ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR FCC CLASS B CERTIFICATION

Test Report No.	**: E067R-011**
AGR No.	**: A065A-124**
Applicant	**: KTV GLOBAL CORPORATION**
Address	**: 357-55, Hosan-Dong, Dalseo-Gu, Daegu-Shi, 704-230, Korea**
Manufacturer	**: KTV GLOBAL CORPORATION**
Address	**: 357-55, Hosan-Dong, Dalseo-Gu, Daegu-Shi, 704-230, Korea**
Type of Equipment	**: 32" LCD TV RECEIVER/MONITOR**
FCC ID	**: BRFLTW32DS**
Model Name	**: LTW32DS**
Multiple Model Name	**: LTW32D, LTW32CS, M32LS**
Serial number	**: N/A**
Total page of Report	**: 16 pages (including this page)**
Date of Incoming	**: April 25, 2006**
Date of Issuing	**: July 05, 2006**

SUMMARY

The equipment complies with the regulation; ***PART 15 SUBPART B, Class B Computing Device Peripherals.***

This test report contains only the result of a single test of the sample supplied for the examination.

It is not a general valid assessment of the features of the respective products of the mass-production

Prepared by: Do-Seob, Choi / Project Engineer
EMC Div.
ONETECH Corp.

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ONETECH Corp.

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1. VERIFICATION OF COMPLIANCE

APPLICANT	: KTV GLOBAL CORPORATION
ADDRESS	: 357-55, Hosan-Dong, Dalseo-Gu, Daegu-Shi, 704-230, Korea
CONTACT PERSON	: Mr. Eui-Yeun, Kim / Team Leader
TELEPHONE NO	: +82-53-605-7071
FCC ID	: BRFLTW32DS
MODEL NO/NAME	: LTW32DS
BRAND NAME	: KTV, Medialine
SERIAL NUMBER	: N/A
DATE	: July 05, 2006

EQUIPMENT CLASS	JBP - Peripheral Device for Class B Computing Device
E.U.T. DESCRIPTION	32" LCD TV RECEIVER/MONITOR
THIS REPORT CONCERNS	ORIGINAL GRANT
MEASUREMENT PROCEDURES	ANSI C63.4: 2003
TYPE OF EQUIPMENT TESTED	PRE-PRODUCTION
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	CERTIFICATION
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	PART 15 SUBPART B, SECTION 15.101
MODIFICATIONS ON THE EQUIPMENT TO ACHIEVE COMPLIANCE	Yes
FINAL TEST WAS CONDUCTED ON	3 METER OPEN AREA TEST SITE

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

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2. GENERAL INFORMATION

2.1 Product Description

The KTV GLOBAL CORPORATION, Model LTW32DS (referred to as the EUT in this report) is a 32" LCD TV RECEIVER/MONITOR. Product specification described herein was obtained from product data sheet or user's manual.

CHASSIS TYPE	Plastic
LIST OF EACH OSC. OR CRY. FREQ.(FREQ.>=1MHz)	14.318 MHz, 18.432 MHz and 27 MHz on the Main Board 25.14 MHz, 26.162 MHz, 27 MHz and 30 MHz on the Sub Board
NUMBER OF LAYERS	6 Layers: Main Board and Sub Board, 2 Layer: Control Board, IR Board and Power Board
ELECTRICAL RATING	AC 100-240V, 50/60Hz, 140W
EXTERNAL TERMINALS	RS-232C, HDMI, DVI Audio, PC D-Sub, PC Audio, Component 1, 2, Audio Line Out, S-Video, A/V In, USB, SPDIF, Antenna Jack, AC In

2.2 Model Differences

The difference(s) compared to the EUT is as follows:

	Model	Model Differences
Basic Model	LTW32DS	-
Multiple Models	LTW32D, LTW32CS, M32LS	Only type designation except for the enclosure shape and brand name.

