ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
INTENTIONAL RADIATOR CERTIFICATION TO
FCC PART 15 SUBPART B &C REQUIREMENT

OF

Radio Control

MODEL No.: NE-T007, NE-T008, NE-T009, NE-T010, NE-T012, NE-T015, NE-T016, NE-T017, NE-T018, NE-T019, NE-T020

BRAND NAME: Nine Eagles

FCC ID: U45-SR12316899

REPORT NO: KAD101108010E

ISSUE DATE: November 29, 2010

Prepared for

Shanghai Nine Eagles Electronic Technology Co., Ltd.
Room 1104, Huaxiang Building, No.80 Moling Road, Shanghai, 200070, China

Prepared by

DONGGUAN EMTEK CO., LTD.

No.281, Guantai Road, Nancheng District,
Dongguan, Guangdong, China
TEL: 86-769-22807078
FAX: 86-769-22807079

VERIFICATION OF COMPLIANCE

Applicant:	Shanghai Nine Eagles Electronic Technology Co., Ltd. Room 1104, Huaxiang Building, No.80 Moling Road, Shanghai, 200070, China
Product Description:	Radio Control
Brand Name:	Nine Eagles
Model Number:	NE-T007, NE-T008, NE-T009, NE-T010, NE-T012, NE-T015, NE-T016, NE-T017, NE-T018, NE-T019, NE-T020 (Note: These samples are the same except appearance structure and color, so we prepare NE-T007 for EMC test.)
File Number:	KAD101108010E
Date of Test:	November 08, 2010 to November 29, 2010

We hereby certify that:

The above equipment was tested by DONGGUAN EMTEK CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2009) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.249.

The test results of this report relate only to the tested sample identified in this report.

Approved By

Sam Lv / Q.A. Manager
DONGGUAN EMTEK CO., LTD.

Table of Contents

1. General Information

1.1 Product Description

The Shanghai Nine Eagles Electronic Technology Co., Ltd. Model: NE-T007 (referred to as the EUT in this report) The EUT is an short range, lower power, Radio Control designed as an Input Device. It is designed by way of utilizing the DSSS modulation achieves the system operating.

A major technical descriptions of EUT is described as following:

A) Operation Frequency: 2420~2460MHz
B) Modulation: DSSS
C) Rated RF Output Power: 20mW
D) Number of Channel: 3 channels
E) Antenna Designation: Internal Antenna
F) Power Supply: DC 12V Battery

Channel frequency:

Channel	Frequency (MHz)
CH01	2420
CH02	2440
CH03	2460

1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: U45-SR12316899 filing to comply with Section 15.249 of the FCC Part 15, Subpart B and Subpart C Rules, The composite system (receiver) is compliance with Subpart B is authorized under a DoC procedure.

1.3 Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 (2009). Radiated testing was performed at an antenna to EUT distance 3 meters.

1.4 Special Accessories

Not available for this EUT intended for grant.

1.5 Equipment Modifications

Not available for this EUT intended for grant.

1.6 Test Facility

Site Description

EMC Lab.	:	Accredited by FCC, Nov. 05, 2008 The Certificate Number is 247565. Accredited by Industry Canada, March 05, 2010 The Certificate Registration Number. is 46405-4480
Name of Firm	:	DONGGUAN EMTEK CO., LTD
Site Location	:	No.281, Guantai Road, Nancheng District, Dongguan, Guangdong, China

2. System Test Configuration

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The Transmitter was operated in the normal operating mode. the Tx frequency was fixed which was for the purpose of the measurements.

2.3 Test Procedure

2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4-2009.Conducted emissions from the EUT measured in the **frequency range between 0.15 MHz and 30MHz** using **CISPR Quasi-Peak and average detector mode**.

2.3.2 Radiated Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C63.4-2009.

2.4 Limitation

(1) Conducted Emission

Frequency(MHz)	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

Note:

1. The lower limit shall apply at the transition frequencies
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

(2)Radiated Emissions FCC Rule: 15.249(a)

FCC Part 15, Subpart C Section 15.249. The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Frequency(MHz)	Filed Strength of Fundamental(at 3m)		Filed Strength of Harmonics(at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
902-928	114	94	74.0	54.0
2400-2483.5	114	94	74.0	54.0
5725-5875	114	94	74.0	54.0
24000-24250	128	108	88.0	68.0

Radiated Emissions

FCC Rule: 15.249(d)(e)

FCC Part 15, Subpart C Section 15.209 limit of radiated emission for frequency below 1000GHz. The emissions from an intentional radiator shall not exceed the field strength level specified in the following table:

Frequency (MHz)	Field strength μV/m	Distance(m)	Field strength at 3m dBμV/m
30-88	100	3	40
88-216	150	3	43.5
216-960	200	3	46
Above 960	500	3	54

Remark: 1. Emission level in dBuV/m=20 log (uV/m)
2. Measurement was performed at an antenna to the closed point of EUT distance of meters.

FCC Part 15, Section 15.35(b) limit of radiated emission for frequency above 1000MHz

Frequency(MHz)	Class A(dBμV/m)(at 3m)		Class B(dBμV/m)(at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80.0	60.0	74.0	54.0

2.5 Configuration of Tested System

Fig. 2-1 Configuration of Tested System

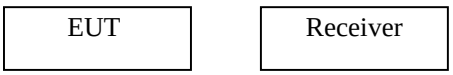


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
1.	Radio Control	Nine Eagles	NE-T007	U45-SR12316899	N/A	***EUT***

Note:

(1) Unless otherwise denoted as EUT in『Remark』column , device(s) used in tested system is a support equipment.

