SAMSUNG ELECTRONICS

EMC TEST REPORT

Project No. : LBE030207

Product : Digital Camcorder

Model No. : SCD29

Date of test : January 24 ~ 25, 2003

Issued Date : January 29, 2003

Tested by:
Kyung Chul, MIN / Test Engineer

Reviewed by:
No Cheon, PARK / Test Engineer

Authorized by
Kyu Baek, CHUNG / Chief of EMC Lab.

SAMSUNG ELECTRONICS Co., Ltd.
EMC Test Laboratory
416 Maetan-3 Dong, Paldal-Ku, Suwon City, Kyungki-Do, Korea,442-742
Tel. : 81-31-200-2185 Fax. : 81-31-200-2189

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1. Introduction & Summary

1.1 Description of the EUT

Applicant	SAMSUNG ELECTRONICS Co., Ltd.
Project Number	LBE030207
Equipment Under Test	Digital Camcorder
Trade Name	SAMSUNG
Model Number	SC-D29
Variant Model	None
Operating Frequency	Main clock : 66.8MHz, Memory clock : 54MHz, 200MHz
FCC ID Number	A3L03DELTA
Mains input	120V 60Hz

1.2 Test facility

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

The 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 (MRA) for the above test item(s) and test method(s).

Measured in Semi-anechoic chamber #1 that is FCC Registration Number 98856.

1.3 Test mode

Test Planning and Test Mode
In each measurement were performed under following two EUT operation modes.

1) Playback mode
2) Camera record mode

1.4 Test rule and Procedure

FCC Rule Part 15, Subpart B : Unintentional Radiators
Test Procedure : ANSI C63.4-1992

1.5 Test Summary

Test item	Applied Standards	Result
AC POWERLINE CONDUCTED EMISSION	ANSI C63.4-1992	Pass
RADIATED EMISSION	ANSI C63.4-1992	Pass

* N/A : Test not applicable

2. Test Results

2.1 AC POWERLINE CONDUCTED EMISSION MEASUREMENT

1) Reference Rule and Specification

FCC Rule Part 15, Section 15.107(a)

2) Test Procedure

2-1) Configurate the EUT System in accordance with ANSI C63.4-1992 section 7 and 12.2.
Connect the EUT's AC line cord to the EUT port of LISN.

2-2) All input terminals are terminated in the proper impedance.
The output ports are connected to the cable provided with the device and the ending port are terminated in the proper impedance.

2-3) Activates the EUT system
Using a calibrated coaxial cable, the TEST RECEIVER is connected to the measuring port of the LISN for EUT.

2-4) To the find out an EUT condition procedures the maximum emission, the position of cables, EUT operations mode are checked under normal usage of EU
Then, the emission are scanned from 0.45MHz to 30MHz relative to the limit are recorded.

3) Test Results

A) EUT Mode : Playback mode

Frequency [MHz]	Meter reading(a) LISN Port	Total Loss(b) [dB]	Results (a) + (b) [dBuV]	Limits [dBuV]	Margin [dB]
3.488	40.46	0.09	40.5	**48.0**	7.5
4.538	42.82	0.09	42.9	**48.0**	5.1
5.917	43.71	0.08	43.8	**48.0**	4.2
7.891	44.13	0.11	44.2	**48.0**	3.8
9.662	43.78	0.28	44.1	**48.0**	3.9
11.111	44.19	0.40	44.6	**48.0**	3.4

* Margin = Limits - Results

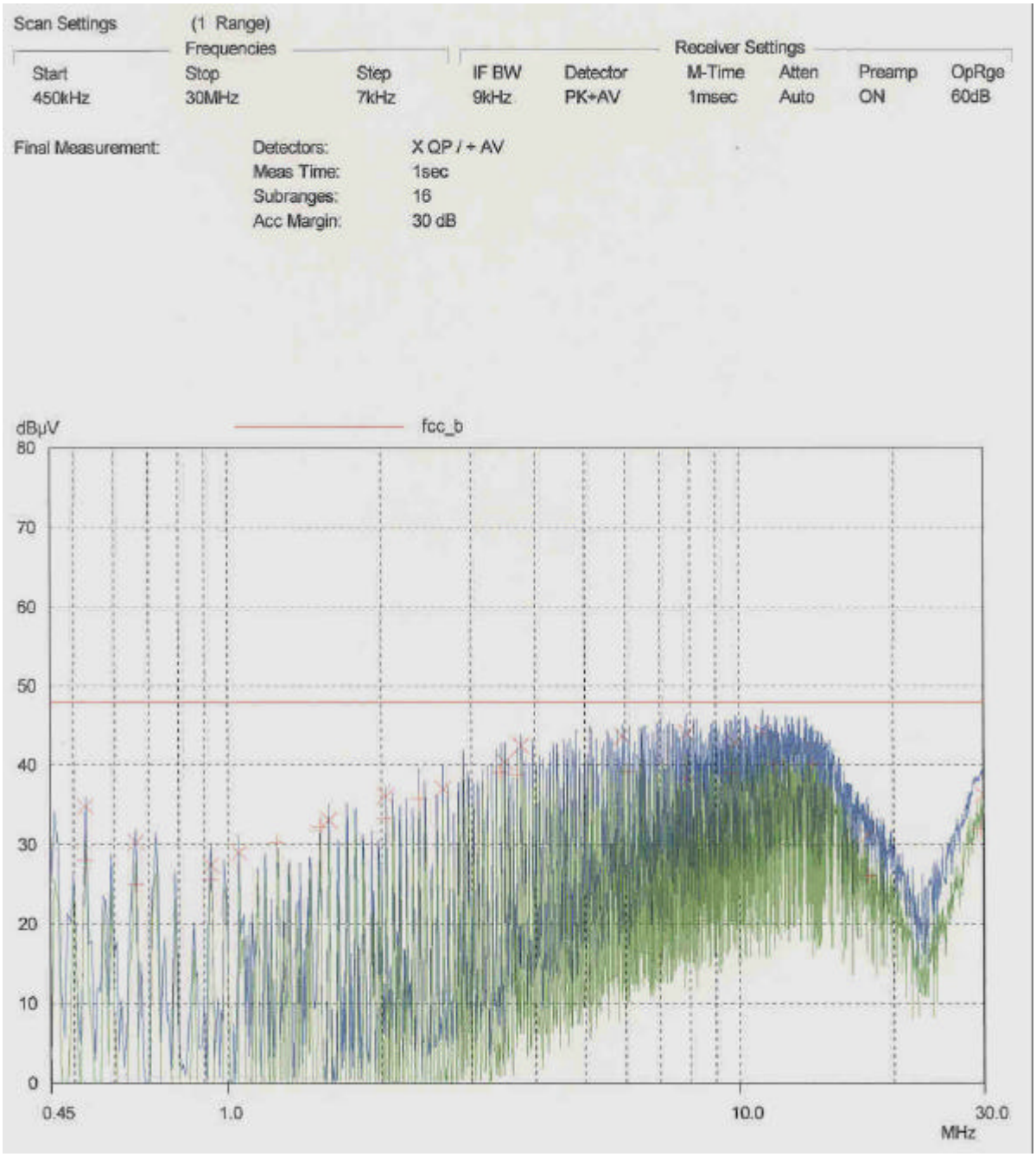
B) EUT Mode : Record mode

Frequency [MHz]	Meter reading(a) LISN Port	Total Loss(b) [dB]	Results (a) + (b) [dBuV]	Limits [dBuV]	Margin [dB]
3.621	40.89	0.09	41.0	**48.0**	7.0
4.475	42.45	0.09	42.5	**48.0**	5.5
7.828	43.88	0.11	44.0	**48.0**	4.0
9.739	43.01	0.29	43.3	**48.0**	4.7
12.896	43.10	0.64	43.7	**48.0**	4.3
13.946	42.95	0.77	43.7	**48.0**	4.3

