FCC TEST REPORT

for

47 CFR Part 15 Subpart C

Equipment	:	**Remote Control (10 Key) C680-580038-A (X2)**
Model No.	:	**DQ758003817**
FCC ID	:	**HFS-ASTOM1**
IC ID	:	**1787B-ASTOM1**
Filing Type	:	**Certification**
Applicant	:	**Quanta Computer Inc.** No. 211, Wen Hwa 2nd Rd., Kuei Shan Hsiang, Tao Yuan Shien, Taiwan, R.O.C.

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- The data shown in this test report were carried out on Jan. 26, 2006 at **Sporton International Inc. LAB.**
- Report No.: FR612511, Report Version: Rev. 02.

Dr. Daniel Lee
EMC/SAR Director

SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

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History of this test report

Report Issue Date: Mar. 22, 2006

Report No.	Description

1. General Description of Equipment under Test

1.1. Applicant

Quanta Computer Inc.
No. 211, Wen Hwa 2nd Rd., Kuei Shan Hsiang, Tao Yuan Shien, Taiwan, R.O.C.

1.2. Manufacturer

Tech-Pro (Shanghai) Computer Co., Ltd.
No. 6, Lane 58, San Zhuang Road, Songjang Export Processing Zone, Shanghai, China

1.3. Basic Description of Equipment under Test

Equipment : Remote Control (10 Key) C680-580038-A (X2)
Model No. : DQ758003817
FCC ID : HFS-ASTOM1
IC ID : 1787B-ASTOM1
Power Supply Type : From Battery 3V

1.4. Feature of Equipment under Test

Product Feature & Specification	
1. DUT Type	Remote Control (10 Key) C680-580038-A (X2)
2. Model No.	DQ758003817
3. Type of Modulation	FSK
4. Number of Channels	1
5. Carrier Frequency of each channel	433.5 MHz

2. Test Configuration of Equipment under Test

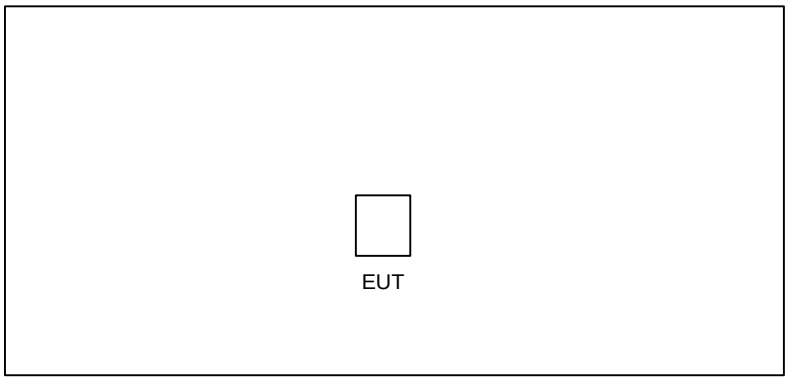
2.1. Test Manner

a. The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.
b. The EUT is programmed to transmit signal continuously for all testings.
c. Frequency range investigated: radiation 30 MHz to 5000 MHz.

2.2. Test Mode

Application	
Radiated Emission	Mode 1: Tx Mode

2.3. Connection Diagram of Test System



2.4. Ancillary Equipment List

N/A

3. RF Utility

The EUT can kept transmitting signals at fixed frequency by programming RF utility. For normal usage, the EUT will cease transmission within 5 seconds after activation.

4. General Information of Test

Test Site Location	:	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-318-0055
Test Site No	:	03CH06-HY

4.1. Test Voltage

AC 120V

4.2. Standard for Methods of Measurement

ANSI C63.4-2003

4.3. Test in Compliance with

47 CFR Part 15 Subpart C

4.4. Frequency Range Investigated

Radiation: from 30 MHz to 5000 MHz

4.5. Test Distance

The test distance of radiated emission from antenna to EUT is 3 m.

