DAYTON T. BROWN, INC.
Founded 1950
ENGINEERING AND TEST DIVISION
CHURCH STREET, BOHEMIA, LONG ISLAND, NEW YORK 11716 (516) 589-6300

TEST REPORT NO.: DTB01R98-0855

DAYTON T. BROWN, INC. JOB NO.: 400267-00-000

CUSTOMER: P-Q CONTROLS, INC.
95 DOLPHIN ROAD
BRISTOL, CT 06010

SUBJECT: FCC CODE OF FEDERAL REGULATIONS, 47 CFR, PART 15, SUB-PART B TESTING PERFORMED ON ONE 418 MHz RECEIVER, DTB SERIAL NO. 3

PURCHASE ORDER NO.: 24905B

ATTENTION: MR. DAVID SCHUMANN

THIS REPORT CONTAINS: SIX PAGES AND FOUR ENCLOSURES

TEST ENGINEER	R. MONTICELLO
DEPARTMENT SUPERVISOR	K. CUMMINGS
OPERATIONS MANAGER	D. MELORE
DATE	3 DECEMBER 1998

THE DATA CONTAINED IN THIS REPORT WAS OBTAINED BY TESTING IN COMPLIANCE WITH THE APPLICABLE TEST SPECIFICATION AS NOTED

TABLE OF CONTENTS

1.0 ABSTRACT

This report details the results of the FCC Code of Federal Regulations, 47 CFR, Part 15, Sub-Part B testing performed on one 418 MHz Receiver, DTB Serial No. 3, manufactured by P-Q Controls, Inc.

The 418 MHz Receiver was found to be in compliance with the radiated portions of the FCC Code of Federal Regulations, 47 CFR, Part 15, Sub-Part B, specification limits.

Detailed test results can be observed in Enclosure 2 of this report.

The test results recorded in this report relate only to those items tested.

2.0 REFERENCES

(a)	Customer Purchase Order No.:	24905B
(b)	Dayton T. Brown, Inc. Job No.:	400267-00-000
(c)	Test Specification:	Code of Federal Regulations, 47 CFR, Part 15, Sub-Part B
(d)	Test Procedure:	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz, ANSI C63.4-1992, dated 17 July 1992

3.0 ADMINISTRATIVE INFORMATION

Customer:	P-Q Controls, Inc. 95 Dolphin Road Bristol, CT 06010
Manufacturer:	P-Q Controls, Inc.
Test Item:	418 MHz Receiver
Quantity Received:	One
DTB Serial No.:	3
Test Start Date:	5 August 1998
Test Completion Date:	7 August 1998
Disposition of Test Item:	The test sample was returned to P-Q Controls, Inc. on 10 August 1998.

4.0 TEST PROGRAM OUTLINE

Description of Test Method	Results
Radiated Emission, 30 MHz to 2 GHz	Met the specification requirements.

5.0 GENERAL TEST INFORMATION

Setup

For the radiated emission test in the frequency range of 30 to 1000 MHz, the test sample was set up in a climate controlled open field site that measures 44 feet long by 24 feet wide by 24 feet high.

For the radiated emission test in the frequency range of 1 to 2 GHz, the test sample was set up in an anechoic chamber that measures 30 feet wide by 32 feet long by 12 feet high.

Unit Operation:

Operational Mode Tested - Receive Mode - The test sample was in a normal receive mode and was powered by 12 volts DC. A 12 volt DC Bosch relay was wired to terminals 5 and 6 of J1-5 and was energized by having the receiver receiving a signal from a 418 MHz Transmitter.

Enclosure 1

Test Equipment List

Test equipment utilized for the program reported herein was within its assigned interval of calibration.
Details are on file at Dayton T. Brown, Inc. and will be made available upon request.

Founded 1950

TEST	ITEM	MANUFACTURER	DTB NO.	EQUIPMENT CHARACTERISTIC	MODEL	SERIAL NO.	CALIBRATION DUE DATE
Radiated Emission	BiLog Antenna	Chase-York	27-1	30 - 2000 MHz	CBL 6112	2055	4/4/99
Radiated Emission	Double Ridge Waveguide Antenna	Electro-Mechanics Co.	27-55	1.0 - 18 GHz	3115	2072	10/18/98
Radiated Emission	Metering Module	Electro-Metrics	65-142-1	10 kHz - 1.0 GHz	CRM 25	136	7/12/99
Radiated Emission	Analyzer, Interference	Electro-Metrics	65-143	10 kHz - 1.0 GHz	EMC 25 Mk III	656	7/5/99
Radiated Emission	Spectrum Analyzer	Hewlett-Packard	65-247	10 kHz - 26.5 GHz	8563A	3220A 01924	11/8/98
Radiated Emission	Preamplifier	Hewlett-Packard	71-11	1 - 26.5 GHz 30 dB Gain	8449B	3008A-00284	12/13/98
Radiated Emission	Anechoic Facility	Dayton T. Brown, Inc.	-	30 ft x 32 ft 12 ft High	-	Anechoic Room	-
Radiated Emission	FCC Facility	Dayton T. Brown, Inc.	-	44 ft x 24 ft 24 ft High	-	FCC Site	-

Enclosure 2

Radiated Emission, 30 MHz to 2 GHz

DAYTON T. BROWN INC.
Founded 1950

RADIATED EMISSION, 30 MHz to 2 GHz

Test Procedure

A radiated emission test, in the frequency range of 30 to 1000 MHz, was performed on the 418 MHz Receiver while it was mounted on a wooden table that was standing on a conductive turntable.

For the frequency range of 30 to 1000 MHz, measurements were made utilizing a manually tuned interference measurement receiver which was located in the instrumentation room below the ground plane.

The interference measurement receiver was connected to the measurement antenna which was located 3 meters from the turntable for the frequency range of 30 to 1000 MHz.

A linear polarized antenna was utilized for the measurements. The antenna height was varied between 1 and 4 meters and the test sample was rotated 360° to ensure maximum pickup from the test sample.

A radiated emission test, in the frequency range of 1 to 2 GHz, was performed on the 418 MHz Receiver while it was mounted on a wooden table in an anechoic chamber.

For the frequency range of 1 to 2 GHz, measurements were made utilizing a spectrum analyzer located in a shielded enclosure which was attached to the anechoic enclosure.

The spectrum analyzer was connected to the measurement antenna, which was located 3 meters from the table for the frequency range of 1 to 2 GHz, with a length of 50Ω coaxial cable.

Any emissions not reported were at least 20 dB below the specification limits.

Measurements were made utilizing the following bandwidth and detector function:

Frequency Range	CISPR Bandwidth	Detector Function
30 to 1000 MHz	120 kHz	Quasi-Peak
1 to 2 GHz	100 kHz	Peak

The antenna per meter factors of the antennas utilized are depicted in the figures contained in this enclosure.

The test setup empoyed is depicted in the photographs contained in this enclosure.

RADIATED EMISSION,
INTENTIONAL RADIATOR, 30 MHz to 2 GHz
(Continued)

Test Results

No emission levels above the FCC Code of Federal Regulations, 47 CFR, Part 15, Sub-Part B, specification limits were observed.

Detailed test results for the radiated emission test can be observed on pages 3 through 8 of this enclosure.

