FCC PART 15C TEST REPORT FOR CERTIFICATION On Behalf of

Shanghai Nine Eagles Electronic Technology Co.,Ltd

Radio Control

Model Number: NE-TX0S201

FCC ID: U45-SRFU123899

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

Prepared By: EST Technology Co., Ltd.

Santun(guantai Road), Houjie Town, Dong Guan City,

GuangDong, China.

Tel: 86-769-83081888-808

ESTE-R1209009 Report Number : Date of Test Sep.5~Sep.15, 2012 Date of Report Sep.16, 2012

EST Technology Co.,Ltd

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TEST REPORT CERTIFICATION

Applicant : Shanghai Nine Eagles Electronic Technology Co.,Ltd

Manufacturer : Shanghai Nine Eagles Electronic Technology Co.,Ltd

EUT Description : Radio Control

(A) MODEL NO. : NE-TX0S201

: NE-TX0S202;NE-TX0S203;NE-TX0S205; NE-TX0S206:NE-TX0S203:NE-TX0S202:

NE-TX0S206;NE-TX06203;NE-TX06202;

(B) Additional Model NE-TX06205;NE-TX06206;NE-TX06207.

Note: The products are difference in model number and appearance, the PCB boards inside are identical.

(C) SERIAL NO. : N/A

(D) Trade Name : Nine Eagles(D) POWER SUPPLY : DC 6V(E) TEST VOLTAGE : DC 6V

Tested for comply with:

FCC Rules and Regulations Part 15 Subpart C:2011

Test procedure used:

ANSI C63.4:2003

The device described above is tested by EST Technology Co., Ltd. to confirm comply with all the FCC Part 15 Subpart C requirements.

The test results are contained in this test report and EST Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment under test (EUT) is to be technically compliant with the FCC requirements.

Prepared by: Tested by: Approved by:

Ada tony Trementhe

Ada / Assistant Tony.Tang/ Engineer Iceman Hu / Manager

This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of EST Technology Co., Ltd.



1. SUMMARY OF STANDARDS AND RESULTS

1.1.Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

page

1-1

EMISSION							
Description of Test Item	Standard	Results					
Power Line Conducted Emission Test	FCC Part 15C: 15.207 ANSI C63.4-2003	N/A					
Radiated Emission Test	FCC Part 15C: 15.209 FCC Part 15C: 15.249 ANSI C63.4-2003	PASS					
Band Edge Compliance Test	FCC Part 15: 15.249 ANSI C63.4-2003	PASS					
20dB Bandwidth Test	FCC Part 15: 15.215 ANSI C63.4-2003	PASS					
Antenna requirement	FCC Part 15: 15.203	PASS					

FCC ID: U45-SRFU123899 page 2-1

2. GENERAL INFORMATION

2.1.Description of Device (EUT)

Product Name : Radio Control

Model Number : NE-TX0S201

FCC ID : U45-SRFU123899

Operation frequency: 2420MHz~2460MHz

Number of channel : 3

Antenna : Internal antenna, 1.2 dBi gain

Modulation : GFSK

Power Supply : DC 6V

Applicant : Shanghai Nine Eagles Electronic Technology Co.,Ltd

Room 1104, Huaxiang Building, No.80 Moling Road,

Shanghai, 200070, China

Manufacturer : Shanghai Nine Eagles Electronic Technology Co.,Ltd

Room 1104, Huaxiang Building, No.80 Moling Road,

Shanghai, 200070, China

Sample Type : Prototype production

2.2. Test Facilities

EMC Lab : Certificated by CNAL, CHINA

Registration No.: L5288

Date of registration: October 28, 2011

Certificated by FCC, USA Registration No.: 989591

Date of registration: December 07, 2010

Certificated by Industry Canada Registration No.: 46405-9405

Date of registration: December 16, 2010

Certificated by VCCI, Japan

Registration No.: R-3663 & C-4103 Date of registration: July 25, 2011

Certificated by TUV Rheinland, Germany Registration No.: UA 50195514 0001 Date of registration: January 07, 2011

Certificated by TUV/PS, Shenzhen

Registration No.: SCN1017

Date of registration: January 27, 2011

Certificated by Intertek ETL SEMKO Registration No.: 2011-RTL-L1-18 Date of registration: April 28, 2011

Certificated by Siemic, Inc. Registration No.: SLCN021

Date of registration: November 8, 2011

Certificated by Nemko, Hong Kong

Registration No.: 175193

Date of registration: May 4, 2011

Name of Firm : EST Technology Co., Ltd.

Site Location : San Tun Management Zone, Houjie Town, Dongguan,

Guangdong, China

2.3. Tested Supporting System Details

None

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2.4. EUT Configuration and operation conditions for test.

EUT

EUT work continues Tx mode and frequency as below:

Channel	Frequency
Low	2420MHz
Middle	2440MHz
High	2460MHz

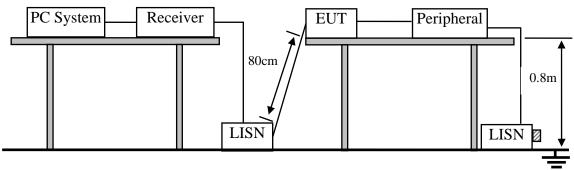
Note: A typical modulation was applied when performance test.

3. POWER LINE CONDUCTED EMISSION TEST

3.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Nov.05, 11	1 Year
2.	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	Nov.05, 11	1 Year
3.	L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	May.02, 12	1 Year
4.	Terminator	Hubersuhner	50Ω	No. 1	May.02, 12	1 Year
5.	Terminator	Hubersuhner	50Ω	No. 2	May.02, 12	1 Year
6.	RF Cable	Fujikura	3D-2W	LISN Cable 1#	May.02, 12	1Year
7.	Coaxial Switch	Anritsu	MP59B	M55367	May.02, 12	1 Year
8.	Passive Probe	Rohde & Schwarz	ESH2-Z3	299.7810.52	May.02, 12	1 Year
9.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.02, 12	1 Year

3.2.Block Diagram of Test Setup



☑ :50Ω Terminator

3.3. Power Line Conducted Emission Test Limits

Frequency range	Limits $dB(\mu V)$				
MHz	Quasi-peak Level	Average Level			
	_	_			
0,15 to 0,5	66~56*	56~46*			
0,5 to 5	56	46			
5 to 30	60	50			

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

3.4. Operating Condition of EUT

- 3.4.1. Setup the EUT and simulator as shown as Section 2.3
- 3.4.2. Turn on the power of all equipment.
- 3.4.3. Let the EUT work in test mode (Tx Mode) and measure it.

3.5. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Powered from PC which mains connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#3). this provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4-2003 on conducted Emission test.

The bandwidth of test receiver (R&S TEST RECEIVER ESHS10) is set at 10kHz.

The frequency range from 150kHz to 30MHz is checked. The test result are reported on Section 3.7.

