

- 1) A statement detailing maximum tuning range i.e. start and stop frequency for each mode. The FCC EAS "tech spec" state the high frequency range for the 1900 TDM mode is 1909.95 MHZ. However, occupied Bandwidth and band edge plots on test report pages 43-53 of 84 were only made at 1909.92 MHZ. Please clarify. Provide an additional plot as appropriate.

Maximum Tuning Range (see page 6 (2of 4) of test report)

824.04 – 848.97	TDMA	800
1850.04 – 1909.95	TDMA	1900
1850.2 – 1909.8	GSM	1900

The occupied bandwidth measurement was not centered for exactly 1909.95 since this was not a measurement of the center frequency, but a measurement of the bandwidth.

Please see table below in #2. The 1909.92 was a typo and has been corrected to be 1909.95.

- 2) A statement and associated diagrams detailing measurement procedures for radiated power and radiated spurious emissions in test report section 3 and 7. Please include a discussion how the burst nature of this signal was accounted for in the test. Also, the power numbers reported on page 11 of 84 do not agree with those published on page 2 of 4 and 3 of 4 in section 1 of the test report. Please clarify.

The table below (page 11 of 84) now includes the Radiated AVG which is what is on page 2 of 4 in the report.

TDMA 800				
Frequency MHz	Conducted Output Peak Power dBm	Conducted Output AVG Power dBm	Radiated Output Peak dBm	Radiated Output AVG dBm
Ch 991 824.06	28.8	25.7	27.3	24.3
Ch 383 836.49	28.9	25.8	28.1	25.1
Ch 799 848.97	29	25.9	28.1	25.1

TDMA 1900				
Frequency MHz	Conducted Output Peak Power dBm	Conducted Output AVG Power dBm	Radiated Output Peak dBm	Radiated Output AVG dBm
Ch 2 1850.04	29	26.0	32.1	29.1
Ch1000 1879.98	29	26.0	31.9	28.9
Ch1998 1909.95	29	26.0	31.4	28.4

GSM 1900				
Frequency MHz	Conducted Output Peak Power dBm	Conducted Output AVG Power dBm	Radiated Output Peak dBm	Radiated Output AVG dBm
Ch 512 1850.2	29.3	29.3	32.8	29.8
Ch 661 1880	29.3	29.3	32.8	29.8
Ch 512 1909.8	29	29.0	31.8	28.8

- 3) New occupied BW data using a 99% BW, per CFR 47 section 2.1049 as well as band edge spectral plots. Please use maximum transmit power. Reference levels in the plots from page 43-53 of 84 suggest that the maximum power was not used for these tests.

See table below for 99% occupied BW. The plots follow the table.

TDMA 800		
Frequency MHz	99% Occupied BW	26 dBC BW
	kHz	kHz
Ch 991 824.06	31.9	33.2
Ch 383 836.49	33	35.4
Ch 799 848.97	32.4	35

TDMA 1900		
Frequency MHz	99% Occupied BW	26 dBC BW
	kHz	kHz
Ch 2 1850.04	34	37.8
Ch1000 1879.98	35	38.6
Ch1998 1909.95	34	35

GSM 1900		
Frequency MHz	99% Occupied BW	26 dBC BW
	kHz	kHz
Ch 512 1850.2	305	238
Ch 661 1880	302	323
Ch 512 1909.8	298	321

CUSTOMER: SIEMENS
EUT: "S46" FCC ID: PWX S46"
TEST: OCCUPIED BANDWIDTH 2.1049 (TDMA 1900 Low band)