DAYTON T. BROWN, INC.
Founded 1950

Test Item : Receiver
Customer : PQ Controls
Test Condition : Receive Mode (Receiving signal from transmitter)
Specification : FCC Rules & Reg., Part 15, Sub-Part B, Class A
Detector Function : Quasi-Peak **Units :** dBuV/m

Date : 6 Aug 1998
Serial No.: None
Job No. : 400267-00-000
Distance : 3 Meters
Antenna Polarization: Vertical
Bandwidth: 120 kHz (CISPR)

Radiated Field Strength Measurements

Met Requirement Yes ☑ No ☐

Freq. (MHz)	Meter Indicated dBuV	Antenna Factor dB	Cable Loss dB	Pre-Amp Gain dB	Total Indicated dBuV/m	Spec. Limit dBuV/m		Level Above Spec. Limit	Notes	
30	-11	18.2	.29	0	7.48999	49.55				
422	36	17.2	1.36	0	54.56	56.9				
836	-3	21.2	1.97	0	20.17	56.9				
1000	1	20.3	2.19	0	23.49	60				

Remarks : * Indicates above Specification Limit; A - Indicates Ambient; Total Indicated = Meter Indicated + Antenna Factor + Cable Loss - Pre-Amp Gain
(Using BiLog Antenna DTB No. 27-1; Calibration Due 12 April 1998)

Engineer : R. Truesdell **Technician** Laurence Williams

98-0855 Enc 2 Pg 4

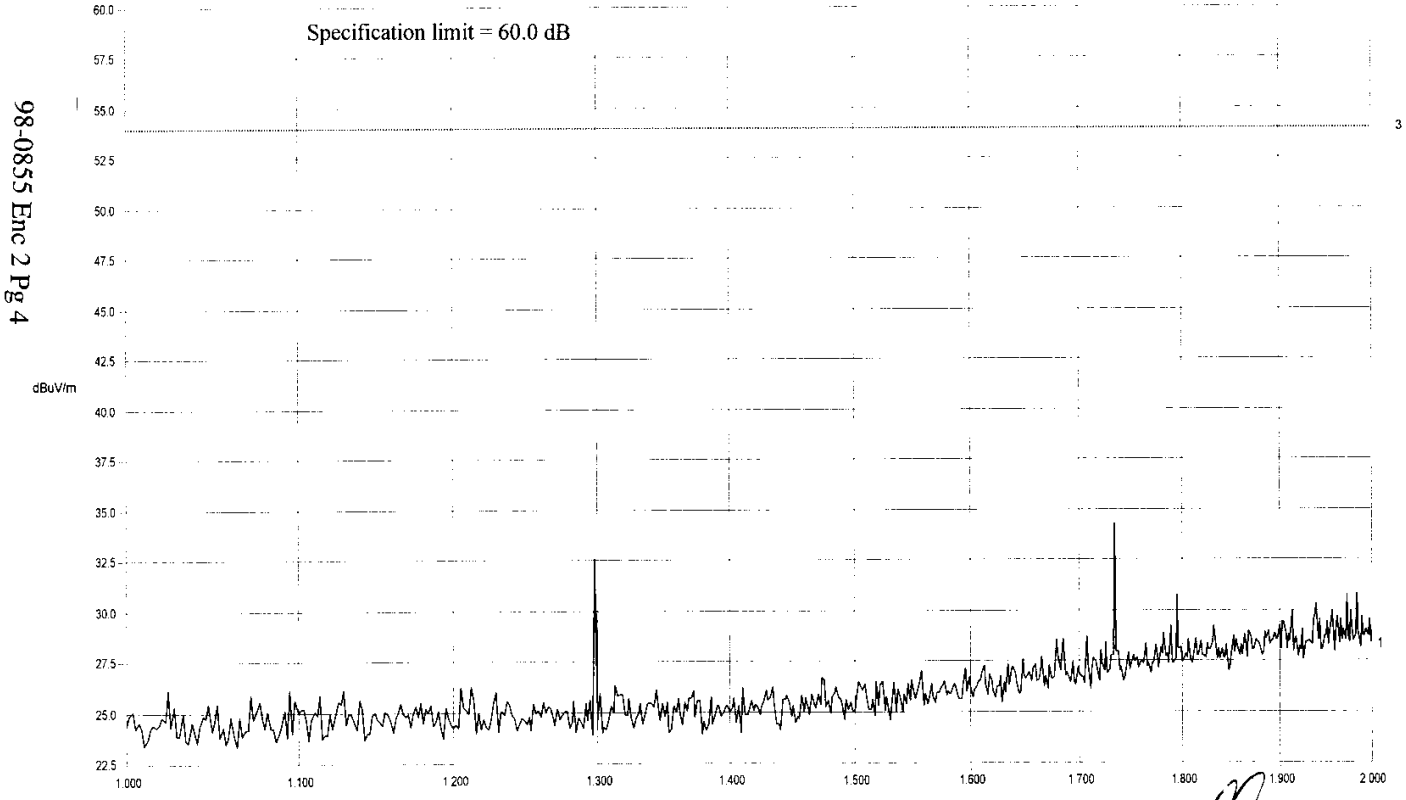
Test Title: Radiated Emissions

Test Procedure:	FCC Part 15, Sub -Part C	Date:	8/7/98	Time:	4:09 PM
Customer:	P Q Controls	Tested By:	Gary Butler		
Test Item:	Receiver	Project Eng.:	R. Monticello		
Model Num.:	N/A	Job Num.:	400272-00-000		
Part Num.:	N/A	Test Num.:	006		
Serial Num.:	DTB # 3	Sensor Loc.:	3 meter distance		
Mode of Op.:	Normal Operation	Sensor Pol.:	Vertical		
Comment:					

1. RE Data

3. 400272_rcvr.rel (spec limit)

File Name: 0272006.red



BW Table

Frequency	BW
1.00 GHz	1.00E5 Hz
2.00 GHz	

Factor Files

27-55.rea (1.00 GHz)

Correction Files

- sma11cc.rec (1.00 GHz) (cable)
- sma11b.rec (1.00 GHz) (2nd cable)
- sma111.rec (1.00 GHz) (3rd cable)
- zero.ret (1.00 GHz) (attenuator)
- 8449b.rep (1.00 GHz) (pre-amp)

Engineer: R. Monticello

Technician:

98-0855 Enc 2 Pg 5

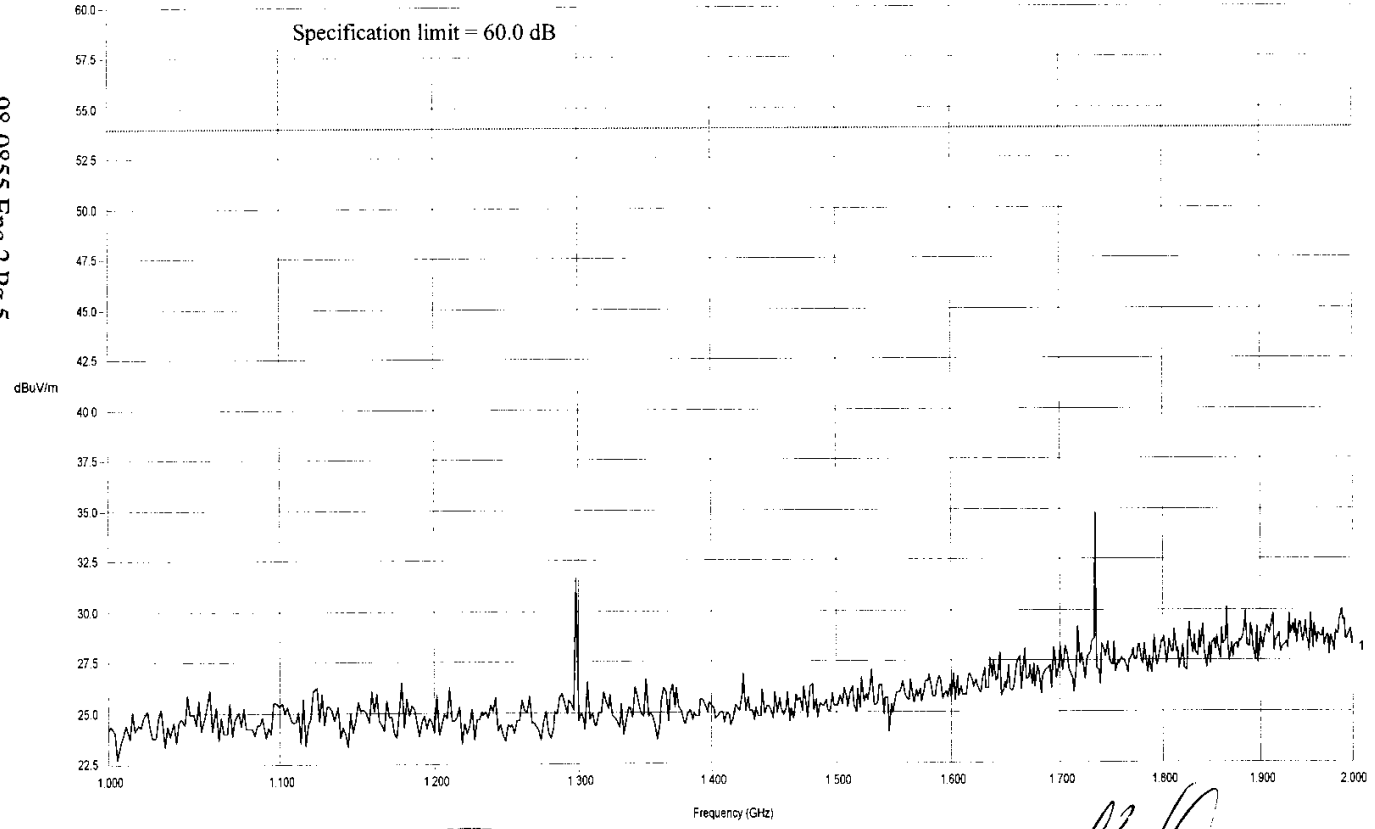
Test Title: Radiated Emissions

Test Procedure:	FCC Part 15, Sub -Part C	Date:	8/7/98	Time:	4:07 PM
Customer:	P Q Controls	Tested By:	Gary Butler		
Test Item:	Receiver	Project Eng.:	R. Monticello		
Model Num.:	N/A	Job Num.:	400272-00-000		
Part Num.:	N/A	Test Num.:	005		
Serial Num.:	DTB # 3	Sensor Loc.:	3 meter distance		
Mode of Op.:	Normal Operation	Sensor Pol.:	Vertical		
Comment:	Power On. No signal applied.				

1: RE Data

3: 400272_rcvr.rel (spec limit)

File Name: 0272005.red



BW Table

Frequency	BW
1.00 GHz	1.00E5 Hz
2.00 GHz	

Factor Files

27-55.rea (1.00 GHz)

Correction Files

- sma11cc.rec (1.00 GHz) (cable)
- sma11b.rec (1.00 GHz) (2nd cable)
- sma111.rec (1.00 GHz) (3rd cable)
- zero.ret (1.00 GHz) (attenuator)
- 8449b.rep (1.00 GHz) (pre-amp)

Engineer: R. Monticello

Technician: G Butler

DAYTON T. BROWN, INC.
Founded 1950

Test Item : Receiver
Customer : PQ Controls
Test Condition : Receive Mode (Receiving signal from transmitter)
Specification : FCC Rules & Reg., Part 15, Sub-Part B, Class A
Detector Function : Quasi-Peak **Units :** dBuV/m

Date : 6 Aug 1998
Serial No.: None
Job No. : 400267-00-000
Distance : 3 Meters
Antenna Polarization: Horizontal
Bandwidth: 120 kHz (CISPR)
Met Requirement Yes ☑ No ☐

Radiated Field Strength Measurements

Freq. (MHz)	Meter Indicated dBuV	Antenna Factor dB	Cable Loss dB	Pre-Amp Gain dB	Total Indicated dBuV/m	Spec. Limit dBuV/m		Level Above Spec. Limit	Notes	
30	-10	19.6	.29	0	9.89	49.55				
422	26	17.7	1.36	0	45.06	56.9				
836	1	21.7	1.97	0	24.67	56.9				
1000	-1	22	2.19	0	23.19	60				

Remarks : * Indicates above Specification Limit; A - Indicates Ambient; Total Indicated = Meter Indicated + Antenna Factor + Cable Loss - Pre-Amp Gain
(Using BiLog Antenna DTB No. 27-1; Calibration Due 12 April 1998)