3. Summary Of Test Results

FCC Rules	Description Of Test	Result
§15.207	Conducted Emission	N/A
§15.249 (a),(b),(d),(e), §15.209	Radiated Emission	Compliant
§15.249	Band Edge	Compliant
§15.247(a)(1)	20dB Bandwidth	Compliant
§15.203	Antenna Requirement	Compliant

4. Description of test modes

The basic operation modes are:

1. Low Channel: TX 2420MHz
2. Middle Channel: TX 2440MHz
3. High Channel: TX 2460MHz

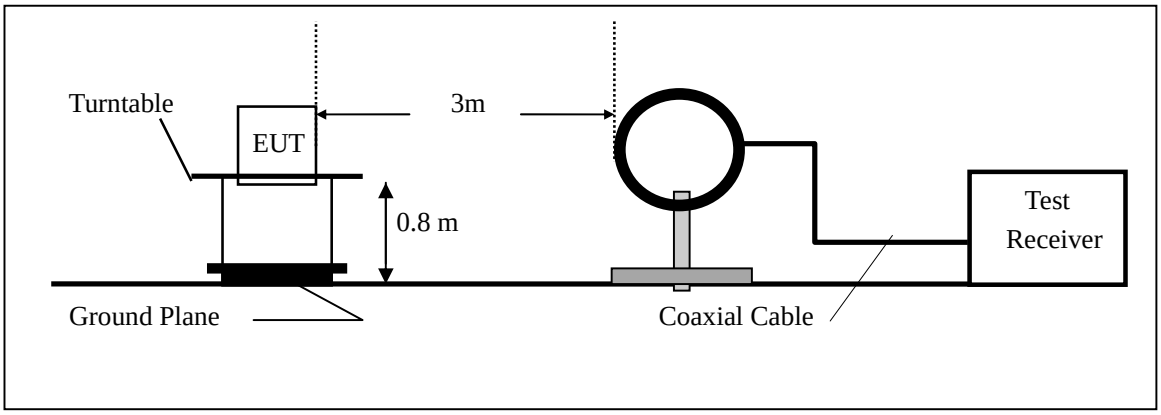
5. Radiated Emission Test

5.1 Measurement Procedure

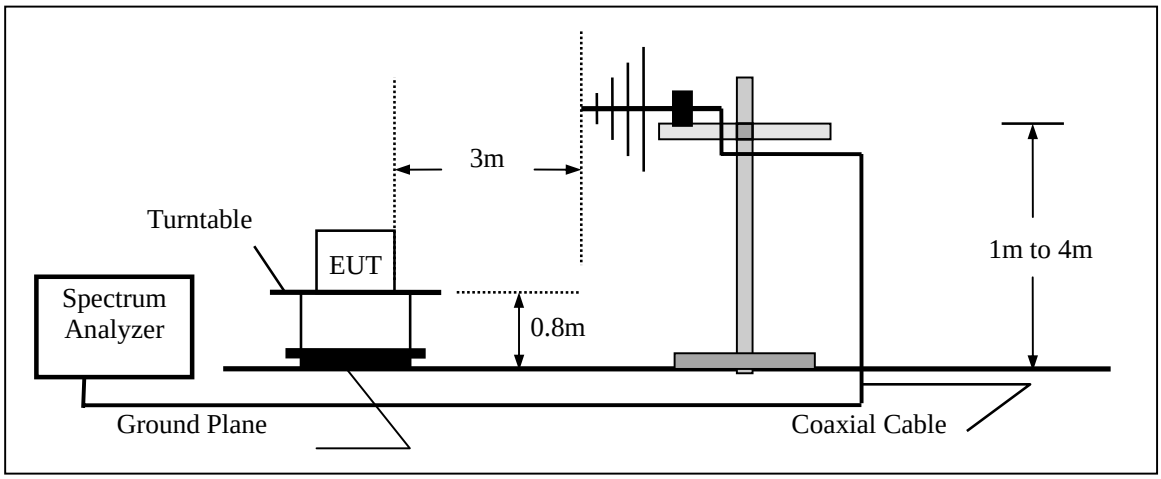
1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measured were complete.

5.2 Test SET-UP (Block Diagram of Configuration)

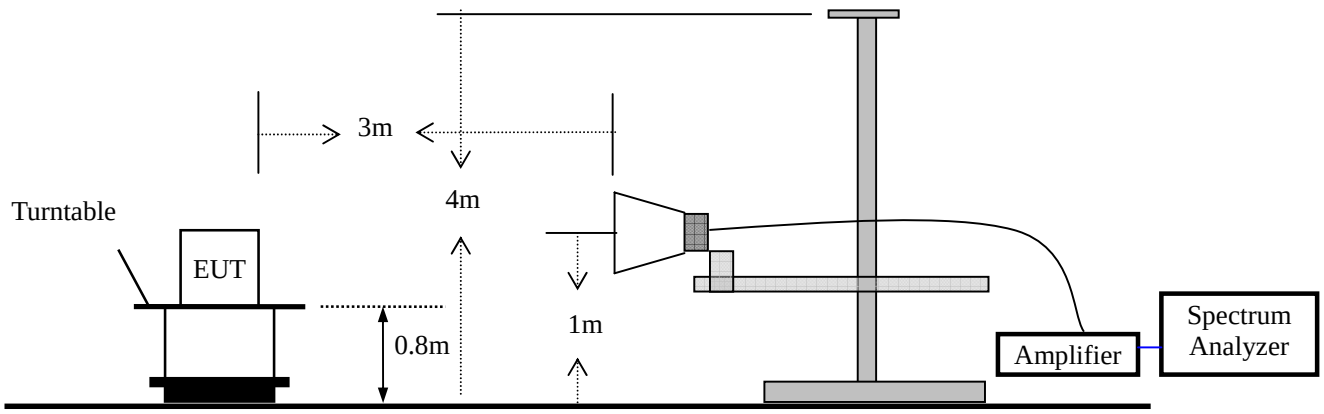
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1000MHz



5.3 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Rohde & Schwarz	FSP7	839511/010	05/29/2010	05/29/2011
Spectrum Analyzer	HP	E4407B	839840481	05/29/2010	05/29/2011
EMI Test Receiver	Rohde & Schwarz	ESCS30	828985/018	05/29/2010	05/29/2011
Pre-Amplifier	HP	8447D	2944A07999	05/29/2010	05/29/2011
Bilog Antenna	Schwarzbeck	VULB9163	142	05/29/2010	05/29/2011
Loop Antenna	ARA	PLA-1030/B	1029	05/29/2010	05/29/2011
Horn Antenna	Electro-Metrics	EM-6961	103314	05/29/2010	05/29/2011
Horn Antenna	Schwarzbeck	BBHA 9120	D143	05/29/2010	05/29/2011

5.4 Out of Band Radiated Measurement Result

Operation Mode:	TX Mode	Test Date :	November 11, 2010
Frequency Range:	30~1000MHz	Temperature :	23 ℃
Test Result:	PASS	Humidity :	59 %
Measured Distance:	3m	Test By:	Andy

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV)	Limit 3m (dBuV/m)	Margin (dB)	Note
30.910	V	33.77	40.00	-6.23	QP
33.250	V	30.78	40.00	-9.22	QP
92.310	V	34.08	40.00	-5.92	QP
316.150	V	36.85	46.00	-9.15	QP
30.930	H	33.51	40.00	-6.49	QP
36.700	H	31.45	40.00	-8.55	QP
90.360	H	34.03	40.00	-5.97	QP
311.420	H	36.00	46.00	-10.00	QP

Note: (1) All Readings are QP Value.
(2) Emission Level= Reading Level+Probe Factor +Cable Loss
(3) The average measurement was not performed when the peak measured data under the limit of average detection.

