



DAVIS INSTRUMENTS TEST REPORT

FOR THE

VANTAGE PRO 2 WIRELESS REPEATER, 7626, 7627, 7653 & 7654

**FCC PART 15 SUBPART C SECTIONS 15.207, 15.209, 15.247,
SUBPART B SECTION 15.109 CLASS B AND RSS-210**

COMPLIANCE

DATE OF ISSUE: JUNE 1, 2005

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Date of test: May 5-27, 2005

Report No.: FC05-023

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TABLE OF CONTENTS

Administrative Information	4
FCC to Canada Standard Correlation Matrix.....	5
Conditions for Compliance.....	5
Approvals.....	5
FCC 15.31(e) Voltage Variation.....	6
FCC 15.31(m) Number Of Channels.....	6
FCC 15.33(a) Frequency Ranges Tested.....	6
FCC 15.35 Analyzer Bandwidth Settings.....	6
FCC 15.203 Antenna Requirements.....	6
Eut Operating Frequency.....	6
Equipment Under Test (EUT) Description.....	7
Equipment Under Test.....	7
Peripheral Devices.....	7
Report of Measurements.....	8
Table 1: FCC 15.109 Six Highest Radiated Emission Levels.....	8
Table 2: FCC 15.111 Six Highest Radiated Emission Levels.....	9
Table 3: FCC 15.207 Six Highest Conducted Emission Levels.....	10
FCC 15.247(a) Average Time Of Occupancy.....	11
FCC 15.247(a)(1) Frequency Separation.....	12
FCC 15.247(a)(1) Number Of Hopping Channels.....	13
FCC 15.247(a)(1) Dwell Time Per Hop Time.....	14
FCC 15.247(a)/RSS-210 Occupied Bandwidth.....	15
Table 4: FCC 15.247(b)(2) Fundamental Emission Levels.....	18
Table 5: FCC 15.247(b)(3) Six Highest Radiated Emission Levels.....	19
Table 6: FCC 15.247(c)/15.209 Six Highest OATS Radiated Emission Levels.....	20
Table 7: FCC 15.247(c) Six Highest Antenna Conducted Emission Levels.....	21
FCC 15.247(c) Band Edge.....	22
Temperature And Humidity During Testing.....	30
EUT Setup.....	30
Correction Factors.....	30
Table A: Sample Calculations.....	30
Test Instrumentation and Analyzer Settings.....	31
Spectrum Analyzer Detector Functions.....	31
Peak.....	31
Quasi-Peak.....	31
Average.....	31
EUT Testing.....	32
Mains Conducted Emissions.....	32
Antenna Conducted Emissions.....	32
Radiated Emissions.....	32
Appendix A: Test Setup Photographs.....	34
Photograph Showing Radiated Emissions.....	35

Photograph Showing Radiated Emissions	36
Photograph Showing Radiated Emissions	37
Photograph Showing Radiated Emissions	38
Photograph Showing Mains Conducted Emissions	39
Photograph Showing Direct Connect Test Setup.....	40
Photograph Showing Direct Connect Test Setup.....	41
Appendix B: Test Equipment List	42
Appendix C: Measurement Data Sheets	43

ADMINISTRATIVE INFORMATION

DATE OF TEST: May 5-27, 2005

DATE OF RECEIPT: May 5, 2005

MANUFACTURER: Davis Instruments
3465 Diablo Avenue
Hayward, CA 94545

REPRESENTATIVE: Perry Dillon

TEST LOCATION: CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

TEST METHOD: ANSI C63.4 (2003), DA 02-2138 August 30, 2002, DA 00-705 March 30, 2000, KDB Publication No. 558074 and RSS-212

PURPOSE OF TEST: To demonstrate the compliance of the Vantage Pro 2 Wireless Repeater, 7626, 7627, 7653 & 7654, with the requirements for FCC Part 15 Subpart C Sections 15.207, 15.209, 15.247, Subpart B Section 15.109 Class A and RSS-210 devices.

FCC TO CANADA STANDARD CORRELATION MATRIX

Canadian Standard	Canadian Section	FCC Standard	FCC Section	Test Description
RSS 210	5.5	47CFR	15.203	Antenna Connector Requirements
RSS 210	6.2.1	47CFR	15.209	General Radiated Emissions Requirement
RSS 210	6.3	47CFR	15.205	Restricted Bands of Operation
RSS 210	6.4	47CFR	15.215(c)	Frequency Stability Recommendation
RSS 210	6.5	47CFR	15.35(c)	Pulsed Operation
RSS 210	6.6	47CFR	15.207	AC Mains Conducted Emissions Requirement
RSS 210	6.2.2(o)(a1)	47CFR	15.247(a)(1)	Minimum Channel Bandwidth
RSS 210	6.2.2(o)(a1)	47CFR	15.247(g)	Hopping Sequence
RSS 210	6.2.2(o)(a1)	47CFR	15.247(h)	Incorporation of Intelligence
RSS 210	6.2.2(o)(a2)	47CFR	15.247(a)(1)(i)	Average Time of Occupancy
RSS 210	6.2.2(o)(a2)	47CFR	15.247(b)(2)	RF Power Output
RSS 210	6.2.2(o)(e1)	47CFR	15.247(c)	Spurious Emissions
	IC 3082-D		784962	Site File No.

Additional Testing Required Per RSS 210

Para	Description	Application	Mode / channel	Test Procedure
5.9.1	99% Bandwidth	ANT	4 LMH	RSS 210

CONDITIONS FOR COMPLIANCE

No modifications to the EUT were necessary to comply.

APPROVALS

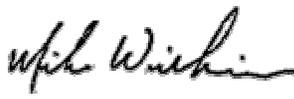
Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:



Joyce Walker, Quality Assurance Administrative Manager

TEST PERSONNEL:



Mike Wilkinson, Lab Manager



Randy Clark, EMC Engineer

FCC 15.31(e) Voltage Variations

15.247(b)(1)/15.31(e) Voltage Variation on Peak Power				
FREQUENCY MHz	CORRECTED READING dBμV/m 85%	CORRECTED READING dBμV/m 100%	CORRECTED READING dBμV/m 115%	SPEC LIMIT dBμV
902.363	112.2	112.3	112.3	137.0
914.907	112.3	112.3	112.3	137.0
927.450	112.1	112.1	112.1	137.0

FCC 15.31(m) Number Of Channels

This device was tested on three channels.

FCC 15.33(a) Frequency Ranges Tested

15.109 Radiated Emissions: 30 MHz – 10 GHz

15.207 Conducted Emissions: 150 kHz – 30 MHz

15.209/15.247 Radiated Emissions: 9 kHz – 10 GHz

FCC SECTION 15.35: ANALYZER BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	10 GHz	1 MHz

FCC 15.203 Antenna Requirements

The 7626 and 7627 model antennas are an integral part of the EUT and are non-removable; therefore the EUTs comply with Section 15.203 of the FCC rules. The 7653 and 7654 external antennas use reverse polarity TNC; therefore the EUTs comply with Section 15.203 of the FCC rules.

Eut Operating Frequency

The EUT was operating at 902-928 MHz.

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The customer declares the EUT tested by CKC Laboratories was representative of a production unit.

The transmitter is the same for all of the following models:

7626 has an integral antenna with AC power

7627 has an integral antenna with solar power

7653 has an external antenna with TNC connection with AC power

7654 has an external antenna with TNC connection with solar power

EQUIPMENT UNDER TEST

Vantage Pro 2 Wireless Repeater

Manuf: Davis Instruments
Model: 762y
Serial: Davis-762y-05
FCC ID: IR2DWW765Y (pending)

Vantage Pro 2 Wireless Repeater

Manuf: Davis Instruments
Model: 765x
Serial: Davis-765x-05
FCC ID: IR2DWW765Y (pending)

PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

Power Adapter

Manuf: Davis Instruments
Model: 6625
Serial: NA
FCC ID: NA

REPORT OF MEASUREMENTS

The following tables report the six highest worst case levels recorded during the tests performed on the EUT. All readings taken are peak readings unless otherwise noted. The data sheets from which these tables were compiled are contained in Appendix C.

Table 1: FCC 15.109 Six Highest Radiated Emission Levels									
FREQUENCY MHz	METER READING dB μ V	CORRECTION FACTORS				CORRECTED READING dB μ V/m	SPEC LIMIT dB μ V/m	MARGIN DB	NOTES
		Ant dB	Amp dB	Cable dB					
85.005	34.6	7.4	-26.9	2.1		17.2	40.0	-22.8	V
902.000	18.3	22.8	-27.0	8.1		22.2	46.0	-23.8	H
902.000	18.0	22.8	-27.0	8.1		21.9	46.0	-24.1	H
915.000	18.2	23.0	-27.0	8.2		22.4	46.0	-23.6	V
915.000	17.0	23.0	-27.0	8.2		21.2	46.0	-24.8	H
928.000	17.2	23.2	-27.0	8.2		21.6	46.0	-24.4	H

Test Method: ANSI C63.4 (2003)
Spec Limit: FCC Part 15 Subpart B Section 15.109 Class B

NOTES: H = Horizontal Polarization
V = Vertical Polarization

COMMENTS: EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous. Receive Antenna configuration: External Connector Terminated. Frequency Range Investigated: 30MHz to 10GHz. Temperature: 20°C, Relative Humidity: 58%. Ambient levels recorded in the 902-928MHz band. **No EUT signals detected within 20dB of the limit.**

Table 2: FCC 15.111 Six Highest Radiated Emission Levels

FREQUENCY MHz	METER READING dB μ V	CORRECTION FACTORS				CORRECTED READING dB μ V/m	SPEC LIMIT dB μ V/m	MARGIN DB	NOTES
		Ant dB		Cable dB					
1828.828	39.5	0.0		0.9		40.4	50.0	-9.6	N
2417.166	39.5	0.0		1.0		40.5	50.0	-9.5	N
3658.157	39.3	0.0		1.3		40.6	50.0	-9.4	N
6928.127	31.0	0.0		1.9		32.9	50.0	-17.1	N
7106.305	31.4	0.0		1.9		33.3	50.0	-16.7	N
7316.515	44.2	0.0		1.9		46.1	50.0	-3.9	N

Test Method: ANSI C63.4 (2003)
 Spec Limit: FCC Part 15 Subpart B Section 15.111
 Test Distance: 3 Meters

NOTES: N = No Polarization

COMMENTS: EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous. Receive Antenna configuration: External Connector. Frequency Range Investigated: 9kHz to 10GHz. Temperature: 20°C, Relative Humidity: 58%.

Table 3: FCC 15.207 Six Highest Conducted Emission Levels

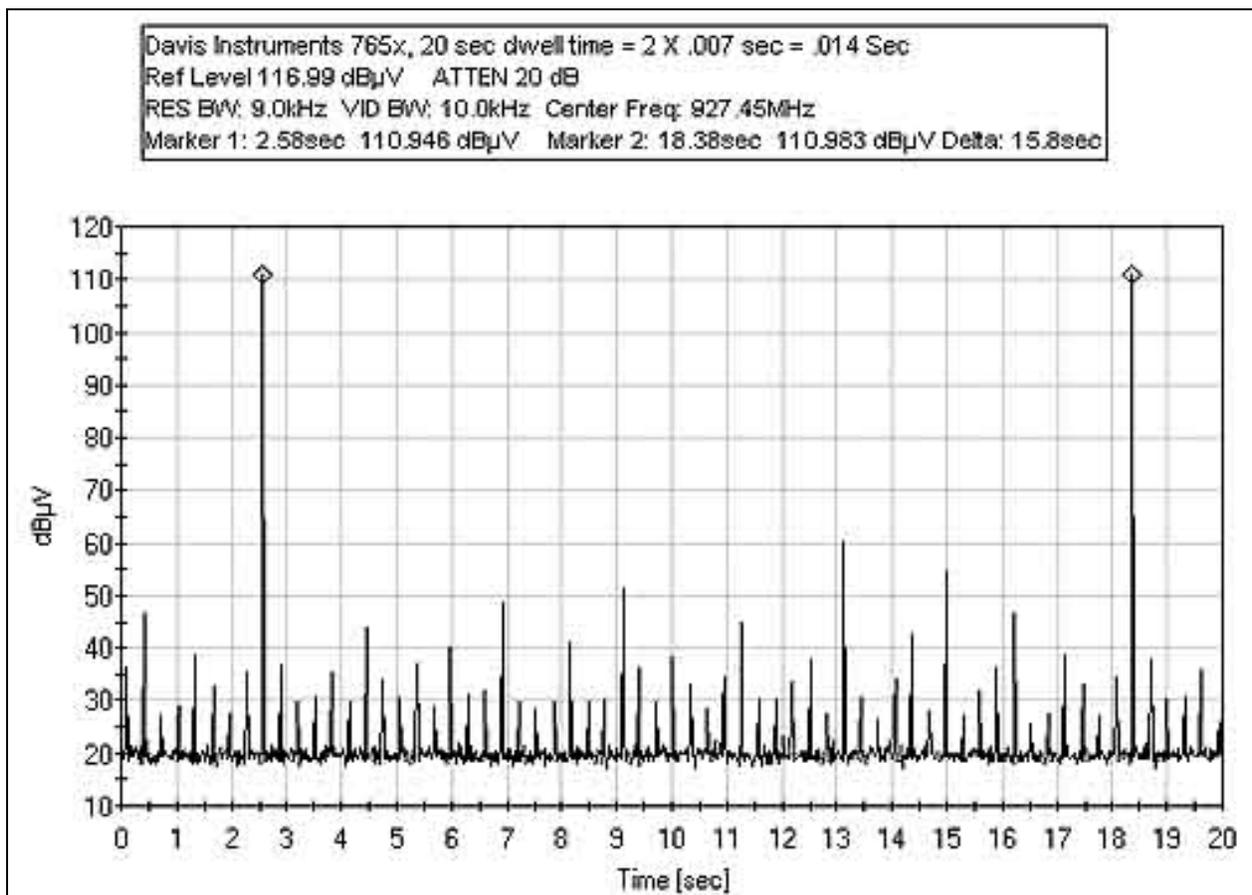
FREQUENCY MHz	METER READING dB μ V	CORRECTION FACTORS				CORRECTED READING dB μ V	SPEC LIMIT dB μ V	MARGIN dB	NOTES
		Lisn dB	HPF dB	Cable dB					
0.330347	30.5	0.3	0.1	0.1		31.0	49.4	-18.4	W
0.336892	28.3	0.3	0.1	0.1		28.8	49.3	-20.5	W
0.339801	28.5	0.3	0.1	0.1		29.0	49.2	-20.2	W
0.342710	28.9	0.3	0.1	0.1		29.4	49.1	-19.7	W
0.355072	28.9	0.4	0.1	0.1		29.5	48.8	-19.3	W
0.373252	27.3	0.4	0.1	0.1		27.9	48.4	-20.5	W

Test Method: ANSI C63.4 (2003)
Spec Limit: FCC Part 15 Subpart C Section 15.207

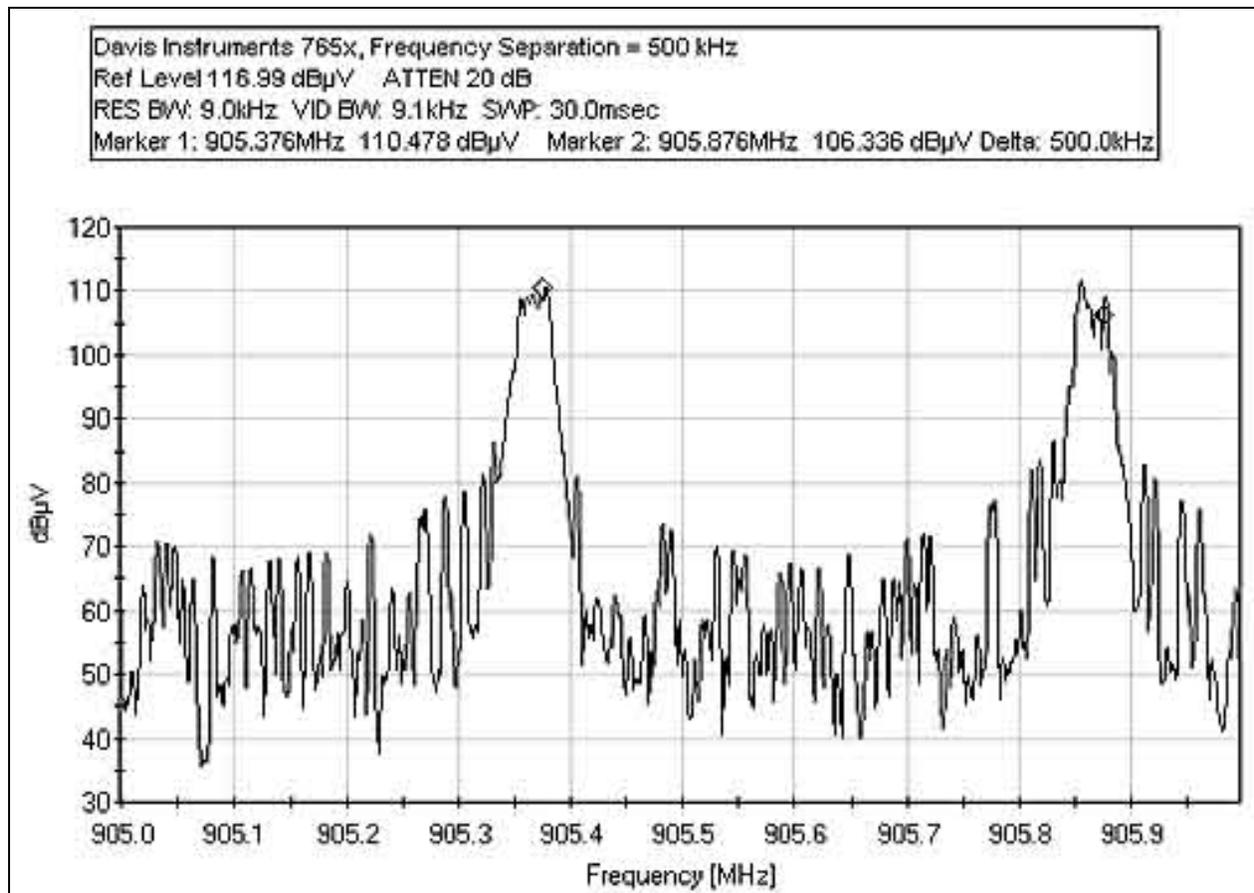
NOTES: W = White Lead

COMMENTS: EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Normal Mode. Antenna configuration: Integral Antenna. Frequency Range Investigated: 150kHz - 30MHz; Temperature: 23°C, Relative Humidity: 52%.

