FCC Test Report

According to

47 CFR Part 15 Subpart B

Equipment	:	**EDA (Enterprise Digital Assistant)**
Trade Name	:	**Symbol**
Model No.	:	**MC5574**
FCC ID	:	**H9PMC5574**
Applicant	:	**Symbol Technologies Inc**
		One Symbol Plaza Holtsville, NY 11733-1300 United States

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- Report Version: Rev. 01

SPORTON International Inc.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

Table of Contents

History of this test report

Report Issue Date: Apr. 14, 2008

Report No.	Description

Certificate No. : FD840317

CERTIFICATE OF COMPLIANCE

According to

47 CFR Part 15 Subpart B

Equipment : EDA (Enterprise Digital Assistant)

Trade Name : Symbol

Model No. : MC5574

FCC ID : H9PMC5574

Applicant : Symbol Technologies Inc

One Symbol Plaza Holtsville, NY 11733-1300 United States

I **HEREBY** CERTIFY THAT:

The measurements shown in this test report were made in accordance with the procedures given in ANSI C63.4 - 2003 and the energy emitted by this equipment was *passed* FCC Part 15 B, radiated and conducted emission class B limits. Testing was carried out on Apr. 08, 2008 at SPORTON International Inc. LAB.

Roy Wu
Manager

SPORTON International Inc.
No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

1. General Description of Equipment under Test

1.1 Applicant

Symbol Technologies Inc

One Symbol Plaza Holtsville, NY 11733-1300 United States

1.2 Manufacturer

ASKEY COMPUYER CORP

10F, No. 119, CHIENKANG RD., CHUNG-HO, TAIPEI, TAIWAN, 235, R.O.C

1.3 Basic Description of Equipment under Test

Equipment		EDA (Enterprise Digital Assistant)
Trade Name		Symbol
Model Name		MC5574
FCC ID		H9PMC5574
Sample A		1D scanner without camera
Sample B		2D scanner without camera
Sample C		1D scanner with camera
Sample D		2D scanner with camera
AC Adapter	**Brand Name**	DELTA
	Model Name	ADP-16GB
	Power Rating	I/P: 100-240Vac, 50-60Hz, 0.4A; O/P: 5.4Vdc, 3A
	AC Power Cord Type	AC: 1.8 meter non-shielded cable with ferrite core DC: 1.8 meter non-shielded cable without ferrite core
Battery	**Brand Name**	SYMBOL
	Part Number	82-107172-01 Rev A
	Power Rating	3.7Vdc, 2400mAh
	Type	Li-ion
Communication USB charge cable	**Brand Name**	SYMBOL
	Part Number	25-108022-01R Rev. 1
	Signal Line Type	1.5 meter shielded cable without ferrite core

Remark: Above EUT's information was declared by manufacturer. Please refer to specifications of manufacturer or User's Manual for more detailed features description.

1.4 Feature of Equipment under Test

Product Feature & Specification	
DUT Type :	EDA (Enterprise Digital Assistant)
Trade Name :	Symbol
Model Name :	MC5574
FCC ID :	H9PMC5574
Tx Frequency :	GSM850 : 824 MHz ~ 849 MHz GSM1900 : 1850 MHz ~1910 MHz Bluetooth : 2400 MHz ~ 2483.5 MHz WLAN : 2400 MHz ~ 2483.5 MHz
Rx Frequency :	GSM850 : 869 MHz ~ 894 MHz GSM1900 : 1930 MHz ~ 1990 MHz Bluetooth : 2400 MHz ~ 2483.5 MHz WLAN : 2400 MHz ~ 2483.5 MHz
Maximum Output Power to Antenna :	GSM850 : 32.43 dBm (GSM) / 32.41 dBm (GPRS8) / 30.62 dBm (GPRS10) / 26.87 dBm (GPRS12) / 25.94 dBm (EGPRS8) / 23.83 dBm (EGPRS10) / 19.67 dBm (EGPRS12) / GSM1900 : 29.50 dBm (GSM) / 29.39 dBm (GPRS8) / 27.55 dBm (GPRS10) / 23.79 dBm (GPRS12) / 25.06 dBm (EGPRS8) / 23.26 dBm (EGPRS10) / 19.22 dBm (EGPRS12) / Bluetooth : 4.76 dBm WLAN : 14.57 dBm (802.11b) / 15.52 dBm (802.11g)
Antenna Type :	GSM : PIFA Antenna Bluetooth : Chip antenna WLAN : PIFA Antenna
Antenna Gain :	Bluetooth : -0.94 dBi WLAN : 1.22 dBi
Power Rating (DC/AC , Voltage and Current of RF element or PA) :	GSM : DC 3.8V / 2A
GPRS / EGPRS Multislot class :	12
Type of Modulation :	GSM / GPRS : GMSK EDGE : 8PSK Bluetooth : GFSK WLAN : DSSS / OFDM
DUT Stage :	Identical Prototype

2. Test Configuration of Equipment under Test

2.1 Test Manner

a. The EUT has been setup pursuant to ANSI C63.4-2003 and configuration operated in a manner which tended to maximize its emission characteristics in a typical application.

b. The complete test system refers to 2.2 for EMI test.

c. The following test modes were tested for conduction test:

Mode 1 : GSM850 Idle + BT Idle + WLAN Idle + Adapter + USB Link + GPS Rx + MPEG 4 + Scanner for Sample A
Mode 2 : GSM850 Idle + BT Idle + WLAN Idle + Adapter + USB Link + GPS Rx + MPEG 4 + Scanner for Sample B
Mode 3 : EDGE Idle + BT Idle + WLAN Idle + Adapter + USB Link + GPS Rx + MPEG 4 for Sample C
Mode 4 : GSM850 Idle + BT Idle + WLAN Idle + Adapter + USB Link + GPS Rx + MPEG 4 + Camera for Sample D
Mode 5 : GSM1900 Idle + BT Idle + WLAN Idle + Adapter + USB Link + GPS Rx + MPEG 4 + Scanner for Sample D

d. The following test modes were tested for radiation test:

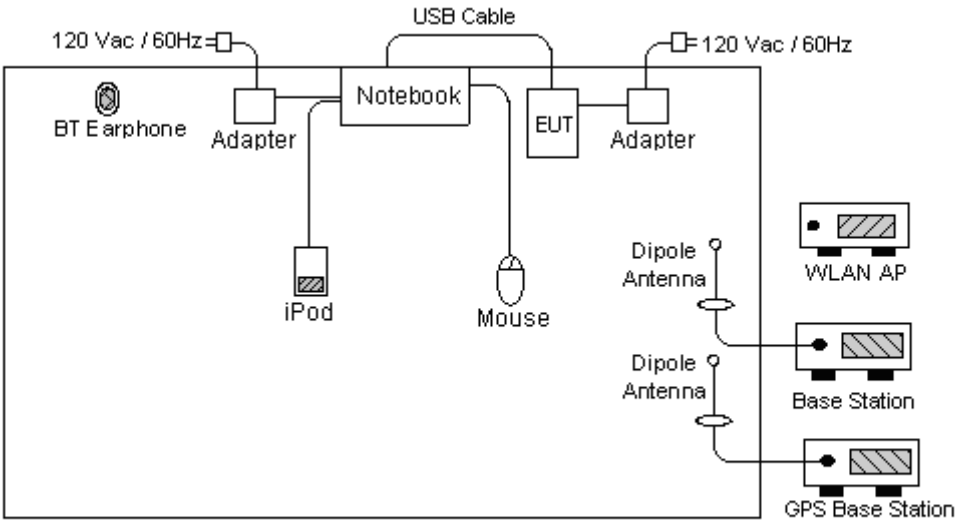
Mode 1 : GSM850 Idle + BT Idle + WLAN Idle + Adapter + USB Link + GPS Rx + MPEG 4 + Scanner for Sample A
Mode 2 : GSM850 Idle + BT Idle + WLAN Idle + Adapter + USB Link + GPS Rx + MPEG 4 + Scanner for Sample B
Mode 3 : EDGE Idle + BT Idle + WLAN Idle + Adapter + USB Link + GPS Rx + MPEG 4 for Sample C
Mode 4 : GSM850 Idle + BT Idle + WLAN Idle + Adapter + USB Link + GPS Rx + MPEG 4 + Camera for Sample D
Mode 5 : GSM1900 Idle + BT Idle + WLAN Idle + Adapter + USB Link + GPS Rx + MPEG 4 + Scanner for Sample D

e. Frequency range investigated: conduction 150 kHz to 30 MHz, radiation 30 MHz to 13 GHz.

2.2 Description of Test System

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Base Station	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	GPS Station	T&E	GS-50	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	SMC	SMC-100	HEDWG4005ACC	N/A	Unshielded, 1.8 m
4.	Notebook	DELL	D400	E2K24GBRL	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	Bluetooth Earphone	Engotech	ET-BH111	PQY471087	N/A	N/A
6.	RS-232 Mouse	State	MS-303	DoC	Unshielded, 1.2 m	N/A
7.	i-pod	Apple	A1199	DoC	Unshielded, 1.2 m	N/A

2.3 Connection Diagram of Test System



3. Test Software

In GSM or EDGE idle mode, the EUT is synchronized to the BCCH, and is in continuous receiving mode by setting system simulator's paging reorganization.

At the same time, the EUT was linked with Bluetooth earphone. For GPS function, the executive program, "VisualGPSce" make EUT receive signal from GPS station.

For associated equipment, the executive program, "EMCTest.exe" and "Activesync.exe" under WINXP installed in notebook generates a complete line of continuously repeating "H" pattern were used as the test software.

The programs were executed as follows:

a. Turn on the power of all equipment.
b. The notebook reads the test program from the hard disk drive and runs it.
c. The notebook sends "H" messages to the panel, and the panel displays "H" patterns on the screen.
d. The notebook sends "H" messages to the internal hard disk, and the hard disk reads and writes the message.
e. Repeat the steps from b to d.

