



## SGS-CSTC Standards Technical Services Ltd.

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**FEDERAL COMMUNICATIONS COMMISSION**  
Registration number: 556682

Report No.: SZEMO080904405RFF(I)  
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FCC ID : VLE15053-PPL-B-49

# TEST REPORT

**Application No.** : SZEMO080904405RF  
**Applicant** : Asian Express Holding Ltd.  
**Address of Applicant** : 4F, 4, No.669, Jingping Rd, Zhonghe City, Taipei Country 235, Taiwan R.O.C.  
**FCC ID** : VLE15053-PPL-B-49  
**Fundamental Frequency** : 49.860MHz  
**Equipment under Test (EUT):**  
EUT Name : SUPER SPORT( ASPHALT CHALLENGE)  
Item No. :15053-PPL-B  
**Standards** : FCC PART 15, SUBPART C : 2008 Section 15.235  
**Date of Receipt** : 04 September 2008  
**Date of Test** : 04 to 12 September 2008  
**Date of Issue** : 12 September 2008

<b>Test Result :</b>	<b>PASS *</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Lo  
Laboratory 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.

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## 2 Test Summary

Test	Test Requirement	Stanadard Paragraph	Result
Radiated Emission (30MHz to 1000MHz)	FCC PART 15 :2008	Section 15.235	PASS
Occupied Bandwidth	FCC PART 15 :2008	Section 15.235	PASS
Conducted Emission (150KHz to 30MHz)	FCC PART 15: 2008	Section 15.207	N/A*

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radiated Frequency.

N/A: The EUT was supplies by batteries.



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## **4 General Information**

### **4.1 Details of E.U.T.**

Power Supply: 9V DC (1\* "6F22"Size New Battery) for Tx.

Power Cord: N/A-

### **4.2 Description of Support Units**

The EUT was tested as an independent unit: a 49MHz radio transmitter.

### **4.3 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 8215 5555 Fax: +86 20 8207 5059

### **4.4 Other Information Requested by the Customer**

None.



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## 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	AFS33-18002 650-30-8P-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

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## **5.2 E.U.T. Operation**

Operating Environment:

Temperature: 24.0 °C  
Humidity: 50 % RH  
Atmospheric Pressure: 1010 mbar

EUT Operation:

Test the EUT in transmitting mode.

## **5.3 Test Procedure & Measurement Data**

### **5.3.1 Radiated Emissions**

Test Requirement: FCC Part15 C Section 15.235  
Test Method: ANSI C63.4  
Measurement Distance: 3m (Semi-Anechoic Chamber)  
Requirements: Carrier frequency will not exceed 80dBuV/m AT 3m.  
Out of band emissions shall not exceed:  
40.0 dB $\mu$ V/m between 30MHz & 88MHz  
43.5 dB $\mu$ V/m between 88MHz & 216MHz  
46.0 dB $\mu$ V/m between 216MHz & 960MHz  
54.0 dB $\mu$ V/m above 960MHz  
Detector: 30MHz to 1000MHz RBW=100KHz VBW=300KHz  
Above 1000MHz RBW=1MHz VBW=3MHz

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



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## Intentional emission

Test Frequency (MHz)	Peak (dBμV/m)		Limits (dBμV/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
49.860	68.88	68.86	100.0	31.12	31.14

Test Frequency (MHz)	Average (dBμV/m)		Limits (dBμV/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
49.860	64.75	65.28	80.0	15.25	14.72

## Other emissions

### Vertical

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dBμV)	Quasi-Peak Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)
99.70	1.20	9.09	27.88	55.15	37.56	43.50	-5.94
148.34	1.32	8.86	27.47	39.73	22.44	43.50	-21.06
198.78	1.40	10.19	27.16	43.77	28.20	43.50	-15.30
349.13	2.06	15.40	27.08	46.14	36.52	46.00	-9.48
398.60	2.20	16.28	27.40	46.39	37.47	46.00	-8.53

### Horizontal

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamplifier Factor (dB)	Read Level (dBμV)	Quasi-Peak Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)
99.60	1.20	9.09	27.88	26.09	8.50	43.50	-35.00
157.07	1.33	9.42	27.40	25.73	9.08	43.50	-34.42
198.78	1.40	10.19	27.16	29.68	14.11	43.50	-29.39
398.60	2.20	16.28	27.40	30.30	21.38	46.00	-24.62
688.63	2.88	21.52	27.31	26.36	23.45	46.00	-22.55
865.17	3.48	22.77	26.60	26.23	25.88	46.00	-20.12

### Remark:

According to 15.35 (b) When average radiated emission measurements are specified in the regulations, including emission measurements below 1000 MHz, there is also a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules, e.g., see Section 15.255.

