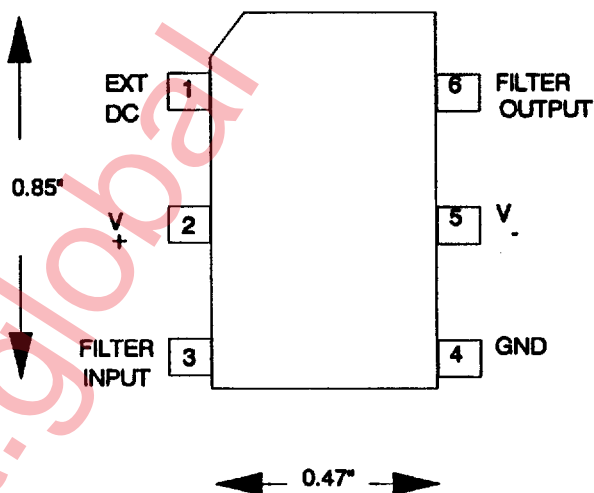


# MINIATURE ANTI-ALIASING FILTER MODULE

AS1000

## FEATURES

- **CUSTOMER SPECIFIED FREQUENCY**  
Your choice of -3 dB Frequency  
Customer modification available  
No additional charge
- **EXTREMELY SMALL SIZE**  
0.85"L x 0.47"W x 0.40"H.  
Fit STD 16-pin DIP socket.
- **ANALOG ACTIVE FILTER**  
RC active filter.  
Not switch-capacitor filter.
- **COMPLETELY ASSEMBLED**  
Fully finished module.  
No external component required.
- **IDEAL FUNCTION BLOCK**  
High input impedance.  
Low output impedance.
- **STANDARD RESPONSES**  
Butterworth, Bessel, Chebyshev.
- **STABLE OUTPUT**  
Unity gain output.  
Amplification available.
- **COMPENSATED DC OFFSET**  
Internal DC offset < 2 mV.  
External adjustable to 0.0.
- **BUILD-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**  
10 mA of supply current per unit.



## ABSOLUTE MAXIMUM RATING

Supply Voltage	+/- 15 V to +/- 5V
Input Voltage	+/- 12 V
Output Swing	+/-12V (2K load)
Dynamic Range	> 90 dB
Operating Temp	
commercial	0 C to 70 C
industrial	-40 C to 85 C
military	-55 C to 125 C
Storage Temp.	-65 C to 150 C

## APPLICATIONS

- Anti-aliasing
- A/D pre filter
- Smoothing filter
- Integrator
- D/A post filter
- Band-limit amplifier

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P.O. Box 1057, Knickerbocker Station, New York, NY 10002

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**ELECTRICAL CHARACTERISTICS**

(Supply = +/- 15V., Load = 10 kohm, Temp. = 25 C)

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

**MECHANICAL CHARACTERISTICS**

Dimension	0.85" x 0.47" x 0.4"
Pin Diameter	0.025"
Materials	Glass Filled Thermoplastic Nylon
SOCKET	Monolithic 16 pin DIP socket

**FILTER SELECTION TABLE**

P/N	Ripples	Attenuation	Response	Type	Order
AS1102	0.00 dB	15 dB @ 3Fc	Bessel	Lowpass	2 nd
AS1103	0.00 dB	21 dB @ 3Fc	Bessel	Lowpass	3 rd
AS1104	0.00 dB	20 dB @ 3Fc	Bessel	Lowpass	4 th
AS1105	0.00 dB	26 dB @ 3Fc	Bessel	Lowpass	5 th
AS1106	0.00 dB	30 dB @ 3Fc	Bessel	Lowpass	6 th
AS1112	0.00 dB	12 dB @ 2Fc	Butterworth	Lowpass	2 nd
AS1113	0.00 dB	18 dB @ 2Fc	Butterworth	Lowpass	3 rd
AS1114	0.00 dB	24 dB @ 2Fc	Butterworth	Lowpass	4 th
AS1115	0.00 dB	30 dB @ 2Fc	Butterworth	Lowpass	5 th
AS1116	0.00 dB	36 dB @ 2Fc	Butterworth	Lowpass	6 th
AS1122	0.10 dB	13 dB @ 2Fc	Chebyshev	Lowpass	2 nd
AS1123	0.10 dB	22 dB @ 2Fc	Chebyshev	Lowpass	3 rd
AS1124	0.10 dB	30 dB @ 2Fc	Chebyshev	Lowpass	4 th
AS1125	0.10 dB	40 dB @ 2Fc	Chebyshev	Lowpass	5 th
AS1126	0.10 dB	50 dB @ 2Fc	Chebyshev	Lowpass	6 th
AS2112	0.00 dB	12 dB @ 0.5Fc	Butterworth	Highpass	2 nd
AS2113	0.00 dB	18 dB @ 0.5Fc	Butterworth	Highpass	3 rd
AS2114	0.00 dB	24 dB @ 0.5Fc	Butterworth	Highpass	4 th

