



ENGINEERING, INC.

CERTIFICATION
FOR
INTENTIONAL RADIATOR

per
Part 15 Subpart C
(CFR 47, 15.201, - 15.209 & 15.231)

Vehicle Security System Transmitter
Model No. TXFM5
447.0 MHz

PREPARED FOR APPLICANT:

David Levy Corporation Inc.
12753 Moore Street
Cerritos, CA 90703

PREPARED BY:

DNB ENGINEERING, INC.
3535 W. Commonwealth Ave.
Fullerton, CA 92833
(714) 870-7781

TRANSMITTAL SUMMARY

Unit tested: Vehicle Security System Remote Transmitter
Model #: TXFM5
FCC ID: JBWTXFM5

Specifications: ANSI C63.4 1992 and CFR 47 FCC part 15 Subpart C

Purpose of Report: This report was prepared to document the status of the Vehicle Security System remote Transmitter (447 MHz) with requirements of the standards listed above.

Requirements not applicable to EUT Part 15.37 - Not applicable
Emergency Broadcast System - Not applicable
Spread Spectrum Exhibit - Not applicable
Scanning Receiver - Not applicable

Test Summary The EUT's compliance status according to the tests performed is as follows.

REQUIREMENTS	STATUS
FCC part 15 Subpart C	
per 15.201-, 15.209 & 15.231	COMPLIANT

The report shall not be reproduced, except in full, without the written approval of DNB ENGINEERING, INC. Results contained in this report relate only to the item tested.

The TXFM5 (Black Widow) Remote Transmitter met all the criteria pertaining to standards called out for testing.

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1.0 ADMINISTRATIVE DATA

Certifications and Qualifications

I certify that DNB Engineering, Inc conducted the tests performed in order to obtain the technical data presented in this application. Also, based on the results of the enclosed data, I have concluded that the equipment tested meets or exceeds the requirements of the Rules and Regulations governing this application.

Measurement Repeatability Information

The test data presented in this report has been acquired using the guidelines set forth in FCC Part 15 Subpart C (CFR 47, 15.201 – 15.209 and 15.231). The test results presented in this document are valid only for the equipment identified herein under the test conditions described. Repeatability of these test results will only be achieved with identical measurement conditions. These conditions include: The same test distance, EUT Height, Measurement Site Characteristics, and the same EUT System Components. The system must have the same Interconnecting Cables arranged in identical placement to that in the test set-up, with the system and/or EUT functioning in the identical mode of operation (i.e. software and so on) as on the date of the test. Any deviation from the test conditions and the environment on the date of the test may result in measurement repeatability difficulties.

All changes made to the EUT during the course of testing as identified in this test report must be incorporated into the EUT or identical models to ensure compliance with the FCC regulations.



Bryan Broaddus (Para. 1.1)

Manager, Test Dept.

DNB Engineering, Inc.

Tel. (714) 870-7781 FAX (714) 870-5081

1.1.1 Request for Certification Per 2.1033(b)1:

Applicant: David Levy Corporation Inc
12753 Moore Street
Cerritos, CA 90703

Contact: Derek Hamilton
Phone: (562) 577-8578

Equipment Under Test: Vehicle Security System Remote
Transmitter

FCC ID: JBWTXFM5

1.2 Related Submittals/Grants

None.

1.3 Purpose of Tests

The purpose of this series of tests was to demonstrate the Electromagnetic Compatibility (EMC) characteristics of the EUT. The following tests were performed:

REQUIREMENTS	STATUS
FCC part 15 Subpart C	
Per 15.201- 15.209 &15.231	COMPLIANT

2. TEST DESCRIPTION

2.1 Test Configuration

Configuration	Unit Name - Processor, Monitor Printer, Cable, etc. (indent for features of a unit)	Style/Model/ Part No.	Comments/ FCC ID#
	Vehicle Security Remote (447 MHz)		

2.2 Equipment Description

Please see Appendix A

2.3 Mode of Operation

EUT was placed in three orthogonal positions to determine worst case emissions. Fresh batteries were used for final measurements.

2.4 Antenna Requirement - per 15.203

The antenna is internally fixed.

2.5 Circuit Description - per 2.1033(b)4

Please see Appendix A.

