



An ESCO Technologies Company

Cert I.D.: 59139
Lab Code 115844/1207.01

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

Certificate of Calibration Conformance

Page 1 of 3

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

SAE, ARP-958 - 1999, Electromagnetic Interference Measurement Antennas; Standard Calibration Method, Society of Automotive Engineers, Aerospace Recommended Practice; Fixed height, three antenna rotation, 1 meter separation; 3 meter calibration performed per Annex C.

ANSI C63.5 - 2006 American National Standard for Electromagnetic Compatibility-Radiated Emission Measurements in Electromagnetic Interference (EMI) Control-Calibration of Antennas, American National Standards Institute, Inc.

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:	ELECTRO-METRICS	Operating Range:	200 - 1000 MHz
Model Number:	LPA-30	Instrument Type:	Log Periodic (Medium)
Serial Number/ ID:	2280	Date Code:	
Tracking Number:	S009145	Alternate ID:	9
Date Completed:	22-Dec-06	Customer:	PRODUCT SAFETY ENG (FL)
Test Type:	3 and 10 Meter, Horizontal		
Calibration Uncertainty:	01m	200 - 1000 MHz, +/-0.8 dB	
(95% Confidence Level)	03m	200 - 1000 MHz, +/-0.9 dB	
	10m	200 - 1000 MHz, +/-0.8 dB	

Test Remarks:

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 17025-1999.

Standards and Equipment Used:

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

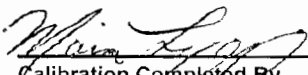
Anritsu	MS4623A	Network Analyzer	992201	28-Aug-07
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Condition of Instrument Upon Receipt:

In Tolerance to Internal Quality Standards

On Release:

In Tolerance to Internal Quality Standards


 Calibration Completed By
 Maria Lopez, Cal Lab Technician


 Attested and Issued on 22-Dec-06
 Ronald W. Bethel, Calibration Lab Supervisor



An ESCO Technologies Company

Cert I.D.: 60413
Lab Code 115844/1207.01

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Cedar Park, Texas 78613
(512) 531-6498

Certificate of Calibration Conformance

Page 1 of 5

The instrument identified 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 calibration performed per Annex C.

ANSI C63.5 - 2006 American National Standard for Electromagnetic Compatibility-Radiated Emission Measurements in Electromagnetic Interference (EMI) Control-Calibration of Antennas, American National Standards Institute, Inc.

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:	200 - 2000 MHz
Model Number:	3148	Instrument Type:	Log Periodic
Serial Number/ ID:	00044783	Date Code:	
Tracking Number:	S009867	Alternate ID:	132
Date Completed:	21-Mar-07	Customer:	PRODUCT SAFETY ENG (FL)
Test Type:	3 and 10 Meter, Horizontal		

Calibration Uncertainty:	01m	200 - 1000 MHz, +/-0.6 dB; 1000 - 2000 MHz, +/-1.4 dB
k=2, (95% Confidence Level)	03m	200 - 1000 MHz, +/-0.9 dB; 1000 - 2000 MHz, +/-1.0 dB
	10m	200 - 1000 MHz, +/-0.8 dB; 1000 - 2000 MHz, +/-1.0 dB

Test Remarks:

Calibration Traceability: All Measuring and Test Equipment (MTE) 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	19-Jan-08
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Condition of Instrument Upon Receipt:

In Tolerance to Internal Quality Standards

On Release:

In Tolerance to Internal Quality Standards


 Calibration Completed By
 Maria Lopez, Cal Lab Technician


 Attested and Issued on 21-Mar-07
 Ronald W. Bethel, Calibration Lab Supervisor