Report No. 248050-1

Test Report

Product	Humidity Detector with GSM Transceiver
Name and address of the applicant	SCA Hygiene Products AB HSB/FE 106 SE-838 80 Hackås SWEDEN
Name and address of the manufacturer	Same as applicant
Model	61407
Rating	/
Trademark	/
Serial number	/
Additional information	GSM1900 GPRS
Tested according to	**FCC CFR47 Subpart 24E** 2 GHz PCS Licensed Transmitter
Order number	248050
Tested in period	2013.08.26
Issue date	2014.02.28
Name and address of the testing laboratory	Nemko Instituttveien 6 Kjeller, Norway FCC No: 994405 IC OATS: 2040D-1 TEL: (+47) 22 96 03 30 FAX: (+47) 22 96 05 50

Prepared by [Frode Sveinsen]	Approved by [Thomas Danglé]

Template version: B

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1 INFORMATION

1.1 Tested Item

Name :	SCA Hygiene
Model name :	61407
FCC ID :	2ABK3IDENTIFI
Serial number :	/
Hardware identity and/or version:	/
Software identity and/or version :	/
Frequency Range :	1850.200 – 1909.800 MHz
Type of Modulation :	Digital (Gaussian Minimum Shift Keying)
Antenna Connector :	None
Number of Antennas :	1
Antenna Diversity Supported :	No
Power Supply :	Secondary Battery (Integrated in EUT)

1.2 Description of Tested Device

The EUT is a Moisture Detector with a GSM/WCDMA Module for transmitting data.

1.3 Test Environment

Temperature:	21.6 – 22.0 °C
Relative humidity:	42.0 – 43.5 %

All tests were performed with a fully charged battery.

The values are the limit registered during the test period.

1.4 Test Engineer(s)

Frode Sveinsen

1.5 Test Equipment

See list of test equipment in clause 6.

1.6 Other Comments

The tests were performed on GSM1900 frequencies with GPRS packet data. All tests were performed with the EUT at the highest power level.

2 TEST REPORT SUMMARY

2.1 General

All measurements are traceable to national standards.

The tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 24E.

All tests were conducted is accordance with ANSI C63.4-2003.

Antenna Gain tests were made in a 3m fully-anechoic chamber.

A description of the test facility is on file with the FCC and Industry Canada.

☒ New Submission ☒ Production Unit

☐ Class II Permissive Change ☐ Pre-production Unit

THIS TEST REPORT APPLIES ONLY TO THE ITEM(S) AND CONFIGURATIONS TESTED.

Deviations from, additions to, or exclusions from the test specifications are described in “Summary of Test Data”.

2.2 Test Summary

Name of test	FCC Part 24E Paragraph #	Verdict
Peak Output Power (e.i.r.p.)	24.232(c)	Complies

3 TEST RESULTS

3.1 Peak Power Output (e.i.r.p.)

Test Results: Complies

Measurement Data:

Maximum Output Power

Channel No.	Frequency (MHz)	Maximum Radiated Output Power (e.i.r.p.) (dBm)
512	1850.2	25.9
660	1879.8	25.7
810	1909.8	25.6

Substitution:

Frequency MHz	Measured value dBm	Subst. Gen. (incl. corr.) dBm	Attenuator and Cable dB	Gain Subst. Antenna dB	Result dBm
1850.2	25.0	31.6	-13.9	8.2	25.9
1879.8	24.8	31.4	-13.9	8.2	25.7
1909.8	24.6	31.2	-13.9	8.3	25.6

