

FCC PART 15.239  
**EMI MEASUREMENT AND TEST REPORT**  
For

**ShenZhen Solam Digital Technology Co.,Ltd.**  
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Bantian Street, Longgang District, Shenzhen China

**FCC ID: X84SL528E**

Mar. 23, 2010

<b>This Report Concerns:</b> Original Report		<b>Equipment Type :</b> FM Transmitter	
<b>Test Engineer:</b>		Jack Liu	
<b>Report No.:</b>		BST10032131623R-3	
<b>Receive EUT Date/Test Date:</b>		Mar.16,2010/ Mar.16-23,2010	
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TABLE OF CONTENTS

1. GENERAL INFORMATION .....3

1.1. Report information .....3

1.2. Measurement Uncertainty .....3

2. PRODUCT DESCRIPTION .....4

2.1. EUT Description .....4

2.2. Block Diagram of EUT Configuration.....4

2.3. Support Equipment List .....4

2.4. Test Conditions .....4

3. FCC ID LABEL.....5

4. TEST RESULTS SUMMARY .....6

Modifications .....6

5. TEST EQUIPMENT USED .....7

6. RADIATED EMISSIONS .....8

6.1. Test Equipment .....8

6.2. Test Procedure .....8

6.3. Radiated Test Setup .....8

6.4. Radiated Emission Limit.....8

6.5. Radiated Emission Test Result .....9

7. OCCUPIED BANDWIDTH.....12

7.1. Test Equipment .....12

7.2. Test Procedure .....12

7.3. Requirements .....12

7.4. Test Result .....12

## **1. GENERAL INFORMATION**

### **1.1. Report information**

1.1.1.This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that BST approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that BST in any way guarantees the later performance of the product/equipment.

1.1.2.The sample/s mentioned in this report is/are supplied by Applicant, BST therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through BST, unless the applicant has authorized BST in writing to do so.

Test Facility -

The test site used to collect the radiated data is located on the address of

Shenzhen Academy of Metrology & Quality Inspection

(FCC Registered Test Site Number: 274801) on

Bldg. Metrology & Quality Inspection, Longzhu Road, Nanshan,

Shenzhen, Guangdong, China

The Test Site is constructed and calibrated to meet the FCC requirements.

### **1.2. Measurement Uncertainty**

Available upon request.

## 2. PRODUCT DESCRIPTION

### 2.1. EUT Description

Description : FM Transmitter

Applicant : ShenZhen Solam Digital Technology Co.,Ltd.  
2<sup>nd</sup> Floor, A Building, Ruida Science and Technology Park,  
Zhongxing Road, Bantian Street, Longgang District, Shenzhen  
China

Model Number : SL-528E, SL-606, SL-826, SL-880, SL-805, SL-600, SL-500,  
SL-706, SL-998, SL-605

#### **Additonal Information**

Frequency : 88.1-107.9MHz

Power Supply : DC 12V

Maximum : N/A

Range

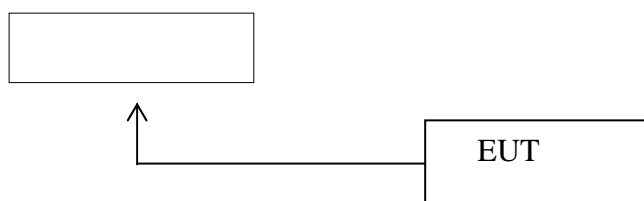
Transmitter : -

Antenna

Current : N/A

Consumption

### 2.2. Block Diagram of EUT Configuration



### 2.3. Support Equipment List

1.	Ipod mp3 player	FCC	DOC
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### 2.4. Test Conditions

Temperature: 23~25

Relative Humidity: 55~63 %

### 3. FCC ID LABEL

**FCC ID:X84SL528E**

**This device complies with Part 15 of the FCC Rules.Operation is subject to the following two conditions:**

- 1. This device may not cause harmful interference, and**
- 2. This device must accept any interference received,including interference that may cause undesired operation.**

#### **Label Location on EUT**

#### **EUT Bottom View/ FCC ID Label Location**



#### 4. TEST RESULTS SUMMARY

##### FCC 15 Subpart C, Paragraph 15.239

Test Standards	Test Items	Test Results
FCC Part 15 Subpart C, Paragraph 15.239	Radiated Emission (30MHz to 1000MHz)	Pass
FCC Part 15 Subpart C, Paragraph 15.239	Occupied Bandwidth	Pass

Remark: “N/A” means “Not applicable.”

##### Modifications

No modification was made.

