

FCC PART 15.109
MEASUREMENT AND TEST REPORT
For

EUT Name: Remote Digital Meat Thermometer
Item No.: 01095
FCC ID: X4E01095R
Serial No.: Not supplied by client



Prepared for : BASE4 Group, Inc.
Address : 2611 Westgrove Drive #109 Carrollton, Texas 75019 USA
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TEST REPORT DECLARATION

Applicant : BASE4 Group, Inc.
Manufacturer : SUNYAN ELECTRONIC CO., LTD.
EUT Description : Remote Digital Meat Thermometer
Model No. : 01095

The device described above is tested by SEM. Test Compliance Service Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B limits for both radiation and conduction emissions.

The measurement results are contained in this test report and Shenzhen Toby Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the FCC official limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Shenzhen Toby Technology Co., Ltd.

Reported by: Jacky Wang Date: Mar. 23, 2010
(Jacky Wang)

Reviewer: Benny Xu Date: Mar. 24, 2010
(Benny Xu)

Approved by: Justin Zhang Date: Mar. 24, 2010
(Justin Zhang)

1. GENERAL INFORMATION

1.1. Product Description for Equipment Under Test (EUT)

1.1.1. Client Information

Applicant: BASE4 Group, Inc.
Address of applicant : 2611 Westgrove Drive #109 Carrollton, Texas 75019 USA

Manufacturer: SUNYAN ELECTRONIC CO., LTD.
Address of manufacturer: NO.2, 7TH South Street, QingGong Road 3, FoShan City, Guangdong, P.R. China

1.1.2. General Description of E.U.T

Items	Description
EUT Description:	Remote Digital Meat Thermometer
Trade Name:	Char-Broil
Model No.:	01095
Rated Voltage:	DC 3V Batteries
Frequency Range:	433.92MHz \pm 200Hz
Tape of Antenna:	Internal Antenna
Size:	11.5cm x 6.6cm x 2.8cm
For more information refer to the circuit diagram form and the user's manual.	

The test data is gathered from a production sample, provided by the manufacturer.

1.2. Test Standards

The following report is prepared on behalf of the BASE4 Group, Inc. in accordance with Part 2, Subpart J, and Part 15, Subparts A and B of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 15, Subpart B, and section 15.205, 15.107, and 15.109 rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission/immunity, should be checked to ensure compliance has been maintained.

1.3. Related Submittal(s)/Grant(s)

No Related Submittal(s).

1.4. Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2009, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

The equipment under test (EUT) was configured to measure its highest possible immunity level. Test is carried with playing mode which worst case has been showed. Test setup was adapted accordingly in reference to the Operating Instructions.

1.5. Accessories Equipment List and Details

Manufacturer	Description	Model	Serial Number
/	/	/	/

1.6. EUT Cable List and Details

Cable Description	Length (M)	Shielded/ Unshielded	With Core/ Without Core
/	/	/	/

1.7. Test Location**FCC – Registration No.: 994117**

SEM.Test Compliance Service 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 and the Registration is 994117. SEM. Test Compliance Service Co., Ltd. Lab.

TOBY Tel: +86 0755 2804 5093 Fax: +86 0755 518055

2. SUMMARY OF TEST RESULTS

DESCRIPTION OF TEST	RESULT
§15.109(a) Radiated Emission	Compliant

3. §15.109(A) - RADIATED EMISSION

3.1. Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is + 3.0 dB.