4. General Information of Test

4.1 Test Facility

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 : 886-3-328-4978
Test Site No. : CO01-HY, 03CH06-HY

4.2 Test Voltage

AC 120V / 60Hz

4.3 Standard for Methods of Measurement

ANSI C63.4-2003

4.4 Test Compliance

FCC Part 15 Subpart B

4.5 Frequency Range

a. Conduction: from 150 kHz to 30 MHz
b. Radiation: from 30 MHz to 13000MHz

4.6 Test Distance

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

5. Test of Conducted Powerline

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 kHz and return leads of the EUT according to the methods defined in ANSI C63.4-2003 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 5.3. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

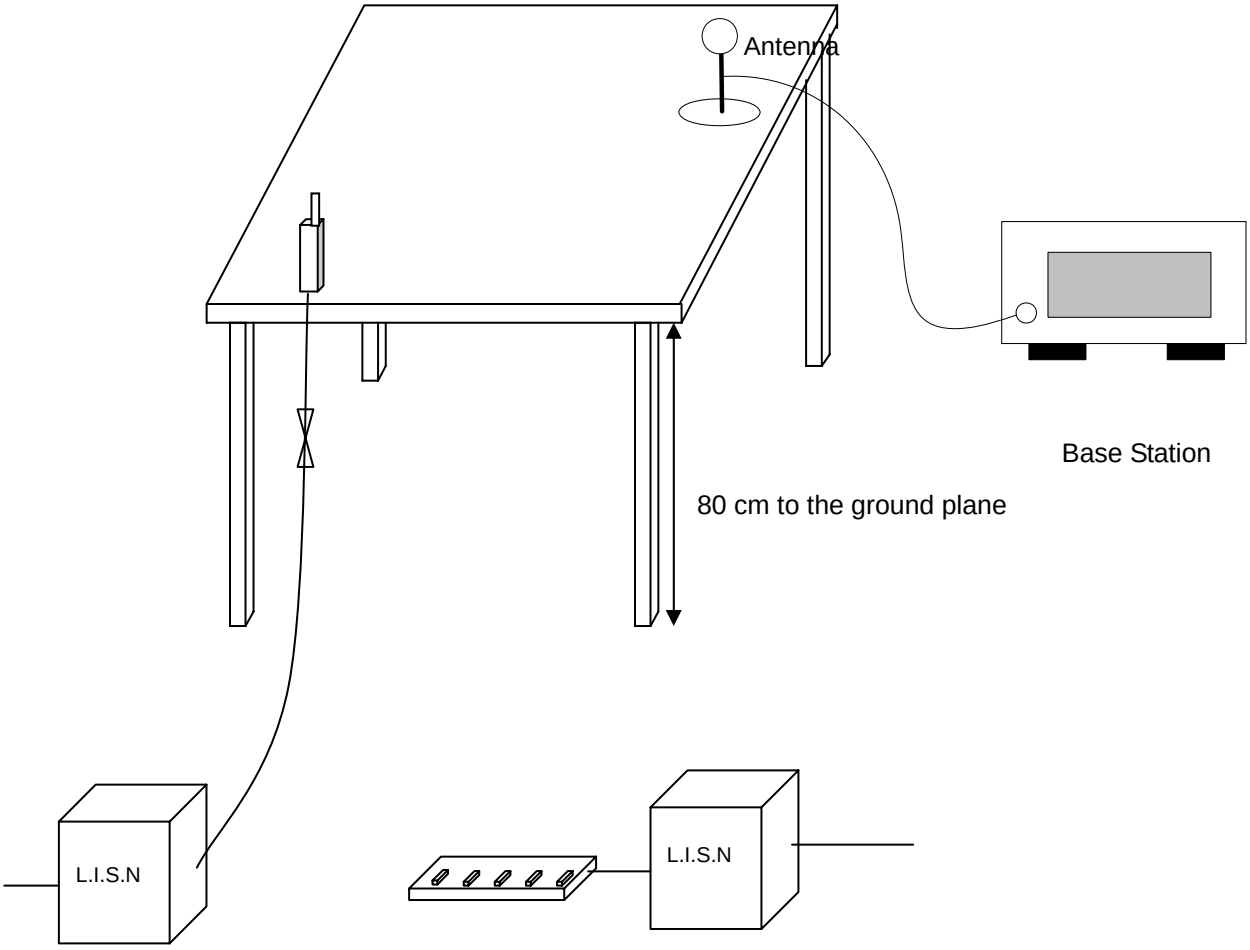
5.1 Major Measuring Instruments

As described in Chapter 7.

5.2 Test Procedures

a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
c. All the support units are connecting to the other LISN.
d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
e. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
f. Both sides of AC line were checked for maximum conducted interference.
g. The frequency range from 150 kHz to 30 MHz was searched.
h. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

5.3 Typical Test Setup Layout of Conducted Powerline

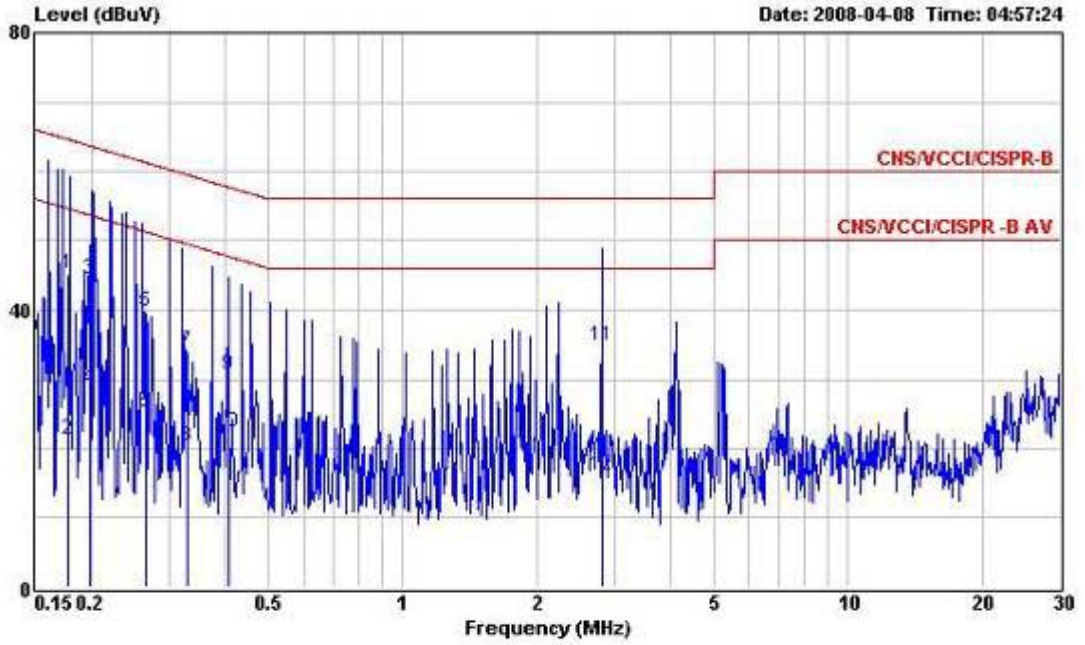


5.4 Test Result of AC Powerline Conducted Emission

5.4.1 Test Mode: Mode 1 – Sample A

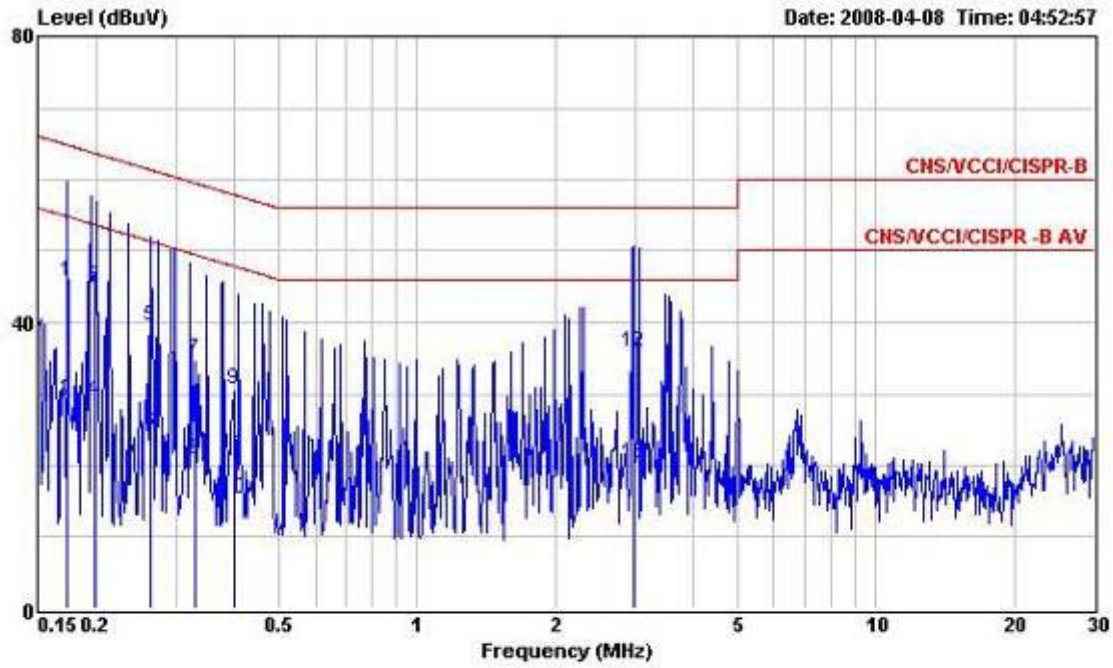
- Frequency Range of Test: from 0.15 MHz to 30 MHz
- Temperature: 26~27℃
- Relative Humidity: 58~59%
- Test Engineer: Darren
- All emissions not reported here are more than 10 dB below the prescribed limit.

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



Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE
EUT : MC5574 EV1 FCC submit with 1D 2D Scanner
: and w/ camera w/o camera
Power : 120V/60Hz
Model : FD840317
Memo : GSM850 Idle+BT Idle + WLAN Idle+Adaptor
Memo : + USB Link + MPEG4 + Scanner

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.178	45.27	-19.33	64.60	45.08	0.10	0.09	QP
2	0.178	21.31	-33.29	54.60	21.12	0.10	0.09	Average
3	0.199	44.54	-19.13	63.67	44.36	0.10	0.08	QP
4	0.199	28.49	-25.18	53.67	28.31	0.10	0.08	Average
5	0.265	39.70	-21.59	61.29	39.50	0.10	0.10	QP
6	0.265	25.15	-26.14	51.29	24.95	0.10	0.10	Average
7	0.329	34.09	-25.39	59.48	33.88	0.10	0.11	QP
8	0.329	20.27	-29.21	49.48	20.06	0.10	0.11	Average
9	0.407	30.58	-27.14	57.72	30.36	0.10	0.12	QP
10	0.407	22.32	-25.39	47.71	22.10	0.10	0.12	Average
11	2.801	34.70	-21.30	56.00	34.32	0.15	0.23	QP
12	2.801	16.08	-29.92	46.00	15.70	0.15	0.23	Average



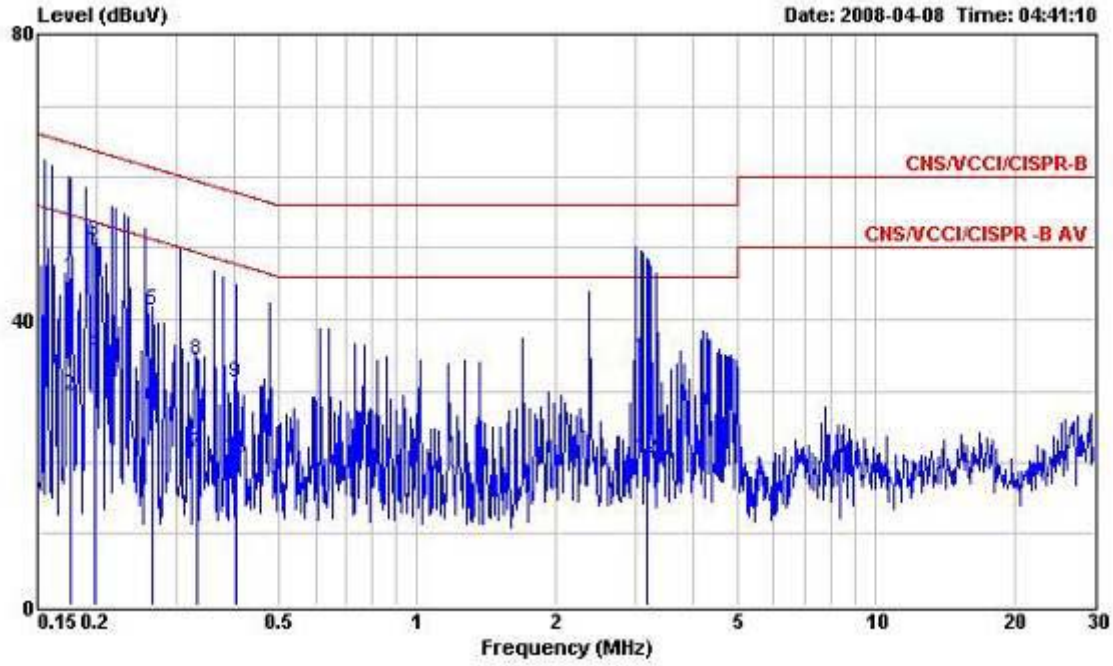
Site : CO01-HV
Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT : MC5574 EV1 FCC submit with 1D 2D Scanner
: and w/ camera w/o camera
Power : 120V/60Hz
Model : FD840317
Memo : GSM850 Idle+BT Idle + WLAN Idle+Adaptor
Memo : + USB Link + MPEG4 + Scanner

