MEASUREMENT/TECHNICAL REPORT

Company - Model: I.D. Systems, Inc.
Flextag
FCC ID: N5VFTG01
May 14, 1999

Description: This is a report to support a request for an original grant of equipment authorization.

Equipment Type: Low Power Communications Device Transmitter

Report prepared for:

I.D. Systems, Inc.
90 William Street
New York, NY 10038
Phone: 212-677-3800
Fax: 212-677-3802

Report prepared by:

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Curtis-Straus LLC
527 Great Road
Littleton, MA 01460 USA
Phone: 978-486-8880
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Letter of Agency

I.D. SYSTEMS, INC.

One Silicon Alley Plaza 90 William Street New York, New York 10038
Phone: 212-677-3800 Fax: 212-677-3802

LETTER OF AGENCY

I, an officer of I.D. Systems, Inc., do hereby authorize Curtis-Straus, LLC to act on our behalf in front of the Federal Communications Commission with respect to all matters relating to certification of equipment under Part 15 of the FCC Rules until further notice.

I further certify that no party (as defined in #1,2002(b) of CFR 47, 1992) to this application, including myself, is subject to denial of federal benefits, that includes FCC benefits, pursuant to section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 853(a).

Certified by:

Jeffrey M. Jaffe
Chief Operating Officer/General Counsel

8/11/1998

Introduction

This report is an application for Certification of a Transmitter operating pursuant to Part 15.249 of the FCC Rules, Code of Federal Regulations 47. The model covered by this report is the Flextag. This report is designed to demonstrate the compliance of this device with the requirements outlined in Part 15 of CFR 47 using the methods outlined in Part 2 of CFR 47. The current revision date, October 1,1998, of each Part has been used for technical requirements.

The confidential information and descriptions included in this application are detailed descriptions of the products, block diagrams, component specifications, and schematic diagrams. We hereby respectfully request under the provision of section 0.457d of the code that the documents listed below be held confidential.

Exhibit 6.1: Technical Description and Block Diagram

Exhibit 6.2: Schematics

Exhibit 6.3: Bill of Materials

I.D. Systems, Inc. is requesting that the Technical Description, Block Diagram, Schematics and Bill of Materials be kept confidential in the FCC application because of the proprietary design developed by I.D. Systems, Inc. that is unique to the industry.

EXHIBIT 1:

1.0 Statement of Conformity

The I.D. Systems, Inc. Flextag has been found to conform with the following parts of the 47 CFR as detailed below:

Part 2	Part 15	Comments
	15.15(b)	The product contains no user accessible controls that increase transmission power above allowable levels.
2.925	15.19	The label is shown in the label exhibit.
	15.21	Information to the user is provided via a leaflet packaged with the product (see Instruction Manual Exhibit 7.0)
	15.27	No special accessories are required for compliance.
	15.203	This device may only be installed by an authorized professional installer.
	15.205 15.209	The fundamental is not in a Restricted band and the spurious and harmonic emissions in the Restricted bands comply with the general emission limits of 15.209.
	15.207	The unit is battery operated and the line conducted limits are, therefore, not applicable.
	15.249(a)	The unit complies with the field strength limits of the 15.249(a) table including the 20dB peak restriction of 15.35(b) and 15.249(d).
	15.249(c)	The unit complies with the field strength limits of the 15.209(a) table.

EXHIBIT 2

2.0 General Description

2.1 Product Description

The Flextag is a transceiver device that is manufactured to operate in a highly automated and mechanically environment, such as a postal facility. It is used to determine the efficiency of mail flow within facilities and from one facility to another. The unit relays this information to a system monitor which then relays this information to a computer. The unit is operated off an internal battery and has no other connections, other than the RF link, to any other device.

Unit Tested:
Model Number: Flextag
Serial Number: Prototype

2.2 Related Submittal(s) Grants

There are no other approvals required for this device.

2.3 Test Methodology

Radiated emission testing was performed according to the procedures in ANSI C63.4 (1992). Radiated testing was performed at an antenna to EUT distance of 3 meters below 1 GHz, and at a distance of 3 or 1 meter(s) above 1 GHz. The actual test distance used is noted in the test data sheets. The device's performance was investigated to 10 times the fundamental frequency. A DC power supply was used during the testing. Although the device does contain voltage regulating circuitry, the emissions in each configuration were maximized and the supply swept to ±15% of the nominal voltage in the maximized configuration just prior to the reading being taken to insure that maximum emissions were recorded.

All other performance tests were made in accordance with the procedures outlined in Part 15 of CFR 47. The applicable sections provided under Part 15 are provided in the measurement section of this report, Exhibit 3.

2.4 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located at 527 Great Road, Littleton, MA 01460. Site "T" was used. This test facility has been fully described in a report submitted to your office, and a letter from your office dated August 8, 1997 verified receipt of this report and confirmed compliance of this site. Please reference your file # 31040/SIT 1300F2 should you have any questions regarding the test site construction.

2.5 Test Equipment Used

SPECTRUM ANALYZER(S)

GREEN 8593E 9 kHz-26.5 GHz		HP	S/N:3829A03618	Calibration Due:31-AUG-99

ANTENNA(S)

GREEN-BLACK CBL6112B Bilog 30 MHz-2 GHz		Chase	S/N:2412	Calibration Due:11-APR-00
BLACK 3115 Horn Antenna	EMCO 1-18 GHz		S/N:9703-5148	Calibration Due:16-MAR-99

PREAMPLIFIER(S)

RED ZFL-1000-LN RF Preamplifier 0.10 - 2000 MHz		MiniCircuits		Calibration Due:06-FEB-00
WHITE SMC-12A RF Preamplifier 2000 - 18000 MHz		MITEQ	S/N:426643	Calibration Due:30-OCT-99

OPEN AREA TEST SITE(S)

SITE "T"				Calibration Due:28-MAY-99

Unless otherwise noted the calibration interval is one year. All equipment is calibrated using standards traceable to NIST or other nationally recognized calibration standard.

EXHIBIT 3

3.0 Measurement Results

3.1 Operating Frequency

The devices operating frequency is 905.6 MHz.

3.2 Electric Field Strength Radiation Measurements

Data was obtained using the procedures outlined in ANSI C63.4 (1992). All signals from the transmitter within 10 dB of the emission limit are reported in the following data tables.

Radiated Emissions Chart — *Curtis-Straus LLC*

Date: 13-Oct-98 **Company:** ID Systems **Distance:** 3 m
Engineer: Michael Buchholz **EUT Desc:** Flex Tag **Table No:** 1
Notes: TX - 905.6MHz **Work Order:** 980819

Harmonic Number	Antenna Polarization (H / V / NF)	EUT Orientation (X / Y / Z)	Frequency (MHz)	Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Distance Factor (dB)	Averaging Factor (dB)	Adjusted Reading (dBµV/m)	FCC Part 15C Sec. 249 Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)
1	H	X	905.6	88.3	22.5	20.6	3.0	0.0	6.7	82.7	94.0	-11.3	Pass
2	V	Y	1811.2	43.2	19.4	26.7	4.9	0.0	6.7	48.7	54.0	-5.3	Pass
3	H	X	2716.8	28.1	19.1	30.8	1.5	0.0	6.7	34.6	54.0	-19.4	Pass
4	V	Y	3622.4	33.2	18.8	32.9	1.9	0.0	6.7	42.5	54.0	-11.5	Pass
5	NF	NF	4528.0	25.0	18.6	34.5	2.2	0.0	6.7	36.4	54.0	-17.6	Pass
6	NF	NF	5433.6	23.7	18.3	36.2	2.5	10.0	6.7	27.4	54.0	-26.6	Pass
7	NF	NF	6339.2	23.1	18.1	36.5	2.7	10.0	6.7	27.5	54.0	-26.5	Pass
8	NF	NF	7244.8	28.5	17.8	37.9	3.0	10.0	6.7	34.9	54.0	-19.1	Pass
9	NF	NF	8150.4	29.9	17.6	38.9	3.2	10.0	6.7	37.7	54.0	-16.3	Pass
10	NF	NF	9056.0	29.5	17.3	39.7	3.5	10.0	6.7	38.7	54.0	-15.3	Pass

