ITS Intertek Testing Services

FCC Parts 22 and 24 Test Report

Performed on the

TDMA/AMPS Cellular Phone
Model: T300

For

Mitsubishi Wireless (MCTC)
FCC ID: BGBMT345XFOR6A

Date of Test: May 25, 2000
Job # J2012925
Report #: 20129252

Total No. of Pages Contained in this Report: 20 + data pages

NVLAP®

FCC Parts 22, 24 Certification, Ver 7/98

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Tested By: _____ _____
Ollie Moyrong Date

Approved By: _____ _____
David Chernomordik Date

1.2 Product Description

The Mitsubishi Wireless (MCTC) Model TCD 588 is a dual mode, dual band TDMA and AMPS cellular radio telephone.

For more information, please refer to the attached product description.

Use of Product	Portable Cellular and PCS Phone
Whether quantity (> 1) production is planned	[X] Yes, [ ] No
Cellular Phone standards	[X] AMPS [X] TDMA
Type(s) of Emission	40K0F8W, 40K0F1D, 30K0G7D
Allowed Deviation	12± 10% (AMPS mode)
Range of RF Output	27.5 dBm
Frequency Range	824 - 849 (AMPS & TDMA), 1850 - 1910 (TDMA)
Antenna(e) & Gain	0 dBi
Detachable antenna ?	[ ]Yes [X] No
Receiver L.O. frequency	
External input	[X] Audio [ ] Digital Data

1.3 Related Submittal(s) Grants

[X] None

[ ] DOC for computer section, a separate DOC is prepared.

2.0 RF Power Output, FCC §2.1046

2.1 Test Procedure

The transmitter output was connected to a calibrated coaxial attenuator, 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 antenna port was determined by adding the value of the attenuator to the spectrum analyzer reading. An HP power meter was also used to measure the RF power.

Tests were performed at three frequencies (low, middle, and high channels) and on all power levels which can be setup on the transmitters.

2.2 Test Equipment

Hewlett Packard 8481A Power Sensor, 435B Power Meter
Hewlett Packard HP8566B Spectrum Analyzer, 100 Hz - 22 GHz
Tektronix 2784 Spectrum Analyzer, 100 Hz – 40 GHz

2.3 Test Results

See attached data.

Measurement Data for Transmitter (conducted):

Power Levels Analog 800	Limit		Measured Peak Output Power [dBm]		
	Nominal Peak Output Power [dBm]	Tolerance [dB]	991 ch	384 ch	799 ch
			824.04	836.52	848.97
0	27.8	+2/-4	25.20	25.22	25.21
1	27.8	+2/-4	25.18	25.17	25.16
2	27.8	+2/-4	24.77	24.80	24.76
3	22.8	+2/-4	22.77	22.77	22.79
4	18.8	+2/-4	18.78	18.73	18.86
5	14.8	+2/-4	14.72	14.74	14.74
6	10.8	+2/-4	10.80	10.85	10.87
7	6.8	+2/-4	6.90	6.87	6.72

Power Levels TDMA 800	Limit		Measured Peak Output Power [dBm]		
	Nominal Peak Output Power [dBm]	Tolerance [dB]	991 ch	384 ch	799 ch
			824.04	836.52	848.97
0	27.8	+2/-4	27.51	27.47	27.47
1	27.8	+2/-4	27.41	27.42	27.42
2	27.8	+2/-4	25.81	25.86	25.80
3	23.8	+2/-4	23.83	23.77	23.82
4	19.8	+2/-4	19.75	19.76	19.80
5	15.8	+2/-4	15.88	15.87	15.89
6	11.8	+2/-4	11.79	11.70	11.81
7	7.8	+2/-4	7.79	7.71	7.71
8	2.8	+2/-4	2.88	2.70	2.79
9	-2.2	+2/-4	-2.21	-2.20	-2.22
10	-7.2	+2/-4	-7.27	-7.11	-7.29

Power Levels TDMA 1900	Limit		Measured Peak Output Power [dBm]		
	Nominal Peak Output Power [dBm]	Tolerance [dB]	2 ch	999 ch	1998 ch
			1850.04	1879.95	1909.92
0	27.8	+2/-4	26.82	26.87	26.88
1	27.8	+2/-4	26.88	26.89	26.90
2	27.8	+2/-4	25.81	25.73	25.74
3	23.8	+2/-4	23.81	23.81	23.80
4	19.8	+2/-4	19.78	19.79	19.71
5	15.8	+2/-4	15.88	15.70	15.80
6	11.8	+2/-4	11.87	11.76	11.73
7	7.8	+2/-4	7.82	7.78	7.80
8	2.8	+2/-4	2.80	2.79	2.81
9	-2.2	+2/-4	-2.23	-2.22	-2.16
10	-7.2	+2/-4	-7.21	-7.23	-7.25

3.0 Radiated Power

FCC § 22.913
The Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

FCC § 24.232
The equivalent Isotropic Radiated Power (EIRP) must not exceed 2 Watts.

3.1 Test Procedure

The EUT was positioned on a non-conductive turntable, 0.8m above the ground plane on an open test site.
The radiated emission at the fundamental frequency was measured at 3m distance with a test antenna and spectrum analyzer. During the measurement, the resolution and video bandwidths of the spectrum analyzer were set to 100 kHz (for frequencies below 1 GHz) and 1 MHz (for frequencies above 1 GHz).

Worst case emission was recorded with the rotation of the turntable and the raising and lowering of the test antenna. The spectrum analyzer reading was recorded and the field strength (E in dBuV/m) was calculated. ERP & EIRP in dBm were calculated as follows:

$$ERP = E - 97.4; \qquad EIRP = E - 95.3$$

In addition, ERP in frequency band 824-849 MHz was measured using a substitution method. The EUT was replaced by half-wave dipole connected to a signal generator. The spectrum analyzer reading was recorded and ERP was calculated as follows:

$$ERP = R_1 - R_2 + V_g,$$

where R_1 & R_2 are spectrum analyzer readings in dBuV when measured field strength from EUT & generator accordingly; V_g is the generator output in dBm

3.2 Test Equipment

Hewlett Packard HP8566B Spectrum Analyzer
EMCO 3148 Log Periodic Antenna
EMCO 3115 Horn Antenna
CDI Robert's Antenna
Rohde & Schwarz SMH 44 signal generator

3.3 Test Results

Passed, refer to the attached data sheets.

ITS Intertek Testing Services

Company: Mitsubishi Communication
Project #: J20012925
Model: AMPS Mode
Engineer: Xi-Ming Yang
Date of test: May 12, 2000

FCC Part 22 Effective Radiated Power (AMPS)

Frequency	Antenna Polarization	Spec.Anlzr Reading (EUT)	Spec. Anlzr Reading Signal Gen & Tuned Dipole	Signal Generator Power	Effective Radiated Power (EUT)
MHz	H/V	dB(uV)	dB(uV)	dBm	dBm
824.0	V	103.7	87.4	9.0	25.3
836.0	V	103.5	86.6	9.0	25.9
849.0	V	102.6	85.7	8.7	25.6

FCC Part 22 Effective Radiated Power (TDMA)

Frequency	Antenna Polarization	Spec.Anlzr Reading (EUT)	Spec. Anlzr Reading Signal Gen & Tuned Dipole	Signal Generator Power	Effective Radiated Power (EUT)
MHz	H/V	dB(uV)	dB(uV)	dBm	dBm
824.0	V	105.7	87.4	9.0	27.3
836.0	V	104.8	86.6	9.0	27.2
849.0	V	105.0	85.7	8.7	28.0

Note: 1. All measurement were made at 3 meters.

ITS Intertek Testing Services

Job No: J20012925
Company: Mitsubishi Communication
Model: T300
Engineer: D. Chernomordik
Date: 5/12/00

Radiated Power
(Substitution Method)

Frequency MHz	Antenna Polarization	Field Strength (EUT) dB(uV/m)	Field Strength (Sig. Gen + Tr. Antenna) dB(uV/m)	Sig. Gen. Power + $G_{t.a}$ dBm	EIRP dBm
1850	V	122.0	118.9	21.5	25.6
1880	V	122.3	118.3	22.0	26.0
1910	V	122.0	117.7	22.5	26.8

Test was performed at 3 m distance
EMCO 3115 Horn Antenna was used

4.0 Modulation Deviation Limiting, FCC § 2.1047, § 22.915(b)(c)

4.1 Test Procedure

The RF output of the transceiver was connected to the input of an FM deviation meter through sufficient attenuation so as not to overload the meter or distort the readings. An audio signal generator with a variable attenuator on the output was coupled into the external microphone jack of the transceiver, or alternatively, the microphone element was removed and the generator output was connected to the microphone wires by clip leads.

At three different modulating frequencies, the output level of the audio generator was varied and the FM deviation level was recorded (Table 4.1a).

In addition, the audio signal was adjusted to obtain 8 kHz deviation at 1 kHz modulation frequency. Then the input signal was increased in 1 step by 20 dB and the peak deviation and steady state deviation were recorded. This test was performed at modulation frequencies from 300 Hz to 3 kHz.

4.2 Test Equipment

Marconi 2955A Radio Communication Test Set
Leader LFG-1300S Function Generator
LMV-182 AC Millivoltmeter

4.3 Test Results

The EUT passed the test, refer to the attached test data.

Test: **Modulation Deviation Limiting**

S/W: **4.2**
Phone Model: **T300**
ESN: **109**
Date: **02/Jun/2000**

Output Level (mV)	FM Deviation in KHz at Indicated modulation Frequency		
	3000 Hz (kHz)	1000 Hz (kHz)	300 Hz (kHz)
15	1.5	0.9	0.6
65	5.4	2.6	0.9
115	8.7	4.3	1.3
165	9.9	5.8	1.6
215	10.3	7.4	2.1
265	11.0	7.6	2.4
315	10.4	8.0	2.9
365	11.1	9.0	3.2
415	10.7	9.2	3.7
465	11.4	9.4	4.1
515	11.0	9.6	4.4
565	10.9	9.8	4.9
615	11.2	10.0	5.3
665	10.8	10.1	5.7
715	11.4	10.2	6.0
765	10.8	10.3	6.6
815	10.8	10.3	6.9
865	11.5	10.4	7.2
915	10.9	10.4	7.8
965	11.6	10.4	8.2
1015	11.2	10.5	8.4
1065	11.1	10.5	8.4
1115	11.2	10.6	8.5
1165	10.8	10.6	8.6
1215	11.3	10.6	8.6
1265	11.0	10.5	8.7

Test: Peak Frequency Deviation

S/W: **4.2**
Phone Model: **T300**
ESN: **109**
Date: **02/Jun/2000**
IS-137 Section: **3.3.1.2.3**

Frequency kHz	Initial Deviation	Peak Deviation	Steady state Deviation
0.3	2.5	5.9	5.3
0.5	3.9	8.0	7.7
0.7	5.6	8.5	8.3
0.9	7.1	9.1	8.6
1.0	8.0	9.7	8.3
1.2	8.9	10.2	9.9
1.4	9.4	9.7	9.3
1.6	9.7	10.3	10.3
1.8	9.7	10.1	9.6
2.0	9.5	11.0	11.0
2.4	9.8	11.5	10.0
2.8	10.8	11.1	10.2
3.0	10.1	11.5	10.2

Test conditions:
V_{in_p}=586 mV
Deviation= 8 kHz at 1 kHz modulation frequency
Middle channel=836.52 MHz

5.0 Audio Filter Characteristics, FCC 22.915(d)

For mobile stations, these signals must be attenuated, relative to the level at 1 kHz, as follows:

(i) In the frequency ranges of 3.0 to 5.9 kHz and 6.1 to 15.0 kHz, signals must be attenuated by at least 40 log (f/3) dB, where f is the frequency of the signal in kHz.

(ii) In the frequency range of 5.9 to 6.1 kHz, signals must be attenuated at least 35 dB.

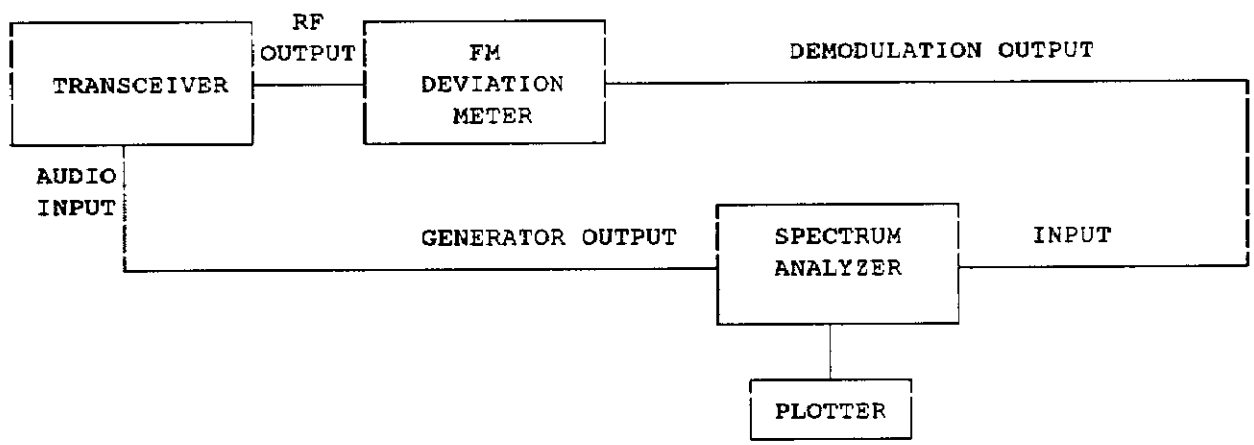
(iii) In the frequency range above 15 kHz, signals must be attenuated at least 28 dB.

5.1 Test Procedure

The RF output of the transceiver was connected to the input of an FM deviation meter through sufficient attenuation so as not to overload the meter or distort the readings. An audio signal generator with a variable attenuator on the output was coupledl into the external microphone jack of the transceiver, or alternatively, the microphone element was removed and the generator output was connected to the microphone wires by clip leads.

The audio signal at the transceiver audio input was adjusted to obtain 8-9 kHz deviation at the more sensitive modulation frequency (approximately 2.7 kHz). The audio frequency was varied from 300 Hz to 30 kHz and the deviation was measured while maintaining a constant input level. Using the level measured at 1 kHz as a reference (0 dB), the audio filter response was calculated (See Table 5-1).

In addition, the test was performed according to the block diagram shown below.



On that block diagram, the HP 3885A spectrum analyzer having the tracing generator, and the Marconi 2955A Radio Communication Test Set having an output of a demodulator, are used. After the calibration was made (the -20 dBm reading of the spectrum analyzer corresponds to the 9 kHz deviation) the spectrum analyzer was set to scan the frequency from 300 Hz to 30 kHz, with the same audio input level as described above, and with compressor OFF and expander OFF.

The audio filter response was plotted directly from the spectrum analyzer (Refer to Plots # 5.1.a, 5.1.b.

