

Test Report # TR 318008-1

Equipment Under Test: Trigger Box

Test Date(s): 15, 16, 21 February and 2, 15 March, 30 April, and 1 May, 2018


Prepared for: L3 Mobile-Vision, Inc
Attn: Leonid Y. Ayzenshtat
400 Commons Way
Rockaway, NJ 07866

Report Issued by: Laura Zehnder, EMC Engineer

Signature: 

Date: 4 May 2018

Report Reviewed by: Adam Alger, Quality Manager

Signature: 

Date: 05/03/2018

Report Constructed by:

Signature: 

Date: 4 May 2018

This test report may not be reproduced, except in full, without written approval of Laird Technologies, Inc.

Company: L3 Mobile-Vision, Inc.	Page 1 of 36	Name: Trigger Box
Report: TR 318008		Model: ZAS-TM010001
Job: C-2932		Serial: 100000001

CONTENTS

Contents	2
Laird Technologies Test Services in Review	3
1 Test Report Summary	4
2 Client Information	5
2.1 Equipment Under Test (EUT) Information	5
2.2 Product Description	5
2.3 Modifications Incorporated for Compliance.....	5
2.4 Deviations and Exclusions from Test Specifications	5
2.5 EUT Power.....	5
2.6 Programming the EUT	5
2.7 Antenna options.....	6
3 References	7
4 Uncertainty Summary	8
5 Test Data	9
5.1 Antenna Port Conducted Emissions.....	9
6 Radiated Spurious Emissions Measurements.....	25
7 Revision History	36

Laird Technologies Test Services in Review

The Laird Technologies, Inc. laboratory located at W66 N220 Commerce Court Cedarburg, Wisconsin, 53012 USA is recognized through the following organizations:



A2LA – American Association for Laboratory Accreditation

Accreditation based on ISO/IEC 17025: 2005 with Electrical (EMC) Scope

A2LA Certificate Number: 1255.01

Scope of accreditation includes all test methods listed herein, unless otherwise noted.



Federal Communications Commission (FCC) – USA

Accredited recognition of two 3 meter Semi-Anechoic Chambers

Accredited Test Firm Registration Number: 953492



**Government
of Canada**

Innovation, Science and Economic Development Canada

ISED Site listing of two 3 meter Semi-Anechoic Chambers based on RSS-GEN – Issue 4

File Number: IC 3088A-2

File Number: IC 3088A-3

Company: L3 Mobile-Vision, Inc.	Page 3 of 36	Name: Trigger Box
Report: 318008-1		Model: ZAS-TM010001
Job: C-2932		Serial: 1000000001

1 TEST REPORT SUMMARY

During 15, 16, 21 February and 2, 15 March, 30 April, and 1 May, 2018 the Equipment Under Test (EUT), Trigger Box, as provided by L3 Mobile-Vision, Inc. was tested to the following FCC and ISED requirements:

Operation in the 2.400 – 2.4835 GHz band

FCC	ISED Canada	Test Description	Measurement Procedure	Compliant
15.247 (a)(2)	RSS-247 5.2 (a)	Digital Modulation System 6 dB bandwidth	ANSI C63.10 Section 11.8	Yes
2.1049	RSS-GEN 6.6	Occupied Bandwidth	ANSI C63.10 Section 6.9	Yes
15.247 (b)(3)	RSS-247 5.4 (d)	Maximum Conducted Output Power	ANSI C63.10 Section 11.9	Yes
15.247 (e)	RSS-247 5.2 (b)	Digital Modulation System Power Spectral Density	ANSI C63.10 Section 11.10	Yes
15.247 (d)	RSS-247 5.5	RF Spurious Emissions at the Transmitter Antenna Terminal	ANSI C63.10 Section 11.11	Yes
15.247 (d)	RSS-GEN 8.10	Spurious Radiated Emissions in Restricted Bands	ANSI C63.10 Section 11.12	Yes
2.1055 (d)	RSS-GEN 6.11	Frequency Stability	ANSI C63.10 Section 6.8	Yes

Notice:

The results relate only to the item tested and described in this report. Any modifications made to the equipment under test after the specified test date(s) may invalidate the data herein.

If the resulting measurement margin is seen to be within the uncertainty value, as listed in this report, the possibility exists that this unit may not meet the required limit specification if subsequently tested.

2 CLIENT INFORMATION

Company Name	L3 Mobile-Vision, Inc.
Contact Person	Leonid Y. Ayzenshtat
Address	400 Commons Way Rockaway, NJ 07866

2.1 Equipment Under Test (EUT) Information

The following information has been supplied by the client

Product Name	Trigger Box
Model Number	ZAS-TM010001
Serial Number	10000000001
FCC ID IC	2AOSO-TB-100 23745-TB100

2.2 Product Description

The Trigger Box device is for use in law enforcement vehicles. This device will be mounted in a vehicle either under the dash or in the trunk. This device will enable BLE triggering between the BWX-100 body worn cameras and the car's video recording system.

2.3 Modifications Incorporated for Compliance

Added ferrite FairRite part number 2675102002 to power cable.

2.4 Deviations and Exclusions from Test Specifications

None noted at time of test

2.5 EUT Power

The EUT is intended to run off a standard 12V car battery. All testing was performed with the EUT powered via a 12 VDC power supply.

2.6 Programming the EUT

The EUT was programmed using a PuTTY interface using WiLink 8.0 Bluetooth Vendor-Specific HCI Commands.

2.7 Antenna options

The manufacturer wishes to allow the customer to use the following antennas.

1. Walsin Technology / RFDPA391300SBAB8G1 – Gain 9dBi
2. Nearson Inc. / S171AH-2450S – Gain 7dBi
3. Laird Technologies / IN24-5RD-RSMA – Gain 5.5dBi
4. Nearson Inc. / S131AH-2450S – Gain 5dBi
5. Pulse Larsen / W1037 – Gain 3.2dBi
6. Laird Technologies / 001-0001 – Gain 2dBi

Company: L3 Mobile-Vision, Inc.	Page 6 of 36	Name: Trigger Box
Report: 318008-1		Model: ZAS-TM010001
Job: C-2932		Serial: 1000000001

3 REFERENCES

Publication	Edition	Date
FCC Part 15		2018
RSS 247		2014
RSS Gen	2	2017
ANSI C63.10		2013

4 UNCERTAINTY SUMMARY

Using the guidance of the following publications the calculated measurement uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level, using a coverage factor of k = 2.

References	Version / Date
CISPR 16-4-1	Ed. 2 (2009-02)
CISPR 16-4-2	Ed. 2 (2011-06)
CISPR 32	Ed. 1 (2012-01)
ANSI C63.23	2012
A2LA P103	February 4, 2016
A2LA P103c	August 10, 2015
ETSI TR 100-028	V1.3.1 (2001-03)

Measurement Type	Configuration	Uncertainty ±
Radiated Emissions	Biconical Antenna	5.0 dB
Radiated Emissions	Log Periodic Antenna	5.3 dB
Radiated Emissions	Horn Antenna	4.7 dB
AC Line Conducted Emissions	Artificial Mains Network	3.4 dB
Telecom Conducted Emissions	Asymmetric Artificial Network	4.9 dB
Disturbance Power Emissions	Absorbing Clamp	4.1 dB
Radiated Immunity	3 Volts/meter	2.2 dB
Conducted Immunity	CDN/EM/BCI	2.4/3.5/3.4 dB
EFT Burst/Surge	Peak pulse voltage	164 volts
ESD Immunity	15 kV level	1377 Volts

Parameter	ETSI U.C. ±	U.C. ±
Radio Frequency, from F0	1x10 ⁻⁷	0.55x10 ⁻⁷
Occupied Channel Bandwidth	5 %	2 %
RF conducted Power (Power Meter)	1.5 dB	1.2 dB
RF conducted emissions (Spectrum Analyzer)	3.0 dB	1.7 dB
All emissions, radiated	6.0 dB	5.3 dB
Temperature	1° C	0.65° C
Humidity	5 %	2.9 %
Supply voltages	3 %	1 %

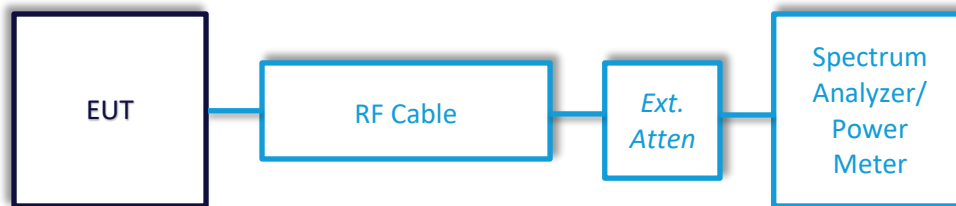
Company: L3 Mobile-Vision, Inc.	Page 8 of 36	Name: Trigger Box
Report: 318008-1		Model: ZAS-TM010001
Job: C-2932		Serial: 1000000001

5 TEST DATA

5.1 Antenna Port Conducted Emissions

Description of Measurement	<p>The direct measurement of emissions at the antenna port of the EUT is achieved by use of a RF connection to a spectrum analyzer or power meter.</p> <p>The cable and attenuator factors are loaded into the analyzer or power meter allowing for direct measurement readings without the need for further corrections.</p>
Example Calculations	<p>Measurement (dBm) + Cable factor (dB) + External Attenuator (dB) = Corrected Reading (dBm)</p> <p>Margin (dB) = Limit (dBm) – Corrected Reading (dBm)</p>

Block Diagram



5.1.1 Antenna Port Conducted Emissions

Operator	Zach Wilson
QA	Laura Zehnder
Test Date	3/2/2018
Location	Radio Benches
Temp. / R.H.	70F / 38%
Requirement	FCC 15.247
Method	ANSI C63.10

Test Parameters

Channels	0 (2402 MHz), 19 (2440 MHz), 39 (2480 MHz)
EUT	Transmitting modulated carrier.
EUT	12 VDC Input Power

