Table 1-1. MODEL 1900A SPECIFICATIONS

OPERATING RANGES

Frequency:
5 Hz to 80 MHz

Period:
5 Hz to 1 MHz single and multiple period averages

Totalize:
1 count to 999999 counts

INPUT CHARACTERISTICS

Sensitivity:
25 mV, typically 15 mV rms sine wave, 5 Hz to 80 MHz
Frequency and totalize: 200 mV P-P pulse amplitude with minimum pulse width of 20 nsec. Duty cycle > 10%.
Period: 200 mV P-P pulse amplitude with minimum pulse width of 200 nsec. Duty cycle > 10%.

Impedance:
1 MΩ shunted by less than 30 pf for signal levels < 500 mV decreasing to approx. 220K shunted by less than 40 pf for levels greater than 500 mV.

Filter:
1 MHz (3dB point) lowpass

Attenuator:
Decreases sensitivity by 10

Overload:
250V rms 5 Hz to 1 kHz decreasing to 20V at 80 MHz

RESOLUTION

Frequency:
Four manually selected gate times of:
10ms (100 Hz resolution)
100ms (10 Hz resolution)
1s (1 Hz resolution)
10s (0.1 Hz resolution)

Autorange position will automatically seek to fill all 6 digits but will not select a gate time greater than 1 second (1 Hz resolution)

Period:
Manual selection of single period through 10^3 periods averaged ratios:
10^0 single period (100 ns resolution)
10^1 periods averaged (10 ns resolution)
10^2 periods averaged (1 ns resolution)
10^3 periods averaged (100 ps resolution)

Autorange position will automatically seek to fill all 6 digits. Autoranging will not select a period average of greater than 10^2 averages.

Totalizing:

TIME BASE CHARACTERISTICS

Frequency: 10 MHz

Stability:
Aging Rate: $< \pm 5 \times 10^{-7}$ month
Short Term: $< \pm 5 \times 10^{-5}$ over 1 second
Temperature: $< \pm 5 \times 10^{-6}$ 0°C to 50°C
$< \pm 2 \times 10^{-6}$ (typical) 20°C to 30°C

Line Variation:
$< \pm 1 \times 10^{-7}$ for ±10% variation in line voltage

GENERAL

Display:
6 digit LED, leading zero suppression
Time between successive measurements is 200 ms plus measurement time

Annunciation:
MHz, kHz, msec, μs overflow

Automatic Features:
AUTORANGE:
In both frequency and period modes, autoranging includes a unique 20% hysteresis in its switching thresholds, to eliminate redundant up range/down range commands. This allows measurements to be made on signals containing large amounts of FM and PM.
Hysteresis memory can be reset by depressing the reset button.
AUTORESET:
A new measurement sequence is started every time a front panel button is activated.

Operating Temp: 0°C to +50°C (0°C to +40°C for -01 Battery option if operated from line.

Storage Temp: −40°C to +60°C

Power Requirements:
115/230 VAC ±10% - 100 VAC available - 50, 60, 400 Hz - 6.5 watts line model - 8.5 watts battery model

Fuses:
1/4A AC-line version-½ A slo-blo battery version

DIMENSIONS

Width:	8.55 inches	217.2 mm
Height:	2.52 inches	64.0 mm
Depth:	10.65 inches	270.5 mm
Weight:	2.75 lbs	1.2 Kg

DATA OUTPUT OPTION

8-4-2-1 BCD output from each digit, plus encoded decimal point and units annunciation information. All outputs CMOS/Low Power TTL compatible, high true. Print command is provided.

BATTERY