
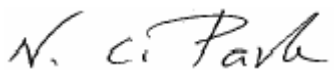
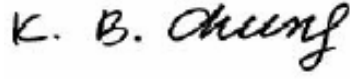


# EMC Test Report

## According to FCC Part 15 Subpart B

<b>Project No.</b>	LBE040656
<b>Equipment under Test</b>	
<b>Address</b>	416 Maetan3-Dong, Yeongtong-Gu, Suwon-Si, Gyeonggi-Do, Korea, 443-742
<b>Product Name</b>	DVD/VHS DUAL DECK
<b>Model Name</b>	DVD-V4600
<b>Manufacturer</b>	SAMSUNG
<b>Brand Name</b>	SAMSUNG
<b>Broadcasting System</b>	NTSC
<b>Variant Model</b>	See Page 3
<b>Date of Test</b>	March 30 ~31, 2004
<b>Issued Date</b>	April 01, 2004

	<b>Name/Position</b>	<b>Signature</b>
<b>Tested by</b>	Kyung Chul, Min Test Engineer	
<b>Reviewed by</b>	No Cheon, Park Manager of EMC Lab.	
<b>Authorized by</b>	Kyu Baek, Chung Chief of EMC 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 200623-0

## Table of Contents

### **1. General Information**

- 1.1 Basic Information related Product
- 1.2 Detail Information related Product
- 1.3 Test Configuration
- 1.4 EUT Operating Conditions
- 1.5 Applied Standard
- 1.6 Test Facility

### **2. Summary of Test Results**

### **3. Description of individual tests**

- 3. 1 Conducted Emission
- 3. 2 Radiated Emission
- 3. 3 Output Signal Level
- 3. 4 Output Terminal Conducted Spurious Emission
- 3. 5 Ant. Transfer Switch

### **4. Appendix A**

- 4.1 Test Photography
- 4.2 EUT Photography

# 1. General Information

## 1.1 Basic Information related Product

Applicant	Samsung Electronics Co. Ltd;
Model name	DVD-V4600
Applicant Address	Samsung Electronics Co. Ltd; 416 Maetan3- Dong, Yeongtong-Gu, Suwon-Si, Gyeonggi-Do, Korea, 443-742
Contact Person	Kyung Chul,Min
Kind of product	DVD/VHS DUAL DECK
Valiant list	None
Manufacturer	Samsung Electronics Co. Ltd;
New / Alternative / Permissive change Information	This report is original report #

## 1.2 Detail Information related Product

### Specification

Items	Description	Remark
Applicant	SAMSUNG	
Product name	DVD/VHS DUAL DECK	
Model name	DVD-V4600	
Brand Name	SAMSUNG	
Manufacturer	SAMSUNG	
FCC ID Number	A3L2004KAISER	
Power consumption	120V, 60Hz, 25W	

### Operating Frequency

- RF OUT CH 03
  - Visual Carrier : 61.25 MHz
  - Audio Carrier : 65.75 MHz
- RF OUT CH 04
  - Visual Carrier : 67.25 MHz
  - Audio Carrier : 71.75 MHz

### 1.3 Operating Mode and Condition

This system have following operating mode(s).

- 1) StanBy
- 2) VCR Play
- 3) DVD Play
- 4) VCR Record

The system was configured for testing in typical fashion use. All connectors not used are terminated with resistors matching the nominal terminal impedance. The mode of operation utilized for testing was selected to best simulate typical EUT use.

### 1.4 Equipment Modifications

No equipment modifications were required.

## 1.5 Test Configuration

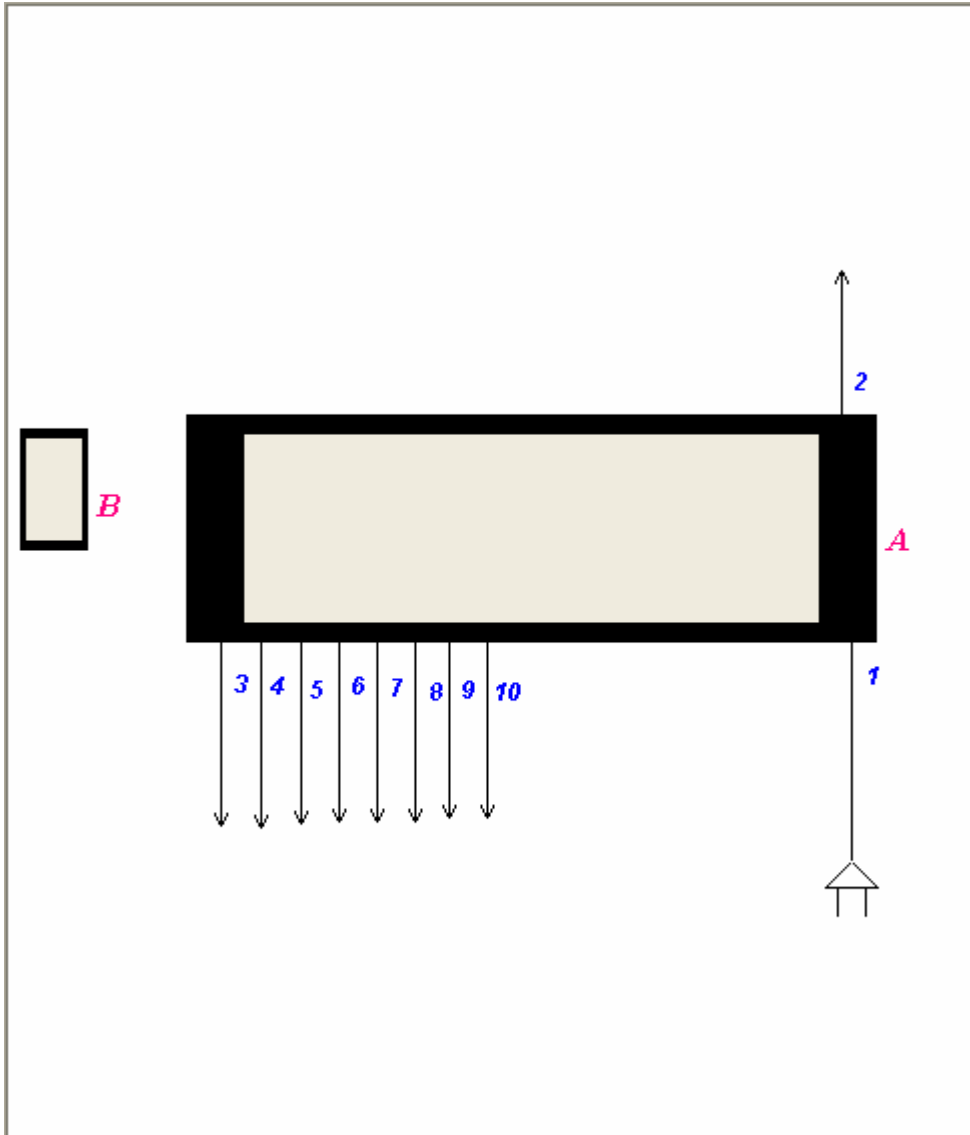
### Used EUT and Peripherals

Seq	Device	Model Name	Serial #	Maker	Note
A	DVD/VHS DUAL DECK	DVD-V4600	-	SAMSUNG	
B	Remote Contoller	-	-	SAMSUNG	

### Used Cable Description

	Connect Cable	Length	Shielded [Y/N]	Remark
1	Mains	1.5	N	
2	Front AV In	1.5	N	
3	S-Video Out	1.0	N	
4	Componet Video Out	1.5	N	
5	Audio Out	1.5	N	
6	Digital Audio Out	1.5	N	
7	AV In 1	1.5	N	
8	AV Out	1.5	N	
9	Ant In	1.5	Y	
10	Ant Out	1.5	Y	

Block Diagram



## 1.6 Applied Standards

List

Applied Standards	Test Procedure
FCC Part15 Subpart B	ANSI 63.4 : 1992

## 1.7 Test Facility

### General Information

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR 22, 16-1, 16-2, 11.

This EMC Testing Lab. is accredited by Korea Laboratory Accreditation Scheme(KOLAS) which signed the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) for the above test item(s) and test method(s).

This Lab. is operated as testing laboratory in accordance with the requirements of ISO/IEC 17025:1998.

### Accreditation and Listing



### Uncertainty

(According to NAMAS Pub.NIS81)

Test Item	Expanded Uncertainty
Radiated Disturbance	5.09
Disturbance voltage at the mains terminals	1.64

## 2. Summary of Test Results

**Result : PASS**

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

Test Name	Applied Standard	Result	
Electromagnetic Emission Test			
3.1	Conducted Emission	FCC Part15 Subpart B	Complied
3.2	Radiated Emission	FCC Part15 Subpart B	Complied
3.3	Output Signal Level	FCC Part15 Subpart B	Complied
3.4	Output Terminal Conducted Spurious Emission	FCC Part15 Subpart B	Complied
3.5	Ant. Transfer Switch	FCC Part15 Subpart B	Complied

### 3. Description of Individual Tests

#### 3.1 Conducted Emission

Test Information	
Test Engineer	Kyung Chul,Min
Test Date	March 31, 2004
Climate Condition	Ambient Temperature : 22.6 °C Relative Humidity : 32%
Test Place	Shield Room #5

#### Test Equipments

Equipment	Modal Name	Manufacturer	Serial No.	Calibration	
				Next Date	Interval
Spectrum Analyzer	E7405A	Agilent	US4110272	2004-06-14	12
TV Signal Generator	PM5418-TDSI	PHILIPS	LO612437	2004-09-20	12
L.I.S.N	ESH3-Z5	R&S	100261	2004-07-16	12
Field strength meter	ESS	R&S	844661	2004-05-31	12
RF Relais Matrix	PSU	R&S	861206/024	N/A	12
L.I.S.N	ESH3-Z5	R&S	100260	2004-07-16	12
Test Software	EP5CE	TOYO	None	N/A	N/A

#### EUT Test Setup

The EUT was set up as per normal use on a wooden table 0.4m from a vertical ground reference plane, at least 0.8m from other conduction surfaces and 0.8m from the LISN.

See photo..