2.3 Related Submittal(s) / Grant(s)

Original submittal only

2.4 Test System Details

The model numbers for all the equipments which were used in the tested system is:

Model	Manufacturer	FCC ID	Description	Connected to
LTW32DS	KTV GLOBAL CORPORATION	BRFLTW32DS	32" LCD TV RECEIVER/MONITOR (EUT)	PC
DHP	Dell Computer Corp	DoC	PC	-
SK-8110	Silitek	DoC	Keyboard	PC
OKD944	Dell Computer Corp	DoC	Mouse	PC
DVD2000	Taeyoung Telstar	N/A	DVD Player	EUT
DVP-NS92V	Sony	N/A	DVD Player	EUT

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2.5 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.4: 2003. Radiated testing was performed at a distance of 3 meters from EUT to the antenna.

2.6 Test Facility

The open area test site and conducted measurement facilities are located on at 307-51, Daessangryung-Ri, Chowol-Eup, Kwangju-City, Kyunggi-Do, 464-080, Korea. Description details of test facilities were submitted to the Commission on August 30, 2005. (Registration Number: 340658)

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3. SYSTEM TEST CONFIGURATION

3.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Main Board	TANGO	N/A	N/A
Inverter Board 1	LG Philips	KLS-EE32CI-S	N/A
Inverter Board 2	LG Philips	KLS-EE32CI-M	N/A
Power Board	Camel Technology	CMP-32SM	N/A
ARSC Board	TANGO	TANGO-SUB-ATSC-MODULE	N/A
LCD Board	LG Philips	LC370WX1/LC320W01	N/A
LED Board	KTV	PLSC02-1	N/A
Control Board	KTV	N/A	N/A

3.2 Mode of operation during the test

The windows program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use. This program was included into HOST. Once loaded, this program sequentially exercises each system component in turn. The sequence used is: (1) series of “H” characters are printed on the monitor until the screen is completely full, (2) copy series of “H” characters to mass storage device (if one is used). The complete cycle is repeated continuously.

The test was performed about each resolution from minimum resolution to maximum resolution for getting maximum noise level and the investigated maximum resolution mode of the EUT was 1366 x 768, 60Hz.

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3.3 Cable Description

Ports Name	Shielded	Ferrite Bead	Metal Hood	Length (m)	Connected to
HDMI	Y	N	BOTH END	1.5	DVD Player
DVI Audio	Y	N	BOTH END	1.5	DVD Player
PC D-Sub	Y	BOTH END	BOTH END	1.5	PC
PC Audio	N	N	BOTH END	1.2	PC
Component 1, 2	N	N	BOTH END	1.5	DVD Player
Audio Line Out	N	N	BOTH END	1.5	DVD Player
S-Video	Y	N	BOTH END	1.2	DVD Player
A/V In	N	N	BOTH END	1.5	DVD Player
USB	Y	N	BOTH END	1.2	PC
SPDIF	Y	N	BOTH END	1.5	DVD Player
Antenna Jack	Y	N	BOTH END	3.0	-
AC In	N	N	-	1.2	-

3.4 Equipment Modifications

-. The ferrite cores were added to the cable of IR, control, speaker and LVDS.

-. The rating of C40 was changed from 102 to 222.

-. The C2 was removed.

3.5 Configuration of Test System

Line Conducted Test: The power of the EUT was connected to LISN. All supporting equipments were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.4: 2003 7.2.3 to determine the worse operating conditions.

Radiated Emission Test: Preliminary radiated emission test was conducted using the procedure in ANSI C63.4: 2003 8.3.1.1 to determine the worse operating conditions. Final radiated emission test was conducted at 3 meters open area test site.

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4. PRELIMINARY TEST

4.1 AC Power line Conducted Emission Test

During Preliminary Test, the following operating mode was investigated

Operation Mode	The Worse operating condition
D-Sub Mode	X
HDMI Mode	X

4.2 Radiated Emission Test

During Preliminary Test, the following operating mode was investigated

Operation Mode	The Worse operating condition
D-Sub Mode	X
HDMI Mode	X

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5. FINAL RESULT OF MEASURMENT

Preliminary test was done in normal operation mode. And the final measurement was selected for the maximized emission level

5.1 Conducted Emission Test

5.1.1 Operating Condition: D-Sub Mode

Humidity Level : 46 % Temperature: 22 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.107(a)

Type of Test : CLASS B

Result : PASSED BY –5.94 dB at 0.15 MHz under peak mode

EUT : 32" LCD TV RECEIVER/MONITOR Date: June 07, 2006

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 9 kHz)

