

# **Electromagnetic Compatibility Test Report**

Tests Performed on a Tiger Accessory Group
Wireless Tow Light Transceiver, Model C6304
Radiometrics Document RP-7394



Product Detail:

FCC ID: PZT-C6304 IC: 10665A-C6304

Equipment type: Low Power Transceiver (904-926 MHz)

Test Standards:

US CFR Title 47, Chapter I, FCC Part 15 Subpart C

FCC Part 15 CFR Title 47: 2012

Industry Canada RSS-210, Issue 8: 2010 as required for Category I Equipment

This report concerns: Original Grant for Certification FCC Part 15.249 for Limited Modular Approval

Tests Performed For: Test Facility:

**Tiger Accessory Group** 6700 Wildlife Way Long Grove, IL 60047

Radiometrics Midwest Corporation

12 East Devonwood Romeoville, IL 60446 (815) 293-0772

Test Date(s): (Month-Day-Year) 12/7/2012 to 1/14/2013

Document	

Rev.	Issue Date	Affected Sections	Revised By		
0	January 18, 2013				

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### 1 ADMINISTRATIVE DATA

Equipment Under Test: A Tiger Accessory Group, Wireless Tow Light Transceiver Model: C6304 Serial Number: 003 This will be referred to as the EUT in this Report						
Date EUT Received at Radiometrics: (Month-Day-Year) December 7, 2012	Test Date(s): (Month-Day-Year) 12/7/12 to 1/14/13					
Test Report Written By: Joseph Strzelecki Senior EMC Engineer	Test Witnessed By: The tests were not witnessed by Tiger Accessory Group.					
Radiometrics' Personnel Responsible for Test:  Strzelecki	Chri W. Carlon					
Joseph Strzelecki Senior EMC Engineer NARTE EMC-000877-NE	Chris W. Carlson Director of Engineering NARTE EMC-000921-NE					

#### **2 TEST SUMMARY AND RESULTS**

The EUT (Equipment Under Test) is a Wireless Tow Light transceiver, Model C6304, manufactured by Tiger Accessory Group. The detailed test results are presented in a separate section. The following is a summary of the test results.

#### **Emissions Tests Results**

Environmental Phenomena	Frequency Range	Basic Standard	Test Result
RF Radiated Emissions	30-9300 MHz	RSS-210 & FCC Part 15	Pass
Occupied Bandwidth Test	Fundamental Freq.	RSS-210 & FCC Part 15	Pass

Note: The RSS-210 specification is not currently covered in Radiometrics' Scope of Accreditation. This is technically very similar to FCC, CFR 47 Part 15 which is on Radiometrics scope.

# 2.1 RF Exposure Compliance Requirements

Since the power output is 0.27 mW, the EUT meets the FCC requirement for RF exposure. Since the EUT is less than 1 mW, it is exempt from RSS-102. There are no power level adjustments and the antenna is permanently attached. The detailed calculations for RF Exposure are presented in a separate document.

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# **3 EQUIPMENT UNDER TEST (EUT) DETAILS**

## 3.1 EUT Description

The EUT is a 900 MHz Wireless Tow Light Transceiver, Model C6304, manufactured by Tiger Accessory Group. The EUT was in good working condition during the tests, with no known defects.

## 3.1.1 FCC Section 15.203 & RSS-GEN Antenna Requirements

The antenna is permanently attached to the printed circuit board. The antenna is internal to the EUT and it is not readily available to be modified by the end user. Therefore it meets the 15.203 Requirements.

#### 3.2 Related Submittals

Tiger Accessory Group is not submitting any other products simultaneously for equipment authorization related to the EUT.

#### **4 TESTED SYSTEM DETAILS**

## 4.1 Tested System Configuration

The system was configured for testing in a typical fashion. The EUT was placed on an 80-cm high, nonconductive test stand. The testing was performed in conditions as close as possible to installed conditions. Wiring was consistent with manufacturer's recommendations. The EUT was tested as a stand-alone device. Power was supplied with a new battery.

The identification for all equipment, plus descriptions of all cables used in the tested system, are:

**Tested System Configuration List** 

Item	Description	Type*	Manufacturer	Model Number	Serial Number
1	Wireless Tow Light	E	Tiger Accessory Group	C6304	003

<sup>\*</sup> Type: E = EUT, P = Peripheral, S = Support Equipment; H = Host Computer

**List of System Cables** 

QTY	Length (m)	Cable Description	Connected to (Item #)	Shielded?
1	1.8	Power / Control cable	#1 Power input	No

# 4.2 Special Accessories

No special accessories were used during the tests in order to achieve compliance.

#### 4.3 Equipment Modifications

No modifications were made to the EUT at Radiometrics' test facility in order to comply with the standards listed in this report.

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#### **5 TEST SPECIFICATIONS AND RELATED DOCUMENTS**

Document	Date	Title
FCC CFR Title 47	2012	Code of Federal Regulations Title 47, Chapter 1, Federal Communications Commission, Part 15 - Radio Frequency Devices
ANSI C63.4-2009	2009	Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
IC RSS-210 Issue 8	2010	Low Power Licence-Exempt Radiocommunication Devices (All Frequency Bands) Category I Equipment
IC RSS-Gen Issue 3	2010	General Requirements and Information for the Certification of Radiocommunication Equipment (RSS-Gen)

The test procedures used are in accordance with the Industry Canada RSS-GEN and ANSI document C63.4, "Methods of Measurement of Radio Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz". The specific procedures are described herein. Radiated testing was performed at an antenna to EUT distance of 3 meters. The antenna was raised and lowered from 1 to 4 meters.

#### **6 RADIOMETRICS' TEST FACILITIES**

The results of these tests were obtained at Radiometrics Midwest Corp. in Romeoville, Illinois, USA. Radiometrics is accredited by A2LA (American Association for Laboratory Accreditation) to conform to ISO/IEC 17025: 2005 "General Requirements for the Competence of Calibration and Testing Laboratories". Radiometrics' Lab Code is 121191 and Certification Number is 1495.01. Radiometrics' scope of accreditation includes all of the test methods listed herein. A copy of the accreditation can be accessed on our web site (www.radiomet.com). Radiometrics accreditation status can be verified at A2LA's web site (www.a2la2.org).

The following is a list of shielded enclosures located in Romeoville, Illinois used during the tests:

Chamber E: Is a custom made anechoic chamber that measures 52' L X 30' W X 18' H. The walls and ceiling are fully lined with RF absorber. Pro-shield of Collinsville, Oklahoma manufactured the chamber. The floor has a 9' x 9' section of microwave absorber for testing above 1 GHz.

Test Station F: Is an area that measures 10' D X 12' W X 10' H. The floor and back wall are metal shielded. This area is used for conducted emissions measurements.

A separate ten-foot long, brass plated, steel ground rod attached via a 6 inch copper braid grounds each of the above chambers. Each enclosure is also equipped with low-pass power line filters.

The FCC has accepted these sites as test site number US1065. The FCC test site Registration Number is 732175. Details of the site characteristics are on file with the Industry Canada as site number IC3124A-1.

A complete list of the test equipment is provided herein. The calibration due dates are indicated on the equipment list. The equipment is calibrated in accordance to ANSI/NCSL Z540-1 with traceability to the National Institute of Standards and Technology (NIST).

#### 7 DEVIATIONS AND EXCLUSIONS FROM THE TEST SPECIFICATIONS

There were no deviations or exclusions from the test specifications.

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#### **8 CERTIFICATION**

Radiometrics Midwest Corporation certifies that the data contained herein was taken under conditions that meet or exceed the requirements of the test specification and the data contained herein was taken with calibrated test equipment. The results relate only to the EUT listed herein.

#### 9 TEST EQUIPMENT TABLE

					Frequency	Cal	Cal
RMC ID	Manufacturer	Description	Model No.	Serial No.	Range	Period	Date
AMP-05	RMC/Celeritek	Pre-amplifier	MW110G	1001	1.0-12GHz	12 Mo.	01/24/12
AMP-22	Anritsu	Pre-amplifier	MH648A	M23969	0.1-1200MHz	12 Mo.	01/24/12
ANT-13	EMCO	Horn Antenna	3115	2502	1.0-18GHz	24 Mo.	12/05/12
ANT-44	Impossible	Super Log Antenna	SL-20M2G	1002	20-2000MHz	24 Mo.	12/14/11
	Machine	-					
REC-03	Anritsu	Spectrum Analyzer	MS2601B	MT94589	0.01-2200MHz	12 Mo.	04/02/12
REC-07	Anritsu	Spectrum Analyzer	MS2601A	MT53067	0.01-2200MHz	12 Mo.	05/21/12
REC-08	Hewlett	Spectrum Analyzer	8566B	2648A13481	30Hz-22GHz	24 Mo.	
	Packard			2209A01436			10/28/11
THM-02	Fluke	Temp/Humid Meter	971	93490471	N/A	12 Mo.	05/44/12

Note: All calibrated equipment is subject to periodic checks.

