Model RO-215

Ruthenium Oxide Cryogenic Temperature Sensor

SCIENTIFIC INSTRUMENTS

RO-215 Ruthenium Oxide sensors are thick-film resistors which adhere to a single resistance-versus-temperature curve. They offer excellent performance characteristics in magnetic field environments. The RO-215 offers similarities physically but possess greater calibration accuracy and are 'expected' to have repeatability greater than 20mK.

Available RO-215 Models

Group "A"
+/- 0.1K from 2K to 50K
+/- 0.75K from 50K to 100K

Group "B"
+/- 0.2K from 2K to 50K
+/- 1K from 50K to 100K

Group "C"
+/- 0.2K from 2K to 50K
+/- 1.5K from 50K to 100K

Group "D"
+/- 0.3K from 2K to 50K
+/- 3K from 50K to 100K

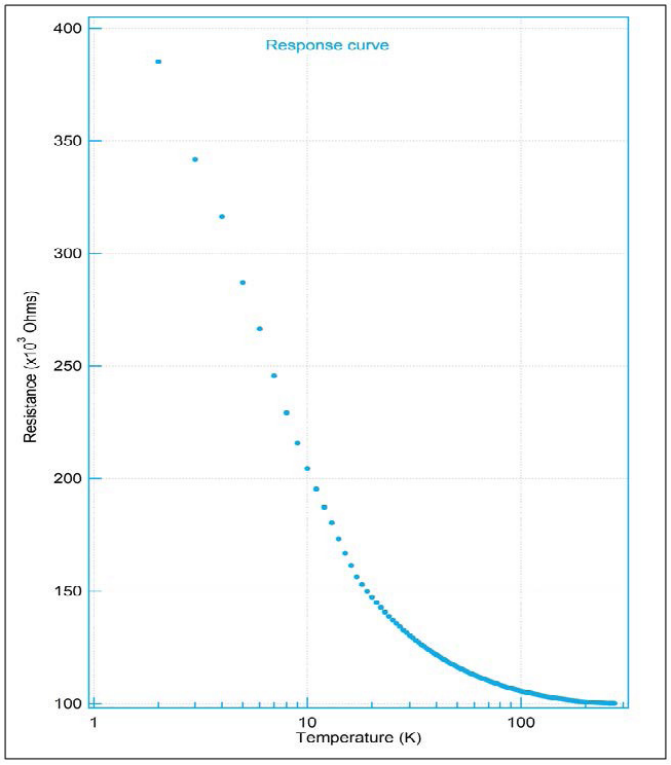
Calibrated N Accuracy
+/- 0.03K from 2K @ 4.2K
+/- 0.1K @ 77K

