## Section 15.231 and ANSI C63.4 This is a list of all test equipment used.

Test Equipment list for Honeywell OATS:

| Equipment             | Mfg             | Model  | Cal Date | Cal Due  |
|-----------------------|-----------------|--------|----------|----------|
| Spectrum Analyzer     | Rohde & Schwarz | FSEA20 | 10/14/08 | 10/14/09 |
| Antenna ('Biconilog') | ETS Lindgren    | 3149   | 04/02/08 | 04/02/09 |

## PLEASE SEE PAGE 2 FOR TEST EQUIPMENT TRACEABILITY

If you need any additional information from Honeywell please contact:

Greg Barbato RF Engineer (Acting for Ken Eskildsen) Phone (Direct): (516) 577-5863 Email: greg.barbato@honeywell.com





Track# \$000012880 Ltd Cal

By ML Date 02-Apr-08

**Next Cal Due** www.ets-lindgren.com

Cert I.D.: 66512 Lab Code 115844/1207.01

1301 Arrow Point Drive Cedar Park, Texas 78613 (512) 531-6498

## Certificate of Calibration Conformance Page 1 of 5

The instrument identifed below has been individually calibrated in compliance with the following standard(s):

SAE, ARP-958 - 2003, Electromagnetic Interference Measurement Antennas; Standard Calibration Method, Society of Automotive Engineers, Aerospace Recommended Practice. Fixed height, three antenna rotation, 1 meter separation. 3 meter separation performed per Annex C. Vertical calibration performed per above listed methodology.

Environment: Laboratory MTE is maintained in a temperature controlled environment with ambient conditions from 18 to 28 C, relative humidity less than 90%. The instrument under test has been calibrated on an open air test site (OATS) with environment temperature conditions ranging from 0 to 40 C which has no known influences on measurement quality.

Manufacturer:

**EMCO** 

**Operating Range:** 

80 MHz - 6 GHz

Model Number:

3149

Instrument Type:

Biconilog (Type 5)

Serial Number/ ID:

00029390

**Date Code:** 

Tracking Number:

S000012880

Alternate ID:

11243

Date Completed:

02-Apr-08

Customer:

Honeywell

Test Type:

3 meter, Horizontal and Vertical

**Calibration Uncertainty:** 

01m

80 - 1000 MHz, +/-0.9 dB; 1000 - 2000 MHz, +/-0.8 dB; 2000 - 6000 MHz, +/-1.2 dB

k=2, (95% Confidence Level)

03m

80 - 1000 MHz, +/-0.9 dB; 1000 - 2000 MHz, +/-0.8 dB; 2000 - 6000 MHz, +/-1.3 dB

10m

80 - 1000 MHz, +/-1.0 dB; 1000 - 2000 MHz, +/-1.4 dB; 2000 - 6000 MHz, +/-2.3 dB

Test Remarks:

Provided data on disk.

Calibration Traceability: All Measuring and Test Equipment (M/TE) identified below are traceable to the National Institute for Standards and Technology (NIST). Calibration Laboratory and Quality System controls are compliant with ISO/IEC 17025-2005.

Standards and Equipment Used:

Make / Model / Name / S/N / Recall Date

Anritsu

MS4623A Network Analyzer

992201

03-Aug-08

**Condition of Instrument** 

Upon Receipt:

In Tolerance to Internal Quality Standards

On Release:

In Tolerance to Internal Quality Standards

Maria Lopez, Cal Lab Technician

Attested and Issued on 02-Apr-08 Ronald W. Bethel, Calibration Manager

This document provides traceability of measurements to recognized national standards using controlled processes at the ETS-Lindgren Calibration Laboratory Uncertainties listed are derived from the methods described by NIST Tech Note 1297. This certificate and report may not be reproduced, except in full, without the written approval of ETS-Lindgren Calibration Laboratory in accordance with ISO/IEC 17025-2005. QAF 1127 (06/07)

Issue Date: 10/14/2008



## General Calibration, Inc.

2 Mars Court, Boonton, New Jersey 07005 Phone (973) 299-2950 Fax (973) 299-0595 Certificate #: 12962MR Purchase Order: 4965832 Work Order #: MR219 Customer #: 001464

GENERAL CALIBRATION, INC. 2 MARS COURT MONTVILLE, NJ 07045 HONEYWELL SECURITY (1464) 2 CORPORATE CENTER DRIVE

MELVILLE, NY 11747

BarCode: 01

018675

Manufacturer:

R&S

Description:

SPECTRUM ANALYZER

Temp./RH:

Current Location: ALARMNET

Cal. Interval:

22 C / 40 % 12 MONTHS

Cal Date:

10/14/2008

Instrument I.D.:

10506

Model Number:

FSEA20

Serial Number: Inspected By:

DE23427 MR1

Job Title:

.....

JOD TRIE.

METROLOGIST

Calibration Result:

PASS

Cal. Due Date:

10/14/2009

Condition: Found In Tolerance and Left In Tolerance

| GENERAL CALIBRATION | 434 | POWER SPLITTER      | N/A | 09/12/2009 |
|---------------------|-----|---------------------|-----|------------|
| GENERAL CALIBRATION | 531 | MEASURING RECEIVER  | N/A | 09/22/2009 |
| GENERAL CALIBRATION | 636 | SYNTHESIZED SWEEPER | N/A | 09/03/2009 |
| GENERAL CALIBRATION | 666 | SENSOR MODULE       | N/A | 04/25/2009 |

The above instrument has been checked and calibrated against the above working standard(s) which are traceable to the NIST. The test limits stated in the report correspond to the published specifications of the equipment, at the points tested. Also, the collective uncertainties of measurement standards do not exceed 25% of the tolerance of the characteristics being calibrated, where possible. The metrology procedures utilized conform to and satisfy the requirements set forth in ANSI/NCSL Z540-1-1994, 10 CFR part 21, ISO 9001-2000, ISO 10012-2003, and MIL-STD 45662A.

| Approved By | But I               | 14/5 am - |  |
|-------------|---------------------|-----------|--|
|             | General Calibration |           |  |