Instrumentation



Date: 23-Feb-2018 Test: Conducted Measurements Job: C-2932
 PE: Laura Zehnder Customer: L3 Technologies Quote: 318008

No.	Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due Date	Equipment Status
1	EE 960088	Analyzer - EMI Receiver	Agilent	N9038A	MY51210138	3/2/2017	3/2/2018	Active Calibration
2	AA 960171	Cable	A.H. Systems, Inc	SAC-26G-6	386	11/15/2017	11/15/2018	Active Verification

5.1.1.1 Occupied Bandwidth

Test Parameters

Requirement	FCC 15.247(a)(2) & RSS-247 5.2(a)
Method	ANSI C63.10 Section 11.8.1, Option 1
Settings	RBW = 100 kHz VBW= 1 MHz

Limits:

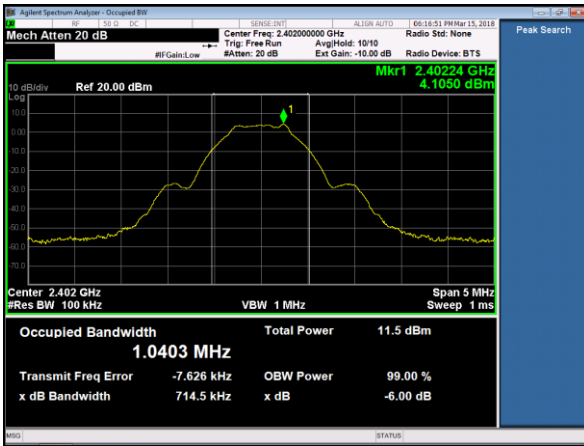
The minimum 6 dB bandwidth shall be at least 500 kHz

Table

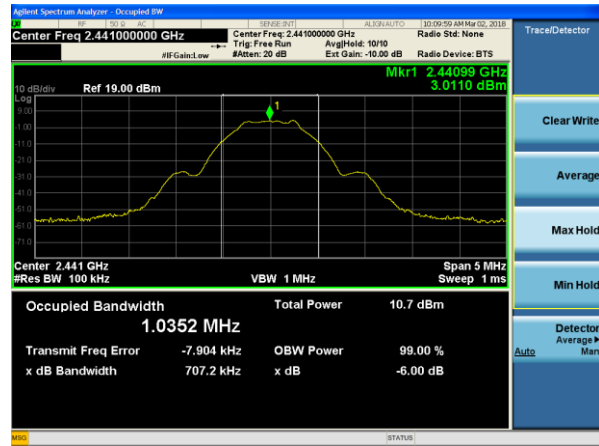
6 dB Bandwidth	
Channel	Bandwidth (kHz)
0	714.3
19	707.2
39	727.8

Plots

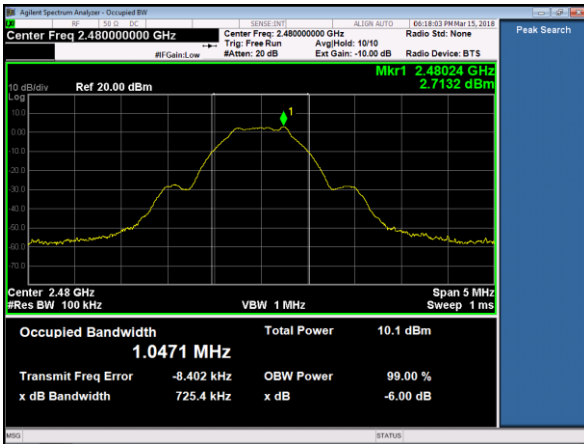
Channel 0



Channel 19



Channel 39

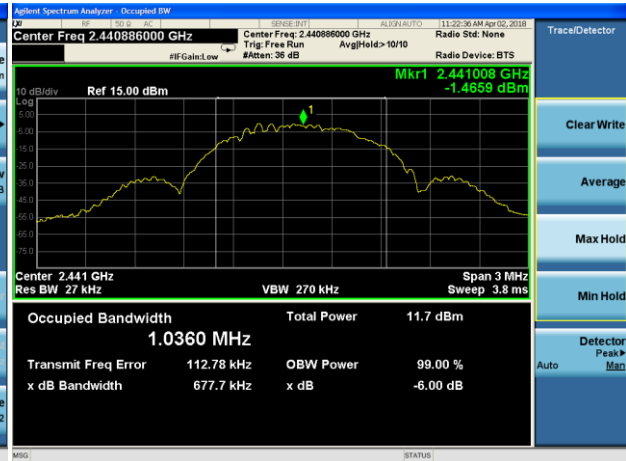


99% Bandwidth	
Channel	Bandwidth (MHz)
0	1.0361
19	1.0360
39	1.0386

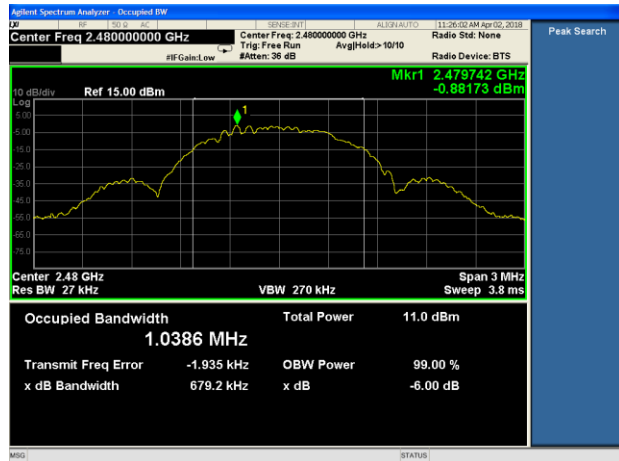
Channel 0



Channel 19



Channel 39



5.1.1.2 Frequency Stability

Requirement	FCC 2.1055(d)
Method	ANSI C63.10
Settings	RBW = 100 kHz VBW = 300 kHz

	Voltage			Frequency Deviation
	10.2 V	12.0 V	13.8 V	
Low	2402241132 Hz	2402241518 Hz	2402241192 Hz	386 Hz
Mid	2441240227 Hz	2441240163 Hz	2441240133 Hz	94 Hz
High	2480240618 Hz	2480240657 Hz	2480240737 Hz	119 Hz

5.1.1.3 Output Power

Requirement	FCC 15.247(b)(3) and (4) & RSS-247 5.4(d)
Method	ANSI C63.10 Section 11.9.1.1
Settings	RBW = 3 MHz VBW= 50 MHz

Limits:

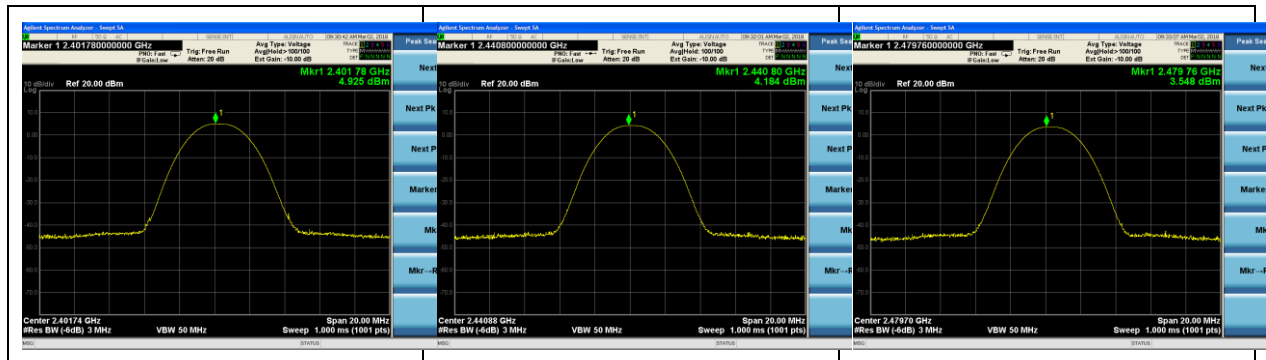
The maximum peak conducted output power for systems using digital modulation shall not exceed 1W output power.

Table

Output Power			
Channel	Output Power (dBm)	Power Limit (dBm)	Power Margin (dBm)
0	4.9	27.0	22.1
19	4.2	27.0	22.8
39	3.5	27.0	23.5

Note: Power limit was reduced by 3 dB (from 30 dB stated in FCC 15.247) as the max antenna gain option is 9 dBi.

Plots



5.1.1.4 Power Spectral Density

Requirement	FCC 15.247 (e) & RSS-247 5.2(b)
Method	ANSI C63.10 Section 11.10.2
Settings	RBW = 3 kHz VBW= 9.1 kHz

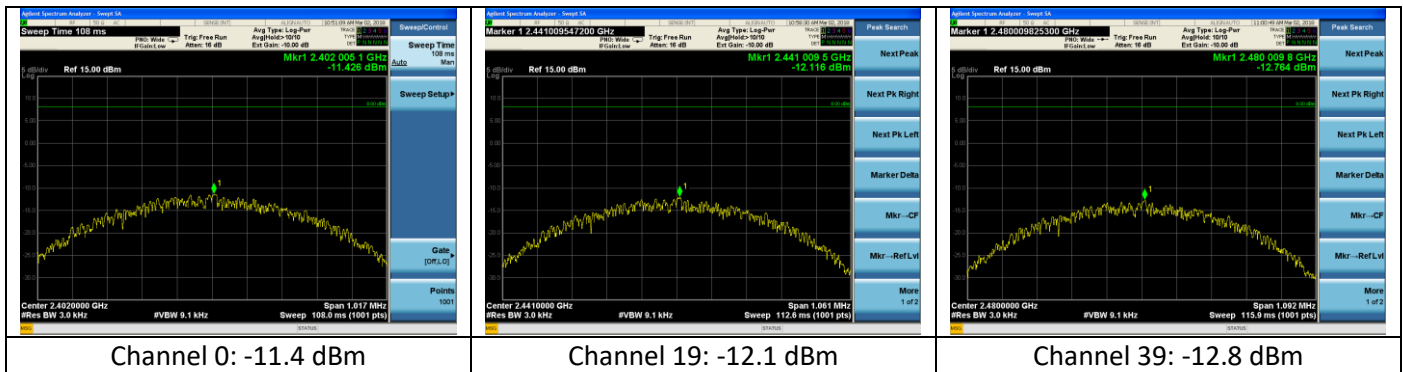
Limits:

15.247(e) The power spectral density shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Table

PSD					
Channel	Span (kHz)	DTS Bandwidth (kHz)	Peak 3kHz Reading (dBm)	Limit (dBm)	Limit Margin (dB)
0	1071.5	714.3	-11.4	8.0	19.4
19	1060.8	707.2	-12.1	8.0	20.1
39	1091.7	727.8	-12.8	8.0	20.8

Plots



5.1.2 Spurious Emissions

5.1.2.1 Conducted Spurious Emissions In Non-Restricted Frequency Bands

Requirement	FCC 15.209 and 15.247(d) & RSS-247 5.5
Method	ANSI C63.10 Section 11.11 & 11.12
Settings	RBW = 100 kHz VBW= 300 kHz

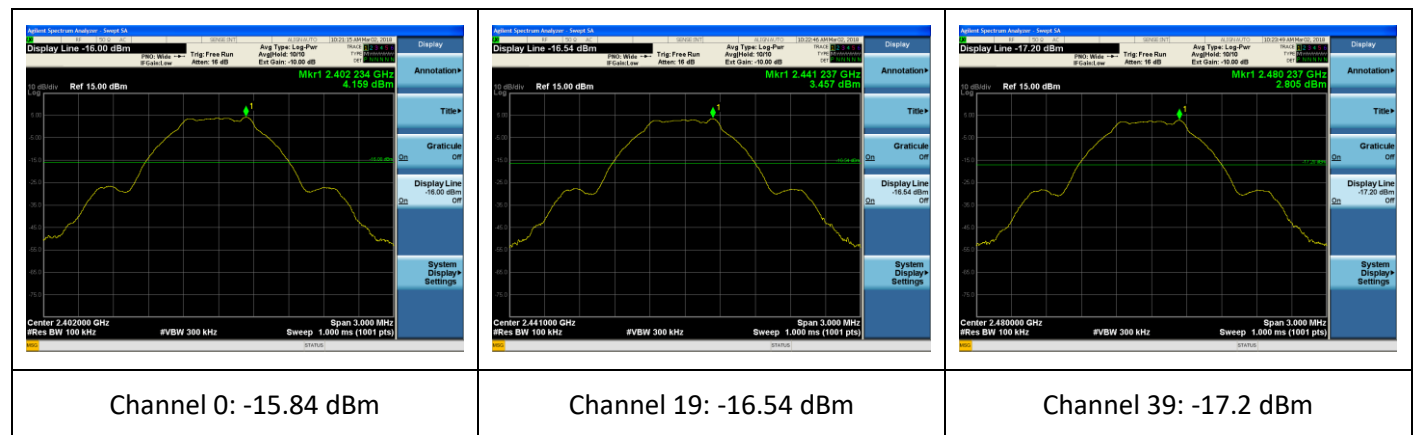
Limits:

In any 100 kHz bandwidth outside the frequency band in which the digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

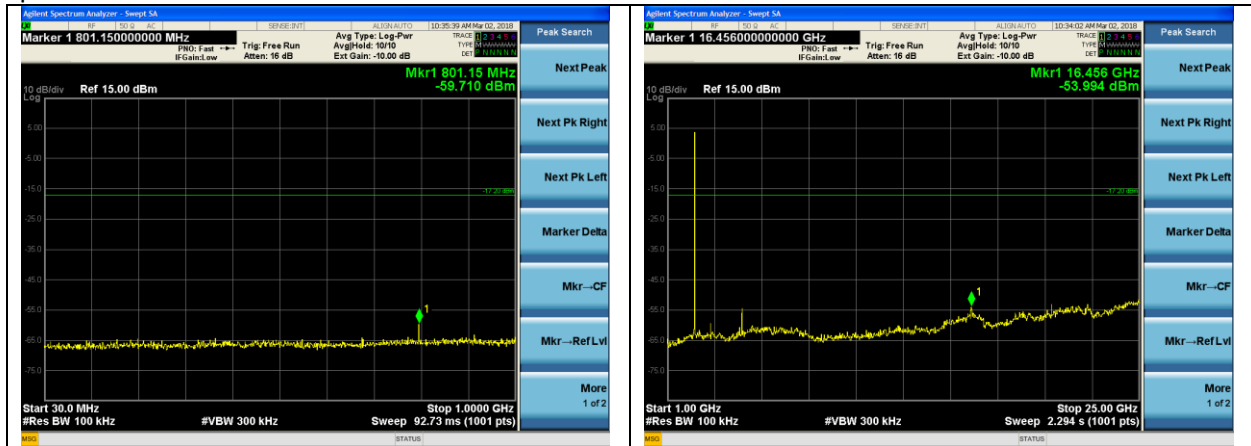
Note: all spurious emissions in plots on page 14 have margins greater than 9 dB (the gain of the highest gain antenna available for the EUT).

Plots

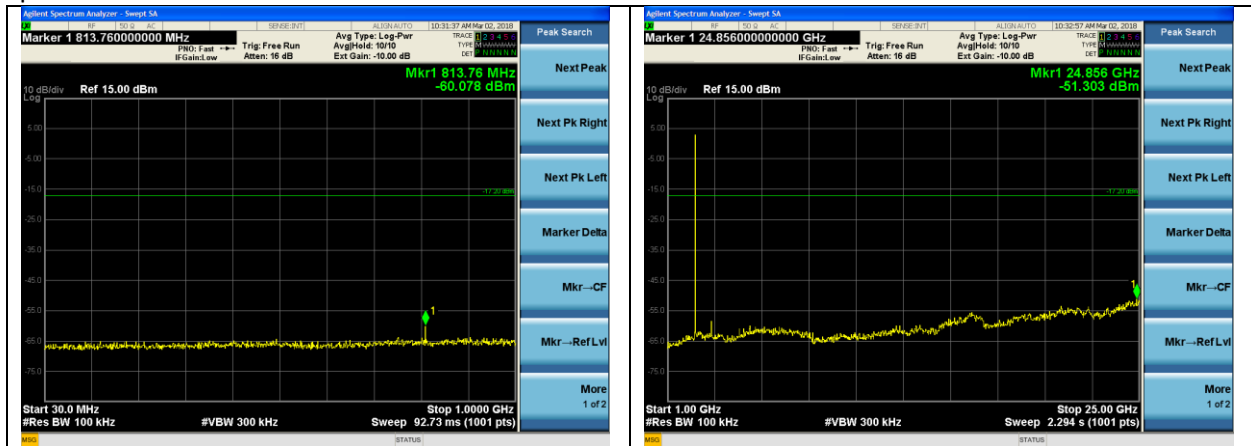
Fundamental emissions reference plots:



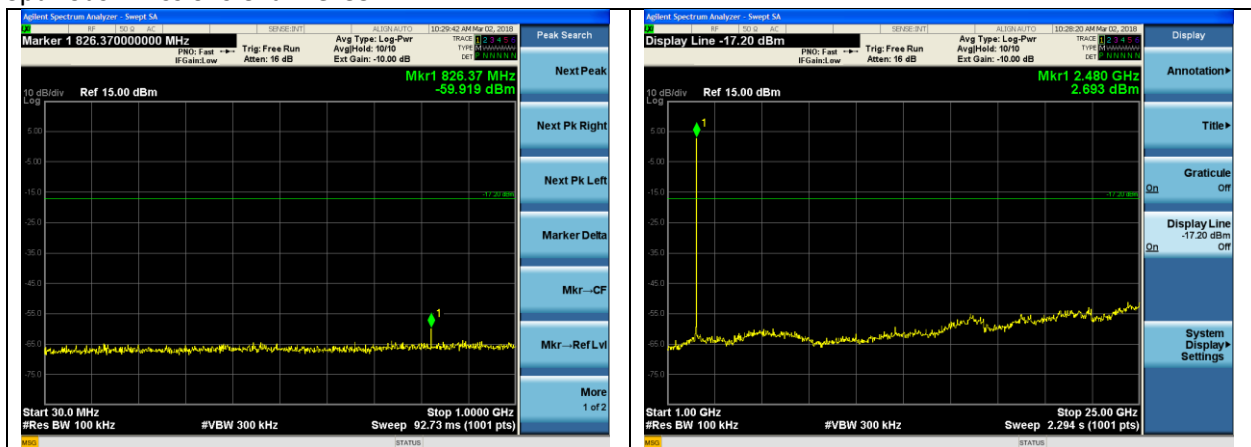
Spurious Emissions Channel 0



Spurious Emissions Channel 19



Spurious Emissions Channel 39



5.1.2.2 Conducted Spurious Emissions in Restricted Frequency Bands

Requirement	FCC 15.247 (d)
Method	ANSI C63.10 Section 11.12.2.2
Settings	Below 1 GHz RBW = 100 kHz VBW= 300 kHz Above 1 GHz: RBW = 1 MHz VBW = 3 MHz
Sample Calculation (1)	Converting EIRP to an equivalent electric field strength: $E = \text{EIRP} - 20 \log d + 104.8$ $E = -556.66 \text{ (dBm)} - 20 \log (3) + 104.8 = 38.6 \text{ dB}\mu\text{V/m}$
Sample Calculation (2)	Margin = Limit – E Field $54.00 \text{ dB}\mu\text{V/m} - 38.60 \text{ dB}\mu\text{V/m} = 15.40 \text{ dB}$

Limits:

Emissions that fall within the restricted bands must comply with limits specified in 15.209(a).