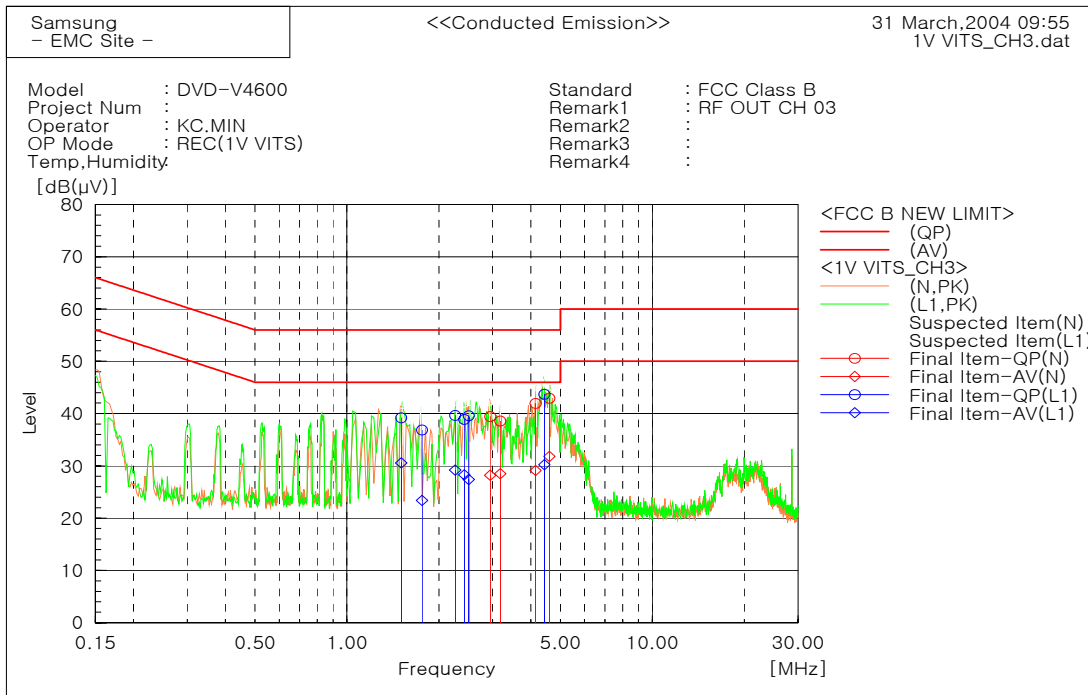
#### Test Result

<b>Measurement Results</b>	Pass No Operation errors were detected during or after the applied test.
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**Test Data**

■ Operating Mode : REC(1V VITS)\_RF Out CH 03

**[Graph and Data]**



Final Result

--- N Phase ---

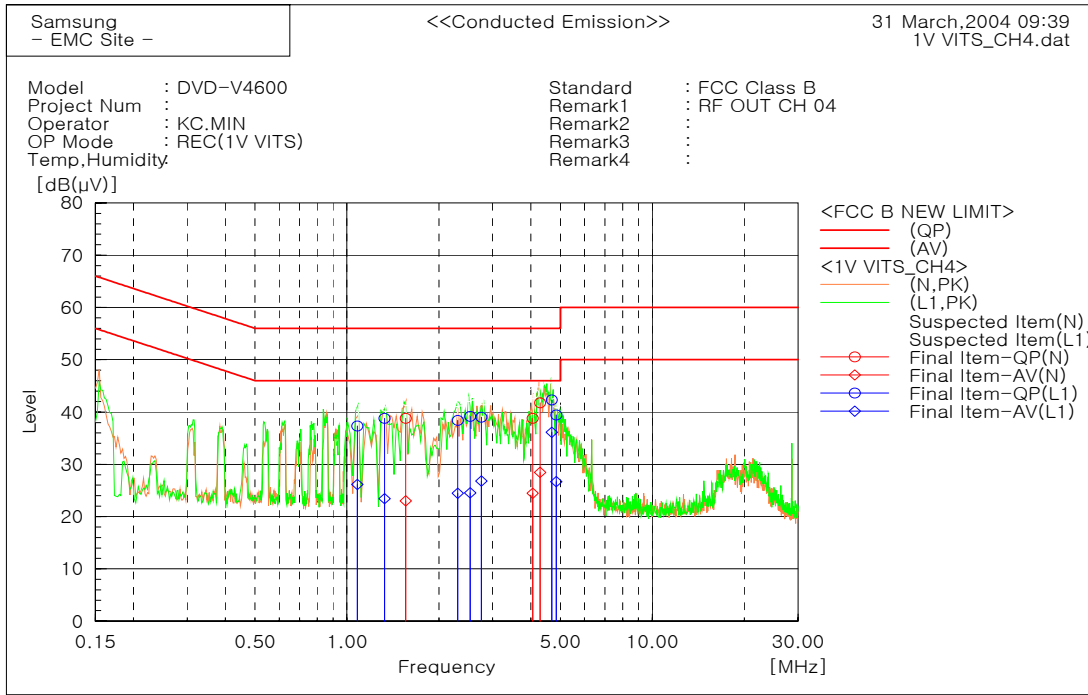
No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c. f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	2.9478	39.3	28.1	0.1	39.4	28.2	56.0	46.0	16.6	17.8
2	3.1778	38.5	28.4	0.1	38.6	28.5	56.0	46.0	17.4	17.5
3	4.1448	41.8	29.0	0.1	41.9	29.1	56.0	46.0	14.1	16.9
4	4.5984	42.9	31.8	0.0	42.9	31.8	56.0	46.0	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	1.5047	39.1	30.5	0.1	39.2	30.6	56.0	46.0	16.8	15.5
2	1.7607	36.8	23.3	0.1	36.9	23.4	56.0	46.0	19.2	22.6
3	2.2629	39.5	29.1	0.1	39.6	29.2	56.0	46.0	16.4	16.8
4	2.4216	38.8	28.2	0.1	38.9	28.3	56.0	46.0	17.1	17.7
5	2.5035	39.5	27.3	0.1	39.6	27.4	56.0	46.0	16.4	18.6
6	4.4319	43.7	30.2	0.0	43.7	30.2	56.0	46.0	12.3	15.8

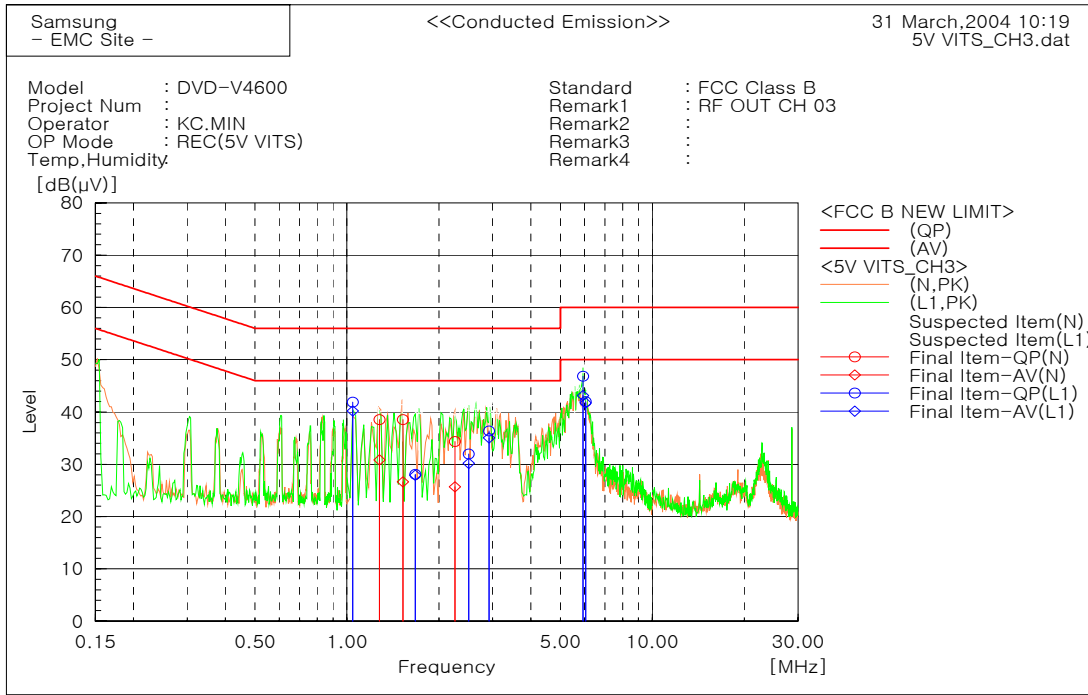
■ Operating Mode : REC(1V VITS)\_RF Out CH 04

[Graph and Data]



■ Operating Mode : REC(5V VITS)\_RF Out CH 03

[Graph and Data]



Final Result

--- N Phase ---

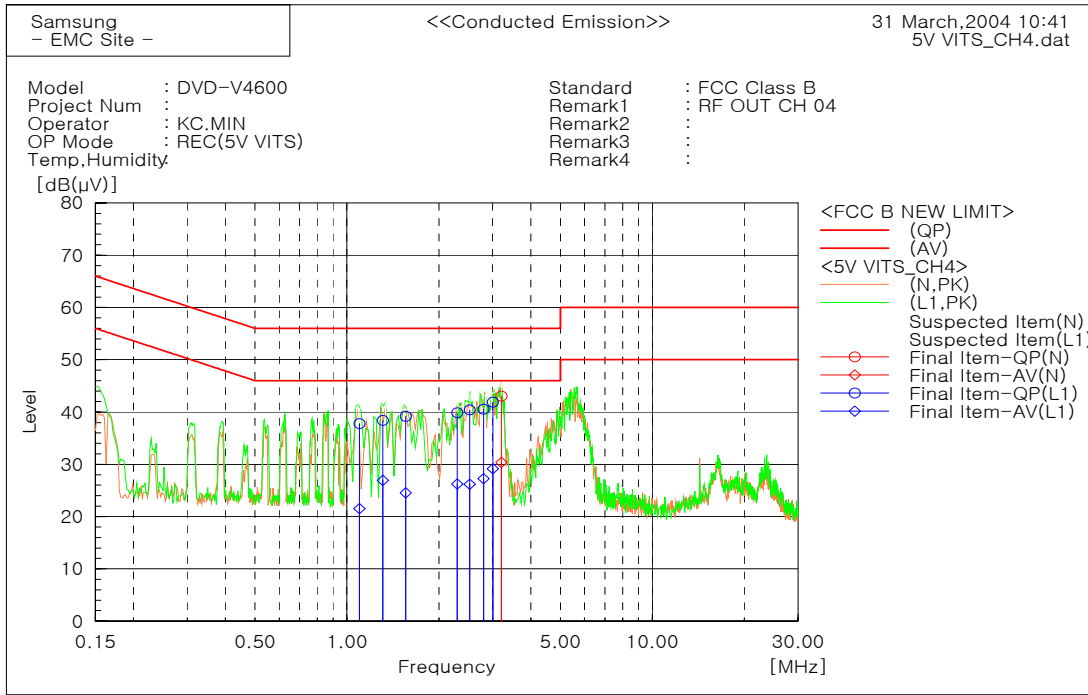
No.	Frequency [MHz]	Reading QP [dB(µV)]	Reading AV [dB(µV)]	c. f [dB]	Result QP [dB(µV)]	Result AV [dB(µV)]	Limit QP [dB(µV)]	Limit AV [dB(µV)]	Margin QP [dB]	Margin AV [dB]
1	1.2783	38.5	30.7	0.1	38.6	30.8	56.0	46.0	17.5	15.2
2	1.5247	38.5	26.5	0.1	38.6	26.6	56.0	46.0	17.4	19.4
3	2.2569	34.3	25.6	0.1	34.4	25.7	56.0	46.0	21.7	20.3

--- 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	1.0455	41.8	40.1	0.1	41.9	40.2	56.0	46.0	14.1	5.8
2	1.675	28.0	27.8	0.1	28.1	27.9	56.0	46.0	27.9	18.1
3	2.5062	31.9	30.1	0.1	32.0	30.2	56.0	46.0	24.1	15.8
4	2.9215	36.3	35.0	0.1	36.4	35.1	56.0	46.0	19.6	10.9
5	5.9302	46.9	43.1	0.0	46.9	43.1	60.0	50.0	13.2	6.9
6	6.0506	42.0	41.7	0.0	42.0	41.7	60.0	50.0	18.0	8.3

