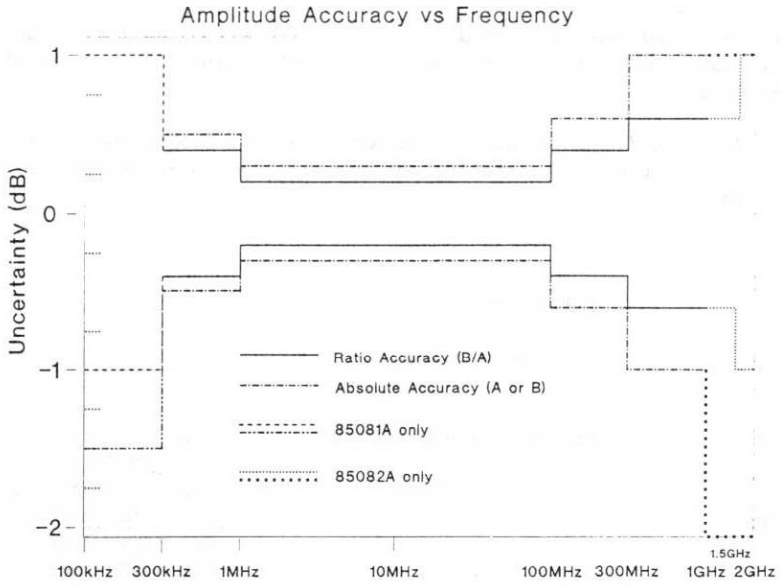
Table 1-2. Specifications

Specifications describe the instrument's warranted performance over the temperature range 0 to 55 deg C unless otherwise stated. Typical values describe typical, but non-warranted, performance. Nominal values are given as a guide to expected performance.

Measurement conditions: All specifications apply to measurements in a 50 ohm system and with frequency autoranging off, unless otherwise stated. Measurements are made with the probes mounted in an HP 11536A Feedthru Tee unless otherwise stated.

Frequency Range	100kHz-1GHz	
Maximum Input	2V ac peak, ±50Vdc	
Measurement Range		
A and B Channel maximum	Magnitude measurements	300mV, 100kHz-1MHz 1V, 1MHz-1GHz
	Phase measurements	300mV, 100kHz-1GHz
A (Ref) Channel minimum		10mV, 100kHz-300kHz 1mV,300kHz-3MHz 300uV,3MHz-1GHz
B (Meas) Channel noise floor		10uV rms, 1MHz-1GHz
Measurement bandwidth	1kHz (nominal)	
Input Crosstalk	>100dB, 1MHz-500MHz >80dB, 500MHz-1GHz	
Impedance	SWR<1.15, 100kHz-750MHz SWR<1.2, 750MHz-1GHz Probe: 100kohm shunted by 2.5pF (nominal) Probe with 11576A 10:1 Divider: 1Mohm shunted by 2pF (nominal) Probe with 10216A Isolator: 100kohm shunted by 5pF (nominal)	
Magnitude Characteristics		
Resolution:	3 1/2 digits	
Accuracy:	Sum of Amplitude Accuracy vs Frequency and Absolute Accuracy vs Level or Ratio Accuracy vs Level (see following graphs).	

Amplitude Accuracy vs Frequency (1) (2)

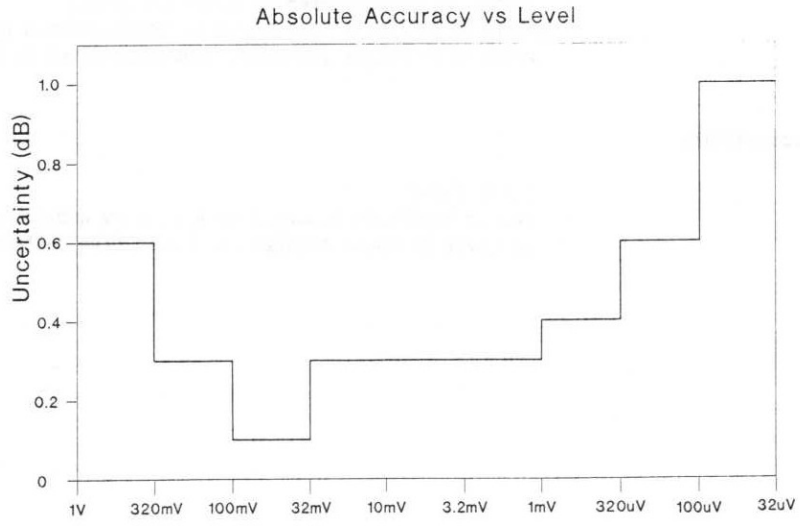


Absolute Amplitude Accuracy (A & B 100mV nominal) (1)