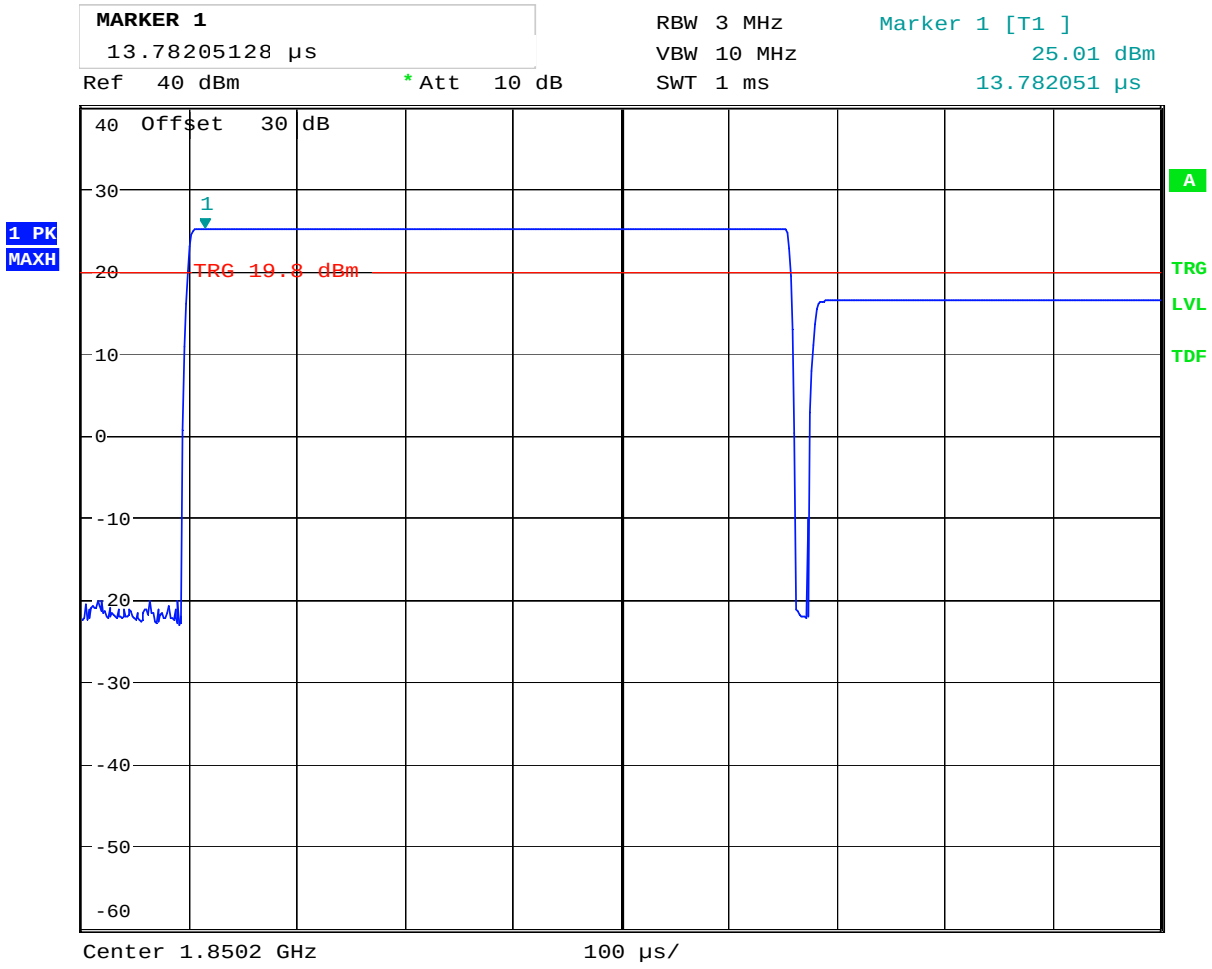
Result = Subst.Gen. + Attenuator + Cable + Antenna Gain

All tests were performed with a fully charged battery and at the highest GSM1900 power level.

