

RESISTIVE SOLUTIONS FOR **MEDICAL APPLICATIONS**

CUSTOM & STANDARD RESISTORS ▶

CUSTOM THERMAL ▶

CUSTOM EMI FILTERS ▶

OHMITE®

www.ohmite.com

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ABOUT OHMITE



Ohmite Manufacturing Company has been the leading provider of resistive products for high current, high voltage, and high energy applications for nearly 100 years.

Operations began in a small shop in Chicago in 1925 with carbon and wirewound “lug” resistors for Chicago’s growing radio manufacturing industry. As the needs of the electronics industry evolved, Ohmite has evolved along with it to serve additional industries and aspects of electronic design.

We provide solutions to common design complications with our proven resistive and thermal technology, including a broad selection of resistors, EMI filters, capacitors, power controls, and heatsinks suited for medical applications. Our portfolio is rounded out by extensive customization capabilities that ensure a tailored, effective solution to each unique design challenge.

A close-up photograph of a complex electronic circuit board, likely a medical device component. The board is densely packed with various components, including integrated circuits, capacitors, and resistors. The lighting is dramatic, with a strong blue and white glow emanating from the components, highlighting their intricate details and the complex wiring. The background is dark, making the glowing elements stand out prominently.

We aim to enable the resistive and thermal engineering community to design end-products that make the world better.

CUSTOM RESISTORS FOR MEDICAL APPLICATIONS

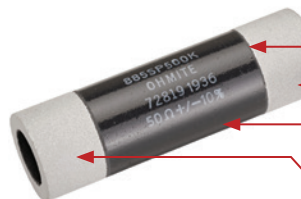
Doctors, healthcare workers, and patients must be able to trust their medical products will perform safely, reliably, and effectively. Ohmite's range of high-performance resistive products are put to the test in hundreds of medical applications every day, including medical instrumentation, Automated External Defibrillators (AED), X-ray systems, and more. Many resistor lines feature multiple customization options to meet demanding medical requirements.

CUSTOM CAPABILITIES

Many of Ohmite's power resistors can be customized to your medical application needs. Options include terminal construction, mounting options, dielectrics, and coatings. Several of our resistors and their customization options are highlighted below.

Ceramic Composition Axials

Axial-leaded resistors are a great alternative to carbon and ceramic composition resistors, which can be difficult to source. They provide excellent performance where high peak power or high-energy pulses must be handled in a small size. Ohmite's OC series is widely accepted as an ideal choice for the medical industry within this category.

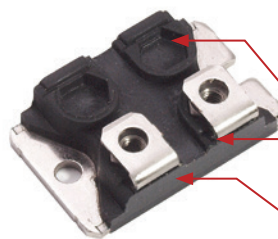


The Ceramic Composition Axials offers the following points of customization:

- Specialized material compositions for high voltage and high energy
- Multiple termination and mounting options
- Coating options for Dielectric and oil resistance
- Ceramic geometry options include:
 - Oval slabs
 - Tubular
 - Axial

TGH600 Series

Ohmite's TGH600 series uses new materials and technology to achieve high levels of wattage in a small SOT-227 package. Its non-inductive design makes it ideally suited for high-frequency and pulse-load applications.

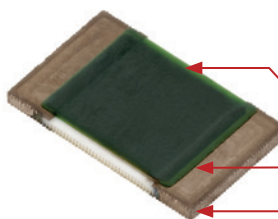


The TGH600 Series offers the following points of customization:

- Two or Four terminal options
- Multiple resistor configurations in multiple value
- Custom dielectrics and internal constructions

TFS Series

Specifically built to absorb large amounts of energy by efficient use of its compact mass, the TFS series of thick film, non-inductive resistors are ideal for medical surge protection applications. They commonly replace standard carbon composition resistors.