Report No.: SC107139

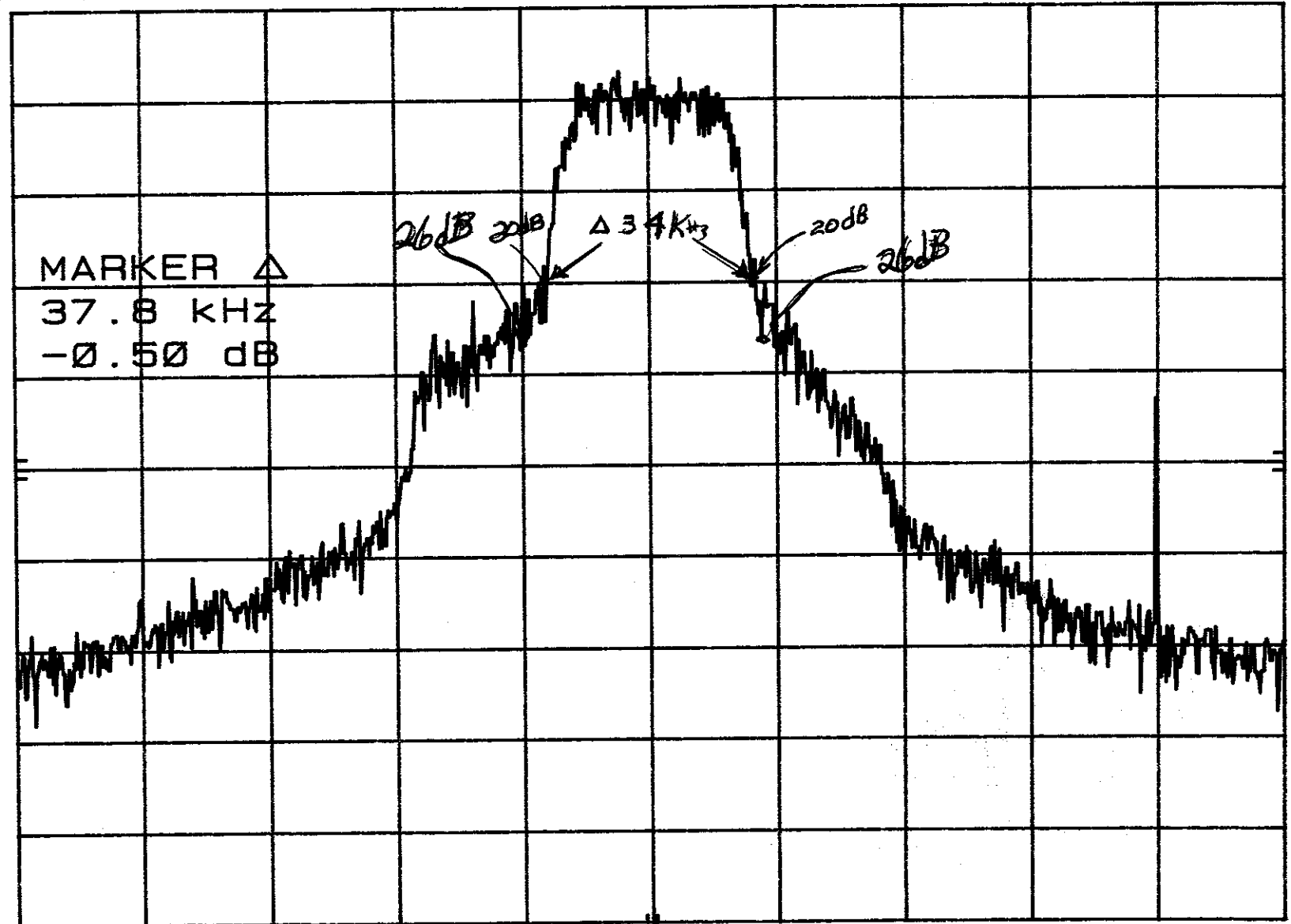
OCT. 22, 2001
TECH/ENGR. *DNB*

2.1049
MKR Δ 37.8 KHz
-0.50 dB

hp REF 20.0 dBm ATTEN 20 dB

10 dB/

OFFSET
11.9
dB



CENTER 1.850 040 GHz

RES BW 300 Hz (1) VBW 300 Hz

SPAN 200 KHz

SWP 15.0 sec 48

CUSTOMER: SIEMENS

Report No.: SC107139

OCT. 22, 2001

EUT: "S46" FCC ID:PWX S46"

TECH/ENGR. *DB*

TEST: OCCUPIED BANDWIDTH 2.1049 (TDMA 1900 Mid band)