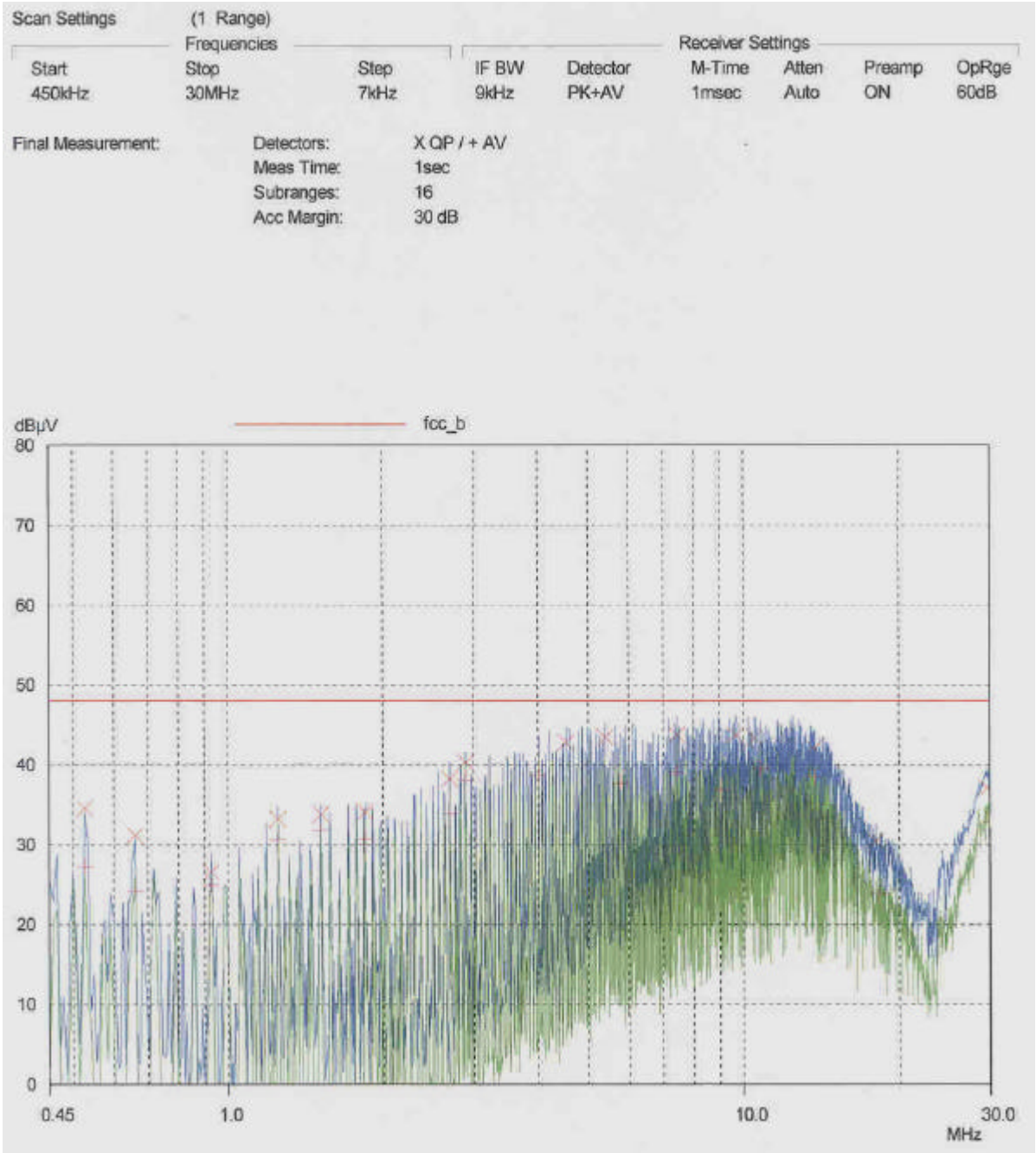
* Margin = Limits - Results

4) Graph

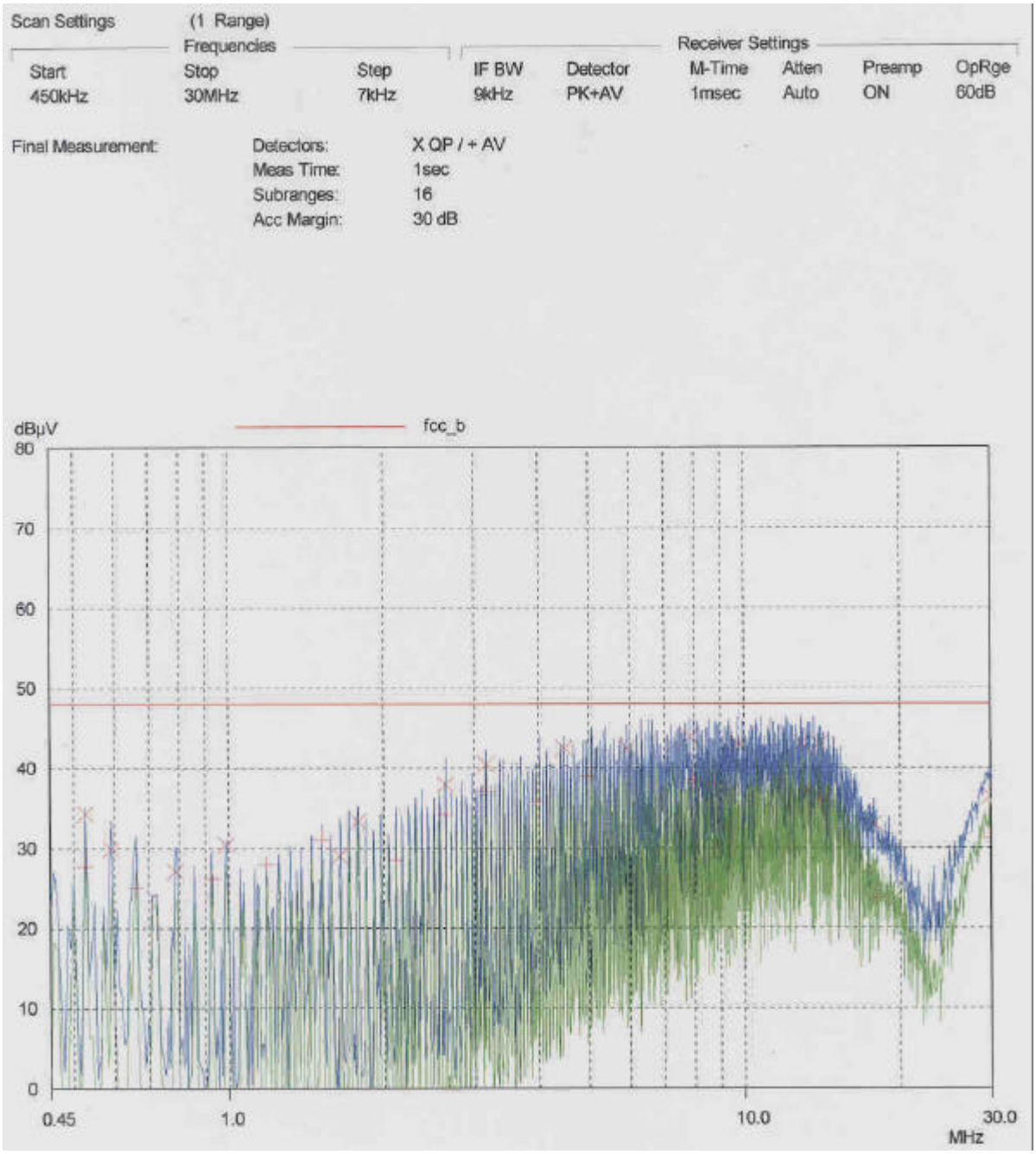
O EUT Mode : Playback, LISN Mode : L1



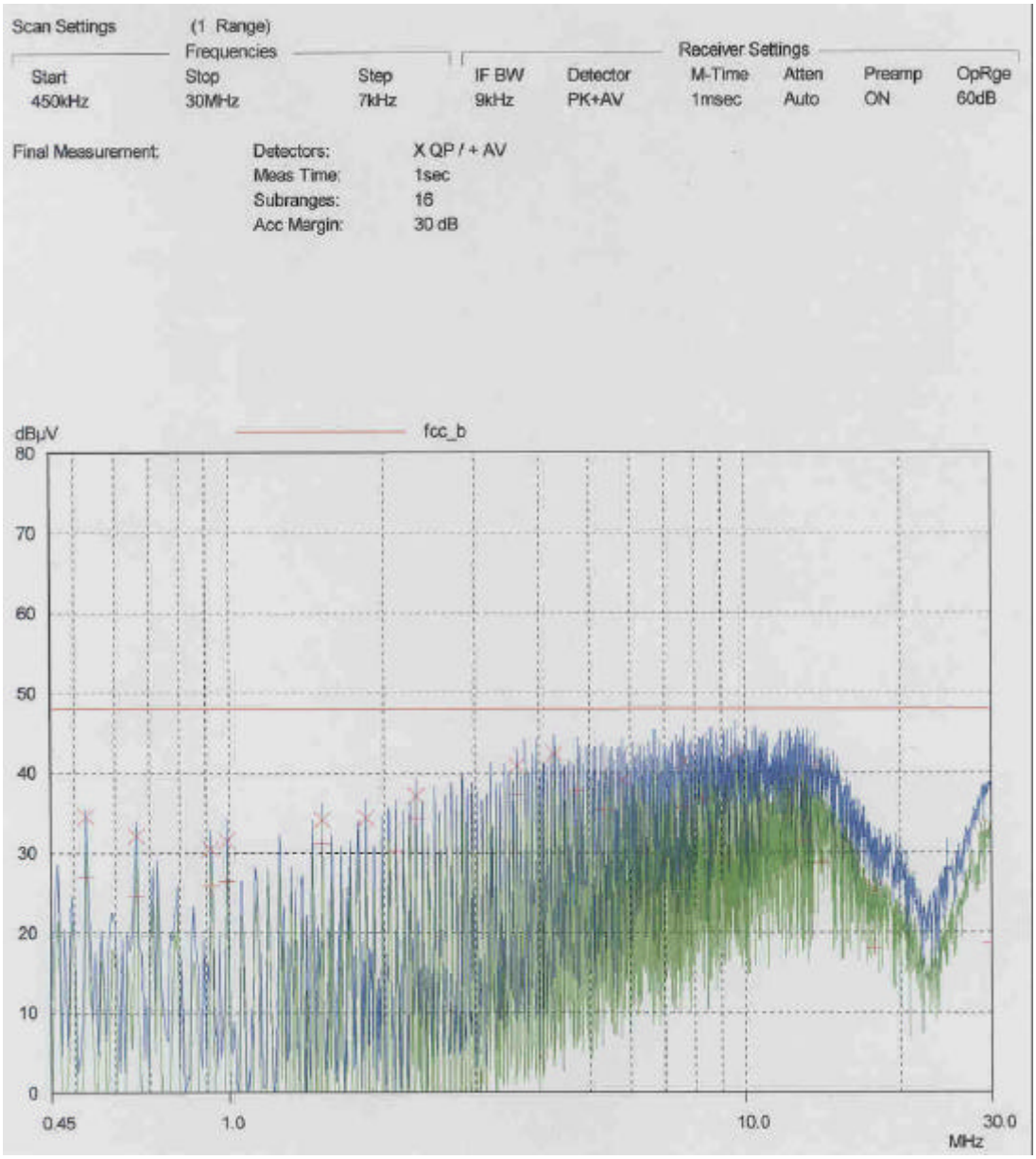
O EUT Mode : Playback, LISN Mode : L2



O EUT Mode : Record, LISN Mode : L1



O EUT Mode : Record, LISN Mode : L2



2.2 RADIATED EMISSION MEASUREMENT

1) Reference Rule and Specification
FCC Rule Part 15, Section 15.109(a) and (c)

2) Test Procedure

2-1) Configurate the EUT System in accordance with ANSI C63.4-1992section 8 and 12.2.

2-2) Power cords for the EUT System are connected the receptacle on the ground plane. The output ports are connected to the cable provided with the device and the ending port of the cable are terminated in the proper impedance.