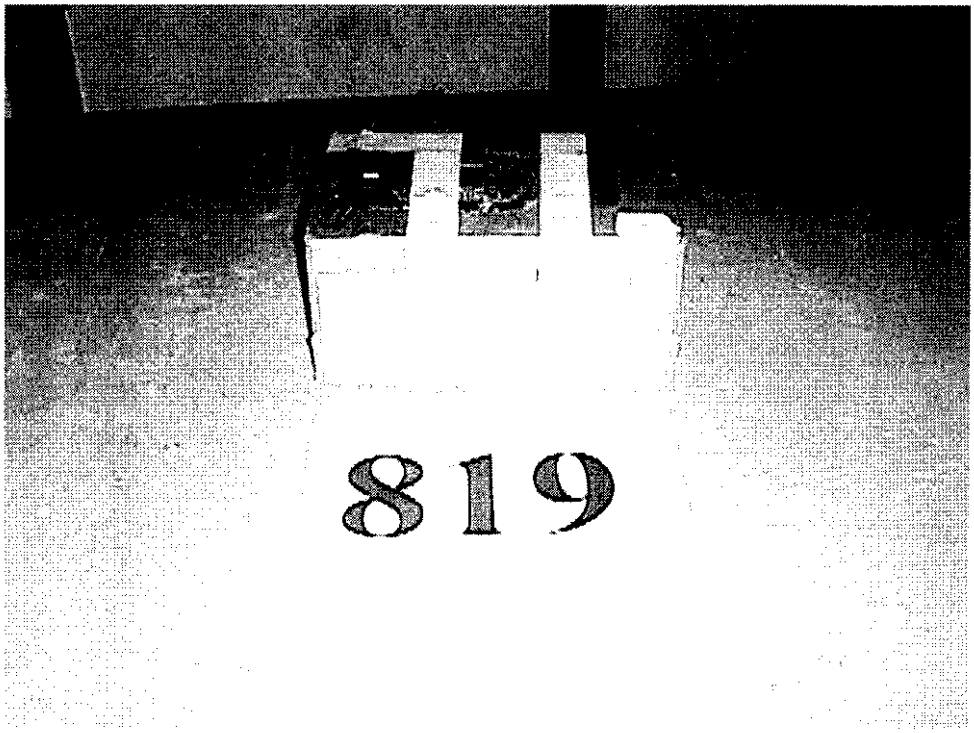
Radiated Emissions Chart — *Curtis-Straus LLC*

Date: 13-Oct-98 **Company:** ID Systems **Distance:** 3 m
Engineer: Michael Buchholz **EUT Desc:** Flex Tag **Table No:** 2
Notes: Full Scan 30MHz-10GHz (excluding TX frequencies and harmonics) **Work Order:** 980819

Antenna Polarization (H / V)	Frequency (MHz)	Reading (dBµV)	Preamp Factor (dB)	Antenna Factor (dB/m)	Cable Factor (dB)	Adjusted Reading (dBµV/m)	FCC Class B Limit (dBµV/m)	Margin (dB)	Result (Pass/Fail)
V	115.6	32.7	22.5	11.0	0.8	22.0	43.5	-21.5	Pass
V	140.7	31.8	22.6	10.6	0.9	20.7	43.5	-22.8	Pass
H	216.1	32.9	22.9	9.5	1.1	20.6	46.0	-25.4	Pass
NF	350.0	19.5	23.1	14.2	1.6	12.2	46.0	-33.8	Pass
NF	600.0	16.7	22.5	18.4	2.3	14.9	46.0	-31.1	Pass
H	834.6	38.4	22.4	20.3	2.9	39.2	46.0	-6.8	Pass
H	839.0	38.2	22.4	20.4	2.9	39.1	46.0	-6.9	Pass
NF	850.0	19.0	22.4	20.5	2.9	20.0	46.0	-26.0	Pass
H	1669.1	34.5	19.8	25.7	4.6	45.0	54.0	-9.0	Pass
V	1678.1	32.7	19.8	25.7	4.6	43.2	54.0	-10.8	Pass
H	2503.6	31.1	19.2	30.1	1.5	43.5	54.0	-10.5	Pass
V	2517.1	32.5	19.2	30.2	1.5	45.0	54.0	-9.0	Pass
H	3338.2	26.7	18.9	32.5	1.8	42.1	54.0	-11.9	Pass
V	3356.1	27.4	18.9	32.6	1.8	42.9	54.0	-11.1	Pass
V	4172.7	23.5	18.7	33.5	2.1	40.4	54.0	-13.6	Pass
V	4195.1	24.8	18.7	33.6	2.1	41.8	54.0	-12.2	Pass

Pre-Amp: Red OATS: "T" Cable: 50' RG8A/U Antenna: Green-Black

Radiated Test Configuration Photographs:

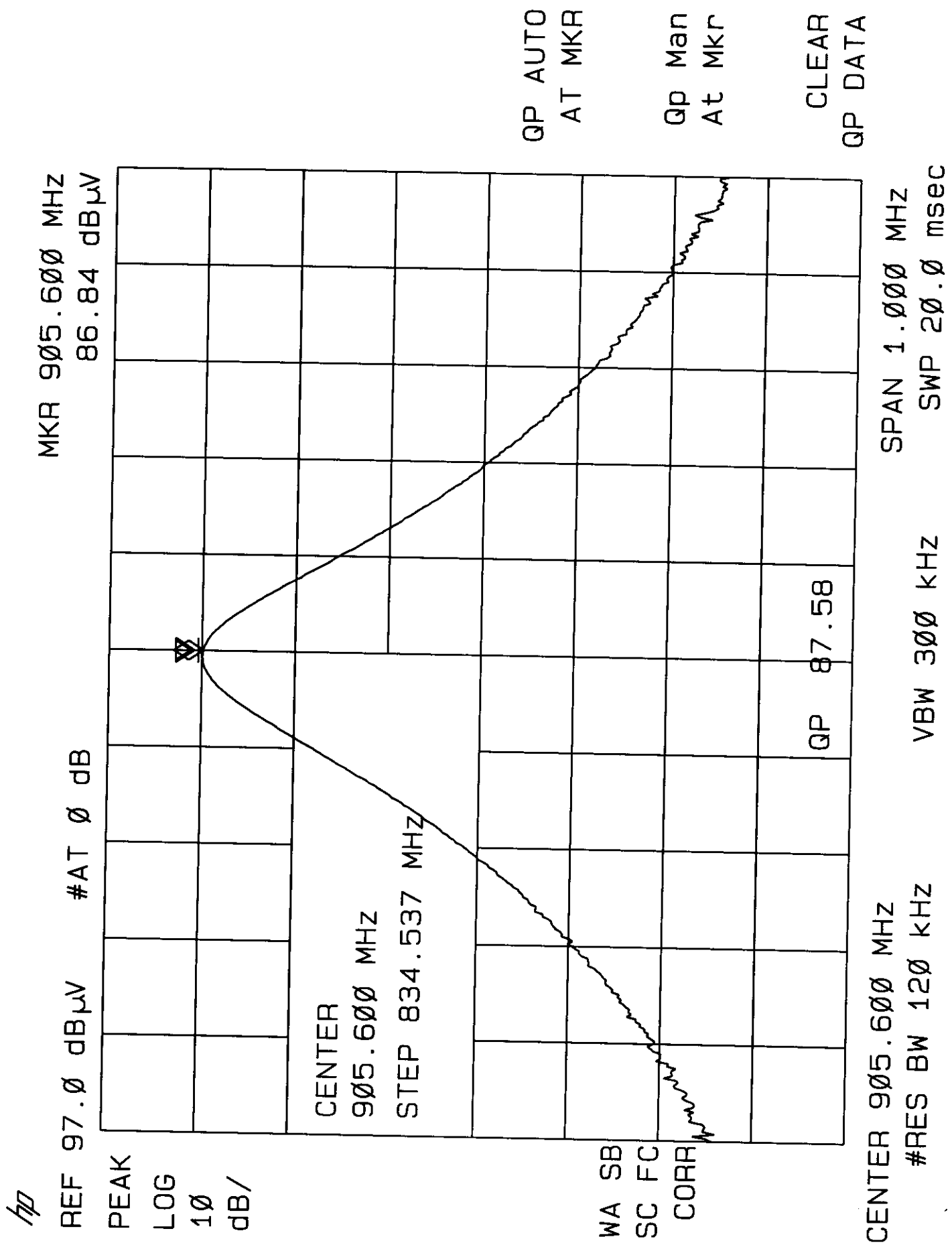


Radiated Emissions

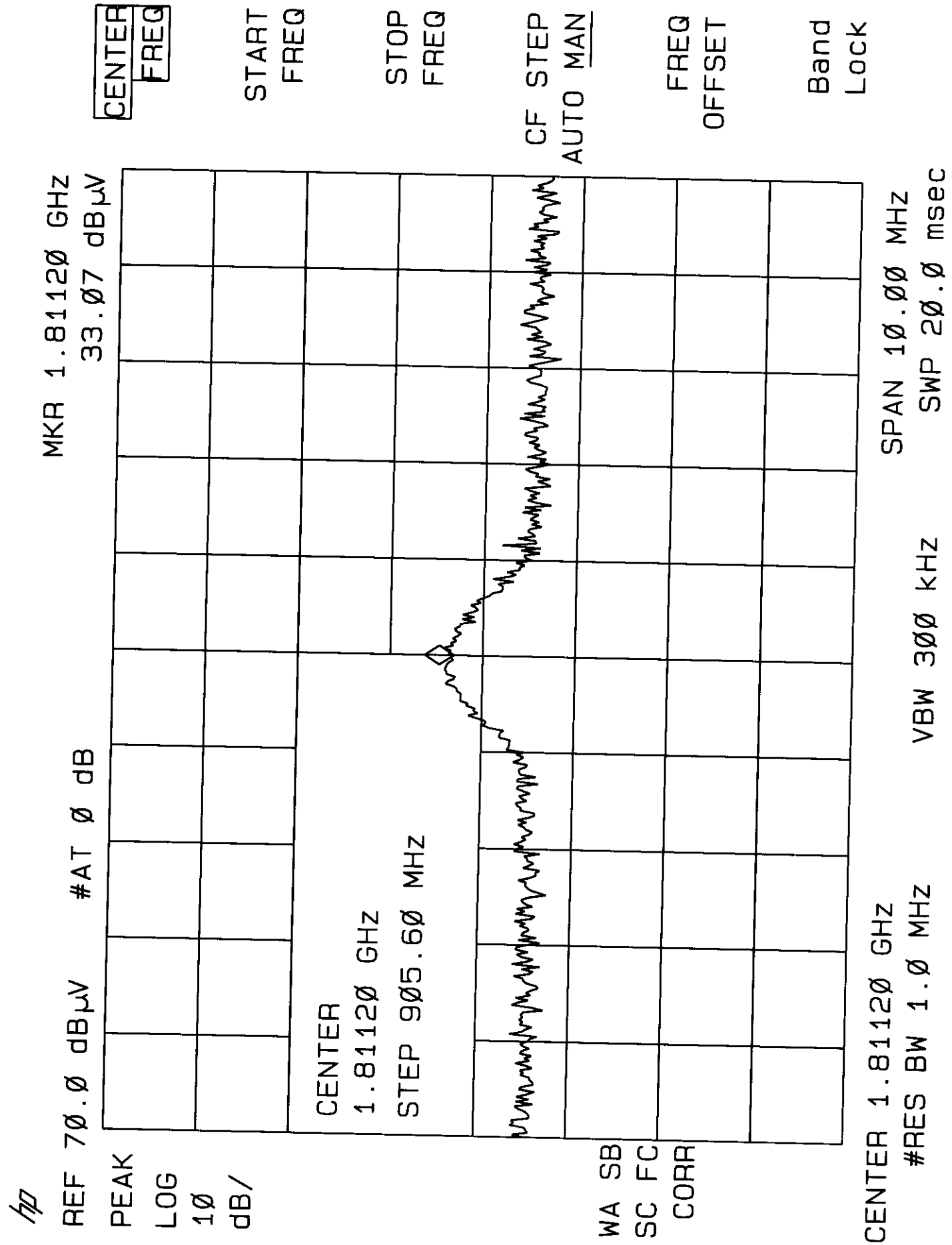
Radiated Emissions

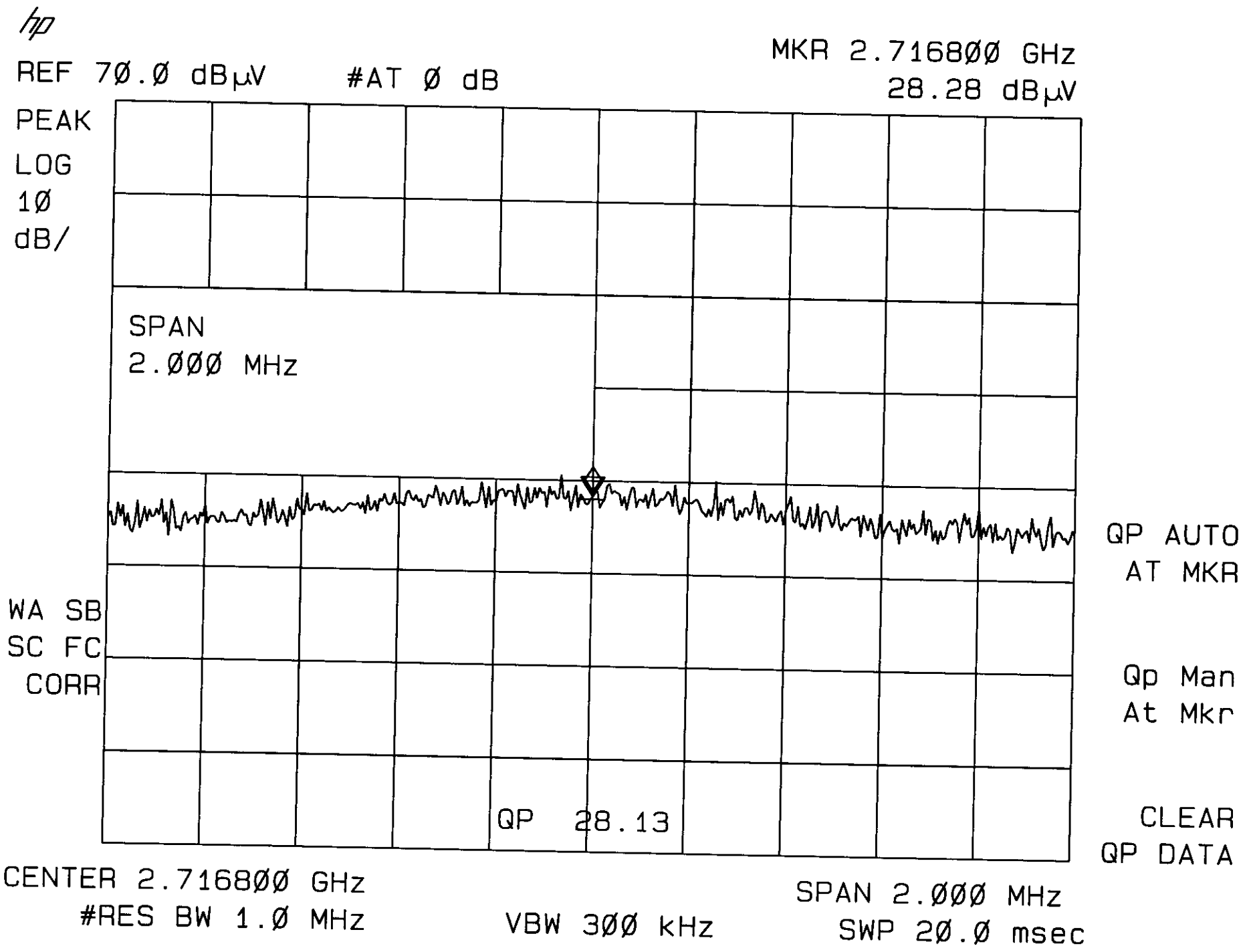
Radiated Emissions Plots:

1st Harmonic



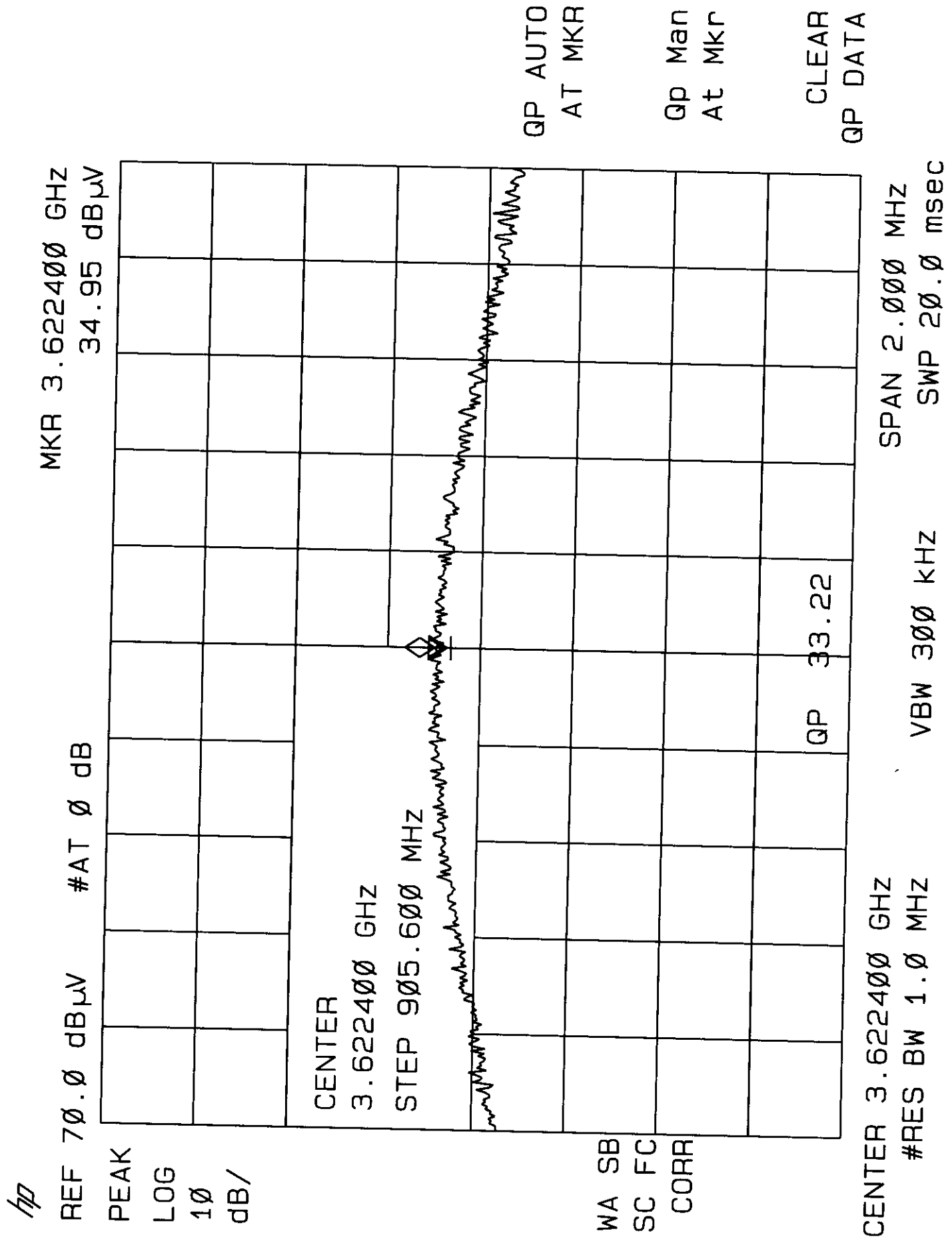
2nd Harmonic



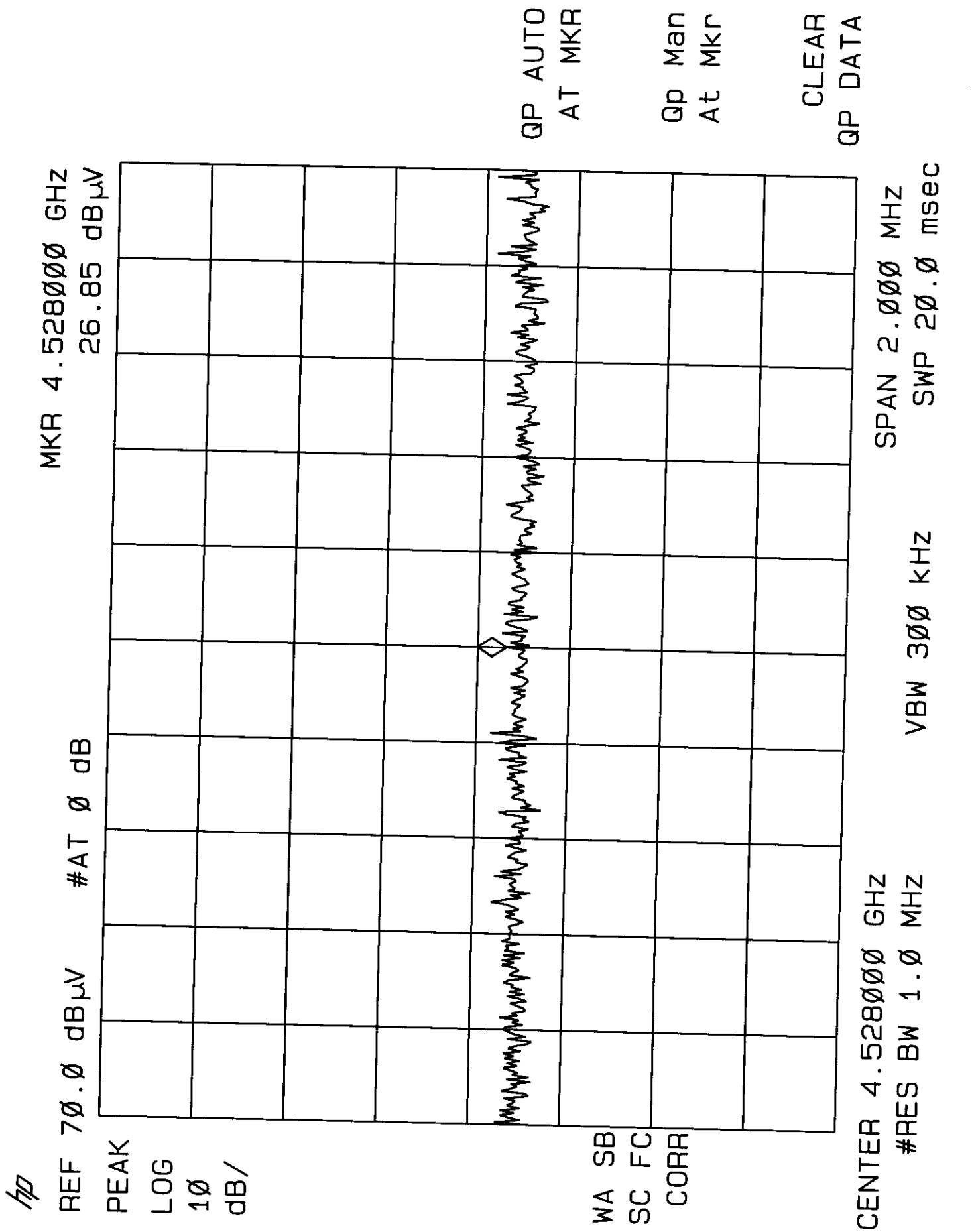


3rd Harmonic

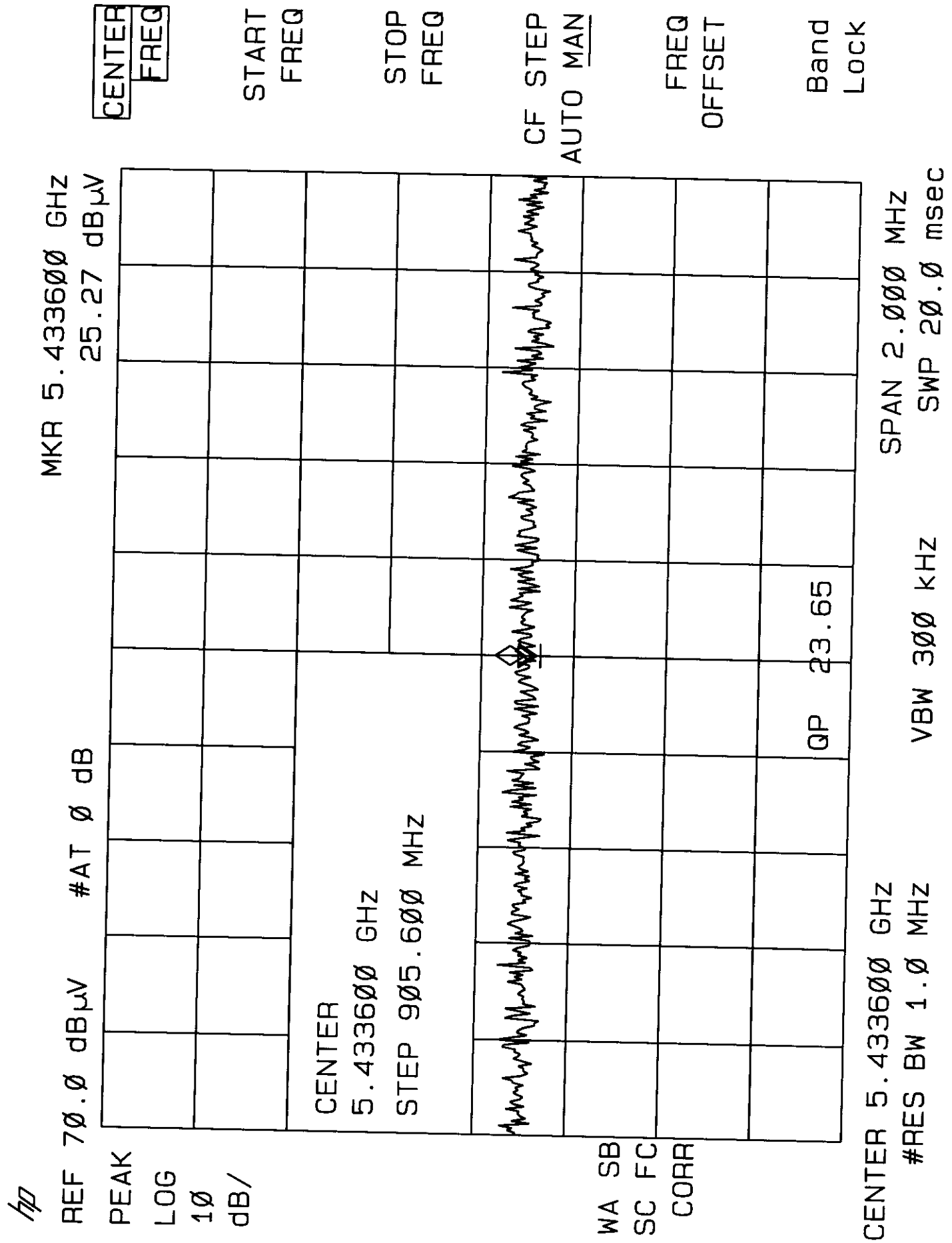
4th Harmonic



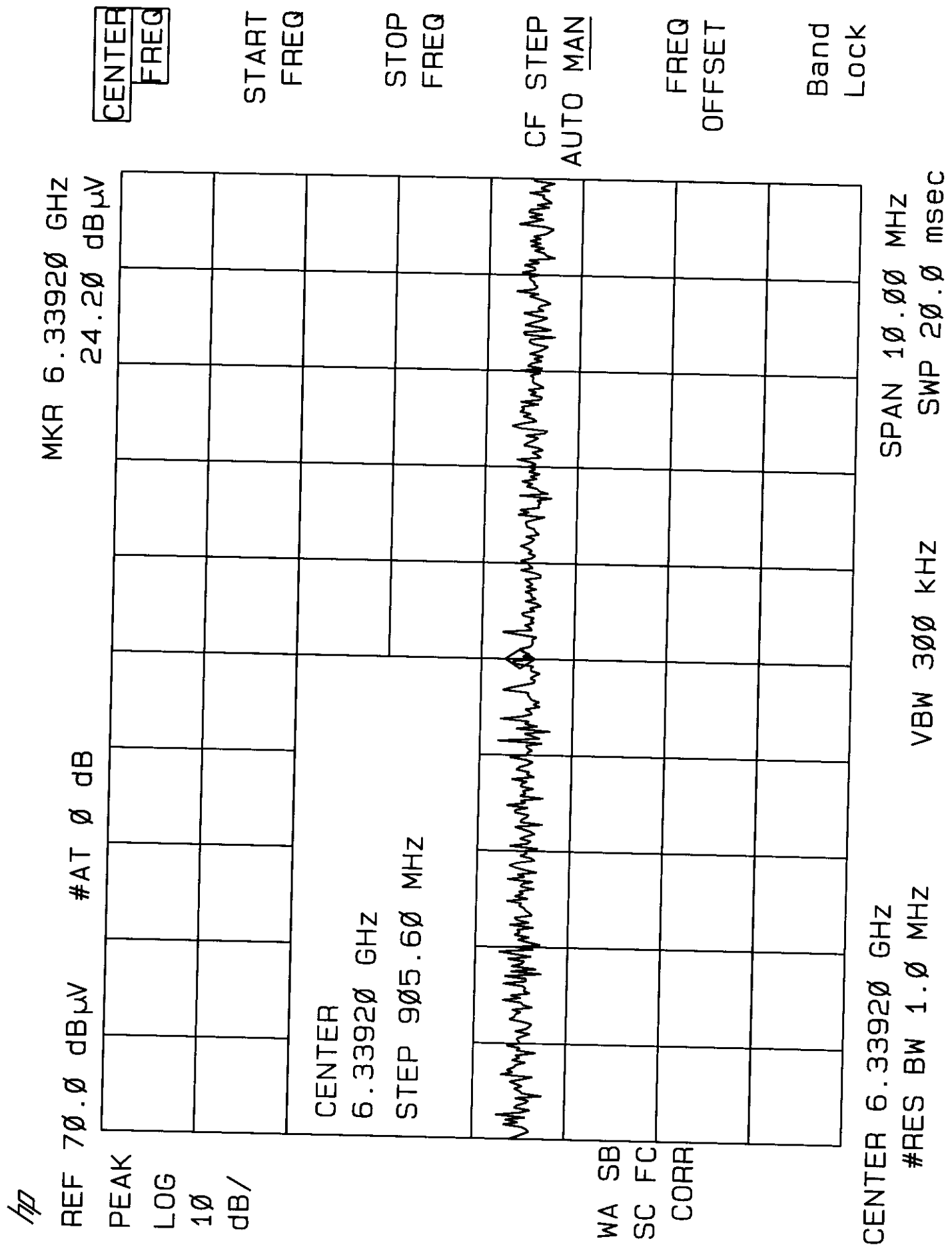