2.6 Schematics

Please see section 5.0

2.7 Photographs of EUT - per 2.1033(b)(7)



JBWTXFM5 – Front View

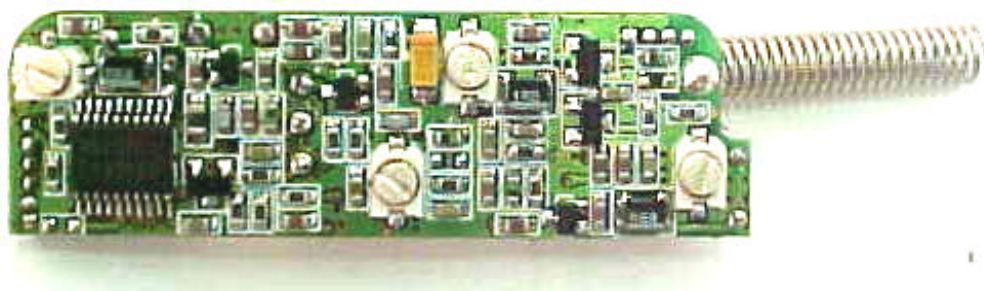


JBWTXFM5 – Rear View

Photographs of EUT - per 2.1033(b)(7) continued

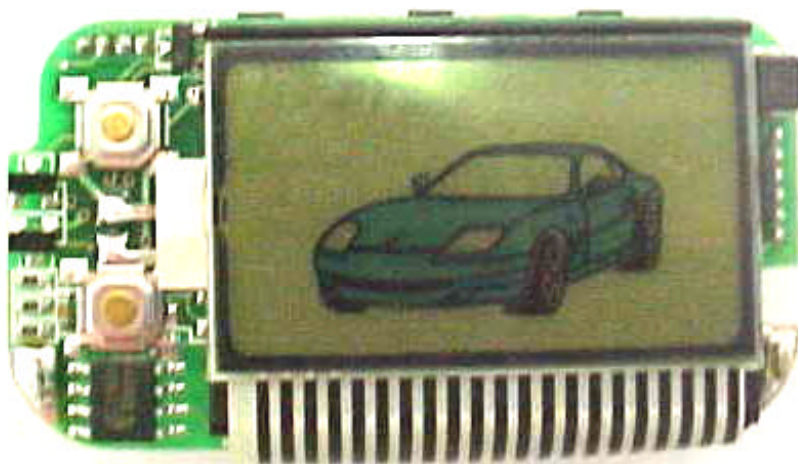


Internal PCB # 1 – Circuit Side

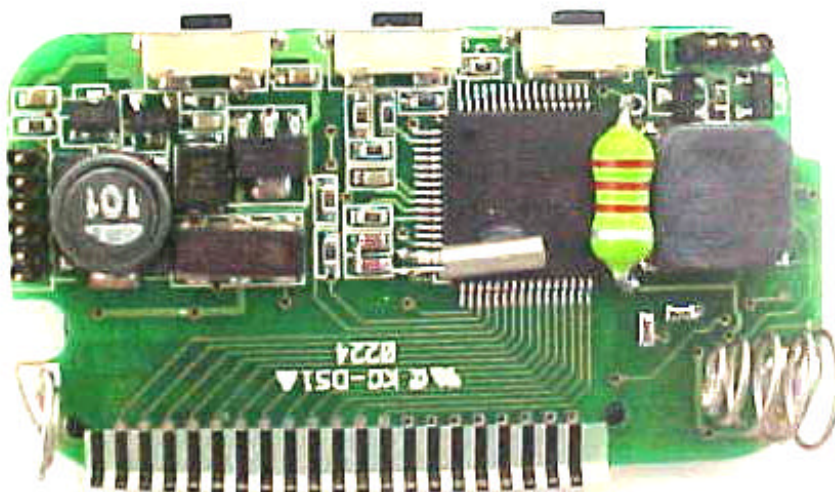


Internal PCB # 1 – Component Side

Photographs of EUT - per 2.1033(b)(7) continued



Internal PCB # 2 – Component Side



Internal PCB # 2 – Circuit Side

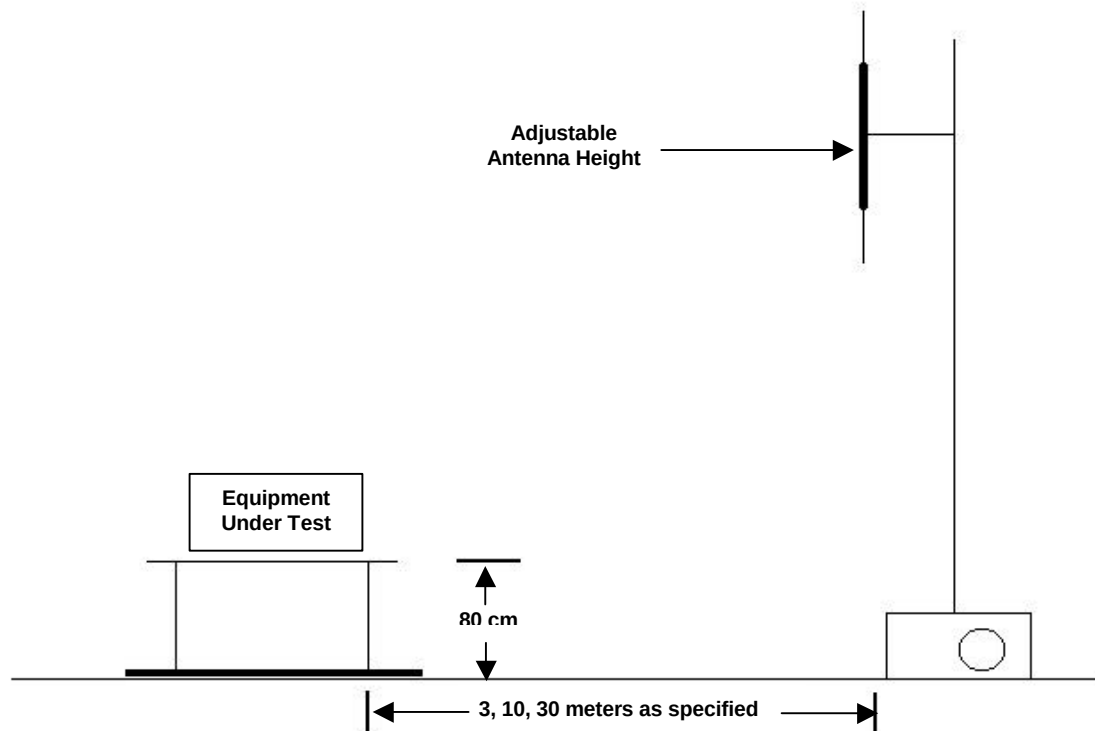
3. EMISSIONS

Per FCC Part 15 Subpart C

3.1 Radiated Emissions Test Setup and Procedure - Per 2.1033(b)(6) Per 2.947(a)

The EUT was placed on a wooden table 1 meter wide and 1.5 meters long, which rests on a inground turntable 3 meter open area test site test site. The top of the table is 80 cm above the ground plane. The turntable can be rotated 360 degrees. Measuring antenna is set at the prescribed distance. (Measurements are made with broad band antennas that have been correlated with tuned dipole antennas). The mast is 6 meters high and is self-supporting. The height of the antenna can be varied from 1 to 4 meters. Positioning of the antenna is controlled remotely.

