Radiated Emissions Test Report

Prepared in accordance with

EN 55022:2010, CISPR 22:2008

On

DC/DC µModule Regulator LTM4651 installed on Demo Board 2328A

Prepared for:

Linear Technology Corporation
1630 McCarthy Blvd.
Milpitas, CA 95035-7417
U.S.A.

Prepared by:

TUV Rheinland of North America, Inc.
1279 Quarry Lane, Ste. A
Pleasanton, CA 94566 U.S.A.

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Revisions

Revision No.	Date	Reason for Change	Author
0	11/22/16	Original Document	KG
1	12/1/16	Updating Model Number	KG

Note: Latest revision report will replace all previous reports.

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ATTESTATION OF TEST RESULTS

Client:	Linear Technology Corporation 1630 McCarthy Blvd. Milpitas, CA 95035-7417 U.S.A.	Jason Sekanina Tel. 408-432-1900, x3563 jsekanina@linear.com

Model Name:	LTM4651	***Serial Number:***	N49725 1611MY

Test Location:	TUV Rheinland of North America 2305 Mission College Blvd., Ste. 105 Santa Clara, CA 95054 U.S.A. Tel. (925) 249-9123

Test Specifications:	Emissions:	EN 55022:2010, CISPR 22:2008
Test Result:	**The above product was found to be engineering data to the above test standard(s)**	

Prepared by: **Kyle Germano**	***Reviewed by:*** David Spencer
December 1, 2016 ***Date*** ***Name*** ***Signature***	December 1, 2016 ***Date*** ***Name*** ***Signature***
Other aspects:	**None**

SANTA CLARA

US5251	**Testing Cert #3331.02**	**INDUSTRY CANADA 2932D-1**	**1097 (A-0032)**

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TABLE OF CONTENTS

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1 General Information

1.1 Scope

This report is intended to document the status of conformance with the listed standards based on the results of testing performed on November 1, 2016 on the DC/DC µModule Regulator LTM4651 installed on Demo Board 2328A, Model No.: LTM4651, manufactured by Linear Technology Corporation. This report only applies to the specific samples tested under the stated test conditions. It is the responsibility of the manufacturer to assure that additional production units of this model are manufactured with identical or EMI equivalent electrical and mechanical components. This report is further intended to document changes and modifications to the EUT throughout its life cycle. All documentation will be included as a supplement.

1.2 Purpose

Testing was performed to evaluate the EMC performance of the EUT (Equipment Under Test) in accordance with the applicable requirements, procedures, and criteria defined in the application of regulations and application of standards listed in this report.

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1.3 Summary of Test Results

Applicant	Linear Technology Corporation 1630 McCarthy Blvd. Milpitas, CA 95035-7417 U.S.A.
Contact	Jason Sekanina
Tel.	408-432-1900, x3563
E-mail	jsekanina@linear.com
Description	DC/DC µModule Regulator LTM4651 installed on Demo Board 2328A
Model Name	LTM4651
Serial Number	N49725 1611MY
Input Power	refer to test data
Test Date(s)	November 1, 2016

Standards	Description	Severity Level or Limit	Criteria	Test Result
EN 55022:2010, CISPR 22:2008 Product Family Standard Emissions	Information Technology Equipment – Radio Disturbance	See called out basic standards below	See Below	Pass
EN 55022:2010, CISPR 22:2008	Radiated Emissions	Class B 30 - 1000 MHz	Limit	Pass

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2 Laboratory Information

2.1 Accreditations & Endorsements

2.1.1 US Federal Communications Commission

TUV Rheinland of North America EMC test facilities located at 1279 Quarry Lane, Ste. A, Pleasanton, CA, 94566, and 2305 Mission College Blvd, Ste. 105, Santa Clara, CA 95054, are recognized by the Commission for performing testing services for the general public on a fee basis. These laboratory test facilities have been fully described in reports submitted to and accepted by the FCC (Pleasanton Registration No. US5254, Santa Clara Registration No. US5251). The laboratory Scopes of Accreditation include Title 47 CFR Parts 15, 18 and 90. The accreditations are updated every three years.

2.1.2 A2LA

TUV Rheinland of North America EMC test facilities are accredited by the American Association for Laboratory Accreditation (A2LA). The laboratories have been assessed and accredited by A2LA in accordance with ISO Standard 17025:2005 (Testing Certificate #3331.02). The Scope of Laboratory Accreditation includes emission and immunity testing. The accreditations are updated annually.

2.1.3 Industry Canada

The Pleasanton 5-meter Semi-Anechoic Chamber, Registration No. 2932M-1, has been accepted by Industry Canada to perform testing to 3 and 5 meters based on the test procedures described in ANSI C63.4-2009. The Santa Clara 10-meter Semi-Anechoic Chamber, Registration No. 2932D-1, has been accepted by Industry Canada to perform testing to 3 and 10 meters based on the test procedures described in ANSI C63.4-2009.

2.1.4 Japan – VCCI

The Voluntary Control Council for Interference by Information Technology Equipment (VCCI) is a group that consists of Information Technology Equipment (ITE) manufacturers and EMC test laboratories. The purpose of the Council is to take voluntary control measures against electromagnetic interference from Information Technology Equipment, and thereby contribute to the development of a socially beneficial and responsible state of affairs in the realm of Information Technology Equipment in Japan. TUV Rheinland of North America EMC test facilities located at 1279 Quarry Lane, Ste. A, Pleasanton, CA, 94566, and 2305 Mission College Blvd, Ste. 105, Santa Clara, CA 95054, have been assessed and approved in accordance with the Regulations for Voluntary Control Measures.

VCCI Registration No. for Pleasanton: A-0031

VCCI Registration No. for Santa Clara: A-0032

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2.2 Test Facilities and EMC Software

Test facilities are located at 1279 Quarry Lane, Ste. A, Pleasanton, California 94566, U.S.A. and 2305 Mission College Blvd., Ste. 105, Santa Clara, 95054, U.S.A. (Santa Clara is the Pleasanton Annex).

2.2.1 Emission Test Facility

The Semi-Anechoic Chambers and AC Line Conducted measurement facilities used to collect radiated and conducted emissions data have been constructed in accordance with ANSI C63.7:1992. The Santa Clara 10 meter semi-anechoic chamber has been measured in accordance with and verified to comply with the theoretical volumetric normalized site attenuation of ANSI C63.4:2009 and SVSWR requirements of CISPR 16-1-4 Consol. Ed. 3.0 (2010-04), at test distances of 3 and 10 meters. This site has been described in reports dated November 1st, 2006, submitted to the FCC, and accepted by letter dated November 28, 2006. The site is listed with the FCC and accredited by A2LA (Testing Certificate #3331.02). The Pleasanton 5 meter semi-anechoic chamber has been verified to comply with the theoretical volumetric normalized site attenuation of ANSI C63.4:2009 and SVSWR requirements of CISPR 16-1-4 Consol. Ed. 3.0 (2010-04) at a test distance of 3 meters. This site has been described in reports dated November 1st, 2006, submitted to the FCC, and accepted by letter dated November 28, 2006. The site is listed with the FCC and accredited by A2LA (Testing Certificate #3331.02).

