

**FCC PART 15, SUBPART B and C
TEST REPORT**

for
LIGHTING CONTROL NODE
MODEL: LCN300

Prepared for

MESH SYSTEMS LLC
N1078 QUALITY DRIVE, SUITE B
GREENVILLE, WISCONSIN 54942

Prepared by: *Kyle Fujimoto*

KYLE FUJIMOTO

Approved by: *James Ross*

JAMES ROSS

COMPATIBLE ELECTRONICS INC.
114 OLINDA DRIVE
BREA, CALIFORNIA 92823
(714) 579-0500

DATE: JULY 1, 2019

	REPORT BODY	APPENDICES					TOTAL
		A	B	C	D	E	
PAGES	23	2	2	2	13	66	108

This report shall not be reproduced, except in full,
without the written approval of Compatible Electronics.



Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Newbury Park Division
1050 Lawrence Drive
Newbury Park, CA 91320
(805) 480-4044

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

TABLE OF CONTENTS

Section / Title	PAGE
GENERAL REPORT SUMMARY	4
SUMMARY OF TEST RESULTS	5
1. PURPOSE	6
2. ADMINISTRATIVE DATA	7
2.1 Location of Testing	7
2.2 Traceability Statement	7
2.3 Cognizant Personnel	7
2.4 Date Test Sample was Received	7
2.5 Disposition of the Test Sample	7
2.6 Abbreviations and Acronyms	7
3. APPLICABLE DOCUMENTS	8
4. DESCRIPTION OF TEST CONFIGURATION	9
4.1 Description of Test Configuration – Emissions	9
4.1.1 Cable Construction and Termination	10
5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT	11
5.1 EUT and Accessory List	11
5.2 Emissions Test Equipment	12
6. TEST SITE DESCRIPTION	13
6.1 Test Facility Description	13
6.2 EUT Mounting, Bonding and Grounding	13
6.3 Measurement Uncertainty	13
7. CHARACTERISTICS OF THE TRANSMITTER	14
7.1 Channel Description and Frequencies	14
7.2 Antenna Gain	14
8. TEST PROCEDURES	15
8.1 RF Emissions	15
8.1.1 Conducted Emissions Test	15
8.1.2 Radiated Emissions (Spurious and Harmonics) Test	16
8.1.3 RF Emissions Test Results	17
8.2 DTS Bandwidth	19
8.3 Maximum Conducted Output Power	19
8.4 Emissions in Non-Restricted Bands	20
8.5 RF Band Edges	21
8.6 Spectral Density Test	22
8.7 Variation of the Input Power	22
9. CONCLUSIONS	23

LIST OF APPENDICES

APPENDIX	TITLE
A	Laboratory Accreditations and Recognitions
B	Modifications to the EUT
C	Additional Models Covered Under This Report
D	Diagrams, Charts, and Photos • Test Setup Diagrams • Radiated and Conducted Emissions Photos • Antenna and Effective Gain Factors
E	Data Sheets

LIST OF FIGURES

FIGURE	TITLE
1	Layout of the Semi-Anechoic Test Chamber
2	Conducted Emissions Test Setup

LIST OF TABLES

TABLE	TITLE
1	Conducted Emissions Test Results
2	Radiated Emissions Test Results

GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced without the written permission of Compatible Electronics, unless done so in full.

This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the federal government.

Device Tested: Lighting Control Node
 Model: LCN300
 S/N: N/A

Product Description: The EUT is device to monitor the status of LED lights and shut them on or off.

Modifications: The EUT was not modified during the testing.

Customer: Mesh Systems LLC
 N1078 Quality Drive, Suite B
 Greenville, Wisconsin 54942

Test Dates: June 1 and 3, 2019; July 31 and August 1, 2019

Test Specifications covered by accreditation:

Emissions requirements
CFR Title 47, Part 15, Subpart B; and
Subpart C, sections 15.205, 15.207, 15.209, and 15.247

Test Procedure: ANSI C63.4 and ANSI C63.10



SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz – 30 MHz	The EUT complies with the Class B limits of CFR Title 47, Part 15 Subpart B; the limits of CFR Title 47, Part 15, Subpart C, section 15.207 See section 6.3 for Measurement Uncertainty
2	Spurious Radiated RF Emissions, 30 MHz – 1000 MHz	The EUT complies with the Class B limits of CFR Title 47, Part 15 Subpart B; the limits of CFR Title 47, Part 15, Subpart C, section 15.209 See section 6.3 for Measurement Uncertainty
3	Spurious Radiated RF Emissions, 9 kHz – 30 MHz and 1000 MHz – 9300 MHz	The EUT complies with the Class B limits of CFR Title 47, Part 15, Subpart B; CFR Title 47, Part 15, Subpart C, section 15.247(d) See section 6.3 for Measurement Uncertainty
4	Fundamental and Emissions produced by the intentional radiator in non-restricted bands, 9 kHz – 9.3 GHz	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247(d)
5	Emissions produced by the intentional radiator in restricted bands, 9 kHz – 9.3 GHz	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.205, 15.209, section 15.247 (d)
6	DTS Bandwidth	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (a)(2)
7	Maximum Conducted Output Power	Complies with the relevant requirements of FCC Title 47, Part 15, Subpart C, section 15.247 (b)(3)
8	RF Conducted Antenna Test	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247 (d)
9	Power Spectral Density from the Intentional Radiator to the Antenna	Complies with the relevant requirements of CFR Title 47, Part 15, Subpart C, section 15.247 (e)

1. PURPOSE

This document is a qualification test report based on the emissions tests performed on the Lighting Control Node, Model: LCN300. The emissions measurements were performed according to the measurement procedure described in ANSI C63.10 and ANSI C63.4. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the Class B specification limits defined by CFR Title 47, Part 15, Subpart B and Subpart C, sections 15.205, 15.207, 15.209, and 15.247.

2. ADMINISTRATIVE DATA

2.1 Location of Testing

The emissions tests described herein were performed at the test facility of Compatible Electronics, 114 Olinda Drive, Brea, California 92823.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Mesh Systems LLC

Nate Welch Associate Embedded Engineer

Compatible Electronics Inc.

James Ross Test Engineer

Kyle Fujimoto Test Engineer

2.4 Date Test Sample was Received

The test sample was received on June 1, 2019.

2.5 Disposition of the Test Sample

The test sample has not been returned to Mesh Systems LLC as of the date of this test report.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network
N/A	Not Applicable

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this emissions Test Report.

SPEC	TITLE
FCC Title 47, Part 15 Subpart C	FCC Rules - Radio frequency devices (including digital devices) – Intentional Radiators
ANSI C63.4 2014	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz
ANSI C63.10 2013	American National Standard for Testing Unlicensed Wireless Devices
FCC Title 47, Part 15 Subpart B	FCC Rules - Radio frequency devices (including digital devices) – Unintentional Radiators
KDB 558074 D01 v05r02	Guidance for Performing Compliance Measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid System Devices Operating Under Section 15.247 of the FCC Rules

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration – Emissions

The Lighting Control Node, Model: LCN300 (EUT) was connected to the AC public mains and LED Light Stand via its power cord and terminal blocks.

The laptop was used to the program the EUT to continuously transmit or receive at the low, middle, or high channel on a continuous basis.

The EUT was continuously transmitting or receiving at the low, middle, or high channel during the testing.

The LED light stand also was also fully illuminated with all twelve LED's turned on.

The EUT voltage was also varied between 85% and 115% using a variable transformer and the fundamental was verified to not change.

The firmware used for the EUT is stored on the company's servers.

It was determined that the emissions were at their highest level when the EUT was operating in the above configuration. The final emissions data was taken in this mode of operation. All initial investigations were performed with the measurement receiver in manual mode scanning the frequency range continuously. Photographs of the test setup are in Appendix D of this report.

4.1.1 Cable Construction and Termination

Cables 1-4 These are 1.2-meter unshielded cables connecting the EUT to the LED light stand. The cables are hard wired at each end.



5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
LIGHTING CONTROL NODE	MESH SYSTEMS LLC	LCN300	N/A	2AC46-LCN300
ISM 868/915 ANTENNA	MOLEX	105262	N/A	N/A
LAPTOP*	HEWLETT PACKARD	HSTNN-C28C	N/A	N/A
LED LIGHT STAND	CREE	N/A	N/A	N/A
AC ADAPTER FOR LAPTOP*	HEWLETT PACKARD	HSTNN-DA40	N/A	N/A
MODFLEX TEST TOOL SUITE*	LS RESEARCH	VERSION 2.6.2.0	N/A	N/A

*Used to program the EUT to transmit or receive on a continuous basis.

5.2 Emissions Test Equipment

EQUIPMENT TYPE	MANU- FACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CAL. CYCLE
TDK TestLab	TDK RF Solutions, Inc.	9.22	700145	N/A	N/A
CombiLog Antenna	Com-Power	AC-220	61093	June 5, 2019	2 Year
Horn Antenna	Com-Power	AH-118	071175	February 22, 2018	2 Year
EMI Receiver, 20 Hz – 40 GHz	Rohde & Schwarz	ESIB40	100172	March 22, 2019	1 Year
EMI Receiver, 20 Hz – 26.5 GHz	Keysight Technologies	N9038A	MY51210150	July 26, 2018	1 Year
Loop Antenna	Com-Power	AL-130R	121090	February 5, 2019	2 Year
Preamplifier	Com-Power	PA-118	181653	January 25, 2019	1 Year
Digital Multimeter	Fluke	115	36601149WS	September 20, 2018	2 Year
Variable Transformer	Superior Electric	Type: 11560	Spec: BP142056	N/A	N/A
Horn Antenna	Com-Power	AH-826	71957	N/A	N/A
Computer	Hewlett Packard	p6716f	MXX1030PX0	N/A	N/A
LCD Monitor	Hewlett Packard	52031a	3CQ046N3MG	N/A	N/A
System Controller	Sunol Sciences Corporation	SC110V	112213-1	N/A	N/A
Turntable	Sunol Sciences Corporation	2011VS	N/A	N/A	N/A
Antenna-Mast	Sunol Sciences Corporation	TWR95-4	112213-3	N/A	N/A
LISN (EUT)	Com-Power	LI-215A	191951	January 10, 2019	1 Year
Attenuator, 10 dB	SureCall	SC-ATT-10	17100025	November 27, 2018	1 Year

6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 and 7.1 of this report for emissions test location.

6.2 EUT Mounting, Bonding and Grounding

For frequencies 1 GHz and below: The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

For frequencies above 1 GHz: The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 1.5 meters above the ground plane.

The EUT was grounded to earth ground via the safety ground of the power cord.

6.3 Measurement Uncertainty

Compatible Electronics' U_{lab} value is less than U_{cispr} , thus based on this – compliance is deemed to occur if no measured disturbance exceeds the disturbance limit

$$u_c(y) = \sqrt{\sum_i c_i^2 u^2(x_i)}$$

MEASUREMENT TYPE	UNCERTAINTY VALUES
Radiated Emissions 30 MHz to 1000 MHz	3.26 dB (Vertical) 3.19 dB (Horizontal)
Radiated Emissions 1 GHz to 40 GHz	3.67 dB (Both Vertical and Horizontal)
AC Line Conducted Emissions 0.15 MHz to 30 MHz	2.72 dB (Line and Neutral Leads)

7. CHARACTERISTICS OF THE TRANSMITTER

7.1 Channel Description and Frequencies

The EUT operates on a total of ten channels.

The low channel is 906 MHz, the middle channel is 914 MHz, and the high channel is 924 MHz.

7.2 Antenna Gain

The gain of the antenna is 1.4 dBi.

8. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

8.1 RF Emissions

8.1.1 Conducted Emissions Test

The EMI Receiver was used as a measuring meter. A 10 dB Attenuator was used for the protection of the EMI Receiver input stage, and the offset was adjusted accordingly to read the actual data measured. The LISN output was measured using the EMI Receiver. The output of the second LISN was terminated by a 50-ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding, and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by computer software. The final qualification data is located in Appendix E.

The six highest reading are listed in Table 1.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and the limits of CFR Title 47, Part 15, Subpart C, Section 15.207. Please see Appendix E for the data sheets.

8.1.2 Radiated Emissions (Spurious and Harmonics) Test

The EMI Receiver was used as the measuring meter. Below 1 GHz, a built-in, internal preamplifier was used to increase the sensitivity of the instrument. At frequencies above 1 GHz, external preamplifiers were used. The EMI Receiver was initially used with the Analyzer mode feature activated. In this mode, the EMI receiver can then record the actual frequency to be measured. This final reading is then taken accurately in the EMI Receiver mode, which takes into account the cable loss, amplifier gain and antenna factors, so that a true reading is compared to the true limit.

The frequencies above 1 GHz were averaged by using the RMS detector function on the EMI Receiver.

The measurement bandwidths and transducers used for the radiated emissions test were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 kHz to 150 kHz	200 Hz	Loop Antenna
150 kHz to 30 MHz	9 kHz	Loop Antenna
30 MHz to 1 GHz	120 kHz	Combilog Antenna
1 GHz to 9.3 GHz	1 MHz	Horn Antenna

The EMI test chamber of Compatible Electronics, Inc. was used for radiated emissions testing. This test site is in full compliance with ANSI C63.4. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The gunsight method was used when measuring with the horn antenna in order to ensure accurate results.

The six highest reading are listed in Table 2.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; the limits of CFR Title 47, Part 15, Subpart C, Sections 15.209 and 15.247 (d) for radiated emissions. Please see Appendix E for the data sheets.

8.1.3 RF Emissions Test ResultsTable 1.0 CONDUCTED EMISSION RESULTS
Lighting Control Node, Model: LCN300

Frequency MHz	Corrected Reading* dBuV	Specification Limit dBuV	Delta (Cor. Reading – Spec. Limit) dB
0.486 (BL) (Tx Mode)	56.11 (QP)	5.622	-0.11
0.430 (BL) (Rx Mode)	47.04 (Avg)	47.18	-0.14
0.430 (WL) (Rx Mode)	46.89 (Avg)	47.18	-0.29
0.734 (WL) (Tx Mode)	45.05 (Avg)	46.00	-0.95
0.474 (BL) (Tx Mode)	45.46 (Avg)	46.42	-0.96
0.294 (BL) (Tx Mode)	49.12 (Avg)	50.17	-1.05

BL Black Lead
WL White Lead
Avg Average
Tx Transmit
Rx Receive
QP Quasi-Peak
Avg Average

Table 2.0 RADIATED EMISSION RESULTS
Lighting Control Node, Model: LCN300

Frequency MHz	Corrected Reading* dBuV/m	Specification Limit dBuV	Delta (Cor. Reading – Spec. Limit) dB
8154 (V) (Y-Axis)	47.15 (Avg)	53.97	-6.82
8226 (V) (Y-Axis)	46.42 (Avg)	53.97	-7.55
7312 (V) (Y-Axis)	42.59 (Avg)	53.97	-11.38
8154 (H) (Y-Axis)	40.88 (Avg)	53.97	-13.09
3624 (V) (Y-Axis)	39.81 (Avg)	53.97	-14.16
8226 (H) (Y-Axis)	39.58 (Avg)	53.97	-14.39

QP Quasi-Peak Reading
H Horizontal Polarization

Avg Average Reading
V Vertical Polarization

8.2 DTS Bandwidth

The DTS Bandwidth was measured using the EMI Receiver. The bandwidth was measured using a direct connection from the EUT. The following steps were performed for measuring the DTS Bandwidth.

1. Set RBW = 100 kHz
2. Set the video bandwidth (VBW) to equal or greater than 3 times the RBW
3. Detector = Peak
4. Trace Mode = Max Hold
5. Sweep = Auto Couple
6. Allow the trace to stabilize
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (a)(2).

8.3 Maximum Average Output Power

The Conducted Average Output Power was measured using the EMI Receiver. The average output power was measured using the average power measurement procedure described in section 11.9.2.2.2 of ANSI C63.10. The Maximum Average Output Power was then taken. The following steps were performed for measuring the Maximum Average Output Power.

1. Set span to at least 1.5 times the OBW
2. Set RBW = 1% to 5% of the OBW, not to exceed 1 MHz
3. Set VBW $\geq$ [3 X RBW]
4. Number of points in sweep is $\geq$ [2 x span /RBW]. 1001 points were used for the measurement
5. Sweep time - auto
6. Detector = RMS
7. Sweep Trigger = Free Run
8. Trace average at least 100 traces in power averaging (rms) mode
9. Computer power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function, with band limits set equal to the OBW band edges.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (b)(3).

8.4 Emissions in Non-Restricted Bands

The emissions in the non-restricted frequency bands measurements were performed using the EMI receiver directly connected to the EUT. The reference level was established by setting the instrument center frequency to DTS channel center frequency. The span was set to ≥ 1.5 times the DTS bandwidth. The RBW was set to 100 kHz and the VBW was set to 300 kHz. A peak detector was used with sweep set to auto. A max hold trace was used and allowed to fully stabilize. The peak marker function was used to determine the level and 30 dB below that was the reference level. For emission level measurement, the center frequency and span were set to encompass the frequency range to be measured. The RBW was set to 100 kHz and the VBW was set to 300 kHz. A peak detector was used with a sweep time set to auto. The number of measurement points were greater than the span/RBW. A max hold trace was used and allowed to fully stabilize. The peak marker function was used to determine the maximum amplitude level. The final qualification data sheets are located in Appendix E.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (d).

8.5 RF Band Edges

The RF band edges were measured using the EMI Receiver. The RF band edges were measured using a direct connection from the RF out on the EUT into the input of the EMI Receiver. The following steps were performed for measuring the spectral density.

The RF band edges were taken at 902 MHz when the EUT was on the low channel and 928 MHz when the EUT was on the high channel using the EMI Receiver. The following steps were performed for measuring the band edges:

1. Set analyzer center frequency to DTS channel center frequency
2. Set the span wide enough to cover the band edges.
3. Set the RBW to 100 kHz
4. Set the VBW $\geq 3 \times$ RBW
5. Detector = Peak
6. Sweep time = auto couple
7. Allow the trace to stabilize
8. Use the peak marker function to determine the maximum amplitude level

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (d) for band edges. Please see the data sheets located in Appendix E.

8.6 Spectral Density Test

The spectrum density output was measured using the EMI Receiver. The spectral density output was measured using a direct connection from the RF out on the EUT into the input of the EMI Receiver. The following steps were performed for measuring the spectral density.

1. Set analyzer center frequency to DTS channel center frequency
2. Set the span to at least 1.5 times the OBW.
3. Set the RBW to $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$
4. Set the VBW $\geq 3 \times \text{RBW}$
5. Detector = power averaging (RMS)
6. Ensure that the number of measurement points in the sweep $\geq 2 \times \text{span/RBW}$
7. Sweep time = auto couple
8. Employ trace averaging (RMS) mode over a minimum of 100 traces
9. Use the peak marker function to determine the maximum amplitude level
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart C section 15.247 (e).

8.7 Variation of the Input Power

The variation of the input power test was performed using the EMI Receiver. The EUT input power was varied between 85% and 115% of the nominal rated supply voltage. The carrier frequency was monitored for any change in amplitude.

Test Results:

The EUT complies with the relevant requirements of FCC Title 47, Part 15, Subpart A section 15.31 (e).

9. CONCLUSIONS

The Lighting Control Node, Model: LCN300 (EUT), as tested, meets all of the specification limits defined in FCC Title 47, Part 15, Subpart B, and Subpart C, sections 15.205, 15.207, 15.209 and 15.247.



APPENDIX A

LABORATORY ACCREDITATIONS AND RECOGNITIONS

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Newbury Park Division
1050 Lawrence Drive
Newbury Park, CA 91320
(805) 480-4044

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

LABORATORY ACCREDITATIONS AND RECOGNITIONS



NVLAP LAB CODE 200528-0

For US, Canada, Australia/New Zealand, Japan, Taiwan, Korea, and the European Union, Compatible Electronics is currently accredited by NVLAP to ISO/IEC 17025.

For the most up-to-date version of our scopes and certificates please visit

<http://celectronics.com/quality/scope/>

Quote from ISO-ILAC-IAF Communiqué on 17025:

"A laboratory's fulfilment of the requirements of ISO/IEC 17025:2005 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations. The management system requirements in ISO/IEC 17025:2005 (Section 4) are written in language relevant to laboratory operations and meet the principles of ISO 9001:2008 Quality Management Systems — Requirements."



APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

The modifications listed below were made to the EUT to pass FCC Subpart B and FCC 15.247 specifications.

All the rework described below was implemented during the test in a method that could be reproduced in all the units by the manufacturer.

The EUT was not modified during the testing.



APPENDIX C

***ADDITIONAL MODELS COVERED
UNDER THIS REPORT***

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Newbury Park Division
1050 Lawrence Drive
Newbury Park, CA 91320
(805) 480-4044

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

Lighting Control Node
Model: LCN300
S/N: N/A

There are no additional models covered under this report.



APPENDIX D

DIAGRAMS AND CHARTS

FIGURE 1: LAYOUT OF THE SEMI-ANECHOIC TEST CHAMBER

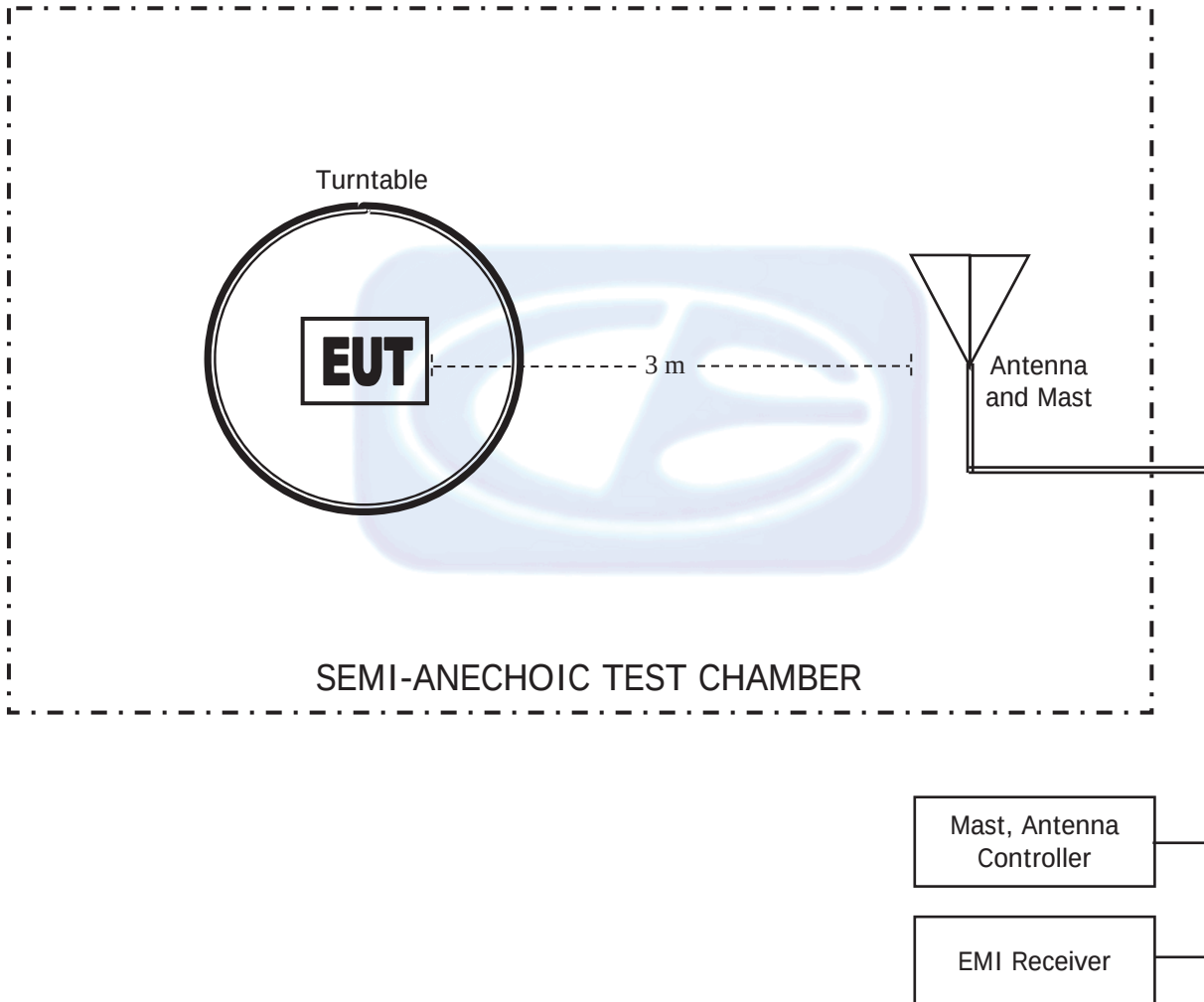
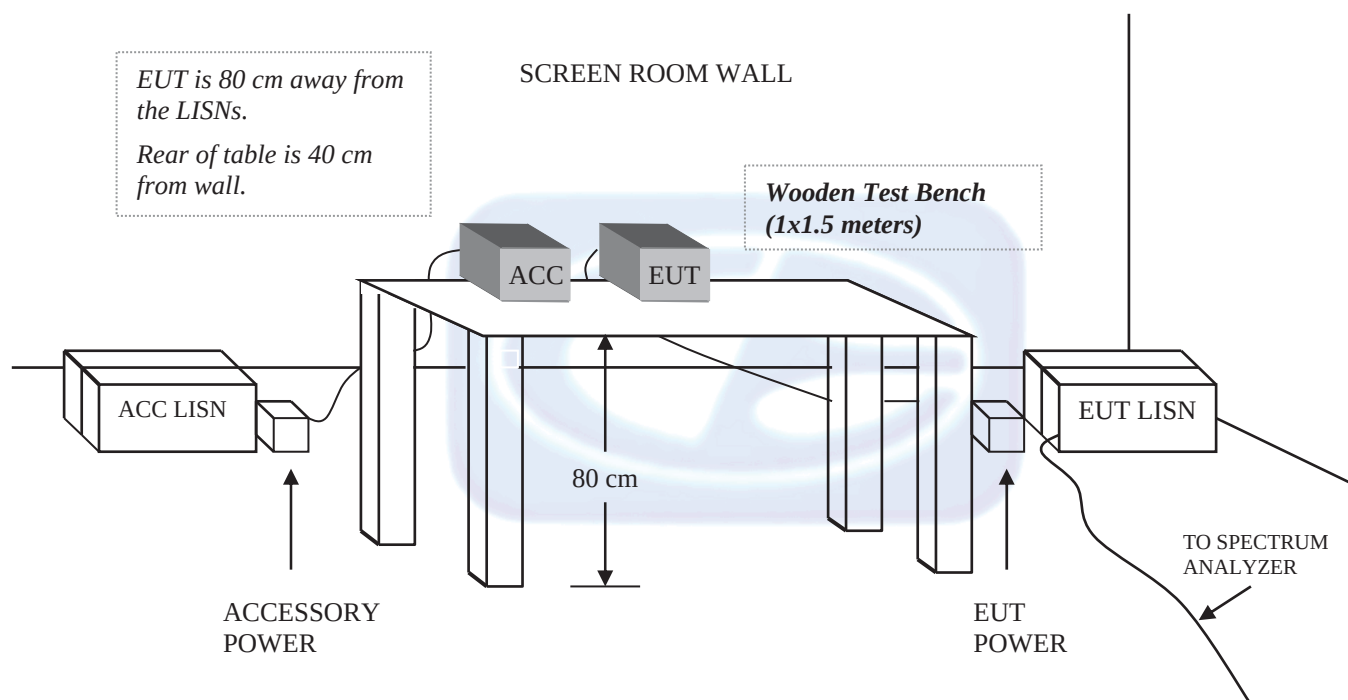


FIGURE 2: CONDUCTED EMISSIONS TEST SETUP



COM-POWER AL-130R**LOOP ANTENNA****S/N: 121090****CALIBRATION DATE: FEBRUARY 5, 2019**

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.01	15.6	-35.9
0.02	14.8	-36.7
0.03	15.6	-35.9
0.04	15.1	-36.4
0.05	14.4	-37.0
0.06	14.6	-36.9
0.07	14.4	-37.1
0.08	14.3	-37.1
0.09	14.5	-36.9
0.10	14.1	-37.3
0.20	14.1	-37.3
0.30	14.0	-37.4
0.40	14.0	-37.4
0.50	14.2	-37.2
0.60	14.2	-37.2
0.70	14.2	-37.2
0.80	14.2	-37.3
0.90	14.3	-37.2
1.00	14.5	-37.0
2.00	14.5	-36.9
3.00	14.5	-36.9
4.00	14.7	-36.8
5.00	14.6	-36.9
6.00	14.6	-36.9
7.00	14.6	-36.9
8.00	14.6	-36.9
9.00	14.6	-36.9
10.00	14.8	-36.6
11.00	14.9	-36.6
12.00	14.8	-36.6
13.00	14.8	-36.7
14.00	14.6	-36.8
15.00	14.5	-36.9
16.00	14.5	-37.0
17.00	14.6	-36.9
18.00	14.7	-36.7
19.00	14.8	-36.6
20.00	14.9	-36.6
21.00	14.6	-36.8
22.00	14.2	-37.2
23.00	13.7	-37.7
24.00	13.3	-38.2
25.00	13.0	-38.5
26.00	12.9	-38.6
27.00	13.0	-38.5
28.00	13.1	-38.4
29.00	13.1	-38.4
30.00	12.9	-38.5

COM-POWER AC-220

COMBILOG ANTENNA

S/N: 61093

CALIBRATION DATE: JUNE 5, 2019

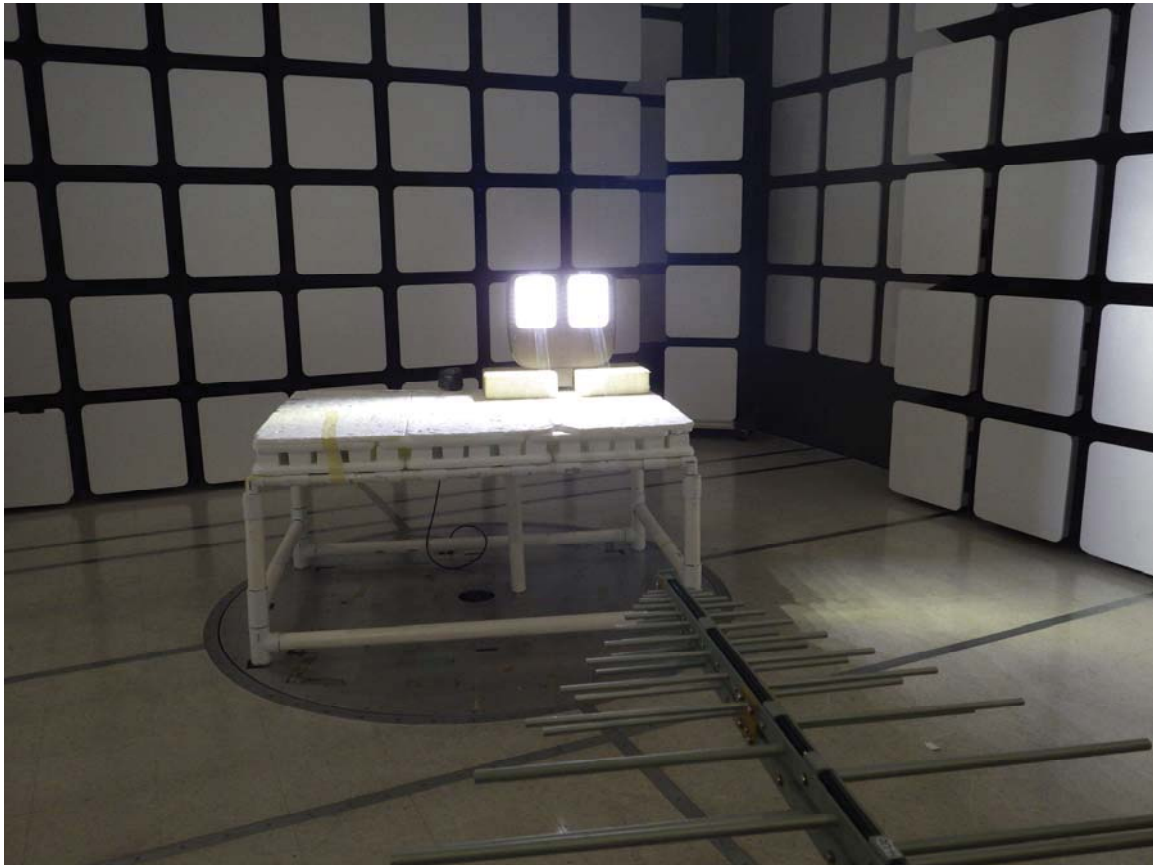
FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	22.10	200	15.30
35	20.90	250	16.80
40	20.10	300	19.00
45	19.40	350	19.60
50	18.40	400	21.70
60	15.10	450	21.60
70	12.00	500	22.20
80	11.60	550	22.70
90	13.50	600	24.20
100	14.70	650	24.40
120	15.90	700	24.50
125	15.90	750	25.40
140	14.80	800	26.30
150	15.50	850	26.70
160	19.80	900	27.50
175	15.20	950	27.80
180	14.90	1000	27.90

