GLOBAL TESTING & CERTIFICATION CENTRE LTD.

FCC
TEST REPORT

Application No.: 08042404 (27MHz,Tx)

Rm09, 5/F Wah Wai Ind Ctr, 38-40 Au Pui Wan Street, Fotan Shatin, N.T., Hong Kong
Tel: [852] 23200326 **Fax**: [852] 23206287

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REPORT NO.: 08042404 **DATE:** 25 April, 2008

APPLICANT:	50 Fifty Concepts Ltd.
ADDRESS:	Rm 507, Chinachem Golden Plaza, Tsim Sha Tsui East, Kowloon, Hong Kong
DATE OF RECEIVED:	16 April, 2008
DATE OF TESTING:	16 April, 2008 to 25 April, 2008
DESCRIPTION OF SAMPLE:	
Product:	Stunt Granny
Brand Name:	N/A
Model No.:	FC22060
FCC ID:	V8PSTUNTGRANNY
Input Voltage:	DC4.5V (AAA x 3pcs)
Description of EUT Operation	The Equipment Under Test (EUT) is a 50 Fifty Concepts Ltd., Stunt Granny. The transmitter is a joystick transmitter. The EUT continues to Transmit while joystick is being pressed, the Modulation signal is provided by IC. And type is pulse modulation.
INVESTIGATION REQUESTED:	**FCC PART 15 SUBPART C**
TEST RESULTS:	See attached sheets
CONCLUSIONS:	The submitted product **COMPLIED** with the requirements of Federal Communications Commission [FCC] Rules and Regulations Part 15. The tests were performed in accordance with the standards described above and on page 5 in this Test report.

GTC

CS Lin, EMC
for Chief Executive

General Details

Test Laboratory

GLOBAL TESTING & CERTIFICATION CENTRE LTD
EMC Laboratory
Rm09,5/F Wah Wai Ind Ctr, 38-40 Au Pui Wan Street,
Fotan Shatin, N.T., Hong Kong

Telephone: 852 2320 0326
Fax: 852 2320 6287

Applicant Details
Applicant

50 Fifty Concepts Ltd.
Rm 507,
Chinachem Golden Plaza,
Tsim Sha Tsui East,
Kowloon, Hong Kong

Manufacturer

50 Fifty Concepts Ltd.
Rm 507,
Chinachem Golden Plaza,
Tsim Sha Tsui East,
Kowloon, Hong Kong

Technical Details

Investigations Requested

Perform ElectroMagnetic Interference measurement in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15 and ANSI C63.4:2003 for FCC Certification.

