



No.198 Kezhu Road, Science Town Economic& Technology  
Development District Guangzhou, China 510663  
Telephone: +86 (0) 20 82155555  
Fax: +86 (0) 20 82075059  
Email: [sgs\\_internet\\_operations@sgs.com](mailto:sgs_internet_operations@sgs.com)

**FEDERAL COMMUNICATIONS COMMISSION**  
Registration number: 282399

Report No.: SZEMO081005102RFF  
Page: 1 of 16  
FCC ID: WTEAXE001PS3AMR

## **TEST REPORT**

**Application No. :** SZEMO081005102RF  
**Applicant:** FREETRONCOM LTD  
**Manufacturer:** Shenzhen Kaytom Plastic & Electronic Co. Ltd  
**FCC ID:** WTEAXE001PS3AMR  
**Fundamental Carrier** **Frequency :** 2.402GHz to 2.480GHz  
**Equipment Under Test (EUT):**

Name: AXE Guitar 4 in 1  
Model: AXE-001-PS3AMR  
**Standards:** FCC PART 15: 2008  
**Date of Receipt:** 15 October 2008  
**Date of Test:** 15 October to 05 November 2008  
**Date of Issue:** 05 November 2008

<b>Test Result :</b>	<b>PASS *</b>
----------------------	---------------

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Lo  
Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.



## 2 Test Summary

Test	Test Requirement	Standard Paragraph	Result
Field Strength of Fundamental	FCC PART 15 : 2008	Section 15.249 (a)	PASS
Field Strength of Harmonics or other Frequency	FCC PART 15 : 2008	Section 15.249 (a) Section 15.209	PASS
Occupied Bandwidth	FCC PART 15 : 2008	Section 15.249	PASS

**FCC ID: WTEAXE001PS3AMR**

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

### **3 Contents**

	Page
<b>1 COVER PAGE .....</b>	<b>1</b>
<b>2 TEST SUMMARY .....</b>	<b>2</b>
<b>3 CONTENTS .....</b>	<b>3</b>
<b>4 GENERAL INFORMATION.....</b>	<b>4</b>
4.1 CLIENT INFORMATION .....	4
4.2 GENERAL DESCRIPTION OF E.U.T.....	4
4.3 DESCRIPTION OF SUPPORT UNITS .....	4
4.4 STANDARDS APPLICABLE FOR TESTING .....	4
4.5 TEST LOCATION .....	4
4.6 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	4
4.7 TEST FACILITY .....	5
<b>5 TEST RESULTS .....</b>	<b>6</b>
5.1 TEST INSTRUMENTS.....	6
5.2 E.U.T. OPERATION.....	6
5.3 TEST PROCEDURE & MEASUREMENT DATA.....	7
5.3.1 <i>Radiated Emissions</i> .....	7
5.3.2 <i>Occupied Bandwidth</i> .....	14-16

FCC ID: WTEAXE001PS3AMR

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

## 4 General Information

### 4.1 Client Information

Applicant Name: FREETRONCOM LTD  
Applicant Address: Unit 5, 17/F, Vanta Industrial Centre, No 21 Tai Lin Pai Road, Kwai Chung, Hong Kong.  
Manufacturer: Shenzhen Kaytom Plastic & Electronic Co. Ltd  
Manufacturer Address: Blk4, City II Fuan Ind. City, Dayangtian Dev Area, Fuyong Town, Baoan, Shenzhen, China.

### 4.2 General Description of E.U.T.

Product Name: AXE Guitar 4 in 1  
Model: AXE-001-PS3AMR  
Power Supply: 4.5V DC(3\*1.5V"AA" Size Batteries)  
Power Cord: N/A-

### 4.3 Description of Support Units

The EUT was tested as an independent unit: a 2.4GHz Wireless Guitar.

### 4.4 Standards Applicable for Testing

The customer requested FCC tests for a 2.4GHz Wireless Guitar.

The standard used was FCC PART 15, SUBPART C ( 2008) section 15.249.

### 4.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory, No.198 Kezhu Road, Science Town Economic& Technology Development District Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.

