

FCC TEST REPORT

CATEGORY : Mobile End Product
PRODUCT NAME : Digital 5.8Ghz Wireless Speaker
FCC ID. : RFARTD210X
FILING TYPE : Certification
MODEL NAME : RTD210 / DR3610
BRAND NAME : RCA

APPLICANT : **Eastech Electronics (Taiwan) Inc.**
13 Fl. No. 99, Sec. 1, Nankan Road, Luchu Shiang, Taoyuan
Hsien 338, Taiwan, R.O.C.
MANUFACTURER : **Eastech Electronics (Hui Yang) Co., Ltd.**
Dong Fong District, Xinxu, Hui- Yang, Guangdong, P.R.China

ISSUED BY : **SPORTON INTERNATIONAL INC.**
6F, No. 106, Sec. 1, Hsin Tai Wu Rd., His Chih, Taipei Hsien,
Taiwan, R.O.C.

Statements:

The test result in this report refers exclusively to the presented test model / sample.

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Certificate or Test Report could not be used by the applicant to claim the product endorsement by CNLA, NVLAP or any agency of U.S. government.

The test equipment used to perform the test are calibrated and traceable to NML/ROC or NIST/USA.



Dr. Alan Lane
Vice General Manager
Sporton International Inc.



Lab Code: 200079-0



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History of this test report

☒ No additional attachment.

☐ Additional attachment were issued as following record:

Attachment No.	Issue Date	Description

1. General Description of Equipment under Test

1.1 Applicant

Eastech Electronics (Taiwan) Inc.

13 Fl. No. 99, Sec. 1, Nankan Road, Luchu Shiang, Taoyuan Hsien 338, Taiwan, R.O.C.

1.2 Manufacturer

Eastech Electronics (Hui Yang) Co., Ltd.

Dong Fong District, Xinxu, Hui- Yang, Guangdong, P.R.China.

1.3 Basic Description of Equipment under Test

This product is an audio playing system with wireless speaker function. The technical data has been listed on section " Features of Equipment under Test ". This product is composed 3 major parts. The DVD player is used to play and generate audio and video signal. The audio signal can be send wirely to the main speaker. The main speaker can make sound and also transmit audio signal wirelessly to the receiver with 4 sub-speakers. The wireless transmitter is insatlled inside the main speaker.

1.4 Features of Equipment under Test

ITEMS	DESCRIPTION
Type of Modulation	BPSK
Number of Channels	6
Operating Frequency Band	5735~5835MHz
Function Type	Transmitter
Power Rating (DC/AC, Voltage)	120VAC
Duty Cycle	N.A.
Humidity Range	10 ~ 90 %
Temperature Range (Operating)	-10 ~ 50°C

2. Test Configuration of the Equipment under Test

2.1 Description of the Test

- a. The EUT has been programmed to continuously transmit or receive during testing. The used peripherals as well as the configuration fulfill the requirements of ANSI C63.4:2001.
- b. The spurious above 1GHz, the following 3 modes were tested.
 - Mode 1: CH01 5735MHz
 - Mode 2: CH03 5775MHz
 - Mode 3: CH06 5835MHz
- c. Spurious emission below 1GHz is independent of channel selection. So, only CH06 was tested.
- d. The configuration is operated in a manner which tends to maximize its emission characteristics in a typical application.
- e. 3 meters measurement distance in semi-anechoic chamber was used in this test.

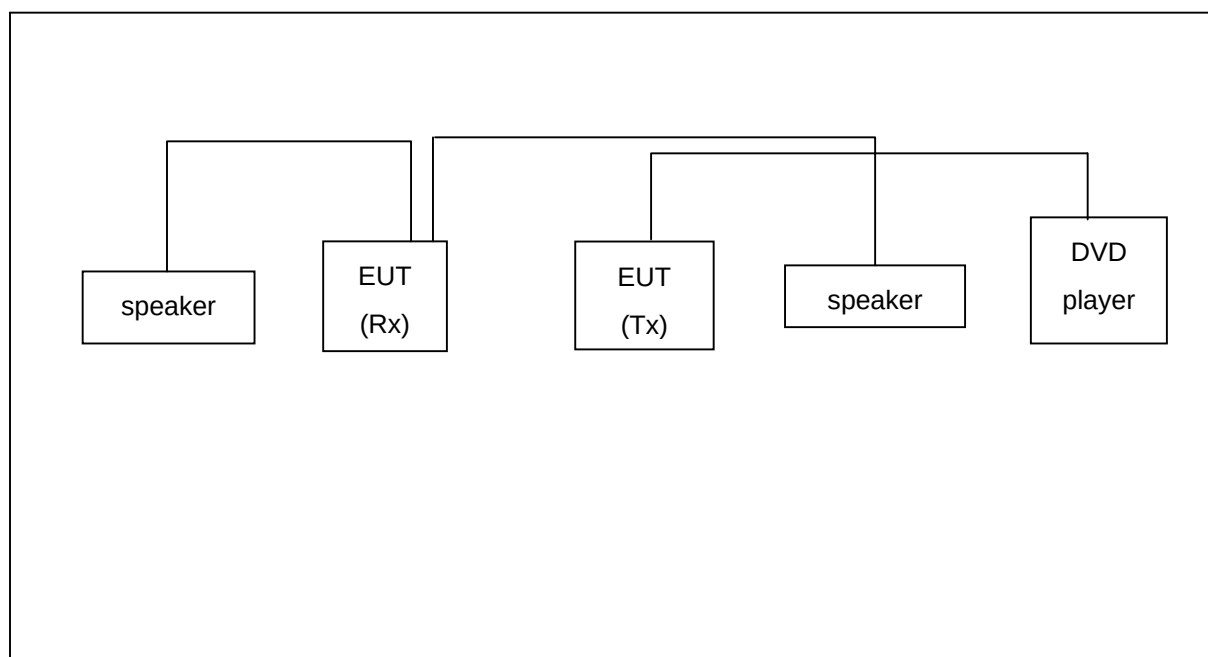
2.1 Frequency Range Investigated

Radiated emission test: from 30 MHz to 10th harmonic of the highest operating frequency or 40GHz whichever is lower.

2.2 Description of Test Supporting Units

2 sub-speakers connected with the receiver, and one DVD Player provided by the applicant.

2.3 Connection Diagram of Test System





2.4 Test Software

No test software is required for this testing.



3. Test Location and Standards

3.1 Test Location

Test Location : Sporton Hwa Ya Testing Building

Address : 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. : 03CH03-HY

3.2 Test Conditions

Normal Voltage : 120V/60Hz
Extreme Voltage : 126.5V and 93.5V
Normal Temperature : 20°C
Extreme Temperature : -20°C and 50°C

3.3 Standards for Methods of Measurement

Here is the list of the standards followed in this test report.

ANSI C63.4-2001

47 CFR Part 15 Subpart C (Section 15.249)

3.4 DoC Statement

This EUT is also classified as a device of computer peripheral Class B which DoC has to be followed. It has been verified according to the rule of 47 CFR part 15 Subpart B, and found that all the requirements has been fulfilled.

4. List of Measurements

4.1 Summary of the Test Results

Applied Standard: 47 CFR Part 15 and Part 2			
Paragraph	FCC Rule	Description of Test	Result
5.1	15.249(a)	Carrier field strength	Pass
5.2	15.107/15.207	AC Power Line Conducted Emission	Pass
5.4	15.249(a)/ 15.249(d)	Spurious Radiated Emission	Pass
5.3	15.249(b)	Frequency Tolerance	Pass
5.5	15.235(c)(3)	Antenna Requirement	Pass



5. Test Result

5.1 Carrier Field Strength

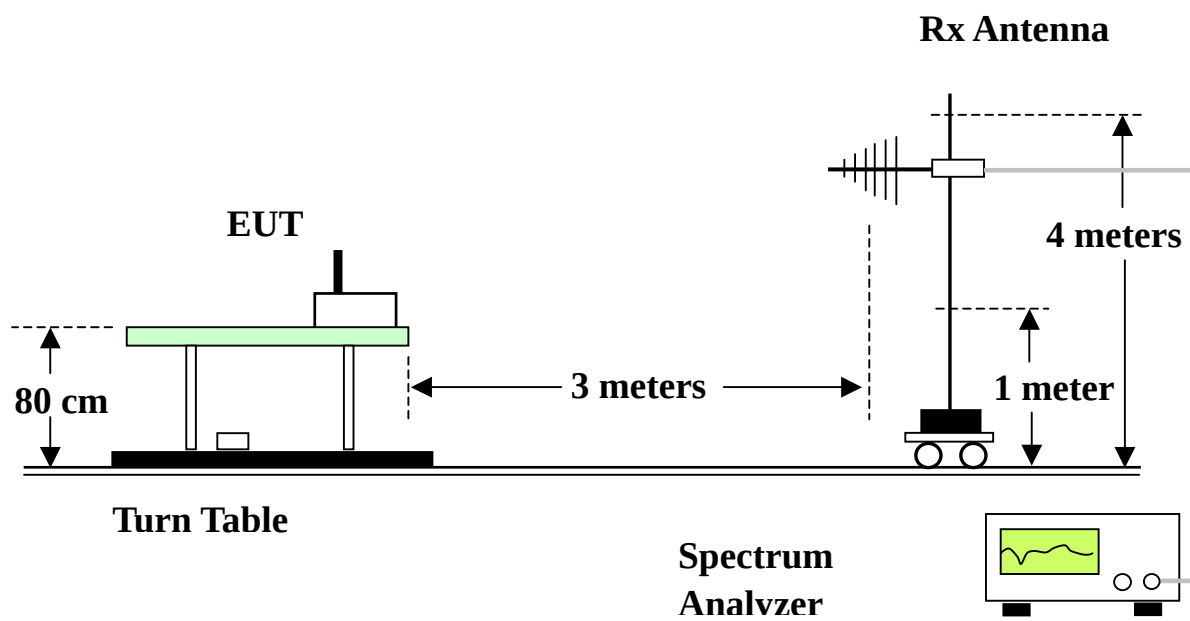
5.1.1 Measuring Instruments

Item 1~9 of the table on section 7.

5.1.2 Test Procedures

- a) Configure the EUT according to ANSI C63.4.
- b) The EUT was placed on the top of the turn table 0.8 meter above ground.
- c) The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turn table.
- d) Power on the EUT and all the supporting units.
- e) The turn table was rotated by 360 degrees to determine the position of the highest radiation.
- f) The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emission field strength of both horizontal and vertical polarization.
- g) For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turn table was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- h) Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- i) For emission above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
- j) If the emission level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz and average method for above the 1GHz. the reported.
- k) For testing above 1GHz, the emission level of the EUT in peak mode was 20dB higher than average limit (that means the emission level in peak 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.

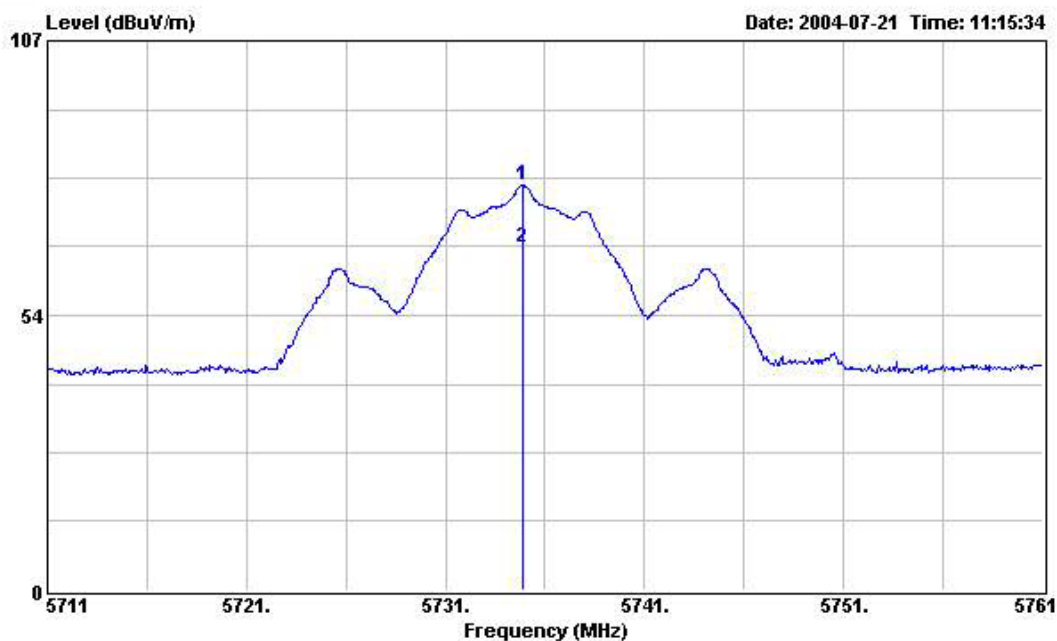
5.1.3 Test Setup Layout





5.1.4 Test Result

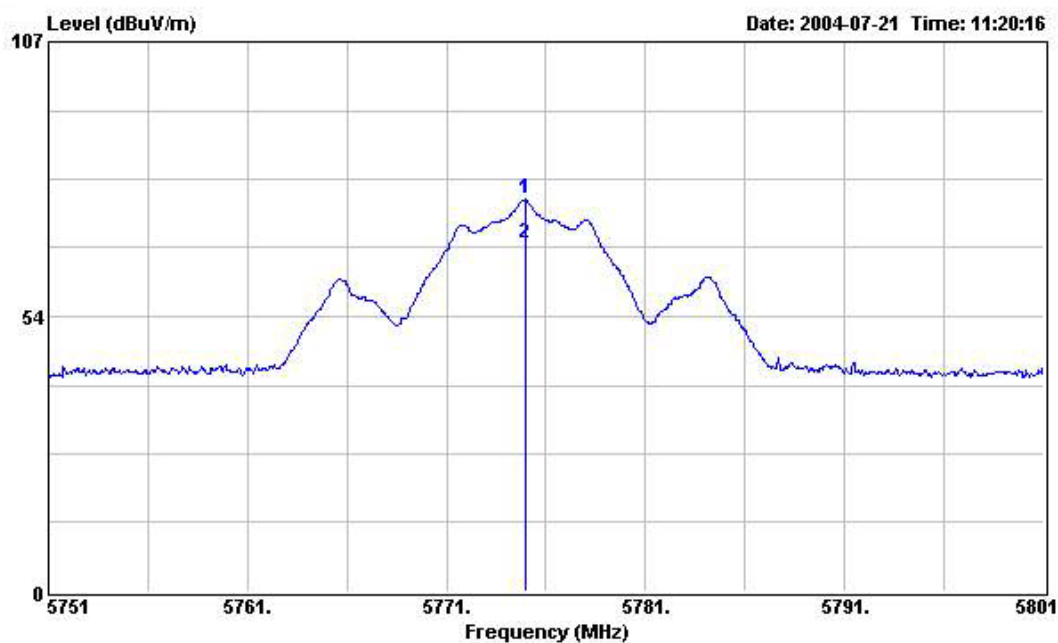
Test Channel	CH 01	Temperature	25 deg. C	Tested By	Steve Chen
Frequency	5735MHz	Humidity	64%		



