Report No.	C3115190
FCC ID	IOWCKM50XXX
Specifications	FCC Part 15, Class B
Test Method	ANSI C63.4 1992
Applicant	Chic Technology Corp.
Applicant address	16F, No. 150, Chien-I Road, 235 Chung Ho City, Taipei Hsien, Taiwan, R.O.C.
Items tested	Wireless Keyboard
Model No.	CKM-50XXX (Sample # C31189)
Frequency Range	26.96MHz to 27.28MHz
Results	**Compliance** (As detailed within this report)
Date	04/03/2002 (month / day / year) (Sample Received) 05/14/2002 (month / day / year) (Test)
Prepared by	Project Engineer
Authorized by	V.General Manager (Jacob Lin)
Issue dat	June 17, 2002 (month / day / year)
Modifications	**None**
Tested by	Training Research Co., Ltd. **(Accredited by NVLAP)**
Office at	2, Lane 194, Huan-Ho Street, Hsichih, Taipei Hsien 221, Taiwan
Open site at	No. 15, Lane 530, Pa-Lian RD., Sec. 1, Hsichih City, Taipei Hsien, Taiwan, R.O.C.

Conditions of issue :

- ***This test report shall not be reproduced except in full, without written approval of TRC. And the test result contained within this report only relate to the sample submitted for testing.***
- ***The test data in this test report are following the procedures in accordance with the terms of accreditation.***
- ***This test report and measurements made by TRC are traceable to the NIST only Conducted and Radiated Method (TRC is accredited by NVLAP, code No.: 200174-0).***
- ***The device has been tested is fully complied with the requirements the Directive FCC Part 15.***

Contents

Chapter 1 Introduction

Description of EUT:

This wireless keyboard use advanced transmission technology to allow comfortable use. However, occasionally outside sources may cause interference. The EUT power by three 1.5VDC batteries.

*This EUT has 2 channels (each with 256 IDs):

1. 27.1400 MHz
2. 27.1950 MHz

Test method:

All measurements contained in this report were performed according to the techniques described in Measurement procedure ANSI C63.4 – 1992.

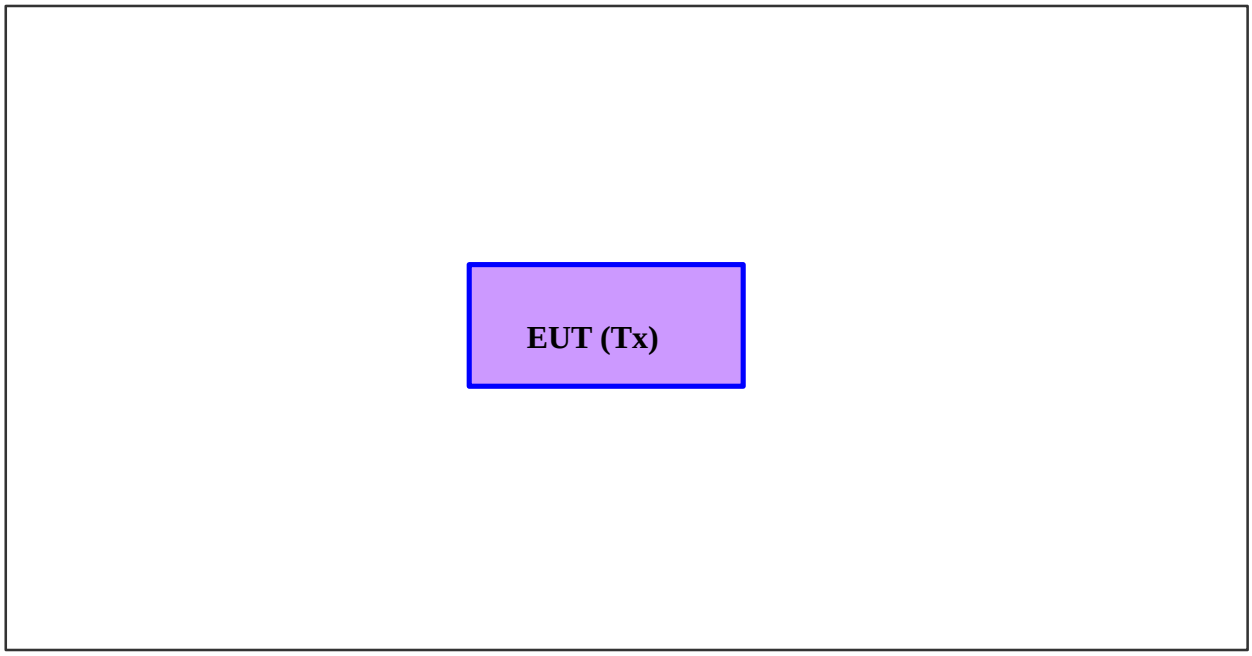
Pretest was found that the emission of operating mode is worse than standby mode. So, The final test is made at the operating mode.

