



SUCCESS STORY

Powerfilm Resistors For Medical Equipment

High power resistive components available in chip, flange and custom designs, power and frequency

Leading manufacturers of MRI machines choose Spectrum Control's Powerfilm line of resistors and terminations. Their reasons include Powerfilm's ability to deliver a high power solution that's available in flange or chip form, or built to the manufacturer's custom requirements.

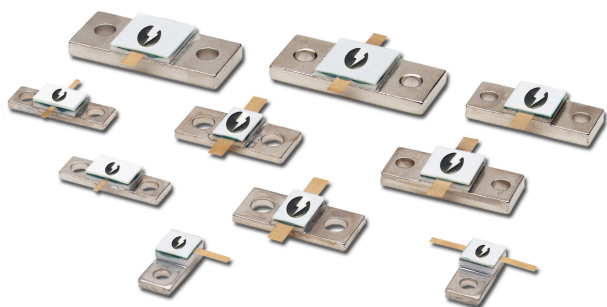
Design, Manufacturing and Support

Also important to our medical customers, Powerfilm resistives are available in non-magnetic (nickel free) solutions, in different sizes, and manufactured to the exact number required. Popular standard Powerfilm models for use in medical equipment include:

- 100W AIN Chip Resistor (250x375 mils), for surface-mount PCB installation
- 300W BeO Chip Termination (375x375 mils), for board-edge or board drop-in installation
- 150W AIN Flange Termination (870x375 mils), available in standard and low PIM configurations
- 250W AIN Flange Termination (1250x500 mils), available in standard and low PIM configurations
- 300W BeO Flange Termination (975x375 mils), available in standard and low PIM configurations
- 800W and 1250W BeO and AIN Flange Resistors and Terminations (1900x1000 mils)

"The Powerfilm team worked with our engineers to design a solution to our specific requirements."

Another advantage, Spectrum Control's Powerfilm line of surface mount resistive products are designed, tested, manufactured and supported from our Ann Arbor, Michigan facility.



Powerfilm flange resistors (pictured), chip resistors, and terminations are used in MRI machines and other industrial equipment.



Results, replicability, and reliability are crucial

The Powerfilm team partners with clients to optimize outcomes. For example, peak power (voltage, pulse width duration, and pulse duty cycle); frequency-sensitive impedance (variation of resistance due to package parasitic capacitances and inductance); linearity of resistive element under high-power conditions (as characterized by passive intermodulation level); and dissipation of power are addressed.

Leading Differentiators and Application Support

Average power, heat management and materials are also concerns unique to your medical equipment. The Powerfilm applications team helps our clients choose the right resistors and terminations from our catalog to enable the best possible performance, or deliver custom designs, as needed. Other Powerfilm features include:

- Frequency ranges up to 40GHz and Power to 1.25KW
- Custom designs available
- Optimized for automated PCB assembly
- Support for both high-performing BeO and environmentally-friendly AIN solutions
- Support for high-frequency solutions with thin-film, and high-power solutions with thick-film resistors
- Multiple terminal/wrap configurations available
- 1%, 2%, 5% tolerance options
- Low Passive Intermodulation (PIM) options (non-magnetic)