3.6. Conducted Disturbance at Mains Terminals Test Results

N/A

4. RADIATED EMISSION TEST

4.1.Test Equipment

Frequency rang: 30~1000MHz

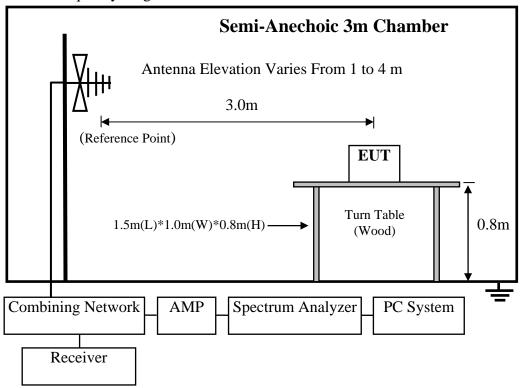
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	EMI Spectrum	Agilent	E4407B	MY41440292	May.02, 12	1 Year
2	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.02, 12	1 Year
3	Amplifier	HP	8447D	2648A04738	May.02, 12	1 Year
4	Bilog Antenna	Schaffner	CBL6112D	25237	Mar. 26,12	1 Year
5	RF Cable	MIYAZAKI	8D-FB	3# Chamber No.1	May.02, 12	1 Year
6	Coaxial Switch	Anritsu	MP59B	M73989	May.02, 12	1 Year

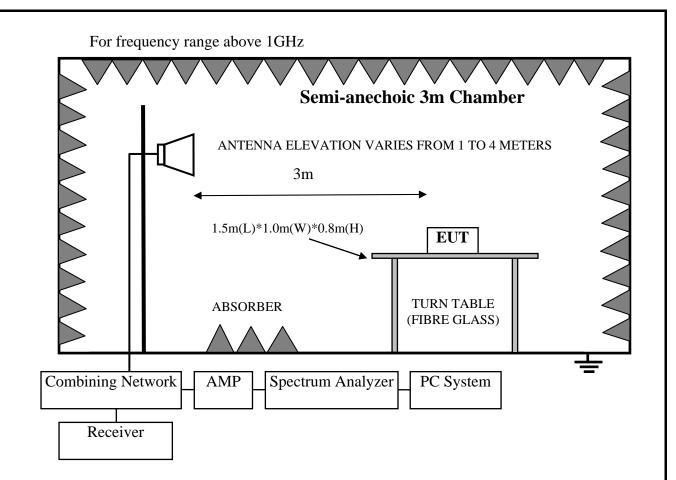
Frequency rang: above 1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4408B	MY44211139	May.02, 12	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	May.02, 12	1.5 Year
3	Horn Antenna	EMCO	3116	00060089	May.02, 12	1.5 Year
4	Amplifier	Agilent	8449B	3008A00863	May.02, 12	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.02, 12	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX102	29091/2	May.02, 12	1 Year

4.2.Block Diagram of Test Setup

For frequency range 30MHz-1000MHz





4.3. Radiated Emission Limit Standard: FCC 15.209 and 15.249

FREQUENCY	DISTANCE	FIELD STREN	NGTHS LIMIT	
MHz	Meters	μV/m	$dB(\mu V)/m$	
30 ~ 88	3	100	40.0	
88 ~ 216	3	150	43.5	
216 ~ 960	3	200 46.0		
960 ~ 1000	3	500	54.0	
Above 1000MHz	3	74.0 dB(μV	/)/m (Peak)	
		$54.0 \text{ dB}(\mu\text{V})$	/m (Average)	
Field Strength of fundamental emissions for 2.4GHz-2.4835GHz	3	114.0 dB(μV)/m (Peak 94.0 dB(μV)/m (Averag		

Remark : (1) Emission level $dB\mu V = 20 \log Emission level \mu V/m$

- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.
- (4) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

4.4. Operating Condition of EUT

- 4.4.1. Setup the EUT and simulator as shown as Section 4.2.
- 4.4.2. Turned on the power of all equipment.
- 4.4.3. Let EUT work in test mode(Tx mode) and test it.

4.5.Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn 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, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2003 on radiated emission Test.

The bandwidth of the EMI test receiver is set at 120kHz for frequency range from 30MHz to 1000 MHz

The bandwidth of the Spectrum Analyzer's RBW is set at 1MHz and VBW is set at 3MHz for peak emissions measurement above 1GHz, and 1MHz RBW, 10Hz VBW for average measurement above 1GHz.

Note: For fundamental emissions, it's bandwidth is about 1.3MHz, so the Spectrum Analyzer's RBW was set at 2MHz and VBW was set at 3MHz for fundamental emissions measure.

4.6. Radiated Emission Test Results

PASS.

All the emissions from 30MHz to 25GHz were comply with the 15.209 Limit.

Note: If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

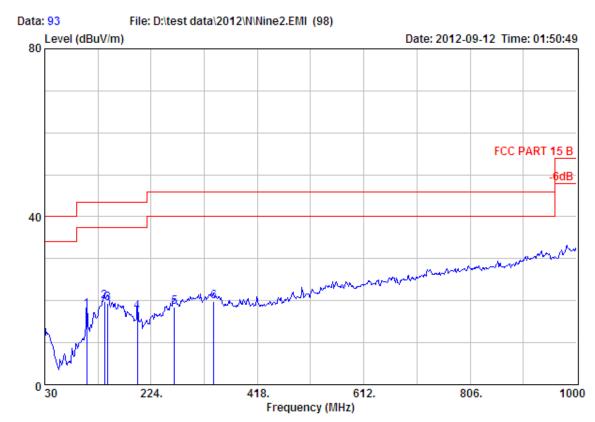
EST Technology Co.,Ltd Report No. ESTE-R1209009

Emissions from 30MHz to 1GHz:

EST Technology

Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China

Tel:+86-769-83081888 Fax:+86-769-83081878



Site no. : 3m Chamber Data no. : 93

Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL

Limit : FCC PART 15 B

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

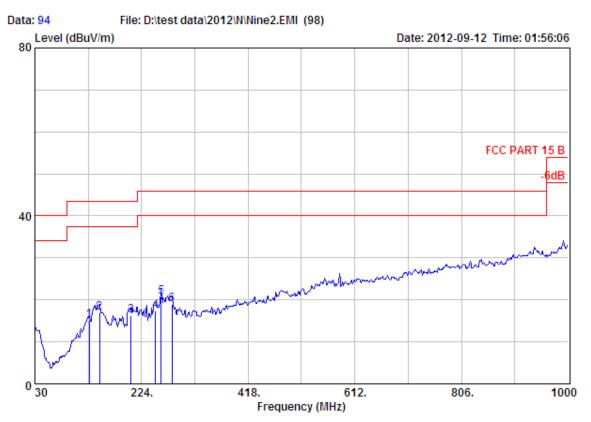
EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2420MHz

		-	Factor	Loss	Reading	Level (dBuV/m)	Limits	_		
_	1	106.63	10.15	3.15	4.58	17.88	43.50	25.62	QP	
	2	138.64	11.42	3.64	4.76	19.82	43.50	23.68	QP	
	3	145.43	11.22	3.73	4.50	19.45	43.50	24.05	QP	
	4	198.78	7.71	4.24	5.53	17.48	43.50	26.02	QP	
	5	266.68	12.79	5.00	0.72	18.51	46.00	27.49	QP	
	6	338.46	14.10	5.56	0.18	19.84	46.00	26.16	QP	

