



## ZILLIONTV CORPORATION ADDENDUM TEST REPORT TO FC09-036

#### **FOR THE**

## **USB BASE STATION, ZA100**

# FCC PART 15 SUBPART C SECTIONS 15.207 & 15.247 AND RSS-210 ISSUE 7

#### **TESTING**

DATE OF ISSUE: APRIL 24, 2009

PREPARED FOR: PREPARED BY:

ZillionTV Corporation
Joyce Walker
CKC Laboratories, Inc.
Sunnyvale, CA 94086
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Mariposa, CA 95338

W.O. No.: 89169 Date of test: March 9-10, 2009

Report No.: FC09-036A

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#### ADMINISTRATIVE INFORMATION

**DATE OF TEST:** March 9-10, 2009 **DATE OF RECEIPT:** March 9, 2009

**REPRESENTATIVE:** Tom Woch

MANUFACTURER: ZillionTV Corporation 1170 Kifer Road Sunnyvale, CA 94086 TEST LOCATION: CKC Laboratories, Inc. 110 Olinda Place Brea, CA 92823

**TEST METHOD:** ANSI C63.4 (2003), RSS-210 Issue 7 and RSS GEN Issue 2

## **PURPOSE OF TEST:**

**Original:** To perform the testing of the USB Base Station, ZA100 with the requirements for FCC Part 15 Subpart C Sections 15.207 & 15.247 and RSS-210 Issue 7 devices.

**Addendum A:** To correct the spec limits used in section 15.247(d) OATS Radiated Spurious Emissions. No new testing was performed.

## **APPROVALS**

Steve Behm, Director of Engineering Services

**QUALITY ASSURANCE:** 

Steve J Bel

**TEST PERSONNEL:** 

terest

Steve Behm, Director of Engineering Services

Armando Del Angel, Test Engineer

Donald Jones, Senior EMC Engineer / Lab

Manager

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## **SUMMARY OF RESULTS**

Test	Specification/Method	Results
Voltage Variation	FCC 15.31(e)	Pass
Conducted Emissions	FCC 15.207	Pass
6 dB Bandwidth	FCC 15.247(a)(2)	Pass
RF Output Power	FCC 15.247(b)(3)	Pass
OATS Spurious Emissions	FCC 15.247(d)	Pass
		_
Bandedge	FCC 15.247(d)	Pass
	70045245	
Peak Power Spectral Density	FCC 15.247(e)	Pass
00017	D G G A 4 6 7	
99% Bandwidth	RSS-210 Issue 7 and RSS GEN Issue 2	Pass
G' E'I M	FGG 210724	
Site File No.	FCC 318736	
	IC 3082C-1	

## **CONDITIONS DURING TESTING**

No modifications to the EUT were necessary during testing.

## FCC 15.31(m) Number Of Channels

This device was tested on three channels.

# FCC 15.33(a) Frequency Ranges Tested

15.207 Conducted Emissions: 150 kHz – 30 MHz 15.247 Radiate Emissions: 9 kHz – 10 GHz.

# **EUT Operating Frequency**

The EUT was operating at 903 MHz – 927 MHz

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# EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The customer declares the EUT tested by CKC Laboratories was representative of a production unit.

# **EQUIPMENT UNDER TEST**

<b>USB Base</b>	<b>Station</b>	<b>Laptop</b>	
Manuf:	ZillionTV Corporation	Manuf:	Lenovo
Model:	ZA100	Model:	T61
Serial:	013	Serial:	10156

# PERIPHERAL DEVICES

The EUT was not tested with peripheral devices.

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#### **MEASUREMENT UNCERTAINTIES**

<b>Uncertainty Value</b>	Parameter
4.73 dB	Radiated Emissions
3.34 dB	Mains Conducted Emissions
3.30 dB	Disturbance Power

The reported measurement uncertainties are calculated based on the worst case of all laboratory environments from CKC Laboratories, Inc. test sites. Only those parameters which require estimation of measurement uncertainty are reported. The reported worst case measurement uncertainty is less than the maximum values derived in CISPR 16-4-2. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k=2. Compliance is deemed to occur provided measurements are below the specified limits.

## REPORT OF EMISSIONS MEASUREMENTS

#### **TESTING PARAMETERS**

## TEMPERATURE AND HUMIDITY DURING TESTING

The temperature during testing was within  $+15^{\circ}$ C and  $+35^{\circ}$ C. The relative humidity was between 20% and 75%.

The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

#### **CORRECTION FACTORS**

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in  $dB\mu V/m$ , the spectrum analyzer reading in  $dB\mu V$  was corrected by using the following formula. This reading was then compared to the applicable specification limit.

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	SAMPLE CALCULATIONS						
	Meter reading	(dBµV)					
+	Antenna Factor	(dB)					
+	Cable Loss	(dB)					
_	Distance Correction	(dB)					
_	Preamplifier Gain	(dB)					
=	Corrected Reading	$(dB\mu V/m)$					

#### TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. The following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used. When conducted emissions testing was performed, a 10 dB external attenuator was used with internal offset correction in the analyzer.

#### SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the highest readings, this is indicated as a "QP" or an "Ave" on the appropriate rows of the data sheets. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

#### Peak

In this mode, the spectrum analyzer/receiver readings recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the measuring device called "peak hold," the measuring device had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

## **Quasi-Peak**

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the quasi-peak detector.

## **Average**

For certain frequencies, average measurements may be made using the spectrum analyzer/receiver. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point the measuring device is set into the linear mode and the scan time is reduced.

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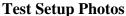
## FCC 15.31(e) VOLTAGE VARIATIONS

**Test Equipment** 

Test Equi	rest Equipment							
Asset #	Equipment	Serial #	Cal Date	Cal Due				
ANP05361	Cable 6'	51	12/30/2008	12/30/2010				
AN01994	Antenna	2453	12/22/2008	12/22/2010				
ANP05366	Cable 30'	11	11/5/2008	11/5/2010				
ANP05371	Cable 6'	49	11/10/2008	11/10/2010				
ANP05360	Cable 20'	16	11/10/2008	11/10/2010				
AN01517	HP 8447D Preamp	2944A08601	7/8/2008	7/8/2010				
AN02872	Agilent E4440A	MY46186330	1/31/2008	1/31/2010				

## **Test Conditions**

The EUT is transmitting. Due to the lack of antenna connectors the test will be done through radiated measurements. EUT is located on the back edge of the test table over 10cm of Styrofoam. The EUT is connected to a laptop via USB. All the laptop ports are filled per ANSI C63.4 procedures. The fundamental's emission will be maximized per ANSI C63.4 procedures. The input voltage to the laptop will be varied from 100% of the nominal voltage to 85% and 115% to analyze any change in the power output of the transmitter due to the voltage variations. EMI test will be used with the solely purpose of accurate Field Strength data gathering. Same calculation from the RF power output test will be done in order to convert the field strength to power.





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**Test Data** 

	85	0/0	10	0%	11	Limit	
	Vertical	Horizontal	Vertical	Horizontal	Vertical	Horizontal	
LOW	-7.52dBm	-7.72dBm	-7.52dBm	-7.82dBm	-7.52dBm	-7.82dBm	30dBm
MID	-4.72dBm	-4.22dBm	-4.52dBm	-4.32dBm	-4.52dBm	-4.32dBm	30dBm
HIGH	-1.92dBm	-2.52dBm	-1.72dBm	dBm -2.52dBm	-1.72dBm	-2.42dBm	30dBm

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# FCC 15.207 AC CONDUCTED EMISSIONS

**Test Setup Photos** 





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#### **Test Data Sheets**

Test Location: CKC Laboratories •22116 23rd Dr SE • Bothell, WA 98021-4413 • 425-402-1717

Customer: ZillionTV Corporation.
Specification: FCC 15.207 - AVE

Work Order #: 89169 Date: 3/10/2009
Test Type: Conducted Emissions Time: 18:32:16
Equipment: USB Base Station Sequence#: 4

Manufacturer: ZillionTV Corporation Tested By: Armando Del Angel

Model: ZA100 110V 60Hz

S/N: 013

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4440A	MY46186330	01/31/2008	01/31/2010	AN02872
Cable 30'	11	11/05/2008	11/05/2010	ANP05366
Cable 6'	49	11/10/2008	11/10/2010	ANP05371
Cable 20'	16	11/10/2008	11/10/2010	ANP05360
Attenuator	9912	03/21/2008	03/21/2010	ANP05503
Filter	G7752	07/21/2008	07/21/2010	AN02611
EMCO LISN	9606-1049	06/01/2007	06/01/2009	AN01492

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
USB Base Station*	ZillionTV Corporation	ZA100	013
Laptop	Lenovo	T61	10156

#### Support Devices:

Function	Manufacturer	Model #	S/N	

## Test Conditions / Notes:

Temp 21°

Rel. Humidity 26% Pressure 102.1kPa

Testing Conducted Emissions per FCC 15.207

The unit is a USB transmitter. It is connected to a laptop and the ports of the laptop are filled. All extra cable length is bundled in 40cm bundles. The Transmitter is located 10cm over the wooden table on styrofoam. The transmitter will be transmitting in the LOW channel.

Vertical Ground plane is located 40cm from the back of the table.

Operating Frequency range = 903 - 927MHz

Frequency range of measurement = 150kHz - 30MHz. Frequency: 150kHz-30MHz RBW= 9kHz, VBW = 9kHz

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# Transducer Legend:

T1=CAB-ANP05371	T2=FIL-AN02611-072108
T3=CAB-ANP05366	T4=ATT-ANP5503-032108
T5=CAB-ANP05360	T6=CDN-AN01492-060107 - Line

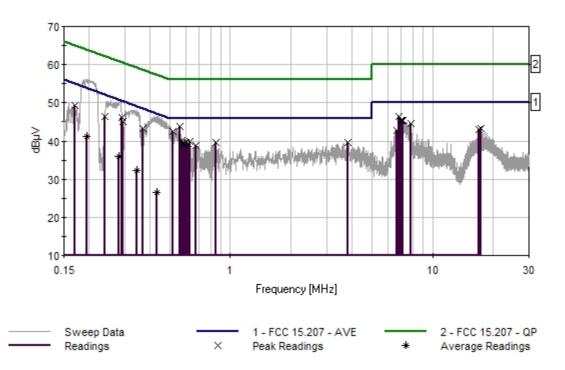
	rement Data:		eading lis					Test Lea			
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6							
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	559.417k	33.3	+0.1	+0.2	+0.0	+10.1	+0.0	43.9	46.0	-2.1	Line
			+0.1	+0.1							
2	519.421k	31.9	+0.1	+0.2	+0.0	+10.1	+0.0	42.5	46.0	-3.5	Line
			+0.1	+0.1							
3	521.602k	31.9	+0.1	+0.2	+0.0	+10.1	+0.0	42.5	46.0	-3.5	Line
			+0.1	+0.1							
4	6.833M	35.3	+0.1	+0.1	+0.2	+10.1	+0.0	46.3	50.0	-3.7	Line
			+0.2	+0.3							
5	291.078k	35.8	+0.0	+0.1	+0.0	+10.1	+0.0	46.1	50.5	-4.4	Line
			+0.0	+0.1							
6	6.950M	34.4	+0.1	+0.1	+0.2	+10.1	+0.0	45.4	50.0	-4.6	Line
			+0.2	+0.3							
7	7.085M	34.3	+0.1	+0.1	+0.2	+10.1	+0.0	45.3	50.0	-4.7	Line
			+0.2	+0.3							
8	7.112M	34.3	+0.1	+0.1	+0.2	+10.1	+0.0	45.3	50.0	-4.7	Line
			+0.2	+0.3							
9	293.260k	34.8	+0.0	+0.1	+0.0	+10.1	+0.0	45.1	50.4	-5.3	Line
	2,5,20011	2	+0.0	+0.1	. 0.0	. 10.1	. 0.0	.0.1			21110
10	368.162k	32.7	+0.1	+0.1	+0.0	+10.1	+0.0	43.2	48.5	-5.3	Line
10	000110211	02.7	+0.1	+0.1	. 0.0	. 10.1	. 0.0		.0.0		
11	7.824M	33.7	+0.1	+0.1	+0.2	+10.1	+0.0	44.7	50.0	-5.3	Line
	7.02 1111	33.7	+0.2	+0.3	10.2	110.1	10.0	,	20.0	0.0	Zine
12	170.362k	38.6	+0.0	+0.4	+0.0	+10.1	+0.0	49.2	54.9	-5.7	Line
	170.00211	20.0	+0.0	+0.1	. 0.0	. 10.1	. 0.0	.,	0>		21110
13	237.992k	36.0	+0.0	+0.2	+0.0	+10.1	+0.0	46.4	52.2	-5.8	Line
10	207199211	20.0	+0.0	+0.1	. 0.0	. 10.1	. 0.0		02.2	2.0	
14	578.324k	29.5	+0.1	+0.2	+0.0	+10.1	+0.0	40.1	46.0	-5.9	Line
• •	570.32 IR	27.0	+0.1	+0.1	10.0	110.1	10.0	10.1	10.0	3.7	Ziiic
15	632.138k	29.2	+0.1	+0.2	+0.0	+10.1	+0.0	39.8	46.0	-6.2	Line
13	032.130K	27.2	+0.1	+0.1	10.0	110.1	10.0	37.0	10.0	0.2	Line
16	576.143k	29.1	+0.1	+0.2	+0.0	+10.1	+0.0	39.7	46.0	-6.3	Line
10	370.143K	27.1	+0.1	+0.1	10.0	110.1	10.0	37.1	40.0	0.5	Line
17	602.322k	29.0	+0.1	+0.2	+0.0	+10.1	+0.0	39.6	46.0	-6.4	Line
1 /	002.322K	27.0	+0.1	+0.1	10.0	110.1	10.0	37.0	40.0	-0.4	Line
18	845.209k	29.0	+0.0	+0.2	+0.1	+10.1	+0.0	39.6	46.0	-6.4	Line
10	043.203K	29.0	+0.0	+0.2	+0.1	+10.1	+0.0	37.0	40.0	-0.4	Line
19	3.799M	28.8	+0.1	+0.1	+0.2	+10.1	+0.0	39.6	46.0	-6.4	Line
17	J. / 77 IVI	20.0	+0.1	+0.1	+0.2	+10.1	+0.0	39.0	40.0	-0.4	LIIIC
20	500 5051 <sub>5</sub>	28.7			+0.0	+10.1	+0.0	39.3	16 N	-6.7	Lina
20	588.505k	28.7	+0.1	+0.2	+0.0	+10.1	+0.0	39.3	46.0	-0./	Line
21	610.0401	20.7	+0.1	+0.1	ΙΔ Δ	+1Ω 1	100	20.2	460	67	T :
21	619.048k	28.7	+0.1	+0.2	+0.0	+10.1	+0.0	39.3	46.0	-6.7	Line
22	17 41014	21.2	+0.1	+0.1	.0.2	. 10 1	.00	42.2	<i>5</i> 0.0		т :
22	17.418M	31.3	+0.2	+0.2	+0.3	+10.1	+0.0	43.3	50.0	-6.7	Line
			+0.3	+0.9							

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585.596k	28.5	+0.1	+0.2	+0.0	+10.1	+0.0	39.1	46.0	-6.9	Line
		+0.1	+0.1							
16.923M	31.0	+0.2	+0.2	+0.3	+10.1	+0.0	43.0	50.0	-7.0	Line
		+0.3	+0.9							
676.497k	28.3	+0.1	+0.2	+0.0	+10.1	+0.0	38.9	46.0	-7.1	Line
		+0.1	+0.1							
6.679M	31.8	+0.1	+0.1	+0.2	+10.1	+0.0	42.8	50.0	-7.2	Line
		+0.2	+0.3							
195.087k	30.9	+0.0	+0.2	+0.0	+10.1	+0.0	41.3	53.8	-12.5	Line
Ave		+0.0	+0.1							
195.087k	45.8	+0.0	+0.2	+0.0	+10.1	+0.0	56.2	53.8	+2.4	Line
		+0.0	+0.1							
281.449k	25.6	+0.0	+0.1	+0.0	+10.1	+0.0	35.9	50.8	-14.9	Line
Ave		+0.0	+0.1							
281.449k	40.7	+0.0	+0.1	+0.0	+10.1	+0.0	51.0	50.8	+0.2	Line
		+0.0	+0.1							
343.437k	21.7	+0.1	+0.1	+0.0	+10.1	+0.0	32.2	49.1	-16.9	Line
Ave		+0.1	+0.1							
343.437k	37.6	+0.1	+0.1	+0.0	+10.1	+0.0	48.1	49.1	-1.0	Line
		+0.1	+0.1							
431.429k	15.8	+0.1	+0.2	+0.0	+10.1	+0.0	26.4	47.2	-20.8	Line
Ave		+0.1	+0.1							
431.429k	35.9	+0.1	+0.2	+0.0	+10.1	+0.0	46.5	47.2	-0.7	Line
		+0.1	+0.1							
,	16.923M 676.497k 6.679M 195.087k Ave 195.087k 281.449k Ave 281.449k 343.437k Ave 343.437k 431.429k Ave	16.923M 31.0 676.497k 28.3 6.679M 31.8 195.087k 30.9 Ave 195.087k 45.8 281.449k 25.6 Ave 281.449k 40.7 343.437k 21.7 Ave 343.437k 37.6 431.429k 15.8 Ave	+0.1  16.923M 31.0 +0.2 +0.3  676.497k 28.3 +0.1 +0.1  6.679M 31.8 +0.1 +0.2  195.087k 30.9 +0.0 195.087k 45.8 +0.0 +0.0  281.449k 25.6 +0.0 +0.0  281.449k 40.7 +0.0 343.437k 21.7 +0.1 +0.1  343.437k 37.6 +0.1 +0.1  431.429k 15.8 +0.1 +0.1  431.429k 35.9 +0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1

CKC Laboratories Date: 3/10/2009 Time: 18:32:16 Zillion TV Corporation. WO#: 89169 FCC 15.207 - AVE Test Lead: Line 110V 60Hz Sequence#: 4 Polarity: Line Notes:





Test Location: CKC Laboratories •22116 23rd Dr SE • Bothell, WA 98021-4413 • 425-402-1717

Customer: ZillionTV Corporation.
Specification: FCC 15.207 - AVE

Work Order #: 89169 Date: 3/10/2009
Test Type: Conducted Emissions Time: 17:36:34
Equipment: USB Base Station Sequence#: 1

Manufacturer: ZillionTV Corporation Tested By: Armando Del Angel

110V 60Hz

Model: ZA100 S/N: 013

### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4440A	MY46186330	01/31/2008	01/31/2010	AN02872
Cable 30'	11	11/05/2008	11/05/2010	ANP05366
Cable 6'	49	11/10/2008	11/10/2010	ANP05371
Cable 20'	16	11/10/2008	11/10/2010	ANP05360
Attenuator	9912	03/21/2008	03/21/2010	ANP05503
Filter	G7752	07/21/2008	07/21/2010	AN02611
EMCO LISN	9606-1049	06/01/2007	06/01/2009	AN01492

**Equipment Under Test (\* = EUT):** 

Function	Manufacturer	Model #	S/N	
USB Base Station*	ZillionTV Corporation	ZA100	013	
Laptop	Lenovo	T61	10156	

#### Support Devices:

FF			
Function	Manufacturer	Model #	S/N

#### Test Conditions / Notes:

Temp 21°

Rel. Humidity 26% Pressure 102.1kPa

Testing Conducted Emissions per FCC 15.207

The unit is a USB transmitter. It is connected to a laptop and the ports of the laptop are filled. All extra cable length is bundled in 40cm bundles. The Transmitter is located 10cm over the wooden table on styrofoam. The transmitter will be transmitting in the MID channel.

Vertical Ground plane is located 40cm from the back of the table.