Test Standards and Results Summary Tables

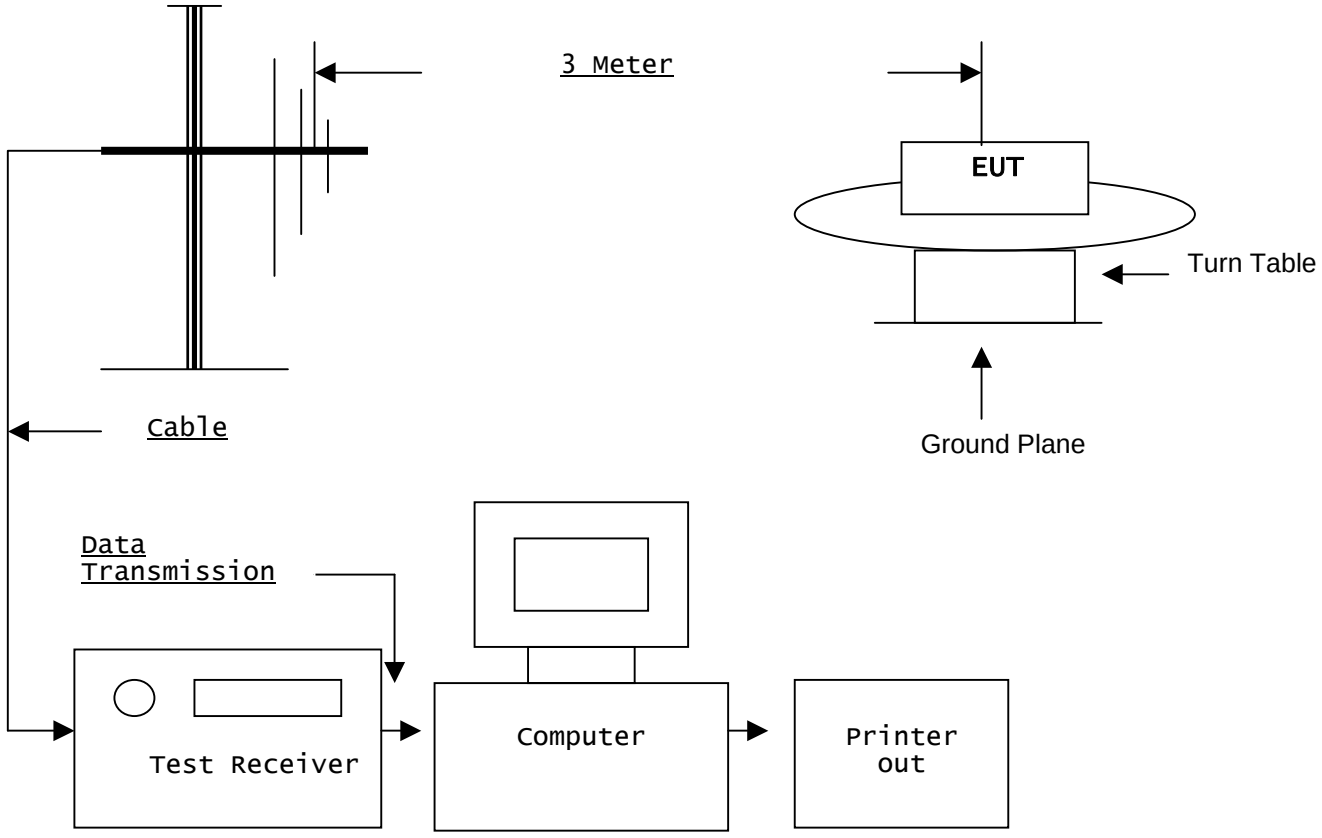
EMISSION Results Summary					
Test Condition	Test Requirement	Test Method	Test Result		
			Pass	Failed	N/A
Field Strength of Fundamental Emissions & Spurious Emissions	FCC 47CFR 15.227	ANSI C63.4:2003	☒	☐	☐
Radiated Emissions, 30MHz to 1GHz	FCC 47CFR 15.209	ANSI C63.4:2003	☒	☐	☐
Conducted Emissions on AC, 0.15MHz to 30MHz	FCC 47CFR 15.207	ANSI C63.4:2003	☐	☐	☒

Note: N/A – Not Applicable

Test Results

Emission

Radiation Emission Measurement (30MHz to 1GHz)
Setup diagram:



Test Method:

The sample was placed 0.8m above the ground plane on the OATS*. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X,Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

*. OATS [Open Area Test Site] located at GTC with a metal ground plane filed with the FCC pursuant to section 2.948 of the FCC rules. With Registration Number:493655

Radiation Emissions Measurement

Appl. : 50 Fifty Concepts Ltd.
Model: FC22060
Operation: TX mode

Test Requirement: FCC 47CFR 15.227
Test Method: ANSI C63.4:2003
Test Date: 2007-04-24

Limits for Field Strength of Fundamental Emissions :

Frequency Range of Fundamental [MHz]	Field Strength of Fundamental Emission [Peak] [µV/m]	Field Strength of Fundamental Emission [Average] [µV/m]
26.96-27.28	100,000	10,000

Results:

Field Strength of Fundamental Emissions Peak Value						
Frequency MHz	Measured Level @3m dBµV	Correction Factor dB/m	Field Strength dBµV/m	Field Strength µV/m	Limite @3m µV/m	E-Field Polarity
27.149	48.0	20.0	68.0	2,511.9	100,000	Vertical

Field Strength of Fundamental Emissions Average					
Frequency MHz	Adjusted by Duty Cycle dB	Field Strength dBµV/m	Field Strength µV/m	Limite @3m µV/m	E-Field Polarity
27.149	-7.2	41.0	112.2	10,000	Vertical

According to FCC 47CFR 15.35, the limit on the radio frequency emissions as measured using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules.