Engineer : R. Truchsess **Technician :** Lawrence Williams

98-0855 Enc 2 Pg 7

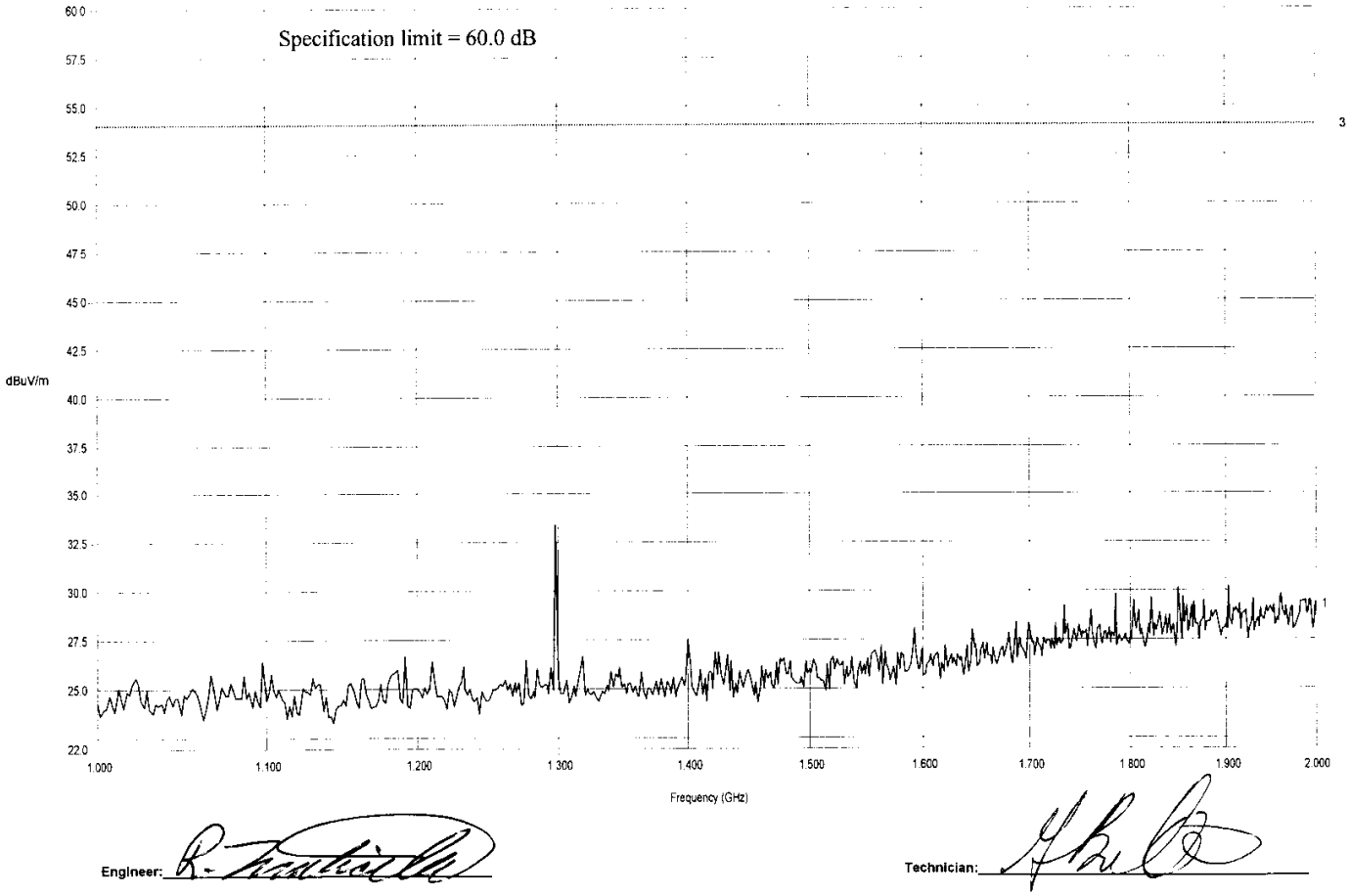
Test Title: Radiated Emissions

Test Procedure:	FCC Part 15, Sub -Part C	Date:	8/7/98	Time:	4:23 PM
Customer:	P Q Controls	Tested By:	Gary Butler		
Test Item:	Receiver	Project Eng.:	R. Monticello		
Model Num.:	N/A	Job Num.:	400272-00-000		
Part Num.:	N/A	Test Num.:	008		
Serial Num.:	DTB # 3	Sensor Loc.:	3 meter distance		
Mode of Op.:	Normal Operation	Sensor Pol.:	Horizontal		
Comment:					

1. RE Data

3. 400272_rcvr.rel (spec limit)

File Name: 0272008.red



BW Table

Frequency	BW
1.00 GHz	1.00E5 Hz
2.00 GHz	

Factor Files

27-55 rea (1.00 GHz)

Correction Files

- sma11cc.rec (1.00 GHz) (cable)
- sma11b.rec (1.00 GHz) (2nd cable)
- sma111.rec (1.00 GHz) (3rd cable)
- zero.ret (1.00 GHz) (attenuator)
- 8449b.rep (1.00 GHz) (pre-amp)

Engineer: R. Monticello

Technician: Gary Butler

98-0855 Enc 2 Pg 8

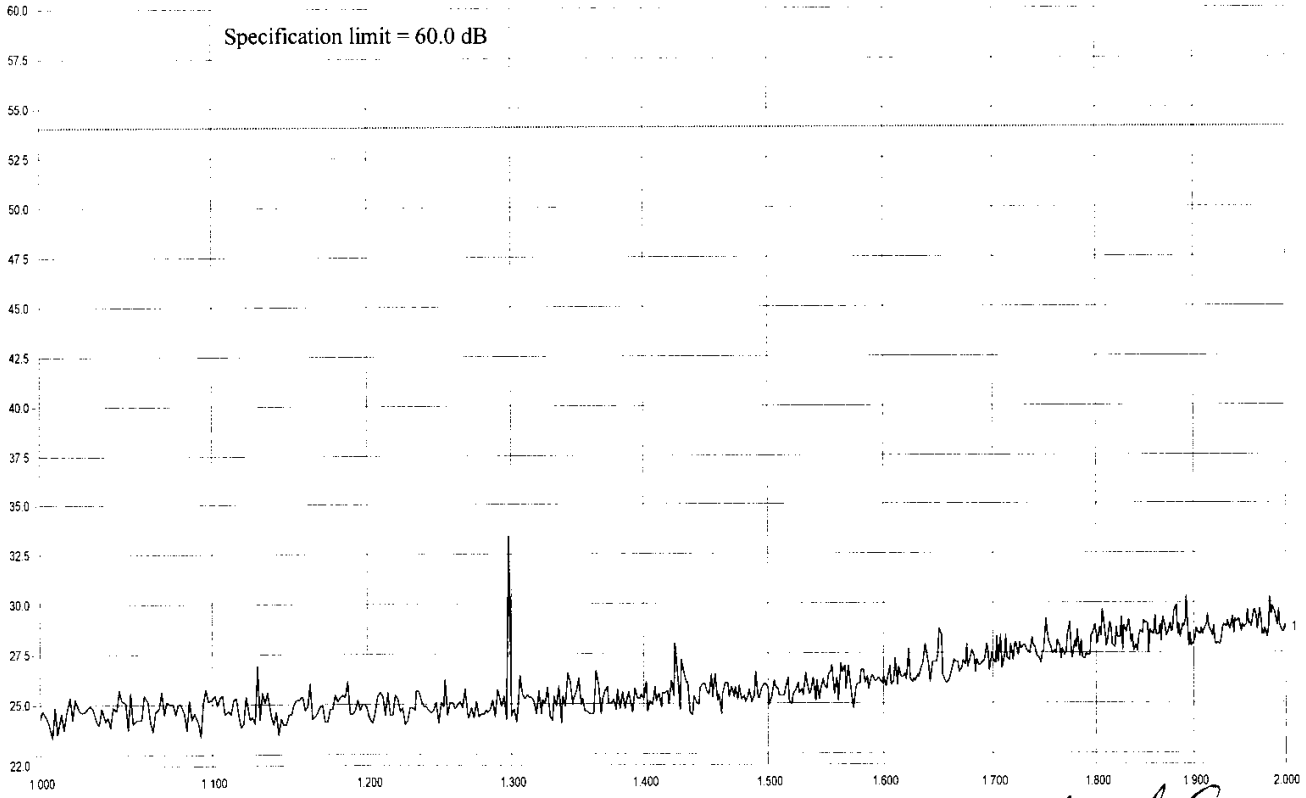
Test Title: Radiated Emissions

Test Procedure:	FCC Part 15, Sub -Part C	Date:	8/7/98	Time:	4:21 PM
Customer:	P Q Controls	Tested By:	Gary Butler		
Test Item:	Receiver	Project Eng.:	R. Monticello		
Model Num.:	N/A	Job Num.:	400272-00-000		
Part Num.:	N/A	Test Num.:	007		
Serial Num.:	DTB # 3	Sensor Loc.:	3 meter distance		
Mode of Op.:	Normal Operation	Sensor Pol.:	Horizontal		
Comment:	Power on. No Signal applied				

1 RE Data

3 400272_rcvr.rel (spec limit)

File Name: 0272007.red



BW Table

Frequency	BW
1.00 GHz	1.00E5 Hz
2.00 GHz	

Factor Files

27-55 rea (1.00 GHz)

Correction Files

- sma11cc.rec (1.00 GHz) (cable)
- sma11b rec (1.00 GHz) (2nd cable)
- sma111.rec (1.00 GHz) (3rd cable)
- zero.ret (1.00 GHz) (attenuator)
- 8449b rep (1.00 GHz) (pre-amp)

