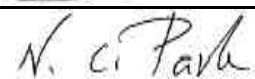
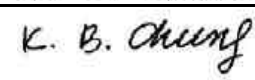


EMC Test Report

Project No.		LBE032290
Equipment under Test		
	Applicant	Samsung Electronics Co.Ltd 416 Maetan-3 Dong, Paldal-Ku, Suwon City, Gyeonggi-Do, Korea, 442-742
	FCC ID	A3LGADGET
	Product Name	Digital Camcorder
	Model Name	ITCAM-9
	Manufacturer	Samsung Electronics Co. Ltd
	Brand Name	SAMSUNG
	Variant Model	See Page 2
Issued Date		13-Nov-03
Applied Standards		FCC Part 15
Result		Passed The equipment under test has found to be compliant with the applied standards.
	Name/Position	Signature
Tested by	Kyung Chul, Min Test Engineer	
Reviewed by	No Cheon, Park Manager of EMC Lab.	
Authorized by	Kyu Baek, Chung Chief of EMC Lab.	
SAMSUNG ELECTRONICS Co., Ltd. SUWON EMC Test Lab.		1. This test reports does not constitute an endorsement by NIST/NVLAP or U.S Government. 2. This test report is to certify that the tested device properly complies with the requirements of FCC Rules and Regulations Part 15 Subpart B Unintentional Radiators.All tests necessary to show compliance to the requirements were and these results met the specifications requirement. This laboratory is registered by the NIST/NVLAP, U.S.A. The test reported herein have been performed in accordance with its terms of registration.  NVLAP LAB CODE
	Address	416 Maetan-3 Dong, Paldal-Ku, Suwon City, Kyungki-Do,Korea, 442-742
	Telephone No.	82-31-200-2135
	Fax No.	82-31-200-2189

1. General Information

1.1 Basic Information related Product

Applicant	Samsung Electronics Co. Ltd
Product name	Digital Camcorder
Model name	ITCAM-9
Brand Name	SAMSUNG
Manufacturer	Samsung Electronics Co. Ltd
Variant Models	None

1.2 Power Input Ports

Description	Voltage(V)	Frequency(Hz)	No of phases
Mains Cable	120V	60Hz	1

1.3 EUT & Support Equipment

Used EUT and Peripherals

Mark	Item	Model No.	Serial No.	Manufacturer	Remark
A	HDD Camcorder	ITCAM-9	-	SAMSUNG	EUT
B	Cradle	-	-	SAMSUNG	EUT
C	Remote Controller	-	-	SAMSUNG	EUT
D	Note PC	PP03S	9X9X9 A00	SAMSUNG	-
E	AC Adapter	AA-E7	-	SAMSUNG	EUT
F	AC Adapter	ADP-50FH	08H051 C/0	DELTA Electronics	Note PC

Used Cable Description

No.	Item	Length[m]	Shielded	Remark
1	AC Power Cable	1.5	N	EUT
2	DC Power Cable	1.2	N	EUT
3	S-Video In Cable	1.5	N	75 ohm Terminated
4	AV In Cable	1.5	N	Terminated Video :75 ohm Audio In : 1 kohm
5	S-Video Out Cable	1.5	N	75 ohm Terminated
6	AV Out Cable	1.5	N	Terminated Video :75 ohm Audio Out : 10 kohm
7	Headphone	1.5	N	-
8	USB Cable	1.5	N	-
9	AC Power Cable	1.5	N	-
10	DC Power Cable	1.2	N	-
11				
12				
13				
14				
15				

