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ENGINEERING TEST REPORT # TR 314388A
LSR Job #: C-2124

Compliance Testing of:

Philadelphia

Test Date(s):

February 9, 12, 14 2015

Prepared For:

TASER

Attn: Mark Hanchett

17800 N. 85th St.

Scottsdale, AZ 58255

This Test Report is issued under the Authority of:

Adam Alger, EMC Engineer

Signature:

Date: 3-26-15

Quality Assurance by:

Khairul Aidi Zainal, EMC Lab Supervisor

Signature:

Date: 3-13-15

Report by:

Adam Alger, EMC Engineer

Signature:

Date: 3-11-15

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Prepared For: TASER

Report: TR 314388

LSR: C-2124

Name: Philadelphia

Model: P/N: T00504

Serial: See Section 3.1

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LS Research, LLC in Review

As an EMC Testing Laboratory, our Accreditation and Assessments are recognized through the following:



TESTING CERT #1255.01

A2LA – American Association for Laboratory Accreditation

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

A2LA Certificate Number: 1255.01



Federal Communications Commission (FCC) – USA

Listing of 3 Meter Semi-Anechoic Chamber based on Title 47 CFR – Part 2.948

FCC Registration Number: 90756



Canada

Industry Canada

On file, 3 Meter Semi-Anechoic Chamber based on RSS-212 – Issue 1

File Number: IC 3088-A

On file, 3 and 10 Meter OATS based on RSS-212 – Issue 1

File Number: IC 3088



U. S. Conformity Assessment Body (CAB) Validation

Validated by the European Commission as a U. S. Competent Body operating under the U. S./EU, Mutual Recognition Agreement (MRA) operating under the European Union Electromagnetic Compatibility – Council Directive 2004/108/EC (formerly 89/336/EEC, Article 10.2).

Date of Validation: January 16, 2001

Validated by the European Commission as a U.S. Notified Body operating under the U.S. /EU, Mutual Recognition Agreement (MRA) operating under the European Union Telecommunication Equipment – Council Directive 99/5/EC, Annex V.

Date of Validation: November 20, 2002

Notified Body Identification Number: 1243

Prepared For: TASER

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Name: Philadelphia

Model: P/N: T00504

Serial: See Section 3.1

1.0 Summary of Test Report

In February 2015 the EUT, Philadelphia, as provided by TASER was tested and MEETS the following requirements:

FCC and IC Paragraph	Test Requirements	Compliance (Yes/No)
FCC:15.247 (a)(2) IC: RSS 210 A8.2 (a)	6 dB Bandwidth of a Digital Modulation System	Yes
FCC : 15.247(b) & 1.1310 IC : RSS 210 A8.4	Maximum Output Power	Yes
FCC:15.247 (d) IC: RSS 210 A8.2 (b)	Power Spectral Density of a Digital Modulation System	Yes
FCC :15.247(d) IC : RSS 210 A8.5	RF Conducted Spurious Emissions at the Transmitter Antenna Terminal	Yes
FCC : 15.247(c), 15.209 & 15.205 IC : RSS 210 A8.2(b), section 2.2, 2.6 and 2.7	Transmitter Radiated Emissions	Yes
FCC : 15.109 IC : RSS GEN	Receive Mode (Digital Device) Radiated Emissions	Yes
FCC : 2.1055 (d)	Frequency Stability	Yes
FCC : 15.207 IC : RSS GEN sect. 7.2.2	Power Line Conducted Emissions Measurements	N/A ¹

Note 1: Device is only powered from battery.

2.0 Test Facilities

All testing was performed at:

LS Research, LLC
W66 N220 Commerce Court
Cedarburg, Wisconsin, 53012 USA

LS Research, LLC is accredited by A2LA (American Association for Laboratory Accreditation) to the requirements of ISO/IEC 17025, 2005 “General Requirements for the Competence of Calibration and Testing Laboratories”.

LS Research, LLC’s scope of accreditation includes all test methods listed herein, unless otherwise noted.

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3.0 Client Information

Manufacturer Name:	TASER
Address:	17800 N. 85 th St. Scottsdale, AZ 58255
Contact Person:	Mark Hanchett

3.1 Equipment Under Test (EUT) Information

The following information has been supplied by the applicant.

Product Name:	Philadelphia
Model Number:	P/N: T00504
Serial Number:	127 (Conducted Sample) 131 (Radiated Sample)
FCC ID	X4GS00831
IC Number	8803A-S00831

3.2 Product Information

Bluetooth Low Energy product.

3.3 Modifications Incorporated In the EUT for Compliance Purposes

None noted at time of test

3.4 Deviations & Exclusions from Test Specifications

None noted at time of test

3.5 Additional Information

EUT programmed for continuous transmit or receive via FTDI to USB cable connected to laptop computer running Broadcom Blue Tool v 1.8.4.6. Test channels; Low Channel (2402 MHz), Mid Channel (2440 MHz), and High Channel (2480 MHz).

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4.0 Conditions of Test

Environmental:

Temperature: 20-25° C
Relative Humidity: 30-60%
Atmospheric Pressure: 86-106 kPa

Mains Voltage: 120VAC 60Hz
DC Supply to EUT: 12 VDC (nominal)

5.0 Test Equipment

All test equipment is calibrated by a calibration laboratory accredited by A2LA to the requirements of ISO 17025. For a complete list of test equipment and calibration dates, see Appendix A. Unless otherwise noted, resolution bandwidth of measuring instrument used during testing for given frequency range, see below.

Frequency Range	Resolution Bandwidth
9 kHz – 150 kHz	200 Hz
150 kHz – 30 MHz	9 kHz
30 MHz – 1000 MHz	120 kHz
Above 1000 MHz	1 MHz

6.0 Conformance Summary

The EUT was found to MEET the requirements as described within the specification of FCC Title 47, CFR Part 15.247, 15.109, Industry Canada RSS-210, Issue 8 (2010), Annex 8, RSS-GEN Issue 4 (2014).

If some emissions are seen to be within 3 dB of their respective limits:

As these levels are within the tolerances of the test equipment and site employed, there is a possibility that this unit, or a similar unit selected out of production may not meet the required limit specification if tested by another agency.

LS Research, LLC certifies that the data contained herein was taken under conditions that meet or exceed the requirements of the test specifications. The results in this Test Report apply only to the item(s) tested on the above-specified dates. Any modifications made to the EUT subsequent to the indicated test date(s) will invalidate the data herein, and void this certification.

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Appendix A – Test Equipment



Date : 12-Feb-2014 Type Test : Radiated and Conducted Emissions Job # : C-2124
 Prepared By : Adam Alger Customer : TASER Quote # : 314388

No.	Asset #	Description	Manufacturer	Model #	Serial #	Cal Date	Cal Due Date	Equipment Status
1	EE 960088	8GHz MXE Spectrum Analyzer	Agilent	N9038A	MY51210138	1/19/2013	12/19/2014	Active Calibration
2	AA 960150	Biconical Antenna	ETS	3110B	0003-3346	1/8/2014	1/8/2015	Active Calibration
3	AA 960078	Log Periodic Antenna	EMCO	93146	9701-4855	1/8/2014	1/8/2015	Active Calibration
4	EE 960159	0.8 - 21GHz LNA	Mini-Circuits	ZVA-213X-S+	740411007	6/20/2014	6/20/2015	Active Calibration
5	AA 960158	Double Ridge Horn Antenna	ETS Lindgren	3117	109300	6/20/2014	6/20/2015	Active Calibration
6	EE 960085	N9038A MXE 26.5GHz Receiver	Agilent	N9038A	MY51210148	8/9/2014	8/9/2015	Active Calibration
7	AA 960154	2.4GHz High Pass Filter	KVM	HPF-L-14186	7272-02	8/1/2014	8/1/2015	Active Calibration
8	EE 960146	Std. Gain Horn Ant. w/preamp	Adv. Micro / EMC	WLA622-4 / 3160-09	123001	8/20/2014	8/20/2015	Active Calibration
9	EE 960073	Spectrum Analyzer	Agilent	E4446A	US45300564	10/19/2014	10/19/2015	Active Calibration

Project Engineer: Adam Alger Quality Assurance: Ken Lee

Prepared For: TASER	Name: Philadelphia
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Appendix B – Test Data
B.1 – RF Conducted Emissions

Manufacturer	TASER
Test Location	LS Research, LLC
Rule Part	FCC Part 15.247 / RSS-210 Annex 8
General Measurement Procedure	FCC KDB 558074 D01 DTS Meas Guidance v03r02 ANSI C63.10-2009 Section 6.7
General Description of Measurement	A direct measurement of the transmitted signal was performed at the antenna port of the EUT via a cable connection to a spectrum analyzer. An attenuator was placed in series with the cable to protect the spectrum analyzer. The loss from the cable and the attenuator were added on the analyzer as gain offset settings there by allowing direct measurements, without the need for any further corrections. The EUT was configured to run in a continuous transmit mode, while being supplied with typical data as a modulation source.