COM POWER AH-118**HORN ANTENNA****S/N: 071175****CALIBRATION DATE: FEBRUARY 22, 2018**

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	23.71	10.0	40.08
1.5	25.46	10.5	40.75
2.0	29.26	11.0	41.78
2.5	27.95	11.5	41.02
3.0	29.03	12.0	40.32
3.5	29.70	12.5	40.96
4.0	30.71	13.0	40.29
4.5	31.62	13.5	39.48
5.0	33.23	14.0	39.89
5.5	35.07	14.5	42.75
6.0	34.43	15.0	40.98
6.5	34.98	15.5	38.54
7.0	36.75	16.0	39.40
7.5	37.10	16.5	39.40
8.0	37.66	17.0	41.74
8.5	39.29	17.5	42.58
9.0	37.75	18.0	44.68
9.5	38.23		

COM-POWER PA-118**PREAMPLIFIER****S/N: 181653****CALIBRATION DATE: JANUARY 25, 2019**

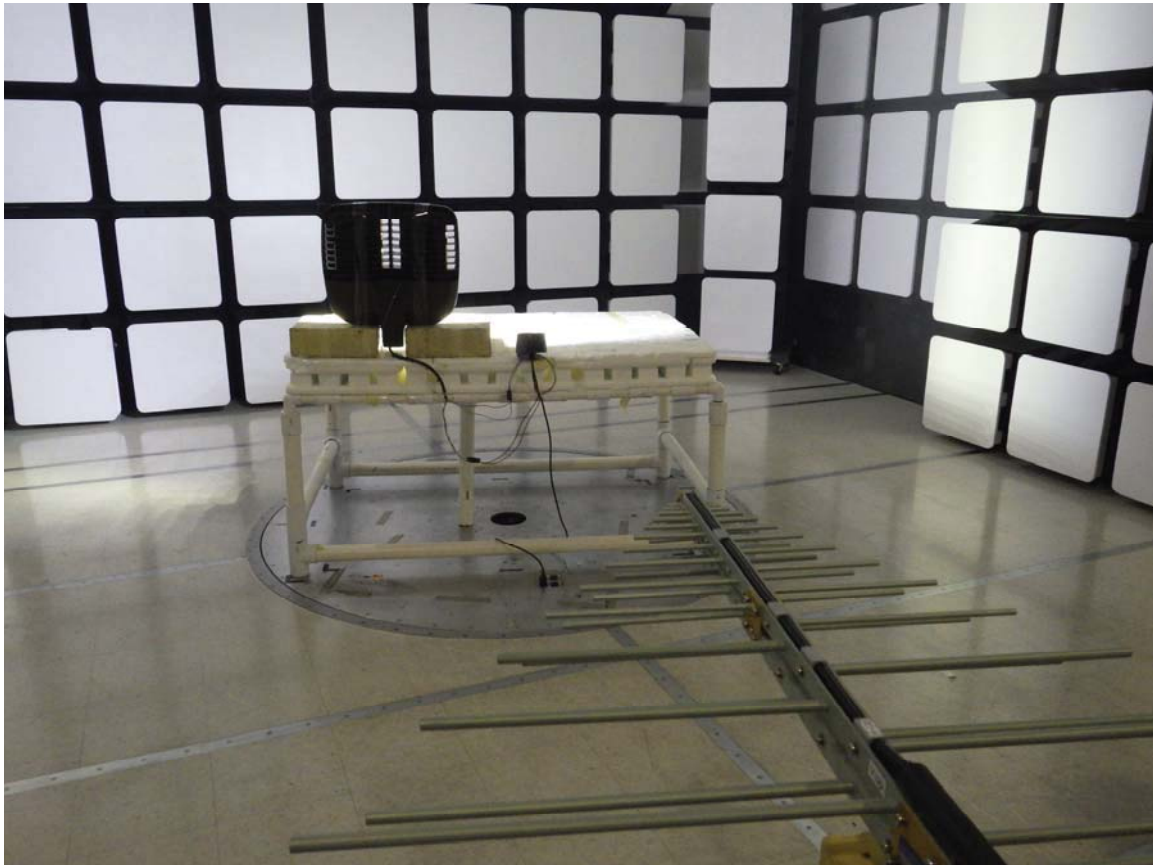
FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (GHz)	FACTOR (dB)
1.0	40.10	6.0	40.60
1.1	40.10	6.5	39.50
1.2	40.00	7.0	39.40
1.3	39.70	7.5	39.30
1.4	39.60	8.0	39.20
1.5	39.90	8.5	40.50
1.6	40.00	9.0	39.60
1.7	39.70	9.5	39.50
1.8	39.50	10.0	38.80
1.9	39.60	11.0	38.70
2.0	39.90	12.0	42.20
2.5	40.10	13.0	40.00
3.0	40.80	14.0	40.30
3.5	40.60	15.0	40.20
4.0	40.50	16.0	41.00
4.5	41.60	17.0	39.70
5.0	39.20	18.0	40.90
5.5	40.00		



FRONT VIEW

MESH SYSTEMS LLC
LIGHTING CONTROL NODE
MODEL: LCN300
FCC SUBPART B AND C – RADIATED EMISSIONS
BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



REAR VIEW

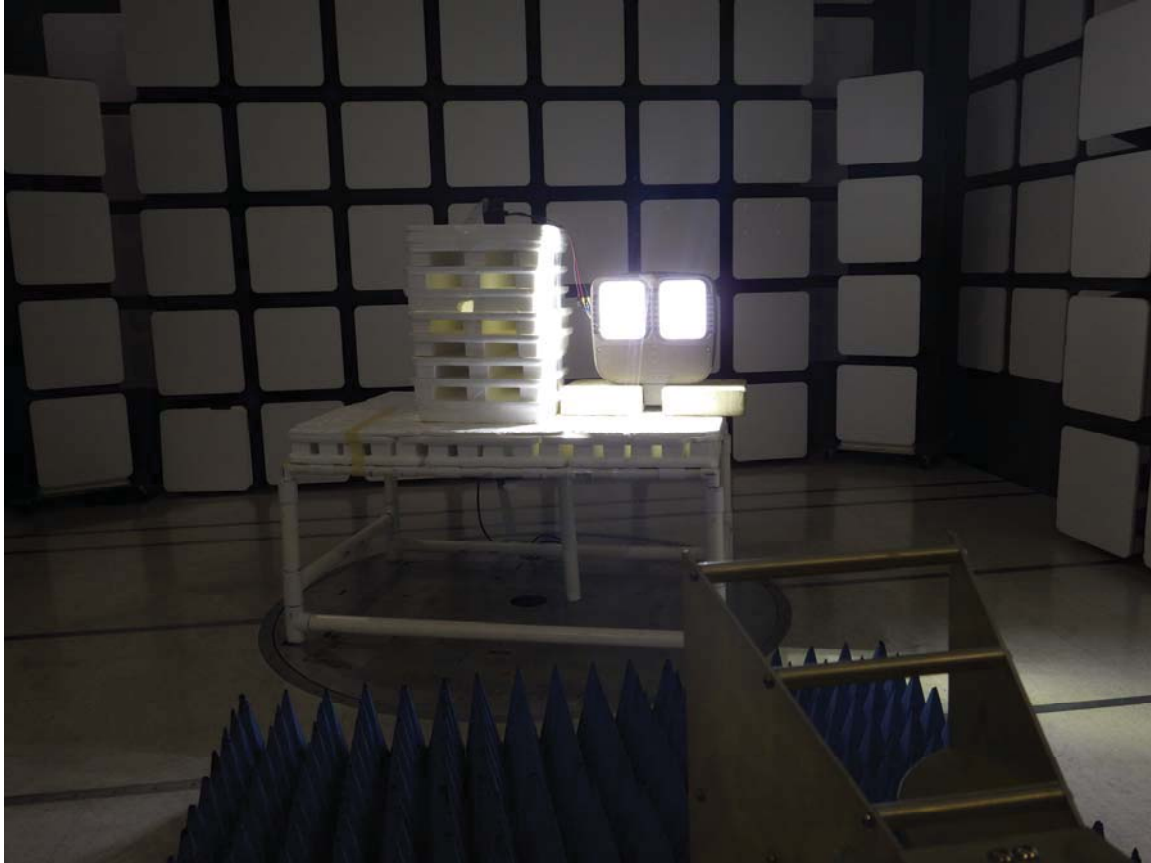
MESH SYSTEMS LLC
LIGHTING CONTROL NODE
MODEL: LCN300
FCC SUBPART B AND C – RADIATED EMISSIONS
BELOW 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Newbury Park Division
1050 Lawrence Drive
Newbury Park, CA 91320
(805) 480-4044

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



FRONT VIEW

MESH SYSTEMS LLC
LIGHTING CONTROL NODE
MODEL: LCN300
FCC SUBPART B AND C – RADIATED EMISSIONS
ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Newbury Park Division
1050 Lawrence Drive
Newbury Park, CA 91320
(805) 480-4044

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



REAR VIEW

MESH SYSTEMS LLC
LIGHTING CONTROL NODE
MODEL: LCN300
FCC SUBPART B AND C – RADIATED EMISSIONS
ABOVE 1 GHz

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Newbury Park Division
1050 Lawrence Drive
Newbury Park, CA 91320
(805) 480-4044

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



FRONT VIEW

MESH SYSTEMS LLC
LIGHTING CONTROL NODE
MODEL: LCN300
FCC SUBPART B AND C – CONDUCTED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Newbury Park Division
1050 Lawrence Drive
Newbury Park, CA 91320
(805) 480-4044

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



REAR VIEW

MESH SYSTEMS LLC
LIGHTING CONTROL NODE
MODEL: LCN300
FCC SUBPART B AND C – CONDUCTED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

APPENDIX E

DATA SHEETS

***RADIATED EMISSIONS
DATA SHEETS***

FCC 15.247

Mesh Systems LLC
Lighting Control Node
Model: LCN300

Date: 07/31/2019
Lab: D
Tested By: Kyle Fujimoto

Low Channel - Y-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1812								N/A - Done via Conducted
								Not in Restricted Band
2718	38.08	V	73.97	-35.89	Peak	92.75	100.00	
2718	28.48	V	53.97	-25.49	Avg	92.75	100.00	
3624	45.53	V	73.97	-28.44	Peak	128.50	136.82	
3624	39.81	V	53.97	-14.16	Avg	128.50	136.82	
4530	41.93	V	73.97	-32.04	Peak	93.75	196.16	
4530	32.04	V	53.97	-21.93	Avg	93.75	196.16	
5436	44.77	V	73.97	-29.20	Peak	122.75	173.17	
5436	35.53	V	53.97	-18.44	Avg	122.75	173.17	
6342								N/A - Done via Conducted
								Not in Restricted Band
7248								N/A - Done via Conducted
								Not in Restricted Band
8154	53.55	V	73.97	-20.42	Peak	124.00	237.35	
8154	47.15	V	53.97	-6.82	Avg	124.00	237.35	
9060								No Emission
9060								detected

FCC 15.247

Mesh Systems LLC
Lighting Control Node
Model: LCN300
Low Channel - Y-Axis
Transmit Mode

Date: 07/31/2019
Lab: D
Tested By: Kyle Fujimoto

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1812								N/A - Done via Conducted
								Not in Restricted Band
2718	37.60	H	73.97	-36.37	Peak	223.75	215.38	
2718	29.58	H	53.97	-24.39	Avg	223.75	215.38	
3624	44.68	H	73.97	-29.29	Peak	195.00	236.52	
3624	37.86	H	53.97	-16.11	Avg	195.00	236.52	
4530	38.94	H	73.97	-35.03	Peak	103.75	100.00	
4530	28.02	H	53.97	-25.95	Avg	103.75	100.00	
5436	38.77	H	73.97	-35.20	Peak	112.50	100.00	
5436	27.79	H	53.97	-26.18	Avg	112.50	100.00	
6342								N/A - Done via Conducted
								Not in Restricted Band
7248								N/A - Done via Conducted
								Not in Restricted Band
8154	48.83	H	73.97	-25.14	Peak	123.50	217.53	
8154	40.88	H	53.97	-13.09	Avg	123.50	217.53	
9060								No Emission
9060								Detected

FCC 15.247

Mesh Systems LLC
Lighting Control Node
Model: LCN300

Date: 07/31/2019

Lab: D

Tested By: Kyle Fujimoto

Middle Channel - Y-Axis
Transmit Mode

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1828								N/A - Done via Conducted
								Not in Restricted Band
2742	39.22	V	73.97	-34.75	Peak	131.50	177.17	
2742	32.19	V	53.97	-21.78	Avg	131.50	177.17	
3656	44.40	V	73.97	-29.57	Peak	111.50	202.73	
3656	38.63	V	53.97	-15.34	Avg	111.50	202.73	
4570	41.74	V	73.97	-32.23	Peak	104.00	194.61	
4570	32.89	V	53.97	-21.08	Avg	104.00	194.61	
5484								N/A - Done via Conducted
								Not in Restricted Band
6398								N/A - Done via Conducted
								Not in Restricted Band
7312	50.48	V	73.97	-23.49	Peak	174.50	190.37	
7312	42.59	V	53.97	-11.38	Avg	174.50	190.37	
8226	52.85	V	73.97	-21.12	Peak	139.00	179.92	
8226	46.42	V	53.97	-7.55	Avg	139.00	179.92	
9140		V						No emission
9140		V						detected

FCC 15.247

Mesh Systems LLC
 Lighting Control Node
 Model: LCN300
Middle Channel - Y-Axis
Transmit Mode

Date: 07/31/2019
 Lab: D
 Tested By: Kyle Fujimoto

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1828								N/A - Done via Conducted
								Not in Restricted Band
2742	37.75	H	73.97	-36.22	Peak	222.00	239.68	
2742	29.82	H	53.97	-24.15	Avg	222.00	239.68	
3656	42.31	H	73.97	-31.66	Peak	253.25	100.00	
3656	36.41	H	53.97	-17.56	Avg	253.25	100.00	
4570	40.94	H	73.97	-33.03	Peak	232.50	218.37	
4570	31.77	H	53.97	-22.20	Avg	232.50	218.37	
5484								N/A - Done via Conducted
								Not in Restricted Band
6398								N/A - Done via Conducted
								Not in Restricted Band
7312	47.02	H	73.97	-26.95	Peak	102.25	100.00	
7312	38.82	H	53.97	-15.15	Avg	102.25	100.00	
8226	48.04	H	73.97	-25.93	Peak	57.75	100.00	
8226	39.58	H	53.97	-14.39	Avg	57.75	100.00	
9140								No emissions
9140								detected

FCC 15.247

Mesh Systems LLC
Lighting Control Node
Model: LCN300
High Channel - Y-Axis
Transmit Mode

Date: 07/31/2019
Lab: D
Tested By: Kyle Fujimoto

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1848								N/A - Done via Conducted
								Not in Restricted Band
2772	32.55	V	73.97	-41.42	Peak	90.75	191.92	
2772	24.86	V	53.97	-29.11	Avg	90.75	191.92	
3696	36.85	V	73.97	-37.12	Peak	134.75	100.00	
3696	33.09	V	53.97	-20.88	Avg	134.75	100.00	
4620	31.56	V	73.97	-42.41	Peak	74.75	100.00	
4620	21.04	V	53.97	-32.93	Avg	74.75	100.00	
5544								N/A - Done via Conducted
5544								Not in Restricted Band
6468								N/A - Done via Conducted
								Not in Restricted Band
7392	42.19	V	73.97	-31.78	Peak	142.50	163.32	
7392	36.01	V	53.97	-17.96	Avg	142.50	163.32	
8316	39.58	V	73.97	-34.39	Peak	159.75	100.00	
8316	29.14	V	53.97	-24.83	Avg	159.75	100.00	
9240								No emission detected
9240								

FCC 15.247

Mesh Systems
 Lighting Control Node
 Model: LCN300

High Channel - Y-Axis
Transmit Mode

Date: 07/31/2019

Lab: D

Tested By: Kyle Fujimoto

Freq. (MHz)	Level (dBuV/m)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Table Angle (deg)	Ant. Height (cm)	Comments
1848								N/A - Done via Conducted
								Not in Restricted Band
2772	38.17	H	73.97	-35.80	Peak	216.50	196.58	
2772	31.23	H	53.97	-22.74	Avg	216.50	196.58	
3696	41.23	H	73.97	-32.74	Peak	114.25	100.00	
3696	34.91	H	53.97	-19.06	Avg	114.25	100.00	
4620	40.35	H	73.97	-33.62	Peak	183.75	186.07	
4620	30.02	H	53.97	-23.95	Avg	183.75	186.07	
5544								N/A - Done via Conducted
5544								Not in Restricted Band
6468								N/A - Done via Conducted
								Not in Restricted Band
7392	44.71	H	73.97	-29.26	Peak	153.00	100.00	
7392	34.58	H	53.97	-19.39	Avg	153.00	100.00	
8316	45.74	H	73.97	-28.23	Peak	108.00	250.00	
8316	35.46	H	53.97	-18.51	Avg	108.00	250.00	
9240								No emissions
9240								detected

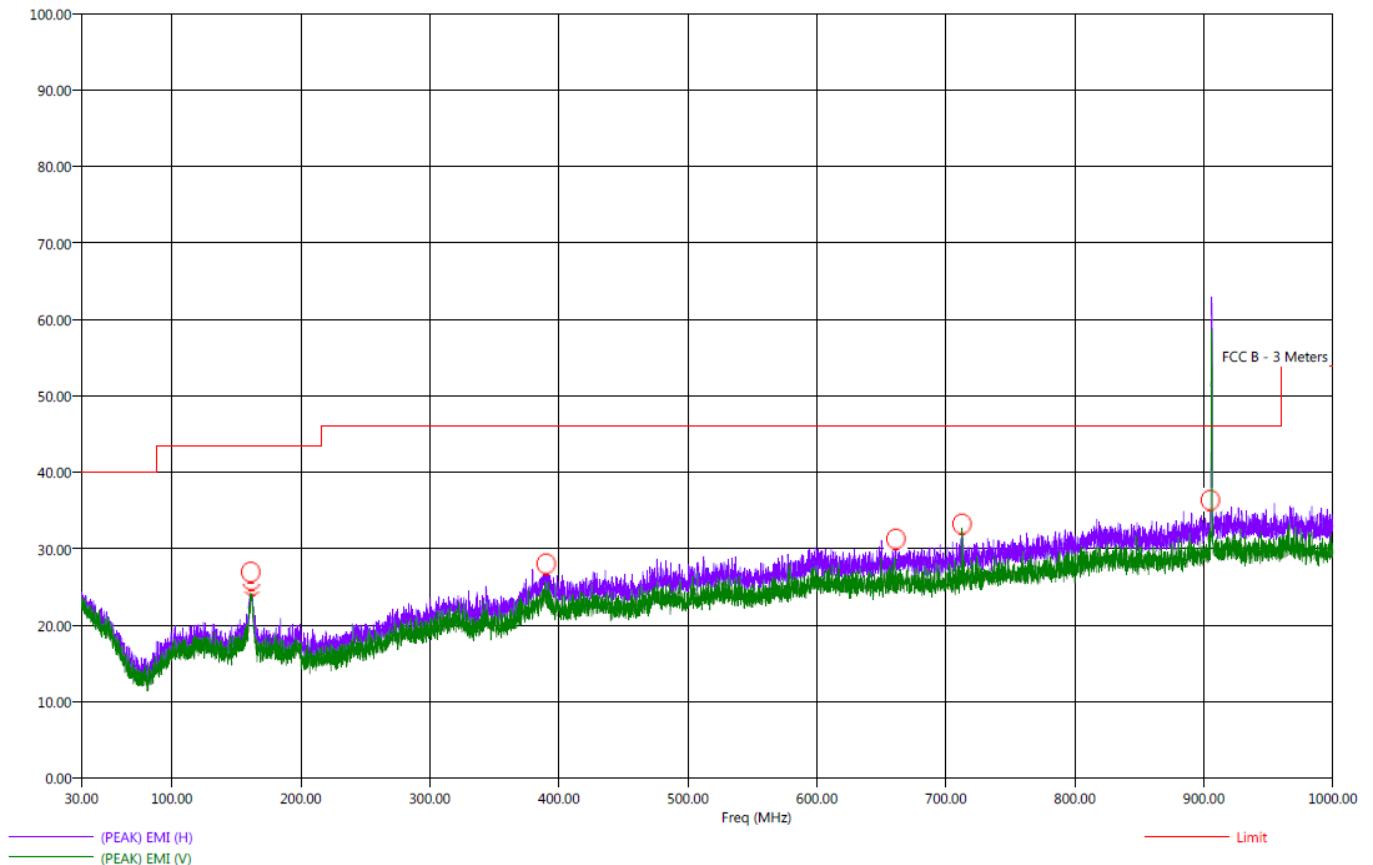
Title: Pre-Scan - FCC Class B
File: 1 - RS - Pre-Scan - Tx Mode - FCC Class B - With LED Light.set
Operator: Kyle Fujimoto
EUT Type: Lighting Control Node
EUT Condition: The EUT is continuously transmitting at the low channel
Company: Mesh Systems LLC
Model: LCN300
S/N: N/A

7/31/2019 8:50:57 AM
Sequence: Preliminary Scan

The frequency at 906 MHz is from the intentional radiator and is subject to the limits of FCC 15.247 instead.
Low channel is the worst case channel

FCC Class B

Electric Field Strength (dBμV/m)



Title: Radiated Final - FCC Class B
File: 1 - RS - Final Scan - Tx Mode - FCC Class B - With LED Lightset
Operator: Kyle Fujimoto
EUT Type: Lighting Control Node
EUT Condition: The EUT is continuously transmitting at the low channel
Company: Mesh Systems LLC
Model: LCN300
S/N: N/A

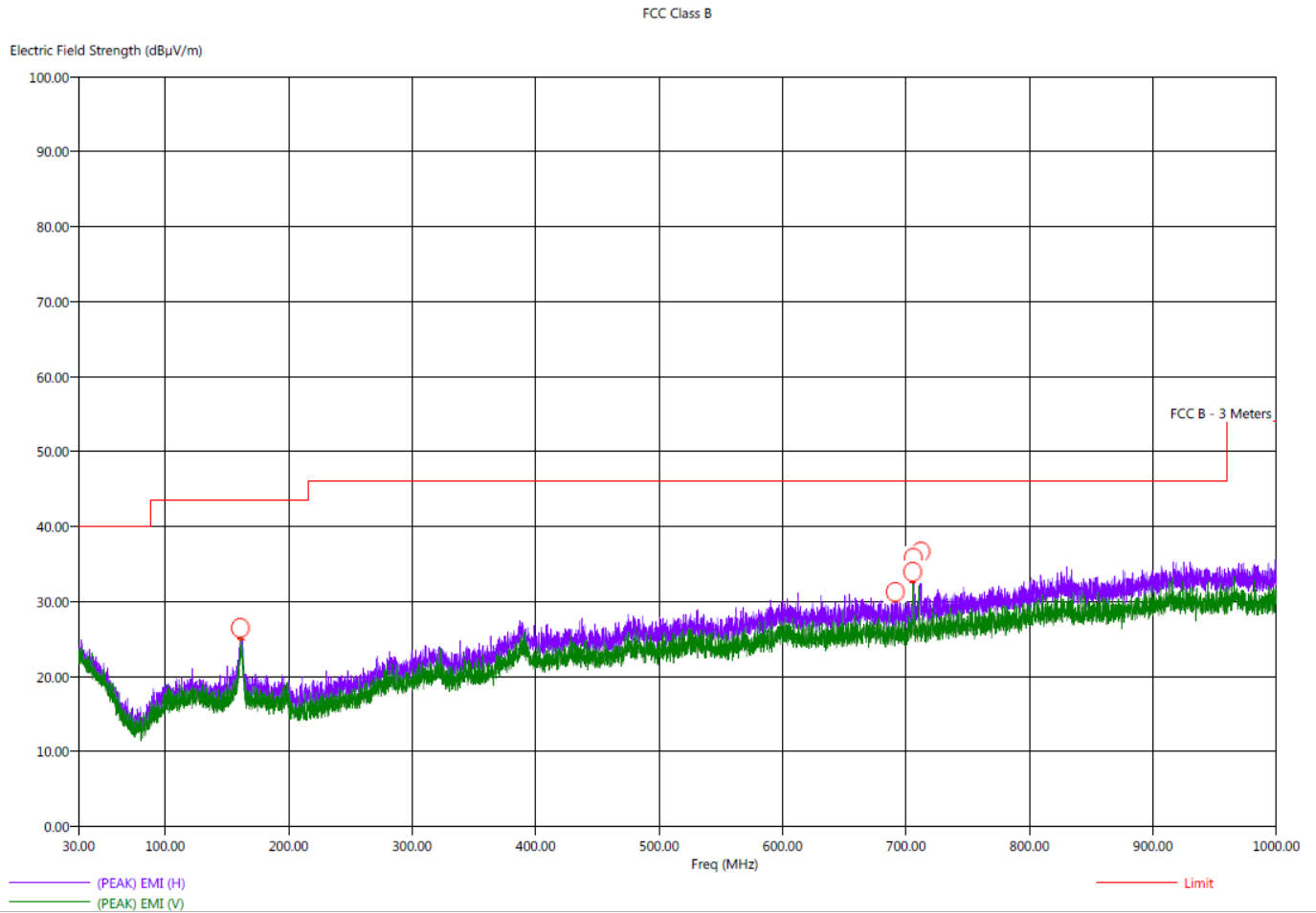
7/31/2019 9:17:58 AM
Sequence: Final Measurements

FCC Class B										
Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(QP) EMI (dBµV/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dBµV/m)	Transducer (dB)	Cable (dB)	Ttbl Aql (dca)	Twr Ht (cm)
161.20	H	26.47	21.35	-17.03	-22.15	43.50	22.04	1.30	134.25	274.85
161.70	H	28.21	21.41	-15.29	-22.09	43.50	22.09	1.30	202.50	193.53
162.20	H	26.63	21.41	-16.87	-22.09	43.50	22.10	1.30	149.25	111.32
390.20	H	27.88	22.61	-18.12	-23.39	46.00	23.12	2.06	72.50	275.32
661.30	H	30.76	25.19	-15.24	-20.81	46.00	24.85	2.50	49.00	242.79
712.50	H	30.63	25.59	-15.37	-20.41	46.00	24.80	2.55	158.75	373.65
905.10	H	34.96	29.61	-11.04	-16.39	46.00	27.71	3.01	292.50	373.71



Title: Pre-Scan - FCC Class B
File: 2 - RS - Pre-Scan - Rx Mode - FCC Class B - With LED Light.set
Operator: Kyle Fujimoto
EUT Type: Lighting Control Node
EUT Condition: The EUT is continuously receiving at the low channel
Company: Mesh Systems LLC
Model: LCN300
S/N: N/A

7/31/2019 9:52:33 AM
Sequence: Preliminary Scan



Title: Radiated Final - FCC Class B
File: 2 - RS - Final Scan - Rx Mode - FCC Class B - With LED Light.set
Operator: Kyle Fujimoto
EUT Type: Lighting Control Node
EUT Condition: The EUT is continuously receiving at the low channel
Company: Mesh Systems LLC
Model: LCN300
S/N: N/A

7/31/2019 10:16:32 AM
Sequence: Final Measurements

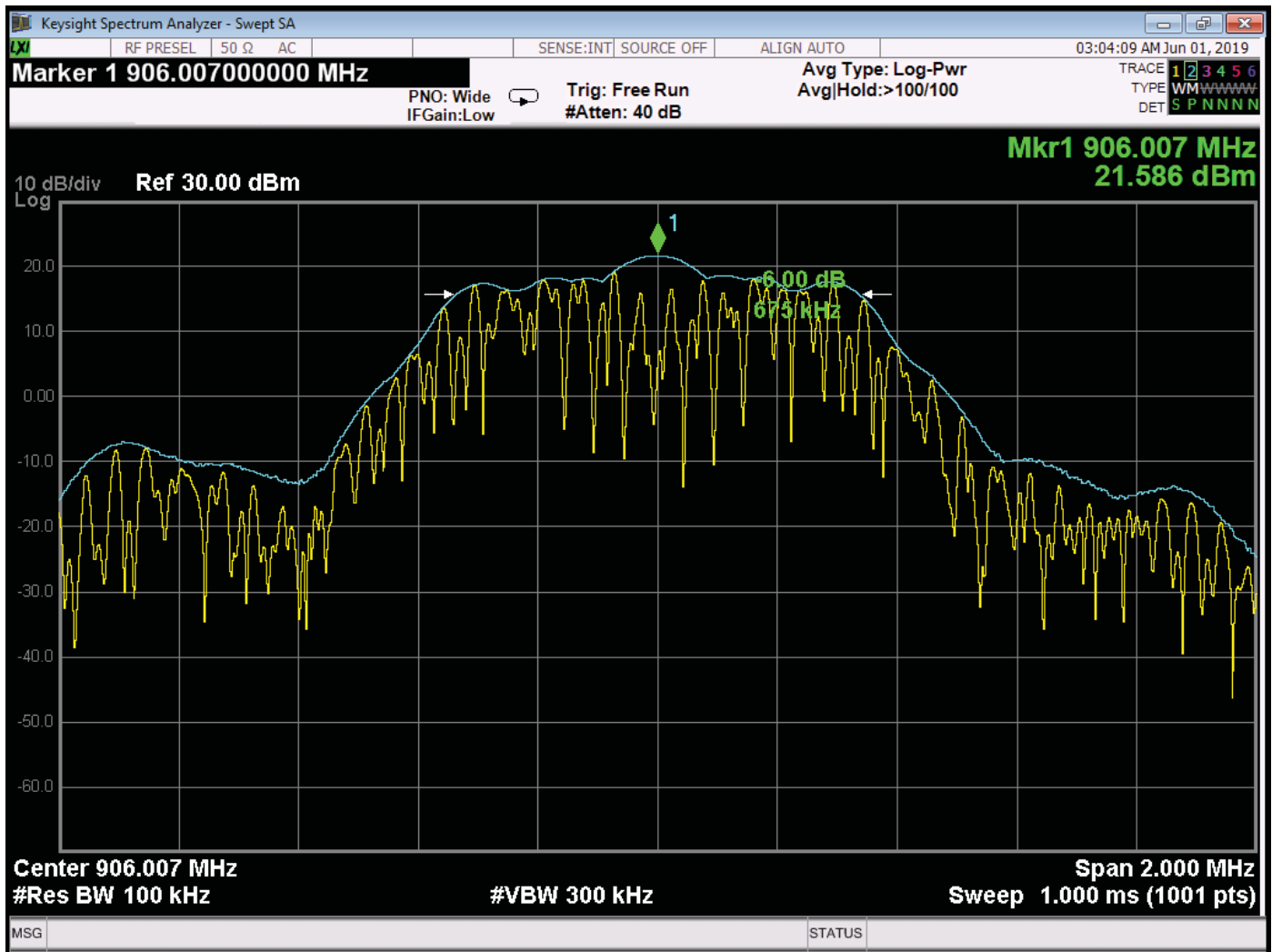
FCC Class B

Freq (MHz)	Pol	(PEAK) EMI (dBµV/m)	(QP) EMI (dBµV/m)	(PEAK) Margin (dB)	(QP) Margin (dB)	Limit (dBµV/m)	Transducer (dB)	Cable (dB)	Ttbl Agl (deg)	Twr Ht (cm)
160.90	H	26.71	20.62	-16.79	-22.88	43.50	21.31	1.30	0.00	324.52
162.10	H	27.38	21.39	-16.12	-22.11	43.50	22.08	1.30	280.75	111.20
691.40	H	30.12	24.79	-15.88	-21.21	46.00	24.45	2.50	305.75	390.61
705.50	V	30.69	38.56	-15.31	-7.44	46.00	24.60	2.52	161.25	373.89
706.00	H	39.97	25.37	-6.03	-20.63	46.00	24.60	2.52	0.00	291.62
712.20	H	43.38	25.59	-2.62	-20.41	46.00	24.80	2.55	324.75	292.04