2.2.2 Immunity Test Facility

ESD, EFT, Surge, PQF: These tests are performed in an environmentally controlled room with a 3.7 m x 3.7 m x 3.175 mm thick aluminum floor connected to PE ground. For ESD testing, tabletop equipment is placed on an insulated mat with a surface resistivity of 10^9 Ohms/square on a 1.6 m x 0.8 m x 0.8 m high non-conductive table with a 3.175 mm aluminum top (Horizontal Coupling Plane). The HCP is connected to the main ground plane via a low impedance ground strap through two 470 kΩ resistors. The Vertical Coupling Plane consists of an aluminum plate 50 cm x 50 cm x 3.175 mm thick. The VCP is connected to the main ground plane via a low impedance ground strap through two 470 kΩ resistors. For each of the other tests, the HCP is removed.

RF Field Immunity testing is performed in a 10m semi-anechoic chamber with absorber added to floor.

RF Conducted and Magnetic Field Immunity testing is performed on a 4.9 m x 3.7 m x 3.175 mm thick aluminum ground plane which is connected to one end of the anechoic chamber.

All test areas allow a minimum distance of 1 meter from the EUT to walls or conducting objects.

2.2.3 EMC Software - Santa Clara

Manufacturer	Name	Version	Test Type
Hewlett-Packard	HP85876B	A.01.00 970825	Radiated & Conducted Emissions
EMISoft	Vasona	5.0	Radiated & Conducted Emissions
ETS-Lindgren	TILE	4.2.A	Radiated Emissions > 1 GHz
ETS-Lindgren	TILE	V.3.4.K.22	Radiated & Conducted Immunity

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Manufacturer	Name	Version	Test Type
Haefely	WinFEAT	1.6.3	Surge
Thermo Electron - Keytek	CEWare32	3.0	EFT/Surge/Voltage Dips & Interrupt
Voltech	IEC61000-3	1.15.07RC	Harmonic & Flicker

2.2.4 EMC Software - Pleasanton

Manufacturer	Name	Version	Test Type
ETS-Lindgren	TILE	3.4.K.14 @ 4.0.A.5	Radiated & Conducted Emissions
EMISoft	Vasona	5.0	Radiated & Conducted Emissions
Agilent	Agilent MXE	A.11.02	Radiated & Conducted Emissions
ETS-Lindgren	TILE	3.4.K.14	Radiated & Conducted Immunity
Thermo Electron - Keytek	CEWare32	4.00	EFT/Surge/Voltage Dips & Interrupt
Voltech	IEC61000-3	1.21.07RC2	Harmonic & Flicker

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2.3 Measurement Uncertainty

Two types of measurement uncertainty are expressed in this report, per *ISO Guide To The Expression Of Uncertainty In Measurement*, 1st Edition, 1995.

The Combined Standard Uncertainty is the standard uncertainty of the result of a measurement when that result is obtained from the values of a number of other quantities, equal to the positive square root of a sum of terms, the terms being the variances or co-variances of these other quantities weighted according to how the measurement result varies with changes in these quantities. The term standard uncertainty is the result of a measurement expressed as a standard deviation.

The Expanded Uncertainty defines an interval about the result of a measurement that may be expected to encompass a large fraction of the distribution of values that could reasonably be attributed to the measurand. The fraction may be viewed as the coverage probability or level of confidence of the interval.

2.3.1 Sample Calculation – radiated & conducted emissions

The field strength is calculated by subtracting the Amplifier Gain and adding the Cable Loss and Antenna Correction Factor to the measured reading. The basic equation is as follows:

Field Strength (dBμV/m) = RAW - AMP + CBL + ACF

Where: RAW = Measured level before correction (dBμV)

AMP = Amplifier Gain (dB)

CBL = Cable Loss (dB)

ACF = Antenna Correction Factor (dB/m)

$$\mu V/m = 10^{\frac{dB\mu V/m}{20}}$$

Sample radiated emissions calculation @ 30 MHz

Measurement +Antenna Factor–Amplifier Gain+Cable loss=Radiated Emissions (dBuV/m)

25 dBuV/m + 17.5 dB – 20 dB + 1.0 dB = 23.5 dBuV/m

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2.3.2 Measurement Uncertainty Emissions

Per CISPR 16-4-2	**U_{lab}**	**U_{cispr}**
Radiated Disturbance @ 10 meters		
30 – 1,000 MHz	2.25 dB	4.51 dB
Radiated Disturbance @ 3 meters		
30 – 1,000 MHz	2.26 dB	4.52 dB
1 – 6 GHz	2.12 dB	4.25 dB
6 – 18 GHz	2.47 dB	4.93 dB
Conducted Disturbance @ Mains Terminals		
150 kHz – 30 MHz	1.09 dB	2.18 dB
Disturbance Power		

Voltech PM6000A

The estimated combined standard uncertainty for harmonic current and flicker measurements is ± 5.0%.	Per CISPR 16-4-2

2.3.3 Measurement Uncertainty Immunity

The estimated expanded uncertainty for ESD immunity measurements is ± 8.2%.	Per IEC 61000-4-2
The estimated expanded uncertainty for radiated immunity measurements is ± 4.10 dB.	Per IEC 61000-4-3
The estimated expanded uncertainty for EFT fast transient immunity measurements is ± 5.84%.	Per IEC 61000-4-4
The estimated expanded uncertainty for surge immunity measurements is ± 5.84 %.	Per IEC 61000-4-4
The estimated expanded uncertainty for conducted immunity measurements with CDN is ± 3.66 dB	Per IEC 61000-4-6
The estimated expanded uncertainty for power frequency magnetic field immunity is ± 11.6%.	Per IEC 61000-4-8
The estimated expanded uncertainty for voltage variation and interruption measurements is ± 3.48%.	Per IEC 61000-4-11

The expanded uncertainty at a level of 95% confidence is obtained by multiplying the combined standard uncertainty by a coverage factor of 2. Compliance criteria are not based on measurement uncertainty.

2.4 Calibration Traceability

All measurement instrumentation is traceable to the National Institute of Standards and Technology (NIST). Measurement method complies with ANSI/NCSL Z540-1-1994 and ISO Standard 17025:2005. Equipment calibration records are kept on file at the test facility.