Average Measurement Test Data

Channel	Frequency (MHz)	Power (dBm)	Gain (dBi)	EIRP (dBm)	Ground Reflection Factor	EIRP (new)	Equivalent E Field (dB μ V/m)	Applicable Limit (dB μ V/m)	Margin (dB)
0	2389	-65.66	9	-56.66	0	-56.66	38.60	54.00	15.40
0	4804	-51.03	9	-42.03	0	-42.03	53.23	54.00	0.77
39	4882	-55.54	9	-46.54	0	-46.54	48.72	54.00	5.28
80	2483	-61.44	9	-52.44	0	-52.443	42.81	54.00	11.19
80	4960	-61.23	9	-52.23	0	-52.23	43.03	54.00	10.97

Peak Measurement Test Data

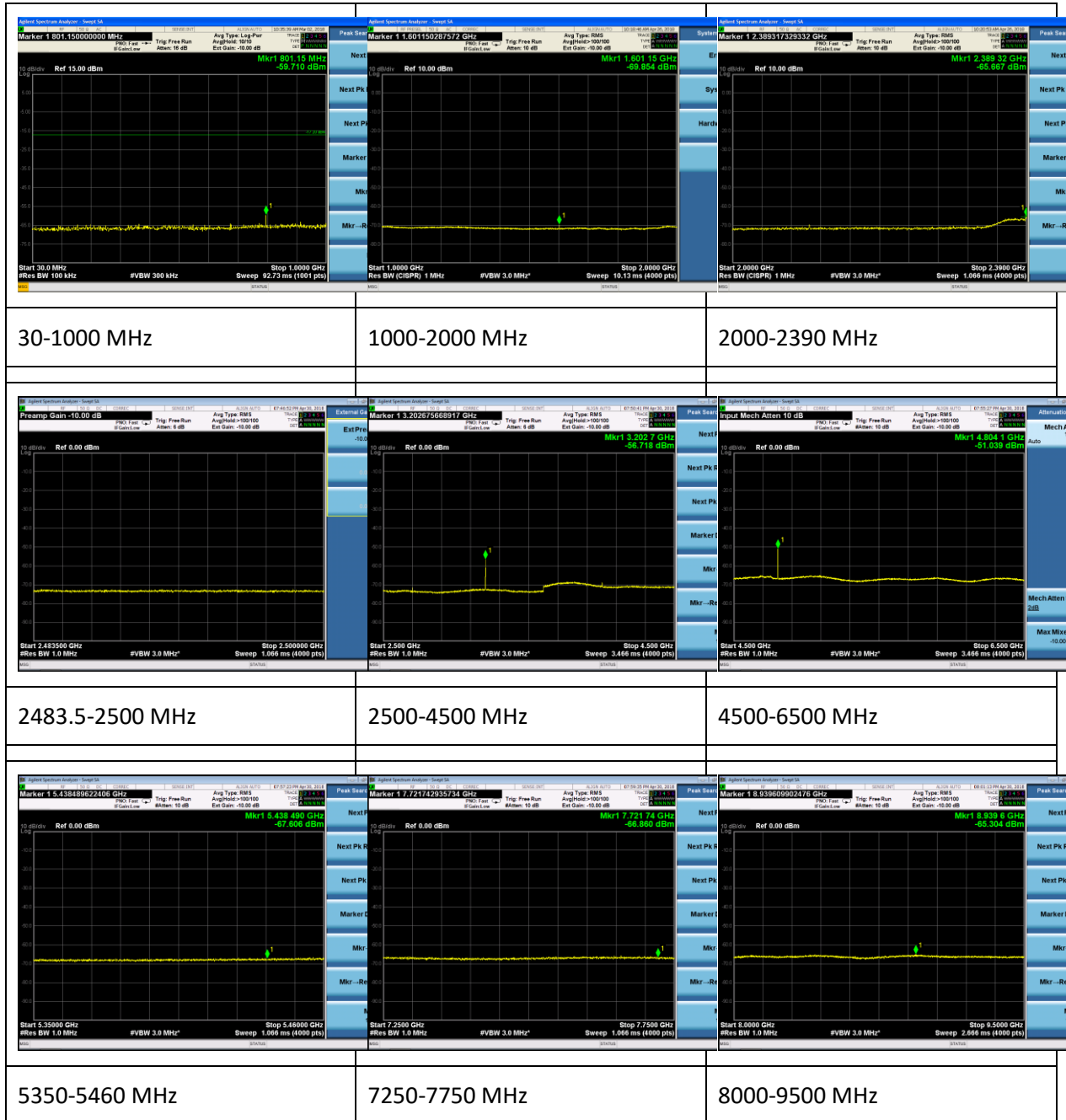
Channel	Frequency (MHz)	Power (dBm)	Gain (dBi)	EIRP	Ground Reflection Factor	EIRP (new)	Equivalent E Field (dB μ V/m)	Applicable Limit (dB μ V/m)	Margin (dB)
0	2389	-53.35	9	-44.35	0	-44.35	50.90	74.00	23.09
0	4804	-46.39	9	-37.39	0	-37.39	57.86	74.00	16.13
39	4882	-48.41	9	-39.41	0	-39.41	55.84	74.00	18.15
80	2483	-49.42	9	-40.42	0	-40.42	54.83	74.00	19.16
80	4960	-51.29	9	-42.29	0	-42.29	52.96	74.00	21.03

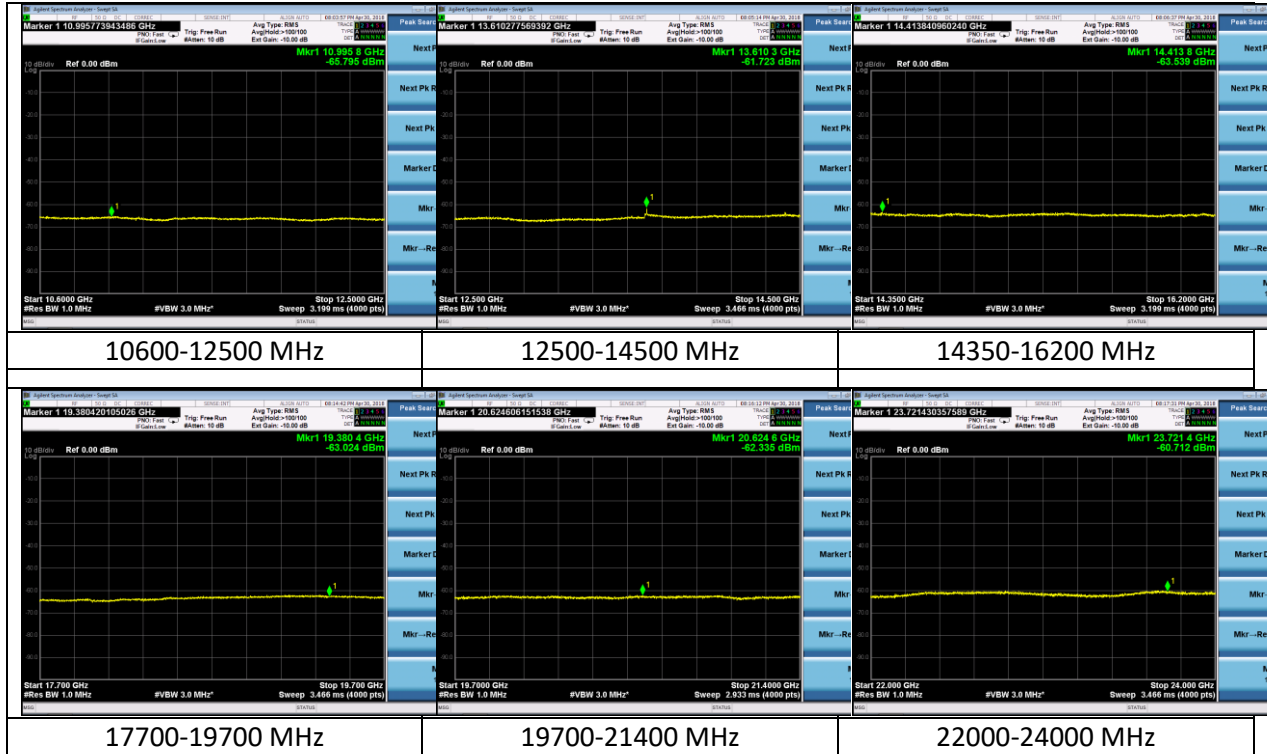
All other emissions are lower than the noise floor as demonstrated in the plots below.

