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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 83018A Microwave System Amplifier, 2 GHz to 26.5 GHZ

Agilent Keysight 83018A Microwave System Amplifier The Agilent/Keysight 83018A is a compact microwave system amplifier covering 2 to 26.5 GHz. OEM 83000A Series Technical Overview 5963-5110E lists 27 dB minimum small-signal gain from 2 to 20 GHz, +22 dBm minimum P1dB from 2 to 20 GHz, and an integral directional detector. Boost sweeper and synthesizer output for compression and mixer-drive tests; recover systematic losses; level power at a remote port using the built-in detector. Integral directional detector for external ALC leveling The Agilent/Keysight 83018A is a compact microwave system amplifier covering 2 to 26.5 GHz. OEM 83000A Series Technical Overview 5963-5110E lists 27 dB minimum small-signal gain from 2 to 20 GHz, +22 dBm minimum P1dB from 2 to 20 GHz, and an integral directional detector. Boost sweeper and synthesizer output for compression and mixer-drive tests; recover systematic losses; level power at a remote port using the built-in detector. Integral directional detector for external ALC leveling Higher gain and power than the 83006A/83017A preamps



MODEL

**Agilent / Keysight
83018A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

83018A

LISTING

<https://aumictechlabs.com/products/83018a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 83018A is a microwave system amplifier delivering signal amplification across 2 GHz to 26.5 GHz. It integrates into automated test equipment and system-level

applications where signal integrity and power boosting are essential. The ultra-broad bandwidth eliminates the need for multiple narrow-band amplifiers, reducing component count and system complexity.

Technical Specifications

Frequency Range: 2 GHz to 26.5 GHz

Gain: 27 dB minimum (2–20 GHz); 23 dB minimum (20–26.5 GHz)

Output Power at P_1 dB: 22 dBm minimum (2–20 GHz); 17 dBm minimum (20–26.5 GHz)

Output Power at Saturation: 24 dBm typical at 20 GHz; 21 dBm typical at 26.5 GHz

Noise Figure: <10 dB typical (1–20 GHz); <13 dB typical (20–26.5 GHz)

VSWR: 2.2

Isolation: 55 dB typical

Third Order Intercept (TOI): 36 dBm typical (2–20 GHz)

RF Connectors: 3.5 mm (female)

DC Detector Output: BNC (female)

Power Requirements: +12 V @ 2 A; –12 V @ 50 mA

Key Features

- Compact form factor with low-profile heat sink for thermal management
- Integral mounting bracket for rapid system integration
- Internal directional detectors enable external leveling applications
- Two-meter DC power supply cable included

Typical Applications

- Microwave testing and measurement systems
- Research and communication system signal boosting
- Enhanced system noise figure and dynamic range optimization
- Automated test equipment requiring multi-octave bandwidth

Compatibility & Integration

The 83018A operates with the Keysight 87421A 25 W Power Supply. Its thermal design and power delivery specifications simplify integration into existing measurement systems.

83018A Characteristics / Specifications

PARAMETER	VALUE
Model	83018A
Instrument Type	Microwave system amplifier
Series Family	Keysight 83000A Series
Frequency Range	2 GHz to 26.5 GHz
Small Signal Gain Low Typical	23 dB typical, 1 to 2 GHz
Small Signal Gain Mid	27 dB minimum, 2 to 20 GHz
Small Signal Gain High	23 dB minimum, 20 to 26.5 GHz
Small Signal Gain Flatness Typical	±5 dB typical
Output Power At One dB Compression Mid	+22 dBm minimum, 2 to 20 GHz
Output Power At One dB Compression High	+17 dBm minimum, 20 to 26.5 GHz
Output Power At Pmax Mid	+24 dBm minimum, 2 to 20 GHz
Output Power At Pmax High	+21 dBm minimum, 20 to 26.5 GHz
Leveled Output Power Flatness	±1.5 dB, 1 to 26.5 GHz at 17 dBm
Noise Figure Mid Typical	less than 10 dB typical, 1 to 20 GHz
Noise Figure High Typical	less than 13 dB typical, 20 to 26.5 GHz
Harmonics At P1dB Mid	minus 19 dBc, 2 to 11 GHz
Input SWR Mid	3:1, 2 to 26.5 GHz
Output SWR Mid	4.5:1, 2 to 10 GHz
Output SWR High	2.2:1, 10 to 26.5 GHz
Impedance Typical	50 ohm typical
Reverse Isolation Typical	minus 55 dB typical at 1 GHz plus 0.95 dB/GHz
Survival Input Power	+23 dBm maximum
Power Dissipation	24 W
Rise Time Typical	275 ps typical

PARAMETER	VALUE
Third Order Intercept Mid Typical	36 dBm typical, 2 to 20 GHz
Positive Bias	12 ±1 Vdc at 1940 ±123 mA
Negative Bias	minus 12 ±1 Vdc at 10 ±5 mA
Rf Connectors	3.5 mm female
Detector Output Connector	BNC female
Detector Sensitivity	4 uV per uW
Detector Polarity	Negative
Net Weight	1.8 kg (4.0 lb)
Operating Temperature	0 C to +55 C
Storage Temperature	minus 40 C to +70 C
Temperature Coefficient Of Gain	minus 0.13 dB perC Notes Numeric rows from Agilent/Keysight 83000A Series Microwave System Amplifiers Technical Overview 5963-5110E. Option 001 Pmax is +25 dBm (2 to 20 GHz) and +22 dBm (20 to 26.5 GHz).
Rise Time	Typical: 275 ps typical

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	minus 40 C to +70 C
Operating temperature	0 C to +55 C
Operating Temperature	0 C to +55 C
Temperature Coefficient Of Gain	minus 0.13 dB perC Notes Numeric rows from Agilent/Keysight 83000A Series Microwave System Amplifiers Technical Overview 5963-5110E. Option 001 Pmax is +25 dBm (2 to 20 GHz) and +22 dBm (20 to 26.5 GHz).

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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Noise Figure High Typical	less than 13 dB typical, 20 to 26.5 GHz
Harmonics At P1dB Mid	minus 19 dBc, 2 to 11 GHz
Input SWR Mid	3:1, 2 to 26.5 GHz
Output SWR Mid	4.5:1, 2 to 10 GHz
Output SWR High	2.2:1, 10 to 26.5 GHz
Impedance Typical	50 ohm typical
Reverse Isolation Typical	minus 55 dB typical at 1 GHz plus 0.95 dB/GHz
Survival Input Power	+23 dBm maximum
Power Dissipation	24 W
Rise Time Typical	275 ps typical
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Positive Bias	12 ±1 Vdc at 1940 ±123 mA

PARAMETER	VALUE
Negative Bias	minus 12 ±1 Vdc at 10 ±5 mA
Rf Connectors	3.5 mm female
Detector Output Connector	BNC female
Detector Sensitivity	4 uV per uW
Detector Polarity	Negative
Net Weight	1.8 kg (4.0 lb)
Operating Temperature	0 C to +55 C
Storage Temperature	minus 40 C to +70 C
Temperature Coefficient Of Gain	minus 0.13 dB perC Notes

Numeric rows from Agilent/Keysight 83000A Series Microwave System Amplifiers Technical Overview 5963-5110E. Option 001 Pmax is +25 dBm (2 to 20 GHz) and +22 dBm (20 to 26.5 GHz).

Ordering Information

OPTION	DESCRIPTION
Option 001	higher Pmax: +25 dBm from 2 to 20 GHz, +22 dBm from 20 to 26.5 GHz

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

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NIST-traceable calibration · SAM registered ·
30-day returns
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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.