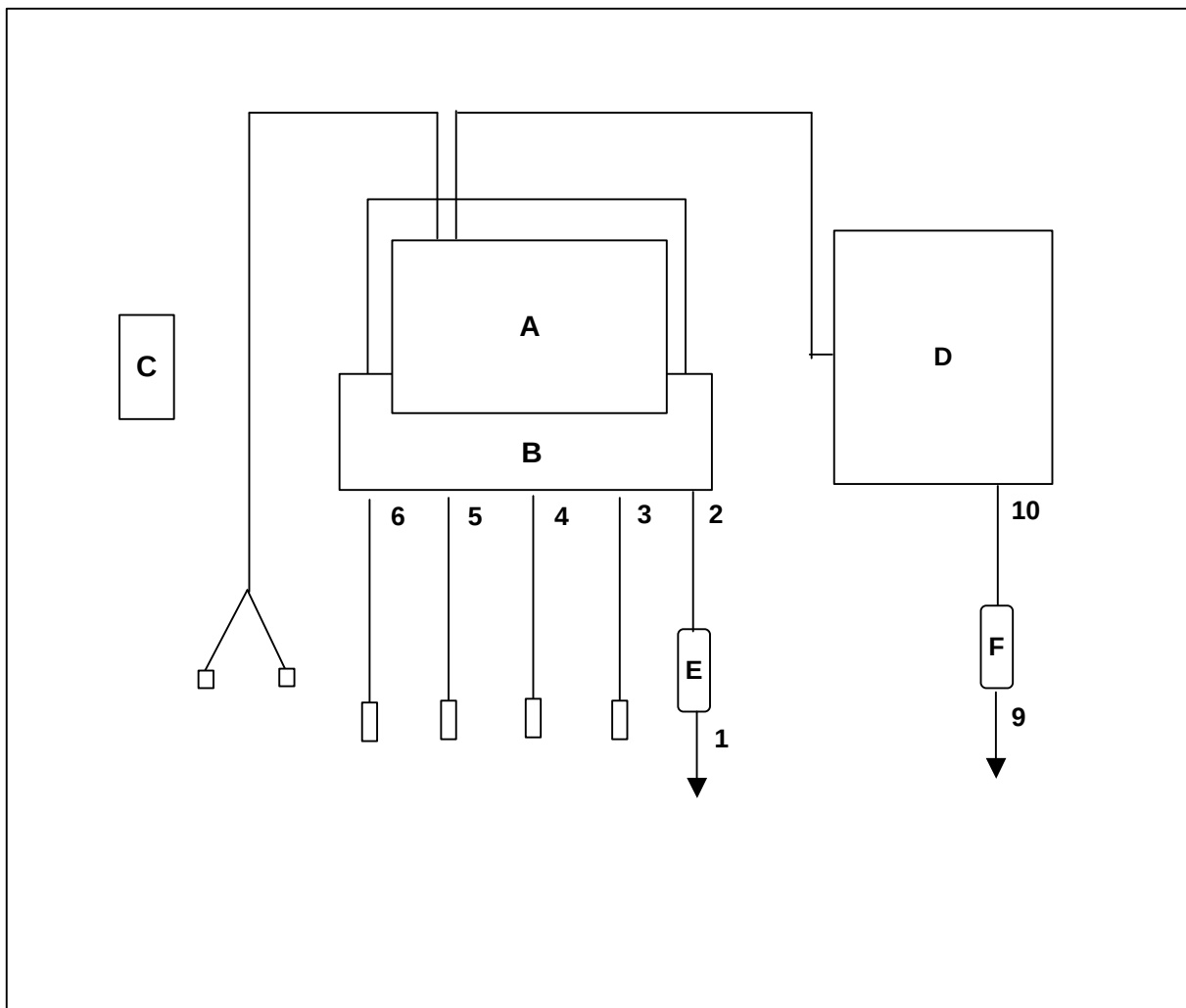
1.4 Operating Mode and Conditions

The system was configured for testing in typical fashion use.

The mode of operation utilized for testing was selected to best simulate typical EUT use.

- HDD Recording
- HDD Play
- MP3 Play

1.5 Block Diagram



1.6 Test Facility

General Information

The EMI/EMS measurement facilities used to collect the tested data are located at 416 Maetan 3 Dong, Paldal-Ku, Suwon City, Gyeonggi-Do, Korea.

This sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1 & 16-2. SAMSUNG Electronics Co.,Ltd is accredited by Korea Laboratory Accreditation scheme(KOLAS) which . signed the International Laboratory Accreditation Cooperation(ILAC) Mutual Recognition Arrangement (M for the above test item(s) and test method(S)

Accreditation and Listing



Reg. No. 124



Reg. No. KR0004



No.195



App. No.001



LAB CODE 200447-0



Reg. No.98856



R-1221,C-1095



H9354285

1.7 Applied Standards

List

FCC Rule Part(s)	Test Procedure(s)
FCC Part 15 Subpart B	ANSI C63.4-2001
	-
	-

2. Summary of Test Results

Result : **Pass**

The equipment under test(EUT) has been found to comply with the applied standards

Section of the Product Standard		Applied Standard	Result
Electromagnetic Emission Test			
3.1	Conducted Emission	FCC Part 15	Complied
3.2	Radiated Emission	FCC Part 15	Complied

* N/A : Test not applicable

3. Description of Individual Tests

3.1 Disturbance voltage at the mains terminals

Test Information	
Test Engineer	Kyung Chul, Min
Test Date	05-Nov-03
Climate Condition	Ambient Temperature : 27.0 , Relative Humidity : 31%
Test Place	Shield Room #5

Test Equipments			
Equipment	Model Name	Manufacturer	Serial No.
TEST RECEIVER	ESI26	R & S	839809/002
LISN	ESH3-Z5	R & S	847265/028
LISN	ESH3-Z5	R & S	100261
10dB Attenuator	8491A	AGILENT	2708A52512
Test Software	EP5/CE	TOYO	Version : 2.0.860

Test Setup

EUT was placed on a platform of nominal size, raised 80cm above the conducting ground plane.

The rear of table top was located 40cm to the vertical conducting plane. The rear of EUT was aligned and flushed with rear of tabletop. All other surfaces of tabletop was at least 80cm from any other grounded conducting surface. All unused 50 ohm connectors of the LISN were resistively terminated in 50 ohm when not connected to the measuring equipment
See photo.

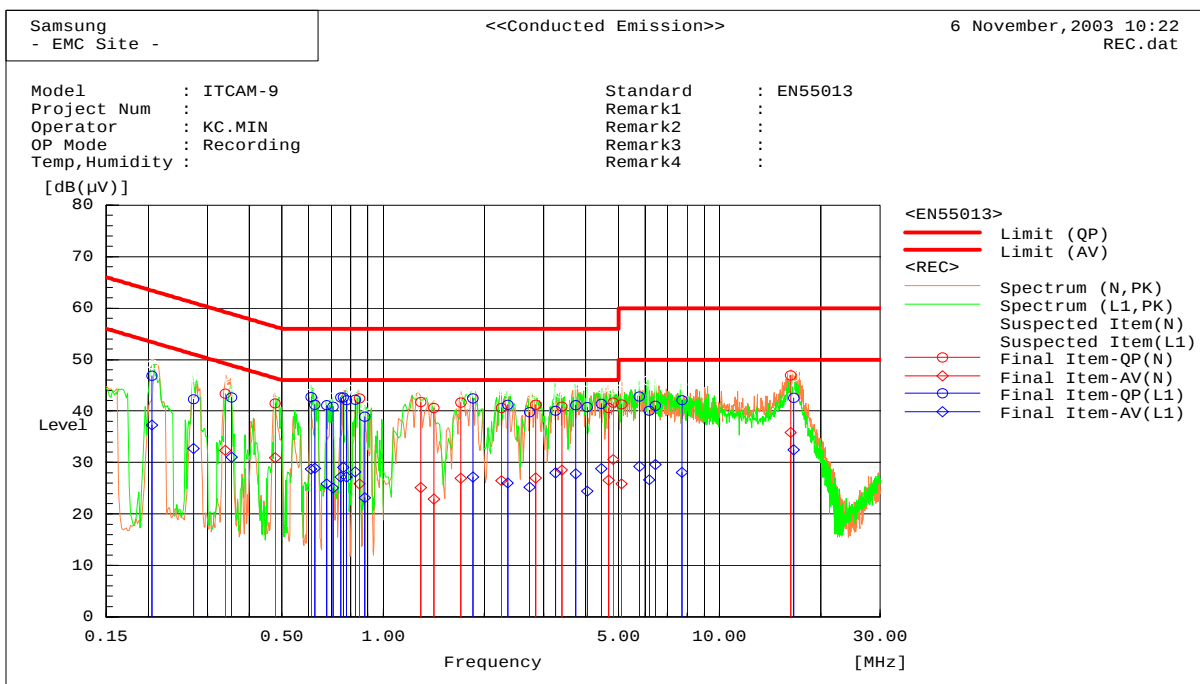
Test Result

Measurement Results	Passed
	The Measured emissions of the EUT have found to be below the specified limits.

