

**SUBMITTED MEASURED DATA INDEX**

|      |                                                          |
|------|----------------------------------------------------------|
| 6A   | RF Power Output - Measured Data                          |
| 6B   | Audio Response - Graph                                   |
| 6C   | Post Limiter Low Pass Filter Response - Graph            |
| 6D   | Signaling Channel Audio Roll-Off Filter Response - Graph |
| 6E-1 | Modulation Limiting (Compandor On) - Graph               |
| 6E-2 | Modulation Limiting (Compandor Off) - Graph              |
| 6F-1 | Occupied Bandwidth, Audio - Photograph                   |
| 6F-2 | Occupied Bandwidth, Audio and SAT - Graph                |
| 6F-3 | Occupied Bandwidth, Wideband Data - Graph                |
| 6F-4 | Occupied Bandwidth, Signaling Tone and SAT - Graph       |
| 6G   | Conducted Spurious and Harmonic Emissions, -Graph        |
| 6H   | Radiated Spurious and Harmonic Emissions, -Graph         |
| 6J   | Reference Oscillator Stability vs. Temperature - Graph   |
| 6K   | Reference Oscillator Stability vs. Supply Voltage        |

**RF POWER OUTPUT DATA**

The input supply to the transmitter was set at 13.7 Volts. The RF power output was measured with the indicated voltage and current applied into the final RF amplifying device(s).