## 5. TEST EQUIPMENT USED

Equipment/Facilities	Manufacturer	Model #	Serial no.	Date of Cal.	Cal. Interval
Cable	Resenberger	N/A	NO.1	Mar 10 , 2010	1 Year
Cable	SCHWARZBECK	N/A	NO.2	Mar 10 , 2010	1 Year
Cable	SCHWARZBECK	N/A	NO.3	Mar 10 , 2010	1 Year
LISN	Rohde & Schwarz	ESH3-Z5	100305	Mar 10 , 2010	1 Year
50 Coaxial Switch	ANRITSU CORP	MP59B	6200283933	Mar 10, 2010	1 Year
EMI Test Receiver	Rohde & Schwarz	ESP13	100180	Oct.18,2009	1 Year
Spectrum Analyzer	Rohde & Schwarz	FSP40	100273	Sep.10,2009	1 Year
3m Semi-Anechoic Chamber	Albatross Projects	9mx6mx6m	N/A	Feb.20,2010	1 Year
Signal Generator	FLUKE	PM5418 + Y/C	LO747012	Feb.20,2010	1 Year
Signal Generator	FLUKE	PM5418TX	LO738007	Feb.20,2010	1 Year
Loop Antenna	SCHWARZBECK	FMZB1516	113	Jan.30,2010	1 Year
Trilog-Super Broadband Antenna	SCHWARZBECK	VULB9161	9161-4079	Sep.22,2009	1 Year
Broad-Band Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-564	Sep.22,2009	1 Year
Ultra Broadband Antenna	Rohde & Schwarz	HL-562	100110	June.15,2009	1 Year
AMN	Rohde & Schwarz	ESH3-Z5	100196	Oct.11,2009	1 Year
AMN	Rohde & Schwarz	ESH3-Z5	100197	Oct.11,2009	1 Year
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	N/A	N/A	N/A
Power Meter	Rohde & Schwarz	NRVD	100041	Feb.20,2010	1 Year
EMI Test Receiver	Rohde & Schwarz	ESCS30	100003	Feb.20,2010	1 Year
Coaxial Cable with N-connectors	SCHWARZBECK	AK9515H	95549	Sep.22,2009	1 Year
Radio Communication Test Set	Rohde & Schwarz	CMS 54	846621/024	Feb.20,2010	1 Year
Modulation Analyzer	Hewlett-Packard	8901B	2303A00362	Feb.20,2010	1 Year
Absorbing clamp	Rohde & Schwarz	MDS-21	N/A	Oct.29,2009	1 Year

6. RADIATED EMISSIONS

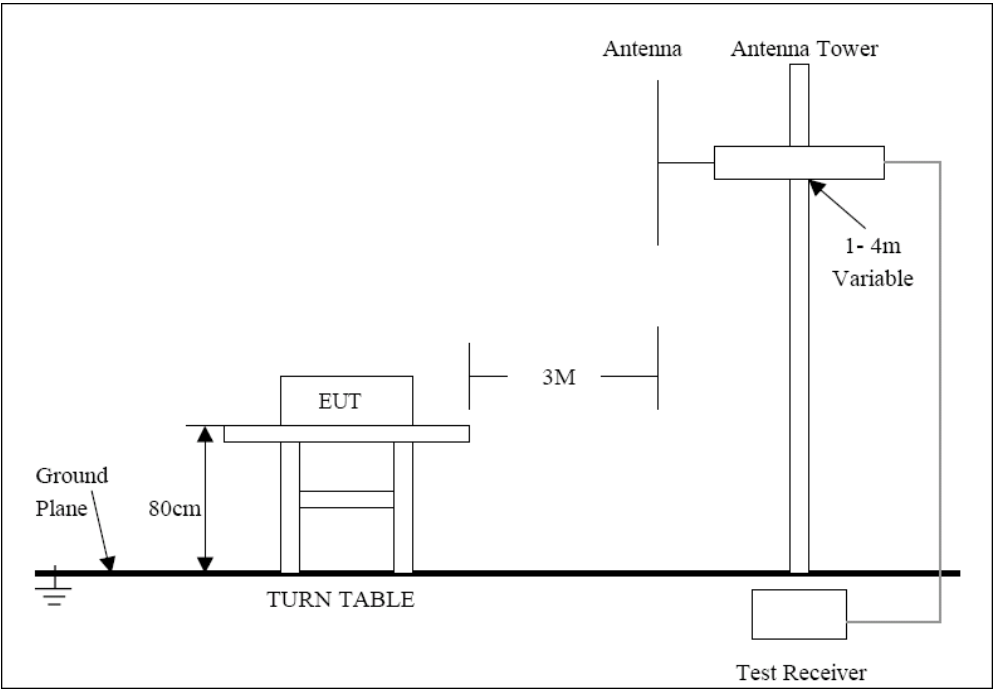
6.1. Test Equipment

Please refer to section 4 this report.

6.2. Test Procedure

The out of band emission tests were performed in the 3-meter chamber test site, using the setup accordance with the ANSI C63.4-2009. The specification used was the FCC Part Subpart C limits.

6.3. Radiated Test Setup



For the accrual test configuration,pleas refer to the related items-photos of Testing.