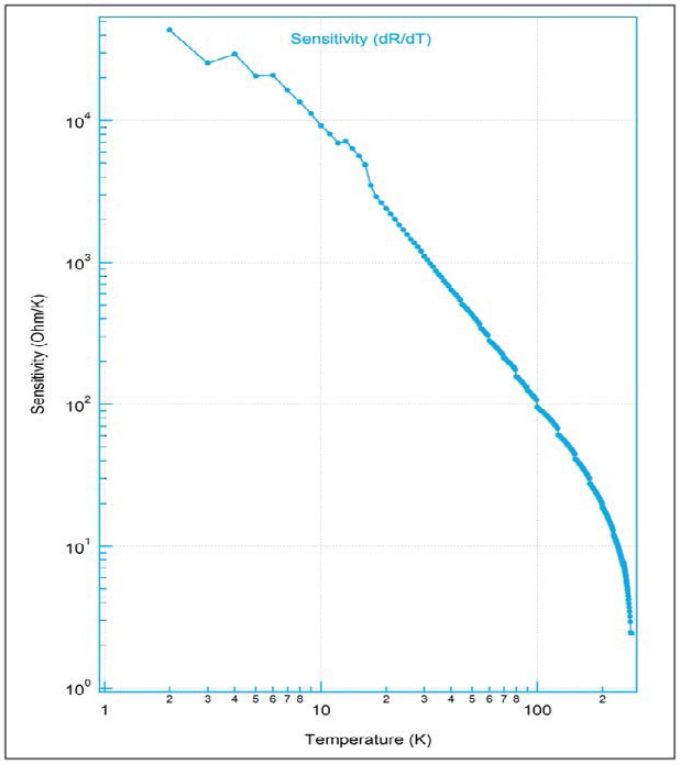
*Uncalibrated
+/- 0.3K from 2K to 50K

Model	RO-215
Range	2.0K to 100K
Excitation	10uA
Repeatability	+/- 20mK @ 4.2K
Magnetic Field Use	No MR for B<2T; negligible positive MR for B>2T
Mounting Options	Copper Can, Bobbin, Direct FoC (film-on-ceramic)
Interchangeability	Yes
Calibration Options	Yes, +/- 30mK accuracy @ 4.2K
Dimensions (Chip) [mil]	177 x 80 x 15
Dimensions (Chip) [mm]	4.5 x 2.03 x 0.38
Technology	RuO thick film custom ink, direct print with over-glaze, remote solder pads to minimize heat on film

dT at 4.2K due to magnetic field

Model	2T	8T
RO-215	0.01K	0.1K





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Two-Wire Options

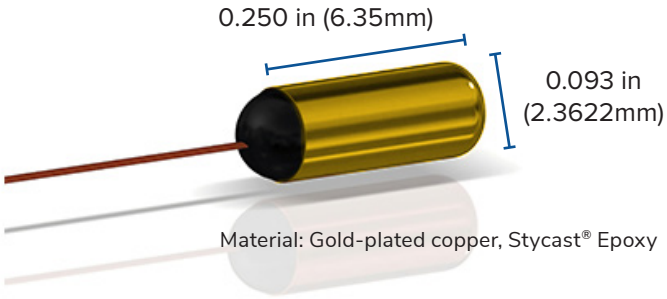
36 AWG Copper, Twisted
Insulation: Teflon

36 AWG Phosphor-Bronze, Bonded
Insulation: Polyimide (Recommended)

32 AWG Phosphor-Bronze, Bonded
Insulation: Polyimide

30 AWG Phosphor-Bronze, Bonded
Insulation: Polyimide

Canister Package



Material: Gold-plated copper, Stycast® Epoxy

Four-Wire Options

36 AWG Copper, Twisted
Insulation: Teflon

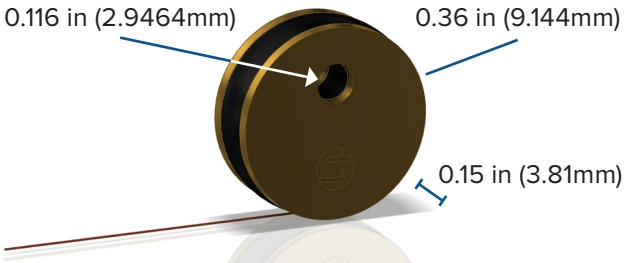
36 AWG Phosphor-Bronze, Bonded
Insulation: Polyimide (Recommended)

32 AWG Phosphor-Bronze, Bonded
Insulation: Polyimide

Available lengths from 6 inches to 15 feet

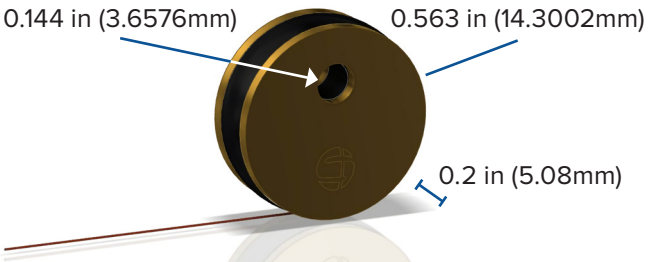
Teflon sheathing available

Model 22 Bobbin



Material: Gold-plated copper, Stycast® Epoxy

Model 25 Bobbin



Material: Gold-plated copper, Stycast® Epoxy

ISO 9001:2015 CERTIFICATION™

intertek

*Custom Configurations Available Upon Request