■ Operating Mode : REC(5V VITS)\_RF Out CH 04

[Graph and Data]



Final Result

--- N Phase ---

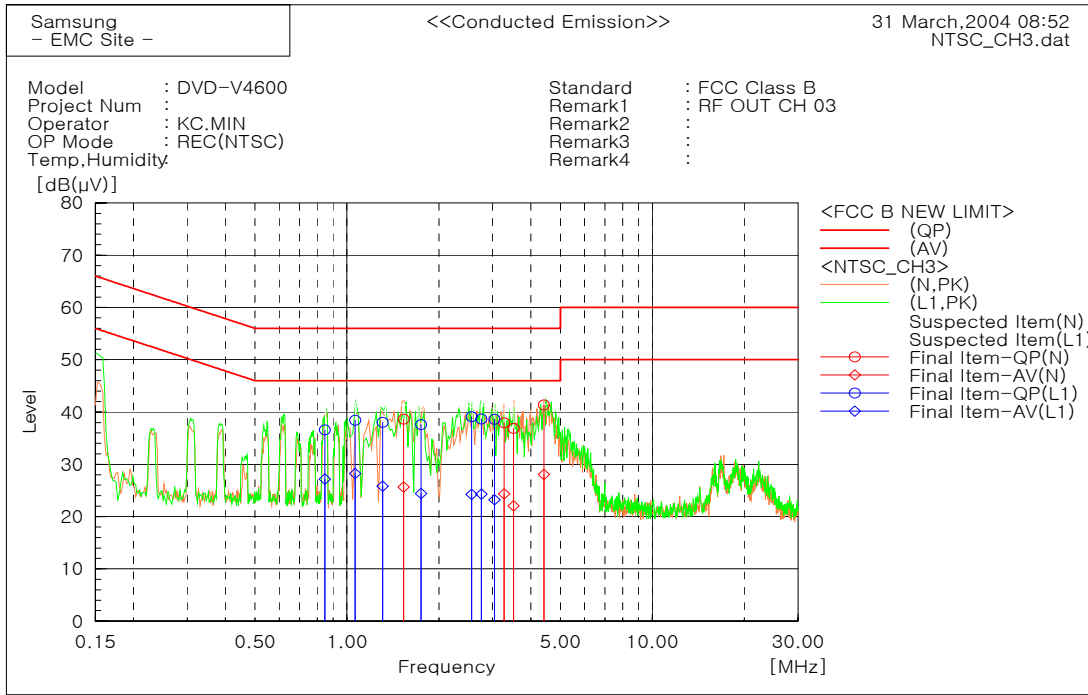
No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c. f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	3.2075	43.0	30.2	0.1	43.1	30.3	56.0	46.0	13.0	15.7

--- 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	1.099	37.7	21.4	0.1	37.8	21.5	56.0	46.0	18.2	24.5
2	1.311	38.3	26.8	0.1	38.4	26.9	56.0	46.0	17.6	19.1
3	1.5576	39.1	24.5	0.1	39.2	24.6	56.0	46.0	16.8	21.5
4	2.2987	39.8	26.1	0.1	39.9	26.2	56.0	46.0	16.1	19.8
5	2.5255	40.3	26.1	0.1	40.4	26.2	56.0	46.0	15.6	19.8
6	2.8016	40.5	27.1	0.1	40.6	27.2	56.0	46.0	15.5	18.8
7	3.0066	41.8	29.1	0.1	41.9	29.2	56.0	46.0	14.1	16.9

■ Operating Mode : REC(NTSC)\_RF Out CH 03

[Graph and Data]



Final Result

--- N Phase ---

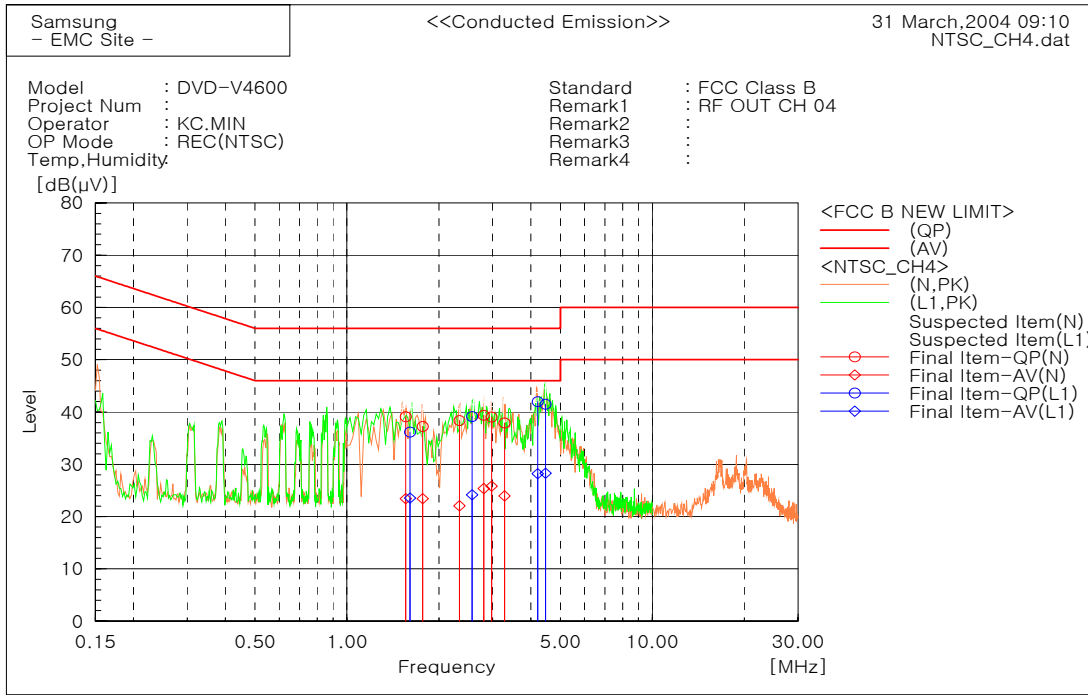
No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c. f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	1.5324	38.5	25.6	0.1	38.6	25.7	56.0	46.0	17.4	20.3
2	3.2687	37.8	24.2	0.1	37.9	24.3	56.0	46.0	18.1	21.7
3	3.5157	36.8	22.0	0.1	36.9	22.1	56.0	46.0	19.1	23.9
4	4.4157	41.3	27.9	0.1	41.4	28.0	56.0	46.0	14.6	18.0

--- 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	0.84706	36.5	27.1	0.1	36.6	27.2	56.0	46.0	19.4	18.8
2	1.0637	38.3	28.2	0.1	38.4	28.3	56.0	46.0	17.6	17.7
3	1.3076	37.9	25.7	0.1	38.0	25.8	56.0	46.0	18.0	20.2
4	1.7475	37.5	24.3	0.1	37.6	24.4	56.0	46.0	18.4	21.6
5	2.562	39.0	24.2	0.1	39.1	24.3	56.0	46.0	16.9	21.8
6	2.7561	38.6	24.2	0.1	38.7	24.3	56.0	46.0	17.3	21.7
7	3.0432	38.5	23.1	0.1	38.6	23.2	56.0	46.0	17.4	22.8

■ Operating Mode : REC(NTSC)\_RF Out CH 04

[Graph and Data]



Final Result

--- N Phase ---

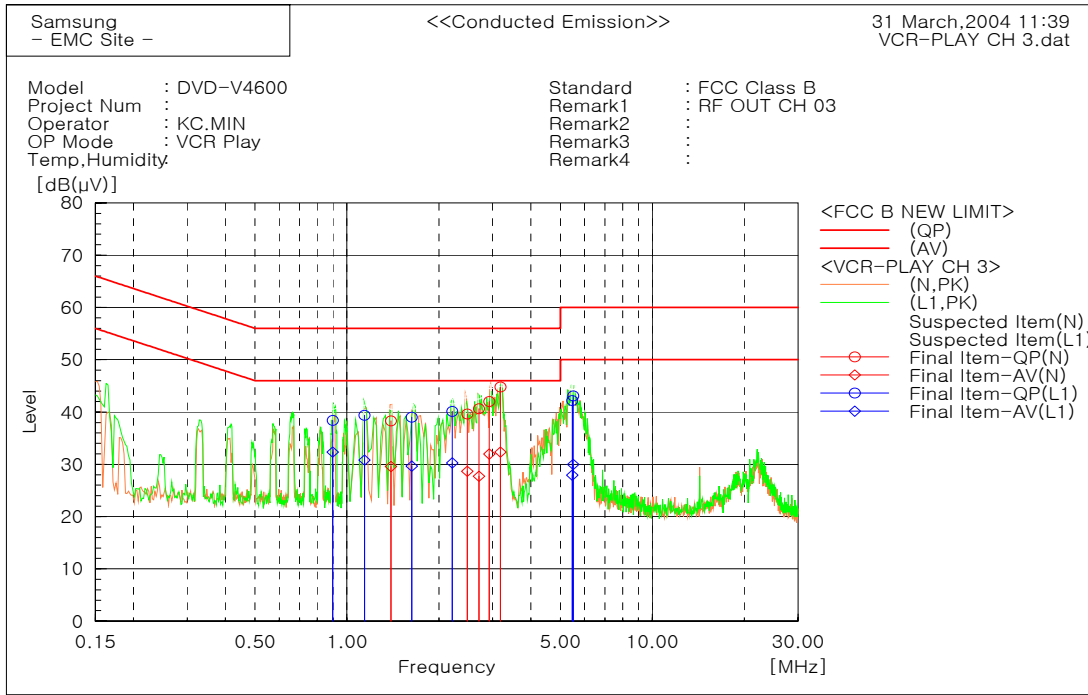
No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c. f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	1.5587	39.0	23.3	0.1	39.1	23.4	56.0	46.0	16.9	22.6
2	1.7704	37.1	23.3	0.1	37.2	23.4	56.0	46.0	18.8	22.6
3	2.3343	38.3	22.0	0.1	38.4	22.1	56.0	46.0	17.7	23.9
4	2.8074	39.3	25.3	0.1	39.4	25.4	56.0	46.0	16.6	20.7
5	2.9766	39.0	25.7	0.1	39.1	25.8	56.0	46.0	16.9	20.2
6	3.2824	37.8	23.8	0.1	37.9	23.9	56.0	46.0	18.1	22.1

--- 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	1.6089	36.1	23.5	0.1	36.2	23.6	56.0	46.0	19.8	22.4
2	2.5692	39.1	24.1	0.1	39.2	24.2	56.0	46.0	16.9	21.8
3	4.2103	41.9	28.1	0.1	42.0	28.2	56.0	46.0	14.0	17.8
4	4.4736	41.5	28.3	0.0	41.5	28.3	56.0	46.0	14.5	17.7

■ Operating Mode : VCR PLAY\_RF Out CH 03

[Graph and Data]



