HCT CO., LTD.

Product Compliance Division

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CERTIFICATE OF COMPLIANCE

FCC PART 15.239 Certification

Applicant Name:
SysOnChip, Inc.

Address:
4F., Singwan Bldg., KT Buk-Daejeon Branch, 138 Gajeong-dong, Yuseong-gu, Daejeon., 302-828 South Korea

Date of Issue:
April 27, 2010

Test Site/Location:
HCT.CO., LTD., San 136-1 Ami-ri, Bubal-eup, Icheon-si, Kyungki-do, Korea

Test Report No.: HCTR1004FR21

HCT FRN: 0005866421

IC Recognition No.: 5944A-1

FCC ID:	**P47SOCNP530**
APPLICANT:	**SysOnChip, Inc.**

FCC Rule Part(s):	Part 15 Subpart C (15.239)
EUT Type:	Portable GPS Navigation
Model(s):	SOCNP530
Frequency Range	88.1 ~ 107.9 MHz
FCC Rule Part(s)	FCC Part 15 Low Power Communication Device TX (DXX)

Engineering Statement:

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has been denied FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998,21 U.S. C.862

Hyo Sun Kwak

Report prepared by

: Hyo Sun Kwak

Test engineer of RF Team

Sang Jun Lee

Approved by

: Sang Jun Lee

Manager of RF Team

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1.GENERAL INFORMATION

Applicant Name:	**SysOnChip, Inc.**
Address:	4F., Singwan Bldg., KT Buk-Daejeon Branch, 138 Gajeong-dong, Yuseong-gu, Daejeon., 302-828 South Korea
FCC ID:	P47SOCNP530
Application Type:	Certification
EUT:	Portable GPS Navigation
Model:	SOCNP530
Date of Test:	April 21, 2009
Contact person:	Name: In Chul Ha Phone #: +82-42-864-4665 Fax #: +82-42-864-4664

2. EUT DESCRIPTION

Product	Portable GPS Navigation
Model Name	SOCNP530
Power Supply	DC 12 V
Frequency Range	88.1 ~ 107.9 MHz
FCC CLASSIFICATION	FCC Part 15 Low Power Communication Device TX (DXX)
Antenna Specification	**Antenna type: WIRE ANTENNA**

3. TEST METHODOLOGY

The measurement procedure described in the American National Standard for Methods of Measurement of Radio-Noise Emission from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz(ANSI C63.4-2003)

3.1 EUT CONFIGURATION

In situ testing was performed for three vehicles based on the following vehicle sizes; small, medium and large. The selected vehicles were: Hyundai AVANTE, Hyundai Tucsan, KIA Grand Carnival. The EUT was connected to cigar jack in the above three types of vehicle.

3.2 EUT EXERCISE

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. According to its specifications, the EUT must comply with the requirements of the Section 15.205, 15.207, 15.209 and 15.239 under the FCC Rules Part 15 Subpart C.

3.3 TEST PROCEDURES

EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. The data was taken on 8 radials with 3 different vehicles at a distance of 3 meters from the closet point of the vehicle.

3.4 DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition. Three frequency in the FM band were measured:
The frequencies tested are high (107.9MHz), middle (98.3MHz) and low (88.1MHz) of the allocated band.

4. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipments, which is traceable to recognized national standards.

5. FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

The open area test site and conducted measurement facility used to collect the radiated data are located at the 254-1,Maekok-Ri, Hobup-Myun, Ichon-Si, Kyoungki-Do, 467-701, KOREA. The site is constructed in conformance with the requirements of ANSI C63.4. (Version :2003) and CISPR Publication 22. Detailed description of test facility was submitted to the Commission and accepted dated June 10, 2009 (Registration Number: 90661)

