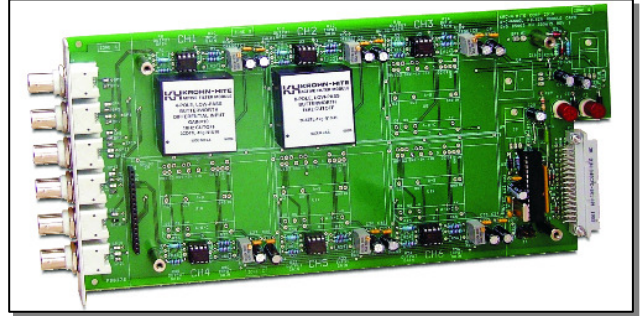


MODEL FLX-302

2-Channel Plug-In Filter/Amplifier Carrier Card

- **2 Channels per Card**
- **Differential Input** for Improved Noise Rejection
- **Common Mode Rejection: >80dB.**
- **Fixed Cutoff Frequency:** Customer defined
1Hz to 1MHz, Low-Pass
1Hz to 600kHz, High-Pass
- **Gain:** Customer defined 1 to 10,000
- **Plugs Into FLX-3007 Chassis**



DESCRIPTION

The FLX-302 Analog Filter/Amplifier Carrier Card for the FLX-3007 system, is ideal for signal conditioning applications where Bessel or Butterworth filters are required. A choice of high-pass, low-pass or band-pass filtering is available. Customer defined fixed cutoff frequencies are from 1Hz to 1MHz (low-pass and band-pass) and 1Hz to 600kHz (high-pass); and also a customer defined choice of 6dB to 96dB/octave rolloff is provided for either filter type. The FLX-302 accepts input signals up to $\pm 10V$ and because of the differential input configuration, the FLX-302 boasts a low noise of $10\mu V$ (referred to input). CMMR is $>80dB$ and signal-to-noise ratio is $>120dB$.

The differential input amplifier and output amplifier in each channel allow for resistor programmable gain from 1 to 100, for a total gain of 10,000 if needed. Maximum gain available is determined by the cutoff frequency and bandwidth of the filter selected.

Filter and amplifier characteristics are customer-defined in each channel, and may be changed at a later time by replacing the filter/amplifier plug-in 3F Filter/Amplifier Module for each channel.

The FLX-302 is one of many plug-in cards available for the FLX-3007, 7-slot Chassis System.

SPECIFICATIONS

Specifications apply at $25^{\circ}C$, $\pm 5^{\circ}C$.

Number of Channels: 2, differential.

Differential Input Amplifier Characteristics

Maximum Input: $\pm 10V$ peak.

Coupling: DC, low-pass; AC, high-pass and band-pass.

Input Impedance: 150k ohm or greater.

CMRR: typically $>80dB$ to 1kHz.

Gain (customer defined): Any specified value 1-100, 3%.

Connectors: BNC.

Filter Characteristics

Input Type (customer defined): Butterworth or Bessel.

Function Type (customer defined): Low-pass, high-pass or band-pass

Number of Poles (customer defined): 1 to 8 and 16.

Cutoff Frequency (customer defined): Any specified fixed between 1Hz to 1MHz, low-pass and band-pass; 1Hz to 600kHz, high-pass. Maximum frequency range is determined by max. gain selected, consult factory.

Passband Flatness: 10Hz to 200kHz, 0.2dB.

Output Amplifier Characteristics

Maximum Output Voltage: $\pm 10V_{\text{peak}}$.

Impedance: 50 ohms.

Gain (customer defined): Any specified value 1-100, 3%.

Maximum Common Mode Voltage: (diff signal x gain) + (Vcm) < $\pm 10V$.

Output DC Offset Voltage: <1mV.

Noise (input shorted): $10\mu V_{\text{rms}}$ typical, $20\mu V_{\text{rms}}$ max referred to input.

Noise Spectral Density (100Hz to 300kHz): $40nV/\sqrt{\text{Hz}}$ typical, $100nV/\sqrt{\text{Hz}}$ max.

Signal-to-Noise (7Vrms): >100dB.

Connectors: BNC.

General

Power Consumption: -15V, 166ma; +15V, 225mA ???.

Operating Temperature: 0°C to +45°C.

Storage Temperature: -25°C to +70°C.

Dimensions: 0.93" wide, 5" high, 10.5" deep.

Weight: 2 lbs ???.

Accessories

CAB-018: 3' Cable, BNC.



3F Series Modules: Plug-In Filter/Amplifier Modules



Other FLX-3007 Chassis

The FLX-3007 Chassis has a maximum of 6-slots. Other family of FLX cards available are:

FLX-ICP4: 4 Channel Differential Piezoelectric Sensor Filter/Amplifier Carrier Card.

FLX-303: 3 Channel Single-Ended Filter Amplifier Carrier Card with BNC Connectors.

FLX-306: 6 Channel Differential/Single-Ended Filter/Amplifier Carrier Card with Screw Terminal Connectors.

FLX-700: High Gain Preamplifier Carrier Card.

Specifications subject to change without notice.