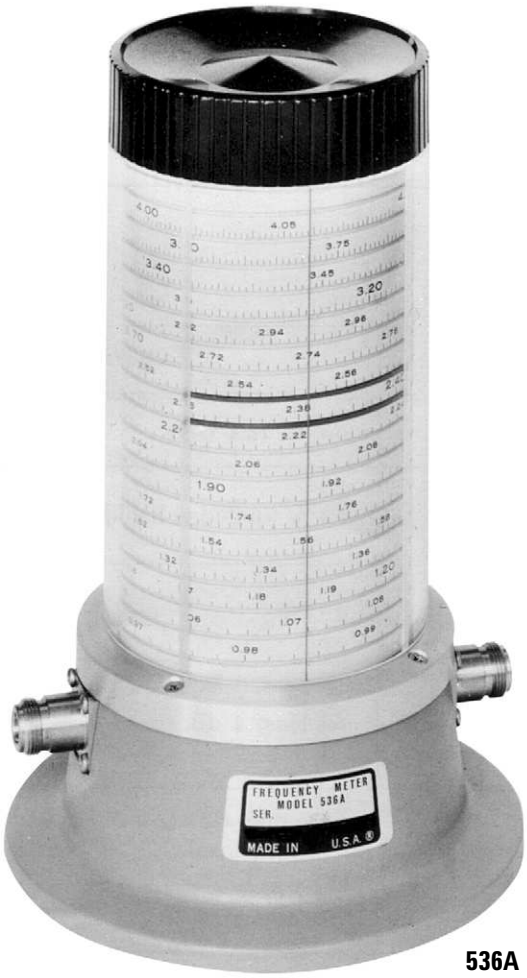
Agilent
Coaxial Frequency Meter
536A 0.96 to 4.2 GHz
537A 3.7 to 12.4 GHz

Data Sheet

537A



536A

- Broadband
- Direct-reading
- No spurious resonances
- High resolution, easy to read dial
- Accuracy specified with T"temperature and humidity

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Description

frequencies 960 MHz to 4.2 GHz and 3.7 to 12.4 GHz can be read directly and accurately with Agilent 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.

Overall 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 and 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)
Overall accuracy[1]	± 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	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: 9.125 inches (232 mm) Diameter: 6 inches (152 mm)	Height: 5.75 inches (146 mm) Base Diameter: 3.5 inches (89 mm) Width (including connectors): 4.625 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)

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

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