


**SK TECH CO., LTD.**

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## FCC-Certificate of Compliance

<b>Test Report No.:</b>	SKTFCE-051201-099		
<b>NVLAP CODE :</b>	200220-0		
<b>Applicant:</b>	SysOnChip, Inc.		
<b>Applicant Address:</b>	#1405, Sahak Yeongum Bldg, 929, Dunsan-Dong, Seo-Gu, Daejeon, Korea		
<b>Manufacturer :</b>	SysOnChip, Inc.		
<b>Manufacturer Address:</b>	#1405, Sahak Yeongum Bldg, 929, Dunsan-Dong, Seo-Gu, Daejeon, Korea		
<b>Product:</b>	Portable Multimedia Player		
<b>FCC ID:</b>	P47SOC2S05	<b>Model No.:</b>	SOC2S05, SOC3S05, SOC4S05, Looket P20
<b>Receipt No.:</b>	SKTEU05-0730	<b>Date of receipt:</b>	Nov. 12, 2005
<b>Date of Issue:</b>	Dec. 01, 2005		
<b>Testing location:</b>	SK TECH CO., LTD. 820-2, Wolmoon-Ri, Wabu-Up, Namyangju-Si, Kyunggi-Do, Korea		
<b>Test Standards:</b>	ANSI C63.4 / 2003		
<b>Rule Parts:</b>	FCC part 15 Subpart B		
<b>Equipment Class :</b>	Class B Digital Device Peripheral		
<b>Test Result:</b>	The above mentioned product has been tested and passed.		

Prepared by: S.Y.Ye

Tested by: J.S.Hyun/Engineer

Approved by: D.H.Kang  
/Manager & Chief Engineer

Signature	Date
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Signature	Date
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Signature	Date
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Other Aspects :

Abbreviations : • OK, Pass = passed • Fail = failed • N/A = not applicable

- This test report is not permitted to copy partly without our permission.
- This test result is dependent on only equipment to be used.
- This test result is based on a single evaluation of one sample of the above mentioned.
- This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S Government.
- We certify that this test report has been based on the measurement standards that is traceable to the national or International standards.

NVLAP Lab. Code: 200220-0



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## 1. General

This equipment has been shown to be capable of compliance with the applicable technical standards and was tested in accordance with the measurement procedures as indicated in this report.

We attest to the accuracy of data. All measurements reported herein were performed by SK Tech Co., Ltd. and were made under Chief Engineer's supervision.

We assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

## 2. Test Site

SK TECH Co., Ltd.

### 2.1 Location

820-2, Wolmoon Ri, Wabu-Up, Namyangju-Si, Kyunggi-Do, Korea

The test site is in compliance with ISO/IEC 17025 for general requirements for the competence of testing and calibration laboratories.

This laboratory is accredited by NVLAP for NVLAP Lab. Code : 200220-0 and DATech for DAR-Registration No.:DAT-P-076/97-01



## 2.2 List of Test and Measurement Instruments

**Table 1 : List of Test and Measurement Equipment**

- **Conducted Disturbance**

Kind of Equipment	Type	S/N	Calibrated until
EMI Receiver	ESHS10	862970/019	09.2006
Artificial Mains Network	ESH2-Z5	834549/011	08.2006
EMI Receiver	ESHS10	835871/002	09.2006
Artificial Mains Network	ESH3-Z5	836679/018	08.2006

- **Radiated Disturbance**

Kind of Equipment	Type	S/N	Calibrated until
EMI Receiver	ESVS 10	825120/013	09.2006
EMI Receiver	ESVS 10	834468/008	09.2006
Spectrum Analyzer	R3361A	11730187	09.2006
Amplifier	8447F	3113A05153	08.2006
Log Periodic Antenna	UHALP9107	1819	11.2006
Biconical Antenna	BBA9106	91031626	11.2006
Open Site Cable	N/A	N/A	N/A
Antenna Turntable Driver	5907	N/A	N/A
Antenna Turntable controller	5906	N/A	N/A
Amp & Receiver connection cable	N/A	N/A	N/A
Amp & Spectrum connection cable	N/A	N/A	N/A
50Ω Switcher	MP59B	6100214538	N/A

## 2.3 Test Date

Date of Application : Nov. 12, 2005

Date of Test : Nov. 15, 2005 ~ Nov. 25, 2005

## 2.4 Test Environment

See each test item's description.



### 3. Description of the tested samples

The EUT is a Portable Multimedia Player. SOC2S05 is the basic model, and SOC3S05, SOC4S05, Looket P20 are multi-listing model.

