

On SCR 3232

Prepared for Samsung Electronics Co., Ltd

According to FCC Part 15 Subpart B Requirements

Test Report #: SAM-9805-1685-FCC
Prepared by: Nancy T. Nguyen
QC Manager: Michael J. Azar

ADMINISTRATIVE DATA

Test Sample : SCR 3232
Manufacturer : Samsung Electronics Co., Ltd
Part Number : N/A
Telephone : (408) 544-5124
Fax : (408) 544-5191

EUT Description

Samsung Electronics Co., Ltd, Model SCR 3232 (referred to as the EUT in this report) is a CD-ROM Drive.

Test Summary

The Electromagnetic Compatibility requirements on Model for this test are stated below.

<i>Emission Tests</i>				
<i>Specifications</i>	<i>Description</i>	<i>Test Results</i>	<i>Test Point</i>	<i>Remark</i>
<i>ANSI C63.4 1992</i>	<i>Conducted Emission</i>	<i>Passed by 7.5 dB of QP</i>	<i>AC Input Port</i>	<i>Attachment 1</i>
<i>ANSI C63.4 1992</i>	<i>Radiated Emission</i>	<i>Passed by 6.3 dB of QP</i>	<i>Enclosure</i>	<i>Attachment 2</i>

Test Location

EMC Compliance Management Group is located at 670 National Ave., Mountain View, CA 94043, USA.

Accreditation Bodies

EMC Compliance Management Group is a fully accredited Test Laboratory for ITE, ISM and Telecommunications Products.



Laboratory Assessment #: 14082, Approved by Assessment Services, A U. K. Competent Body, as meeting the requirements of EN45001 and ISO Guide 25.



In compliance with the site registration requirements of Section 2.948 of the FCC Rules to perform EMI measurements for the general public.



Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code # 200068-0.



Registered in accordance with Japanese VCCI Regulations.

Video Mode Justification

The system was tested in the 640x480 graphic mode. This mode was used to collect the included data.

EUT Exercise Software

Musical CD was loaded in the EUT used to exercised during conducted and radiated testing under Windows 95. Once loaded, the test engineer selected each connected support device, then the program exercises each connected support device in turn, no other data is transmitted to the EUT during testing.

Equipment Modification

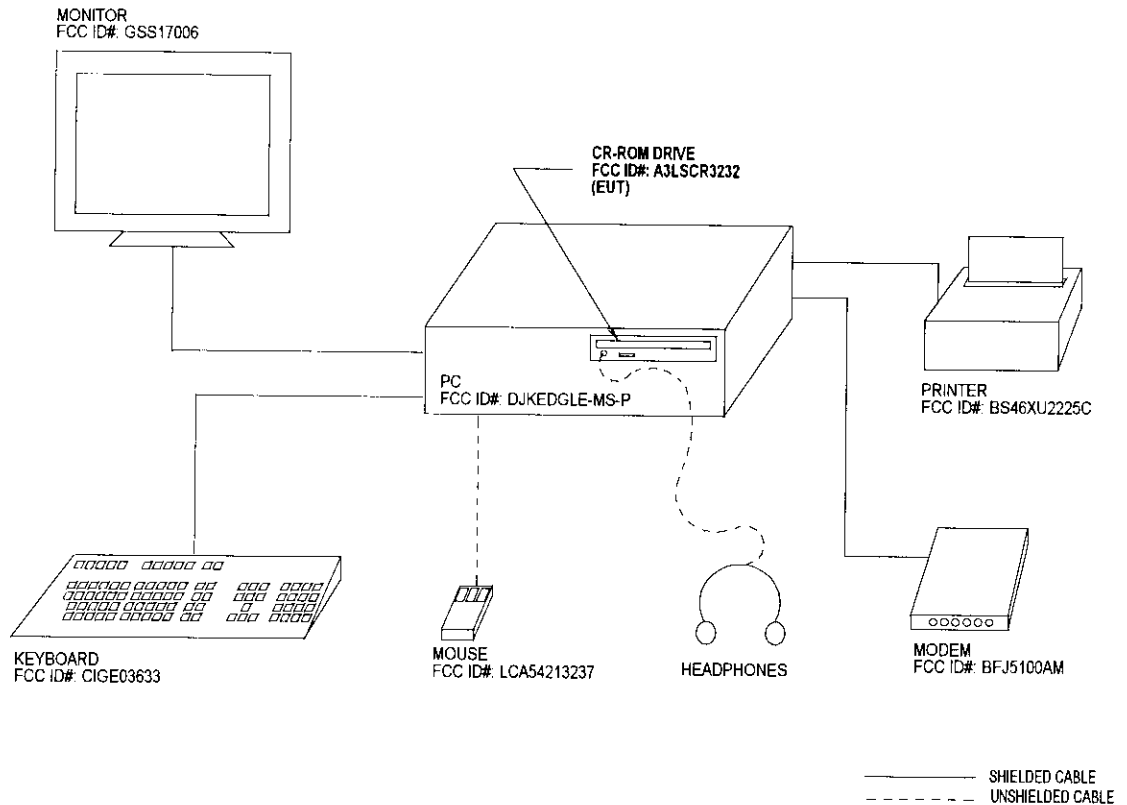
Any modification installed previous to testing by Samsung Electronics Co., Ltd will be incorporated in each production model sold or leased in United States of America.

