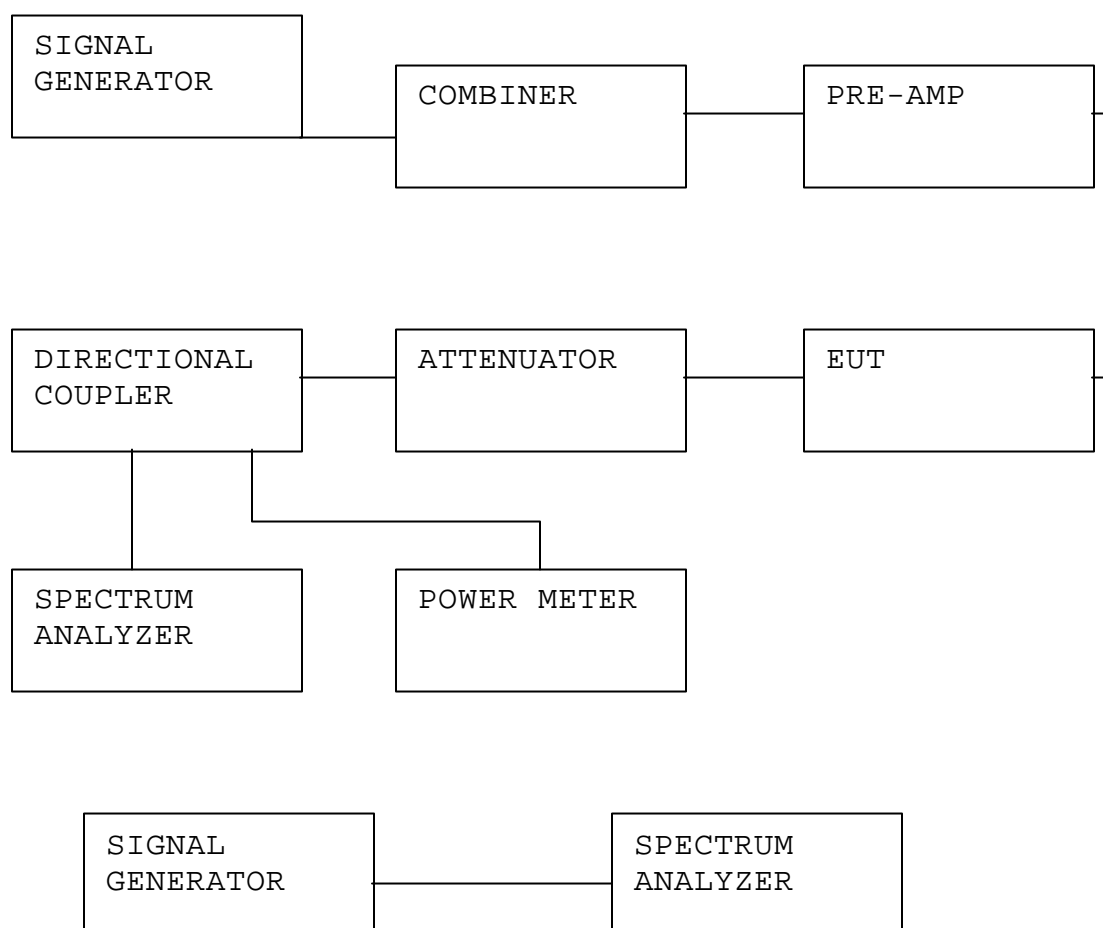


SECTION 2.1047: MODULATION CHARACTERISTICS

Not applicable. EUT is a power amplifier.

SECTION 2.1049: OCCUPIED BANDWIDTH**TEST SETUP FOR OUTPUT:****Minimum Requirement:****Section 2.1049(i);**

Transmitters designed for other types of modulation-when modulated by an appropriate signal of sufficient amplitude to be representative of the type of service in which used. A description of the input signal should be supplied.

Test Procedure:

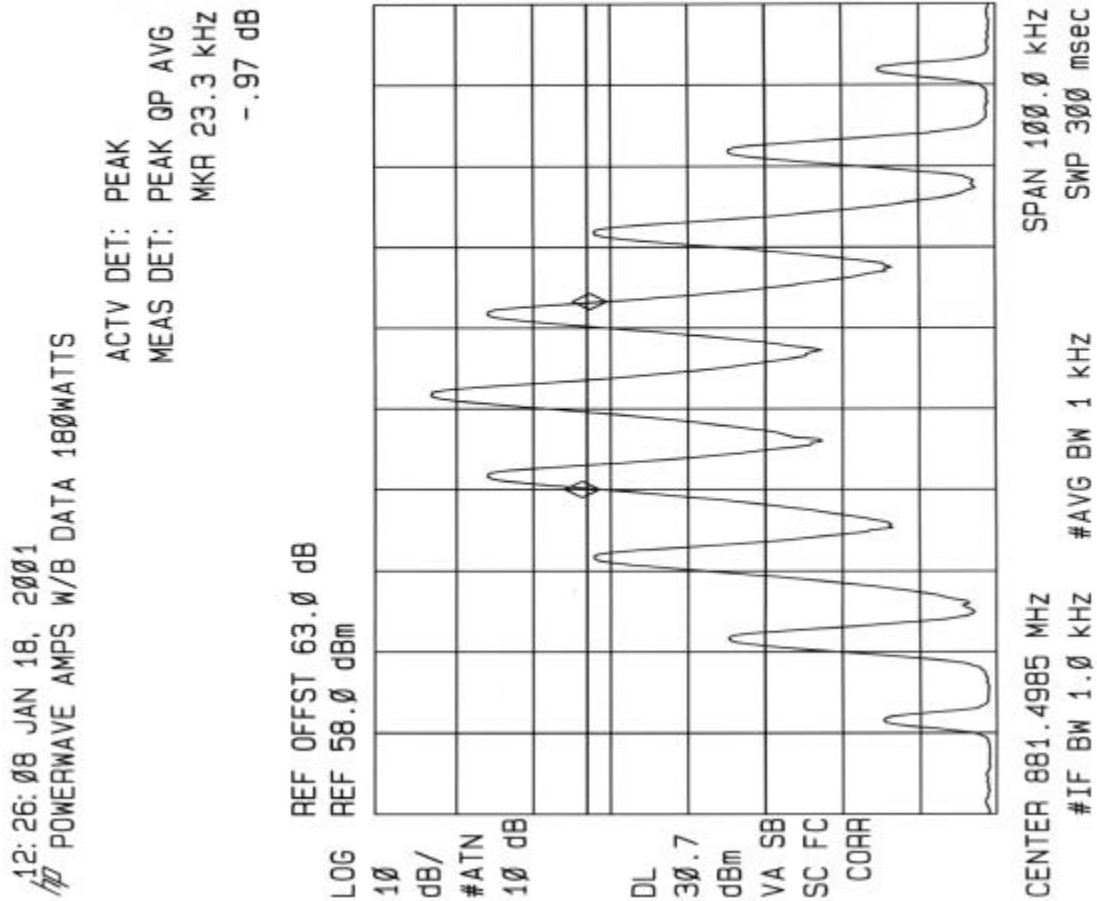
The Eut's occupied bandwidth is compared to the input source plot (signal generator) and output plot (power amplifier) to check that the input signal bandwidth is not greater at the output of amplifier.

Use the setup for output shown above. Correct for external attenuation and cable loss. Set the power amplifier to the maximum output gain. Using the marker delta function, measure the 20dB bandwidth of the EUT's emission. Record the spectrum analyzer plot.

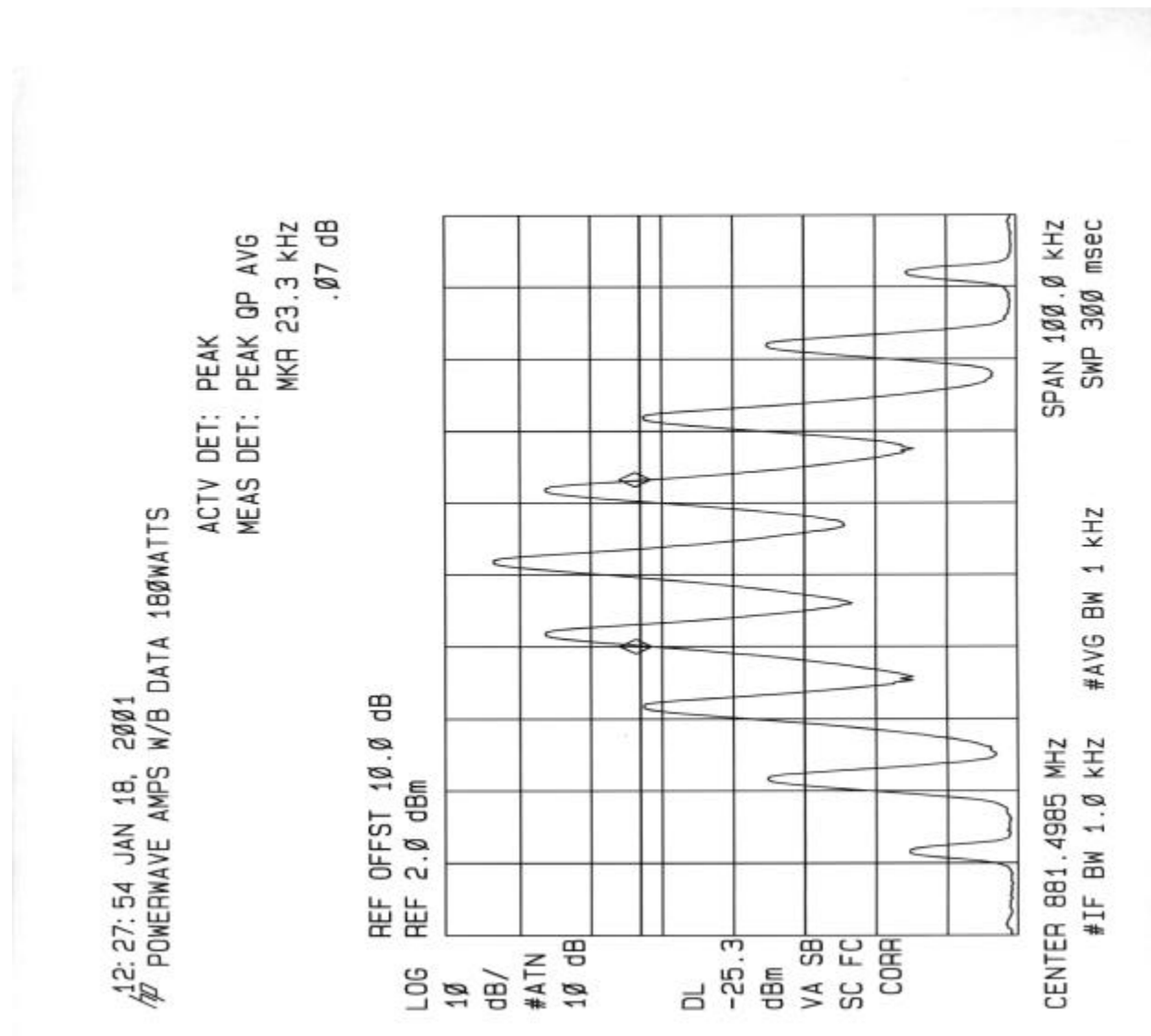
Use the setup for input shown above. Correct for external attenuation and cable loss. Using the marker delta function, measure the 20dB bandwidth of the signal generator's emission. Record the spectrum analyzer plot.

Test Results:

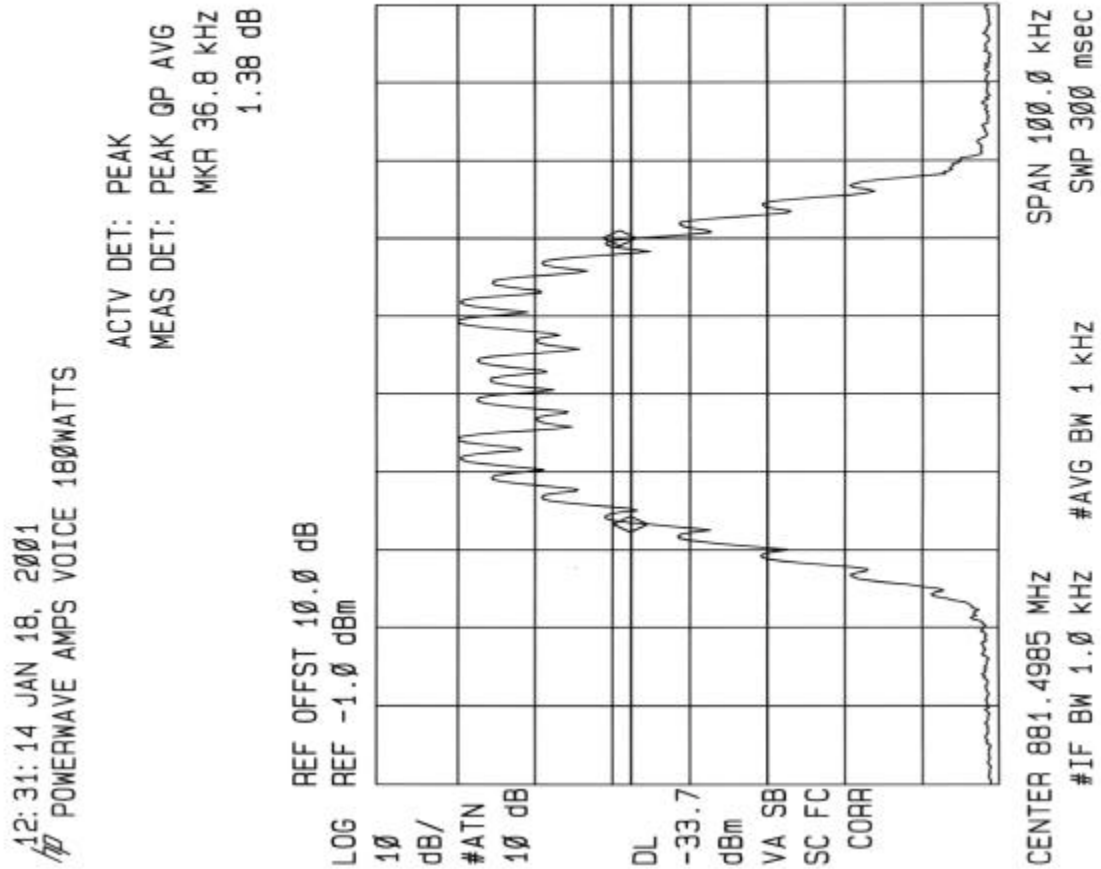
See plots below:



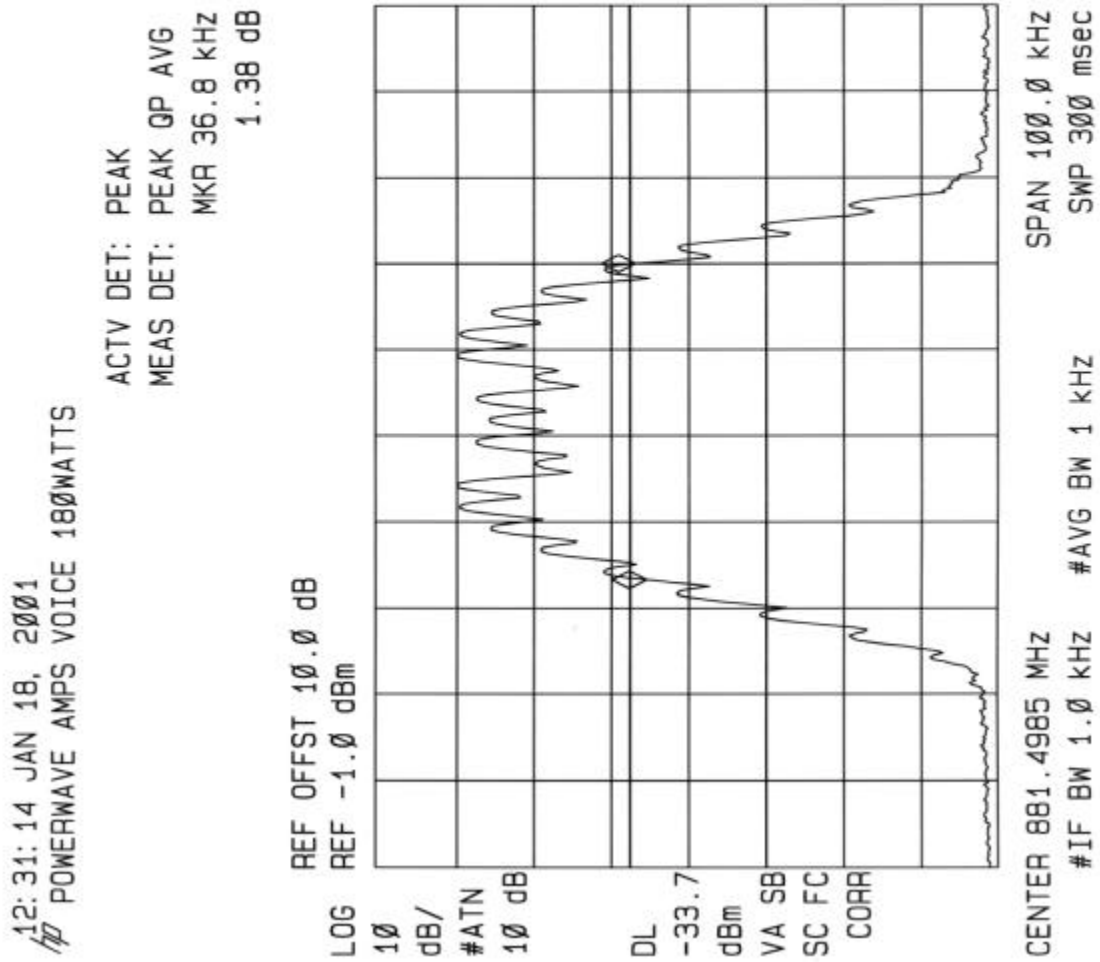
AMPS WITH BANDWIDTH DATA OUTPUT



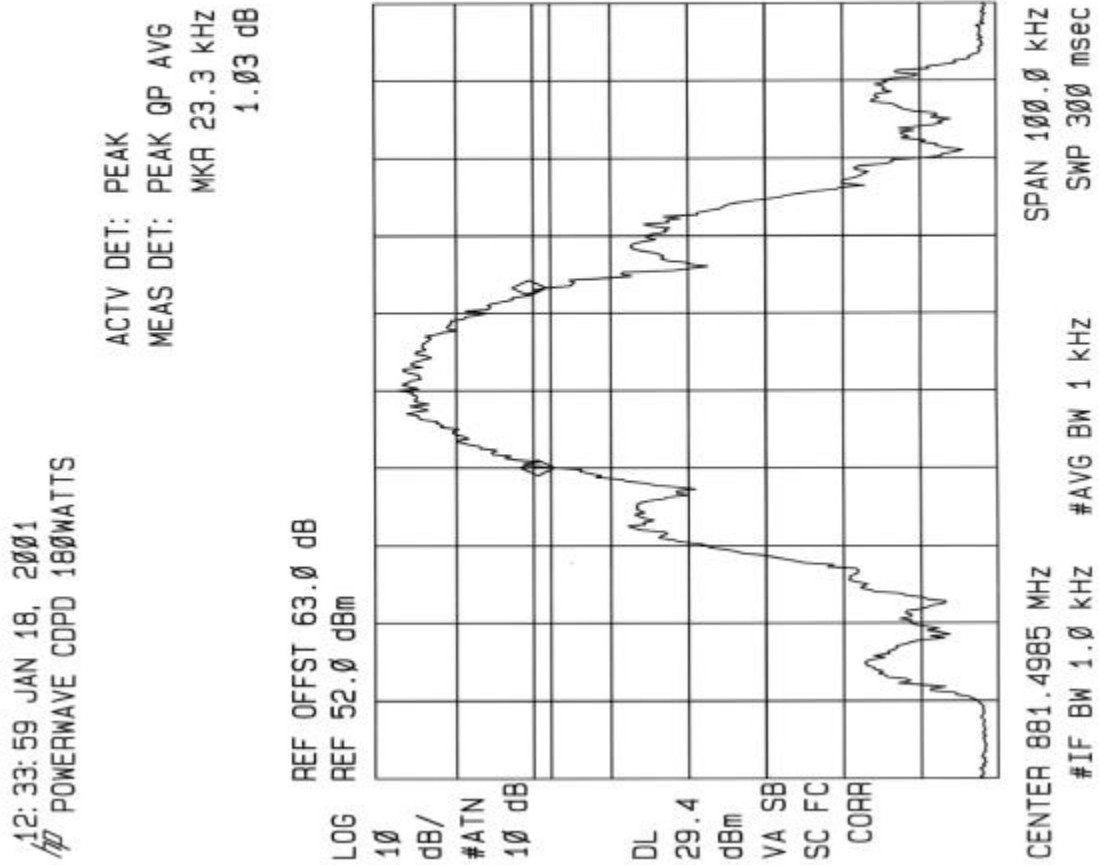
AMPS WITH BANDWIDTH DATA INPUT



AMPS VOICE BANDWIDTH OUTPUT



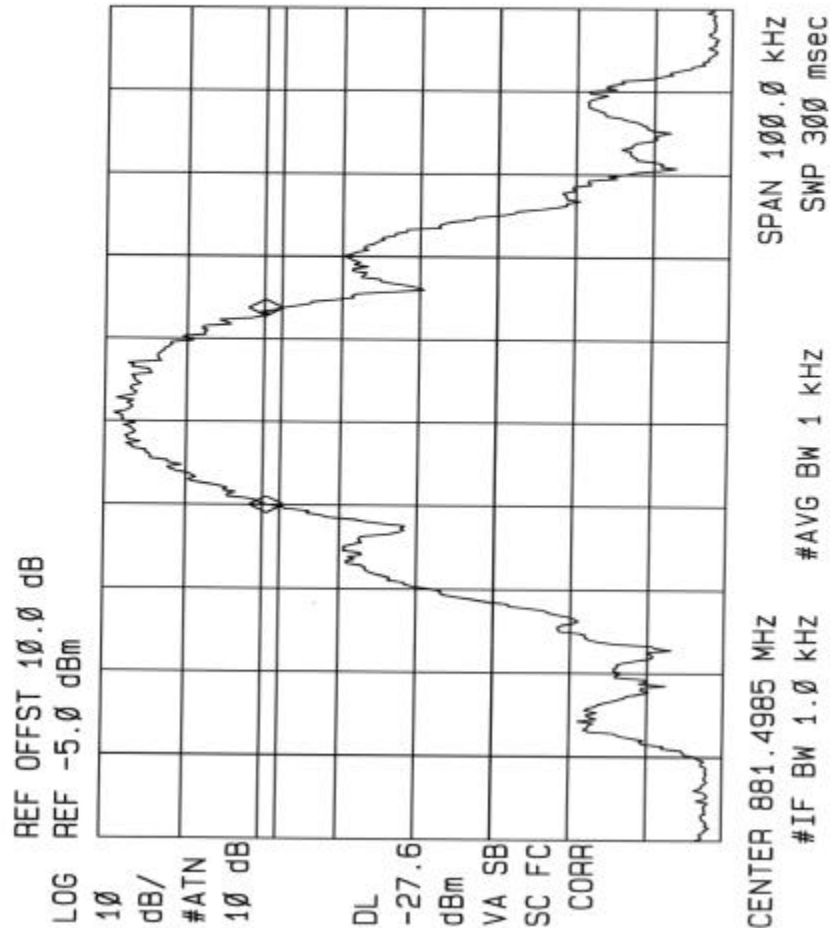
AMPS VOICE BANDWIDTH INPUT



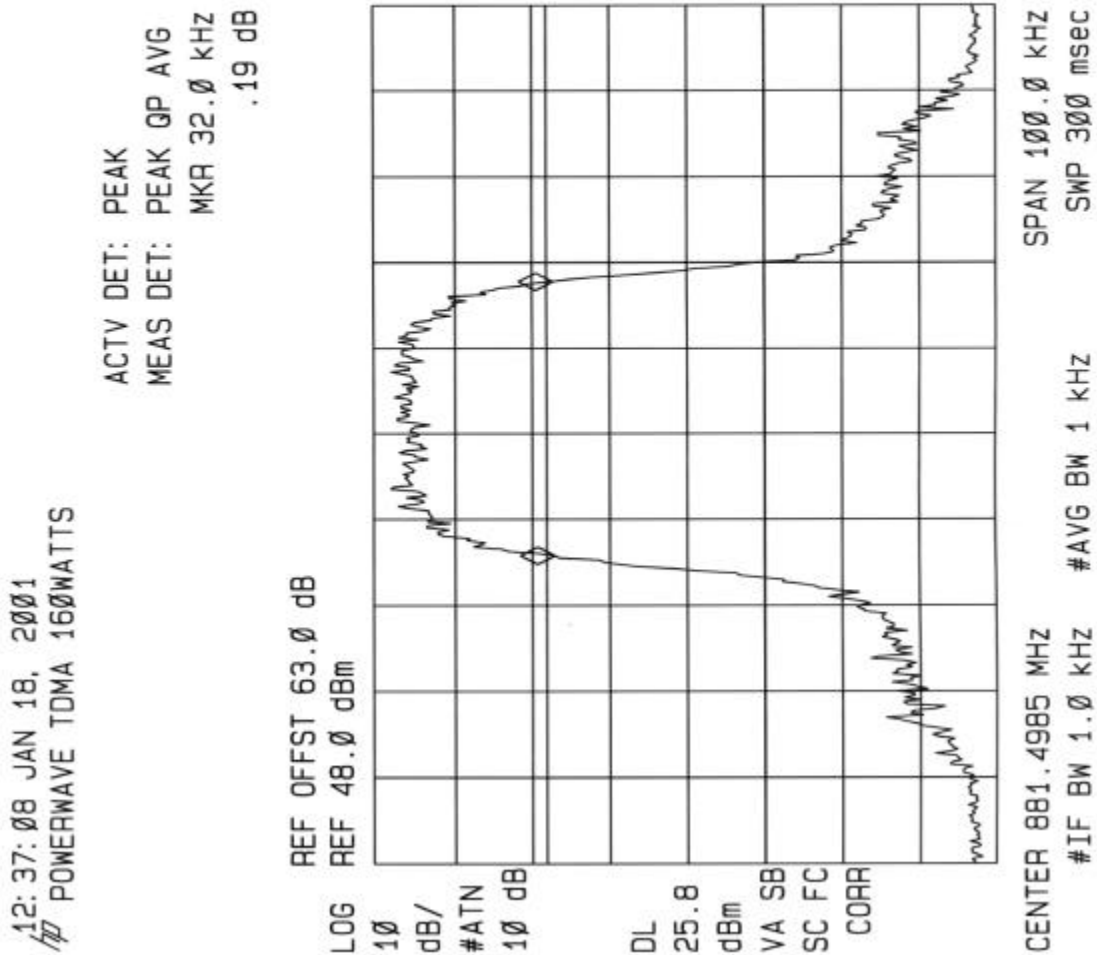
CDPD BANDWIDTH OUTPUT

12:35:21 JAN 18, 2001
POWERWAVE CDPD 180WATTS

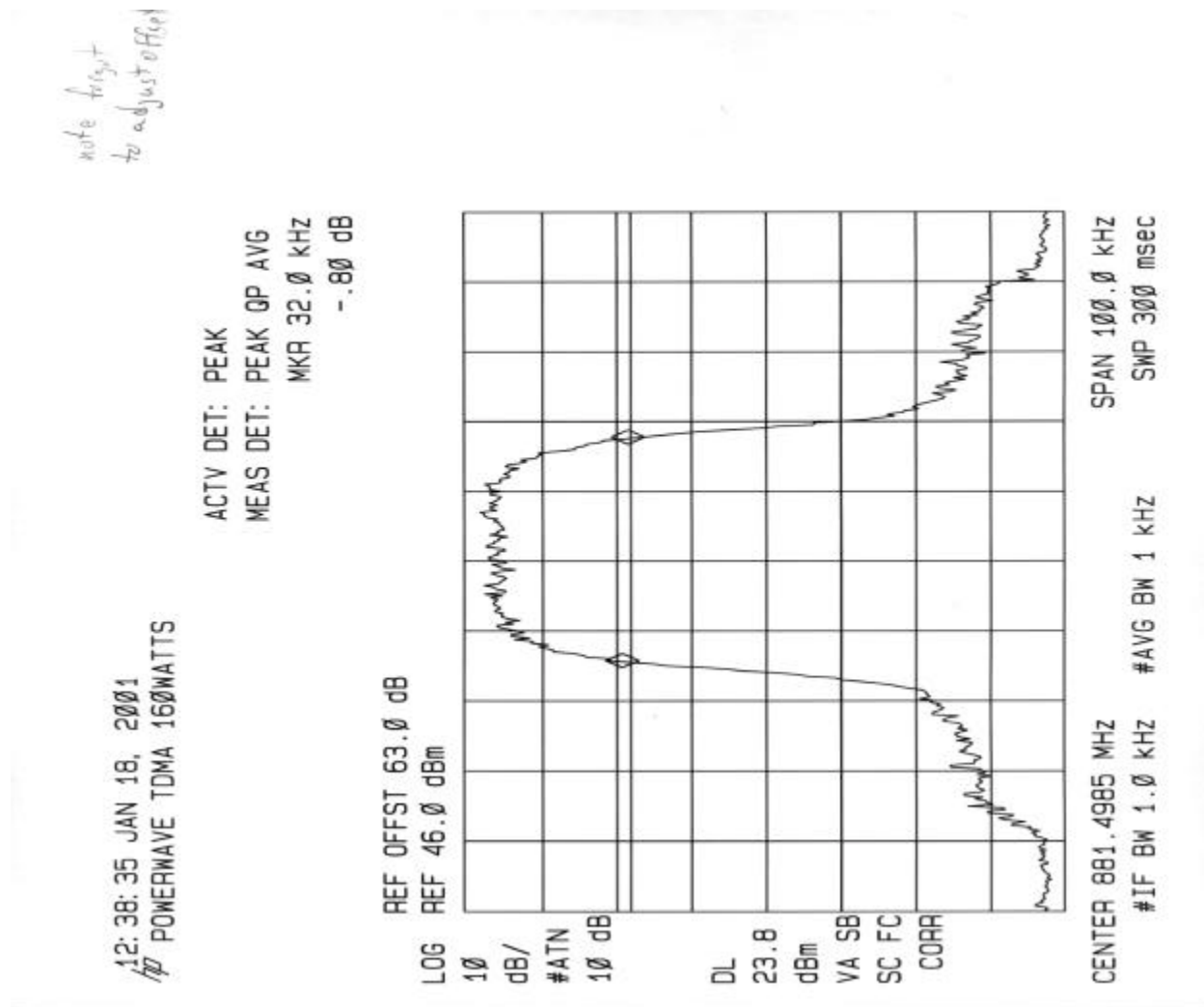
ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 23.8 KHZ
.36 dB