No others harmonics emissions are higher than 20dB below the limits of 47 CFR Part 15.209.

Operation Mode:	TX (2420MHz)	Test Date :	November 11, 2010
Frequency Range:	1-25GHz	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %
Measured Distance:	3m	Test By:	Andy

Freq.	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Margin(dB)	
(GHz)	H/V	PK	AV	PK	AV	PK	AV
2.420(F)	V	93.61	82.26	114	94	-20.39	-11.74
4.840	V	62.54	41.50	74	54	-11.46	-12.50
7.260	V	60.41	40.47	74	54	-13.59	-13.53
9.680	V	57.54	41.30	74	54	-16.46	-12.70
12.100	V	59.42	41.72	74	54	-14.58	-12.28
2.420(F)	H	95.55	82.33	114	94	-18.45	-11.67
4.840	H	61.67	42.40	74	54	-12.33	-11.60
7.260	H	60.06	41.54	74	54	-13.94	-12.46
9.680	H	58.89	40.33	74	54	-15.11	-13.67
12.100	H	60.11	41.45	74	54	-13.89	-12.55

No others harmonics emissions are higher than 20dB below the limits of 47 CFR Part 15.249.

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+Probe Factor +Cable Loss
(3) The average measurement was not performed when the peak measured data under the limit of average detection.

Operation Mode:	TX(2440MHz)	Test Date :	November 11, 2010
Frequency Range:	1-25GHz	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %
Measured Distance:	3m	Test By:	Andy

Freq.	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Margin(dB)	
(GHz)	H/V	PK	AV	PK	AV	PK	AV
2.440(F)	V	90.48	82.60	114	94	-23.52	-11.40
4.880	V	60.80	45.46	74	54	-13.20	-8.54
7.320	V	59.79	42.55	74	54	-14.21	-11.45
9.760	V	58.25	40.50	74	54	-15.75	-13.50
12.200	V	59.54	40.71	74	54	-14.46	-13.29
2.440(F)	H	92.00	81.50	114	94	-22.00	-12.50
4.880	H	61.38	46.66	74	54	-12.62	-7.34
7.320	H	59.51	42.08	74	54	-14.49	-11.92
9.760	H	59.69	39.24	74	54	-14.31	-14.76
12.200	H	60.24	39.66	74	54	-13.76	-14.34

No others harmonics emissions are higher than 20dB below the limits of 47 CFR Part 15.249.

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+Probe Factor +Cable Loss
(3) The average measurement was not performed when the peak measured data under the limit of average detection.

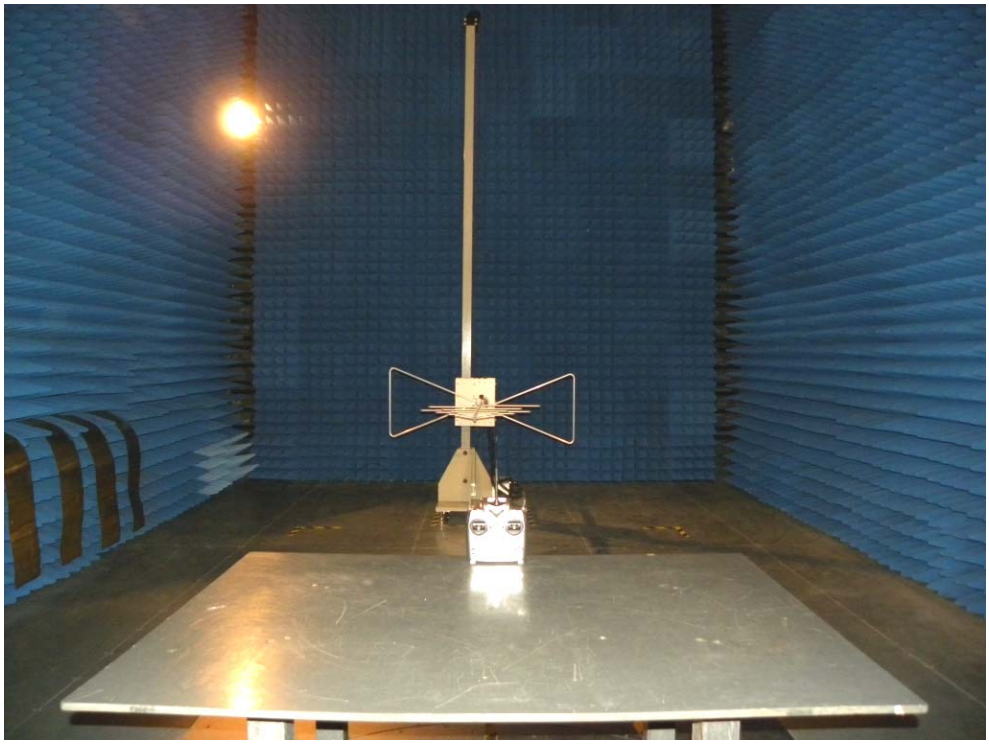
Operation Mode:	TX(2460MHz)	Test Date :	November 11, 2010
Frequency Range:	1-25GHz	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %
Measured Distance:	3m	Test By:	Andy

Freq.	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Margin(dB)	
(GHz)	H/V	PK	AV	PK	AV	PK	AV
2.460(F)	V	94.04	80.33	114	94	-19.96	-13.67
4.920	V	63.66	40.35	74	54	-10.34	-13.65
7.380	V	62.12	41.54	74	54	-11.88	-12.46
9.840	V	59.54	41.56	74	54	-14.46	-12.44
12.300	V	59.13	41.15	74	54	-14.87	-12.85
2.460(F)	H	95.25	80.54	114	94	-18.75	-13.46
4.920	H	62.71	41.16	74	54	-11.29	-12.84
7.380	H	62.46	41.48	74	54	-11.54	-12.52
9.840	H	59.49	41.32	74	54	-14.51	-12.68
12.300	H	58.68	40.00	74	54	-15.32	-14.00

No others harmonics emissions are higher than 20dB below the limits of 47 CFR Part 15.249.