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.173	45.75	-19.07	64.82	45.56	0.10	0.09	QP
2	0.173	29.16	-25.66	54.82	28.97	0.10	0.09	Average
3	0.198	44.94	-18.75	63.69	44.76	0.10	0.08	QP
4	0.198	29.02	-24.67	53.69	28.84	0.10	0.08	Average
5	0.263	39.36	-21.98	61.34	39.16	0.10	0.10	QP
6	0.263	24.74	-26.60	51.34	24.54	0.10	0.10	Average
7	0.330	34.81	-24.65	59.46	34.60	0.10	0.11	QP
8	0.330	20.75	-28.71	49.46	20.54	0.10	0.11	Average
9	0.398	30.56	-27.34	57.90	30.34	0.10	0.12	QP
10	0.398	15.38	-32.52	47.90	15.16	0.10	0.12	Average
11	0.398	21.57	-36.33	57.90	21.35	0.10	0.12	QP
12	2.979	35.95	-20.05	56.00	35.60	0.10	0.25	QP
13	2.980	20.33	-25.67	46.00	19.98	0.10	0.25	Average

5.4.2 Test Mode: Mode 2 – Sample B

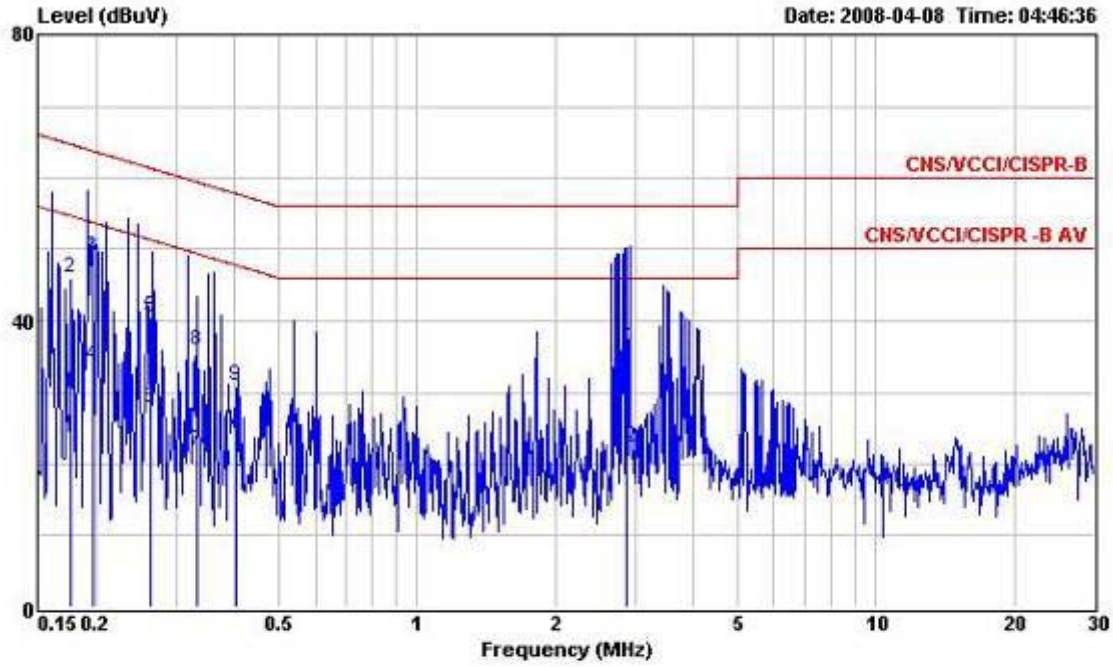
- Frequency Range of Test: from 0.15 MHz to 30 MHz
- Temperature: 26~27℃
- Relative Humidity: 58~59%
- Test Engineer: Darren
- All emissions not reported here are more than 10 dB below the prescribed limit.

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



Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE
EUT : MC5574 EV1 FCC submit with 1D 2D Scanner
: and w/ camera w/o camera
Power : 120V/60Hz
Model : FD840317
Memo : GSM850 Idle+BT Idle +WLAN Idle+Adaptor
Memo : + USB Link + MPEG4 + Scanner

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.175	45.91	-18.81	64.72	45.72	0.10	0.09	QP
2	0.175	29.31	-25.41	54.72	29.12	0.10	0.09	Average
3	0.198	50.84	-12.84	63.68	50.66	0.10	0.08	QP
4	0.198	35.14	-18.54	53.68	34.96	0.10	0.08	Average
5	0.266	41.22	-20.02	61.24	41.02	0.10	0.10	QP
6	0.266	27.77	-23.47	51.24	27.57	0.10	0.10	Average
7	0.333	21.33	-28.05	49.38	21.12	0.10	0.11	Average
8	0.333	34.25	-25.13	59.38	34.04	0.10	0.11	QP
9	0.403	31.28	-26.51	57.79	31.06	0.10	0.12	QP
10	0.403	20.42	-27.37	47.79	20.20	0.10	0.12	Average
11	3.170	34.50	-21.50	56.00	34.06	0.17	0.27	QP
12	3.170	20.44	-25.56	46.00	20.00	0.17	0.27	Average



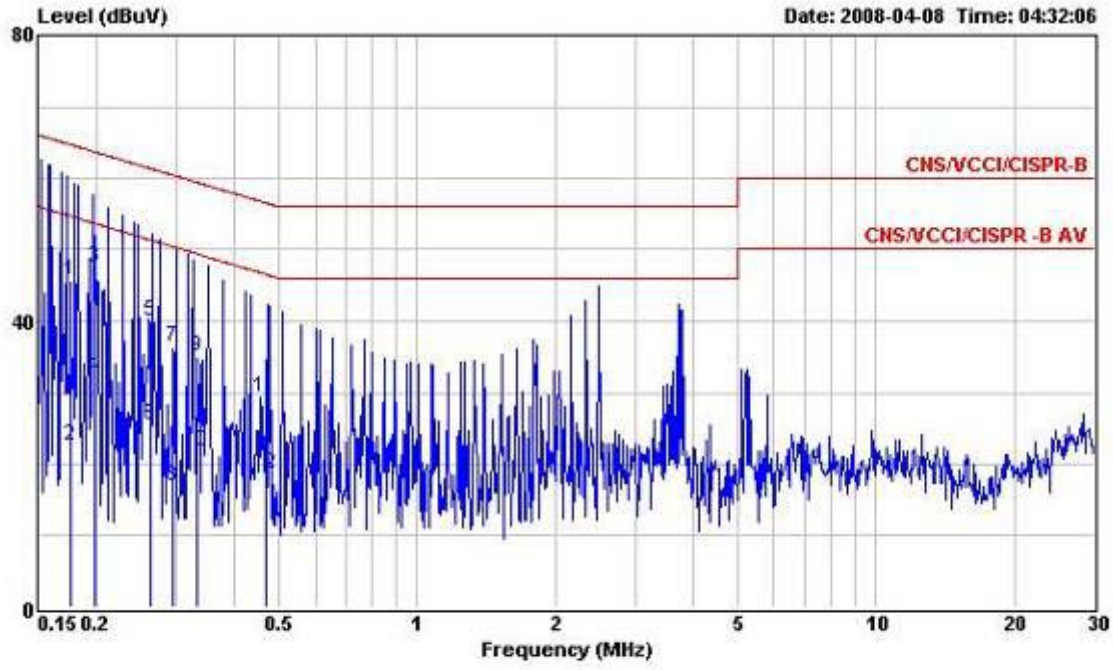
Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT : MC5574 EV1 FCC submit with 1D 2D Scanner
: and w/ camera w/o camera
Power : 120V/60Hz
Model : FD840317
Memo : GSM850 Idle+BT Idle + WLAN Idle+Adaptor
Memo : + USB Link + MPEG4 + Scanner

	Freq	Level	over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.175	29.88	-24.84	54.72	29.69	0.10	0.09	Average
2	0.175	45.93	-18.79	64.72	45.74	0.10	0.09	QP
3	0.196	48.74	-15.03	63.77	48.56	0.10	0.08	QP
4	0.196	33.71	-20.06	53.77	33.53	0.10	0.08	Average
5	0.263	40.56	-20.79	61.35	40.36	0.10	0.10	QP
6	0.263	27.89	-23.46	51.35	27.69	0.10	0.10	Average
7	0.332	21.88	-27.53	49.41	21.67	0.10	0.11	Average
8	0.332	35.75	-23.66	59.41	35.54	0.10	0.11	QP
9	0.403	31.02	-26.78	57.80	30.80	0.10	0.12	QP
10	0.403	18.90	-28.90	47.80	18.68	0.10	0.12	Average
11	2.850	36.32	-19.68	56.00	35.98	0.10	0.24	QP
12	2.850	22.47	-23.53	46.00	22.13	0.10	0.24	Average

5.4.3 Test Mode: Mode 3 – Sample C

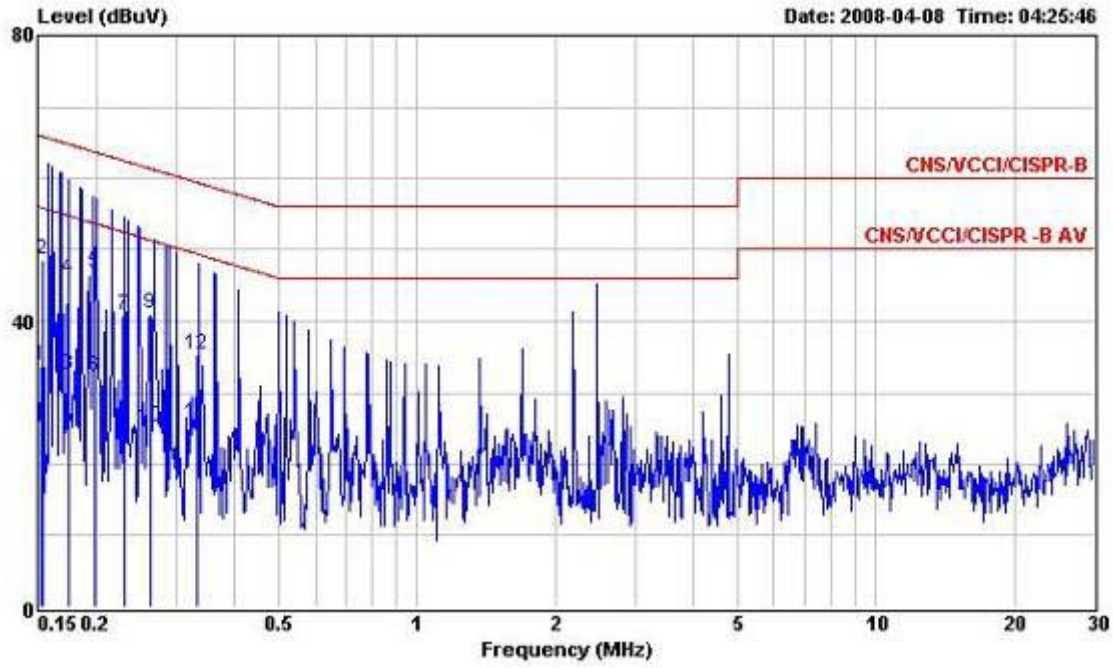
- Frequency Range of Test: from 0.15 MHz to 30 MHz
- Temperature: 26~27°C
- Relative Humidity: 58~59%
- Test Engineer: Darren
- All emissions not reported here are more than 10 dB below the prescribed limit.