### 4.6 Other Information Requested by the Customer

None.

FCC ID: WTEAXE001PS3AMR

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

## 4.7 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **NVLAP – Lab Code: 200811-0**  
SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is recognized under the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200811-0. Effective through December 31, 2008.
- **ACA**  
SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.
- **VCCI**  
The 3m Semi-anechoic chamber and Shielded Room (11.5m x 4m x 4m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-1599 and C-1706 respectively.  
Date of Registration: June 01, 2005. Valid until February 22, 2008
- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**  
Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.
- **CNAL – LAB Code: L0141**  
SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAL/AC01: 2002 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:1999 General Requirements) for the Competence of Testing Laboratories.
- **FCC – Registration No.: 282399**  
SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 282399, May 31, 2002. With the above and NVLAP's accreditation, SGS-CSTC is an authorised test laboratory for the DoC process.
- **Industry Canada (IC)**  
The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5169.

FCC ID: WTEAXE001PS3AMR

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

## 5 Test Results

### 5.1 Test Instruments

RE in Chamber						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (dd-mm-yy)	Cal.Due date (dd-mm-yy)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	16-06-2007	15-06-2009
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEL0023	12-12-2007	11-12-2008
3	EMI Test software	AUDIX	E3	SEL0050	N/A	N/A
4	Coaxial cable	SGS	N/A	SEL0028	18-06-2008	17-06-2009
5	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0014	12-08-2008	11-08-2009
6	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	18-06-2008	17-06-2009
7	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0005	12-08-2008	11-08-2009
8	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEL0076	12-08-2008	11-08-2009
9	Pre-amplifier (1-18GHz)	Rohde & Schwarz	AFS42-00101 800-25-S-42	SEL0081	18-06-2008	17-06-2009
10	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33- 18002650-30- 8P-44	SEL0080	18-06-2008	17-06-2009
11	Band filter	Amindeon	82346	SEL0094	18-06-2008	17-06-2009
12	Active Loop Antenna	Beijing Daze	ZN30900A	SEL0097	15-06-2008	14-06-2009

### 5.2 E.U.T. Operation

Input voltage: 4.5V DC(3\*1.5V"AA" Size Batteries)

Operating Environment:

Temperature: 24°C

Humidity: 50 % RH

Atmospheric Pressure: 1010 mbar

EUT Operation: Test in transmitting mode:

1. For channel 0: 2.402GHz.
2. For channel 39: 2.441GHz.
3. For channel 78: 2.480GHz.

FCC ID: WTEAXE001PS3AMR

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

## 5.3 Test Procedure & Measurement Data

### 5.3.1 Radiated Emissions

#### 5.3.1.1 Test in transmitting mode

Test Requirement: FCC Part15.249,15.209 and 15.205  
Test Method: ANSI C63.4:2003  
Measurement Distance: 3m (Semi-Anechoic Chamber)  
Frequency range 30 MHz – 25GHz  
Test instrumentation resolution bandwidth  
120 kHz (30 MHz - 1000 MHz), 1 MHz (1000 MHz– 25GHz)  
Operation: Receive antenna scan height 1 - 4 m, polarization Vertical/ Horizontal  
Requirements:

Fundamental Frequency (MHz)	Field Strength of Fundamental (dBuV/m @ 3m)	Field Strength of Harmonics and Spurious Emissions (dBuV/m @ 3m)
902 to 928	94.0	54.0
2400 to 2483.5	94.0	54.0
5725 to 5875	94.0	54.0
24000 to 24250	108.0	68.0

The fundamental frequency of the EUT is 2.4GHz to 2.480GHz

The limit for average field strength dB $\mu$ V/m for the fundamental frequency = 94.0 dB $\mu$ V/m.

