EMC - Test Report

Model : Digimax 210SE

FCC ID	NLMDIGIMAX210SE		
Product type	DIGITAL CAMERA	Serial No.	-
Applicant	SAMSUNG TECHWIN CO., LTD.		
Address	42, Sungju-Dong, Changwon City, Kyungnam, Korea 641-716		
Manufacturer	SAMSUNG TECHWIN CO., LTD.		
Address	42, Sungju-Dong, Changwon City, Kyungnam, Korea 641-716		

Test specification (Standard) : **FCC Part15 Subpart B Class B**

Test Result : **In compliance**

Tested by (Test engineer)			*Reviewed by (EMC Manager)*		
2000-11-06	Young Joon, Park		2000-11-06	James, Hong	
Date	Name	Signature	Date	Name	Signature

Definition ☒ : Applicable, ☐ : Not Applicable, **N/A** : Not Applicable, **-** : Not Applicable

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1. EUT description

Introduction

Digimax 210SE is a DIGITAL CAMERA.

Identification

Receipt date : 2000-10-30

Model : Digimax 210SE

Manufacturer : SAMSUNG TECHWIN CO., LTD.

Address : 42, Sungju-Dong, Changwon City, Kyungnam, Korea 641-716

Contact person : YONG MYUNG PARK (Assistant Manager)

Telephone : +82 - 551 - 260 - 5736

Peripheral Device Ports

Port name	Description
DC IN6V	Connect to Adaptor
VIDEO	Connect to External Monitor
USB	Connect to PC' s USB Port
DIGITAL	Connect to PC' s RS232C Port