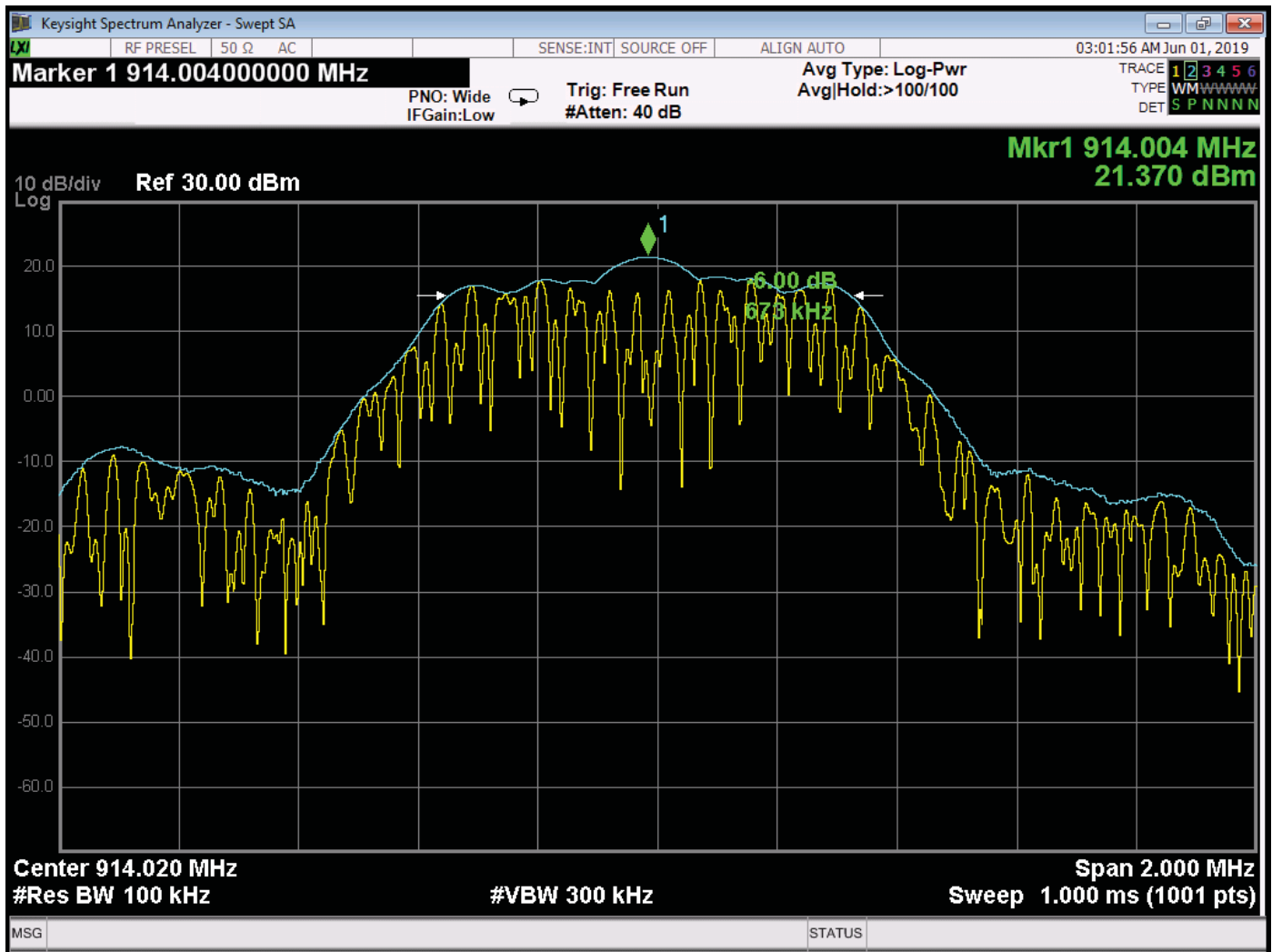


-6 dB BANDWIDTH

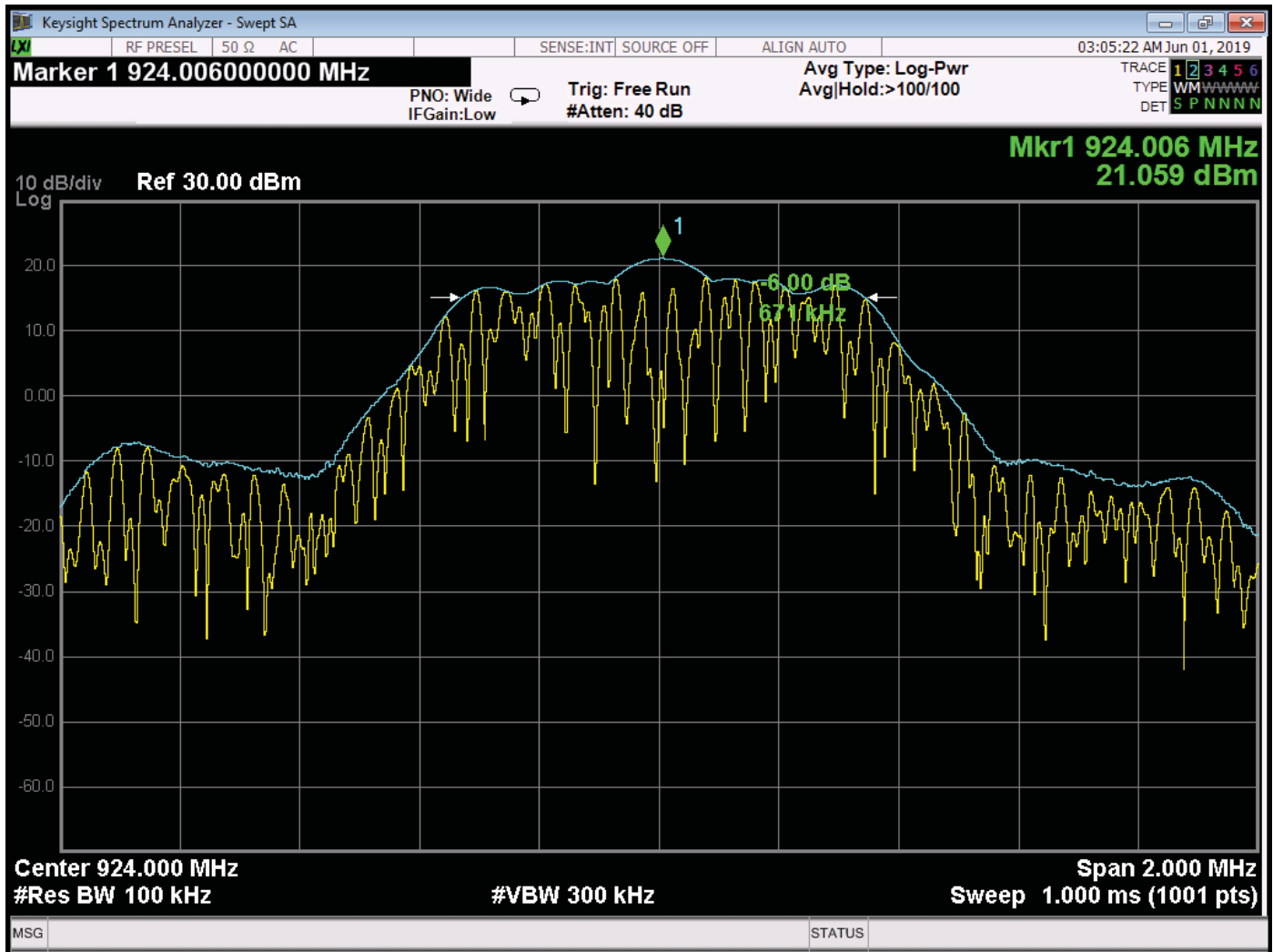
DATA SHEETS



-6 dB Bandwidth – Low Channel



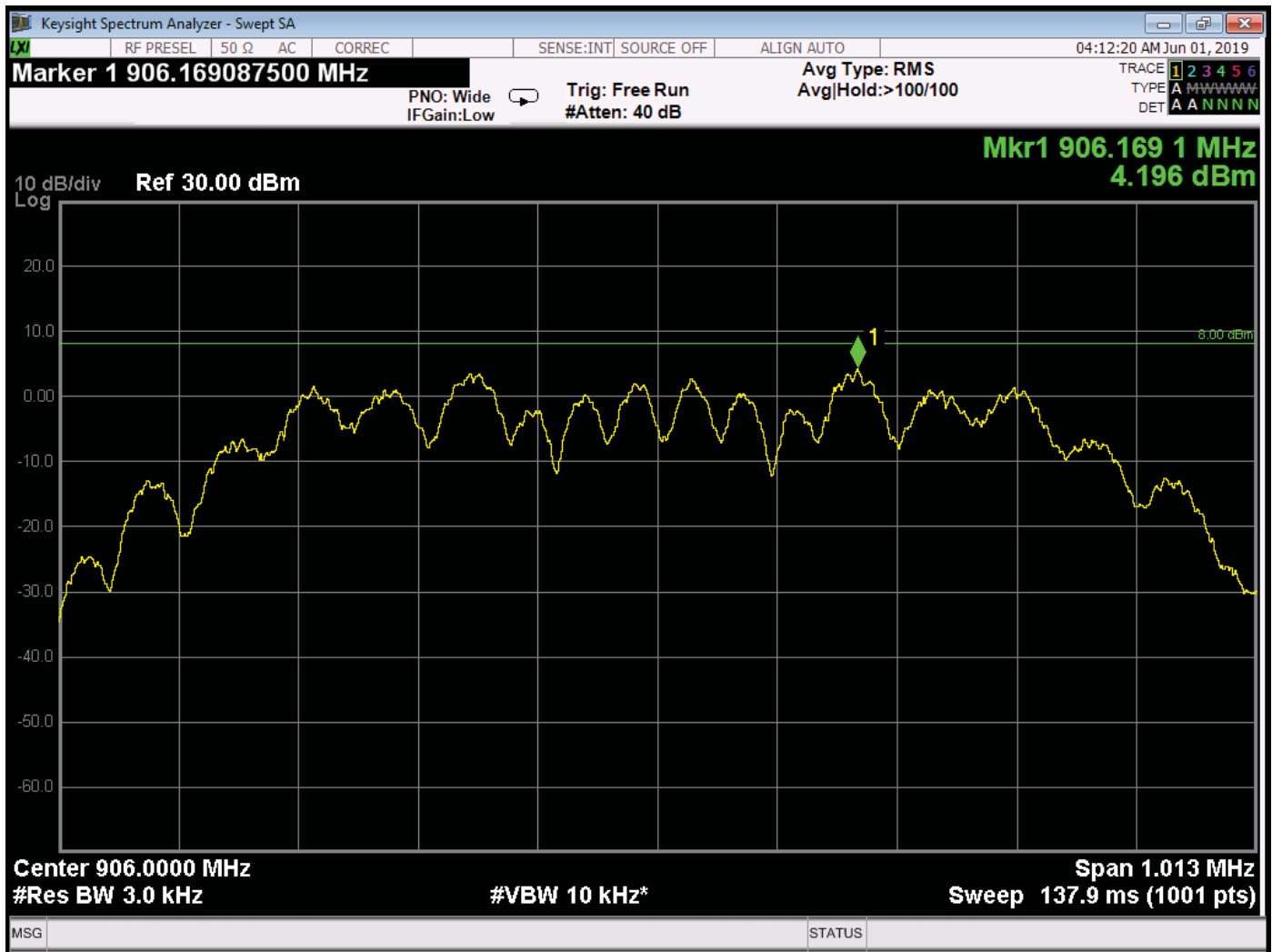
-6 dB Bandwidth – Middle Channel



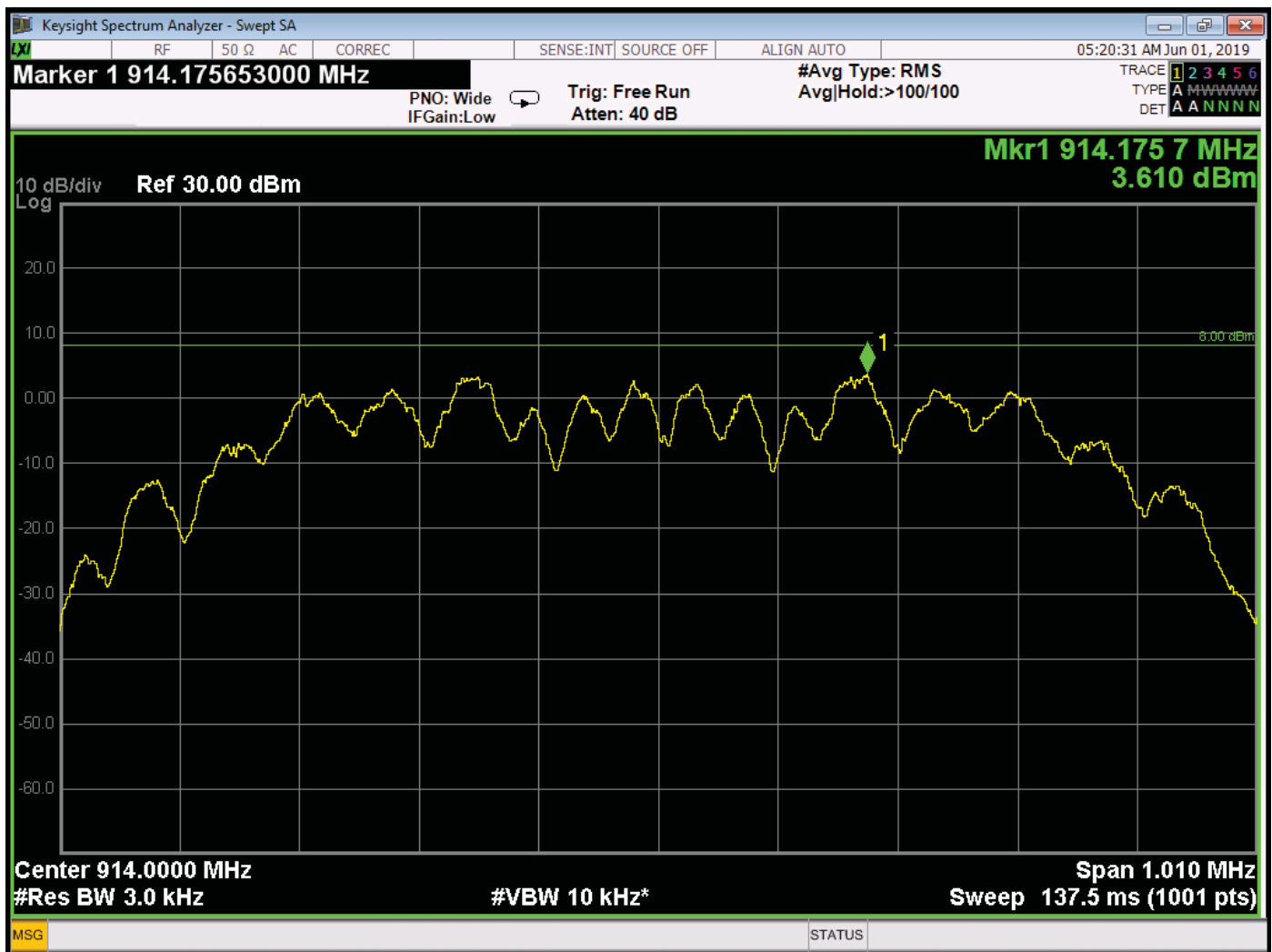
-6 dB Bandwidth – High Channel

SPECTRAL DENSITY OUTPUT

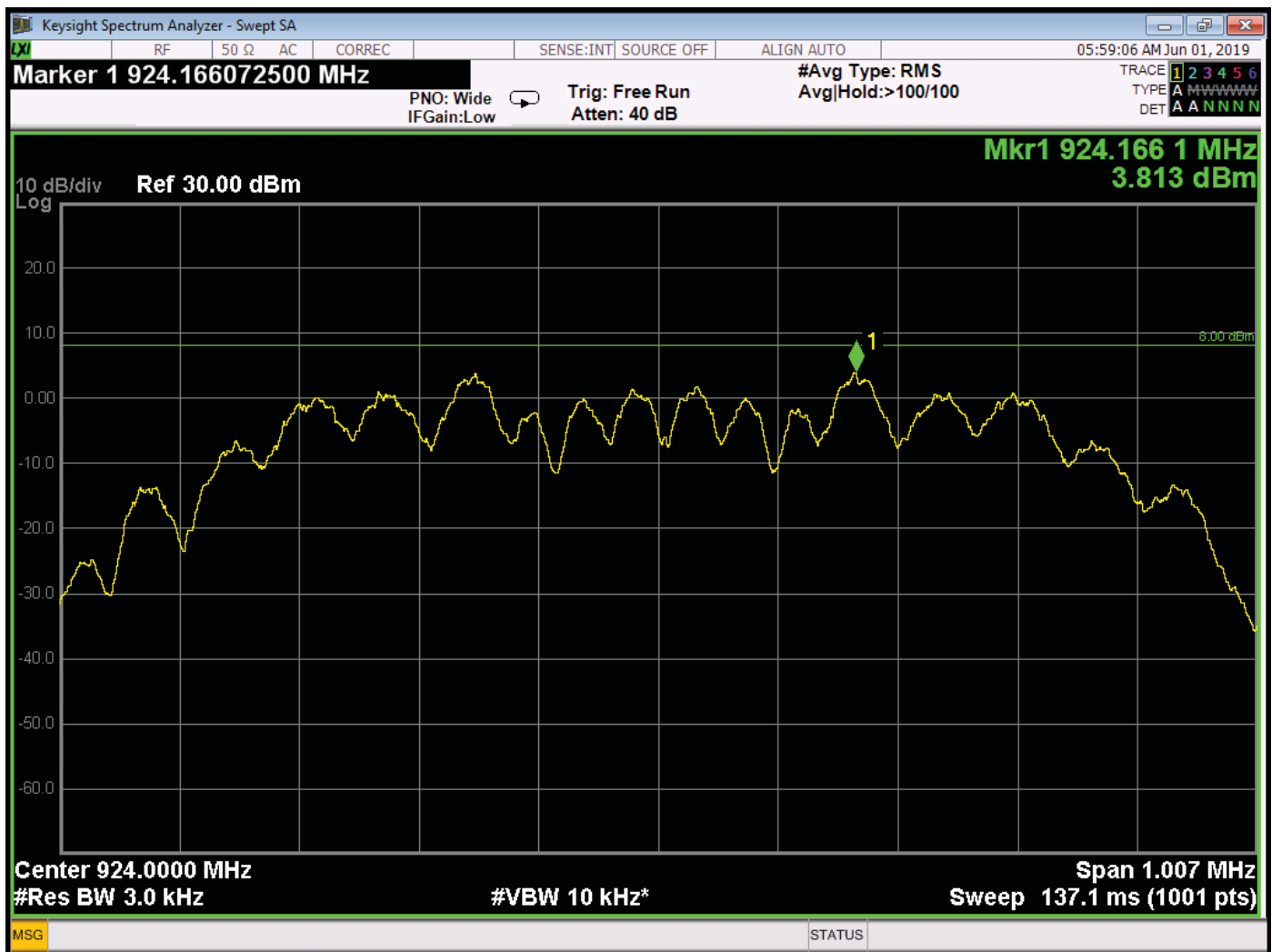
DATA SHEETS



Spectral Density – Low Channel



Spectral Density – Middle Channel



Spectral Density – High Channel

AVERAGE POWER

DATA SHEETS



Average Output Power – Low Channel



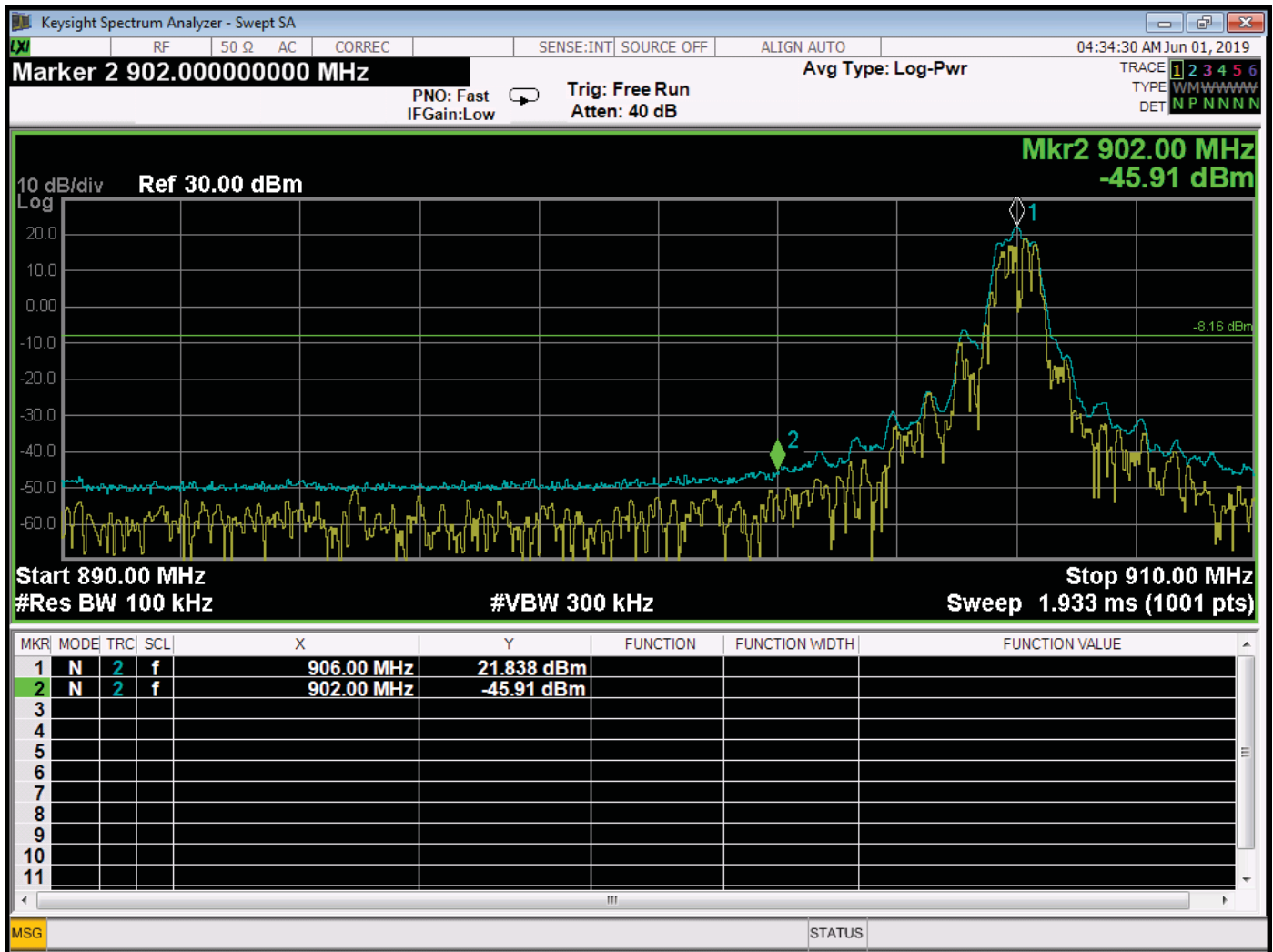
Average Output Power – Middle Channel



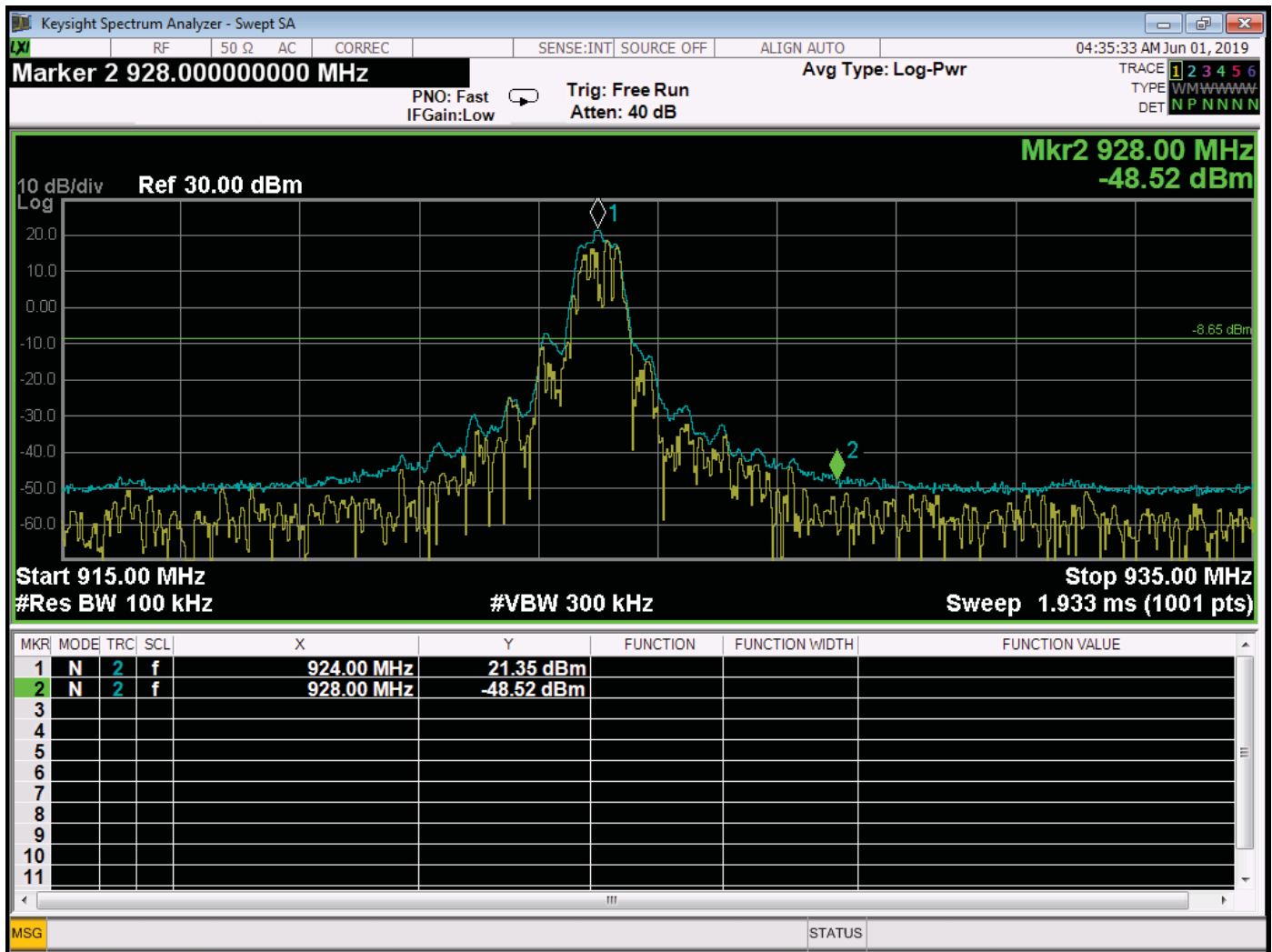
Average Output Power – High Channel

BAND EDGES

DATA SHEETS

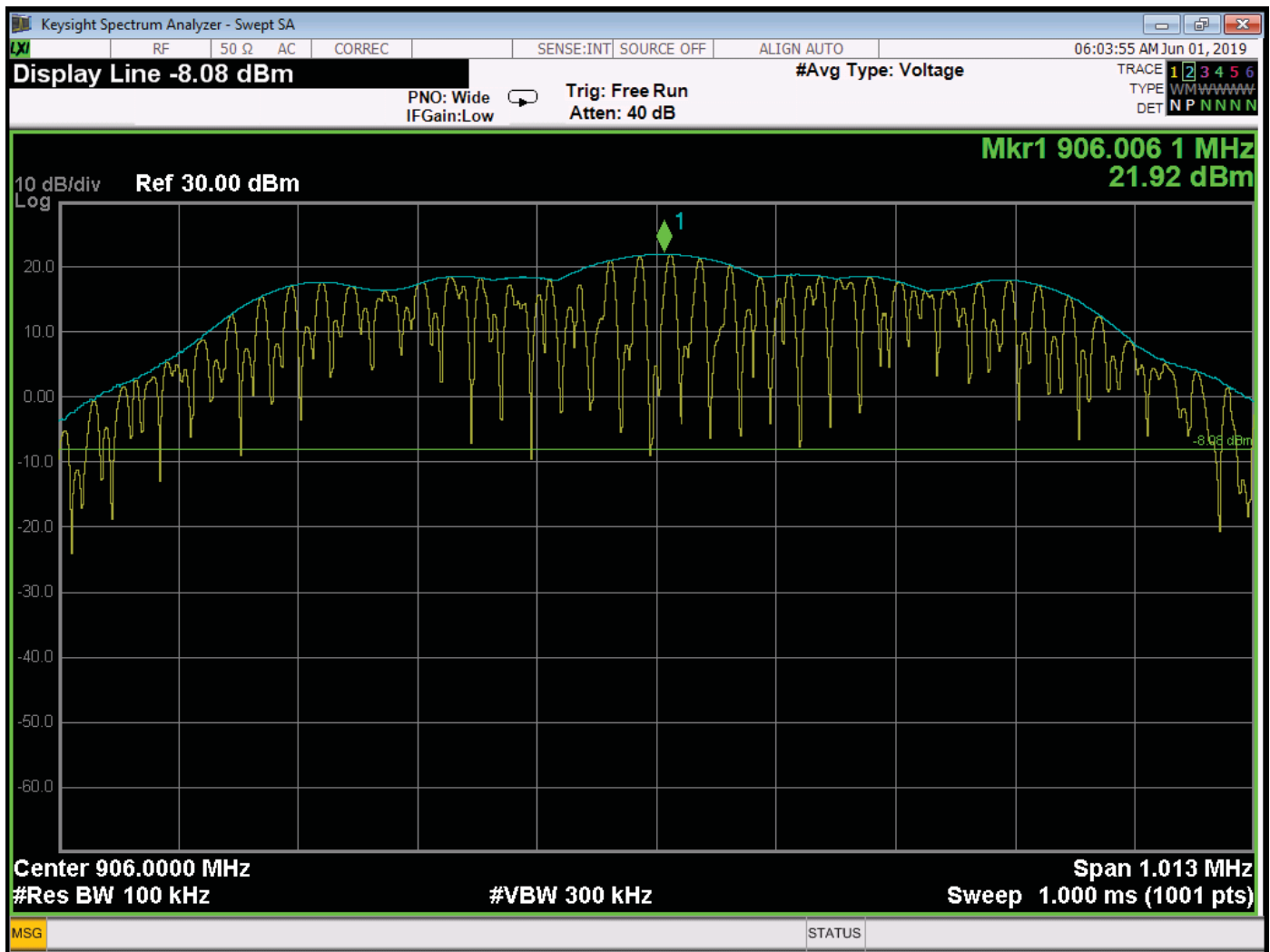


Band Edges – Low Channel

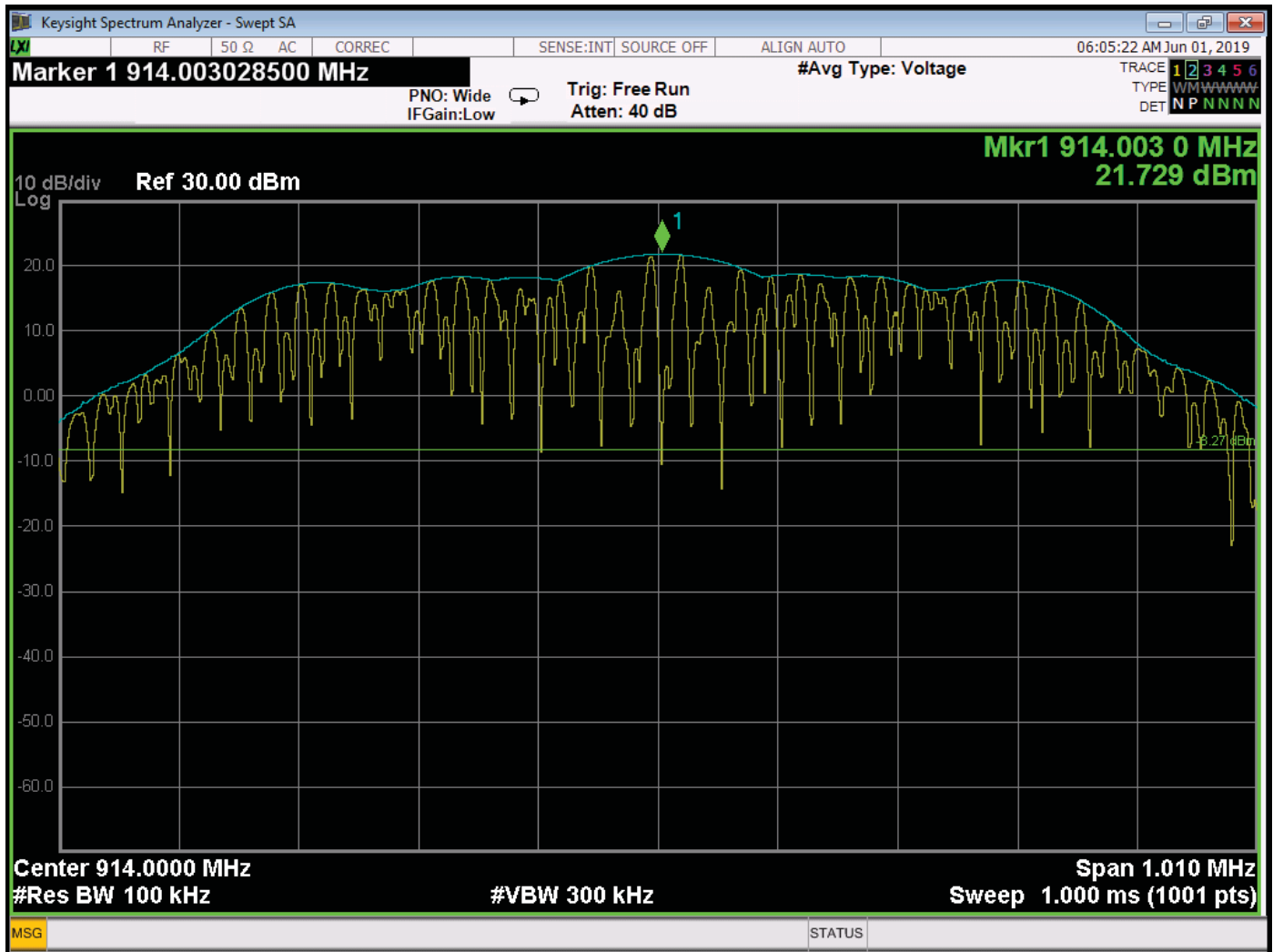


Band Edges – High Channel

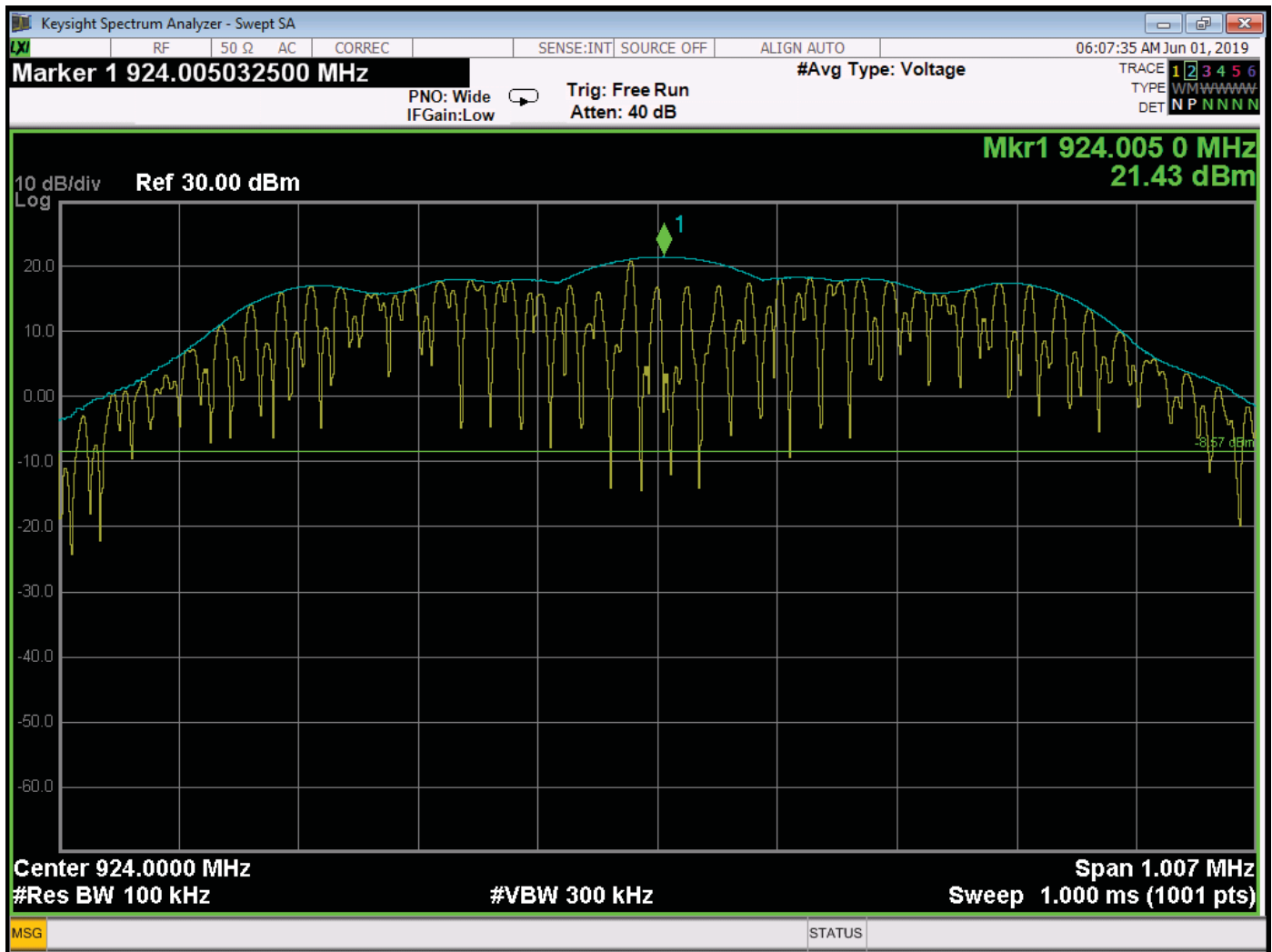
**EMISSIONS IN
NON-RESTRICTED BANDS
*DATA SHEETS***



RF Antenna Conducted – Reference Level – Low Channel



RF Antenna Conducted – Reference Level – Middle Channel



RF Antenna Conducted – Reference Level – High Channel

MESH SYSTEMS LLC**LIGHTING CONTROL NODE****MODEL: LCN300****EMISSIONS IN NON-RESTRICTED BANDS**

FREQUENCY (MHz)	LEVEL (dBm)	Limit* (dBm)	Margin (dB)
1813.19	-44.884	-8.08	-36.804
1828.00	-46.842	-8.08	-38.762
6607.20	-47.871	-8.08	-39.791

Note: The three highest non-restricted emissions are reported.

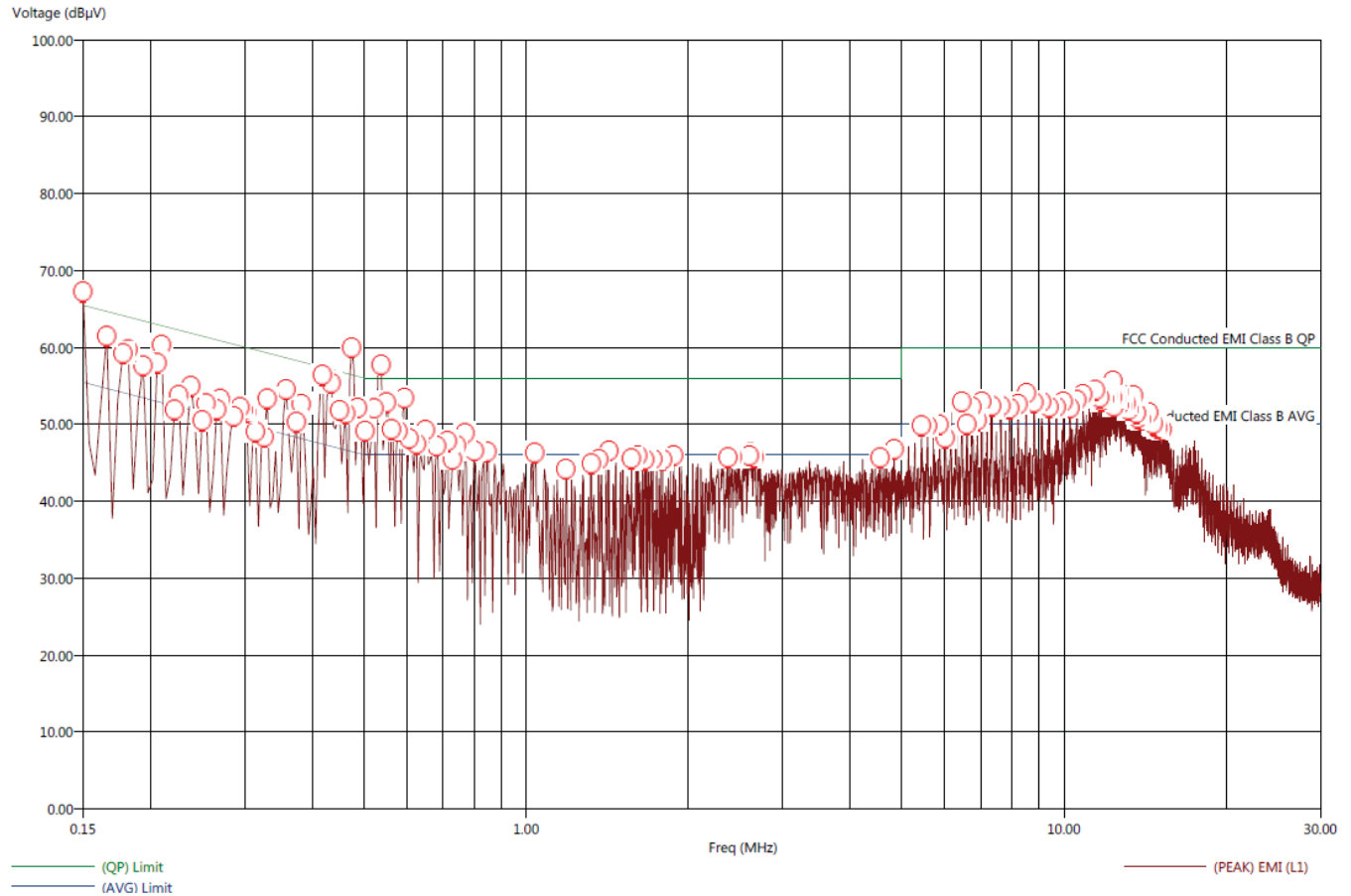
*The Limit is based on 30 dB below the highest reference level obtained on the previous pages.

***CONDUCTED EMISSIONS
DATA SHEETS***

Title: FCC B - Conducted Emissions - Black Lead
File: 1 - RS - Pre-Scan - Black Lead -Tx Mode - FCC Class B - With LED Lights - 30 MHz to 1000 MHz.set
Operator: Kyle Fujimoto
EUT Type: Lighting Control Node
EUT Condition: The EUT is continuously transmitting at the low channel - Worst Case
Company: Mesh Systems LLC
Model: LCN300
S/N: N/A

8/1/2019 9:19:07 AM
Sequence: Preliminary Scan

FCC Class B - Conducted Emissions - Black Lead



Title: FCC B - Conducted Emissions - Black Lead
File: 1 - RS - Final Scan - Black Lead - Tx Mode - FCC Class B - With LED Lights - 30 MHz to 1000 MHz.set
Operator: Kyle Fujimoto
EUT Type: Lighting Control Node
EUT Condition: The EUT is continuously transmitting at the low channel
Company: Mesh Systems LLC
Model: LCN300
S/N: N/A

8/1/2019 9:31:02 AM
Sequence: Final Measurements

FCC Class B - Conducted Emissions - Black Lead

Freq (MHz)	(PEAK) EMI (dBμV)	(QP) EMI (dBμV)	(PEAK) Margin QPL (dB)	(QP) Margin QPL (dB)	(QP) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
0.150	69.45	57.97	3.99	-7.49	65.46	0.00	0.42	9.80
0.166	65.11	54.07	0.45	-10.59	64.66	0.00	0.38	9.80
0.178	62.63	52.36	-1.49	-11.76	64.11	0.00	0.35	9.80
0.182	61.75	52.29	-2.18	-11.65	63.94	0.00	0.34	9.80
0.194	62.46	52.12	-0.98	-11.31	63.44	0.00	0.31	9.80
0.206	61.83	49.90	-1.14	-13.07	62.97	0.00	0.28	9.80
0.210	58.89	49.05	-3.92	-13.77	62.81	0.01	0.27	9.79
0.222	58.03	47.16	-4.34	-15.22	62.38	0.01	0.25	9.79
0.226	58.05	46.75	-4.19	-15.49	62.24	0.01	0.24	9.79
0.238	57.61	51.03	-4.22	-10.80	61.83	0.02	0.22	9.78
0.250	57.65	49.26	-3.80	-12.18	61.45	0.02	0.20	9.78
0.254	58.96	47.13	-2.36	-14.19	61.32	0.03	0.19	9.77
0.266	57.43	45.40	-3.52	-15.56	60.96	0.03	0.17	9.77
0.270	55.99	44.99	-4.85	-15.85	60.84	0.03	0.16	9.77
0.286	56.60	46.25	-3.78	-14.14	60.39	0.04	0.14	9.76
0.294	56.91	51.37	-3.26	-8.80	60.17	0.04	0.13	9.76
0.298	57.38	47.76	-2.68	-12.30	60.07	0.04	0.12	9.76
0.302	56.12	46.99	-3.84	-12.97	59.96	0.04	0.11	9.76
0.314	54.59	48.39	-5.07	-11.26	59.65	0.05	0.10	9.75
0.326	55.00	44.50	-4.36	-14.86	59.36	0.05	0.08	9.75
0.330	56.41	45.63	-2.86	-13.63	59.26	0.05	0.08	9.75
0.358	54.50	48.36	-4.12	-10.26	58.62	0.06	0.05	9.74
0.374	54.27	46.69	-4.01	-11.59	58.28	0.07	0.05	9.73
0.382	55.49	43.85	-2.63	-14.27	58.11	0.07	0.04	9.73
0.418	60.41	53.71	3.00	-3.70	57.41	0.08	0.04	9.72
0.434	61.40	52.81	4.29	-4.30	57.11	0.08	0.03	9.72
0.450	57.09	48.59	0.26	-8.24	56.83	0.09	0.03	9.71
0.462	55.48	48.60	-1.14	-8.02	56.62	0.09	0.03	9.71
0.474	59.38	52.90	2.96	-3.52	56.42	0.09	0.03	9.71
0.486	61.19	56.11	4.97	-0.11	56.22	0.10	0.04	9.70
0.502	55.86	46.49	-0.14	-9.51	56.00	0.10	0.04	9.70
0.522	56.45	50.79	0.45	-5.21	56.00	0.09	0.04	9.71
0.538	58.83	50.95	2.83	-5.05	56.00	0.09	0.04	9.72
0.550	58.34	54.41	2.34	-1.59	56.00	0.09	0.04	9.73
0.562	53.84	47.24	-2.16	-8.76	56.00	0.08	0.04	9.73
0.578	54.03	47.61	-1.97	-8.39	56.00	0.08	0.04	9.74
0.594	53.41	46.73	-2.59	-9.27	56.00	0.08	0.04	9.75
0.606	52.86	47.88	-3.14	-8.12	56.00	0.07	0.04	9.76
0.626	50.17	44.29	-5.83	-11.71	56.00	0.07	0.04	9.76
0.650	50.78	45.00	-5.22	-11.00	56.00	0.06	0.04	9.78
0.682	49.10	42.69	-6.90	-13.31	56.00	0.06	0.04	9.79
0.714	49.96	44.57	-6.04	-11.43	56.00	0.05	0.04	9.80
0.730	51.73	46.33	-4.27	-9.67	56.00	0.05	0.04	9.81
0.742	51.24	43.21	-4.76	-12.79	56.00	0.04	0.04	9.81
0.770	48.47	42.03	-7.53	-13.97	56.00	0.04	0.04	9.82
0.802	49.71	43.85	-6.29	-12.15	56.00	0.03	0.04	9.84

Freq (MHz)	(PEAK) EMI (dBμV)	(OP) EMI (dBμV)	(PEAK) Margin QPL (dB)	(QP) Margin QPL (dB)	(OP) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
0.846	47.23	42.19	-8.77	-13.81	56.00	0.02	0.04	9.85
1.038	46.61	43.53	-9.39	-12.47	56.00	0.01	0.04	9.89
1.186	46.04	43.32	-9.96	-12.68	56.00	0.02	0.04	9.88
1.322	46.68	41.92	-9.32	-14.08	56.00	0.04	0.04	9.86
1.366	46.33	42.77	-9.67	-13.23	56.00	0.04	0.04	9.86
1.426	46.86	43.99	-9.14	-12.01	56.00	0.05	0.04	9.85
1.570	44.95	38.18	-11.05	-17.82	56.00	0.07	0.04	9.83
1.614	47.55	41.88	-8.45	-14.12	56.00	0.07	0.04	9.83
1.662	45.98	41.99	-10.02	-14.01	56.00	0.07	0.04	9.83
1.722	46.54	39.27	-9.46	-16.73	56.00	0.08	0.04	9.82
1.794	46.02	41.72	-9.98	-14.28	56.00	0.08	0.04	9.82
1.882	46.04	39.82	-9.96	-16.18	56.00	0.09	0.04	9.81
2.374	45.82	42.79	-10.18	-13.21	56.00	0.12	0.04	9.80
2.418	46.74	43.46	-9.26	-12.54	56.00	0.12	0.04	9.80