Test Data

* Operating Mode : HDD Recording

AMN Mode : Live & Neutral



Final Result

--- N Phase ---

No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	0.33893	33.4	22.4	10.0	43.4	32.4	59.2	49.2	15.8	16.8
2	0.47759	31.5	20.9	10.0	41.5	30.9	56.4	46.4	14.9	15.5
3	0.84842	32.5	15.9	10.0	42.5	25.9	56.0	46.0	13.5	20.1
4	1.29173	31.8	15.2	9.9	41.7	25.1	56.0	46.0	14.3	20.9
5	1.4151	30.7	13.0	9.9	40.6	22.9	56.0	46.0	15.4	23.1
6	1.69827	31.6	16.9	10.0	41.6	26.9	56.0	46.0	14.4	19.1
7	2.24296	30.6	16.4	10.0	40.6	26.4	56.0	46.0	15.4	19.6
8	2.83634	31.2	17.0	10.0	41.2	27.0	56.0	46.0	14.8	19.0
9	3.39239	30.8	18.4	10.1	40.9	28.5	56.0	46.0	15.1	17.5
10	4.68414	30.5	16.4	10.1	40.6	26.5	56.0	46.0	15.4	19.5
11	4.82085	31.5	20.5	10.1	41.6	30.6	56.0	46.0	14.4	15.4
12	5.10726	31.2	15.7	10.1	41.3	25.8	60.0	50.0	18.7	24.2
13	16.23788	36.5	25.4	10.4	46.9	35.8	60.0	50.0	13.1	14.2

--- L1 Phase ---

No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	0.20539	37.0	27.4	9.9	46.9	37.3	63.4	53.4	16.5	16.1
2	0.27328	32.4	22.8	9.9	42.3	32.7	61.0	51.0	18.7	18.3
3	0.35338	32.7	21.0	10.0	42.7	31.0	58.9	48.9	16.2	17.9
4	0.61085	32.8	18.7	10.0	42.8	28.7	56.0	46.0	13.2	17.3
5	0.62601	31.2	18.8	10.0	41.2	28.8	56.0	46.0	14.8	17.2
6	0.67798	31.1	15.8	10.0	41.1	25.8	56.0	46.0	14.9	20.2
7	0.7082	30.9	15.0	10.0	40.9	25.0	56.0	46.0	15.1	21.0
8	0.74605	32.6	17.2	10.0	42.6	27.2	56.0	46.0	13.4	18.8
9	0.75976	32.7	19.0	10.0	42.7	29.0	56.0	46.0	13.3	17.0
10	0.77654	32.1	17.2	10.0	42.1	27.2	56.0	46.0	13.9	18.8
11	0.82631	32.2	18.2	10.0	42.2	28.2	56.0	46.0	13.8	17.8
12	0.8816	28.9	13.1	10.0	38.9	23.1	56.0	46.0	17.1	22.9
13	1.84508	32.5	17.2	10.0	42.5	27.2	56.0	46.0	13.5	18.8