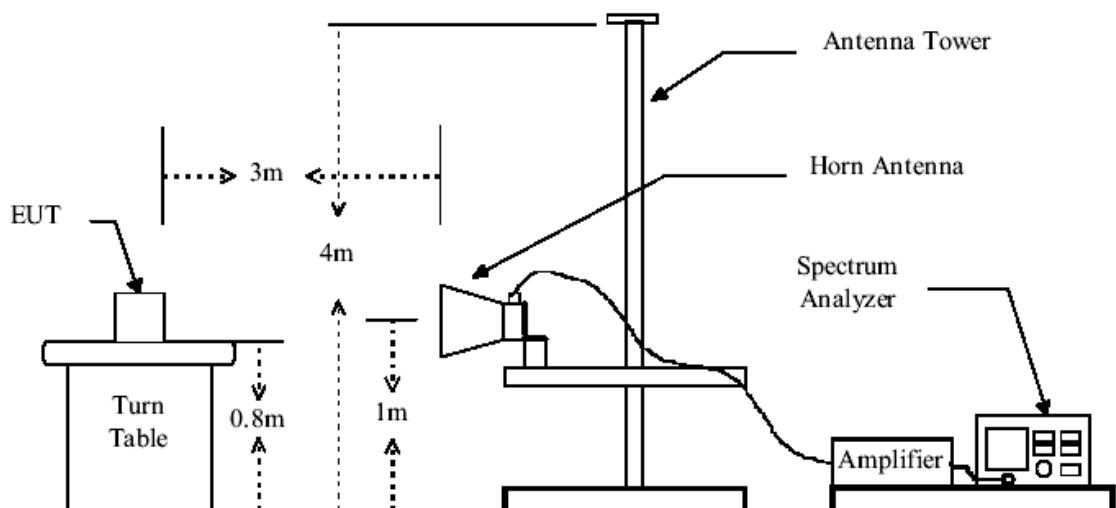
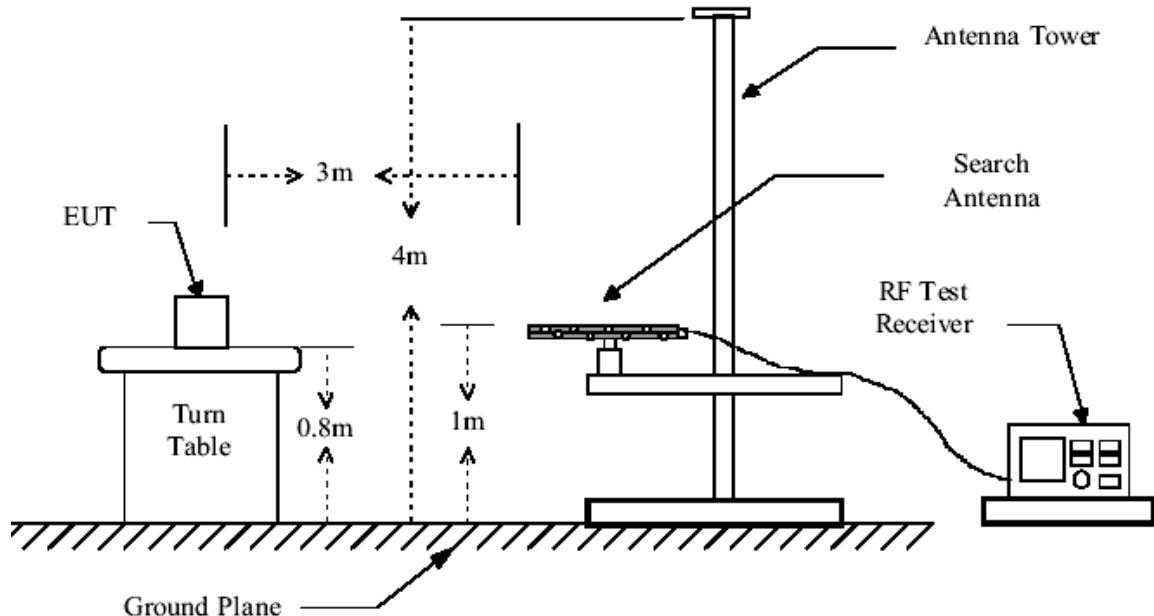
No fundamental is allowed in the restricted bands.

#### Test Procedure:

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
  2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
  3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
  4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
  5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
  6. Repeat above procedures until the measurements for all frequencies are complete.
- 7 The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.