2.602	45.41	41.17	-10.59	-14.83	56.00	0.13	0.05	9.80
2.614	46.31	41.18	-9.69	-14.82	56.00	0.13	0.05	9.80
2.654	45.76	42.72	-10.24	-13.28	56.00	0.13	0.05	9.80
4.554	45.30	40.56	-10.70	-15.44	56.00	0.19	0.05	9.80
4.838	47.20	41.67	-8.80	-14.33	56.00	0.20	0.05	9.80
5.434	47.01	40.51	-12.99	-19.49	60.00	0.21	0.05	9.80
5.578	48.25	42.33	-11.75	-17.67	60.00	0.22	0.05	9.80
5.862	51.19	48.53	-8.81	-11.47	60.00	0.22	0.05	9.80
6.018	49.27	43.07	-10.73	-16.93	60.00	0.23	0.05	9.80
6.458	52.35	46.41	-7.65	-13.59	60.00	0.24	0.05	9.80
6.602	49.15	44.91	-10.85	-15.09	60.00	0.24	0.05	9.80
6.746	53.14	49.50	-6.86	-10.50	60.00	0.24	0.05	9.80
6.898	48.94	43.49	-11.06	-16.51	60.00	0.25	0.05	9.80
7.038	53.65	50.43	-6.35	-9.57	60.00	0.25	0.05	9.80
7.338	51.30	47.19	-8.70	-12.81	60.00	0.26	0.04	9.80
7.634	51.95	46.18	-8.05	-13.82	60.00	0.26	0.04	9.80
7.934	47.72	43.76	-12.28	-16.24	60.00	0.27	0.04	9.80
8.218	52.27	47.09	-7.73	-12.91	60.00	0.27	0.04	9.80
8.518	50.35	44.73	-9.65	-15.27	60.00	0.28	0.04	9.80
8.798	54.24	49.30	-5.76	-10.70	60.00	0.28	0.04	9.80
9.090	54.62	49.50	-5.38	-10.50	60.00	0.29	0.04	9.81
9.390	51.82	47.28	-8.18	-12.72	60.00	0.29	0.04	9.84
9.686	51.49	46.59	-8.51	-13.41	60.00	0.30	0.04	9.87
9.974	52.09	47.80	-7.91	-12.20	60.00	0.30	0.04	9.90
10.270	52.08	47.36	-7.92	-12.64	60.00	0.30	0.04	9.90
10.574	52.95	45.50	-7.05	-14.50	60.00	0.31	0.04	9.90
10.842	54.21	49.82	-5.79	-10.18	60.00	0.31	0.04	9.90
11.438	53.79	48.48	-6.21	-11.52	60.00	0.32	0.03	9.90
11.654	53.36	46.64	-6.64	-13.36	60.00	0.32	0.03	9.90
11.734	54.94	48.26	-5.06	-11.74	60.00	0.32	0.03	9.90
11.898	52.97	47.73	-7.03	-12.27	60.00	0.33	0.03	9.90
11.942	53.14	47.39	-6.86	-12.61	60.00	0.33	0.03	9.90
12.026	53.65	48.57	-6.35	-11.43	60.00	0.33	0.03	9.90
12.130	53.12	47.38	-6.88	-12.62	60.00	0.33	0.03	9.89
12.298	55.43	49.45	-4.57	-10.55	60.00	0.33	0.03	9.88
12.342	54.07	47.66	-5.93	-12.34	60.00	0.33	0.03	9.87
12.390	52.91	47.38	-7.09	-12.62	60.00	0.33	0.03	9.87
12.478	52.48	47.08	-7.52	-12.92	60.00	0.33	0.03	9.86
12.626	54.61	47.72	-5.39	-12.28	60.00	0.33	0.03	9.85
12.666	52.97	47.35	-7.03	-12.65	60.00	0.33	0.03	9.85
12.818	53.91	47.09	-6.09	-12.91	60.00	0.34	0.03	9.84
13.046	53.24	47.19	-6.76	-12.81	60.00	0.34	0.03	9.83
13.194	53.04	47.65	-6.96	-12.35	60.00	0.34	0.03	9.81
13.266	51.93	46.73	-8.07	-13.27	60.00	0.34	0.03	9.81

Freq (MHz)	(PEAK) EMI (dBμV)	(OP) EMI (dBμV)	(PEAK) Margin QPL (dB)	(QP) Margin QPL (dB)	(OP) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
13.470	52.82	47.67	-7.18	-12.33	60.00	0.34	0.03	9.80
13.642	51.45	45.91	-8.55	-14.09	60.00	0.34	0.02	9.79
13.730	51.52	45.87	-8.48	-14.13	60.00	0.35	0.02	9.78
13.934	49.81	45.42	-10.19	-14.58	60.00	0.35	0.02	9.77
14.382	50.40	44.53	-9.60	-15.47	60.00	0.35	0.02	9.74
14.654	51.65	45.65	-8.35	-14.35	60.00	0.36	0.02	9.72
14.662	50.94	45.00	-9.06	-15.00	60.00	0.36	0.02	9.72
14.726	48.67	43.50	-11.33	-16.50	60.00	0.36	0.02	9.72
14.942	49.77	45.30	-10.23	-14.70	60.00	0.36	0.02	9.70
15.242	49.63	44.59	-10.37	-15.41	60.00	0.36	0.02	9.71



Title: FCC B - Conducted Emissions - Black Lead
File: 1 - RS - Final Scan - Black Lead - Tx Mode - FCC Class B - With LED Lights - 30 MHz to 1000 MHz.set
Operator: Kyle Fujimoto
EUT Type: Lighting Control Node
EUT Condition: The EUT is continuously transmitting at the low channel
Company: Mesh Systems LLC
Model: LCN300
S/N: N/A

8/1/2019 9:31:02 AM
Sequence: Final Measurements

FCC Class B - Conducted Emissions - Black Lead

Freq (MHz)	(PEAK) EMI (dBµV)	(AVG) EMI (dBµV)	(PEAK) Margin AVL (dB)	(AVG) Margin AVL (dB)	(AVG) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)
0.150	69.45	45.86	13.99	-9.60	55.46	0.00	0.42	9.80
0.166	65.11	36.55	10.45	-18.11	54.66	0.00	0.38	9.80
0.178	62.63	36.05	8.51	-18.06	54.11	0.00	0.35	9.80
0.182	61.75	40.71	7.82	-13.23	53.94	0.00	0.34	9.80
0.194	62.46	40.04	9.02	-13.40	53.44	0.00	0.31	9.80
0.206	61.83	34.61	8.86	-18.35	52.97	0.00	0.28	9.80
0.210	58.89	33.78	6.08	-19.03	52.81	0.01	0.27	9.79
0.222	58.03	34.35	5.66	-18.03	52.38	0.01	0.25	9.79
0.226	58.05	33.92	5.81	-18.31	52.24	0.01	0.24	9.79
0.238	57.61	38.94	5.78	-12.89	51.83	0.02	0.22	9.78
0.250	57.65	35.09	6.20	-16.36	51.45	0.02	0.20	9.78
0.254	58.96	33.82	7.64	-17.50	51.32	0.03	0.19	9.77
0.266	57.43	33.51	6.48	-17.45	50.96	0.03	0.17	9.77
0.270	55.99	32.64	5.15	-18.20	50.84	0.03	0.16	9.77
0.286	56.60	38.56	6.22	-11.82	50.39	0.04	0.14	9.76
0.294	56.91	49.12	6.74	-1.05	50.17	0.04	0.13	9.76
0.298	57.38	42.49	7.32	-7.58	50.07	0.04	0.12	9.76
0.302	56.12	35.94	6.16	-14.02	49.96	0.04	0.11	9.76
0.314	54.59	32.67	4.93	-16.99	49.65	0.05	0.10	9.75
0.326	55.00	32.36	5.64	-17.00	49.36	0.05	0.08	9.75
0.330	56.41	34.02	7.14	-15.25	49.26	0.05	0.08	9.75
0.358	54.50	33.92	5.88	-14.71	48.62	0.06	0.05	9.74
0.374	54.27	32.70	5.99	-15.58	48.28	0.07	0.05	9.73
0.382	55.49	32.14	7.37	-15.97	48.11	0.07	0.04	9.73
0.418	60.41	40.09	13.00	-7.32	47.41	0.08	0.04	9.72
0.434	61.40	42.27	14.29	-4.84	47.11	0.08	0.03	9.72
0.450	57.09	43.05	10.26	-3.78	46.83	0.09	0.03	9.71
0.462	55.48	35.28	8.86	-11.34	46.62	0.09	0.03	9.71
0.474	59.38	45.46	12.96	-0.96	46.42	0.09	0.03	9.71
0.486	61.19	39.32	14.97	-6.90	46.22	0.10	0.04	9.70
0.502	55.86	31.59	9.86	-14.41	46.00	0.10	0.04	9.70
0.522	56.45	38.66	10.45	-7.34	46.00	0.09	0.04	9.71
0.538	58.83	32.65	12.83	-13.35	46.00	0.09	0.04	9.72
0.550	58.34	35.16	12.34	-10.84	46.00	0.09	0.04	9.73
0.562	53.84	34.28	7.84	-11.72	46.00	0.08	0.04	9.73
0.578	54.03	33.24	8.03	-12.76	46.00	0.08	0.04	9.74
0.594	53.41	32.34	7.41	-13.66	46.00	0.08	0.04	9.75
0.606	52.86	33.10	6.86	-12.90	46.00	0.07	0.04	9.76
0.626	50.17	30.22	4.17	-15.78	46.00	0.07	0.04	9.76
0.650	50.78	30.39	4.78	-15.61	46.00	0.06	0.04	9.78
0.682	49.10	27.11	3.10	-18.89	46.00	0.06	0.04	9.79
0.714	49.96	35.17	3.96	-10.83	46.00	0.05	0.04	9.80
0.730	51.73	43.43	5.73	-2.57	46.00	0.05	0.04	9.81
0.742	51.24	30.43	5.24	-15.57	46.00	0.04	0.04	9.81
0.770	48.47	27.47	2.47	-18.53	46.00	0.04	0.04	9.82
0.802	49.71	32.82	3.71	-13.18	46.00	0.03	0.04	9.84