While testing, the EUT was made to transmit continuously and adjusted at a position, which transmitted the maximum emission.

The test placement as the photographs showed is the worst case emission placed. (If the emission is close to the ambient, the resolution BW and view resolution will be reduced and the data will be recorded by detection of maximum hold peak mode.)

The testing configuration of test setup is showing in the next page.

Configuration of Test Setup



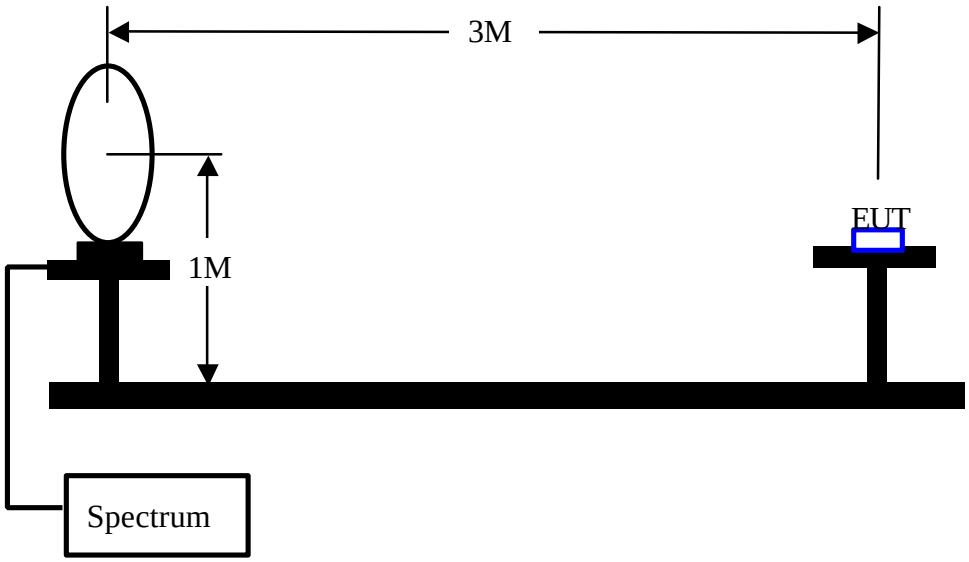
EUT:

Put three AA size, 1.5V battery into the battery cell of EUT, powers the subject device. The EUT does not be connected with any product.

Chapter 2 Peak Power Measurement (Frequency Band: 26.96 ~ 27.28)

Test Setup:

1. Test Setup:



2. Test Procedure:

a. The EUT was setup in the anechoic chamber as shown above.
b. The loop antenna was located upon its plane vertical, 3-meter distance from the EUT. The center of the loop is 1-meter above the ground plane.
c. In order to find the maximum radiation, the EUT was rotated 360°. The measuring antenna was rotated about its axis at each azimuth about the EUT.

List of test Instrument :

				Calibration Date	
Instrument Name	Model No.	Brand	Serial No.	Last time	Next time
Receiver	SCR3102	SCHAFFNER	012	03/29/02	03/28/03
Control Box	TRC-CB-2	TRC	CB-002	N/A	N/A
Antenna	6502	EMCO	9206-2777	06/10/02	06/09/03
Open test side (Antenna, Amplify, cable calibrated together)				05/16/02	05/15/03

The level of confidence of 95% , the uncertainty of measurement of radiated emission is ± 4.96 dB .