No modification were installed by EMC Compliance Management Group.

Test System Details

EUT				
Model Number:	SCR 3232			
FCC ID No.:	A3LSCR3232			
Description:	CD-ROM DRIVE			
Manufacturer:	SAMSUNG ELETRONICS CO., LTD			
Support Equipment				
<i>Description</i>	<i>Model Number</i>	<i>FCC ID # or Serial Number</i>	<i>Manufacturer</i>	<i>Cable Description</i>
Host PC	BRAVO MS-P-133	DJKEDGLE-MS-P	AST	None
Monitor	1786PS	GSS17006	Viewsonic	Shielded
Keyboard	E03633WLUS-C	CIGE03633	HP	Shielded
Mouse	M-S34	LCA54213237	HP	Unshielded
Modem	5100AM	BFJ5100AM	Hayes	Shielded
Printer	2225C	BS46XU2225C	HP	Shielded
Headphones	TRH-2	N/A	Sony	Unshielded
VGA Card	Stealth 64	FTUPC1765TV	Diamond	Build-in PC

Configuration of Tested System



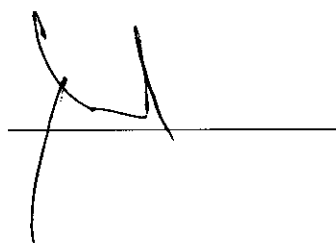
ATTACHMENT 1 - CONDUCTED EMISSION TEST RESULTS (212C01)

CLIENT:	Samsung Electronics Co., Ltd	TEST REFERENCE:	FCC Part 15 Subpart B
EUT MODEL:	SCR 3232	PRODUCT:	CD-ROM DRIVE
SERIAL NO.:	Engineering sample	EUT DESIGNATION:	Home and Office
TEMPERATURE:	26°C	HUMIDITY:	38%
ATM PRESSURE:	1017 Mbar	GROUNDING:	Through power cord
TESTED BY:	Dexter V. Latonio	DATE OF TEST:	05/27/98
TEST METHOD:	ANSI C63.4 1992		
TEST PROCEDURE:	The EUT is set up according to the guideline of ANSI C63.4 for conducted emissions. The EUT is then plugged into a Line Impedance Stabilization Network (LISN) and an EMI receiver peak scan is made at the frequency measurement range. The six highest significant peaks are then marked, and these signals are then quasi-peaked and averaged. The frequency range investigated is from 150KHz/450kHz to 30MHz.		
TEST VOLTAGE:	120AC @ 60Hz		
RESULTS:	The EUT meet the requirements of test reference for Conducted Emissions on both line by 7.5 dB of Quasi-Peak detector.		
M.U.:	Freq. $\pm 2 \times 10^{-7}$ x Center Freq., Amp ± 2.6 dB		