Freq (MHz)	(PEAK) EMI (dBµV)	(AVG) EMI (dBµV)	(PEAK) Margin AVL (dB)	(AVG) Margin AVL (dB)	(AVG) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)
0.846	47.23	31.18	1.23	-14.82	46.00	0.02	0.04	9.85
1.038	46.61	30.56	0.61	-15.44	46.00	0.01	0.04	9.89
1.186	46.04	27.17	0.04	-18.83	46.00	0.02	0.04	9.88
1.322	46.68	29.61	0.68	-16.39	46.00	0.04	0.04	9.86
1.366	46.33	28.12	0.33	-17.88	46.00	0.04	0.04	9.86
1.426	46.86	27.59	0.86	-18.41	46.00	0.05	0.04	9.85
1.570	44.95	25.94	-1.05	-20.06	46.00	0.07	0.04	9.83
1.614	47.55	33.86	1.55	-12.14	46.00	0.07	0.04	9.83
1.662	45.98	27.00	-0.02	-19.00	46.00	0.07	0.04	9.83
1.722	46.54	23.02	0.54	-22.98	46.00	0.08	0.04	9.82
1.794	46.02	25.73	0.02	-20.27	46.00	0.08	0.04	9.82
1.882	46.04	24.75	0.04	-21.25	46.00	0.09	0.04	9.81
2.374	45.82	24.24	-0.18	-21.76	46.00	0.12	0.04	9.80
2.418	46.74	26.56	0.74	-19.44	46.00	0.12	0.04	9.80
2.602	45.41	24.97	-0.59	-21.03	46.00	0.13	0.05	9.80
2.614	46.31	24.12	0.31	-21.88	46.00	0.13	0.05	9.80
2.654	45.76	25.60	-0.24	-20.40	46.00	0.13	0.05	9.80
4.554	45.30	28.89	-0.70	-17.11	46.00	0.19	0.05	9.80
4.838	47.20	36.55	1.20	-9.45	46.00	0.20	0.05	9.80
5.434	47.01	33.55	-2.99	-16.45	50.00	0.21	0.05	9.80
5.578	48.25	36.13	-1.75	-13.87	50.00	0.22	0.05	9.80
5.862	51.19	45.27	1.19	-4.73	50.00	0.22	0.05	9.80
6.018	49.27	37.01	-0.73	-12.99	50.00	0.23	0.05	9.80
6.458	52.35	40.65	2.35	-9.35	50.00	0.24	0.05	9.80
6.602	49.15	38.96	-0.85	-11.04	50.00	0.24	0.05	9.80
6.746	53.14	44.16	3.14	-5.84	50.00	0.24	0.05	9.80
6.898	48.94	37.80	-1.06	-12.20	50.00	0.25	0.05	9.80
7.038	53.65	44.99	3.65	-5.01	50.00	0.25	0.05	9.80
7.338	51.30	41.81	1.30	-8.19	50.00	0.26	0.04	9.80
7.634	51.95	40.40	1.95	-9.60	50.00	0.26	0.04	9.80
7.934	47.72	37.33	-2.28	-12.67	50.00	0.27	0.04	9.80
8.218	52.27	41.52	2.27	-8.48	50.00	0.27	0.04	9.80
8.518	50.35	38.67	0.35	-11.33	50.00	0.28	0.04	9.80
8.798	54.24	43.94	4.24	-6.06	50.00	0.28	0.04	9.80
9.090	54.62	44.14	4.62	-5.86	50.00	0.29	0.04	9.81
9.390	51.82	41.90	1.82	-8.10	50.00	0.29	0.04	9.84
9.686	51.49	40.50	1.49	-9.50	50.00	0.30	0.04	9.87
9.974	52.09	42.18	2.09	-7.82	50.00	0.30	0.04	9.90
10.270	52.08	41.24	2.08	-8.76	50.00	0.30	0.04	9.90
10.574	52.95	38.00	2.95	-12.00	50.00	0.31	0.04	9.90
10.842	54.21	45.46	4.21	-4.54	50.00	0.31	0.04	9.90
11.438	53.79	42.01	3.79	-7.99	50.00	0.32	0.03	9.90
11.654	53.36	35.29	3.36	-14.71	50.00	0.32	0.03	9.90
11.734	54.94	41.21	4.94	-8.79	50.00	0.32	0.03	9.90
11.898	52.97	34.83	2.97	-15.17	50.00	0.33	0.03	9.90
11.942	53.14	35.38	3.14	-14.62	50.00	0.33	0.03	9.90
12.026	53.65	41.30	3.65	-8.70	50.00	0.33	0.03	9.90
12.130	53.12	35.81	3.12	-14.19	50.00	0.33	0.03	9.89
12.298	55.43	43.32	5.43	-6.68	50.00	0.33	0.03	9.88
12.342	54.07	37.25	4.07	-12.75	50.00	0.33	0.03	9.87
12.390	52.91	36.03	2.91	-13.97	50.00	0.33	0.03	9.87
12.478	52.48	35.24	2.48	-14.76	50.00	0.33	0.03	9.86
12.626	54.61	38.18	4.61	-11.82	50.00	0.33	0.03	9.85
12.666	52.97	36.09	2.97	-13.91	50.00	0.33	0.03	9.85
12.818	53.91	35.16	3.91	-14.84	50.00	0.34	0.03	9.84
13.046	53.24	36.39	3.24	-13.61	50.00	0.34	0.03	9.83
13.194	53.04	40.83	3.04	-9.17	50.00	0.34	0.03	9.81
13.266	51.93	35.66	1.93	-14.34	50.00	0.34	0.03	9.81

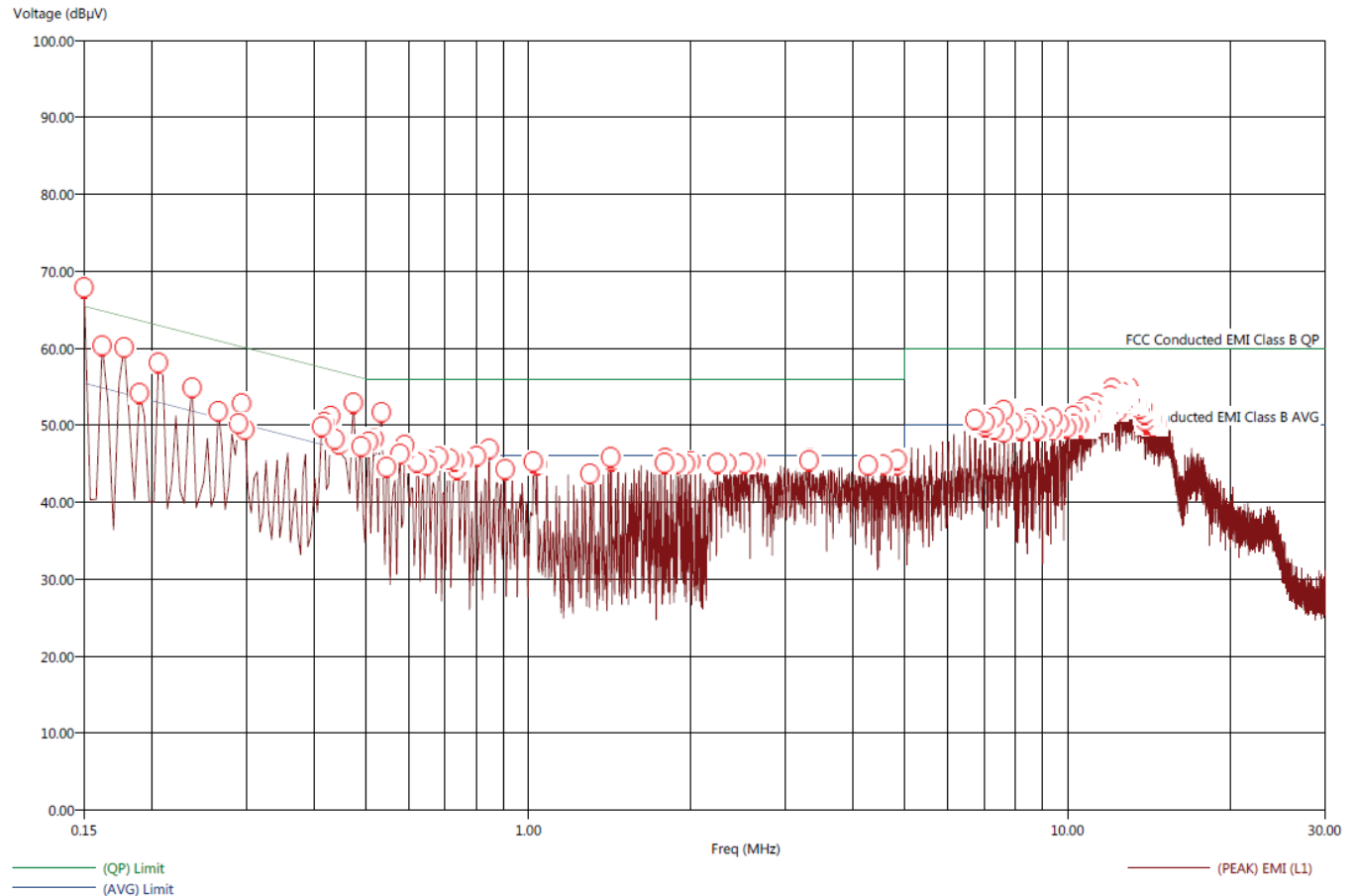
Freq (MHz)	(PEAK) EMI (dBµV)	(AVG) EMI (dBµV)	(PEAK) Margin AVL (dB)	(AVG) Margin AVL (dB)	(AVG) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)
13.470	52.82	41.58	2.82	-8.42	50.00	0.34	0.03	9.80
13.642	51.45	35.85	1.45	-14.15	50.00	0.34	0.02	9.79
13.730	51.52	37.14	1.52	-12.86	50.00	0.35	0.02	9.78
13.934	49.81	35.90	-0.19	-14.10	50.00	0.35	0.02	9.77
14.382	50.40	36.82	0.40	-13.18	50.00	0.35	0.02	9.74
14.654	51.65	39.31	1.65	-10.69	50.00	0.36	0.02	9.72
14.662	50.94	38.38	0.94	-11.62	50.00	0.36	0.02	9.72
14.726	48.67	35.46	-1.33	-14.54	50.00	0.36	0.02	9.72
14.942	49.77	39.51	-0.23	-10.49	50.00	0.36	0.02	9.70
15.242	49.63	38.62	-0.37	-11.38	50.00	0.36	0.02	9.71



Title: FCC B - Conducted Emissions - White Lead
File: 2 - RS - Pre-Scan - White Lead - Tx Mode - FCC Class B - With LED Lights - 30 MHz to 1000 MHz.set
Operator: Kyle Fujimoto
EUT Type: Lighting Control Node
EUT Condition: The EUT is continuously transmitting at the low channel - Worst Case
Company: Mesh Systems LLC
Model: LCN300
S/N: N/A

8/1/2019 10:12:13 AM
Sequence: Preliminary Scan

FCC Class B - Conducted Emissions - White Lead



Title: FCC B - Conducted Emissions - White Lead
File: 2 - RS - Final Scan - White Lead - Tx Mode - FCC Class B - With LED Lights - 30 MHz to 1000 MHz.set
Operator: Kyle Fujimoto
EUT Type: Lighting Control Node
EUT Condition: The EUT is continuously transmitting at the low channel
Company: Mesh Systems LLC
Model: LCN300
S/N: N/A

8/1/2019 10:24:56 AM
Sequence: Final Measurements

FCC Class B - Conducted Emissions - White Lead

Freq (MHz)	(PEAK) EMI (dBμV)	(QP) EMI (dBμV)	(PEAK) Margin QPL (dB)	(QP) Margin QPL (dB)	(QP) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
0.15	67.46	58.04	2.00	-7.42	65.46	0.00	0.40	9.80
0.16	63.36	53.73	-1.49	-11.12	64.85	0.00	0.36	9.80
0.18	60.29	51.25	-3.82	-12.86	64.11	0.00	0.32	9.80
0.19	63.82	54.45	0.22	-9.15	63.60	0.00	0.29	9.80
0.21	58.06	48.32	-4.91	-14.65	62.97	0.00	0.26	9.80
0.24	58.36	50.08	-3.47	-11.75	61.83	0.02	0.19	9.78
0.27	53.15	42.37	-7.80	-18.58	60.96	0.03	0.14	9.77
0.29	54.41	47.50	-5.87	-12.78	60.28	0.04	0.10	9.76
0.29	55.00	50.36	-5.17	-9.81	60.17	0.04	0.10	9.76
0.30	51.91	44.97	-8.16	-15.09	60.07	0.04	0.09	9.76
0.41	50.67	44.14	-6.81	-13.34	57.48	0.08	0.02	9.72
0.42	55.95	50.00	-1.46	-7.41	57.41	0.08	0.02	9.72
0.43	58.01	52.63	0.83	-4.56	57.18	0.08	0.02	9.72
0.44	54.76	47.85	-2.28	-9.19	57.04	0.09	0.02	9.71
0.44	51.67	47.18	-5.29	-9.79	56.97	0.09	0.02	9.71
0.45	50.68	44.15	-6.22	-12.75	56.90	0.09	0.02	9.71
0.47	56.25	49.20	-0.16	-7.22	56.42	0.09	0.02	9.71
0.49	56.75	50.84	0.59	-5.32	56.16	0.10	0.02	9.70
0.51	47.79	41.25	-8.21	-14.75	56.00	0.10	0.02	9.70
0.52	50.45	46.03	-5.55	-9.97	56.00	0.09	0.02	9.71
0.52	51.62	46.38	-4.38	-9.62	56.00	0.09	0.02	9.71
0.53	51.82	46.02	-4.18	-9.98	56.00	0.09	0.02	9.72
0.55	51.86	46.49	-4.14	-9.51	56.00	0.09	0.02	9.73
0.58	48.78	42.59	-7.22	-13.41	56.00	0.08	0.02	9.74
0.59	49.03	42.64	-6.97	-13.36	56.00	0.08	0.02	9.75
0.59	48.37	40.86	-7.63	-15.14	56.00	0.08	0.02	9.75
0.62	46.87	40.41	-9.13	-15.59	56.00	0.07	0.02	9.76
0.65	45.39	40.31	-10.61	-15.69	56.00	0.06	0.02	9.78
0.65	47.50	39.79	-8.50	-16.21	56.00	0.06	0.02	9.78
0.68	45.94	37.65	-10.06	-18.35	56.00	0.06	0.02	9.79
0.71	49.66	42.87	-6.34	-13.13	56.00	0.05	0.02	9.80
0.73	49.66	43.98	-6.34	-12.02	56.00	0.05	0.02	9.81
0.73	51.95	46.14	-4.05	-9.86	56.00	0.04	0.02	9.81
0.74	48.33	41.52	-7.67	-14.48	56.00	0.04	0.02	9.81
0.74	46.55	38.64	-9.45	-17.36	56.00	0.04	0.02	9.81
0.76	49.10	43.08	-6.90	-12.92	56.00	0.04	0.02	9.82
0.80	47.23	41.69	-8.77	-14.31	56.00	0.03	0.02	9.84
0.85	47.84	40.38	-8.16	-15.62	56.00	0.02	0.02	9.85
0.91	46.59	36.80	-9.41	-19.20	56.00	0.01	0.02	9.87
1.02	45.38	38.30	-10.62	-17.70	56.00	0.00	0.02	9.90
1.03	47.48	43.33	-8.52	-12.67	56.00	0.00	0.02	9.90
1.04	45.43	42.10	-10.57	-13.90	56.00	0.01	0.02	9.89
1.30	38.60	31.62	-17.40	-24.38	56.00	0.04	0.03	9.86
1.42	45.98	43.94	-10.02	-12.06	56.00	0.05	0.03	9.85
1.43	45.63	42.01	-10.37	-13.99	56.00	0.05	0.03	9.85
1.79	45.31	40.75	-10.69	-15.25	56.00	0.08	0.04	9.82

Freq (MHz)	(PEAK) EMI (dBμV)	(QP) EMI (dBμV)	(PEAK) Margin QPL (dB)	(QP) Margin QPL (dB)	(QP) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
1.79	44.98	41.04	-11.02	-14.96	56.00	0.08	0.04	9.82
1.88	44.09	39.20	-11.91	-16.80	56.00	0.09	0.04	9.81
1.96	45.22	38.34	-10.78	-17.66	56.00	0.10	0.04	9.80
2.00	45.10	39.28	-10.90	-16.72	56.00	0.10	0.04	9.80
2.24	44.93	39.53	-11.07	-16.47	56.00	0.11	0.04	9.80
2.33	45.48	40.01	-10.52	-15.99	56.00	0.12	0.04	9.80
2.52	45.62	38.86	-10.38	-17.14	56.00	0.13	0.04	9.80
2.60	45.42	41.01	-10.58	-14.99	56.00	0.13	0.04	9.80
2.64	45.95	41.46	-10.05	-14.54	56.00	0.13	0.04	9.80
3.32	46.15	42.20	-9.85	-13.80	56.00	0.16	0.04	9.80
3.33	45.51	38.02	-10.49	-17.98	56.00	0.16	0.04	9.80
4.27	44.32	39.83	-11.68	-16.17	56.00	0.18	0.04	9.80
4.55	46.40	41.95	-9.60	-14.05	56.00	0.19	0.03	9.80
4.83	46.38	41.22	-9.62	-14.78	56.00	0.20	0.03	9.80
4.84	47.15	41.72	-8.85	-14.28	56.00	0.20	0.03	9.80
6.74	51.51	48.33	-8.49	-11.67	60.00	0.24	0.04	9.80
7.04	53.13	49.06	-6.87	-10.94	60.00	0.25	0.04	9.80
7.04	50.97	48.02	-9.03	-11.98	60.00	0.25	0.04	9.80
7.33	52.52	48.97	-7.48	-11.03	60.00	0.26	0.04	9.80
7.33	52.35	49.15	-7.65	-10.85	60.00	0.26	0.04	9.80
7.61	51.09	47.10	-8.91	-12.90	60.00	0.26	0.04	9.80
7.62	52.90	48.63	-7.10	-11.37	60.00	0.26	0.04	9.80
7.63	50.61	47.27	-9.39	-12.73	60.00	0.26	0.04	9.80
7.91	52.08	48.82	-7.92	-11.18	60.00	0.27	0.04	9.80
8.20	50.56	46.32	-9.44	-13.68	60.00	0.27	0.04	9.80
8.20	50.97	47.65	-9.03	-12.35	60.00	0.27	0.04	9.80
8.50	51.76	48.12	-8.24	-11.88	60.00	0.28	0.05	9.80
8.51	51.79	47.77	-8.21	-12.23	60.00	0.28	0.05	9.80
8.79	52.02	47.79	-7.98	-12.21	60.00	0.28	0.05	9.80
8.80	52.11	47.82	-7.89	-12.18	60.00	0.28	0.05	9.80
9.09	52.63	48.04	-7.37	-11.96	60.00	0.29	0.05	9.81
9.39	52.08	47.11	-7.92	-12.89	60.00	0.29	0.05	9.84
9.39	51.04	46.32	-8.96	-13.68	60.00	0.29	0.05	9.84
9.67	52.20	47.48	-7.80	-12.52	60.00	0.30	0.05	9.87
9.97	52.98	46.67	-7.02	-13.33	60.00	0.30	0.05	9.90
10.25	51.29	46.10	-8.71	-13.90	60.00	0.30	0.05	9.90
10.25	52.87	46.51	-7.13	-13.49	60.00	0.30	0.05	9.90
10.26	54.37	47.36	-5.63	-12.64	60.00	0.30	0.05	9.90
10.51	51.11	45.16	-8.89	-14.84	60.00	0.31	0.05	9.90
10.53	51.68	46.13	-8.32	-13.87	60.00	0.31	0.05	9.90
10.54	53.50	46.64	-6.50	-13.36	60.00	0.31	0.05	9.90
10.55	52.89	47.09	-7.11	-12.91	60.00	0.31	0.05	9.90
10.55	53.52	47.43	-6.48	-12.57	60.00	0.31	0.05	9.90
10.55	53.36	47.59	-6.64	-12.41	60.00	0.31	0.05	9.90
10.56	53.58	47.49	-6.42	-12.51	60.00	0.31	0.05	9.90
10.65	51.74	45.36	-8.26	-14.64	60.00	0.31	0.05	9.90
10.68	51.56	45.41	-8.44	-14.59	60.00	0.31	0.05	9.90
10.81	52.30	46.05	-7.70	-13.95	60.00	0.31	0.05	9.90
10.82	52.82	46.61	-7.18	-13.39	60.00	0.31	0.05	9.90
10.83	53.14	46.73	-6.86	-13.27	60.00	0.31	0.05	9.90
10.83	54.68	47.24	-5.32	-12.76	60.00	0.31	0.05	9.90
10.84	54.14	47.28	-5.86	-12.72	60.00	0.31	0.05	9.90
10.85	54.63	47.71	-5.37	-12.29	60.00	0.31	0.05	9.90
10.93	51.99	46.12	-8.01	-13.88	60.00	0.31	0.05	9.90
10.95	52.25	46.54	-7.75	-13.46	60.00	0.31	0.05	9.90
10.97	52.25	46.28	-7.75	-13.72	60.00	0.31	0.05	9.90
11.06	51.67	46.45	-8.33	-13.55	60.00	0.31	0.05	9.90
11.09	54.07	46.78	-5.93	-13.22	60.00	0.31	0.06	9.90

Freq (MHz)	(PEAK) EMI (dBμV)	(OP) EMI (dBμV)	(PEAK) Margin QPL (dB)	(QP) Margin QPL (dB)	(OP) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
11.12	52.33	47.54	-7.67	-12.46	60.00	0.32	0.06	9.90
11.13	53.69	47.89	-6.31	-12.11	60.00	0.32	0.06	9.90
11.17	53.23	47.18	-6.77	-12.82	60.00	0.32	0.06	9.90
11.18	52.22	46.90	-7.78	-13.10	60.00	0.32	0.06	9.90
11.21	52.68	46.86	-7.32	-13.14	60.00	0.32	0.06	9.90
11.24	53.76	47.31	-6.24	-12.69	60.00	0.32	0.06	9.90
11.27	53.43	47.23	-6.57	-12.77	60.00	0.32	0.06	9.90
11.29	54.34	47.25	-5.66	-12.75	60.00	0.32	0.06	9.90
11.33	53.24	47.16	-6.76	-12.84	60.00	0.32	0.06	9.90
11.34	52.30	47.16	-7.70	-12.84	60.00	0.32	0.06	9.90
11.36	53.56	47.33	-6.44	-12.67	60.00	0.32	0.06	9.90
11.37	52.89	47.50	-7.11	-12.50	60.00	0.32	0.06	9.90
11.39	53.45	47.52	-6.55	-12.48	60.00	0.32	0.06	9.90
11.40	53.55	47.64	-6.45	-12.36	60.00	0.32	0.06	9.90
11.42	53.81	48.33	-6.19	-11.67	60.00	0.32	0.06	9.90
11.43	55.46	48.80	-4.54	-11.20	60.00	0.32	0.06	9.90
11.44	53.74	48.61	-6.26	-11.39	60.00	0.32	0.06	9.90
11.45	53.15	48.18	-6.85	-11.82	60.00	0.32	0.06	9.90
11.46	54.10	47.93	-5.90	-12.07	60.00	0.32	0.06	9.90
11.48	53.55	47.59	-6.45	-12.41	60.00	0.32	0.06	9.90
11.49	53.04	47.52	-6.96	-12.48	60.00	0.32	0.06	9.90
11.50	53.57	47.68	-6.43	-12.32	60.00	0.32	0.06	9.90
11.52	53.27	47.54	-6.73	-12.46	60.00	0.32	0.06	9.90
11.53	53.16	47.65	-6.84	-12.35	60.00	0.32	0.06	9.90
11.55	54.13	47.71	-5.87	-12.29	60.00	0.32	0.06	9.90
11.56	53.27	47.82	-6.73	-12.18	60.00	0.32	0.06	9.90
11.57	53.54	47.99	-6.46	-12.01	60.00	0.32	0.06	9.90
11.59	53.60	47.81	-6.40	-12.19	60.00	0.32	0.06	9.90
11.61	54.62	47.81	-5.38	-12.19	60.00	0.32	0.06	9.90
11.61	53.52	47.75	-6.48	-12.25	60.00	0.32	0.06	9.90
11.64	54.35	47.60	-5.65	-12.40	60.00	0.32	0.06	9.90
11.65	53.43	47.76	-6.57	-12.24	60.00	0.32	0.06	9.90
11.67	53.22	48.04	-6.78	-11.96	60.00	0.32	0.06	9.90
11.69	54.68	48.18	-5.32	-11.82	60.00	0.32	0.06	9.90
11.71	54.29	48.56	-5.71	-11.44	60.00	0.32	0.06	9.90
11.73	54.31	49.03	-5.69	-10.97	60.00	0.32	0.06	9.90
11.75	54.22	48.54	-5.78	-11.46	60.00	0.32	0.06	9.90
11.81	54.69	47.93	-5.31	-12.07	60.00	0.32	0.06	9.90
11.88	53.86	48.37	-6.14	-11.63	60.00	0.32	0.06	9.90
11.90	54.53	48.20	-5.47	-11.80	60.00	0.33	0.06	9.90
11.94	53.42	48.40	-6.58	-11.60	60.00	0.33	0.06	9.90
11.97	53.81	48.41	-6.19	-11.59	60.00	0.33	0.06	9.90
11.99	54.50	48.65	-5.50	-11.35	60.00	0.33	0.06	9.90
12.01	55.12	49.20	-4.88	-10.80	60.00	0.33	0.06	9.90
12.02	54.13	49.07	-5.87	-10.93	60.00	0.33	0.06	9.90
12.07	54.23	48.89	-5.77	-11.11	60.00	0.33	0.06	9.89
12.10	53.72	48.32	-6.28	-11.68	60.00	0.33	0.06	9.89
12.14	54.79	48.58	-5.21	-11.42	60.00	0.33	0.06	9.89
12.17	54.23	48.49	-5.77	-11.51	60.00	0.33	0.06	9.89
12.22	55.24	48.48	-4.76	-11.52	60.00	0.33	0.06	9.88
12.25	55.32	48.89	-4.68	-11.11	60.00	0.33	0.06	9.88
12.29	54.49	48.82	-5.51	-11.18	60.00	0.33	0.06	9.88
12.31	54.94	49.70	-5.06	-10.30	60.00	0.33	0.06	9.88
12.35	53.85	48.64	-6.15	-11.36	60.00	0.33	0.06	9.87
12.39	54.08	48.70	-5.92	-11.30	60.00	0.33	0.06	9.87
12.41	54.95	49.07	-5.05	-10.93	60.00	0.33	0.06	9.87
12.49	54.76	48.67	-5.24	-11.33	60.00	0.33	0.06	9.86
12.55	54.93	48.86	-5.07	-11.14	60.00	0.33	0.06	9.86

Freq (MHz)	(PEAK) EMI (dBμV)	(QP) EMI (dBμV)	(PEAK) Margin QPL (dB)	(QP) Margin QPL (dB)	(QP) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
12.57	54.32	48.63	-5.68	-11.37	60.00	0.33	0.06	9.86
12.61	55.54	49.41	-4.46	-10.59	60.00	0.33	0.06	9.86
12.70	54.04	48.84	-5.96	-11.16	60.00	0.33	0.06	9.85
12.74	53.72	48.42	-6.28	-11.58	60.00	0.33	0.06	9.85
12.79	53.84	48.34	-6.16	-11.66	60.00	0.34	0.06	9.84
12.82	54.25	48.30	-5.75	-11.70	60.00	0.34	0.06	9.84
12.87	54.33	48.80	-5.67	-11.20	60.00	0.34	0.06	9.84
12.91	55.62	49.02	-4.38	-10.98	60.00	0.34	0.06	9.83
12.99	53.23	48.43	-6.77	-11.57	60.00	0.34	0.06	9.83
13.06	53.49	48.34	-6.51	-11.66	60.00	0.34	0.06	9.82
13.12	53.09	47.89	-6.91	-12.11	60.00	0.34	0.06	9.82
13.15	53.78	48.21	-6.22	-11.79	60.00	0.34	0.06	9.82
13.27	53.52	47.98	-6.48	-12.02	60.00	0.34	0.06	9.81
13.32	54.02	47.90	-5.98	-12.10	60.00	0.34	0.06	9.81
13.43	52.88	47.77	-7.12	-12.23	60.00	0.34	0.06	9.80
13.51	53.20	47.47	-6.80	-12.53	60.00	0.34	0.06	9.79
13.62	53.73	47.46	-6.27	-12.54	60.00	0.34	0.07	9.79
13.63	53.03	47.58	-6.97	-12.42	60.00	0.34	0.07	9.79
13.79	53.44	47.34	-6.56	-12.66	60.00	0.35	0.07	9.78
13.87	52.59	46.88	-7.41	-13.12	60.00	0.35	0.07	9.77
13.90	52.91	46.86	-7.09	-13.14	60.00	0.35	0.07	9.77
13.94	53.56	46.78	-6.44	-13.22	60.00	0.35	0.07	9.77
13.99	51.88	46.66	-8.12	-13.34	60.00	0.35	0.07	9.76
14.02	52.16	46.89	-7.84	-13.11	60.00	0.35	0.07	9.76
14.05	52.56	46.94	-7.44	-13.06	60.00	0.35	0.07	9.76
14.09	52.22	46.46	-7.78	-13.54	60.00	0.35	0.07	9.76
14.15	52.25	46.19	-7.75	-13.81	60.00	0.35	0.07	9.75
14.21	51.89	46.39	-8.11	-13.61	60.00	0.35	0.07	9.75
14.32	52.88	45.90	-7.12	-14.10	60.00	0.35	0.07	9.74
14.39	51.93	46.03	-8.07	-13.97	60.00	0.35	0.07	9.74
14.44	51.91	45.71	-8.09	-14.29	60.00	0.35	0.07	9.73
14.50	52.11	45.86	-7.89	-14.14	60.00	0.35	0.07	9.73
14.62	51.92	45.46	-8.08	-14.54	60.00	0.35	0.07	9.72
14.63	52.17	45.69	-7.83	-14.31	60.00	0.35	0.07	9.72
14.65	51.46	45.90	-8.54	-14.10	60.00	0.36	0.07	9.72

Title: FCC B - Conducted Emissions - White Lead
File: 2 - RS - Final Scan - White Lead - Tx Mode - FCC Class B - With LED Lights - 30 MHz to 1000 MHz.set
Operator: Kyle Fujimoto
EUT Type: Lighting Control Node
EUT Condition: The EUT is continuously transmitting at the low channel - Worst Case
Company: Mesh Systems LLC
Model: LCN300
S/N: N/A

8/1/2019 10:24:56 AM
Sequence: Final Measurements

FCC Class B - Conducted Emissions - White Lead

Freq (MHz)	(PEAK) EMI (dBµV)	(AVG) EMI (dBµV)	(PEAK) Margin AVL (dB)	(AVG) Margin AVL (dB)	(AVG) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)
0.150	67.46	45.27	12.00	-10.19	55.46	0.00	0.40	9.80
0.162	63.36	34.99	8.51	-19.86	54.85	0.00	0.36	9.80
0.178	60.29	34.38	6.18	-19.74	54.11	0.00	0.32	9.80
0.190	63.82	42.02	10.22	-11.58	53.60	0.00	0.29	9.80
0.206	58.06	33.18	5.09	-19.79	52.97	0.00	0.26	9.80
0.238	58.36	37.85	6.53	-13.99	51.83	0.02	0.19	9.78
0.266	53.15	31.99	2.20	-18.97	50.96	0.03	0.14	9.77
0.290	54.41	45.88	4.13	-4.40	50.28	0.04	0.10	9.76
0.294	55.00	48.97	4.83	-1.20	50.17	0.04	0.10	9.76
0.298	51.91	42.37	1.84	-7.69	50.07	0.04	0.09	9.76
0.414	50.67	37.04	3.19	-10.44	47.48	0.08	0.02	9.72
0.418	55.95	37.96	8.54	-9.45	47.41	0.08	0.02	9.72
0.430	58.01	42.27	10.83	-4.92	47.18	0.08	0.02	9.72
0.438	54.76	45.74	7.72	-1.30	47.04	0.09	0.02	9.71
0.442	51.67	45.14	4.71	-1.82	46.97	0.09	0.02	9.71
0.446	50.68	39.83	3.78	-7.07	46.90	0.09	0.02	9.71
0.474	56.25	43.81	9.84	-2.61	46.42	0.09	0.02	9.71
0.490	56.75	35.93	10.59	-10.23	46.16	0.10	0.02	9.70
0.506	47.79	27.24	1.79	-18.76	46.00	0.10	0.02	9.70
0.518	50.45	37.10	4.45	-8.90	46.00	0.09	0.02	9.71
0.522	51.62	36.10	5.62	-9.90	46.00	0.09	0.02	9.71
0.534	51.82	29.95	5.82	-16.05	46.00	0.09	0.02	9.72
0.546	51.86	30.34	5.86	-15.66	46.00	0.09	0.02	9.73
0.578	48.78	29.06	2.78	-16.94	46.00	0.08	0.02	9.74
0.590	49.03	33.16	3.03	-12.84	46.00	0.08	0.02	9.75
0.594	48.37	28.19	2.37	-17.81	46.00	0.08	0.02	9.75
0.622	46.87	27.30	0.87	-18.70	46.00	0.07	0.02	9.76
0.650	45.39	27.10	-0.61	-18.90	46.00	0.06	0.02	9.78
0.654	47.50	28.20	1.50	-17.80	46.00	0.06	0.02	9.78
0.682	45.94	23.40	-0.06	-22.60	46.00	0.06	0.02	9.79
0.714	49.66	33.33	3.66	-12.67	46.00	0.05	0.02	9.80
0.730	49.66	42.31	3.66	-3.69	46.00	0.05	0.02	9.81
0.734	51.95	45.05	5.95	-0.95	46.00	0.04	0.02	9.81
0.738	48.33	38.18	2.33	-7.82	46.00	0.04	0.02	9.81
0.742	46.55	29.50	0.55	-16.50	46.00	0.04	0.02	9.81
0.758	49.10	32.41	3.10	-13.59	46.00	0.04	0.02	9.82
0.802	47.23	31.62	1.23	-14.38	46.00	0.03	0.02	9.84
0.846	47.84	30.43	1.84	-15.57	46.00	0.02	0.02	9.85
0.906	46.59	26.20	0.59	-19.80	46.00	0.01	0.02	9.87
1.022	45.38	34.63	-0.62	-11.37	46.00	0.00	0.02	9.90
1.026	47.48	39.91	1.48	-6.09	46.00	0.00	0.02	9.90
1.038	45.43	30.45	-0.57	-15.55	46.00	0.01	0.02	9.89
1.302	38.60	16.76	-7.40	-29.24	46.00	0.04	0.03	9.86
1.422	45.98	27.66	-0.02	-18.34	46.00	0.05	0.03	9.85
1.426	45.63	27.64	-0.37	-18.36	46.00	0.05	0.03	9.85
1.790	45.31	25.07	-0.69	-20.93	46.00	0.08	0.04	9.82

