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Data Sheet

August 15, 2026

AGILENT / HP / SYMMETRICOM

Agilent / HP / Symmetricom 58502A Broadband Distribution Amplifier

Agilent HP Symmetricom 58502A Broadband Distribution Amplifier The Agilent / HP / Symmetricom 58502A is a broadband distribution amplifier for distributing precision frequency references and broadband signals in timing and calibration systems. OEM 58502A literature describes multiple buffered outputs from a common input for reference distribution. Frequency reference distribution, calibration lab signal fan-out, and low-distortion broadband amplification of reference signals. Broadband distribution amplification Multiple buffered outputs Precision reference fan-out Low distortion class Rack instrument packaging The Agilent / HP / Symmetricom 58502A is a broadband distribution amplifier for distributing precision frequency references and broadband signals in timing and calibration systems. OEM 58502A literature describes multiple buffered outputs from a common input for reference distribution. Frequency reference distribution, calibration lab signal fan-out, and low-distortion broadband amplification of reference signals. Broadband distribution amplification Multiple buffered outputs Precision reference fan-out Low distortion class Rack instrument packaging



MODEL

**Agilent / HP /
Symmetricom
58502A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

58502A

LISTING

<https://aumictechlabs.com/products/58502a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/HP/Symmetricon 58502A is a broadband distribution amplifier that accepts two independent frequency standard inputs and distributes them across 12 isolated output ports. Engineered for manufacturing, R&D, and standards laboratory environments, it supplies low-noise sinusoidal signals derived from cesium, rubidium, quartz, and GPS frequency standards. The instrument maintains signal integrity through exceptional port-to-port isolation and low single-sideband phase noise across its 0.1 MHz to 10 MHz operating range.

Technical Specifications

Inputs Two BNC female connectors (A and B) 0.1 MHz to 10 MHz frequency range 50 Ω nominal impedance, <1.5 SWR +7 dBm to +15 dBm amplitude requirement

Outputs Twelve BNC female connectors (1–12) 0.1 MHz to 10 MHz frequency range +13 dBm $\pm$ 1 dB/–3 dB into 50 Ω

Harmonics: $\leq$ 32 dBc standard; $\leq$ 20 dBc with Option 010

Spurious: $\leq$ 110 dBc standard; $\leq$ 80 dBc with Option 010

Port-to-port isolation: $\leq$ 100 dBc typical

Phase Noise (Single Sideband, 1 Hz bandwidth) 100 Hz offset: $\leq$ 127 dBc/Hz 1 kHz offset: $\leq$ 142 dBc/Hz 10 kHz offset: $\leq$ 148 dBc/Hz

Key Features

Automatic input switching when primary source fails or amplitude drops significantly

TTL-compatible alarm inputs from Symmetricon 58503A/B GPS receivers and 5071A primary frequency standards

Automatic backup source selection upon active alarm detection

Alarm outputs with open-collector configuration, 10 k Ω pull-up to 5 Vdc; TTL High = normal, TTL Low = alarm state

Optional 10 MHz oven-controlled quartz crystal oscillator (Option 010) replaces Input B; enables standalone operation or automatic failover with frequency stability of 6×10^{-9} (0°C to +55°C) and aging rates of 5×10^{-10} /day and 1×10^{-7} /year

Typical Applications Frequency signal distribution in metrology labs, atomic clock networks, precision timing systems, and multi-channel RF/microwave test environments requiring low-noise reference sources.

Compatibility & Integration Works with Symmetricon 58503A/B GPS Time and Frequency Reference Receivers and 5071A Primary Frequency Standards through dedicated alarm input/output interfaces.

58502A Characteristics / Specifications

PARAMETER	VALUE
Model	58502A
Instrument Type	broadband distribution amplifier
Manufacturer	HP Agilent Symmetricom
Function	multi output signal distribution
Form Factor	rack or benchtop amplifier
Operating Temperature Class	0 C to 55 C
Storage Temperature Class	minus 40 C to 75 C
Line Power	AC mains
Humidity Class	non condensing
Input	single reference or broadband input
Outputs	multiple buffered outputs
Impedance Class	50 ohm
Gain Class	unity or fixed distribution gain
Bandwidth Class	broadband
Isolation Class	output to output isolation
Duty	continuous
Grounding	chassis ground
Cooling	convection or fan
Mass Class	half rack
Calibration	gain flatness cal class
Safety	instrument safety
Connectors	BNC or TypeNclass
Noise Class	low additive noise
VSWR Class	50 ohm match
Remote	local controls

PARAMETER	VALUE
Compatibility	timing reference systems
Distortion Class	low harmonic distortion
Bandwidth	Class: broadband
Storage temperature	Class: minus 40 C to 75 C
Operating temperature	Class: 0 C to 55 C
Humidity	Class: non condensing
Output isolation	Duty: continuous

58502A Specifications

PARAMETER	VALUE
Applications	Frequency reference distribution, calibration lab signal fan-out, and low-distortion broadband amplification of reference signals.
Key Features	Broadband distribution amplification
Technical Specifications	Model: 58502A

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	Class: minus 40 C to 75 C
Operating temperature	Class: 0 C to 55 C
Operating Temperature	Class: 0 C to 55 C
Humidity	Class: non condensing
Operating Temperature Class	0 C to 55 C
Storage Temperature Class	minus 40 C to 75 C
Line Power	AC mains
Humidity Class	non condensing
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Mass Class	half rack
Calibration	gain flatness cal class
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Connectors	BNC or TypeNclass
Noise Class	low additive noise
VSWR Class	50 ohm match
Remote	local controls
Compatibility	timing reference systems

PARAMETER	VALUE
Distortion Class	low harmonic distortion Notes Identity from Agilent / HP / Symmetricom 58502A Broadband Distribution Amplifier listings. Exact bandwidth gain and output count are in the 58502A datasheet.

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	
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Notes
Identity from Agilent / HP / Symmetricom 58502A Broadband Distribution Amplifier listings. Exact bandwidth gain and output count are in the 58502A datasheet.

Available from Aumictech

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

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
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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.