Requirements, FCC Part 24E, Clause 24.232(c)

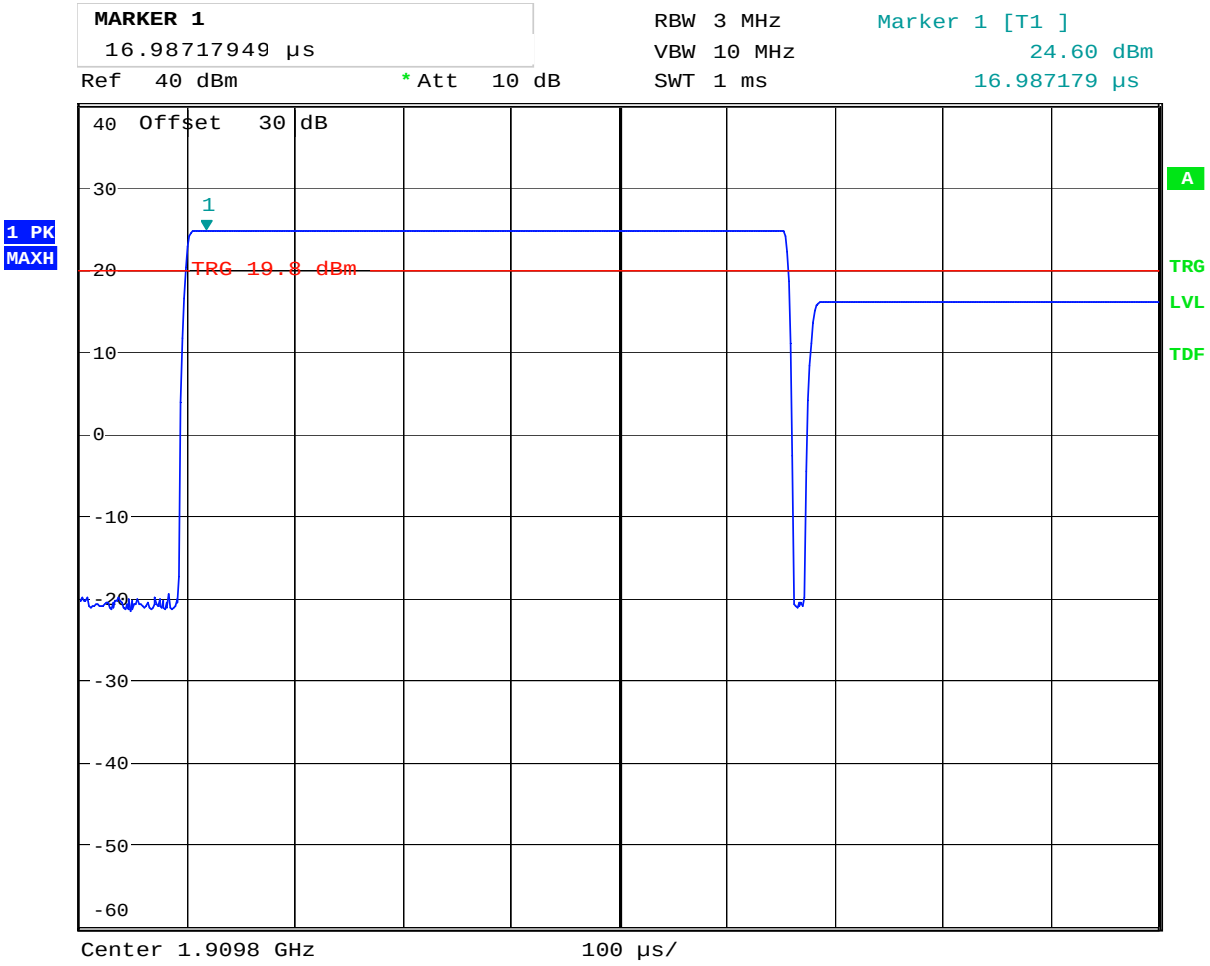
Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

Radiated Peak Output Power



Date: 26.AUG.2013 13:32:45

Lower Channel (Max: EUT V, HP)