Freq (MHz)	(PEAK) EMI (dBμV)	(AVG) EMI (dBμV)	(PEAK) Margin (dB)	(AVG) Margin (dB)	(AVG) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
1.794	44.98	26.74	-1.02	-19.26	46.00	0.08	0.04	9.82
1.882	44.09	25.06	-1.91	-20.94	46.00	0.09	0.04	9.81
1.958	45.22	22.28	-0.78	-23.72	46.00	0.10	0.04	9.80
2.002	45.10	25.37	-0.90	-20.63	46.00	0.10	0.04	9.80
2.242	44.93	23.02	-1.07	-22.98	46.00	0.11	0.04	9.80
2.334	45.48	25.47	-0.52	-20.53	46.00	0.12	0.04	9.80
2.518	45.62	24.96	-0.38	-21.04	46.00	0.13	0.04	9.80
2.598	45.42	24.35	-0.58	-21.65	46.00	0.13	0.04	9.80
2.638	45.95	28.75	-0.05	-17.25	46.00	0.13	0.04	9.80
3.318	46.15	27.35	0.15	-18.65	46.00	0.16	0.04	9.80
3.334	45.51	25.38	-0.49	-20.62	46.00	0.16	0.04	9.80
4.270	44.32	24.29	-1.68	-21.71	46.00	0.18	0.04	9.80
4.546	46.40	33.15	0.40	-12.85	46.00	0.19	0.03	9.80
4.834	46.38	33.88	0.38	-12.12	46.00	0.20	0.03	9.80
4.838	47.15	35.74	1.15	-10.26	46.00	0.20	0.03	9.80
6.738	51.51	43.36	1.51	-6.64	50.00	0.24	0.04	9.80
7.038	53.13	45.64	3.13	-4.36	50.00	0.25	0.04	9.80
7.042	50.97	43.37	0.97	-6.63	50.00	0.25	0.04	9.80
7.326	52.52	44.73	2.52	-5.27	50.00	0.26	0.04	9.80
7.330	52.35	45.73	2.35	-4.27	50.00	0.26	0.04	9.80
7.614	51.09	41.83	1.09	-8.17	50.00	0.26	0.04	9.80
7.618	52.90	44.07	2.90	-5.93	50.00	0.26	0.04	9.80
7.630	50.61	42.19	0.61	-7.81	50.00	0.26	0.04	9.80
7.914	52.08	44.66	2.08	-5.34	50.00	0.27	0.04	9.80
8.198	50.56	40.91	0.56	-9.09	50.00	0.27	0.04	9.80
8.202	50.97	42.22	0.97	-7.78	50.00	0.27	0.04	9.80
8.498	51.76	44.00	1.76	-6.00	50.00	0.28	0.05	9.80
8.506	51.79	43.08	1.79	-6.92	50.00	0.28	0.05	9.80
8.790	52.02	43.24	2.02	-6.76	50.00	0.28	0.05	9.80
8.798	52.11	43.73	2.11	-6.27	50.00	0.28	0.05	9.80
9.086	52.63	43.53	2.63	-6.47	50.00	0.29	0.05	9.81
9.386	52.08	42.30	2.08	-7.70	50.00	0.29	0.05	9.84
9.390	51.04	40.86	1.04	-9.14	50.00	0.29	0.05	9.84
9.670	52.20	42.72	2.20	-7.28	50.00	0.30	0.05	9.87
9.974	52.98	41.36	2.98	-8.64	50.00	0.30	0.05	9.90
10.246	51.29	39.42	1.29	-10.58	50.00	0.30	0.05	9.90
10.250	52.87	40.13	2.87	-9.87	50.00	0.30	0.05	9.90
10.258	54.37	42.24	4.37	-7.76	50.00	0.30	0.05	9.90
10.514	51.11	35.21	1.11	-14.79	50.00	0.31	0.05	9.90
10.534	51.68	38.50	1.68	-11.50	50.00	0.31	0.05	9.90
10.542	53.50	39.88	3.50	-10.12	50.00	0.31	0.05	9.90
10.546	52.89	40.96	2.89	-9.04	50.00	0.31	0.05	9.90
10.550	53.52	41.41	3.52	-8.59	50.00	0.31	0.05	9.90
10.554	53.36	42.39	3.36	-7.61	50.00	0.31	0.05	9.90
10.558	53.58	41.24	3.58	-8.76	50.00	0.31	0.05	9.90
10.654	51.74	33.11	1.74	-16.89	50.00	0.31	0.05	9.90
10.678	51.56	32.53	1.56	-17.47	50.00	0.31	0.05	9.90
10.810	52.30	35.83	2.30	-14.17	50.00	0.31	0.05	9.90
10.818	52.82	37.43	2.82	-12.57	50.00	0.31	0.05	9.90
10.826	53.14	38.55	3.14	-11.45	50.00	0.31	0.05	9.90
10.834	54.68	39.77	4.68	-10.23	50.00	0.31	0.05	9.90
10.838	54.14	40.19	4.14	-9.81	50.00	0.31	0.05	9.90
10.846	54.63	41.88	4.63	-8.12	50.00	0.31	0.05	9.90
10.930	51.99	33.89	1.99	-16.11	50.00	0.31	0.05	9.90
10.950	52.25	33.66	2.25	-16.34	50.00	0.31	0.05	9.90
10.974	52.25	33.24	2.25	-16.76	50.00	0.31	0.05	9.90
11.058	51.67	33.35	1.67	-16.65	50.00	0.31	0.05	9.90
11.090	54.07	34.87	4.07	-15.13	50.00	0.31	0.06	9.90

Freq (MHz)	(PEAK) EMI (dBµV)	(AVG) EMI (dBµV)	(PEAK) Margin AVL (dB)	(AVG) Margin AVL (dB)	(AVG) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)
11.122	52.33	38.81	2.33	-11.19	50.00	0.32	0.06	9.90
11.134	53.69	40.76	3.69	-9.24	50.00	0.32	0.06	9.90
11.166	53.23	36.65	3.23	-13.35	50.00	0.32	0.06	9.90
11.178	52.22	35.18	2.22	-14.82	50.00	0.32	0.06	9.90
11.206	52.68	34.21	2.68	-15.79	50.00	0.32	0.06	9.90
11.238	53.76	34.48	3.76	-15.52	50.00	0.32	0.06	9.90
11.274	53.43	34.24	3.43	-15.76	50.00	0.32	0.06	9.90
11.286	54.34	34.21	4.34	-15.79	50.00	0.32	0.06	9.90
11.326	53.24	33.88	3.24	-16.12	50.00	0.32	0.06	9.90
11.342	52.30	33.75	2.30	-16.25	50.00	0.32	0.06	9.90
11.362	53.56	34.14	3.56	-15.86	50.00	0.32	0.06	9.90
11.370	52.89	34.53	2.89	-15.47	50.00	0.32	0.06	9.90
11.390	53.45	35.89	3.45	-14.11	50.00	0.32	0.06	9.90
11.402	53.55	37.06	3.55	-12.94	50.00	0.32	0.06	9.90
11.418	53.81	39.14	3.81	-10.86	50.00	0.32	0.06	9.90
11.430	55.46	41.26	5.46	-8.74	50.00	0.32	0.06	9.90
11.442	53.74	39.71	3.74	-10.29	50.00	0.32	0.06	9.90
11.450	53.15	38.33	3.15	-11.67	50.00	0.32	0.06	9.90
11.458	54.10	37.25	4.10	-12.75	50.00	0.32	0.06	9.90
11.478	53.55	35.55	3.55	-14.45	50.00	0.32	0.06	9.90
11.490	53.04	34.82	3.04	-15.18	50.00	0.32	0.06	9.90
11.502	53.57	34.97	3.57	-15.03	50.00	0.32	0.06	9.90
11.522	53.27	35.00	3.27	-15.00	50.00	0.32	0.06	9.90
11.530	53.16	34.71	3.16	-15.29	50.00	0.32	0.06	9.90
11.546	54.13	34.50	4.13	-15.50	50.00	0.32	0.06	9.90
11.558	53.27	34.66	3.27	-15.34	50.00	0.32	0.06	9.90
11.570	53.54	35.00	3.54	-15.00	50.00	0.32	0.06	9.90
11.586	53.60	34.48	3.60	-15.52	50.00	0.32	0.06	9.90
11.606	54.62	34.17	4.62	-15.83	50.00	0.32	0.06	9.90
11.614	53.52	34.34	3.52	-15.66	50.00	0.32	0.06	9.90
11.642	54.35	34.51	4.35	-15.49	50.00	0.32	0.06	9.90
11.650	53.43	34.49	3.43	-15.51	50.00	0.32	0.06	9.90
11.670	53.22	35.31	3.22	-14.69	50.00	0.32	0.06	9.90
11.694	54.68	37.03	4.68	-12.97	50.00	0.32	0.06	9.90
11.706	54.29	38.69	4.29	-11.31	50.00	0.32	0.06	9.90
11.726	54.31	40.80	4.31	-9.20	50.00	0.32	0.06	9.90
11.754	54.22	37.11	4.22	-12.89	50.00	0.32	0.06	9.90
11.814	54.69	35.36	4.69	-14.64	50.00	0.32	0.06	9.90
11.882	53.86	35.37	3.86	-14.63	50.00	0.32	0.06	9.90
11.902	54.53	35.33	4.53	-14.67	50.00	0.33	0.06	9.90
11.938	53.42	35.80	3.42	-14.20	50.00	0.33	0.06	9.90
11.966	53.81	35.59	3.81	-14.41	50.00	0.33	0.06	9.90
11.986	54.50	37.10	4.50	-12.90	50.00	0.33	0.06	9.90
12.006	55.12	39.12	5.12	-10.88	50.00	0.33	0.06	9.90
12.022	54.13	40.60	4.13	-9.40	50.00	0.33	0.06	9.90
12.070	54.23	36.05	4.23	-13.95	50.00	0.33	0.06	9.89
12.102	53.72	35.40	3.72	-14.60	50.00	0.33	0.06	9.89
12.138	54.79	35.36	4.79	-14.64	50.00	0.33	0.06	9.89
12.166	54.23	35.83	4.23	-14.17	50.00	0.33	0.06	9.89
12.218	55.24	34.90	5.24	-15.10	50.00	0.33	0.06	9.88
12.254	55.32	35.89	5.32	-14.11	50.00	0.33	0.06	9.88
12.286	54.49	37.89	4.49	-12.11	50.00	0.33	0.06	9.88
12.314	54.94	40.16	4.94	-9.84	50.00	0.33	0.06	9.88
12.346	53.85	36.56	3.85	-13.44	50.00	0.33	0.06	9.87
12.394	54.08	35.53	4.08	-14.47	50.00	0.33	0.06	9.87
12.414	54.95	35.84	4.95	-14.16	50.00	0.33	0.06	9.87
12.490	54.76	35.82	4.76	-14.18	50.00	0.33	0.06	9.86
12.550	54.93	35.74	4.93	-14.26	50.00	0.33	0.06	9.86

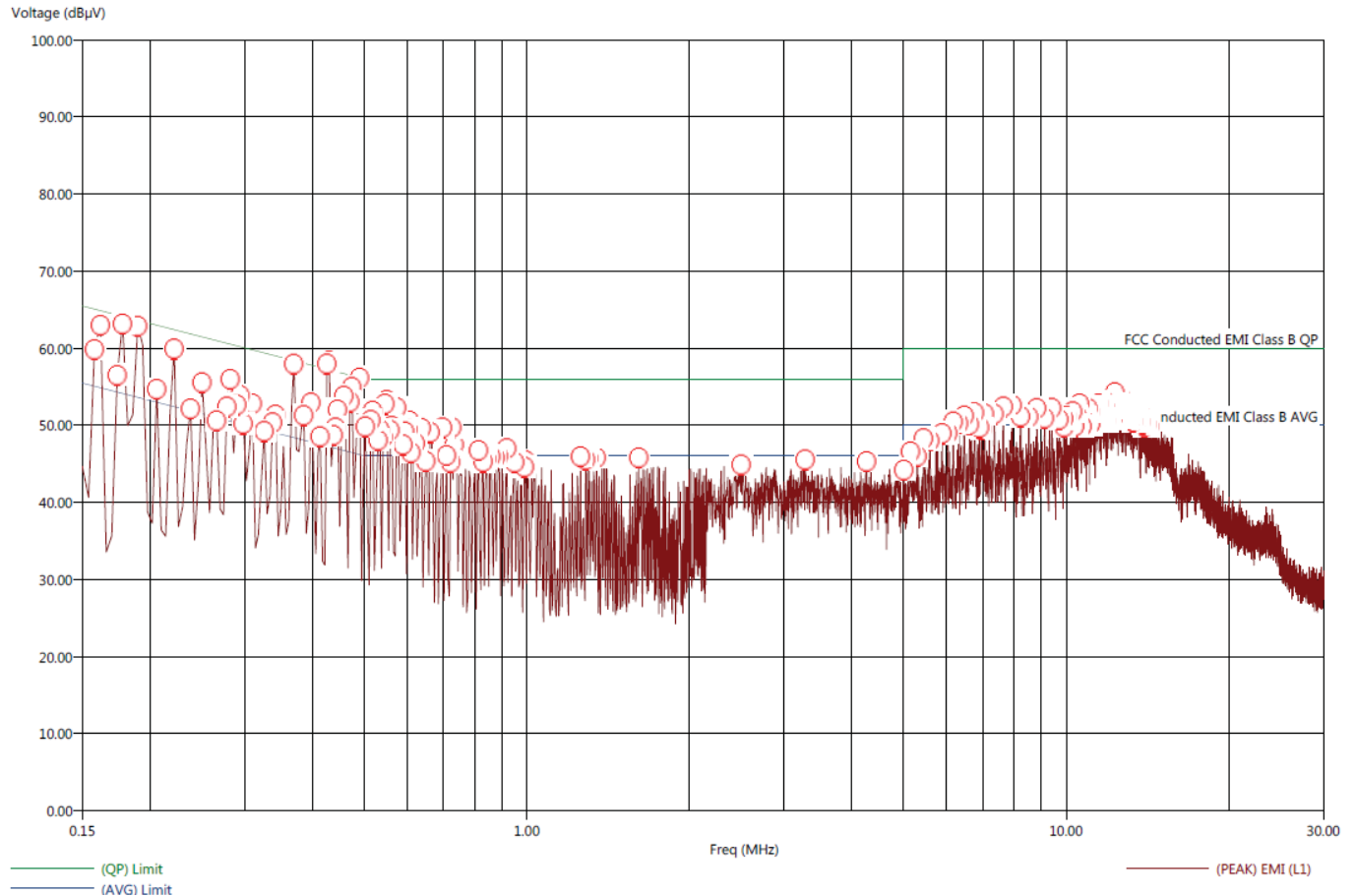
Freq (MHz)	(PEAK) EMI (dBμV)	(AVG) EMI (dBμV)	(PEAK) Margin AVL (dB)	(AVG) Margin AVL (dB)	(AVG) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
12.574	54.32	37.20	4.32	-12.80	50.00	0.33	0.06	9.86
12.614	55.54	39.02	5.54	-10.98	50.00	0.33	0.06	9.86
12.698	54.04	35.74	4.04	-14.26	50.00	0.33	0.06	9.85
12.738	53.72	36.24	3.72	-13.76	50.00	0.33	0.06	9.85
12.794	53.84	35.45	3.84	-14.55	50.00	0.34	0.06	9.84
12.822	54.25	35.54	4.25	-14.46	50.00	0.34	0.06	9.84
12.874	54.33	37.93	4.33	-12.07	50.00	0.34	0.06	9.84
12.914	55.62	37.85	5.62	-12.15	50.00	0.34	0.06	9.83
12.994	53.23	35.61	3.23	-14.39	50.00	0.34	0.06	9.83
13.062	53.49	36.13	3.49	-13.87	50.00	0.34	0.06	9.82
13.122	53.09	35.76	3.09	-14.24	50.00	0.34	0.06	9.82
13.146	53.78	36.00	3.78	-14.00	50.00	0.34	0.06	9.82
13.266	53.52	35.83	3.52	-14.17	50.00	0.34	0.06	9.81
13.322	54.02	36.59	4.02	-13.41	50.00	0.34	0.06	9.81
13.430	52.88	35.87	2.88	-14.13	50.00	0.34	0.06	9.80
13.510	53.20	36.78	3.20	-13.22	50.00	0.34	0.06	9.79
13.622	53.73	36.44	3.73	-13.56	50.00	0.34	0.07	9.79
13.626	53.03	36.88	3.03	-13.12	50.00	0.34	0.07	9.79
13.786	53.44	37.76	3.44	-12.24	50.00	0.35	0.07	9.78
13.874	52.59	36.01	2.59	-13.99	50.00	0.35	0.07	9.77
13.902	52.91	36.35	2.91	-13.65	50.00	0.35	0.07	9.77
13.938	53.56	36.36	3.56	-13.64	50.00	0.35	0.07	9.77
13.990	51.88	35.45	1.88	-14.55	50.00	0.35	0.07	9.76
14.022	52.16	35.94	2.16	-14.06	50.00	0.35	0.07	9.76
14.054	52.56	37.14	2.56	-12.86	50.00	0.35	0.07	9.76
14.086	52.22	36.83	2.22	-13.17	50.00	0.35	0.07	9.76
14.154	52.25	35.68	2.25	-14.32	50.00	0.35	0.07	9.75
14.214	51.89	37.17	1.89	-12.83	50.00	0.35	0.07	9.75
14.318	52.88	35.99	2.88	-14.01	50.00	0.35	0.07	9.74
14.386	51.93	36.77	1.93	-13.23	50.00	0.35	0.07	9.74
14.438	51.91	35.82	1.91	-14.18	50.00	0.35	0.07	9.73
14.498	52.11	37.05	2.11	-12.95	50.00	0.35	0.07	9.73
14.618	51.92	36.62	1.92	-13.38	50.00	0.35	0.07	9.72
14.630	52.17	36.74	2.17	-13.26	50.00	0.35	0.07	9.72
14.654	51.46	37.26	1.46	-12.74	50.00	0.36	0.07	9.72



Title: FCC B - Conducted Emissions - Black Lead
File: 3 - RS - Pre-Scan - Black Lead - Rx Mode - FCC Class B - With LED Lights - 30 MHz to 1000 MHz.set
Operator: Kyle Fujimoto
EUT Type: Lighting Control Node
EUT Condition: The EUT is continuously receiving at the low channel - Worst Case
Company: Mesh Systems LLC
Model: LCN300
S/N: N/A

8/1/2019 11:36:06 AM
Sequence: Preliminary Scan

FCC Class B - Conducted Emissions - Black Lead



Title: FCC B - Conducted Emissions - Black Lead
 File: 3 - RS - Final Scan - Black Lead - Rx Mode - FCC Class B - With LED Lights - 30 MHz to 1000 MHz.set
 Operator: Kyle Fujimoto
 EUT Type: Lighting Control Node
 EUT Condition: The EUT is continuously receiving at the low channel - Worst Case
 Company: Mesh Systems LLC
 Model: LCN300
 S/N: N/A

8/1/2019 3:52:59 PM
 Sequence: Final Measurements

FCC Class B - Conducted Emissions - Black Lead

Freq (MHz)	(PEAK) EMI (dBμV)	(QP) EMI (dBμV)	(PEAK) Margin QPL (dB)	(QP) Margin QPL (dB)	(QP) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
0.158	72.25	61.46	7.20	-3.59	65.05	0.00	0.40	9.80
0.162	71.86	60.48	7.01	-4.37	64.85	0.00	0.39	9.80
0.174	68.93	58.21	4.64	-6.08	64.29	0.00	0.36	9.80
0.178	68.86	57.82	4.75	-6.30	64.11	0.00	0.35	9.80
0.190	68.45	57.97	4.85	-5.63	63.60	0.00	0.32	9.80
0.206	66.45	55.45	3.48	-7.52	62.97	0.00	0.28	9.80
0.222	62.68	53.63	0.30	-8.74	62.38	0.00	0.25	9.79
0.238	61.81	52.76	-0.02	-9.08	61.83	0.00	0.22	9.78
0.250	61.55	52.10	0.10	-9.34	61.45	0.00	0.20	9.78
0.266	61.68	51.12	0.72	-9.84	60.96	0.00	0.17	9.77
0.278	61.25	49.90	0.64	-10.71	60.61	0.00	0.15	9.76
0.282	61.17	49.46	0.67	-11.03	60.50	0.00	0.14	9.76
0.290	57.93	49.47	-2.35	-10.81	60.28	0.00	0.13	9.76
0.294	60.45	50.56	0.27	-9.61	60.17	0.00	0.13	9.76
0.298	58.17	52.51	-1.89	-7.55	60.07	0.00	0.12	9.76
0.310	55.04	47.01	-4.72	-12.75	59.76	0.00	0.10	9.75
0.326	54.30	42.73	-5.06	-16.63	59.36	0.00	0.08	9.75
0.338	51.34	40.83	-7.74	-18.25	59.08	0.00	0.07	9.74
0.342	50.71	40.47	-8.27	-18.51	58.98	0.00	0.06	9.74
0.370	46.46	37.39	-11.91	-20.98	58.37	0.00	0.05	9.73
0.386	45.62	34.68	-12.41	-23.35	58.03	0.00	0.04	9.73
0.398	44.98	33.73	-12.81	-24.07	57.79	0.00	0.04	9.72
0.414	43.74	32.94	-13.74	-24.54	57.48	0.00	0.04	9.72
0.426	51.03	48.81	-6.23	-8.45	57.26	0.00	0.03	9.72
0.430	51.46	48.66	-5.73	-8.52	57.18	0.00	0.03	9.72
0.438	42.17	31.90	-14.87	-25.14	57.04	0.00	0.03	9.71
0.442	41.69	30.25	-15.28	-26.72	56.97	0.00	0.03	9.71
0.446	40.41	29.84	-16.49	-27.06	56.90	0.00	0.03	9.71
0.458	39.49	28.79	-17.20	-27.90	56.69	0.00	0.03	9.71
0.470	39.40	32.69	-17.09	-23.79	56.49	0.00	0.03	9.71
0.474	40.01	32.84	-16.41	-23.58	56.42	0.00	0.03	9.71
0.490	37.74	27.41	-18.42	-28.75	56.16	0.00	0.04	9.70
0.502	37.02	26.24	-18.98	-29.76	56.00	0.00	0.04	9.70
0.514	36.67	32.27	-19.33	-23.73	56.00	0.00	0.04	9.71
0.518	38.73	33.10	-17.27	-22.90	56.00	0.00	0.04	9.71
0.530	36.11	28.94	-19.89	-27.06	56.00	0.00	0.04	9.72
0.534	34.20	28.65	-21.80	-27.35	56.00	0.00	0.04	9.72
0.542	31.87	24.59	-24.13	-31.41	56.00	0.00	0.04	9.72
0.546	31.67	25.35	-24.33	-30.65	56.00	0.00	0.04	9.73
0.550	32.56	24.49	-23.44	-31.51	56.00	0.00	0.04	9.73
0.558	34.68	28.05	-21.32	-27.95	56.00	0.00	0.04	9.73
0.562	36.33	32.69	-19.67	-23.31	56.00	0.00	0.04	9.73
0.574	36.77	31.90	-19.23	-24.10	56.00	0.00	0.04	9.74
0.590	34.73	30.82	-21.27	-25.18	56.00	0.00	0.04	9.75
0.594	34.71	30.06	-21.29	-25.94	56.00	0.00	0.04	9.75
0.602	37.24	34.31	-18.76	-21.69	56.00	0.00	0.04	9.75

Freq (MHz)	(PEAK) EMI (dBμV)	(OP) EMI (dBμV)	(PEAK) Margin QPL (dB)	(QP) Margin QPL (dB)	(OP) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
0.606	37.95	34.83	-18.05	-21.17	56.00	0.00	0.04	9.76
0.610	38.22	34.82	-17.78	-21.18	56.00	0.00	0.04	9.76
0.622	36.12	31.43	-19.88	-24.57	56.00	0.00	0.04	9.76
0.638	38.44	34.10	-17.56	-21.90	56.00	0.00	0.04	9.77
0.650	36.30	31.28	-19.70	-24.72	56.00	0.00	0.04	9.78
0.662	36.68	31.87	-19.32	-24.13	56.00	0.00	0.04	9.78
0.666	36.93	32.07	-19.07	-23.93	56.00	0.00	0.04	9.78
0.698	36.98	31.12	-19.02	-24.88	56.00	0.00	0.04	9.80
0.710	48.50	46.25	-7.50	-9.75	56.00	0.00	0.04	9.80
0.722	37.32	31.64	-18.68	-24.36	56.00	0.00	0.04	9.81
0.726	35.60	30.21	-20.40	-25.79	56.00	0.00	0.04	9.81
0.734	34.06	28.97	-21.94	-27.03	56.00	0.00	0.04	9.81
0.738	34.44	29.33	-21.56	-26.67	56.00	0.00	0.04	9.81
0.814	33.32	27.79	-22.68	-28.21	56.00	0.00	0.04	9.84
0.830	27.64	21.25	-28.36	-34.75	56.00	0.00	0.04	9.85
0.842	34.05	30.07	-21.95	-25.93	56.00	0.00	0.04	9.85
0.858	34.98	30.90	-21.02	-25.10	56.00	0.00	0.04	9.86
0.874	29.44	23.94	-26.56	-32.06	56.00	0.00	0.04	9.86
0.886	34.09	26.70	-21.91	-29.30	56.00	0.00	0.04	9.87
0.918	28.16	22.20	-27.84	-33.80	56.00	0.00	0.04	9.88
0.950	32.82	30.15	-23.18	-25.85	56.00	0.00	0.04	9.89
0.990	35.73	30.41	-20.27	-25.59	56.00	0.00	0.04	9.90
0.994	41.45	39.06	-14.55	-16.94	56.00	0.00	0.04	9.90
1.258	22.23	15.63	-33.77	-40.37	56.00	0.00	0.04	9.87
1.286	36.91	33.67	-19.09	-22.33	56.00	0.00	0.04	9.86
1.302	23.67	15.70	-32.33	-40.30	56.00	0.00	0.04	9.86
1.346	24.33	18.30	-31.67	-37.70	56.00	0.00	0.04	9.86
1.614	33.20	30.97	-22.80	-25.03	56.00	0.00	0.04	9.83
2.498	32.72	28.35	-23.28	-27.65	56.00	0.02	0.05	9.80
2.510	33.64	30.40	-22.36	-25.60	56.00	0.02	0.05	9.80
3.282	35.76	30.69	-20.24	-25.31	56.00	0.05	0.05	9.80
4.266	30.97	27.30	-25.03	-28.70	56.00	0.08	0.05	9.80
5.002	37.82	33.19	-22.18	-26.81	60.00	0.10	0.05	9.80
5.146	30.33	25.14	-29.67	-34.86	60.00	0.10	0.05	9.80
5.294	38.05	34.91	-21.95	-25.09	60.00	0.10	0.05	9.80
5.442	32.01	27.90	-27.99	-32.10	60.00	0.10	0.05	9.80
5.590	36.09	30.88	-23.91	-29.12	60.00	0.10	0.05	9.80
5.886	37.02	32.44	-22.98	-27.56	60.00	0.10	0.05	9.80
6.034	37.70	33.06	-22.30	-26.94	60.00	0.10	0.05	9.80
6.178	36.51	29.50	-23.49	-30.50	60.00	0.10	0.05	9.80
6.318	39.12	35.88	-20.88	-24.12	60.00	0.10	0.05	9.80
6.474	38.08	33.20	-21.92	-26.80	60.00	0.10	0.05	9.80
6.618	39.45	34.77	-20.55	-25.23	60.00	0.10	0.05	9.80
6.766	43.48	37.94	-16.52	-22.06	60.00	0.10	0.05	9.80
6.914	41.89	37.57	-18.11	-22.43	60.00	0.10	0.05	9.80
6.970	49.76	45.70	-10.24	-14.30	60.00	0.10	0.05	9.80
7.058	41.76	37.95	-18.24	-22.05	60.00	0.10	0.05	9.80
7.358	39.30	36.17	-20.70	-23.83	60.00	0.10	0.04	9.80
7.650	38.96	34.24	-21.04	-25.76	60.00	0.10	0.04	9.80
7.942	38.14	34.22	-21.86	-25.78	60.00	0.10	0.04	9.80
8.234	38.19	33.61	-21.81	-26.39	60.00	0.10	0.04	9.80
8.530	35.78	31.73	-24.22	-28.27	60.00	0.10	0.04	9.80
8.822	34.59	31.15	-25.41	-28.85	60.00	0.10	0.04	9.80
9.118	35.19	30.83	-24.81	-29.17	60.00	0.10	0.04	9.81
9.402	35.23	30.47	-24.77	-29.53	60.00	0.10	0.04	9.84
9.706	37.75	32.69	-22.25	-27.31	60.00	0.10	0.04	9.87
9.714	39.67	35.91	-20.33	-24.09	60.00	0.10	0.04	9.87
9.894	40.10	35.33	-19.90	-24.67	60.00	0.10	0.04	9.89