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2.5 Measurement Equipment Used

Equipment	Manufacturer	Model #	Serial/Inst #	Last Cal mm/dd/yy	Next Cal mm/dd/yy	Test
EMI Receiver (Receiver Section)	Agilent	MXE	MY52260210	1/18/2016	1/18/2017	RE
100 kHz – 1 GHz PreAmp	HP	8447D	2944A07486	1/17/2016	1/17/2017	RE
Bilog Antenna Emissions	Sunol Sciences	JB3	A020502	05/16/2014	05/16/2017	RE
EMI Receiver	Rohde & Schwarz	ESIB40	100180	01/19/2016	01/19/2017	CE

Note: CE=Conducted Emissions, CI=Conducted Immunity, DP=Disturbance Power, EFT=Electrical Fast Transients, ESD=Electrostatic Discharge, FLI=Flicker, HAR=Harmonics, MF=Magnetic Field Immunity, NCR=No Calibration Required, RE=Radiated Emissions, RI=Radiated Immunity, SI=Surge Immunity, VDSI=Voltage Dips and Short Interruptions

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3 Product Information

3.1 Product Description

See Section 6.4.

3.2 Equipment Modifications

No modifications were needed to bring product into engineering.

3.3 Test Plan

The EUT product information, test configuration, mode of operation, test types, test procedures, test levels, pass/failure criteria, in this report were carried out per the product test plan located in Appendix A of this report.

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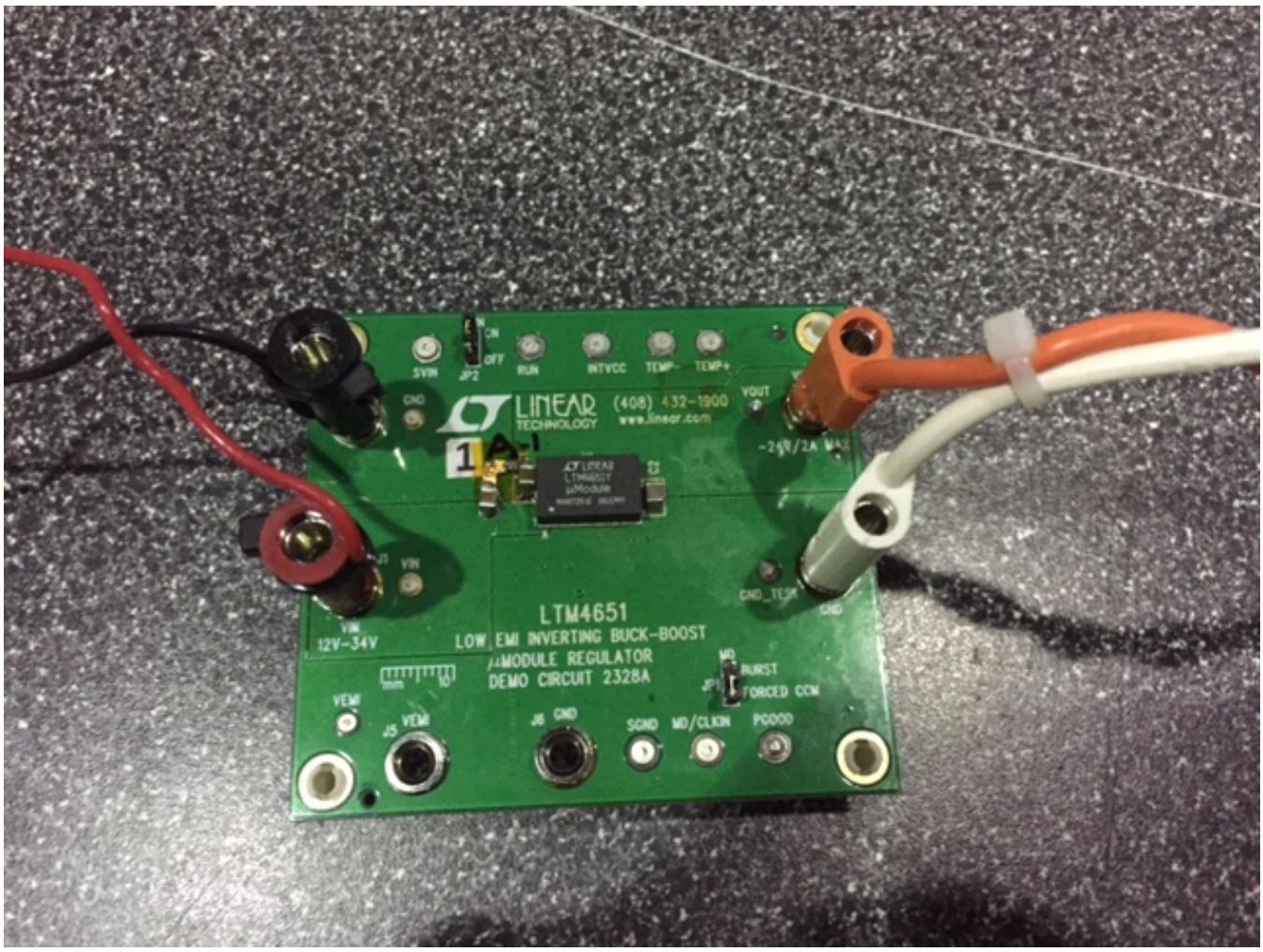