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B.1.1 – RF Conducted – Fundamental Bandwidth

Manufacturer	TASER
Date	2-9-15
Operator	Adam A
Temp. / R.H.	20 - 25° C / 30-60% R.H.
Rule Part	FCC Part 15.247 / RSS-210 A8
Specific Measurement Procedure	FCC KDB 558074 Section 8.0 DTS bandwidth ANSI C63.10-2009 Section 6.9 RSS-GEN Section 6.6
Additional Description of Measurement	Peak detector used
Additional Notes	1. Continuous transmit modulated used for this test.

Table

Frequency (MHz)	6 dB DTS BW (kHz)	99% OBW (MHz)	20 dB OBW (MHz)
2402	779.924	1.098	1.135
2440	772.582	1.090	1.134
2480	768.769	1.079	1.124

Prepared For: TASER

Name: Philadelphia

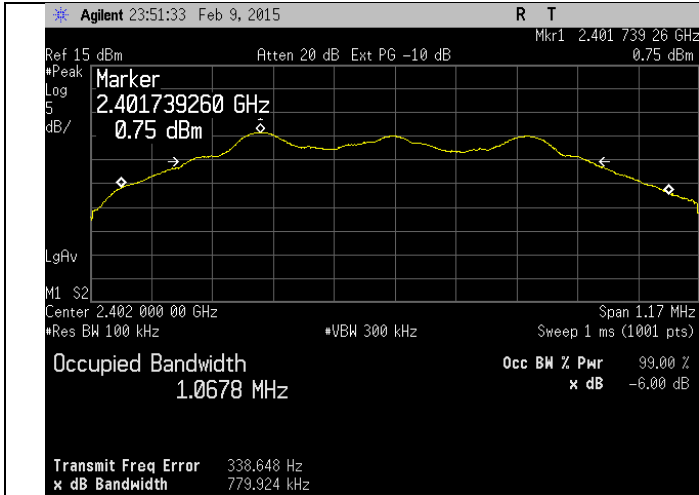
Report: TR 314388

Model: P/N: T00504

LSR: C-2124

Serial: See Section 3.1

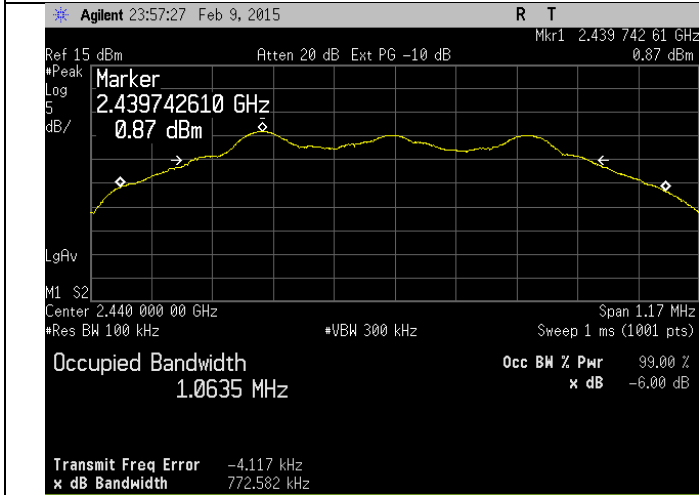
Plots



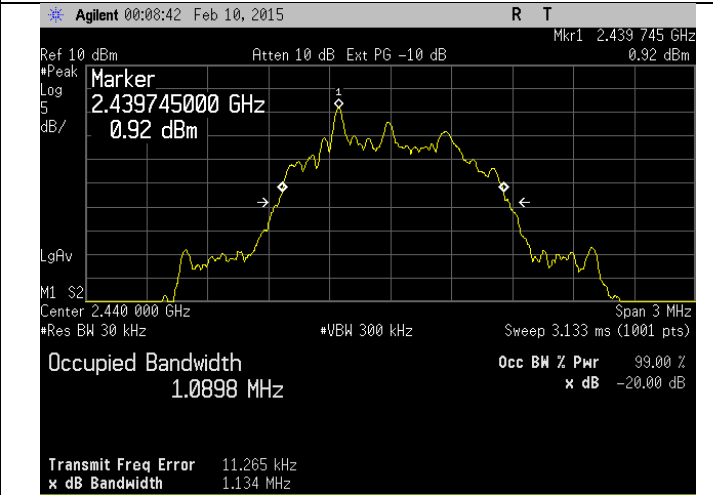
DTS BW – Low Channel



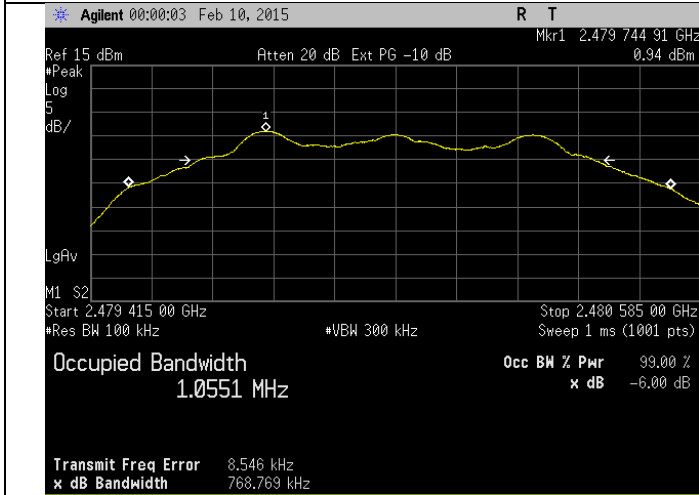
OBW + 99% BW – Low Channel



DTS BW – Mid Channel



OBW + 99% BW – Mid Channel



DTS BW – High Channel



OBW + 99% BW – High Channel

Prepared For: TASER

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Name: Philadelphia

Model: P/N: T00504

Serial: See Section 3.1

B.1.2 – RF Conducted – Fundamental Power and Spectral Density

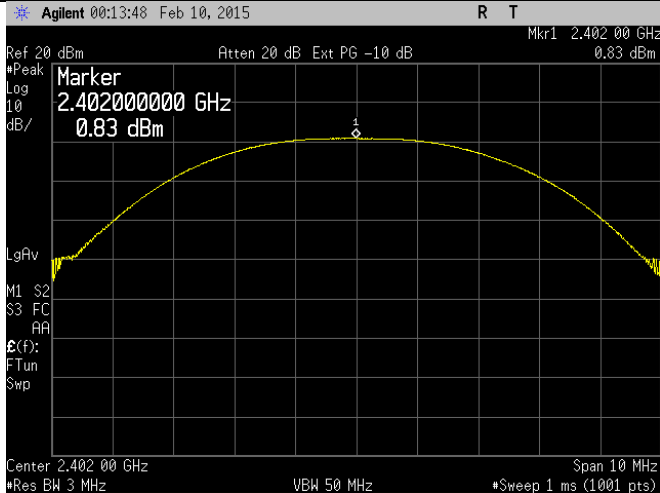
Manufacturer	TASER
Date	2-9-15
Operator	Adam A
Temp. / R.H.	20 - 25° C / 30-60% R.H.
Rule Part	15.247 / RSS-210 A8
Specific Measurement Procedure	FCC KDB 558074 Section 9.1 (Power) / 10.2 (PSD)
Additional Description of Measurement	Peak Output Power and Peak PSD methods utilized for measurement 100 kHz resolution bandwidth used for Peak Power Spectral Density measurement
Additional Notes	1. Continuous transmit modulated used for this test. Sample Calculation: Margin (dB) = Limit – Measured Level

Table

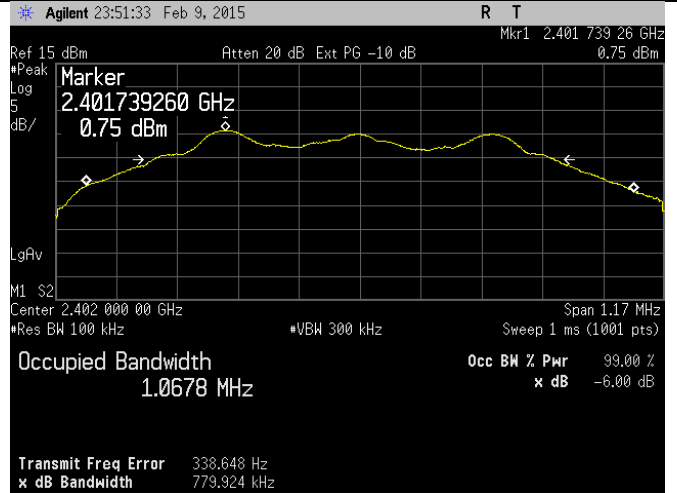
Frequency (MHz)	6 dB DTS BW (kHz)	99% OBW (MHz)	20 dB OBW (MHz)	100 kHz PSD (dBm)	PSD Limit (dBm / 3 kHz)	PSD Margin (dB)	Max Output Power (dBm)	Max Output Power Limit (dBm)	Max Output Power Margin (dB)
2402	779.924	1.098	1.135	0.75	8	7.3	0.83	30	29.2
2440	772.582	1.090	1.134	0.87	8	7.1	0.94	30	29.1
2480	768.769	1.079	1.124	0.94	8	7.1	0.99	30	29.0