Continued Test Data

* Operating Mode : HDD Recording

AMN Mode : Live & Neutral

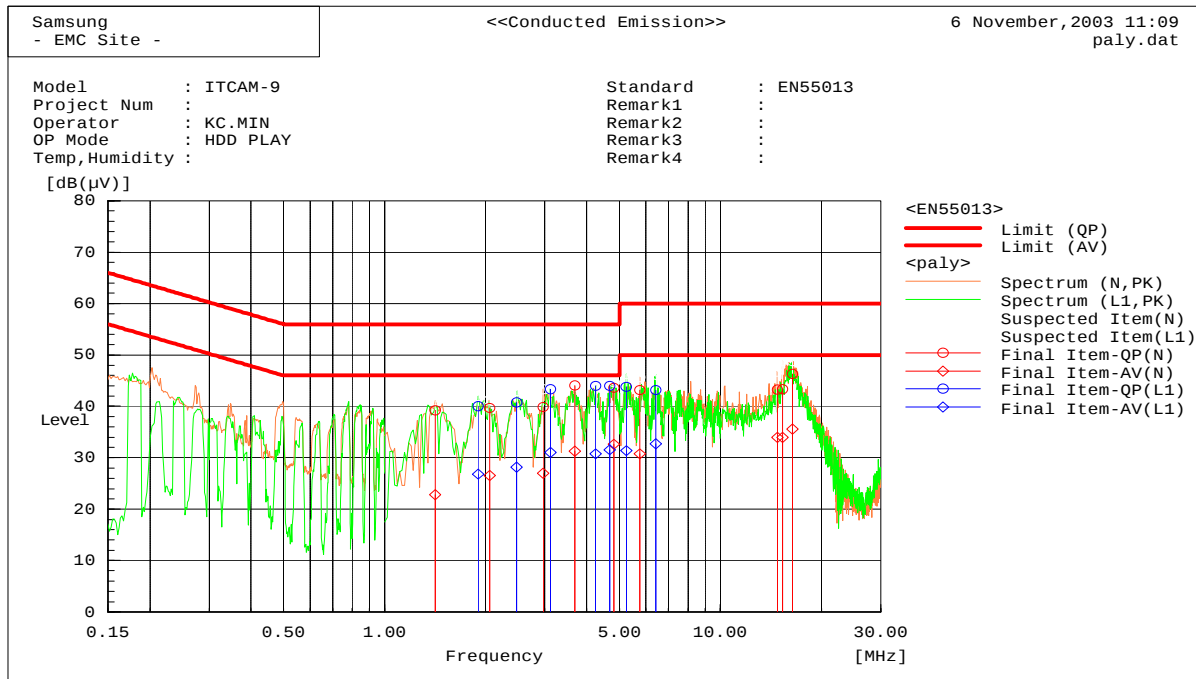
Final Result

--- L1 Phase ---

No.	Frequency	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c.f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
14	2.34017	31.2	16.0	10.0	41.2	26.0	56.0	46.0	14.8	20.0
15	2.72073	29.8	15.2	10.0	39.8	25.2	56.0	46.0	16.2	20.8
16	3.25767	30.0	17.9	10.1	40.1	28.0	56.0	46.0	15.9	18.0
17	3.73797	31.0	17.7	10.1	41.1	27.8	56.0	46.0	14.9	18.2
18	4.04404	30.6	14.3	10.1	40.7	24.4	56.0	46.0	15.3	21.6
19	4.45598	31.3	18.7	10.1	41.4	28.8	56.0	46.0	14.6	17.2
20	5.76125	32.7	19.0	10.2	42.9	29.2	60.0	50.0	17.1	20.8
21	6.16941	29.8	16.5	10.2	40.0	26.7	60.0	50.0	20.0	23.3
22	6.44103	30.9	19.4	10.2	41.1	29.6	60.0	50.0	18.9	20.4
23	7.72682	31.9	17.8	10.2	42.1	28.0	60.0	50.0	17.9	22.0
24	16.63628	32.0	21.9	10.5	42.5	32.4	60.0	50.0	17.5	17.6

* Operating Mode : HDD Play

AMN Mode : Live & Neutral



Final Result

--- N Phase ---

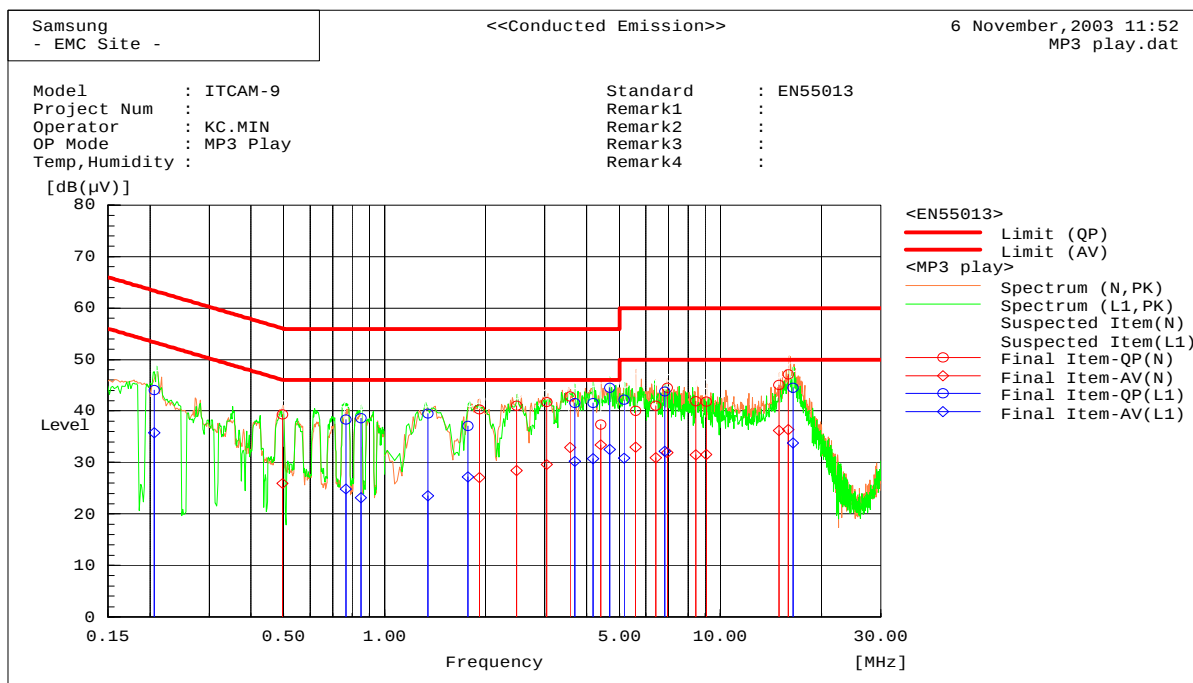
No.	Frequency	Reading QP	Reading AV	c.f	Result QP	Result AV	Limit QP	Limit AV	Margin QP	Margin AV
	[MHz]	[dB(μV)]	[dB(μV)]	[dB]	[dB(μV)]	[dB(μV)]	[dB(μV)]	[dB(μV)]	[dB]	[dB]
1	1.41131	29.3	12.9	9.9	39.2	22.8	56.0	46.0	16.8	23.2
2	2.05231	29.7	16.6	10.0	39.7	26.6	56.0	46.0	16.3	19.4
3	2.96819	29.8	17.0	10.0	39.8	27.0	56.0	46.0	16.2	19.0
4	3.68494	34.0	21.2	10.1	44.1	31.3	56.0	46.0	11.9	14.7
5	4.80642	33.5	22.5	10.1	43.6	32.6	56.0	46.0	12.4	13.4
6	5.74267	33.0	20.5	10.2	43.2	30.7	60.0	50.0	16.8	19.3
7	14.7497	32.9	23.6	10.4	43.3	34.0	60.0	50.0	16.7	16.0
8	15.28116	33.0	23.6	10.4	43.4	34.0	60.0	50.0	16.6	16.0
9	16.39379	35.9	25.2	10.4	46.3	35.6	60.0	50.0	13.7	14.4