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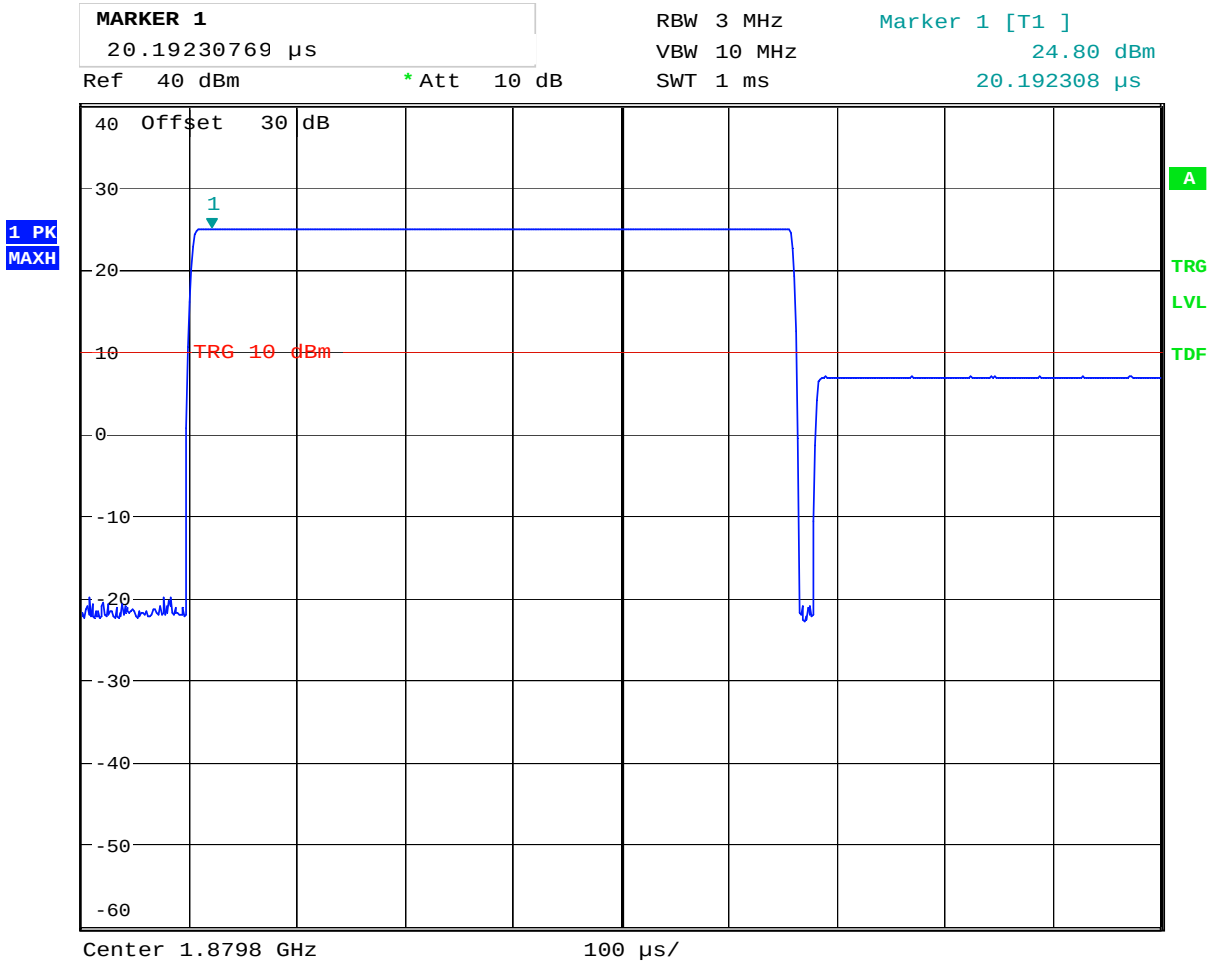
Upper Channel (Max: EUT V, HP)



