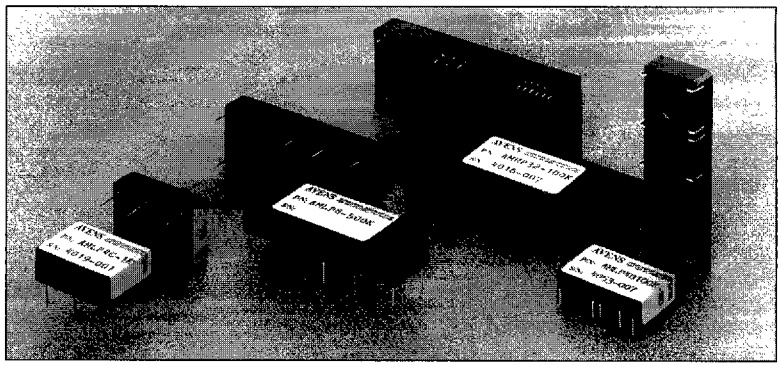
High Order Frequency Filter

AM series offer a cost effective alternative in make or buy decision both in prototype and production. It is a low cost, semi-customized filter modules. It implements virtually any kind of filter applications. Standard features are stock and ready to deliver in 48 hours.



Features include:

❒ CUSTOMER SPECIFIED FREQUENCY
Your choice of -3 dB Frequency.
Customer modifications available.
No additional charge.

❒ COMPACT SIZES
1.25"L x 0.80"W x 0.40"H & 2.05"L x 0.80"W x 0.40"H
2.45"L x 0.77"W x 0.40"H.

❒ RESPONSE CHOICES
Butterworth, Bessel, Chebyshev,
Elliptic, & Linear Phase Elliptic.

❒ HIGH ORDER HIGH ATTENUATION
Implement filter orders from 4th
up to 24th order filter.
Attenuation greater than 80 dB @ 1.1 F_0 (-3 dB)

❒ SUPPORT ALL FILTER FUNCTIONS
Lowpass, Highpass, Bandpass, & Bandreject

❒ IDEAL FUNCTION BLOCK
Low output / High input impedance.
Impedance matching available.

❒ STABLE OUTPUT
Unity gain output, Amplification available

❒ COMPENSATED DC OFFSET
Internal DC offset < 2 mV.
External adjustable to 0.0.

❒ BUILT-IN DECOUPLING
Internal power supply decoupling.

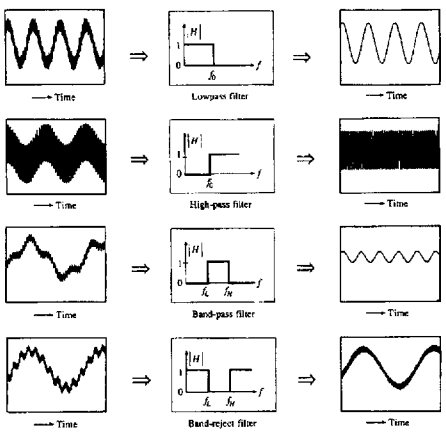
❒ SINGLE / DUAL POWER SUPPLY
Single Supply : 15.0 V & GND.
Dual Supply : +/- 15.0 V & GND.

❒ LOW POWER CONSUMPTION
1 mA of supply current per 4th order.

Applications and Ratings

APPLICATIONS

- Anti-aliasing Filter
- Equalizers
- Differentiator
- Frequency Seperator
- Integrator
- D/A Post Filter
- Band-limit Amplifier
- Video processing
- Phase correction

