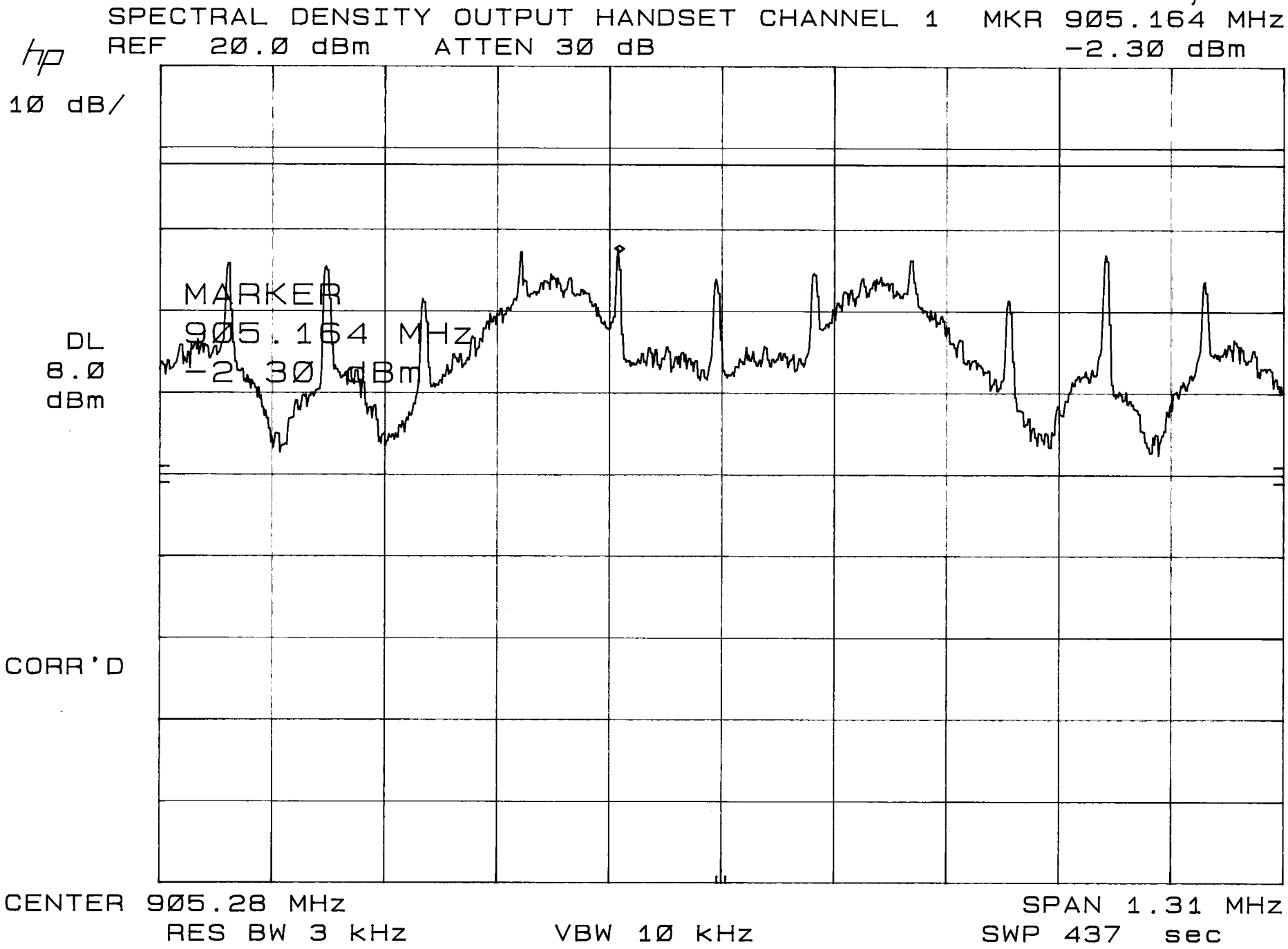
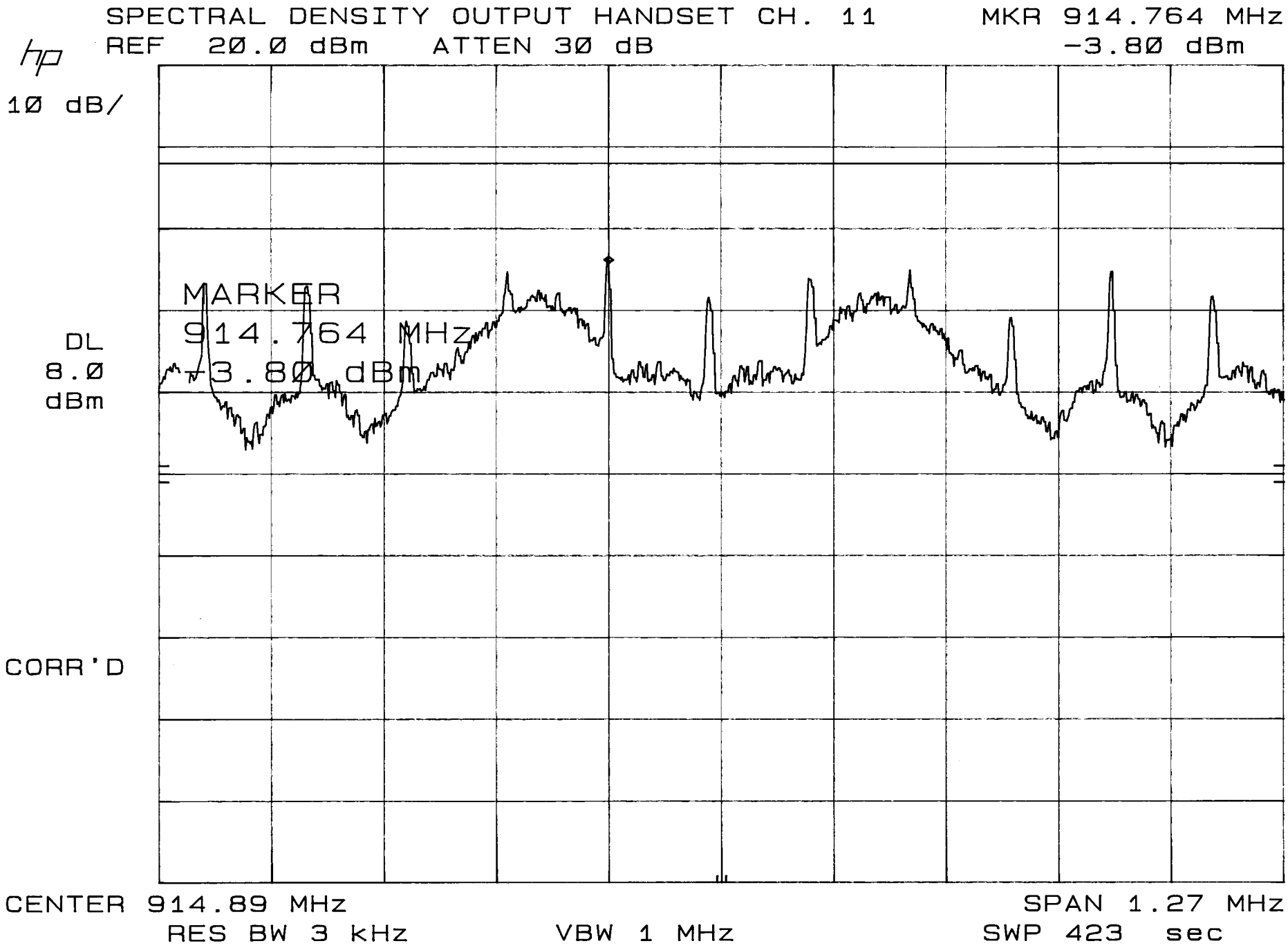
SPECTRAL DENSITY OUTPUT DATA SHEETS FOR THE HANDSET