--- L1 Phase ---

No.	Frequency	Reading QP	Reading AV	c.f	Result QP	Result AV	Limit QP	Limit AV	Margin QP	Margin AV
	[MHz]	[dB(μV)]	[dB(μV)]	[dB]	[dB(μV)]	[dB(μV)]	[dB(μV)]	[dB(μV)]	[dB]	[dB]
1	1.89811	30.0	16.8	10.0	40.0	26.8	56.0	46.0	16.0	19.2
2	2.47057	30.8	18.2	10.0	40.8	28.2	56.0	46.0	15.2	17.8
3	3.11879	33.3	20.9	10.1	43.4	31.0	56.0	46.0	12.6	15.0
4	4.25271	33.9	20.6	10.1	44.0	30.7	56.0	46.0	12.0	15.3
5	4.67746	33.9	21.4	10.1	44.0	31.5	56.0	46.0	12.0	14.5
6	5.24326	33.7	21.3	10.1	43.8	31.4	60.0	50.0	16.2	18.6
7	6.43021	33.0	22.6	10.2	43.2	32.8	60.0	50.0	16.8	17.2

* Operating Mode : MP3 Play

AMN Mode : Live & Neutral



Final Result

--- N Phase ---

No.	Frequency	Reading QP	Reading AV	c.f	Result QP	Result AV	Limit QP	Limit AV	Margin QP	Margin AV
	[MHz]	[dB(μV)]	[dB(μV)]	[dB]	[dB(μV)]	[dB(μV)]	[dB(μV)]	[dB(μV)]	[dB]	[dB]
1	0.49582	29.3	15.9	10.0	39.3	25.9	56.1	46.1	16.8	20.2
2	1.91326	30.3	17.1	10.0	40.3	27.1	56.0	46.0	15.7	18.9
3	2.47274	31.0	18.4	10.0	41.0	28.4	56.0	46.0	15.0	17.6
4	3.04123	31.8	19.6	10.0	41.8	29.6	56.0	46.0	14.2	16.4
5	3.5632	32.7	22.8	10.1	42.8	32.9	56.0	46.0	13.2	13.1
6	4.40404	27.2	23.4	10.1	37.3	33.5	56.0	46.0	18.7	12.5
7	5.5955	29.8	22.8	10.2	40.0	33.0	60.0	50.0	20.0	17.0
8	6.41073	30.8	20.8	10.2	41.0	31.0	60.0	50.0	19.0	19.0
9	6.95416	34.3	21.7	10.2	44.5	31.9	60.0	50.0	15.5	18.1
10	8.45007	31.8	21.3	10.2	42.0	31.5	60.0	50.0	18.0	18.5
11	9.08259	31.6	21.4	10.2	41.8	31.6	60.0	50.0	18.2	18.4
12	14.90681	34.6	25.8	10.4	45.0	36.2	60.0	50.0	15.0	13.8
13	15.92845	36.7	25.9	10.4	47.1	36.3	60.0	50.0	12.9	13.7

--- L1 Phase ---

No.	Frequency	Reading QP	Reading AV	c.f	Result QP	Result AV	Limit QP	Limit AV	Margin QP	Margin AV
	[MHz]	[dB(μV)]	[dB(μV)]	[dB]	[dB(μV)]	[dB(μV)]	[dB(μV)]	[dB(μV)]	[dB]	[dB]
1	0.20571	34.1	25.8	9.9	44.0	35.7	63.4	53.4	19.4	17.7
2	0.76521	28.3	14.9	10.0	38.3	24.9	56.0	46.0	17.7	21.1
3	0.84997	28.6	13.1	10.0	38.6	23.1	56.0	46.0	17.4	22.9
4	1.34314	29.6	13.6	9.9	39.5	23.5	56.0	46.0	16.5	22.5
5	1.77203	27.1	17.1	10.0	37.1	27.1	56.0	46.0	18.9	18.9
6	3.68151	31.5	20.1	10.1	41.6	30.2	56.0	46.0	14.4	15.8
7	4.16849	31.5	20.7	10.1	41.6	30.8	56.0	46.0	14.4	15.2
8	4.68432	34.4	22.4	10.1	44.5	32.5	56.0	46.0	11.5	13.5
9	5.17292	32.0	20.8	10.1	42.1	30.9	60.0	50.0	17.9	19.1
10	6.82141	33.6	21.9	10.2	43.8	32.1	60.0	50.0	16.2	17.9
11	16.45832	34.0	23.3	10.5	44.5	33.8	60.0	50.0	15.5	16.2

3.2 Radiated Disturbances

Test Information	
Test Engineer	Kyung Chul, Min
Test Date	04-Nov-03
Climate Condition	Ambient Temperature : 23.1 , Relative Humidity : 49%
Test Place	10m Semi-Anechoic Chamber

Test Equipments			
Equipment	Model Name	Manufacturer	Serial No.
Test Receiver	ESCS30	R & S	100104
Secetrum Analyzer	E7405A	AGILENT	US41110272
RF Selector	NS4900	TOYO	0303-015
Mast Controller	HD2000	HD	HD20000902027
Bi-Log Antenna	CBL6112B	SCHAFFNER	2766
Preamp	8447D	Agilent	2944A10430
Test Software	EP5/RE	TOYO	Version : 2.0.860
Antenna Mast	MA240	HD	240/620
Turn Table	DS412	HD	-

Test Setup

EUT was placed on a platform of nominal size and raised 80cm above the conducting ground plane.

The rear of EUT was aligned and flushed with rear of tabletop.

Test was made with the antenna positioned in both the horizontal and vertical planes of polarization.

The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength.