#### **10 TEST SECTIONS**

#### 10.1 Radiated RF Emissions

Radiated emission measurements were performed with linearly polarized broadband antennas. The results obtained with these antennas can be correlated with results obtained with a tuned dipole antenna. The radiated emission measurements were performed with a spectrum analyzer. The bandwidth used from 150 kHz to 30 MHz is 9 or 10 kHz and the bandwidth from 30 MHz to 1000 MHz is 100 or 120 kHz. Above 1 GHz, a 1 MHz bandwidth is used. A 10 dB linearity check is performed prior to start of testing in order to determine if an overload condition exists.

From 30 to 1000 MHz, an Anritsu spectrum analyzer was used. For tests from 1 to 25 GHz, an HP 8566 spectrum analyzer was used. For tests from 1 to 10 GHz, a high pass filter was used to reduce the fundamental emission. A harmonic mixer was used from 18 to 25 GHz. Figure 4 herein lists the details of the test equipment used during radiated emissions tests.

Final radiated emissions measurements were performed inside of an anechoic chamber at a test distance of 3 meters. The anechoic chamber is designated as Chamber E. This Chamber meets the Site Attenuation requirements of ANSI C63.4 and CISPR 16-1. Chamber E is located at 12 East Devonwood Ave. Romeoville, Illinois EMI test lab.

The entire frequency range from 30 to 9300 MHz was slowly scanned with particular attention paid to those frequency ranges which appeared high. Measurements were performed using two antenna polarizations, (vertical and horizontal). The worst case emissions were recorded. All measurements may be performed using either the peak, average or quasi-peak detector functions. If the peak detector data exceeds or is marginally close to the limits, the measurements are repeated using a quasi-peak detector or average function as required by the specification for final determination of compliance.

The detected emission levels were maximized by rotating the EUT, adjusting the positions of all cables, and by scanning the measurement antenna from 1 to 4 meters above the ground.

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# **10.1.1 Field Strength Calculation**

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

$$FS = RA + AF + CF - AG + PKA$$

Where: FS = Field Strength

RA = Receiver Amplitude AF = Antenna Factor

CF = Cable Attenuation Factor

AG = Amplifier Gain

PKA = Peak to Average Factor (This is zero for non-average measurements)

The Peak to average factor is used when average measurements are required. It is calculated by the highest duty cycle in percent over any 100mS transmission. The factor in dB is 20 \* Log(Duty cycle/100).

### 10.1.2 Radiated Emissions Test Results

Test Date	01/03/2013
Test Distance	3 Meters
Specification	FCC Part 15 Subpart C & RSS-210
Abbreviations	P = peak; Q = QP Pol = Antenna Polarization; V = Vertical; H = Horizontal;
	For Antenna Type Bi-Log = (ANT-44); Horn = (ANT-13)