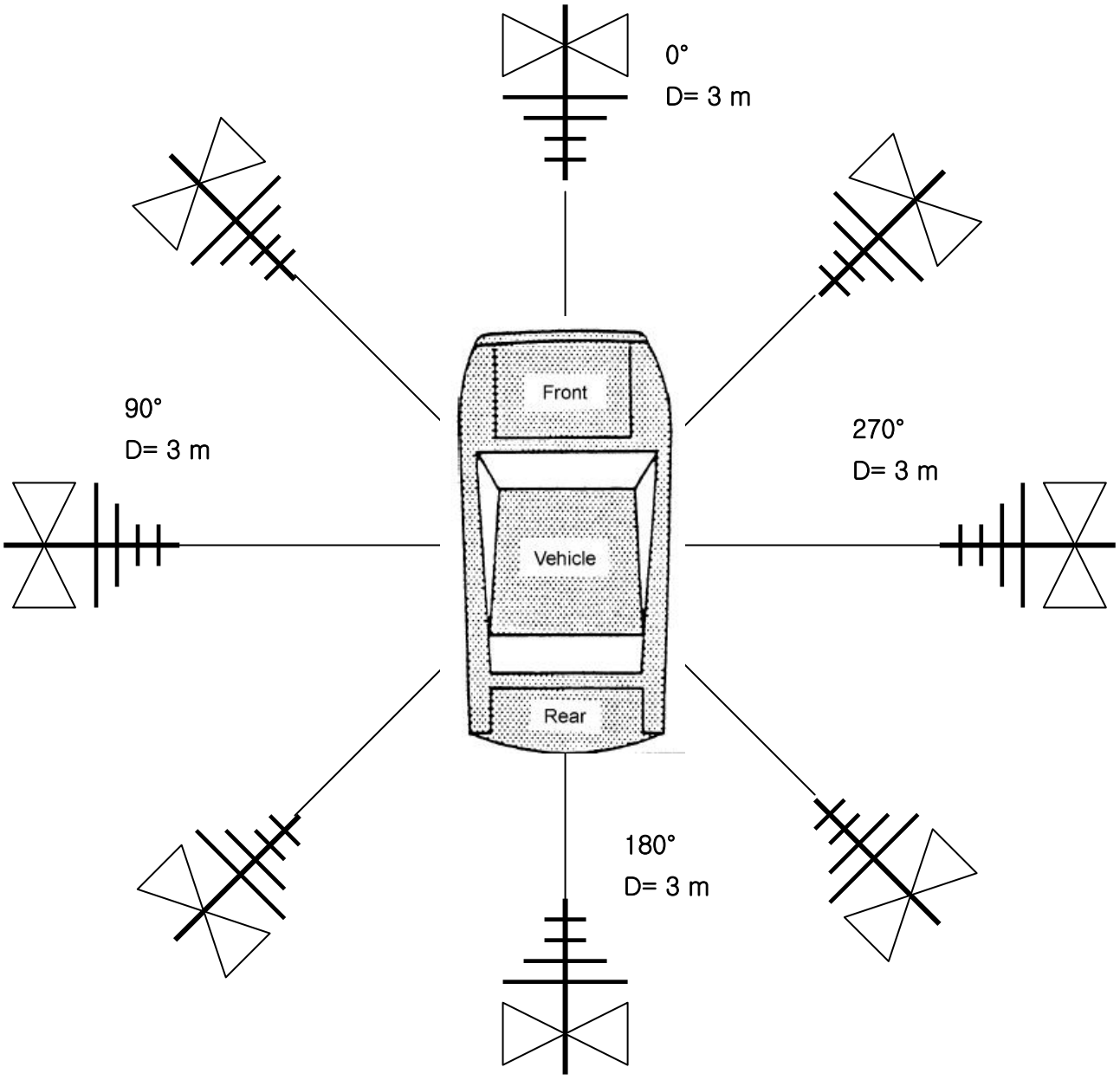
5.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

6. DESCRIPTION OF TEST SETUP



7. LIMITS & TEST RESULT

7.1 LIMITS

Section 15.239 Operation in the band 88 - 108 MHz.

(a) Emissions from the intentional radiator shall be confined within a band 200 kHz wide centered on the operating frequency. The 200 kHz band shall lie wholly within the frequency range of 88-108 MHz.

(b) The field strength of any emissions within the permitted 200 kHz band shall not exceed 250 microvolts/meter at 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in Section 15.35 for limiting peak emissions apply.

(c) The field strength of any emissions radiated on any frequency outside of the specified 200 kHz band shall not exceed the general radiated emission limits in Section 15.209.

Section 15.209 Radiated emission limits, general requirements.

(a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

(b) In the emission table above, the tighter limit applies at the band edges.

7.2 TEST RESULT

No non-compliance noted.

No other emission were detected beside the fundamental frequency.

Note :

The unit was tested with the lowest, highest and mid channels. Three orthogonal positions were tested with the worst case levels reported.

