

FCC TEST REPORT

For

SHANGHAI MERIT TECHNOLOGY CORP.

2.4GHz remote control

Model No. : 2.4G-01T-

FCC ID : XJ6MTG01TVI

Operating
Frequency : 2401-2480 MHz

Applicant : SHANGHAI MERIT TECHNOLOGY CORP.
1058 TAOGAN RD. SHESHAN TOWN, SONGJIANG,
SHANGHAI, CHINA

Regulation : ***FCC Part 15.249 Subpart C***

Prepared by : AOV Testing Technology Co., Ltd
AOV Building, Xueyuan Road East, University City, Shenzhen
(Tanglang Village, Xili Town, Nanshan District), China

Test Date : June 20-30, 2009

Date of Report : July 3, 2009

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TEST REPORT DECLARATION

Applicant : SHANGHAI MERIT TECHNOLOGY CORP.
Manufacturer : SHANGHAI MERIT TECHNOLOGY CORP.
EUT Description : 2.4GHz remote control

Test Procedure Used:
FCC Part 15.249 Subpart C

The E. U. T. listed below has been completed RFI testing by Shenzhen AOV Testing Technology Co., Ltd at the test site of Bontek Compliance Testing Laboratory Ltd. and the Interference emissions can pass **FCC Part 15** limitations.

The test configurations and the facility comply with the radiated criteria in **ANSI C63.4-2003**.

Date of Test:

June 20-30, 2009

Prepared by:



Project Engineer

Reviewer :



Project Manager

1. GENERAL INFORMATION

1.1 General Information

Description : 2.4GHz remote control

Number of Channels : 75 CH

Model No. : 2.4G-01T-

Applicant : SHANGHAI MERIT TECHNOLOGY CORP.
1058 TAOGAN RD. SHESHAN TOWN, SONGJIANG,
SHANGHAI, CHINA

Manufacturer : SHANGHAI MERIT TECHNOLOGY CORP.
1058 TAOGAN RD. SHESHAN TOWN, SONGJIANG,
SHANGHAI, CHINA

1.2 Test Facility

Test Firm : Bontek Compliance Testing Laboratory Ltd.
Certificated by FCC, Registration No.: 338263

Address : FL.1, Building H-3, Hua Qiao Cheng East Industrial Area
Qiaocheng East Road, Nanshan, Shenzhen, P.R.China

Tel : 86-755-86337020

Fax : 86-755-86337028

1.3 Test Instrument Used

No.	Equipment	Manufacturer	Model No.	S/N	Calculator date
1.	EMI Test Receiver	R&S	ESCI	100687	2009-2-22
2.	EMI Test Receiver	R&S	FSU	BCT-019	2009-2-22
3.	Amplifier	HP	8447D	1937A02492	2009-2-22
4.	TRILOG Broadband Test-Antenna	SCHWARZBECK	VULB9163	9163-324	2009-2-22
5.	Horn Antenna	SCHWARZBECK	BBHA9120A	B08000991-0001	2009-2-27
6.	High Field Biconical Antenna	ELECTRO-METRICS	EM-6913	166	2009-2-22
7.	Log Periodic Antenna	ELECTRO-METRICS	EM-6950	811	2009-2-22
8.	Remote Active Vertical Antenna	ELECTRO-METRICS	EM-6892	304	2009-2-22
9.	Teo Line Single Phase Module	SCHWARZBECK	NSLK8128	D-69250	2009-3-31
10.	Positioning Controller	C&C	CC-C-1F	MF7802113	2009-2-22
11.	Triple-Loop Antenna	EVERFINE	LLA-2	607004	2009-2-27
12.	10dB attenuator	SCHWARZBECK	MTAIMP-136	R65.90.0001#06	2009-2-22

2. RADIATION INTERFERENCE

2.1. Rules Part No.

15.249

2.2. Limits

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental Frequency	Field Strength of Fundamental (millivolts/meter)	Field Strength of Harmonics (microvolts/meter)
902 - 928 MHz	50	500
2400 - 2483.5 MHz	50 (94)	500 (54)
5725 - 5875 MHz	50	500
24.0 - 24.25 GHz	250	2500

The field strength of any emissions radiated on any frequency outside of the fundamental band shall not exceed the general radiated emission limits in Section 15.209.

Frequency of (MHz)	Emission Field Strength (microvolts/meter)
30 - 88	100 (40)
88 - 216	150 (43.5)
216 - 960	200 (46.0)
Above 960	500 (54.0)

2.3. Test Procedure

ANSI STANDARD C63.4-2003 10.1.7 MEASUREMENT PROCEDURES:

The EUT is placed on a turned table that is 0.8 meter above the ground. The turned table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna that is mounted on the antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (log periodical antenna and horn antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on test.