Operating Frequency range = 903 - 927MHz

Frequency range of measurement = 150kHz - 30MHz. Frequency: 150kHz-30MHz RBW= 9kHz, VBW = 9kHz

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# Transducer Legend:

T1=CAB-ANP05371	T2=FIL-AN02611-072108
T3=CAB-ANP05366	T4=ATT-ANP5503-032108
T5=CAB-ANP05360	T6=CDN-AN01492-060107 - Line

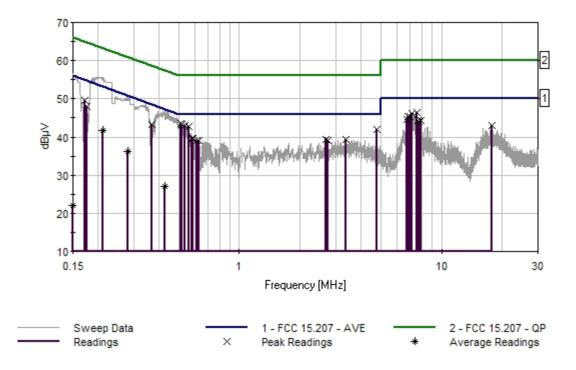
	rement Data:			ted by ma	_			Test Lea			
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6							
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	515.057k	32.9	+0.1	+0.2	+0.0	+10.1	+0.0	43.5	46.0	-2.5	Line
			+0.1	+0.1							
2	520.148k	32.7	+0.1	+0.2	+0.0	+10.1	+0.0	43.3	46.0	-2.7	Line
			+0.1	+0.1							
3	539.782k	32.5	+0.1	+0.2	+0.0	+10.1	+0.0	43.1	46.0	-2.9	Line
			+0.1	+0.1							
4	561.599k	32.2	+0.1	+0.2	+0.0	+10.1	+0.0	42.8	46.0	-3.2	Line
			+0.1	+0.1							
5	7.535M	35.4	+0.1	+0.1	+0.2	+10.1	+0.0	46.4	50.0	-3.6	Line
			+0.2	+0.3							
6	7.112M	35.2	+0.1	+0.1	+0.2	+10.1	+0.0	46.2	50.0	-3.8	Line
Ü	,,,,,	20.2	+0.2	+0.3			. 0.0		20.0	2.0	2
7	4.790M	31.0	+0.1	+0.1	+0.2	+10.1	+0.0	41.9	46.0	-4.1	Line
,	, > 01.1	51.0	+0.2	+0.2	10.2	110.1	10.0	11.5	10.0	•••	Zine
8	6.959M	34.5	+0.1	+0.1	+0.2	+10.1	+0.0	45.5	50.0	-4.5	Line
O	0.737WI	37.3	+0.2	+0.3	10.2	110.1	10.0	73.3	30.0	-4.5	Line
9	6.815M	34.3	+0.1	+0.1	+0.2	+10.1	+0.0	45.3	50.0	-4.7	Line
,	0.013WI	34.3	+0.1	+0.1	+0.2	⊤10.1	+0.0	45.5	30.0	-4.7	Line
10	172.543k	39.0	+0.2	+0.3	+0.0	+10.1	+0.0	49.6	54.8	-5.2	Line
10	172.343K	39.0	+0.0	+0.4	+0.0	+10.1	+0.0	49.0	34.6	-3.2	Line
11	260 0001-	22.0			.00	. 10.1	. 0. 0	12.2	10.5	<i>5</i> 2	T :
11	368.889k	32.8	+0.1	+0.1	+0.0	+10.1	+0.0	43.3	48.5	-5.2	Line
10	( 770) I	22.6	+0.1	+0.1	.0.2	. 10.1	. 0. 0	11.6	50.0	<i></i>	т !
12	6.770M	33.6	+0.1	+0.1	+0.2	+10.1	+0.0	44.6	50.0	-5.4	Line
1.0	6.750).4	22.5	+0.2	+0.3	. 0. 0	. 10 1	. 0. 0	44.5	<b>50.0</b>	<i></i>	т.
13	6.752M	33.5	+0.1	+0.1	+0.2	+10.1	+0.0	44.5	50.0	-5.5	Line
	7 (72) (	22.4	+0.2	+0.3		10.1	0.0	44.4	<b>7</b> 0.0		
14	7.652M	33.4	+0.1	+0.1	+0.2	+10.1	+0.0	44.4	50.0	-5.6	Line
			+0.2	+0.3					<b>=</b> 0.0		
15	7.896M	33.4	+0.1	+0.1	+0.2	+10.1	+0.0	44.4	50.0	-5.6	Line
			+0.2	+0.3							
16	7.697M	33.0	+0.1	+0.1	+0.2	+10.1	+0.0	44.0	50.0	-6.0	Line
			+0.2	+0.3							
17	582.688k	29.0	+0.1	+0.2	+0.0	+10.1	+0.0	39.6	46.0	-6.4	Line
			+0.1	+0.1							
18	588.505k	28.9	+0.1	+0.2	+0.0	+10.1	+0.0	39.5	46.0	-6.5	Line
			+0.1	+0.1							
19	3.382M	28.6	+0.1	+0.1	+0.2	+10.1	+0.0	39.4	46.0	-6.6	Line
			+0.2	+0.1							
20	176.907k	37.4	+0.0	+0.3	+0.0	+10.1	+0.0	47.9	54.6	-6.7	Line
			+0.0	+0.1							
21	2.676M	28.7	+0.1	+0.1	+0.1	+10.1	+0.0	39.3	46.0	-6.7	Line
			+0.1	+0.1							
22	2.748M	28.5	+0.1	+0.1	+0.1	+10.1	+0.0	39.1	46.0	-6.9	Line
	-		+0.1	+0.1							

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613.230k	28.4	+0.1	+0.2	+0.0	+10.1	+0.0	39.0	46.0	-7.0	Line
		+0.1	+0.1							
615.412k	28.4	+0.1	+0.2	+0.0	+10.1	+0.0	39.0	46.0	-7.0	Line
		+0.1	+0.1							
633.592k	28.4	+0.1	+0.2	+0.0	+10.1	+0.0	39.0	46.0	-7.0	Line
		+0.1	+0.1							
17.833M	31.0	+0.2	+0.2	+0.3	+10.1	+0.0	43.0	50.0	-7.0	Line
		+0.3	+0.9							
210.358k	31.2	+0.0	+0.2	+0.0	+10.1	+0.0	41.6	53.2	-11.6	Line
Ave		+0.0	+0.1							
210.358k	45.3	+0.0	+0.2	+0.0	+10.1	+0.0	55.7	53.2	+2.5	Line
		+0.0	+0.1							
281.192k	25.9	+0.0	+0.1	+0.0	+10.1	+0.0	36.2	50.8	-14.6	Line
Ave		+0.0	+0.1							
281.192k	40.9	+0.0	+0.1	+0.0	+10.1	+0.0	51.2	50.8	+0.4	Line
		+0.0	+0.1							
429.974k	16.4	+0.1	+0.2	+0.0	+10.1	+0.0	27.0	47.3	-20.3	Line
Ave		+0.1	+0.1							
429.974k	36.5	+0.1	+0.2	+0.0	+10.1	+0.0	47.1	47.3	-0.2	Line
		+0.1	+0.1							
150.000k	8.9	+0.0	+3.0	+0.0	+10.1	+0.0	22.1	56.0	-33.9	Line
Ave		+0.0	+0.1							
150.000k	39.7	+0.0	+3.0	+0.0	+10.1	+0.0	52.9	56.0	-3.1	Line
		+0.0	+0.1							
	615.412k 633.592k 17.833M 210.358k Ave 210.358k 281.192k Ave 281.192k 429.974k Ave 429.974k 150.000k Ave	615.412k 28.4 633.592k 28.4 17.833M 31.0 210.358k 31.2 Ave 210.358k 45.3 281.192k 25.9 Ave 281.192k 40.9 429.974k 16.4 Ave 429.974k 36.5 150.000k 8.9 Ave	+0.1 615.412k	+0.1	+0.1 +0.1 615.412k 28.4 +0.1 +0.2 +0.0 +0.1 +0.1 633.592k 28.4 +0.1 +0.2 +0.0 +0.1 +0.1 17.833M 31.0 +0.2 +0.2 +0.3 +0.3 +0.9 210.358k 31.2 +0.0 +0.2 +0.0 Ave +0.0 +0.1 210.358k 45.3 +0.0 +0.2 +0.0 +0.0 +0.1 281.192k 25.9 +0.0 +0.1 +0.0 Ave +0.0 +0.1 281.192k 40.9 +0.0 +0.1 +0.0 +0.0 +0.1 429.974k 16.4 +0.1 +0.2 +0.0 Ave +0.1 +0.1 429.974k 36.5 +0.1 +0.2 +0.0 +0.1 +0.1 150.000k 8.9 +0.0 +3.0 +0.0 Ave +0.0 +0.1 150.000k 39.7 +0.0 +3.0 +0.0	+0.1	+0.1 +0.1 +0.1   615.412k	+0.1 +0.1 615.412k 28.4 +0.1 +0.2 +0.0 +10.1 +0.0 39.0 +0.1 +0.1 +0.1 633.592k 28.4 +0.1 +0.2 +0.0 +10.1 +0.0 39.0 +0.1 +0.1 +0.1 17.833M 31.0 +0.2 +0.2 +0.3 +10.1 +0.0 43.0 +0.3 +0.9 210.358k 31.2 +0.0 +0.2 +0.0 +10.1 +0.0 41.6 Ave +0.0 +0.1 210.358k 45.3 +0.0 +0.2 +0.0 +10.1 +0.0 55.7 +0.0 +0.1 281.192k 25.9 +0.0 +0.1 +0.0 +10.1 +0.0 36.2 Ave +0.0 +0.1 281.192k 40.9 +0.0 +0.1 +0.0 +10.1 +0.0 51.2 +0.0 +0.1 429.974k 16.4 +0.1 +0.2 +0.0 +10.1 +0.0 27.0 Ave +0.1 +0.1 429.974k 36.5 +0.1 +0.2 +0.0 +10.1 +0.0 47.1 +0.1 +0.1 +0.1 150.000k 8.9 +0.0 +3.0 +0.0 +10.1 +0.0 22.1 Ave +0.0 +0.1	+0.1	+0.1

CKC Laboratories Date: 3/10/2009 Time: 17:36:34 Zillion TV Corporation. WO#: 89169 FCC 15.207 - AVE Test Lead: Line 110V 60Hz Sequence#: 1 Polarity: Line Notes:





Test Location: CKC Laboratories •22116 23rd Dr SE • Bothell, WA 98021-4413 • 425-402-1717

Customer: ZillionTV Corporation.
Specification: FCC 15.207 - AVE

Work Order #: 89169 Date: 3/10/2009
Test Type: Conducted Emissions Time: 18:37:57
Equipment: USB Base Station Sequence#: 5

Manufacturer: ZillionTV Corporation Tested By: Armando Del Angel

110V 60Hz

Model: ZA100 S/N: 013

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4440A	MY46186330	01/31/2008	01/31/2010	AN02872
Cable 30'	11	11/05/2008	11/05/2010	ANP05366
Cable 6'	49	11/10/2008	11/10/2010	ANP05371
Cable 20'	16	11/10/2008	11/10/2010	ANP05360
Attenuator	9912	03/21/2008	03/21/2010	ANP05503
Filter	G7752	07/21/2008	07/21/2010	AN02611
EMCO LISN	9606-1049	06/01/2007	06/01/2009	AN01492

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
USB Base Station*	ZillionTV Corporation	ZA100	013
Laptop	Lenovo	T61	10156

#### Support Devices:

TI I				
Function	Manufacturer	Model #	S/N	

#### Test Conditions / Notes:

Temp 21°

Rel. Humidity 26% Pressure 102.1kPa

Testing Conducted Emissions per FCC 15.207

The unit is a USB transmitter. It is connected to a laptop and the ports of the laptop are filled. All extra cable length is bundled in 40cm bundles. The Transmitter is located 10cm over the wooden table on styrofoam. The transmitter will be transmitting in the HIGH channel.

Vertical Ground plane is located 40cm from the back of the table.

Operating Frequency range = 903 - 927MHz

Frequency range of measurement = 150kHz - 30MHz. Frequency: 150kHz-30MHz RBW= 9kHz, VBW = 9kHz

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# Transducer Legend:

$\mathbf{T}^{2}$	1=CAB-ANP05371	T2=FIL-AN02611-072108
T	3=CAB-ANP05366	T4=ATT-ANP5503-032108
T:	5=CAB-ANP05360	T6=CDN-AN01492-060107 - Line

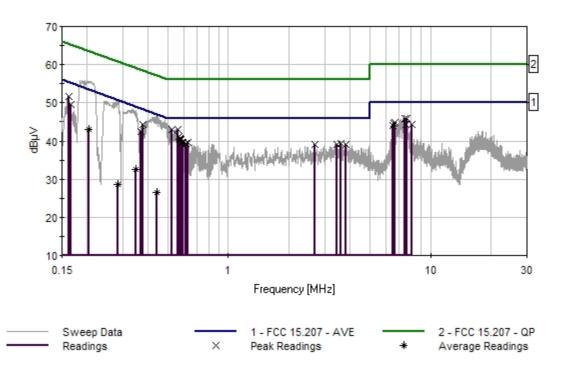
	rement Data:							Test Lea			
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6							
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	528.146k	32.5	+0.1	+0.2	+0.0	+10.1	+0.0	43.1	46.0	-2.9	Line
			+0.1	+0.1							
2	559.416k	32.5	+0.1	+0.2	+0.0	+10.1	+0.0	43.1	46.0	-2.9	Line
			+0.1	+0.1							
3	162.362k	40.9	+0.0	+0.6	+0.0	+10.1	+0.0	51.7	55.3	-3.6	Line
			+0.0	+0.1							
4	7.472M	35.0	+0.1	+0.1	+0.2	+10.1	+0.0	46.0	50.0	-4.0	Line
			+0.2	+0.3							
5	377.615k	33.7	+0.1	+0.1	+0.0	+10.1	+0.0	44.2	48.3	-4.1	Line
			+0.1	+0.1							
6	7.607M	34.8	+0.1	+0.1	+0.2	+10.1	+0.0	45.8	50.0	-4.2	Line
			+0.2	+0.3							
7	571.779k	30.6	+0.1	+0.2	+0.0	+10.1	+0.0	41.2	46.0	-4.8	Line
			+0.1	+0.1							
8	6.697M	33.8	+0.1	+0.1	+0.2	+10.1	+0.0	44.8	50.0	-5.2	Line
O	0.057111	33.0	+0.2	+0.3	10.2	110.1	10.0		20.0	3.2	Zine
9	575.415k	30.1	+0.1	+0.2	+0.0	+10.1	+0.0	40.7	46.0	-5.3	Line
	373.113K	30.1	+0.1	+0.1	10.0	110.1	10.0	10.7	10.0	5.5	Line
10	6.607M	33.5	+0.1	+0.1	+0.2	+10.1	+0.0	44.5	50.0	-5.5	Line
10	0.007111	33.3	+0.2	+0.3	10.2	110.1	10.0	11.5	30.0	3.3	Line
11	578.323k	29.8	+0.1	+0.2	+0.0	+10.1	+0.0	40.4	46.0	-5.6	Line
11	370.323K	27.0	+0.1	+0.1	10.0	110.1	10.0	70.7	40.0	-5.0	Line
12	7.535M	33.4	+0.1	+0.1	+0.2	+10.1	+0.0	44.4	50.0	-5.6	Line
12	7.555141	33.4	+0.2	+0.3	10.2	110.1	10.0	77.7	30.0	5.0	Line
13	8.076M	33.4	+0.1	+0.1	+0.2	+10.1	+0.0	44.4	50.0	-5.6	Line
13	0.0701	33.4	+0.2	+0.3	10.2	110.1	10.0	77.7	30.0	-5.0	Line
14	165.270k	38.8	+0.0	+0.5	+0.0	+10.1	+0.0	49.5	55.2	-5.7	Line
14	103.270K	30.0	+0.0	+0.3	+0.0	±10.1	+0.0	49.5	33.2	-3.1	Line
15	582.687k	29.7	+0.1	+0.2	+0.0	+10.1	+0.0	40.3	46.0	-5.7	Line
13	302.007K	29.1	+0.1	+0.2	+0.0	+10.1	+0.0	40.3	40.0	-3.7	Line
16	6.490M	33.1	+0.1	+0.1	+0.2	+10.1	+0.0	44.1	50.0	-5.9	Line
10	0.490M	33.1	+0.1	+0.1	+0.2	+10.1	+0.0	44.1	30.0	-3.9	Line
17	367.434k	31.9	+0.2	+0.3	+0.0	+10.1	+0.0	42.4	48.6	-6.2	Line
1 /	307.434K	31.9	+0.1 +0.1	+0.1	+0.0	+10.1	+0.0	42.4	46.0	-0.2	Lille
10	(20.0551-	20.0			.00	+10.1	+0.0	20.6	46.0	<i>C</i> 1	T :
18	629.955k	29.0	+0.1	+0.2	+0.0	+10.1	+0.0	39.6	46.0	-6.4	Line
10	500 2211.	20.0	+0.1	+0.1	ΙΛ.Ο	+1Ω 1	LO 0	20.5	460	( =	Т !
19	589.231k	28.9	+0.1	+0.2	+0.0	+10.1	+0.0	39.5	46.0	-6.5	Line
20	506 5041	20.0	+0.1	+0.1		. 10 1	. 0. 0	20. 7	460		т.
20	596.504k	28.9	+0.1	+0.2	+0.0	+10.1	+0.0	39.5	46.0	-6.5	Line
	2.50.51	20.5	+0.1	+0.1		10.4		20.1	450		T .
21	3.586M	28.6	+0.1	+0.1	+0.2	+10.1	+0.0	39.4	46.0	-6.6	Line
	#04 CCC:		+0.2	+0.1		40.0		20.2	4 - 0		
22	581.232k	28.7	+0.1	+0.2	+0.0	+10.1	+0.0	39.3	46.0	-6.7	Line
			+0.1	+0.1							