5. Report of Measurements and Examinations

5.1. List of Measurements and Examinations

FCC Rule	Description of Test	Result	Section
15.231	Radiated Emission	Pass	5.2

5.2. Radiated Emission Measurement

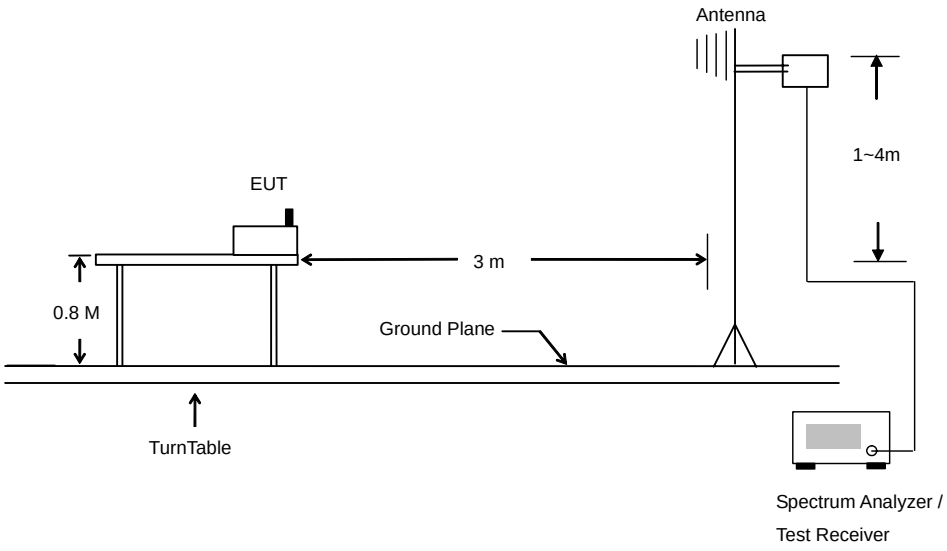
5.2.1 Measuring Instruments

As described in chapter 6 of this Report.

5.2.2 Test Procedures

1. The EUT was placed on a rotatable table top 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
7. For testing below 1GHz, If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.
8. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
9. For SA setting, RBW=120KHz, VBW=300KHz for spurious emission; RBW=100KHz, VBW=100KHz for signal measurement.

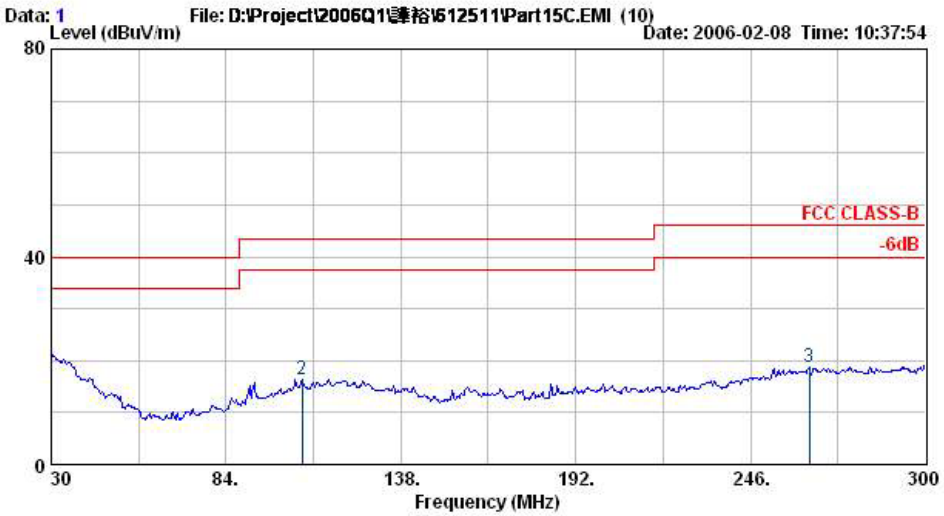
5.2.3 Typical Test Setup Layout of Radiated Emission