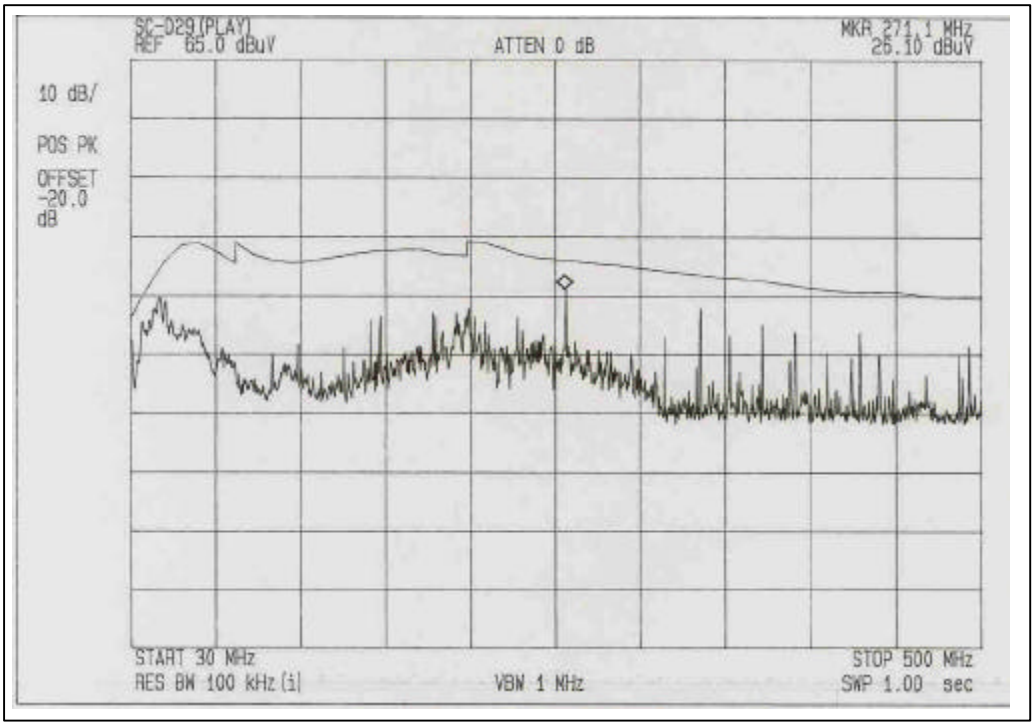
2-3) Activates the EUT system. To find out the emission of the EUT system, preliminary radiated measurement are performed at a closer distance than that specified for final radiated measurement.

2-4) To determine the EUT condition produces the maximum emission, the cable positions are checked under normal usage. In final compliance test, the maximum emissions recorded above are measured at the specified distance.

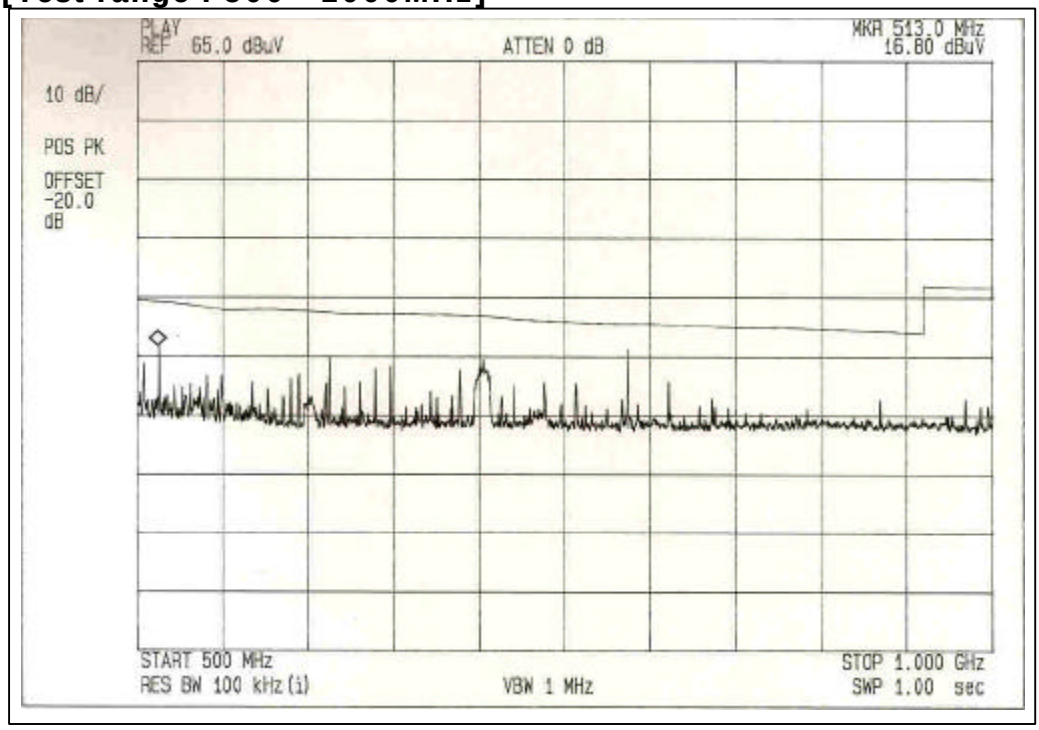
3) Test Results (Graph)

O EUT Mode : Playback

[Test range : 30 - 500MHz]