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614.684k	28.7	+0.1	+0.2	+0.0	+10.1	+0.0	39.3	46.0	-6.7	Line
		+0.1	+0.1							
2.680M	28.6	+0.1	+0.1	+0.1	+10.1	+0.0	39.2	46.0	-6.8	Line
		+0.1	+0.1							
3.807M	28.4	+0.1	+0.1	+0.2	+10.1	+0.0	39.2	46.0	-6.8	Line
		+0.2	+0.1							
3.454M	28.3	+0.1	+0.1	+0.2	+10.1	+0.0	39.1	46.0	-6.9	Line
		+0.2	+0.1							
204.539k	32.6	+0.0	+0.2	+0.0	+10.1	+0.0	43.0	53.4	-10.4	Line
Ave		+0.0	+0.1							
204.539k	45.3	+0.0	+0.2	+0.0	+10.1	+0.0	55.7	53.4	+2.3	Line
		+0.0	+0.1							
348.526k	22.0	+0.1	+0.1	+0.0	+10.1	+0.0	32.5	49.0	-16.5	Line
Ave		+0.1	+0.1							
348.526k	37.5	+0.1	+0.1	+0.0	+10.1	+0.0	48.0	49.0	-1.0	Line
		+0.1	+0.1							
440.881k	15.8	+0.1	+0.2	+0.0	+10.1	+0.0	26.4	47.0	-20.6	Line
Ave		+0.1	+0.1							
440.881k	35.8	+0.1	+0.2	+0.0	+10.1	+0.0	46.4	47.0	-0.6	Line
		+0.1	+0.1							
285.259k	18.4	+0.0	+0.1	+0.0	+10.1	+0.0	28.7	50.7	-22.0	Line
Ave		+0.0	+0.1							
285.259k	40.4	+0.0	+0.1	+0.0	+10.1	+0.0	50.7	50.7	+0.0	Line
		+0.0	+0.1							
,	2.680M  3.807M  3.454M  204.539k  Ave  204.539k  348.526k  440.881k  Ave  440.881k  285.259k  Ave	2.680M 28.6  3.807M 28.4  3.454M 28.3  204.539k 32.6  Ave 204.539k 45.3  348.526k 22.0  Ave 348.526k 37.5  440.881k 15.8  Ave 440.881k 35.8  285.259k 18.4  Ave	+0.1  2.680M  28.6  +0.1  +0.1  3.807M  28.4  +0.1  +0.2  3.454M  28.3  +0.1  +0.2  204.539k  32.6  +0.0  204.539k  45.3  +0.0  +0.0  348.526k  22.0  40.1  440.881k  15.8  40.1  440.881k  15.8  40.1  440.881k  35.8  +0.1  40.1  285.259k  18.4  40.0  285.259k  40.4  +0.0	2.680M 28.6 +0.1 +0.1 +0.1 +0.1 +0.1 3.807M 28.4 +0.1 +0.1 +0.2 +0.1 3.454M 28.3 +0.1 +0.1 +0.2 +0.1 204.539k 32.6 +0.0 +0.2 Ave +0.0 +0.1 204.539k 45.3 +0.0 +0.2 +0.0 +0.1 348.526k 22.0 +0.1 +0.1 4ve +0.1 +0.1 440.881k 15.8 +0.1 +0.1 +0.1 +0.1 440.881k 35.8 +0.1 +0.2 +0.0 +0.1 285.259k 18.4 +0.0 +0.1 285.259k 40.4 +0.0 +0.1	2.680M 28.6 +0.1 +0.1 +0.1 +0.1 +0.1 +0.1 +0.1	2.680M 28.6 +0.1 +0.1 +0.1 +10.1 +10.1 +0.1 +0.1 +0	2.680M 28.6 +0.1 +0.1 +0.1 +10.1 +0.0 +0.1 +0.1 +0.	2.680M 28.6 +0.1 +0.1 +0.1 +10.1 +0.0 39.2 +0.1 +0.1 +0.1 +0.1 +0.1 +0.0 39.2 +0.1 +0.2 +0.1 +0.1 +0.2 +10.1 +0.0 39.2 +0.2 +0.1	+0.1	+0.1

CKC Laboratories Date: 3/10/2009 Time: 18:37:57 Zillion TV Corporation. WO#: 89169 FCC 15.207 - AVE Test Lead: Line 110V 60Hz Sequence#: 5 Polarity: Line Notes:





Test Location: CKC Laboratories •22116 23rd Dr SE • Bothell, WA 98021-4413 • 425-402-1717

Customer: ZillionTV Corporation.
Specification: FCC 15.207 - AVE

Work Order #: 89169 Date: 3/10/2009
Test Type: Conducted Emissions Time: 18:04:56
Equipment: USB Base Station Sequence#: 3

Manufacturer: ZillionTV Corporation Tested By: Armando Del Angel

110V 60Hz

Model: ZA100 S/N: 013

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #	
Agilent E4440A	MY46186330	01/31/2008	01/31/2010	AN02872	
Cable 30'	11	11/05/2008	11/05/2010	ANP05366	
Cable 6'	49	11/10/2008	11/10/2010	ANP05371	
Cable 20'	16	11/10/2008	11/10/2010	ANP05360	
Attenuator	9912	03/21/2008	03/21/2010	ANP05503	
Filter	G7752	07/21/2008	07/21/2010	AN02611	
EMCO LISN	9606-1049	06/01/2007	06/01/2009	AN01492	

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N	
USB Base Station*	ZillionTV Corporation	ZA100	013	
Laptop	Lenovo	T61	10156	

#### Support Devices:

TI I				
Function	Manufacturer	Model #	S/N	

#### Test Conditions / Notes:

Temp 21°

Rel. Humidity 26% Pressure 102.1kPa

Testing Conducted Emissions per FCC 15.207

The unit is a USB transmitter. It is connected to a laptop and the ports of the laptop are filled. All extra cable length is bundled in 40cm bundles. The Transmitter is located 10cm over the wooden table on styrofoam. The transmitter will be transmitting in the LOW channel.

Vertical Ground plane is located 40cm from the back of the table.

Operating Frequency range = 903 - 927MHz

Frequency range of measurement = 150kHz - 30MHz. Frequency: 150kHz-30MHz RBW= 9kHz, VBW = 9kHz

> Page 20 of 78 Report No: FC09-036A



# Transducer Legend:

,	T1=CAB-ANP05371	T2=FIL-AN02611-072108
	T3=CAB-ANP05366	T4=ATT-ANP5503-032108
ľ	T5=CAB-ANP05360	T6=CDN-AN01492-060107 - Neutral

	rement Data:		eading lis						d: Neutral		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6							
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	347.072k	36.9	+0.1	+0.1	+0.0	+10.1	+0.0	47.5	49.0	-1.5	Neut
			+0.1	+0.2							
2	363.798k	36.1	+0.1	+0.1	+0.0	+10.1	+0.0	46.7	48.6	-1.9	Neut
			+0.1	+0.2							
3	572.506k	32.9	+0.1	+0.2	+0.0	+10.1	+0.0	43.6	46.0	-2.4	Neut
			+0.1	+0.2							
4	360.889k	35.1	+0.1	+0.1	+0.0	+10.1	+0.0	45.7	48.7	-3.0	Neu
			+0.1	+0.2							
5	745.581k	31.8	+0.0	+0.2	+0.1	+10.1	+0.0	42.5	46.0	-3.5	Neu
-			+0.1	+0.2							
6	585.595k	31.7	+0.1	+0.2	+0.0	+10.1	+0.0	42.4	46.0	-3.6	Neut
Ü	202.272K	31.7	+0.1	+0.2	10.0	110.1	10.0	.2	10.0	3.0	1100
7	632.864k	31.7	+0.1	+0.2	+0.0	+10.1	+0.0	42.4	46.0	-3.6	Neu
,	032.00 <del>4</del> K	31.7	+0.1	+0.2	10.0	110.1	10.0	72.7	40.0	-3.0	rvcu
8	358.707k	34.5	+0.1	+0.1	+0.0	+10.1	+0.0	45.1	48.8	-3.7	Neu
0	336.707K	34.3	+0.1	+0.1	+0.0	+10.1	+0.0	43.1	40.0	-3.1	INCU
9	579.778k	31.6	+0.1	+0.2	+0.0	+10.1	+0.0	42.3	46.0	-3.7	Neu
9	319.116K	31.0			+0.0	+10.1	+0.0	42.3	40.0	-3.7	neu
10	CE 4 COOL	20.4	+0.1	+0.2	. 0. 0	. 10.1	. 0. 0	41.1	46.0	4.0	NT.
10	654.680k	30.4	+0.1	+0.2	+0.0	+10.1	+0.0	41.1	46.0	-4.9	Neu
	4 6 7 0 0 0 1	20.2	+0.1	+0.2	0.0	40.4	0.0	<b>7</b> 0.0			
11	165.998k	39.2	+0.0	+0.5	+0.0	+10.1	+0.0	50.0	55.2	-5.2	Neu
			+0.0	+0.2							
12	889.963k	29.7	+0.0	+0.2	+0.1	+10.1	+0.0	40.4	46.0	-5.6	Neu
			+0.1	+0.2							
13	667.043k	29.4	+0.1	+0.2	+0.0	+10.1	+0.0	40.1	46.0	-5.9	Neu
			+0.1	+0.2							
14	987.776k	29.3	+0.0	+0.2	+0.1	+10.1	+0.0	40.0	46.0	-6.0	Neu
			+0.1	+0.2							
15	872.115k	29.2	+0.0	+0.2	+0.1	+10.1	+0.0	39.9	46.0	-6.1	Neu
			+0.1	+0.2							
16	4.722M	28.8	+0.1	+0.1	+0.2	+10.1	+0.0	39.8	46.0	-6.2	Neu
			+0.2	+0.3							
17	156.544k	37.6	+0.0	+1.4	+0.0	+10.1	+0.0	49.3	55.6	-6.3	Neu
			+0.0	+0.2							
18	176.906k	37.4	+0.0	+0.3	+0.0	+10.1	+0.0	48.0	54.6	-6.6	Neu
		٥,	+0.0	+0.2	. 0.0	0.1	. 0.0		2	0.0	_ ,
19	657.589k	28.7	+0.1	+0.2	+0.0	+10.1	+0.0	39.4	46.0	-6.6	Neu
1)	057.507K	20.7	+0.1	+0.2	10.0	110.1	10.0	57.7	10.0	0.0	1100
20	1.056M	28.5	+0.0	+0.2	+0.1	+10.1	+0.0	39.2	46.0	-6.8	Neu
20	1.050101	20.3	+0.0	+0.2	+0.1	+10.1	±0.0	37.4	+0.0	-0.0	1100
21	1 2401/	28.5	+0.1	+0.2	1Ω1	+10.1	+ΩΩ	39.1	46.0	-6.9	Mar-
21	1.268M	28.3	+0.0 +0.1	+0.1	+0.1	+10.1	+0.0	39.1	40.0	-0.9	Neu
22	1 1501/	20.2			, Δ.1	. 10.1	.00	20.0	46.0	7 1	<b>N</b> T
22	1.158M	28.2	+0.0	+0.2	+0.1	+10.1	+0.0	38.9	46.0	-7.1	Neu
			+0.1	+0.2							

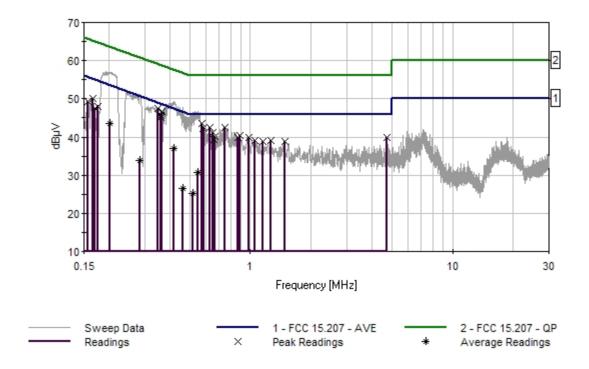


23	1.477M	28.1	+0.1	+0.1	+0.1	+10.1	+0.0	38.8	46.0	-7.2	Neutr
			+0.1	+0.2							
24	170.361k	36.8	+0.0	+0.4	+0.0	+10.1	+0.0	47.5	54.9	-7.4	Neutr
			+0.0	+0.2							
25	201.631k	33.1	+0.0	+0.2	+0.0	+10.1	+0.0	43.6	53.5	-9.9	Neutr
	Ave		+0.0	+0.2							
٨	201.631k	46.5	+0.0	+0.2	+0.0	+10.1	+0.0	57.0	53.5	+3.5	Neutr
			+0.0	+0.2							
27	419.065k	26.3	+0.1	+0.1	+0.0	+10.1	+0.0	36.9	47.5	-10.6	Neutr
	Ave		+0.1	+0.2							
^	419.065k	38.6	+0.1	+0.1	+0.0	+10.1	+0.0	49.2	47.5	+1.7	Neutr
			+0.1	+0.2							
29	549.235k	19.9	+0.1	+0.2	+0.0	+10.1	+0.0	30.6	46.0	-15.4	Neutr
	Ave		+0.1	+0.2							
٨	549.235k	36.1	+0.1	+0.2	+0.0	+10.1	+0.0	46.8	46.0	+0.8	Neutr
			+0.1	+0.2							
31	283.078k	23.5	+0.0	+0.1	+0.0	+10.1	+0.0	33.9	50.7	-16.8	Neutr
	Ave		+0.0	+0.2							
٨	283.078k	40.7	+0.0	+0.1	+0.0	+10.1	+0.0	51.1	50.7	+0.4	Neutr
			+0.0	+0.2							
33	464.879k	15.7	+0.1	+0.2	+0.0	+10.1	+0.0	26.4	46.6	-20.2	Neutr
	Ave		+0.1	+0.2							
^	464.879k	36.9	+0.1	+0.2	+0.0	+10.1	+0.0	47.6	46.6	+1.0	Neutr
			+0.1	+0.2							
35	518.692k	14.6	+0.1	+0.2	+0.0	+10.1	+0.0	25.3	46.0	-20.7	Neutr
	Ave		+0.1	+0.2							
^	518.692k	35.7	+0.1	+0.2	+0.0	+10.1	+0.0	46.4	46.0	+0.4	Neutr
			+0.1	+0.2							

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CKC Laboratories Date: 3/10/2009 Time: 18:04:56 Zillion TV Corporation. WO#: 89169 FCC 15.207 - AVE Test Lead: Neutral 110V 60Hz Sequence#: 3 Polarity: Neutral Notes:





Test Location: CKC Laboratories •22116 23rd Dr SE • Bothell, WA 98021-4413 • 425-402-1717

Customer: ZillionTV Corporation.
Specification: FCC 15.207 - AVE

Work Order #: 89169 Date: 3/10/2009
Test Type: Conducted Emissions Time: 17:58:19
Equipment: USB Base Station Sequence#: 2

Manufacturer: ZillionTV Corporation Tested By: Armando Del Angel

110V 60Hz

Model: ZA100 S/N: 013

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4440A	MY46186330	01/31/2008	01/31/2010	AN02872
Cable 30'	11	11/05/2008	11/05/2010	ANP05366
Cable 6'	49	11/10/2008	11/10/2010	ANP05371
Cable 20'	16	11/10/2008	11/10/2010	ANP05360
Attenuator	9912	03/21/2008	03/21/2010	ANP05503
Filter	G7752	07/21/2008	07/21/2010	AN02611
EMCO LISN	9606-1049	06/01/2007	06/01/2009	AN01492

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
USB Base Station*	ZillionTV Corporation	ZA100	013
Laptop	Lenovo	T61	10156

#### Support Devices:

FF			
Function	Manufacturer	Model #	S/N

#### Test Conditions / Notes:

Temp 21°

Rel. Humidity 26% Pressure 102.1kPa

Testing Conducted Emissions per FCC 15.207

The unit is a USB transmitter. It is connected to a laptop and the ports of the laptop are filled. All extra cable length is bundled in 40cm bundles. The Transmitter is located 10cm over the wooden table on styrofoam. The transmitter will be transmitting in the MID channel.

Vertical Ground plane is located 40cm from the back of the table.

Operating Frequency range = 903 - 927MHz

Frequency range of measurement = 150kHz - 30MHz. Frequency: 150kHz-30MHz RBW= 9kHz, VBW = 9kHz

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# Transducer Legend:

T1=CAB-ANP05371	T2=FIL-AN02611-072108
T3=CAB-ANP05366	T4=ATT-ANP5503-032108
T5=CAB-ANP05360	T6=CDN-AN01492-060107 - Neutral

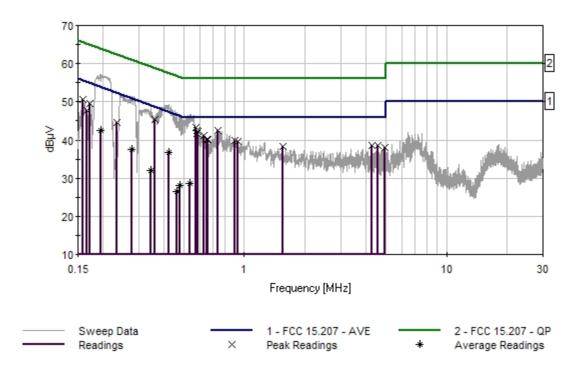
	rement Data:		eading lis		argin.				d: Neutral		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6							
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	576.870k	32.5	+0.1	+0.2	+0.0	+10.1	+0.0	43.2	46.0	-2.8	Neut
			+0.1	+0.2							
2	359.435k	34.7	+0.1	+0.1	+0.0	+10.1	+0.0	45.3	48.7	-3.4	Neut
			+0.1	+0.2							
3	579.779k	31.8	+0.1	+0.2	+0.0	+10.1	+0.0	42.5	46.0	-3.5	Neut
			+0.1	+0.2							
4	736.128k	31.7	+0.0	+0.2	+0.1	+10.1	+0.0	42.4	46.0	-3.6	Neut
			+0.1	+0.2							
5	589.232k	31.6	+0.1	+0.2	+0.0	+10.1	+0.0	42.3	46.0	-3.7	Neut
·	00,120211	01.0	+0.1	+0.2	. 0.0	. 10.1	. 0.0			21,	1 10 010
6	582.688k	31.1	+0.1	+0.2	+0.0	+10.1	+0.0	41.8	46.0	-4.2	Neut
O	202.000K	31.1	+0.1	+0.2	10.0	110.1	10.0	11.0	10.0	2	11041
7	632.865k	30.6	+0.1	+0.2	+0.0	+10.1	+0.0	41.3	46.0	-4.7	Neut
,	032.003K	30.0	+0.1	+0.2	10.0	110.1	10.0	11.5	10.0	1.7	11041
8	158.727k	39.3	+0.0	+0.9	+0.0	+10.1	+0.0	50.5	55.5	-5.0	Neut
O	130.727K	37.3	+0.0	+0.2	10.0	110.1	10.0	30.3	33.3	-5.0	rveut
9	171.816k	38.8	+0.0	+0.4	+0.0	+10.1	+0.0	49.5	54.9	-5.4	Neut
,	1/1.010K	30.0	+0.0	+0.4	+0.0	±10.1	+0.0	49.5	34.9	-3.4	rvcui
10	653.954k	29.4	+0.0	+0.2	+0.0	+10.1	+0.0	40.1	46.0	-5.9	Neut
10	033.334K	27. <del>4</del>	+0.1	+0.2	+0.0	+10.1	+0.0	40.1	40.0	-3.9	Neut
11	660.499k	29.4	+0.1	+0.2	+0.0	+10.1	+0.0	40.1	46.0	-5.9	Neut
11	000.499K	29.4	+0.1	+0.2	+0.0	+10.1	+0.0	40.1	40.0	-3.9	Neut
12	898.469k	29.3	+0.1	+0.2	+0.1	+10.1	+0.0	40.0	46.0	-6.0	Neut
12	898.409K	29.3		+0.2	+0.1	+10.1	+0.0	40.0	40.0	-0.0	Neut
13	022 4001-	20.0	+0.1		ι O 1	+10.1	+ O O	39.6	46.0	<i>C</i> 1	NI
13	932.490k	28.9	+0.0	+0.2	+0.1	+10.1	+0.0	39.0	40.0	-6.4	Neut
1.4	166 7061	27.0	+0.1	+0.2	. 0. 0	. 10.1	. 0. 0	47.0	<i>55</i> 1	7.2	NT.
14	166.726k	37.0	+0.0	+0.5	+0.0	+10.1	+0.0	47.8	55.1	-7.3	Neut
1.5	12001	27.6	+0.0	+0.2	0.2	10.1	0.0	20.5	46.0	7.5	<b>NT</b> .
15	4.296M	27.6	+0.1	+0.1	+0.2	+10.1	+0.0	38.5	46.0	-7.5	Neut
1.0	4.5553.4	27.5	+0.2	+0.2	0.0	10.1	0.0	20.5	46.0	7.5	3.7
16	4.577M	27.5	+0.1	+0.1	+0.2	+10.1	+0.0	38.5	46.0	-7.5	Neut
- 15	227 0021	2.1.2	+0.2	+0.3	0.0	10.1	0.0				
17	235.083k	34.2	+0.0	+0.2	+0.0	+10.1	+0.0	44.7	52.3	-7.6	Neut
			+0.0	+0.2							
18	1.549M	27.7	+0.1	+0.1	+0.1	+10.1	+0.0	38.4	46.0	-7.6	Neut
			+0.1	+0.2							
19	4.930M	27.1	+0.1	+0.1	+0.2	+10.1	+0.0	38.1	46.0	-7.9	Neut
			+0.2	+0.3							
20	421.975k	26.1	+0.1	+0.1	+0.0	+10.1	+0.0	36.7	47.4	-10.7	Neut
1	Ave		+0.1	+0.2							
٨	421.975k	38.7	+0.1	+0.1	+0.0	+10.1	+0.0	49.3	47.4	+1.9	Neut
			+0.1	+0.2							
22	195.087k	32.0	+0.0	+0.2	+0.0	+10.1	+0.0	42.5	53.8	-11.3	Neut
,	Ave		+0.0	+0.2							