5.2.4 Test Data

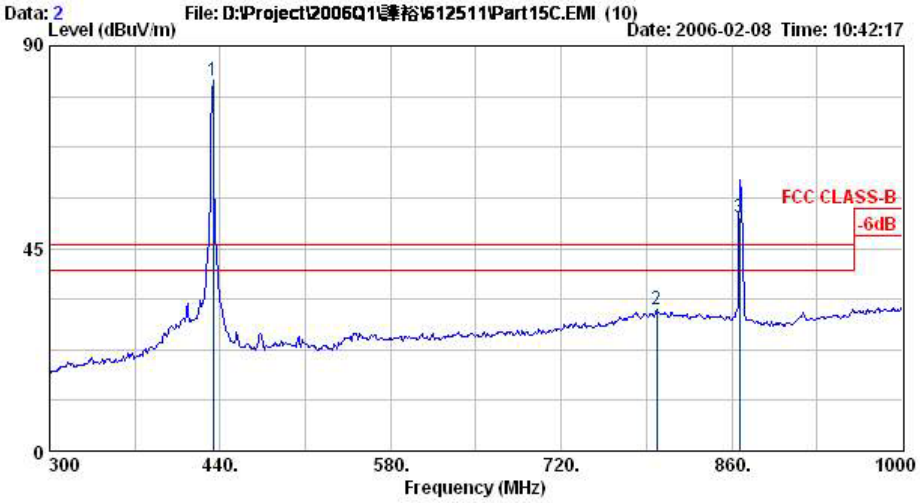
- Temperature : 24 °C
- Relating Humidity : 58 %
- Test Enginner : Andy
- Test Mode : Mode 1
- Polarization : Horizontal

■ The test that passed at the minimum margin was marked by the frame in the following test record



Site : 03CH06-HY
Condition : BI-LOG-2004-1122 HORIZONTAL
EUT : RF遙控器
Power : Real Battery
Model : FR612511
Memo : TX Mode
Plane : E2

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.00	21.32	-18.68	40.00	32.73	18.73	1.35	31.49	400	0	Peak
2	107.49	16.50	-27.00	43.50	33.62	11.36	2.51	30.98	400	0	Peak
3	264.09	18.81	-27.19	46.00	32.82	12.90	4.06	30.97	400	0	Peak



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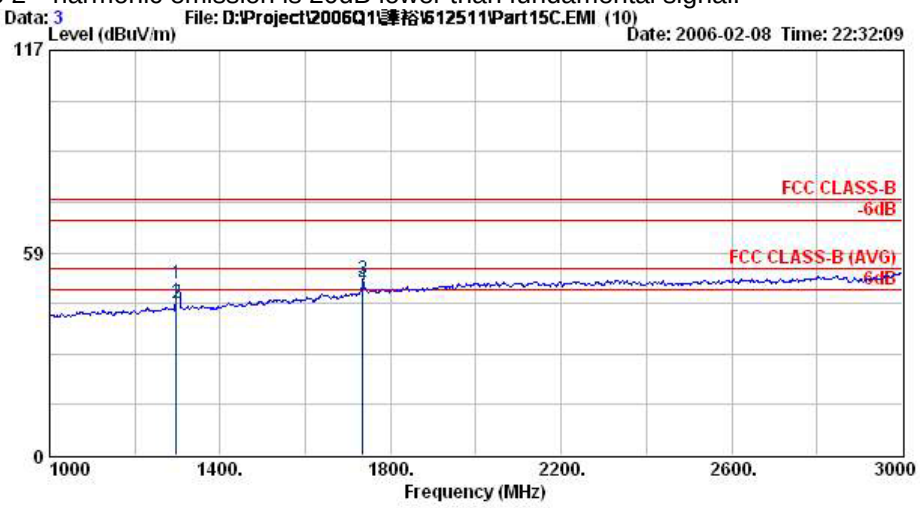
Condition : BI-LOG-2004-1122 HORIZONTAL
EUT : RF遙控器
Power : Real Battery
Model : FR612511
Memo : TX Mode
Plane : E2