3.2. Test Equipment List and Details

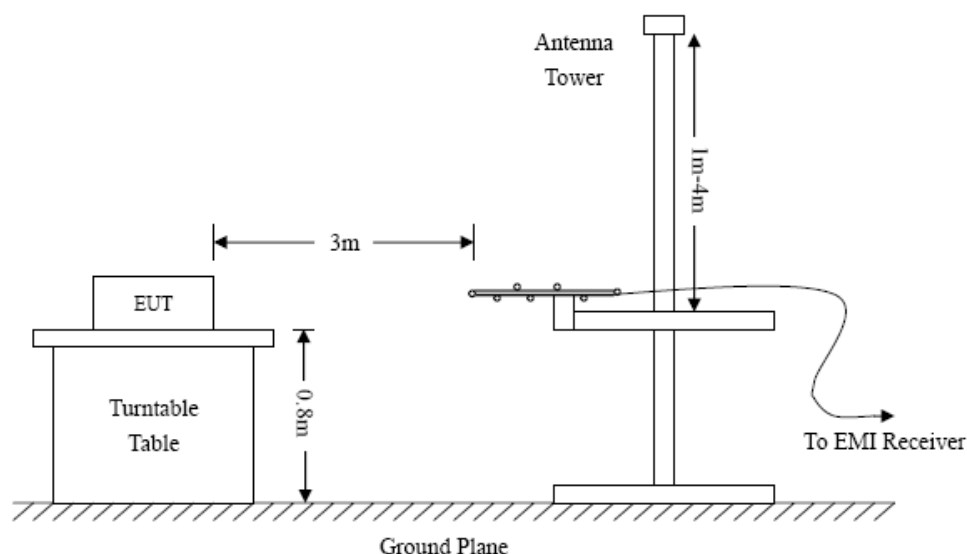
Description	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Date
Spectrum Analyzer	ROHDE & SCHWARZ	FSEA20	DE25181	2009-08-12	2010-08-11
Positioning Controller	C&C	CC-C-1F	N/A	2009-08-12	2010-08-11
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2009-07-21	2010-07-20
Horn Antenna	SCHWARZBECK	BBHX 9120	9120-426	2009-07-21	2010-07-20
RF Switch	EM	EMSW18	SW060023	2009-08-12	2010-08-11
Amplifier	Agilent	8447F	3113A06717	2009-08-12	2010-08-11
Coaxial Cable	SCHWARZBECK	AK9513	9513-10	2009-08-12	2010-08-11
EMI Test Receiver	ROHDE & SCHWARZ	ESPI	25498514	2009-08-12	2010-08-11

3.3. Test Procedure

The setup of EUT is according with per ANSI C63.4-2009 measurement procedure.

The specification used was with the FCC Part 15.205 and FCC Part 15.109 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle. The spacing between the peripherals was 10 cm.



3.4. Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} - \text{Corr. Factor}$$

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB μ V means the emission is 6dB μ V below the maximum limit for Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15B Limit}$$

3.5. Environmental Conditions

Temperature:	21° C
Relative Humidity:	53 %
ATM Pressure:	1012 mbar

3.6. Summary of Test Result

According to the data in section 3.7, the EUT complied with the the FCC Part15 Paragraph 15.109(a) standards.