FCC ID: WTEAXE001PS3AMR

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

**Test Configuration:**

**FCC ID: WTEAXE001PS3AMR**

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

The field strength is calculated by adding the Antenna Factor, Cable Factor & Peramplifier . The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Peramplifier Factor

The following test results were performed on the EUT:

1. The following test results were performed at 30MHz—1GHz

Vertical:

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
133.790	1.28	7.86	27.57	46.44	28.01	43.50	-15.49
163.860	1.34	9.56	27.36	49.16	32.70	43.50	-10.80
264.084	1.74	12.59	26.85	49.40	36.88	46.00	-9.12
374.080	2.13	15.97	27.25	52.00	42.85	46.00	-3.15
657.590	2.82	20.84	27.42	36.11	32.35	46.00	-13.65
808.910	3.25	22.21	26.89	34.83	33.40	46.00	-12.60

Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)
82.380	1.10	7.95	27.99	49.20	30.26	40.00	-9.74
133.790	1.28	7.86	27.57	51.91	33.48	43.50	-10.02
160.950	1.34	9.59	27.38	48.15	31.70	43.50	-11.80
268.479	1.76	12.68	26.84	49.21	36.81	46.00	-9.19
374.098	2.13	15.97	27.25	46.5	37.35	46.00	-8.65
657.590	2.82	20.84	27.42	38.96	35.2	46.00	-10.80

FCC ID: WTEAXE001PS3AMR

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

2. The following test results were performed at above 1GHz

For Channel 0:

#### Harmonics & Spurious Emissions

##### Peak Measurement

Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over limit	polarization
2402	4.97	32.25	0	55.2	92.42	114	-21.58	Vertical
2394	4.97	32.24	37.65	59.53	59.09	74	-14.91	Vertical
2400	4.97	32.25	37.65	64.69	64.26	74	-9.74	Vertical
4842	6.62	34.03	38.21	44.53	46.97	74	-27.03	Vertical
7222	7.63	36.29	38.55	44.44	49.81	74	-24.19	Vertical
2402	4.97	32.25	0	47.89	85.11	114	-28.89	Horizontal
2394	4.97	32.24	37.65	59.53	59.09	74	-14.91	Horizontal
2400	4.97	32.25	37.65	64.69	64.26	74	-9.74	Horizontal
4842	6.62	34.03	38.21	44.53	46.97	74	-27.03	Horizontal
7222	7.63	36.29	38.55	44.44	49.81	74	-24.19	Horizontal

##### Average Measurement

Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over limit	polarization
2402	4.97	32.25	0	45.65	82.87	94	-11.13	Vertical
2394	4.97	32.24	37.65	38.38	37.94	54	-16.06	Vertical
2400	4.97	32.25	37.65	43.02	42.59	54	-11.41	Vertical
4825	6.62	34.03	38.2	32.11	34.56	54	-19.44	Vertical
7222	7.63	36.29	38.55	32.35	37.72	54	-16.28	Vertical
2402	4.97	32.25	0	40.26	77.48	94	-16.52	Horizontal
2394	4.97	32.24	37.65	36.19	35.75	54	-18.25	Horizontal
2400	4.97	32.25	37.65	43.41	42.98	54	-11.02	Horizontal
4774	6.6	34.04	38.16	34.54	37.02	54	-16.98	Horizontal
7222	7.63	36.29	38.55	32.43	37.80	54	-16.20	Horizontal

FCC ID: WTEAXE001PS3AMR

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.



For Channel 39:

## . Harmonics &amp; Spurious Emissions

## Peak Measurement

Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over limit	polarization
2441	5.03	32.27	0	54.47	91.77	114	-22.23	Vertical
2411	4.99	32.25	37.65	45.61	45.20	74	-28.80	Vertical
2496	5.10	32.3	37.64	45.98	45.74	74	-28.26	Vertical
4859	6.63	34.03	38.22	47.03	49.47	74	-24.53	Vertical
7273	7.61	36.21	38.53	44.56	49.85	74	-24.15	Vertical
2441	5.03	32.27	0	49.78	87.08	114	-26.29	Horizontal
2394	4.97	32.24	37.65	45.82	45.38	74	-28.62	Horizontal
2479	5.08	32.29	37.64	45.48	45.21	74	-28.79	Horizontal
4859	6.63	34.03	38.22	44.28	46.72	74	-27.28	Horizontal
7188	7.65	36.36	38.56	44.27	49.72	74	-24.28	Horizontal