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



Site : CO01-HV
Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE
EUT : MC5574 EV1 FCC submit with 1D 2D Scanner
: and w/ camera w/o camera
Power : 120V/60Hz
Model : FD840317
Memo : EDGE Idle+BT Idle +WLAN Idle+Adaptor
Memo : + USB Link + MPEG4 + Scanner

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.176	45.75	-18.90	64.65	45.56	0.10	0.09	QP
2	0.176	22.64	-32.01	54.65	22.45	0.10	0.09	Average
3	0.199	47.44	-16.23	63.67	47.26	0.10	0.08	QP
4	0.199	32.21	-21.46	53.67	32.03	0.10	0.08	Average
5	0.264	39.90	-21.42	61.32	39.70	0.10	0.10	QP
6	0.264	25.46	-25.86	51.32	25.26	0.10	0.10	Average
7	0.294	36.42	-24.00	60.42	36.22	0.10	0.10	QP
8	0.294	17.00	-33.42	50.42	16.80	0.10	0.10	Average
9	0.332	34.99	-24.40	59.39	34.78	0.10	0.11	QP
10	0.332	21.70	-27.69	49.39	21.49	0.10	0.11	Average
11	0.467	29.27	-27.30	56.57	29.04	0.10	0.13	QP
12	0.467	18.66	-27.91	46.57	18.43	0.10	0.13	Average



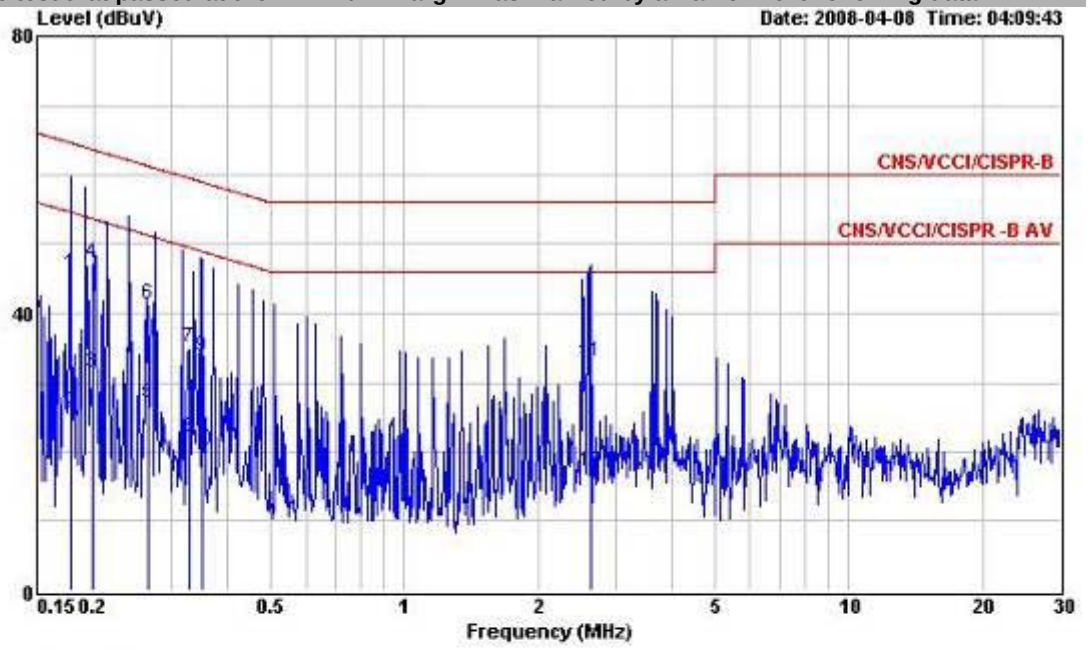
Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT : MC5574 EV1 FCC submit with 1D 2D Scanner
: and w/ camera w/o camera
Power : 120V/60Hz
Model : FD840317
Memo : EDGE Idle+BT Idle + WLAN Idle+Adaptor
Memo : + USB Link + MPEG4 + Scanner

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.152	33.85	-22.04	55.89	33.65	0.10	0.10	Average
2	0.152	48.48	-17.39	65.87	48.28	0.10	0.10	QP
3	0.174	32.48	-22.29	54.77	32.29	0.10	0.09	Average
4	0.174	46.03	-18.73	64.76	45.84	0.10	0.09	QP
5	0.199	46.80	-16.84	63.64	46.62	0.10	0.08	QP
6	0.199	32.21	-21.43	53.64	32.03	0.10	0.08	Average
7	0.231	40.67	-21.76	62.43	40.48	0.10	0.09	QP
8	0.231	24.84	-27.57	52.41	24.65	0.10	0.09	Average
9	0.264	41.04	-20.28	61.32	40.84	0.10	0.10	QP
10	0.264	25.31	-26.01	51.32	25.11	0.10	0.10	Average
11	0.332	25.84	-23.56	49.40	25.63	0.10	0.11	Average
12	0.332	35.43	-23.97	59.40	35.22	0.10	0.11	QP

5.4.4 Test Mode: Mode 4 – Sample D

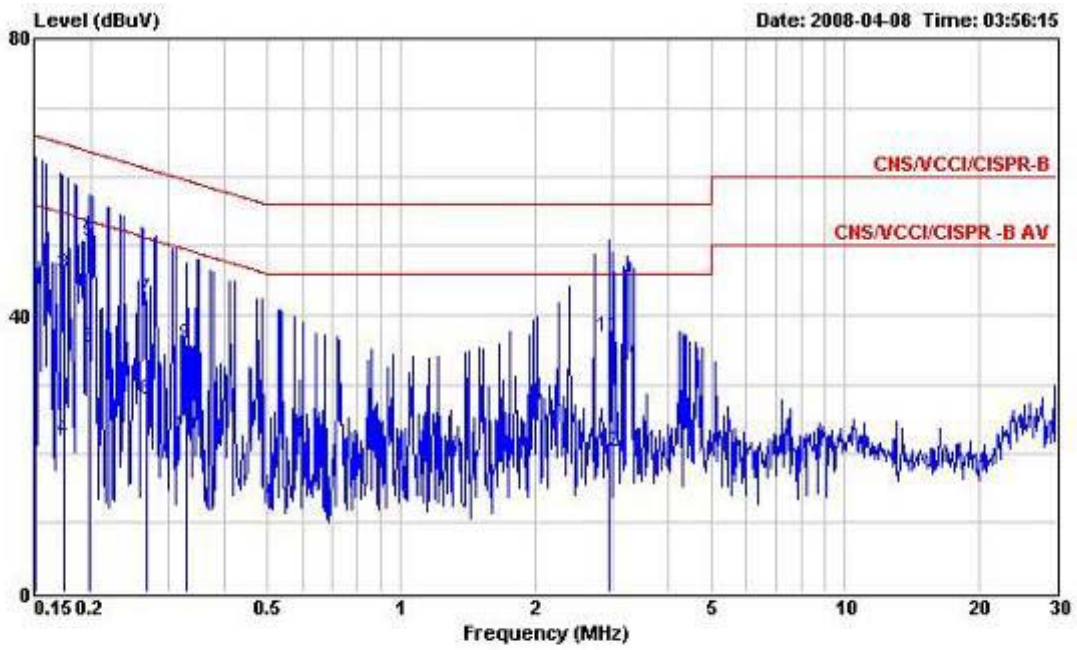
- Frequency Range of Test: from 0.15 MHz to 30 MHz
- Temperature: 26~27℃
- Relative Humidity: 58~59%
- Test Engineer: Darren
- All emissions not reported here are more than 10 dB below the prescribed limit.

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



Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200504 LINE
EUT : MC5574 EV1 FCC submit with 1D 2D Scanner
: and w/ camera w/o camera
Power : 120V/60Hz
Model : FD840317
Memo : GSM850 Idle+BT Idle + WLAN Idle+Adaptor
Memo : + USB Link + MPEG4 + Camera

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.178	45.61	-18.97	64.58	45.42	0.10	0.09	QP
2	0.178	25.79	-28.79	54.58	25.60	0.10	0.09	Average
3	0.199	31.46	-22.20	53.66	31.28	0.10	0.08	Average
4	0.199	47.28	-16.38	63.66	47.10	0.10	0.08	QP
5	0.264	26.89	-24.41	51.30	26.69	0.10	0.10	Average
6	0.264	41.32	-19.98	61.30	41.12	0.10	0.10	QP
7	0.330	35.13	-24.33	59.46	34.92	0.10	0.11	QP
8	0.330	22.16	-27.30	49.46	21.95	0.10	0.11	Average
9	0.352	33.67	-25.25	58.92	33.46	0.10	0.11	QP
10	0.352	20.20	-28.72	48.92	19.99	0.10	0.11	Average
11	2.628	33.01	-22.99	56.00	32.66	0.14	0.21	QP
12	2.628	17.15	-28.85	46.00	16.80	0.14	0.21	Average