CDPD BANDWIDTH INPUT



TDMA BANDWIDTH OUTPUT

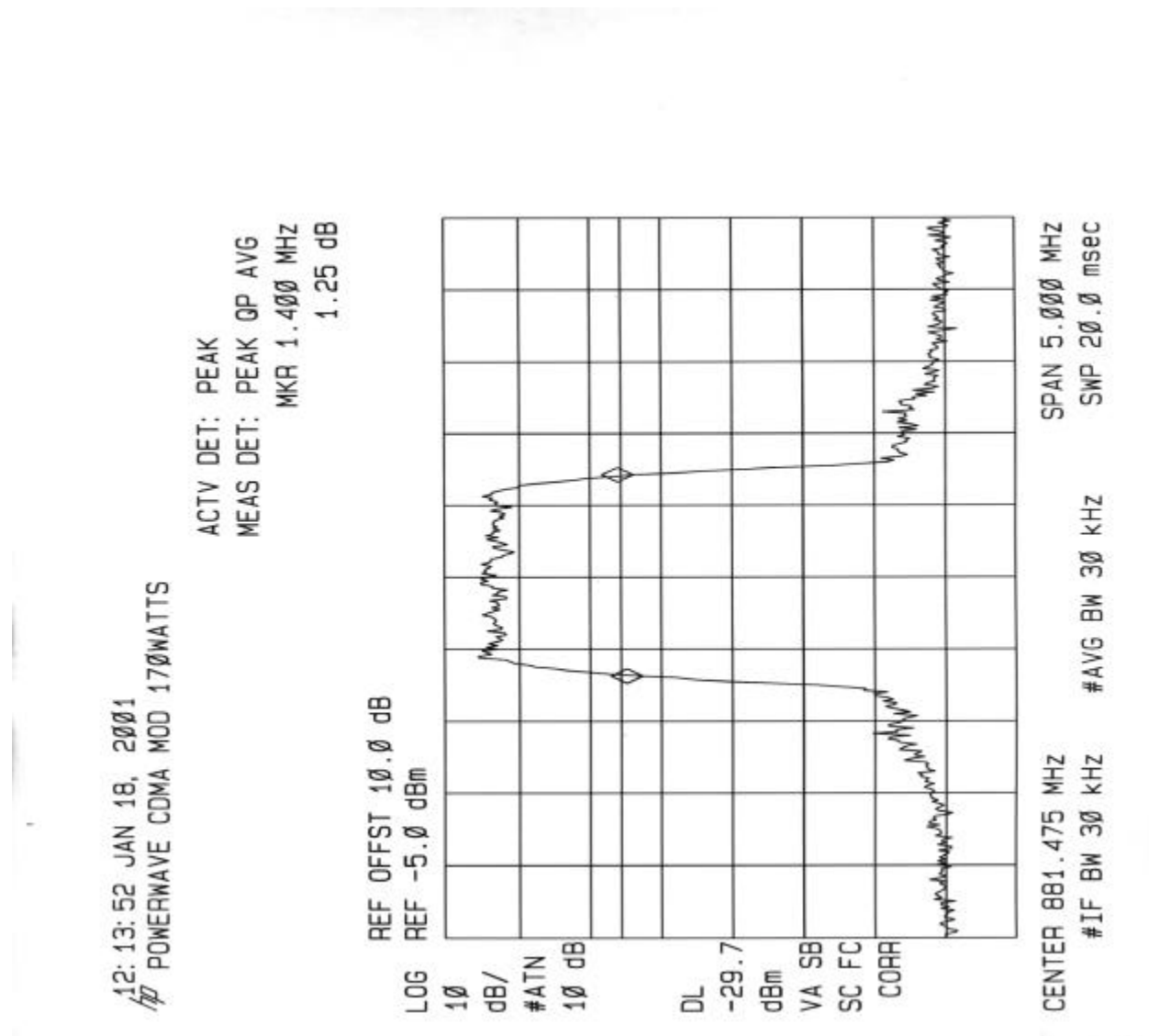


TDMA BANDWIDTH INPUT

NOTE: INPUT SIGNAL DISPLAY MISTAKENLY. NOT UPDATED TO REMOVE REF LVL
OFFSET.

CORRECT REF LVL OFFSET: 10dB

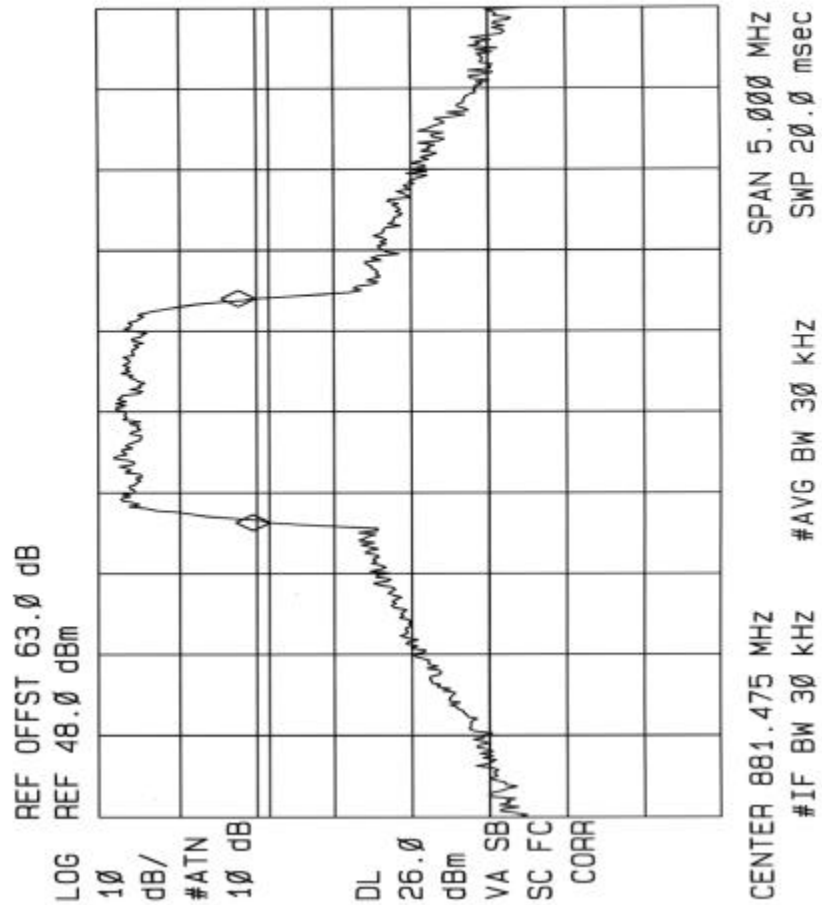
CORRECT REF LVL: -5dBm



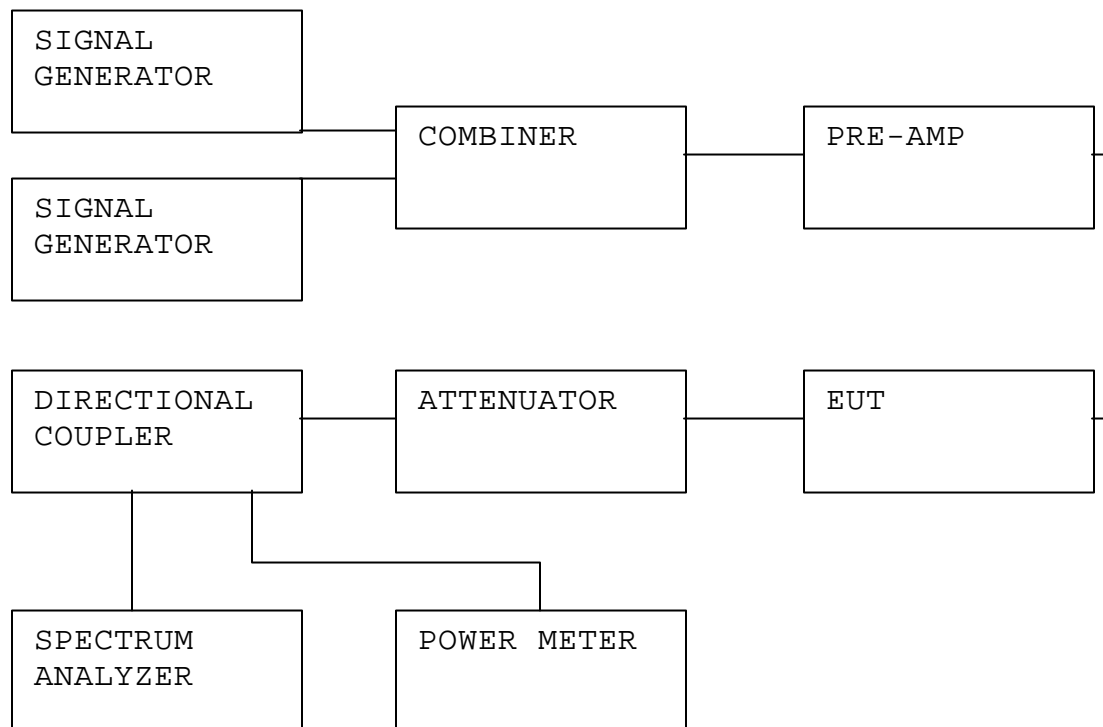
CDMA MODULATION BANDWIDTH INPUT

12:09:20 JAN 18, 2001
POWERWAVE CDMA MOD 170WATTS

ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 1.388 MHz
1.84 dB



CDMA MODULATION BANDWIDTH OUTPUT

SECTION 2.1051: SPURIOUS EMISSION AT ANTENNA TERMINALS**TEST SETUP:****Minimum Requirement:****Section 22.917(e):**

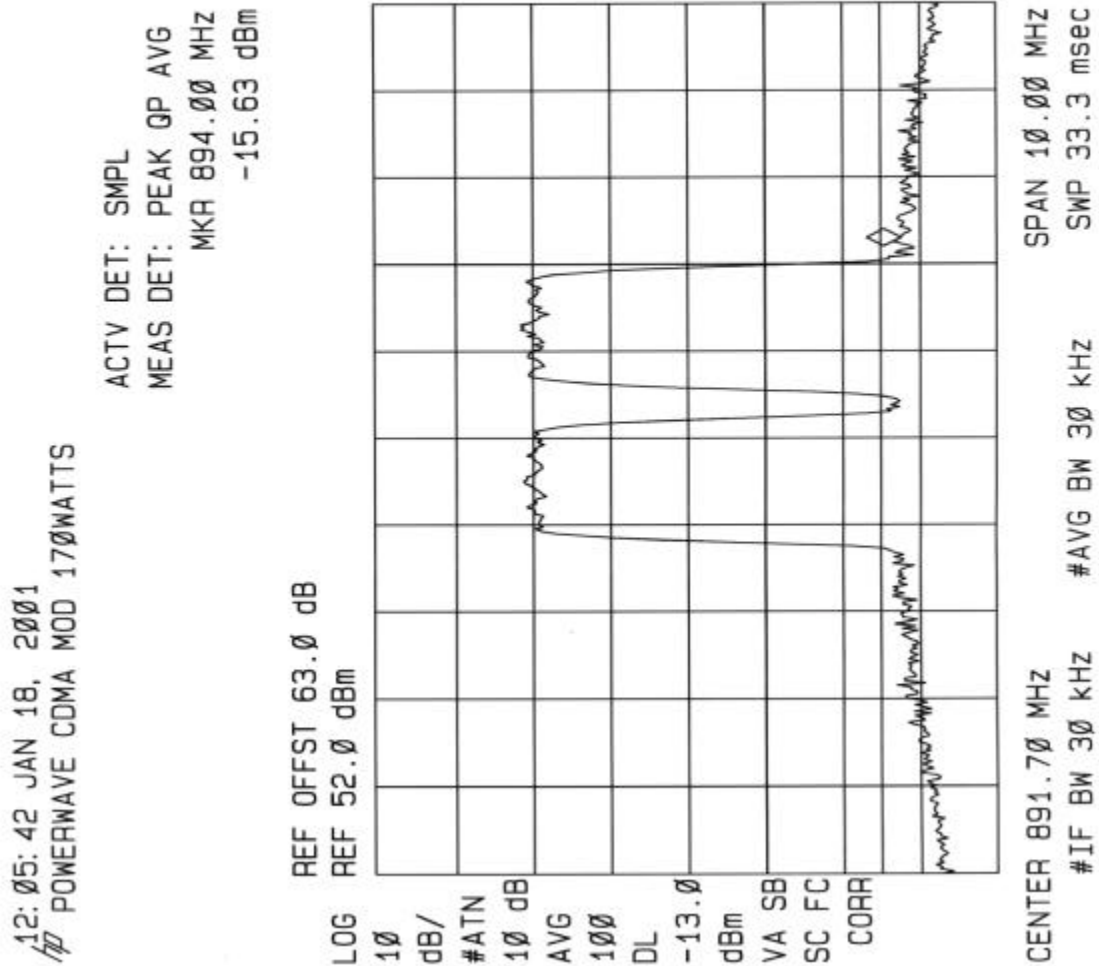
For Base stations transmitters the magnitude of each spurious, harmonic, and intermodulation emissions that can be detected when the equipment is operated under conditions specified in the instruction manual and/or alignment procedure, shall not be more than $43 + 10 \log (P)$ dBc below the mean power output, which is equivalent to -13 dBm.

Test Procedure:

Input 2 modulated signals to the amp to produce 180 watts composite power. Set the RES Bw: 30kHz and the DISPLAY LINE to -13 dBm. Scan the Eut from 1MHz to the 10^{th} harmonic of carrier and check for spurious, harmonic, and intermodulation emissions.