Final Result

--- N Phase ---

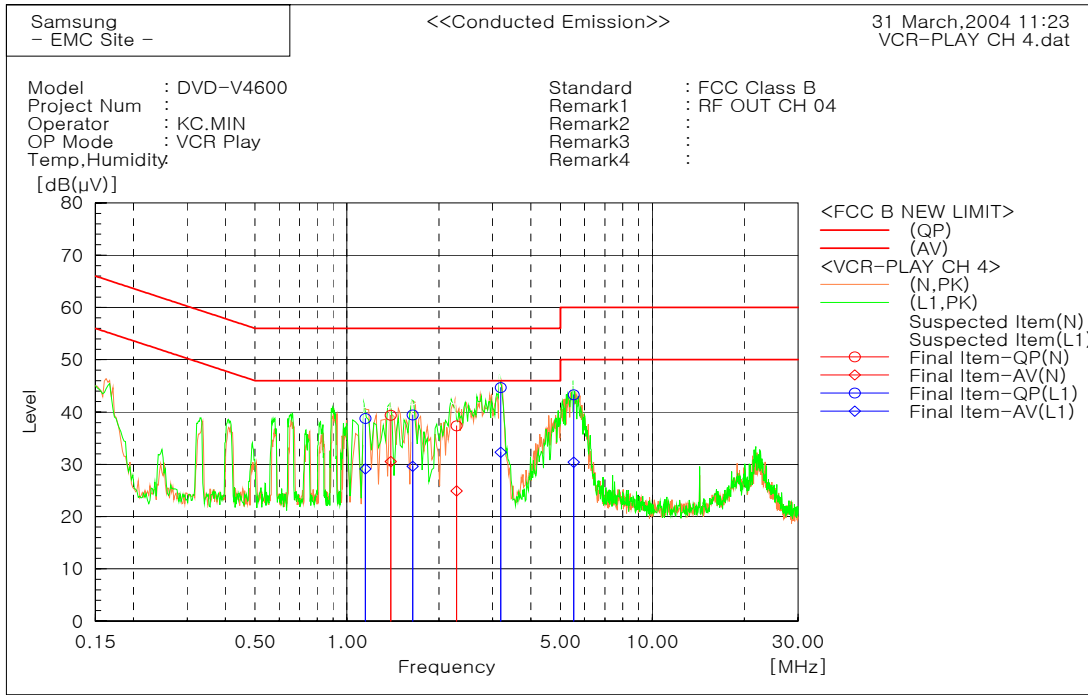
No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c. f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	1.3931	38.2	29.5	0.1	38.3	29.6	56.0	46.0	17.7	16.5
2	2.478	39.5	28.5	0.1	39.6	28.6	56.0	46.0	16.4	17.4
3	2.7075	40.5	27.6	0.1	40.6	27.7	56.0	46.0	15.4	18.3
4	2.9271	41.9	31.8	0.1	42.0	31.9	56.0	46.0	14.0	14.1
5	3.1805	44.7	32.2	0.1	44.8	32.3	56.0	46.0	11.2	13.7

--- 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	0.89887	38.3	32.3	0.1	38.4	32.4	56.0	46.0	17.6	13.7
2	1.142	39.3	30.7	0.1	39.4	30.8	56.0	46.0	16.6	15.2
3	1.6284	38.9	29.5	0.1	39.0	29.6	56.0	46.0	17.0	16.4
4	2.211	40.0	30.2	0.1	40.1	30.3	56.0	46.0	15.9	15.7
5	5.4746	42.2	27.9	0.0	42.2	27.9	60.0	50.0	17.8	22.1
6	5.5092	43.1	30.0	0.0	43.1	30.0	60.0	50.0	16.9	20.0

■ Operating Mode : VCR PLAY\_RF Out CH 04

[Graph and Data]



Final Result

--- N Phase ---

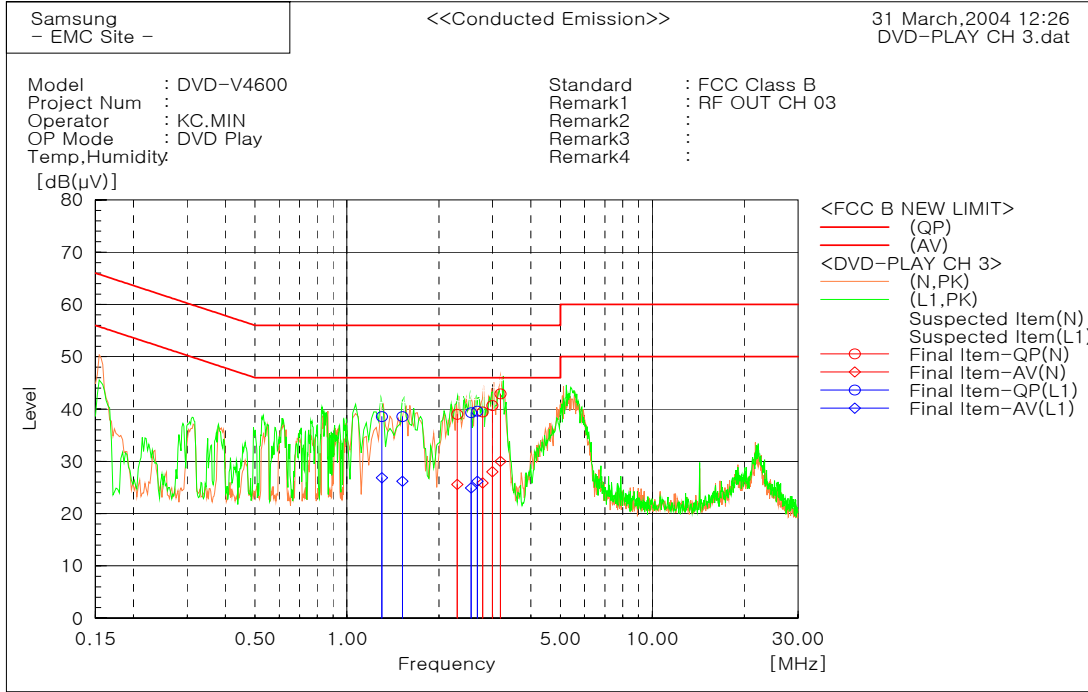
No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c. f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	1.3922	39.3	30.4	0.1	39.4	30.5	56.0	46.0	16.6	15.5
2	2.2857	37.3	24.8	0.1	37.4	24.9	56.0	46.0	18.6	21.1

--- 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	1.1501	38.7	29.0	0.1	38.8	29.1	56.0	46.0	17.2	16.9
2	1.6417	39.3	29.5	0.1	39.4	29.6	56.0	46.0	16.6	16.4
3	3.1863	44.5	32.2	0.1	44.6	32.3	56.0	46.0	11.4	13.7
4	5.5277	43.3	30.4	0.0	43.3	30.4	60.0	50.0	16.7	19.6

■ Operating Mode : DVD PLAY\_RF Out CH 03

[Graph and Data]



Final Result

--- N Phase ---

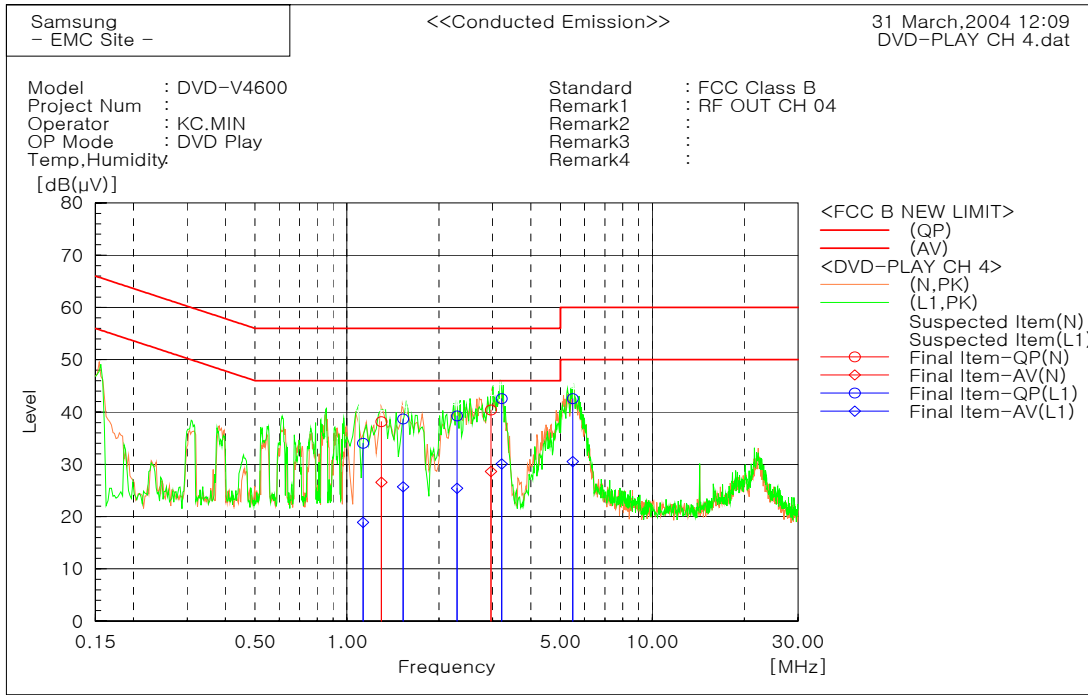
No.	Frequency [MHz]	Reading QP [dB(μV)]	Reading AV [dB(μV)]	c. f [dB]	Result QP [dB(μV)]	Result AV [dB(μV)]	Limit QP [dB(μV)]	Limit AV [dB(μV)]	Margin QP [dB]	Margin AV [dB]
1	2.2983	38.9	25.5	0.1	39.0	25.6	56.0	46.0	17.0	20.4
2	2.7813	39.3	25.8	0.1	39.4	25.9	56.0	46.0	16.6	20.1
3	2.9949	40.6	27.9	0.1	40.7	28.0	56.0	46.0	15.3	18.0
4	3.1841	42.8	29.9	0.1	42.9	30.0	56.0	46.0	13.1	16.0

--- 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	1.3013	38.5	26.8	0.1	38.6	26.9	56.0	46.0	17.4	19.1
2	1.5198	38.5	26.1	0.1	38.6	26.2	56.0	46.0	17.5	19.8
3	2.5525	39.2	24.8	0.1	39.3	24.9	56.0	46.0	16.7	21.1
4	2.6727	39.5	26.1	0.1	39.6	26.2	56.0	46.0	16.4	19.8

■ Operating Mode : DVD PLAY\_RF Out CH 04

[Graph and Data]



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	1.2968	38.1	26.5	0.1	38.2	26.6	56.0	46.0	17.9	19.4
2	2.9622	40.3	28.5	0.1	40.4	28.6	56.0	46.0	15.6	17.4

--- 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	1.1298	33.9	18.8	0.1	34.0	18.9	56.0	46.0	22.0	27.1
2	1.5276	38.6	25.6	0.1	38.7	25.7	56.0	46.0	17.3	20.3
3	2.2926	39.2	25.3	0.1	39.3	25.4	56.0	46.0	16.8	20.6
4	3.2122	42.5	30.0	0.1	42.6	30.1	56.0	46.0	13.5	15.9
5	5.4928	42.6	30.5	0.0	42.6	30.5	60.0	50.0	17.4	19.5

### 3.2 Radiated Emission

Test Information	
Test Engineer	Kyung Chul,Min
Test Date	March 30, 2004
Climate Condition	Ambient Temperature : 22.6 °C Relative Humidity : 32%
Test Place	10m Semi-Anechoic Chamber(3m Measurement)