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Tx   Hrm   Freq   Vertical Polarization   Horizontal Polarization   Fact   Freq   Tot. FS   Limit   United   Limit   Horizontal Polarization   Fact   Freq   Tot. FS   Limit   United   Limit   Horizontal Polarization   Fact   Freq   Miltz   GBuV/m   GBu				Spectrum Analyzer Readings dBuV									Ave		Ave	Margin	
Hm   Freq     Wertical Polarization   Horizontal Polarization   Fact   Freq   GBUV/m   GBUV/m   GB   GBV/m   GB   GBV/m   GB   GBV/m   GB   GBV/m   GB   GBV/m   GB   GB   GB   GB   GB   GB   GB   G		Tx		Peak		Ave		Peak		Ave	Corr	Emission	Peak	QP	Peak	QP	
## MH2	Hrm		Ve	ertical Po	larizatio	ı I	Но	orizontal	Polarizatio	n		Freg	Tot.	FS	Lin	nit	
2 904.6 51.1 53.1 56.0 40.6 48.7 50.6 53.1 37.7 -1.0 1809 55.0 39.6 74 54 14.4 3 904.6 45.4 47.8 45.5 32.4 42.2 42.4 42.4 27.0 1.5 2714 49.3 33.9 74 54 20.1 4 904.6 39.7 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.4 3618 47.2 31.8 74 54 22.2 5 904.6 42.5 42.6 42.6 27.2 42.5 42.6 42.0 27.2 4.4 3618 47.2 31.8 74 54 20.0 6 904.6 42.5 42.6 42.6 27.2 42.5 42.3 42.6 27.2 6.8 4523 49.4 34.0 74 54 20.0 6 904.6 42.3 42.3 42.7 27.3 42.6 43.6 43.6 28.2 8.2 5428 51.8 36.4 74 54 17.6 7 904.6 44.4 44.6 44.5 29.2 44.3 45.0 48.7 33.3 8.6 6332 57.3 41.9 74 54 12.1 9 904.6 45.8 47.8 51.9 36.5 48.3 43.7 44.9 32.9 8.2 7237 60.1 44.7 74 54 9.3 9 904.6 36.5 36.5 35.7 21.1 39.4 34.8 35.6 24.0 14.8 8141 54.2 38.8 74 54 15.2 10 904.6 36.5 36.5 35.7 21.1 39.4 34.8 35.6 24.0 14.8 8141 54.2 38.8 74 54 15.2 10 904.6 36.5 36.5 35.7 21.1 39.4 34.8 35.6 24.0 14.8 8141 54.2 38.8 74 54 15.2 10 904.6 36.2 7 59.9 90.7 38.8 37.5 35.5 23.4 10.8 9046 49.6 34.2 74 54 19.8 19.5 40.5 40.7 53.0 56.5 41.1 54.6 52.7 53.1 39.2 -0.9 1830 55.6 40.2 74 54 13.8 3 915.0 42.3 42.8 42.2 27.4 42.2 42.4 27.0 1.4 2745 47.1 31.7 74 54 22.3 4 19.5 40.5 40.7 53.0 56.5 41.1 54.6 52.7 53.1 39.2 -0.9 1830 55.6 40.2 74 54 21.8 5 915.0 42.2 42.6 42.6 42.0 27.2 4.8 3660 47.6 32.2 74 54 21.8 5 915.0 42.2 42.6 42.6 42.0 27.2 4.8 3660 47.6 32.2 74 54 21.8 5 915.0 42.3 42.8 42.2 27.4 42.2 42.4 42.6 42.6 27.2 42.5 42.3 42.6 42.6 27.2 42.5 42.3 42.6 42.6 27.2 42.5 42.3 42.6 42.6 27.2 42.5 42.3 42.6 42.0 27.2 4.8 3660 47.6 32.2 74 54 20.0 79.1 50.0 42.3 43.1 42.7 27.7 42.6 43.6 43.6 28.2 8.2 5490 51.8 36.4 74 54 17.6 7 915.0 42.3 43.1 42.7 27.7 42.6 43.6 43.6 28.2 8.2 5490 51.8 36.4 74 54 17.6 7 915.0 42.4 42.8 42.5 42.6 42.0 27.2 42.5 42.3 42.6 42.0 27.2 42.5 42.3 42.6 42.0 27.2 42.5 42.3 42.6 42.0 27.2 42.5 42.3 42.6 42.0 27.2 42.5 42.3 42.6 42.0 27.2 42.5 42.3 42.6 42.0 27.2 42.5 42.3 42.6 42.0 27.2 42.5 42.6 42.0 27.2 42.5 42.3 42.6 42.0 27.2 42.5 42.3 42.6 42.0 27.2 42.5 42.6 42.0 27.2 42.5 42.6 42.0 27.2 42.5 42.3 42.6 42.0 27.2 42.5 42.3 42.6 42.0 27.2 42.5 42.3 42.6 42.0 27.2 42.5												•					
3   904.6   45.4   47.8   45.5   32.4   42.2   42.4   42.4   27.0   1.5   2714   49.3   33.9   74   54   20.1     4   904.6   39.7   42.8   42.2   27.4   42.2   42.6   42.0   27.2   4.4   3618   47.2   31.8   74   54   22.2     5   904.6   42.5   42.6   42.6   27.2   42.5   42.3   42.6   27.2   6.8   4523   49.4   34.0   74   54   20.0     6   904.6   42.3   42.3   42.7   27.3   42.6   43.6   43.6   28.2   8.2   5428   51.8   36.4   74   54   17.6     7   904.6   44.4   44.6   44.5   29.2   44.3   45.0   48.7   33.3   8.6   6332   57.3   41.9   74   54   12.1     8   904.6   45.8   47.8   51.9   36.5   48.3   43.7   44.9   32.9   8.2   7237   60.1   44.7   74   54   9.3     9   904.6   36.5   36.5   35.7   21.1   39.4   34.8   35.6   24.0   14.8   8141   54.2   38.8   74   54   15.2     10   904.6   35.9   36.1   35.9   20.7   38.8   37.5   35.5   23.4   10.8   9046   49.6   34.2   74   54   19.8     1   915.0   62.7   58.9   59.9   61.9   61.9   59.1   53.5   61.5   24.3   915   87.0   86.2   94   94   7.0     2   915.0   46.7   53.0   56.5   41.1   54.6   52.7   53.1   39.2   -0.9   1830   55.6   40.2   74   54   13.8     3   915.0   42.3   42.8   42.2   27.4   42.2   42.6   42.0   27.2   4.8   3660   47.6   32.2   74   54   22.3     4   915.0   42.2   42.6   42.6   27.2   42.5   42.3   42.6   42.0   27.2   4.8   3660   47.6   32.2   74   54   22.3     5   915.0   42.2   42.6   42.6   27.2   42.5   42.3   42.6   42.0   27.2   4.8   3660   47.6   32.2   74   54   20.0     6   915.0   42.3   43.1   42.7   27.7   42.6   43.6   43.6   28.2   8.2   5490   51.8   36.4   74   54   17.6     7   915.0   44.4   44.6   44.5   29.2   44.3   45.0   45.9   30.5   8.7   6405   54.6   39.2   74   54   17.6     9   915.0   35.4   36.5   35.7   21.1   38.3   34.8   35.6   22.9   14.2   8235   52.5   37.1   74   54   62.9     9   9   15.0   35.9   36.1   35.9   20.7   39.1   37.5   35.5   23.7   10.5   9150   49.6   34.2   74   54   10.8     1   9   9   9   9   9   9   9   9   9	1	904.6	65.4	60.0	62.2	55.4	62.4	60.2	62.2	62.1	24.2	905	89.6	86.3	94	94	4.4
4         904.6         39.7         42.8         42.2         27.4         42.2         42.6         42.0         27.2         4.4         3618         47.2         31.8         74         54         22.2           5         904.6         42.5         42.6         42.6         27.2         6.8         4523         49.4         34.0         74         54         20.0           6         904.6         42.3         42.7         27.3         42.6         43.6         28.2         52.8         51.8         36.4         74         54         17.6           7         904.6         44.4         44.6         44.5         29.2         44.3         45.0         48.7         33.3         8.6         6332         57.3         41.9         74         54         12.1           8         904.6         45.8         47.8         51.9         36.5         48.3         43.7         44.9         32.9         8.2         7237         60.1         44.7         74         54         9.3           9         904.6         35.9         36.1         35.9         20.7         38.8         37.5         35.5         23.4         10.8         904.6 </td <td>2</td> <td>904.6</td> <td>51.1</td> <td>53.1</td> <td>56.0</td> <td>40.6</td> <td>48.7</td> <td>50.6</td> <td>53.1</td> <td>37.7</td> <td>-1.0</td> <td>1809</td> <td>55.0</td> <td>39.6</td> <td>74</td> <td>54</td> <td>14.4</td>	2	904.6	51.1	53.1	56.0	40.6	48.7	50.6	53.1	37.7	-1.0	1809	55.0	39.6	74	54	14.4
5         904.6         42.5         42.6         42.6         27.2         42.5         42.3         42.6         27.2         6.8         4523         49.4         34.0         74         54         20.0           6         904.6         42.3         42.3         42.7         27.3         42.6         43.6         43.6         28.2         8.2         5428         51.8         36.4         74         54         17.6           7         904.6         44.4         44.6         44.5         29.2         44.3         45.0         48.7         33.3         8.6         6332         57.3         41.9         74         54         12.1           8         904.6         45.8         47.8         51.9         36.5         48.3         43.7         44.9         32.9         8.2         7237         60.1         44.7         74         54         9.3           9         904.6         36.5         36.7         21.1         39.4         34.8         35.6         24.0         14.8         814.1         54.2         38.8         74         54         19.8           10         904.6         35.9         36.1         36.9         90.7<	3	904.6	45.4	47.8	45.5	32.4	42.2	42.4	42.4	27.0	1.5	2714	49.3	33.9	74	54	20.1
6         904.6         42.3         42.3         42.7         27.3         42.6         43.6         43.6         28.2         8.2         5428         51.8         36.4         74         54         17.6           7         904.6         44.4         44.6         44.5         29.2         44.3         45.0         48.7         33.3         8.6         6332         57.3         41.9         74         54         12.1           8         904.6         45.8         47.8         51.9         36.5         48.3         43.7         44.9         32.9         8.2         7237         60.1         44.7         74         54         9.3           9         904.6         36.5         36.5         36.5         36.5         38.8         37.5         35.5         23.4         10.8         9046         49.6         34.2         74         54         19.8           1         915.0         62.7         58.9         59.9         61.9         69.1         53.5         61.5         24.3         915         87.0         86.2         94         94         7.0           2         915.0         46.7         43.4         45.7         45.1 <td>4</td> <td>904.6</td> <td>39.7</td> <td>42.8</td> <td>42.2</td> <td>27.4</td> <td>42.2</td> <td>42.6</td> <td>42.0</td> <td>27.2</td> <td>4.4</td> <td>3618</td> <td>47.2</td> <td>31.8</td> <td>74</td> <td>54</td> <td>22.2</td>	4	904.6	39.7	42.8	42.2	27.4	42.2	42.6	42.0	27.2	4.4	3618	47.2	31.8	74	54	22.2