3.1.1 Spurious Radiation Test Site Per 2.1033(b)6



Radiated Test Setup and Procedure - cont'd

The EUT is put into the operational test mode as stated in Section 2.2.1 is then started.

The spectrum analyzer is setup to store the peak emission over the band of the antenna. Peak EUT and ambient emissions are stored while the turntable is rotated 360°. Peak spectrum analyzer trace is then recorded with the addition of antenna and cable correction factors. The limit is recorded on the same graph. A receiver with CISPR Quasi Peak capabilities is then used on the frequencies identified as the highest with respect to the plotted limit. Ambience is noted on the graph along with EUT emissions. The highest EUT frequencies, with respect to the limit, are maximized.

To maximize emissions levels, the turntable is rotated and the antenna is raised and lowered to determine the point of maximum emanations. The cables are then manipulated at that point to maximize emissions. Measurements are made with the antennas in each horizontal and vertical polarization separately. The data obtained from these tests is corrected with the proper cable, preamplifier and antenna factors. The results are then transcribed onto tables that show the maximum emission levels. The highest emissions are listed in a Radiated Emissions Summary table.

If no emissions can be found, the lowest harmonics of the EUT clocks within the bands of the standard are tuned into with the receiver. If no emissions are found, the noise floor will be entered into the table and noted. A minimum of six frequencies will be logged. Summary results will reflect only actual emissions from the EUT.

The field intensity measurements are made using standard techniques with a spectrum analyzer or EMI receiver as the calibrated Field Intensity Meter (FIM). Preamplifiers and filters are used when required.

When using the Hewlett Packard Model 8566B Spectrum Analyzer as the FIM, the Analyzer is calibrated to read signal level in dBm. Where:

$$0 \text{ dBm (50 ohms)} = 107 \text{ dBuV (50 ohms)}$$

The signal level (dBuV) = indicated signal level (dBm) + 107 dB. To obtain the signal level in dBuV/m it is necessary to add the antenna factor in dB.

3.1.2 Example Of Typical Calculation Per 2.1033(b)6

Measurement Distance = 3 Meter		
Reading @ 60 MHz	→	49.0 dBuV
Antenna Factor	+7.5 dBuV	
Cable Loss	+2.0 dBuV	
Preamplifier	-25.5 dBuV	
	-16.0 dBuV	→
Field Strength dBuV/m at 3 Meter	→	33.0 dBuV

The Following FCC limits for acceptance were used:

Limit 447 MHz (Field Strength of Fundamental):

$$11,350 \text{ ?V/M} = 20 \log (11,350) \text{ dB?V/M} = 81.1 \text{ dB?V/M @ 3 Meters}$$

Limit 447 MHz (Field Strength of Spurious Emissions):

$$1,135 \text{ ?V/M} = 20 \log (1,135) \text{ dB?V/M} = 61.1 \text{ dB?V/M @ 3 Meters}$$

Limit 30 to 88 MHz:

$$100 \text{ ?V/M} = 20 \log (100) \text{ dB?V/M} = 40.0 \text{ dB?V/M @ 3 Meters}$$

Limit 88 to 216 MHz (Not at the Carrier Frequency):

$$150 \text{ ?V/M} = 20 \log (150) \text{ dB?V/M} = 43.5 \text{ dB?V/M @ 3 Meters}$$

Limit 216 to 960 MHz:

$$200 \text{ ?V/M} = 20 \log (200) \text{ dB?V/M} = 46 \text{ dB?V/M @ 3 Meters}$$

Limit >960 MHz:

$$500 \text{ ?V/M} = 20 \log (500) \text{ dB?V/M} = 54.0 \text{ dB?V/M @ 3 Meters}$$

3.1.3 Field Strength of Fundamental

Test equipment used for all measurements is provided on page 13

Test results are provided on pages 14 thru 19.

3.1.4 Harmonic Radiated Emissions

Test equipment used for all measurements is provided on page 13.

Test results are provided on pages 14 thru 19.

3.1.5 Spurious Emissions Not Associated With Fundamental

TEST EQUIPMENT LOG

[illegible]

	3535 W. Commonwealth Ave. Fullerton, CA 92833 (714) 870-7781 FAX (714) 870-5081		CFR 47 Subpart C Worksheet				
	DNB Job Number:	28030			Date:	22 Aug 2002	
	Customer:	David Levey Corp			Specification FCC Part 15 Subpart C paragraph 15.209 paragraph 15.231		
	Model Number:	Black Widow Remote Transmitter				Serial Number:	N/A
	Description:	Transmitter, 447.5 MHz					

EUT performed within the requirements of the applicable Standard(s) ☒ YES ☐ NO

Ch. H. H. H. Signed

B = A.H. Systems SAS-200/540 Biconical Antenna S/N 138 (30-200 Mhz)
 L = EMCO 3146 Log-Periodic Antenna S/N 1284 (200-1000 Mhz)
 H = Electro-Metrics M/N 3115 Double Ridge Guide Antenna S/N 2280 (1-18 Ghz)
 ACF = Antenna correction factor
 AMP = Preamplifier Gain
 CBL = Cable Loss
 DCF = Distance Correction Factor = $20 \cdot \log_{10}(\text{Test Distance/Specification Distance})$
 Corr = Corrected reading = Meter + ACF + AMP + CBL + DCF
 MD = Type of reading PK = Peak reading QP = Quasi-peak reading AV = Average reading
 PL = Antenna polarity and type V = Vertical H = Horizontal
 "u" = Readings taken with a resolution bandwidth of 10KHz do to nearby ambient signal