Freq (MHz)	(PEAK) EMI (dBμV)	(OP) EMI (dBμV)	(PEAK) Margin QPL (dB)	(QP) Margin QPL (dB)	(OP) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
9.914	41.57	37.68	-18.43	-22.32	60.00	0.10	0.04	9.89
10.006	42.07	37.80	-17.93	-22.20	60.00	0.10	0.04	9.90
10.290	41.82	37.85	-18.18	-22.15	60.00	0.10	0.04	9.90
10.298	42.78	39.68	-17.22	-20.32	60.00	0.10	0.04	9.90
10.378	44.13	39.04	-15.87	-20.96	60.00	0.11	0.04	9.90
10.474	43.36	38.94	-16.64	-21.06	60.00	0.11	0.04	9.90
10.486	42.09	37.77	-17.91	-22.23	60.00	0.11	0.04	9.90
10.590	43.29	40.57	-16.71	-19.43	60.00	0.11	0.04	9.90
10.710	46.98	43.74	-13.02	-16.26	60.00	0.11	0.04	9.90
10.766	43.59	38.45	-16.41	-21.55	60.00	0.11	0.04	9.90
10.802	39.15	34.19	-20.85	-25.81	60.00	0.11	0.04	9.90
10.854	41.59	36.78	-18.41	-23.22	60.00	0.11	0.04	9.90
10.878	44.57	40.62	-15.43	-19.38	60.00	0.11	0.04	9.90
10.978	49.11	46.34	-10.89	-13.66	60.00	0.11	0.04	9.90
11.062	43.84	38.19	-16.16	-21.81	60.00	0.11	0.04	9.90
11.110	41.46	35.98	-18.54	-24.02	60.00	0.12	0.03	9.90
11.130	41.06	35.65	-18.94	-24.35	60.00	0.12	0.03	9.90
11.154	44.77	39.87	-15.23	-20.13	60.00	0.12	0.03	9.90
11.162	44.49	40.80	-15.51	-19.20	60.00	0.12	0.03	9.90
11.178	43.86	37.90	-16.14	-22.10	60.00	0.12	0.03	9.90
11.210	43.22	36.55	-16.78	-23.45	60.00	0.12	0.03	9.90
11.238	46.05	40.11	-13.95	-19.89	60.00	0.12	0.03	9.90
11.274	47.78	44.32	-12.22	-15.68	60.00	0.12	0.03	9.90
11.302	45.56	39.88	-14.44	-20.12	60.00	0.12	0.03	9.90
11.354	43.94	38.05	-16.06	-21.95	60.00	0.12	0.03	9.90
11.370	44.07	36.98	-15.93	-23.02	60.00	0.12	0.03	9.90
11.390	43.30	37.18	-16.70	-22.82	60.00	0.12	0.03	9.90
11.410	44.16	37.48	-15.84	-22.52	60.00	0.12	0.03	9.90
11.470	46.16	39.10	-13.84	-20.90	60.00	0.12	0.03	9.90
11.514	45.31	39.58	-14.69	-20.42	60.00	0.12	0.03	9.90
11.554	50.04	45.72	-9.96	-14.28	60.00	0.12	0.03	9.90
11.570	48.55	43.90	-11.45	-16.10	60.00	0.12	0.03	9.90
11.586	47.33	40.93	-12.67	-19.07	60.00	0.12	0.03	9.90
11.610	45.76	39.99	-14.24	-20.01	60.00	0.12	0.03	9.90
11.630	47.14	40.25	-12.86	-19.75	60.00	0.12	0.03	9.90
11.658	45.89	39.41	-14.11	-20.59	60.00	0.12	0.03	9.90
11.674	46.71	39.86	-13.29	-20.14	60.00	0.12	0.03	9.90
11.698	45.92	39.64	-14.08	-20.36	60.00	0.12	0.03	9.90
11.722	47.58	41.18	-12.42	-18.82	60.00	0.12	0.03	9.90
11.762	47.92	41.09	-12.08	-18.91	60.00	0.12	0.03	9.90
11.794	47.11	40.51	-12.89	-19.49	60.00	0.12	0.03	9.90
11.826	49.59	44.27	-10.41	-15.73	60.00	0.12	0.03	9.90
11.838	50.79	45.80	-9.21	-14.20	60.00	0.12	0.03	9.90
11.874	47.84	42.16	-12.16	-17.84	60.00	0.12	0.03	9.90
11.898	47.76	41.74	-12.24	-18.26	60.00	0.13	0.03	9.90
11.906	48.46	42.35	-11.54	-17.65	60.00	0.13	0.03	9.90
11.918	47.41	42.75	-12.59	-17.25	60.00	0.13	0.03	9.90
11.930	47.75	41.90	-12.25	-18.10	60.00	0.13	0.03	9.90
11.942	47.46	41.16	-12.54	-18.84	60.00	0.13	0.03	9.90
11.962	47.13	42.44	-12.87	-17.56	60.00	0.13	0.03	9.90
11.974	47.64	41.28	-12.36	-18.72	60.00	0.13	0.03	9.90
11.986	48.19	43.00	-11.81	-17.00	60.00	0.13	0.03	9.90
12.002	48.14	43.11	-11.86	-16.89	60.00	0.13	0.03	9.90
12.014	49.70	43.49	-10.30	-16.51	60.00	0.13	0.03	9.90
12.050	49.02	43.72	-10.98	-16.28	60.00	0.13	0.03	9.90
12.074	48.21	42.74	-11.79	-17.26	60.00	0.13	0.03	9.89
12.110	50.64	45.04	-9.36	-14.96	60.00	0.13	0.03	9.89
12.134	52.11	45.82	-7.89	-14.18	60.00	0.13	0.03	9.89

Freq (MHz)	(PEAK) EMI (dBµV)	(QP) EMI (dBµV)	(PEAK) Margin QPL (dB)	(QP) Margin QPL (dB)	(QP) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)
12.142	51.34	44.82	-8.66	-15.18	60.00	0.13	0.03	9.89
12.170	51.19	44.71	-8.81	-15.29	60.00	0.13	0.03	9.89
12.190	51.04	44.02	-8.96	-15.98	60.00	0.13	0.03	9.89
12.238	49.51	44.13	-10.49	-15.87	60.00	0.13	0.03	9.88
12.262	50.43	43.89	-9.57	-16.11	60.00	0.13	0.03	9.88
12.274	50.01	44.47	-9.99	-15.53	60.00	0.13	0.03	9.88
12.290	50.25	44.11	-9.75	-15.89	60.00	0.13	0.03	9.88
12.310	50.88	45.32	-9.12	-14.68	60.00	0.13	0.03	9.88
12.318	50.89	45.18	-9.11	-14.82	60.00	0.13	0.03	9.88
12.358	50.53	44.72	-9.47	-15.28	60.00	0.13	0.03	9.87
12.390	50.86	45.66	-9.14	-14.34	60.00	0.13	0.03	9.87
12.418	51.66	46.51	-8.34	-13.49	60.00	0.13	0.03	9.87
12.446	51.43	45.70	-8.57	-14.30	60.00	0.13	0.03	9.87
12.506	51.42	45.48	-8.58	-14.52	60.00	0.13	0.03	9.86
12.538	51.41	44.87	-8.59	-15.13	60.00	0.13	0.03	9.86
12.558	51.95	45.68	-8.05	-14.32	60.00	0.13	0.03	9.86
12.566	50.80	45.72	-9.20	-14.28	60.00	0.13	0.03	9.86
12.578	51.81	45.90	-8.19	-14.10	60.00	0.13	0.03	9.86
12.606	51.47	45.70	-8.53	-14.30	60.00	0.13	0.03	9.86
12.618	51.46	45.38	-8.54	-14.62	60.00	0.13	0.03	9.85
12.650	50.79	45.17	-9.21	-14.83	60.00	0.13	0.03	9.85
12.706	52.69	46.84	-7.31	-13.16	60.00	0.13	0.03	9.85
12.726	52.81	46.56	-7.19	-13.44	60.00	0.13	0.03	9.85
12.746	51.11	46.02	-8.89	-13.98	60.00	0.14	0.03	9.85
12.758	50.61	45.57	-9.39	-14.43	60.00	0.14	0.03	9.85
12.802	50.62	45.80	-9.38	-14.20	60.00	0.14	0.03	9.84
12.826	50.73	45.34	-9.27	-14.66	60.00	0.14	0.03	9.84
12.854	50.55	45.11	-9.45	-14.89	60.00	0.14	0.03	9.84
12.882	50.86	46.04	-9.14	-13.96	60.00	0.14	0.03	9.84
12.942	51.51	45.13	-8.49	-14.87	60.00	0.14	0.03	9.83
12.994	51.94	46.68	-8.06	-13.32	60.00	0.14	0.03	9.83
13.042	50.65	45.14	-9.35	-14.86	60.00	0.14	0.03	9.83
13.054	50.57	45.10	-9.43	-14.90	60.00	0.14	0.03	9.82
13.102	49.79	44.57	-10.21	-15.43	60.00	0.14	0.03	9.82
13.114	49.46	44.31	-10.54	-15.69	60.00	0.14	0.03	9.82
13.142	49.90	44.77	-10.10	-15.23	60.00	0.14	0.03	9.82
13.150	51.26	44.61	-8.74	-15.39	60.00	0.14	0.03	9.82
13.202	50.29	44.91	-9.71	-15.09	60.00	0.14	0.03	9.81
13.238	50.07	43.96	-9.93	-16.04	60.00	0.14	0.03	9.81
13.294	51.24	44.92	-8.76	-15.08	60.00	0.14	0.03	9.81
13.330	48.88	44.38	-11.12	-15.62	60.00	0.14	0.03	9.81
13.402	49.21	43.72	-10.79	-16.28	60.00	0.14	0.03	9.80
13.422	48.93	43.35	-11.07	-16.65	60.00	0.14	0.03	9.80
13.454	50.43	45.00	-9.57	-15.00	60.00	0.14	0.03	9.80
13.482	49.16	43.87	-10.84	-16.13	60.00	0.14	0.03	9.80
13.510	48.81	43.45	-11.19	-16.55	60.00	0.14	0.03	9.79
13.558	50.89	45.13	-9.11	-14.87	60.00	0.14	0.02	9.79
13.610	50.09	44.55	-9.91	-15.45	60.00	0.14	0.02	9.79
13.718	48.61	43.77	-11.39	-16.23	60.00	0.15	0.02	9.78
13.818	48.07	44.64	-11.93	-15.36	60.00	0.15	0.02	9.77
13.858	50.83	45.63	-9.17	-14.37	60.00	0.15	0.02	9.77
13.938	49.41	44.13	-10.59	-15.87	60.00	0.15	0.02	9.77
13.970	49.44	44.50	-10.56	-15.50	60.00	0.15	0.02	9.76
14.086	50.36	44.57	-9.64	-15.43	60.00	0.15	0.02	9.76
14.250	49.58	45.04	-10.42	-14.96	60.00	0.15	0.02	9.75

Title: FCC B - Conducted Emissions - Black Lead
File: 3 - RS - Final Scan - Black Lead - Rx Mode - FCC Class B - With LED Lights - 30 MHz to 1000 MHz.set
Operator: Kyle Fujimoto
EUT Type: Lighting Control Node
EUT Condition: The EUT is continuously receiving at the low channel - Worst Case
Company: Mesh Systems LLC
Model: LCN300
S/N: N/A

8/1/2019 3:52:59 PM
Sequence: Final Measurements

FCC Class B - Conducted Emissions - Black Lead

Freq (MHz)	(PEAK) EMI (dBµV)	(AVG) EMI (dBµV)	(PEAK) Margin AVL (dB)	(AVG) Margin AVL (dB)	(AVG) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)
0.158	72.25	37.56	17.20	-17.49	55.05	0.00	0.40	9.80
0.162	71.86	36.19	17.01	-18.67	54.85	0.00	0.39	9.80
0.174	68.93	35.31	14.64	-18.98	54.29	0.00	0.36	9.80
0.178	68.86	36.77	14.75	-17.35	54.11	0.00	0.35	9.80
0.190	68.45	44.20	14.85	-9.41	53.60	0.00	0.32	9.80
0.206	66.45	31.63	13.48	-21.34	52.97	0.00	0.28	9.80
0.222	62.68	29.51	10.30	-22.86	52.38	0.00	0.25	9.79
0.238	61.81	38.39	9.98	-13.44	51.83	0.00	0.22	9.78
0.250	61.55	29.45	10.10	-22.00	51.45	0.00	0.20	9.78
0.266	61.68	26.87	10.72	-24.09	50.96	0.00	0.17	9.77
0.278	61.25	31.18	10.64	-19.44	50.61	0.00	0.15	9.76
0.282	61.17	36.15	10.67	-14.35	50.50	0.00	0.14	9.76
0.290	57.93	34.90	7.65	-15.38	50.28	0.00	0.13	9.76
0.294	60.45	32.92	10.27	-17.25	50.17	0.00	0.13	9.76
0.298	58.17	33.17	8.11	-16.89	50.07	0.00	0.12	9.76
0.310	55.04	28.96	5.28	-20.80	49.76	0.00	0.10	9.75
0.326	54.30	27.16	4.94	-22.20	49.36	0.00	0.08	9.75
0.338	51.34	22.56	2.26	-26.52	49.08	0.00	0.07	9.74
0.342	50.71	22.17	1.73	-26.81	48.98	0.00	0.06	9.74
0.370	46.46	18.95	-1.91	-29.42	48.37	0.00	0.05	9.73
0.386	45.62	19.02	-2.41	-29.02	48.03	0.00	0.04	9.73
0.398	44.98	24.61	-2.81	-23.19	47.79	0.00	0.04	9.72
0.414	43.74	23.32	-3.74	-24.16	47.48	0.00	0.04	9.72
0.426	51.03	46.55	3.77	-0.71	47.26	0.00	0.03	9.72
0.430	51.46	47.04	4.27	-0.14	47.18	0.00	0.03	9.72
0.438	42.17	27.96	-4.87	-19.08	47.04	0.00	0.03	9.71
0.442	41.69	21.05	-5.28	-25.92	46.97	0.00	0.03	9.71
0.446	40.41	18.42	-6.49	-28.48	46.90	0.00	0.03	9.71
0.458	39.49	17.34	-7.20	-29.35	46.69	0.00	0.03	9.71
0.470	39.40	27.66	-7.09	-18.83	46.49	0.00	0.03	9.71
0.474	40.01	27.02	-6.41	-19.40	46.42	0.00	0.03	9.71
0.490	37.74	16.44	-8.42	-29.71	46.16	0.00	0.04	9.70
0.502	37.02	21.73	-8.98	-24.27	46.00	0.00	0.04	9.70
0.514	36.67	25.35	-9.33	-20.65	46.00	0.00	0.04	9.71
0.518	38.73	29.35	-7.27	-16.65	46.00	0.00	0.04	9.71
0.530	36.11	26.19	-9.89	-19.81	46.00	0.00	0.04	9.72
0.534	34.20	24.62	-11.80	-21.38	46.00	0.00	0.04	9.72
0.542	31.87	18.77	-14.13	-27.23	46.00	0.00	0.04	9.72
0.546	31.67	19.83	-14.33	-26.17	46.00	0.00	0.04	9.73
0.550	32.56	18.83	-13.44	-27.17	46.00	0.00	0.04	9.73
0.558	34.68	22.13	-11.32	-23.87	46.00	0.00	0.04	9.73
0.562	36.33	27.09	-9.67	-18.91	46.00	0.00	0.04	9.73
0.574	36.77	25.99	-9.23	-20.01	46.00	0.00	0.04	9.74
0.590	34.73	26.45	-11.27	-19.55	46.00	0.00	0.04	9.75
0.594	34.71	25.09	-11.29	-20.91	46.00	0.00	0.04	9.75
0.602	37.24	30.41	-8.76	-15.59	46.00	0.00	0.04	9.75

Freq (MHz)	(PEAK) EMI (dBµV)	(AVG) EMI (dBµV)	(PEAK) Margin AVL (dB)	(AVG) Margin AVL (dB)	(AVG) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)
0.606	37.95	30.42	-8.05	-15.58	46.00	0.00	0.04	9.76
0.610	38.22	29.60	-7.78	-16.40	46.00	0.00	0.04	9.76
0.622	36.12	26.77	-9.88	-19.23	46.00	0.00	0.04	9.76
0.638	38.44	33.77	-7.56	-12.23	46.00	0.00	0.04	9.77
0.650	36.30	25.48	-9.70	-20.52	46.00	0.00	0.04	9.78
0.662	36.68	25.92	-9.32	-20.08	46.00	0.00	0.04	9.78
0.666	36.93	26.28	-9.07	-19.72	46.00	0.00	0.04	9.78
0.698	36.98	25.79	-9.02	-20.21	46.00	0.00	0.04	9.80
0.710	48.50	44.92	2.50	-1.08	46.00	0.00	0.04	9.80
0.722	37.32	29.54	-8.68	-16.46	46.00	0.00	0.04	9.81
0.726	35.60	25.60	-10.40	-20.40	46.00	0.00	0.04	9.81
0.734	34.06	23.81	-11.94	-22.19	46.00	0.00	0.04	9.81
0.738	34.44	25.89	-11.56	-20.11	46.00	0.00	0.04	9.81
0.814	33.32	20.19	-12.68	-25.81	46.00	0.00	0.04	9.84
0.830	27.64	15.13	-18.36	-30.87	46.00	0.00	0.04	9.85
0.842	34.05	21.96	-11.95	-24.04	46.00	0.00	0.04	9.85
0.858	34.98	23.33	-11.02	-22.67	46.00	0.00	0.04	9.86
0.874	29.44	17.91	-16.56	-28.09	46.00	0.00	0.04	9.86
0.886	34.09	20.65	-11.91	-25.35	46.00	0.00	0.04	9.87
0.918	28.16	16.49	-17.84	-29.51	46.00	0.00	0.04	9.88
0.950	32.82	21.52	-13.18	-24.48	46.00	0.00	0.04	9.89
0.990	35.73	27.69	-10.27	-18.31	46.00	0.00	0.04	9.90
0.994	41.45	37.65	-4.55	-8.35	46.00	0.00	0.04	9.90
1.258	22.23	9.21	-23.77	-36.79	46.00	0.00	0.04	9.87
1.286	36.91	31.21	-9.09	-14.79	46.00	0.00	0.04	9.86
1.302	23.67	10.69	-22.33	-35.31	46.00	0.00	0.04	9.86
1.346	24.33	10.90	-21.67	-35.10	46.00	0.00	0.04	9.86
1.614	33.20	18.74	-12.80	-27.26	46.00	0.00	0.04	9.83
2.498	32.72	17.39	-13.28	-28.61	46.00	0.02	0.05	9.80
2.510	33.64	19.00	-12.36	-27.00	46.00	0.02	0.05	9.80
3.282	35.76	23.25	-10.24	-22.75	46.00	0.05	0.05	9.80
4.266	30.97	17.15	-15.03	-28.85	46.00	0.08	0.05	9.80
5.002	37.82	28.78	-12.18	-21.22	50.00	0.10	0.05	9.80
5.146	30.33	16.68	-19.67	-33.32	50.00	0.10	0.05	9.80
5.294	38.05	30.67	-11.95	-19.33	50.00	0.10	0.05	9.80
5.442	32.01	21.40	-17.99	-28.60	50.00	0.10	0.05	9.80
5.590	36.09	26.59	-13.91	-23.41	50.00	0.10	0.05	9.80
5.886	37.02	26.70	-12.98	-23.30	50.00	0.10	0.05	9.80
6.034	37.70	28.31	-12.30	-21.69	50.00	0.10	0.05	9.80
6.178	36.51	23.60	-13.49	-26.40	50.00	0.10	0.05	9.80
6.318	39.12	31.33	-10.88	-18.67	50.00	0.10	0.05	9.80
6.474	38.08	27.55	-11.92	-22.45	50.00	0.10	0.05	9.80
6.618	39.45	30.06	-10.55	-19.94	50.00	0.10	0.05	9.80
6.766	43.48	33.05	-6.52	-16.95	50.00	0.10	0.05	9.80
6.914	41.89	34.79	-8.11	-15.21	50.00	0.10	0.05	9.80
6.970	49.76	41.62	-0.24	-8.38	50.00	0.10	0.05	9.80
7.058	41.76	36.12	-8.24	-13.88	50.00	0.10	0.05	9.80
7.358	39.30	31.82	-10.70	-18.18	50.00	0.10	0.04	9.80
7.650	38.96	28.38	-11.04	-21.62	50.00	0.10	0.04	9.80
7.942	38.14	29.79	-11.86	-20.21	50.00	0.10	0.04	9.80
8.234	38.19	29.90	-11.81	-20.10	50.00	0.10	0.04	9.80
8.530	35.78	27.15	-14.22	-22.85	50.00	0.10	0.04	9.80
8.822	34.59	26.15	-15.41	-23.85	50.00	0.10	0.04	9.80
9.118	35.19	25.72	-14.81	-24.28	50.00	0.10	0.04	9.81
9.402	35.23	26.04	-14.77	-23.96	50.00	0.10	0.04	9.84
9.706	37.75	26.85	-12.25	-23.15	50.00	0.10	0.04	9.87
9.714	39.67	30.98	-10.33	-19.02	50.00	0.10	0.04	9.87
9.894	40.10	29.72	-9.90	-20.28	50.00	0.10	0.04	9.89

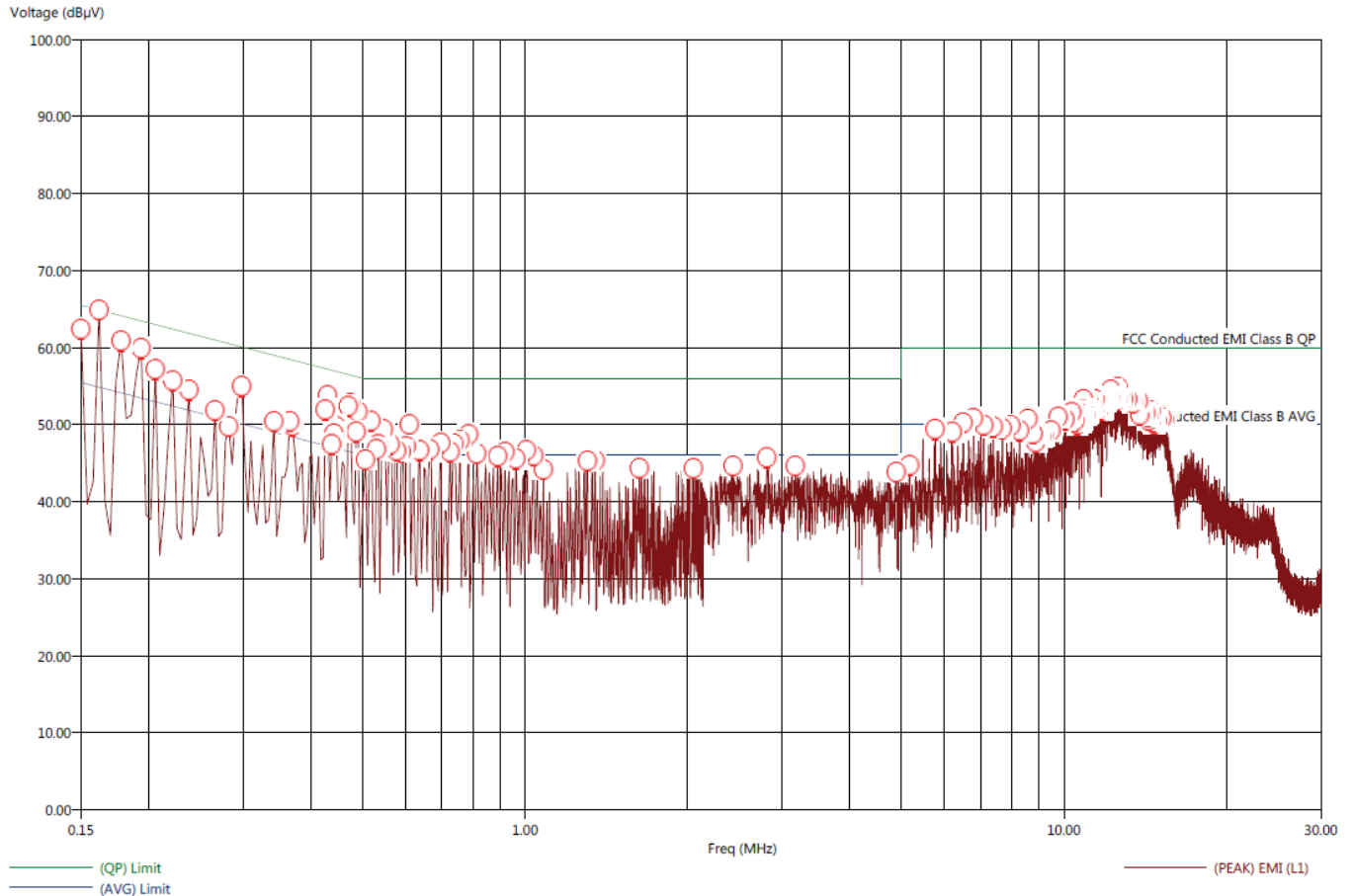
Freq (MHz)	(PEAK) EMI (dBμV)	(AVG) EMI (dBμV)	(PEAK) Margin AVL (dB)	(AVG) Margin AVL (dB)	(AVG) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
9.914	41.57	33.24	-8.43	-16.76	50.00	0.10	0.04	9.89
10.006	42.07	33.11	-7.93	-16.89	50.00	0.10	0.04	9.90
10.290	41.82	33.28	-8.18	-16.72	50.00	0.10	0.04	9.90
10.298	42.78	35.45	-7.22	-14.55	50.00	0.10	0.04	9.90
10.378	44.13	33.41	-5.87	-16.59	50.00	0.11	0.04	9.90
10.474	43.36	34.74	-6.64	-15.26	50.00	0.11	0.04	9.90
10.486	42.09	32.76	-7.91	-17.24	50.00	0.11	0.04	9.90
10.590	43.29	36.24	-6.71	-13.76	50.00	0.11	0.04	9.90
10.710	46.98	40.05	-3.02	-9.95	50.00	0.11	0.04	9.90
10.766	43.59	35.10	-6.41	-14.90	50.00	0.11	0.04	9.90
10.802	39.15	27.75	-10.85	-22.25	50.00	0.11	0.04	9.90
10.854	41.59	30.93	-8.41	-19.07	50.00	0.11	0.04	9.90
10.878	44.57	36.17	-5.43	-13.83	50.00	0.11	0.04	9.90
10.978	49.11	43.00	-0.89	-7.00	50.00	0.11	0.04	9.90
11.062	43.84	32.70	-6.16	-17.30	50.00	0.11	0.04	9.90
11.110	41.46	27.68	-8.54	-22.32	50.00	0.12	0.03	9.90
11.130	41.06	28.32	-8.94	-21.68	50.00	0.12	0.03	9.90
11.154	44.77	35.61	-5.23	-14.39	50.00	0.12	0.03	9.90
11.162	44.49	36.14	-5.51	-13.86	50.00	0.12	0.03	9.90
11.178	43.86	31.94	-6.14	-18.06	50.00	0.12	0.03	9.90
11.210	43.22	29.46	-6.78	-20.54	50.00	0.12	0.03	9.90
11.238	46.05	33.85	-3.95	-16.15	50.00	0.12	0.03	9.90
11.274	47.78	39.41	-2.22	-10.59	50.00	0.12	0.03	9.90
11.302	45.56	33.93	-4.44	-16.07	50.00	0.12	0.03	9.90
11.354	43.94	31.95	-6.06	-18.05	50.00	0.12	0.03	9.90
11.370	44.07	28.82	-5.93	-21.18	50.00	0.12	0.03	9.90
11.390	43.30	28.97	-6.70	-21.03	50.00	0.12	0.03	9.90
11.410	44.16	29.41	-5.84	-20.59	50.00	0.12	0.03	9.90
11.470	46.16	32.02	-3.84	-17.98	50.00	0.12	0.03	9.90
11.514	45.31	32.31	-4.69	-17.69	50.00	0.12	0.03	9.90
11.554	50.04	42.27	0.04	-7.73	50.00	0.12	0.03	9.90
11.570	48.55	39.36	-1.45	-10.64	50.00	0.12	0.03	9.90
11.586	47.33	34.23	-2.67	-15.77	50.00	0.12	0.03	9.90
11.610	45.76	31.94	-4.24	-18.06	50.00	0.12	0.03	9.90
11.630	47.14	34.14	-2.86	-15.86	50.00	0.12	0.03	9.90
11.658	45.89	29.74	-4.11	-20.26	50.00	0.12	0.03	9.90
11.674	46.71	30.20	-3.29	-19.80	50.00	0.12	0.03	9.90
11.698	45.92	30.21	-4.08	-19.79	50.00	0.12	0.03	9.90
11.722	47.58	34.79	-2.42	-15.21	50.00	0.12	0.03	9.90
11.762	47.92	34.59	-2.08	-15.41	50.00	0.12	0.03	9.90
11.794	47.11	31.62	-2.89	-18.38	50.00	0.12	0.03	9.90
11.826	49.59	38.98	-0.41	-11.02	50.00	0.12	0.03	9.90
11.838	50.79	40.41	0.79	-9.59	50.00	0.12	0.03	9.90
11.874	47.84	34.89	-2.16	-15.11	50.00	0.12	0.03	9.90
11.898	47.76	33.06	-2.24	-16.94	50.00	0.13	0.03	9.90
11.906	48.46	34.53	-1.54	-15.47	50.00	0.13	0.03	9.90
11.918	47.41	34.80	-2.59	-15.20	50.00	0.13	0.03	9.90
11.930	47.75	32.99	-2.25	-17.01	50.00	0.13	0.03	9.90
11.942	47.46	30.73	-2.54	-19.27	50.00	0.13	0.03	9.90
11.962	47.13	31.10	-2.87	-18.90	50.00	0.13	0.03	9.90
11.974	47.64	30.66	-2.36	-19.34	50.00	0.13	0.03	9.90
11.986	48.19	31.83	-1.81	-18.17	50.00	0.13	0.03	9.90
12.002	48.14	33.44	-1.86	-16.56	50.00	0.13	0.03	9.90
12.014	49.70	35.83	-0.30	-14.17	50.00	0.13	0.03	9.90
12.050	49.02	35.75	-0.98	-14.25	50.00	0.13	0.03	9.90
12.074	48.21	32.33	-1.79	-17.67	50.00	0.13	0.03	9.89
12.110	50.64	38.25	0.64	-11.75	50.00	0.13	0.03	9.89
12.134	52.11	40.56	2.11	-9.44	50.00	0.13	0.03	9.89