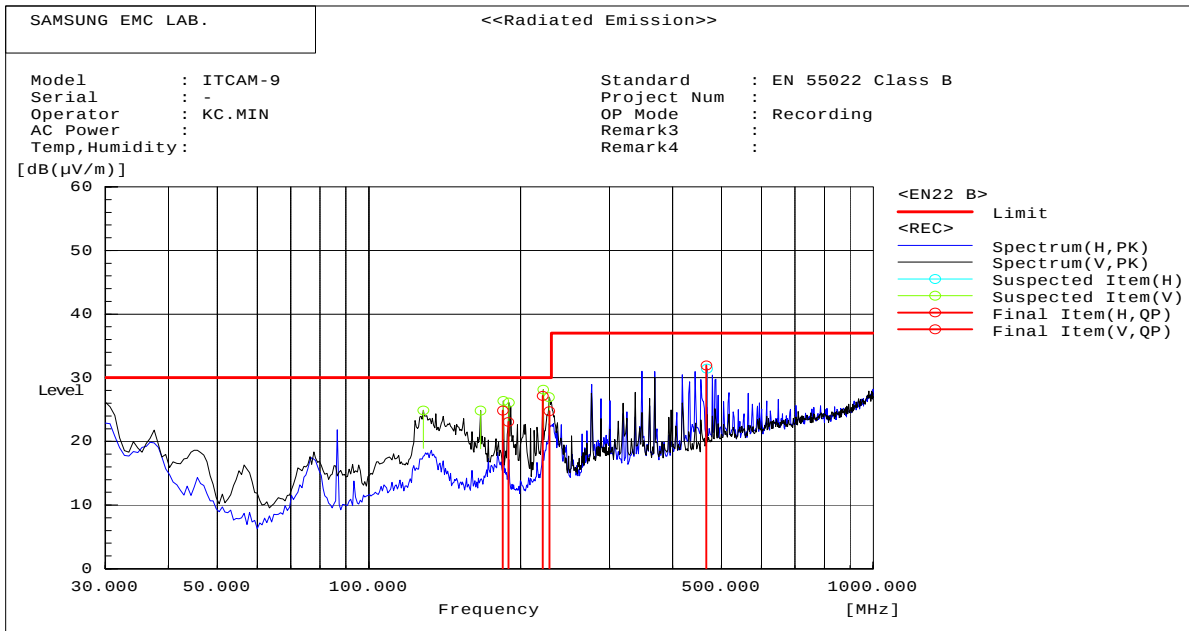
See photo.

Test Result

Measurement Results	Passed
	The Measured emissions of the EUT have found to be below the specified limits.

Test Graph & Data

*** Operating Mode: HDD Recording**



Final Result

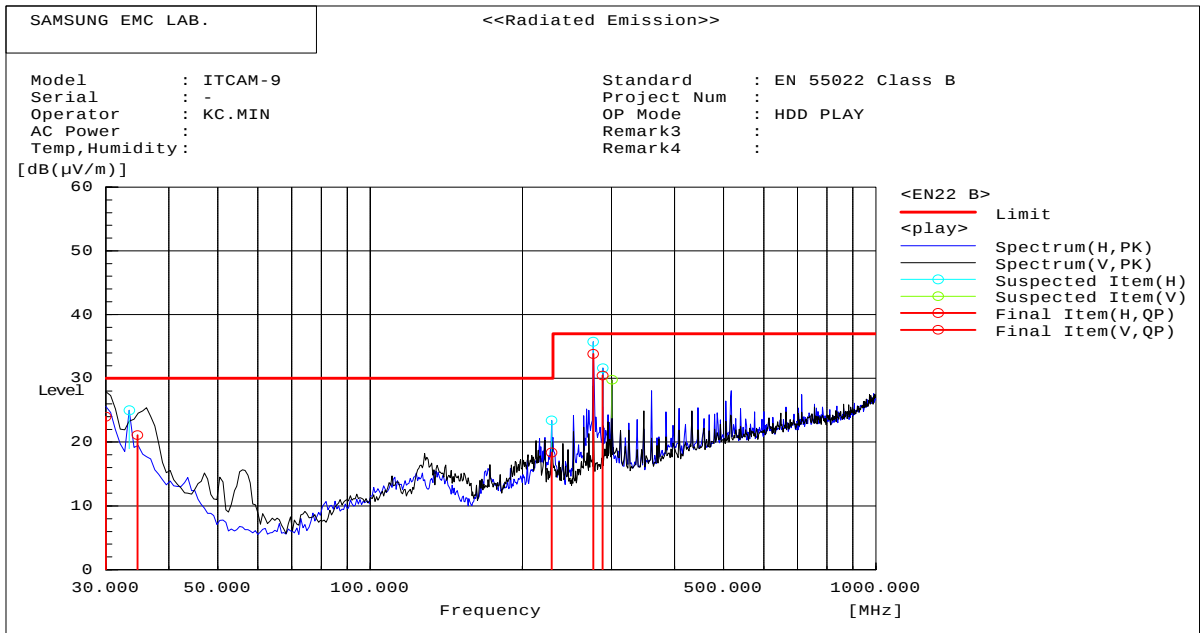
--- Horizontal Polarization (QP)---

No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Height [cm]	Angle [°]
1	466.950	39.7	-7.8	31.9	37.0	5.1	196.0	49.0

--- Vertical Polarization (QP)---

No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Height [cm]	Angle [°]
1	184.325	42.0	-17.1	24.9	30.0	5.1	106.0	298.0
2	188.996	40.1	-17.0	23.1	30.0	6.9	105.0	256.0
3	221.187	43.3	-16.1	27.2	30.0	2.9	106.0	102.0
4	227.998	40.3	-15.5	24.8	30.0	5.3	108.0	125.0