6.4. Radiated Emission Limit

CARRIER FREQUENCY WILL NOT EXCEEDS 48.0 dBuV/m AT 3M. OUT-OF-BAND EMISSIONS SHALL NOT EXCEED:

Frequency (MHz)	Distance (m)	Field Strength (dBuV/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
ABOVE 960	3	54.0



## 6.5. Radiated Emission Test Result

FREQ. (MHZ)	POL V/H	LEVEL (DB $\mu$ V/M)		LIMIT (DB $\mu$ V/M)		MARGIN (DB)	
		AV	PK	AV	PK	AV	PK
88.1	H	42.12	47.89	48	68	-5.88	-20.11
88.1	V	44.15	49.25	48	68	-3.85	-18.75
98.0	H	41.42	48.25	48	68	-6.58	-19.75
98.0	V	45.28	52.36	48	68	-2.72	-15.64
107.9	H	42.13	49.35	48	68	-5.87	-18.65
107.9	V	43.32	51.37	48	68	-4.68	-16.63

Note: Spectrum Setting:

30MHz—1000MHz, RBW=100KHz, VBW=100KHz, For PK Detector Mode

30MHz—1000MHz, RBW=1000KHz, VBW=10Hz, For AV Detector Mode

FREQ. (MHZ)	POL V/H	LEVEL ( DB $\mu$ V/M)	LIMIT (DB $\mu$ V/M)	MARGIN (DB)
<b>For 88.1MHz</b>				
176.2	H	25.32	43.5	18.18
176.2	V	23.26	43.5	20.24
264.3	H	22.38	46	23.62
264.3	V	19.65	46	26.35
352.4	H	19.76	46	26.24
352.4	V	20.65	46	25.35
440.5	H	--	46	--
440.5	V	--	46	--
528.6	H	--	46	--
528.6	V	--	46	--
616.7	H	--	46	--
616.7	V	--	46	--
704.8	H	--	46	--
704.8	V	--	46	--
792.9	H	--	54	--
792.9	V	--	54	--
881.0	H	--	54	--
881.0	V	--	54	--

FREQ. (MHZ)	POL V/H	LEVEL ( DB $\mu$ V/M )	LIMIT ( DB $\mu$ V/M )	MARGIN (DB)
<b>For 98.0MHz</b>				
196.0	H	25.35	43.5	18.15
196.0	V	28.76	43.5	14.74
294.0	H	19.67	46	26.33
294.0	V	21.25	46	24.75
392.0	H	18.67	46	27.33
392.0	V	19.77	46	26.23
490.0	H	--	46	--
490.0	V	--	46	--
588.0	H	--	46	--
588.0	V	--	46	--
686.0	H	--	46	--
686.0	V	--	46	--
784.0	H	--	46	--
784.0	V	--	46	--
882.0	H	--	54	--
882.0	V	--	54	--
980.0	H	--	54	--
980.0	V	--	54	--

FREQ. (MHZ)	POL V/H	LEVEL ( DB $\mu$ V/M )	LIMIT ( DB $\mu$ V/M )	MARGIN (DB)
<b>For 107.9MHz</b>				
215.8	H	22.56	43.5	20.94
215.8	V	23.71	43.5	19.79
323.7	H	23.79	46	22.21
323.7	V	25.13	46	20.87
431.6	H	21.26	46	24.74
431.6	V	23.45	46	22.55
539.5	H	--	46	--
539.5	V	--	46	--
647.4	H	--	46	--
647.4	V	--	46	--
755.3	H	--	46	--
755.3	V	--	46	--
863.2	H	--	46	--
863.2	V	--	46	--
971.1	H	--	54	--
971.1	V	--	54	--
1079.0	H	--	54	--
1079.0	V	--	54	--

Note:

1,

The frequency will not be recorded if the the level of the spurious emission is very weak(no harmonic or spurious emissions were higher than 20dB below the limits of 47 CFR Part 15.209).

## **7. OCCUPIED BANDWIDTH**

### **7.1. Test Equipment**

Please refer to Section 4 this report.

### **7.2. Test Procedure**

1. The EUT was tested according C63.4-2009.The test was performed with Spectrum Analyzer at FCC Registration laboratory .
2. Based on FCC Part15 C Section 15.239.  
Operation within the band 88MHz – 108MHz

### **7.3. Requirements**

Intentional radiators operating under the alternative provisions to the geneql emission limits,as Emissions from the device shall be confined within a band 200 kHz wide centered on the operating frequency. The 200 kHz band shall lie wholly within the frequency range of 88-108 MHz.

### **7.4. Test Result**

Method of measurement:

The bandwidth was properly tested with maximum audio input(such as MP3 Player)

1. Set both RBW and VBW of spectrum analyzer to 10 kHz and 100kHz respectively with a convenient frequency span including 200kHz bandwidth of the emission.
2. Mark the bandwidth of 200kHz points and plot the graph on spectrum analyzer.