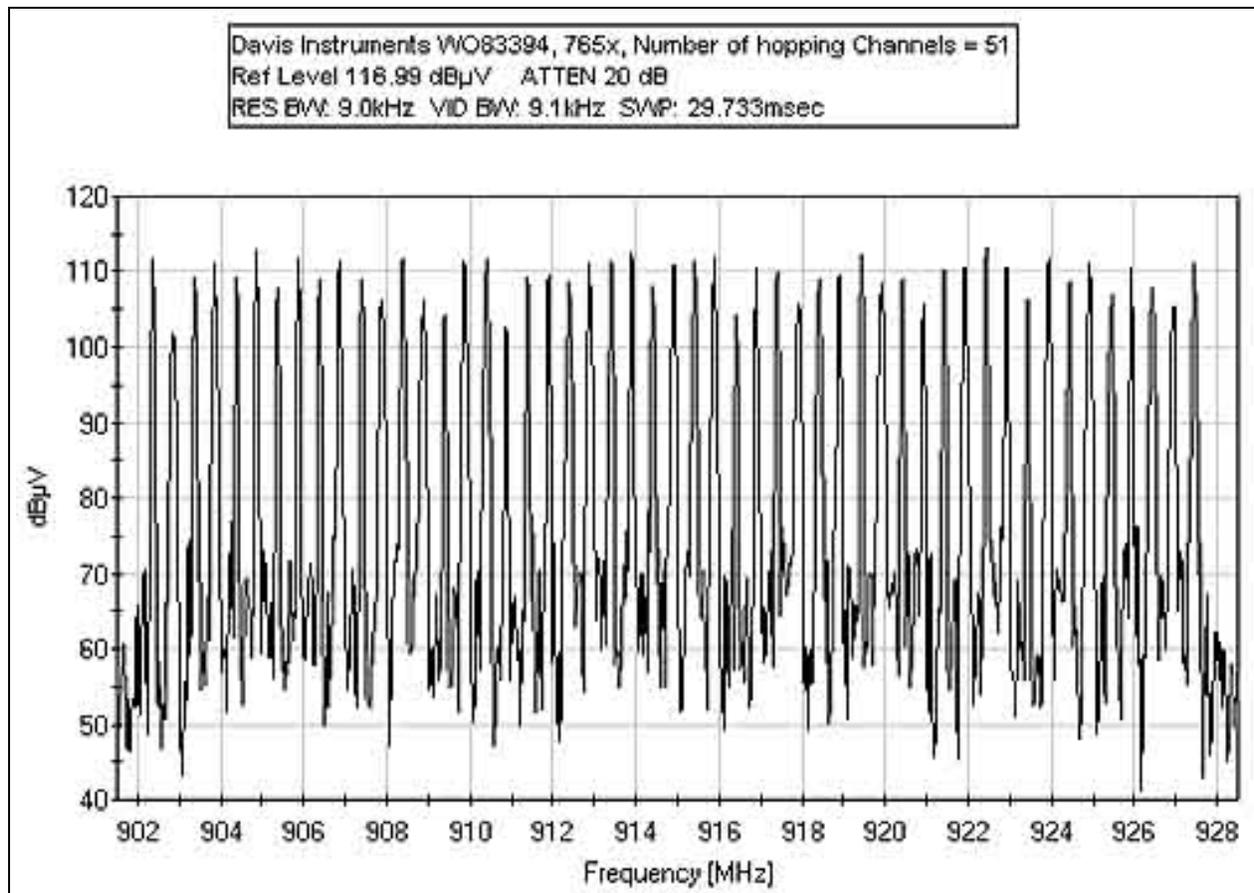
FCC 15.247(a) AVERAGE TIME OF OCCUPANCY



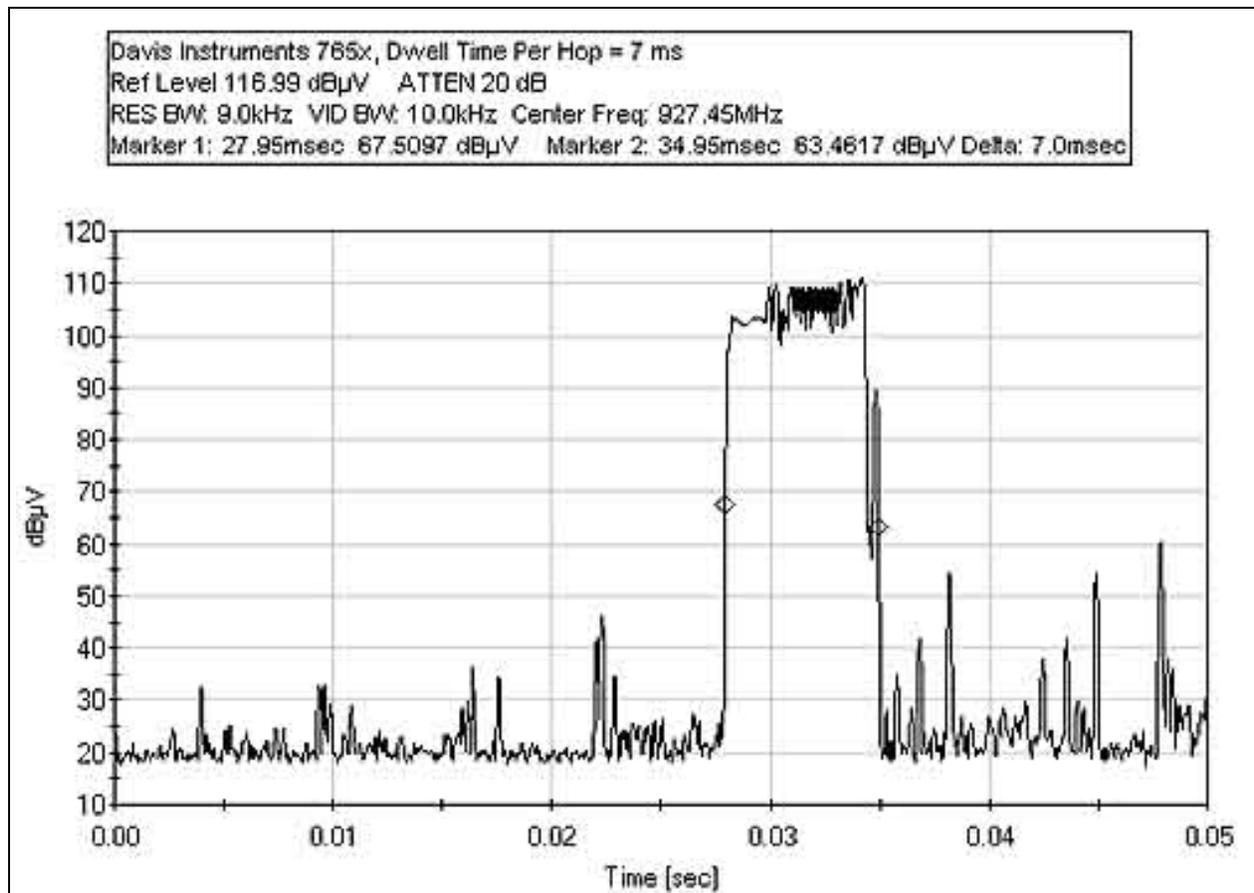
FCC 15.247(a)(1) FREQUENCY SEPARATION



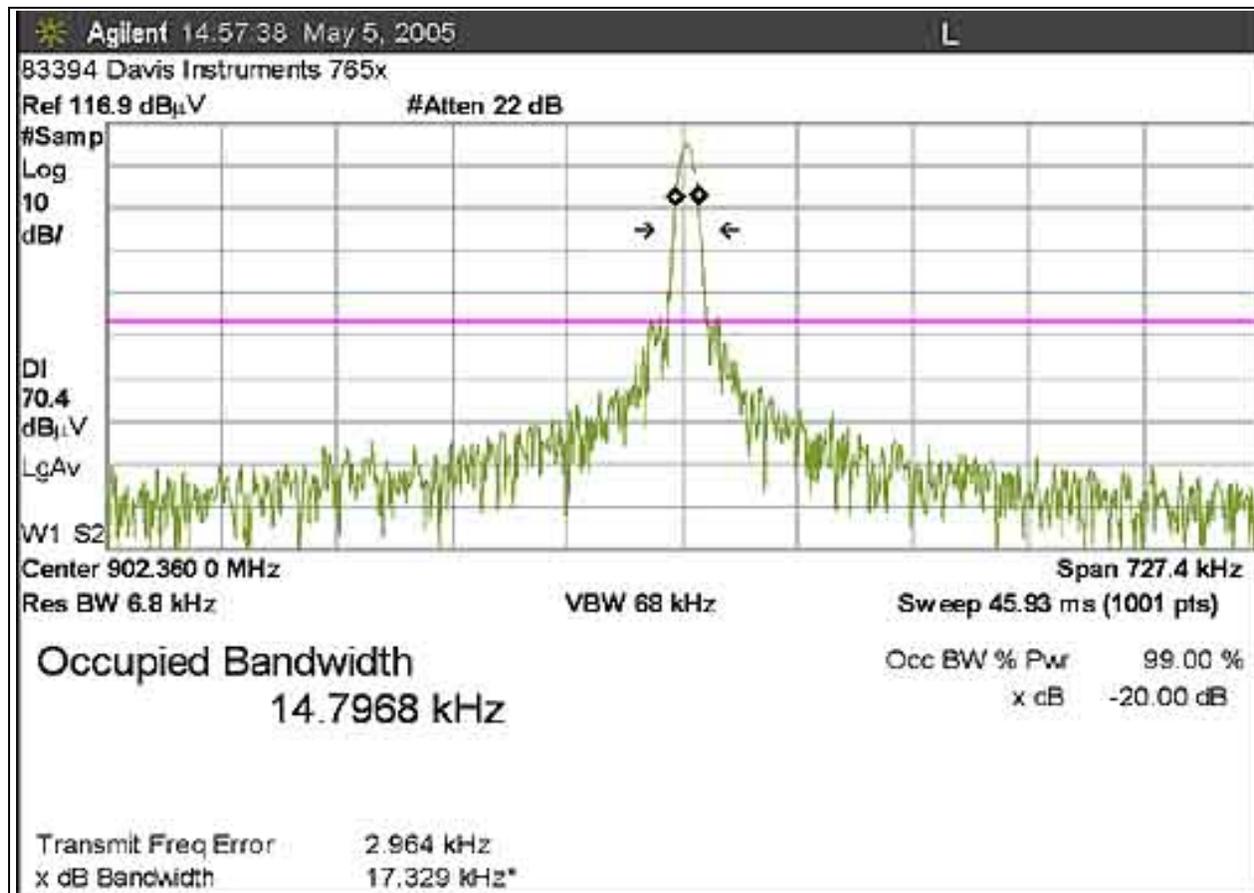
FCC 15.247(a)(1) NUMBER OF HOPPING CHANNELS



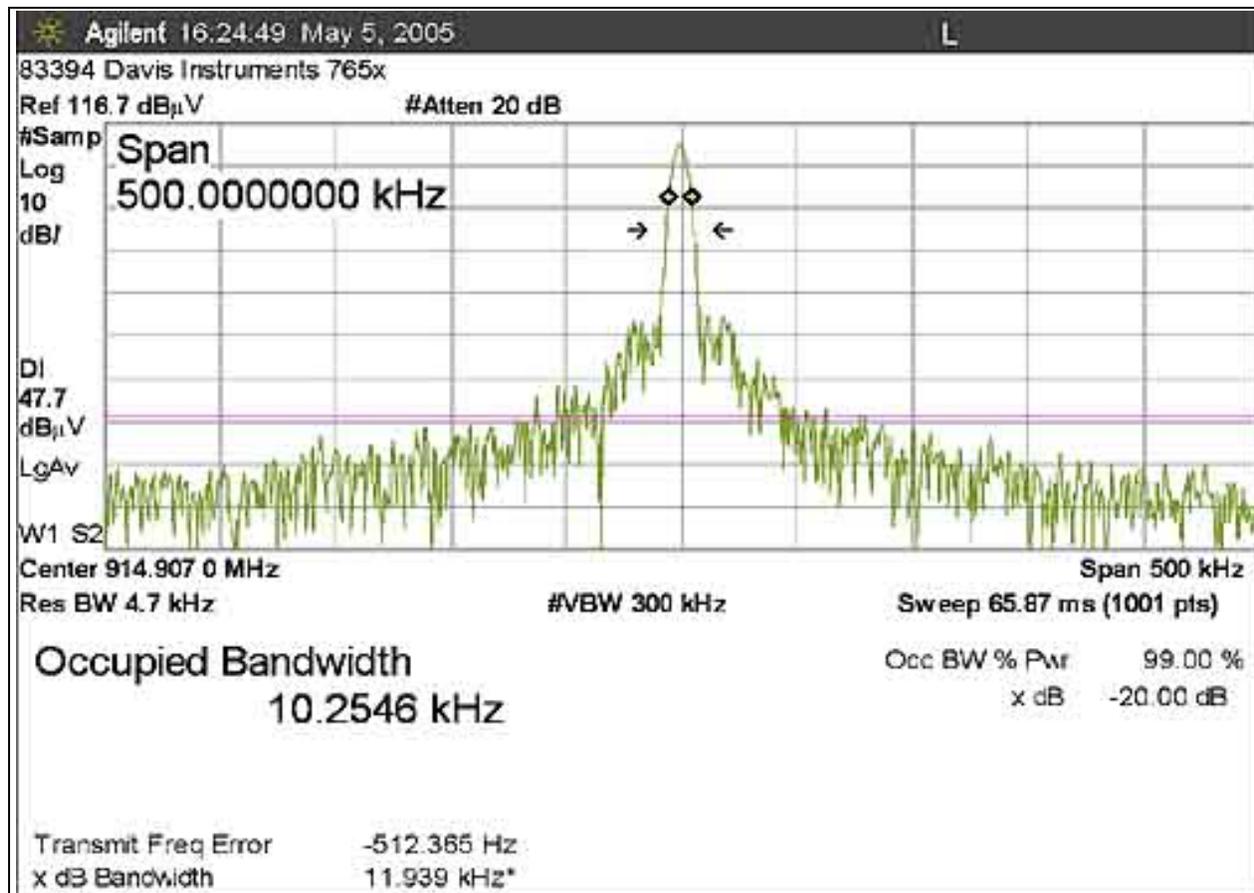
FCC 15.247(a)(1) DWELL TIME PER HOP TIME