Remarks:
Correction Factor included Antenna Factor and Cable Attenuation.
Calculated measurement uncertainty : 30MHz to 1GHz ±4.1dB

Radiation Emissions Measurement

Appl. : 50 Fifty Concepts Ltd.
Model: FC22060
Operation: TX mode

Test Requirement: FCC 47CFR 15.209
Test Method: ANSI C63.4:2003
Test Date: 2007-04-24

Results:

Frequency Range [MHz]	Quasi-Peak Limits [µV/m]
30-88	100
88-216	150
216-960	200
Above960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Radiated Emissions Quasi-Peak

Frequency MHz	Measured Level @3m dBµV	Correction Factor dB/m	Field Strength dBµV/m	Field Strength µV/m	Limit @3m µV/m	E-Field Polarity
54.3	25.0	10.3	35.3	58.2	100	Horizontal
81.4	24.0	7.1	31.1	35.9	100	Vertical
108.6	20.0	11.6	31.6	38.0	150	Horizontal
135.8	< 16.0	14.3	30.3	32.7	150	Horizontal
308.1	< 16.0	16.7	32.7	43.2	200	Horizontal
488.7	< 16.0	19.9	35.9	62.4	200	Horizontal
705.9	< 8.0	24.7	32.7	43.2	200	Horizontal
923.1	< 8.0	27.0	35.0	56.2	200	Horizontal

Remarks:
Correction Factor included Antenna Factor and Cable Attenuation.
Calculated measurement uncertainty : 30MHz to 1GHz ±4.1dB

Conducted Emission on AC (0.15MHz to 30MHz)

Appl. : 50 Fifty Concepts Ltd.
Model: FC22060
Operation: N/A

Test Requirement: FCC 47CFR 15.207
Test Method: ANSI C63.4:2003
Test Date: N/A

Results: N/A

The EUT is operated by a single source of internal battery power [located in the battery compartment], therefore power line conducted emission was deemed unnecessary.

20dB Bandwidth of Fundamental Emission

Appl. : 50 Fifty Concepts Ltd.
Model: FC22060
Operation: On mode

Test Requirement: FCC 47CFR 15.227
Test Method: ANSI C63.4:2003 (section 13.1.7)
Test Date: 2007-04-24

Test Method:

The bandwidth is measured at an amplitude level reduced from the reference level by a specified ratio. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

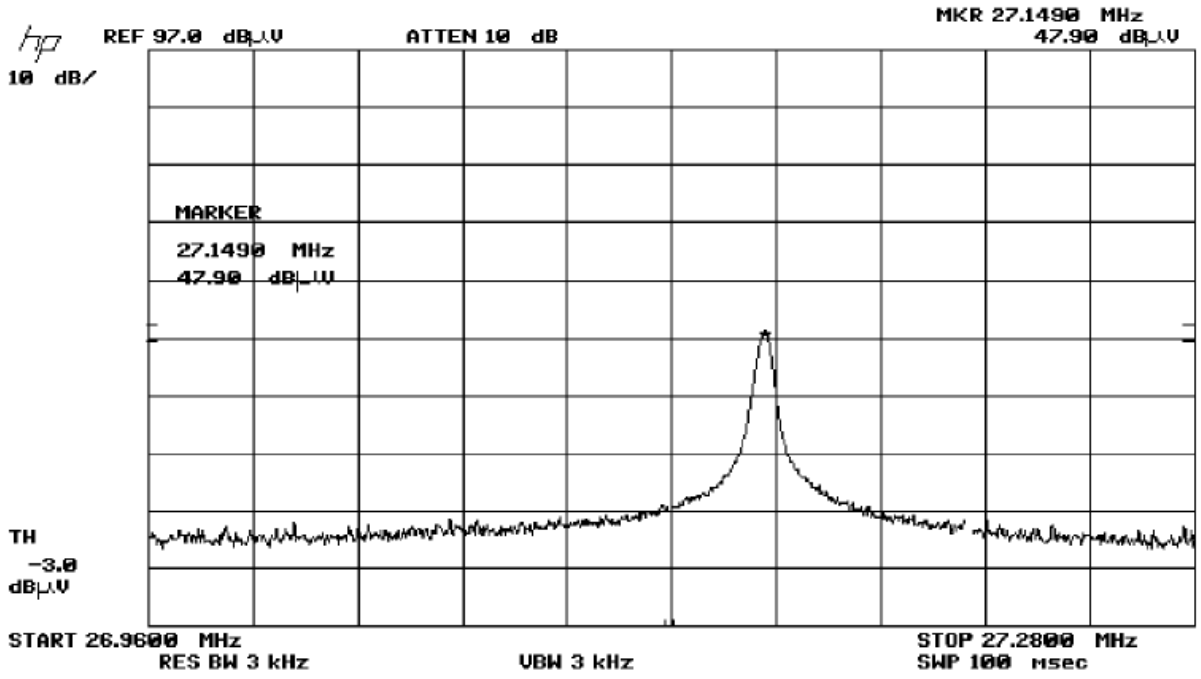
Setup diagram:

As Test Setup of page 6 in this report

Limits for 20dB bandwidth of Fundamental Emission:

Frequency Range [MHz]	20dB Bandwidth [KHz]	FCC Limits [MHz]
27.149	13.5	Within 26.96-27.28

20dB Bandwidth of Fundamental Emission



APPENDIX A

LIST OF MEASUREMENT EQUIPMENT

Equi. No.	Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Due Date
E005	EMI Test Receiver	Rohde & Schwarz	ESVP	893417/019	21 Sep 2007	20 Sep 2008
E003	Spectrum Analyzer With Q/P	Tektronix	2712	B034039	21 Sep 2007	20 Sep 2008
E004	RF Preselector	Tektronix	2706	B010649	21 Sep 2007	20 Sep 2008
E057	EMI Test Receiver	Rohde & Schwarz	ESVP	863112/007	17 Aug 2007	16 Aug 2008
E084	Spectrum Analyzer	Hewlett Packard	HP 8568B	3001A04930	07 Jul 2006	06 Jul 2008
E085	Displayer of Spectrum Analyzer	Hewlett Packard	HP 85662A	2033A01841	07 Sep 2006	06 Sep 2008
E086	Quasi-Peak Adaptor	Hewlett Packard	HP 85650A	2527A00785	07 Sep 2006	06 Sep 2008
E090	RF Signal Generator	Rohde & Schwarz	SMX	832566/005	04 Mar 2008	03 Mar 2009
E001	Antenna System	Schwarzbeck	UHALP9107	D-6917	04 Mar 2008	03 Mar 2009
E002	Antenna System	Schwarzbeck	VHA9103	VHA91031253	04 Mar 2008	03 Mar 2009
E101	Loop Antenna	EMCO	6502	9902-3269	25 Feb 2008	25 Feb 2009
E008	LISN	EMCO	3825/2	1115	20 Sep 2005	19 Sep 2008
E115	Limiter 50 Ohm DC~1800MHz	Hewlett Packard	11867A	--------	04 Mar 2008	03 Mar 2009
E100	Turntable	Chioce Way	TB1200	51112	--------	--------
E006	RF Signal Generator	Fluke	6060A	3880007	04 Mar 2008	03 Mar 2009
E092	Antenna Tripole	IT&T	UH800100	A05011	04 Mar 2008	03 Mar 2009
E098	Pre-Amplifier	Hewlett Packard	8447D	2944A09089	04 Mar 2008	03 Mar 2009
E099	Antenna Mast	Schwarzbeck	AM9014	--------	---------	--------

APPENDIX B

Duty Cycle Correction During 100msec

Each function key sends a different series of characters, but each packet period (61.6msec) never exceeds a series of 4 long (1.5msec) and 52 short (0.4msec) pulses. Assuming any combination of short and long pulses may be obtained due to encoding the worst case transmit duty cycle would be considered 4x1.5msec+52x0.4msec per 61.6msec=43.50% duty cycle. Figure A through C show the characteristics of the pulse train for one of these functions.

Remarks:

Duty Cycle Correction =20Log(0.435) =-7.2dB

The following figures [Figure A to Figure C] show the characteristics of the pulse train for one of these functions.