5th Harmonic



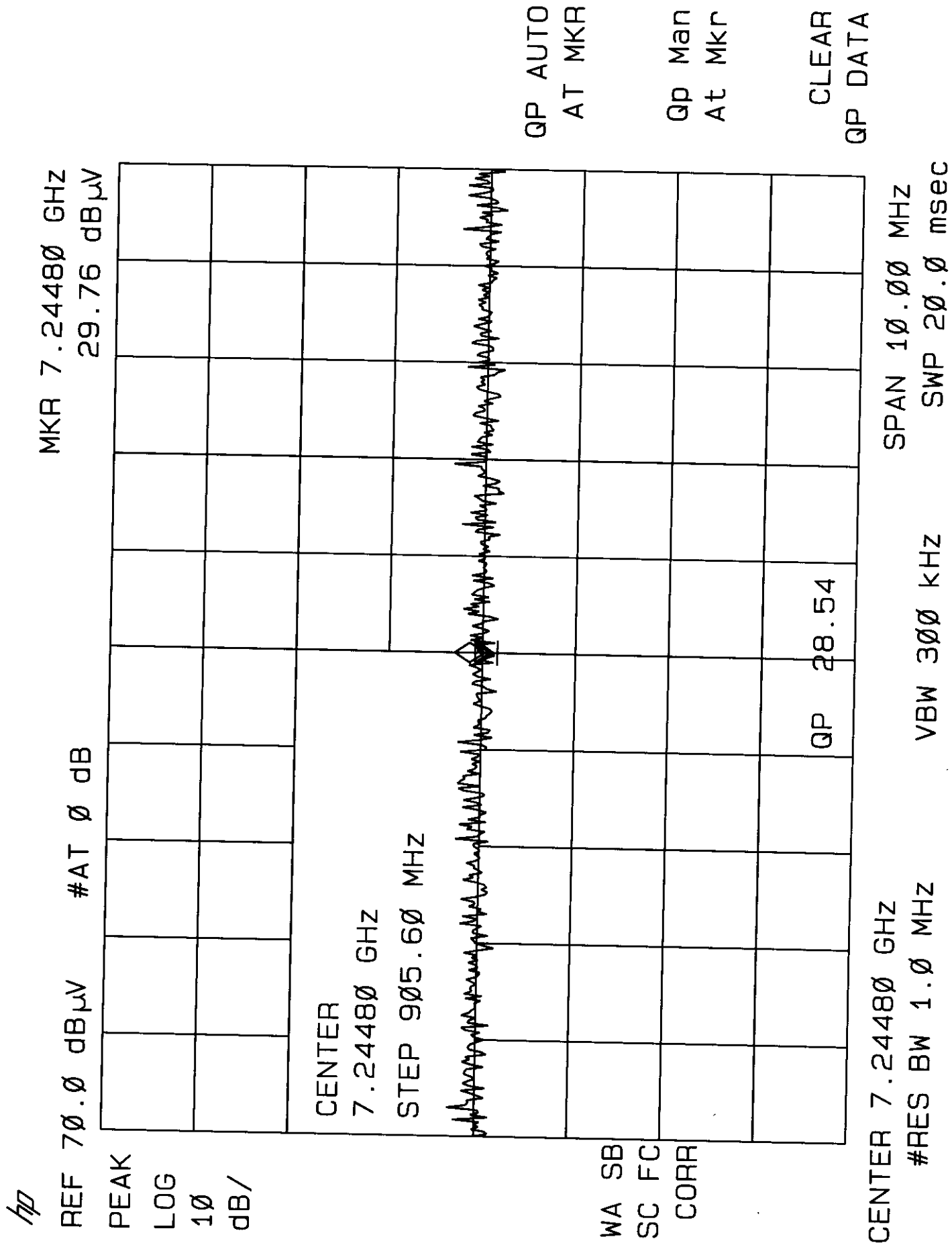
6th Harmonic



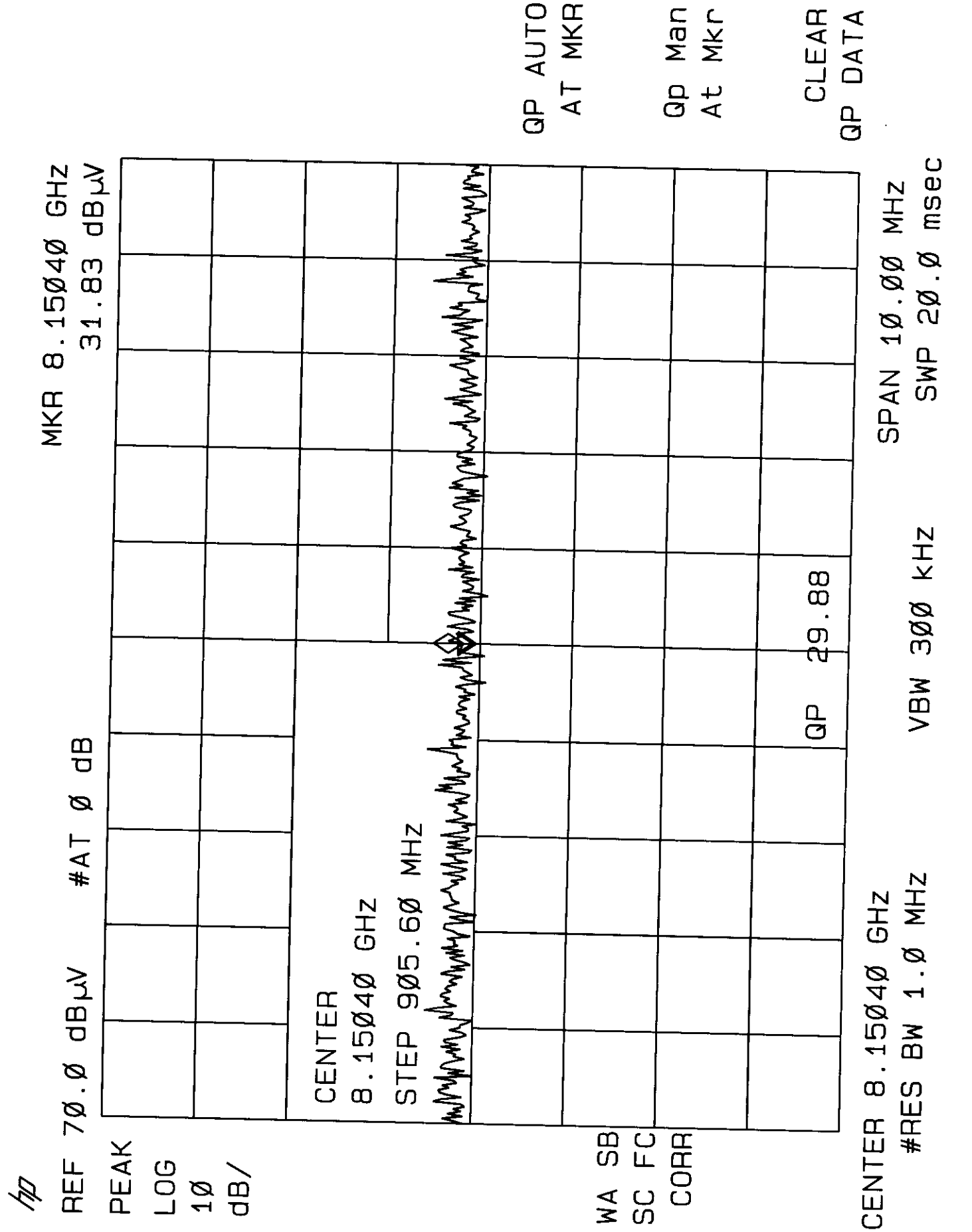
7th Harmonic



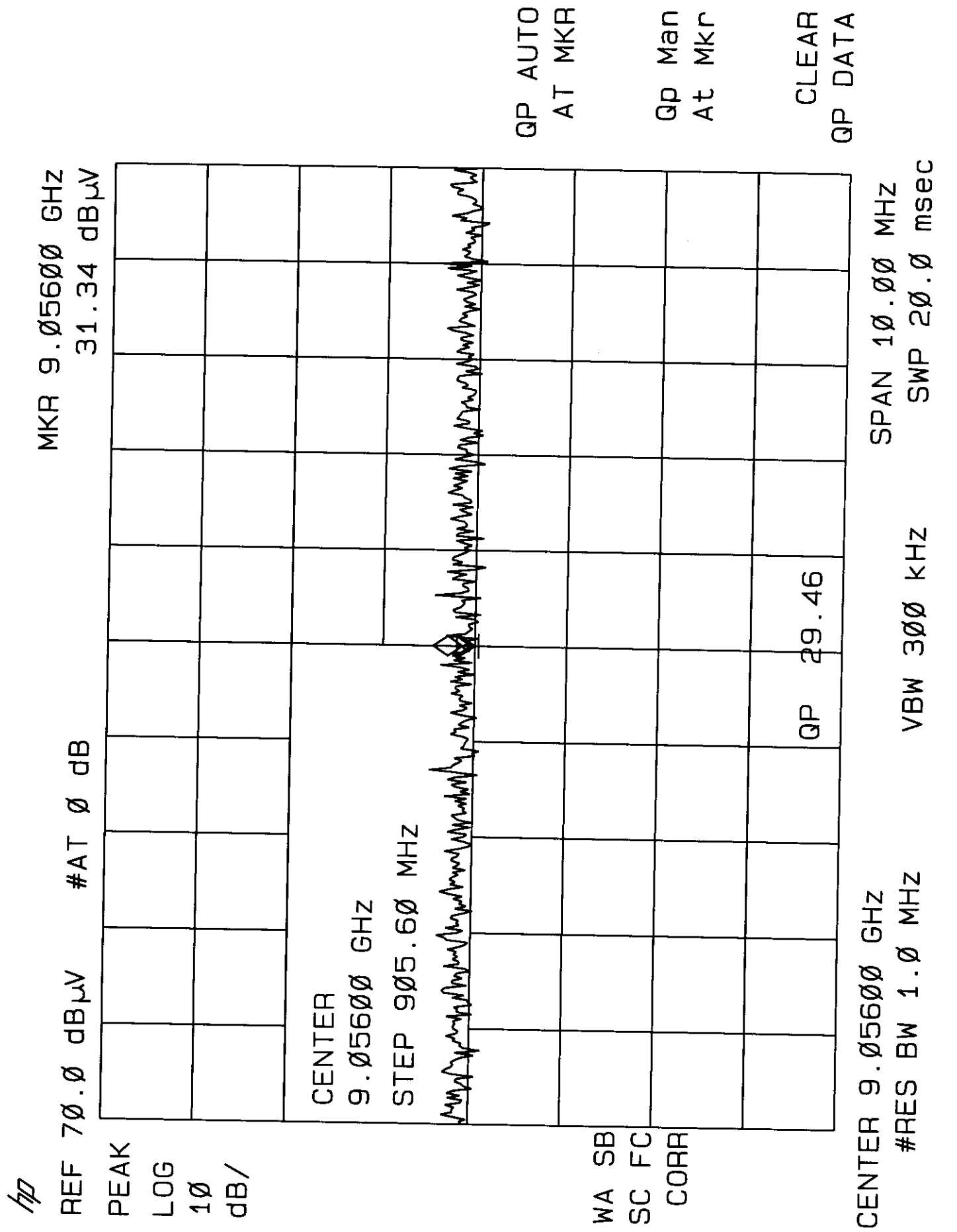
8th Harmonic



9th Harmonic