Test Result:

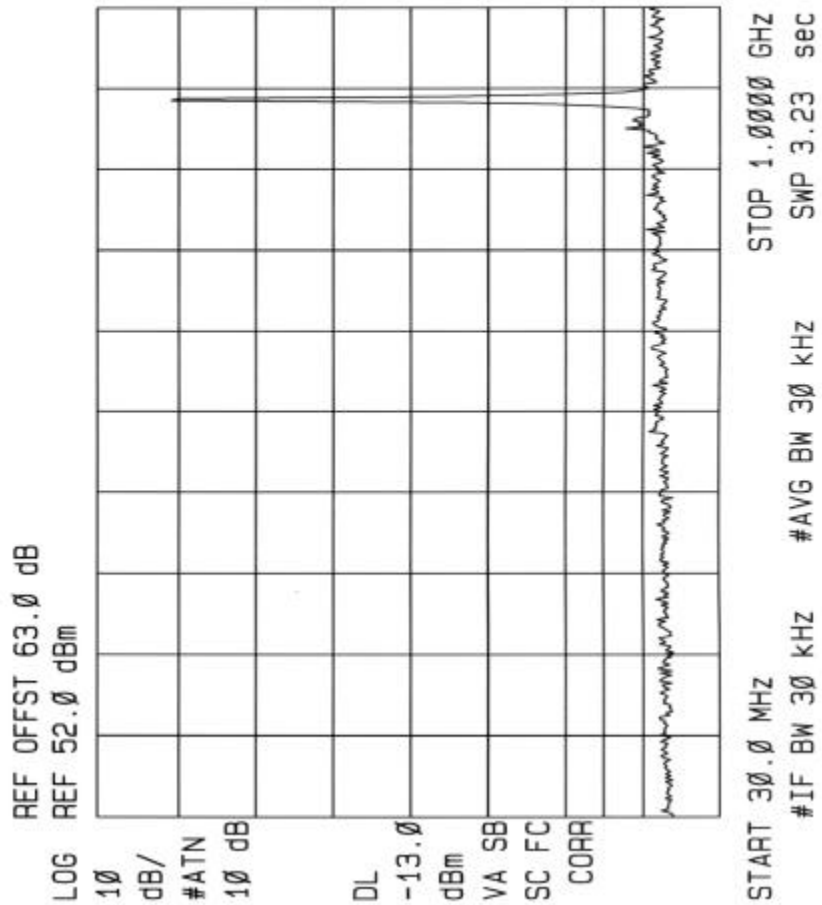
Plots were taken with 2 inputs at the high end of the band and with 2 inputs at the low end of the band. Plots were of the intermodulation products and of the out-of-band emissions from 1MHz to the 10^{th} harmonic of the carrier frequency.



HIGH END OF BAND
(CDMA MODULATION)

12:04:44 JAN 18, 2001
POWERWAVE CDMA MOD 170WATTS

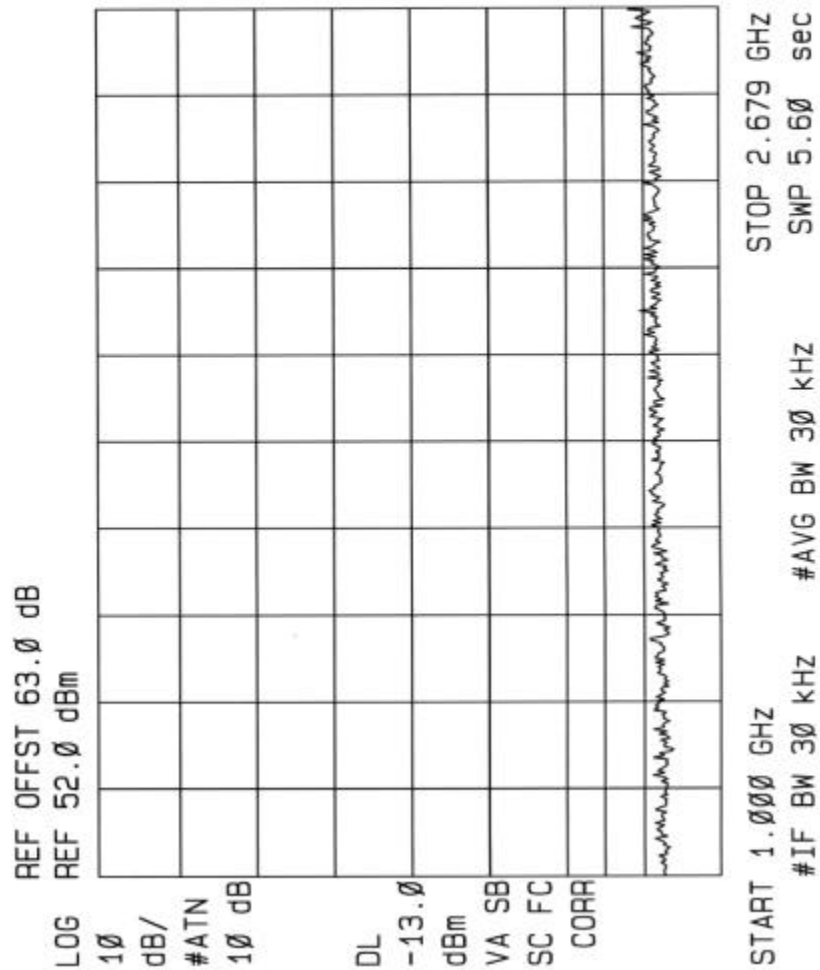
ACTV DET: PEAK
MEAS DET: PEAK QP AVG



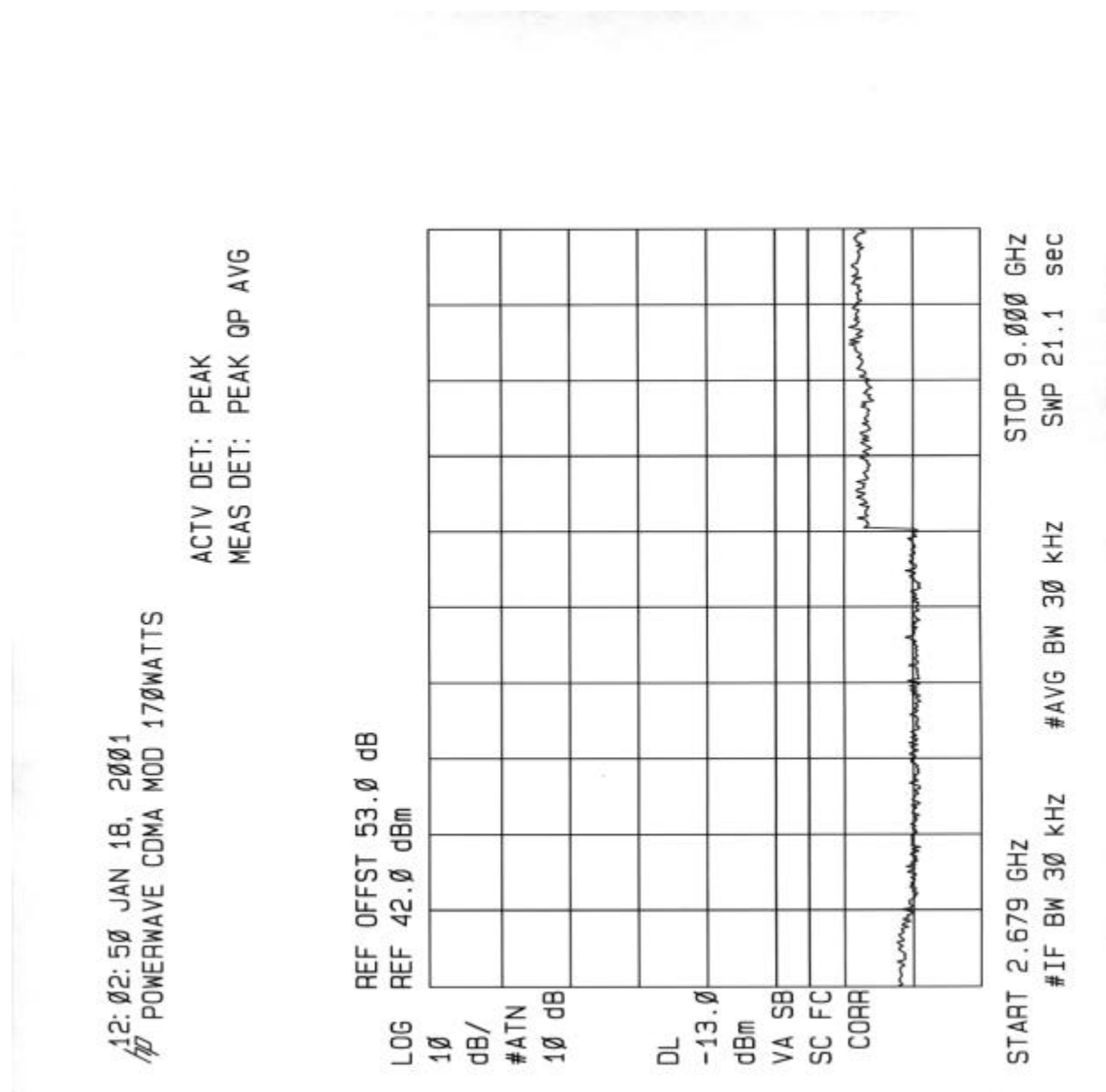
HIGH END OF BAND
(CDMA MODULATION)

12:04:02 JAN 18, 2001
POWERWAVE CDMA MOD 170WATTS

ACTV DET: PEAK
MEAS DET: PEAK QP AVG



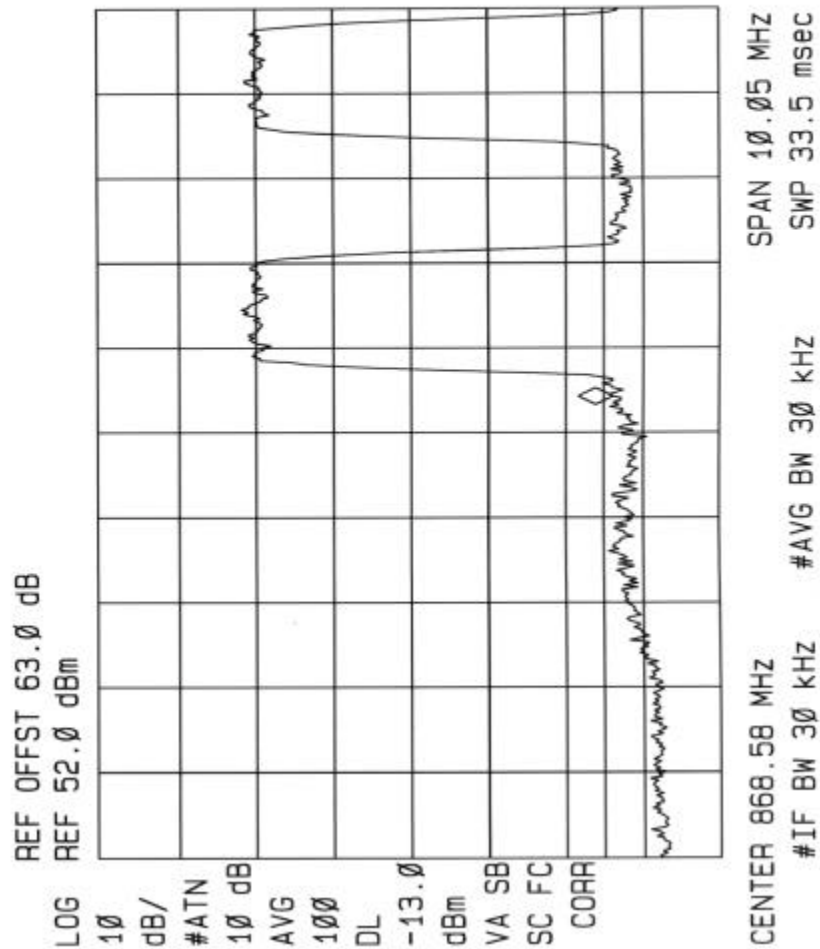
HIGH END OF BAND
(CDMA MODULATION)



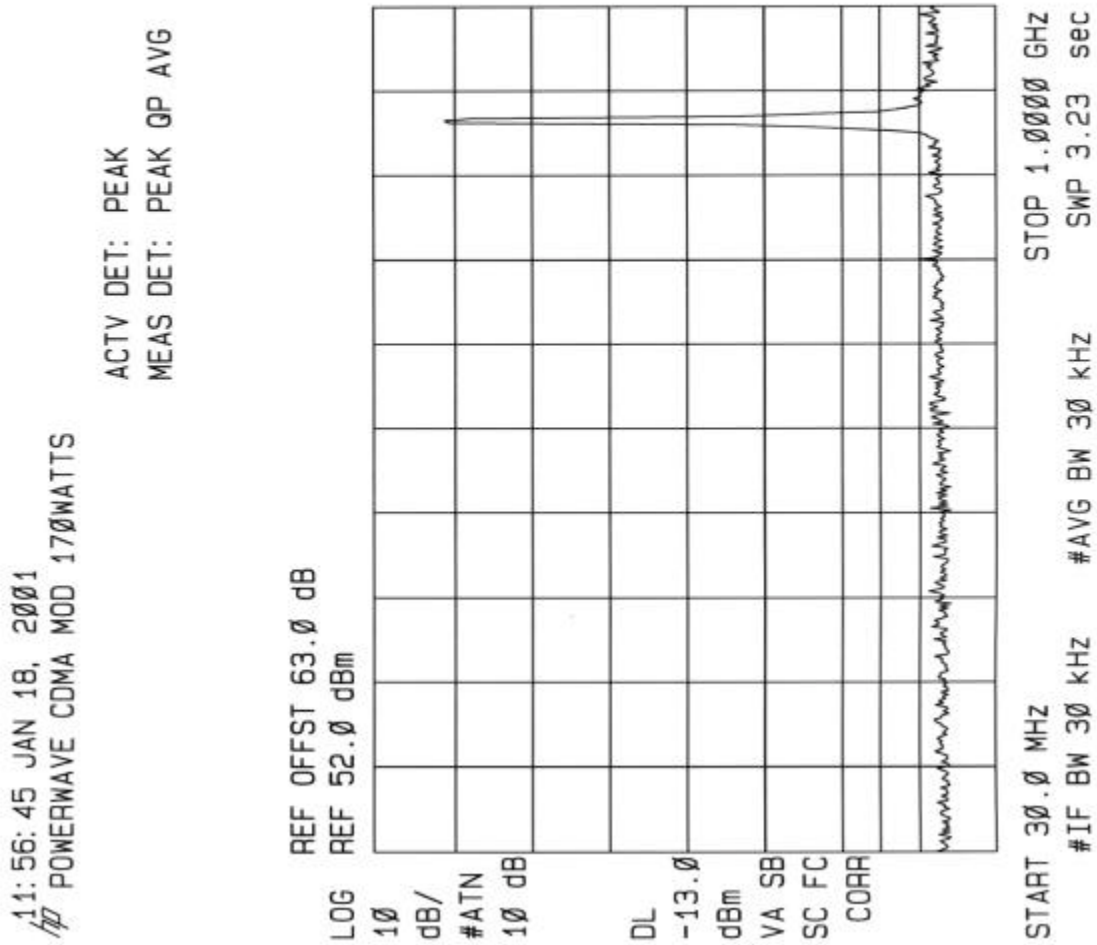
HIGH END OF BAND
(CDMA MODULATION)