NOTES: Limits are from FCC Part 15 Subpart C para 15.231.
Position # 1

Freq GHz	Meter	ACF	AMP	CBL	DCF	Corr dBuV	Limit dBuV	Delta dBuV	Corr uV	Limit uV	Delta uV	MD	PL
447.67	72.0	20.4	-24.7	3.5	0	71.2	81.1	-9.9	363.1	11350	-7719	PK	H
895.34	35.6	24.3	-24.2	5.2	0	40.9	61.1	-20.2	111	1135	-1024	PK	H
1134.3	19.1	25.5	-21.5	3.0	0	26.1	61.1	-35	20	1135	-1115	PK	H
1790.0	18.9	27.5	-22.3	4.1	0	28.2	61.1	-32.9	26	1135	-1109	PK	H
2238.0	28.0	29.9	-33.7	4.3	0	28.5	61.1	-32.6	27	1135	-1108	PK	H
2686	29.1	30.1	-33.2	4.5	0	30.5	61.1	-30.6	33	1135	-1102	PK	H
3133.0	28.7	31.3	-33.2	4.8	0	31.6	61.1	-29.5	38	1135	-1097	PK	H
3581.0	30.4	32.3	-33.4	4.9	0	34.2	61.1	-26.9	51	1135	-1084	PK	H
4029.0	28.7	33.1	-22.0	5.3	0	45.1	61.1	-16	180	1135	-955	PK	H
4476.0	28.3	33.5	-22.0	5.8	0	45.6	61.1	-15.5	191	1135	-944	PK	H
447.67	80.1	20.4	-24.7	3.5	0	79.3	81.1	-1.8	9226	11350	-2124	PK	V
895.34	37.2	24.3	-24.2	5.2	0	42.5	61.1	-18.6	133	1135	-1002	PK	V
1134.3	17.7	25.5	-21.5	3.0	0	24.7	61.1	-36.4	17	1135	-1118	PK	V
1790.0	19.4	27.5	-22.3	4.1	0	28.7	61.1	-32.4	27	1135	-1108	PK	V
2238.0	29.0	29.9	-33.7	4.3	0	29.5	61.1	-31.6	30	1135	-1105	PK	V
2686	29.1	30.1	-33.2	4.5	0	30.5	61.1	-30.6	33	1135	-1102	PK	V
3133.0	28.8	31.3	-33.2	4.8	0	31.7	61.1	-29.4	38	1135	-1097	PK	V
3581.0	28.2	32.3	-33.4	4.9	0	32	61.1	-29.1	40	1135	-1095	PK	V
4029.0	27.9	33.1	-22.0	5.3	0	44.3	61.1	-16.8	164	1135	-971	PK	V
4476.0	28.7	33.5	-22.0	5.8	0	46	61.1	-15.1	200	1135	-935	PK	V

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	Customer:	David Levey Corp			Specification FCC Part 15 Subpart C paragraph 15.209 paragraph 15.231	
	Model Number:	Black Widow Remote Transmitter				Serial Number:
Description:	Transmitter, 447.5 MHz					

EUT performed within the requirements of the applicable Standard(s) ☒ YES ☐ NO

C. H. Payne Signed

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 "*" = Readings taken with a resolution bandwidth of 10KHz do to nearby ambient signal

NOTES: Limits are from FCC Part 15 Subpart C para 15.231.
Position # 2

Freq GHz	Meter	ACF	AMP	CBL	DCF	Corr dBuV	Limit dBuV	Delta dBuV	Corr uV	Limit uV	Delta uV	MD	PL
447.67	78.8	20.4	-24.7	3.5	0	78	81.1	-3.1	7943	11350	-3407	PK	H
895.34	35.0	24.3	-24.2	5.2	0	40.3	61.1	-20.8	104	1135	-1031	PK	H
1134.3	17.7	25.5	-21.5	3.0	0	24.7	61.1	-36.4	17	1135	-1118	PK	H
1790.0	19.4	27.5	-22.3	4.1	0	28.7	61.1	-32.4	27	1135	-1108	PK	H
2238.0	29.0	29.9	-33.7	4.3	0	29.5	61.1	-31.6	30	1135	-1105	PK	H
2686	29.0	30.1	-33.2	4.5	0	30.4	61.1	-30.7	33	1135	-1102	PK	H
3133.0	28.8	31.3	-33.2	4.8	0	31.7	61.1	-29.4	38	1135	-1097	PK	H
3581.0	28.2	32.3	-33.4	4.9	0	32	61.1	-29.1	40	1135	-1095	PK	H
4029.0	27.9	33.1	-22.0	5.3	0	44.3	61.1	-16.8	164	1135	-971	PK	H
4476.0	28.7	33.5	-22.0	5.8	0	46	61.1	-15.1	200	1135	-935	PK	H
447.67	66.6	20.4	-24.7	3.5	0	65.8	81.1	-15.3	1950	11350	-9400	PK	V
895.34	35.4	24.3	-24.2	5.2	0	40.7	61.1	-20.4	108	1135	-1027	PK	V
1134.3	18.8	25.5	-21.5	3.0	0	25.8	61.1	-35.3	19	1135	-1116	PK	V
1790.0	19.4	27.5	-22.3	4.1	0	28.7	61.1	-32.4	27	1135	-1108	PK	V
2238.0	28.8	29.9	-33.7	4.3	0	29.3	61.1	-31.8	29	1135	-1106	PK	V
2686	29.2	30.1	-33.2	4.5	0	30.6	61.1	-30.5	34	1135	-1101	PK	V
3133.0	29.2	31.3	-33.2	4.8	0	32.1	61.1	-29	40	1135	-1095	PK	V
3581.0	29.2	32.3	-33.4	4.9	0	33	61.1	-28.1	45	1135	-1090	PK	V
4029.0	27.4	33.1	-22.0	5.3	0	43.8	61.1	-17.3	155	1135	-980	PK	V
4476.0	29.0	33.5	-22.0	5.8	0	46.3	61.1	-14.8	207	1135	-928	PK	V