#### 3.1 Rating and Physical Characteristics

Technical Specification	
Display	3.5" TFT Landscape LCD, 16.7 Million color, QVGA 320x240 pixel Viewing angle: 60 degrees(Right& Left)
HDD	20GB, 1.8 inch, FAT32
Interface	USB2.0 Slave(max 480Mbps) USB1.1 Host full speed
Audio	Audio output: Max 40mW Bandwidth: 8~96kHz Bit rate: 32kbps~320kbps SNR: 97.0dB
FM Radio	Bandwidth: 87.5MHz~108MHz SNR: 60.0dB Antenna: earphones
Dimension	77.5mm(L)x104mm(W)x23mm(D)
Scalability	Firmware upgradeable
Operating temperature	5°C~45°C
Optional Accessory	Remote control & FM transmitter
Power Source	Internal: Replaceable and rechargeable, Lithium-ion battery External: Home charger(AC adapter DC 5V 1A)

#### File formats

Video	Support Codec	MPEG4 Simple profile, XviD, WMV9 Divx3.11, 4,5, 5pro
	Support File Format	AVI, ASF, WMV
	Output Format	NTSC/PAL Composite video output 75Ohm
	Encoding	MPEG 4 simple profile, ASF file format
Audio	Support Codec	MP3, WMA, AC3, OGG, G.726
	Encoding	G.726
Image	Support File	JPEG, BMP, GIF

#### 3.2 Submitted Documents

N/A



## 4. Measurement Conditions

Operating voltage of the EUT is AC120V, 60Hz.

### 4.1 Modes of Operation

During all test, The EUT is under following state.

1. Data transmitting and receiving mode
2. Multimedia play mode and FM receive mode

### 4.2 List of Peripherals

Equipment	Manufacturer	Model Name	Serial No.
Note PC	LG IBM	2681	FX-P2816
Adapter	ASTEC ELECTRONICS	08L8202	11S08K8202Z1Z
Video Monitor	HITRON SYSTEMS INC.	HM29A12	8070059

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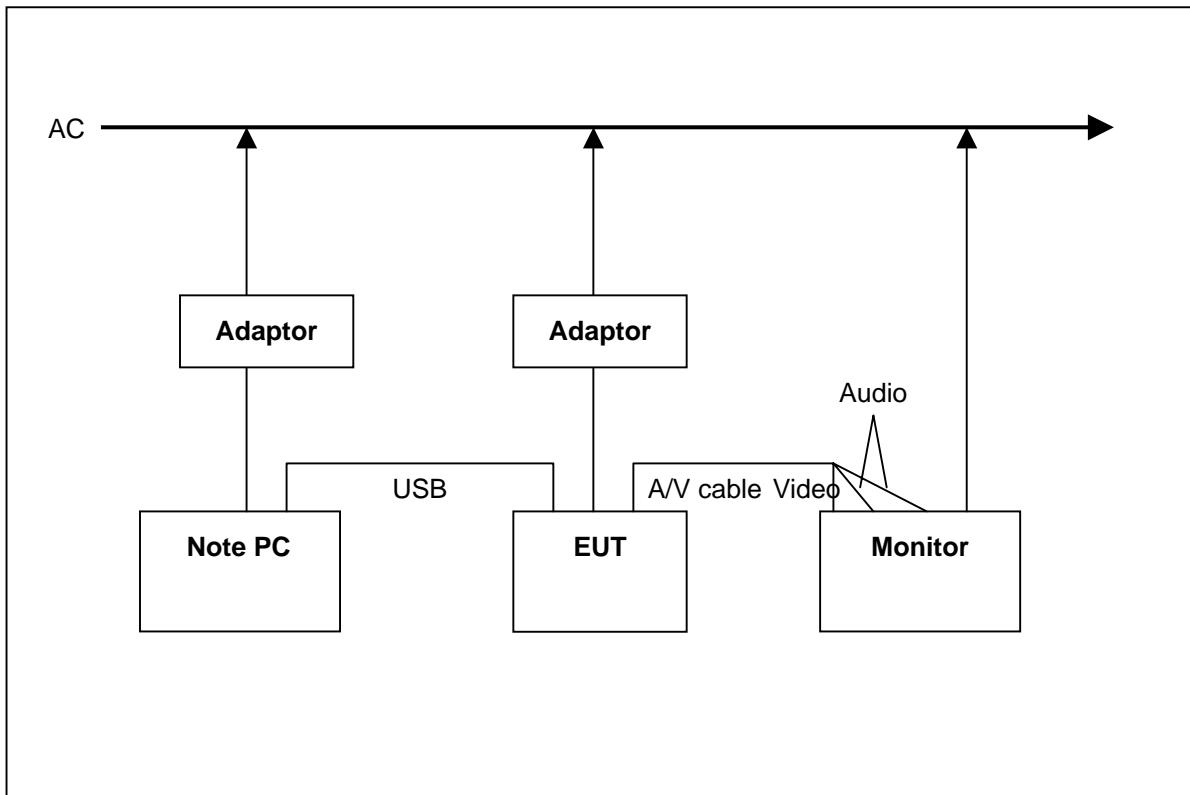
### 4.3 Type of Used Cables

Equipment	Manufacturer	M/N	S/N	Cables &connectors
Note PC	LG IBM	2681	FX-P2816	1.0m usb cable unshielded 1.7m power cable unshielded
Adapter	ASTEC ELECTRONICS	08L8202	11S08K8202 Z1Z	1.2m power cable unshielded
Video Monitor	HITRON SYSTEMS INC.	HM29A12	8070059	1.3m power cable unshielded



## 4.4 Test Setup

The test setup photographs showed the external supply connections and interfaces.



