



NETWORK ANALYZERS

8756 System Components

Models 8756A, 85021A/B/C, 85020A/B

8756A Specifications

Amplitude Accuracy

Dynamic range: +10 dBm to -50 dBm in all three inputs (A, B, and R).

Dynamic accuracy: dynamic accuracy of a single channel measurement using 11664A/B Detector. Measurement taken over +10 to -50 dBm at 25°C and at 50 MHz.

±(0.1 dB + 0.01 dB/DB) from +10 to -40 dBm.

±(0.2 dB + 0.02 dB/dB) from -40 to -50 dBm.

Scale resolution: 0.1, 0.2, 0.5, 1, 2, 5, 10, or 20 dB per division. Independently controlled for each measurement channel.

Reference offset: offset level adjustable in 0.01 dB increments from -70.00 to +20.00 dBm (absolute) or -90.00 to -90.00 dB (ratio).

Display Characteristics

Resolution

Vertical: 0.006 dB for display.

0.01 dB for "Display Cursor."

Horizontal: 401 points.

Sweep time: minimum sweep time ≥ 150 ms.

Averaging: 2, 4, 8, 16, 32, 64, 128, or 256 traces may be averaged. Independent control of each display channel.

Normalization: traces are stored and normalized to 0.006 dB resolution, independent of scale/division or offset. The horizontal resolution is 401 points.

HP-IB Characteristics

Transfer formats: data may be transferred as either ASCII strings (nominally 6 characters per reading) or as 16 bit integers. Readings may be taken at a single point or as an entire 401 point measurement trace.

Transfer Speed

ASCII format, trace: 800 ms typical.

ASCII format, point: 10 ms typical.

Binary format, trace: 35 ms typical.

Binary format, point: 5 ms typical.

System Interface

Description: the 8756A System Interface is an HP-IB port used exclusively by the 8756A to control and extract information from a sweep oscillator and a digital plotter.

Sweep oscillators: 8350B with RF plug-in or 8340A

Plotters: 7470A Opt. 002 or 9872C

General Specifications

Power requirements: 48 to 62 Hz, 115/230V ± 10%, typically 100 watts.

Dimensions: 188 H x 425.5 W x 451 mm D (7.4 x 16.75 x 17.75 in.).

Weight: Net, 15 kg (33 lb). Shipping, 20 kg (44 lb).



Directional Bridges

The 85020A/B and 85021A/B/C are Directional Bridges designed especially for the 8756A and 8755C Scalar Network Analyzers. Each bridge features outstanding directivity and test port match in a compact, rugged package.

Within each bridge, one zero-bias Schottky diode detector measures the return loss of the test device. Ratio measurements can be made by adding a power splitter (11667A) and detector (11664A/B).

85021A/B/C Directional Bridges

The three new microwave Directional Bridges cover the 10 MHz to 26.5 GHz frequency range. Accurately measure SMA devices over the full 10 MHz to 26.5 GHz frequency range with the 85021B Bridge with its precise APC 3.5 test port connector. For 10 MHz to 18 GHz reflection measurements choose the 85021C with its Type-N test port connector or the rugged APC-7® test port connector of the 85021A.

85021A/B/C Specifications

Frequency Range

85021A: 0.01 to 18 GHz.

85021B: 0.01 to 26.5 GHz.

85021C: 0.01 to 18 GHz.



Nominal impedance: 50 ohms.

Input Connector

- 85021A: Type-N Female.
- 85021B: APC-3.5 Female.
- 85021C: Type-N Female.

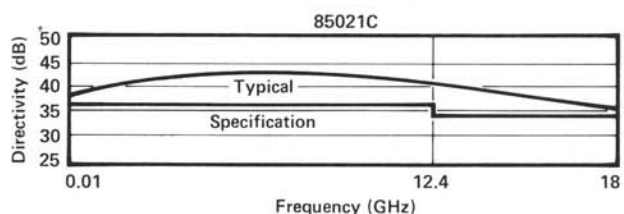
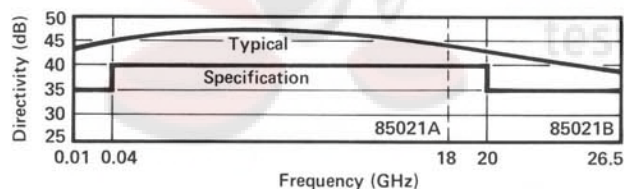
Output Connector

- 85021A: APC-7.
- 85021B: APC-3.5 Female.
- 85021C: Type-N Female.