7         904.6         44.4         44.6         44.5         29.2         44.3         45.0         48.7         33.3         8.6         6332         57.3         41.9         74         54         12.1           8         904.6         45.8         47.8         51.9         36.5         48.3         43.7         44.9         32.9         8.2         7237         60.1         44.7         74         54         9.3           9         904.6         36.5         36.5         35.7         21.1         39.4         34.8         35.6         24.0         14.8         8141         54.2         38.8         74         54         15.2           10         904.6         35.9         36.1         35.9         20.7         38.8         37.5         35.5         23.4         10.8         9046         49.6         34.2         74         54         19.8           1         915.0         62.7         58.9         59.9         61.9         61.9         59.1         53.5         61.5         24.3         915.0         86.2         94         47.0           2         915.0         42.2         42.4         42.2         42.2         4	5	904.6	42.5	42.6	42.6	27.2	42.5	42.3	42.6	27.2	6.8	4523	49.4	34.0	74	54	20.0
8 904.6 45.8 47.8 51.9 36.5 48.3 43.7 44.9 32.9 8.2 7237 60.1 44.7 74 54 9.3 9 904.6 36.5 36.5 35.7 21.1 39.4 34.8 35.6 24.0 14.8 8141 54.2 38.8 74 54 15.2 10 904.6 35.9 36.1 35.9 20.7 38.8 37.5 35.5 23.4 10.8 9046 49.6 34.2 74 54 19.8 1 915.0 62.7 58.9 59.9 61.9 61.9 591. 53.5 61.5 24.3 915. 87.0 86.2 94 94 7.0 2 915.0 46.7 53.0 56.5 41.1 54.6 52.7 53.1 39.2 -0.9 1830 55.6 40.2 74 54 13.8 3 915.0 45.4 45.7 45.5 30.3 42.2 42.2 42.4 27.0 1.4 2745 47.1 31.7 74 54 22.3 4 915.0 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3660 47.6 32.2 74 54 21.8 5 915.0 42.3 42.1 42.7 27.7 42.6 43.6 43.6 28.2 8.2 5490 51.8 36.4 74 54 17.6 7 915.0 44.4 44.6 44.5 29.2 44.3 45.0 45.9 30.5 8.7 6405 52.5 47.1 74 54 6.9 9 915.0 35.4 36.5 35.7 21.1 38.3 34.8 35.6 22.9 14.2 8235 52.5 37.1 74 54 18.8 1925.4 63.4 57.9 60.8 63.3 61.6 56.4 55.8 46.0 33.1 8.6 7320 62.5 47.1 74 54 19.8 1925.4 63.4 57.9 60.8 63.3 61.6 56.4 55.8 60.6 24.4 925 87.8 87.7 94 94 6.2 2 925.4 45.4 45.7 45.5 30.3 42.2 42.4 42.6 42.0 27.2 48.8 3600 47.6 32.2 74 54 14.8 8 15.0 50.0 48.9 53.9 38.5 48.5 46.5 46.0 33.1 8.6 7320 62.5 47.1 74 54 6.9 9 915.0 35.4 36.5 35.7 21.1 38.3 34.8 35.6 22.9 14.2 8235 52.5 37.1 74 54 16.9 195.0 42.3 42.4 45.4 45.7 45.5 30.3 42.2 42.4 42.4 42.0 42.4 42.9 42.6 42.0 27.2 48.8 37.0 49.6 34.2 74 54 19.8 1925.4 63.4 57.9 60.8 63.3 61.6 56.4 55.8 60.6 24.4 92.5 87.8 87.7 94 94 6.2 2 925.4 50.4 51.6 54.6 39.2 59.3 51.7 52.8 43.9 -0.7 1851 58.6 43.2 74 54 19.8 1925.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 10.8 3 925.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 10.8 3 925.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 10.8 3 925.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 10.8 3 925.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 10.8 3 925.4 42.3 42.8 42.2 27.4 42.6 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 10.8 3 925.4 42.3 42.8 42.2 27.4 42.6 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 10.8 41.7 41.8 41.8 41.8 41.8 41.8 41.8 41.8 41.8	6	904.6	42.3	42.3	42.7	27.3	42.6	43.6	43.6	28.2	8.2	5428	51.8	36.4	74	54	17.6
9 904.6 36.5 36.5 35.7 21.1 39.4 34.8 35.6 24.0 14.8 8141 54.2 38.8 74 54 15.2 10 904.6 35.9 36.1 35.9 20.7 38.8 37.5 35.5 23.4 10.8 9046 49.6 34.2 74 54 19.8 1 915.0 62.7 58.9 59.9 61.9 61.9 59.1 53.5 61.5 24.3 915 87.0 86.2 94 94 7.0 2 915.0 46.7 53.0 56.5 41.1 54.6 52.7 53.1 39.2 -0.9 1830 55.6 40.2 74 54 13.8 3 915.0 45.4 45.7 45.5 30.3 42.2 42.2 42.4 27.0 1.4 2745 47.1 31.7 74 54 22.3 4 915.0 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3660 47.6 32.2 74 54 21.8 5 915.0 42.3 43.1 42.7 27.7 42.6 43.6 43.6 28.2 8.2 5490 51.8 36.4 74 54 17.6 7 915.0 44.4 44.6 44.5 29.2 44.3 45.0 45.9 30.5 8.7 6405 54.6 39.2 74 54 16.9 9 9 15.0 35.4 36.5 35.7 21.1 38.3 34.8 35.6 22.9 14.2 8235 52.5 37.1 74 54 16.9 19 9 15.0 35.4 36.5 35.7 21.1 38.3 34.8 35.6 22.9 14.2 8235 52.5 37.1 74 54 16.9 19 9 25.4 63.4 57.9 60.8 63.3 61.6 56.4 55.8 60.6 24.4 925 87.8 87.7 94 94 6.2 2 925.4 45.4 45.7 45.5 30.3 42.2 42.4 42.4 27.0 1.4 2776 47.1 31.7 74 54 19.8 19 25.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 6.8 45.7 10.5 9150 49.6 34.2 74 54 10.8 19 925.4 45.4 44.6 44.5 29.2 44.3 45.0 45.9 30.5 8.7 6405 54.6 39.2 74 54 16.9 10 915.0 35.4 36.5 35.7 21.1 38.3 34.8 35.6 22.9 14.2 8235 52.5 37.1 74 54 16.9 10 915.0 35.9 36.1 35.9 20.7 39.1 37.5 35.5 23.7 10.5 9150 49.6 34.2 74 54 19.8 19 25.4 63.4 57.9 60.8 63.3 61.6 56.4 55.8 60.6 24.4 925 87.8 87.7 94 94 6.2 2 925.4 45.4 45.4 45.7 45.5 30.3 42.2 42.4 42.4 42.4 27.0 1.4 2776 47.1 31.7 74 54 20.0 6 925.4 45.4 45.7 45.5 30.3 42.2 42.4 42.4 27.0 1.4 2776 47.1 31.7 74 54 20.0 6 925.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 20.0 6 925.4 42.3 43.1 42.7 27.7 42.6 43.6 43.6 43.6 28.2 8.2 5552 51.8 36.4 74 54 10.8 10 10 915.0 35.9 36.1 35.9 20.7 39.1 37.5 35.5 23.7 10.5 9150 49.6 34.2 74 54 10.8 10 10 915.0 35.9 36.1 35.9 20.7 39.1 37.5 35.5 23.7 10.5 9150 49.6 34.2 74 54 10.8 10 10 915.0 35.4 36.5 35.7 21.1 39.9 34.8 35.6 24.5 12.8 8329 52.7 37.3 74 54 10.8 10 10 925.4 35.9 36.5 35.7 21.1 39.9 34.8 35.6 24.5 12.8 8329 52.7 37.3 74 54 10.7 10 925.4 35.9 36.5 35.7 21.1 39.9 34.8	7	904.6	44.4	44.6	44.5	29.2	44.3	45.0	48.7	33.3	8.6	6332	57.3	41.9	74	54	12.1
10         904.6         35.9         36.1         35.9         20.7         38.8         37.5         35.5         23.4         10.8         9046         49.6         34.2         74         54         19.8           1         915.0         62.7         58.9         59.9         61.9         61.9         59.1         53.5         61.5         24.3         915         87.0         86.2         94         94         7.0           2         915.0         46.7         53.0         56.5         41.1         54.6         52.7         53.1         39.2         -0.9         1830         55.6         40.2         74         54         13.8           3         915.0         45.4         45.7         45.5         30.3         42.2         42.4         27.0         1.4         2745         47.1         31.7         74         54         22.3           4         915.0         42.3         42.8         42.2         27.4         42.2         42.6         42.7         48.8         3660         47.6         32.2         74         54         22.3           5         915.0         42.3         43.1         42.7         27.7         42.6	8	904.6	45.8	47.8	51.9	36.5	48.3	43.7	44.9	32.9	8.2	7237	60.1	44.7	74	54	9.3
1       915.0       62.7       58.9       59.9       61.9       69.1       59.1       53.5       61.5       24.3       915       87.0       86.2       94       94       7.0         2       915.0       46.7       53.0       56.5       41.1       54.6       52.7       53.1       39.2       -0.9       1830       55.6       40.2       74       54       13.8         3       915.0       45.4       45.7       45.5       30.3       42.2       42.2       42.4       27.0       1.4       2745       47.1       31.7       74       54       22.3         4       915.0       42.3       42.8       42.2       27.4       42.2       42.6       42.0       27.2       48.8       3660       47.6       32.2       74       54       21.8         5       915.0       42.2       42.6       42.2       42.5       42.3       42.6       27.2       48.8       3660       47.6       32.2       74       54       21.8         5       915.0       42.3       43.1       42.7       27.7       42.6       43.6       43.6       28.2       82.2       5490       51.8       36.4	9	904.6	36.5	36.5	35.7	21.1	39.4	34.8	35.6	24.0	14.8	8141	54.2	38.8	74	54	15.2
2         915.0         46.7         53.0         56.5         41.1         54.6         52.7         53.1         39.2         -0.9         1830         55.6         40.2         74         54         13.8           3         915.0         45.4         45.7         45.5         30.3         42.2         42.4         27.0         1.4         2745         47.1         31.7         74         54         22.3           4         915.0         42.3         42.8         42.2         27.4         42.2         42.6         42.0         27.2         4.8         3660         47.6         32.2         74         54         21.8           5         915.0         42.2         42.6         42.6         27.2         42.6         42.0         27.2         6.8         4575         49.4         34.0         74         54         20.0           6         915.0         42.3         43.1         42.7         27.7         42.6         43.6         28.2         8.2         5490         51.8         36.4         74         54         17.6           7         915.0         36.0         35.7         21.1         38.5         46.5         46.5 </td <td>10</td> <td>904.6</td> <td>35.9</td> <td>36.1</td> <td>35.9</td> <td>20.7</td> <td>38.8</td> <td>37.5</td> <td>35.5</td> <td>23.4</td> <td>10.8</td> <td>9046</td> <td>49.6</td> <td>34.2</td> <td>74</td> <td>54</td> <td>19.8</td>	10	904.6	35.9	36.1	35.9	20.7	38.8	37.5	35.5	23.4	10.8	9046	49.6	34.2	74	54	19.8
