz	15.209	53.6 dBµV/m @ 5350.0 MHz (-0.4 dB)
	а	60 - 5300MHz	1	q85	Restricted Band Edge at 5350 MHz	15.209	53.6 dBµV/m @ 5350.0 MHz (-0.4 dB)
	а	100 - 5500MHz	1	q70	Restricted Band Edge at 5460 MHz	15.209	46.5 dBµV/m @ 5456.2 MHz (-7.5 dB)
	а	100 - 5500MHz	1	q70	Band Edge 5460 - 5470 MHz	15E	68.0 dBµV/m @ 5469.5 MHz (-0.3 dB)
3	а	104 - 5520MHz	1	q85	Restricted Band Edge at 5460 MHz	15.209	49.9 dBµV/m @ 5446.7 MHz (-4.1 dB)
5	а	104 - 5520MHz	1	q85	Band Edge 5460 - 5470 MHz	15E	68.0 dBµV/m @ 5464.5 MHz (-0.2 dB)
	а	140 - 5700MHz	1	q65	Band Edge 5725MHz	15E	68.0 dBµV/m @ 5726.7 MHz (-0.3 dB)
	а	136 - 5680MHz	1	q83	Band Edge 5725MHz	15E	67.3 dBµV/m @ 5740.8 MHz (-1.0 dB)

Client:	ARRIS					Job Number:	
Model:	C61W/					T-Log Number:	T103891
Model.	COTW					Project Manager:	Christine Krebill
Contact:	Mark Riege	r				Project Coordinator:	-
Standard:	FCC 15.B /	FCC 15.247	15.E			Class:	N/A
				-			
Run #	Mode	Channel	# of SS	Passing Pwr Setting	Test Performed	Limit	Result / Margin
Λ	а	149 - 5745MHz	1	q90	Band Edge 5725 MHz	15E	61.6 dBµV/m @ 564 MHz (-6.7 dB)
4	а	165 - 5825MHz	1	q90	Band Edge 5850MHz	15E	59.4 dBµV/m @ 592 MHz (-12.1 dB)
5	n20	36 - 5180MHz	1	q69	Restricted Band Edge at 5150 MHz	15.209	53.3 dBµV/m @ 514 MHz (-0.7 dB)
5	n20	40 - 5200MHz	1	q84	Restricted Band Edge at 5150 MHz	15.209	53.0 dBµV/m @ 514 MHz (-1.0 dB)
6	n20	64 - 5320MHz	1	q70	Restricted Band Edge at 5350 MHz	15.209	53.1 dBµV/m @ 535 MHz (-0.9 dB)
0	n20	60 - 5300MHz	1	q86	Restricted Band Edge at 5350 MHz	15.209	53.5 dBµV/m @ 535 MHz (-0.5 dB)
	n20	100 - 5500MHz	1	q68	Restricted Band Edge at 5460 MHz	15.209	47.8 dBµV/m @ 548 MHz (-6.2 dB)
	n20	100 - 5500MHz	1	q68	Band Edge 5460 - 5470 MHz	15E	53.8 dBµV/m @ 54 MHz (-0.2 dB)
7	n20	104 - 5520MHz	1	q84	Restricted Band Edge at 5460 MHz	15.209	49.7 dBµV/m @ 543 MHz (-4.3 dB)
	n20	104 - 5520MHz	1	q84	Band Edge 5460 - 5470 MHz	15E	53.0 dBµV/m @ 54 MHz (-1.0 dB)
	n20	140 - 5700MHz	1	q57	Band Edge 5725MHz	15E	68.1 dBµV/m @ 573 MHz (-0.2 dB)
8	n20	149 - 5745MHz	1	q90	Band Edge 5725 MHz	15E	117.8 dBµV/m @ 5749.4 MHz (-4.5 d
U	n20	165 - 5825MHz	1	q90	Band Edge 5850MHz	15E	119.6 dBµV/m @ 5828.2 MHz (-2.7 d

Page 53

Client	ARRIS					Job Num	ber: JD102669
							per: T103891
Model	C61W						ger: Christine Krebill
Contact	Mark Riege	r				Project Coordina	-
	-	FCC 15.247	/ 15.E			,	ass: N/A
Run #	Mode	Channel	# of SS	Passing Pwr Setting	Test Performed	Limit	Result / Margin
0MHz Ban	dwith Modes	-					
9	n40	38 - 5190MHz	1	q57	Restricted Band Edge at 5150 MHz	15.209	73.9 dBµV/m @ 5149 MHz (-0.1 dB)
5	n40	46 - 5230MHz	1	q80	Restricted Band Edge at 5150 MHz	15.209	53.0 dBµV/m @ 5148 MHz (-1.0 dB)
40	n40	62 - 5310MHz	1	q59	Restricted Band Edge at 5350 MHz	15.209	53.6 dBµV/m @ 5350 MHz (-0.4 dB)
10	n40	54 - 5270MHz	1	q80	Restricted Band Edge at 5350 MHz	15.209	53.3 dBµV/m @ 5353 MHz (-0.7 dB)
	n40	102 - 5510MHz	1	q56	Restricted Band Edge at 5460 MHz	15.209	47.9 dBµV/m @ 5455 MHz (-6.1 dB)
	n40	102 - 5510MHz	1	q56	Band Edge 5460 - 5470 MHz	15E	73.2 dBµV/m @ 5469 MHz (-0.8 dB)
11	n40	110 - 5550MHz	1	q78	Restricted Band Edge at 5460 MHz	15.209	51.1 dBµV/m @ 5459 MHz (-2.9 dB)
	n40	110 - 5550MHz	1	q78	Band Edge 5460 - 5470 MHz	15E	53.5 dBµV/m @ 5468 MHz (-0.5 dB)
	n40	134 - 5670MHz	1	q67	Band Edge 5725MHz	15E	68.1 dBµV/m @ 5725 MHz (-0.2 dB)
10	n40	151 - 5755MHz	1	q83	Band Edge 5725 MHz	15E	67.9 dBµV/m @ 5645 MHz (-0.4 dB)
12	n40	159 - 5795MHz	1	q90	Band Edge 5850MHz	15E	67.4 dBµV/m @ 5940 MHz (-0.9 dB)

		RSUCCESS				EM	C Test Data					
Client:	ARRIS					Job Number:	JD102669					
Model:	C61W					T-Log Number: T103891						
Model.	COTW				-	Project Manager:	Christine Krebill					
Contact:	Mark Rieger											
Standard:	FCC 15.B /	FCC 15.247	/ 15.E			Class:	N/A					
Run #	Mode	Channel	# of SS	Passing Pwr Setting	Test Performed	Limit	Result / Margin					
80MHz Ban	dwith Modes											
13	ac80	42 - 5210MHz	1	q54	Restricted Band Edge at 5150 MHz	15.209	72.4 dBµV/m @ 5146.5 MHz (-1.6 dB)					
14	ac80	58 - 5290MHz	1	q53	Restricted Band Edge at 5350 MHz	15.209	72.2 dBµV/m @ 5353.9 MHz (-1.8 dB)					
45	ac80	106 - 5530MHz	1	q46	Restricted Band Edge at 5460 MHz	15.209	46.3 dBµV/m @ 5455.4 MHz (-7.7 dB)					
15	ac80	106 - 5530MHz	1	q46	Band Edge 5460 - 5470 MHz	15E	67.0 dBµV/m @ 5465.5 MHz (-1.3 dB)					
16	ac80	155 - 5775MHz	1	q77	Band Edge 5725 MHz	15E	67.4 dBµV/m @ 5640.4 MHz (-0.9 dB)					
10	ac80	155 - 5775MHz	1	q77	Band Edge 5850MHz	15E	64.5 dBµV/m @ 5934.1 MHz (-3.8 dB)					

Modifications Made During Testing No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.



EMC Test Data

Client:	ARRIS	Job Number:	JD102669
Model:	CE1W	T-Log Number:	T103891
	COTW	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

Procedure Comments:

Measurements performed in accordance with FCC KDB 789033

Peak measurements performed with: RBW=1MHz, VBW=3MHz, peak detector, max hold, auto sweep time

Unless otherwise stated/noted, emission has duty cycle ≥ 98% and was measured using RBW=1MHz, VBW=10Hz, peak detector, linear average mode, auto sweep time, max hold 50 traces. (method VB of KDB 789033)

	Mode	Data Rate	Duty Cycle (x)	Constant DC?	T (ms)	Pwr Cor Factor*	Lin Volt Cor Factor**	Min VBW for FS (Hz)
1SS	11a	6MB/s	0.99	Yes	1.952	0	0	10
1SS	n20	MCS0	0.99	Yes	1.953	0	0	10
1SS	n40	MCS0	0.9798	Yes	0.971	0.09	0.18	1030
1SS	ac80	VHT0	0.96	Yes	0.46	0.18	0.37	2174

Sample Notes

Sample S/N: G62DA7BU20005B

Driver: -

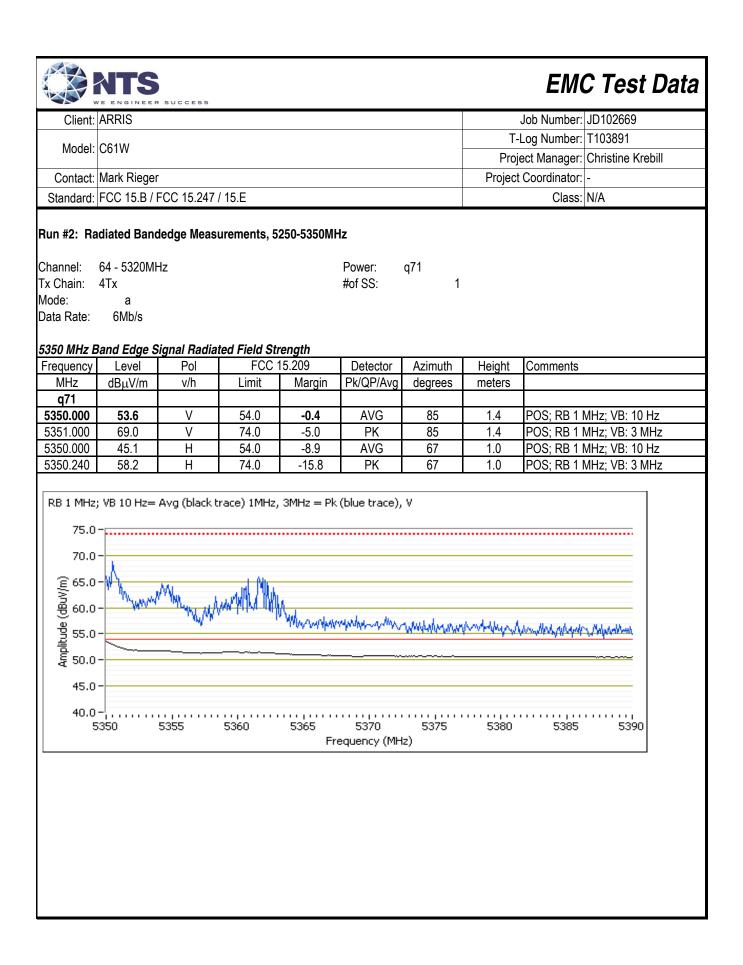
Antenna: Internal 4x4

Measurement Specific Notes:

	For emissions outside of the restricted bands the limit is -27dBm/MHz eirp (68.3dBuV/m). The measurement method
Note 1:	required is a peak measurement (RB=1MHz, VB≥3MHz, peak detector). Per KDB 789033 2) c) (i), compliance can be
	demonstrated by meeting the average and peak limits of 15.209, as an alternative.
Note 2:	Emission has a duty cycle ≥ 98%, average measurement performed: RBW=1MHz, VBW=3MHz, RMS, Power averaging, auto
NOLE Z.	sweep, trace average 100 traces (method AD of KDB 789033)
Note 3:	Emission has constant duty cycle < 98%, average measurement performed: RBW=1MHz, VBW>1/T but not less than 10Hz,
NOLE 5.	peak detector, linear averaging, auto sweep,max hold 50*1/DC traces (method VB of KDB 789033)
Note 4:	Emission has a duty cycle < 98%, average measurement performed: RBW=1MHz, VBW=3MHz, RMS, Power averaging, auto
NOLE 4.	sweep, trace average 100*1/DC traces, measurement corrected by Pwr correction factor (method AD of KDB 789033)
Note 5:	Plots of the average and peak bandedge do not account for any duty cycle correction. Refer to the tabular results for final
NOLE D.	measurements.

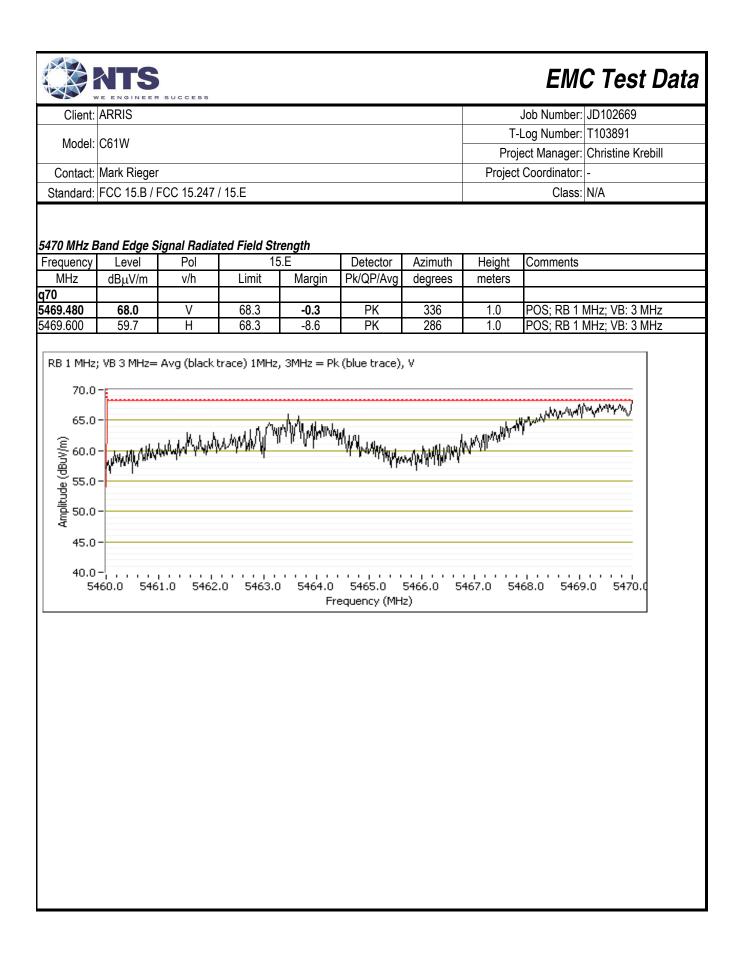
	NTS							EMC Test Data	
Client:	ARRIS	SUCCESS						Job Number: JD102669	
						T-Log Number: T103891			
Model:	C61W						ect Manager: Christine Krebill		
Contact.	Mark Rieger			-	Coordinator: -				
	FCC 15.B / F	CC 15 247	/ 15 F					Class: N/A	
	adiated Band			150-5250MI	H7				
		ougo mouo							
	Date of Test:					onfig. Used:			
	est Engineer:					fig Change:			
I	est Location:	FI Chambe	r#7		E	UT Voltage:	120V/60Hz		
Channel:	36 - 5180 Mł	47			Power:	q74			
Tx Chain:	4Tx	14			#of SS:	4/ 4 1			
Mode:	а								
Data Rate:	6Mb/s								
	Band Edge Si					A · · · ·			
Frequency	Level	Pol		15.209	Detector	Azimuth	Height	Comments	
MHz q74	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
<u>974</u> 5146.790	53.6	V	54.0	-0.4	AVG	90	1.0	POS; RB 1 MHz; VB: 10 Hz	
5146.310	71.0	V	74.0	-3.0	PK	90	1.0	POS; RB 1 MHz; VB: 3 MHz	
5150.000	44.4	H	54.0	-9.6	AVG	346	1.9	POS; RB 1 MHz; VB: 10 Hz	
5149.120	56.7	Н	74.0	-17.3	PK	346	1.9	POS; RB 1 MHz; VB: 3 MHz	
75.0 70.0 65.0 (m/) 60.0 55.0 55.0 4 9.05			mprover Alfreen		(blue trace),	AM MANN	~~~	5145 5150	

		SUCCESS						EMC Test Dat					
Client	ARRIS							Job Number: JD102669					
Madal	004144	C61W T-Log Number: T103891											
Model	Project Manager: Cl												
Contact:	Mark Rieger	Mark Rieger Project Coordinator: -											
	FCC 15.B / F		/ 15.E					Class: N/A					
	Date of Test:					onfig. Used:							
	est Engineer: est Location:	•	-			ifig Change: UT Voltage:							
Channel:	40 - 5200 MI	Hz			Power:	q85							
x Chain:	4Tx				#of SS:	. 1							
/lode:	а												
Data Rate:	6Mb/s												
150 MU-	Band Edan C	ianal Dadia	tod Field St	ronath									
-requency	Band Edge S Level	Pol		15.209	Detector	Azimuth	Height	Comments					
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters						
q85	αυμινικ	.,											
5149.040	53.3	V	54.0	-0.7	AVG	97	1.2	POS; RB 1 MHz; VB: 10 Hz					
5148.400	70.0	V	74.0	-4.0	PK	97	1.2	POS; RB 1 MHz; VB: 3 MHz					
5146.870	44.5	Н	54.0	-9.5	AVG	291	1.9	POS; RB 1 MHz; VB: 10 Hz					
5148.080	57.6	Н	74.0	-16.4	PK	291	1.9	POS; RB 1 MHz; VB: 3 MHz					
								www.wyupow					

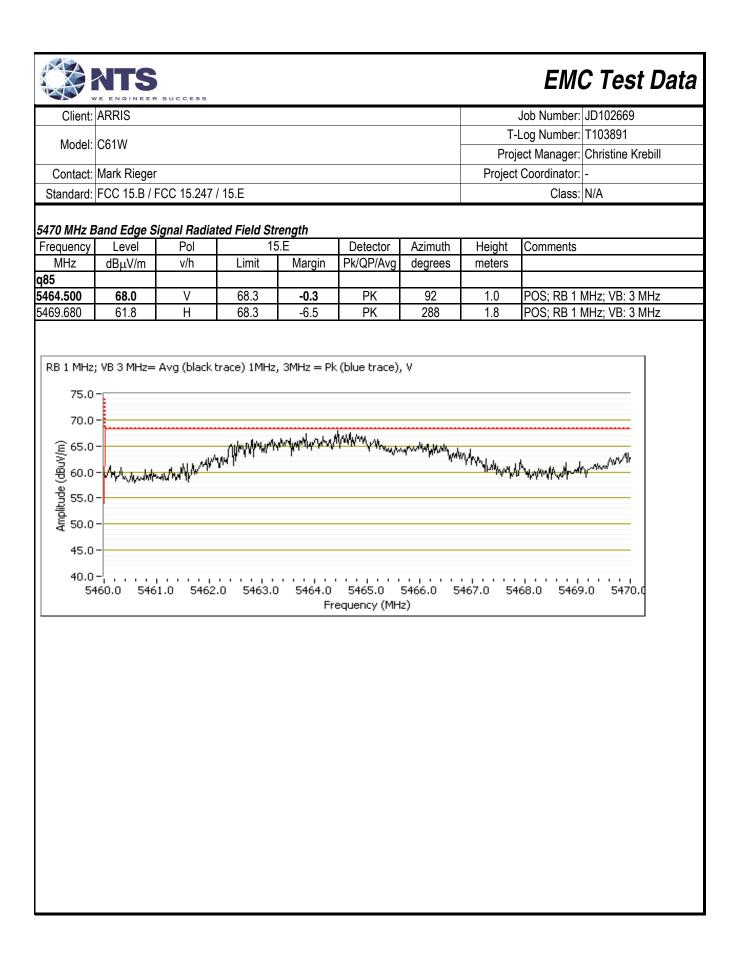


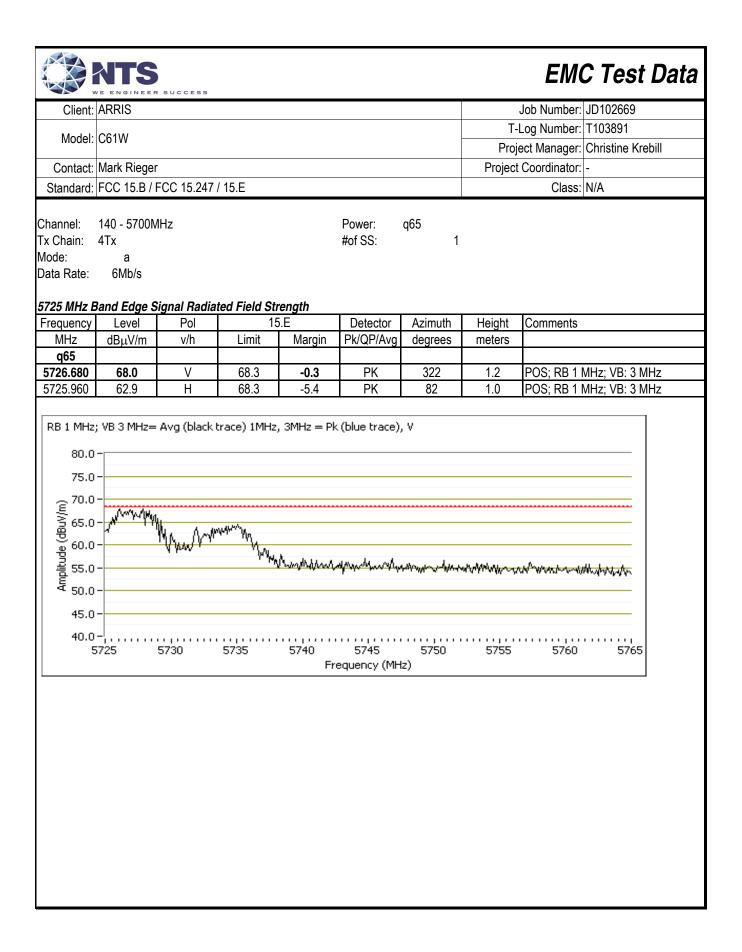
	VE ENGINEER	SUCCESS						EMC Test Da
Client:	ARRIS			Job Number: JD102669				
Model:	C61W					Log Number: T103891		
Contact:	Mark Rieger					ect Manager: Christine Krebill Coordinator: -		
	FCC 15.B / F		/ 15 F				riojeci	Class: N/A
otandara.	10010.071	00 10.211	10.2					
	60 - 5300MH	lz				q85		
Tx Chain: Node:	4Tx				#of SS:	1		
Data Rate:	a 6Mb/s							
	01110/0							
	Band Edge S	ignal Radia Pol	ted Field Str FCC		Detector	Azimuth	Unicht	Commonts
Frequency MHz	Level dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	Height meters	Comments
q85	40µ1/111							
5350.000	53.6	V	54.0	-0.4	AVG	86	1.3	POS; RB 1 MHz; VB: 10 Hz
5350.000	68.0	V	74.0	-6.0	PK	86	1.3	POS; RB 1 MHz; VB: 3 MHz
5350.480 5352.160	46.1 59.5	<u>Н</u> Н	54.0 74.0	-7.9 -14.5	AVG PK	52 52	1.6 1.6	POS; RB 1 MHz; VB: 10 Hz POS; RB 1 MHz; VB: 3 MHz
(ස 65.0 දිනි පු 60.0		annin Muh 	under geweinen		hummhum 			Marken Marina Marina Marina Marina M
) 900 100 100 100 100 100 100 100 100 100	-	5355	5360	5365	5370 equency (MH	5375	5380	5385 5390

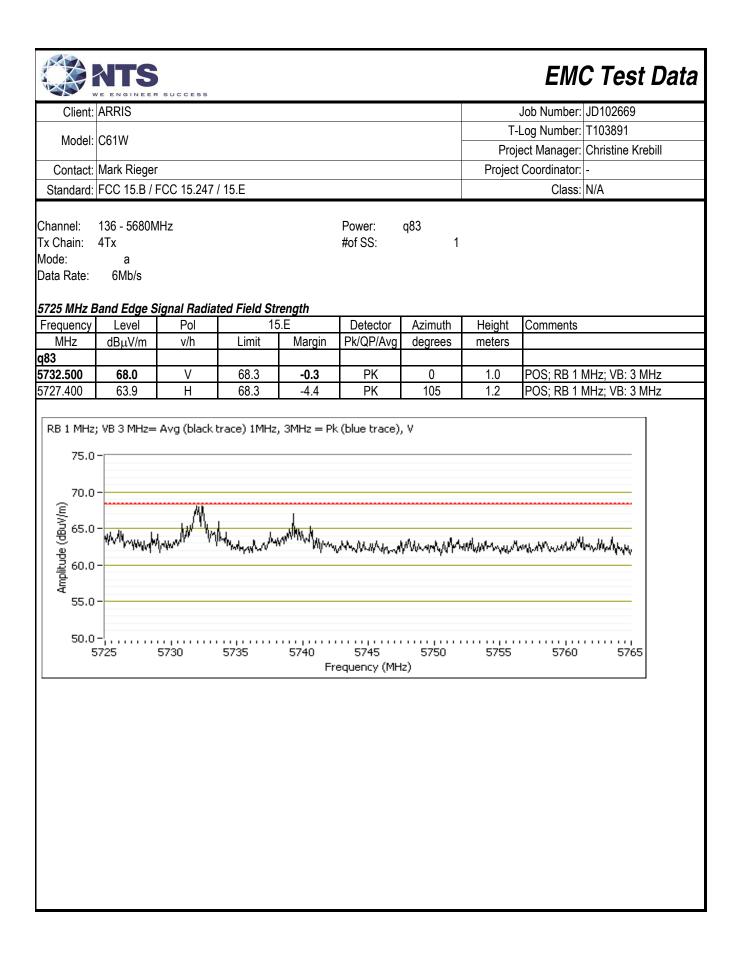
		SUCCESS						ЕМС	C Test Data
Client:	ARRIS							Job Number:	JD102669
					T-I	Log Number:	T103891		
Model:	C61W						Christine Krebill		
Contact:	Mark Rieger	•				Coordinator:	-		
	FCC 15.B / I		/ 15 F					Class:	N/A
	adiated Band			470-5725MH	łz			0.0001	
[Date of Test:	3/2/2017 0:0	00		С	onfig. Used:	1		
	st Engineer:					fig Change:			
	est Location:	•	-			UT Voltage:			
					_				
Channel:	100 - 5500N	1Hz				q70			
Tx Chain:	4Tx				#of SS:	1			
Mode: Data Rate:	a 6Mb/s								
	UND/S								
5460 MHz E	Band Edge S	Signal Radia	ted Field Sti	rength					
Frequency	Level	Pol	FCC ²	5.209	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
5456.230	46.5	V	54.0	-7.5	AVG	336	1.0		1Hz; VB: 10 Hz
5457.500	63.0	V	74.0	-11.0	PK	336	1.0		1Hz; VB: 3 MHz
5457.920 5457.350	41.0 54.2	H	54.0 74.0	-13.0 -19.8	AVG PK	286 286	1.0 1.0		1Hz; VB: 10 Hz 1Hz; VB: 3 MHz
5457.550	J4.Z	11	74.0	-19.0	ΓN	200	1.0	F 00, ND T W	
	- - - - - 	Myrym M				<u>₩₩₩₩₩₩₩₩</u> 	www.wh.wh.wh.wh.wh.wh.wh.wh.wh.wh.wh.wh.	ylumythul ylly 5455	**************************************

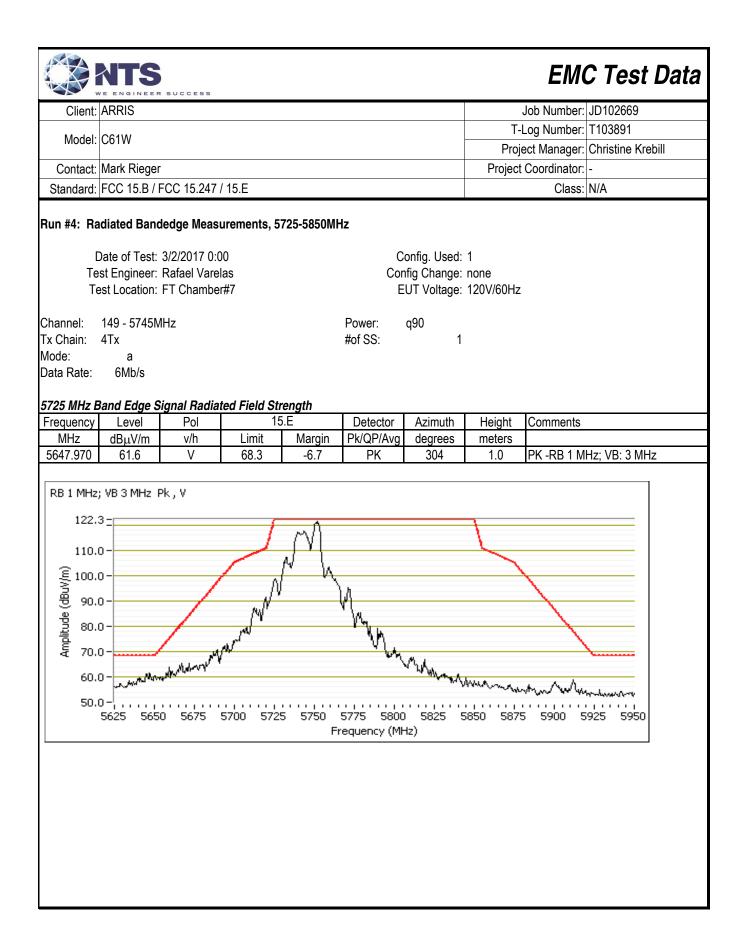


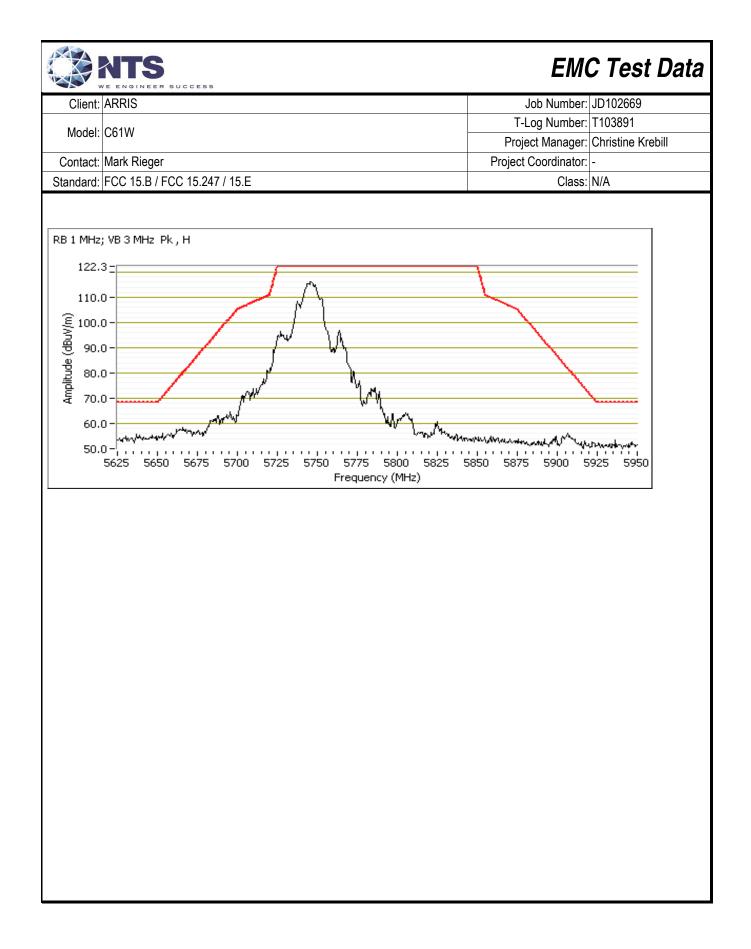
Client: ARRIS Job Number: JD1026i Model: C61W T-Log Number: T10389: Contact: Mark Rieger Project Manager: Christine Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Channel: 104 - 5520MHz Power: q85 Tx Chain: 4Tx #of SS: 1 Mode: a a Data Rate: 6Mb/s 5460 MHz Band Edge Signal Radiated Field Strength Frequency Level Pol FCC 15.209 Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin PK/QP/Avg degrees meters 5446.690 63.1 V 74.0 -10.9 PK 92 1.0 POS; RB 1 MHz; VB 5437.800 44.8 H 54.0 -9.2 AVG 288 1.8 POS; RB 1 MHz; VB 5454.710 56.6 H 74.0 -17.4 PK 288 1.8	1
Model: C61W Project Manager: Christing Contact: Mark Rieger Project Coordinator: - Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Channel: 104 - 5520MHz Power: q85 Tx Chain: 4Tx #of SS: 1 Mode: a a Data Rate: 6Mb/s 5460 MHz Band Edge Signal Radiated Field Strength Frequency Level Pol FCC 15.209 Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin PK/QP/Avg degrees meters 5446.690 63.1 V 74.0 -10.9 PK 92 1.0 POS; RB 1 MHz; VB 5437.800 44.8 H 54.0 -9.2 AVG 288 1.8 POS; RB 1 MHz; VB 5454.710 56.6 H 74.0 -17.4 PK 288 1.8 POS; RB 1 MHz; VB	
Contact: Mark Rieger Project Manager: Christing Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Channel: 104 - 5520MHz Power: q85 'x Chain: 4Tx #of SS: 1 Mode: a a a Data Rate: 6Mb/s Frequency Level Pol FCC 15.209 Detector Azimuth Height Comments MHz dBμV/m v/h Limit Margin Pk/QP/Avg degrees meters 5446.690 43.1 V 74.0 -10.9 PK 92 1.0 POS; RB 1 MHz; VB 5446.690 63.1 V 74.0 -9.2 AVG 288 1.8 POS; RB 1 MHz; VB 5437.800 44.8 H 54.0 -9.2 AVG 288 1.8 POS; RB 1 MHz; VB 5454.710 56.6 H 74.0 -17.4 PK 288 1.8 POS; RB 1 MHz; VB RB 1 MHz; VB 10 Hz= Avg (black	e Krebill
Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Channel: 104 - 5520MHz Power: q85 ix Chain: 4Tx #of SS: 1 Aode: a a a Data Rate: 6Mb/s 6Mb/s 6Mb/s Frequency Level Pol FCC 15.209 Detector Azimuth Height Comments MHz dBμV/m v/h Limit Margin PK/QP/Avg degrees meters 5446.690 49.9 V 54.0 -4.1 AVG 92 1.0 POS; RB 1 MHz; VB 5446.690 63.1 V 74.0 -10.9 PK 92 1.0 POS; RB 1 MHz; VB 5437.800 44.8 H 54.0 -9.2 AVG 288 1.8 POS; RB 1 MHz; VB 5454.710 56.6 H 74.0 -17.4 PK 288 1.8 POS; RB 1 MHz; VB RB 1 MHz; VB 10 Hz= Avg (black trace) 1MHz, 3MHz = Pk (blue trace), V X	
Channel: 104 - 5520MHz Power: q85 fx Chain: 4Tx #of SS: 1 Mode: a a a Data Rate: 6Mb/s 6Mb/s Frequency Level Pol FCC 15.209 Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 5446.690 49.9 V 54.0 -4.1 AVG 92 1.0 POS; RB 1 MHz; VB 5446.690 63.1 V 74.0 -10.9 PK 92 1.0 POS; RB 1 MHz; VB 5437.800 44.8 H 54.0 -9.2 AVG 288 1.8 POS; RB 1 MHz; VB 5454.710 56.6 H 74.0 -17.4 PK 288 1.8 POS; RB 1 MHz; VB RB 1 MHz; VB 10 Hz= Avg (black trace) 1MHz, 3MHz = Pk (blue trace), V RB 1 MHz; VB 10 Hz= Avg (black trace) 1MHz, 3MHz = Pk (blue trace), V K	
Tx Chain: 4Tx #of SS: 1 Mode: a Data Rate: 6Mb/s 6460 MHz Band Edge Signal Radiated Field Strength Frequency Level Pol FCC 15.209 Detector MHz dB _μ V/m v/h Limit Margin Pk/QP/Avg degrees meters 5446.690 63.1 V 74.0 -10.9 PK 92 1.0 POS; RB 1 MHz; VB 5437.800 44.8 H 54.0 -9.2 AVG 288 1.8 POS; RB 1 MHz; VB 5454.710 56.6 H 74.0 -17.4 RB 1 MHz; VB 10 Hz= Avg (black trace) 1MHz, 3MHz = Pk (blue trace), V X	
Frequency Level Pol FCC 15.209 Detector Azimuth Height Comments MHz dBμV/m v/h Limit Margin Pk/QP/Avg degrees meters 5446.690 49.9 V 54.0 -4.1 AVG 92 1.0 POS; RB 1 MHz; VB 5446.690 63.1 V 74.0 -10.9 PK 92 1.0 POS; RB 1 MHz; VB 5437.800 44.8 H 54.0 -9.2 AVG 288 1.8 POS; RB 1 MHz; VB 5454.710 56.6 H 74.0 -17.4 PK 288 1.8 POS; RB 1 MHz; VB RB 1 MHz; VB 10 Hz= Avg (black trace) 1MHz, 3MHz = Pk (blue trace), V V 74.0 -17.4 PK 288 1.8 POS; RB 1 MHz; VB	
MHz dBμV/m v/h Limit Margin Pk/QP/Avg degrees meters 5446.690 49.9 V 54.0 -4.1 AVG 92 1.0 POS; RB 1 MHz; VB 5446.690 63.1 V 74.0 -10.9 PK 92 1.0 POS; RB 1 MHz; VB 5437.800 44.8 H 54.0 -9.2 AVG 288 1.8 POS; RB 1 MHz; VB 5454.710 56.6 H 74.0 -17.4 PK 288 1.8 POS; RB 1 MHz; VB RB 1 MHz; VB 10 Hz= Avg (black trace) 1MHz, 3MHz = Pk (blue trace), V V Avg	
5446.690 49.9 V 54.0 -4.1 AVG 92 1.0 POS; RB 1 MHz; VB 5446.690 63.1 V 74.0 -10.9 PK 92 1.0 POS; RB 1 MHz; VB 5437.800 44.8 H 54.0 -9.2 AVG 288 1.8 POS; RB 1 MHz; VB 5454.710 56.6 H 74.0 -17.4 PK 288 1.8 POS; RB 1 MHz; VB RB 1 MHz; VB 10 Hz= Avg (black trace) 1MHz, 3MHz = Pk (blue trace), V X	
5446.690 63.1 V 74.0 -10.9 PK 92 1.0 POS; RB 1 MHz; VB 5437.800 44.8 H 54.0 -9.2 AVG 288 1.8 POS; RB 1 MHz; VB 5454.710 56.6 H 74.0 -17.4 PK 288 1.8 POS; RB 1 MHz; VB RB 1 MHz; VB 10 Hz= Avg (black trace) 1MHz, 3MHz = Pk (blue trace), V	10 Hz
5437.800 44.8 H 54.0 -9.2 AVG 288 1.8 POS; RB 1 MHz; VB 5454.710 56.6 H 74.0 -17.4 PK 288 1.8 POS; RB 1 MHz; VB RB 1 MHz; VB 10 Hz= Avg (black trace) 1MHz, 3MHz = Pk (blue trace), V PK 288 1.8 POS; RB 1 MHz; VB	
5454.710 56.6 H 74.0 -17.4 PK 288 1.8 POS; RB 1 MHz; VB RB 1 MHz; VB 10 Hz= Avg (black trace) 1MHz, 3MHz = Pk (blue trace), V	
	3 MHz
(mileson- ender (mileson- ender (mileson- ender (mileson- ender (mileson- ender (mileson-	
40.0-¦,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	460





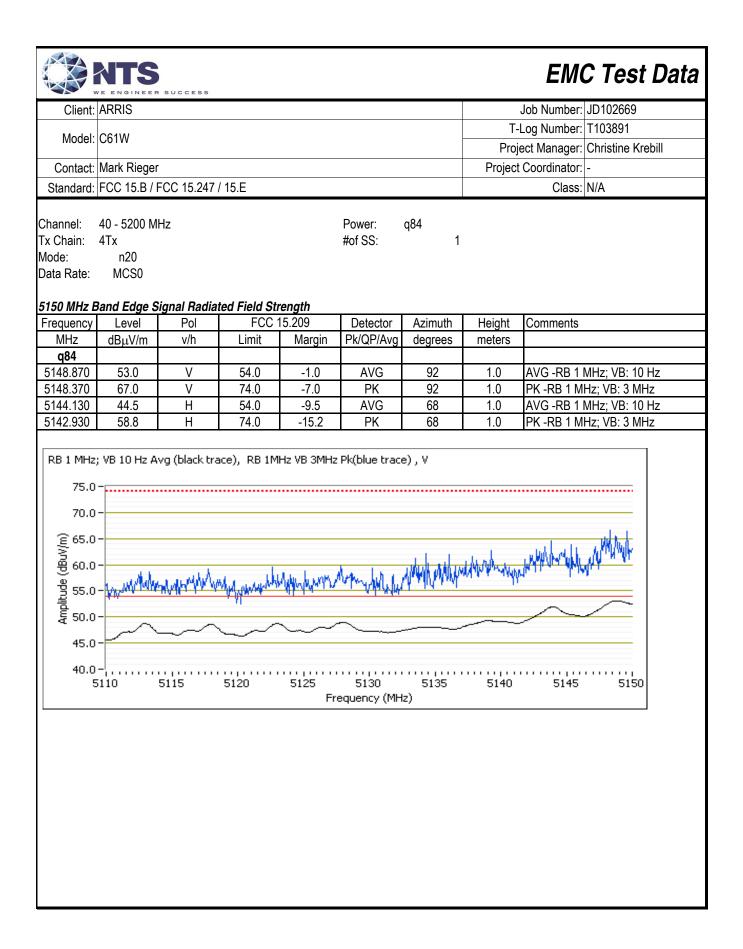




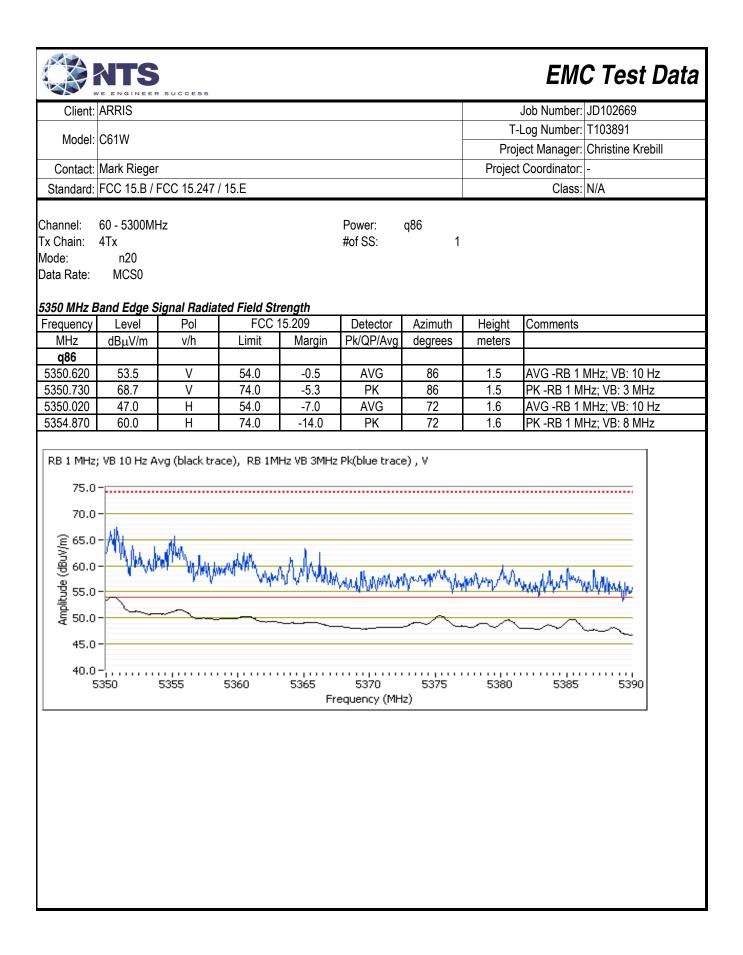


		SUCCESS						EM	C Test Dat
Client:	ARRIS	30001200						Job Number:	JD102669
Model:	C61W				T-Log Number: T103891		T103891		
				-	-	Christine Krebill			
	Mark Rieger						Project	Coordinator:	
	FCC 15.B / I		15.E					Class:	N/A
hannel: ‹ Chain: ode: ata Rate:	165 - 5825M 4Tx a 6Mb/s				Power: #of SS:	q90 1			
			ted Field Stro 15		Detector	Azimuth	Hoight	Commonto	
requency MHz	Level dBµV/m	Pol v/h	Limit	.⊏ Margin	Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments	
920.620	59.4	V	71.5	-12.1	PK	204	1.4	PK -RB 1 M	Hz; VB: 3 MHz
(W/Ngp) 90, 80, 70, 50, 50,	0		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	5750	5775 5800 requency (MH	5825 5	850 5875		
RB 1 MHz 122. 110.		Ъk, H	5			۸	L		
Humplitude (dBu//m) 90. 80. 80. 70. 60.	0 - 0 - 0 -	/		<u>ь</u> , лі	hormon		l WL	10 Pr -	
50.	0- 14-1-14/14 5625 565	0 5675		0,00	" 5775 5800 'equency (MF	5825 5	850 587		чилиц 1925 5950

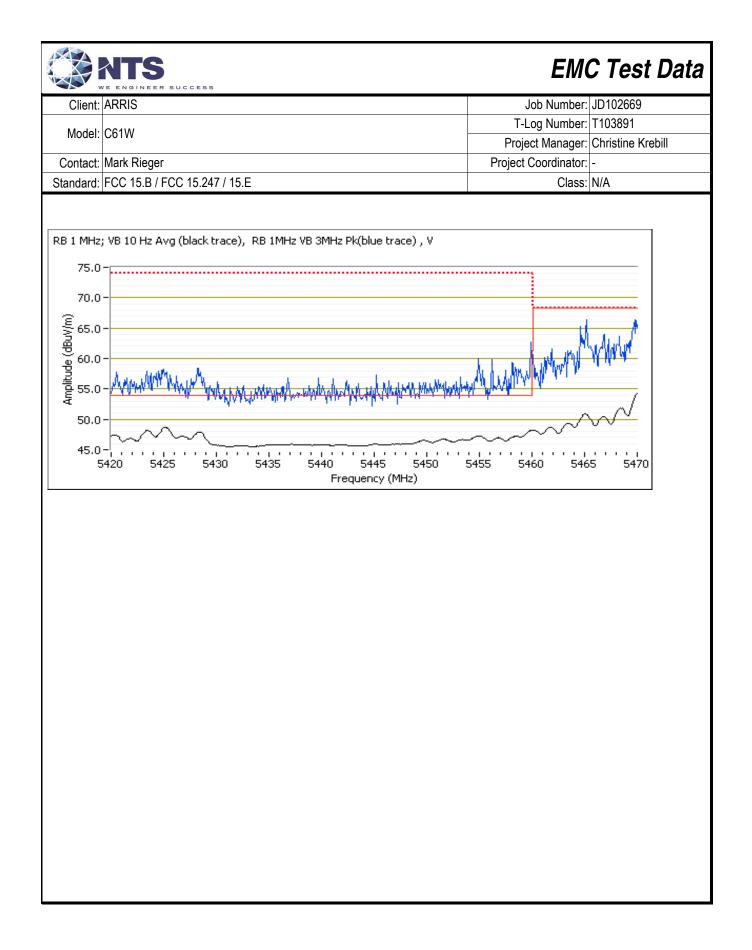
Client:	ARRIS							Job Number: JD102669
Model	C61W				T-	Log Number: T103891		
wouer.	COTW						Proj	ect Manager: Christine Krebill
Contact:	Mark Rieger				Project	Coordinator: -		
Standard:	FCC 15.B / F	CC 15.247	/ 15.E					Class: N/A
un #5: Ra	adiated Band	edge Meas	urements, 5	150-5250MI	Hz			
		2/2/2017 0.0	20		0	مسائم الممطر	4	
	Date of Test: 3 est Engineer: 1					onfig. Used: nfig Change:		
	est Location:					UT Voltage:		
						jer i ensiger		
Channel:	36 - 5180 MH	Ηz				q69		
Tx Chain:	4Tx				#of SS:	1		
Node:	n20							
Data Rate:	MCS0							
5150 MHz I	Band Edge Si	ignal Radia	ted Field St	rength				
Frequency	Level	Pol		15.209	Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
q69	50.0		54.0	0.7	1) (0		4.0	
5148.650 5149.750	53.3 68.2	V V	54.0 74.0	-0.7 -5.8	AVG PK	86 86	1.0 1.0	AVG -RB 1 MHz; VB: 10 Hz PK -RB 1 MHz; VB: 3 MHz
5149.750	48.1	 H	54.0	-5.8	Avg	68	1.0	AVG -RB 1 MHz; VB: 10 Hz
5148.530	60.4	H	74.0	-13.6	PK	68	1.6	PK -RB 1 MHz; VB: 3 MHz
75.0 70.0 (@(^) 60.0 90.05 55.0 45.0 45.0	- - - - -			for the second s	yhan yhdyd	Mh.M.A.		5145 5150
				Fr	equency (MH	z)		



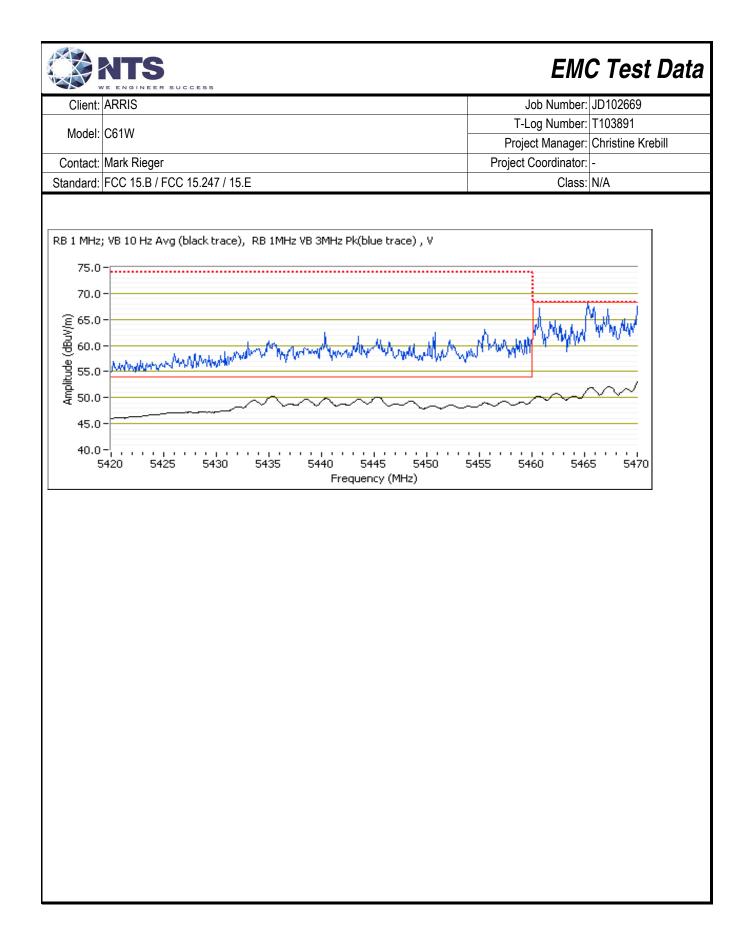
		SUCCESS						ЕМС	C Test Data		
Client:	ARRIS	5000255						Job Number:	JD102669		
								Log Number:			
Model:	C61W Project Manager: Christine Krebill										
Contact:	Mark Rieger							Coordinator:			
	FCC 15.B / F		/ 15.E				-,	Class:			
	adiated Band			250-5350MH	łz						
[Date of Test:	3/2/2017 0:0)0		C	onfig. Used:	1				
Te	st Engineer:	Rafael Varel	las			fig Change:					
Te	est Location:	FT Chambe	r#7		E	UT Voltage:	120V/60Hz				
					_						
Channel:	64 - 5320MH	lz				q70					
Tx Chain: Mode:	4Tx n20				#of SS:	1					
Data Rate:	MCS0										
	WOOD										
5350 MHz E	Band Edge S	ignal Radia	ted Field Str	rength							
Frequency	Level	Pol	FCC 1	5.209	Detector	Azimuth	Height	Comments			
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters				
q70	50.4		54.0	0.0	N/0	00	1.0				
5350.230	53.1 67.7	V V	54.0	-0.9	AVG	86	1.2		MHz; VB: 10 Hz		
5350.370 5350.000	47.2	V H	74.0 54.0	-6.3 -6.8	PK AVG	86 73	1.2 1.6		Hz; VB: 3 MHz MHz; VB: 10 Hz		
5355.270	58.2	H	74.0	-0.0	PK	73	1.6		Hz; VB: 3 MHz		
75.0 70.0 (@,65.0 9,00 9,00 9,00 9,00 45.0 45.0 40.0			MAA4	5365	Pk(blue trace	nth (10-10-10)	workten	<mark>∕//////////</mark>	М <u>мули</u> 5390		

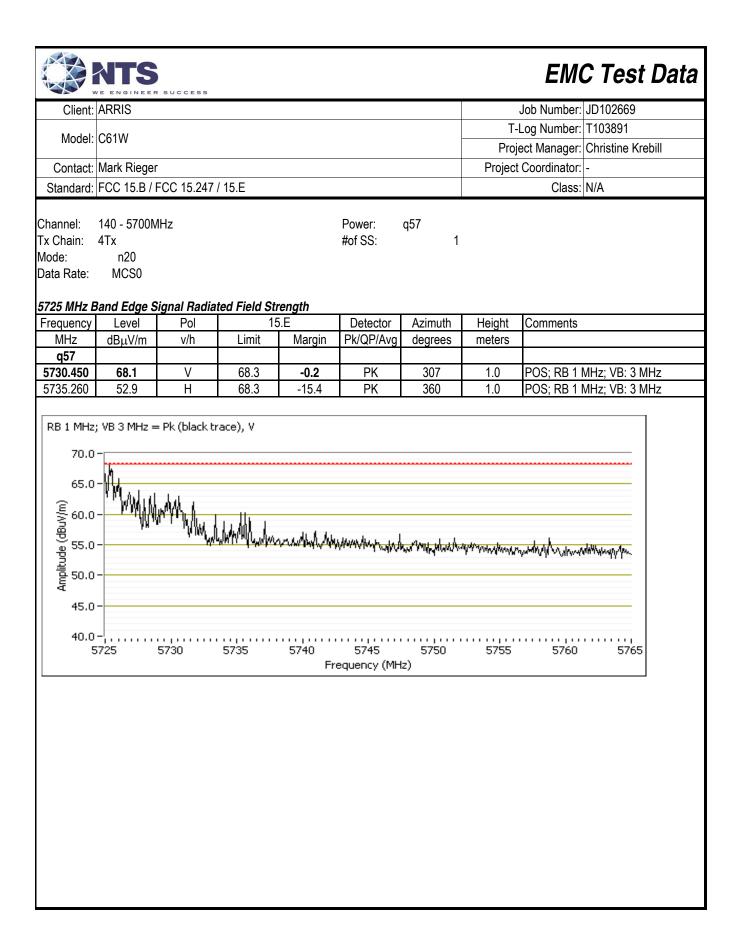


		SUCCESS						ЕМС	C Test Data
Client:	ARRIS							Job Number:	JD102669
							T-I	Log Number:	T103891
Model:	C61W							-	Christine Krebill
Contact	Mark Rieger						-	Coordinator:	
	-		/ 15 5				Појест		
Standard:	FCC 15.B / I	FUU 15.247	/ IJ.E					Class:	IN/A
Run #7: Ra	diated Band	dedge Meas	urements, 54	470-5725MH	łz				
[Date of Test:	3/2/2017 0:0	00		С	onfig. Used:	1		
	st Engineer:			Cadigal		fig Change:			
	est Location:			-		UT Voltage:			
						-			
Channel:	100 - 5500N	1Hz				q68			
Tx Chain:	4Tx				#of SS:	1			
Mode:	n20								
Data Rate:	MCS0								
5400 MU- 5	land Edua C	Samel Dedie	had Field Ch	a wath					
Frequency	Band Edge S Level	Pol	FCC 1		Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	Comments	
q68	ασμνπι	V/11	Liint	Margin	i NGI //Ng	ucgrees	meters		
5459.930	47.8	V	54.0	-6.2	AVG	87	1.2	AVG -RB 1	MHz; VB: 10 Hz
5456.830	63.0	V	74.0	-11.0	PK	87	1.2		Hz; VB: 3 MHz
5459.870	41.1	H	54.0	-12.9	AVG	77	1.7		MHz; VB: 10 Hz
5458.070	54.9	Н	74.0	-19.1	PK	77	1.7		Hz; VB: 3 MHz
5470 MHz E	Band Edge S	ignal Radia	ted Field Str	ength					
Frequency	Level	Pol	15	i.E	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
q68									
5470.000	53.8	V	54.0	-0.2	AVG	87	1.2		MHz; VB: 10 Hz
5469.950	69.8	V	74.0	-4.2	PK	87			Hz; VB: 3 MHz
5469.000	44.5	Н	54.0	-9.5	AVG	77	1.7		MHz; VB: 10 Hz
5469.020	59.8	Н	74.0	-14.2	PK	77	1.7	PK -RB 1 M	Hz; VB: 3 MHz

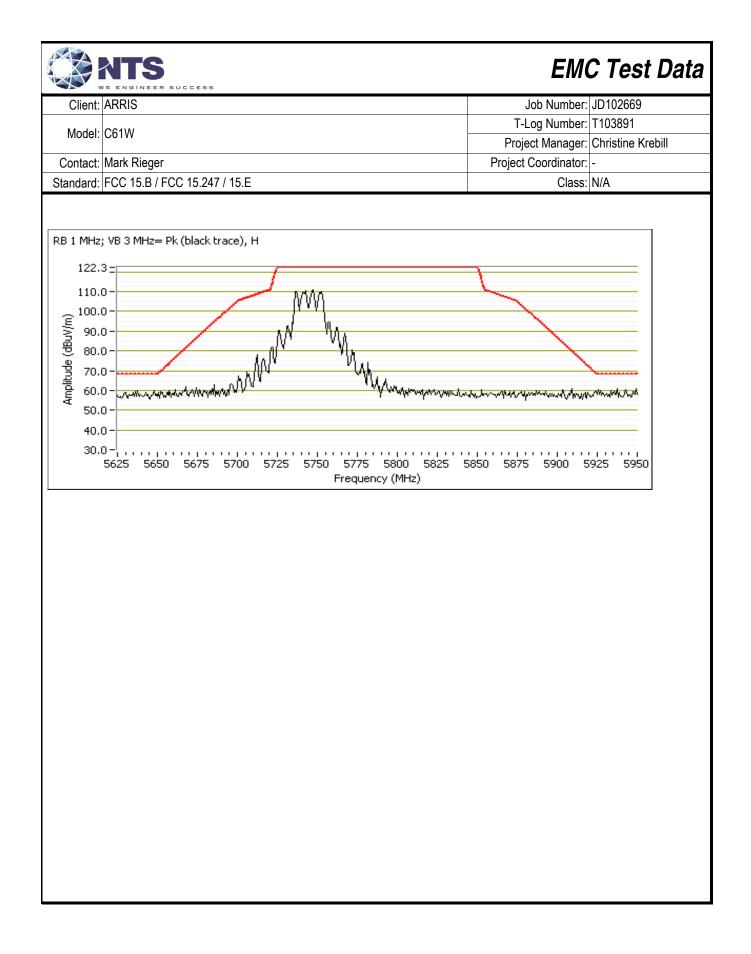


Tx Chain: 4Tx Mode: n Data Rate: 5460 MHz Band I Frequency Le MHz dBu q84	1W rk Rieger C 15.B / FC - 5520MH c n20	z I nal Radia Pol			#of SS:	q84 1	T- Proj	Coordinator: Class:	T103891 Christine Krebill -
Contact: Mark Standard: FCC Channel: 104 - Tx Chain: 4Tx Mode: n Data Rate: 5460 MHz Band Frequency Le MHz dBµ q84	rk Rieger C 15.B / FC - 5520MH c n20 d Edge Sig Level	z I nal Radia Pol	ted Field Stı		#of SS:	1	Proj	ect Manager: Coordinator: Class:	Christine Krebill -
Contact: Mark Standard: FCC Channel: 104 - Tx Chain: 4Tx Mode: n Data Rate: 5460 MHz Band Frequency Le MHz dBµ q84	rk Rieger C 15.B / FC - 5520MH c n20 d Edge Sig Level	z I nal Radia Pol	ted Field Stı		#of SS:	1		Coordinator: Class:	-
Standard: FCC Channel: 104 - Tx Chain: 4Tx Mode: n Data Rate: n 5460 MHz Band 1 Frequency Le MHz dBµ q84 1	C 15.B / FC - 5520MH n20 d Edge Sig Level	z I nal Radia Pol	ted Field Stı		#of SS:	1	Project	Class:	- N/A
Channel: 104 - Tx Chain: 4Tx Mode: n Data Rate: 5460 MHz Band I Frequency Le MHz dBu q84	- 5520MH n20 d Edge Sig Level	z I nal Radia Pol	ted Field Stı		#of SS:	1			N/A
Tx Chain: 4Tx Mode: n Data Rate: 5460 MHz Band I Frequency Le MHz dBµ q84	n20 1 Edge Sig Level	i nal Radia t Pol			#of SS:	1		_	
Frequency Le MHz dBı q84	Level	Pol							
MHz dBı q84			FCC ²	15 200					
q84	BμV/m	//=		10.203	Detector	Azimuth	Height	Comments	
		v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
5435 270 A									
5455.270 4	49.7	V	54.0	-4.3	AVG	84	1.5	AVG -RB 1 I	MHz; VB: 10 Hz
5435.730 6	65.8	V	74.0	-8.2	PK	84	1.5	PK -RB 1 M	Hz; VB: 3 MHz
5443.470 4	42.8	Н	54.0	-11.2	AVG	83	1.9	AVG -RB 1	MHz; VB: 10 Hz
5448.070 5	53.6	Н	74.0	-20.4	PK	83	1.9	PK -RB 1 M	Hz; VB: 3 MHz
5470 MHz Band		i nal Radia Pol		r ength 5.E	Detector	Animuth	Hoight	Comments	
	Level				Detector	Azimuth	Height	Comments	
	BμV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
q84 5470.000 5	53.0	V	54.0	-1.0	AVG	84	1.5		MHz; VB: 10 Hz
	68.9	V	54.0 74.0	-1.0	PK	84	1.5		Hz; VB: 3 MHz
	44.9	H	74.0 54.0	-5.1 -9.1	AVG	83	1.5		HZ; VB: 3 MHZ MHZ; VB: 10 HZ
	44.9 60.4	H H	54.0 74.0	-9.1	PK	83	1.9		Hz; VB: 10 Hz
J+00.170 0	00.4	11	74.0	-13.0	Γ'N	UJ UJ	1.9		