Figure 1 - PCB Photo of EUT

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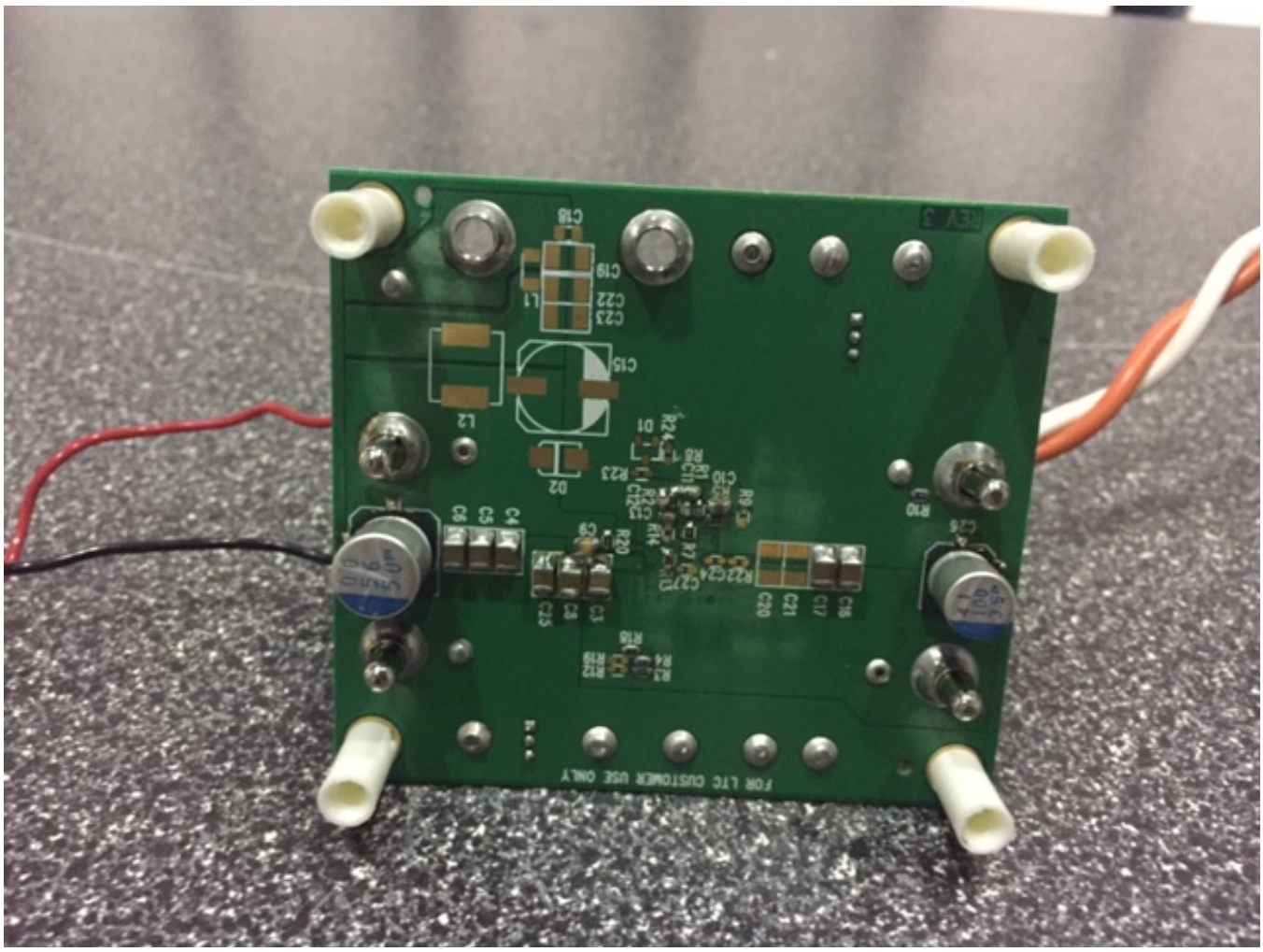

Figure 2 - PCB Photo of EUT

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4 Emissions

4.1 Radiated Emissions

This test measures the electromagnetic levels of spurious signals generated by the EUT that radiated from the EUT and may affect the performance of other nearby electronic equipment.

4.1.1 Overview of Test

Results	**engineering** (as tested per this report)			**Test Date(s)**	November 1, 2016		
Standard	EN 55022:2010, CISPR 22:2008						
Model Number	LTM4651			**Serial #**	N49725 1611MY		
Configuration	See test plan for details.						
Test Setup	Tested in the 10-meter chamber, placed on turntable: see test plan for details.						
EUT Powered By	Refer to data						
Environmental Conditions	November 1, 2016	**Temp**	23º C	**Humidity**	47%	**Pressure**	1019mbar
Frequency Range	30 – 1000MHz						
Perf. Criteria	Class B		**Perf. Verification**		Readings Under Limit		
Mod. to EUT	None		**Test Performed By**		Kyle Germano		

4.1.2 Test Procedure

Radiated emissions tests were performed using the procedures of CISPR 22:2010 including methods for signal maximizations and EUT configuration. The photos included with the report show the EUT in its maximized configuration.

The frequency range from 30MHz to 1000MHz was investigated for radiated emissions.

4.1.3 Deviations

There were no deviations from the test methodology listed in the test plan for the radiated emission test.

4.1.4 Final Test

All final radiated emissions measurements were below the specification limits.

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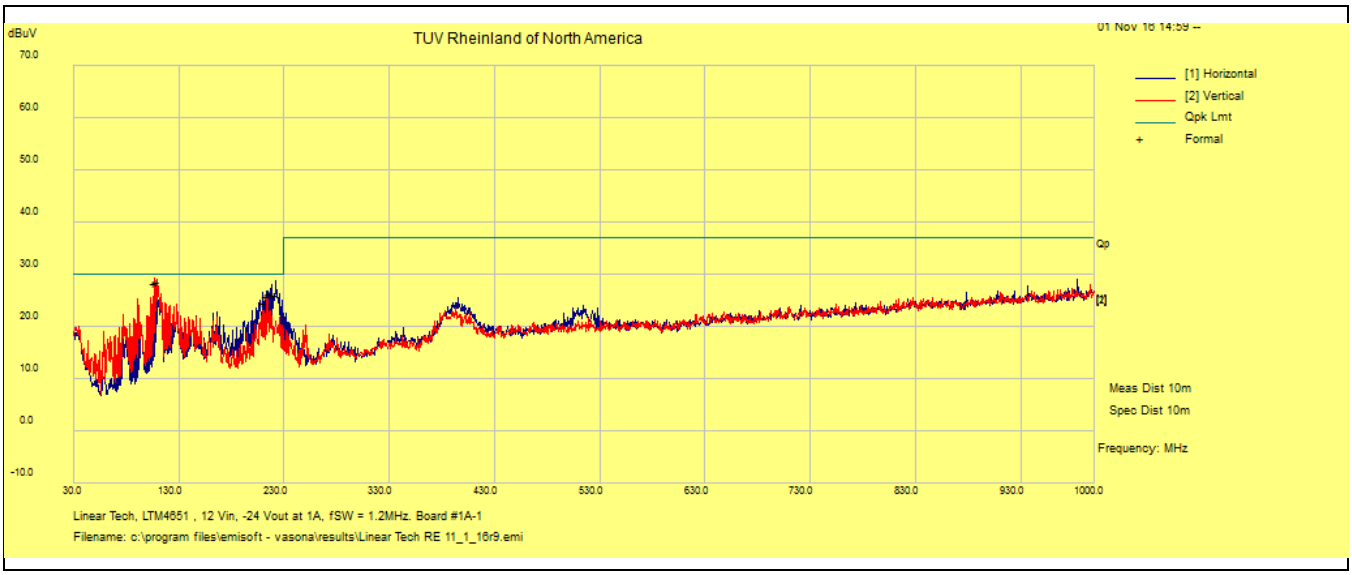
4.1.5 Plots

