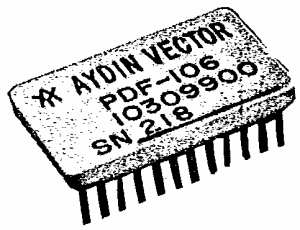
AYDIN VECTOR

AMPLIFIER/FILTER
PDF-106 Series



- Programmable Gain
- Programmable Cut-Off
- Hermetically Sealed
- High Reliability
- Low Power
- Small Size
- Off the Shelf Delivery

The Vector Model PDF-106 is a hybrid voltage conditioner/presampling low-pass filter module. It combines a programmable instrumentation amplifier with a programmable 6-pole Butterworth filter.

The unit has been designed for use in severe environments such as those encountered in aerospace and rugged industrial applications.

Employing thick-film hybrid circuit design techniques, the unit offers small size, high accuracy, low power consumption and high reliability.

ELECTRICAL SPECIFICATIONS

Signal Input Range: ±10 Vdc maximum.

Amplifier Gain Range: 0.1 to 1000 programmable by external resistor.

Gain Stability: ±2% F.S.

Offset Range: ±10 Vdc.

Input Impedance (Diffl): 100 megohms in parallel with 4 pF.

Input Impedance (Cmn Mode): 100 megohms in parallel with 4 pF.

Output Impedance: 100 ohms maximum.

Filter Type: Low pass.

Characteristic: 6 pole Butterworth.

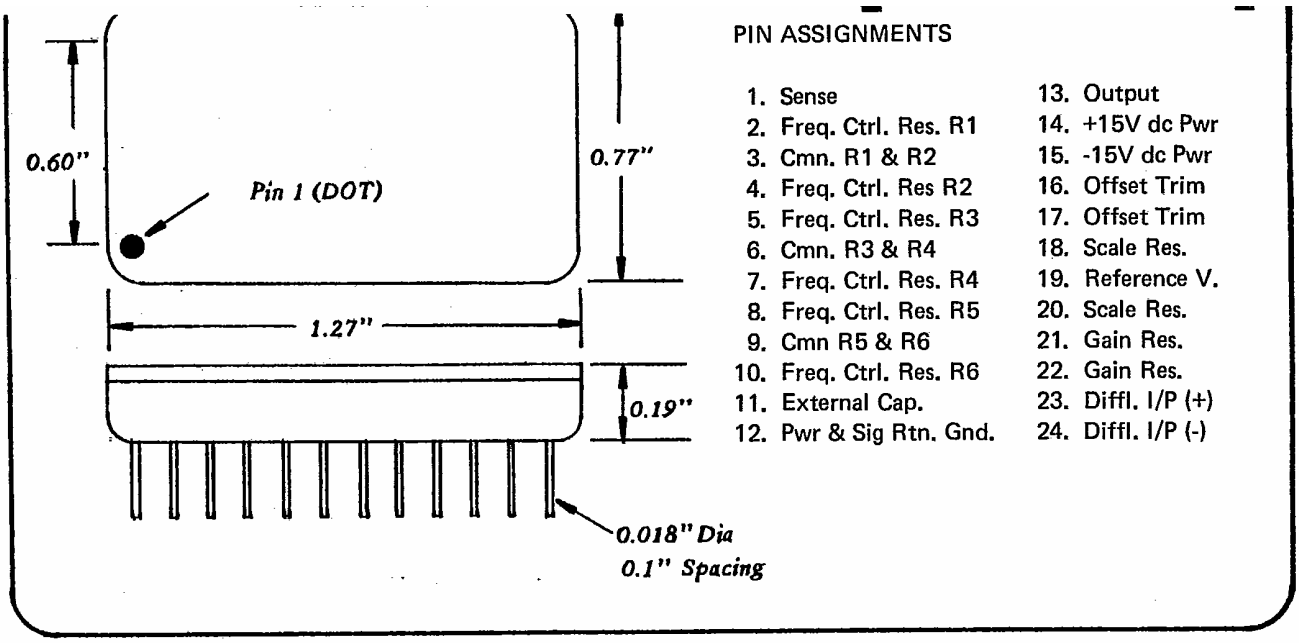
Cut-Off Rate: -36 dB/Octave
±3 dB theoretical

Cut-Off Range: 5 Hz to 5 kHz programmable by external components.

Cut-Off Point: -3.0 dB reference mid band response.

Cut-Off Accuracy: ±5%.

Power: ±15V; 20 mA (ea) maximum.



PIN ASSIGNMENTS

1. Sense	13. Output
2. Freq. Ctrl. Res. R1	14. +15V dc Pwr
3. Cmn. R1 & R2	15. -15V dc Pwr
4. Freq. Ctrl. Res R2	16. Offset Trim
5. Freq. Ctrl. Res. R3	17. Offset Trim
6. Cmn. R3 & R4	18. Scale Res.
7. Freq. Ctrl. Res. R4	19. Reference V.
8. Freq. Ctrl. Res. R5	20. Scale Res.
9. Cmn R5 & R6	21. Gain Res.
10. Freq. Ctrl. Res. R6	22. Gain Res.
11. External Cap.	23. Diffl. I/P (+)
12. Pwr & Sig Rtn. Gnd.	24. Diffl. I/P (-)

ENVIRONMENTAL SPECIFICATIONS

Temperature Range:

Operating: -10°C to +75°C (Consult factory for extended temperature range.)

Storage: -45°C to 100°C

Vibration: Capable of withstanding greater than 30g from 55 to 200 Hz in each major axis.

Shock: Capable of withstanding at least 20g shock in each major axis.

Acceleration: Capable of withstanding at least 100g acceleration in each major axis.

Altitude: Unlimited.

Humidity: 95% RH non-condensing.

MECHANICAL SPECIFICATIONS

Size: See drawing.

Weight: 13 grams maximum.

Mounting: PCB, solder, zero insertion force socket, conventional socket.

Bulletin No. 10309900/2-82-1M/Printed in USA

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