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Description:	Transmitter, 447.5 MHz					

EUT performed within the requirements of the applicable Standard(s) ☒ YES ☐ NO Signed *Ch. Rogers*

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 L = EMCO 3146 Log-Periodic Antenna S/N 1284 (200-1000 Mhz)
 H = Electro-Metrics M/N 3115 Double Ridge Guide Antenna S/N 2280 (1-18 Ghz)
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 "*" = Readings taken with a resolution bandwidth of 10KHz do to nearby ambient signal

NOTES: Limits are from FCC Part 15 Subpart C para 15.209 except for fundamental which is 15.231.
Position # 1

Freq GHz	Meter	ACF	AMP	CBL	DCF	Corr dBuV	Limit dBuV	Delta dBuV	Corr uV	Limit uV	Delta uV	MD	PL
447.5	72.0	20.4	-24.7	3.5	0	71.2	81.1	-9.9	363.1	11350	-7719	PK	H
895.0	35.6	24.3	-24.2	5.2	0	40.9	46.02	-5.12	111	200	-89	PK	H
1342.5	19.1	25.5	-21.5	3.0	0	26.1	53.98	-27.88	20	500	-480	PK	H
1790.0	18.9	27.5	-22.3	4.1	0	28.2	53.98	-25.78	26	500	-474	PK	H
2237.5	28.0	29.9	-33.7	4.3	0	28.5	53.98	-25.48	27	500	-473	PK	H
2685.0	29.1	30.1	-33.2	4.5	0	30.5	53.98	-23.48	33	500	-467	PK	H
3132.5	28.7	31.3	-33.2	4.8	0	31.6	53.98	-22.38	38	500	-462	PK	H
3580.0	30.4	32.3	-33.4	4.9	0	34.2	53.98	-19.78	51	500	-449	PK	H
4027.5	28.7	33.1	-22.0	5.3	0	45.1	53.98	-8.88	180	500	-320	PK	H
4475.0	28.3	33.5	-22.0	5.8	0	45.6	53.98	-8.38	191	500	-309	PK	H
447.5	80.1	20.4	-24.7	3.5	0	79.3	81.1	-1.8	9226	11350	-2124	PK	V
895.0	37.2	24.3	-24.2	5.2	0	42.5	46.02	-3.52	133	200	-67	PK	V
1342.5	17.7	25.5	-21.5	3.0	0	24.7	53.98	-29.28	17	500	-483	PK	V
1790.0	19.4	27.5	-22.3	4.1	0	28.7	53.98	-25.28	27	500	-473	PK	V
2237.5	29.0	29.9	-33.7	4.3	0	29.5	53.98	-24.48	30	500	-470	PK	V
2685.0	29.1	30.1	-33.2	4.5	0	30.5	53.98	-23.48	33	500	-467	PK	V
3132.5	28.8	31.3	-33.2	4.8	0	31.7	53.98	-22.28	38	500	-462	PK	V
3580.0	28.2	32.3	-33.4	4.9	0	32	53.98	-21.98	40	500	-460	PK	V
4027.5	27.9	33.1	-22.0	5.3	0	44.3	53.98	-9.68	164	500	-336	PK	V
4475.0	28.7	33.5	-22.0	5.8	0	46	53.98	-7.98	200	500	-300	PK	V

	3535 W. Commonwealth Ave. Fullerton, CA 92833 (714) 870-7781 FAX (714) 870-5081		CFR 47 Subpart C Worksheet			
	DNB Job Number:	28030			Date:	22 Aug 2002
	Customer:	David Levey Corp				
	Model Number:	Black Widow Remote Transmitter			Serial Number:	N/A
Description:	Transmitter, 447.5 MHz			Specification FCC Part 15 Subpart C paragraph 15.209 paragraph 15.231		

EUT performed within the requirements of the applicable Standard(s) ☒ YES ☐ NO Signed 

B = A.H. Systems SAS-200/540 Biconical Antenna S/N 138 (30-200 Mhz)
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NOTES: Limits are from FCC Part 15 Subpart C para 15.209 except for fundamental which is 15.231.
Position # 2

Freq GHz	Meter	ACF	AMP	CBL	DCF	Corr dBuV	Limit dBuV	Delta dBuV	Corr uV	Limit uV	Delta uV	MD	PL
447.5	78.8	20.4	-24.7	3.5	0	78	81.1	-3.1	7943	11350	-3407	PK	H
895.0	35.0	24.3	-24.2	5.2	0	40.3	46.02	-5.72	104	200	-96	PK	H
1342.5	17.7	25.5	-21.5	3.0	0	24.7	53.98	-29.28	17	500	-483	PK	H
1790.0	19.4	27.5	-22.3	4.1	0	28.7	53.98	-25.28	27	500	-473	PK	H
2237.5	29.0	29.9	-33.7	4.3	0	29.5	53.98	-24.48	30	500	-470	PK	H
2685.0	29.0	30.1	-33.2	4.5	0	30.4	53.98	-23.58	33	500	-467	PK	H
3132.5	28.8	31.3	-33.2	4.8	0	31.7	53.98	-22.28	38	500	-462	PK	H
3580.0	28.2	32.3	-33.4	4.9	0	32	53.98	-21.98	40	500	-460	PK	H
4027.5	27.9	33.1	-22.0	5.3	0	44.3	53.98	-9.68	164	500	-336	PK	H
4475.0	28.7	33.5	-22.0	5.8	0	46	53.98	-7.98	200	500	-300	PK	H
447.5	66.6	20.4	-24.7	3.5	0	65.8	81.1	-15.3	1950	11350	-9400	PK	V
895.0	35.4	24.3	-24.2	5.2	0	40.7	46.02	-5.32	108	200	-92	PK	V
1342.5	18.8	25.5	-21.5	3.0	0	25.8	53.98	-28.18	19	500	-481	PK	V
1790.0	19.4	27.5	-22.3	4.1	0	28.7	53.98	-25.28	27	500	-473	PK	V
2237.5	28.8	29.9	-33.7	4.3	0	29.3	53.98	-24.68	29	500	-471	PK	V
2685.0	29.2	30.1	-33.2	4.5	0	30.6	53.98	-23.38	34	500	-466	PK	V
3132.5	29.2	31.3	-33.2	4.8	0	32.1	53.98	-21.88	40	500	-460	PK	V
3580.0	29.2	32.3	-33.4	4.9	0	33	53.98	-20.98	45	500	-455	PK	V
4027.5	27.4	33.1	-22.0	5.3	0	43.8	53.98	-10.18	155	500	-345	PK	V
4475.0	29.0	33.5	-22.0	5.8	0	46.3	53.98	-7.68	207	500	-293	PK	V