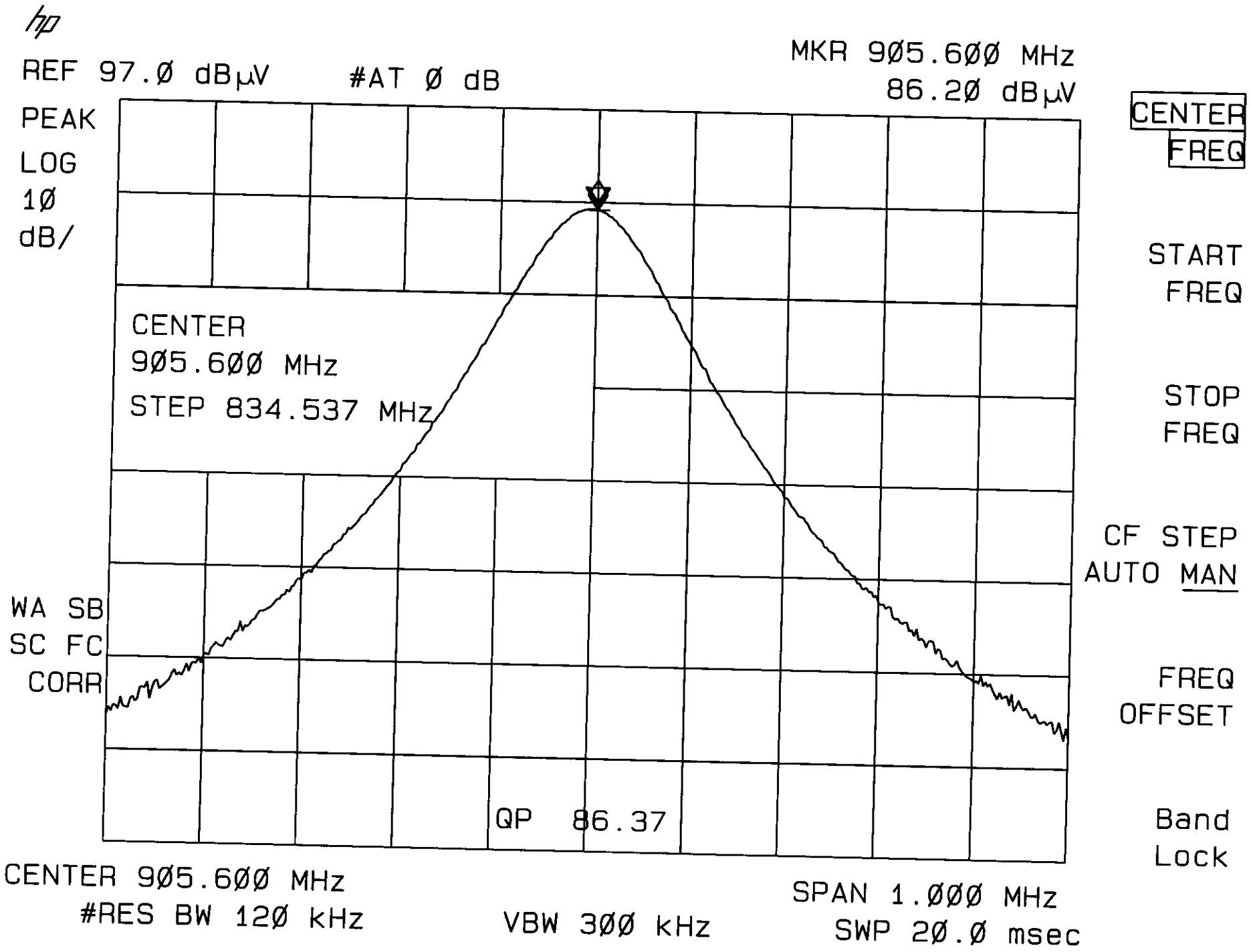


10th Harmonic



3.3 Occupied Bandwidth Measurements

A plot was obtained with the unit operating with modulation. The bandwidth observed does not extend outside of the operating band 902-928MHz.