Resolution : 1366 x 768, 60Hz

Frequency (MHz)	Line	Peak (dBuV)		Margin (dB)
		Emission level	Q.P Limits	
0.15	H	60.06	66.00	-5.94
0.17	N	54.98	64.96	-9.98
0.19	H	49.49	63.82	-14.33
0.23	H	44.45	62.27	-17.82
1.04	N	39.94	56.00	-16.06
3.17	N	41.17	56.00	-14.83
Frequency (MHz)	**Line**	**Average (dBuV)**		**Margin (dB)**
		Emission level	**Limits**	
0.15	H	47.82	56.00	-8.18
0.17	N	44.28	54.96	-10.68
0.19	H	39.35	53.82	-14.47
3.17	N	33.53	46.00	-12.47

Line Conducted Emission Tabulated Data

Remark : “H”: Hot Line, “N”: Neutral line

See next page for an overview sweep performed with peak and average detector.

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5.1.1 Operating Condition: HDMI Mode

Humidity Level : 46 % Temperature: 22 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.107(a)

Type of Test : CLASS B

Result : PASSED BY –6.82 dB at 0.15 MHz under peak mode

EUT : 32" LCD TV RECEIVER/MONITOR Date: June 07, 2006

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 9 kHz)

Resolution : 1366 x 768, 60Hz

Frequency (MHz)	Line	Peak (dBuV)		Margin (dB)
		Emission level	Q.P Limits	
0.15	H	58.91	65.73	-6.82
0.17	H	54.96	64.96	-10.00
0.58	H	39.91	56.00	-16.09
1.99	N	39.77	56.00	-16.23
2.57	H	40.41	56.00	-15.59
3.51	N	40.45	56.00	-15.55
Frequency (MHz)	**Line**	**Average (dBuV)**		**Margin (dB)**
		Emission level	**Limits**	
0.15	H	44.28	55.73	-11.45
0.17	H	43.83	54.96	-11.13
2.57	H	31.86	46.00	-14.14
3.51	N	34.15	46.00	-11.85

Line Conducted Emission Tabulated Data

Remark : "H": Hot Line, "N": Neutral line

See next page for an overview sweep performed with peak and average detector.

