FCC PART 15 Subpart C

EMI MEASUREMENT AND TEST REPORT

FOR

LG ELECTRONICS, INC.

LG Kangseo B/D, 36, Munlae-Dong, 6-Ga,
Youngdungpo-Gu, Seoul, 150-096, Korea

FCC ID: FFMGT-8320C

October 30, 2000

This Report Concerns:	**Equipment Type:**
☒ Original Report	Digital Spread Spectrum Cordless Phone – Household Appliances

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Test Date: October 12, 2000

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1 - GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

The *LG Electronic, Inc.*, FCC ID *FFMGT-8320C or the* "EUT" as referred to in this report is a Digital Spread Spectrum Cordless Phone which has 20 channel possible in the 904-926 MHz Bandwidth, and the transmission range up to 1 Km in open sight (longer range than analog 900MHz cordless phone).

The EUT was composed of two parts: one is the handset which measures 9” L x 2.125” W x 1.675” H, the other is the base which measures 7” L x 5.5” W x 2.25” H.

1.2 Objective

This type approval report is prepared on behalf of *LG Electronics, Inc.*, in accordance with Part 2, Subpart J, Part 15, Subparts A and B of the Federal Communication Commissions rules.

The objective of the manufacturer is to demonstrate compliance with FCC rules for Output Power, 6 dB Bandwidth, Power Density, Band Edge, Spurious Emission, Processing Gain, Antenna Gain, and Conducted and Radiated Emission.

1.3 Related Submittal(s)/Grant(s)

No Related Submittals

1.4 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4 –1992, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz. All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratory, Corp. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

1.5 Test Facility

The **O**pen **A**rea **T**est **S**ite used by Bay Area Compliance Laboratory Corporation to collect radiated and conducted emission measurement data is located in the back parking lot of the building at 230 Commercial Street, Suite 2, Sunnyvale, California, USA.

Test site at Bay Area Compliance Laboratory Corporation has been fully described in reports submitted to the Federal Communication Commission (FCC) and Voluntary Control Council for Interference (VCCI). The details of these reports has been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on February 11 and December 10, 1997 and Article 8 of the VCCI regulations on December 25, 1997. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-1992.

The Federal Communications Commission and Voluntary Control Council for Interference has the reports on file and is listed under FCC file 31040/SIT 1300F2 and VCCI Registration No.: C-674 and R-657. The test site has been approved by the FCC and VCCI for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratory Corporation is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (NVLAP). The scope of the accreditation covers the FCC Method - 47 CFR Part 15 - Digital Devices, IEC/CISPR 22: 1993, and AS/NZS 3548: Electromagnetic Interference - Limits and Methods of Measurement of Information Technology Equipment test methods under NVLAP Lab Code 200167-0.

1.6 Test Equipment List

Manufacturer	Description	Model	Serial Number	Cal. Due Data
HP	Spectrum Analyzer	8566B	2610A02165	12/6/00
HP	Spectrum Analyzer	8593B	2919A00242	12/20/00
HP	Amplifier	8349B	2644A02662	12/20/00
HP	Quasi-Peak Adapter	85650A	917059	12/6/00
HP	Amplifier	8447E	1937A01046	12/6/00
A.H. System	Horn Antenna	SAS0200/571	261	12/27/00
Com-Power	Log Periodic Antenna	AL-100	16005	11/2/00
Com-Power	Biconical Antenna	AB-100	14012	11/2/00
Solar Electronics	LISN	8012-50-R-24-BNC	968447	12/28/00
Com-Power	LISN	LI-200	12208	12/20/00
Com-Power	LISN	LI-200	12005	12/20/00
BACL	Data Entry Software	DES1	0001	12/20/00
Rohde & Schwarz	Signal Generator	SMIQ03B	1125.5555.03	7/10/2002
Rohde & Schwarz	I/Q Modulation Generator	AMIQ	1110.2003.02	8/10/2002

1.7 Equipment Under Test (EUT)

Manufacturer	Description	Model	Serial Number	FCC ID
LG Electronics, Inc.	Handset	GT-8320C	None	FFMGT-8320C
LG Electronics, Inc.	Base	GT-8320C	None	FFMGT-8320C

1.8 EUT Configuration Details and List

NOT APPLICABLE

1.9 External I/O Cabling

For Base:

Cable Description	Length (M)	Port/From	To
Non-Shielded Phone Cable	2.0	RJ11 Port/EUT	Line1 RJ11 Port/ Telephone Simulator

2 - SYSTEM TEST CONFIGURATION

2.1 Justification

The EUT was configured for testing in a typical fashion (as normally used in a typical application).

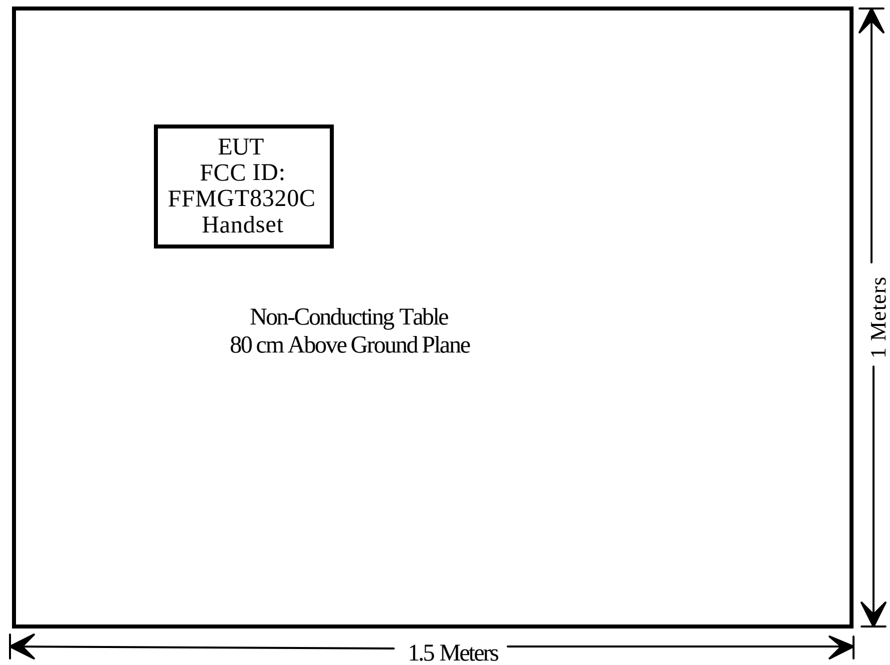
The final qualification test was performed with the EUT operating at normal mode.

2.2 Block Diagram

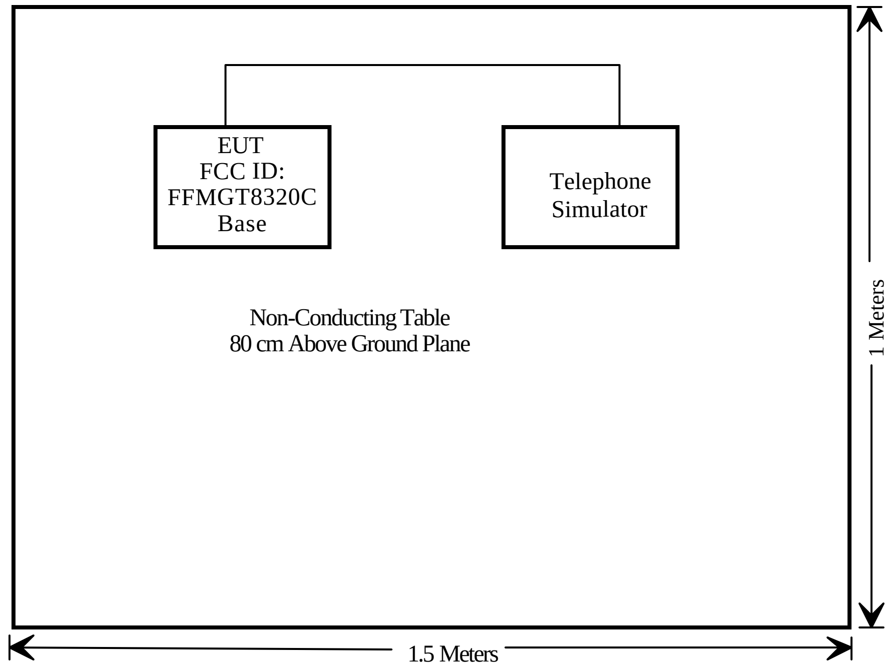
Appendix A contains a copy of the EUT’s block diagram as reference.

2.3 Test Setup Block Diagram

For Handset:



For Base:



2.4 Equipment Modifications

No modifications were necessary for the EUT to comply.

3.0 Summary of Test Results

FCC RULE	DESCRIPTION OF TEST	RESULT
15.247 (b)	Peak Output Power	Pass
15.247 (a) (2)	6dB Bandwidth	Pass
15.247 (2) (d)	Power Density	Pass
15.247 (2) (c)	Band Edges Testing	Pass
15.247 (2) (c)	Spurious Emission	Pass
15.247, 15.205	Field Strength of Spurious Radiation	Pass
15.207	Conduction Emission	Pass
15.247 (e)	Processing Gain	Pass

3.1.0 Peak Output Power

Requirements: FCC Part 15.247 (b)

3.1.1 Test Procedure

The antenna was removed and SMA connector was connected to the transmitter output. The transmitter output was connected to a calibrated coaxial attenuator (50 Ohm), the other end of which was connected to a spectrum analyzer. Transmitter output was read off the spectrum analyzer in dBm. The power output at the transmitter was determined by adding the value of the attenuator to the spectrum analyzer reading.

The test was performed at three frequencies (low, middle, and high channels) and on all power levels that can be setup on the transmitter.

3.1.2 Test equipment

Hewlett Packard HP8566B Spectrum Analyzer
Hewlett Packard HP 7470A Plotter

3.1.3 Test Results

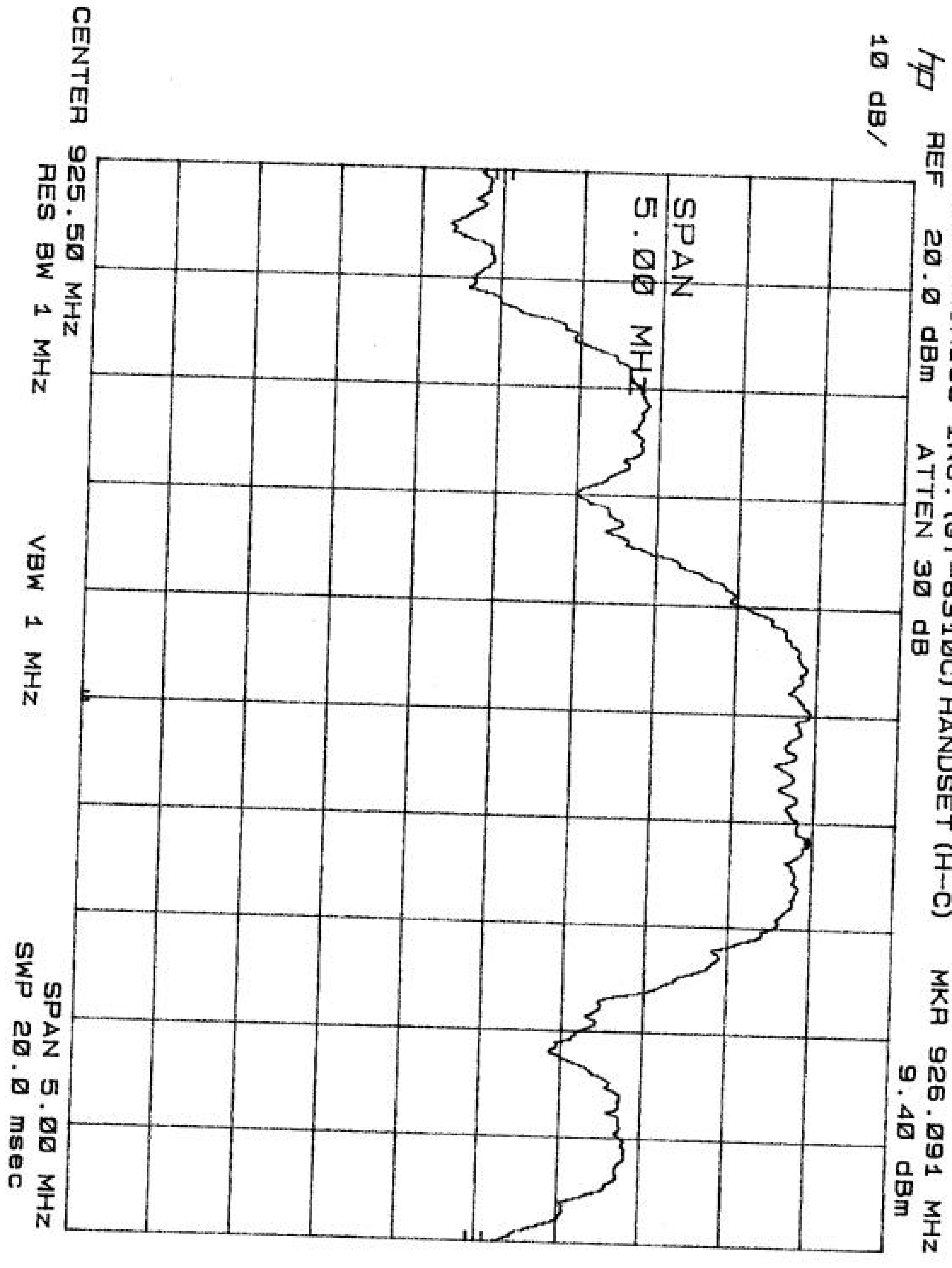
Refer to the attached to the following plots:

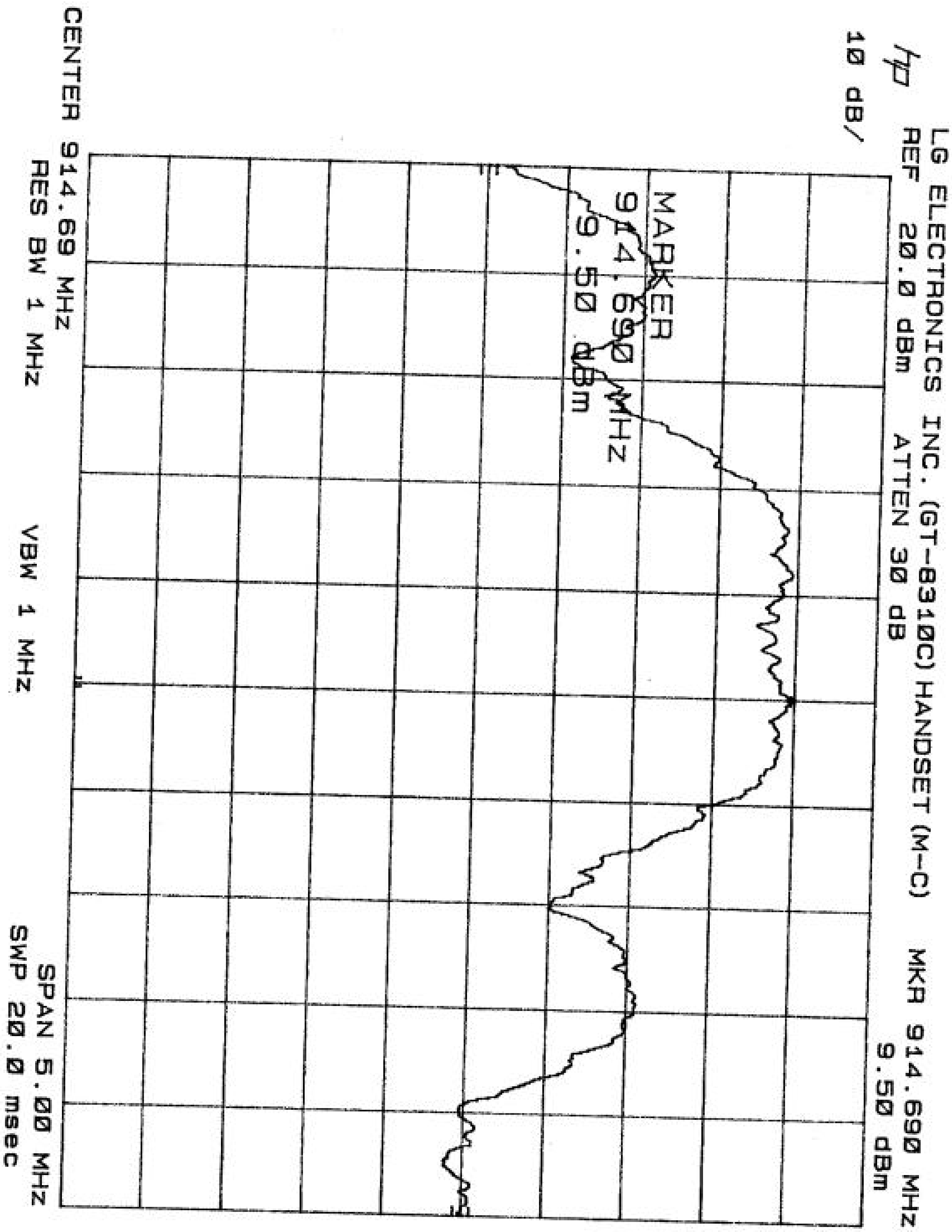
BASE

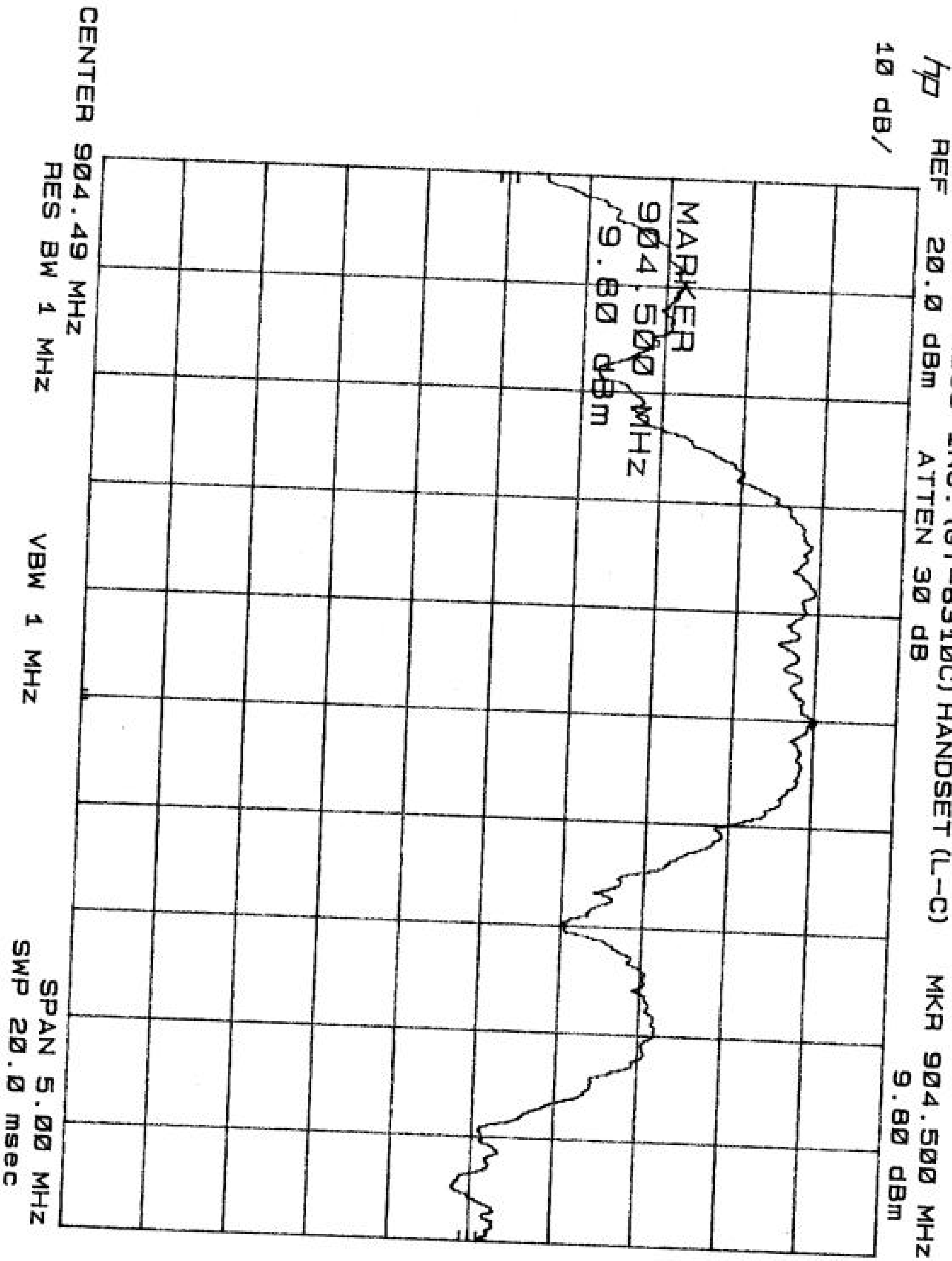
Peak Output Power	
High Channel	Page 14
Middle Channel	Page 15
Low Channel	Page 16

