OEM Custom Components

Coaxial Dynamics has also been heavily involved in the design and manufacture of custom components since 1969. Components such as RF Filters, Directional Power Detectors, Filter-Detector combinations, and PIN Diode Switches are routinely designed for Customers all over the world.

Our general range of operations covers frequencies from 2 MHz to 2500 MHz. All devices are designed for use in 50 Ohm transmission line systems. Most are for use inside of transmitters and transceivers. They are designed to handle power levels from a few milliwatts up to several kilowatts.

Filters

Our filter line includes Low Pass, High Pass, and Band Pass designs. The most numerous designs are the Low Pass configurations. Insertion Loss typically ranges from 0.2 dB to 0.4 dB and VSWR from 1.3 to 1.4 maximum. Stop Band levels can reach 60 dB or higher.

Most Filters are built in a box configuration, which gives the best use of available space. At frequencies of 1000 MHz and above we use tubular structures.

Directional Power Detectors

The Directional Power Detectors come in sizes as small as ¼" x ½" x 1½" with more popular configurations in a box of 1" x 1 ¼" x 3". Typical output voltages are 1.0 volt across 5,000 Ohms at reasonable power levels (10 watts and greater). Most have one forward and one reflected sensing port for DC output voltages. Directivity of 30 dB is typical. VSWR runs 1.1 maximum and Insertion Loss 0.1 dB maximum in most cases.

Filter-Detectors-Switches

Combinations of Low Pass Filters and Directional Power Detectors (or Couplers) have frequently been made. This provides a single VSWR and Insertion Loss specification for the pair. Such designs typically take far less space and weight.

Designs including combinations of multiple Filters, a Directional Power Detector, and a PIN Diode Switch are also common.

Although Coaxial Dynamics does not cover all areas of Filters and Power Detectors, we do have considerable expertise in the areas we do handle.

We invite new inquiries. Your needs may be satisfied with one of our hundreds of existing designs available. However, if none meet your requirements, we can design one to meet your needs.
**"Standard" RF Filters & Filter/Couplers**

**Hi-Power FM**

**Pass Band**
- Freq. (MHz): 88 to 108
- Power: 1200 W
- VSWR: 1.15:1
- I.L. (dB): 0.15
- Atten. (dB): 60 Max

**Stop Band**
- Freq. (MHz): 176 to 1000
- Power: 30 dB
- VSWR: 1.15:1
- I.L. (dB): 25 Max

**X-Tractor Output**
- Model: 2264

**Model 5100 Filter-Coupler (Hi-Power FM)**

**Pass Band**
- Freq. (MHz): 88 to 108
- Power: 1200 W
- VSWR: 1.15:1
- I.L. (dB): 0.15
- Atten. (dB): 60 Max

**Stop Band**
- Freq. (MHz): 176 to 1000
- Power: 36 dB
- VSWR: 1.15:1
- I.L. (dB): 25 Max

**X-Tractor Output**
- Model: 2264B

**"Standard" RF Power Sensors**

**Frequency Range (MHz)**

<table>
<thead>
<tr>
<th>Power (Watts)</th>
<th>FWD / RFL</th>
<th>2 to 30</th>
<th>25 to 60</th>
<th>50 to 100</th>
<th>100 to 250</th>
<th>200 to 500</th>
<th>400 to 1000</th>
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<td>3418</td>
<td>3426</td>
<td>3434</td>
<td>3442</td>
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<tr>
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</table>

These Directional RF Power Sensors provide DC currents proportional to the Forward and Reflected power flowing through the line. All models are designed to drive a 30 microampere, 1400 ohm meter, or approximately 100 millivolts across a 5K load. Directivity is typically 25 dB minimum. Special calibration is also available.