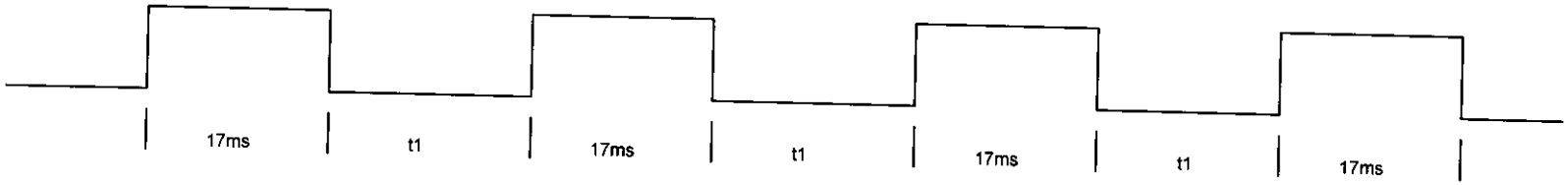

REF 97.Ø dBµV
#AT Ø dB
MKR 9Ø5.6ØØ MHz
86.2Ø dBµV
PEAK
LOG
1Ø
dB/
CENTER
FREQ
START
FREQ
CENTER
9Ø5.6ØØ MHz
STEP 834.537 MHz
STOP
FREQ
CF STEP
AUTO MAN
WA SB
SC FC
CORR
FREQ
OFFSET
QP 86.37
Band
Lock
CENTER 9Ø5.6ØØ MHz
#RES BW 12Ø kHz
VBW 3ØØ kHz
SPAN 1.ØØØ MHz
SWP 2Ø.Ø msec

3.4 Averaging factor derivation based on worst case 100mS period.

Attached is a timing diagram for the device. As can be seen, the worst case 100mS second period results in an averaging factor of 6.7dB.

Ave Factor = 20 x log (on time / total time)

Ave Factor = 20 x log (17 / 37) = ***-6.7dB***



t1 > = 20ms

Title: Timing Diagram for Transmission Sequence of Flextag		
Size: A	Document Number: {Doc}	Rev: {RevCode}
Date: Tuesday, March 02, 1999	Sheet 1 of 1	

EXHIBIT 4

4.0 Equipment Photographs

4.1 External

There is no external chassis for this device.

4.2 Internal Photographs

EXHIBIT 5

5.0 Product Labeling

5.1 Label Artwork

The label shown in the attached drawing will is silkscreened to the PCB at the location shown.

EXHIBIT 6

6.0 Technical Specifications

6.1 Technical Description and Block Diagram

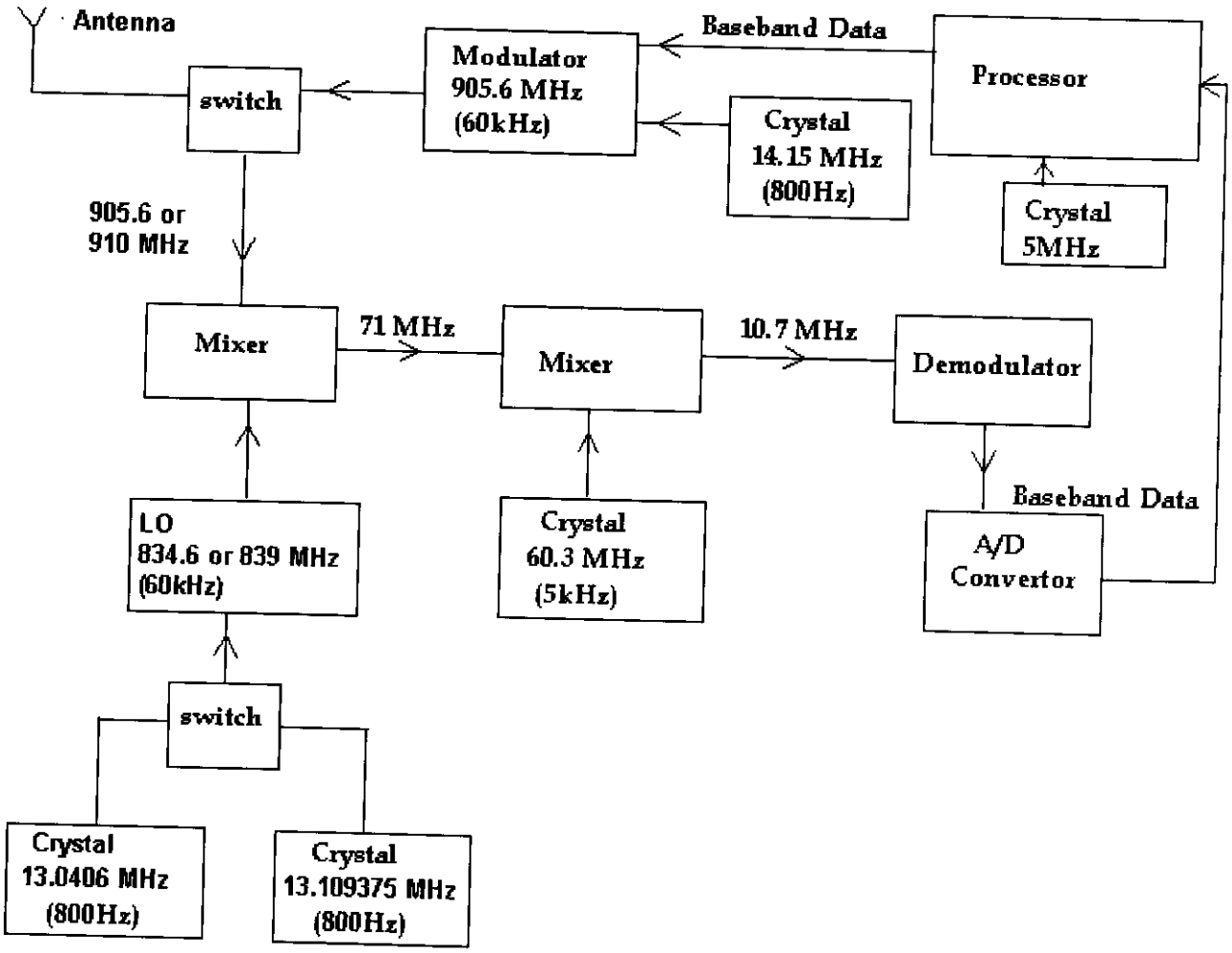
DESCRIPTION OF FLEXTAG

9/16/1998

Flextag Operation

The flextag is a transceiver unit that is specially manufactured to operate in a highly automated and mechanically demanding environment. It consists of a transceiver whose transmitter operates at 905.6 MHz but whose receiver operates at two the frequencies of 905.6 and 910 MHz. The flextag also consists of a microstrip antenna, battery and digital circuitry. The electronic circuitry is manufactured on three separate PCBs that are bonded together with a flexible material along with the antenna and battery. It communicates with fixed units called System Monitors (SMs) through a self contained, low powered radio link operating at the frequency of 905.6MHz. Each flextag has its own unique identification code, which it conveys to the SMs when it establishes a radio link with the SM. For communication to happen between an SM and flextag, the flextag first detects the wakeup signal at 910 MHz from the SM when it is within range. After detecting the wakeup signal the flextag transmits its ID along with other information to the SM. After receiving the information the SM will respond back to the tag saying that it obtained the information successfully, the flextag will then go back into sleep mode for a certain length of time after which it again listens for the wakeup signal. The purpose of the sleep mode is to conserve the flextag battery life.
A block diagram of the transceiver circuit is given below along with the tuning frequencies.