Freq (MHz)	(PEAK) EMI (dBµV)	(AVG) EMI (dBµV)	(PEAK) Margin AVL (dB)	(AVG) Margin AVL (dB)	(AVG) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)
12.142	51.34	38.37	1.34	-11.63	50.00	0.13	0.03	9.89
12.170	51.19	35.61	1.19	-14.39	50.00	0.13	0.03	9.89
12.190	51.04	34.63	1.04	-15.37	50.00	0.13	0.03	9.89
12.238	49.51	32.35	-0.49	-17.65	50.00	0.13	0.03	9.88
12.262	50.43	32.10	0.43	-17.90	50.00	0.13	0.03	9.88
12.274	50.01	32.53	0.01	-17.47	50.00	0.13	0.03	9.88
12.290	50.25	34.16	0.25	-15.84	50.00	0.13	0.03	9.88
12.310	50.88	37.20	0.88	-12.80	50.00	0.13	0.03	9.88
12.318	50.89	36.74	0.89	-13.26	50.00	0.13	0.03	9.88
12.358	50.53	33.79	0.53	-16.21	50.00	0.13	0.03	9.87
12.390	50.86	35.96	0.86	-14.04	50.00	0.13	0.03	9.87
12.418	51.66	40.33	1.66	-9.67	50.00	0.13	0.03	9.87
12.446	51.43	36.89	1.43	-13.11	50.00	0.13	0.03	9.87
12.506	51.42	34.80	1.42	-15.20	50.00	0.13	0.03	9.86
12.538	51.41	33.42	1.41	-16.58	50.00	0.13	0.03	9.86
12.558	51.95	33.96	1.95	-16.04	50.00	0.13	0.03	9.86
12.566	50.80	34.21	0.80	-15.79	50.00	0.13	0.03	9.86
12.578	51.81	35.21	1.81	-14.79	50.00	0.13	0.03	9.86
12.606	51.47	36.65	1.47	-13.35	50.00	0.13	0.03	9.86
12.618	51.46	35.35	1.46	-14.65	50.00	0.13	0.03	9.85
12.650	50.79	34.47	0.79	-15.53	50.00	0.13	0.03	9.85
12.706	52.69	41.03	2.69	-8.97	50.00	0.13	0.03	9.85
12.726	52.81	38.90	2.81	-11.10	50.00	0.13	0.03	9.85
12.746	51.11	36.54	1.11	-13.46	50.00	0.14	0.03	9.85
12.758	50.61	34.98	0.61	-15.02	50.00	0.14	0.03	9.85
12.802	50.62	34.43	0.62	-15.57	50.00	0.14	0.03	9.84
12.826	50.73	34.25	0.73	-15.75	50.00	0.14	0.03	9.84
12.854	50.55	34.19	0.55	-15.81	50.00	0.14	0.03	9.84
12.882	50.86	37.24	0.86	-12.76	50.00	0.14	0.03	9.84
12.942	51.51	34.70	1.51	-15.30	50.00	0.14	0.03	9.83
12.994	51.94	40.64	1.94	-9.36	50.00	0.14	0.03	9.83
13.042	50.65	35.61	0.65	-14.39	50.00	0.14	0.03	9.83
13.054	50.57	36.06	0.57	-13.94	50.00	0.14	0.03	9.82
13.102	49.79	34.29	-0.21	-15.71	50.00	0.14	0.03	9.82
13.114	49.46	34.25	-0.54	-15.75	50.00	0.14	0.03	9.82
13.142	49.90	34.96	-0.10	-15.04	50.00	0.14	0.03	9.82
13.150	51.26	35.20	1.26	-14.80	50.00	0.14	0.03	9.82
13.202	50.29	36.88	0.29	-13.12	50.00	0.14	0.03	9.81
13.238	50.07	35.43	0.07	-14.57	50.00	0.14	0.03	9.81
13.294	51.24	38.43	1.24	-11.57	50.00	0.14	0.03	9.81
13.330	48.88	35.77	-1.12	-14.23	50.00	0.14	0.03	9.81
13.402	49.21	34.96	-0.79	-15.04	50.00	0.14	0.03	9.80
13.422	48.93	34.78	-1.07	-15.22	50.00	0.14	0.03	9.80
13.454	50.43	37.43	0.43	-12.57	50.00	0.14	0.03	9.80
13.482	49.16	36.06	-0.84	-13.94	50.00	0.14	0.03	9.80
13.510	48.81	35.56	-1.19	-14.44	50.00	0.14	0.03	9.79
13.558	50.89	38.61	0.89	-11.39	50.00	0.14	0.02	9.79
13.610	50.09	37.39	0.09	-12.61	50.00	0.14	0.02	9.79
13.718	48.61	36.24	-1.39	-13.76	50.00	0.15	0.02	9.78
13.818	48.07	36.63	-1.93	-13.37	50.00	0.15	0.02	9.77
13.858	50.83	39.24	0.83	-10.76	50.00	0.15	0.02	9.77
13.938	49.41	37.18	-0.59	-12.82	50.00	0.15	0.02	9.77
13.970	49.44	36.73	-0.56	-13.27	50.00	0.15	0.02	9.76
14.086	50.36	37.14	0.36	-12.86	50.00	0.15	0.02	9.76
14.250	49.58	37.03	-0.42	-12.97	50.00	0.15	0.02	9.75

Title: FCC B - Conducted Emissions - White Lead
File: 4 - RS - Pre-Scan - White Lead - Rx Mode - FCC Class B - With LED Lights - 30 MHz to 1000 MHz.set
Operator: Kyle Fujimoto
EUT Type: Lighting Control Node
EUT Condition: The EUT is continuously receiving at the low channel - Worst Case
Company: Mesh Systems LLC
Model: LCN300
S/N: N/A

8/1/2019 12:17:11 PM
Sequence: Preliminary Scan

FCC Class B - Conducted Emissions - White Lead



Title: FCC B - Conducted Emissions - White Lead
File: 4 - RS - Final Scan - White Lead - Rx Mode - FCC Class B - With LED Lights - 30 MHz to 1000 MHz.set
Operator: Kyle Fujimoto
EUT Type: Lighting Control Node
EUT Condition: The EUT is continuously receiving at the low channel - Worst Case
Company: Mesh Systems LLC
Model: LCN300
S/N: N/A

8/1/2019 5:16:56 PM
Sequence: Final Measurements

FCC Class B - Conducted Emissions - White Lead

Freq (MHz)	(PEAK) EMI (dBµV)	(QP) EMI (dBµV)	(PEAK) Margin QPL (dB)	(QP) Margin QPL (dB)	(QP) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)
0.150	73.08	63.69	7.62	-1.77	65.46	0.00	0.40	9.80
0.162	70.71	60.95	5.86	-3.90	64.85	0.00	0.36	9.80
0.178	68.07	57.45	3.96	-6.67	64.11	0.00	0.32	9.80
0.194	67.03	57.19	3.59	-6.25	63.44	0.00	0.28	9.80
0.206	66.20	56.65	3.24	-6.32	62.97	0.00	0.26	9.80
0.222	64.19	54.01	1.82	-8.37	62.38	0.01	0.22	9.79
0.238	62.15	53.35	0.32	-8.48	61.83	0.02	0.19	9.78
0.266	59.43	50.30	-1.52	-10.66	60.96	0.03	0.14	9.77
0.282	59.82	49.62	-0.68	-10.88	60.50	0.04	0.12	9.76
0.298	57.90	52.05	-2.17	-8.01	60.07	0.04	0.09	9.76
0.342	49.18	40.82	-9.80	-18.17	58.98	0.06	0.03	9.74
0.366	48.26	38.62	-10.19	-19.83	58.45	0.07	0.02	9.73
0.370	47.24	37.08	-11.13	-21.29	58.37	0.07	0.02	9.73
0.426	51.81	49.02	-5.45	-8.24	57.26	0.08	0.02	9.72
0.430	53.20	50.06	-3.98	-7.12	57.18	0.08	0.02	9.72
0.438	41.87	33.12	-15.17	-23.92	57.04	0.09	0.02	9.71
0.442	40.85	30.05	-16.12	-26.92	56.97	0.09	0.02	9.71
0.446	39.48	29.88	-17.42	-27.02	56.90	0.09	0.02	9.71
0.470	40.15	36.07	-16.33	-20.41	56.49	0.09	0.02	9.71
0.474	40.78	35.42	-15.64	-21.00	56.42	0.09	0.02	9.71
0.486	38.59	27.00	-17.63	-29.22	56.22	0.10	0.02	9.70
0.490	36.38	26.66	-19.78	-29.50	56.16	0.10	0.02	9.70
0.506	35.80	26.47	-20.20	-29.53	56.00	0.10	0.02	9.70
0.518	38.03	34.47	-17.97	-21.53	56.00	0.09	0.02	9.71
0.530	35.60	29.30	-20.40	-26.70	56.00	0.09	0.02	9.72
0.534	37.01	29.58	-18.99	-26.42	56.00	0.09	0.02	9.72
0.546	34.14	26.48	-21.86	-29.52	56.00	0.09	0.02	9.73
0.562	37.66	33.13	-18.34	-22.87	56.00	0.08	0.02	9.73
0.578	34.16	29.05	-21.84	-26.95	56.00	0.08	0.02	9.74
0.590	36.14	32.51	-19.86	-23.49	56.00	0.08	0.02	9.75
0.602	36.94	33.34	-19.06	-22.66	56.00	0.07	0.02	9.75
0.610	38.89	35.47	-17.11	-20.53	56.00	0.07	0.02	9.76
0.638	35.18	34.93	-20.82	-21.07	56.00	0.06	0.02	9.77
0.666	35.65	31.97	-20.35	-24.03	56.00	0.06	0.02	9.78
0.698	35.34	30.23	-20.66	-25.77	56.00	0.05	0.02	9.80
0.726	35.61	30.58	-20.39	-25.42	56.00	0.05	0.02	9.81
0.738	34.11	28.93	-21.89	-27.07	56.00	0.04	0.02	9.81
0.758	35.01	30.89	-20.99	-25.11	56.00	0.04	0.02	9.82
0.786	29.45	24.90	-26.55	-31.10	56.00	0.03	0.02	9.83
0.814	31.98	26.85	-24.02	-29.15	56.00	0.03	0.02	9.84
0.890	31.97	26.93	-24.03	-29.07	56.00	0.02	0.02	9.87
0.918	26.19	22.05	-29.81	-33.95	56.00	0.01	0.02	9.88
0.962	24.32	19.50	-31.68	-36.50	56.00	0.01	0.02	9.89
1.006	36.50	33.92	-19.50	-22.08	56.00	0.00	0.02	9.90
1.038	30.16	25.84	-25.84	-30.16	56.00	0.01	0.02	9.89
1.082	31.48	28.34	-24.52	-27.66	56.00	0.01	0.02	9.89

Freq (MHz)	(PEAK) EMI (dBµV)	(QP) EMI (dBµV)	(PEAK) Margin QPL (dB)	(QP) Margin QPL (dB)	(QP) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)
1.306	25.82	17.59	-30.18	-38.41	56.00	0.04	0.03	9.86
1.350	21.64	14.01	-34.36	-41.99	56.00	0.04	0.03	9.86
1.630	26.92	18.72	-29.08	-37.28	56.00	0.07	0.03	9.83
2.054	31.64	24.59	-24.36	-31.41	56.00	0.10	0.04	9.80
2.434	35.30	29.27	-20.70	-26.73	56.00	0.12	0.04	9.80
2.810	32.13	27.02	-23.87	-28.98	56.00	0.14	0.04	9.80
3.174	35.16	29.65	-20.84	-26.35	56.00	0.15	0.04	9.80
4.886	32.12	27.19	-23.88	-28.81	56.00	0.20	0.03	9.80
5.174	34.20	27.74	-25.80	-32.26	60.00	0.20	0.03	9.80
5.770	34.42	30.08	-25.58	-29.92	60.00	0.22	0.03	9.80
6.206	39.23	33.62	-20.77	-26.38	60.00	0.23	0.04	9.80
6.502	41.08	36.91	-18.92	-23.09	60.00	0.24	0.04	9.80
6.794	40.32	37.04	-19.68	-22.96	60.00	0.24	0.04	9.80
7.102	39.25	34.81	-20.75	-25.19	60.00	0.25	0.04	9.80
7.398	36.92	32.39	-23.08	-27.61	60.00	0.26	0.04	9.80
7.686	35.84	31.47	-24.16	-28.53	60.00	0.26	0.04	9.80
7.978	36.12	32.16	-23.88	-27.84	60.00	0.27	0.04	9.80
8.274	36.58	30.24	-23.42	-29.76	60.00	0.27	0.04	9.80
8.578	37.45	31.28	-22.55	-28.72	60.00	0.28	0.05	9.80
8.770	39.78	34.68	-20.22	-25.32	60.00	0.28	0.05	9.80
8.866	37.01	31.55	-22.99	-28.45	60.00	0.28	0.05	9.80
8.958	41.37	36.41	-18.63	-23.59	60.00	0.28	0.05	9.80
9.078	41.10	37.77	-18.90	-22.23	60.00	0.29	0.05	9.81
9.166	41.08	37.25	-18.92	-22.75	60.00	0.29	0.05	9.82
9.470	43.42	40.37	-16.58	-19.63	60.00	0.29	0.05	9.85
9.758	42.64	39.13	-17.36	-20.87	60.00	0.30	0.05	9.88
10.050	40.70	36.63	-19.30	-23.37	60.00	0.30	0.05	9.90
10.082	40.99	34.90	-19.01	-25.10	60.00	0.30	0.05	9.90
10.342	42.62	37.24	-17.38	-22.76	60.00	0.30	0.05	9.90
10.478	41.13	35.42	-18.87	-24.58	60.00	0.31	0.05	9.90
10.534	40.03	33.23	-19.97	-26.77	60.00	0.31	0.05	9.90
10.594	43.58	38.87	-16.42	-21.13	60.00	0.31	0.05	9.90
10.630	43.91	38.84	-16.09	-21.16	60.00	0.31	0.05	9.90
10.646	41.49	36.22	-18.51	-23.78	60.00	0.31	0.05	9.90
10.666	41.97	36.98	-18.03	-23.02	60.00	0.31	0.05	9.90
10.710	49.16	46.45	-10.84	-13.55	60.00	0.31	0.05	9.90
10.734	45.78	40.33	-14.22	-19.67	60.00	0.31	0.05	9.90
10.798	42.03	35.88	-17.97	-24.12	60.00	0.31	0.05	9.90
10.862	41.55	36.40	-18.45	-23.60	60.00	0.31	0.05	9.90
10.870	42.82	38.56	-17.18	-21.44	60.00	0.31	0.05	9.90
10.958	44.74	39.25	-15.26	-20.75	60.00	0.31	0.05	9.90
10.974	48.72	43.72	-11.28	-16.28	60.00	0.31	0.05	9.90
11.002	47.20	43.56	-12.80	-16.44	60.00	0.31	0.05	9.90
11.086	41.50	35.94	-18.50	-24.06	60.00	0.31	0.06	9.90
11.158	44.67	40.04	-15.33	-19.96	60.00	0.32	0.06	9.90
11.234	44.94	39.13	-15.06	-20.87	60.00	0.32	0.06	9.90
11.286	47.71	43.61	-12.29	-16.39	60.00	0.32	0.06	9.90
11.418	44.01	38.08	-15.99	-21.92	60.00	0.32	0.06	9.90
11.446	46.59	41.29	-13.41	-18.71	60.00	0.32	0.06	9.90
11.530	47.66	42.67	-12.34	-17.33	60.00	0.32	0.06	9.90
11.574	48.33	43.16	-11.67	-16.84	60.00	0.32	0.06	9.90
11.586	47.34	41.07	-12.66	-18.93	60.00	0.32	0.06	9.90
11.626	46.37	41.31	-13.63	-18.69	60.00	0.32	0.06	9.90
11.686	46.28	40.29	-13.72	-19.71	60.00	0.32	0.06	9.90
11.746	46.20	41.28	-13.80	-18.72	60.00	0.32	0.06	9.90
11.758	47.49	42.42	-12.51	-17.58	60.00	0.32	0.06	9.90
11.790	47.37	41.27	-12.63	-18.73	60.00	0.32	0.06	9.90
11.806	47.80	42.68	-12.20	-17.32	60.00	0.32	0.06	9.90

Freq (MHz)	(PEAK) EMI (dBµV)	(OP) EMI (dBµV)	(PEAK) Margin QPL (dB)	(QP) Margin QPL (dB)	(OP) Limit (dBµV)	Cable (dB)	Transducer (dB)	Filter (dB)
11.826	51.59	45.91	-8.41	-14.09	60.00	0.32	0.06	9.90
11.850	48.91	44.11	-11.09	-15.89	60.00	0.32	0.06	9.90
11.858	48.56	42.73	-11.44	-17.27	60.00	0.32	0.06	9.90
11.894	47.76	42.57	-12.24	-17.43	60.00	0.33	0.06	9.90
11.962	48.83	42.43	-11.17	-17.57	60.00	0.33	0.06	9.90
12.070	49.77	43.87	-10.23	-16.13	60.00	0.33	0.06	9.89
12.170	50.78	44.71	-9.22	-15.29	60.00	0.33	0.06	9.89
12.222	50.48	44.54	-9.52	-15.46	60.00	0.33	0.06	9.88
12.298	51.43	45.42	-8.57	-14.58	60.00	0.33	0.06	9.88
12.350	51.18	45.51	-8.82	-14.49	60.00	0.33	0.06	9.87
12.462	51.55	45.67	-8.45	-14.33	60.00	0.33	0.06	9.87
12.550	51.44	45.72	-8.56	-14.28	60.00	0.33	0.06	9.86
12.598	50.59	45.47	-9.41	-14.53	60.00	0.33	0.06	9.86
12.678	52.75	46.98	-7.25	-13.02	60.00	0.33	0.06	9.85
12.902	50.87	45.84	-9.13	-14.16	60.00	0.34	0.06	9.84
13.126	50.97	44.92	-9.03	-15.08	60.00	0.34	0.06	9.82
13.158	50.30	45.37	-9.70	-14.63	60.00	0.34	0.06	9.82
13.290	50.83	44.67	-9.17	-15.33	60.00	0.34	0.06	9.81
13.438	50.72	44.33	-9.28	-15.67	60.00	0.34	0.06	9.80
13.750	48.42	44.04	-11.58	-15.96	60.00	0.35	0.07	9.78
13.830	50.40	45.21	-9.60	-14.79	60.00	0.35	0.07	9.77
13.926	48.76	44.46	-11.24	-15.54	60.00	0.35	0.07	9.77
14.186	49.75	44.63	-10.25	-15.37	60.00	0.35	0.07	9.75
14.322	49.50	44.91	-10.50	-15.09	60.00	0.35	0.07	9.74
14.330	50.61	44.90	-9.39	-15.10	60.00	0.35	0.07	9.74
14.362	50.18	45.11	-9.82	-14.89	60.00	0.35	0.07	9.74
14.514	49.68	44.37	-10.32	-15.63	60.00	0.35	0.07	9.73
14.566	50.22	45.02	-9.78	-14.98	60.00	0.35	0.07	9.73
14.610	50.04	44.19	-9.96	-15.81	60.00	0.35	0.07	9.72
14.698	49.07	44.46	-10.93	-15.54	60.00	0.36	0.07	9.72
14.894	48.94	43.80	-11.06	-16.20	60.00	0.36	0.07	9.71
15.206	49.92	44.40	-10.08	-15.60	60.00	0.36	0.07	9.70
15.366	49.08	43.41	-10.92	-16.59	60.00	0.36	0.07	9.71
15.434	49.24	44.00	-10.76	-16.00	60.00	0.36	0.07	9.71



Title: FCC B - Conducted Emissions - White Lead
File: 4 - RS - Final Scan - White Lead - Rx Mode - FCC Class B - With LED Lights - 30 MHz to 1000 MHz.set
Operator: Kyle Fujimoto
EUT Type: Lighting Control Node
EUT Condition: The EUT is continuously receiving at the low channel - Worst Case
Company: Mesh Systems LLC
Model: LCN300
S/N: N/A

8/1/2019 5:16:56 PM
Sequence: Final Measurements

FCC Class B - Conducted Emissions - White Lead

Freq (MHz)	(PEAK) EMI (dBμV)	(AVG) EMI (dBμV)	(PEAK) Margin AVL (dB)	(AVG) Margin AVL (dB)	(AVG) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
0.150	73.08	43.23	17.62	-12.22	55.46	0.00	0.40	9.80
0.162	70.71	35.73	15.86	-19.12	54.85	0.00	0.36	9.80
0.178	68.07	35.36	13.96	-18.75	54.11	0.00	0.32	9.80
0.194	67.03	38.39	13.59	-15.05	53.44	0.00	0.28	9.80
0.206	66.20	31.76	13.24	-21.20	52.97	0.00	0.26	9.80
0.222	64.19	29.98	11.82	-22.40	52.38	0.01	0.22	9.79
0.238	62.15	36.98	10.32	-14.85	51.83	0.02	0.19	9.78
0.266	59.43	26.53	8.48	-24.43	50.96	0.03	0.14	9.77
0.282	59.82	35.52	9.32	-14.98	50.50	0.04	0.12	9.76
0.298	57.90	31.77	7.83	-18.29	50.07	0.04	0.09	9.76
0.342	49.18	22.16	0.20	-26.82	48.98	0.06	0.03	9.74
0.366	48.26	21.30	-0.19	-27.15	48.45	0.07	0.02	9.73
0.370	47.24	19.45	-1.13	-28.91	48.37	0.07	0.02	9.73
0.426	51.81	45.71	4.55	-1.55	47.26	0.08	0.02	9.72
0.430	53.20	46.89	6.02	-0.29	47.18	0.08	0.02	9.72
0.438	41.87	29.77	-5.17	-17.27	47.04	0.09	0.02	9.71
0.442	40.85	21.52	-6.12	-25.45	46.97	0.09	0.02	9.71
0.446	39.48	19.81	-7.42	-27.08	46.90	0.09	0.02	9.71
0.470	40.15	29.57	-6.33	-16.91	46.49	0.09	0.02	9.71
0.474	40.78	29.15	-5.64	-17.27	46.42	0.09	0.02	9.71
0.486	38.59	17.01	-7.63	-29.22	46.22	0.10	0.02	9.70
0.490	36.38	16.37	-9.78	-29.79	46.16	0.10	0.02	9.70
0.506	35.80	22.18	-10.20	-23.82	46.00	0.10	0.02	9.70
0.518	38.03	28.70	-7.97	-17.30	46.00	0.09	0.02	9.71
0.530	35.60	25.31	-10.40	-20.69	46.00	0.09	0.02	9.72
0.534	37.01	25.09	-8.99	-20.91	46.00	0.09	0.02	9.72
0.546	34.14	20.67	-11.86	-25.33	46.00	0.09	0.02	9.73
0.562	37.66	26.15	-8.34	-19.85	46.00	0.08	0.02	9.73
0.578	34.16	23.79	-11.84	-22.21	46.00	0.08	0.02	9.74
0.590	36.14	28.19	-9.86	-17.81	46.00	0.08	0.02	9.75
0.602	36.94	28.36	-9.06	-17.64	46.00	0.07	0.02	9.75
0.610	38.89	30.92	-7.11	-15.08	46.00	0.07	0.02	9.76
0.638	35.18	27.83	-10.82	-18.17	46.00	0.06	0.02	9.77
0.666	35.65	26.35	-10.35	-19.65	46.00	0.06	0.02	9.78
0.698	35.34	25.16	-10.66	-20.84	46.00	0.05	0.02	9.80
0.726	35.61	26.52	-10.39	-19.48	46.00	0.05	0.02	9.81
0.738	34.11	23.87	-11.89	-22.13	46.00	0.04	0.02	9.81
0.758	35.01	25.11	-10.99	-20.89	46.00	0.04	0.02	9.82
0.786	29.45	20.00	-16.55	-26.00	46.00	0.03	0.02	9.83
0.814	31.98	19.06	-14.02	-26.94	46.00	0.03	0.02	9.84
0.890	31.97	21.11	-14.03	-24.89	46.00	0.02	0.02	9.87
0.918	26.19	16.18	-19.81	-29.82	46.00	0.01	0.02	9.88
0.962	24.32	14.46	-21.68	-31.54	46.00	0.01	0.02	9.89
1.006	36.50	32.35	-9.50	-13.65	46.00	0.00	0.02	9.90
1.038	30.16	18.00	-15.84	-28.00	46.00	0.01	0.02	9.89
1.082	31.48	21.50	-14.52	-24.50	46.00	0.01	0.02	9.89

Freq (MHz)	(PEAK) EMI (dBμV)	(AVG) EMI (dBμV)	(PEAK) Margin AVL (dB)	(AVG) Margin AVL (dB)	(AVG) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
1.306	25.82	11.14	-20.18	-34.86	46.00	0.04	0.03	9.86
1.350	21.64	8.59	-24.36	-37.41	46.00	0.04	0.03	9.86
1.630	26.92	8.43	-19.08	-37.57	46.00	0.07	0.03	9.83
2.054	31.64	14.70	-14.36	-31.30	46.00	0.10	0.04	9.80
2.434	35.30	24.59	-10.70	-21.41	46.00	0.12	0.04	9.80
2.810	32.13	17.11	-13.87	-28.89	46.00	0.14	0.04	9.80
3.174	35.16	21.20	-10.84	-24.80	46.00	0.15	0.04	9.80
4.886	32.12	18.92	-13.88	-27.08	46.00	0.20	0.03	9.80
5.174	34.20	22.90	-15.80	-27.10	50.00	0.20	0.03	9.80
5.770	34.42	24.88	-15.58	-25.12	50.00	0.22	0.03	9.80
6.206	39.23	28.94	-10.77	-21.06	50.00	0.23	0.04	9.80
6.502	41.08	32.20	-8.92	-17.80	50.00	0.24	0.04	9.80
6.794	40.32	32.22	-9.68	-17.78	50.00	0.24	0.04	9.80
7.102	39.25	30.66	-10.75	-19.34	50.00	0.25	0.04	9.80
7.398	36.92	27.67	-13.08	-22.33	50.00	0.26	0.04	9.80
7.686	35.84	26.01	-14.16	-23.99	50.00	0.26	0.04	9.80
7.978	36.12	27.10	-13.88	-22.90	50.00	0.27	0.04	9.80
8.274	36.58	24.56	-13.42	-25.44	50.00	0.27	0.04	9.80
8.578	37.45	25.64	-12.55	-24.36	50.00	0.28	0.05	9.80
8.770	39.78	28.88	-10.22	-21.12	50.00	0.28	0.05	9.80
8.866	37.01	25.68	-12.99	-24.32	50.00	0.28	0.05	9.80
8.958	41.37	30.69	-8.63	-19.31	50.00	0.28	0.05	9.80
9.078	41.10	32.62	-8.90	-17.38	50.00	0.29	0.05	9.81
9.166	41.08	32.60	-8.92	-17.40	50.00	0.29	0.05	9.82
9.470	43.42	36.28	-6.58	-13.72	50.00	0.29	0.05	9.85
9.758	42.64	34.44	-7.36	-15.56	50.00	0.30	0.05	9.88
10.050	40.70	31.14	-9.30	-18.86	50.00	0.30	0.05	9.90
10.082	40.99	28.83	-9.01	-21.17	50.00	0.30	0.05	9.90
10.342	42.62	31.45	-7.38	-18.55	50.00	0.30	0.05	9.90
10.478	41.13	29.69	-8.87	-20.31	50.00	0.31	0.05	9.90
10.534	40.03	27.83	-9.97	-22.17	50.00	0.31	0.05	9.90
10.594	43.58	34.75	-6.42	-15.25	50.00	0.31	0.05	9.90
10.630	43.91	34.63	-6.09	-15.37	50.00	0.31	0.05	9.90
10.646	41.49	30.10	-8.51	-19.90	50.00	0.31	0.05	9.90
10.666	41.97	31.13	-8.03	-18.87	50.00	0.31	0.05	9.90
10.710	49.16	42.50	-0.84	-7.50	50.00	0.31	0.05	9.90
10.734	45.78	34.80	-4.22	-15.20	50.00	0.31	0.05	9.90
10.798	42.03	29.65	-7.97	-20.35	50.00	0.31	0.05	9.90
10.862	41.55	29.91	-8.45	-20.09	50.00	0.31	0.05	9.90
10.870	42.82	33.59	-7.18	-16.41	50.00	0.31	0.05	9.90
10.958	44.74	33.50	-5.26	-16.50	50.00	0.31	0.05	9.90
10.974	48.72	38.97	-1.28	-11.03	50.00	0.31	0.05	9.90
11.002	47.20	39.10	-2.80	-10.90	50.00	0.31	0.05	9.90
11.086	41.50	28.77	-8.50	-21.23	50.00	0.31	0.06	9.90
11.158	44.67	35.56	-5.33	-14.44	50.00	0.32	0.06	9.90
11.234	44.94	32.75	-5.06	-17.25	50.00	0.32	0.06	9.90
11.286	47.71	39.27	-2.29	-10.73	50.00	0.32	0.06	9.90
11.418	44.01	29.73	-5.99	-20.27	50.00	0.32	0.06	9.90
11.446	46.59	36.44	-3.41	-13.56	50.00	0.32	0.06	9.90
11.530	47.66	37.03	-2.34	-12.97	50.00	0.32	0.06	9.90
11.574	48.33	37.87	-1.67	-12.13	50.00	0.32	0.06	9.90
11.586	47.34	34.34	-2.66	-15.66	50.00	0.32	0.06	9.90
11.626	46.37	34.23	-3.63	-15.77	50.00	0.32	0.06	9.90
11.686	46.28	30.61	-3.72	-19.39	50.00	0.32	0.06	9.90
11.746	46.20	33.04	-3.80	-16.96	50.00	0.32	0.06	9.90
11.758	47.49	36.27	-2.51	-13.73	50.00	0.32	0.06	9.90
11.790	47.37	33.02	-2.63	-16.98	50.00	0.32	0.06	9.90
11.806	47.80	36.14	-2.20	-13.86	50.00	0.32	0.06	9.90

Freq (MHz)	(PEAK) EMI (dBμV)	(AVG) EMI (dBμV)	(PEAK) Margin AVL (dB)	(AVG) Margin AVL (dB)	(AVG) Limit (dBμV)	Cable (dB)	Transducer (dB)	Filter (dB)
11.826	51.59	41.73	1.59	-8.27	50.00	0.32	0.06	9.90
11.850	48.91	38.56	-1.09	-11.44	50.00	0.32	0.06	9.90
11.858	48.56	35.02	-1.44	-14.98	50.00	0.32	0.06	9.90
11.894	47.76	35.26	-2.24	-14.74	50.00	0.33	0.06	9.90
11.962	48.83	31.53	-1.17	-18.47	50.00	0.33	0.06	9.90
12.070	49.77	34.28	-0.23	-15.72	50.00	0.33	0.06	9.89
12.170	50.78	35.83	0.78	-14.17	50.00	0.33	0.06	9.89
12.222	50.48	32.59	0.48	-17.41	50.00	0.33	0.06	9.88
12.298	51.43	35.52	1.43	-14.48	50.00	0.33	0.06	9.88
12.350	51.18	34.91	1.18	-15.09	50.00	0.33	0.06	9.87
12.462	51.55	36.10	1.55	-13.90	50.00	0.33	0.06	9.87
12.550	51.44	35.63	1.44	-14.37	50.00	0.33	0.06	9.86
12.598	50.59	36.56	0.59	-13.44	50.00	0.33	0.06	9.86
12.678	52.75	40.09	2.75	-9.91	50.00	0.33	0.06	9.85
12.902	50.87	35.34	0.87	-14.66	50.00	0.34	0.06	9.84
13.126	50.97	36.97	0.97	-13.03	50.00	0.34	0.06	9.82
13.158	50.30	36.02	0.30	-13.98	50.00	0.34	0.06	9.82
13.290	50.83	36.28	0.83	-13.72	50.00	0.34	0.06	9.81
13.438	50.72	36.42	0.72	-13.58	50.00	0.34	0.06	9.80
13.750	48.42	36.50	-1.58	-13.50	50.00	0.35	0.07	9.78
13.830	50.40	38.77	0.40	-11.23	50.00	0.35	0.07	9.77
13.926	48.76	36.73	-1.24	-13.27	50.00	0.35	0.07	9.77
14.186	49.75	37.31	-0.25	-12.69	50.00	0.35	0.07	9.75
14.322	49.50	37.43	-0.50	-12.57	50.00	0.35	0.07	9.74
14.330	50.61	37.41	0.61	-12.59	50.00	0.35	0.07	9.74
14.362	50.18	38.60	0.18	-11.40	50.00	0.35	0.07	9.74
14.514	49.68	36.95	-0.32	-13.05	50.00	0.35	0.07	9.73
14.566	50.22	37.99	0.22	-12.01	50.00	0.35	0.07	9.73
14.610	50.04	36.89	0.04	-13.11	50.00	0.35	0.07	9.72
14.698	49.07	37.15	-0.93	-12.85	50.00	0.36	0.07	9.72
14.894	48.94	35.90	-1.06	-14.10	50.00	0.36	0.07	9.71
15.206	49.92	35.72	-0.08	-14.28	50.00	0.36	0.07	9.70
15.366	49.08	33.97	-0.92	-16.03	50.00	0.36	0.07	9.71
15.434	49.24	35.27	-0.76	-14.73	50.00	0.36	0.07	9.71