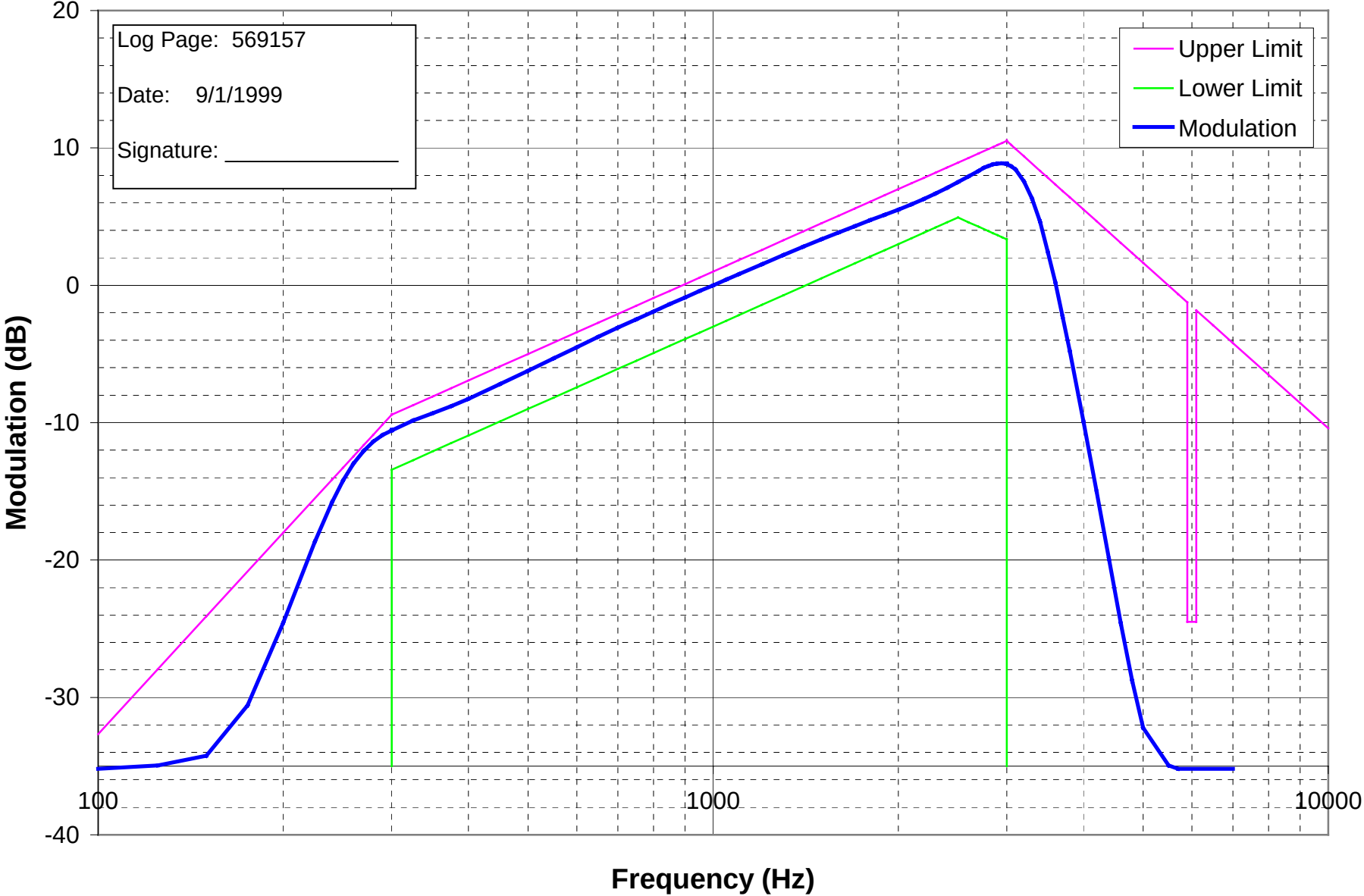
Measured RF output: 3 W

Measured DC voltage: 13.7 V

Measured DC current: 450 mA

Measured RF input: 0.4 W

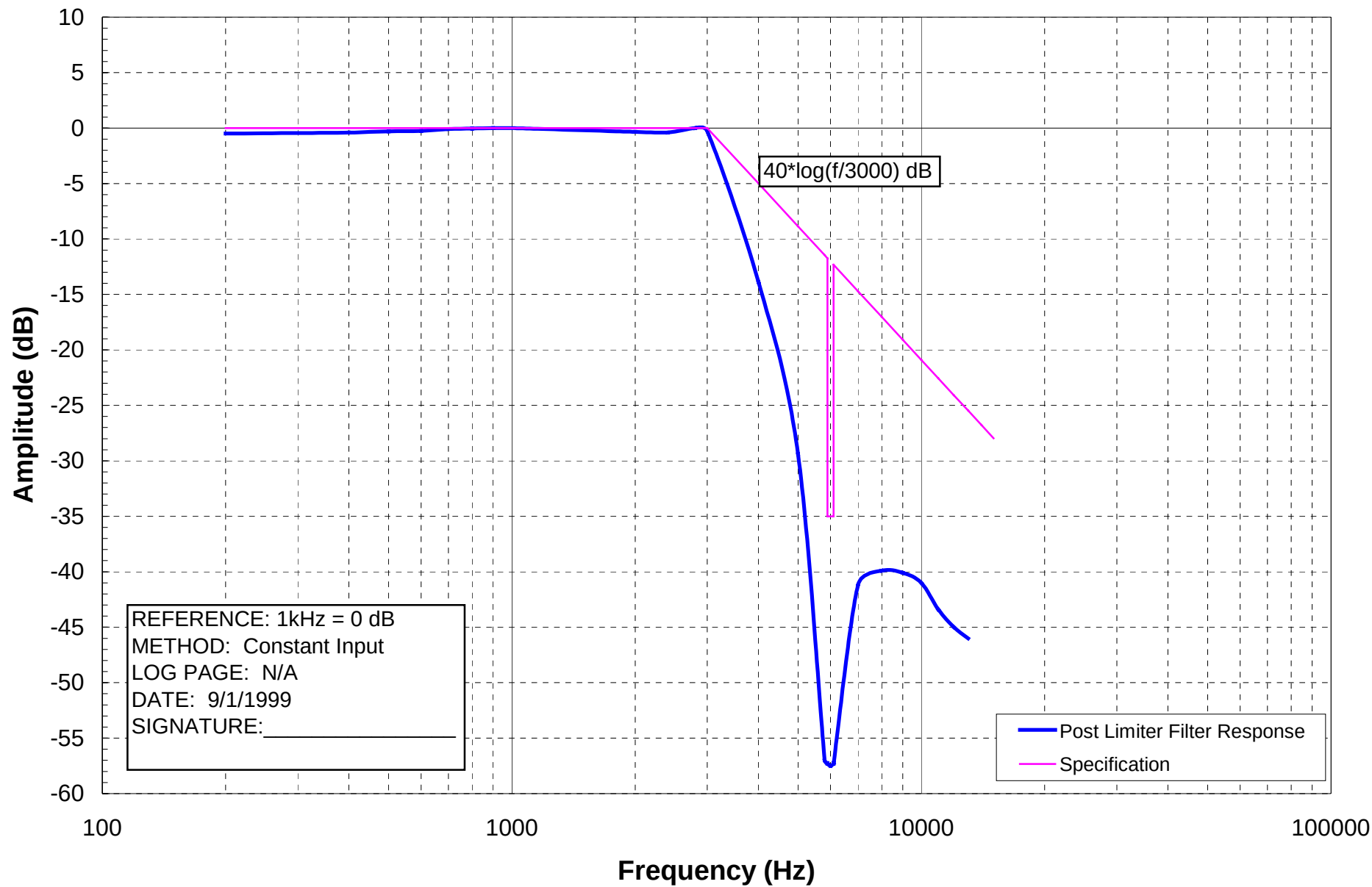
AUDIO RESPONSE



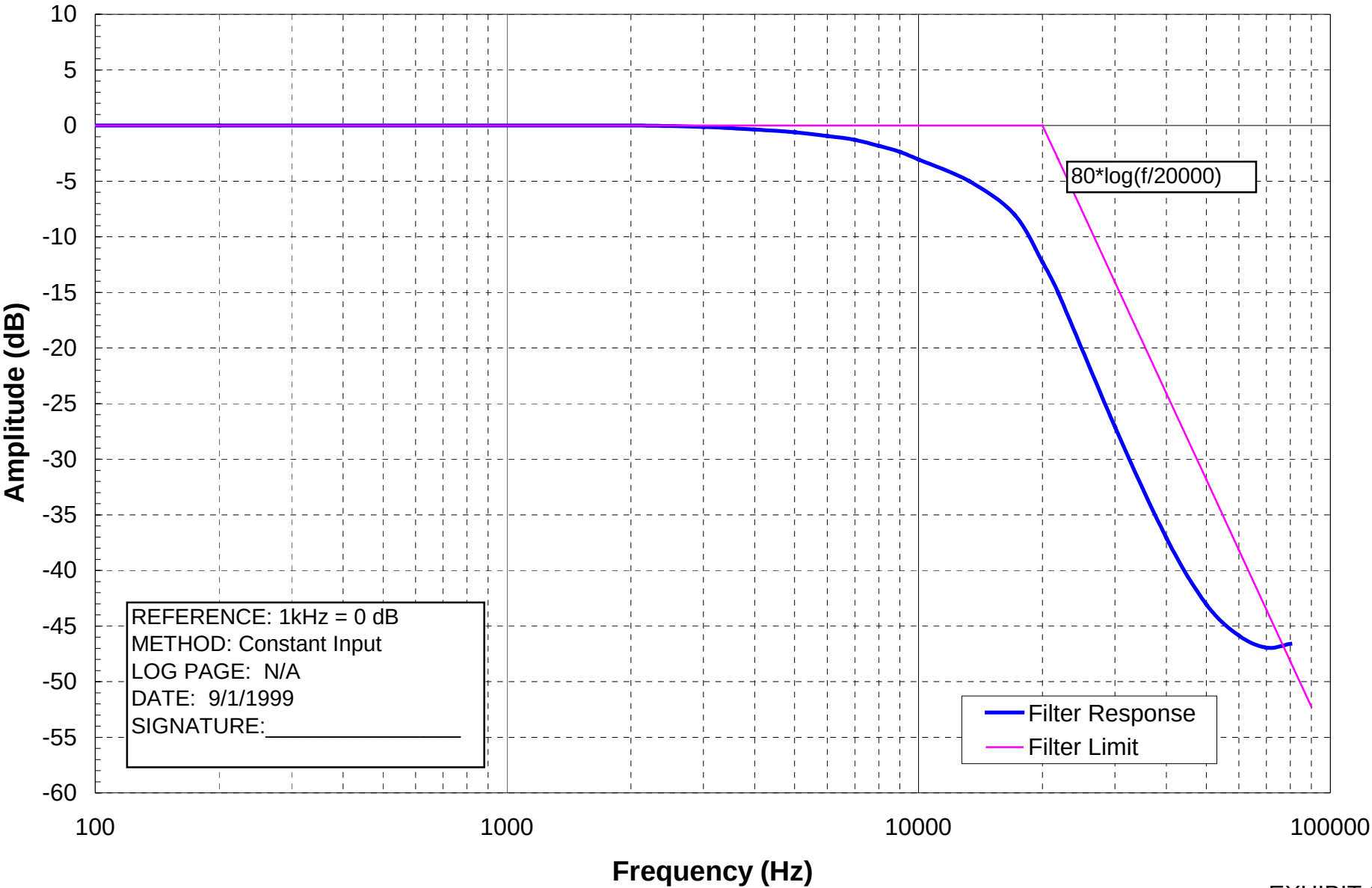
Log Page: 569157  
Date: 9/1/1999  
Signature: \_\_\_\_\_