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Site no. : 3m Chamber Data no. : 94

Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

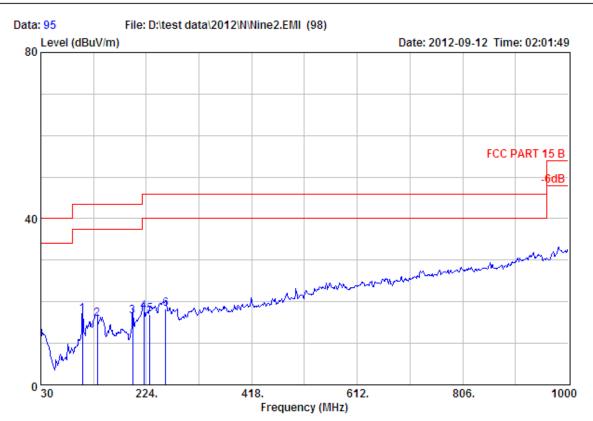
Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2420MHz

	Freq.	Factor	Loss	Reading	Emission Level (dBuV/m)	Limits	_		
	(11112)	(GD/III)	(45)		(GDGV/10)			(ub)	
1	128.94	11.33	3.48	0.38	15.19	43.50	28.31	QP	
2	147.37	11.08	3.75	2.08	16.91	43.50	26.59	QP	
3	204.60	7.91	4.30	4.05	16.26	43.50	27.24	QP	
4	249.22	11.67	4.86	0.85	17.38	46.00	28.62	QP	
5	259.89	12.97	4.93	2.76	20.66	46.00	25.34	QP	
6	279.29	12.37	5.08	1.48	18.93	46.00	27.07	QP	



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Fax:+86-769-83081878



Site no. : 3m Chamber Data no. : 95

Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL

Limit : FCC PART 15 B

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

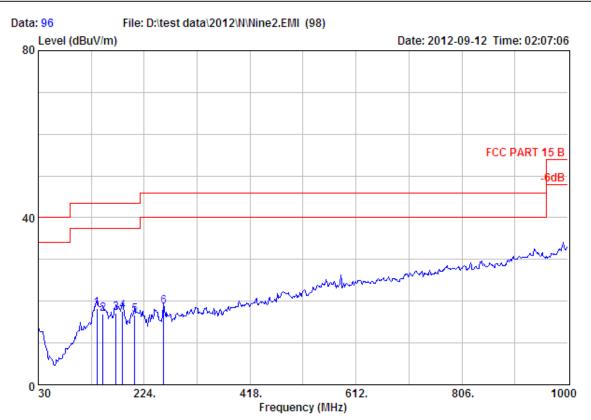
Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2440MHz

	-	Factor	Loss	Reading	Emission Level (dBuV/m)	Limits	_		
1	106.63	10.15	3.15	3.58	16.88	43.50	26.62	QP	
2	133.79	11.36	3.58	0.93	15.87	43.50	27.63	QP	
3	198.78	7.71	4.24	4.53	16.48	43.50	27.02	QP	
4	219.15	9.10	4.42	4.01	17.53	46.00	28.47	QP	
5	230.79	9.49	4.58	2.84	16.91	46.00	29.09	QP	
6	259.89	12.97	4.93	0.38	18.28	46.00	27.72	QP	



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Site no. : 3m Chamber Data no. : 96

Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

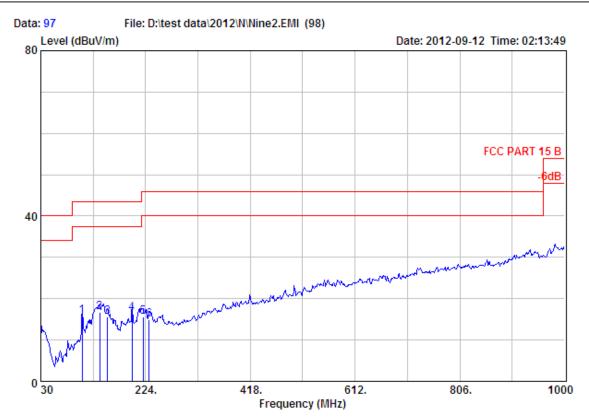
Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2440MHz

		Ant.	Cable		Emission	L			
	Freq. (MHz)			_	Level (dBuV/m)		_	Reamark (dB)	
1	137 67	11 41	3 62	3 27	18.30	43 50	25 20	OP	
2					16.98			~	
3	172.59	9.07	4.05	4.04	17.16	43.50	26.34	QP	
4	184.23	8.57	4.18	4.86	17.61	43.50	25.89	QP	
5	206.54	8.09	4.32	4.34	16.75	43.50	26.75	QP	
6	259.89	12.97	4.93	0.76	18.66	46.00	27.34	QP	



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Site no. : 3m Chamber Data no. : 97

Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL

Limit : FCC PART 15 B

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

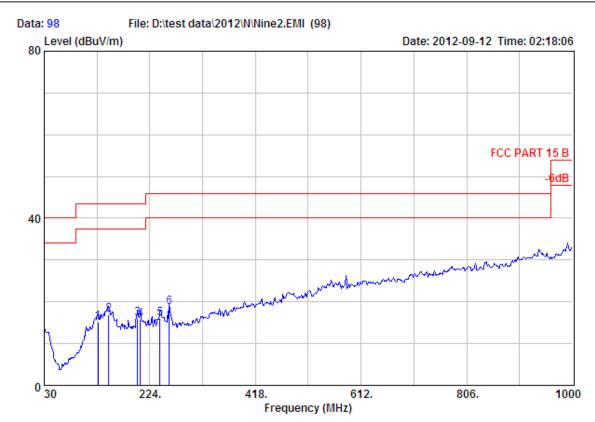
Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2460MHz

	_	Factor	Loss	Reading	Emission Level (dBuV/m)	Limits	_		
1	106.63	10.15	3.15	2.58	15.88	43.50	27.62	QP	
2	138.64	11.42	3.64	1.76	16.82	43.50	26.68	QP	
3	153.19	10.75	3.81	1.14	15.70	43.50	27.80	QP	
4	198.78	7.71	4.24	4.53	16.48	43.50	27.02	QP	
5	219.15	9.10	4.42	2.01	15.53	46.00	30.47	QP	
6	230.79	9.49	4.58	0.84	14.91	46.00	31.09	QP	