▣ TEST DATA

VEHECLE (SMALL): HYUNDAI AVANTE

EUT at 0°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	38.6	8.3	2.2	49.1	67.96	18.86	Peak	V	1.6	0°
88.1	30.3	8.3	2.2	40.8	47.96	7.16	AV	V		
88.1	29.1	8.3	2.2	39.6	67.96	28.36	Peak	H	3.8	
88.1	17.7	8.3	2.2	28.2	47.96	19.76	AV	H		
98.3	31.4	8.9	2.4	42.7	67.96	25.26	Peak	V	1.5	
98.3	27.1	8.9	2.4	38.4	47.96	9.56	AV	V		
98.3	31.6	8.9	2.4	42.9	67.96	25.06	Peak	H	4.0	
98.3	16.7	8.9	2.4	28	47.96	19.96	AV	H		
107.9	37.4	9.7	2.5	49.6	67.96	18.36	Peak	V	1.0	
107.9	21.7	9.7	2.5	33.9	47.96	14.06	AV	V		
107.9	41.8	9.7	2.5	54	67.96	13.96	Peak	H	4.0	
107.9	15.7	9.7	2.5	27.9	47.96	20.06	AV	H		

EUT at 45°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	33.5	8.3	2.2	44	67.96	23.96	Peak	V	1.0	45°
88.1	24.1	8.3	2.2	34.6	47.96	13.36	AV	V		
88.1	34.2	8.3	2.2	44.7	67.96	23.26	Peak	H	4.0	
88.1	28.5	8.3	2.2	39	47.96	8.96	AV	H		
98.3	30.1	8.9	2.4	41.4	67.96	26.56	Peak	V	1.0	
98.3	22.4	8.9	2.4	33.7	47.96	14.26	AV	V		
98.3	31.7	8.9	2.4	43	67.96	24.96	Peak	H	3.8	
98.3	26.4	8.9	2.4	37.7	47.96	10.26	AV	H		
107.9	27.0	9.7	2.5	39.2	67.96	28.76	Peak	V	1.1	
107.9	17.3	9.7	2.5	29.5	47.96	18.46	AV	V		
107.9	30.6	9.7	2.5	42.8	67.96	25.16	Peak	H	2.8	
107.9	14.2	9.7	2.5	26.4	47.96	21.56	AV	H		

EUT at 90°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	37.7	8.3	2.2	48.2	67.96	19.76	Peak	V	4.0	90°
88.1	23.8	8.3	2.2	34.3	47.96	13.66	AV	V		
88.1	34.5	8.3	2.2	45	67.96	22.96	Peak	H	4.0	
88.1	27.2	8.3	2.2	37.7	47.96	10.26	AV	H		
98.3	26.8	8.9	2.4	38.1	67.96	29.86	Peak	V	4.0	
98.3	16.2	8.9	2.4	27.5	47.96	20.46	AV	V		
98.3	34.4	8.9	2.4	45.7	67.96	22.26	Peak	H	3.7	
98.3	24.2	8.9	2.4	35.5	47.96	12.46	AV	H		
107.9	32.6	9.7	2.5	44.8	67.96	23.16	Peak	V	1.0	
107.9	14.6	9.7	2.5	26.8	47.96	21.16	AV	V		
107.9	40.2	9.7	2.5	52.4	67.96	15.56	Peak	H	4.0	
107.9	18.3	9.7	2.5	30.5	47.96	17.46	AV	H		

EUT at 135°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	37.4	8.3	2.2	47.9	67.96	20.06	Peak	V	4.0	135°
88.1	20.4	8.3	2.2	30.9	47.96	17.06	AV	V		
88.1	35.2	8.3	2.2	45.7	67.96	22.26	Peak	H	15.0	
88.1	27.5	8.3	2.2	38	47.96	9.96	AV	H		
98.3	28.6	8.9	2.4	39.9	67.96	28.06	Peak	V	3.8	
98.3	17.5	8.9	2.4	28.8	47.96	19.16	AV	V		
98.3	35.0	8.9	2.4	46.3	67.96	21.66	Peak	H	1.5	
98.3	27.1	8.9	2.4	38.4	47.96	9.56	AV	H		
107.9	32.9	9.7	2.5	45.1	67.96	22.86	Peak	V	1.0	
107.9	10.3	9.7	2.5	22.5	47.96	25.46	AV	V		
107.9	35.2	9.7	2.5	47.4	67.96	20.56	Peak	H	3.4	
107.9	14.5	9.7	2.5	26.7	47.96	21.26	AV	H		

EUT at 180°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	35.0	8.3	2.2	45.5	67.96	22.46	Peak	V	4.0	180°
88.1	21.2	8.3	2.2	31.7	47.96	16.26	AV	V		
88.1	26.7	8.3	2.2	37.2	67.96	30.76	Peak	H	3.9	
88.1	9.5	8.3	2.2	20	47.96	27.96	AV	H		
98.3	29.6	8.9	2.4	40.9	67.96	27.06	Peak	V	1.0	
98.3	26.1	8.9	2.4	37.4	47.96	10.56	AV	V		
98.3	29.0	8.9	2.4	40.3	67.96	27.66	Peak	H	3.4	
98.3	14.5	8.9	2.4	25.8	47.96	22.16	AV	H		
107.9	27.8	9.7	2.5	40	67.96	27.96	Peak	V	1.0	
107.9	19.7	9.7	2.5	31.9	47.96	16.06	AV	V		
107.9	32.3	9.7	2.5	44.5	67.96	23.46	Peak	H	4.0	
107.9	5.3	9.7	2.5	17.5	47.96	30.46	AV	H		