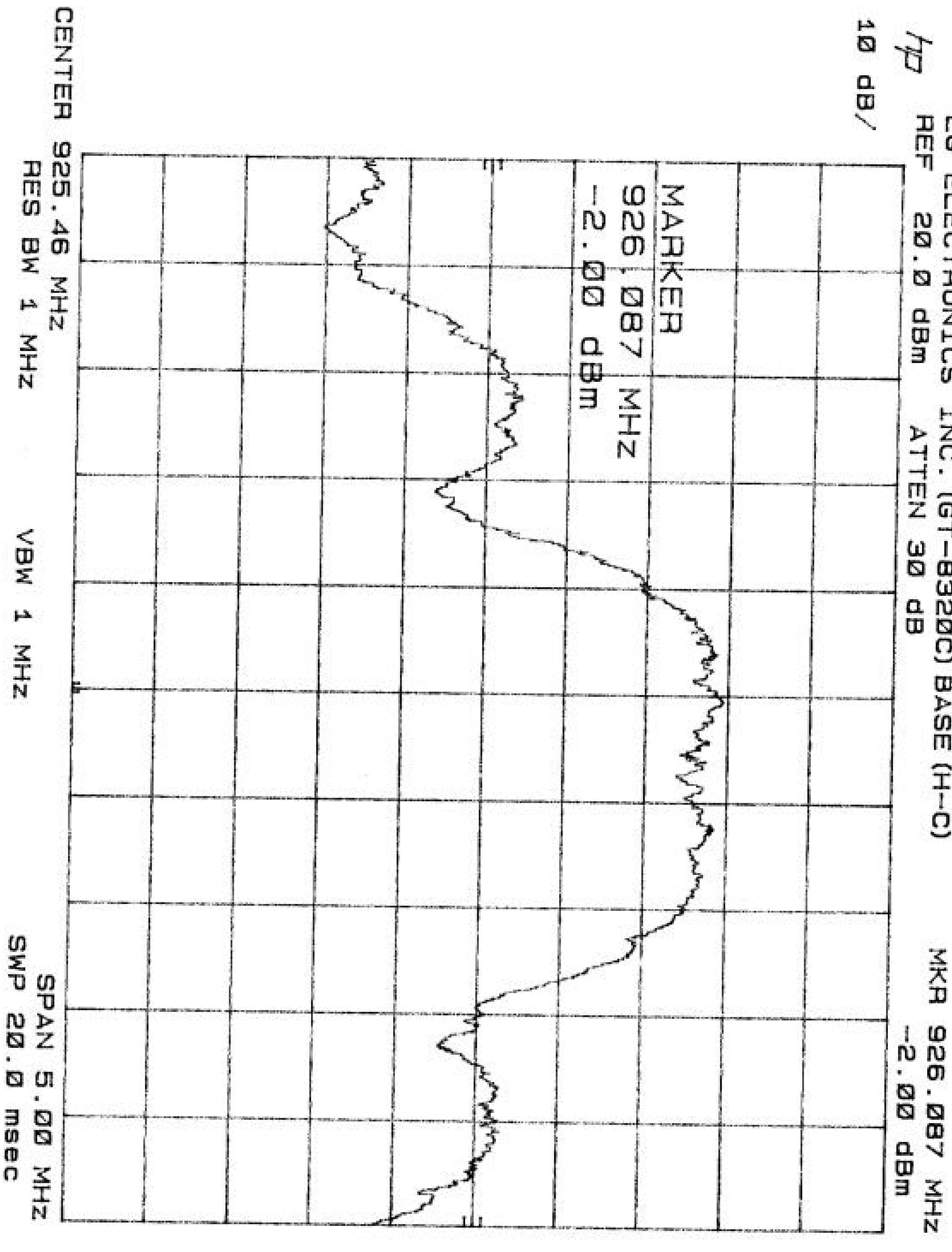
HANDSET

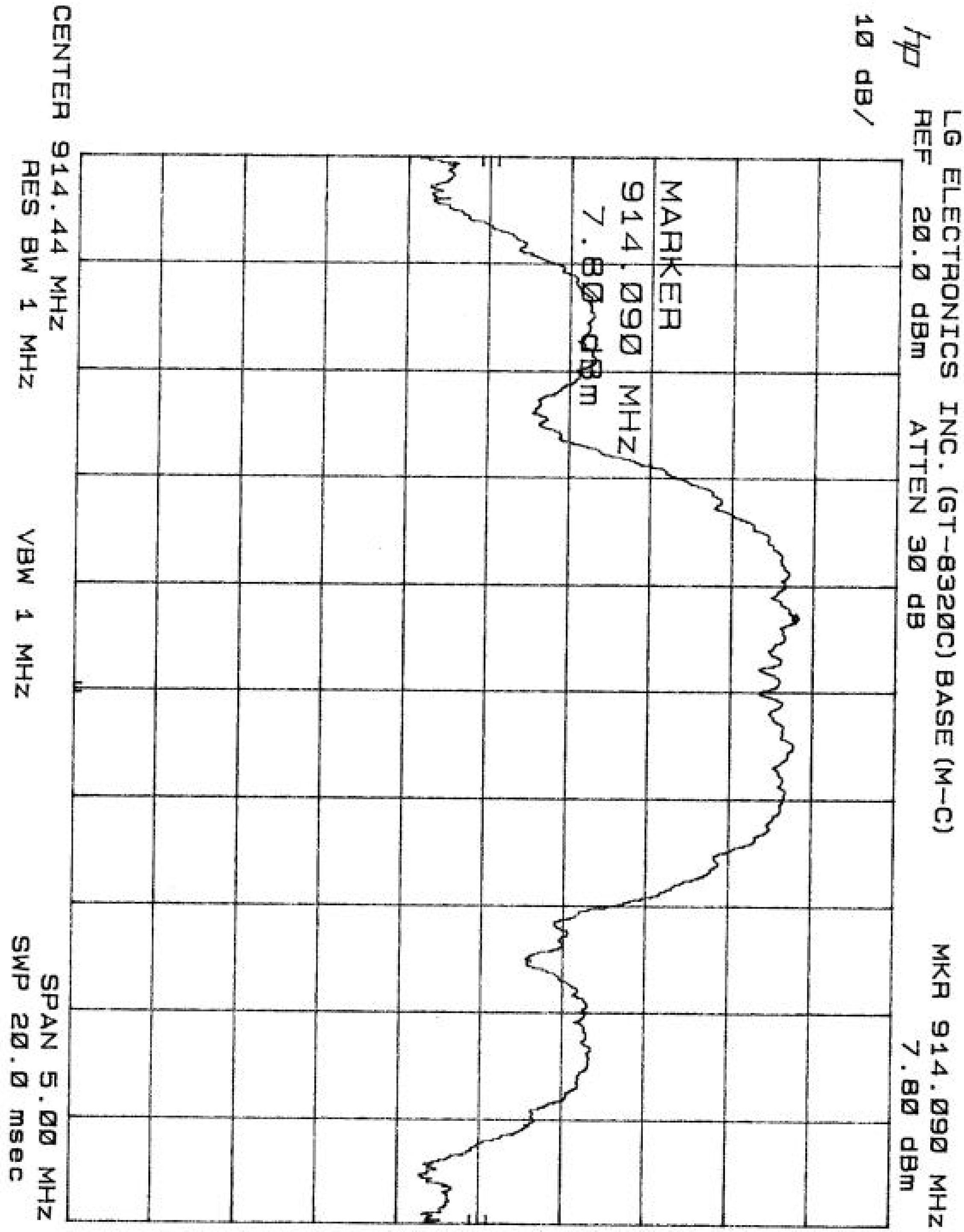
Peak Output Power	
High Channel	Page 11
Middle Channel	Page 12
Low Channel	Page 13

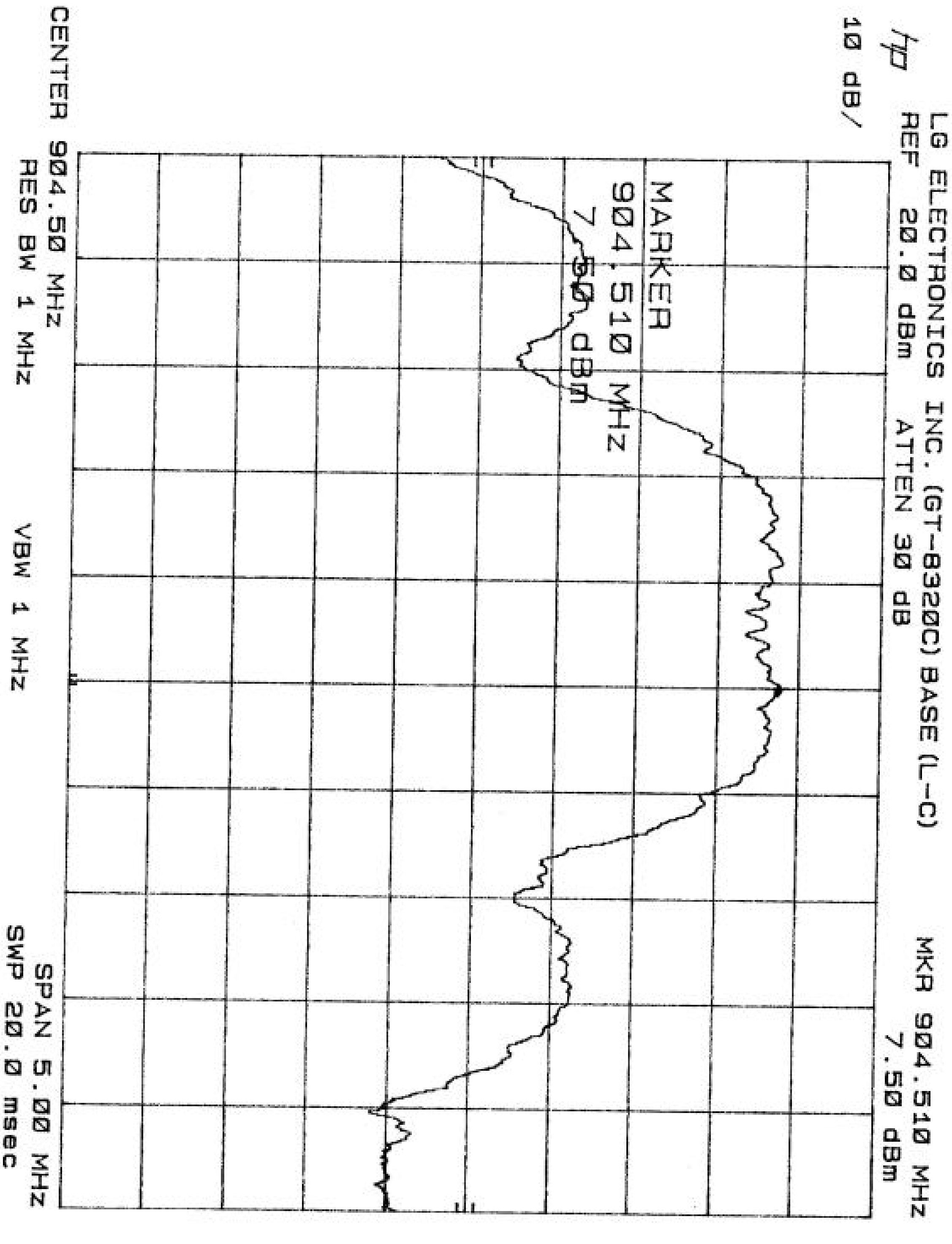

LG ELECTRONICS INC. (GT-8310C) HANDSET (H-C)
REF 20.0 dBm ATTEN 30 dB
MKR 926.091 MHz
9.40 dBm
10 dB/
SPAN
5.00 MHz
CENTER 925.50 MHz
RES BW 1 MHz
VBW 1 MHz
SPAN 5.00 MHz
SWP 20.0 msec


LG ELECTRONICS INC. (GT-8310C) HANDSET (M-C)
REF 20.0 dBm ATTEN 30 dB
10 dB/
MKR 914.690 MHz
9.50 dBm
MARKER
914.690 MHz
9.50 dBm
CENTER 914.69 MHz
RES BW 1 MHz
VBW 1 MHz
SPAN 5.00 MHz
SWP 20.0 msec


LG ELECTRONICS INC. (GT-8310C) HANDSET (L-C)
REF 20.0 dBm ATTEN 30 dB
MKR 904.500 MHz
9.80 dBm
10 dB/
MARKER
904.500 MHz
9.80 dBm
CENTER 904.49 MHz
SPAN 5.00 MHz
RES BW 1 MHz
VBW 1 MHz
SWP 20.0 msec


hp
LG ELECTRONICS INC. (GT-8320C) BASE (H-C)
REF 20.0 dBm ATTEN 30 dB
10 dB/
MKR 926.087 MHz
-2.00 dBm
MARKER
926.087 MHz
-2.00 dBm
CENTER 925.46 MHz
RES BW 1 MHz
VBW 1 MHz
SPAN 5.00 MHz
SWP 20.0 msec


hp
LG ELECTRONICS INC. (GT-8320C) BASE (M-C)
REF 20.0 dBm ATTEN 30 dB
MKR 914.090 MHz
7.80 dBm
10 dB/
MARKER
914.090 MHz
7.80 dBm
CENTER 914.44 MHz
RES BW 1 MHz
VBW 1 MHz
SPAN 5.00 MHz
SWP 20.0 msec



LG ELECTRONICS INC. (GT-8320C) BASE (L-C)
REF 20.0 dBm ATTEN 30 dB
10 dB/
MKR 904.510 MHz
7.50 dBm
MARKER
904.510 MHz
7.50 dBm
CENTER 904.50 MHz
RES BW 1 MHz
VBW 1 MHz
SPAN 5.00 MHz
SWP 20.0 msec

3.2.0 6dB Bandwidth

Requirement: FCC 15.247 (a)(2), the 6 dB Bandwidth shall not be less than 500 kHz.

3.2.1 Test Procedure

The antenna was removed and SMA connector was connected to the transmitter output. The transmitter output was connected to a calibrated coaxial attenuator (50 Ohm), the other end of which was connected to a spectrum analyzer with the VBW > RBW. Transmitter output was read off the spectrum analyzer in dBm. The power output at the transmitter was determined by adding the value of the attenuator to the spectrum analyzer reading.

The test was performed at three frequencies (low, middle, and high channels) and on all power levels that can be setup on the transmitter.

3.2.2 Test Equipment

Hewlett Packard HP8566B Spectrum Analyzer
Hewlett Packard HP 7470A Plotter

3.2.3 Test Results:

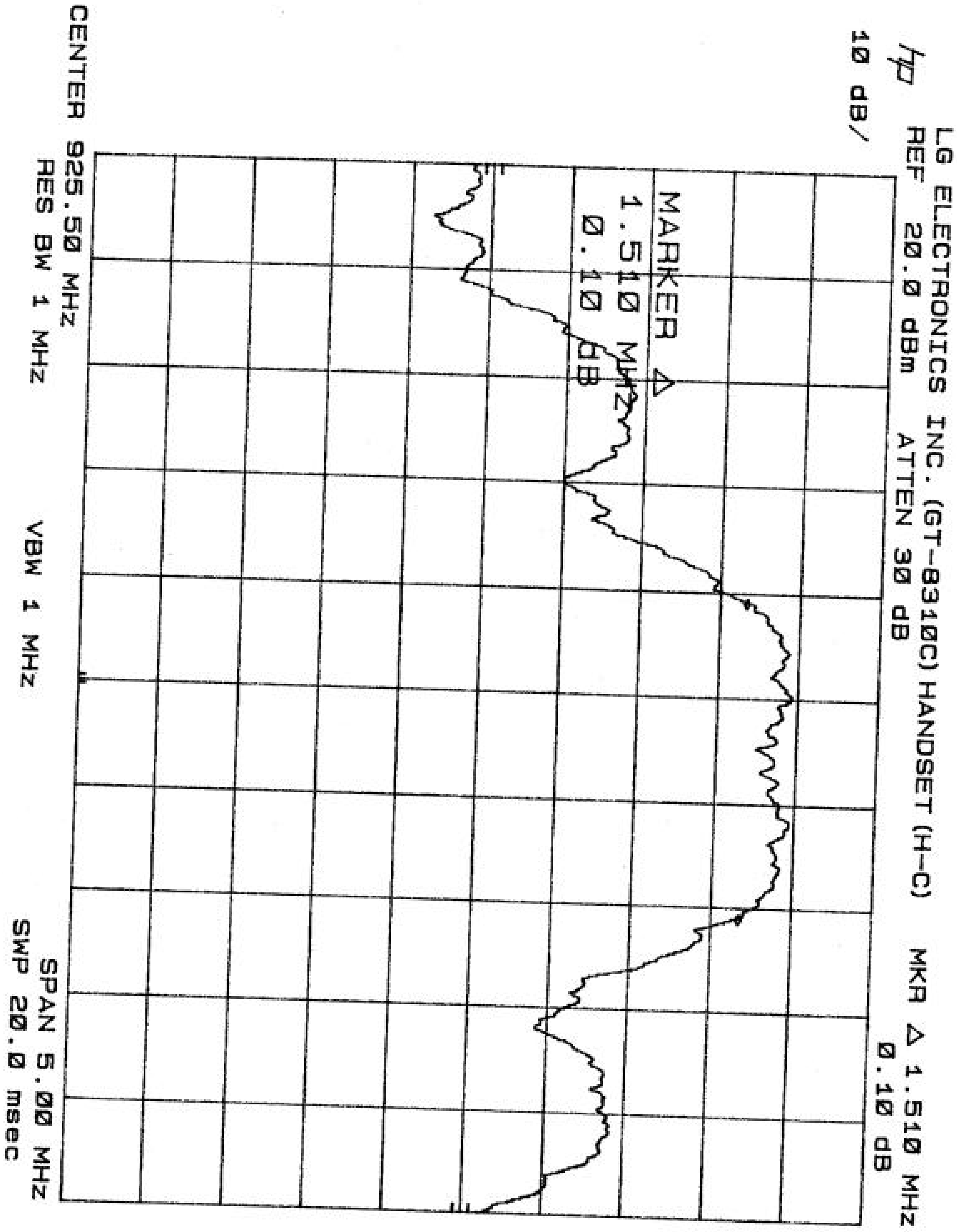
Included are plots of 6dB bandwidth for low, middle and high channel.

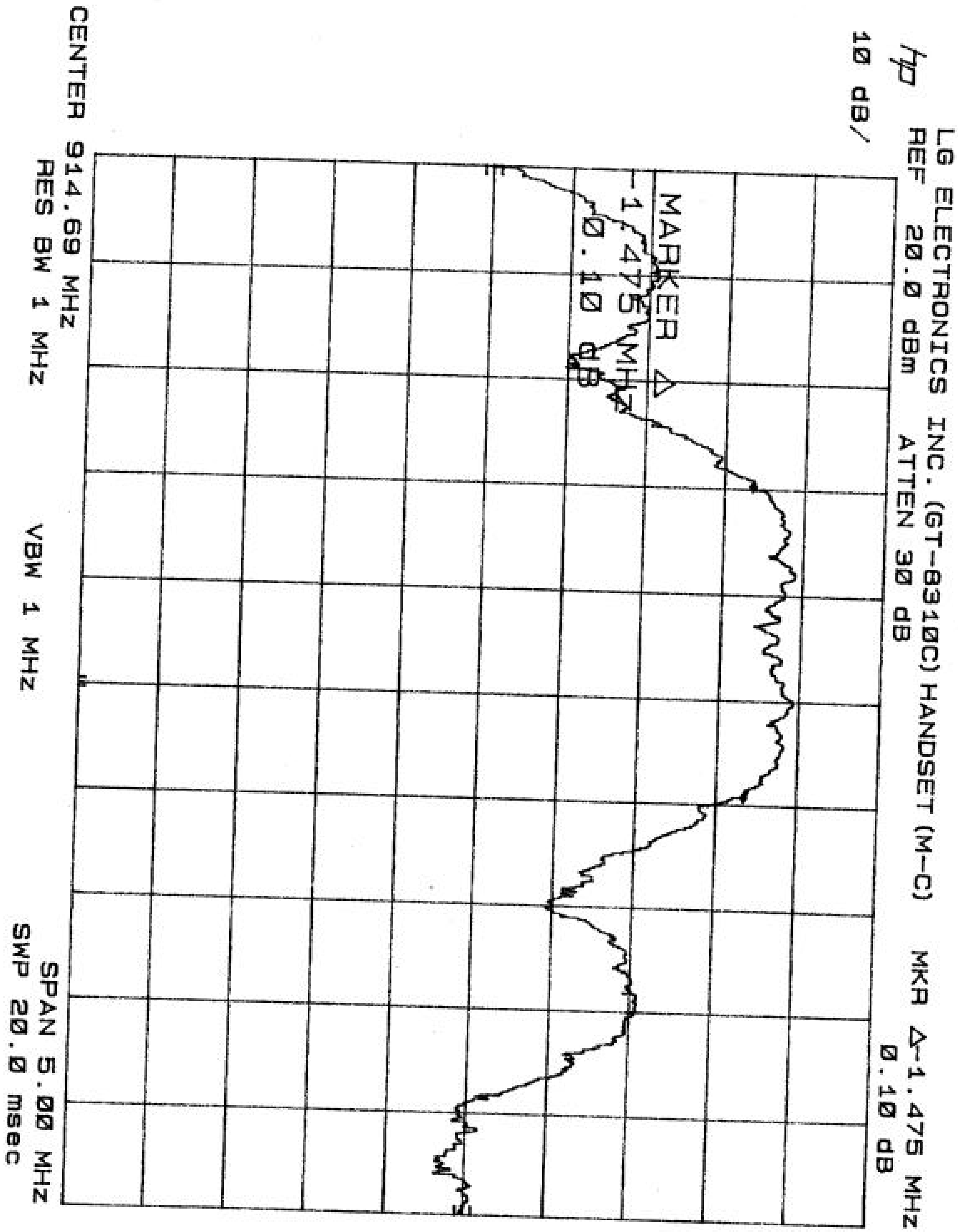
BASE

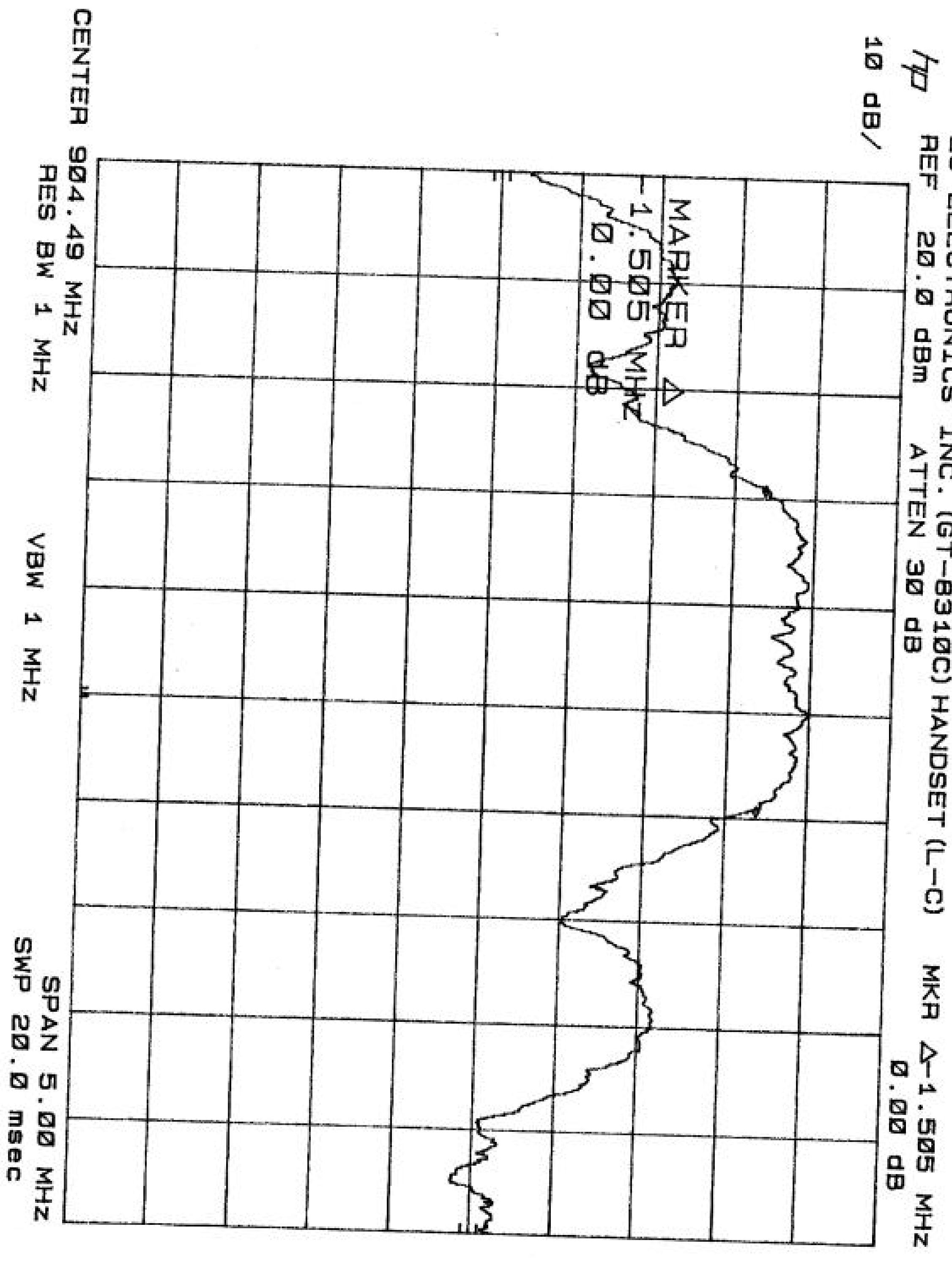
6dB bandwidth	
High Channel	Page 21
Middle Channel	Page 22
Low Channel	Page 23