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Fax:+86-769-83081878



Site no. : 3m Chamber Data no. : 98

Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL

Limit : FCC PART 15 B

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2460MHz

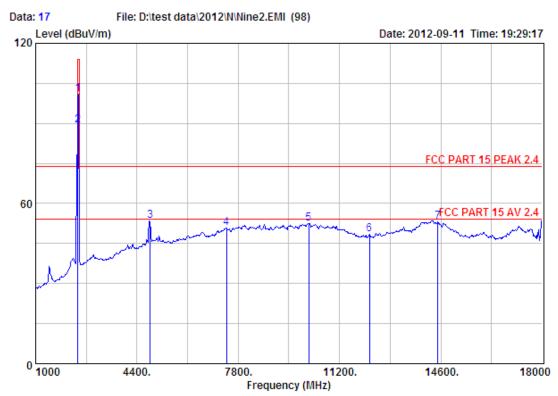
	Freq.	Factor	Loss	Reading	Emission Level (dBuV/m)	Limits	_	Reamark (dB)	
1	128.94	11.33	3.48	0.38	15.19	43.50	28.31	QP	
2	148.34	11.00	3.76	2.22	16.98	43.50	26.52	QP	
3	201.69	7.79	4.30	3.97	16.06	43.50	27.44	QP	
4	206.54	8.09	4.32	3.34	15.75	43.50	27.75	QP	
5	242.43	10.64	4.72	0.60	15.96	46.00	30.04	QP	
6	259.89	12.97	4.93	0.76	18.66	46.00	27.34	QP	



Emissions from 1GHz to 18GHz:

EST Technology

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Site no. : 3m Chamber Data no. : 17
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa
Engineer : Tony

EUT : Radio Control
Power : DC 6V
M/N : NE-TX0S201
Test Mode : TX 2420MHz

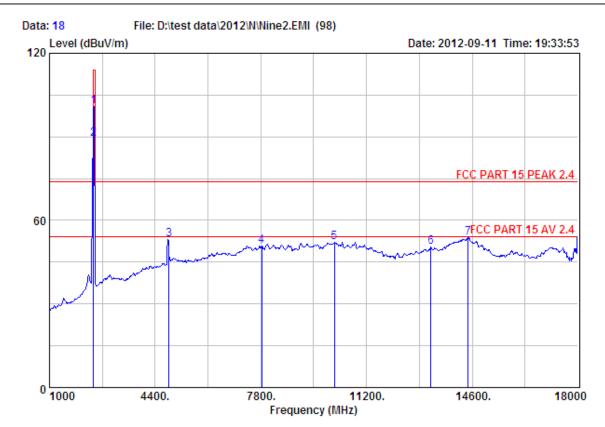
		Freq.	Ant. Factor	Cable Loss	-		Emission Level	Limits	Margin	Remark
		(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
_	1	2420.00	27.60	6.66	34.15	100.84	100.95	114.00	13.05	Peak
	2	2420.00	27.60	6.66	34.15	89.05	89.16	94.00	4.84	Average
	3	4840.00	31.31	11.92	31.85	42.17	53.55	74.00	20.45	Peak
	4	7409.00	36.58	11.60	31.97	34.73	50.94	74.00	23.06	Peak
	5	10163.00	38.39	11.50	32.08	34.77	52.58	74.00	21.42	Peak
	6	12203.00	38.68	11.20	35.71	34.33	48.50	74.00	25.50	Peak
	7	14498.00	41.88	10.93	33.08	33.29	53.02	74.00	20.98	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China

Tel:+86-769-83081888 Fax:+86-769-83081878



Site no. : 3m Chamber Data no. : 18

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2420MHz

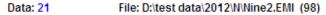
_		Freq.	Ant. Factor (dB/m)	Loss	Amp Factor (dB)	Reading		Limits (dBuV/m)	_	Remark
	1	2420.00	27.60	6.66	34.15	100.73	100.84	114.00	13.16	Peak
	2	2420.00	27.60	6.66	34.15	89.15	89.26	94.00	4.74	Average
	3	4840.00	31.31	11.92	31.85	41.75	53.13	74.00	20.87	Peak
	4	7834.00	36.68	11.47	31.40	34.05	50.80	74.00	23.20	Peak
	5	10163.00	38.39	11.50	32.08	34.41	52.22	74.00	21.78	Peak
	6	13274.00	39.54	11.47	34.79	34.41	50.63	74.00	23.37	Peak
	7	14464.00	41.85	10.93	32.96	33.86	53.68	74.00	20.32	Peak

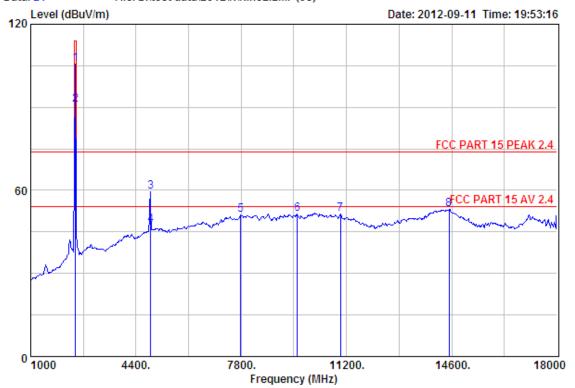
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 21

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

: FCC PART 15 PEAK 2.4 Limit

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

: Radio Control EUT

: DC 6V Power M/N : NE-TX0S201 Test Mode : TX 2440MHz

		Ant.	Cable	Amp		Emission	1		
	Freq. (MHz)	Factor (dB/m)		Factor (dB)	-	•	Limits (dBuV/m)	_	Remark
1	2440.00	27.60	6.67	34.12	105.63	105.78	114.00	8.22	Peak
2	2440.00	27.60	6.67	34.12	90.65	90.80	94.00	3.20	Average
3	4880.00	31.37	12.07	31.90	47.80	59.34	74.00	14.66	Peak
4	4880.00	31.37	12.07	31.90	36.06	47.60	54.00	6.40	Average
5	7783.00	36.59	11.50	31.45	34.40	51.04	74.00	22.96	Peak
6	9619.00	37.93	11.68	31.92	33.69	51.38	74.00	22.62	Peak
7	11013.00	39.51	11.28	33.68	34.29	51.40	74.00	22.60	Peak
8	14515.00	41.89	10.93	33.14	33.31	52.99	74.00	21.01	Peak

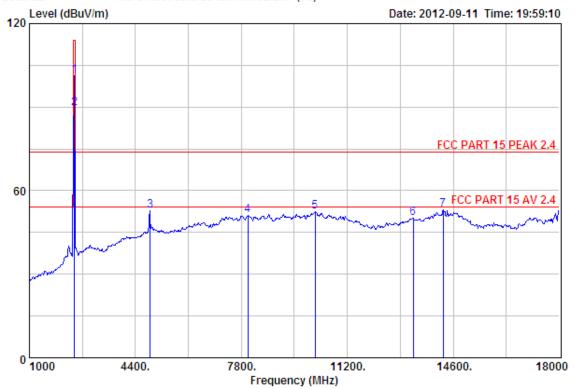
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 22

