

## 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 1/4" x 1/2" x 1 1/2" with more popular configurations in a box of 1" x 1 1/4" 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.

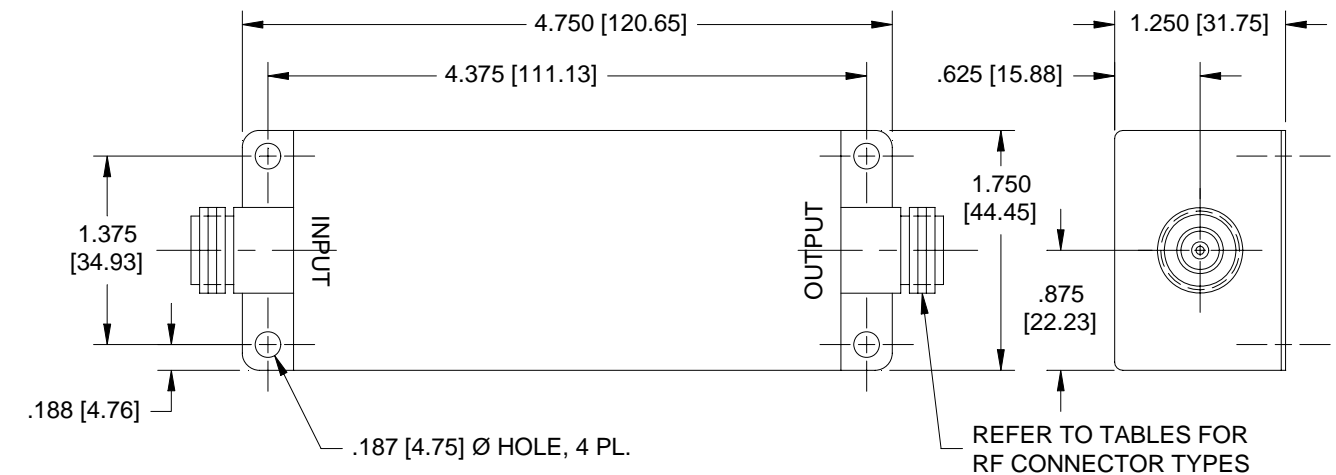
Designs including combinations of multiple Filters, a Directional Power Detector, and a PIN Diode Switch are also common.

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 inquires. 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