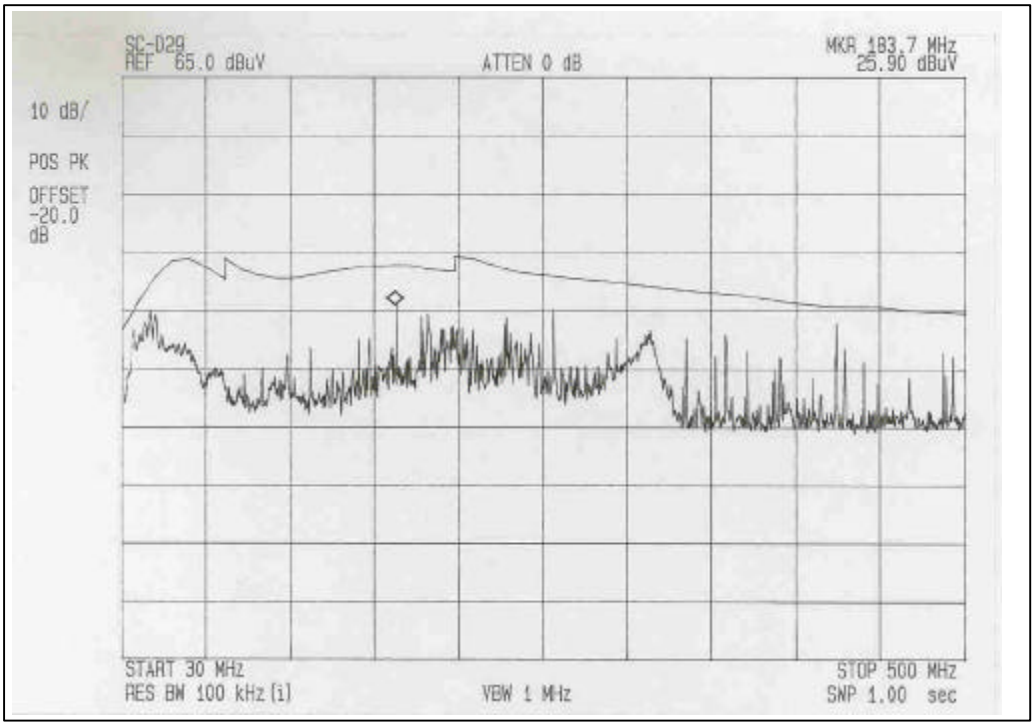


[Test range : 500 - 1000MHz]

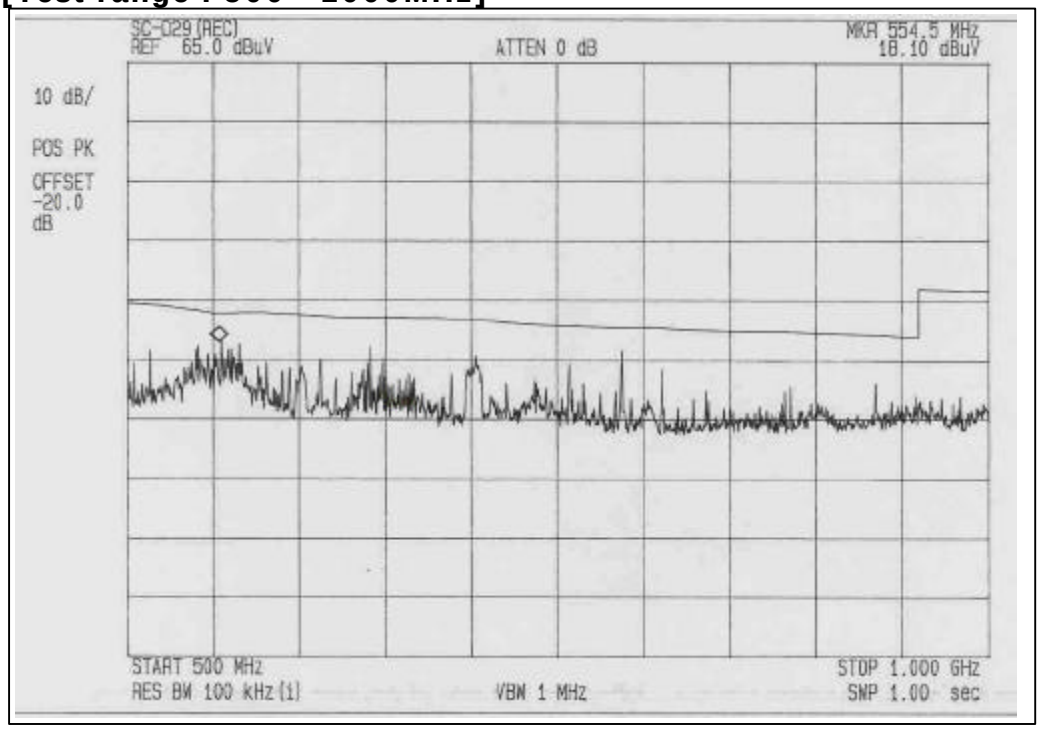


O EUT Mode : Record

[Test range : 30 - 500MHz]



[Test range : 500 - 1000MHz]



3. Test equipment

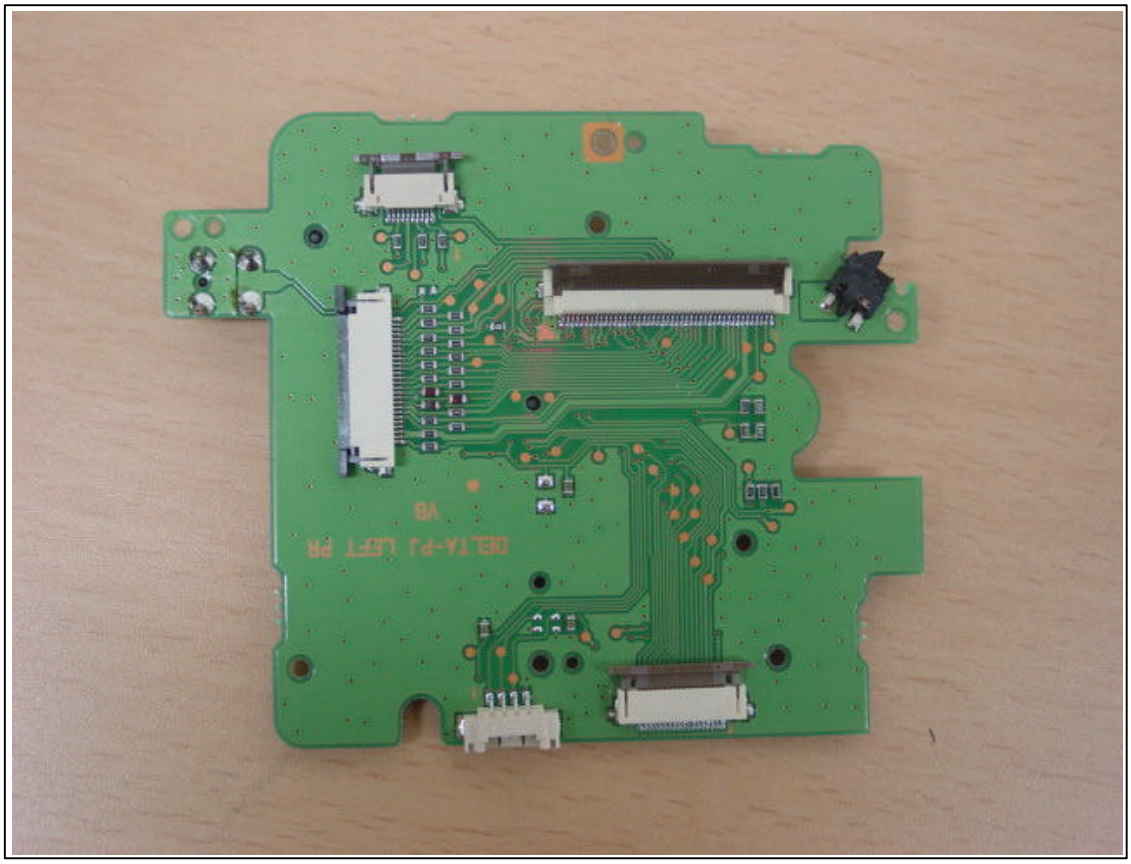
Equipment	Model No.	Serial No.	Makers	Calibration Last calibration
Spectrum analyzer	8566B	3340A21744	H.P	02/03/04, 12Months
Quasi-peak adapter	85650A	2521A00687	H.P	02/10/09, 12Months
RF Preselector	85685A	2602A00224	H.P	02/10/09, 12Months
Field strength meter	ESCS30	839809/022	R & S	02/06/18, 12Months
	Firmware versions : Main 1.08, OTP 02.01, GRA 02.03			
L.I.S.N	3825-2	9208-1981	EMCO	02/03/23, 12Months
Bi-Log Antenna	CBL6112B	2767	SCHAFFNER	02/ 04/26, 12Months