Note: (1) All Readings are Peak Value and AV.
(2) Emission Level= Reading Level+Probe Factor +Cable Loss
(3) The average measurement was not performed when the peak measured data under the limit of average detection.

5.5 Radiated Measurement Photos:



6. Band Edge

6.1 Test limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

6.2 Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set EUT as normal operation.
3. Set SPA Center Frequency=Fundamental frequency, RBW=100KHz, VBW=100KHz.
4. Set SPA Max hold. Mark peak.

6.3 Test SET-UP(Block Diagram of Configuration)

Same as 5.2 Radiated Emission Measurement.

6.4 Measurement Equipment Used:

Same as 5.3 Radiated Emission Measurement.

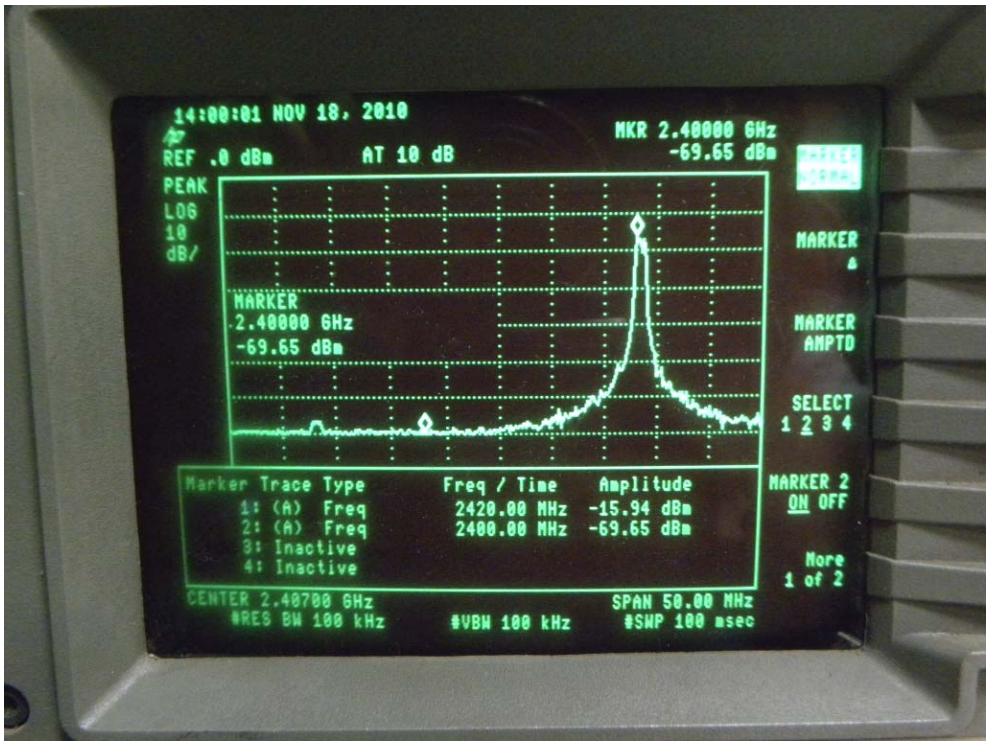
6.5 Measurement Results:

PASS.

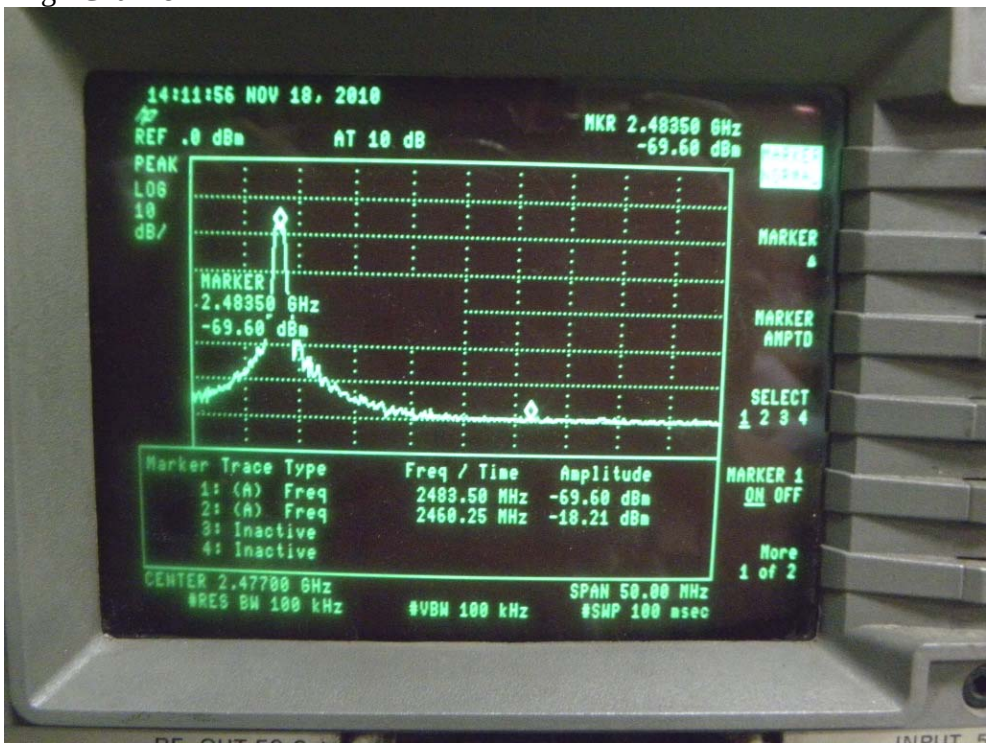
The test plots as following:

Test Data:

Low Channel



High Channel

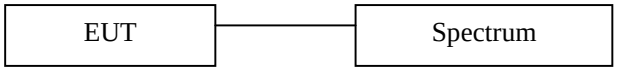


7. 20dB Bandwidth test

7.1 Measurement Procedure

The EUT was operating in hopping mode or could be controlled its channel. Printed out the test result from the spectrum by hard copy function.