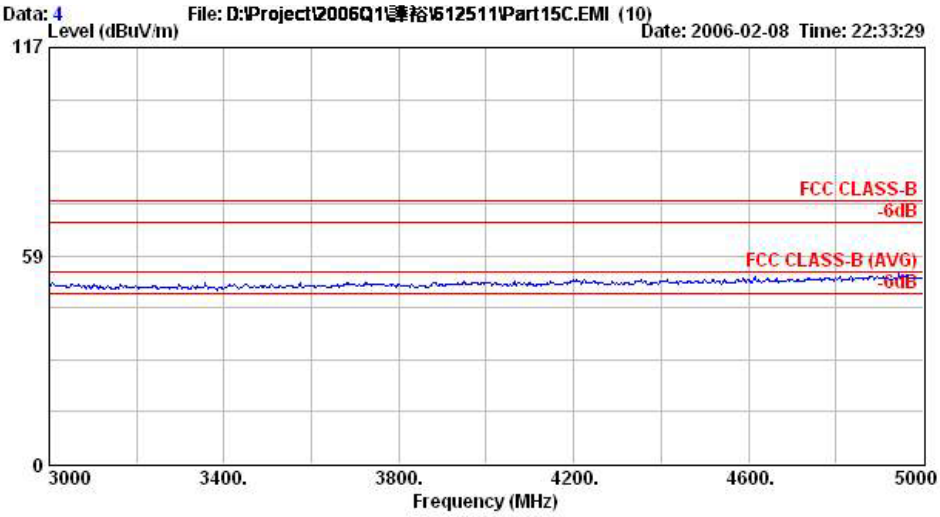
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	434.40	82.41			91.53	16.40	5.26	30.79	100	0	Peak
2	798.40	31.57	-14.43	46.00	32.41	21.84	7.45	30.13	100	0	Peak
3 X	866.30	51.72			53.60	20.61	7.79	30.28	100	218	Average

Remark: #1 Fundamental Signal.
#3 2nd harmonic emission is 20dB lower than fundamental signal.



Site : 03CH06-HY
Condition : HF-ANT-071025-940201 HORIZONTAL
EUT : RF遙控器
Power : Real Battery
Model : FR612511
Memo : TX Mode
Plane : E2

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1298.00	49.72	-24.28	74.00	56.94	25.70	3.13	36.05	100	360	Peak
2	1298.00	44.07	-9.93	54.00	51.28	25.70	3.13	36.05	100	62	Average
3	1734.00	50.88	-23.12	74.00	54.25	28.51	3.57	35.45	100	360	Peak
4 !	1734.00	49.26	-4.74	54.00	52.63	28.51	3.57	35.45	112	33	Average



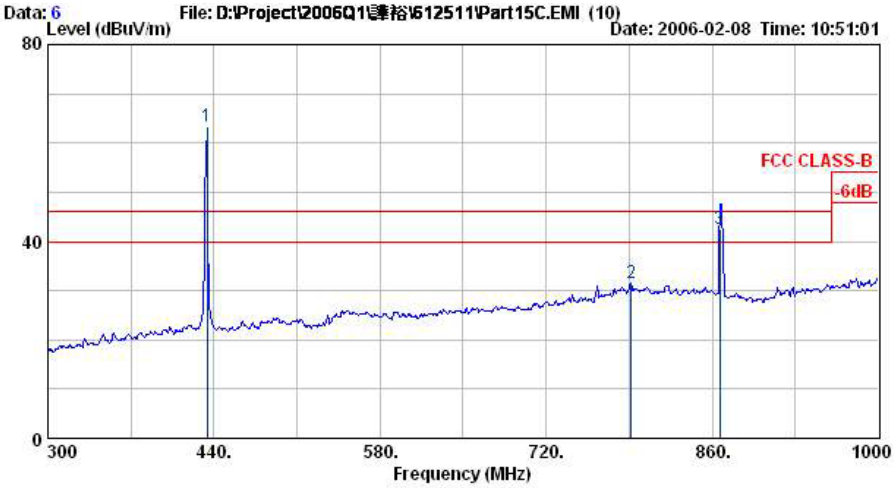
Site : 03CH06-HY
Condition : HF-ANT-071025-940201 HORIZONTAL
EUT : RF遙控器
Power : Real Battery
Model : FR612511
Memo : TX Mode
Plane : E2

- Test Mode : Mode 1
- Polarization : Vertical

■ The test that passed at minimum margin was marked by the frame in the following table.