## Average Measurement

Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over limit	polarization
2441	5.03	32.27	0	46.08	83.38	94	-10.62	Vertical
2411	4.99	32.25	37.65	32.95	32.54	54	-21.46	Vertical
2496	5.1	32.3	37.64	33.42	33.18	54	-20.82	Vertical
4859	6.63	34.03	38.22	34.58	37.02	54	-16.98	Vertical
7273	7.61	36.21	38.53	32.19	37.48	54	-16.52	Vertical
2441	5.03	32.27	0	43.55	80.85	94	-13.15	Horizontal
2411	4.99	32.25	37.65	32.99	32.58	54	-21.42	Horizontal
2496	5.1	32.3	37.64	33.35	33.11	54	-20.89	Horizontal
4876	6.64	34.02	38.23	32.09	34.52	54	-19.48	Horizontal
7239	7.62	36.25	38.54	32.58	37.91	54	-16.09	Horizontal

FCC ID: WTEAXE001PS3AMR

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.



For Channel 78:

## Harmonics &amp; Spurious Emissions

## Peak Measurement

Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over limit	polarization
2480	5.08	32.29	0	54.2	91.57	114	-22.43	Vertical
2483.5	5.08	32.29	37.64	59.4	59.13	74	-14.87	Vertical
2496	5.1	32.3	37.64	49.57	49.33	74	-24.67	Vertical
4893	6.65	34.02	38.24	44.23	46.66	74	-27.34	Vertical
7273	7.61	36.21	38.53	44.79	50.08	74	-23.92	Vertical
2480	5.08	32.29	0	50.22	87.59	114	-26.41	Horizontal
2483.5	5.08	32.29	37.64	59.37	59.10	74	-14.9	Horizontal
2496	5.1	32.3	37.64	53.92	53.68	74	-20.32	Horizontal
4893	6.65	34.02	38.24	43.89	46.32	74	-27.68	Horizontal
7307	7.59	36.14	38.52	44.36	49.57	74	-24.43	Horizontal

## Average Measurement

Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Over limit	polarization
2480	5.08	32.29	0	45.28	82.65	94	-11.35	Vertical
2483.5	5.08	32.29	37.64	42.56	42.29	54	-11.71	Vertical
2496	5.1	32.3	37.64	36.57	36.33	54	-17.67	Vertical
4910	6.65	34.02	38.26	31.72	34.13	54	-19.87	Vertical
7307	7.59	36.14	38.52	32.03	37.24	54	-16.76	Vertical
2480	5.08	32.29	0	36.22	73.59	94	-20.41	Horizontal
2483.5	5.08	32.29	37.64	42.89	42.62	54	-11.38	Horizontal
2496	5.1	32.3	37.64	36.73	36.49	54	-17.51	Horizontal
4944	6.67	34.01	38.29	31.84	34.23	54	-19.77	Horizontal
7358	7.57	36.06	38.5	31.94	37.07	54	-16.93	Horizontal

FCC ID: WTEAXE001PS3AMR

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.



## SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEMO081005102RFF

Page: 13 of 16

N/A: refer to remark 1).

Remark:

- 1). For this intentional radiator operates below 10 GHz, the spectrum shall be investigated to the tenth harmonic of the highest fundamental frequency. And above the fifth harmonic of this intentional radiator, the disturbance is very low. So the test result only displays to 4<sup>th</sup> harmonic.
  
- 2). According to 15.249 (e) As shown in Section 15.35(b), for frequencies above 1000 MHz, the above field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

TEST RESULTS: The unit does meet the FCC requirements.