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2440MHz

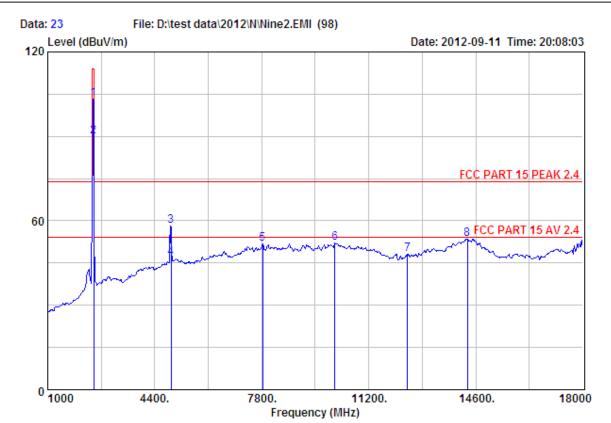
	Freq.	Ant. Factor (dB/m)		-	Reading	•	Limits (dBuV/m)	_	Remark
1	2440.00	27.60	6.67	34.12	101.24	101.39	114.00	12.61	Peak
2	2440.00	27.60	6.67	34.12	89.45	89.60	94.00	4.40	Average
3	4880.00	31.37	12.07	31.90	41.37	52.91	74.00	21.09	Peak
4	8004.00	37.01	11.40	31.22	34.02	51.21	74.00	22.79	Peak
5	10163.00	38.39	11.50	32.08	34.79	52.60	74.00	21.40	Peak
6	13308.00	39.62	11.47	34.86	33.77	50.00	74.00	24.00	Peak
7	14277.00	41.70	10.92	33.14	33.52	53.00	74.00	21.00	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 23

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2460MHz

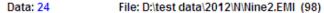
	Freq. (MHz)	Ant. Factor (dB/m)	Loss		Reading	•	Limits (dBuV/m)	_	Remark
1	2460.00	27.58	6.69	34.06	102.92	103.13	114.00	10.87	Peak
2	2460.00	27.58	6.69	34.06	89.79	90.00	94.00	4.00	Average
3	4920.00	31.45	12.29	31.95	46.46	58.25	74.00	15.75	Peak
4	4920.00	31.45	12.29	31.95	34.91	46.70	54.00	7.30	Average
5	7834.00	36.68	11.47	31.40	34.93	51.68	74.00	22.32	Peak
6	10129.00	38.33	11.52	32.01	34.18	52.02	74.00	21.98	Peak
7	12424.00	38.74	10.97	35.29	33.81	48.23	74.00	25.77	Peak
8	14328.00	41.74	10.92	32.98	33.88	53.56	74.00	20.44	Peak

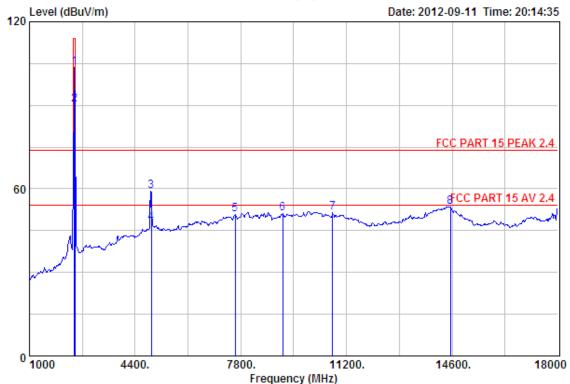
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 24

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2460MHz

		Ant.	Cable	Amp		Emission	1		
	-				-	•	Limits	_	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2445.00	27.59	6.67	34.09	103.32	103.49	114.00	10.51	Peak
2	2460.00	27.58	6.69	34.06	90.19	90.40	94.00	3.60	Average
3	4920.00	31.45	12.29	31.95	47.50	59.29	74.00	14.71	Peak
4	4920.00	31.45	12.29	31.95	36.01	47.80	54.00	6.20	Average
5	7613.00	36.39	11.57	31.72	34.57	50.81	74.00	23.19	Peak
6	9143.00	37.65	11.53	32.39	34.38	51.17	74.00	22.83	Peak
7	10758.00	39.26	11.30	33.20	34.16	51.52	74.00	22.48	Peak
8	14549.00	41.77	10.92	33.26	34.11	53.54	74.00	20.46	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

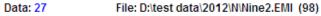


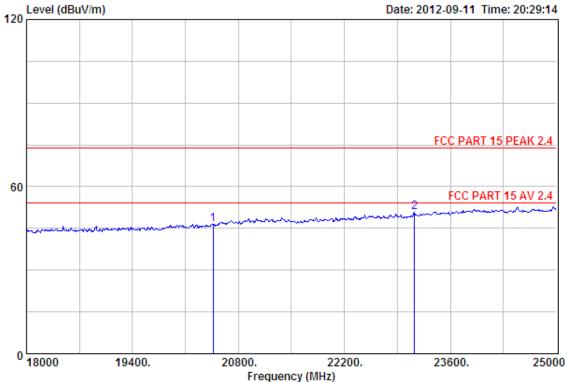
Above 18GHz

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Site no. : 3m Chamber Data no. : 27

Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2460MHz

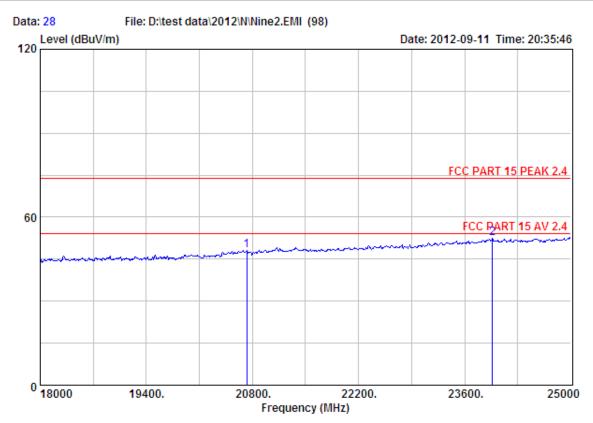
		Ant.	nt. Cable Amp Emission						
	-				_		Limits (dBuV/m)	_	Remark
1	20464.00	46.01	19.89	36.27	16.89	46.52	74.00	27.48	Peak
2	23124.00	45.63	21.26	33.72	17.69	50.86	74.00	23.14	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 28

Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2460MHz

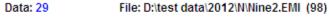
		Ant.	Cable	Amp		Emission			
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	20723.00	46.14	20.01	36.05	18.01	48.11	74.00	25.89	Peak
2	23964.00	45.61	22.02	32.83	17.75	52.55	74.00	21.45	Peak

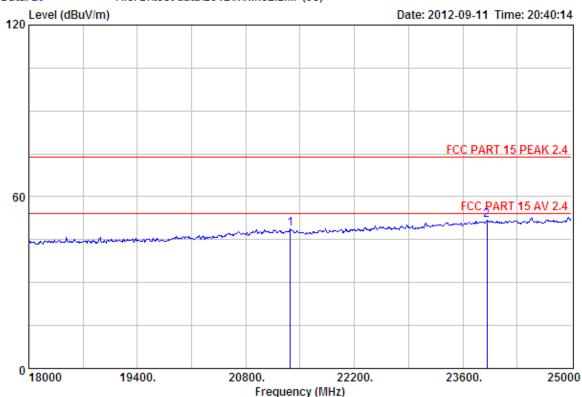
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 29

Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2440MHz

	Ant.	Cable	Amp		Emission			
-				_		Limits (dBuV/m)	_	Remark
21374.00 23908.00								Peak Peak

