FREQUENCY DEVICES™, INC.

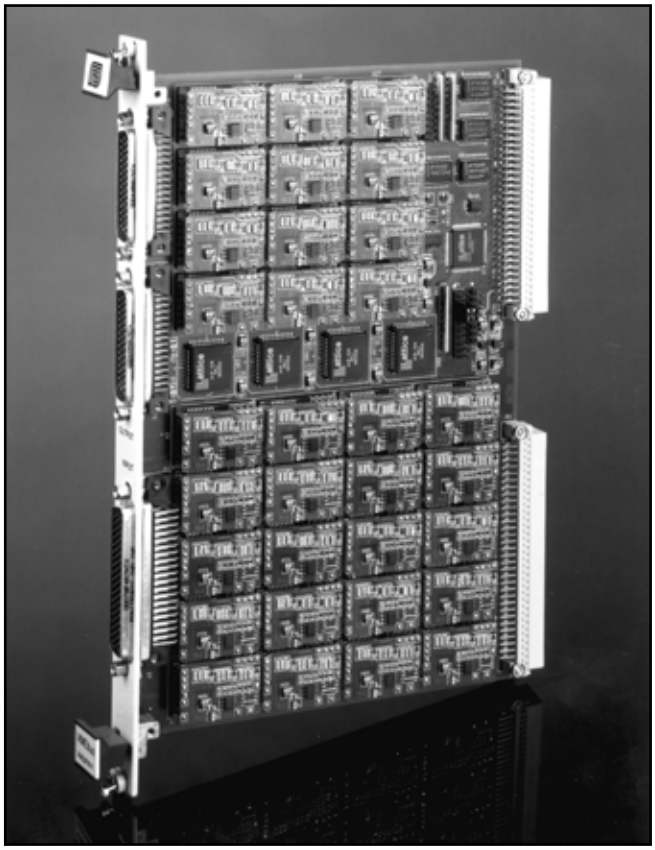
Model VM300PAFF

Programmable Amplifiers with Fixed Frequency Filters VME Board

32 Channel

Description

Frequency Devices' Model VM300PAFF comprises a family of VMEbus amplifier/filter boards offering software programmable differential amplifiers combined with precision 3-pole Butterworth or Bessel linear analog filters in a single width B-size (6U) VME form factor. VM300PAFF boards provide simultaneous access to 32, DC-coupled wideband signals while providing programmable gain from -12dB to +42dB, in 6dB steps and fixed frequency filters with corner frequencies from >100 kHz to 300 kHz. VM300PAFF boards may be configured with 8, 16, or 32 channels. The boards conform to VME revision C.1 as an A16/D16 Slave. Available options include AC coupled input and/or differential output.



Features/Benefits:

- Simultaneous access over 32 channels offers a low cost, versatile and convenient way to provide amplification and filtering.
- Three active read/write registers provide programming and set-up verification.
- Interchannel crosstalk <-100 dB provides precision performance solutions to design engineers, system integrators and OEM's.
- Three pole Butterworth or Bessel transfer functions with a broad range of corner frequencies to meet a wide range of applications.
- High channel count density without sacrificing performance maximizes chassis utilization.

Signal conditioning applications include:

- Sonar, navigation and aerospace
- Engine test and simulation
- Acoustic, vibration analysis & control
- Satellite and telecommunications
- Automatic test equipment (ATE)

AMPLIFIER/FILTER OPTIONS

PGAB5-300	-12 dB to +42 dB in 6 dB steps Butterworth 3-pole 100 Hz to 300 kHz
PGAL5-300	-12 dB to +42 dB in 6 dB steps Bessel 3-pole 100 Hz to 300 kHz

Ordering Information

Transfer Function
B - Butterworth
L - Bessel

Options
A - AC Coupled Input
D - Differential Output

VM300PAFF-16-PGAB5-250kHz-D

8, 16 or 32 **Channels**

-3dB Corner Frequency
e.g. 100 Hz to 300 kHz

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Programmable Amplifiers with Fixed Frequency Filters VME Board

Specifications

(@ 25°C and rated Power Input)

32 CHANNEL VME SIGNAL CONDITIONING BOARD

Analog Input	
1. Impedance	1 MΩ//22pF
2. Maximum Input	±15V
3. AC Couple (Optional Fixed Freq.)	10 Hz to 1 kHz
Analog Output	
4. Impedance	1.0Ω typ., 10Ω max.
5. Linear Operating Range	±5V, Output clamped to ±9 V
6. Channel to Channel Crosstalk	<-100dB @ 1 kHz, <-90dB @ 20 kHz
7. Maximum Current	5.0mA
8. Offset Voltage	2mV RTI, NTE 25mV max.
9. Offset Temp. Coeff., RTI	±(5 + 100/G) µV/°C max.
Filter Characteristics	
10. Anti-alias filtering	3-pole low-pass Butterworth or Bessel fixed frequency
11. Cut-off Frequency fc (-3dB)	Fixed frequency from 100 Hz to 300 kHz
12. Amplitude Match*	±0.1dB @ DC, linear to ±0.25dB at fc
13. Phase Match*	0.5° typ., 2.0° max. @ fc
14. Noise Voltage, RTI	$20nV/\sqrt{Hz}$ @ 1 kHz, G=128
15. Distortion PGA5, G=1X	-83dB, 1 kHz single ended
@ $1V_{RMS}$ Output, R_L=2kΩ	-86dB, 1 kHz differential
Gain	
16. Gain Programming (G)	0.25X to 128X in factors of 2:1 (before filtering) 32 channels programmed over VMEbus with read-back
17. Gain Accuracy @ DC	±0.1dB max.
VMEbus	
18. Interface	A16/D16, D08 (EO), Slave
19. Registers	Three active R/W registers in 64 byte block
Power Supply	
20. From VME Backplane	+5V - 1.0A max. ±12 - 0.7A max. each
Environmental	
21.Operating	0°C to +70°C
22. Storage	-25°C to +85°C
23. Humidity	0-95% non-condensing
Mechanical	
24. Card Size	VMEbus 6U single slot 9.17 x 6.3 inches, (233 x 160 mm)
25. No. of Input Channels	32 Differential - DC coupled
26. No. of Output Channels	32 Single Ended - DC coupled, Two groups of 16
27. Differential Output (Optional)	
28. Mating Connectors	Input: Male high density 78-pin D-sub Output: Female high density 44-pin D-sub
29. Weight	1 LB., (454 grams)

* Any two channels set to same gain and loading

We hope the information given here will be helpful. The information is based on data and our best knowledge, and we consider the information to be true and accurate. Please read all statements, recommendations or suggestions herein in conjunction with our conditions of sale which apply to all goods supplied by us. We assume no responsibility for the use of these statements, recommendations or suggestions, nor do we intend them as a recommendation for any use which would infringe any patent or copyright.

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