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^ 19	95.087k	46.6	+0.0	+0.2	+0.0	+10.1	+0.0	57.1	53.8	+3.3	Neutr
			+0.0	+0.2							
24 27	79.015k	27.1	+0.0	+0.1	+0.0	+10.1	+0.0	37.5	50.8	-13.3	Neutr
Ave	<b>.</b>		+0.0	+0.2							
^ 27	79.015k	41.0	+0.0	+0.1	+0.0	+10.1	+0.0	51.4	50.8	+0.6	Neutr
			+0.0	+0.2							
26 34	44.891k	21.3	+0.1	+0.1	+0.0	+10.1	+0.0	31.9	49.1	-17.2	Neutr
Ave	<b>.</b>		+0.1	+0.2							
^ 34	44.891k	37.7	+0.1	+0.1	+0.0	+10.1	+0.0	48.3	49.1	-0.8	Neutr
			+0.1	+0.2							
28 53	36.146k	17.8	+0.1	+0.2	+0.0	+10.1	+0.0	28.5	46.0	-17.5	Neutr
Ave	<b>.</b>		+0.1	+0.2							
29 47	78.697k	17.4	+0.1	+0.2	+0.0	+10.1	+0.0	28.1	46.4	-18.3	Neutr
Ave	<b>)</b>		+0.1	+0.2							
30 40	64.153k	15.7	+0.1	+0.2	+0.0	+10.1	+0.0	26.4	46.6	-20.2	Neutr
Ave	e		+0.1	+0.2							
^ 40	64.153k	36.6	+0.1	+0.2	+0.0	+10.1	+0.0	47.3	46.6	+0.7	Neutr
			+0.1	+0.2							

CKC Laboratories Date: 3/10/2009 Time: 17:58:19 Zillion TV Corporation. WO#: 89169 FCC 15:207 - AVE Test Lead: Neutral 110V 60Hz Sequence#: 2 Polarity: Neutral Notes:





Test Location: CKC Laboratories •22116 23rd Dr SE • Bothell, WA 98021-4413 • 425-402-1717

Customer: ZillionTV Corporation.
Specification: FCC 15.207 - AVE

Work Order #: 89169 Date: 3/10/2009
Test Type: Conducted Emissions Time: 18:44:16
Equipment: USB Base Station Sequence#: 6

Manufacturer: ZillionTV Corporation Tested By: Armando Del Angel

110V 60Hz

Model: ZA100 S/N: 013

#### Test Equipment:

Function	S/N	Calibration Date	Cal Due Date	Asset #	
Agilent E4440A	MY46186330	01/31/2008	01/31/2010	AN02872	
Cable 30'	11	11/05/2008	11/05/2010	ANP05366	
Cable 6'	49	11/10/2008	11/10/2010	ANP05371	
Cable 20'	16	11/10/2008	11/10/2010	ANP05360	
Attenuator	9912	03/21/2008	03/21/2010	ANP05503	
Filter	G7752	07/21/2008	07/21/2010	AN02611	
EMCO LISN	9606-1049	06/01/2007	06/01/2009	AN01492	

#### Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
USB Base Station*	ZillionTV Corporation	ZA100	013
Laptop	Lenovo	T61	10156

#### Support Devices:

Tr				
Function	Manufacturer	Model #	S/N	

#### Test Conditions / Notes:

Temp 21°

Rel. Humidity 26% Pressure 102.1kPa

Testing Conducted Emissions per FCC 15.207

The unit is a USB transmitter. It is connected to a laptop and the ports of the laptop are filled. All extra cable length is bundled in 40cm bundles. The Transmitter is located 10cm over the wooden table on styrofoam. The transmitter will be transmitting in the HIGH channel.

Vertical Ground plane is located 40cm from the back of the table.

Operating Frequency range = 903 - 927MHz

Frequency range of measurement = 150kHz - 30MHz. Frequency: 150kHz-30MHz RBW= 9kHz, VBW = 9kHz

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# Transducer Legend:

,	T1=CAB-ANP05371	T2=FIL-AN02611-072108
	T3=CAB-ANP05366	T4=ATT-ANP5503-032108
ľ	T5=CAB-ANP05360	T6=CDN-AN01492-060107 - Neutral

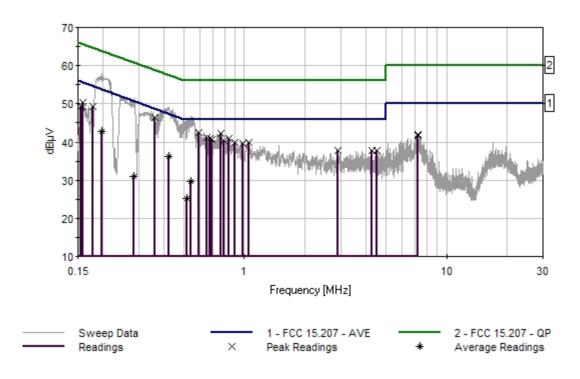
	rement Data:		eading lis						d: Neutral		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6							
	MHz	dΒμV	dB	dB	dB	dB	Table	dΒμV	dΒμV	dB	Ant
1	360.163k	35.7	+0.1	+0.1	+0.0	+10.1	+0.0	46.3	48.7	-2.4	Neut
			+0.1	+0.2							
2	596.505k	31.8	+0.1	+0.2	+0.0	+10.1	+0.0	42.5	46.0	-3.5	Neut
			+0.1	+0.2							
3	767.398k	31.6	+0.0	+0.2	+0.1	+10.1	+0.0	42.3	46.0	-3.7	Neut
			+0.1	+0.2							
4	653.954k	30.4	+0.1	+0.2	+0.0	+10.1	+0.0	41.1	46.0	-4.9	Neut
			+0.1	+0.2							
5	677.952k	30.3	+0.1	+0.2	+0.0	+10.1	+0.0	41.0	46.0	-5.0	Neut
			+0.1	+0.2							
6	842.300k	30.2	+0.0	+0.2	+0.1	+10.1	+0.0	40.9	46.0	-5.1	Neut
Ü	0.2.00011	20.2	+0.1	+0.2		. 10.1	. 0.0	,		0.12	1,000
7	159.454k	39.3	+0.0	+0.7	+0.0	+10.1	+0.0	50.3	55.5	-5.2	Neut
,	13). 13 IK	37.3	+0.0	+0.2	10.0	110.1	10.0	30.3	33.3	3.2	1100
8	178.361k	38.7	+0.0	+0.3	+0.0	+10.1	+0.0	49.3	54.6	-5.3	Neut
0	170.501K	30.7	+0.0	+0.3	+0.0	+10.1	+0.0	49.3	54.0	-5.5	NCu
9	688.860k	29.9	+0.0	+0.2	+0.0	+10.1	+0.0	40.6	46.0	-5.4	Neu
9	000.000K	29.9			+0.0	+10.1	+0.0	40.0	40.0	-3.4	Neu
10	705 7501	20.6	+0.1	+0.2	· O 1	. 10.1	. 0. 0	40.2	46.0	<i>- 7</i>	NT.
10	795.759k	29.6	+0.0	+0.2	+0.1	+10.1	+0.0	40.3	46.0	-5.7	Neu
1.1	004216	20.2	+0.1	+0.2	0.1	10.1	0.0	20.0	46.0	<i>c</i> 1	
11	894.216k	29.2	+0.0	+0.2	+0.1	+10.1	+0.0	39.9	46.0	-6.1	Neut
- 10	10701	20.2	+0.1	+0.2	0.1	10.1	0.0	20.0	450		
12	1.056M	29.2	+0.0	+0.2	+0.1	+10.1	+0.0	39.9	46.0	-6.1	Neu
			+0.1	+0.2							
13	157.999k	37.9	+0.0	+1.1	+0.0	+10.1	+0.0	49.3	55.6	-6.3	Neu
			+0.0	+0.2							
14	155.090k	37.1	+0.0	+1.8	+0.0	+10.1	+0.0	49.2	55.7	-6.5	Neut
			+0.0	+0.2							
15	983.523k	28.8	+0.0	+0.2	+0.1	+10.1	+0.0	39.5	46.0	-6.5	Neu
			+0.1	+0.2							
16	7.184M	30.9	+0.1	+0.1	+0.2	+10.1	+0.0	42.0	50.0	-8.0	Neu
			+0.2	+0.4							
17	4.292M	26.9	+0.1	+0.1	+0.2	+10.1	+0.0	37.8	46.0	-8.2	Neut
			+0.2	+0.2							
18	7.256M	30.7	+0.1	+0.1	+0.2	+10.1	+0.0	41.8	50.0	-8.2	Neu
			+0.2	+0.4							22
19	2.889M	27.0	+0.1	+0.1	+0.1	+10.1	+0.0	37.7	46.0	-8.3	Neu
1)	2.007111	27.0	+0.1	+0.2	. 0.1	. 10.1	. 0.0	51.1	10.0	0.5	1100
20	4.501M	26.7	+0.1	+0.1	+0.2	+10.1	+0.0	37.7	46.0	-8.3	Neu
20	T.JU11V1	20.7	+0.1	+0.1	10.2	110.1	10.0	31.1	+0.0	-0.5	1100
21	196.541k	32.3	+0.2	+0.3	+0.0	+10.1	+0.0	42.8	53.8	-11.0	Neu
	190.341K Ave	32.3	+0.0	+0.2	+0.0	+10.1	+0.0	42.0	55.0	-11.0	INCU
٨		17 1			ΙΛ Λ	+1Ω 1	ι Ο Ο	57.0	52.0	+ 4-1	Marr
^	196.541k	47.4	+0.0	+0.2	+0.0	+10.1	+0.0	57.9	53.8	+4.1	Neu
			+0.0	+0.2							

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23	421.975k	25.7	+0.1	+0.1	+0.0	+10.1	+0.0	36.3	47.4	-11.1	Neutr
1	Ave		+0.1	+0.2							
^	421.975k	38.5	+0.1	+0.1	+0.0	+10.1	+0.0	49.1	47.4	+1.7	Neutr
			+0.1	+0.2							
25	541.237k	18.9	+0.1	+0.2	+0.0	+10.1	+0.0	29.6	46.0	-16.4	Neutr
1	Ave		+0.1	+0.2							
٨	541.237k	38.1	+0.1	+0.2	+0.0	+10.1	+0.0	48.8	46.0	+2.8	Neutr
			+0.1	+0.2							
27	284.533k	20.6	+0.0	+0.1	+0.0	+10.1	+0.0	31.0	50.7	-19.7	Neutr
1	Ave		+0.0	+0.2							
٨	284.533k	40.9	+0.0	+0.1	+0.0	+10.1	+0.0	51.3	50.7	+0.6	Neutr
			+0.0	+0.2							
29	519.421k	14.4	+0.1	+0.2	+0.0	+10.1	+0.0	25.1	46.0	-20.9	Neutr
	Ave		+0.1	+0.2							
^	519.421k	35.5	+0.1	+0.2	+0.0	+10.1	+0.0	46.2	46.0	+0.2	Neutr
			+0.1	+0.2							

CKC Laboratories Date: 3/10/2009 Time: 18:44:16 Zillion TV Corporation. WO#: 89169 FCC 15:207 - AVE Test Lead: Neutral 110V 60Hz Sequence#: 6 Polarity: Neutral Notes:





## FCC Part 15.247(a)(2) 6dB BANDWIDTH

**Test Equipment** 

Asset #	Equipment	Serial #	Cal Date	Cal Due
ANP05361	Cable 6'	51	12/30/2008	12/30/2010
AN01994	Antenna	2453	12/22/2008	12/22/2010
ANP05366	Cable 30'	11	11/5/2008	11/5/2010
ANP05371	Cable 6'	49	11/10/2008	11/10/2010
ANP05360	Cable 20'	16	11/10/2008	11/10/2010
AN01517	HP 8447D Preamp	2944A08601	7/8/2008	7/8/2010
AN02872	Agilent E4440A	MY46186330	1/31/2008	1/31/2010

## **Test Conditions**

EUT is transmitting. Due to the lack of antenna connectors the test will be done through radiated measurements. EUT is located in the back edge of the test table over 10cm of Styrofoam. The EUT is connected to a laptop via USB. All the laptop ports are filled per ANSI C63.4 procedures. PSA is on max hold, marker-to-peak function is set on the peak of each channel (LOW, MID, HIGH), and then the marker will be positioned 6dB below the peak on one side and then on the other side. The separation between those two is the 6dB bandwidth.

RBW = 120 kHzVBW = 120 kHz

Span = Wide enough to see all the signal

**Test Setup Photos** 



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**Test Data** 

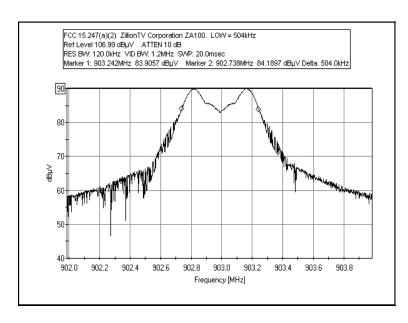
Channel	20dB B	Limit	
	Vertical	Horizontal	
LOW	500kHz	504kHz	500kHz
MID	508kHz	506kHz	500kHz
HIGH	504kHz	500kHz	500kHz

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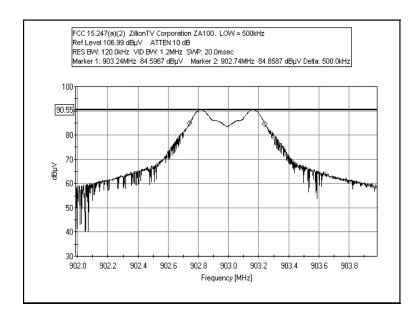


## **Test Plots**

# FCC 15.247(a)(2) 6dB BANDWIDTH – LOW CHANNEL HORIZONTAL



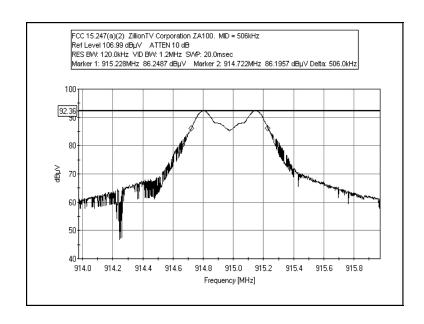
# FCC 15.247(a)(2) 6dB BANDWIDTH – LOW CHANNEL VERTICAL



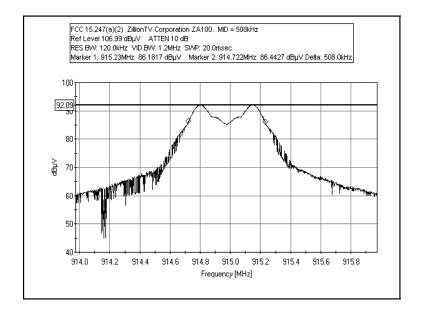
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# FCC 15.247(a)(2) 6dB BANDWIDTH – MID CHANNEL HORIZONTAL



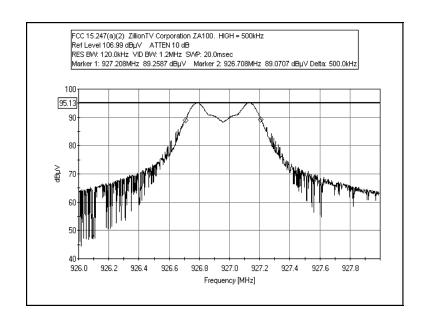
# FCC 15.247(a)(2) 6dB BANDWIDTH – MID CHANNEL VERTICAL



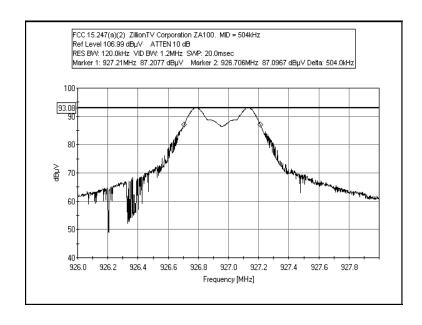
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# FCC 15.247(a)(2) 6dB BANDWIDTH – HIGH CHANNEL HORIZONTAL



# FCC 15.247(a)(2) 6dB BANDWIDTH – HIGH CHANNEL VERTICAL



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## FCC Part 15.247(b)(3) RF POWER OUTPUT

**Test Equipment** 

Test Equipment								
Asset #	Equipment	Serial #	Cal Date	Cal Due				
ANP05361	Cable 6'	51	12/30/2008	12/30/2010				
AN01994	Antenna	2453	12/22/2008	12/22/2010				
ANP05366	Cable 30'	11	11/5/2008	11/5/2010				
ANP05371	Cable 6'	49	11/10/2008	11/10/2010				
ANP05360	Cable 20'	16	11/10/2008	11/10/2010				
AN01517	HP 8447D Preamp	2944A08601	7/8/2008	7/8/2010				
AN02872	Agilent E4440A	MY46186330	1/31/2008	1/31/2010				

## **Test Conditions**

The EUT is transmitting. Due to the lack of antenna connectors the test will be done through radiated measurements. EUT is located in the back edge of the test table over 10cm of Styrofoam. The EUT is connected to a laptop via USB. All the laptop ports are filled per ANSI C63.4 procedures. The Fundamental's emission will be maximized per ANSI C63.4 procedures. EMI test will be used with the solely purpose of accurate Field Strength data gathering. The following calculation will be used per FCC procedures in order to obtain the transmitter peak power:

 $P = (E*d)^2 / (30*G)$ 

E: Is the field strength in V/m

G: Is the numeric gain of the transmitting antenna with reference to an isotropic radiator.

d: Is the distance at which the measurement is being executed.

RBW = 1 MHzVBW = 1 MHz

Span = Wide enough to see all the signal

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**Test Setup Photos** 





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**Test Data** 

	Ver	tical	Horiz	zontal	LIMIT
	F/S	Power	F/S	Power	
LOW	82.2dBuV	-7.52dBm	88.9dBuV	-7.82dBm	30dBm
MID	92.2dBuV	-4.52dBm	92.4dBuV	-4.32dBm	30dBm
HIGH	95.0dBuV	-1.72dBm	94.2dBuV	-2.52dBm	30dBm

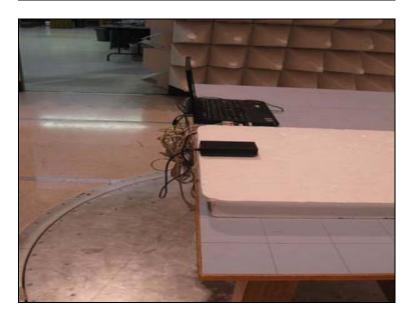
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# FCC 15.247(d) OATS RADIATED SPURIOUS EMISSIONS

**Test Setup Photos** 





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## **Test Data Sheets**

Test Location: CKC Laboratories •22116 23rd Dr SE • Bothell, WA 98021-4413 • 425-402-1717

Customer: ZillionTV Corporation.
Specification: FCC 15.247/15.209

Work Order #: 89169 Date: 3/10/2009
Test Type: Radiated Scan Time: 16:41:23
Equipment: USB Base Station Sequence#: 3

Manufacturer: ZillionTV Corporation Tested By: Armando Del Angel

Model: ZA100 S/N: 013

Test Equipment:

Test Equipment:				
Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8447D Preamp	2944A08601	07/08/2008	07/08/2010	AN01517
Agilent E4440A	MY46186330	01/31/2008	01/31/2010	AN02872
Cable 6'	51	12/30/2008	12/30/2010	ANP05361
Antenna	2453	12/22/2008	12/22/2010	AN01994
Cable 30'	11	11/05/2008	11/05/2010	ANP05366
Cable 6'	49	11/10/2008	11/10/2010	ANP05371
Cable 20'	16	11/10/2008	11/10/2010	ANP05360
High Pass Filter	2	05/01/2008	05/01/2010	02750
Heliax cable	N/A	07/22/2008	07/22/2010	AN05545
High freq. Cable	N/A	12/02/2008	12/02/2010	AN03123
High freq. Cable	N/A	12/02/2008	12/02/2010	AN03121
EMCO 3115 Horn	9606-4854	11/12/2007	11/12/2009	AN01412
HP 83017A Pre-amp	3123A00464	10/02/2007	10/02/2009	AN01271
Mag Loop	2156	06/04/2008	06/04/2010	AN00052

Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
USB Base Station*	ZillionTV Corporation	ZA100	013
Laptop	Lenovo	T61	10156

### Support Devices:

Function	Manufacturer	Model #	S/N	
Function	Manufacturei	WIOUCI #	O/1N	

## Test Conditions / Notes:

Temp =  $19^{\circ}$ C

Rel. Temp. = 26%

Atm. Pressure. = 102.1kPa

Testing Radiated Spurious Emissions per FCC 15.247(d)

The unit is a USB transmitter. It is connected to a laptop and the ports of the laptop are filled.