2.1049

MKR Δ 38.6 KHz
1.80 dB

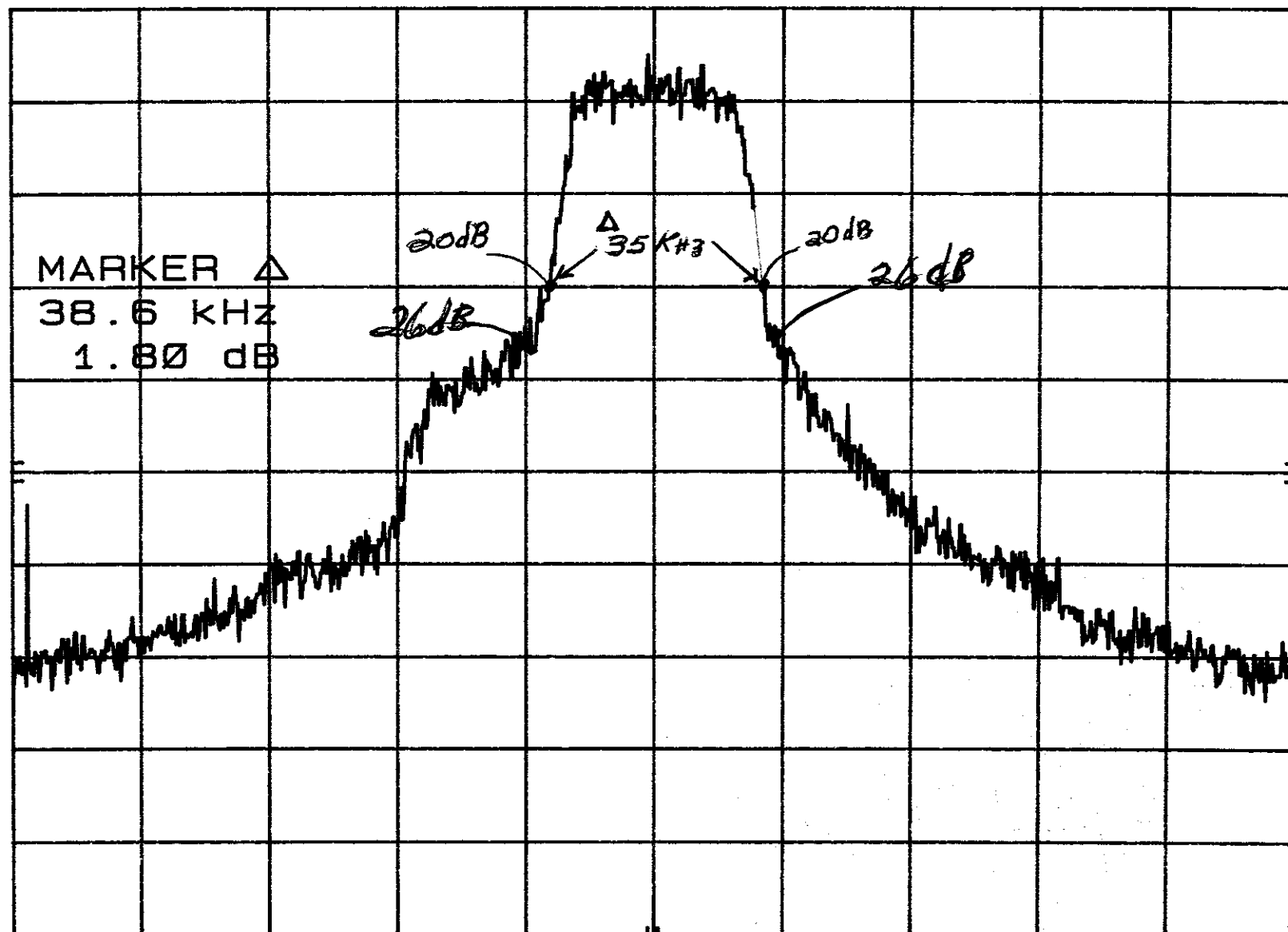
hp

REF 20.0 dBm

ATTEN 20 dB

10 dB/

OFFSET
11.9
dB



CENTER 1.879 980 GHz

RES BW 300 Hz (1) VBW 300 Hz

SPAN 200 KHz

SWP 15.0 sec

49

CUSTOMER: SIEMENS

Report No.: SC107139

OCT. 22, 2001

EUT: "S46" FCC ID:PWX S46"

TECH/ENGR. *STB*

TEST: OCCUPIED BANDWIDTH 2.1049 (TDMA 1900 High band)

2.1049

MKR Δ 35.0 KHz
-0.90 dB

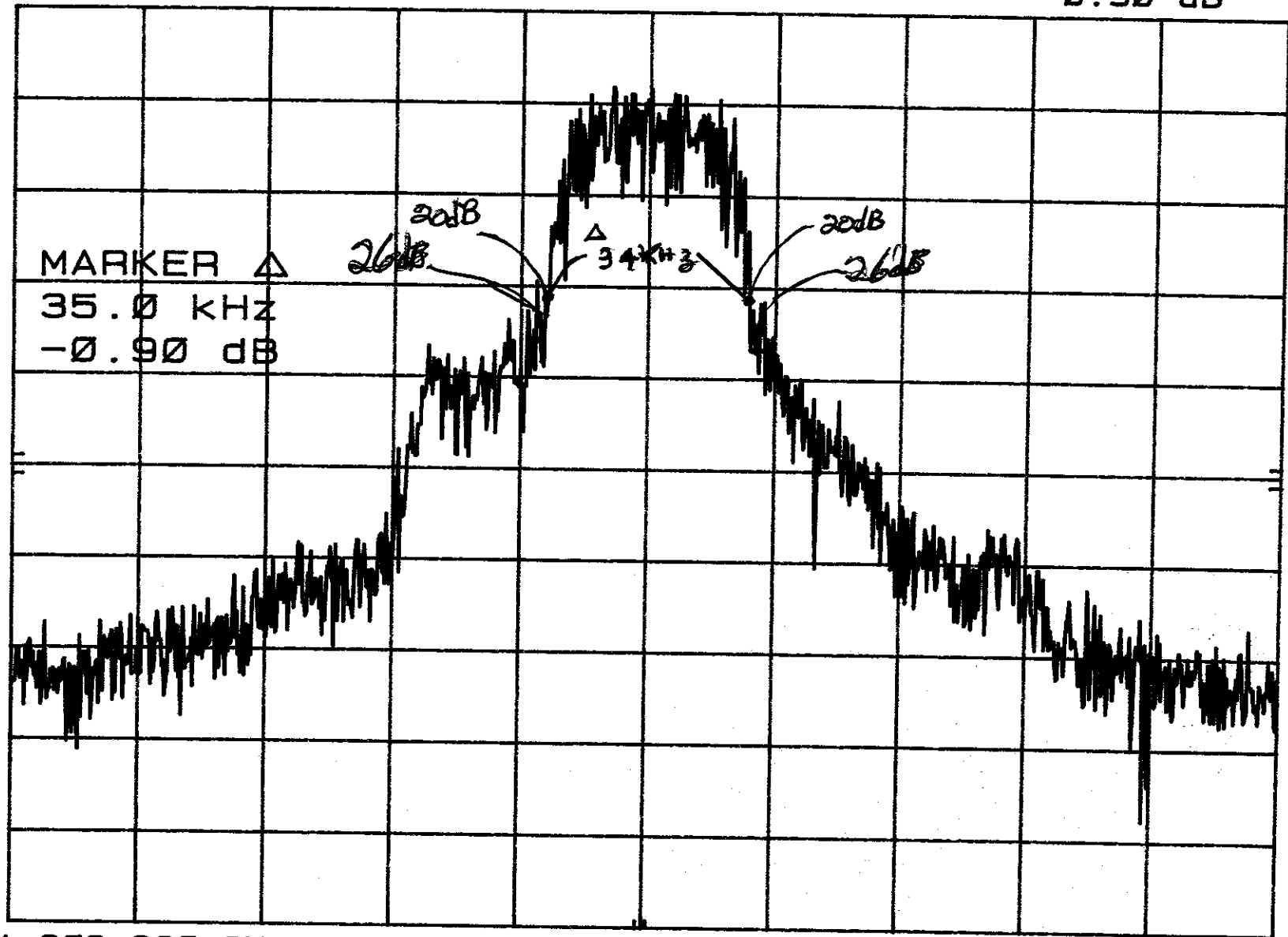
hp REF 20.0 dBm ATTEN 20 dB

10 dB/

POS PK

OFFSET

11.9
dB



CENTER 1.909 920 GHz

RES BW 300 Hz (1) VBW 300 Hz

SPAN 200 KHz
SWP 15.0 sec

50

CUSTOMER: SIEMENS
EUT: "S46" FCC ID:PWX S46"

Report No.: SC107139

OCT. 22, 2001
TECH/ENGR. *JOE*

TEST: OCCUPIED BANDWIDTH 2.1049 (GSM 1900 Low band)