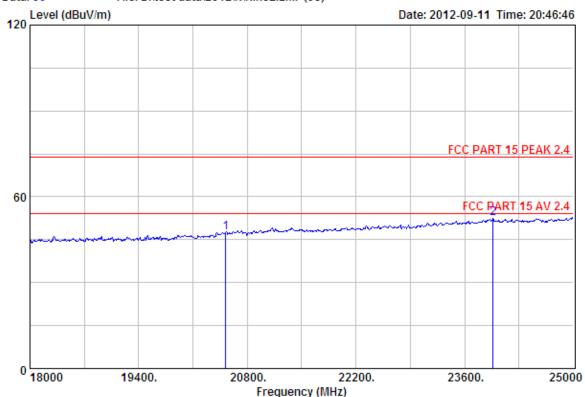
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 30

Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2440MHz

	Ant.	Cable	Amp	I	Emission			
Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark

(MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

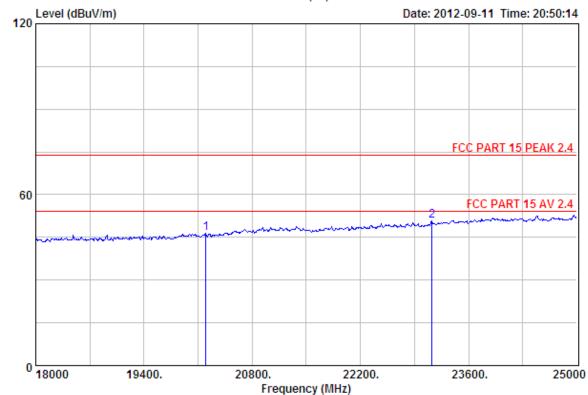
1 20520.00 46.01 19.92 36.23 17.77 47.47 74.00 26.53 Peak 2 23964.00 45.61 22.02 32.83 17.75 52.55 74.00 21.45 Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

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Data: 31 File: D:\test data\2012\N\Nine2.EMI (98)



Site no. : 3m Chamber Data no. : 31

Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2420MHz

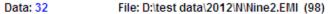
		Ant.	Cable	Amp		Emission			
	-				_		Limits (dBuV/m)	_	Remark
_	20198.00 23124.00								Peak Peak

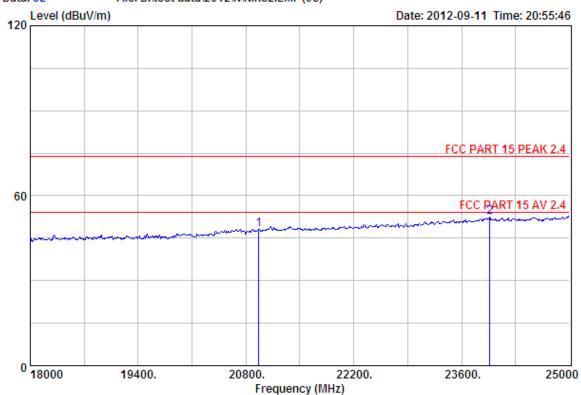
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 32

Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2420MHz

		Ant.	Cable	Amp	Emission
E-	200	Factor	Togg F	actor Bondino	Torrol

Freq. Factor Loss Factor Reading Level Limits Margin Remark (MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

1 20069 00 46 20 20 12 25 92 17 66 48 25 74 00 25 75 Pools

1 20968.00 46.29 20.12 35.82 17.66 48.25 74.00 25.75 Peak 2 23964.00 45.61 22.02 32.83 17.75 52.55 74.00 21.45 Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



5. 20 DB BANDWIDTH TEST

5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4408B	MY44211139	May.02, 12	1 Year

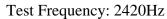
5.2. Limit

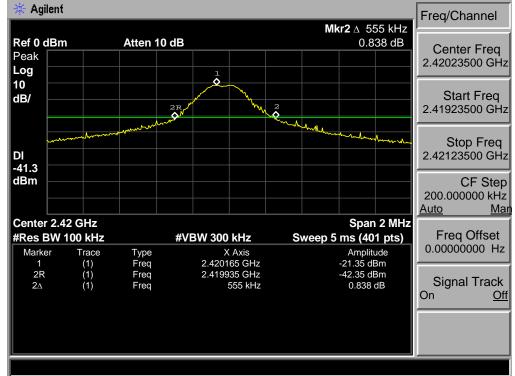
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

5.3. Test Results

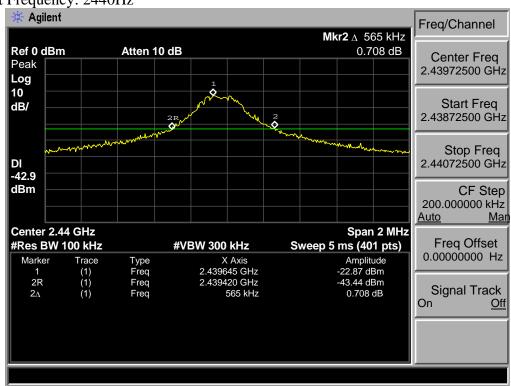
EUT: Radio Control		
M/N: NE-TX0S201		
Test date:2012-09-12	Pressure:101.8 kpa	Humidity:54 %
Tested by: Tony.Tang	Test site: RF site	Temperature : 24.1 °C

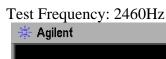
Frequency	20% bandwidth (MHz)	Limit (KHz)				
2420	0.555	N/A				
2440	0.550	N/A				
2460	0.595	N/A				
Conclusion: PASS						

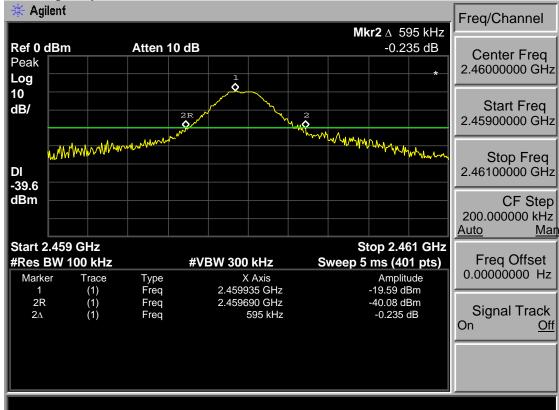




Test Frequency: 2440Hz







5-3

page

FCC ID: U45-SRFU123899 page 6-1

6. BAND EDGE COMPLIANCE TEST

6.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
	Spectrum Analyzer	Agilent	E4408B	MY44211139	May.02, 12	1 Year
2.	Horn Antenna	EMCO	3115	9607-4877	May.02, 12	1.5 Year
3.	Amplifier	Agilent	8449B	3008A02495	May.02, 12	1 Year
4.	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.02, 12	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.02, 12	1 Year
6.	RF Cable	Hubersuhner	SUCOFLEX102	28610/2	May.02, 12	1 Year

6.2. Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

6.3. Test Produce

- 1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.
- 2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
- 4. Set the spectrum analyzer in the following setting in order to capture the lower and upperband-edges of the emission:
 - (a) PEAK: RBW=1MHz; VBW=3MHz, PK detector, Sweep=AUTO
 - (b) Average: RBW=1MHz ;VBW=10Hz, PK detector, Sweep=AUTO

6.4. Test Results

Pass (The testing data was attached in the next pages.)