Frequency (MHz)	Level (dBuV/m)	Read Level (dBuV)	Probe Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Limit Line (dBuV/m)	Detect Mode
5734.900	78.84	84.88	34.50	2.66	43.20	114	Peak
5734.900	66.82	72.86	34.50	2.66	43.20	94	AV



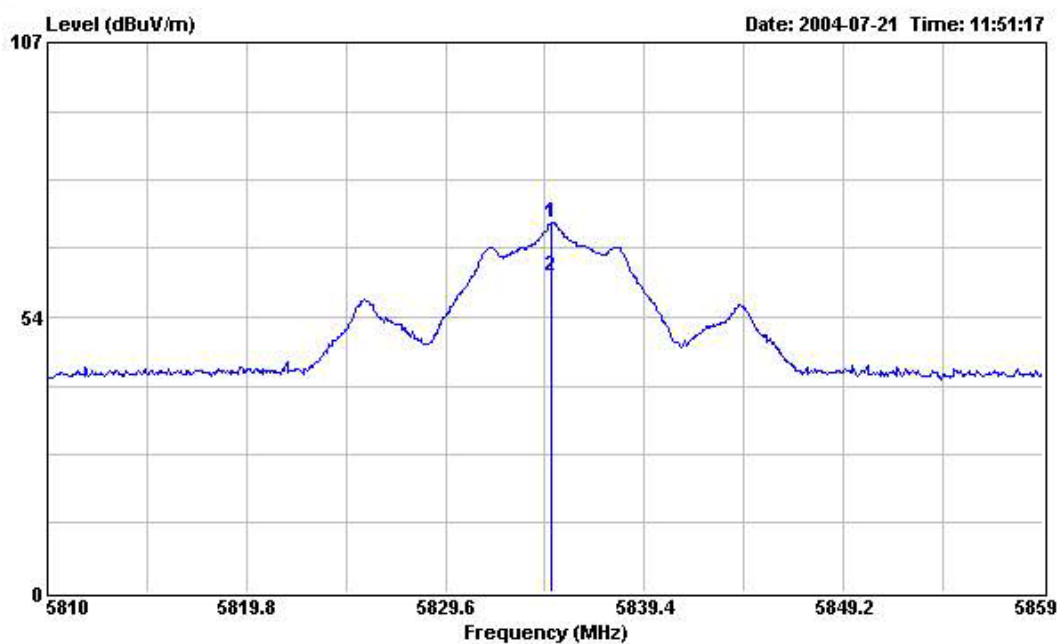
Test Channel	CH 03	Temperature	25 deg. C	Tested By	Steve Chen
Frequency	5775MHz	Humidity	64%		



Frequency (MHz)	Level (dBuV/m)	Read Level (dBuV)	Probe Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Limit Line (dBuV/m)	Detect Mode
5774.950	76.48	82.75	34.51	2.43	43.21	114	Peak
5774.950	67.57	73.84	34.51	2.43	43.21	94	AV



Test Channel	CH 06	Temperature	27 deg. C	Tested By	Steve Chen
Frequency	5835MHz	Humidity	63%		



Frequency (MHz)	Level (dBuV/m)	Read Level (dBuV)	Probe Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Limit Line (dBuV/m)	Detect Mode
5837.850	71.80	77.86	34.54	2.64	43.24	114	Peak
5834.850	61.56	67.62	34.54	2.64	43.24	94	AV



5.2 AC Power Line Conducted Emission

5.2.1 Measuring Instruments

Please reference item 1~7 in chapter 6 for the instruments used for testing.

5.2.2 Test Procedures

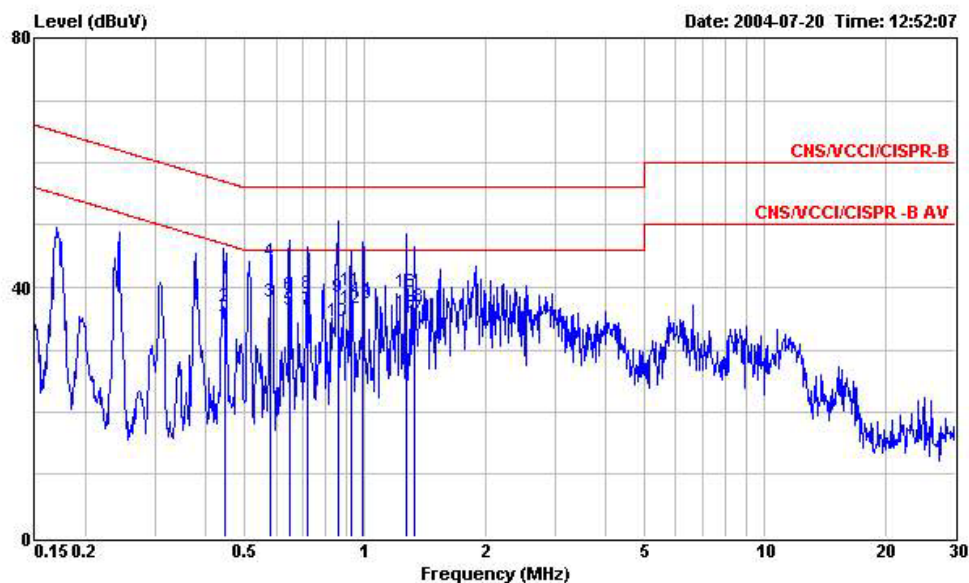
1. Configure the EUT according to ANSI C63.4.
2. The EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connected to the other LISNs. The LISN should provides 50uH/50ohms coupling impedance.
5. The frequency range from 150 KHz to 30 MHz was searched.
6. Use the Channel & Power Controlling software to make the EUT working on selected channel and expected output power, then use the "H" Patter Generator software to make the supporting equipments stay on working condition.
7. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
8. The measurement has to be done between each power line and ground at the power terminal for each RF channel. Only one RF channel has to be investigated since this test is independent with the RF channel selection.



5.2.3 Test Result of Conducted Emission

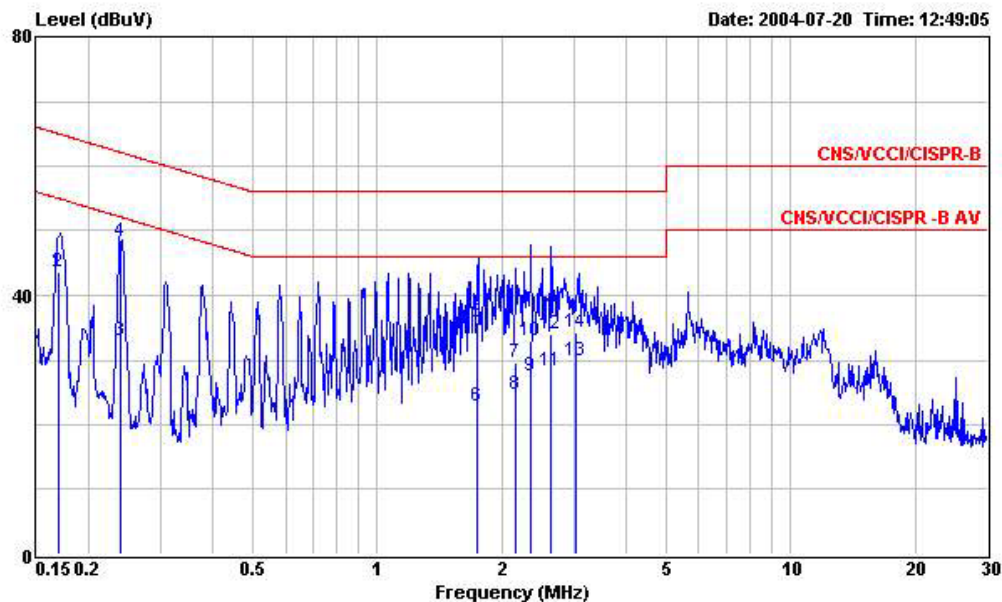
Test Mode	RF LINK	Tested By	Brian Lin
Temperature / Humidity	24deg. C / 53%		

Line to Ground



	Freq	Level	Limit	Line	Level	Probe	Cable	
	MHz	dBuV	dB	dBuV	dBuV	Factor	Loss	Remark
1	0.445	34.02	-12.94	46.96	33.89	0.10	0.03	Average
2	0.445	36.95	-20.01	56.96	36.82	0.10	0.03	QP
3	0.581	37.72	-8.28	46.00	37.59	0.10	0.03	Average
4	0.581	44.21	-11.79	56.00	44.08	0.10	0.03	QP
5	0.651	36.32	-9.68	46.00	36.18	0.10	0.04	Average
6	0.651	38.72	-17.28	56.00	38.58	0.10	0.04	QP
7	0.720	36.29	-9.71	46.00	36.15	0.10	0.04	Average
8	0.720	38.84	-17.16	56.00	38.70	0.10	0.04	QP
9	0.857	38.42	-17.58	56.00	38.28	0.10	0.04	QP
10	0.857	34.42	-11.58	46.00	34.28	0.10	0.04	Average
11	0.923	39.59	-16.41	56.00	39.45	0.10	0.04	QP
12	0.923	36.52	-9.48	46.00	36.38	0.10	0.04	Average
13	0.990	37.52	-8.48	46.00	37.38	0.10	0.04	Average
14	0.990	37.84	-18.16	56.00	37.70	0.10	0.04	QP
15	1.266	35.77	-10.23	46.00	35.62	0.10	0.05	Average
16	1.266	39.16	-16.84	56.00	39.01	0.10	0.05	QP
17	1.333	35.19	-10.81	46.00	35.03	0.10	0.06	Average
18	1.333	36.82	-19.18	56.00	36.66	0.10	0.06	QP

Neutral to Ground



	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.170	43.56	-21.40	64.96	43.45	0.10	0.01	QP
2	0.170	43.74	-11.22	54.96	43.63	0.10	0.01	Average
3	0.239	32.95	-19.17	52.12	32.83	0.10	0.02	Average
4	0.239	48.38	-13.74	62.12	48.26	0.10	0.02	QP
5	1.750	35.79	-20.21	56.00	35.62	0.10	0.07	QP
6	1.750	22.90	-23.10	46.00	22.73	0.10	0.07	Average
7	2.170	29.74	-26.26	56.00	29.55	0.11	0.08	QP
8	2.170	24.80	-21.20	46.00	24.61	0.11	0.08	Average
9	2.360	27.59	-18.41	46.00	27.38	0.12	0.09	Average
10	2.360	33.05	-22.95	56.00	32.84	0.12	0.09	QP
11	2.640	28.40	-17.60	46.00	28.17	0.14	0.09	Average
12	2.640	33.96	-22.04	56.00	33.73	0.14	0.09	QP
13	3.022	29.81	-16.19	46.00	29.55	0.16	0.10	Average
14	3.022	34.31	-21.69	56.00	34.05	0.16	0.10	QP

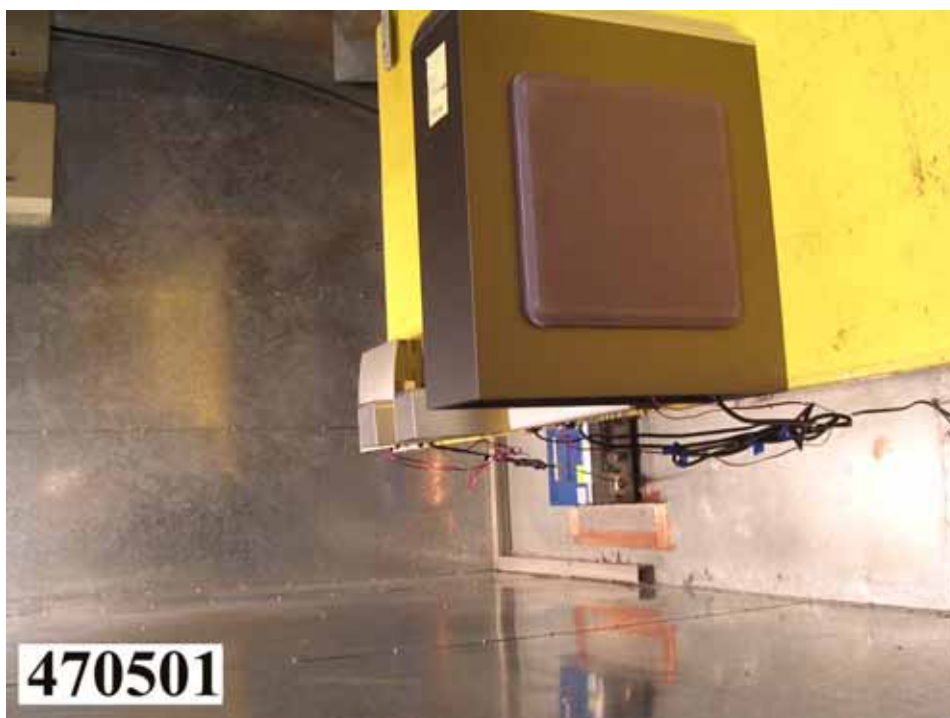
5.2.4 Photographs of Conducted Emission Test Configuration

- The photographs show the configuration that generates the maximum emission.

