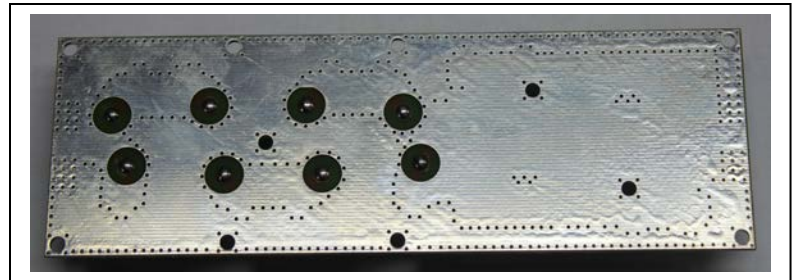
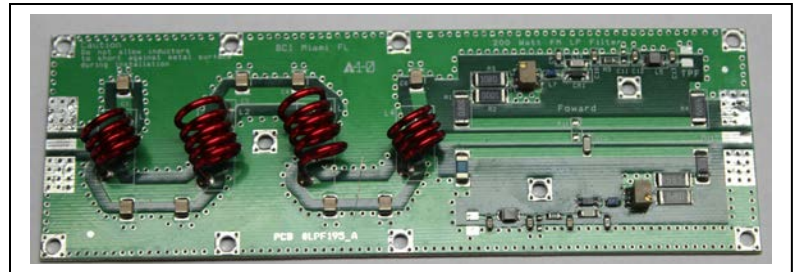


## Model: LPF195DC: LPFM Low Pass Filter

This low pass filter is designed for low power FM broadcast applications

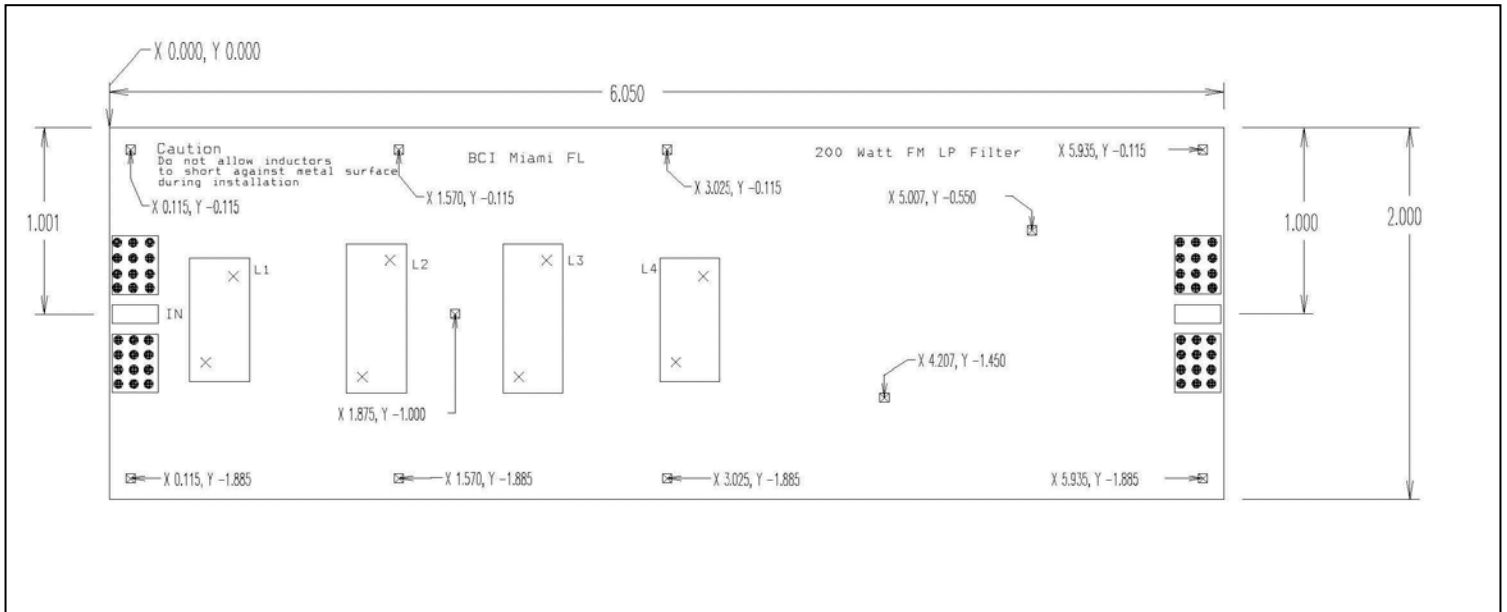
- **87.5 to 108.1 MHz**
- **0.25dB loss typical**
- **200W power capability**
- **Directional Coupler**



Dimension (L x W x H inch) [6.05" x 2.0" x 0.75"]

Electrical Specifications				
Characteristics	min	nom	max	unit
Operating Frequency range	87.5		108.1	MHz
Insertion loss S21	0.2	0.25	0.3	dB
Power Rating	n/a	-	200	Watts
Return loss S11/S22	-25	-	-	dB
Stop band rejection 176MHz	-50	-50	-55	dB
Stop band rejection 216-1000MHz	-60	-70	-	dB