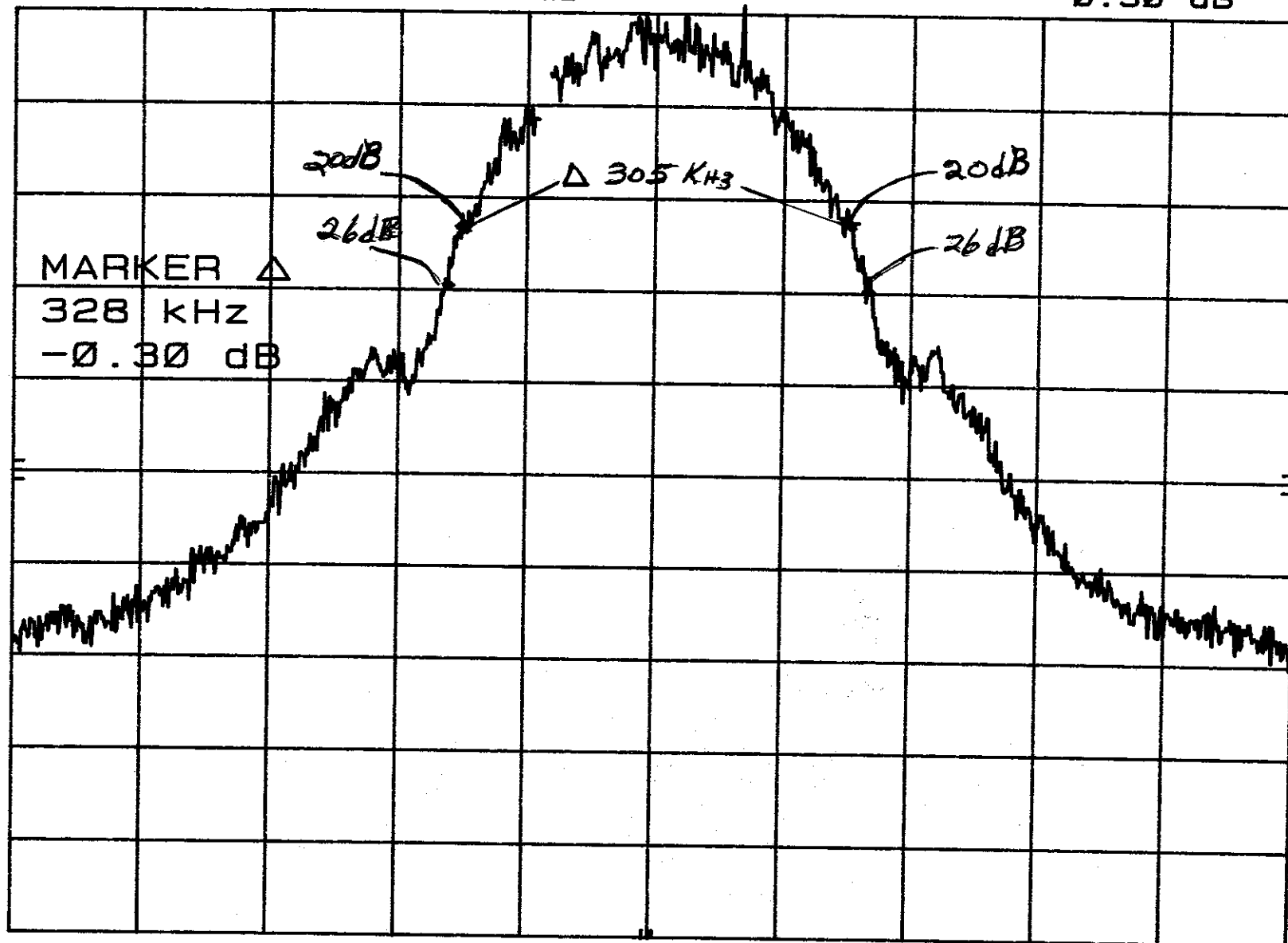
2.1049

MARKER Δ 328 kHz
-0.30 dB

hp REF 20.0 dBm ATTEN 20 dB

10 dB/

OFFSET
11.9
dB



CENTER 1.850 20 GHz

RES BW 3 kHz (i)

VBW 3 kHz

SPAN 1.00 MHz
SWP 750 msec

51

CUSTOMER: SIEMENS
EUT: "S46" FCC ID:PWX S46"

Report No.: SC107139

OCT. 22, 2001
TECH/ENGR. *AB*

TEST: OCCUPIED BANDWIDTH 2.1049 (GSM 1900 Mid band)

