Lucent Technologies
Bell Labs Innovations

June 2, 1999

Test Results Graphs

The following graphs belong to test results of connected measurements on Handset Channel 1, the file name is 9520power-connected.

The sequence of the graphs are:
- Bandwidth of channel main carrier in KHz according to 15.247(a.1.i).
- Power of main carrier according to 15.247(b.2).
- Power of and up to the 10th harmonic according to 15.209 and 15.247(c).

Field Strength Calculation*

According to explanation gave in duty cycle correct factor, done in file "test-avg-advice", the final results would be obtained as follow:

FR = SR + CL + AF – DCF

Where:
FR : Final Result
SR: Spectrum Analizer Reading
CL: Cable Loss
AF: Antenna Factor
DCF: Duty Cycle Factor

As an example a real result was extracted from file 9520power-connected.
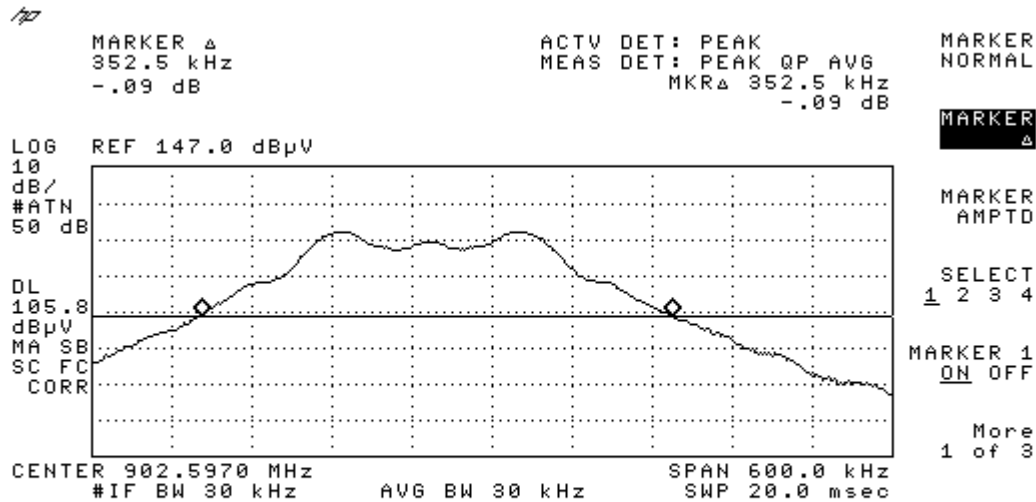
SR	(+)CL	(+)AF	(-)DCF	**= FR**
124.64	0.5	0.0	26.00	**99.14**

* Graph results are not affected by this final calculation, the graphs only shows the Spectrum Analyzer Reading.
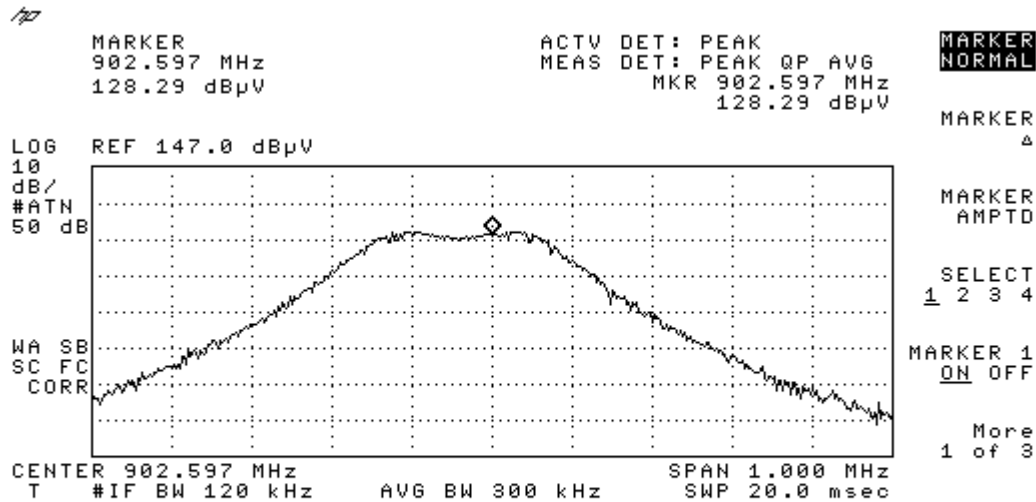
Conducted Power Measurement at Antenna Port(s) 47 CFR 15.247(b)