#### Test Equipments

Equipment	Modal Name	Manufacturer	Serial No.	Calibration	
				Next Date	Interval
Field strength meter	ESCS	R&S	100104	2004-10-17	12
RF Selector	NS4900	TOYO	0303-015	N/A	N/A
Biconilog Antenna	6112B	SCHAFFNER	2767	2004-06-03	12
Mast Controller	HD2000	HD	HD20000902027	N/A	N/A
Test Software	EP5RE	TOYO	None	N/A	12
TV Signal Generator	PM5418-TDSI	PHILIPS	LO612437	2004-09-20	12
Biconilog Antenna	6112B	SCHAFFNER	2766	2004-06-03	12
Spectrum Analyzer	E7405A	Agilent	MY42000109	2004-11-27	12

#### EUT Test Setup

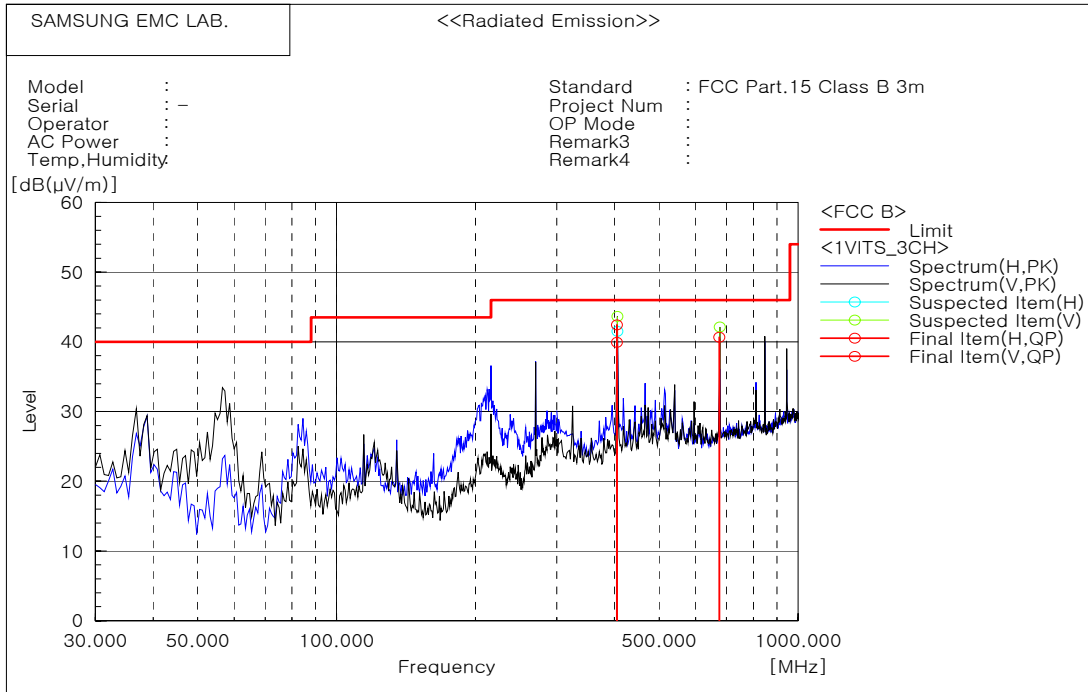
EUT set up in semi-anechoic chamber. EUT positioned at 3m from antenna in center of table.  
All ports terminated into characteristic loads.

#### Test Result

<b>Measurement Results</b>	Pass No Operation errors were detected during or after the applied test.
----------------------------	---

**Test Data (Other Frequency)**

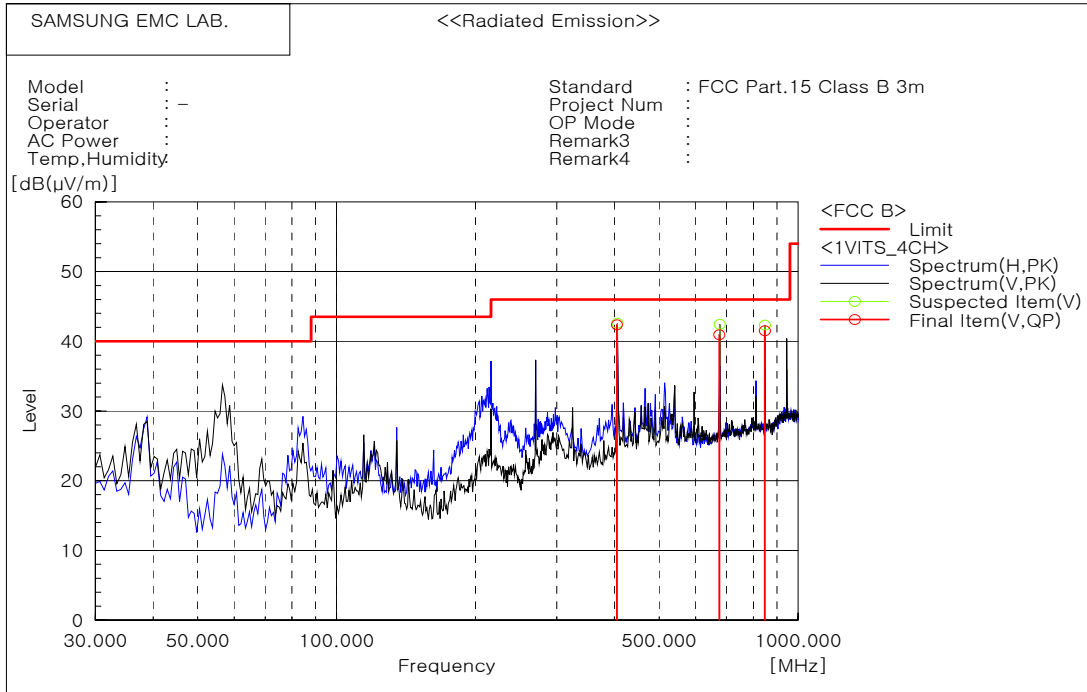
■ Operating Mode : REC(1V VITS)\_RF Out CH 03



Final Result

No.	Frequency [MHz]	(P)	S.C	Reading QP [dB(μV)]	c.f [dB(1/m)]	Result QP [dB(μV/m)]	Limit [dB(μV/m)]	Margin QP [dB]	Remark
1	405.000	V	S	49.6	-7.2	42.4	46.0	3.6	
2	405.000	H	S	47.1	-7.2	39.9	46.0	6.1	
3	675.010	V	S	43.0	-2.3	40.7	46.0	5.3	

■ Operating Mode : REC(1V VITS)\_RF Out CH 04



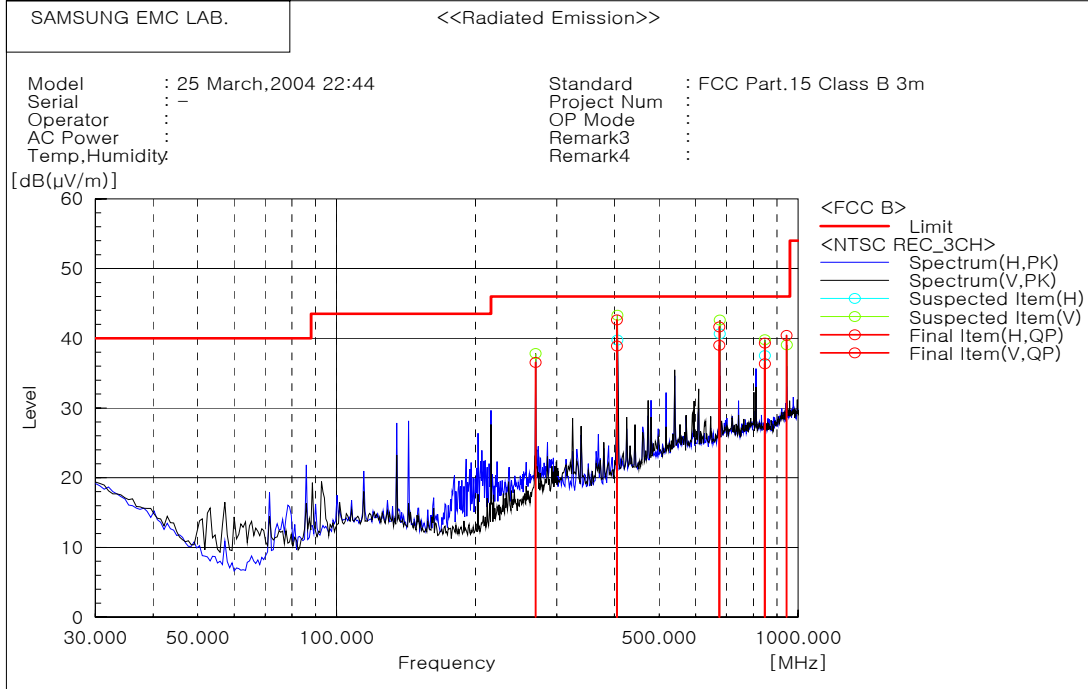
Final Result

No.	Frequency [MHz]	(P)	S.C	Reading QP [dB(µV)]	c.f [dB(1/m)]	Result QP [dB(µV/m)]	Limit [dB(µV/m)]	Margin QP [dB]	Remark
1	405.000	V	S	49.6	-7.2	42.4	46.0	3.6	
2	675.010	V	S	43.3	-2.3	41.0	46.0	5.0	
3	847.030	V	S	42.1	-0.6	41.5	46.0	4.5	





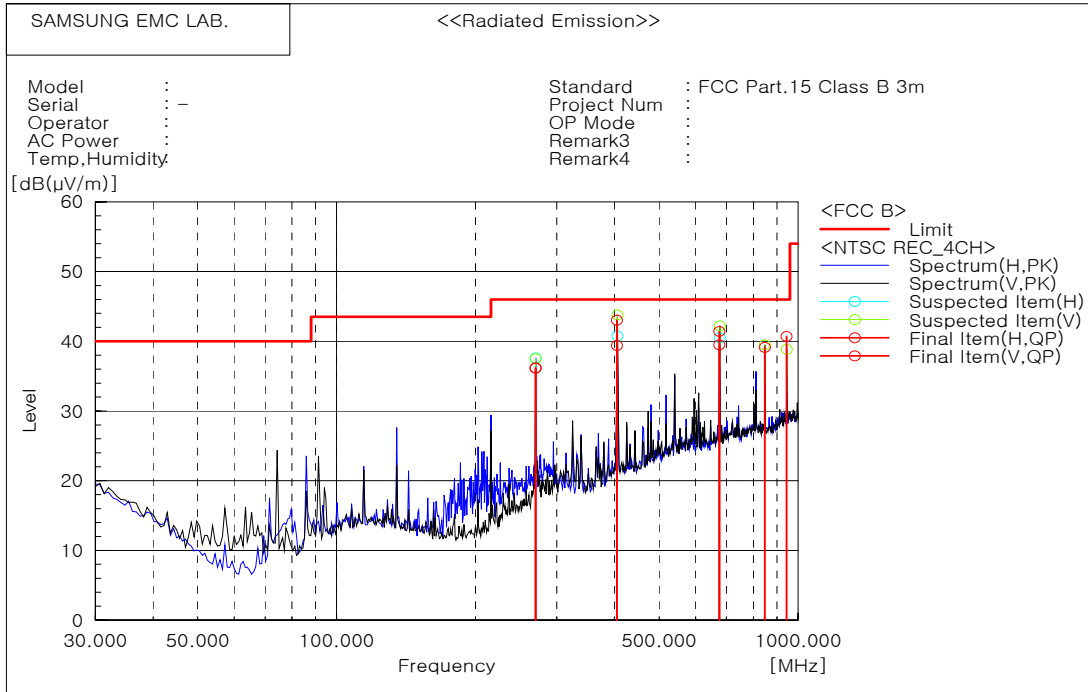
■ Operating Mode : REC(NTSC)\_RF Out CH 03