Site : 03CH06-HY
Condition : BI-LOG-2004-1122 VERTICAL
EUT : RF遙控器
Power : Real Battery
Model : FR612511
Memo : TX Mode
Plane : E2

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	30.54	22.30	-17.70	40.00	34.05	18.40	1.37	31.52	400	0	Peak
2	92.64	17.38	-26.12	43.50	37.04	9.47	2.34	31.47	400	0	Peak
3	111.54	17.01	-26.49	43.50	33.68	11.81	2.54	31.03	400	0	Peak

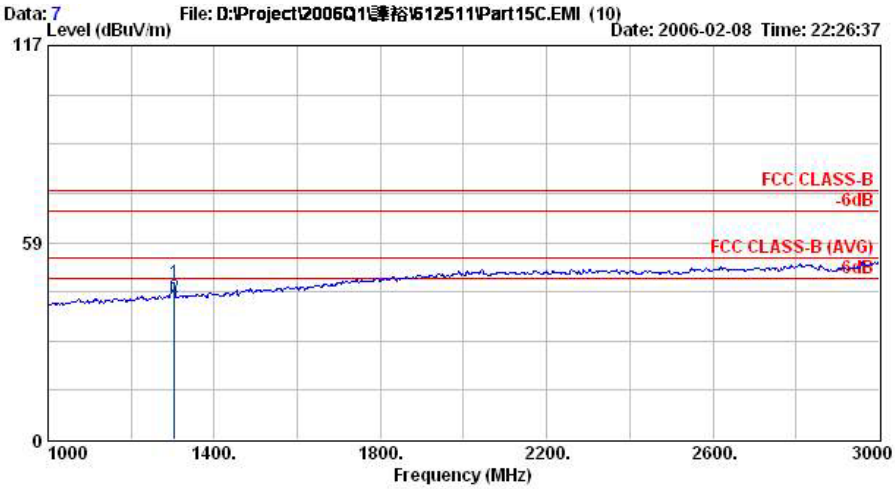


Site : 03CH06-HY
Condition : BI-LOG-2004-1122 VERTICAL
EUT : RF遙控器
Power : Real Battery
Model : FR612511
Memo : TX Mode
Plane : E2

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 X	434.40	63.32			72.45	16.40	5.26	30.79	100	0	Peak
2	791.40	31.51	-14.49	46.00	32.60	21.65	7.43	30.17	100	0	Peak
3 !	866.30	42.52			44.40	20.61	7.79	30.28	100	288	Average

Remark: #1 Fundamental Signal

#3 2nd harmonic emission is 20dB lower than fundamental signal.



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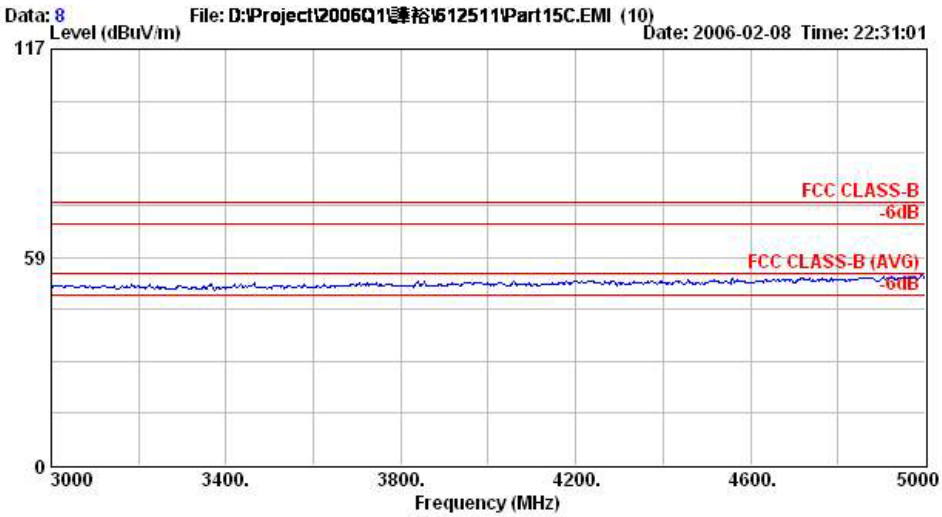
Condition : HF-ANT-071025-940201 VERTICAL
EUT : RF遙控器
Power : Real Battery
Model : FR612511
Memo : TX Mode
Plane : E2