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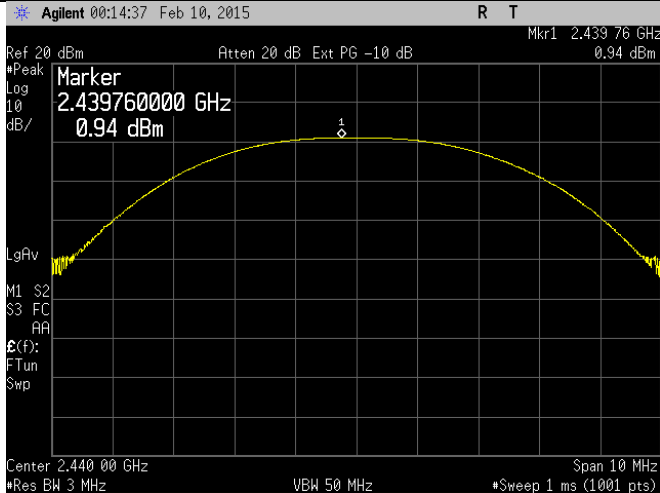
Plots



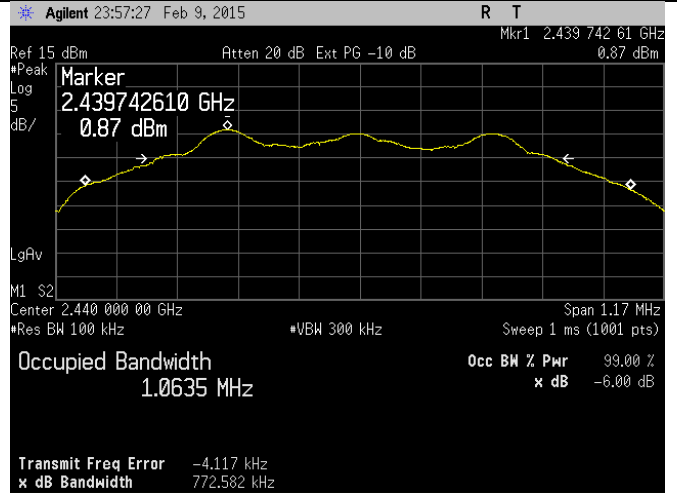
Peak Output Power – Low Channel



PPSD – Low Channel



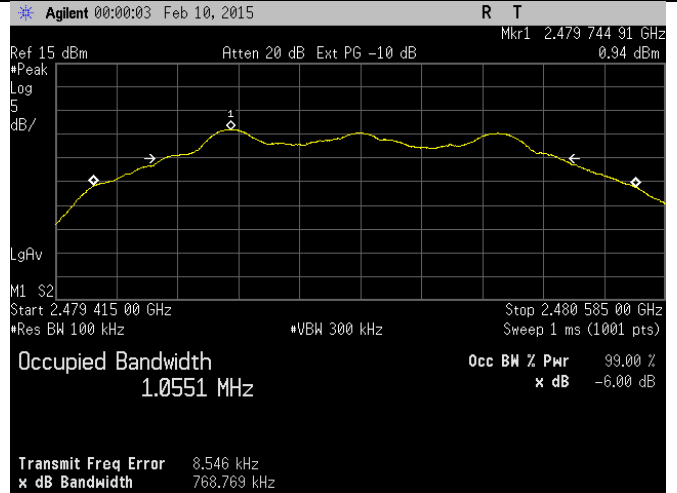
Peak Output Power – Mid Channel



PPSD – Mid Channel



Peak Output Power – High Channel



PPSD – High Channel

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B.1.3 – RF Conducted – Spurious Emissions

Manufacturer	TASER
Date	2-9-15
Operator	Adam A
Temp. / R.H.	20 - 25° C / 30-60% R.H.
Rule Part	15.247 / RSS-210 A8
Specific Measurement Procedure	FCC KDB 558074 Section 11.0 – Emissions in non-restricted frequency bands
Additional Description of Measurement	Peak output power measurements therefore spurious emissions attenuated 20 dBc.
Additional Notes	1. Continuous transmit modulated used for this test. 2. See DTS BW plots for 100 kHz reference 3. NF = measurement of system Noise Floor

Table

Channel	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Note
Low	4811	-41.38	-19.1	22.3	-
	7201	-56.17	-19.1	37.1	-
	23815	-61.88	-19.1	42.8	NF
	966	-69.98	-19.1	50.9	NF
	2400	-53.35	-19.1	34.3	-
Mid	4883	-41.79	-19.1	22.7	-
	7318	-57.22	-19.1	38.1	-
	24100	-61.88	-19.1	42.8	NF
	873.9	-70.87	-19.1	51.8	NF
	2400	-71.64	-19.1	52.5	-
	2483.5	-72.88	-19.1	53.8	-
High	4960	-42.66	-19.1	23.6	-
	7435	-57.1	-19.1	38.0	-
	23890	-62.35	-19.1	43.3	NF
	646.9	-71.44	-19.1	52.3	NF
	2483.5	-56.33	-19.1	37.2	-

