



**COMPATIBLE
ELECTRONICS**

EXHIBIT 3

TECHNICAL TEST REPORT

FCC PART 15, SUBPART C
TEST REPORT

for

CAR ALARM TRANSMITTER
Model: KTX303A
FCC ID: N6PKTX303

Prepared for

DVP, INC.
3430 OCEAN VIEW BLVD. STE. A
GLENDALE, CA 91308

Prepared by: Jeremy D. Williamson
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Approved by: Jeff S. Klinger
JEFF S. KLINGER

COMPATIBLE ELECTRONICS INC.
2337 TROUTDALE DRIVE
AGOURA, CALIFORNIA 91301
(818) 597-0600

DATE: SEPTEMBER 9, 1998

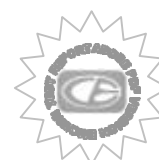
	REPORT BODY	APPENDICES				TOTAL
		A	B	C	D	
PAGES	18	2	2	7	13	42

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TABLE OF CONTENTS

Section / Title	PAGE
GENERAL REPORT SUMMARY	4
SUMMARY OF TEST RESULTS	4
1. PURPOSE	5
2. ADMINISTRATIVE DATA	6
2.1 Location of Testing	6
2.2 Traceability Statement	6
2.3 Cognizant Personnel	6
2.4 Date Test Sample was Received	6
2.5 Disposition of the Test Sample	6
2.6 Abbreviations and Acronyms	6
3. APPLICABLE DOCUMENTS	7
4. Description of Test Configuration	8
4.1 Description of Test Configuration - EMI	8
4.1.1 Cable Construction and Termination	9
5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT	10
5.1 EUT and Accessory List	10
5.2 EMI Test Equipment	11
6. TEST SITE DESCRIPTION	12
6.1 Test Facility Description	12
6.2 EUT Mounting, Bonding and Grounding	12
7. Test Procedures	13
7.1 RF Emissions	13
7.1.1 Conducted Emissions Test	13
7.1.2 Radiated Emissions Test	14
7.1.3 RF Emissions Test Results	15
7.1.4 Sample Calculations	17
8. CONCLUSIONS	18



LIST OF APPENDICES

APPENDIX	TITLE
A	Modifications to the EUT
B	Additional Models Covered Under This Report
C	Diagrams, Charts and Photos • Test Setup Diagrams • Antenna and Effective Gain Factors • Radiated Emissions Photos
D	Duty Cycle Plots & Data Sheets

LIST OF TABLES

TABLE	TITLE
1	Radiated Emissions Test Results-Fundamental and Harmonics
2	Radiated Emissions Test Results-Spurious
3	Duty Cycle Calculations

LIST OF FIGURES

FIGURE	Title
1	Conducted Emissions Test Setup
2	Plot Map And Layout of Test Site
A - G	Duty Cycle Plots



GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced in any form unless done so in full with the written permission of Compatible Electronics.

This report must not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government.

Device Tested: CAR ALARM TRANSMITTER
Model: KTX303A
S/N: NONE

Product Description: This is a low power RF Car Alarm CAR ALARM TRANSMITTER.

Modifications: The EUT was not modified during the testing.

Manufacturer: DVP, INC.
3430 Ocean View Blvd. Ste. A
Glendale, CA 91208

Test Date(s): July 13, 16 and 17, 1998

Test Specifications:
EMI requirements
FCC Title 47, Part 15 Subpart C
Test Procedure: ANSI C63.4: 1992.

Test Deviations: The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions, 150 kHz - 30 MHz.	This device is battery operated and does not draw power from public mains hence no conducted test was required.
2	Radiated RF Emissions, 30 MHz – 3.1 GHz.	Complies with the limits of FCC Title 47, Part 15 Subpart C, section 15.209 and 15.231.



1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the CAR ALARM TRANSMITTER Model: KTX303A. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 1992. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the specification limits defined in FCC Title 47, Part 15, Subpart C, 15.209 and 15.231.



2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 2337 Troutdale Drive, Agoura, California 91301.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

DVP, INC.

Mark Simon Consultant

Compatible Electronics, Inc.

Jeremy D. Williamson Test Technician

Jeff S. Klinger Lab Manager

2.4 Date Test Sample was Received

The test sample was received on July 13, 1998.

2.5 Disposition of the Test Sample

The test sample remains at Compatible Electronics.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network



3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
FCC Title 47, Subpart C.	FCC Rules - Intentional Radiators
ANSI C63.4 1992	Methods of measurement of radio-noise emissions from low-voltage electrical and electronic equipment in the range of 9 kHz to 40 GHz.



4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description of Test Configuration - EMI

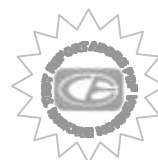
The EUT was set up in a tabletop configuration. The EUT was tested in each of three positions (X axis, Y axis and Z axis). The EUT was tested while continuously transmitting.

It was determined that the highest emission levels were found in the above configuration. The final radiated data was taken in this mode of operation. All initial investigations were performed with the EMI Receiver in manual mode scanning the frequency range continuously. Photographs and data sheets are included in Appendices C and D (respectively).



4.1.1 Cable Construction and Termination

The EUT has no cables.



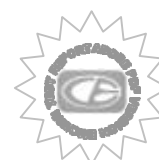
5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT**5.1 EUT and Accessory List**

EQUIPMENT TYPE	MANUFACTURER	MODEL	SERIAL NUMBER
CAR ALARM TRANSMITTER (EUT)	DVP, INC.	KTX303A	S/N: NONE



5.2 EMI Test Equipment

EQUIPMENT TYPE	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. DATE	CAL. DUE DATE
EMI Receiver	Hewlett Packard	8546A	3325A00140	Mar. 08, 1998	Mar. 08, 1999
Preamplifier	Com Power	PA-102	01249	Apr. 20, 1998	Apr. 20, 1999
Preamplifier over 1GHz	Com Power	PA-122	25137	Jul. 15, 1998	Jul. 15, 1999
Biconical Antenna	Com Power	AB-100	01535	Apr. 17, 1998	Apr. 17, 1999
Log Periodic Antenna	Com Power	AL-100	A101	Apr. 16, 1998	Apr. 16, 1999
Horn Antenna	Antenna Research Assoc.	DRG-118/A	1015	Dec. 02, 1993	N.C.R.
Antenna Mast	Com Power	AM-400	N/A	N/A	N/A
Turntable	Com Power	TT-106A	N/A	N/A	N/A
Plotter	Hewlett Packard	7470A	2644V 00493	N/A	N/A



6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 and 7.1.2 of this report for EMI test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was not grounded.



7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

7.1 RF Emissions

7.1.1 Conducted Emissions Test

The EMI Receiver was used as a measuring meter. The data was collected with the EMI Receiver in the peak detect mode with the "Max Hold" feature activated. The quasi-peak was used only where indicated in the data sheets. A 10 dB attenuation pad was used for the protection of the spectrum analyzer input stage, and the EMI Receiver offset was adjusted accordingly to read the actual data measured. The LISN output was read by the EMI Receiver. The output of the second LISN was terminated by a 50 ohm termination. The effective measurement bandwidth used for the conducted emissions test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The EUT was powered through the LISN, which was bonded to the ground plane. The LISN power was filtered and the filter was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI C63.4: 1992. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The initial test data was taken in manual mode while scanning the frequency ranges of 0.15 MHz to 1.6 MHz, 1.6 MHz to 5 MHz and 5 MHz to 30 MHz. The conducted emissions from the EUT were maximized for operating mode as well as cable and peripheral placement. Once a predominant frequency (within 12 dB of the limit) was found, it was more closely examined with the EMI Receiver span adjusted to 1 MHz.

The EUT is a battery powered device which does not connect to the public mains, therefore no conducted test was required.



7.1.2 Radiated Emissions Test

The EMI Receiver was used as a measuring meter. The Preamplifier was used to increase the sensitivity of the instrument. The EMI Receiver was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the receiver records the highest measured reading over all the sweeps. The quasi-peak was used only for those readings which are marked accordingly on the data sheets. The effective measurement bandwidth used for the radiated emissions test was 120 kHz for readings under 1GHz and 1MHz for readings over 1GHz.

Broadband antennas were used as transducers during the measurement. The biconical antenna was used from 30 MHz to 300 MHz, the log periodic antenna was used from 300 MHz to 1 GHz and the horn antenna was used above 1 GHz. The frequency spans were wide (30 MHz to 300 MHz, 300 MHz to 1 GHz and 1 GHz to 3.1 GHz) during preliminary investigations. The final data was taken with a frequency span of 1 MHz. Furthermore, the frequency span was reduced during the preliminary investigations as deemed necessary.

The open field test site of Compatible Electronics, Inc. was used for radiated emission testing. This test site is set up according to ANSI C63.4: 1992. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength).

Preliminary testing was done at a distance of 1 meter instead of 3 meters to determine the predominant harmonics and spurious emission frequencies. An open field test site was used for the preliminary investigations. Broadband antennas were used to scan large frequency bands while manipulating the X, Y, and Z azimuth of the unit. If and when any frequency was found to be above 30 microvolts/meter level (at 1 meter distance), this frequency was recorded as a significant frequency. All significant frequencies are further examined carefully at a reduced frequency span on the spectrum analyzer while changing the antenna height and EUT orientation. The EUT was tested again at a 3 meter test distance to obtain the final test data. The bandwidth of the spectrum analyzer was varied to ensure that pulse desensitization did not occur.