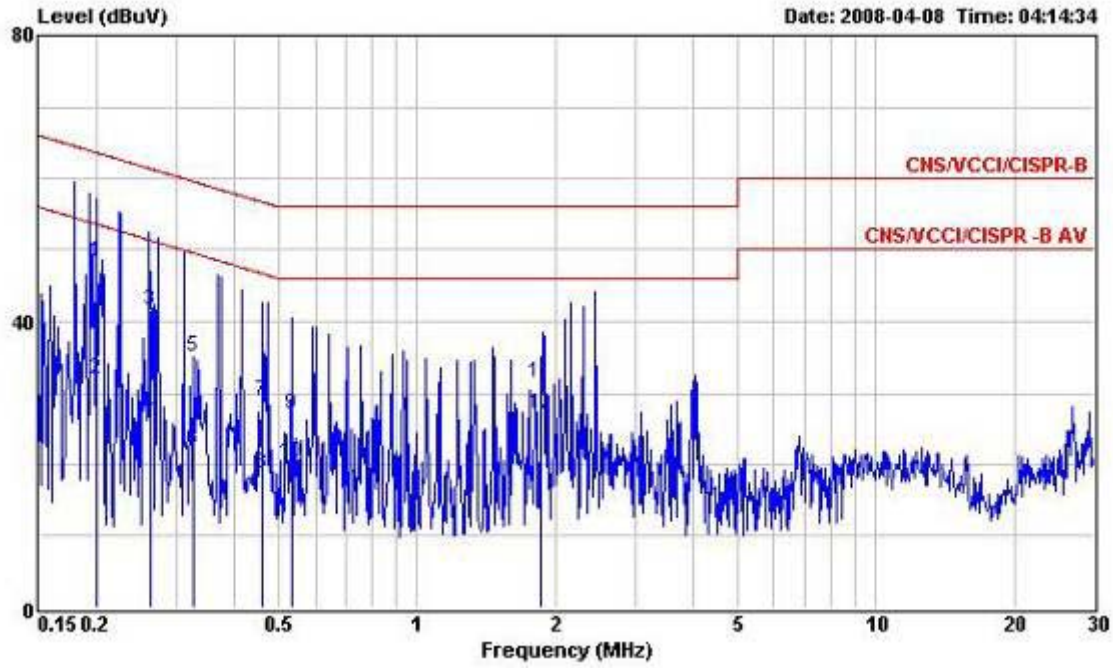
Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT : MC5574 EV1 FCC submit with 1D 2D Scanner
: and w/ camera w/o camera
Power : 120V/60Hz
Model : FD840317
Memo : GSM850 Idle+BT Idle + WLAN Idle+Adaptor
Memo : + USB Link + MPEG4 + Camera

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.150	48.74	-17.24	65.98	48.54	0.10	0.10	QP
2	0.150	20.26	-45.72	65.98	20.06	0.10	0.10	Average
3	0.175	46.07	-18.67	64.74	45.88	0.10	0.09	QP
4	0.175	22.20	-42.54	64.74	22.01	0.10	0.09	Average
5	0.198	50.74	-12.94	63.68	50.56	0.10	0.08	QP
6	0.198	35.24	-28.44	63.68	35.06	0.10	0.08	Average
7	0.267	42.26	-18.97	61.23	42.06	0.10	0.10	QP
8	0.267	27.77	-33.46	61.23	27.57	0.10	0.10	Average
9	0.329	35.75	-23.73	59.48	35.54	0.10	0.11	QP
10	0.329	22.55	-36.93	59.48	22.34	0.10	0.11	Average
11	2.950	36.87	-19.13	56.00	36.52	0.10	0.25	QP
12	2.950	20.35	-35.65	56.00	20.00	0.10	0.25	Average

5.4.5 Test Mode: Mode 5 – Sample D

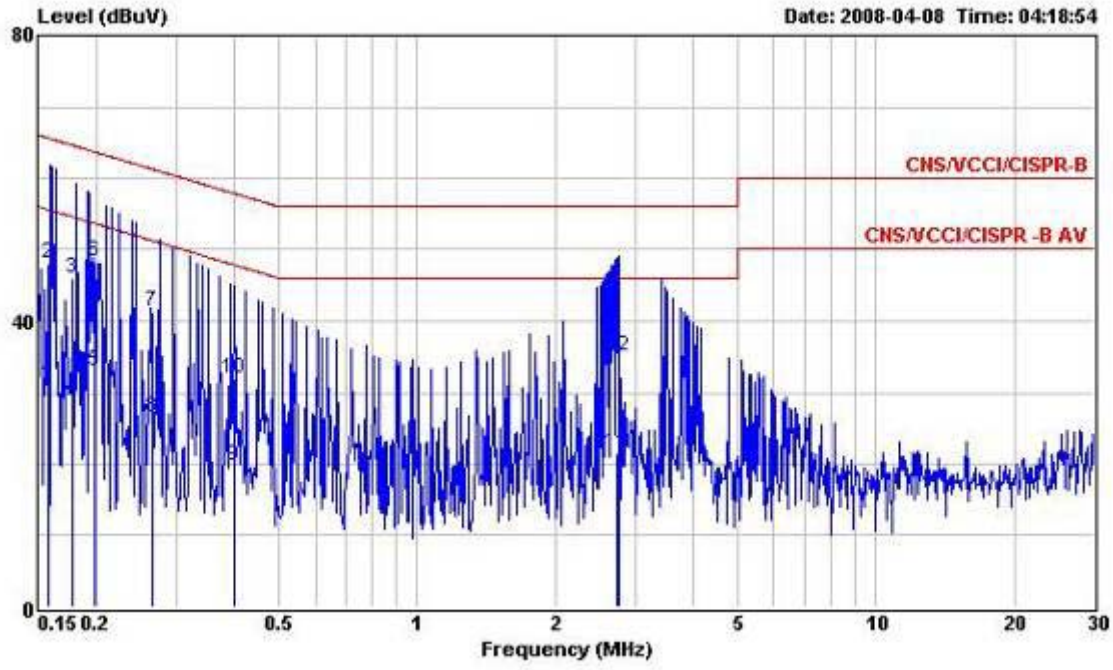
- Frequency Range of Test: from 0.15 MHz to 30 MHz
- Temperature: 26~27℃
- Relative Humidity: 58~59%
- Test Engineer: Darren
- All emissions not reported here are more than 10 dB below the prescribed limit.

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



Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 LINE
EUT : MC5574 EV1 FCC submit with 1D 2D Scanner
: and w/ camera w/o camera
Power : 120V/60Hz
Model : FD840317
Memo : PCS1900 Idle+BT Idle + WLAN Idle+Adaptor
Memo : + USB Link + MPEG4 + Scanner

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.200	48.40	-15.23	63.63	48.22	0.10	0.08	QP
2	0.200	32.06	-21.57	53.63	31.88	0.10	0.08	Average
3	0.262	41.44	-19.93	61.37	41.24	0.10	0.10	QP
4	0.262	27.02	-24.35	51.37	26.82	0.10	0.10	Average
5	0.327	34.95	-24.59	59.54	34.74	0.10	0.11	QP
6	0.327	22.05	-27.49	49.54	21.84	0.10	0.11	Average
7	0.459	28.85	-27.85	56.70	28.62	0.10	0.13	QP
8	0.459	18.75	-27.95	46.70	18.52	0.10	0.13	Average
9	0.532	26.90	-29.10	56.00	26.66	0.10	0.14	QP
10	0.532	20.14	-25.86	46.00	19.90	0.10	0.14	Average
11	1.868	31.45	-24.55	56.00	31.22	0.10	0.13	QP
12	1.868	27.05	-18.95	46.00	26.82	0.10	0.13	Average



Site : CO01-HY
Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL
EUT : MC5574 EV1 FCC submit with 1D 2D Scanner
: and w/ camera w/o camera
Power : 120V/60Hz
Model : FD840317
Memo : PCS1900 Idle+BT Idle + WLAN Idle+Adaptor
Memo : + USB Link + MPEG4 + Scanner

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.157	31.19	-24.43	55.62	31.00	0.10	0.09	Average
2	0.157	47.93	-17.67	65.60	47.74	0.10	0.09	QP
3	0.177	45.85	-18.79	64.64	45.66	0.10	0.09	QP
4	0.177	29.09	-25.54	54.63	28.90	0.10	0.09	Average
5	0.199	33.02	-20.65	53.67	32.84	0.10	0.08	Average
6	0.199	48.26	-15.41	63.67	48.08	0.10	0.08	QP
7	0.265	41.40	-19.88	61.28	41.20	0.10	0.10	QP
8	0.265	26.49	-24.79	51.28	26.29	0.10	0.10	Average
9	0.400	19.84	-28.01	47.85	19.62	0.10	0.12	Average
10	0.400	32.00	-25.85	57.85	31.78	0.10	0.12	QP
11	2.740	21.56	-24.44	46.00	21.23	0.10	0.23	Average
12	2.743	35.03	-20.97	56.00	34.70	0.10	0.23	QP

5.5 Photographs of Conducted Powerline Test Configuration

Please refer to Appendix B

6. Test of Radiated Emission

Radiated emissions from 30 MHz to 13 GHz were measured with a bandwidth of 120 kHz and 1MHz according to the methods defines in ANSI C63.4-2003. The EUT was placed on a nonmetallic stand, 0.8 meter above the ground plane, as shown in section 6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

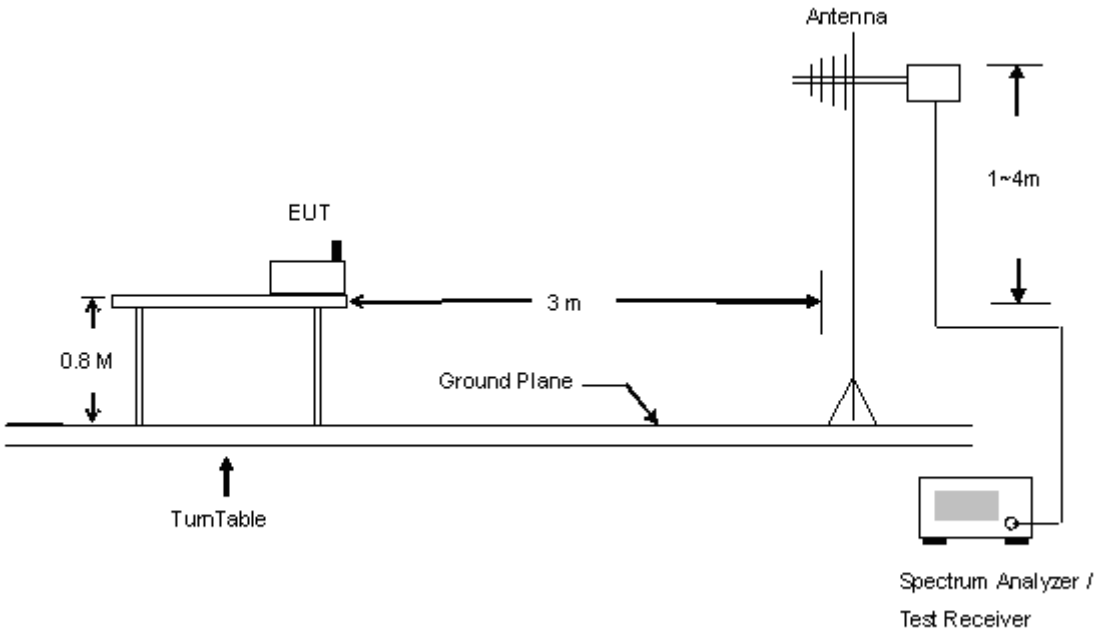
6.1 Major Measuring Instruments

As described in Chapter 7.

6.2 Test Procedures

a. The EUT was placed on a turntable with 0.8 meter above ground.
b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
c. The table was rotated 360 degrees to determine the position of the highest radiation.
d. The antenna is a Bi-Log antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both for horizontal polarization and vertical polarization of the antenna.
e. 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.
f. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
g. 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.