FCC 15.247(a)/RSS-210 OCCUPIED BANDWIDTH LOW



FCC 15.247(a)/RSS-210 OCCUPIED BANDWIDTH MID



FCC 15.247(a)/RSS-210 OCCUPIED BANDWIDTH HIGH

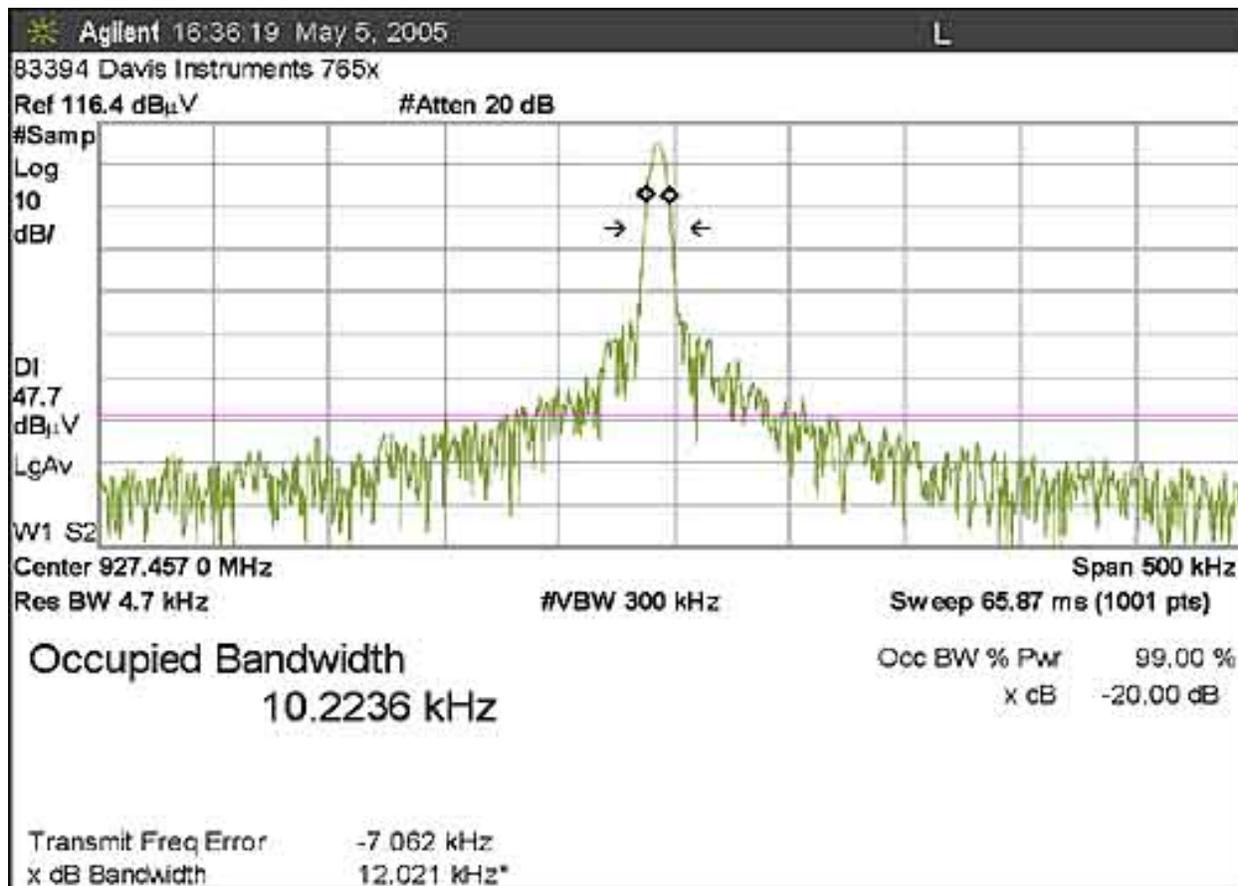


Table 4: FCC 15.247(b)(2) Fundamental Emission Levels

FREQUENCY MHz	METER READING dB μ V	CORRECTION FACTORS				CORRECTED READING dB μ V/m	SPEC LIMIT dB μ V/m	MARGIN DB	NOTES
		Ant dB	Amp dB	Cable dB	Dist dB				
902.363	111.9	0.0		0.6		112.5	137.0	-24.5	N
914.900	111.8	0.0		0.6		112.4	137.0	-24.6	N
927.449	111.5	0.0		0.6		112.1	137.0	-24.9	N

Test Method: ANSI C63.4 (2001)
 Spec Limit: FCC Part 15 Subpart C Section 15.247(b)(2)
 Test Distance: No Distance

NOTES: N = No Polarization

COMMENTS: EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Transmit Modulated. Antenna configuration: External Connector. Frequency Range Investigated: Carrier. Temperature: 20°C, Relative Humidity: 58%.

Table 5: FCC 15.247(b)(3) Six Highest Radiated Emission Levels

FREQUENCY MHz	METER READING dB μ V	CORRECTION FACTORS				CORRECTED READING dB μ V/m	SPEC LIMIT dB μ V/m	MARGIN DB	NOTES
		Ant dB	Amp dB	Cable dB					
902.365	83.1	22.8	0.0	8.1		114.0	127.0	-13.0	V-2
902.366	104.5	22.8	-27.0	8.1		108.4	127.0	-18.6	V-1
914.908	103.5	23.0	-27.0	8.2		107.7	127.0	-19.3	V-1
914.910	82.7	23.0	0.0	8.2		113.9	127.0	-13.1	V-2
927.450	103.5	23.2	-27.0	8.2		107.9	127.0	-19.1	V-1
927.453	82.1	23.2	0.0	8.2		113.5	127.0	-13.5	V-2

Test Method: ANSI C63.4 (2003)
 Spec Limit: FCC Part 15 Subpart C Section 15.247(b)(3)
 Test Distance: 3 Meters

NOTES: V = Vertical Polarization
 1 = Omni Antenna
 2 = Yagi Antenna
 3 = Integral Antenna

COMMENTS: EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Transmit Modulated. Antenna configuration: Integral (dedicated), External Yagi and External Omni. Frequency Range Investigated: Carrier. Data represents Low, Middle and High transmit frequencies. Temperature: 23°C, Relative Humidity: 52%

Table 6: FCC 15.247(c)/15.209 Six Highest OATS Radiated Emission Levels

FREQUENCY MHz	METER READING dB μ V	CORRECTION FACTORS				CORRECTED READING dB μ V/m	SPEC LIMIT dB μ V/m	MARGIN DB	NOTES
		Ant dB	Amp dB	Cable dB					
2707.095	46.5	30.1	-34.4	8.4		50.6	54.0	-3.4	VA
2707.100	40.0	30.1	-34.4	8.4		44.1	54.0	-9.9	HA
2744.680	41.2	30.3	-34.4	8.5		45.6	54.0	-8.4	VA
2782.300	44.3	30.4	-34.4	8.5		48.8	54.0	-5.2	VA
2782.325	45.1	30.4	-34.4	8.5		49.6	54.0	-4.4	VA
2782.400	44.4	30.4	-34.4	8.5		48.9	54.0	-5.1	H

Test Method: ANSI C63.4 (2003)
 Spec Limit: FCC Part 15 Subpart C Section 15.247(c)/15.209
 Test Distance: 3 Meters

NOTES: H = Horizontal Polarization
 V = Vertical Polarization
 A = Average Reading

COMMENTS: EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Transmit Modulated. Antenna configuration: Integral (dedicated), External Yagi and External Omni. Frequency Range Investigated: 9kHz to 10 GHz. Data represents Low, Middle and High transmit frequencies. Temperature: 23°C, Relative Humidity: 52%. Where average readings apply, a dwell time correction factor is applied in accordance with DA 00-705 $20 \cdot \text{LOG}(\text{Dwell}/100\text{ms})$. Dwell time per hop is 7ms, therefore $\text{CF} = 20 \cdot \text{LOG}(7\text{ms}/100\text{ms}) = -23.1\text{dB}$. This table represents testing of the integral, Yagi and Omni antennas, but all the highest readings came from the integral antenna.

Table 7: FCC 15.247(c) Six Highest Antenna Conducted Emission Levels

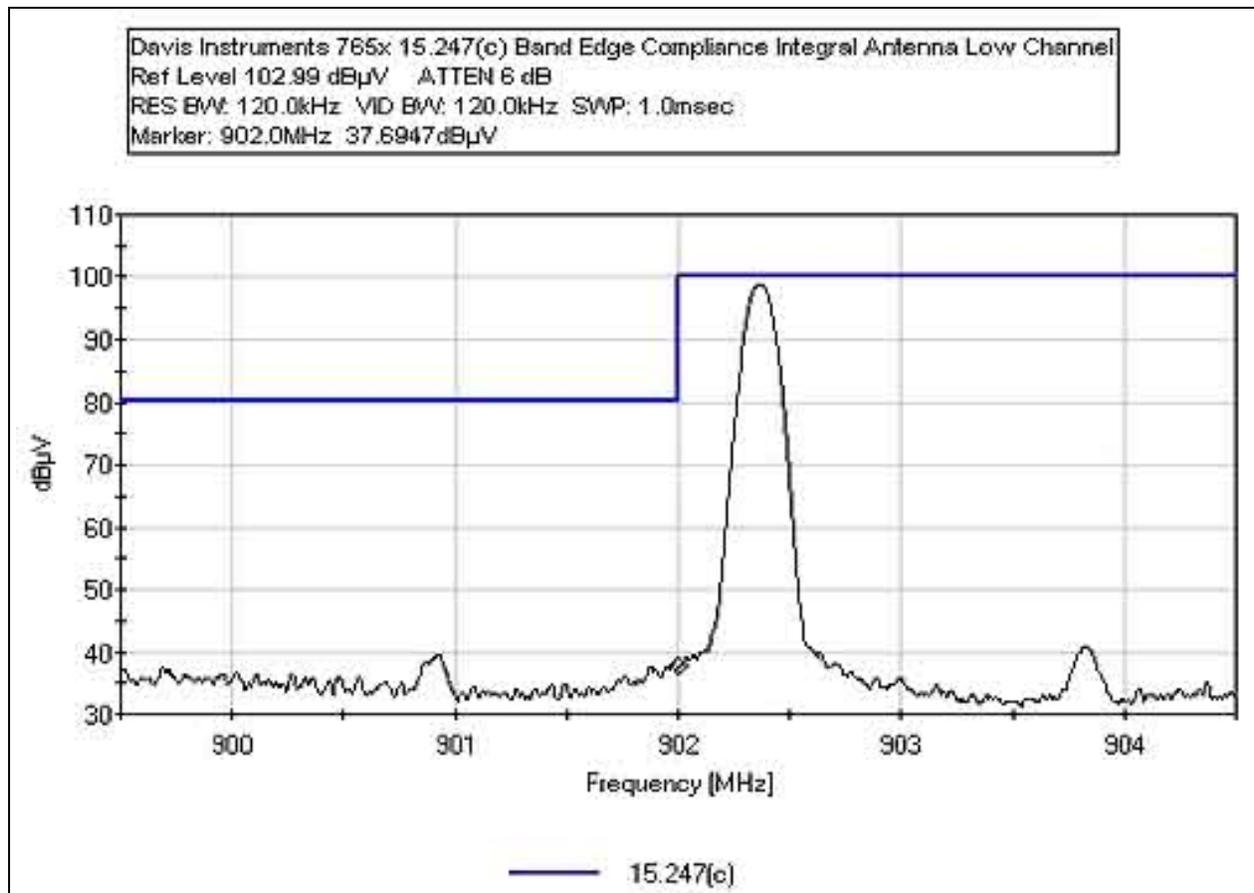
FREQUENCY MHz	METER READING dB μ V	CORRECTION FACTORS				CORRECTED READING dB μ V/m	SPEC LIMIT dB μ V/m	MARGIN DB	NOTES
		Ant dB		Cable dB					
1804.804	52.8	0.0		0.9		53.7	92.5	-38.8	N-1
1829.829	52.4	0.0		0.9		53.3	92.5	-39.2	N-2
1854.854	52.5	0.0		0.9		53.4	92.5	-39.1	N-3
2468.467	65.8	0.0		1.0		66.8	92.5	-25.7	N-3
2478.477	62.2	0.0		1.0		63.2	92.5	-29.3	N-3
2706.705	50.4	0.0		1.1		51.5	92.5	-41.0	N-1

Test Method: ANSI C63.4 (2003)
 Spec Limit: FCC Part 15 Subpart C Section 15.247(c)
 Test Distance: No Distance

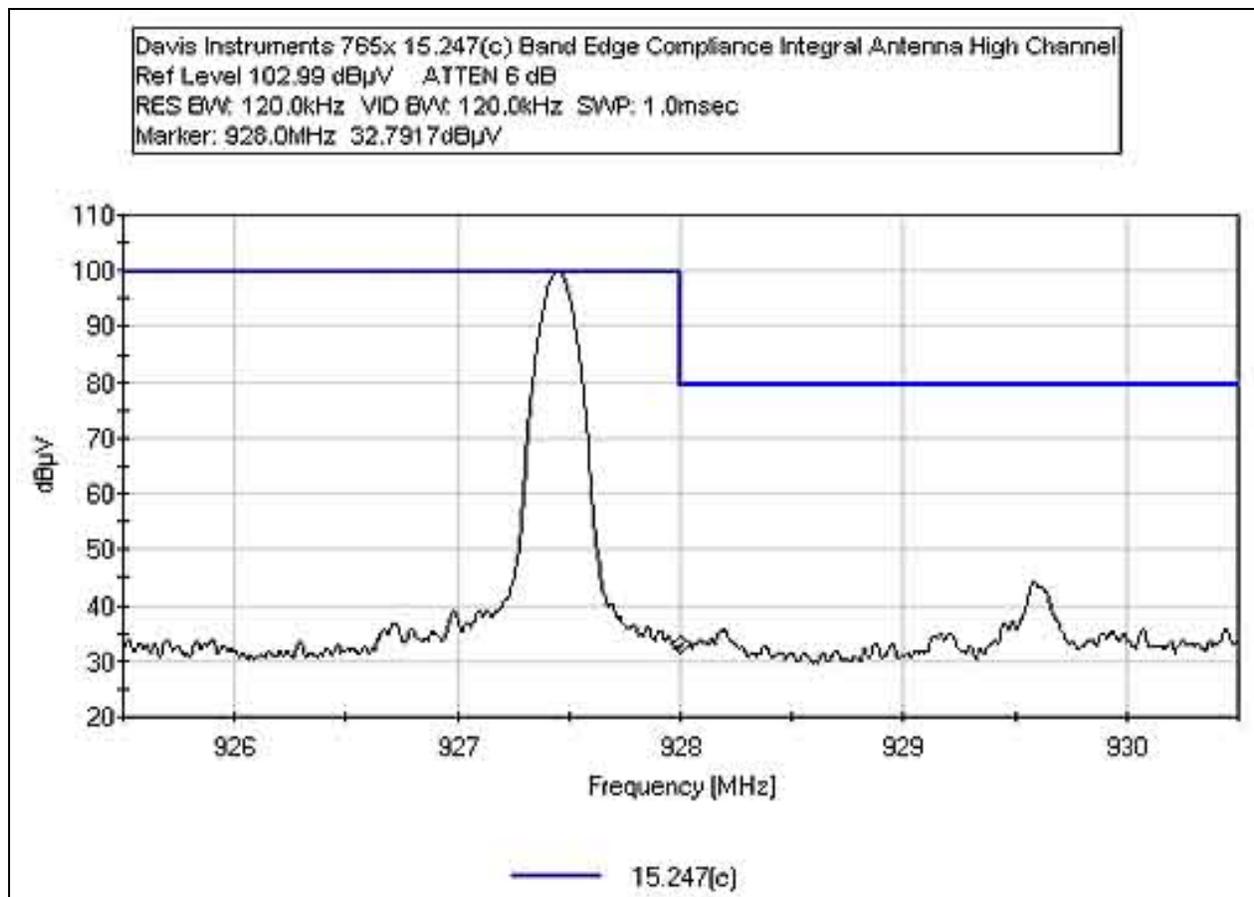
NOTES:
 N = No Polarization
 V = Vertical Polarization
 1 = Channel 0
 2 = Channel 25
 3 = Channel 50

COMMENTS: EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Transmit Modulated, Channel 0 (Low). Antenna configuration: External Connector. Frequency Range Investigated: 1 MHz to 10 GHz. Temperature: 20°C, Relative Humidity: 58%.