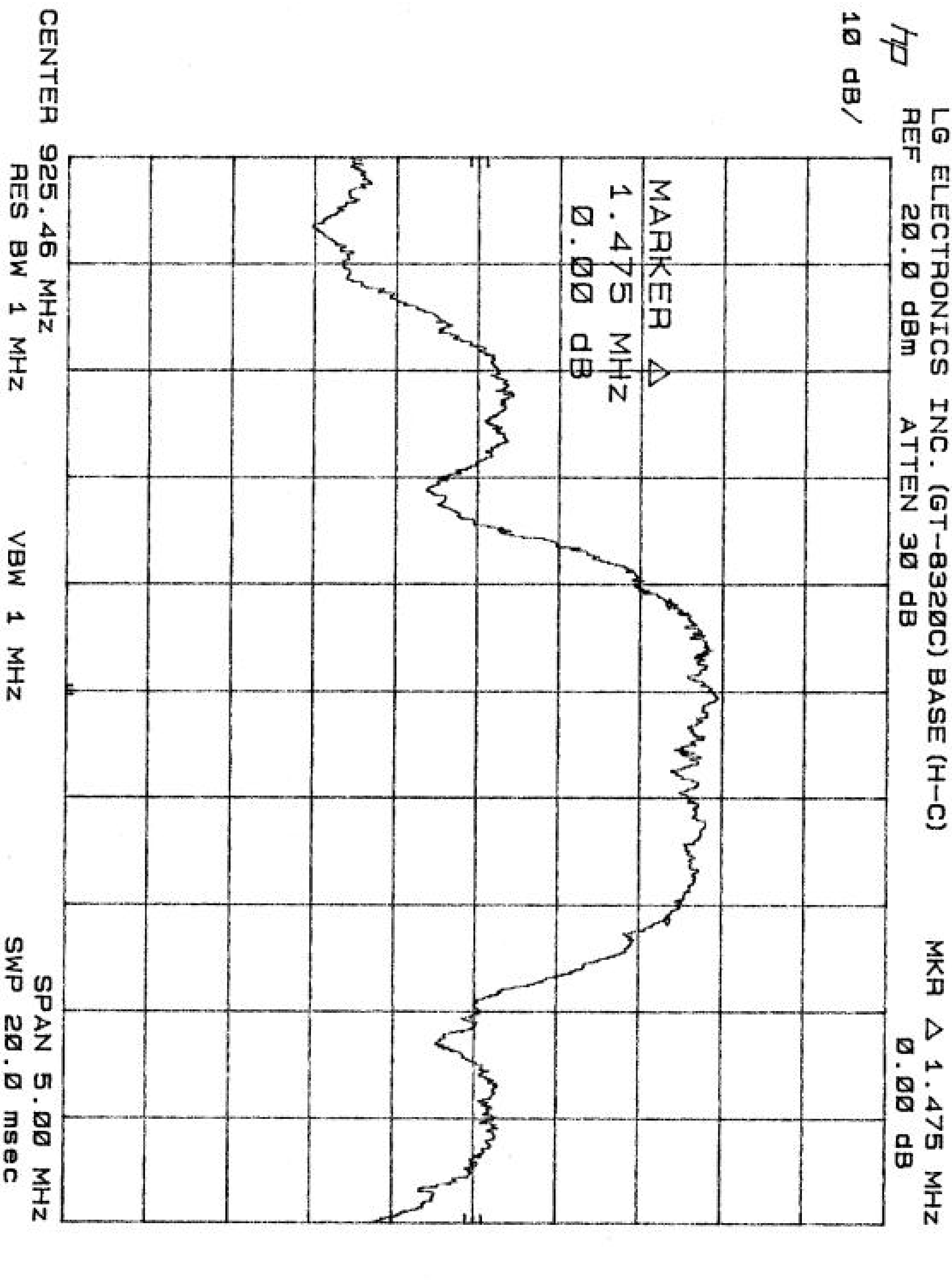
HANDSET

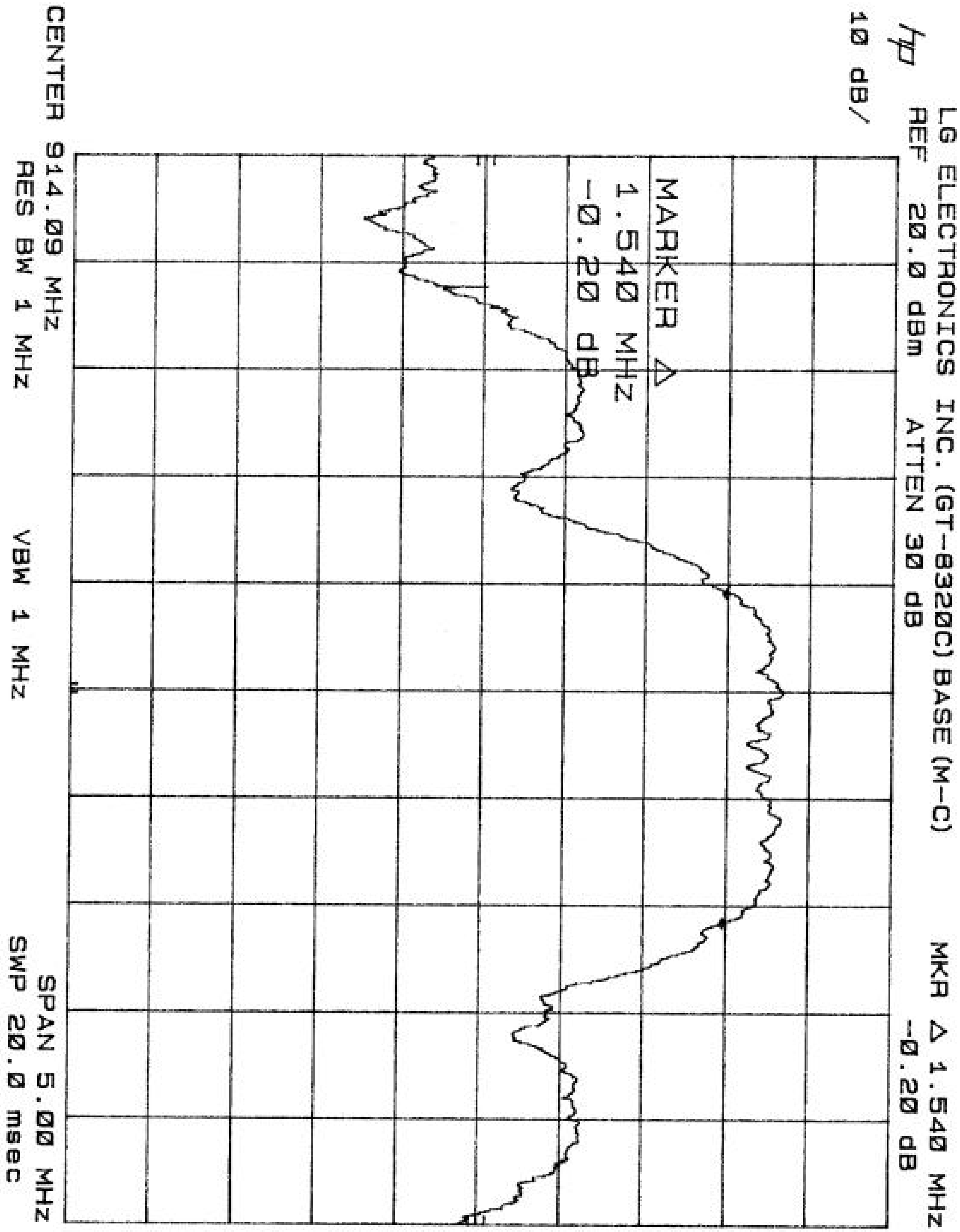
6dB bandwidth	
High Channel	Page 18
Middle Channel	Page 19
Low Channel	Page 20

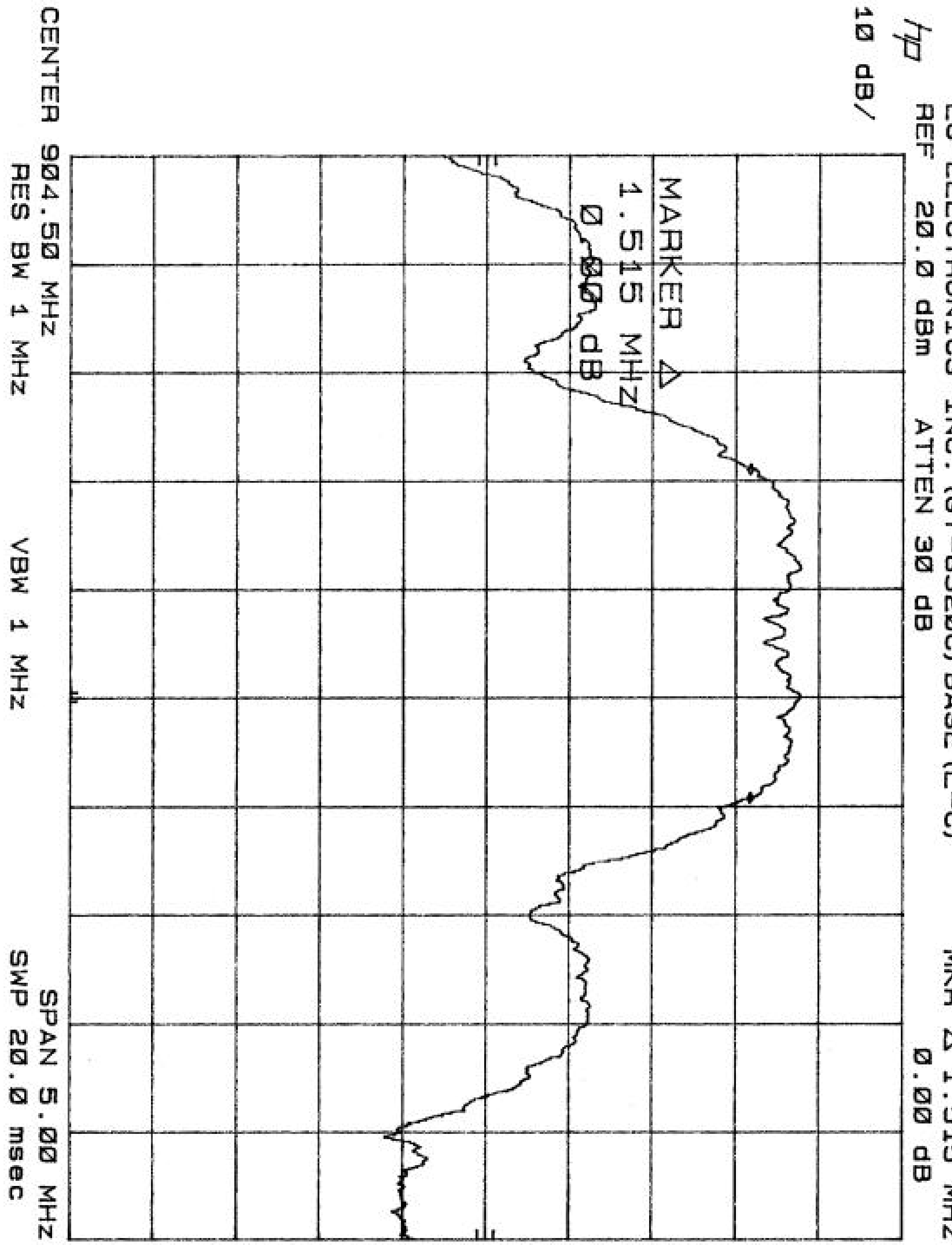

LG ELECTRONICS INC. (GT-8310C) HANDSET (H-C)
REF 20.0 dBm ATTEN 30 dB
MKR Δ 1.510 MHz
0.10 dB
10 dB/
MARKER Δ
1.510 MHz
0.10 dB
CENTER 925.50 MHz
RES BW 1 MHz
VBW 1 MHz
SPAN 5.00 MHz
SWP 20.0 msec


hp
10 dB/
LG ELECTRONICS INC. (GT-8310C) HANDSET (M-C)
REF 20.0 dBm ATTEN 30 dB
MKR Δ-1.475 MHz
0.10 dB
MARKER Δ
-1.475 MHz
-0.10 dB
CENTER 914.69 MHz
RES BW 1 MHz
VBW 1 MHz
SPAN 5.00 MHz
SWP 20.0 msec


LG ELECTRONICS INC. (GT-8310C) HANDSET (L-C)
REF 20.0 dBm
ATTEN 30 dB
MKR Δ-1.505 MHz
0.00 dB
10 dB/
MARKER Δ
-1.505 MHz
0.00 dB
CENTER 904.49 MHz
RES BW 1 MHz
VBW 1 MHz
SPAN 5.00 MHz
SWP 20.0 msec


hp
LG ELECTRONICS INC. (GT-8320C) BASE (H-C)
REF 20.0 dBm ATTEN 30 dB
MKR △ 1.475 MHz
0.00 dB
10 dB/
MARKER △
1.475 MHz
0.00 dB
CENTER 925.46 MHz
RES BW 1 MHz
VBW 1 MHz
SPAN 5.00 MHz
SWP 20.0 msec


hp
10 dB/
LG ELECTRONICS INC. (GT-8320C) BASE (M-C)
REF 20.0 dBm ATTEN 30 dB
MKR Δ 1.540 MHz
-0.20 dB
MARKER Δ
1.540 MHz
-0.20 dB
CENTER 914.09 MHz
RES BW 1 MHz
VBW 1 MHz
SPAN 5.00 MHz
SWP 20.0 msec


hp
LG ELECTRONICS INC. (GT-8320C) BASE (L-C)
REF 20.0 dBm ATTEN 30 dB
10 dB/
MKR Δ 1.515 MHz
0.00 dB
MARKER Δ
1.515 MHz
0.00 dB
CENTER 904.50 MHz
RES BW 1 MHz
VBW 1 MHz
SPAN 5.00 MHz
SWP 20.0 msec

3.3.0 Power Density

Requirements: FCC 15.247 (2) (d), the transmitted power density averaged over any 1 second interval shall not be greater than 8 dBMm in any 3 kHz bandwidth within these bands.

3.3.1 Test Procedure

The antenna was removed and SMA connector was connected to the transmitter output. The transmitter output was connected to a calibrated coaxial attenuator (50 Ohm), the other end of which was connected to a spectrum analyzer with the RBW set to 3kHz and VBW > RBW. The start and stop frequencies of the Spectrum Analyzer should be set according to the maximum emission frequency range seen from the 6 dB bandwidth test. The sweep time of the spectrum analyzer should be set to the value that allows to observe each 3 kHz interval for at least 1 second.

The test was performed at three frequencies (low, middle, and high channels) and on all power levels that can be setup on the transmitter.

3.3.2 Test Equipment

Hewlett Packard HP8566B Spectrum Analyzer
Hewlett Packard HP 7470A Plotter

3.3.3 Test Results

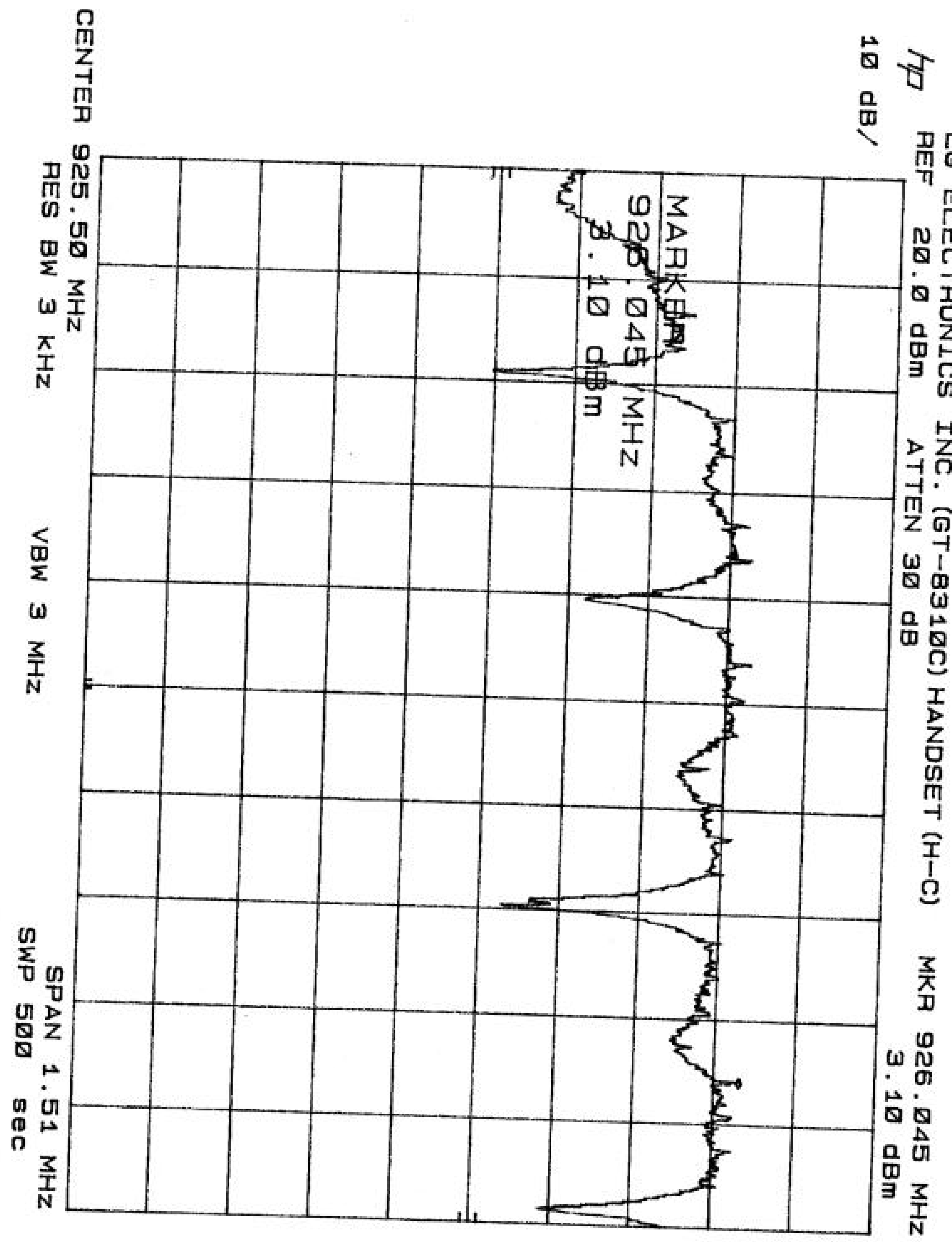
Refer to the attached Plots

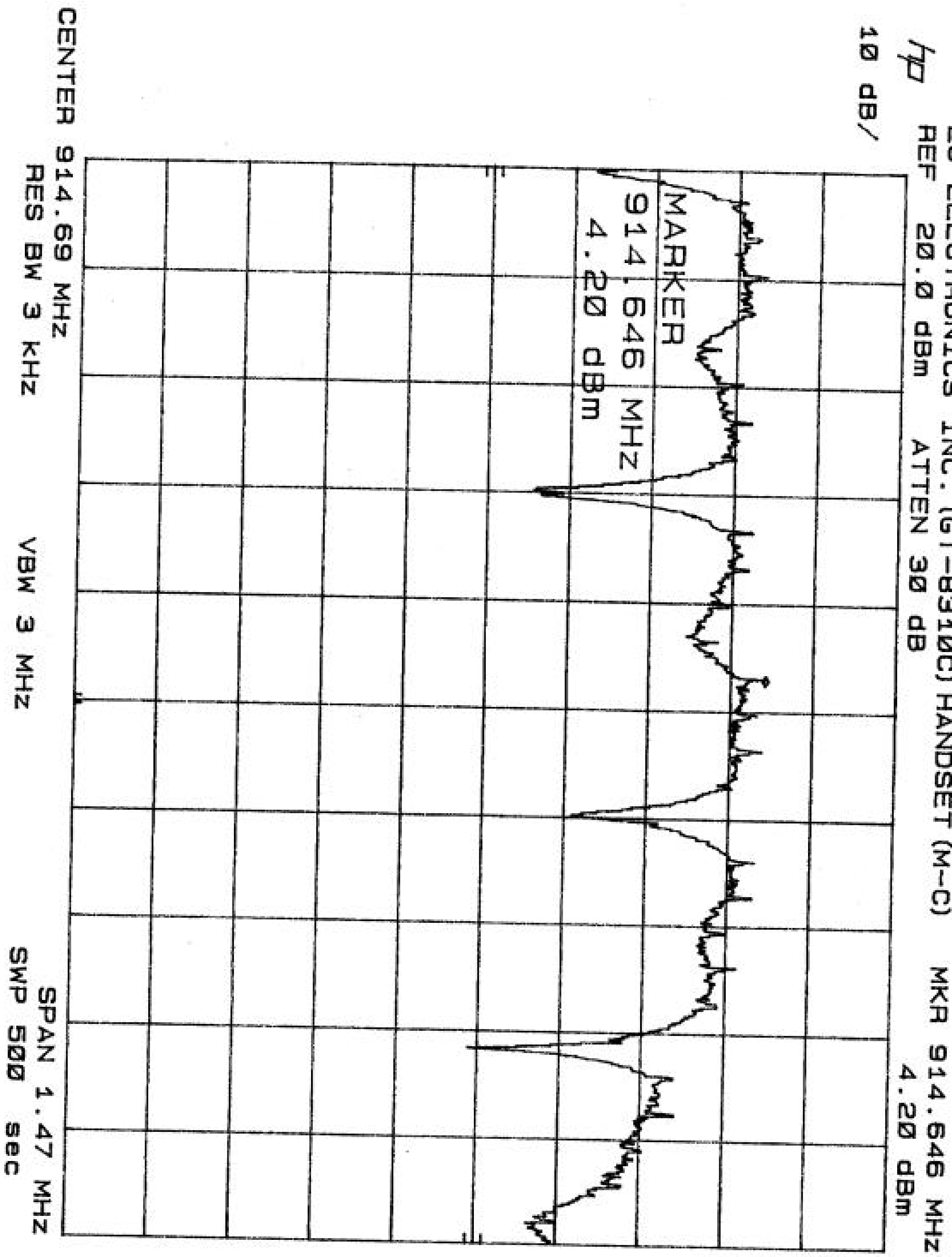
BASE

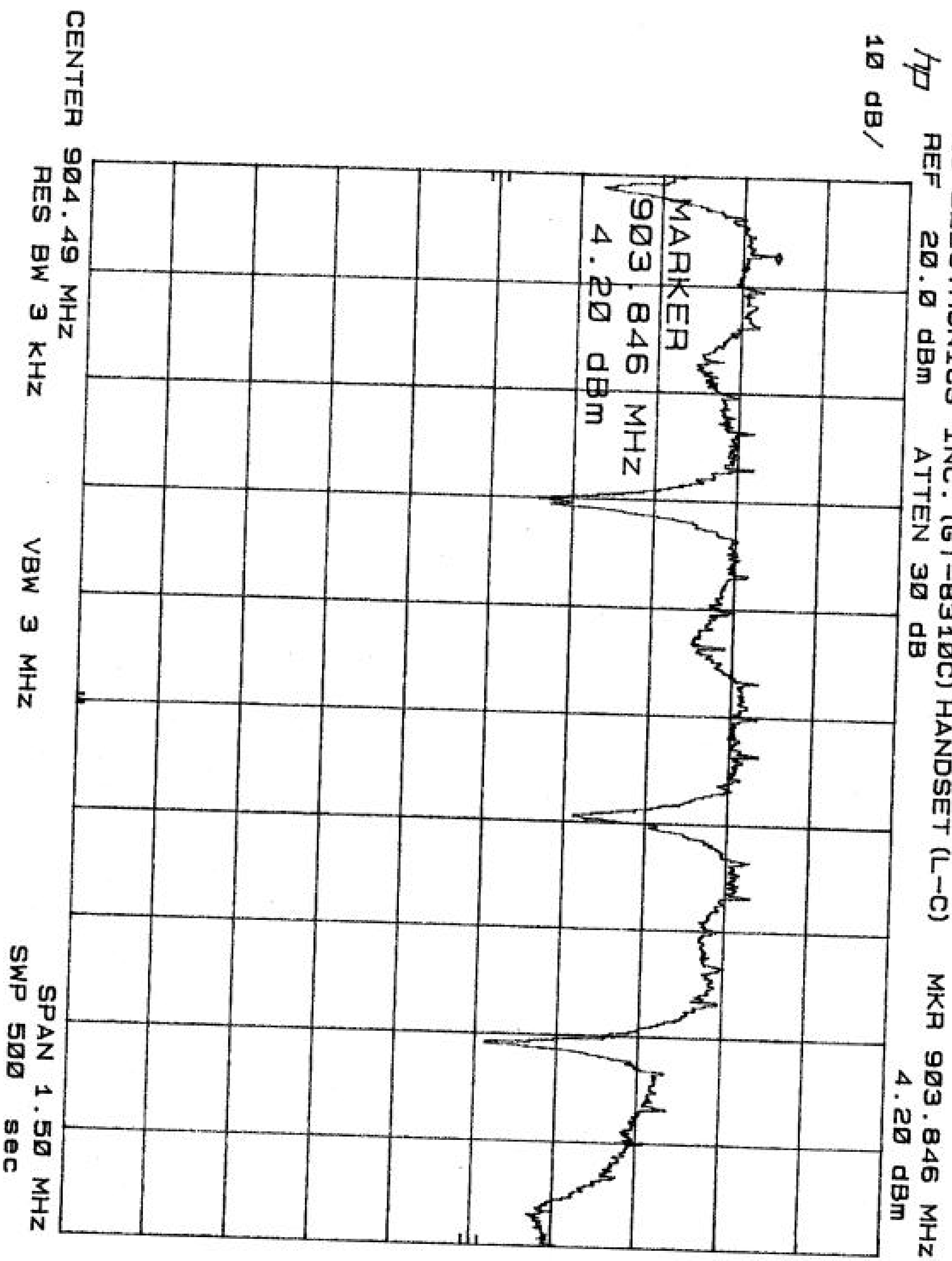
Power Density	
High Channel	Page 28
Middle Channel	Page 29
Low Channel	Page 30