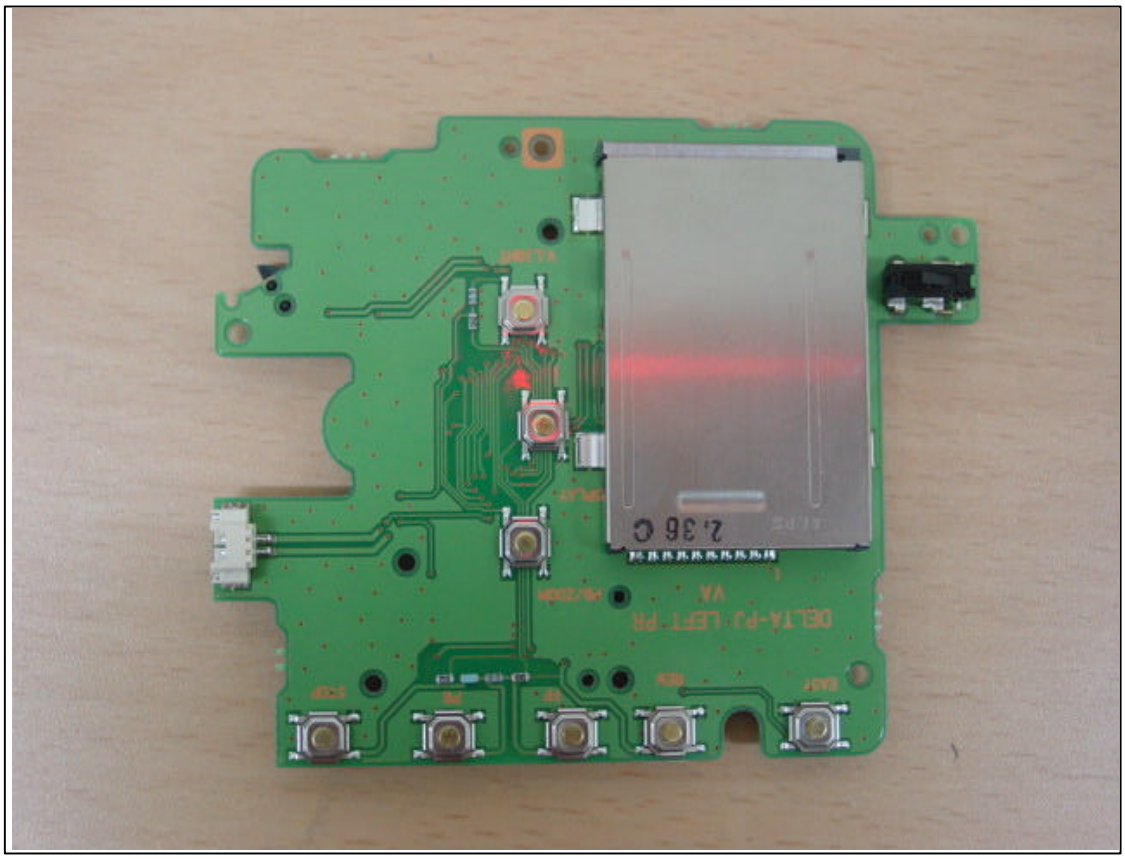
EUT Photographs

[Label and Label position]