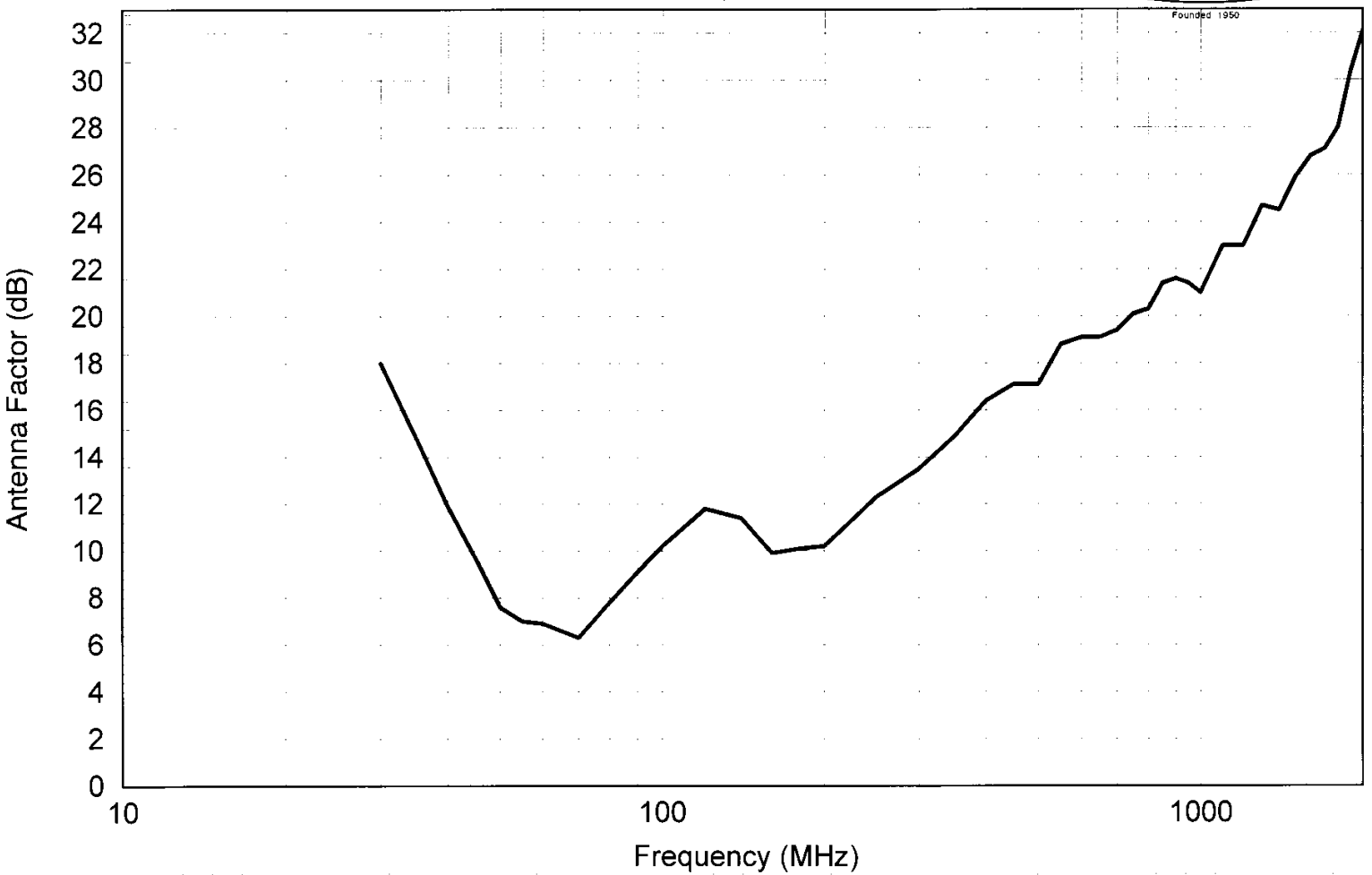
Engineer: R. Monticello

Technician: G. Butler

10 Meter Antenna Factor VERTICAL Polarization

For The Chase EMC, Inc. BiLog Antenna

Model Number: CBL6112, DTB Number: 27-1



Antenna Factor (dB)	30	35	40	45	50	55	60	70	80	90	100	120	140	160	180	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
	18	14.8	11.9	9.7	7.6	7	6.9	6.3	7.8	9.1	10.2	11.8	11.4	9.9	10.1	10.2	12.3	13.5	14.9	16.4	17.1	17.1	18.8	19.1	19.1	19.4	20.1	20.3	21.4	21.6	21.4	21	23	23	24.7	24.5	25.9	26.8	27.1	28	30.4	32.1

Cal Date: 10 April 1998

Due Date: 4 April 1999

Add Factors Shown Here in dB to Meter Indicated in dBuV to Convert to Field Intensity in dBµV/m

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98-0855 Enc 2 Pg 10

Antenna Factor For The
EMCO Model 3115
Double Ridge Waveguide Antenna DTB No 27-55

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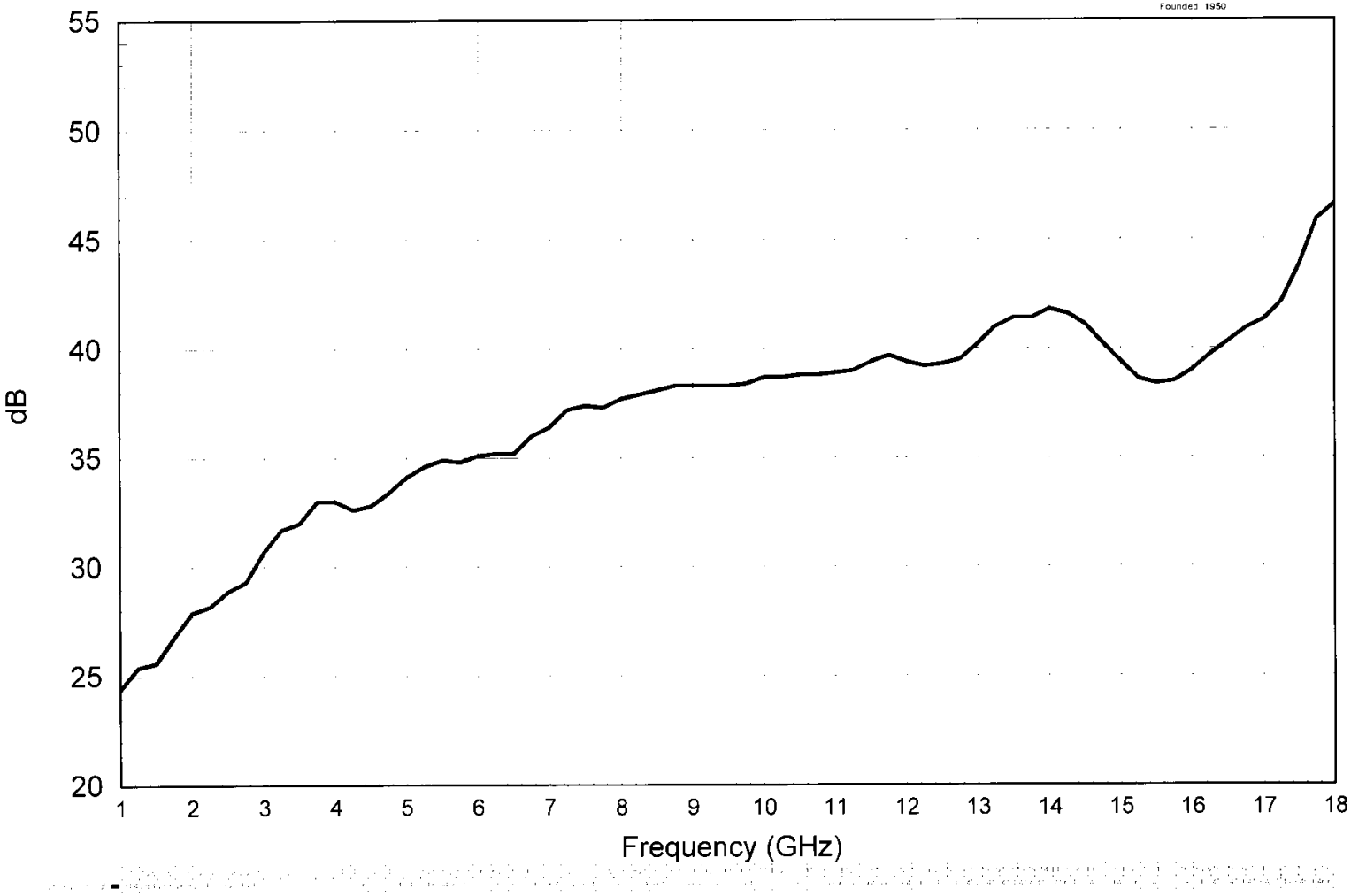