6.3 Typical Test Setup Layout of Radiated Emission

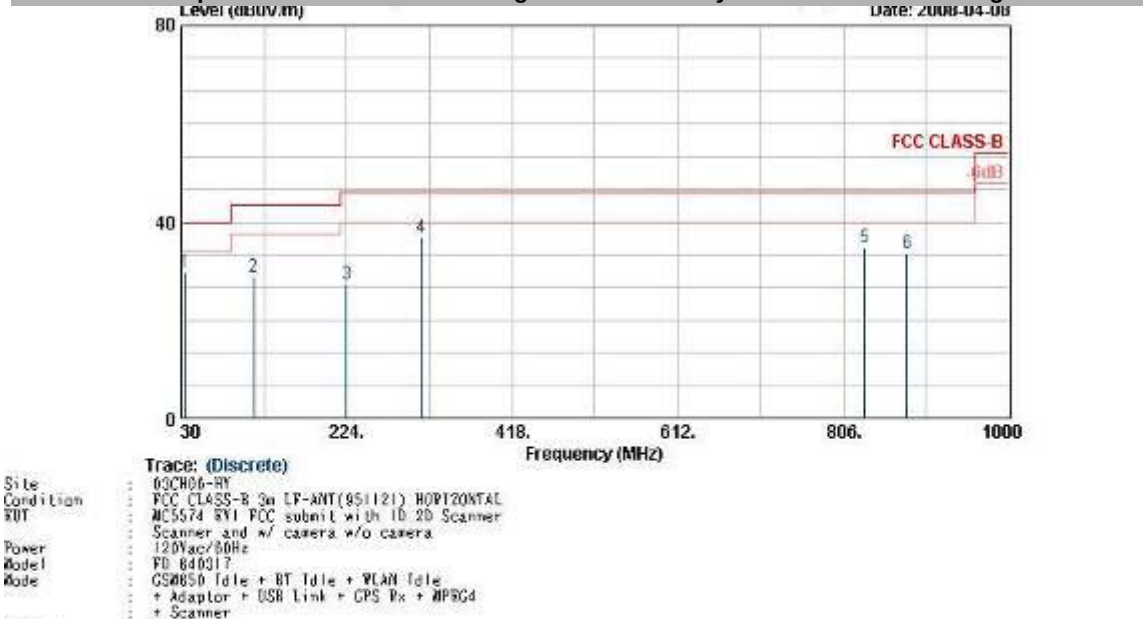


6.4 Test Result of Radiated Emission

6.4.1 Test Mode: Mode 1 – Sample A

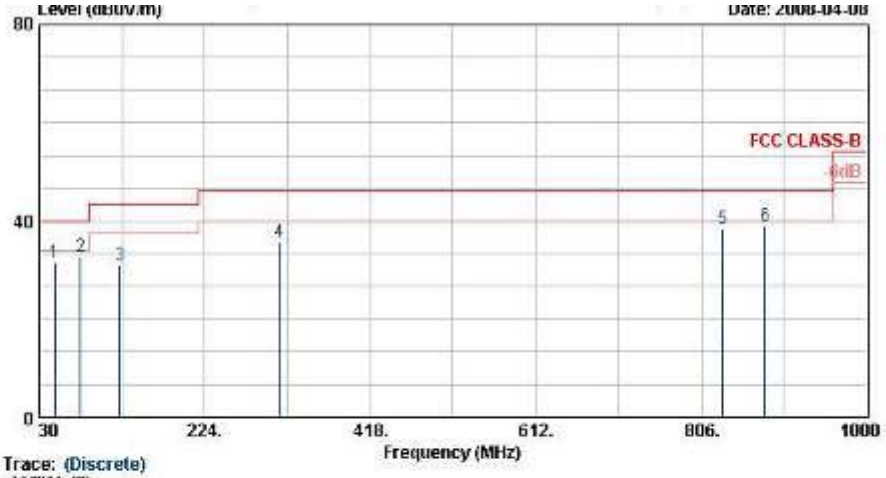
- Test Distance: 3m
- Temperature: 21~26°C
- Relative Humidity: 51~58%
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Test Engineer: Sun
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

■ **The test that passed at the minimum margin was marked by a frame in the following data**



	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	34.59	29.72	-10.28	40.00	46.59	16.13	0.30	33.30	---	---	Peak
2	114.78	28.81	-14.69	43.50	49.73	12.13	0.50	33.55	---	---	Peak
3	223.59	27.25	-18.75	46.00	49.31	10.73	0.70	33.48	---	---	Peak
4	311.90	36.79	-9.21	46.00	55.76	13.53	0.80	33.30	100	182	Peak
5	831.30	34.81	-11.19	46.00	46.20	20.04	1.20	32.63	---	---	Peak
6	880.30	33.48	-12.52	46.00	44.54	20.38	1.30	32.75	---	---	Peak

Remark: The spurious emission above 1 GHz is too low to be taken.



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(851121) VERTICAL
EUT : MC5574 EVI FCC submit with ID 2D Scanner
: Scanner and w/ camera w/o camera
Power : 120Vac/60Hz
Model : FD 840317
Mode : GSM850 Idle + BT Idle + WLAN Idle
: + Adaptor + USB Link + GPS Rx + BPBG4
: + Scanner

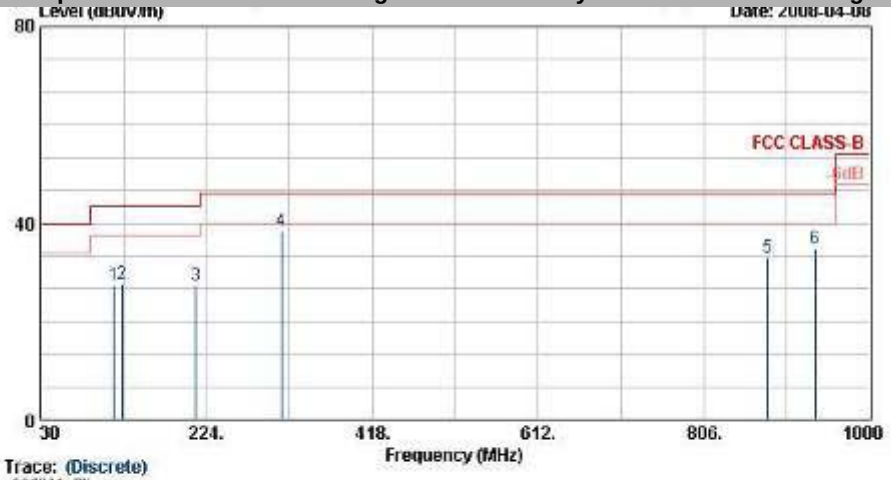
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	48.09	31.51	-8.49	40.00	55.29	9.06	0.30	33.14	---	---	Peak
2	78.33	32.77	-7.23	40.00	58.34	7.41	0.47	33.44	100	106	Peak
3	124.77	30.84	-12.66	43.50	51.00	12.66	0.50	33.33	---	---	Peak
4	311.90	35.58	-10.42	46.00	54.56	13.53	0.80	33.30	---	---	Peak
5	831.30	38.33	-7.67	46.00	49.73	20.04	1.20	32.63	---	---	Peak
6	880.30	39.10	-6.90	46.00	50.16	20.39	1.30	32.75	---	---	Peak

Remark: The spurious emission above 1 GHz is too low to be taken.

6.4.2 Test Mode: Mode 2 – Sample B

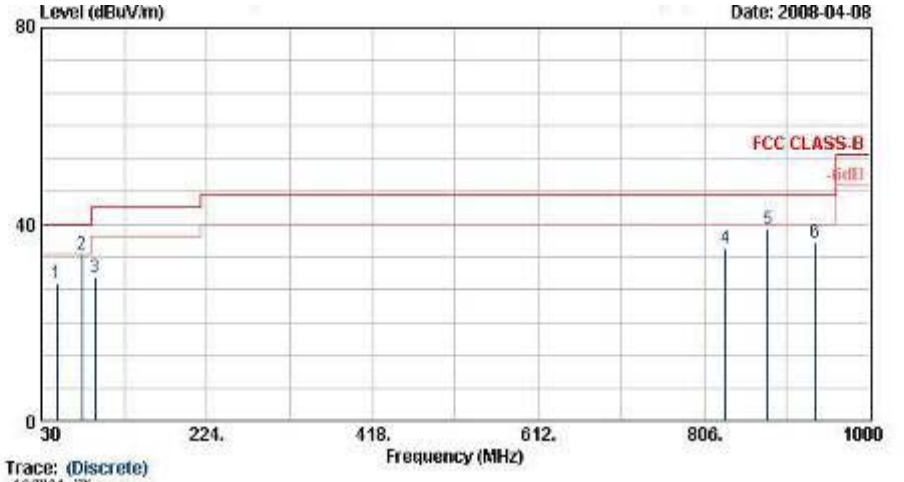
- Test Distance: 3m
- Temperature: 21~26°C
- Relative Humidity: 51~58%
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Test Engineer: Sun
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

■ **The test that passed at the minimum margin was marked by a frame in the following data**



	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	115.59	27.24	-16.26	43.50	48.06	12.20	0.50	33.52	---	---	Peak
2	125.58	27.67	-15.83	43.50	47.98	12.50	0.50	33.31	---	---	Peak
3	211.44	27.41	-16.09	43.50	50.32	9.99	0.61	33.51	---	---	Peak
4	311.90	38.30	-7.70	46.00	57.27	13.53	0.80	33.30	100	196	Peak
5	880.30	33.05	-12.95	46.00	44.11	20.39	1.30	32.75	---	---	Peak
6	936.30	34.84	-11.16	46.00	45.39	20.79	1.20	32.54	---	---	Peak

Remark: The spurious emission above 1 GHz is too low to be taken.



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LP-ANT(9511121) VERTICAL
EUT : MC5574 XYI FCC submit with ID 2D Scanner
Scanner and w/ camera w/o camera
Power : 120Vac/60Hz
Model : FD 840317
Mode : GSM850 Idle + BT Idle + WLAN Idle
+ Adaptor + USB Link + CPS Rx + MPEG4
+ Scanner

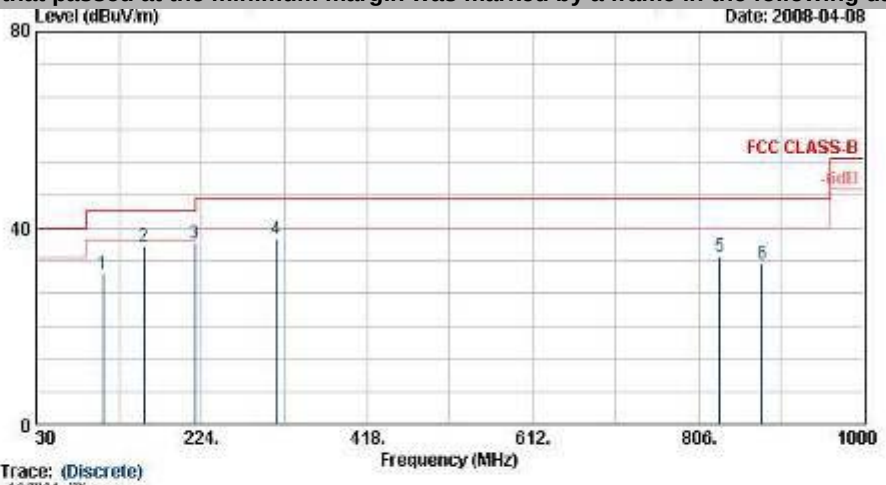
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	48.09	27.87	-12.13	40.00	51.65	9.06	0.30	33.14	---	---	Peak
2	77.79	33.87	-6.13	40.00	59.54	7.35	0.45	33.47	100	211	Peak
3	92.64	29.15	-14.35	43.50	52.37	9.62	0.50	33.33	---	---	Peak
4	831.30	35.03	-10.97	46.00	46.43	20.04	1.20	32.63	---	---	Peak
5	880.30	38.91	-7.09	46.00	49.97	20.39	1.30	32.75	---	---	Peak
6	936.30	36.40	-9.60	46.00	46.95	20.79	1.20	32.54	---	---	Peak

Remark: The spurious emission above 1 GHz is too low to be taken.