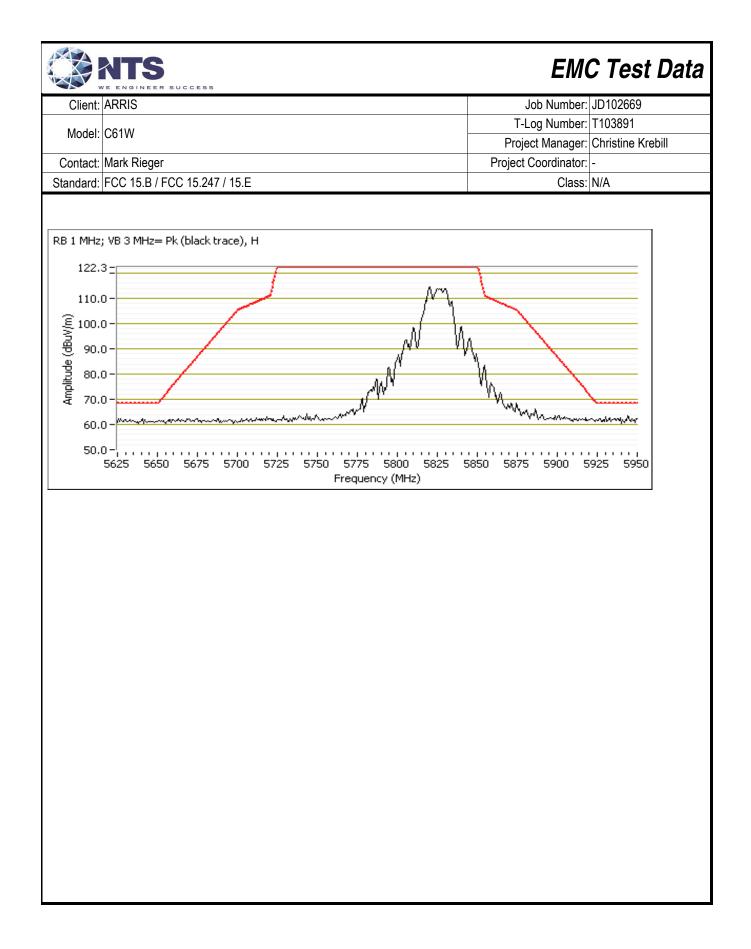




Test E Test I Channel: 149	RRIS i1W ark Rieger CC 15.B / F ated Bander e of Test: 3		15.E				T-L Proje	Job Number: og Number: ect Manager: Coordinator:	
Model: C6 Contact: Ma Standard: FC Run #8: Radia Date Test E Test I Channel: 149	ark Rieger CC 15.B / F ated Band e of Test: 3		15.E				T-L Proje	og Number: ect Manager:	T103891
Contact: Ma Standard: FC Run #8: Radia Date Test E Test I Channel: 149	ark Rieger C 15.B / F ated Band e of Test: 3		′ 15.E				Proje	ect Manager:	
Standard: FC Run #8: Radia Date Test E Test I Channel: 149	C 15.B / F ated Band e of Test: (15.E					_	
Standard: FC Run #8: Radia Date Test E Test I Channel: 149	C 15.B / F ated Band e of Test: (′ 15.E				1 10/000	Coordinator.	-
Run #8: Radia Date Test E Test I Channel: 149	eted Band						,	Class:	N/A
Test E Test I Channel: 149			urements, 5	725-5850MI	Hz				
Test L Channel: 149	Engineer: 、	3/3/2017 0:0	0		C	onfig. Used:	1		
Channel: 149		Joseph Cad				fig Change:			
	Location: I	FT Chambe	r#7		E	UT Voltage:	120V/60Hz		
		U-7			Power:	a00			
Tx Chain: 4T	9 - 5745MI x	IIΖ			Power: #of SS:	q90 1			
Mode:									
	MCS0								
				_					
5725 MHz Ban		=		ength .E	Detector	Azimuth	Hojaht	Commonte	
	Level IBµV/m	Pol v/h	Limit	.∟ Margin	Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments	
	117.8	V	122.3	-4.5	PK	324	1.0	POS: RB 1 M	/Hz; VB: 3 MHz
	114.0	Ĥ	122.3	-8.3	PK	92			/Hz; VB: 3 MHz
50.0-		www.we	MMNN	5 5750	5775 5800 requency (MH	5825 5			1



Client: A Model: C Contact: M				C Test Data
Contact: N			Job Number:	
	C61W	-	T-Log Number:	
	Mark Diagor		Project Manager: Project Coordinator:	Christine Krebill
Standard	FCC 15.B / FCC 15.247 / 15.E		Class	
Stanuaru. I	00 13.B / 1 00 13.24/ / 13.L		01833	
x Chain: 4 lode: vata Rate:	4Tx n20 MCS0	Power: q90 #of SS: 1		
requency	and Edge Signal Radiated Field Strength Level Pol 15.E	Detector Azimuth	Height Comments	
MHz	dBµV/m v/h Limit Margin	Pk/QP/Avg degrees	meters	
5828.210	119.6 V 122.3 -2.7	PK 301	1.0 POS; RB 1	MHz; VB: 3 MHz
5820.390	115.9 H 122.3 -6.4	PK 77	1.5 POS; RB 1	MHz; VB: 3 MHz
(JU) 100.0 90.0 80.0 70.0 60.0 50.0		5775 5800 5825 5 equency (MHz)	144 MMMMMM 850 5875 5900 9	



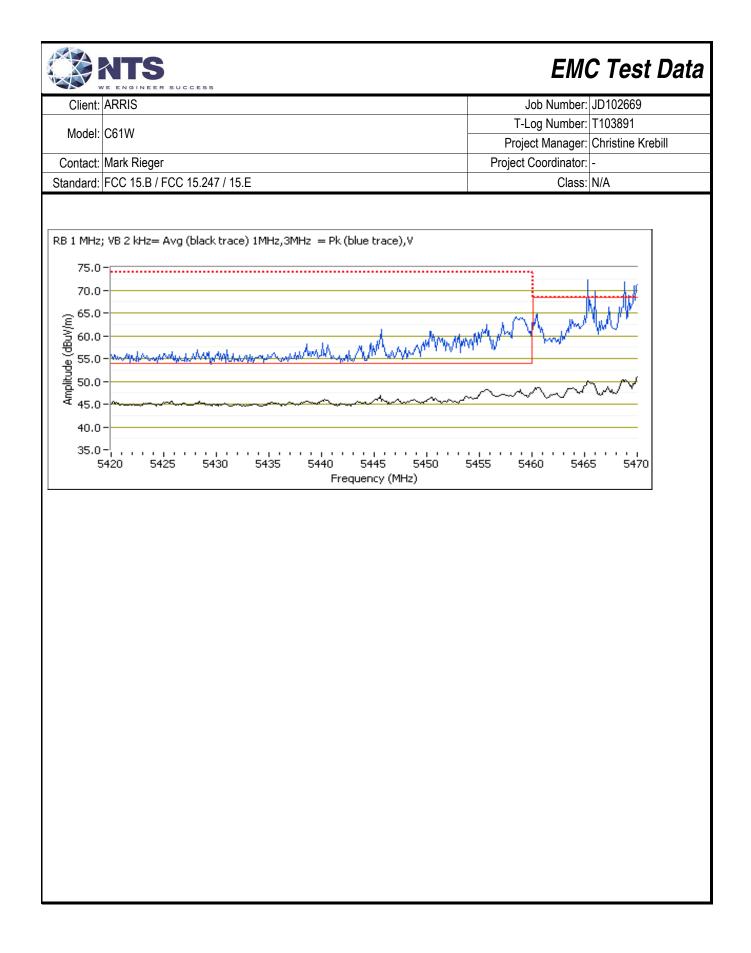
v v	The second second second	SUCCESS						EMC Test Data
Client:	ARRIS							Job Number: JD102669
Model:	C61W						T-	Log Number: T103891
WOUCH.	00177						Proj	ect Manager: Christine Krebill
Contact:	Mark Rieger						Project	Coordinator: -
Standard:	FCC 15.B / F	CC 15.247	/ 15.E					Class: N/A
Run #9: Ra	diated Band	edge Meas	urements, 5	150-5250MH	łz			
r		21210047.0.0	0		0		4	
	Date of Test: 3					onfig. Used: nfig Change:		
	est Location:	•	-			UT Voltage:		
					-	or voltago.	1200/00112	
Channel:	38 - 5190 MH	Ηz			Power:	q57		
	4Tx				#of SS:	. 1		
Node:	n40							
Data Rate:	MCS0							
5150 MHz F	Band Edge Si	ianal Radia	ted Field Sti	renath				
Frequency	Level	Pol	FCC	15.209	Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5 7								
5150.000	52.6	V	54.0	-1.4	Avg	301	1.0	POS; RB 1 MHz; VB: 2 kHz
5149.600	73.9 45.2	<u>v</u> H	74.0	-0.1 -8.8	PK	301	1.0 1.0	POS; RB 1 MHz; VB: 3 MHz
5149.040 5148.720	45.2 61.7	<u>н</u> Н	54.0 74.0	-o.o -12.3	Avg PK	105 105	1.0	POS; RB 1 MHz; VB: 2 kHz POS; RB 1 MHz; VB: 3 MHz
0140.720	01.7		74.0	-12.0		100	1.0	
	- - - - - - - - - - - - - - - - - - -		white and the second		(blue trace),	5135		5145 5150

Client:	ARRIS	SUCCESS						Job Number:	JD102669
								Log Number:	
Model:	C61W						Proj	ect Manager:	Christine Krebill
Contact:	Mark Rieger						Project	Coordinator:	-
Standard:	FCC 15.B / F	-CC 15.247	/ 15.E					Class:	N/A
Channel: Tx Chain: Mode: Data Rate:	46 - 5230 MI 4Tx n40 MCS0	Ηz			Power: #of SS:	q80 1			
	Band Edge S							-	
Frequency		Pol		15.209	Detector	Azimuth	Height	Comments	
MHz q80	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
5148.400	53.0	V	54.0	-1.0	Avg	92	1.0	POS; RB 1 I	MHz; VB: 2 kHz
5146.500	66.0	V	74.0	-8.0	PK	92	1.0	POS; RB 1 I	MHz; VB: 3 MHz
5149.280	47.9	Н	54.0	-6.1	Avg	68	1.4		MHz; VB: 2 kHz
5139.420	60.3	Н	74.0	-13.7	PK	68	1.4	POS; RB 1 I	MHz; VB: 3 MHz
.0.0	-		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	hwww.w/mwah				w ^{w/w/} www.d	where we
40.0	_	5115	5120	5125	5130 equency (MH	5135	5140	5145	5150

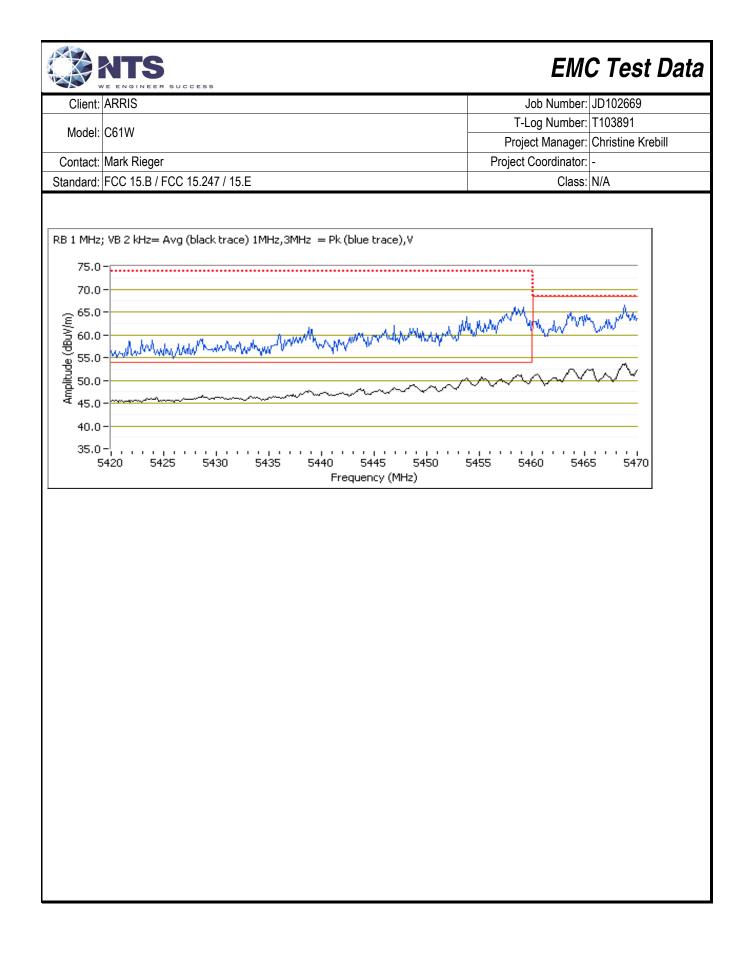
		SUCCESS						EMO	C Test Data
Client:	ARRIS							Job Number:	JD102669
	004144						T-I	Log Number:	T103891
Model:	C61W						Proje	ect Manager:	Christine Krebill
Contact:	Mark Rieger	•						Coordinator:	
Standard:	FCC 15.B / I	FCC 15.247	′ 15.E					Class:	N/A
Run #10: F	Radiated Bar	ndedge Mea	surements,	5250-5350N	IHz				
,	Date of Test:	3/3/2017 0:0	0		С	onfig. Used:	1		
	est Engineer:					fig Change:			
	est Location:					UT Voltage:			
Channel:	62 - 5310MH	Ηz			Power:	q59			
Tx Chain:	4Tx				#of SS:	1			
Mode:	n40								
Data Rate:	MCS0								
5350 MHz I	Band Edge S	ianal Radia	ted Field Sti	renath					
Frequency		Pol		15.209	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
q59									
5350.000	53.6	V	54.0	-0.4	Avg	88	1.0		VHz; VB: 2 kHz
5350.080	72.5	V	74.0	-1.5	PK	88	1.0		MHz; VB: 3 MHz
5350.240	49.6	H	54.0	-4.4	Avg	72 72	1.0		MHz; VB: 2 kHz
5350.480	70.4	П	74.0	-3.6	PK	12	1.0	PU5; RB 11	MHz; VB: 3 MHz
2; 2, 19 (m//m) 25 (19 (dBu//m) 26 (19 (dBu//m)	5.0- 		MMM	www.hw/All.	Pk (blue trac				

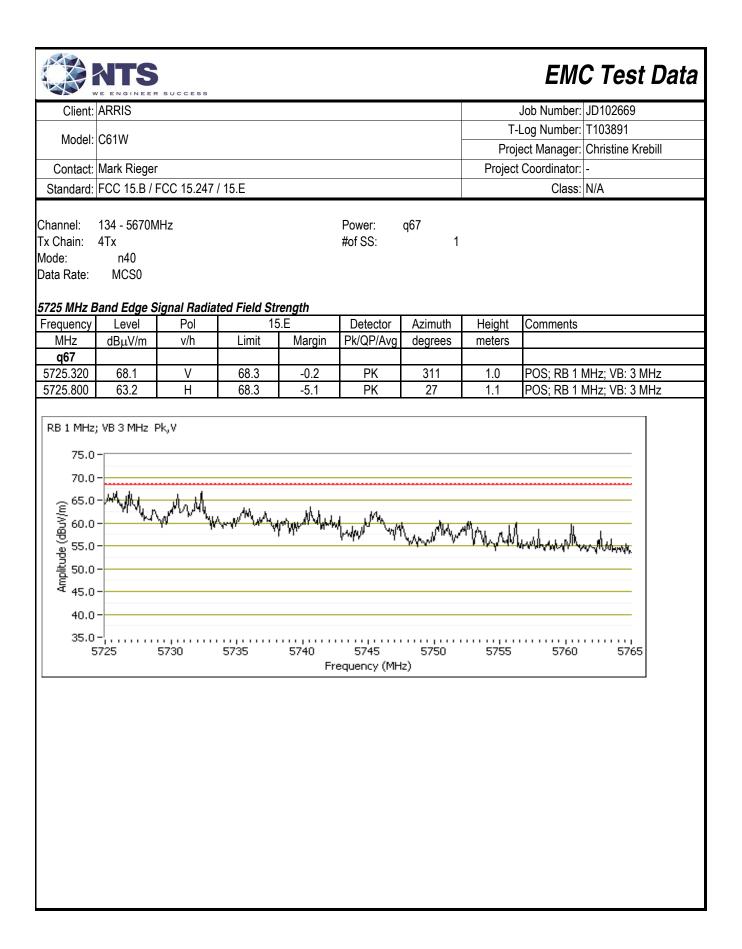
		SUCCESS						EMO	C Test Dat
Client: A	ARRIS							Job Number:	
Model: 0	C61W						T-	Log Number:	T103891
							Proj	ect Manager:	Christine Krebill
	Mark Rieger						Project	Coordinator:	
Standard: F	FCC 15.B / F	CC 15.247	/ 15.E					Class:	N/A
Tx Chain: 4 Mode: Data Rate:	54 - 5270MH: 4Tx n40				Power: #of SS:	q80 1			
	and Edge Sig		ted Field Sti	rength 15.209	Detector	A - insuth	Hoight	Commonto	
Frequency MHz	Level dBµV/m	Pol v/h	Limit	Margin	Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments	
q80	υσμν/Π	V/11		iviaiyiii	FNQF/AVY	ucyiees	11161615		
5353.930	53.3	V	54.0	-0.7	Avg	86	1.0	POS; RB 1 I	MHz; VB: 2 kHz
5351.120	65.1	V	74.0	-8.9	PK	86	1.0		MHz; VB: 3 MHz
5350.720	49.5	Н	54.0	-4.5	Avg	72	1.6		MHz; VB: 2 kHz
5351.520	61.5	Н	74.0	-12.5	PK	72	1.6	POS; RB 1 I	MHz; VB: 3 MHz
((65.0-) () () () () () () () () () () () () (Vm/m ~~~~			444411	allad huran har	muther		produtiviting
40.0 - 35.0 - 53		355	5360	5365	5370 equency (MH	5375	5380	5385	5390

Client: A Model: C								EMC Test Data
	E ENGINEER	SUCCESS						Job Number: JD102669
Model: C								
	C61W					-		Log Number: T103891
							-	ect Manager: Christine Krebill
	Mark Rieger						Project	Coordinator: -
Standard: F	FCC 15.B / F	-CC 15.247	/ 15.E					Class: N/A
Run #11: Ra	diated Ban	dedge Mea	surements,	5470-5725N	IHz			
Da	ate of Test:	3/3/2017 0:0)0		C	onfig. Used:	1	
		Rafael Vare				fig Change:		
		FT Chambe				UT Voltage:		
Channel: 1	102 - 5510M	IHz			Power:	q56		
	102 001010 1Tx				#of SS:	1		
Aode:	n40					•		
Data Rate:	MCS0							
5460 MHz Ba	and Edae S	ianal Radia	ted Field Stı	renath				
-requency	Level	Pol		15.209	Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
q56								
5455.670	47.9	V	54.0	-6.1	Avg	84	1.1	POS; RB 1 MHz; VB: 2 kHz
5458.480	63.8	V	74.0	-10.2	PK	84	1.1	POS; RB 1 MHz; VB: 3 MHz
5459.440	43.2	Н	54.0	-10.8	Avg	77	1.9	POS; RB 1 MHz; VB: 2 kHz
5458.240	55.1	Н	74.0	-18.9	PK	77	1.9	POS; RB 1 MHz; VB: 3 MHz
470 MHz Ba	and Edge S	ianal Radia	tod Fiold Sti	ronath				
Frequency	Level	Pol		5.E	Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
q56	αBμττιπ	.,						
5469.880	50.6	V	54.0	-3.4	Avg	84	1.1	POS; RB 1 MHz; VB: 2 kHz
5469.400	73.2	V	74.0	-0.8	PK	84	1.1	POS; RB 1 MHz; VB: 3 MHz
5469.900	45.2	Н	54.0	-8.8	Avg	77	1.9	POS; RB 1 MHz; VB: 2 kHz
5468.640	63.6	Н	74.0	-10.4	PK	77	1.9	POS; RB 1 MHz; VB: 3 MHz

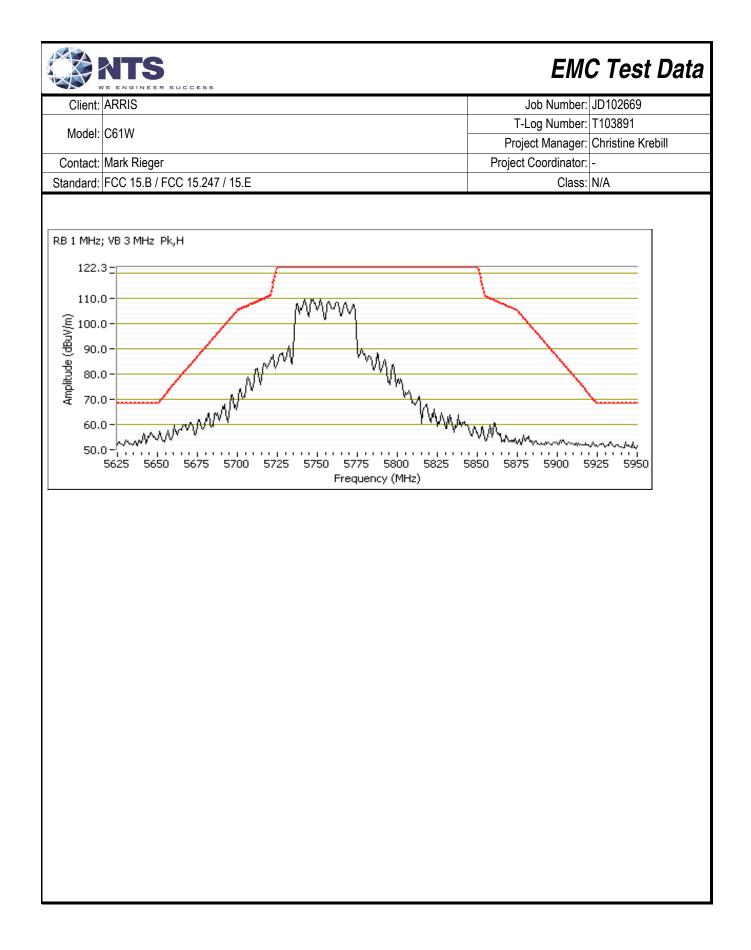


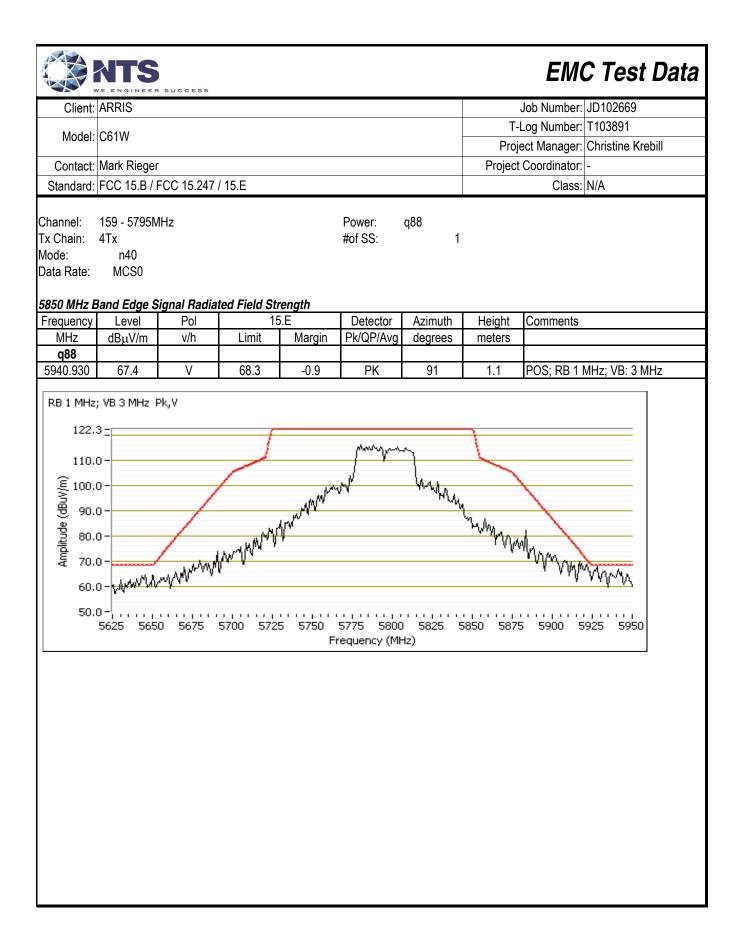
Model:	1							Job Number:	
	C61W						T-	Log Number:	T103891
Contact	COTW						Proj	ect Manager:	Christine Krebi
Contact:	Mark Rieger						Project	Coordinator:	-
Standard:	FCC 15.B / F	CC 15.247	/ 15.E					Class:	N/A
Channel:	110 - 5550M	Hz			Power:	q78			
Tx Chain:	4Tx				#of SS:	1			
Node:	n40								
ata Rate:	MCS0								
5460 MHz I	Band Edge Si	ignal Radia	ted Field Stı	rength					
Frequency	Level	Pol		15.209	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
q78									
5458.960	51.1	V	54.0	-2.9	Avg	85	1.3	,	MHz; VB: 2 kHz
	65.3	V	74.0	-8.7	PK	85	1.3		MHz; VB: 3 MH
	00.0	•							
5457.600 5459.040	44.5	Н	54.0	-9.5	Avg	62	1.5		
5457.600 5459.040			54.0 74.0	-9.5 -18.2	Avg PK	62 62	<u>1.5</u> 1.5		MHz; VB: 2 kHz MHz; VB: 3 MH:
5457.600 5459.040 5456.150 5470 MHz E Frequency	44.5 55.8 Band Edge Si Level	H H i gnal Radia Pol	74.0 ted Field St i	-18.2 r ength 5.E	PK	62 Azimuth	1.5 Height		
5457.600 5459.040 5456.150 470 MHz E Frequency MHz	44.5 55.8 Band Edge Si	H H İgnal Radia	74.0 ted Field Str	-18.2 rength	РК	62	1.5	POS; RB 1	
5457.600 5459.040 5456.150 6470 MHz E Frequency MHz q78	44.5 55.8 Band Edge Si Level dBμV/m	H H i gnal Radia Pol v/h	74.0 ted Field Str 15 Limit	-18.2 r ength 5.E Margin	PK Detector Pk/QP/Avg	62 Azimuth degrees	1.5 Height meters	POS; RB 1	MHz; VB: 3 MH
5457.600 5459.040 5456.150 6470 MHz E Frequency MHz q78 5468.620	44.5 55.8 Band Edge Si Level dBμV/m 53.5	H H i gnal Radia Pol v/h	74.0 ted Field Str 15 Limit 54.0	-18.2 rength 5.E Margin -0.5	PK Detector Pk/QP/Avg Avg	62 Azimuth degrees 85	1.5 Height meters 1.3	POS; RB 1 Comments POS; RB 1	MHz; VB: 3 MH
5457.600 5459.040 5456.150 5470 MHz E Frequency MHz q78 5468.620 5469.980	44.5 55.8 Band Edge Si Level dBμV/m 53.5 66.2	H H ignal Radia Pol v/h V V	74.0 ted Field Sti 15 Limit 54.0 74.0	-18.2 <i>rength</i> 5.E Margin -0.5 -7.8	PK Detector Pk/QP/Avg Avg PK	62 Azimuth degrees 85 85	1.5 Height meters 1.3 1.3	POS; RB 1 Comments POS; RB 1 POS; RB 1	MHz; VB: 3 MH MHz; VB: 2 kHz MHz; VB: 3 MH
5457.600 5459.040 5456.150 6470 MHz E Frequency MHz 978 5468.620 5469.980 5469.980	44.5 55.8 Band Edge Si Level dBμV/m 53.5 66.2 66.2	H H ignal Radia Pol v/h V V V	74.0 <i>ted Field Sti</i> 15 Limit 54.0 74.0 68.3	-18.2 rength 5.E Margin -0.5 -7.8 -2.1	PK Detector Pk/QP/Avg Avg PK PK	62 Azimuth degrees 85 85 85 85	1.5 Height meters 1.3 1.3 1.3	POS; RB 1 Comments POS; RB 1 POS; RB 1 POS; RB 1	MHz; VB: 3 MH MHz; VB: 2 kHz MHz; VB: 3 MH MHz; VB: 3 MH
5457.600 5459.040 5456.150 5470 MHz E Frequency MHz q78 5468.620 5469.980 5469.980 5468.780	44.5 55.8 Band Edge Si Level dBμV/m 53.5 66.2 66.2 44.9	H H ignal Radia Pol v/h V V V V V H	74.0 ted Field Str 15 Limit 54.0 74.0 68.3 54.0	-18.2 rength 5.E Margin -0.5 -7.8 -2.1 -9.1	PK Detector Pk/QP/Avg Avg PK PK Avg	62 Azimuth degrees 85 85 85 85 62	1.5 Height meters 1.3 1.3 1.3 1.5	POS; RB 1 Comments POS; RB 1 POS; RB 1 POS; RB 1 POS; RB 1	MHz; VB: 3 MH MHz; VB: 2 kHz MHz; VB: 3 MH MHz; VB: 3 MH MHz; VB: 3 MH
5457.600 5459.040 5456.150 5470 MHz E Frequency MHz q78 5468.620 5469.980 5469.980	44.5 55.8 Band Edge Si Level dBμV/m 53.5 66.2 66.2	H H ignal Radia Pol v/h V V V	74.0 <i>ted Field Sti</i> 15 Limit 54.0 74.0 68.3	-18.2 rength 5.E Margin -0.5 -7.8 -2.1	PK Detector Pk/QP/Avg Avg PK PK	62 Azimuth degrees 85 85 85 85	1.5 Height meters 1.3 1.3 1.3	POS; RB 1 Comments POS; RB 1 POS; RB 1 POS; RB 1 POS; RB 1 POS; RB 1	MHz; VB: 3 MH MHz; VB: 2 kHz MHz; VB: 3 MH MHz; VB: 3 MH

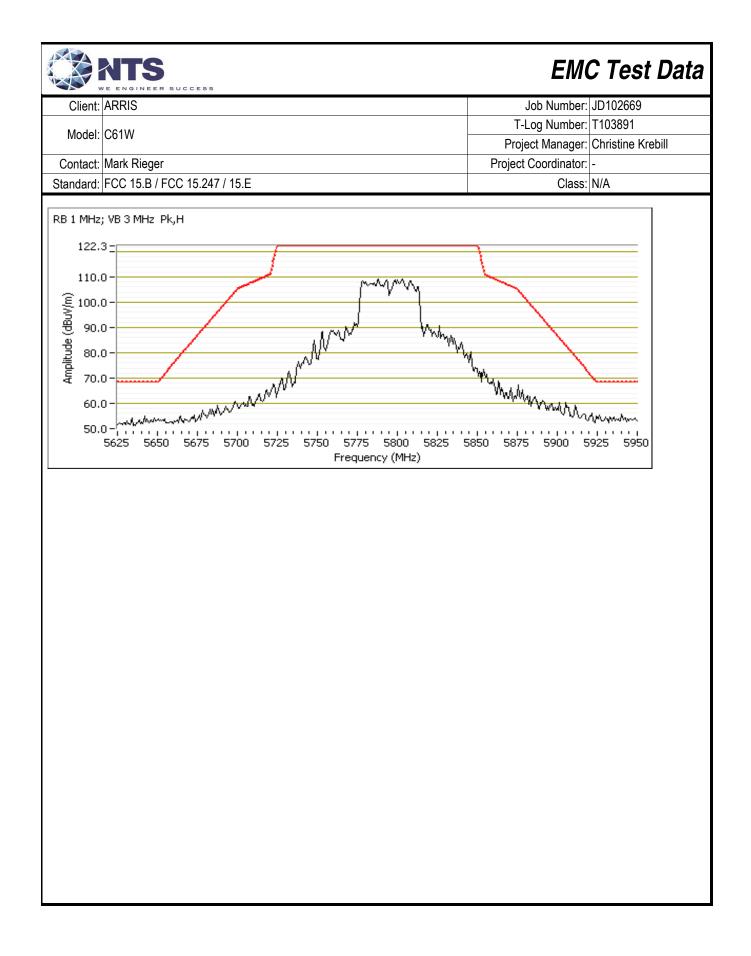




		SUCCESS						ЕМС	C Test Data
Client:	ARRIS						,	Job Number:	JD102669
Model:	C61W							_og Number:	
								-	Christine Krebill
	Mark Rieger						Project	Coordinator:	-
Standard:	FCC 15.B / I	-CC 15.247	/ 15.E					Class:	N/A
Run #12: R	adiated Bar	dedge Meas	surements,	5725-5850N	ſHz				
C	Date of Test:	3/3/2017 0:0	0		С	onfig. Used:	1		
	st Engineer:					nfig Change:			
Te	est Location:	FT Chambe	r#7		E	UT Voltage:	120V/60Hz		
Channel:	151 - 5755N	lHz			Power:	q83			
	4Tx				#of SS:	1			
Mode:	n40								
Data Rate:	MCS0								
5725 MHz B	and Edge S	ianal Radia	ted Field Stı	renath					
Frequency	Level	Pol		5.E	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
q83 5645.190	67.9	V	68.3	-0.4	PK	88	1.4		MHz; VB: 3 MHz
3043.130	07.5	v	00.0	-0.4		00	1.4	100,1011	
RB 1 MHz;	;VB 3 MHz F	Pk,∀							
122.3	5 <u>-</u>		[4.4.5					
110.0	0-			MW	M		~		
َ § 100.0	n –			1					
		MM MM	. Mr	Ŵ	WYN			\backslash	
원 90.0 원	0-		Marx	•	· rwy				
Amplitud	D -	/	ъMY *		· 0[Щ.,		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
특 70.0	0-	. MA	/"			White			
	mm	MAN				5 A 9 B	When we	hyer and and	mation
60.0 55.0	D - D -								
	5625 565	0 5675	5700 572		2//2 2000) 3023 3	850 5875	5900 5	925 5950
				F	requency (Mł	Hz)			

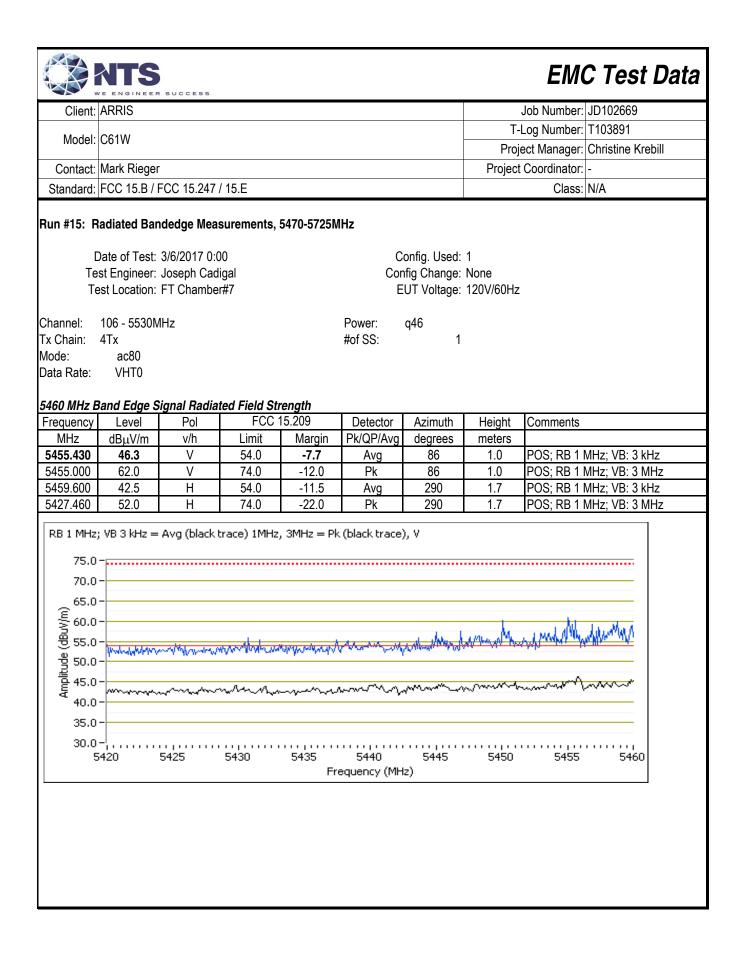


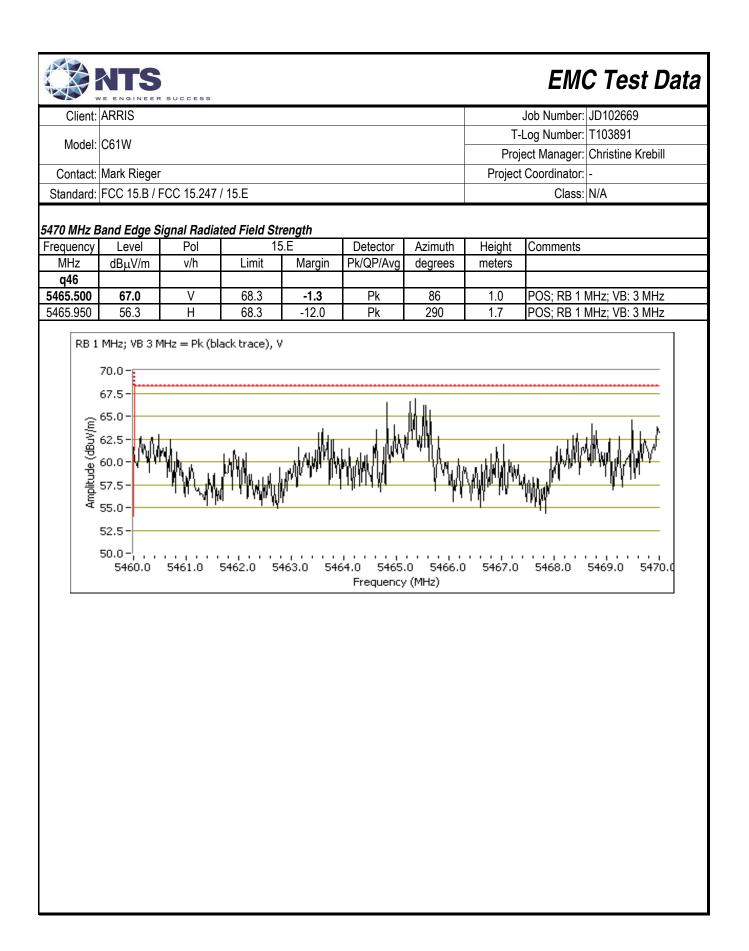




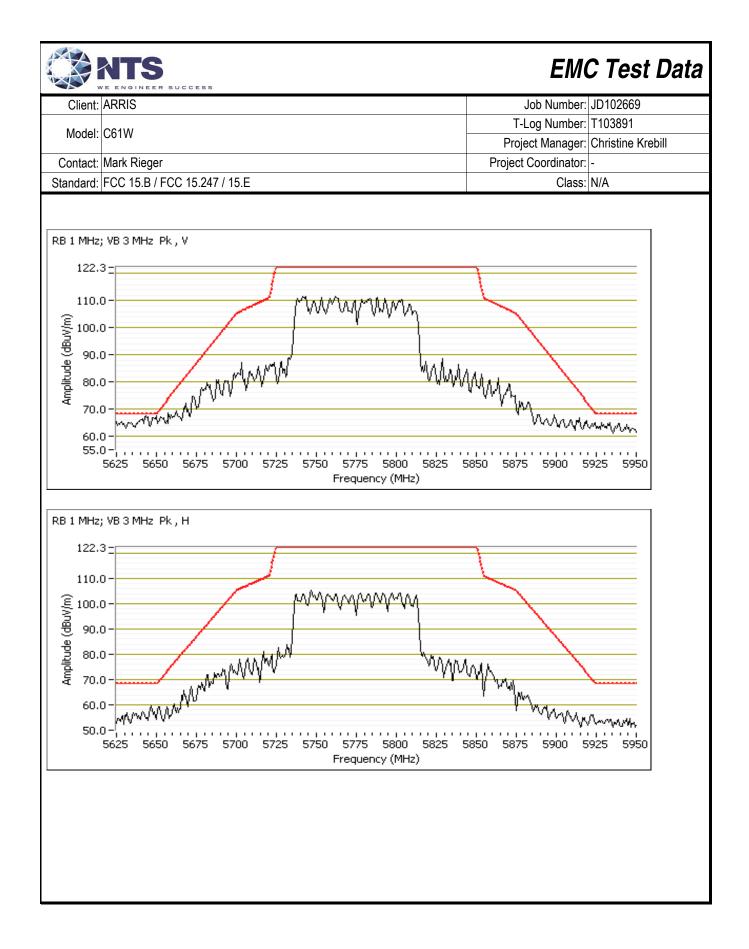
Client:	ARRIS							Job Number:	JD102669
	004114						T-	Log Number:	T103891
Model:	COTW							-	Christine Krebill
Contact:	Mark Rieger						-	Coordinator:	
	FCC 15.B / F	CC 15 247	/ 15 F				.,	Class:	
lun #13: F	Radiated Bane	dedge Mea	surements,	5150-5250N	/Hz				
	Date of Test: 8					onfig. Used:			
	est Engineer: I					fig Change:			
Te	est Location: I	-T Chambe	r#5		E	UT Voltage:	120V/60Hz		
Channel:	42 - 5210MH	Z			Power:	q54			
Tx Chain:					#of SS:	1			
Mode:	ac80				Data Rate:	VHT0			
	Band Edge Si				Datastas	A 1	11.1.1.1		
Frequency		Pol		15.209 Morgin	Detector	Azimuth	Height	Comments	
MHz 354	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
5146.500	72.4	V	74.0	-1.6	PK	152	1.9	POS: RB 1 I	MHz; VB: 3 MHz
5146.430	52.3	V	54.0	-1.7	AVG	152	1.9		MHz; VB: 3 kHz
5143.910	50.6	H	54.0	-3.4	AVG	73	1.9		MHz; VB: 3 kHz
5148.880	68.4	Н	74.0	-5.6	PK	73	1.9		MHz; VB: 3 MHz
	80.0 - 75.0 - 70.0 - 65.0 -	mmmth	mphalant	MurMhuw		tuy lin	~~~~	M.M.	M M
Amplitude (dl	55.0 50.0 45.0 40.0 5110	5115	5120	5125	5130	513			45 5150

Client:	ARRIS							Job Number:	JD102669
							T-	Log Number:	T103891
Model:	C61W						Proj	ect Manager:	Christine Krebill
Contact:	Mark Rieger						-	Coordinator:	
	FCC 15.B / F	CC 15.247	/ 15.E				,	Class:	
									I
	Radiated Band		surements,	5250-5350N	/Hz				
	Date of Test: 5					onfig. Used:			
	est Engineer: N					ifig Change:			
10	est Location: F	- I Chambe	C#1		E	UT voltage:	120V/60Hz		
Channel:	58 - 5290MH	z			Power:	q53			
Tx Chain:					#of SS:	1			
Mode:	ac80				Data Rate:	VHT0			
50 MHz 4	Band Edge Sig	anal Radia	ted Field St	renath					
requency		Pol		15.209	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
3									
53.880	72.2	V	74.0	-1.8	PK	84	1.0		MHz; VB: 3 MHz
53.110 51.410	71.3 51.0	H V	74.0 54.0	-2.7 -3.0	PK RMS	60 84	1.3 1.0		MHz; VB: 3 MHz MHz; VB: 3 kHz
53.370	48.9	 H	54.0 54.0	-3.0 -5.1	RMS	60	1.0		MHz; VB: 3 kHz
5.570	40.5		54.0	-0.1	TNNO	00	1.0		
B1 MH	łz; VB 3 kHz;	Average (Blue Trace)	; RB 1 MHz	z; VB 3 MHz;	Peak (Blac	k Trace)		
80.0) – [
75.0) –								
<u>کے</u> 70.0	- when the	In Mr. L.	In . ANN	. Iu					
2	<u>רי קאייף: י</u> _ו	W. M	WANT NO.	WHIM.	in a sh	. It do .			
岩 65.0			1. 10	Second - M	Mondal	A way way	Amalluha	Mar And	h
명 65.0 관 co.o) –						1.10	dimber A cost	Hold Martin
B 65.0									
dp 65.0 60.0 55.0)								
Amplitude (\sim	\sim			~	N
50.0)	~~~	_~	\sim	\				
50.0 45.0)-	~~~			E270	5775		EDOE	
50.0 45.0)-		5360	5365	5370	5375	5380	5385	5390
50.0 45.0)-	;355	5360	5365	5370 equency (Mł	5375	5380	5385	5390
50.0 45.0)-	 i355	5360	5365	5370	5375	5380	5385	5390
50.0 45.0)-		5360	5365	5370	5375	5380	5385	5390
50.0 45.0)-	 i355	5360	5365	5370	5375	5380	5385	5390
50.0 45.0)-	 i355	5360	5365	5370	5375	5380	5385	5390





Rieger 5.B / FCC 15.247 d Bandedge Mea Test: 3/6/2017 0: neer: Rafael Vare ation: FT Chambe	a surements, 00	5725-5850M			T-l Proje	EMC Test Da Job Number: JD102669 Log Number: T103891 ect Manager: Christine Krebill Coordinator: -
Rieger 5.B / FCC 15.247 d Bandedge Mea Test: 3/6/2017 0: neer: Rafael Vare	a surements, 00	5725-5850M	Hz		T-l Proje	Log Number: T103891 ect Manager: Christine Krebill Coordinator: -
5.B / FCC 15.247 d Bandedge Mea Test: 3/6/2017 0: neer: Rafael Vare	a surements, 00	5725-5850M	Hz		Proje	ect Manager: Christine Krebill Coordinator: -
5.B / FCC 15.247 d Bandedge Mea Test: 3/6/2017 0: neer: Rafael Vare	a surements, 00	5725-5850M	Hz		Proje	ect Manager: Christine Krebill Coordinator: -
5.B / FCC 15.247 d Bandedge Mea Test: 3/6/2017 0: neer: Rafael Vare	a surements, 00	5725-5850M	Hz			Coordinator: -
5.B / FCC 15.247 d Bandedge Mea Test: 3/6/2017 0: neer: Rafael Vare	a surements, 00	5725-5850M	Hz			
d Bandedge Mea Test: 3/6/2017 0: neer: Rafael Vare	a surements, 00	5725-5850M	Hz			Class: N/A
neer: Rafael Vare						
ation: FT Chambe			Con	onfig. Used: ifig Change:	None	
	er#7		E	UT Voltage:	120V/60Hz	
5775MHz 30 F0			Power: #of SS:	q77 1		
			Detector	A4	11-1-1-1-4	lo
						Comments
//111 //11		warym	FK/QF/AVy	uegrees	meters	
4 V	68.3	-0.9	PK	304	1.0	POS; RB 1 MHz; VB: 3 MHz
						Comments
//m v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
5 V	68.3	-3.8	PK	304	10	POS; RB 1 MHz; VB: 3 MHz
	TO dge Signal Radia el Pol //m v/h 4 V	TO	TO dge Signal Radiated Field Strength Image Margin Image Margin	TO dge Signal Radiated Field Strength el Pol 15.E Detector //m v/h Limit Margin Pk/QP/Avg 4 V 68.3 -0.9 PK dge Signal Radiated Field Strength Detector Pice Detector //m v/h Limit Margin Pk/QP/Avg	TO dge Signal Radiated Field Strength el Pol 15.E Detector Azimuth //m v/h Limit Margin Pk/QP/Avg degrees 4 V 68.3 -0.9 PK 304 dge Signal Radiated Field Strength Detector Azimuth el Pol 15.E Detector Azimuth //m v/h Limit Margin Pk/QP/Avg degrees	TO dge Signal Radiated Field Strength el Pol 15.E Detector Azimuth Height I/m v/h Limit Margin Pk/QP/Avg degrees meters 4 V 68.3 -0.9 PK 304 1.0 dge Signal Radiated Field Strength el Pol 15.E Detector Azimuth Height //m v/h Limit Margin Pk/QP/Avg degrees meters



EMC Test Data

Client:	ARRIS	Job Number:	JD102669
Model:	C61W	T-Log Number:	T103891
MOUEI.	Corw	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

FCC 15.407 (UNII) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

ITS

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. For radiated emissions testing the measurement antenna was located 3 meters from the EUT, unless otherwise noted.

Ambient Conditions:

Temperature:	22.4 °C
Rel. Humidity:	40 %

Summary of Results

Run #	Mode	Channel	# of SS	Passing Pwr Setting	Test Performed	Limit	Result / Margin
20MHz Ban	dwith Modes		-				
5	n20	36 - 5180MHz	1	q69	Restricted Band Edge at 5150 MHz	15.209	53.8 dBµV/m @ 5150.0 MHz (-0.2 dB)
6	n20	64 - 5320MHz	1	q68	Restricted Band Edge at 5350 MHz	15.209	53.9 dBµV/m @ 5350. MHz (-0.1 dB)
	n20	100 - 5500MHz	1	q70	Restricted Band Edge at 5460 MHz	15.209	49.1 dBµV/m @ 5459. MHz (-4.9 dB)
7	n20	100 - 5500MHz	1	q70	Band Edge 5460 - 5470 MHz	15E	67.8 dBµV/m @ 5469. MHz (-0.5 dB)
	n20	140 - 5700MHz	1	q62	Band Edge 5725MHz	15E	67.4 dBµV/m @ 5727. MHz (-0.9 dB)
8	n20	149 - 5745MHz	1	q90	Band Edge 5725 MHz	15E	59.2 dBµV/m @ 5642. MHz (-9.1 dB)
0	n20	165 - 5825MHz	1	q90	Band Edge 5850MHz	15E	59.4 dBµV/m @ 5932. MHz (-8.9 dB)

		RSUCCESS				EM	C Test Data
Client:	ARRIS					Job Number:	JD102669
						T-Log Number:	T103891
Model:	C61W				-	Project Manager:	
Contact:	Mark Rieger	r				Project Coordinator:	
	-	FCC 15.247	/ 15.E			Class:	
Run #	Mode	Channel	# of SS	Passing Pwr Setting	Test Performed	Limit	Result / Margin
40MHz Ban	dwith Modes						
9	n40	38 - 5190MHz	1	q60	Restricted Band Edge at 5150 MHz	15.209	52.9 dBµV/m @ 5149.9 MHz (-1.1 dB)
10	n40	62 - 5310MHz	1	q62	Restricted Band Edge at 5350 MHz	15.209	53.3 dBµV/m @ 5350.6 MHz (-0.7 dB)
	n40	102 - 5510MHz	1	q62	Restricted Band Edge at 5460 MHz	15.209	49.6 dBµV/m @ 5457.8 MHz (-4.4 dB)
11	n40	102 - 5510MHz	1	q62	Band Edge 5460 - 5470 MHz	15E	53.2 dBµV/m @ 5469.9 MHz (-0.8 dB)
	n40	134 - 5670MHz	1	q70	Band Edge 5725MHz	15E	53.8 dBµV/m @ 5728.4 MHz (-0.2 dB)
12	n40	151 - 5755MHz	1	q88	Band Edge 5725 MHz	15E	67.9 dBµV/m @ 5649.4 MHz (-0.4 dB)
12	n40	159 - 5795MHz	1	q90	Band Edge 5850MHz	15E	69.8 dBµV/m @ 5922.1 MHz (-0.6 dB)
80MHz Ban	dwith Modes						
13	ac80	42 - 5210MHz	1	q59	Restricted Band Edge at 5150 MHz	15.209	52.9 dBµV/m @ 5149.5 MHz (-1.1 dB)
14	ac80	58 - 5290MHz	1	q56	Restricted Band Edge at 5350 MHz	15.209	72.7 dBµV/m @ 5356.8 MHz (-1.3 dB)
45	ac80	106 - 5530MHz	1	q53	Restricted Band Edge at 5460 MHz	15.209	73.8 dBµV/m @ 5467.8 MHz (-0.2 dB)
15	ac80	106 - 5530MHz	1	q53	Band Edge 5460 - 5470 MHz	15E	67.3 dBµV/m @ 5466.2 MHz (-1.0 dB)
16	ac80	155 - 5775MHz	1	q77	Band Edge 5725 MHz	15E	68.2 dBµV/m @ 5633.1 MHz (-0.1 dB)
16	ac80	155 - 5775MHz	1	q77	Band Edge 5850MHz	15E	69.8 dBµV/m @ 5921.8 MHz (-0.8 dB)

Modifications Made During Testing No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.