[ System Block Diagram of Test Configuration ]



## 4.5 Uncertainty

### 1) Radiated disturbance

◎ Horizontally polarized radiated disturbances from 30MHz to 1000MHz at a distance of 10m

Input quantity	Uncertainty of Xi		U(Xi) dB	Ci	Ci <sub>u</sub> (xi)	CISPR 16-4
	dB	Probability distribution function				
1) Receiver reading	±0.1	K=1	0.1	1	0.1	0.10
2) Attenuation: antenna-receiver	±0.18	K=2	0.09	1	0.09	0.05
3) Antenna factor	±1.5	K=2	0.75	1	0.75	1.00
RECEIVER CORRECTIONS:						
4) Sine wave voltage	±0.56	K=2	0.28	1	0.50	0.50
5) Pulse amplitude response	±1.5	Rectangular (1/3)	0.87	1	0.87	0.87
6) Pulse repetition rate response	±1.5	Rectangular (1/3)	0.87	1	0.87	0.87
7) Noise floor proximity	±0.5	K=2	0.25	1	0.25	0.25
8) AF frequency interpolation	±0.3	Rectangular (1/3)	0.17	1	0.17	0.17
9) Balance	±0.3	Rectangular (1/3)	0.17	1	0.17	0.53
10) AF height deviations	±0.5	Rectangular (1/3)	0.29	1	0.29	0.29
11) Phase center location	±0.3	Rectangular (1/3)	0.17	1	0.17	0.17
12) Directive difference	+1.0	Rectangular (1/3)	0.29	1	0.29	0.29
13) Cross polarization	±0.9	Rectangular (1/3)	0.52	1	0.52	0.52
14) Site corrections	±2.6	Rectangular (1/3)	1.5	1	1.5	1.63
15) Mismatch (ant-receiver)	±1.06	U-shaped (1/2)	0.75	1	0.75	0.67

### Combined Uncertainty

$$U_c(x_i) = \sqrt{(1)^2 + (2)^2 + (3)^2 + (4)^2 + (5)^2 + (6)^2 + (7)^2 + (8)^2 + (9)^2 + (10)^2 + (11)^2 + (12)^2 + (13)^2 + (14)^2 + (15)^2} = 2.37$$

### Expanded Uncertainty

$$U = k * U_c(x_i) = 2 * 2.37 = 4.74 \text{dB}$$

(The coverage factor k =2 yields approximately a 95% level of confidence)



◎ Vertically polarized radiated disturbances from 30MHz to 1000 MHz at a distance of 10 m

Input quantity	Uncertainty of Xi		U(Xi) dB	Ci	Ciu(xi)	CISPR 16-4
	dB	Probability distribution function				
1) Receiver reading	±0.1	K=1	0.1	1	<b>0.1</b>	0.10
2) Attenuation: antenna-receiver	±0.18	K=2	0.09	1	<b>0.09</b>	0.05
3) Antenna factor	±1.5	K=2	0.75	1	<b>0.75</b>	1.00
RECEIVER CORRECTIONS:						
4) Sine wave voltage	±0.56	K=2	0.28	1	<b>0.50</b>	0.50
5) Pulse amplitude response	±1.5	Rectangular (√3)	0.87	1	<b>0.87</b>	0.87
6) Pulse repetition rate response	±1.5	Rectangular (√3)	0.87	1	<b>0.87</b>	0.87
7) Noise floor proximity	±0.5	K=2	0.25	1	<b>0.25</b>	0.25
8) AF frequency interpolation	±0.3	Rectangular (√3)	0.17	1	<b>0.17</b>	0.17
9) Balance	±0.9	Rectangular (√3)	0.52	1	<b>0.52</b>	0.52
10) AF height deviations	±0.3	Rectangular (√3)	0.17	1	<b>0.17</b>	0.17
11) phase center location	±0.3	Rectangular (√3)	0.17	1	<b>0.17</b>	0.17
12) directive difference	+1.0	Rectangular (√3)	0.29	1	<b>0.29</b>	0.29
13) cross polarization	±0.9	Rectangular (√3)	0.52	1	<b>0.52</b>	0.52
14) site corrections	±2.6	Rectangular (√3)	1.5	1	<b>1.5</b>	1.63
15) Mismatch (ant-receiver)	±1.06	U-shaped (√2)	0.75	1	<b>0.75</b>	0.67

### Combined Uncertainty

$$Uc(xi) = \sqrt{(1)^2 + (2)^2 + (3)^2 + (4)^2 + (5)^2 + (6)^2 + (7)^2 + (8)^2 + (9)^2 + (10)^2 + (11)^2 + (12)^2 + (13)^2 + (14)^2 + (15)^2} = 2.43$$

### Expanded Uncertainty

$$U = k * Uc(xi) = 2 * 2.43 = 4.86 \text{ dB}$$

(The coverage factor k =2 yields approximately a 95% level of confidence)



## 2) Conducted disturbance

## ◎ Conducted disturbance from 150 KHz to 30 MHz using a 50 Ω/ 50 uH AMN

input quantity	Uncertainty of Xi		U(Xi) dB	Ci	Ciu(xi)	CISPR 16-4
	dB	Probability distribution function				
1) Receiver Readeing	±0.1	K=1	0.1	1	<b>0.1</b>	0.10
2) Attenuation:AMN-receiver	±0.36	Triangular ( $\sqrt{6}$ )	0.15	1	<b>0.15</b>	0.05
RECEIVER CORRECTIONS:						
3) Sine wave voltage	±0.5	K=2	0.25	1	<b>0.25</b>	0.50
4) Pulse amplitude response	±1.5	Rectangular ( $\sqrt{3}$ )	0.87	1	<b>0.87</b>	0.87
5) Pulse repetition rate response	±1.5	Rectangular ( $\sqrt{3}$ )	0.87	1	<b>0.87</b>	0.87
6) AMN voltage division factor	±0.07	K=2	0.04	1	<b>0.04</b>	0.1
7) Mismatch : AMN-receiver	±0.55	U-shaped ( $\sqrt{2}$ )	0.39	1	<b>0.39</b>	0.53
8) AMN impedance	±1.52	Triangular ( $\sqrt{6}$ )	0.62	1	<b>0.62</b>	1.08

