



Riedon is a major supplier to **medical** electronics equipment manufacturers and independent design firms engaged in high-reliability medical and healthcare system design.

We have identified three specific product type which are most commonly used: **high pulse**, **current sense** and **high voltage resistors**.

A defibrillator must dissipate a large amount of energy in a very short amount of time. During this process the electrical components undergo a large amount of stress. In order to protect these components from failure Riedon understands that a quality component, capable of withstanding a high energy millisecond surge, must be used. Therefore, Riedon recommends using our UT series wirewound resistors. The UT series is capable of withstanding over 1000 Joules.

In addition for the need to absorb a large amount of energy, some resistors in the medical field must be able to withstand extremely high voltages. Examples of medical applications that require these types of resistors are defibrillators and x-ray imaging machines. Resistors from our HTE series are able to withstand up to 48kVAC of working voltage.

There also exists a demand for accurate current sensing in the medical industry. For example, most types of hand held devices require current sensing to monitor battery life. Depending on the application of the current sensing resistor, Riedon offers a variety of solutions ranging from small packages to high current applications. Riedon's CSR series has a minimum resistance of 0.5 milliohms for maximum efficiency while our MSR-5 is capable of withstanding up to 30Amps. See the next page for our product offering for this market.

Riedon Offers:

- Custom Designed Solutions
- Wide Range of Resistor Technology
- Quick Delivery

Medical Applications:

- Imaging Systems (X-ray, MRI, CT Scan)
- Defibrillators and Cardiac Care
- Medical Pumps (blood pump)
- Patient Monitoring Systems
- Diagnostic Equipment
- Medication Delivery Systems



Riedon products sold into Medical market:

UT 	➤ Resistance from 0.02 to 260k Ohms ➤ Excellent Pulse Handling ➤ High Temperature: -55°C to 275°C ➤ Resistance Tolerances to $\pm 0.01\%$ ➤ Power Rating 0.1 to 13 Watts ➤ Low TCR: $\pm 20\text{ppm/K}$ Standard ➤ Non-Inductive Windings Available ➤ MIL-R-26 / MIL-R-39007 Power Ratings
HTE 	➤ Resistances from 1k Ohms to 100M Ohms ➤ Power Rating 0.7 to 17 Watts ➤ Resistance Tolerances to $\pm 1\%$ ➤ Low TCR: $\pm 100\text{ppm/K}$ Standard ➤ Voltage Ratings to 48KV ➤ Non-Inductive Design ➤ SMD upon request
CSR 	➤ Resistances from 0.5mOhm to 15mOhms ➤ Power Rating 1 to 3 Watts ➤ Resistance Tolerances to $\pm 1\%$ ➤ TCR to $\pm 50\text{ppm/K}$ ➤ Customized Resistance Available ➤ Sizes: 1206 / 2010 / 2512
MSR 	➤ Resistances from 0.005 to 0.1 Ohms ➤ Tolerances to $\pm 1\%$ ➤ Resistance Wire TCR: $\pm 20\text{ppm/K}$ ➤ For Current Sensing and Shunt Applications ➤ All Welded Construction ➤ Low Inductance ($< 10\text{nH}$) ➤ Economical Bare Metal Element