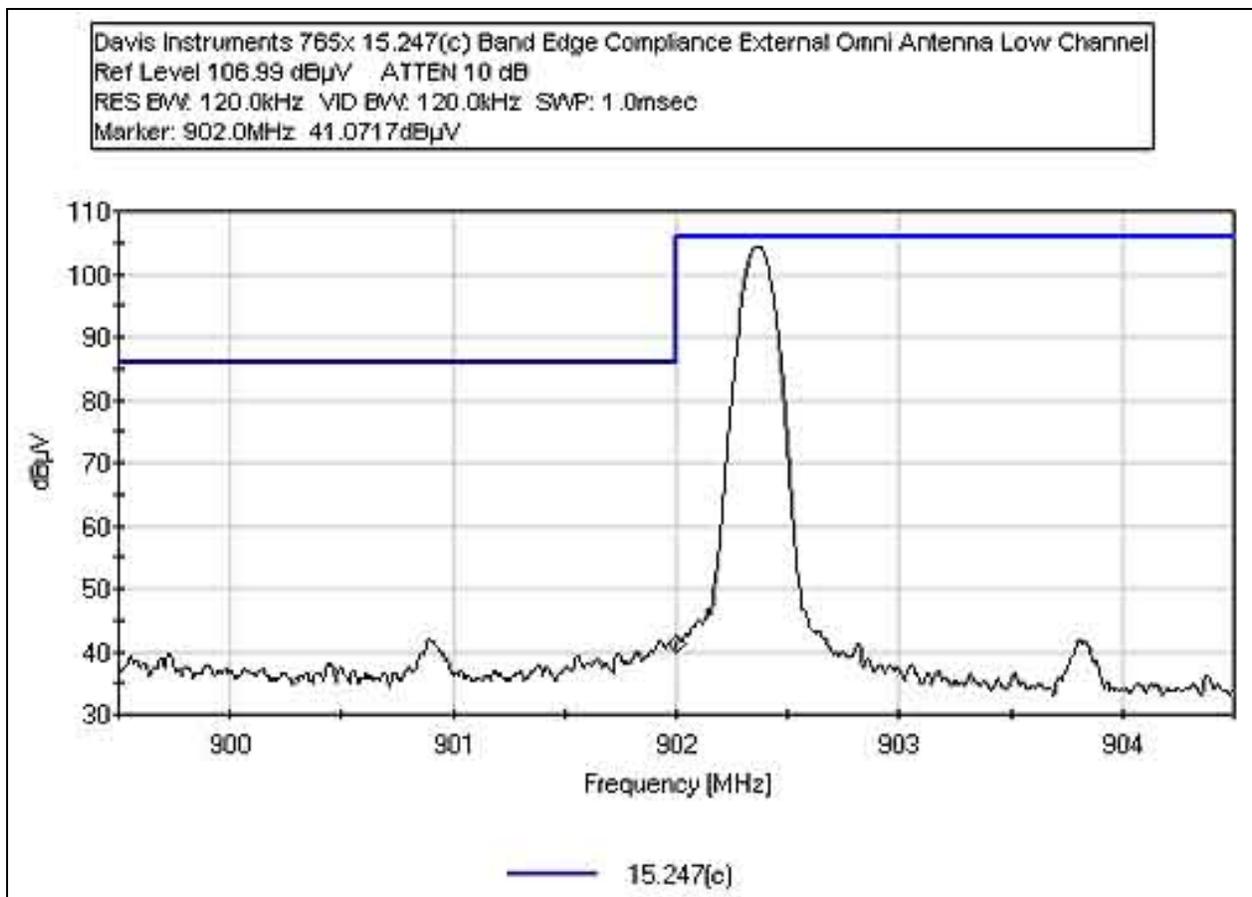
FCC 15.247(c) BAND EDGE INTEGRAL ANTENNA LOW CHANNEL



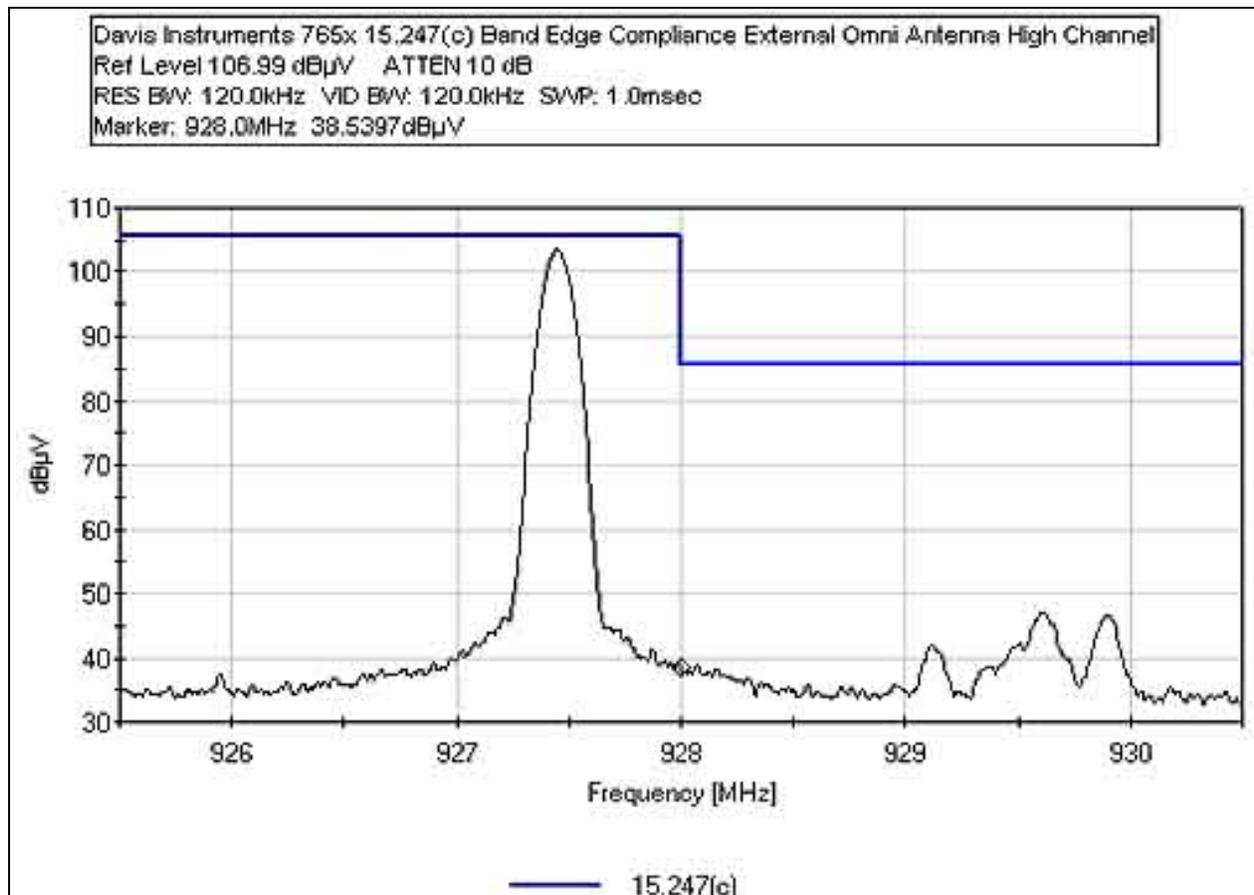
FCC 15.247(c) BAND EDGE INTEGRAL ANTENNA HIGH CHANNEL



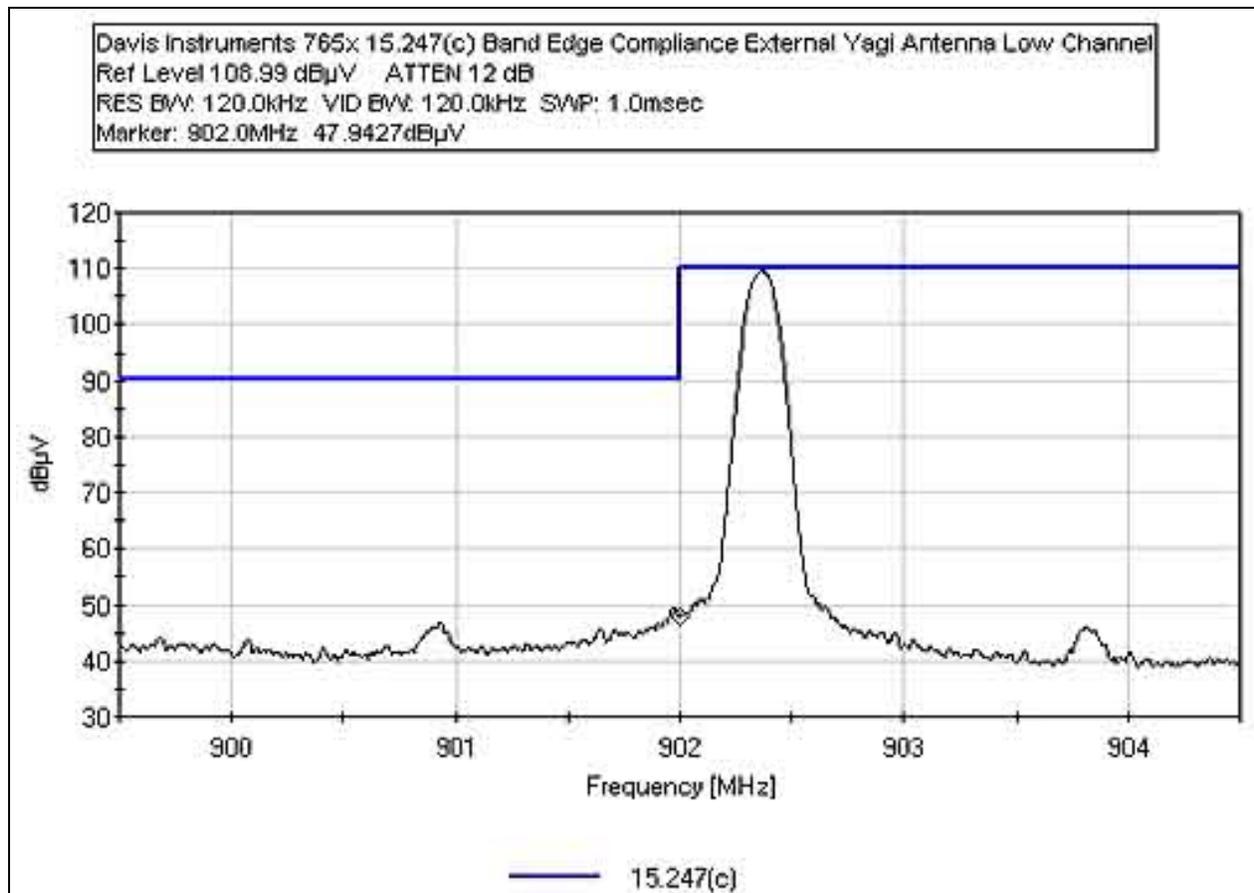
FCC 15.247(c) BAND EDGE EXTERNAL OMNI ANTENNA LOW CHANNEL



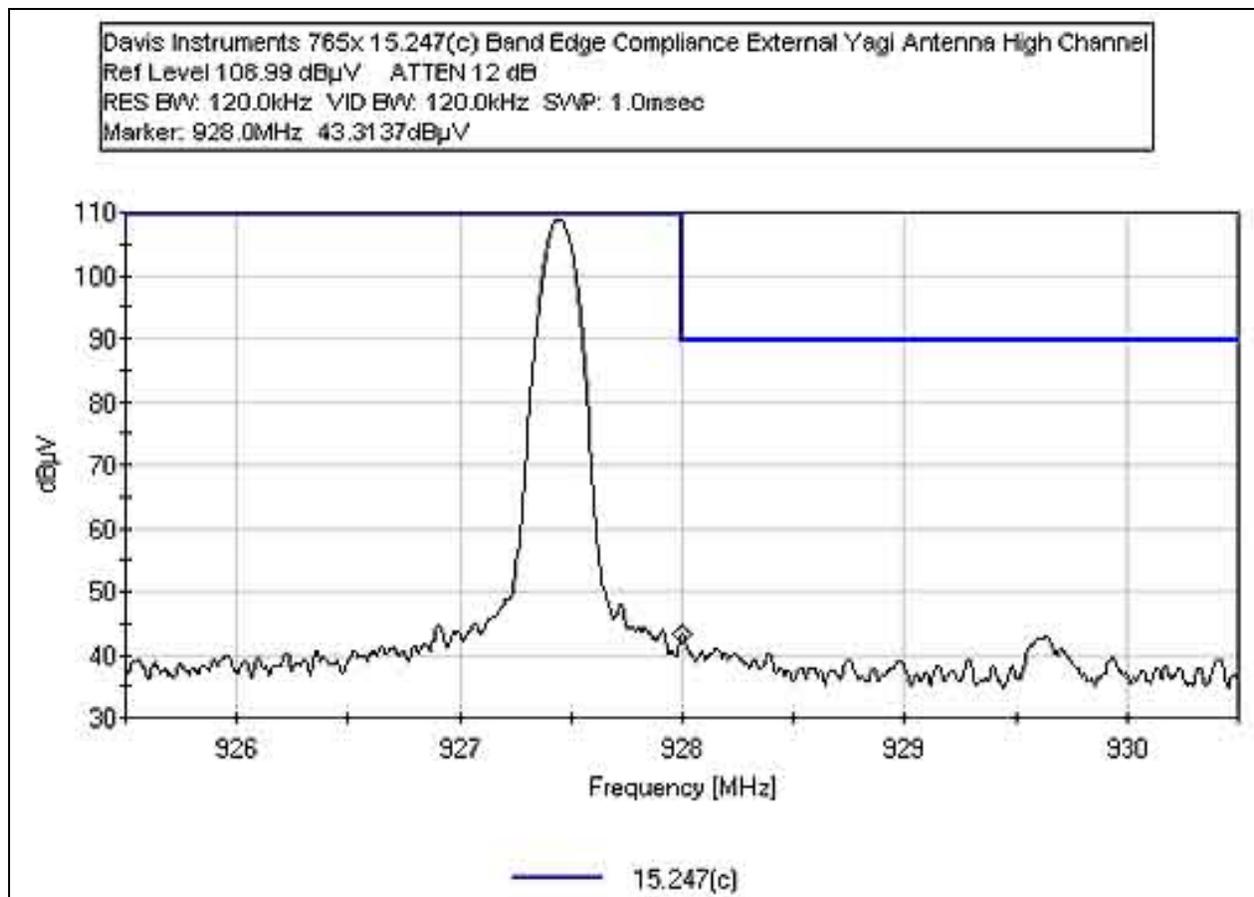
FCC 15.247(c) BAND EDGE EXTERNAL OMNI ANTENNA HIGH CHANNEL



