

High Frequency Powerfilm Resistives for LEO Applications

Highly Reliable Surface Mount Resistives Helping to Commercialize Space

Powerfilm resistives, including chip attenuators, terminations, and resistors are ideal for New Space endeavors. For example, Low Earth Orbit (LEO) satellites will soon deliver high-speed, low latency broadband throughout the world. But to make this happen, they require high frequency, highly reliable resistives, and in a small package size. An affordable, commercializable solution. Powerfilm products deliver on each of these criteria.

High Frequency and Power, Small Package Size

Powerfilm resistives can be designed for specific configurations, and manufactured in the quantities specified. Its small package size, multiple mounting options, and high power, high frequency performance is why Powerfilm resistives are used in radars, 5G infrastructure, Tx/Rx modules, amplifiers, and a host of space applications, including GPSIII and NAVSTAR.

Smaller, lighter, best-in-class performance, and optimized for New Space applications.

Application example: Communication systems in LEO satellite antennas require components that are compact and lightweight, and capable of delivering high-frequency performance and enhanced reliability for extreme environments. Our applications support, design, manufacturing and customer service teams are co-located and work together with you to optimize your application and design the Powerfilm best suited for your requirements.



Powerfilm thin film chip resistors shown. To request any Powerfilm samples, contact Spectrum Control.



Powerfilm surface mount attenuators support LEO satellite applications delivering broadband. Powerfilm can be used in multiple locations in the RF chain.

Customization and Features

Critical requirements for LEO Communications include products that deliver high frequency and high power in harsh environments, are made of space qualified materials when necessary, and maximize SWaP-C demands (for size, weight, power and cost). Powerfilm attenuators, terminations and resistives are a highly flexible solution able to match budget and technical requirements.

All Powerfilm resistives are designed, tested and manufactured in our Ann Arbor, MI, USA facility, and our Quality Assurance system is qualified to ISO-9001:2015.

Competitive Differentiators

- SWaP -C small size/weight (0603, 0402, and 0201 package sizes)
- High frequency: tested to over 40 GHz
- High power for this size – 0.5W, 1W, 2W
- Multiple finishes and packaging options