Test Equipment	Manufacturer/ Model	Serial No.	Last Cal.
EMI Receiver	HP 8546A	3650A00363	11/04/97
RF Filter	HP 85460A	3704A00349	11/04/97
LISN	EMCO 3825/2	109804	04/16/98

Line	Frequency [MHz]	Corrected QP Reading [dB(μV)]	Delta QP [dB]	Limited QP Reading [dB(μV)]
L1	16.588	40.4	-7.6	48.0
L1	12.077	35.8	-12.2	48.0
L1	6.315	30.5	-17.5	48.0
L2	16.589	40.5	-7.5	48.0
L2	12.075	35.7	-12.3	48.0
L2	6.315	32.9	-15.1	48.0

SIGNED:



REVIEWED:



ATTACHMENT 2 - RADIATED EMISSION TEST RESULTS (212R01)

CLIENT:	Samsung Electronics Co., Ltd	TEST REFERENCE:	FCC Part 15 Subpart B
EUT MODEL:	SCR 3232	PRODUCT:	CD-ROM DRIVE
SERIAL NO.:	Engineering sample	EUT DESIGNATION:	Home and Office
TEMPERATURE:	26°C	HUMIDITY:	38%
ATM PRESSURE:	1017 Mbar	GROUNDING:	Through power cord
TESTED BY:	Dexter V. Latonio	DATE OF TEST:	05/27/98
TEST METHOD:	ANSI C63.4 1992		
TEST PROCEDURE:	The EUT is set up according to the guidelines of ANSI C63.4 for radiated emissions. An EMI receiver peak scan is made at the frequency measurement range (prescan) in an anechoic chamber. Signal discrimination is then performed and the significant peaks marked. These peaks are then quasi-peaked for final test at the open area test site. The following data lists the significant emission frequencies, measured levels, correction factors (including cable and antenna correction factors), and the corrected readings against the limits. Explanation of the Correction Factor is given as follows: The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the measured reading. The basic equation with a sample calculation is as follows: $FS = RA + AF + CF - AG$ Where: FS = Field Strength RA = Receiver Amplitude AF = Antenna Factor CF = Cable Attenuation Factor AG = Amplifier Gain		
TEST VOLTAGE:	120VAC @ 60Hz		
RESULTS:	The EUT meet the requirements of test reference for Radiated Emissions on both polarities by 6.3 dB at 680.130 MHz.		
M.U.:	Freq. $\pm 2 \times 10^{-7}$ x Center Freq., Amp ± 2.6 dB		

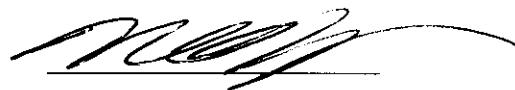
Frequency [MHz]	Polarity [V/H]	Corrected Reading [dB(μV)]	Delta, QP [dB]	3 Meters Limit [dB(μV)]	Correction Factor [dB]
680.130	V	39.7	-6.3	46.0	21.8
608.250	V	39.1	-6.9	46.0	21.2
50.785	V	33.0	-7.0	40.0	21.8
608.250	H	38.6	-7.4	46.0	21.2
680.130	H	38.5	-7.5	46.0	21.8
520.100	H	38.1	-7.9	46.0	20.0
Note: All reading are quasi-peak unless stated otherwise, using a QPA bandwidth of 120kHz, with a 30 ms sweep time. A video filter was not used.					