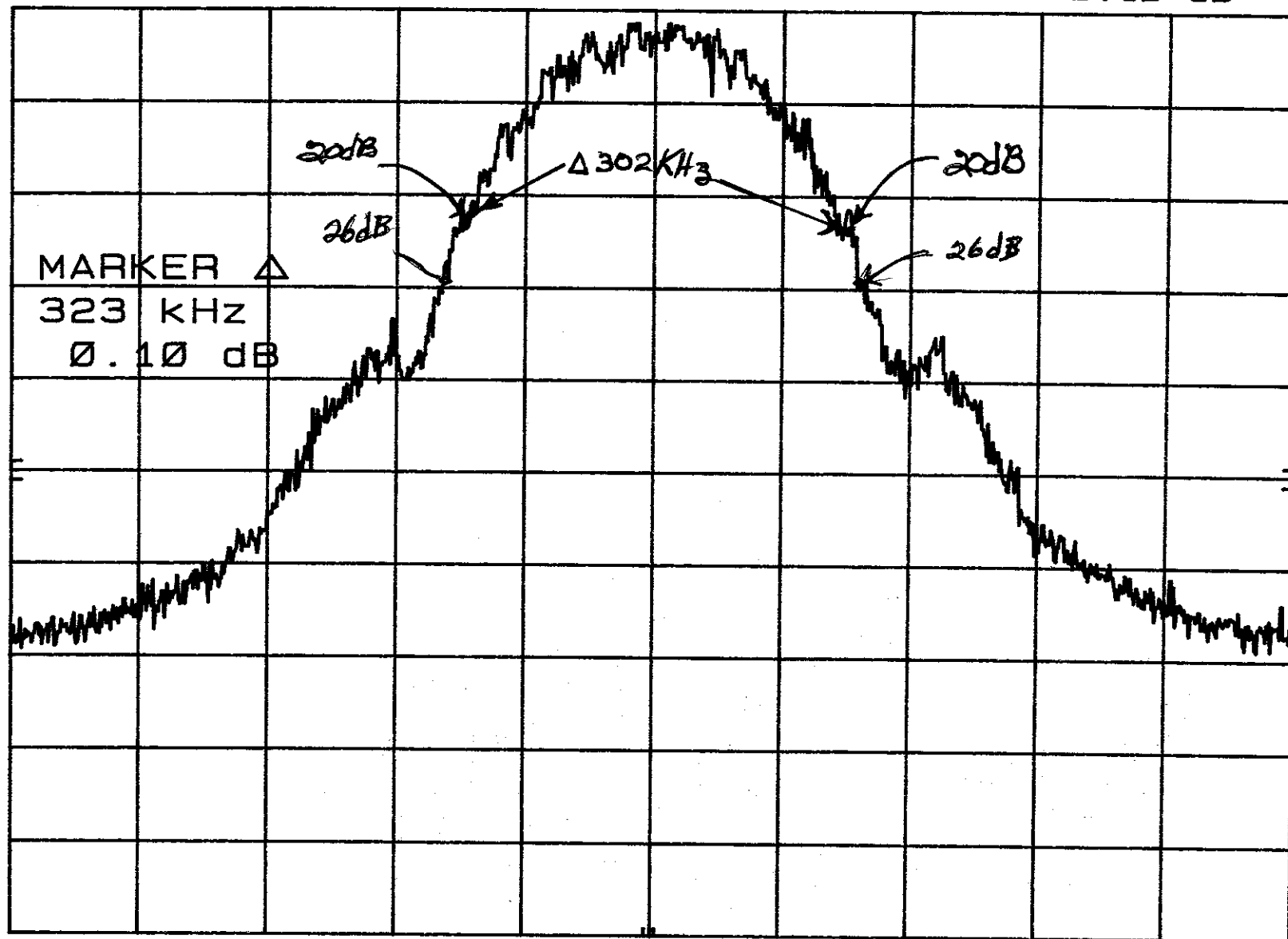
2.1049

MARKER Δ 323 kHz
0.10 dB

hp REF 20.0 dBm ATTEN 20 dB

10 dB/

OFFSET
11.9
dB



CENTER 1.880 00 GHz
RES BW 3 kHz (i)

VBW 3 kHz

SPAN 1.00 MHz
SWP 750 msec

52

CUSTOMER: SIEMENS
EUT: "S46" FCC ID:PWX S46"

Report No.: SC107139

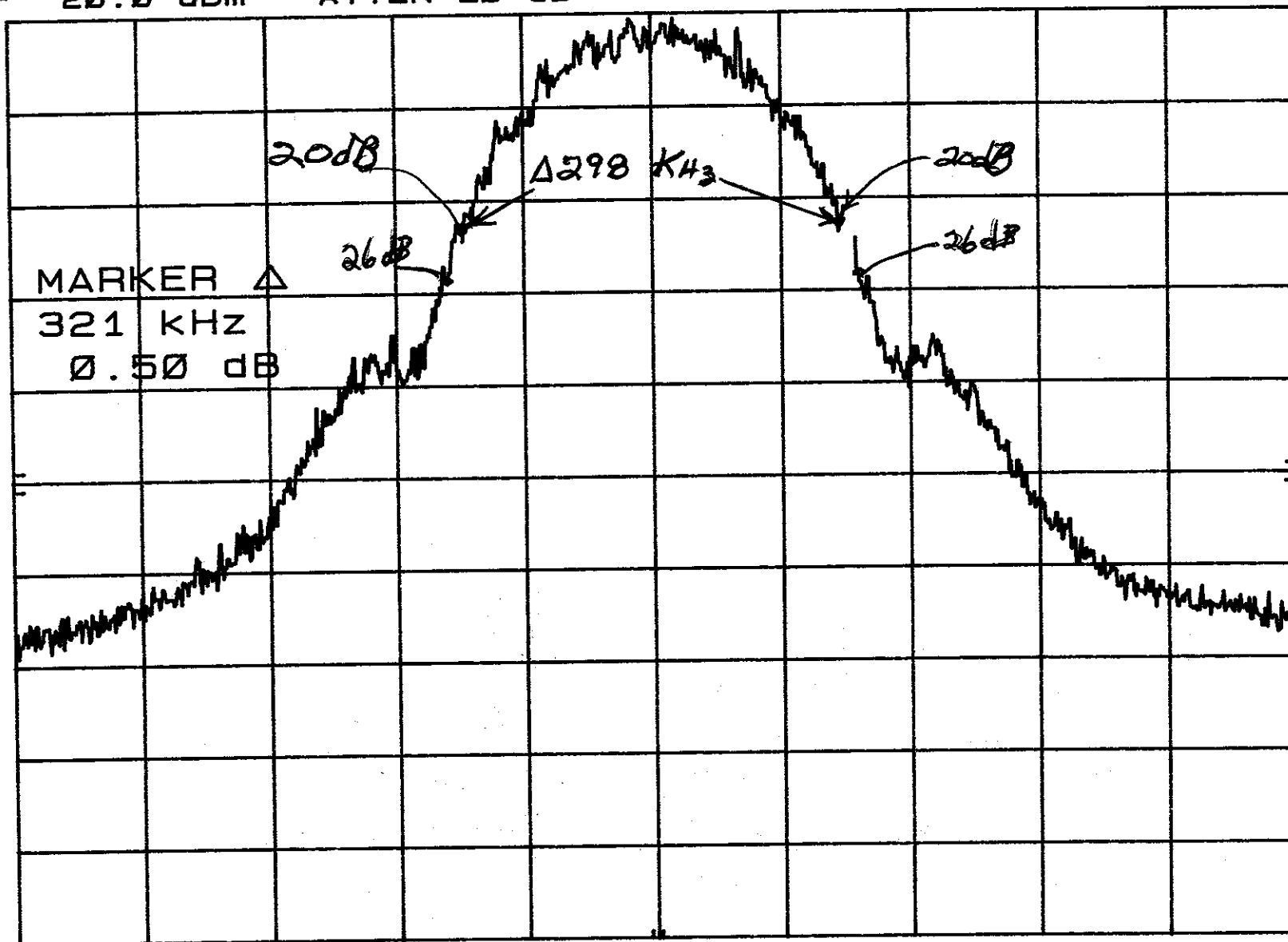
OCT. 22, 2001
TECH/ENGR. *[Signature]*
MKR Δ 321 KHz
0.50 dB