Date:	May 31, 1999
EUT:	9520-900MHz Spread Spectrum Frequency Hopping Cordless Telephone
Temperature:	23°C
Humidity:	25%

HANDSET BW Channel 1

```
hp
        MARKER Δ                    ACTV DET: PEAK              MARKER
        352.5 kHz                   MEAS DET: PEAK QP AVG       NORMAL
        -.09 dB                            MKRΔ 352.5 kHz
                                                -.09 dB        MARKER
                                                                  Δ
   LOG  REF 147.0 dBµV
   10
   dB/                                                         MARKER
   #ATN                                                        AMPTD
   50 dB

                                                              SELECT
   DL                                                         1 2 3 4
   105.8
   dBµV
   MA SB                                                      MARKER 1
   SC FC                                                      ON OFF
     CORR

                                                                More
                                                               1 of 3
   CENTER 902.5970 MHz                     SPAN 600.0 kHz
        #IF BW 30 kHz      AVG BW 30 kHz   SWP 20.0 msec
```

HANDSET POWER Channel 1

```
hp
        MARKER                      ACTV DET: PEAK              MARKER
        902.597 MHz                 MEAS DET: PEAK QP AVG       NORMAL
        128.29 dBµV                        MKR 902.597 MHz
                                                128.29 dBµV     MARKER
                                                                  Δ
   LOG  REF 147.0 dBµV
   10
   dB/                                                         MARKER
   #ATN                                                        AMPTD
   50 dB

                                                              SELECT
                                                              1 2 3 4

   WA SB
   SC FC                                                      MARKER 1
     CORR                                                     ON OFF

                                                                More
                                                               1 of 3
   CENTER 902.597 MHz                      SPAN 1.000 MHz
     T   #IF BW 120 kHz    AVG BW 300 kHz  SWP 20.0 msec
```
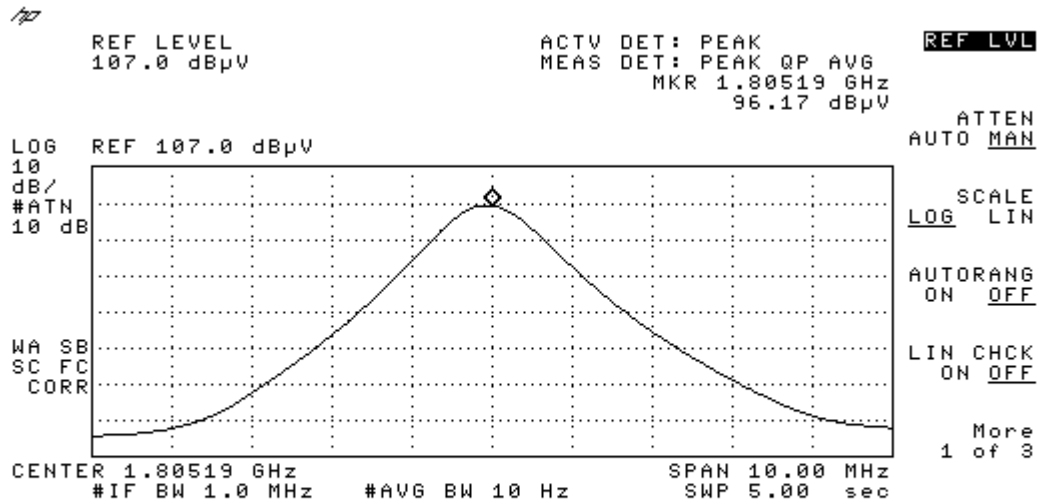
HANDSET 2th Harmonic, Channel 1

Conducted Power Measurement at Antenna Port(s) 47 CFR 15.247(b)

Date:	May 31, 1999
EUT:	9520-900MHz Spread Spectrum Frequency Hopping Cordless Telephone
Temperature:	23°C
Humidity:	25%