NOTES: LTM4651 12Vin -> -24Vout @ 1A, fSW=1.2MHz, Board #1A-1

Radiated Emissions Pre-Scan

Vertical / Horizontal



4.1.1 Final Tabulated Data – 30 - 1000 MHz

Freq	Raw Reading	Cable Loss	AF	Corrected	Detector Type	Pol H/V	Ant Height	Azi	Limit	Margin
MHz	dBuV/m	dB	dB	dBuV/m			Cm	Deg	dBuV/m	dB
106.3244	43.16	1.92	-16.63	28.45	Quasi Max	V	101	354	30	-1.55
109.8459	42.61	1.94	-16.03	28.52	Quasi Max	V	106	220	30	-1.48
210.2459	40.41	2.37	-18.16	24.61	Quasi Max	H	308	187	30	-5.39
213.7916	41.42	2.38	-18.02	25.78	Quasi Max	H	338	201	30	-4.22
217.3228	41.85	2.4	-17.92	26.33	Quasi Max	H	326	202	30	-3.67
222.0391	41.46	2.42	-17.82	26.06	Quasi Max	H	291	201	30	-3.94

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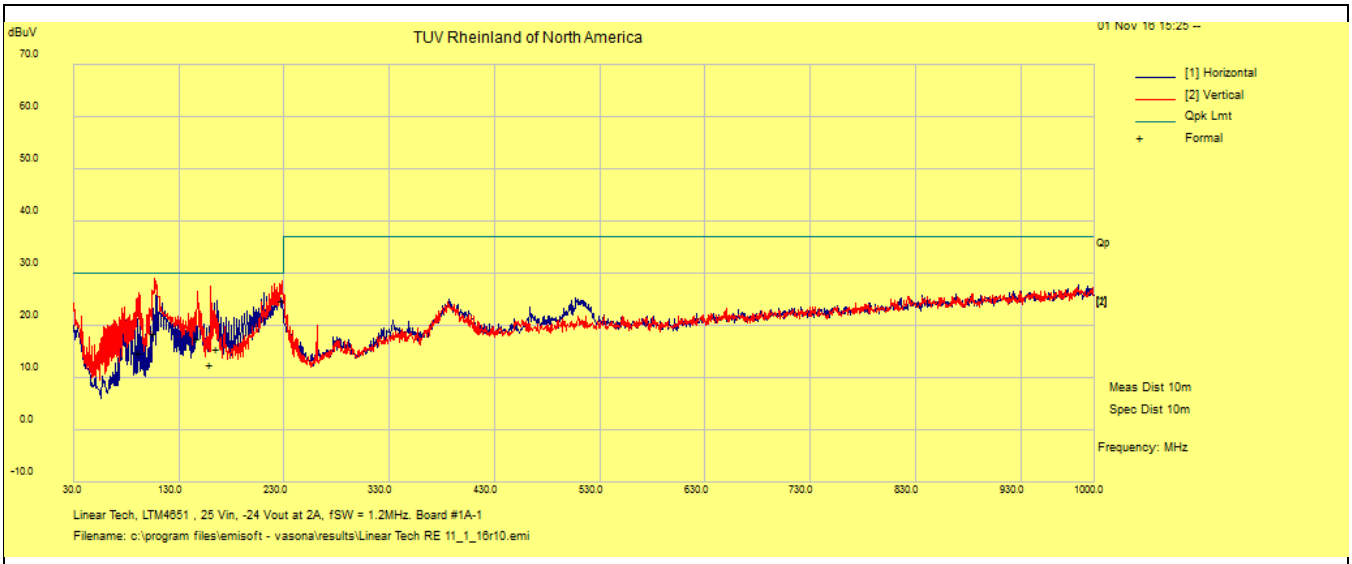
NOTES: LTM4651 25Vin -> -24Vout @ 2A, fSW=1.2MHz, Board #1A-1

Radiated Emissions Full Scan

Vertical / Horizontal



4.1.1 Final Tabulated Data – 30 - 1000 MHz

Freq	Raw Reading	Cable Loss	AF	Corrected	Detector Type	Pol H/V	Ant Height	Azi	Limit	Margin
MHz	dBuV/m	dB	dB	dBuV/m			Cm	Deg	dBuV/m	dB
92.64813	33.32	1.84	-20.41	14.75	Quasi Max	V	136	293	30	-15.25
107.0003	33.23	1.92	-16.5	18.65	Quasi Max	V	114	355	30	-11.35
148.1788	31.41	2.12	-15.98	17.55	Quasi Max	V	395	123	30	-12.45
160.2269	26.8	2.17	-16.28	12.69	Quasi Max	V	144	322	30	-17.31
166.0475	29.93	2.19	-16.58	15.54	Quasi Max	H	269	229	30	-14.46
228.2128	39.95	2.45	-17.62	24.78	Quasi Max	V	100	40	30	-5.22

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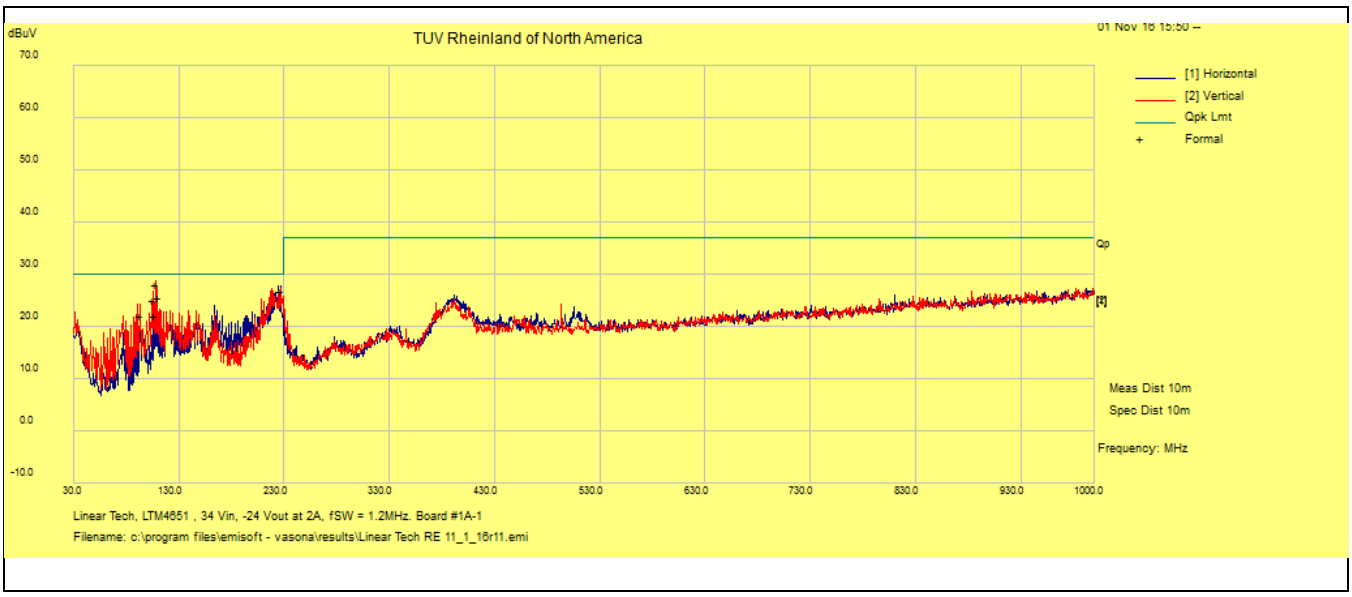
NOTES: LTM4651 34Vin -> -24Vout @ 2A, fSW=1.2MHz, Board #1A-1