6.4.3 Test Mode: Mode 3 – Sample C

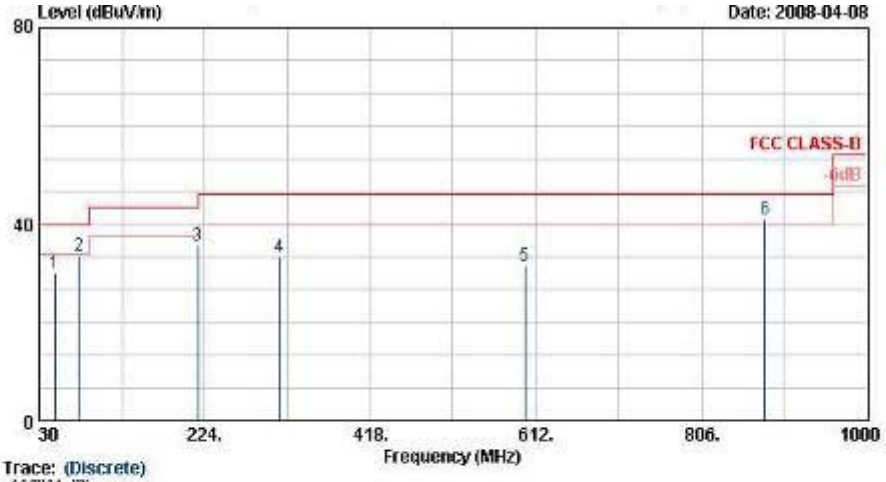
- Test Distance: 3m
- Temperature: 21~26°C
- Relative Humidity: 51~58%
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Test Engineer: Sun
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

■ **The test that passed at the minimum margin was marked by a frame in the following data**



	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	108.03	30.72	-12.78	43.50	52.21	11.60	0.50	33.59	---	---	Peak
2	156.09	36.27	-7.23	43.50	58.95	10.24	0.60	33.52	100	145	Peak
3	216.03	36.75	-9.25	46.00	59.32	10.27	0.66	33.50	---	---	Peak
4	311.90	37.87	-8.13	46.00	56.84	13.53	0.80	33.30	---	---	Peak
5	831.30	34.26	-11.74	46.00	45.65	20.04	1.20	32.63	---	---	Peak
6	880.30	32.69	-13.31	46.00	43.75	20.39	1.30	32.75	---	---	Peak

Remark: The spurious emission above 1 GHz is too low to be taken.



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(9511121) VERTICAL
EUT : MC5574 5Y1 FCC submit with ID 2D Scanner Scanner and w/ camera w/o camera
Power : 120Vac/60Hz
Model : FD 840317
Mode : EDGE Idle + BT Idle + WLAN Idle + Adaptor + USB Link + GPS Rx + MP8Gd + Camera

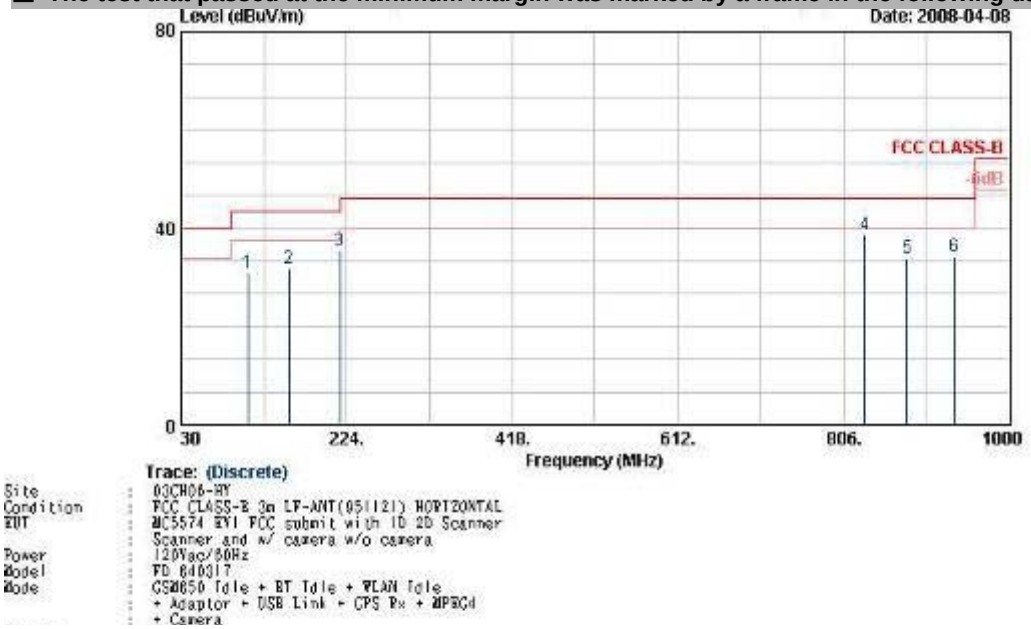
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	48.09	30.02	-9.98	40.00	53.79	9.06	0.30	33.14	---	---	Peak
2	78.98	33.50	-6.50	40.00	59.27	7.29	0.43	33.49	100	183	Peak
3	216.03	35.67	-10.33	46.00	58.24	10.27	0.66	33.50	---	---	Peak
4	311.90	33.21	-12.79	46.00	52.18	13.53	0.80	33.30	---	---	Peak
5	598.90	31.41	-14.59	46.00	44.83	18.45	1.00	32.87	---	---	Peak
6 @	880.30	41.02	-4.98	46.00	52.08	20.39	1.30	32.75	---	---	Peak

Remark: The spurious emission above 1 GHz is too low to be taken.

6.4.4 Test Mode: Mode 4 – Sample D

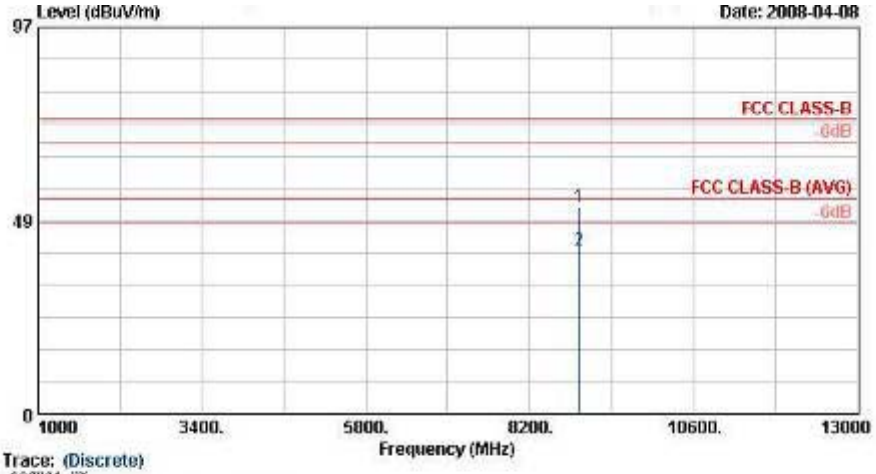
- Test Distance: 3m
- Temperature: 21~26°C
- Relative Humidity: 51~58%
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Test Engineer: Sun
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

■ **The test that passed at the minimum margin was marked by a frame in the following data**



	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	108.03	31.03	-12.47	43.50	52.53	11.60	0.50	33.59	---	---	Peak
2	156.09	31.82	-11.68	43.50	54.50	10.24	0.60	33.52	100	210	QP
3	216.03	35.34	-10.66	46.00	57.91	10.27	0.66	33.50	---	---	Peak
4	831.30	38.68	-7.32	46.00	50.07	20.04	1.20	32.63	100	179	Peak
5	880.30	33.85			44.91	20.39	1.30	32.75	---	---	Peak
6	936.30	34.10	-11.90	46.00	44.66	20.78	1.20	32.54	---	---	Peak

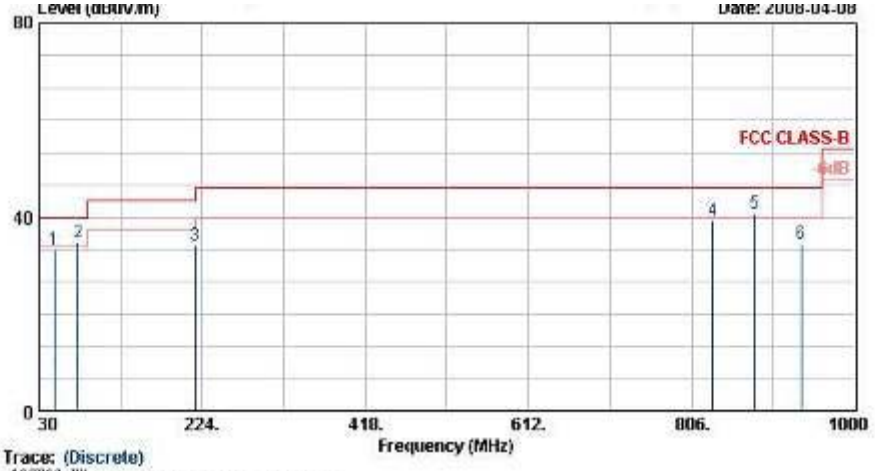
Remark: #5 is BS BCCH Signal.