- 1)~8) For numbered comments, refer to following articles

## Combined Uncertainty

$$U_c(x_i) = \sqrt{(1)^2 + (2)^2 + (3)^2 + (4)^2 + (5)^2 + (6)^2 + (7)^2 + (8)^2} = 1.47$$

## Expanded uncertainty

$$U = k * U_c(x_i) = 2 * 1.47 = 2.94 \text{ dB}$$

The coverage factor  $k = 2$  yields approximately a 95% level of confidence

## ◎ Refer

- 1) receiver's resolution capacity
- 2) refer to the sub clause 11. of a calibration report
- 3) quoted from CISPR 16-4
- 4) refer to a calibration report
- 5) refer to CISPR 16-4 article 5. 7)
- 6) refer to a calibration report and a measured AMN impedance data



## 5. EMISSION Test

### 5.1 Conducted Emissions

**Result:** **PASS**

The line-conducted facility is located inside a 2.6M x 3.6M x 7.0M shielded enclosure.

The shielding effectiveness of the shielded room is in accordance with MIL-Std-285 or NSA 604-05.

A 1 m x 1.5 m wooden table 80 cm high is placed 40 cm. away from the vertical wall and 1.5 m away from the side wall of the shielded room. ROHDE & SCHWARZ Model ESH3-Z5 (10 kHz-30 MHz) 50 ohm/50 uH Line-Impedance Stabilization Networks(LISNs) are bonded to the shielded room.

The EUT is powered from the ROHDE & SCHWARZ LISN and the support equipment is powered from the ROHDE & SCHWARZ LISN. Power to the LISNs are filtered by a high-current high-insertion loss Lindgren enclosures power line filters (100dB 14 kHz-10 GHz).

The purpose of the filter is to attenuate ambient signal interference and this filter is also bonded to the shielded enclosure.

All electrical cables are shielded by braided tinned copper zipper tubing with inner diameter of 1/2".

If the EUT is a DC-powered device, power will be derived from the source power supply it normally will be powered from and this supply lines will be connected to the ROHDE & SCHWARZ LISN.

All interconnecting cables more than 1 meter were shortened by non-inductive bundling (serpentine fashion) to a 1-meter length.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the spectrum analyzer to determine the frequency producing the maximum EME from the EUT.

The spectrum was scanned from 150 kHz to 30 MHz with 100msec. sweep time.

The frequency producing the maximum level was reexamined using EMI/field Intensity Meter (ESHS 10) and Quasi-Peak adapter. The detector function was set to CISPR quasi-peak mode.

The bandwidth of the receiver was set to 10 kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each EME emission.

Each emission was maximized by: switching power lines; varying the mode of operation or resolution; clock or data exchange speed; if applicable; whichever determined the worst-case emission.

Photographs of the worst-case emission can be seen in photograph of conducted test.

Each EME reported was calibrated using self-calibrating mode.

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**Figure 1 : Spectral Diagram, LINE – PE(Play mode)**