The presence of ambient signals was verified by turning the EUT off. In case an ambient signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the ambient signal does not hide any emissions from the EUT. The EUT was tested at a 3 meter test distance to obtain final test data. The test results are listed in table 1.



7.1.3 RF Emissions Test Results

Table 1.0 RADIATED EMISSION RESULTS (Fundamental & Harmonics)
CAR ALARM TRANSMITTER Model: KTX303A

Frequency MHz	Meter* Reading dBuV/m	Effective Gain ** dB	Antenna Factor ** dB/m	Distance Factor dB	Corrected Reading dBuV/m	Spec. Limit dBuV/m	Delta dB
303.68	93.6 A	33.6	14.8	0	74.8	74.9	-0.1
607.43	65.8	31.3	22.2	0	56.7	61.9	-5.2
911.13	56.1	28.8	21.9	0	49.2	61.9	-12.7
1214.81	50.5 R	28.4	25.0	0	47.1	54.0	-6.9
1518.51	53.1 R	28.8	26.8	0	51.1	54.0	-2.9
1822.19	54.8	27.6	28.5	0	55.7	61.9	-6.2
2125.91	52.	26.2	29.8	0	55.6	61.9	-6.3
2429.67	46.9	26.1	29.9	0	50.7	61.9	-11.2
2733.29	43.5 R	25.7	30.1	0	47.9	54.0	-6.1
3037.00	38.8	25.1	30.3	0	44.0	61.9	-17.9

Notes:

- * The complete emissions data is given in Appendix A of this report.
- ** The effective factor includes the cable loss. The correction factors for the antenna and effective gain are attached in [Appendix C](#) of this report.
- A** Average Reading. The duty cycle plots and calculations are located in Appendix D of this report.
- R** Restricted Band

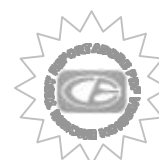


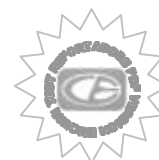
Table 2.0 RADIATED EMISSIONS - SPURIOUS
RF LOW POWER CAR ALARM TRANSMITTER

The following bands were specifically scanned.

Frequency Band in MHz	RF Energy From CAR ALARM TRANSMITTER at 3 meters (uV/m)
37.5 to 38.25	< 100
73 to 74.6	< 100
74.8 to 75.2	< 100
108 to 121.94	< 150
123 to 138	< 150
149.9 to 150.05	< 150
156.7 to 156.9	< 150
162.0125 to 167.17	< 150
167.72 to 173.2	< 150
240 to 285	< 200
322 to 335.4	< 200
399.9 to 410	< 200
608 to 614	< 200
960 to 1240	< 500
1300 to 1427	< 500
1435 to 1626.5	< 500
1660 to 1710	< 500
1718.8 to 1722.2	< 500
2200 to 2300	< 500
2310 to 2390	< 500
2483.5 to 2500	< 500
2655 to 2900	< 500

The bandwidth of the emission was less than 0.25% of the center frequency when measured at the points 20dB down from the modulated carrier.

Frequency in MHz	Bandwidth in MHz	Maximum Bandwidth in MHz
303.70	0.365	<0.759



7.1.4 Sample Calculations

The Preamplifier was used to increase the sensitivity of the EMI Receiver. A correction factor for the antenna, preamplifier, cable loss and a distance factor (if any), must be applied to the meter reading before a true field strength reading can be obtained. For greater efficiency and convenience, instead of using these correction factors for each meter reading, the specification limit was modified to reflect these correction factors at each frequency, so that the meter readings can be compared directly to the modified specification limit, referred to henceforth as the corrected meter reading limit (CML).

The equation can be derived in the following manner:

$$\text{Corrected Meter Reading} = \text{meter reading} + F - G$$

where: F = antenna factor
G = effective gain (amplifier gain - cable loss)

Therefore, the equation for determining the corrected meter reading limit is:

$$\text{CML} = \text{spec. limit} - F + G$$

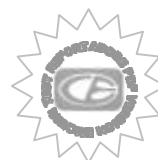
A table of corrected meter reading limits was used to permit immediate comparison of the meter reading and determine if the emission level exceeded the specification limit at that frequency. The correction factors for the antenna and the effective gain are attached in Appendix C of this report. The data sheets are attached in Appendix D.

The distance factor D is 0 when the test is performed at a distance of 3 meters.



8. CONCLUSIONS

The CAR ALARM TRANSMITTER Model: KTX303A meets all of the requirements of the FCC Title 47, Part 15, Subpart C.





APPENDIX A

MODIFICATIONS TO THE EUT



MODIFICATIONS TO THE EUT

There were no modifications made to the EUT during the test.





APPENDIX B

***ADDITIONAL MODELS COVERED
UNDER THIS REPORT***



ADDITIONAL MODELS COVERED UNDER THIS REPORT

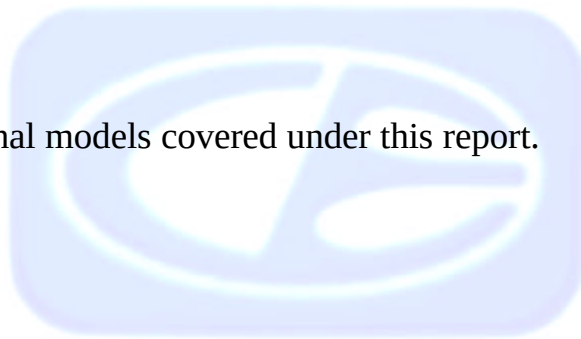
USED FOR THE PRIMARY TEST

CAR ALARM TRANSMITTER

Model: KTX303A

S/N: NONE

There were no additional models covered under this report.





APPENDIX C

DIAGRAMS, CHARTS AND PHOTOS



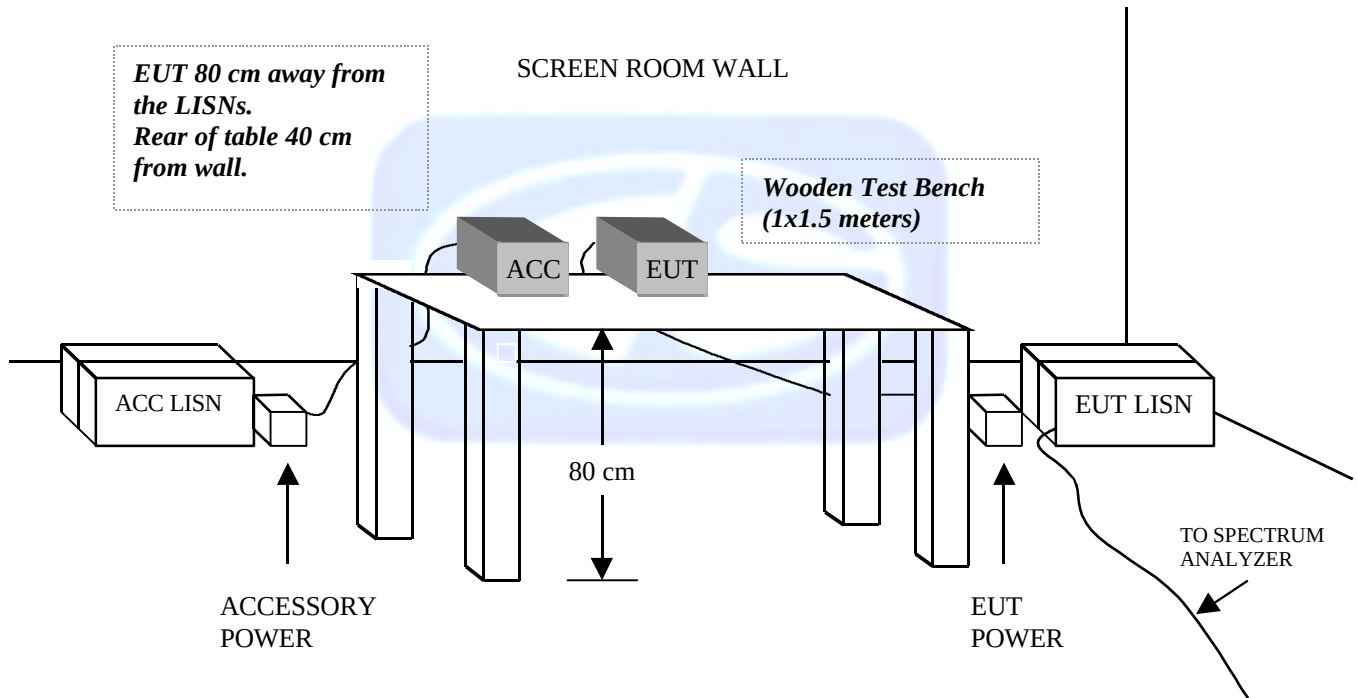
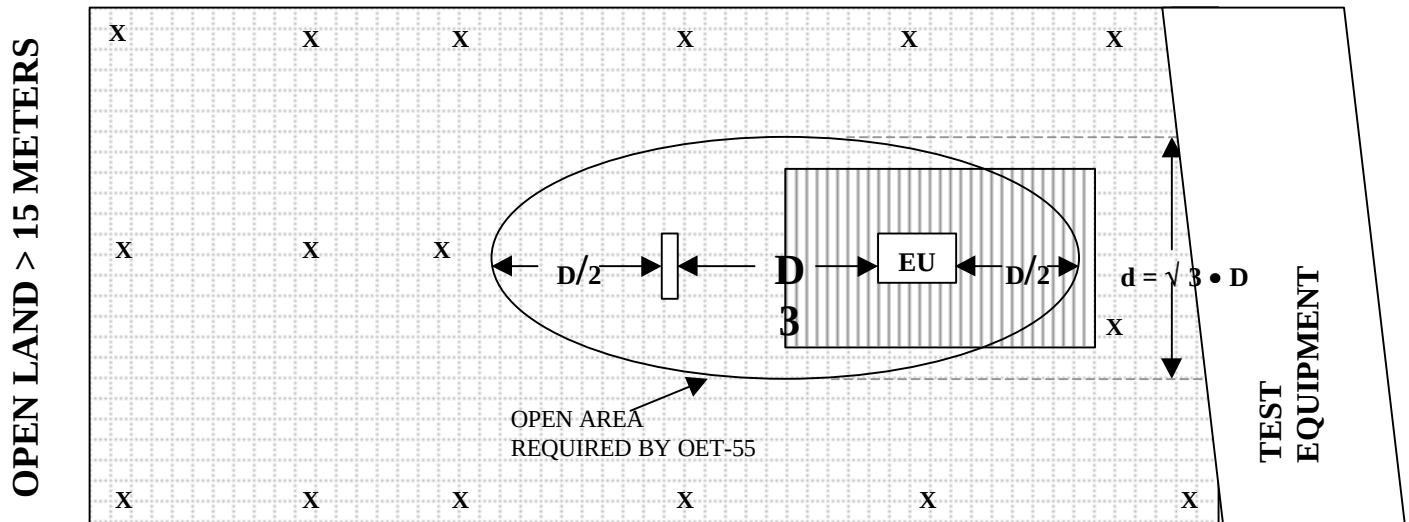
FIGURE 1: CONDUCTED EMISSIONS TEST SETUP