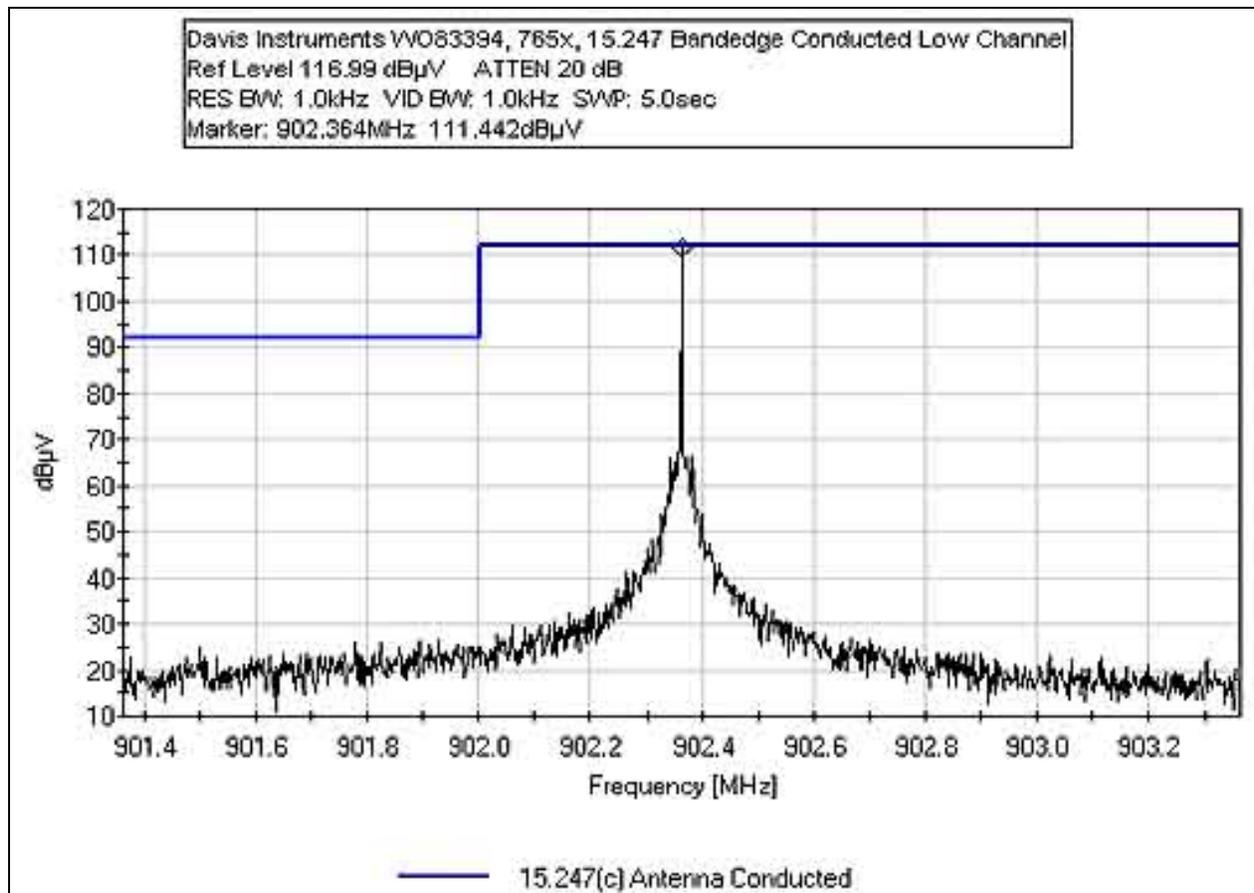
FCC 15.247(c) BAND EDGE EXTERNAL YAGI ANTENNA LOW CHANNEL



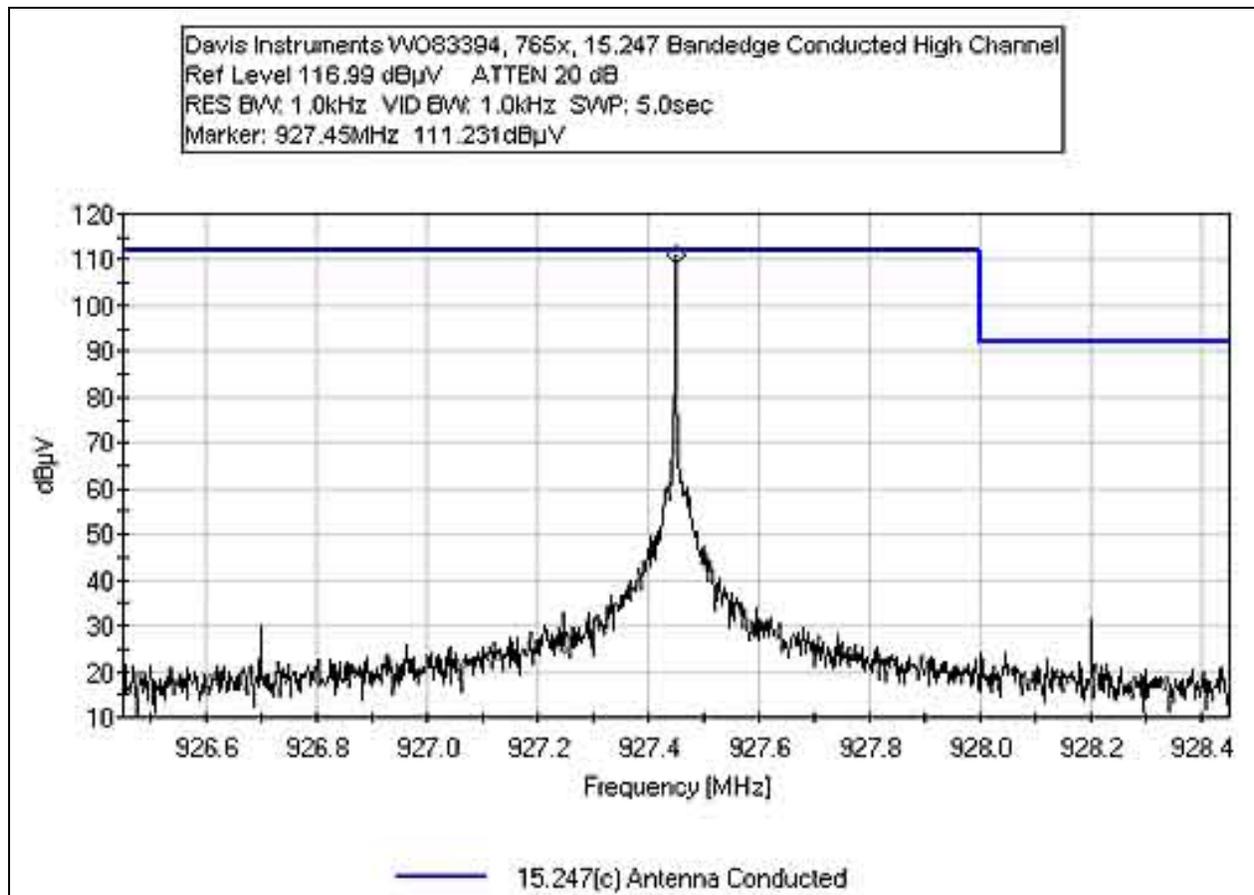
FCC 15.247(c) BAND EDGE EXTERNAL YAGI ANTENNA HIGH CHANNEL



FCC 15.247 BAND EDGE CONDUCTED LOW CHANNEL



FCC 15.247 BAND EDGE CONDUCTED HIGH CHANNEL



TEMPERATURE AND HUMIDITY DURING TESTING

The temperature during testing was within +15°C and + 35°C. The relative humidity was between 20% and 75%.

EUT SETUP

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the photographs in Appendix A. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables. The corrected data was then compared to the applicable emission limits to determine compliance.

The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available I/O ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. I/O cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The radiated and conducted emissions data of the EUT was taken with the HP Spectrum Analyzer. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in Table A.

Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dB μ V/m, the spectrum analyzer reading in dB μ V was corrected by using the following formula in Table A. This reading was then compared to the applicable specification limit to determine compliance.

TABLE A: SAMPLE CALCULATIONS		
	Meter reading	(dB μ V)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dB μ V/m)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed in Table A were used to collect both the radiated and conducted emissions data for the EUT. For radiated measurements from 9 kHz to 30 MHz, the magnetic loop antenna was used. For radiated measurements from 30 to 1000 MHz, the biconilog antenna was used. The horn antenna was used for frequencies above 1000 MHz. Conducted emissions tests required the use of the FCC type LISNs.

The HP spectrum analyzer was used for all measurements. Table B shows the analyzer bandwidth settings that were used in designated frequency bands. For conducted emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used. A 10 dB external attenuator was also used during conducted tests, with internal offset correction in the analyzer. During radiated testing, the measurements were made with 0 dB of attenuation, a reference level of 97 dB μ V, and a vertical scale of 10 dB per division.

SPECTRUM ANALYZER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the Tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the six highest readings, this is indicated as a "Q" or an "A" in the appropriate table. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the Spectrum Analyzer or test engineer recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the analyzer called "peak hold," the analyzer had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the analyzer made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the HP Quasi-Peak Adapter for the HP Spectrum Analyzer. The detailed procedure for making quasi peak measurements contained in the HP Quasi-Peak Adapter manual were followed.

Average

For certain frequencies, average measurements may be made using the spectrum analyzer. To make these measurements, the test engineer reduces the video bandwidth on the analyzer until the modulation of the signal is filtered out. At this point the analyzer is set into the linear mode and the scan time is reduced.

EUT TESTING

Mains Conducted Emissions

During conducted emissions testing, the EUT was located on a wooden table measuring approximately 80 cm high, 1 meter deep, and 1.5 meters in length. One wall of the room where the EUT was located has a minimum 2 meter by 2 meter conductive plane. The EUT was mounted on the wooden table 40 cm away from the conductive plane, and 80 cm from any other conductive surface.

The vertical metal plane used for conducted emissions was grounded to the earth. Power to the EUT was provided through a LISN. The LISN was grounded to the ground plane. All other objects were kept a minimum of 80 cm away from the EUT during the conducted test.

The LISNs used were 50 μH -/+50 ohms. Above 150 kHz, a 0.15 μF series capacitor was added in-line prior to connecting the analyzer to restore the proper impedance for the range. A 30 to 50 second sweep time was used for automated measurements in the frequency bands of 150 kHz to 500 kHz, and 500 kHz to 30 MHz. All readings within 20 dB of the limit were recorded, and those within 6 dB of the limit were examined with additional measurements using a slower sweep time.

Antenna Conducted Emissions

For measuring the signal strength on the RF output port of the EUT, the spectrum analyzer was connected directly to the EUT. The sweep time of the analyzer was adjusted so that the spectrum analyzer readings were always in a calibrated range. All readings within 20 dB of the limit were recorded.

Radiated Emissions

The EUT was mounted on a nonconductive, rotating table 80 cm above the conductive grid. The nonconductive table dimensions were .5 meter by .5 meters.

During the preliminary radiated scan, the EUT was powered up and operating in its defined FCC test mode. For radiated measurements from 9 kHz to 30 MHz, the magnetic loop antenna was used. The frequency range of 30 MHz to 1000 MHz was scanned with the biconilog antenna located about 1.5 meter above the ground plane in the vertical polarity. During this scan, the turntable was rotated and all peaks at or near the limit were recorded. A scan of the FM band from 88 to 110 MHz was then made using a reduced resolution bandwidth and frequency span. The biconilog antenna was changed to the horizontal polarity and the above steps were repeated. For frequencies exceeding 1000 MHz, the horn antenna was used. Care was taken to ensure that no frequencies were missed within the FM and TV bands. An analysis was performed to determine if the signals that were at or near the limit were caused by an ambient transmission. If unable to determine by analysis, the equipment was powered down to make the final determination if the EUT was the source of the emission.

A thorough scan of all frequencies was made manually using a small frequency span, rotating the turntable and raising and lowering the antenna from one to four meters as needed. The test engineer maximized the readings with respect to the table rotation, antenna height and configuration of EUT. Maximizing of the EUT was achieved by monitoring the spectrum analyzer on a closed circuit television monitor.

APPENDIX A

TEST SETUP PHOTOGRAPHS

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Front View

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Omni Antenna

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Yagi Antenna

PHOTOGRAPH SHOWING RADIATED EMISSIONS



Radiated Emissions - Receiver

PHOTOGRAPH SHOWING MAINS CONDUCTED EMISSIONS



Mains Conducted Emissions - Front View

PHOTOGRAPH SHOWING DIRECT CONNECT TEST SETUP



Transmitter

PHOTOGRAPH SHOWING DIRECT CONNECT TEST SETUP



Receiver

APPENDIX B

TEST EQUIPMENT LIST

15.109

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/12/2005	01/12/2007	02660
Chase CBL6111C Bilog	2456	06/26/2003	06/26/2005	01991
EMCO 3115 Horn Antenna	9307-4085	04/29/2005	04/29/2007	00656
HP 8447D Preamp	1937A02604	03/11/2005	03/11/2007	00099
HP 8449B Preamp	3008A00301	12/14/2004	12/14/2006	2010
Cable, Pasternack 36"	NA	02/08/2005	02/08/2007	P05202
Cable, Andrews Hardline HF-005-20	NA	06/03/2003	06/03/2005	P04275

15.111

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/12/2005	01/12/2007	02660
Cable, Pasternack 36"	NA	02/08/2005	02/08/2007	P05202

15.207

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/12/2005	01/12/2007	02660
150kHz HP Filter TTE	G7754	04/20/2004	04/20/2006	02608
LISN, 8028-50-TS-24-BNC	8379276, 280	06/05/2003	06/05/2005	1248 & 1249

15.31(e)/15.247(a)/15.247(b)(1)/15.247(b)(2)

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/12/2005	01/12/2007	02660
Cable, Pasternack 36"	NA	02/08/2005	02/08/2007	P05202

15.247(b)(3)

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/12/2005	01/12/2007	02660
Chase CBL6111C Bilog	2456	06/26/2003	06/26/2005	01991
HP 8447D Preamp	1937A02604	03/11/2005	03/11/2007	00099

15.247(c) OATS

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/12/2005	01/12/2007	02660
Chase CBL6111C Bilog	2456	06/26/2003	06/26/2005	01991
EMCO 3115 Horn Antenna	9307-4085	04/29/2005	04/29/2007	00656
HP 8447D Preamp	1937A02604	03/11/2005	03/11/2007	00099
HP 8449B Preamp	3008A00301	12/14/2004	12/14/2006	2010
Cable, Pasternack 36"	NA	02/08/2005	02/08/2007	P05202
Cable, Andrews Hardline HF-005-20	NA	06/03/2003	06/03/2005	P04275
EMCO Loop Antenna	1074	05/13/2005	05/13/2007	00226

15.247(c) Antenna Conducted

Function	S/N	Calibration Date	Cal Due Date	Asset #
Agilent E4446A SA	US44300407	01/12/2005	01/12/2007	02660
Cable, Pasternack 36"	NA	02/08/2005	02/08/2007	P05202
Transformer Powerstat 126	None	05/05/2005	05/05/2007	2037

APPENDIX C
MEASUREMENT DATA SHEETS

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Davis Instruments**

Specification: **15.109 CLASS B**

Work Order #: **83394**

Date: 05/27/2005

Test Type: **Maximized Emissions**

Time: 10:39:00

Equipment: **VP2 Wireless Repeater**

Sequence#: 16

Manufacturer: Davis Instruments

Tested By: Randal Clark

Model: 765x

S/N: Davis-765x-05

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
VP2 Wireless Repeater*	Davis Instruments	765x	Davis-765x-05

Support Devices:

Function	Manufacturer	Model #	S/N
Power Adapter	Davis Instruments	6625	NA

Test Conditions / Notes:

EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Recieve Antenna configuration: External Connector Terminated. Frequency Range Investigated: 30MHz to 10GHz. Temperature: 20°C, Relative Humidity: 58%. Ambient levels recorded in the 902-928MHz band. **No EUT Signals detected within 20dB of the limit.**

Transducer Legend:

T1=Amp - S/N 604	T2=Bilog Site D
T3=Cable - 10 Meter	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	Dist dB	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	85.005M	34.6	-26.9	+7.4	+2.1	+0.0	17.2	40.0	-22.8	Vert 115
2	915.000M	18.2	-27.0	+23.0	+8.2	+0.0	22.4	46.0	-23.6	Verti 100
3	902.000M	18.3	-27.0	+22.8	+8.1	+0.0	22.2	46.0	-23.8	Horiz 150
4	902.000M	18.0	-27.0	+22.8	+8.1	+0.0	21.9	46.0	-24.1	Horiz 150
5	928.000M	17.2	-27.0	+23.2	+8.2	+0.0	21.6	46.0	-24.4	Horiz 150
6	915.000M	17.0	-27.0	+23.0	+8.2	+0.0	21.2	46.0	-24.8	Horiz 150
7	928.000M	15.4	-27.0	+23.2	+8.2	+0.0	19.8	46.0	-26.2	Verti 100
8	902.000M	15.3	-27.0	+22.8	+8.1	+0.0	19.2	46.0	-26.8	Verti 100

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Davis Instruments**
 Specification: **FCC 15.111**
 Work Order #: **83394** Date: 05/05/2005
 Test Type: **Antenna Terminals** Time: 3:39:31 PM
 Equipment: **VP2 Wireless Repeater** Sequence#: 2
 Manufacturer: Davis Instruments Tested By: Randal Clark
 Model: 765x
 S/N: Davis-765x-05

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
VP2 Wireless Repeater*	Davis Instruments	765x	Davis-765x-05

Support Devices:

Function	Manufacturer	Model #	S/N
Power Adapter	Davis Instruments	6625	NA

Test Conditions / Notes:

EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Receive. Antenna configuration: External Connector. Frequency Range Investigated: 9kHz to 10GHz. Temperature: 20°C Relative Humidity: 58%.

