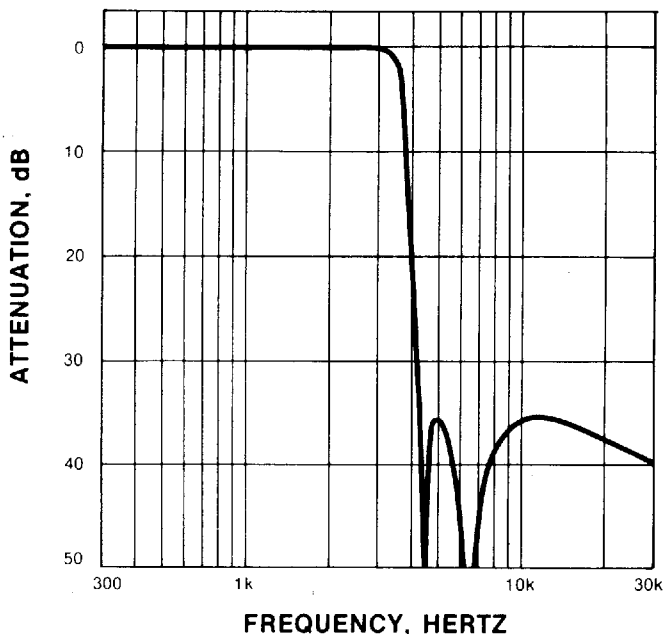



**FREQUENCY
DEVICES**
**MODEL 582
PCM FILTER**

197

FREQUENCY DEVICES INC

T-75-11-13

FREQUENCY RESPONSE

FEATURES

- No External Components Required
- Low Profile Packaging
- Wide Supply Range, ± 5 to ± 18 V
- Designed for PCM Applications

DESCRIPTION

The Model 582 Lowpass Active Filter is a fifth order Cauer-Elliptic designed for use in D3 channel bank PCM transmit and receive applications. The typical amplitude response in the passband is flat to within ± 0.05 dB with a voltage gain of 0 ± 0.1 dB. The attenuation at 4kHz, one-half the 8kHz PCM sampling frequency, is 15dB. Stopband attenuation of 35dB is maintained from 4.5kHz out to 100kHz.

These filters have been designed to comply with the current military and telephone industry requirements for sample data PCM systems.

Frequency 25 Haverhill,
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Incorporated Street 01832

(508) 374-0761
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**FREQUENCY
DEVICES**
**MODEL 582
OPERATING
CHARACTERISTICS**
FREQUENCY DEVICES INC

	CONDITIONS	MIN	TYP	MAX	UNITS
PASSBAND CHARACTERISTICS					
Voltage Gain	at 1kHz	-0.1	0	+0.1	dB
Ripple	dc - 3kHz		± 0.05	± 0.20	dB
Group Delay	at 1020Hz		126	133	μS
ATTENUATION					
	at 3.4kHz	0.0	1.0	1.2	dB
	at 4.0kHz	14	15		dB
	4.5 to 10kHz	33	35		dB
INPUT					
Impedance		20			kΩ
Linear Voltage Range	$V_s = \pm 15\text{Vdc}$	± 10			V
Safe Input Voltage				± V_s	V
OUTPUT (Non-Inverting)					
Impedance				10	Ω
Rated Load Current ^{1,2}				± 12	mA
Linear Voltage Range					V_p
at 12mA	$V_s = \pm 15\text{Vdc}$	± 10			V_p
	$V_s = \pm 10\text{Vdc}$	± 6			$\mu\text{V RMS}$
Noise ³			30	50	mVdc
Offset			± 20	± 40	
POWER SUPPLY (± V_s)					
Operating Voltage		± 5		± 18	Vdc
Quiescent Current	$V_s = \pm 15\text{Vdc}$		14	18	mA
TEMPERATURE					
Operating		0		+70	°C
Storage		-25		+85	°C

NOTES: 1) Short circuit protected to ground.

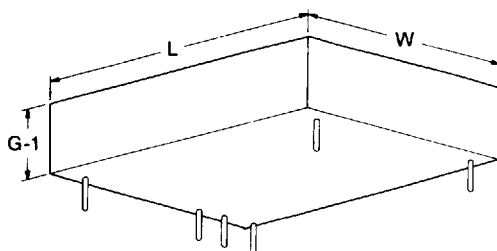
2) The filter is capable of driving a 600Ω at rated current with an output voltage of up to ± 7.2 volts.

3) DC to 50kHz, excluding dc offset, input grounded.

Specifications are subject to change without notice.



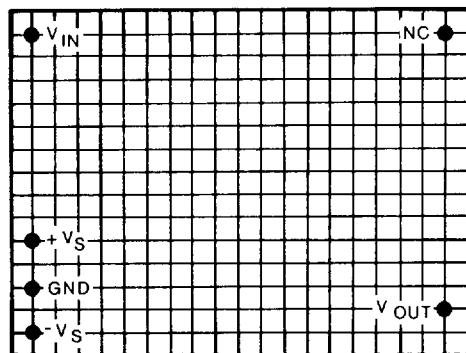
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DIMENSION	MILLIMETERS	INCHES
G-1	10.2	0.4
L	50.8	2.0
W	38.1	1.5
PIN LENGTH	5.1 MIN	0.2 MIN
PIN DIA	1.02	0.04

Case dimensions are nominal. Pin location is $\pm 0.13\text{mm}$ (0.005 in) referenced to an ideal grid

TERMINAL DIAGRAM



BOTTOM VIEW

0.1 INCH GRID

TERMINAL KEY

V_{IN}	Signal Input
V_{OUT}	Signal Output
NC	No Connection
$+V_S$	Power Supply Voltage, Positive
GND	Ground, Supply Common
$-V_S$	Power Supply Voltage, Negative


**FREQUENCY
DEVICES™**
**MODEL 582
PCM FILTER**
FREQUENCY DEVICES INC
FREQUENCY RESPONSE TABLE

HERTZ	A(dB)	$\Psi(^{\circ})$	HERTZ	A(dB)	$\Psi(^{\circ})$
0	0.00	0.0	4.90k	35.75	-190.1
200	0.01	-9.0	5.00k	35.58	-192.5
400	0.02	-18.0	5.20k	36.05	-196.9
600	0.05	-27.0	5.40k	37.25	-200.8
800	0.07	-36.0	5.60k	39.05	-204.2
1.00k	0.09	-45.2	5.80k	41.48	-207.2
1.02k	0.09	-46.1	6.00k	44.82	-209.9
1.15k	0.10	-52.3	6.20k	49.91	-212.4
2.00k	0.01	-97.1	7.00k	46.03	-40.4
2.40k	0.02	-123.4	8.00k	39.04	-47.6
2.80k	0.10	-155.3	9.00k	36.84	-52.8
3.00k	0.06	-175.3	10.0k	35.95	-56.9
3.40k	1.00	-240.3	11.0k	35.62	-60.1
4.00k	19.35	-332.0	12.0k	35.58	-62.7
4.10k	23.53	-338.8	13.0k	35.70	-64.9
4.20k	28.31	-344.6	14.0k	35.91	-66.8
4.30k	34.39	-349.6	15.0k	36.17	-68.4
4.40k	44.70	-354.0	16.0k	36.46	-69.8
4.50k	50.00	-177.9	17.0k	36.77	-71.0
4.60k	40.80	-181.4	18.0k	37.09	-72.1
4.70k	37.78	-184.5	19.0k	37.41	-73.1
4.80k	36.38	-187.4	20.0k	37.73	-73.9

SOCKET S1006
DIMENSIONS IN MM (INCHES)