FRONT VIEW



REAR VIEW



SIDE VIEW



5.3 Frequency Tolerance

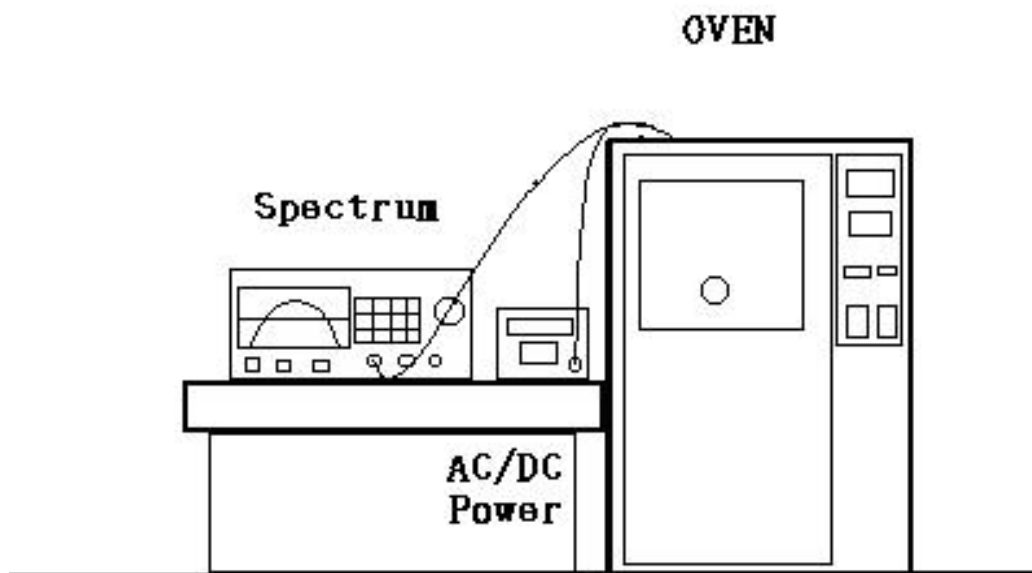
5.3.1 Measuring Instruments

Item 2, 6, 8 of the table on section 7.

5.3.2 Test Procedures

- Power must be removed when changing from one temperature to another or one voltage to another voltage. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- The frequency tolerance of the carrier signal shall be maintained within $\pm 0.001\%$ of the operating frequency over a temperature variation of -20 degrees to $+50$ degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C, For battery operated equipment, the equipment tests shall be performed using a new battery.
- The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5^{\circ}\text{C}$ during the measurement testing.

5.3.3 Test Setup Layout



5.3.4 Test Result

FREQUENCY ERROR vs. VOLTAGE			
Voltage (Volts)	Frequency (MHz)	Frequency Error (ppm)	Limit
126.5	5735.0242	4.22	10ppm
110.0	5735.0223	3.89	10ppm
93.5	5735.0114	1.99	10ppm

FREQUENCY ERROR vs. TEMPERATURE			
Temp. (°C)	Frequency (MHz)	Frequency Error (ppm)	Limit
-20	5735.0124	2.16	10ppm
-10	5735.0156	2.72	10ppm
0	5735.0211	3.68	10ppm
10	5735.0314	5.48	10ppm
20	5735.0128	2.23	10ppm
30	5735.0221	3.85	10ppm
40	5735.0045	0.78	10ppm
50	5735.0142	2.48	10ppm



5.4 Test of Radiated Emission

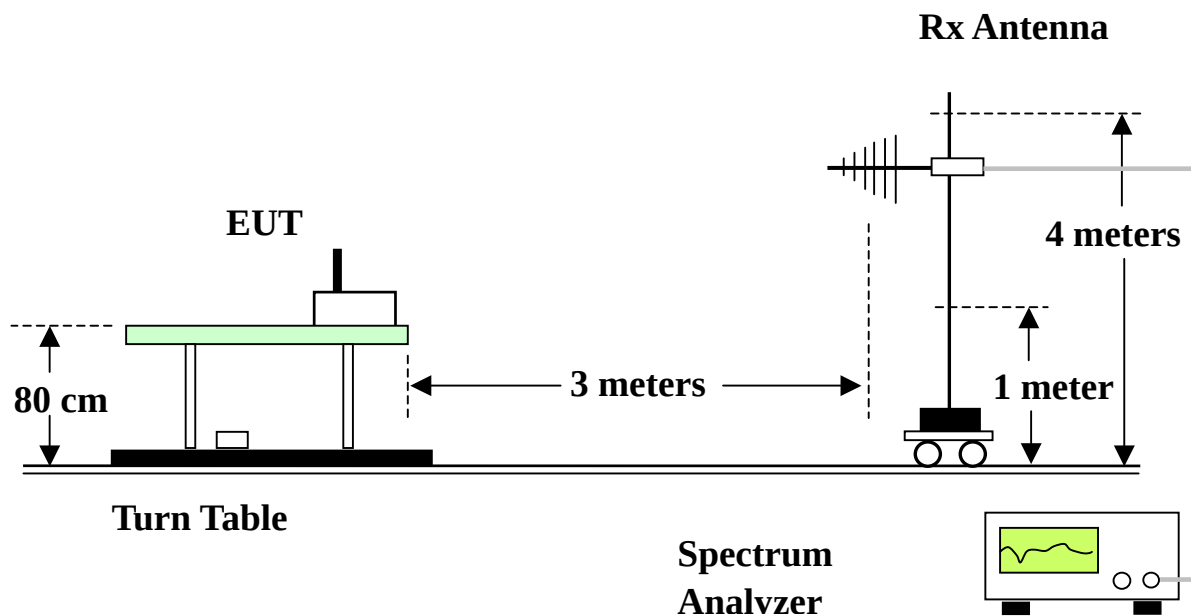
5.4.1 Measuring Instruments

Item 1~9 of the table on section 7.

5.4.2 Test Procedures

- a) Configure the EUT according to ANSI C63.4.
- b) The EUT was placed on the top of the turn table 0.8 meter above ground.
- c) The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turn table.
- d) Power on the EUT and all the supporting units.
- e) The turn table was rotated by 360 degrees to determine the position of the highest radiation.
- f) The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emission field strength of both horizontal and vertical polarization.
- g) For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turn table was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- h) Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- i) For emission above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
- j) If the emission level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz and average method for above the 1GHz. the reported.
- k) For testing above 1GHz, the emission level of the EUT in peak mode was 20dB higher than average limit (that means the emission level in peak 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.

5.4.3. Test Setup Layout





5.4.4 Test Results and Limit

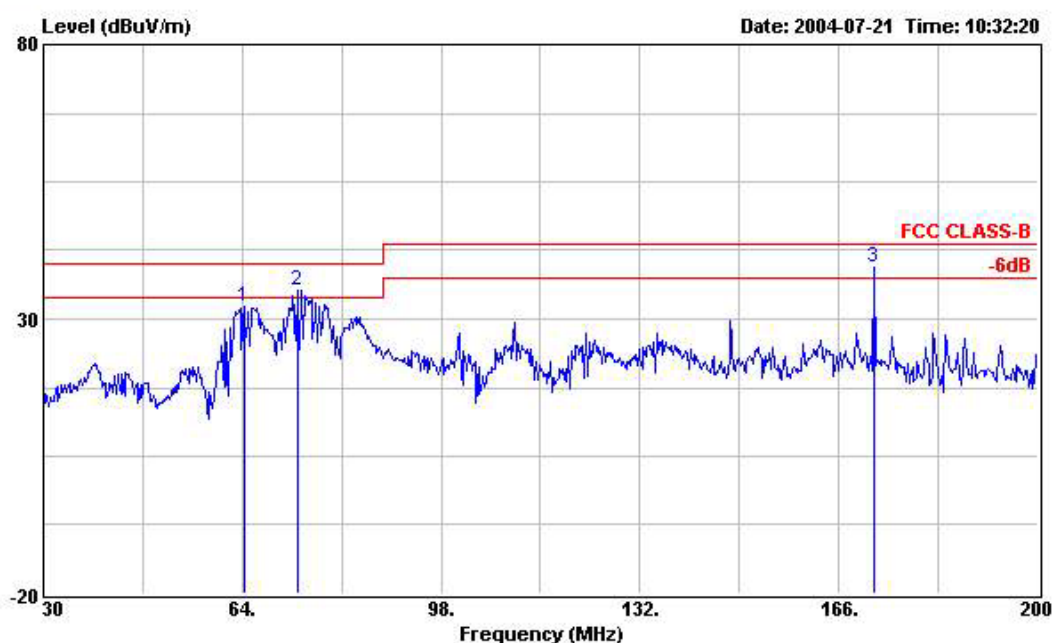
Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m)

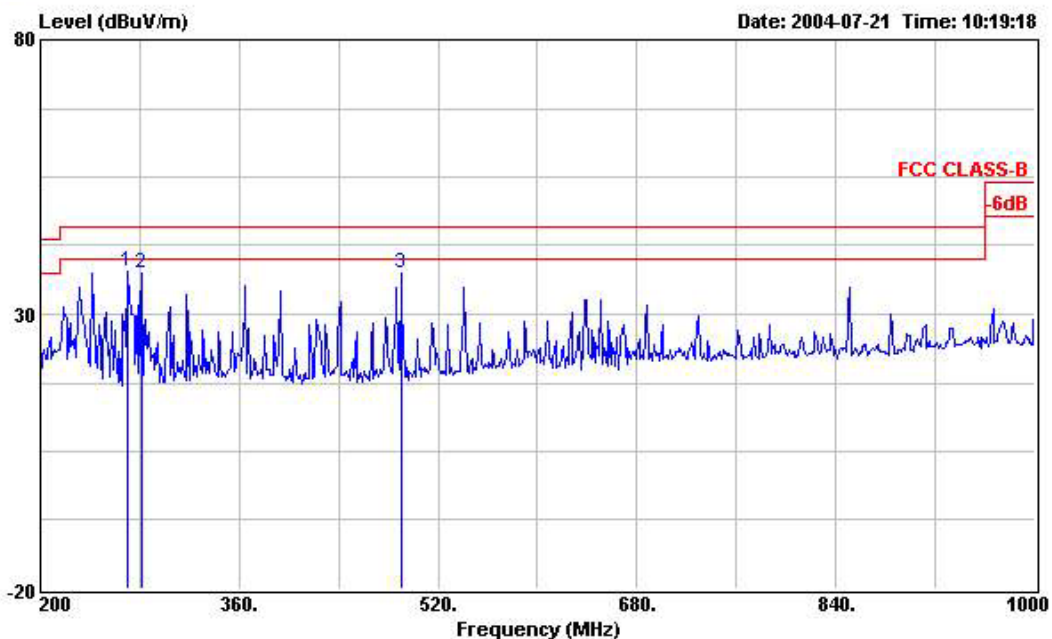
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

Test Mode	RF LINK (CH06)	Temperature	25 deg. C	Tested By	Steve Chen
Freq. Range	30MHz~1GHz	Humidity	64%		

(A) Polarization: Horizontal



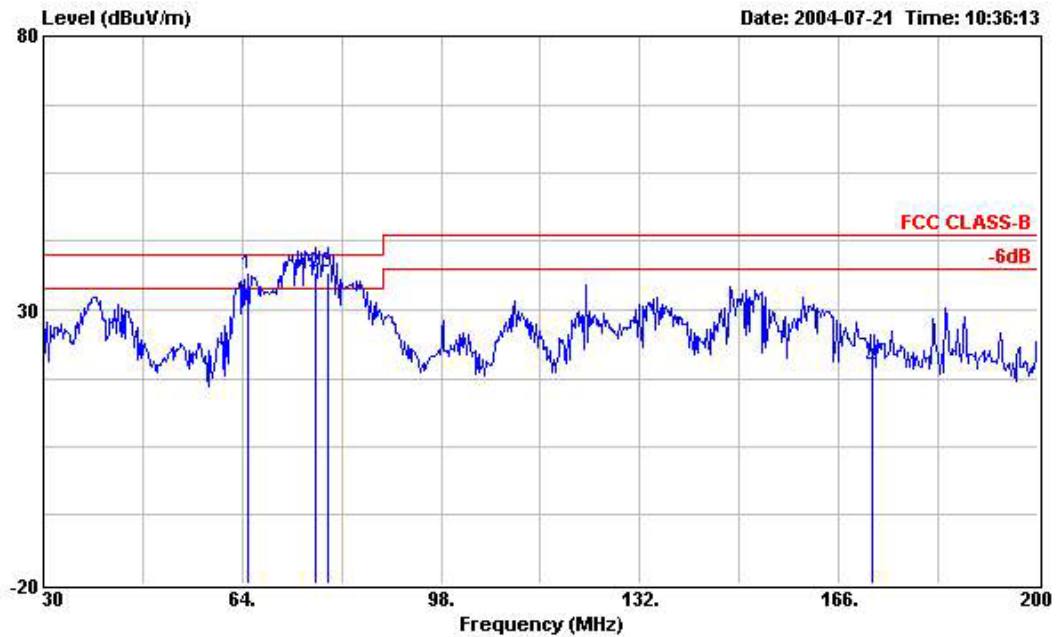
	Freq	Level	Over	Limit	Read	Probe	Cable	Preamp		Ant	Table
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
			dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	64.340	32.23	-7.77	40.00	49.42	9.43	1.35	27.97	QP	---	---
2 !	73.350	35.31	-4.69	40.00	52.78	9.04	1.44	27.95	QP	---	---
3 !	171.950	39.55	-3.95	43.50	51.62	13.32	2.37	27.76	QP	---	---