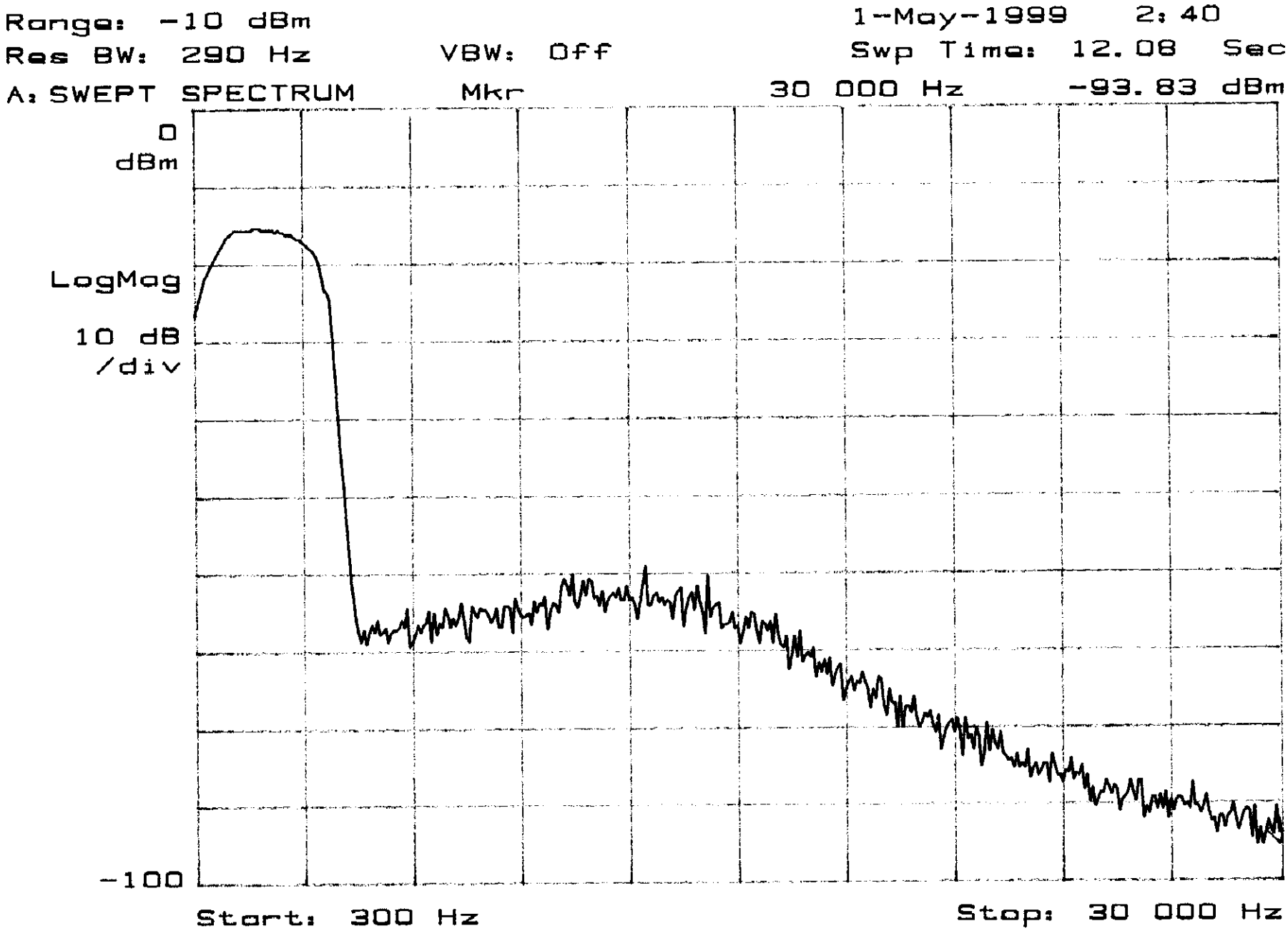
5.2 Test Equipment

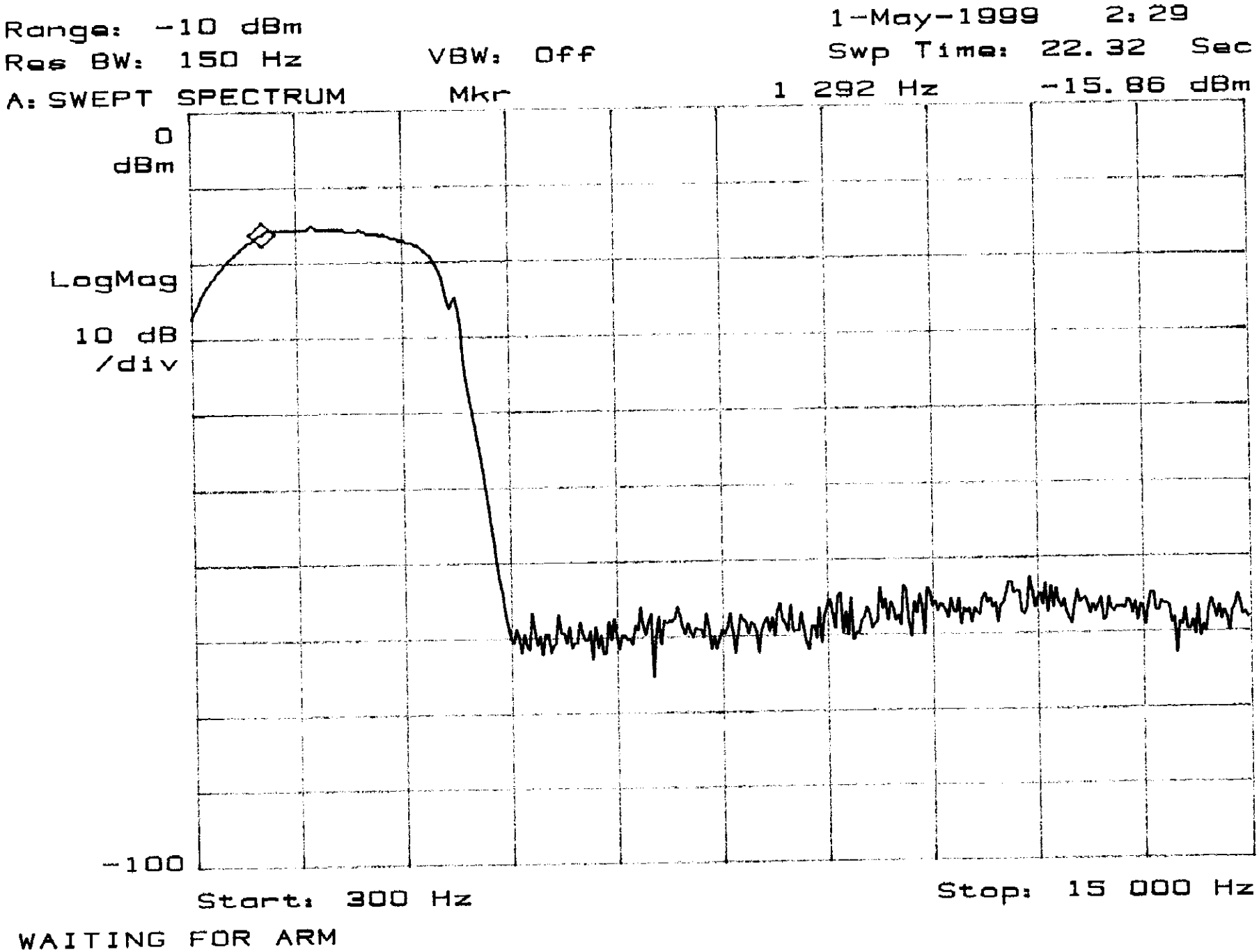
Marconi Instruments 2955A Radio Communications Test Set
HP 3588A Spectrum Analyzer
HP 7470A Plotter
Leader LFG-1300S Function Generator
LMV-182 AC Millivoltmeter

5.3 Test Results

Passed, refer to the attached test data and plots.

Table 5.1 Audio Filter Characteristics		
Modulation Frequency kHz	Level Corresponding to Deviation dBm	Attenuation DB
0.3	-27.0	10.4
0.4	-24.9	7.5
0.5	-23.6	6.2
0.6	-22.0	4.6
0.7	-20.67	3.3
0.8	-19.5	2.1
0.9	-18.5	1.1
1.0	-17.4	0
1.2	-16.3	-1.1
1.4	-15.5	-1.9
1.6	-15.3	-2.1
1.8	-15.4	-2.0
2.0	-15.0	-2.0
2.2	-15.3	-2.1
2.5	-1.5	-1.9
3.0	-16.2	-1.2
3.5	-17.8	0.4
4.0	-25.0	7.6
4.5	-60.3	42.9
5.0	-66.4	49.0
5.5	-68.3	52.9
5.9	-68.4	51.0
6.0	-67.6	50.2
6.1	-67.5	50.1
8.0	-69.5	52.1
10.0	-65.6	48.2
15.0	-65.0	47.6
20.0	-80.0	62.6
30.0	-93.8	76.4


Range: -10 dBm
1-May-1999 2:40
Res BW: 290 Hz
VBW: Off
Swp Time: 12.08 Sec
A: SWEPT SPECTRUM
Mkr
30 000 Hz
-93.83 dBm
0
dBm
LogMag
10 dB
/div
-100
Start: 300 Hz
Stop: 30 000 Hz
WAITING FOR ARM


Range: -10 dBm
Res BW: 150 Hz
VBW: Off
1-May-1999 2:29
Swp Time: 22.32 Sec
A: SWEPT SPECTRUM
Mkr 1 292 Hz -15.86 dBm
0 dBm
LogMag
10 dB /div
-100
Start: 300 Hz
Stop: 15 000 Hz
WAITING FOR ARM

6.0 Emission Limitations, Occupied Bandwidth, FCC § 2.1049, 22.917(b)(d)

For F3E/F3D emission mask uses with audio filter, the mean power of emissions must be attenuated below the mean power of the unmodulated carrier wave (P) as follows:

(1) On any frequency removed from the carrier frequency by more than 20 kHz but not more than 45 kHz: at least 26 dB;

(2) On any frequency removed from the carrier frequency by more than 45 kHz, up to the first multiple of the carrier frequency: at least 60 dB or 43 + 10 log P dB, whichever is the lesser attenuation.

For F1D emission mask, the mean power of emissions must be attenuated below the mean power of the unmodualted carrier (P) as follows:

(1) On any frequency removed from the carrier frequency by more than 20 kHz but no more than 45 kHz: at least 26 dB;

(2) On any frequency removed from the carrier frequency by more than 45 kHz but not more than 90 kHz: at least 45 dB;

(2) On any frequency removed from the carrier frequency by more than 90 kHz, up to the first multiple ofthe carrier frequency: at least 60 dB or 43 +10 log P db, whichever is the lesser attenuation.

6.1 Test Procedure

The RF output of the transceiver was connected to the input of the spectrum analyzer through sufficient attenuation. The audio generator was connected to the audio input of the transceiver.

The spectrum with no modulation was recorded. The audio input signal was adjusted to obtain the frequencies deviation equal 6 kHz at the audio frequency of maximum response which was determined measuring deviation versus frequency from 300 Hz to 3.5 kHz and was found 2.8 kHz. The audio input level was increased by 16 dB. The audio frequency was set to the frequency 2.5 kHz.

The resolution bandwidth of the spectrum analyzer was set at 300 Hz and the spectrum was recorded in the frequency band ±50 kHz and ±100 kHz from the carrier frequency. The same plots has been done for wideband emissions, SAT, ST, DTMF9, Voice, some of the combinations of these modulating signals and in TDMA mode.

Note: Some of the plots were only done in the frequency band of ±50 kHz since it was clear from these plots, that the levels of emissions were well below the limits.

6.2 Test Equipment

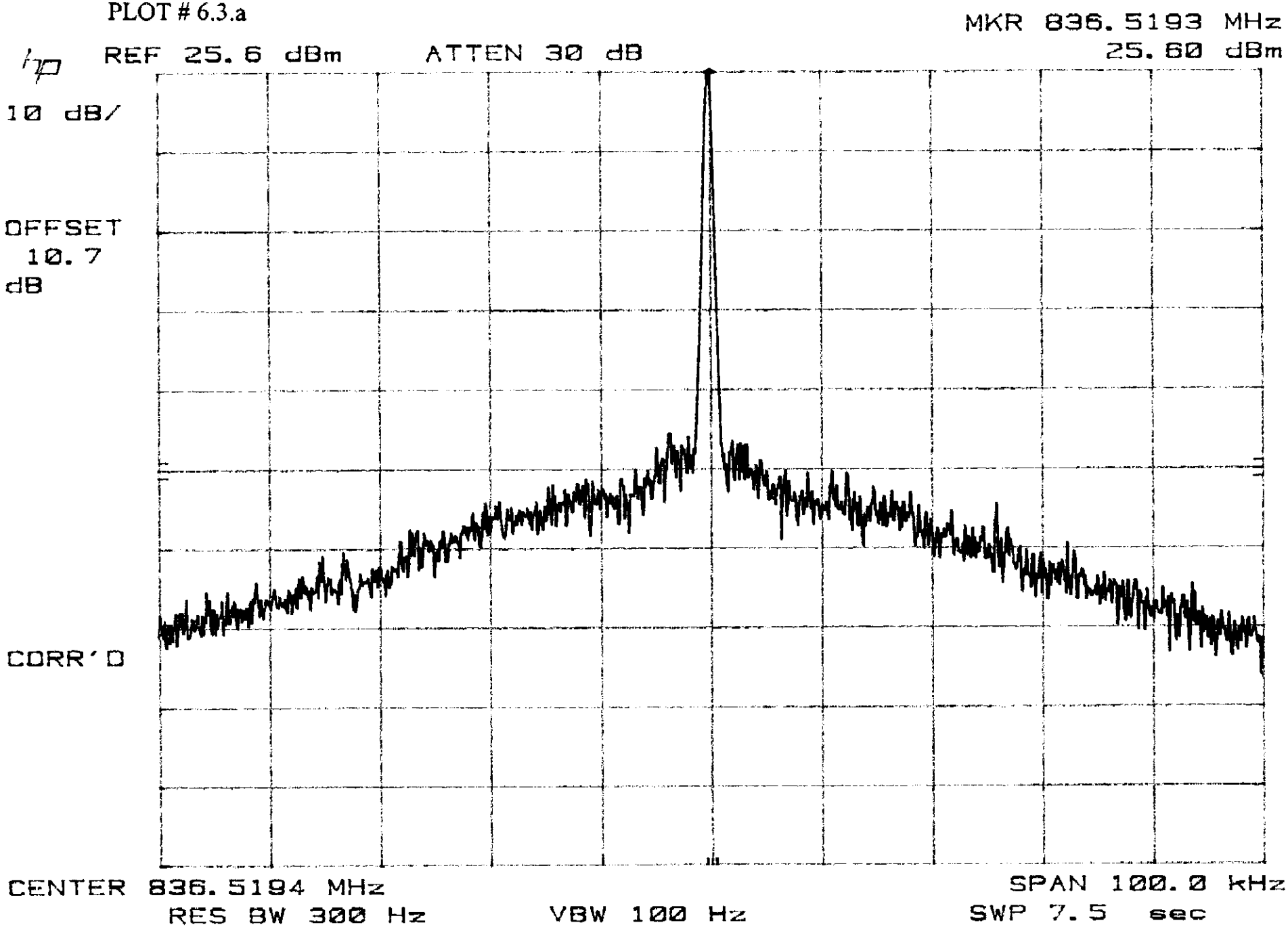
HP 8566B Spectrum Analyzer
Leader LFG-1300S Function Generator
Leader LMV-182 AC Millivoltmeter
Marconi 2955A Radio Communication Test Set
HP 7470A Plotter

6.3 Test Results

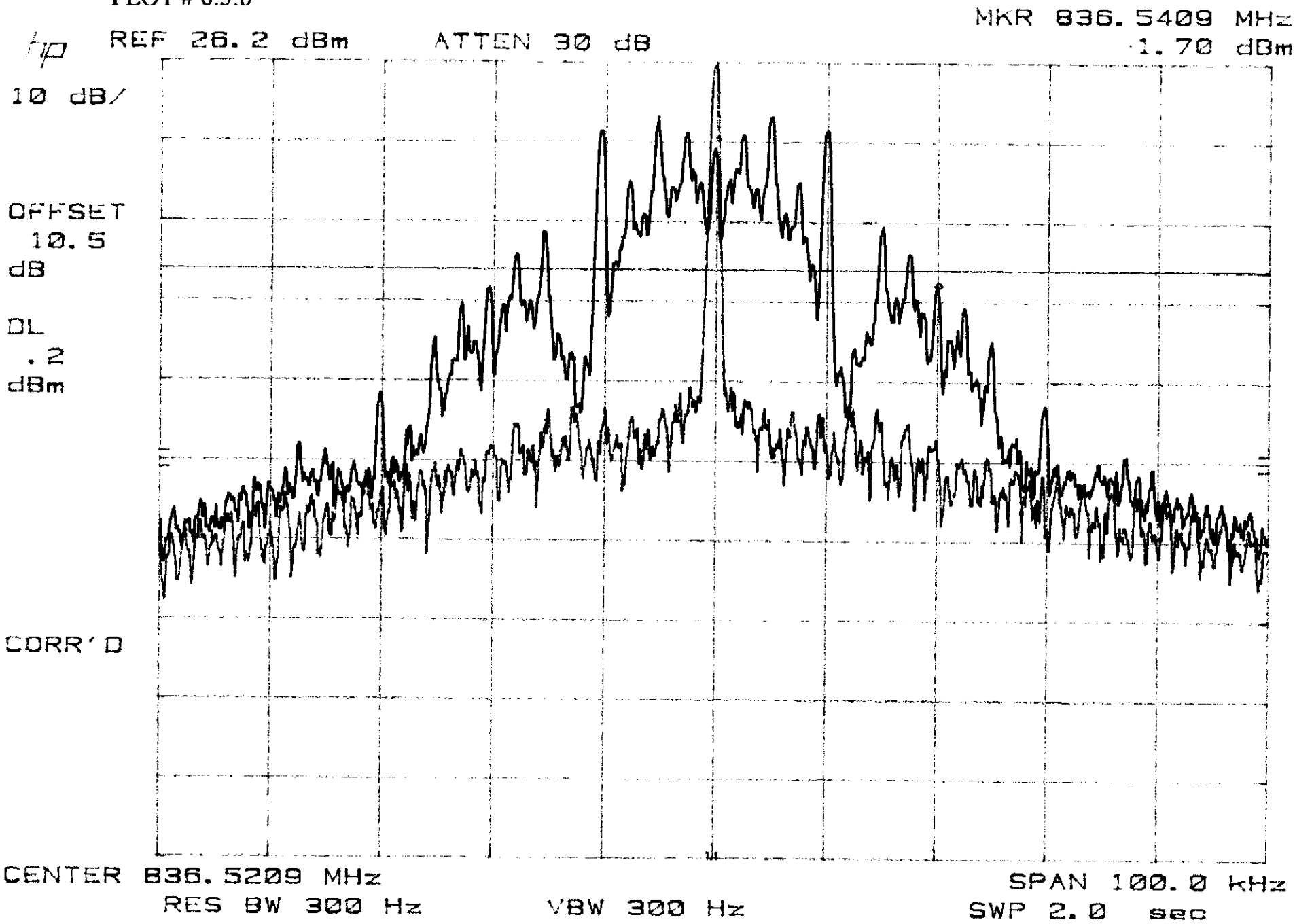
Passes	Refer to the attached plots.