EMC Test Data

Client:	ARRIS	Job Number:	JD102669
Model:	CE1W	T-Log Number:	T103891
Model:	Colw	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

Procedure Comments:

Measurements performed in accordance with FCC KDB 789033

Peak measurements performed with: RBW=1MHz, VBW=3MHz, peak detector, max hold, auto sweep time

Unless otherwise stated/noted, emission has duty cycle ≥ 98% and was measured using RBW=1MHz, VBW=10Hz, peak detector, linear average mode, auto sweep time, max hold 50 traces. (method VB of KDB 789033)

	Mode	Data Rate	Duty Cycle (x)	Constant DC?	T (ms)	Pwr Cor Factor*	Lin Volt Cor Factor**	Min VBW for FS (Hz)
1SS	n20	MCS0	0.88	No	4.41	0.55	1.09	227
1SS	n40	MCS0	0.83	No	4.17	0.79	1.58	240
1SS	ac80	VHT0	0.58	No	2.92	2.34	4.68	342

Sample Notes

Sample S/N: G62DA7BU200058 Driver: -Antenna: Internal 4x4

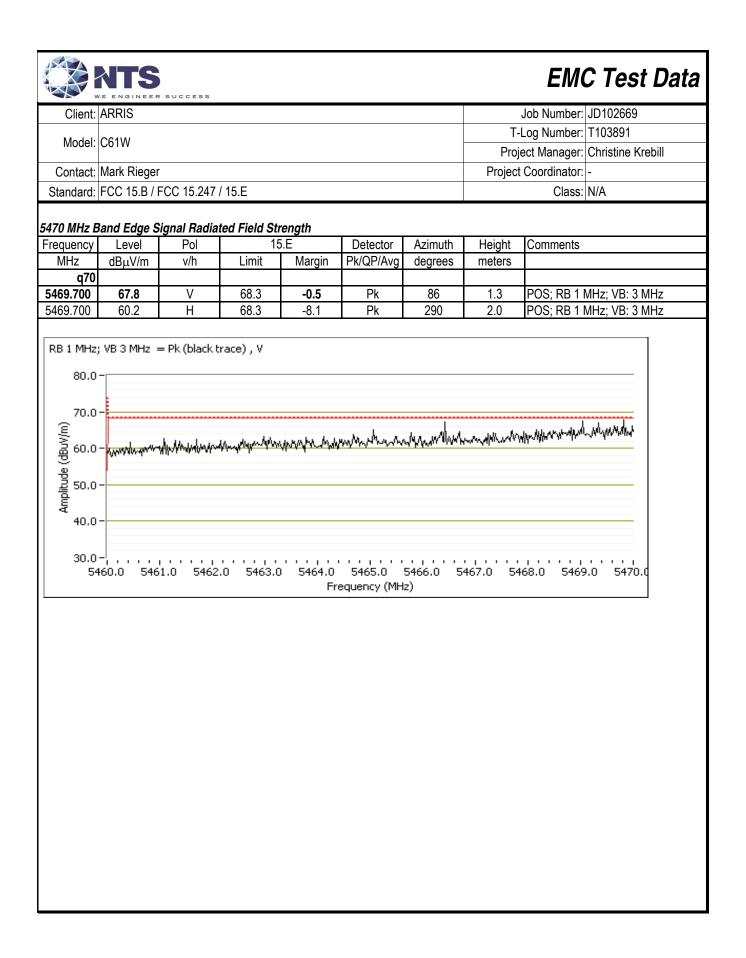
Measurement Specific Notes:

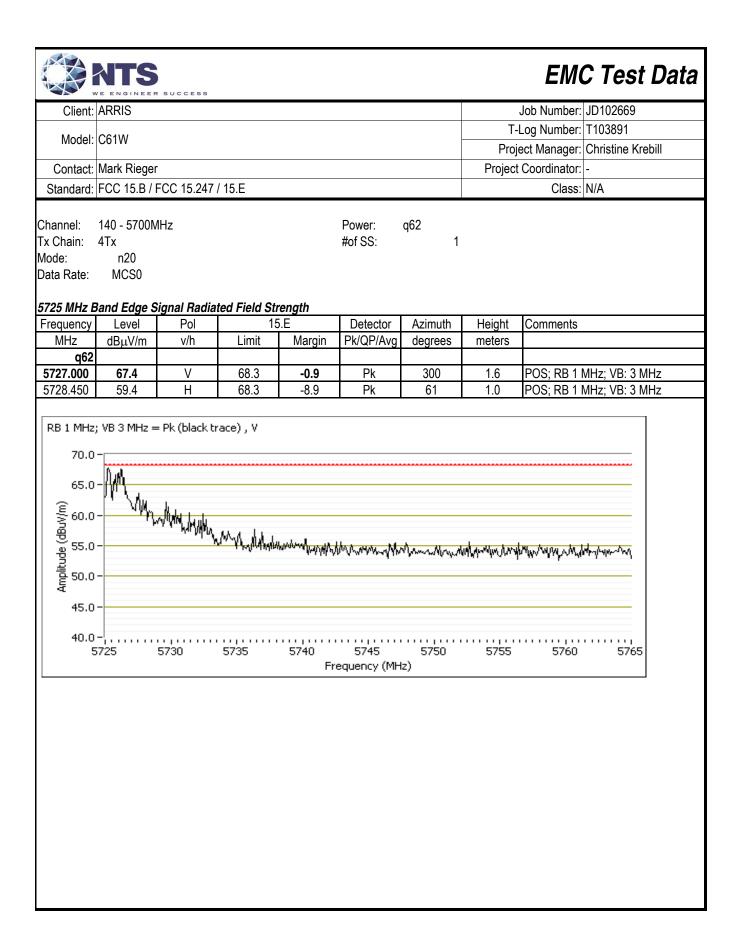
	For emissions outside of the restricted bands the limit is -27dBm/MHz eirp (68.3dBuV/m). The measurement method
Note 1:	required is a peak measurement (RB=1MHz, VB≥3MHz, peak detector). Per KDB 789033 2) c) (i), compliance can be
	demonstrated by meeting the average and peak limits of 15.209, as an alternative.
Note 2:	Emission has a duty cycle ≥ 98%, average measurement performed: RBW=1MHz, VBW=3MHz, RMS, Power averaging, auto
NOLE Z.	sweep, trace average 100 traces (method AD of KDB 789033)
Note 3:	Emission has constant duty cycle < 98%, average measurement performed: RBW=1MHz, VBW>1/T but not less than 10Hz,
NOLE 5.	peak detector, linear averaging, auto sweep,max hold 50*1/DC traces (method VB of KDB 789033)
Note 4:	Emission has a duty cycle < 98%, average measurement performed: RBW=1MHz, VBW=3MHz, RMS, Power averaging, auto
NOLE 4.	sweep, trace average 100*1/DC traces, measurement corrected by Pwr correction factor (method AD of KDB 789033)
Note 5:	Plots of the average and peak bandedge do not account for any duty cycle correction. Refer to the tabular results for final
Note 5.	measurements.
l	
1	

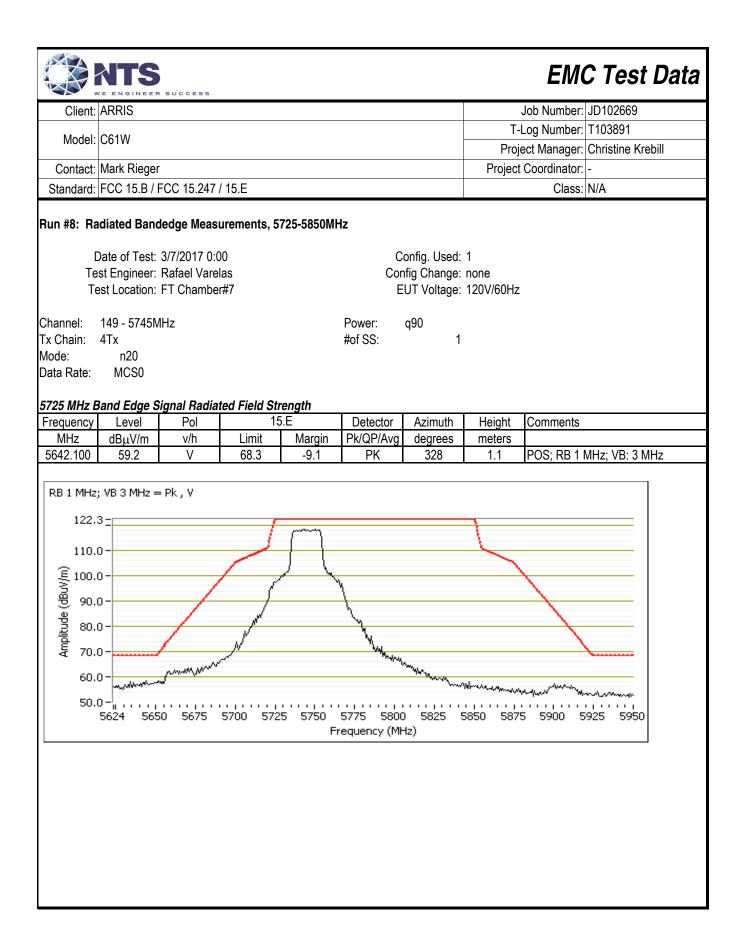
		SUCCESS						ЕМС	C Test Data
Client:	ARRIS							Job Number:	JD102669
								Log Number:	
Model:	C61W								Christine Krebill
Contact	Mark Rieger							Coordinator:	
	-						FIUJECI		
Standard:	FCC 15.B /	-00 15.247	/ 15.E					Class:	N/A
Run #5: Ra	adiated Band	ledge Meas	urements, 5	150-5250MH	łz				
	Date of Test:	3/6/2017 0:0	00			onfig. Used:			
	est Engineer:					ifig Change:			
Т	est Location:	FT Chambe	r#7		E	UT Voltage:	120V/60Hz		
Channel:	36 - 5180 M	Hz			Power:	q69			
Tx Chain:					#of SS:	400 1			
Mode:	n20					·			
Data Rate:	MCS0								
	Band Edge S								
Frequency	Level	Pol		15.209	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
q69 5150.000	53.8	V	54.0	-0.2	Avg	93	1.0		MHz; VB: 300 Hz
5150.000	66.9	V	74.0	-7.1	Pk	93	1.0		MHz; VB: 3 MHz
5149.840	46.7	H	54.0	-7.3	Avg	71	1.3		MHz; VB: 300 Hz
5147.520	61.2	Н	74.0	-12.8	Pk	71	1.3		MHz; VB: 3 MHz
75.0 70.0 (65.0 (W/\ngp) 55.0 9pnjijdwy 45.0 35.0 30.0				5125	Pk (blue trac		Josephane April 	malland Man	

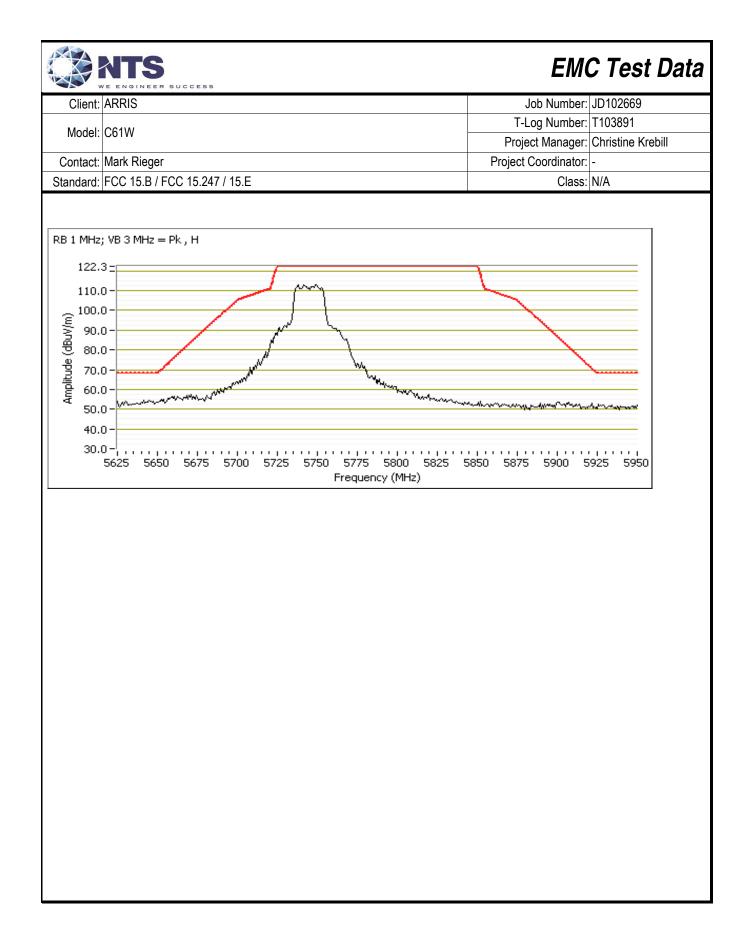
RRIS :61W fark Rieger CC 15.B / FC iated Bander ite of Test: 3/ : Engineer: Jo t Location: F ⁻	dge Meası 7/2017 0:0		250-5350MF			T-L Proje	Job Number: _og Number: ect Manager: Coordinator:	T103891 Christine Krebill			
C61W Mark Rieger CC 15.B / FC iated Bander ite of Test: 3/ Engineer: Jo	dge Meası 7/2017 0:0		250-5350MF			T-L Proje	og Number: ect Manager:	T103891 Christine Krebill			
flark Rieger CC 15.B / FC iated Bander ite of Test: 3/ Engineer: Jo	dge Meası 7/2017 0:0		250-5350MF			Proje	ect Manager:	Christine Krebill			
CC 15.B / FC iated Bande ite of Test: 3/ : Engineer: Jo	dge Meası 7/2017 0:0		250-5350MF			-	-				
CC 15.B / FC iated Bande ite of Test: 3/ : Engineer: Jo	dge Meası 7/2017 0:0		250-5350MF			FIDJECL					
iated Bandeo ite of Test: 3/ : Engineer: Jo	dge Meası 7/2017 0:0		250-5350MF	rd: FCC 15.B / FCC 15.247 / 15.E							
ite of Test: 3/ Engineer: Jo	7/2017 0:0	urements, 52	250-5350MF				Class:	N/A			
Engineer: Jo				Ηz							
Engineer: Jo		0		0	مسائم المعطر	4					
-	JSEDIT GAU				onfig. Used: nfig Change:						
	•	-			UT Voltage:						
		πι		L	or voltage.	120 0/00112					
4 - 5320MHz				Power:	q68						
Tx				#of SS:	1						
n20											
MCS0											
Level	Pol			Detector		Height	Comments				
dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters					
	<u> </u>	F00 4	15.000		A		<u> </u>				
						×.	Comments				
				-							
59.5	11	74.0	-14.5	FK	09	1.0	F00, ND FN				
h	M/www.wi	unpuqlumu,		h-Mwamulu 	۲ <u>۳</u>		hardagan dhafd				
	MCS0 <u>nd Edge Sig</u> Level <u>dBµV/m</u> 53.9 65.9 44.9 59.5 /B 300 Hz =	MCS0 hd Edge Signal Radiat Level Pol dBμV/m v/h 53.9 V 65.9 V 44.9 H 59.5 H B 300 Hz = Avg (blac	MCS0 <u>hd Edge Signal Radiated Field Str</u> Level Pol FCC 1 dBμV/m v/h Limit <u>Level Pol FCC 1</u> dBμV/m v/h Limit 53.9 V 54.0 65.9 V 74.0 44.9 H 54.0 59.5 H 74.0 WMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM	MCS0 nd Edge Signal Radiated Field Strength Level Pol FCC 15.209 dBµV/m v/h Limit Margin Level Pol FCC 15.209 dBµV/m v/h Limit Margin 53.9 V 54.0 -0.1 65.9 V 74.0 -8.1 44.9 H 54.0 -9.1 59.5 H 74.0 -14.5 //B 300 Hz = Avg (black trace), 1MHz, 3MHz = //MMM/MM/M/M/M/M/M/M/M/M/M/M/M/M/M/M/M	MCS0 nd Edge Signal Radiated Field Strength Level Pol FCC 15.209 Detector dBμV/m v/h Limit Margin Pk/QP/Avg Level Pol FCC 15.209 Detector dBμV/m v/h Limit Margin Pk/QP/Avg 53.9 V 54.0 -0.1 Avg 65.9 V 74.0 -8.1 Pk 44.9 H 54.0 -9.1 Avg 59.5 H 74.0 -14.5 Pk 7B<300 Hz	MCS0 Id Edge Signal Radiated Field Strength Level Pol FCC 15.209 Detector Azimuth dBµV/m v/h Limit Margin Pk/QP/Avg degrees Level Pol FCC 15.209 Detector Azimuth dBµV/m v/h Limit Margin Pk/QP/Avg degrees 53.9 V 54.0 -0.1 Avg 88 65.9 V 74.0 -8.1 Pk 88 44.9 H 54.0 -9.1 Avg 69 59.5 H 74.0 -14.5 Pk 69 ''B 300 Hz = Avg (black trace), 1MHz, 3MHz = Pk (blue trace) , V V ''MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM	MCS0 <u>hd Edge Signal Radiated Field Strength</u> <u>Level Pol FCC 15.209 Detector Azimuth Height</u> <u>dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters</u> <u>53.9 V 54.0 -0.1 Avg 88 1.2</u> <u>65.9 V 74.0 -8.1 Pk 88 1.2</u> <u>65.9 V 74.0 -9.1 Avg 69 1.0</u> <u>59.5 H 74.0 -14.5 Pk 69 1.0</u> B 300 Hz = Avg (black trace), 1MHz, 3MHz = Pk (blue trace), V	MCS0 ad Edge Signal Radiated Field Strength Level Pol FCC 15.209 Detector Azimuth Height Comments dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters			

Client	ARRIS	SUCCESS						Job Number: JD102669	
							T-Log Number: T103891		
Model	: C61W						Project Manager: Christine Krebill		
Contact	: Mark Rieger						Project Coordinator: -		
	: FCC 15.B / F	CC 15.247	/ 15.E					Class: N/A	
un #7: R	adiated Band	edge Meas	urements, 5	470-5725MH	łz				
			•		0		4		
	Date of Test: 3					onfig. Used: ifig Change:			
	est Location: I					UT Voltage:			
Channel:	100 - 5500MI	Ηz				q70			
x Chain:	4Tx				#of SS:	1			
/lode:)ata Rate:	n20								
	Band Edge Si							-	
Frequency	1	Pol		15.209	Detector	Azimuth	Height	Comments	
MHz 5459.440	dBμV/m 49.1	v/h V	Limit 54.0	Margin -4.9	Pk/QP/Avg Avg	degrees 86	meters 1.3	POS; RB 1 MHz; VB: 300 Hz	
5456.710	62.3	V	74.0	-11.7	Pk	86	1.3	POS; RB 1 MHz; VB: 3 MHz	
5459.680	44.5	Н	54.0	-9.5	Avg	290	2.0	POS; RB 1 MHz; VB: 300 Hz	
5424.810	56.0	Н	74.0	-18.0	Pk	290	2.0	POS; RB 1 MHz; VB: 3 MHz	
75.0 70.0 (اللهج 65.0)-							Mar	

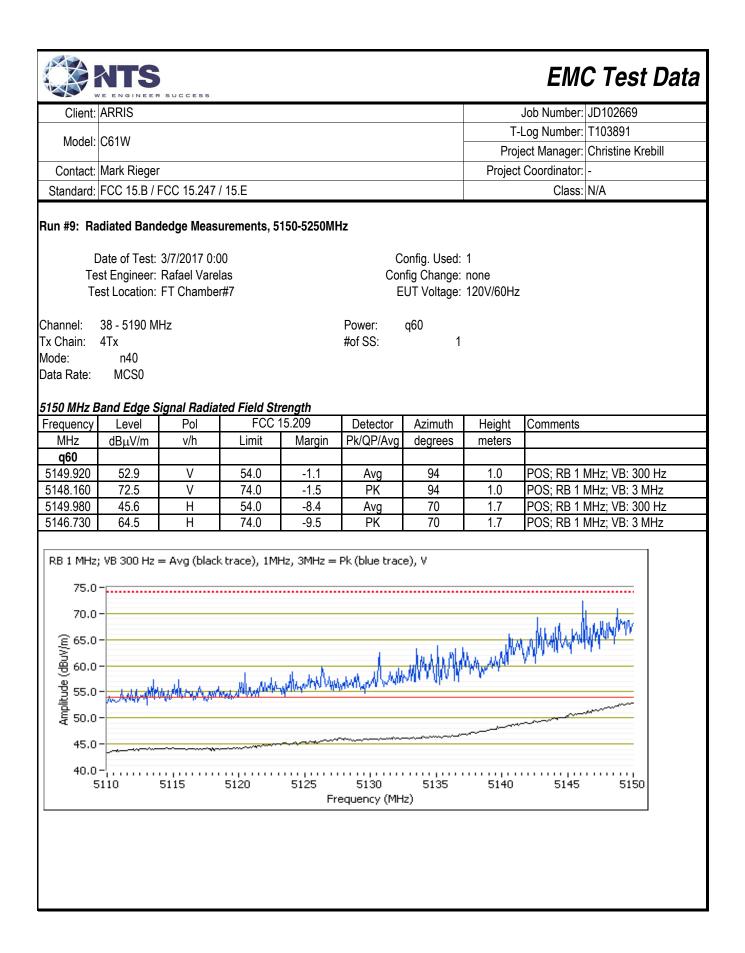






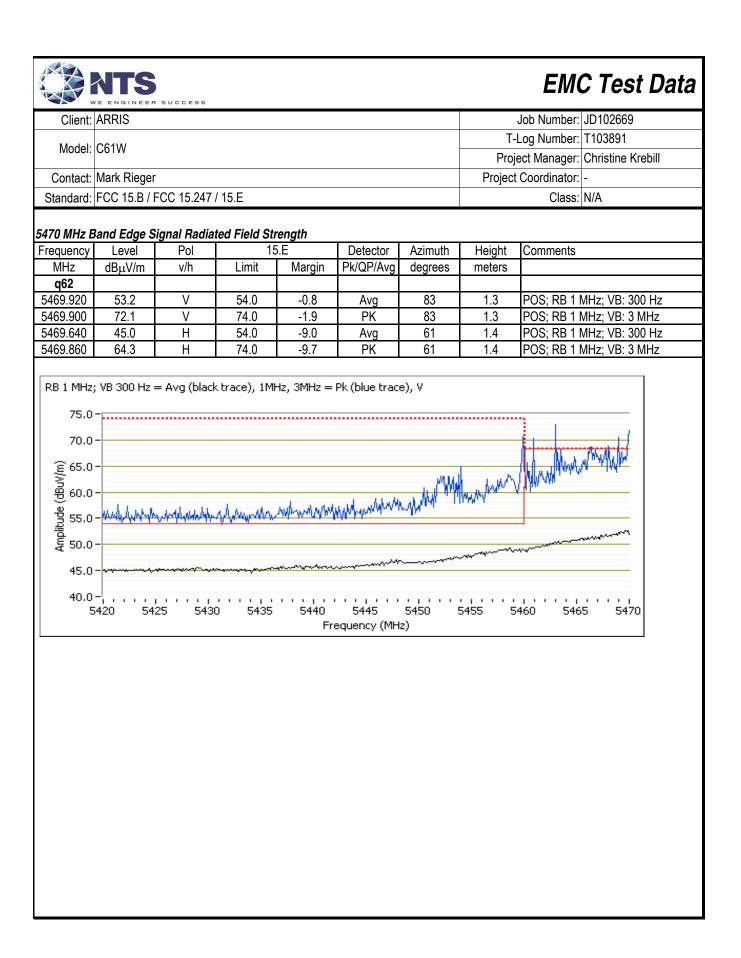


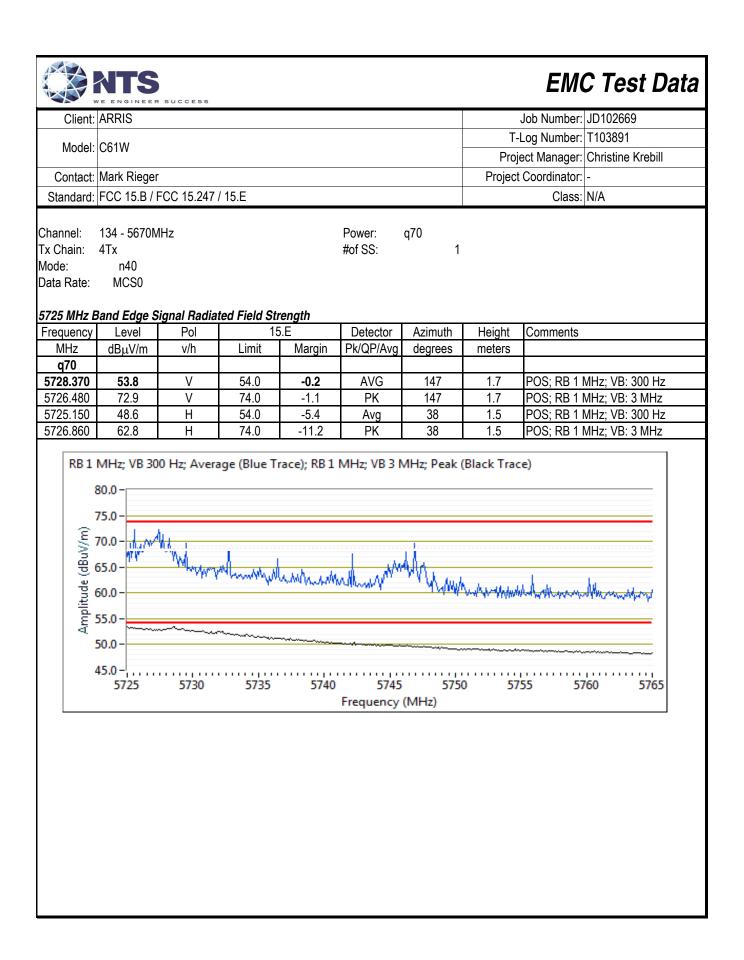
	NTS							EM	C Test Data	
Client:	ARRIS	SUCCESS						Job Number:	JD102669	
Model:	C61)M						T-l	_og Number:	T103891	
woder.	COTW						Proje	ect Manager:	Christine Krebill	
	Mark Rieger						Project	Coordinator:		
	FCC 15.B / I		15.E					Class:	N/A	
Channel: Tx Chain: Mode: Data Rate: 5850 MHz F	165 - 5825M 4Tx n20 MCS0 Band Edge S		ed Field Str	enath	Power: #of SS:	q90 1				
Frequency	Level	Pol	15		Detector	Azimuth	Height	Comments		
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters			
5932.310	59.4	V	68.3	-8.9	PK	90	1.3	POS; RB 1	MHz; VB: 3 MHz	
122.3 110.0 100.0 90.0 90.0 90.0 60.0 60.0 50.0 5625 5650 5675 5700 5725 5750 5775 5800 5825 5850 5875 5900 5925 5950 Frequency (MHz)										
122. 110. (W/\ng0 90. 90. 80. 400 80. 60.	0 - 0 - 0 - 0 - 0 -		5700 5725	5 5750	, , , , , , , , , , , , , , , , , , ,	5825 5	850 5875	¹⁴ 1, 14, 14, 14, 14, 14, 14, 14, 14, 14, 1		



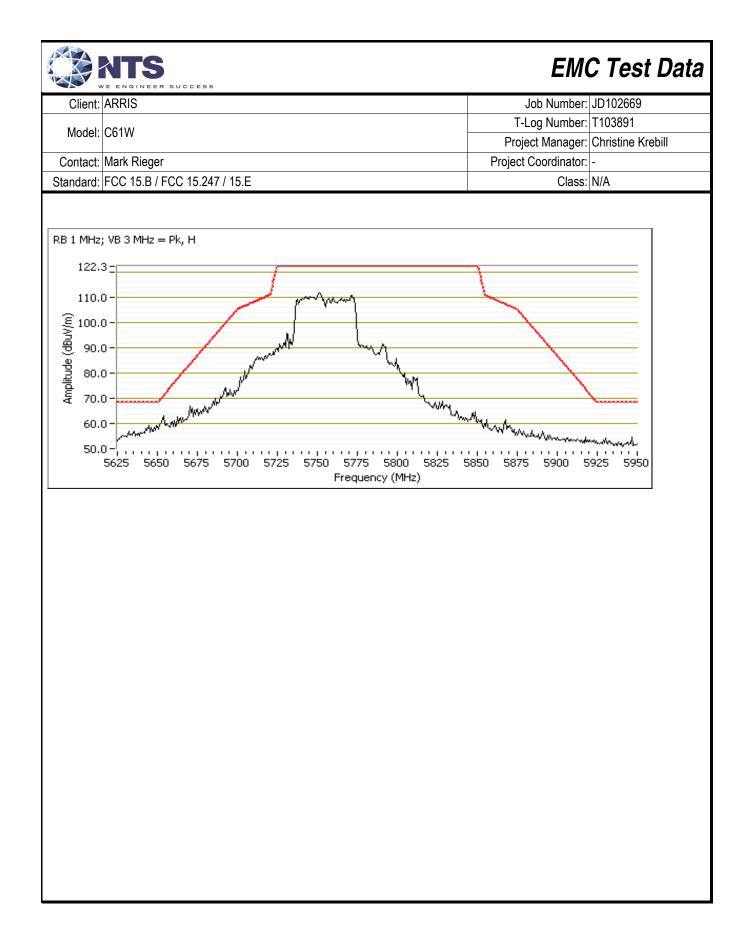
Tx Chain: 4Tx #of SS: 1 Mode: n40 Data Rate: MCS0 5350 MHz Band Edge Signal Radiated Field Strength	Client	ogn sentes mit ar - on	SUCCESS						lob Number	102660
Model: Cb IW Project Manager: Christine Krebill Contact: Mark Rieger Project Coordinator: - Standard: FCC 15.B / FCC 15.247 / 15.E Class: IV/A Itun #10: Radiated Bandedge Measurements, 5250-5350MHz Config. Used: 1 Date of Test: 3/7/2017 0.00 Config. Used: 1 Test Engineer: Rafael Varelas Config Change: none Test Location: FT Chamber#7 EUT Voltage: 120V/60Hz Channel: 62 - 5310MHz Power: q62 x Chain: 4Tx #of SS: 1 Note: n40 FCC 15.209 Detector Azimuth MHz dBµV/m v/h Limit Margin PK/QP/Avg degrees 350.640 53.3 V 54.0 -0.7 Avg 88 1.3 POS; RB 1 MHz; VB: 300 Hz 350.680 49.5 H 54.0 4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 30 Hz 353.130 69.1 <td>Client:</td> <td>AKKIS</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Client:	AKKIS								
Contact: Mark Rieger Project Coordinator: - Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Aun #10: Radiated Bandedge Measurements, 5250-5350MHz Date of Test: 37/2017 0:00 Config: Used: 1 Test Engineer: Rafed Varelas Config: Used: 1 EUT Voltage: 120V/60Hz Stannel: 62 - 5310MHz Power: q62 x Chain: 4Tx #of SS: 1 Alar Rate: MCS0 Standard: Power: q62 Stand Rde: n40 Ata #of SS: 1 Alar Rate: MCS0 Standard: Power: q62 MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters g02 V - - Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters s350.640 53.3 V 54.0 - 7.2 1.9 POS; RB 1 MHz; VB: 30 Hz	Model:	C61W							-	
Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Lun #10: Radiated Bandedge Measurements, 5250-5350MHz Date of Test: 3/7/2017 0:00 Config. Used: 1 Test Engineer: Rafiael Varelas Config Change: none EUT Voltage: 120V/60Hz Test Location: FT Chamber#7 EUT Voltage: 120V/60Hz Channel: 62 - 5310MHz Power: q62 x Chain: 4Tx #of SS: 1 lode: n40 vata Rate: MCS0 330 MHz Bald Edge Signal Radiated Field Strength Frequency Everel Pol Frequency Level Pol FCC 15.209 Detector Azimuth Height Comments MHz dBµU/m vh Limit Margin PK/QP/Avg degrees meters 5350.640 53.3 V 54.0 -0.7 Avg 88 1.3 POS; RB 1 MHz; VB: 300 Hz 5350.640 71.3 V 74.0 -2.7 PK 88 1.3 POS; RB 1 MHz; VB: 30 Hz 5350.680 </td <td></td>										
Nun #10: Radiated Bandedge Measurements, 5250-5350MHz Date of Test: 377/2017 0:00 Config. Used: 1 Test Engineer: Rafael Varelas Config. Change: none Test Location: FT Chamber#7 EUT Voltage: 120V/60Hz Channel: 62 - 5310MHz Power: g62 Tx Chain: 4Tx #of SS: 1 Jode: n40 Jata Rate: MCS0 S350 MHz Band Edge Signal Radiated Field Strength Frequency Level Pol FCC 15.209 Detector Azimuth Height Comments MHz dBµV/m Vh Limit Margin Pk/QP/Avg degrees meters g62 5350.680 53.3 V 54.0 -0.7 Avg 88 1.3 POS; RB 1 MHz; VB: 300 Hz 5350.680 49.5 H 54.0 -4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 300 Hz 5350.680 49.5 H 54.0 -4.9 PK 72 1.9 POS; RB 1 MHz; VB: 300 Hz <t< td=""><td></td><td>_</td><td></td><td></td><td></td><td></td><td></td><td>Project</td><td></td><td></td></t<>		_						Project		
Date of Test: 3/7/2017 0:00 Test Location: FT Chamber#7 Config. Used: 1 Config Change: none EUT Voltage: 120V/60Hz Channel: 62 - 5310MHz Power: q62 Tx Chain: Tx Chain: 4Tx #of SS: 1 Vode: n40 Data Rate: MCSO S30 Bate of Edit Strength Technological Strength Frequency Level Pol FCC 15.209 S40 Data Rate: MCSO S350 MHz dB ₁ V/m V/m G62 53.3 V 54.0 -0.7 S350.604 53.3 V 54.0 -0.7 Avg 88 1.3 POS; RB 1 MHz; VB: 300 Hz S350.604 49.5 H 54.0 -4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 300 Hz S353.130 69.1 H 74.0 -4.9 PK 72 1.9 POS; RB 1 MHz; VB: 3 MHz RB 1 MHz; VB 300 Hz = Avg (black trace), 1MHz, 3MHz = Pk (blue trace), V 75.0 70.0 70.0 72 1.9 POS; RB 1 MHz; VB: 3 MHz RB 1 MHz; VB 300 Hz = Avg (black trace), 1MHz, 3MHz = Pk (blue trace), V 75.0 75.0	Standard:	FCC 15.B / I	-CC 15.247	/ 15.E					Class:	N/A
Test Enginee: Rafael Varelas Test Location: Config Change: none Dannel: 62 - 5310MHz Power: q62 Ix Chain: 4Tx #of SS: 1 Jata Rate: MCS0 5350 MHz Band Edge Signal Radiated Field Strength Frequency Evel Pol Frequency Level Pol FCC 15.209 Detector Azimuth Height Comments 350.640 53.3 V 54.0 -0.7 Avg 88 1.3 POS; RB 1 MHz; VB: 300 Hz 3530.680 49.5 H 54.0 -4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 300 Hz 353.130 69.1 H 74.0 -2.7 PK 88 1.3 POS; RB 1 MHz; VB: 300 Hz 353.660 49.5 H 54.0 -4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 300 Hz 355.0 69.1 H 74.0 -2.7 PK 88 1.3 POS; RB 1 MHz; VB: 300 Hz 355.0 69.1 H 74.0 -2.7 PK 88 0.0 -0.5	Run #10: F	adiated Ban	dedge Mea	surements,	5250-5350N	IHz				
Test Location: FT Chamber#7 EUT Voltage: 120V/60Hz Channel: 62 - 5310MHz Power: q62 fx Chain: 4Tx #of SS: 1 Vode: n40 n40 0 Data Rate: MCS0 S350 MHz Band Edge Signal Radiated Field Strength Frequency Level Pol FCC 15.209 Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 62 1 1 Margin Pk/QP/Avg 88 1.3 POS; RB 1 MHz; VB: 300 Hz 5350.640 53.3 V 54.0 -0.7 Avg 88 1.3 POS; RB 1 MHz; VB: 300 Hz 5353.610 71.3 V 74.0 -2.7 PK 88 1.3 POS; RB 1 MHz; VB: 300 Hz 5353.130 69.1 H 74.0 -4.9 PK 72 1.9 POS; RB 1 MHz; VB: 30 Hz 75.0 - - - - 1.9 PK 72 1.9 POS; RB 1 MHz; VB: 30 Hz	[Date of Test:	3/7/2017 0:0	0			•			
Channel: 62 - 5310MHz Power: q62 Tx Chain: 4Tx #of SS: 1 Vode: n40 Data Rate: MCS0 5350 MHz Band Edge Signal Radiated Field Strength Frequency Level Pol FCC 15.209 Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters <u>962</u> <u>10 127 PK 88 1.3 POS; RB 1 MHz; VB: 300 Hz</u> <u>5350.640 53.3 V 54.0 -0.7 Avg 88 1.3 POS; RB 1 MHz; VB: 300 Hz</u> <u>5350.680 49.5 H 54.0 4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 300 Hz</u> <u>5353.130 69.1 H 74.0 4.9 PK 72 1.9 POS; RB 1 MHz; VB: 300 Hz</u> <u>5355.660 49.5 H 54.0 4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 300 Hz</u> <u>5355.660 49.5 H 54.0 4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 300 Hz</u> <u>5355.610 53.5 S300 Hz</u> = Avg (black trace), 1MHz, 3MHz = Pk (blue trace), V <u>75.0 40 40 40 40 40 40 40 40 40 40 40 40 40</u>		-								
fx Chain: 4Tx #of SS: 1 Mode: n40 Data Rate: MCS0 S350 MHz Band Edge Signal Radiated Field Strength Frequency Level Pol FC 15.209 Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters g62 0 0 0 0 0 0 0 5350.640 53.3 V 54.0 -0.7 Avg 88 1.3 POS; RB 1 MHz; VB: 300 Hz 5350.640 53.3 V 74.0 -2.7 PK 88 1.3 POS; RB 1 MHz; VB: 300 Hz 5350.800 49.5 H 54.0 -4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 30 Hz 5353.130 69.1 H 74.0 -4.9 PK 72 1.9 POS; RB 1 MHz; VB: 3 MHz 76.0	Te	est Location:	FT Chambe	r#7		E	UT Voltage:	120V/60Hz		
fx Chain: 4Tx #of SS: 1 Mode: n40 Data Rate: MCS0 S350 MHz Band Edge Signal Radiated Field Strength Frequency Level Pol FC 15.209 Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters g62 0 0 0 0 0 0 0 5350.640 53.3 V 54.0 -0.7 Avg 88 1.3 POS; RB 1 MHz; VB: 300 Hz 5350.640 53.3 V 74.0 -2.7 PK 88 1.3 POS; RB 1 MHz; VB: 300 Hz 5350.800 49.5 H 54.0 -4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 30 Hz 5353.130 69.1 H 74.0 -4.9 PK 72 1.9 POS; RB 1 MHz; VB: 3 MHz 76.0										
Mode: n40 Data Rate: MCS0 5350 MHz Band Edge Signal Radiated Field Strength Frequency Level Pol FCC 15.209 Detector Azimuth Height Comments MHz dBµV/m V/h Limit Margin Pk/QP/Avg degrees meters g62 Detector Azimuth Height Comments g62 Detector Avg 88 1.3 POS; RB 1 MHz; VB: 300 Hz 5350.640 53.3 V 74.0 -2.7 PK 88 1.3 POS; RB 1 MHz; VB: 300 Hz 5350.680 49.5 H 54.0 -4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 30 Hz 5353.130 69.1 H 74.0 -4.9 PK 72 1.9 POS; RB 1 MHz; VB: 3 MHz 75.0 Geto	Channel:	62 - 5310MF	łz			Power:	q62			
Data Rate: MCS0 S350 MHz Band Edge Signal Radiated Field Strength Errequency Level Pol FCC 15.209 Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 5350.640 53.3 V 54.0 -0.7 Avg 88 1.3 POS; RB 1 MHz; VB: 300 Hz 5350.680 49.5 H 54.0 -4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 300 Hz 5353.130 69.1 H 74.0 -4.9 PK 72 1.9 POS; RB 1 MHz; VB: 30 Hz 5350.680 49.5 H 54.0 -4.9 PK 72 1.9 POS; RB 1 MHz; VB: 30 Hz 5350.60.0 55.0 - <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>•</td><td></td><td></td><td></td></td<>							•			
5350 MHz Band Edge Signal Radiated Field Strength Frequency Level Pol FCC 15.209 Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters q62 Detector Azimuth Height Comments js30.640 53.3 V 54.0 -0.7 Avg 88 1.3 POS; RB 1 MHz; VB: 300 Hz js356.680 49.5 H 54.0 -4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 300 Hz js350.680 49.5 H 74.0 -4.9 PK 72 1.9 POS; RB 1 MHz; VB: 3 MHz js350.680 49.5 H 74.0 -4.9 PK 72 1.9 POS; RB 1 MHz; VB: 3 MHz kB 1 MHz; VB 300 Hz = Avg (black trace), 1 MHz, 3 MHz = Pk (blue trace), V 75.0 75.0 75.0 75.0 75.0 75.0 75.0 75.0 75.0 75.0 75.0 75.0 75.0 75.0 75.0										
Frequency Level Pol FCC 15.209 Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters g62	Data Rate:	MCS0								
Frequency Level Pol FCC 15.209 Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters g62	5350 MH7 F	Sand Edge S	ianal Radia	ted Field Str	renath					
MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters g62				FCC	15.209	Detector	Azimuth	Height	Comments	
5350.640 53.3 V 54.0 -0.7 Avg 88 1.3 POS; RB 1 MHz; VB: 300 Hz 5353.610 71.3 V 74.0 -2.7 PK 88 1.3 POS; RB 1 MHz; VB: 300 Hz 5350.680 49.5 H 54.0 -4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 300 Hz 5353.130 69.1 H 74.0 -4.9 PK 72 1.9 POS; RB 1 MHz; VB: 300 Hz 5350.680 49.5 H 74.0 -4.9 PK 72 1.9 POS; RB 1 MHz; VB: 30 Hz 5350.60 530 F300 Hz Avg (black trace), 1MHz, 3MHz = Pk (blue trace), V 75.0				Limit	Margin					
5353.610 71.3 V 74.0 -2.7 PK 88 1.3 POS; RB 1 MHz; VB: 3 MHz 5350.680 49.5 H 54.0 -4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 300 Hz 5353.130 69.1 H 74.0 -4.9 PK 72 1.9 POS; RB 1 MHz; VB: 300 Hz RB 1 MHz; VB 300 Hz = Avg (black trace), 1MHz, 3MHz = Pk (blue trace), V 75.0 70.0 75.0 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>										
5350.680 49.5 H 54.0 -4.5 Avg 72 1.9 POS; RB 1 MHz; VB: 300 Hz 5353.130 69.1 H 74.0 -4.9 PK 72 1.9 POS; RB 1 MHz; VB: 300 Hz RB 1 MHz; VB 300 Hz = Avg (black trace), 1 MHz, 3MHz = Pk (blue trace), V 75.0 70.0 75.0 70.0 75.0 70.0 75.0 70.0 75.0 70.0										
5353.130 69.1 H 74.0 -4.9 PK 72 1.9 POS; RB 1 MHz; VB: 3 MHz RB 1 MHz; VB 300 Hz = Avg (black trace), 1 MHz, 3MHz = Pk (blue trace), V 75.0 70.0 66.0 65.0 65.0 65.0 65.0 65.0 65.0 65.0 65.0 65.0 65.0 65.0 65.0 65.0 60.0 99 55.0 60.0 99 55.0 60.0 93 55.0 60.0 65.0 40.0 5350 5355 5360 5365 5370 5370 5380 5380										•
RB 1 MHz; VB 300 Hz = Avg (black trace), 1MHz, 3MHz = Pk (blue trace), V 75.0 70.0 66.0 66.0 99 55.0 45.0 45.0 45.0 5350 5355 5360 5365 5370 5375 5380 5385 5390										
75.0- 70.0- (0,0)-	JJJJJ. 13U	09.1	П	74.0	-4.9	۲ň	12	1.9	FUS; KB 11	WITZ, VB. 3 WINZ
(m 65.0										
65.0- 99 55.0- 45.0- 45.0- 5350 5355 5360 5365 5370 5375 5380 5385 5390	70.0	- What is	1							
0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	2650	 Other and the second sec	here be							
45.0- 40.0- 5350 5355 5360 5365 5370 5375 5380 5385 5390	5 5		an Abad Milda	March 1 1.		-				
45.0- 40.0- 5350 5355 5360 5365 5370 5375 5380 5385 5390	ଞ୍ ଁ ତେ.୦	-		- WANNAW	Mr. Ale ast	er white	hel .			
45.0- 40.0- 5350 5355 5360 5365 5370 5375 5380 5385 5390	9 55.0	_			· · · · /kwta	in halfly allowing	HHM W ALL HALL MAD	Whyther produce	And Maria	the day to see
45.0- 40.0- 5350 5355 5360 5365 5370 5375 5380 5385 5390	bild in a	harry	~~~						<u>, , , , , , , , , , , , , , , , , , , </u>	The London of A
40.0- 5350 5355 5360 5365 5370 5375 5380 5385 5390	₹ 50.0		- Cardenary	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						
5350 5355 5360 5365 5370 5375 5380 5385 5390	45.0	-					*			
Frequency (MHz)	40.0	_ ;350	5355	5360	5365	5370	5375	5380	5385	5390
					Fr	equency (MH	z)			

	NTS	SUCCESS						ЕМС	C Test Data
Client:	ARRIS	30000233						Job Number:	JD102669
								_og Number:	
Model:	C61W								Christine Krebill
Oratest	Mark Dianar							Coordinator:	
	Mark Rieger						Project		
Standard:	FCC 15.B / F	-CC 15.247 /	15.E					Class:	N/A
Run #11: R	adiated Ban	dedge Meas	surements,	5470-5725M	IHz				
Γ	Date of Test:	3/7/2017 0:0	0		C	onfig. Used:	1		
	st Engineer:					fig Change:			
Te	est Location:	FT Chamber	r#7		E	UT Voltage:	120V/60Hz		
Channel:	102 - 5510M	IHz			Power:	q62			
	4Tx				#of SS:	402 1			
Mode:	n40				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Data Rate:	MCS0								
5460 MHz E Frequency	Band Edge S Level	ignal Radia Pol	ted Field Str FCC 1		Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	Comments	
q62	ασμν/π	V/11	Linin	Margin	T N QL // Ng	ucgroco	motors		
5457.840	49.6	V	54.0	-4.4	Avg	83	1.3	POS: RB 1 M	/Hz; VB: 300 Hz
5457.190	67.9	V	74.0	-6.1	PK	83	1.3		/Hz; VB: 3 MHz
5458.160	43.7	Н	54.0	-10.3	Avg	61	1.4		/Hz; VB: 300 Hz
5459.280	56.7	Н	74.0	-17.3	PK	61	1.4	POS; RB 1 N	/Hz; VB: 3 MHz

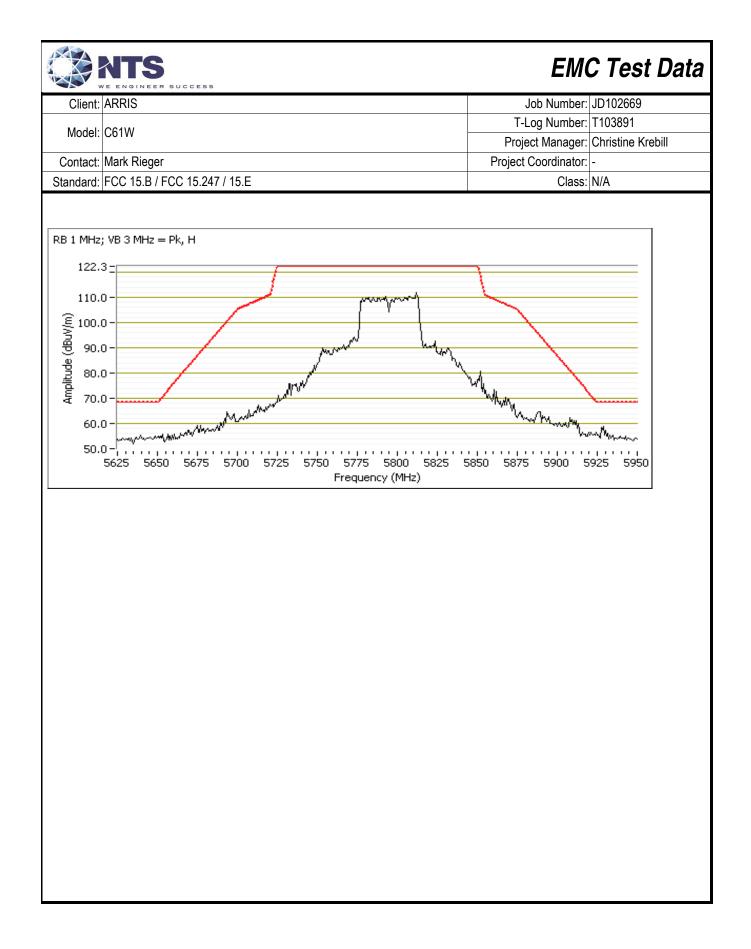




Client:		SUCCESS						ЕМС	CTest Data
	ARRIS	SUCCESS						Job Number: J	D102669
Model	C61W							_og Number: 1	
							=	-	Christine Krebill
	Mark Rieger						Project	Coordinator: -	
Standard:	FCC 15.B / I	FCC 15.247	/ 15.E					Class: N	I/A
Run #12: F	Radiated Bar	ndedge Mea	surements,	5725-5850N	IHz				
I	Date of Test:	3/7/2017 0:0	00		С	onfig. Used:	1		
	est Engineer:					fig Change:			
l e	est Location:	FI Chambe	r#7		E	UT Voltage:	120V/60Hz		
Channel:	151 - 5755N	1Hz				q88			
x Chain:	4Tx				#of SS:	1			
/lode:)ata Rate:	n40 MCS0								
vala ridle.	IVIC3U								
	Band Edge S				_			-	
Frequency MHz	Level dBµV/m	Pol v/h	15 Limit	5.E Margin	Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments	
q88	ασμν/π	V/11	LIIIIL	Maryin	FNQF/AVy	uegrees	meters		
5649.400	67.9	V	68.3	-0.4	PK	353	1.3	POS; RB 1 M	Hz; VB: 3 MHz
122. 110. (الله 100. الله 90.	0 - 0 -	n.Nt-mark	ANACAMAN	5 5750	hand	Mund	M.A.,	A,	

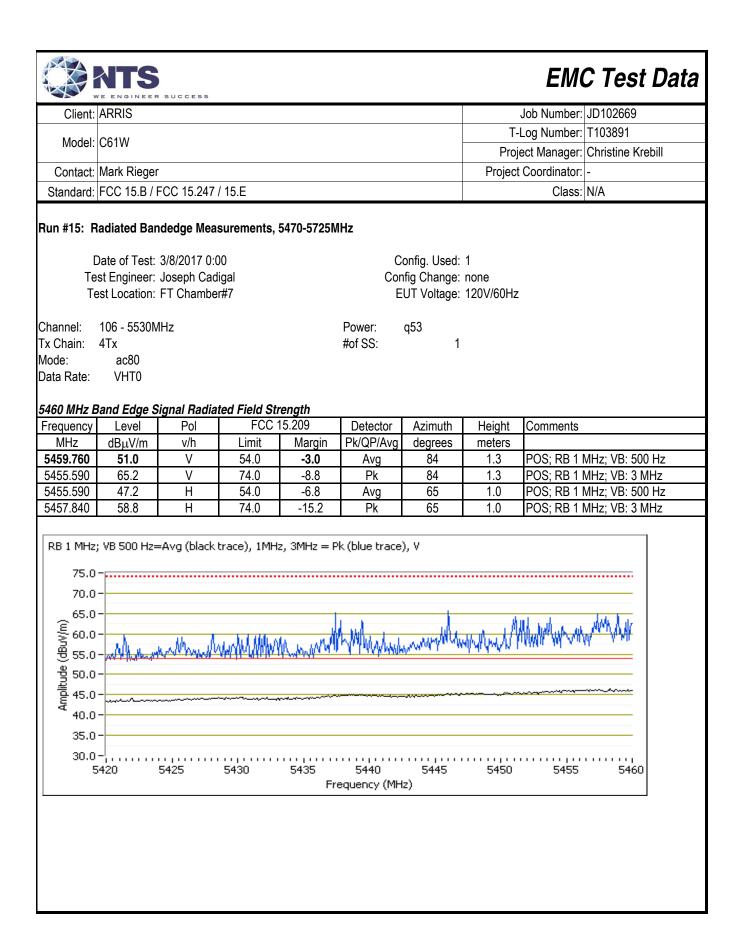


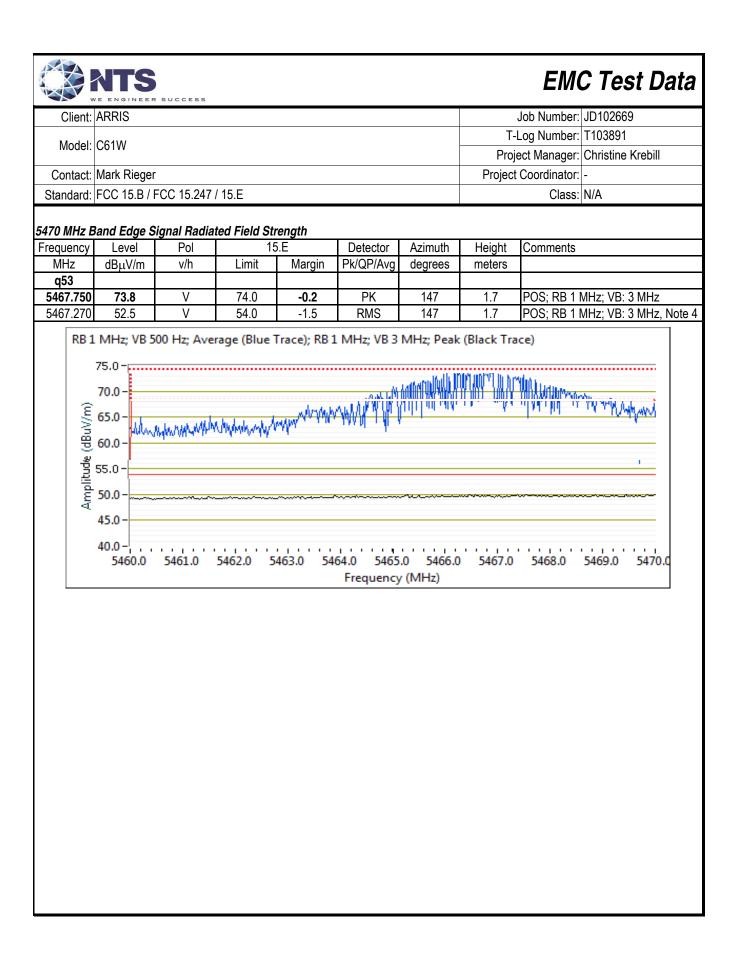
Client: ARRIS Job Number: JD10 Model: C61W T-Log Number: T103 Contact: Mark Rieger Project Manager: Chris Standard: FCC 15.B / FCC 15.247 / 15.E Project Coordinator: - Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Channel: 159 - 5795MHz Power: q90 Tx Chain: 4Tx #of SS: 1 Mode: n40 Data Rate: MCS0 5850 MHz Band Edge Signal Radiated Field Strength Frequency Level Pol 15.E Frequency Level Pol 15.E Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 5922.130 69.8 V 70.4 -0.6 PK 303 1.0 POS; RB 1 MHz; V 5642.180 63.1 V 68.3 -5.2 PK 303 1.0 POS; RB 1 MHz; V	891
Model: C61W Project Manager: Christ Contact: Mark Rieger Project Coordinator: - Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Channel: 159 - 5795MHz Power: q90 Tx Chain: 4Tx #of SS: 1 Mode: n40 n40 Pol 15.E Data Rate: MCS0 MCS0 Frequency Level Pol 15.E Frequency Level Pol 15.E Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 5922.130 69.8 V 70.4 -0.6 PK 303 1.0 POS; RB 1 MHz; V	
Contact: Mark Rieger Project Manager: Chris Standard: FCC 15.B / FCC 15.247 / 15.E Power: q90 Channel: 159 - 5795MHz Power: q90 Tx Chain: 4Tx #of SS: 1 Mode: n40 n40 1 Standard: MCS0 Stand Edge Signal Radiated Field Strength Frequency Level Pol 15.E Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 5922.130 69.8 V 70.4 -0.6 PK 303 1.0 POS; RB 1 MHz; V	tine Krebill
Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Channel: 159 - 5795MHz Power: q90 Tx Chain: 4Tx #of SS: 1 Mode: n40 mode: power: q90 Data Rate: MCS0 MCS0 End Edge Signal Radiated Field Strength Frequency Level Pol 15.E Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters Field Strength 5922.130 69.8 V 70.4 -0.6 PK 303 1.0 POS; RB 1 MHz; V	
Channel: 159 - 5795MHz Power: q90 Tx Chain: 4Tx #of SS: 1 Mode: n40 Data Rate: MCS0 5850 MHz Band Edge Signal Radiated Field Strength Frequency Level Pol 15.E Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 5922.130 69.8 V 70.4 -0.6 PK 303 1.0 POS; RB 1 MHz; V	
Tx Chain: 4Tx #of SS: 1 Mode: n40 Data Rate: MCS0 5850 MHz Band Edge Signal Radiated Field Strength Frequency Level Pol 15.Ε Detector MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees 5922.130 69.8 V 70.4 -0.6 PK 303 1.0 POS; RB 1 MHz; V	
Frequency Level Pol 15.E Detector Azimuth Height Comments MHz dBμV/m v/h Limit Margin Pk/QP/Avg degrees meters 5922.130 69.8 V 70.4 -0.6 PK 303 1.0 POS; RB 1 MHz; V	
5922.130 69.8 V 70.4 -0.6 PK 303 1.0 POS; RB 1 MHz; V	
5642.180 63.1 V 68.3 -5.2 PK 303 1.0 POS; RB 1 MHz; V	
	VB: 3 MHz
110.0 - (100.0 - 90.0 - 90.	

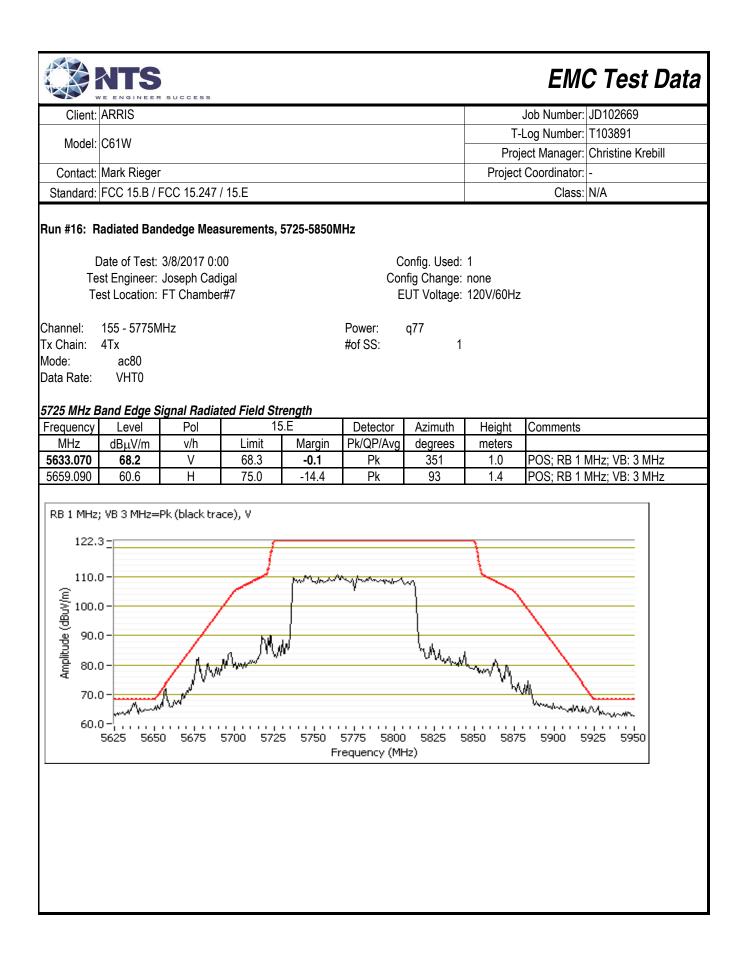


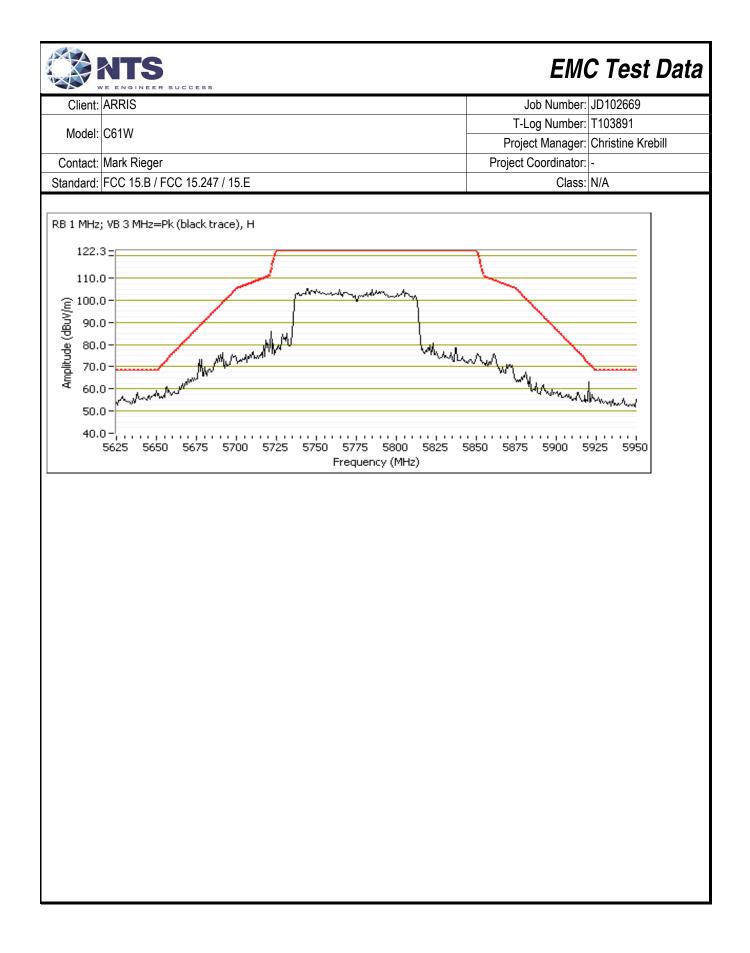
		SUCCESS						EMO	10400000
Client:	ARRIS							Job Number:	
Model:	C61W							Log Number:	
								-	Christine Krebill
	Mark Rieger						Project	Coordinator:	-
Standard:	FCC 15.B / I	-CC 15.247	/ 15.E					Class:	N/A
≀un #13: F	adiated Ban	idedge Mea	surements,	5150-5250M	lHz				
[Date of Test:	3/7/2017 0:0	00			onfig. Used:			
	st Engineer:					ifig Change:			
Te	est Location:	FT Chambe	r#7		E	UT Voltage:	120V/60Hz		
hannel:	42 - 5210MH	Ηz			Power:	q59			
x Chain:	4Tx	12			#of SS:	1			
/lode:	ac80								
ata Rate:	VHT0								
Tiso MHz E Frequency	Band Edge S Level	i gnal Radia Pol	red Field Str	rength 15.209	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	Comments	
q59	αυμνπη	v/11	2	Margin	r togi // tog	dogrooo	motoro		
5149.520	52.9	V	54.0	-1.1	Avg	91	1.0	POS; RB 1 I	MHz; VB: 500 Hz
5144.070	72.2	V	74.0	-1.8	PK	91	1.0		MHz; VB: 3 MHz
5148.880	47.7	H	54.0	-6.3	Avg	70	1.4		MHz; VB: 500 Hz
5141.740	63.9	Н	74.0	-10.1	PK	70	1.4	POS; RB 1 I	MHz; VB: 3 MHz
	- - - - - - 	hu hhiyh	WWW.Mbull		Pk (blue trace			and the	

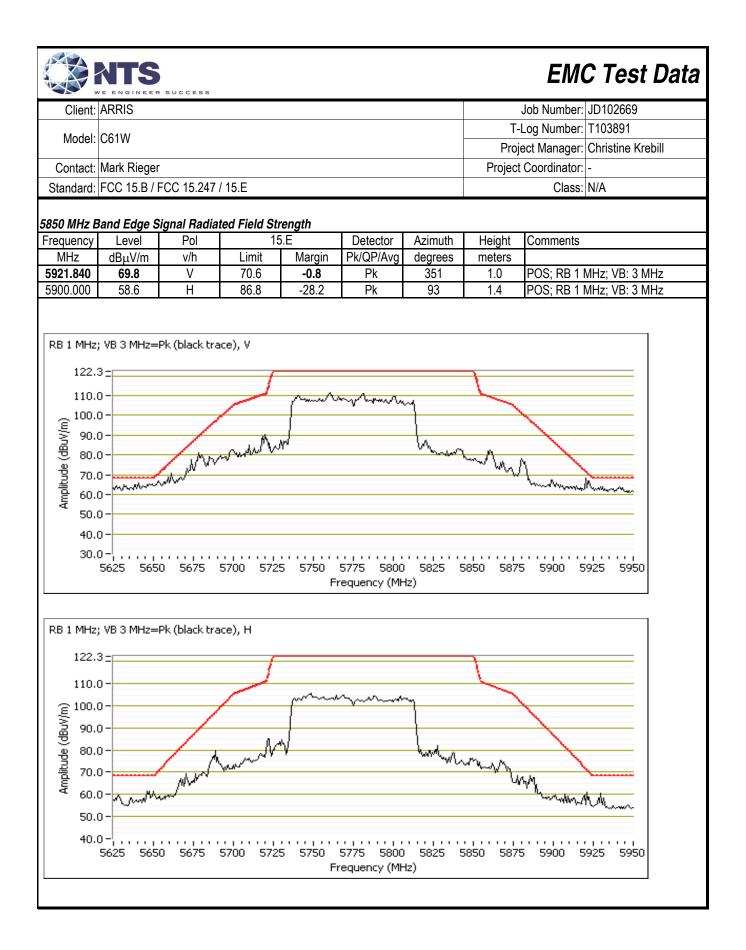
		SUCCESS						EMC	C Test Data
Client:	ARRIS						,	Job Number:	JD102669
Model:	C61W							_og Number:	
wouer.	COIV						Proje	ect Manager:	Christine Krebill
Contact:	Mark Rieger						Project	Coordinator:	-
Standard:	FCC 15.B / I	FCC 15.247	/ 15.E					Class:	N/A
Run #14: R	adiated Bar	ndedge Meas	surements,	5250-5350M	IHz				
	Date of Test:	3/7/2017 0:0	0		С	onfig. Used:	1		
Te	st Engineer:	Rafael Varel	as			nfig Change:			
Те	est Location:	FT Chambe	r#7		E	UT Voltage:	120V/60Hz		
Channel:	58 - 5290MH	Ηz			Power:	q56			
	4Tx				#of SS:	1			
Mode:	ac80								
Data Rate:	VHT0								
5350 MHz B	and Edge S	ignal Radia	ted Field Str	enath					
Frequency	Level	Pol	FCC 1		Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
q56	50.0		= 1 0						
5351.360	50.2	V V	54.0	-3.8	Avg PK	86	1.4		/Hz; VB: 500 Hz
5356.810 5353.690	72.7 46.8	V H	74.0 54.0	-1.3 -7.2	Avg	86 70	1.4 1.8		/Hz; VB: 3 MHz /Hz; VB: 500 Hz
5351.120	66.5	H	74.0	-7.5	PK	70	1.8		/Hz; VB: 3 MHz
								•	
RB 1 MHz;	; VB 500 Hz=	= Avg (black	trace), 1MH	z, 3MHz = P	Pk (blue trace	e), V			
75.0	_								
						6			
70.0	M.	head	.1 6	1	1	цă	h		
€ 65.0	-MANAMINA	AMPAT NO	viller In Adam	MANA A.	A MAG	July July	Willia II.		1
ろ 岩 60.0*	_		, te - leur	a see his WHV	rwr yn	VWV -	<u> </u>	A MANY WALL	
9							W 1 W	taka ant	. And no The Low
(@,65.0 (@,\ng) 60.0 (@,)ng) 55.0 (@,)ng) 55.0									
Ę 50.0°		-	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	-			
45.0	-					~***	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
40.0									
5	350	5355	5360	5365	5370	5375	5380	5385	5390
				Fre	equency (MH	z)			











EMC Test Data

Client:	ARRIS	Job Number:	JD102669
Model:	CE1W	T-Log Number:	T103891
woder.	COTW	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

RSS-247 and FCC 15.407 (UNII) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

NTS

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. For radiated emissions testing the measurement antenna was located 3 meters from the EUT, unless otherwise noted.