		5969 Robinson Avenue Riverside, CA 92503 (909) 637-2630 FAX (909) 637-2704		EMI Datasheet (ITE Devices)	
DNB Job Number:	28030	Date:	21 Aug 2002	Specification [X] FCC Part 15 Class B	
Customer:	David Levy Corporation Inc				
Model Number:	Black Widow Remote Transceiver	Serial Number:	N/A		
Description:	Transmitter, 447.5 MHz				

EUT performed within the requirements of the applicable Standard(s) ☒ YES ☐ NO Signed 														
Bcn = A.H. Systems SAS-200/540 Biconical Antenna S/N 138 (30-200 Mhz) Log = EMCO 3146 Log-Periodic Antenna S/N 1284 (200-1000 Mhz) Def = Distance Correction Factor = $20 \cdot \log_{10}(\text{Test Distance/Specification Distance})$ Typ = Type of reading PK = Peak reading QP = Quasi-peak reading							Cbl = Cable Loss Amp = Preamplifier Gain Pl = Antenna polarity V = Vertical H = Horizontal "o" = Readings taken with a res bandwidth of 10KHz do to nearby ambient signal							
NOTES: Unitnetional Radiator and Receiver Emissions														
Freq	Meter	Bcn	Log	Cbl	Amp	Def	Corr	Lim dB	Delta	Corr uV	Lim uV	Delta	Typ	Pl
Position # 1														
35.034	25.4	11.7	0	0.7	-24.0	-10	3.8	30	-26.2	2	32	-30	PK	H
82.821	26.6	8.4	0	1.2	-24.0	-10	2.2	30	-27.8	1	32	-31	PK	H
160.82	23.5	15.4	0	1.7	-24.0	-10	6.6	30	-23.4	2	32	-30	PK	H
224.82	27.3	17.2	0	2.0	-24.0	-10	12.5	30	-17.5	4	32	-28	PK	H
232.04	28.1	0	14.1	2.0	-24.1	-10	10.1	37	-26.9	3	71	-68	PK	H
277.04	26.8	0	15.4	2.3	-24.2	-10	10.3	37	-26.7	3	71	-68	PK	H
491.74	25.8	0	22.1	3.2	-24.8	-10	16.3	37	-20.7	7	71	-64	PK	H
597.43	21.9	0	22.7	3.4	-24.9	-10	13.1	37	-23.9	5	71	-66	PK	H
44.000	24.8	13.8	0	0.9	-24.0	-10	5.5	30	-24.5	2	32	-30	PK	V
130.93	37.4	14.7	0	1.6	-24.0	-10	19.7	30	-10.3	10	32	-22	PK	V
173.09	27.5	17.1	0	1.8	-24.0	-10	12.4	30	-17.6	4	32	-28	PK	V
215.13	26.9	17.5	0	2.0	-24.0	-10	12.4	30	-17.6	4	32	-28	PK	V
232.90	28.4	0	14.0	2.0	-24.1	-10	10.3	37	-26.7	3	71	-68	PK	V
267.08	28.5	0	14.8	2.2	-24.2	-10	11.3	37	-25.7	4	71	-67	PK	V
347.08	27.7	0	17.0	2.7	-24.4	-10	13	37	-24	4	71	-67	PK	V
Position # 2														
44.980	26.9	13.9	0	0.9	-24.0	-10	7.7	30	-22.3	2	32	-30	PK	H
164.98	23.3	16.0	0	1.8	-24.0	-10	7.1	30	-22.9	2	32	-30	PK	H
180.59	24.5	17.5	0	1.8	-24.0	-10	9.8	30	-20.2	3	32	-29	PK	H

	5969 Robinson Avenue Riverside, CA 92503 (909) 637-2630 FAX (909) 637-2704		EMI Datasheet (ITE Devices)	
	DNR Job Number:	28030	Date:	21 Aug 2002
	Customer:	David Levy Corporation Inc		
	Model Number:	Black Widow Remote Transceiver	Serial Number:	N/A
	Description:	Transmitter, 447.5 MHz		
		Specification [X] FCC Part 15 Class B		

[illegible]

