2G HTS for Current Leads

SuperPower's 2G high temperature superconducting (HTS) wire enables current leads to carry high power currents between ambient temperatures and liquid nitrogen temperatures with minimal heat leak.

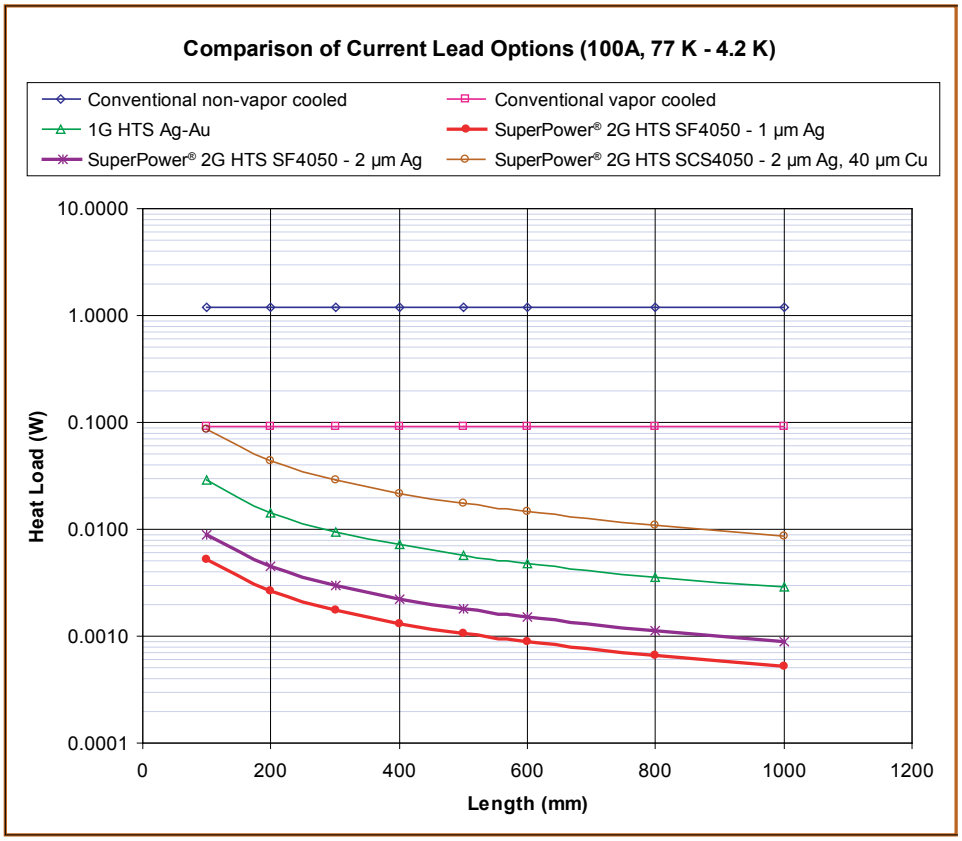
2G HTS leads offer system stability, safety, security and compactness with greater design optimization from ambient to cryogenic temperatures where HTS leads become effective.

Conventional current leads (copper, brass, stainless-based) have a limited optimization point and suffer from heat leak in conduction and Joule heating. Superconducting current leads offer freedom from the effects of the Wiedemann-Franz Law (optimization point = electrical conductor + high thermal conductivity for minimum heat load) by eliminating resistance and no Joule heating.

SuperPower'd™ for superior performance.

2G HTS Current Leads offer important benefits when compared to other options:

- Better in field properties
- Greater current density
- Superior mechanical properties (strain, stress tolerance [up to 700 MPa], and superior fatigue properties)
- Potentially lower thermal conduction than 1G over the same cross-section



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