Ambient Conditions:

Temperature:	25 °C
Rel. Humidity:	30 %

Summary of Results

Run #	Mode	Channel	Power Setting	Passing Pwr Setting	Test Performed	Limit	Result / Margin
Scans on "c	enter" chann	el in all four	OFDM mode	s to determin	e the worst case mode.		
	а	40 - 5200MHz	q90	q84	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	68.1 dBµV/m @ 10398.7 MHz (-0.2 dB)
1	n20	40 - 5200MHz	q90	q87	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	67.8 dBµV/m @ 10398.2 MHz (-0.5 dB)
	n40	38 - 5190MHz	q90	q85	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	53.4 dBµV/m @ 5425.6 MHz (-0.6 dB)
	ac80	42 - 5210MHz	q90	q85	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	53.6 dBµV/m @ 5439.5 MHz (-0.3 dB)
Measureme	nts on low a	nd high chani	nels in worst	-case OFDM	mode.		
2	а	36 - 5180MHz	q90	q86	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	67.9 dBµV/m @ 10359.2 MHz (-0.4 dB)
2	а	48 - 5240MHz	q90	q90	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	67.7 dBµV/m @ 10481.9 MHz (-0.6 dB)
1							

		RSUCCESS					C Test Data
Client:	ARRIS					Job Number:	
Model:	C61W					T-Log Number:	
						Project Manager:	Christine Krebill
	Mark Riege					Project Coordinator:	-
Standard:	FCC 15.B /	FCC 15.247	/ 15.E			Class:	N/A
Summary	/ of Resul	ts					
			Power	Passing			
Run #	Mode	Channel	Setting	Pwr Setting	Test Performed	Limit	Result / Margin
cans on "c	enter" chanr		OFDM mode	s to determin	e the worst case mode.		
	а	60 -	q90	q90	Radiated Emissions,	FCC 15.209 / 15 E	50.5 dBµV/m @
		5300MHz 60 -		'	1 - 40 GHz Radiated Emissions,		10600.0 MHz (-3.5 dl 53.9 dBµV/m @
2	n20	5300MHz	q90	q90	1 - 40 GHz	FCC 15.209 / 15 E	10601.6 MHz (-0.1 di
3	n40	54 - 5270MHz	q90	q87	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	53.4 dBµV/m @ 5421 MHz (-0.6 dB)
	ac80	58 -	q90	q75	Radiated Emissions,	FCC 15.209 / 15 E	53.4 dBµV/m @ 5424
1		5290MHz	•	-	1 - 40 GHz		MHz (-0.6 dB)
leasureme	nts on Iow a	nd nigh chani 52 -	neis in worst	-case OFDM	Radiated Emissions,		67.8 dBµV/m @
	n20	5260MHz	q90	q88	1 - 40 GHz	FCC 15.209 / 15 E	10521.6 MHz (-0.5 d
4	n20	64 -	q90	q90	Radiated Emissions,	FCC 15.209 / 15 E	51.5 dBµV/m @
	-	5320MHz	•	-	1 - 40 GHz	100 10.2037 10 E	10641.6 MHz (-2.5 dl
0MHz - us	e if worse ca		must do hig	hest 20 MHz			
4	n40	62 - 5310MHz	q90	q90	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	52.6 dBµV/m @ 5440 MHz (-1.4 dB)
cans on "c	enter" chanr		OFDM mode	es to determin	e the worst case mode.		
	а	116 -	q90	q85	Radiated Emissions,	FCC 15.209 / 15 E	53.3 dBµV/m @ 5355
	a	5580MHz	490	400	1 - 40 GHz	100 10.2037 10 E	MHz (-0.7 dB)
	n20	116 -	q90	q75	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	53.6 dBµV/m @ 5355
5		5580MHz 110 -	-		Radiated Emissions,		MHz (-0.4 dB) 53.8 dBµV/m @ 5374
	n40	5550MHz	q90	q86	1 - 40 GHz	FCC 15.209 / 15 E	MHz (-0.2 dB)
		106 -	q90		Radiated Emissions,	FCC 15.209 / 15 E	52.9 dBµV/m @ 5378
	2080		490	q77	1 - 40 GHz	1 CC 15.2097 13 L	MHz (-1.1 dB)
	ac80	5530MHz					
leasureme		nd high chani	nels in worst	-case OFDM			40 E ID 1// 0
leasureme		nd high chanı 100 -	nels in worst q90	-case OFDM q90	Radiated Emissions,	FCC 15.209 / 15 E	49.5 dBµV/m @
1easureme 6	nts on low a	nd high chani				FCC 15.209 / 15 E FCC 15.209 / 15 E	49.5 dBµV/m @ 11001.3 MHz (-4.5 dl 49.6 dBµV/m @

		SUCCESS				EM	C Test Data
Client:	ARRIS					Job Number:	JD102669
						T-Log Number:	
Model:	C61W					Project Manager:	
Contact:	Mark Rieger					Project Coordinator:	-
	FCC 15.B / I		/ 15.E			Class:	N/A
	of Result						
Run #	Mode	Channel	Power Setting	Passing Pwr Setting	Test Performed	Limit	Result / Margin
Scans on "c	enter" chann		OFDM mode	s to determin	e the worst case mode.		
	а	157 - 5785MHz	q90	q90	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	53.2 dBµV/m @ 11568.1 MHz (-0.8 dB)
7	n20	157 - 5785MHz	q90	q90	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	53.1 dBµV/m @ 11570.1 MHz (-0.9 dB)
	n40	159 - 5795MHz	q90	q90	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	51.9 dBµV/m @ 11591.6 MHz (-2.1 dB)
	ac80	155 - 5775MHz	q90	q82	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	67.2 dBµV/m @ 5611.1 MHz (-1.1 dB)
Measureme	nts on low an		nels in worst	-case OFDM			
8	а	149 - 5745MHz	q90	q90	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	68.1 dBµV/m @ 5513.1 MHz (-0.2 dB)
	а	165- 5825MHz	q90	q90	Radiated Emissions, 1 - 40 GHz	FCC 15.209 / 15 E	53.7 dBµV/m @ 11648.4 MHz (-0.3 dB)



EMC Test Data

Client:	ARRIS	Job Number:	JD102669
Model:	CE1W	T-Log Number:	T103891
wouer.	COTW	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Procedure Comments:

Measurements performed in accordance with FCC KDB 789033

Peak measurements performed with: RBW=1MHz, VBW=3MHz, peak detector, max hold, auto sweep time Unless otherwise stated/noted, emission has duty cycle ≥ 98% and was measured using RBW=1MHz, VBW=10Hz, peak detector, linear average mode, auto sweep time, max hold 50 traces. (method VB of KDB 789033)

	Mode	Data Rate	Duty Cycle (x)	Constant DC?	T (ms)	Pwr Cor Factor*	Lin Volt Cor Factor**	Min VBW for FS (Hz)
1SS	11a	6MB/s	0.99	Yes	1.952	0	0	10
1SS	11n20	MCS0	0.99	Yes	1.953	0	0	10
1SS	n40	MCS0	0.9798	Yes	0.971	0.0885442	0.2	1030
1SS	ac80	VHT0	0.96	Yes	0.46	0.1848341	0.4	2174

Sample Notes

Sample S/N: G62DA7BU20005B Driver: -Antenna: Internal 4x4

Measurement Specific Notes:

	For emissions outside of the restricted bands the limit is -27dBm/MHz eirp (68.3dBuV/m). The measurement method
Note 1:	required is a peak measurement (RB=1MHz, VB≥3MHz, peak detector). Per KDB 789033 2) c) (i), compliance can be
	demonstrated by meeting the average and peak limits of 15.209, as an alternative.
Note 2:	Emission has a duty cycle ≥ 98%, average measurement performed: RBW=1MHz, VBW=3MHz, RMS, Power averaging, auto
NOLE Z.	sweep, trace average 100 traces (method AD of KDB 789033)
Note 3:	Emission has constant duty cycle < 98%, average measurement performed: RBW=1MHz, VBW>1/T but not less than 10Hz,
NOLE 5.	peak detector, linear averaging, auto sweep,max hold 50*1/DC traces (method VB of KDB 789033)
Note 4:	Emission has a duty cycle < 98%, average measurement performed: RBW=1MHz, VBW=3MHz, RMS, Power averaging, auto
Note 4.	sweep, trace average 100*1/DC traces, measurement corrected by Pwr correction factor (method AD of KDB 789033)

		SUCCESS						EM	C Test Data
Client:	ARRIS							Job Number:	JD102669
	004144						T-L	og Number:	T103891
Model:	C61W						Proje	ect Manager:	Christine Krebill
Contact:	Mark Rieger							Coordinator:	
Standard:	FCC 15.B / F	CC 15.247	15.E					Class:	
Run #1, Rad	diated Spurio	ous Emissio	ons, 1,000 - 4	10,000 MHz	. Operation i	n the 5150-5	5250 MHz Ba	and	
	Date of Test:					onfig. Used:			
	st Engineer:		•			fig Change:			
	est Location:		#7		E	UT Voltage:	120V/60Hz		
Run #1a: Co	enter Chann	ei							
Channel:	40		Mode:	а					
	4Tx		Data Rate:	6MB/s			-		
Frequency	Level	Pol	15.209		Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	-	meters		
10398.690	68.1	V V	68.3	-0.2	PK AVG	168 72	1.3		/B 3 MHz;Peak, q 84
5432.610 5432.690	48.4 59.0	V	54.0 74.0	-5.6 -15.0	PK	72	1.0 1.0		/B 10 Hz;Peak /B 3 MHz;Peak
5043.290	59.0	V	54.0	-13.0	AVG	102	1.3		/B 10 Hz;Peak
5043.150	62.0	V	74.0	-12.0	PK	102	1.3		/B 3 MHz;Peak
1249.130	41.0	Ĥ	54.0	-13.0	AVG	199	1.9		/B 10 Hz;Peak
1248.430	67.7	Н	74.0	-6.3	PK	199	1.9		/B 3 MHz;Peak
6933.360	58.3	V	68.3	-10.0	PK	320	1.3		/B 3 MHz;Peak
5200 MHz 140,1 120,1 (w/\ngp) 80,1 80,1 80,1 40,1 20,1) -) -) -) -) -) -) -	- I I -	 []]] 	n la la com	equency (Mł				
	Scans made	e between 1	8 - 40 GHz v	vith the mea	asurement al	ntenna mov	ed around ti	he card and	its antennas 20-50cm
Note:					icant emissi				
Note 1:	For emission	is in restricte	d bands, the	limit of 15.2	09 was used	which requir	es average a	and peak me	
Note 2:							68.3dBuV/m). The meas	urement method
	required is a	peak measu	irement (RB=	=1MHz, VB≥	:3MHz, peak	aetector).			

		SUCCESS						EMO	C Test Data
Client:	ARRIS							Job Number:	JD102669
							T-l	og Number:	T103891
Model:	C61W						Proje	ect Manager:	Christine Krebill
Contact:	Mark Rieger						Project	Coordinator:	-
Standard:	FCC 15.B / F	-CC 15.247	15.E					Class:	N/A
Run #1b: C	enter Chanr	nel							
Channel:	40		Mode:	11n20					
	4Tx		Data Rate:	MCS0					
Frequency	Level	Pol	15.209	/ 15E	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
10398.220	67.8	V	68.3	-0.5	PK	215	1.3		/B 3 MHz;Peak, q 87
5035.640	49.8	V	54.0	-4.2	AVG	16	1.5		/B 10 Hz;Peak
5034.800	61.0	V	74.0	-13.0	PK	16	1.5		/B 3 MHz;Peak
1248.730 1248.830	41.8 68.1	H H	54.0	-12.2	AVG PK	196 196	1.9 1.9		/B 10 Hz;Peak
5433.600	48.9	п V	74.0 54.0	-5.9 -5.1	AVG	200	1.9		/B 3 MHz;Peak /B 10 Hz;Peak
5433.260	60.2	V	74.0	-13.8	PK	200	1.6		/B 3 MHz;Peak
6933.500	57.8	V	68.3	-10.5	PK	336	1.0		/B 3 MHz;Peak
140. 120. (w/\ngp) apnil 80. 80. 60. 40. 20.	0 - 0 - 0 - 0 - 0 -	ling and the second sec	{]]]}† 	n de la de l	requency (MH				18000
Note:				vith the mea		ntenna move			its antennas 20-50cm
Note 1:					09 was used				
Note 2:					limit is -27dBr :3MHz, peak (68.3dBuV/m). The meas	urement method

V	VE ENGINEER	SUCCESS							C Test Dat
Client:	ARRIS							Job Number:	JD102669
Model:	C61W						T-I	Log Number:	T103891
wodel:	COIW						Proje	ect Manager:	Christine Krebill
Contact:	Mark Rieger						Project	Coordinator:	-
Standard:	FCC 15.B / F	CC 15.247	/ 15.E					Class:	N/A
un #1c: C	Center Chanr	nel							
hannel:	38		Mode:	11n40					
	4Tx		Data Rate:	MCS0					
requency	Level	Pol	15.209) / 15E	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
5425.570	53.4	V	54.0	-0.6	AVG	92	1.6		′B 1kHz;Peak, q85
5031.340	72.1	V	74.0	-1.9	PK	20	1.6		/B 3 MHz;Peak
5424.460	64.2	V	74.0	-9.8	PK	92	1.6		/B 3 MHz;Peak
0381.230	59.3	V	68.3	-9.0	PK	166	1.3		/B 3 MHz;Peak
1248.830	41.4	Ξ	54.0	-12.6	AVG	177	1.6		/B 10 Hz;Peak
1248.760 6920.100	66.7 50.1	H V	74.0 68.3	-7.3 -18.2	PK AVG	177 317	1.6 1.3		' <u>B 3 MHz;Peak</u> 'B 10 Hz;Peak
15/211 1111	JU. I	V	00.3	-10.2	AVG	317	١.٥		DIVELEBAK
6919.900		V	68.3	-13.2	РК	317	1.3	RB 1 MHz;V	/B 3 MHz;Peak
5919.900 5190 MHz	2 n40 0 - 0 - 0 - 0 - 0 -	V	68.3						
5190 MHz 5190 MHz 140. 120. (W,\ngp) apnildwy 80. 40. 40.	2 n40 0 - 0 - 0 - 0 - 0 - 0 - 0 - 1000	un lun da		i i	requency (MH	Hz)			B 3 MHz;Peak
5190 MHz 5190 MHz 140. 120. (W,\ngp) apnjldwy 80. 40. 40.	s n40 0 - 0 - 0 - 0 - 0 - 0 - 1000 Scans made	e between 1		Fi	requency (MH	tz)	10 10 10 ed around t	he card and	B 3 MHz;Peak
5190 MHz 5190 MHz 140. 120. (^{W/} , 100. (^{W/} , 100. 9, 80. 40. 20.	s n40 0 - 0 - 0 - 0 - 0 - 0 - 0 - 1000 Scans made from the de	e between 1 vice indicat	8 - 40 GHz v ed there we	vith the mea	requency (MH	1z)	tic trequency ra	booo he card and ange	B 3 MHz;Peak
5190 MHz 5190 MHz 140. 120. (Jan 100. (Jan 100	2 n40 0 - 0 - 0 - 0 - 0 - 0 - 1000 Scans made from the de For emission	e between 1 vice indicat	8 - 40 GHz v ed there we	vith the meaning in the signiful time of 15.2	requency (MH	Hz)	tic trequency ra es average	he card and ange and peak me.	B 3 MHz;Peak
5190 MHz 5190 MHz 140. 120. (^W /ngp) apprjiduw 40. 20. Note:	2 n40 0 - 0 - 0 - 0 - 0 - 0 - 0 - 1000 Scans made from the de For emission For emission	e between 1 vice indicat is in restricte	8 - 40 GHz v ed there we the restricted	vith the meaning of 15.2 d bands the	requency (MH	Hz)	tic trequency ra es average	he card and ange and peak me.	B 3 MHz;Peak

	ARRIS							Job Number: JD102669
Model:	C61W						T-	Log Number: T103891
MOUEI.	00100						Proj	ect Manager: Christine Krebill
Contact:	Mark Rieger						Project	: Coordinator: -
Standard:	FCC 15.B / F	CC 15.247	/ 15.E					Class: N/A
Run #1d: C	enter Chanr	nel						
<u>.</u>	10							
Channel: Tx Chain:	42 4Tx		Mode: Data Rate:	ac80 VHT0				
rx Ghain.	41X		Dala Rale.	VHIU				
Frequency	Level	Pol	15.20	9 / 15E	Detector	Azimuth	Height	Comments
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	
1249.250	41.8	V	54.0	-12.2	AVG	117	2.2	RB 1 MHz;VB 3 kHz;Peak
1248.840	61.8	V	74.0	-12.2	PK	117	2.2	RB 1 MHz;VB 3 MHz;Peak
5438.950	71.8	V	74.0	-2.2	PK	189	1.6	RB 1 MHz;VB 3 MHz;Peak
6946.760	55.1	V	68.3	-13.2	PK	322	1.3	RB 1 MHz;VB 3 MHz;Peak
10415.710	62.2	V	68.3	-6.1	AVG	47	1.0	RB 1 MHz;VB 3 MHz;Peak, q85
5046.790 1248.890	52.0 40.3	V V	54.0 54.0	-2.0 -13.7	AVG AVG	47 117	1.0 2.2	RB 1 MHz;VB 3 kHz;Peak, q85 RB 1 MHz;VB 3 kHz;Peak, q85
5439.490	53.6	V	54.0 54.0	-13.7 -0.3	AVG	189	1.6	RB 1 MHz;VB 3 kHz;Peak, q85
		Muluu	in haddwr i	i - [] i hudada	Frequency (M	Hz)		
			ed there we	re no signii	ficant emissio	ons in this f	requency r	the card and its antennas 20-50c ange and peak measurements.

2	ARRIS							Job Number:	JD102669
Model:	C61W							Log Number:	
									Christine Krebill
	Mark Rieger						Project	Coordinator:	
	FCC 15.B /				. Operating I			Class:	N/A
l Te To	Date of Test: est Engineer: est Location:	2/28/2017 0: Joseph Cadi FT Chamber	00 gal		C	onfig. Used: nfig Change: UT Voltage:	1 None		
Channel: Tx Chain:	36		Mode: Data Rate:	11a 6Mb					
Frequency	Level	Pol	15.209	9 / 15E	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
6906.660 10359.230	55.9 67.9	V V	68.3 68.3	-12.4 -0.4	PK PK	321 166	1.2 1.3		′ <u>B 3 MHz;Peak</u> ′B 3 MHz;Peak, q 86
	0 - 0 - 0 -	un han de	 L L L L L L	a () and ()					
20.	1000		·		· requency (MH	 	10	oooo	18000

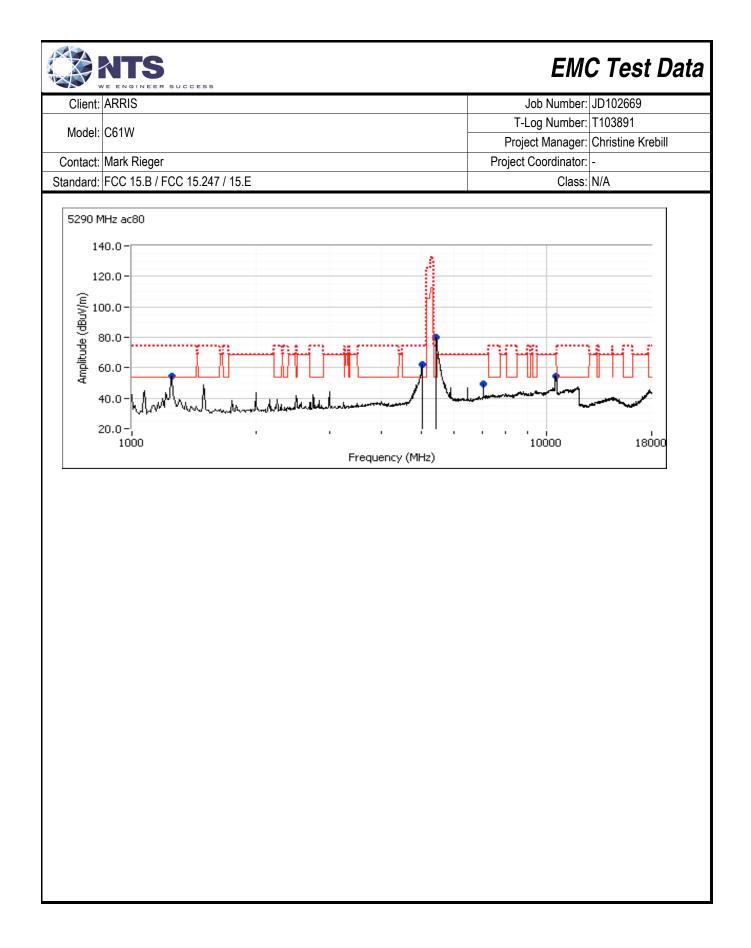
		SUCCESS					_	EMO	C Test Data
Client:	ARRIS	SUCCESS						Job Number:	JD102669
								Log Number:	
Model:	C61W								Christine Krebill
Contact [.]	Mark Rieger	•						Coordinator:	
	FCC 15.B / I		/ 15 F					Class:	
	igh Channel		10.L					01000.	
Channel:	48		Mode:	11a					
	4Tx		Data Rate:						
Frequency	Level	Pol	15.209	9 / 15E	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
10481.900	67.7	V	68.3	-0.6	PK	185	1.2		/B 3 MHz;Peak
6986.730	57.1	V	68.3	-11.2	PK	324	1.0		/B 3 MHz;Peak
4956.520	48.3	V	54.0	-5.7	AVG	304	1.4		/B 10 Hz;Peak
4955.830 5436.800	58.7 46.9	V V	74.0 54.0	-15.3 -7.1	PK AVG	304 203	1.4 1.6		/B 3 MHz;Peak /B 10 Hz;Peak
5435.160	46.9 58.8	V	54.0 74.0	-7.1	PK	203	1.6		B 3 MHz;Peak
1248.870	37.9	H	54.0	-16.1	AVG	173	1.0		/B 10 Hz;Peak
1248.890	65.2	H	74.0	-8.8	PK	173	1.0		/B 3 MHz;Peak
140.1 120.1 (W) 100.1 (W) 100.1 9 9 9 9 9 0.1 40.1 40.1 20.1	0- 0- 0- 0- 0-	n la se		n ()	requency (MH				+[]-[18000

		SUCCESS						EM	C Test Data
Client:	ARRIS							Job Number:	JD102669
							T-I	Log Number:	T103891
Model:	C61W							0	Christine Krebill
Contact:	Mark Rieger							Coordinator:	
	FCC 15.B / F		15.E				- ,	Class:	
				40.000 MHz	. Operation i	n the 5250-5	350 MHz Ba		
	Date of Test:				•	onfig. Used:			
	st Engineer:					ifig Change:			
	est Location:		r#7		E	UT Voltage:	120V/60Hz		
Run #3a: Ce	enter Chann	el							
Channel:	60		Mode:						
	60 4Tx		Data Rate:	a 6MB/s					
		<u> </u>							
Frequency	Level	Pol	15.209		Detector	Azimuth	Height	Comments	
MHz 10600.000	dBµV/m 50.5	v/h V	Limit 54.0	Margin -3.5	Pk/QP/Avg AVG	degrees 29	meters		/B 10 Hz;Peak
10600.000	50.5 62.5	V	54.0 74.0	-3.5 -11.5	PK	29 29	1.1 1.1		/B 3 MHz;Peak
5000.370	50.1	V	54.0	-3.9	AVG	176	1.7		/B 10 Hz;Peak
5001.150	60.9	V	74.0	-13.1	PK	176	1.7		/B 3 MHz;Peak
7066.670	56.8	V	68.3	-11.5	PK	326	1.0		/B 3 MHz;Peak
5436.340	49.0	V	54.0	-5.0	AVG	200	1.4		/B 10 Hz;Peak
5436.270	60.8	V	74.0	-13.2	PK	200	1.4	RB 1 MHz;V	/B 3 MHz;Peak
1248.990	38.6	Н	54.0	-15.4	AVG	154	1.7		/B 10 Hz;Peak
1248.750	60.7	Н	74.0	-13.3	PK	154	1.7		/B 3 MHz;Peak
5888.880	57.2	V	68.3	-11.1	PK	84	1.4	RB 1 MHz;V	/B 3 MHz;Peak
Noto					asurement ar ficant emissio				its antennas 20-50cm
					209 was used				
					limit is -27dBr ≥3MHz, peak (68.3dBuV/m	i). The meas	urement method
5300 MH;	z 11a								
140.	0								
140.	.0-					6			
120.	.0 -					1			
2						И			
출100.	.0-								
9	0								
(m//100. (m//nge) 80. (m//mge) 80.		1			í i		-111	r-{ }i	
- - ₹ 40.		~ ^	LU 4	Le la la	المراجعين المساحد	T Uuu			~
20.	.0- 1000					ļŀ		0000	18000
	1000			F	requency (M	Hz)	1	0000	10000
L									

		SUCCESS						EM	C Test Data
Client:	ARRIS							Job Number:	JD102669
							T-	Log Number:	T103891
Model:	C61W							•	Christine Krebill
Contact:	Mark Rieger						-	Coordinator:	
	FCC 15.B / F		/ 15.E					Class:	
Run #3b: C	Center Chanr	nel							
Ohannah	<u> </u>		Mada	11-00					
Channel: Tx Chain:	60 4Tx		Mode: Data Rate:	11n20 MCS0					
			Data Nato.	MOOD					
Frequency	Level	Pol	15.209	9 / 15E	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
10601.580	53.9	V	54.0	-0.1	AVG	27	1.0		/B 10 Hz;Peak
10601.580	67.4	V	74.0	-6.6	PK	27	1.0		/B 3 MHz;Peak
5431.440	49.1	V	54.0	-4.9	AVG	84	1.1		/B 10 Hz;Peak
5430.280	61.2	V	74.0	-12.8	PK	84	1.1		/B 3 MHz;Peak
5009.310	47.9	V	54.0	-6.1	AVG	168	1.8		/B 10 Hz;Peak
5009.430	58.5	V	74.0	-15.5	PK	168	1.8		/B 3 MHz;Peak
1249.010	36.0	Н	54.0	-18.0	AVG	248	1.8		/B 10 Hz;Peak
1248.980	63.4	H	74.0	-10.6	PK	248	1.8	,	/B 3 MHz;Peak
7066.760	56.7	V	68.3	-11.6	PK	324	1.1	IRB 1 MHz:V	/B 3 MHz;Peak
						-		,	· · ·
Note:	from the de	vice indicat	ted there we	vith the mea re no signif	asurement ai licant emissi	ntenna move ons in this f	ed around i requency r	the card and ange	its antennas 20-50cm
Note:	<i>from the de</i> For emissior	vice indicat	ted there we ed bands, the	vith the mea re no signif limit of 15.2	asurement a licant emissi 209 was used	ntenna mov ons in this fi which requir	ed around a requency r es average	<i>the card and</i> ange and peak me	its antennas 20-50cm asurements.
Note: Note 1:	<i>from the de</i> For emissior For emissior	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the	asurement an ficant emission 209 was used limit is -27dBr	ntenna move ons in this f which requir m/MHz eirp (ed around a requency r es average	<i>the card and</i> ange and peak me	its antennas 20-50cm
Note: Note 1:	<i>from the de</i> For emissior For emissior	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the	asurement a licant emissi 209 was used	ntenna move ons in this f which requir m/MHz eirp (ed around a requency r es average	<i>the card and</i> ange and peak me	its antennas 20-50cm asurements.
Note: Note 1:	from the de For emissior For emissior required is a	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the	asurement an ficant emission 209 was used limit is -27dBr	ntenna move ons in this f which requir m/MHz eirp (ed around a requency r es average	<i>the card and</i> ange and peak me	its antennas 20-50cm asurements.
Note 1: Note 2:	from the de For emission For emission required is a	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the	asurement an ficant emission 209 was used limit is -27dBr	ntenna move ons in this f which requir m/MHz eirp (ed around a requency r es average	<i>the card and</i> ange and peak me	its antennas 20-50cm asurements.
Note 1: Note 2: 5300 MHz 140.0	from the de For emission For emission required is a n20	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the	asurement an ficant emission 209 was used limit is -27dBr	ntenna move ons in this f which requir m/MHz eirp (ed around a requency r es average	<i>the card and</i> ange and peak me	its antennas 20-50cm asurements.
Note 1: Note 2:	from the de For emission For emission required is a n20	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the	asurement an ficant emission 209 was used limit is -27dBr	ntenna move ons in this f which requir m/MHz eirp (detector).	ed around a requency r es average	<i>the card and</i> ange and peak me	its antennas 20-50cm asurements.
Note 1: Note 2: 5300 MHz 140.0	from the de For emission For emission required is a n20 0 -	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the	asurement an ficant emission 209 was used limit is -27dBr	ntenna move ons in this f which requir m/MHz eirp (detector).	ed around a requency r es average	<i>the card and</i> ange and peak me	its antennas 20-50cm asurements.
Note 1: Note 2: 5300 MHz 140.0	from the de For emission For emission required is a n20 0 -	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the	asurement an ficant emission 209 was used limit is -27dBr	ntenna move ons in this f which requir m/MHz eirp (detector).	ed around a requency r es average	<i>the card and</i> ange and peak me	its antennas 20-50cm asurements.
Note 1: Note 2: 5300 MHz 140.0	from the de For emission For emission required is a : n20 0 - 0 -	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the	asurement an ficant emission 209 was used limit is -27dBr	ntenna move ons in this f which requir m/MHz eirp (detector).	ed around a requency r es average	<i>the card and</i> ange and peak me	its antennas 20-50cm asurements.
Note 1: Note 2: 5300 MHz 140.0	from the de For emission For emission required is a n20 0 - 0 - 0 -	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the	asurement an ficant emission 209 was used limit is -27dBr	ntenna move ons in this f which requir m/MHz eirp (detector).	ed around a requency r es average	<i>the card and</i> ange and peak me	its antennas 20-50cm asurements.
Note 1: Note 2: 5300 MHz 140.0	from the de For emission For emission required is a n20 0 - 0 - 0 -	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the	asurement an ficant emission 209 was used limit is -27dBr	ntenna move ons in this f which requir m/MHz eirp (detector).	ed around a requency r es average	<i>the card and</i> ange and peak me	its antennas 20-50cm asurements.
Note 1: Note 2: 5300 MHz 140.0 120.0 (W/Mgp) 9001 100.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0 0 0 0 0 0 0 0 0 0 0 0	from the de For emission For emission required is a n20 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the	asurement an ficant emission 209 was used limit is -27dBr	ntenna move ons in this f which requir m/MHz eirp (detector).	ed around a requency r es average	<i>the card and</i> ange and peak me	its antennas 20-50cm asurements.
Note 1: Note 2: 5300 MHz 140.0	from the de For emission For emission required is a n20 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the	asurement an ficant emission 209 was used limit is -27dBr	ntenna move ons in this f which requir m/MHz eirp (detector).	ed around a requency r es average	<i>the card and</i> ange and peak me	its antennas 20-50cm asurements.
Note 1: Note 2: 5300 MHz 140.0 (W/) 100.0 (W/) 100.0 9001 40.0	from the de For emission For emission required is a : n20 0 -	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the	asurement an ficant emission 209 was used limit is -27dBr	ntenna move ons in this f which requir m/MHz eirp (detector).	ed around a requency r es average	<i>the card and</i> ange and peak me	its antennas 20-50cm asurements.
Note 1: Note 2: 5300 MHz 140.0 120.0 (W/)ngp) 80.0 9001 40.0 40.0 20.0	from the de For emission For emission required is a : n20 0 -	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the =1MHz, VB≥	asurement ar ficant emission 209 was used limit is -27dBr 23MHz, peak 23MHz, peak	ntenna movo ons in this f which requir n/MHz eirp (detector).	ed around a requency r es average 68.3dBuV/n	<i>the card and</i> ange and peak me	its antennas 20-50cm asurements.
Note 1: Note 2: 5300 MHz 140.0 120.0 (W/)ngp) 80.0 9001 40.0 40.0 20.0	from the de For emission For emission required is a : n20 0	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the =1MHz, VB≥	asurement an ficant emission 209 was used limit is -27dBr	ntenna movo ons in this f which requir n/MHz eirp (detector).	ed around a requency r es average 68.3dBuV/n	the card and ange and peak me n). The meas	asurements.
Note 1: Note 2: 5300 MHz 140.0 (W/)100.0 (W/)100.0 (W/)100.0 40.0 40.0	from the de For emission For emission required is a : n20 0	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the =1MHz, VB≥	asurement ar ficant emission 209 was used limit is -27dBr 23MHz, peak 23MHz, peak	ntenna movo ons in this f which requir n/MHz eirp (detector).	ed around a requency r es average 68.3dBuV/n	the card and ange and peak me n). The meas	asurements.
Note: Note 1: Note 2: 5300 MHz 140.0 120.0 (W/MBP) appild appild 40.0 40.0	from the de For emission For emission required is a : n20 0	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the =1MHz, VB≥	asurement ar ficant emission 209 was used limit is -27dBr 23MHz, peak 23MHz, peak	ntenna movo ons in this f which requir n/MHz eirp (detector).	ed around a requency r es average 68.3dBuV/n	the card and ange and peak me n). The meas	its antennas 20-50cm asurements. surement method
Note: lote 1: lote 2: 5300 MHz 140.0 (W/\ngp) applidume (W/\ngp) applidume 40.0 40.0	from the de For emission For emission required is a : n20 0	evice indicat ns in restricte ns outside of	ted there we ed bands, the the restricted	vith the mea re no signif limit of 15.2 d bands the =1MHz, VB≥	asurement ar ficant emission 209 was used limit is -27dBr 23MHz, peak 23MHz, peak	ntenna movo ons in this f which requir n/MHz eirp (detector).	ed around a requency r es average 68.3dBuV/n	the card and ange and peak me n). The meas	its antennas 20-50cm asurements. surement method

		SUCCESS							C Test Dat
Client:	ARRIS							Job Number:	JD102669
Madal	C61W						T-	Log Number:	T103891
woder.	COIVV						Proj	ect Manager:	Christine Krebill
Contact:	Mark Rieger						Project	Coordinator:	-
Standard:	FCC 15.B / F	CC 15.247	/ 15.E					Class:	N/A
un #3c: C	Center Chann	nel							
	- 4			44 40					
nannel:	54		Mode:	11n40					
Chain:	4Tx		Data Rate:	MCS0					
equency	Level	Pol	15.209	9 / 15E	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
421.860	53.4	V	54.0	-0.6	Avg	203	1.7	POS; RB 1 I	MHz; VB: 3 kHz
q90									
541.200		V	68.3	-3.2	PK	342	1.2		/B 3 MHz;Peak
026.840	55.7	V	68.3	-12.6	PK	324	1.1		/B 3 MHz;Peak
034.340	53.5	V	54.0	-0.5	Avg	260	1.4		/B 3 kHz;Peak
034.510	63.7	V	74.0	-10.3	PK	260	1.4		/B 3 MHz;Peak
247.590	43.7	H	54.0	-10.3	Avg	186	1.9		/B 3 kHz;Peak
249.110	66.9	Н	74.0	-7.1	PK	186	1.9	RB 1 MHZ;V	/B 3 MHz;Peak
q87	52 A	V	54.0	0.6	Δυσ	202	17		
121.860 122.040	53.4 63.3	V	54.0 74.0	-0.6 -10.7	Avg PK	203 203	1.7 1.7		MHz; VB: 3 kHz MHz; VB: 3 MHz
	00.0	V	74.0	-10.7	ΓN	205	1.7	F03, KD T1	
722.040									
	Scans made	e between 1	8 - 40 GHz v	vith the mea	asurement ai	ntenna mov	ed around t	the card and	its antennas 20-50
Note:					asurement ai licant emissio				its antennas 20-50
	from the de For emission	vice indicat is in restricte	t ed there we ed bands, the	re no signif limit of 15.2	icant emissi 209 was used	<i>ons in this f</i> which requir	requency r a es average	ange and peak me	asurements.
<i>Note:</i> te 1:	<i>from the de</i> For emission For emission	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	<i>re no signit</i> limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency r a es average	ange and peak me	
Note: te 1:	<i>from the de</i> For emission For emission	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	<i>re no signit</i> limit of 15.2 d bands the	icant emissi 209 was used	ons in this f which requir m/MHz eirp (requency r a es average	ange and peak me	asurements.
<i>Note:</i> te 1: te 2:	from the de For emission For emission required is a	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	<i>re no signit</i> limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency r a es average	ange and peak me	asurements.
Note: te 1: te 2: 270 MHz	from the de For emission For emission required is a 2 n40	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	<i>re no signit</i> limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency r a es average	ange and peak me	asurements.
<i>Note:</i> te 1: te 2:	from the de For emission For emission required is a 2 n40	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	<i>re no signit</i> limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency r a es average	ange and peak me	asurements.
Note: le 1: le 2: 270 MHz 140.	from the de For emission For emission required is a 2 n40	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	<i>re no signit</i> limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency r a es average	ange and peak me	asurements.
Note: te 1: te 2: 270 MHz 140. 120.	from the de For emission For emission required is a 2 n40	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	<i>re no signit</i> limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency r a es average	ange and peak me	asurements.
Note: ie 1: ie 2: 270 MHz 140. 120.	For emission For emission required is a 2 n40 0 -	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	<i>re no signit</i> limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency r a es average	ange and peak me	asurements.
Note: te 1: te 2: :270 MHz 140. 120.	For emission For emission required is a 2 n40 0 - 0 -	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	<i>re no signit</i> limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency r a es average	ange and peak me	asurements.
Note: te 1: te 2: 270 MHz 140. 120.	For emission For emission required is a 2 n40 0 - 0 -	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	<i>re no signit</i> limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency r a es average	ange and peak me	asurements.
Note: te 1: te 2: :270 MHz 140. 120.	from the de For emission For emission required is a a n40 0 - 0 - 0 -	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	<i>re no signit</i> limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency r a es average	ange and peak me	asurements.
Note: te 1: te 2: 140. 120.	from the de For emission For emission required is a a n40 0 - 0 - 0 -	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	<i>re no signit</i> limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency r a es average	ange and peak me	asurements.
Note: te 1: te 2: :270 MHz 140. 120.	from the de For emission For emission required is a z n40 0- 0- 0- 0- 0- 0-	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	<i>re no signit</i> limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency r a es average	ange and peak me	asurements.
Note: te 1: te 2: 140. 120. (W/Mgp) apprilidure 80. 40.	For emission For emission required is a a n40 0 - 0 - 0 - 0 - 0 -	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	<i>re no signit</i> limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency r a es average	ange and peak me	asurements.
Note: te 1: te 2: 140. 120. (W/Mgp) apprilidure 80. 40.	For emission For emission required is a a n40 0 - 0 - 0 - 0 - 0 - 0 -	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	<i>re no signit</i> limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency rates average 68.3dBuV/m	ange and peak me n). The meas	asurements. urement method
Note: te 1: te 2: 140. 120. (W/Mgp) apprilidure 80. 40.	For emission For emission required is a a n40 0 - 0 - 0 - 0 - 0 -	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	re no signif e limit of 15.2 d bands the =1MHz, VB≥	icant emission 209 was used limit is -27dBr 23MHz, peak	ons in this f which requir m/MHz eirp (detector).	requency rates average 68.3dBuV/m	ange and peak me	asurements.
Note: te 1: te 2: 140. 120. (W/\ngp) 80. 80. 40.	For emission For emission required is a a n40 0 - 0 - 0 - 0 - 0 - 0 -	vice indicat is in restricte is outside of	ed there we ed bands, the the restricted	re no signif e limit of 15.2 d bands the =1MHz, VB≥	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (detector).	requency rates average 68.3dBuV/m	ange and peak me n). The meas	asurements. urement method

Client:									C Test Data
	ARRIS						,	Job Number:	JD102669
							T-	Log Number:	T103891
Model:	C61W							-	Christine Krebill
Contact:	Mark Rieger							Project Coordinator: -	
	FCC 15.B / F	CC 15.247	Class: N/A						
	enter Chann								
hannel:	58		Mode:	ac80					
x Chain:	4Tx		Data Rate:	VHT0					
requency		Pol	15.209		Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
5424.310	53.4	V	54.0	-0.6	Avg	203	1.7	POS; RB 1 I	MHz; VB: 3 kHz
0601.300	49.4	V	54.0	-4.6	Avg	342	1.0		'B 3 kHz;Peak
0601.650	60.3	V	74.0	-13.7	PK	342	1.0		'B 3 MHz;Peak
1248.740	45.6	H	54.0	-8.4	Avg	193	2.4		B 3 kHz;Peak
1248.780	68.4	Н	74.0	-5.6	PK	193	2.4		B 3 MHz;Peak
7053.510	55.1	V	68.3	-13.2	PK	326	1.1		B 3 MHz;Peak
0575.750	61.8	V	68.3	-6.5	PK	342	1.0		B 3 MHz;Peak
q75	-								,
5424.310	53.4	V	54.0	-0.6	Avg	203	1.7	POS: RB 1 I	MHz; VB: 3 kHz
5424.450	64.8	V	74.0	-9.2	PK	203	1.7		MHz; VB: 3 MHz
5037.670	48.3	V	54.0	-5.7	Avg	94	1.5		B 3 kHz;Peak
5037.640	57.9	V	74.0	-16.1	PK	94	1.5		B 3 MHz;Peak
Note: ote 1:	For emissions in restricted bands, the limit of 15.209 was used which requires average and peak measurements.								
ote 2:	For emissions outside of the restricted bands the limit is -27dBm/MHz eirp (68.3dBuV/m). The measurement method required is a peak measurement (RB=1MHz, VB≥3MHz, peak detector).								



		SUCCESS						EMC Test Data		
Client:	ARRIS							Job Number: JD102669		
Madalı	CE1W							T-Log Number: T103891		
Model: C61W							Project Manager: Christine Krebill			
Contact:	Mark Rieger			Project Coordinator: -						
Standard:	FCC 15.B / F	CC 15.247	/ 15.E	Class: N/A						
Run #4: Ra	diated Spuri	ous Emissi	ions, 1,000 -	40000 MHz	. Operating N	lode: Wors	e case fron	n Run #3		
	Date of Test: 2					onfig. Used:				
	st Engineer: I					fig Change:				
le	est Location:	FI Chambe	r#7		E	UT Voltage:	120V/60Hz			
	ow Channel									
hannel:	52		Mode:	n20						
x Chain:	4Tx		Data Rate:	VHT0	Detector	Λ =:	Usis-1	Commonto		
Frequency MHz	Level	Pol v/b	15.209 Limit	1	Detector Pk/QP/Avg	Azimuth	Height	Comments		
4963.090	dBμV/m 47.8	v/h V	Limit 54.0	Margin -6.2	AVG	degrees 9	meters 1.0	RB 1 MHz;VB 10 Hz;Peak		
4963.590	57.7	V	74.0	-16.3	PK	9	1.0	RB 1 MHz;VB 3 MHz;Peak		
1248.730	40.0	H	54.0	-14.0	AVG	199	1.7	RB 1 MHz;VB 10 Hz;Peak		
1249.300	67.2	Н	74.0	-6.8	PK	199	1.7	RB 1 MHz;VB 3 MHz;Peak		
5426.540	48.6	V	54.0	-5.4	AVG	199	1.3	RB 1 MHz;VB 10 Hz;Peak		
5426.710	59.7	V	74.0	-14.3	PK	199	1.3	RB 1 MHz;VB 3 MHz;Peak		
7013.470	56.6	V	68.3	-11.7	PK	319	1.2	RB 1 MHz;VB 3 MHz;Peak		
q88	07.0		00.0	0.5	DI/	00	4.0			
10521.600	67.8	V	68.3	-0.5	PK	28	1.0	RB 1 MHz;VB 3 MHz;Peak		
Note:					asurement ar licant emissio			he card and its antennas 20-50cm		
lote 1:				-				-		
		issions in restricted bands, the limit of 15.209 was used which requires average and peak measurements. issions outside of the restricted bands the limit is -27dBm/MHz eirp (68.3dBuV/m). The measurement method								
								/		
		peak measu								
ote 2:	required is a	peak measi			· •	/				
lote 2:	required is a MHz n20	peak meas								
lote 2:	required is a	peak meas				4				
lote 2: 5260 r 1	required is a MHz n20	peak measi				4				
lote 2:	required is a MHz n20 40.0 - 20.0 -	peak meası								
lote 2:	MHz n20	peak meası								
lote 2:	required is a MHz n20 40.0 - 20.0 - 20.0 -	peak meası								
lote 2:	required is a MHz n20 40.0 - 20.0 -	peak measi								
lote 2:	required is a MHz n20 40.0 - 20.0 - 20.0 -	peak measi								
Note 2:	required is a MHz n20 40.0 - 20.0 - 20.0 - 80.0 -			[]]]-[]]	**************************************					
lote 2:	required is a MHz n20 40.0 - 20.0 - 80.0 - 80.0 - 60.0 - 40.0 -									
lote 2:	required is a MHz n20 40.0 - 20.0 - 80.0 - 80.0 - 40.0 - 40.0 -				1					
5260 r 5260 r 1 (W/\ngp) 9 phtip WW	required is a MHz n20 40.0 - 20.0 - 80.0 - 80.0 - 60.0 - 40.0 -				Frequency					

		SUCCESS						ЕМС	C Test Data
Client:	ARRIS							Job Number:	JD102669
								Log Number:	
Model:	C61W							•	Christine Krebill
Contact:	Mark Rieger						,	Coordinator:	
	FCC 15.B / F		/ 15 E				Појесс	Class:	
Standard:	FUC 15.B/1	-00 15.247	/ ID.E					Class.	IN/A
C Te	igh Channel Date of Test: st Engineer: est Location:	2/28/2017 (Rafael Vare	elas		Cor	onfig. Used: ifig Change: UT Voltage:	None		
Channel:	64		Mode:	n20					
	4Tx		Data Rate:	MCS0					
TA Onum.	TTA .			10000					
Frequency	Level	Pol	15.209 / 15E		Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
10641.640	51.5	V	54.0	-2.5	AVG	36	1.1	RB 1 MHz;V	/B 10 Hz;Peak
10641.540	63.8	V	74.0	-10.2	PK	36	1.1	RB 1 MHz;V	/B 3 MHz;Peak
7093.440	56.6	V	68.3	-11.7	PK	324	1.0	RB 1 MHz;V	/B 3 MHz;Peak
5016.200	49.6	V	54.0	-4.4	AVG	308	1.0	RB 1 MHz;V	/B 10 Hz;Peak
5016.490	61.2	V	74.0	-12.8	PK	308	1.0	RB 1 MHz;V	'B 3 MHz;Peak
1248.930	41.0	Н	54.0	-13.0	AVG	195	2.2	RB 1 MHz;V	/B 10 Hz;Peak
1248.910	68.3	Н	74.0	-5.7	PK	195	2.2	RB 1 MHz;V	'B 3 MHz;Peak
5425.570	50.8	V	54.0	-3.2	AVG	89	1.5	RB 1 MHz;V	/B 10 Hz;Peak
5425.220	63.8	V	74.0	-10.2	PK	89	1.5	RB 1 MHz;V	/B 3 MHz;Peak
Noto	<i>from the de</i> For emissior	vice indica	ted there wei ed bands, the	re no signi limit of 15.2	ficant emissi 209 was used	ons in this f which requir	frequency r a res average	ange and peak mea	
Note 2:						• •	68.3dBuV/m	n). The meas	urement method
NOIG Z.	required is a	peak meas	urement (RB=	=1MHz, VB≥	≥3MHz, peak	detector).			
5320 MH	lz n20								
140	.0								
						A			
120	.0-								
\$ 100	0-					1			
	.0-								
	.0-					11			
jtud	.0-						<u> </u>		
40	MMM.	handlin	to and share	المعاسات		rf %Laudu	مدوني ميروني م		~~
20	1000 - 1 1000				¦ Frequency (M		1	.0000	18000

<u></u>		SUCCESS						EMO	C Test Dat
Client:	ARRIS							Job Number:	JD102669
	004144						T-	Log Number:	T103891
Wodel:	C61W						Proje	ect Manager:	Christine Krebill
Contact.	Mark Rieger						-	Coordinator:	
	FCC 15.B / I		/ 15 E				1 10,000	Class:	
	ligh Channel		/ 10.L					01035.	IN/74
	Date of Test:		:00		С	onfig. Used:	1		
	est Engineer:					fig Change:			
	est Location:					UT Voltage:			
honnoli	62		Mada	-10		Ū.			
hannel:			Mode:	n40					
x Chain: -requency	4Tx Level	Pol	Data Rate:	VHT0 9 / 15E	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters	Comments	
5440.710	υ <u>Β</u> μν/π 52.6	V	54.0	-1.4	Avg	215	1.6	POS: RB 11	MHz; VB: 3 kHz
5440.130	67.4	V	74.0	-6.6	PK	215	1.6		MHz; VB: 3 MHz
10616.870	52.2	V	54.0	-1.8	Avg	26	1.0		B 3 kHz;Peak
10621.570		V	74.0	-10.1	PK	26	1.0		'B 3 MHz;Peak
5002.700	45.6	V	54.0	-8.4	Avg	93	1.5	RB 1 MHz;V	'B 3 kHz;Peak
4997.100	56.2	V	74.0	-17.8	PK	93	1.5	RB 1 MHz;V	'B 3 MHz;Peak
1248.530	44.9	Н	54.0	-9.1	Avg	199	1.2	RB 1 MHz;V	'B 3 kHz;Peak
1248.910	67.4	Н	74.0	-6.6	PK	199	1.2		'B 3 MHz;Peak
7080.130	55.6	V	68.3	-12.7	PK	324	1.0	RB 1 MHz;V	'B 3 MHz;Peak
<i>Note:</i> lote 1:	from the de For emission	evice indications in restricted	t ed there we ed bands, the	re no signif limit of 15.2	icant emissi 209 was used	ons in this f which requir	requency ra res average	ange and peak me	
lote 1:	from the de For emission For emission	evice indicat ns in restricte ns outside of	ed there we ed bands, the the restricted	re no signit limit of 15.2 d bands the	icant emissi 209 was used	ons in this f which requir m/MHz eirp (requency ra res average	ange and peak me	
ote 1: ote 2:	from the de For emission For emission	evice indicat ns in restricte ns outside of	ed there we ed bands, the the restricted	re no signit limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency ra res average	ange and peak me	asurements.
lote 1: lote 2:	from the de For emission For emission required is a	evice indicat ns in restricte ns outside of	ed there we ed bands, the the restricted	re no signit limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency ra res average	ange and peak me	asurements.
lote 1: lote 2:	from the de For emission For emission required is a MHz n40 140.0 -	evice indicat ns in restricte ns outside of	ed there we ed bands, the the restricted	re no signit limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency ra res average	ange and peak me	asurements.
lote 1: lote 2:	from the de For emission For emission required is a	evice indicat ns in restricte ns outside of	ed there we ed bands, the the restricted	re no signit limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency ra res average	ange and peak me	asurements.
ote 1: ote 2: 5310	from the de For emission For emission required is a MHz n40 140.0 - 120.0 -	evice indicat ns in restricte ns outside of	ed there we ed bands, the the restricted	re no signit limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency ra res average	ange and peak me	asurements.
ote 1: ote 2: 5310	from the de For emission For emission required is a MHz n40 140.0 -	evice indicat ns in restricte ns outside of	ed there we ed bands, the the restricted	re no signit limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency ra res average	ange and peak me	asurements.
lote 1: lote 2:	from the de For emission For emission required is a MHz n40 140.0 - 120.0 - 100.0 -	evice indicat ns in restricte ns outside of	ed there we ed bands, the the restricted	re no signit limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency ra res average	ange and peak me	asurements.
ote 1: ote 2: 5310	from the de For emission For emission required is a MHz n40 140.0 - 120.0 -	evice indicat ns in restricte ns outside of	ed there we ed bands, the the restricted	re no signit limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency ra res average	ange and peak me	asurements.
ote 1: ote 2: 5310	from the de For emission For emission required is a MHz n40 140.0 - 120.0 - 100.0 -	evice indicat ns in restricte ns outside of	ed there we ed bands, the the restricted	re no signit limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency ra res average	ange and peak me	asurements.
ote 1: ote 2: 5310	from the de For emission required is a MHz n40 140.0 - 120.0 - 100.0 - 80.0 -	evice indicat ns in restricte ns outside of	ed there we ed bands, the the restricted	re no signit limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency ra res average	ange and peak me	asurements.
lote 1: lote 2:	from the de For emission For emission required is a MHz n40 140.0 - 120.0 - 100.0 - 80.0 - 40.0 - 40.0 - 20.0 -	evice indicat ns in restricte ns outside of	ed there we ed bands, the the restricted	re no signit limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir m/MHz eirp (requency ra res average	ange and peak me i). The meas	
lote 1: lote 2:	from the de For emission For emission required is a MHz n40 140.0 - 120.0 - 100.0 - 80.0 - 40.0 -	evice indicat ns in restricte ns outside of	ed there we ed bands, the the restricted	re no signit limit of 15.2 d bands the	icant emissi 209 was used limit is -27dBr	ons in this f which requir n/MHz eirp (detector).	requency ra res average	ange and peak me	asurements.

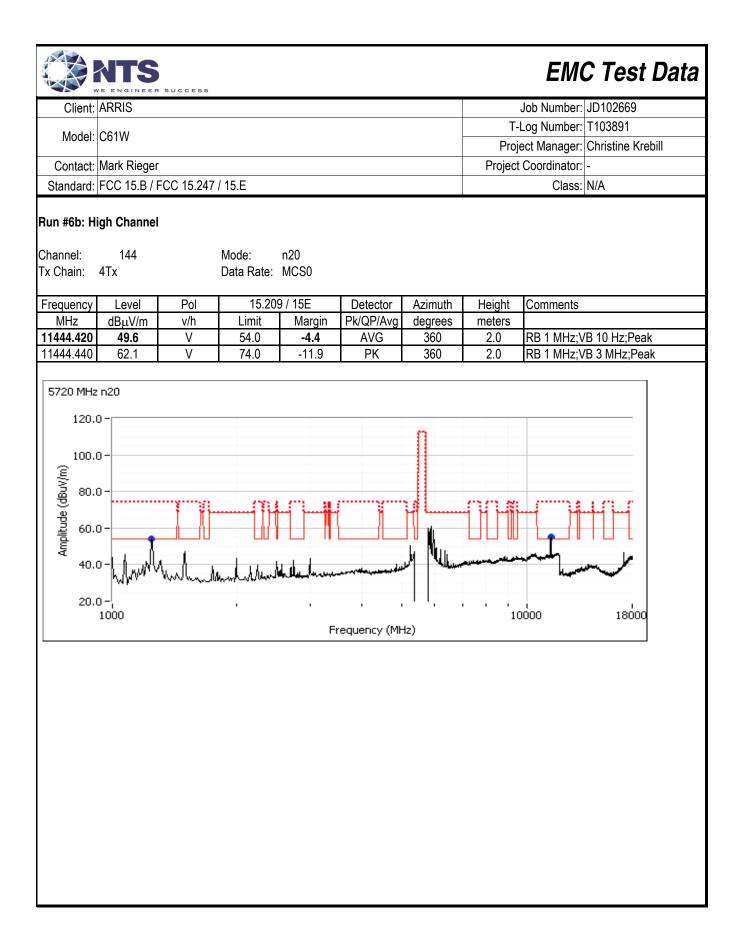
	ARRIS							Job Number:	JD102669
Madal	00111						T-	Log Number:	T103891
woder:	C61W						Proj	ect Manager:	Christine Krebill
Contact:	Mark Rieger						Project	Coordinator:	-
Standard:	FCC 15.B / F	CC 15.247	15.E					Class:	N/A
un #5, Ra	diated Spurio	ous Emissio	ons, 1,000 -	40,000 MHz	. Operation i	n the 5470-5	5725 MHz B	and	
	Date of Test:					onfig. Used:			
	est Engineer:	•	-			fig Change:			
	est Location: enter Channe		7#7		E	UT Voltage:	120V/60Hz		
un #5a: C	enter Channe	<i>‡</i> I							
hannel:	116		Mode:	а					
x Chain:			Data Rate:	6MB/s					
					<u> </u>			1.	
Frequency	Level	Pol) / 15E	Detector	Azimuth	Height	Comments	
MHz 7440.180	dBµV/m 46.1	v/h V	Limit 54.0	Margin -7.9	Pk/QP/Avg AVG	degrees 41	meters 1.3		/B 10 Hz;Peak
7440.160	53.8	V	74.0	-7.9	PK	41	1.3		/B 3 MHz;Peak
1248.960	40.9	Н	54.0	-13.1	AVG	210	2.0		/B 10 Hz;Peak
1248.330	67.5	H	74.0	-6.5	PK	210	2.0		/B 3 MHz;Peak
1158.440	51.5	V	54.0	-2.5	AVG	341	1.0		/B 10 Hz;Peak
1159.100	64.4	V	74.0	-9.6	PK	341	1.0	RB 1 MHz;V	/B 3 MHz;Peak
q85	E2 2	V	EA O	0.7	A)/O	01	1 1		
5355.410 5355.050	53.3 63.1	V V	54.0 74.0	-0.7 -10.9	AVG PK	91 91	1.1 1.1		MHz; VB: 10 Hz MHz; VB: 3 MHz
0000.000	05.1	v	74.0	-10.9	ΓN	31	1.1	F 00, ND T 1	
5580 MH;	z 11a								
120.	0-					0			
100.	0-								
	°								
2	o -								
R 80.	-			- C	(¥L	- 11 -16	1	al fair and a second
ନ୍ଥି 80. କୁନ୍ମ	n-					1		1. 1	
ng 80. pnqe (qg. 60.	• I			L 11					1 LJ L
mplitude (dBu 09	Ŭ 📑			11	المراجع والمراجع	MULL	and a second second	-	$\sim l$
de (d			1 1 1		A				
		malinal	wellowthead	ijllywlwystaw					
40.	0- 0-	millionth		ij. Kandester					
40.	o-What	malhands	without beaut	ijfrandeskaar	requency (Mł			0000	18000