Final Result

No.	Frequency [MHz]	(P)	S.C	Reading QP [dB(µV)]	c.f [dB(1/m)]	Result QP [dB(µV/m)]	Limit [dB(µV/m)]	Margin QP [dB]	Remark
1	269.996	V	S	47.1	-10.6	36.5	46.0	9.5	
2	405.000	V	S	49.9	-7.2	42.7	46.0	3.3	
3	405.000	H	S	46.1	-7.2	38.9	46.0	7.1	
4	675.010	V	S	43.9	-2.3	41.6	46.0	4.4	
5	675.010	H	S	41.3	-2.3	39.0	46.0	7.0	
6	847.020	V	S	39.9	-0.6	39.3	46.0	6.7	
7	847.020	H	S	37.0	-0.6	36.4	46.0	9.7	
8	945.000	V	S	38.6	1.8	40.4	46.0	5.6	

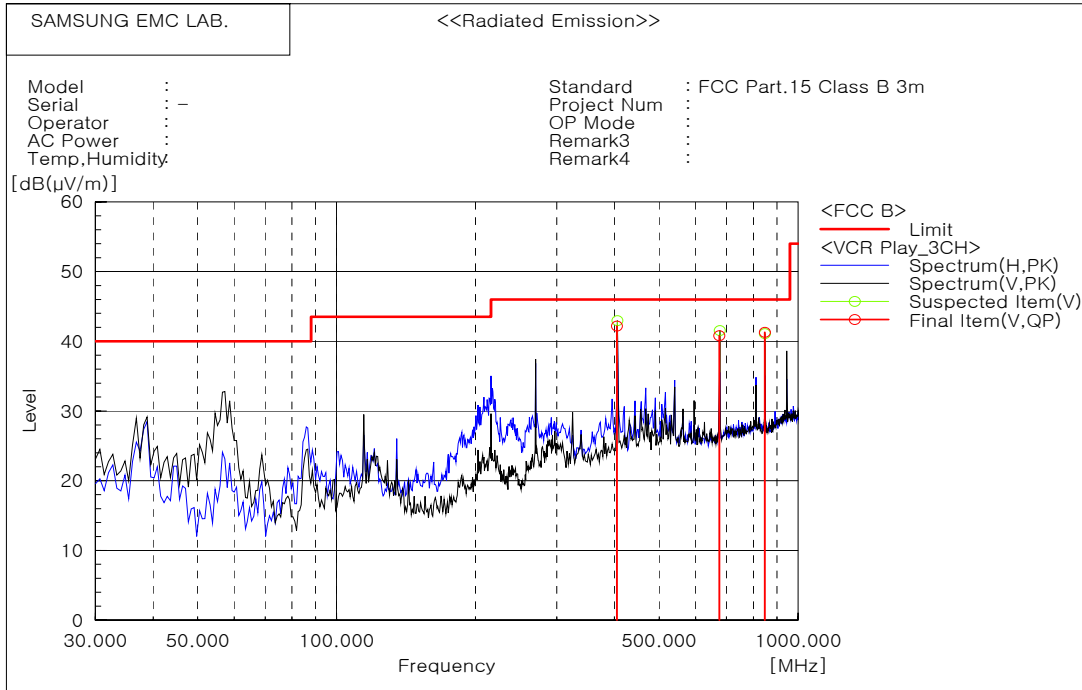
■ Operating Mode : REC(NTSC)\_RF Out CH 04



Final Result

No.	Frequency [MHz]	(P)	S.C	Reading QP [dB(μV)]	c.f [dB(1/m)]	Result QP [dB(μV/m)]	Limit [dB(μV/m)]	Margin QP [dB]	Remark
1	269.996	H	S	46.7	-10.6	36.1	46.0	9.9	
2	269.996	V	S	46.8	-10.6	36.2	46.0	9.8	
3	405.000	V	S	50.2	-7.2	43.0	46.0	3.0	
4	405.000	H	S	46.6	-7.2	39.4	46.0	6.6	
5	675.010	V	S	43.7	-2.3	41.4	46.0	4.6	
6	675.010	H	S	41.8	-2.3	39.5	46.0	6.5	
7	847.020	V	S	39.7	-0.6	39.1	46.0	6.9	
8	945.000	V	S	38.9	1.8	40.7	46.0	5.3	

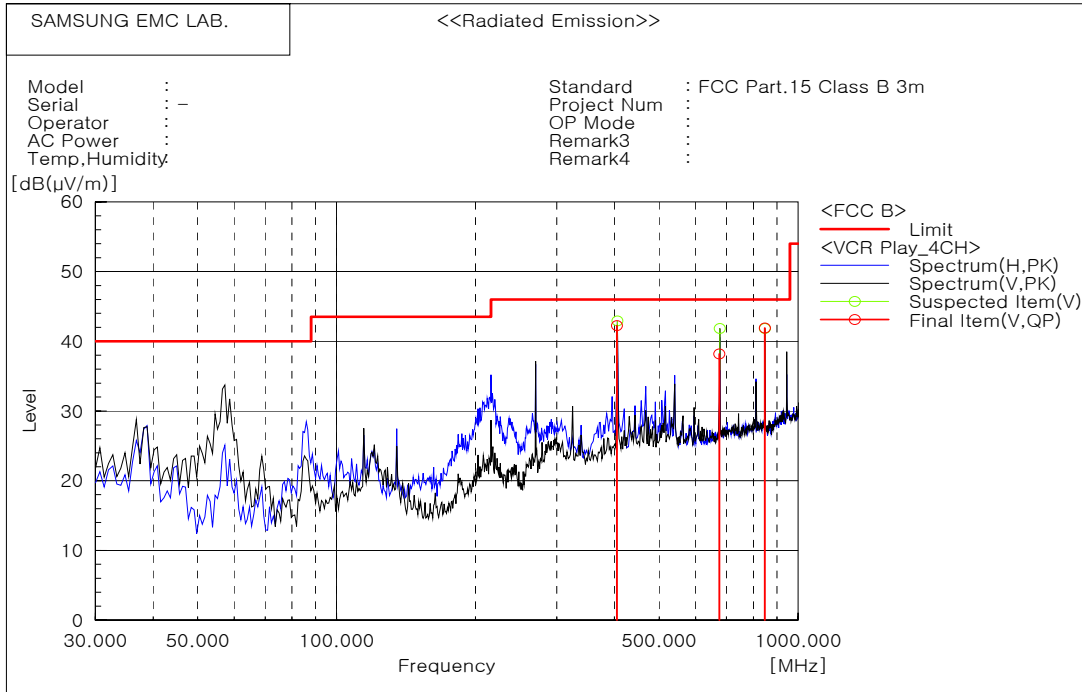
■ Operating Mode : VCR PLAY\_RF Out CH 03



Final Result

No.	Frequency [MHz]	(P)	S.C	Reading QP [dB(µV)]	c.f [dB(1/m)]	Result QP [dB(µV/m)]	Limit [dB(µV/m)]	Margin QP [dB]	Remark
1	405.000	V	S	49.4	-7.2	42.2	46.0	3.8	
2	675.010	V	S	43.1	-2.3	40.8	46.0	5.2	
3	847.020	V	S	41.9	-0.6	41.3	46.0	4.7	

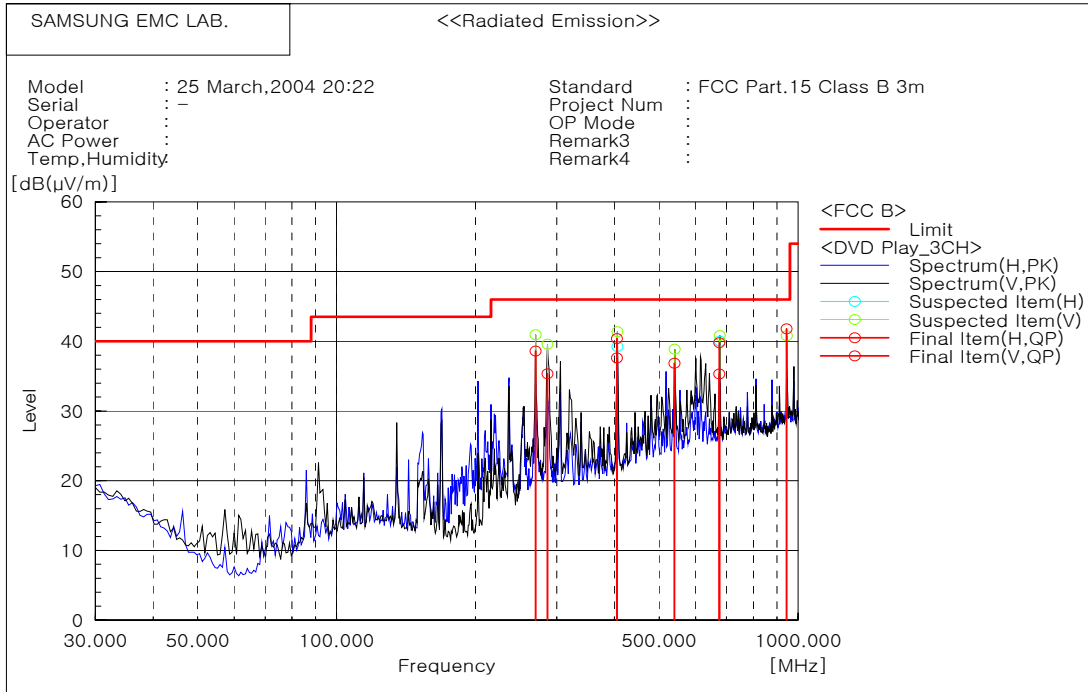
■ Operating Mode : VCR PLAY\_RF Out CH 04



Final Result

No.	Frequency [MHz]	(P)	S.C	Reading QP [dB(µV)]	c.f [dB(1/m)]	Result QP [dB(µV/m)]	Limit [dB(µV/m)]	Margin QP [dB]	Remark
1	405.000	V	S	49.5	-7.2	42.3	46.0	3.7	
2	675.010	V	S	40.5	-2.3	38.2	46.0	7.8	
3	847.020	V	S	42.5	-0.6	41.9	46.0	4.1	