**OPTIONS**

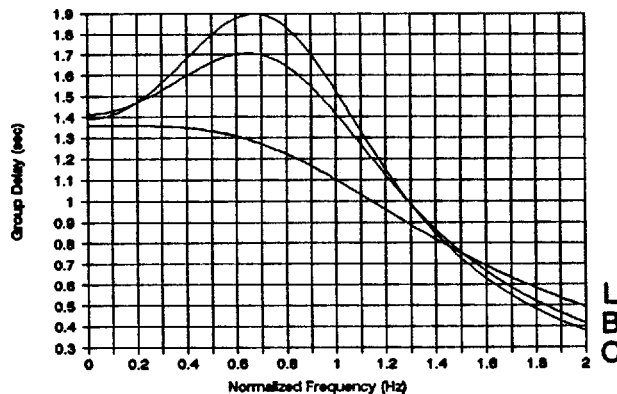
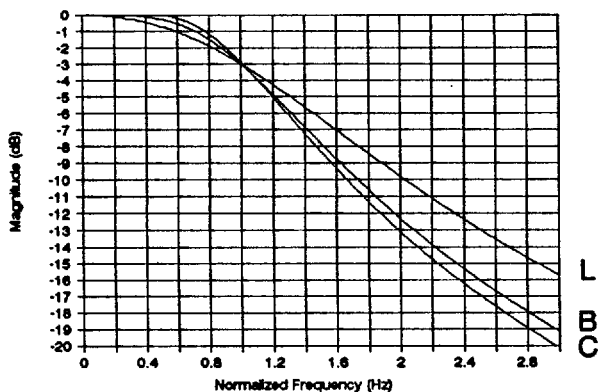
Suffix	Description
-L	Low power consumption (1 mA)
-I	Industrial temp. range (-25 C to 85 C)
-M	Military temp. range (-55 C to 125 C)
-A1	10x amplification
-A2	100x amplification
-A3	1000x amplification