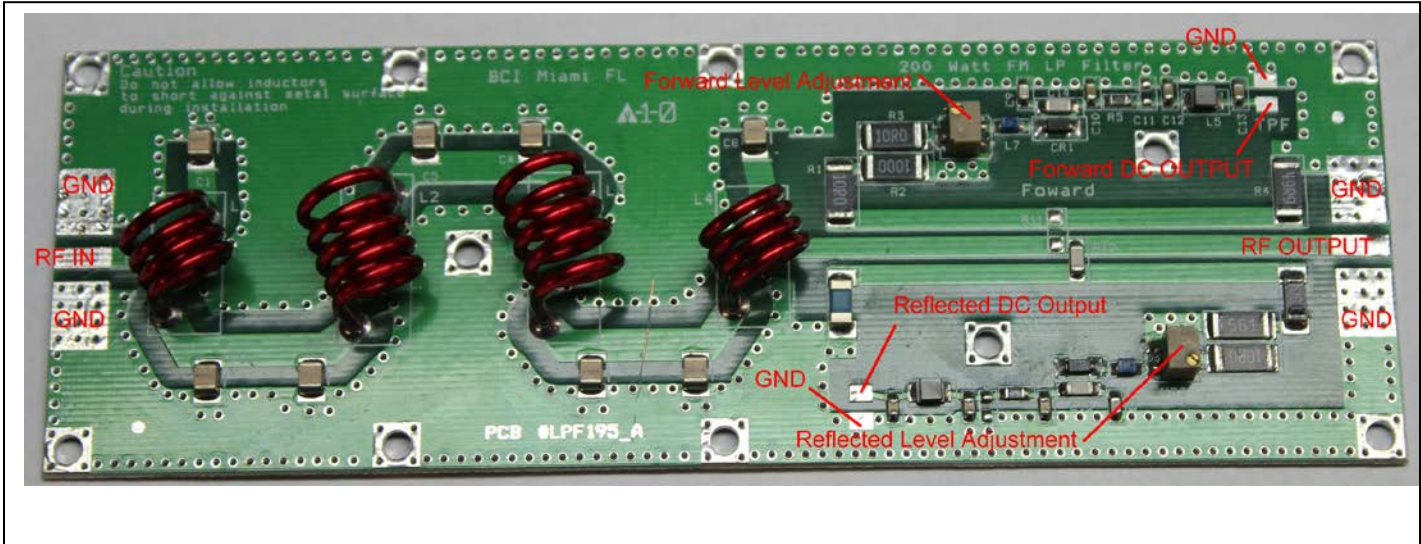
Filter Drawing: Figure 1



**Tips for Installation:**

- A DXF file of the drawing above can be downloaded by clicking here: <http://broadcastconcepts.com/80watt/lpf195/LPF195R14A.DXF>
- The filter should be mounted to a metal surface with PCB standoffs to prevent coils L1 thru L4 from shorting out. 0.1 inch clearance minimum is recommended from the bottom of the leads.
- The low pass filter can be installed in a metal enclosure. We do not offer an enclosure for this product.
- No tuning is required. These filters are carefully optimized on a network analyzer at the factory.

### Electrical Connections



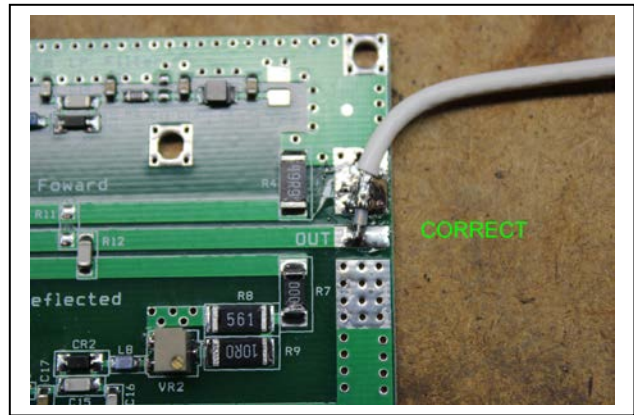
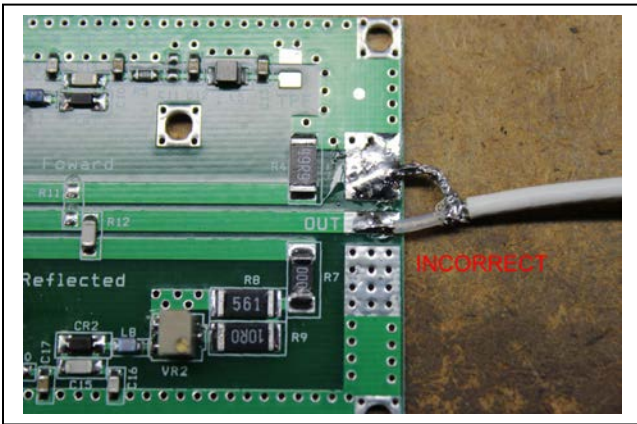
The directional coupler has 2 pads for measuring forward and reflected voltage “reflected dc output” and “Forward dc output. The voltages that appear in these locations may be adjusted with the trimmers.

