

**Aumictech**

Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 83006A Microwave System Amplifier, 10 MHz to 26.5 GHz

Agilent Keysight 83006A Microwave System Amplifier The Agilent/Keysight 83006A is a compact microwave system amplifier covering 10 MHz to 26.5 GHz. OEM 83000A Series Technical Overview 5963-5110E lists 20 dB minimum small-signal gain and +13 dBm minimum output power at 1 dB compression from 0.01 to 20 GHz. Recover cable, connector, and routing losses in RF/microwave ATE; boost source power to drive mixers, TWTs, and modulators; preamplify spectrum-analyzer and noise-figure paths. Ultrabroad 10 MHz to 26.5 GHz coverage in one gain block The Agilent/Keysight 83006A is a compact microwave system amplifier covering 10 MHz to 26.5 GHz. OEM 83000A Series Technical Overview 5963-5110E lists 20 dB minimum small-signal gain and +13 dBm minimum output power at 1 dB compression from 0.01 to 20 GHz. Recover cable, connector, and routing losses in RF/microwave ATE; boost source power to drive mixers, TWTs, and modulators; preamplify spectrum-analyzer and noise-figure paths. Ultrabroad 10 MHz to 26.5 GHz coverage in one gain block Low-profile heat sink and integral mounting bracket



MODEL

**Agilent / Keysight
83006A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

83006A

LISTING

<https://aumictechlabs.com/products/83006a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 83006A is a microwave system amplifier engineered to recover signal losses and boost RF/microwave signal strength across ultra-broadband frequencies from 10 MHz to 26.5 GHz. This compact, off-the-shelf amplifier delivers minimum 20 dB small-signal gain while maintaining controlled gain flatness - ± 5 dB from 10 MHz to 5 GHz and ± 3 dB from 5 GHz to 26.5 GHz. Its single broadband design eliminates the need for multiple narrow-band amplifiers, crossover networks, or multiple bias supplies, making it ideal for simplified ATE system integration.

Technical Specifications

Frequency Range: 10 MHz to 26.5 GHz Small Signal Gain: ≥ 20 dB minimum Gain Flatness: ± 5 dB (10 MHz–5 GHz); ± 3 dB (5–26.5 GHz) Output Power: +18 dBm (10 MHz–10 GHz typical); +13 dBm minimum (10 MHz–20 GHz at 1 dB compression) P1dB: >13 dBm to 20 GHz Noise Figure: 8 dB (0.1–18 GHz); <13 dB (0.01–0.1 GHz and 20–26.5 GHz) Harmonics: -25 dBc (10 MHz–11 GHz) Third Order Intercept (TOI): 30 dBm at 2 GHz Input SWR: 2.6:1 Output SWR: 2.8:1 (10 MHz–18 GHz) Reverse Isolation: -65 dB typical Survival Input Power: +23 dBm maximum Impedance: 50 Ω Power Dissipation: 6 W

Electrical Bias & Connectors

Bias Requirements: +12 V @ 450 mA; -12 V @ 50 mA (external power supply) Compatible Power Supplies: Keysight 87421A (25 W); Keysight 87422A (70 W) RF Connectors: 3.5 mm (female) Bias Cable: 2 meters standard

Physical Specifications

Weight: 0.64 kg (1.4 lbs)

Integration & Related Components

Pair with Keysight 83036C directional detector (10 MHz–26.5 GHz) or 87300C coupler with 8474C detector (1–26.5 GHz) for signal leveling and monitoring in automated test systems.

83006A Characteristics / Specifications

PARAMETER	VALUE
Model	83006A
Instrument Type	Microwave system amplifier
Series Family	Keysight 83000A Series
Frequency Range	10 MHz to 26.5 GHz
Small Signal Gain	20 dB minimum
Small Signal Gain Flatness Low Band	±5 dB maximum, 0.01 to 5 GHz
Small Signal Gain Flatness High Band	±3 dB maximum, 5 to 26.5 GHz
Output Power At One dB Compression Low	+13 dBm minimum, 0.01 to 20 GHz
Output Power At One dB Compression High	+10 dBm minimum, 20 to 26.5 GHz
Output Power At Pmax Low Typical	+18 dBm typical, 0.01 to 10 GHz
Output Power At Pmax Mid Typical	+16 dBm typical, 10 to 20 GHz
Output Power At Pmax High Typical	+14 dBm typical, 20 to 26.5 GHz
Noise Figure Low Band Typical	less than 13 dB typical, 0.01 to 0.1 GHz
Noise Figure Mid Band Typical	less than 8 dB typical, 0.1 to 18 GHz
Noise Figure High Band Typical	less than 13 dB typical, 18 to 26.5 GHz
Harmonics At P1dB Low	minus 25 dBc, 0.01 to 11 GHz
Input SWR	2.6:1
Output SWR Low	2.8:1, 0.01 to 18 GHz
Output SWR High	3.2:1, 18 to 26.5 GHz
Impedance Typical	50 ohm typical
Reverse Isolation Typical	minus 65 dB typical
Survival Input Power	+23 dBm maximum
Power Dissipation	6 W
Rise Time Typical	400 ps typical

PARAMETER	VALUE
Third Order Intercept Typical	30 dBm typical at 2 GHz; 20 dBm typical at 26.5 GHz
Positive Bias	12 ±1 Vdc at 410 ±85 mA
Negative Bias	minus 12 ±1 Vdc at 10 ±5 mA
Rf Connectors	3.5 mm female
Net Weight	0.64 kg (1.4 lb)
Operating Temperature	0 C to +55 C
Storage Temperature	minus 40 C to +70 C
Temperature Coefficient Of Gain	minus 0.07 dB perCCompatible Bias Supply: 87421A
Rise Time	Typical: 400 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 0.07 dB perCCompatible Bias Supply: 87421A Notes Numeric rows from Agilent/Keysight 83000A Series Microwave System Amplifiers Technical Overview 5963-5110E (June 2011). Specifications apply after one hour continuous operation; typical values are non-warranted.

