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Data Sheet
August 5, 2026

KEYSIGHT / AGILENT

Keysight (Agilent) 85070B High-Temperature Dielectric Probe Kit

Keysight (Agilent) 85070B High-Temperature Dielectric Probe Kit The Agilent/Keysight 85070B isahigh-temperature coaxial dielectric probe kit for measuring complex permittivity of liquids, semi-solids, and flat solids withavector network analyzer and materials measurement software. The high-temperature probe withstands approximately −40 °C to +200 °C withahermetic glass-to-metal seal. Nominal probe frequency coverage about 200 MHz to 20 GHz (limited by MUT properties at the upper end). Successor kits include 85070E and N1501A. The Agilent/Keysight 85070B isahigh-temperature coaxial dielectric probe kit for measuring complex permittivity of liquids, semi-solids, and flat solids withavector network analyzer and materials measurement software. The high-temperature probe withstands approximately −40 °C to +200 °C withahermetic glass-to-metal seal. Nominal probe frequency coverage about 200 MHz to 20 GHz (limited by MUT properties at the upper end). Successor kits include 85070E and N1501A. Materials permittivity (εr′, εr″, tan δ) vs frequency and temperature; chemical/process monitoring; R&D materials characterization.

MODEL **Keysight / Agilent 85070B**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **85070B**	LISTING **https://aumictechlabs.com/products/85070b-2/**

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight (Agilent) 85070B High-Temperature Dielectric Probe Kit measures dielectric properties of liquids and semi-solids non-destructively across a wide frequency range and elevated temperatures. The probe immerses directly into material samples, eliminating preparation steps and special fixtures. It determines permittivity (dielectric constant), loss factor, loss tangent, and generates Cole-Cole plots for comprehensive material characterization.Technical Specifications Frequency Range: 200 MHz to 20 GHz (nominal) Temperature Range: −40 °C to +200 °C Material Properties Measured: Permittivity (ε'), loss factor (ε"), loss tangent (tan δ), Cole-Cole plots Sample Type: Liquids and semi-solids Sample Preparation: Non-destructive; no preparation requiredKey Features Hermetic glass-to-metal seal construction resists corrosive and abrasive chemicals Rugged design for field and laboratory use Direct immersion measurement eliminates fixture complexity Temperature-compensated refresh calibration simplifies multi-temperature measurements Software generates frequency-dependent plots of ε', ε", tan delta, and Cole-Cole diagrams Tabular and graphical data output to printers and plotters Data export in MS-DOS ASCII or HP BASIC BDAT (HP LIF binary) formatsTypical Applications Dielectric characterization of coating formulations, food products, chemical liquids, and material process optimization where non-contact, real-time measurement across broad temperature and frequency ranges is required.Compatibility & Integration Requires a network analyzer and controller to form a complete measurement system. Operates with MS-DOS software environment.

Features & description

From manufacturer datasheet

Features

• High-temperature coaxial dielectric probe • Temperature class: −40 °C to +200 °C • Frequency: ~200 MHz to 20 GHz (nominal probe) • Hermetic glass-to-metal seal • Guided calibration / refresh cal vs temperature (software) • Results formats: εr′, εr″, loss tangent, Cole-Cole • Compatible with Agilent/Keysight VNAs of the era

85070B Characteristics / Specifications

PARAMETER	VALUE
Model	85070B
Manufacturer	Keysight Technologies (Agilent)
Instrument Type	High-Temperature Dielectric Probe Kit
Family	85070 Dielectric Probe Kits
Alias	85070B; Agilent 85070B RF / Materials
Probe frequency (nominal)	200 MHz to 20 GHz
Temperature range	−40 °C to +200 °C
Measured quantities	complex permittivity, loss tangent Operational Notes Do not confuse with 85070E/N1501A later kits. Prefer Agilent 85070B product note / dielectric probe literature (e.g. 5968-5330 class).
Temperature class	−40 °C to +200 °C
Frequency	~200 MHz to 20 GHz (nominal probe)
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85070B Specifications

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Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications

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Model	85070B
Manufacturer	Keysight Technologies (Agilent)
Instrument Type	High-Temperature Dielectric Probe Kit
Family	85070 Dielectric Probe Kits
Alias	85070B; Agilent 85070B

RF / Materials

Specifications

PARAMETER	VALUE
Probe frequency (nominal)	200 MHz to 20 GHz
Temperature range	−40 °C to +200 °C
Measured quantities	complex permittivity, loss tangent

Operational Notes
Do not confuse with 85070E/N1501A later kits. Prefer Agilent 85070B product note / dielectric probe literature (e.g. 5968-5330 class).

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: **sales@aumictech.com** · +1 (484) 841-9341

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