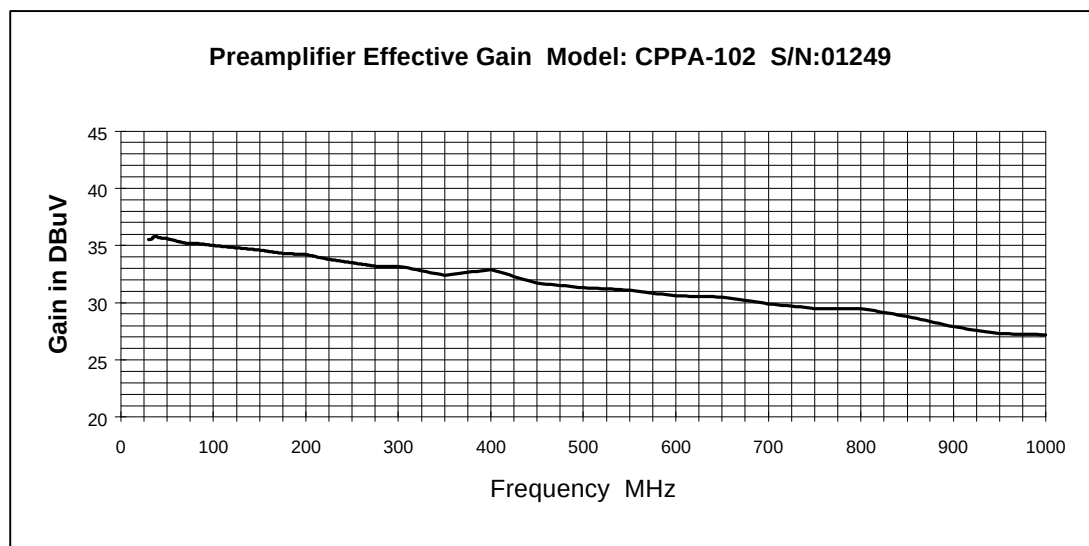
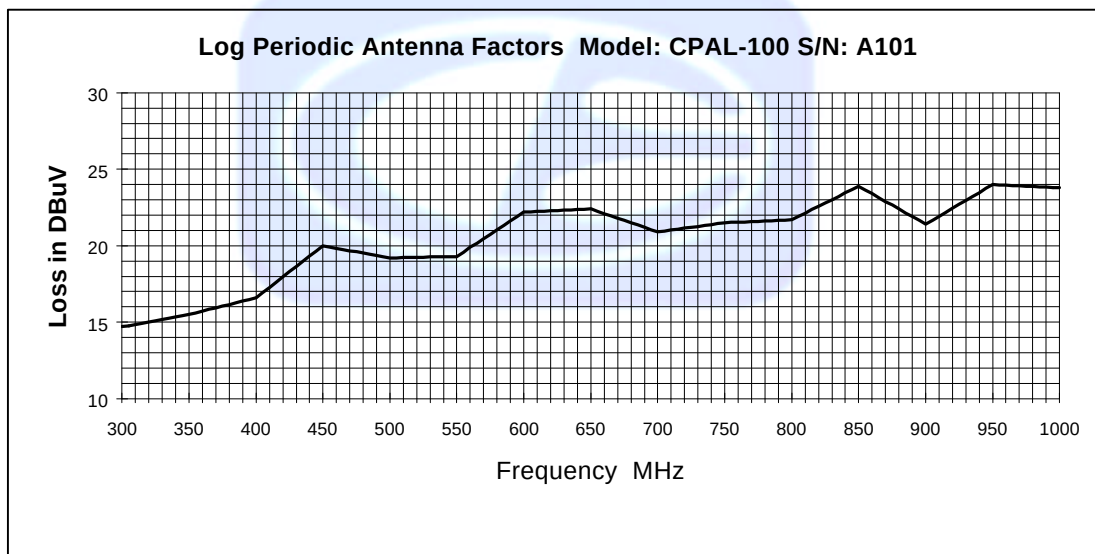
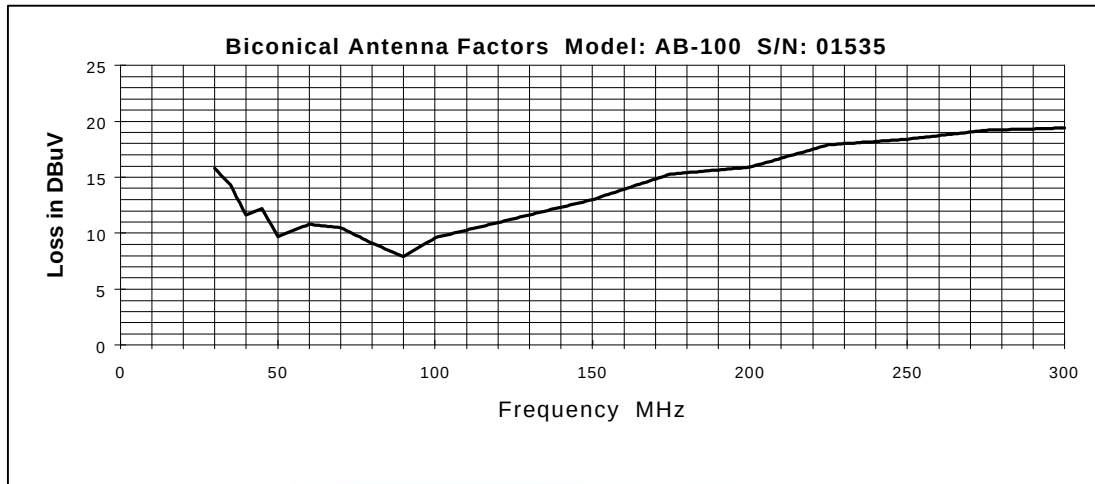
FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED SITE

