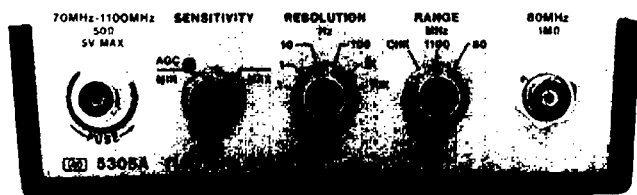


- 1100 MHz
- 25 mV rms sensitivity
- Fused input



### 5305A 1100 MHz frequency counter module

#### Input channel A (CW or burst)

**Range:** 70 MHz to 1100 MHz, prescaled by 16

#### Sensitivity:

- 10 mV to 500 MHz
- 25 mV to 1100 MHz

Signal must pass through zero.

Sensitivity can be varied continuously up to 5 V rms by adjusting sensitivity control.

Sensitivity can be set automatically by use of AGC (Automatic Gain Control) mode. Counter automatically transfers to AGC mode whenever amplifier is over driven, for added amplifier protection. Transfer of control, lights front panel indicator.

**Overload protection:** 5 V rms (Input circuitry fuse protected) Fuse is located in BNC connector, accessible from front panel.

#### Input channel B (CW or burst)

**Range:** 50 Hz to 80 MHz Direct

#### Sensitivity AGC (automatic gain control):

- 25 mV rms sine wave, 100 Hz to 50 MHz
- 50 mV rms sine wave, 50 Hz to 100 Hz and 50 MHz to 80 MHz

Sensitivity is adjusted automatically by AGC.

Effective up to input clipping level of 10 V p-p.

**Impedance:** 1 mΩ shunted by less than 40 pF

**Overload protection:** 250 V rms 50 Hz to 10 kHz, declining to 10 V rms above 10 MHz

#### Frequency measurement

##### Resolution (selectable):

.1, 1, 10, 100, 1000, 10000 Hz corresponding to 10, 1, 0.1, 0.01, 0.001, 0.0001 Sec Gate Times on the 80 MHz Channel and 160, 16, 1.6, 0.16, 0.016, 0.0016 Sec Gate Times on the 1100 MHz Channel

**Accuracy:**  $\pm 1$  digit  $\pm$  time base accuracy

**Display:** Hz, kHz, MHz with positioned decimal point

#### General

**CHECK:** Counts internal 10 MHz Reference Frequency.

**Operation temperature:** 0° to 50°C

**Power requirements:** AC operation: 115 or 230 V  $\pm 10\%$ , 50 to 400 Hz through 5300A or 5300B mainframe (nominally 10 watts including mainframe).

**Weight:** Net, 1.3 kg (2¾ lb). Shipping, 1.8 kg (4 lb)

**Dimensions:** See mainframe.

#### Price:

\$1100

**Option 001:** High Stability Time Base (for use with 5300A)

**Frequency:** 10 MHz

#### Stability:

**Aging rate:**  $< 1.2$  part in  $10^6$ /year

**Temperature:**  $< \pm 5$  parts in  $10^6$ , 0° to 50°C

**Line voltage:**  $< \pm 5$  parts in  $10^6$  for 10% line variation

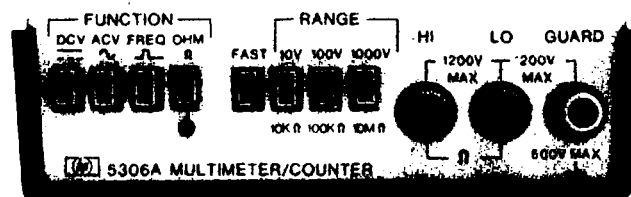
**Oscillator output:** 10 MHz, approximately 1 V rms at rear panel BNC, 200Ω source impedance

**External input:** 1 to 10 MHz, 1 V rms into 500Ω High stability time base is also available in the 5300B mainframe and can be used with other modules.