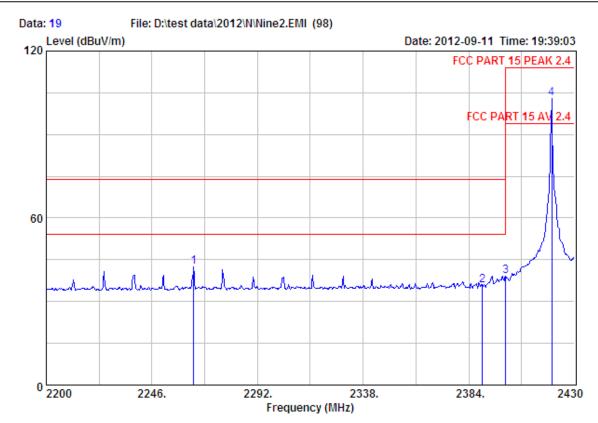
Note: If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

6.5. Test Data

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Site no. : 3m Chamber Data no. : 19

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2420MHz

		Ant.	Cable	Amp		Emission			
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2264.17	27.80	6.47	34.27	42.49	42.49	74.00	31.51	Peak
2	2390.00	27.64	6.62	34.19	35.68	35.75	74.00	38.25	Peak
3	2400.00	27.61	6.62	34.18	38.92	38.97	74.00	35.03	Peak
4	2420.11	27.60	6.66	34.15	102.83	102.94	114.00	11.06	Peak

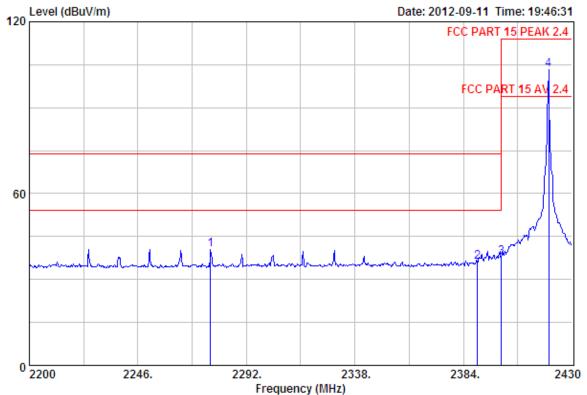
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 20

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2420MHz

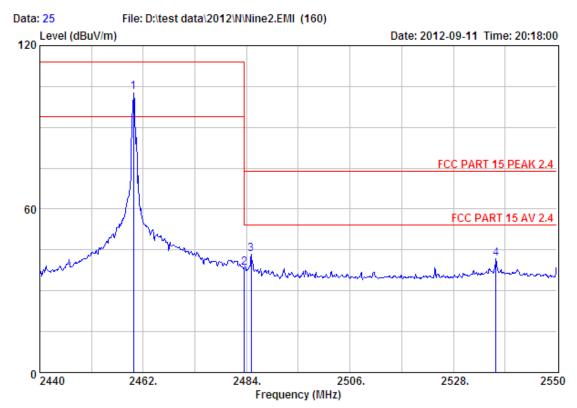
		Ant.	Cable	Amp		Emission	L		
	-				-	•	Limits (dBuV/m)	_	Remark
1	2276.82	27.79	6.49	34.26	40.29	40.31	74.00	33.69	Peak
2	2390.00	27.64	6.62	34.19	36.16	36.23	74.00	37.77	Peak
3	2400.00	27.61	6.62	34.18	37.80	37.85	74.00	36.15	Peak
4	2420.11	27.60	6.66	34.15	103.06	103.17	114.00	10.83	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 25

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2460MHz

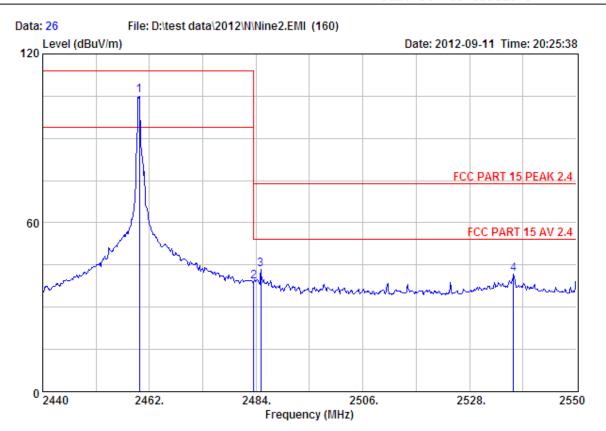
	-	Factor	Loss	Factor	Reading		Limits (dBuV/m)	_	Remark
	(PHZ)	(GB/III)	(QB)	(аь)	(dbuv)	(abuv/m)	(GBUV/III)	(ab)	
1	2459.97	27.58	6.69	34.06	102.69	102.90	114.00	11.10	Peak
2	2483.50	27.58	6.71	34.03	38.10	38.36	74.00	35.64	Peak
3	2484.99	27.58	6.71	34.03	43.14	43.40	74.00	30.60	Peak
4	2537.02	27.63	6.88	33.99	41.31	41.83	74.00	32.17	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China

Tel:+86-769-83081888 Fax:+86-769-83081878



Site no. : 3m Chamber Data no. : 26

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Radio Control

Power : DC 6V M/N : NE-TX0S201 Test Mode : TX 2460MHz

		Ant.	Cable	Amp		Emission	1		
	-						Limits (dBuV/m)	_	Remark
1	2459.97	27.58	6.69	34.06	105.12	105.33	114.00	8.67	Peak
2	2483.50	27.58	6.71	34.03	38.85	39.11	74.00	34.89	Peak
3	2484.99	27.58	6.71	34.03	43.06	43.32	74.00	30.68	Peak
4	2537.02	27.63	6.88	33.99	41.25	41.77	74.00	32.23	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



7. ANTENNA REQUIREMENTS

Standard requirement: FCC Part15 C Section 15.203

7.1. 15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by there sponsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

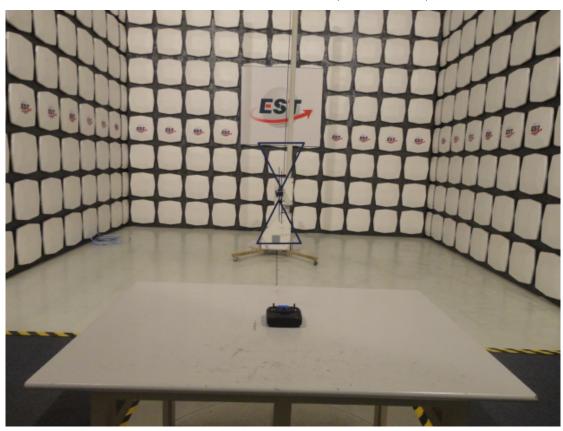
7.2. E.U.T Antenna:

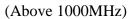
The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 1.2dBi.