Tested by: Do-Seob, Choi / Project Engineer

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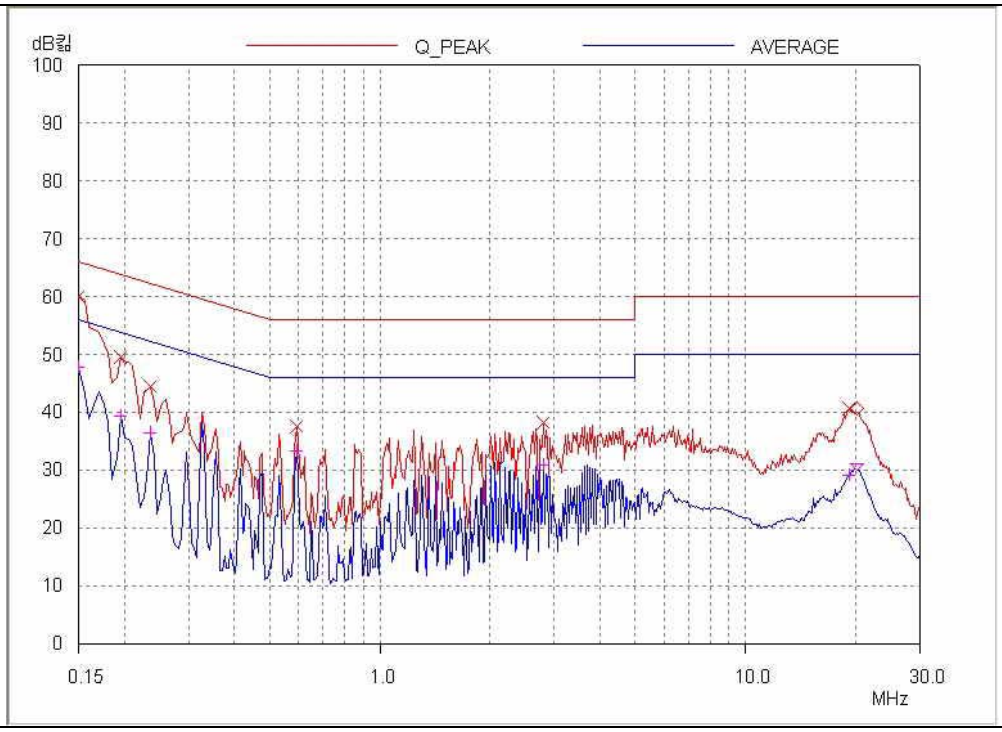
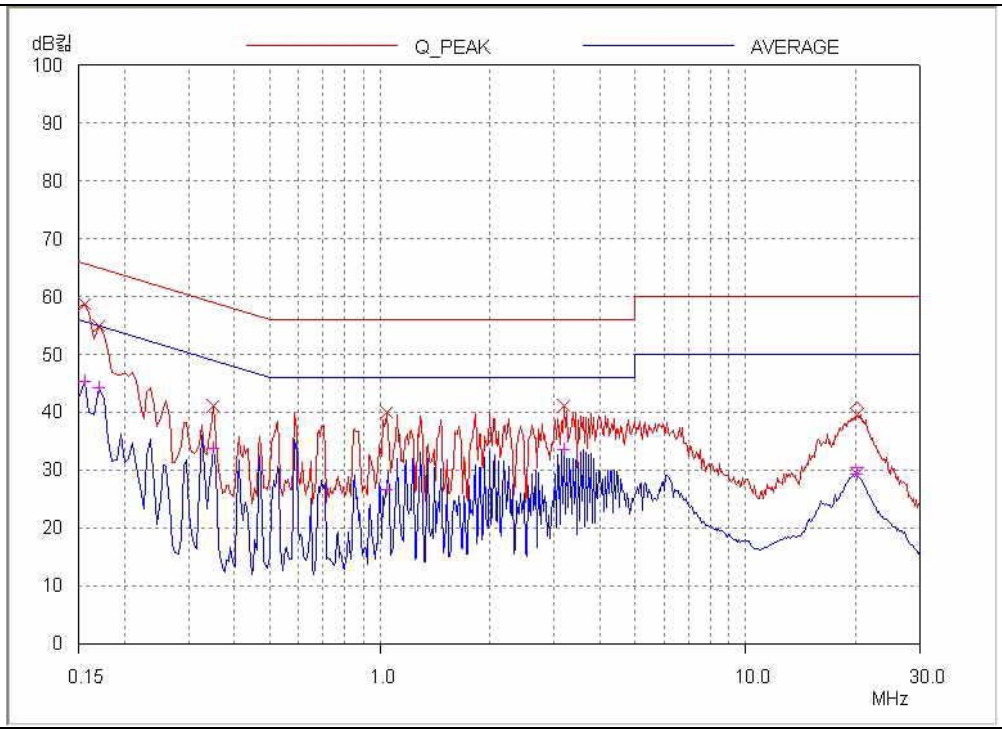
Operating Condition: D-Sub Mode