The resolution bandwidth was 100 kHz and the video bandwidth was 300 kHz.

The spectrum was scanned from 30 MHz to 10th harmonic of the fundamental.

2.4. Test Result

PASS

Low Channel: 2401MHz

Field Strength of Fundamental:

Horizontal:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
2401.1600	76.53	69.50	94.00	24.50

Vertical:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
2401.1200	80.81	72.80	94.00	21.20

Field Strength of Spurious Emission:

Horizontal:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
47.4600	24.30	---	40.00	15.70
192.9600	29.40	---	40.00	14.10
355.9200	31.40	---	43.50	18.30
363.6800	30.60	---	43.50	19.60
633.3400	33.70	---	46.00	15.30
935.9800	33.60	---	46.00	10.40
4803.5000	36.50	---	54.00	17.50
7204.5600	38.56	---	54.00	15.44
9606.8900	37.35	---	54.00	16.45

Vertical:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
47.4600	25.80	---	40.00	15.70
55.2200	22.80	---	40.00	17.20
121.1800	24.50	---	43.50	19.00
280.2600	26.90	---	46.00	19.10
547.9800	30.60	---	46.00	15.40
945.6800	35.40	---	46.00	10.60
4803.6500	38.30	---	54.00	15.70
7204.7600	36.02	---	54.00	17.98
9606.7900	39.05	---	54.00	14.95

Middle Channel: 2438MHz

Field Strength of Fundamental:

Horizontal:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
2438.3600	81.60	73.50	94.00	20.50

Vertical:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
2438.2600	78.56	70.50	94.00	23.50

Field Strength of Spurious Emission:

Horizontal:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
47.4600	27.10	---	40.00	12.90
95.9600	23.70	---	40.00	16.30
99.8400	24.70	---	43.50	18.80
299.8200	23.70	---	46.00	22.30
544.1000	30.00	---	46.00	16.00
994.1800	36.60	---	54.00	17.40
4876.2200	38.60	---	54.00	15.40
7315.2600	36.50	---	54.00	17.50
9751.6500	38.20	---	54.00	15.80

Vertical:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
47.4600	27.40	---	40.00	12.60
95.9600	24.20	---	43.50	19.30
99.8400	24.30	---	43.50	19.20
555.7400	31.50	---	46.00	14.50
943.7400	35.70	---	46.00	10.30
992.2400	36.80	---	54.00	17.20
4876.8500	39.55	---	54.00	14.45
7315.5600	36.83	---	54.00	17.17
9751.7300	36.50	---	54.00	17.50

High Channel: 2480.0MHz

Field Strength of Fundamental:

Horizontal:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
2480.5300	80.55	72.36	94.00	21.64

Vertical:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
2480.5300	82.67	72.83	94.00	21.17

Field Strength of Spurious Emission:

Horizontal:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
35.8200	26.20	---	40.00	13.80
47.4600	26.80	---	40.00	13.20
95.9600	24.20	---	43.50	19.30
97.9000	24.20	---	43.50	19.30
183.2600	23.00	---	43.50	20.50
916.5800	37.10	---	54.00	16.90
4962.3800	35.60	---	54.00	18.40
7441.2800	37.60	---	54.00	16.40
9920.5200	38.50	---	54.00	15.50

Vertical:

Frequency (MHz)	PK (dBuV/m)	Read Level (dBuV/m)	Limit (dBuV/m)	Margin (dBuV/m)
47.4600	26.40	---	40.00	13.60
95.9600	24.90	---	43.50	18.60
101.7800	24.30	---	43.50	19.20
225.9400	24.70	---	46.00	21.30
555.7400	30.90	---	46.00	15.10
955.3800	33.20	---	46.00	12.80
4961.3600	35.80	---	54.00	18.20
7441.2800	38.30	---	54.00	15.70
9920.5200	37.60	---	54.00	16.40

3. BAND EDGE

3.1. Rules Part No.

15.249

3.2. Limits

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 50dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