TEST: OCCUPIED BANDWIDTH 2.1049 (GSM 1900 High band)

2.1049

hp
10 dB/
OFFSET
11.9
dB

REF 20.0 dBm ATTN 20 dB



CENTER 1.909 80 GHz
RES BW 3 KHz (i)

VBW 3 KHz

SPAN 1.00 MHz
SWP 750 msec

53

CUSTOMER: SIEMENS
EUT: "S46" FCC ID:PWX S46"

Report No.: SC107139

OCT. 22, 2001

TECH/ENGR. *DNB*

TEST: OCCUPIED BANDWIDTH 2.1049 (TDMA 800 Low band)

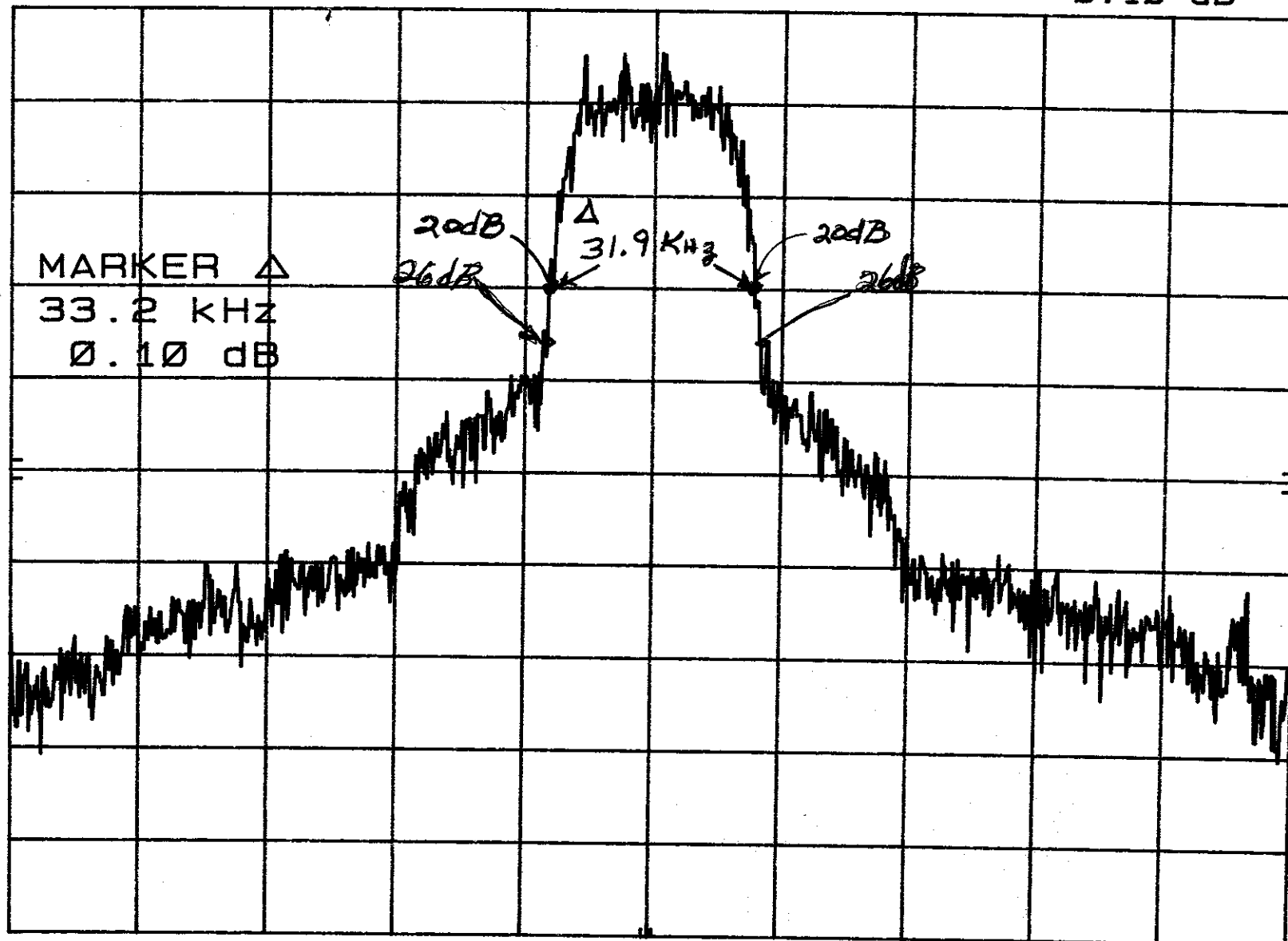
2.1049

MARKER Δ 33.2 kHz
0.10 dB

hp REF 20.0 dBm ATTEN 20 dB

10 dB/

OFFSET
11.9
dB



CENTER 824.040 MHz

RES BW 300 Hz (1) VBW 300 Hz

SPAN 200 kHz
