

DC Pass, 13.56 MHz RF Blocking Filter



- ▣ Protects DC Power Supplies and Control Systems from Damage & Interference
- ▣ Filters RF from DC Components
- ▣ Low Frequency DC (< 1 MHz) Passes Through Without Interference
- ▣ 3 watts to 4 KW from 1 to 13.56 MHz
- ▣ Connects at Output of DC Power Supply
- ▣ CE, CSA & UL Compliant

Description

Simply put, if you will run an RF power supply simultaneously with a DC magnetron power supply, you need one of these.

This filter is required to be installed on the output of the Ion™ series power supplies when 13.56 MHz RF power is present in the sputtering environment (including substrate bias and heaters in addition to RF power to one or more sputtering sources). Its use results in keeping the RF energy inside the “process” instead of leaking out and radiating. Radiation of RF energy may cause coupling to adjacent system cabling and interference with the connected hardware.

The filter allows low-frequency (DC) < 1 MHz to pass from the DC power supply to the sputtering source while at the same time preventing RF power from interfering with or damaging DC or AC power supplies. The filter uses a “Pi” topology and ferrite cores. This is a somewhat more expensive, but much more reliable design compared to “L” topology without a ferrite core. Ferrite cores improve the stability, sensitivity and reliability of the filtering function. Plainly stated – the filter is more effective.

Note that the orientation of the filter is important. The capacitor must always be on the power supply side (“output”) to ensure process stability. Input and output are defined as follows:

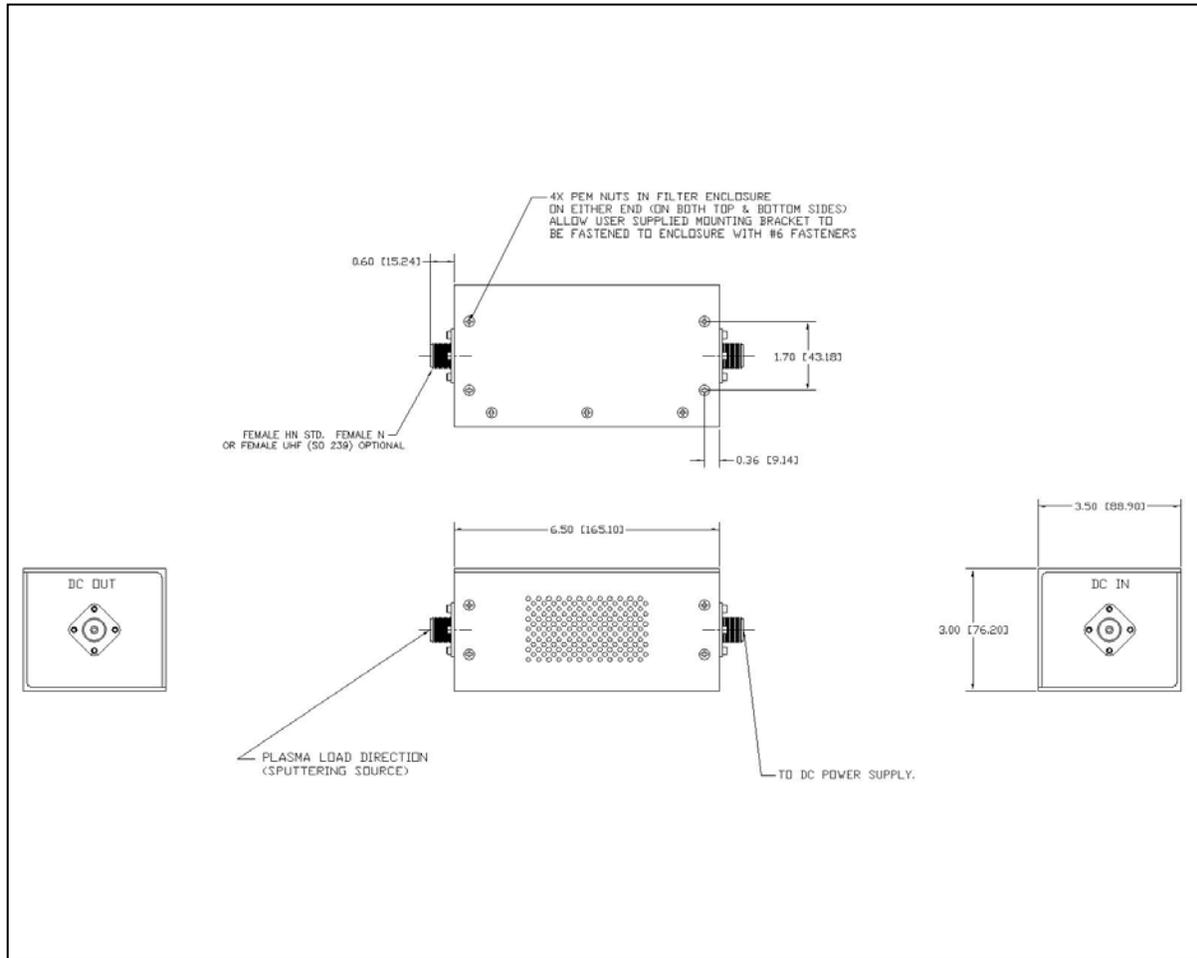
Output: Toward Plasma Load

Input: Toward DC or AC Power Supply



Specifications

Part Number	00002374
Frequencies Attenuated	1 to 13.56 MHz
Power Rating	3 to 4000 watts RF (4A @ 1000V)
Input Connector	Female HN standard (Female UHF (SO 239) or N optional)
Output Connector	Female HN standard (Female UHF (SO 239) or N optional)
Size (L x W x H)	6.50" x 3.50" x 3.00" (165.10 mm x 88.90 mm x 76.20 mm)
Weight	1.9 pounds (861 grams)



MATERIALS SCIENCE, INC.

Vacuum & Thin Film Technology

Materials Science, Inc.
1662 Los Altos Road
San Diego, CA 92109
Tel: (858) 483-3223
E-mail: sales@msi-pse.com