Figure A [Pulse Train]

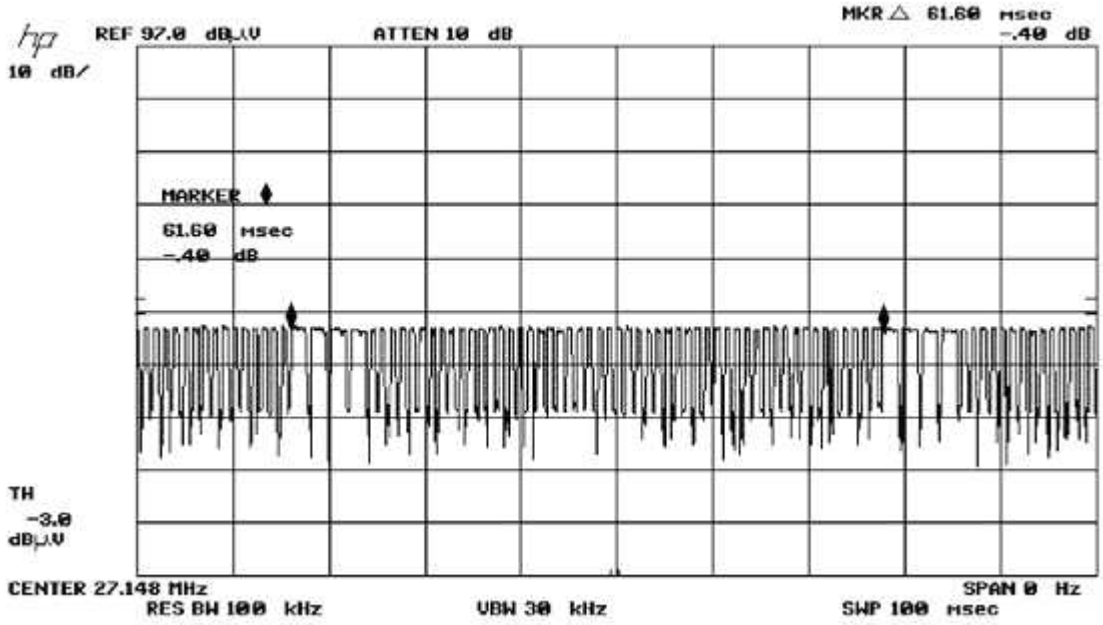


Figure B [Long Pulse]