Plots

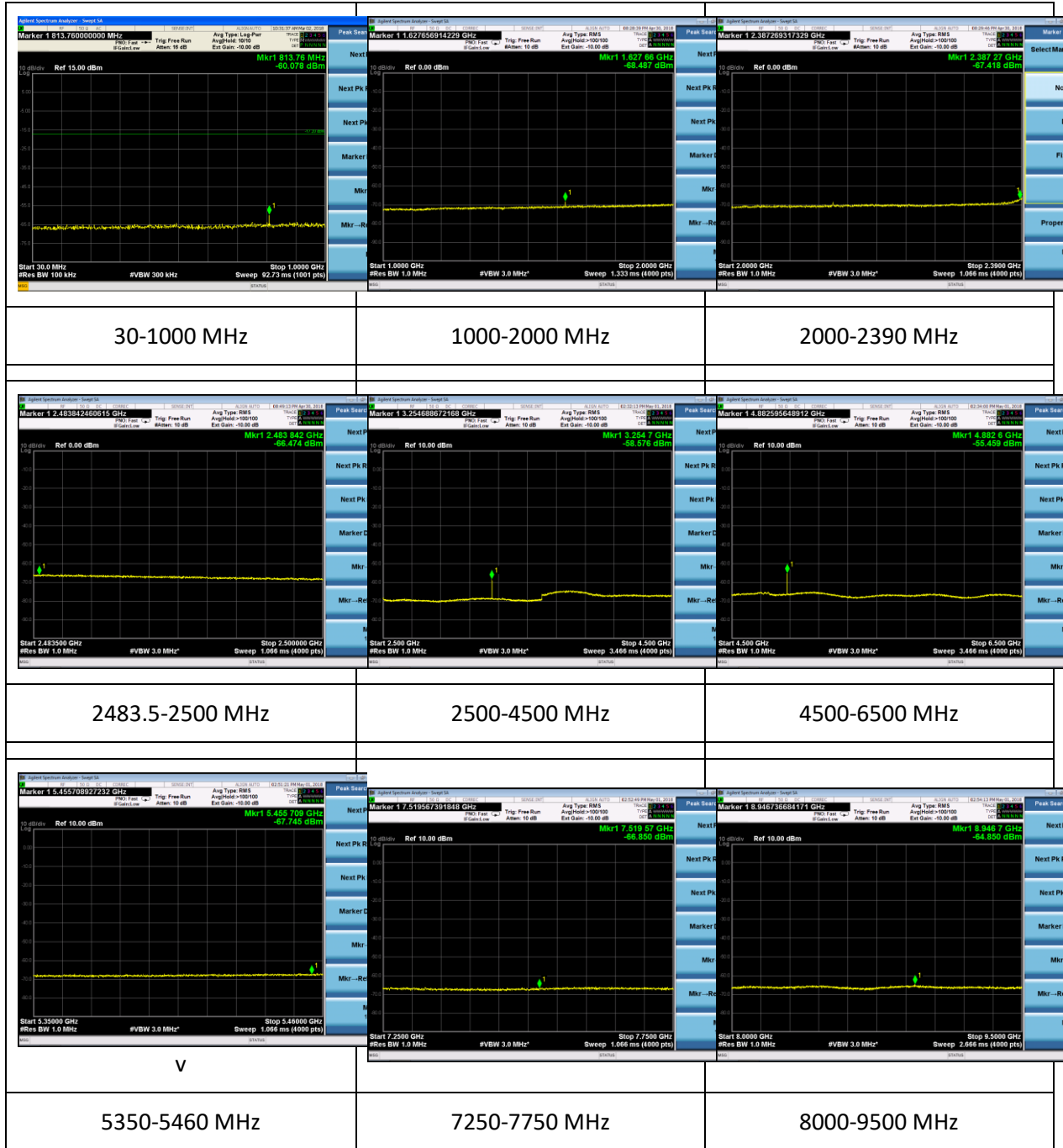
Conducted Spurious Emissions

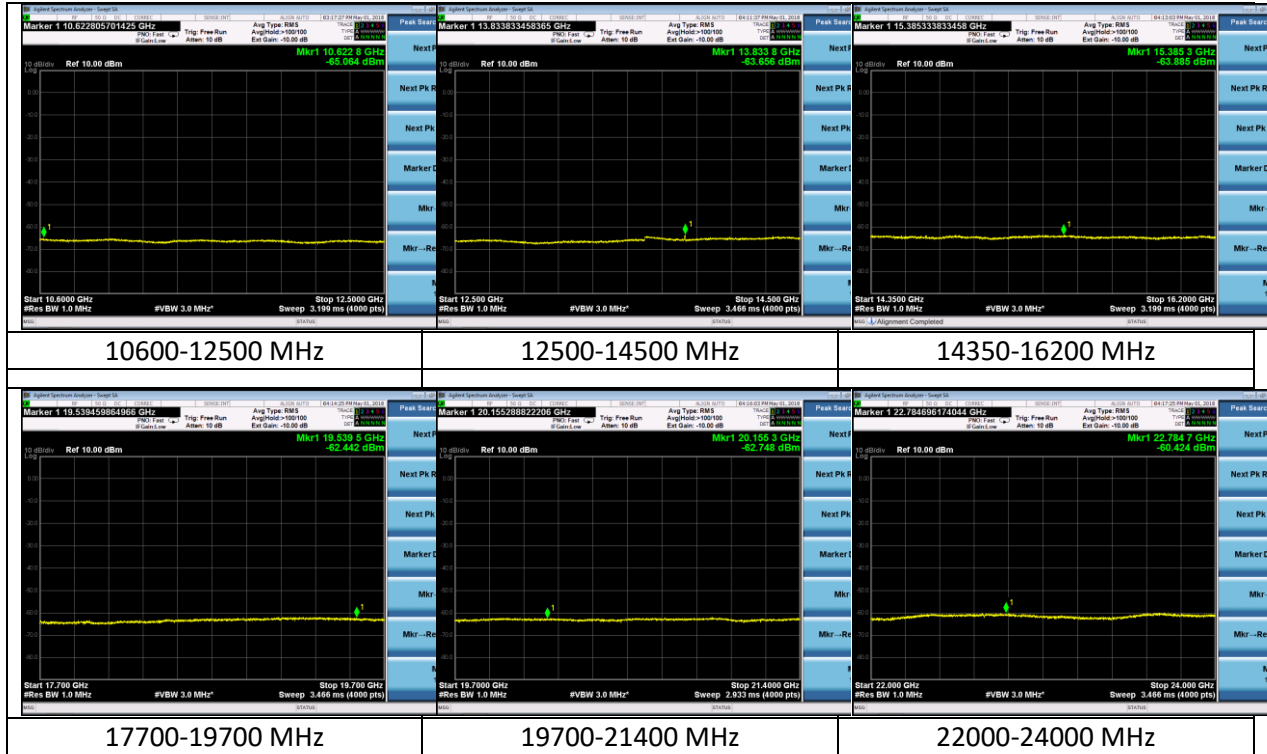
Tx Low Channel (2402 MHz)





Tx Middle Channel (2440 MHz)

