


**FREQUENCY  
DEVICES™**
**MODEL 583  
PSOPHOMETER**

201

FREQUENCY DEVICES INC

—T-71-11-07

**DESCRIPTION**

The Model 583 Psophometer is used for measurements on sound-programme circuits.

**SPECIFICATION**

(Typical @ 25°C and  $\pm 15V$  unless otherwise noted)

**INPUT**

|                                     |                                     |
|-------------------------------------|-------------------------------------|
| Impedance (min)                     | 10k $\Omega$                        |
| Source Impedance (max) <sup>1</sup> | 600 $\Omega$                        |
| Bias Current                        | 0 (Capacitor Coupled 0.033 $\mu$ F) |
| Linear Voltage Range                | $\pm 10V$                           |
| Safe Input Voltage                  | $\pm V_s$                           |

**OUTPUT<sup>2</sup>**

|                    |                         |
|--------------------|-------------------------|
| Rated Output @ 2mA | $\pm 10V$               |
| Resistance         | <1 $\Omega$             |
| Offset Voltage     | $\pm 5mV$               |
| Offset Drift       | $\pm 100\mu V/^\circ C$ |
| Noise <sup>3</sup> | 50 $\mu V$ RMS          |

**GAIN**

0 $\pm$ 0.1dB @ 1kHz

**POWER SUPPLY (DC) ( $\pm V_s$ )**

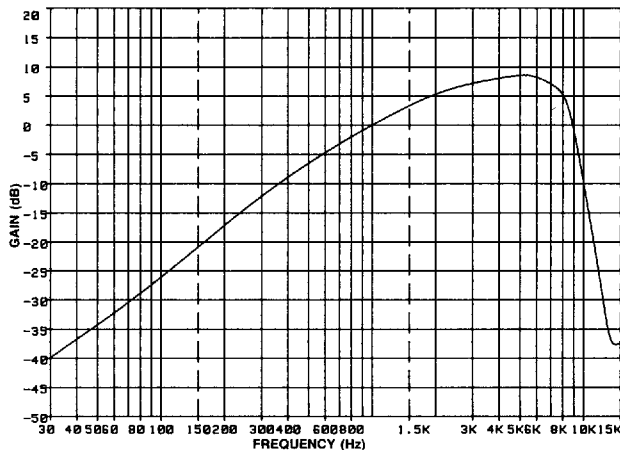
|                    |                                   |
|--------------------|-----------------------------------|
| Supply Current     | $\pm 5.6mA$ typ, $\pm 11.2mA$ max |
| Voltage, Operating | $\pm 5V$ to $\pm 18V$             |
| Voltage, Rated     | $\pm 15V$                         |

**TEMPERATURE**

|           |                |
|-----------|----------------|
| Operating | 0°C to +70°C   |
| Storage   | -25°C to +85°C |

NOTES: (All signal voltages are referenced to supply common.)

- 1) Maximum allowable series input resistance if gain accuracies are to be maintained.
- 2) Short circuit protected to ground. DO NOT CONNECT TO  $\pm V_s$ .
- 3) Noise DC to 50kHz excluding DC offset with input grounded.



201

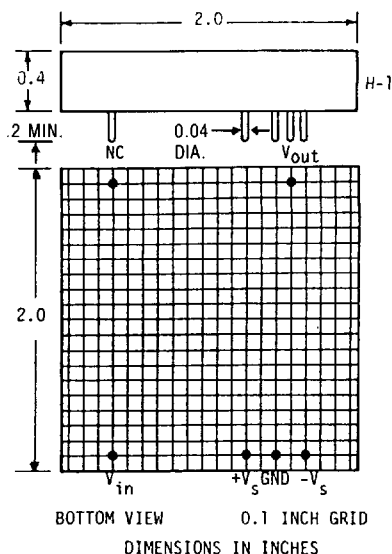
Frequency 25 Haverhill,  
Devices Locust Massachusetts  
Incorporated Street 01832

(508) 374-0761  
FAX  
(508) 521-1839

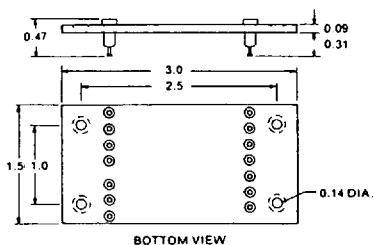
FREQUENCY DEVICES INC

### FREQUENCY RESPONSE TABLE

| FREQUENCY<br>Hz | GAIN<br>dB | TOLERANCE<br>dB |
|-----------------|------------|-----------------|
| 50              | -34.3      | ±1.5dB          |
| 60              | -32.2      |                 |
| 100             | -26.1      |                 |
| 200             | -17.3      |                 |
| 400             | -8.8       |                 |
| 800             | -1.9       |                 |
| 1000            | 0.0        | ±0.1dB          |
| 2000            | +5.3       | ±1.5dB          |
| 4000            | +8.2       |                 |
| 5000            | +8.4       |                 |
| 6000            | +8.2       |                 |
| 7000            | +7.3       |                 |
| 8000            | +5.1       |                 |
| 9000            | -0.3       | ±3dB            |
| 10000           | -9.7       |                 |
| 13000           | ≤ -30      | MAX             |



## 51006 INSTALLATION SOCKET



TERMINAL KEY

|           |                             |
|-----------|-----------------------------|
| NC        | No Contact                  |
| $V_{in}$  | Signal Input                |
| $V_{out}$ | Signal Output               |
| $+V_S$    | Voltage Supply,<br>Positive |
| GND       | Ground, Common              |
| $-V_S$    | Voltage Supply,<br>Negative |