All extra cable length is bundled in 40cm bundles. The Transmitter is located 10cm over the

wooden table on styrofoam. The transmitter will be transmitting in the MID channel.

Due to the lack of an antenna connector only Radiated Spurious emissions will

be performed.

Operating Frequency range = 903 - 927MHz

Frequency range of measurement = 9kHz - 10GHz.

Frequency: 9kHz - 150kHz RBW= 200Hz, VBW= 200Hz

150kHz - 30MHz RBW= 9kHz, VBW = 9kHz 30MHz - 1GHz RBW= 120kHz, VBW=120kHz

1GHz - 10GHz RBW= 1 MHz, VBW=1 MHz.

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Transducer Legend:

T1=ANT AN01994 25-1000MHz
T2=CAB-ANP05360
T3=CAB-ANP05361
T5=CAB-ANP05371
T6=AMP-AN01517-070808
T7=AN01271 HP PreAmplifier
T8=ANT-AN01412-111207
T9=Filter 1GHz HP AN02750
T11=CAB-ANP03123-120208
T11=CAB-ANP03123-120208
T13=ANT- AN00052-06042008

Measi	Measurement Data: Reading listed by margin.				argin.	Test Distance: 3 Meters					
#	Freq	Rdng	T1	T2	Т3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
			T9	T10	T11	T12					
			T13								
	MHz	dΒμV	dB	dB	dB	dB		$dB\mu V/m$		dB	Ant
1	- , , ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,	59.3	+9.0	+0.8	+0.2	+0.9	+0.0	41.6	44.0	-2.4	Vert
	QP		+0.2	-28.8			230				99
	150 000 5	<b>50.0</b>		0.0		0.0	0.0		110		**
٨	179.983M	78.3	+9.0	+0.8	+0.2	+0.9	+0.0	60.6	44.0	+16.6	Vert
			+0.2	-28.8			230				99
3	372.084M	52.7	+15.5	+1.2	+0.3	+1.3	+0.0	42.5	46.0	-3.5	Vert
3	372.064M	32.1	+13.3	-28.8	+0.3	+1.3	352	42.3	40.0	-3.3	99
			⊤0.5	-20.0			332				22
4	160.713M	56.4	+10.6	+0.8	+0.2	+0.9	+0.0	40.2	44.0	-3.8	Vert
	1001,101,1		+0.2	-28.9	. 0.2		. 0.0			2.0	101
				_0.,							101
5	910.000M	43.1	+23.2	+1.9	+0.5	+2.0	+0.0	41.8	46.0	-4.2	Vert
			+0.4	-29.3			109				99
6	64.595M	58.3	+5.5	+0.4	+0.1	+0.4	+0.0	35.6	40.0	-4.4	Vert
			+0.1	-29.2							101
<u></u>	2607 0003 5	4 : =	0.0			0.0	0.0	40.4	# 4 O		<b>T</b> 7
7	3605.000M	44.7	+0.0	+0.0	+0.0	+0.0	+0.0	49.4	54.0	-4.6	Vert
			+0.0	+0.0	-32.7	+31.7	272				178
			+0.5	+1.6	+0.6	+3.0					
8	168.016M	56.0	+9.9	+0.8	+0.2	+0.9	+0.0	39.2	44.0	-4.8	Vert
8	QP	50.0	+9.9	+0.8 -28.8	+0.2	+0.9	+0.0 276	39.2	44.0	-4.0	vert 99
	QI.		+0.∠	-20.0			270				フフ
٨	168.016M	77.0	+9.9	+0.8	+0.2	+0.9	+0.0	60.2	44.0	+16.2	Vert
			+0.2	-28.8		. 0.7	276			0 <b></b>	99
				_0.0							

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10 155.977M QP	54.6	+10.9 +0.2	+0.8 -28.9	+0.2	+0.8	+0.0 230	38.6	44.0	-5.4	Vert 101
^ 155.977M	58.3	+10.9	+0.8	+0.2	+0.8	+0.0	42.3	44.0	-1.7	Vert
133.57711	30.3	+0.2	-28.9	10.2	10.0	230	72.3	44.0	1.7	101
12 663.638M	44.9	+20.4	+1.6	+0.4	+1.8	+0.0	39.7	46.0	-6.3	Vert
QP		+0.3	-29.7			360				99
^ 663.638M	53.3	+20.4	+1.6	+0.4	+1.8	+0.0	48.1	46.0	+2.1	Vert
		+0.3	-29.7			360				99
14 191.942M	54.5	+9.1 +0.3	+0.9 -28.8	+0.2	+1.0	+0.0	37.2	44.0	-6.8	Vert 101
		+0.3	-20.0							101
15 007 450) 5	20.7	22.2	1.0	0.5	2.0	0.0	20.2	46.0		X 7 .
15 907.450M	39.7	+23.2 +0.3	+1.9 -29.3	+0.5	+2.0	+0.0	38.3	46.0	-7.7	Vert 99
		10.5	27.3							,,,
16 288.033M	49.0	+13.2	+1.0	+0.3	+1.2	+0.0	36.6	46.0	-9.4	Vert
10 200.033101	47.0	+0.3	-28.4	+0.5	T1.2	360	30.0	40.0	-3.4	99
17 597.200M	41.0	+20.1	+1.6	+0.4	+1.9	+0.0	35.9	46.0	-10.1	Vert
		+0.5	-29.6			6				99
18 252.092M	47.3	+12.7	+1.0	+0.2	+1.0	+0.0	34.0	46.0	-12.0	Vert
		+0.4	-28.6			360				99
19 1082.500M	48.8	+0.0	+0.0	+0.0	+0.0	+0.0	41.9	54.0	-12.1	Vert
		+0.0 +1.1	$+0.0 \\ +1.0$	-35.8 +0.6	+24.5 +1.7	360				99
		11.1	11.0	10.0	11.7					
20 2632.500M	40.0	+0.0	+0.0	+0.0	+0.0	+0.0	41.3	54.0	-12.7	Vert
		+0.0 +0.6	+0.0 +1.3	-33.2 +0.5	+29.5 +2.6	223				178
		10.0	11.5	10.5	12.0					
21 909.732M	34.4	+23.2	+1.9	+0.5	+2.0	+0.0	33.0	46.0	-13.0	Vert
QP		+0.3	-29.3			180				99
^ 909.732M	44.6	+23.2 +0.3	+1.9 -29.3	+0.5	+2.0	+0.0 180	43.2	46.0	-2.8	Vert 99
		±0.3	-47.3			100				27

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23	5488.755M	29.9	+0.0	+0.0	+0.0	+0.0	+0.0	38.3	54.0	-15.7	Vert
	Ave		+0.0	+0.0	-33.3	+34.7	211				108
			+0.3	+2.0	+0.8	+3.9					
٨	5488.755M	52.3	+0.0	+0.0	+0.0	+0.0	+0.0	60.7	54.0	+6.7	Vert
			+0.0	+0.0	-33.3	+34.7	211				108
			+0.3	+2.0	+0.8	+3.9					
25	7321.489M	26.8	+0.0	+0.0	+0.0	+0.0	+0.0	36.9	54.0	-17.1	Vert
	Ave		+0.0	+0.0	-34.7	+36.4	322				108
			+0.3	+2.3	+1.1	+4.7					
٨	7321.489M	48.6	+0.0	+0.0	+0.0	+0.0	+0.0	58.7	54.0	+4.7	Vert
			+0.0	+0.0	-34.7	+36.4	322				108
			+0.3	+2.3	+1.1	+4.7					
27	529.400k	45.5	+0.0	+0.1	+0.0	+0.0	-40.0	15.6	33.1	-17.5	180de
			+0.1	+0.0	+0.0	+0.0	242				150
			+0.0	+0.0	+0.0	+0.0					
			+9.9								
28	779.330k	41.8	+0.0	+0.1	+0.0	+0.1	-40.0	12.0	29.7	-17.7	180de
			+0.0	+0.0	+0.0	+0.0	130				150
			+0.0	+0.0	+0.0	+0.0					
			+10.0								
29	913.500M	47.0	+23.3	+1.9	+0.5	+2.0	+0.0	45.8	72.7	-26.9	Vert
	QP	.,.0	+0.4	-29.3	. 0.2		50		20dBc limi		168
	-									F F	
٨	913.500M	57.8	+23.3	+1.9	+0.5	+2.0	+0.0	56.6	72.7	-16.1	Vert
			+0.4	-29.3			50		20dBc limi		168
										F F	
31	912.989M	44.3	+23.3	+1.9	+0.5	+2.0	+0.0	43.1	72.7	-29.6	Vert
	QP		+0.4	-29.3			50		20dBc limi		168
	-									F F	
٨	912.989M	54.6	+23.3	+1.9	+0.5	+2.0	+0.0	53.4	72.7	-19.3	Vert
	,,		+0.4	-29.3			50		20dBc limi		168
										TI	
33	17.885M	22.7	+0.0	+0.3	+0.0	+0.3	-40.0	-8.0	29.5	-37.5	180de
			+0.2	+0.0	+0.0	+0.0	360				150
			+0.0	+0.0	+0.0	+0.0	-				
			+8.5								
34	356.360k	47.3	+0.0	+0.1	+0.0	+0.0	-80.0	-22.7	16.6	-39.3	180de
			+0.1	+0.0	+0.0	+0.0	287	- <b>-</b> ··	-0.0		150
			+0.0	+0.0	+0.0	+0.0					100
			+9.8		. 0.0	. 0.0					
35	213.340k	48.8	+0.0	+0.0	+0.0	+0.0	-80.0	-21.2	21.0	-42.2	180de
	213.3 TOR	10.0	+0.0	+0.0	+0.0	+0.0	69	21.2	21.0		150
			+0.0	+0.0	+0.0	+0.0	0)				150
				10.0	10.0	10.0					
			+10.0								

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36	915.144M	93.9	+23.3	+1.9	+0.5	+2.0	+0.0	92.7	137.0	-44.3	Vert
			+0.4	-29.3			50		Fundament	al	168
37	70.900k	55.7	+0.0	+0.0	+0.0	+0.0	-80.0	-14.2	30.6	-44.8	180de
			+0.0	+0.0	+0.0	+0.0					150
			+0.0	+0.0	+0.0	+0.0					
			+10.1								
38	141.800k	35.7	+0.0	+0.0	+0.0	+0.0	-80.0	-34.4	24.6	-59.0	180de
			+0.0	+0.0	+0.0	+0.0					150
			+0.0	+0.0	+0.0	+0.0					
			+9.9								
39	104.300k	35.3	+0.0	+0.0	+0.0	+0.0	-80.0	-34.7	27.2	-61.9	180de
			+0.0	+0.0	+0.0	+0.0					150
			+0.0	+0.0	+0.0	+0.0					
			+10.0								
40	37.290k	39.9	+0.0	+0.0	+0.0	+0.0	-80.0	-29.3	36.2	-65.5	180de
			+0.0	+0.0	+0.0	+0.0					150
			+0.0	+0.0	+0.0	+0.0					
			+10.8								
41	10.250k	45.1	+0.0	+0.0	+0.0	+0.0	-80.0	-18.4	47.4	-65.8	180de
			+0.0	+0.0	+0.0	+0.0					150
			+0.0	+0.0	+0.0	+0.0					
			+16.5								

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Test Location: CKC Laboratories •22116 23rd Dr SE • Bothell, WA 98021-4413 • 425-402-1717

Customer: ZillionTV Corporation.
Specification: FCC 15.247/15.209

Work Order #: 89169 Date: 3/10/2009
Test Type: Radiated Scan Time: 17:07:12
Equipment: USB Base Station Sequence#: 4

Manufacturer: ZillionTV Corporation Tested By: Armando Del Angel

Model: ZA100 S/N: 013

#### Test Equipment:

resi Equipmeni.				
Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8447D Preamp	2944A08601	07/08/2008	07/08/2010	AN01517
Agilent E4440A	MY46186330	01/31/2008	01/31/2010	AN02872
Cable 6'	51	12/30/2008	12/30/2010	ANP05361
Antenna	2453	12/22/2008	12/22/2010	AN01994
Cable 30'	11	11/05/2008	11/05/2010	ANP05366
Cable 6'	49	11/10/2008	11/10/2010	ANP05371
Cable 20'	16	11/10/2008	11/10/2010	ANP05360
High Pass Filter	2	05/01/2008	05/01/2010	02750
Heliax cable	N/A	07/22/2008	07/22/2010	AN05545
High freq. Cable	N/A	12/02/2008	12/02/2010	AN03123
High freq. Cable	N/A	12/02/2008	12/02/2010	AN03121
EMCO 3115 Horn	9606-4854	11/12/2007	11/12/2009	AN01412
HP 83017A Pre-amp	3123A00464	10/02/2007	10/02/2009	AN01271
Mag Loop	2156	06/04/2008	06/04/2010	AN00052

## Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
USB Base Station*	ZillionTV Corporation	ZA100	013
Laptop	Lenovo	T61	10156

## Support Devices:

Function	Manufacturer	Model #	S/N	
Hunction	Manufacturer	Model #	2/10	

## Test Conditions / Notes:

Temp = 19°C Rel. Temp. = 26%

Atm. Pressure. = 102.1kPa

Testing Radiated Spurious Emissions per FCC 15.247(d)

The unit is a USB transmitter. It is connected to a laptop and the ports of the laptop are filled. All extra cable length is bundled in 40cm bundles. The Transmitter is located 10cm over the wooden table on styrofoam. The transmitter will be transmitting in the MID channel.

Due to the lack of an antenna connector only Radiated Spurious emissions will

be performed.

Operating Frequency range = 903 - 927MHz

Frequency range of measurement = 9kHz - 10GHz.

Frequency: 9kHz - 150kHz RBW= 200Hz, VBW= 200Hz

150kHz - 30MHz RBW= 9kHz, VBW = 9kHz 30MHz - 1GHz RBW= 120kHz, VBW=120kHz 1GHz - 10GHz RBW= 1 MHz, VBW=1 MHz.

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Transducer Legend:

T1=ANT AN01994 25-1000MHz
T2=CAB-ANP05360
T3=CAB-ANP05361
T5=CAB-ANP05371
T6=AMP-AN01517-070808
T7=AN01271 HP PreAmplifier
T8=ANT-AN01412-111207
T9=Filter 1GHz HP AN02750
T11=CAB-ANP03123-120208
T11=CAB-ANP03123-120208
T13=ANT- AN00052-06042008

Measi	ırement Data:	Re	Reading listed by margin.			Test Distance: 3 Meters					
#	Freq	Rdng	T1	T2	Т3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
			T9	T10	T11	T12					
			T13								
	MHz	dΒμV	dB	dB	dB	dB		$dB\mu V/m$		dB	Ant
1	, - , , , , , , , ,	57.8	+6.6	+0.5	+0.1	+0.5	+0.0	36.5	40.0	-3.5	Horiz
	QP		+0.2	-29.2			170				234
	<b>5</b> 1.00 <i>6</i> 1.5	<b>72.</b> 0		0.7		0.7	0.0	<b></b>	40.0	10.5	** .
^	71.986M	72.0	+6.6	+0.5	+0.1	+0.5	+0.0	50.7	40.0	+10.7	Horiz
			+0.2	-29.2			170				234
3	168.012M	56.9	+9.9	+0.8	+0.2	+0.9	+0.0	40.1	44.0	-3.9	Horiz
3	106.012WI	30.9	+9.9	-28.8	+0.2	+0.9	360	40.1	44.0	-3.9	200
			⊤0.2	-20.0			300				200
4	5490.000M	41.5	+0.0	+0.0	+0.0	+0.0	+0.0	49.9	54.0	-4.1	Horiz
·	2 17 010 00112		+0.0	+0.0	-33.3	+34.7	360	.,,,	2		99
			+0.3	+2.0	+0.8	+3.9					
5	180.009M	57.0	+9.0	+0.8	+0.2	+0.9	+0.0	39.3	44.0	-4.7	Horiz
	QP		+0.2	-28.8			200				173
^	180.009M	75.2	+9.0	+0.8	+0.2	+0.9	+0.0	57.5	44.0	+13.5	Horiz
			+0.2	-28.8			200				173
	155.0023.5	T 1 1	. 10.0	. 0. 0	.0.0	.0.0	. 0. 0	20.4	44.0	<i></i>	77 '
/	155.982M	54.4	+10.9	+0.8	+0.2	+0.8	+0.0	38.4	44.0	-5.6	Horiz
	QP		+0.2	-28.9			238				220
^	155.982M	74.8	+10.9	+0.8	+0.2	+0.8	+0.0	58.8	44.0	+14.8	Horiz
	133.702111	74.0	+10.9	+0.8 -28.9	+0.∠	+0.8	238	50.0	44.0	±14.0	220
			±0.2	-20.7			230				220
9	909.200M	41.7	+23.2	+1.9	+0.5	+2.0	+0.0	40.3	46.0	-5.7	Horiz
	, 0, .2001.1	,	+0.3	-29.3	. 0.0	. 2.0	359	.0.5	. 3.0	2.,	150
				-2.0							

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10 288.136M	52.6	+13.2	+1.0	+0.3	+1.2	+0.0	40.2	46.0	-5.8	Horiz
20012011	02.0	+0.3	-28.4	. 0.0		360	2	.0.0		150
11 918.660M	38.9	+23.4	+1.9	+0.5	+2.0	+0.0	37.8	46.0	-8.2	Horiz
QP	36.9	+23.4	+1.9 -29.3	+0.5	+2.0	+0.0 275	37.0	40.0	-0.2	150
ζ.		10.1	27.3			273				150
^ 918.660M	47.9	+23.4	+1.9	+0.5	+2.0	+0.0	46.8	46.0	+0.8	Horiz
		+0.4	-29.3			275				150
13 365.952M	48.1	+15.3	+1.2	+0.3	+1.3	+0.0	37.8	46.0	-8.2	Horiz
		+0.3	-28.7			360				150
14 1832.000M	46.5	+0.0	+0.0	+0.0	+0.0	+0.0	43.6	54.0	-10.4	Horiz
		+0.0	+0.0	-33.7	+26.6	360				175
		+0.4	+1.1	+0.5	+2.2					
15 763.600M	38.2	+21.8	+1.7	+0.5	+1.9	+0.0	35.0	46.0	-11.0	Hori
		+0.5	-29.6			360				150
16 666.000M	39.4	+20.4	+1.6	+0.4	+1.8	+0.0	34.2	46.0	-11.8	Hori
		+0.3	-29.7			360				150
17 300.064M	44.8	+13.3	+1.1	+0.3	+1.2	+0.0	32.6	46.0	-13.4	Hori
		+0.3	-28.4			360				150
18 7321.299M	30.3	+0.0	+0.0	+0.0	+0.0	+0.0	40.4	54.0	-13.6	Hori
Ave		+0.0	+0.0	-34.7	+36.4	85				142
		+0.3	+2.3	+1.1	+4.7					
^ 7321.299M	52.7	+0.0	+0.0	+0.0	+0.0	+0.0	62.8	54.0	+8.8	Hori
		+0.0	+0.0		+36.4	85				142
		+0.3	+2.3	+1.1	+4.7					
20 597.200M	36.6	+20.1	+1.6	+0.4	+1.9	+0.0	31.5	46.0	-14.5	Hori
		+0.5	-29.6			360				150
21 778.480k	41.5	+0.0	+0.1	+0.0	+0.1	-40.0	11.7	29.8	-18.1	90de
		+0.0	+0.0	+0.0	+0.0					150
		+0.0	+0.0	+0.0	+0.0					
		<b>+1000</b>								
22 969.150M	28.3	+10.0	+1.8	+0.5	+2.2	+0.0	28.2	54.0	-25.8	Hori