EUT at 225°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	40.2	8.3	2.2	50.7	67.96	17.26	Peak	V	1.0	225°
88.1	20.2	8.3	2.2	30.7	47.96	17.26	AV	V		
88.1	36.8	8.3	2.2	47.3	67.96	20.66	Peak	H	4.0	
88.1	26.5	8.3	2.2	37	47.96	10.96	AV	H		
98.3	26.1	8.9	2.4	37.4	67.96	30.56	Peak	V	1.2	
98.3	16.5	8.9	2.4	27.8	47.96	20.16	AV	V		
98.3	34.7	8.9	2.4	46	67.96	21.96	Peak	H	1.7	
98.3	24.6	8.9	2.4	35.9	47.96	12.06	AV	H		
107.9	33.1	9.7	2.5	45.3	67.96	22.66	Peak	V	4.0	
107.9	10.9	9.7	2.5	23.1	47.96	24.86	AV	V		
107.9	41.7	9.7	2.5	53.9	67.96	14.06	Peak	H	4.0	
107.9	15.8	9.7	2.5	28	47.96	19.96	AV	H		

EUT at 270°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	24.8	8.3	2.2	35.3	67.96	32.66	Peak	V	1.0	270°
88.1	16.5	8.3	2.2	27	47.96	20.96	AV	V		
88.1	31.9	8.3	2.2	42.4	67.96	25.56	Peak	H	4.0	
88.1	23.2	8.3	2.2	33.7	47.96	14.26	AV	H		
98.3	27.7	8.9	2.4	39	67.96	28.96	Peak	V	4.0	
98.3	13.5	8.9	2.4	24.8	47.96	23.16	AV	V		
98.3	31.6	8.9	2.4	42.9	67.96	25.06	Peak	H	3.6	
98.3	27.8	8.9	2.4	39.1	47.96	8.86	AV	H		
107.9	29.2	9.7	2.5	41.4	67.96	26.56	Peak	V	4.0	
107.9	13.7	9.7	2.5	25.9	47.96	22.06	AV	V		
107.9	34.5	9.7	2.5	46.7	67.96	21.26	Peak	H	4.0	
107.9	19.5	9.7	2.5	31.7	47.96	16.26	AV	H		

EUT at 315°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	34.9	8.3	2.2	45.4	67.96	22.56	Peak	V	4.0	315°
88.1	20.4	8.3	2.2	30.9	47.96	17.06	AV	V		
88.1	32.8	8.3	2.2	43.3	67.96	24.66	Peak	H	4.0	
88.1	26.9	8.3	2.2	37.4	47.96	10.56	AV	H		
98.3	26.4	8.9	2.4	37.7	67.96	30.26	Peak	V	4.0	
98.3	24.8	8.9	2.4	36.1	47.96	11.86	AV	V		
98.3	30.1	8.9	2.4	41.4	67.96	26.56	Peak	H	3.5	
98.3	25.3	8.9	2.4	36.6	47.96	11.36	AV	H		
107.9	31.4	9.7	2.5	43.6	67.96	24.36	Peak	V	1.0	
107.9	15.4	9.7	2.5	27.6	47.96	20.36	AV	V		
107.9	29.5	9.7	2.5	41.7	67.96	26.26	Peak	H	4.0	
107.9	13.4	9.7	2.5	25.6	47.96	22.36	AV	H		

VEHECLE (MEDIUM): HYUNDAI TUCSAN

EUT at 0°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	37.7	8.3	2.2	48.2	67.96	19.76	Peak	V	1.7	0°
88.1	31.1	8.3	2.2	41.6	47.96	6.36	AV	V		
88.1	30.6	8.3	2.2	41.1	67.96	26.86	Peak	H	4.0	
88.1	14.5	8.3	2.2	25	47.96	22.96	AV	H		
98.3	34.1	8.9	2.4	45.4	67.96	22.56	Peak	V	1.1	
98.3	31.3	8.9	2.4	42.6	47.96	5.36	AV	V		
98.3	34.6	8.9	2.4	45.9	67.96	22.06	Peak	H	3.8	
98.3	24.5	8.9	2.4	35.8	47.96	12.16	AV	H		
107.9	30.6	9.7	2.5	42.8	67.96	25.16	Peak	V	4.0	
107.9	16.1	9.7	2.5	28.3	47.96	19.66	AV	V		
107.9	34.8	9.7	2.5	47	67.96	20.96	Peak	H	3.2	
107.9	12.1	9.7	2.5	24.3	47.96	23.66	AV	H		