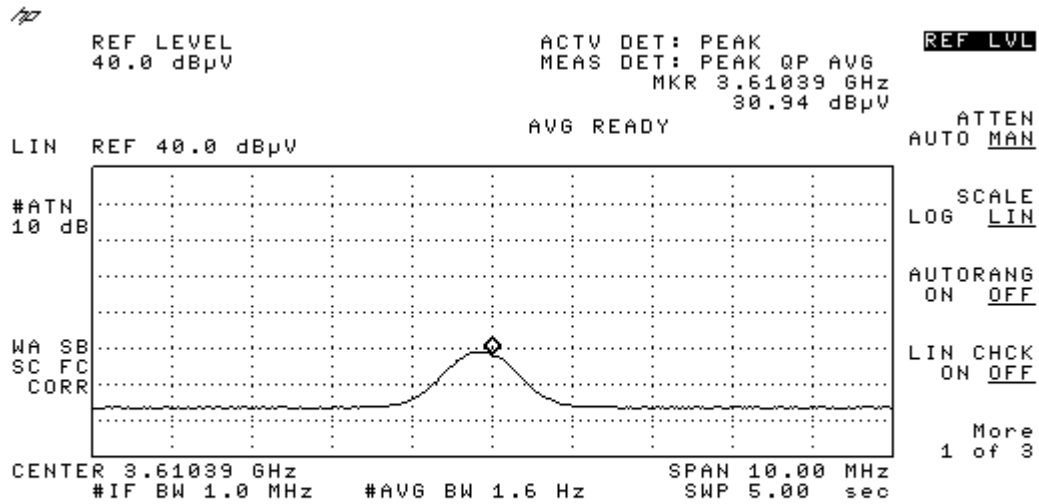HANDSET 3th Harmonic, Channel 1
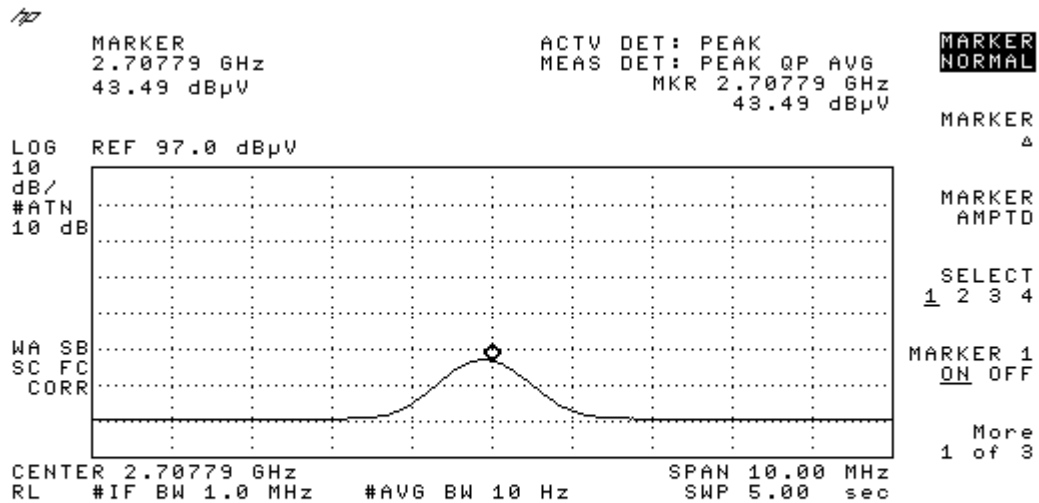
HANDSET 4th Harmonic, Channel 1

Conducted Power Measurement at Antenna Port(s) 47 CFR 15.247(b)

Date:	May 31, 1999
EUT:	9520-900MHz Spread Spectrum Frequency Hopping Cordless Telephone
Temperature:	23°C
Humidity:	25%

```
hp
      REF LEVEL                 ACTV DET: PEAK              REF LVL
      40.0 dBμV                 MEAS DET: PEAK QP AVG
                                      MKR 3.61039 GHz
                                         30.94 dBμV          ATTEN
                                  AVG READY               AUTO MAN
 LIN  REF 40.0 dBμV

 #ATN                                                        SCALE
 10 dB                                                   LOG  LIN

                                                         AUTORANG
                                                           ON  OFF

 WA SB                            ◇                       LIN CHCK
 SC FC                                                      ON OFF
   CORR
                                                             More
                                                            1 of 3
 CENTER 3.61039 GHz                      SPAN 10.00 MHz
     #IF BW 1.0 MHz    #AVG BW 1.6 Hz    SWP 5.00  sec
```