Radiated Emissions Full Scan

Vertical / Horizontal



4.1.1 Final Tabulated Data – 30 - 1000 MHz

Freq	Raw Reading	Cable Loss	AF	Corrected	Detector Type	Pol H/V	Ant Height	Azi	Limit	Margin
MHz	dBuV/m	dB	dB	dBuV/m			Cm	Deg	dBuV/m	dB
93.40656	40.38	1.85	-20.22	22.01	Quasi Max	V	150	-1	30	-7.99
105.2438	40.14	1.92	-16.85	25.21	Quasi Max	V	103	-1	30	-4.79
106.4334	36.69	1.92	-16.61	21.99	Quasi Max	V	102	-1	30	-8.01
107.5822	42.56	1.92	-16.38	28.09	Quasi Max	V	112	-1	30	-1.91
109.9675	39.67	1.94	-16.01	25.6	Quasi Max	V	153	-1	30	-4.4
226.9481	41.99	2.44	-17.68	26.75	Quasi Max	H	396	247	30	-3.25

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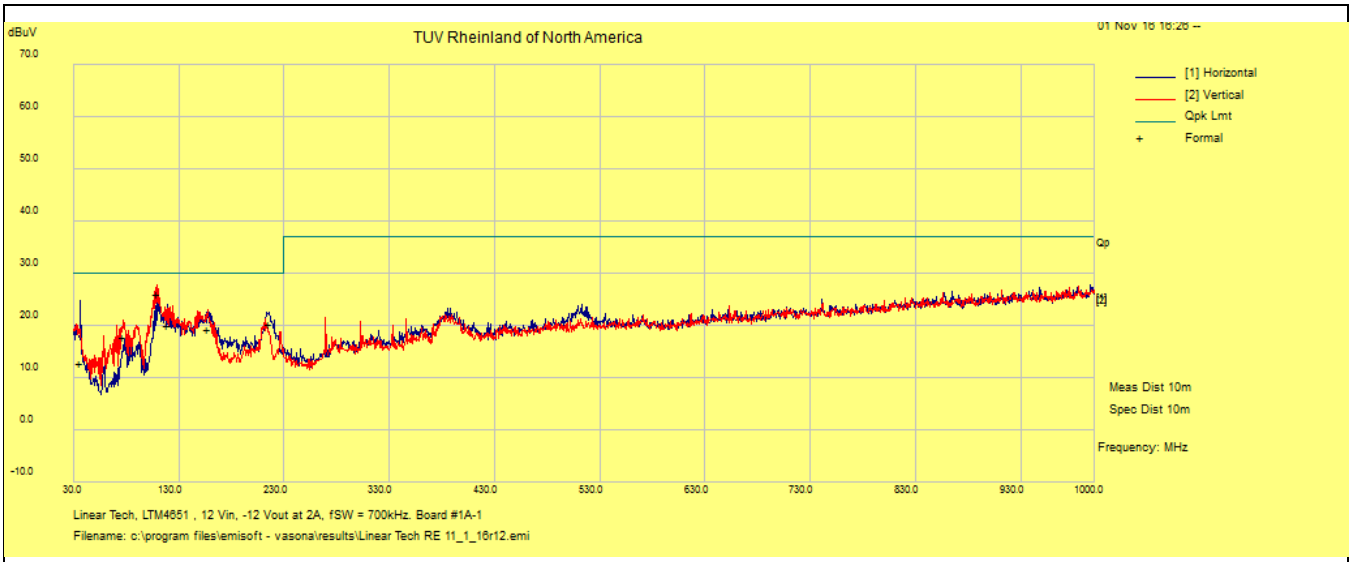
NOTES: LTM4651 12Vin -> -12Vout @ 2A, fSW=700kHz, Board #1A-1

Radiated Emissions Full Scan

Vertical / Horizontal



4.1.2 Final tabulated data – 30 – 1000 MHz

Freq	Raw Reading	Cable Loss	AF	Corrected	Detector Type	Pol H/V	Ant Height	Azi	Limit	Margin
MHz	dBuV/m	dB	dB	dBuV/m			Cm	Deg	dBuV/m	dB
36.79	23.54	1.51	-12.31	12.74	Quasi Max	H	243	267	30	-17.26
76.73156	36.97	1.76	-20.8	17.94	Quasi Max	V	119	267	30	-12.06
109.7884	40.09	1.94	-16.04	25.98	Quasi Max	V	164	203	30	-4.02
118.8794	33.17	1.99	-15	20.16	Quasi Max	H	399	203	30	-9.85
157.5378	33.29	2.16	-16.18	19.28	Quasi Max	V	100	203	30	-10.73
216.0838	35.8	2.39	-17.95	20.25	Quasi Max	H	266	222	30	-9.75

