AM1968 Platinum-Sheath Capsule SPRT

AccuMac

HIGHLIGHTS

- ✓ **Rtpw Drift < 1 mK after thermal cycle**
- ✓ **Temperature range: -260 °C (13K) to 232 °C (505K)**
- ✓ **Short term stability < 1 mK**
- ✓ **Nominal Rtpw: 25 ohm at 0 °C**

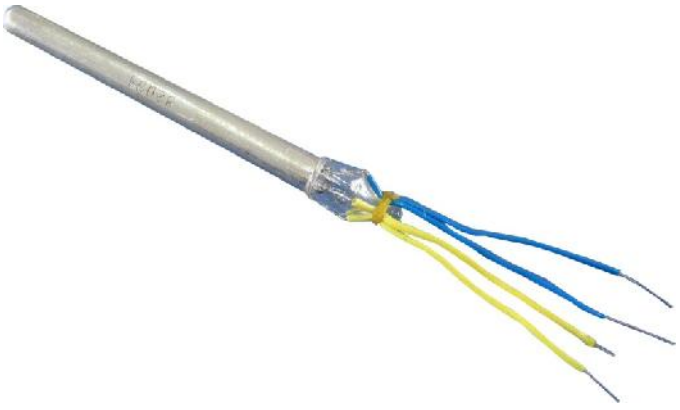
OVERVIEW

AM1968 Platinum Capsule SPRT covers temperatures from -260°C to 232 °C. The capsule construction makes this SPRT a preferred primary standard for cryogenic applications and other applications where space is limited or stem conduction is a concern for a long stem SPRT.

The sensing element is made of pure platinum wires with a temperature coefficient of 0.003925Ω/Ω/°C. The coiled platinum wires are mounted in a way that is strain free and enclosed in a platinum capsule, which is sealed by glass. The special sealing glass has a thermal expansion coefficient that matches with that of the platinum wire to ensure the capsule SPRT is sealed permanently in the entire temperature range. A uniquely designed support structure provides excellent performances of stability, mechanical shock, and thermal cycle performance. The SPRT achieves a high level of stability and repeatability in performance and fully meets ITS-90 criteria for reference thermometers.

FEATURES

- Temperature range: -260 °C to 232 °C
- Long term drift: <0.003°C at TPW after 1 year, <0.001°C at TPW typical
- Short term stability: 0.001 °C at 0.01°C
- Temperature Coefficient 0.003925 Ω/Ω/°C
- W(Ga)>=1.11807
- W(Hg)<=0.844235
- Platinum sheath



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SPECIFICATIONS

Temperature Range	-260°C to 232°C
Resistance at 0.01 °C	Nominal 25 Ω
Temperature Coefficient	0.003925 Ω/ Ω/°C
Drift of R(tpw)*	<0.003°C at TPW after 1 year, <0.001°C at TPW typical
Short Term Stability	±0.001°C
Thermal Shock	±0.001°C after thermal cycle from minimum to maximum temperatures
Self-heating	0.0015 °C at 1 mA current
Resistance Ratios	W(Ga) ≥ 1.11807 W(Hg) ≤ 0.844235
Measurement Current	1 mA
Sensor Length	42 mm
Filling Gas	Helium
Sheath Material	Platinum
Dimension	Sheath diameter 5 mm, glass head diameter 7mm, length 60 mm
External Leads	4 platinum wires, 30 mm

*Long-term drift rate is for reference only. It could be affected by such facts as handling, application, and maintenance, etc.

ACCESSORIES INCLUDED

Model	Description
9007	Carrying Case