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1304.00	46.43	-27.57	74.00	53.64	25.70	3.13	36.05	100	360	Peak
2	1304.00	42.07	-11.93	54.00	49.28	25.70	3.13	36.05	100	232	Average



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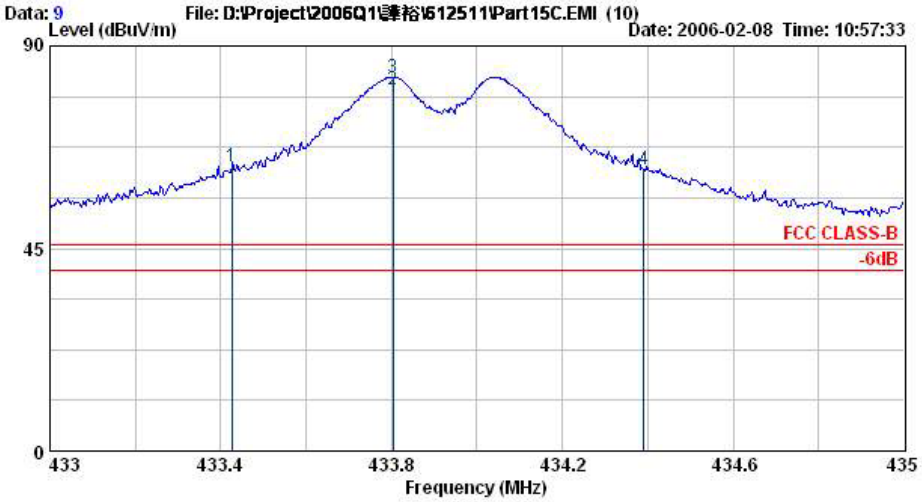
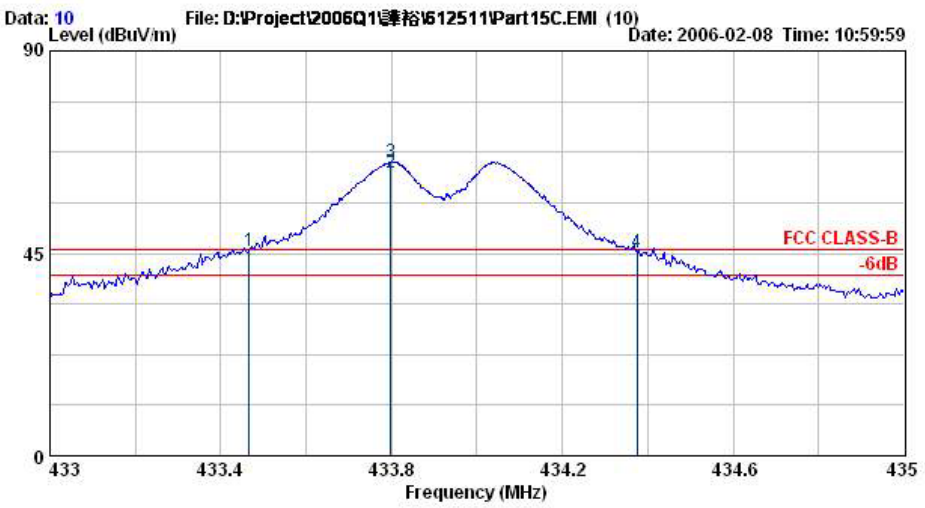