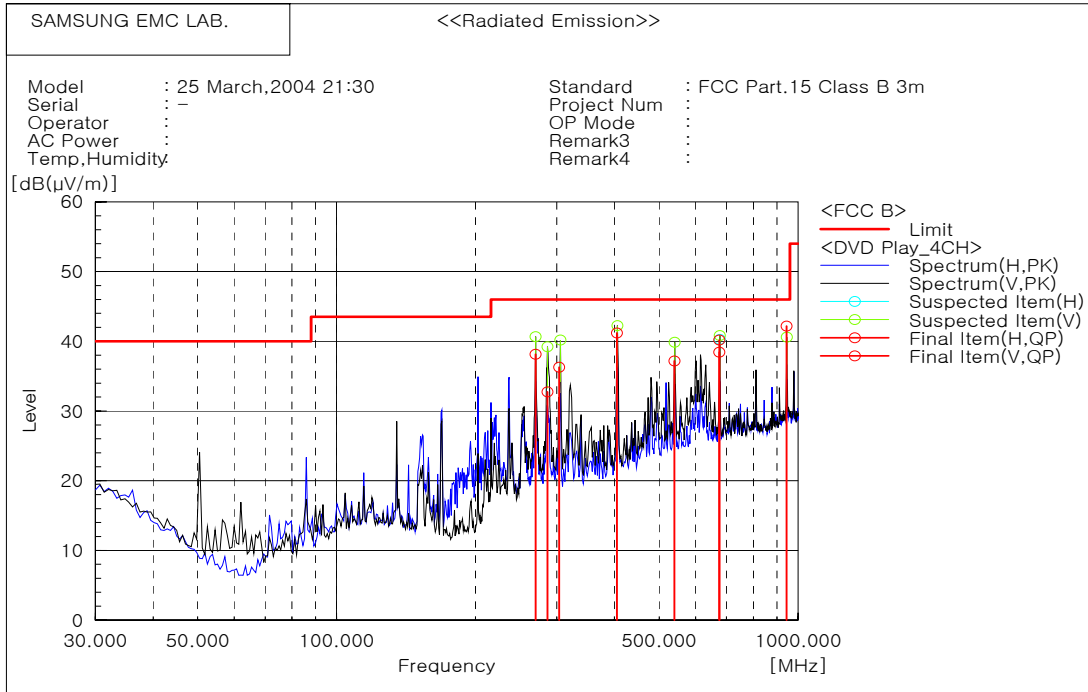
■ Operating Mode : DVD PLAY\_RF Out CH 03



Final Result

No.	Frequency [MHz]	(P)	S.C	Reading QP [dB(µV)]	c.f [dB(1/m)]	Result QP [dB(µV/m)]	Limit [dB(µV/m)]	Margin QP [dB]	Remark
1	269.996	V	S	49.2	-10.6	38.6	46.0	7.4	
2	286.352	V	S	45.4	-10.0	35.4	46.0	10.6	
3	405.000	V	S	47.6	-7.2	40.4	46.0	5.6	
4	405.000	H	S	44.8	-7.2	37.6	46.0	8.4	
5	540.000	V	S	41.2	-4.3	36.9	46.0	9.1	
6	674.990	V	S	42.1	-2.3	39.8	46.0	6.2	
7	674.990	H	S	37.6	-2.3	35.3	46.0	10.7	
8	945.000	V	S	40.0	1.8	41.8	46.0	4.2	

■ Operating Mode : DVD PLAY\_RF Out CH 04



Final Result

No.	Frequency [MHz]	(P)	S.C	Reading QP [dB(µV)]	c.f [dB(1/m)]	Result QP [dB(µV/m)]	Limit [dB(µV/m)]	Margin QP [dB]	Remark
1	269.996	V	S	48.7	-10.6	38.1	46.0	7.9	
2	286.419	V	S	42.8	-10.0	32.8	46.0	13.3	
3	303.760	V	S	45.9	-9.6	36.3	46.0	9.7	
4	405.000	V	S	48.4	-7.2	41.2	46.0	4.8	
5	540.000	V	S	41.5	-4.3	37.2	46.0	8.8	
6	674.990	V	S	42.5	-2.3	40.2	46.0	5.8	
7	674.990	H	S	40.7	-2.3	38.4	46.0	7.6	
8	945.000	V	S	40.4	1.8	42.2	46.0	3.8	

### 3.3 Output Signal Level

Test Information	
Test Engineer	Kyung Chul,Min
Test Date	March 31, 2004
Climate Condition	Ambient Temperature : 22.6 °C Relative Humidity : 32%
Test Place	Shield Room #5

#### Test Equipments

Equipment	Modal Name	Manufacturer	Serial No.	Calibration	
				Next Date	Interval
TV Signal Generator	PM5418-TDSI	PHILIPS	LO612437	2004-09-20	12
Pre-Amplifier	310N	SONOMA	185861	2004-09-20	12
Test Receiver	ESS	R&S	844861/005	2005-01-05	12
Matching Pad	RAM	R&S	834188/009	2005-01-08	12
Spectrum Analyzer	E7405A	Agilent	US41110272	2004-07-12	12
RF Matrix	PSU	R&S	861206/024	N/A	12

#### EUT Test Setup

The RF output terminal was connected to the test receiver through the matching pad( 75-50 ohm ) with a cable. Then, the RF output signal level was measured under the EUT Operating mode(s).

#### Test Result

<b>Measurement Results</b>	Pass No Operation errors were detected during or after the applied test.
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**Test Data**

■ Operating Mode : REC(1V VITS) RF Output CH No. :3CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
56.753	76.5	-25.1	51.4	56.5	5.2
61.253	90.7	-25.1	65.6	69.5	3.9
65.753	75.4	-25.1	50.3	56.5	6.2

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(1V VITS) RF Output CH No. :4CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
62.743	75.9	-25.1	50.8	56.5	5.8
67.243	90.0	-25.1	64.9	69.5	4.6
71.740	74.6	-25.1	49.5	56.5	7.0

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(5V VITS) RF Output CH No. :3CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
56.758	76.6	-25.1	51.5	56.5	5.0
61.255	90.8	-25.1	65.7	69.5	3.8
65.755	75.4	-25.1	50.3	56.5	6.2

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(5V VITS) RF Output CH No. :4CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
62.748	76.0	-25.1	50.9	56.5	5.6
67.248	90.0	-25.1	64.9	69.5	4.6
71.743	74.8	-25.1	49.7	56.5	6.8

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(NTSC) RF Output CH No. :3CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
56.770	76.7	-25.1	51.6	56.5	4.9
61.253	90.9	-25.1	65.8	69.5	3.7
65.745	75.5	-25.1	50.4	56.5	6.2

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(NTSC) RF Output CH No. :4CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
62.753	75.9	-25.1	50.8	56.5	5.7
67.243	90.1	-25.1	65.0	69.5	4.5
71.733	74.7	-25.1	49.6	56.5	6.9

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : VCR PLAY RF Output CH No. :3CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
56.758	76.6	-25.1	51.5	56.5	5.0
61.250	90.6	-25.1	65.5	69.5	4.0
65.755	75.4	-25.1	50.3	56.5	6.2

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : VCR PLAY RF Output CH No. :4CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
62.740	75.8	-25.1	50.7	56.5	5.8
67.240	89.9	-25.1	64.8	69.5	4.7
71.743	74.8	-25.1	49.7	56.5	6.8

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : DVD PLAY

RF Output CH No. :3CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
56.775	76.5	-25.1	51.4	56.5	5.1
61.248	90.6	-25.1	65.5	69.5	4.0
65.738	75.5	-25.1	50.4	56.5	6.1

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : DVD PLAY

RF Output CH No. :4CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
62.775	75.5	-25.1	50.4	56.5	6.1
67.243	89.8	-25.1	64.7	69.5	4.8
71.715	74.6	-25.1	49.5	56.5	7.0

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

### 3.4 Output Terminal Conducted Spurious

Test Information	
Test Engineer	Kyung Chul,Min
Test Date	March 31, 2004
Climate Condition	Ambient Temperature : 22.6 °C Relative Humidity : 32%
Test Place	Shield Room #5

#### Test Equipments

Equipment	Modal Name	Manufacturer	Serial No.	Calibration	
				Next Date	Interval
Pre-Amplifier	310N	SONOMA	185861	2004-09-20	12
RF Matrix	PSU	R&S	861206/024	N/A	12
Spectrum Analyzer	E7405A	Agilent	US41110272	2004-07-12	12
TV Signal Generator	PM5418-TDSI	PHILIPS	LO612437	9/20/2004	12

#### EUT Test Setup

The RF output terminal was connected to the test receiver through the matching pad( 75-50 ohm ) with a cable. Then, the RF output signal level was measured under the EUT Operating mode(s).

Tested frequency range were from 30MHz to more than 4.6MHz below the visual carrier frequency, and from more than 7.4MHz above the visual carrier frequency to 1000MHz

#### Test Result

<b>Measurement Results</b>	<p>Pass</p> <p>No Operation errors were detected during or after the applied test.</p>
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**Test Data**

■ Operating Mode : REC(1V VITS) RF Output CH No. :3CH[Spurious Low]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
49.1554	41.5	-25.1	16.4	39.5	23.2
54.1596	39.2	-25.1	14.1	39.5	25.5
55.2462	38.5	-25.1	13.4	39.5	26.1

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(1V VITS) RF Output CH No. :3CH[Spurious High]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
74.760	36.9	-25.1	11.8	39.5	27.8
122.520	44.2	-25.0	19.2	39.5	20.3
612.550	34.5	-24.3	10.2	39.5	29.3

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(1V VITS) RF Output CH No. :4CH[Spurious Low]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
49.1549	41.2	-25.1	16.1	39.5	23.4
57.2742	43.5	-25.1	18.4	39.5	21.1
61.4411	41.7	-25.1	16.6	39.5	22.9

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(1V VITS) RF Output CH No. :4CH[Spurious High]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
134.480	38.7	-25.0	13.7	39.5	25.8
672.430	34.6	-24.2	10.4	39.5	29.1
958.46013	30.7	-22.7	8.0	39.5	31.5

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(5V VITS) RF Output CH No. :3CH[Spurious Low]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
47.7522	40.0	-25.1	14.9	39.5	24.6
49.154	42.0	-25.1	16.9	39.5	22.6
56.2836	38.8	-25.1	13.7	39.5	25.9

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(5V VITS) RF Output CH No. :3CH[Spurious High]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
122.520	44.3	-25.0	19.3	39.5	20.2
735.090	32.7	-24.2	8.5	39.5	31.0
873.450	29.6	-23.7	5.9	39.5	33.6

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(5V VITS) RF Output CH No. :4CH[Spurious Low]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
49.1525	41.0	-25.1	15.9	39.5	23.6
57.2766	43.4	-25.1	18.3	39.5	21.2
61.4436	39.6	-25.1	14.5	39.5	25.0

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(5V VITS) RF Output CH No. :4CH[Spurious High]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
134.480	38.8	-25.0	13.8	39.5	25.7
672.390	34.4	-24.2	10.2	39.5	29.3
878.290	29.9	-23.7	6.2	39.5	33.3

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(NTSC) RF Output CH No. :3CH[Spurious Low]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
47.7909	39.9	-25.1	14.8	39.5	24.7
49.154	40.9	-25.1	15.8	39.5	23.7
54.1429	36.9	-25.1	11.8	39.5	27.7