114 OLINDA DRIVE, BREA, CALIFORNIA 92823 PHONE: (714) 579-0500 FAX: (714) 579-1850

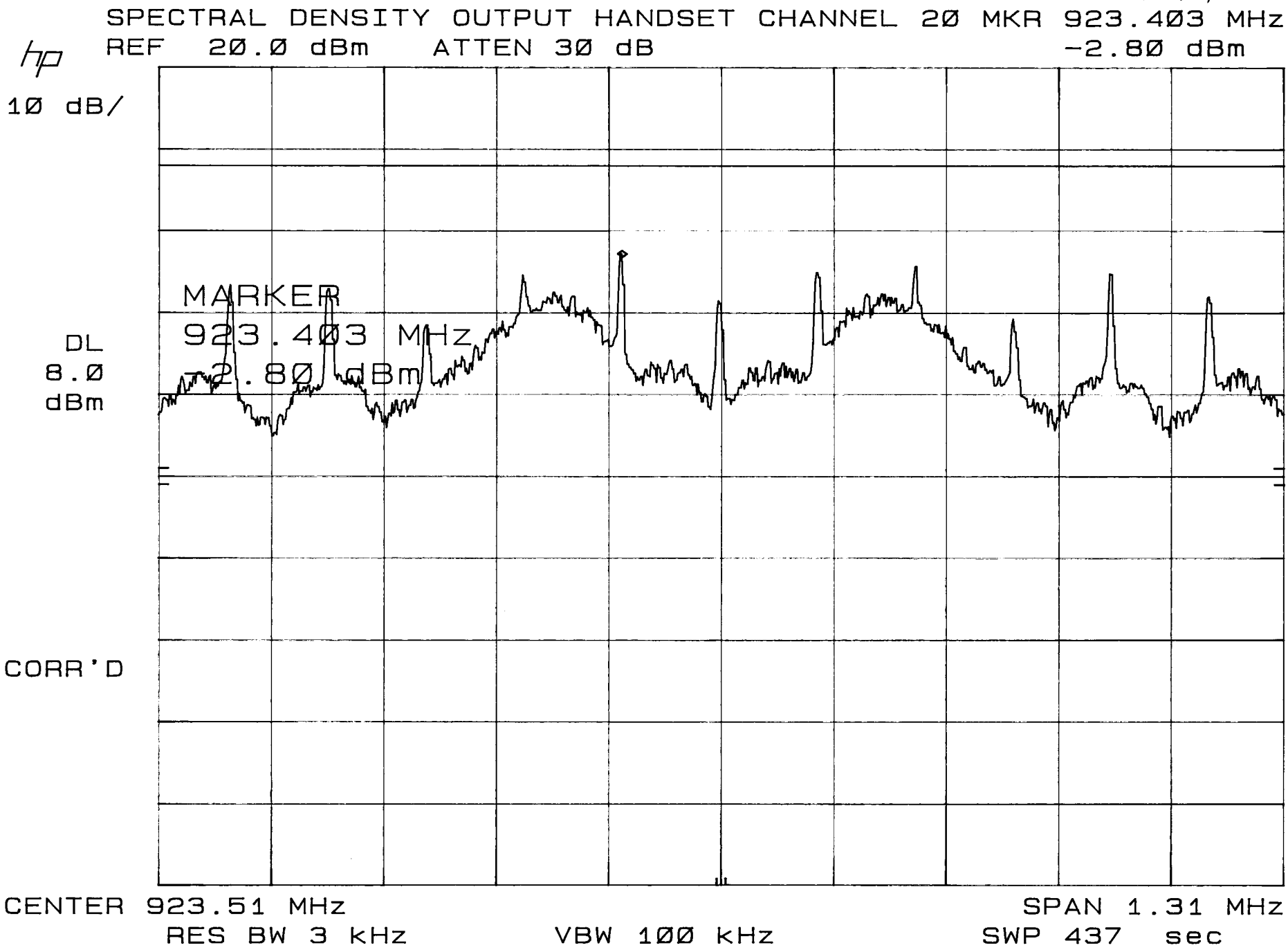
10-4-99


SPECTRAL DENSITY OUTPUT HANDSET CHANNEL 1
MKR 905.164 MHz
REF 20.0 dBm
ATTEN 30 dB
-2.30 dBm
10 dB/
MARKER
905.164 MHz
-2.30 dBm
DL
8.0
dBm
CORR'D
CENTER 905.28 MHz
SPAN 1.31 MHz
RES BW 3 kHz
VBW 10 kHz
SWP 437 sec

10-4-99


SPECTRAL DENSITY OUTPUT HANDSET CH. 11
MKR 914.764 MHz
REF 20.0 dBm
ATTEN 30 dB
-3.80 dBm
10 dB/
MARKER
914.764 MHz
-3.80 dBm
DL
8.0
dBm
CORR'D
CENTER 914.89 MHz
SPAN 1.27 MHz
RES BW 3 kHz
VBW 1 MHz
SWP 423 sec

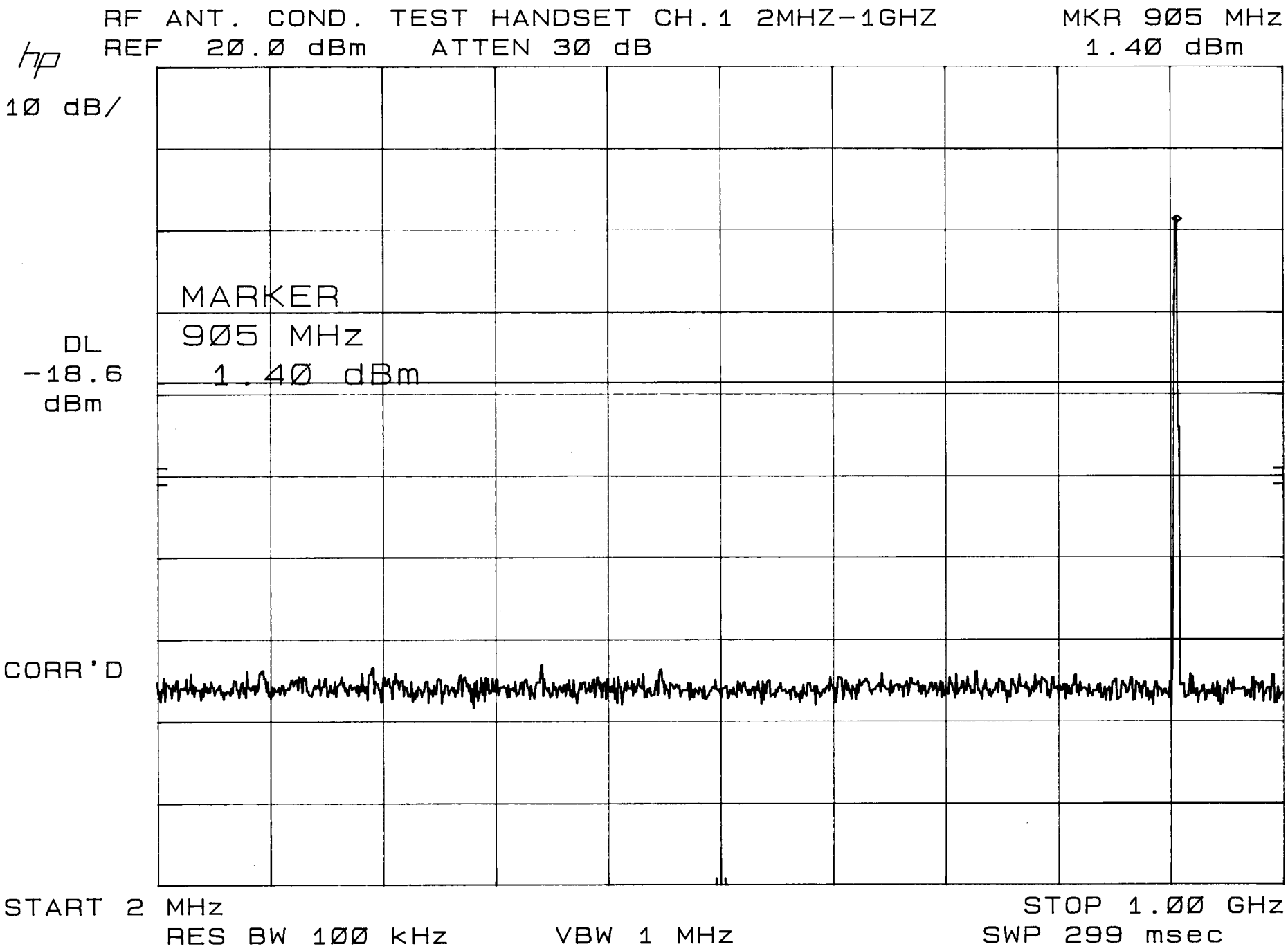
10-4-99


SPECTRAL DENSITY OUTPUT HANDSET CHANNEL 20 MKR 923.403 MHz
REF 20.0 dBm ATTEN 30 dB -2.80 dBm
10 dB/
MARKER
923.403 MHz
-2.80 dBm
DL
8.0
dBm
CORR'D
CENTER 923.51 MHz
SPAN 1.31 MHz
RES BW 3 kHz
VBW 100 kHz
SWP 437 sec

