

This literature was published years prior to the establishment of Agilent Technologies as a company independent from Hewlett-Packard and describes products or services now available through Agilent. It may also refer to products/services no longer supported by Agilent. We regret any inconvenience caused by obsolete information. For the latest information on Agilent's test and measurement products go to:

www.agilent.com/find/products

Or in the U.S., call Agilent Technologies at 1-800-452-4844 (8am-8pm EST)



Agilent Technologies

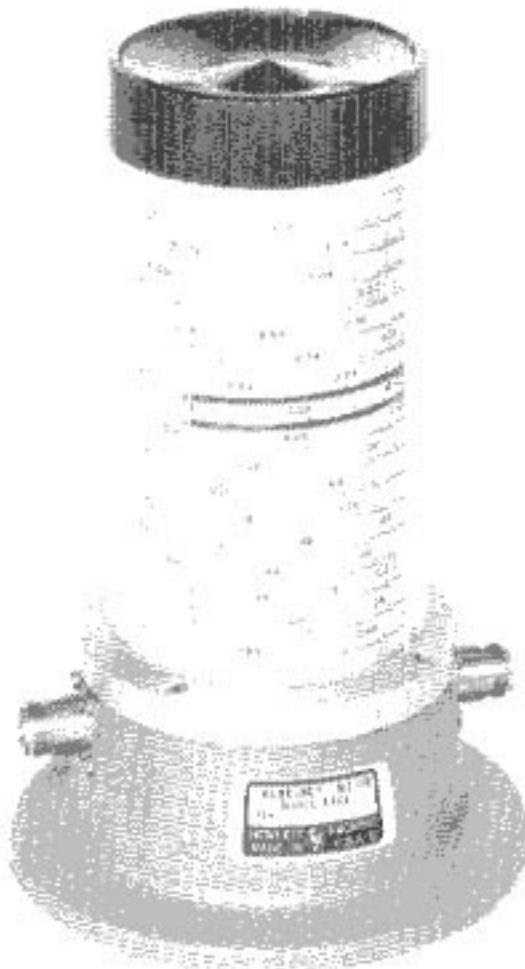
Innovating the HP Way

HEWLETT  PACKARD

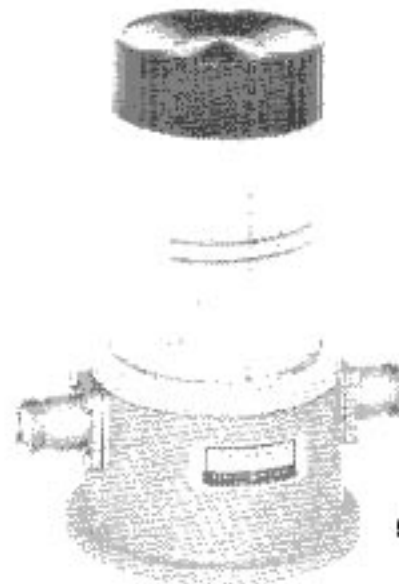
COAXIAL FREQUENCY METER

models
536A
0.96 to 4.2 GHz
537A
3.7 to 12.4 GHz

TECHNICAL DATA 15 AUG 74



536A



537A

- **Broadband**
- **Direct-Reading**
- **No Spurious Resonances**
- **High Resolution, Easy to Read Dial**
- **Accuracy Specified with Temperature and Humidity**

Description

Frequencies 960 MHz to 4.2 GHz and 3.7 to 12.4 GHz can be read directly and accurately with HP 536A and 537A Coaxial Frequency Meters. Convenient readout with high resolution is provided by long spiral dials. These dials have all frequency calibrations visible so you can tell at a glance the specific portion of each band you are measuring.

Over-all accuracy of these frequency meters is 0.17% and includes such variables as dial calibration, temperature variation over a 20°C range, relative humidity effects, and backlash. Extreme resolution and readability permit individual scale correction charts to be made and readings repeated with even higher accuracy. Calibration marks are every 2 MHz for the

536A, every 10 MHz for the 537A. Even at the high frequency end of the dial, minimum spacing between calibrations is such that you can easily resolve small differences of frequency. The tuning plunger is spring-loaded to eliminate backlash.

There are no spurious resonances at any setting. A one-quarter wavelength tuning mode is employed and capacitively loaded to prevent the three-quarter wavelength mode of higher frequencies from being excited and giving a spurious response. A well-matched section of strip line couples microwave energy into the cavity. Resonance is indicated by a dip in output power of approximately 1 dB. Cavity Q is typically greater than 1500 (536A).

Specifications

	536A	537A
Frequency Range:	0.96 to 4.2 GHz.	3.7 to 12.4 GHz.
Dial Accuracy:	±0.10% from 1 to 4.2 GHz. ±0.15% from 0.96 to 1 GHz.	0.1% (includes backlash).
Over-all Accuracy*:	±0.17% from 1 to 4.2 GHz. ±0.22% from 0.96 to 1 GHz.	0.17%.
Dip at Resonance:	At least 1 dB from 1 to 4 GHz. At least 0.6 dB from 0.96 to 1 GHz and from 4 to 4.2 GHz.	At least 1 dB.
Reflection Coefficient Off Resonance:	Less than 0.091 (1.2 SWR, 20.8 dB return loss).	Less than 0.33 (2.0 SWR, 9.5 dB return loss).
Calibration Increments:	2 MHz.	10 MHz.
Connectors:	Type N female.	Type N female.
Dimensions:	Height: 9½ inches (232 mm). Diameter: 6 inches (152 mm).	Height: 5¾ inches (146 mm). Base Diameter: 3½ inches (89 mm). Width (including connectors): 4¾ inches (118 mm).
Weight:	Net, 10 lb (4.5 kg). Shipping, 13 lb (5.9 kg).	Net, 3.3 lb (1.5 kg). Shipping, 4.5 lb (2 kg).

* Includes allowance of ±0.02% for 0-100% relative humidity.
±0.0016% per °C from 13-33°C and 0.03% backlash.