Transducer Legend:

T1=Cable 40 GHz 36"

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB				Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	7316.515M	44.2	+1.9				+0.0	46.1	50.0	-3.9	None
2	3658.157M	39.3	+1.3				+0.0	40.6	50.0	-9.4	None
3	2417.166M	39.5	+1.0				+0.0	40.5	50.0	-9.5	None
4	1828.828M	39.5	+0.9				+0.0	40.4	50.0	-9.6	None
5	7106.305M	31.4	+1.9				+0.0	33.3	50.0	-16.7	None
6	6928.127M	31.0	+1.9				+0.0	32.9	50.0	-17.1	None
7	7063.262M	30.8	+1.9				+0.0	32.7	50.0	-17.3	None
8	7087.286M	30.8	+1.9				+0.0	32.7	50.0	-17.3	None
9	7128.327M	30.8	+1.9				+0.0	32.7	50.0	-17.3	None
10	6913.112M	30.6	+1.9				+0.0	32.5	50.0	-17.5	None

11	7122.321M	30.6	+1.9	+0.0	32.5	50.0	-17.5	None
12	7330.529M	29.8	+1.9	+0.0	31.7	50.0	-18.3	None
13	7726.925M	29.7	+2.0	+0.0	31.7	50.0	-18.3	None
14	6793.993M	29.5	+1.8	+0.0	31.3	50.0	-18.7	None
15	7562.761M	29.2	+1.9	+0.0	31.1	50.0	-18.9	None

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Davis Instruments**

Specification: **FCC 15.207 - AVE**

Work Order #: **83394**

Date: 05/27/2005

Test Type: **Conducted Emissions**

Time: 9:43:08 AM

Equipment: **VP2 Wireless Repeater**

Sequence#: 14

Manufacturer: Davis Instruments

Tested By: Randal Clark

Model: 762y

120V 60Hz

S/N: Davis-762y-05

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
VP2 Wireless Repeater*	Davis Instruments	762y	Davis-762y-05

Support Devices:

Function	Manufacturer	Model #	S/N
Power Adapter	Davis Instruments	6625	NA

Test Conditions / Notes:

EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Normal Mode. Antenna configuration: Integral Antenna. Frequency Range Investigated: 150kHz - 30MHz. Temperature: 23°C, Relative Humidity: 52%.

Transducer Legend:

T1=Cable - Internal + cab	T2=LISN Insertion Loss s/n280
T3=HP Filter AN02608	

Measurement Data:

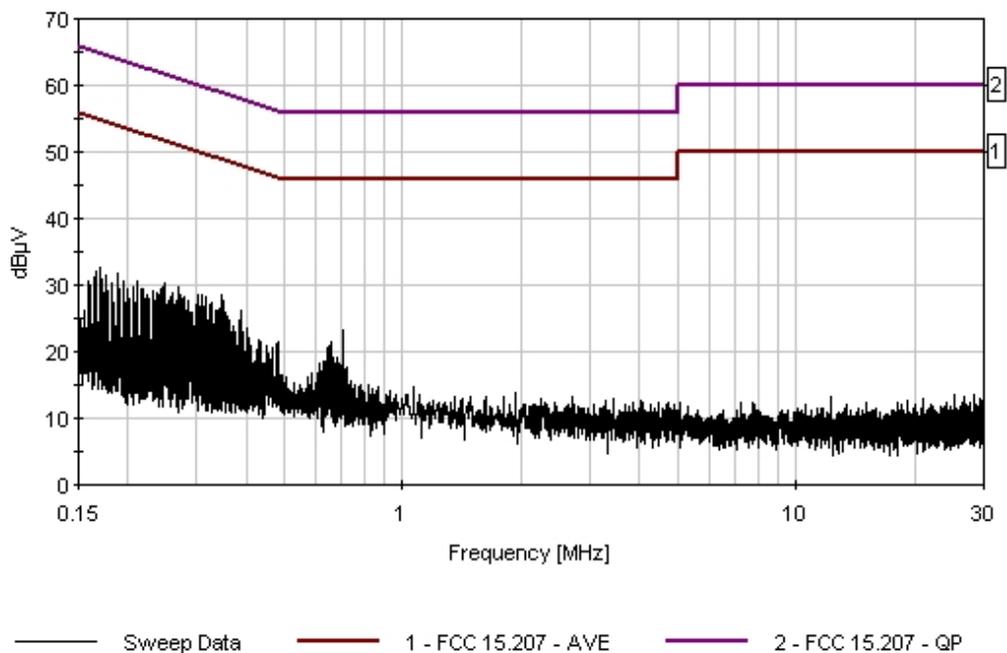
Reading listed by margin.

Test Lead: Black

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	Dist dB	Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	345.618k	28.1	+0.1	+0.2	+0.1	+0.0		28.5	49.1	-20.6	Black
2	351.436k	27.2	+0.1	+0.3	+0.1	+0.0		27.7	48.9	-21.2	Black
3	269.989k	29.3	+0.1	+0.2	+0.2	+0.0		29.8	51.1	-21.3	Black
4	248.900k	29.6	+0.1	+0.2	+0.3	+0.0		30.2	51.8	-21.6	Black
5	303.441k	28.0	+0.1	+0.2	+0.2	+0.0		28.5	50.1	-21.6	Black
6	309.258k	27.9	+0.1	+0.2	+0.2	+0.0		28.4	50.0	-21.6	Black
7	315.076k	27.8	+0.1	+0.2	+0.1	+0.0		28.2	49.8	-21.6	Black
8	387.796k	25.7	+0.1	+0.3	+0.1	+0.0		26.2	48.1	-21.9	Black
9	327.438k	26.9	+0.1	+0.2	+0.1	+0.0		27.3	49.5	-22.2	Black
10	169.635k	31.4	+0.1	+0.3	+0.9	+0.0		32.7	55.0	-22.3	Black
11	245.264k	29.0	+0.1	+0.2	+0.3	+0.0		29.6	51.9	-22.3	Black

12	187.815k	31.1	+0.1	+0.3	+0.2	+0.0	31.7	54.1	-22.4	Black
13	272.898k	28.0	+0.1	+0.2	+0.2	+0.0	28.5	51.0	-22.5	Black
14	342.710k	26.2	+0.1	+0.2	+0.1	+0.0	26.6	49.1	-22.5	Black
15	212.540k	30.0	+0.1	+0.3	+0.1	+0.0	30.5	53.1	-22.6	Black

CKC Laboratories Date: 05/27/2005 Time: 9:43:08 AM Davis Instruments WVO#: 83394
 FCC 15.207 - AVE Test Lead: Black 120V 60Hz Sequence#: 14
 Davis Instruments MN 762x



Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Davis Instruments**

Specification: **FCC 15.207 - AVE**

Work Order #: **83394**

Date: 05/27/2005

Test Type: **Conducted Emissions**

Time: 9:45:38 AM

Equipment: **VP2 Wireless Repeater**

Sequence#: 15

Manufacturer: Davis Instruments

Tested By: Randal Clark

Model: 762y

120V 60Hz

S/N: Davis-762y-05

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
VP2 Wireless Repeater*	Davis Instruments	762y	Davis-762y-05

Support Devices:

Function	Manufacturer	Model #	S/N
Power Adapter	Davis Instruments	6625	NA

Test Conditions / Notes:

EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Normal Mode. Antenna configuration: Integral Antenna. Frequency Range Investigated: 150kHz - 30MHz. Temperature: 23°C, Relative Humidity: 52%.

Transducer Legend:

T1=Cable - Internal + cab	T2=LISN Insertion Loss s/n276
T3=HP Filter AN02608	

Measurement Data:

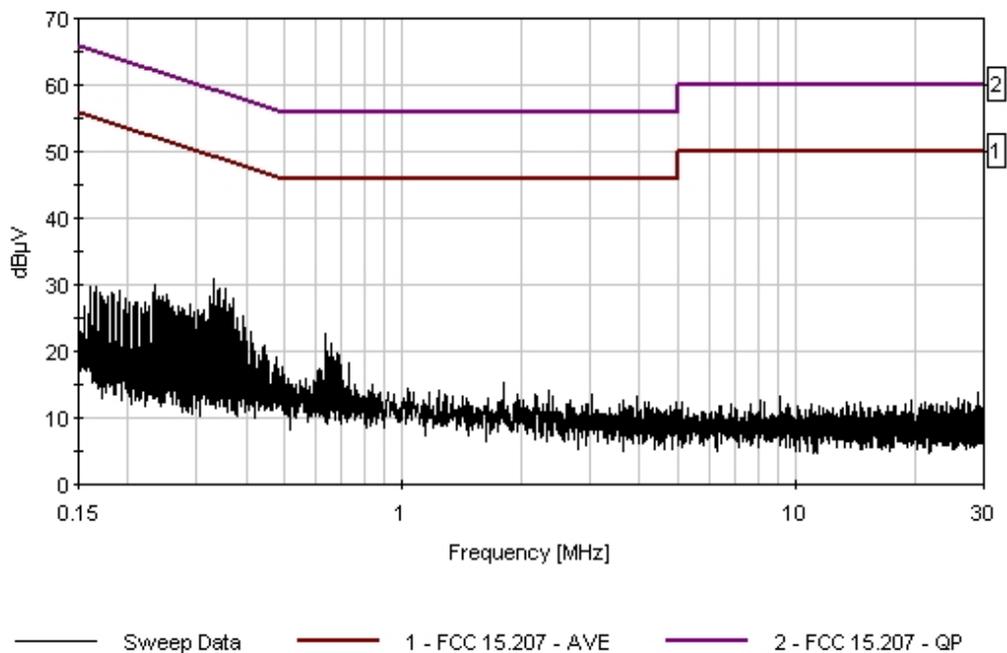
Reading listed by margin.

Test Lead: White

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	Dist dB	Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	330.347k	30.5	+0.1	+0.3	+0.1	+0.0		31.0	49.4	-18.4	White
2	355.072k	28.9	+0.1	+0.4	+0.1	+0.0		29.5	48.8	-19.3	White
3	342.710k	28.9	+0.1	+0.3	+0.1	+0.0		29.4	49.1	-19.7	White
4	339.801k	28.5	+0.1	+0.3	+0.1	+0.0		29.0	49.2	-20.2	White
5	336.892k	28.3	+0.1	+0.3	+0.1	+0.0		28.8	49.3	-20.5	White
6	373.252k	27.3	+0.1	+0.4	+0.1	+0.0		27.9	48.4	-20.5	White
7	351.436k	27.1	+0.1	+0.4	+0.1	+0.0		27.7	48.9	-21.2	White
8	348.527k	27.0	+0.1	+0.4	+0.1	+0.0		27.6	49.0	-21.4	White
9	324.529k	27.6	+0.1	+0.3	+0.1	+0.0		28.1	49.6	-21.5	White
10	360.890k	26.5	+0.1	+0.4	+0.1	+0.0		27.1	48.7	-21.6	White

11	369.616k	26.3	+0.1	+0.4	+0.1	+0.0	26.9	48.5	-21.6	White
12	366.707k	26.0	+0.1	+0.4	+0.1	+0.0	26.6	48.6	-22.0	White
13	233.629k	29.2	+0.1	+0.4	+0.2	+0.0	29.9	52.3	-22.4	White
14	327.438k	26.5	+0.1	+0.3	+0.1	+0.0	27.0	49.5	-22.5	White
15	345.618k	26.1	+0.1	+0.3	+0.1	+0.0	26.6	49.1	-22.5	White

CKC Laboratories Date: 05/27/2005 Time: 9:45:38 AM Davis Instruments WO#: 83394
 FCC 15.207 - AVE Test Lead: White 120V 60Hz Sequence#: 15
 Davis Instruments MN 762x



Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Davis Instruments**

Specification: **15.247(b)(2)**

Work Order #: **83394**

Date: 05/05/2005

Test Type: **Antenna Terminals**

Time: 16:35:37

Equipment: **VP2 Wireless Repeater**

Sequence#: 1

Manufacturer: Davis Instruments

Tested By: Randal Clark

Model: 765x

S/N: Davis-765x-05

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
VP2 Wireless Repeater*	Davis Instruments	765x	Davis-765x-05

Support Devices:

Function	Manufacturer	Model #	S/N
Power Adapter	Davis Instruments	6625	NA

Test Conditions / Notes:

EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Transmit Modulated. Antenna configuration: External Connector. Frequency Range Investigated: Carrier. Temperature: 20°C, Relative Humidity: 58%.

Transducer Legend:

T1=Cable 40 GHz 36"

Measurement Data:

Reading listed by margin.

Test Distance: None

#	Freq MHz	Rdng dB μ V	T1 dB	dB	dB	dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	902.363M	111.9	+0.6				+0.0	112.5	137.0	-24.5	None
									Low Channel		
2	914.900M	111.8	+0.6				+0.0	112.4	137.0	-24.6	None
									Mid Channel		
3	927.449M	111.5	+0.6				+0.0	112.1	137.0	-24.9	None
									High Channel		

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Davis Instruments**

Specification: **15.247(b)(3)**

Work Order #: **83394**

Date: 05/25/2005

Test Type: **Antenna Terminals**

Time: 12:28:02

Equipment: **VP2 Wireless Repeater**

Sequence#: 7

Manufacturer: Davis Instruments

Tested By: Randal Clark

Model: 762y

S/N: Davis-762y-05

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
VP2 Wireless Repeater*	Davis Instruments	762y	Davis-762y-05

Support Devices:

Function	Manufacturer	Model #	S/N
Power Adapter	Davis Instruments	6625	NA

Test Conditions / Notes:

EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Transmit Modulated. Antenna configuration: Integral (dedicated). Frequency Range Investigated: Carrier. Data represents Low, Middle and High transmit frequencies. Temperature: 23°C, Relative Humidity: 52%.

Transducer Legend:

T1=Amp - S/N 604	T2=Bilog Site D
T3=Cable - 10 Meter	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	Dist dB	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	914.908M	99.8	-27.0	+23.0	+8.2	+0.0	104.0	127.0	-23.0	Vert
2	902.368M	99.9	-27.0	+22.8	+8.1	+0.0	103.8	127.0	-23.2	Vert
3	927.452M	99.3	-27.0	+23.2	+8.2	+0.0	103.7	127.0	-23.3	Vert
4	902.365M	99.2	-27.0	+22.8	+8.1	+0.0	103.1	127.0	-23.9	Horiz
5	914.908M	98.4	-27.0	+23.0	+8.2	+0.0	102.6	127.0	-24.4	Horiz
6	927.452M	97.5	-27.0	+23.2	+8.2	+0.0	101.9	127.0	-25.1	Horiz

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Davis Instruments**
 Specification: **15.247(b)(3)**
 Work Order #: **83394** Date: 05/26/2005
 Test Type: **Antenna Terminals** Time: 09:22:29
 Equipment: **VP2 Wireless Repeater** Sequence#: 10
 Manufacturer: Davis Instruments Tested By: Randal Clark
 Model: 765x
 S/N: Davis-765x-05

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
VP2 Wireless Repeater*	Davis Instruments	765x	Davis-765x-05

Support Devices:

Function	Manufacturer	Model #	S/N
Power Adapter	Davis Instruments	6625	NA

Test Conditions / Notes:

EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Transmit Modulated. Antenna configuration: External Yagi. Frequency Range Investigated: Carrier. Data represents Low, Middle and High transmit frequencies. Temperature: 23°C, Relative Humidity: 52%.