7.2 Test SET-UP (Block Diagram of Configuration)



7.3 Measurement Equipment Used:

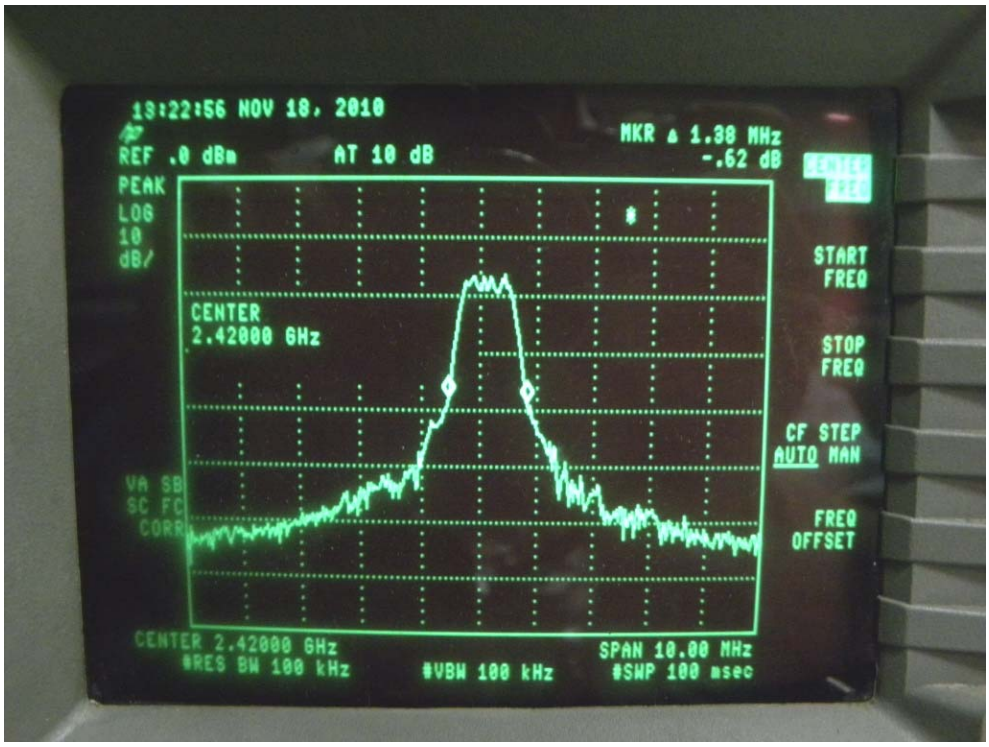
Same as 5.3 Radiated Emission Measurement.

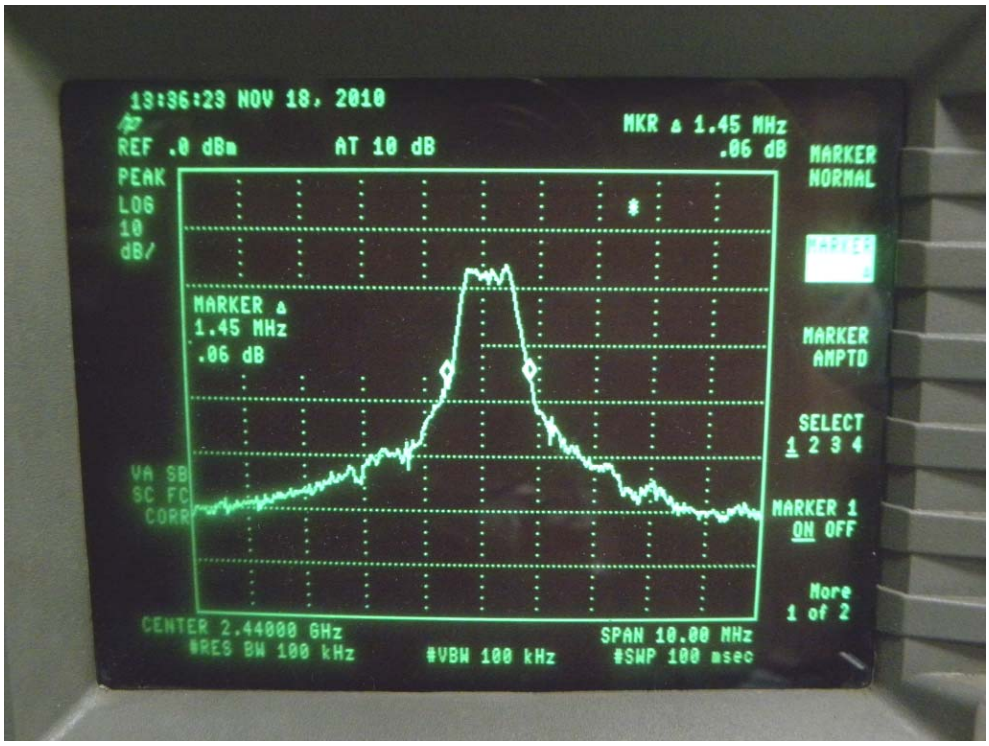
7.4 Measurement Results:

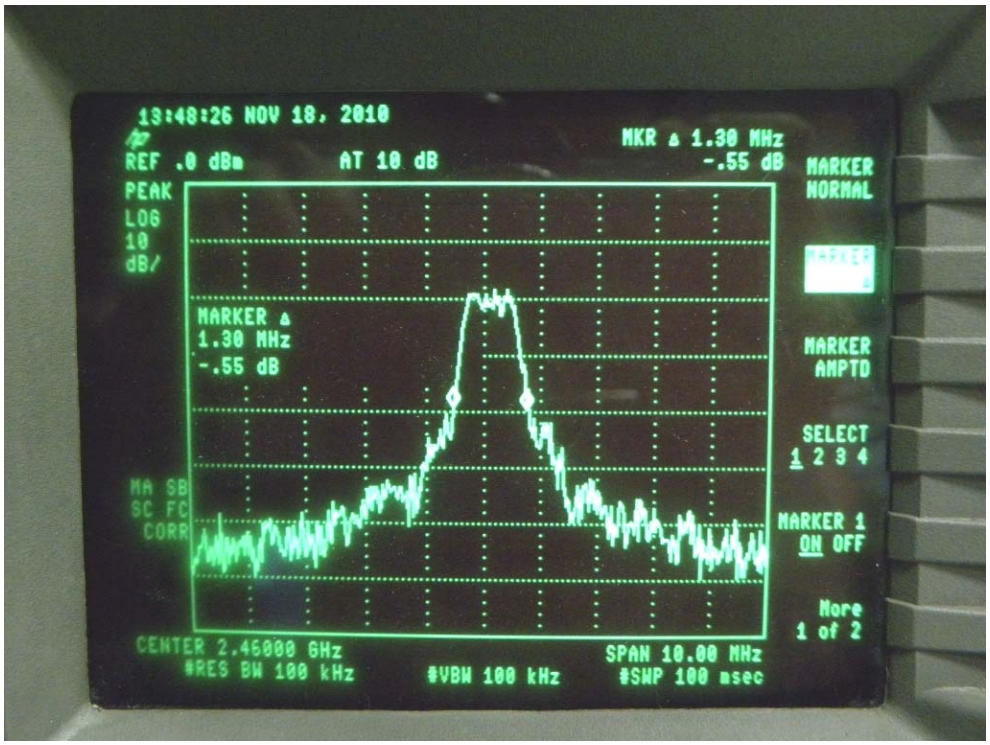
Refer to attached data chart.