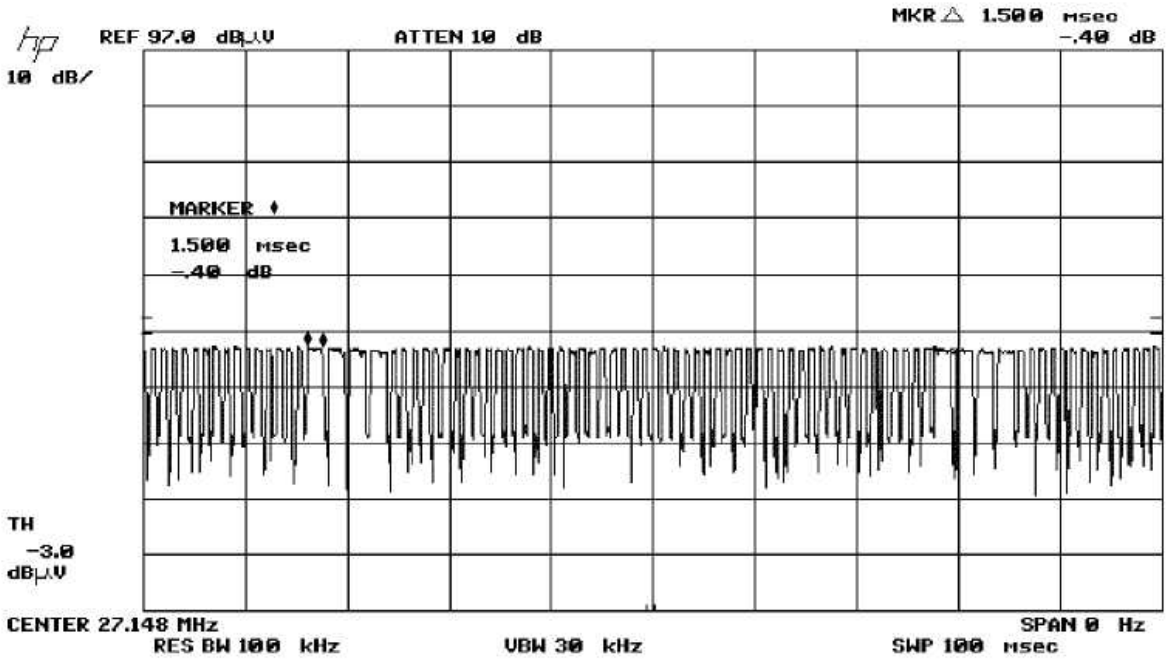
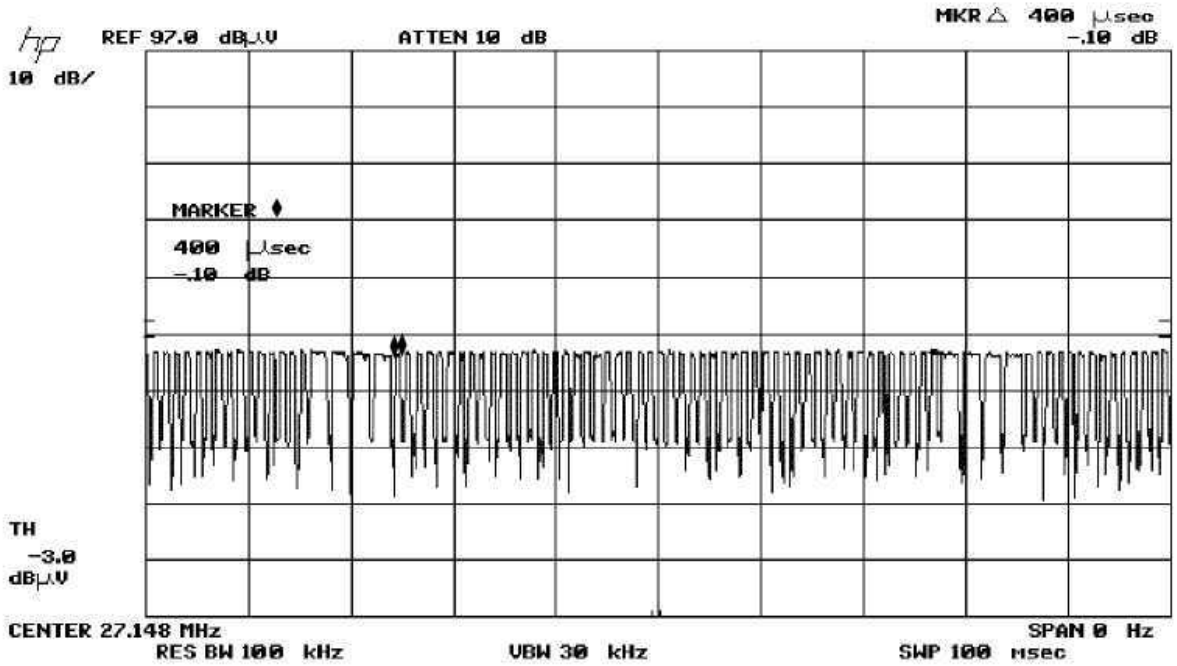


Figure C [Short Pulse]