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23	64.697M QP	62.1	+5.5 +0.1	+0.4 -29.2	+0.1	+0.4	+0.0 176	39.4	70.7 20dBc limi	-31.3 t applied	Horiz 284
^	64.697M	66.2	+5.5 +0.1	+0.4 -29.2	+0.1	+0.4	+0.0 176	43.5	70.7 20dBc limi	-27.2 t applied	Horiz 284
25	24.095M	24.7	+0.0 +0.2 +0.0 +6.9	+0.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.3 +0.0 +0.0	-40.0 360	-7.6	29.5	-37.1	90deg 150
26	17.454M	20.5	+0.0 +0.2 +0.0 +8.5	+0.3 +0.0 +0.0	+0.0 +0.0 +0.0	+0.3 +0.0 +0.0	-40.0	-10.2	29.5	-39.7	90deg 150
27	70.900k	60.4	+0.0 +0.0 +0.0 +10.1	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0 265	-9.5	30.6	-40.1	90deg 150
28	212.470k	50.5	+0.0 +0.0 +0.0 +10.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0 105	-19.5	21.1	-40.6	90deg 150
29	915.140M	92.1	+23.3 +0.4	+1.9 -29.3	+0.5	+2.0	+0.0 275	90.9	137.0 Fundament	-46.1 al	Horiz 150
30	141.800k	35.5	+0.0 +0.0 +0.0 +9.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0 360	-34.6	24.6	-59.2	90deg 150
31	14.600k	44.5	+0.0 +0.0 +0.0 +14.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0	-20.9	44.3	-65.2	90deg 150

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Test Location: CKC Laboratories •22116 23rd Dr SE • Bothell, WA 98021-4413 • 425-402-1717

Customer: ZillionTV Corporation.
Specification: FCC 15.247/15.209

Work Order #: 89169 Date: 3/10/2009
Test Type: Radiated Scan Time: 16:47:38
Equipment: USB Base Station Sequence#: 5

Manufacturer: ZillionTV Corporation Tested By: Armando Del Angel

Model: ZA100 S/N: 013

#### Test Equipment:

Test Equipment.				
Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8447D Preamp	2944A08601	07/08/2008	07/08/2010	AN01517
Agilent E4440A	MY46186330	01/31/2008	01/31/2010	AN02872
Cable 6'	51	12/30/2008	12/30/2010	ANP05361
Antenna	2453	12/22/2008	12/22/2010	AN01994
Cable 30'	11	11/05/2008	11/05/2010	ANP05366
Cable 6'	49	11/10/2008	11/10/2010	ANP05371
Cable 20'	16	11/10/2008	11/10/2010	ANP05360
Heliax cable	N/A	07/22/2008	07/22/2010	AN05545
High freq. Cable	N/A	12/02/2008	12/02/2010	AN03123
High freq. Cable	N/A	12/02/2008	12/02/2010	AN03121
EMCO 3115 Horn	9606-4854	11/12/2007	11/12/2009	AN01412
HP 83017A Pre-amp	3123A00464	10/02/2007	10/02/2009	AN01271
High Pass Filter	2	05/01/2008	05/01/2010	02750
Mag Loop	2156	06/04/2008	06/04/2010	AN00052

## Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
USB Base Station*	ZillionTV Corporation	ZA100	013
Laptop	Lenovo	T61	10156

## Support Devices:

Function	Manufacturer	Model #	S/N	
Hunction	Manufacturer	Model #	2/10	

## Test Conditions / Notes:

Temp = 19°C Rel. Temp. = 26%

Atm. Pressure. = 102.1kPa

Testing Radiated Spurious Emissions per FCC 15.247(d)

The unit is a USB transmitter. It is connected to a laptop and the ports of the laptop are filled. All extra cable length is bundled in 40cm bundles. The Transmitter is located 10cm over the wooden table on styrofoam. The transmitter will be transmitting in the HIGH channel.

Due to the lack of an antenna connector only Radiated Spurious emissions will

be performed.

Operating Frequency range = 903 - 927MHz

Frequency range of measurement = 9kHz - 10GHz.

Frequency: 9kHz - 150kHz RBW= 200Hz, VBW= 200Hz

150kHz - 30MHz RBW= 9kHz, VBW = 9kHz 30MHz - 1GHz RBW= 120kHz, VBW=120kHz 1GHz - 10GHz RBW= 1 MHz, VBW=1 MHz.

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Transducer Legend:

T1=ANT AN01994 25-1000MHz
T2=CAB-ANP05360
T3=CAB-ANP05361
T5=CAB-ANP05371
T6=AMP-AN01517-070808
T7=AN01271 HP PreAmplifier
T8=ANT-AN01412-111207
T9=Filter 1GHz HP AN02750
T11=CAB-ANP03123-120208
T11=CAB-ANP03123-120208
T13=ANT- AN00052-06042008

Measu	rement Data:	Re	eading lis	ted by ma	argin.		Te	est Distance	e: 3 Meters		
#	Freq	Rdng	T1	T2	Т3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
			T9	T10	T11	T12					
			T13								
	MHz	dΒμV	dB	dB	dB	dB		dBμV/m	dBμV/m	dB	Ant
1	167.826M	57.3	+10.0	+0.8	+0.2	+0.9	+0.0	40.6	44.0	-3.4	Vert
			+0.2	-28.8							99
		<b></b>							10.0	•	
2	64.596M	58.9	+5.5	+0.4	+0.1	+0.4	+0.0	36.2	40.0	-3.8	Vert
			+0.1	-29.2							99
	1.42.0223.4	55.0	. 11.7	. 0.7	.0.2	.00	. 0. 0	20.0	44.0	4.0	77.
3	143.832M	55.2	+11.5	+0.7 -28.9	+0.2	+0.8	+0.0	39.8	44.0	-4.2	Vert 99
			+0.3	-28.9							99
4	180.004M	57.0	+9.0	+0.8	+0.2	+0.9	+0.0	39.3	44.0	-4.7	Vert
-	QP	37.0	+0.2	-28.8	+0.2	+0.9	300	37.3	44.0	-4.7	118
	QI		10.2	-20.0			300				110
^	180.004M	60.5	+9.0	+0.8	+0.2	+0.9	+0.0	42.8	44.0	-1.2	Vert
	100.00 1111	00.5	+0.2	-28.8	10.2	10.5	300	12.0	11.0	1.2	118
6	937.840M	40.5	+23.6	+2.0	+0.5	+2.0	+0.0	39.9	46.0	-6.1	Vert
			+0.5	-29.2							155
7	160.572M	54.0	+10.6	+0.8	+0.2	+0.9	+0.0	37.8	44.0	-6.2	Vert
			+0.2	-28.9							99
8	2416.000M	46.8	+0.0	+0.0	+0.0	+0.0	+0.0	47.1	54.0	-6.9	Vert
			+0.0	+0.0	-33.3	+28.9	360				200
			+0.4	+1.3	+0.5	+2.5					
	1010 500% 5	<b>50</b> 0		.00		.00	.0.0	165	<i>5</i> 40	7.5	<b>17</b> a = 4
9	1019.500M	52.8	+0.0	+0.0	+0.0	+0.0	+0.0	46.5	54.0	-7.5	Vert
			+0.0	+0.0	-35.9	+24.4	347				200
			+2.0	+1.0	+0.6	+1.6					

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10 663.787M	42.9	+20.4	+1.6	+0.4	+1.8	+0.0	37.7	46.0	-8.3	Vert
QP		+0.3	-29.7							99
^ 663.787M	50.9	+20.4	+1.6	+0.4	+1.8	+0.0	45.7	46.0	-0.3	Vert
		+0.3	-29.7							99
12 1555.000M	50.6	+0.0	+0.0	+0.0	+0.0	+0.0	45.5	54.0	-8.5	Vert
		+0.0	+0.0	-34.2	+25.1	360				200
		+0.5	+1.0	+0.5	+2.0					
13 599.540M	40.4	+20.2	+1.6	+0.4	+1.9	+0.0	35.4	46.0	-10.6	Vert
		+0.5	-29.6			360				99
									<u> </u>	
14 288.136M	47.4	+13.2	+1.0	+0.3	+1.2	+0.0	35.0	46.0	-11.0	Vert
		+0.3	-28.4			360				157
15 4100 00035	250	.00	. 0. 0	.00	.0.0	.0.0	40.7	<i></i>	11.2	<b>T.7</b> .
15 4180.000M	36.8	+0.0	+0.0	+0.0	+0.0	+0.0	42.7	54.0	-11.3	Vert
		+0.0	+0.0	-32.7	+32.7					99
		+0.2	+1.7	+0.8	+3.2					
16 012 200M	25.4	. 22.2	. 1.0	.0.5	.20	. 0. 0	24.2	46.0	11.0	<b>V</b> 74
16 913.280M	35.4	+23.3	+1.9	+0.5	+2.0	+0.0	34.2	46.0	-11.8	Vert
		+0.4	-29.3			360				99
17 2590.000M	40.3	+0.0	+0.0	+0.0	+0.0	+0.0	41.4	54.0	-12.6	Vert
17 2390.000WI	40.3	+0.0	+0.0	-33.2	+29.4	103	41.4	34.0	-12.0	99
		+0.5	+0.0	+0.5	+29.4	103				77
		+0.5	⊤1.3	+0.5	+∠.0					
18 5560.695M	30.9	+0.0	+0.0	+0.0	+0.0	+0.0	39.2	54.0	-14.8	Vert
Ave	30.9	+0.0	+0.0	-33.4	+34.7	218	39.2	34.0	-14.0	107
Ave		+0.3	+2.0	+0.7	+4.0	210				107
		10.5	12.0	10.7	14.0					
^ 5560.695M	52.9	+0.0	+0.0	+0.0	+0.0	+0.0	61.2	54.0	+7.2	Vert
3300.073111	52.7	+0.0	+0.0	-33.4	+34.7		01.2	5 1.0	11.4	107
		+0.3	+2.0	+0.7	+4.0					107
		. 0.2	. 2.0	. 0.,						
20 997.620M	38.7	+24.4	+2.1	+0.5	+2.1	+0.0	39.0	54.0	-15.0	Vert
	20.,	+0.2	-29.0	. 0.2				20	-2.0	155
21 7414.280M	26.7	+0.0	+0.0	+0.0	+0.0	+0.0	37.1	54.0	-16.9	Vert
Ave		+0.0	+0.0	-34.5	+36.5	111				173
		+0.3	+2.3	+1.1	+4.7					
^ 7414.280M	47.9	+0.0	+0.0	+0.0	+0.0	+0.0	58.3	54.0	+4.3	Vert
		+0.0	+0.0	-34.5	+36.5	111				173
		+0.3	+2.3	+1.1	+4.7					

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23	977.600M	35.9	+24.1	+1.9	+0.5	+2.2	+0.0	35.9	54.0	-18.1	Vert
			+0.4	-29.1							155
24	781.030k	41.2	+0.0	+0.1	+0.0	+0.1	-40.0	11.4	29.7	-18.3	180de
			+0.0	+0.0	+0.0	+0.0	25				150
			+0.0	+0.0	+0.0	+0.0					
25	522 0 401	12.4	+10.0	. 0.1	. 0. 0	. 0. 0	40.0	12.5	22.1	10.6	1001
25	532.840k	43.4	+0.0	$+0.1 \\ +0.0$	$+0.0 \\ +0.0$	+0.0	-40.0 36	13.5	33.1	-19.6	180de 150
			$+0.1 \\ +0.0$	+0.0 +0.0	+0.0	+0.0 +0.0	30				130
			+9.9	+0.0	+0.0	+0.0					
26	930.155M	44.4	+23.5	+2.0	+0.5	+2.0	+0.0	43.7	75.2	-31.5	Vert
	QP		+0.5	-29.2	10.5	12.0	46	15.7	20dBc limi		155
										TI	
^	930.155M	50.7	+23.5	+2.0	+0.5	+2.0	+0.0	50.0	75.2	-25.2	Vert
			+0.5	-29.2			46		20dBc limi	t applied	155
28	156.108M	59.2	+10.9	+0.8	+0.2	+0.8	+0.0	43.2	75.2	-32.0	Vert
	QP		+0.2	-28.9			245		20dBc limi	t applied	99
	156 1003 5	01.1	10.0	0.0	0.2	0.0	0.0		75.0	10.1	**
^	156.108M	81.1	+10.9	+0.8	+0.2	+0.8	+0.0	65.1	75.2	-10.1	Vert
			+0.2	-28.9			245		20dBc limi	t appned	99
30	214.220k	55.8	+0.0	+0.0	+0.0	+0.0	-80.0	-14.2	21.0	-35.2	180de
30	214.220K	33.0	+0.0	+0.0	+0.0	+0.0	107	17.2	21.0	33.2	150
			+0.0	+0.0	+0.0	+0.0	107				150
			+10.0								
31	24.724M	26.0	+0.0	+0.3	+0.0	+0.3	-40.0	-6.5	29.5	-36.0	180de
			+0.2	+0.0	+0.0	+0.0	360				150
			+0.0	+0.0	+0.0	+0.0					
			+6.7								
32	17.682M	22.8	+0.0	+0.3	+0.0	+0.3	-40.0	-7.9	29.5	-37.4	180de
1			+0.2	+0.0	+0.0	+0.0	234				150
1			+0.0	+0.0	+0.0	+0.0					
- 22	027 1243 5	05.0	+8.5	. 2. 2	.0.7	. 2. 2	. 0. 0	07.2	107.0	41.0	<b>T</b> 7 ·
33	927.134M	95.9	+23.5	+2.0	+0.5	+2.0	+0.0	95.2	137.0	-41.8	Vert
			+0.5	-29.2			160		Fundament	aı	118
1											
34	70.900k	55.6	+0.0	+0.0	+0.0	+0.0	-80.0	-14.3	30.6	-44.9	180de
34	70.300K	55.0	+0.0	+0.0	+0.0	+0.0 +0.0	132	-14.3	50.0	<del>-++</del> .7	150
1			+0.0	+0.0	+0.0	+0.0	134				150
1			+10.1	. 0.0	1 3.0	. 0.0					
35	141.800k	44.2	+0.0	+0.0	+0.0	+0.0	-80.0	-25.9	24.6	-50.5	180de
	5 0 0 11	· ··-	+0.0	+0.0	+0.0	+0.0	315	_0.,		- 0.0	150
1			+0.0	+0.0	+0.0	+0.0	-				
			+9.9								

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36	26.510k	44.3	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0 113	-23.8	39.1	-62.9	180de 150
			+11.9								
37	14.280k	44.5	+0.0	+0.0	+0.0	+0.0	-80.0	-20.8	44.5	-65.3	180de
			+0.0	+0.0	+0.0	+0.0	231				150
			+0.0	+0.0	+0.0	+0.0					
			+14.7								

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Test Location: CKC Laboratories •22116 23rd Dr SE • Bothell, WA 98021-4413 • 425-402-1717

Customer: ZillionTV Corporation.
Specification: FCC 15.247/15.209

Work Order #: 89169 Date: 3/10/2009
Test Type: Radiated Scan Time: 17:13:06
Equipment: USB Base Station Sequence#: 6

Manufacturer: ZillionTV Corporation Tested By: Armando Del Angel

Model: ZA100 S/N: 013

## Test Equipment:

Test Equipment:				
Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8447D Preamp	2944A08601	07/08/2008	07/08/2010	AN01517
Agilent E4440A	MY46186330	01/31/2008	01/31/2010	AN02872
Cable 6'	51	12/30/2008	12/30/2010	ANP05361
Antenna	2453	12/22/2008	12/22/2010	AN01994
Cable 30'	11	11/05/2008	11/05/2010	ANP05366
Cable 6'	49	11/10/2008	11/10/2010	ANP05371
Cable 20'	16	11/10/2008	11/10/2010	ANP05360
Heliax cable	N/A	07/22/2008	07/22/2010	AN05545
High freq. Cable	N/A	12/02/2008	12/02/2010	AN03123
High freq. Cable	N/A	12/02/2008	12/02/2010	AN03121
EMCO 3115 Horn	9606-4854	11/12/2007	11/12/2009	AN01412
HP 83017A Pre-amp	3123A00464	10/02/2007	10/02/2009	AN01271
Filter	2	05/01/2008	05/01/2010	2750
Mag Loop	2156	06/04/2008	06/04/2010	AN00052

## Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
USB Base Station*	ZillionTV Corporation	ZA100	013
Laptop	Lenovo	T61	10156

## Support Devices:

	The state of the s	·	•	
Function	Manufaatuman	Madal #	C/NI	
Function	Manufacturer	Model #	<b>3</b> /1 <b>N</b>	

## Test Conditions / Notes:

Temp =  $19^{\circ}$ 

Rel. Temp. = 26%

Atm. Pressure. = 102.1kPa

Testing Radiated Spurious Emissions per FCC 15.247(d)

The unit is a USB transmitter. It is connected to a laptop and the ports of the laptop are filled. All extra cable length is bundled in 40cm bundles. The Transmitter is located 10cm over the wooden table on styrofoam. The transmitter will be transmitting in the HIGH channel.

Due to the lack of an antenna connector only Radiated Spurious emissions will

be performed.

Operating Frequency range = 903 - 927MHz

Frequency range of measurement = 9kHz - 10GHz.

Frequency: 9kHz - 150kHz RBW= 200Hz, VBW= 200Hz

150kHz - 30MHz RBW= 9kHz, VBW = 9kHz 30MHz - 1GHz RBW= 120kHz, VBW=120kHz 1GHz - 10GHz RBW= 1 MHz, VBW=1 MHz.