11:56:21 JAN 18, 2001
 POWERWAVE CDMA MOD 170WATTS

ACTV DET: SMPL
 MEAS DET: PEAK QP AVG
 MKR 869.01 MHz
 -14.16 dBm



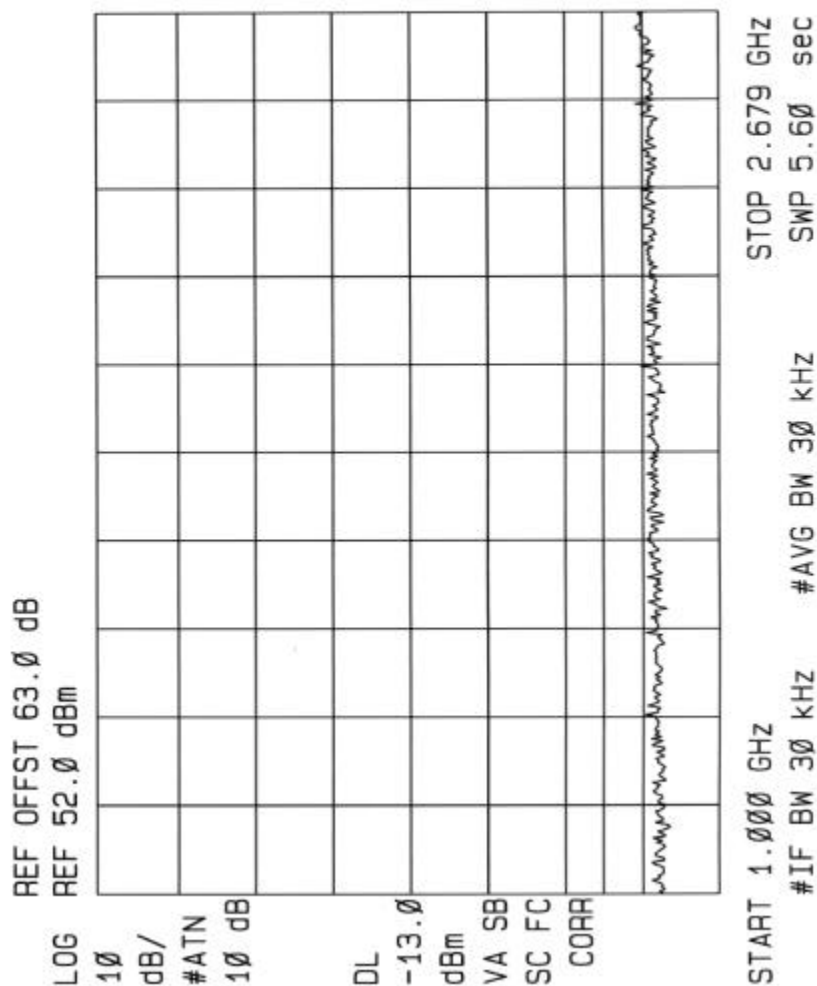
LOW END OF BAND
 (CDMA MODULATION)



LOW END OF BAND
(CDMA MODULATION)

11:57:31 JAN 18, 2001
POWERWAVE COMA MOD 170WATTS

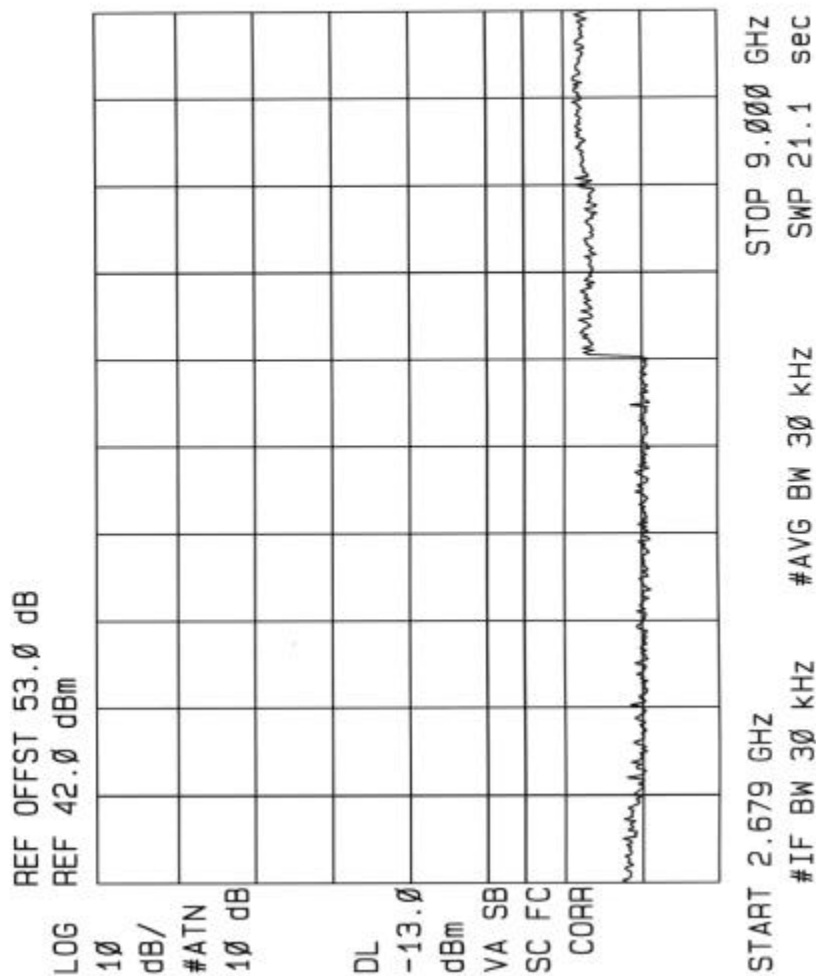
ACTV	DET:	PEAK
MEAS	DET:	PEAK QP AVG



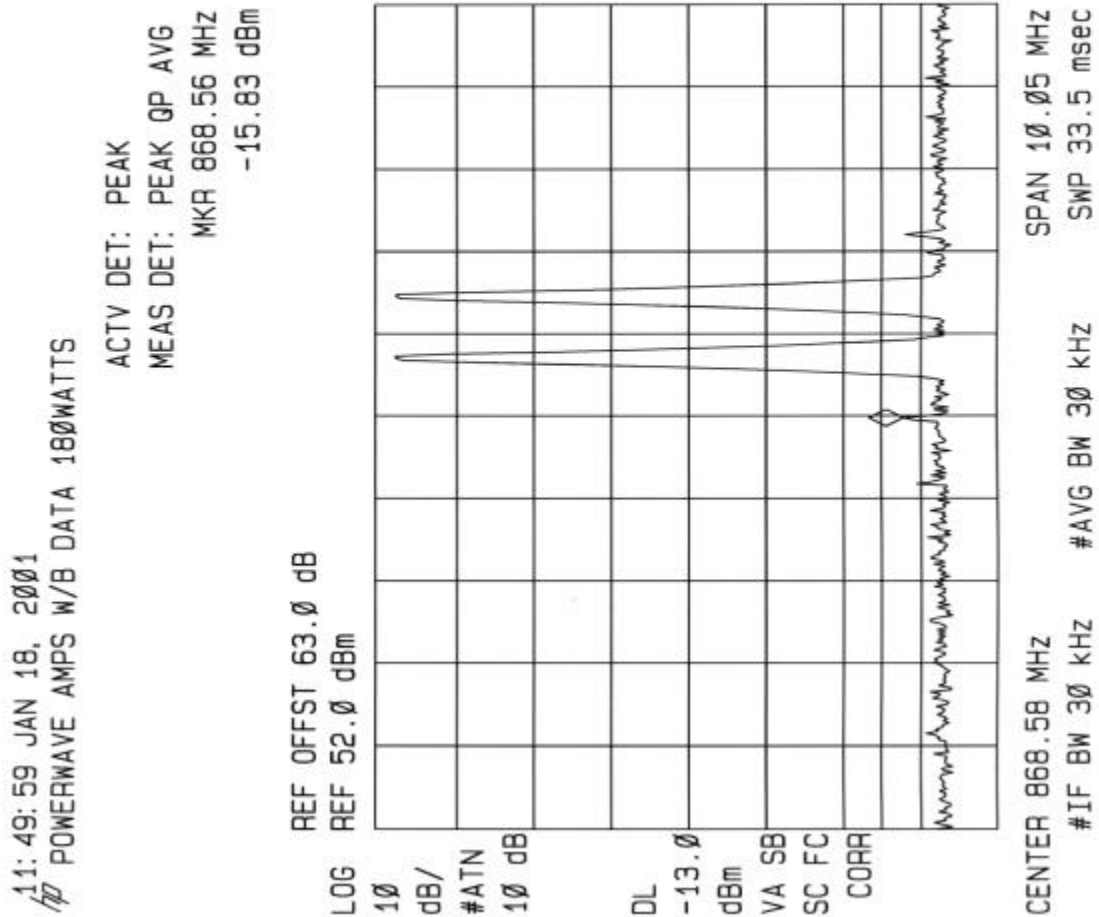
LOW END OF BAND
(CDMA MODULATION)

11:59:11 JAN 18, 2001
POWERWAVE CDMA MOD 170WATTS

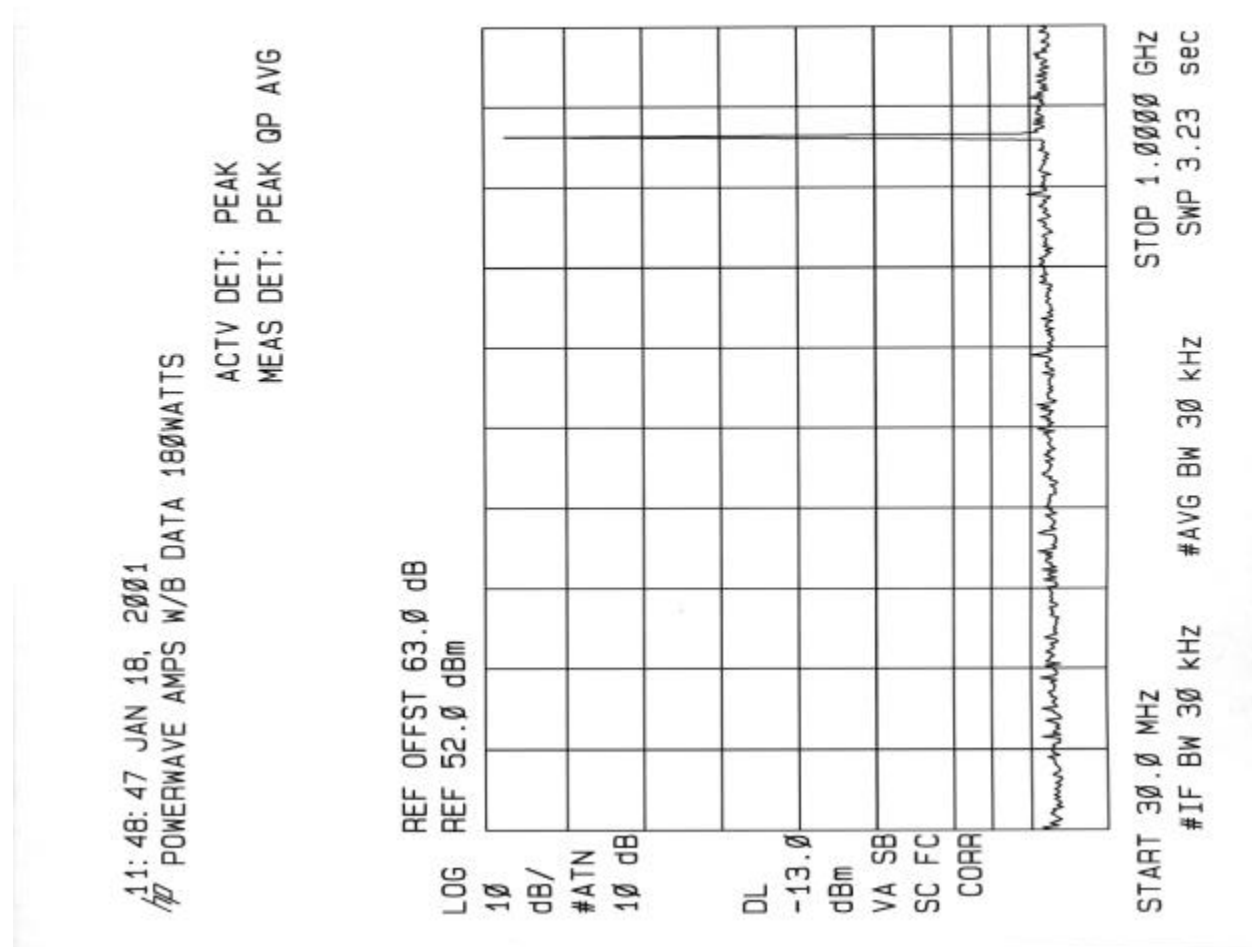
ACTV	DET:	PEAK
MEAS	DET:	PEAK QP AVG



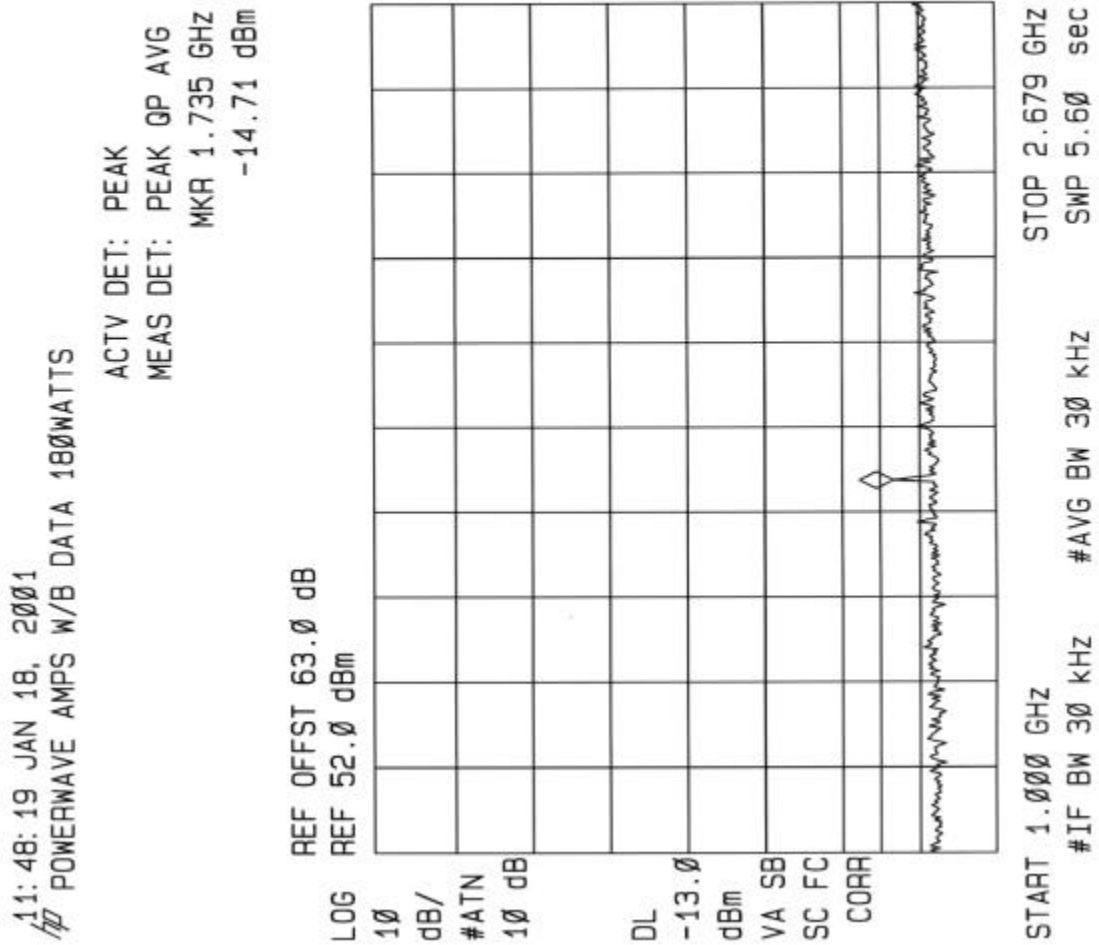
LOW END OF BAND
(CDMA MODULATION)