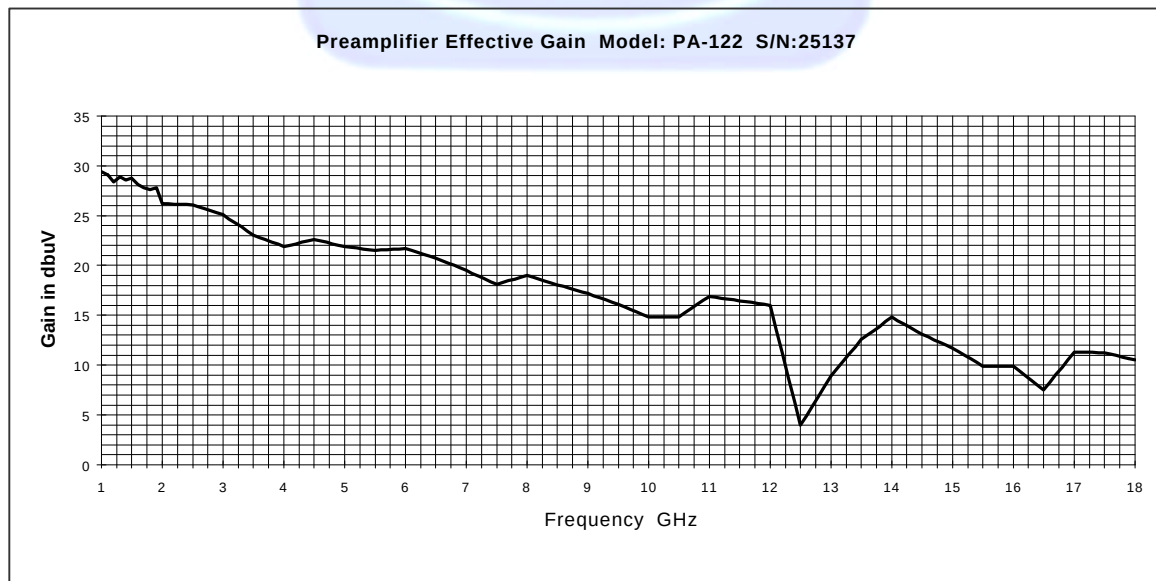
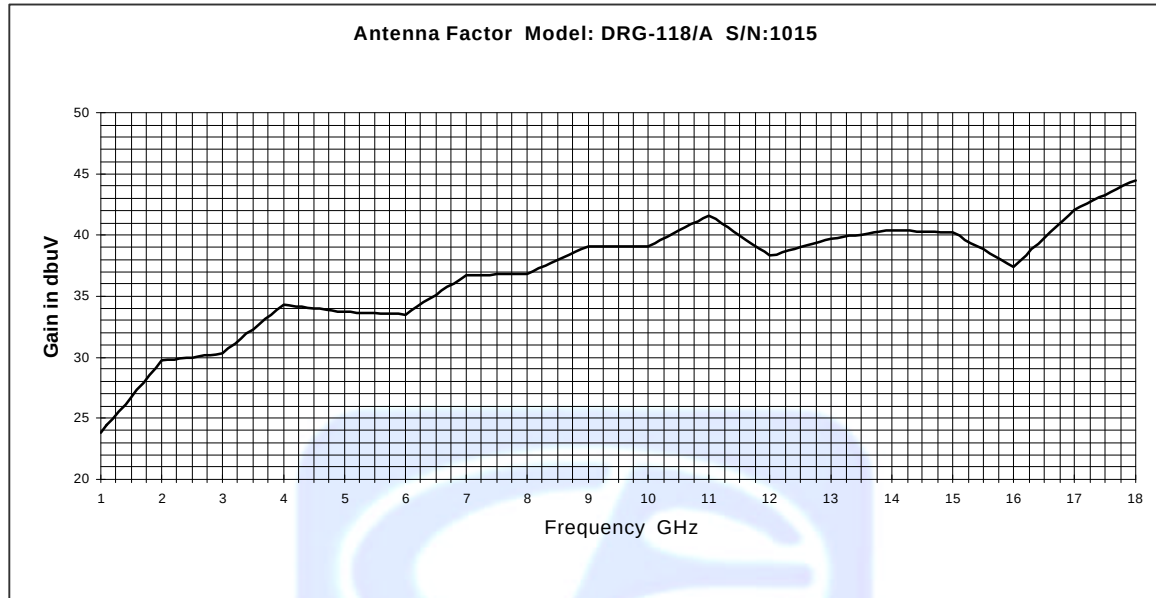
OPEN LAND > 15 METERS

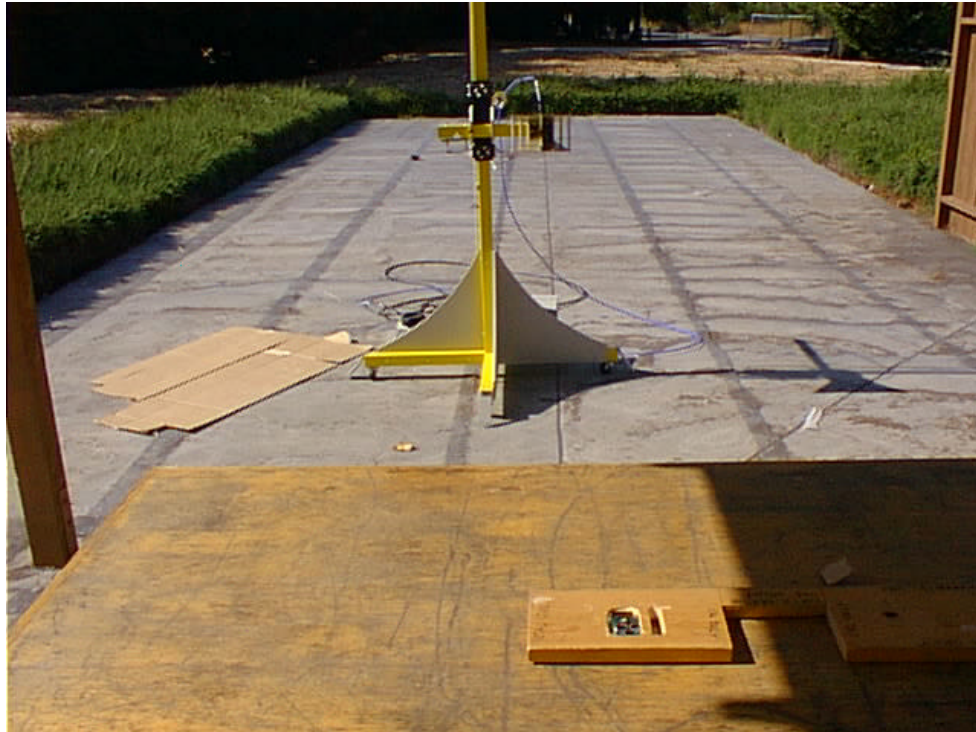


OPEN LAND > 15 METERS









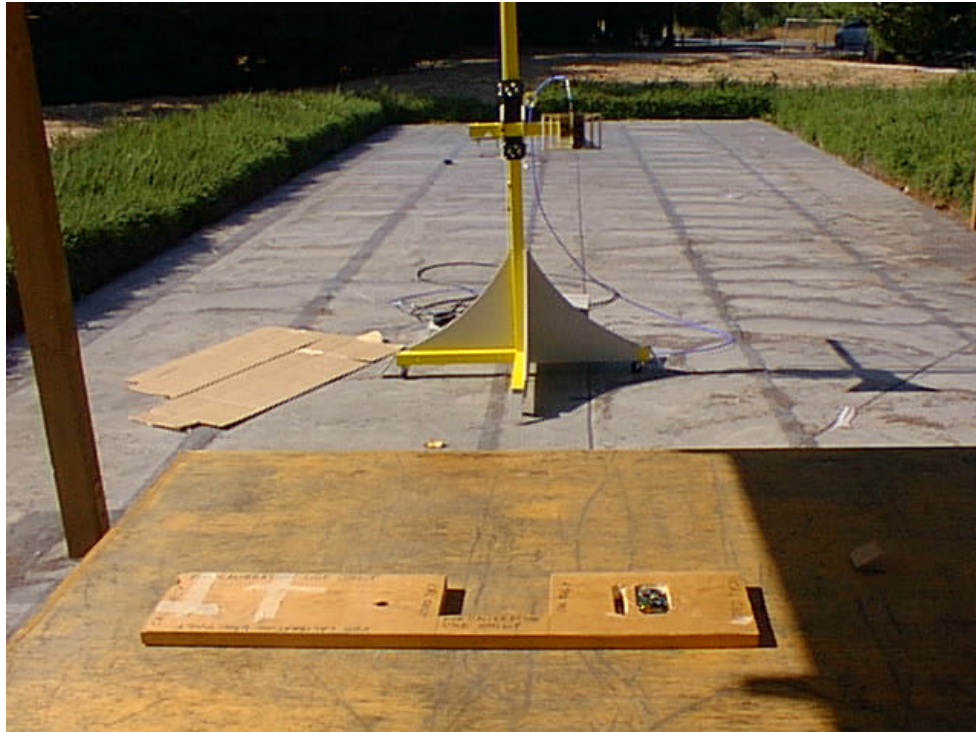
FRONT VIEW

DVP, INC, INC.
CAR ALARM TRANSMITTER
Model: KTX303A

FCC PART 15 SUBPART C - RADIATED EMISSIONS – 7-17-98

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**





REAR VIEW

DVP, INC, INC.
CAR ALARM TRANSMITTER
Model: KTX303A

FCC PART 15 SUBPART C - RADIATED EMISSIONS – 7-17-98

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



APPENDIX D

DUTY CYCLE PLOTS & DATA SHEETS



DUTY CYCLE PLOTS and CALCULATIONS

1. Duty Cycle Factor for KTX303A Car Alarm Transmitter

The signal modulating the 303.80 MHz RF carrier is a low frequency, digitally coded stream. It has two waveforms within its total cycle. Each waveform is separated by a dead period with an effective duty cycle of zero. Figure A shows the total time duration of the cycle. Figures B and C show the total time on of the first waveform and it's duty cycle. Figures D and E show the total time on of the second waveform and it's duty cycle. Figures F and G show the total time off of the periods between the two waveforms. Due the variation in the total waveform, the duty cycle will be calculated from a total on time divided by the total time of one cycle.