3.1.6 Duty Cycle Correction

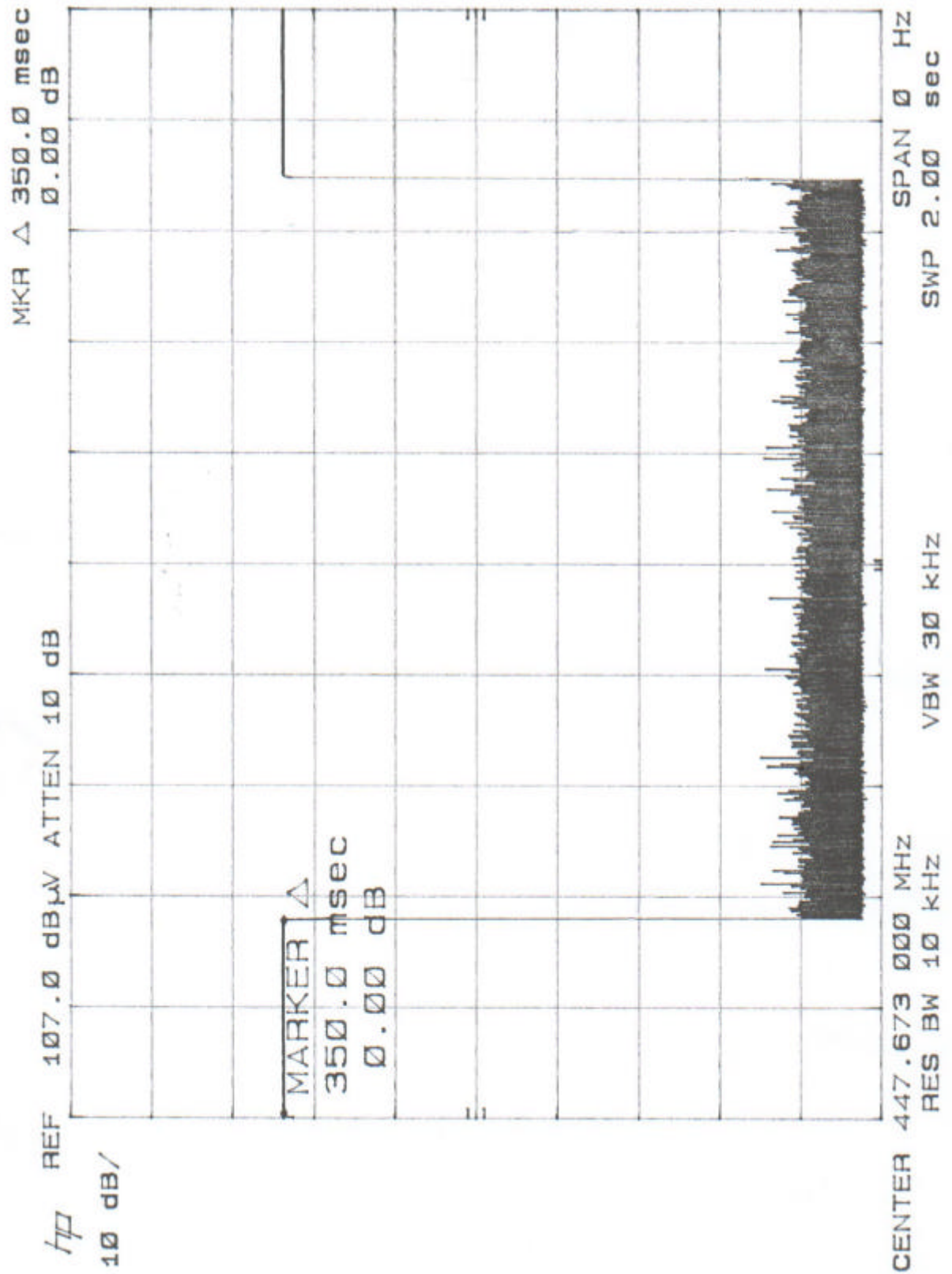
Duty cycle correction is determined by counting the number of pulses on over a 100 ms period.

Actual plots showing on time versus off time are on pages 21 thru 26

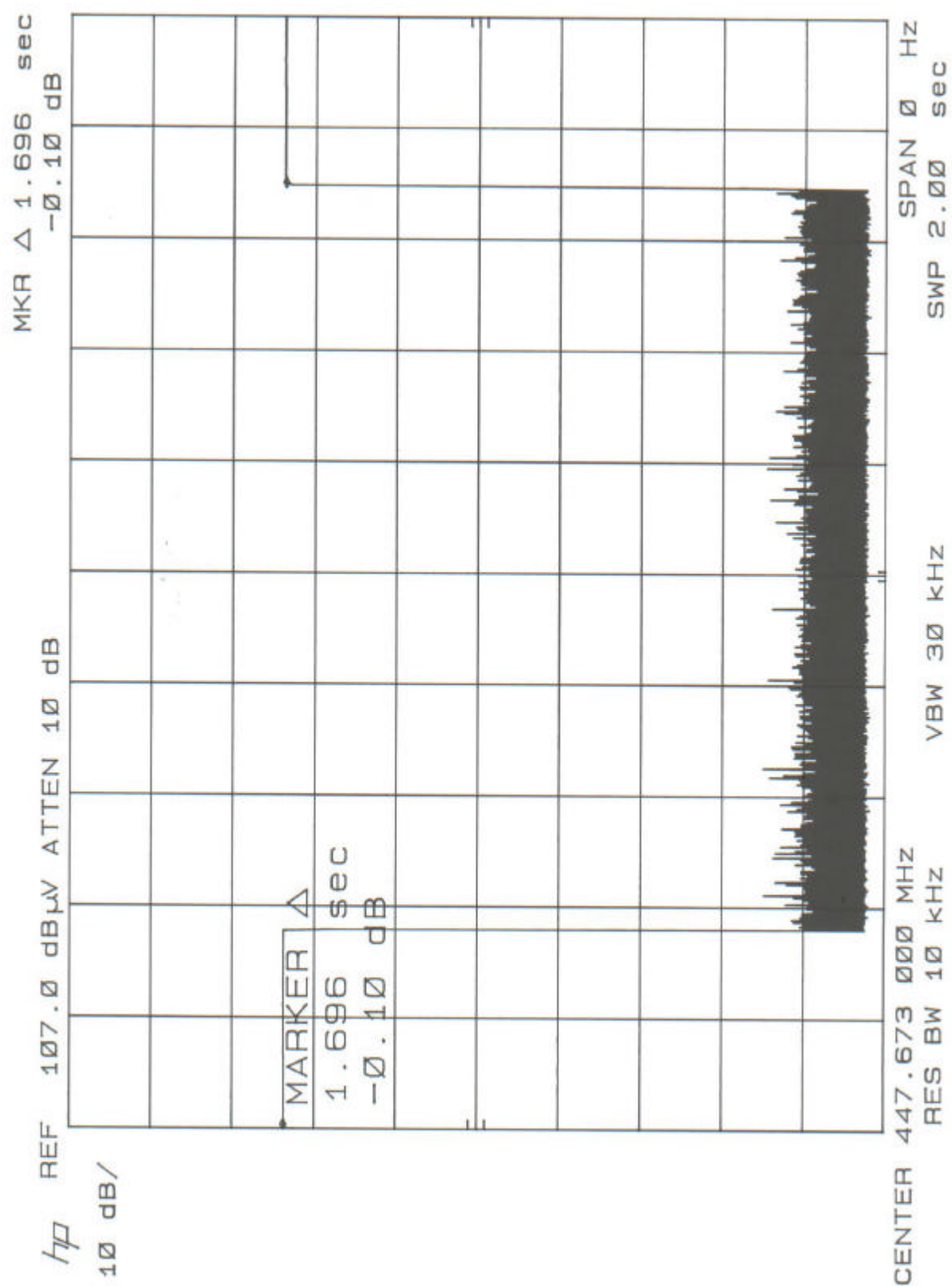
No duty cycle correction has been applied to this unit.