LOW END OF BAND
(AMPS WITH BANDWIDTH DATA)



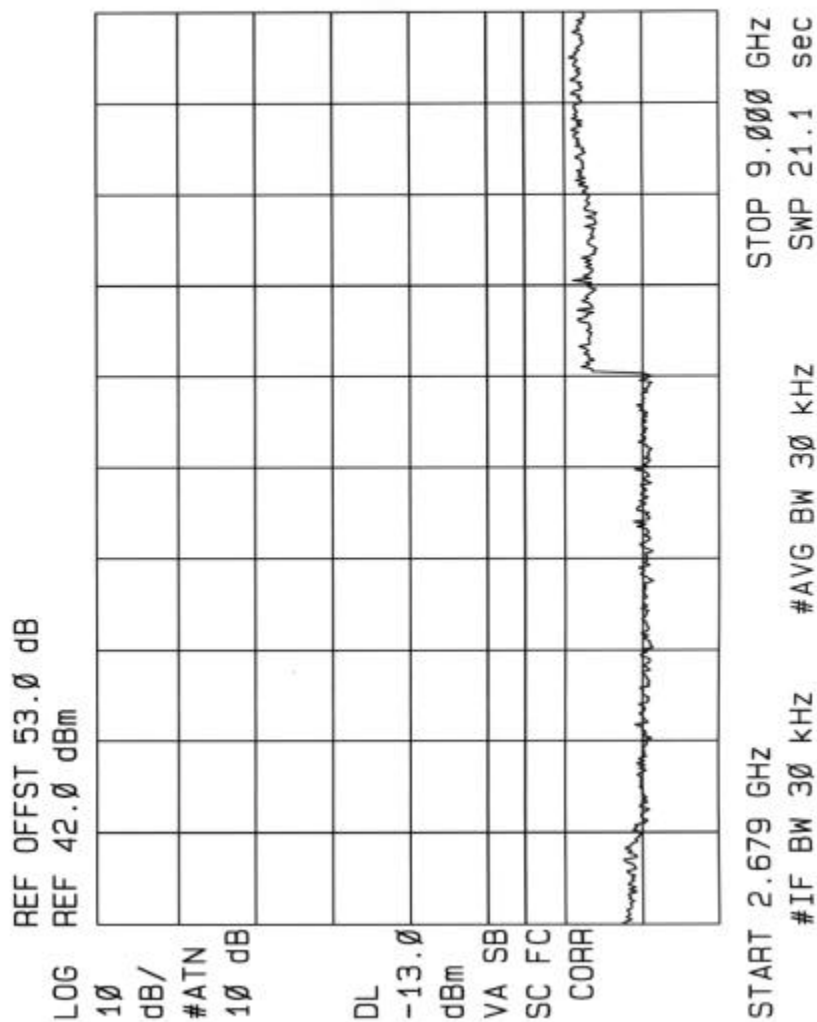
LOW END OF BAND
(AMPS WITH BANDWIDTH DATA)



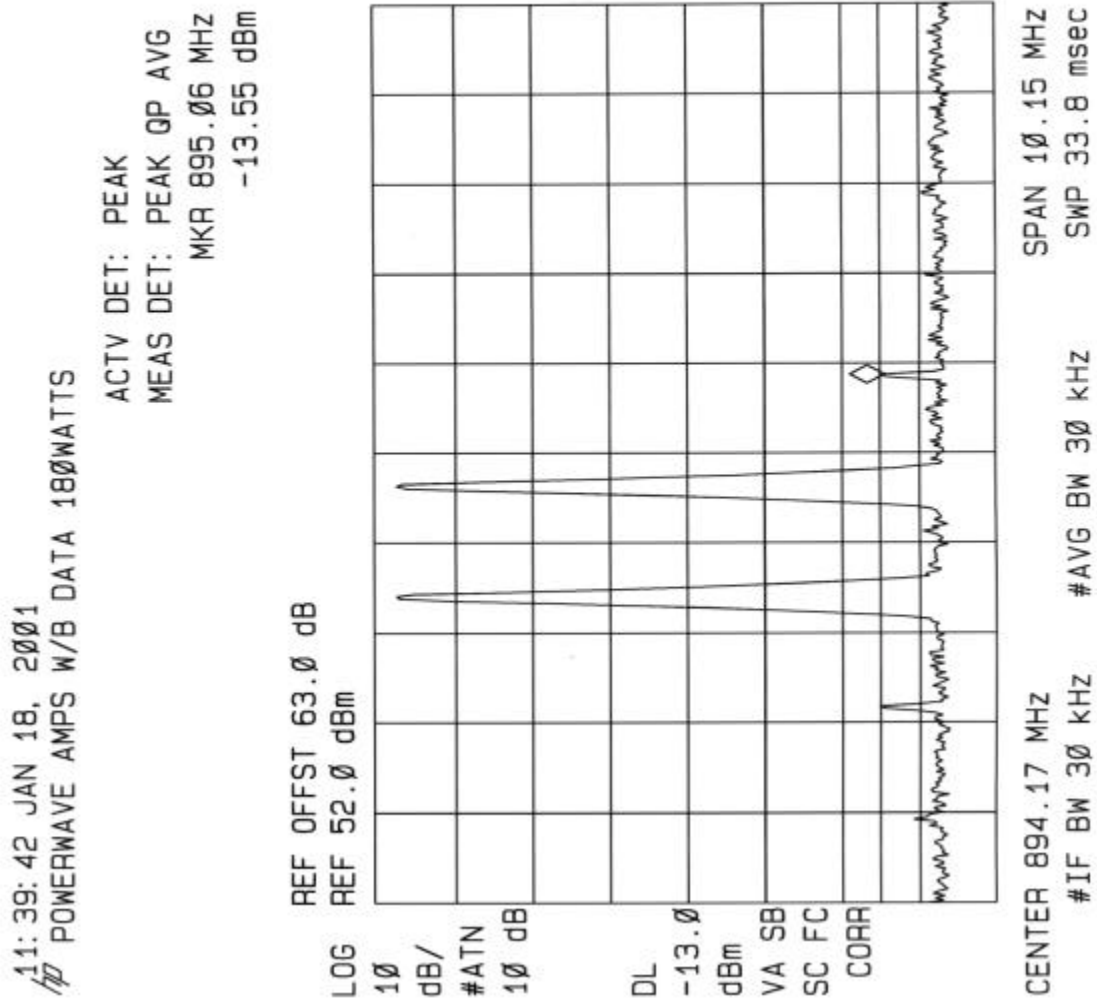
LOW END OF BAND
(AMPS WITH BANDWIDTH DATA)

11:44:44 JAN 18, 2001
POWERWAVE AMPS W/B DATA 180WATTS

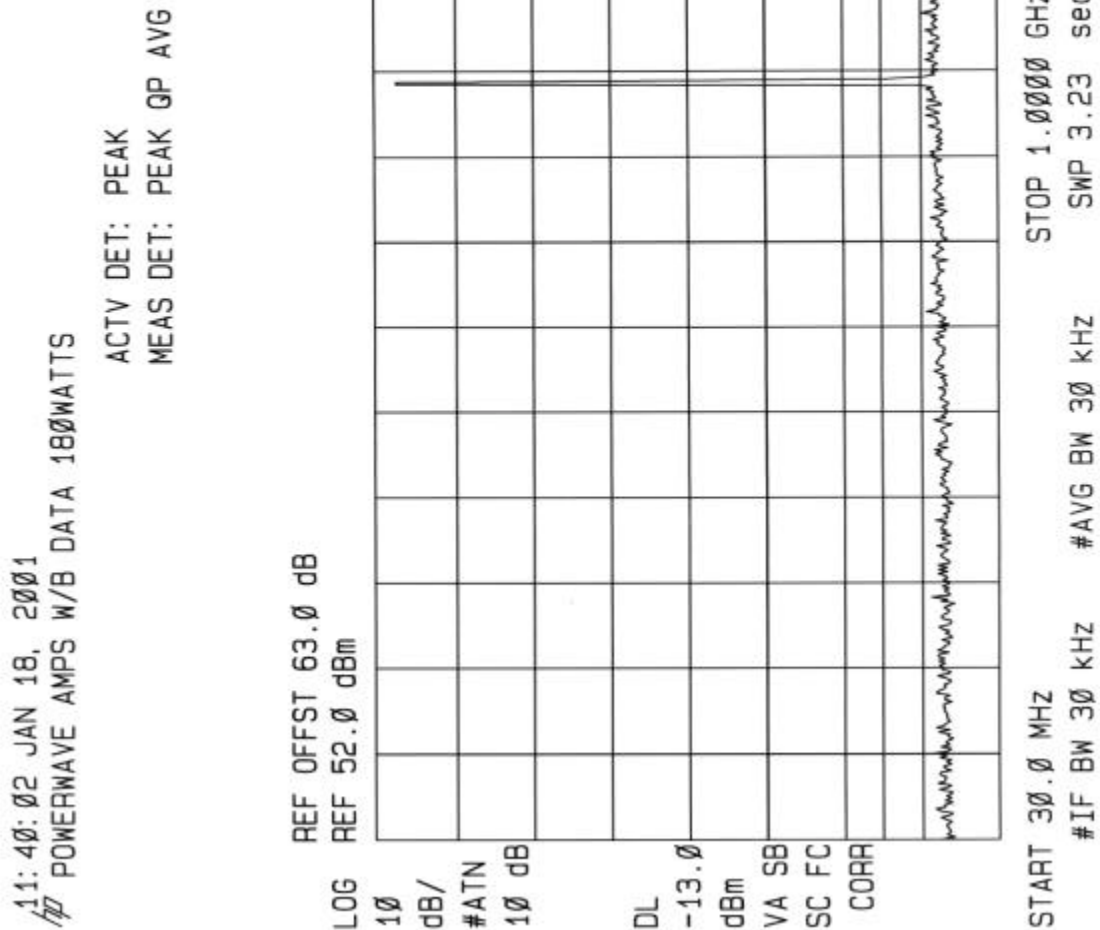
ACTV DET: PEAK
MEAS DET: PEAK QP AVG



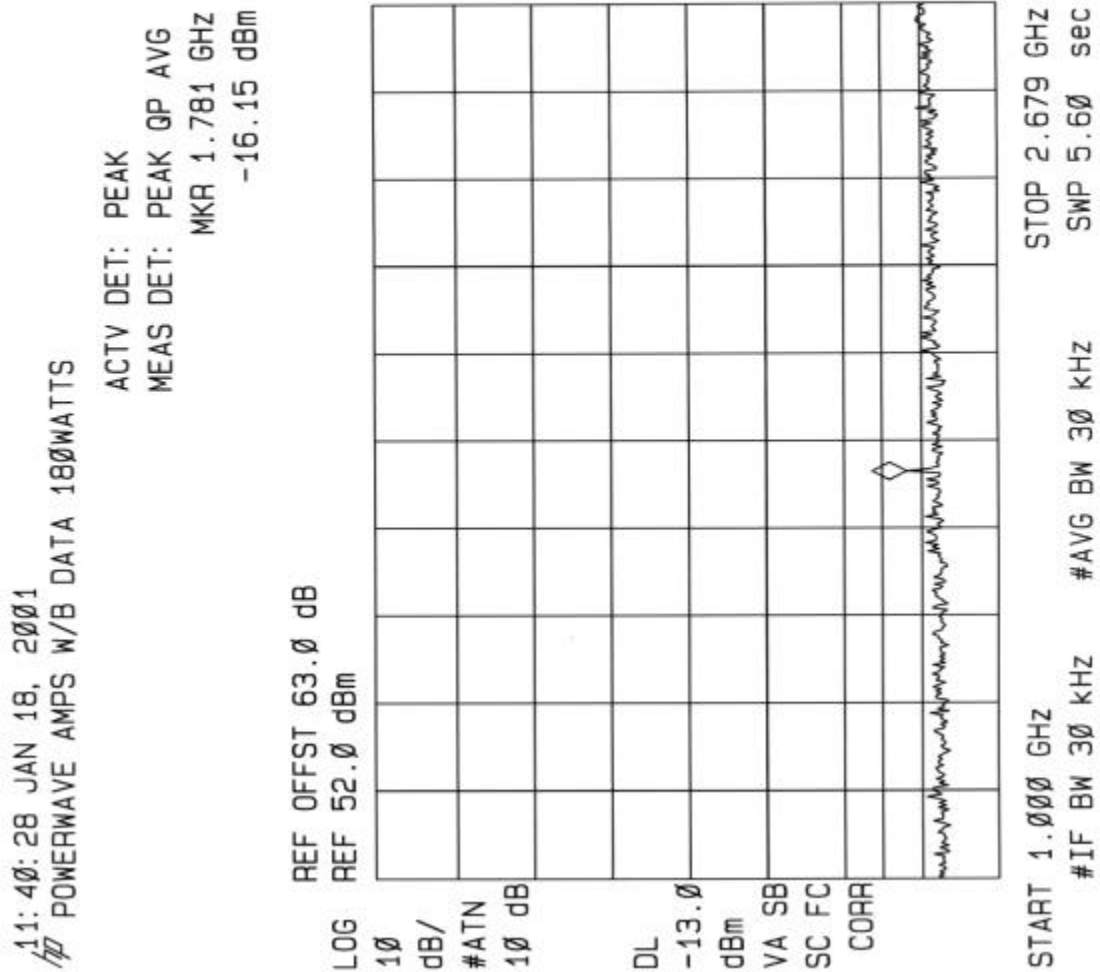
LOW END OF BAND
(AMPS WITH BANDWIDTH DATA)