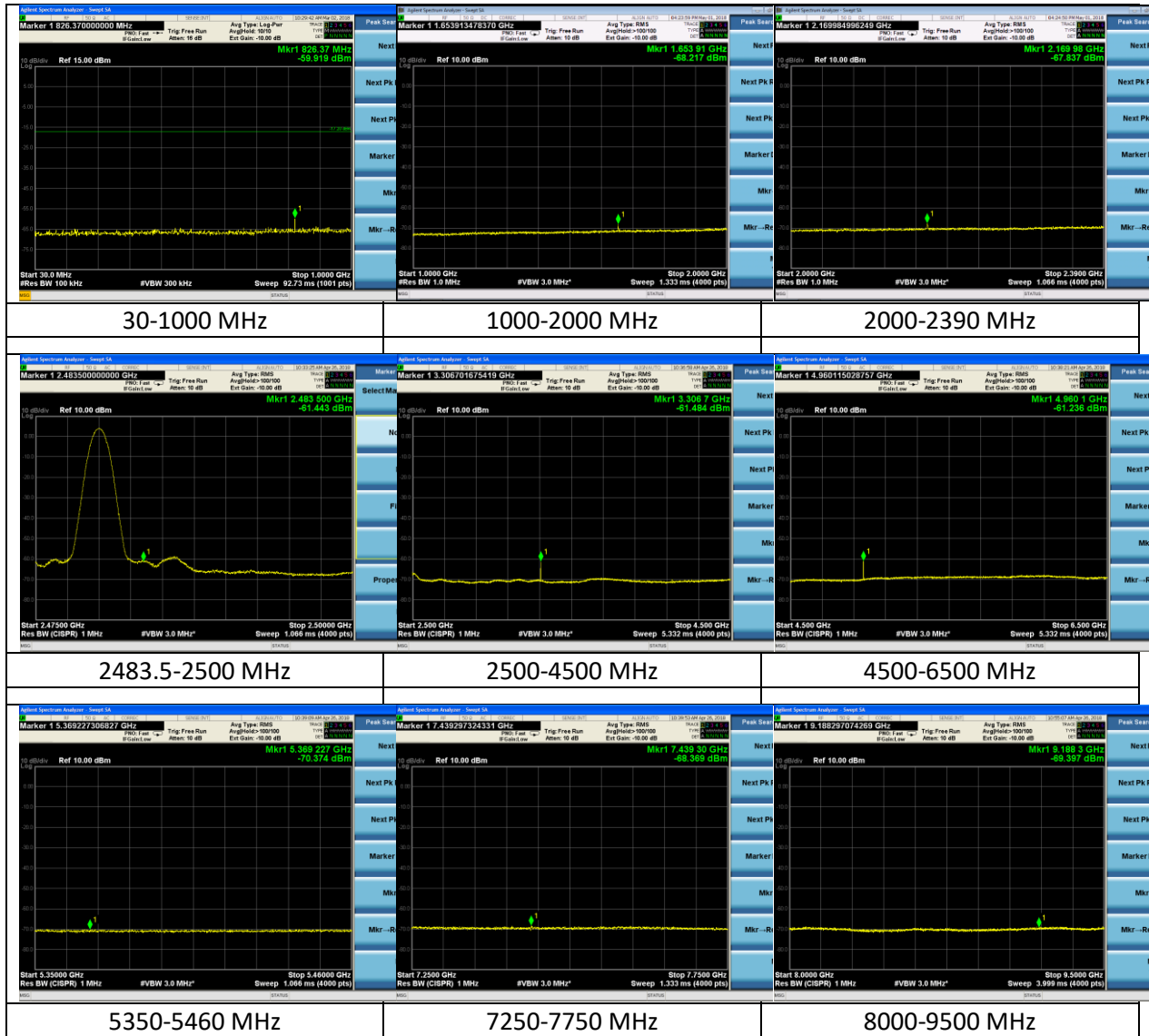




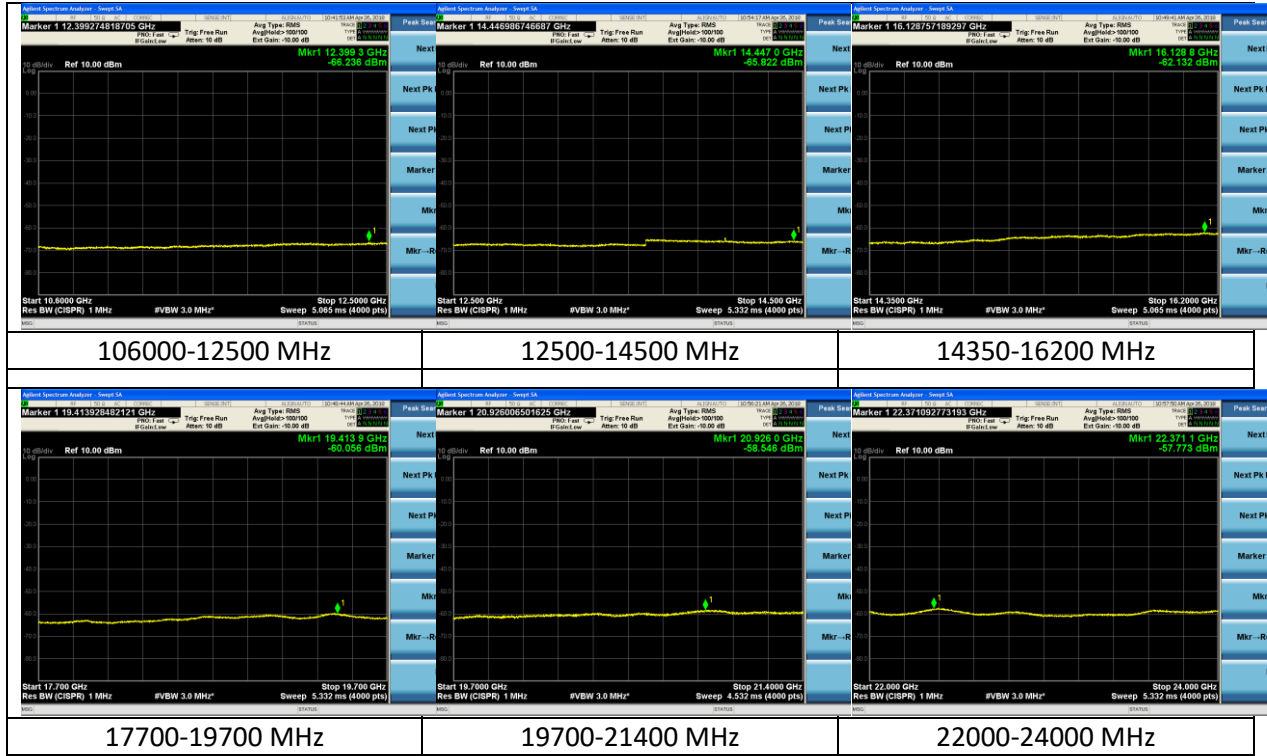
Company: L3 Mobile-Vision, Inc.	Page 22 of 36	Name: Trigger Box
Report: 318008-1		Model: ZAS-TM010001
Job: C-2932		Serial: 100000001



Tx High channel (2480 MHz)



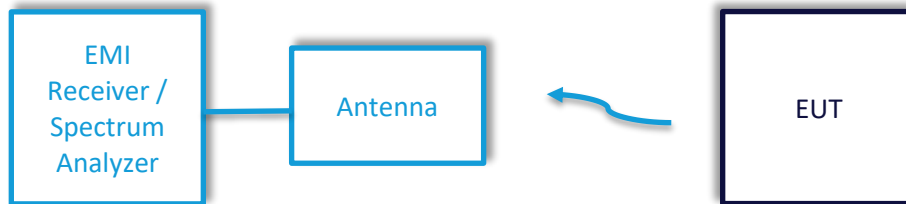
Company: L3 Mobile-Vision, Inc.	Page 23 of 36	Name: Trigger Box
Report: 318008-1		Model: ZAS-TM010001
Job: C-2932		Serial: 100000001



6 RADIATED SPURIOUS EMISSIONS MEASUREMENTS

Description of Measurement	<p>The frequency spectrum is investigated for intentional and / or unintentional signals emanating from the EUT by use of a standardized test site and measurement antenna.</p> <p>The antenna, cable, pre-amp, and other necessary measurement system correction factors are loaded onto the EMI receiver / spectrum analyzer when the measurements are performed allowing the data to be gathered and reported as corrected values.</p> <p>The maximum emissions from the EUT are determined by turn-table azimuth rotation (360°) and scanning of the measurement antenna. Maximized levels are noted at degree values of azimuth, measurement antenna height, and measurement antenna polarity.</p>
Example Calculations	<p>Measurement (dBμV) + Cable factor (dB) + Other (dB) + Antenna Factor (dB/m) = Corrected Reading (dBμV/m)</p> <p>Margin (dB) = Limit (dBμV/m) - Corrected Reading (dBμV/m)</p> <p>Example at 4000 MHz: Reading = 40 dBμV + 3.4 dB + 0.9 dB + 6.5 dB/m = 50.8 dBμV/m Average Limit = 20 log (500) = 54 dBμV/m Margin = 54 dBμV/m - 50.8 dBμV/m = 3.2 dB</p>

Block Diagram



Operator	Laura Zehnder
QA	Aidi Zainal
Test Date	12/21/2018
Location	Chamber 5
Temp. / R.H.	70F / 38%
Requirement	15.209 & RSS GEN 6.13
Method	ANSI C63.10

Limits (at 3 meter measurement distance):

Frequency (MHz)	Field Strength (microvolts/meter)	Field Strength (dBμV/m)
30-88	100	40.0
88-216	150	43.5
216-960	200	46.0
Above 960	500	54.0

Test Parameters

Frequency	30-25000 MHz
Distance	3m
RBW	Below 1 GHz: 120 kHz & Above 1 GHz: 1 MHz
VBW	Below 1 GHz: 1.2 MHz & Above 1 GHz: 3 MHz (Peak Measurements), 30 kHz (Video-Averaged Measurements)
EUT Power	12 VDC
EUT Channels	Low (2402), Mid (2440), High (2480)
Notes	Antenna port terminated via 50Ω SMA Termination. There were no significant differences in emissions signatures when transmitting on different channels or in different positions (EUT Flat, Vertical, Side). All measurements and plots are from the EUT transmitting on channel 19 in flat position, which was determined to be worst case.
Example Calculation	Margin (dB)= QP Limit (dBμV/m) – QP Measurement (dBμV/m) 11.8 (dB)= 40.0 (dBμV/m) – 28.2 (dBμV/m)

Instrumentation



Date : 23-Feb-2018 Test : Radiated Emissions (209) Job : C-2932
 PE : Laura Zehnder Customer : L3 Technologies Quote : 318008

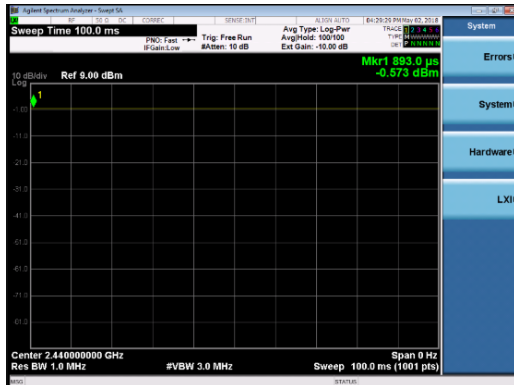
No.	Asset	Description	Manufacturer	Model	Serial	Cal Date	Cal Due Date	Equipment Status
1	EE 960088	Analyzer - EMI Receiver	Agilent	N9038A	MY51210138	3/2/2017	4/26/2018	Active Calibration
2	AA 960195	Antenna - Log Periodic	A.H. Systems, Inc	SAS-512-2	557	1/30/2018	1/30/2019	Active Calibration
3	EE 960159	Antenna - Low Noise Amplifier	Mini-Circuits	ZVA-213X-S+	691801732	3/26/2018	3/26/2019	Active Calibration
4	AA 960158	Antenna - Double Ridge Horn	ETS Lindgren	3117	109300	3/26/2018	3/26/2019	Active Calibration
5	AA 960150	Antenna - Biconical	ETS Lindgren	3110E	0003-3346	3/3/2017	3/13/2018	Active Calibration
6	AA 960174	Antenna - Small Horn	ETS Lindgren	3116C-PA	00206880	5/1/2017	5/1/2018	Active Calibration

Table

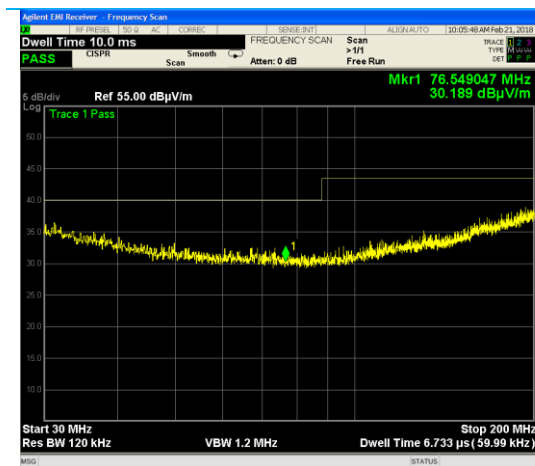
Frequency (MHz)	Azimuth (degrees)	Mast height (cm)	Polarity	Peak (dBμV/m)	Quasi Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)
40	0	100	V	34.1	28.2	40.0	11.8
172	0	100	V	36.3	31.3	43.5	12.2
76	346	108	H	31.6	25.6	43.5	17.9
650	292	118	H	37.5	34.5	47.0	12.5
392	0	106	H	30.5	23.9	47.0	23.1
649	245	109	V	37.4	34.2	47.0	12.8
549	237	107	V	32.9	29.0	47.0	18.1