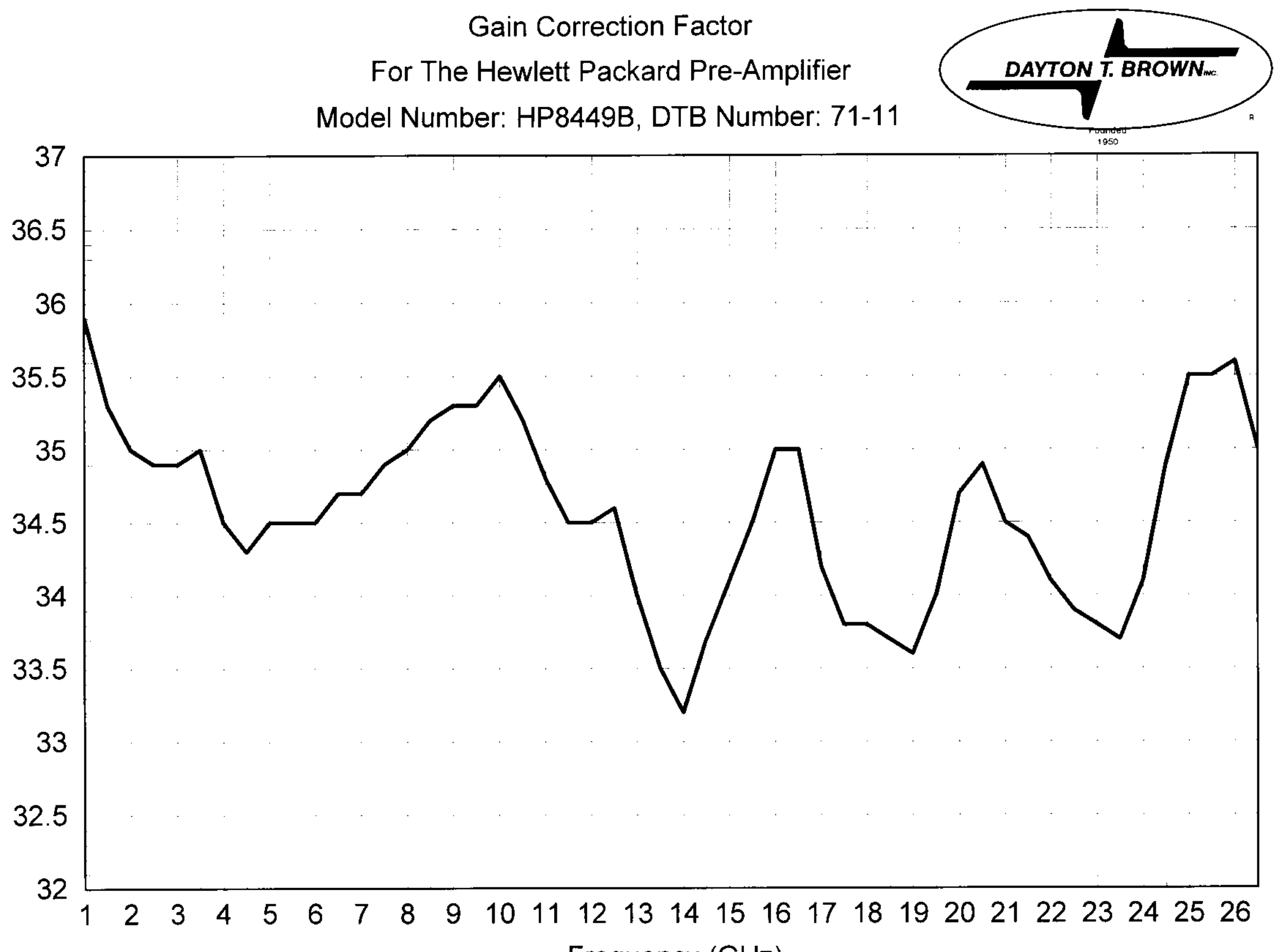
CAL DATE 23 OCT 1996
DUE DATE 18 OCT 1998

Add Factors Shown Here in dB to
Meter Indicated in dBuV
to Convert to Field Intensity in dBuV/m.

Gain Correction Factor

For The Hewlett Packard Pre-Amplifier

Model Number: HP8449B, DTB Number: 71-11

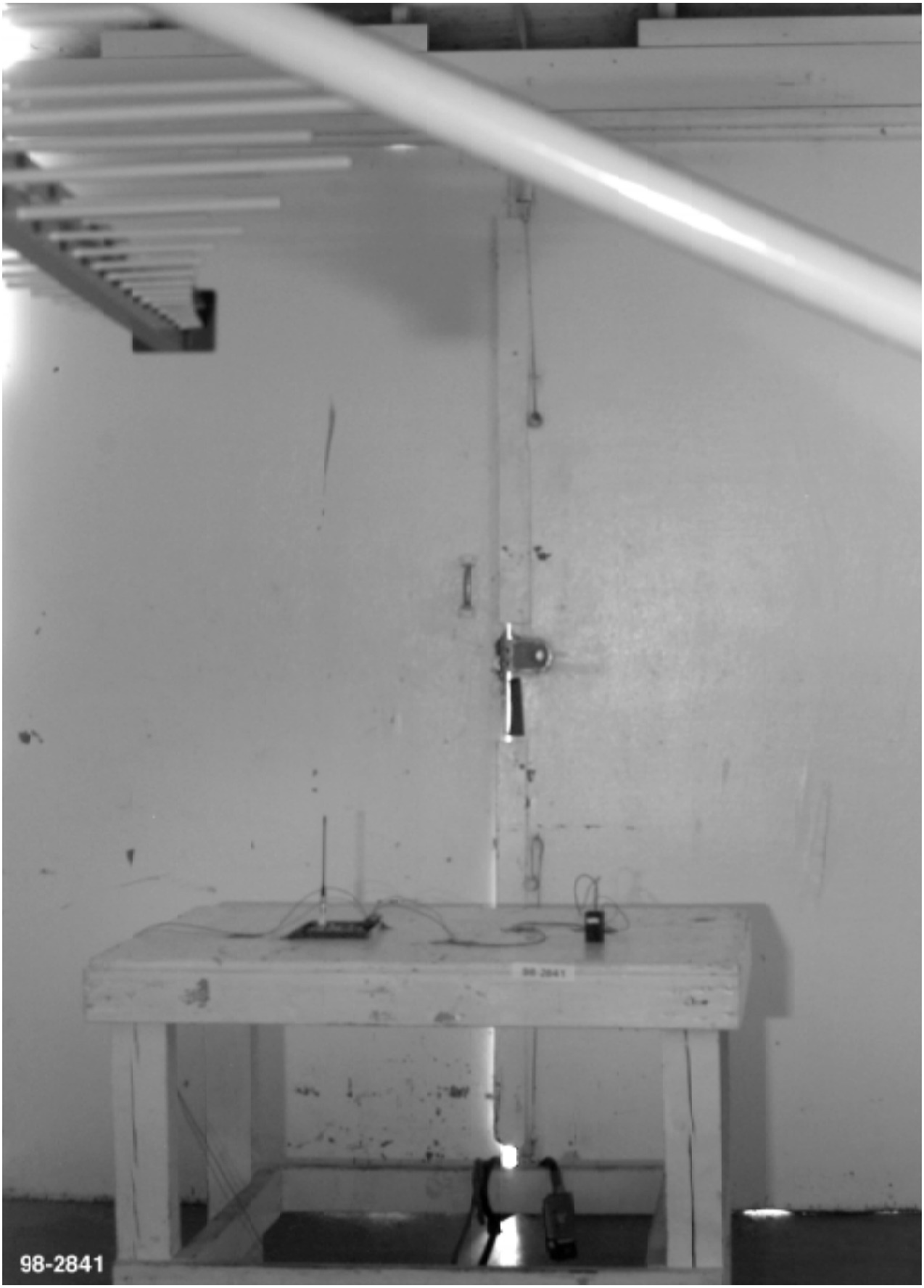


Frequency (GHz)	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5
Gain (dB)	35.9	35.3	35	34.9	34.9	35	34.5	34.3	34.5	34.5	34.5	34.7	34.7	34.9	35	35.2	35.3	35.3	35.5	35.2	34.8	34.5	34.5	34.6	34	33.5