HOT LINE



NEUTRAL LINE

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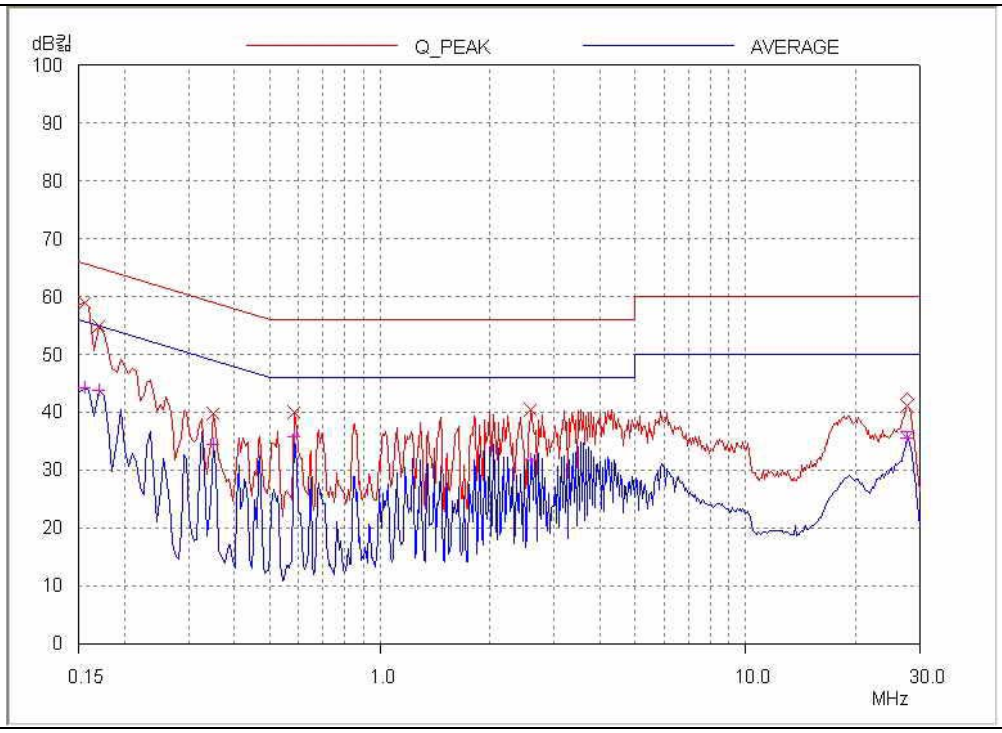
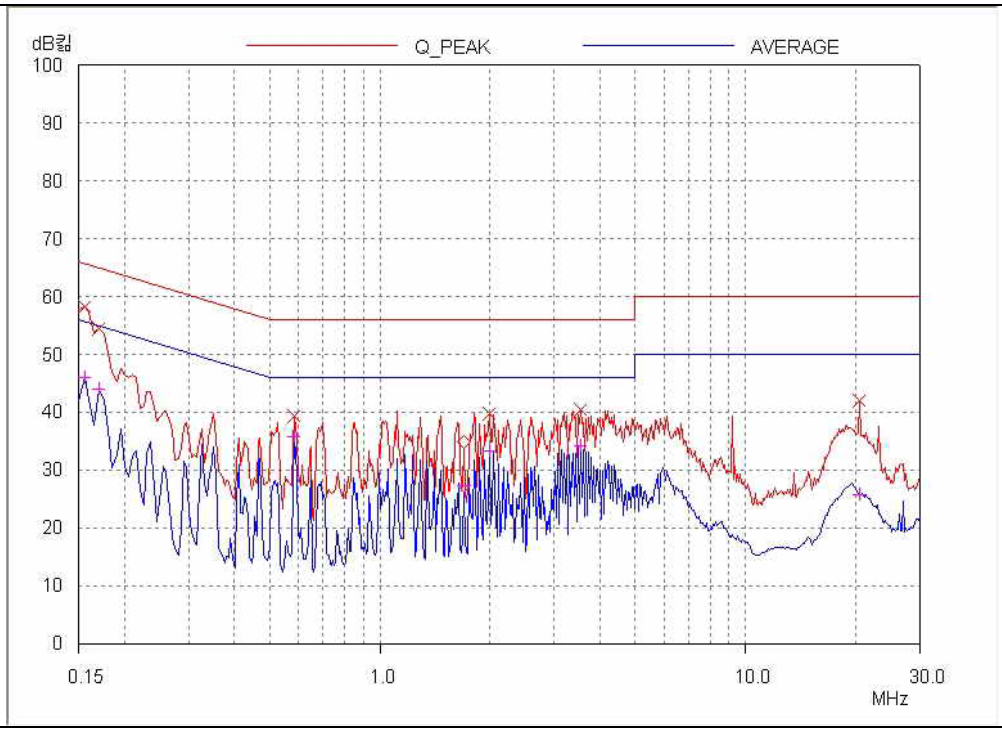
Operating Condition: HDMI Mode



HOT LINE



NEUTRAL LINE

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5.2 Radiated Emission Test

The following table shows the highest levels of radiated emission on both polarizations of horizontal and vertical.