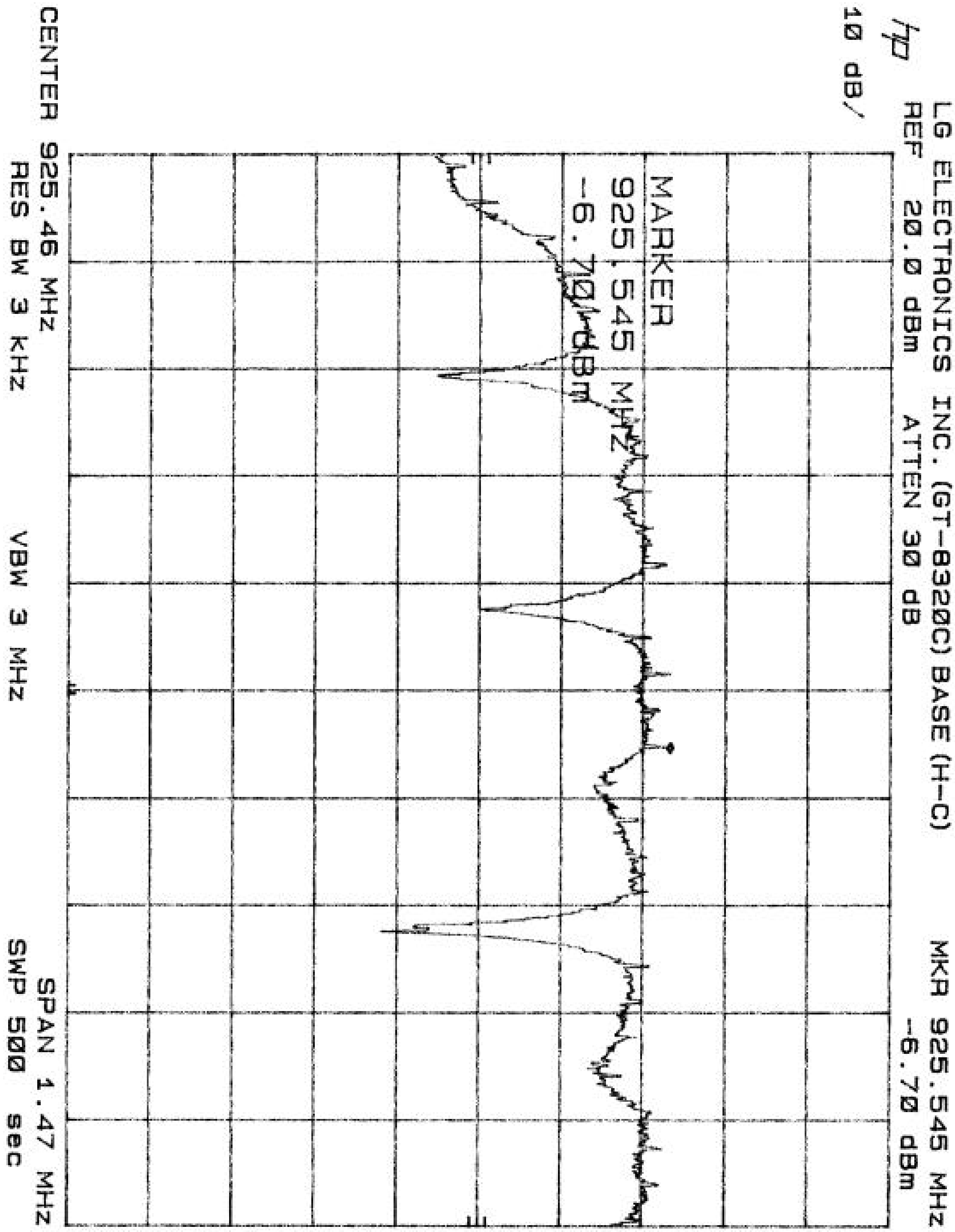
HANDSET

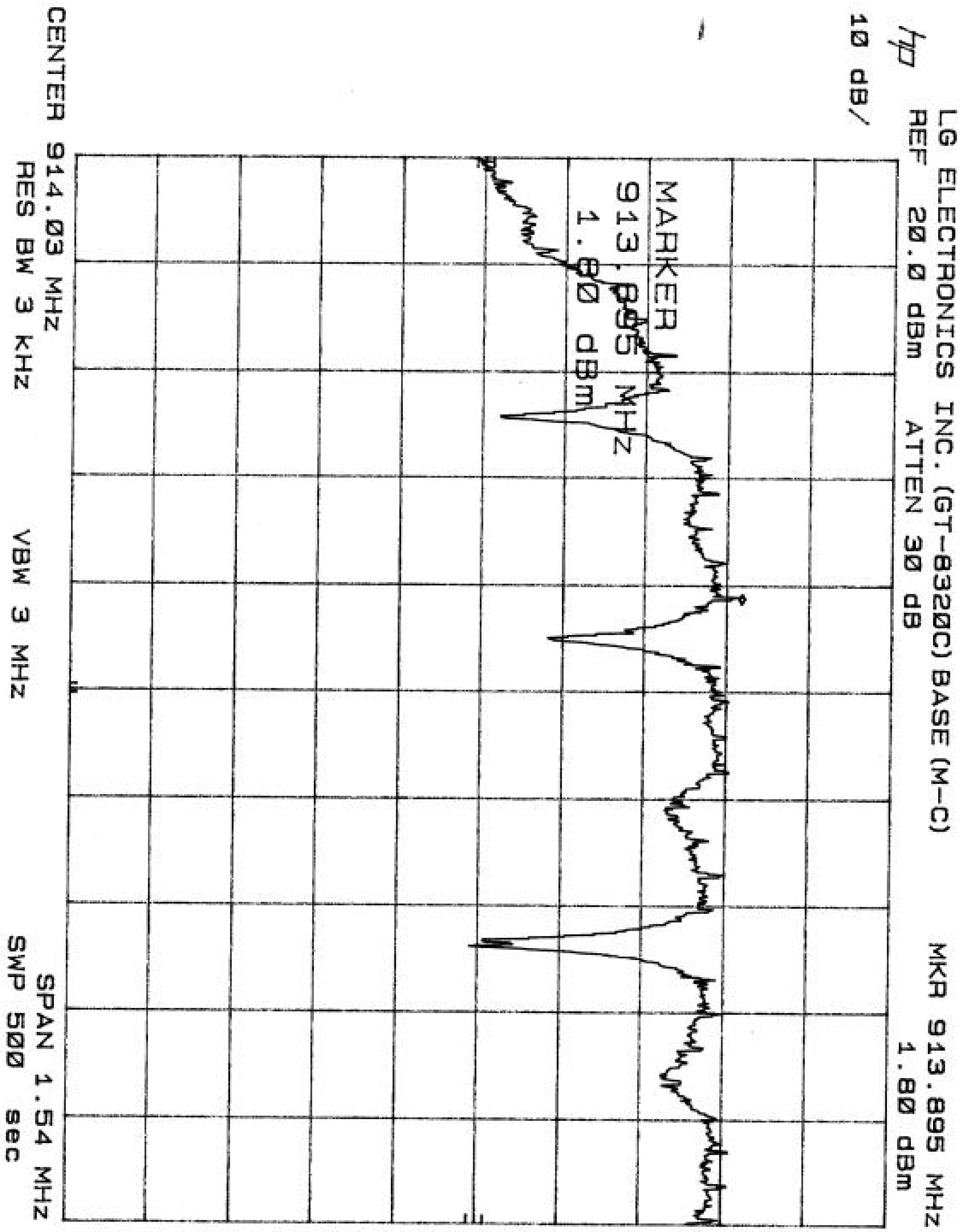
Power Density	
High Channel	Page 25
Middle Channel	Page 26
Low Channel	Page 27

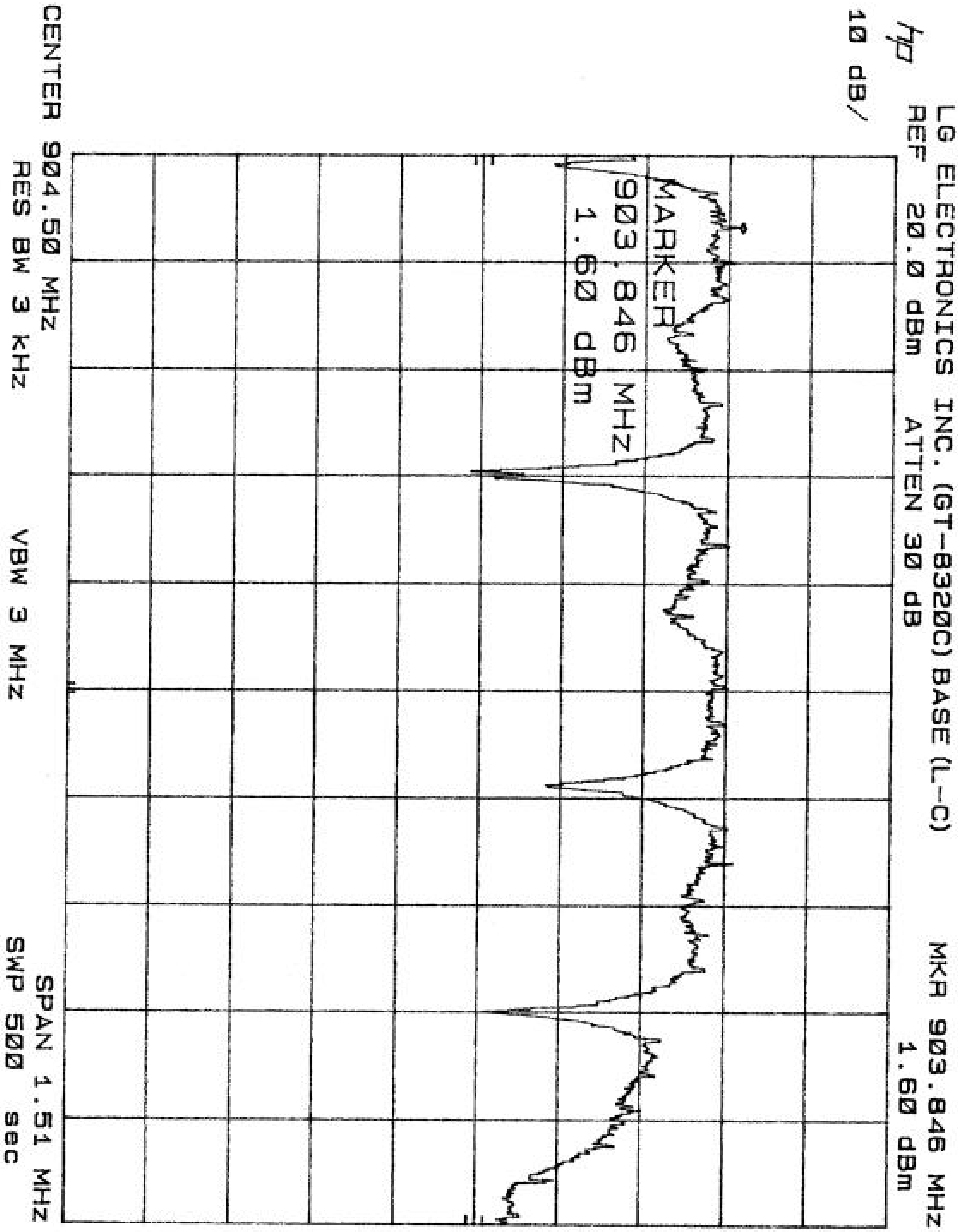

hp
LG ELECTRONICS INC. (GT-8310C) HANDSET (H-C)
REF 20.0 dBm
ATTEN 30 dB
MKR 926.045 MHz
3.10 dBm
10 dB/
MARKER
926.045 MHz
3.10 dBm
CENTER 925.50 MHz
RES BW 3 kHz
VBW 3 MHz
SPAN 1.51 MHz
SWP 500 sec


LG ELECTRONICS INC. (GT-8310C) HANDSET (M-C)
REF 20.0 dBm ATTEN 30 dB
MKR 914.646 MHz
4.20 dBm
10 dB/
MARKER
914.646 MHz
4.20 dBm
CENTER 914.69 MHz
RES BW 3 kHz
VBW 3 MHz
SPAN 1.47 MHz
SWP 500 sec


hp
10 dB/
LG ELECTRONICS INC. (GT-8310C) HANDSET (L-C)
REF 20.0 dBm
ATTEN 30 dB
MKR 903.846 MHz
4.20 dBm
MARKER
903.846 MHz
4.20 dBm
CENTER 904.49 MHz
RES BW 3 kHz
VBW 3 MHz
SPAN 1.50 MHz
SWP 500 sec


LG ELECTRONICS INC. (GT-8320C) BASE (H-C)
REF 20.0 dBm ATTEN 30 dB
MKR 925.545 MHz
-6.70 dBm
10 dB/
MARKER
925.545 MHz
-6.70 dBm
CENTER 925.46 MHz
RES BW 3 kHz
VBW 3 MHz
SPAN 1.47 MHz
SWP 500 sec


hp
10 dB/
LG ELECTRONICS INC. (GT-8320C) BASE (M-C)
REF 20.0 dBm ATTEN 30 dB
MKR 913.895 MHz
1.80 dBm
MARKER
913.895 MHz
1.80 dBm
CENTER 914.03 MHz
RES BW 3 kHz
VBW 3 MHz
SPAN 1.54 MHz
SWP 500 sec


LG ELECTRONICS INC. (GT-8320C) BASE (L-C)
REF 20.0 dBm ATTEN 30 dB
10 dB/
MKR 903.846 MHz
1.60 dBm
MARKER
903.846 MHz
1.60 dBm
CENTER 904.50 MHz
RES BW 3 kHz
VBW 3 MHz
SPAN 1.51 MHz
SWP 500 sec

3.4.0 Band Edges Testing

Requirements : FCC 15.247 (2) ©, the emission power at the START and STOP frequencies shall be at least 20 dB below than the peak of the EUT's emission inside the operation band.

3.4.1 Test Procedure

The antenna was removed and SMA connector was connected to the transmitter output. The transmitter output was connected to a calibrated coaxial attenuator (50 Ohm), the other end of which was connected to a spectrum analyzer with the START and STOP frequencies set to the operation band. Transmitter output was read off the spectrum analyzer in dBm. The power output at the transmitter was determined by adding the value of the attenuator to the spectrum analyzer reading.

The test was performed at three frequencies (low, middle, and high channels) and on all power levels that can be setup on the transmitter.

3.4.2 Test Equipment

HP 8566B Spectrum Analyzer
HP 7470A Plotter

3.4.3 Test Results

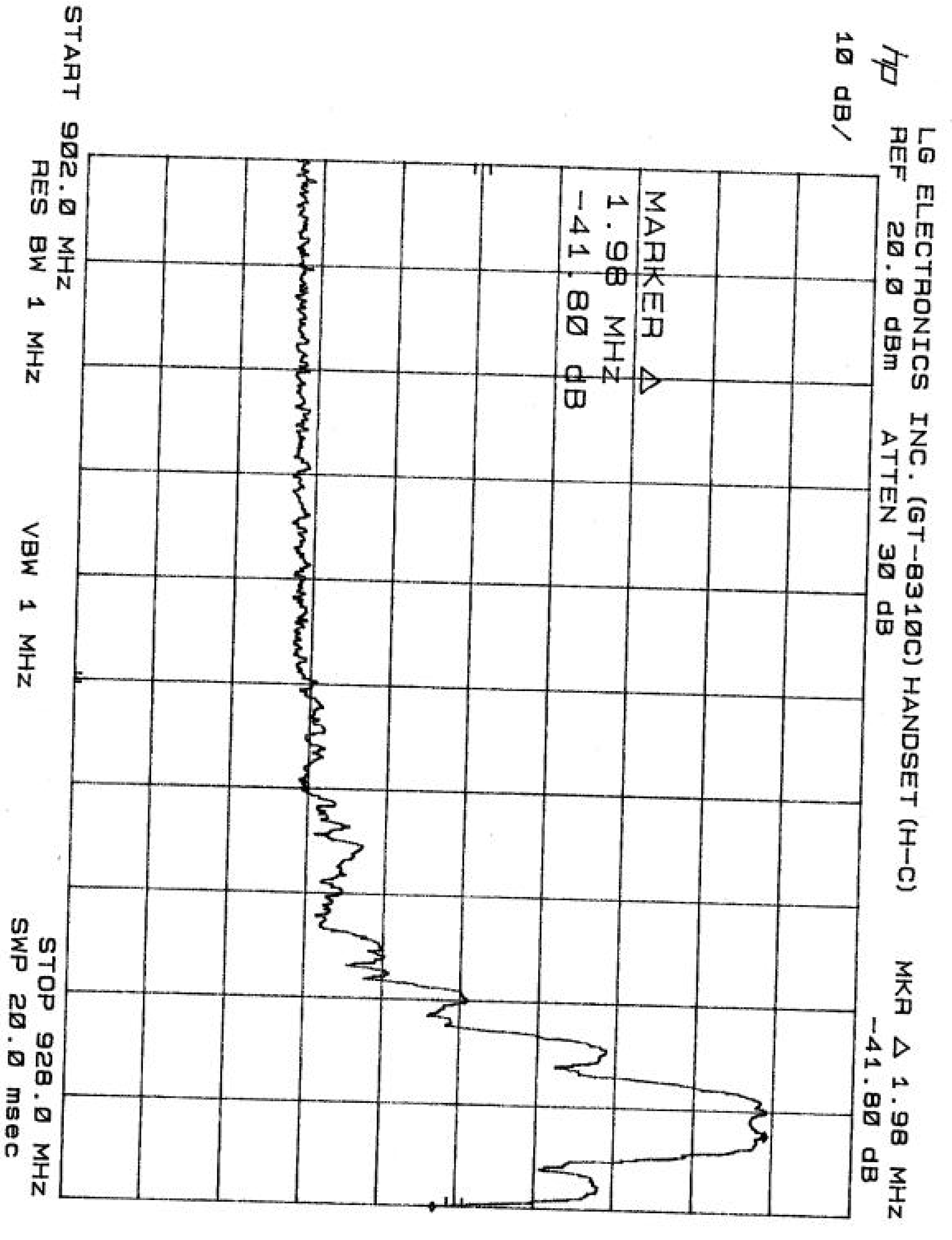
Refer to the attached plots.

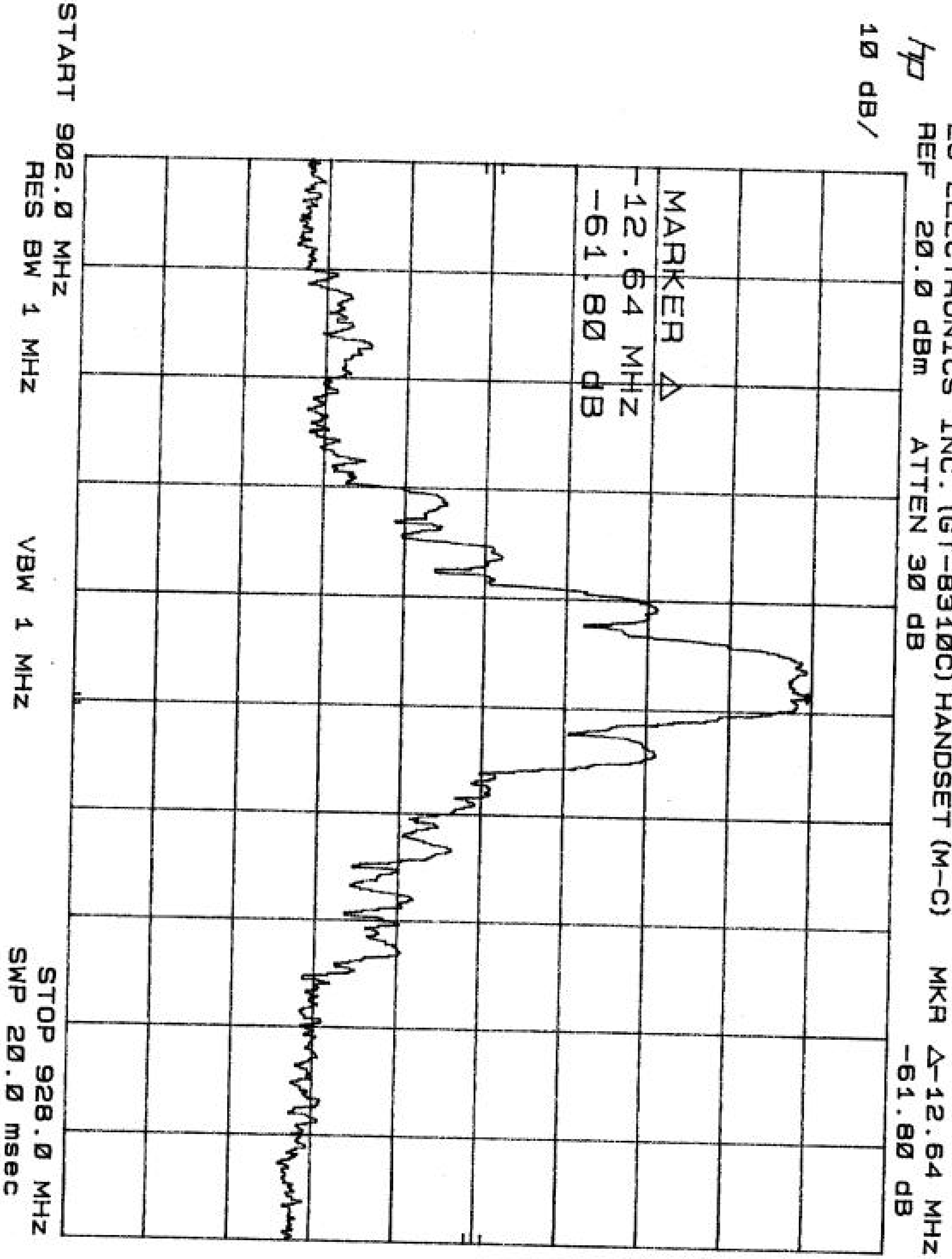
BASE

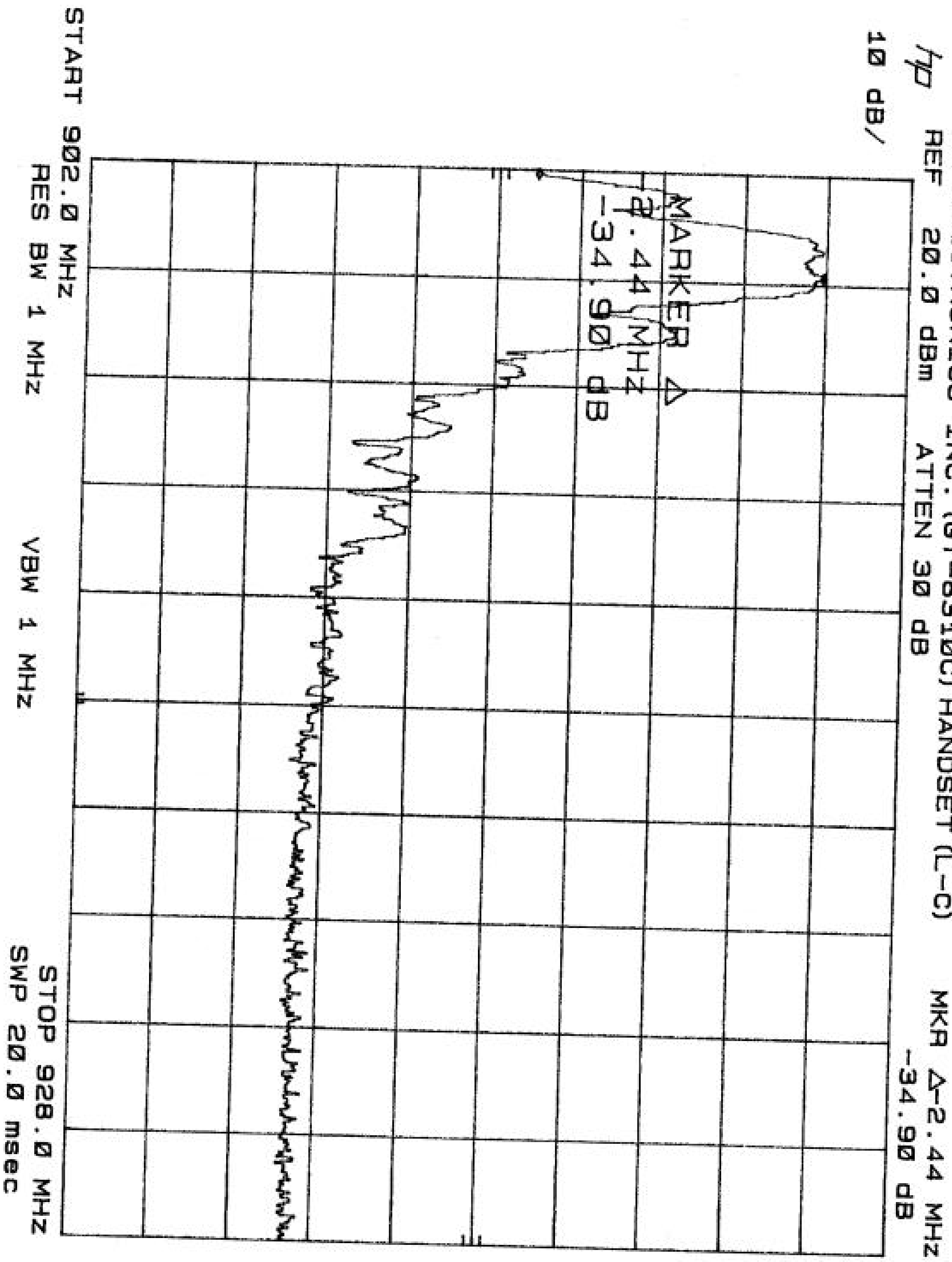
Band Edge	
High Channel	Page 35
Middle Channel	Page 36
Low Channel	Page 37