**Test Results: The unit does meet the FCC Part 15 C Section 15.235 requirements.**

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### 5.3.2 Occupied Bandwidth

Test Requirement: FCC Part15 C Section 15.235

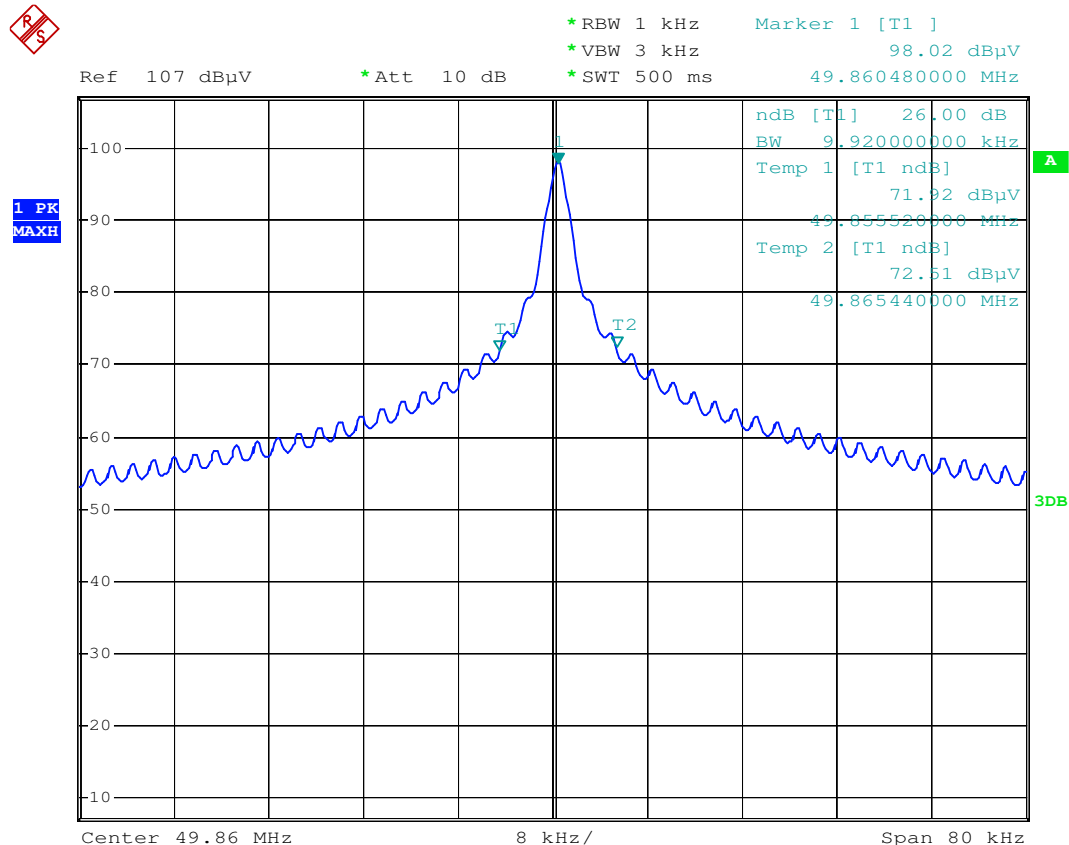
Test Method: ANSI C63.4

Operation within the band 49.82 – 49.90 MHz

Requirements: The field strength of any emissions appearing between the band edges and up to 10 kHz above and below the band edges shall be attenuated at least 26 dB below the level of the unmodulated carrier or to the general limits in Section 15.209, whichever permits the higher emission levels. The field strength of any emissions removed by more than 10 kHz from the band edges shall not exceed the general radiated emission limits in Section 15.209

Method of measurement: The useful radiated emission from the EUT was detected by the spectrum analyser with peak detector. The vertical Scale is set to –10dB per division. The horizontal scale is set to 8KHz per division.

The graph as below, represents the emissions take for this device.



Date: 5.SEP.2008 11:54:55

**The results: The unit does meet the FCC Part 15 C Section 15.235 requirements.**

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