Site : 03CH06-HY
Condition : BI-LOG-2004-1122 HORIZONTAL
EUT : RF遙控器
Power : Real Battery
Model : FR612511
Memo : TX Mode
Plane : E2

		Freq	Level	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
		MHz	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	X	433.43	63.10	72.28	16.40	5.26	30.84	100	0	Peak
2	@	433.80	80.42	89.60	16.40	5.26	30.84	100	271	Average
3	@	433.80	83.00	92.18	16.40	5.26	30.84	100	271	Peak
4	X	434.39	62.73	71.85	16.40	5.26	30.79	100	0	Peak



Site : 03CH06-HY
Condition : BI-LOG-2004-1122 VERTICAL
EUT : RF遙控器
Power : Real Battery
Model : FR612511
Memo : TX Mode
Plane : E2

		Freq	Level	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
		MHz	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	!	433.47	45.67	54.85	16.40	5.26	30.84	277	118	Peak
2	X	433.80	62.82	72.00	16.40	5.26	30.84	277	118	Average
3	@	433.80	65.27	74.45	16.40	5.26	30.84	277	118	Peak
4	!	434.37	45.29	54.42	16.40	5.26	30.79	277	118	Peak

6. List of Measuring Equipments Used

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
Spectrum analyzer	Agilent	E4408B	MY44211030	9KHz-26.5GHz	Jul. 25, 2005	Jul. 24, 2006	Radiation (03CH06-HY)
Receiver	R&S	ESCS30	100356	9KHz-2.75GHz	Jun. 28, 2005	Jun. 27, 2006	Radiation (03CH06-HY)
Controller	CT	SC100	N/A	N/A	N/A	N/A	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Nov. 22, 2004	Nov. 22, 2006	Radiation (03CH06-HY)
Horn Antenna	Com-Power	AH118	071025	1G-18G	Feb. 22, 2005	Feb. 22, 2006	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-249	14G - 40G	Jul. 21, 2005	Jul. 20, 2006	Radiation (03CH06-HY)
HF Amplifier	MITEQ	AFS44	973248	0.1G - 26.5G	Nov. 23, 2005	Nov. 22, 2006	Radiation (03CH06-HY)
Amplifier	MITEQ	AMF-6F	997165	26G - 40G	Jul. 21, 2005	Jul. 20, 2006	Radiation (03CH06-HY)
Turn Table	HD	DS 420	420/650/00	0 ~ 360 degree	N/A	N/A	Radiation (03CH06-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	N/A	Radiation (03CH06-HY)

5. Uncertainty Evaluation

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.10	Normal(k=2)	0.05
Cable loss	0.10	Normal(k=2)	0.05
AMN insertion loss	2.50	Rectangular	0.63
Receiver Spec	1.50	Rectangular	0.43
Site imperfection	1.39	Rectangular	0.80
Mismatch	+0.34/-0.35	U-shape	0.24
combined standard uncertainty Uc(y)	**1.13**		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	**2.26**		

Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.41	Normal(k=2)	0.21
Antenna factor calibration	0.83	Normal(k=2)	0.42
Cable loss calibration	0.25	Normal(k=2)	0.13
Pre Amplifier Gain calibration	0.27	Normal(k=2)	0.14
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.43	Rectangular	0.83
Mismatch	+0.39/-0.41	U-shaped	0.28
combined standard uncertainty Uc(y)	**1.27**		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	**2.54**		

Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

Contribution	Uncertainty of x_i		$u(x_i)$	Ci	$Ci*u(x_i)$
	dB	Probability Distribution			
Receiver reading	±0.10	Normal(k=1)	0.10	1	0.10
Antenna factor calibration	±1.70	Normal(k=2)	0.85	1	0.85
Cable loss calibration	±0.50	Normal(k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR Γ1= 0.197 Antenna VSWR Γ2= 0.194 Uncertainty=20log(1-Γ1*Γ2*Γ3)	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty Uc(y)	**2.36**				
Measuring uncertainty for a level of confidence of 95% U=2Ue(y)	**4.72**				