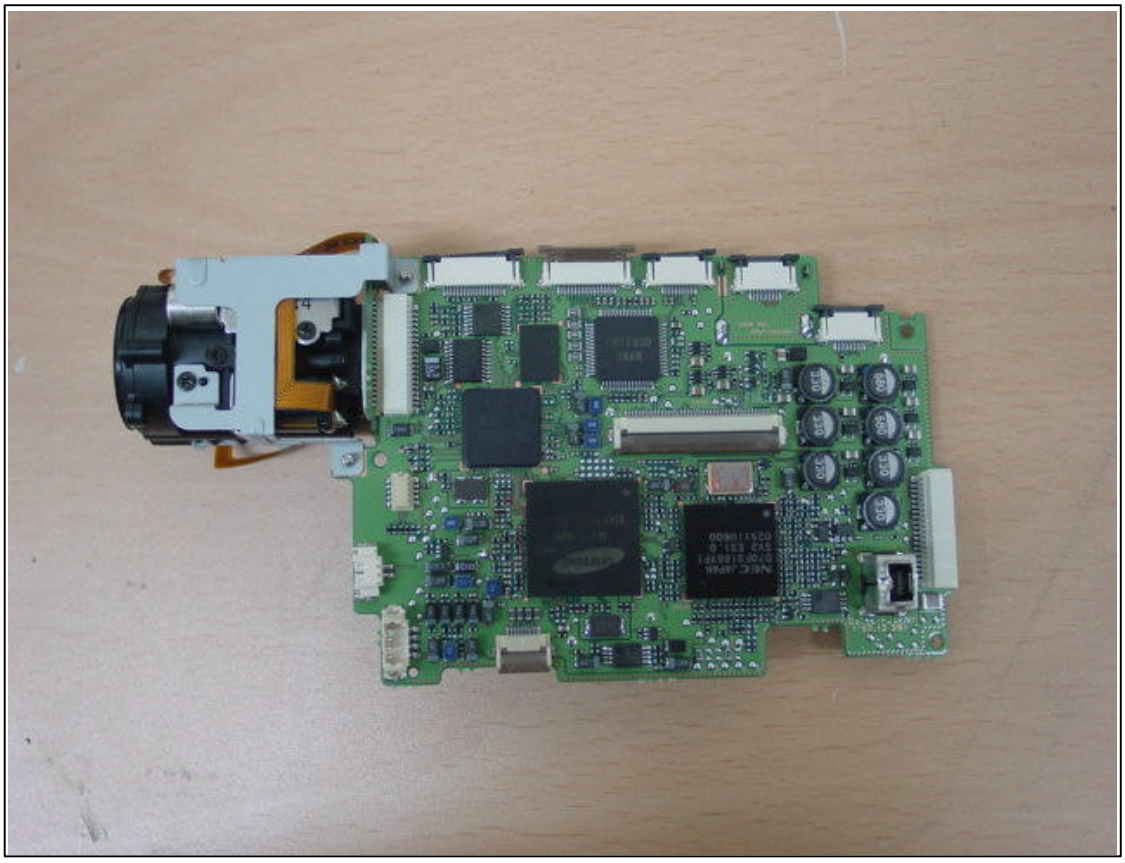
EUT Photographs

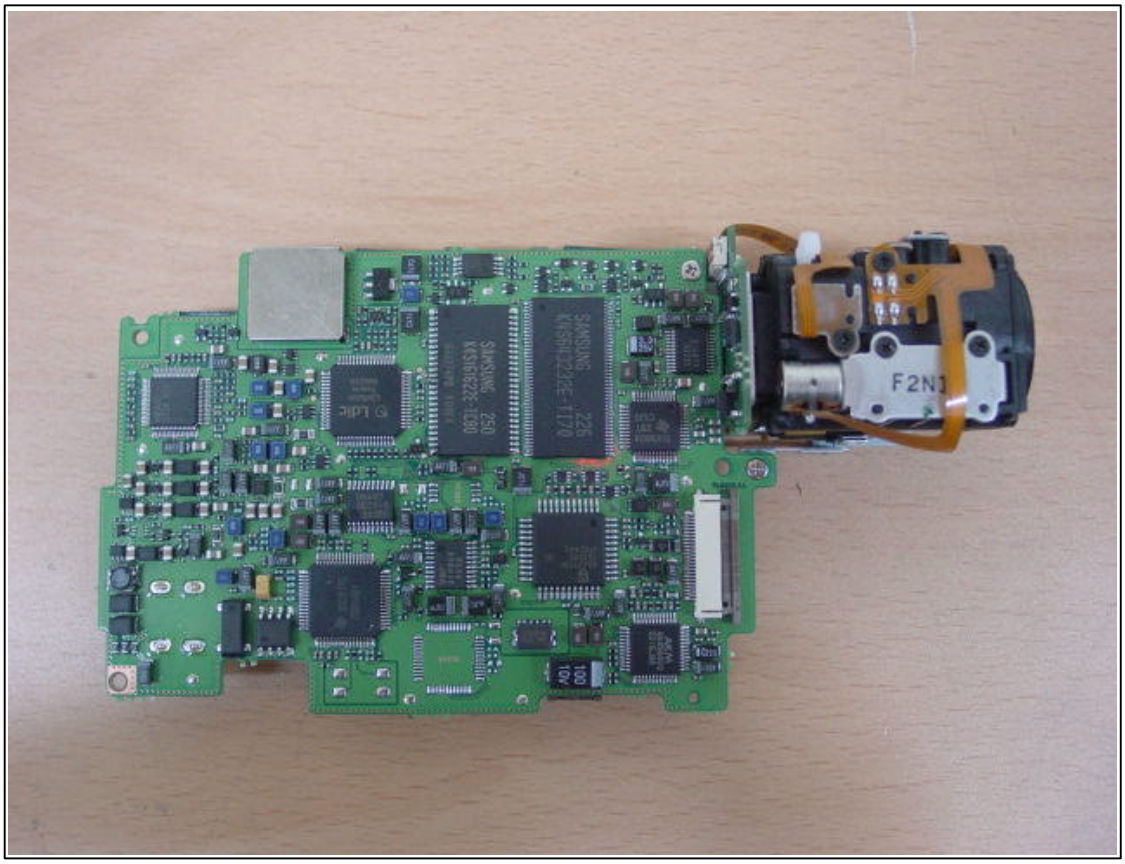
EUT Photographs



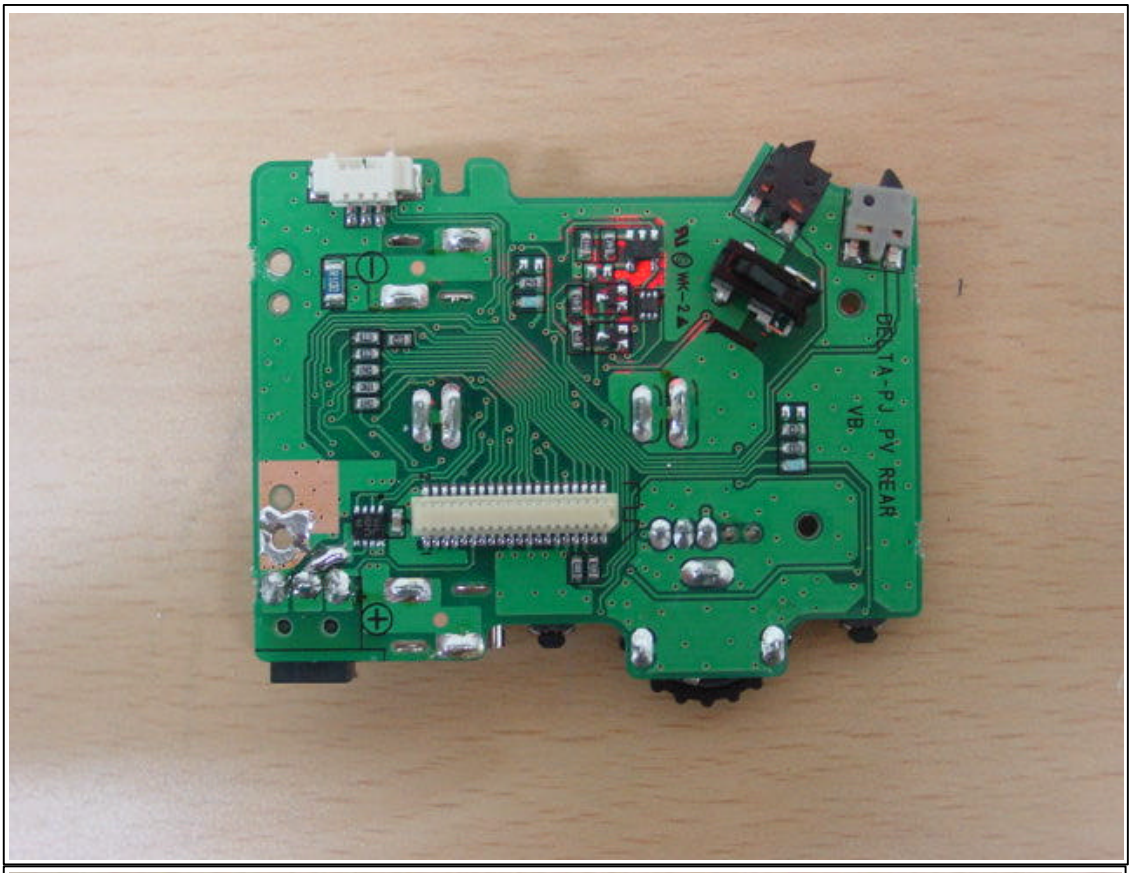


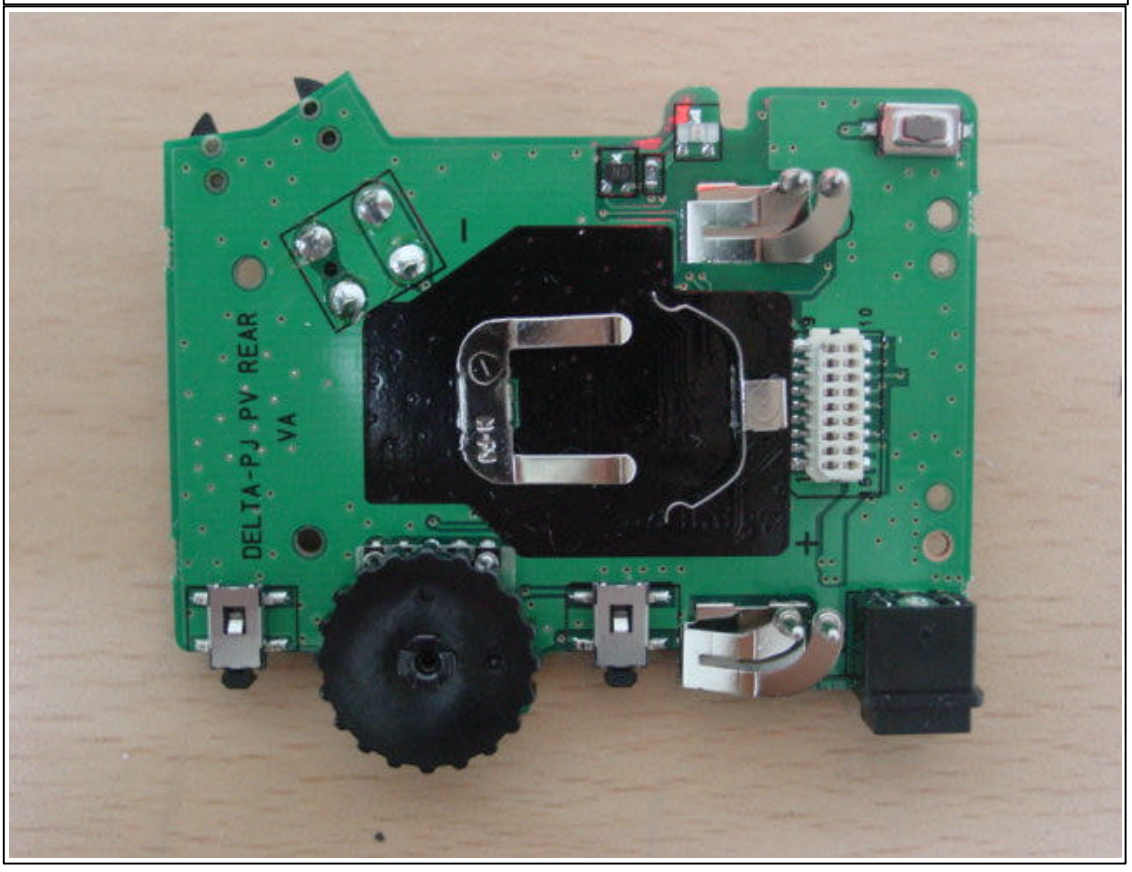