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(NTSC) RF Output CH No. :3CH[Spurious High]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
74.730	36.7	-25.1	11.6	39.5	27.9
122.520	44.3	-25.0	19.3	39.5	20.2
612.550	34.6	-24.3	10.3	39.5	29.2

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(NTSC) RF Output CH No. :4CH[Spurious Low]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
49.1533	40.8	-25.1	15.7	39.5	23.8
53.7064	39.5	-25.1	14.4	39.5	25.2
57.2742	43.1	-25.1	18.0	39.5	21.5

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(NTSC) RF Output CH No. :4CH[Spurious High]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
80.780	35.9	-25.1	10.8	39.5	28.7
134.490	39.1	-25.0	14.1	39.5	25.4
872.530	28.9	-23.7	5.2	39.5	34.3

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : VCR PLAY RF Output CH No. :3CH[Spurious Low]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
47.7522	40.1	-25.1	15.0	39.5	24.5
49.154	42.2	-25.1	17.1	39.5	22.5
56.2489	37.0	-25.1	11.9	39.5	27.6

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : VCR PLAY RF Output CH No. :3CH[Spurious High]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
74.760	36.9	-25.1	11.8	39.5	27.7
122.520	44.2	-25.0	19.2	39.5	20.3
612.550	34.6	-24.3	10.3	39.5	29.2

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : VCR PLAY RF Output CH No. :4CH[Spurious Low]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
49.1541	41.9	-25.1	16.8	39.5	22.7
57.2742	42.0	-25.1	16.9	39.5	22.6
61.4411	37.9	-25.1	12.8	39.5	26.7

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : VCR PLAY RF Output CH No. :4CH[Spurious High]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
80.780	35.9	-25.1	10.8	39.5	28.7
134.490	39.1	-25.0	14.1	39.5	25.4
872.530	28.9	-23.7	5.2	39.5	34.3

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : DVD PLAY RF Output CH No. :3CH[Spurious Low]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
47.8548	39.6	-25.1	14.5	39.5	25.0
55.2462	44.9	-25.1	19.8	39.5	19.7
56.0291	45.6	-25.1	20.5	39.5	19.0

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : DVD PLAY RF Output CH No. :3CH[Spurious High]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
74.860	36.6	-25.1	11.5	39.5	28.0
122.520	44.3	-25.0	19.3	39.5	20.2
991.53988	28.7	-22.4	6.3	39.5	33.2

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : DVD PLAY RF Output CH No. :4CH[Spurious Low]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
31.2366	38.0	-25.1	12.9	39.5	26.6
53.6394	38.6	-25.1	13.5	39.5	26.0
61.5448	42.7	-25.1	17.6	39.5	21.9

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : DVD PLAY RF Output CH No. :4CH[Spurious High]

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
168.750	43.1	-24.9	18.2	39.5	21.3
276.920	42.9	-24.4	18.5	39.5	21.0
289.040	39.6	-24.4	15.2	39.5	24.3

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

### 3.5 Antenna Transfer Switch Measurement

Test Information	
Test Engineer	
Test Date	
Climate Condition	Ambient Temperature : °C Relative Humidity : %
Test Place	Shield Room #5

#### Test Equipments

Equipment	Modal Name	Manufacturer	Serial No.	Calibration	
				Next Date	Interval
TV Signal Generator	PM5418-TDSI	PHILIPS	LO612437	2004-09-20	12
Pre-Amplifier	310N	SONOMA	185861	2004-09-20	12
Matching Pad	RAM	R&S	834188/009	2005-01-08	12
RF Matrix	PSU	R&S	861206/024	N/A	12
Spectrum Analyzer	E7405A	Agilent	US4110272	2004-07-12	12
Test Receiver	ESS	R&S	844861/005	2005-01-05	12

#### EUT Test Setup

The Antenna input terminal is connected to the test receiver through the matching pad (75 – 50 ohm) with a calibrated cable. Then, the RF output leakage level is measured under the EUT operating mode(s).

#### Test Result

<b>Measurement Results</b>	Pass No Operation errors were detected during or after the applied test.
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**Test Data**

■ Operating Mode : REC(1V VITS) RF Output CH No. :3CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
61.44205	25.9	-25.1	0.8	9.5	8.7

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(1V VITS) RF Output CH No. :4CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
67.240	27.2	-25.1	2.1	9.5	7.4

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(5V VITS) RF Output CH No. :3CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
61.4417	25.9	-25.1	0.8	9.5	8.7

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : REC(5V VITS) RF Output CH No. :4CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
67.245	27.3	-25.1	2.2	9.5	7.3

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : VCR PLAY

RF Output CH No. :3CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
61.4426	25.6	-25.1	0.5	9.5	9.0

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : VCR PLAY

RF Output CH No. :4CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
67.240	27.3	-25.1	2.2	9.5	7.3

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : DVD PLAY

RF Output CH No. :3CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
61.2529	24.9	-25.1	-0.2	9.5	9.7

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

■ Operating Mode : DVD PLAY

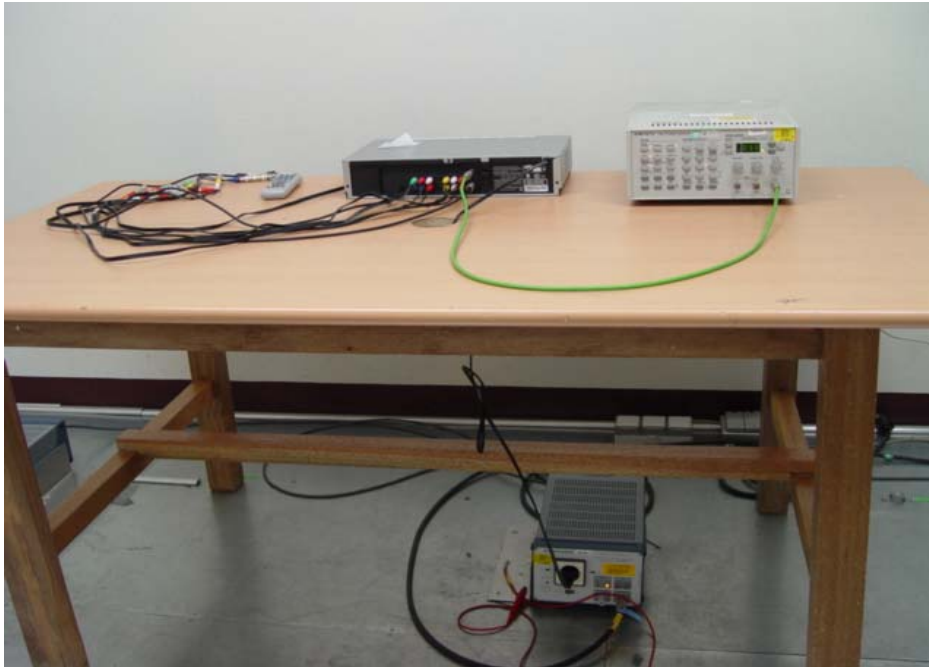
RF Output CH No. :4CH

Frequency	Reading	Factor	Level	Limit	Margin
[MHz]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dB]
67.240	27.5	-25.1	2.4	9.5	7.1

\* Factor = Preamp Gain + Matching Pad Loss + Cable Loss

## 4. Appendix A

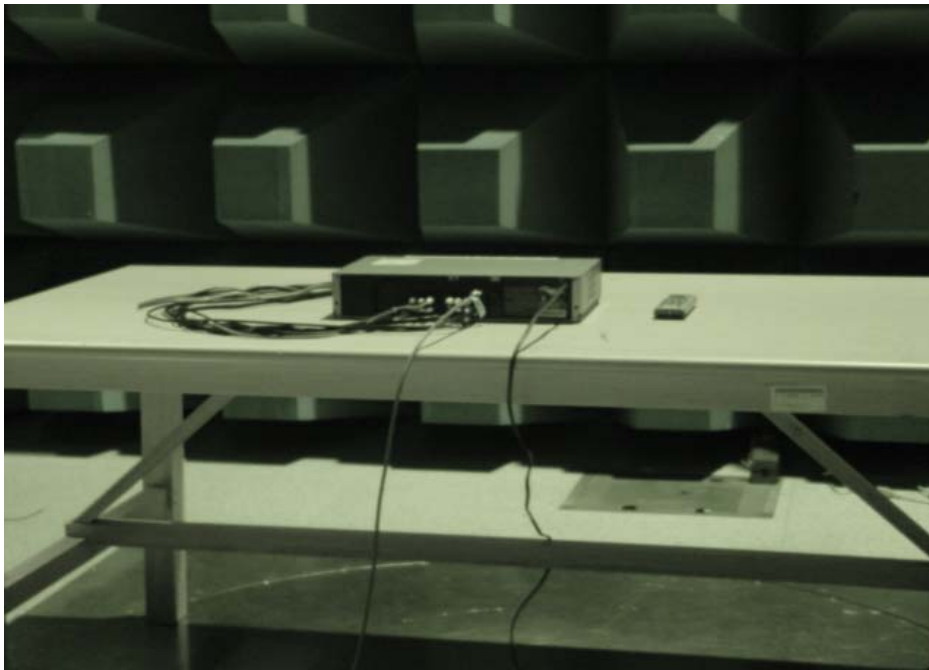
### 4.1 Test Photography



Picture 1. Conducted Emission (Front)



Picture 2. Radiated Emission (Front)



Picture 3. Radiated Emission (Rear)



Picture 4. Output Signal Level



Picture 5. Output Terminal Conducted Spurious Emission



Picture 6. Ant. Transfer Switch





## 4.2 EUT Photography



Picture 7. EUT (Front)



Picture 8. EUT (Rear)

<p>Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, 4,819,098 and 4,907,093 licensed for limited viewing uses only.</p>	<p><b>SAMSUNG</b> DVD /VHS DUAL DECK</p> <p>MODEL : DVD-V4600</p> <p>POWER SOURCE : 120V~ 60Hz 25W</p>
<p>"DTS" and "DTS Digital Out" are trademarks of Digital Theater Systems, Inc.</p>	
<p>This product is covered by one or more of the following U.S. patents: 5,060,220 5,703,862 5,909,424 6,091,691 6,222,812 6,259,668 6,272,096 6,147,955 5,561,649 5,546,368 5,602,549 5,714,950</p>	<p> LR38329</p> <p> LISTED 2AA9 E221083</p> <p>FACTORY ID / IDENTIFICATION D'USINE: "I"</p>
<p>PRODUCT IS CERTIFIED BY THE MANUFACTURER TO COMPLY WITH DHHS RULES 21 CFR SUBCHAPTER J. APPLICABLE AT THE DATE OF MANUFACTURE.</p>	<p><b>CLASS 1 LASER PRODUCT</b> <b>KLASSE 1 LASER PRODUKT</b> <b>LUOKAN 1 LASER LAITE</b> <b>KLASS 1 LASER APPARAT</b> <b>PRODUCTO LÁSER CLASE 1</b></p>
<p>PT. SAMSUNG ELECTRONICS INDONESIA JL. JABABEKA RAYA BLOK F29-33 CIKARANG, BEKASI 17530, INDONESIA</p>	<p>MANUFACTURED:</p>
<p>FCC ID : A3L2004KAISER MADE BY SAMSUNG IN INDONESIA</p> <p> </p>	

Picture 9. EUT (Label)