SWP 15.0 sec

55

CUSTOMER: SIEMENS

Report No.: SC107139

OCT. 22, 2001

EUT: "S46" FCC ID:PWX S46"

TECH/ENGR. *DB*

TEST: OCCUPIED BANDWIDTH 2.1049 (TDMA 800 Mid band)

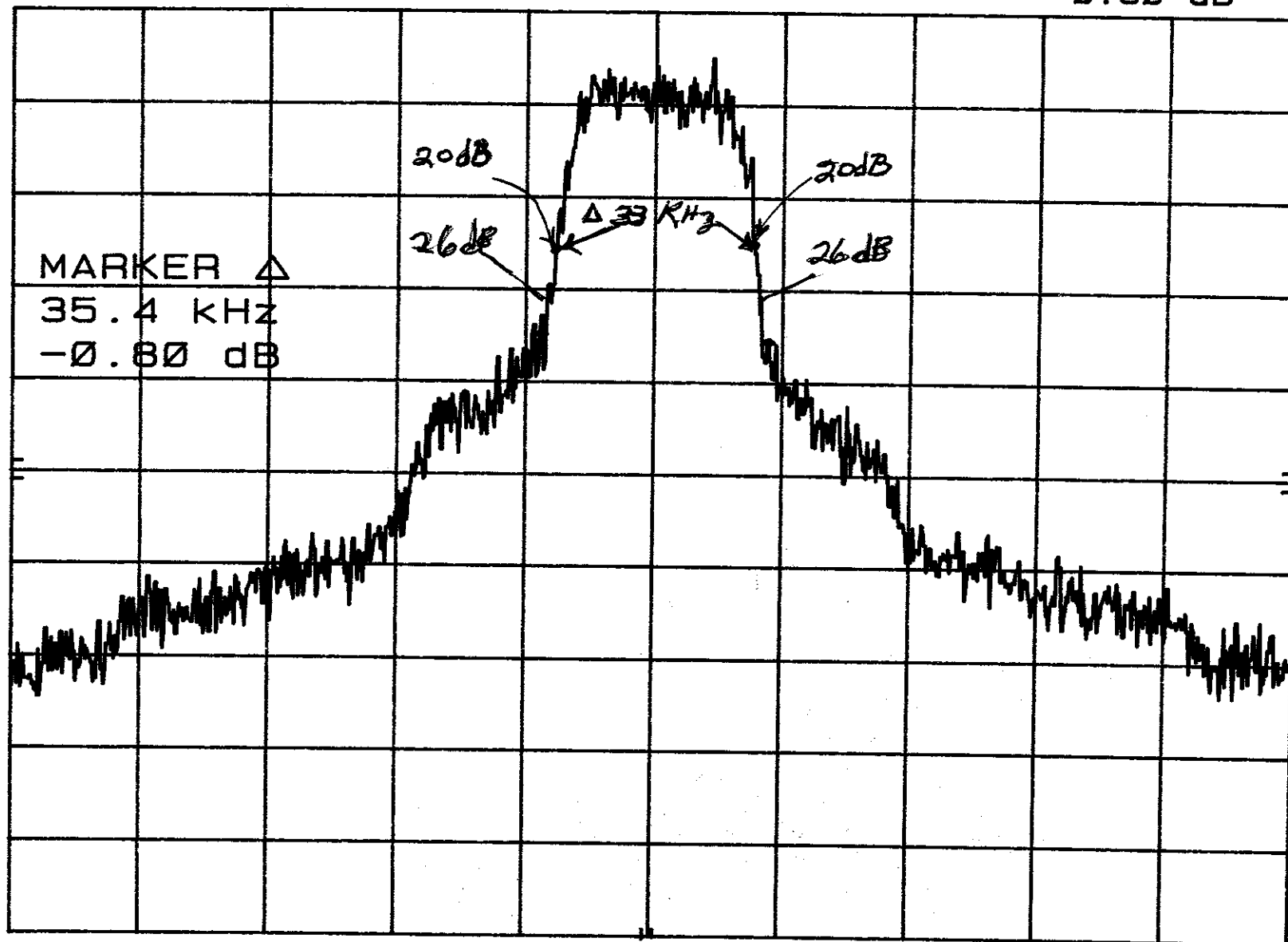
2.1049

MKR Δ 35.4 KHz
-0.80 dB

hp REF 20.0 dBm ATTEN 20 dB

10 dB/

OFFSET
11.9
dB



CENTER 836.490 MHz

RES BW 300 Hz (i) VBW 300 Hz

SPAN 200 KHz
SWP 15.0 sec

54

CUSTOMER: SIEMENS
EUT: "S46" FCC ID: PWX S46"

Report No.: SC107139

OCT. 22, 2001
TECH/ENGR. *JPB*

TEST: OCCUPIED BANDWIDTH 2.1049 (TDMA 800 High band)