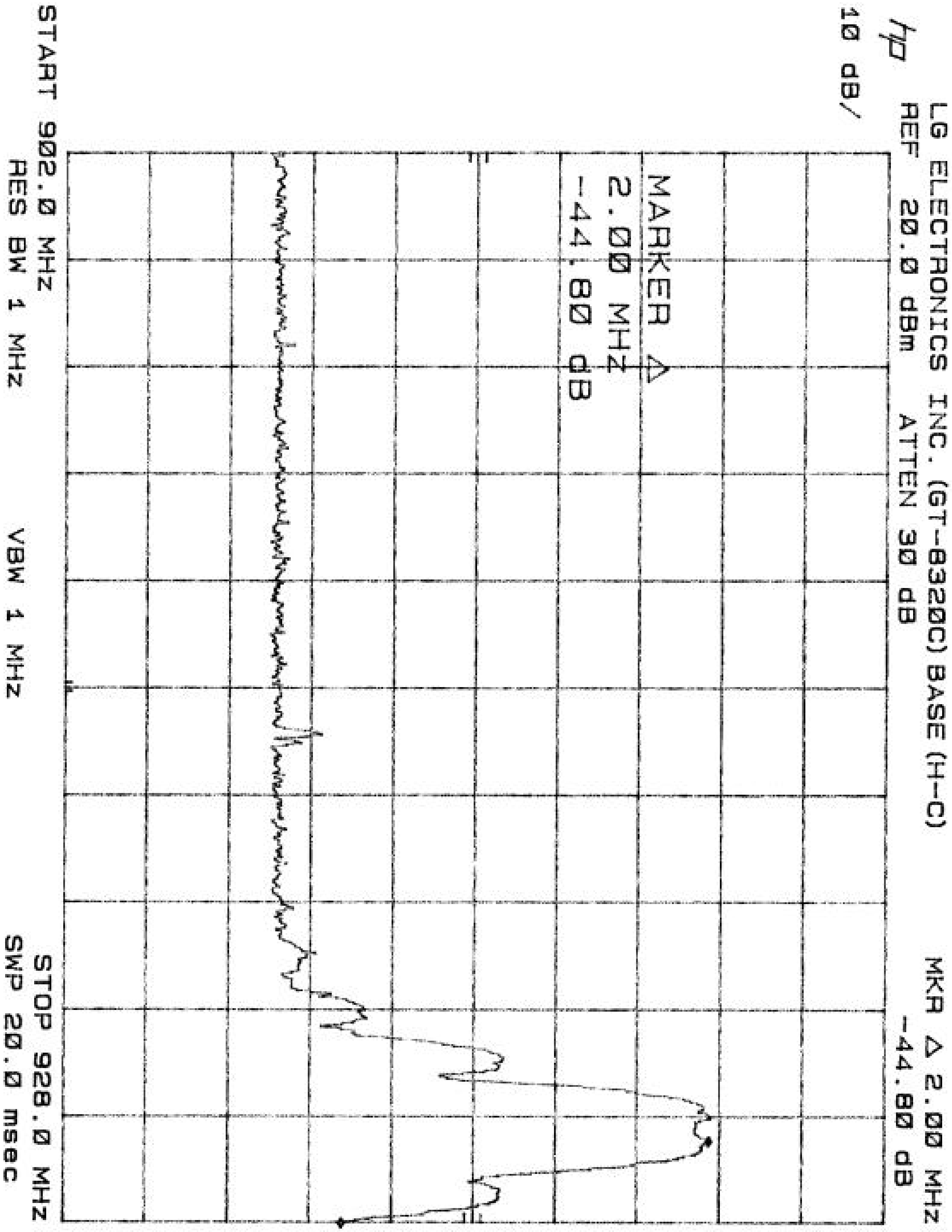
HANDSET

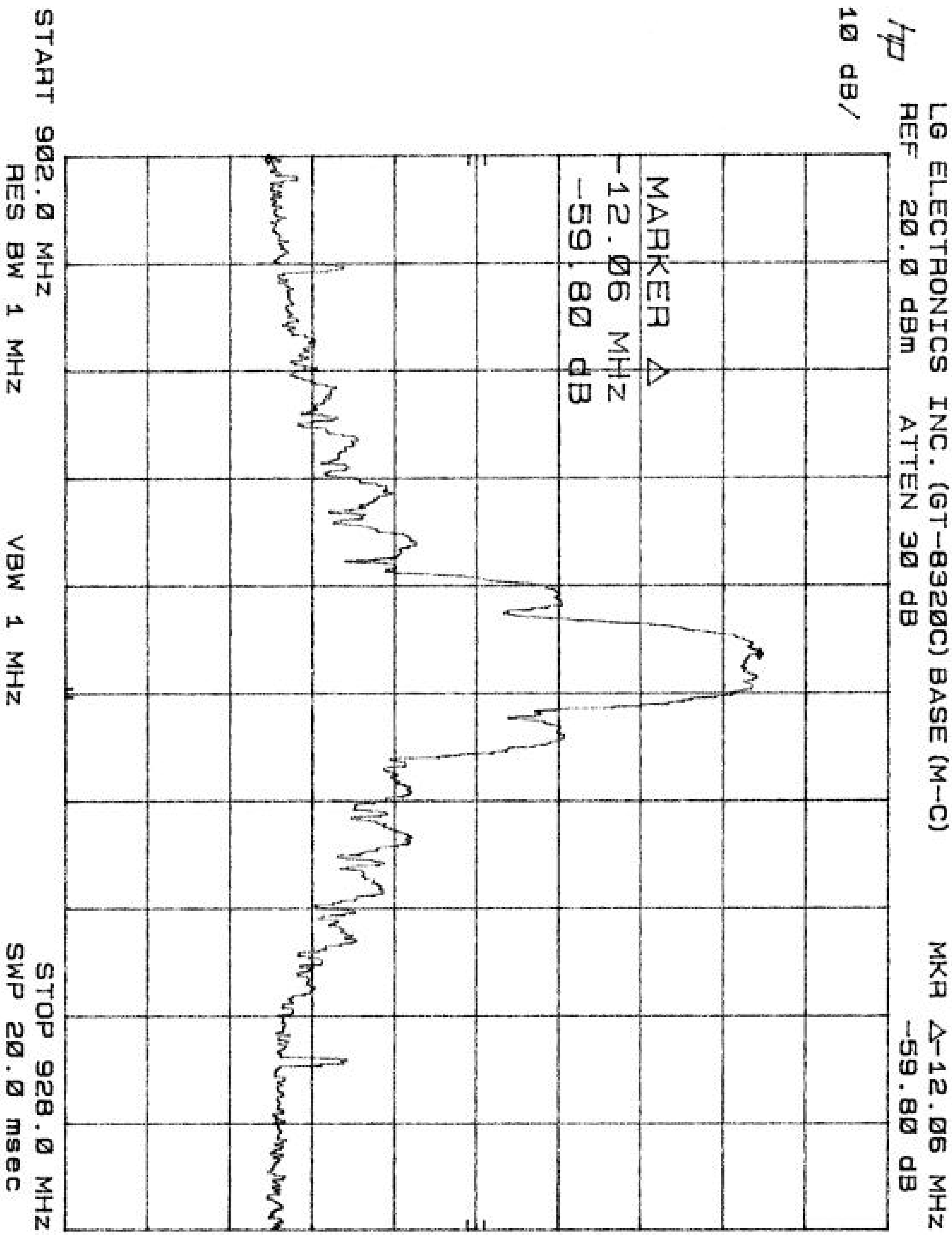
Band Edge	
High Channel	Page 32
Middle Channel	Page 33
Low Channel	Page 34


hp
10 dB/
LG ELECTRONICS INC. (GT-8310C) HANDSET (H-C)
REF 20.0 dBm ATTEN 30 dB
MKR Δ 1.98 MHz
-41.80 dB
MARKER Δ
1.98 MHz
-41.80 dB
START 902.0 MHz
RES BW 1 MHz
VBW 1 MHz
STOP 928.0 MHz
SWP 20.0 msec

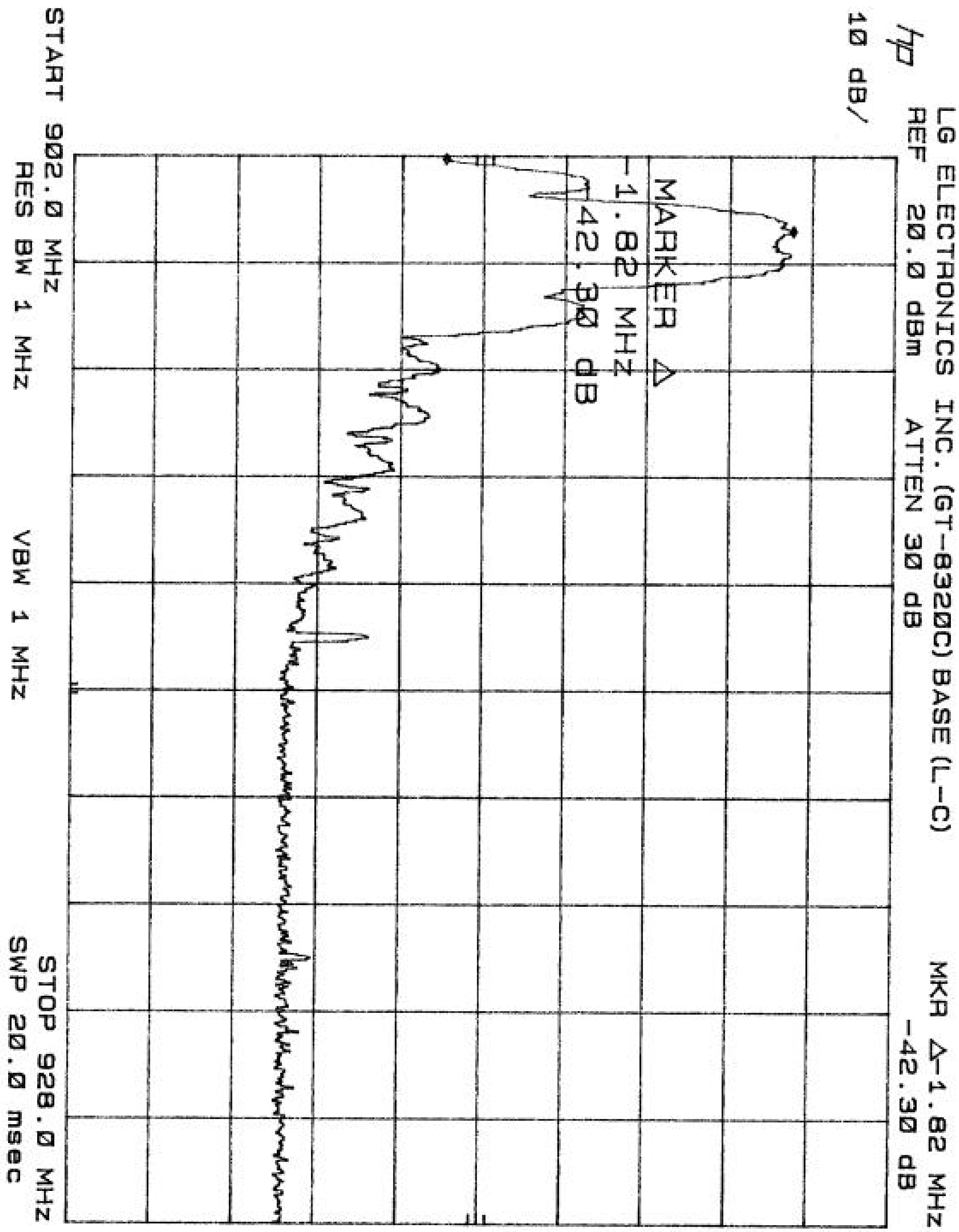

LG ELECTRONICS INC. (GT-8310C) HANDSET (M-C)
REF 20.0 dBm ATTEN 30 dB
10 dB/
MKR Δ-12.64 MHz
-61.80 dB
MARKER Δ
-12.64 MHz
-61.80 dB
START 902.0 MHz
RES BW 1 MHz
VBW 1 MHz
STOP 928.0 MHz
SWP 20.0 msec


LG ELECTRONICS INC. (GT-8310C) HANDSET (L-C)
REF 20.0 dBm
ATTEN 30 dB
10 dB/
MKR Δ-2.44 MHz
-34.90 dB
MARKER Δ
2.44 MHz
-34.90 dB
START 902.0 MHz
RES BW 1 MHz
VBW 1 MHz
STOP 928.0 MHz
SWP 20.0 msec


10 dB/
LG ELECTRONICS INC. (GT-8320C) BASE (H-C)
REF 20.0 dBm
ATTEN 30 dB
MKR Δ 2.00 MHz
-44.80 dB
MARKER Δ
2.00 MHz
-44.80 dB
START 902.0 MHz
STOP 928.0 MHz
RES BW 1 MHz
VBW 1 MHz
SWP 20.0 msec



hp
10 dB/
LG ELECTRONICS INC. (GT-8320C) BASE (M-C)
REF 20.0 dBm ATTEN 30 dB
MKR Δ-12.06 MHz
-59.80 dB
MARKER Δ
-12.06 MHz
-59.80 dB
START 902.0 MHz
RES BW 1 MHz
VBW 1 MHz
STOP 928.0 MHz
SWP 20.0 msec


LG ELECTRONICS INC. (GT-8320C) BASE (L-C)
REF 20.0 dBm ATTEN 30 dB
MKR Δ-1.82 MHz
-42.30 dB
10 dB/
MARKER Δ
-1.82 MHz
-42.30 dB
START 902.0 MHz
RES BW 1 MHz
VBW 1 MHz
STOP 928.0 MHz
SWP 20.0 msec

3.5.0 Spurious Emissions

Requirements: FCC 15.247 (2) © The harmonics and other signals must be at least 20 dB below than the highest emissions level within the operation band.

3.5.1 Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 100 kHz. Sufficient scans were taken to show any out of band emissions up to 10^{th} harmonic.

3.5.2 Test Equipment

Hewlett Packard HP8566B Spectrum Analyzer
Hewlett Packard HP 7470A Plotter

3.5.3 Test Results

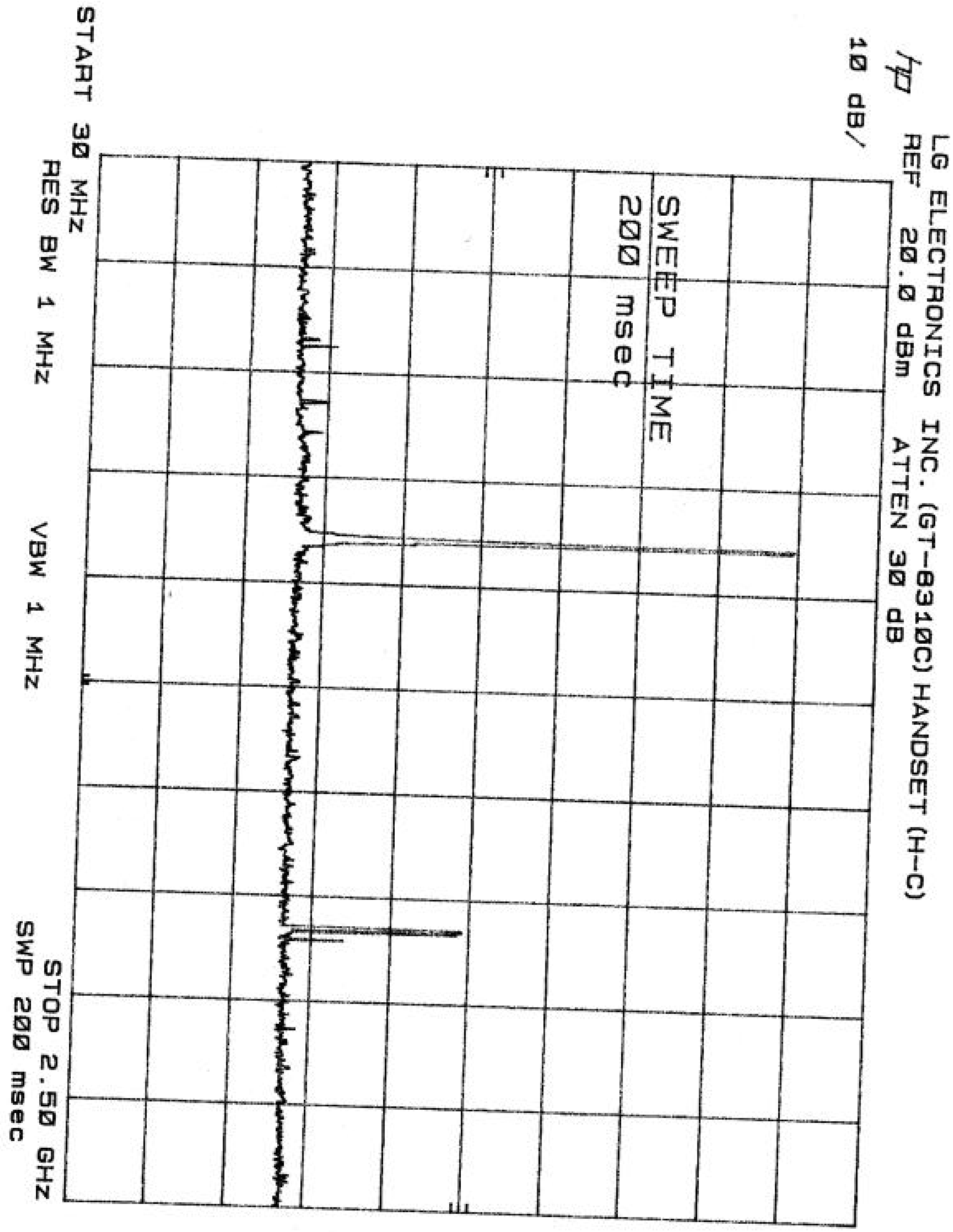
Refer to the attached plots.

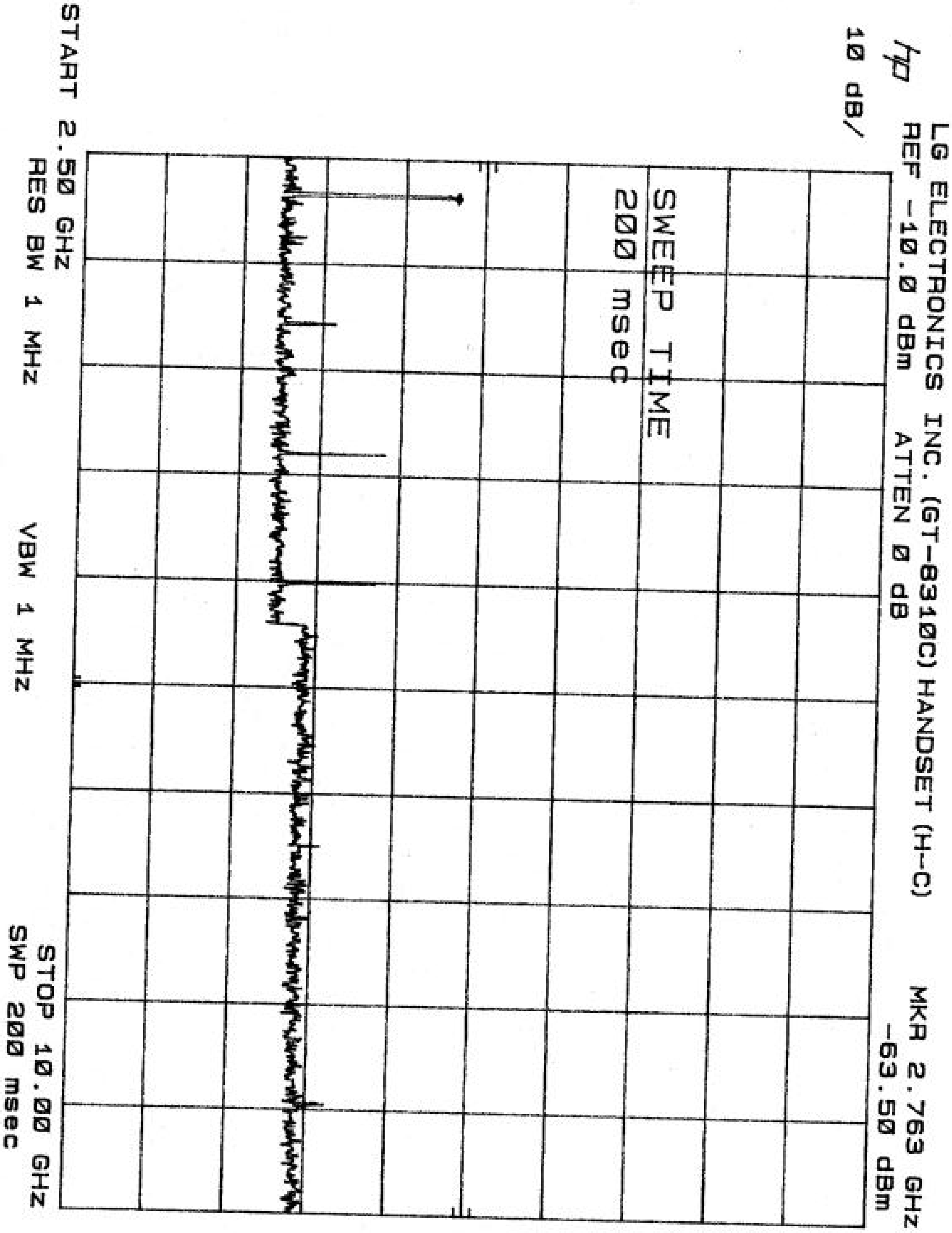
BASE

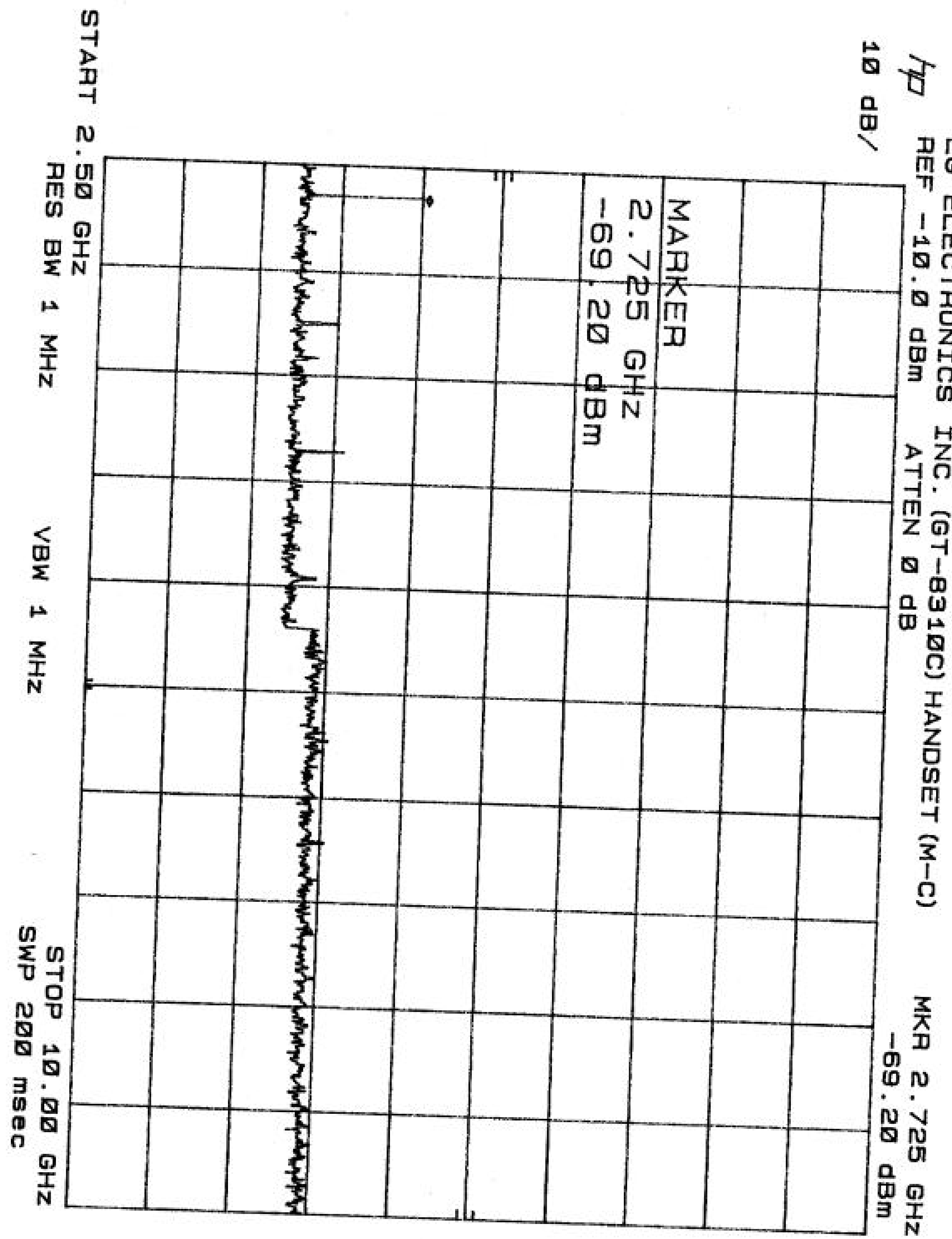
Spurious Emission	
High Channel	Page 45, 46
Middle Channel	Page 47, 48
Low Channel	Page 49, 50