Transceiver Block Diagram



6.2 Schematics

6.3 Bill of Materials

FlexTag							
P/N: 801-0012-01		Rev G 04					
Revised:	12/14/98						
Gerber Data/PCB: 375-0012-01 Rev G							
Item	Quantity	Reference	Part	Manufacturer	Manuf Part Number	IDS Part Number	
1	1	C1	6.8uf	Panasonic	ECS-H1CC685R	566-0685-01	
2	22	C2,C3,C124,C149,C150	100pf	Panasonic	ECU-V1H101JCG	541-0101-01	
		C23,C93,C94,C98,C99,					
		C100,C101,C102,C103,					
		C104,C105,C109,C110,					
		C113,C117,C119,C151					
3	1	C4	15pf	Panasonic	ECU-V1H150JCG	541-0150-01	
4	6	C5,C7,C8,C31,C33,C34	330 pF	Panasonic	ECU-V1H331JCG	541-0331-01	
5	2	C6,C32	1000pf	Panasonic	ECU-V1H102JCX	541-0102-01	
5.1	1	C35	1000pf	Panasonic	ECU-V1H102JCM	541-0102-02	1206 Size
6	8	C13,C14,C25,C48,C49,	.1uf	Cal Chip	GMC21X7R104K50N	541-0104-01	
		C89,C152,C147					
6.1	1	C9	.1uf	Cal Chip	GMC31X7R104K50N	541-0104-02	1206 Size
7	3	C15,C16,C19	470 pF	Panasonic	ECU-V1H471JCX	541-0471-01	
8	2	C21,C148	5pf	Panasonic	ECU-V1H050CCN	541-0050-01	
9	19	C24,C43,C44,C45,C46,	.01uf	Cal Chip	GMC21X7R103J50NTM	541-0103-01	
		C132,C133,C134,C135,					
		C136,C137,C138,C139,					
		C140,C141,C142,C47					
		C52,C56					
10	1	C143	.022uf	Panasonic	ECU-V1H223KBX	541-0223-01	
11	1	C153	10pf	Panasonic	ECU-VIH100JCN	541-0100-01	
12	1	C26	DNL	Johanson	2320-4	571-2320-01	
13	2	C27,C125	22pf	Panasonic	ECU-V1H220JCN	541-0220-01	
14	1	C50	180 pF	Panasonic	ECU-V1H181JCG	541-0181-01	
15	1	C51	1.0uf	Panasonic	ECS-H1CY105R	566-0105-01	
16	1	C55	56pf	Panasonic	ECU-V1H560JCN	541-0560-01	
17	4	C64,C65,C128,C130	68pf	Panasonic	ECU-V1H680JCG	541-0680-01	
18	1	C69	33pf	Panasonic	ECU-V1H330JCG	541-0330-01	
19	1	C70	27pf	Panasonic	ECU-V1H270JCG	541-0270-01	
20	4	C87,C88,C121,C123	2.2 uF	Panasonic	ECS-H1CX225R	566-0225-01	
21	1	C96	4.7uf	Panasonic	ECS-H1CC475R	566-0475-01	
22	1	C112	47pf	Panasonic	ECU-V1H470JCG	541-0470-01	
23	1	C114	0.5-1.3 pF	Johanson	9401-1SL-1R3	571-9401-01	
24	1	C115	12pf	Panasonic	ECU-V1H120JCN	541-0120-01	
25	1	C126	18pf	Panasonic	ECU-V1H180JCN	541-0180-01	
26	1	C127	220pf	Panasonic	ECU-V1H221JCG	541-0221-01	
27	4	C154,C155,C156,C157	DNL	Johanson	2320-2	571-2320-02	
28	1	D2	GREEN LED	Panasonic	LN1351C	641-1351-01	
29	1	D3	DIODE SCHOTTK	Digikey	BAS70DICT-ND	601-0001-01	
30	1	J3	2367-5006-54	M/A Comm	2367-5006-54	325-0001-01	
31	2	J4,J5	0098-0606-02	IDS	0098-0606-02	395-0001-01	
32	2	L2,L1	12 nH	Coilcraft	1008CS-120XJBC	581-0120-01	
33	2	L3,L14	100 nH	Coilcraft	1008CS-101XKBC	581-0101-01	
34	1	L4	4.7 nH	Coilcraft	1008CT-040XMBC	581-0040-01	
35	2	L8,L19	220 nH	Coilcraft	1008CS-221XKBC	581-0221-01	
36	1	L20	10nH	Coilcraft	1008CS-100XKBC	581-0100-01	
37	2	L12,L13	18nH	Coilcraft	1008CS-180XJBC	581-0180-01	
38	1	L15	47nH	Coilcraft	1008CS-470XMBC	581-0470-01	
39	1	L17	390nH	Coilcraft	1008CS-391XKBC	581-0391-01	
40	2	L18,L11	1.8uH	Coilcraft	1008CS-182XJBC	581-0182-01	
41	5	Q15,Q16,Q17,Q18,Q25	JFET P	Supertex	VP2110K1	631-0001-01	
42	3	Q21,Q22,	2N3906	LiteOn	MMBT3906DICT-ND	601-0002-01	
42.1	1	Q26	DNL				
43	2	Q23,Q24	TN0104	Supertex	TN0104N8	631-0002-01	
44	6	R1,R8,R19,R28,R117,	22K	Panasonic	ERJ-6GEYJ223	501-0223-01	
		R190					
45	1	R43	100K Pot	Bourns	3314J-104ETR	526-3314-01	
45.1	1	R2	DNL				
46	1	R3	2.2K	Panasonic	ERJ-6GEYJ222	501-0222-01	
47	4	R4,R29,R37,R38	430 ohm	Panasonic	ERJ-6GEYJ431	501-0431-01	
48	6	R5,R30,R31,R135,R192,R199	0 ohm	Panasonic	ERJ-6GEYJ0R00	501-0000-01	
49	5	R6,R46,R124,R125,R178	4.7K	Panasonic	ERJ-6GEYJ472	501-0472-01	
50	5	R7,R21,R33,R150,R191	1 MEG	Panasonic	ERJ-6GEYJ105	501-0105-01	
51	2	R9,R10	200 ohm	Panasonic	ERJ-6GEYJ201	501-0201-01	
52	4	R13,R14,R18,R40	10 ohm	Panasonic	ERJ-6GEYJ100	501-0100-01	
53	2	R16,R17,	750 ohm	Panasonic	ERJ-6GEYJ751	501-0751-01	

54	1	R20	300K	Panasonic	ERJ-6GEYJ304	501-0304-01	
55	2	R32,R56	220 ohm	Panasonic	ERJ-6GEYJ221	501-0221-01	
56	1	R39	1.5K	Panasonic	ERJ-6GEYJ152	501-0152-01	
57	1	R44	33 ohm	Panasonic	ERJ-6GEYJ330	501-0330-01	
58	23	R45,R80,R136,R137,	10K	Panasonic	ERJ-6GEYJ103	501-0103-01	
		R139,R140,R141,R142,					
		R143,R144,R145,R146,					
		R147,R148,R149,R156,					
		R160,R168,R169,R170,					
		R183,R184,R185					
59	13	R47,R48,R138,R154,	100K	Panasonic	ERJ-6GEYJ104	501-0104-01	
		R161,R172,R173,R177,					
		R158,R186,R187,R188,					
		R195,					
60	1	R180	100K 1%	Panasonic	ERJ-6ENF1003	501-1003-01	
61	1	R81	16K	Panasonic	ERJ-6GEYJ163	501-0163-01	
62	1	R126	267K 1%	Panasonic	ERJ-6ENF2673	501-2673-01	
63	1	R127	110K 1%	Panasonic	ERJ-6ENF1103	501-1103-01	
64	1	R153	51 ohm	Panasonic	ERJ-6GEYJ510	501-0510-01	
	1	R151	DNL				
65	1	R152	1K	Panasonic	ERJ-6GEYJ102	501-0102-01	
66	1	R164	75K	Panasonic	ERJ-6GEYJ753	501-0753-01	
67	2	R165,R166	470K	Panasonic	ERJ-6GEYJ474	501-0474-01	
68	1	R167	2M	Panasonic	ERJ-6GEYJ205	501-0205-01	
69	1	R179	294K	Panasonic	ERJ-6ENF2943	501-2943-01	
70	2	R181,R182	150 ohm	Panasonic	ERJ-6GEYJ151	501-0151-01	
71	1	R201	160K	Panasonic	ERJ-6GEYJ164	501-0164-01	
72	1	R193	51K	Panasonic	ERJ-6GEYJ513	501-0513-01	
73	1	R194	68 ohm	Panasonic	ERJ-6GEYJ680	501-0680-01	
74	2	R196,R197	470 ohm	Panasonic	ERJ-6GEYJ471	501-0471-01	
75	1	S1	P8001S	Panasonic	EVQ-QFD02K	406-0001-01	
76	2	U1,U5	RF9901	RF Micro Devices	RF9901	701-0008-01	
77	1	U4	IDS20E1M	Motorola	MC143120E2DW	716-0001-01	
78	1	U6	MC13156DW	Motorola	MC13156DW	701-0002-01	
79	2	U7,U8	SFECV10.7MA5-A	Murata	SFECA10.7MA5-A-TC	591-0001-01	
80	2	U14,U38	SW-385	M/A Comm	SW-385	406-0002-01	
81	2	U19,U49	MIC2951	MICREL	MIC2951-03BM	701-0003-01	
82	1	U22	74AHC1G04	Texas Instruments	74AHC1G04	701-0004-01	
83	1	U27	UPC2757T	NEC/Califomia Eastern Labs	UPC2757T	701-0005-01	
84	1	U29	UPC2748T	NEC/Califomia Eastern Labs	UPC2748T	701-0006-01	
85	2	U30,U31	FSCH-915M00	Fujitsu	F5CH-915M00-L2JZT	591-0002-01	
86	3	U32,U35,U51	LTF3216L-FR90G	TOKO	LTF3216L-FR90G	591-0003-01	
87	1	U37	MAX406	Maxim	MAX406AESA	701-0000-01	
88	1	U39	74HC74	National Semiconductor	74HC74AFN	701-0001-01	
89	1	U46	DW9276	GEC Plessey	DW9276	591-0004-01	
90	1	U47		IDS	726-0101-01A	726-0101-01	
91	1	U50	TC7S00FCT-ND	Toshiba	TC7S00FTE85L	701-0007-01	
92	1	Y1	13.109375MHz	Siward	XTL1N010A-13.109375	660-0001-01	
93	1	Y2	14.15000MHz	Siward	XTL1N010A-14.150	660-0002-01	
94	1	Y3	60.300MHz	Siward	XTL3N010A-60.300	660-0003-01	
95	1	Y4	EFOP5004E5	Panasonic	EFOP5004E5	591-0005-01	
96	1	Y5	13.040625MHz	Siward	XTL1N010A-13.040625	660-0004-01	

EXHIBIT 7

7.0 Instruction Manual

There is no manual supplied with this unit. The following required FCC user's manual warnings will appear on a leaflet packaged with the product.

Federal Communications Commission (FCC) Notice

This equipment has been tested and been found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used properly, may cause harmful interference to radio communications. However, this is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment to an outlet on a different circuit than the one to which the receiver is connected.
Consult an authorized service person for help.

Note: Unauthorized modification of this device could void the user's authority to operate this equipment.

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