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**Data Sheet**

August 14, 2026

HP / AGILENT

# HP / Agilent 5386A 3 GHz Frequency Counter

The HP/Agilent 5386A is a dual-channel frequency counter covering Channel A from 10 Hz to 100 MHz and Channel B from 100 MHz to 3 GHz (3.5 GHz typical) with a 50 ohm microwave input. OEM data sheets specify 15 mVrms sensitivity on both channels through 3 GHz, a selectable A-channel attenuator, and an optional oven timebase (Option 004). RF and microwave frequency counting to 3 GHz, production GO/NO-GO frequency checks, and general-purpose CW frequency measurement with HP-IB automation. Channel B prescaled 3 GHz (3.5 GHz typical) input Timebase Output: 10 MHz, 25 mV pk-pk nominal into 50 ohm External Timebase Input: 10 MHz, 0.5 Vrms into 500 ohm Power Requirements: 30 VA maximum; 115/230 V selectable From Agilent/HP 5386A Frequency Counter data sheet. Channel B sensitivity above 3 GHz is typical; damage levels follow the OEM sheet.



|                    |                                                                                                       |
|--------------------|-------------------------------------------------------------------------------------------------------|
| MODEL              | CALIBRATION                                                                                           |
| HP / Agilent 5386A | Available on request                                                                                  |
| CONDITION          | STATUS                                                                                                |
| Used               | In stock                                                                                              |
| RFQ / SKU          | LISTING                                                                                               |
| 5386A              | <a href="https://aumictechlabs.com/products/5386a-2/">https://aumictechlabs.com/products/5386a-2/</a> |

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## This unit

The HP/Agilent 5386A is a 3 GHz frequency counter engineered for precise frequency and time interval measurements across service, calibration, and electronic testing applications. Built on gallium arsenide prescaler and attenuator technology, the instrument combines reciprocal counting and interpolation techniques to deliver high performance in a half-rack form factor. The 12-character LCD display offers direct sunlight readability with large character presentation, while dual-channel architecture supports measurements from 10 Hz to 3 GHz. Channel A handles low-

frequency signals via adjustable trigger and selectable 100 kHz low-pass filtering. Channel B extends measurement range to 3 GHz (3.5 GHz typical) with 50 ohm input impedance and dynamic range of 30.5 dB. Sensitivity reaches 15 mVrms (−23.5 dBm) at 100 MHz to 3 GHz, improving to 5 mVrms (−33.0 dBm) at typical 3.5 GHz operation. The standard time base oscillator includes 10 MHz reference output and external reference input capability. Optional ovenized oscillator (Option 004) provides enhanced frequency stability for demanding metrology work. HP-IB (IEEE-488) interface enables remote operation, control, and automated data transfer with configurable instrument addressing. Portable design facilitates deployment to remote measurement locations without compromising measurement integrity or ease of operation.

Technical Specifications  
Frequency Range: Channel A: 10 Hz to 100 MHz | Channel B: 100 MHz to 3 GHz (3.5 GHz typical)  
Sensitivity: Channel B (100 MHz–3 GHz): 15 mVrms (−23.5 dBm) | Channel B (3.5 GHz typical): 5 mVrms (−33.0 dBm) | Channel A: 15 mVrms sine wave or 45 mV pk-pk (5 ns minimum pulse width)  
Dynamic Range: Channel B: 30.5 dB | Channel A: 45 mV to 4 V pk-pk  
Maximum Input: Channel B: 0.5 Vrms (+7 dBm) Damage Level: AC >4 V (+25 dBm) | DC ±5 V  
Input Impedance: Channel B: 50 ohm nominal, VSWR <2.5:1 typical | Channel A (X1): 1 Mohm nominal || <25 pF | Channel A (X20): 500 kohm  
Input Coupling: AC Time Base: Standard oscillator with optional ovenized oscillator (Option 004) Reference Oscillator Output: 10 MHz External Reference Input: 10 MHz  
Key Features 12-character LCD display with sunlight readability and large character font Adjustable trigger level on Channel A 100 kHz low-pass filter on Channel A (switchable) BNC input (Channel A) and N-type connector (Channel B) Half-rack width form factor for portable field deployment  
Compatibility & Integration HP-IB (IEEE-488) interface supports remote operation and automated control Rear-panel switch for instrument address selection Maximum 15 instruments per IEEE-488 bus Compatible with HP-IB controllers and test automation systems