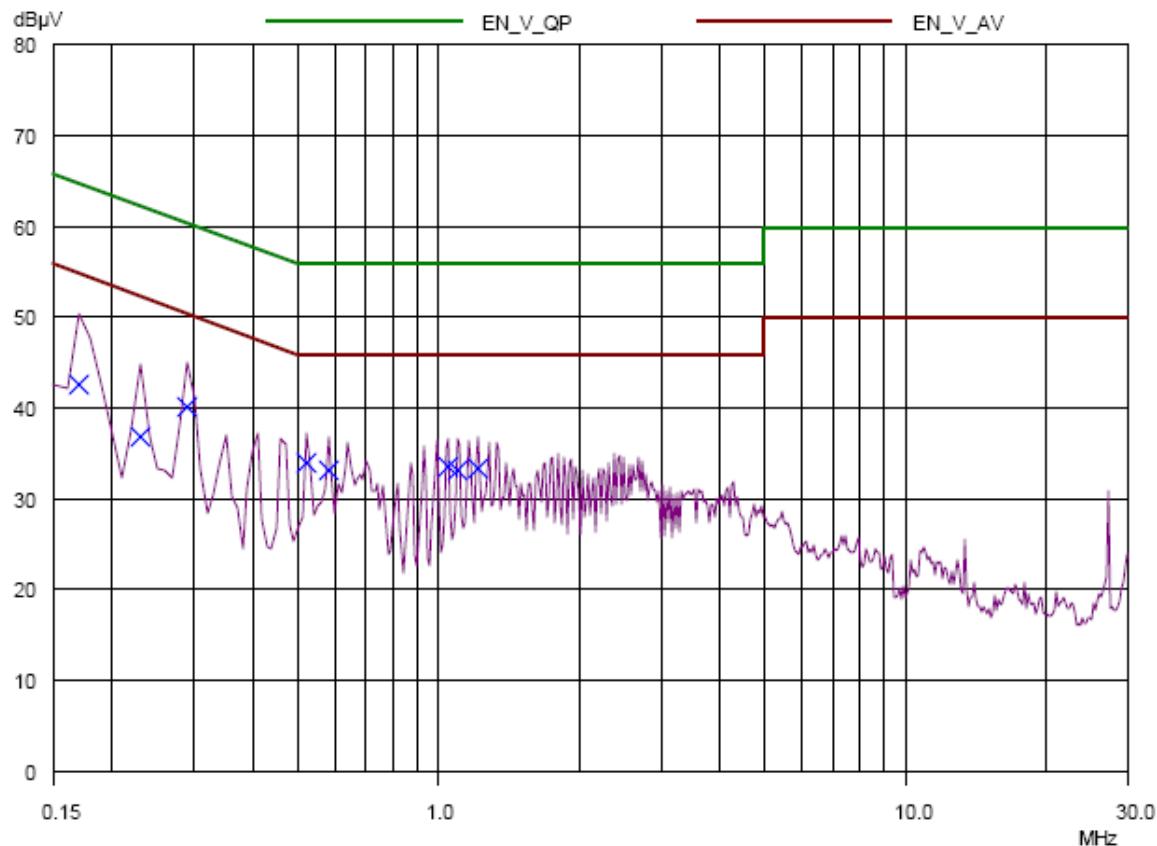
19 Nov 2005 11:02

**CONDUCTED DISTURBANCE**

EUT: SOC2S05  
Manuf:  
Op Cond:  
Operator:  
Test Spec:  
Comment: LINE-PE

Scan Settings (1 Range)		Receiver Settings						
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB

Final Measurement: Detector: X QP  
Meas Time: 1sec  
Peaks: 8  
Acc Margin: 35 dB



**Figure 2: Test Data, LINE – PE(Play mode)**

19 Nov 2005 11:02

**CONDUCTED DISTURBANCE**

EUT: SOC2S05

Manuf:

Op Cond:

Operator:

Test Spec:

Comment: LINE-PE

Scan Settings (1 Range)		Receiver Settings						
Frequencies		Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
Start 150kHz	Stop 30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB

Final Measurement:  
Detector: X QP  
Meas Time: 1sec  
Peaks: 8  
Acc Margin: 35 dB

**Final Measurement Results**

Frequency MHz	QP Level dB $\mu$ V	QP Limit dB $\mu$ V	QP Delta dB
0.17	42.65	64.96	22.31
0.23	37.03	62.45	25.42
0.29	40.16	60.52	20.36
0.52	34.00	56.00	22.00
0.58	33.18	56.00	22.82
1.05	33.69	56.00	22.31
1.1	33.23	56.00	22.77
1.22	33.52	56.00	22.48



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**Figure 3 : Spectral Diagram, NEUTRAL – PE(Play mode)**

19 Nov 2005 10:52

## CONDUCTED DISTURBANCE

EUT: SOC2S05

Manuf:

Op Cond:

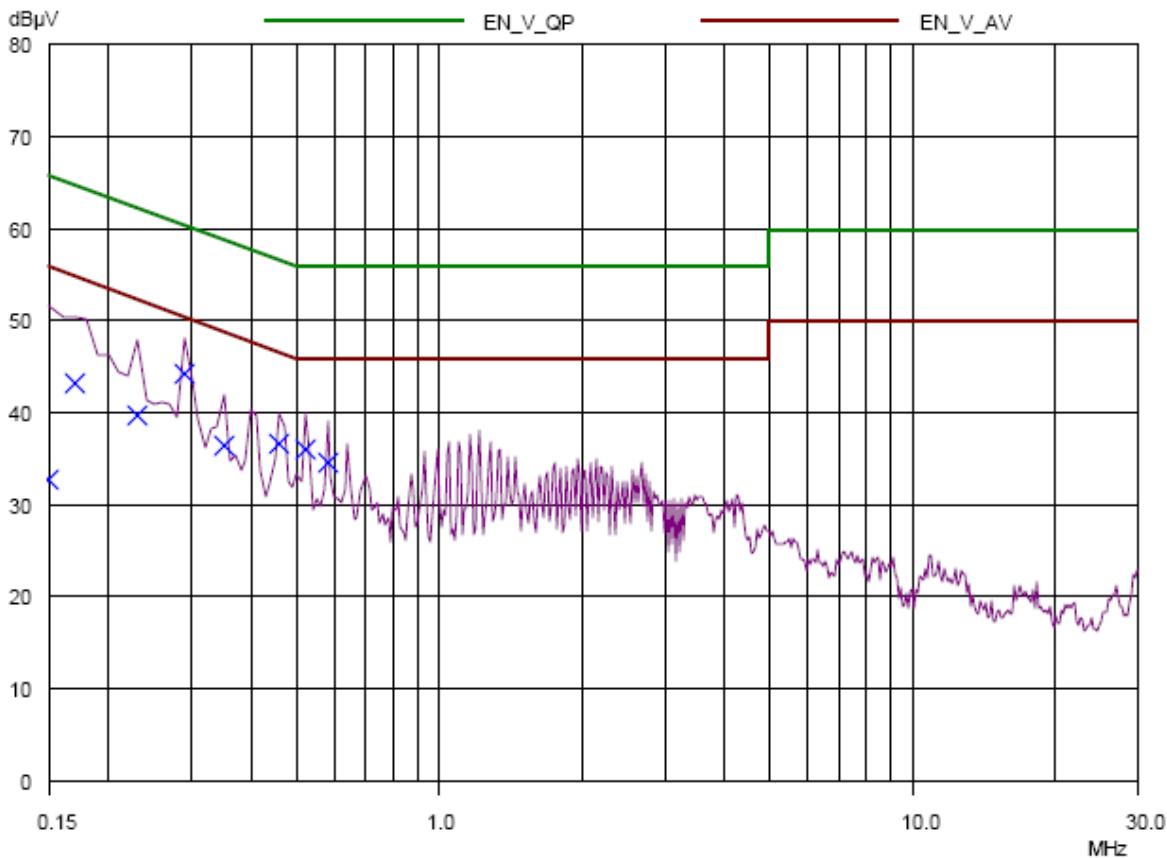
**Operator:**

### Test Spec

### Comment

## CONCLUDING REMARKS

Scan Settings (1 Range)		Receiver Settings						
Frequencies		Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
Start	Stop							
150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB
Final Measurement:	Detector:	X QP						
	Meas Time:	1sec						
	Peaks:	8						
	Acc Margin:	35 dB						




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**Figure 4: Test Data, NEUTRAL – PE(Play mode)**

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**CONDUCTED DISTURBANCE**

EUT: SOC2S05  
 Manuf:  
 Op Cond:  
 Operator:  
 Test Spec:  
 Comment: NEUTRAL-PE

Scan Settings (1 Range)		Receiver Settings						
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB
Final Measurement:		Detector:	X QP					
		Meas Time:	1sec					
		Peaks:	8					
		Acc Margin:	35 dB					

**Final Measurement Results**

Frequency MHz	QP Level dB $\mu$ V	QP Limit dB $\mu$ V	QP Delta dB
0.15	32.77	66.00	33.23
0.17	43.28	64.96	21.68
0.23	39.77	62.45	22.68
0.29	44.24	60.52	16.28
0.35	36.49	58.96	22.47
0.46	36.73	56.69	19.96
0.52	36.18	56.00	19.82
0.58	34.61	56.00	21.39

\* limit exceeded

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**Figure 5 : Spectral Diagram, LINE – PE(Download mode)**

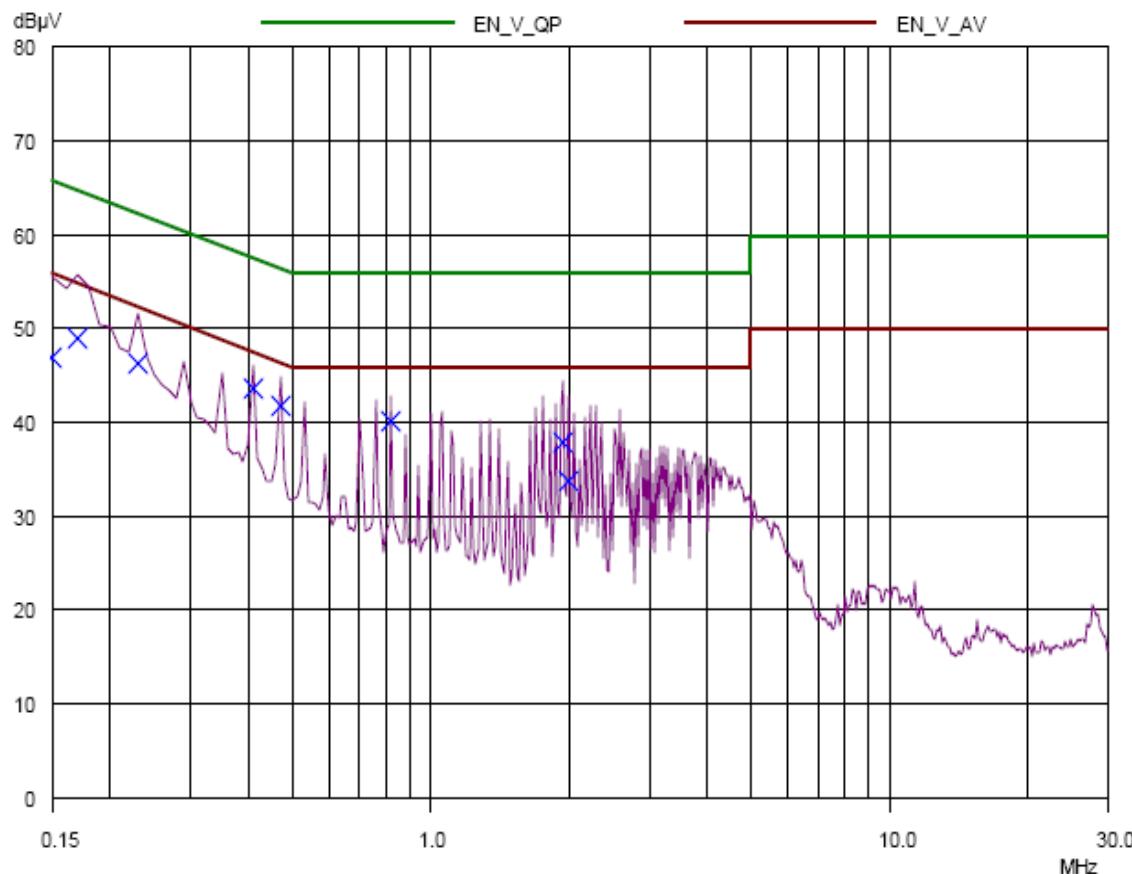
19 Nov 2005 15:23

**CONDUCTED DISTURBANCE**

EUT: SOC2S05  
Manuf:  
Op Cond:  
Operator:  
Test Spec: Download mode  
Comment: LINE-PE