3.7. Radiation Emissions Test Data

Radiated Disturbance

EUT: Remote Digital Meat Thermometer

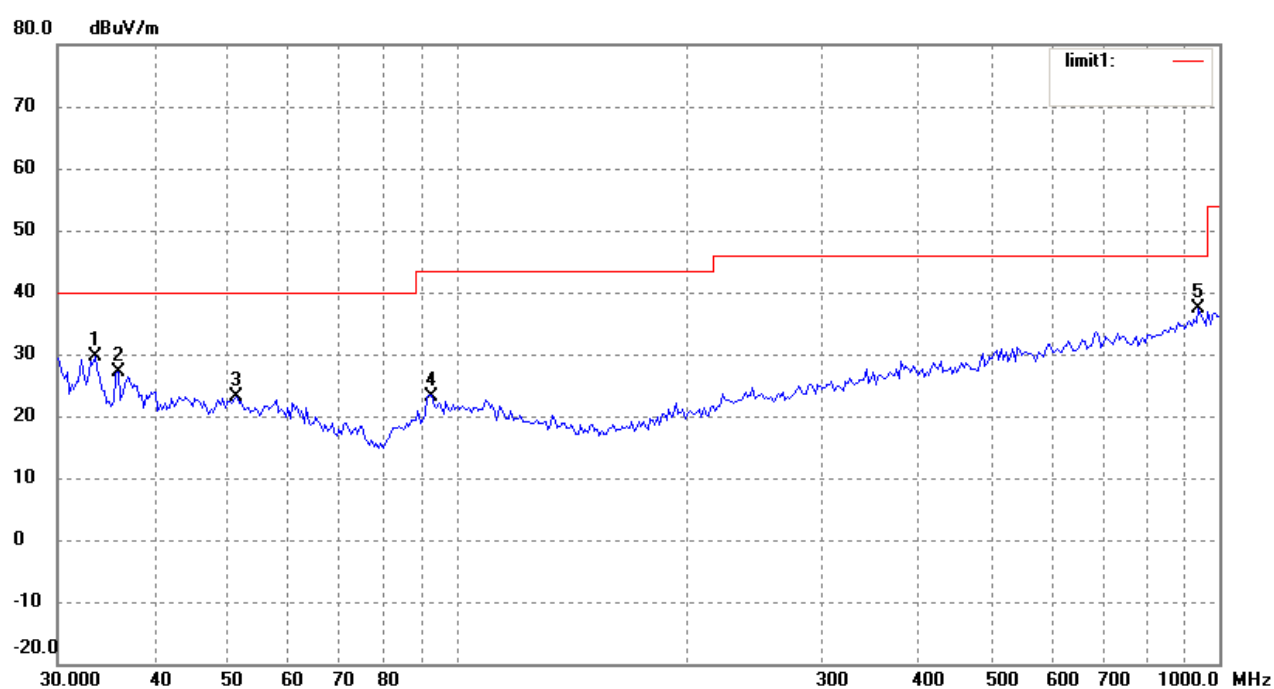
M/N: 01095

Operating Condition: ON

Test Specification: Horizontal & Vertical

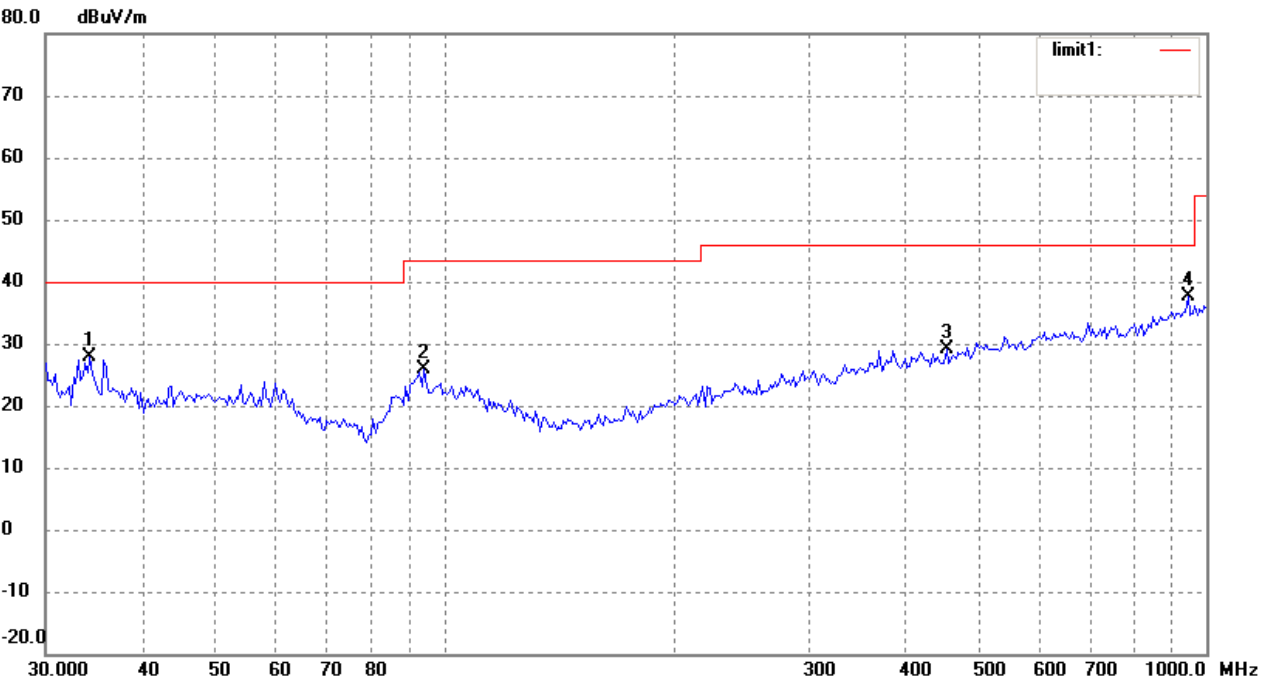
Comment:

Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	33.5623	22.68	6.86	29.54	40.00	-10.46	---	100	peak
2	36.0007	20.22	6.84	27.06	40.00	-12.94	---	100	peak
3	51.4806	15.26	7.91	23.17	40.00	-16.83	---	100	peak
4	92.7871	15.63	7.62	23.25	43.50	-20.25	---	100	peak
5	938.8325	16.38	21.00	37.38	46.00	-8.62	---	100	peak

Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor (dB)	Result (dBuV/m)	Limit (dBuVm)	Margin (dB)	Degree ()	Height (cm)	Remark
1	34.2760	21.15	6.85	28.00	40.00	-12.00	---	100	peak
2	94.0978	17.96	7.88	25.84	43.50	-17.66	---	100	peak
3	455.9057	16.13	12.89	29.02	46.00	-16.98	---	100	peak
4	945.4398	16.57	21.06	37.63	46.00	-8.37	---	100	peak