## 5386A Characteristics / Specifications

| PARAMETER                               | VALUE                                       |
|-----------------------------------------|---------------------------------------------|
| ChannelA Frequency Range                | 10 Hz to 100 MHz                            |
| ChannelB Frequency Range                | 100 MHz to 3 GHz (3.5 GHz typical)          |
| ChannelA Sensitivity Man Level Off      | 15 mVrms sine 10 Hz to 100 MHz              |
| ChannelA Pulse Sensitivity              | 45 mV pk-pk, 5 ns minimum pulse width       |
| ChannelA Dynamic Range                  | 45 mV to 4 V pk-pk times attenuator setting |
| ChannelA Impedance X                    | 500 kohm nominal parallel less than 25 pF   |
| ChannelA Attenuator                     | X1 or X20 nominal                           |
| ChannelB Sensitivity 100 MHz to 3 GHz   | 15 mVrms (-23.5 dBm)                        |
| ChannelB Sensitivity Typical to 3.5 GHz | 5 mVrms (-33.0 dBm)                         |
| ChannelB Maximum Input                  | 0.5 Vrms (+7 dBm)                           |
| ChannelB Impedance                      | 50 ohm nominal                              |
| ChannelB VSWR Typical                   | less than 2.5:1                             |
| ChannelB Damage Level AC                | greater than 4 V (+25 dBm)                  |
| ChannelB Damage Level DC                | +/-5 V                                      |
| Standard Timebase Aging                 | less than 1E-7 per month                    |
| Standard Timebase Temperature           | less than 2E-6, 0 to 40 C                   |
| Gate Times                              | 0.1, 1, or 10 s nominal                     |
| Timebase Output                         | 10 MHz, 25 mV pk-pk nominal into 50 ohm     |
| External Timebase Input                 | 10 MHz, 0.5 Vrms into 500 ohm               |
| Power Requirements                      | 30 VA maximum; 115/230 V selectable         |
| Net Weight                              | 3.4 kg (7 lb 8 oz)                          |
| Shipping Weight                         | 5.3 kg (11 lb 9 oz)                         |
| Operating Temperature Class             | 0 to 50 C                                   |
| Operating temperature                   | Class: 0 to 50 C                            |

# 5386A Specifications

| PARAMETER                                      | VALUE                                                                                                                                 |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| HP Agilent 5386A Frequency Counter             | Overview                                                                                                                              |
| Key Features                                   | Channel B prescaled 3 GHz (3.5 GHz typical) input                                                                                     |
| Manual or automatic trigger level on Channel A | Optional Option 004 ovenized 10 MHz timebase                                                                                          |
| Technical Specifications                       | Channel A Frequency Range: 10 Hz to 100 MHz                                                                                           |
| Notes                                          | From Agilent/HP 5386A Frequency Counter data sheet. Channel B sensitivity above 3 GHz is typical; damage levels follow the OEM sheet. |

# General Specifications & Supplementary Characteristics

| PARAMETER                   | VALUE                                                                                                                                                |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating temperature       | Class: 0 to 50 C                                                                                                                                     |
| Operating Temperature       | Class: 0 to 50 C                                                                                                                                     |
| Operating Temperature Class | 0 to 50 C Notes From Agilent/HP 5386A Frequency Counter data sheet. ChannelB sensitivity above 3 GHz is typical; damage levels follow the OEM sheet. |

# Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

| Specifications                                                           |                                             |
|--------------------------------------------------------------------------|---------------------------------------------|
| Specifications                                                           |                                             |
| PARAMETER                                                                | VALUE                                       |
| ChannelAFrequency Range                                                  | 10 Hz to 100 MHz                            |
| ChannelBFrequency Range                                                  | 100 MHz to 3 GHz (3.5 GHz typical)          |
| ChannelASensitivity Man Level Off                                        | 15 mVrms sine 10 Hz to 100 MHz              |
| ChannelAPulse Sensitivity                                                | 45 mV pk-pk, 5 ns minimum pulse width       |
| ChannelADynamic Range                                                    | 45 mV to 4 V pk-pk times attenuator setting |
| ChannelAImpedance X1                                                     | 1 Mohm nominal parallel less than 25 pF     |
| ChannelAImpedance X20                                                    | 500 kohm nominal parallel less than 25 pF   |
| ChannelAAttenuator                                                       | X1 or X20 nominal                           |
| ChannelBSensitivity 100 MHz to 3 GHz                                     | 15 mVrms (-23.5 dBm)                        |
| ChannelBSensitivity Typical to 3.5 GHz                                   | 5 mVrms (-33.0 dBm)                         |
| ChannelBMaximum Input                                                    | 0.5 Vrms (+7 dBm)                           |
| ChannelBImpedance                                                        | 50 ohm nominal                              |
| ChannelBVSWR Typical                                                     | less than 2.5:1                             |
| ChannelBDamage Level AC                                                  | greater than 4 V (+25 dBm)                  |
| ChannelBDamage Level DC                                                  | +/-5 V                                      |
| Standard Timebase Aging                                                  | less than 1E-7 per month                    |
| Standard Timebase Temperature                                            | less than 2E-6, 0 to 40 C                   |
| Option 004 Oven Aging: less than 3E-8 per month after 30 days continuous |                                             |
| Specifications                                                           |                                             |
| PARAMETER                                                                | VALUE                                       |
| Gate Times                                                               | 0.1, 1, or 10 s nominal                     |
| Timebase Output                                                          | 10 MHz, 25 mV pk-pk nominal into 50 ohm     |
| External Timebase Input                                                  | 10 MHz, 0.5 Vrms into 500 ohm               |
| Power Requirements                                                       | 30 VA maximum; 115/230 V selectable         |
| Net Weight                                                               | 3.4 kg (7 lb 8 oz)                          |

| PARAMETER                   | VALUE               |
|-----------------------------|---------------------|
| Shipping Weight             | 5.3 kg (11 lb 9 oz) |
| Operating Temperature Class | 0 to 50 C           |

Notes  
From Agilent/HP 5386A Frequency Counter data sheet. ChannelB sensitivity above 3 GHz is typical; damage levels follow the OEM sheet.

## Ordering Information

| OPTION     | DESCRIPTION              |
|------------|--------------------------|
| Option 004 | ovenized 10 MHz timebase |

### Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

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#### Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.