HANDSET 5th Harmonic, Channel 1

```
hp
      MARKER                    ACTV DET: PEAK             MARKER
      4.51299 GHz               MEAS DET: PEAK QP AVG      NORMAL
      11.38 dBμV                      MKR 4.51299 GHz
                                         11.38 dBμV         MARKER
                                  AVG READY                    Δ
 LIN  REF 43.0 dBμV

 #ATN                                                       MARKER
 0 dB                                                       AMPTD

                                                            SELECT
                                                           1 2 3 4

 WA SB                                                     MARKER 1
 SC FC                                                      ON OFF
   CORR
                                  ◇                          More
                                                            1 of 3
 CENTER 4.51299 GHz                      SPAN 10.00 MHz
 RL    #IF BW 1.0 MHz   #AVG BW 1.6 Hz   SWP 5.00  sec
```

HANDSET 6TH Harmonic, Channel 1

Conducted Power Measurement at Antenna Port(s) 47 CFR 15.247(b)

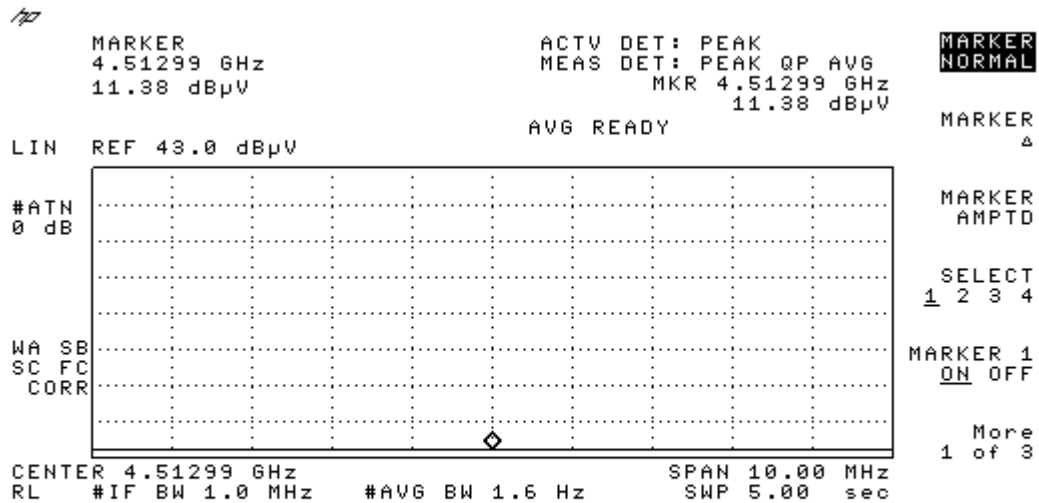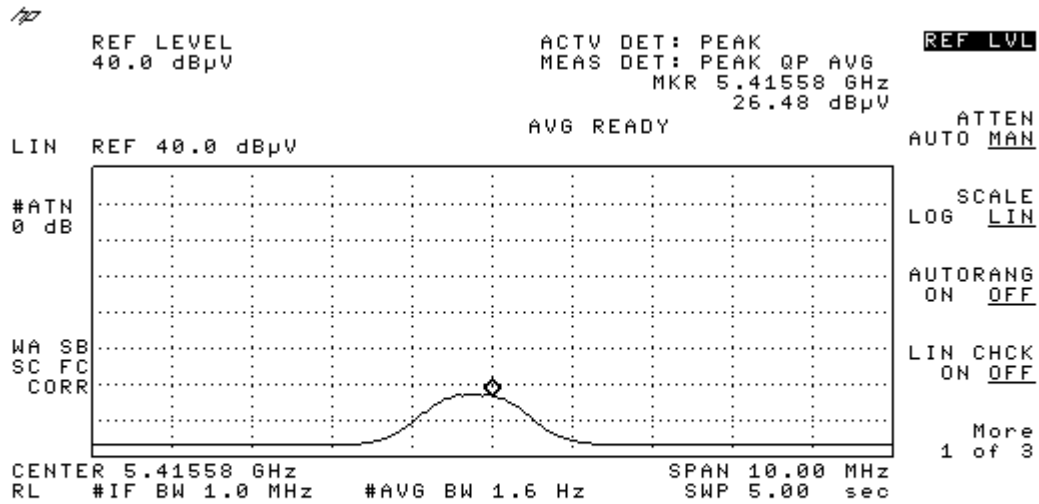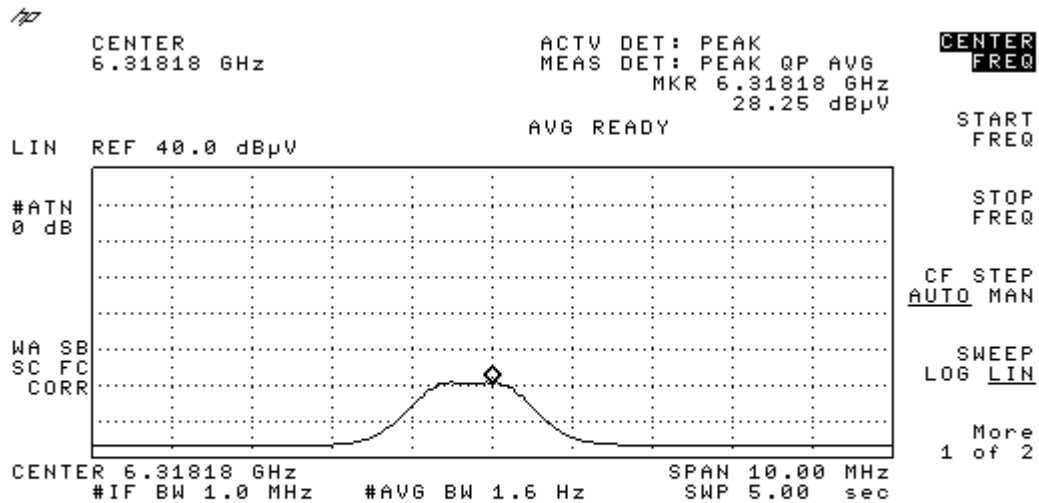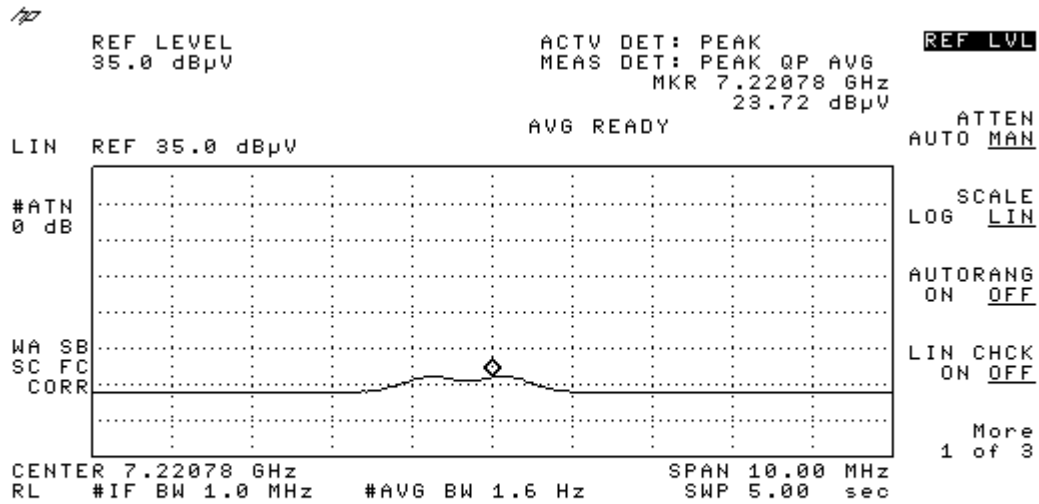| Date:	May 31, 1999
EUT:	9520-900MHz Spread Spectrum Frequency Hopping Cordless Telephone
Temperature:	23°C
Humidity:	25%