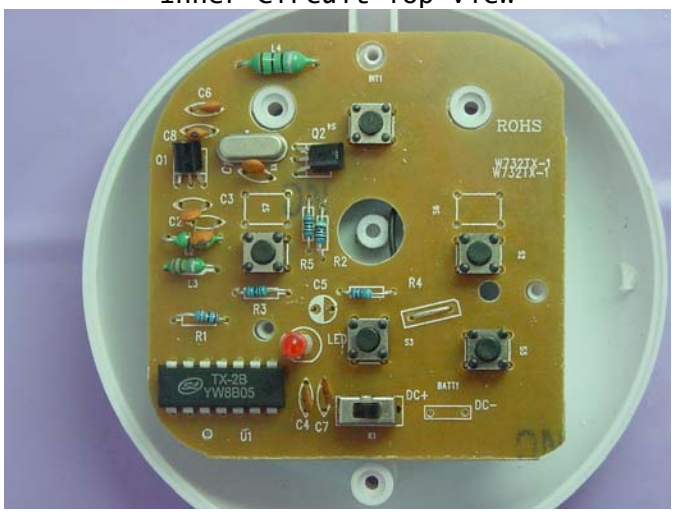
APPENDIX C

Photos of EUT

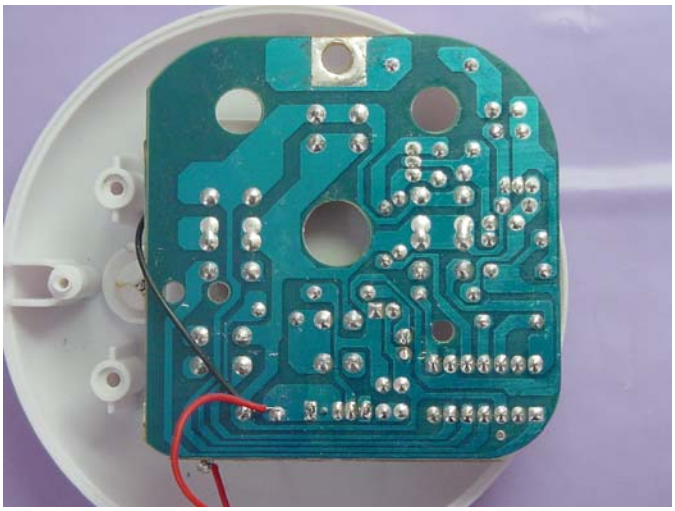
Front View of the product

Rear View of the product

Inner Circuit Top View



Inner Circuit Bottom View



Photos of EUT

Measurement of Radiated Emission Test Set up

Photos of EUT

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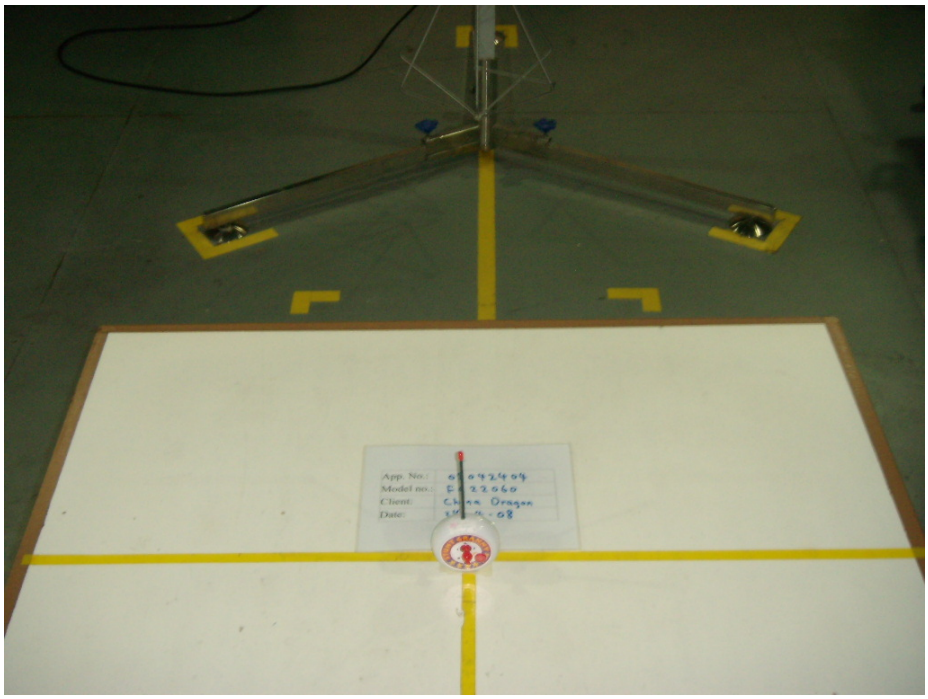

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