3 915.0 45.4 45.7 45.5 30.3 42.2 42.2 42.4 27.0 1.4 2745 47.1 31.7 74 54 22.3 4 915.0 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3660 47.6 32.2 74 54 21.8 5 915.0 42.2 42.6 42.6 27.2 42.5 42.3 42.6 27.2 6.8 4575 49.4 34.0 74 54 20.0 6 915.0 42.3 43.1 42.7 27.7 42.6 43.6 43.6 28.2 8.2 5490 51.8 36.4 74 54 17.6 7 915.0 44.4 44.6 44.5 29.2 44.3 45.0 45.9 30.5 8.7 6405 54.6 39.2 74 54 14.8 8 915.0 50.0 48.9 53.9 38.5 48.5 46.5 46.0 33.1 8.6 7320 62.5 47.1 74 54 6.9 9 915.0 35.4 36.5 35.7 21.1 38.3 34.8 35.6 22.9 14.2 8235 52.5 37.1 74 54 16.9 10 915.0 35.9 36.1 35.9 20.7 39.1 37.5 35.5 23.7 10.5 9150 49.6 34.2 74 54 19.8 1 925.4 63.4 57.9 60.8 63.3 61.6 56.4 55.8 60.6 24.4 925 87.8 87.7 94 94 6.2 2 925.4 50.4 51.6 54.6 39.2 59.3 51.7 52.8 43.9 -0.7 1851 58.6 43.2 74 54 10.8 3 925.4 42.3 42.8 42.2 27.4 42.2 42.4 42.4 27.0 1.4 2776 47.1 31.7 74 54 22.3 4 925.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 10.8 5 925.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 21.8 5 925.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 21.8 5 925.4 42.3 43.1 42.7 27.7 42.6 43.6 43.6 28.2 8.2 5552 51.8 36.4 74 54 10.8 5 925.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 21.8 5 925.4 42.3 43.1 42.7 27.7 42.6 43.6 43.6 28.2 8.2 5552 51.8 36.4 74 54 17.6 7 925.4 44.4 44.6 44.5 29.2 44.3 45.0 45.9 30.5 8.8 6478 54.7 39.3 74 54 17.6 7 925.4 44.4 44.6 44.5 29.2 44.3 45.0 45.9 30.5 8.8 6478 54.7 39.3 74 54 17.6 7 925.4 44.4 44.6 44.5 29.2 44.3 45.0 45.9 30.5 8.8 6478 54.7 39.3 74 54 17.6 7 925.4 44.4 44.6 44.5 29.2 44.3 45.0 45.9 30.5 8.8 6478 54.7 39.3 74 54 17.6 7 925.4 44.9 50.6 53.1 37.7 48.6 46.7 49.4 34.0 8.9 7403 62.0 46.6 74 54 7.4 17.6 10 925.4 35.9 36.5 35.7 21.1 39.9 34.8 35.5 23.6 10.6 9254 49.6 34.2 74 54 19.8 Column numbers (see below for explanations)	1	915.0	62.7	58.9	59.9	61.9	61.9	59.1	53.5	61.5	24.3	915	87.0	86.2	94	94	7.0
4         915.0         42.3         42.8         42.2         27.4         42.2         42.6         42.0         27.2         4.8         3660         47.6         32.2         74         54         21.8           5         915.0         42.2         42.6         42.5         42.3         42.6         27.2         6.8         4575         49.4         34.0         74         54         20.0           6         915.0         42.3         43.1         42.7         27.7         42.6         43.6         28.2         8.2         5490         51.8         36.4         74         54         17.6           7         915.0         44.4         44.6         44.5         29.2         44.3         45.0         45.9         30.5         8.7         6405         54.6         39.2         74         54         14.8           8         915.0         50.0         48.9         53.9         38.5         48.5         46.5         46.0         33.1         8.6         7320         62.5         47.1         74         54         6.9           9         915.0         35.4         36.5         35.7         21.1         38.3         34.8 <td>2</td> <td>915.0</td> <td>46.7</td> <td>53.0</td> <td>56.5</td> <td>41.1</td> <td>54.6</td> <td>52.7</td> <td>53.1</td> <td>39.2</td> <td>-0.9</td> <td>1830</td> <td>55.6</td> <td>40.2</td> <td>74</td> <td>54</td> <td>13.8</td>	2	915.0	46.7	53.0	56.5	41.1	54.6	52.7	53.1	39.2	-0.9	1830	55.6	40.2	74	54	13.8
5         915.0         42.2         42.6         42.6         27.2         42.5         42.3         42.6         27.2         6.8         4575         49.4         34.0         74         54         20.0           6         915.0         42.3         43.1         42.7         27.7         42.6         43.6         43.6         28.2         8.2         5490         51.8         36.4         74         54         17.6           7         915.0         44.4         44.6         44.5         29.2         44.3         45.0         45.9         30.5         8.7         6405         54.6         39.2         74         54         14.8           8         915.0         50.0         48.9         53.9         38.5         48.5         46.5         46.0         33.1         8.6         7320         62.5         47.1         74         54         6.9           9         915.0         35.4         36.5         35.7         21.1         38.3         34.8         35.6         22.9         14.2         8235         52.5         37.1         74         54         16.9           10         915.0         35.9         36.1         35.9 </td <td>3</td> <td>915.0</td> <td>45.4</td> <td>45.7</td> <td>45.5</td> <td>30.3</td> <td>42.2</td> <td>42.2</td> <td>42.4</td> <td>27.0</td> <td>1.4</td> <td>2745</td> <td>47.1</td> <td>31.7</td> <td>74</td> <td>54</td> <td>22.3</td>	3	915.0	45.4	45.7	45.5	30.3	42.2	42.2	42.4	27.0	1.4	2745	47.1	31.7	74	54	22.3
6 915.0 42.3 43.1 42.7 27.7 42.6 43.6 43.6 28.2 8.2 5490 51.8 36.4 74 54 17.6 7 915.0 44.4 44.6 44.5 29.2 44.3 45.0 45.9 30.5 8.7 6405 54.6 39.2 74 54 14.8 8 915.0 50.0 48.9 53.9 38.5 48.5 46.5 46.0 33.1 8.6 7320 62.5 47.1 74 54 6.9 9 915.0 35.4 36.5 35.7 21.1 38.3 34.8 35.6 22.9 14.2 8235 52.5 37.1 74 54 16.9 10 915.0 35.9 36.1 35.9 20.7 39.1 37.5 35.5 23.7 10.5 9150 49.6 34.2 74 54 19.8 1 925.4 63.4 57.9 60.8 63.3 61.6 56.4 55.8 60.6 24.4 925 87.8 87.7 94 94 6.2 2 925.4 50.4 51.6 54.6 39.2 59.3 51.7 52.8 43.9 -0.7 1851 58.6 43.2 74 54 10.8 3 925.4 45.4 45.7 45.5 30.3 42.2 42.4 42.4 27.0 1.4 2776 47.1 31.7 74 54 22.3 4 925.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 21.8 5 925.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 21.8 5 925.4 42.3 43.1 42.7 27.7 42.6 43.6 43.6 28.2 8.2 5552 51.8 36.4 74 54 17.6 7 925.4 44.4 44.6 44.5 29.2 44.3 45.0 45.9 30.5 8.8 6478 54.7 39.3 74 54 14.7 8 925.4 35.9 36.1 35.9 20.7 39.0 37.5 35.5 23.6 10.6 9254 49.6 34.2 74 54 19.8 Column numbers (see below for explanations)	4	915.0	42.3	42.8	42.2	27.4	42.2	42.6	42.0	27.2	4.8	3660	47.6	32.2	74	54	21.8
7         915.0         44.4         44.6         29.2         44.3         45.0         45.9         30.5         8.7         6405         54.6         39.2         74         54         14.8           8         915.0         50.0         48.9         53.9         38.5         48.5         46.5         46.0         33.1         8.6         7320         62.5         47.1         74         54         6.9           9         915.0         35.4         36.5         35.7         21.1         38.3         34.8         35.6         22.9         14.2         8235         52.5         37.1         74         54         16.9           10         915.0         35.9         36.1         35.9         20.7         39.1         37.5         35.5         23.7         10.5         9150         49.6         34.2         74         54         19.8           1         925.4         63.4         57.9         60.8         63.3         61.6         56.4         55.8         60.6         24.4         925         87.8         87.7         94         94         6.2           2         925.4         45.0         45.7         45.5         30.3 </td <td>5</td> <td>915.0</td> <td>42.2</td> <td>42.6</td> <td>42.6</td> <td>27.2</td> <td>42.5</td> <td>42.3</td> <td>42.6</td> <td>27.2</td> <td>6.8</td> <td>4575</td> <td>49.4</td> <td>34.0</td> <td>74</td> <td>54</td> <td>20.0</td>	5	915.0	42.2	42.6	42.6	27.2	42.5	42.3	42.6	27.2	6.8	4575	49.4	34.0	74	54	20.0
8 915.0 50.0 48.9 53.9 38.5 48.5 46.5 46.0 33.1 8.6 7320 62.5 47.1 74 54 6.9 9 915.0 35.4 36.5 35.7 21.1 38.3 34.8 35.6 22.9 14.2 8235 52.5 37.1 74 54 16.9 10 915.0 35.9 36.1 35.9 20.7 39.1 37.5 35.5 23.7 10.5 9150 49.6 34.2 74 54 19.8 1 925.4 63.4 57.9 60.8 63.3 61.6 56.4 55.8 60.6 24.4 925 87.8 87.7 94 94 6.2 2 925.4 50.4 51.6 54.6 39.2 59.3 51.7 52.8 43.9 -0.7 1851 58.6 43.2 74 54 10.8 3 925.4 45.4 45.7 45.5 30.3 42.2 42.4 42.4 27.0 1.4 2776 47.1 31.7 74 54 22.3 4 925.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 21.8 5 925.4 42.3 42.6 42.6 27.2 42.5 42.3 42.6 27.2 6.8 4627 49.4 34.0 74 54 20.0 6 925.4 42.3 43.1 42.7 27.7 42.6 43.6 43.6 28.2 8.2 5552 51.8 36.4 74 54 17.6 7 925.4 44.4 44.6 44.5 29.2 44.3 45.0 45.9 30.5 8.8 6478 54.7 39.3 74 54 14.7 8 925.4 49.9 50.6 53.1 37.7 48.6 46.7 49.4 34.0 8.9 7403 62.0 46.6 74 54 7.4 9 925.4 35.9 36.5 35.7 21.1 39.9 34.8 35.6 24.5 12.8 8329 52.7 37.3 74 54 16.7 10 925.4 35.9 36.1 35.9 20.7 39.0 37.5 35.5 23.6 10.6 9254 49.6 34.2 74 54 19.8 Column numbers (see below for explanations)	6	915.0	42.3	43.1	42.7	27.7	42.6	43.6	43.6	28.2	8.2	5490	51.8	36.4	74	54	17.6