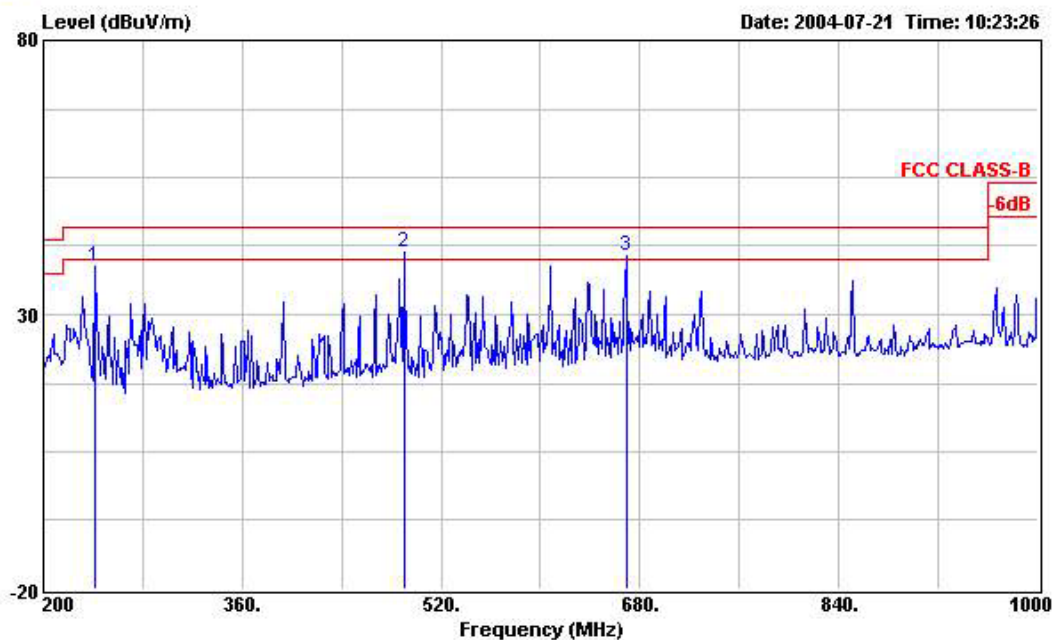
	Freq	Level	Over	Limit	Read	Probe	Cable	Preamp		Ant	Table
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	269.600	37.87	-8.13	46.00	49.81	12.53	2.95	27.42	QP	---	---
2	281.600	37.35	-8.65	46.00	48.79	12.91	3.02	27.37	QP	---	---
3	490.400	37.57	-8.43	46.00	45.11	17.22	3.85	28.61	QP	---	---



(B) Polarization: Vertical



	Freq	Level	Over	Limit	Read	Probe	Cable	Preamp		Ant	Table
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1 !	65.020	36.56	-3.44	40.00	53.82	9.35	1.36	27.97	QP	---	---
2 !	76.580	36.89	-3.11	40.00	54.14	9.21	1.49	27.95	QP	157	178
3 !	78.790	36.82	-3.18	40.00	53.85	9.38	1.53	27.94	QP	---	---
4	171.780	19.35	-24.15	43.50	31.43	13.31	2.37	27.76	QP	---	---



	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	240.800	38.84	-7.16	46.00	50.77	12.81	2.80	27.54	QP	---	---
2 !	490.400	41.41	-4.59	46.00	48.95	17.22	3.85	28.61	QP	---	---
3 !	668.800	40.73	-5.27	46.00	45.65	19.17	4.64	28.73	QP	---	---



Test Mode	Mode 1	Temperature	25 deg. C	Tested By	Steve Chen
Freq. Range	1GHz~40GHz	Humidity	64%		

(A) Polarization: Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamplifier Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	1092.000	41.98	-12.02	54.00	56.88	24.08	1.22	40.20	Average	---	---
2	1334.000	38.46	-15.54	54.00	52.79	24.77	1.35	40.45	Average	---	---
3	1822.000	37.79	-16.21	54.00	50.52	26.45	1.62	40.80	Average	---	---
1	3822.000	47.93	-6.07	54.00	55.08	32.24	2.04	41.43	Average	---	---
1	7644.000	48.20	-5.80	54.00	50.48	36.79	3.21	42.28	Average	102	216

(B) Polarization: Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamplifier Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	1092.000	47.74	-6.26	54.00	62.64	24.08	1.22	40.20	Average	---	---
2	1822.000	40.67	-13.33	54.00	53.40	26.45	1.62	40.80	Average	---	---
3	2308.000	43.03	-10.97	54.00	54.45	27.92	1.75	41.09	Average	---	---
1	3822.000	45.00	-9.00	54.00	52.15	32.24	2.04	41.43	Average	---	---



Test Mode	Mode 2	Temperature	25 deg. C	Tested By	Steve Chen
Freq. Range	1GHz~40GHz	Humidity	64%		

(A) Polarization: Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	1092.000	41.28	-12.72	54.00	56.18	24.08	1.22	40.20	Average	---	---
2	1334.000	37.70	-16.30	54.00	52.03	24.77	1.35	40.45	Average	---	---
3	1732.000	41.81	-12.19	54.00	54.98	26.12	1.46	40.75	Average	---	---
1	3846.000	46.50	-7.50	54.00	53.50	32.31	2.13	41.44	Average	---	---
1	7700.000	47.44	-6.56	54.00	49.87	36.83	2.97	42.23	Average	---	---

(B) Polarization: Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	1092.000	47.54	-6.46	54.00	62.44	24.08	1.22	40.20	Average	---	---
2	1822.000	40.35	-13.65	54.00	53.08	26.45	1.62	40.80	Average	---	---
3	2308.000	42.32	-11.68	54.00	53.74	27.92	1.75	41.09	Average	---	---
1	3846.000	45.79	-8.21	54.00	52.79	32.31	2.13	41.44	Average	---	---
1	5734.000	46.43	-7.57	54.00	52.47	34.50	2.66	43.20	Average	---	---
1	7700.000	48.47	-5.53	54.00	50.90	36.83	2.97	42.23	Average	105	127



Test Mode	Mode 3	Temperature	25 deg. C	Tested By	Steve Chen
Freq. Range	1GHz~40GHz	Humidity	64%		

(A) Polarization: Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	1092.000	41.29	-12.71	54.00	56.19	24.08	1.22	40.20	Average	---	---
2	1334.000	38.18	-15.82	54.00	52.51	24.77	1.35	40.45	Average	---	---
3	1822.000	36.93	-17.07	54.00	49.66	26.45	1.62	40.80	Average	---	---
1	3886.000	43.93	-10.07	54.00	51.72	32.42	1.25	41.46	Average	---	---
1	7780.000	49.52	-4.48	54.00	51.99	36.87	2.83	42.17	Average	103	228

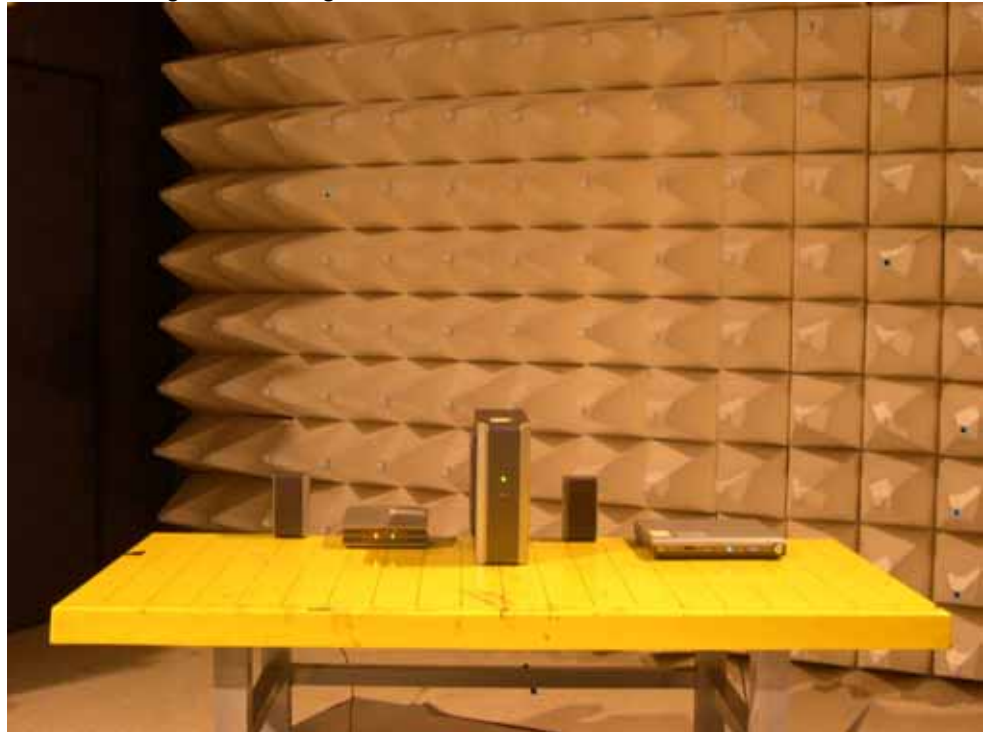
(B) Polarization: Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	1092.000	47.89	-6.11	54.00	62.79	24.08	1.22	40.20	Average	---	---
2	1276.000	41.90	-12.10	54.00	56.32	24.60	1.37	40.39	Average	---	---
3	2308.000	42.73	-11.27	54.00	54.15	27.92	1.75	41.09	Average	---	---
1	3886.000	42.80	-11.20	54.00	50.59	32.42	1.25	41.46	Average	---	---

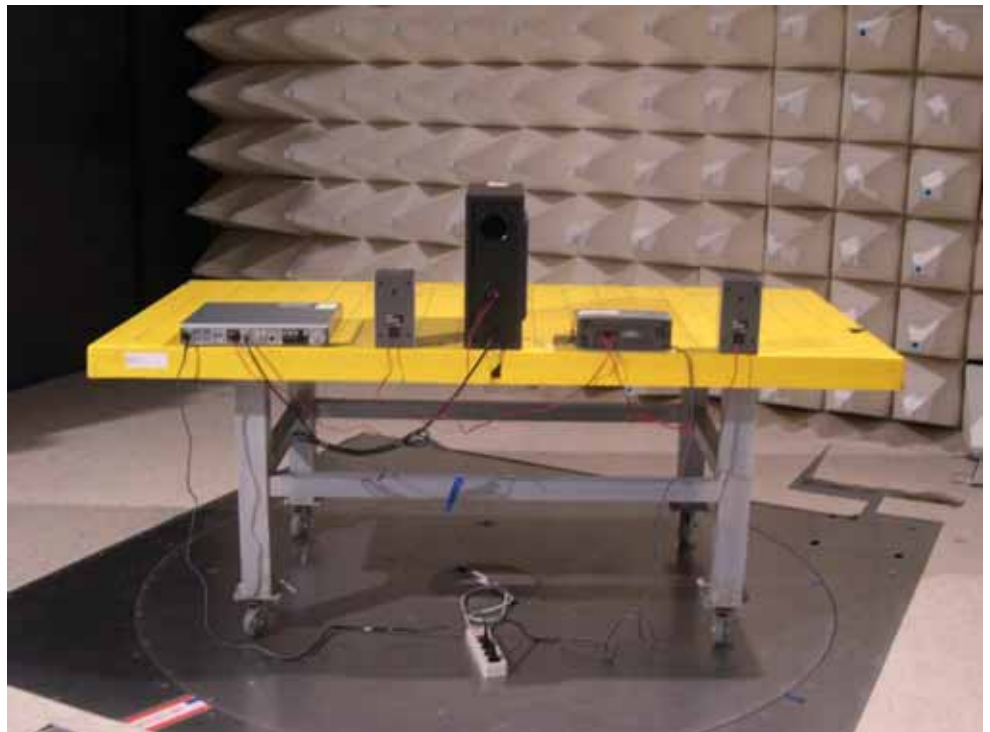
5.4.5 Photographs of Radiated Emission Test Configuration

- The photographs show the configuration that generates the maximum emission.

FRONT VIEW



REAR VIEW





6 Antenna Requirements

6.1 Standard Applicable

47 CFR Part15 Section 15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

47 CFR Part15 Section 15.235 (c):

The antenna shall be a single element, one meter or less in length, permanently mounted on the enclosure containing the device.

6.2 Antenna Construction

The antenna used in this device is dipole antenna, there is no antenna connector.

7 List of Measuring Equipments Used

Items	Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
1	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz~1GHz 3m	Jun. 20, 2004	Radiation (03CH03-HY)
2	Spectrum analyzer	R&S	FSP40	100004	9KHZ~40GHz	Aug. 23, 2003	Radiation (03CH03-HY)
3	Amplifier	HP	8447D	2944A09072	100KHz – 1.3GHz	Nov. 05, 2003	Radiation (03CH03-HY)
4	Biconical Antenna	SCHWARZBECK	VHBB 9124	301	30MHz – 200MHz	Jul. 23, 2004	Radiation (03CH03-HY)
5	Log Antenna	SCHWARZBECK	VUSLP 9111	221	200MHz -1GHz	Jul. 23, 2004	Radiation (03CH03-HY)
6	RF Cable-R03m	Jye Bao	RG142	CB021	30MHz~1GHz	Dec. 03, 2003	Radiation (03CH03-HY)
7	Amplifier	MITEQ	AFS44	879981	100MHz~26.5GHz	Jul. 22, 2004	Radiation (03CH03-HY)
8	Horn Antenna	EMCO	3115	6821	1GHz – 18GHz	Sep. 12, 2003	Radiation (03CH03-HY)
9	Turn Table	HD	DS 420	420/650/00	0 ~ 360 degree	N/A	Radiation (03CH03-HY)
10	Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	Radiation (03CH03-HY)
11	Horn Antenna	Schwarzbeck	BBHA9170	154	15GHz~40GHz	Jun. 01, 2004	Radiation (03CH03-HY)
12	RF Cable-HIGH	Jye Bao	RG142	CB030-HIGH	1GHz~29.5GHz	Dec. 05, 2003	Radiation (03CH03-HY)

※ Calibration Interval of instruments listed above is one year.