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m HR-ANT(0-10)-060918 PORT2ONTAL
EUT : MC5574 EVT FCC submit with ID 2D Scanner
: Scanner and w/ camera w/o camera
Power : 120Vac/60Hz
Model : FD 840317
Mode : GSM850 Idle + BT Idle + WLAN Idle
: + Adaptor + USB Link + GPS Rx + BPSG4
: + Camera

	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	8918.00	51.93	-22.07	74.00	44.39	36.38	7.71	36.56	100	0	Peak
2	8918.00	41.10	-12.90	54.00	33.56	36.38	7.71	36.56	100	216	Average

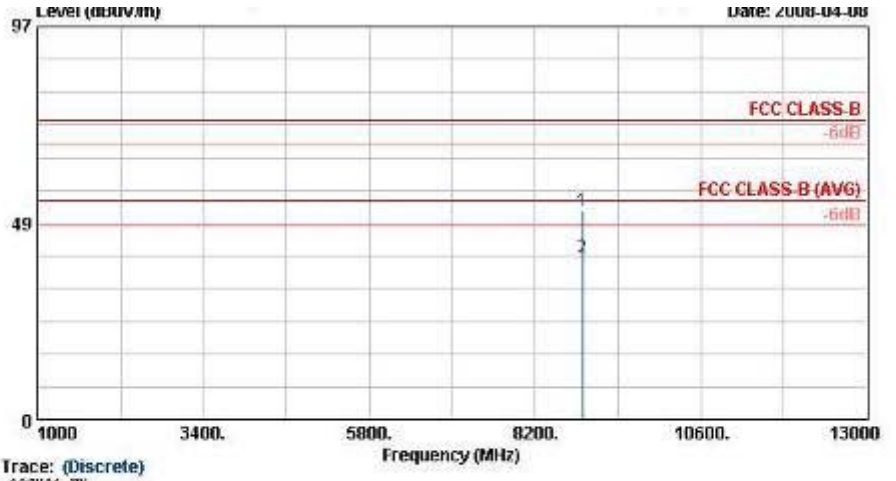


Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LP-ANT(951121) VERTICAL
EUT : MC5574 EVT FCC submit with ID 2D Scanner
: Scanner and w/ camera w/o camera
Power : 120Vac/60Hz
Model : FD 840317
Mode : GSM850 Idle + BT Idle + WLAN Idle
: + Adaptor + USB Link + GPS Rx + BPSG4
: + Camera

	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	48.09	33.32	-6.68	40.00	57.09	9.06	0.30	33.14	---	---	Peak
2 @	76.44	34.69	-5.31	40.00	60.46	7.29	0.43	33.49	100	208	Peak
3	216.03	34.06	-11.94	46.00	56.63	10.27	0.66	33.50	---	---	Peak
4	831.30	39.13	-6.87	46.00	50.52	20.04	1.20	32.63	---	---	Peak
5 !	880.30	40.67			51.73	20.39	1.30	32.75	---	---	Peak
6	936.30	34.59	-11.41	46.00	45.14	20.79	1.20	32.54	---	---	Peak

Remark: #5 is BS BCCH Signal.



Trace: (Discrete)

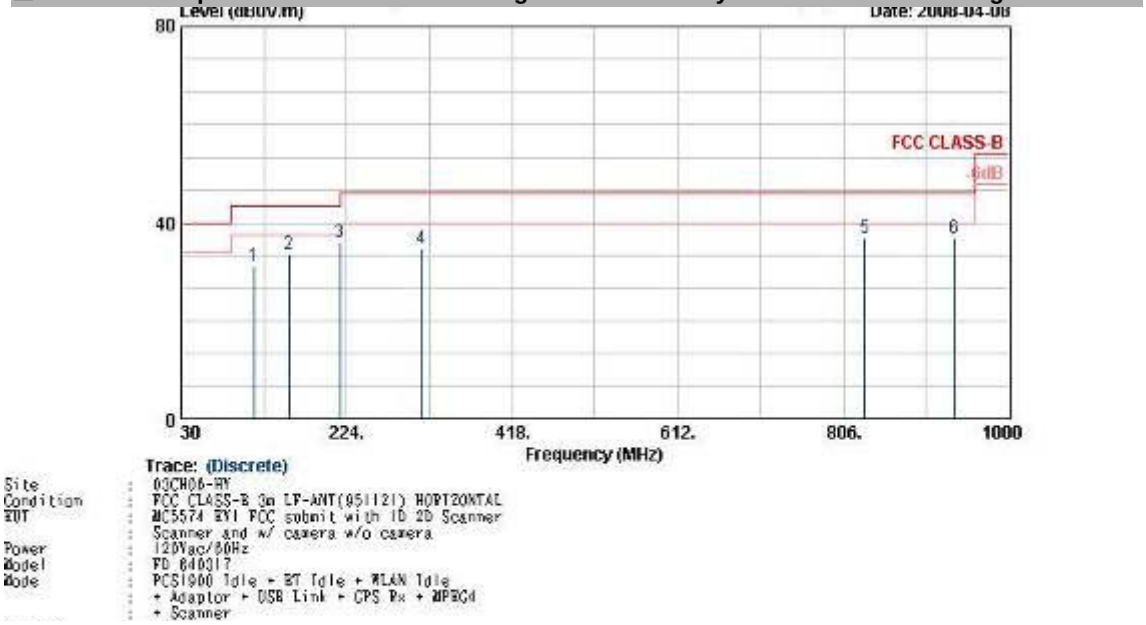
Site : 03CH06-HY
Condition : FCC CLASS-B 3m HF-ANT(6-18)-060918 VERTICAL
EUT : MC5574 EVT FCC submit with ID 2D Scanner
: Scanner and w/ camera w/o camera
Power : 120Vac/60Hz
Model : FD 840317
Mode : GSM850 Idle + BT Idle + WLAN Idle
: + Adaptor + USB Link + GPS Rx + MPEG4
: + Camera

	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	8894.00	51.44	-22.56	74.00	43.96	36.34	7.68	36.54	100	0	Peak
2	8894.00	40.04	-13.96	54.00	32.56	36.34	7.68	36.54	100	163	Average

6.4.5 Test Mode: Mode 5 – Sample D

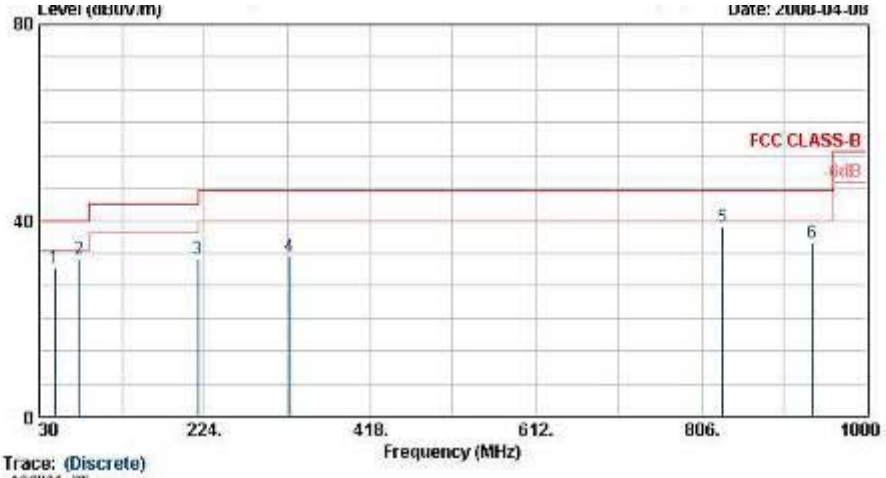
- Test Distance: 3m
- Temperature: 21~26°C
- Relative Humidity: 51~58%
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Test Engineer: Sun
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

■ **The test that passed at the minimum margin was marked by a frame in the following data**



	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	114.78	31.16	-12.34	43.50	52.08	12.13	0.50	33.55	---	---	Peak
2	156.09	33.69	-9.81	43.50	56.37	10.24	0.60	33.52	---	---	Peak
3	218.03	35.94	-10.06	46.00	58.50	10.27	0.66	33.50	---	---	Peak
4	311.90	34.65	-11.35	46.00	53.63	13.53	0.80	33.30	---	---	Peak
5	831.30	36.93	-9.07	46.00	48.33	20.04	1.20	32.63	---	---	Peak
6	936.30	36.98	-9.02	46.00	47.53	20.79	1.20	32.54	100	288	Peak

Remark: The spurious emission above 1 GHz is too low to be taken.



Trace: (Discrete)

Site : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(9511121) VERTICAL
EUT : MC5574 EVT FCC submit with 1D 2D Scanner
: Scanner and w/ camera w/o camera
Power : 120Vac/60Hz
Model : FD 840317
Mode : PCS1900 Idle + BT Idle + WLAN Idle
: + Adaptor + USB Link + GPS Rx + BPBGd
: + Scanner

	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	48.09	30.38	-9.62	40.00	54.15	9.06	0.30	33.14	---	---	Peak
2	76.44	32.00	-8.00	40.00	57.77	7.29	0.43	33.49	---	---	Peak
3	216.03	32.16	-13.84	46.00	54.73	10.27	0.66	33.50	---	---	Peak
4	323.80	32.78	-13.22	46.00	51.42	13.83	0.80	33.27	---	---	Peak
5	831.30	38.79	-7.21	46.00	50.19	20.04	1.20	32.63	100	153	Peak
6	936.30	35.33	-10.67	46.00	45.88	20.79	1.20	32.54	---	---	Peak

Remark: The spurious emission above 1 GHz is too low to be taken.

6.5 Photographs of Radiated Emission Test Configuration

Please refer to Appendix B

7. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMC Receiver	R&S	ESCS 30	100132	9kHz – 2.75GHz	Jul. 14, 2007	Jul. 13, 2008	Conduction (CO01-HY)
LISN	MessTec	NNB-2/16Z	2001/004	9kHz – 30MHz	Mar. 24, 2008	Mar. 23, 2009	Conduction (CO01-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	2001/009	9kHz – 30MHz	Mar. 13, 2008	Mar. 12, 2009	Conduction (CO01-HY)
EMI Filter	LINDGREN	LRE-2060	1004	< 450Hz	N/A	N/A	Conduction (CO01-HY)
EMI Filter	LINDGREN	N6006	201052	0 – 60Hz	N/A	N/A	Conduction (CO01-HY)
RF Cable-CON	Suhner Switzerland	RG223/U	CB029	9kHz – 30MHz	Dec. 03, 2007	Dec. 02, 2008	Conduction (CO01-HY)
Isolation Transformer	Erika Fiedler OHG	D-65396 Walluf	58	45MHz-2.15GHz	N/A	N/A	Conduction (CO01-HY)
Impedance Stabilization	SCHAFFNER	ST08	22589	150kHz – 230MHz	Mar. 03, 2008	Feb. 14, 2009	Conduction (CO01-HY)
Impedance Stabilization	SCHAFFNER	T400	21653	150kHz – 230MHz	May. 09, 2007	May 08, 2008	Conduction (CO01-HY)
Impedance Stabilization	SCHAFFNER	T800	23342	150kHz – 230MHz	Mar. 03, 2008	Mar. 04, 2009	Conduction (CO01-HY)
Spectrum Analyzer	Agilent	E4408B	MY44211028	9KHz-26.5GHz	Oct. 17, 2007	Oct. 16, 2008	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESCS30	100356	9KHz-2.75GHz	Jul. 26, 2007	Jul. 25, 2008	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Dec. 01, 2007	Nov. 30, 2008	Radiation (03CH06-HY)
Double Ridge Horn Antenna	Com-Power	AH118	071025	1G~18G	Jun. 04, 2007	Jun. 03, 2008	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-251	14G - 40G	Oct. 17, 2007	Oct. 16, 2008	Radiation (03CH06-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1G - 26.5G	Nov. 22, 2007	Nov. 21, 2008	Radiation (03CH06-HY)
Pre Amplifier	EMEC	PA303	PA303-SMA-059	100K~3GHz	Nov. 26, 2007	Nov. 25, 2008	Radiation (03CH06-HY)
Base Station Simulator	R & S	CMU200	103937	Third-Band	Oct. 19, 2007	Oct. 18, 2008	Radiation (03CH06-HY)

8. Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150 KHz ~ 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 (30 MHz ~ 1000 MHz)

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=2Uc(y)	**4.72**				

9. Certification of NVLAP Accreditation

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 200079-0

Sporton International, Inc. Hwa Ya EMC Laboratory
Tao Yuan Hsien 333
TAIWAN

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated 18 June 2005).

2008-01-01 through 2008-12-31
Effective dates

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01C (REV. 2006-09-13)