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Name: Philadelphia

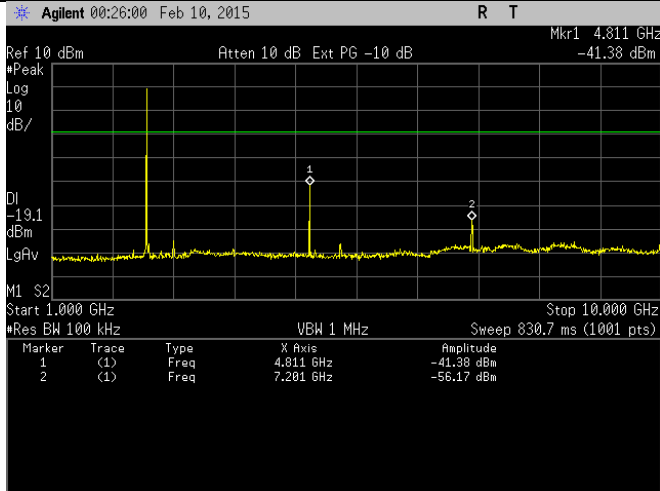
Report: TR 314388

Model: P/N: T00504

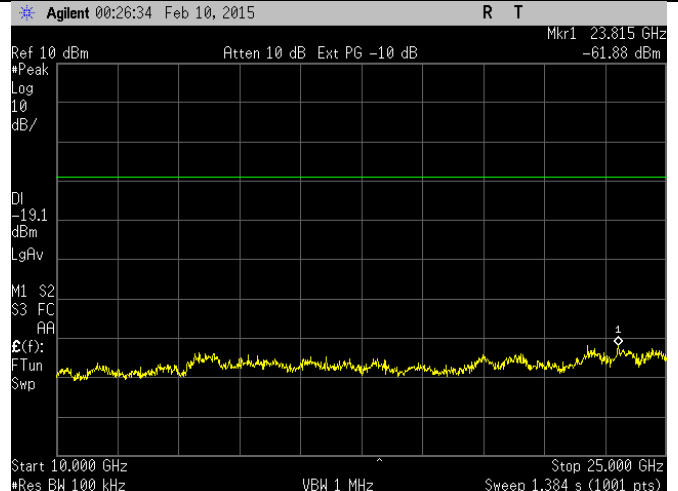
LSR: C-2124

Serial: See Section 3.1

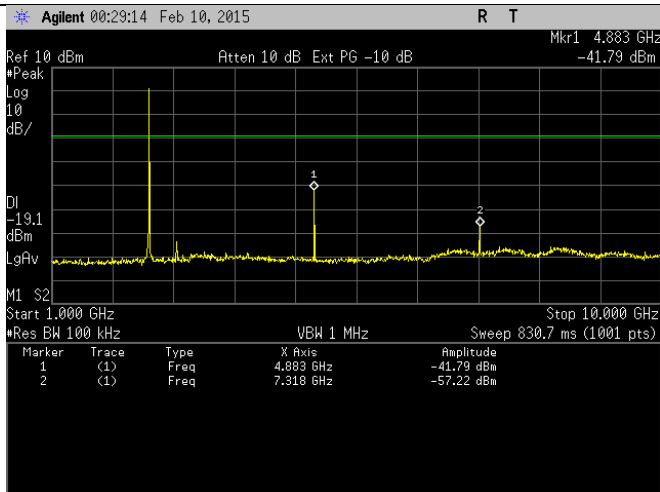
Plots



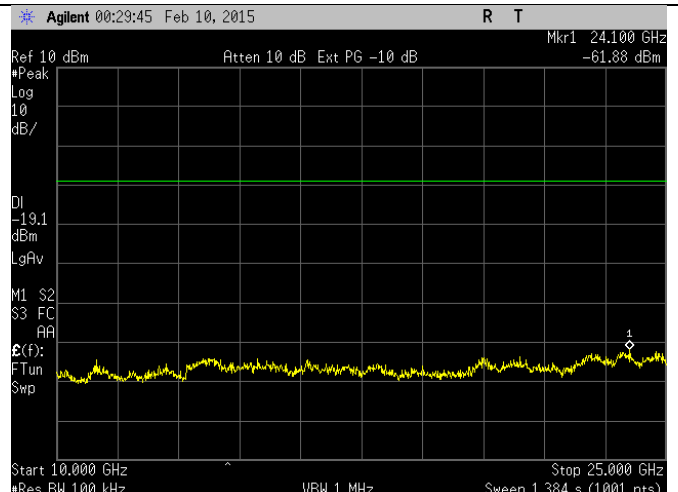
1-10 GHz – Low Channel



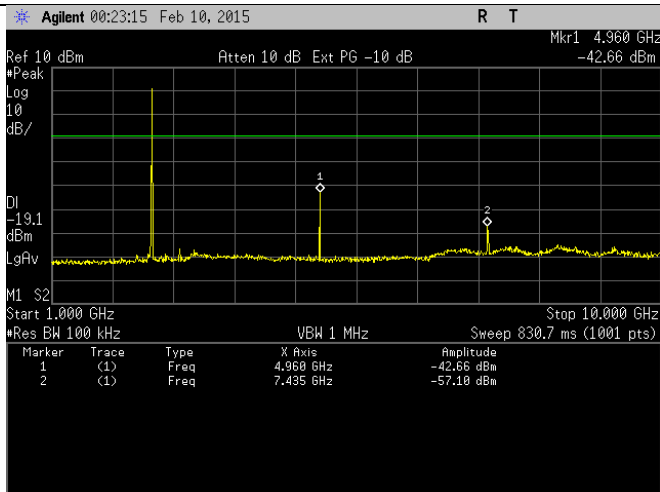
10-25 GHz – Low Channel



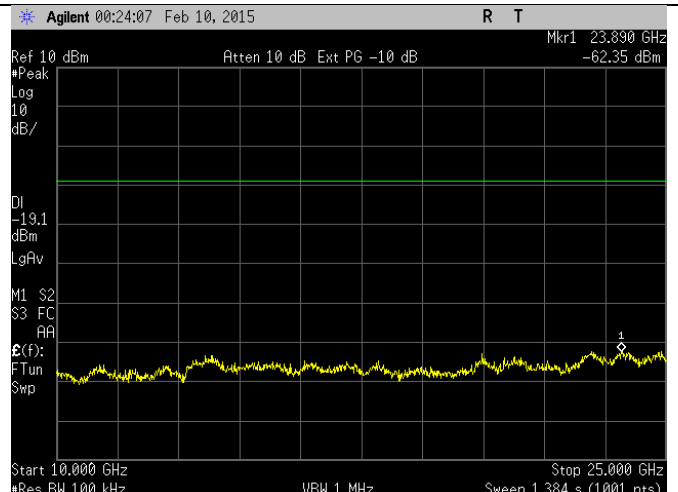
1-10 GHz – Mid Channel



10-25 GHz – Mid Channel



1-10 GHz – High Channel



10-25 GHz – High Channel

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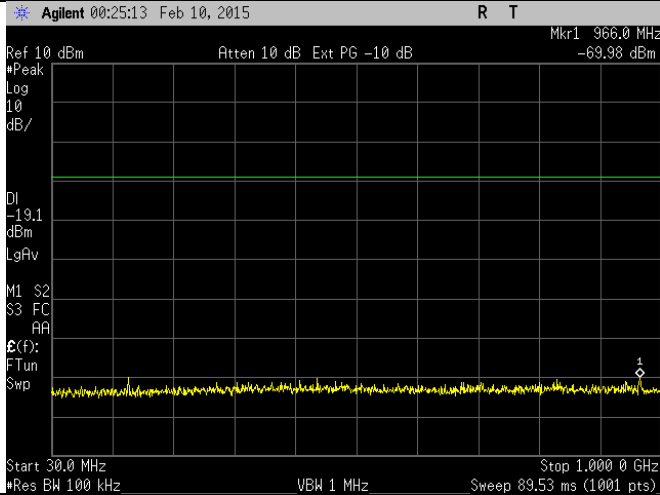
LSR: C-2124