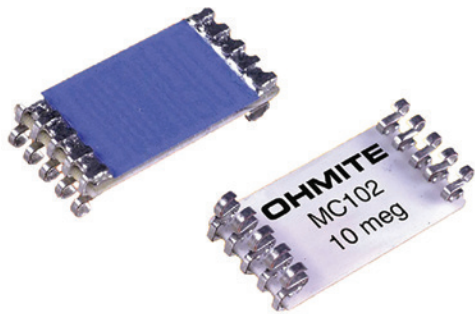


The TFS Series offers the following points of customization:

- Additional sizes for custom energy applications
- Custom coatings and dielectric coverings
- Multiple termination options

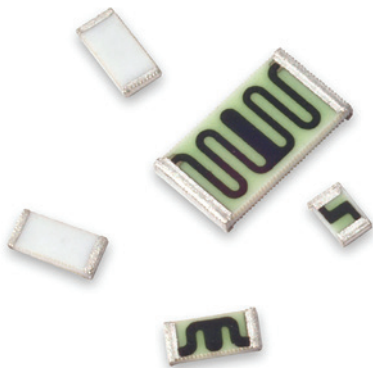
STANDARD RESISTORS FOR MEDICAL APPLICATIONS

In addition to Ohmite's customizable products, we offer a range of standard products for the medical field. These high-reliability series are built to meet the rigorous standards of medical products.



MacroChip Series

The MacroChip series of high-voltage/high-resistance resistors are designed with thick film on alumina substrate technology and can be provided in precision tolerances, high voltage ratings, and high resistance values. The planar package design is low profile for easy use with medical equipment, instrumentation, and power supplies.



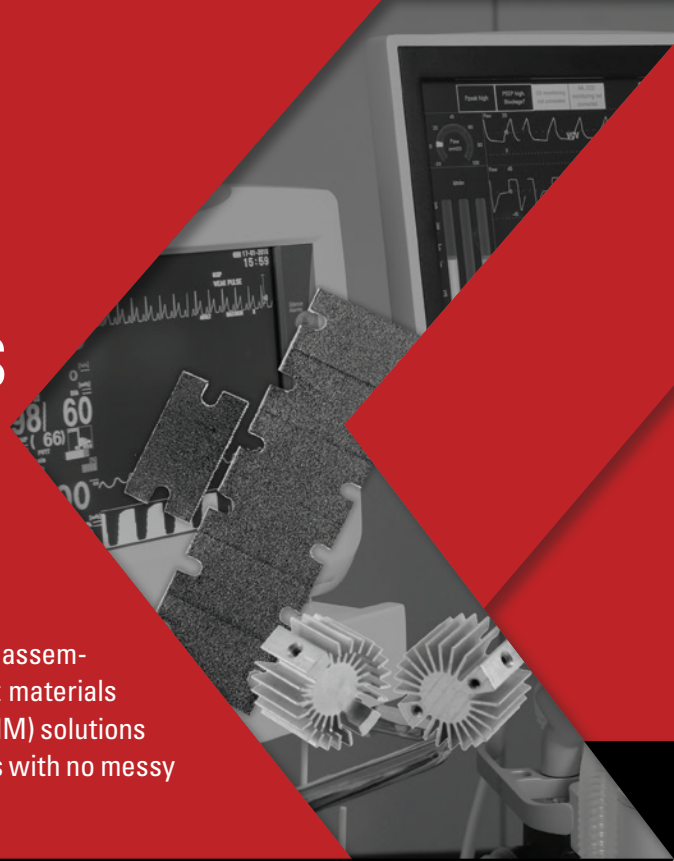
HVC Series

Ohmite's high-voltage HVC series incorporates high accuracy screen printing technology to achieve high voltage capability in a stable wraparound SMD chip resistor package. Its unique non-inductive serpentine pattern allows for lower voltage and temperature coefficients, less noise, tighter tolerances, and more.

CUSTOM THERMAL MANAGEMENT FOR MEDICAL APPLICATIONS

Ohmite strives to be the number one provider of thermal solutions for high-power medical applications. We offer an array of heatsinks to meet the needs of not only power resistors, but of all active devices as well. Many of the heatsinks offered by Ohmite are fitted with a patented clip system, eliminating the use of screws and tools for installation.

This innovative clipping system is designed for an easier, more streamlined assembly process. Our heatsinks include Aluminum Alloy 6063-T5 or equivalent materials and are ROHS compliant. Ohmite also offers Thermal Interface Material (TIM) solutions for heatsinkable devices. Our TIM's are specifically cut to device footprints with no messy grease or paste.