Channel: 116 Mode: 11n20 Erequency Level Pol 15.209/15E Detector Azimuth Height Comments MHz dBuV/m v/h Limit Margin Pk/QP/Avg degrees meters meters 11160.280 64.4 V 74.0 9.6 PK 23 1.2 RB 1 MHz;VB 10 Hz;Peak 1248.880 41.0 H 54.0 -2.1 AVG 195 2.0 RB 1 MHz;VB 10 Hz;Peak 1248.880 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 30 Hz;Peak 7440.050 53.3 V 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 30 Hz;Peak 5355.720 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 30 Hz;Peak 5355.620 63.9 V 74.0 -10.1 PK 201 1.8 POS; RB 1 MHz;VB 30 Mz;Peak 5355.620 63.9 V 74.0 -10.1 PK 201 1.8 POS; RB 1 MHz;VB 30 Mz;Peak	Model: C61W T-Log Number: T103891 Contact: Mark Rieger Project Manager: Christine Krebill Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Num #5b: Center Channel Class: N/A Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Um #5b: Center Channel Contact: Mix A Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Um #5b: Center Channel Standard: Mix Data Rate: MCS0 Frequency Level Pol 15.209 / 15E Detector Azimuth Height Comments 11160.280 61.9 V 74.0 -2.0 PK (27) 12. RB 1 MHz/VB 10 Hz/Peak 1248.860 41.0 H 54.0 -7.9 AVG (318 11. RB 1 MHz/VB 30 MHz/Peak 1240.060 66.1 V 54.0 -0.4 AVG (201 1.8 POS; RB 1 MHz; VB : 10 Hz 2555.720 53.6 <th></th> <th></th> <th>SUCCESS</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>EMO</th> <th>C Test Data</th>			SUCCESS						EMO	C Test Data
Model: Child Project Manage: Christine Krebill Contact: Mark Rieger Project Coordinator: - Standard: FCC 15.8 / FCC 15.247 / 15.E Class: N/A Unun #5b: Center Channel Christine Krebill Project Manage: Christine Krebill Shannel: 116 Mode: 11n20 Cass: N/A Schain 4Tx Data Rate: MCS0 RB 1 MHz/VB 10 Hz/P68 MHz/VB	Model: Contact: Mark Rieger Project Manager: Christine Krebill Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Jun #5b: Center Channel Class: N/A Zhannel: 116 Mode: 11n20 X Chain: 4Tx Data Rate: MCS0 Frequency Level Pol 15209 / 15E Detector Azimuth Height Comments 11160.280 51.9 V 54.0 -2.1 AVG 23 1.2 RB 1 MHz;VB 10 Hz;Peak 1248.860 67.8 H 74.0 -9.6 PK 23 1.2 RB 1 MHz;VB 30 Hz;Peak 7440.060 64.1 V 54.0 -7.9 AVG 195 2.0 RB 1 MHz;VB 30 MLz;Peak 740.0060 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 30 MLz;Peak 740 536.720 53.6 V 54.0 -7.9 AVG 201 1.8 POS; RB 1 MHz;VB 3 MHz;	Client:	ARRIS							Job Number:	JD102669
Project Marager: Christine Krebill Project Coordinator:	Project Marager: Christine Krebil Project Coordinator: - Standard: FCC 15.8 / FCC 15.247 / 15.E Class: N/A Run #5b: Center Channel Standard: FCC 15.8 / FCC 15.247 / 15.E Class: N/A Run #5b: Center Channel Standard: FCC 15.247 / 15.E Class: N/A Class: N/A <th< td=""><td>Madal</td><td>004144</td><td></td><td></td><td></td><td></td><td></td><td>T-</td><td>Log Number:</td><td>T103891</td></th<>	Madal	004144						T-	Log Number:	T103891
Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Use Center Channel Channel: 116 Mode: 11n20 X Chain: 4Tx Data Rate: MCS0 Frequency Level Pol 15209 / 15E Detector Azimuth Height Comments MHz dBjLV/m v/h Limit Margin PK/QP/Avg degrees meters Intervs 10 124.860 64.4 V 74.0 -9.6 PK 23 1.2 RB 1 MHz/VB 10 Hz/Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz/VB 3 MHz/Peak 7440.050 63.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz/VB 3 MHz/Peak 6355.720 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 3 MHz/Peak 5580 MHz n20	Standard: FCC 15.8 / FCC 15.247 / 15.E Class: N/A Standard: FCC 15.8 / FCC 15.247 / 15.E Class: N/A Standard: FCC 15.8 / FCC 15.247 / 15.E Data Rate: MCS0 Frequency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBjuV/m v/h Limit Margin PK/QP/Avg degrees meters 11160.280 64.4 V 74.0 -9.6 PK 23 1.2 RB 1 MHz;VB 10 Hz;Peak 1248.860 74.1 H 54.0 -7.9 AVG 318 1.1 RB 1 MHz;VB 10 Hz;Peak 7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 3 MHz;Peak 675 7 7 4.0 -20.7 PK 318 1.1 RB 1 MHz;VB 3 MHz;Peak 675 7 7 4.0 -20.7 PK 318 1.1 RB 1 MHz;VB 3 MHz;Peak 675 7	Model:	COIW						Proj	ect Manager:	Christine Krebill
Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Use Center Channel Channel: 116 Mode: 11n20 X Chain: 4Tx Data Rate: MCS0 Frequency Level Pol 15209 / 15E Detector Azimuth Height Comments MHz dBjLV/m v/h Limit Margin PK/QP/Avg degrees meters Intervs 10 124.860 64.4 V 74.0 -9.6 PK 23 1.2 RB 1 MHz/VB 10 Hz/Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz/VB 3 MHz/Peak 7440.050 63.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz/VB 3 MHz/Peak 6355.720 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 3 MHz/Peak 5580 MHz n20	Standard: FCC 15.8 / FCC 15.247 / 15.E Class: N/A Standard: FCC 15.8 / FCC 15.247 / 15.E Class: N/A Standard: FCC 15.8 / FCC 15.247 / 15.E Data Rate: MCS0 Frequency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBjuV/m v/h Limit Margin PK/QP/Avg degrees meters 11160.280 64.4 V 74.0 -9.6 PK 23 1.2 RB 1 MHz;VB 10 Hz;Peak 1248.860 74.1 H 54.0 -7.9 AVG 318 1.1 RB 1 MHz;VB 10 Hz;Peak 7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 3 MHz;Peak 675 7 7 4.0 -20.7 PK 318 1.1 RB 1 MHz;VB 3 MHz;Peak 675 7 7 4.0 -20.7 PK 318 1.1 RB 1 MHz;VB 3 MHz;Peak 675 7	Contact:	Mark Rieger						Project	Coordinator:	-
Brannel:116Mode:11n20TrequencyLevelPol15.209/15EDetectorAzimuthHeightCommentsIntegrationdBµV/mv/hLimitMarginPk/QP/AvgdegreesmetersIntegration11160.28064.4V74.0-9.6PK231.2RB 1 MHz/VB 10 Hz/Peak1248.86067.8H74.0-9.6PK231.2RB 1 MHz/VB 30 MHz/Peak1248.86067.8H74.0-6.2PK1952.0RB 1 MHz/VB 30 MHz/Peak7440.05063.3V74.0-20.7PK3181.1RB 1 MHz/VB 30 Mtz/Peak7440.25053.3V74.0-20.7PK3181.1RB 1 MHz/VB 30 Mtz/Peak7450.55.2063.6V54.0-0.4AVG2011.8POS; RB 1 MHz; VB: 10 Hz5355.62063.9V74.0-10.1PK2011.8POS; RB 1 MHz; VB: 30 Mtz5500 MHz n20-0-0-0.4AVG2011.8POS; RB 1 MHz; VB: 30 Mtz5500 MHz n20-0-0-0-0-0-0-0-0100.0-0-0-0-0-0-0-0-0100.0-0-0-0-0-0-0-0-0100.0-0-0-0-0-0-0-0-0100.0-0-0-0-0-0-0-0 <td>Channel:116Mode:11n20Schain:4TxData Rate:MCS0FrequencyLevelPol15.209/15EDetectorAzimuthHeightCommentsIII160.28051.9V54.0-2.1AVG231.2RB 1 MHz;VB 10 Hz;Peak11160.28064.4V74.0-9.6PK231.2RB 1 MHz;VB 10 Hz;Peak1248.88067.8H74.0-6.2PK1952.0RB 1 MHz;VB 30 Hz;Peak1248.88067.8H74.0-6.2PK1952.0RB 1 MHz;VB 30 Hz;Peak7440.05046.1V54.0-7.9AVG3181.1RB 1 MHz;VB 30 Hz;Peak7440.25053.3V74.0-20.7PK3181.1RB 1 MHz;VB 30 Hz;Peak675GGV54.0-0.4AVG2011.8POS; RB 1 MHz; VB 3 MHz;Peak740.0GG-0.4AVG2011.8POS; RB 1 MHz; VB; 30 Hz;6355.620G3.9V74.0-10.1PK2011.8POS; RB 1 MHz; VB; 30 Hz;5580 MHz n20-0.0-0.0-0.4AVG2011.8POS; RB 1 MHz; VB; 30 Hz;60.0-0.0-0.0-0.0-0.0-0.0-0.0-0.0-0.070.0-0.0-0.0-0.0-0.0-0.0-0.0-0.070.0-0.0-0.0-0.0-0.0-0.0-0.0-0.0<tr< td=""><td></td><td></td><td>CC 15.247</td><td>/ 15.E</td><td></td><td></td><td></td><td></td><td>Class:</td><td>N/A</td></tr<></td>	Channel:116Mode:11n20Schain:4TxData Rate:MCS0FrequencyLevelPol15.209/15EDetectorAzimuthHeightCommentsIII160.28051.9V54.0-2.1AVG231.2RB 1 MHz;VB 10 Hz;Peak11160.28064.4V74.0-9.6PK231.2RB 1 MHz;VB 10 Hz;Peak1248.88067.8H74.0-6.2PK1952.0RB 1 MHz;VB 30 Hz;Peak1248.88067.8H74.0-6.2PK1952.0RB 1 MHz;VB 30 Hz;Peak7440.05046.1V54.0-7.9AVG3181.1RB 1 MHz;VB 30 Hz;Peak7440.25053.3V74.0-20.7PK3181.1RB 1 MHz;VB 30 Hz;Peak675GGV54.0-0.4AVG2011.8POS; RB 1 MHz; VB 3 MHz;Peak740.0GG-0.4AVG2011.8POS; RB 1 MHz; VB; 30 Hz;6355.620G3.9V74.0-10.1PK2011.8POS; RB 1 MHz; VB; 30 Hz;5580 MHz n20-0.0-0.0-0.4AVG2011.8POS; RB 1 MHz; VB; 30 Hz;60.0-0.0-0.0-0.0-0.0-0.0-0.0-0.0-0.070.0-0.0-0.0-0.0-0.0-0.0-0.0-0.070.0-0.0-0.0-0.0-0.0-0.0-0.0-0.0 <tr< td=""><td></td><td></td><td>CC 15.247</td><td>/ 15.E</td><td></td><td></td><td></td><td></td><td>Class:</td><td>N/A</td></tr<>			CC 15.247	/ 15.E					Class:	N/A
x Chain: 4 Tx Data Rate: MCSD Trequency Level Pol 15:209/15E Detector Azimuth Height Comments MHz dBjLV/m v/h Limit Margin PK/QP/Avg degrees meters 11160.280 51.9 V 54.0 -2.1 AVG 23 1.2 RB 1 MHz/VB 10 Hz/Peak 11160.280 64.4 V 74.0 -9.6 PK 23 1.2 RB 1 MHz/VB 30 Hz/Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz/VB 30 Hz/Peak 7440.050 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz/VB 30 Hz/Peak 7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz/VB 30 Hz/Peak 6355.720 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 30 Hz 5355.620 63.9 V 74.0 -10.1 PK 201 1.8 POS; RB 1 MHz; VB: 30 Hz 50.	x Chain: 4Tx Data Rate: MCS0 Frequency Level Pol 15.209/15E Detector Azimuth Height Comments MHz dBµ/Vm v/m Limit Margin PV(QP/Avg) degrees meters 11160.280 51.9 V 54.0 -2.1 AVG 23 1.2 RB 1 MHz/VB 10 Hz/Peak 1248.860 41.0 H 54.0 -13.0 AVG 195 2.0 RB 1 MHz/VB 3 MHz/Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz/VB 10 Hz/Peak 7440.050 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz/VB 3 MHz/Peak 7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz/VB 3 MHz/Peak 675 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 3 MHz 5355.620 63.9 V 74.0 -10.1 PK 201 1.8 POS; RB 1 MHz; VB: 3 MHz 50.0 <td></td>										
x Chain: 4 Tx Data Rate: MCSD Trequency Level Pol 15:209/15E Detector Azimuth Height Comments MHz dBjLV/m v/h Limit Margin PK/QP/Avg degrees meters 11160.280 51.9 V 54.0 -2.1 AVG 23 1.2 RB 1 MHz/VB 10 Hz/Peak 11160.280 64.4 V 74.0 -9.6 PK 23 1.2 RB 1 MHz/VB 30 Hz/Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz/VB 30 Hz/Peak 7440.050 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz/VB 30 Hz/Peak 7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz/VB 30 Hz/Peak 6355.720 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 30 Hz 5355.620 63.9 V 74.0 -10.1 PK 201 1.8 POS; RB 1 MHz; VB: 30 Hz 50.	x Chain: 4Tx Data Rate: MCS0 Frequency Level Pol 15.209/15E Detector Azimuth Height Comments MHz dBµ/Vm v/m Limit Margin PV(QP/Avg) degrees meters 11160.280 51.9 V 54.0 -2.1 AVG 23 1.2 RB 1 MHz/VB 10 Hz/Peak 1248.860 41.0 H 54.0 -13.0 AVG 195 2.0 RB 1 MHz/VB 3 MHz/Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz/VB 10 Hz/Peak 7440.050 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz/VB 3 MHz/Peak 7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz/VB 3 MHz/Peak 675 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 3 MHz 5355.620 63.9 V 74.0 -10.1 PK 201 1.8 POS; RB 1 MHz; VB: 3 MHz 50.0 <td></td>										
Erequency Level Pol 15:209 / 15E Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 11160.280 51.9 V 54.0 -2.1 AVG 23 1.2 RB 1 MHz;VB 10 Hz;Peak 11460.280 64.4 V 74.0 -9.6 PK 23 1.2 RB 1 MHz;VB 10 Hz;Peak 1248.860 41.0 H 54.0 -1.3.0 AVG 195 2.0 RB 1 MHz;VB 10 Hz;Peak 1248.860 46.1 V 54.0 -7.9 AVG 188 1.1 RB 1 MHz;VB 30 Hz;Peak 7440.050 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 30 Hz;Peak 925 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 30 Hz;Peak 90.0 - - - 0.0 - 1.0000 1.8 POS; RB 1 MHz; VB: 30 Hz;Peak	Erequency Level Pol 15:209 / 15E Detector Azimuth Height Comments MHz dBjJV/m vh Limit Margin PK/QP/Avg degrees meters 11160.280 51.9 V 54.0 -2.1 AVG 23 1.2 RB 1 MHz;VB 10 Hz;Peak 1248.860 41.0 H 54.0 -2.1 AVG 195 2.0 RB 1 MHz;VB 10 Hz;Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 30 Hz;Peak 7440.060 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz;VB 30 Hz;Peak 7740 -20.7 PK 318 1.1 RB 1 MHz;VB 30 Hz;Peak 2555.720 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 30 Hz; 5580 MHz n20 - - - 10.1 PK 201 1.8 POS; RB 1 MHz; VB: 30 Mz; 0.0 - -										
MHz dBµLV/m v/h Limit Margin Pk/QP/Avg degrees meters 11160.280 51.9 V 54.0 -2.1 AVG 23 1.2 RB 1 MHz;VB 10 Hz;Peak 11160.280 64.4 V 74.0 -9.6 PK 23 1.2 RB 1 MHz;VB 10 Hz;Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 10 Hz;Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 10 Hz;Peak 7440.060 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz;VB 3 MHz;Peak 740.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 3 MHz;VB 3 MHz;Peak 75 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB 3 MHz; VB 3 MHz; VB 3 MHz; 5355.620 63.9 V 74.0 -10.1 PK 201	MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 11160.280 51.9 V 54.0 -2.1 AVG 23 1.2 RB 1 MHz;VB 10 Hz;Peak 11160.280 64.4 V 74.0 -9.6 PK 23 1.2 RB 1 MHz;VB 30 Hz;Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 30 Hz;Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 30 Hz;Peak 7440.060 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz;VB 30 MHz;Peak 740.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 30 Mz;Peak 75 -	x Chain:	4Tx		Data Rate:	MCS0					
MHz dBµLV/m v/h Limit Margin PK/QP/Avg degrees meters 11160.280 51.9 V 54.0 -2.1 AVG 23 1.2 RB 1 MHz;VB 10 Hz;Peak 11160.280 64.4 V 74.0 -9.6 PK 23 1.2 RB 1 MHz;VB 10 Hz;Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 10 Hz;Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 10 Hz;Peak 7440.060 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz;VB 3 MHz;Peak 740.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 3 MHz;VB 3 MHz;Peak 75 -	MHz dBµLV/m v/h Limit Margin Pk/QP/Avg degrees meters 11160.280 51.9 V 54.0 -2.1 AVG 23 1.2 RB 1 MHz;VB 10 Hz;Peak 11160.280 64.4 V 74.0 -9.6 PK 23 1.2 RB 1 MHz;VB 10 Hz;Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 3 MHz;Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 3 MHz;Peak 7440.060 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz;VB 3 MHz;Peak 975 - <td>requency</td> <td>l evel</td> <td>Pol</td> <td>15 209</td> <td>) / 15F</td> <td>Detector</td> <td>Azimuth</td> <td>Height</td> <td>Comments</td> <td></td>	requency	l evel	Pol	15 209) / 15F	Detector	Azimuth	Height	Comments	
11160.280 51.9 V 54.0 -2.1 AVG 23 1.2 RB 1 MHz;VB 10 Hz;Peak 11160.280 64.4 V 74.0 -9.6 PK 23 1.2 RB 1 MHz;VB 3 MHz;Peak 1248.860 41.0 H 54.0 -13.0 AVG 195 2.0 RB 1 MHz;VB 10 Hz;Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 10 Hz;Peak 7440.050 66.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz;VB 10 Hz;Peak 7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 3 MHz;Peak 975 - - - - - - - - 5355.720 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 10 Hz; VB: 3 MHz 5580 MHz n20 - - - - 1.0 POS; RB 1 MHz; VB: 3 MHz 0.0 - - - - 1.0 1.8 POS; RB 1 MHz; VB: 3 MHz<	11160.280 51.9 V 54.0 -2.1 AVG 23 1.2 RB 1 MHz/VB 10 Hz/Peak 11160.280 64.4 V 74.0 -9.6 PK 23 1.2 RB 1 MHz/VB 30 Mtz/Peak 1248.860 41.0 H 54.0 -13.0 AVG 195 2.0 RB 1 MHz/VB 30 Mtz/Peak 7440.060 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz/VB 30 Mtz/Peak 7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz/VB 3 MHz/Peak q75 - - - - - - - - 555.720 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB 3 MHz 558.00 63.9 V 74.0 -10.1 PK 201 1.8 POS; RB 1 MHz; VB 30 Mtz 5580 MHz n20 - - - - - - - - - - - - - - - - - <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Commento</td><td></td></td<>									Commento	
1160.280 64.4 V 74.0 -9.6 PK 23 1.2 RB 1 MHz;VB 3 MHz;Peak 1248.860 41.0 H 54.0 -13.0 AVG 195 2.0 RB 1 MHz;VB 3 MHz;Peak 1248.880 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 3 MHz;Peak 1248.880 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 3 MHz;Peak 7440.050 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 3 MHz;Peak 975 - - - - - - - - 63.5 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 3 MHz 5580 MHz n20 - - 1.0 PK 201 1.8 POS; RB 1 MHz; VB: 3 MHz 5580 MHz n20 - - - 1.0 PK 201 1.8 POS; RB 1 MHz; VB: 3 MHz 50.0 - - - 0.0 - -	1160.280 64.4 V 74.0 -9.6 PK 23 1.2 RB 1 MHz;VB 3 MHz;Peak 1248.860 41.0 H 54.0 -13.0 AVG 195 2.0 RB 1 MHz;VB 10 Hz;Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 3 MHz;Peak 1248.860 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 3 MHz;Peak 7440.060 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz;VB 10 Hz;Peak 740.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 10 Hz;Peak 975 - - - - - - - - 555.720 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB 3 MHz; VB 3 MHz 5580 MHz n20 - - - - - - - - - - - - - - - - - -					0	Ŭ.			RB 1 MHz:V	/B 10 Hz:Peak
1248.860 41.0 H 54.0 -13.0 AVG 195 2.0 RB 1 MHz;VB 10 Hz;Peak 1248.880 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 10 Hz;Peak 7440.060 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz;VB 10 Hz;Peak 7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 3 MHz;Peak 975 - - - - - - - 5355.720 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 10 Hz 5355.620 63.9 V 74.0 -10.1 PK 201 1.8 POS; RB 1 MHz; VB: 3 MHz 5580 MHz n20 - - - - - - 100.0 - - 100.00 - 100.00 - 10000 18000 - 18000 - 18000 - 18000 - 18000 - 18000 - 18000 - 18000	1248.860 41.0 H 54.0 -13.0 AVG 195 2.0 RB 1 MHz;VB 10 Hz;Peak 1248.880 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 30 Hz;Peak 7440.060 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz;VB 30 Hz;Peak 7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 30 MHz;Peak 475 - - - - - - - - 5355.720 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB : 0 Hz 5355.620 63.9 V 74.0 -10.1 PK 201 1.8 POS; RB 1 MHz; VB : 3 MHz 5580 MHz n20 - - - - 1.0 R0 - 1.0 - 1.0 1.0 1.0 1.0 1.0 1.000 1.000 1.000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0										
1248.880 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 3 MHz;Peak 7440.060 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz;VB 3 MHz;Peak 7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 3 MHz;Peak 675 Image: constraint of the state of the s	1248.880 67.8 H 74.0 -6.2 PK 195 2.0 RB 1 MHz;VB 3 MHz;Peak 7440.060 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz;VB 10 Hz;Peak 7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 3 MHz;Peak g75										
7440.060 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz;VB 10 Hz;Peak 7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 3 MHz;Peak q75	7440.060 46.1 V 54.0 -7.9 AVG 318 1.1 RB 1 MHz;VB 10 Hz;Peak 7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz;VB 3 MHz;Peak q75										
7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz; VB 3 MHz; Peak 975 5355.720 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 10 Hz 5355.620 63.9 V 74.0 -10.1 PK 201 1.8 POS; RB 1 MHz; VB: 3 MHz 5580 MHz n20 100.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 3 MHz 5580 MHz n20 -0.4 .0.0 -0.4 .0.0 -0.4 .0.0 -0.4 .0.00 .0.00 .0.00 .0.00 .0.00 .0.00 .0.00 .0.00 .0.00 .0.00 .0.00 .0.00 .0.00 .0.00 .0.00 .0.00 .0.00 .0.00	7440.250 53.3 V 74.0 -20.7 PK 318 1.1 RB 1 MHz; VB 3 MHz; Peak 975 5355.720 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB : 10 Hz 5355.620 63.9 V 74.0 -10.1 PK 201 1.8 POS; RB 1 MHz; VB : 3 MHz 5580 MHz n20 100.0 0<										
5335.720 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 10 Hz 5355.620 63.9 V 74.0 -10.1 PK 201 1.8 POS; RB 1 MHz; VB: 3 MHz 5580 MHz n20 120.0 - - 1.8 POS; RB 1 MHz; VB: 3 MHz 5580 MHz n20 - - - - - - 1.8 POS; RB 1 MHz; VB: 3 MHz 5580 MHz n20 -	5355.720 53.6 V 54.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 10 Hz 5355.620 63.9 V 74.0 -10.1 PK 201 1.8 POS; RB 1 MHz; VB: 3 MHz 5580 MHz n20 120.0 -0.4 AVG 201 1.8 POS; RB 1 MHz; VB: 3 MHz 5580 MHz n20 -0.0 <td>7440.250</td> <td>53.3</td> <td>V</td> <td></td> <td>-20.7</td> <td>PK</td> <td>318</td> <td>1.1</td> <td></td> <td></td>	7440.250	53.3	V		-20.7	PK	318	1.1		
S3355.620 G3.9 V 74.0 -10.1 PK 201 1.8 POS, RB 1 MHz; VB: 3 MHz 5580 MHz n20 120.0	S3355.620 G3.9 V 74.0 -10.1 PK 201 1.8 POS; RB 1 MHz; VB: 3 MHz 5580 MHz n20 120.0	q75									
5580 MHz n20 120.0 100.0 0	5580 MHz n20 120.0 100.0 0	5355.720							1.8		
120.0 0 <td>120.0 0<td>5355.620</td><td>63.9</td><td>V</td><td>74.0</td><td>-10.1</td><td>PK</td><td>201</td><td>1.8</td><td>POS; RB 1 I</td><td>MHz; VB: 3 MHz</td></td>	120.0 0 <td>5355.620</td> <td>63.9</td> <td>V</td> <td>74.0</td> <td>-10.1</td> <td>PK</td> <td>201</td> <td>1.8</td> <td>POS; RB 1 I</td> <td>MHz; VB: 3 MHz</td>	5355.620	63.9	V	74.0	-10.1	PK	201	1.8	POS; RB 1 I	MHz; VB: 3 MHz
Note: Scans made between 18 - 40 GHz with the measurement antenna moved around the card and its antennas 20-50cm from the device indicated there were no significant emissions in this frequency range Iote 1: For emissions in restricted bands, the limit of 15.209 was used which requires average and peak measurements. Iote 2: For emissions outside of the restricted bands the limit is -27dBm/MHz eirp (68.3dBuV/m). The measurement method	Note: Scans made between 18 - 40 GHz with the measurement antenna moved around the card and its antennas 20-50ch from the device indicated there were no significant emissions in this frequency range Note 1: For emissions in restricted bands, the limit of 15.209 was used which requires average and peak measurements. Note 2: For emissions outside of the restricted bands the limit is -27dBm/MHz eirp (68.3dBuV/m). The measurement method	100.0 (m/ 80.1 60.0 40.1 40.1		- I - I	 						
Iote 1: For emissions in restricted bands, the limit of 15.209 was used which requires average and peak measurements. For emissions outside of the restricted bands the limit is -27dBm/MHz eirp (68.3dBuV/m). The measurement method	Iote 1: For emissions in restricted bands, the limit of 15.209 was used which requires average and peak measurements. Iote 2: For emissions outside of the restricted bands the limit is -27dBm/MHz eirp (68.3dBuV/m). The measurement method	Note:				vith the mea	asurement ar	ntenna mov			its antennas 20-50cm
For emissions outside of the restricted bands the limit is -27dBm/MHz eirp (68.3dBuV/m). The measurement method	For emissions outside of the restricted bands the limit is -27dBm/MHz eirp (68.3dBuV/m). The measurement method	lote 1:				-				-	asurements.
required is a peak measurement (RB=1MHz, VB≥3MHz, peak detector).	required is a peak measurement (RB=1MHz, VB≥3MHz, peak detector).										
			required is a	peak meası	irement (RB=	=1MHz, VB≥	3MHz, peak	detector).			

		SUCCESS							C Test Dat
Client:	ARRIS							Job Number:	
Model:	C61W							Log Number:	
wouer.	00100						Proj	ect Manager:	Christine Krebill
Contact:	Mark Rieger						Project	Coordinator:	-
Standard:	FCC 15.B / F	CC 15.247	/ 15.E					Class:	N/A
un #5c: C	Center Chann	nel							
hannel:	110		Mode:	11n40					
Chain:	4Tx		Data Rate:	MCS0					
requency	Level	Pol		9 / 15E	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
1100.380		V	54.0	-3.2	AVG	23	2.0		/B 10 kHz;Peak
101.260	63.0	V	74.0	-11.0	PK	21	2.0		/B 3 MHz;Peak
400.030	45.6	V	54.0	-8.4	AVG	180	1.5		/B 3 kHz;Peak
400.460	52.9	<u>V</u>	74.0	-21.1	PK	181	1.5		/B 3 MHz;Peak
1248.780	43.7	<u>H</u>	54.0	-10.3	AVG	188	2.0		/B 3 kHz;Peak
1249.190	67.9	Н	74.0	-6.1	PK	188	2.0	KB I MHZ;V	'B 3 MHz;Peak
36	53.8	V	54.0	-0.2	Avg	204	1.7		MHz; VB: 3 kHz
(// K'())									
374.530 374.610 5550 MHz 120.	63.4 z n40	V	74.0	-10.6	PK	204	1.7		MHz; VB: 3 MHz
374.610 5550 MH2 120. (m/\ngp app. 100. (m/\ngp app. 60. 40.	63.4 2 n40 0 - 0 - 0 - 0 -							POS; RB 1 I	
374.610 5550 MHz 120. (W/\ngp) 80. 90011dwy 40. 20.	63.4 2 n40 0 - 0 - 0 - 0 - 0 - 1000 Scans made	V	74.0	-10.6	PK	204	1.7	POS; RB 1 I	
374.610 5550 MH2 120. (W/\ngp) 80. 900, 80. 40. 20. Note:	63.4 2 n40 0 - 0 - 0 - 0 - 1000 Scans made from the de	V	74.0	-10.6	PK	204	1.7	POS; RB 1 I	MHz; VB: 3 MHz
374.610 5550 MHz 120. (^(U) /ngp) 80. ^(U) /ngp 80. 900 100 40. 20.	63.4 2 n40 0 - 0 - 0 - 0 - 0 - 1000 Scans made from the de For emission	V	74.0	-10.6	PK	204	1.7	POS; RB 1 I	MHz; VB: 3 MHz
374.610 5550 MH2 120. (W/\ngp) appnjiduwy 40. 20. Note:	63.4 2 n40 0 - 0 - 0 - 0 - 0 - 1000 Scans made from the de For emission For emission	V	74.0	-10.6	PK	204	1.7	POS; RB 1 I	MHz; VB: 3 MHz

Client ARRIS Job Number: DI0/2669 Model: C61W T-Log Number: T103891 Project Manager: Christine Krebil Project Coordinator: - Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Jun #5d: Center Channel Node: ac80 xx N/A Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A N/A Frequency Level Pol 15.209 / 15E Detector Azimuth Height Comments Standard: 4Tx Data Rate: VHT0 VHT Standard: Standard: </th <th>Client[.]</th> <th></th> <th>SUCCESS</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>C Test Dat</th>	Client [.]		SUCCESS							C Test Dat
Model: ColiW Project Manager Christine Krebil Contact: Mark Rieger Project Coordinator: - Standard; FCC 15.B / FCC 15.247 / 15.E Class: N/A un #5d: Center Channel - - hannet: 106 Mode: ac80 x Chain: 4Tx Data Rate: VHT0 requency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dB ₁₁ V/m v/h Limit Margin Pk/QP/Avg degrees meters 1075.170 46.7 V 54.0 -7.3 Avg 24 2.0 RB 1 MHz;VB 3 kHz;Peak 737.520 45.4 V 54.0 -8.6 Avg 180 1.0 RB 1 MHz;VB 3 kHz;Peak 759.340 48.5 V 54.0 -5.5 AVG 151 1.0 RB 1 MHz;VB 3 kHz;Peak 779.320 61.2 V 74.0 -42.8 PK 151 1.0	Short.	ARRIS							Job Number:	JD102669
Project Manager: Christine Krebil Standard: FCC 15.B / FCC 15.247 / 15.E Project Coordinator: - In #5d: Center Channel Class: N/A nannel: 106 Mode: ac80 ic Chain: 4Tx Data Rate: VHT0 reguency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBj.V/m v/h Limit Margin PKOPC/Avg degrees meters 1075.170 46.7 V 54.0 -7.3 Avg 106 15. RB 1 MHz/VB 3 kHz/Peak 779.550 59.6 V 68.3 -8.7 Avg 106 1.5 RB 1 MHz/VB 3 kHz/Peak 709.340 44.5 V 54.0 -10.7 Avg 193 2.0 RB 1 MHz/VB 3 kHz/Peak 799.340 48.5 V 54.0 -5.5 AVG 151 1.0 RB 1 MHz/VB 3 MHz/Peak 799.340 48.5 V 74.0 -12.8 PK 151 1.0	Madal	06111						T-	Log Number:	T103891
Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A un #5d: Center Channel aranel: 106 Mode: ac80 Chain: 4Tx Data Rate: VHT0 VHT0 requency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBjL//m v/h Limit Margin Pk/QP/Avg degrees meters meters 707.550 59.6 V 68.3 -8.7 Avg 106 1.5 RB 1 MHz/VB 3 kHz/Peak 075.120 59.7 V 54.0 -7.3 Avg 193 2.0 RB 1 MHz/VB 3 MHz/Peak 075.120 59.7 V 74.0 -14.3 PK 24 2.0 RB 1 MHz/VB 3 MHz/Peak 075.120 59.7 V 74.0 -12.8 PK 151 1.0 RB 1 MHz/VB 3 MHz/Peak 073.1230 53.1 V 74.0 -20.9 PK 182 1.0 RB 1 MHz/VB 3 MHz/Peak	woder:	COIV						Proj	ect Manager:	Christine Krebill
Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A un #5d: Center Channel aranel: 106 Mode: ac80 Chain: 4Tx Data Rate: VHT0 VHT0 requency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBjL//m v/h Limit Margin Pk/QP/Avg degrees meters meters 707.550 59.6 V 68.3 -8.7 Avg 106 1.5 RB 1 MHz/VB 3 kHz/Peak 075.120 59.7 V 54.0 -7.3 Avg 193 2.0 RB 1 MHz/VB 3 MHz/Peak 075.120 59.7 V 74.0 -14.3 PK 24 2.0 RB 1 MHz/VB 3 MHz/Peak 075.120 59.7 V 74.0 -12.8 PK 151 1.0 RB 1 MHz/VB 3 MHz/Peak 073.1230 53.1 V 74.0 -20.9 PK 182 1.0 RB 1 MHz/VB 3 MHz/Peak	Contact:	Mark Rieger						Project	Coordinator:	-
namel: 106 Mode: ac80 Chain: 4Tx Data Rate: VHT0 requency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dB ₁₁ V/m v/h Limit Margin Pk/QP/Avg degrees meters 1075.170 46.7 V 54.0 -7.3 Avg 24 2.0 RB 1 MHz/VB 3 kHz/Peak 373.520 45.4 V 54.0 -8.6 Avg 180 1.0 RB 1 MHz/VB 3 kHz/Peak 1075.170 48.5 V 54.0 -10.7 Avg 193 2.0 RB 1 MHz/VB 3 kHz/Peak 373.520 45.4 V 54.0 -10.7 Avg 193 2.0 RB 1 MHz/VB 3 kHz/Peak 1075.120 59.7 V 74.0 -12.8 PK 151 1.0 RB 1 MHz/VB 3 MHz/Peak 799.340 48.5 V 54.0 -5.5 AVG 151 1.0 RB 1 MHz/VB 3 MHz/Peak 737.802 52.9 V 54.0 -1.1 Avg				/ 15.E					Class:	N/A
annel: 106 Chain: Mode: ac80 Data Rate: equency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBµLV/m v/h Limit Margin Pk/QP/Avg degrees meters 075.170 46.7 V 54.0 -7.3 Avg 24 2.0 RB 1 MHz;VB 3 kHz;Peak 797.550 59.6 V 68.3 -8.7 Avg 106 1.5 RB 1 MHz;VB 3 kHz;Peak 248.700 43.3 H 54.0 -10.7 Avg 193 2.0 RB 1 MHz;VB 3 kHz;Peak 279.230 61.2 V 74.0 -14.3 PK 24 2.0 RB 1 MHz;VB 3 kHz;Peak 279.230 61.2 V 74.0 -12.8 PK 101 RB 1 MHz;VB 3 MHz;Peak 373.230 53.1 V 74.0 -20.9 PK 182 1.0 RB 1 MHz;VB 3 MHz;Peak 477 - - - - RB 1 MHz;VB 3 MHz;Peak - - - - - - RB 1 MHz;	ın #5d: (Center Chanr	nel							
equency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBµV/m vh Limit Margin Pk/QP/Avg degrees meters 075.170 46.7 V 54.0 -7.3 Avg 24 2.0 RB 1 MHz;VB 3 kHz;Peak 373.520 59.6 V 68.3 -8.7 Avg 106 1.5 RB 1 MHz;VB 3 kHz;Peak 075.120 59.7 V 74.0 -10.7 Avg 193 2.0 RB 1 MHz;VB 3 kHz;Peak 075.120 59.7 V 74.0 -12.8 PK 151 1.0 RB 1 MHz;VB 3 MHz;Peak 079.230 61.2 V 74.0 -22.9 PK 151 1.0 RB 1 MHz;VB 3 MHz;Peak 373.230 53.1 V 74.0 -22.9 PK 193 2.0 RB 1 MHz;VB 3 MHz;Peak 378.200 62.9 V 54.0 -1.1 Avg 24 1.3 POS; RB 1 MHz;VB 3 MHz;Peak	annel:	106		Mode:	ac80					
MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 0075.170 46.7 V 54.0 -7.3 Avg 24 2.0 RB 1 MHz;VB 3 kHz;Peak 797.550 59.6 V 68.3 -8.7 Avg 106 1.5 RB 1 MHz;VB 3 kHz;Peak 737.520 45.4 V 54.0 -8.6 Avg 180 1.0 RB 1 MHz;VB 3 kHz;Peak 248.700 43.3 H 54.0 -10.7 Avg 193 2.0 RB 1 MHz;VB 3 kHz;Peak 248.700 59.7 V 74.0 -14.3 PK 24 2.0 RB 1 MHz;VB 3 MHz;Peak 799.340 48.5 V 54.0 -5.5 AVG 151 1.0 RB 1 MHz;VB 3 MHz;Peak 792.320 61.2 V 74.0 -20.9 PK 162 1.0 RB 1 MHz;VB 3 MHz;Peak 248.730 67.8 H 74.0 -6.2 PK 193 2.0 RB 1 MHz;VB 3 MHz;P	Chain:	4Tx		Data Rate:	VHT0					
MHz dBµV/m v/h Limit Margin Pk/QP/Avg degrees meters 075.170 46.7 V 54.0 -7.3 Avg 24 2.0 RB 1 MHz;VB 3 kHz;Peak 797.550 59.6 V 68.3 -8.7 Avg 106 1.5 RB 1 MHz;VB 3 kHz;Peak 733.520 45.4 V 54.0 -8.6 Avg 180 1.0 RB 1 MHz;VB 3 kHz;Peak 248.700 43.3 H 54.0 -10.7 Avg 193 2.0 RB 1 MHz;VB 3 kHz;Peak 248.700 48.5 V 54.0 -5.5 AVG 151 1.0 RB 1 MHz;VB 3 MHz;Peak 799.230 61.2 V 74.0 -12.8 PK 151 1.0 RB 1 MHz;VB 3 MHz;Peak 273.230 53.1 V 74.0 -20.9 PK 182 1.0 RB 1 MHz;VB 3 MHz;Peak 248.730 67.8 H 74.0 -6.2 PK 193 2.0 RB 1 MHz;VB 3 MHz;P				45.000			A 1	11.2.1.1		
075.170 46.7 V 54.0 -7.3 Avg 24 2.0 RB 1 MHz;VB 3 kHz;Peak 797.550 59.6 V 68.3 -8.7 Avg 106 1.5 RB 1 MHz;VB 3 kHz;Peak 737.520 45.4 V 54.0 -8.6 Avg 180 1.0 RB 1 MHz;VB 3 kHz;Peak 737.520 59.7 V 74.0 -14.3 PK 24 2.0 RB 1 MHz;VB 3 kHz;Peak 7075.120 59.7 V 74.0 -5.5 AVG 151 1.0 RB 1 MHz;VB 3 MHz;Peak 799.340 48.5 V 54.0 -5.5 AVG 151 1.0 RB 1 MHz;VB 3 MHz;Peak 799.230 61.2 V 74.0 -12.8 PK 151 1.0 RB 1 MHz;VB 3 MHz;Peak 737.8.20 53.1 V 74.0 -6.2 PK 193 2.0 RB 1 MHz;VB 3 MHz;Peak 97									Comments	
797.550 59.6 V 68.3 -8.7 Avg 106 1.5 RB 1 MHz;VB 3 kHz;Peak 373.520 45.4 V 54.0 -8.6 Avg 180 1.0 RB 1 MHz;VB 3 kHz;Peak 248.700 43.3 H 54.0 -10.7 Avg 193 2.0 RB 1 MHz;VB 3 kHz;Peak 075.120 59.7 V 74.0 -14.3 PK 24 2.0 RB 1 MHz;VB 3 kHz;Peak 99.340 48.5 V 54.0 -5.5 AVG 151 1.0 RB 1 MHz;VB 3 MHz;Peak 799.230 61.2 V 74.0 -12.8 PK 151 1.0 RB 1 MHz;VB 3 MHz;Note 787.230 53.1 V 74.0 -6.2 PK 193 2.0 RB 1 MHz;VB 3 MHz;Peak q77					u u					B 3 kHz. Daak
373.520 45.4 V 54.0 -8.6 Avg 180 1.0 RB 1 MHz;VB 10 kHz;Peak 248.700 43.3 H 54.0 -10.7 Avg 193 2.0 RB 1 MHz;VB 3 kHz;Peak 075.120 59.7 V 74.0 -14.3 PK 24 2.0 RB 1 MHz;VB 3 kHz;Peak 799.340 48.5 V 54.0 -5.5 AVG 151 1.0 RB 1 MHz;VB 3 MHz;Peak 799.230 61.2 V 74.0 -12.8 PK 151 1.0 RB 1 MHz;VB 3 MHz;Note 7373.230 53.1 V 74.0 -20.9 PK 182 1.0 RB 1 MHz;VB 3 MHz;Note 248.730 67.8 H 74.0 -6.2 PK 193 2.0 RB 1 MHz;VB 3 MHz;Peak 977										
248.700 43.3 H 54.0 -10.7 Avg 193 2.0 RB 1 MHz;VB 3 kHz;Peak 075.120 59.7 V 74.0 -14.3 PK 24 2.0 RB 1 MHz;VB 3 MHz;Peak 799.340 48.5 V 54.0 -5.5 AVG 151 1.0 RB 1 MHz;VB 3 MHz;Peak 799.340 61.2 V 74.0 -12.8 PK 151 1.0 RB 1 MHz;VB 3 MHz;Peak 737.320 53.1 V 74.0 -20.9 PK 182 1.0 RB 1 MHz;VB 3 MHz;Peak 977 74.0 -6.2 PK 193 2.0 RB 1 MHz;VB 3 MHz;Peak 977 7 7 7 7 7 7 7 7 978.200 52.9 V 54.0 -1.1 Avg 24 1.3 POS; RB 1 MHz; VB: 3 MHz 978.260 63.5 V 74.0 -10.5 PK 24 1.3 POS; RB 1 MHz; VB: 3 MHz 980.0 - - - - 10000 100000 18000 <						ŭ				
075.120 59.7 V 74.0 -14.3 PK 24 2.0 RB 1 MHz;VB 3 MHz;Peak 799.340 48.5 V 54.0 -5.5 AVG 151 1.0 RB 1 MHz;VB 3 MHz;Peak 799.230 61.2 V 74.0 -12.8 PK 151 1.0 RB 1 MHz;VB 3 MHz;Peak 737.230 53.1 V 74.0 -20.9 PK 182 1.0 RB 1 MHz;VB 3 MHz;Peak q77 -						ŭ				
799.340 48.5 V 54.0 -5.5 AVG 151 1.0 RB 1 MHz; VB: 3 kHz, Note 799.230 61.2 V 74.0 -12.8 PK 151 1.0 RB 1 MHz; VB: 3 MHz; Note 373.230 53.1 V 74.0 -20.9 PK 182 1.0 RB 1 MHz; VB: 3 MHz; Peak 248.730 67.8 H 74.0 -6.2 PK 193 2.0 RB 1 MHz; VB: 3 MHz; Peak q77						¥				
373 230 53.1 V 74.0 -20.9 PK 182 1.0 RB 1 MHz;VB 3 MHz;Peak 248.730 67.8 H 74.0 -6.2 PK 193 2.0 RB 1 MHz;VB 3 MHz;Peak q77			V							,
248.730 67.8 H 74.0 -6.2 PK 193 2.0 RB 1 MHz; VB 3 MHz; Peak q77	799.230	61.2	V	74.0	-12.8	PK	151	1.0		
q77 Q	373.230	53.1		74.0	-20.9	PK	182	1.0	RB 1 MHz;V	/B 3 MHz;Peak
378.020 52.9 V 54.0 -1.1 Avg 24 1.3 POS; RB 1 MHz; VB: 3 kHz 378.260 63.5 V 74.0 -10.5 PK 24 1.3 POS; RB 1 MHz; VB: 3 MHz 5530 MHz ac80 120.0 0 <td>248.730</td> <td>67.8</td> <td>Н</td> <td>74.0</td> <td>-6.2</td> <td>PK</td> <td>193</td> <td>2.0</td> <td>RB 1 MHz;V</td> <td>/B 3 MHz;Peak</td>	248.730	67.8	Н	74.0	-6.2	PK	193	2.0	RB 1 MHz;V	/B 3 MHz;Peak
378.260 63.5 V 74.0 -10.5 PK 24 1.3 POS; RB 1 MHz; VB: 3 MHz 5530 MHz ac80 120.0 100.0 60.0 40.0 -10.0 10000 Frequency (MHz) Scans made between 18 - 40 GHz with the measurement antenna moved around the card and its antennas 20										
5530 MHz ac80 120.0 100.0 60.0 60.0 100										
Frequency (MHz) Scans made between 18 - 40 GHz with the measurement antenna moved around the card and its antennas 20	120 100 80 60 40 40	0.0 - 0.0 - 0.0 - 0.0 -								
from the device indicated there were no significant emissions in this frequency range		1000	- hotwoon :	18 - 40 GHz v	vith the me	asurement ar	ntenna move	ed around a	the card and	
	Note:			ted there we	re no sianii	icani cimisan	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	icquenev n	ange	
te 2: For emissions outside of the restricted bands the limit is -27dBm/MHz eirp (68.3dBuV/m). The measurement method required is a peak measurement (RB=1MHz, VB≥3MHz, peak detector).		from the de	vice indica						-	asurements.

Client	ARRIS							Job Number:	JD102669
Madal	00111						T-	Log Number:	T103891
woder.	C61W						Proj	ect Manager:	Christine Krebill
Contact:	Mark Rieger						Project	Coordinator:	-
Standard:	FCC 15.B / F	CC 15.247	15.E					Class:	N/A
Run #6: Ra	adiated Spuri	ous Emissi	ons, 1,000 -	40000 MHz	. Operating I	Node: Wors	e case fror	n Run #5	
	Date of Test:					onfig. Used:			
	est Engineer:	•	-			fig Change:			
I	est Location:	- I Chambei	#/		E	UT Voltage:	120V/60Hz		
Run #6a• I	.ow Channel								
iun nou. I									
Channel:	100		Mode:	n20					
Tx Chain:	4Tx		Data Rate:	MCS0					
Frequency	Level	Pol	15 200	9 / 15E	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
11001.310	49.5	V	54.0	-4.5	AVG	49	1.0	RB 1 MHz;\	/B 10 Hz;Peak
10999.920	60.7	V	74.0	-13.3	PK	49	1.0		/B 3 MHz;Peak
7333.480	47.8	V	54.0	-6.2	AVG	182	1.5		/B 10 Hz;Peak
7333.120	54.2	V	74.0	-19.8	PK	182	1.5		/B 3 MHz;Peak
1248.730	41.4	Н	54.0	-12.6	AVG	186	2.0		/B 10 Hz;Peak
1248.800 5350.060	67.7 49.5	H V	74.0 54.0	-6.3 -4.5	PK	186 247	2.0 2.0		/B 3 MHz;Peak
5350.060	49.5 60.3	V	<u> </u>	-4.5 -13.7	Avg PK	247	2.0		/B 3 kHz;Peak /B 3 MHz;Peak
0000.020	00.0	v	74.0	-10.7	ΪŇ	271	2.0		D J WI 12,1 Eak
5500 MH;	z n20								
	_								
120.	0-								
100.	0-								
-	0								
7 80.	n-								
_ ш оо,	Ŭ	1 VL		. C	(uL	TUTUR	1 1	Line -
L D						*			
(P) 아이 아이 아	U-			LJ 11					1 LJ L
mplitude (d	1					M Munt	Lun		
Ampl			1						
p) 60. dwblitnde 40.		how have all	unterstational	he have been here					
40.	o-Umily	howthereald		-					
40.		how have all	understational	alla have	requency (Mł		10	000	18000



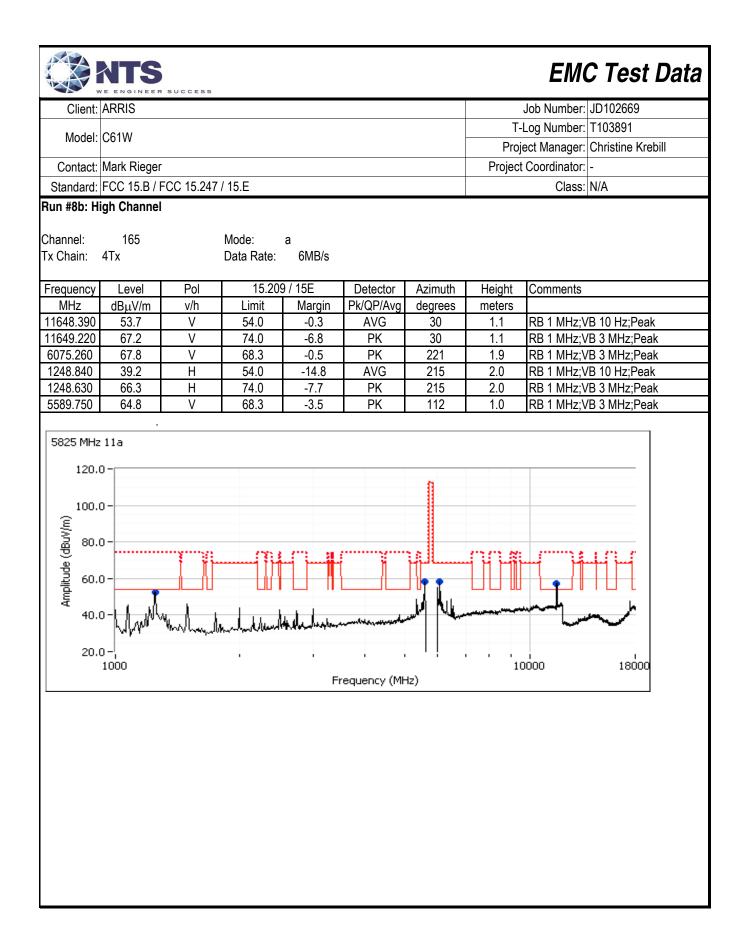
		SUCCESS						ЕМС	C Test Data
Client:	ARRIS							Job Number:	JD102669
Model:	C61W						T-	Log Number:	T103891
wouer.	COTW						Proj	ect Manager:	Christine Krebill
Contact:	Mark Rieger	•					Project	Coordinator:	-
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A
Run #7, Ra	diated Spuri	ous Emissio	ons, 1,000 - /	40,000 MHz	. Operation in	n the 5725-5	5850 MHz B	and	
Te	Date of Test: est Engineer: est Location:	Rafael Vare	las		Con	onfig. Used: ifig Change: UT Voltage:	None		
Run #7a: C	enter Chann	el							
Channel:	157		Mode:	а					
Tx Chain:			Data Rate:	6MB/s					
Frequency	Level	Pol	15.209) / 15E	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
11568.110	53.2	V	54.0	-0.8	AVG	29	1.0	RB 1 MHz;V	B 10 Hz;Peak
11567.850	66.4	V	74.0	-7.6	PK	29	1.0	RB 1 MHz;V	B 3 MHz;Peak
1248.950	41.0	Н	54.0	-13.0	AVG	202	1.9	RB 1 MHz;V	B 10 Hz;Peak
1248.890	69.2	Н	74.0	-4.8	PK	202	1.9		B 3 MHz;Peak
5536.700	67.0	V	68.3	-1.3	PK	101	1.7		B 3 MHz;Peak
6019.730	63.4	V	68.3	-4.9	PK	94	1.1	RB 1 MHz;V	B 3 MHz;Peak
Note:					asurement ar licant emissio				its antennas 20-50cm
Note 1:				-	209 was used			-	asurements.
							-		urement method
lote 2:	required is a	ı peak meası	urement (RB:	=1MHz, VB≥	≥3MHz, peak	detector).			
5785 MHz	:11a								
120.	0								
	-					£1			
100.	o -								
_	-								
2 2 2 80.1	o -								
	-		n	<u></u>	г	ul	สามารถ	u	LCLC
Amplitude (dBuV/m) 90.00	o- 							┞ _╋ ╢	
	o-le le antil	mohund	under Albert	kellen Imin	فيأفره بالاشترو ويلاا المتعري		,	- And and a second	
40.1	Mbear								
-						1			1
40.	0- 1000				; ;	(1)	10	0000	18000

		SUCCESS						ЕМ	C Test Data
Client:	ARRIS							Job Number:	JD102669
Madalı	004111						T-	Log Number:	T103891
Model:	COTW						Proje	ect Manager:	Christine Krebill
Contact:	Mark Rieger						Project	Coordinator:	-
Standard:	FCC 15.B / I	FCC 15.247	/ 15.E					Class:	N/A
Run #7b: C	enter Chan	nel							
Channel:	157		Mode:	11n20					
Tx Chain:			Data Rate:	MCS0					
					1				
Frequency	Level	Pol	15.209		Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		/D 10 D!-
11570.110	53.1	V	54.0	-0.9	AVG	27	1.3		/B 10 Hz;Peak
11570.450 5536.620	64.8	V V	74.0	-9.2	PK	27 89	1.3 1.5		/B 3 MHz;Peak
	66.8	V H	68.3	-1.5 -12.7	PK AVG		2.0		/B 3 MHz;Peak
1248.810 1248.920	41.3 68.8	н Н	54.0 74.0	-12.7	PK	200 200	2.0		′ <u>B 10 Hz;Peak</u> ′B 3 MHz;Peak
6032.660	65.3	V	68.3	-3.0	PK	200	1.5		/B 3 MHz;Peak
Note 1: Note 2:	For emissior For emissior	ns in restricte ns outside of	ed bands, the the restricted	limit of 15.2 bands the	iicant emissio 209 was used limit is -27dBr 23MHz, peak o	which requir n/MHz eirp (es average	and peak me	asurements. urement method
5785 MHz 120,0 (W/Angp) 80,0 mpilitidury 60,0 40,0 20,0		Multin M		Fr	requency (MH				

		SUCCESS						EM	C Test Data
Client:	ARRIS							Job Number:	JD102669
	004114						T-	Log Number:	T103891
Model:	C61W						Proje	ect Manager:	Christine Krebill
Contact:	Mark Rieger	1					Project	Coordinator:	-
Standard:	FCC 15.B / F	-CC 15.247	15.E					Class:	N/A
Run #7c: C	enter Chanr	nel							
Channel:	159		Mode:	11n40					
Tx Chain:			Data Rate:	MCS0					
Frequency	Level	Pol	15.209	/ 15E	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
11591.630	51.9	V	54.0	-2.1	Avg	6	1.2	RB 1 MHz;V	/B 3 kHz;Peak
11591.330	64.0	V	74.0	-10.0	PK	6	1.2		/B 3 MHz;Peak
6439.080	59.2	V	68.3	-9.1	PK	330	1.1		/B 3 MHz;Peak
5568.380	60.1	V	68.3	-8.2	PK	278	1.0		/B 3 MHz;Peak
1248.910	41.3	Н	54.0	-12.7	AVG	198	2.0	RB 1 MHz;V	/B 3 kHz;Peak
1249.110	68.6	Н	74.0	-5.4	PK	198	2.0	RB 1 MHz;V	/B 3 MHz;Peak
6278.100	57.5	V	68.3	-10.8	PK	186	2.0	RB 1 MHz;V	/B 3 MHz;Peak
Note 1:	For emissior For emissior	ns in restricte ns outside of	d bands, the the restricted	limit of 15.2 I bands the	ficant emissio 209 was used limit is -27dBr ≥3MHz, peak o	which requir n/MHz eirp (es average	and peak me	asurements. urement method
5795 MHz 120.0						n			
100.0 (ш/ Дад 80.0									
)'08 (100 (dBuV/m) (100 (dBuV/m)			[]]]					┈ੑੵੵੑੑੑ	+11-1
40.0	WWW '	Mulande	mhaddeed	pulliture water	مۇيچىرىيەردىد ^ر -اىدىرى		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		\sim
20.0	0 −¦ 1000			, Fr	requency (MH	12)	10	0000	18000

		SUCCESS						ЕМС	C Test Data
Client:	ARRIS	SUCCESS						Job Number:	JD102669
								Log Number:	
Model:	C61W							0	Christine Krebill
Contact	Mark Rieger						,	Coordinator:	
							FIUJECI		-
	FCC 15.B / F		/ 15.E					Class:	N/A
Channel: Tx Chain:	2enter Chanr 155 4Tx	lei	Mode: Data Rate:	ac80 VHT0					
Frequency	Level	Pol	15.209	9 / 15E	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	v/h	Limit	Margin	Pk/QP/Avg	degrees	meters		
5611.130	67.2	V	68.3	-1.1	PK	84	1.2	POS; RB 1 M	/Hz; VB: 3 MHz
1539.020	50.4	V	54.0	-3.6	Avg	305	1.0		B 3 kHz;Peak
1538.850	60.5	V	74.0	-13.5	PK	305	1.0		B 3 MHz;Peak
1249.050	45.4	Н	54.0	-8.6	Avg	196	1.8		B 3 kHz;Peak
1249.370	67.0	Н	74.0	-7.0	PK	196	1.8	RB 1 MHz;V	B 3 MHz;Peak
q82	07.0				DI/				
5611.130	67.2	V	68.3	-1.1	PK	84	1.2	1	/Hz; VB: 3 MHz
5984.020	61.6	V	68.3	-6.7	PK	81	1.0		B 3 MHz;Peak
5424.860 5429.510	42.5 53.1	V V	54.0 74.0	-11.5 -20.9	Avg PK	86 86	<u>1.2</u> 1.2		B 3 kHz;Peak B 3 MHz;Peak
5429.510	JJ. I	V	74.0	-20.9	PN	00	1.Z	RD I IVINZ,V	D 3 MITZ, Peak
Note:					asurement ar ficant emissio				its antennas 20-50cn
Note 1:					209 was used				
Note 2:					limit is -27dBr ≥3MHz, peak o	• •	68.3dBuV/m	n). The meas	urement method
5775 MHz	: ac80								
120.1	0								
120.						0			
100.	0-								
	0-								
Amplitude (dBuV/m) 1.08			003	610 B	·····		mm as	errina 8	1.02.0
e de						1	וורין רן ר	TT)T	
<u>귀</u> 60.1 문	•					J∦ ∖			I LI L
						/ 11	بحيود منبعه سان	بالعبيم	<u>v</u>
40.1		howhing	mountheast	keyldestrates	مىلىمىدىيەرمەندەمىر.	, here			\sim
20.1	0_								
20.1	0-'i 1000				i i		11	i 0000	18000
	#			Fi	requency (MH	lz)			
1									
						-			