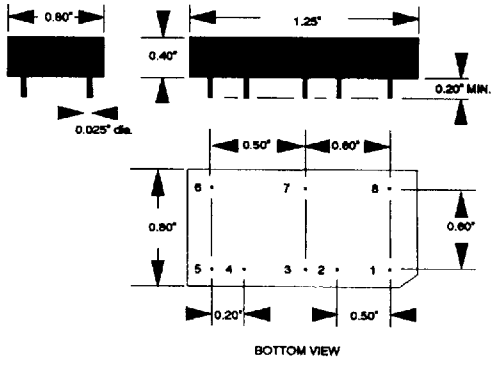


ABSOLUTE MAXIMUM RATING

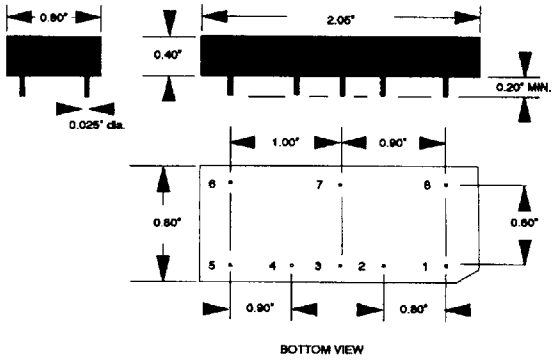
Supply Voltage	± 15 V to ± 5 V
Input Voltage	± 12 V
Output Swing	± 12 V (2k load)
Dynamic Range	> 90 dB
Operating Temp.	
commercial	0° C to 70° C
industrial	- 25° C to 85° C
military	- 55° C to 125° C
Storage Temp.	- 65° C to 150° C
Cut-Off Range	0.01 Hz to 10 MHz

Case Style and Outline Dimensions

24 PIN DIP PACKAGE



40 PIN DIP PACKAGE

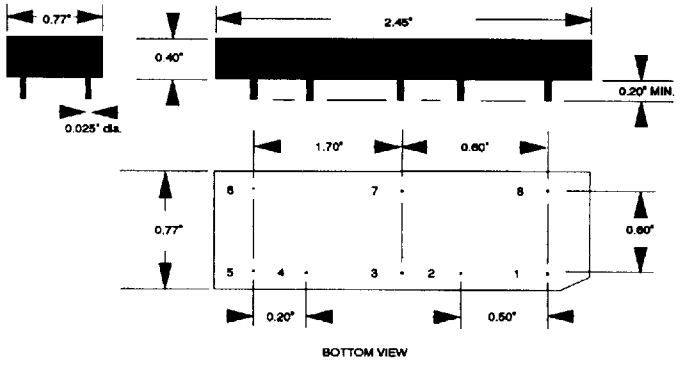


24, 40*, & 48 PIN DIP PACKAGE

PIN NO.	FUNCTION
1	Ground & Common of Supply
2	Filter Input
3	V+ Supply
4*	External DC Adjust
5*	Filter Output
6*	No Connection
7	V-Supply
8	No Connection

*NOTE:
40 Pin Dip Package: Pin 4 = Filter Output, Pin 5 no connection
Pin 6 External DC adjustment

48 PIN DIP PACKAGE



Specifications

ELECTRICAL CHARACTERISTICS

(Supply = ±15V., Load = 10 kΩ, Temp. = 25° C)

Supply Current	10 mA/4th order
Input Impedance	> 500 kohm
Output Impedance	< 1 ohm (@ DC)
Cut-off Variation	± 2%
Frequency Stability	0.01 % /°C
Unity Gain Output	0.0 dB
Max. Input Voltage	±12 V.
Max. Output Voltage	±12 V.
DC Offset	< ±2mV

MECHANICAL CHARACTERISTICS

Dimension	1.25" x 0.77" x 0.40", 2.05" x 0.80" x 0.40", 2.45" x 0.77" x 0.40"
Case Materials	Glass Filled Thermoplastic Nylon
Pin Diameter	0.025"

OPTIONS

Suffix	Description
L –	Low power consumption (1mA)
I –	Industrial temp. range (-25° C to 85° C)
M –	Military temp. range (-55° C to 125° C)
A1 –	10x amplification
A2 –	100x amplification
A3 –	1000x amplification
S –	Single supply (+5 V to +18 V)
D –	Differential Input
C –	Custom specification
TI –	Low DC drift 25 ppm/°C

PART NUMBER SYSTEM (Typical part numbering example shown below)

AM – LP – 8 – E – 10K – I – L – A1

- A1: Gain Option (see option)
- L: Low power Option (see option)
- I: Temperature Range Option (see option)
- 10K: –3 dB Frequency (specified by customer)
- E: Response: B=Butterworth, L=Bessel, C=Chebyshev, E=Elliptic
- 8: Filter order: 8th order
- LP: Filter type: LP = Lowpass, HP = Highpass, BP = Bandpass, BR = Band-reject
- AM: Model Number (see selection)

Typical Frequency Response Curves Available
(See Back of Catalog)

AVENS SIGNAL EQUIPMENT CORP.
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