*** Operating Mode: HDD play**



Final Result

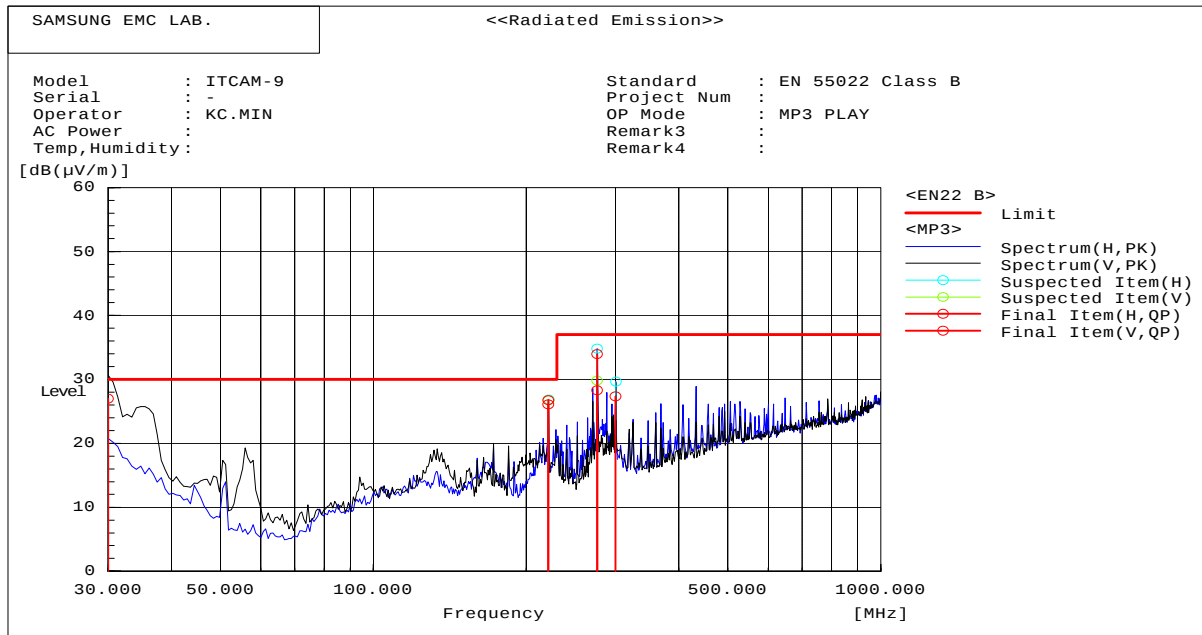
--- Horizontal Polarization (QP)---

No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Height [cm]	Angle [°]
1	34.664	33.1	-12.0	21.1	30.0	8.9	215.0	288.0
2	228.396	33.9	-15.5	18.4	30.0	11.6	388.0	25.0
3	275.997	45.8	-12.0	33.8	37.0	3.2	354.0	72.0
4	287.999	42.0	-11.6	30.4	37.0	6.6	297.0	70.0

--- Vertical Polarization (QP)---

No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Height [cm]	Angle [°]
1	30.000	33.2	-9.2	24.0	30.0	6.0	206.0	17.0

*** Operating Mode: MP3 play**



Final Result

--- Horizontal Polarization (QP)---

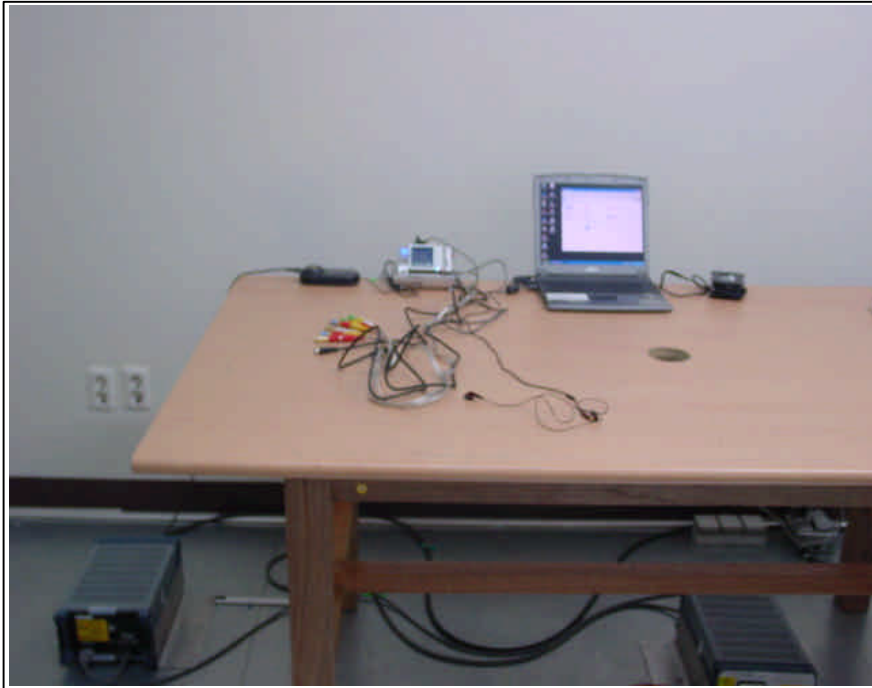
No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Height [cm]	Angle [°]
1	275.997	46.0	-12.0	34.0	37.0	3.1	389.0	29.0
2	221.187	42.9	-16.1	26.8	30.0	3.2	386.0	301.0
3	299.990	38.7	-11.3	27.4	37.0	9.7	320.0	21.0