Frequency (GHz)	14	14.5	15	15.5	16	16.5	17	17.5	18	18.5	19	19.5	20	20.5	21	21.5	22	22.5	23	23.5	24	24.5	25	25.5	26	26.5
Gain (dB)	33.2	33.7	34.1	34.5	35	35	34.2	33.8	33.8	33.7	33.6	34	34.7	34.9	34.5	34.4	34.1	33.9	33.8	33.7	34.1	34.9	35.5	35.5	35.6	35

Cal Date: 19 Dec 1996

Due Date: 13 Dec 1998



TESTED FOR P-Q CONTROLS, INC. S/N DTB-3
ITEM: 418 MHz RECEIVER

RADIATED EMISSION, 30 TO 1000 MHz

JOB NO. 400267-00-000 FILE NO. 98-2841 6 AUGUST 1998
DTB01R98-0855 ENCLOSURE 2 PHOTO 1

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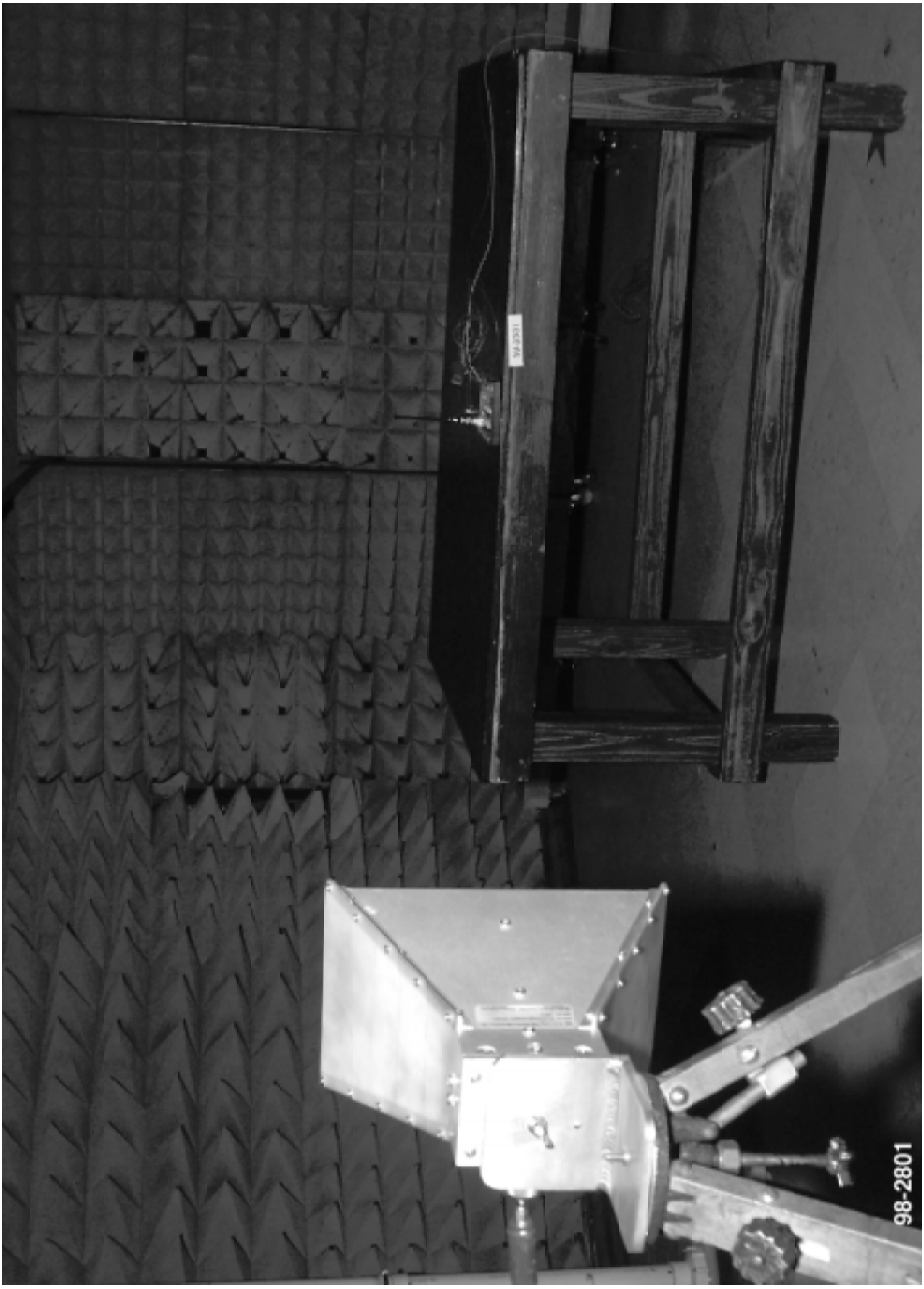

TESTED FOR P-Q CONTROLS, INC. S/N DTB-3
ITEM: 418 MHz RECEIVER

RADIATED EMISSION, 1 TO 2 GHz

JOB NO. 400267-00-000 FILE NO. 98-2801 10 AUGUST 1998
DTB01R98-0855 ENCLOSURE 2 PHOTO 2

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Enclosure 3

Physical Inspection Forms

DAYTON T. BROWN INC.
Founded 1950

PHYSICAL INSPECTION FORM

JOB NUMBER 400267-00-000 DATE 8-5-98

CUSTOMER: P-Q Controls, Inc. ENGINEER R. Monticello

TEST FCC SPECIFICATION 47 CFR, Part 15

ITEM 418 MHz Receiver SERIAL NO. DTB 3

A PRE TEST INSPECTION REVEALED :

√ NO ANOMALIES

NO ANOMALIES DUE TO TESTING

THE FOLLOWING

Photograph Taken ?? NO If Yes, Photo Number N/A

Technician Lawrence Williams

Engineer R. Monticello

LAB FORM NO. 40 REV 03/94

DAYTON T. BROWN INC.
Founded 1950

PHYSICAL INSPECTION FORM

JOB NUMBER 400267-00-000 DATE 8-6-98

CUSTOMER: P-Q Controls, Inc. ENGINEER R. Monticello

TEST FCC SPECIFICATION 47 CFR, Part 15

ITEM 418 MHz Receiver SERIAL NO. DTB 3

A POST TEST INSPECTION REVEALED :

√ NO ANOMALIES

NO ANOMALIES DUE TO TESTING

THE FOLLOWING

Photograph Taken ?? NO If Yes, Photo Number N/A

Technician

Engineer

Enclosure 4

A2LA Scope of Accreditation

American Association for Laboratory Accreditation

SCOPE OF ACCREDITATION TO ISO/IEC GUIDE 25-1990

DAYTON T. BROWN, INC.
Church Street
Bohemia, NY 11716
Charles Gortakowski Phone: 516 589 6300

ACOUSTICS & VIBRATION

Valid To: December 31, 1998 Certificate Number: 0767-01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following acoustics & vibration tests:

Vibration (Sine, Random, Gunfire, Shipboard)

Buzz, Squeak and Rattle

Combined Environments and Reliability (Temperature, Humidity and Vibration)

Pyroshock

Sound Power and Measurements

Airborne and Structureborne Noise Measurement

On the following types of materials and products:
Aircraft Components & Systems; Automotive Components & Systems; Shipboard Components & Systems; Railroad & Industrial Vehicle Components & Systems; Information Technology & Telecommunication Equipment & Systems; Electronic Components & Systems; Medical Electronic Equipment; Military Equipment & Hardware.