3.3. Test Procedure

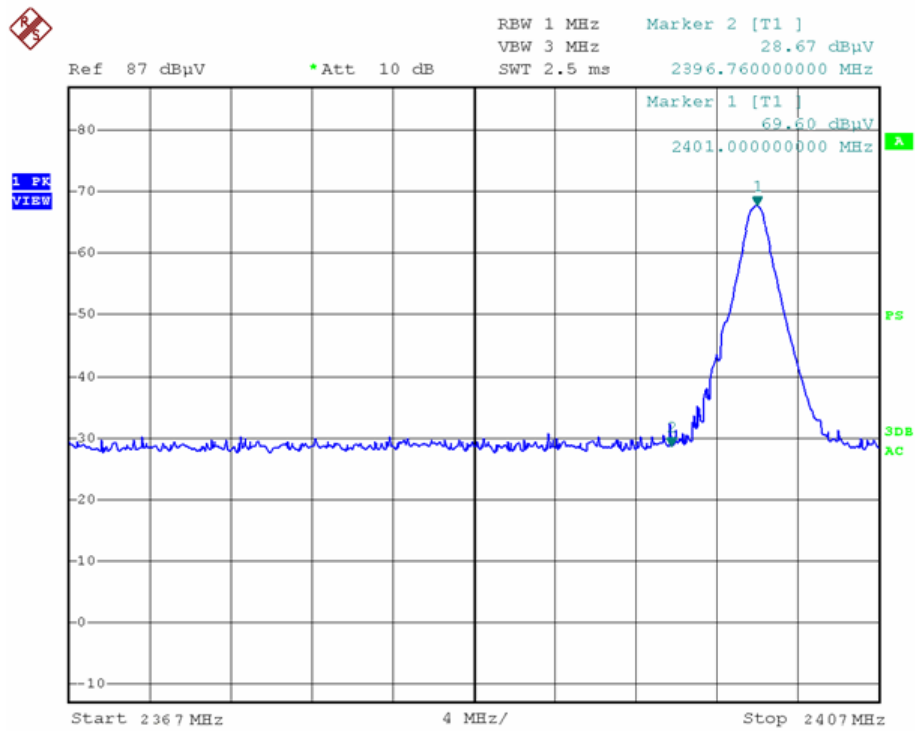
Record the response of frequency waveform when the EUT was working by a spectrum analyzer or EMI Receiver. Low and high channel were tested.

3.4. Test Result

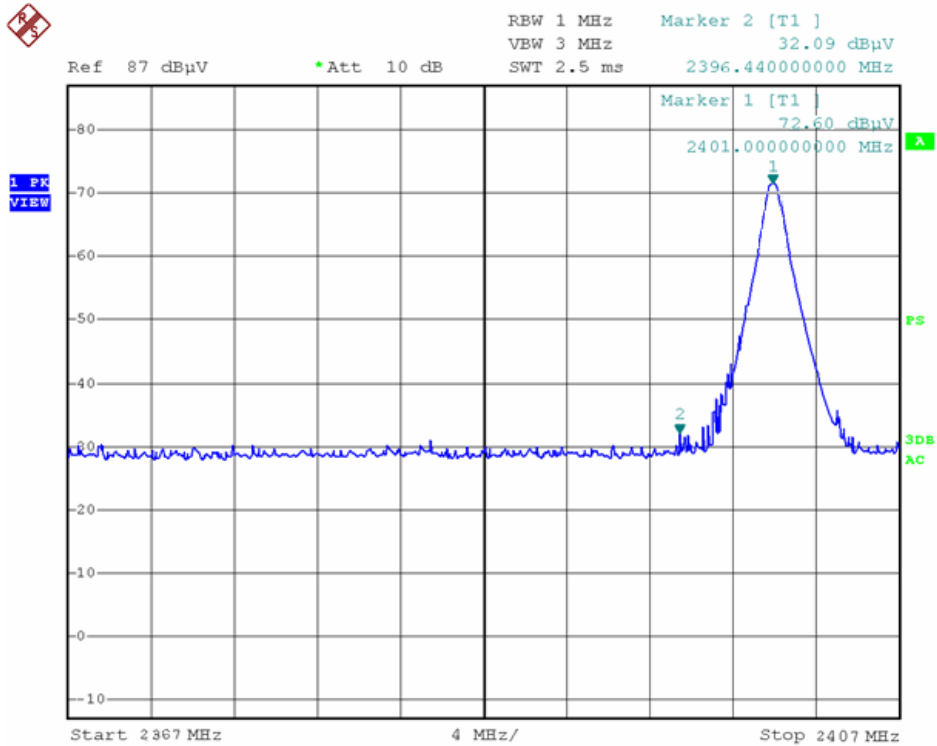
PASS

Low Channel: 2401.0 MHz

Horizontal:

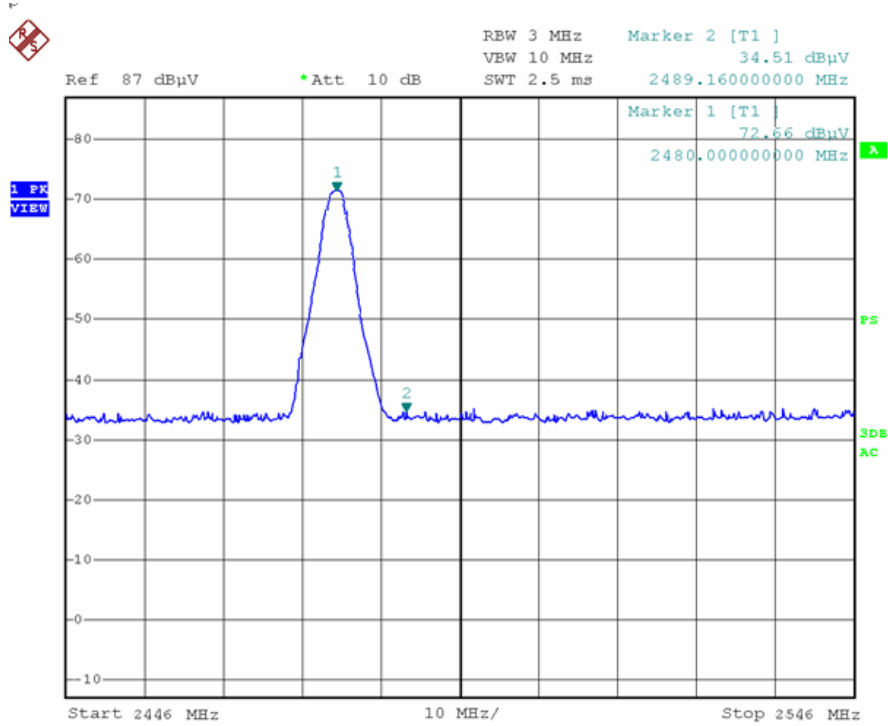


Vertical

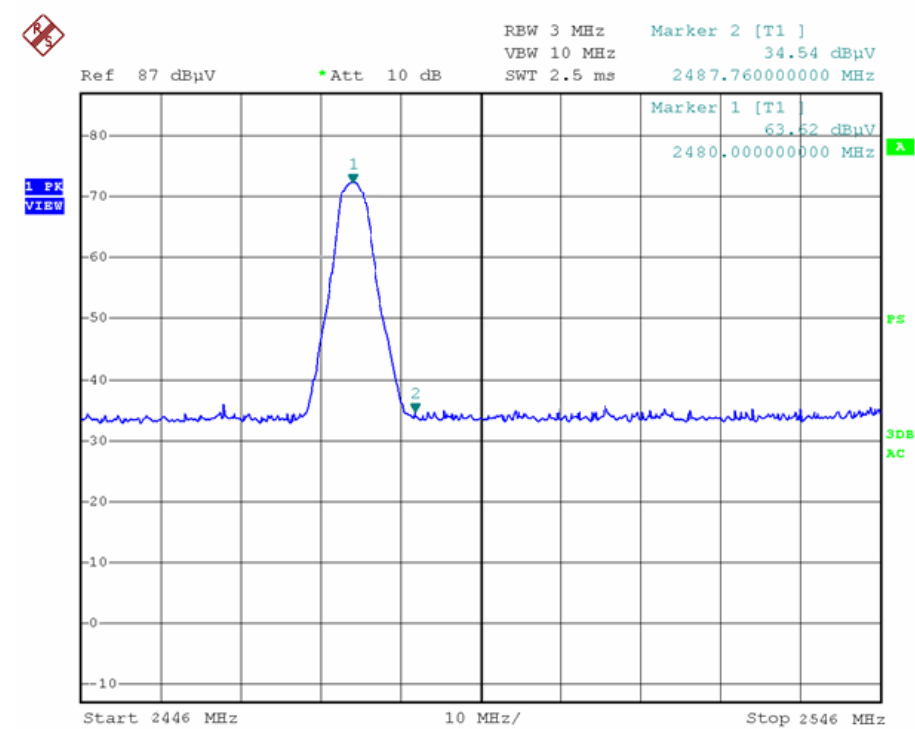


High Channel: 2480.0 MHz

Horizontal:



Vertical



4. ANTENNA REQUIREMENT

According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

Antenna is fixed by enclosure, can not be changed except take apart the product.

5. PHOTOGRAPH OF TEST

Radiated Emission test

(Below 1GHz)



(Above 1GHz)