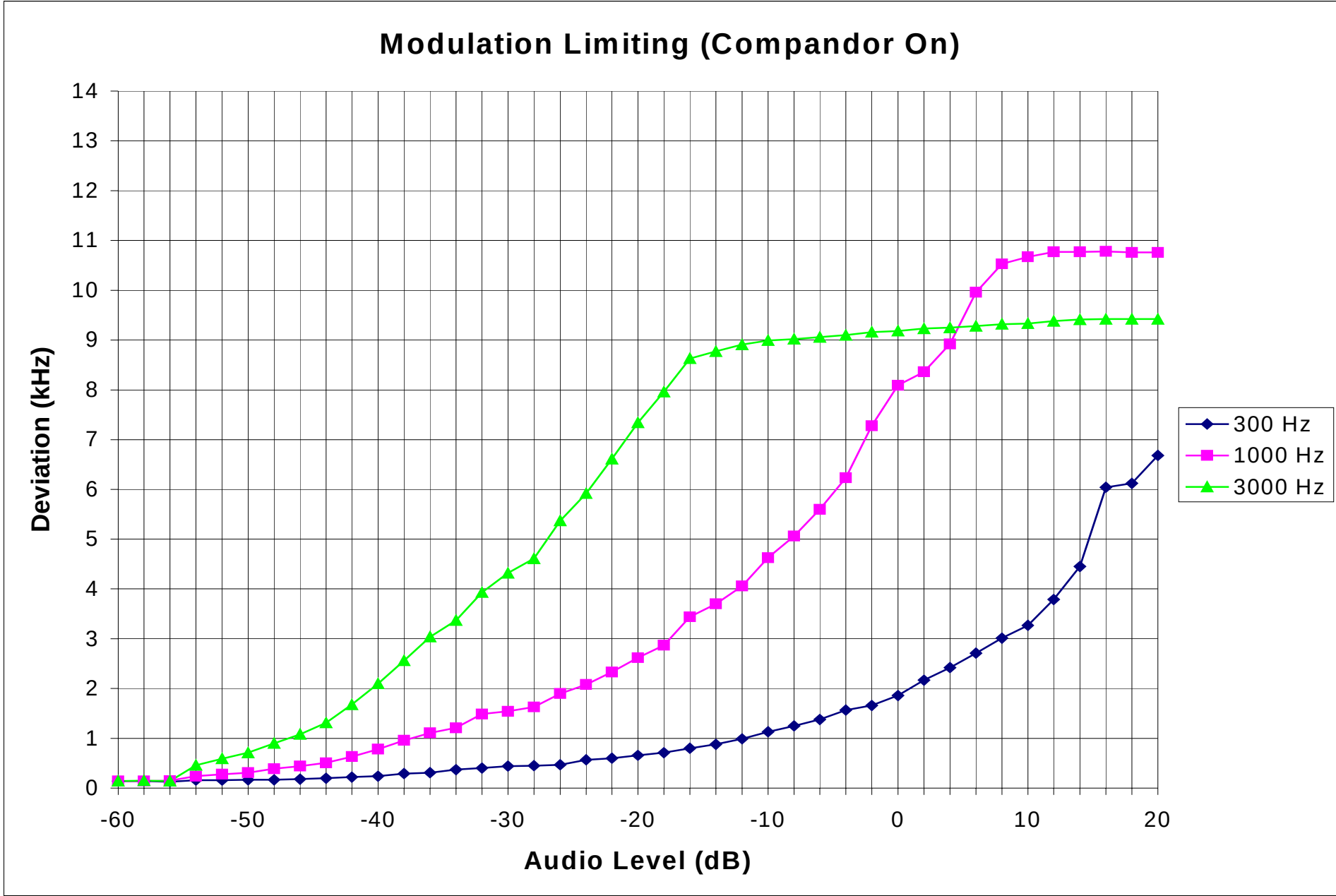
Upper Limit  
Lower Limit  
Modulation

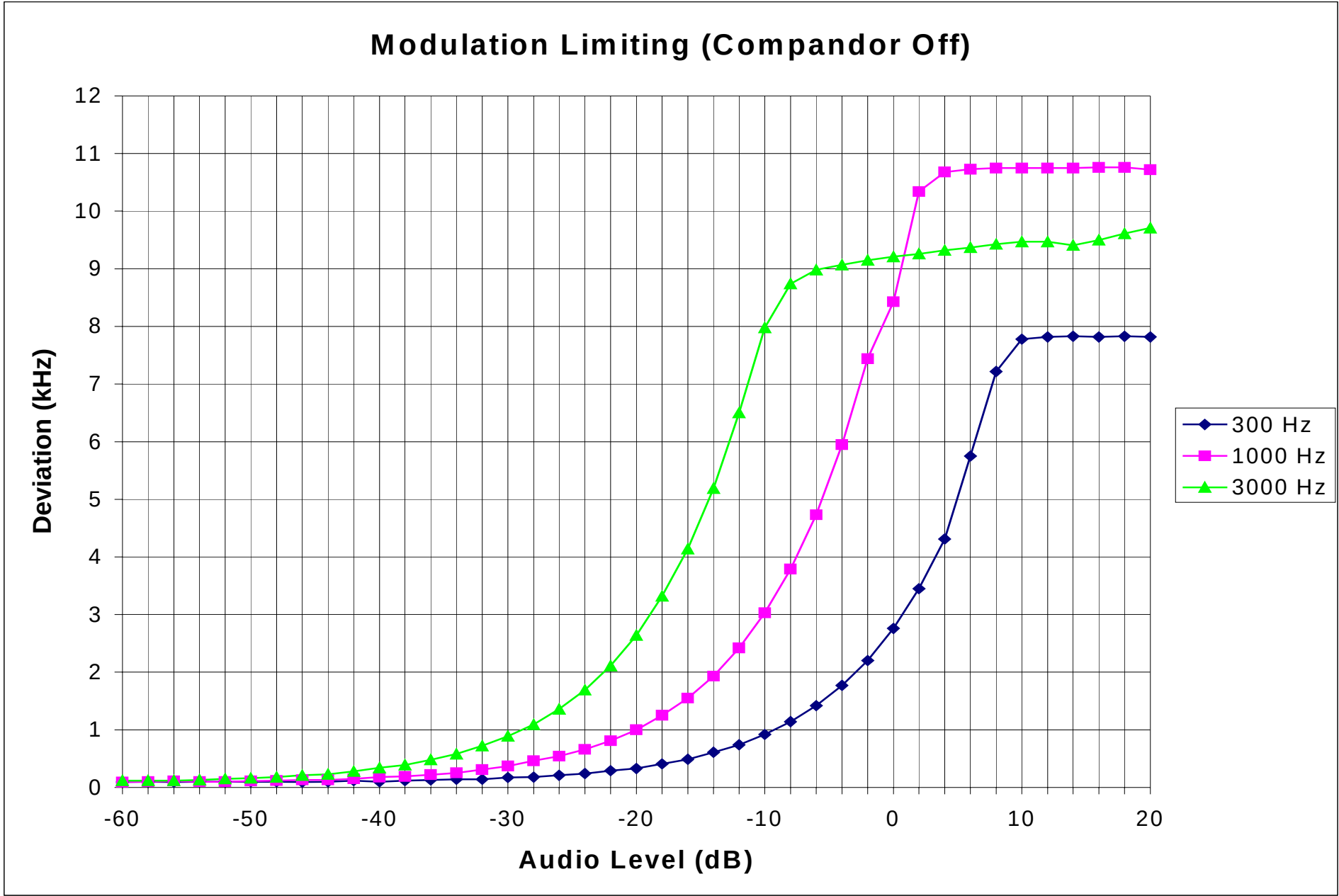
Post-Limiter Low Pass Filter Response



Signaling Channel Audio Roll-Off Filter Response







**BANDWIDTH MEASUREMENT DATA FOR TRANSMITTER TYPES F8W****DEVIATION OF THE CARRIER WITH 2500 Hz AUDIO MODULATION**

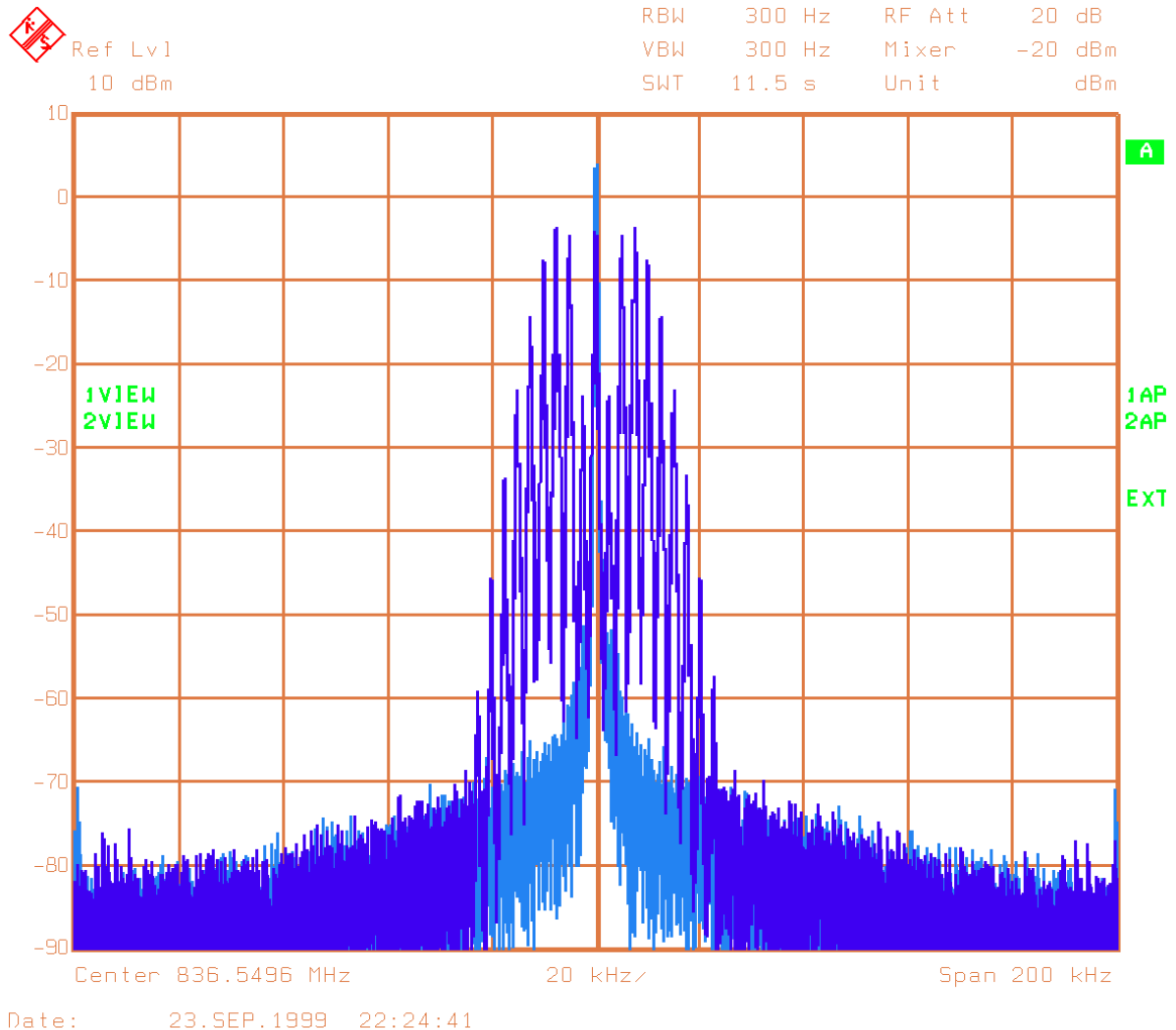
HORIZONTAL SCALE = 20 kHz/DIVISION

VERTICAL SCALE = 10 dB/DIVISION (ATTENUATION)

RESOLUTION BANDWIDTH = 300 Hz

AUDIO LEVEL = 16 dB GREATER THAN LEVEL REQUIRED TO PRODUCE  
 $\pm 6$  kHz PEAK FM DEVIATION

POWER LEVEL = 3 W

**MEASURED DATA:**

1. Instantaneous Deviation Control set for a maximum of  $\pm 12$  kHz.
2. Tune and adjust to obtain unmodulated carrier on the analyzer scope. Save trace of unmodulated carrier.