Transducer Legend:

T1=Bilog Site D	T2=Cable - 10 Meter
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Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	902.365M	83.1	+22.8	+8.1		+0.0	114.0	127.0	-13.0	Verti 100
2	914.910M	82.7	+23.0	+8.2		+0.0	113.9	127.0	-13.1	Verti 144
3	927.453M	82.1	+23.2	+8.2		+0.0	113.5	127.0	-13.5	Verti 144
4	914.911M	68.9	+23.0	+8.2		+0.0	100.1	127.0	-26.9	Horiz 129
5	902.364M	68.2	+22.8	+8.1		+0.0	99.1	127.0	-27.9	Horiz 136
6	927.453M	67.6	+23.2	+8.2		+0.0	99.0	127.0	-28.0	Horiz 190

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Davis Instruments**

Specification: **15.247(b)(3)**

Work Order #: **83394**

Date: 05/27/2005

Test Type: **Antenna Terminals**

Time: 09:11:50

Equipment: **VP2 Wireless Repeater**

Sequence#: 12

Manufacturer: Davis Instruments

Tested By: Randal Clark

Model: 765x

S/N: Davis-765x-05

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
VP2 Wireless Repeater*	Davis Instruments	765x	Davis-765x-05

Support Devices:

Function	Manufacturer	Model #	S/N
Power Adapter	Davis Instruments	6625	NA

Test Conditions / Notes:

EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Transmit Modulated. Antenna configuration: External Omni. Frequency Range Investigated: Carrier. Data represents Low, Middle and High transmit frequencies. Temperature: 23°C, Relative Humidity: 52%.

Transducer Legend:

T1=Amp - S/N 604	T2=Bilog Site D
T3=Cable - 10 Meter	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	Dist dB	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	902.366M	104.5	-27.0	+22.8	+8.1	+0.0	108.4	127.0	-18.6	Verti 141
2	927.450M	103.5	-27.0	+23.2	+8.2	+0.0	107.9	127.0	-19.1	Verti 165
3	914.908M	103.5	-27.0	+23.0	+8.2	+0.0	107.7	127.0	-19.3	Verti 166
4	927.448M	90.7	-27.0	+23.2	+8.2	+0.0	95.1	127.0	-31.9	Horiz 146
5	902.365M	91.2	-27.0	+22.8	+8.1	+0.0	95.1	127.0	-31.9	Horiz 137
6	914.908M	90.2	-27.0	+23.0	+8.2	+0.0	94.4	127.0	-32.6	Horiz 163

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Davis Instruments**
 Specification: **15.247(c)/15.209**
 Work Order #: **83394** Date: 05/26/2005
 Test Type: **Maximized Emissions** Time: 11:49:46
 Equipment: **VP2 Wireless Repeater** Sequence#: 8
 Manufacturer: Davis Instruments Tested By: Randal Clark
 Model: 762y
 S/N: Davis-762y-05

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
VP2 Wireless Repeater*	Davis Instruments	762y	Davis-762y-05

Support Devices:

Function	Manufacturer	Model #	S/N
Power Adapter	Davis Instruments	6625	NA

Test Conditions / Notes:

EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Transmit Modulated. Antenna configuration: Integral (dedicated). Frequency Range Investigated: 9kHz to 10GHz. Data represents Low, Middle and High transmit frequencies. Temperature: 23°C, Relative Humidity: 52%.

Transducer Legend:

T1=Amp - S/N 604	T2=Bilog Site D
T3=Cable - 10 Meter	T4=Amp - S/N 301
T5=Horn AN 00656 1-18 GHz (Mariposa)	T6=Cable 40 GHz 36"
T7=Cable - 3 Meter to bulkhead	T8=Cable HF-005-20
T9=Mag Loop - AN 00226 - 9kHz-30M	

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1	T2	T3	T4	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			T5 dB	T6 dB	T7 dB	T8 dB					
1	2707.095M	46.5	+0.0	+0.0	+0.0	-34.4	+0.0	50.6	54.0	-3.4	Verti 107
	Ave		+30.1	+1.1	+5.2	+2.1					
^	2707.095M	50.4	+0.0	+0.0	+0.0	-34.4	+0.0	54.5	54.0	+0.5	Verti 107
			+30.1	+1.1	+5.2	+2.1					
3	2782.325M	45.1	+0.0	+0.0	+0.0	-34.4	+0.0	49.6	54.0	-4.4	Verti 107
	Ave		+30.4	+1.1	+5.3	+2.1					
^	2782.325M	48.2	+0.0	+0.0	+0.0	-34.4	+0.0	52.7	54.0	-1.3	Verti 107
			+30.4	+1.1	+5.3	+2.1					
5	2782.400M	44.4	+0.0	+0.0	+0.0	-34.4	+0.0	48.9	54.0	-5.1	Horiz 134
			+30.4	+1.1	+5.3	+2.1					

6	2782.300M Ave	44.3	+0.0 +30.4	+0.0 +1.1	+0.0 +5.3	-34.4 +2.1	+0.0	48.8	54.0	-5.2	Verti 134
7	2744.680M Ave	41.2	+0.0 +30.3	+0.0 +1.1	+0.0 +5.3	-34.4 +2.1	+0.0	45.6	54.0	-8.4	Verti 121
^	2744.730M	46.2	+0.0 +30.3	+0.0 +1.1	+0.0 +5.3	-34.4 +2.1	+0.0	50.6	54.0	-3.4	Verti 121
9	2707.100M Ave	40.0	+0.0 +30.1	+0.0 +1.1	+0.0 +5.2	-34.4 +2.1	+0.0	44.1	54.0	-9.9	Horiz 134
10	85.005M	34.6	-26.9	+7.4	+2.1		+0.0	17.2	40.0	-22.8	Vert
11	1829.820M	61.9	+0.0 +27.5	+0.0 +0.9	+0.0 +4.2	-35.1 +1.7	+0.0	61.1	84.0 not within a restricted band: limit is 20dBc	-22.9	Verti 121
12	1804.660M	61.7	+0.0 +27.4	+0.0 +0.9	+0.0 +4.2	-35.1 +1.7	+0.0	60.8	84.0 not within a restricted band: limit is 20dBc	-23.2	Verti 118
13	1804.680M	61.1	+0.0 +27.4	+0.0 +0.9	+0.0 +4.2	-35.1 +1.7	+0.0	60.2	84.0 not within a restricted band: limit is 20dBc	-23.8	Horiz 134
14	1854.800M	59.5	+0.0 +27.6	+0.0 +0.9	+0.0 +4.2	-35.1 +1.7	+0.0	58.8	84.0 not within a restricted band: limit is 20dBc	-25.2	Verti 100
15	1829.800M	58.9	+0.0 +27.5	+0.0 +0.9	+0.0 +4.2	-35.1 +1.7	+0.0	58.1	84.0 not within a restricted band: limit is 20dBc	-25.9	Horiz 134
16	1854.885M	57.5	+0.0 +27.6	+0.0 +0.9	+0.0 +4.2	-35.1 +1.7	+0.0	56.8	84.0 not within a restricted band: limit is 20dBc	-27.2	Horiz 133
17	929.880M Ambient	49.2	-27.0	+23.2	+8.2		+0.0	53.6	84.0	-30.4	Verti 125
18	929.600M Ambient	42.8	-27.0	+23.2	+8.2		+0.0	47.2	84.0	-36.8	Verti 125
19	934.065M	36.8	-27.0	+23.3	+8.1		+0.0	41.2	84.0	-42.8	Horiz 128

20	934.085M Ave	36.7	-27.0	+23.3	+8.1	+0.0	41.1	84.0	-42.9	Verti 125
^	934.078M	39.3	-27.0	+23.3	+8.1	+0.0	43.7	84.0	-40.3	Verti 125
22	929.986M	36.6	-27.0	+23.2	+8.2	+0.0	41.0	84.0	-43.0	Verti 131
23	899.827M	36.9	-27.0	+22.8	+8.1	+0.0	40.8	84.0	-43.2	Verti 131
24	899.815M	36.7	+0.0	+0.0	+0.0	+0.0	40.6	84.0	-43.4	Horiz
25	935.563M	35.9	-27.0	+23.3	+8.1	+0.0	40.3	84.0	-43.7	Verti 125
26	902.000M	35.8	-27.0	+22.8	+8.1	+0.0	39.7	84.0	-44.3	Vert
27	900.895M Ave	34.2	-27.0	+22.8	+8.1	+0.0	38.1	84.0	-45.9	Vert
^	900.895M	38.8	-27.0	+22.8	+8.1	+0.0	42.7	84.0	-41.3	Vert
29	900.905M Ave	34.1	-27.0	+22.8	+8.1	+0.0	38.0	84.0	-46.0	Horiz
^	900.905M	39.8	-27.0	+22.8	+8.1	+0.0	43.7	84.0	-40.3	Horiz
31	928.000M	32.7	-27.0	+23.2	+8.2	+0.0	37.1	84.0	-46.9	Verti 125
32	929.978M	32.3	+0.0	+0.0	+0.0	+0.0	36.7	84.0	-47.3	Horiz

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Davis Instruments**
 Specification: **15.247(c)/15.209**
 Work Order #: **83394** Date: 05/26/2005
 Test Type: **Maximized Emissions** Time: 13:46:36
 Equipment: **VP2 Wireless Repeater** Sequence#: 9
 Manufacturer: Davis Instruments Tested By: Randal Clark
 Model: 765x
 S/N: Davis-765x-05

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
VP2 Wireless Repeater*	Davis Instruments	765x	Davis-765x-05

Support Devices:

Function	Manufacturer	Model #	S/N
Power Adapter	Davis Instruments	6625	NA

Test Conditions / Notes:

EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Transmit Modulated. Antenna configuration: External Yagi. Frequency Range Investigated: 9kHz to 10GHz. Data represents Low, Middle and High transmit frequencies. Temperature: 23°C, Relative Humidity: 52%. Where average readings apply, a dwell time correction factor is applied in accordance with DA 00-705 20*LOG(Dwell/100ms). Dwell time per hop is 7ms, therefore CF = 20*LOG(7ms/100ms) = -23.1dB.

Transducer Legend:

T1=Amp - S/N 604	T2=Bilog Site D
T3=Cable - 10 Meter	T4=Amp - S/N 301
T5=Horn AN 00656 1-18 GHz (Mariposa)	T6=Cable 40 GHz 36"
T7=Cable - 3 Meter to bulkhead	T8=Cable HF-005-20
T9=DTCF - 7ms Dwell Time	

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	Reading listed by margin				Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			T1 dB	T2 dB	T3 dB	T4 dB					
1	2782.330M	45.6	+0.0	+0.0	+0.0	-34.4	+0.0	27.0	54.0	-27.0	Horiz 100
			+30.4	+1.1	+5.3	+2.1					
			-23.1								
2	2782.330M	45.3	+0.0	+0.0	+0.0	-34.4	+0.0	26.7	54.0	-27.3	Verti 172
			+30.4	+1.1	+5.3	+2.1					
			-23.1								
3	2707.130M	45.5	+0.0	+0.0	+0.0	-34.4	+0.0	26.5	54.0	-27.5	Horiz 138
			+30.1	+1.1	+5.2	+2.1					
			-23.1								
4	2744.745M	45.1	+0.0	+0.0	+0.0	-34.4	+0.0	26.4	54.0	-27.6	Verti 136
			+30.3	+1.1	+5.3	+2.1					
			-23.1								
5	2707.055M	42.6	+0.0	+0.0	+0.0	-34.4	+0.0	23.6	54.0	-30.4	Verti 133
			+30.1	+1.1	+5.2	+2.1					
			-23.1								

6	2744.710M Ave	41.7	+0.0 +30.3 -23.1	+0.0 +1.1	+0.0 +5.3	-34.4 +2.1	+0.0	23.0	54.0	-31.0	Horiz 117
^	2744.755M	46.8	+0.0 +30.3 -23.1	+0.0 +1.1	+0.0 +5.3	-34.4 +2.1	+0.0	28.1	54.0	-25.9	Horiz 117
8	2782.330M	41.5	+0.0 +30.4 -23.1	+0.0 +1.1	+0.0 +5.3	-34.4 +2.1	+0.0	22.9	54.0	-31.1	Horiz 100
9	902.000M	46.0	-27.0 +0.0 +0.0	+22.8 +0.0	+8.1 +0.0	+0.0 +0.0	+0.0	49.9	94.0	-44.1	Verti 143
10	928.000M QP	40.1	-27.0 +0.0 +0.0	+23.2 +0.0	+8.2 +0.0	+0.0 +0.0	+0.0	44.5	94.0	-49.5	Verti 143
11	1829.776M	25.8	+0.0 +27.5 -23.1	+0.0 +0.9	+0.0 +4.2	+0.0 +1.7	+0.0	37.0	94.0	-57.0	Verti 100
12	1804.725M	24.2	+0.0 +27.4 -23.1	+0.0 +0.9	+0.0 +4.2	+0.0 +1.7	+0.0	35.3	94.0	-58.7	Verti 133
13	1804.708M	23.7	+0.0 +27.4 -23.1	+0.0 +0.9	+0.0 +4.2	+0.0 +1.7	+0.0	34.8	94.0	-59.2	Horiz 146
14	1829.836M	23.6	+0.0 +27.5 -23.1	+0.0 +0.9	+0.0 +4.2	+0.0 +1.7	+0.0	34.8	94.0	-59.2	Horiz 145
15	1854.902M	23.1	+0.0 +27.6 -23.1	+0.0 +0.9	+0.0 +4.2	+0.0 +1.7	+0.0	34.4	94.0	-59.6	Horiz 116
16	1854.902M	21.9	+0.0 +27.6 -23.1	+0.0 +0.9	+0.0 +4.2	+0.0 +1.7	+0.0	33.2	94.0	-60.8	Verti 100

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Davis Instruments**
 Specification: **15.247(c)/15.209**
 Work Order #: **83394** Date: 05/27/2005
 Test Type: **Maximized Emissions** Time: 09:17:43
 Equipment: **VP2 Wireless Repeater** Sequence#: 11
 Manufacturer: Davis Instruments Tested By: Randal Clark
 Model: 765x
 S/N: Davis-765x-05

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
VP2 Wireless Repeater*	Davis Instruments	765x	Davis-765x-05

Support Devices:

Function	Manufacturer	Model #	S/N
Power Adapter	Davis Instruments	6625	NA

Test Conditions / Notes:

EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Transmit Modulated. Antenna configuration: External Omni. Frequency Range Investigated: 9kHz to 10GHz. Data represents Low, Middle and High transmit frequencies. Temperature: 23°C, Relative Humidity: 52%. Where average readings apply, a dwell time correction factor is applied in accordance with DA 00-705 20*LOG(Dwell/100ms). Dwell time per hop is 7ms, therefore CF = 20*LOG(7ms/100ms) = -23.1dB.