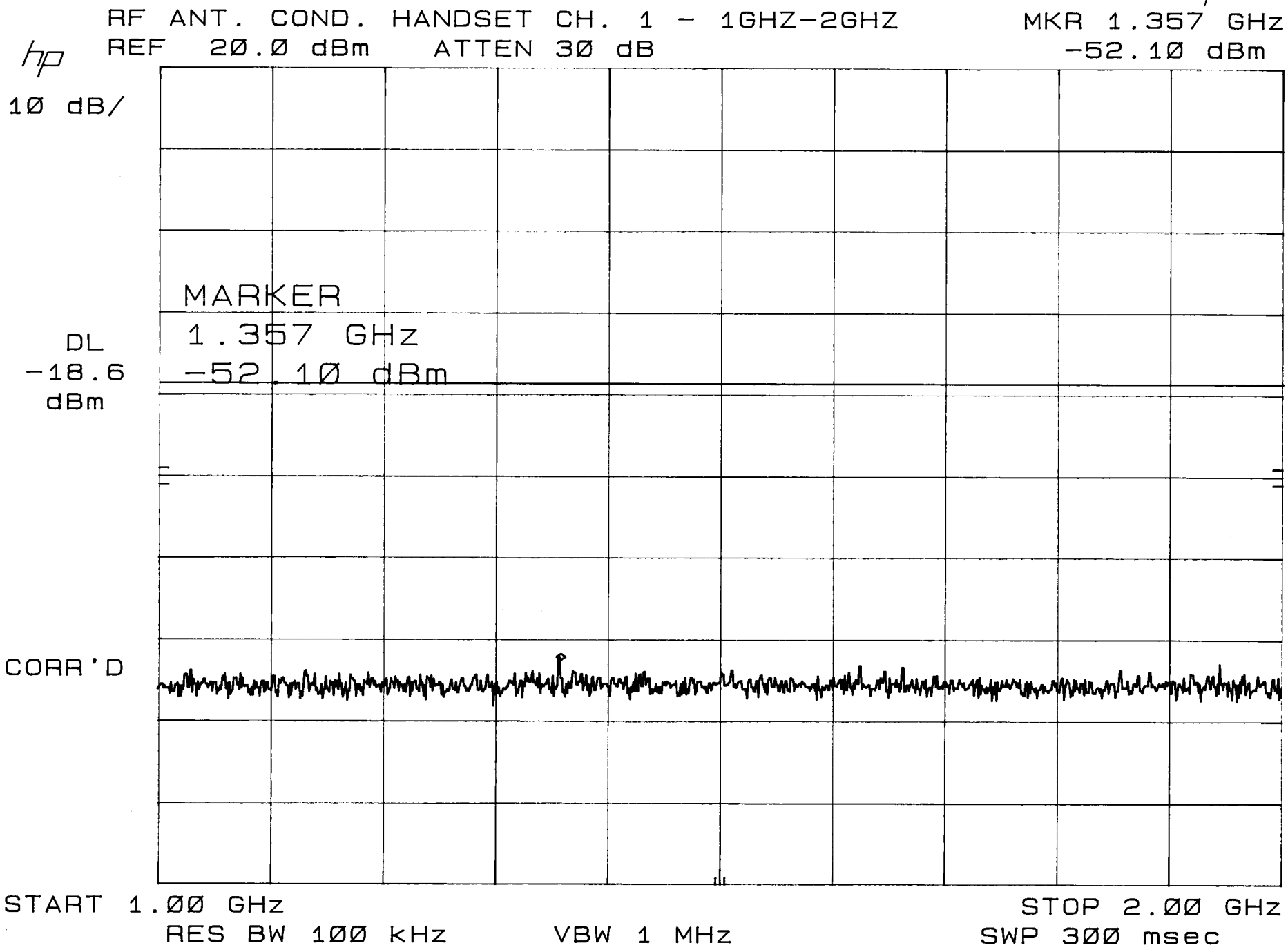
RF ANTENNA CONDUCTED DATA SHEETS FOR THE HANDSET

114 OLINDA DRIVE, BREA, CALIFORNIA 92823 PHONE: (714) 579-0500 FAX: (714) 579-1850

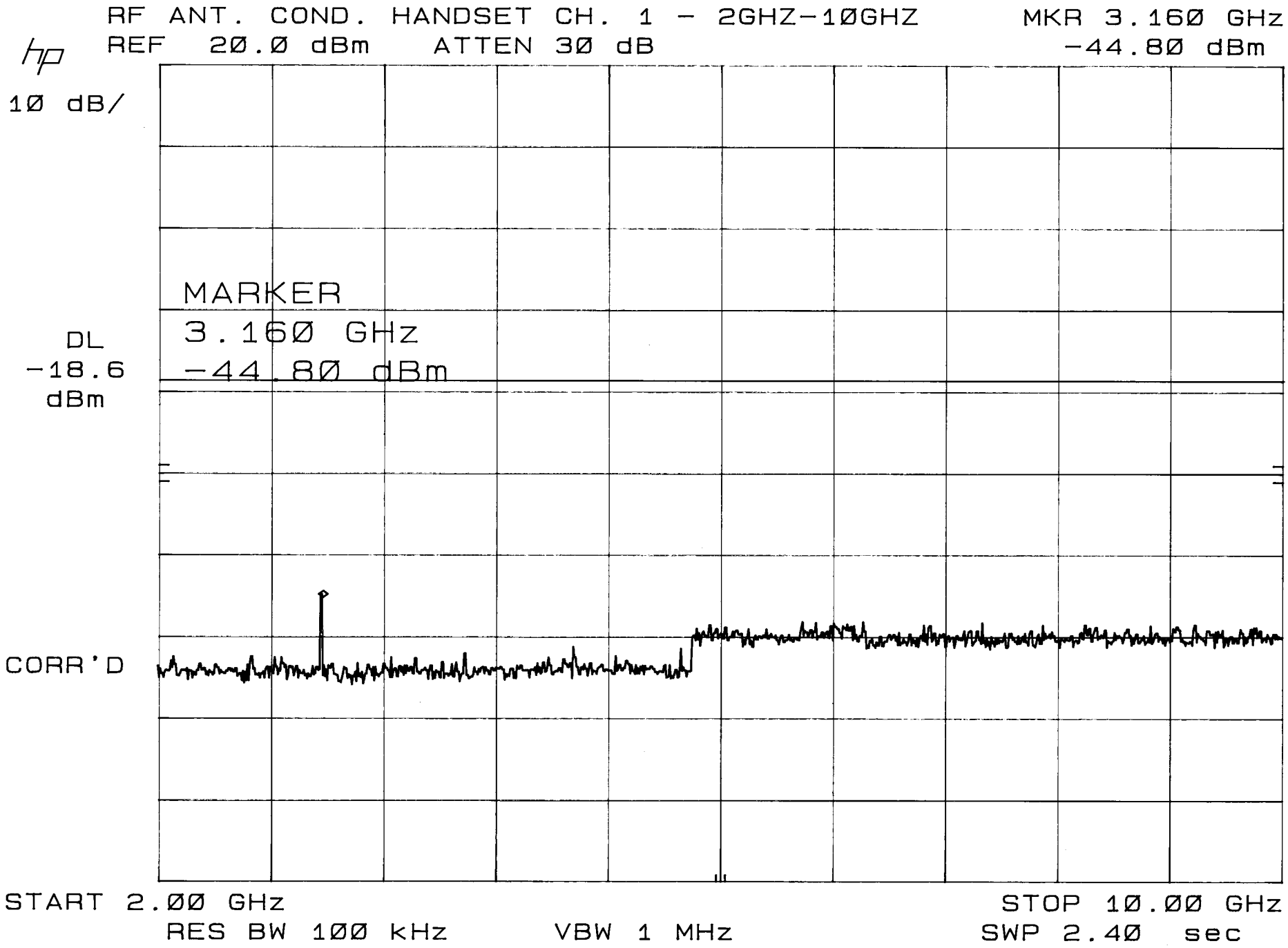
10-4-99


RF ANT. COND. TEST HANDSET CH.1 2MHZ-1GHZ
MKR 905 MHz
REF 20.0 dBm
ATTEN 30 dB
1.40 dBm
10 dB/
MARKER
905 MHz
1.40 dBm
DL
-18.6
dBm
CORR'D
START 2 MHz
STOP 1.00 GHz
RES BW 100 kHz
VBW 1 MHz
SWP 299 msec