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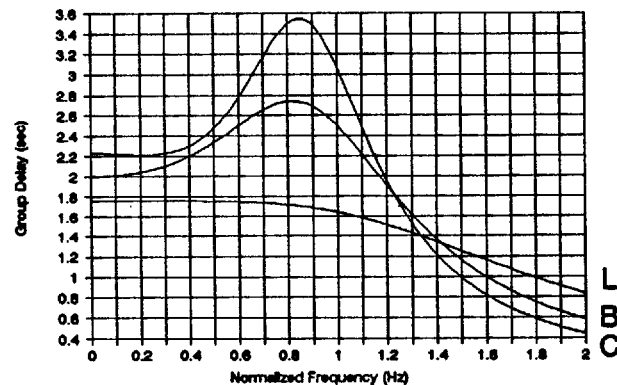
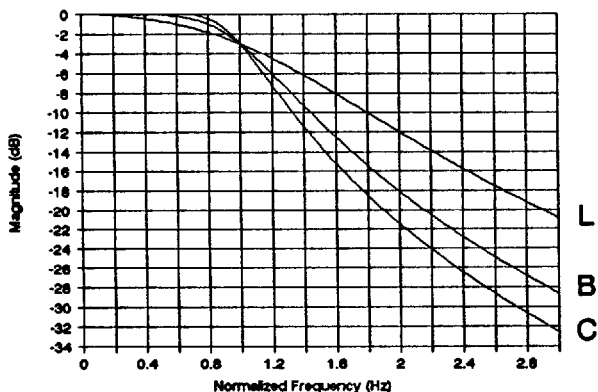
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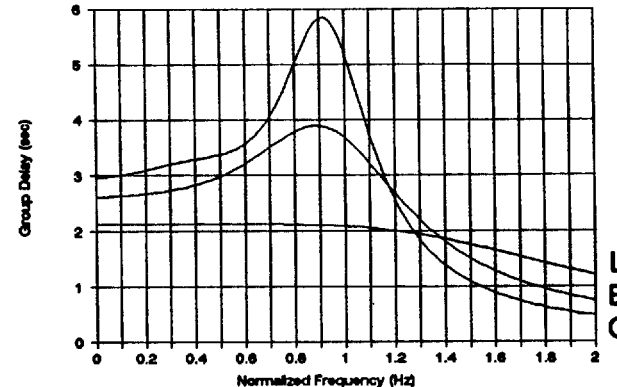
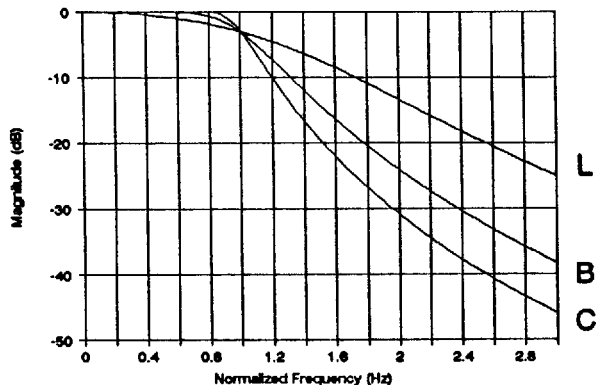
## 2nd order Responses



## 3rd order Responses



## 4th order Responses



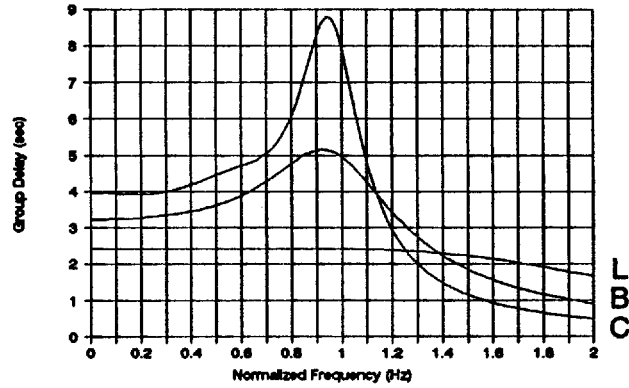
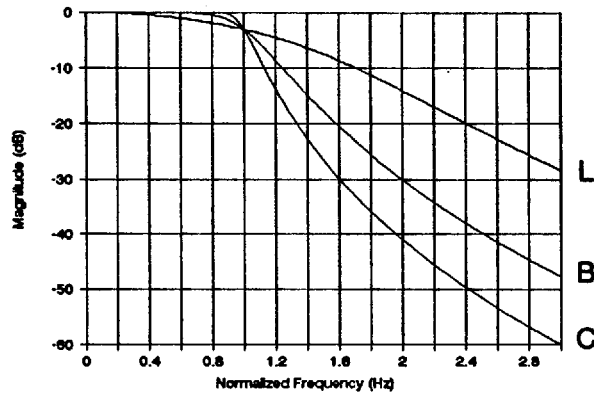
L = BESSEL , B = BUTTERWORTH , C = CHEBYSHEV