Spectrum Detector:	PK	Test Date :	November 18, 2010
Test By:	Andy	Temperature :	28 ℃
Test Result:	PASS	Humidity :	65 %

Channel number	Channel frequency (MHz)	20dB Down BW(kHz) (MHz)
01	2420	1.38
02	2440	1.45
03	2460	1.30


13:22:56 NOV 18, 2010
MKR Δ 1.38 MHz
REF .0 dBm
AT 10 dB
-.62 dB
PEAK
LOG
10
dB/
START FREQ
CENTER
2.42000 GHz
STOP FREQ
CF STEP
AUTO MAN
VA SB
SC FC
CORR
FREQ OFFSET
CENTER 2.42000 GHz
SPAN 10.00 MHz
#RES BW 100 kHz
#VBW 100 kHz
#SWP 100 msec


13:36:23 NOV 18, 2010
MKR Δ 1.45 MHz
REF .0 dBm
AT 10 dB
.06 dB
MARKER NORMAL
PEAK
LOG
10
dB/
MARKER Δ
1.45 MHz
.06 dB
MARKER AMPTD
SELECT
1 2 3 4
VA SB
SC FC
CORR
MARKER 1
ON OFF
More
1 of 2
CENTER 2.44000 GHz
SPAN 10.00 MHz
#RES BW 100 kHz
#VBW 100 kHz
#SWP 100 msec


13:48:26 NOV 18, 2010
REF .0 dBm
AT 10 dB
MKR Δ 1.30 MHz
-.55 dB
PEAK
LOG
10
dB/
MARKER Δ
1.30 MHz
-.55 dB
MARKER
NORMAL
MARKER
AMPTD
SELECT
1 2 3 4
MARKER 1
ON OFF
More
1 of 2
MA SB
SC FC
CORR
CENTER 2.46000 GHz
#RES BW 100 kHz
#VBW 100 kHz
SPAN 10.00 MHz
#SWP 100 msec