Transducer Legend:

T1=Amp - S/N 604	T2=Bilog Site D
T3=Cable - 10 Meter	T4=Amp - S/N 301
T5=Horn AN 00656 1-18 GHz (Mariposa)	T6=Cable 40 GHz 36"
T7=Cable - 3 Meter to bulkhead	T8=Cable HF-005-20
T9=DTCF - 7ms Dwell Time	

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq	Rdng	Reading listed by margin.				Dist	Corr	Spec	Margin	Polar
			T1	T2	T3	T4					
	MHz	dBμV	T5	T6	T7	T8	Table	dBμV/m	dBμV/m	dB	Ant
1	2707.080M	49.3	+0.0	+0.0	+0.0	-34.4	+0.0	30.3	54.0	-23.7	Verti
	Ave		+30.1	+1.1	+5.2	+2.1					100
			-23.1								
^	2707.080M	51.4	+0.0	+0.0	+0.0	-34.4	+0.0	32.4	54.0	-21.6	Verti
			+30.1	+1.1	+5.2	+2.1					100
			-23.1								
3	2782.375M	47.1	+0.0	+0.0	+0.0	-34.4	+0.0	28.5	54.0	-25.5	Verti
	Ave		+30.4	+1.1	+5.3	+2.1					100
			-23.1								
^	2782.375M	49.5	+0.0	+0.0	+0.0	-34.4	+0.0	30.9	54.0	-23.1	Verti
			+30.4	+1.1	+5.3	+2.1					100
			-23.1								

5	2707.080M Ave	45.3	+0.0 +30.1 -23.1	+0.0 +1.1	+0.0 +5.2	-34.4 +2.1	+0.0	26.3	54.0	-27.7	Horiz 137
^	2707.080M	47.8	+0.0 +30.1 -23.1	+0.0 +1.1	+0.0 +5.2	-34.4 +2.1	+0.0	28.8	54.0	-25.2	Horiz 137
7	2744.705M Ave	44.1	+0.0 +30.3 -23.1	+0.0 +1.1	+0.0 +5.3	-34.4 +2.1	+0.0	25.4	54.0	-28.6	Verti 158
^	2744.705M	46.8	+0.0 +30.3 -23.1	+0.0 +1.1	+0.0 +5.3	-34.4 +2.1	+0.0	28.1	54.0	-25.9	Verti 158
9	2744.705M Ave	44.0	+0.0 +30.3 -23.1	+0.0 +1.1	+0.0 +5.3	-34.4 +2.1	+0.0	25.3	54.0	-28.7	Horiz 123
^	2744.705M	47.8	+0.0 +30.3 -23.1	+0.0 +1.1	+0.0 +5.3	-34.4 +2.1	+0.0	29.1	54.0	-24.9	Horiz 123
11	2782.380M Ave	43.4	+0.0 +30.4 -23.1	+0.0 +1.1	+0.0 +5.3	-34.4 +2.1	+0.0	24.8	54.0	-29.2	Horiz 113
^	2782.380M	46.6	+0.0 +30.4 -23.1	+0.0 +1.1	+0.0 +5.3	-34.4 +2.1	+0.0	28.0	54.0	-26.0	Horiz 113
13	896.460M	42.8	-27.0 +0.0 +0.0	+22.8 +0.0	+8.1 +0.0	+0.0 +0.0	+0.0	46.7	90.0	-43.3	Verti 141
14	900.905M	41.5	-27.0 +0.0 +0.0	+22.8 +0.0	+8.1 +0.0	+0.0 +0.0	+0.0	45.4	90.0	-44.6	Verti 141
15	902.000M	41.1	-27.0 +0.0 +0.0	+22.8 +0.0	+8.1 +0.0	+0.0 +0.0	+0.0	45.0	90.0	-45.0	Verti 141
16	934.080M	39.2	-27.0 +0.0 +0.0	+23.3 +0.0	+8.1 +0.0	+0.0 +0.0	+0.0	43.6	90.0	-46.4	Verti 167
17	928.000M	38.5	-27.0 +0.0 +0.0	+23.2 +0.0	+8.2 +0.0	+0.0 +0.0	+0.0	42.9	90.0	-47.1	Verti 167
18	899.820M	38.7	-27.0 +0.0 +0.0	+22.8 +0.0	+8.1 +0.0	+0.0 +0.0	+0.0	42.6	90.0	-47.4	Verti 141
19	935.600M	35.9	-27.0 +0.0 +0.0	+23.3 +0.0	+8.1 +0.0	+0.0 +0.0	+0.0	40.3	90.0	-49.7	Verti 167
20	948.820M	32.8	-27.0 +0.0 +0.0	+23.5 +0.0	+7.8 +0.0	+0.0 +0.0	+0.0	37.1	90.0	-52.9	Verti 167
21	1854.970M	25.5	+0.0 +27.6 -23.1	+0.0 +0.9	+0.0 +4.2	+0.0 +1.7	+0.0	36.8	90.0	-53.2	Horiz 107

22	1804.708M	25.7	+0.0 +27.4 -23.1	+0.0 +0.9	+0.0 +4.2	+0.0 +1.7	+0.0	36.8	90.0	-53.2	Horiz 139
23	1829.850M	25.2	+0.0 +27.5 -23.1	+0.0 +0.9	+0.0 +4.2	+0.0 +1.7	+0.0	36.4	90.0	-53.6	Horiz 110
24	1854.970M	24.6	+0.0 +27.6 -23.1	+0.0 +0.9	+0.0 +4.2	+0.0 +1.7	+0.0	35.9	90.0	-54.1	Verti 150
25	1829.790M	24.3	+0.0 +27.5 -23.1	+0.0 +0.9	+0.0 +4.2	+0.0 +1.7	+0.0	35.5	90.0	-54.5	Verti 119
26	1804.728M	23.0	+0.0 +27.4 -23.1	+0.0 +0.9	+0.0 +4.2	+0.0 +1.7	+0.0	34.1	90.0	-55.9	Verti 185

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Davis Instruments**
 Specification: **15.247(c) Antenna Conducted**
 Work Order #: **83394**
 Test Type: **Antenna Terminals**
 Equipment: **VP2 Wireless Repeater**
 Manufacturer: Davis Instruments
 Model: 765x
 S/N: Davis-765x-05

Date: 05/06/2005
 Time: 9:58:55 AM
 Sequence#: 3
 Tested By: Randal Clark

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
VP2 Wireless Repeater*	Davis Instruments	765x	Davis-765x-05

Support Devices:

Function	Manufacturer	Model #	S/N
Power Adapter	Davis Instruments	6625	NA

Test Conditions / Notes:

EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Transmit Modulated, Channel 0 (Low). Antenna configuration: External Connector. Frequency Range Investigated: 1MHz to 10GHz Temperature: 20°C, Relative Humidity: 58%.

Transducer Legend:

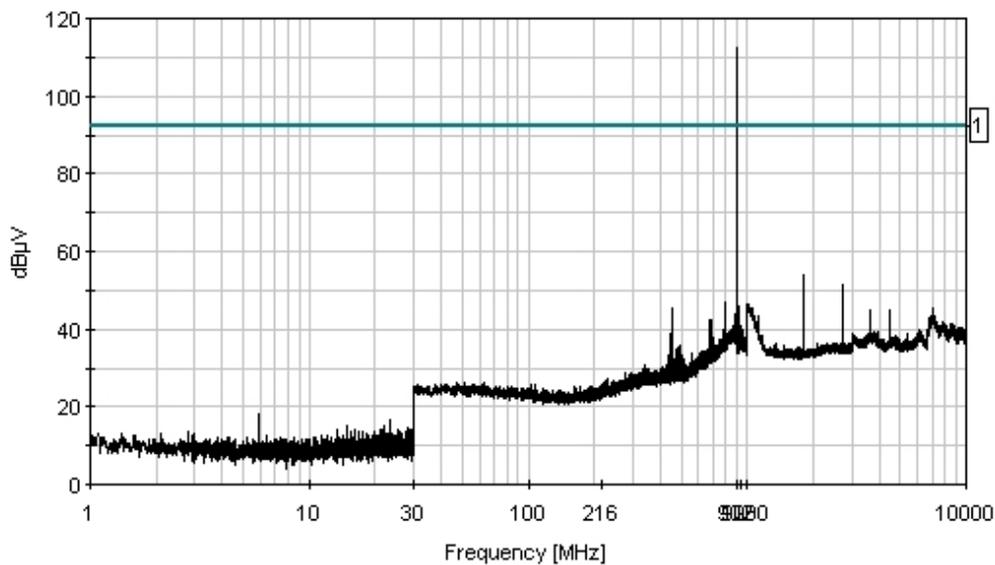
T1=Cable 40 GHz 36"

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	dB			Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	902.311M	111.9	+0.6				+0.0	112.5	137.0	-24.5	None
									Carrier - Low Channel		
2	1804.804M	52.8	+0.9				+0.0	53.7	92.5	-38.8	None
3	2706.705M	50.4	+1.1				+0.0	51.5	92.5	-41.0	None
4	896.426M	50.1	+0.6				+0.0	50.7	92.5	-41.8	None
5	900.990M	47.5	+0.6				+0.0	48.1	92.5	-44.4	None
6	903.873M	47.3	+0.6				+0.0	47.9	92.5	-44.6	None
7	791.801M	46.3	+0.6				+0.0	46.9	92.5	-45.6	None
8	1002.002M	46.0	+0.6				+0.0	46.6	92.5	-45.9	None
9	908.317M	45.4	+0.6				+0.0	46.0	92.5	-46.5	None
10	452.582M	44.9	+0.5				+0.0	45.4	92.5	-47.1	None

11	897.987M	44.8	+0.6	+0.0	45.4	92.5	-47.1	None
12	6983.978M	43.3	+1.9	+0.0	45.2	92.5	-47.3	None
13	3609.607M	43.7	+1.3	+0.0	45.0	92.5	-47.5	None
14	4511.508M	43.5	+1.4	+0.0	44.9	92.5	-47.6	None
15	889.098M	43.9	+0.6	+0.0	44.5	92.5	-48.0	None

CKC Laboratories Date: 05/06/2005 Time: 9:58:55 AM Davis Instruments WVO#: 83394
 15.247(c) Antenna Conducted Test Distance: None Sequence#: 3
 Davis Instruments MN 762xOV



— Sweep Data — 1 - 15.247(c) Antenna Conducted

Test Location: CKC Laboratories • 5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Davis Instruments**
 Specification: **15.247(c) Antenna Conducted**
 Work Order #: **83394** Date: 05/06/2005
 Test Type: **Antenna Terminals** Time: 10:12:16 AM
 Equipment: **VP2 Wireless Repeater** Sequence#: 4
 Manufacturer: Davis Instruments Tested By: Randal Clark
 Model: 765x
 S/N: Davis-765x-05

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
VP2 Wireless Repeater*	Davis Instruments	765x	Davis-765x-05

Support Devices:

Function	Manufacturer	Model #	S/N
Power Adapter	Davis Instruments	6625	NA

Test Conditions / Notes:

EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Transmit Modulated, Channel 25 (Mid). Antenna configuration: External Connector. Frequency Range Investigated: 1MHz to 10GHz. Temperature: 20°C, Relative Humidity: 58%.

Transducer Legend:

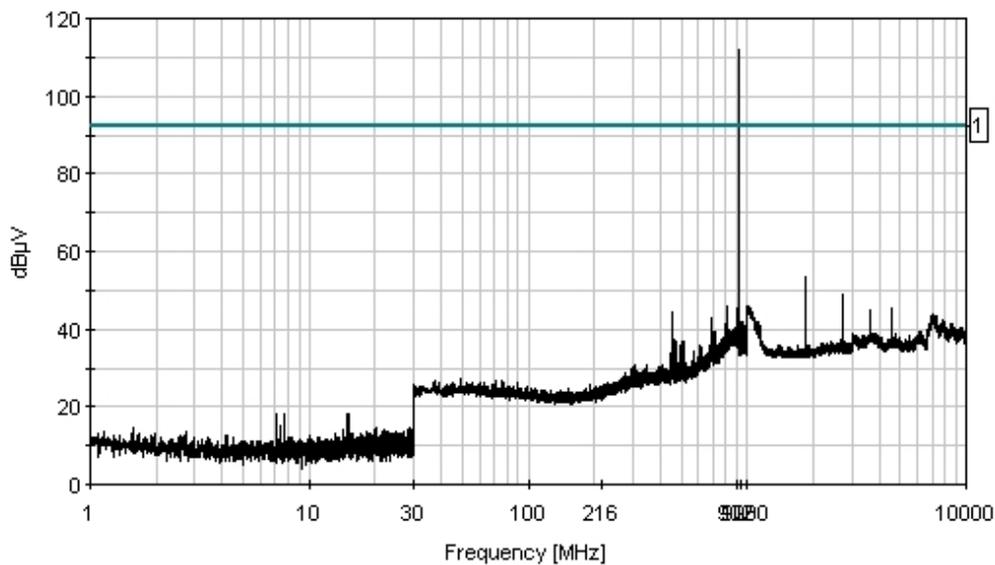
T1=Cable 40 GHz 36"

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	914.924M	111.8	+0.6				+0.0	112.4	137.0	-24.6	None
Carrier - Mid Channel											
2	1829.829M	52.4	+0.9				+0.0	53.3	92.5	-39.2	None
3	2744.743M	47.7	+1.1				+0.0	48.8	92.5	-43.7	None
4	907.837M	47.9	+0.6				+0.0	48.5	92.5	-44.0	None
5	907.236M	47.3	+0.6				+0.0	47.9	92.5	-44.6	None
6	911.080M	45.5	+0.6				+0.0	46.1	92.5	-46.4	None
7	804.294M	45.4	+0.6				+0.0	46.0	92.5	-46.5	None
8	1001.001M	45.4	+0.6				+0.0	46.0	92.5	-46.5	None
9	899.789M	45.0	+0.6				+0.0	45.6	92.5	-46.9	None
10	4574.571M	44.1	+1.4				+0.0	45.5	92.5	-47.0	None

11	907.597M	44.6	+0.6	+0.0	45.2	92.5	-47.3	None
12	3659.657M	43.6	+1.3	+0.0	44.9	92.5	-47.6	None
13	1038.038M	44.1	+0.7	+0.0	44.8	92.5	-47.7	None
14	1046.046M	44.0	+0.7	+0.0	44.7	92.5	-47.8	None
15	921.891M	44.0	+0.6	+0.0	44.6	92.5	-47.9	None

CKC Laboratories Date: 05/06/2005 Time: 10:12:16 AM Davis Instruments WVO#: 83394
 15.247(c) Antenna Conducted Test Distance: None Sequence#: 4
 Davis Instruments MN 762xOV



— Sweep Data — 1 - 15.247(c) Antenna Conducted

Test Location: CKC Laboratories •5473A Clouds Rest • Mariposa, CA 95338 • 1-800-500-4EMC (4362)

Customer: **Davis Instruments**
 Specification: **15.247(c) Antenna Conducted**
 Work Order #: **83394**
 Test Type: **Antenna Terminals**
 Equipment: **VP2 Wireless Repeater**
 Manufacturer: Davis Instruments
 Model: 765x
 S/N: Davis-765x-05

Date: 05/06/2005
 Time: 10:48:35 AM
 Sequence#: 5
 Tested By: Randal Clark

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
VP2 Wireless Repeater*	Davis Instruments	765x	Davis-765x-05

Support Devices:

Function	Manufacturer	Model #	S/N
Power Adapter	Davis Instruments	6625	NA

Test Conditions / Notes:

EUT is a repeater station for temperature monitoring systems. The equipment operates on a frequency range of 902-928MHz. Operating Configuration: Continuous Transmit Modulated, Channel 50 (High). Antenna configuration: External Connector. Frequency Range Investigated: 1MHz to 10GHz. Temperature: 20°C, Relative Humidity: 58%.

Transducer Legend:

T1=Cable 40 GHz 36"

Measurement Data: Reading listed by margin. Test Distance: None

#	Freq MHz	Rdng dBμV	T1 dB	dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	927.417M	111.5	+0.6				+0.0	112.1	137.0	-24.9	None
									Carrier - High Channel		
2	2468.467M	65.8	+1.0				+0.0	66.8	92.5	-25.7	None
3	2478.477M	62.2	+1.0				+0.0	63.2	92.5	-29.3	None
4	1854.854M	52.5	+0.9				+0.0	53.4	92.5	-39.1	None
5	4637.634M	48.2	+1.4				+0.0	49.6	92.5	-42.9	None
6	2781.780M	47.1	+1.1				+0.0	48.2	92.5	-44.3	None
7	1007.007M	46.0	+0.6				+0.0	46.6	92.5	-45.9	None
8	928.017M	45.5	+0.6				+0.0	46.1	92.5	-46.4	None
9	1000.000M	45.5	+0.6				+0.0	46.1	92.5	-46.4	None
10	934.023M	45.4	+0.6				+0.0	46.0	92.5	-46.5	None

11	1009.009M	45.2	+0.6	+0.0	45.8	92.5	-46.7	None
12	816.906M	44.3	+0.6	+0.0	44.9	92.5	-47.6	None
13	7122.116M	41.9	+1.9	+0.0	43.8	92.5	-48.7	None
14	6957.952M	41.6	+1.9	+0.0	43.5	92.5	-49.0	None
15	6992.987M	41.5	+1.9	+0.0	43.4	92.5	-49.1	None

CKC Laboratories Date: 05/06/2005 Time: 10:48:35 AM Davis Instruments WVO#: 83394
 15.247(c) Antenna Conducted Test Distance: None Sequence#: 5
 Davis Instruments MN 762xOV