Using the following standards:
Military: MIL-STD-810, MIL-STD-167-1, MIL-S-901, MIL-STD-202, MIL-STD-781, MIL-E-16400, MIL-STD-108, MIL-STD-2036, MIL-T-28800, MIL-STD-740-1, MIL-STD-740-2, NAVMAT P-9492
Commercial: RTCA/DO-160
ANSI: S1.2, S1.35
GM: 9103P, 9104P, 9110P, 9125P, 9128P, 9140P, 9144P, 9154P, 9163P, 9175P
FORD: DVT1.12.00.007-AC, ES-F5VB-54043B13-AA
Chrysler: PF-9007, PF-9531, PF-6897, PF-8243, PF-9164
Telephony: Bellcore GR-1089

Rosanne M. Robinson

American Association for Laboratory Accreditation

SUPPLEMENT TO THE SCOPE OF ACCREDITATION
TO ISO/IEC GUIDE 25-1990 AND EN 45001

DAYTON T. BROWN, INC.
Church Street
Bohemia, NY 11716
Charles Gortakowski Phone: 516 589 6300

ELECTRICAL (EMC)

Valid as of: November 18, 1997 Certificate Number: 0767-02
Valid until: December 31, 1998

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following electrical tests:

AS/NZS 3548
Code of Federal Regulations (CFR) 47, FCC Method Part 15 using ANSI C63.4
Code of Federal Regulations (CFR) 47, FCC Method Part 68
CISPR 22
EN: 50081-1, 50081-2, 50082-1, 50082-2, 50091-1, 50091-2, 55011, 55013, 55014, 55015, 55022, 60555-2, 60555-3, 60601-1-2, 61000-4-1, 61000-4-2, 61000-4-4, 61000-4-5, 61000-4-7, 61000-4-8, 61000-4-11
ENV: 50140, 50141, 50142, 50204
IEC: 601, 601-1-2, 801-1 (1000-4-1), 801-2 (1000-4-2), 801-3 (1000-4-3), 801-4 (1000-4-4), 801-5 (1000-4-5) 801-6 (1000-4-6), 1000-4-7, 1000-4-8, 1000-4-11, 1000-3-2, 1000-3-3
Commercial Aviation: RTCA/DO-160, FAA Advisory Circular 20-136, Boeing D200Z001, Boeing WZZ7300
Military: MIL-STD-461 (A,B,C,&D), MIL-STD-462, MIL-STD-1399, MIL-STD-704, MIL-E-16400, MIL-STD-2036, MIL-STD-1275A(AT), MIL-STD-202
GM: 9100P, 9105P, 9109P, 9110P, 9112P, 9113P, 9114P, 9115P, 9116P, 9117P, 9119P, 9120P, 9103P, 9104P, 9125P, 9128P, 9140P, 9144P, 9154P, 9163P, 9175P
Chrysler PF9164
Telephony Bellcore GR-1089
ANSI/IEEE: IEEE-587-1980, IEEE-C62.41, IEEE-C62.32
TEMPEST: NST ISSAM Tempest/1-92, NACSEM 5100, NACSIM 5100A, NACSEM 5112, KAG-30A/TSEC
VCCI

Peter Mongan

American Association for Laboratory Accreditation

SCOPE OF ACCREDITATION TO ISO/IEC GUIDE 25-1990 AND EN 45001

DAYTON T. BROWN, INC.
Church Street
Bohemia, NY 11716
Charles Gortakowski Phone: 516 589 6300

ELECTRICAL (EMC)

Valid To: December 31, 1998 Certificate Number: 0767-02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following electrical tests:

Capacitance	Impedance
AC Capacitance	Inductance
AC Loss Characteristics	Lightning
Permittivity	Magnetism
(Dielectric Loss Constant)	Power Transmission
Conductivity	Resistivity
Current (AC/DC)	AC/DC
Electrostatic (ESD)	Insulation Resistance
EMP	Voltage (AC/DC)
EMI/RFI	
Conducted Emissions	Lightning
Conducted Transient Susceptibility	Input Power Variations
Conducted Susceptibility (Immunity)	Magnetic Field Emission
Radiated Emissions (O.A.T.S. Method)	Magnetic Field Susceptibility
Radiated Emissions	Harmonics
Shielded Room Method	RF Power Handling
Radiated Susceptibility (Immunity)	Shielding Effectiveness
Radiated Transient Susceptibility	Stirred Mode
Electrostatic Discharge (ESD)	Transmissibility
Electromagnetic Pulse (EMP)	Site Survey
Electrical Fast Transient (EFT)	TEMPEST

On the following types of materials and products:
Aerospace Components & Systems; Automotive Components & Systems; Shipboard Components & Systems; Railroad & Industrial Vehicle Components & Systems; Information Technology & Telecommunication Equipment & Systems; Electrical & Electronic Components & Systems; Medical Electronic Equipment; Military Equipment & Hardware.

Using the following sources of standards:
ANSI, AS/NZS, CFR, CISPR, EN, ENV, FCC, IEC, Commercial Aviation, Military, GM, Chrysler, Telephony, ANSI/IEEE, TEMPEST, VCCI

A supplemental scope, identifying the full range of tests and types of tests, is available from A2LA or the laboratory.

Peter Mongan

American Association for Laboratory Accreditation

SCOPE OF ACCREDITATION TO ISO/IEC GUIDE 25-1990

DAYTON T. BROWN, INC.
Church Street
Bohemia, NY 11716
Charles Gortakowski Phone: 516 589 6300

MECHANICAL

Valid To: December 31, 1998 Certificate Number: 0767-03

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following mechanical tests:

Compression	Stress	Fracture
Fatigue	Metallography	Torsion
Shear	Hardness	

Tensile (Room, High & Low Temperatures)
NDT (Dye Penetrant & Magnetic Particle)

Environmental Simulation		
Acceleration	Altitude	Fungus
Explosion	Dust	Sun/Solar Radiation
Temperature/Altitude	Wind & Rain	Combined Environments
Salt Fog/Salt Spray	Humidity	Water Immersion
Temperature/Shock	Drop/Impact	Sand

Durability (Horn Life Actuation/Horn Blow Mechanism)
High/Low Temperature/Humidity/Vibration
High Pressure Burst (Air & Hydraulic)
Shock (1/2 Sine, Sawtooth, Trapezoid)

On the following types of materials and products:
Aerospace Components & Systems; Automotive Components & Systems; Shipboard Components & Systems; Railroad & Industrial Components & Systems; Information Technology & Telecommunication Equipment & Systems; Electrical & Electronic Components & Systems; Medical Electronic Equipment; Military Equipment & Hardware; Packaging & Containers; Pipes, Hoses, Fittings, and Valves.

Using the following standards:
Military: MIL-STD-810, MIL-STD-167-1, MIL-S-901, MIL-STD-202, MIL-STD-781, MIL-E-16400, MIL-STD-108, MIL-STD-2036, MIL-T-28800, NAVMAT P-9492, MIL-STD-6866, MIL-T-7743, MIL-STD-410
Commercial: RTCA/DO-160
ASTM: B117, D1141, G23, E18, D2240, B557, E8, E1444
GM: 9110P,9103P, 9104P, 9125P, 9128P, 9140P, 9144P, 9154P, 9163P, 9175P
FORD: DVT1.12.00-007-AC, ES-F5VB-54043B13-AA
Chrysler: PF-9007, PF-9531, PF-6897, PF-8243, PF-9164
Telephony: Bellcore GR-1089

Rosanne M. Robinson