Plots

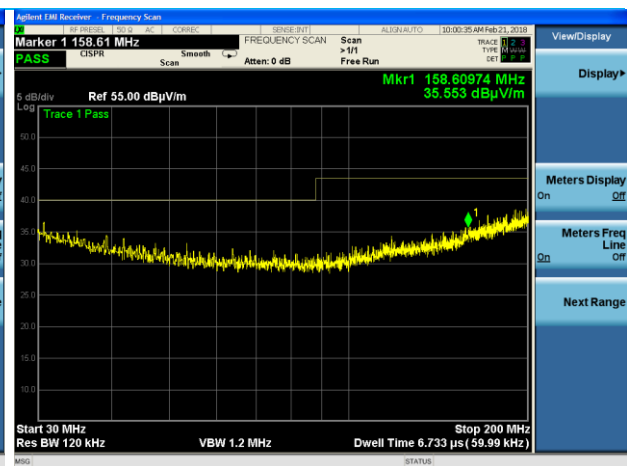
Duty Cycle: 100%



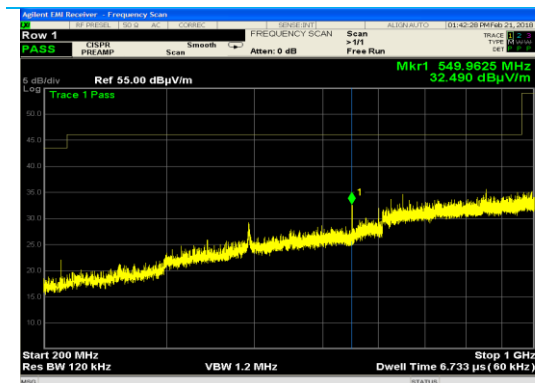
Radiated Emissions



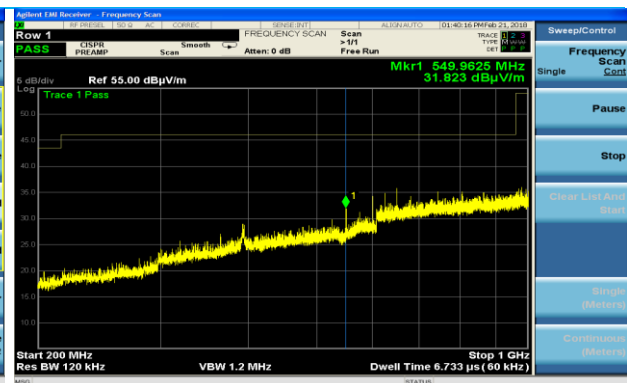
30-200 MHz Horizontal



30-200 MHz Vertical

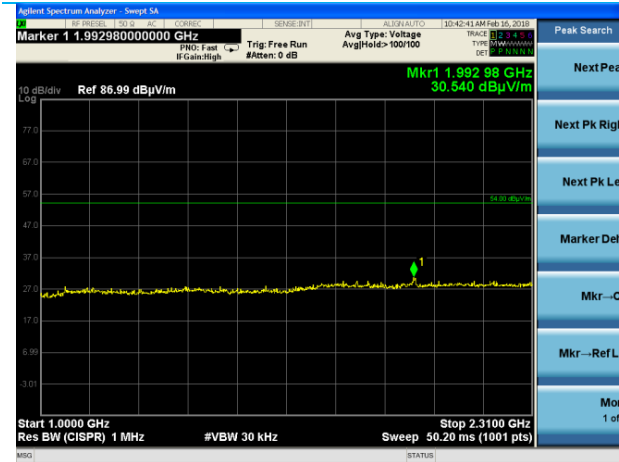


200-1000 MHz Horizontal

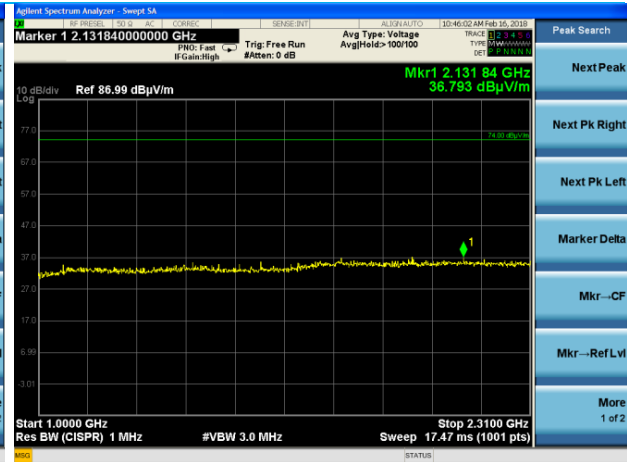


200-1000 MHz Vertical

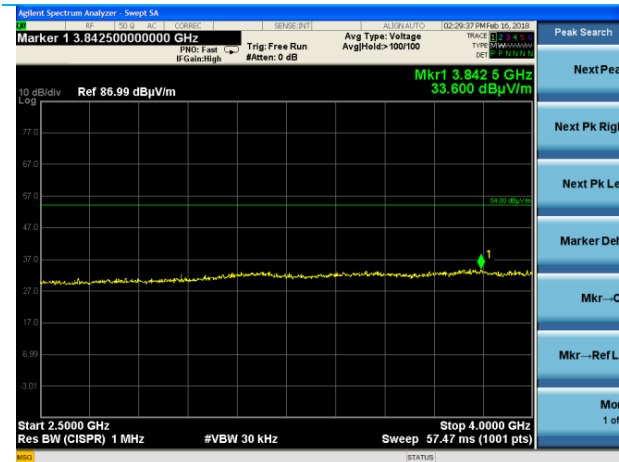
Company: L3 Mobile-Vision, Inc.	Page 28 of 36	Name: Trigger Box
Report: 318008-1		Model: ZAS-TM010001
Job: C-2932		Serial: 100000001



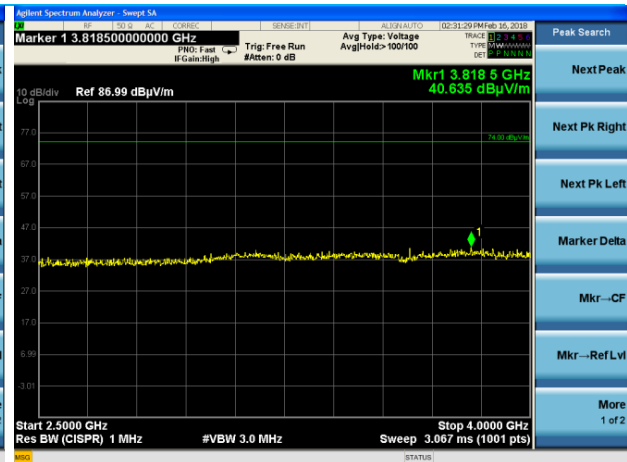
1000-2310 MHz Horizontal



1000-2310 MHz Vertical



2500-4000 MHz Horizontal



2500-4000 MHz Vertical

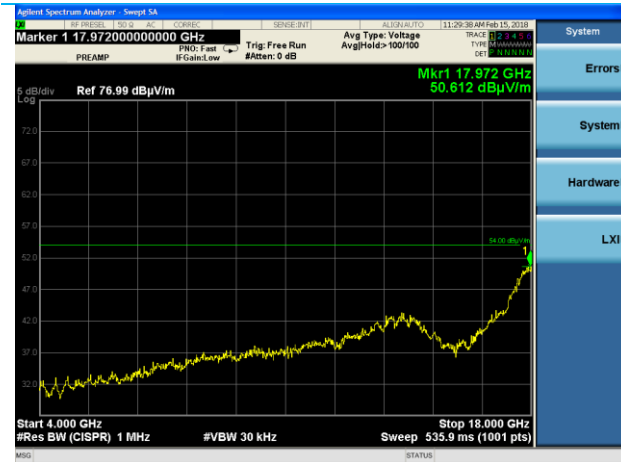
Company: L3 Mobile-Vision, Inc.	Page 29 of 36	Name: Trigger Box
Report: 318008-1		Model: ZAS-TM010001
Job: C-2932		Serial: 100000001



4000-18000 MHz Horizontal (Peak Values)



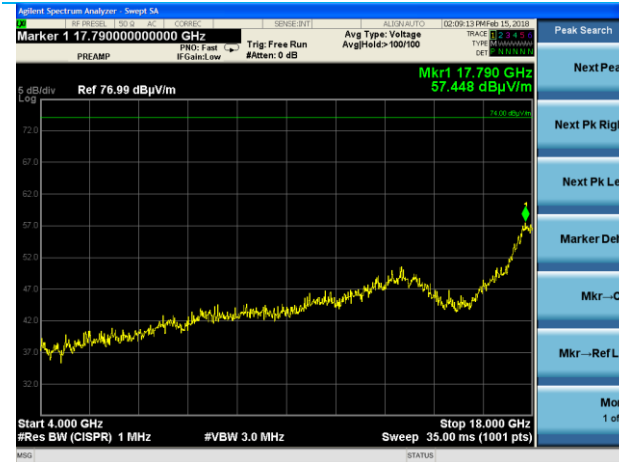
4000-18000 MHz Vertical (Peak Values)



4000-18000 MHz Horizontal (Averaged Values)



4000-18000 MHz Vertical (Averaged Values)



18000-25000 MHz Horizontal (Peak Values)



18000 -25000MHz Vertical (Peak Values)



18000-25000 MHz Horizontal (Averaged Values)



18000-25000 MHz Vertical (Averaged Values)

Company: L3 Mobile-Vision, Inc.	Page 31 of 36	Name: Trigger Box
Report: 318008-1		Model: ZAS-TM010001
Job: C-2932		Serial: 100000001

6.1.1.1 Spurious Emissions – Radiated Band Edge Emissions

Test Information

Operator	Zach Wilson
QA	Laura Zehnder
Test Date	2/16/2018
Location	Chamber 3
Temp. / R.H.	70F / 39%
Requirement	FCC 15.247
Method	ANSI C63.10

Test Parameters

Frequency	1-4 GHz
RBW	1 MHz
VBW	30 kHz for average plots, 3 MHz for peak plots and measurements, 30 Hz for average measurements
EUT Input Power	12 VDC
EUT Power	Set to power setting 7
EUT Mode	BLE Tx, Low & High
Notes	Antenna ported terminated, using LNA to see fundamental and do band edges. Adding 9 dBi antenna to measurements

Fundamental Peaking

Channel	Antenna Orientation	EUT Orientation	Height (m)	Angle	Peak Level (dBm)
0	Horizontal	Flat	1.50	242.7	64.4
0	Vertical	Flat	2.79	0.00	60.9
0	Vertical	Side	2.50	261.3	64.6
0	Horizontal	Side	1.00	199.1	62.9
0	Horizontal	Vertical	1.00	143.8	63.9
0	Vertical	Vertical	1.00	136.0	63.2