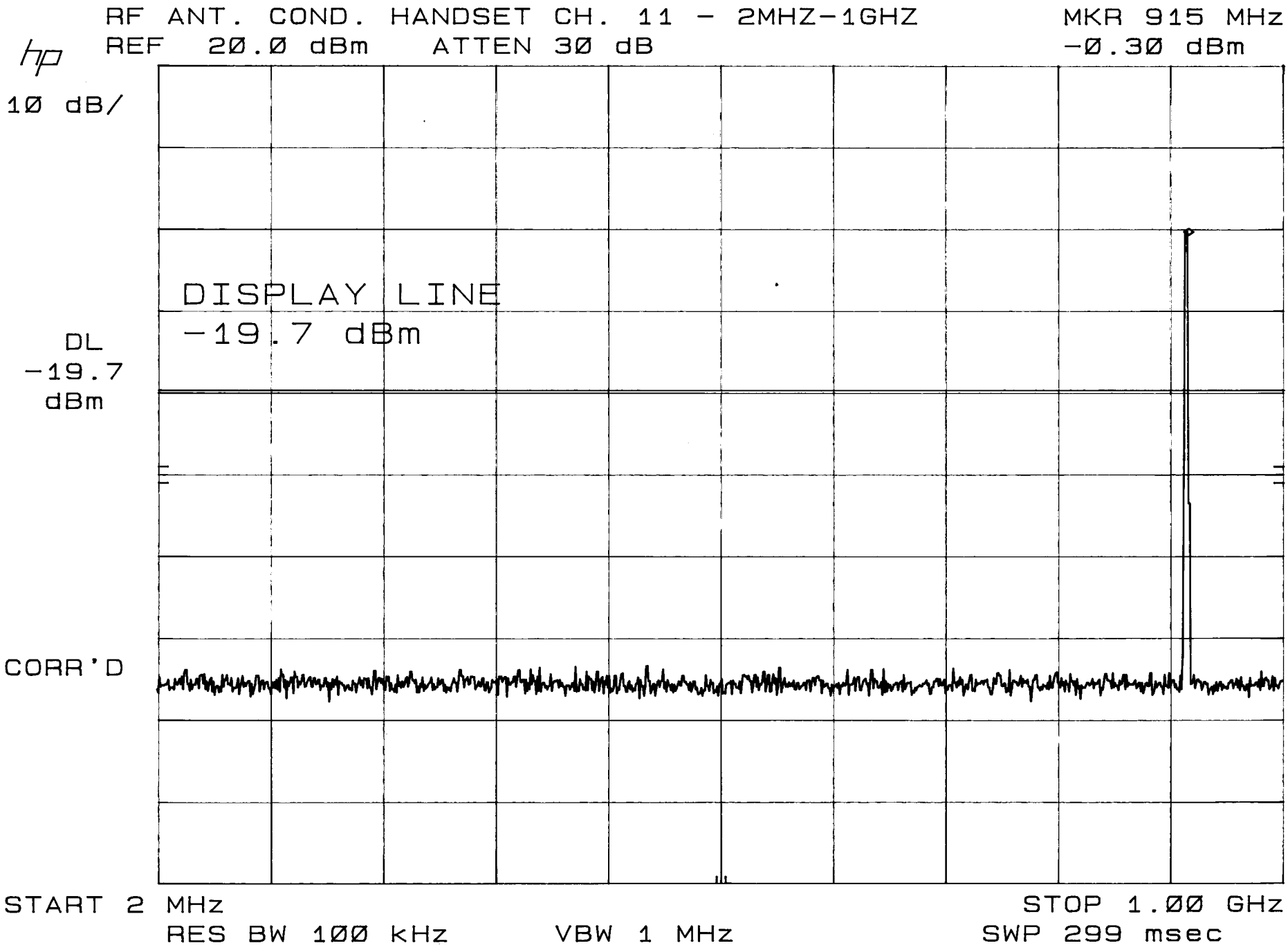
10-4-99


RF ANT. COND. HANDSET CH. 1 - 1GHZ-2GHZ
MKR 1.357 GHz
REF 20.0 dBm
ATTEN 30 dB
-52.10 dBm
10 dB/
MARKER
1.357 GHz
-52.10 dBm
DL
-18.6
dBm
CORR'D
START 1.00 GHz
STOP 2.00 GHz
RES BW 100 kHz
VBW 1 MHz
SWP 300 msec

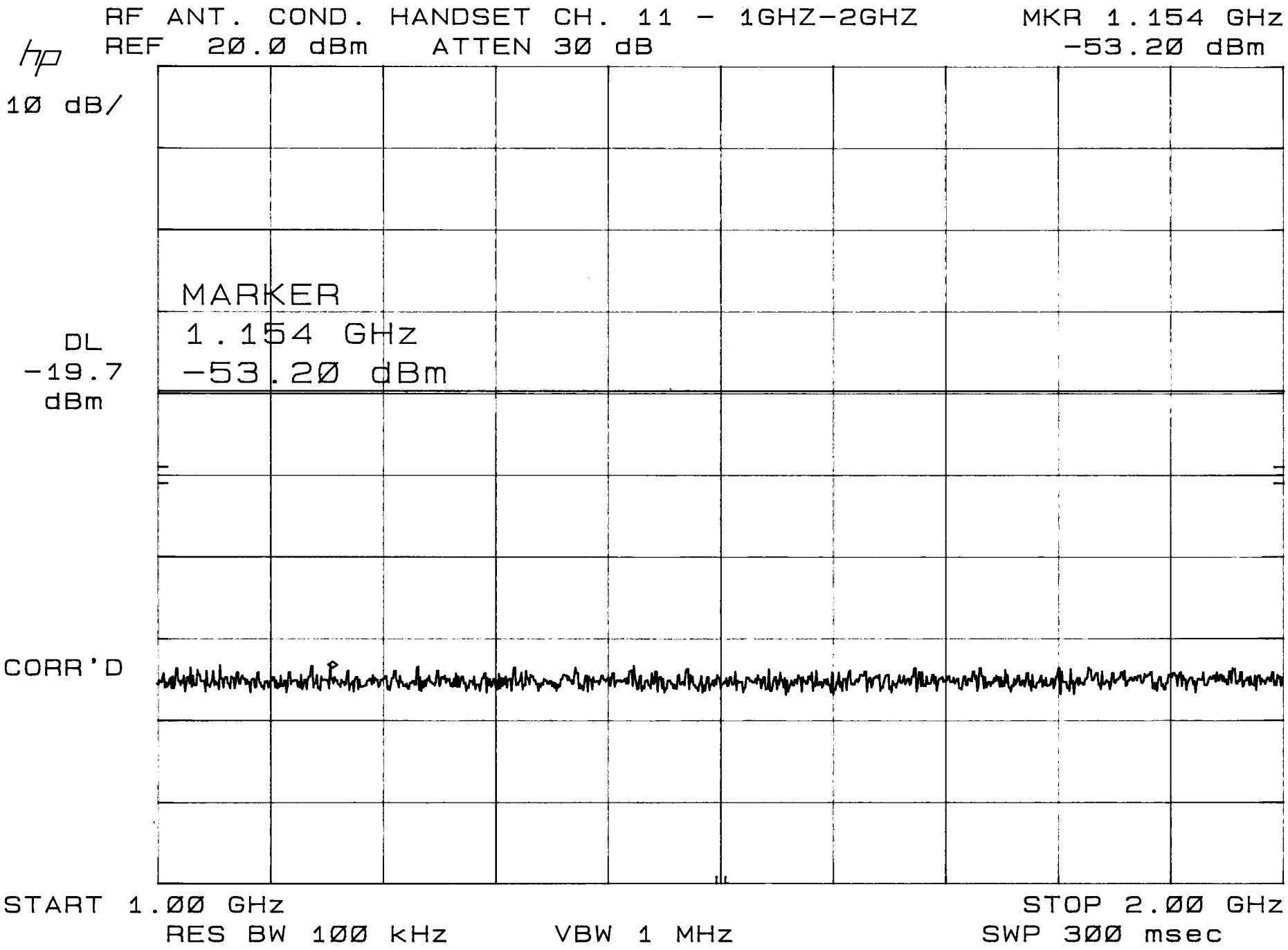
10-4-99


RF ANT. COND. HANDSET CH. 1 - 2GHZ-10GHZ
MKR 3.160 GHz
REF 20.0 dBm
ATTEN 30 dB
-44.80 dBm
10 dB/
MARKER
3.160 GHz
-44.80 dBm
DL
-18.6
dBm
CORR'D
START 2.00 GHz
STOP 10.00 GHz
RES BW 100 kHz
VBW 1 MHz
SWP 2.40 sec