#### Price:

\$180

- DC volts, AC volts, ohms and frequency



### 5306A Digital multimeter/counter module

#### DC voltage

Range	Accuracy (60 days, 23°C $\pm 5^\circ\text{C}$ , $< 80\%$ RH)	Sensitivity
10 V	$\pm(0.03\%$ of reading + 0.003% of range)	100 $\mu\text{V}$
100 V	$\pm(0.03\%$ of reading + 0.003% of range)	1 mV
1000 V	$\pm(0.097\%$ of reading + 0.03% of range)	10 mV

**Temperature coefficient:**  $\pm (0.002\%$  of reading/ $^\circ\text{C}$  + 0.0002% of range/ $^\circ\text{C}$ )

**Sample times:** Normal: 0.5 sec, Fast: 0.05 sec

**Input:** Floating pair, 10 MΩ resistance, all ranges

**Effective common mode rejection (1 kΩ imbalance):** DC:  $> 80$  dB; 50 Hz or 60 Hz  $\pm 0.1\%$ :  $> 80$  dB

**Normal mode rejection:** 50 Hz or 60 Hz  $\pm 0.1\%$ :  $> 50$  dB

**Maximum input:** High to Low: 1100 V dc all ranges

**Low to Guard:**  $\pm 200$  V dc or peak ac

**Guard to Ground:**  $\pm 500$  V dc or 240 V rms at 50 or 60 Hz

#### AC voltage

Range	Frequency	Accuracy (60 days, 23°C $\pm 5^\circ\text{C}$ , $< 80\%$ RH)
10 V	40 Hz to 10 kHz	$\pm(0.98\%$ of reading + 0.02% of range)
	10 kHz to 100 kHz	$\pm(0.98\%$ of reading + 0.10% of range)
100 V	40 Hz to 500 Hz	$\pm(1.5\%$ of reading + 0.05% of range)
1000 V	40 Hz to 500 Hz	$\pm(1.5\%$ of reading + 0.05% of range)

#### Temperature coefficient:

**10V and 100V range:**  $\pm(0.5\%$  of reading + 0.003% of range/ $^\circ\text{C}$ )

**1000V range:**  $\pm(0.5\%$  of reading + 0.003% of range/ $^\circ\text{C}$ )

**Input impedance:** 10 MΩ shunted by  $< 75$  pF maximum

**Maximum input voltage:** (See DC voltage specification)

**Effective common mode rejection (1 kΩ imbalance):** DC:  $> 80$  dB; 50 Hz or 60 Hz  $\pm 0.1\%$ :  $> 50$  dB (10 V range)

#### Ohms

Range	Accuracy (60 days, 23°C, $\pm 5^\circ\text{C}$ , $< 80\%$ RH)	Sensitivity
10 kΩ	$\pm(0.5\%$ of reading + 0.003% of range)	0.1Ω
100 kΩ	$\pm(0.5\%$ of reading + 0.003% of range)	1Ω
10 MΩ	$\pm(0.75\%$ of reading + 0.003% of range)	100Ω

**Temperature coefficient:**  $\pm(0.0002\%$  of range/ $^\circ\text{C}$ )

**Current through unknown:** 1 mA on 10 kΩ range; 100  $\mu\text{A}$  on 100 kΩ range; 1  $\mu\text{A}$  on 10 MΩ range

**Overload protection:** 10 kΩ range; 240 V rms for 1 min, 140 V rms continuous (warning lamp indicates overvoltage) 100 kΩ, 10 MΩ ranges: 240 V rms continuous

#### Frequency

**Range:** 40 Hz to 10 MHz

**Sensitivity (min):** 50 mV rms to 1 MHz; 125 mV rms to 10 MHz

**Trigger level:** Automatically adjusts to 40% of peak level of input

**Overload protection:** 1000 V rms. On 10 V range: 240 V rms from 40 Hz to 400 kHz, 10 $\times$  V Hz from 400 kHz to 10 MHz

**Gate times:** Normal: 1 sec, Fast: 0.1 sec

**Accuracy:**  $\pm 1$  count  $\pm$  time base accuracy

**Power requirements:** Including mainframe, nominally 12 watts

**Weight:** Net, 1.1 kg (2.3 lb). Shipping, 1.7 kg (3.6 lb)

#### Price:

\$465