9 915.0 35.4 36.5 35.7 21.1 38.3 34.8 35.6 22.9 14.2 8235 52.5 37.1 74 54 16.9 10 915.0 35.9 36.1 35.9 20.7 39.1 37.5 35.5 23.7 10.5 9150 49.6 34.2 74 54 19.8 1 925.4 63.4 57.9 60.8 63.3 61.6 56.4 55.8 60.6 24.4 925 87.8 87.7 94 94 6.2 2 925.4 50.4 51.6 54.6 39.2 59.3 51.7 52.8 43.9 -0.7 1851 58.6 43.2 74 54 10.8 3 925.4 45.4 45.7 45.5 30.3 42.2 42.4 42.4 27.0 1.4 2776 47.1 31.7 74 54 22.3 4 925.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 21.8 5 925.4 42.3 43.1 42.7 27.7 42.6 43.6 43.6 28.2 8.2 5552 51.8 36.4 74 54 17.6 7 925.4 44.4 44.6 44.5 29.2 44.3 45.0 45.9 30.5 8.8 6478 54.7 39.3 74 54 14.7 8 925.4 35.9 36.5 35.7 21.1 39.9 34.8 35.6 24.5 12.8 8329 52.7 37.3 74 54 16.7 10 925.4 35.9 36.1 35.9 20.7 39.0 37.5 35.5 23.6 10.6 9254 49.6 34.2 74 54 19.8 Column numbers (see below for explanations)	7	915.0	44.4	44.6	44.5	29.2	44.3	45.0	45.9	30.5	8.7	6405	54.6	39.2	74	54	14.8
10       915.0       35.9       36.1       35.9       20.7       39.1       37.5       35.5       23.7       10.5       9150       49.6       34.2       74       54       19.8         1       925.4       63.4       57.9       60.8       63.3       61.6       56.4       55.8       60.6       24.4       925       87.8       87.7       94       94       6.2         2       925.4       50.4       51.6       54.6       39.2       59.3       51.7       52.8       43.9       -0.7       1851       58.6       43.2       74       54       10.8         3       925.4       45.4       45.7       45.5       30.3       42.2       42.4       42.0       27.0       1.4       2776       47.1       31.7       74       54       22.3         4       925.4       42.3       42.8       42.2       27.4       42.2       42.6       42.0       27.2       4.8       3702       47.6       32.2       74       54       21.8         5       925.4       42.2       42.6       42.3       42.6       27.2       42.3       42.6       27.2       6.8       4627       49.4	8	915.0	50.0	48.9	53.9	38.5	48.5	46.5	46.0	33.1	8.6	7320	62.5	47.1	74	54	6.9
1       925.4       63.4       57.9       60.8       63.3       61.6       56.4       55.8       60.6       24.4       925       87.8       87.7       94       94       6.2         2       925.4       50.4       51.6       54.6       39.2       59.3       51.7       52.8       43.9       -0.7       1851       58.6       43.2       74       54       10.8         3       925.4       45.4       45.7       45.5       30.3       42.2       42.4       42.4       27.0       1.4       2776       47.1       31.7       74       54       22.3         4       925.4       42.3       42.8       42.2       27.4       42.2       42.6       42.0       27.2       4.8       3702       47.6       32.2       74       54       21.8         5       925.4       42.2       42.6       42.3       42.3       42.6       27.2       6.8       4627       49.4       34.0       74       54       20.0         6       925.4       42.3       43.1       42.7       27.7       42.6       43.6       43.6       28.2       8.2       5552       51.8       36.4       74	9	915.0	35.4	36.5	35.7	21.1	38.3	34.8	35.6	22.9	14.2	8235	52.5	37.1	74	54	16.9
2     925.4     50.4     51.6     54.6     39.2     59.3     51.7     52.8     43.9     -0.7     1851     58.6     43.2     74     54     10.8       3     925.4     45.4     45.7     45.5     30.3     42.2     42.4     42.4     27.0     1.4     2776     47.1     31.7     74     54     22.3       4     925.4     42.3     42.8     42.2     27.4     42.2     42.6     42.0     27.2     4.8     3702     47.6     32.2     74     54     21.8       5     925.4     42.2     42.6     42.5     42.3     42.6     27.2     6.8     4627     49.4     34.0     74     54     20.0       6     925.4     42.3     43.1     42.7     27.7     42.6     43.6     43.6     28.2     8.2     5552     51.8     36.4     74     54     17.6       7     925.4     44.4     44.6     44.5     29.2     44.3     45.0     45.9     30.5     8.8     6478     54.7     39.3     74     54     14.7       8     925.4     49.9     50.6     53.1     37.7     48.6     46.7     49.4     34.0     8.	10	915.0	35.9	36.1	35.9	20.7	39.1	37.5	35.5	23.7	10.5	9150	49.6	34.2	74	54	19.8
3 925.4 45.4 45.7 45.5 30.3 42.2 42.4 42.4 27.0 1.4 2776 47.1 31.7 74 54 22.3 4 925.4 42.3 42.8 42.2 27.4 42.2 42.6 42.0 27.2 4.8 3702 47.6 32.2 74 54 21.8 5 925.4 42.2 42.6 42.6 27.2 42.5 42.3 42.6 27.2 6.8 4627 49.4 34.0 74 54 20.0 6 925.4 42.3 43.1 42.7 27.7 42.6 43.6 43.6 28.2 8.2 5552 51.8 36.4 74 54 17.6 7 925.4 44.4 44.6 44.5 29.2 44.3 45.0 45.9 30.5 8.8 6478 54.7 39.3 74 54 14.7 8 925.4 49.9 50.6 53.1 37.7 48.6 46.7 49.4 34.0 8.9 7403 62.0 46.6 74 54 7.4 9 925.4 35.9 36.5 35.7 21.1 39.9 34.8 35.6 24.5 12.8 8329 52.7 37.3 74 54 16.7 10 925.4 35.9 36.1 35.9 20.7 39.0 37.5 35.5 23.6 10.6 9254 49.6 34.2 74 54 19.8 Column numbers (see below for explanations)	1	925.4	63.4	57.9	60.8	63.3	61.6	56.4	55.8	60.6	24.4	925	87.8	87.7	94	94	6.2
4       925.4       42.3       42.8       42.2       27.4       42.2       42.6       42.0       27.2       4.8       3702       47.6       32.2       74       54       21.8         5       925.4       42.2       42.6       42.5       42.3       42.6       27.2       6.8       4627       49.4       34.0       74       54       20.0         6       925.4       42.3       43.1       42.7       27.7       42.6       43.6       43.6       28.2       8.2       5552       51.8       36.4       74       54       17.6         7       925.4       44.4       44.6       44.5       29.2       44.3       45.0       45.9       30.5       8.8       6478       54.7       39.3       74       54       14.7         8       925.4       49.9       50.6       53.1       37.7       48.6       46.7       49.4       34.0       8.9       7403       62.0       46.6       74       54       7.4         9       925.4       35.9       36.5       35.7       21.1       39.9       34.8       35.6       24.5       12.8       8329       52.7       37.3       74	2	925.4	50.4	51.6	54.6	39.2	59.3	51.7	52.8	43.9	-0.7	1851	58.6	43.2	74	54	10.8
5     925.4     42.2     42.6     42.6     27.2     42.5     42.3     42.6     27.2     6.8     4627     49.4     34.0     74     54     20.0       6     925.4     42.3     43.1     42.7     27.7     42.6     43.6     43.6     28.2     8.2     5552     51.8     36.4     74     54     17.6       7     925.4     44.4     44.6     44.5     29.2     44.3     45.0     45.9     30.5     8.8     6478     54.7     39.3     74     54     14.7       8     925.4     49.9     50.6     53.1     37.7     48.6     46.7     49.4     34.0     8.9     7403     62.0     46.6     74     54     7.4       9     925.4     35.9     36.5     35.7     21.1     39.9     34.8     35.6     24.5     12.8     8329     52.7     37.3     74     54     16.7       10     925.4     35.9     36.1     35.9     20.7     39.0     37.5     35.5     23.6     10.6     9254     49.6     34.2     74     54     19.8    Column numbers (see below for explanations)	3	925.4	45.4	45.7	45.5	30.3	42.2	42.4	42.4	27.0	1.4	2776	47.1	31.7	74	54	22.3
6 925.4 42.3 43.1 42.7 27.7 42.6 43.6 43.6 28.2 8.2 5552 51.8 36.4 74 54 17.6 7 925.4 44.4 44.6 44.5 29.2 44.3 45.0 45.9 30.5 8.8 6478 54.7 39.3 74 54 14.7 8 925.4 49.9 50.6 53.1 37.7 48.6 46.7 49.4 34.0 8.9 7403 62.0 46.6 74 54 7.4 9 925.4 35.9 36.5 35.7 21.1 39.9 34.8 35.6 24.5 12.8 8329 52.7 37.3 74 54 16.7 10 925.4 35.9 36.1 35.9 20.7 39.0 37.5 35.5 23.6 10.6 9254 49.6 34.2 74 54 19.8 Column numbers (see below for explanations)	4	925.4	42.3	42.8	42.2	27.4	42.2	42.6	42.0	27.2	4.8	3702	47.6	32.2	74	54	21.8
7 925.4 44.4 44.6 44.5 29.2 44.3 45.0 45.9 30.5 8.8 6478 54.7 39.3 74 54 14.7 8 925.4 49.9 50.6 53.1 37.7 48.6 46.7 49.4 34.0 8.9 7403 62.0 46.6 74 54 7.4 9 925.4 35.9 36.5 35.7 21.1 39.9 34.8 35.6 24.5 12.8 8329 52.7 37.3 74 54 16.7 10 925.4 35.9 36.1 35.9 20.7 39.0 37.5 35.5 23.6 10.6 9254 49.6 34.2 74 54 19.8 Column numbers (see below for explanations)	5	925.4	42.2	42.6	42.6	27.2	42.5	42.3	42.6	27.2	6.8	4627	49.4	34.0	74	54	20.0
8     925.4     49.9     50.6     53.1     37.7     48.6     46.7     49.4     34.0     8.9     7403     62.0     46.6     74     54     7.4       9     925.4     35.9     36.5     35.7     21.1     39.9     34.8     35.6     24.5     12.8     8329     52.7     37.3     74     54     16.7       10     925.4     35.9     36.1     35.9     20.7     39.0     37.5     35.5     23.6     10.6     9254     49.6     34.2     74     54     19.8       Column numbers (see below for explanations)	6	925.4	42.3	43.1	42.7	27.7	42.6	43.6	43.6	28.2	8.2	5552	51.8	36.4	74	54	17.6
9 925.4 35.9 36.5 35.7 21.1 39.9 34.8 35.6 24.5 12.8 8329 52.7 37.3 74 54 16.7 10 925.4 35.9 36.1 35.9 20.7 39.0 37.5 35.5 23.6 10.6 9254 49.6 34.2 74 54 19.8 Column numbers (see below for explanations)	7	925.4	44.4	44.6	44.5	29.2	44.3	45.0	45.9	30.5	8.8	6478	54.7	39.3	74	54	14.7
10 925.4 35.9 36.1 35.9 20.7 39.0 37.5 35.5 23.6 10.6 9254 49.6 34.2 74 54 19.8 Column numbers (see below for explanations)	8	925.4	49.9	50.6	53.1	37.7	48.6	46.7	49.4	34.0	8.9	7403	62.0	46.6	74	54	7.4
Column numbers (see below for explanations)	9	925.4	35.9	36.5	35.7	21.1	39.9	34.8	35.6	24.5	12.8	8329	52.7	37.3	74	54	16.7
Column numbers (see below for explanations)	10	925.4			35.9					23.6			49.6		74	54	
						Colu	ımn nu	mbers		ow for	explana	ations)	•				
	1	2	3	4	5								13	14	15	16	17