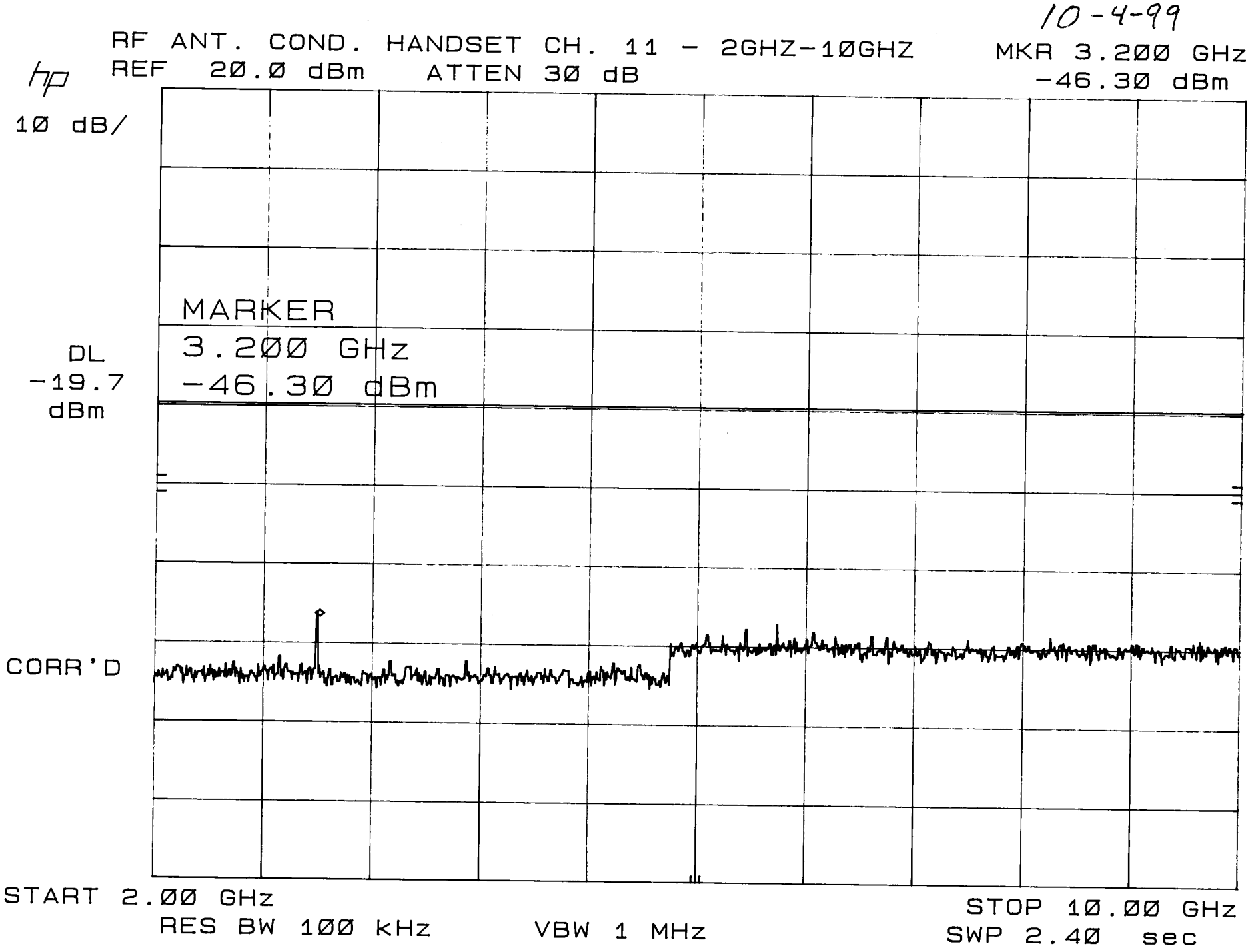
10-4-99


RF ANT. COND. HANDSET CH. 11 - 2MHZ-1GHZ
MKR 915 MHz
REF 20.0 dBm
ATTEN 30 dB
-0.30 dBm
10 dB/
DISPLAY LINE
-19.7 dBm
DL
-19.7
dBm
CORR'D
START 2 MHz
STOP 1.00 GHz
RES BW 100 kHz
VBW 1 MHz
SWP 299 msec

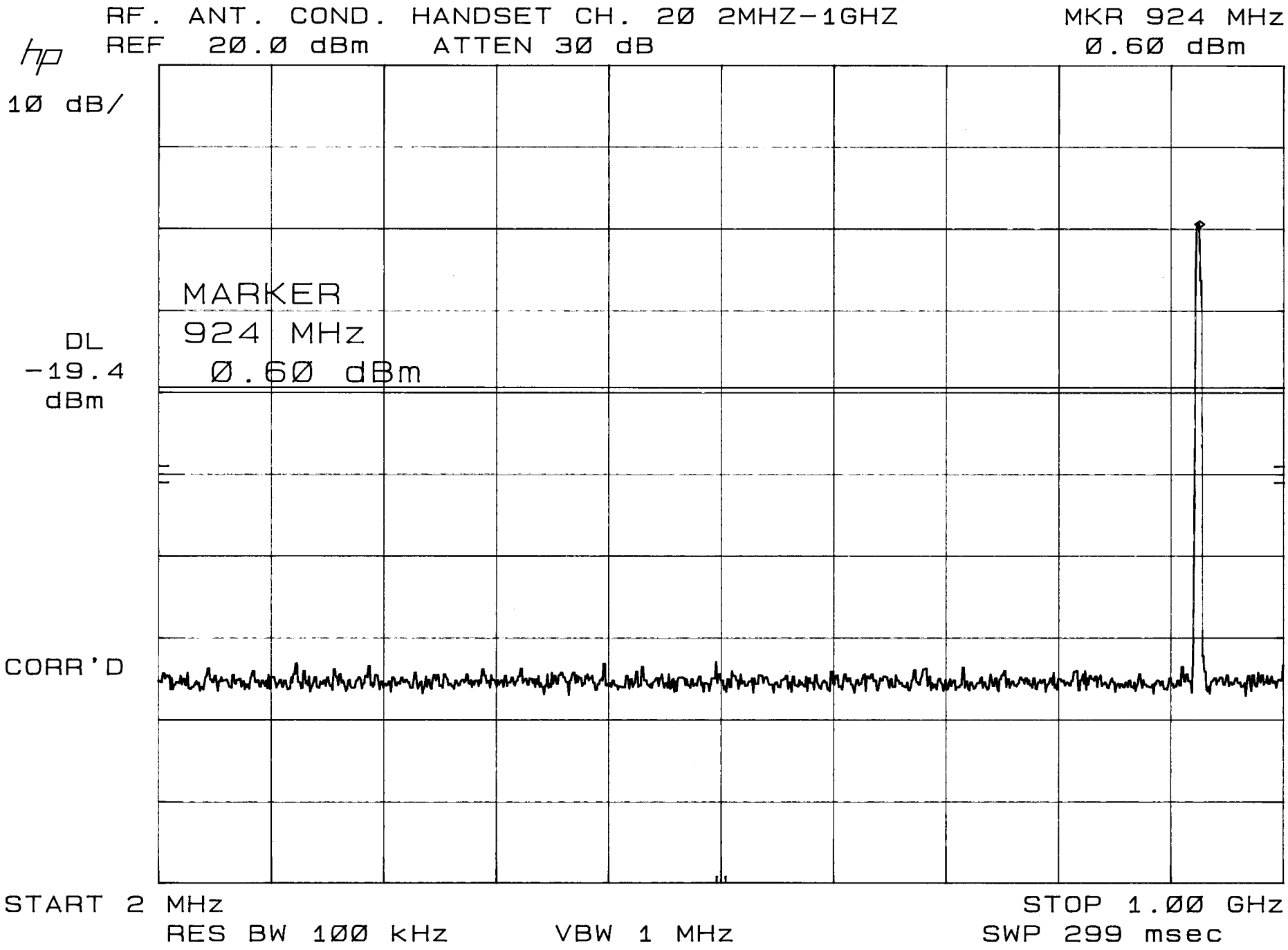
10-4-99


RF ANT. COND. HANDSET CH. 11 - 1GHZ-2GHZ
MKR 1.154 GHz
REF 20.0 dBm
ATTEN 30 dB
-53.20 dBm
10 dB/
MARKER
1.154 GHz
-53.20 dBm
DL
-19.7
dBm
CORR'D
START 1.00 GHz
STOP 2.00 GHz
RES BW 100 kHz
VBW 1 MHz
SWP 300 msec

