

High Voltage Power Supply required for use in bronchoscopic PFA system

INDUSTRY

Medical

SOLUTION

High Power C Series

EQUIPMENT

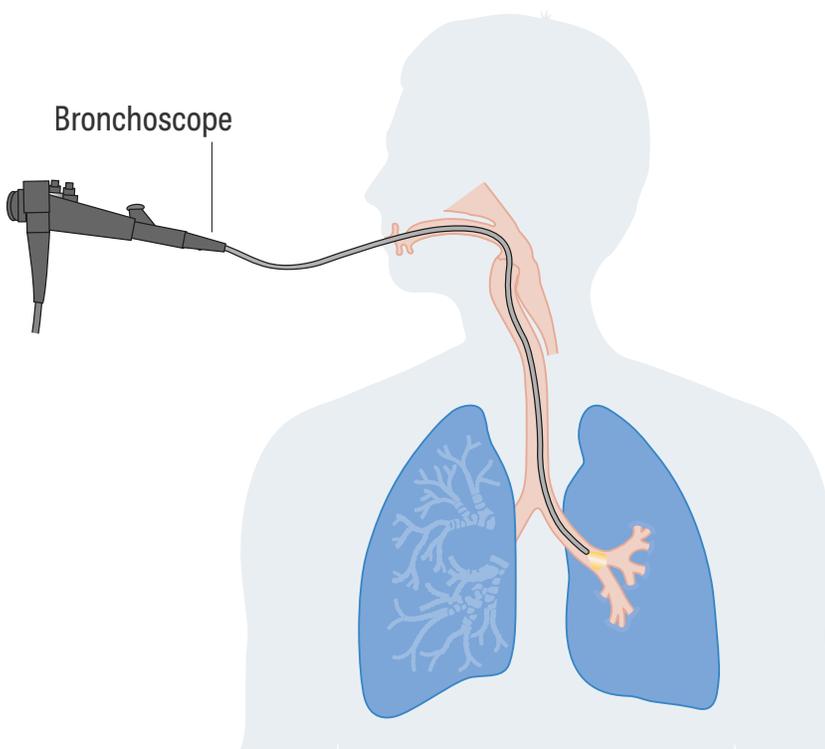
Bronchoscopic Pulsed Field Ablation System

CHALLENGE

A major medical device company developing disease-modifying therapies that improve survival, quality of life, and outcomes for patients with pulmonary diseases. The customer developed a Pulsed field ablation (PFA) system which targets the cells responsible for mucus hypersecretion in the airways.

This device delivers ultra-short, high voltage current to the mucus producing cells, causing the cell membranes to become porous resulting in cell death. The death of these cells reduces mucus hypersecretion within the airways. This mechanism of inducing cell death is called Irreversible Electroporation (IRE) or Pulsed Field Ablation (PFA). This process is less aggressive than prior methods and allows more rapid regeneration of the epithelium as well as regeneration of any damaged normal cells with far fewer abnormal cells recurring.

The primary high voltage requirements are 2000V/250W, with fast rise time in a compact package. Our high voltage solutions, from the Ultravolt product line, were leveraged to solve the customer's challenges and our engineering teams partnered with the customer for the duration of the design process.



SOLUTION

After reviewing the customer's technical requirements, the High Power C Series, a compact, reliable high voltage power supply that features fast rise-times ideal for pulsing applications proved to be the ideal solution. Advanced Energy UltraVolt's efforts and customer assistance enabled the customer to achieve rapid product development, timely clinical trials and accelerated time to market.

Below are some benefits for using the UltraVolt product line for this application:

- Proven and highly reliable high voltage medical power supply solutions ideal for Pulsed Field Ablation applications

- Rapid risetime of the High Power C Series allowed good control over pulse waveforms and duration
- Ease of access to UltraVolt's team of applications and design engineers facilitated the ongoing product development cycle and closed off action items rapidly
- We worked as a team with their contract manufacturer accelerating time to market.

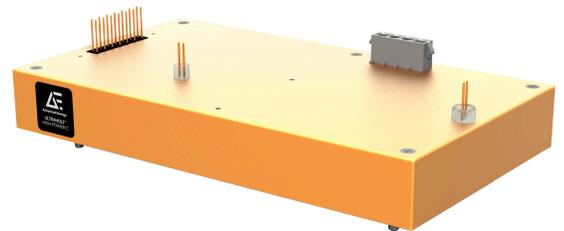
AE's short lead-times allowed the customer to stick to their timeline and their initial goal of commencing their pivotal clinical trial.

RESULT

Advanced Energy's highly reliable High Power C medical power supply proved to be the perfect solution for this Pulsed Field Ablation application. Due to short lead time for samples and dedicated medical engineering and customer support, Advanced Energy was able to accelerate development time and the customer began clinical trials on time, minimizing time to market.

CONCLUSION

By choosing UltraVolt's High Power C Series the customer was able to satisfy their demand for a reliable high voltage power supply for this pulsed application. In addition, given our historically high reliability in pulsing applications we provided the customer with the comfort level they required to quickly develop their system and prepare it for clinical trials. This helped them move rapidly toward eventual market deployment with a unique, proprietary approach to an existing technology.



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