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4.1.3 Photos

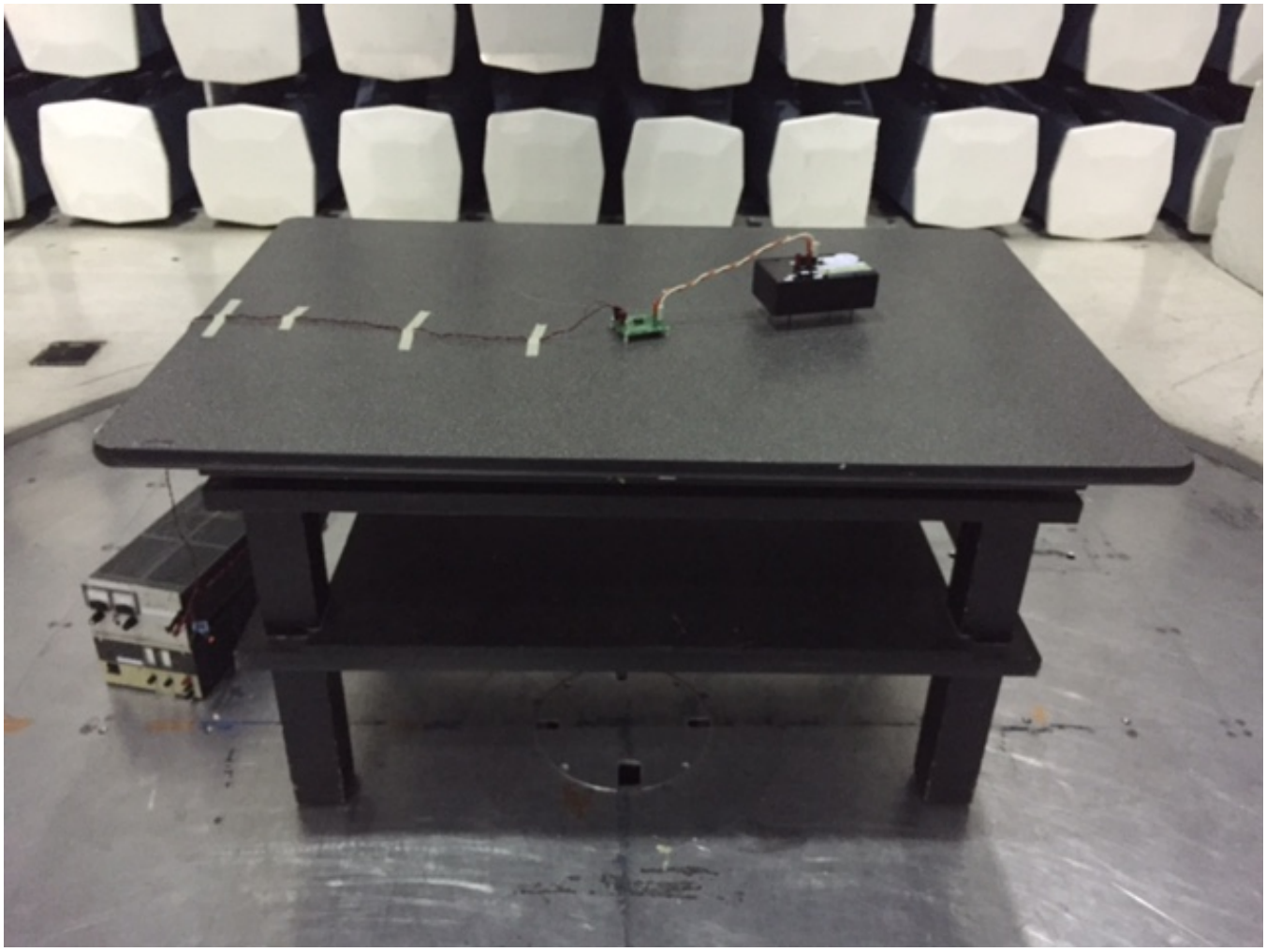

Figure 3 - Radiated Emissions Test Setup 30 - 1000 MHz - Front

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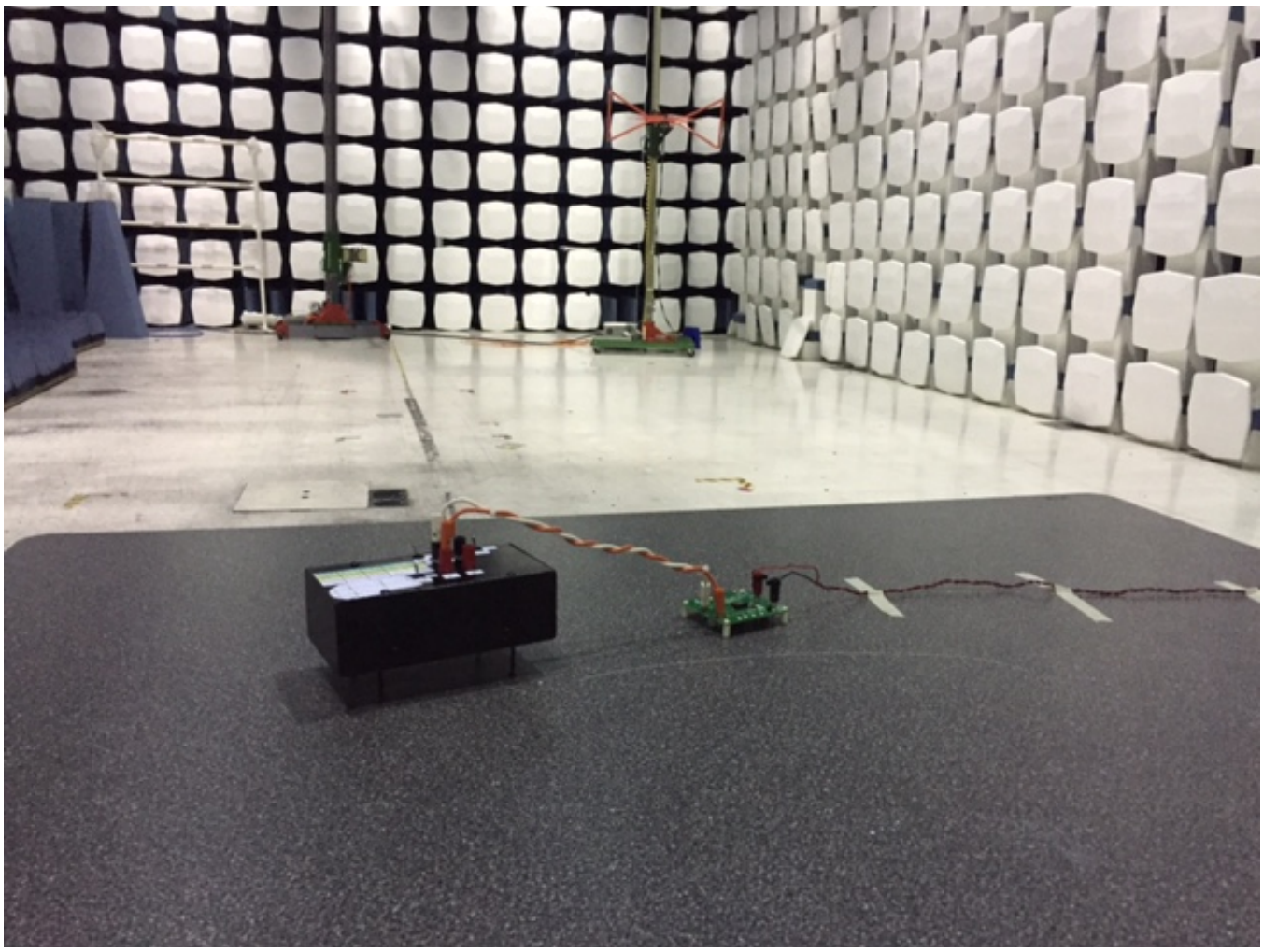

Figure 4 - Radiated Emissions Test Setup 30 - 1000 MHz – Back

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Appendix A

5 Test Plan

This test report is intended to follow the test plan outlined herein unless otherwise stated. The test plan provides product information, reference standards, and testing details. The product information was provided by the client. Test procedure information will reference standards or internal TUV Rheinland NA procedures.