3. Modulate the transmitter with a 2.5 kHz tone, 16 dB greater than that required to produce  $\pm 6$  kHz deviation. Photograph the sideband display while it is superimposed upon the unmodulated carrier.

SPEC LIMITS:

- a. On any frequency removed from the assigned carrier frequency by more than 20 kHz, up to and including 45 kHz, the sideband is at least 26 dB below the carrier.
- b. On any frequency removed from the assigned carrier frequency by more than 45 kHz, the sideband is at least  $63 + 10\log_{10}$  (mean power output in Watts) dB below the carrier.

**BANDWIDTH MEASUREMENT DATA FOR TRANSMITTER TYPES F8W**

DEVIATION OF THE CARRIER WITH 2500 Hz AUDIO MODULATION AND  
SUPERVISORY AUDIO TONE

HORIZONTAL SCALE = 20 kHz/DIVISION

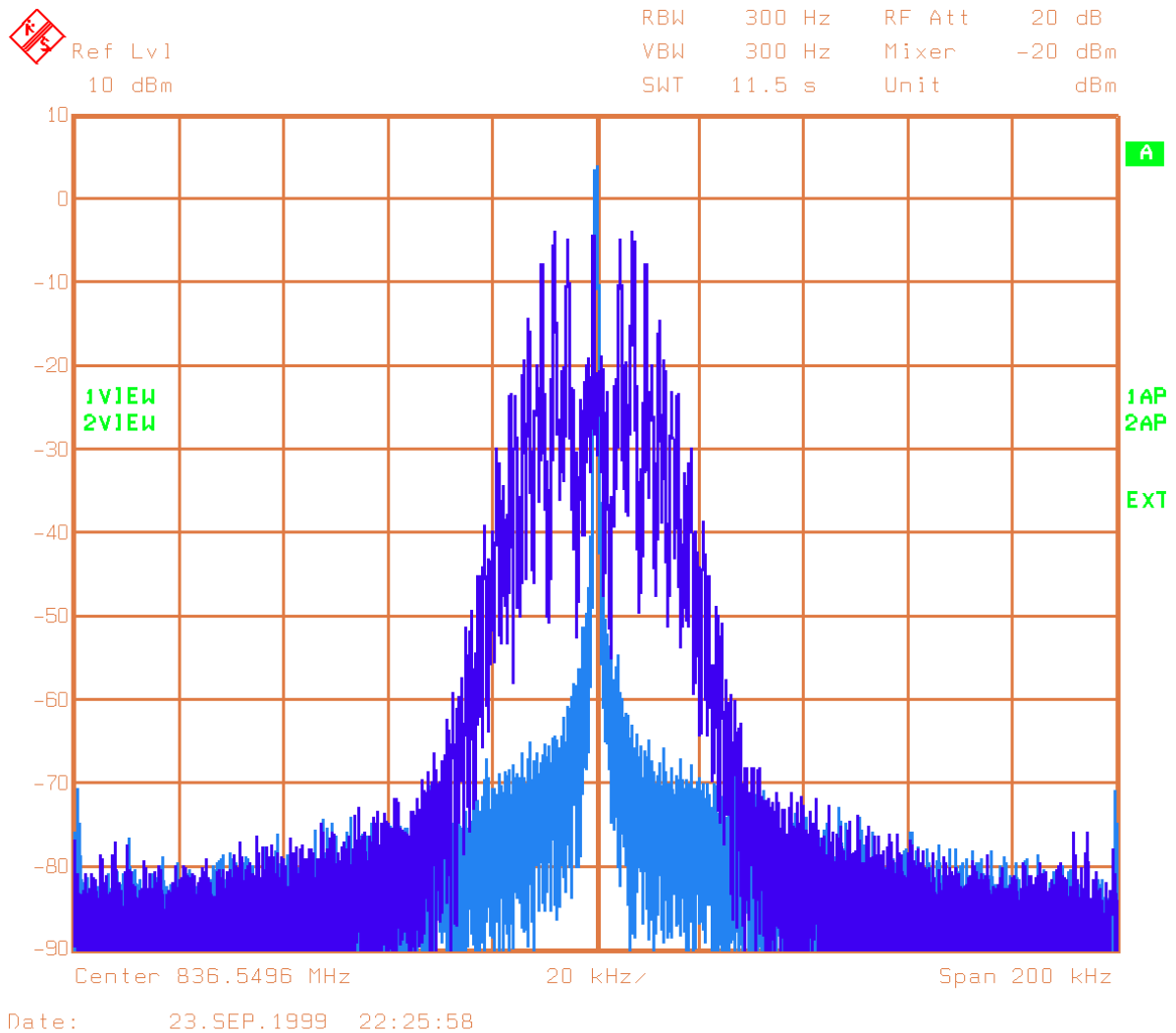
VERTICAL SCALE = 10 dB/DIVISION (ATTENUATION)

RESOLUTION BANDWIDTH = 300 Hz

AUDIO LEVEL = 16 dB GREATER THAN LEVEL REQUIRED TO PRODUCE  
 $\pm 6$  kHz FM DEVIATION

POWER LEVEL = 3 W

MEASURED DATA:



1. Instantaneous Deviation Control set for a maximum of  $\pm 12$  kHz.
2. Tune and adjust to obtain unmodulated carrier on the analyzer scope. Save trace of unmodulated carrier.
3. Modulate the transmitter with a 2.5 kHz tone, 16 dB greater than that required to produce  $\pm 6$  kHz deviation and add a 6 kHz SAT with  $\pm 2$  kHz deviation. Photograph the sideband display while it is superimposed upon the unmodulated carrier.

SPEC LIMITS:

- a. On any frequency removed from the assigned carrier frequency by more than 20 kHz, up to and including 45 kHz, the sideband is at least 26 dB below the carrier.
- b. On any frequency removed from the assigned carrier frequency by more than 45 kHz, the sideband is at least  $63 + 10\log_{10}$  (mean power output in Watts) dB below the carrier.