The directivity of an ideal directional coupler is negative infinity; however, this coupler has -20dB. This means that there will always be some voltage present on the reflected DC output even when the load is a perfect 50 ohms.

The output voltages from the coupler should be adjusted to output no more than 5V at the maximum RF power capability of the transmitter. This will prevent damage to the diodes and to most control systems which are usually based on 5 volt devices.

This filter may be used with our VSWR overdrive board.

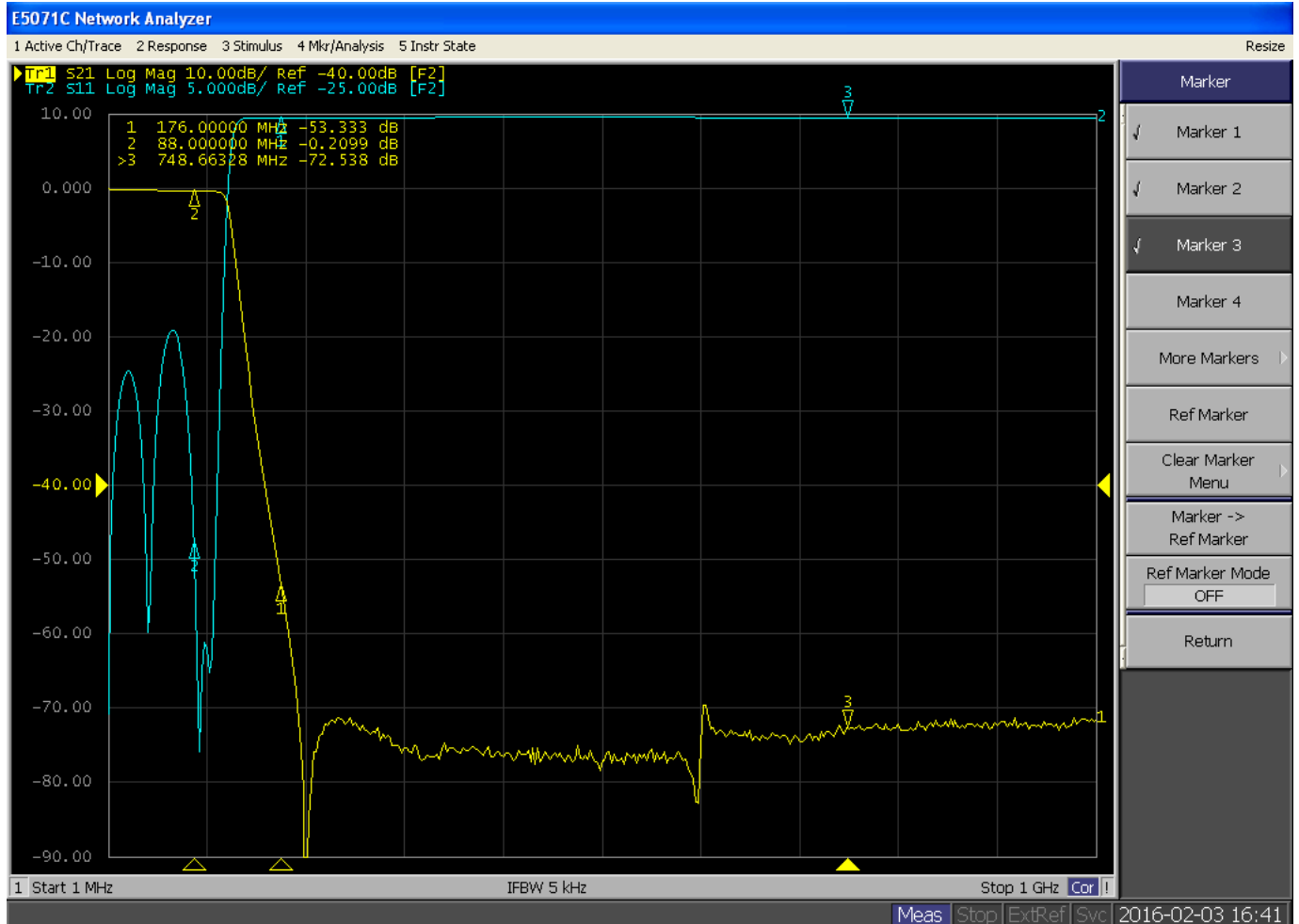
Correct installation of coaxial cables is required for all of our pallets and filters to work properly.



The photos above are examples of correct and incorrect coaxial connections. The problem with the connection on the left is high inductance. Never twist the braid of a coax to form a ground. It is not necessary to pick up ground from both sides of the output conductor. We have seen customers twist the braid to pick up ground on both sides of the output conductor. This is still not a correct connection.



Typical S21 and S11/S22 performance: An S-parameter file of this plot may be downloaded here:  
<http://broadcastconcepts.com/80watt/lpf195/LPF195A.S2P>



Typical stop band performance: An S-parameter file of this plot may be downloaded here:  
<http://broadcastconcepts.com/80watt/lpf195/LPF195B.S2P>