Table 3.0 Duty Cycle Calculations

Figure	G	F	E	D	C	B	A
Ttot	14.98mS	3.66mS	4.39mS	71.6mS	.734mS	8.42mS	98.4mS
Ton	0.0mS	0.0mS	2.19mS	35.8mS	.367mS	4.21mS	40.01mS
Duty Cycle (Ton/Ttot)	-----	-----	50%	-----	50%	-----	40.6%

By adding the Ton in Figures B, D, F and G, we can find the total Ton for figure A. The Ton in figures B and D were calculated from the duty cycle of figures C and E. **The total duty cycle of one period is 40.6%**

Figure A

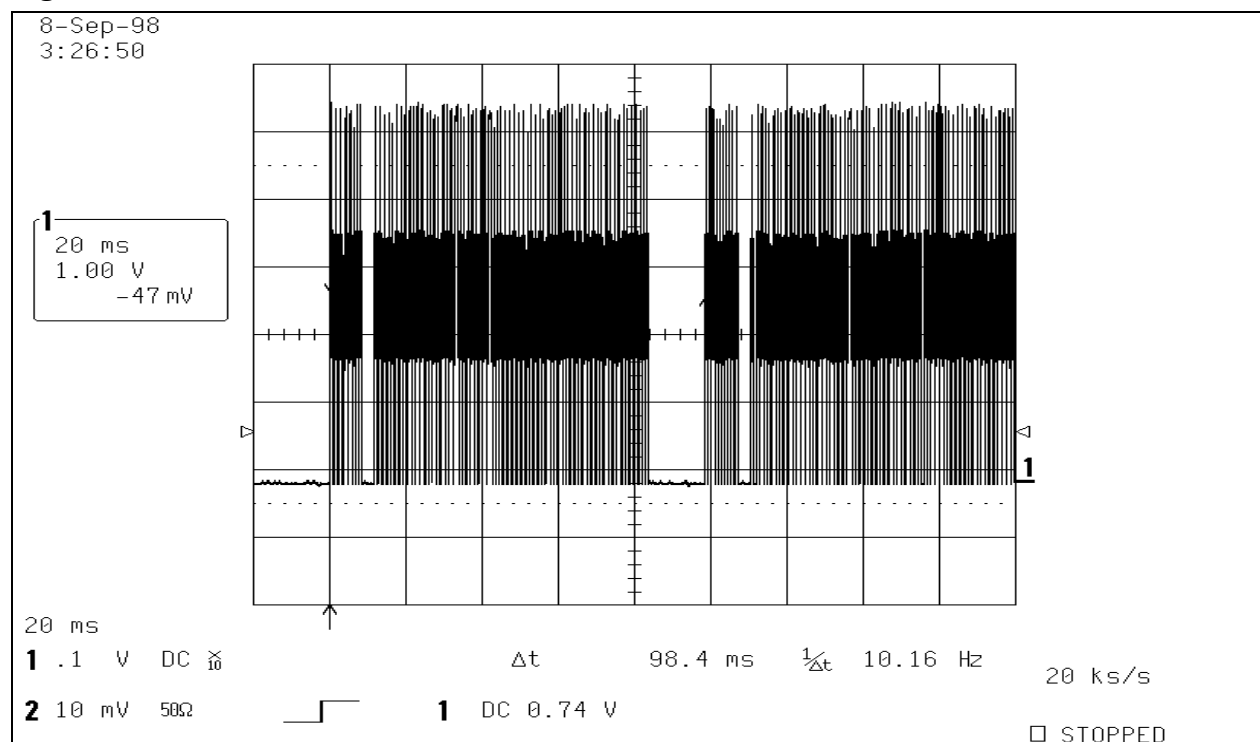


Figure B

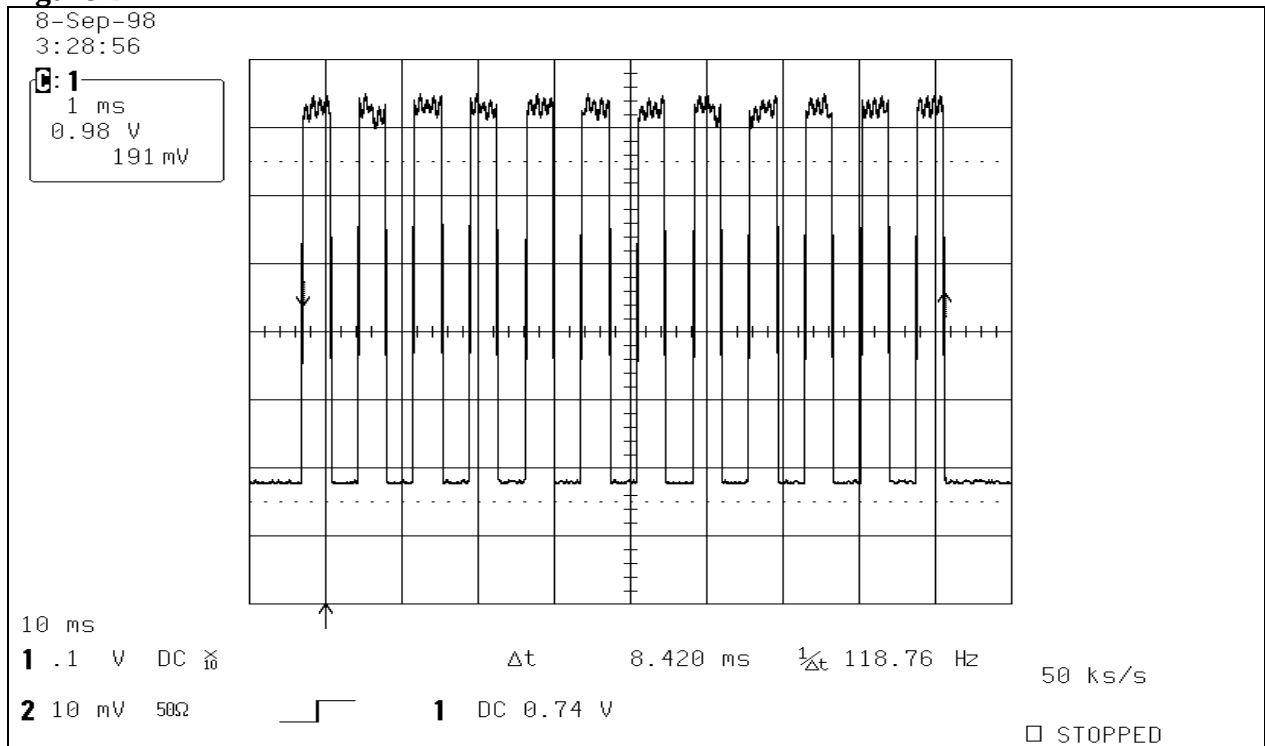


Figure C

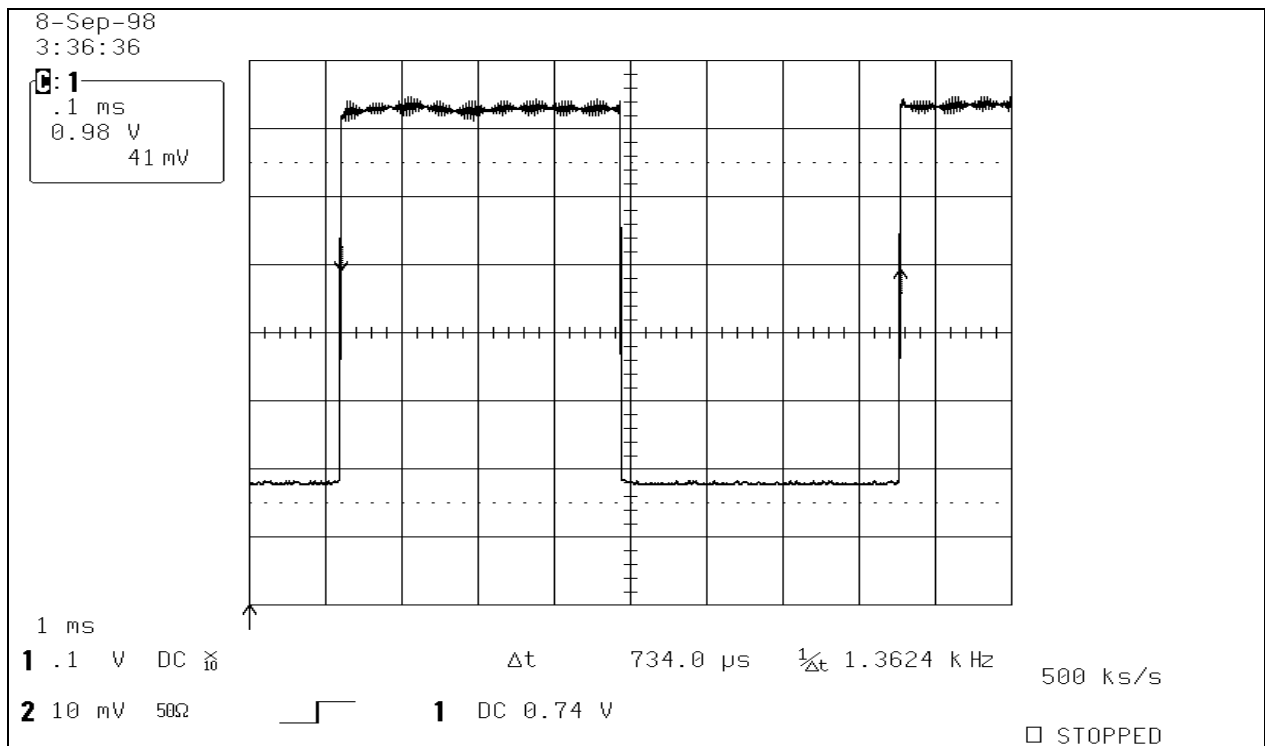


Figure D

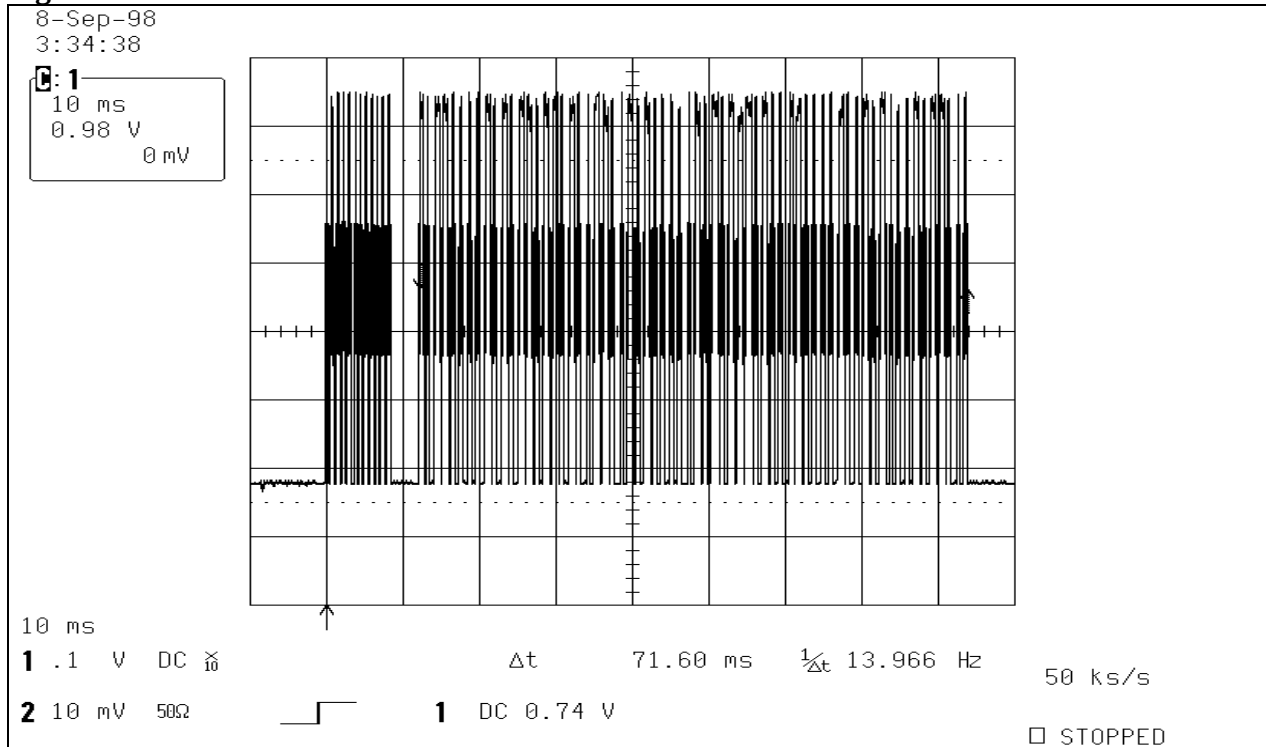


Figure E

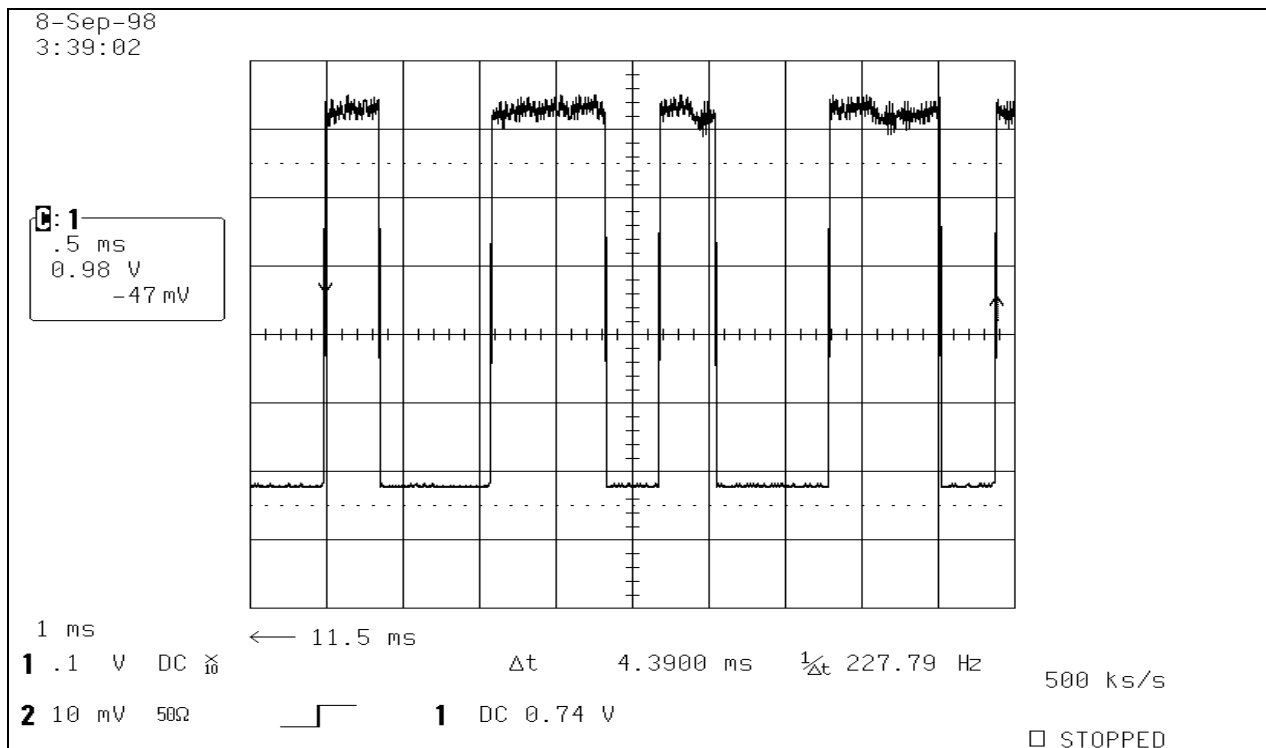


Figure F

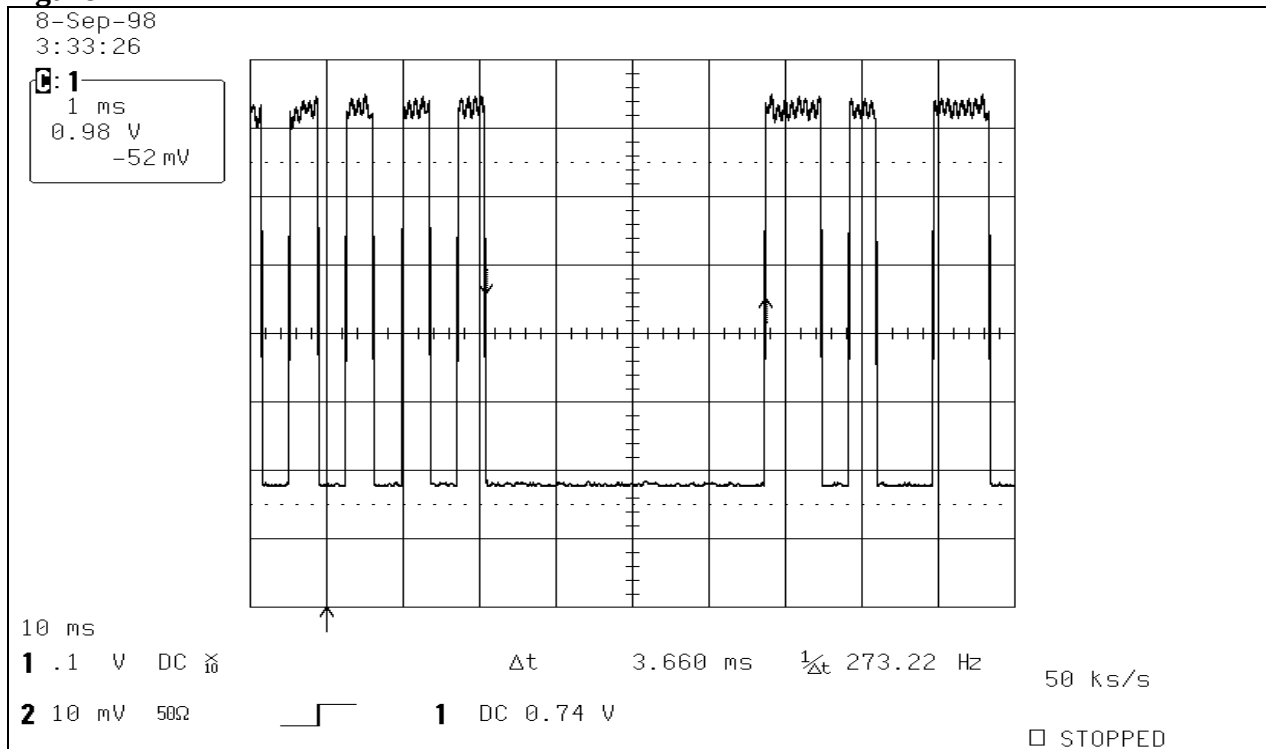
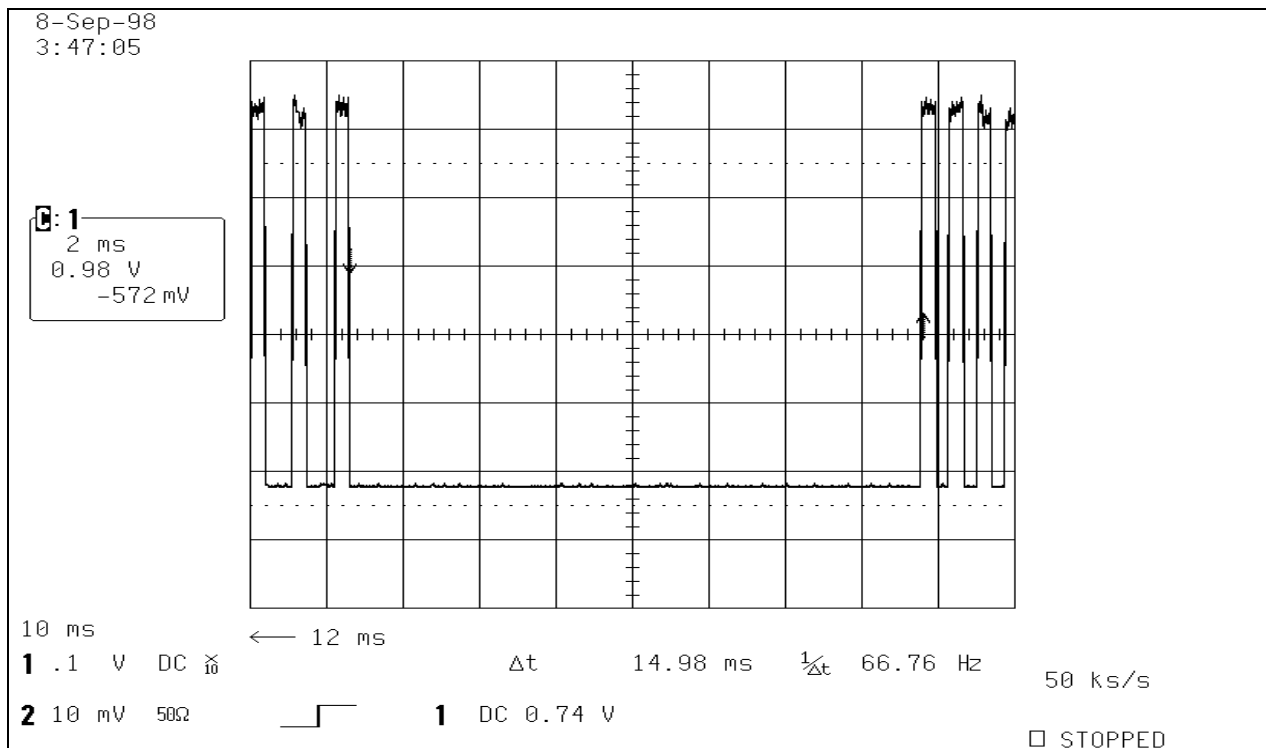