Scan Settings (1 Range)		Receiver Settings						
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB

Final Measurement: Detector: X QP  
Meas Time: 1sec  
Peaks: 8  
Acc Margin: 35 dB



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**Figure 6: Test Data, LINE – PE(Download mode)**

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**CONDUCTED DISTURBANCE**

EUT: SOC2S05  
Manuf:  
Op Cond:  
Operator:  
Test Spec: Download mode  
Comment: LINE-PE

Scan Settings (1 Range)		Receiver Settings						
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB

Final Measurement: Detector: X QP  
Meas Time: 1sec  
Peaks: 8  
Acc Margin: 35 dB

**Final Measurement Results**

Frequency MHz	QP Level dB $\mu$ V	QP Limit dB $\mu$ V	QP Delta dB
0.15	46.94	66.00	19.06
0.17	49.10	64.96	15.86
0.23	46.30	62.45	16.15
0.41	43.66	57.65	13.99
0.47	41.88	56.51	14.63
0.82	40.26	56.00	15.74
1.94	37.87	56.00	18.13
2.0	33.89	56.00	22.11

\* limit exceeded


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**Figure 7 : Spectral Diagram, NEUTRAL – PE(Download mode)**

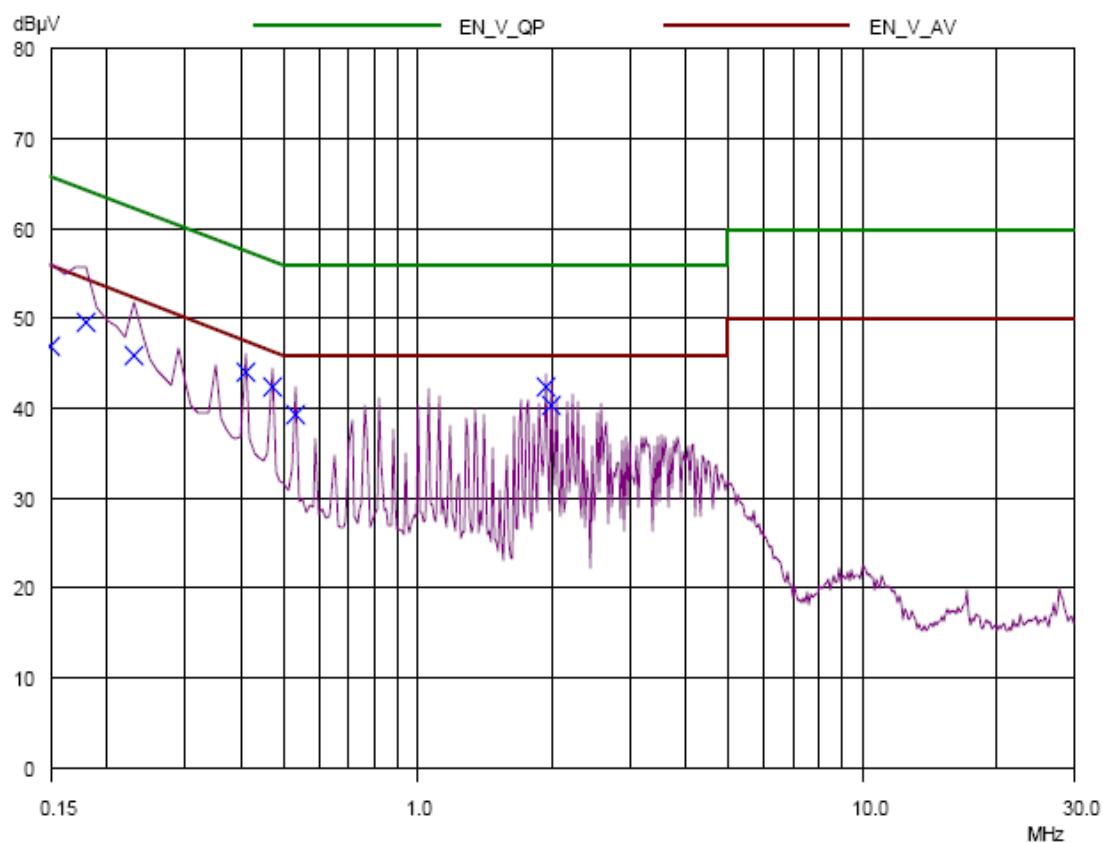
19 Nov 2005 15:14

**CONDUCTED DISTURBANCE**

EUT: SOC2S05  
 Manuf:  
 Op Cond:  
 Operator:  
 Test Spec: Download mode  
 Comment: NEUTRAL-PE