5.1 General Information

Client	Linear Technology Corporation
Address	1630 McCarthy Blvd.
	Milpitas, CA 95035-7417 U.S.A.
Contact Person	Jason Sekanina
Telephone	408-432-1900, x3563
e-mail	jsekanina@linear.com

5.2 EUT Designation

Model Name	LTM4651

5.3 EUT Description

DC/DC µModule Regulator LTM4651 installed on Demo Board 2328A

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5.4 Equipment Under Test (EUT) Description

The LTM®4651 is an ultralow noise, 58V, 24W DC/DC µModule® inverting-topology regulator. It regulates a negative output voltage (V_{OUT}–) from a positive input supply voltage (V_{IN}), and is designed to meet the radiated emissions requirements of EN55022. Conducted emission requirements can be met by adding standard filter components.

Included in the package are the switching controller, power MOSFETs, inductor, filters and support components. The LTM4651 can regulate V_{OUT}– to a value between 0V and –26.5V, provided that its input and output voltages adhere to the safe operating area criteria of the LTM4651: $V_{IN}+|V_{OUT}–| \leq 58V$. A switching frequency range of 250kHz to 3MHz is supported (400kHz default) and the module can synchronize to an external clock.

Despite being an inverting-topology regulator, no level-shift circuitry is needed to interface to the LTM4651's RUN, PGOOD or MD/CLKIN pins; those pins are referenced to GND.

The LTM4651 is offered in a 15mm × 9mm x 5.01mm BGA package with SnPb or RoHS compliant terminal finish.

5.5 Product Environment(s)

☐	**Domestic/Residential**	☐	**Hospital**
☐	**Light Industrial/Commercial**	☐	**Small Clinic**
☐	**Industrial**	☐	**Doctor's office**
☐	**Telecommunications Center**	☐	**Other than Telecommunications Center**
☒	**Other**	**SMT Electronics and Subassemblies**	

*Check all that apply

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5.6 EUT Electrical Power Information

Name	Type	Voltage		Frequency	Current	Notes
		Min	Max			
LTM4651	DC/DC	3.6	58	250kHz-3MHz	up to 4A	
Notes						

Power Supply *(check all that apply)*	Operating Voltage 3.6V-58V Operating Frequency 1.2MHz Multiple Cords? ☐ Yes how many Ⅹ No Current *(Max)* 4 (A) Power Consumption *(Max loaded)* 6 (W)

5.7 EUT Clock/Oscillator Frequencies

Reference Designation	Speed (MHz)	Type
N/A		☐ Oscillator ☐ Microprocessor

5.7.1 Radiated Emissions, Upper Frequency

☒	**Less than 108 MHz**	**Scan to 1 GHz**
☐	**Less than 500 MHz**	**Scan to 2 GHz**
☐	**Less than 1000 MHz**	**Scan to 5 GHz**
☐	**Greater than 1000 MHz**	**Scan to 5th Harmonic or 40 GHz (whichever is lower)**

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5.8 EUT Modes of Operation

LTM4653 Test Conditions

Vin (V)	Vout (V)	Iout (A)	R load (Ohm)
12	-24	1	24
25	-24	2	12
34	-24	2	12
12	-12	2	6

5.9 Electrical Support Equipment

Type	Manufacture	Model	Serial Number
Power Supply	Lambda	LK345A	001856
Load Resistors	N/A	N/A	N/A

5.10 EUT Equipment/Cabling Information

EUT Port	Connected To	Location	Cable Type		
			Length	Shielded	Bead
VIN/GND	VIN/GND	Input terminals	1.5	No	No
VOUT/GND	Resistor Load	Output terminals	0.35	No	No

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5.1 EUT Test Program

None

5.2 Monitoring of EUT during Testing

For Emissions testing, the EUT output voltage is monitored during the test.

5.3 EUT Configuration

5.3.1 Description

Configuration	Description
Standard	DC/DC µModule Regulator LTM4651 installed on Demo Board 2328A
Notes	All configurations tested with a resistive load.

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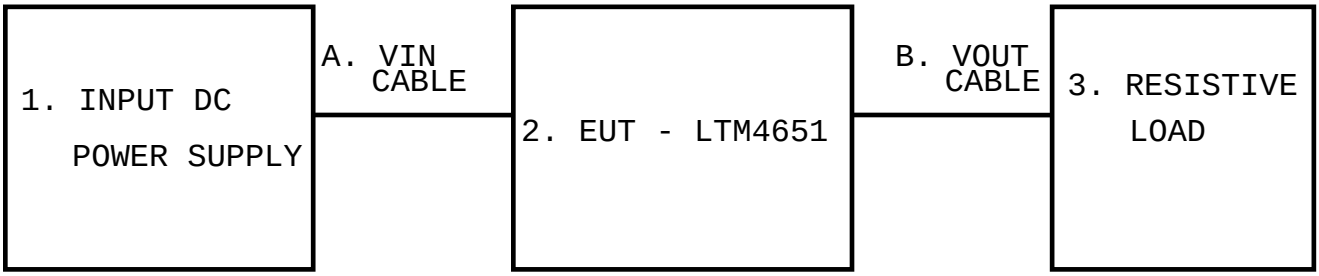
5.3.2 Block Diagram



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5.4 Emissions

5.4.1 Radiated Emissions

Final Radiated Emissions Test Setup

Standard	EN 55022:2006 +A1:2007			**TUV Test Procedure**	QP093006
Limit	Class B	**Emissions Verification**			Emissions Under Limit
Frequency Range	30 – 1000 MHz	**Ant Dist**	10m	**Det**	QP 30 – 1000 MHz,
Scan #1	Configuration 1 (30 – 1000 MHz)				
Configuration	Basic				

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END OF REPORT

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