Model: C61W T-Log Number: T103991 Project Manager: Christine Krebill Project Manager: Christine Krebill Standard: FCC 15.2 / 15.E Class; N/A Run #8: Radiated Spurious Emissions, 1,000 - 40000 MHz. Operating Mode: Worse case from Run #7 Date of Test: 31/2017 0:00 Config. Used: 1 Test Engineer: Rafael Varelas Config. Used: 1 Test Engineer: Rafael Varelas Config. Used: 1 Test Engineer: Rafael Varelas Config. Change: none EUT Voltage: 120V/60Hz Run #8a: Low Channel EUT Voltage: 120V/60Hz Rafael Varelas Comments MHz dBµV/m Vh Limit Margin PK/OP/Avg degrees meters S13.080 68.1 V 68.3 -0.2 PK 96 1.3 RB 1 MHz/VB 3 MHz/Peak S148.090 41.4 H 54.0 -7.7 AVG 192 1.6 RB 1 MHz/VB 3 MHz/Peak S241.570 46.3	Client	ARRIS	SUCCESS						Job Number:	102669
Model: Cost W Project Manager: Christine Krebill Contact: Mark Rieger Project Coordinator: - Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A Lum #8: Radiated Spurious Emissions, 1,000 - 40000 MHz. Operating Mode: Worker Coordinator: - Date of Test: 3/1/2017 0:00 Config. Used: 1 Test Engineer: Rafiel Varelas Config. Used: 1 Test Location: FT Chamber#7 EUT Voltage: 120V/60Hz Atum #8a: Low Channel Stannel: 149 Mode: a Schain: 4Tx Data Rate: 6MB/s Stanson Stanson Frequency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dB ₁₁ /W Vh Limit Margin PK(OP/Avg degrees meters 5513.080 68.1 V 68.3 -0.2 PK 95 1.8 R1 MHz;VB 3 MHz;Peak 1248.940 41.4 <td< td=""><td>Olient.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	Olient.									
Contact: Mark Rieger Project Coordinator: Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A um #8: Radiated Spurious Emissions, 1,000 - 40000 MHz. Operating Mode: Worse case from Run #7 Date of Test: 3/1/2017 0:00 Config. Used: 1 Test Engineen: Rafiel Varelas Config Change: none Test Location: FT Chamber#7 EUT Voltage: 120V/60Hz tun #8a: Low Channel Kchain: thannel: 149 Mode: a x Chain: 4Tx Data Rate: 6MB/s Frequency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBi ₁ V/m v/h Limit Margin PK/OP/Avg degrees meters 5513.080 66.1 V 68.3 -0.2 PK 95 1.8 RB 1 MHz;/VB 3 MHz;Peak 1248.940 41.4 H 54.0 -7.7 AVG 332 1.0 RB 1 MHz;/VB 3 MHz;Peak 1248.940 68.3 V 54.0 -7.7 AVG3	Model:	C61W							-	
Standard: FCC 15.B / FCC 15.247 / 15.E Class: N/A un #8: Radiated Spurious Emissions, 1,000 - 40000 MHz. Operating Mode: Worse case from Run #7 Date of Test: 3/1/2017 0:00 Config. Used: 1 Test Engineer: Rafael Varelas Config Change: none EUT Voltage: 1200/60Hz un #8: Low Channel EUT Voltage: 1200/60Hz un hannel: 149 Mode: a chain: K Comments m#8: Low Channel Marce 6MB/s Comments Marce requency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBu//m vh Limit Margin PK/OP/Avg degrees meters S 5978.750 66.1 V 68.3 -0.2 PK 95 1.8 RB 1 MHz/VB 3 MHz/Peak 248.800 68.3 H 74.0 -5.7 PK 192 1.6 RB 1 MHz/VB 3 MHz/Peak	Orighterati	Mark Diaran						-	-	
un #8: Radiated Spurious Emissions, 1,000 - 40000 MHz. Operating Mode: Worse case from Run #7 Date of Test: 3/1/2017 0:00 Test Engineen: Rafael Varelas Test Location: FT Chamber#7 un #8a: Low Channel hannel: 149 Mode: a x Chain: 4Tx Data Rate: 6MB/s Tequency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin Pk/OP/Avg degrees meters MHz dBµV/m v/h Limit Margin Pk/OP/Avg degrees meters 5513.080 68.1 V 68.3 -0.2 PK 95 1.8 RB 1 MHz;VB 3 MHz;Peak 5978.750 66.1 V 68.3 -2.2 PK 96 1.3 RB 1 MHz;VB 3 MHz;Peak 5424.940 41.4 H 54.0 -12.6 AVG 192 1.6 RB 1 MHz;VB 3 MHz;Peak 5421.570 46.3 V 54.0 -7.7 AVG 332 1.0 RB 1 MHz;VB 3 MHz;Peak 5421.640 56.2 V 74.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 5421.640 56.2 V 74.0 -0.5 AVG 314 1.0 RB 1 MHz;VB 3 MHz;Peak 149.2170 65.3 V 74.0 -8.7 PK 314 1.0 RB 1 MHz;VB 3 MHz;Peak 5421.640 50.2 V 74.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 5421.640 50.2 V 74.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 1492.170 65.3 V 74.0 -8.7 PK 314 1.0 RB 1 MHz;VB 3 MHz;Peak 1492.170 65.3 V 74.0 -8.7 PK 314 1.0 RB 1 MHz;VB 3 MHz;Peak		-						Project		
Date of Test: 3/1/2017 0:00 Config. Used: 1 Test Engineer: Rafael Varelas Config Change: none Test Location: FT Chamber#7 EUT Voltage: 120V/60Hz un #8a: Low Channel hannel: 149 Mode: a x Chain: 4Tx Data Rate: 6MB/s requency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBµ//m v/h Limit Margin Pk/QP/Avg degrees meters 5513.080 68.1 V 68.3 -0.2 PK 95 1.8 RB 1 MHz;VB 3 MHz;Peak 5613.080 68.1 V 68.3 -2.2 PK 96 1.3 RB 1 MHz;VB 3 MHz;Peak 1248.900 68.3 H 74.0 -5.7 PK 192 1.6 RB 1 MHz;VB 3 MHz;Peak 6421.570 46.3 V 54.0 -7.7 AVG 332 1.0 RB 1 MHz;VB 3 MHz;Peak 6513 V 54.0 -0.5 AVG 314 1.0 RB 1 MHz;VB 3 MHz;Peak 1491.870<					40000 1411	0	A			N/A
Test Engineer: Rafael Varelas Test Location: FT Chamber#7 Config Change: none EUT Voltage: 120V/60Hz un #8a: Low Channel Mode: a x Chain: 4Tx Mode: a Data Rate: 6MB/s requency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBµ//m v/h Limit Margin Pk/QP/Avg degrees meters 5513.080 68.1 V 68.3 -0.2 PK 95 1.8 RB 1 MHz;VB 3 MHz;Peak 5978.750 66.1 V 68.3 -2.2 PK 96 1.3 RB 1 MHz;VB 3 MHz;Peak 1248.800 68.3 H 74.0 -5.7 PK 192 1.6 RB 1 MHz;VB 10 Hz;Peak 4248.800 68.3 H 74.0 -5.7 PK 332 1.0 RB 1 MHz;VB 10 Hz;Peak 5421.640 56.2 V 74.0 -17.8 PK 332 1.0 RB 1 MHz;VB 10 Hz;Peak 1491.870 53.5 V 54.0 -0.5 AVG 314 1.0 RB 1 MHz;VB 3 MHz;Peak 1492.170 65.3 V					40000 MH2				n Run #7	
Test Location: FT Chamber#7 EUT Voltage: 120V/60Hz tun #8a: Low Channel Mode: a x Chain: 4Tx Mode: 6000 x Chain: 4Tx Data Rate: 6MB/s Trequency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBitV/m v/h Limit Margin Pk/QP/Avg degrees meters 5513.080 66.1 V 68.3 -0.2 PK 95 1.8 RB 1 MHz;VB 3 MHz;Peak 5978.750 66.1 V 68.3 -2.2 PK 96 1.3 RB 1 MHz;VB 10 Hz;Peak 1248.940 41.4 H 54.0 -12.6 AVG 192 1.6 RB 1 MHz;VB 10 Hz;Peak 1248.940 68.3 H 74.0 -5.7 PK 192 1.6 RB 1 MHz;VB 10 Hz;Peak 5421.570 46.3 V 54.0 -7.7 AVG 332 1.0 RB 1 MHz;VB 3 MHz;Peak 5421.570 56.2 V 74.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 1491.870 53.5										
thannel: 149 Mode: a Data Rate: 6MB/s Trequency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dB _L U/m v/h Limit Margin Pk/OP/Avg degrees meters 5513.080 66.1 V 68.3 -0.2 PK 95 1.8 RB 1 MHz;VB 3 MHz;Peak 5978.750 66.1 V 68.3 -2.2 PK 96 1.3 RB 1 MHz;VB 3 MHz;Peak 1248.940 41.4 H 54.0 -12.6 AVG 192 1.6 RB 1 MHz;VB 3 MHz;Peak 5421.570 46.3 V 54.0 -7.7 AVG 332 1.0 RB 1 MHz;VB 10 Hz;Peak 5421.640 53.5 V 54.0 -7.7 AVG 332 1.0 RB 1 MHz;VB 10 Hz;Peak 1499.870 53.5 V 54.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 1492.170 65.3 V 74.0 -8.7 PK 314 1.0 RB 1 MHz;VB 3 MHz;Peak <td></td> <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		•								
thannel: 149 Mode: a Data Rate: 6MB/s Trequency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dB _L U/m v/h Limit Margin Pk/OP/Avg degrees meters 5513.080 66.1 V 68.3 -0.2 PK 95 1.8 RB 1 MHz;VB 3 MHz;Peak 5978.750 66.1 V 68.3 -2.2 PK 96 1.3 RB 1 MHz;VB 3 MHz;Peak 1248.940 41.4 H 54.0 -12.6 AVG 192 1.6 RB 1 MHz;VB 3 MHz;Peak 5421.570 46.3 V 54.0 -7.7 AVG 332 1.0 RB 1 MHz;VB 10 Hz;Peak 5421.640 53.5 V 54.0 -7.7 AVG 332 1.0 RB 1 MHz;VB 10 Hz;Peak 1499.870 53.5 V 54.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 1492.170 65.3 V 74.0 -8.7 PK 314 1.0 RB 1 MHz;VB 3 MHz;Peak <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td>							-			
x Chain: 4Tx Data Rate: 6MB/s requency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBµV/m V/h Limit Margin Pk/QP/Avg degrees meters 5513.080 68.1 V 68.3 -0.2 PK 95 1.8 RB 1 MHz;VB 3 MHz;Peak 1248.940 41.4 H 54.0 -12.6 AVG 192 1.6 RB 1 MHz;VB 3 MHz;Peak 1248.800 68.3 H 74.0 -5.7 PK 192 1.6 RB 1 MHz;VB 3 MHz;Peak 5421.570 46.3 V 54.0 -7.7 AVG 332 1.0 RB 1 MHz;VB 3 MHz;Peak 5421.640 56.2 V 74.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 1491.870 53.5 V 54.0 -0.5 AVG 314 1.0 RB 1 MHz;VB 10 Hz;Peak 1492.170 65.3 V 74.0 -8.7 PK 314 1.0 RB 1 MHz;VB 3 MHz;Peak 1492.170 65.3 V 74.0 -8.7 PK 314 1.0 RB 1 MHz;VB 3 MHz;Peak	un #8a: L	ow Channel								
Frequency Level Pol 15.209 / 15E Detector Azimuth Height Comments MHz dBµV/m v/h Limit Margin PK/QP/Avg degrees meters 5513.080 68.1 V 68.3 -0.2 PK 95 1.8 RB 1 MHz;VB 3 MHz;Peak 5978.750 66.1 V 68.3 -2.2 PK 96 1.3 RB 1 MHz;VB 3 MHz;Peak 1248.940 41.4 H 54.0 -12.6 AVG 192 1.6 RB 1 MHz;VB 3 MHz;Peak 1248.800 68.3 H 74.0 -5.7 PK 192 1.6 RB 1 MHz;VB 3 MHz;Peak 5421.570 46.3 V 54.0 -7.7 AVG 332 1.0 RB 1 MHz;VB 3 MHz;Peak 5421.640 56.2 V 74.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 1491.870 53.5 V 54.0 -0.5 AVG 314 1.0 RB 1 MHz;VB 3 MHz;Peak <td>hannel:</td> <td>149</td> <td></td> <td>Mode:</td> <td>а</td> <td></td> <td></td> <td></td> <td></td> <td></td>	hannel:	149		Mode:	а					
MHz dBµV/m V/h Limit Margin PK/QP/Avg degrees meters 5513.080 68.1 V 68.3 -0.2 PK 95 1.8 RB 1 MHz;VB 3 MHz;Peak 5978.750 66.1 V 68.3 -2.2 PK 96 1.3 RB 1 MHz;VB 3 MHz;Peak 1248.940 41.4 H 54.0 -12.6 AVG 192 1.6 RB 1 MHz;VB 10 Hz;Peak 1248.800 68.3 H 74.0 -5.7 PK 192 1.6 RB 1 MHz;VB 3 MHz;Peak 5421.570 46.3 V 54.0 -7.7 AVG 332 1.0 RB 1 MHz;VB 10 Hz;Peak 5421.640 56.2 V 74.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 1491.870 53.5 V 54.0 -0.5 AVG 314 1.0 RB 1 MHz;VB 3 MHz;Peak 5745 MHz 11a		4Tx		Data Rate:	6MB/s					
MHz dBµV/m V/h Limit Margin Pk/QP/Avg degrees meters 5513.080 68.1 V 68.3 -0.2 PK 95 1.8 RB 1 MHz;VB 3 MHz;Peak 5978.750 66.1 V 68.3 -2.2 PK 96 1.3 RB 1 MHz;VB 3 MHz;Peak 1248.940 41.4 H 54.0 -12.6 AVG 192 1.6 RB 1 MHz;VB 10 Hz;Peak 1248.800 68.3 H 74.0 -5.7 PK 192 1.6 RB 1 MHz;VB 3 MHz;Peak 5421.570 46.3 V 54.0 -7.7 AVG 332 1.0 RB 1 MHz;VB 10 Hz;Peak 5421.640 56.2 V 74.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 1491.870 53.5 V 54.0 -0.5 AVG 314 1.0 RB 1 MHz;VB 3 MHz;Peak 5745 MHz 11a	requencv	Level	Pol	15.20	9 / 15E	Detector	Azimuth	Height	Comments	
5513.080 68.1 V 68.3 -0.2 PK 95 1.8 RB 1 MHz;VB 3 MHz;Peak 5978.750 66.1 V 68.3 -2.2 PK 96 1.3 RB 1 MHz;VB 3 MHz;Peak 1248.940 41.4 H 54.0 -12.6 AVG 192 1.6 RB 1 MHz;VB 10 Hz;Peak 1248.800 68.3 H 74.0 -5.7 PK 192 1.6 RB 1 MHz;VB 3 MHz;Peak 5421.570 46.3 V 54.0 -7.7 AVG 332 1.0 RB 1 MHz;VB 10 Hz;Peak 5421.640 56.2 V 74.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 1491.870 53.5 V 54.0 -0.5 AVG 314 1.0 RB 1 MHz;VB 3 MHz;Peak 1492.170 65.3 V 74.0 -8.7 PK 314 1.0 RB 1 MHz;VB 3 MHz;Peak 5745 MHz 11a										
1248.940 41.4 H 54.0 -12.6 AVG 192 1.6 RB 1 MHz;VB 10 Hz;Peak 1248.800 68.3 H 74.0 -5.7 PK 192 1.6 RB 1 MHz;VB 3 MHz;Peak 5421.570 46.3 V 54.0 -7.7 AVG 332 1.0 RB 1 MHz;VB 10 Hz;Peak 5421.640 56.2 V 74.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 5421.640 56.2 V 74.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 5421.640 56.2 V 74.0 -0.5 AVG 314 1.0 RB 1 MHz;VB 3 MHz;Peak 11491.870 53.5 V 54.0 -0.5 AVG 314 1.0 RB 1 MHz;VB 3 MHz;Peak 11492.170 65.3 V 74.0 -8.7 PK 314 1.0 RB 1 MHz;VB 3 MHz;Peak 5745 MHz 11a	5513.080		V	68.3	-0.2	PK	95	1.8	RB 1 MHz;V	/B 3 MHz;Peak
1248.800 68.3 H 74.0 -5.7 PK 192 1.6 RB 1 MHz;VB 3 MHz;Peak 5421.570 46.3 V 54.0 -7.7 AVG 332 1.0 RB 1 MHz;VB 10 Hz;Peak 5421.640 56.2 V 74.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 11491.870 53.5 V 54.0 -0.5 AVG 314 1.0 RB 1 MHz;VB 10 Hz;Peak 11492.170 65.3 V 74.0 -8.7 PK 314 1.0 RB 1 MHz;VB 3 MHz;Peak 5745 MHz 11a										
5421.570 46.3 V 54.0 -7.7 AVG 332 1.0 RB 1 MHz;VB 10 Hz;Peak 5421.640 56.2 V 74.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 11491.870 53.5 V 54.0 -0.5 AVG 314 1.0 RB 1 MHz;VB 10 Hz;Peak 11492.170 65.3 V 74.0 -8.7 PK 314 1.0 RB 1 MHz;VB 3 MHz;Peak 5745 MHz 11a										
5421.640 56.2 V 74.0 -17.8 PK 332 1.0 RB 1 MHz;VB 3 MHz;Peak 11491.870 53.5 V 54.0 -0.5 AVG 314 1.0 RB 1 MHz;VB 10 Hz;Peak 11492.170 65.3 V 74.0 -8.7 PK 314 1.0 RB 1 MHz;VB 3 MHz;Peak 5745 MHz 11a 100.0 100.0 60.0 60.0 90 60.0 60.0										
11491.870 53.5 V 54.0 -0.5 AVG 314 1.0 RB 1 MHz;VB 10 Hz;Peak 11492.170 65.3 V 74.0 -8.7 PK 314 1.0 RB 1 MHz;VB 3 MHz;Peak 5745 MHz 11a 100.0 100.0 60.0 0 0 0 </td <td></td>										
11492.170 65.3 V 74.0 -8.7 PK 314 1.0 RB 1 MHz;VB 3 MHz;Peak 5745 MHz 11a 120.0 100.0 00.0 00.0 60.0										
5745 MHz 11a										
120.0 - 100.0 - (W/NgP) 80.0 - 60.0 - (W/NgP) 60.0 - (W/NgP) 60.0 - (W/NgP)	11102.110	00.0	v	71.0	0.1		011	1.0	110 1 11112,1	D 0 11112,1 001
100.0- 100.0- 0.00-	5745 MHz	11a								
100.0-										
Bolo - Color	120.0	0-								
-0.08 (gg / l)	100.0	_								
		0-								
	4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	n								
	8 00.0			004	m a	·····	tal –	nn ø	(****) ž	151.5
	g S 60 (n –		ш III					Π_Π	
	분 00.0	° – •								ILI L
1000 R (100 Vib as) - by L by a Martin Language and a second sec		n-h-h-ulli		1. 1			JP N.		- Anore	
M h h where we have a second seco	10.0	- MM A	unling	makenteral	البرار المراسي	فالم ومدينية وسيا المدمد ويران	·		موريونها	\sim
20.0-		n								
1000 10000 18000	20.1								000	18000
Frequency (MHz)					F	requency (Mł	Hz)			



L				
ĺ	Client:	ARRIS	Job Number:	JD102669
ĺ	Model:	CE1W	T-Log Number:	T103891
	MOUEI.	COTW	Project Manager:	Christine Krebill
ĺ	Contact:	Mark Rieger	Project Coordinator:	-
ľ	Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

FCC 15.407(UNII) Antenna Port Measurements Power, PSD, Bandwidth and Spurious Emissions

Test Specific Details

TS

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Power, 5150 - 5250MHz	15.407(a) (1) (iv)	Pass	a: 21.7 dBm (147.8 mW) n20: 21.9 dBm (156.6 mW) n40: 23.4 dBm (217.6 mW) ac80: 19.7 dBm (92.4 mW)
1	PSD, 5150 - 5250MHz	15.407(a) (1) (iv)	Pass	a: 10.3 dBm/MHz n20: 10.3 dBm/MHz n40: 10 dBm/MHz ac80: 3.0 dBm/MHz

General Test Configuration

When measuring the conducted emissions from the EUT's antenna port, the antenna port of the EUT was connected to the spectrum analyzer or power meter via a suitable attenuator to prevent overloading the measurement system. All measurements are corrected to allow for the external attenuators and cables used.

Ambient Conditions:

Temperature:	25 °C
Rel. Humidity:	40 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

	NTS Ve engineer success	EM	C Test Data
Client:	ARRIS	Job Number:	JD102669
Model:	CEAN	T-Log Number:	T103891
woder.	Colw	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

Procedure Comments:

Measurements performed in accordance with FCC KDB 789033 D01

	Mode	Data Rate	Duty Cycle (x)	Constant DC?	T (ms)	Pwr Cor Factor*	Lin Volt Cor Factor**	Min VBW for FS (Hz)
1SS	11a	6MB/s	0.99	Yes	1.952	0	0	10
1SS	11n20	MCS0	0.99	Yes	1.953	0	0	10
1SS	n40	MCS0	0.9798	Yes	0.971	0.0885442	0.2	1030
1SS	ac80	VHT0	0.96	Yes	0.46	0.1848341	0.4	2174

Sample Notes

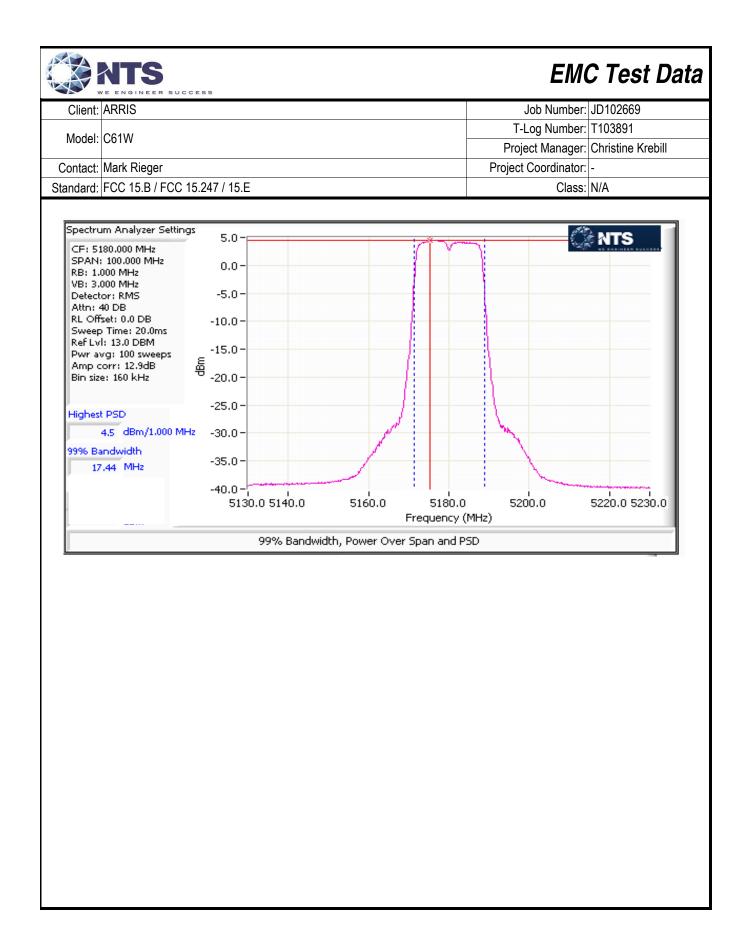
Sample S/N: G62DA7BU20005B Driver: -

		RSUCCESS						ЕМ	C Test	Data
Client:	ARRIS							Job Number:	JD102669	
Madalı	004114						T-	Log Number:	T103891	
Model:	COIV						Proj	ect Manager:	Christine Kr	ebill
Contact:	Mark Riege	r					Project	Coordinator:	-	
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
[Te	Date of Test: st Engineer:	Atput Power 3/8/2017 0:(Joseph Cad FT Lab #4B)0 ligal	Spectral De	Co) Systems Config. Used: nfig Change: EUT Voltage:	none			
Note 1:	Power meas	sured using a	a gated aver	age power n	neter					
Note 2:	2*span/RBV duty cycle.	V, RMS deteo This is based	ctor, trace a d on 10log(1	verage 100 t /x), where x	races, power is the duty cy	RBW=1MHz, V averaging on rcle. (method	. The meas SA-2 of AN	urements we SI C63.10)	re adjusted o	corrected for
Note 5:	(in linear ter mode of the the limits is chain. If the	rms). The an MIMO devic the highest g	tenna gain e. If the sig ain of the in coherent the	used to deter nals on the r dividual chai en the effecti	rmine the EIR non-coherent ins and the E ive antenna g	alculated from P and limits for between the t RP is the sum ain is the sum	or PSD/Outp transmit cha n of the proc	out power dep ins then the lucts of gain a	pends on the gain used to and power or	operating determine n each
Antenna Ga	ain Informat	ion								
Freq		Antenna Gair 2	n (dBi) / Cha 3	in 4	BF	MultiChain Legacy	CDD	Sectorized / Xpol	Dir G (PWR)	Dir G (PSD)
5150-5250					No	Yes	Yes	No	0.70	6.70
5250-5350	Re	fer to Operat	ional Descri	ntion	No	Yes	Yes	No	0.60	6.50
5470-5725				ption	No	Yes	Yes	No	1.00	6.80
5725-5825					No	Yes	Yes	No	0.70	6.60
	Min # of spa Max # of spa	ort CDD mod atial streams: atial streams: d measurem	1 4	g performe	d using 1 sp	atial stream				

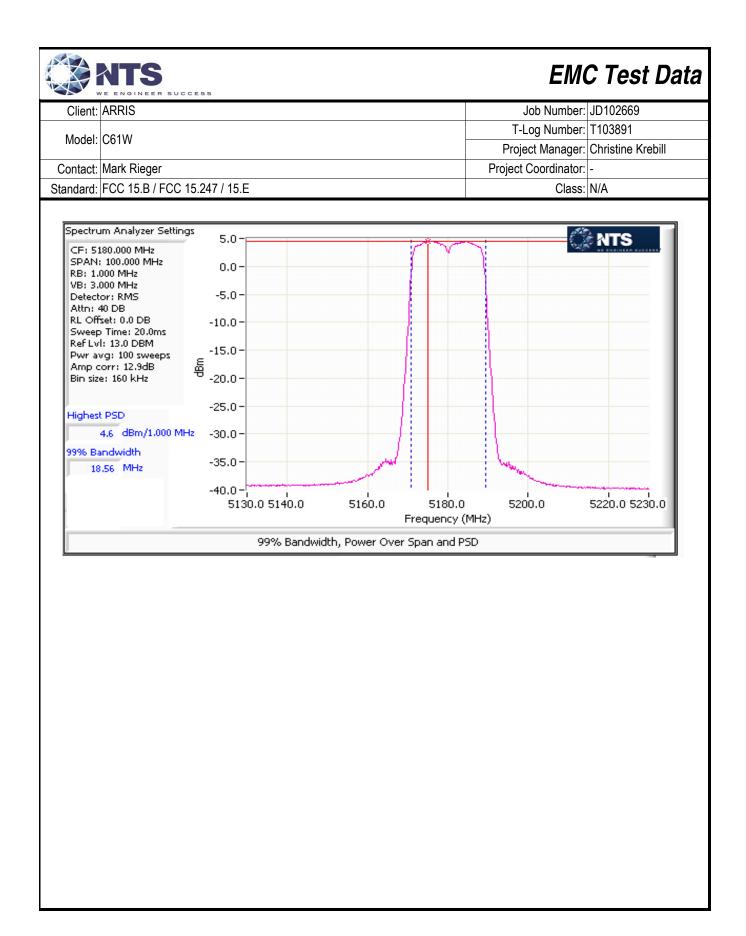
	NTS VE ENGINEER SUCCESS	EM	C Test Data
Client:	ARRIS	Job Number:	JD102669
Model:	C61W	T-Log Number:	T103891
woder.	Corw	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A
Notes:	BF = beamforming mode supported, Multichain Legacy = 802.11 legacy dat CDD = Cyclic Delay Diversity (or Cyclic Shift Diversity) modes supported, S cross polarized. Dir G (PWR) = total gain (Gant + Array Gain) for power calculations; GA (PS FCC KDB 662911. Depending on the modes supported, the Array Gain val value.	ectorized / Xpol = antenn SD) = total gain for PSD	as are sectorized or calculations based on
Notes:	Array gain for power/psd calculated per KDB 662911 D01.		
Notes:	For systems with Beamforming and CDD, choose one the following options: Option 1: Delays are optimized for beamforming, rather than being selected calculated based on beamforming criteria. Option 2: Antennas are paired for beamforming, and the pairs are configure	d from cyclic delay table o	

FCC UNII-1	Limits	Pwr	PSD
	Outdoor AP	30	17
	Indoor AP	30	17
Х	Station (e.g. Client)	24	11
	Outdoor AP (>30° Elv.)	21	-

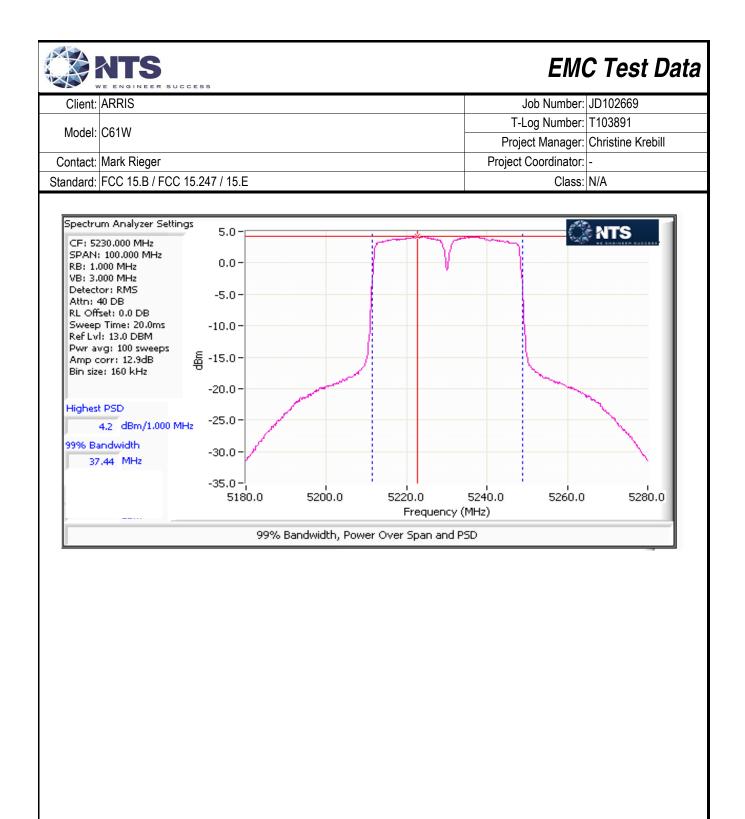
Modal	ARRIS							lob Number:		
mouer.	C61W							.og Number:		
							_	-	Christine Kre	bill
	Mark Rieger						Project	Coordinator:		
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
IMO Devi	ce - 5150-52	50 MHz Ban	d - ECC							
Mode:	11a		u-100				Max	EIRP (mW):	173.6	
requency	Chain	Software	26dB BW	Duty Cycle	Power ¹	Total	Power		Max Power	Result
(MHz)	Chain	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	Resul
	1				15.7					
5180	3	q62		100	15.5	147.8	21.7	24.0		Pass
	4	4-			15.8		147.0 21.7	24.0		
	2				15.7					
	1				15.5 15.5					
5200	3 4	q62		100	15.5	146.1	21.6	24.0	0.148	Pass
	2				15.7					
					13.7				-	
					15.3					
	1			100	15.3 15.4					_
5240		q62		100	15.4	142.0	21.5	24.0		Pass
5240	1 3	q62		100		142.0	21.5	24.0		Pass
150-5250 <u>Mode:</u> requency	1 3 4 2 PSD - FCC 11a	Software	99% BW (MHz)	Duty Cycle	15.4 15.7 15.6 PSD	Total	PSD ²	FCC	Limit	Pass
150-5250 Mode:	1 3 4 2 PSD - FCC 11a Chain		99% BW (MHz)		15.4 15.7 15.6 PSD dBm/MHz			FCC	Limit /MHz	
150-5250 Mode: requency (MHz)	1 3 4 2 PSD - FCC 11a	Software Setting		Duty Cycle %	15.4 15.7 15.6 PSD	Total mW/MHz	PSD ² dBm/MHz	FCC dBm	/MHz	Resul
150-5250 <u>Mode:</u> requency	1 3 4 2 PSD - FCC 11a Chain 1 3 4	Software		Duty Cycle	15.4 15.7 15.6 PSD dBm/MHz 4.1 4.0 4.5	Total	PSD ²	FCC dBm		
150-5250 Mode: requency (MHz)	1 3 4 2 PSD - FCC 11a Chain 1 3 4 2	Software Setting		Duty Cycle %	15.4 15.7 15.6 PSD dBm/MHz 4.1 4.0 4.5 4.2	Total mW/MHz	PSD ² dBm/MHz	FCC dBm	/MHz	Resul
150-5250 Mode: requency (MHz)	1 3 4 2 PSD - FCC 11a Chain 1 3 4 2 1	Software Setting		Duty Cycle %	15.4 15.7 15.6 PSD dBm/MHz 4.1 4.0 4.5 4.2 4.1	Total mW/MHz	PSD ² dBm/MHz	FCC dBm	/MHz	Resul
150-5250 <u>Mode:</u> requency (MHz) 5180	1 3 4 2 PSD - FCC 11a Chain 1 3 4 2 1 3	Software Setting q62		Duty Cycle % 99	15.4 15.7 15.6 PSD dBm/MHz 4.1 4.0 4.5 4.2 4.1 4.2	Total mW/MHz 10.5	PSD ² dBm/MHz 10.2	FCC dBm 1(/MHz).3	Resul
150-5250 Mode: requency (MHz)	1 3 4 2 PSD - FCC 11a Chain 1 3 4 2 1 3 4	Software Setting		Duty Cycle %	15.4 15.7 15.6 PSD dBm/MHz 4.1 4.0 4.5 4.2 4.1 4.2 4.3	Total mW/MHz	PSD ² dBm/MHz	FCC dBm 1(/MHz	Resul
150-5250 <u>Mode:</u> requency (MHz) 5180	1 3 4 2 PSD - FCC 11a Chain 1 3 4 2 1 3 4 2	Software Setting q62		Duty Cycle % 99	15.4 15.7 15.6 PSD dBm/MHz 4.1 4.0 4.5 4.2 4.1 4.2 4.3 4.4	Total mW/MHz 10.5	PSD ² dBm/MHz 10.2	FCC dBm 1(/MHz).3	Resul
150-5250 Mode: Trequency (MHz) 5180	1 3 4 2 PSD - FCC 11a Chain 1 3 4 2 1 3 4 2 1 3	Software Setting q62 q62		Duty Cycle % 99 99	15.4 15.7 15.6 PSD dBm/MHz 4.1 4.0 4.5 4.2 4.1 4.2 4.3 4.4 4.1	Total mW/MHz 10.5 10.6	PSD ² dBm/MHz 10.2 10.3	FCC dBm 1(/MHz).3).3	Resul [®] Pass Pass
150-5250 <u>Mode:</u> requency (MHz) 5180	1 3 4 2 PSD - FCC 11a Chain 1 3 4 2 1 3 4 2	Software Setting q62		Duty Cycle % 99	15.4 15.7 15.6 PSD dBm/MHz 4.1 4.0 4.5 4.2 4.1 4.2 4.3 4.4	Total mW/MHz 10.5	PSD ² dBm/MHz 10.2	FCC dBm 1(/MHz).3	Result



Model Contact Standard /IIMO Devi Mode: Frequency	ARRIS C61W Mark Rieger FCC 15.B / ce - 5150-52							lala Nicorala aut		
Contact Standard IIMO Devi Mode: Frequency	Mark Rieger FCC 15.B /								JD102669	
Contact Standard IIMO Devi Mode:	Mark Rieger FCC 15.B /							og Number:		
Standard IIMO Devi Mode: Frequency	FCC 15.B /						-	-	Christine Kre	bill
IIMO Devi Mode: Frequency	Į.	FCC 15.247					Project	Coordinator:		
Mode: requency	ce - 5150-52		/ 15.E					Class:	N/A	
requency		50 MHz Ban	d - FCC							
		Software	26dB BW	Dut Out	D 1	Tatal	Max Power	EIRP (mW):	184 Max Power	
(MHz)	Chain	Setting	200B BVV (MHz)	Duty Cycle %	Power ¹ dBm	mW	dBm	dBm	(W)	Result
(101112)	1	Oetting		70	авлі 15.7	TTIVV	UDIII	UDIII	(**)	
	3				15.7					_
5180	4	q63		100	15.8	151.2	21.8	24.0		Pass
	2				15.9					
	1				15.9					
5200	3	q63		100	15.8	156.6	21.9	24.0	0.157	Pass
5200	4	405		100	16.1	150.0	21.9	24.0	0.157	F d 5 5
	2				15.9					
	1				15.6					
5240	3	q63		100	15.7	149.5	21.7	24.0		Pass
	4	400			15.8 15.8					
150-5250 Mode:	PSD - FCC									
	1	Osthurse	000/ DW		505			500		
	1	Software	99% BW	Duty Cycle	PSD		PSD ²		Limit	Result
requency (MHz)	Chain	Software Setting	99% BW (MHz)	Duty Cycle %	dBm/MHz	Total mW/MHz	PSD ² dBm/MHz		Limit /MHz	Result
	Chain 1 3 4				dBm/MHz 4.1 4.5			dBm		Result
(MHz)	Chain 1 3 4 2	Setting		%	dBm/MHz 4.1 4.5 4.6	mW/MHz	dBm/MHz	dBm	/MHz	
(MHz) 5180	Chain 1 3 4 2 1	Setting q63		99	dBm/MHz 4.1 4.5 4.6 4.3	mW/MHz 10.8	dBm/MHz 10.3	<u>dBm</u> 10	/MHz).3	Pass
(MHz)	Chain 1 3 4 2 1 3	Setting		%	dBm/MHz 4.1 4.5 4.6 4.3 4.1	mW/MHz	dBm/MHz	<u>dBm</u> 10	/MHz	
(MHz) 5180	Chain 1 3 4 2 1 3 4	Setting q63		99	dBm/MHz 4.1 4.5 4.6 4.3	mW/MHz 10.8	dBm/MHz 10.3	<u>dBm</u> 10	/MHz).3	Pass
5180	Chain 1 3 4 2 1 3	Setting q63		99	dBm/MHz 4.1 4.5 4.6 4.3 4.1 4.2	mW/MHz 10.8	dBm/MHz 10.3	<u>dBm</u> 10	/MHz).3	Pass



		SUCCESS								
Client:	ARRIS						, i	Job Number:	JD102669	
Model:	C61W							og Number:		
									Christine Kre	bill
	Mark Rieger						Project	Coordinator:		
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
MIMO Devi Mode:	ce - 5150-52	50 MHz Ban	d - FCC				Max		128.1	
Frequency	n40	Software	26dB BW	Duty Cycle	Power	Total	Power ¹	EIRP (mW):	Max Power	
(MHz)	Chain	Setting	(MHz)	Muly Cycle	dBm	mW	dBm	dBm	(W)	Result
()	1		(70	14.4	11177		GDIII	()	
5100	3	aE7		100	14.1	100.0	20.4	24.0		Deec
5190	4	q57		100	14.3	109.0	20.4	24.0		Pass
	2				14.6				0.109	
	1				17.4				0.100	
5230	3	q70		100	17.1 17.7	217.6	23.4	24.0		Pass
	4									
5150-5250 Mode:					17.2	I				
5 150-5250 Mode: Frequency (MHz)	PSD - FCC	Software Setting	99% BW (MHz)	Duty Cycle %	PSD dBm/MHz	Total mW/MHz	PSD ² dBm/MHz		Limit /MHz	Result
Mode: Frequency	PSD - FCC n40				PSD			dBm		Result Pass



		SUCCESS						EM	C Test	Data
Client:	ARRIS							lob Number:	JD102669	
Madal	C61W						T-L	og Number:	T103891	
woder.	COIV						Proje	ct Manager:	Christine Kre	bill
Contact:	Mark Rieger	•					Project	Coordinator:	-	
Standard:	FCC 15.B / I	FCC 15.247	/ 15.E					Class:	N/A	
	ce - 5150-52	50 MHz Ban	d - FCC							
Mode:	ac80							EIRP (mW):		
Frequency	Chain	Software	26dB BW	Duty Cycle			Power ¹		Max Power	Result
(MHz)		Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	
	1				13.1					
5210	3	q54		96	13.8 13.3	92.4	19.7	24.0	0.092	Pass
	2				13.6					
Mode: requency	PSD - FCC ac80 Chain	Software	99% BW	Duty Cycle			PSD ²		Limit	Result
(MHz)		Setting	(MHz)	%	dBm/MHz	mW/MHz	dBm/MHz	dBm	/MHz	
5210	1 3 4 2	q54		96	-3.6 -2.8 -3.4 -3.0	2.0	3.0	10).3	Pass
	um Analyzer									
SPAN RB: 1 VB: 3 Detec Attn: RL O	210.000 MHz 4: 120.000 MHz .000 MHz .000 MHz ttor: RMS 40 DB ffset: 0.0 DB ffset: 0.0 DB p Time: 20.0r vl: 10.0 DBM	-1 -1 ns	0.0 - -5.0 - 10.0 - 15.0 - 20.0 -							
Ref L' Pwr a Amp Bin si Highe	avg: 100 swee corr: 12.5dB ze: 192 kHz st PSD	چ	25.0 -							
Ref L' Pwr a Amp Bin si Highe	corr: 12.5dB ze: 192 kHz st PSD -2,8 dBm/1.1	چ								
Ref L Pwr a Bin si Highe 99% E	corr: 12.5dB ze: 192 kHz st PSD -2.8 dBm/1.0 andwidth	· 특 -2 -3 000 MHz -3	30.0 - 35.0 -							
Ref L Pwr : Amp Bin si Highe 99% E 7	corr: 12.5dB ze: 192 kHz st PSD -2.8 dBm/1.0 Bandwidth 5.26 MHz	· 특 -2 -3 000 MHz -3	30.0-							
Ref L Pwr a Amp Bin si Highe 99% E 7 Powe 24	corr: 12.5dB ze: 192 kHz st PSD -2.8 dBm/1.0 andwidth	· 특 -2 -3 000 MHz -3 -4	30.0 - 35.0 -	51	180.0 5	i200.0 Frequency	5220.0 (MHz)	5240.0	527	- - -0.0
Ref L Pwr : Amp Bin si Highe 99% E 7 Powe	corr: 12.5dB ze: 192 kHz st PSD -2.8 dBm/1.0 andwidth 5.26 MHz r Over Span .025 mW	· 특 -2 -3 000 MHz -3 -4	30.0 - 35.0 - 40.0 - 45.0 - 5150.0	51 6 Bandwidth,		Frequency	(MHz)	5240.0	527	

L				
ſ	Client:	ARRIS	Job Number:	JD102669
	Model:	C61W	T-Log Number:	T103891
	MOUEI.	COTW	Project Manager:	Christine Krebill
	Contact:	Mark Rieger	Project Coordinator:	-
	Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

FCC 15.407(UNII) Antenna Port Measurements Power, PSD, Bandwidth and Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Power, 5150 - 5250MHz	15.407(a) (1) (iv)	Pass	n20: 22 dBm (158.5 mW) n40: 23.3 dBm (215.1 mW) ac80: 21 dBm (126.2 mW)
1	PSD, 5150 - 5250MHz	15.407(a) (1) (iv)	Pass	n20: 10.3 dBm/MHz n40: 10 dBm/MHz ac80: 4.1 dBm/MHz

General Test Configuration

When measuring the conducted emissions from the EUT's antenna port, the antenna port of the EUT was connected to the spectrum analyzer or power meter via a suitable attenuator to prevent overloading the measurement system. All measurements are corrected to allow for the external attenuators and cables used.

Ambient Conditions:

Temperature:	22.6 °C
Rel. Humidity:	41 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

	NTS NE ENGINEER SUCCESS	EMC Test Data
Client:	ARRIS	Job Number: JD102669
Model:	C61W	T-Log Number: T103891
wouer.	Colw	Project Manager: Christine Krebill
Contact:	Mark Rieger	Project Coordinator: -
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class: N/A

Procedure Comments:

Measurements performed in accordance with FCC KDB 789033 D01

	Mode	Data Rate	Duty Cycle (x)	Constant DC?	T (ms)	Pwr Cor Factor*	Lin Volt Cor Factor**	Min VBW for FS (Hz)
1SS	11n20	MCS0	0.99	Yes	1.953	0	0	10
1SS	n40	MCS0	0.9798	Yes	0.971	0.0885442	0.2	1030
1SS	ac80	VHT0	0.96	Yes	0.46	0.1848341	0.4	2174

Note - for antenna port measurements, the EUT was operated in the non-TxBF mode

Sample Notes

Sample S/N: G62DA7BU20005B Driver: -

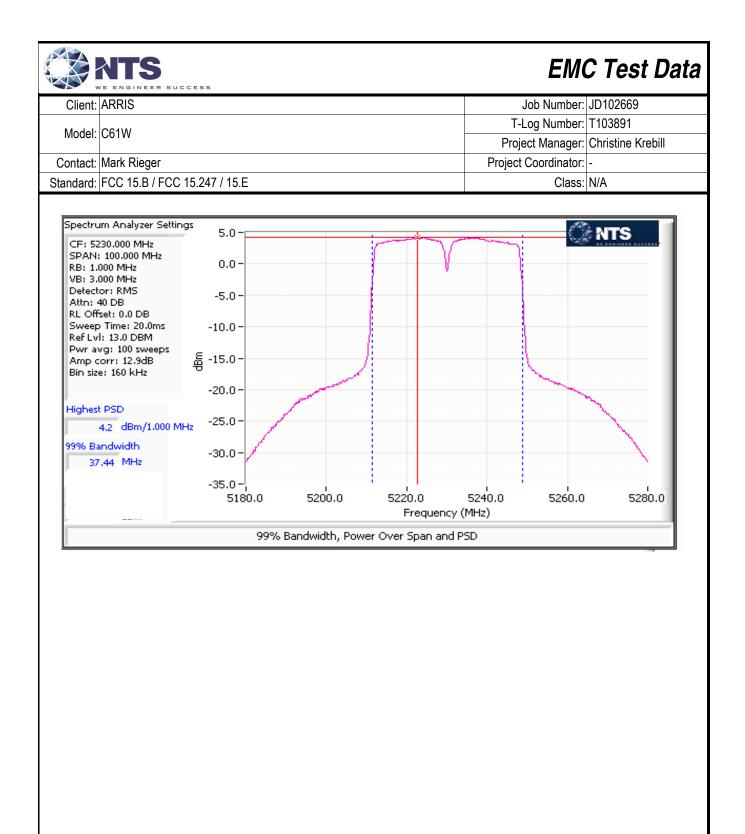
		RSUCCESS						ЕМС	C Test	Data
Client:	ARRIS							Job Number:	JD102669	
Model:	C61W						T-	Log Number:	T103891	
woder.	COTW						Proj	ect Manager:	Christine Kr	ebill
Contact:	Mark Riege	r					Project	t Coordinator:	-	
Standard:	FCC 15.B /	FCC 15.247 /	15.E					Class:	N/A	
C Te	Date of Test: st Engineer:	u tput Power a 3/10/2017 0: Rafael Varel FT Lab #4B	00) Ca) Systems Config. Used: nfig Change: EUT Voltage:	none	:		
Note 1:	Power mean the power n	-	gated aver	age power m	eter. Power	on channels t	hat straddle	e the bandedg	e were meas	sured using
	2*span/RBV duty cycle.	V, RMS detec This is based	tor, trace av on 10log(1	/erage 100 tr /x), where x i	aces, power s the duty cy	RBW=1MHz, \ averaging on. rcle. (method	The meas SA-2 of AN	surements we ISI C63.10)	re adjusted c	corrected for
Note 5: For MIMO systems the total output power and total PSD are calculated from the sum of the powers of the individual chains (in linear terms). The antenna gain used to determine the EIRP and limits for PSD/Output power depends on the operating mode of the MIMO device. If the signals on the non-coherent between the transmit chains then the gain used to determine the limits is the highest gain of the individual chains and the EIRP is the sum of the products of gain and power on each chain. If the signals are coherent then the effective antenna gain is the sum (in linear terms) of the gains for each chain and the EIRP is the product of the effective gain and total power.								operating determine n each		
Antenna Ga	ain Informat	ion								
Freq		Antenna Gain 2	(dBi) / Cha 3	in 4	BF	MultiChain Legacy	CDD	Sectorized / Xpol	Dir G (PWR)	Dir G (PSD)
5150-5250					No	Yes	Yes	No	6.70	6.70
5250-5350	Re	fer to Operation	onal Descrir	otion	No	Yes	Yes	No	6.50	6.50
5470-5725					No	Yes	Yes	No	6.80	6.80
5725-5825					No	Yes	Yes	No	6.60	6.60
1	Min # of spa Max # of spa	ort CDD mode atial streams: atial streams: d measureme	1 4	g performed	l using 1 sp	atial stream				

	NTS VE ENGINEER SUCCESS	EM	C Test Data				
Client:	ARRIS	Job Number:	JD102669				
Model:	CE1W	T-Log Number:	T103891				
Model.	COTW	Project Manager:	Christine Krebill				
Contact:	Mark Rieger	Project Coordinator:	-				
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A				
	BF = beamforming mode supported, Multichain Legacy = 802.11 legacy dat CDD = Cyclic Delay Diversity (or Cyclic Shift Diversity) modes supported, S cross polarized. Dir G (PWR) = total gain (Gant + Array Gain) for power calculations; GA (PS FCC KDB 662911. Depending on the modes supported, the Array Gain val value.	ectorized / Xpol = antenn SD) = total gain for PSD	as are sectorized or calculations based on				
Notes:	Array gain for power/psd calculated per KDB 662911 D01.						
Notes: Array gain for power/psd calculated per KDB 662911 D01. For systems with Beamforming and CDD, choose one the following options: Option 1: Delays are optimized for beamforming, rather than being selected from cyclic delay table of 802.11; Array gains calculated based on beamforming criteria. Notes: Option 2: Antennas are paired for beamforming, and the pairs are configured to use the cyclic delay diversity of 802.11; the array gain associated with beamforming with 2 antennas (3dB), and the array gain associated with CDD with two antennas (3dB for PSD and 0 dB for power)							

FCC UNII-1	Limits	Pwr	PSD
	Outdoor AP	30	17
	Indoor AP	30	17
Х	Station (e.g. Client)	24	11
	Outdoor AP (>30° Elv.)	21	-

	C61W							Job Number:		
Contact:								og Number:		
	00111						Proje	ect Manager:	Christine Kre	bill
	Mark Riege	r					Project	Coordinator:	-	
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
MMO Devi	co - 5150-52	50 MHz Ban								
Mode:			u-100				Max	EIRP (mW):	736.7	
requency	Chain	Software	26dB BW	Duty Cycle	Power ¹	Total	Power	FCC Limit	Max Power	Result
(MHz)	Chain	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	Result
	1				15.8					
5180	3	q63		100	15.8	156.6	21.9	23.3		Pass
0100	4	400		100	16.0	100.0	21.0	20.0		1 455
	2				16.1					
	1				15.8					
5200	3	q63		100	15.9	157.5	22.0	23.3	0.158	Pass
0200	4	400		100	16.1	10110	•	20.0	0.100	1 400
	2				16.0					
	1				15.7					
	3				150					
5240		a63		100	15.9	156.6	21.9	23.3		Pass
5240	4	q63		100	16.2	156.6	21.9	23.3		Pass
5240		q63		100		156.6	21.9	23.3		Pass
150-5250 Mode:	4 2 PSD - FCC n20				16.2 15.9					Pass
150-5250 Mode: Frequency	4 2 PSD - FCC n20	Software	99% BW	100 Duty Cycle	16.2		21.9 PSD ¹		Limit	
150-5250 Mode:	4 2 PSD - FCC n20		99% BW (MHz)		16.2 15.9			FCC	Limit /MHz	
150-5250 Mode: Frequency	4 2 PSD - FCC n20	Software		Duty Cycle	16.2 15.9 PSD	Total	PSD ¹	FCC		Pass
150-5250 Mode: Frequency (MHz)	4 2 PSD - FCC n20 Chain 1 3	Software Setting		Duty Cycle %	16.2 15.9 PSD dBm/MHz	Total mW/MHz	PSD ¹ dBm/MHz	FCC dBm	/MHz	Resul
150-5250 Mode: Frequency	4 2 PSD - FCC n20 Chain	Software		Duty Cycle	16.2 15.9 PSD dBm/MHz 4.1 4.1 4.5	Total	PSD ¹	FCC dBm		Resul
150-5250 Mode: Frequency (MHz)	4 2 PSD - FCC n20 Chain 1 3	Software Setting		Duty Cycle %	16.2 15.9 PSD dBm/MHz 4.1 4.1	Total mW/MHz	PSD ¹ dBm/MHz	FCC dBm	/MHz	Resul
150-5250 Mode: Frequency (MHz)	4 2 PSD - FCC n20 Chain 1 3 4	Software Setting		Duty Cycle %	16.2 15.9 PSD dBm/MHz 4.1 4.1 4.5	Total mW/MHz	PSD ¹ dBm/MHz	FCC dBm	/MHz	Resul
150-5250 Mode: Frequency (MHz) 5180	4 2 PSD - FCC n20 Chain 1 3 4 2	Software Setting q63		Duty Cycle % 99	16.2 15.9 PSD dBm/MHz 4.1 4.1 4.5 4.6 4.3 4.1	Total mW/MHz 10.8	PSD ¹ dBm/MHz 10.3	FCC dBm 10	/MHz).3	Resul
150-5250 Mode: Frequency (MHz)	4 2 PSD - FCC n20 Chain 1 3 4 2 1 3 4	Software Setting		Duty Cycle %	16.2 15.9 PSD dBm/MHz 4.1 4.1 4.5 4.6 4.3 4.1 4.2	Total mW/MHz	PSD ¹ dBm/MHz	FCC dBm 10	/MHz	Resul
150-5250 Mode: Frequency (MHz) 5180	4 2 PSD - FCC n20 Chain 1 3 4 2 1 3	Software Setting q63		Duty Cycle % 99	16.2 15.9 PSD dBm/MHz 4.1 4.1 4.5 4.6 4.3 4.1	Total mW/MHz 10.8	PSD ¹ dBm/MHz 10.3	FCC dBm 10	/MHz).3	Resul Pass
5 150-5250 Mode: Frequency (MHz) 5180	4 2 PSD - FCC n20 Chain 1 3 4 2 1 3 4 2 1 3 4 2 1	Software Setting q63		Duty Cycle % 99	16.2 15.9 dBm/MHz 4.1 4.5 4.6 4.3 4.1 4.2 4.6 4.0	Total mW/MHz 10.8	PSD ¹ dBm/MHz 10.3	FCC dBm 10	/MHz).3	Resul
5150-5250 Mode: Frequency (MHz) 5180 5200	4 2 PSD - FCC n20 Chain 1 3 4 2 1 3 4 2 1 3 4 2	Software Setting q63 q63		Duty Cycle % 99 99	16.2 15.9 PSD dBm/MHz 4.1 4.1 4.5 4.6 4.3 4.1 4.2 4.6	Total mW/MHz 10.8 10.8	PSD ¹ dBm/MHz 10.3 10.3	FCC dBm 1(/MHz).3).3	Resul Pass Pass
150-5250 Mode: Frequency (MHz) 5180	4 2 PSD - FCC n20 Chain 1 3 4 2 1 3 4 2 1 3 4 2 1	Software Setting q63		Duty Cycle % 99	16.2 15.9 dBm/MHz 4.1 4.5 4.6 4.3 4.1 4.2 4.6 4.0	Total mW/MHz 10.8	PSD ¹ dBm/MHz 10.3	FCC dBm 1(/MHz).3	Resul

		SUCCESS						EM	C Test	Data
Client:	ARRIS							Job Number:		
Model.	C61W							og Number:		
									Christine Kre	bill
	Mark Rieger						Project	Coordinator:	-	
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
MIMO Devi Mode:	ce - 5150-52 n40	50 MHz Ban	d - FCC				Мах	EIRP (mW):	1006.1	
Frequency		Software	26dB BW	Duty Cycle	Power	Total	Power ¹		Max Power	
(MHz)	Chain	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	Result
()	1	eettiing	()	70	15.2	11177	dDin	QDIII	()	
F100	3	-60		100	15.0	124.0	01.0	02.2		Deee
5190	4	q60		100	15.6	134.9	21.3	23.3		Pass
	2				15.3				0.215	
	1				17.0				0.215	
5230	3	q69		100	17.2	215.1	23.3	23.3		Pass
5250	4	403		100	17.6	213.1	20.0	20.0		1 455
	2				17.4					
5150-5250 Mode: Frequency (MHz)		Software Setting	99% BW (MHz)	Duty Cycle %	PSD dBm/MHz		PSD ¹ dBm/MHz		Limit /MHz	Result
Mode: Frequency	n40	Software Setting q60		Duty Cycle % 98	PSD dBm/MHz 0.6 -0.5 0.4 0.4	Total mW/MHz 4.2	PSD ¹ dBm/MHz 6.2	dBm	Limit /MHz D.3	Result Pass



Client:	ATS ARRIS	R SUCCESS						LIVI	C Test	Dala
								.og Number:		
Model:	C61W							•	Christine Kre	bill
Contact:	Mark Rieger						-	Coordinator:		
	FCC 15.B / I		15 F				110,000	Class:		
	ce - 5150-52						Max	EIRP (mW):		
Frequency		Software	26dB BW	Duty Cycle	Power	Total F	Power ¹	FCC Limit	Max Power	
(MHz)	Chain	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	Result
5210	1 3 4 2	q59		100	14.5 14.9 15.5 15.0	126.2	21.0	23.3	0.126	Pass
Mode: requency	PSD - FCC ac80 Chain	Software	99% BW	Duty Cycle		Total	-		Limit	Resul
(MHz)		Setting	(MHz)	%	dBm/MHz	mW/MHz	dBm/MHz	dBm	/MHz	IVESUI
5210	1 3 4 2	q59		96	-2.1 -2.1 -2.3 -1.7	2.6	4.1	10).3	Pass
CF: 5210. SPAN: 12 RB: 1.000 VB: 3.000 Detector: Attn: 40 E RL Offset: Sweep Tii Ref Lvl: 1 Pwr avg: Amp corr Bin size: 1 Highest PS -1.7 99% Band	20.000 MHz MHz MHz RMS DB : 0.0 DB me: 20.0ms 2.0 DBM 100 sweeps : 12.9dB 192 kHz SD dBm/1.000 M	-5.0 -5.0 -10.0 -15.0 -15.0 -25.0								

Client:	ARRIS	Job Number:	JD102669
Model:	CE1W	T-Log Number:	T103891
wouer.	COTW	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

FCC 15.407(UNII) Antenna Port Measurements Power, PSD, Bandwidth and Spurious Emissions

Test Specific Details

TS

SUCCESS

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Summary of Results

ourinnary of ficsur				-
Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Power, 5250 - 5350MHz	15.407(a) (2)	Pass	a: 22.0 dBm (157 mW) n20: 22.2 dBm (165 mW) n40: 23.8 dBm (241.3 mW) ac80: 19.9 dBm (98.4 mW)
1	PSD, 5250 - 5350MHz	15.407(a) (2)	Pass	a: 10.4 dBm/MHz n20: 10.4 dBm/MHz n40: 10.3 dBm/MHz ac80: 2.3 dBm/MHz
1	Max EIRP 5250 - 5350MHz	TPC required if EIRP≥ 500mW (27dBm). EIRP ≥ 200mW (23dBm) DFS threshold = -64dBm.		EIRP = 24.4 dBm (277 mW)
1	26dB Bandwidth	15.407 (Information only)	-	> 20MHz for all modes

General Test Configuration

When measuring the conducted emissions from the EUT's antenna port, the antenna port of the EUT was connected to the spectrum analyzer or power meter via a suitable attenuator to prevent overloading the measurement system. All measurements are corrected to allow for the external attenuators and cables used.