Name: Philadelphia

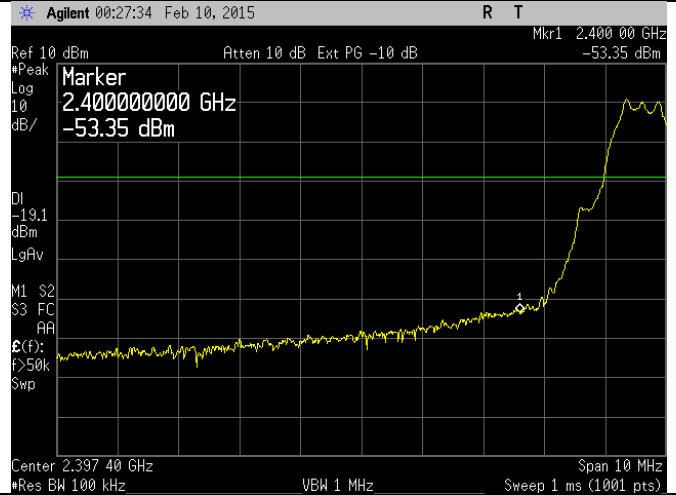
Model: P/N: T00504

Serial: See Section 3.1

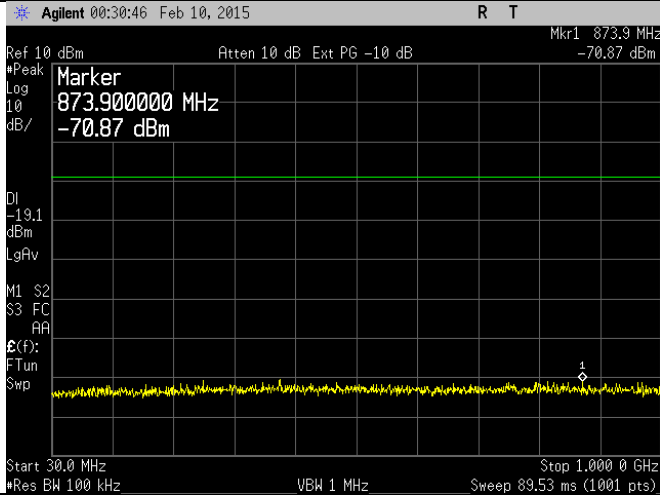
Plots



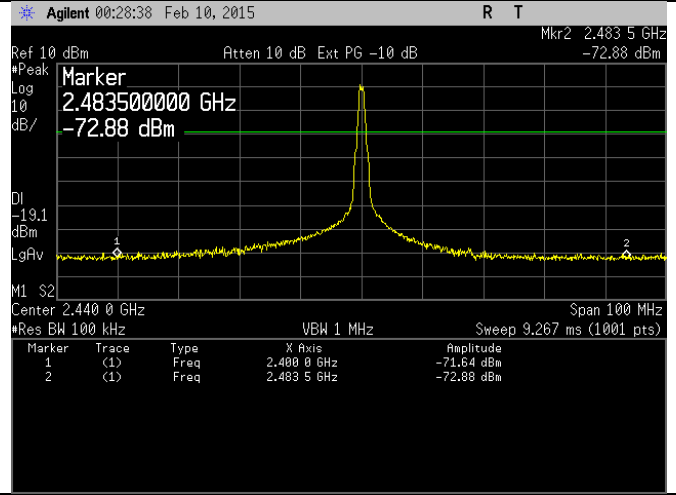
30-1000 MHz – Low Channel



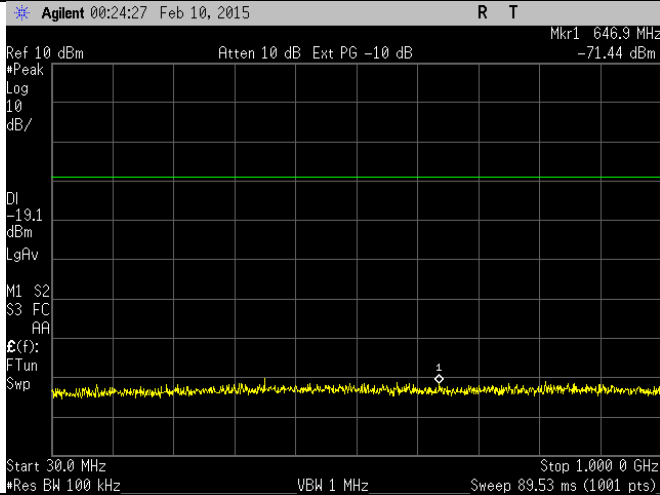
Band-Edge – Low Channel



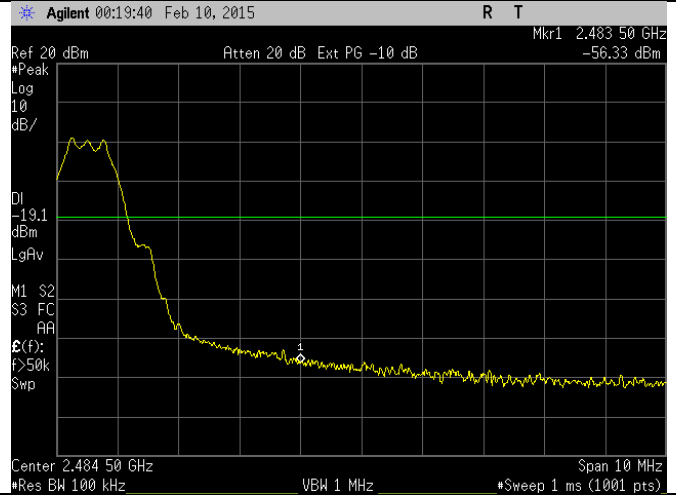
30-1000 MHz – Mid Channel



Band-Edge – Mid Channel



30-1000 MHz – High Channel



Band-Edge – High Channel

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B.1.4 – RF Conducted – Frequency Stability

Manufacturer	TASER
Date	2-9-15
Operator	Adam A
Temp. / R.H.	20 - 25° C / 30-60% R.H.
Rule Part	15.247 / RSS-210 A8
Specific Measurement Procedure	ANSI C63.10-2009
Additional Description of Measurement	RF Conducted Measurement
Additional Notes	1. Continuous transmit modulated used for this test.

Table

Channel	10.2 VDC	12.0 VDC	13.8 VDC	Max Drift (Hz)
	Frequency (Hz)	Frequency (Hz)	Frequency (Hz)	
Low	2401997635	2401997755	2401997513	242
Mid	2439984564	2439984777	2439984803	239
High	2479987231	2479987530	2479987456	299

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B.2 – Radiated Emissions

Rule Part(s)	FCC: 15.247 / 15.205 / 15.209 IC: RSS-210 A8 / RSS-210 Section 2.2			
Measurement Procedure	ANSI C63.4 - 2009 ANSI C63.10 – 2009 FCC KDB 558074 D01 DTS Meas Guidance v03r02			
Test Location	LS Research, LLC - FCC Listed 3 meter Semi-Anechoic Chamber			
Test Distance	See data section			
EUT Placement	80 cm height non-conductive table above reference ground plane			
Frequency Range of Measurement	Biconical: 30-300 MHz	Log Periodic Dipole Array: 300-1000 MHz	Double-Ridged Waveguide Horn: 1-18 GHz	Standard Gain Horn: 18-26GHz
Measurement Detectors	30-1000MHz RBW: 120 kHz VBW: At least 300 kHz		1 - 40 GHz: RBW : 1MHz VBW: At least 3 (MHz) Peak 10 Hz Average	
Description of Measurement	<p>1) The antenna, cable, pre-amp, and other necessary measurement system correction factors are loaded onto the EMI receiver / spectrum analyzer when the measurements are preformed. The data is gathered and reported as the corrected values.</p> <p>2) The EUT is placed on a non-conductive pedestal <u>made of expanded polyethylene foam</u> centered on a turn-table in the test location with the antenna at the test distance from the EUT</p> <p>3) Maximum radiated RF emissions are determined by rotation of azimuth and scanning the sense antenna between 1 and 4 meters in height using both horizontal and vertical antenna polarities. Maximized levels are manually noted at degree values of azimuth and at sense antenna height.</p>			
Example Calculations	Reported Measurement data = Raw receiver measurement + Antenna Correction Factor + Cable factor (dB) - amplification factor (when applicable) + Additional factor (when applicable)			

FCC Part 15.209 / IC RSS-210 Section 2.7 Limits:

Frequency (MHz)	3 m Limit ($\mu\text{V/m}$)	3 m Limit ($\text{dB}\mu\text{V/m}$)	Type
30-88	100	40.0	Quasi-Peak
88-216	150	43.5	Quasi-Peak
216-960	200	46.0	Quasi-Peak
Above 960	500	54.0	Average (>1 GHz)

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B.2.1 – Transmitter Band-Edge Restricted Band

Manufacturer	TASER
Date	2-12-15
Operator	Adam A
Temp. / R.H.	20 - 25° C / 30-60% R.H.
Rule Part	15.247/ 15.205 / 15.209
Measurement Procedure	ANSI C63.4 - 2009 ANSI C63.10 - 2009 FCC KDB 558074 v03r02
Test Distance	3 meter
EUT Placement	80 cm height non-conductive table centered on turn-table
Detectors	Peak; RBW 1MHz VBW 3 MHz (10Hz VBW for average measurements)
Additional Notes	1) Tested in continuous transmit modulated mode with EUT rotated in three orientations. 2) EUT maximized in azimuth and antenna height with maximum results reported.

Example Calculation:

FCC 15.209 Average Limit @ 3 meter (dBμV/m) – Average Reading (dBμV/m) = Margin

FCC 15.209 Peak Limit @ 3 meter (dBμV/m) – Peak Reading (dBμV/m) = Margin

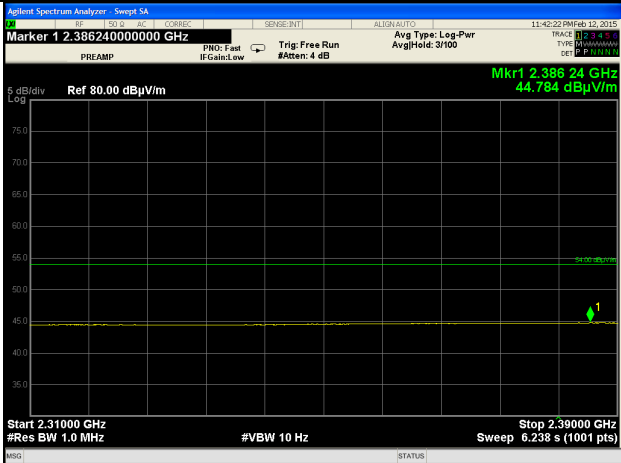
Average Table

EUT Channel	Frequency (MHz)	Average Reading (dBμV/m)	Average Limit (dBμV/m)	Average Margin (dB)
Low	2386.2	44.78	54	9.2
High	2499.7	45.34	54	8.7

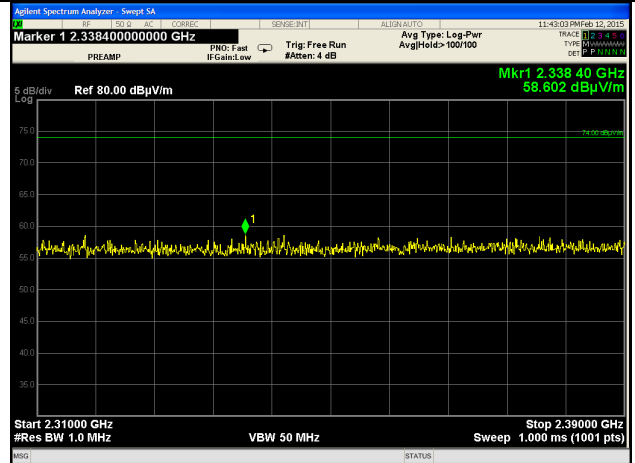
Peak Table

EUT Channel	Frequency (MHz)	Peak Reading (dBμV/m)	Peak Limit (dBμV/m)	Peak Margin (dB)
Low	2338.4	58.60	74	15.4
High	2483.9	61.88	74	12.1

