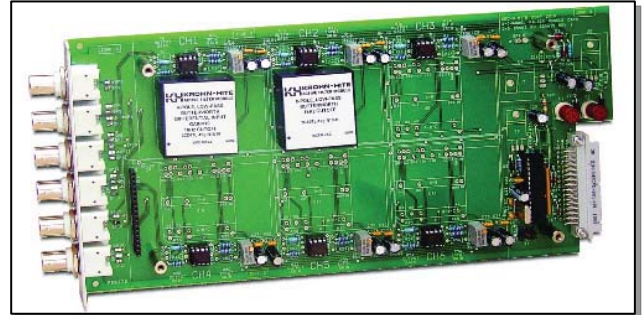


# MODEL FLX-302

## 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:**  $(\text{diff signal} \times \text{gain}) + (V_{\text{cm}}) < \pm 10V$ .

**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:**  $0^{\circ}\text{C}$  to  $+45^{\circ}\text{C}$ .

**Storage Temperature:**  $-25^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ .

**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.



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