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	
Technical Specifications	
PARAMETER	VALUE
Model	83006A
Instrument Type	Microwave system amplifier
Series Family	Keysight 83000A Series
Frequency Range	10 MHz to 26.5 GHz
Small Signal Gain	20 dB minimum
Small Signal Gain Flatness Low Band	±5 dB maximum, 0.01 to 5 GHz
Small Signal Gain Flatness High Band	±3 dB maximum, 5 to 26.5 GHz
Output Power At One dB Compression Low	+13 dBm minimum, 0.01 to 20 GHz
Output Power At One dB Compression High	+10 dBm minimum, 20 to 26.5 GHz
Output Power At Pmax Low Typical	+18 dBm typical, 0.01 to 10 GHz
Output Power At Pmax Mid Typical	+16 dBm typical, 10 to 20 GHz
Output Power At Pmax High Typical	+14 dBm typical, 20 to 26.5 GHz
Noise Figure Low Band Typical	less than 13 dB typical, 0.01 to 0.1 GHz
Noise Figure Mid Band Typical	less than 8 dB typical, 0.1 to 18 GHz
Noise Figure High Band Typical	less than 13 dB typical, 18 to 26.5 GHz
Harmonics At P1dB Low	minus 25 dBc, 0.01 to 11 GHz
Input SWR	2.6:1
Output SWR Low	2.8:1, 0.01 to 18 GHz
Output SWR High	3.2:1, 18 to 26.5 GHz
Impedance Typical	50 ohm typical
Reverse Isolation Typical	minus 65 dB typical
Survival Input Power	+23 dBm maximum
Power Dissipation	6 W
Rise Time Typical	400 ps typical
Third Order Intercept Typical	30 dBm typical at 2 GHz; 20 dBm typical at 26.5 GHz
Positive Bias	12 ±1 Vdc at 410 ±85 mA

PARAMETER	VALUE
Negative Bias	minus 12 $\pm$ 1 Vdc at 10 $\pm$ 5 mA
Rf Connectors	3.5 mm female
Net Weight	0.64 kg (1.4 lb)
Operating Temperature	0 C to +55 C
Storage Temperature	minus 40 C to +70 C
Temperature Coefficient Of Gain	minus 0.07 dB per C
Compatible Bias Supply	87421A

Specifications

PARAMETER	VALUE
Model	83006A
Instrument Type	Microwave system amplifier
Series Family	Keysight 83000A Series
Frequency Range	10 MHz to 26.5 GHz
Small Signal Gain	20 dB minimum
Small Signal Gain Flatness Low Band	$\pm$ 5 dB maximum, 0.01 to 5 GHz
Small Signal Gain Flatness High Band	$\pm$ 3 dB maximum, 5 to 26.5 GHz
Output Power At One dB Compression Low	+13 dBm minimum, 0.01 to 20 GHz
Output Power At One dB Compression High	+10 dBm minimum, 20 to 26.5 GHz
Output Power At Pmax Low Typical	+18 dBm typical, 0.01 to 10 GHz
Output Power At Pmax Mid Typical	+16 dBm typical, 10 to 20 GHz
Output Power At Pmax High Typical	+14 dBm typical, 20 to 26.5 GHz
Noise Figure Low Band Typical	less than 13 dB typical, 0.01 to 0.1 GHz
Noise Figure Mid Band Typical	less than 8 dB typical, 0.1 to 18 GHz
Noise Figure High Band Typical	less than 13 dB typical, 18 to 26.5 GHz
Harmonics At P1dB Low	minus 25 dBc, 0.01 to 11 GHz
Input SWR	2.6:1
Output SWR Low	2.8:1, 0.01 to 18 GHz
Output SWR High	3.2:1, 18 to 26.5 GHz
Impedance Typical	50 ohm typical
Reverse Isolation Typical	minus 65 dB typical
Survival Input Power	+23 dBm maximum
Power Dissipation	6 W

PARAMETER	VALUE
Rise Time Typical	400 ps typical
Third Order Intercept Typical	30 dBm typical at 2 GHz; 20 dBm typical at 26.5 GHz
Positive Bias	12 ±1 Vdc at 410 ±85 mA
Negative Bias	minus 12 ±1 Vdc at 10 ±5 mA
Rf Connectors	3.5 mm female
Net Weight	0.64 kg (1.4 lb)
Operating Temperature	0 C to +55 C
Storage Temperature	minus 40 C to +70 C
Temperature Coefficient Of Gain	minus 0.07 dB perCCompatible Bias Supply: 87421A

Notes
Numeric rows from Agilent/Keysight 83000A Series Microwave System Amplifiers Technical Overview 5963-5110E (June 2011). Specifications apply after one hour continuous operation; typical values are non-warranted.

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 14, 2026

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