Plots



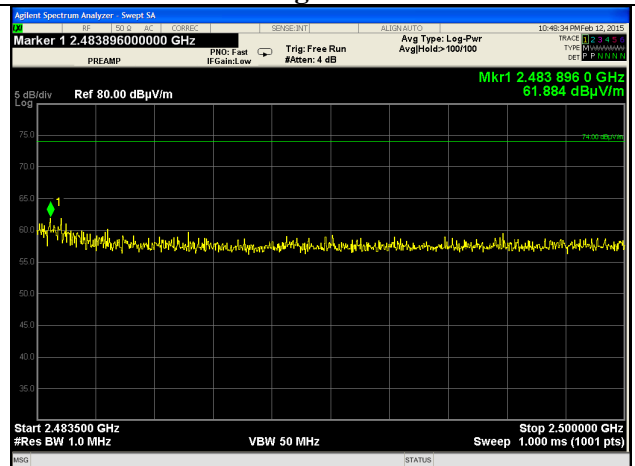
Lower Band-Edge – Low Ch. - Average



Lower Band-Edge – Low Ch. - Peak



Upper Band-Edge – High Ch. - Average



Upper Band-Edge – High Ch. - Peak

Prepared For: TASER

Report: TR 314388

LSR: C-2124

Name: Philadelphia

Model: P/N: T00504

Serial: See Section 3.1

B.2.2 – Transmitter Radiated Spurious Emissions in Restricted Bands

Manufacturer	TASER
Date	2-12, 2-14 2015
Operator	Adam A
Temp. / R.H.	20 - 25° C / 30-60% R.H.
Rule Part	15.247/ 15.205 / 15.209
Measurement Procedure	ANSI C63.4 - 2009 ANSI C63.10 - 2009 FCC KDB 558074 v03r02 Section 12.2.7 Radiated spurious emission test
Test Distance	3 meter 4-18 GHz, 1 meter 18-25 GHz
EUT Placement	80 cm height non-conductive table centered on turn-table
Detectors	Peak; RBW 1 MHz Average VBW (10Hz)
Additional Notes	1) Tested in continuous transmit modulated mode on three channels in three orientations. 2) No emissions found above system noise floor. Table results of noise floor.

Example Calculation:

FCC 15.209 Quasi-Peak Limit @ 3 meter (dB μ V/m) – Peak Reading (dB μ V/m) = Margin

FCC 15.209 Average Limit @ 3 meter (dB μ V/m) – Average Reading (dB μ V/m) = Margin

FCC 15.209 Peak Limit @ 3 meter (dB μ V/m) – Peak Reading (dB μ V/m) = Margin

Table

30-1000 MHz

Frequency (MHz)	Peak Reading (dB μ V/m)	Quasi-Peak Limit (dB μ V/m)	Margin (dB)
199.5	25.48	43.5	18.0
197.8	24.91	43.5	18.6
945.4	36.73	46	9.3
996.3	36.73	54	17.3

1-25 GHz - Average

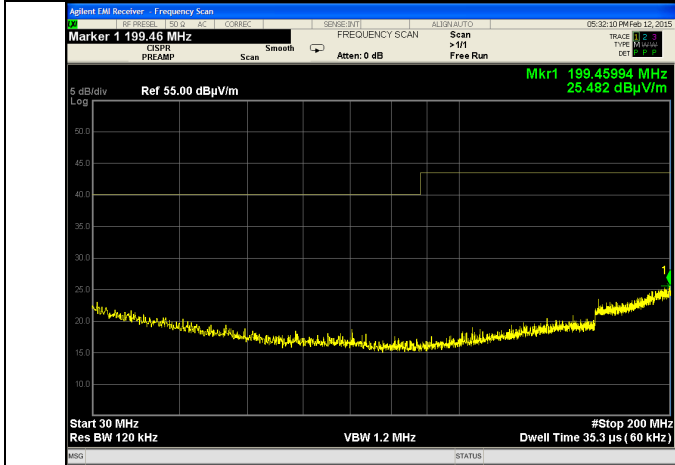
Frequency (MHz)	Average Reading (dB μ V/m)	Average Limit (dB μ V/m)	Average Margin (dB)
2273.3	41.55	54	12.5
3595.0	45.70	54	8.3
4804.0	33.41	54	20.6
24748.0	50.54	63.5	13.0

1-25 GHz - Peak

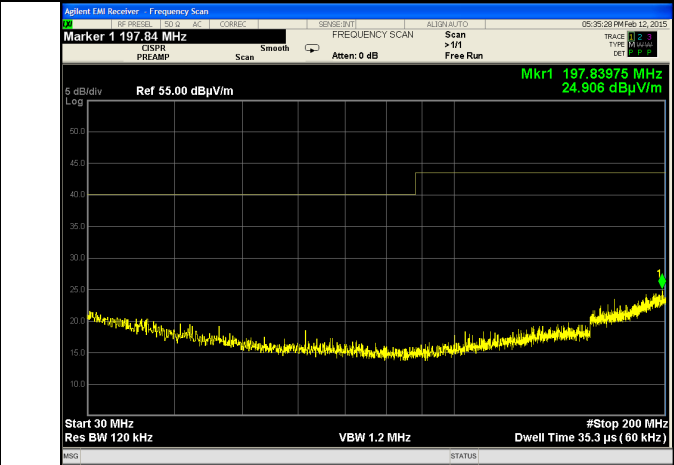
Frequency (MHz)	Peak Reading (dB μ V/m)	Peak Limit (dB μ V/m)	Peak Margin (dB)
2168.5	57.74	74	16.3
3529.0	60.35	74	13.7
16558.0	57.03	74	17.0
24342.0	58.76	83.5	15.2

Prepared For: TASER	Name: Philadelphia
Report: TR 314388	Model: P/N: T00504
LSR: C-2124	Serial: See Section 3.1

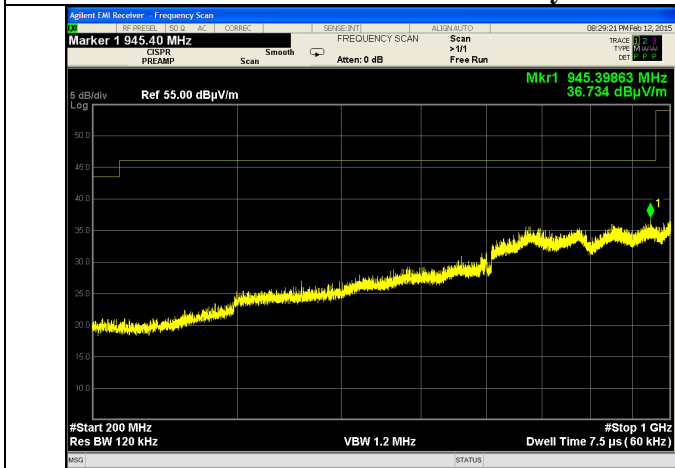
Plots



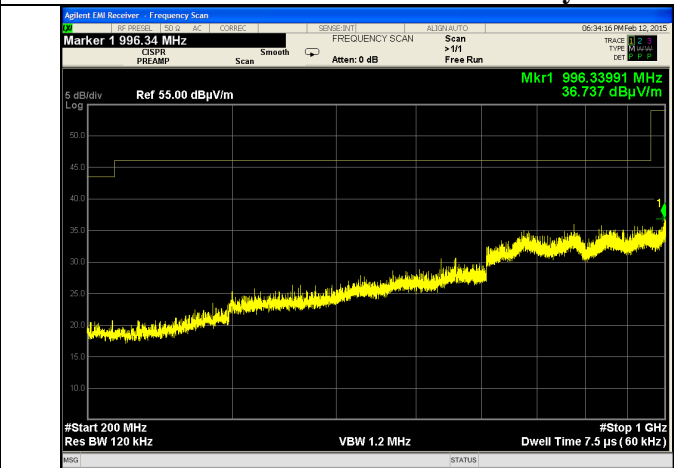
30-200 MHz - Vertical Polarity



30-200 MHz - Horizontal Polarity



200-1000 MHz - Vertical Polarity



200-1000 MHz - Horizontal Polarity

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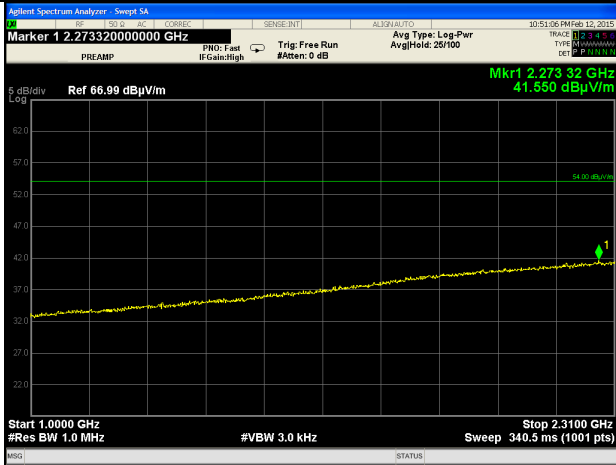
LSR: C-2124