Items	Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
1	Spectrum analyzer	R&S	FSP7	838858/014	9KHZ~7GHZ	Sep. 03, 2003	Conducted (TH01-HY)
2	Power meter	R&S	NRVS	100967	DC~40GHz	Mar. 02, 2004	Conducted (TH01-HY)
3	Power sensor	R&S	NRV-Z51	100666	DC~40GHz	Mar 18, 2004	Conducted (TH01-HY)
4	Power Sensor	R&S	NRV-Z32	836953/060	30MHz-6GHz	Mar. 11, 2004	Conducted (TH01-HY)
5	AC power source	G.W.	GPC-6030D	C671845	DC 1V~60V	Nov. 06, 2003	Conducted (TH01-HY)
6	Temp. and Humidity Chamber	KSON	THS-C3L	612	N/A	Oct. 01, 2003	Conducted (TH01-HY)
7	RF CABLE-1m	Jye Bao	RG142	CB034-1m	20MHz~7GHz	Jan. 01, 2004	Conducted (TH01-HY)
8	RF CABLE-2m	Jye Bao	RG142	CB035-2m	20MHz~1GHz	Jan. 01, 2004	Conducted (TH01-HY)

※ Calibration Interval of instruments listed above is one year.

APPENDIX A. Photographs of EUT

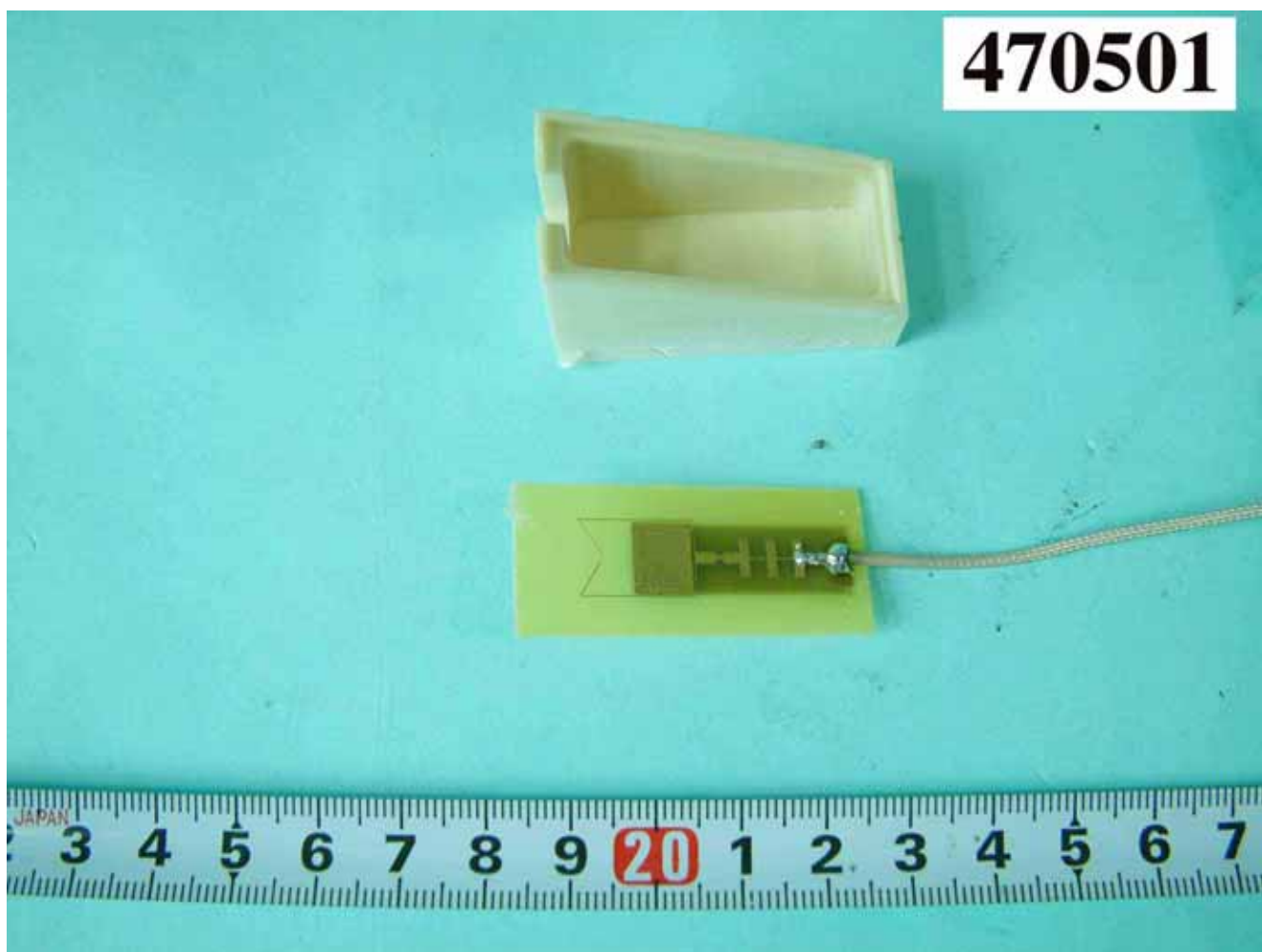


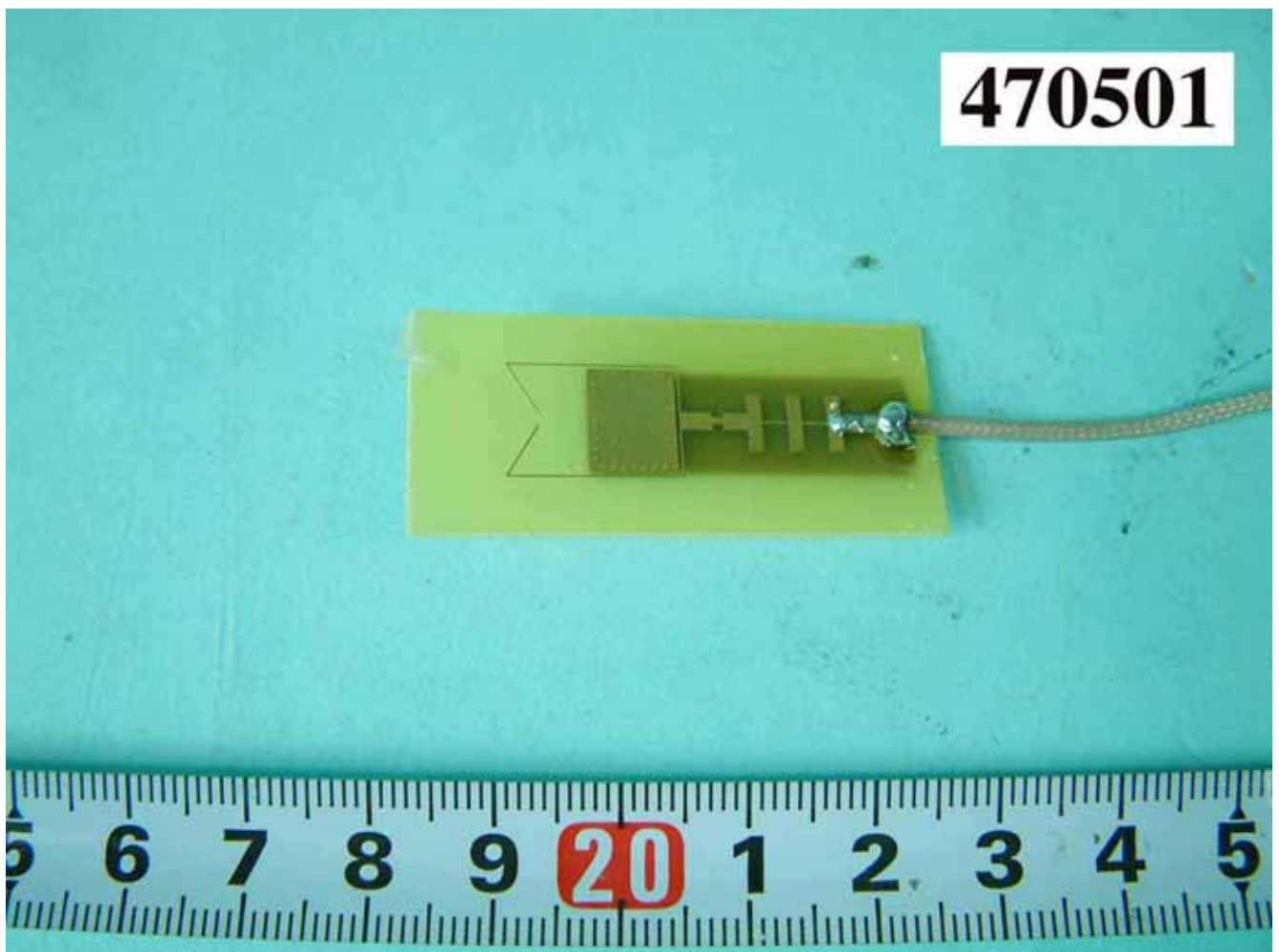


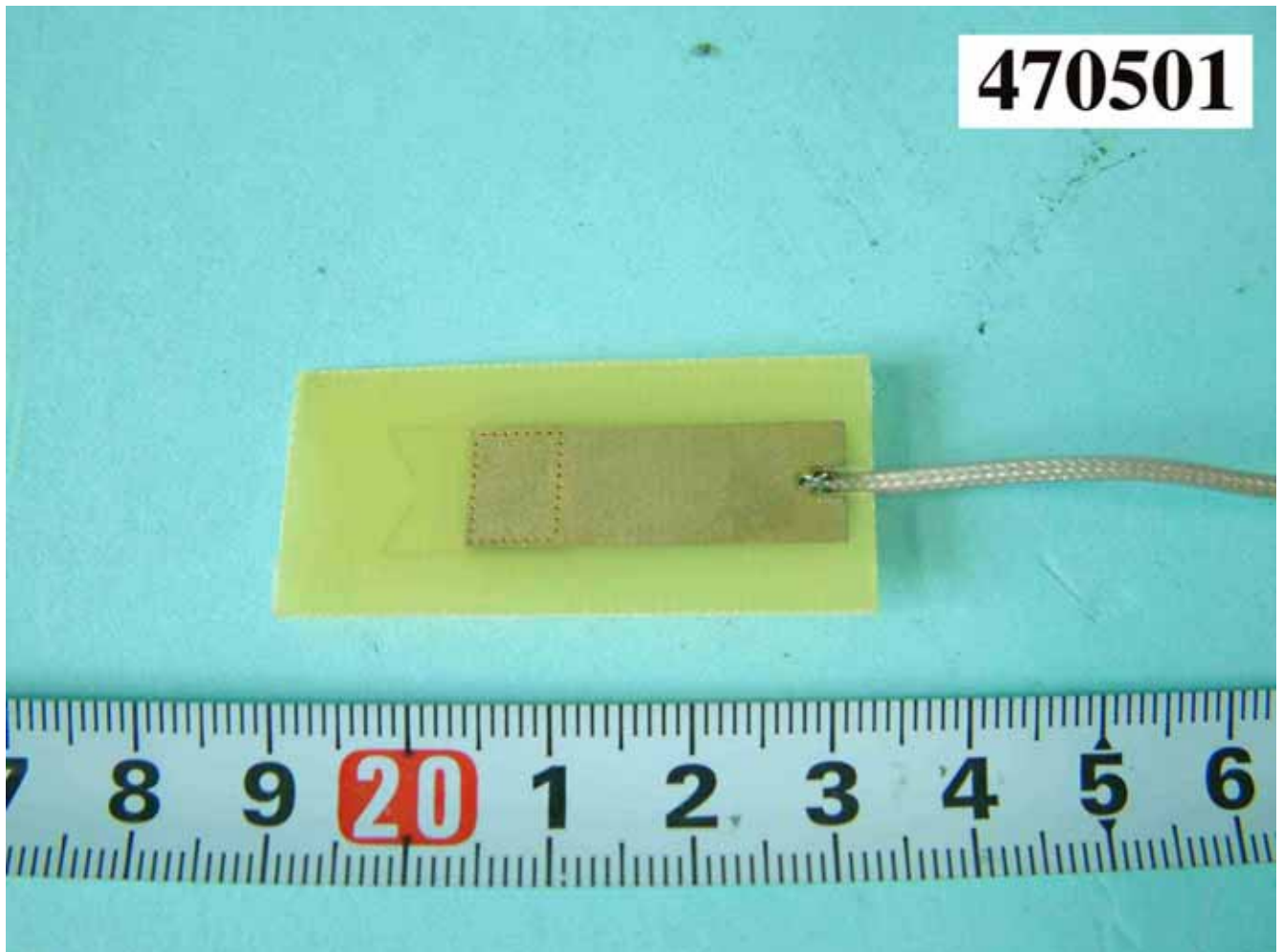


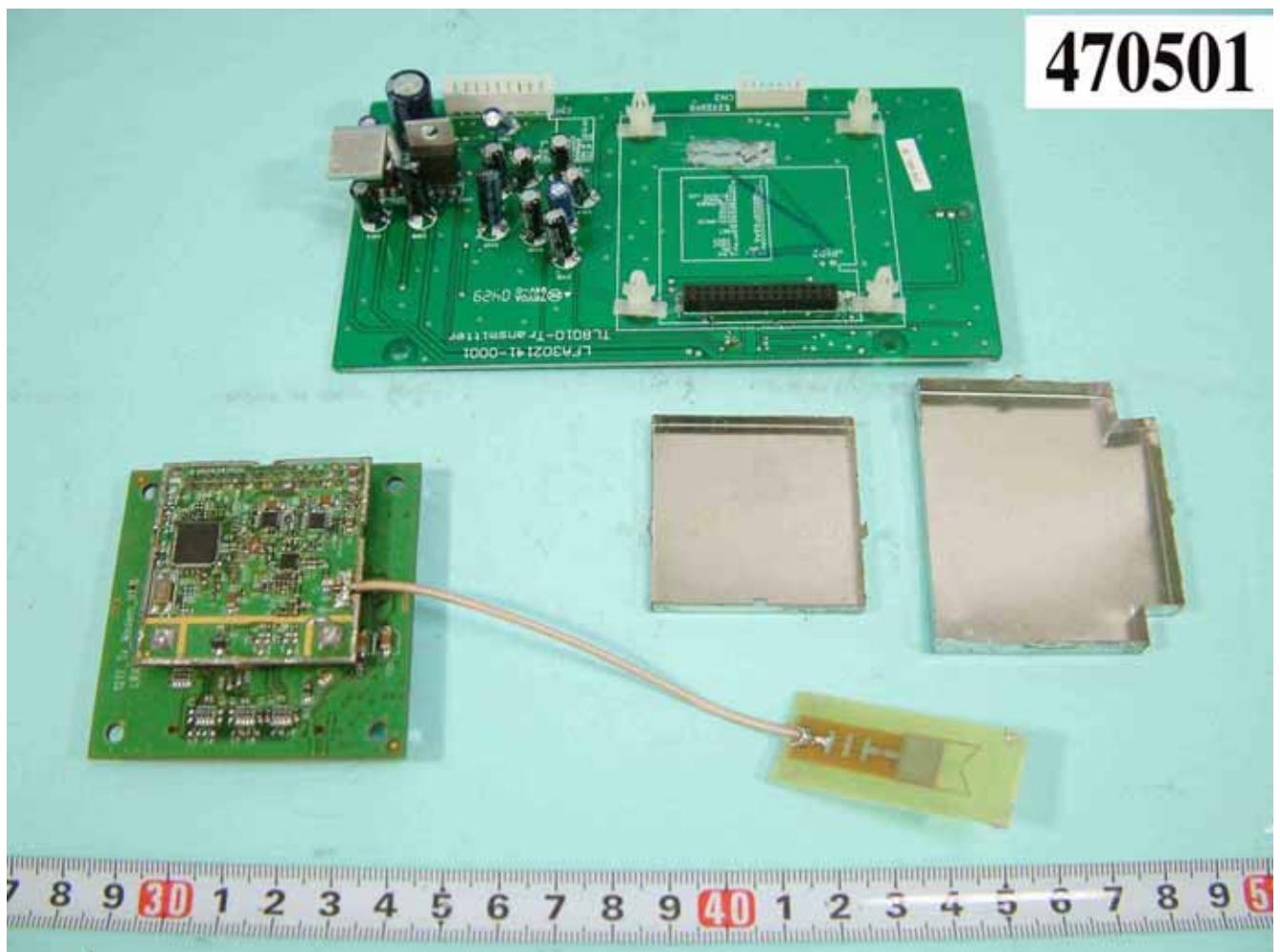
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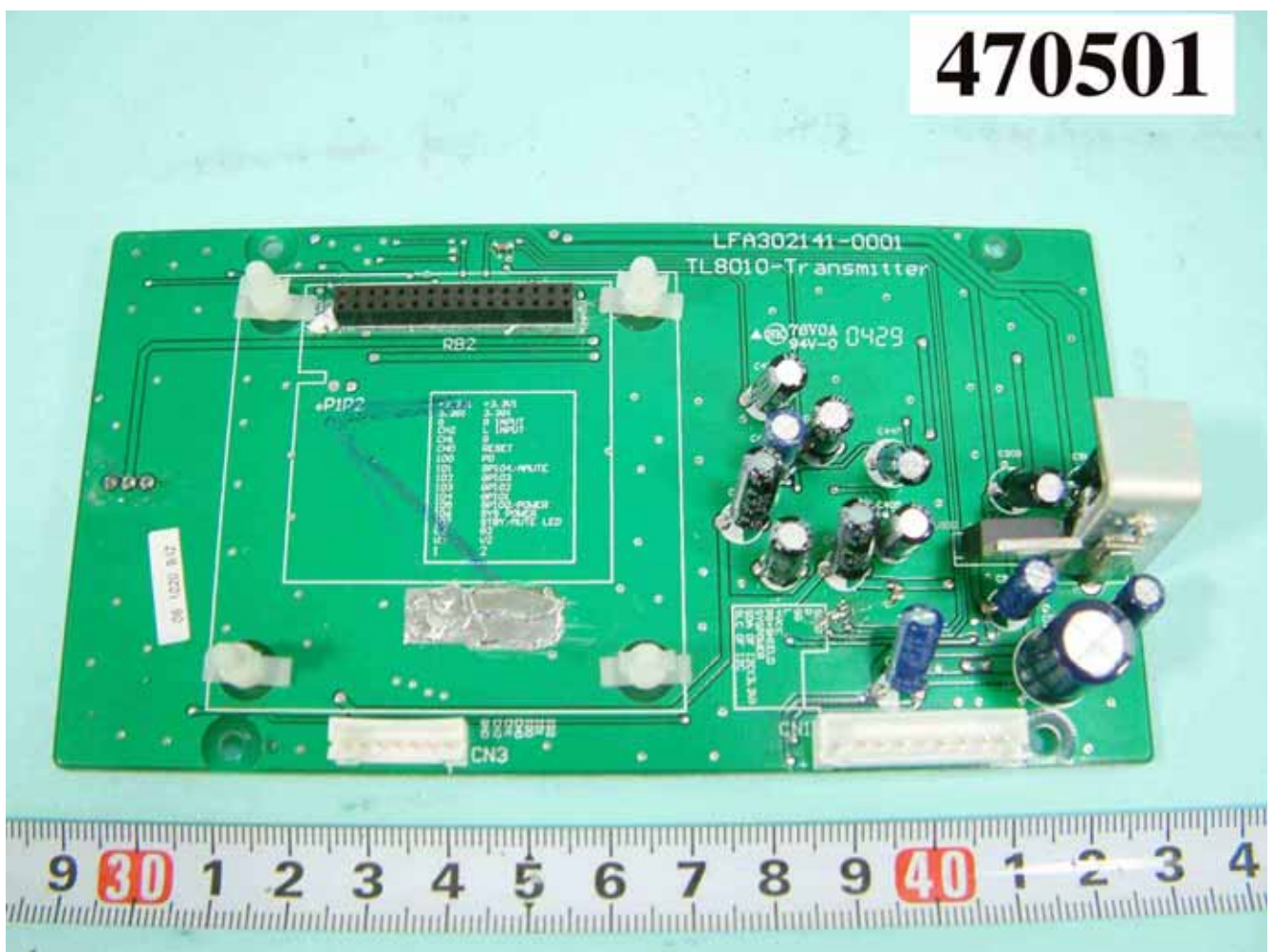