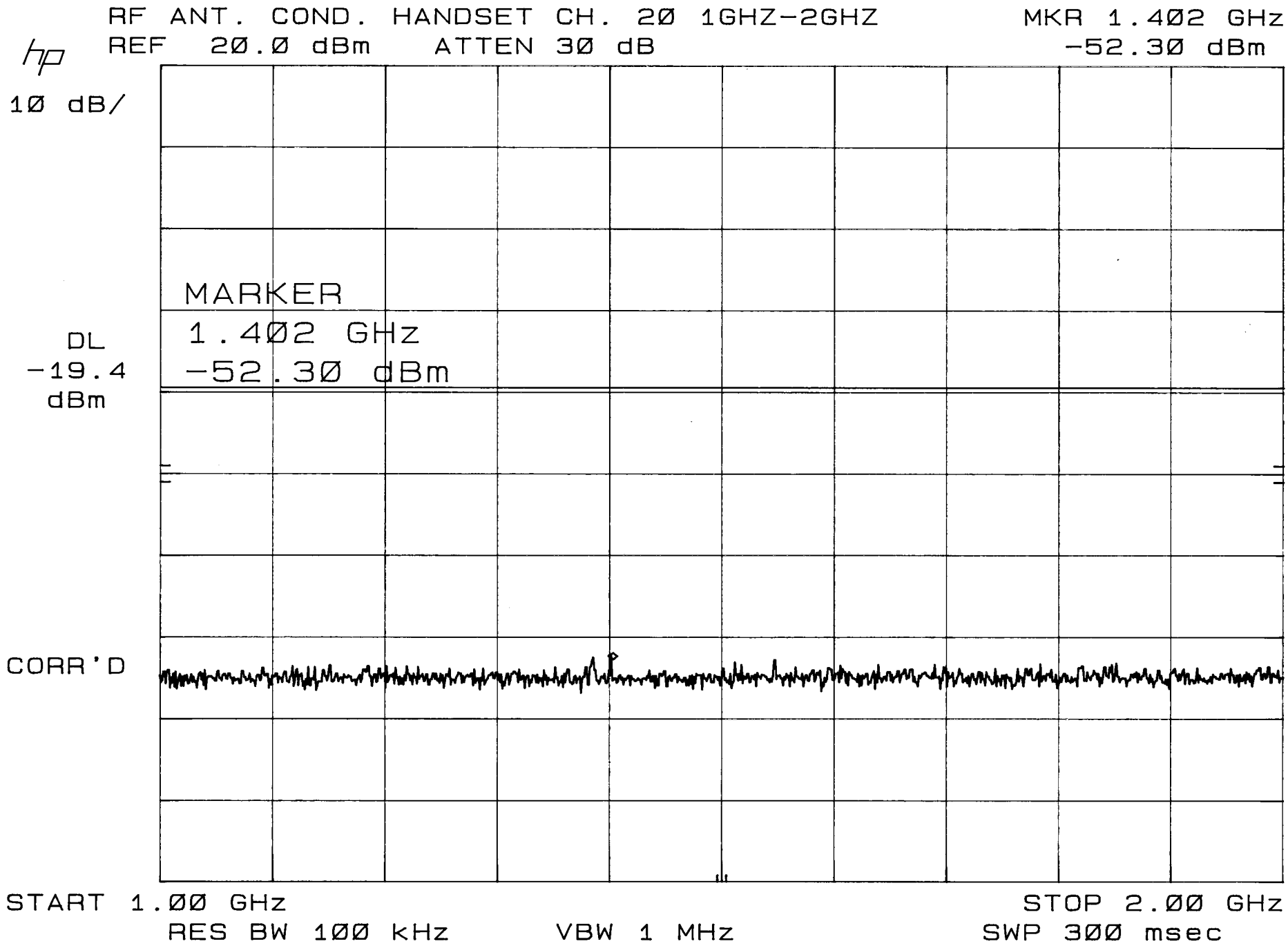
10-4-99


RF ANT. COND. HANDSET CH. 11 - 2GHZ-10GHZ
REF 20.0 dBm ATTEN 30 dB
MKR 3.200 GHz
-46.30 dBm
10 dB/
MARKER
3.200 GHz
-46.30 dBm
DL
-19.7
dBm
CORR'D
START 2.00 GHz
RES BW 100 kHz
VBW 1 MHz
STOP 10.00 GHz
SWP 2.40 sec

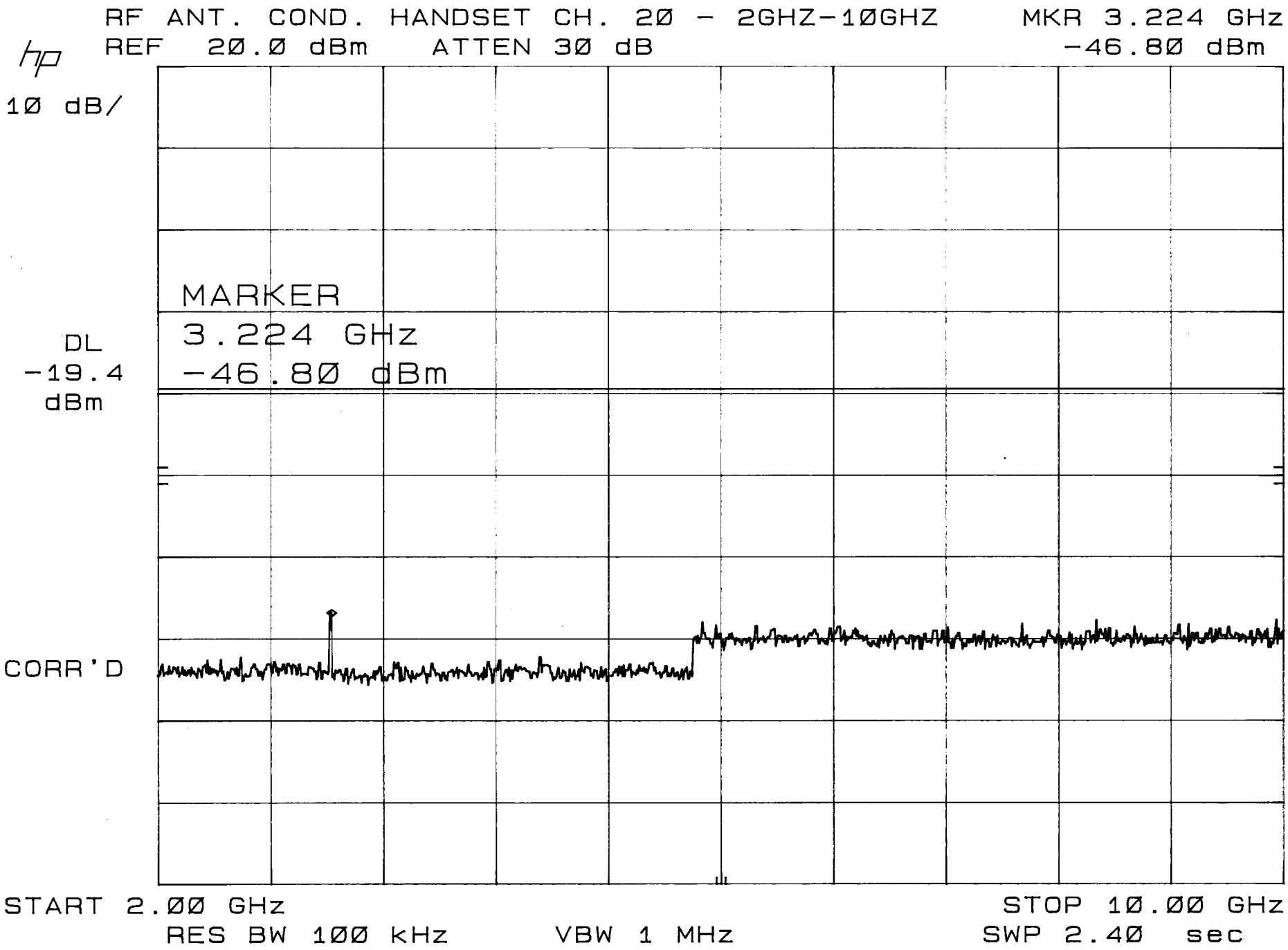
10-4-99


RF. ANT. COND. HANDSET CH. 20 2MHZ-1GHZ
MKR 924 MHz
REF 20.0 dBm
ATTEN 30 dB
0.60 dBm
10 dB/
MARKER
924 MHz
0.60 dBm
DL
-19.4
dBm
CORR'D
START 2 MHz
STOP 1.00 GHz
RES BW 100 kHz
VBW 1 MHz
SWP 299 msec