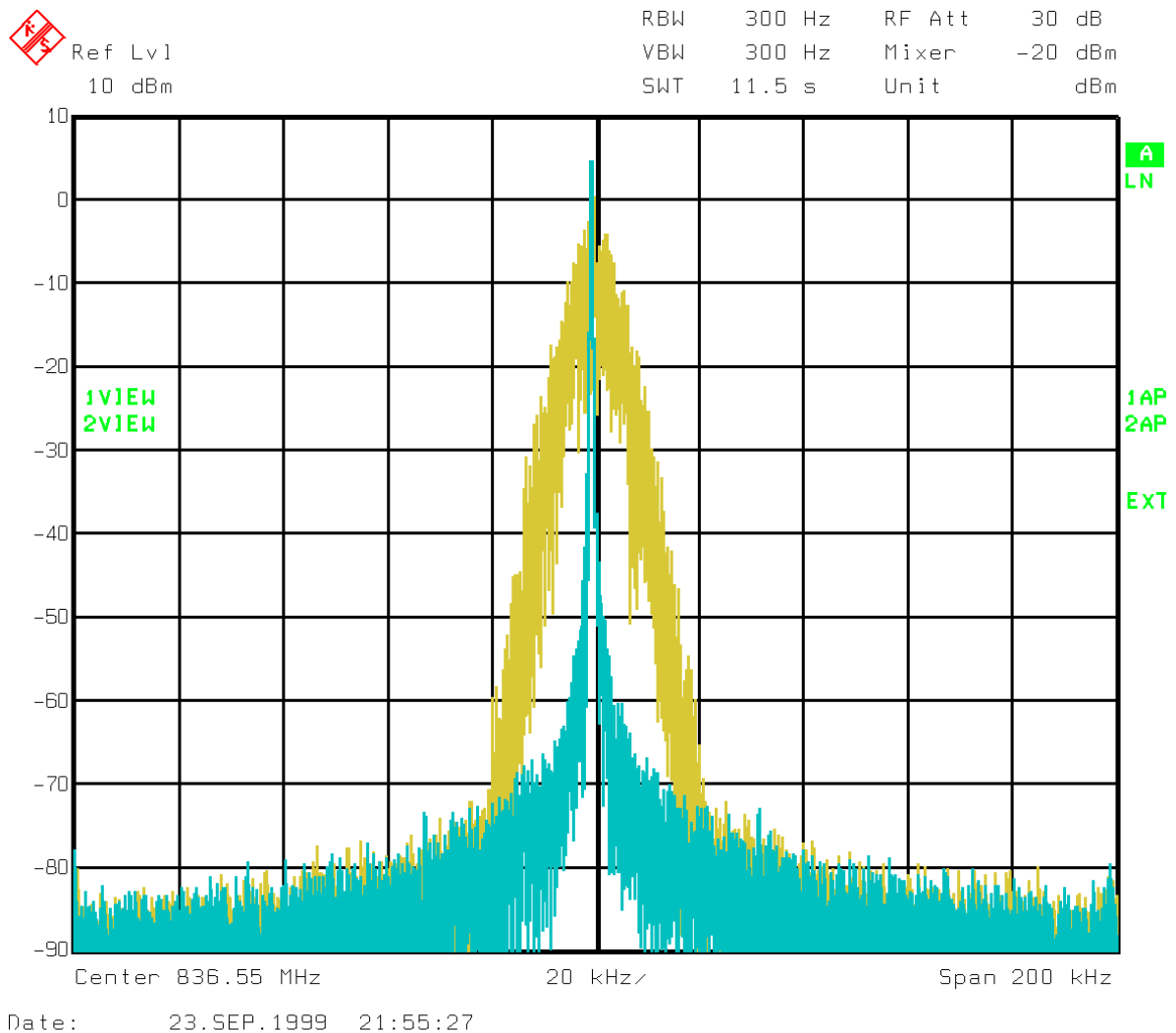
**BANDWIDTH MEASUREMENT DATA FOR TRANSMITTER TYPES F1D****DEVIATION OF THE CARRIER WITH WIDE BAND DATA**

HORIZONTAL SCALE = 20 kHz/DIVISION

VERTICAL SCALE = 10 dB/DIVISION (ATTENUATION)

RESOLUTION BANDWIDTH = 300 Hz

POWER LEVEL = 3 W

**MEASURED DATA:**

1. Instantaneous Deviation Control set for a maximum of  $\pm 12$  kHz.
2. Tune and adjust to obtain unmodulated carrier on the analyzer scope. Save trace of unmodulated carrier.

3. Modulate the transmitter with quasi-random 10 kilobit/second wide band data with  $\pm 8$  kHz peak deviation. Photograph the sideband display while it is superimposed upon the unmodulated carrier.

SPEC LIMITS:

- a. On any frequency removed from the assigned carrier frequency by more than 20 kHz, up to and including 45 kHz, the sideband is at least 26 dB below the carrier.
- b. On any frequency removed from the assigned carrier frequency by more than 45 kHz, up to and including 60 kHz, the sideband is at least 45 dB below the carrier.
- c. On any frequency removed from the assigned carrier frequency by more than 60 kHz, up to and including 90 kHz, the sideband is at least 65 dB below the carrier.
- d. On any frequency removed from the assigned carrier frequency by more than 90 kHz, up to the first multiple of the carrier frequency, the sideband is at  $63 + 10\log_{10}$  (mean power output in Watts) dB below the carrier.

