

## **Printed Filters Improve SWaP-C**

Building cost efficiencies with an eye toward miniaturization

Printed filter manufacturing provides exciting and innovative possibilities for microwave frequency electronics, particularly for miniaturization, low-cost manufacturing, and repeatable performance. As part our existing portfolio of high-performance RF components, Spectrum Control's printed filters are designed for today's demanding RF and microwave applications.

## **High Density System**

Spectrum Control's printed filters are offered in a rugged, low-profile package, with a frequency range of 2 to 30 GHz with Lowpass, Bandpass, Bandreject designs. These high-reliability expand Spectrum Control's reach in the growing market of microelectronics for printed filters, where printed components and circuits promise ease cost-reductions, use, and greater manufacturing efficiencies. Spectrum Control's printed filters offer improved SWaP-C customers where product package height and unitto-unit repeatability are primary concerns.

Printed filters are available in standalone or building blocks for IMAs to improve package density

Spectrum Control's printed filters are available as standalone or as part of our integrated microwave (IMA) products. Our printed assembly capability also can be leveraged into our filterbased IMAs to achieve reductions in mechanical package volumes, and diversify our portfolio with an additional tool for product optimization. This results in integrated assemblies with lower profiles and improved package densities.





Spectrum Control's experience in microelectronics design and testing, we provide a range of design and manufacturing solutions. Our printed filters products target electronic warfare, UAV, guidance and navigation communications and surveillance applications.

One of the advantages of printer filter manufacturing possibility of using it to implement miniaturization techniques. This is a growing trend that results in circuit design procedures that reduce the size of the electronics in a device by making them denser and, in some cases, partitioning them differently to reduce the overall number of components.

## **Features & Highlights**

- Low Profile: <0.20" (<0.08" in some cases)
- · Filter Function: Lowpass, Bandpass, and Bandreject
- Frequency Range: 2 to 30 GHz
- Bandpass Filter percent BW: 2-100%
- · Complexity: up to 12 sections
- Operating temperature: -40c to +85c