Figure G





RADIATED EMISSIONS

COMPANY NAME: DVP, INC. DATE: 7.13.98

EUT: CAR ALARM TRANSMITTER EUT S/N: NONE

EUT MODEL: KTX303A LOCATION: ☐ BREA ☐ SILVERADO ☒ AGOURA

SPECIFICATION: FCC pt 15 SUB C CLASS: TEST DISTANCE: 3M LAB: F

ANTENNA: ☐ LOOP ☐ BICONICAL ☒ LOG ☒ HORN POLARIZATION: ☒ VERT ☐ HORIZ

☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: J. WILLIAMSON

NOTES: FUNDAMENTAL LIMITS = $74.9 \text{ dB}_{\mu\text{V/m}}$

HARMONICS OVER $470 \text{ MHz} = 61.9 \text{ dB}_{\mu\text{V/m}}$

DUTY CYCLE = 41% $\therefore \text{AVG} = -7.7 \text{ dB}$

Frequency (MHz)	Peak Reading (dBuV/m)	Obs. AVA (dBuV/m)	Antenna Height (meters)	Azimuth (degrees)	Delta * (dB)	Corrected Limit (dBuV/m)	Comments <u>ADS</u>
303.70	76.6		2.0	90°	-17.1	93.7	X
303.71	94.2	86.5	1.5	0°	-7.2	93.7	Y
303.71	94.8	87.1	1.5	0°	-6.6	93.7	Z
607.42	57.9		1.0	180°	-13.1	71.0	X
607.43	65.8		1.0	0°	-5.2	71.0	Y
607.42	68.7	61.0	1.0	0°	-10.0	71.0	Z
911.12	40.9		1.0	270°	-27.9	68.8	X
911.15	46.7		1.0	0°	-22.1	68.8	Y
911.14	54.7		1.0	180°	-14.1	68.8	Z
R 1214.79	50.0		2.0	0°	-15.3	65.3	X
R 1214.03	44.1		1.5	0°	-21.2	65.3	Y
R 1214.80	56.2		1.0	180°	-9.1	65.3	Z

R= RESTRICTED BAND, SEE LAST PAGE FOR LIMITS.

* DELTA = METER READING - CORRECTED LIMIT

RADIATED EMISSIONS - CONTINUATION SHEET

COMPANY NAME: DVP, INC.

DATE: 7-16-98

EUT: CAR ALARM TRANSMITTER

EUT S/N: NONE

EUT MODEL: KTX303A

ENGINEER: J. WILLIAMSON

ANTENNA: ☐ LOOP ☐ BICONICAL ☐ LOG ☒ HORN

POLARIZATION: ☒ VERT ☐ HORIZ

	Frequency (MHz)	Peak Reading (dBuV/m)	Quasi- Peak (dBuV/m)	Antenna Height (meters)	Azimuth (degrees)	Delta * (dB)	Corrected Limit (dBuV/m)	Comments <u>Axis</u>
R	1518.47	58.1		2.0	180°	-5.8	63.9	X
R	1518.44	45.4		1.0	180°	-18.5	63.9	Y
R	1518.51	60.8		1.5	270°	-3.1	63.9	Z
	1822.17	61.1	53.4	1.5	180°	-7.6	61.0	X
	1822.21	46.7		1.0	0°	-14.3	61.0	Y
	1822.22	60.1	52.4	1.0	45°	-8.6	61.0	Z
	2125.91	52.0		1.0	180°	-6.3	58.3	X
	2125.94	45.4		1.0	180°	-12.9	58.3	Y
	2126.00	46.5		1.5	0°	-11.8	58.3	Z
	2429.67	46.9		1.0	180°	-11.2	58.1	X
	2429.67	44.6		1.0	180°	-13.5	58.1	Y
	2429.59	43.7		1.5	270°	-14.4	58.1	Z
R	2733.29	43.5		1.0	90°	-14.0	57.5	X
R	2733.34	42.8		1.0	0°	-14.7	57.5	Y
R	2733.38	41.9		1.5	0°	-15.6	57.5	Z
	3036.90	33.1		2.0	0°	-23.6	56.7	X
	3037.20	35.7		1.0	45°	-21.0	56.7	Y
	3037.20	31.6		2.0	0°	-25.1	56.7	Z

R = RESTRICTED BAND, SEE LAST PAGE FOR LIMITS.

* DELTA = METER READING - CORRECTED LIMIT



RADIATED EMISSIONS

COMPANY NAME: DVP, INC. DATE: 7.13.98EUT: CAR ALARM TRANSMITTER EUT S/N: NONEEUT MODEL: KTX 303A LOCATION: ☐ BREA ☐ SILVERADO ☒ AGOURASPECIFICATION: FCC pt. 15 sub. C CLASS: TEST DISTANCE: 3 M LAB: FANTENNA: ☐ LOOP ☐ BICONICAL ☒ LOG ☐ HORN POLARIZATION: ☐ VERT ☒ HORIZ☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: J. WILLIAMSON

NOTES: FUNDAMENTAL LIMITS = $74.9 \text{ dB}_{\mu\text{V/m}}$
HARMONICS OVER 470 MHz = $61.9 \text{ dB}_{\mu\text{V/m}}$
DUTY CYCLE = 41% $\therefore \text{AVG} = -7.7 \text{ dB}$

Frequency (MHz)	Peak Reading (dBuV/m)	Consistent Peak (dBuV/m)	Antenna Height (meters)	Azimuth (degrees)	Delta * (dB)	Corrected Limit (dBuV/m)	Comments <i>4x15</i>
303.68	101.3	93.6	1.0	270°	-0.1	93.7	X
303.70	96.0	88.3	1.5	270°	-5.4	93.7	Y
303.71	92.8	85.1	2.0	90°	-8.6	93.7	Z
607.39	72.6	64.9	1.0	270°	-6.1	71.0	X
607.42	69.9	62.2	1.5	270°	-8.8	71.0	Y
607.42	62.6		2.0	270°	-8.4	71.0	Z
911.07	55.3		1.0	0°	-13.5	68.8	X
911.13	56.1		1.5	270°	-12.7	68.8	Y
911.13	48.7		2.0	270°	-20.1	68.8	Z
R 1214.81	50.5		1.0	90°	-14.8	65.3	X
R 1214.80	55.1		1.0	90°	-10.2	65.3	Y
R 1214.84	45.4		2.0	45°	-19.9	65.3	Z

R = RESTRICTED BAND, SEE LAST PAGE FOR LIMITS.