### Low Pass - Low Power

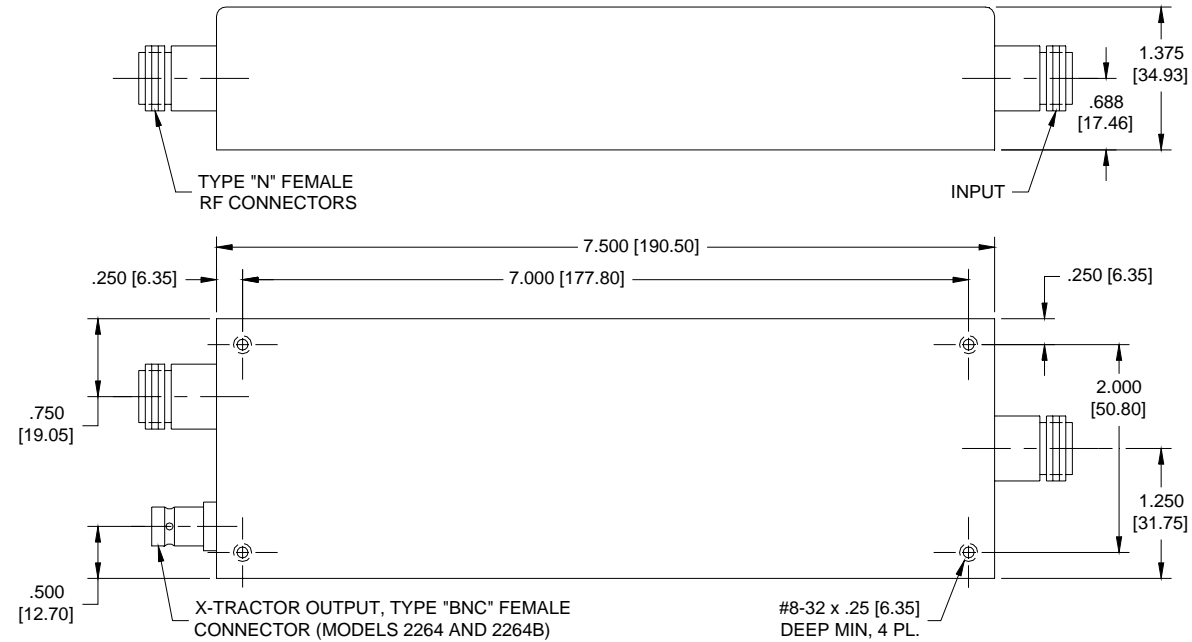


Standard 100 Watt Low Pass Filters (With Type "BNC" Female Connectors)					
Pass Band			Stop Band		Model Number
Frequency Range	VSWR	Insertion Loss	Attenuation	Frequency Range	
88 to 108 MHz	1.35 : 1	0.5 dB	40 dB	176 to 2000 MHz	2405-40
88 to 108 MHz	1.35 : 1	0.5 dB	50 dB	176 to 2000 MHz	2405-50
88 to 108 MHz	1.35 : 1	0.5 dB	60 dB	176 to 2000 MHz	2405-60
100 to 156 MHz	1.35 : 1	0.5 dB	40 dB	200 to 2000 MHz	2420-40
100 to 156 MHz	1.35 : 1	0.5 dB	50 dB	200 to 2000 MHz	2420-50
100 to 156 MHz	1.35 : 1	0.5 dB	60 dB	200 to 2000 MHz	2420-60
225 to 400 MHz	1.35 : 1	0.5 dB	40 dB	450 to 2000 MHz	2435-40
225 to 400 MHz	1.35 : 1	0.5 dB	50 dB	450 to 2000 MHz	2435-50
225 to 400 MHz	1.35 : 1	0.5 dB	60 dB	450 to 2000 MHz	2435-60

Standard 200 Watt Low Pass Filters (With Type "N" Female Connectors)					
Pass Band			Stop Band		Model Number
Frequency Range	VSWR	Insertion Loss	Attenuation	Frequency Range	
88 - 108 MHz	1.35 : 1	0.5 dB	40 dB	176 - 2000 MHz	2410-40
88 - 108 MHz	1.35 : 1	0.5 dB	50 dB	176 - 2000 MHz	2410-50
88 - 108 MHz	1.35 : 1	0.5 dB	60 dB	176 - 2000 MHz	2410-60
100 - 156 MHz	1.35 : 1	0.5 dB	40 dB	200 - 2000 MHz	2425-40
100 - 156 MHz	1.35 : 1	0.5 dB	50 dB	200 - 2000 MHz	2425-50
100 - 156 MHz	1.35 : 1	0.5 dB	60 dB	200 - 2000 MHz	2425-60
225 - 400 MHz	1.35 : 1	0.5 dB	40 dB	450 - 2000 MHz	2440-40
225 - 400 MHz	1.35 : 1	0.5 dB	50 dB	450 - 2000 MHz	2440-50
225 - 400 MHz	1.35 : 1	0.5 dB	60 dB	450 - 2000 MHz	2440-60

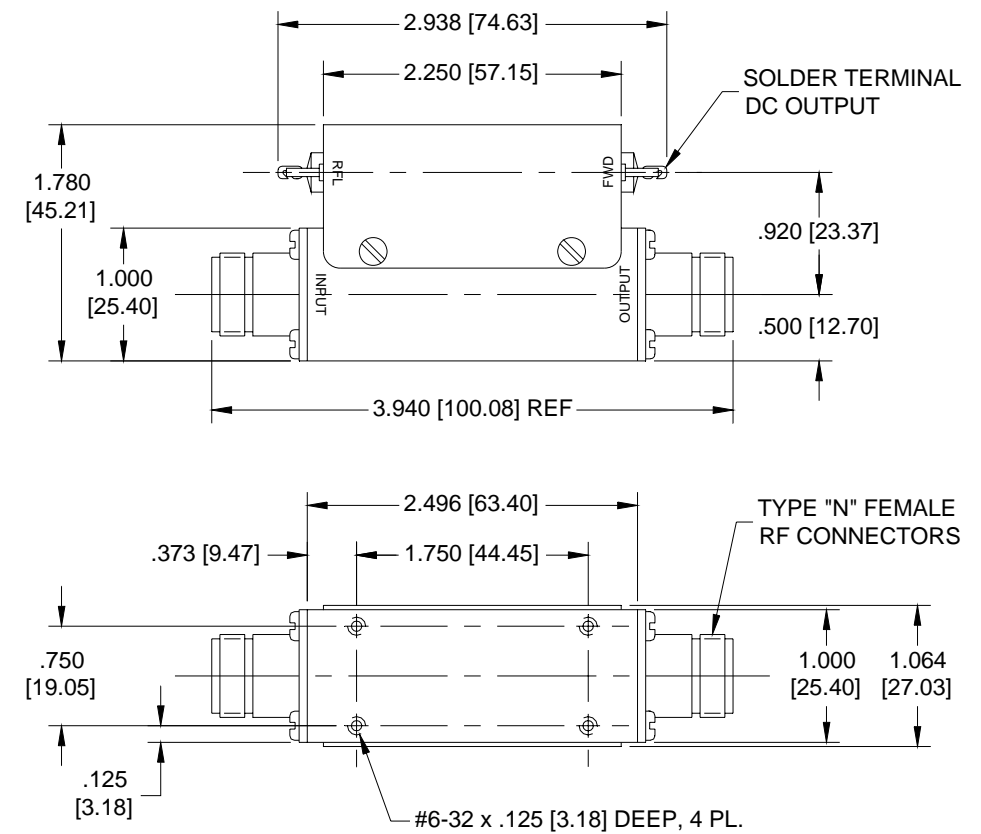
# "Standard" RF Filters & Filter/Couplers