Plot Number	Description
6.3.a	Carrier frequency, no modulation, scan 100 kHz
6.3.b	Wideband emissions (0, 1, 0, 1), scan 100 kHz
6.3.c	Wideband emissions (0, 1, 0, 1), scan 200 kHz
6.3.d	DTMF "9"
6.3.e	SAT (6 kHz, 2 kHz deviation)
6.3.f1	ST (10 kHz, 8 kHz deviation), scan 50 kHz, Res BW=300 Hz
6.3.f2	ST (10 kHz, 8 kHz deviation), scan 50 kHz, Res BW=100 Hz
6.3.f3	ST (10 kHz, 8 kHz deviation), scan 100 kHz
6.3.g	ST & SAT (6 kHz & 10 kHz), scan 100 kHz
6.3.h	ST & SAT (6 kHz & 10 kHz), scan 200 kHz
6.3.i	DTMF & SAT, scan 100 kHz
6.3.k1	Voice (2.5 kHz), scan 100 kHz
6.3.k2	Voice (2.5 kHz), scan 200 kHz
6.3.l1	Voice (2.5 kHz) & SAT (6 kHz), scan 100 kHz
6.3.l2	Voice (2.5 kHz) & SAT (6 kHz), scan 200 kHz
6.3.m	Voice (2.5 kHz) & SAT (6 kHz), low power
6.3.n	TDMA mode, scan 100 kHz, cellular
6.3.o	TDMA mode, scan 200 kHz, cellular
6.3.p	TDMA mode, PCS
6.3.q	TDMA mode, PCS

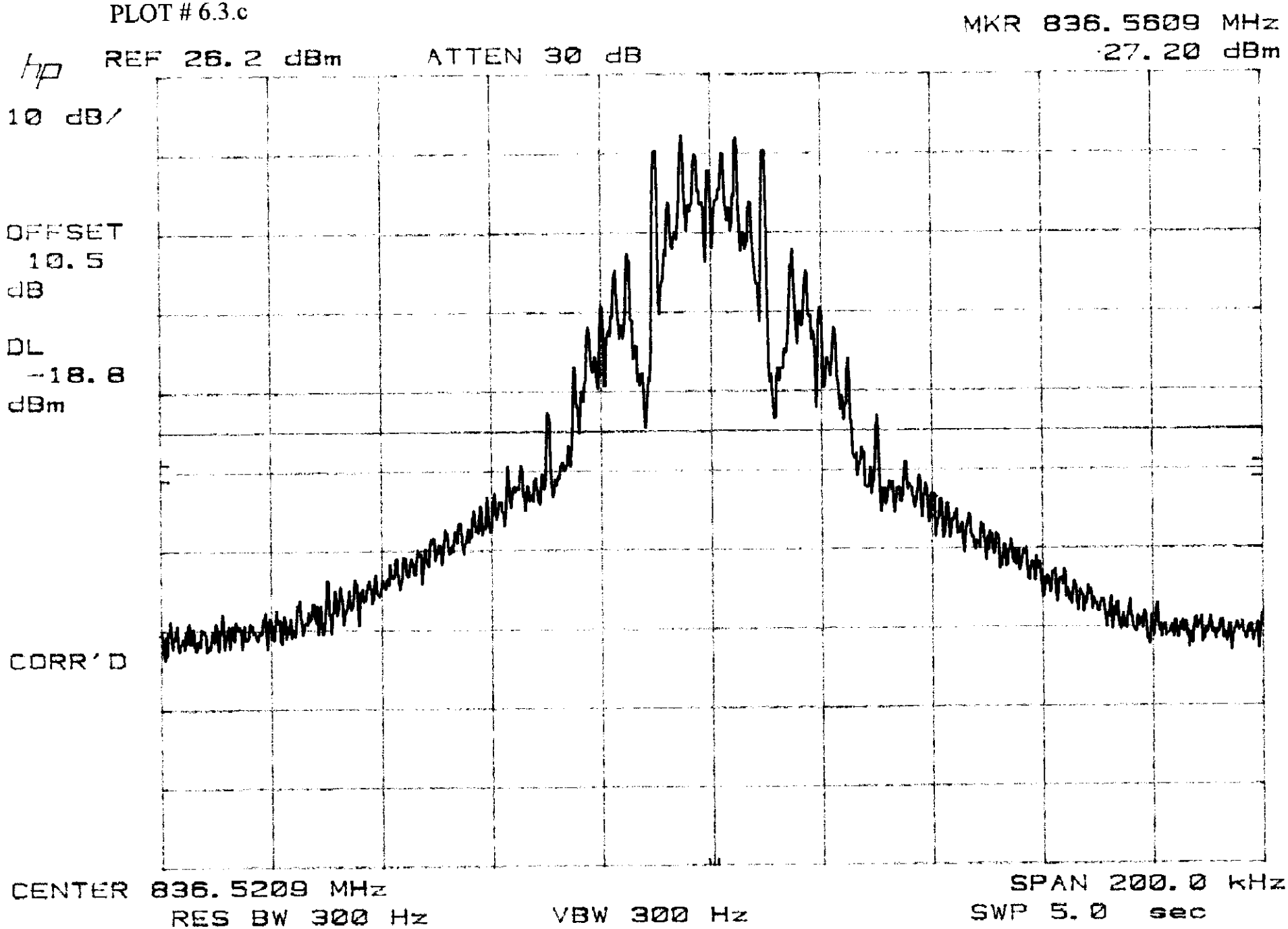
PLOT # 6.3.a


MKR 836.5193 MHz
25.60 dBm
REF 25.6 dBm
ATTEN 30 dB
10 dB/
OFFSET
10.7
dB
CORR'D
CENTER 836.5194 MHz
SPAN 100.0 kHz
RES BW 300 Hz
VBW 100 Hz
SWP 7.5 sec

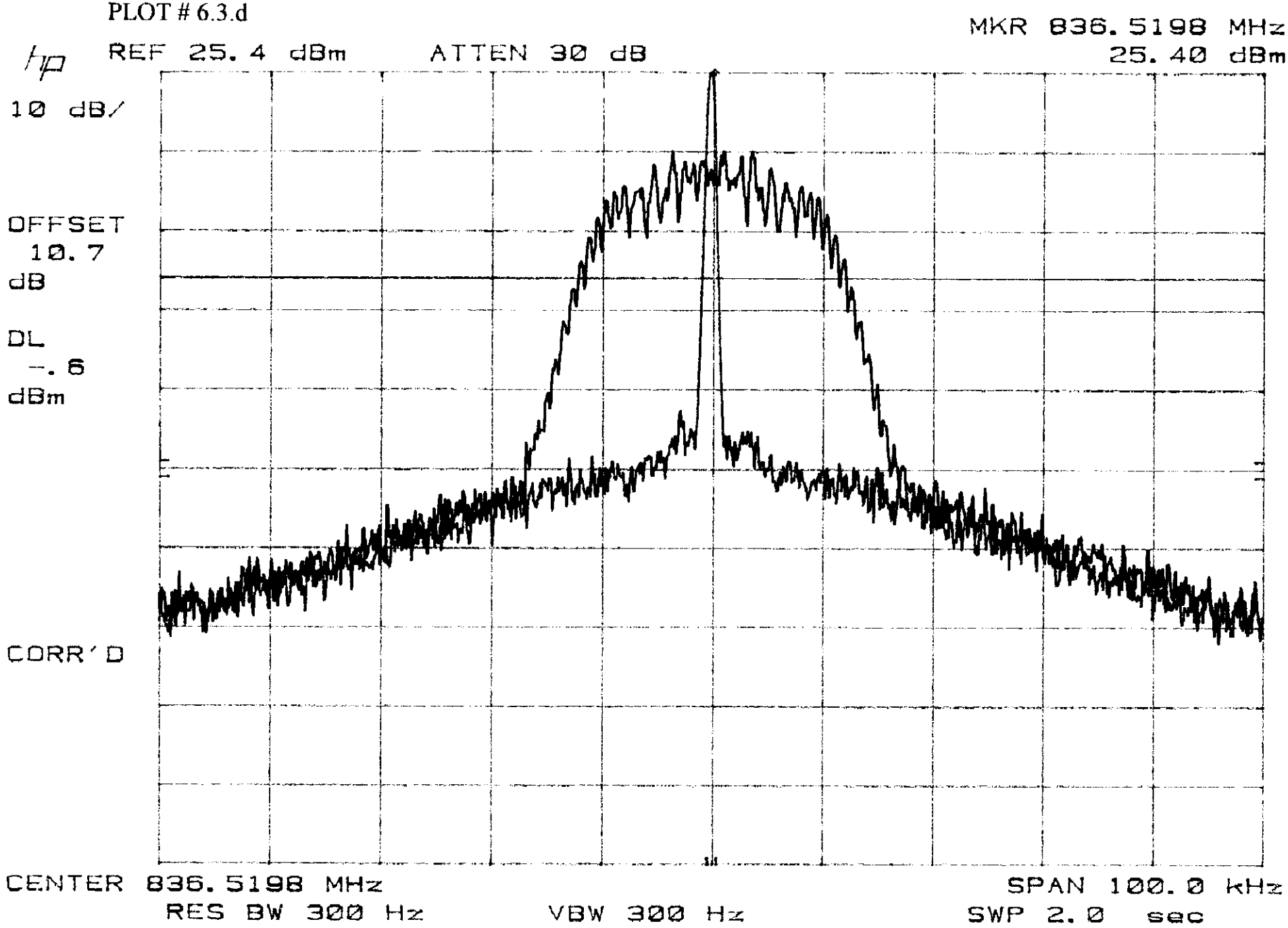
PLOT # 6.3.b


MKR 836.5409 MHz
1.70 dBm
REF 26.2 dBm
ATTEN 30 dB
10 dB/
OFFSET
10.5
dB
DL
.2
dBm
CORR'D
CENTER 836.5209 MHz
RES BW 300 Hz
VBW 300 Hz
SPAN 100.0 kHz
SWP 2.0 sec

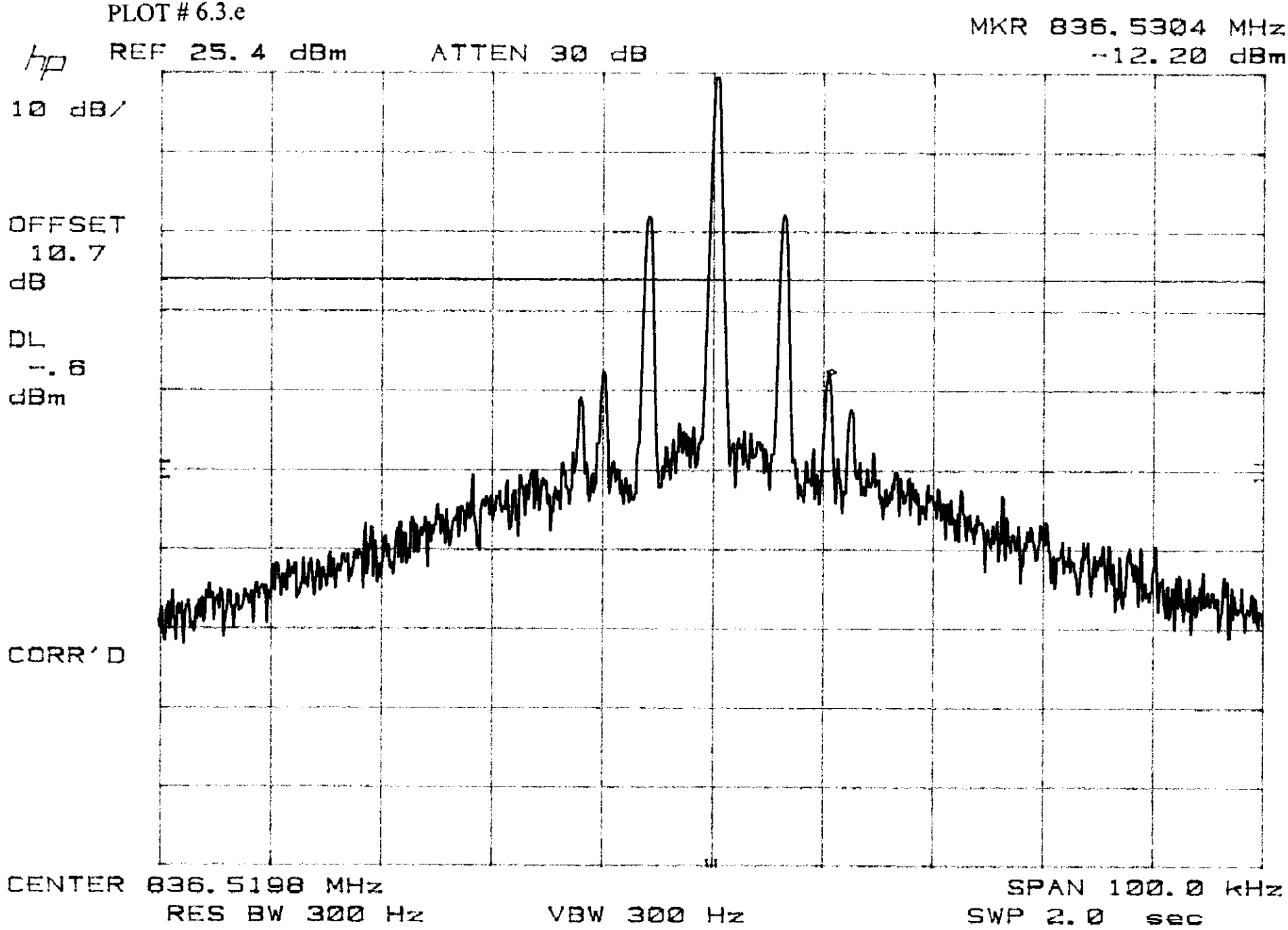
PLOT # 6.3.c


MKR 836.5609 MHz
-27.20 dBm
REF 26.2 dBm
ATTEN 30 dB
10 dB/
OFFSET
10.5
dB
DL
-18.8
dBm
CORR'D
CENTER 836.5209 MHz
RES BW 300 Hz
VBW 300 Hz
SPAN 200.0 kHz
SWP 5.0 sec

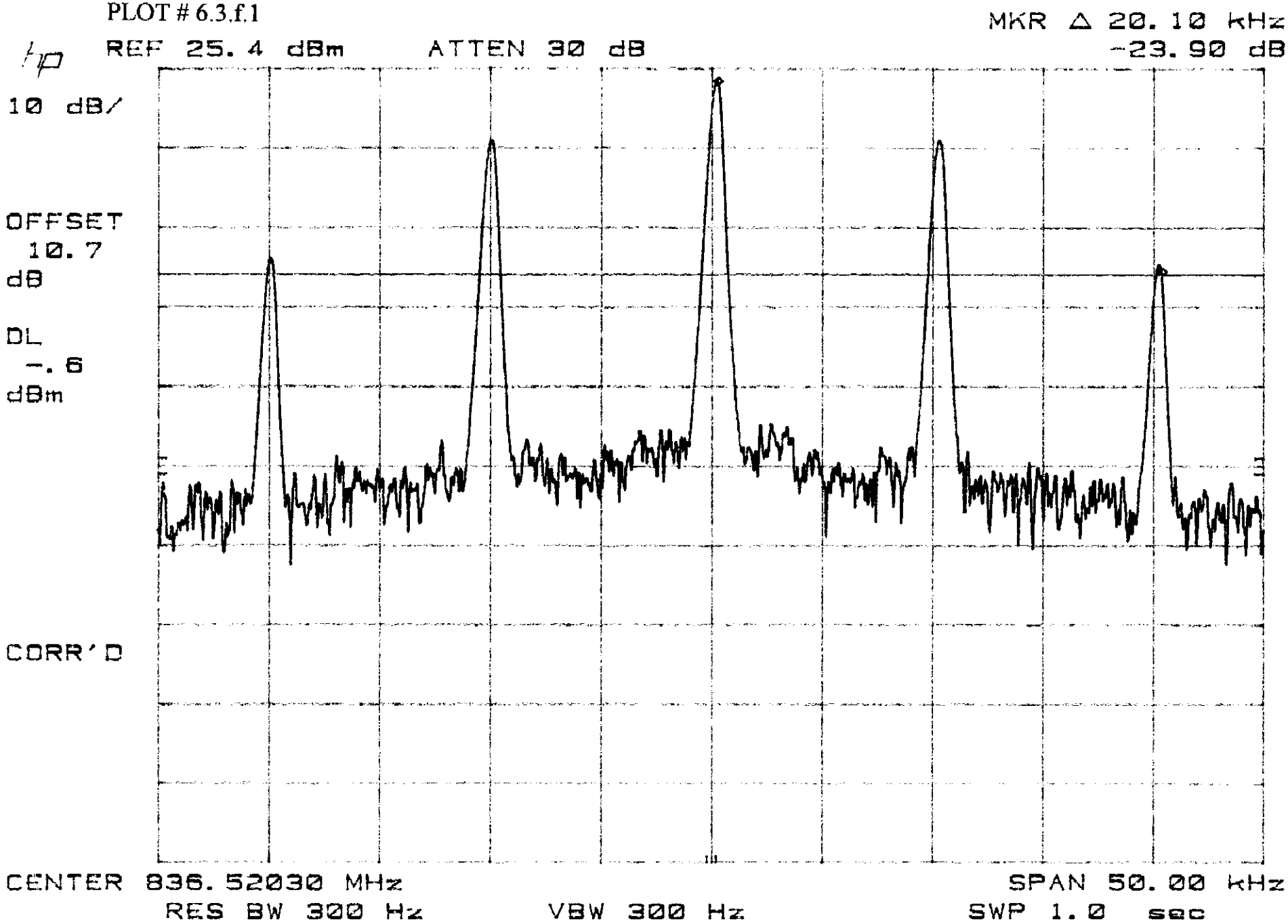
PLOT # 6.3.d


MKR 836.5198 MHz
25.40 dBm
REF 25.4 dBm
ATTEN 30 dB
10 dB/
OFFSET
10.7
dB
DL
-.6
dBm
CORR'D
CENTER 836.5198 MHz
SPAN 100.0 kHz
RES BW 300 Hz
VBW 300 Hz
SWP 2.0 sec