10-4-99


RF ANT. COND. HANDSET CH. 20 1GHZ-2GHZ
MKR 1.402 GHz
REF 20.0 dBm
ATTEN 30 dB
-52.30 dBm
10 dB/
MARKER
1.402 GHz
-52.30 dBm
DL
-19.4
dBm
CORR'D
START 1.00 GHz
STOP 2.00 GHz
RES BW 100 kHz
VBW 1 MHz
SWP 300 msec

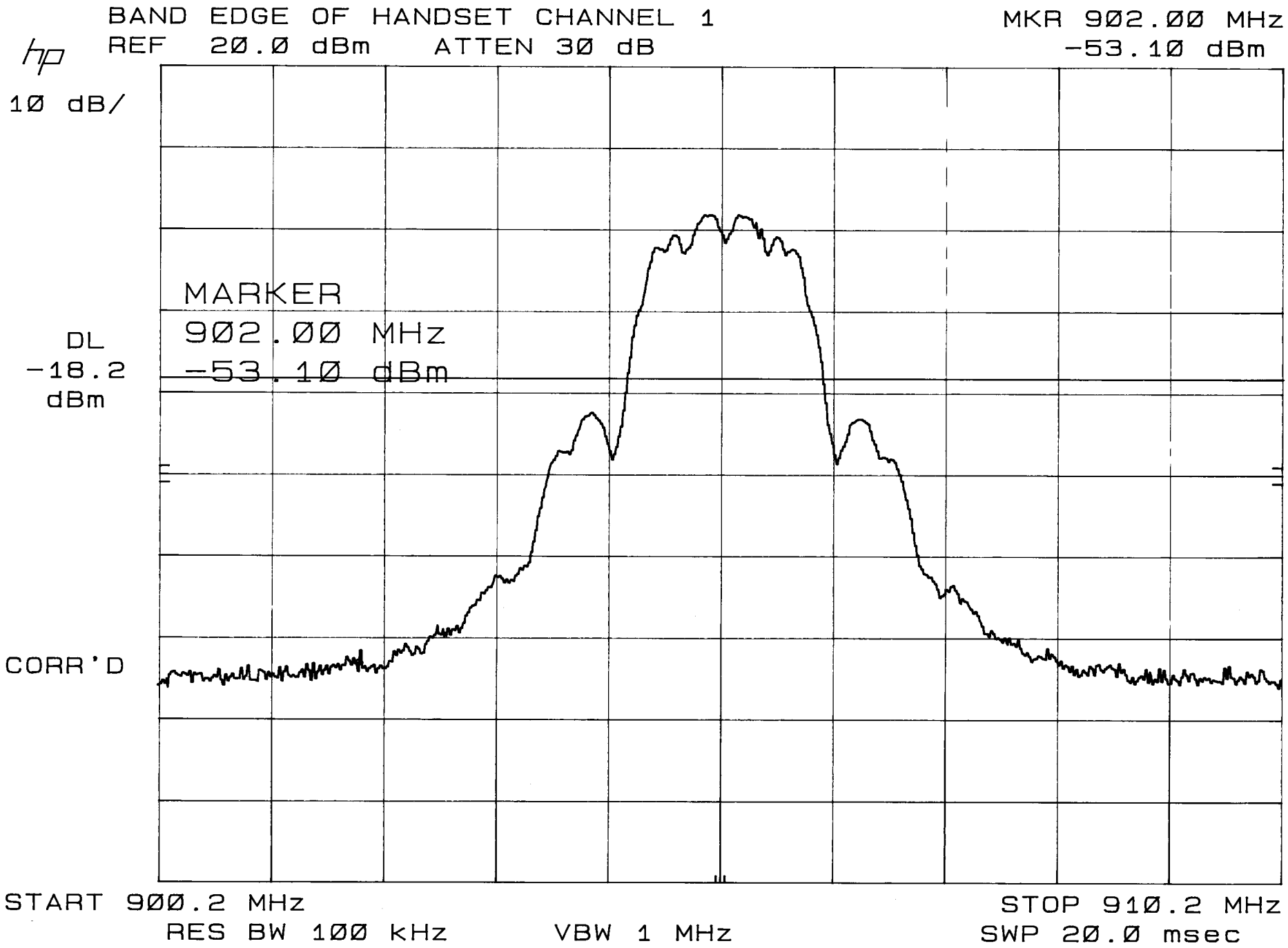
10-4-99


RF ANT. COND. HANDSET CH. 20 - 2GHZ-10GHZ
MKR 3.224 GHz
REF 20.0 dBm
ATTEN 30 dB
-46.80 dBm
10 dB/
MARKER
3.224 GHz
-46.80 dBm
DL
-19.4
dBm
CORR'D
START 2.00 GHz
STOP 10.00 GHz
RES BW 100 kHz
VBW 1 MHz
SWP 2.40 sec

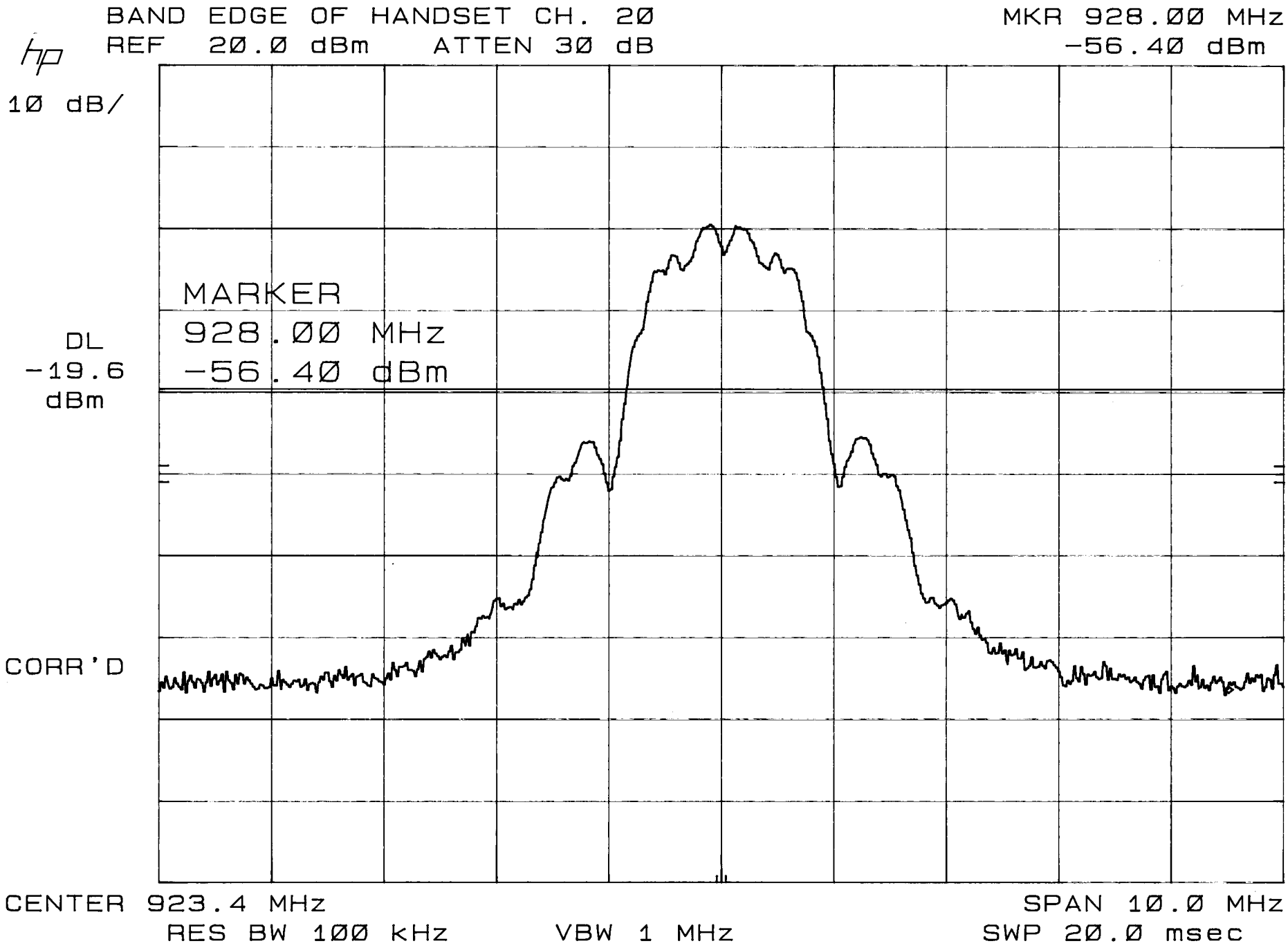
RF BAND EDGES FOR THE HANDSET

114 OLINDA DRIVE, BREA, CALIFORNIA 92823 PHONE: (714) 579-0500 FAX: (714) 579-1850

10-4-99


BAND EDGE OF HANDSET CHANNEL 1
REF 20.0 dBm ATTEN 30 dB
MKR 902.00 MHz
-53.10 dBm
10 dB/
MARKER
902.00 MHz
-53.10 dBm
DL
-18.2
dBm
CORR'D
START 900.2 MHz
STOP 910.2 MHz
RES BW 100 kHz
VBW 1 MHz
SWP 20.0 msec