Judgment: Passed by 4.4 dB; No other Emissions were detected from 30 to 9300 MHz within 15 dB of the limits.

Column #1. hrm = Harmonic

Column #2. Frequency of Transmitter.

Column #3. Uncorrected readings from the spectrum analyzer with First Axis Rotation.

Column #4. Uncorrected readings from the spectrum analyzer with Second Axis Rotation.

Column #5. Uncorrected readings from the spectrum analyzer with Third Axis Rotation.

Column #6. Average Reading above 1 GHz or QP reading below 1GHz

Column #7. Uncorrected readings from the spectrum analyzer with First Axis Rotation.

Column #8. Uncorrected readings from the spectrum analyzer with Second Axis Rotation.

Column #9. Uncorrected readings from the spectrum analyzer with Third Axis Rotation.

Column #10. Average Reading above 1 GHz or QP reading below 1GHz

Column #11. Corr. Factors = Cable Loss - Preamp Gain + Antenna Factor

Column #12. Frequency of Tested Emission

Column #13. Highest peak field strength at listed frequency.

Column #14. Highest Average field strength at listed frequency.

Column #15. Peak Limit.

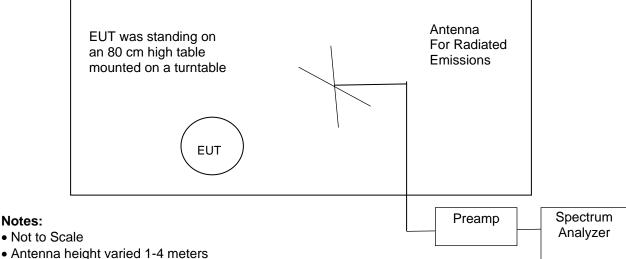
Column #16. Average Limit above 1 GHz; Quasi-peak limit below 1GHz.

Column #17. The margin (last column) is the worst case margin under the peak or average limits for that row.

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Figure 1. Drawing of Radiated Emissions Setup

Chamber E, anechoic



- Not to Scale
- Antenna height varied 1-4 meters
- Distance from antenna to tested system is 3 meters
- AC cords not shown. They are connected to AC outlet with low-pass filter on turntable

F., D.,	Receive	Pre-	Spectrum
Frequency Range	Antenna	Amplifier	Analyzer
30 to 1000 MHz	ANT-44	AMP-22	REC-03
1 to 10 GHz	ANT-13	AMP-05	REC-08

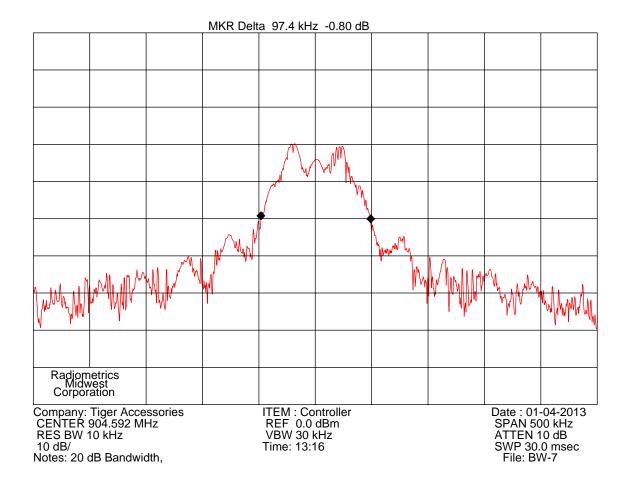
# 10.2 Occupied Bandwidth Data

The occupied bandwidth of the RF output was measured using a spectrum analyzer. The bandwidth was measured using the peak detector function and a narrow resolution bandwidth.