## Hi-Power FM

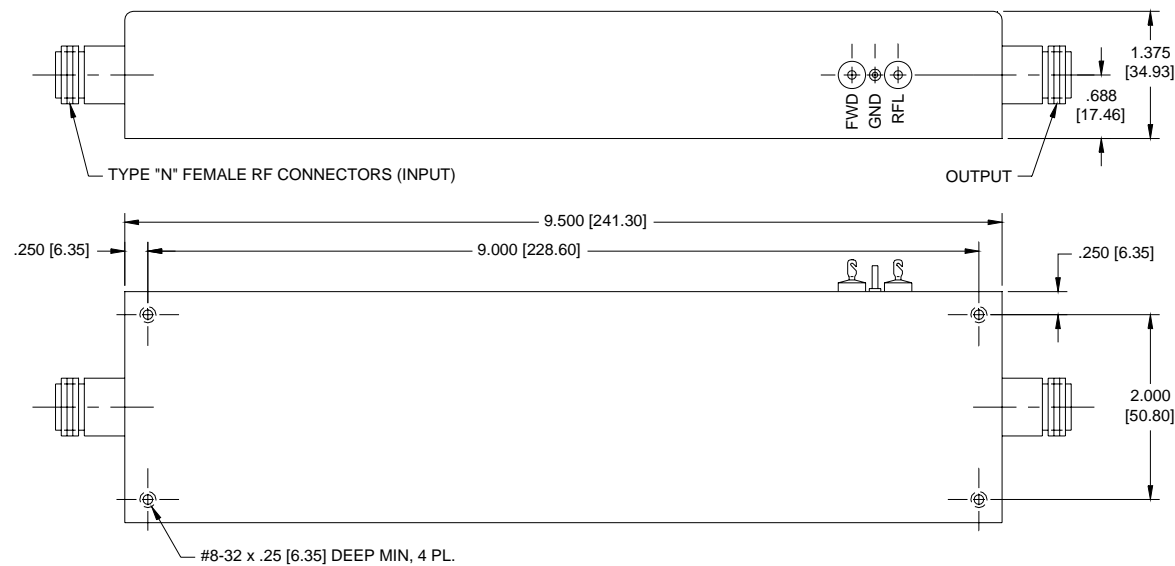


Pass Band				Stop Band		X-Tractor Output	Model Number
Freq. (MHz)	Power	VSWR	I.L. (dB)	Atten. (dB)	Freq. (MHz)		
88 to 108	1200 W	1.15:1	0.15	60 Max	176 to 1000	30 dB	2264
88 to 108	1200 W	1.15:1	0.15	60 Max	176 to 1000	36 dB	2264B
88 to 108	1200 W	1.15:1	0.15	60 Max	176 to 1000	N/A	2268

# "Standard" RF Power Sensors



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.



Model 5100 Filter-Coupler (Hi-Power FM)								
Pass Band			Stop Band		Coupler Specifications			
Freq. (MHz)	Power	VSWR	I.L. (dB)	Atten. (dB)	Freq. (MHz)	Dir. (dB)	Coupler Output	DC Load
88 to 108	1200 W	1.15:1	0.15	60 Max	175 to 1000	25	.50 VDC $\pm$ 5% @ 500 W FWD .50 VDC $\pm$ 5% @ 125 W RFL	5K Ohms

Power (Watts) FWD / RFL	Frequency Range (MHz)					
	2 to 30	25 to 60	50 to 100	100 to 250	200 to 500	400 to 1000
5 / 5	N/A	3418	3426	3434	3442	3450
10 / 10	N/A	3419	3427	3435	3443	3451
25 / 10	3412	3420	3428	3436	3444	3452
50 / 10	3413	3421	3429	3437	3445	3453
100 / 25	3414	3422	3430	3438	3446	3454
250 / 50	3415	3423	3431	3439	3447	3455
500 / 100	3416	3424	3432	3440	3448	3456
1000 / 250	3417	3425	3433	3441	3449	3457