Electrical rating

Input : 6VDC

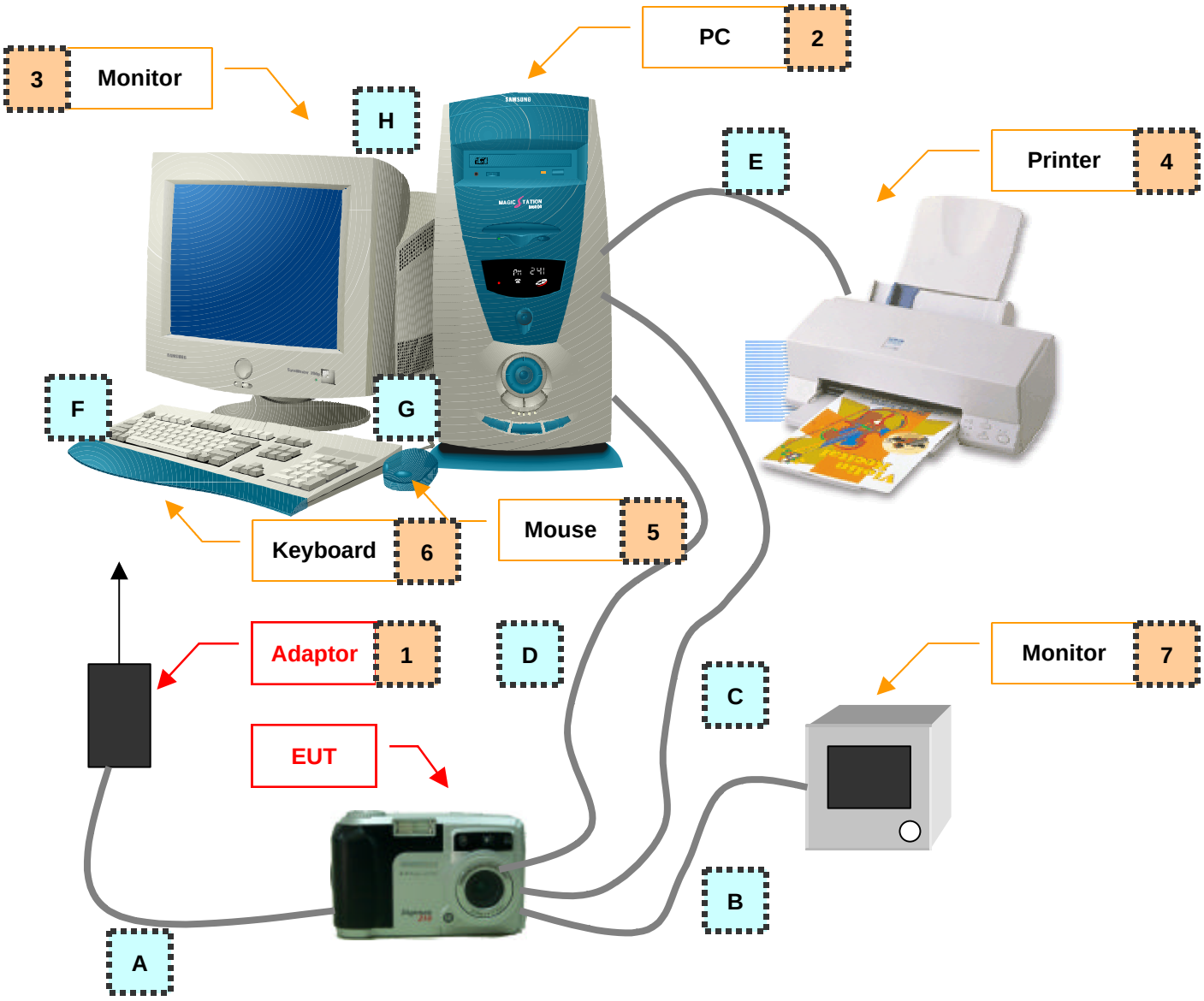
Output : -

2. Test Set-up

Test Mode

Normal operation mode. - Data Transfer mode (EUT <-> PC)

Cable configuration



Cable description

	Port name (start / end)	Type	Length (m)	Remark
A	DC IN6V (EUT) / Adaptor	Unshielded	1.6	Include Ferrite Core
B	VIDEO (EUT) / VIDEO IN (MONITOR)	Unshielded	1.3	-
C	USB (EUT) / USB (PC)	Shielded	1.5	-
D	DIGITAL (EUT) / RS232C (PC)	Shielded	1.5	-
E	PARALLEL (PC) / PRINTER	Shielded	1.6	Include Ferrite Core
F	KEYBOARD (PC) / KEYBOARD	Shielded	1.6	-
G	MOUSE (PC) / MOUSE	Shielded	1.6	-
H	VIDEO (PC) / MONITOR	Shielded	1.6	Include Ferrite Core

Auxiliary equipment

	Description	Model name	Serial No.	Manufacturer
1	ADAPTOR	MD15-060	-	KENTEX
2	PC	M6100	360992GJC00029	SAMSUNG
3	MONITOR	D4820A	KR64503520	SAMSUNG
4	PRINTER	EPSON Stylus COLOR 460	BWCE136524	EPSON
5	MOUSE	NICHE MOUSE	115433	KEY SYSTEMS
6	KEYBOARD	SK-2502C	M000351491	HP
7	MONITOR	TPM-233-02/03	-	KEC

Test software

Software name	Manufacturer	Version	Description
Adobe Photo Deluxe	Adobe	3.0	Editing Software

Measurement Procedures

Preliminary AC power line conducted emissions tests were performed shielded room. To find worst mode, several typical mode and typical cable position were tested.
Final AC power line conducted emissions test was performed shielded room.(location is same as Preliminary test) Based on the preliminary tests of the EUT, final test was proceeded worst case test mode and cable configuration.

Preliminary radiated emissions test were performed anechoic chamber (Distance of antenna and EUT was 3m). To find worst mode, several typical mode and typical cable position were tested and peak level and frequency were recorded.
Final radiated emissions test was performed Open Area Test Site. Based on the preliminary tests of the EUT, final test was proceeded worst case test mode and cable configuration.