5.2.1 Operating Condition: D-Sub Mode

Humidity Level : 45 % Temperature: 24 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.109(a)

Type of Test : CLASS B

Result : PASSED BY –4.44dB at 603.35MHz

EUT : 32" LCD TV RECEIVER/MONITOR Date: May 29, 2006

Frequency range : 30MHz – 1000MHz

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)

Distance : 3 Meter

Resolution : 1366 x 768, 60Hz

Radiated Emission		Ant	Correction Factors		Total	FCC Class B	
Freq. (MHz)	Amp. (dBuV)	Pol.	Ant. (dBuV/m)	Cable (dB)	Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
41.00	19.80	V	14.29	1.38	35.47	40.00	-4.53
63.55	22.40	V	6.72	1.47	30.59	40.00	-9.41
73.60	22.60	V	5.86	1.57	30.03	40.00	-9.97
238.87	17.20	V	17.01	3.22	37.43	46.02	-8.59
603.35	16.10	H	20.15	5.33	41.58	46.02	-4.44
851.09	9.40	H	23.41	7.10	39.91	46.02	-6.11

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5.2.1 Operating Condition: HDMI Mode

Humidity Level : 45 % Temperature: 24 °C

Limits apply to : FCC CFR 47, PART 15, SUBPART B, SECTION 15.109(a)

Type of Test : CLASS B

Result : PASSED BY –4.48dB at 38.95MHz

EUT : 32" LCD TV RECEIVER/MONITOR Date: May 29, 2006

Frequency range : 30MHz – 1000MHz

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)

Distance : 3 Meter

Resolution : 1366 x 768, 60Hz

Radiated Emission		Ant	Correction Factors		Total	FCC Class B	
Freq. (MHz)	Amp. (dBuV)	Pol.	Ant. (dBuV/m)	Cable (dB)	Amp. (dBuV/m)	Limit (dBuV/m)	Margin (dB)
38.95	19.20	V	15.06	1.26	35.52	40.00	-4.48
44.20	18.00	V	13.15	1.64	32.79	40.00	-7.21
46.60	20.50	V	12.32	1.64	34.46	40.00	-5.54
51.75	22.00	V	10.49	1.47	33.96	40.00	-6.04
100.56	26.40	V	10.10	1.90	38.40	43.52	-5.12
557.00	12.50	V	19.62	5.30	37.42	46.02	-8.60

Tested by: Do-Seob, Choi / Project Engineer

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6. FIELD STRENGTH CALCULATION

Meter readings are compared to the specification limit correcting for antenna and cable losses

+	Meter reading	(dBuV)
+	Cable Loss	(dB)
+	Antenna Factor (Loss)	(dB/meter)
=	Corrected Reading	(dBuV/meter)
-	Specification Limit	(dBuV/meter)
=	dB Relative to Spec	(+/- dB)

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7. LIST OF TEST EQUIPMENT

No.	EQUIPMENTS	MFR.	MODEL	SER. NO.	LAST CAL	DUE CAL	USE
1.	Test receiver	R/S	ESVS10	827864/005	DEC/05	12MONTH	■
2.	Test receiver	R/S	ESHS 10	834467/007	MAY/06	12MONTH	■
3.	Spectrum analyzer	HP	8566B	3407A08547	JUL/05	12MONTH	
4.	TRILOG Broadband Antenna	Schwarzbeck	VULB9163	VULB9163 166	MAY/06	12MONTH	
5.	Biconical antenna	EMCO	3110	9003-1121	FEB/06	12MONTH	
		Schwarzbeck	VHA9103	91031852	FEB/06		■
6.	Log Periodic antenna	EMCO	3146	9001-2614	FEB/06	12MONTH	
		Schwarzbeck	9108-A(494)	62281001	FEB/06		■
7.	LISN	EMCO	3825/2	9109-1867	JUL/05	12MONTH	■
				9109-1869	JUL/05		
		Schwarzbeck	NSLK 8126	8126-404	AUG/05		■
8.	Position Controller	HD GmbH	HD100	N/A	N/A	N/A	■
9.	Turn Table	HD GmbH	DS420S	N/A	N/A	N/A	■
10.	Antenna Master	HD GmbH	MA240	N/A	N/A	N/A	■

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