EUT Photographs



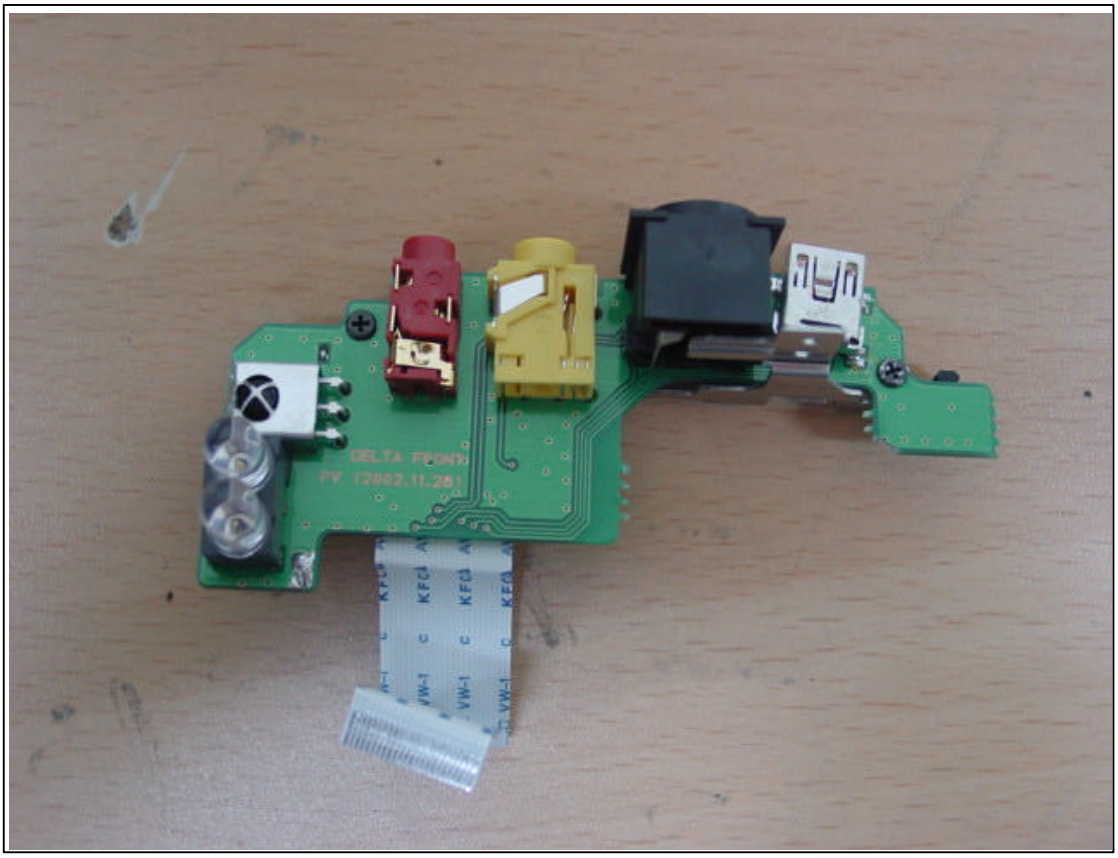


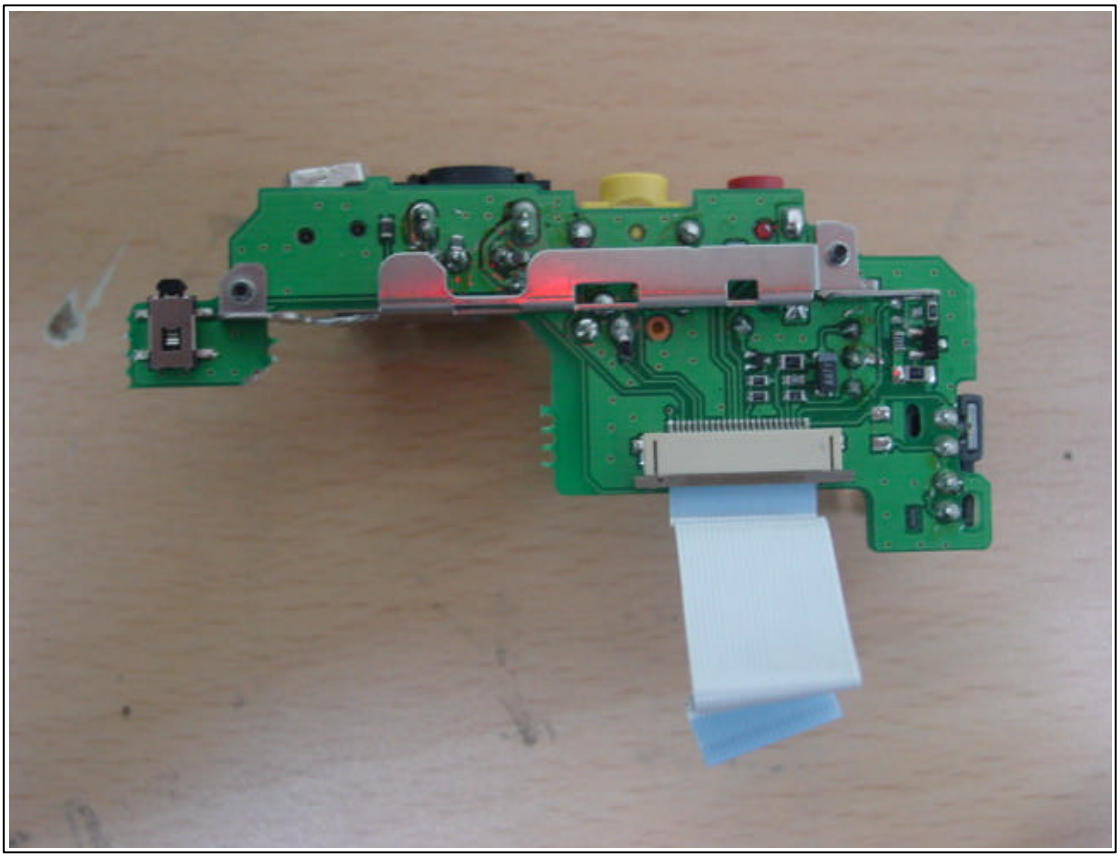
EUT Photographs



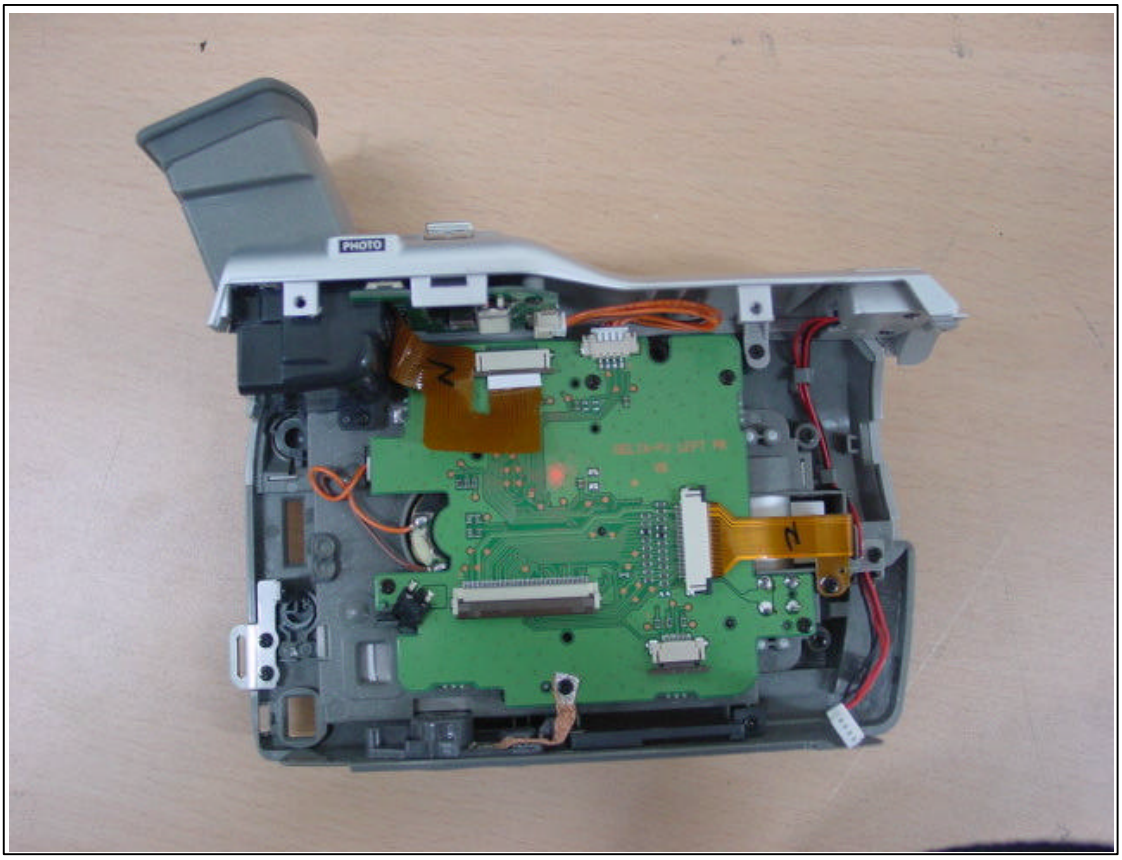