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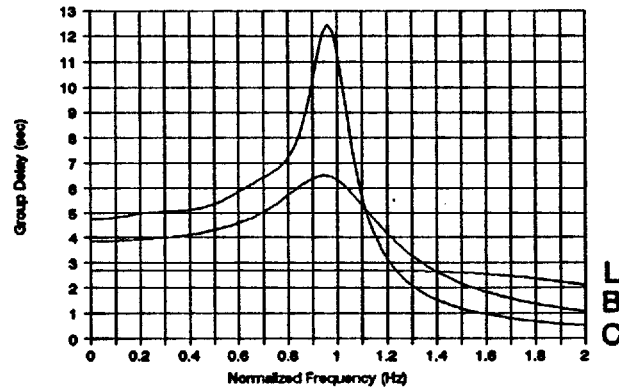
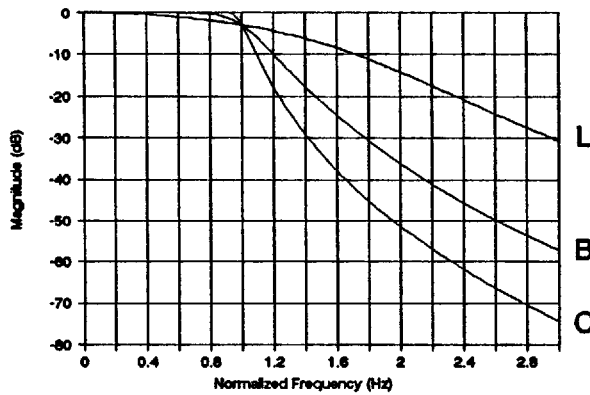
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## 5th order Responses



## 6th order Responses



L = BESSEL , B = BUTTERWORTH , C = CHEBYSHEV

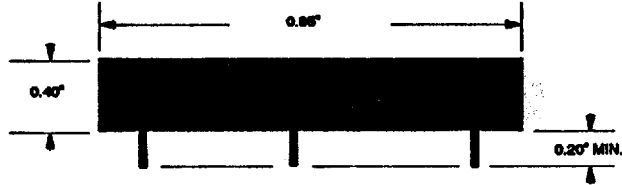
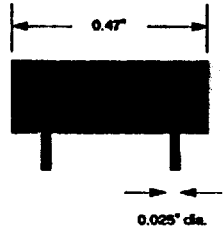
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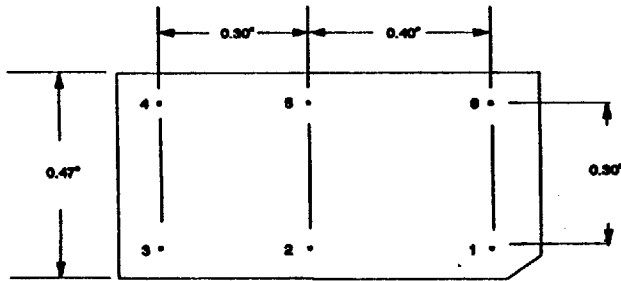
**AS1000**

MECAHNICAL DIMENSION



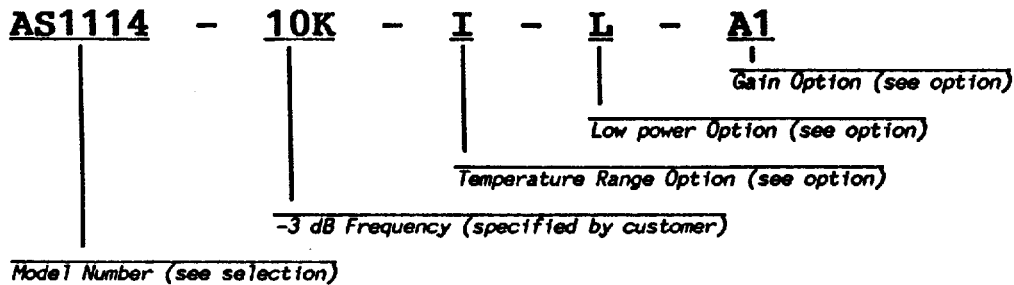
**16 PIN DIP PACKAGE**

PIN CONNECTION	
PIN No.	FUNCTION
1	DC Adjust
2	V +
3	Filter Input
4	Ground
5	V -
6	Filter Ouput



**BOTTOM VIEW**

PART NUMBER SYSTEM



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