°C %

Ambient Conditions:

Temperature:	22.4
Rel. Humidity:	39



Client:	ARRIS	Job Number:	JD102669
Model:	CE1W	T-Log Number:	T103891
	Corw	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Procedure Comments:

Measurements performed in accordance with FCC KDB 789033 D01

	Mode	Data Rate	Duty Cycle (x)	Constant DC?	T (ms)	Pwr Cor Factor*	Lin Volt Cor Factor**	Min VBW for FS (Hz)
1SS	11a	6MB/s	0.99	Yes	1.952	0	0	10
1SS	11n20	MCS0	0.99	Yes	1.953	0	0	10
1SS	n40	MCS0	0.9798	Yes	0.971	0.0885442	0.2	1030
1SS	ac80	VHT0	0.96	Yes	0.46	0.1848341	0.4	2174

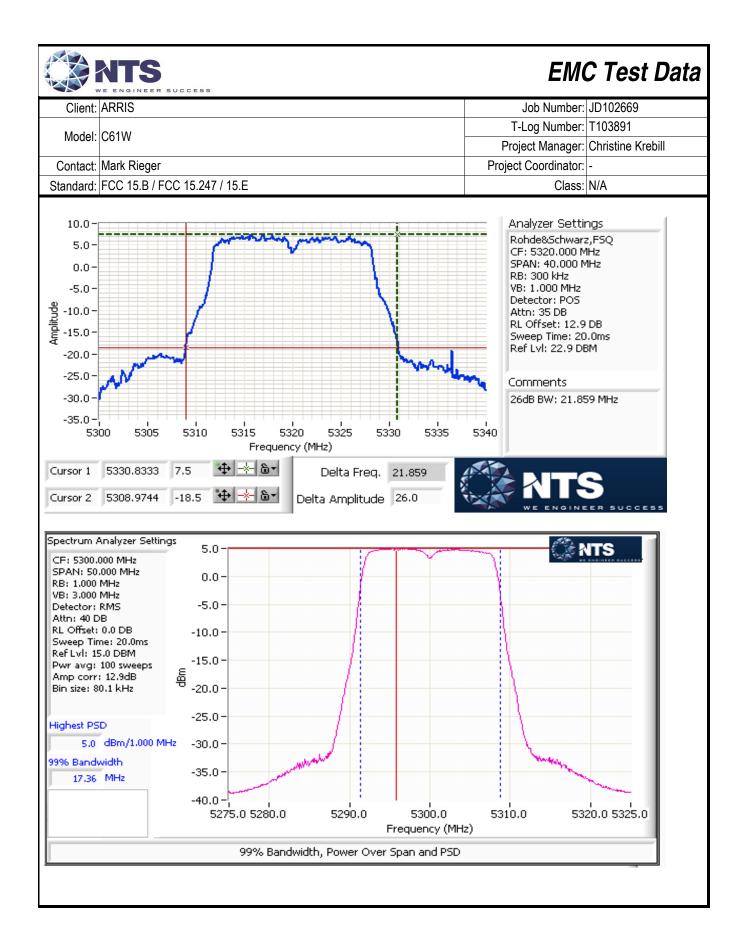
Sample Notes

Sample S/N: G62DA7BU20005B Driver: -

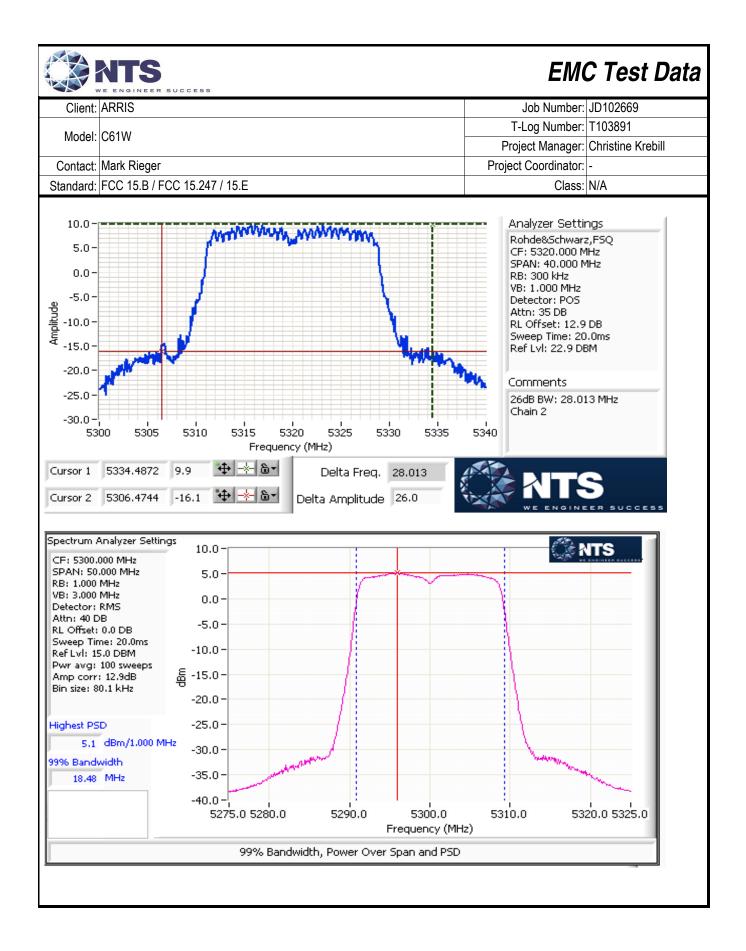
EMC Test Data										
Client:	ARRIS				Job Number:	JD102669				
Madalı	004111				T-Log Number: T103891					
woder.	Model: C61W					Project Manager: Christine Krebill				
Contact:	Mark Rieger			Project Coordinator: -						
Standard:	FCC 15.B / FCC 15.247 / 15.E			Class: N/A						
Run #1: Bandwidth, Output Power and Power Spectral Density - MIMO Systems Date of Test: 3/9/2017 0:00 Config. Used: 1 Test Engineer: Rafael Varelas / Joseph Cadigal Config Change: none Test Location: FT Lab #4B EUT Voltage: 120V/60Hz										
	Note 1: Power measured using a gated average power meter PSD measured using a spectrum analyzer (see plots below). RBW=1MHz, VB=3 MHz, Span > OBW, # of points in sweep ≥ Note 2: 2*span/RBW, RMS detector, trace average 100 traces, power averaging on. The measurements were adjusted corrected for duty cycle. This is based on 10log(1/x), where x is the duty cycle. (method SA-2 of ANSI C63.10)									
Note 4: For MIMO systems the total output power and total PSD are calculated from the sum of the powers of the individual chains (in linear terms). The antenna gain used to determine the EIRP and limits for PSD/Output power depends on the operating mode of the MIMO device. If the signals on the non-coherent between the transmit chains then the gain used to determine the limits is the highest gain of the individual chains and the EIRP is the sum of the products of gain and power on each chain. If the signals are coherent then the effective antenna gain is the sum (in linear terms) of the gains for each chain and the EIRP is the product of the effective gain and total power.										
Antenna Ga	ain Information									
Freq	Antenna Gain (dBi) / Chain 1 2 3 4	BF	MultiChain Legacy	CDD	Sectorized / Xpol	Dir G (PWR)	Dir G (PSD)			
5150-5250	_	No	Yes	Yes	No	0.70	6.70			
5250-5350	Refer to Operational Description	No	Yes	Yes	No	0.60	6.50			
5470-5725		No	Yes	Yes	No	1.00	6.80			
5725-5825		No	Yes	Yes	No	0.70	6.60			
	s that support CDD modes Min # of spatial streams: 1 Max # of spatial streams: 4 Il power/psd measurements, testing performed u	using 1 spa	atial stream							

	NTS	EMC Test Data				
Client:	ARRIS	Job Number: JD102669				
		T-Log Number: T103891				
Model:	C61W	Project Manager: Christine Krebill				
Contact:	Mark Rieger	Project Coordinator: -				
	FCC 15.B / FCC 15.247 / 15.E	Class: N/A				
Notes:	BF = beamforming mode supported, Multichain Legacy = 802.11 legacy dat CDD = Cyclic Delay Diversity (or Cyclic Shift Diversity) modes supported, S cross polarized.	ectorized / Xpol = antennas are sectorized or				
Notes:	Dir G (PWR) = total gain (Gant + Array Gain) for power calculations; GA (PS FCC KDB 662911. Depending on the modes supported, the Array Gain val value.	, .				
	Array gain for power/psd calculated per KDB 662911 D01.					
Notes:	For systems with Beamforming and CDD, choose one the following options: Option 1: Delays are optimized for beamforming, rather than being selected calculated based on beamforming criteria. Option 2: Antennas are paired for beamforming, and the pairs are configure array gain associated with beamforming with 2 antennas (3dB), and the arra (3dB for PSD and 0 dB for power)	d from cyclic delay table of 802.11; Array gains ed to use the cyclic delay diversity of 802.11; the				

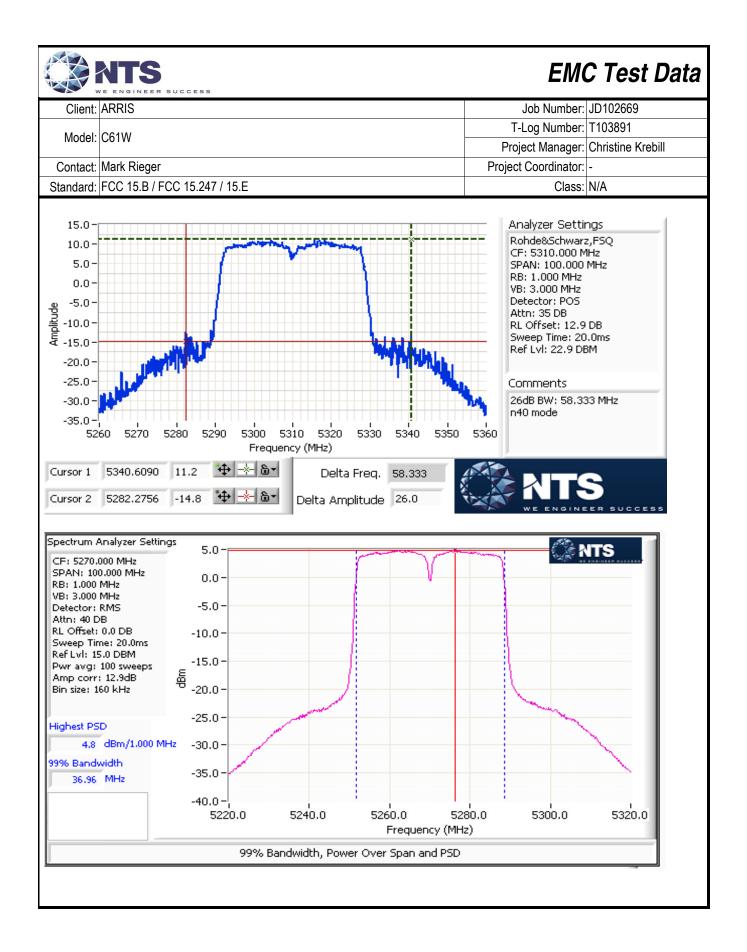
Model: Contact:								lob Number:		
Contact:	C61W						T-Log Number: T103891 Project Manager: Christine Krebill			
Contact:	Mark Diago	-						-		DIII
04	-						Project	Coordinator:		
Standard:	FCC 15.B /	FUU 15.247	/ 15.E					Class:	N/A	
IMO Devi	ce - 5250-53	50 MHz Ban	d - FCC							
Mode:								EIRP (mW):	179.9	
requency	Chain	Software	26dB BW	Duty Cycle	Power	Total F	Power ¹	FCC Limit	Max Power	Result
(MHz)	onam	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	rtooun
	1				14.9					
5260	3	q63	21.923	100	15.2	134.2	21.3	24.0		Pass
	4				15.5 15.4					
	1				15.4				-	
	3				16.0					
5300	4	q63	21.859	100	15.9	156.7	22.0	24.0	0.157	Pass
	2				16.2					
	1				15.2					
5220	3	a 62	21 950	100	15.7	150.0	21.0	24.0		Dooo
5320	3 4	q63	21.859	100	15.7 15.8	150.0	21.8	24.0		Pass
5320		q63	21.859	100		150.0	21.8	24.0		Pass
250-5350 Mode:	4 2 PSD - FCC/I	с	21.859 99% BW	100 Duty Cycle	15.8	150.0 Total		24.0 FCC Limit	IC Limit	
250-5350 Mode:	4 2 PSD - FCC// 11a	C			15.8 16.2					Pass
250-5350 <u>Mode:</u> requency	4 2 PSD - FCC/II 11a Chain	C Software	99% BW	Duty Cycle	15.8 16.2 PSD dBm/MHz 3.7	Total	PSD ¹	FCC Limit		
250-5350 Mode: requency (MHz)	4 2 PSD - FCC/I 11a Chain 1 3	C Software Setting	99% BW	Duty Cycle %	15.8 16.2 PSD dBm/MHz 3.7 4.7	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm/	MHz	Result
250-5350 <u>Mode:</u> requency	4 2 PSD - FCC/I 11a Chain 1 3 4	C Software	99% BW	Duty Cycle	15.8 16.2 PSD dBm/MHz 3.7 4.7 4.1	Total	PSD ¹	FCC Limit		Result
250-5350 Mode: requency (MHz)	4 2 PSD - FCC/I 11a Chain 1 3 4 2	C Software Setting	99% BW	Duty Cycle %	15.8 16.2 PSD dBm/MHz 3.7 4.7 4.1 4.9	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm/	MHz	Result
250-5350 Mode: requency (MHz)	4 2 PSD - FCC// 11a Chain 1 3 4 2 1	C Software Setting	99% BW	Duty Cycle %	15.8 16.2 PSD dBm/MHz 3.7 4.7 4.1 4.9 3.5	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm/	MHz	Result
250-5350 Mode: requency (MHz)	4 2 PSD - FCC//I Chain 1 3 4 2 1 3	C Software Setting	99% BW	Duty Cycle %	15.8 16.2 PSD dBm/MHz 3.7 4.7 4.1 4.9 3.5 4.8	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm/	MHz	Result
250-5350 Mode: requency (MHz) 5260	4 2 PSD - FCC/II Chain 1 3 4 2 1 3 4	C Software Setting q63	99% BW	Duty Cycle % 99	15.8 16.2 PSD dBm/MHz 3.7 4.7 4.1 4.9 3.5 4.8 4.0	Total mW/MHz 11.0	PSD ¹ dBm/MHz 10.4	FCC Limit dBm/ 10.5	MHz 11.0	Result
250-5350 Mode: Trequency (MHz) 5260	4 2 PSD - FCC/I Chain 1 3 4 2 1 3 4 2 1 3 4 2	C Software Setting q63	99% BW	Duty Cycle % 99	15.8 16.2 PSD dBm/MHz 3.7 4.7 4.1 4.9 3.5 4.8 4.0 5.0	Total mW/MHz 11.0	PSD ¹ dBm/MHz 10.4	FCC Limit dBm/ 10.5	MHz 11.0	Result
250-5350 Mode: requency (MHz) 5260 5300	4 2 PSD - FCC// 11a Chain 1 3 4 2 1 3 4 2 1 3 4 2 1	C Software Setting q63 q63	99% BW	Duty Cycle % 99 99	15.8 16.2 PSD dBm/MHz 3.7 4.7 4.1 4.9 3.5 4.8 4.0 5.0 3.3	Total mW/MHz 11.0 10.9	PSD ¹ dBm/MHz 10.4 10.4	FCC Limit dBm/ 10.5 10.5	MHz 11.0 11.0	Resul [®] Pass Pass
250-5350 Mode: requency (MHz) 5260	4 2 PSD - FCC/I Chain 1 3 4 2 1 3 4 2 1 3 4 2	C Software Setting q63	99% BW	Duty Cycle % 99	15.8 16.2 PSD dBm/MHz 3.7 4.7 4.1 4.9 3.5 4.8 4.0 5.0	Total mW/MHz 11.0	PSD ¹ dBm/MHz 10.4	FCC Limit dBm/ 10.5	MHz 11.0	Result



		SUCCESS								
Client:	ARRIS							Job Number:		
Model:	C61W						T-L	og Number:	T103891	
WOUEI.	COTW						Proje	ect Manager:	Christine Kre	bill
Contact:	Mark Rieger						Project	Coordinator:	-	
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
IIMO Devid Mode:	ce - 5250-53 n20	50 MHz Ban	d - FCC				Max	EIRP (mW):	189.7	
requency		Software	26dB BW	Duty Cycle	Power	Total F			Max Power	Desult
(MHz)	Chain	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	Result
	1				15.8					
5260	3	q64	28.91	100	16.0	165.2	22.2	24.0		Pass
0200	4	40.	20.01	100	16.3	100.2		20		1 400
	2				16.5					
	1				15.5 16.0					
5300	4	q64	29.167	100	16.3	161.6	22.1	24.0	0.165	Pass
	2				16.4					
					-					
	1				15.3					
5320	3	a64	28.013	100	15.3 16.0	155.2	21.0	24.0		Pass
5320	3 4	q64	28.013	100	16.0 16.0	155.2	21.9	24.0		Pass
5320	3	q64	28.013	100	16.0	155.2	21.9	24.0		Pass
250-5350 I <u>Mode:</u> requency	3 4 2 PSD - FCC//(n20	Software	99% BW	Duty Cycle	16.0 16.0 16.2 PSD	Total	PSD ¹	FCC Limit		
250-5350 I Mode:	3 4 2 PSD - FCC/I0 n20 Chain	:			16.0 16.0 16.2 PSD dBm/MHz					
250-5350 I <u>Mode:</u> requency	3 4 2 PSD - FCC/I0 n20 Chain 1 3 4	Software	99% BW	Duty Cycle	16.0 16.2 PSD dBm/MHz 3.9 5.0 3.7	Total	PSD ¹	FCC Limit		Pass Result Pass
250-5350 I Mode: requency (MHz)	3 4 2 PSD - FCC/IC n20 Chain 1 3 4 2	Software Setting	99% BW	Duty Cycle %	16.0 16.2 PSD dBm/MHz 3.9 5.0 3.7 4.4	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm/	/MHz	Result
250-5350 I Mode: requency (MHz)	3 4 2 PSD - FCC//(n20 Chain 1 3 4 2 1	Software Setting	99% BW	Duty Cycle %	16.0 16.2 PSD dBm/MHz 3.9 5.0 3.7 4.4 3.4	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm/	/MHz	Result
250-5350 I Mode: requency (MHz)	3 4 2 PSD - FCC//(n20 Chain 1 3 4 2 1	Software Setting	99% BW	Duty Cycle %	16.0 16.2 PSD dBm/MHz 3.9 5.0 3.7 4.4 3.4 4.7	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm/	/MHz	Result
250-5350 I Mode: requency (MHz) 5260	3 4 2 PSD - FCC/I(n20 Chain 1 3 4 2 1 3 4	Software Setting q64	99% BW	Duty Cycle % 99	16.0 16.2 PSD dBm/MHz 3.9 5.0 3.7 4.4 3.4 4.7 4.0	Total mW/MHz 10.7	PSD ¹ dBm/MHz 10.3	FCC Limit dBm/ 10.5	MHz 11.0	Result
250-5350 I <u>Mode:</u> Trequency (MHz) 5260	3 4 2 PSD - FCC//(n20 Chain 1 3 4 2 1	Software Setting q64	99% BW	Duty Cycle % 99	16.0 16.2 PSD dBm/MHz 3.9 5.0 3.7 4.4 3.4 4.7	Total mW/MHz 10.7	PSD ¹ dBm/MHz 10.3	FCC Limit dBm/ 10.5	MHz 11.0	Result Pass



Client:	ARRIS	SUCCESS						Job Number:	JD102669	
Madal	004144						T-Log Number: T103891			
Model:	COTW						Proje	ect Manager:	Christine Kre	ebill
Contact:	Mark Rieger	•					Project	Coordinator:	-	
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
/IMO Devi Mode:	ce - 5250-53 n40	50 MHz Ban	d - FCC					EIRP (mW):		
requency	Chain	Software	26dB BW	Duty Cycle	Power	Total I	Power ¹		Max Power	Result
(MHz)		Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	1 tootal
	1				17.5					
5270	3 4	q70	78.7	100	17.7 18.0	241.3	23.8	24.0		Pass
	2				18.0				0.044	
					14.0				0.241	
	1									
5310	3	a59	58.3	100	14.8	117 8	20.7	24 0		Pass
Mode:			-	100	14.9 15.0	117.8	20.7	24.0		Pass
1IMO Devi Mode:	3 4 2 ce 5250-5350) PSD - FCC	///C		14.9 15.0					Pass
IIMO Devi Mode: Frequency	3 4 2 ce 5250-5350	0 PSD - FCC Software	/ IC 99% BW	Duty Cycle	14.9 15.0 PSD	Total	PSD ¹	FCC Limit		Pass
1IMO Devi Mode:	3 4 2 ce 5250-5350 n40) PSD - FCC	///C		14.9 15.0			FCC Limit	IC Limit /MHz	
IIMO Devi Mode: requency (MHz)	3 4 2 ce 5250-535 0 n40 Chain 1 3	0 PSD - FCC Software Setting	/ IC 99% BW	Duty Cycle %	14.9 15.0 PSD dBm/MHz 3.5 4.3	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	/MHz	Resul
IIMO Devi Mode: requency	3 4 2 ce 5250-535 0 n40 Chain 1 3 4	0 PSD - FCC Software	/ IC 99% BW	Duty Cycle	14.9 15.0 PSD dBm/MHz 3.5 4.3 4.2	Total	PSD ¹	FCC Limit		Resul
IIMO Devi Mode: Frequency (MHz)	3 4 2 ce 5250-5350 n40 Chain 1 3 4 2	0 PSD - FCC Software Setting	/ IC 99% BW	Duty Cycle %	14.9 15.0 PSD dBm/MHz 3.5 4.3 4.2 4.8	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	/MHz	
IIMO Devi Mode: Frequency (MHz) 5270	3 4 2 ce 5250-5350 n40 Chain 1 3 4 2 1	PSD - FCC Software Setting q74	/ IC 99% BW	Duty Cycle % 98	14.9 15.0 PSD dBm/MHz 3.5 4.3 4.2 4.8 -0.7	Total mW/MHz 10.6	PSD ¹ dBm/MHz 10.3	FCC Limit dBm 10.5	/MHz 11.0	Resul Pass
IIMO Devi Mode: Trequency (MHz)	3 4 2 ce 5250-5350 n40 Chain 1 3 4 2	0 PSD - FCC Software Setting	/ IC 99% BW	Duty Cycle %	14.9 15.0 PSD dBm/MHz 3.5 4.3 4.2 4.8	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	/MHz	Resul



	WE ENGINEER	SUCCESS							1	
Client:	ARRIS							Job Number:		
Model [.]	C61W							.og Number:		
							Project Manager: Christine Krebill			
	Mark Rieger						Project	Coordinator:		
Standard:	FCC 15.B /	FCC 15.247	15.E					Class:	N/A	
	ce - 5250-53	50 MHz Ban	d - FCC						140	
Mode:	ac80	Cofficients			D			EIRP (mW):		
requency (MHz)	Chain	Software Setting	26dB BW (MHz)	Duty Cycle	Power		Power ¹		Max Power (W)	Resul
	1	Setting		%	dBm 13.5	mW	dBm	dBm	(**)	
	3		.		13.5			.		_
5290	4	q53	82.1	96	13.5	98.4	19.9	24.0	0.098	Pass
	2				13.9	1				
5290	1 3 4	q53		96	-4.0 -3.6 -3.9	1.7	2.3	10.5	11.0	Pass
	2				-3.6					
	-				0.0				-	
Spectru		iettinas			0.0			10		
_	ım Analyzer S	iettings (.0		0.0	·		Q	NTS	
CF: 52 SPAN:	ım Analyzer S 290.000 MHz : 120.000 MHz		.0-					Ċ	NTS	
CF: 52 SPAN: RB: 1.	ım Analyzer S 190.000 MHz	-5	.0-				~~~~		NTS	
CF: 52 SPAN: RB: 1,0 VB: 3,0 Detect	im Analyzer S 90.000 MHz 120.000 MHz 000 MHz 000 MHz 000 MHz or: RMS		.0-						NTS	
CF: 52 SPAN: RB: 1.0 VB: 3.0 Detect Attn: 4 RL Off	IM Analyzer S 290.000 MHz 120.000 MHz 000 MHz 000 MHz 000 MHz 0r: RMS 40 DB set: 0.0 DB	-10 -15	.0-						NTS	
CF: 52 SPAN: RB: 1,0 VB: 3,0 Detect Attn: 4 RL Off Sweep	Im Analyzer S 290.000 MHz 120.000 MHz 000 MHz 000 MHz or: RMS 40 DB set: 0.0 DB set: 0.0 DB	-5 -10 s -15	.0 - .0 -						NTS	
CF: 52 SPAN: RB: 1. VB: 3. Detect Attn: 4 RL Off Sweep Ref Lv Pwr av	Im Analyzer S 290.000 MHz 120.000 MHz 000 MHz 000 MHz or: RMS 40 DB set: 0.0 DB set: 0.0 DB 1 Time: 20.0m: 1: 10.0 DBM vg: 100 sweep	-5 -10 -15 -15	.0-						NTS	
CF: 52 SPAN: RB: 1. VB: 3. Detect Attn: 4 RL Off Sweep Ref Lv Pwr an Amp o	Im Analyzer S 290.000 MHz 120.000 MHz 000 MHz 000 MHz or: RMS 40 DB set: 0.0 DB set: 0.0 DB 1 Time: 20.0m 1: 10.0 DBM	-5 -10 -15 -20	.0 - .0 - .0 -							
CF: 52 SPAN: RB: 1. VB: 3. Detect Attn: 4 RL Off Sweep Ref Lv Pwr an Amp o	um Analyzer S 290.000 MHz 2000 MHz 000 MHz 000 MHz 000 MHz 000 MHz 000 MHz 000 MHz 000 MHz 00 MHz 00 MHz 100 0 100 Sweep 000 Sweep 000 Sweep 000 Sweep	-5 -10 -15 -15 -20 -25	.0 - .0 - .0 - .0 -						NTS	
CF: 52 SPAN: RB: 1. VB: 3. Detect Attn: 4 RL Off Sweep Ref Lv Pwr an Amp o	Im Analyzer S 90.000 MHz 120.000 MHz 000 MHz 000 MHz 000 MHz 000 B 100 DB 10.0 DB 10.0 DBM vg: 100 sweep orr: 12.5dB e: 192 kHz	-5 -10 -15 -15 -20 -25	.0 - .0 - .0 -						NTS	
CF: 52 SPAN: RB: 1.1 VB: 3.1 Detect Attn: 4 RL Off Sweep Ref Lv Pwr av Amp o Bin size	Im Analyzer S 90.000 MHz 120.000 MHz 000 MHz 000 MHz 000 MHz 000 B 100 DB 10.0 DB 10.0 DBM vg: 100 sweep orr: 12.5dB e: 192 kHz	-5 -10 -15 -20 -25 -25 -30	.0 - .0 - .0 - .0 -							
CF: 52 SPAN: RB: 1.1 VB: 3.1 Detect Attn: 4 RL Off Sweep Ref Lv Pwr at Amp o Bin size	Im Analyzer S 190.000 MHz 120.000 MHz 1000 MHz 000 MHz 000 MHz 000 MHz 000 DB 100 DB 100 DB 100 JBM 100 JBM 100 Sweep 0077 12.5dB 12.5dB 12.5dB 192 kHz	-10 -15 -15 -15 -20 -25 -25 -30 00 MHz -35	.0 - .0 - .0 - .0 - .0 -						NTS	
CF: 52 SPAN: RB: 1.1 VB: 3.1 Detect Attn: 4 RL Off Sweep Ref Lv Pwr ai Amp o Bin size	Im Analyzer S 90.000 MHz 120.000 MHz 120.000 MHz 000 MHz 00 MHz 00 DB 00 Sweep 00 Sweep 0	-10 -15 -15 -15 -20 -25 -25 -30 00 MHz -35	.0 - .0 - .0 - .0 -						NTS	
CF: 52 SPAN: RB: 1.) VB: 3.) Detect Attn: 4 RL Off Sweep Ref Lv Pwr at Amp o Bin size Highest - 99% Ba 76	Im Analyzer S 190.000 MHz 120.000 MHz 120.000 MHz 000 MHz 000 MHz 000 MHz 000 MHz 000 MHz 000 MHz 000 MHz 10.0 DB 110.0 DBM 110.0 DBM 110.0 DBM 110.0 DBM 110.0 Nweep 00000000000000000000000000000000000	-5 -10 -15 -20 -25 -25 -30 00 MHz -30 -40	.0 - .0 - .0 - .0 - .0 - .0 -							
CF: 52 SPAN: RB: 1.1 VB: 3.1 Detect Attn: 4 RL Off Sweep Ref Lv Pwr at Amp o Bin size Highest 99% Ba 76 Power 24.8	Im Analyzer S 190.000 MHz 120.000 MHz 120.000 MHz 000 MHz 000 MHz 000 B 100 DB 100 DB 100 DB 100 DB 100 DB 100 DB 100 DB 100 Sweep 007: 12.5dB 100 Sweep 07: 12.5dB 100 Sweep 12.5dB 100 Sweep 100 Swee	-5 -10 -15 -20 -25 -25 -30 00 MHz -30 -40	.0 - .0 - .0 - .0 - .0 -	526	.0.0 52	280.0 5		5320.0	NTS 5350	.0

Client:	ARRIS	Job Number:	JD102669
Model:	CE1W	T-Log Number:	T103891
wouer.	COTW	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

FCC 15.407(UNII) Antenna Port Measurements Power, PSD, Bandwidth and Spurious Emissions

Test Specific Details

TS

SUCCESS

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Summary of Results

Run #	Test Performed	Limit	Deee / Fail	Result / Margin
Rull #	Test Periornieu	LIIIII	Pass / Fall	Result / Margin
1	Power, 5250 - 5350MHz	15.407(a) (2)	Pass	n20: 22.2 dBm (165.2 mW) n40: 23.4 dBm (220.4 mW) ac80: 20.4 dBm (108.5 mW)
1	PSD, 5250 - 5350MHz	15.407(a) (2)	Pass	n20: 10.4 dBm/MHz n40: 10.3 dBm/MHz ac80: 2.8 dBm/MHz
1	Max EIRP 5250 - 5350MHz	TPC required if EIRP≥ 500mW (27dBm). EIRP ≥ 200mW (23dBm) DFS threshold = -64dBm.		EIRP = 29.9 dBm (984.5 mW)
1	26dB Bandwidth	15.407 (Information only)	-	> 20MHz for all modes

General Test Configuration

When measuring the conducted emissions from the EUT's antenna port, the antenna port of the EUT was connected to the spectrum analyzer or power meter via a suitable attenuator to prevent overloading the measurement system. All measurements are corrected to allow for the external attenuators and cables used.

Ambient Conditions:

Temperature:	22.6 °C
Rel. Humidity:	41 %



Client:	ARRIS	Job Number:	JD102669
Model:	CE1W	T-Log Number:	T103891
woder.	COIW	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Procedure Comments:

Measurements performed in accordance with FCC KDB 789033 D01

	Mode	Data Rate	Duty Cycle (x)	Constant DC?	T (ms)	Pwr Cor Factor*	Lin Volt Cor Factor**	Min VBW for FS (Hz)
1SS	11n20	MCS0	0.99	Yes	1.953	0	0	10
1SS	n40	MCS0	0.9798	Yes	0.971	0.0885442	0.2	1030
1SS	ac80	VHT0	0.96	Yes	0.46	0.1848341	0.4	2174

Note - for antenna port measurements, the EUT was operated in the non-TxBF mode

Sample Notes

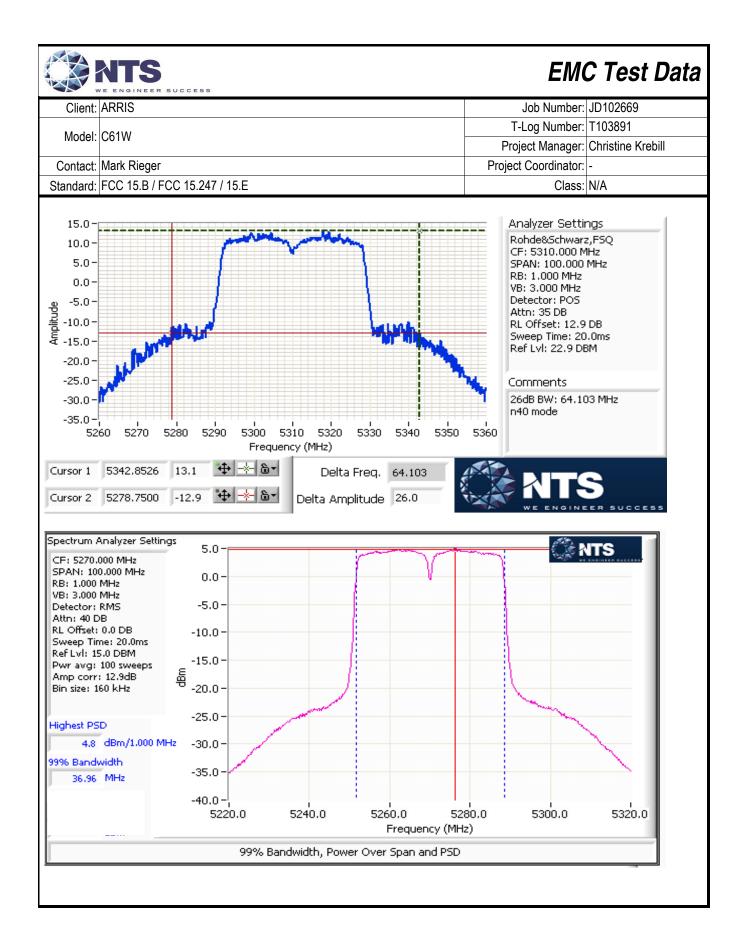
Sample S/N: G62DA7BU20005B Driver: -

		RSUCCESS						EMO	C Test	Data
Client:	ARRIS							Job Number:	JD102669	
Madal	004144						T	-Log Number:	T103891	
Model:	COTW						Pro	ject Manager:	Christine Kr	ebill
Contact:	Mark Riege	۱					Projec	t Coordinator:	-	
Standard:	FCC 15.B /	FCC 15.247	/ 15.E				Class: N/A			
l Te	Date of Test	u tput Power : 3/10/2017 0 : Rafael Vare : FT Lab #4B	:00	e r Spectral De ph Cadigal	Co	O Systems Config. Used: onfig Change: EUT Voltage:	none	2		
Note 1:	Power mea the power r		gated av	erage power m	neter. Power	r on channels t	hat straddl	e the bandedg	e were meas	sured using
Note 2:	2*span/RB\ duty cycle.	N, RMS detec This is based	tor, trace on 10log	analyzer (see p average 100 t i(1/x), where x	races, power is the duty c	r averaging on. ycle. (method	The meas SA-2 of AN	surements we ISI C63.10)	re adjusted c	orrected for
Note 4:	(in linear te mode of the the limits is chain. If the	rms). The an e MIMO devic the highest g e signals are	tenna gain e. If the s ain of the coherent t	t power and tot n used to deter ignals on the n individual chai then the effecti ctive gain and t	mine the EIF non-coherent ns and the E ve antenna (RP and limits fo between the tr IRP is the sum	or PSD/Out ransmit cha of the pro	put power dep ains then the ducts of gain a	ends on the gain used to and power or	operating determine n each
Antenna Ga						<u> </u>				
Freq	1	Antenna Gair	· · ·		BF	MultiChain	CDD	Sectorized	Dir G	Dir G
5150-5250	1	2	3	4	No	Legacy Yes	Yes	/ Xpol No	(PWR) 6.70	(PSD) 6.70
5250-5350	_				No	Yes	Yes	No	6.50	6.50
5470-5725	Re	fer to Operati	onal Desc	cription	No	Yes	Yes	No	6.80	6.80
5725-5825					No	Yes	Yes	No	6.60	6.60
	Min # of spa Max # of spa	ort CDD mod atial streams: atial streams: d measureme	1 4	ing performed	d using 1 sp	patial stream				

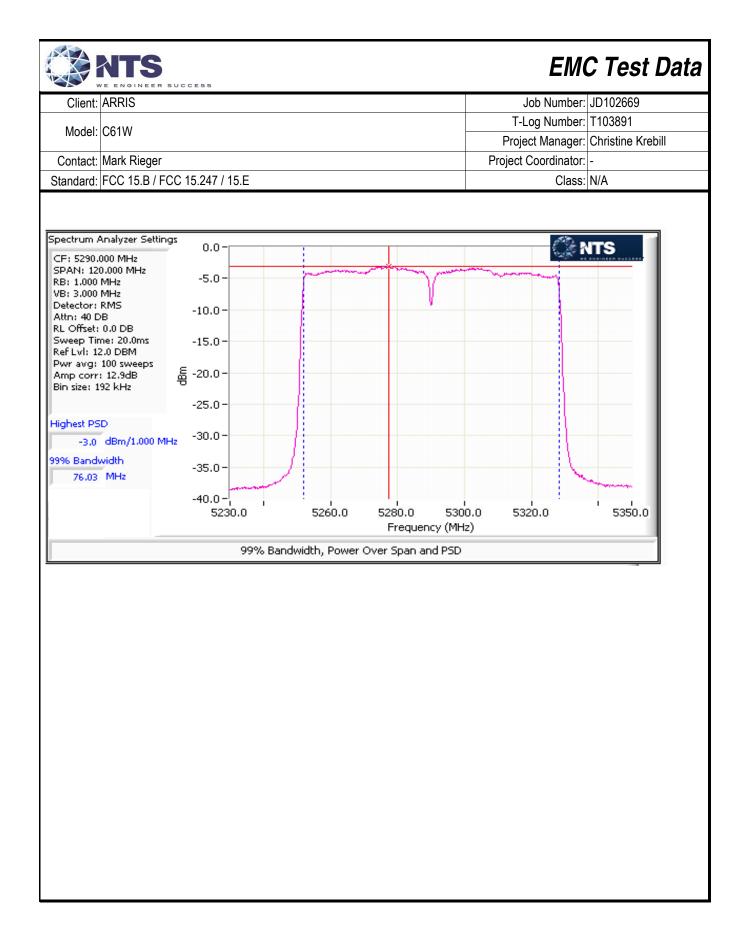
	E ENGINEER SUCCESS	EMC Test Dat
Client:		Job Number: JD102669
		T-Log Number: T103891
Model:	C61W	Project Manager: Christine Krebill
Contact:	Mark Rieger	Project Coordinator: -
	FCC 15.B / FCC 15.247 / 15.E	Class: N/A
Notes:	BF = beamforming mode supported, Multichain Legacy = 802.11 legacy d CDD = Cyclic Delay Diversity (or Cyclic Shift Diversity) modes supported,	
Notes:	cross polarized. Dir G (PWR) = total gain (Gant + Array Gain) for power calculations; GA (F FCC KDB 662911. Depending on the modes supported, the Array Gain va value.	, .
	Array gain for power/psd calculated per KDB 662911 D01.	
Notes:	For systems with Beamforming and CDD, choose one the following option Option 1: Delays are optimized for beamforming, rather than being select calculated based on beamforming criteria. Option 2: Antennas are paired for beamforming, and the pairs are configu array gain associated with beamforming with 2 antennas (3dB), and the ar (3dB for PSD and 0 dB for power)	ed from cyclic delay table of 802.11; Array gains red to use the cyclic delay diversity of 802.11; th

<u></u>	WE ENGINEER	SUCCESS							C Test	
Client:	ARRIS							Job Number:		
Model:	C61W							og Number:	Christine Krebill	
Contact	Mark Rieger	•					-	-		
	FCC 15.B / I		/ 15 F				Project Coordinator: - Class: N/A			
Standard.	10010.071	100 10.247	/ 10.L					01033.	IN/ <i>F</i> A	
IIMO Devi Mode:	ce - 5250-53 n20	50 MHz Ban	d - FCC				Мах	EIRP (mW):	737.9	
requency	Chain	Software	26dB BW	Duty Cycle	Power	Total I	Power ¹	FCC Limit	Max Power	Resul
(MHz)	Chain	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	i vesui
	1				15.8					
5260	3	q64	28.91	100	16.0 16.3	165.2	22.2	23.5		Pass
	4				16.3					
	1				15.5					
5200	3	-64	00.467	100	16.0	161.6	00.4	00 F	0.465	Deee
5300	4	q64	29.167	100	16.3	161.6	22.1	23.5	0.165	Pass
	2				16.4					
	1				15.3					
5320	3	q64	28.013	100	16.0	155.2	21.9	23.5		Pass
	4				16.0 16.2					
250-5350 Mode: Frequency (MHz)	PSD - FCC/IC n20 Chain	Software Setting	99% BW (MHz)	Duty Cycle %	PSD dBm/MHz	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	IC Limit /MHz	Resul
. ,	1				3.9					
5260	3	q64		99	5.0 3.7	10.7	10.3	10.5	11.0	Pass
	2				4.4					
	1				3.4					
	3	q64		99	4.7	10.9	10.4	10.5	11.0	Pass
5300	4	404		33	4.0	10.3	10.4	10.5	11.0	1 033
5300					5.1					
5300	2				3.3					
	1	. 64				40.0	40.0	40 5	44.0	-
5300 5320		q64		99	4.6 3.9	10.6	10.3	10.5	11.0	Pass

Client:	ARRIS							Job Number:	JD102669	
Model	C61W						T-I	og Number:	T103891	
Model.	COTW						Proje	ect Manager:	Christine Kre	ebill
	Mark Rieger						Project	Coordinator:	-	
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
/IMO Devi Mode:	ce - 5250-53 n40	50 MHz Ban	d - FCC				Max	EIRP (mW):	984.5	
Frequency		Software	26dB BW	Duty Cycle	Power	Total I	Power ¹		Max Power	Deaul
(MHz)	Chain	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	Result
	1				16.9					
5270	3	q68	79.5	100	17.3	220.4	23.4	23.5		Pass
	4				17.7 17.7					
	1				15.3				0.220	
5210	3	~60	64.1	100	15.8	140 7	21.0	72 E		Dooo
5310 IIMO Devi Mode:		q62 0 PSD - FCC	64.1 /IC	100	15.8 15.9 15.9	149.7	21.8	23.5		Pass
/IMO Devi Mode: Frequency	3 4 2 ce 5250-535 n40	0 PSD - FCC Software	/ IC 99% BW	Duty Cycle	15.9 15.9 PSD	Total	PSD ¹	FCC Limit		
/IMO Devi	3 4 2 ce 5250-5350 n40 Chain) PSD - FCC	/IC		15.9 15.9 PSD dBm/MHz			FCC Limit	IC Limit /MHz	Pass
/IIMO Devi <u>Mode:</u> Frequency (MHz)	3 4 2 ce 5250-5350 n40 Chain	0 PSD - FCC Software Setting	/ IC 99% BW	Duty Cycle %	15.9 15.9 PSD dBm/MHz 3.5	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	/MHz	Resul
IIMO Devi Mode: Frequency	3 4 2 ce 5250-5350 n40 Chain	0 PSD - FCC Software	/ IC 99% BW	Duty Cycle	15.9 15.9 PSD dBm/MHz	Total	PSD ¹	FCC Limit		Resul
IIMO Devi Mode: Frequency (MHz)	3 4 2 ce 5250-535 n40 Chain 1 3	0 PSD - FCC Software Setting	/ IC 99% BW	Duty Cycle %	15.9 15.9 PSD dBm/MHz 3.5 4.3 4.2 4.8	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	/MHz	Resul
IIMO Devi Mode: Frequency (MHz)	3 4 2 ce 5250-5355 n40 Chain 1 3 4 2 1	0 PSD - FCC Software Setting	/ IC 99% BW	Duty Cycle %	15.9 15.9 PSD dBm/MHz 3.5 4.3 4.2 4.8 0.2	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	/MHz	
IIMO Devi Mode: Frequency (MHz)	3 4 2 ce 5250-5350 n40 Chain 1 3 4 2	0 PSD - FCC Software Setting	/ IC 99% BW	Duty Cycle %	15.9 15.9 PSD dBm/MHz 3.5 4.3 4.2 4.8	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	/MHz	Resul



		SUCCESS						EM	C Test	Data
Client:	ARRIS							Job Number:	JD102669	
Model:	C61W							og Number:		
WOUEI.	COTW						-	-	Christine Kre	bill
	Mark Rieger						Project	Coordinator:		
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
	ce - 5250-53	50 MHz Ban	d - FCC				May		484.7	
Mode: Frequency	ac80	Software	26dB BW	Duty Cycle	Power	Total	Power ¹	EIRP (mW): FCC Limit	404.7 Max Power	
(MHz)	Chain	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	Result
/	1			/0	14.0		d D III	dBiii		
5290	3	q56	81.9	100	14.2	108.5	20.4	23.5	0.109	Pass
	4	400	•		14.4 14.7			_0.0		
Mode: Frequency	ce 5250-5350 ac80 Chain	Software	99% BW	Duty Cycle	PSD		PSD ¹	FCC Limit		Result
(MHz)	1	Setting	(MHz)	%	dBm/MHz -3.6	mW/MHz	dBm/MHz	dBm	/MHz	
5290	3 4 2	q56		96	-3.0 -3.0 -4.4 -3.1	1.9	2.8	10.5	11.0	Pass
10.0 - 5.0 - 0.0 - -5.0 - -90 -10.0 - -10.0 - -15.0 - -25.0 - -30.0 - -35.0 - -35.0 - -35.0 - 52 Cursor 1 Cursor 2		5240 5 7.3	260 5280	ency (MHz) Delt	5320 534	.923	Rol CF SP/ RB VB: Del Att RL Sw Rel Cor	alyzer Setti hde&Schwar : 5290.000 M AN: 180.000 : 1.000 MHz : 3.000 MHz tector: POS n: 35 DB Offset: 12.9 eep Time: 20 f Lvl: 22.9 DI mments dB BW: 81.9: 30 mode	z,FSQ IHz MHz DB).0ms BM	5 5



Client:	ARRIS	Job Number:	JD102669
Model:	CE1W	T-Log Number:	T103891
wouer.	COTW	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

FCC 15.407(UNII) Antenna Port Measurements Power, PSD, Bandwidth and Spurious Emissions

Test Specific Details

TS

SUCCESS

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Power, 5470 - 5725MHz	15.407(a) (2)	Pass	a: 21.9 dBm (156 mW) n20: 22.4 dBm (173 mW) n40: 23.9 dBm (243 mW) ac80: 23.8 dBm (241 mW)
1	PSD, 5470 - 5725MHz	15.407(a) (2)	Pass	a: 10.2 dBm/MHz n20: 10.1 dBm/MHz n40: 9.8 dBm/MHz ac80: 10 dBm/MHz
1	Max EIRP 5470 - 5725MHz	TPC required if EIRP≥ 500mW (27dBm). EIRP ≥ 200mW (23dBm) DFS threshold	Pass	EIRP = 24.8 dBm (300.4 mW)
1	26dB Bandwidth	15.407 (Information only)	-	Power limit reduced for those channels with 26dB BW < 20MHz

General Test Configuration

When measuring the conducted emissions from the EUT's antenna port, the antenna port of the EUT was connected to the spectrum analyzer or power meter via a suitable attenuator to prevent overloading the measurement system. All measurements are corrected to allow for the external attenuators and cables used.

Ambient Conditions:

Temperature:	22.4 °C
Rel. Humidity:	39 %



Client:	ARRIS	Job Number:	JD102669
Model:	C61W	T-Log Number:	T103891
Model.	Colw	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

Modifications Made During Testing No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Procedure Comments:

Measurements performed in accordance with FCC KDB 789033 D01

	Mode	Data Rate	Duty Cycle (x)	Constant DC?	T (ms)	Pwr Cor Factor*	Lin Volt Cor Factor**	Min VBW for FS (Hz)
1SS	11a	6MB/s	0.99	Yes	1.952	0	0	10
1SS	11n20	MCS0	0.99	Yes	1.953	0	0	10
1SS	n40	MCS0	0.9798	Yes	0.971	0.0885442	0.2	1030
1SS	ac80	VHT0	0.96	Yes	0.46	0.1848341	0.4	2174

Sample Notes

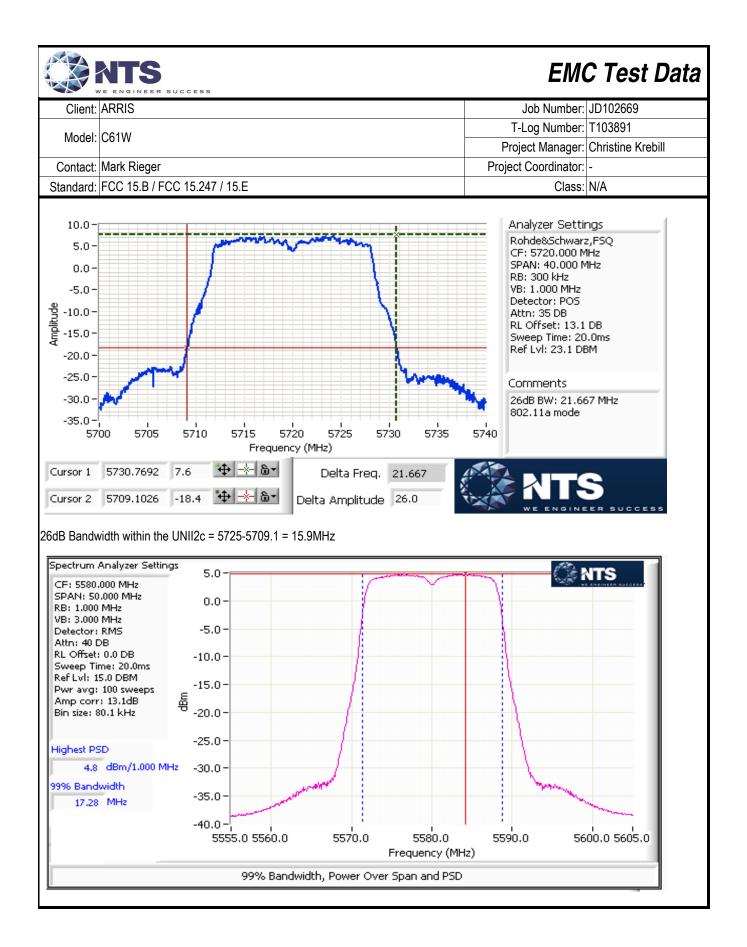
Sample S/N: G62DA7BU20005B Driver: -

		RSUCCESS						EMO	C Test	⁻ Data
Client:	ARRIS							Job Number:	JD102669	
Model:	C61W					_	T-	Log Number:	T103891	
Woder.	00111							ect Manager:		ebill
Contact:	Mark Rieger	ſ					Project	t Coordinator:	-	
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
[Te	ndwidth, Ou Date of Test: est Engineer: est Location:	3/9/2017 0:0 Rafael Vare)0 las / Josepł	Spectral De n Cadigal	Co	D Systems Config. Used: onfig Change: EUT Voltage:	none	-		
Note 1:		-	-	• •		on channels t as this repres		-		sured using
Note 2:	2*span/RBV duty cycle.	V, RMS deteo This is based	ctor, trace a d on 10log(1	verage 100 tr I/x), where x i	races, power is the duty cy	RBW=1MHz, V averaging on ycle. (method	The meas SA-2 of AN	surements we ISI C63.10)	re adjusted o	corrected for
Note 1:	OBW, # of p continuous,	ooints in swee duty cycle ≥	ep ≥ 2*spar 98%) and p	NRBW, auto	sweep, RMS tion over the	n analyzer (see 6 detector, pow OBW (methoo alculated from	ver averagii I SA-1 of A	ng on (transmi NSI C63.10).	itted signal w	as
Note 4:	(in linear ter mode of the the limits is chain. If the	ms). The an MIMO devic the highest g signals are	tenna gain e. If the sig ain of the ir coherent th	used to detern nals on the n ndividual chair	mine the EIF on-coherent ns and the E ve antenna g	RP and limits for between the t IRP is the sum gain is the sum	or PSD/Out ransmit cha n of the pro-	put power dep ains then the ducts of gain a	pends on the gain used to and power or	operating determine n each
Antenna Ga	ain Informat									
Freq	/ 1	Antenna Gair 2	n (dBi) / Cha 3	ain 4	BF	MultiChain Legacy	CDD	Sectorized / Xpol	Dir G (PWR)	Dir G (PSD)
5150-5250					No	Yes	Yes	No	0.70	6.70
5250-5350	Ref	fer to Operat	ional Descri	intion	No	Yes	Yes	No	0.60	6.50
5470-5725				puon	No	Yes	Yes	No	1.00	6.80
5725-5825					No	Yes	Yes	No	0.70	6.60
	Max # of spa	tial streams: tial streams:	1 4	ng performed	l using 1 sp	atial stream				
			·	-						

NTS	EM	C Test Data
ARRIS	Job Number:	JD102669
C61W	•	
Mark Rieger		
100 10.571 00 10.247 10.L	01000.	
CDD = Cyclic Delay Diversity (or Cyclic Shift Diversity) modes supported, Se		
	SD = total gain for PSD	calculations based on
	, .	
Array gain for power/psd calculated per KDB 662911 D01.		
	I from cyclic delay table of	of 802.11; Array gains
	ly gain associated with C	DD with two antennas
(3dB for PSD and 0 dB for power)		
	ARRIS C61W Mark Rieger FCC 15.B / FCC 15.247 / 15.E BF = beamforming mode supported, Multichain Legacy = 802.11 legacy data CDD = Cyclic Delay Diversity (or Cyclic Shift Diversity) modes supported, Secons polarized. Dir G (PWR) = total gain (Gant + Array Gain) for power calculations; GA (PS FCC KDB 662911. Depending on the modes supported, the Array Gain value. Array gain for power/psd calculated per KDB 662911 D01. For systems with Beamforming and CDD, choose one the following options: Option 1: Delays are optimized for beamforming, rather than being selected calculated based on beamforming criteria. Option 2: Antennas are paired for beamforming, and the pairs are configure	ARRIS Job Number: C61W T-Log Number: Mark Rieger Project Manager: Mark Rieger Project Coordinator: FCC 15.B / FCC 15.247 / 15.E Class: BF = beamforming mode supported, Multichain Legacy = 802.11 legacy data rates supported for mu CDD = Cyclic Delay Diversity (or Cyclic Shift Diversity) modes supported, Sectorized / Xpol = antenn cross polarized. Dir G (PWR) = total gain (Gant + Array Gain) for power calculations; GA (PSD) = total gain for PSD FCC KDB 662911. Depending on the modes supported, the Array Gain value for power could be dif value. Array gain for power/psd calculated per KDB 662911 D01. For systems with Beamforming and CDD, choose one the following options: Option 1: Delays are optimized for beamforming, rather than being selected from cyclic delay table of calculated based on beamforming criteria. Option 2: Antennas are paired for beamforming, and the pairs are configured to use the cyclic delay array gain associated with beamforming with 2 antennas (3dB), and the array gain associated with Comparison of the cyclic delay table of calculated based on beamforming with 2 antennas (3dB), and the array gain associated with beamforming with 2 antennas (3dB), and the array gain associated with Comparison of the cyclic delay table of calculated with beamforming with 2 antennas (3dB), and the array gain associated with Comparison of the cyclic delay table of calculated with beamforming with 2 antennas (3dB), and the array gain associated with Comparison of the cyclic delay table of calculated with beamforming with 2 antennas (3dB), and the array gain associated with Compa

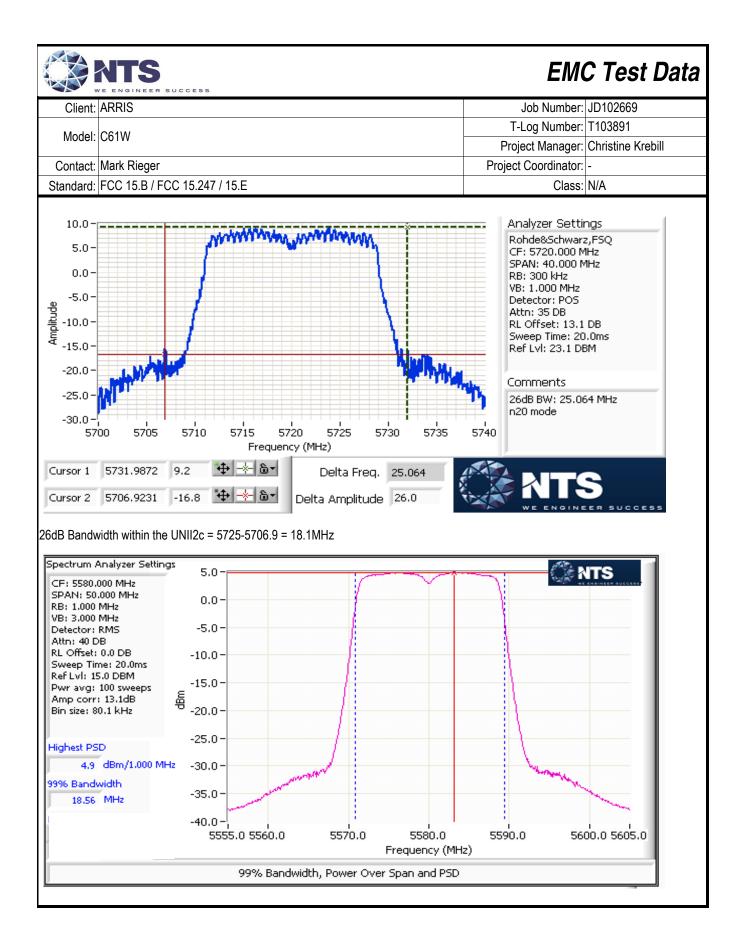
		SUCCESS							C Test	Data
Client:	ARRIS							Job Number:		
Model:	C61W							Log Number:		
							-		Christine Kre	bill
	Mark Rieger						Project	Coordinator:		
Standard:	FCC 15.B / I	FCC 15.247	/ 15.E					Class:	N/A	
	ce - 5470-572	25 MHz Ban	d - FCC				Mar		400.0	
Mode:	11a	Software	26dB BW	Duty Cycle	Dowor	Total	Power	EIRP (mW): FCC Limit	196.3 Max Power	
requency (MHz)	Chain	Software	260B BVV (MHz)	Duty Cycle	Power				(W)	Result
(11112)	1	Setting		%	dBm 15.6	mW	dBm	dBm	(**)	
	3				15.0		_			
5500	4	q64	21.5	100	16.1	155.9	21.9	24.0		Pass
	2				16.2					
	1				15.6					
FE00	3	-05	04 5	100	15.9	150.0	04.0	04.0		D
5580	4	q65	21.5	100	15.7	152.2	21.8	24.0		Pass
	2				16.0				0.156	
	1				15.3				0.100	
5700	3	q64	21.6	100	15.5	146.3	21.7	24.0		Pass
5100	4	407	21.0	100	15.7	170.0	21.1	27.0		1 033
	2				16.0					
	1				14.9					
5720	3	q63	15.9	100	15.1	135.1	21.3	23.0		Pass
	4				15.4		-			
	2				15.7					
	2				13.7					

Model: C6 Contact: Mar Standard: FC0 5470-5700 PSD Mode: Frequency	ırk Rieger C 15.B / F		/ 15.E				Proje	og Number: ct Manager:		ebill	
Contact: Mar Standard: FC0 5470-5700 PSD Mode: Frequency	irk Rieger C 15.B / F D - FCC/IC		/ 15.E						Christine Kr	ebill	
Standard: FC0 6470-5700 PSD Mode: Frequency	C 15.B / F D - FCC/IC		/ 15.E				Dustant				
5470-5700 PSD Mode: Frequency) - FCC/IC		/ 15.E			Project Coordinator: -					
Mode: Frequency							Class: N/A				
Frequency	bi i										
(MHz)	Chain	Software Setting	99% BW (MHz)	Duty Cycle %	PSD dBm/MHz	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm/	IC limit MHz	Result	
5500	1 3 4 2	q64		99	3.8 3.8 3.1 4.1	9.4	9.7	10.2	11.0	Pass	
5580	1 3 4 2	q65		99	4.0 3.2 4.8 3.7	10.0	10.0	10.2	11.0	Pass	
5700	1 3 4 2	q64		99	4.4 3.3 4.8 4.1	10.5	10.2	10.2	11.0	Pass	
5720	1 3 4 2	q63		99	4.0 2.7 4.4 3.7	9.5	9.8	10.2	11.0	Pass	
Portion within	5725-585	0 MHz band	I (UNII-3)								
5720	1 3 4 2	q63		99	3.9 2.8 3.9 3.6	9.1	9.6	29.2	29.2	Pass	



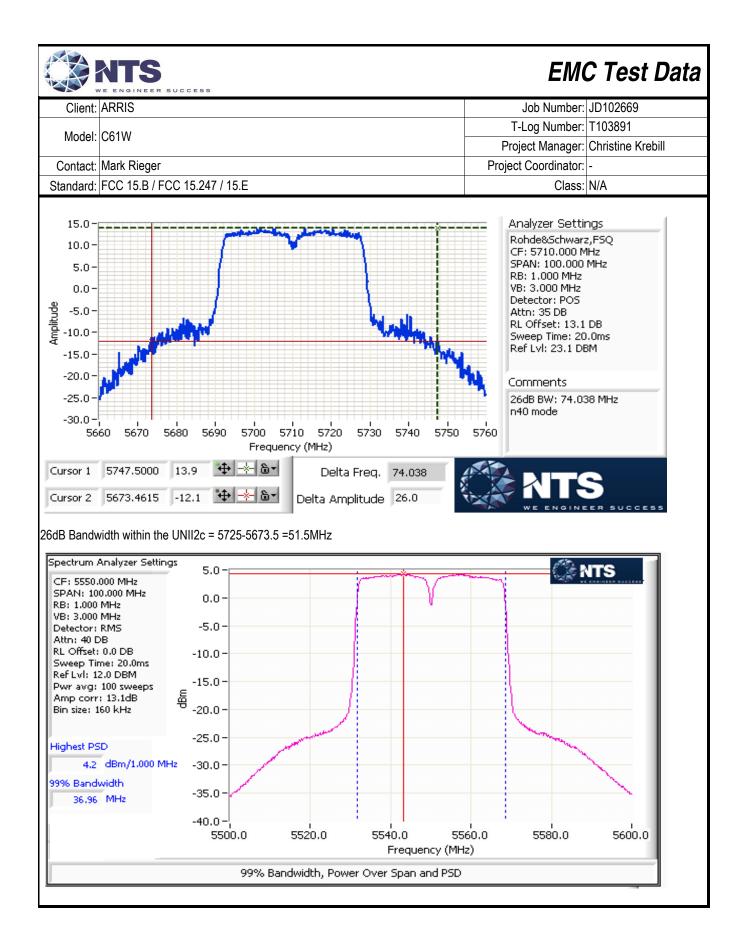
		SUCCESS							C Test	Data	
Client:	ARRIS							Job Number:			
Model:	C61W							Log Number:			
									Christine Kre	bill	
	Mark Rieger					Project	Coordinator:				
Standard:	andard: FCC 15.B / FCC 15.247 / 15.E Class: N/A										
MIMO Devi	ce - 5470-572	25 MHz Ban	d - FCC								
Mode:	n20						Max	EIRP (mW):			
Frequency	Chain	Software	26dB BW	Duty Cycle	Power	Total	Power		Max Power	Result	
(MHz)		Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	Robuit	
	1				16.0						
5500	3	q65	21.7	100	16.1	166.9	22.2	24.0		Pass	
	4	4			16.2						
	2				16.5						
	1				16.2						
5580	3	q67	21.9	100	16.3	172.7	22.4	24.0		Pass	
	4	4			16.4						
	2				16.5				0.173		
	1				15.2						
5700	3	q64	25.1	100	15.5	148.3	21.7	24.0		Pass	
0100	4	901	20.1		15.8	110.0		2		1 400	
	2				16.2						
	1				15.2						
5720	3	q64	18.1	100	15.4	143.0	21.6	23.6		Pass	
0120	4	901	10.1	100	15.7	110.0	21.0	20.0		1 400	
	2				15.8						

$ \begin{array}{c c c c c c c c c c c c c c c c c c c $
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $
$\begin{array}{c c c c c c c c c c c c c c c c c c c $
$\begin{array}{c c c c c c c c c c c c c c c c c c c $
$\begin{array}{c c c c c c c c c c c c c c c c c c c $
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
5720 3 064 09 3.2 10.2 10.1 10.2 11.0
2 4.0
Portion within 5725-5850 MHz band (UNII-3)
$5720 \frac{1}{3} \\ \frac{3}{4} \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 1 \\ 2 \\ 2$



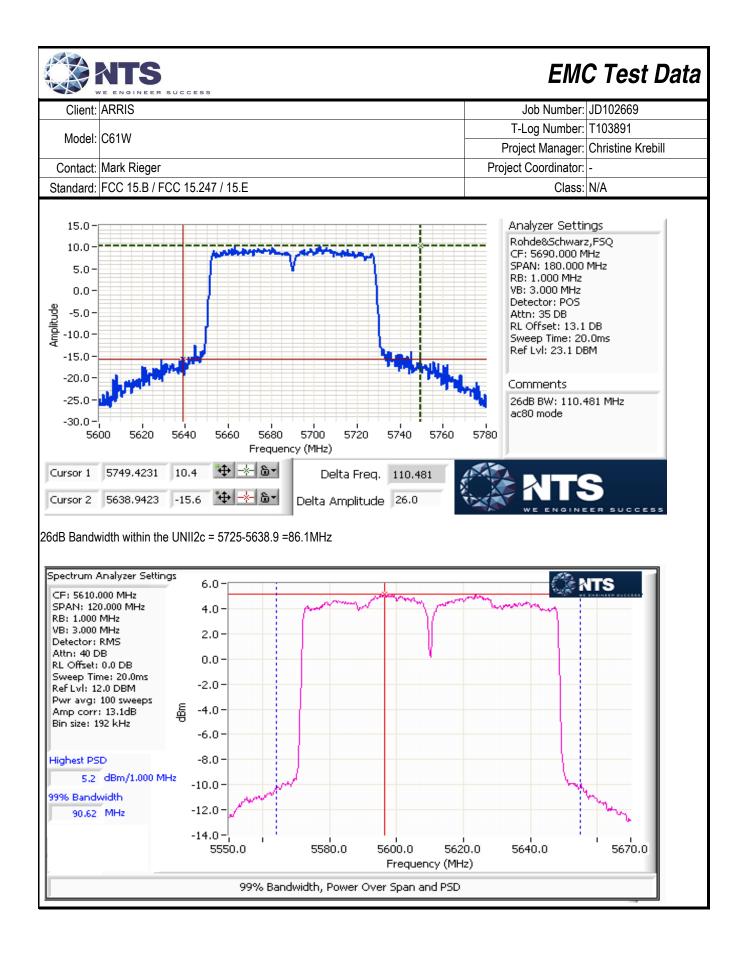
		SUCCESS						EM	C Test	Data
Client:	ARRIS							Job Number:		
Model:	C61W							og Number:		
Oratest	Mark Diagon				-	ect Manager: Coordinator:	Christine Kre	bill		
	Mark Rieger FCC 15.B / I		15 5				Project	Coordinator. Class:		
Stanuaru.	FUC 15.D71	00 15.247	IJ.E					01855.	N/A	
	ce - 5470-572	25 MHz Ban	d - FCC							
Mode:	n40	0 1			_			EIRP (mW):		
Frequency (MHz)	Chain	Software Setting	26dB BW (MHz)	Duty Cycle	Power		Power		Max Power	Result
(11112)	1	Setting	(IVIEZ)	%	dBm 13.7	mW	dBm	dBm	(W)	
FF 4 0	3	50	44.0	400	13.7	00 5	40.0	04.0		
5510	4	q56	41.3	100	13.8	96.5	19.8	24.0		Pass
	2				13.9					
	1				17.5					
5550	3	q73	69.5	100	17.6	238.6	23.8	24.0		Pass
	4				17.8 18.1					
	 1				16.1				0.239	
5670	3	-			16.5	179.0	22.5	24.0		_
	4	q67	64.6	100	16.6					Pass
	2				16.8					
	1				17.4					
5710	3	q73	51.5	100	17.9	242.8	23.9	24.0		Pass
	4	•			17.9 18.1					

		SUCCESS						EMO	C Test	Data
Client:	ARRIS						,	Job Number:	JD102669	
Model:	C61W					T-Log Number: T103891				
								ect Manager:	Christine Kr	ebill
	Mark Rieger					Project	Coordinator:	-		
Standard:	FCC 15.B / I	FCC 15.247	/ 15.E					Class:	N/A	
IIMO Devid Mode:	ce 5470-5725 n40	5 PSD - FCC	/IC							
requency	Chain	Software	99% BW	Duty Cycle	PSD	Total	PSD ¹	FCC Limit	IC limit	Result
(MHz)	Chain	Setting	(MHz)	%	dBm/MHz	mW/MHz	dBm/MHz	dBm	/MHz	Result
	1				-1.9					
5510	3	q56		98	-2.0	2.7	4.3	10.2	11.0	Pass
	4				-1.1 -1.8					
	1				3.4					
5550	3	q78		98	3.0	9.1	9.6	10.2	11.0	Pass
5550	4	470		90	4.2	9.1	9.0	10.2	11.0	газэ
	2				3.6					
	1 3				2.1 0.6					
5670	4	q67		98	2.6	6.0	7.8	10.2	11.0	Pass
	2				1.5					
	1				4.2					
5710	3	q76		98	3.2	9.6	9.8	10.2	11.0	Pass
•••••	4	4. 0			4.1 3.6	010	010			
ortion wit	 hin 5725-585	60 MHz banc	I (UNII-3)	1	3.0					
5710	1 3 4	q76		98	3.1 2.4 3.7	8.0	9.0	29.2	29.2	Pass
5710	4 2	ų/0		90	3.7 2.7	0.0	9.0	23.2	23.2	FdS



		SUCCESS						EM	C Test	Data
Client:	ARRIS							Job Number:		
Model:	C61W						T-	Log Number:	T103891	
							-	-	Christine Kre	bill
	Mark Rieger					Project	Coordinator:			
Standard:	FCC 15.B / I		Class:	N/A						
	ce - 5470-57	25 MHz Ban	d - FCC							
Mode:	ac80	0.1		<u></u>	1			EIRP (mW):		
						Power		Max Power	Result	
(MHz)		Setting	(MHz)	%	dBm 11.6	mW	dBm	dBm	(W)	
	1 3				11.0					
5530	4	q46	81.5	100	11.2	54.3	17.3	24.0		Pass
	2				11.4					
	1				17.5					
5610	3	q70	92.3	100	18.0	241.4	23.8	24.0	0.241	Pass
0010	4	470	02.0		17.6	211.1	20.0	21.0	0.211	1 400
	2				18.1					
	1 3				17.4 18.0					
5690	4	q71	86.1	100	17.6	240.2	23.8	24.0		Pass
	2				18.1					

		SUCCESS						EM	C Test	Data
Client:	ARRIS							Job Number:	JD102669	
Model:	C61W							og Number:		
						ect Manager:		ebill		
Contact: Mark Rieger								Coordinator:		
Standard:	FCC 15.B / I	FCC 15.247	/ 15.E					Class:	N/A	
Mode:	PSD - FCC/IC ac80		00% DW		DOD					
Frequency (MHz)	Chain	Software Setting	99% BW (MHz)	Duty Cycle %	PSD dBm/MHz	l otal mW/MHz	PSD ¹ dBm/MHz	FCC Limit	IC limit /MHz	Result
5530	1 3 4 2	q46	(1112)	96	-7.1 -8.4 -6.7 -7.3	0.8	-1.0	10.2	11.0	Pass
5610	1 3 4 2	q87		96	3.5 1.9 5.2 3.9	10.0	10.0	10.2	11.0	Pass
5690	1 3 4 2	q85		96	3.9 2.7 4.3 3.3	9.5	9.8	10.2	11.0	Pass
Portion wit	hin 5725-585	60 MHz banc	I (UNII-3)							
5690	1 3 4 2	q85		96	2.3 1.0 2.9 2.2	6.8	8.3	29.2	29.2	Pass



Client:	ARRIS	Job Number:	JD102669
Model:	CE1W	T-Log Number:	T103891
	COTW	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

FCC 15.407(UNII) Antenna Port Measurements Power, PSD, Bandwidth and Spurious Emissions

Test Specific Details

ITS

SUCCESS

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Summary of Results

outilitially of ficour		-		
Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Power, 5470 - 5725MHz	15.407(a) (2)	Pass	n20: 22.4 dBm (172.7 mW) n40: 23.2 dBm (207 mW) ac80: 23.1 dBm (202 mW)
1	PSD, 5470 - 5725MHz	15.407(a) (2)	Pass	n20: 10.1 dBm/MHz n40: 9.8 dBm/MHz ac80: 10.0 dBm/MHz
1	Max EIRP 5470 - 5725MHz	TPC required if EIRP≥ 500mW (27dBm). EIRP ≥ 200mW (23dBm) DFS threshold	Pass	EIRP = 30.0 dBm (988.8 mW)
1	26dB Bandwidth	15.407 (Information only)	-	> 20MHz for all modes

General Test Configuration

When measuring the conducted emissions from the EUT's antenna port, the antenna port of the EUT was connected to the spectrum analyzer or power meter via a suitable attenuator to prevent overloading the measurement system. All measurements are corrected to allow for the external attenuators and cables used.