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Transducer Legend:

T1=ANT AN01994 25-1000MHz
T2=CAB-ANP05360
T3=CAB-ANP05361
T5=CAB-ANP05371
T6=AMP-AN01517-070808
T7=AN01271 HP PreAmplifier
T8=ANT-AN01412-111207
T9=Filter 1GHz HP AN02750
T11=CAB-ANP03123-120208
T11=CAB-ANP03123-120208
T13=ANT- AN00052-06042008

Measu	rement Data:	Re	eading lis	ted by ma	argin.		Te	est Distance	e: 3 Meters		
#	Freq	Rdng	T1	T2	Т3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
			T9	T10	T11	T12					
			T13								
	MHz	dΒμV	dB	dB	dB	dB		$dB\mu V/m$		dB	Ant
1	180.100M	58.5	+9.0	+0.8	+0.2	+0.9	+0.0	40.8	44.0	-3.2	Horiz
			+0.2	-28.8							200
2	5565 000M	41.6	. 0. 0	. 0. 0	. 0. 0	.00	. 0. 0	40.0	<b>540</b>	4.1	TT
2	5565.000M	41.6	+0.0	+0.0	+0.0	+0.0	+0.0	49.9	54.0	-4.1	Horiz
			+0.0	+0.0	-33.4	+34.7 +4.0	327				201
			+0.3	+1.9	+0.8	+4.0					
3	366.236M	51.5	+15.3	+1.2	+0.3	+1.3	+0.0	41.2	46.0	-4.8	Horiz
	300.230171	51.5	+0.3	-28.7	10.5	11.5	360	.1.2	10.0	1.0	150
4	920.000M	41.8	+23.4	+2.0	+0.5	+2.0	+0.0	40.8	46.0	-5.2	Horiz
			+0.4	-29.3			240				200
5	71.850M	55.8	+6.6	+0.5	+0.1	+0.5	+0.0	34.5	40.0	-5.5	Horiz
			+0.2	-29.2							200
6	168.200M	55.1	+9.9	+0.8	+0.2	+0.9	+0.0	38.3	44.0	-5.7	Horiz
0	100.200WI	33.1	+0.2	-28.8	+0.2	+0.9	+0.0	30.3	44.0	-3.1	200
			10.2	20.0							200
7	7060.000M	38.5	+0.0	+0.0	+0.0	+0.0	+0.0	48.2	54.0	-5.8	Horiz
			+0.0	+0.0	-34.7	+36.1	200				201
			+0.2	+2.3	+1.2	+4.6					
8		54.2	+10.9	+0.8	+0.2	+0.8	+0.0	38.2	44.0	-5.8	Horiz
	QP		+0.2	-28.9			240				201
٨	155.998M	57.2	+10.9	+0.8	+0.2	+0.8	+0.0	41.2	44.0	-2.8	Horiz
	133.336WI	31.2	+10.9	+0.8 -28.9	+0.2	+0.8	+0.0 240	41.2	44.0	-2.0	201
			+0.2	-20.9			<b>240</b>				201

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10 59.950M	57.2	+4.6	+0.4	+0.1	+0.4	+0.0	33.7	40.0	-6.3	Horiz
		+0.1	-29.1							200
11 192.190M	53.2	+9.1	+0.9	+0.2	+1.0	+0.0	35.9	44.0	-8.1	Horiz
		+0.3	-28.8							200
12 288.136M	49.0	+13.2	+1.0	+0.3	+1.2	+0.0	36.6	46.0	-9.4	Horiz
12 200.1301.1	17.0	+0.3	-28.4	10.5	. 1.2	358	50.0	10.0	<i>,</i>	150
13 663.800M	40.6	+20.4	+1.6	+0.4	+1.8	+0.0	35.4	46.0	-10.6	Horiz
		+0.3	-29.7			360				200
14 252 06914	/O 1	127	+1.Ω	10.2	+1.0	100	34.8	16.0	11.2	Цота
14 252.068M	48.1	+12.7 +0.4	+1.0 -28.6	+0.2	+1.0	+0.0 360	34.8	46.0	-11.2	Horiz 150
		+0.4	-20.0			300				130
15 3082.500M	37.5	+0.0	+0.0	+0.0	+0.0	+0.0	40.9	54.0	-13.1	Horiz
		+0.0	+0.0	-32.9	+30.7	360				150
		+0.7	+1.5	+0.6	+2.8					
16 7417.062M	29.7	+0.0	+0.0	+0.0	+0.0	+0.0	40.1	54.0	-13.9	Horiz
Ave		+0.0	+0.0	-34.5	+36.5	336				201
		+0.3	+2.3	+1.1	+4.7					
^ 7417.062M	48.6	+0.0	+0.0	+0.0	+0.0	+0.0	59.0	54.0	+5.0	Horiz
7 117.002111	10.0	+0.0	+0.0	-34.5	+36.5	336	37.0	31.0	13.0	201
		+0.3	+2.3	+1.1	+4.7					
18 7414.318M	29.0	+0.0	+0.0	+0.0	+0.0	+0.0	39.4	54.0	-14.6	Horiz
Ave		+0.0	+0.0	-34.5	+36.5	336				201
		+0.3	+2.3	+1.1	+4.7					
A 7414 210M	40.5	. 0. 0	.00	.0.0	. 0. 0	. 0. 0	50.0	<i>510</i>	. 5.0	TT
^ 7414.318M	49.5	$+0.0 \\ +0.0$	$+0.0 \\ +0.0$	+0.0 -34.5	+0.0 +36.5	+0.0 336	59.9	54.0	+5.9	Horiz 201
		+0.3	+2.3	+1.1	+4.7	330				201
		10.5	12.3	11.1	1-7.7					
20 1855.000M	39.5	+0.0	+0.0	+0.0	+0.0	+0.0	36.8	54.0	-17.2	Horiz
		+0.0	+0.0	-33.7	+26.8	360				194
		+0.4	+1.1	+0.5	+2.2					
21 780.180k	40.6	+0.0	+0.1	+0.0	+0.1	-40.0	10.8	29.7	-18.9	90deg
		+0.0	+0.0	+0.0	+0.0					150
		+0.0	+0.0	+0.0	+0.0					
22 1067.500M	38.1	+10.0	+0.0	+0.0	+0.0	+0.0	31.2	54.0	-22.8	Horiz
22 1007.JUUNI	50.1	+0.0 +0.0	+0.0 +0.0	-35.8	+24.4	<del>+0.0</del> 360	31.4	J+.U	-22.0	194
		+1.2	+1.0	+0.6	+1.7	500				1/7
		. 1.2	. 1.0	. 0.0	,					

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22	C1 C10N1	60.0	. 5 5	ı O 1	ι Ο 1	· O. 4	.0.0	20.2	72.0	24.0	Hanin
23	64.640M	60.9	+5.5	+0.4	+0.1	+0.4	+0.0	38.2	73.0	-34.8	Horiz
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	QP		+0.1	-29.2			201		20dBc limi	t appned	258
^	64.640M	65.7	+5.5	+0.4	+0.1	+0.4	+0.0	43.0	73.0	-30.0	Horiz
	04.040IVI	03.7	+0.1	+0.4 -29.2	+0.1	+0.4	201	43.0	20dBc limi		258
			+0.1	-29.2			201		ZOUBC IIIII	t appneu	230
25	213.340k	51.2	+0.0	+0.0	+0.0	+0.0	-80.0	-18.8	21.0	-39.8	90deg
			+0.0	+0.0	+0.0	+0.0	43				150
			+0.0	+0.0	+0.0	+0.0					
			+10.0								
26	17.530M	19.3	+0.0	+0.3	+0.0	+0.3	-40.0	-11.4	29.5	-40.9	90deg
			+0.2	+0.0	+0.0	+0.0					150
			+0.0	+0.0	+0.0	+0.0					
			+8.5								
27	927.128M	93.7	+23.5	+2.0	+0.5	+2.0	+0.0	93.0	137.0	-44.0	Horiz
			+0.5	-29.2			275		Fundament	al	150
28	70.800k	50.5	+0.0	+0.0	+0.0	+0.0	-80.0	-19.4	30.6	-50.0	90deg
			+0.0	+0.0	+0.0	+0.0	101				150
			+0.0	+0.0	+0.0	+0.0					
			+10.1								
29	141.800k	38.0	+0.0	+0.0	+0.0	+0.0	-80.0	-32.1	24.6	-56.7	90deg
			+0.0	+0.0	+0.0	+0.0	278				150
			+0.0	+0.0	+0.0	+0.0					
			+9.9								
30	12.550k	45.1	+0.0	+0.0	+0.0	+0.0	-80.0	-19.5	45.6	-65.1	90deg
			+0.0	+0.0	+0.0	+0.0					150
			+0.0	+0.0	+0.0	+0.0					
			+15.4								

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Test Location: CKC Laboratories •22116 23rd Dr SE • Bothell, WA 98021-4413 • 425-402-1717

Customer: ZillionTV Corporation.
Specification: FCC 15.247/15.209

Work Order #: 89169 Date: 3/10/2009
Test Type: Radiated Scan Time: 16:36:16
Equipment: USB Base Station Sequence#: 1

Manufacturer: ZillionTV Corporation Tested By: Armando Del Angel

Model: ZA100 S/N: 013

#### Test Equipment:

Test Equipment.				
Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8447D Preamp	2944A08601	07/08/2008	07/08/2010	AN01517
Agilent E4440A	MY46186330	01/31/2008	01/31/2010	AN02872
Cable 6'	51	12/30/2008	12/30/2010	ANP05361
Antenna	2453	12/22/2008	12/22/2010	AN01994
Cable 30'	11	11/05/2008	11/05/2010	ANP05366
Cable 6'	49	11/10/2008	11/10/2010	ANP05371
Cable 20'	16	11/10/2008	11/10/2010	ANP05360
High Pass Filter	2	05/01/2008	05/01/2010	02750
Heliax cable	N/A	07/22/2008	07/22/2010	AN05545
High freq. Cable	N/A	12/02/2008	12/02/2010	AN03121
EMCO 3115 Horn	9606-4854	11/12/2007	11/12/2009	AN01412
HP 83017A Pre-amp	3123A00464	10/02/2007	10/02/2009	AN01271
High freq. Cable	N/A	12/02/2008	12/02/2010	AN03123
Mag Loop	2156	06/04/2008	06/04/2010	AN00052

## Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
USB Base Station*	ZillionTV Corporation	ZA100	013
Laptop	Lenovo	T61	10156

## Support Devices:

Function	M C	N. ( 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1 .	C/NT	
Hillingtion	Manutacturer	Model #	C/N	
			3/18	

## Test Conditions / Notes:

Temp = 19°C Rel. Temp. = 26%

Atm. Pressure. = 102.1kPa

Testing Radiated Spurious Emissions per FCC 15.247(d)

The unit is a USB transmitter. It is connected to a laptop and the ports of the laptop are filled. All extra cable length is bundled in 40cm bundles. The Transmitter is located 10cm over the wooden table on styrofoam. The transmitter will be transmitting in the LOW channel.

Due to the lack of an antenna connector only Radiated Spurious emissions will

be performed.

Operating Frequency range = 903 - 927MHz

Frequency range of measurement = 9kHz - 10GHz.

Frequency: 9kHz - 150kHz RBW= 200Hz, VBW= 200Hz

150kHz - 30MHz RBW= 9kHz, VBW = 9kHz 30MHz - 1GHz RBW= 120kHz, VBW=120kHz 1GHz - 10GHz RBW= 1 MHz, VBW=1 MHz.

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Transducer Legend:

T1=ANT AN01994 25-1000MHz
T2=CAB-ANP05360
T3=CAB-ANP05361
T5=CAB-ANP05371
T6=AMP-AN01517-070808
T7=AN01271 HP PreAmplifier
T8=ANT-AN01412-111207
T9=Filter 1GHz HP AN02750
T11=CAB-ANP03123-120208
T11=CAB-ANP03123-120208
T13=ANT- AN00052-06042008

Measur	ement Data:	Re	eading lis	ted by ma	argin.		Τe	est Distance	e: 3 Meters		
#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
			T9	T10	T11	T12					
			T13								
	MHz	dΒμV	dB	dB	dB	dB	Table		•	dB	Ant
1	167.970M	57.7	+9.9	+0.8	+0.2	+0.9	+0.0	40.9	44.0	-3.1	Vert
			+0.2	-28.8	+0.0	+0.0					100
			+0.0	+0.0	+0.0	+0.0					
2	64.290M	59.7	+5.4	+0.4	+0.1	+0.4	+0.0	36.9	40.0	-3.1	Vert
			+0.1	-29.2	+0.0	+0.0					100
			+0.0	+0.0	+0.0	+0.0					
3	180.004M	57.7	+9.0	10.8	+0.2	+0.9	+0.0	40.0	44.0	-4.0	Vert
		31.1	+9.0	+0.8 -28.8	+0.2	+0.9	230	40.0	44.0	-4.0	100
'	QР						230				100
			+0.0	+0.0	+0.0	+0.0					
٨	180.004M	77.2	+9.0	+0.8	+0.2	+0.9	+0.0	59.5	44.0	+15.5	Vert
			+0.2	-28.8	+0.0	+0.0	230	-,			100
			+0.0	+0.0	+0.0	+0.0					100
5	143.940M	55.4	+11.5	+0.7	+0.2	+0.8	+0.0	40.0	44.0	-4.0	Vert
			+0.3	-28.9	+0.0	+0.0					100
			+0.0	+0.0	+0.0	+0.0					
6	372.200M	48.2	+15.5	+1.2	+0.3	+1.3	+0.0	38.0	46.0	-8.0	Vert
			+0.3	-28.8	+0.0	+0.0					161
			+0.0	+0.0	+0.0	+0.0					
7	251.940M	49.1	+12.7	+1.0	+0.2	+1.0	+0.0	35.8	46.0	-10.2	Vert
			+0.4	-28.6	+0.0	+0.0					100
			+0.0	+0.0	+0.0	+0.0					
Q	1064.000M	50.3	+0.0	+0.0	+0.0	+0.0	+0.0	43.5	54.0	-10.5	Vert
0	1004.000141	30.3	+0.0	+0.0	-35.8	+24.4	360	+3.3	54.0	-10.5	175
			+1.3	+0.0	+0.6	+1.7	300				1/3
			11.3	11.0	10.0	1.7					
9	365.000M	45.1	+15.3	+1.2	+0.3	+1.3	+0.0	34.8	46.0	-11.2	Vert
			+0.3	-28.7	+0.0	+0.0					161
			+0.0	+0.0	+0.0	+0.0					

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10	663.600M	39.9	+20.4	+1.6	+0.4	+1.8	+0.0	34.7	46.0	-11.3	Vert
			+0.3	-29.7	+0.0	+0.0	360				161
			+0.0	+0.0	+0.0	+0.0					
11	597.200M	38.2	+20.1	+1.6	+0.4	+1.9	+0.0	33.1	46.0	-12.9	Vert
			+0.5	-29.6	+0.0	+0.0	360				161
			+0.0	+0.0	+0.0	+0.0					
12	5419.015M	29.6	+0.0	+0.0	+0.0	+0.0	+0.0	38.5	54.0	-15.5	Vert
	Ave		+0.0	+0.0	-33.1	+34.5	214				99
			+0.3	+2.3	+1.0	+3.9					
^	5419.015M	52.5	+0.0	+0.0	+0.0	+0.0	+0.0	61.4	54.0	+7.4	Vert
			+0.0	+0.0	-33.1	+34.5	214				99
			+0.3	+2.3	+1.0	+3.9					
14	999.710M	37.9	+24.4	+2.1	+0.5	+2.1	+0.0	38.2	54.0	-15.8	Vert
			+0.2	-29.0	+0.0	+0.0	364				157
			+0.0	+0.0	+0.0	+0.0					
	7225.390M	26.5	+0.0	+0.0	+0.0	+0.0	+0.0	36.5	54.0	-17.5	Vert
	Ave		+0.0	+0.0	-34.7	+36.3	307				99
			+0.3	+2.3	+1.1	+4.7					
_	7227 2003 1	47.0	0.0	0.0	0.0	0.0	0.0	57.0	<b>7.1.0</b>	2.0	<b>T.7</b> .
^	7225.390M	47.0	+0.0	+0.0	+0.0	+0.0	+0.0	57.0	54.0	+3.0	Vert
			+0.0	+0.0	-34.7	+36.3	307				99
			+0.3	+2.3	+1.1	+4.7					
17	780.180k	41.7	+O O	+O 1	+ O O	+O 1	-40.0	11.0	20.7	17.0	180de
1 /	/80.180K	41.7	+0.0 +0.0	$+0.1 \\ +0.0$	+0.0 +0.0	+0.1 +0.0	-40.0	11.9	29.7	-17.8	150
			+0.0 +0.0	+0.0	+0.0 +0.0	+0.0 +0.0					130
			+10.0	+0.0	+0.0	+0.0					
18	538.010k	43.1	+0.0	+0.1	+0.0	+0.0	-40.0	13.2	33.0	-19.8	180de
10	336.010K	43.1	+0.0	+0.1	+0.0	+0.0	20	13.2	33.0	-17.0	150
			+0.1	+0.0	+0.0	+0.0	20				130
			+9.9	10.0	10.0	10.0					
19	1.076M	33.9	+0.0	+0.1	+0.0	+0.1	-40.0	4.1	26.9	-22.8	180de
19	1.0701	33.7	+0.0	+0.1	+0.0 +0.0	+0.1		7.1	20.9	-22.0	150
1			+0.0	+0.0	+0.0	+0.0	550				150
1			+10.0	1 0.0	10.0	1 0.0					
20	155.996M	59.7	+10.9	+0.8	+0.2	+0.8	+0.0	43.7	70.0	-26.3	Vert
	QP	٠,,,	+0.2	-28.9	+0.0	+0.0	230	,	20dBc limit		100
	<u>-</u>		+0.0	+0.0	+0.0	+0.0				Tr	-00
٨	155.996M	80.7	+10.9	+0.8	+0.2	+0.8	+0.0	64.7	70.0	-5.3	Vert
1			+0.2	-28.9	+0.0	+0.0	230		20dBc limit		100
1			+0.0	+0.0	+0.0	+0.0				TF	-00
22	213.340k	55.7	+0.0	+0.0	+0.0	+0.0	-80.0	-14.3	21.0	-35.3	180de
			+0.0	+0.0	+0.0	+0.0	104				150
			+0.0	+0.0	+0.0	+0.0					
			+10.0								
-											

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23	17.663M	20.5	+0.0	+0.3	+0.0	+0.3	-40.0	-10.2	29.5	-39.7	180de
			+0.2	+0.0	+0.0	+0.0					150
			+0.0	+0.0	+0.0	+0.0					
			+8.5								
24	3.964M	16.4	+0.0	+0.2	+0.0	+0.2	-40.0	-12.8	29.5	-42.3	180de
			+0.1	+0.0	+0.0	+0.0	360				150
			+0.0	+0.0	+0.0	+0.0					
			+10.3								
25	70.900k	55.7	+0.0	+0.0	+0.0	+0.0	-80.0	-14.2	30.6	-44.8	180de
			+0.0	+0.0	+0.0	+0.0					157
			+0.0	+0.0	+0.0	+0.0					
			+10.1								
26	903.163M	91.5	+23.1	+1.9	+0.5	+2.0	+0.0	90.0	137.0	-47.0	Vert
			+0.3	-29.3	+0.0	+0.0	53		Fundament	al	157
			+0.0	+0.0	+0.0	+0.0					
27	141.800k	36.3	+0.0	+0.0	+0.0	+0.0	-80.0	-33.8	24.6	-58.4	180de
			+0.0	+0.0	+0.0	+0.0					157
			+0.0	+0.0	+0.0	+0.0					
			+9.9								
28	18.220k	46.1	+9.9 +0.0	+0.0	+0.0	+0.0	-80.0	-20.5	42.4	-62.9	180de
28	18.220k	46.1		+0.0 +0.0	+0.0 +0.0	+0.0 +0.0	-80.0 350	-20.5	42.4	-62.9	180de 157
28	18.220k	46.1	+0.0					-20.5	42.4	-62.9	

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Test Location: CKC Laboratories •22116 23rd Dr SE • Bothell, WA 98021-4413 • 425-402-1717

Customer: ZillionTV Corporation. Specification: FCC 15.247/15.209

Work Order #: 89169 Date: 3/10/2009
Test Type: Radiated Scan Time: 16:59:47
Equipment: USB Base Station Sequence#: 1

Manufacturer: ZillionTV Corporation Tested By: Armando Del Angel

Model: ZA100 S/N: 013

#### Test Equipment:

Test Equipment.				
Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8447D Preamp	2944A08601	07/08/2008	07/08/2010	AN01517
Agilent E4440A	MY46186330	01/31/2008	01/31/2010	AN02872
Cable 6'	51	12/30/2008	12/30/2010	ANP05361
Antenna	2453	12/22/2008	12/22/2010	AN01994
Cable 30'	11	11/05/2008	11/05/2010	ANP05366
Cable 6'	49	11/10/2008	11/10/2010	ANP05371
Cable 20'	16	11/10/2008	11/10/2010	ANP05360
High Pass Filter	2	05/01/2008	05/01/2010	02750
Heliax cable	N/A	07/22/2008	07/22/2010	AN05545
High freq. Cable	N/A	12/02/2008	12/02/2010	AN03123
High freq. Cable	N/A	12/02/2008	12/02/2010	AN03121
EMCO 3115 Horn	9606-4854	11/12/2007	11/12/2009	AN01412
HP 83017A Pre-amp	3123A00464	10/02/2007	10/02/2009	AN01271
Mag Loop	2156	06/04/2008	06/04/2010	AN00052

## Equipment Under Test (\* = EUT):

Function	Manufacturer	Model #	S/N
USB Base Station*	ZillionTV Corporation	ZA100	013
Laptop	Lenovo	T61	10156

## Support Devices:

Function	Manufacturer	Model #	S/N	
Hunction	Manufacturer	Model #	×/ V	

## Test Conditions / Notes:

Temp =  $19^{\circ}$ 

Rel. Temp. = 26%

Atm. Pressure. = 102.1kPa

Testing Radiated Spurious Emissions per FCC 15.247(d)

The unit is a USB transmitter. It is connected to a laptop and the ports of the laptop are filled. All extra cable length is bundled in 40cm bundles. The Transmitter is located 10cm over the wooden table on styrofoam. The transmitter will be transmitting in the LOW channel.