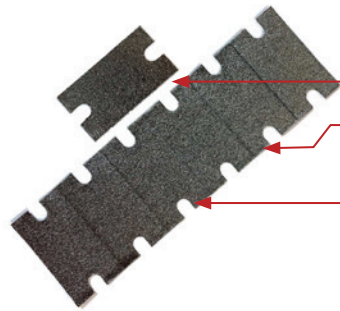


CUSTOM CAPABILITIES

Ohmite's entire line of heatsinks can be customized to your medical application needs. Options include extrusion lengths, clip type, and thermal materials. Several of our heatsinks and their customization options are highlighted below.

Thermal Interface Materials (TIM) HS Thermal Pad and SOT/TAP pads

There are multiple high power heatsinkable devices on the market. Most if not all require pastes, materials, or grease between the heatsink and the device to meet its full potential. Turn to Ohmite for your Thermal Interface Material (TIM) solutions. Ohmite offers TIMs specifically cut to device footprints with no messy grease or paste. Ohmite TIMs fill air voids and do not require a re-torque creating a quicker assembly process.



The Thermal Interface Materials (TIM) offers the following points of customization:

- Die-cut for specific land patterns
- Packaging options for assembly process needs
- Specialized material compositions for insulation and thermal transfer

Aluminum Extruded Heatsinks

Ohmite offers a range of heatsinks that are extruded, not stamped, for significantly higher efficiency than stamped competitors. The extrusion designs allow for large pads and a direct thermal path from the board and into the heatsink.

Ohmite's SV Series for LED modules, D Series for TO-252, TO-263 and TO-263 packages, and VR Series for TO-220 and TO-247 packages are well-suited for medical products.



The Aluminum Extruded Heatsinks offers the following points of customization:

- Addition/Elimination of fins
- Custom Extrusion lengths
- Addition of threaded holes for mounting

CUSTOM EMI FILTERS FOR MEDICAL APPLICATIONS

If interference causes malfunction or poor performance in medical equipment, patient and staff lives may be at risk. Ohmite offers multiple medical-grade EMI filter series to accommodate the critical compliance needs of medical applications, such as diagnostic equipment, X-ray machines, and surgical beds. All filters are designed to meet the requirements of stringent medical standards like IEC 60601-1.

CUSTOM CAPABILITIES

Ohmite's entire line of medical-grade EMI filters can be customized to your applications needs, with options like terminations and attenuation characteristics. Several of our EMI filters and their customization options are highlighted below.

The AFM Series offers the following points of customization:

- Customer specified terminations
- Custom attenuation characteristics with internal component changes
- Single and dual fuses; custom fuse rating
- Screw or snap fittings

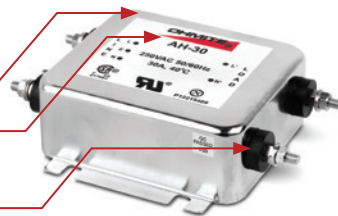


AFM Series

Designed for medical applications requiring high performance with no leakage currents, the AFM series of Power Entry Modules features rated currents up to 15 A and max. continuous voltage up to 250 VAC. They meet the requirements of IEC 60601-1, IEC 61010-1, and UL 60939-3.

The AGM Series offers the following points of customization:

- Dual stage and low frequency options
- Custom attenuation characteristics with internal component changes
- Customer specified terminations

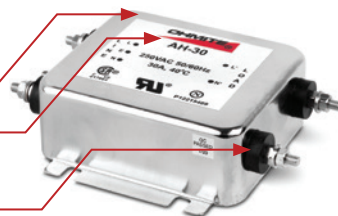


AGM Series

These single-phase medical grade EMI filters are designed to suppress undesirable electrical disturbances in power lines. The chassis-mounted design is rated up to 100 A and offers six different case sizes to meet current handling needs. AGM series meets the requirements of IEC 60601-1, IEC 61010-1, and UL 60939-3.

The AHM Series offers the following points of customization:

- Dual stage and low frequency options
- Custom attenuation characteristics with internal component changes
- Customer specified terminations



AHM Series

The AHM series of medical double-stage filters offers superior performance when used in applications with low-impedance loads, controlling continuous and intermittent interference noise. They meet the requirements of IEC 60601-1, IEC 61010-1, and UL 60939-3.



CUSTOM & STANDARD RESISTORS | CUSTOM THERMAL | CUSTOM EMI FILTERS

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