



SHENZHEN MOST ELECTRONICS CO., LTD.

Tel: (86) 755-26825180 Fax: (86) 755-86170310

Http:// www. szmost.com Email: szmost@szmost.com

Test Report

Product Name: Wireless Remote Transmitter

Model No.: SF-101, SF-102, BY-101, LCD-109, LCD-115, SF-011, SF-012, CG-F01,
CG-FG01, CG-FGY01, LCD-105, SF-114, BY-109, BY-115, CG-102, GZ6086T-T

FCC ID: UROSF-10XSERIES

Applicant:

SHENZHEN SAFY TECHNOLOGY CO., LTD.

26E, YADIANGE, DONGFANGHAIYA BUILDING, CHUANGYE RD, NANSHAN DISTRICT, SHENZHEN

Date Received: 11/07/2006

Date Tested: 11/07/2006



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TABLE OF CONTENTS

APPLICANT: SHENZHEN SAFY TECHNOLOGY CO., LTD.

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TEST REPORT CONTAINING:

PAGE 1.....TEST EQUIPMENT LIST
PAGE 5.....RADIATION INTERFERENCE TEST DATA
PAGE 6-7.....OCCUPIED BANDWIDTH AND PLOTS
PAGE 8-9.....DUTY CYCLE PLOTS

EXHIBIT INCLUDED:

PAGE 1.....BLOCK DIAGRAM
PAGE 2.....SCHEMATIC
PAGE 3.....USERS MANUAL
PAGE 4.....LABEL SAMPLE
PAGE 5.....LABEL LOCATION
PAGE 6.....EXTERNAL PHOTOGRAPHS
PAGE 7.....INTERNAL PHOTOGRAPHS
PAGE 8.....OPERATIONAL DESCRIPTION
PAGE 9.....TEST SET UP PHOTOGRAPHS

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TABLE OF CONTENTS



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EMC Equipment List

Test Equipment	Manufacturer	Model	Serial No.	Last Cal.	Cal. Due
EMI Test Receiver	R&S	ESCS 30	640101048	2006-06-08	2007-06-08
LISN	R&S	ESH2-Z5	640201028-02	2006-06-08	2007-06-08
EMI Test Receiver	R&S	ESMI	640201028	2006-06-08	2007-06-08
BiConiLog antenna	ETS•Lindgren	3142B	00026414	2006-06-08	2007-06-08
Double ridge horn Antenna	EMCO	3115	640201028-08	2006-06-08	2007-06-08
Chamber	ETS•Lindgren	RFSD-F-100	2693	2006-06-08	2007-06-08
Radio communication tester	R&S	CMU200	106389	2006-08-08	2007-08-08

Remark:

Test Firm Name: CHINA CEPREI (HEADQUARTERS) LABORATORY

Test Firm Address: NO 110 DONGGUANZHUANG ROAD, TIANHE DISTRICT, GUANGZHOU 510610, P.R.
CHINA

FCC Registered Test Site Number: 258518

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TEST PROCEDURE

GENERAL: This report shall NOT be reproduced except in full without the written approval of SHENZHEN MOST ELECTRONICS CO., LTD. The EUT was transmitting a test signal during the testing.

POWER LINE CONDUCTED INTERFERENCE: The test procedure used was ANSI Standard C63.4-2003 using a 50 UH LISN. Both Lines were observed. The bandwidth of the receiver was 10kHz with an appropriate sweep speed. The ambient temperature of the EUT was 25 with a humidity of 58%.

RADIATION INTERFERENCE: The test procedure used was ANSI Standard C63.4-2003 using a ANRITSU spectrum analyzer with a pre-selector. The analyzer was calibrated in dB above a micro volt at the output of the antenna. The resolution bandwidth was 100 kHz and the video bandwidth was 300 kHz up to 1 GHz and 1 MHz with a video BW of 3 MHz above 1 GHz. The ambient temperature of the EUT was 25 with a humidity of 58%.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB. The gain of the Pre-selector was accounted for in the Spectrum Analyzer Meter Reading.

Example:

Freq (MHz) METER READING + ACF = FS

33 20 dBuV + 10.36 dB = 30.36 dBuV/m @ 3m

ANSI STANDARD C63.4-2003 10.1.7 MEASUREMENT PROCEDURES: The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The EUT was placed in the center of the table (1.5m side). The table used for radiated measurements is capable of continuous rotation.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

The situation was similar for the conducted measurement except that the table did not rotate. The EUT was setup as described in ANSI Standard C63.4-2003 10.1.7 with the EUT 40 cm from the vertical ground wall.



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NAME OF TEST: RADIATION INTERFERENCE

RULES PART NUMBER: 15.231

REQUIREMENTS:

Fundamental Frequency MHz	Field Strength of Fundamental dBuV	Field Strength of Harmonics and Spurious Emissions (dBuV/m @ 3m)
40.66 to 40.70	67.04	47.04
70 to 130	61.94	41.94
130 to 174	61.94 to 71.48	41.94 to 51.48
174 to 260	71.48	51.48
260 to 470	71.48 to 81.94	51.48 to 61.94
470 and above	81.94	61.94

THE LIMIT FOR AVERAGE FIELD STRENGTH dBuV/m FOR THE FUNDAMENTAL FREQUENCY= 75.623 dBuV/m. NO FUNDAMENTAL IS ALLOWED IN THE RESTRICTED BANDS.