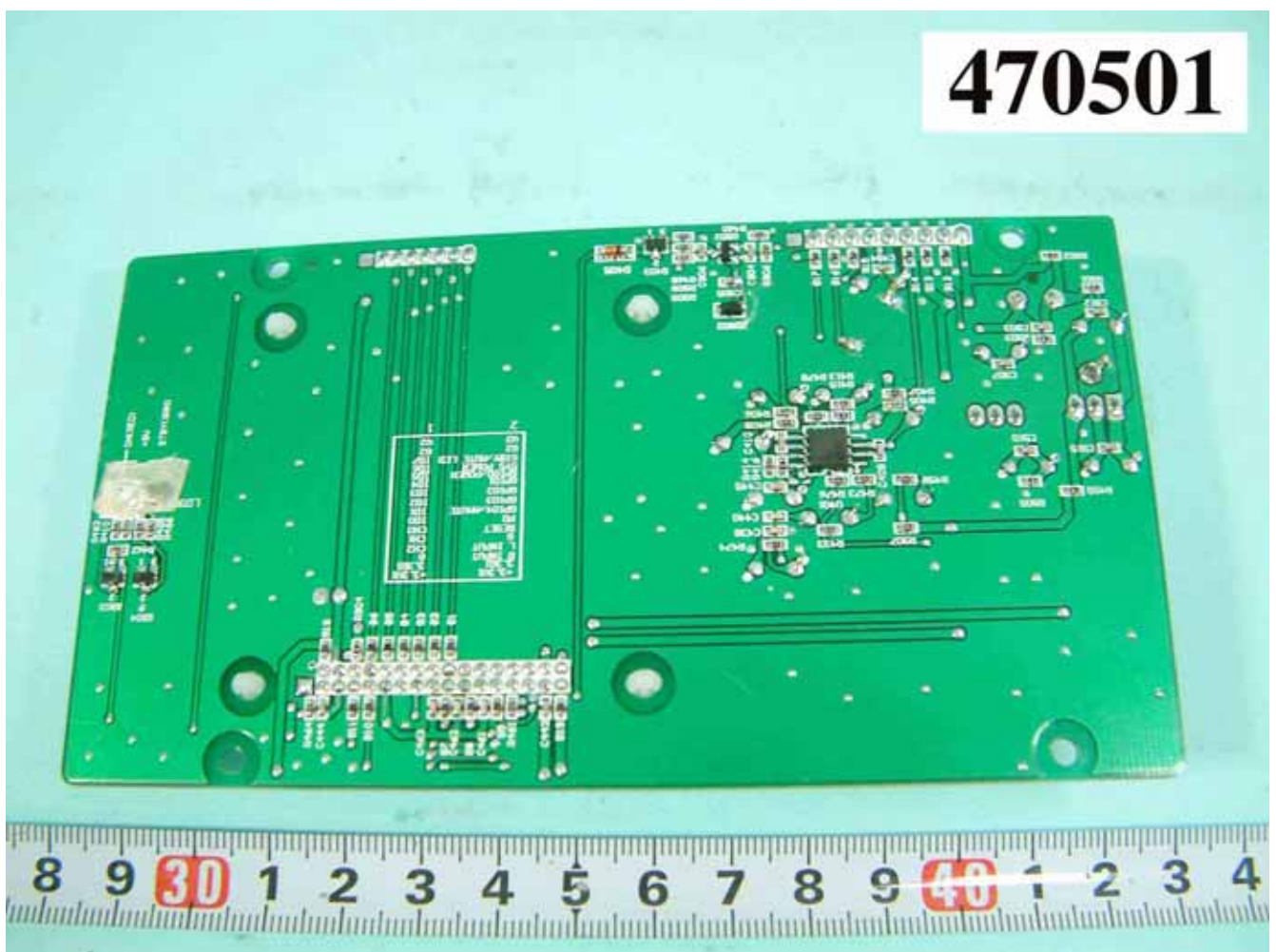


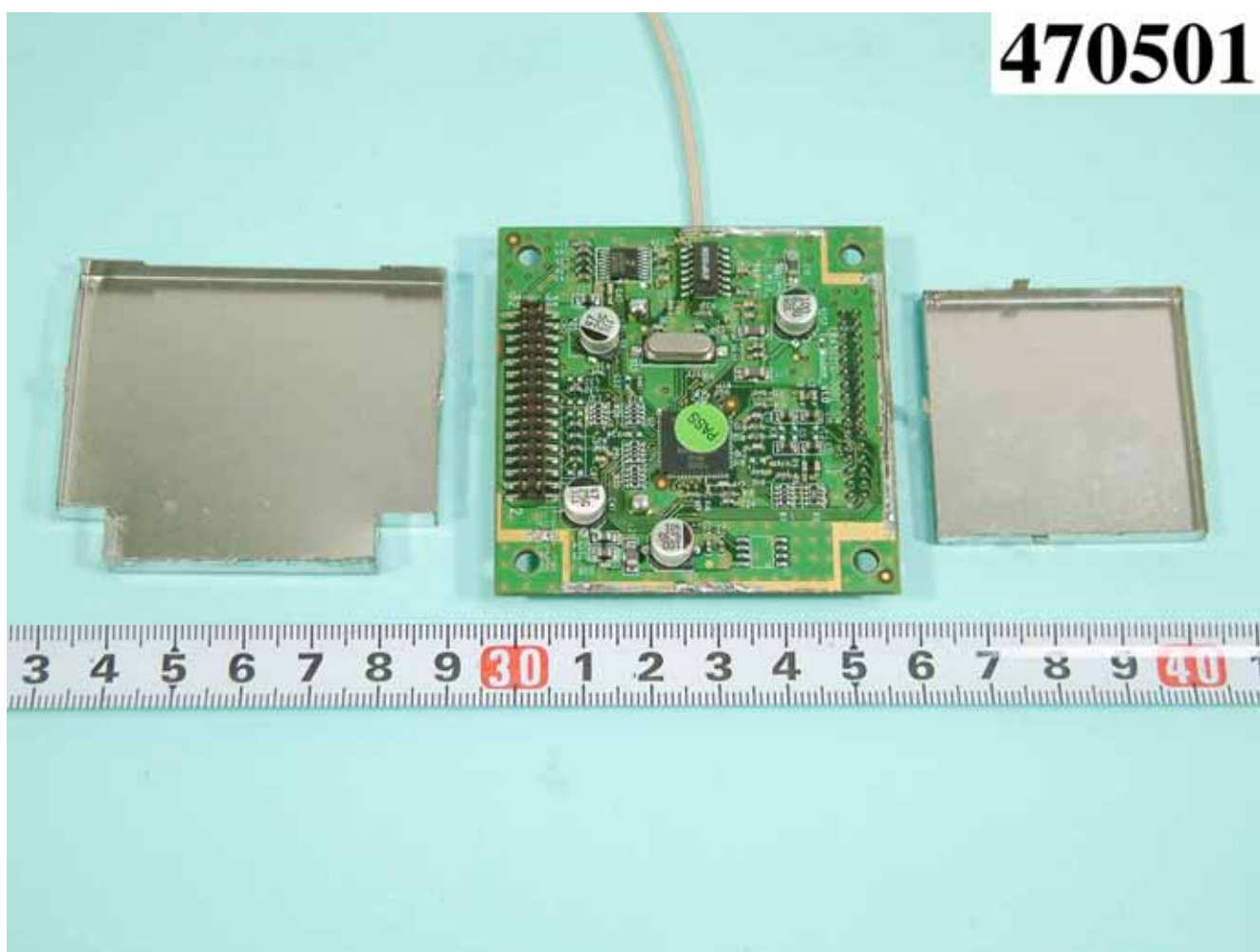


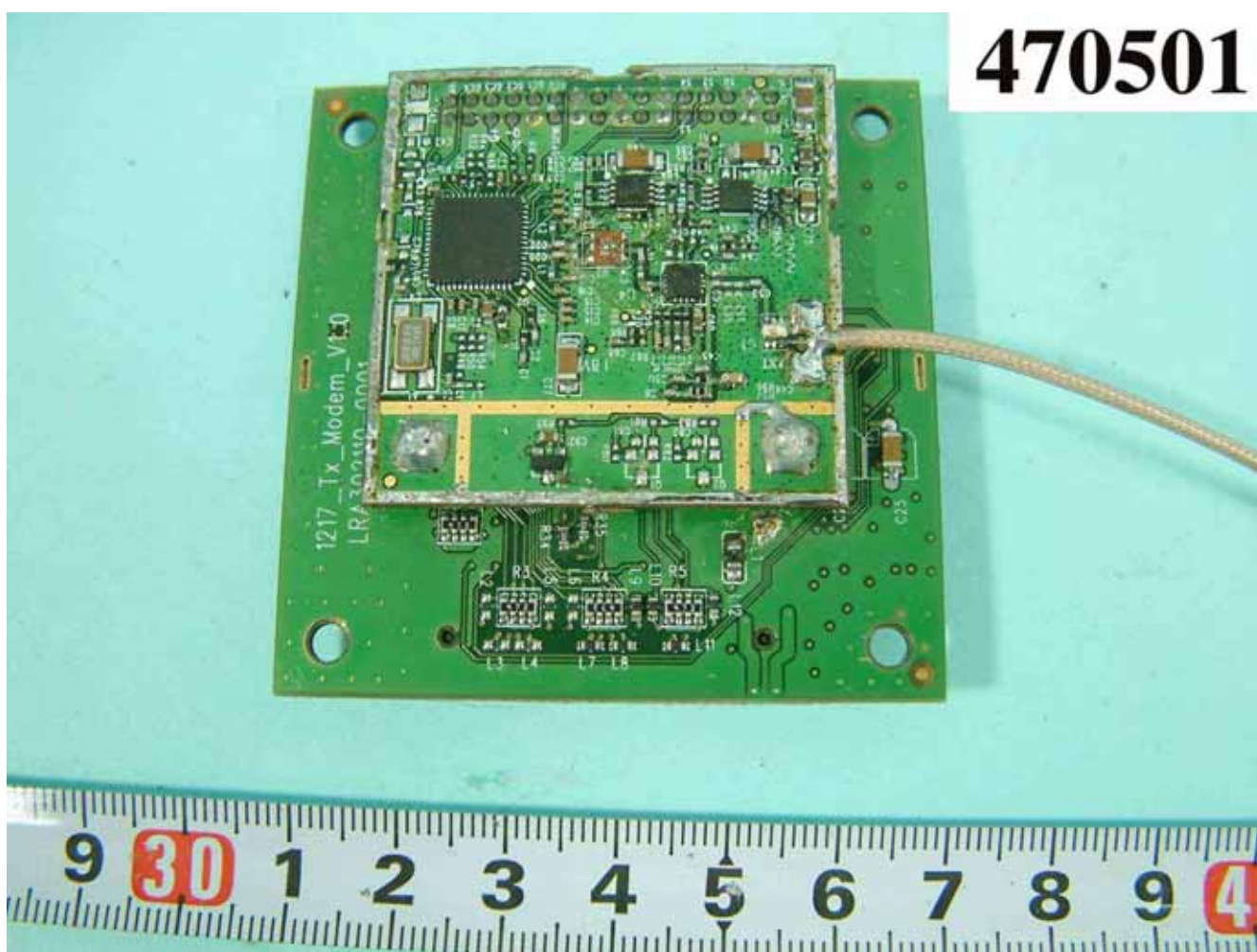






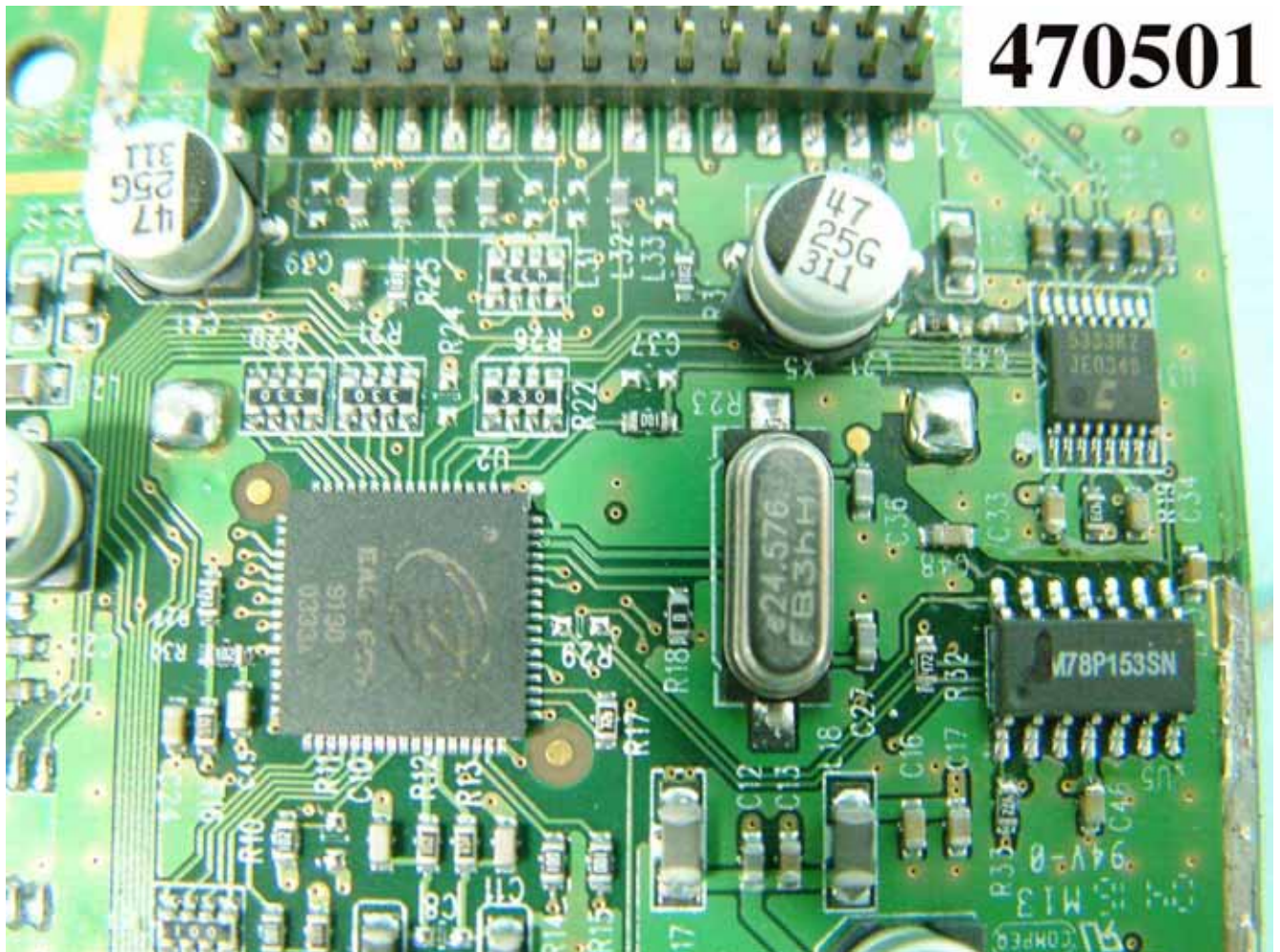


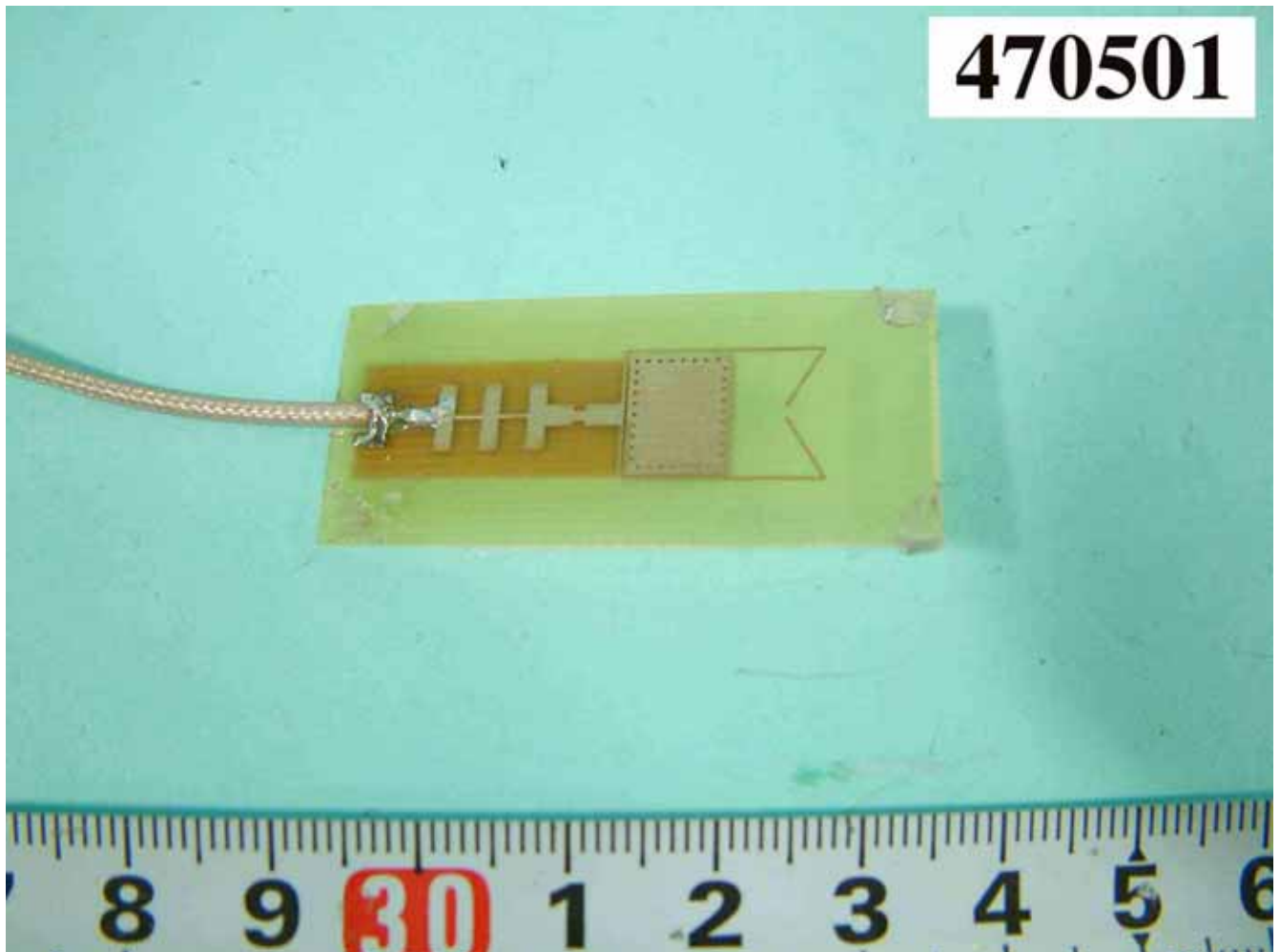