Test Result : Appendix A

Chapter 3 Radiated Emission Test

Test Condition and Setup:

Pretest : Prior to the final test ,the EUT is placed in an anechoic chamber, and scan from 30MHz to 1GHz. The devices rotated through three orthogonal axes to determine which attitude and configuration produces the highest emission relative to the limit. This is done to ensure the radiation exactly emits form the EUT.

Final test: Final radiation measurements is made on a **3 – meter** open-field test site. The EUT's maximum emission of radiation is placed on a nonconductive table, which is 0.8m height, the top surface is 1.0 x 1.5 meter. All placement is according to ANSI C63.4 - 1992.

The emissions was examined from 30 MHz to 1000 MHz measured by receiver.

The whole range Antenna is used to measure frequency from 30 MHz to 1 GHz. The final test is used the receiver.

Measure more than six top marked frequencies generated form pretest by computer step by step at each frequency. The EUT is rotated 360 degrees, and antenna is raised and lowered from 1 to 4 meters to find the maximum emission levels. The antenna is used with both horizontal and vertical polarization.

Appropriated preamplifier, which is made by TRC is used for improving sensitivity and precautions is taken to avoid overloading. The spectrum analyzer' s 6dB bandwidth is set to 120 KHz, and the EUT is measured at quasi-peak mode.

If the emission is close to the frequency band of ambient, the tester will recheck the data and the corrected data will be written in the test data sheet. If the emission is just within the ambient, the data from shield room will be taken as the final data.

List of test Instrument :

				Calibration Date	
Instrument Name	Model No.	Brand	Serial No.	Last time	Next time
RECEIVER	SCR3102	SCHAFFNER	012	03/29/02	03/28/03
Control Box	TRC-CB-2	TRC	CB-002	N/A	N/A
Antenna	VULB 9160	SCHAFFNER	4188	11/29/01	11/29/02
Open test side (Antenna, Amplify, cable calibrated together)				05/16/02	05/15/03

The level of confidence of 95% , the uncertainty of measurement of radiated emission is ± 4.96 dB .

Test Result : Pass (Appendix A)

Appendix A

Peak Power Test Result: (Horizontal)

Frequency	Reading Amplitude	Correction Factors	Corrected Amplitude	Limit	Margin
MHz	dBμV	dB	dBμV/m	dBμV/m	dB
27.1684	78.360	-8.30	70.06	80.00	-9.94

Radiated Emission Test Result: (Horizontal)

Test Conditions:

Testing site : Temperature : 30 ° C Humidity : 70 % RH

Frequency	Reading Amplitude	Ant. Height	Table	Correction Factors	Corrected Amplitude	Class B Limit	Margin
MHz	dBμV	m	degree	dB	dBμV/m	dBμV/m	dB
54.0272	38.82	2.50	30	-6.62	32.22	40.00	-7.78
81.0544	41.67	1.00	61	-8.02	33.65	40.00	-6.35
162.1094	35.81	2.50	128	-4.64	31.17	43.52	-12.35
189.1239	40.03	3.99	99	-4.27	35.76	43.52	-7.76
***							

Note:

1. Margin = Amplitude – limit, *if margin is minus means under limit.*
2. Corrected Amplitude = Reading Amplitude – Correction Factors
3. Correction factor = Antenna factor + (Cable Loss – Amplitude gain)

(For example : 30MHz correction factor = 15.5 + (–15.26) = 0.24 dB/m)

Peak Power Test Result: (Vertical)

Frequency	Reading Amplitude	Correction Factors	Corrected Amplitude	Limit	Margin
MHz	dBμV	dB	dBμV/m	dBμV/m	dB
27.1684	73.17	-8.30	64.87	80.00	-15.13

Radiated Emission Test Result: (Vertical)

Test Conditions:

Testing site : Temperature : 30 ° C Humidity : 70 % RH

Frequency	Reading Amplitude	Ant. Height	Table	Correction Factors	Corrected Amplitude	Class B Limit	Margin
MHz	dBμV	m	degree	dB	dBμV/m	dBμV/m	dB
54.0272	40.11	1.00	36	-6.62	33.43	40.00	-6.51
81.0544	35.24	1.00	76	-8.02	27.18	40.00	-12.82
189.1239	38.95	1.00	250	-4.27	34.68	43.52	-8.84
***							