* Measurement procedures was In accordance with ANSI C63.4-1992 7.2.3, 7.2.4 and 8.3.1.1, 8.3.1.2

3. Test Result

Test summary

Test	Result	Remark
Emission test (EMI)		
Radiated emission	**Met**	
Conducted emission	**Met**	

Measurement uncertainty (k=2)

150kHz~30MHz: ±2.68, 30MHz~300MHz: +4.58, -4.66, 300MHz ~ 1GHz: +3.78, -3.74

Uncertainty parameter was calculated according to ‘ NAMAS Publication NIS 80’

The tested Digimax 210SE fully meets the Requirements of ANSI C63.4-1992, when operated as described in this report.

Radiated emission

Test result: **Met**

Date of testing : 2000-11-02

Ambient temperature: 18°C, Relative humidity: 45%, Atmospheric pressure: 995hPa(mbar)

Test site type: Open area test site

Reference Standard: FCC Part15 Subpart B , Class B

Test and measurement equipment (Main equipment)

Model name	Manufacturer	Description	Serial No.
BBA9106	Schwarzbeck	Biconical antenna	41-00210
UHALP9107	Schwarzbeck	Log-periodic antenna	1452
ESVS30	Rohde Schwarz	Field strength meter	826638/008
-	-	-	-

Frequency Band 30MHz - 1000MHz

Antenna distance 3m (From the EUT)

Test data sheet

Frequency	Reading	Pol.	Height	Correction Factor		Limits	Result	Margin
[MHz]	[dBuV/m]		[m]	Antenna	Cable	[dBuV/m]	[dBuV/m]	[dB]
108.99	23.6	H	2.5	10.80	1.10	43.5	35.50	8.00
126.12	20.2	V	1.0	11.55	1.10	43.5	32.85	10.65
135.06	22.1	H	1.8	12.00	1.30	43.5	35.40	8.10
144.25	20.4	V	1.0	12.30	1.40	43.5	34.10	9.40
162.30	23.0	H	2.2	12.75	1.60	43.5	37.35	6.15
216.69	22.0	H	1.8	16.50	1.80	46.0	40.30	5.70
234.46	20.1	H	2.0	17.85	2.00	46.0	39.95	6.05
252.50	18.5	H	3.5	18.63	2.10	46.0	39.23	6.77
323.86	22.1	H	2.2	15.22	2.50	46.0	39.82	6.18
378.45	20.8	H	1.3	15.40	2.70	46.0	38.90	7.10
540.19	18.3	H	1.2	18.22	3.50	46.0	40.02	5.98
800.51	13.5	V	1.7	21.20	4.70	46.0	39.40	6.60

Comment : -

Conducted emission

Test result: **Met**

Date of testing : 2000-11-03

Ambient temperature: 20°C, Relative humidity: 50%, Atmospheric pressure: 998hPa(mbar)

Test site type: Shielded room

Reference Standard: FCC Part15 Subpart B , Class B

Test and measurement equipment (Main equipment)

Model name	Manufacturer	Description	Serial No.
3825/2	EMCO	LISN	9206-1971
ESHS30	Rohde Schwarz	Field strength meter	828144/002
-	-	-	-

Test data sheet

Frequency	Correction Factor		Line	Quasi-peak				Average			
				Limit	Reading	Result	Margin	Limit	Reading	Result	Margin
[MHz]	LISN	Cable		[dBuV]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dB]
1.47	0.2	0.1	N	48.0	32.3	32.6	15.4				
1.52	0.2	0.1	N	48.0	32.3	32.6	15.4				
1.80	0.2	0.1	N	48.0	31.0	31.3	16.7				
1.82	0.2	0.1	H	48.0	32.2	32.5	15.5				
1.85	0.2	0.1	N	48.0	33.5	33.8	14.2				
1.87	0.3	0.1	H	48.0	31.4	31.8	16.2				
1.90	0.3	0.1	N	48.0	33.9	34.3	13.7				
1.99	0.3	0.1	N	48.0	33.2	33.6	14.4				
2.04	0.3	0.1	N	48.0	32.7	33.1	14.9				
4.32	0.3	0.1	N	48.0	32.9	33.3	14.7				
4.36	0.2	0.1	N	48.0	31.8	32.1	15.9				
4.40	0.2	0.1	H	48.0	32.8	33.1	14.9				

Comment : -

Test data graphic