EUT at 45°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	30.8	8.3	2.2	41.3	67.96	26.66	Peak	V	1.0	45°
88.1	23.3	8.3	2.2	33.8	47.96	14.16	AV	V		
88.1	32.2	8.3	2.2	42.7	67.96	25.26	Peak	H	4.0	
88.1	27.5	8.3	2.2	38	47.96	9.96	AV	H		
98.3	29.7	8.9	2.4	41	67.96	26.96	Peak	V	1.0	
98.3	25.8	8.9	2.4	37.1	47.96	10.86	AV	V		
98.3	32.2	8.9	2.4	43.5	67.96	24.46	Peak	H	3.6	
98.3	27.5	8.9	2.4	38.8	47.96	9.16	AV	H		
107.9	28.3	9.7	2.5	40.5	67.96	27.46	Peak	V	1.0	
107.9	15.7	9.7	2.5	27.9	47.96	20.06	AV	V		
107.9	27.6	9.7	2.5	39.8	67.96	28.16	Peak	H	1.5	
107.9	13.7	9.7	2.5	25.9	47.96	22.06	AV	H		

EUT at 90°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	31.9	8.3	2.2	42.4	67.96	25.56	Peak	V	1.2	90°
88.1	19.1	8.3	2.2	29.6	47.96	18.36	AV	V		
88.1	31.5	8.3	2.2	42	67.96	25.96	Peak	H	4.0	
88.1	26.8	8.3	2.2	37.3	47.96	10.66	AV	H		
98.3	24.3	8.9	2.4	35.6	67.96	32.36	Peak	V	4.0	
98.3	13.7	8.9	2.4	25	47.96	22.96	AV	V		
98.3	31.3	8.9	2.4	42.6	67.96	25.36	Peak	H	4.0	
98.3	25.3	8.9	2.4	36.6	47.96	11.36	AV	H		
107.9	31.3	9.7	2.5	43.5	67.96	24.46	Peak	V	1.0	
107.9	14.1	9.7	2.5	26.3	47.96	21.66	AV	V		
107.9	34.4	9.7	2.5	46.6	67.96	21.36	Peak	H	2.8	
107.9	10.3	9.7	2.5	22.5	47.96	25.46	AV	H		

EUT at 135°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	38.8	8.3	2.2	49.3	67.96	18.66	Peak	V	4.0	135°
88.1	24.3	8.3	2.2	34.8	47.96	13.16	AV	V		
88.1	36.1	8.3	2.2	46.6	67.96	21.36	Peak	H	2.3	
88.1	28.0	8.3	2.2	38.5	47.96	9.46	AV	H		
98.3	29.5	8.9	2.4	40.8	67.96	27.16	Peak	V	3.5	
98.3	18.2	8.9	2.4	29.5	47.96	18.46	AV	V		
98.3	37.0	8.9	2.4	48.3	67.96	19.66	Peak	H	2.0	
98.3	28.3	8.9	2.4	39.6	47.96	8.36	AV	H		
107.9	33.8	9.7	2.5	46	67.96	21.96	Peak	V	1.0	
107.9	12.8	9.7	2.5	25	47.96	22.96	AV	V		
107.9	39.3	9.7	2.5	51.5	67.96	16.46	Peak	H	3.1	
107.9	15.3	9.7	2.5	27.5	47.96	20.46	AV	H		

EUT at 180°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	38.6	8.3	2.2	49.1	67.96	18.86	Peak	V	4.0	180°
88.1	22.6	8.3	2.2	33.1	47.96	14.86	AV	V		
88.1	31.8	8.3	2.2	42.3	67.96	25.66	Peak	H	1.7	
88.1	6.4	8.3	2.2	16.9	47.96	31.06	AV	H		
98.3	33.8	8.9	2.4	45.1	67.96	22.86	Peak	V	1.0	
98.3	25.2	8.9	2.4	36.5	47.96	11.46	AV	V		
98.3	37.8	8.9	2.4	49.1	67.96	18.86	Peak	H	3.7	
98.3	13.4	8.9	2.4	24.7	47.96	23.26	AV	H		
107.9	21.2	9.7	2.5	33.4	67.96	34.56	Peak	V	1.0	
107.9	12.0	9.7	2.5	24.2	47.96	23.76	AV	V		
107.9	23.8	9.7	2.5	36	67.96	31.96	Peak	H	3.7	
107.9	3.9	9.7	2.5	16.1	47.96	31.86	AV	H		