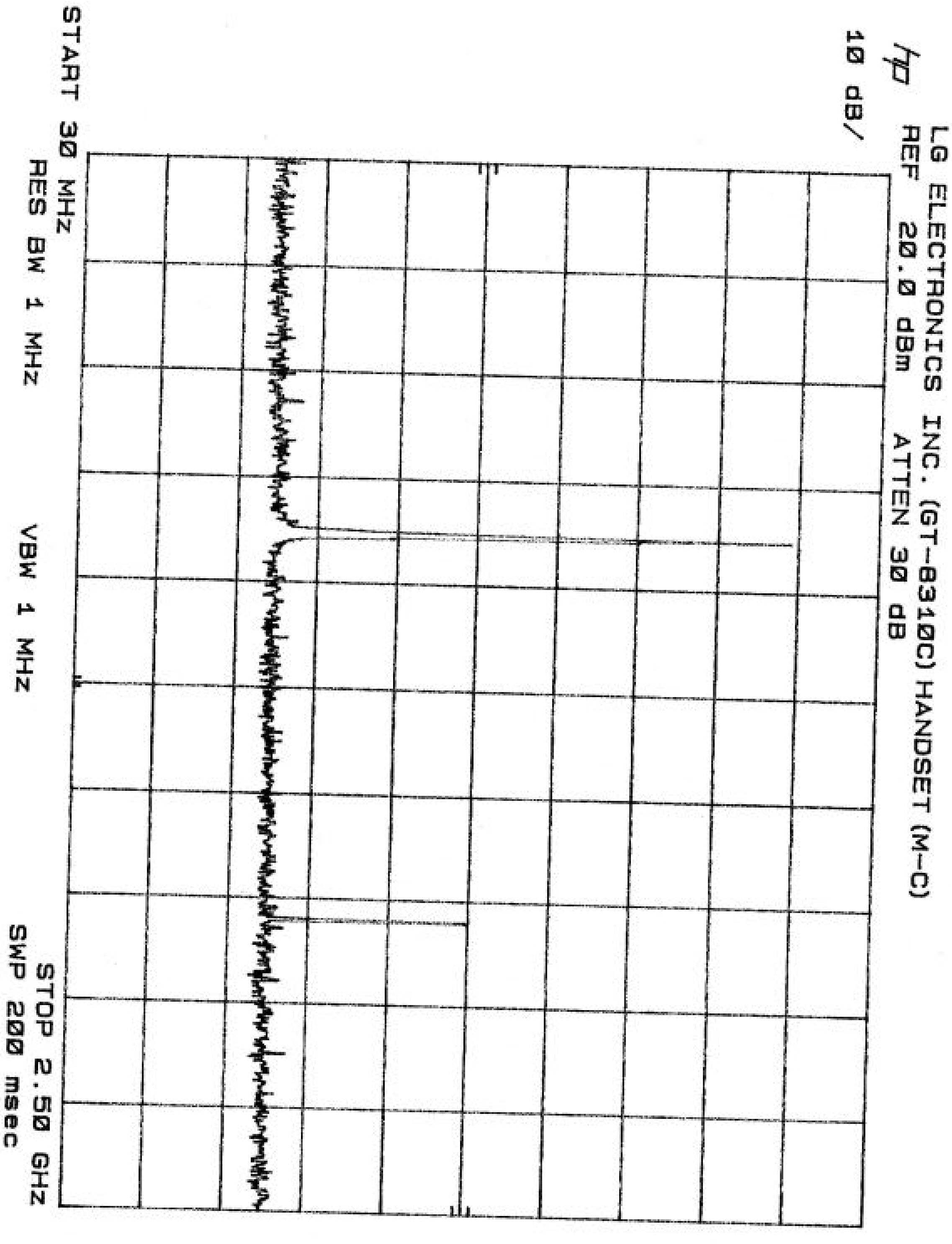
HANDSET

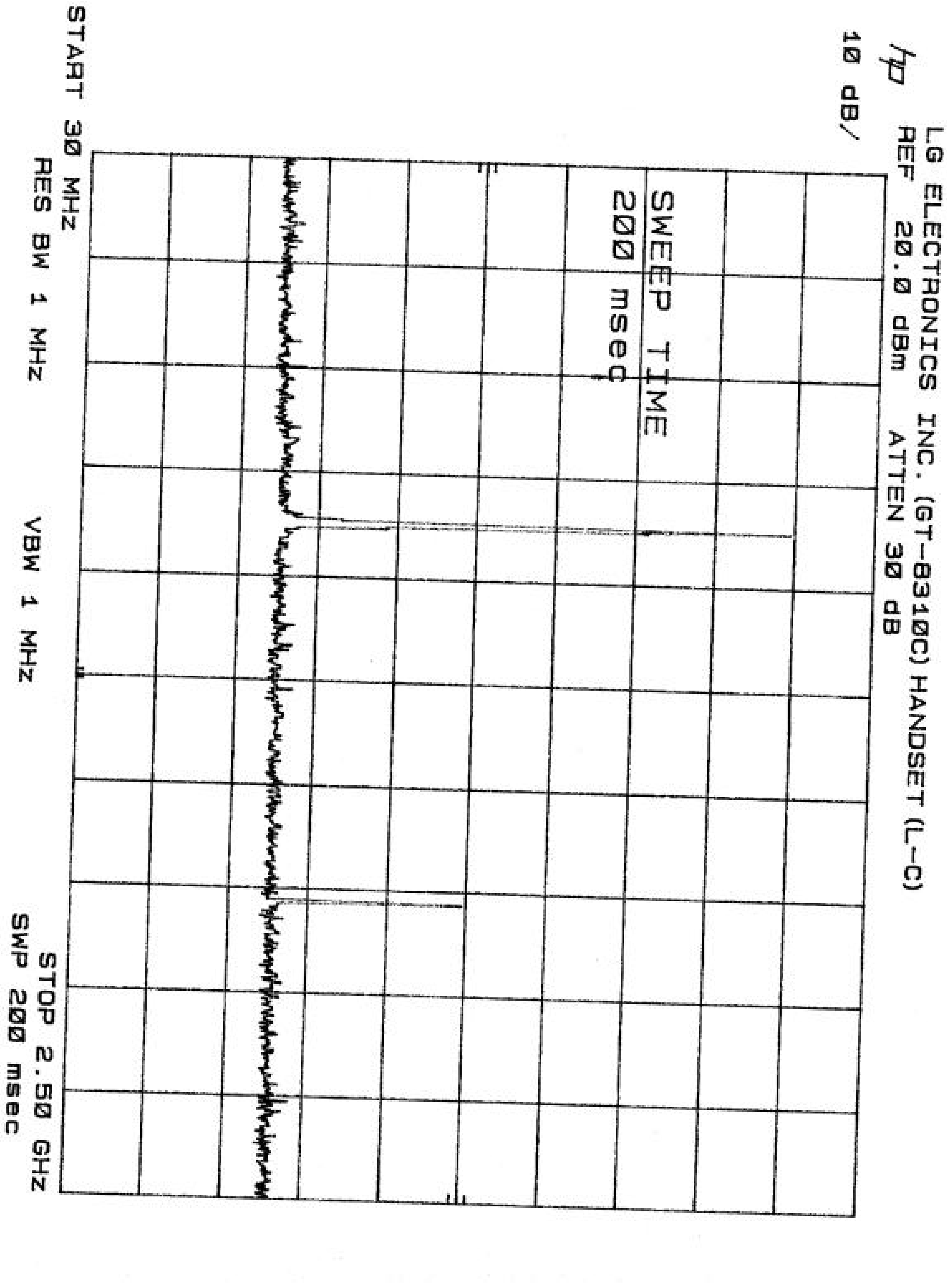
Spurious Emission	
High Channel	Page 39, 40
Middle Channel	Page 41, 42
Low Channel	Page 43, 44

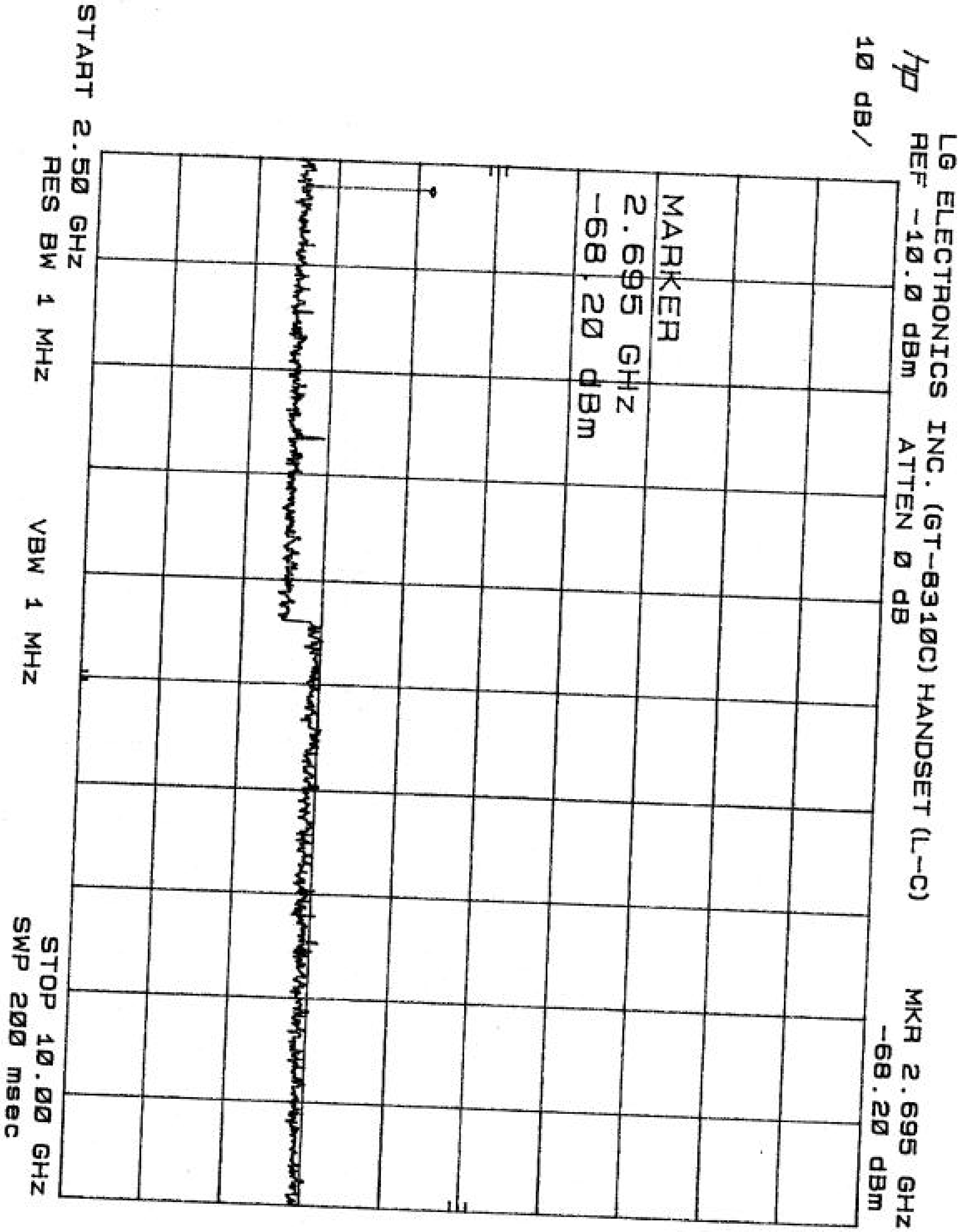

LG ELECTRONICS INC. (GT-8310C) HANDSET (H-C)
REF 20.0 dBm ATTEN 30 dB
10 dB/
SWEEP TIME
200 msec
START 30 MHz
RES BW 1 MHz
VBW 1 MHz
STOP 2.50 GHz
SWP 200 msec

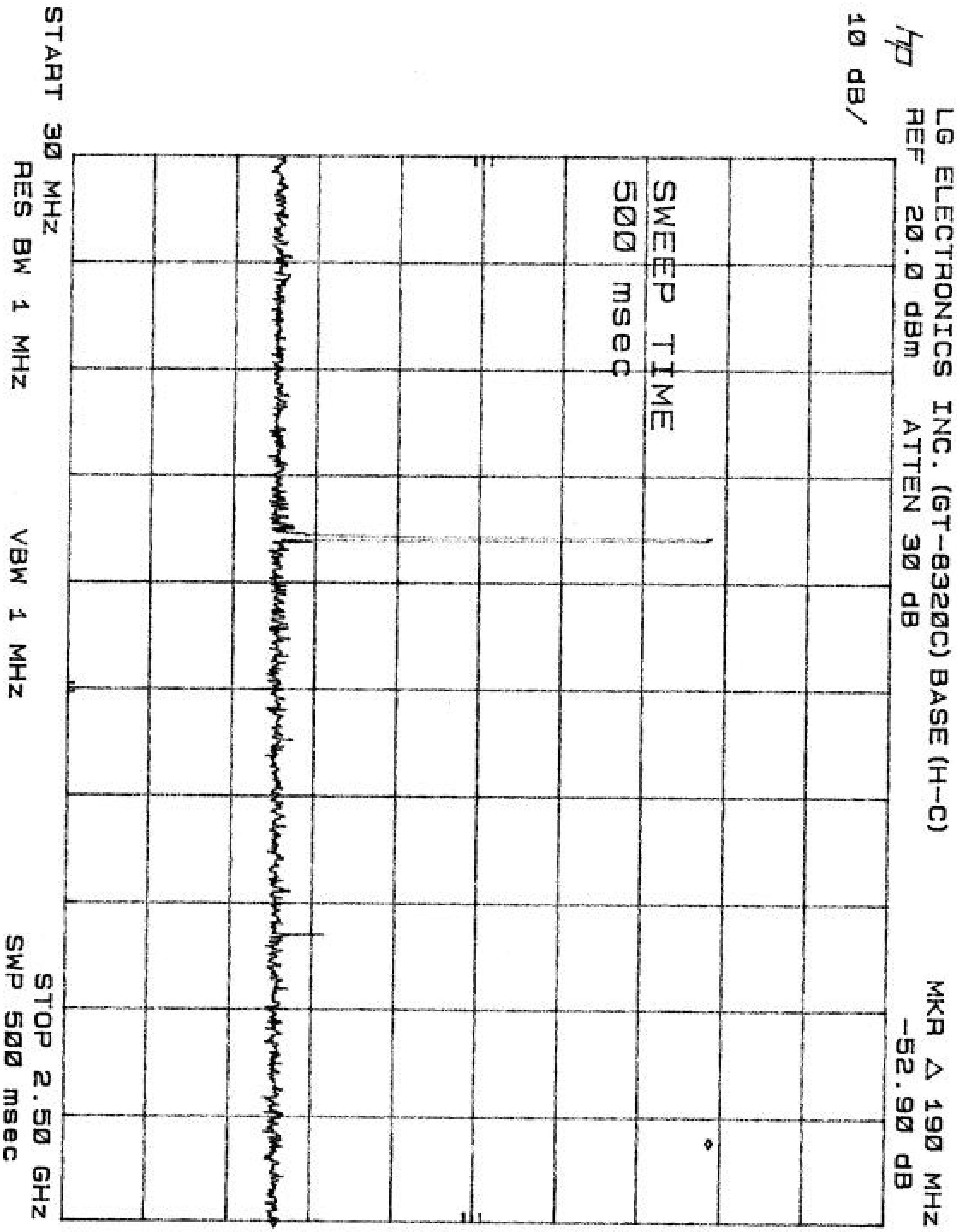

LG ELECTRONICS INC. (GT-8310C) HANDSET (H-C)
REF -10.0 dBm
ATTEN 0 dB
10 dB/
MKR 2.763 GHz
-63.50 dBm
SWEEP TIME
200 msec
START 2.50 GHz
RES BW 1 MHz
VBW 1 MHz
STOP 10.00 GHz
SWP 200 msec

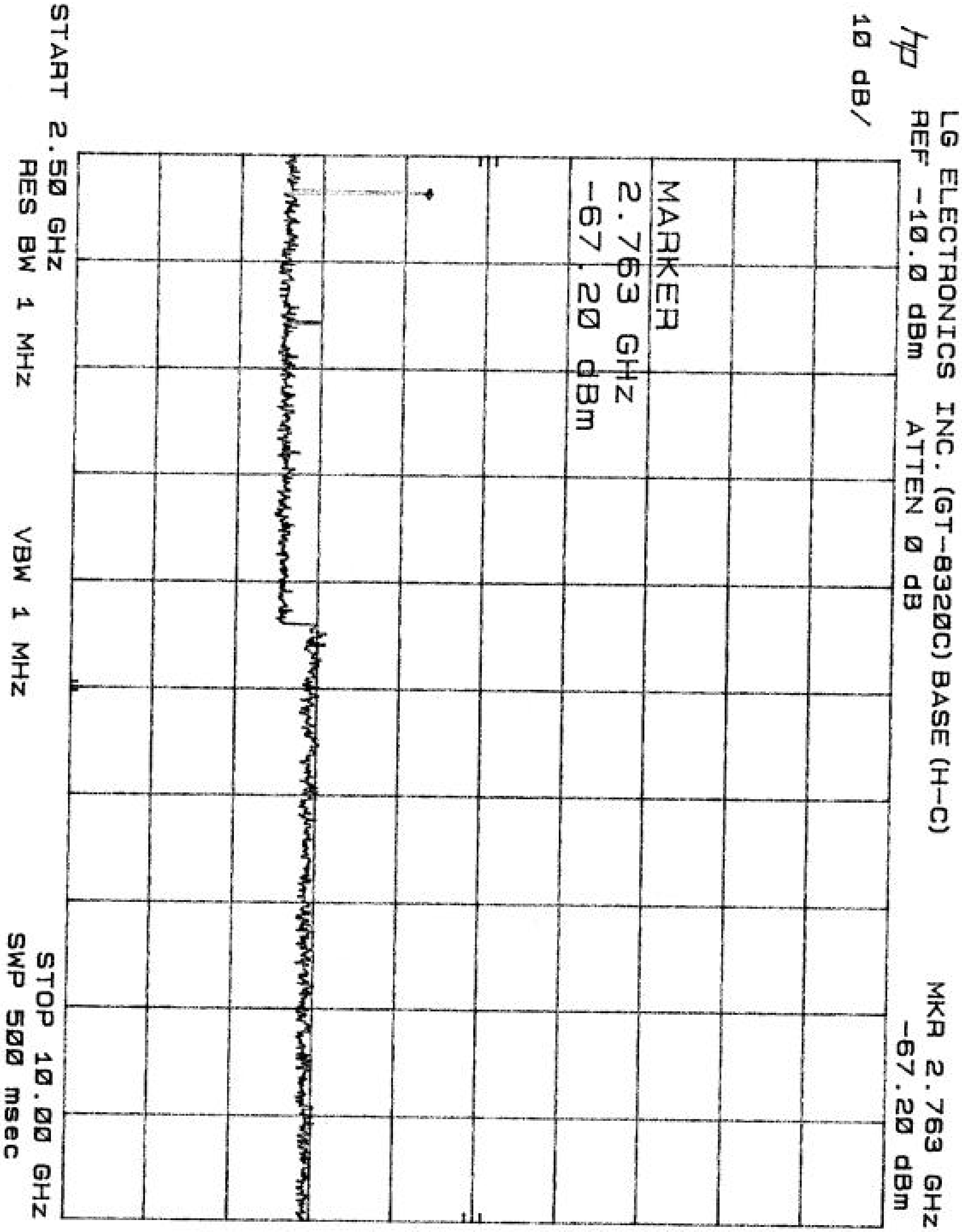

hp
10 dB/
LG ELECTRONICS INC. (GT-8310C) HANDSET (M-C)
REF -10.0 dBm ATTEN 0 dB
MKR 2.725 GHz
-69.20 dBm
MARKER
2.725 GHz
-69.20 dBm
START 2.50 GHz
RES BW 1 MHz
VBW 1 MHz
STOP 10.00 GHz
SWP 200 msec