Due to the lack of an antenna connector only Radiated Spurious emissions will

be performed.

Operating Frequency range = 903 - 927MHz

Frequency range of measurement = 9kHz - 10GHz.

Frequency: 9kHz - 150kHz RBW= 200Hz, VBW= 200Hz

150kHz - 30MHz RBW= 9kHz, VBW = 9kHz 30MHz - 1GHz RBW= 120kHz, VBW=120kHz 1GHz - 10GHz RBW= 1 MHz, VBW=1 MHz.

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Transducer Legend:

T1=ANT AN01994 25-1000MHz
T3=CAB-ANP05361
T5=CAB-ANP05361
T5=CAB-ANP05371
T6=AMP-AN01517-070808
T7=AN01271 HP PreAmplifier
T8=ANT-AN01412-111207
T9=Filter 1GHz HP AN02750
T10=CAB-ANP03123-120208
T11=CAB-ANP03123-120208
T13=ANT- AN00052-06042008

Meas	urement Data:	Re	eading lis	ted by ma	argin.		Te	est Distance	e: 3 Meters	1	
#	Freq	Rdng	T1 T5 T9 T13	T2 T6 T10	T3 T7 T11	T4 T8 T12	Dist	Corr	Spec	Margin	Polar
	MHz	dΒμV	dB	dB	dB	dB	Table	$dB\muV/m$	$dB\muV/m$	dB	Ant
1	168.005M QP	58.9	+9.9 +0.2	+0.8 -28.8	+0.2	+0.9	+0.0 241	42.1	44.0	-1.9	Horiz 201
/	168.005M	80.0	+9.9 +0.2	+0.8 -28.8	+0.2	+0.9	+0.0 241	63.2	44.0	+19.2	Horiz 201
3	3 904.465M QP	44.9	+23.2 +0.3	+1.9 -29.3	+0.5	+2.0	+0.0 154	43.5	46.0	-2.5	Horiz 151
/	904.465M	54.0	+23.2 +0.3	+1.9 -29.3	+0.5	+2.0	+0.0 154	52.6	46.0	+6.6	Horiz 151
5	5 179.916M	59.2	+9.0 +0.2	+0.8 -28.8	+0.2	+0.9	+0.0	41.5	44.0	-2.5	Horiz 201
6	69.060M	59.1	+6.2 +0.2	+0.5 -29.2	+0.1	+0.5	+0.0	37.4	40.0	-2.6	Horiz 201
7	204.096M	57.4	+9.4 +0.3	+0.9 -28.8	+0.2	+1.0	+0.0	40.4	44.0	-3.6	Horiz 201
8	3 71.998M QP	57.5	+6.6 +0.2	+0.5 -29.2	+0.1	+0.5	+0.0 180	36.2	40.0	-3.8	Horiz 201
/	71.998M	72.2	+6.6 +0.2	+0.5 -29.2	+0.1	+0.5	+0.0 180	50.9	40.0	+10.9	Horiz 201

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10 Q1	64.640M P	58.6	+5.5 +0.1	+0.4 -29.2	+0.1	+0.4	+0.0 180	35.9	40.0	-4.1	Horiz 201
٨	64.640M	63.7	+5.5	+0.4	+0.1	+0.4	+0.0	41.0	40.0	+1.0	Horiz
			+0.1	-29.2			180				201
12	155.922M	55.6	+10.9	+0.8	+0.2	+0.8	+0.0	39.6	44.0	-4.4	Horiz
			+0.2	-28.9							201
	905.000M	42.7	+23.2	+1.9	+0.5	+2.0	+0.0	41.3	46.0	-4.7	Horiz
Q1	Р		+0.3	-29.3			275				151
^ (	005 00014	<i>51.6</i>	122.2	.1.0	.0.5	+2.0	.00	50.2	46.0	.4.2	II.a.i.
	905.000M	51.6	+23.2	+1.9	+0.5	+2.0	+0.0	50.2	46.0	+4.2	Horiz
			+0.3	-29.3			275				151
15	911.270M	38.7	+23.3	+1.9	+0.5	+2.0	+0.0	37.5	46.0	-8.5	Horiz
13	911.270W	30.7	+0.4	-29.3	+0.5	<b>⊤∠.</b> 0	+0.0	31.3	40.0	-0.5	151
			10.4	27.3							131
16	192.006M	52.1	+9.1	+0.9	+0.2	+1.0	+0.0	34.8	44.0	-9.2	Horiz
	1,2,0001,1	02.1	+0.3	-28.8	. 0.2		. 0.0	0		, . <u>_</u>	201
17	901.698M	37.8	+23.1	+1.9	+0.5	+2.0	+0.0	36.3	46.0	-9.7	Horiz
Q	P		+0.3	-29.3			198				151
Λ (	901.698M	51.8	+23.1	+1.9	+0.5	+2.0	+0.0	50.3	46.0	+4.3	Horiz
			+0.3	-29.3			198				151
10	25 ( 15 ) 5	47.6	10.0	1.0	0.2		0.0	240	4.6.0		** .
19	276.150M	47.6	+13.0	+1.0	+0.3	+1.1	+0.0	34.9	46.0	-11.1	Horiz
			+0.3	-28.4							150
20	107.934M	49.5	+10.8	+0.6	+0.1	+0.6	+0.0	32.7	44.0	-11.3	Horiz
20	107.734WI	49.3	+10.8	+0.6 -29.1	+0.1	+0.0	+0.0	32.1	44.0	-11.3	201
			⊤0.∠	-27.1							201
21	599.700M	36.2	+20.2	+1.6	+0.4	+1.9	+0.0	31.2	46.0	-14.8	Horiz
21	JJJ.1001 <b>V1</b>	30.2	+20.2	-29.6	10.7	11.7	360	31.2	40.0	17.0	125
			10.5	27.0			500				123
22 1	804.000M	42.1	+0.0	+0.0	+0.0	+0.0	+0.0	39.0	54.0	-15.0	Horiz
			+0.0	+0.0	-33.8	+26.5	360				175
			+0.4	+1.1	+0.5	+2.2					

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23	719.900M	34.6	+20.9	+1.7	+0.5	+1.9	+0.0	30.4	46.0	-15.6	Horiz
			+0.4	-29.6			360				125
24	7225.408M	27.3	+0.0	+0.0	+0.0	+0.0	+0.0	37.3	54.0	-16.7	Horiz
	Ave		+0.0	+0.0	-34.7	+36.3	335				136
			+0.3	+2.3	+1.1	+4.7					
^	7225.408M	49.2	+0.0	+0.0	+0.0	+0.0	+0.0	59.2	54.0	+5.2	Horiz
			+0.0	+0.0	-34.7	+36.3	335				136
			+0.3	+2.3	+1.1	+4.7					
2.5	000 5051 5	27.4	24.4		0.7		0.0	27.5	710	10.0	** '
26	999.525M	35.4	+24.4	+2.1	+0.5	+2.1	+0.0	35.7	54.0	-18.3	Horiz
			+0.2	-29.0							151
27	5418.875M	26.5	+0.0	+0.0	+0.0	+0.0	+0.0	35.4	54.0	-18.6	Horiz
21	3418.8/3M Ave	20.3	+0.0 +0.0	+0.0 +0.0	+0.0 -33.1	+34.5	+0.0 240	33.4	34.0	-10.0	137
	Ave		+0.0	+2.3	+1.0	+34.3	240				137
			+0.3	+2.3	+1.0	+3.9					
^	5418.875M	47.1	+0.0	+0.0	+0.0	+0.0	+0.0	56.0	54.0	+2.0	Horiz
	3+10.073W1	77.1	+0.0	+0.0	-33.1	+34.5	240	30.0	34.0	12.0	137
			+0.3	+2.3	+1.0	+3.9	240				137
			10.5	12.3	11.0	13.7					
29	777.620k	40.6	+0.0	+0.1	+0.0	+0.1	-40.0	10.8	29.8	-19.0	90deg
	777.020R	10.0	+0.0	+0.0	+0.0	+0.0	22	10.0	27.0	17.0	150
			+0.0	+0.0	+0.0	+0.0					
			+10.0								
30	1.076M	32.1	+0.0	+0.1	+0.0	+0.1	-40.0	2.3	26.9	-24.6	90deg
			+0.0	+0.0	+0.0	+0.0	271				150
			+0.0	+0.0	+0.0	+0.0					
			+10.0								
31	24.370M	26.1	+0.0	+0.3	+0.0	+0.3	-40.0	-6.3	29.5	-35.8	90deg
			+0.2	+0.0	+0.0	+0.0	207				150
			+0.0	+0.0	+0.0	+0.0					
			+6.8								
32	214.220k	50.5	+0.0	+0.0	+0.0	+0.0	-80.0	-19.5	21.0	-40.5	90deg
			+0.0	+0.0	+0.0		124				150
			+0.0	+0.0	+0.0	+0.0					
			+10.0								
33	17.663M	19.7	+0.0	+0.3	+0.0	+0.3	-40.0	-11.0	29.5	-40.5	90deg
			+0.2	+0.0	+0.0	+0.0	360				150
			+0.0	+0.0	+0.0	+0.0					
	000 1 503 5	00.0	+8.5	4.0		2.0		00.7	105.0	40.7	77 '
34	903.162M	90.0	+23.1	+1.9	+0.5	+2.0	+0.0	88.5	137.0	-48.5	Horiz
			+0.3	-29.3			275		Fundamenta	I	151
25	70.0001	£1 £	.00	, 0.0	.00		90.0	10 4	20.6	40.0	004.
35	70.900k	51.5	+0.0	+0.0	+0.0	+0.0	-80.0	-18.4	30.6	-49.0	90deg
			+0.0 +0.0	+0.0	+0.0	+0.0 +0.0	214				150
			+0.0 +10.1	+0.0	+0.0	+0.0					
			+10.1								

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36	141.800k	38.9	+0.0 +0.0 +0.0 +9.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0 360	-31.2	24.6	-55.8	90deg 150
37	11.480k	44.4	+0.0 +0.0 +0.0 +15.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	-80.0 78	-19.7	46.4	-66.1	90deg 150

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# FCC 15.247(d) BANDEDGE

**Test Equipment** 

Asset #	Equipment	Serial #	Cal Date	Cal Due
ANP05361	Cable 6'	51	12/30/2008	12/30/2010
AN01994	Antenna	2453	12/22/2008	12/22/2010
ANP05366	Cable 30'	11	11/5/2008	11/5/2010
ANP05371	Cable 6'	49	11/10/2008	11/10/2010
ANP05360	Cable 20'	16	11/10/2008	11/10/2010
AN01517	HP 8447D Preamp	2944A08601	7/8/2008	7/8/2010
AN02872	Agilent E4440A	MY46186330	1/31/2008	1/31/2010

**Test Setup Photos** 



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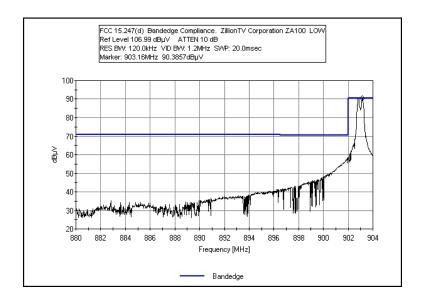


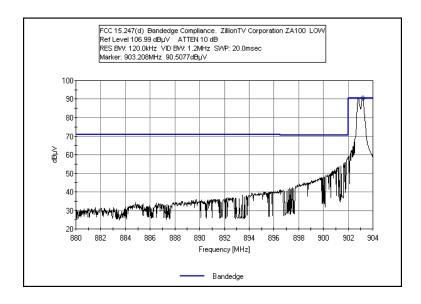


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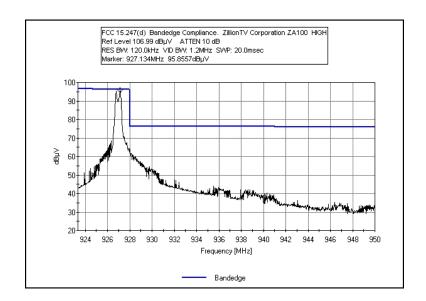
## **Test Plots**

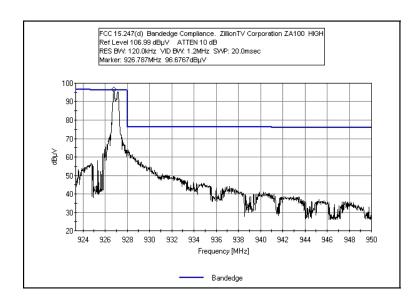




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## FCC 15.247(e) PEAK POWER SPECTRAL DENSITY

**Test Equipment** 

Asset #	Equipment	Serial #	Cal Date	Cal Due
ANP05361	Cable 6'	51	12/30/2008	12/30/2010
AN01994	Antenna	2453	12/22/2008	12/22/2010
ANP05366	Cable 30'	11	11/5/2008	11/5/2010
ANP05371	Cable 6'	49	11/10/2008	11/10/2010
ANP05360	Cable 20'	16	11/10/2008	11/10/2010
AN01517	HP 8447D Preamp	2944A08601	7/8/2008	7/8/2010
AN02872	Agilent E4440A	MY46186330	1/31/2008	1/31/2010

## **Test Conditions**

The EUT is transmitting. Due to the lack of antenna connectors the test will be done through radiated measurements. EUT is located in the back edge of the test table over 10cm of Styrofoam. The EUT is connected to a laptop via USB. All the laptop ports are filled per ANSI C63.4 procedures. The Fundamental's emission will be maximized per ANSI C63.4 procedures. PSA is on max hold centered at the desired channel.

EMI test will be used with the solely purpose of accurate Field Strength data gathering.

Same calculation from the RF power output test will be done in order to convert the field strength to power.

RBW = 3 kHz

VBW = 9 kHz

Span = 300 kHz

Sweep Time = 100s

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**Test Setup Photos** 





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**Test Data** 

	Vertical	Horizontal	Limit
LOW	-17.02dBm/3kHz	-16.82dBm/3kHz	8dBm/3kHz
MID	-13.62dBm/3kHz	-13.72dBm/3kHz	8dBm/3kHz
HIGH	-12.12dBm/3kHz	-11.62dBm/3kHz	8dBm/3kHz

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## **RSS-210 99% BANDWIDTH**

**Test Equipment** 

Asset #	Equipment	Serial #	Cal Date	Cal Due
ANP05361	Cable 6'	51	12/30/2008	12/30/2010
AN01994	Antenna	2453	12/22/2008	12/22/2010
ANP05366	Cable 30'	11	11/5/2008	11/5/2010
ANP05371	Cable 6'	49	11/10/2008	11/10/2010
ANP05360	Cable 20'	16	11/10/2008	11/10/2010
AN01517	HP 8447D Preamp	2944A08601	7/8/2008	7/8/2010
AN02872	Agilent E4440A	MY46186330	1/31/2008	1/31/2010

## **Test Conditions**

EUT is transmitting. Due to the lack of antenna connectors the test will be done through radiated measurements. EUT is located in the back edge of the test table over 10cm of Styrofoam. The EUT is connected to a laptop via USB. All the laptop ports are filled per ANSI C63.4 procedures. PSA is on max hold, Agilent procedure used for each channel LOW, MID, HIGH.

RBW = 10 kHz VBW = 100 kHzSpan = 1 MHz

**Test Setup Photos** 









**Test Data** 

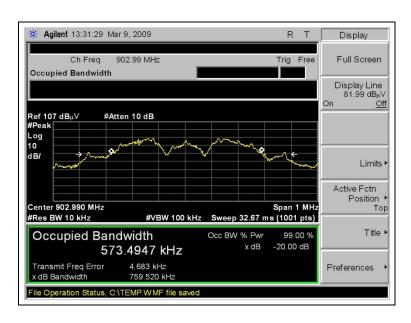
Channel	99% Bandwidth				
	Vertical	Horizontal			
LOW	578.51kHz	573.49kHz			
MID	568.70kHz	564.30kHz			
HIGH	566.15kHz	567.90kHz			

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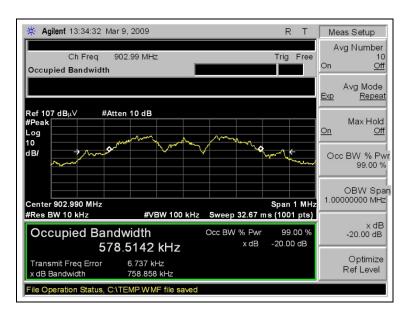


## **Test Plots**

## RSS-210 99% BANDWIDTH - LOW CHANNEL HORIZONTAL



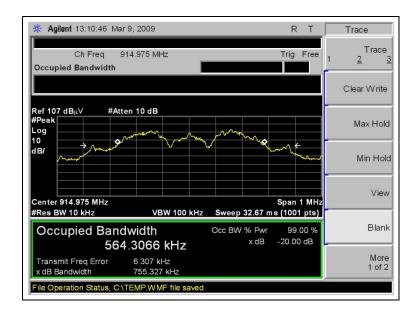
## RSS-210 99% BANDWIDTH - LOW CHANNEL VERTICAL



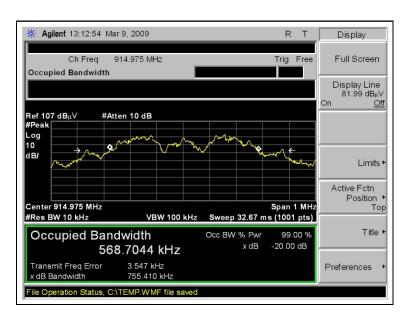
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## RSS-210 99% BANDWIDTH - MID CHANNEL HORIZONTAL



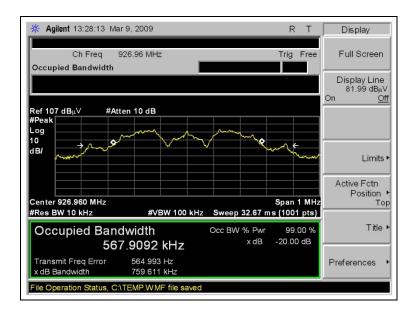
## RSS-210 99% BANDWIDTH - MID CHANNEL VERTICAL



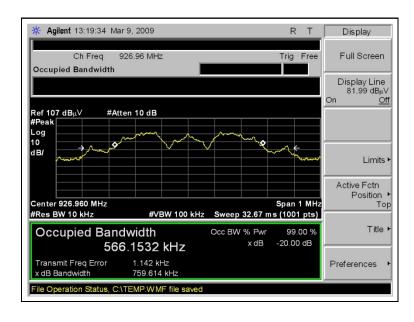
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## RSS-210 99% BANDWIDTH - HIGH CHANNEL HORIZONTAL



## RSS-210 99% BANDWIDTH - HIGH CHANNEL VERTICAL



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