EUT at 225°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	43.4	8.3	2.2	53.9	67.96	14.06	Peak	V	4.0	225°
88.1	22.0	8.3	2.2	32.5	47.96	15.46	AV	V		
88.1	40.3	8.3	2.2	50.8	67.96	17.16	Peak	H	4.0	
88.1	28.7	8.3	2.2	39.2	47.96	8.76	AV	H		
98.3	24.4	8.9	2.4	35.7	67.96	32.26	Peak	V	2.1	
98.3	16.0	8.9	2.4	27.3	47.96	20.66	AV	V		
98.3	35.6	8.9	2.4	46.9	67.96	21.06	Peak	H	1.8	
98.3	27.4	8.9	2.4	38.7	47.96	9.26	AV	H		
107.9	34.8	9.7	2.5	47	67.96	20.96	Peak	V	4.0	
107.9	11.7	9.7	2.5	23.9	47.96	24.06	AV	V		
107.9	40.7	9.7	2.5	52.9	67.96	15.06	Peak	H	4.0	
107.9	14.7	9.7	2.5	26.9	47.96	21.06	AV	H		

EUT at 270°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	41.8	8.3	2.2	52.3	67.96	15.66	Peak	V	4.0	270°
88.1	20.1	8.3	2.2	30.6	47.96	17.36	AV	V		
88.1	38.9	8.3	2.2	49.4	67.96	18.56	Peak	H	4.0	
88.1	26.9	8.3	2.2	37.4	47.96	10.56	AV	H		
98.3	30.4	8.9	2.4	41.7	67.96	26.26	Peak	V	4.0	
98.3	19.8	8.9	2.4	31.1	47.96	16.86	AV	V		
98.3	39.5	8.9	2.4	50.8	67.96	17.16	Peak	H	3.4	
98.3	24.4	8.9	2.4	35.7	47.96	12.26	AV	H		
107.9	38.7	9.7	2.5	50.9	67.96	17.06	Peak	V	1.0	
107.9	14.7	9.7	2.5	26.9	47.96	21.06	AV	V		
107.9	43.7	9.7	2.5	55.9	67.96	12.06	Peak	H	4.0	
107.9	12.5	9.7	2.5	24.7	47.96	23.26	AV	H		

EUT at 315°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	33.5	8.3	2.2	44	67.96	23.96	Peak	V	3.8	315°
88.1	21.3	8.3	2.2	31.8	47.96	16.16	AV	V		
88.1	33.2	8.3	2.2	43.7	67.96	24.26	Peak	H	4.0	
88.1	28.4	8.3	2.2	38.9	47.96	9.06	AV	H		
98.3	29.2	8.9	2.4	40.5	67.96	27.46	Peak	V	3.7	
98.3	26.3	8.9	2.4	37.6	47.96	10.36	AV	V		
98.3	33.1	8.9	2.4	44.4	67.96	23.56	Peak	H	3.2	
98.3	27.0	8.9	2.4	38.3	47.96	9.66	AV	H		
107.9	28.0	9.7	2.5	40.2	67.96	27.76	Peak	V	4.0	
107.9	13.8	9.7	2.5	26	47.96	21.96	AV	V		
107.9	28.0	9.7	2.5	40.2	67.96	27.76	Peak	H	1.8	
107.9	11.1	9.7	2.5	23.3	47.96	24.66	AV	H		

VEHECLE (LARGE): KIA GRAND CANIVAL

EUT at 0°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	32.1	8.3	2.2	42.6	67.96	25.36	Peak	V	1.7	0°
88.1	27.4	8.3	2.2	37.9	47.96	10.06	AV	V		
88.1	27.9	8.3	2.2	38.4	67.96	29.56	Peak	H	4.0	
88.1	17.3	8.3	2.2	27.8	47.96	20.16	AV	H		
98.3	32.2	8.9	2.4	43.5	67.96	24.46	Peak	V	1.0	
98.3	29.5	8.9	2.4	40.8	47.96	7.16	AV	V		
98.3	32.3	8.9	2.4	43.6	67.96	24.36	Peak	H	3.6	
98.3	25.5	8.9	2.4	36.8	47.96	11.16	AV	H		
107.9	31.2	9.7	2.5	43.4	67.96	24.56	Peak	V	1.0	
107.9	25.1	9.7	2.5	37.3	47.96	10.66	AV	V		
107.9	32.1	9.7	2.5	44.3	67.96	23.66	Peak	H	3.8	
107.9	17.3	9.7	2.5	29.5	47.96	18.46	AV	H		