Note:

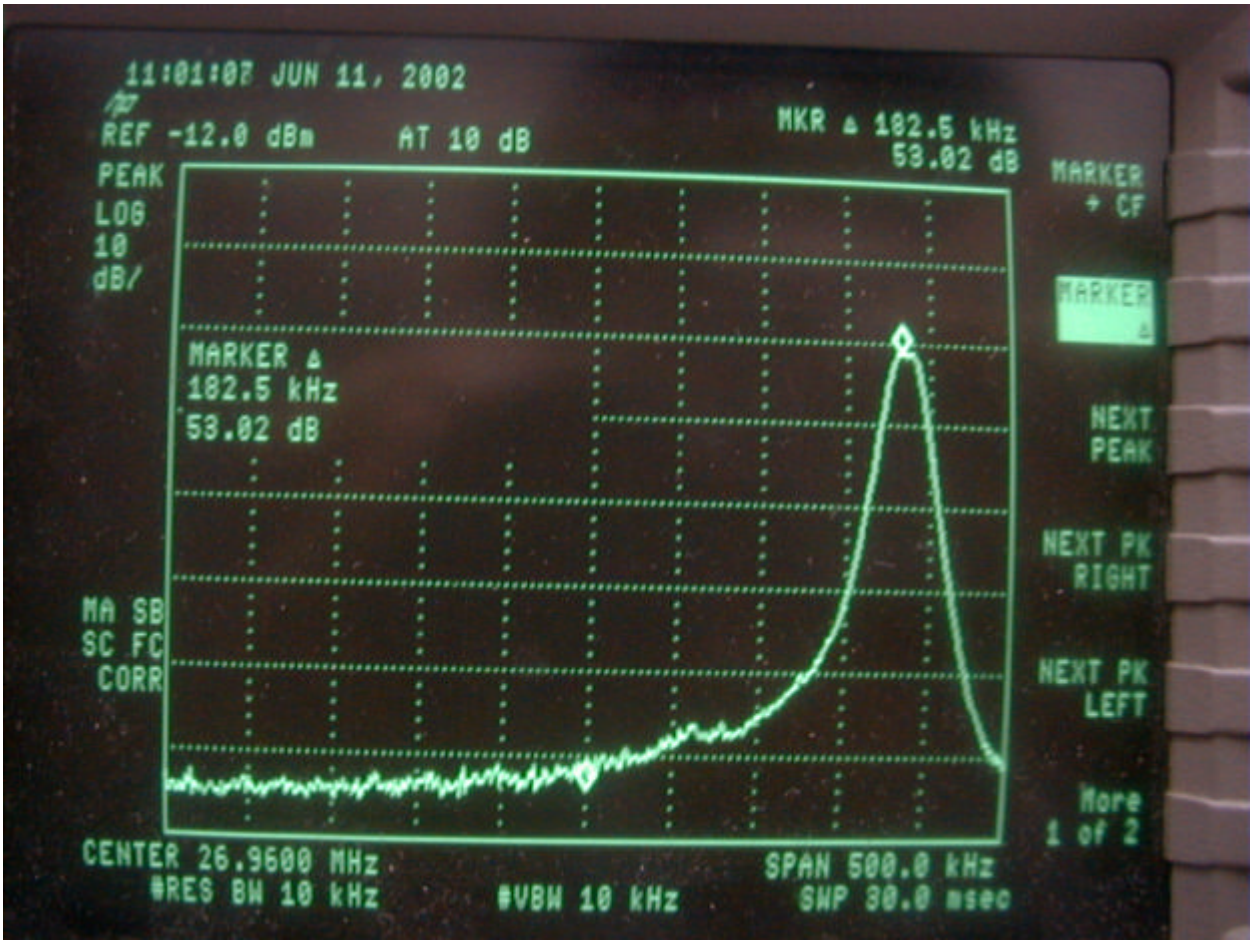
1. Margin = Amplitude – limit, *if margin is minus means under limit.*
2. Corrected Amplitude = Reading Amplitude – Correction Factors
3. Correction factor = Antenna factor + (Cable Loss – Amplitude gain)