**BANDWIDTH MEASUREMENT DATA FOR TRANSMITTER TYPES F1D**

DEVIATION OF THE CARRIER WITH 10kHz SIGNALING TONE AND  
SUPERVISORY AUDIO TONE

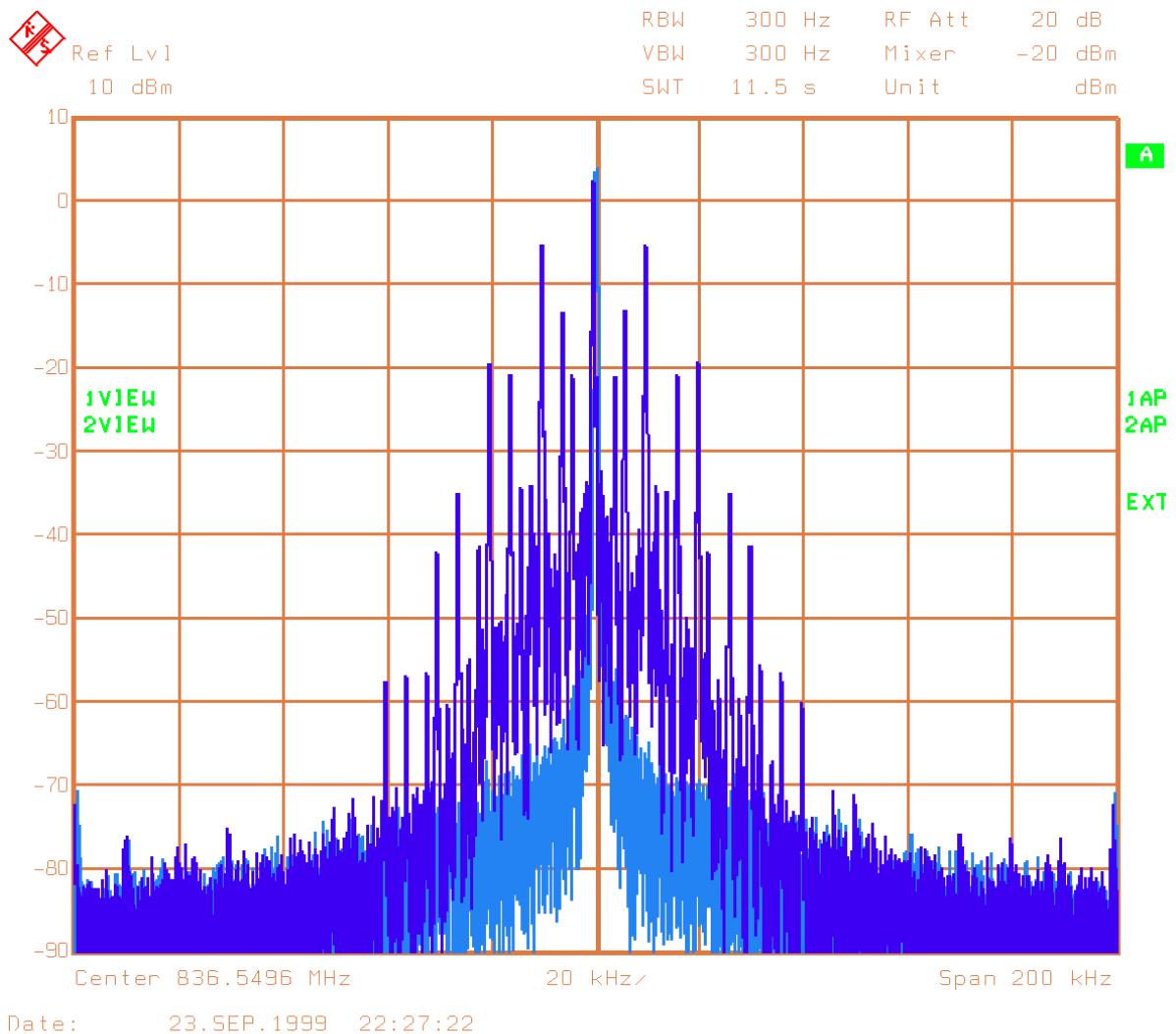
HORIZONTAL SCALE = 20 kHz/DIVISION

VERTICAL SCALE = 10 dB/DIVISION (ATTENUATION)

RESOLUTION BANDWIDTH = 300 Hz

POWER LEVEL = 3 W

MEASURED DATA:

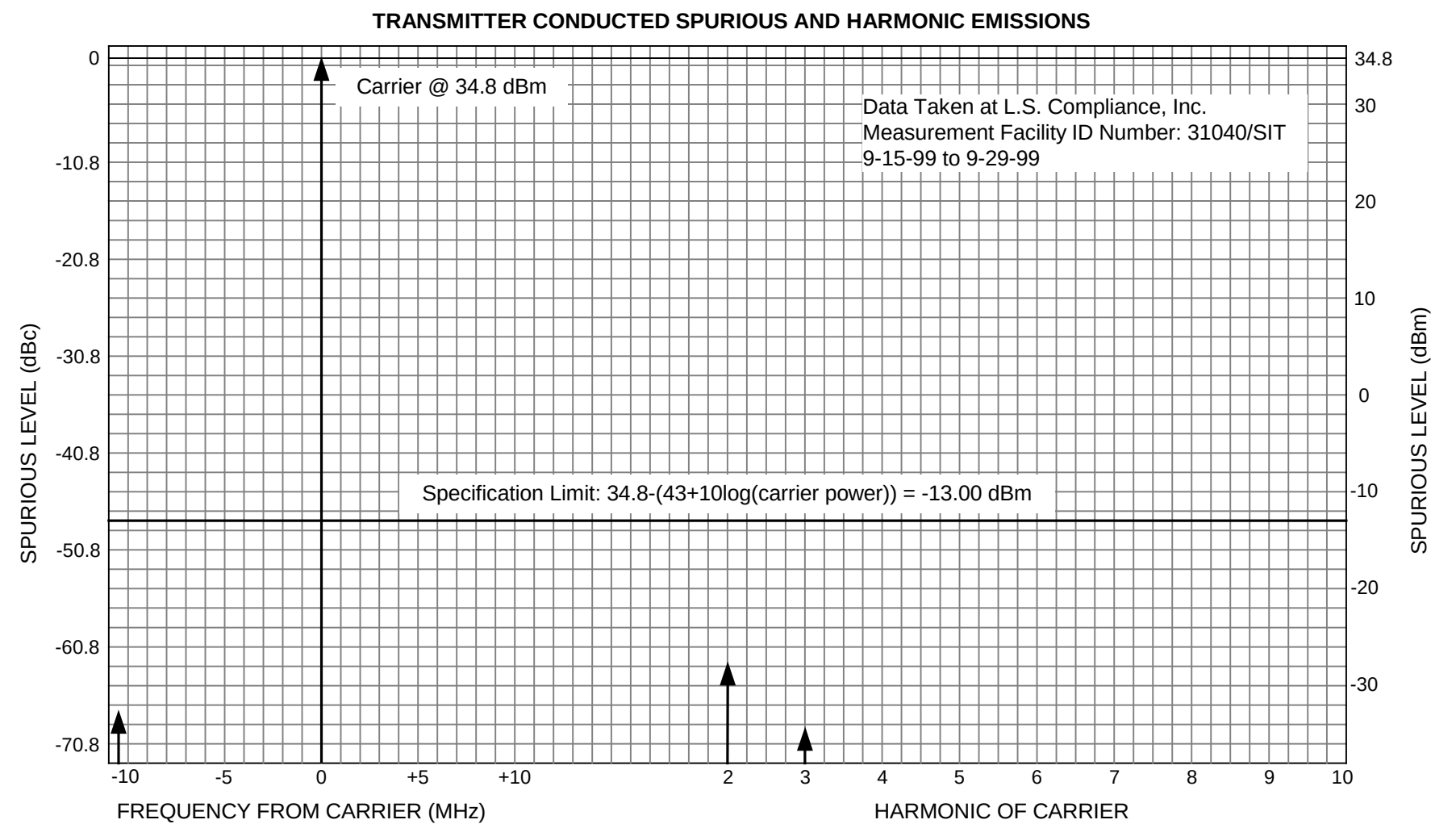


1. Instantaneous Deviation Control set for a maximum of  $\pm 12$  kHz.
2. Tune and adjust to obtain unmodulated carrier on the analyzer scope. Save trace of unmodulated carrier.