EUT at 45°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	32.8	8.3	2.2	43.3	67.96	24.66	Peak	V	1.0	45°
88.1	20.5	8.3	2.2	31	47.96	16.96	AV	V		
88.1	35.1	8.3	2.2	45.6	67.96	22.36	Peak	H	4.0	
88.1	26.4	8.3	2.2	36.9	47.96	11.06	AV	H		
98.3	32.9	8.9	2.4	44.2	67.96	23.76	Peak	V	1.0	
98.3	24.2	8.9	2.4	35.5	47.96	12.46	AV	V		
98.3	33.0	8.9	2.4	44.3	67.96	23.66	Peak	H	3.8	
98.3	25.7	8.9	2.4	37	47.96	10.96	AV	H		
107.9	35.4	9.7	2.5	47.6	67.96	20.36	Peak	V	1.1	
107.9	13.4	9.7	2.5	25.6	47.96	22.36	AV	V		
107.9	28.1	9.7	2.5	40.3	67.96	27.66	Peak	H	4.0	
107.9	13.6	9.7	2.5	25.8	47.96	22.16	AV	H		

EUT at 90°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	28.6	8.3	2.2	39.1	67.96	28.86	Peak	V	4.0	90°
88.1	21.4	8.3	2.2	31.85	47.96	16.11	AV	V		
88.1	33.8	8.3	2.2	44.3	67.96	23.66	Peak	H	4.0	
88.1	26.2	8.3	2.2	36.7	47.96	11.26	AV	H		
98.3	23.3	8.9	2.4	34.6	67.96	33.36	Peak	V	1.1	
98.3	15.3	8.9	2.4	26.6	47.96	21.36	AV	V		
98.3	27.0	8.9	2.4	38.3	67.96	29.66	Peak	H	3.8	
98.3	23.1	8.9	2.4	34.4	47.96	13.56	AV	H		
107.9	29.1	9.7	2.5	41.3	67.96	26.66	Peak	V	1.2	
107.9	18.5	9.7	2.5	30.7	47.96	17.26	AV	V		
107.9	30.9	9.7	2.5	43.1	67.96	24.86	Peak	H	4.0	
107.9	14.5	9.7	2.5	26.7	47.96	21.26	AV	H		

EUT at 135°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	40.1	8.3	2.2	50.6	67.96	17.36	Peak	V	4.0	135°
88.1	24.9	8.3	2.2	35.4	47.96	12.56	AV	V		
88.1	34.2	8.3	2.2	44.7	67.96	23.26	Peak	H	1.5	
88.1	26.0	8.3	2.2	36.5	47.96	11.46	AV	H		
98.3	27.3	8.9	2.4	38.6	67.96	29.36	Peak	V	4.0	
98.3	17.5	8.9	2.4	28.8	47.96	19.16	AV	V		
98.3	34.9	8.9	2.4	46.2	67.96	21.76	Peak	H	1.2	
98.3	27.6	8.9	2.4	38.9	47.96	9.06	AV	H		
107.9	34.8	9.7	2.5	47	67.96	20.96	Peak	V	1.0	
107.9	13.1	9.7	2.5	25.3	47.96	22.66	AV	V		
107.9	40.5	9.7	2.5	52.7	67.96	15.26	Peak	H	3.4	
107.9	14.1	9.7	2.5	26.3	47.96	21.66	AV	H		

EUT at 180°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	31.4	8.3	2.2	41.9	67.96	26.06	Peak	V	4.0	180°
88.1	25.0	8.3	2.2	35.5	47.96	12.46	AV	V		
88.1	29.2	8.3	2.2	39.7	67.96	28.26	Peak	H	1.9	
88.1	13.6	8.3	2.2	24.1	47.96	23.86	AV	H		
98.3	27.7	8.9	2.4	39	67.96	28.96	Peak	V	4.0	
98.3	23.7	8.9	2.4	35	47.96	12.96	AV	V		
98.3	26.8	8.9	2.4	38.1	67.96	29.86	Peak	H	3.6	
98.3	16.2	8.9	2.4	27.5	47.96	20.46	AV	H		
107.9	24.8	9.7	2.5	37	67.96	30.96	Peak	V	1.0	
107.9	19.1	9.7	2.5	31.3	47.96	16.66	AV	V		
107.9	17.8	9.7	2.5	30	67.96	37.96	Peak	H	4.0	
107.9	8.7	9.7	2.5	20.9	47.96	27.06	AV	H		