Maximum power to input port: +23 dBm.

Directivity

- 85021A: 0.01 to 0.04 GHz: 36 dB.
0.04 to 18 GHz: 40 dB.
- 85021B: 0.01 to 0.04 GHz: 36 dB.
0.04 to 20 GHz: 40 dB.
20 to 26.5 GHz: 36 dB.
- 85021C: 0.01 to 12.4 GHz: 36 dB.
12.4 to 18 GHz: 34 dB.



Test Port Match (SWR)

- 85021A/C: 0.01 to 8.4 GHz: 1.15.
8.4 to 12.4 GHz: 1.25.
12.4 to 18 GHz: 1.40.
- 85021B: 0.01 to 8.4 GHz: 1.15.
8.4 to 20 GHz: 1.40.
20 to 26.5 GHz: 1.75.

Typical Input Port Match (SWR)

- 85021A/C: 0.01 to 8.4 GHz: <1.22.
8.4 to 18 GHz: <1.43.
- 85021B: 0.01 to 8.4 GHz: <1.22.
8.4 to 20 GHz: <1.43.
20 to 26.5 GHz: <1.93.

Typical Insertion Loss

- 85021A/B/C: 6.5 dB at 10 MHz.
8.0 dB at 18 GHz.
- 85021B: 10 dB at 26.5 GHz.

Typical detector flatness: +3, -1 dB (with leveled RF).

Typical minimum input power (for a 40 dB return loss measurement): +7 dBm at 18 GHz.

Dimensions: 15 H x 110 W x 96 mm D (1.0 x 4.3 x 3.9 in).

Weight: net, 0.5 kg (1.2 lb). Shipping, 2.3 kg (5 lb).

85020A/B Directional Bridges

The economical 85020A/B Directional Bridges also offer high (40 dB) directivity and excellent port match at RF (to 4.3 GHz) frequencies. For 50 ohm measurements choose the 85020A. The 85020B is designed for 75 ohm environments. Both RF bridges have Type-N connectors.

85020A/B Specifications

Frequency Range

- 85020A: 0.01 to 4.3 GHz.
- 85020B: 0.01 to 2.4 GHz.

Nominal Impedance

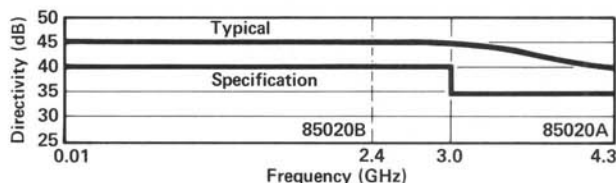
- 85020A: 50 ohms.
- 85020B: 75 ohms.

Connectors: Type-N Female.

Maximum power to input port: +23 dBm.

Directivity

- 85020A: 0.01 to 3 GHz: 40 dB.
3 to 4.3 GHz: 34 dB.
- 85020B: 0.01 to 2.4 GHz: 40 dB.



Test Port Match (SWR)

- 85020A: 0.01 to 3 GHz: 1.20.
3 to 4.3 GHz: 1.25.
- 85020B: 0.01 to 1.3 GHz: 1.25.
1.3 to 2.4 GHz: 1.39.

Typical Input Port Match (SWR)

- 85020A: 0.01 to 4.3 GHz: 1.25.
- 85020B: 0.01 to 2.4 GHz: 1.25.

Typical insertion loss: 6.5 dB.

Typical detector flatness: ±0.5 dB.

Typical minimum input power (for a 40 dB return loss measurement): +4 dBm.

Dimensions: 25 H x 110 W x 96 mm D (1.0 x 4.3 x 3.9 in).

Weight: net, 0.5 kg (1.2 lb). Shipping 2.3 kg (5 lb).