Test Equipment	Manufacturer/ Model	Serial No.	Last Cal.
EMI Receiver	HP 8546A	3650A00363	11/04/97
RF Filter	HP 85460A	3704A00349	11/04/97
Antenna	CHASE CBL6112A	2274	11/15/97

SIGNED:



REVIEWED:



PHOTOGRAPHS & ILLUSTRATIONS

hp 10:37:58 MAY 27, 1998 120 VAC / 60HZ L1
SAMSUNG SCR 3232 CD ROM DRIVE

ACTV DET: PEAK
MEAS DET: PEAK QP AVG

LOG REF 70.0 dBμV

10

dB/

ATN

10 dB

VA SB

SC FC

ACORR

START 450 kHz

IF BW 9.0 kHz

AVG BW 30 kHz

STOP 30.00 MHz

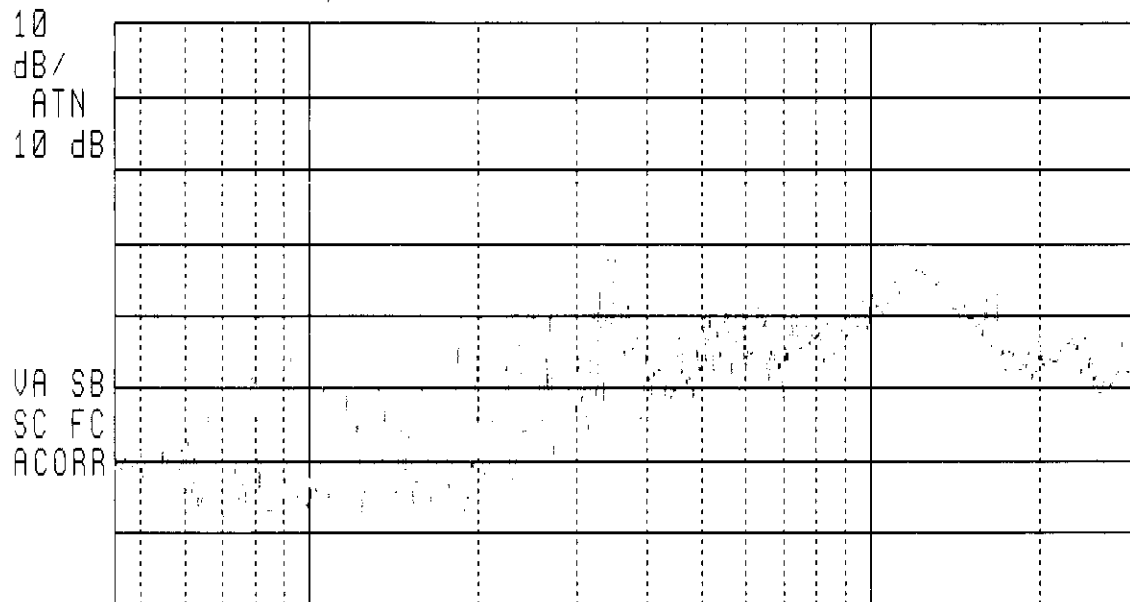
SWP 2.46 sec

Signal Number	Frequency (MHz)	Peak (dBuV)	QP (dBuV)	QP Delta L 1 (dB)	Corr (dB)
1	16.588500	42.3	40.4	-7.6	0.5
2	12.076985	38.5	35.8	-12.2	0.4
3	6.315553	32.7	30.5	-17.5	0.2

hp 10:44:23 MAY 27, 1998 120 VAC / 60HZ L2
SAMSUNG SCR 3232 CD ROM DRIVE

ACTV DET: PEAK
MEAS DET: PEAK QP AVG *~*

LOG REF 70.0 dBμV



START 450 kHz

IF BW 9.0 kHz

AVG BW 30 kHz

STOP 30.00 MHz

SWP 2.46 sec

Signal Number	Frequency (MHz)	Peak (dBμV)	QP (dBμV)	QP Delta L 1 (dB)	Corr (dB)
1	16.589000	42.2	40.5	-7.5	0.5
2	12.075321	38.6	35.7	-12.3	0.4
3	6.315082	34.5	32.9	-15.1	0.2