(For example : 30MHz correction factor = 15.5 + (–15.26) = 0.24 dB/m)

Appendix B

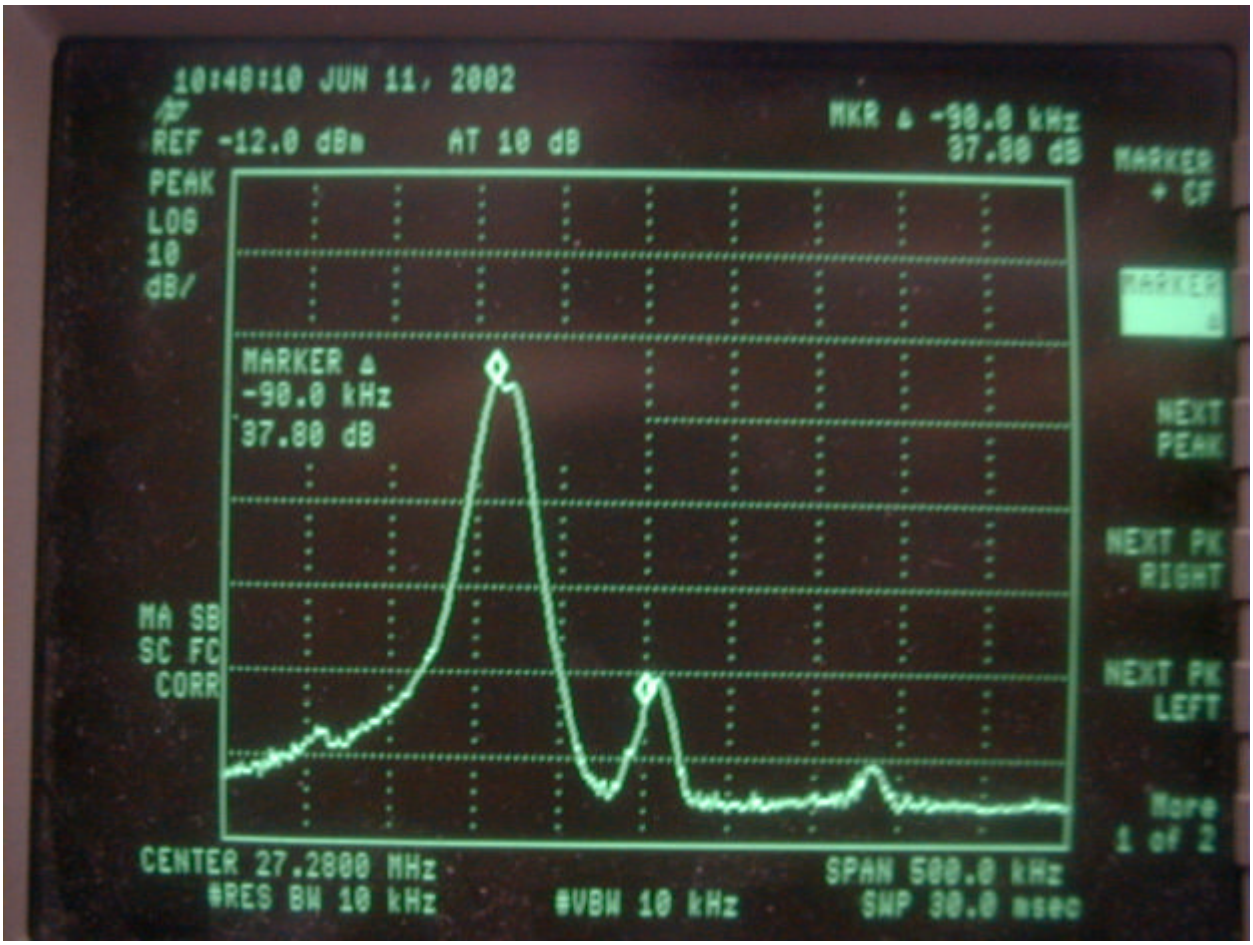
Band Edge of Measurement: (Frequency Band: 26.96 ~ 27.28)

Lower channel



26.96MHz << Class B Limit.

Upper channel:



27.28 MHz < < Class B Limit.