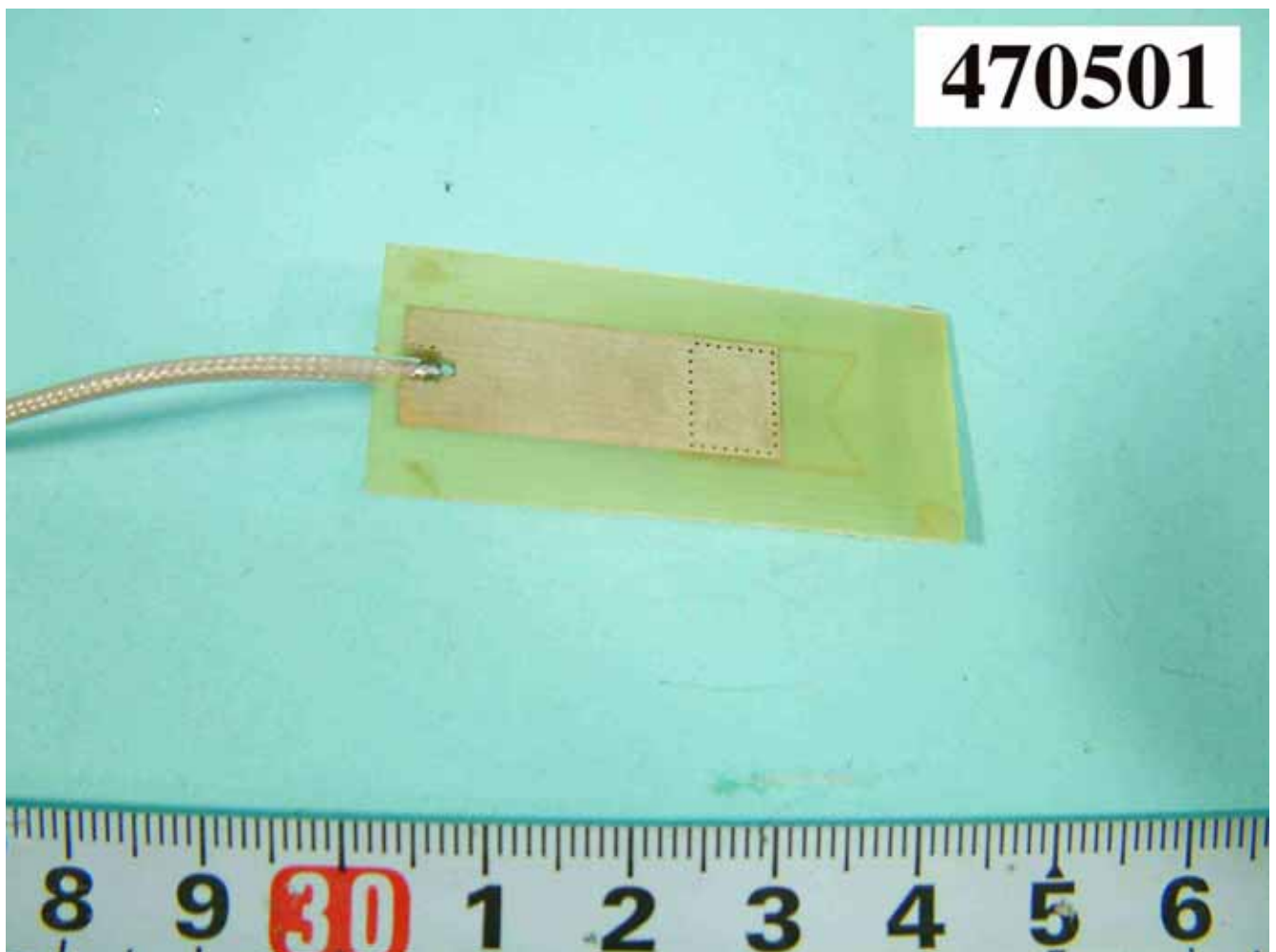


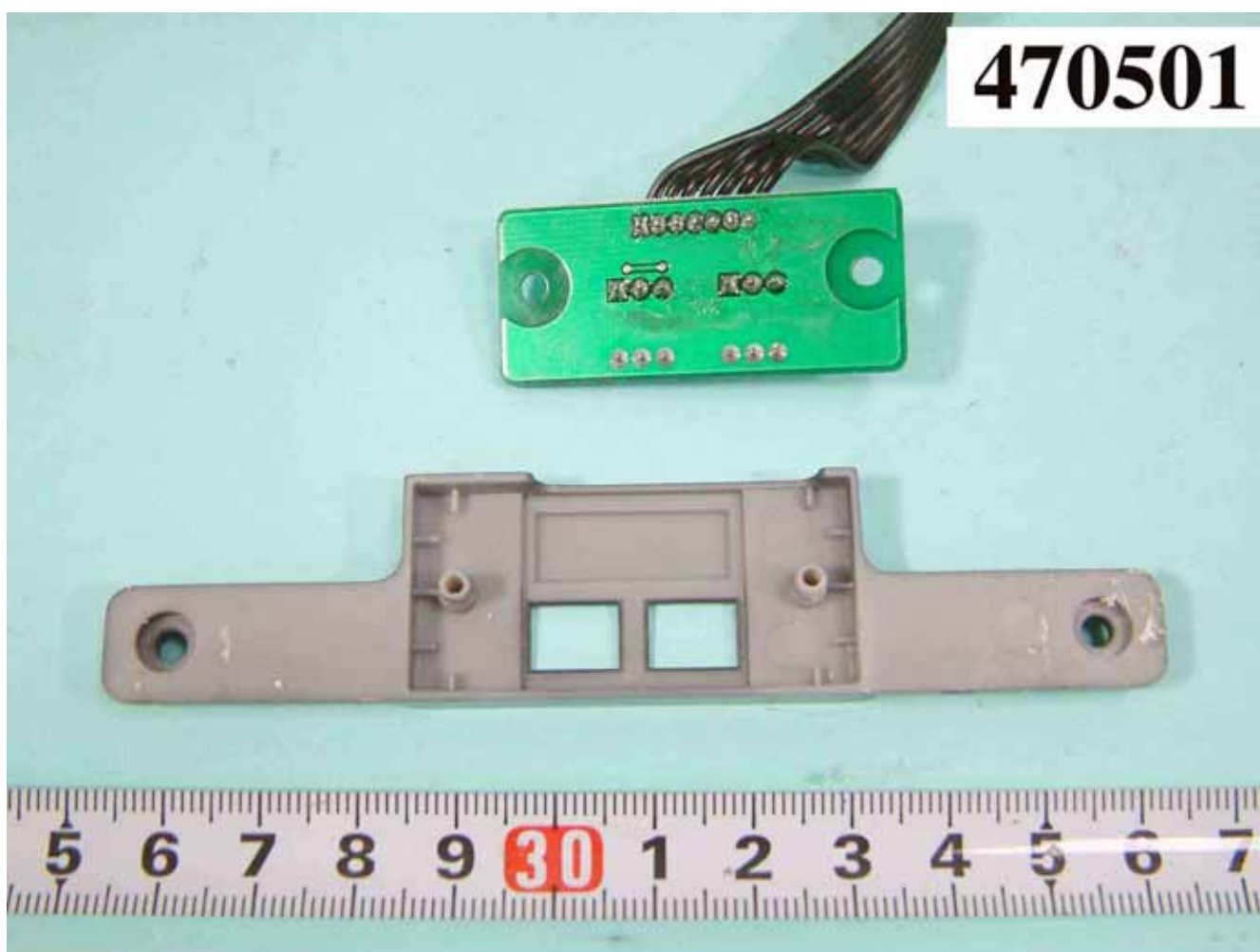


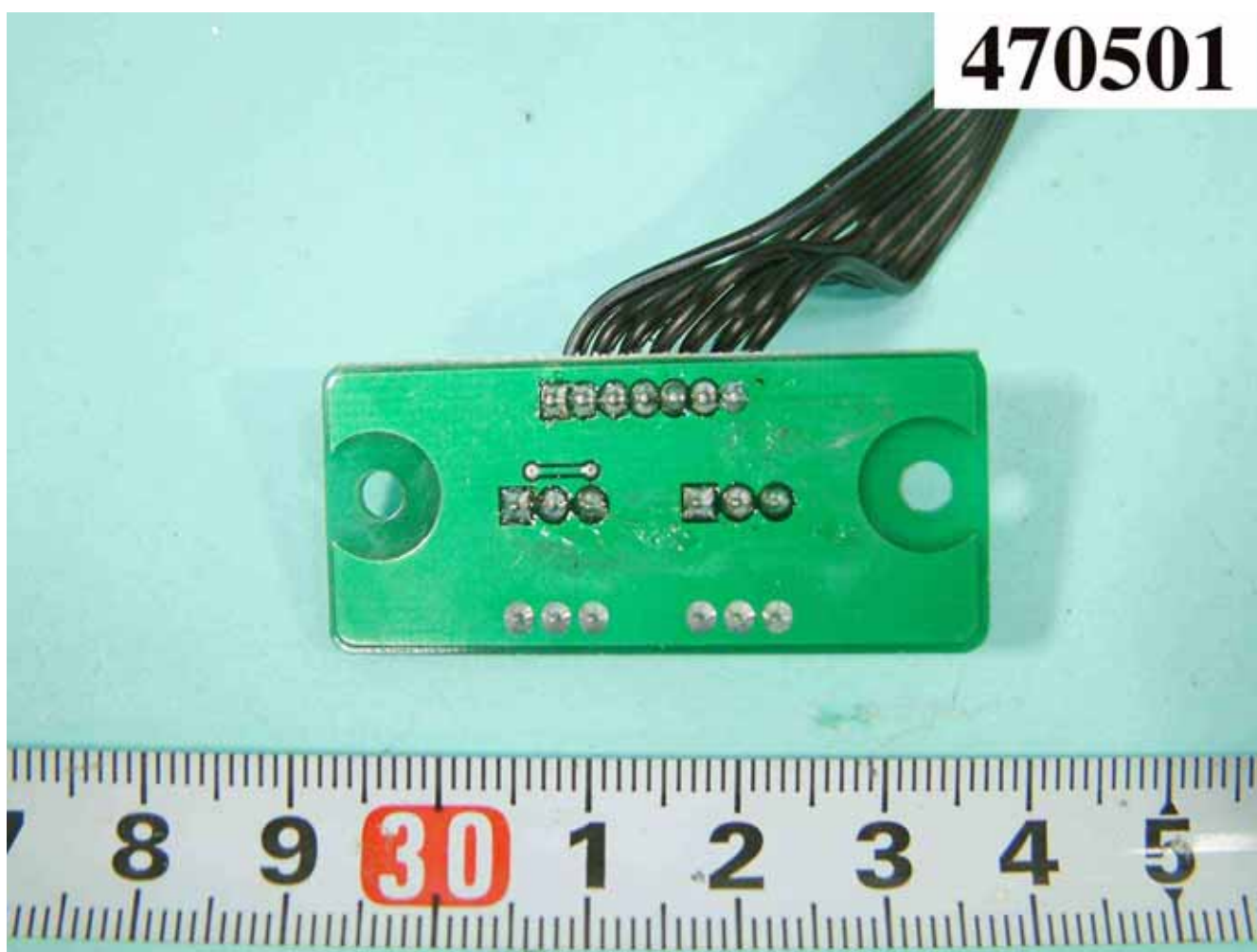


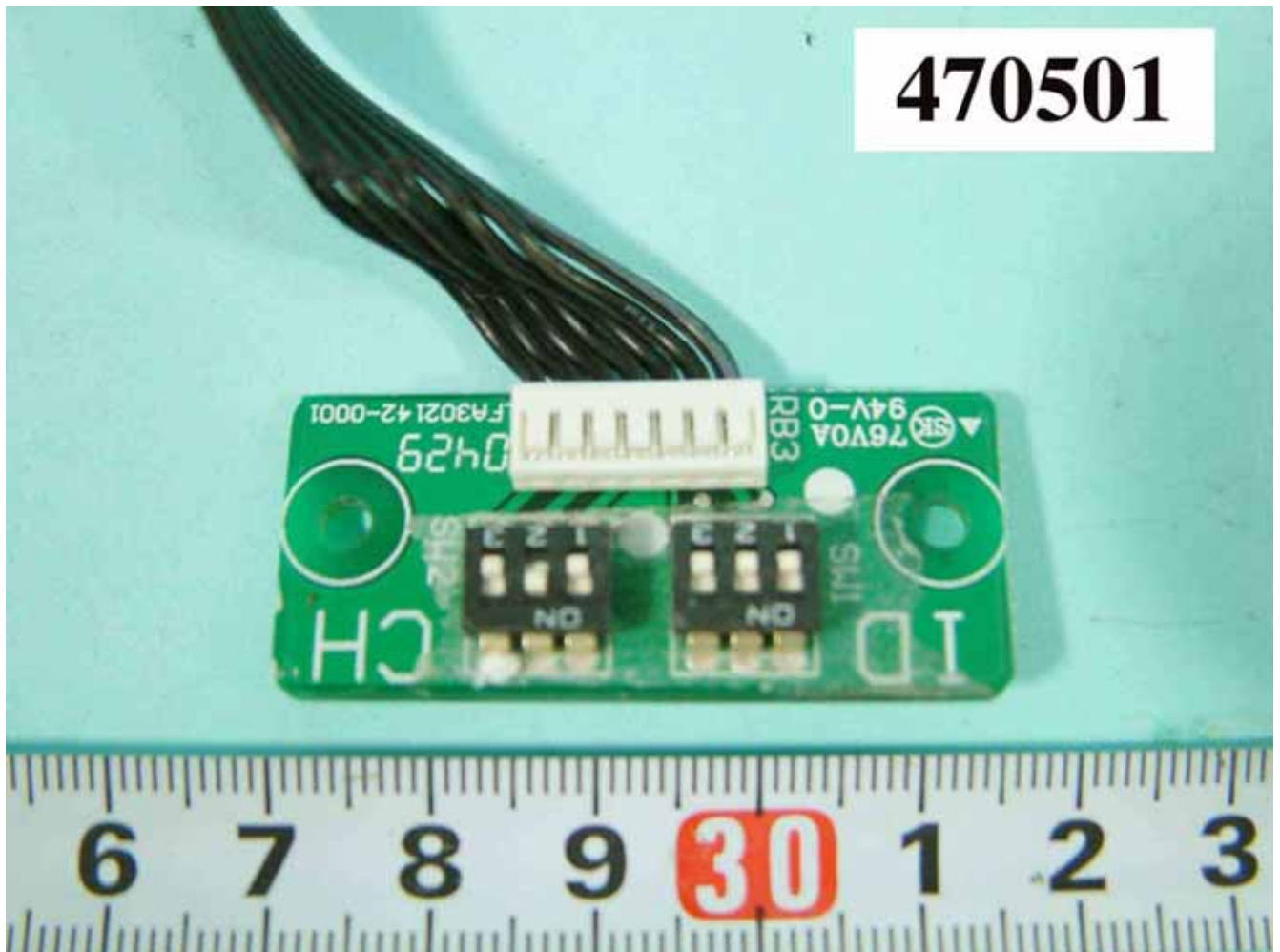
























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