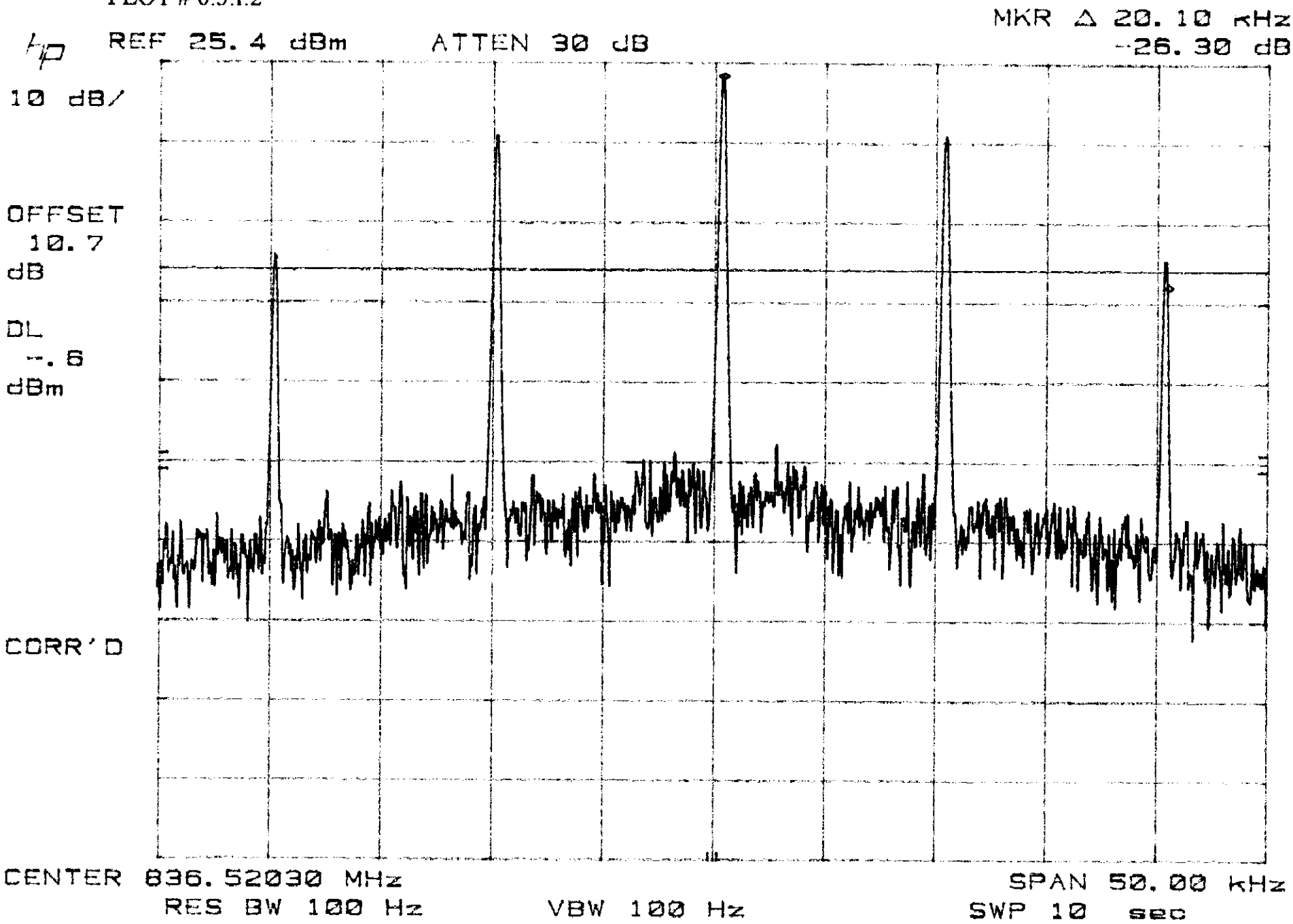
PLOT # 6.3.e


MKR 836.5304 MHz
-12.20 dBm
REF 25.4 dBm
ATTEN 30 dB
10 dB/
OFFSET
10.7
dB
DL
-.6
dBm
CORR'D
CENTER 836.5198 MHz
SPAN 100.0 kHz
RES BW 300 Hz
VBW 300 Hz
SWP 2.0 sec

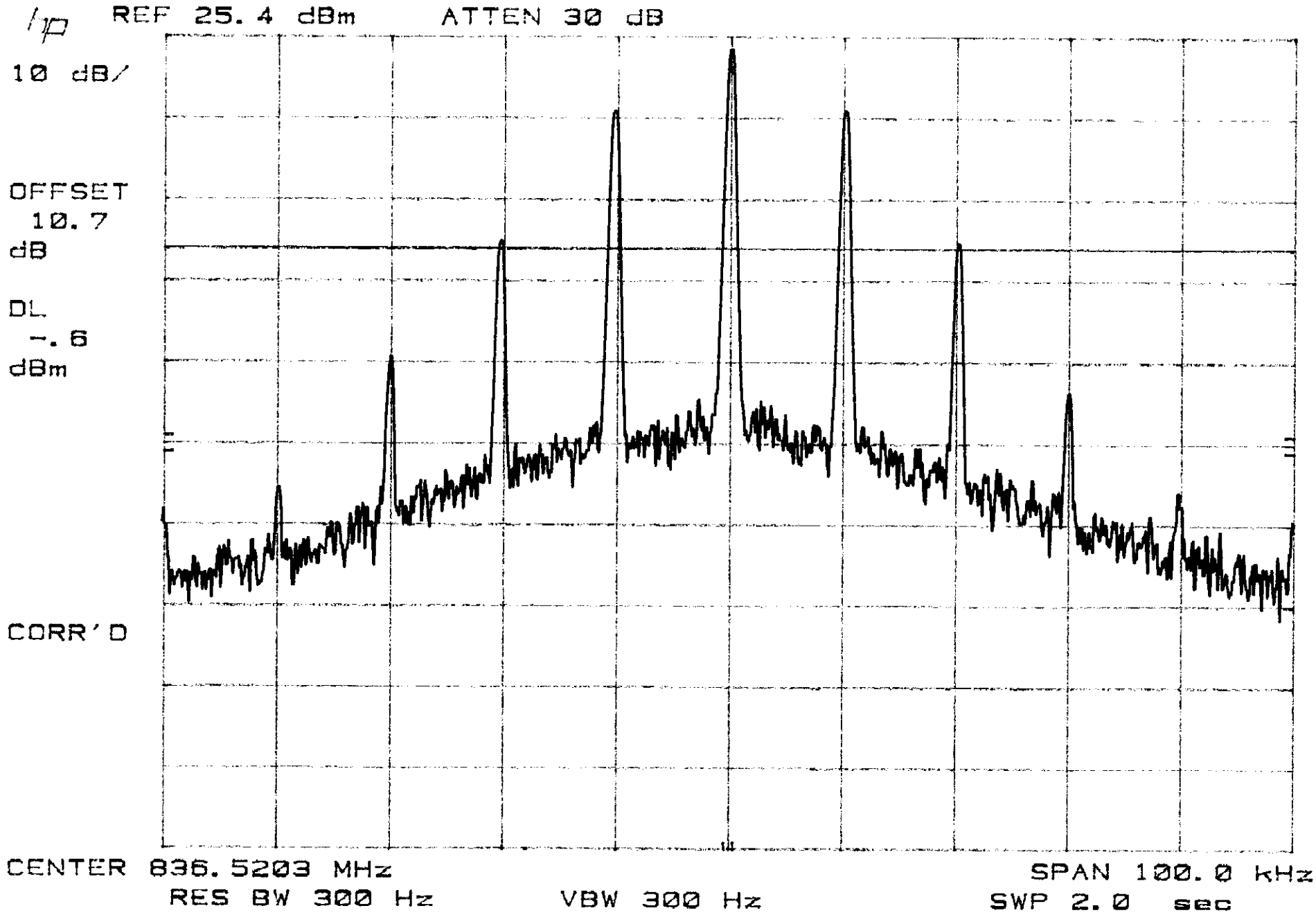
PLOT # 6.3.f.1


MKR Δ 20.10 kHz
-23.90 dB
REF 25.4 dBm
ATTEN 30 dB
10 dB/
OFFSET
10.7
dB
DL
-.6
dBm
CORR'D
CENTER 836.52030 MHz
SPAN 50.00 kHz
RES BW 300 Hz
VBW 300 Hz
SWP 1.0 sec

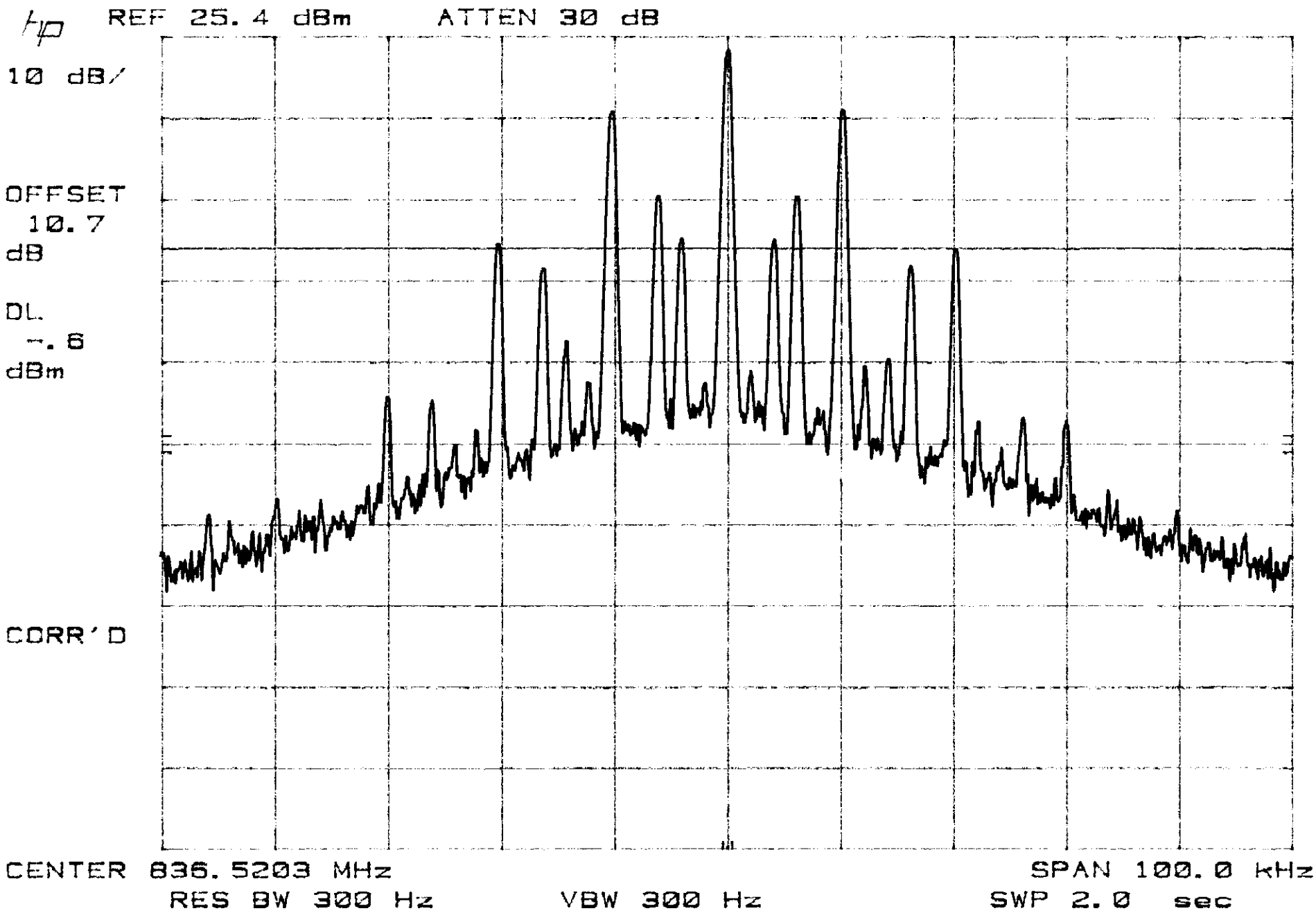
PLOT # 6.3.f.2


MKR Δ 20.10 kHz
-26.30 dB
REF 25.4 dBm
ATTEN 30 dB
10 dB/
OFFSET
10.7
dB
DL
-.6
dBm
CORR'D
CENTER 836.52030 MHz
SPAN 50.00 kHz
RES BW 100 Hz
VBW 100 Hz
SWP 10 sec

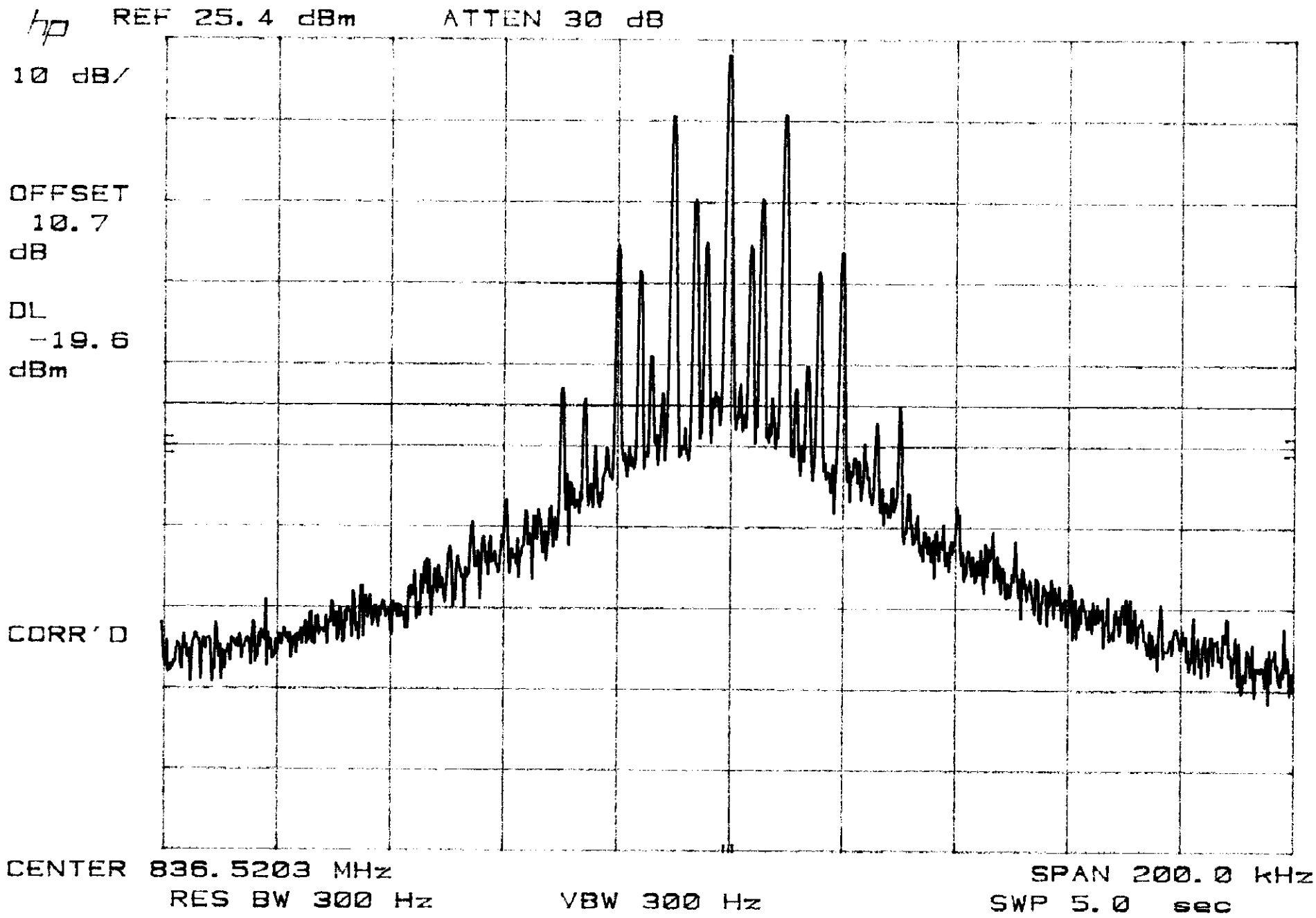
PLOT # 6.3.f.3


REF 25.4 dBm
ATTEN 30 dB
10 dB/
OFFSET
10.7
dB
DL
-.6
dBm
CORR'D
CENTER 836.5203 MHz
RES BW 300 Hz
VBW 300 Hz
SPAN 100.0 kHz
SWP 2.0 sec