Band Edge Measurements

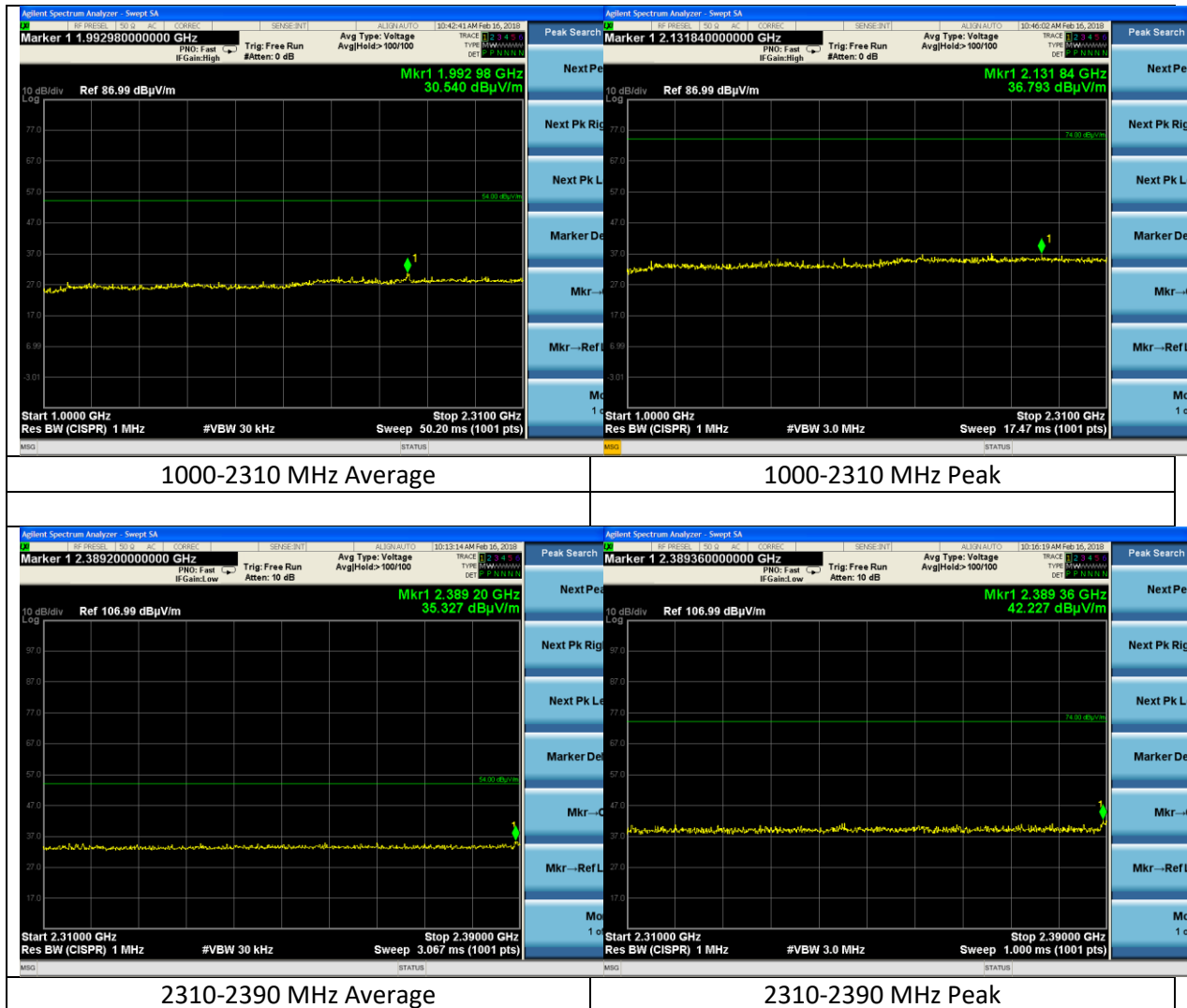
Frequency (GHz)	Channel	Antenna Polarity	EUT Orientation	Height (m)	Angle (deg)	Peak (dBuV/m)	Peak Margin (dBuV/m)	Average Antenna Terminated (dBuV/m)	Average Antenna Terminated Margin (dBuV/m)
2.38936	0	Vertical	Side	2.50	261.3	42.2	31.8	29.4	24.6
1.99298	0	Vertical	Side	1.50	0.0	36.0	38.0	24.8	29.2
2.490166	39	Vertical	Side	2.50	258.2	37.1	36.9	26.3	27.7
3.8425	39	Vertical	Side	1.50	0.0	40.6	33.4	33.6	20.4

Note: All measurements were taken with antenna port terminated with 50Ω termination.

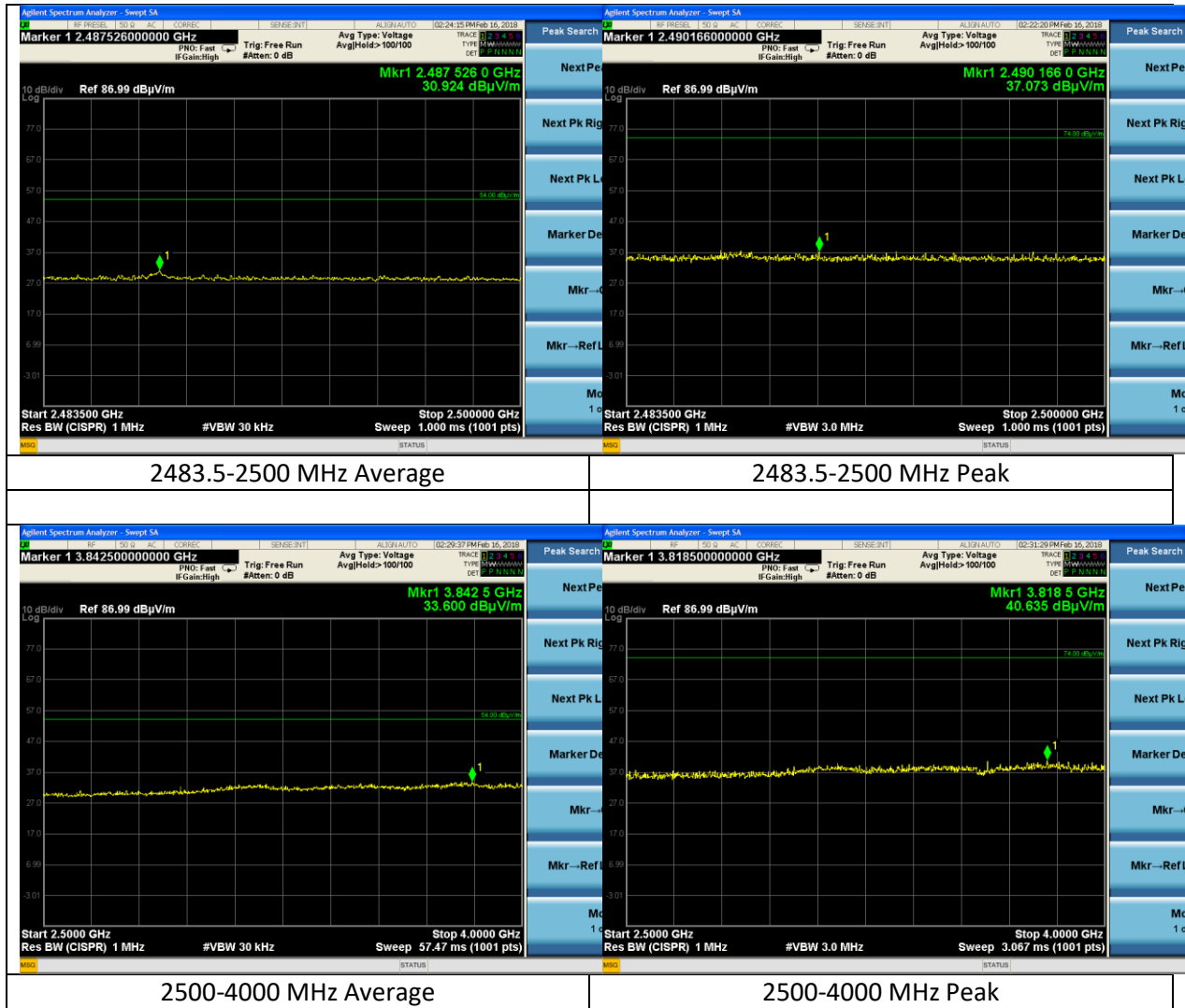
Frequency (GHz)	Channel	Peak (dBuV/m)	Peak Margin (dBuV/m)	Peak Margin w/ 7 dBi Antenna (dBuV/m)	Average Antenna Terminated (dBuV/m)	Average Antenna Terminated Margin (dBuV/m)	Average Margin w/ 7dBi Antenna (dBuV/m)
2.38936	0	42.2	31.8	24.8	29.4	24.6	17.6
1.99298	0	36.0	38.0	31.0	24.8	29.2	22.2
2.490166	39	37.1	36.9	29.9	26.3	27.7	20.7
3.8425	39	40.6	33.4	26.4	33.6	20.4	13.4

Plots

Lower Band Edge
Channel 0 Tx



Upper Band Edge
Channel 39 Tx



Company: L3 Mobile-Vision, Inc.	Page 35 of 36	Name: Trigger Box
Report: 318008-1		Model: ZAS-TM010001
Job: C-2932		Serial: 100000001

7 REVISION HISTORY

Version	Date	Notes	Reference Personnel
0.0	19 March 2018	Released for Initial Review	Laura Zehnder
0.1	1 May 2018	Added data for Conducted Emissions in Restricted Bands	Laura Zehnder
0.2	2 May 2018	Included Tx duty cycle plot. Updated calibration data and spurious emission peak data.	Laura Zehnder

END OF REPORT