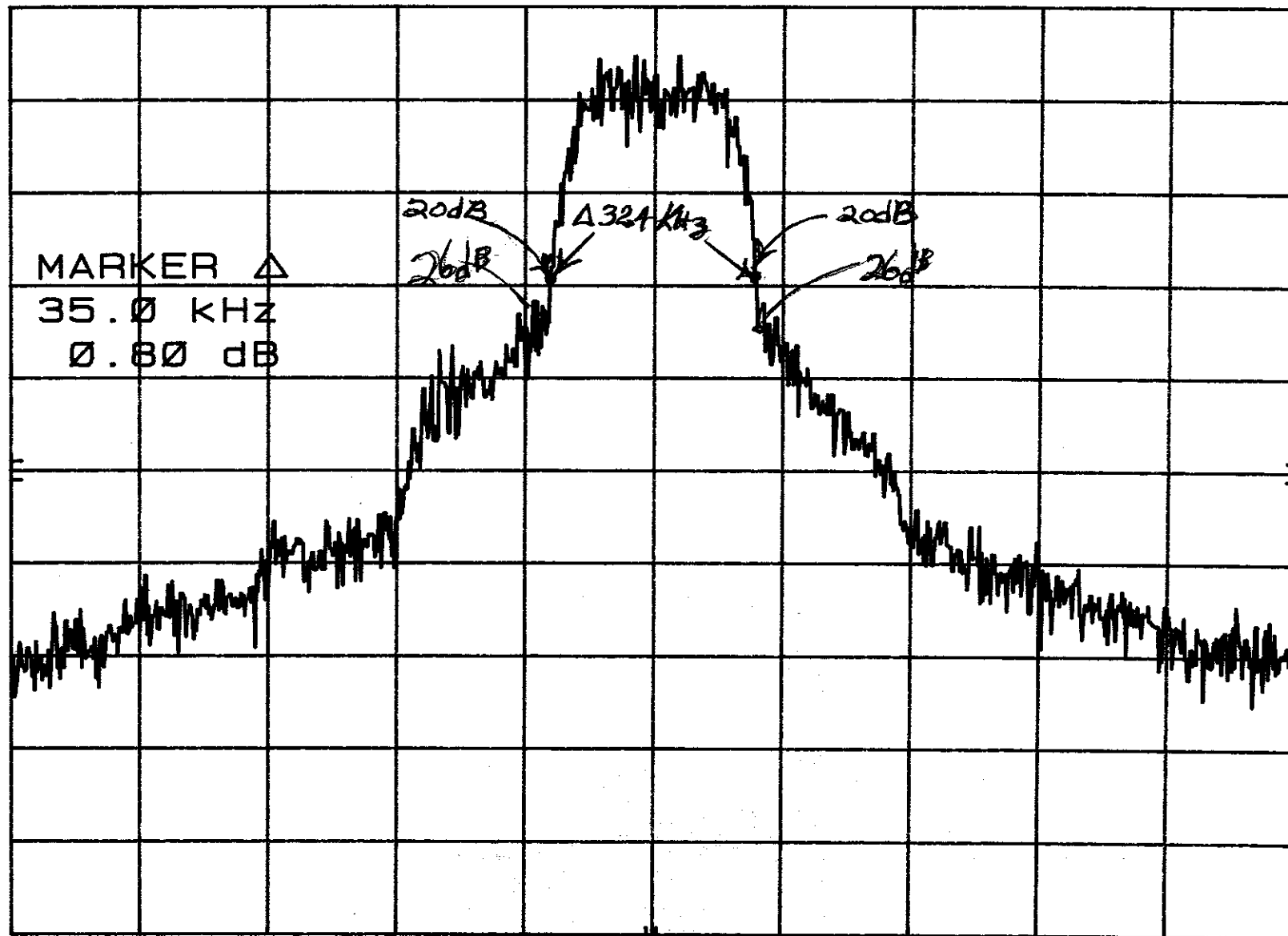
2.1049

MKR Δ 35.0 KHz
0.80 dB

hp REF 20.0 dBm ATTEN 20 dB

10 dB/

OFFSET
11.9
dB



CENTER 848.970 MHz

RES BW 300 Hz (i) VBW 300 Hz

SPAN 200 KHz

SWP 15.0 sec

56

- 4) A statement justifying the bandwidths chosen for the emission designators, please use the procedure in CFR 47 section 2.202.

We measured the bandwidths and since they corresponded to the industry standards noted on other applications on the FCC website they were included without explanation.

- 5) Statement confirming compliance with ESN requirements from section 22.919.

See statement below. The answer to #7 is also on the page.

1.) We confirm that the S46 mobile phone, FCC ID: PWX-S46, complies with the requirements for ESN under Part 22.919. More information about this compliance is available in the filed document "Technical Description" at page 7 under "IMEI / ESN Number" section.

2.) We confirm the "battery-end-point" to be 3.6 V. The battery-end-point is determined by software within the phone. The battery voltage is continuously monitored by Software running on the processor Egold+ (D800) and by an dedicated hardware (D880). To ensure proper functionality and compliance with other requirements (e.g. IS-136 and GSM specifications) the battery voltage must not go below 3.6 V during the inactive time slots. If the voltage drops below 3.6 V, the handset will be powered off instantaneously.

An appropriate block diagram and more information about the involved hardware are available in the filed document "Technical Description" at page 3 and in the chapter starting at page 8: "Detailed Technical Description of SIEMENS S46 Base Band Section".

6) EMC test setup photograph to compliment those on exhibit showing the substitution antenna in place of the device under test.



7) Confirmation that the lowest voltage tested (3.6 V) in the frequency stability test is the "battery end-point". Please describe the operational characteristics of the units when the battery goes below this voltage.

[Please see #5 above.](#)