Ambient Conditions:

Temperature:	22.6 °C
Rel. Humidity:	41 %



Client:	ARRIS	Job Number:	JD102669
Model:	CE1W	T-Log Number:	T103891
woder.	COIW	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Procedure Comments:

Measurements performed in accordance with FCC KDB 789033 D01

	Mode	Data Rate	Duty Cycle (x)	Constant DC?	T (ms)	Pwr Cor Factor*	Lin Volt Cor Factor**	Min VBW for FS (Hz)
1SS	11n20	MCS0	0.99	Yes	1.953	0	0	10
1SS	n40	MCS0	0.98	Yes	0.971	0.0885442	0.2	1030
1SS	ac80	VHT0	0.96	Yes	0.46	0.1848341	0.4	2174

Note - for antenna port measurements, the EUT was operated in the non-TxBF mode

Sample Notes

Sample S/N: G62DA7BU20005B Driver: -

		RSUCCESS						ЕМ	C Test	Data	
Client:	ARRIS							Job Number:	JD102669		
Madalı	004144						T-I	og Number:	T103891		
Model:	COTW						Proje	ect Manager:	Christine Kre	ebill	
Contact:	Mark Riege	r					Project	Coordinator:	-		
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A		
[Te	Date of Test: st Engineer:	atput Power a 3/14/2017 0 Rafael Varel FT Lab #4B	:00	Spectral Den Cadigal	Co) Systems Config. Used: nfig Change: EUT Voltage:	none				
Note 1:		-	-	age power me pared to the L				-		sured using	
Note 2:	2*span/RBV duty cycle.	V, RMS detec This is based	tor, trace av d on 10log(1/	alyzer (see plo verage 100 tra /x), where x is	aces, power s the duty cy	averaging on cle. (method	SA-2 of ANS	urements we SI C63.10)	re adjusted c	orrected for	
Note 3:	99% Bandwidth measured in accordance with C63.10 - RB between 1-5 % of OBW and VB ≥ 3*RB, Span between 1.5 and 5 times OBW.										
Note 4:	For MIMO systems the total output power and total PSD are calculated from the sum of the powers of the individual chains (in linear terms). The antenna gain used to determine the EIRP and limits for PSD/Output power depends on the operating mode of the MIMO device. If the signals on the non-coherent between the transmit chains, then the gain used to determine										
Antenna Ga											
Freq		Antenna Gair	<u> </u>		BF	MultiChain	CDD	Sectorized	Dir G	Dir G	
	1	2	3	4		Legacy		/ Xpol	(PWR)	(PSD)	
5150-5250					No	Yes	Yes	No	6.70	6.70	
5250-5350	Re	fer to Operati	onal Descrit	otion	No	Yes	Yes	No	6.50	6.50	
5470-5725					No	Yes	Yes	No	6.80	6.80	
5725-5825					No	Yes	Yes	No	6.60	6.60	
	For devices that support CDD modes Min # of spatial streams: 1 Max # of spatial streams: 4 Note - for all power/psd measurements, testing performed using 1 spatial stream										

	KTTS WE ENGINEER SUCCESS	EM	C Test Data
Client	ARRIS	Job Number:	JD102669
		T-Log Number:	
Model	C61W	Project Manager:	
Contact	Mark Rieger	Project Coordinator:	
	FCC 15.B / FCC 15.247 / 15.E	Class:	
Otaridard	100 10.B / 100 10.2 / / 10.E	01000.	14/7 4
Notes:	BF = beamforming mode supported, Multichain Legacy = 802.11 legacy dat CDD = Cyclic Delay Diversity (or Cyclic Shift Diversity) modes supported, S	••	
	cross polarized.		
	Dir G (PWR) = total gain (Gant + Array Gain) for power calculations; GA (PS	, .	
Notes:	FCC KDB 662911. Depending on the modes supported, the Array Gain val	ue for power could be dif	ferent from the PSD
Nataa	value.		
Notes:	Array gain for power/psd calculated per KDB 662911 D01. For systems with Beamforming and CDD, choose one the following options		
	Option 1: Delays are optimized for beamforming, rather than being selected		of 802.11: Array gains
	calculated based on beamforming criteria.		si oozii i, i iiray gamo
Notes:	Option 2: Antennas are paired for beamforming, and the pairs are configure	ed to use the cyclic delay	diversity of 802.11; the
	array gain associated with beamforming with 2 antennas (3dB), and the array		
	(3dB for PSD and 0 dB for power)		

		SUCCESS							C Test	Data
Client:	ARRIS							Job Number:		
Model:	C61W							Log Number:		1.11
<u> </u>									Christine Kre	DIII
	Mark Rieger						Project	Coordinator:		
Standard:	FCC 15.B / I	-CC 15.247	/ 15.E					Class:	N/A	
MIMO Devi	ce - 5470-572	25 MHz Ban	d - FCC							
Mode:	n20						Max	EIRP (mW):	826.6	
Frequency	Chain	Software	26dB BW	Duty Cycle	Power	Total	Power		Max Power	Result
(MHz)	Chain	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	Result
	1				16.0					
5500	3	q65	21.7	100	16.1	166.9	22.2	23.2		Pass
	4	400			16.2					
	2				16.5					
	1				16.2					
5580	3	q67	21.9	100	16.3	172.7	22.4	23.2		Pass
	4	•			16.4					
	2				16.5				0.173	
	1				15.1					
5700	3	q62	30.064	100	15.3	136.4	21.3	23.2		Pass
	4				15.3					
	2				15.6					
	3				15.2					
5720	3 4	q64	18.1	100	15.4 15.7	143.0	21.6	22.8		Pass
	2				15.7					
	2				15.8					

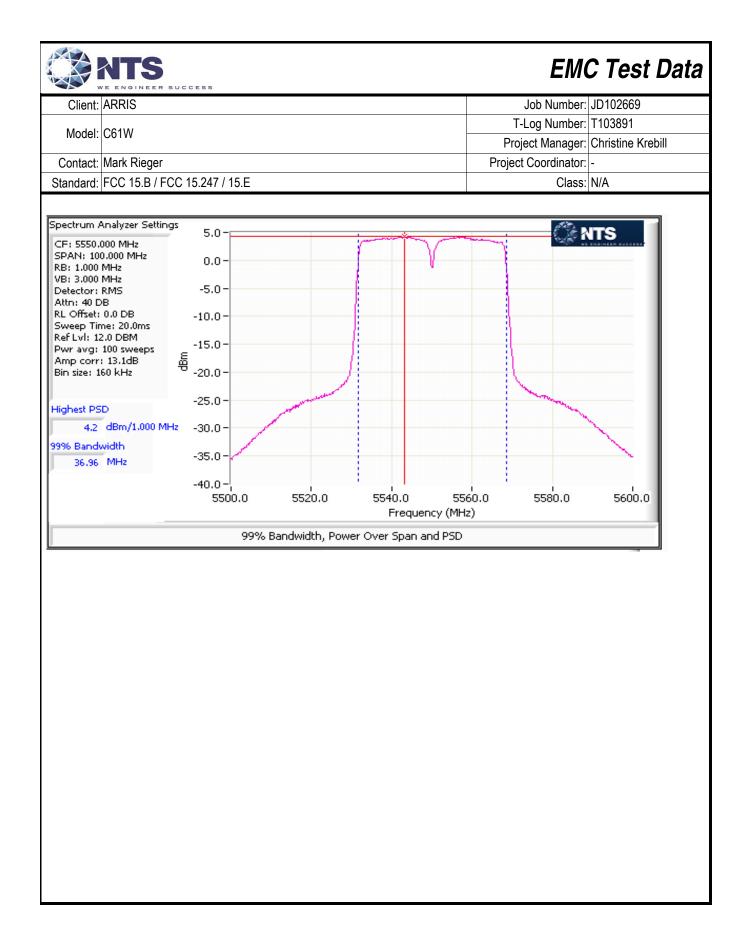
Client	ARRIS	SUCCESS						Job Number:	10102660	
Client	ARRIS									
Model	C61W						T-Log Number: T10389 Project Manager: Christin			ebill
Contact	Mark Rieger	-						Coordinator:	-	
	FCC 15.B /		/ 15.E				.,	Class:	N/A	
5470-5725 Mode:	PSD - FCC/IC n20	0								
Frequency		Software	99% BW	Duty Cycle	PSD	Total	PSD ¹	FCC Limit	IC limit	Deeu
(MHz)	Chain	Setting	(MHz)	%	dBm/MHz	mW/MHz	dBm/MHz		/MHz	Resu
	1				3.5					
5500	3	q65		99	3.6 4.1	9.1	9.6	10.2	11.0	Pass
	2				3.0					
	1				3.9					
5580	3	q67		99	1.9	9.0	9.5	10.2	11.0	Pass
0000	4	907			4.9	0.0	0.0	10.2	11.0	1 400
	2				2.9 3.9					
	3				2.6			40.0		_
5700	4	q62		99	3.6	8.8	9.4	10.2	11.0	Pase
	2				3.4					
	1				4.4 3.2					
5720	4	q64		99	4.5	10.2	10.1	10.2	11.0	Pass
	2				4.0					
Portion wit	hin 5725-58	50 MHz band	1 (UNII-3)							
	1				4.0					
5720	3	q64		99	3.1	9.4	9.7	29.2	29.2	Pass
	4	4			3.8 3.9					

									C Test	Data
Client:	ARRIS							Job Number:		
Model:	C61W							Log Number:		
							-	-	Christine Kre	bill
	Mark Rieger						Project	Coordinator:		
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
	ce - 5470-572		d - FCC				Mar		000.0	
Mode: Frequency	n40	Software	26dB BW	Duty Cycle	Power	Total	Max Power	EIRP (mW): FCC Limit	988.8 Max Power	
(MHz)	Chain	Setting	(MHz)	Duty Cycle %	dBm	mW	dBm	dBm	(W)	Result
(11112)	1	Oetting		70	<u>иыл</u> 15.3	TIVV	UDIII	UDIII	(**)	
	3		10.1	100	15.4	100.0				-
5510	4	q62	43.1	100	15.3	138.8	21.4	23.2		Pass
	2				15.6					
	1				16.9					
5550	3	q70	66.2	100	17.1	206.6	23.2	23.2		Pass
0000	4	9,0	00.2	100	17.0	200.0	20.2	20.2		1 400
	2				17.5				0.207	
	1				16.5					
5670	3	q68	62.5	100	17.1 16.8	196.3	22.9	23.2		Pass
	2				17.2					
	1				16.7					
5740	3		50.0	100	17.1	000.4	00.4	00.0		Dees
5710	4	q69	52.3	100	17.0	203.1	23.1	23.2		Pass
	2				17.4					

	NTS	EMO	EMC Test Data		
Client:	ARRIS	Job Number:	JD102669		
Madalı	OC4M	T-Log Number:	T103891		
Model:	COTVV	Project Manager:	Christine Krebill		
Contact:	Mark Rieger	Project Coordinator:	-		
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A		

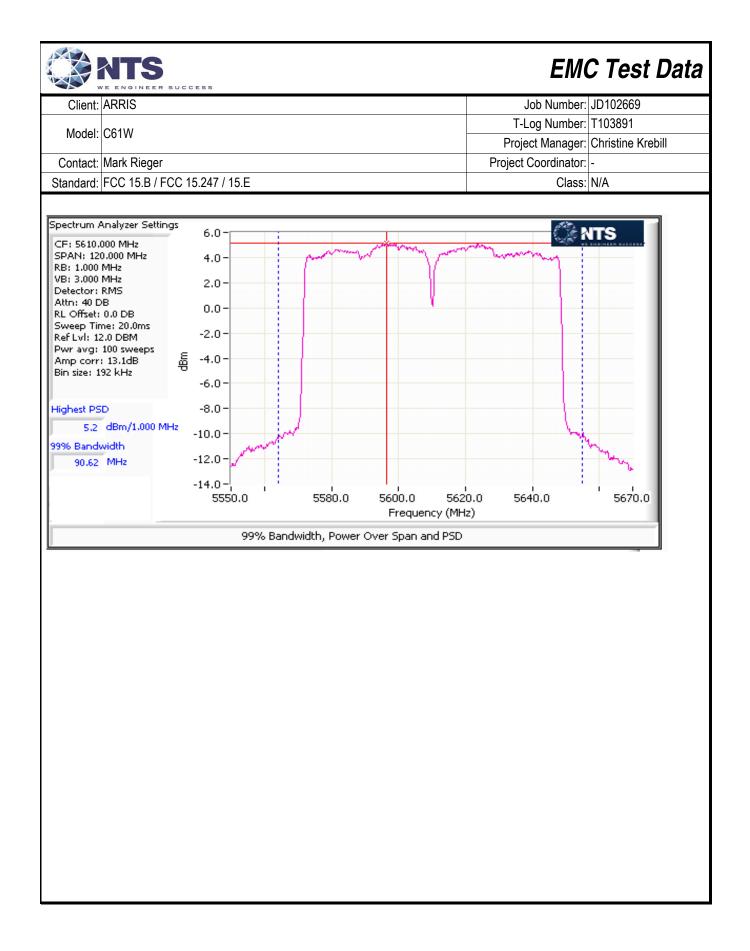
MIMO Device 5470-5725 PSD - FCC/IC

Mode:	n40	Software	00% D\M	Duty Ovela	DOD	Tatal				
Frequency (MHz)	Chain	Software	99% BW (MHz)	Duty Cycle %	PSD dBm/MHz	l otal mW/MHz	PSD ¹ dBm/MHz	FCC Limit	IC limit MHz	Result
(11112)	1	ootang	(11112)	/0	-0.3			uDin/		
	3				-0.6					
5510	4	q62		98	0.3	3.8	5.8	10.2	11.0	Pass
	2				-0.2					
	1				3.4					
5550	3	-70		00	3.0	0.1	0.0	10.0	11.0	Deee
5550	4	q78		98	4.2	9.1	9.6	10.2	11.0	Pass
	2				3.6					
	1				2.8					
5670	3	q70		98	1.5	7.0	8.5	10.2	11.0	Pass
5070	4	<i>q1</i> 0		50	3.3	7.0	0.5	10.2	11.0	1 435
	2				1.9					
	1				4.2					
5710	3	q76		98	3.2	9.6	9.8	10.2	11.0	Pass
0110	4	4.0			4.1	0.0	0.0		11.0	1 400
	2				3.6					
Portion with	nin 5725-585	50 MHz band	I (UNII-3)							
	1		<u> </u>		3.1					
5740	3	-76		00	2.4	0.0	0.0	20.0	20.0	Dees
5710	4	q76		98	3.7	8.0	9.0	29.2	29.2	Pass
	2				2.7					



		SUCCESS						EM	C Test	Data
Client:	ARRIS							Job Number:	JD102669	
Model:	C61W						T-	Log Number:	T103891	
							Proj	ect Manager:	Christine Kre	bill
Contact:	Mark Rieger						Project	Coordinator:	-	
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
	ce - 5470-57	25 MHz Ban	d - FCC				M		000.4	
Mode:	ac80	Software	26dB BW	Dut Out	D 1	Tatal		EIRP (mW):	966.4 Max Power	
Frequency (MHz)	Chain	Software Setting	260B BVV (MHz)	Duty Cycle	Power ¹		Power			Result
	1	Setting	(IVITZ)	%	dBm 12.2	mW	dBm	dBm	(W)	
	3				12.2					
5530	4	q50	82.5	100	12.0	67.6	18.3	23.2		Pass
	2				12.5					
	1				16.8					
5610	3	q67	81.3	100	17.2	201.9	23.1	23.2	0.202	Pass
0010	4	907	01.0	100	16.8	201.0	20.1	20.2	0.202	1 400
	2				17.3					
	1				16.3					
5690	3	q68	77.1	100	17.0 16.3	186.7	22.7	23.2		Pass
	2				17.1					

		SUCCESS						EMO	C Test	Data
Client:	ARRIS							Job Number:	JD102669	
Model:	C61W						T-Log Number: T103891			
wouer.	COTW							ect Manager:		ebill
	Mark Rieger				Project	Coordinator:				
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
5470-5725 I Mode: Frequency	PSD - FCC/IC ac80	Software	99% BW	Duty Cycle	PSD	Total	PSD ¹	FCC Limit	IC limit	Desult
(MHz)	Chain	Setting	(MHz)	%	dBm/MHz	mW/MHz	dBm/MHz		/MHz	Result
5530	1 3 4 2	q50		96	-5.9 -6.8 -5.6 -6.1	1.0	0.0	10.2	11.0	Pass
5610	1 3 4 2	q87		96	3.5 1.9 5.2 3.9	10.0	10.0	10.2	-	Pass
5690	1 3 4 2	q85		96	3.9 2.7 4.3 3.3	9.5	9.8	10.2	11.0	Pass
Portion wit	hin 5725-585	0 MHz bond	L / LINIIL-2)							
5690	1 3 4 2	q85	(UNII-3)	96	2.3 1.0 2.9 2.2	6.8	8.3	29.2	29.2	Pass



k				
ĺ	Client:	ARRIS	Job Number:	JD102669
ĺ	Model:	CE1W	T-Log Number:	T103891
	MOUEI.	COTW	Project Manager:	Christine Krebill
ĺ	Contact:	Mark Rieger	Project Coordinator:	-
I	Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

FCC 15.407(UNII) Antenna Port Measurements Power, PSD, Bandwidth and Spurious Emissions

Test Specific Details

TS

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Power, 5725 - 5850MHz	15.407(a) (3)	Pass	a: 28.5 dBm (709.2 mW) n20: 28.6 dBm (725 mW) n40: 28.5 dBm (707 mW) ac80: 25.2 dBm (328 mW)
1	PSD, 5725 - 5850MHz	15.407(a) (3)		a: 17.4 dBm/MHz n20: 17.2 dBm/MHz n40: 14.1 dBm/MHz ac80: 7.9 dBm/MHz

General Test Configuration

When measuring the conducted emissions from the EUT's antenna port, the antenna port of the EUT was connected to the spectrum analyzer or power meter via a suitable attenuator to prevent overloading the measurement system. All measurements are corrected to allow for the external attenuators and cables used.

Ambient Conditions:

Temperature:	22.6 °C
Rel. Humidity:	41 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

	NTS Ve engineer success	EMC Test Data				
Client:	ARRIS	Job Number:	JD102669			
Model:	CEAN	T-Log Number:	T103891			
woder.	Colw	Project Manager:	Christine Krebill			
Contact:	Mark Rieger	Project Coordinator:	-			
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A			

Procedure Comments:

Measurements performed in accordance with FCC KDB 789033 D01

	Mode	Data Rate	Duty Cycle (x)	Constant DC?	T (ms)	Pwr Cor Factor*	Lin Volt Cor Factor**	Min VBW for FS (Hz)
1SS	11a	6MB/s	0.99	Yes	1.952	0	0	10
1SS	11n20	MCS0	0.99	Yes	1.953	0	0	10
1SS	n40	MCS0	0.9798	Yes	0.971	0.0885442	0.2	1030
1SS	ac80	VHT0	0.96	Yes	0.46	0.1848341	0.4	2174

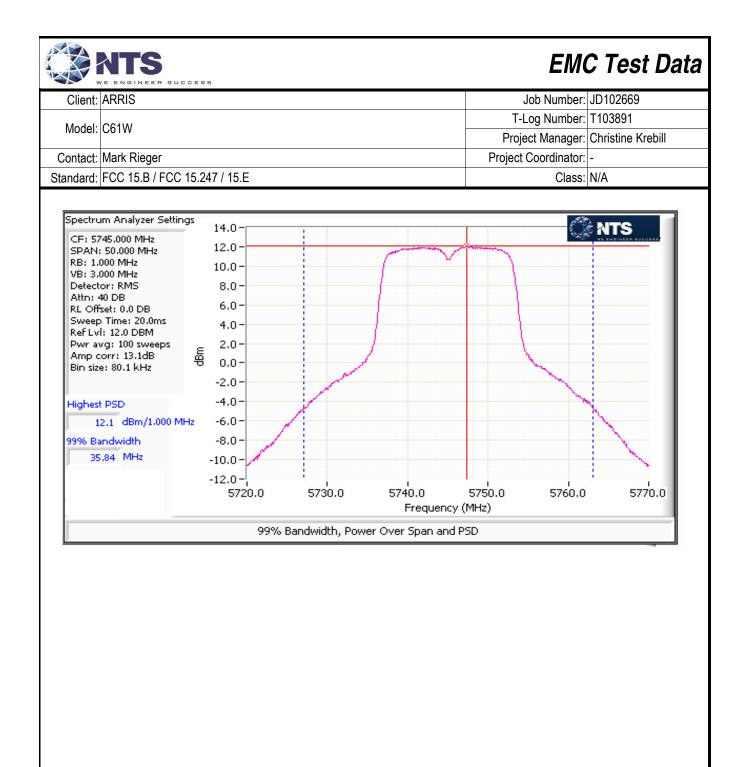
Sample Notes

Sample S/N: G62DA7BU20005B Driver: -

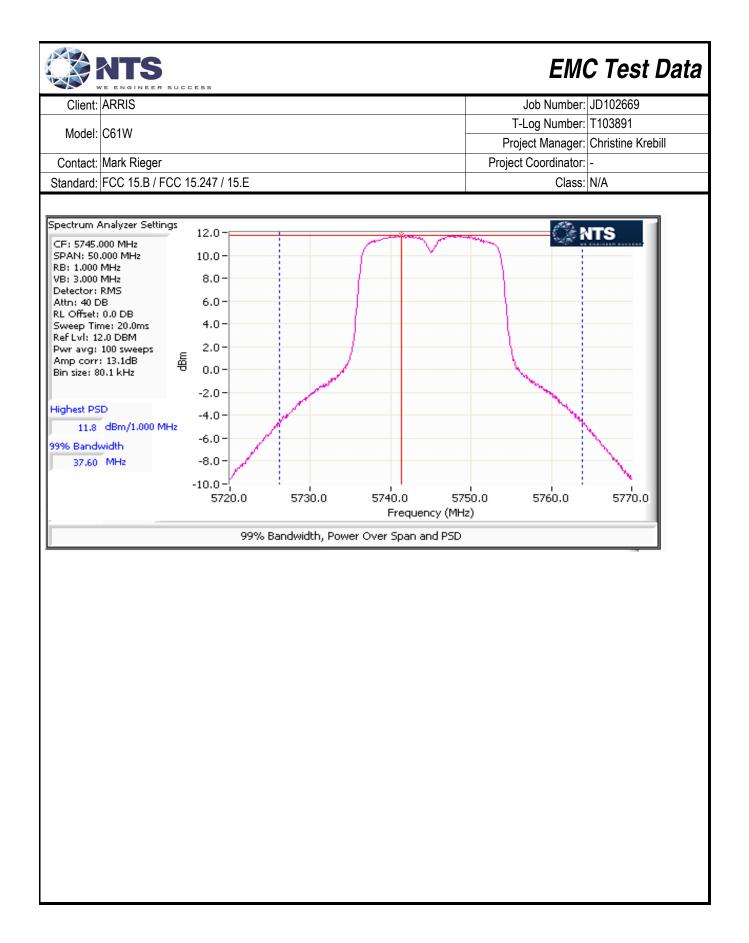
		RSUCCESS						EMO	C Test	Data
Client	ARRIS							Job Number:	JD102669	
NA	004144						T	-Log Number:	T103891	
Model	C61W						Pro	ject Manager:	Christine Kr	ebill
Contact	Mark Riege	er					Projec	t Coordinator:	-	
Standard	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
Te	Date of Test est Engineer	utput Power a : 3/10/2017 0 : Rafael Varel : FT Lab #4B	:00	Spectral De	Co	D Systems Config. Used: onfig Change: EUT Voltage:	none	<u>z</u>		
Note 1:	Power mea	isured using a	gated avera	age power n	neter.					
Note 2:	2*span/RB duty cycle.	W, RMS deteo This is based	tor, trace av 1 on 10log(1/	verage 100 t x), where x	races, power is the duty c	RBW=1MHz, V averaging on. ycle. (method	The mea SA-2 of AN	surements we ISI C63.10)	re adjusted o	corrected for
Note 3:	times OBW	<i>!</i> .				etween 1-5 % o				
Note 4:	mode of the the limits is chain. If th	e MIMO device the highest g	e. If the sigr ain of the inc coherent the	nals on the r dividual chai n the effecti	non-coherent ins and the E ive antenna g	RP and limits for between the tr IRP is the sum pain is the sum	ansmit cha of the pro	ains then the ducts of gain a	gain used to and power or	determine n each
Antenna G	ain Informa	tion								
Freq	1	Antenna Gair 2	ı (dBi) / Chai 3	n 4	BF	MultiChain Legacy	CDD	Sectorized / Xpol	Dir G (PWR)	Dir G (PSD)
5150-5250					No	Yes	Yes	No	0.70	6.70
5250-5350	Re	efer to Operati	onal Descrin	ition	No	Yes	Yes	No	0.60	6.50
5470-5725					No	Yes	Yes	No	1.00	6.80
5725-5825					No	Yes	Yes	No	0.70	6.60
	Min # of spa Max # of spa	ort CDD mod atial streams: atial streams: d measureme	1 4	g performe	d using 1 sp	atial stream				

	ATTS	EM	C Test Data
Client: A	ARRIS	Job Number:	JD102669
		T-Log Number:	
Model: C	C61W	Project Manager:	
Contact:	Mark Rieger	Project Coordinator:	
	FCC 15.B / FCC 15.247 / 15.E	Class:	
otandara. I	00 10.B / 1 00 10.247 / 10.E	01000.	
	BF = beamforming mode supported, Multichain Legacy = 802.11 legacy dat CDD = Cyclic Delay Diversity (or Cyclic Shift Diversity) modes supported, Si		
	ross polarized.		
	Dir G (PWR) = total gain (Gant + Array Gain) for power calculations; GA (PS	SD) = total gain for PSD	calculations based on
	FCC KDB 662911. Depending on the modes supported, the Array Gain val	, .	
	/alue.	····	
Notes: A	Array gain for power/psd calculated per KDB 662911 D01.		
	For systems with Beamforming and CDD, choose one the following options:		
	Option 1: Delays are optimized for beamforming, rather than being selected	d from cyclic delay table o	of 802.11; Array gains
Notoc	calculated based on beamforming criteria.		
C	Option 2: Antennas are paired for beamforming, and the pairs are configure		
	array gain associated with beamforming with 2 antennas (3dB), and the arra	ay gain associated with C	DD with two antennas
(3dB for PSD and 0 dB for power)		

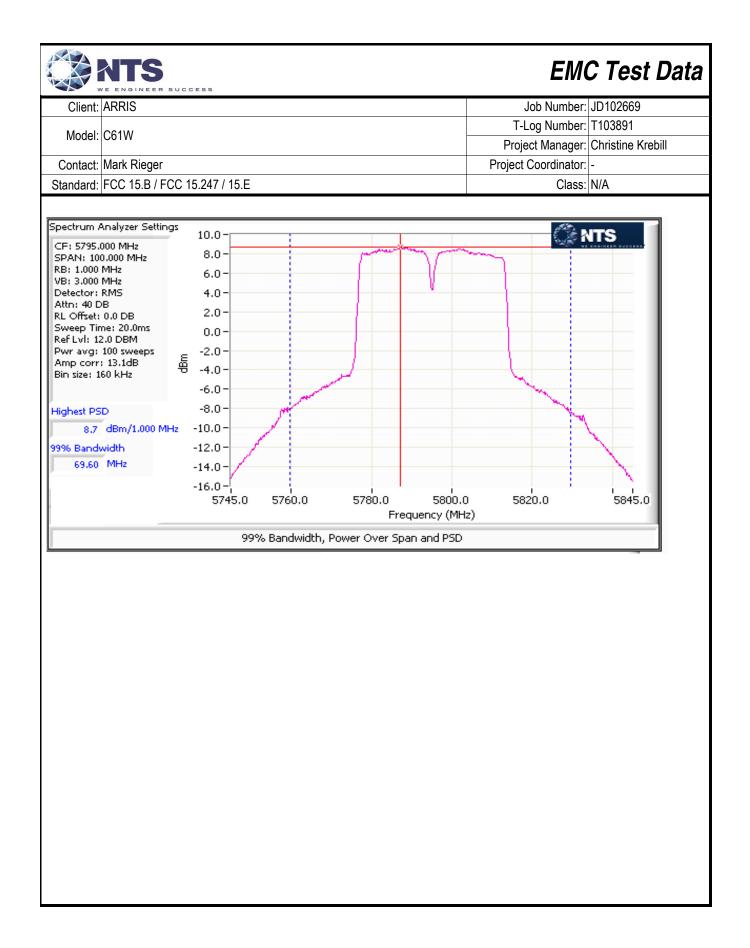
Client:	ARRIS							lob Number:		
Model:	C61W							og Number:		
<u> </u>							_	-	Christine Kre	bill
	Mark Rieger						Project	Coordinator:		
Standard:	FCC 15.B / I	-CC 15.247	/ 15.E					Class:	N/A	
MO Devi	ce - 5725-58	50 MHz Ban	d - FCC/IC							
Mode:								EIRP (mW):	833.2	
requency	Chain	Software	99% BW	Duty Cycle	Power	Total F	Power ¹	Limit	Max Power	Resul
(MHz)		Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	1,000
	1				22.0					
5745	3	q90	25.0	100	22.4 22.9	709.2	28.5	30.0		Pass
	2				22.9					
	1				21.7					
5785	3	~00	27.4	100	22.1	674.0	28.3	30.0	0.709	Deee
5705	4	q90	27.4	100	22.6	074.0	20.3	30.0	0.709	Pass
	2				22.6					
	1				21.7					
5825	3	q90	30.2	100	22.3	673.4	28.3	30.0		Pass
5825		q90	30.2	100		673.4	28.3	30.0		Pass
25-5850 <u>Mode:</u> requency	3 4	Software	99% BW	Duty Cycle	22.3 22.5 22.5 PSD	Total	PSD ¹	FCC Limit		Pass
25-5850	3 4 2 PSD - FCC//0 11a				22.3 22.5 22.5 PSD dBm/MHz			FCC Limit	IC Limit 00kHz	
25-5850 Mode: requency (MHz)	3 4 2 PSD - FCC/IC 11a Chain	Software Setting	99% BW	Duty Cycle %	22.3 22.5 22.5 PSD	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm/5	00kHz	Resul
25-5850 <u>Mode:</u> equency	3 4 2 PSD - FCC/IC 11a Chain 1 3 4	Software	99% BW	Duty Cycle	22.3 22.5 22.5 PSD dBm/MHz 11.6 10.6 12.1	Total	PSD ¹	FCC Limit		Resul
25-5850 Mode: requency (MHz)	3 4 2 PSD - FCC//C 11a Chain 1 3 4 2	Software Setting	99% BW	Duty Cycle %	22.3 22.5 22.5 PSD dBm/MHz 11.6 10.6 12.1 11.2	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm/5	00kHz	Resul
25-5850 Mode: requency (MHz)	3 4 2 PSD - FCC//C 11a Chain 1 3 4 2 1	Software Setting	99% BW	Duty Cycle %	22.3 22.5 22.5 PSD dBm/MHz 11.6 10.6 12.1 11.2 11.5	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm/5	00kHz	Resul
25-5850 Mode: requency (MHz)	3 4 2 PSD - FCC/IC 11a Chain 1 3 4 2 1 3	Software Setting	99% BW	Duty Cycle %	22.3 22.5 22.5 dBm/MHz 11.6 10.6 12.1 11.2 11.5 10.3	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm/5	00kHz	Resul Pass
725-5850 <u>Mode:</u> requency (MHz) 5745	3 4 2 PSD - FCC/I0 11a Chain 1 3 4 2 1 3 4	Software Setting q90	99% BW	Duty Cycle % 99	22.3 22.5 22.5 dBm/MHz 11.6 10.6 12.1 11.2 11.5 10.3 11.8	Total mW/MHz 55.3	PSD ¹ dBm/MHz 17.4	FCC Limit dBm/5 29.4	00kHz 29.4	Resul Pass
25-5850 Mode: requency (MHz) 5745	3 4 2 PSD - FCC/IC 11a Chain 1 3 4 2 1 3 4 2	Software Setting q90	99% BW	Duty Cycle % 99	22.3 22.5 22.5 PSD dBm/MHz 11.6 10.6 12.1 11.2 11.5 10.3 11.8 11.0	Total mW/MHz 55.3	PSD ¹ dBm/MHz 17.4	FCC Limit dBm/5 29.4	00kHz 29.4	
25-5850 Mode: requency (MHz) 5745 5785	3 4 2 PSD - FCC/I0 11a Chain 1 3 4 2 1 3 4	Software Setting q90 q90	99% BW	Duty Cycle % 99 99	22.3 22.5 22.5 dBm/MHz 11.6 10.6 12.1 11.2 11.5 10.3 11.8	Total mW/MHz 55.3 52.6	PSD ¹ dBm/MHz 17.4 17.2	FCC Limit dBm/5 29.4 29.4	00kHz 29.4 29.4	Resul Pass Pass
25-5850 Mode: requency (MHz) 5745	3 4 2 PSD - FCC/IC 11a Chain 1 3 4 2 1 3 4 2 1 3 4 2 1	Software Setting q90	99% BW	Duty Cycle % 99	22.3 22.5 22.5 PSD dBm/MHz 11.6 10.6 12.1 11.2 11.5 10.3 11.8 11.0 10.3	Total mW/MHz 55.3	PSD ¹ dBm/MHz 17.4	FCC Limit dBm/5 29.4	00kHz 29.4	Resul Pass



Client:	ARRIS							Job Number:		
Model:	C61W							og Number:		
							-	-	Christine Kre	bill
	Mark Riege						Project	Coordinator:		
Standard:	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
IMO Devi Mode:	ce - 5725-58 n20		d - FCC/IC				Max	EIRP (mW):	851.7	
requency	ſ	Software	99% BW	Duty Cycle	Power	Total F	Power ¹		Max Power	
(MHz)	Chain	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	Result
	1				22.2					
5745	3	q90	24.0	100	22.5	724.9	28.6	30.0		Pass
•••••	4	400			22.8		_0.0			
	2				22.8 21.9					
	3				21.9					_
5785	4	q90	27.8	100	22.6	692.9	28.4	30.0	0.725	Pass
	2				22.7					
	1				21.7					
	· ·									
5825	3	q90	31.4	100	22.2	669.5	28.3	30.0		Pass
5825	3 4 2	q90	31.4	100		669.5	28.3	30.0		Pass
250-5350 <u>Mode:</u> Frequency	4 2 PSD - FCC/I0 n20	Software	99% BW	Duty Cycle	22.2 22.5 22.5 PSD	Total	PSD ¹	FCC Limit		Pass
250-5350 Mode:	4 2 PSD - FCC/II n20 Chain	C			22.2 22.5 22.5 PSD dBm/MHz					
250-5350 Mode: Frequency (MHz)	4 2 PSD - FCC/I n20 Chain	C Software Setting	99% BW	Duty Cycle %	22.2 22.5 22.5 PSD dBm/MHz 11.7	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	/MHz	Result
250-5350 <u>Mode:</u> requency	4 2 PSD - FCC/II n20 Chain	Software	99% BW	Duty Cycle	22.2 22.5 22.5 PSD dBm/MHz	Total	PSD ¹	FCC Limit		
250-5350 Mode: requency (MHz)	4 2 PSD - FCC/II n20 Chain 1 3 4 2	C Software Setting	99% BW	Duty Cycle %	22.2 22.5 22.5 PSD dBm/MHz 11.7 10.1 11.8 10.9	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	/MHz	Result
250-5350 Mode: Frequency (MHz)	4 2 PSD - FCC/II n20 Chain 1 3 4 2 1	C Software Setting	99% BW	Duty Cycle %	22.2 22.5 22.5 PSD dBm/MHz 11.7 10.1 11.8 10.9 10.7	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	/MHz	Result
250-5350 Mode: Frequency (MHz)	4 2 PSD - FCC/II n20 Chain 1 3 4 2 1	C Software Setting	99% BW	Duty Cycle %	22.2 22.5 22.5 PSD dBm/MHz 11.7 10.1 11.8 10.9 10.7 10.2	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	/MHz	Result
250-5350 Mode: Frequency (MHz) 5745	4 2 PSD - FCC/III n20 Chain 1 3 4 2 1 3 4	Software Setting q90	99% BW	Duty Cycle % 99	22.2 22.5 22.5 PSD dBm/MHz 11.7 10.1 11.8 10.9 10.7 10.2 11.4	Total mW/MHz 52.5	PSD ¹ dBm/MHz 17.2	FCC Limit dBm, 29.4	/MHz 29.4	Resul Pass
250-5350 Mode: Frequency (MHz) 5745	4 2 PSD - FCC/II n20 Chain 1 3 4 2 1	Software Setting q90	99% BW	Duty Cycle % 99	22.2 22.5 22.5 PSD dBm/MHz 11.7 10.1 11.8 10.9 10.7 10.2 11.4 10.8	Total mW/MHz 52.5	PSD ¹ dBm/MHz 17.2	FCC Limit dBm, 29.4	/MHz 29.4	Resul
250-5350 Mode: Trequency (MHz) 5745 5785	4 2 PSD - FCC/II n20 Chain 1 3 4 2 1 3 4 2 1 3 4 2 1 3	Software Setting q90 q90	99% BW	Duty Cycle % 99 99	22.2 22.5 22.5 PSD dBm/MHz 11.7 10.1 11.8 10.9 10.7 10.2 11.4 10.8 10.3 10.5	Total mW/MHz 52.5 48.0	PSD ¹ dBm/MHz 17.2 16.8	FCC Limit dBm 29.4 29.4	/MHz 29.4 29.4	Result Pass Pass
250-5350 Mode: Trequency (MHz) 5745	4 2 PSD - FCC/II n20 Chain 1 3 4 2 1 3 4 2 1 3 4 2 1	Software Setting q90	99% BW	Duty Cycle % 99	22.2 22.5 22.5 PSD dBm/MHz 11.7 10.1 11.8 10.9 10.7 10.2 11.4 10.8 10.3	Total mW/MHz 52.5	PSD ¹ dBm/MHz 17.2	FCC Limit dBm, 29.4	/MHz 29.4	Result



	E ENGINEER	SUCCESS						EM	C Test	Data
Client:	ARRIS							Job Number:	JD102669	
Model:	C61W						T-l	og Number:	T103891	
woder.	COIW						Proje	ect Manager:	Christine Kre	ebill
Contact:	Mark Rieger						Project	Coordinator:	-	
Standard:	FCC 15.B / I	FCC 15.247	/ 15.E					Class:	N/A	
IIMO Devid Mode:	e - 5725-58 n40	50 MHz Ban	d - FCC/IC				Max	EIRP (mW):	831.1	
requency	Chain	Software	99% BW	Duty Cycle	Power	Total	Power ¹		Max Power	Decult
(MHz)	Chain	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	Result
	1				20.1					
5755	3	q83	37.4	100	20.5	452.4	26.6	30.0		Pass
5755	4	400		100	20.6	702.7	20.0	50.0		1 435
	2				20.9				0.707	
					21.9					
	1				00.0					
5795	3	q90	69.6	100	22.3	707.4	28.5	30.0		Pass
	3 4 2	q90) PSD - FCC		100	22.3 22.4 23.2	707.4	28.5	30.0		Pass
IIMO Devid Mode: Frequency	3 4 2 :e 5250-5350) PSD - FCC Software	/ IC 99% BW	Duty Cycle	22.4 23.2 PSD	Total	PSD ¹	FCC Limit		Pass
1IMO Devid	3 4 2 ee 5250-5350 n40 Chain) PSD - FCC	///C		22.4 23.2 PSD dBm/MHz			FCC Limit	IC Limit /MHz	
IIMO Devid Mode: Frequency	3 4 2 ce 5250-5350 n40 Chain 1) PSD - FCC Software	/ IC 99% BW	Duty Cycle %	22.4 23.2 PSD dBm/MHz 6.3	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	/MHz	
IIMO Devid Mode: Frequency	3 4 2 :e 5250-5350 n40 Chain 1 3) PSD - FCC Software	/ IC 99% BW	Duty Cycle	22.4 23.2 PSD dBm/MHz 6.3 5.4	Total	PSD ¹	FCC Limit		Resul
IMO Devid Mode: requency (MHz)	3 4 2 ce 5250-5350 n40 Chain 1 3 4) PSD - FCC Software Setting	/ IC 99% BW	Duty Cycle %	22.4 23.2 PSD dBm/MHz 6.3 5.4 6.3	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	/MHz	Resul
IIMO Devid Mode: Frequency (MHz)	3 4 2 :e 5250-5350 n40 Chain 1 3) PSD - FCC Software Setting	/ IC 99% BW	Duty Cycle %	22.4 23.2 PSD dBm/MHz 6.3 5.4 6.3 6.1	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	/MHz	
IIMO Devid Mode: Trequency (MHz) 5755	3 4 2 ce 5250-535 0 n40 Chain 1 3 4 2	PSD - FCC Software Setting q83	/ IC 99% BW	Duty Cycle % 98	22.4 23.2 PSD dBm/MHz 6.3 5.4 6.3	Total mW/MHz 16.1	PSD ¹ dBm/MHz 12.1	FCC Limit dBm 29.4	/MHz 29.4	Result
IIMO Devid Mode: requency (MHz)	3 4 2 ce 5250-535 0 n40 Chain 1 3 4 2 1) PSD - FCC Software Setting	/ IC 99% BW	Duty Cycle %	22.4 23.2 PSD dBm/MHz 6.3 5.4 6.3 6.1 8.1	Total mW/MHz	PSD ¹ dBm/MHz	FCC Limit dBm	/MHz	Result



		RSUCCESS						EM	C Test	Data
Client:	ARRIS	SUCCESS						Job Number:	JD102669	
								og Number:		
Model:	C61W								Christine Kre	bill
Contact:	Mark Riege	r					-	Coordinator:		
	•	FCC 15.247 /	15.E				.,	Class:		
IIMO Devi	ce - 5725-58	50 MHz Band	I - FCC/IC				·			
Mode:	ac80						Max	EIRP (mW):	385.1	
requency	Chain	Software	99% BW	Duty Cycle	Power	Total I	Power ¹	FCC Limit	Max Power	Resul
(MHz)	Grialit	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	176201
	1				18.6					
5775	3	q77	76.4	100	19.3	327.8	25.2	30.0	0.328	Pass
0.10	4	· · ·		100	19.2	021.0	20.2	50.0	0.020	1 000
	2				19.4					
(MHz)	1 3	Setting	(MHz)	%	dBm/MHz 1.6 1.6	mW/MHz	dBm/MHz		/MHz	
5775	4	q77		96	1.7	6.1	7.9	29.4	29.4	Pass
	2				1.8					
										-
5pectrum /	Analyzer Sett	ings 2.5 ·	-		Į.			- Č P	ITS	
CF: 5775. SPAN: 12	.000 MHz :0.000 MHz	0.0	_	pont	martin	-	mound	m	ENSINEER SUCCESS	
RB: 1.000	MHz	-2.5								
VB: 3.000 Detector:										
Attn: 40 D	ЭВ	-5.0								
RL Offset: Sweep Til	: 0.0 DB me: 20.0ms	-7.5	-							
Ref Lvl: 1	2.0 DBM	-10.0	-							
Pwr avg: Amp corr	100 sweeps : 13.1dB	튭 -12.5	-							
Bin size: 1		号 -15.01								
Highest PS	5D	-17.5								
1.8	dBm/1.000									
99% Band	width	-22.5							<u>\</u>	
76.42	MHz	-25.0	Variation						and handles	
		-27.5 57	15.0	5740.0	5760.0	5780.0 quency (MH		0 5820	.0 5835.0	
-					wer Over Sp		-,		_	

L				
ſ	Client:	ARRIS	Job Number:	JD102669
	Model: C61W	CE1W	T-Log Number:	T103891
	MOUEI.	COTW	Project Manager:	Christine Krebill
	Contact:	Mark Rieger	Project Coordinator:	-
	Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

FCC 15.407(UNII) Antenna Port Measurements Power, PSD, Bandwidth and Spurious Emissions

Test Specific Details

ITS

SUCCESS

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Summary of Results

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
1	Power, 5725 - 5850MHz	15.407(a) (3)	Pass	n20: 28.6 dBm (725 mW) n40: 28.5 dBm (707 mW) ac80: 25.3 dBm (342 mW)
1	PSD, 5725 - 5850MHz	15.407(a) (3)	Pass	n20: 17.2 dBm/MHz n40: 14.1 dBm/MHz ac80: 7.9 dBm/MHz

General Test Configuration

When measuring the conducted emissions from the EUT's antenna port, the antenna port of the EUT was connected to the spectrum analyzer or power meter via a suitable attenuator to prevent overloading the measurement system. All measurements are corrected to allow for the external attenuators and cables used.

Ambient Conditions:

Temperature:	22.6 °C
Rel. Humidity:	41 %



Client:	ARRIS	Job Number:	JD102669
Model:	CE1W	T-Log Number:	T103891
woder.	COIW	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Procedure Comments:

Measurements performed in accordance with FCC KDB 789033 D01

	Mode	Data Rate	Duty Cycle (x)	Constant DC?	T (ms)	Pwr Cor Factor*	Lin Volt Cor Factor**	Min VBW for FS (Hz)
1SS	11n20	MCS0	0.99	Yes	1.953	0	0	10
1SS	n40	MCS0	0.98	Yes	0.971	0.0885442	0.2	1030
1SS	ac80	VHT0	0.96	Yes	0.46	0.1848341	0.4	2174

Note - for antenna port measurements, the EUT was operated in the non-TxBF mode

Sample Notes

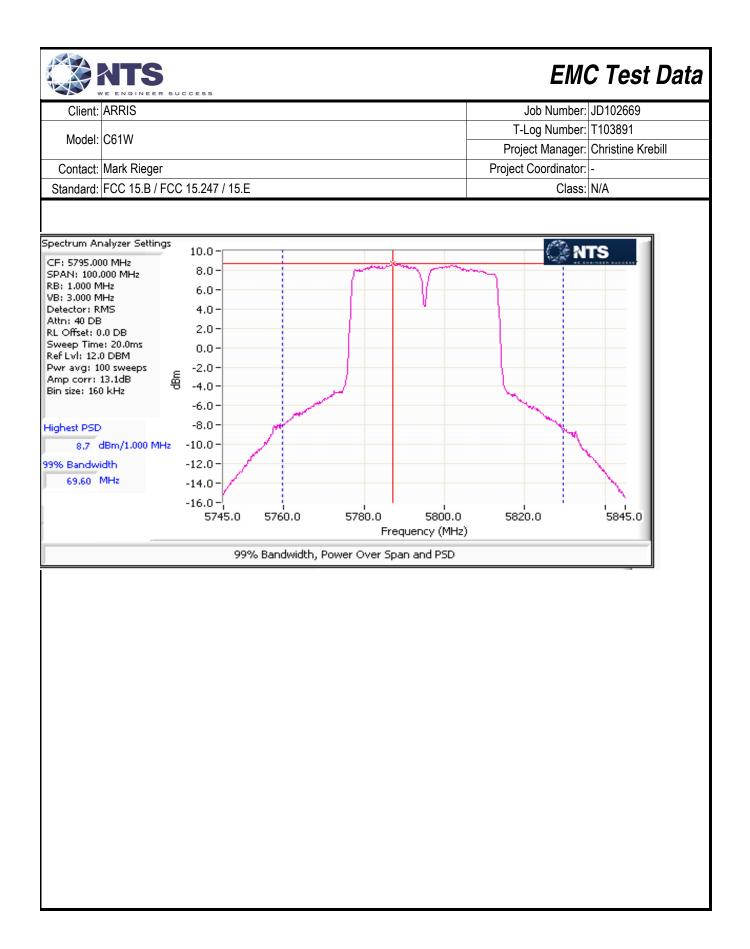
Sample S/N: G62DA7BU20005B Driver: -

	NTS				ЕМС	C Test	Data	
Client:	ARRIS				Job Number:	JD102669		
	00000			T-	Log Number:	T103891		
Model:	C61W			Proj	ect Manager:	Christine Kr	ebill	
Contact:	Mark Rieger			Project	Coordinator:	-		
Standard:	FCC 15.B / FCC 15.247 / 15.E				Class:	N/A		
Run #1: Bandwidth, Output Power and Power Spectral Density - MIMO Systems Date of Test: 3/14/2017 0:00 Config. Used: 1 Test Engineer: Rafael Varelas Config Change: none Test Location: FT Lab #4B EUT Voltage: 120V/60Hz								
Note 1:	Power measured using a gated average power me	eter.						
Note 2:	Note 2: PSD measured using a spectrum analyzer (see plots below). RBW=1MHz, VB=3 MHz, Span > OBW, # of points in sweep ≥ 2*span/RBW, RMS detector, trace average 100 traces, power averaging on. The measurements were adjusted corrected for duty cycle. This is based on 10log(1/x), where x is the duty cycle. (method SA-2 of ANSI C63.10)							
Note 3:	99% Bandwidth measured in accordance with C63 times OBW.							
Note 4:	For MIMO systems the total output power and total PSD are calculated from the sum of the powers of the individual chains (in linear terms). The antenna gain used to determine the EIRP and limits for PSD/Output power depends on the operating mode of the MIMO device. If the signals on the non-coherent between the transmit chains, then the gain used to determine							
Antenna Ga	ain Information	•						
Freq	Antenna Gain (dBi) / Chain 1 2 3 4	BF	MultiChain Legacy	CDD	Sectorized / Xpol	Dir G (PWR)	Dir G (PSD)	
5150-5250		No	Yes	Yes	No	6.70	6.70	
5250-5350	Refer to Operational Description	No	Yes	Yes	No	6.50	6.50	
5470-5725		No	Yes	Yes	No	6.80	6.80	
5725-5825		No	Yes	Yes	No	6.60	6.60	
For devices that support CDD modes Min # of spatial streams: 1 Max # of spatial streams: 4 Note - for all power/psd measurements, testing performed using 1 spatial stream								
	n powonpou measuremento, teoting performeu	aonig i op						

NTS We Engineer Success	EMO	C Test Data
ARRIS	Job Number:	JD102669
C61W	-	
Mark Rieger		
	,	
1 00 10.D / 1 00 10.247 / 10.E	01000.	14/7 4
CDD = Cyclic Delay Diversity (or Cyclic Shift Diversity) modes supported, S		
FCC KDB 662911. Depending on the modes supported, the Array Gain val	, .	
Array gain for power/psd calculated per KDB 662911 D01.		
		of 802.11; Array gains
calculated based on beamforming criteria.		
	ay gain associated with C	DD with two antennas
(3dB for PSD and 0 dB for power)		
	ARRIS C61W Mark Rieger FCC 15.B / FCC 15.247 / 15.E BF = beamforming mode supported, Multichain Legacy = 802.11 legacy dat CDD = Cyclic Delay Diversity (or Cyclic Shift Diversity) modes supported, S cross polarized. Dir G (PWR) = total gain (Gant + Array Gain) for power calculations; GA (PS FCC KDB 662911. Depending on the modes supported, the Array Gain val value. Array gain for power/psd calculated per KDB 662911 D01. For systems with Beamforming and CDD, choose one the following options Option 1: Delays are optimized for beamforming, rather than being selected calculated based on beamforming criteria. Option 2: Antennas are paired for beamforming, and the pairs are configure	ARRIS Job Number: C61W T-Log Number: Mark Rieger Project Manager: Mark Rieger Project Coordinator: FCC 15.B / FCC 15.247 / 15.E Class: BF = beamforming mode supported, Multichain Legacy = 802.11 legacy data rates supported for mu CDD = Cyclic Delay Diversity (or Cyclic Shift Diversity) modes supported, Sectorized / Xpol = antenn cross polarized. Dir G (PWR) = total gain (Gant + Array Gain) for power calculations; GA (PSD) = total gain for PSD FCC KDB 662911. Depending on the modes supported, the Array Gain value for power could be dif value. Array gain for power/psd calculated per KDB 662911 D01. For systems with Beamforming and CDD, choose one the following options: Option 1: Delays are optimized for beamforming, rather than being selected from cyclic delay table of calculated based on beamforming criteria. Option 2: Antennas are paired for beamforming, and the pairs are configured to use the cyclic delay array gain associated with beamforming with 2 antennas (3dB), and the array gain associated with Calculated calculated with Calculated calculated with Calculated cal

		SUCCESS							C Test	Dali
Client:	ARRIS							Job Number:	JD102669	
Model	C61W						T-l	_og Number:	T103891	
wouer.	COTW						Proje	ect Manager:	Christine Kre	ebill
Contact:	Mark Rieger						Project	Coordinator:	-	
Standard:	FCC 15.B / F	-CC 15.247	/ 15.E					Class	N/A	
Mode:	ce - 5725-58 n20	ou MHZ Ban	a - FCC/IC				Max	EIRP (mW):	3313.4	
requency		Software	99% BW	Duty Cycle	Power	Total	Power ¹		Max Power	
(MHz)	Chain	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	Result
. ,	1				22.2				. ,	
5745	3	q90	24.0	100	22.5	724.9	28.6	29.4		Pass
5745	4	430	24.0	100	22.8	124.5	20.0	23.4		1 433
	2				22.8					
	1				21.9					
5785	3 4	q90	27.8	100	22.3 22.6	692.9	28.4	29.4	0.725	Pass
	4				22.0					
	1				21.7				4 }	
5005	3	00	04.4	400	22.2	000 5	00.0	00.4		_
5825	4	q90	31.4	100	22.5	669.5	28.3	29.4		Pass
	2				22.5					
Mode: requency		Software	99% BW	Duty Cycle			PSD ¹	FCC Limit		Result
(MHz)	1	Setting	(MHz)	%	dBm/MHz 11.7	mW/MHz	dBm/MHz	dBm	/MHz	
	1				10.1					
5745	4	q90		99	11.8	52.5	17.2	29.4	29.4	Pass
	2				10.9					
	1				10.7					
	3	q90		99	10.2	48.0	16.8	29.4	29.4	Pass
5705	4	0ep		99	11.4	40.0	10.0	29.4	29.4	F 855
5785					10.8					
5785	2				10.3					
5785	2 1							1		
	2 1 3	q90		99	10.5	45.5	16.6	29.4	29.4	Pass
5785 5825	2 1	q90		99		45.5	16.6	29.4	29.4	Pass

		SUCCESS						EM	C Test	Data
Client	ARRIS							Job Number:	JD102669	
Madal	C61W						T-L	og Number:	T103891	
woder	COTW						Proje	ect Manager:	Christine Kre	ebill
Contact	Mark Rieger	•					Project	Coordinator:	-	
Standard	FCC 15.B /	FCC 15.247	/ 15.E					Class:	N/A	
/IMO Devi Mode:	ce - 5725-58 n40	50 MHz Ban	d - FCC/IC				Max	EIRP (mW):	3233.4	
requency	Chain	Software	99% BW	Duty Cycle	Power	Total I	Power ¹	FCC Limit	Max Power	Result
(MHz)	Chain	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	Result
	1				21.3					
5755	3	q88	37.4	100	21.7	615.5	27.9	29.4		Pass
	4				21.9 22.5					
	2 1				22.5				0.707	
5705	3	. 00	<u> </u>	400	22.3	707 4	00.5	00.4		D
5795	4	q90	69.6	100	22.4	707.4	28.5	29.4		Pass
	2				23.2					
/IMO Devi	ce 5250-535() PSD - FCC	/IC							
Mode:		0 PSD - FCC Software	/ IC 99% BW	Duty Cycle	PSD	Total	PSD ¹	FCC Limit	IC Limit	Deput
	n40	-	-	Duty Cycle %	PSD dBm/MHz	Total mW/MHz	PSD ¹ dBm/MHz		IC Limit /MHz	Result
Mode: requency	n40	Software	99% BW				-			Result



EMC Test Data										
Client:	ARRIS						,	Job Number:	JD102669	
Madalı	004144						T-L	og Number:	T103891	
Model:	COTV						Proje	ect Manager:	Christine Kre	ebill
Contact:	Mark Rieger	•					Project	Coordinator:	-	
Standard:	FCC 15.B / I	FCC 15.247	/ 15.E					Class:	N/A	
	I						1		I	
MIMO Devi	ce - 5725-58	50 MHz Ban	d - FCC/IC							
Mode:	ac80						Max	EIRP (mW):	1561	
Frequency	Chain	Software	99% BW	Duty Cycle	Power	Total F	Power ¹	FCC Limit	Max Power	Result
(MHz)	Unaim	Setting	(MHz)	%	dBm	mW	dBm	dBm	(W)	Result
	1				18.6					
5775	3	q77	76.4	96	19.3	341.5	25.3	29.4	0.342	Pass
	4				19.2					
	2				19.4					
MIMO Devi	ce 5250-5350) PSD - FCC	/IC							
Mode:	ac80									
Frequency	Chain	Software	99% BW	Duty Cycle	PSD	Total	PSD ¹	FCC Limit	IC Limit	Result
(MHz)	Unain	Setting	(MHz)	%	dBm/MHz	mW/MHz	dBm/MHz	dBm	/MHz	Result
	1				1.6					
5775	3	q77		96	1.6	6.1	7.9	29.4	29.4	Pass
0.10	4	۳٬٬		, v	1.7	0.1		20.1	20.1	

1.7

1.8

All measurements are consistent with non-Tx BF operation, no plots provided.

4

2

Client:	ARRIS	Job Number:	JD102669
Madalı	C61W	T-Log Number:	T103891
wouer.	COTW	Project Manager:	Christine Krebill
Contact:	Mark Rieger	Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247 / 15.E	Class:	N/A

FCC Part 15 Frequency Stability

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

ITS

All measurements are made with the EUT's rf port connected to the measurement instrument via an attenuator. All amplitude measurements are adjusted to account for the attenuation between EUT and measuring instrument. For frequency stability measurements the EUT was placed inside an environmental chamber.

Ambient Conditions:	Temperature:	24 °C
	Rel. Humidity:	38 %

Run #	Test Performed	Limit	Pass / Fail	
1	Frequency Stability	Stays in band	Pass	

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

	NTS			EM	C Test Data
Client:	ARRIS			Job Number:	JD102669
Madalı	001111			T-Log Number:	T103891
Model:	COIW			Project Manager:	Christine Krebill
Contact:	Mark Rieger			Project Coordinator:	-
Standard:	FCC 15.B / FCC 15.247	15.E		Class:	N/A
Te Frequency The EUT wa ensure the E	EUT and chamber had sta	5180 MHz ure ature for a minimum of 3 bilized at that temperate		120V/60Hz	ng the measurements to
Temperature	Frequency Measured	-	<u>Drift</u>		
(Celsius) 0	(MHz) 5180.0400	(Hz) 40000	(ppm) 7.7		
10	5179.9600	-40000	-7.7		
20	5179.9200	-80000	-15.4		
30	5180.0000	0	0.0		

0.0

-15.4

Frequency Stability Over Input Voltage

5180.0000

5180.0000

Worst case:

Nominal Voltage is 120Vac.

40

50

Voltage	Frequency Measured	D	<u>rift</u>
(DC)	(MHz)	(Hz)	(ppm)
102.00	5179.920000	-80000	-15.4
138.00	5180.000000	0	0.0
	Worst case:	-80000	-15.4

0

0

-80000



End of Report

This page is intentionally blank and marks the last page of this test report.