HANDSET 7th Harmonic, Channel 1

HANDSET 8TH Harmonic, Channel 1

Conducted Power Measurement at Antenna Port(s) 47 CFR 15.247(b)

Date:	May 31, 1999
EUT:	9520-900MHz Spread Spectrum Frequency Hopping Cordless Telephone
Temperature:	23°C
Humidity:	25%

```
         REF LEVEL              ACTV DET: PEAK           REF LVL
         35.0 dBμV              MEAS DET: PEAK QP AVG
                                    MKR 7.22078 GHz
                                        23.72 dBμV      ATTEN
                                AVG READY               AUTO MAN
   LIN  REF 35.0 dBμV
                                                        SCALE
   #ATN                                                 LOG  LIN
   0 dB
                                                        AUTORANG
                                                        ON   OFF

   WA SB                                                LIN CHCK
   SC FC                        ◇                       ON  OFF
     CORR

                                                        More
                                                        1 of 3
   CENTER 7.22078 GHz                    SPAN 10.00 MHz
   RL    #IF BW 1.0 MHz   #AVG BW 1.6 Hz  SWP 5.00  sec
```

HANDSET 9th Harmonic, Channel 1

```
         CENTER                ACTV DET: PEAK           CENTER
         8.12337 GHz           MEAS DET: PEAK QP AVG     FREQ
                                    MKR 8.12337 GHz
                                        21.85 dBμV      START
                                AVG READY               FREQ
   LIN  REF 35.0 dBμV
                                                        STOP
   #ATN                                                 FREQ
   0 dB
                                                        CF STEP
                                                        AUTO MAN

   WA SB                                                SWEEP
   SC FC                        ◇                       LOG LIN
     CORR

                                                        More
                                                        1 of 2
   CENTER 8.12337 GHz                    SPAN 10.00 MHz
   RL    #IF BW 1.0 MHz   #AVG BW 1.6 Hz  SWP 5.00  sec
```
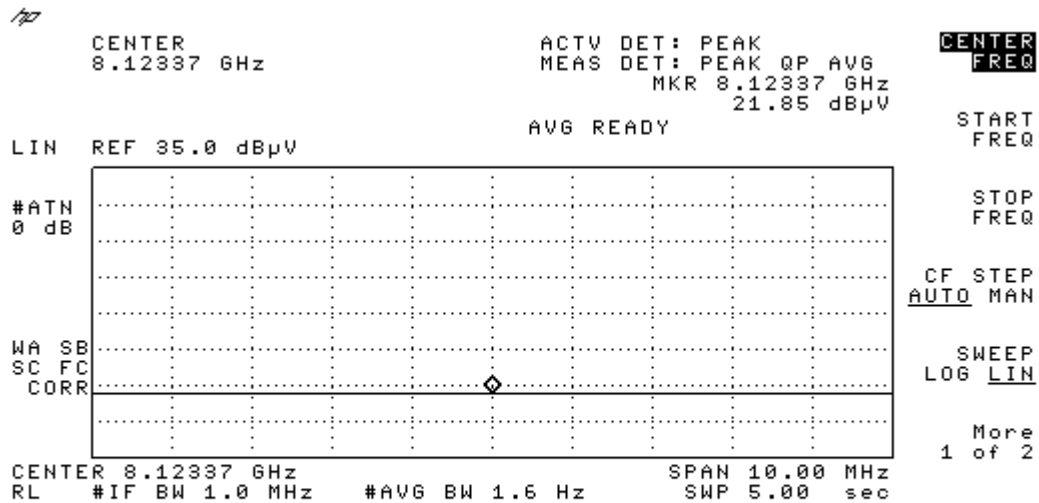
HANDSET 10th Harmonic, Channel 1

Conducted Power Measurement at Antenna Port(s) 47 CFR 15.247(b)

Date:	May 31, 1999
EUT:	9520-900MHz Spread Spectrum Frequency Hopping Cordless Telephone
Temperature:	23°C
Humidity:	25% |