10-4-99


BAND EDGE OF HANDSET CH. 20
REF 20.0 dBm ATTEN 30 dB
MKR 928.00 MHz
-56.40 dBm
10 dB/
MARKER
928.00 MHz
-56.40 dBm
DL
-19.6
dBm
CORR'D
CENTER 923.4 MHz
SPAN 10.0 MHz
RES BW 100 kHz
VBW 1 MHz
SWP 20.0 msec

PROCESSING GAIN
DATA SHEETS FOR THE BASE AND HANDSET

114 OLINDA DRIVE, BREA, CALIFORNIA 92823 PHONE: (714) 579-0500 FAX: (714) 579-1850

PROCESSING GAIN TEST

CHANNEL 11 (914.88MHz) - Base station output to handset input

Jammer Freq. (MHz)	Transmitter Outputs (dBm)	Signal Level (dBm)	CW Level (dBm)	Mj J/S ratio (dB)	Processing Gain (dB)
913.88	5.4	-44.6	-37.0	7.6	20.6
913.93	5.4	-44.6	-37.6	7.0	20.0
913.98	5.4	-44.6	-38.3	6.3	19.3
914.03	5.4	-44.6	-39.3	5.3	18.3
914.08	5.4	-44.6	-39.9	4.7	17.7
914.13	5.4	-44.6	-40.3	4.3	17.3
914.18	5.4	-44.6	-41.1	3.5	16.5
914.23	5.4	-44.6	-42.0	2.6	15.6
914.28	5.4	-44.6	-42.6	2.0	15.0
914.33	5.4	-44.6	-43.0	1.6	14.6
914.38	5.4	-44.6	-43.6	1.0	14.0
914.43	5.4	-44.6	-43.7	0.9	13.9
914.48	5.4	-44.6	-44.1	0.5	13.5
914.53	5.4	-44.6	-44.1	0.5	13.5
914.58	5.4	-44.6	-44.5	0.1	13.1
914.63	5.4	-44.6	-44.8	-0.2	12.8
914.68	5.4	-44.6	-44.5	0.1	13.1
914.73	5.4	-44.6	-44.5	0.1	13.1
914.78	5.4	-44.6	-44.5	0.1	13.1
914.83	5.4	-44.6	-44.5	0.1	13.1

LOSSES(dB)

Attenuation	50
System Loss	2
S/N ratio	11

Mj J/S ratio =
CW Noize- Sig.Level

ProcessingGain =
Mj J/S ratio + Sytem Loss + S/N rat

CHANNEL 9 (912.96MHz) - Handset output to base station input

Jammer Freq. (MHz)	Transmitter Outputs (dBm)	Signal Level (dBm)	CW Level (dBm)	Mj J/S ratio (dB)	Processing Gain (dB)
911.96	1.0	-49.0	-40.7	8.3	21.3
912.01	1.0	-49.0	-41.7	7.3	20.3
912.06	1.0	-49.0	-42.5	6.5	19.5
912.11	1.0	-49.0	-43.4	5.6	18.6
912.16	1.0	-49.0	-44.6	4.4	17.4
912.21	1.0	-49.0	-45.1	3.9	16.9
912.26	1.0	-49.0	-44.7	4.3	17.3
912.31	1.0	-49.0	-45.6	3.4	16.4
912.36	1.0	-49.0	-46.4	2.6	15.6
912.41	1.0	-49.0	-46.7	2.3	15.3
912.46	1.0	-49.0	-47.8	1.2	14.2
912.51	1.0	-49.0	-48.3	0.7	13.7
912.56	1.0	-49.0	-48.6	0.4	13.4
912.61	1.0	-49.0	-48.6	0.4	13.4
912.66	1.0	-49.0	-49.2	-0.2	12.8
912.71	1.0	-49.0	-49.2	-0.2	12.8
912.76	1.0	-49.0	-48.2	0.8	13.8
912.81	1.0	-49.0	-49.4	-0.4	12.6
912.86	1.0	-49.0	-49.1	-0.1	12.9
912.91	1.0	-49.0	-49.0	0.0	13.0

COMPATIBLE ELECTRONICS

PROCESSING GAIN TEST

CHANNEL 11(914.88MHz)- Base station output to handset input

Jammer Freq. (MHz)	Transmitter Outputs (dBm)	Signal Level (dBm)	CW Level (dBm)	Mj J/S ratio (dB)	Processing Gain (dB)
914.88	5.4	- 44.6	- 44.9	- 0.3	12.7
914.93	5.4	- 44.6	- 44.7	- 0.1	12.9
914.98	5.4	- 44.6	- 44.5	0.1	13.1
915.03	5.4	- 44.6	- 44.3	0.3	13.3
915.08	5.4	- 44.6	- 44.3	0.3	13.3
915.13	5.4	- 44.6	- 44.0	0.6	13.6
915.18	5.4	- 44.6	- 43.9	0.7	13.7
915.23	5.4	- 44.6	- 43.9	0.7	13.7
915.28	5.4	- 44.6	- 43.6	1.0	14.0
915.33	5.4	- 44.6	- 42.6	2.0	15.0
915.38	5.4	- 44.6	- 42.3	2.3	15.3
915.43	5.4	- 44.6	- 42.1	2.5	15.5
915.48	5.4	- 44.6	- 41.7	2.9	15.9
915.53	5.4	- 44.6	- 41.5	3.1	16.1
915.58	5.4	- 44.6	- 40.9	3.7	16.7
915.63	5.4	- 44.6	- 40.1	4.5	17.5
915.68	5.4	- 44.6	- 39.5	5.1	18.1
915.73	5.4	- 44.6	- 39.0	5.6	18.6
915.78	5.4	- 44.6	- 38.3	6.3	19.3
915.83	5.4	- 44.6	- 37.5	7.1	20.1
915.88	5.4	- 44.6	- 36.6	8.0	21.0

LOSSES(dB)	
Attenuation	50
System Loss	2
S/N ratio	11

Mj J/S ratio =
CW Noize- Sig.Level

ProcessingGain =
Mj J/S ratio + Sytem Loss + S/N rat

CHANNEL 9(912.96MHz) - Handset output to base station input

Jammer Freq. (MHz)	Transmitter Outputs (dBm)	Signal Level (dBm)	CW Level (dBm)	Mj J/S ratio (dB)	Processing Gain (dB)
912.96	1.0	- 49.0	- 48.4	0.6	13.6
913.01	1.0	- 49.0	- 48.6	0.4	13.4
913.06	1.0	- 49.0	- 48.9	0.1	13.1
913.11	1.0	- 49.0	- 48.6	0.4	13.4
913.16	1.0	- 49.0	- 47.7	1.3	14.3
913.21	1.0	- 49.0	- 48.0	1.0	14.0
913.26	1.0	- 49.0	- 47.5	1.5	14.5
913.31	1.0	- 49.0	- 47.4	1.6	14.6
913.36	1.0	- 49.0	- 47.5	1.5	14.5
913.41	1.0	- 49.0	- 46.8	2.2	15.2
913.46	1.0	- 49.0	- 46.1	2.9	15.9
913.51	1.0	- 49.0	- 46.1	2.9	15.9
913.56	1.0	- 49.0	- 46.1	2.9	15.9
913.61	1.0	- 49.0	- 46.7	2.3	15.3
913.66	1.0	- 49.0	- 48.0	1.0	14.0
913.71	1.0	- 49.0	- 46.5	2.5	15.5
913.76	1.0	- 49.0	- 44.8	4.2	17.2
913.81	1.0	- 49.0	- 44.8	4.2	17.2
913.86	1.0	- 49.0	- 44.7	4.3	17.3
913.91	1.0	- 49.0	- 44.6	4.4	17.4
913.96	1.0	- 49.0	- 43.8	5.2	18.2