* DELTA = METER READING - CORRECTED LIMIT

RADIATED EMISSIONS - CONTINUATION SHEET

COMPANY NAME: DVP, INC. DATE: 7-16-98

EUT: CAR ALARM TRANSMITTER EUT S/N: NONE

EUT MODEL: KTX 303A ENGINEER: J. WILLIAMSON

ANTENNA: ☐ LOOP ☐ BICONICAL ☐ LOG ☒ HORN POLARIZATION: ☐ VERT ☒ HORIZ

	Frequency (MHz)	Peak Reading (dBuV/m)	Quasi- Peak (dBuV/m)	Antenna Height (meters)	Azimuth (degrees)	Delta * (dB)	Corrected Limit (dBuV/m)	Comments Axis
R	1518.41	49.8		1.0	90°	-14.1	63.9	X
R	1518.48	56.6		1.0	90°	-7.3	63.9	Y
R	1518.34	53.2		2.0	90°	-10.7	63.9	Z
	1822.23	47.0		1.0	270°	-14.0	61.0	X
	1822.19	54.8		1.0	90°	-6.2	61.0	Y
	1822.10	53.4		2.0	0°	-7.6	61.0	Z
	2125.78	42.7		1.0	90°	-15.6	58.3	X
	2125.78	47.7		1.0	90°	-10.6	58.3	Y
	2126.01	47.4		1.5	0°	-10.9	58.3	Z
	2429.54	37.8		1.0	100°	-20.3	58.1	X
	2429.68	44.6		1.0	90°	-13.5	58.1	Y
	2429.62	46.1		2.5	270°	-12.0	58.1	Z
R	2733.00	NO READING	FOUND				57.5	X
R	2733.38	41.7		1.5	90°	-15.8	57.5	Y
R	2733.20	48.5		2.5	270°	-9.0	57.5	Z
	3036.87	30.1		1.5	0°	-26.6	56.7	X
	3037.17	33.3		1.5	90°	-23.4	56.7	Y
	3037.00	38.8		1.5	270°	-17.9	56.7	Z

R = RESTRICTED BAND, SEE LAST PAGE FOR LIMITS.

* DELTA = METER READING - CORRECTED LIMIT

**RADIATED EMISSIONS**COMPANY NAME: DVP, INC. DATE: 7-16-98EUT: CAR ALARM TRANSMITTER EUT S/N: NONEEUT MODEL: KT X303A LOCATION: ☐ BREA ☐ SILVERADO ☒ AGOURASPECIFICATION: FCC pt. 15 sub C CLASS: TEST DISTANCE: 3m LAB: FANTENNA: ☐ LOOP ☐ BICONICAL ☐ LOG ☒ HORN POLARIZATION: ☒ VERT ☐ HORIZ☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: J. WILLIAMSONNOTES: RESTRICTED BANDS LIMIT = 54 dB μ V/m**RESTRICTED BAND READINGS:**

Frequency (MHz)	Peak Reading (dB μ V/m)	Quasi- Avg. Peak (dB μ V/m)	Antenna Height (meters)	Azimuth (degrees)	Delta * (dB)	Corrected Limit (dB μ V/m)	Comments 4x5
1214.79	50.0		2.0	0°	-7.4	57.4	X
1214.03	44.1		1.5	0°	-13.3	57.4	Y
1214.80	56.2	48.5	1.0	180°	-8.9	57.4	Z
1518.47	58.1	50.4	2.0	180°	-5.6	56.0	X
1518.44	45.4		1.0	180°	-10.6	56.0	Y
1518.51	60.8	53.1	1.5	270°	-2.9	56.0	Z
2733.29	43.5		1.0	90°	-6.1	49.6	X
2733.34	42.8		1.0	0°	-6.8	49.6	Y
2733.38	41.9		1.5	0°	-7.7	49.6	Z

* DELTA = METER READING - CORRECTED LIMIT

RADIATED EMISSIONS

COMPANY NAME: DVP, INC. DATE: 7-16-98

EUT: CAR ALARM TRANSMITTER EUT S/N: NONE

EUT MODEL: KTX303A LOCATION: ☐ BREA ☐ SILVERADO ☒ AGOURA

SPECIFICATION: FCC pt. 15 SUB-C CLASS: TEST DISTANCE: 3m LAB: F

ANTENNA: ☐ LOOP ☐ BICONICAL ☐ LOG ☒ HORN POLARIZATION: ☐ VERT ☒ HORIZ

☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: J. WILLIAMSON

NOTES: RESTRICTED BANDS LIMIT = 54 dB μ V/m

RESTRICTED BAND READINGS:

Frequency (MHz)	Peak Reading (dB μ V/m)	Quasi- Avg. (dB μ V/m)	Antenna Height (meters)	Azimuth (degrees)	Delta * (dB)	Corrected Limit (dB μ V/m)	Comments
1214.81	50.5		1.0	90°	-6.9	57.4	X
1214.80	55.1	47.4	1.0	90°	-10.0	57.4	Y
1214.84	45.4		2.0	45°	-12.0	57.4	Z
1518.41	49.8		1.0	90°	-6.2	56.0	X
1518.48	56.6	48.9	1.0	90°	-7.1	56.0	Y
1518.34	53.2	45.5	2.0	90°	-10.5	56.0	Z
2733.00	NO READING FOUND					49.6	X
2733.38	41.7		1.5	90°	-7.9	49.6	Y
2733.20	48.5	40.8	2.5	270°	-8.8	49.6	Z

* DELTA = METER READING - CORRECTED LIMIT

BREA (714) 579-0500

SILVERADO (714) 589-0700

AGOURA (818) 597-0600

[Gp] 09:18:10 JUL 16, 1998

Last Hrd
Key Menu

ADRS / OPERATION

ACTV DET: PEAK
MEAS DET: PEAK QP
MKRA 365 kHz
-.44 dB

SPAN

COPY
SCREEN

OUTPUT
REPORT

AUTORANGE ON

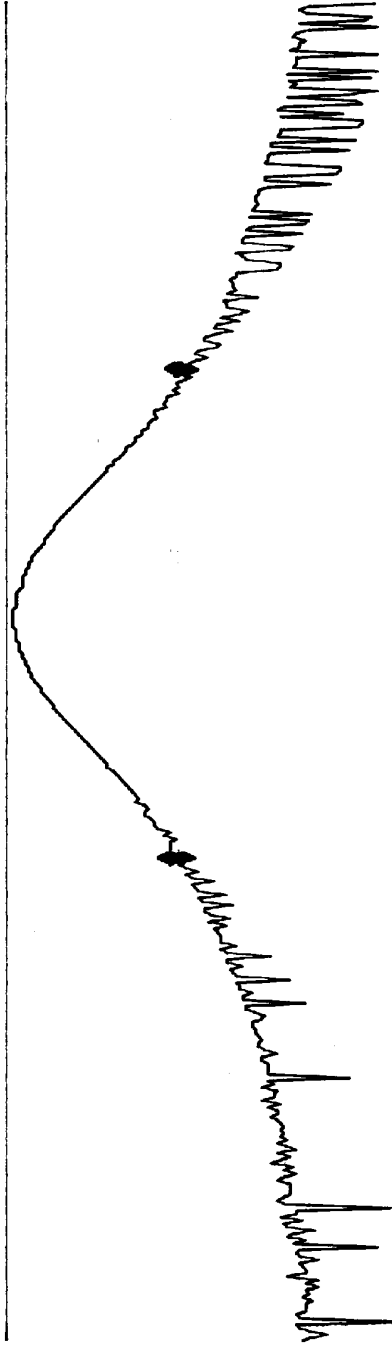
LOG REF 80.0 dB μ V
10
dB/
ATN
10 dB

DL
55.0
dB μ V
VA SB
SC FC
CORR

Define
Report

Define
List

EDIT
ANNOTATN



CENTER 303.700 MHz
#IF BW 100 kHz
AUG BW 30 kHz
SPAN 1.000 MHz
SWP 20.0 msec



RADIATED EMISSIONS

COMPANY NAME: DVP, INC. DATE: 7.17.98

EUT: CAR ALARM TRANSMITTER EUT S/N: NONE

EUT MODEL: KTX303A LOCATION: ☐ BREA ☐ SILVERADO ☒ AGOURA

SPECIFICATION: FCC pt. 15 sub. B CLASS: B TEST DISTANCE: 3m LAB: F

ANTENNA: ☐ LOOP ☒ BICONICAL ☒ LOG ☐ HORN POLARIZATION: ☒ VERT ☒ HORIZ

☒ QUALIFICATION ☐ ENGINEERING ☐ MFG. AUDIT ENGINEER: J. WILLIAMSON

NOTES: SPURIOUS EMISSIONS

TEMP: 82°F

HUM: 45%

Frequency (MHz)	Peak Reading (dBuV/m)	Quasi- Peak (dBuV/m)	Antenna Height (meters)	Azimuth (degrees)	Delta * (dB)	Corrected Limit (dBuV/m)	Comments
43.43	37.4		1.0	0°	-25.6	63.0	
86.74	40.8		1.0	0°	-26.2	67.0	
201.84	30.4		1.0	0°	-31.4	61.8	
385.71	31.2		1.0	0°	-31.4	62.6	
539.68	27.4		1.0	0°	-31.2	58.6	
823.30	26.6		1.0	0°	-26.8	53.4	

* DELTA = METER READING - CORRECTED LIMIT