		Time in ms	
Pulse Train Cycle Time			
Number of long pulses			
Number of Short pulses			
Total on Time per cycle			
Number of Cycles per 100 ms			
Total on time per 100 ms			
Percent on per 100 ms			
Total duty cycle correction in dB			

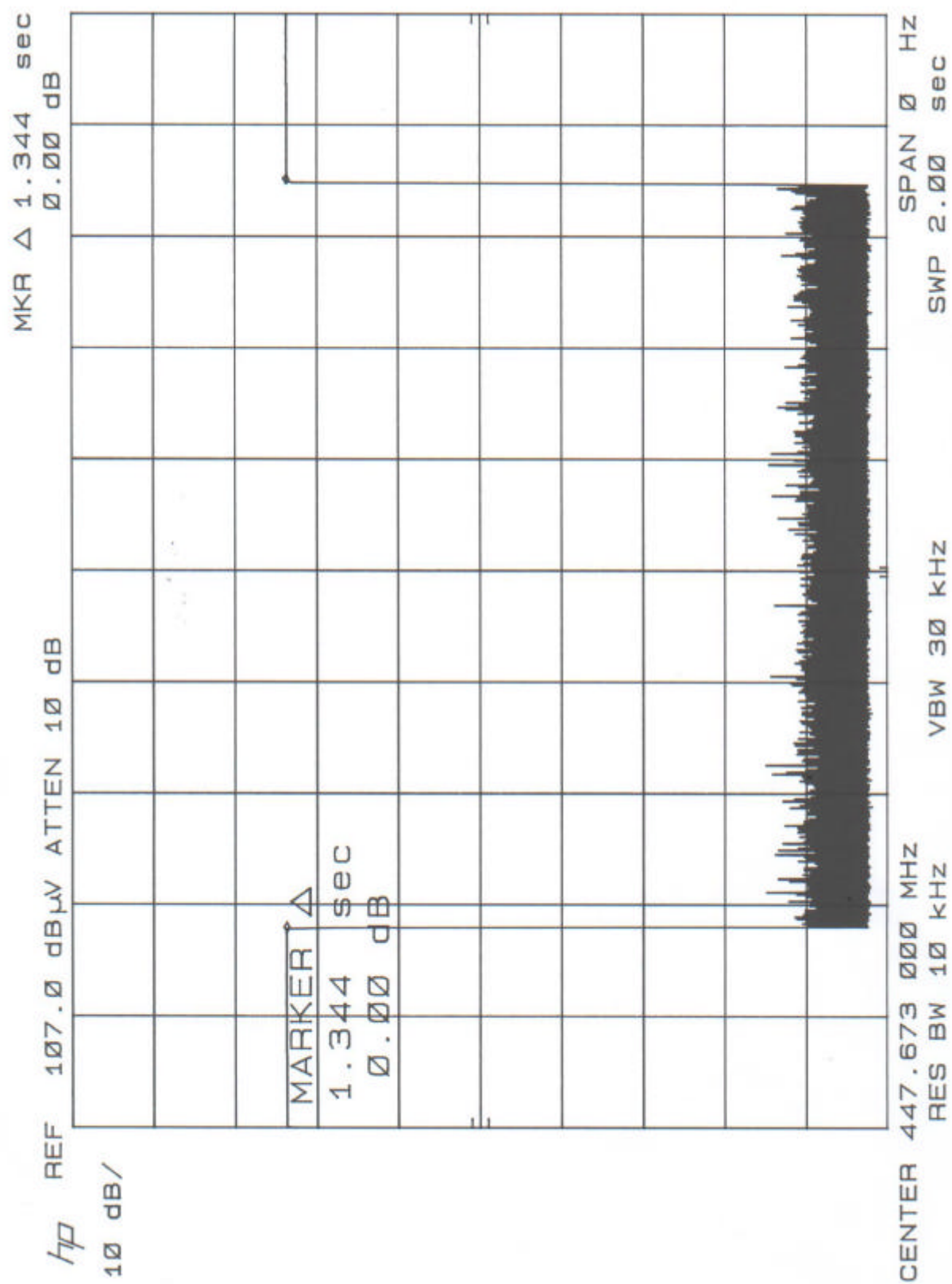
Maximum Pulse Width = 350.0msec



Timing Between Pulses = 1.696sec



Timing Period Between Pulses = 1.344sec



No Automatic Mode
 Repetition Rate = 8 Pulse Trains per Burst