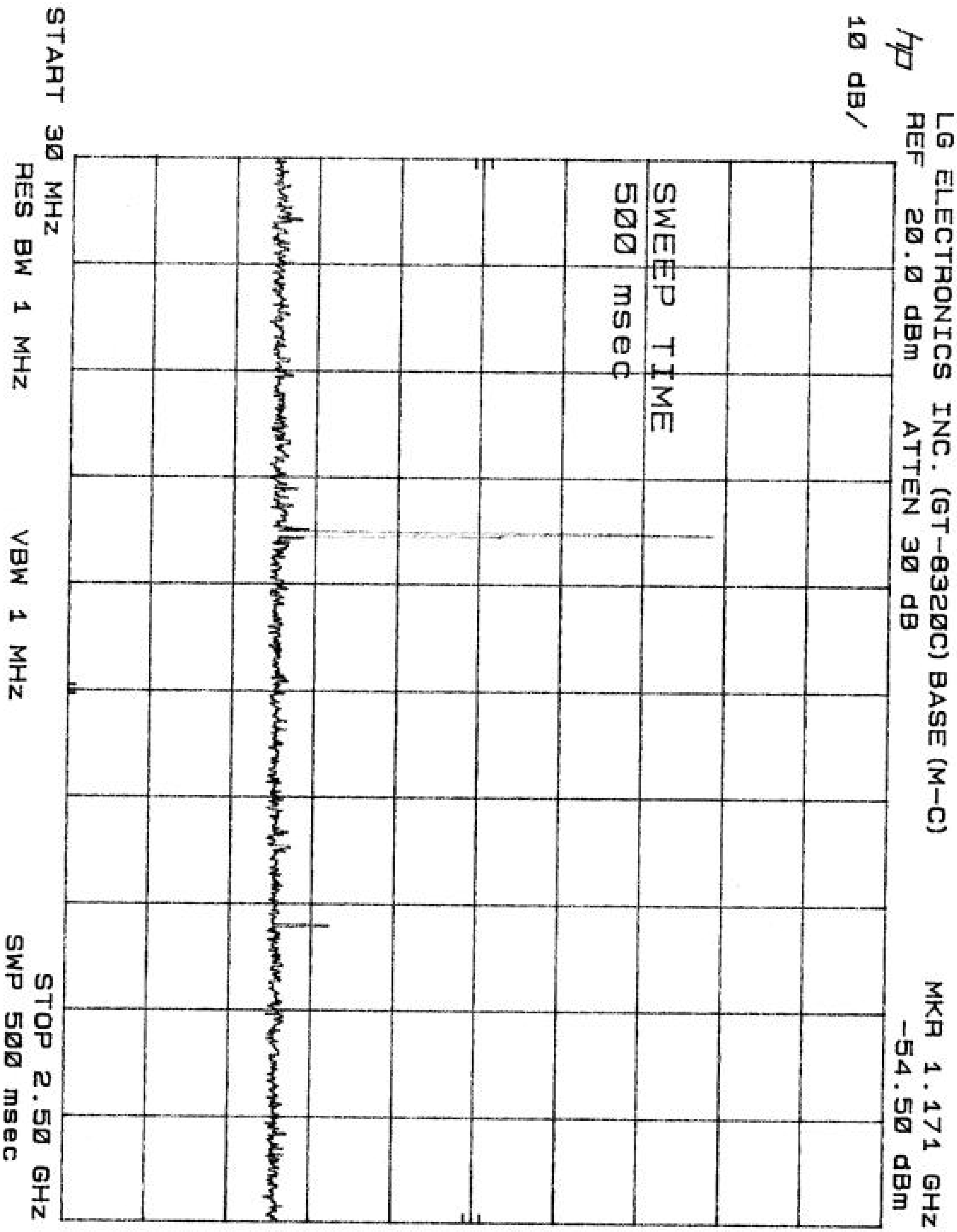

hp
LG ELECTRONICS INC. (GT-8310C) HANDSET (M-C)
REF 20.0 dBm ATTEN 30 dB
10 dB/
START 30 MHz
RES BW 1 MHz
VBW 1 MHz
STOP 2.50 GHz
SWP 200 msec

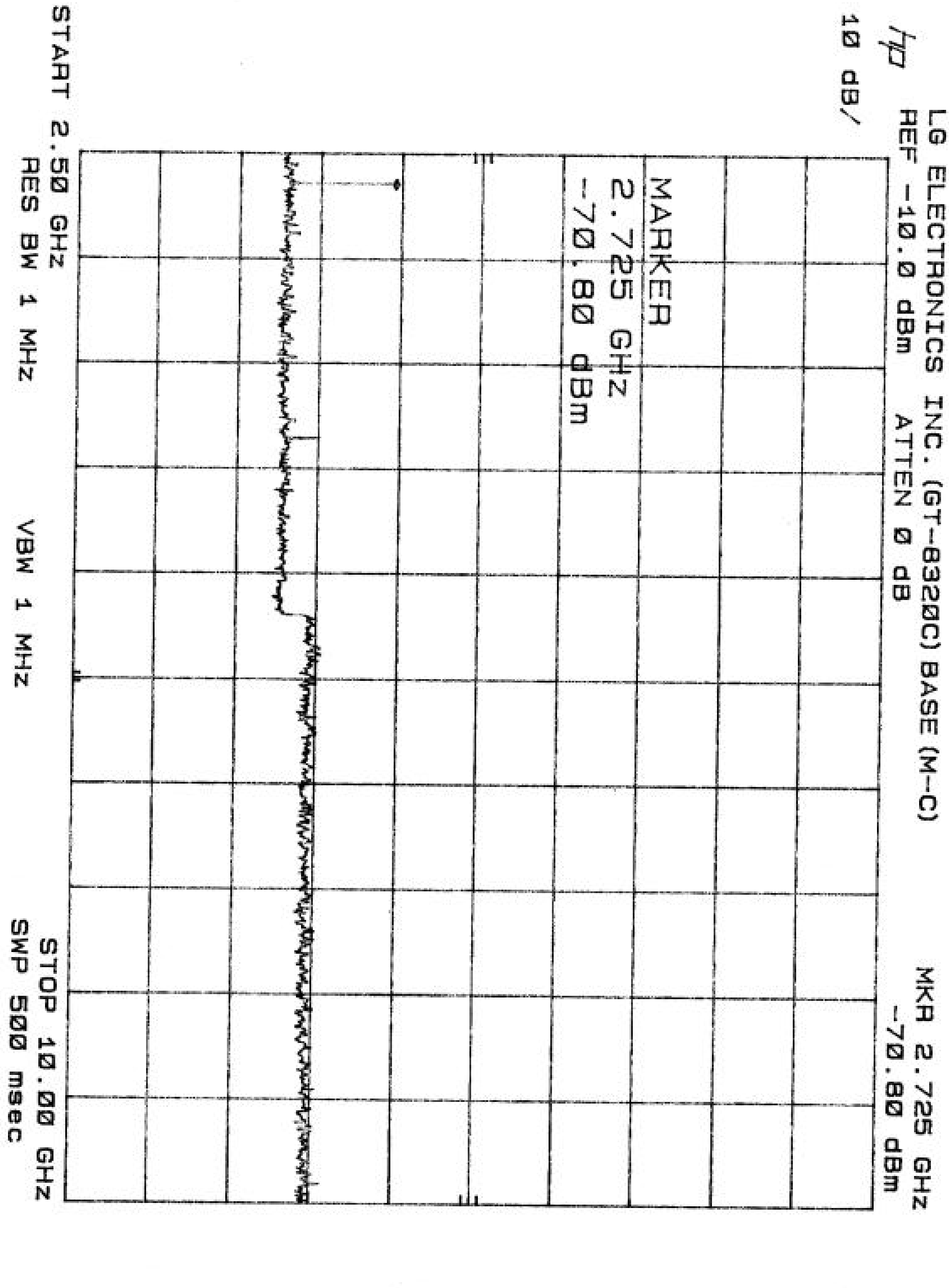

LG ELECTRONICS INC. (GT-8310C) HANDSET (L-C)
REF 20.0 dBm ATTEN 30 dB
10 dB/
SWEEP TIME
200 msec
START 30 MHz
RES BW 1 MHz
VBW 1 MHz
STOP 2.50 GHz
SWP 200 msec


LG ELECTRONICS INC. (GT-8310C) HANDSET (L-C)
REF -10.0 dBm ATTEN 0 dB
10 dB/
MKR 2.695 GHz
-68.20 dBm
MARKER
2.695 GHz
-68.20 dBm
START 2.50 GHz
RES BW 1 MHz
VBW 1 MHz
STOP 10.00 GHz
SWP 200 msec

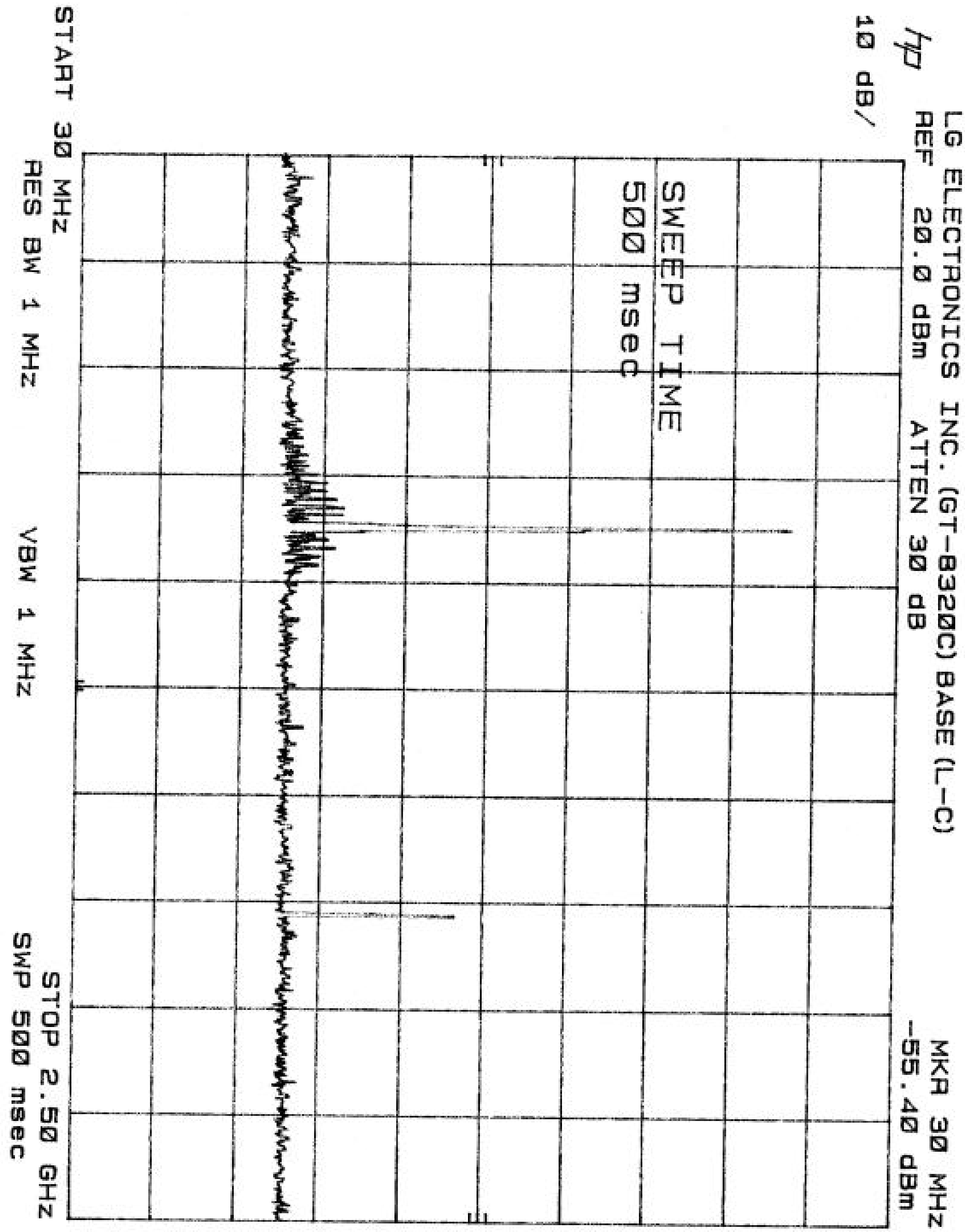

LG ELECTRONICS INC. (GT-8320C) BASE (H-C)
REF 20.0 dBm ATTEN 30 dB
10 dB/
MKR Δ 190 MHz
-52.90 dB
SWEEP TIME
500 msec
START 30 MHz
RES BW 1 MHz
VBW 1 MHz
STOP 2.50 GHz
SWP 500 msec

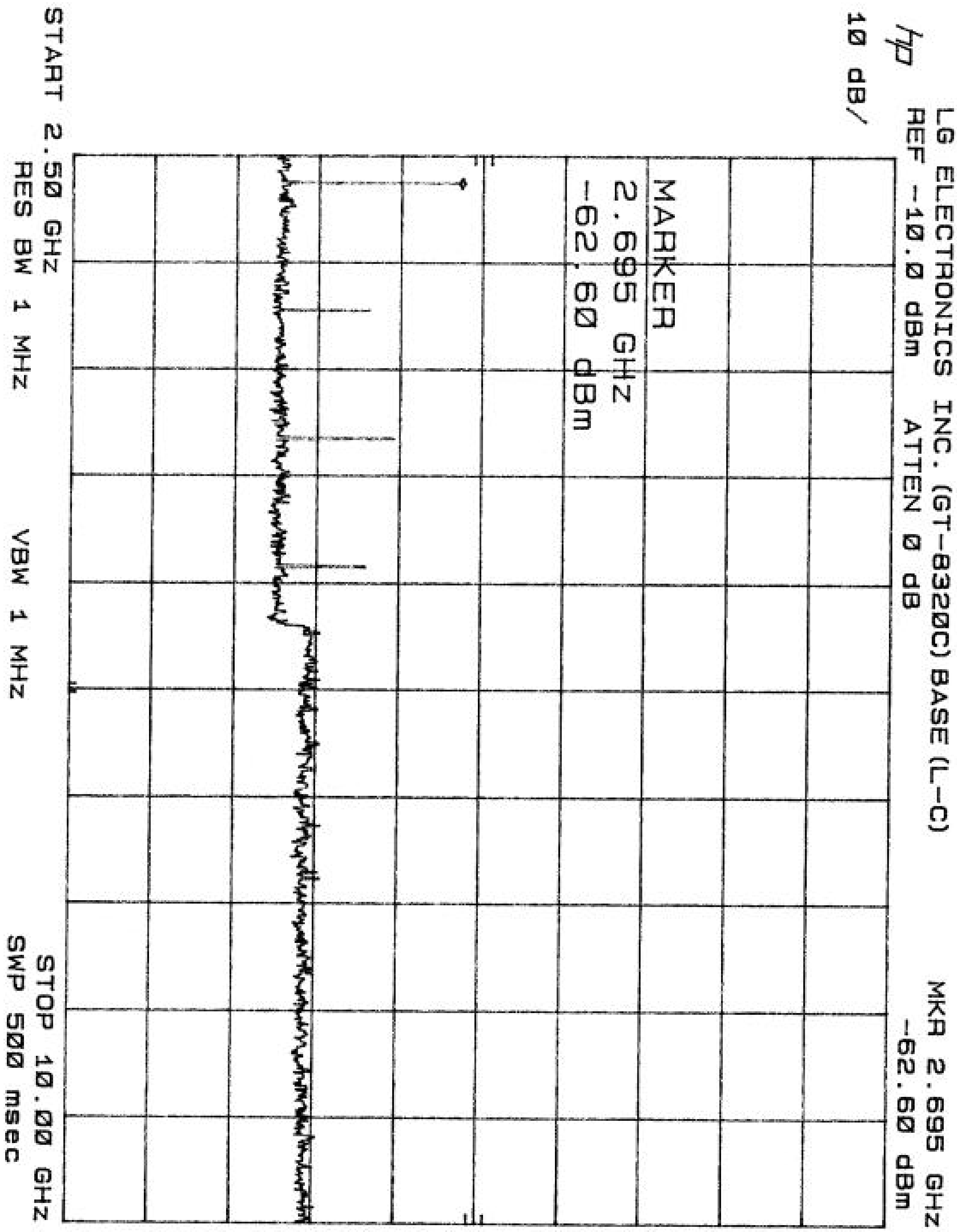

hp
LG ELECTRONICS INC. (GT-8320C) BASE (H-C)
REF -10.0 dBm ATTEN 0 dB
10 dB/
MKR 2.763 GHz
-67.20 dBm
MARKER
2.763 GHz
-67.20 dBm
START 2.50 GHz
RES BW 1 MHz
VBW 1 MHz
STOP 10.00 GHz
SWP 500 msec


LG ELECTRONICS INC. (GT-8320C) BASE (M-C)
REF 20.0 dBm ATTEN 30 dB
10 dB/
MKR 1.171 GHz
-54.50 dBm
SWEEP TIME
500 msec
START 30 MHz
RES BW 1 MHz
VBW 1 MHz
STOP 2.50 GHz
SWP 500 msec



LG ELECTRONICS INC. (GT-8320C) BASE (M-C)
REF -10.0 dBm ATTEN 0 dB
10 dB/
MKR 2.725 GHz
-70.80 dBm
MARKER
2.725 GHz
-70.80 dBm
START 2.50 GHz
RES BW 1 MHz
VBW 1 MHz
STOP 10.00 GHz
SWP 500 msec


LG ELECTRONICS INC. (GT-8320C) BASE (L-C)
REF 20.0 dBm ATTEN 30 dB
10 dB/
MKR 30 MHz
-55.40 dBm
SWEEP TIME
500 msec
START 30 MHz
RES BW 1 MHz
VBW 1 MHz
STOP 2.50 GHz
SWP 500 msec


LG ELECTRONICS INC. (GT-8320C) BASE (L-C)
REF -10.0 dBm ATTEN 0 dB
10 dB/
MKR 2.695 GHz
-62.60 dBm
MARKER
2.695 GHz
-62.60 dBm
START 2.50 GHz
RES BW 1 MHz
VBW 1 MHz
STOP 10.00 GHz
SWP 500 msec

3.6.0 Field Strength of Spurious Radiation (30 MHz-90000MHz)

Requirements: FCC15.247 (2) (c)

3.6.1 Test Procedure

The measurement antenna was placed at a distance of 3 meter from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT.

The frequency range up to tenth harmonics of each of the three fundamental frequencies (low, middle, and high channels) was investigated.

The spurious emissions attenuation was calculated as the difference between EIRP in dB (pW) at the fundamental frequency and at the spurious emissions frequency.

3.6.2 Test Equipment

A.H. System Horn Antenna

High Pass Filter

Preamplifier

Hewlett Packard HP8566B Spectrum Analyzer

Hewlett Packard HP 7470A Plotter

3.6.3 Test Results

Refer to the attached data sheets.

3.6.3.a Final Scan, Base, High Channel.

INDICATED		TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC CLASS B	
Frequency MHz	Ampl. dBmV/m	Angle Degree	Height Meter	Polar H/ V	Antenna dBmV/m	Cable dB	Amp. dB	Corr. Ampl. dBmV/m	Limit dBmV/m	Margin dB
925.50	88.6	180	1.2	V	24.7	4.4	20.2	97.5		
925.50	80.4	180	1.4	H	24.7	4.4	20.2	89.3		
1851.00	47.1	270	1.4	V	25.3	2.6	20.0	55.0	77.5	-22.5
1851.00	46.2	245	1.3	H	25.3	2.6	20.0	54.1	77.5	-23.4
2777.00	37.9(P)	180	1.4	V	29.0	3.7	20.0	50.6	74.0	-23.4
2777.00	29.6(A)	180	1.4	V	29.0	3.7	20.0	42.3	54.0	-11.7
3703.00	37.6(P)	350	1.4	V	30.3	4.3	20.0	52.2	74.0	-21.8
3703.00	31.5(A)	350	1.4	V	30.3	4.3	20.0	46.1	54.0	-7.9
4629.00	36.5(P)	145	1.4	V	32.5	4.9	20.0	53.9	74.0	-20.1
4629.00	27.6(A)	145	1.4	V	32.5	4.9	20.0	45.0	54.0	-9.0
5554.00	28.4(P)	145	1.3	V	34.1	5.4	20.0	47.9	74.0	-26.1
5554.00	19.0(A)	145	1.3	V	34.1	5.4	20.0	38.5	54.0	-15.5
2777.00	37.6(P)	360	2.2	H	29.0	3.7	20.0	50.3	74.0	-23.7
2777.00	27.8(A)	360	2.2	H	29.0	3.7	20.0	40.5	54.0	-13.5
3703.00	34.9(P)	45	2.2	H	30.3	4.3	20.0	49.5	74.0	-24.5
3703.00	27.5(A)	45	2.2	H	30.3	4.3	20.0	42.1	54.0	-11.9
4629.00	31.3(P)	180	2.3	H	32.5	4.9	20.0	48.7	74.0	-25.3
4629.00	23.3(A)	180	2.3	H	32.5	4.9	20.0	40.7	54.0	-13.3
5554.00	32.8(P)	145	2.3	H	34.1	5.4	20.0	52.3	74.0	-21.7
5554.00	23.2(A)	145	2.3	H	34.1	5.4	20.0	42.7	54.0	-11.3

3.6.3.b Final Scan, Base, Middle Channel.

INDICATED		TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC CLASS B	
Frequency MHz	Ampl. dBmV/m	Angle Degree	Height Meter	Polar H/ V	Antenna dBmV/m	Cable dB	Amp. dB	Corr. Ampl. dBmV/m	Limit dBmV/m	Margin dB
914.10	89.2	180	1.2	V	24.6	4.2	19.8	98.2		
914.10	81.5	270	1.4	H3	24.6	4.2	19.8	90.5		
1828.00	47.6	15	1.6	H3	25.3	2.6	20.0	55.5	78.2	-22.7
1828.00	43.5	270	1.4	H3	25.3	2.6	20.0	51.4	78.2	-26.8
2742.00	35.9(P)	200	1.6	H3	29.0	3.7	20.0	48.6	74.0	-25.4
2742.00	26.0(A)	200	1.6	H3	29.0	3.7	20.0	38.7	54.0	-15.3
3657.00	35.4(P)	90	1.6	H3	30.3	4.3	20.0	50.0	74.0	-24.0
3657.00	27.1(A)	90	1.6	H3	30.3	4.3	20.0	41.7	54.0	-12.3
4571.00	32.6(P)	45	1.3	H3	32.5	4.9	20.0	50.0	74.0	-24.0
4571.00	26.0(A)	45	1.3	H3	32.5	4.9	20.0	43.4	54.0	-10.6
5486.00	31.9(P)	200	2.0	H3	33.9	5.2	20.0	51.0	74.0	-23.0
5486.00	24.5(A)	200	2.0	H3	33.9	5.2	20.0	43.6	54.0	-10.4
2742.00	35.7(P)	160	3.0	V	29.0	3.7	20.0	48.4	74.0	-25.6
2742.00	28.7(A)	160	1.4	V	29.0	3.7	20.0	41.4	54.0	-12.6
3657.00	37.4(P)	90	1.4	V	30.3	4.3	20.0	52.0	74.0	-22.0
3657.00	30.6(A)	90	1.4	V	30.3	4.3	20.0	45.2	54.0	-8.8
4571.00	27.9(P)	340	1.4	V	32.5	4.9	20.0	45.3	74.0	-28.7
4571.00	21.0(A)	340	1.4	V	32.5	4.9	20.0	38.4	54.0	-15.6
5486.00	28.4(P)	160	1.3	V	33.9	5.2	20.0	47.5	74.0	-26.5
5486.00	19.8(A)	160	1.3	V	33.9	5.2	20.0	38.9	54.0	-15.1

3.6.3.c Final Scan, Base, Low Channel.

INDICATED		TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC CLASS B	
Frequency MHz	Ampl. dBmV/m	Angle Degree	Height Meter	Polar H/ V	Antenna dBmV/m	Cable dB	Amp. dB	Corr. Ampl. dBmV/m	Limit dBmV/m	Margin dB
904.50	85.2	250	1.2	V	24.8	3.0	19.8	93.2		
904.50	80.6	250	1.4	H3	24.8	3.0	19.8	88.6		
1808.00	44.5	250	1.3	V	25.3	2.6	20.0	52.4	73.2	-20.8
1808.00	44.0	145	3.2	H3	25.3	2.6	20.0	51.9	73.2	-21.3
2712.00	37.4(P)	180	2.2	V	29.0	3.7	20.0	50.1	74.0	-23.9
2712.00	28.3(A)	180	2.2	V	29.0	3.7	20.0	41.0	54.0	-13.0
3616.00	34.6(P)	90	2.2	V	30.3	4.3	20.0	49.2	74.0	-24.8
3616.00	28.1(A)	90	2.2	V	30.3	4.3	20.0	42.7	54.0	-11.3
4520.00	30.7(P)	145	1.3	V	32.5	4.9	20.0	48.1	74.0	-25.9
4520.00	19.8(A)	145	1.3	V	32.5	4.9	20.0	37.2	54.0	-16.8
5425.00	26.9(P)	145	1.2	V	33.9	5.2	20.0	46.0	74.0	-28.0
5425.00	17.7(A)	145	1.2	V	33.9	5.2	20.0	36.8	54.0	-17.2
2712.00	38.5(P)	350	3.2	H3	29.0	3.7	20.0	51.2	74.0	-22.8
2712.00	28.0(A)	350	3.2	H3	29.0	3.7	20.0	40.7	54.0	-13.3
3616.00	32.2(P)	180	3.2	H3	30.3	4.3	20.0	46.8	74.0	-27.2
3616.00	24.0(A)	180	3.2	H3	30.3	4.3	20.0	38.6	54.0	-15.4
4520.00	29.3(P)	360	3.2	H3	32.5	4.9	20.0	46.7	74.0	-27.3
4520.00	22.3(A)	360	3.2	H3	32.5	4.9	20.0	39.7	54.0	-14.3
5425.00	28.0(P)	20	1.5	H3	33.9	5.2	20.0	47.1	74.0	-26.9
5425.00	23.0(A)	20	1.5	H3	33.9	5.2	20.0	42.1	54.0	-11.9

3.6.3.d Final Scan, Handset, High Channel.