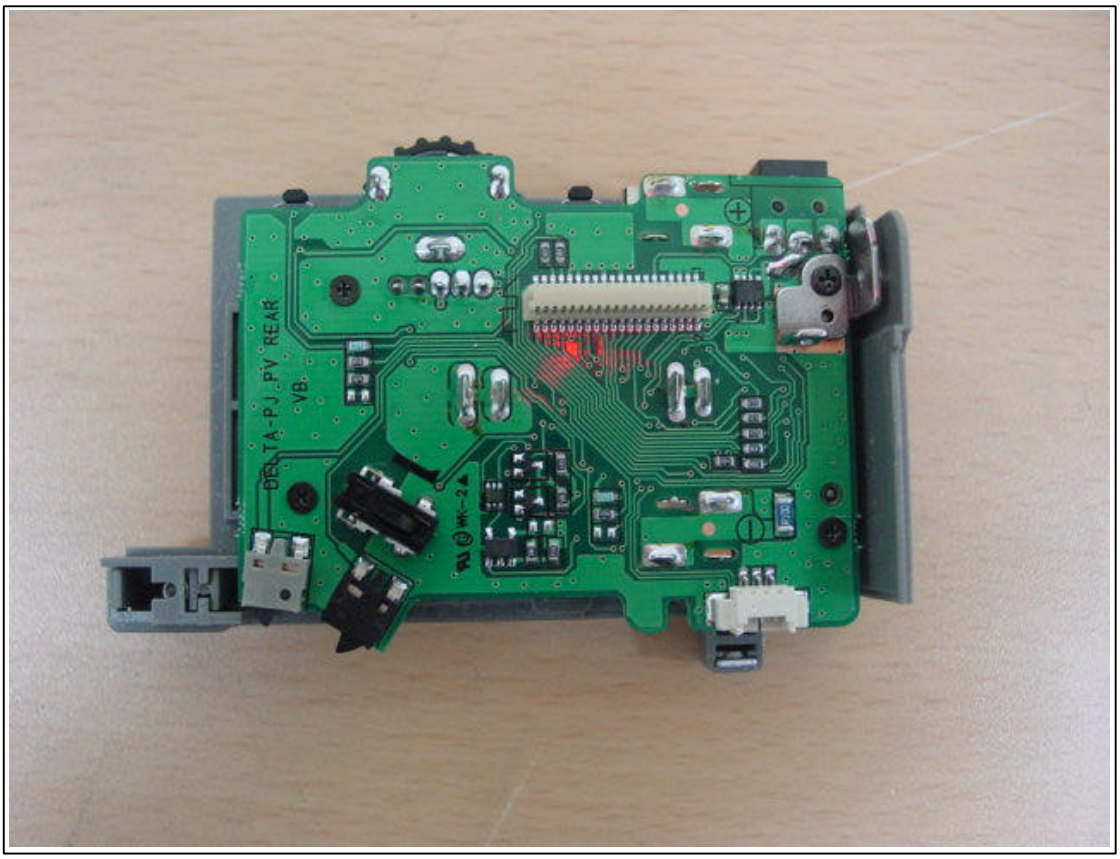
EUT Photographs



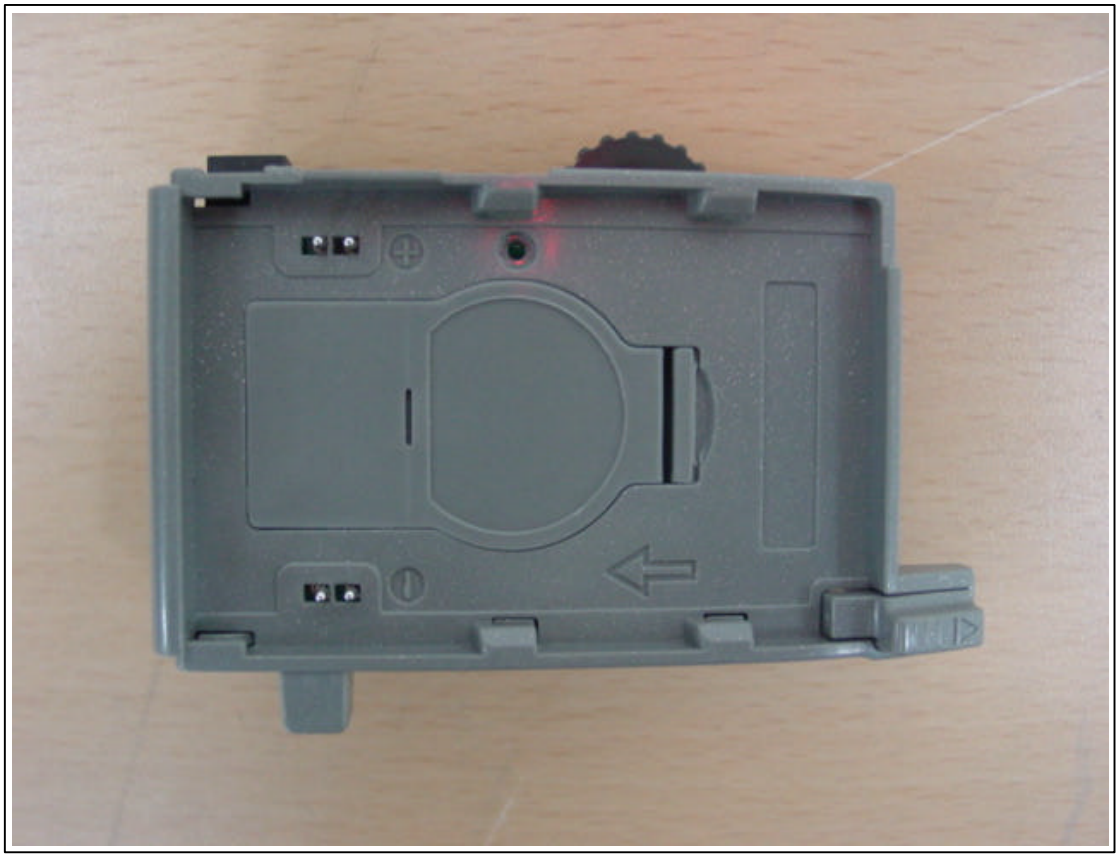


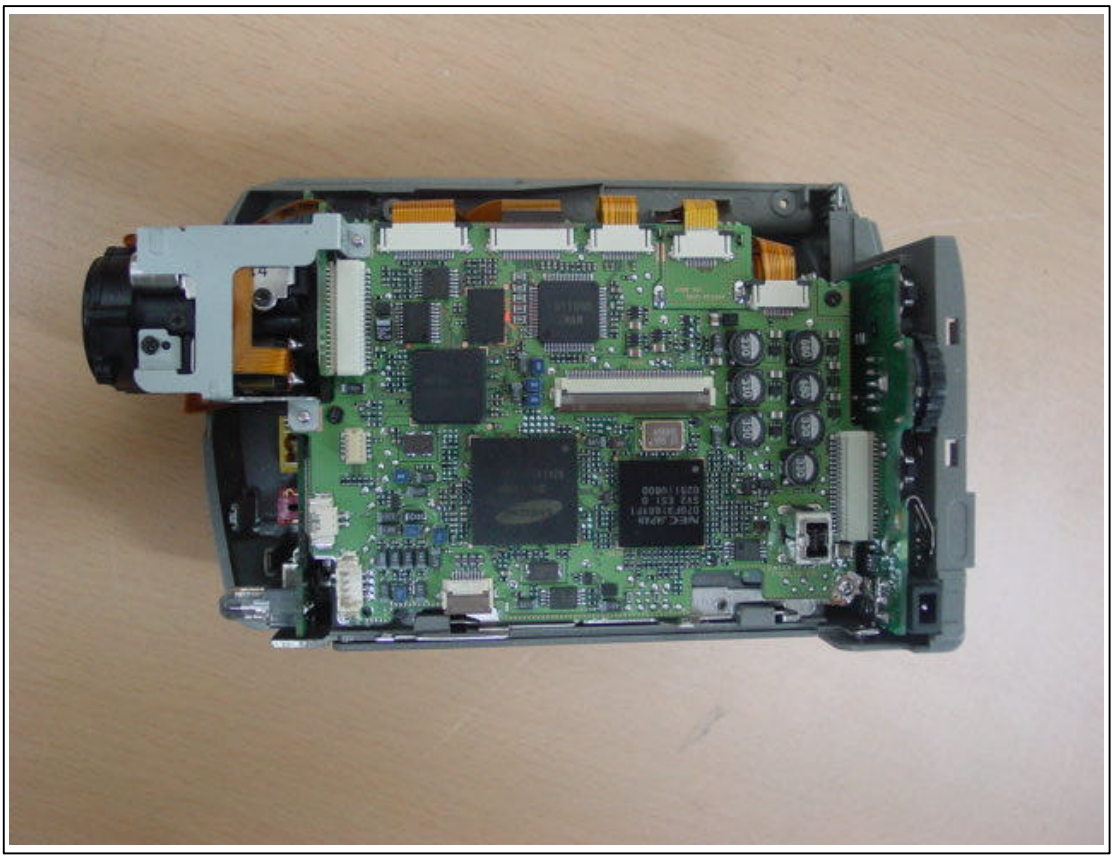
EUT Photographs





EUT Photographs





[Block Diagram]