EUT at 225°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	45.3	8.3	2.2	55.8	67.96	12.16	Peak	V	4.0	225°
88.1	23.8	8.3	2.2	34.3	47.96	13.66	AV	V		
88.1	42.6	8.3	2.2	53.1	67.96	14.86	Peak	H	3.8	
88.1	30.1	8.3	2.2	40.6	47.96	7.36	AV	H		
98.3	26.4	8.9	2.4	37.7	67.96	30.26	Peak	V	1.6	
98.3	17.2	8.9	2.4	28.5	47.96	19.46	AV	V		
98.3	37.1	8.9	2.4	48.4	67.96	19.56	Peak	H	2.1	
98.3	29.0	8.9	2.4	40.3	47.96	7.66	AV	H		
107.9	33.5	9.7	2.5	45.7	67.96	22.26	Peak	V	1.0	
107.9	14.3	9.7	2.5	26.5	47.96	21.46	AV	V		
107.9	42.0	9.7	2.5	54.2	67.96	13.76	Peak	H	4.0	
107.9	15.6	9.7	2.5	27.8	47.96	20.16	AV	H		

EUT at 270°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	24.0	8.3	2.2	34.5	67.96	33.46	Peak	V	4.0	270°
88.1	20.2	8.3	2.2	30.7	47.96	17.26	AV	V		
88.1	29.5	8.3	2.2	40	67.96	27.96	Peak	H	4.0	
88.1	27.0	8.3	2.2	37.5	47.96	10.46	AV	H		
98.3	26.1	8.9	2.4	37.4	67.96	30.56	Peak	V	4.0	
98.3	22.1	8.9	2.4	33.4	47.96	14.56	AV	V		
98.3	29.1	8.9	2.4	40.4	67.96	27.56	Peak	H	3.6	
98.3	25.9	8.9	2.4	37.2	47.96	10.76	AV	H		
107.9	21.4	9.7	2.5	33.6	67.96	34.36	Peak	V	1.0	
107.9	14.2	9.7	2.5	26.4	47.96	21.56	AV	V		
107.9	22.7	9.7	2.5	34.9	67.96	33.06	Peak	H	3.0	
107.9	19.5	9.7	2.5	31.7	47.96	16.26	AV	H		

EUT at 315°

Frequency	Reading	AF	C/L	LEVEL	LIMIT	Margin	Detecter	POL	Height	Azimuth
88.1	31.6	8.3	2.2	42.1	67.96	25.86	Peak	V	4.0	315°
88.1	19.8	8.3	2.2	30.3	47.96	17.66	AV	V		
88.1	34.9	8.3	2.2	45.4	67.96	22.56	Peak	H	4.0	
88.1	29.2	8.3	2.2	39.7	47.96	8.26	AV	H		
98.3	31.5	8.9	2.4	42.8	67.96	25.16	Peak	V	3.9	
98.3	27.6	8.9	2.4	38.9	47.96	9.06	AV	V		
98.3	34.6	8.9	2.4	45.9	67.96	22.06	Peak	H	3.0	
98.3	26.4	8.9	2.4	37.7	47.96	10.26	AV	H		
107.9	30.4	9.7	2.5	42.6	67.96	25.36	Peak	V	4.0	
107.9	14.9	9.7	2.5	27.1	47.96	20.86	AV	V		
107.9	29.7	9.7	2.5	41.9	67.96	26.06	Peak	H	1.2	
107.9	13.4	9.7	2.5	25.6	47.96	22.36	AV	H		

9. LIST OF TEST EQUIPMENT

Manufacturer	Model / Equipment	Cal Interval	Calibration Date	Serial No.
Schwarzbeck	VULB 9160/ TRILOG Antenna	Biennial	12/18/2008	9160-3150
HD	MA240/ Antenna Position Tower	N/A	N/A	556
EMCO	1050/ Turn Table	N/A	N/A	114
HD GmbH	HD 100/ Controller	N/A	N/A	13
HD GmbH	KMS 560/ SlideBar	N/A	N/A	12
MITEQ	AMF-60-0010 1800-35-20P/AMP	Annual	05/20/2009	1200937
Rohde & Schwarz	ESCI / EMI Receiver	Annual	02/19/2010	100033
DIGITAL	EP-3010 /DC POWER SUPPLY	Annual	01/08/2010	3110117
ITECH	IT6720 / DC POWER SUPPLY	Annual	12/01/2009	010002156287001199
TESCOM	TC-3000A / BLUETOOTH TESTER	Annual	01/11/2010	3000A490112
Rohde & Schwarz	CBT / BLUETOOTH TESTER	Annual	06/22/2009	100422
EMCO	6502.LOOP ANTENNA	Biennial	01/13/2010	9009-2536