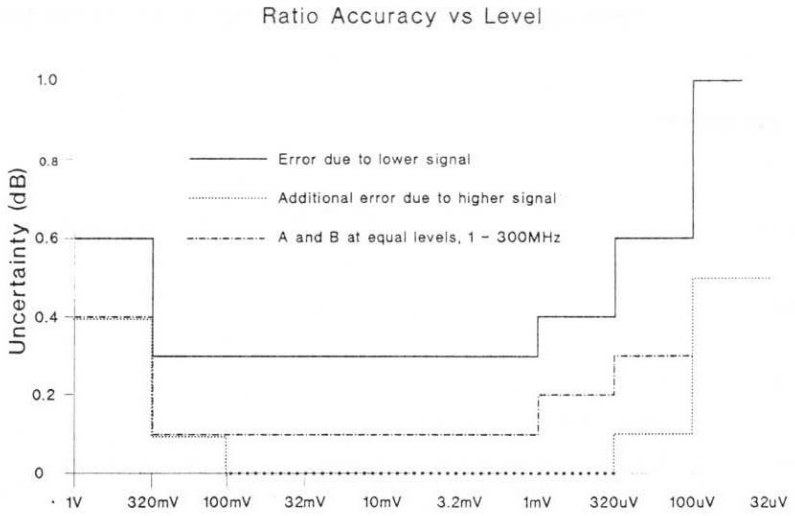
With 11576A 10:1 Divider: ±1dB, 100kHz - 100MHz (nominal)

With 10216A Isolator: For the 85081A High Impedance Input Module ±1dB, 100kHz-200MHz(nominal)

Absolute Accuracy vs Level (1) (3) (5)



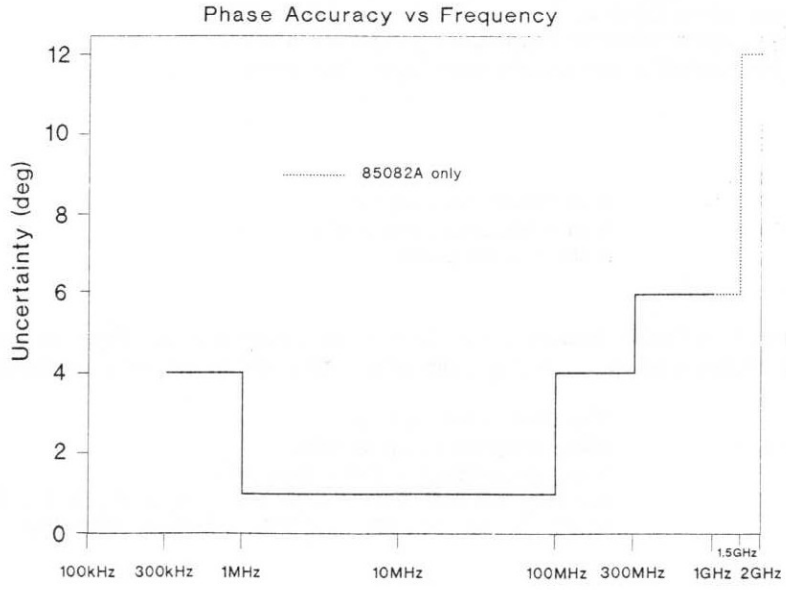
Ratio Accuracy vs Level (1) (3) (5)



Phase Characteristics

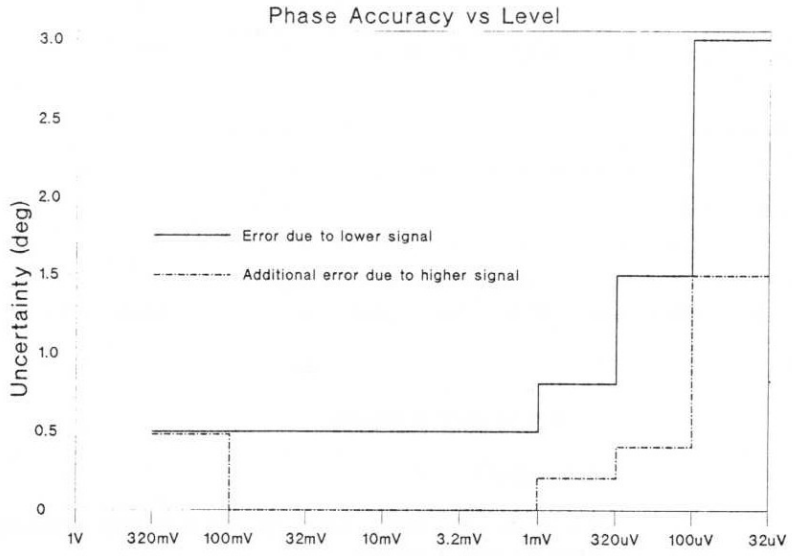
Display Range:	-179.9 to +180.0 degrees
Display Resolution:	0.1 degrees
Accuracy:	Sum of Phase Accuracy vs Frequency and Phase Accuracy vs Level (see following graphs).