Name: Philadelphia

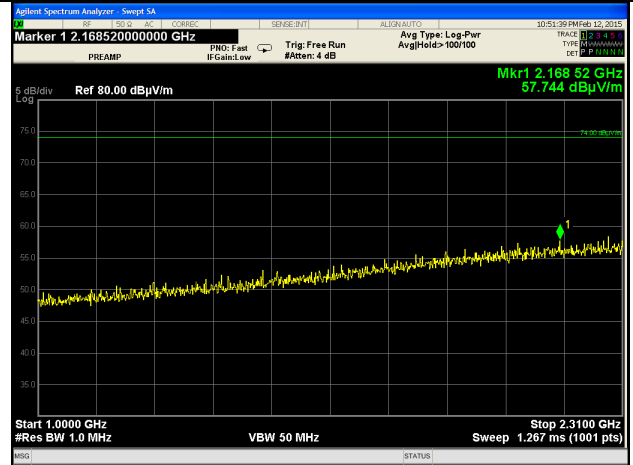
Model: P/N: T00504

Serial: See Section 3.1

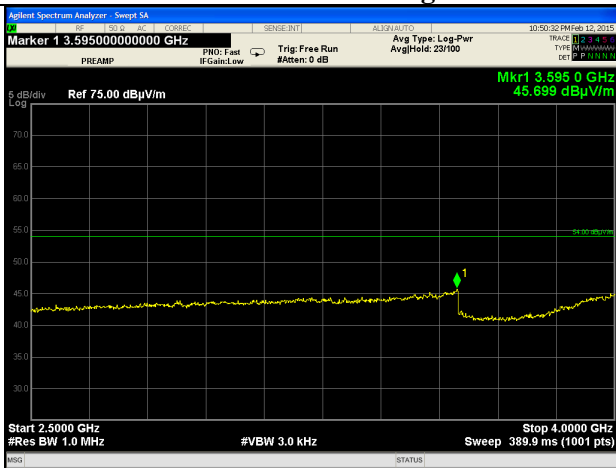
Plots



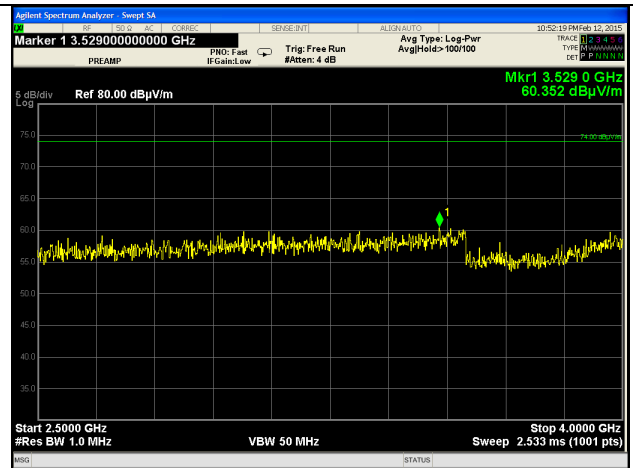
1-2.31 GHz – Average



1-2.31 GHz - Peak



2.5-4 GHz – Average



2.5-4 GHz - Peak

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Name: Philadelphia

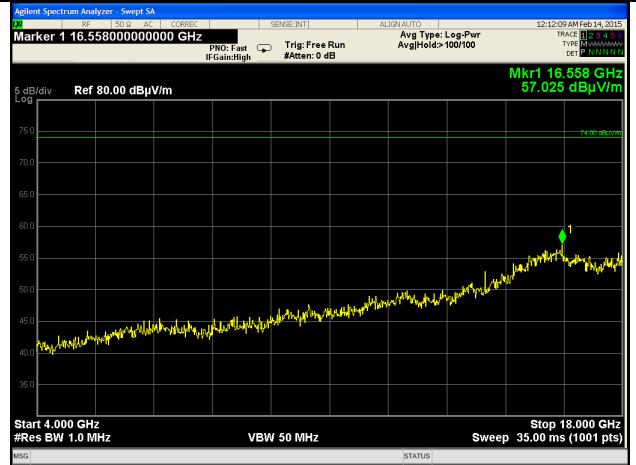
Model: P/N: T00504

Serial: See Section 3.1

Plots



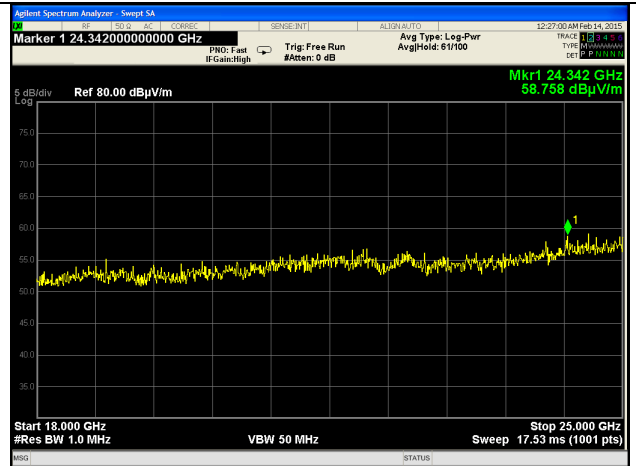
4-18 GHz – Average



4-18 GHz - Peak



18-25 GHz – Average



18-25 GHz - Peak

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Report: TR 314388

LSR: C-2124

Name: Philadelphia

Model: P/N: T00504

Serial: See Section 3.1

B.2.3 – Radiated Emissions Receive Mode

Manufacturer	TASER
Date	2-12, 2-14 2015
Operator	Adam A
Temp. / R.H.	20 - 25° C / 30-60% R.H.
Rule Part	15.109 / RSS-GEN
Measurement Procedure	ANSI C63.4 - 2009 ANSI C63.10 - 2009
Test Distance	3 meter 4-18 GHz, 1 meter 18-25 GHz
EUT Placement	80 cm height non-conductive table centered on turn-table
Detectors	Peak; RBW 1 MHz
Additional Notes	1) Tested in continuous receive mode on three channels in three orientations. 2) No emissions found above system noise floor.

Example Calculation:

Limit (dBμV/m) – Reading (dBμV/m) = Margin

Table

30-1000 MHz

Frequency (MHz)	Peak Reading (dBμV/m)	Quasi-Peak Limit (dBμV/m)	Margin (dB)
199.5	25.48	43.5	18.0
197.8	24.91	43.5	18.6
945.4	36.73	46	9.3
996.3	36.73	54	17.3

1-25 GHz – Average

Frequency (MHz)	Average Reading (dBμV/m)	Average Limit (dBμV/m)	Average Margin (dB)
3598.0	47.37	54	6.6
3595.0	47.22	54	6.8
4804.0	33.41	54	20.6
24748.0	50.54	63.5	13.0

1-25 GHz – Peak

Frequency (MHz)	Peak Reading (dBμV/m)	Peak Limit (dBμV/m)	Peak Margin (dB)
2168.5	57.74	74	16.3
3529.0	60.35	74	13.7
16558.0	57.03	74	17.0
24342.0	58.76	83.5	15.2