THE LIMIT FOR AVERAGE FIELD STRENGTH dBuV/m FOR THE HARMONICS AND SPURIOUS FREQUENCIES = 55.623 dBuV/m. SPURIOUS IN THE RESTRICTED BANDS MUST BE LESS THAN 54dBuV/m OR 15.209

Fundamental Radiation Interference Data:

Frequency (MHz)	Antenna Polarization	Emission Level (dBuV/m)	FCC 15 Subpart C Limit (dBuV/m)
315.00	Vertical	69.80	75.623
315.00	Horizontal	63.15	75.623
630.20	Vertical	43.50	55.623
630.20	Horizontal	41.65	55.623
1260.30	Vertical	40.00	55.623
1260.30	Horizontal	39.15	55.623
1575.50	Vertical	38.70	55.623
1575.50	Horizontal	32.60	55.623
3150.00	Vertical	32.21	55.623
3150.00	Horizontal	34.65	55.623

SAMPLE CALCULATION OF LIMIT @ 303 MHz:

(470 - 260)Mhz = 210 MHz
(12500 - 3750)uV/m = 8750 uV/m
8750uV/m/210MHz = 41.67 uV/m/MHz
(303-260)MHz = 43 MHz
43 MHz * 41.67 uV/m/MHz = 1791.81 uV/m
(1791.81 + 3750)uV/m = 5541.81 uV/m limit @ 303 MHz

TEST RESULTS: The unit DOES meet the FCC requirements.

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NAME OF TEST: Occupied Bandwidth

RULES PART NUMBER: 15.231(C)

REQUIREMENTS: The bandwidth of the emission shall be no wider than .25% of the center frequency for devices operating between 70 and 900 MHz. Bandwidth is determined at the points 20 dB down from the modulated carrier.

$$315.00 \text{ MHz} * 0.0025 = 0.7875 \text{ MHz}$$

$$0.7875 \text{ MHz} / 2 = +/- 393.75$$

METHOD OF MEASUREMENT: METHOD OF MEASUREMENT: A small sample of the transmitter output was fed into the spectrum analyzer and the plot in next page was generated. The vertical scale is set to 10 dB per division: the horizontal scale is set to 1 MHz per division.

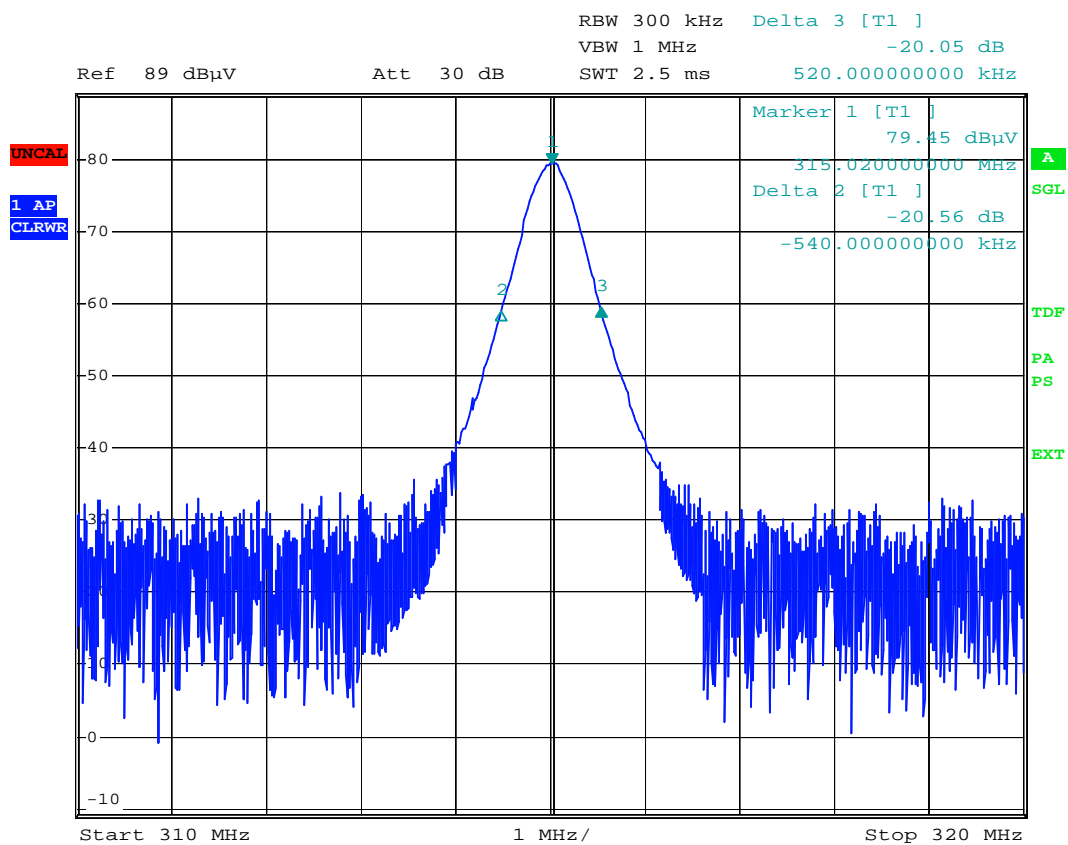
TEST RESULTS: The unit DOES meet the FCC requirements.

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NAME OF TEST: DUTY CYCLE

RULES PART NUMBER: 15.231

The period of the pulse train is determined by observing it on an oscilloscope or a spectrum analyzer with zero (0) frequency span. A plot is then made of the pulse train with a sweep time of 20 ms. This sweep determines the duration of the pulse train, which in this case is second.

The plot is in the following page.



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