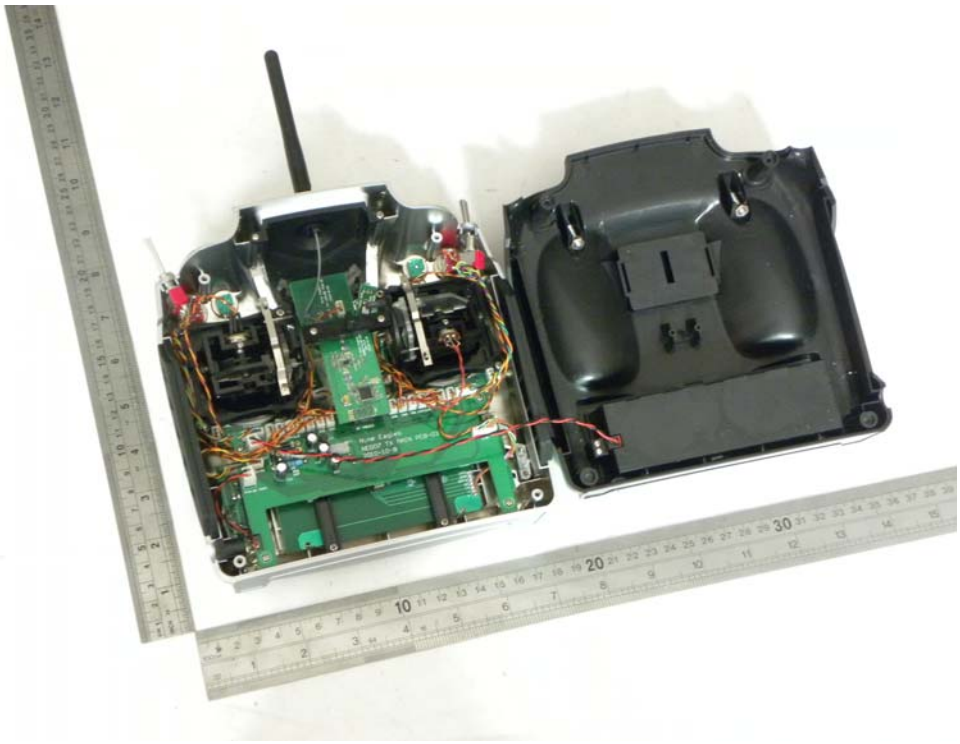
8. Antenna Application

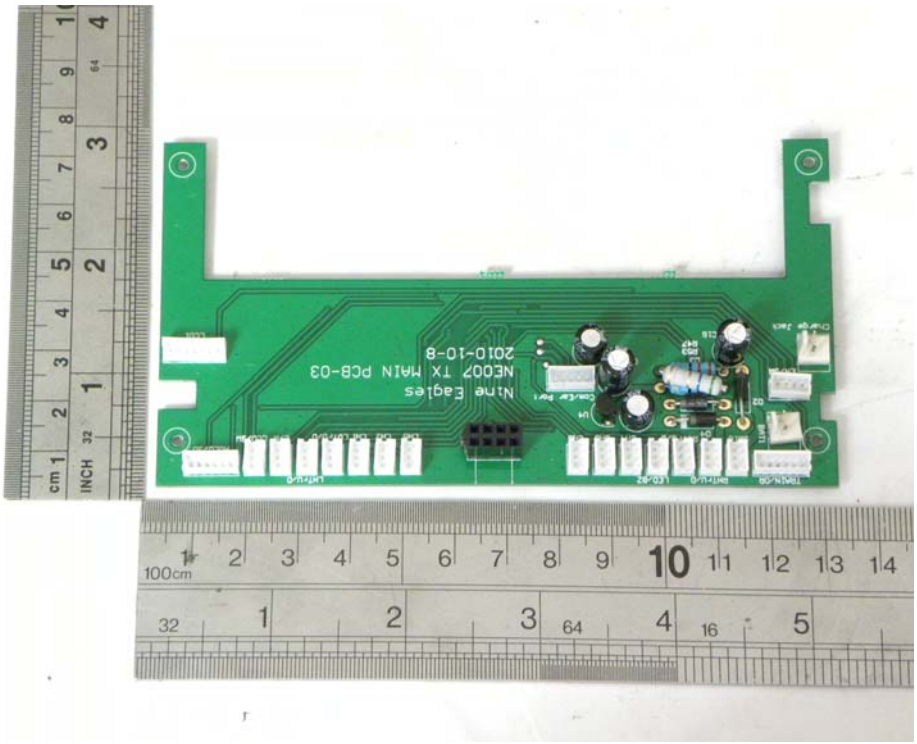
8.1 Antenna requirement

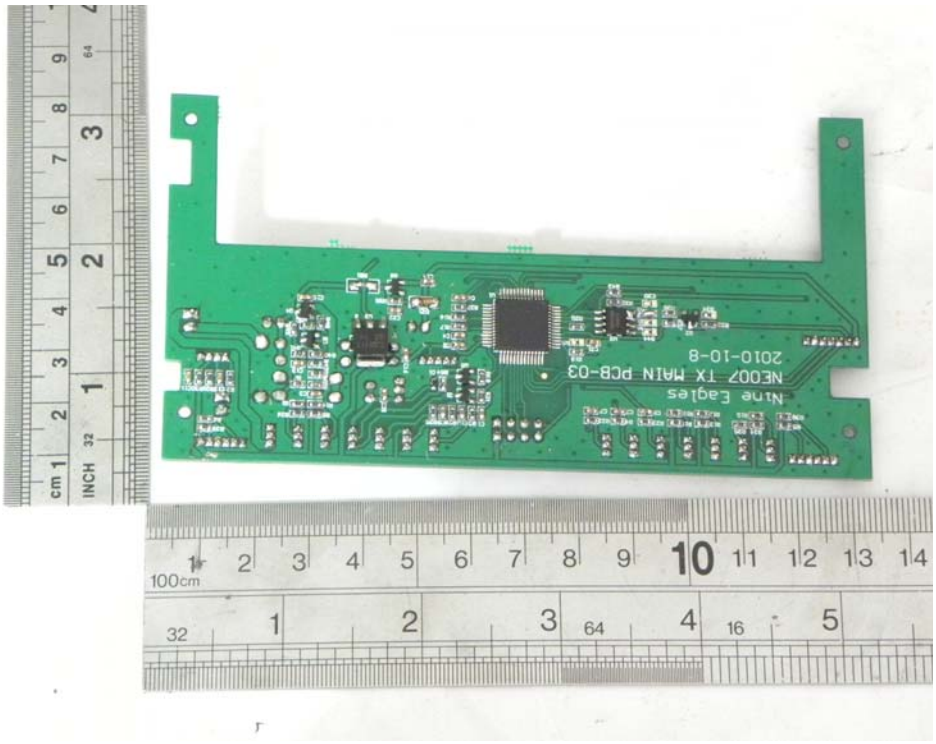
The EUT'S antenna is met the requirement of FCC part 15C section 15.203 and 15.240.

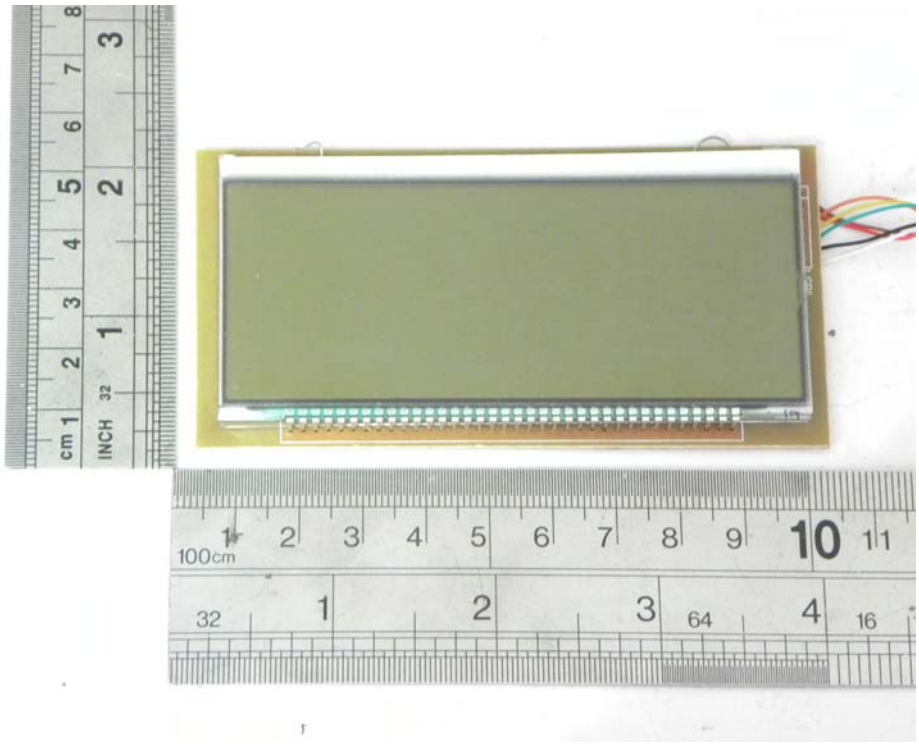
According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by responsible party shall be used with the device.
The EUT's antenna used a chip antenna and integrated on PCB , this is permanently attached antenna and meets the requirements of this section.