Scan Settings	(1 Range)				Receiver Settings				
	Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
	150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB

Final Measurement: Detector: X QP  
 Meas Time: 1sec  
 Peaks: 8  
 Acc Margin: 35 dB



**Figure 8: Test Data, NEUTRAL – PE(Download mode)**

19 Nov 2005 15:14

**CONDUCTED DISTURBANCE**

EUT: SOC2S05  
Manuf:  
Op Cond:  
Operator:  
Test Spec: Download mode  
Comment: NEUTRAL-PE

Scan Settings		(1 Range)			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge	
150kHz	30MHz	10kHz	10kHz	PK	100msec	Auto	OFF	60dB	

Final Measurement: Detector: X QP  
Meas Time: 1sec  
Peaks: 8  
Acc Margin: 35 dB

**Final Measurement Results**

Frequency MHz	QP Level dB $\mu$ V	QP Limit dB $\mu$ V	QP Delta dB
0.15	47.02	66.00	18.98
0.18	49.72	64.49	14.77
0.23	45.98	62.45	16.47
0.41	44.22	57.65	13.43
0.47	42.44	56.51	14.07
0.53	39.40	56.00	16.60
1.94	42.55	56.00	13.45
2.0	40.50	56.00	15.50

\* limit exceeded



## 5.2 Radiated Emissions

**Result :****PASS**

Preliminary measurements were made indoors at 3 meter using broadband antennas, broadband amplifier, and spectrum analyzer to determine the frequency producing the maximum EME.

Appropriate precaution was taken to ensure that all EME from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, turntable azimuth with respect to the antenna were noted for each frequency found.

The spectrum was scanned from 30 to 300 MHz using biconical antenna and from 300 to 1000 MHz using log-periodic antenna. Above 1 GHz, linearly polarized double ridge horn antennas were used.

Final measurements were made outdoors at 3-meter test range using SCHWARZBECK dipole antennas. The test equipment was placed on a wooden table situated on a 4x4 meter area adjacent to the measurement area. Turntable was to protect from weather in the dome that made with FRP.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. Each frequency found during pre-scan measurements was re-examined and investigated using EMI/Field Intensity Meter(ESVS 10) and Quasi-Peak Adapter. The detector function was set to CISPR quasi-peak mode and the bandwidth of the receiver was set to 100 kHz or 1 MHz depending on the frequency or type of signal.

The half-wave dipole antenna was tuned to the frequency found during preliminary radiated measurements. The EUT, support equipment and interconnecting cables were re-configured to the set-up producing the maximum emission for the frequency and were placed on top of a 0.8-meter high non-metallic 1 x 1.5 meter table.

The EUT, support equipment, and interconnecting cables were re-arranged and manipulated to maximize each EME emission. The turntable containing the system was rotated; the antenna height was varied 1 to 4 meters and stopped at the azimuth or height producing the maximum emission. Each emission was maximized by: varying the mode of operation or resolution; clock or data exchange speed, and/or support equipment, if applicable; and changing the polarity of the antenna, whichever determined the worst-case emission.

Photographs of the worst-case emission can be seen in photograph of radiated emission test.

Each EME reported was calibrated using self-calibrating mode.

**Table 2 : Test Data, Radiated Emissions****<Download Mode>**

Frequency [MHz]	Pol.	Height [m]	Real Reading	Correction Factor		T-Fact [dB]	Data [dBuV/m]	Limits [dBuV/m]	Margin [dB]
				Antenna	Cable				
103.42	H	4.0	8.1	10.8	1.4	12.2	20.3	30.0	9.7
122.47	H	4.0	10.2	13.3	1.7	15.0	25.2	30.0	4.8
199.85	H	4.0	6.6	16.2	2.2	18.4	25.0	30.0	5.0
268.24	H	4.0	7.6	17.9	2.7	20.6	28.2	37.0	8.8
395.77	V	1.0	7.7	18.2	3.7	21.9	29.6	37.0	7.4
486.32	H	3.5	4.9	18.5	4.4	22.9	27.8	37.0	9.2

**<Multimedia Play Mode/RM Receive Mode>**

Frequency [MHz]	Pol.	Height [m]	Real Reading	Correction Factor		T-Fact [dB]	Data [dBuV/m]	Limits [dBuV/m]	Margin [dB]
				Antenna	Cable				
122.47	H	4.0	10.3	13.3	1.7	15.0	25.3	30.0	4.7
216.85	H	4.0	5.2	16.9	2.4	19.3	24.5	30.0	5.5
304.12	H	3.1	9.4	16.4	3.1	19.5	28.9	37.0	8.1
486.36	V	1.0	6.9	18.5	4.4	22.9	29.8	37.0	7.2
508.27	H	2.7	9.2	19.0	4.6	23.6	32.8	37.0	4.2
610.44	H	2.1	4.4	21.1	5.2	26.3	30.7	37.0	6.3

**NOTES:**

1. All modes of operation were investigated and the worst-case emission are reported.
2. All other emission are non-significant.
3. All readings are calibrated by self-mode in receiver.
4. Measurements using CISPR quasi-peak mode.
5. H = Horizontal, V = Vertical Polarization
6. DATA = Real Reading + T - FACTOR(=Antenna+Cable)
7. Margin = Limits - DATA