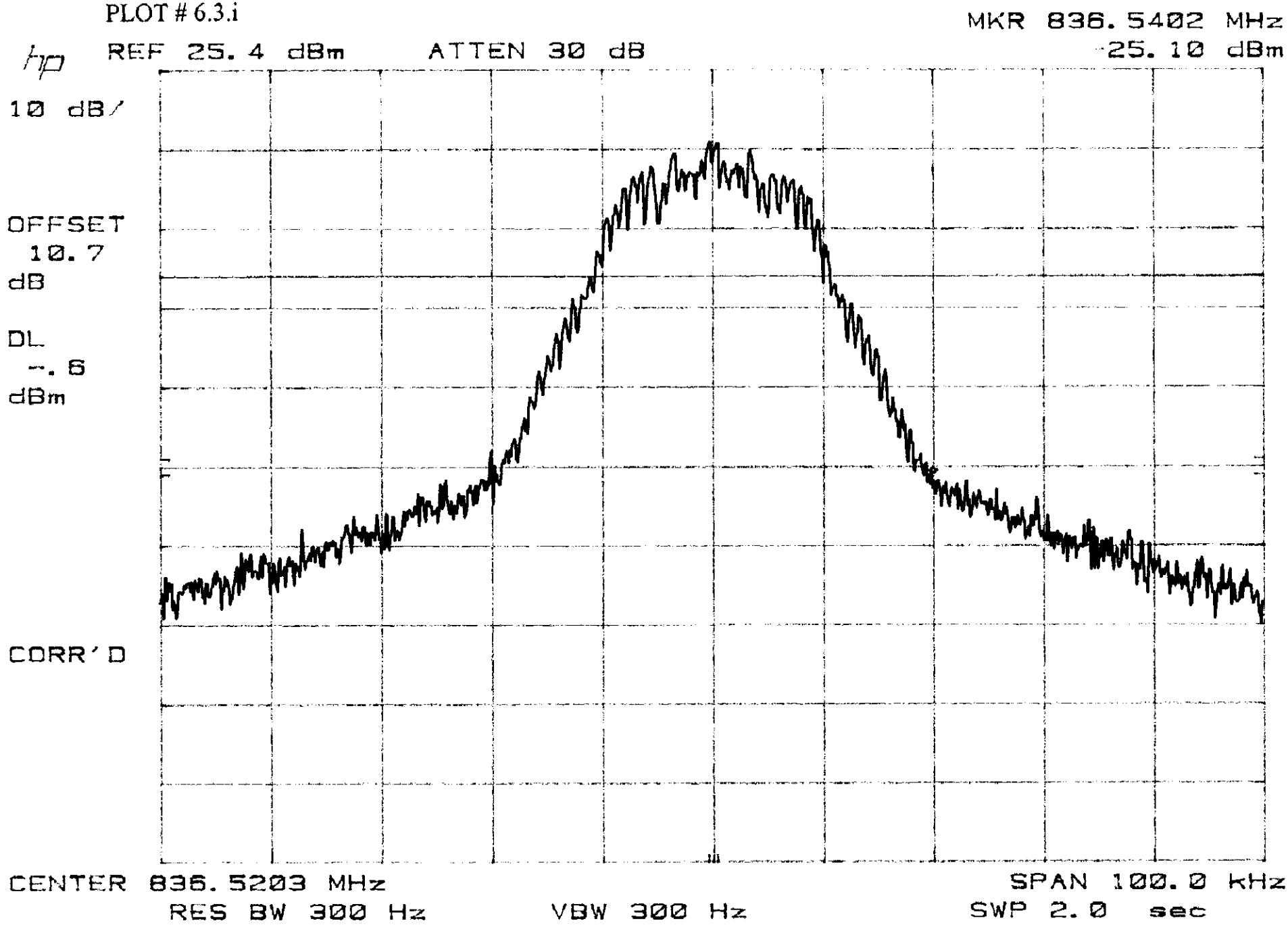
PLOT # 6.3.g


REF 25.4 dBm
ATTEN 30 dB
10 dB/
OFFSET
10.7
dB
DL
-.6
dBm
CORR'D
CENTER 836.5203 MHz
SPAN 100.0 kHz
RES BW 300 Hz
VBW 300 Hz
SWP 2.0 sec

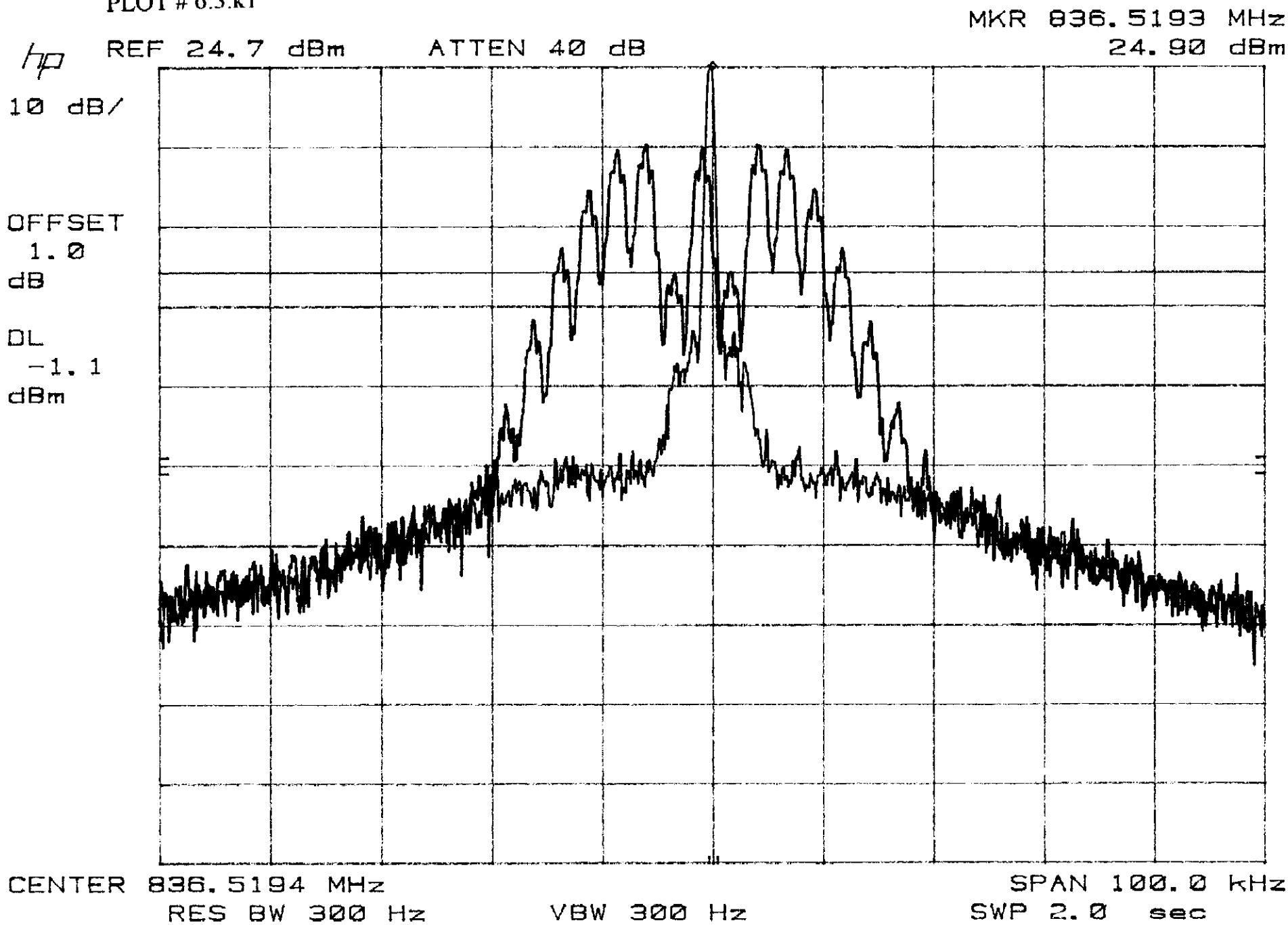
PLOT # 6.3.h


REF 25.4 dBm
ATTEN 30 dB
10 dB/
OFFSET
10.7
dB
DL
-19.6
dBm
CORR'D
CENTER 836.5203 MHz
SPAN 200.0 kHz
RES BW 300 Hz
VBW 300 Hz
SWP 5.0 sec

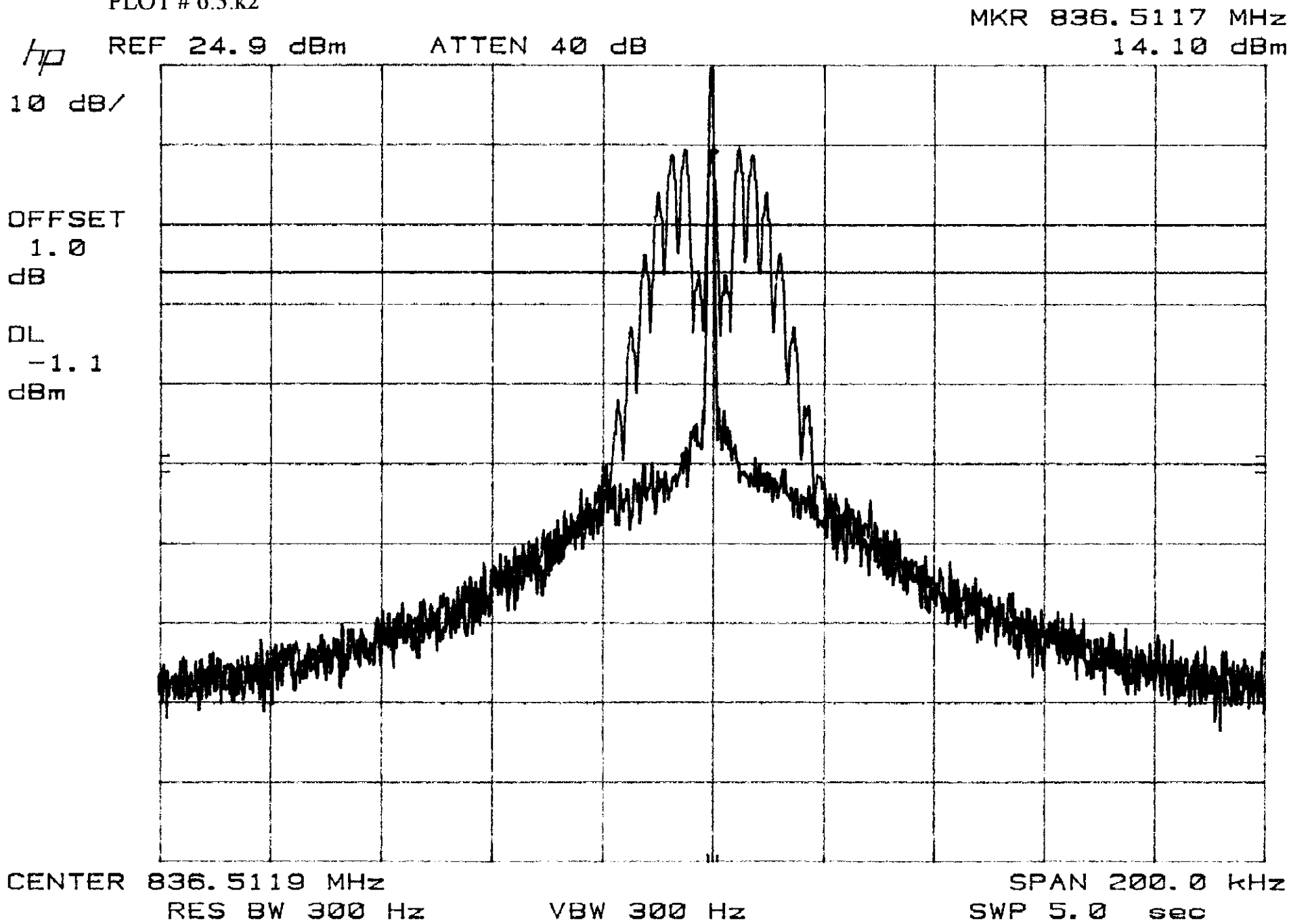
PLOT # 6.3.i


MKR 836.5402 MHz
25.10 dBm
REF 25.4 dBm
ATTEN 30 dB
10 dB/
OFFSET
10.7
dB
DL
-.6
dBm
CORR'D
CENTER 836.5203 MHz
SPAN 100.0 kHz
RES BW 300 Hz
VBW 300 Hz
SWP 2.0 sec

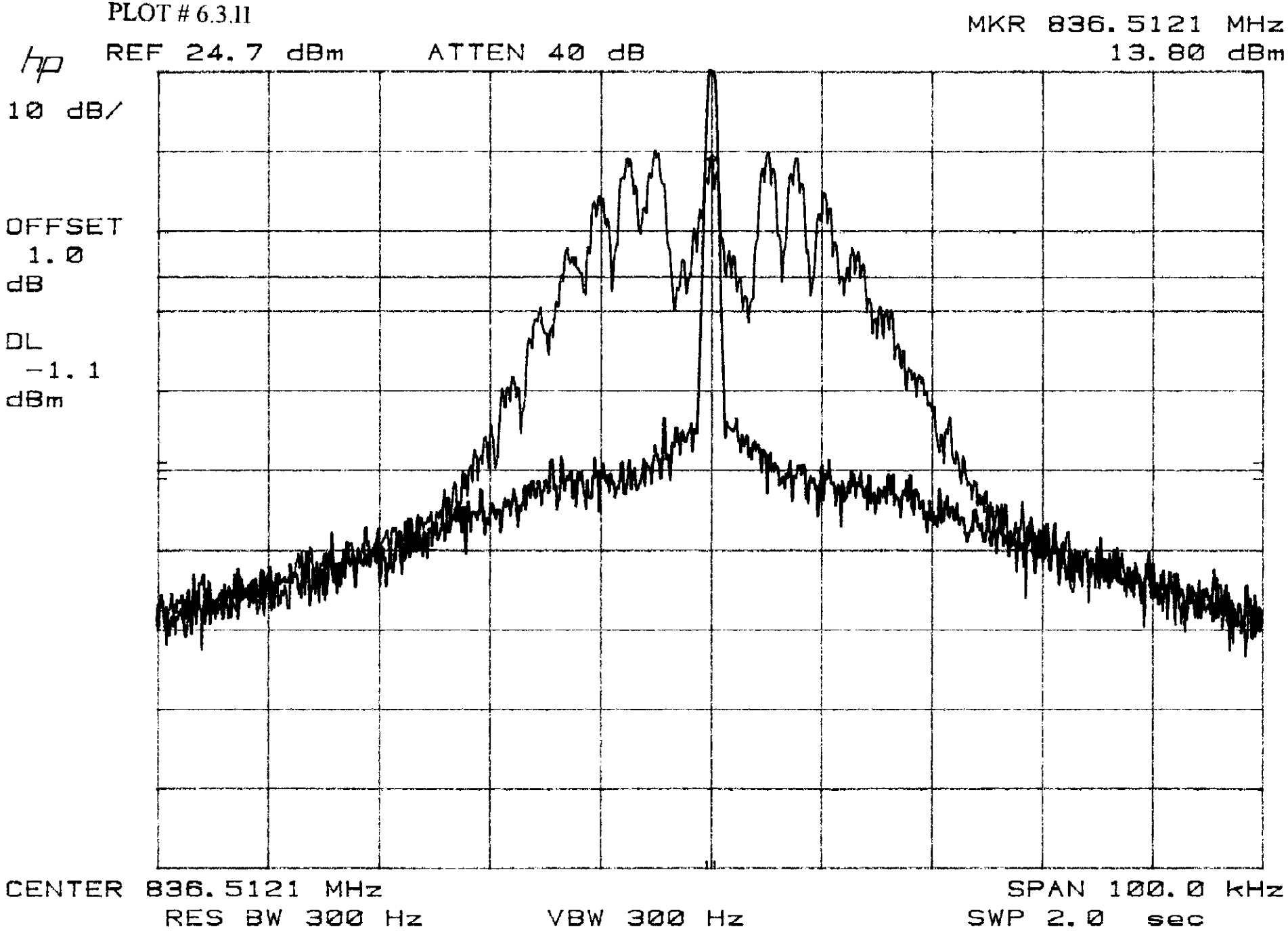
PLOT # 6.3.k1


MKR 836.5193 MHz
24.90 dBm
REF 24.7 dBm
ATTEN 40 dB
10 dB/
OFFSET
1.0
dB
DL
-1.1
dBm
CENTER 836.5194 MHz
SPAN 100.0 kHz
RES BW 300 Hz
VBW 300 Hz
SWP 2.0 sec