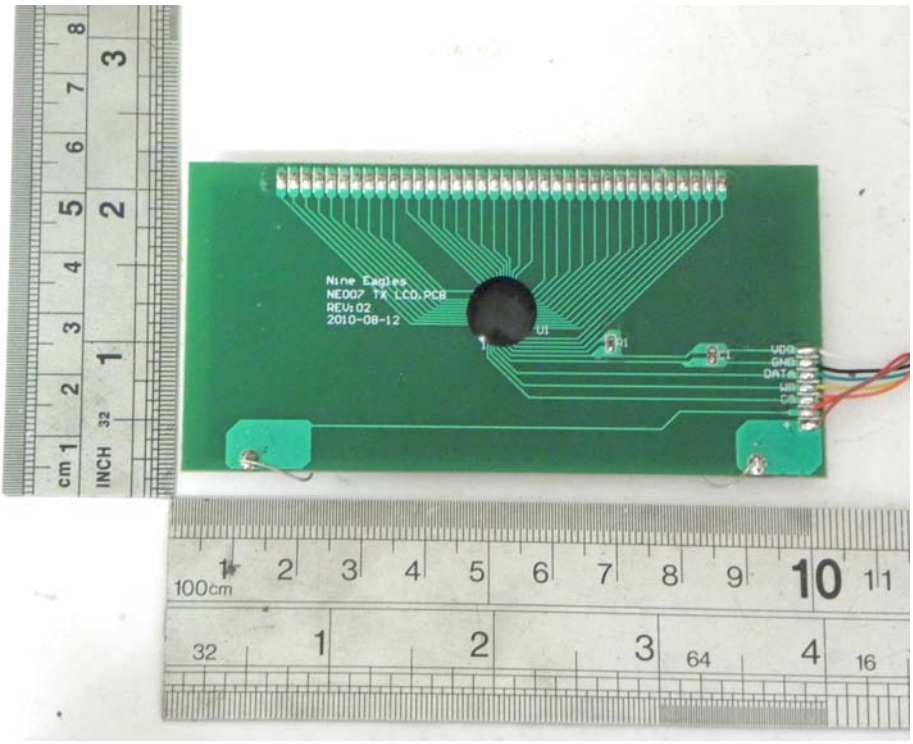
General Appearance of the EUT




Nine Eagles
NE007 TX MAIN PCB-03
2010-10-8


Nine Eagles
NE007 TX MAIN PCB-03
2010-10-8

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NE007 TX LCD.PCB
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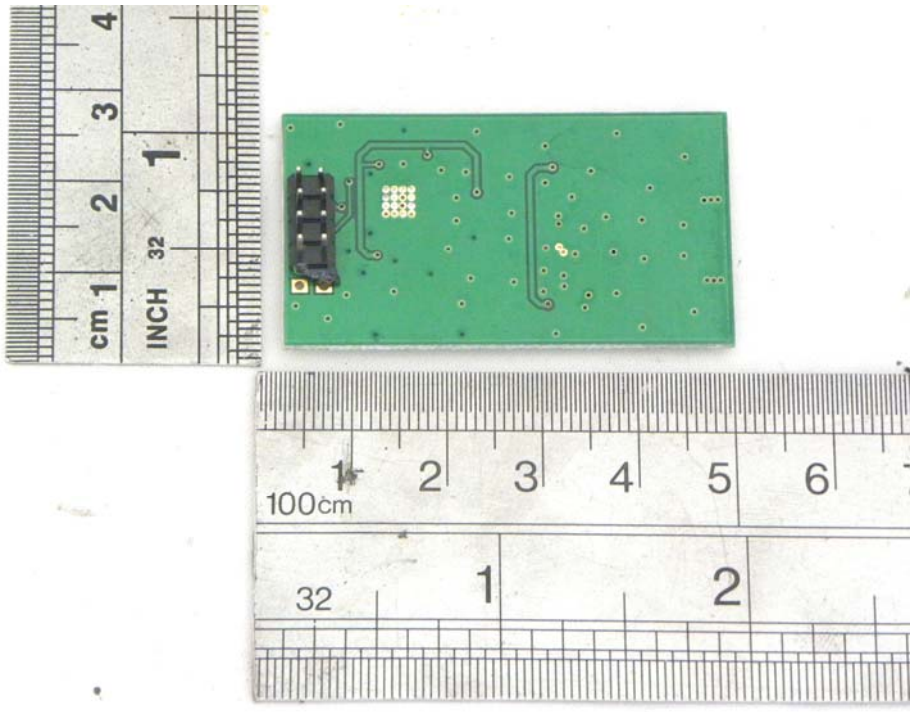
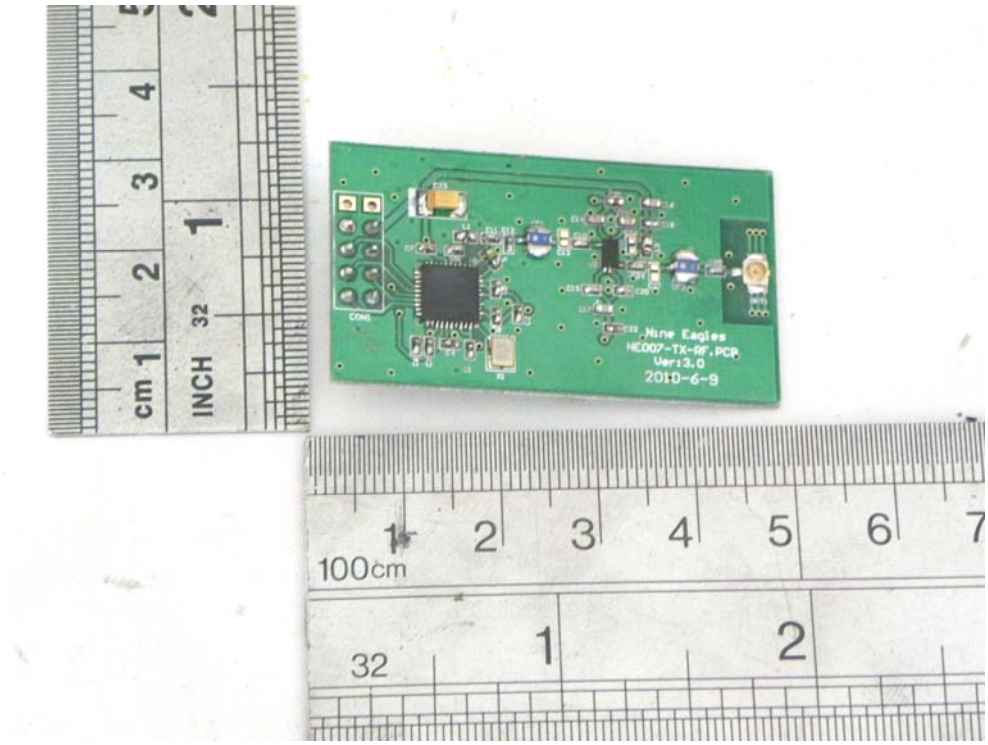
2010-08-12
VDD
GND
DAT
WR
CS
100cm
INCH


100cm
INCH


cm 1
INCH 32
Nine Eagles
HE007-TX-RF,PCB
Ver:3.0
2010-6-9
100cm
32