FCC ID: WTEAXE001PS3AMR

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

### 5.3.2 Occupied Bandwidth

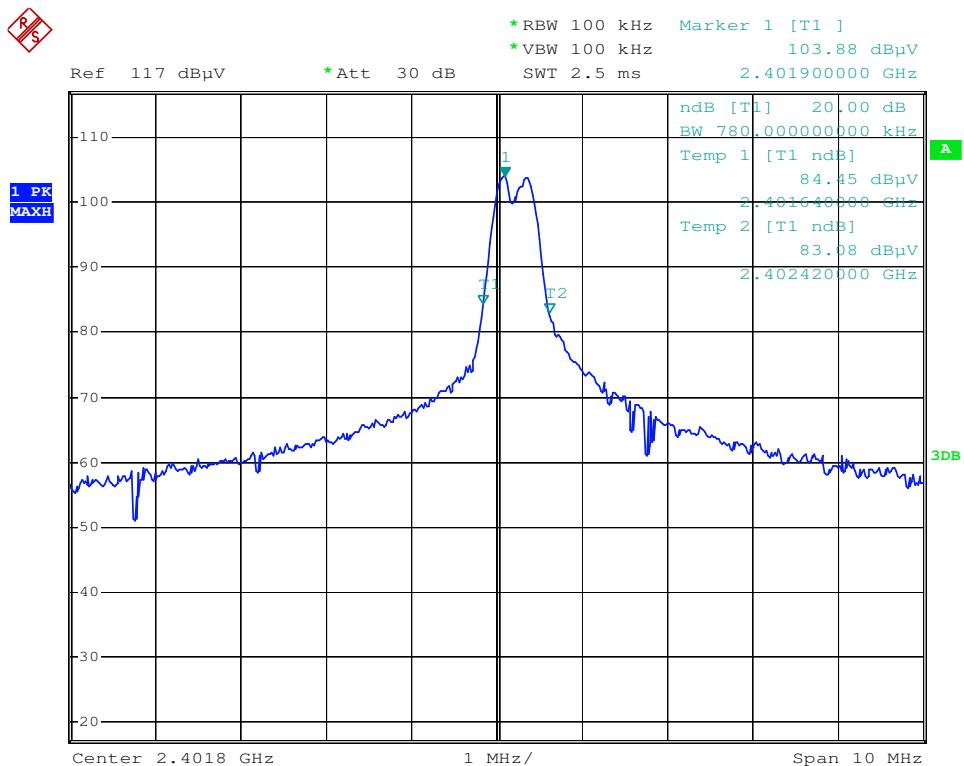
Test Requirement: FCC Part 15.249

Test Method: ANSI C63.4:2003

Operation within the band 2.402 – 2.480GHz

**The occupied bandwidth as below:**

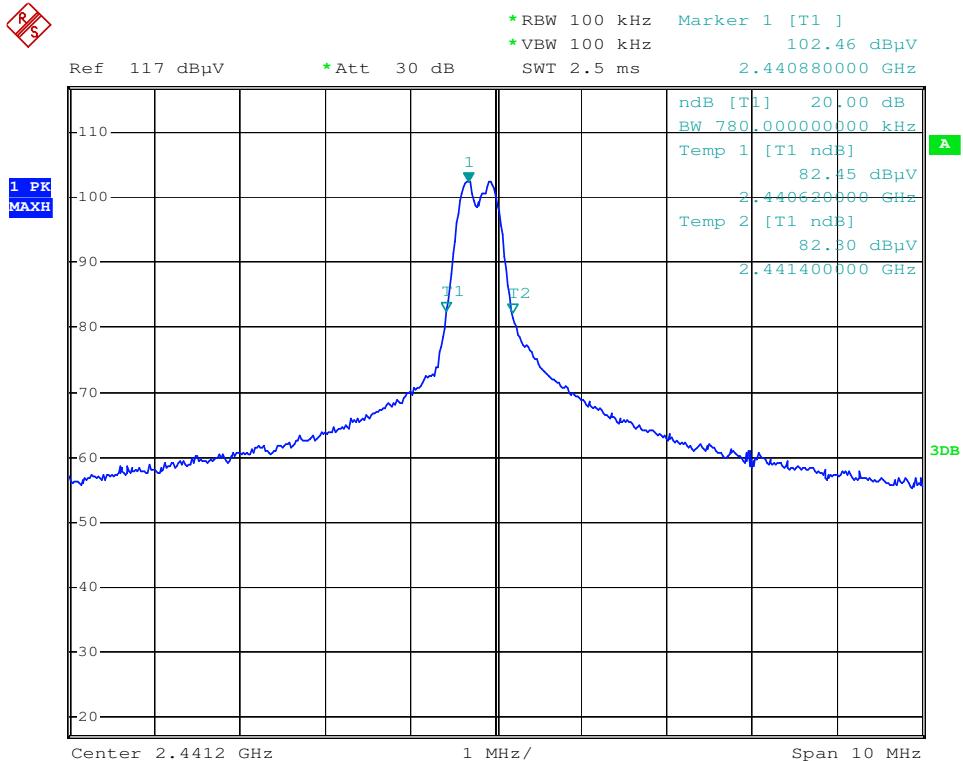
1. For Channel 0:



Date: 4.NOV.2008 11:04:55

FCC ID: WTEAXE001PS3AMR

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

**2. For Channel 39:**


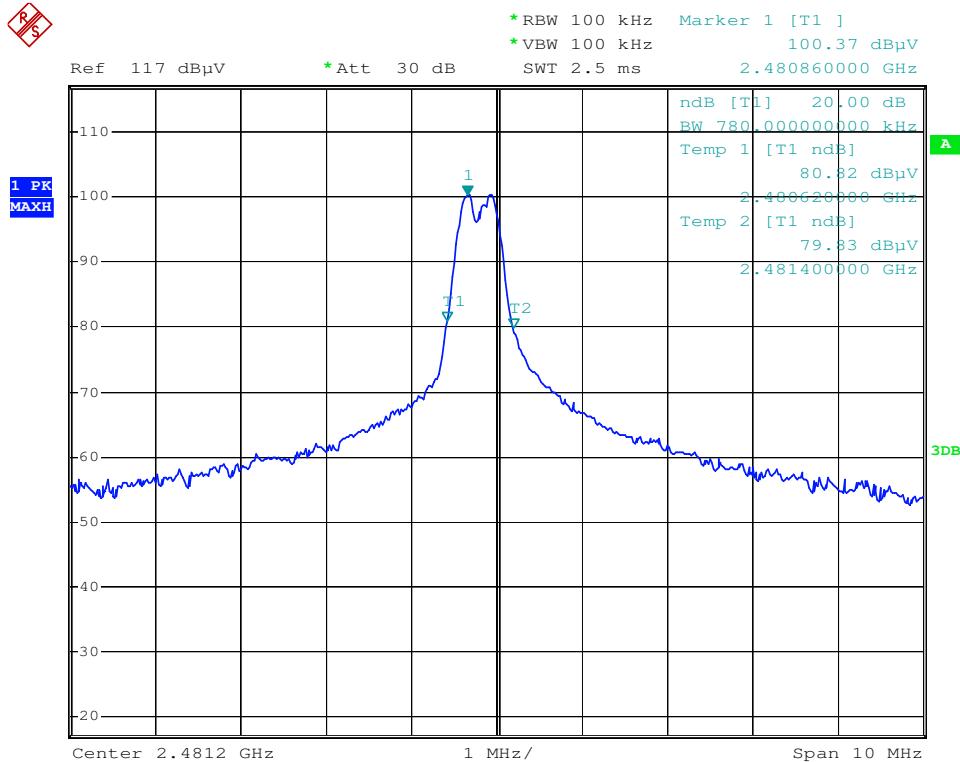
Date: 4.NOV.2008 11:13:54

**FCC ID: WTEAXE001PS3AMR**

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.

Report No.: SZEMO081005102RFF

Page: 16 of 16

**3. For Channel 78:**


Date: 4.NOV.2008 11:27:59

**FCC ID: WTEAXE001PS3AMR**

This document is issued by the Company under its General Conditions of Service printed overleaf or available on request and accessible at [http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law." Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company.