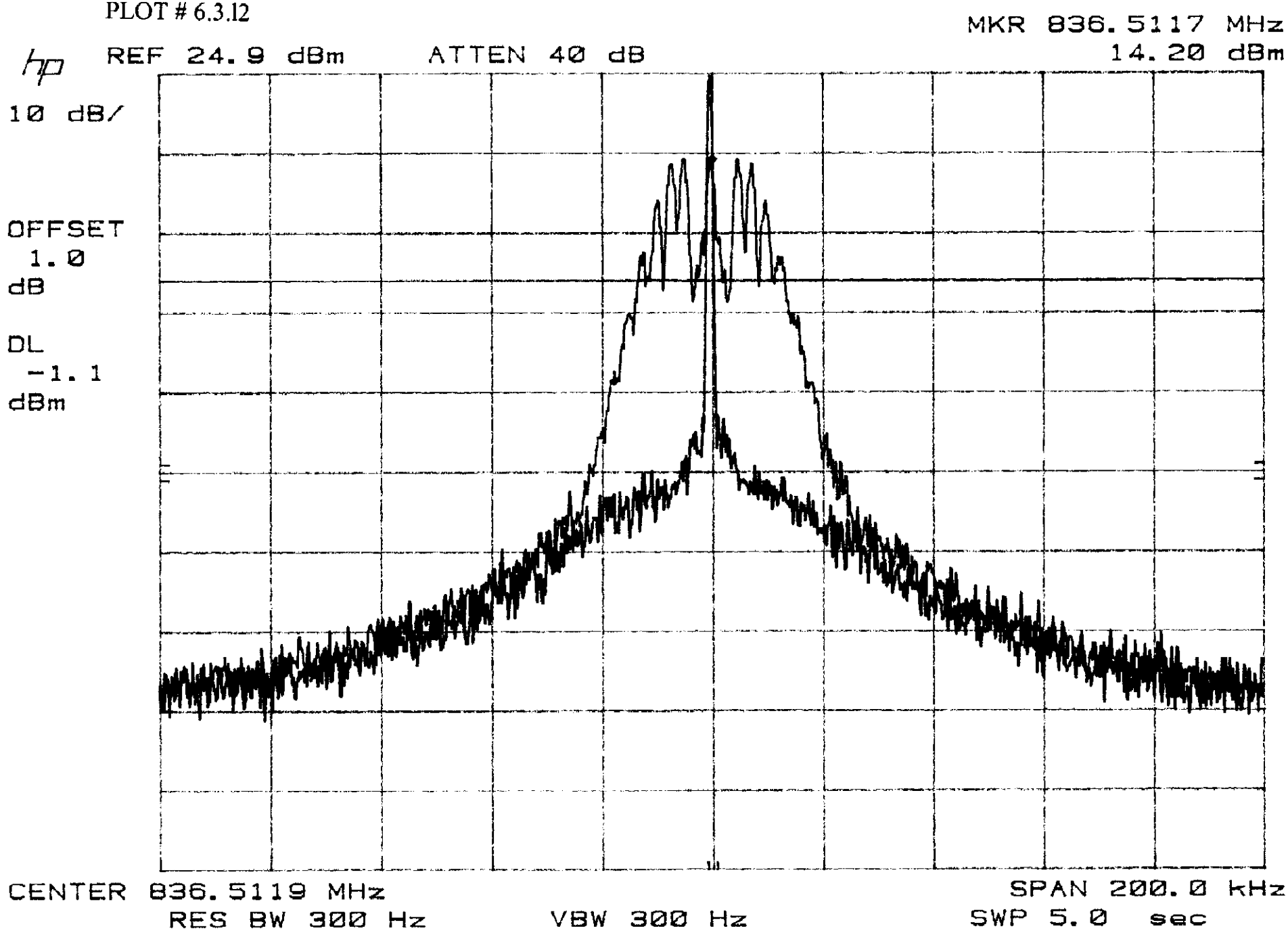
PLOT # 6.3.k2


MKR 836.5117 MHz
14.10 dBm
REF 24.9 dBm
ATTEN 40 dB
10 dB/
OFFSET
1.0
dB
DL
-1.1
dBm
CENTER 836.5119 MHz
SPAN 200.0 kHz
RES BW 300 Hz
VBW 300 Hz
SWP 5.0 sec

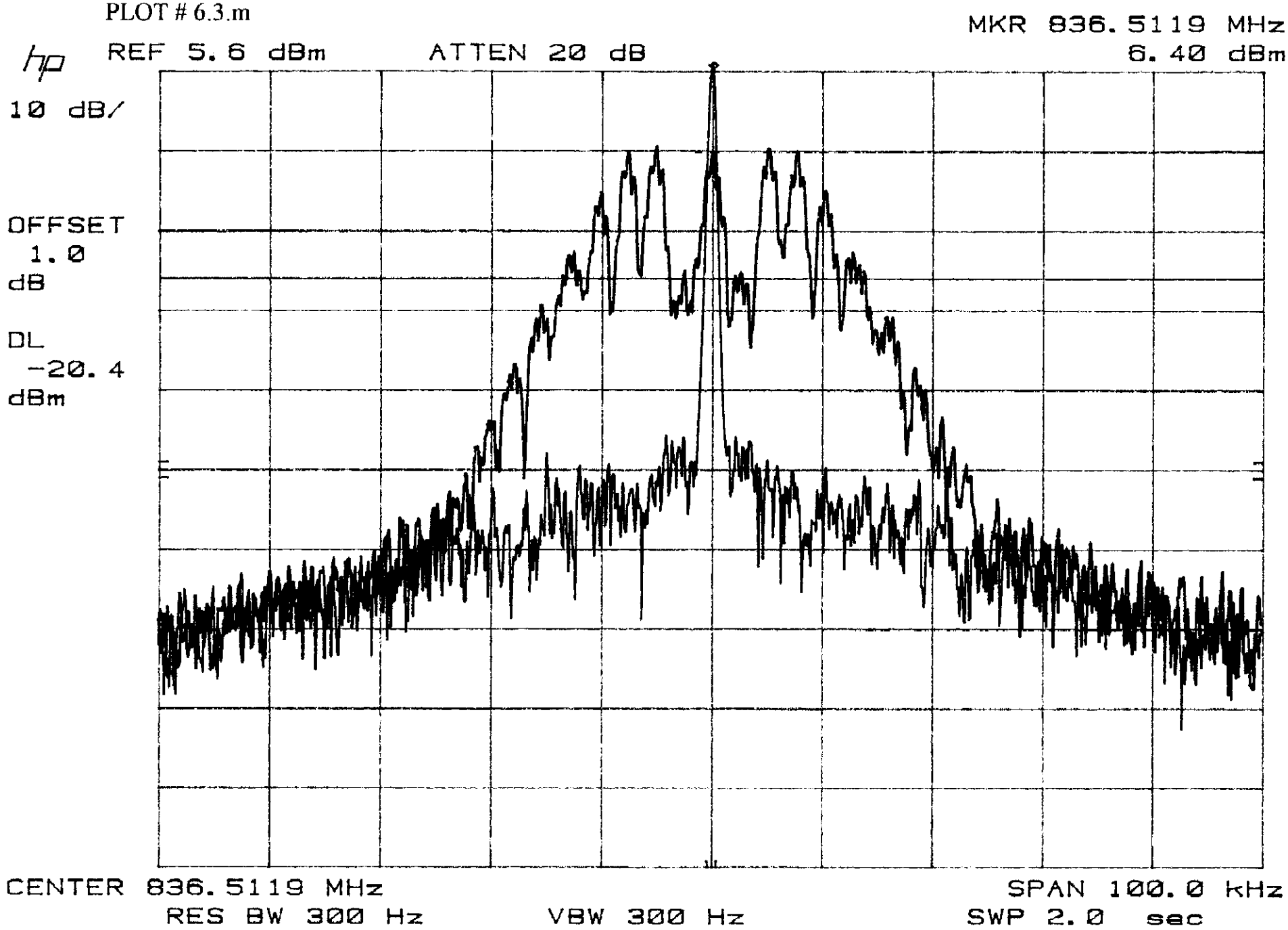
PLOT # 6.3.11


MKR 836.5121 MHz
13.80 dBm
REF 24.7 dBm
ATTEN 40 dB
10 dB/
OFFSET
1.0
dB
DL
-1.1
dBm
CENTER 836.5121 MHz
SPAN 100.0 kHz
RES BW 300 Hz
VBW 300 Hz
SWP 2.0 sec

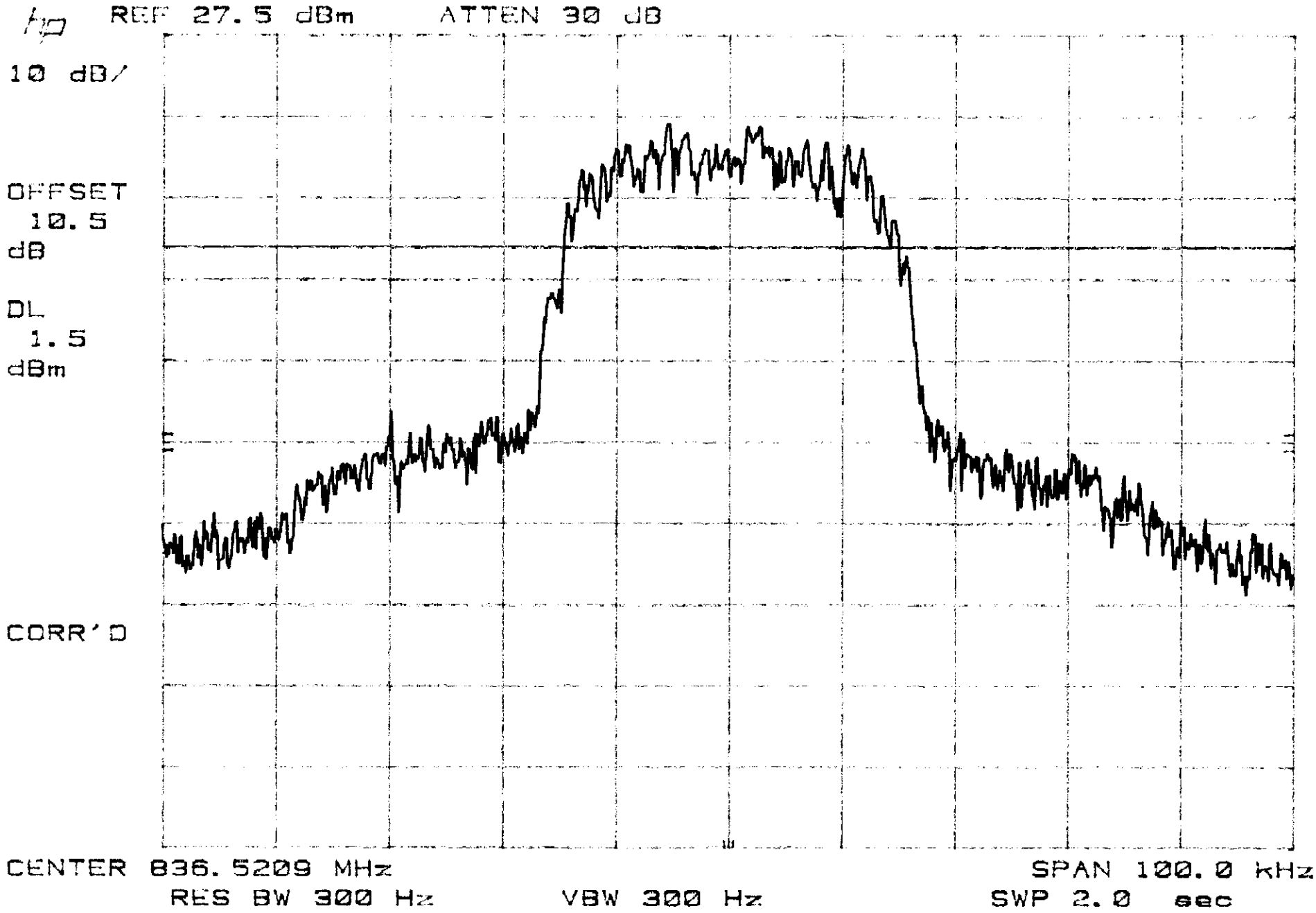
PLOT # 6.3.12


MKR 836.5117 MHz
14.20 dBm
REF 24.9 dBm
ATTEN 40 dB
10 dB/
OFFSET
1.0
dB
DL
-1.1
dBm
CENTER 836.5119 MHz
SPAN 200.0 kHz
RES BW 300 Hz
VBW 300 Hz
SWP 5.0 sec

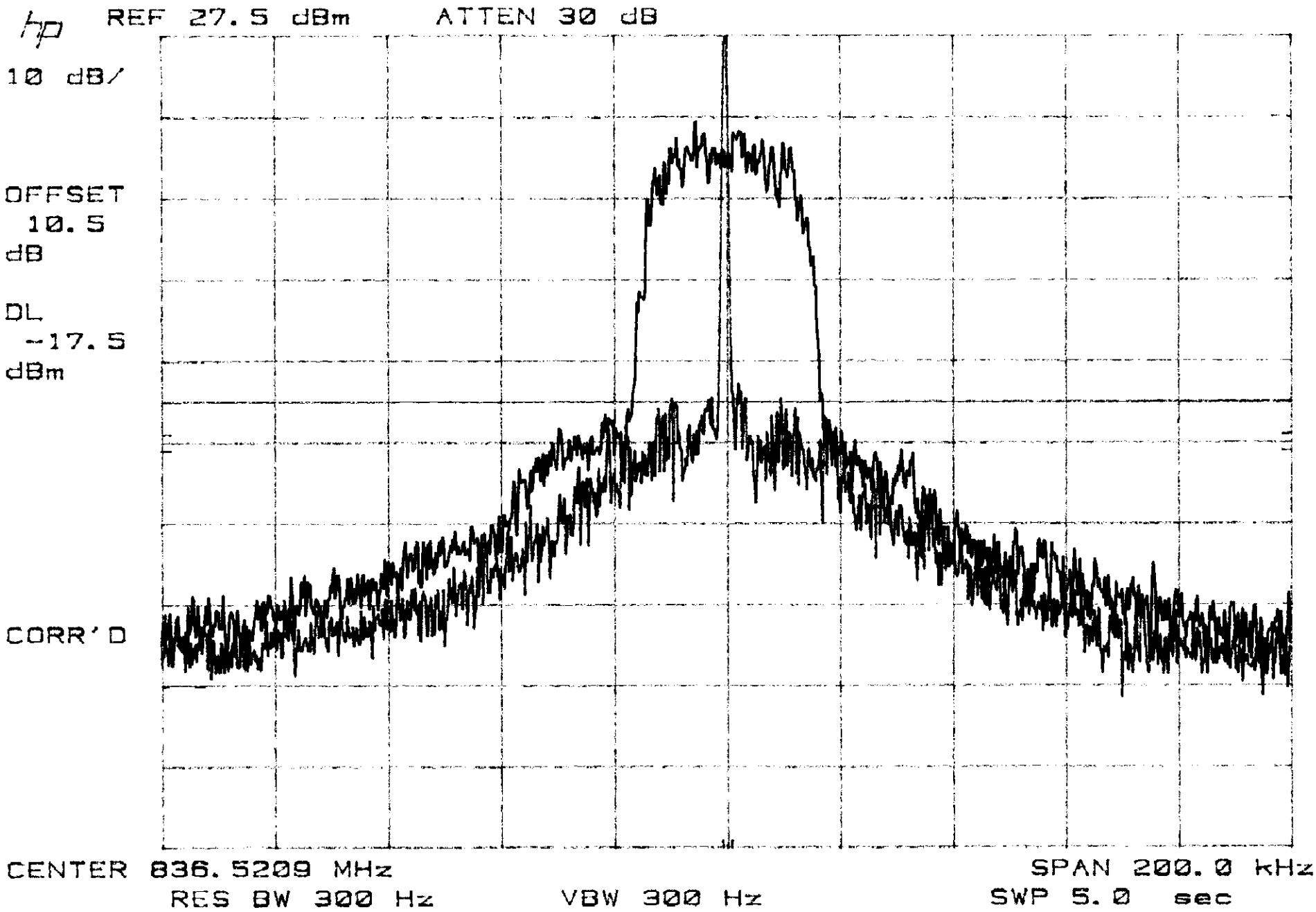
PLOT # 6.3.m


MKR 836.5119 MHz
6.40 dBm
REF 5.6 dBm
ATTEN 20 dB
10 dB/
OFFSET
1.0
dB
DL
-20.4
dBm
CENTER 836.5119 MHz
SPAN 100.0 kHz
RES BW 300 Hz
VBW 300 Hz
SWP 2.0 sec

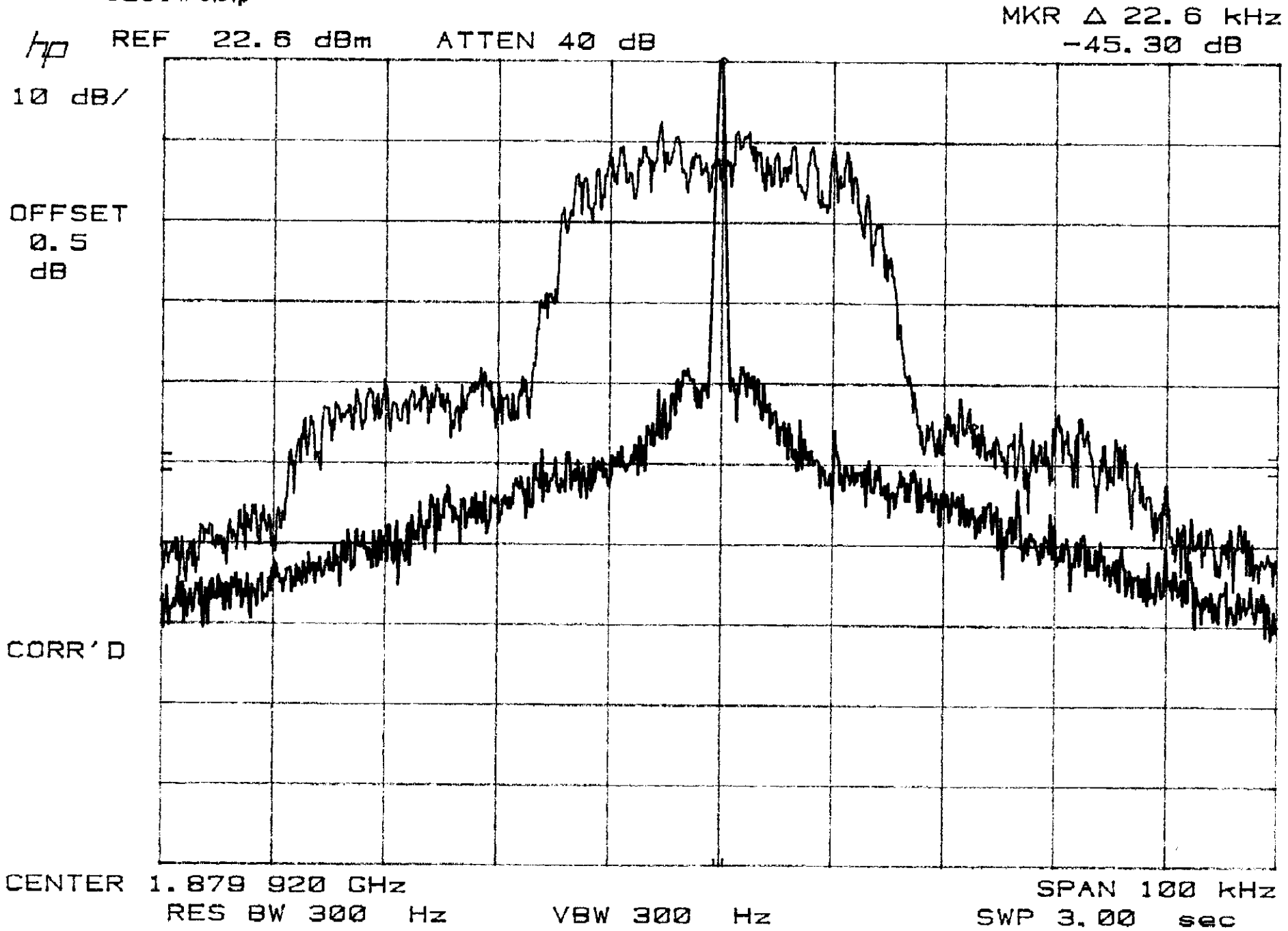
PLOT # 6.3.n


REF 27.5 dBm
ATTEN 30 dB
10 dB/
OFFSET
10.5
dB
DL
1.5
dBm
CORR'D
CENTER 836.5209 MHz
SPAN 100.0 kHz
RES BW 300 Hz
VBW 300 Hz
SWP 2.0 sec