Phase Accuracy vs Frequency (4) (6)



Phase Accuracy (A-B, A & B 100mV) (4) (6) (7)	Probe with 11576A 10:1 Divider: ±4 deg, 100kHz - 100MHz (nominal) Divider: ±4 deg,100kHz-100MHz (nominal) Probe with HP 10216A Isolator: ±6 deg, 100kHz-200MHz (nominal)

Phase Accuracy vs Level (4) (6) (7)



Footnotes
(1) 15 to 30 degrees C. Add ±0.1dB per 5 deg C outside this range.
(2) A and B absolute value includes ±0.15dB source traceability error.
(3) A minimum input level depends on frequency. See Measurement Range.
(4) 15 to 30 degrees C. Add 1 deg per 5 deg C outside this range.
(5) Add ±0.5dB for signals above 100mV at frequencies greater than 500MHz.
(6) Add ±3 deg for signals above 100mV at frequencies greater than 500MHz.
(7) Add ±0.4 deg phase non-linearity for measurements other than 0 deg.

General

Accessories furnished	2 ea 10218A BNC Adaptor 6 ea replacement probe tip Probe tip extractor

Search and lock time
Automatic tuning starts from lowest frequency and searches consecutive bands. Total search and lock time depends on the number of bands to be scanned and the lockup time within the selected band.

Process start time:	50ms after lock is lost.
Lockup (within 1 range):	40ms, frequencies up to 3MHz 20ms, frequencies greater than 3MHz
Ranges (MHz):	0.1-0.2, 0.2-0.6, 0.6-1, 1-3, 3-5, 5-8, 8-15, 15-25, 25-50, 50-80, 80-150, 150-250, 250-500, 500-1000, 1000-2000

Rear Panel Outputs:

Normal Operation: Provides an analog representation of the digital display values, including internal instrument correction factors.
OUTPUT 1 corresponds to DISPLAY 1, OUTPUT 2 corresponds to DISPLAY 2.
Range: 0 to ±1999 display counts.
Sensitivity: 1mV represents 1 display count (nominal).
For readings greater than ±1999 counts, the rear panel output voltage will remain fixed at ±2.0 Volts.
Display resolution can be controlled by manual ranging.
Update rate: Approximately 3 readings per second.

Direct Analog Output: Provides continuous direct output from the internal magnitude and phase detectors through 800Hz low-pass filters. No internal correction is applied.
OUTPUT 1 corresponds to linear magnitude (A or B selected by front panel control).
Sensitivity: 1V equals displayed full scale deflection (nominal). Can be controlled by manual ranging.
OUTPUT 2 corresponds to B-A phase.
Sensitivity: 10mV per degree (nominal).
Phase Jitter: < 3 deg rms (typical, A=100mV, B=100uV)

HP-IB Capability

Interface functions:	SH1 AH1 T6 TE0 L4 LE0 SR1 RL1 PP0 DC1 DT1 C0
Transfer Rate:	Normal Operation: Approximately 1 reading per 85ms. Measurement Conditions: Triggered measurement, default averaging. Maximum Rate: Approximately 1 reading per 18ms. Measurement conditions: Continuous output, averaging count 0, system format FP64, display rate off, equal steady state signals at A and B inputs, single output of phase or linear A or B voltage.

Probe Power Supply

Supplies:	+12 and -12 volts and ground

This supply is sufficient to operate 1 HP 85024A High Impedance Probe.

Environment

Temperature:	0 to 55 deg C (operating), -40 to 70 deg C (storage)
Humidity:	0 to 95%, non-condensing
Altitude:	0 to 4500m (operating), 0 to 15000m (storage)

RFI:	Conducted and radiated interference is within the requirements of Messempfaenger-Postverfuegung 526/527/79.
Power:	100, 120, 220 or 240V +5/-10%, 48 to 440 Hz, 40VA
Size:	Std: 133mm (5.25in) H x 425.5mm (16.75in) W x 473.3mm (18.65in) D Opt 001: 158.8mm (6.25in) H x 524.5mm (19.75in) W x 524.5mm (20.65in) D
Weight:	Std: 8.1kg (net) 11kg (shipping) Opt 001: 9.4kg (net) 12.5kg (shipping)