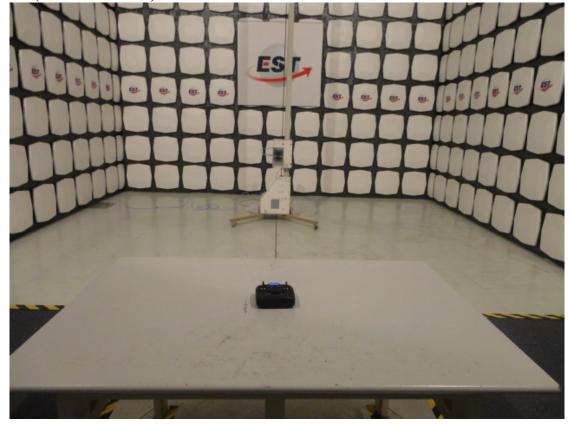
EST Technology Co.,Ltd Report No. ESTE-R1209009

8. PHOTOGRAPH OF TEST

8.1. Photos of Radiated Emission Test (30-1000MHz)







9. PHOTOGRAPH OF EUT

Figure 1
General Appearance of the EUT



Figure 2
General Appearance of the EUT



Figure 3
General Appearance of the EUT



Figure 4
General Appearance of the EUT



Figure 5
General Appearance of the EUT



Figure 6
General Appearance of the EUT



Figure 7
Component Side of the PCB

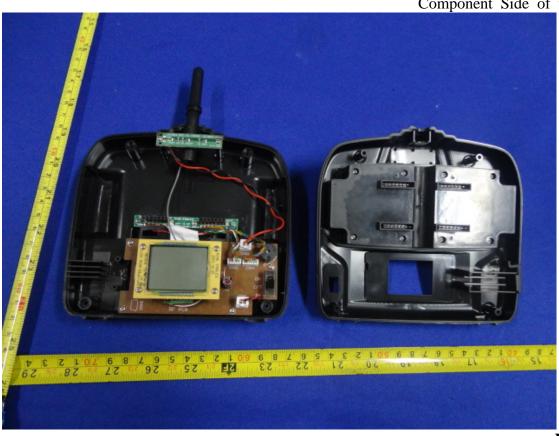


Figure 8
Component Side of the PCB

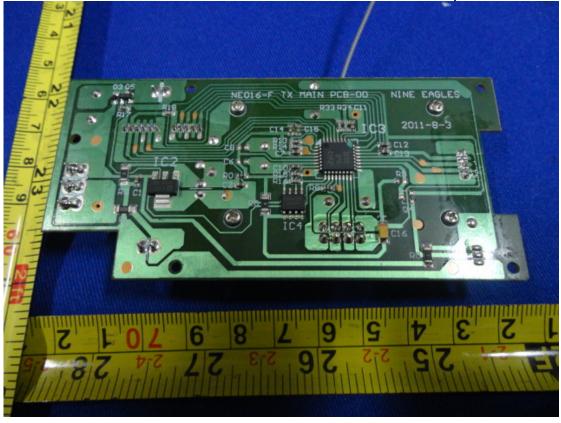




Figure 9
Component Side of the PCB

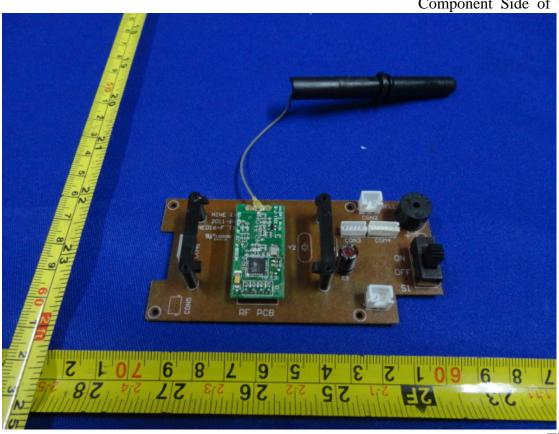


Figure 10 Component Side of the PCB

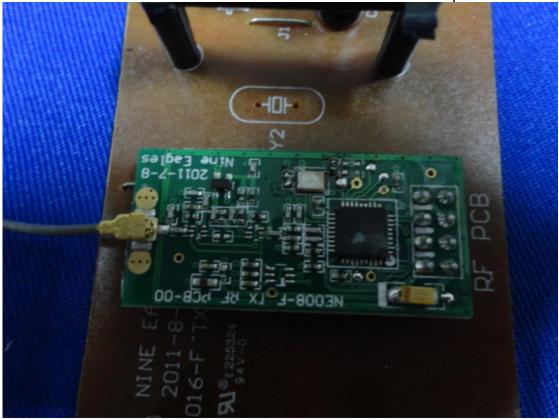


Figure 11 Component Side of the PCB

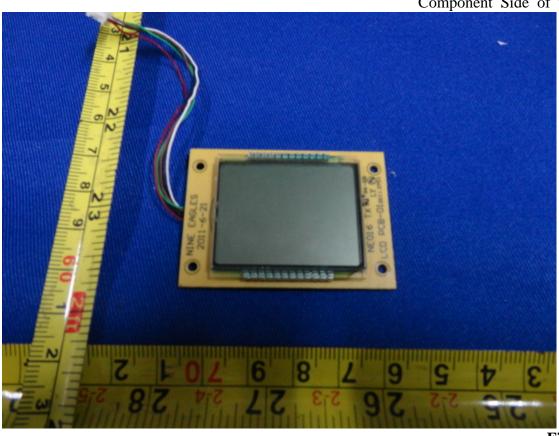


Figure 12 Component Side of the PCB

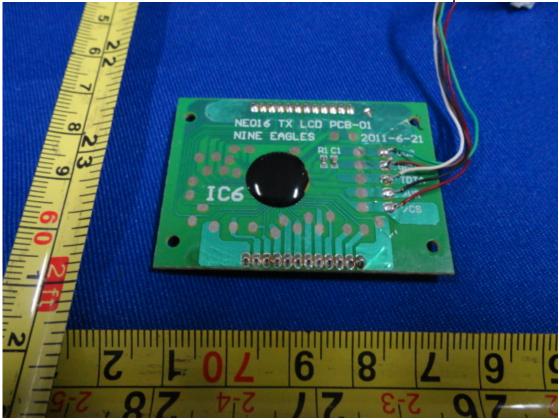
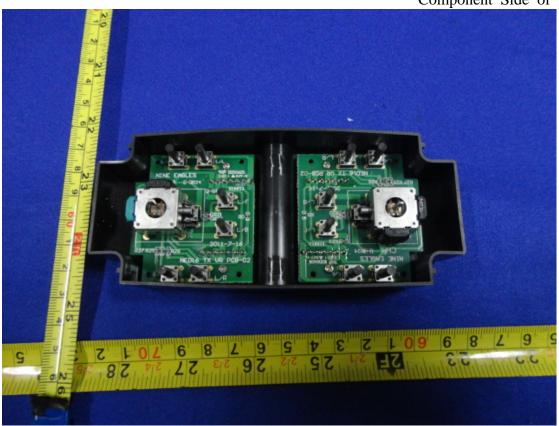


Figure 13
Component Side of the PCB



<End Of Report>