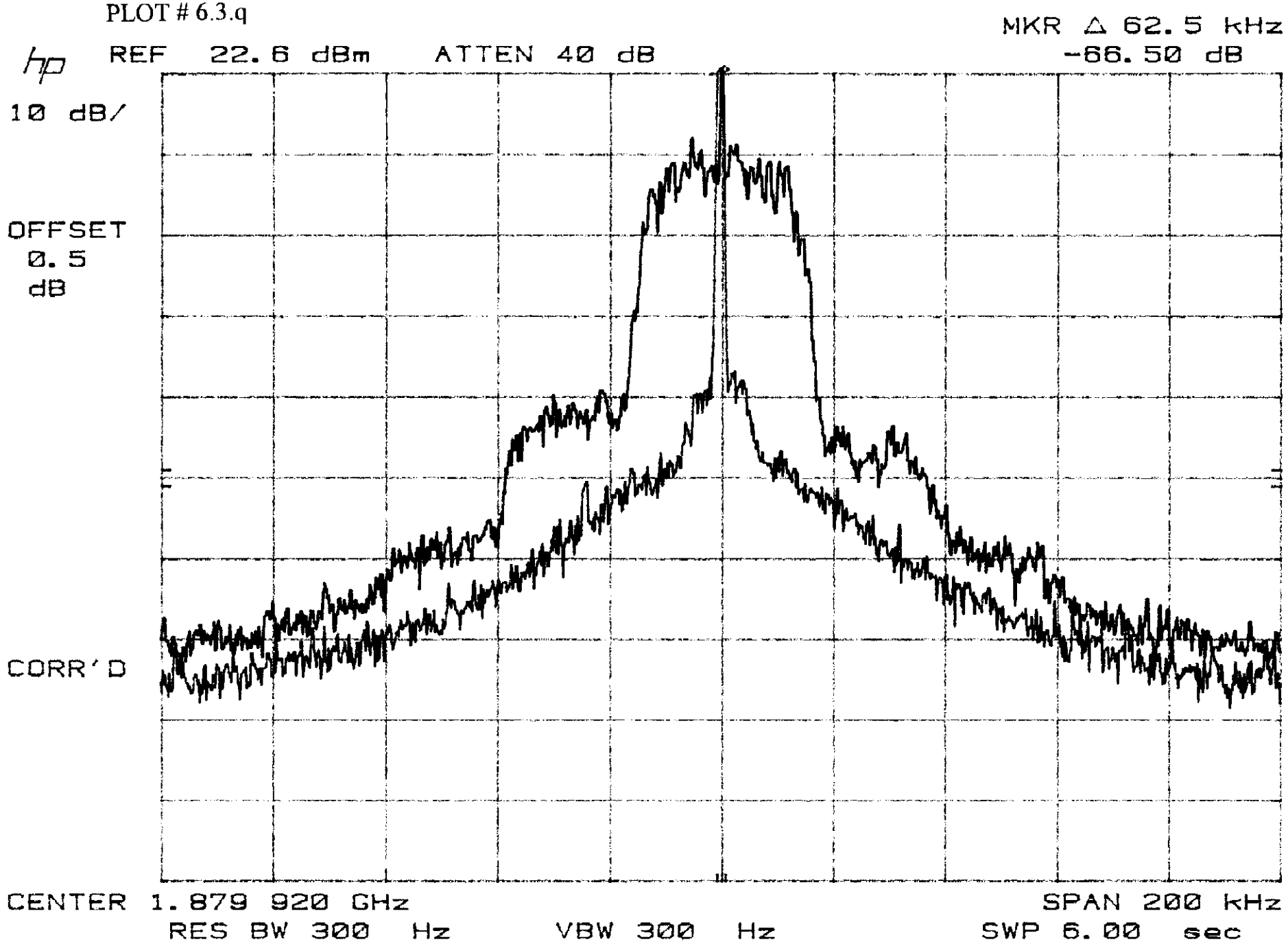
PLOT # 6.3.o

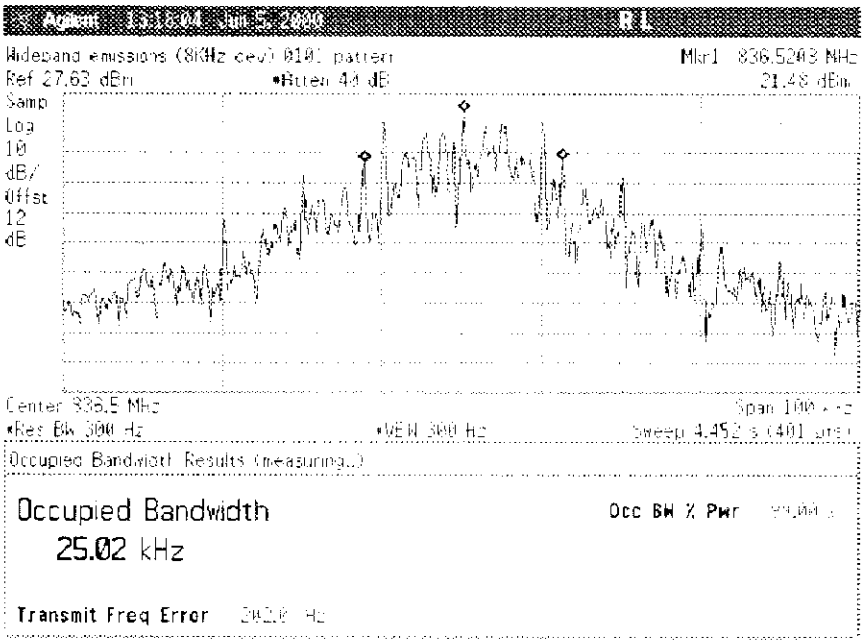

REF 27.5 dBm
ATTEN 30 dB
10 dB/
OFFSET
10.5
dB
DL
-17.5
dBm
CORR'D
CENTER 836.5209 MHz
SPAN 200.0 kHz
RES BW 300 Hz
VBW 300 Hz
SWP 5.0 sec

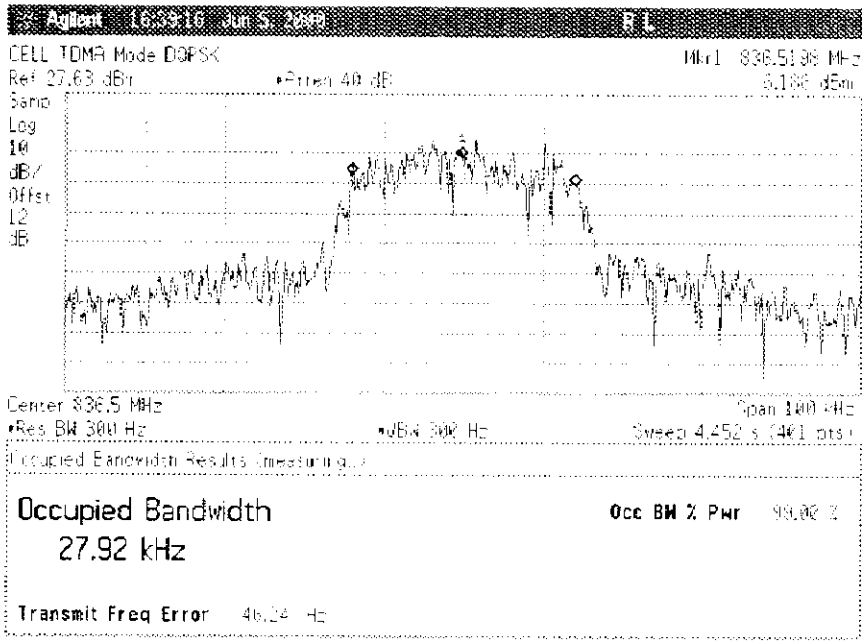
PLOT # 6.3.p

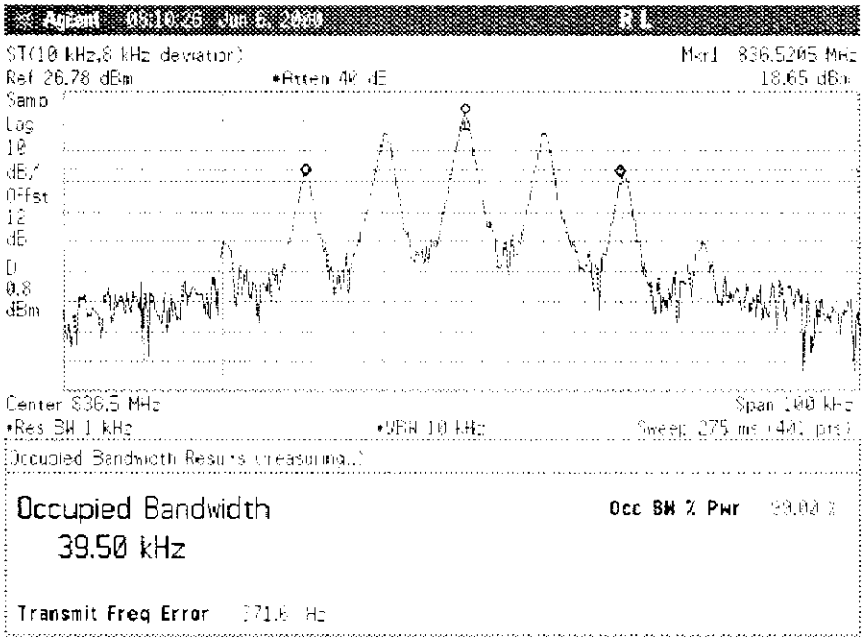

MKR Δ 22.6 kHz
-45.30 dB
REF 22.6 dBm
ATTEN 40 dB
10 dB/
OFFSET
0.5
dB
CORR'D
CENTER 1.879 920 GHz
SPAN 100 kHz
RES BW 300 Hz
VBW 300 Hz
SWP 3.00 sec

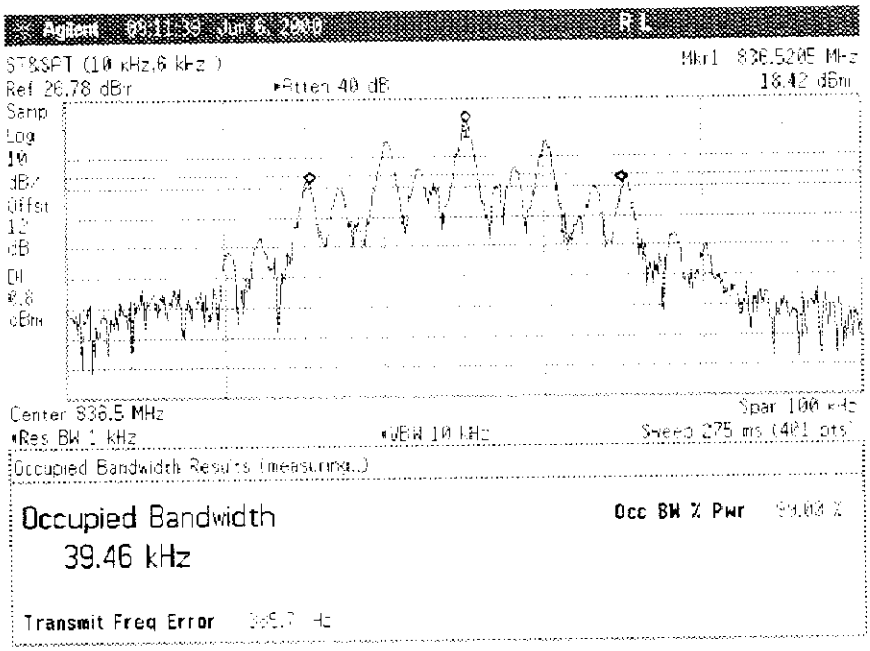
PLOT # 6.3.q

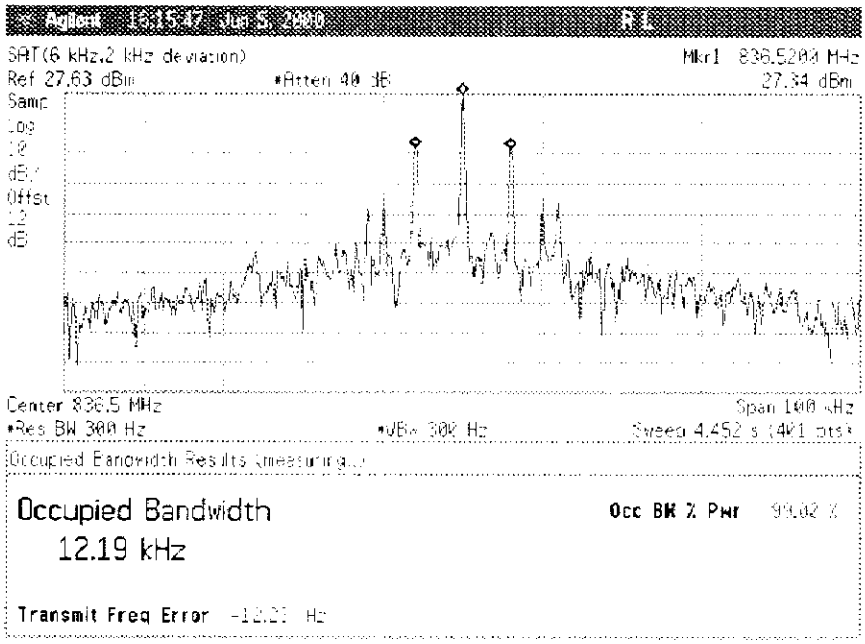

MKR Δ 62.5 kHz
-66.50 dB
REF 22.6 dBm
ATTEN 40 dB
10 dB/
OFFSET
0.5
dB
CORR'D
CENTER 1.879 920 GHz
SPAN 200 kHz
RES BW 300 Hz
VBW 300 Hz
SWP 6.00 sec

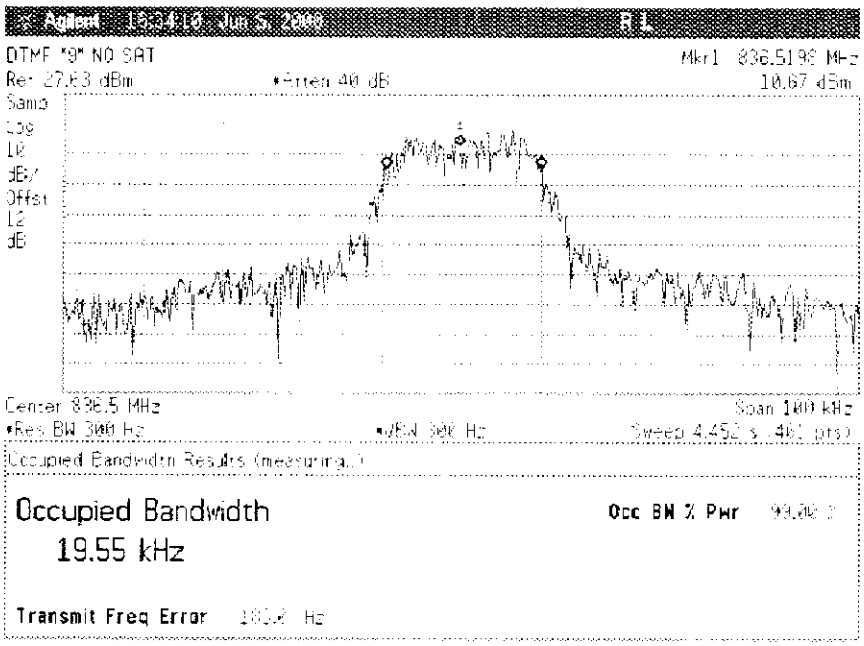

Agilent 13:18:04 Jun 5, 2000
RL
Wideband emissions (8KHz dev) 810 pattern
Mkr1 836.5203 MHz
Ref 27.63 dBm
#Atten 44 dB
21.48 dBm
Samp
Log
10
dB/
Offst
12
dB
Center 836.5 MHz
Span 100 kHz
#Res BW 300 Hz
#VBW 300 Hz
Sweep 4.45 s (401 pts)
Occupied Bandwidth Results (measuring...)
Occupied Bandwidth
25.02 kHz
Occ BW % Pwr
Transmit Freq Error