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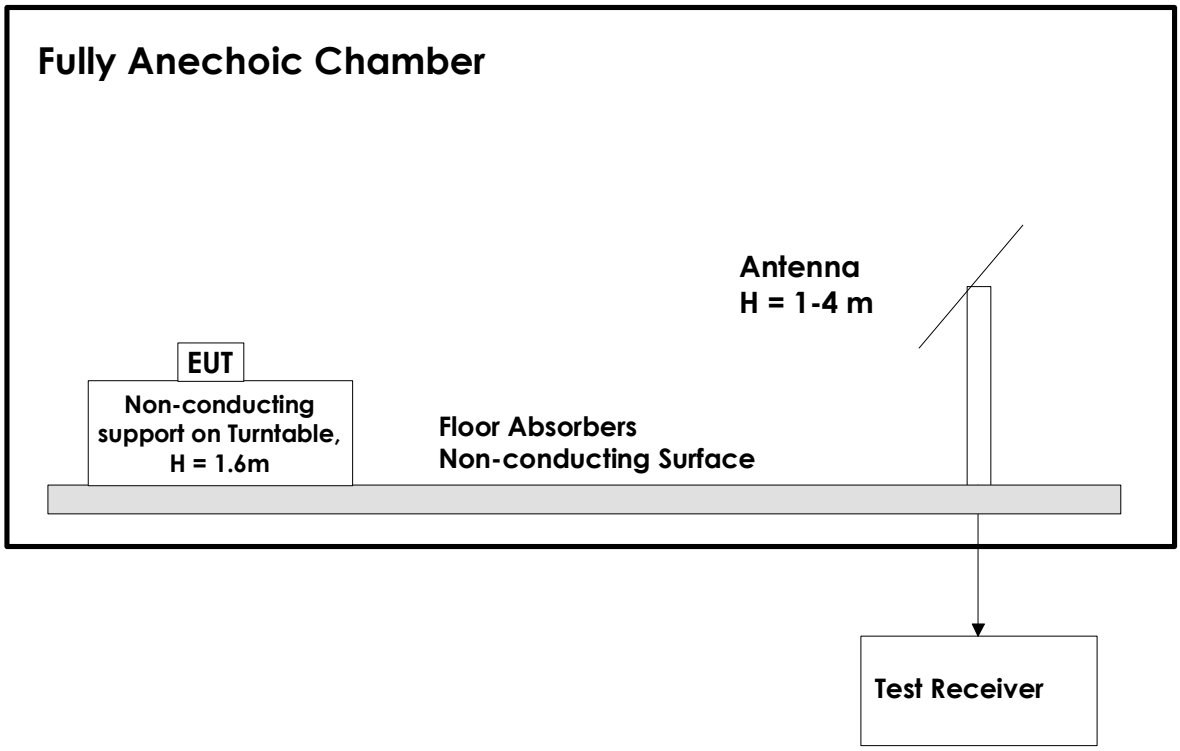
Middle Channel (Max: EUT V, HP)

4 Test Setups

4.1 Radiated Emissions Test, Fully Anechoic Chamber



Test equipment: 1, 9, 10, 16, 21, 28, 29, 30

Test Set-Up 7

This test setup is used for measuring radiated output power. The measurements are performed in a 3m Fully Anechoic Chamber with a Spectrum Analyzer and Horn Antenna, a preamplifier may be used after the antenna. The measuring distance is 3m.

5 Test Equipment Used

To facilitate inclusion on each page of the test equipment used for related tests, each item of test equipment and ancillaries are identified (numbered) by the Testhouse.

No.	Model number	Description	Manufacturer	Ref. no.	Cal. date	Cal. Due
1	FSU26	Spectrum Analyzer	Rohde & Schwarz	LR 1504	2011.11.03	2013.11.03
9	6810.17A	Attenuator	Suhner	LR 1137	2012.10.31	2014.10.31
10	6820.17A	Attenuator	Suhner	LR 1132	2012.10.31	2014.10.31
16	3115	Double Ridged Horn Antenna	EMCO	LR 1226	N/A	
21	JS4	Pre-Amplifier	Miteq	LR 1552	2012.09	2013.09
28	CMU200	Radiocommunications Tester	Rohde & Schwarz	LR 1537	N/A	
29	Model 7200	Signal generator	Gigatronics	LR 1188	2012.10.31	2014.10.31
30	3115	Double Ridged Horn Antenna	EMCO	LR 1330	2010.08.05	2015.08.05