INDICATED		TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC CLASS B	
Frequency MHz	Ampl. dBmV/m	Angle Degree	Height Meter	Polar H/ V	Antenna dBmV/m	Cable dB	Amp. dB	Corr. Ampl. dBmV/m	Limit dBmV/m	Margin dB
926.10	66.6	145	3.0	V	24.7	4.4	20.2	75.5		
926.10	72.2	145	1.1	H	24.7	4.4	20.2	81.1		
1851.00	45.2	230	1.1	V	25.3	2.6	20.0	53.1	61.1	-8.0
1851.00	46.9	145	1.2	H	25.3	2.6	20.0	54.8	61.1	-6.3
2777.00	40.2(P)	360	1.5	V	29.0	3.7	20.0	52.9	74.0	-21.1
2777.00	32.9(A)	350	1.4	V	29.0	3.7	20.0	45.6	54.0	-8.4
3703.00	38.2(P)	190	1.4	V	30.3	4.3	20.0	52.8	74.0	-21.2
3703.00	28.9(A)	190	1.4	V	30.3	4.3	20.0	43.5	54.0	-10.5
5554.00	31.8(P)	200	1.4	V	34.1	5.4	20.0	51.3	74.0	-22.7
5554.00	23.9(A)	200	1.4	V	34.1	5.4	20.0	43.4	54.0	-10.6
2777.00	40.0(P)	70	1.2	H	29.0	3.7	20.0	52.7	74.0	-21.3
2777.00	32.8(A)	70	1.2	H	29.0	3.7	20.0	45.5	54.0	-8.5
3703.00	35.0(P)	180	1.2	H	30.3	4.3	20.0	49.6	74.0	-24.4
3703.00	28.0(A)	180	1.2	H	30.3	4.3	20.0	42.6	54.0	-11.4
5554.00	27.1(P)	245	1.2	H	34.1	5.4	20.0	46.6	74.0	-27.4
5554.00	18.0(A)	245	1.2	H	34.1	5.4	20.0	37.5	54.0	-16.5

3.6.3.e Final Scan, Handset, Middle Channel.

INDICATED		TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC CLASS B	
Frequency MHz	Ampl. dBmV/m	Angle Degree	Height Meter	Polar H/ V	Antenna dBmV/m	Cable dB	Amp. dB	Corr. Ampl. dBmV/m	Limit dBmV/m	Margin dB
914.69	65.3	160	2.9	V	24.6	4.2	19.8	74.3		
914.69	72.8	145	1.1	H	24.6	4.2	19.8	81.8		
1828.00	43.8	270	1.2	H	25.3	2.6	20.0	51.7	61.8	-10.1
1828.00	46.5	145	1.8	V	25.3	2.6	20.0	54.4	61.8	-7.4
2743.00	39.3(P)	260	1.2	H	29.0	3.7	20.0	52.0	74.0	-22.0
2743.00	29.7(A)	260	1.2	H	29.0	3.7	20.0	42.4	54.0	-11.6
3657.00	36.2(P)	30	1.5	H	30.3	4.3	20.0	50.8	74.0	-23.2
3657.00	27.6(A)	30	1.5	H	30.3	4.3	20.0	42.2	54.0	-11.8
5486.00	29.9(P)	100	1.5	H	33.9	5.2	20.0	49.0	74.0	-25.0
5486.00	23.2(A)	100	1.5	H	33.9	5.2	20.0	42.3	54.0	-11.7
5486.00	33.3(P)	120	1.8	V	33.9	5.2	20.0	52.4	74.0	-21.6
5486.00	24.6(A)	120	1.8	V	33.9	5.2	20.0	43.7	54.0	-10.3
3657.00	36.8(P)	90	1.8	V	30.3	4.3	20.0	51.4	74.0	-22.6
3657.00	29.8(A)	90	1.8	V	30.3	4.3	20.0	44.4	54.0	-9.6
2473.00	42.1(P)	200	1.8	V	28.1	3.4	20.0	53.6	74.0	-20.5
2473.00	33.9(A)	200	1.8	V	28.1	3.4	20.0	45.4	54.0	-8.7

3.6.3.f Final Scan, Handset, Low Channel.

INDICATED		TABLE	ANTENNA		CORRECTION FACTOR			CORRECTED AMPLITUDE	FCC CLASS B	
Frequency MHz	Ampl. dBmV/m	Angle Degree	Height Meter	Polar H/ V	Antenna dBmV/m	Cable dB	Amp. dB	Corr. Ampl. dBmV/m	Limit dBmV/m	Margin dB
904.50	66.2	340	2.9	V	24.8	3.0	19.8	74.2		
904.50	73.5	90	1.1	H	24.8	3.0	19.8	81.5		
1808.00	43.0	200	1.1	V	25.3	2.6	20.0	50.9	61.5	-10.6
1808.00	41.2	160	1.2	H	25.3	2.6	20.0	49.1	61.5	-12.4
2712.00	38.5(P)	270	1.2	H	29.0	3.7	20.0	51.2	74.0	-22.8
2712.00	28.3(A)	270	1.2	H	29.0	3.7	20.0	41.0	54.0	-13.0
3616.00	37.8(P)	360	1.9	H	30.3	4.3	20.0	52.4	74.0	-21.6
3616.00	26.5(A)	360	1.9	H	30.3	4.3	20.0	41.1	54.0	-12.9
5425.00	28.9(P)	180	1.8	H	33.9	5.2	20.0	48.0	74.0	-26.0
5425.00	22.7(A)	180	1.8	H	33.9	5.2	20.0	41.8	54.0	-12.2
2712.00	34.4(P)	180	1.4	V	29.0	3.7	20.0	47.1	74.0	-26.9
2712.00	24.0(A)	180	1.4	V	29.0	3.7	20.0	36.7	54.0	-17.3
3616.00	32.0(P)	270	1.4	V	30.3	4.3	20.0	46.6	74.0	-27.4
3616.00	26.5(A)	270	1.4	V	30.3	4.3	20.0	41.1	54.0	-12.9
5425.00	29.6(P)	145	1.4	V	33.9	5.2	20.0	48.7	74.0	-25.3
5425.00	23.3(A)	145	1.4	V	33.9	5.2	20.0	42.4	54.0	-11.6

3.7.0 Processing Gain

Processing Gain Measurements for GT-8110 DCT TEST report

3.7.1 Scope

This document details the results of measurement of the processing gain of a DCT(GT-8320C) with reference to the Code of Federal Regulations, Title 47, Chapter 1, Part 15 Radio Frequency Devices, FCC. The purpose of this document is to provide conceptual background of processing gain and method of measurement.

FCC	Federal Communications Commission
SNR	Signal to Noise Ratio
JSR	Jammer to Signal Ratio
CW	Continuous wave (jammer)
HS	Handset
BS	Basestation
DBPSK	Differential Binary Phase Shift Keying

Table 1: Definitions and Abbreviations

3.7.2 An Overview of the FCC Method for measuring Processing Gain

Processing Gain Calculation

Theoretical processing gain limit for the 12bit Spreading BPSK system is 10.8dB.

Processing Gain = 10Log (Spreaded data rate/Unspreaded data rate)
= 10Log [(12 Chip/bit*100Kbit/sec)/100Kbit/sec)]
= 10Log[12]
= 10.8dB

Processing Gain Measurement Method

Following method is specified by the FCC to measure processing gain. The detailed are in 15.247 (e)(1). This involves transmitting a CW jammer in the RF passband of the system and measuring the jammer to signal ratio (JSR) required to achieve a certain bit error rate. The choice of the actual value of the bit error rate is left up to the tester. The jammer is stepped in 50 kHz increments across the entire passband and in each case the JSR to achieve the desired bit error rate is measured. The JSR is measured at the RF input to the system under test. The lowest 20% of the JSR data (in dB) is discarded. The processing gain can then be calculated as follows:

$$G_p = \left(\frac{S}{N}\right)_{theory} + \left(\frac{J}{S}\right)_{measured} + L_{system}$$

Where G_p is the processing gain, the SNR is that theoretically predicted for the system under the test to achieve the desired bit error rate, the JSR is the lowest value (in dB) in the remaining data set and L_{sys} adjusts for non-ideal system losses. L_{sys} cannot be greater than 2 dB.

3.7.3 Processing Gain Measurement Test Setup

The test setup is shown in Fig.1. The base station and handset are configured to measure the Bit Error Rate (BER) through serial ports of a personal computer. Conexant's software utility program (FCC_3V3.exe) is used to configure the test modes, establish the link between the base and handset unit and monitor the results. The BER test results are displayed on the monitor. The strength of the received signal entering at the receiving antenna port of the unit under test is derived from the signal strength of the transmitting unit. The following parameters were used in the test setup.

General Procedure

Step-1: Measure the output power of the base and handset units in LO power mode. Determine attenuation and signal losses in the path to calculate the received signal strength arriving at the base station antenna port.
Step-2: Connect the serial interface of the base and handset to the serial ports of a PC.
Step-3: Connect the base and handset through attenuator, signal combiner etc components using 50 ohm SMA connectors and cables as shown in Figure 1. Thus, the BER test set up establishes link through wired connection.Step-4;Using utility test software, select the channel frequency (921.6MHz), LOW power mode, LNA attenuation for base and handset units.
Step-5: Click on " Start S7 HS Master" button ON. The two link is established and the BER results are displayed on monitor.
Step-6:Feed jamming signal from the signal generator.
Step-7: Increase the amplitude of the jamming while monitoring BER such that the BER is ≤10E-3. this signal power is recorded for computing received Jammer power level J.
Step-8: Increment the Jammer signal frequency in steps of 0kHZ and repeat step 7 and determine the minimum Jammer signal power to achieve BER of ≤10E-3. Calculate the processing gain.

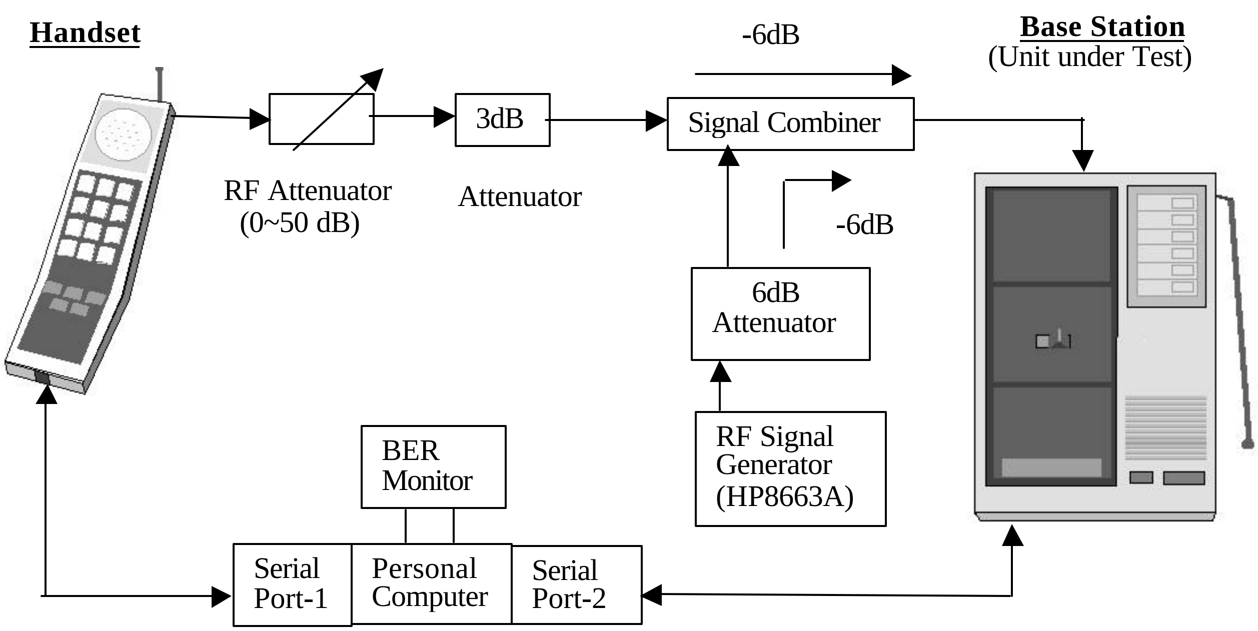


Figure 1: Test Setup

The following parameter was used in the test setup.

Table 2: Test Setup Parameters

HS Tx power (dBm)	-1.9	Measured @ 50-ohm SMA-antenna port
BS LNA gain (dB)	0	
Test system losses (signal)(dB)	-61.75	-50dB (channel attenuation)-5.7dB (attenuator & cables), -6dB (signal combiner)
Received signal strength (dBm) at combiner output	-63.65	Measured @ combiner output
Test system losses (jammer) (dB) upto the combiner output	-12.85	-6dB (attenuator), -6dB (signal combiner), -0.85 dB (cable)

3.7.4 Results and Conclusions

The following measurement results were taken at the basestation. The desired bit error rate was set at 10^{-3}.

Table 3: Test Results

Jammer Frequency (MHz)	BER (BS)	Received jammer power (dBm)	Received signal power (dBm)	Jammer/Signal ratio (dB)
913.80	$9.4x10^{-4}$	-59.65	-63.65	4.5
913.85	$9.6x10^{-4}$	-57.95	-63.65	5.7
913.90	$9.6x10^{-4}$	-60.25	-63.65	3.3
913.95	$9.6x10^{-4}$	-64.25	-63.65	-0.6
914.00	$1.1x10^{-3}$	-61.55	-63.65	2.1
914.05	$9.8x10^{-4}$	-61.45	-63.65	2.2
914.10	$1.1x10^{-3}$	-61.95	-63.65	1.9
914.15	$9.2x10^{-4}$	-62.85	-63.65	0.7
914.20	$1.0x10^{-3}$	-59.85	-63.65	3.5
914.25	$1.0x10^{-3}$	-61.15	-63.65	2.5
914.30	$1.1x10^{-3}$	-62.05	-63.65	1.5
914.35	$1.0x10^{-3}$	-57.65	-63.65	6.0
914.40	$1.1x10^{-3}$	-55.65	-63.65	8.1
914.45	$1.0x10^{-3}$	-49.35	-63.65	14.3
914.50	$1.1x10^{-3}$	-59.25	-63.65	4.7
914.55	$1.0x10^{-3}$	-62.35	-63.65	1.3
914.60	$9.7x10^{-4}$	-59.05	-63.65	4.6
914.65	$1.0x10^{-3}$	-61.05	-63.65	2.6
914.70	$1.1x10^{-3}$	-62.55	-63.65	1.1
914.75	$9.0x10^{-4}$	-61.95	-63.65	1.7
914.80	$1.0x10^{-3}$	-61.05	-63.65	2.6
914.85	$9.9x10^{-4}$	-62.25	-63.65	1.3
914.90	$1.1x10^{-3}$	-64.05	-63.65	-0.3
914.95	$9.2x10^{-4}$	-56.25	-63.65	7.4
915.00	$1.0x10^{-3}$	-59.85	-63.65	4.1
915.05	$1.1x10^{-3}$	-57.25	-63.65	6.6
915.10	$9.9x10^{-4}$	-58.15	-63.65	5.6

For DBPSK at 10^{-3} bit error rate the required SNR is 8.0 dB. Using the results above and the data in the table below the processing gain is calculated to be **11.3** dB.

Table 4: Processing Gain Calculation data

required SNR (dB)	8.0
system losses (dB)	2.0
J/S ratio at 80% point (dB)	1.30
FCC Processing gain (dB)	**11.3**

Conclusions

The result measured for processing gain of **11.3** dB is close to the actual processing gain due to a 12 chip spreading code of

$$10 \times \log_{10}(12) = 10.8\ dB$$

4 - CONDUCTED EMISSIONS TEST DATA

4.1 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at BACL is ±2.4 dB.

4.2 EUT Setup

The measurement was performed at the **O**pen **A**rea **T**est **S**ite, using the same setup per ANSI C63.4 - 1992 measurement procedure. The specification used was with FCC Class B limits.

4.3 Spectrum Analyzer Setup

The spectrum analyzer was set with the following configurations during the conduction test:

Start Frequency ....450 kHz
Stop Frequency ....30 MHz
Sweep Speed..Auto
IF Bandwidth..100 kHz
Video Bandwidth...100 kHz
Quasi-Peak Adapter Bandwidth...9 kHz
Quasi-Peak Adapter Mode ....Normal

4.4 Test Procedure

During the conducted emission test, the power cord of the host system was connected to the auxiliary outlet of the first LISN.

Maximizing procedure was performed on the six (6) highest emissions of each modes tested to ensure EUT is compliant with all installation combination.

All data was recorded in the peak detection mode. Quasi-peak readings were only performed when an emission was found to be marginal (less than -4 dBμV). Quasi-peak readings are distinguished with a "**QP**".

4.5 Summary of Test Results

According to the data in section 3.6, the EUT complied with the FCC Conducted margin for a Class B device and these test results is deemed satisfactory evidence of compliance with ICES-003 of the Canadian Interference-Causing Equipment Regulations, with the *worst* margin reading of:

-5.4 dBmV at **0.450 MHz** in the **Line** mode power supply.

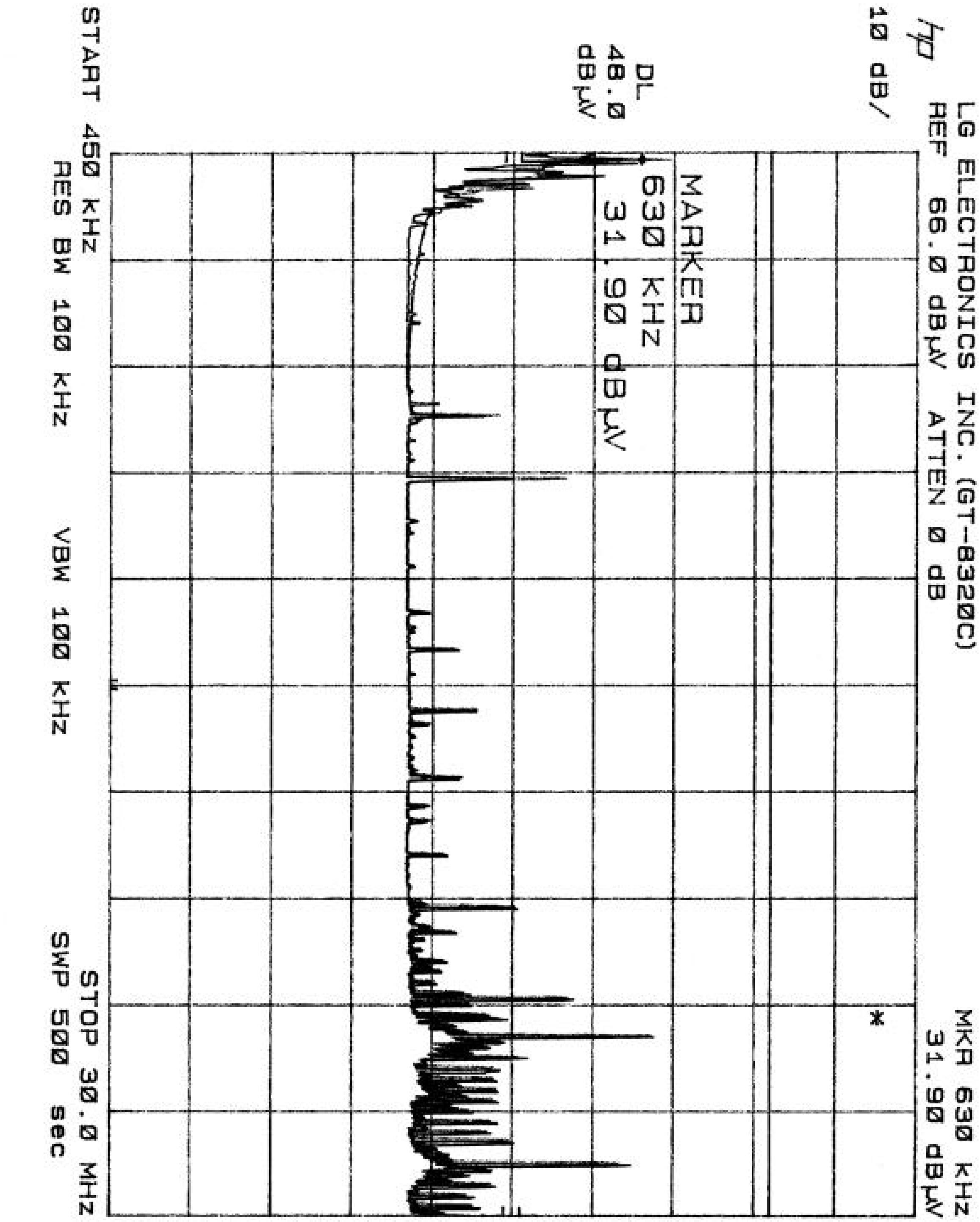
4.6 Conducted Emissions Test Data

4.6.1 Test Data, 0.45 - 30 MHz.

LINE CONDUCTED EMISSIONS				FCC CLASS B	
Frequency	Amplitude	Detector	Phase	Limit	Margin
MHz	dBμV	QP/Ave/Peak	Line/Neutral	dBμV	DB
0.450	41.5	AVPeak	Line	47	-5.4
0.450	35.6	AVPeak	Neutral	47	-11.3
16.580	15.7	AVPeak	Line	50	-34.3
15.850	14.8	AVPeak	Neutral	50	-35.2
2.810	13.4	AVPeak	Line	46	-32.6
3.580	6.9	AVPeak	Neutral	46	-39.1

4.7 Plot of Conducted Emissions Test Data

Plot(s) of Conducted Emissions Test Data is presented in the following Appendix of this report as reference.


LG ELECTRONICS INC.(GT-8320C)
REF 66.0 dBµV ATTEN 0 dB
10 dB/
MKR 630 kHz
31.90 dBµV
MARKER
630 kHz
31.90 dBµV
DL
48.0
dBµV
START 450 kHz
STOP 30.0 MHz
RES BW 100 kHz
VBW 100 kHz
SWP 500 sec

Appendix A – AGENT AUTHORIZATION LETTER

LGIC
LG Information & Communications, Ltd.

LG Kangseo B/D 36, Munlae-Dong, 6-Ga,
Youngdungpo-Gu, Seoul, 150-096, Korea
Youngdungpo P.O Box101, Seoul, Korea
Telephone : 82-2-2630-3651~2
Fax : 82-2-2630-3669

Exhibit B

AUTHORITY TO ACT AS AGENT TO THE FEDERAL COMMUNICATIONS COMMISSION

Date : February 21, 2000

Federal Communications Commission
Authorization and Evaluation Division
Equipment Authorization Branch
7435 Oakland Mills Road
Columbia, MID 21046 U.S.A.

Dear Sir:

We, the undersigned, hereby authorize Bay Area Compliance Laboratory Corp. to act on our behalf in all matters relating to applications for approval of Telecommunication apparatus, including the signing of all documents relating to this matters.
Any and all acts carried out by Bay Area Compliance Laboratory Corp., on our behalf shall have the same effect as acts of our own.
I further appoint Bay Area Compliance Laboratory Corp., to act as agent in preparation of this application for registration of LG Information & Communications, Ltd., Model GT-8110 as Exhibit C under Part 68 of the Rules and Regulations of the Federal Communications Commission.
I certify that the exhibits properly describe the device or system for which registration is sought, that Exhibit G represents the policies of the applicant which will be followed for all units manufactured and distributed under the provisions of Part 68, that the labels described in Exhibit H will be affixed to each unit, and that the information described in Exhibit J will be provided with each unit manufactured or distributed by the applicant. We also certify that no party to the applications authorized hereunder is subject to benefits, including FCC benefits, Pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988,21 USC 853(a).

Sincerely yours,

D. S. Kim

D.S.KIM / Quality Engineering Dept.
LG Information & Communications, Ltd.