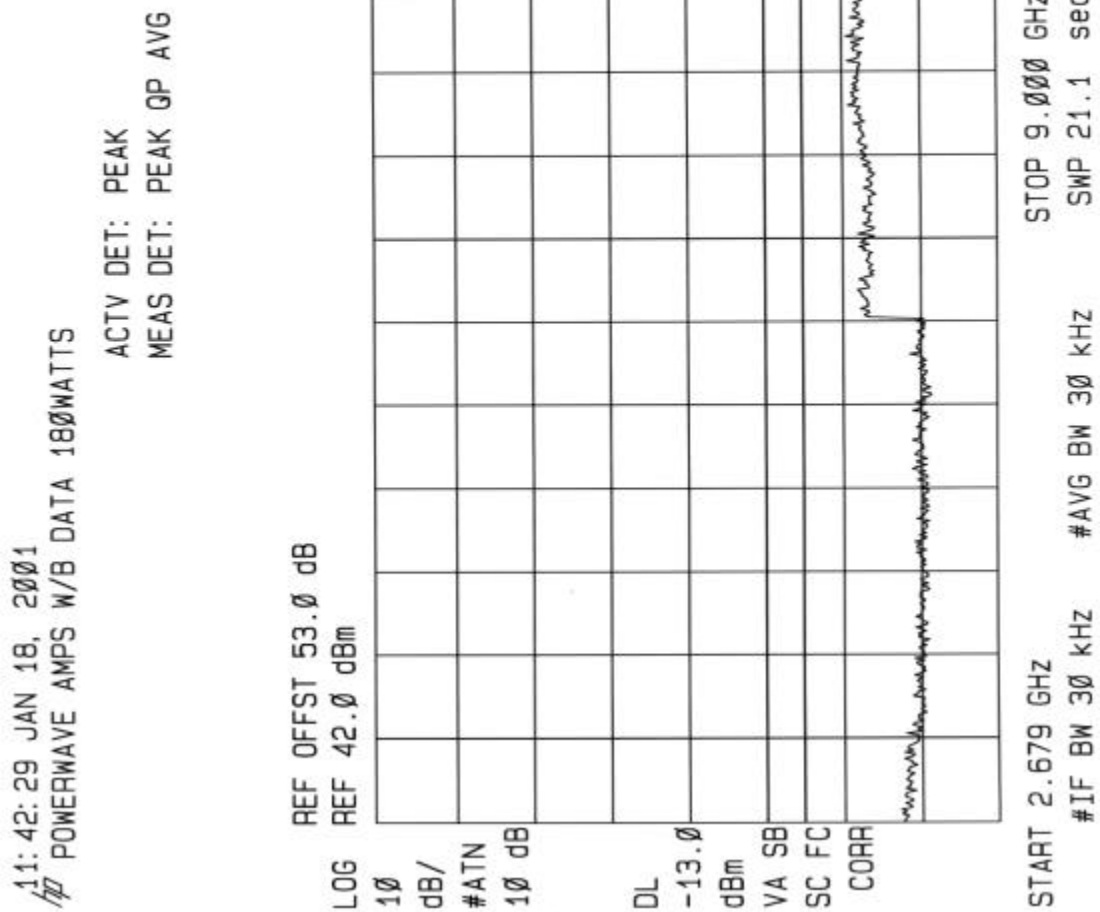
HIGH END OF BAND
(AMPS WITH BANDWIDTH DATA)



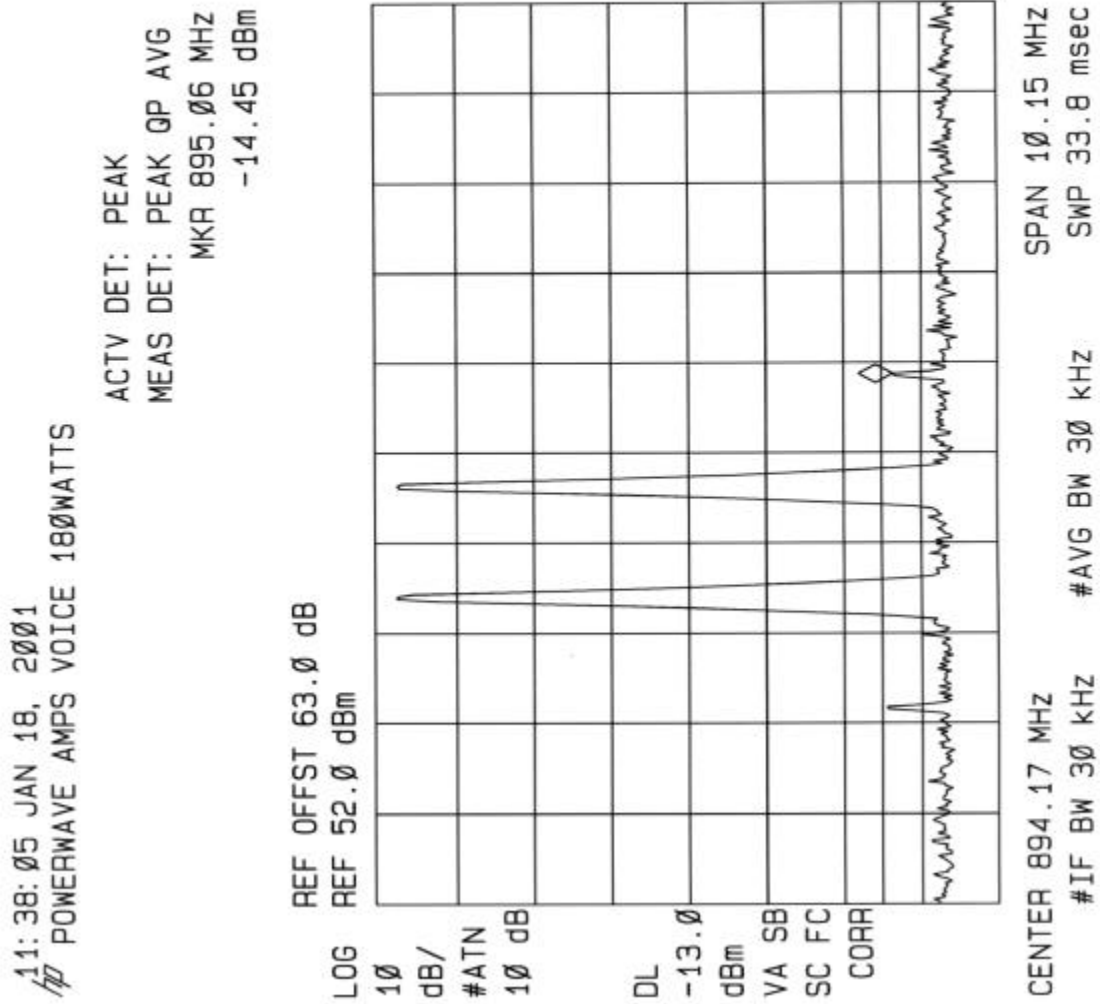
HIGH END OF BAND
(AMPS WITH BANDWIDTH DATA)



HIGH END OF BAND
(AMPS WITH BANDWIDTH DATA)



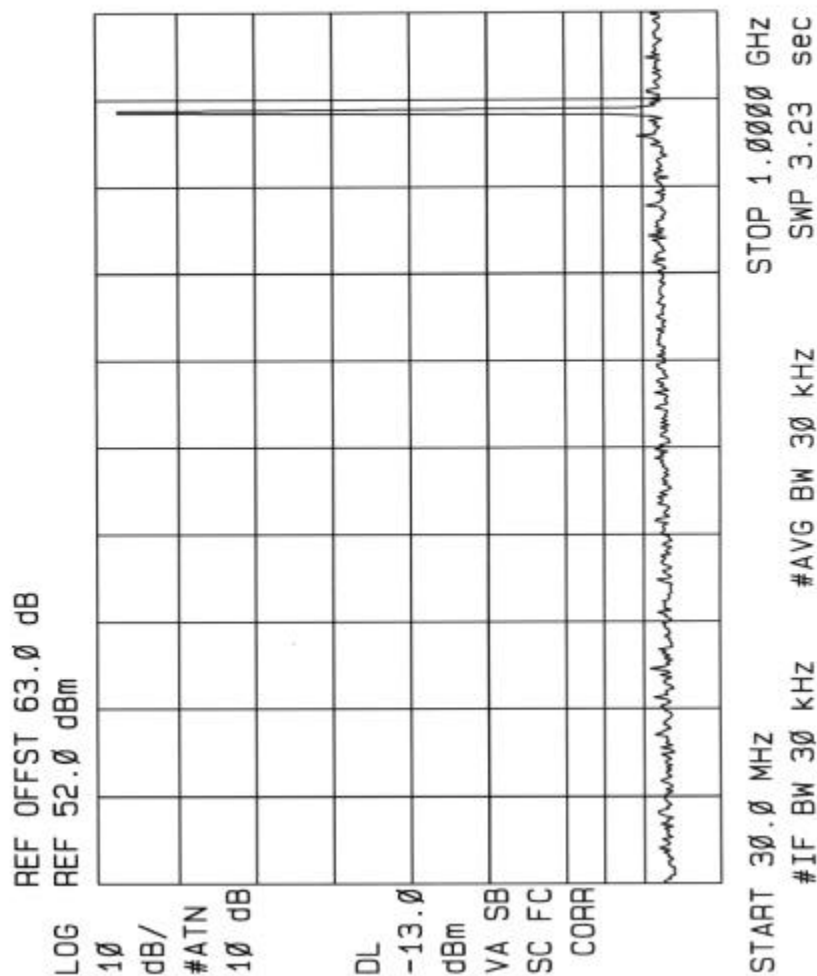
HIGH END OF BAND
(AMPS WITH BANDWIDTH DATA)



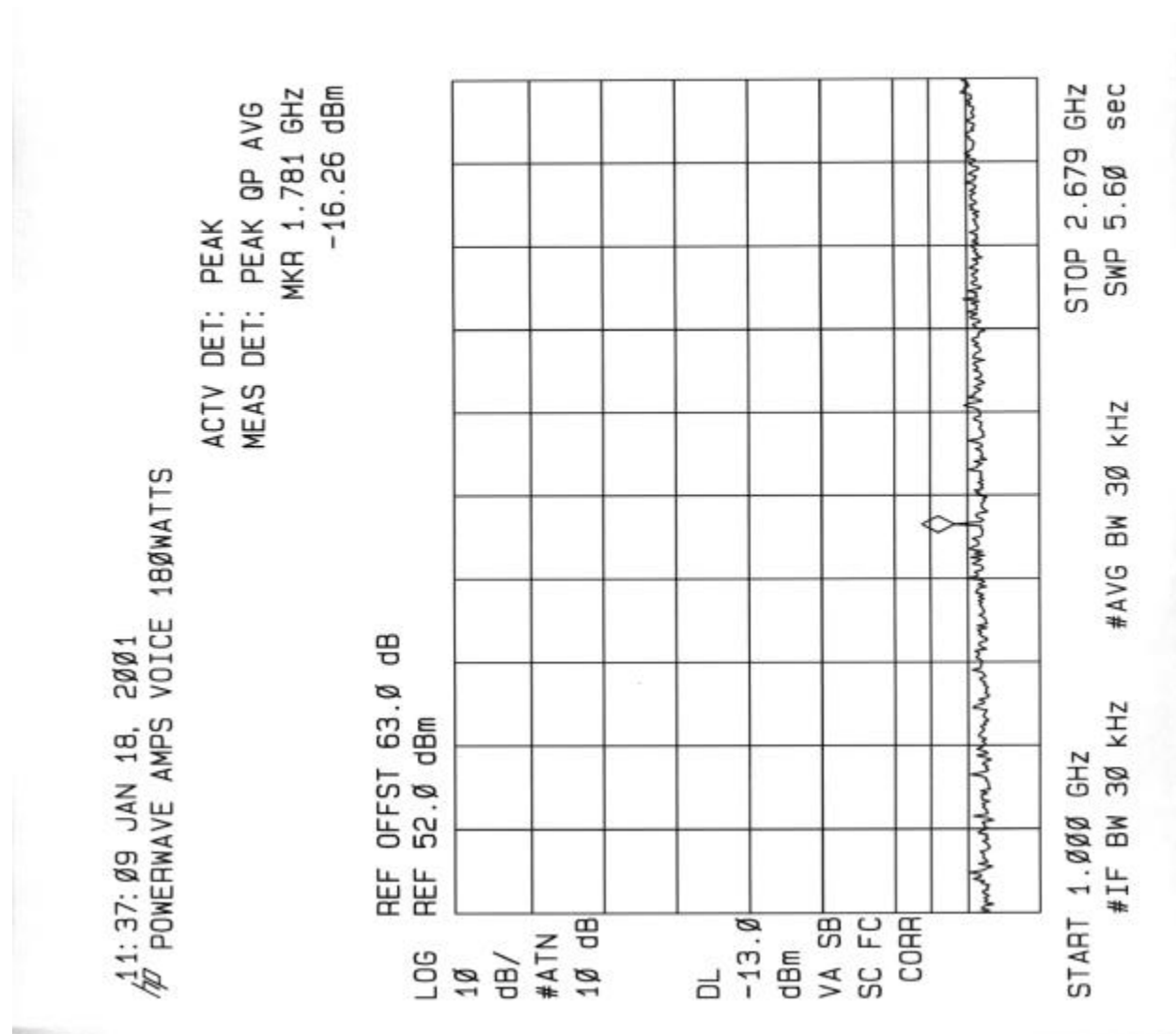
HIGH END OF BAND
(AMPS VOICE)