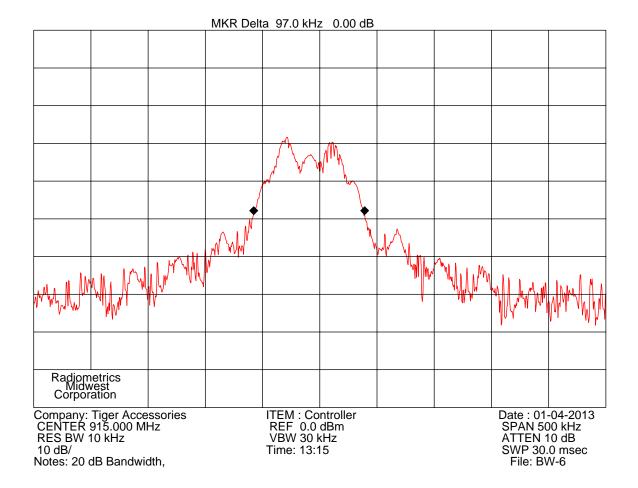
A broadband antenna was used to receive the modulated signal. The spectrum analyzer was set to the MAX HOLD mode to record the worst case of the modulation. The spectrum analyzer display was digitized and plotted. A limit was drawn on the plots based on the level of the modulated carrier. The plots of the occupied bandwidth for the EUT are supplied on the following page.

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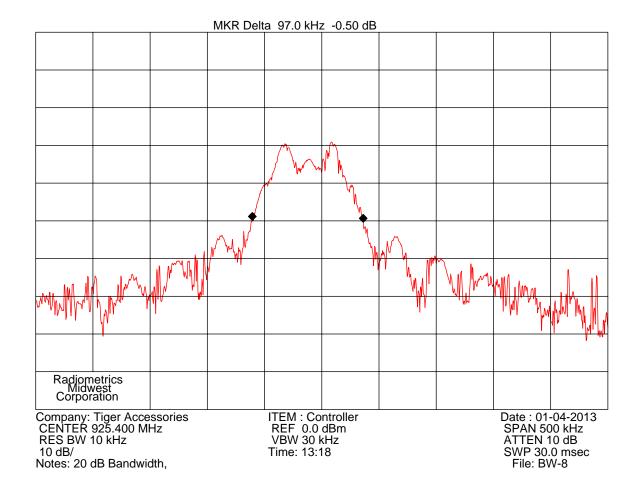
Figure 2. Occupied Bandwidth Plots



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Test Result: Bandwidth = 97.4 kHz

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# 10.3 Unintentional Emissions (Receive Mode)

Manufacturer	Tiger Accessories	Specification	FCC Part 15.247 & RSS-210			
Model	C6304	Test Date	01/04/2013			
Serial Number	03	Test Distance	3 Meters			
Abbreviations	Pol = Antenna Polarization; V = Vertical; H = Horizontal; P = peak; Q = QP					
Notes	Corr. Factors = Cable Loss - Preamp Gain - Duty Cycle Factor + HP Filter Loss					
Configuration	Receive mode					

	Meter		Antenna		Corr.	Field Strength		Margin
	Reading	Dect.	Factor		Factors	dB	uV/m	Under Limit
Freq. MHz	dBuV	Type	dB	Pol/ ID#	dB	EUT	Limit	dB
31.6	23.2	Р	21.6	H/44	-28.9	15.9	40.0	24.1
48.0	33.4	Р	19.0	H/44	-28.9	23.5	40.0	16.5
80.8	30.5	Р	11.7	H/44	-29.0	13.2	40.0	26.8
123.2	25.5	Р	18.2	H/44	-28.9	14.8	43.5	28.7
159.6	36.6	Р	13.9	H/44	-28.8	21.6	43.5	21.9
168.4	38.6	Р	13.0	H/44	-28.9	22.7	43.5	20.8
207.2	30.5	Р	13.1	H/44	-28.9	14.8	43.5	28.7
226.7	30.0	Р	14.5	H/44	-28.9	15.6	46.0	30.4
228.8	25.2	Р	14.5	H/44	-28.9	10.9	46.0	35.1
260.8	28.3	Р	15.2	H/44	-28.8	14.6	46.0	31.4
293.3	31.3	Р	15.9	H/44	-28.7	18.5	46.0	27.5
311.2	28.5	Р	16.1	H/44	-28.7	15.9	46.0	30.1
363.9	29.0	Р	17.4	H/44	-28.7	17.8	46.0	28.2
382.9	29.1	Р	17.9	H/44	-28.6	18.4	46.0	27.6
400.8	35.8	Р	18.2	H/44	-28.6	25.4	46.0	20.6
482.6	25.2	Р	19.5	H/44	-28.3	16.5	46.0	29.5
504.4	25.5	Р	21.6	H/44	-28.3	18.8	46.0	27.2
516.0	26.5	Р	20.3	H/44	-28.0	18.8	46.0	27.2
564.0	27.5	Р	19.7	H/44	-27.7	19.5	46.0	26.5
635.0	29.5	Р	22.1	H/44	-27.5	24.1	46.0	21.9
653.0	36.4	Р	21.5	H/44	-27.4	30.5	46.0	15.5
724.0	29.1	Р	21.2	H/44	-27.3	23.0	46.0	23.0
758.0	34.4	Р	21.5	H/44	-27.5	28.5	46.0	17.5
789.0	31.7	Р	21.8	H/44	-27.6	25.9	46.0	20.1
880.0	36.9	Р	22.7	H/44	-27.0	32.6	46.0	13.4
960.0	33.2	Р	23.3	H/44	-27.1	29.4	46.0	16.6
994.0	27.7	Р	23.4	H/44	-27.4	23.7	54.0	30.3
51.6	42.2	Р	16.7	V/44	-29.0	29.9	40.0	10.1
71.6	33.8	Р	10.0	V/44	-28.9	14.9	40.0	25.1
109.6	32.5	Р	15.8	V/44	-28.8	19.5	43.5	24.0
154.8	25.4	Р	15.0	V/44	-28.8	11.5	43.5	32.0
214.0	31.5	Р	13.9	V/44	-28.8	16.6	43.5	26.9
226.8	25.7	Р	14.5	V/44	-28.9	11.3	46.0	34.7
232.8	29.1	Р	14.7	V/44	-28.9	14.9	46.0	31.1
287.2	32.0	Р	15.7	V/44	-28.7	19.0	46.0	27.0
304.5	30.7	Р	16.1	V/44	-28.7	18.1	46.0	27.9
332.0	28.1	Р	16.4	V/44	-28.6	15.9	46.0	30.1

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	Meter		Antenna		Corr.	Field Strength		Margin
	Reading	Dect.	Factor		Factors	dB	uV/m	Under Limit
Freq. MHz	dBuV	Type	dB	Pol/ ID#	dB	EUT	Limit	dB
376.8	30.3	Р	17.5	V/44	-28.6	19.2	46.0	26.8
416.0	27.2	Р	17.7	V/44	-28.5	16.3	46.0	29.7
467.5	27.1	Ρ	18.5	V/44	-28.2	17.4	46.0	28.6
503.3	30.3	Ρ	21.7	V/44	-28.3	23.7	46.0	22.3
510.0	25.7	Р	21.0	V/44	-28.2	18.5	46.0	27.5
524.0	30.6	Р	19.4	V/44	-27.8	22.1	46.0	23.9
624.0	27.6	Р	21.8	V/44	-27.4	21.9	46.0	24.1
663.0	29.9	Р	21.0	V/44	-27.4	23.5	46.0	22.5
703.0	31.6	Ρ	20.9	V/44	-27.2	25.2	46.0	20.8
736.0	33.0	Ρ	21.3	V/44	-27.3	27.0	46.0	19.0
745.0	34.0	Р	21.4	V/44	-27.4	28.0	46.0	18.0
832.0	25.9	Р	22.2	V/44	-27.4	20.7	46.0	25.3
874.0	29.9	Р	22.6	V/44	-26.9	25.6	46.0	20.4
937.0	25.4	Р	23.2	V/44	-27.0	21.6	46.0	24.4
982.0	26.0	Р	23.4	V/44	-27.3	22.1	54.0	31.9

Results: Pass by 13.4 dB.

No other Emissions were detected from 30 to 5000 MHz within 15 dB of the limits.

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