

CADDOCK

ELECTRONICS, INCORPORATED

- High Performance Film Resistors, Resistor Networks and Custom Resistive Devices •

Introducing the Type USG Low TC, Ultra-Stable, Precision High Voltage Resistors

- **The Lowest Temperature Coefficient High Voltage Resistor available in the Industry**
10 ppm/°C from -40°C to +85°C, ref. to +25°C
- **The Best Loadlife Stability in a High Voltage Resistor available in the Industry**
- **Standard Tolerance of ±0.10% in Standard Resistance Values form 50 Meg to 200 Meg**
- **Three body sizes provide voltage ratings of 5 kV, 10 kV, and 15 kV**

Caddock is pleased to announce the Type USG, Ultra-Stable, Low TC, Precision High Voltage Resistors developed for use in the most demanding Precision High Voltage Applications. The USG is available in three models with voltage ratings (and standard resistance values) of 5 kV (50 Meg and 75 Meg), 10 kV (100 Meg and 150 Meg), and 15 kV (150 Meg and 200 Meg).

The Type USG uses Caddock's proven Tetrinox® Resistance Film System with selected core materials and physical geometry to optimize the Low TC and Ultra-Stable Performance of these resistors in voltage ratings and resistance values to fit a variety of high performance high voltage systems.

The Type USG offers outstanding thermal stability and long-term stability. The Ultra-Low TC (Temperature Coefficient) of 10 ppm/°C, -40°C to +85°C, ref to +25°C, means very minimal start-up drift and excellent stability over a wide temperature range. The loadlife stability is outstanding, typical resistance change after 1000 hours at full rated voltage at 85°C is 0.025%, the maximum change is 0.05%. The Voltage Coefficient (VC) is also very low.

Precision High Voltage Resistive Dividers can be formed using catalog standard resistors of the Type USG and the Type USF Ultra-Stable Precision Film Resistors or "matched" with selected Type TK Low TC Precision Film Resistors. Contact Caddock Applications Engineering for assistance.

Custom Low TC, High Voltage Strings are available for higher system voltages, 30 kV to 200 kV and higher. Contact Caddock Applications Engineering for assistance.

Applications of the Type USG include Ultra-Stable High Voltage Power Supplies for Electron Microscopes, Semiconductor Manufacturing Equipment, Spectrographic Equipment, and other Precision High Voltage Power Supplies for Laboratory, Research, and Industrial Applications.



- **Models:** 3 Models with Voltage Ratings of 5 kV, 10 kV, and 15 kV
- **Ohm Values:** Standard Values of 50 Meg, 75 Meg, 100 Meg, 150 Meg, and 200 Meg
- **Tolerance:** 0.10%
- **Temp. Coefficient:** ±10ppm/°C from -40°C to +85°C ref. to +25°C
- **Loadlife Stability:** 0.025% typical, 0.050% max. per 1000 hours at rated voltage at 85°C
- **Availability:** Available Now with Lead Times: Stock (Engineering

Reader (Inquiry) Contact: Caddock Electronics, Inc.; Applications Engineering Department
17271 North Umpqua Highway, Roseburg, Oregon 97470-9422
Tel.: 541-496-0700; Fax: 541-496-0408; Email: caddock@caddock.com; Web: www.caddock.com

Editorial Contact: Dave Anderson, Senior Applications Engineer
Tel.: 541-496-0700; Fax: 541-496-0408; Email: dave.anderson@caddock.com