--- Vertical Polarization (QP)---

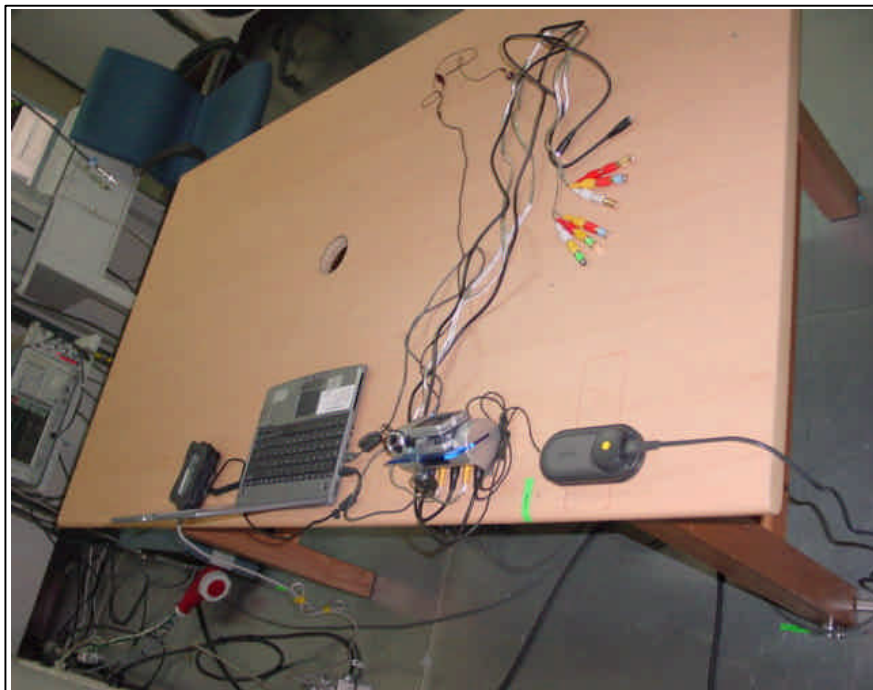
No.	Frequency [MHz]	Reading [dB(μV)]	c.f [dB(1/m)]	Result [dB(μV/m)]	Limit [dB(μV/m)]	Margin [dB]	Height [cm]	Angle [°]
1	30.000	36.2	-9.2	27.0	30.0	3.0	244.0	36.0
2	221.187	42.2	-16.1	26.1	30.0	3.9	129.0	337.0
3	275.997	40.3	-12.0	28.3	37.0	8.7	102.0	188.0

4. Appendix

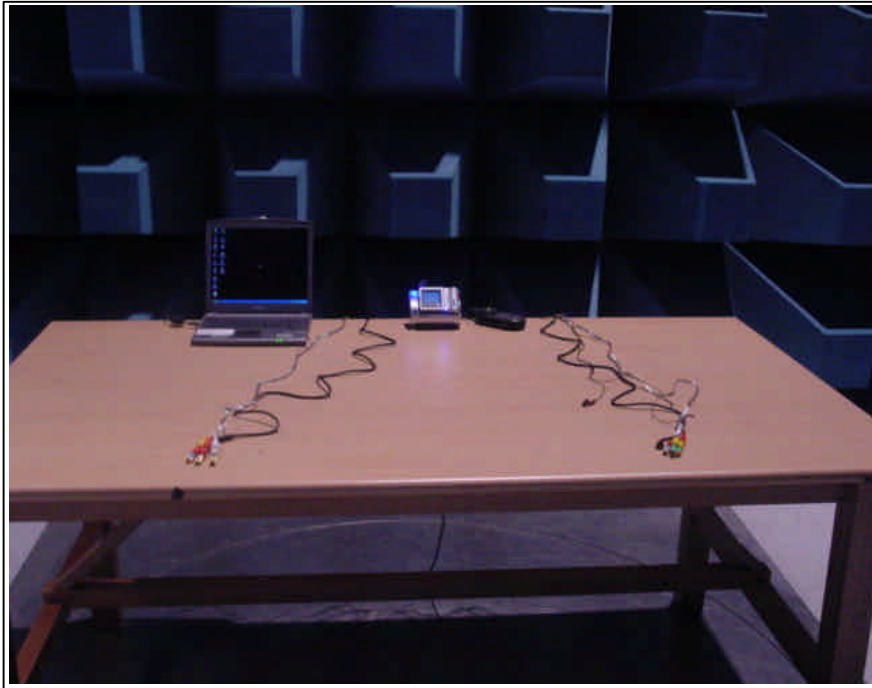
4.1 Test Photography



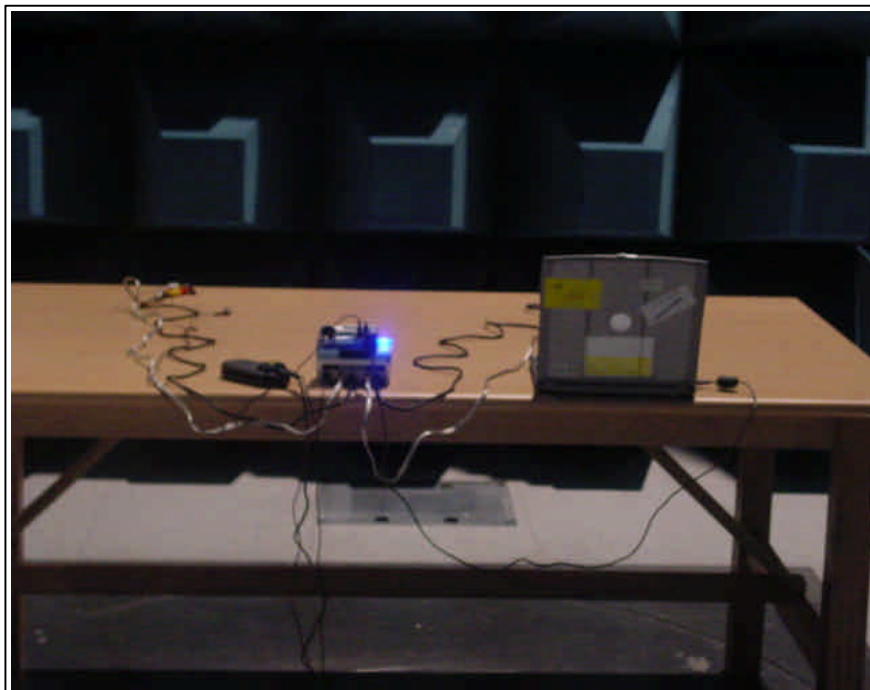
Pic. 1 Conducted Emission [Front]



Pic. 2 Conducted Emission [Rear]



Pic. 3 Radiated Emission [Front]



Pic. 4 Radiated Emission [Rear]

4.2 EUT Photography



Pic. 5 EUT [Front]



Pic. 6 EUT [Rear]



Pic. 7 EUT



Pic. 8 EUT