3. Modulate the transmitter with a 10 kHz signaling tone with  $\pm 8$  kHz deviation and add a 6 kHz SAT with  $\pm 2$  kHz deviation. Photograph the sideband display while it is superimposed upon the unmodulated carrier.

SPEC LIMITS:

- a. On any frequency removed from the assigned carrier frequency by more than 20 kHz, up to and including 45 kHz, the sideband is at least 26 dB below the carrier.
- b. On any frequency removed from the assigned carrier frequency by more than 45 kHz, up to and including 60 kHz, the sideband is at least 45 dB below the carrier.
- c. On any frequency removed from the assigned carrier frequency by more than 60 kHz, up to and including 90 kHz, the sideband is at least 65 dB below the carrier.
- d. On any frequency removed from the assigned carrier frequency by more than 90 kHz, up to the first multiple of the carrier frequency, the sideband is at  $63 + 10\log_{10}(\text{mean power output in Watts})$  dB below the carrier.



Carrier Power: 3W to 4.8mW in 4dB steps.

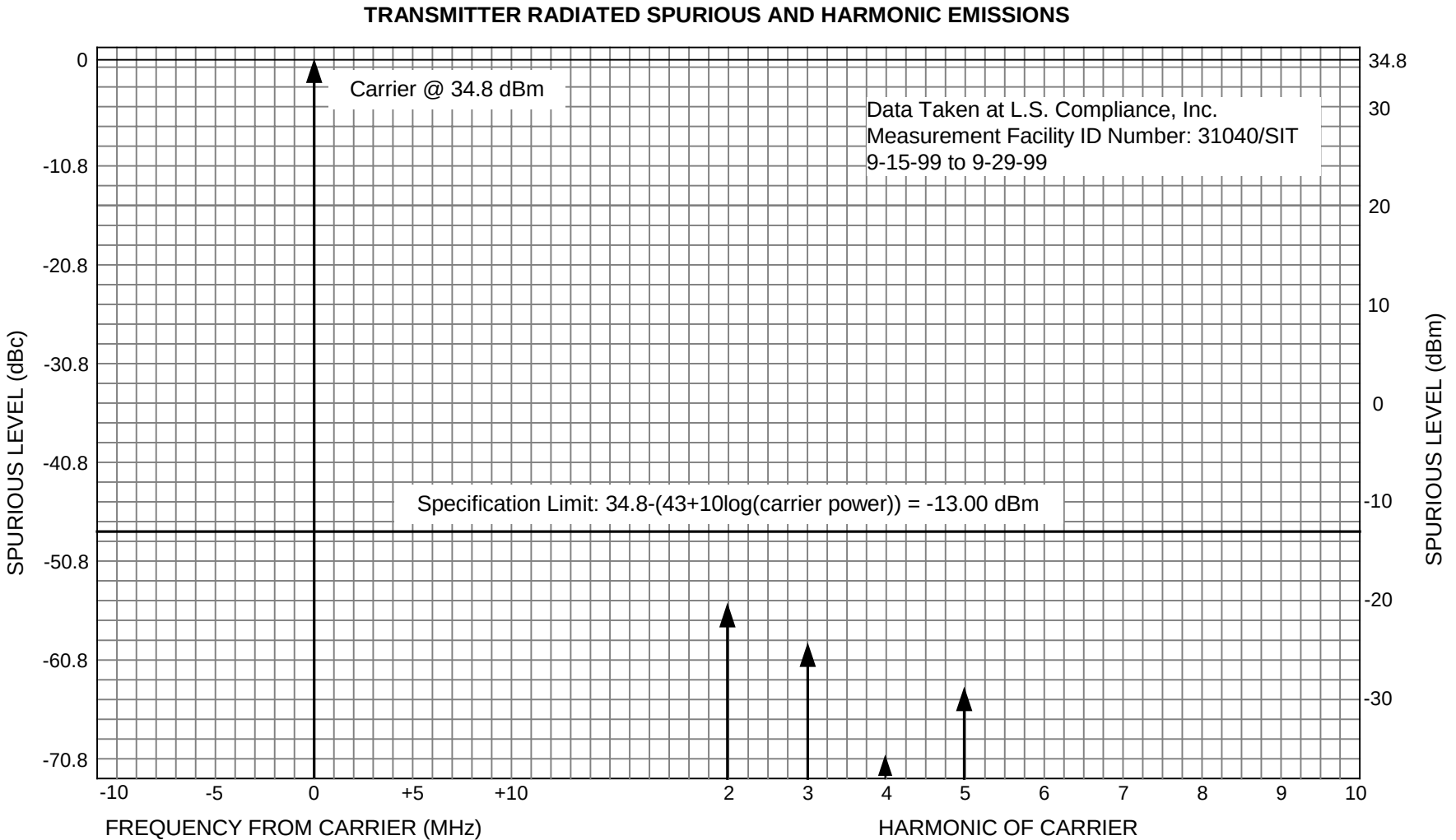
Carrier Frequency: 824.04 to 848.97 MHz in 30kHz steps.

Each reported emission reflects the highest absolute level found among all power levels and channels

All emissions not reported were greater than 25 dB below the FCC specification.

No signals greater than -80dBm were found in the 869 to 894 MHz band.

Spectrum was searched from 1MHz to the 10<sup>th</sup> harmonic of the transmitter.



Carrier Power: 3W to 4.8mW in 4dB steps.  
Carrier Frequency: 824.04 to 848.97 MHz in 30kHz steps.  
Each reported emission reflects the highest absolute level found among all power levels and channels.  
All emissions not reported were greater than 25 dB below the FCC specification.  
No signals greater than -80dBm were found in the 869 to 894 MHz band.  
Spectrum was searched from 30 MHz to the 10<sup>th</sup> harmonic of the transmitter.