11:37:30 JAN 18, 2001
POWERWAVE AMPS VOICE 180WATTS

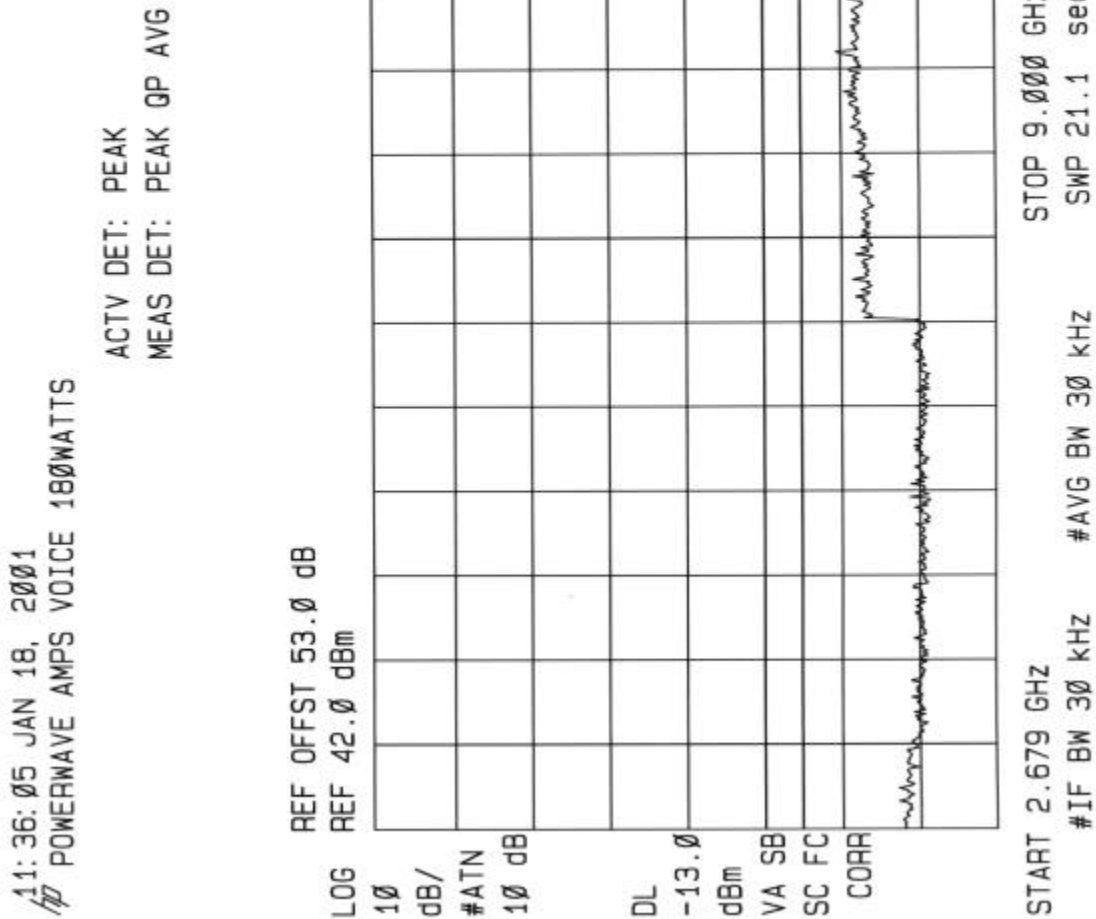
ACTV	DET:	PEAK
MEAS	DET:	PEAK QP AVG



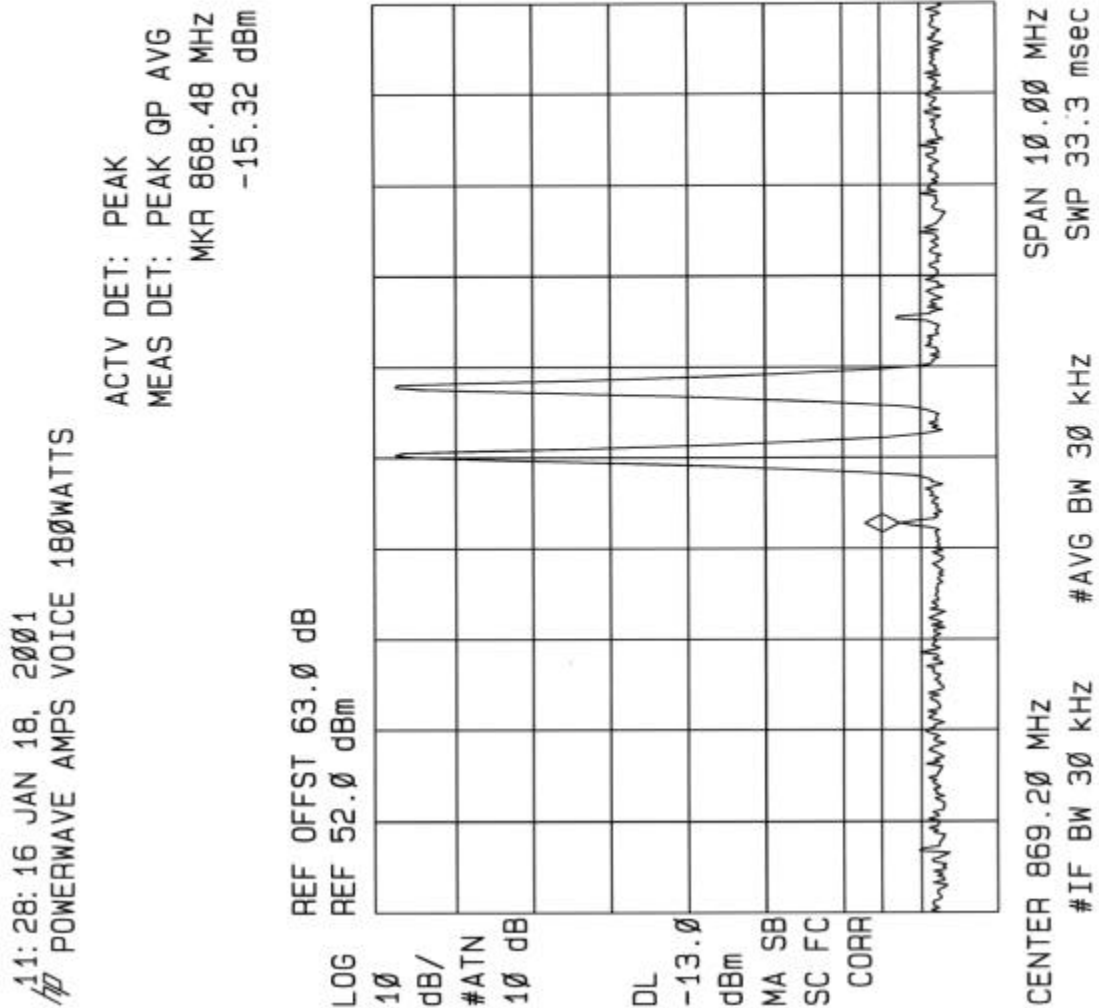
HIGH END OF BAND
(AMPS VOICE)



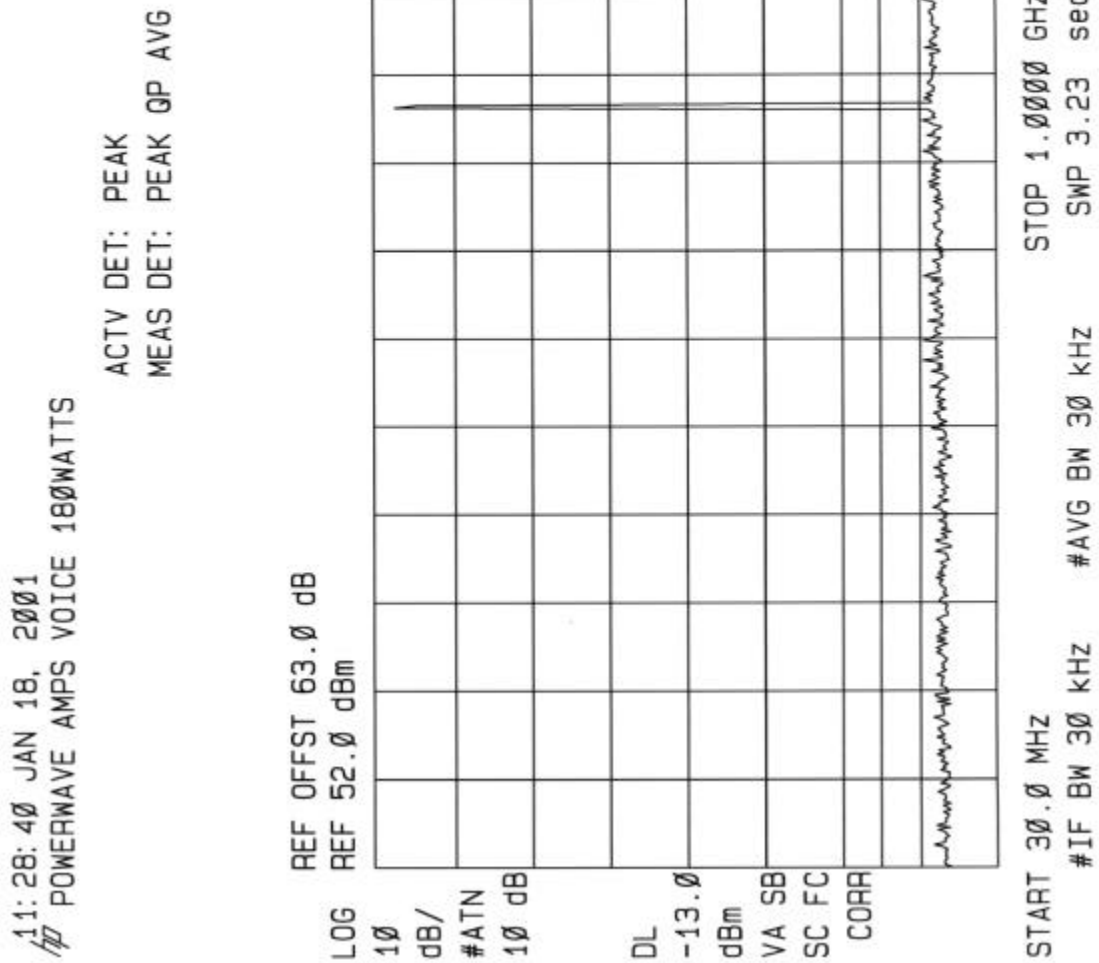
HIGH END OF BAND
(AMPS VOICE)



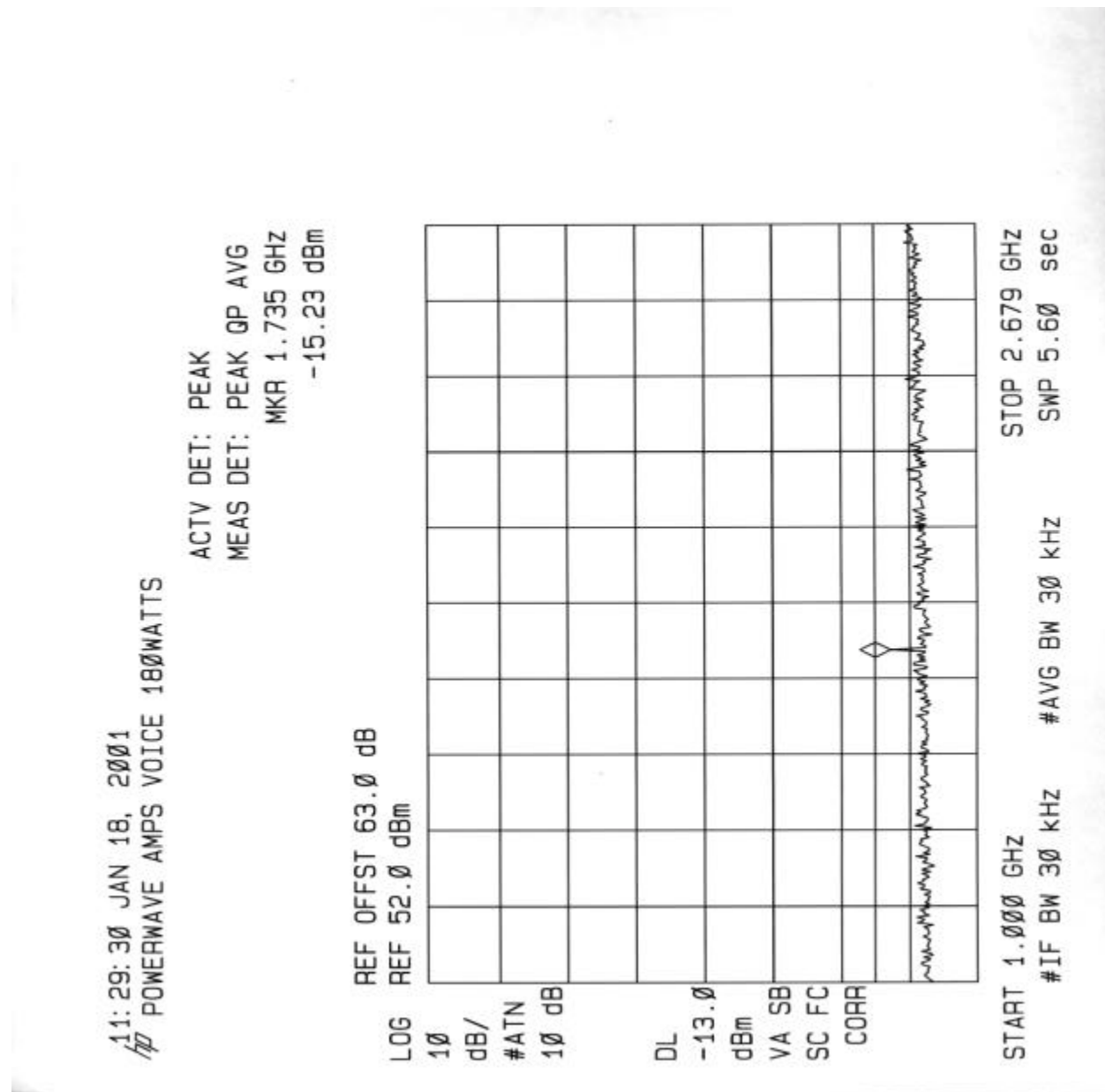
HIGH END OF BAND
(AMPS VOICE)



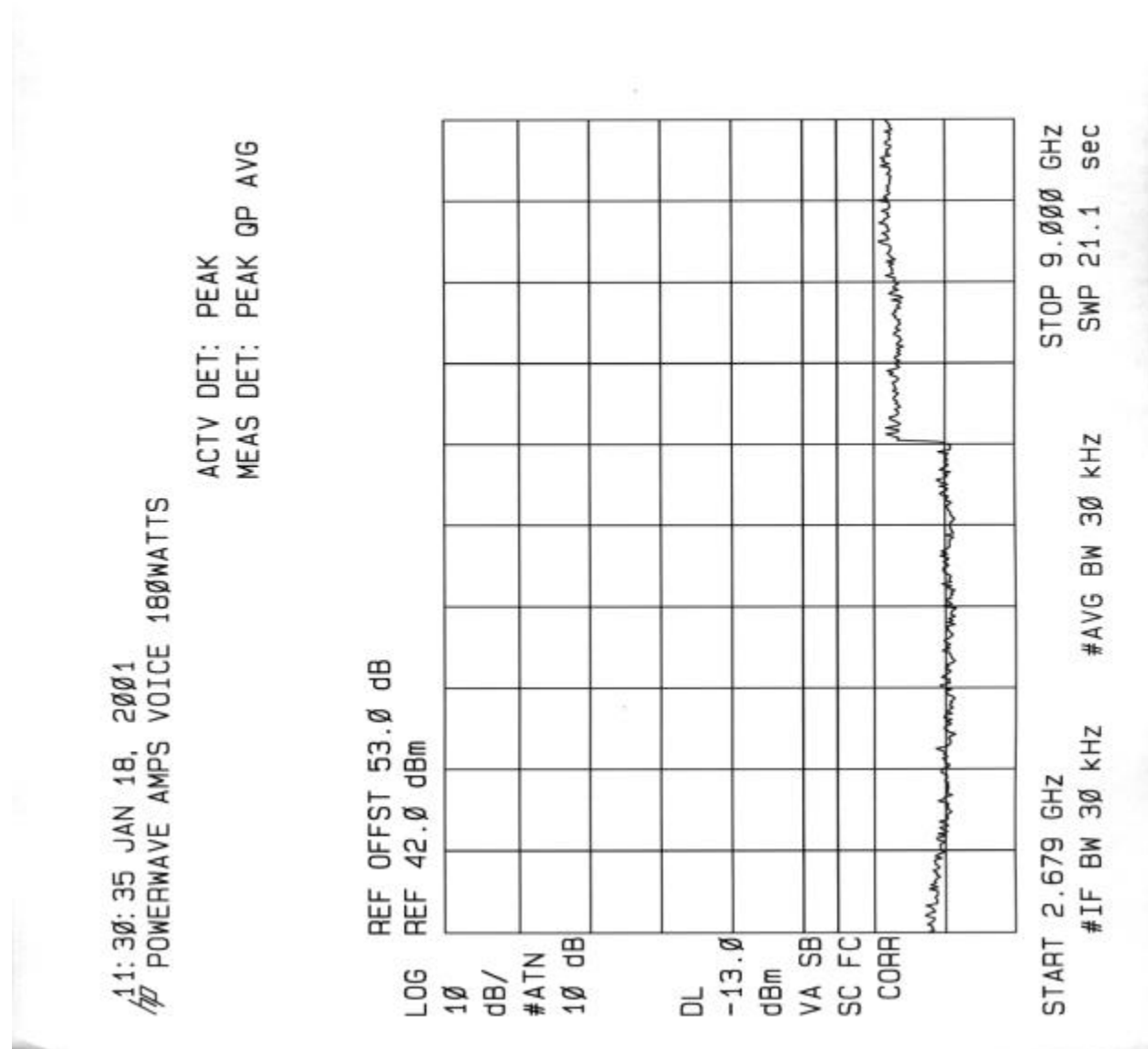
LOW END OF BAND
(AMPS VOICE)



LOW END OF BAND
(AMPS VOICE)



LOW END OF BAND
(AMPS VOICE)



LOW END OF BAND
(AMPS VOICE)