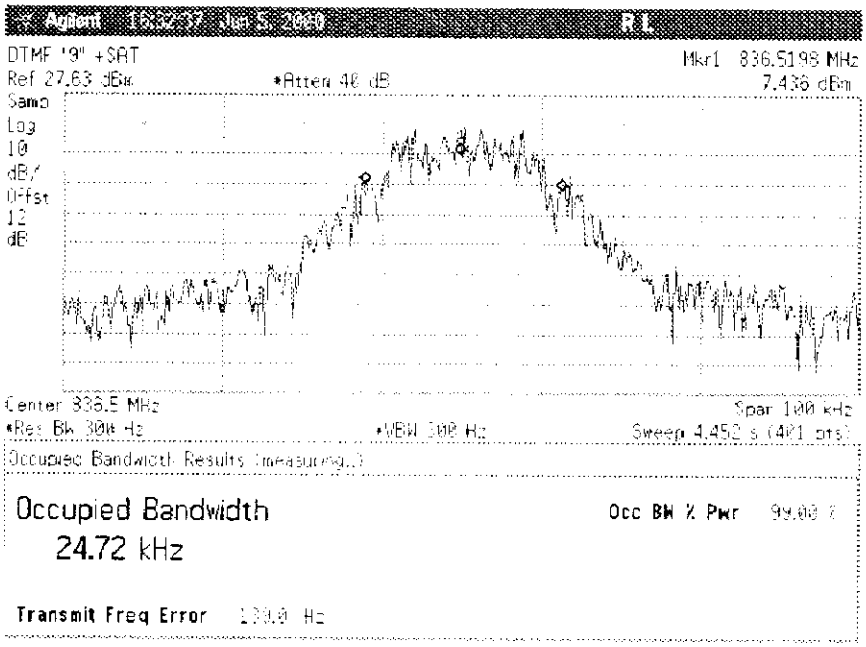

Agilent 16:31:0 Jun 5 2000
CELL TDMA Mode DQPSK
Ref 27.63 dBm
#Atten 40 dB
Mkr1 836.5196 MHz
Samp
Log
10
dB/
Offset
12
dB
Center 836.5 MHz
#Res BW 300 Hz
#VBW 300 Hz
Span 100 kHz
Sweep 4.452 s (401 pts)
Occupied Bandwidth Results (measuring...)
Occupied Bandwidth
27.92 kHz
Occ BW % Pwr 98.00 %
Transmit Freq Error 46.24 Hz

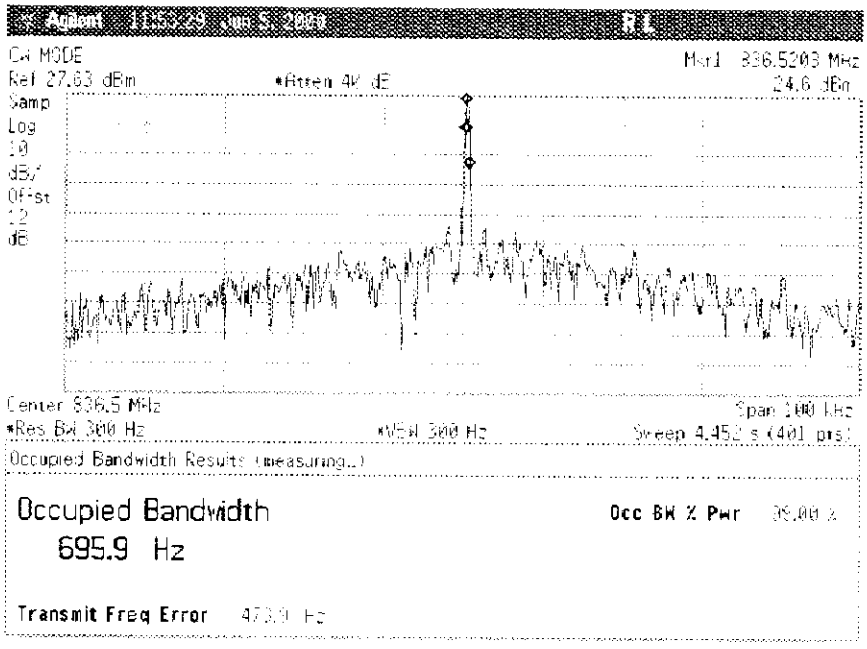

Agilent 08:10:26 Jun 6, 2000
RL
ST(10 kHz,8 kHz deviation)
Mkr1 836.5205 MHz
Ref 26.78 dBm
#Atten 4V dE
18.65 dBm
Samp
Log
10
dB/
Offst
12
dB
D
0.8
dBm
Center 836.5 MHz
Span 100 kHz
#Res BW 1 kHz
#VBW 10 kHz
Sweep 275 ms (401 pts)
Occupied Bandwidth Results (measuring...)
Occupied Bandwidth
39.50 kHz
Occ BW % Pwr 99.00 %
Transmit Freq Error 171.6 Hz

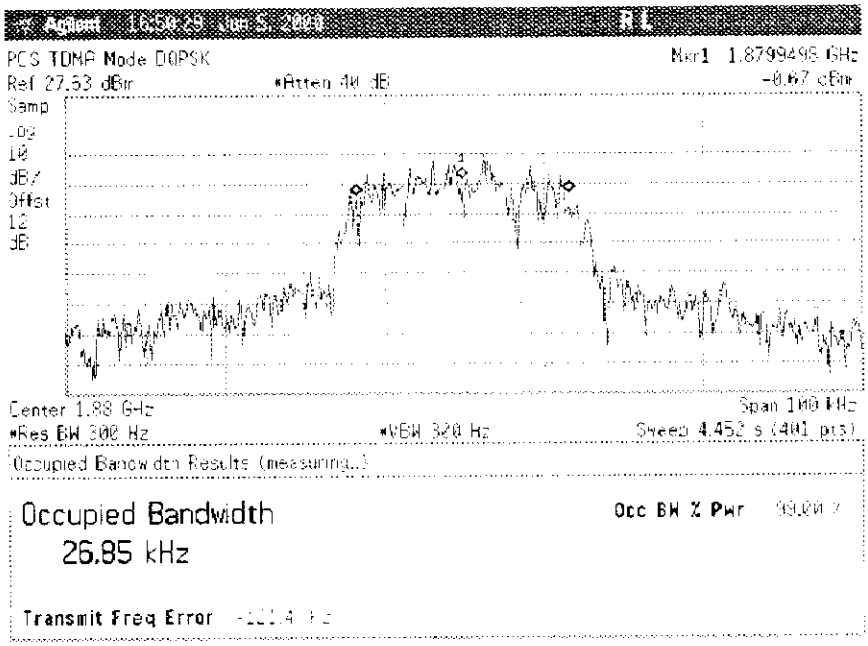

Agilent 08:11:39 Jun 6, 2000
RL
ST&SAT (10 kHz,6 kHz)
Mkr1 836.5205 MHz
Ref 26.78 dBm
Atten 40 dB
18.42 dBm
Samp
Log
10
dB/
Offset
12
dB
CH
26.8
dBm
Center 836.5 MHz
Span 100 kHz
#Res BW 1 kHz
#VBW 10 kHz
Sweep 275 ms (401 pts)
Occupied Bandwidth Results (measuring..)
Occupied Bandwidth
39.46 kHz
Occ BW % Pwr
Transmit Freq Error

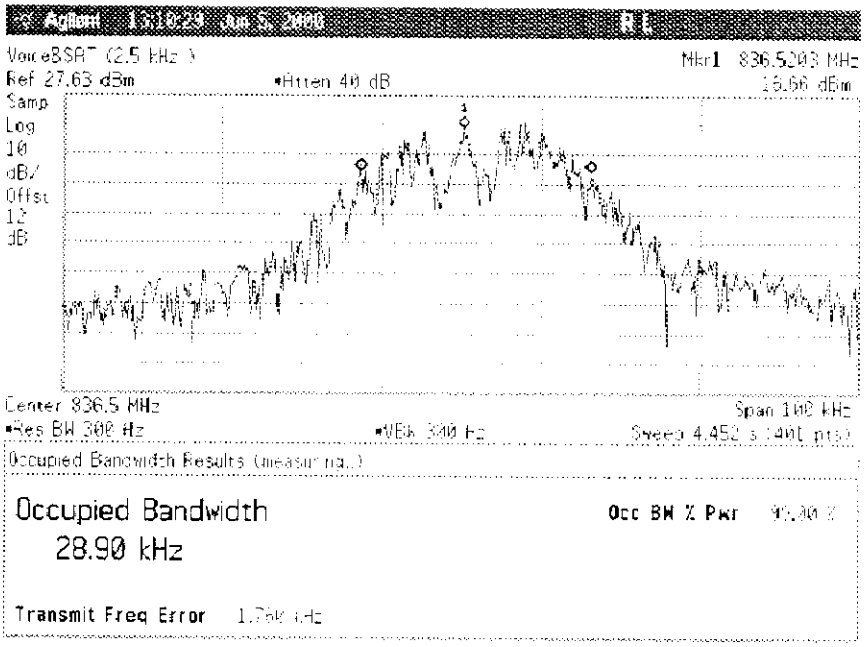

Agilent 16:15:47 Jun 5, 2000
RL
SAT(6 kHz,2 kHz deviation)
Mkr1 836.5204 MHz
Ref 27.63 dBm
#Atten 40 dB
27.34 dBm
Samp
Log
10
dB/
Offst
10
dB
Center 836.5 MHz
Span 100 kHz
#Res BW 300 Hz
#VBW 300 Hz
Sweep 4.452 s (401 pts)
Occupied Bandwidth Results (measuring...)
Occupied Bandwidth
12.19 kHz
Occ BW % Pwr 99.02 %
Transmit Freq Error -12.21 Hz

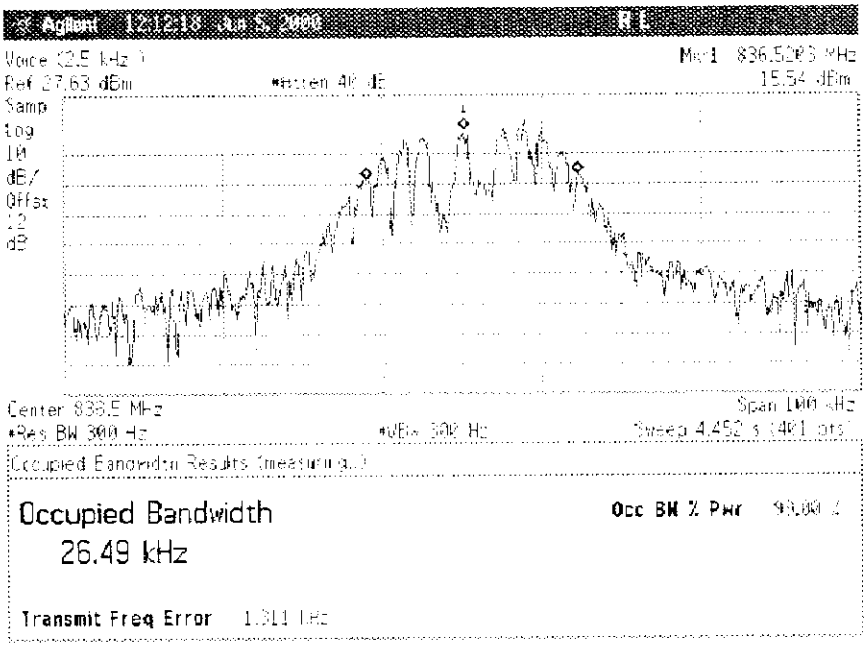

Agilent 12:34:10 Jun 5, 2000
RL
DTMF "9" NO SAT
Mkr1 836.519 MHz
Ref 27.83 dBm
#Atten 40 dB
10.67 dBm
Log
10
dB/
Offset
12
dB
Center 836.5 MHz
Span 100 kHz
#Res BW 300 Hz
#VBW 300 Hz
Sweep 4.452 s (401 pts)
Occupied Bandwidth Results (measuring...)
Occupied Bandwidth
19.55 kHz
Occ BW % Pwr
Transmit Freq Error
Hz

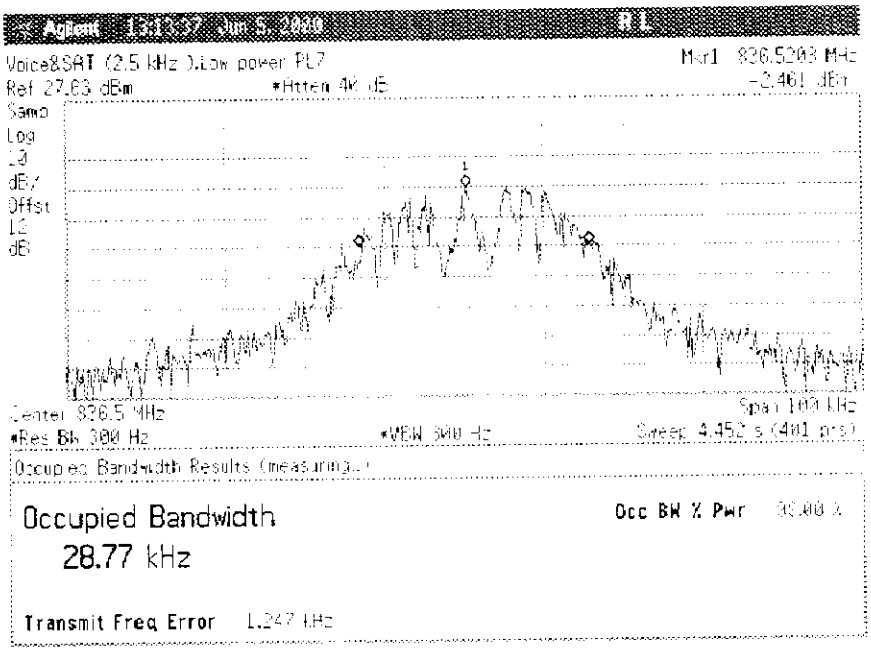

Agilent 16:32:37 Jun 5, 2000
RL
DTMF '9" +SAT
Ref 27.63 dBm
#Atten 40 dB
Mkr1 836.5198 MHz
7.436 dBm
Samp
Log
10
dB/
Offst
12
dB
Center 836.5 MHz
#Res BW 30 Hz
#VBW 300 Hz
Span 100 kHz
Sweep 4.452 s (401 pts)
Occupied Bandwidth Results (measuring...)
Occupied Bandwidth
24.72 kHz
Occ BW % Pwr 99.00 %
Transmit Freq Error 230.0 Hz


Agilent 11:5:29 Jun 5 2000
RL
CW MODE
Ref 27.63 dBm
#Atten 4V dB
Mkr1 836.5203 MHz
24.6 dBm
Samp
Log
10
dB/
Offst
12
dB
Center 836.5 MHz
Span 100 kHz
#Res BW 300 Hz
#VBW 300 Hz
Sweep 4.452 s (401 pts)
Occupied Bandwidth Results (measuring...)
Occupied Bandwidth
695.9 Hz
Occ BW % Pwr 99.00 %
Transmit Freq Error 473.0 Hz


Agilent 16:58:25 Jun 5, 2000
PCS TDMA Mode DQPSK
Mkr1 1.8799498 GHz
Ref 27.53 dBm
#Atten 40 dB
-0.67 dBm
Samp
Log
10
dB/
Offst
12
dB
Center 1.88 GHz
Span 100 kHz
#Res BW 300 Hz
#VBW 320 Hz
Sweep 4.452 s (401 pts)
Occupied Bandwidth Results (measuring...)
Occupied Bandwidth
26.85 kHz
Occ BW % Pwr 99.00 %
Transmit Freq Error -111.4 Hz


Agilent
Jun 5, 2000
VoiceBSAT (2.5 kHz)
Mkr1 836.5203 MHz
Ref 27.63 dBm
#Atten 40 dB
16.66 dBm
Samp
Log
10
dB/
Offset
12
dB
Center 836.5 MHz
Span 100 kHz
#Res BW 300 Hz
#VBW 300 Hz
Sweep 4.452 s (401 pts)
Occupied Bandwidth Results (measurement)
Occupied Bandwidth
28.90 kHz
Occ BW % Pwr 99.00 %
Transmit Freq Error 1.764 kHz


Agilent 12:12:13 Jun 5, 2000
Voice (2.5 kHz)
Ref 27.63 dBm
#Atten 40 dB
Mkr1 836.5283 MHz
15.54 dBm
Samp
Log
10
dB/
Offset
12
dB
Center 836.5 MHz
#Res BW 300 Hz
#VBW 300 Hz
Span 1.000 MHz
Sweep 4.452 s (401 pts)
Occupied Bandwidth Results (measuring...)
Occupied Bandwidth
26.49 kHz
Occ BW % Pwr
Transmit Freq Error 1.311 kHz


Agilent 13:13:37 Jun 5, 2000
Voice&SAT (2.5 kHz) Low power PL7
Mkr1 836.5203 MHz
Ref 27.63 dBm
#Atten 4K dB
-2.461 dBm
Samp
Log
10
dB/
Offst
10
dB
Center 836.5 MHz
Span 100 kHz
#Res BW 300 Hz
#VBW 300 Hz
Sweep 4.452 s (401 pts)
Occupied Bandwidth Results (measuring...)
Occupied Bandwidth
28.77 kHz
Occ BW % Pwr 99.00 %
Transmit Freq Error 1.247 kHz