Prepared For: TASER

Name: Philadelphia

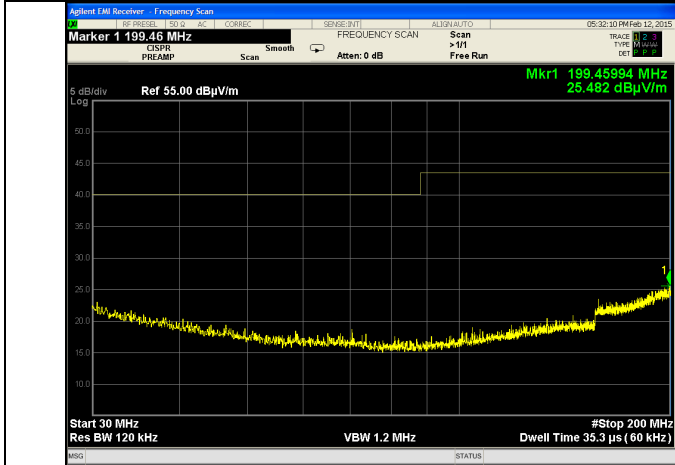
Report: TR 314388

Model: P/N: T00504

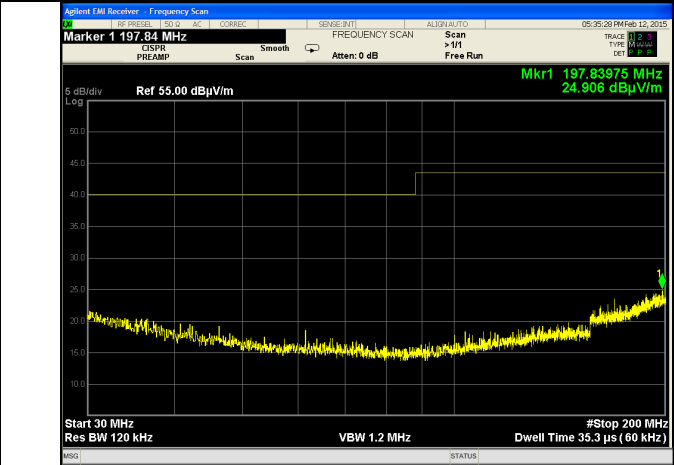
LSR: C-2124

Serial: See Section 3.1

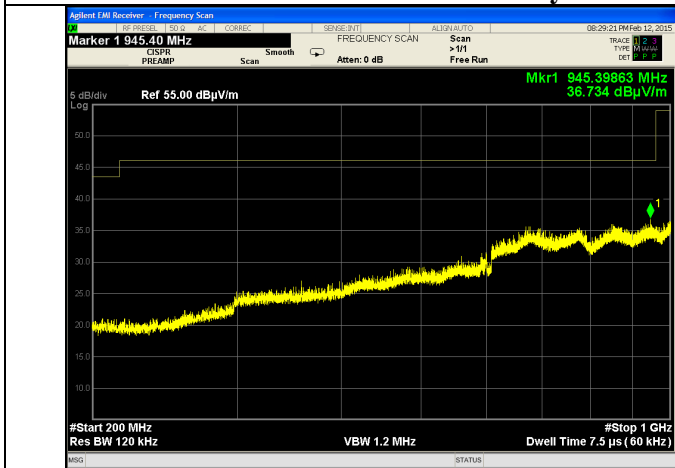
Plots



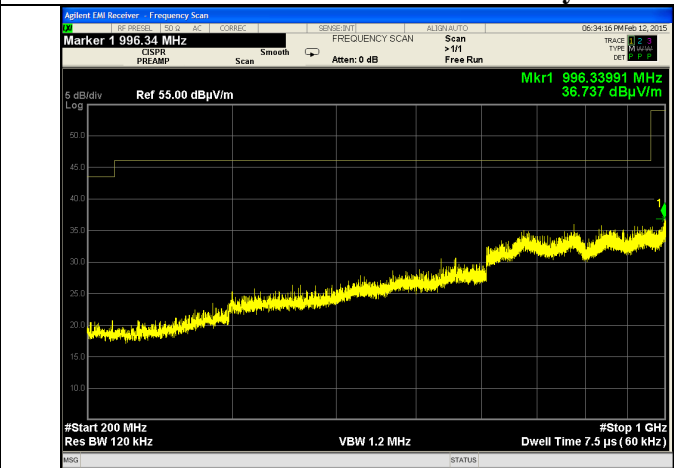
30-200 MHz - Vertical Polarity



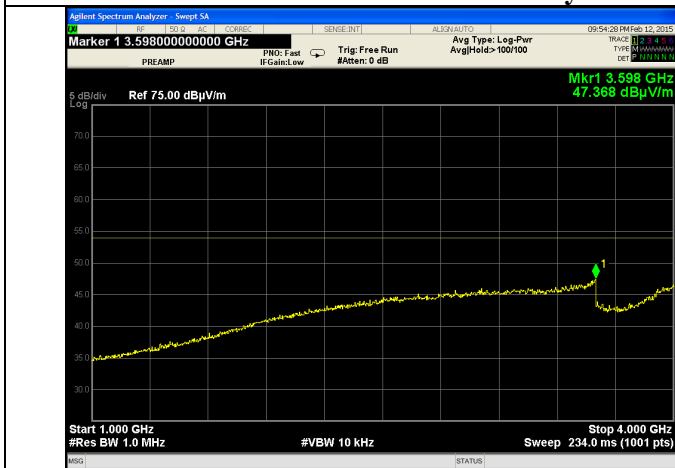
30-200 MHz - Horizontal Polarity



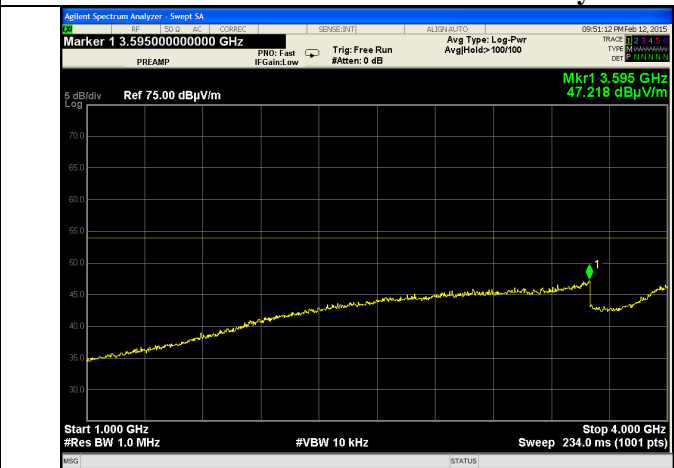
200-1000 MHz - Vertical Polarity



200-1000 MHz - Horizontal Polarity



1-4 GHz - Vertical Polarity - Average



1-4 GHz - Horizontal Polarity - Average

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Name: Philadelphia

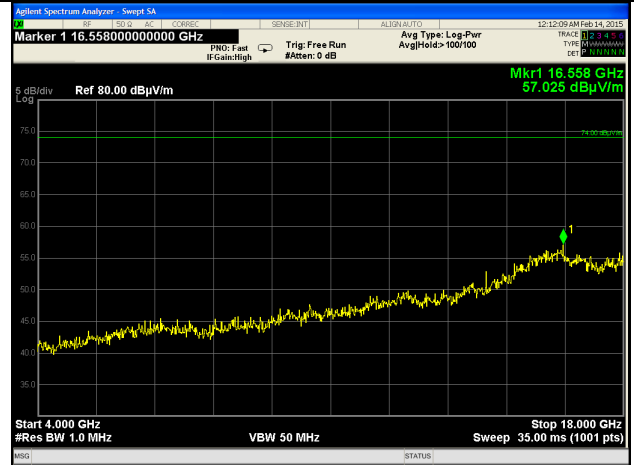
Model: P/N: T00504

Serial: See Section 3.1

Plots



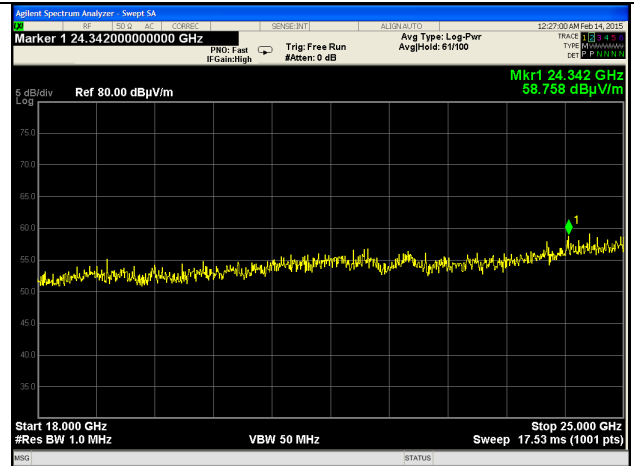
4-18 GHz – Average



4-18 GHz - Peak



18-25 GHz – Average



18-25 GHz - Peak

Prepared For: TASER

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Name: Philadelphia

Model: P/N: T00504

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Appendix C - Uncertainty Summary

This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level, using a coverage factor of $k=2$.

Table of Expanded Uncertainty Values, (K=2) for Specified Measurements

Measurement Type	Particular Configuration	Uncertainty Values
Radiated Emissions	3 – Meter chamber, Biconical Antenna	4.82 dB
Radiated Emissions	3-Meter Chamber, Log Periodic Antenna	4.88 dB
Radiated Emissions	3-Meter Chamber, Horn Antenna	4.85 dB
Absolute Conducted Emissions	Agilent PSA/ESA Series	1.38 dB
AC Line Conducted Emissions	Shielded Room/EMCO LISN	3.20 dB
Radiated Immunity	3 Volts/Meter in 3-Meter Chamber	2.05 Volts/Meter
Conducted Immunity	3 Volts level	2.33 V
EFT Burst, Surge, VDI	230 VAC	54.4 V
ESD Immunity	Discharge at 15kV	3200 V
Temperature/Humidity	Thermo-hygrometer	0.64°/ 2.88 %RH

Appendix D - References

Publication	Year	Title
FCC CFR Parts 0-15	2015	Code of Federal Regulations – Telecommunications
ANSI C63.4	2009	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.
RSS-210 Annex 8	2010	Low-power License-exempt Radio communication Devices (All Frequency Bands): Category I Equipment
RSS-GEN Issue 4	2014	General Requirements and Information for the Certification of Radio Apparatus
ANSI C63.10	2009	American National Standard for Testing Unlicensed Wireless Devices
FCC KDB 558074 D01 DTS Meas Guidance v03r02	2014	Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247

Prepared For: TASER

Report: TR 314388

LSR: C-2124

Name: Philadelphia

Model: P/N: T00504

Serial: See Section 3.1

END OF REPORT

Date	Version	Comments	Person
3-11-15	V0	Initial Draft Release	Adam A
3-26-15	V1	Final Release	Adam A

Prepared For: TASER

Report: TR 314388

LSR: C-2124

Name: Philadelphia

Model: P/N: T00504

Serial: See Section 3.1