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Data Sheet

August 15, 2026

COUGAR COMPONENTS

Cougar Components AR2589B

Teledyne Cougar AR2589B 100 to 2500 MHz High Linearity Amplifier The Teledyne Cougar AR2589 (AR2589B screened/package build) is a 50 ohm cascadable amplifier. The 2016 Cougar selection guide lists 100 to 2500 MHz, gain typically 20.5 dB with 19.0 dB minimum at 0 to 50 C and 18.5 dB minimum at minus 55 to plus 85 C, flatness 0.7/0.8 dB, noise figure 3.4/4.0/5.0 dB, P1dB 28.3/27.5/27.0 dBm, reverse isolation typically 34 dB, IP3/IP2 typically 39/55 dBm, SWR 1.8/1.9, and plus 15 V at typically 283 mA. The Teledyne Cougar AR2589 (AR2589B screened/package build) is a 50 ohm cascadable amplifier. The 2016 Cougar selection guide lists 100 to 2500 MHz, gain typically 20.5 dB with 19.0 dB minimum at 0 to 50 C and 18.5 dB minimum at minus 55 to plus 85 C, flatness 0.7/0.8 dB, noise figure 3.4/4.0/5.0 dB, P1dB 28.3/27.5/27.0 dBm, reverse isolation typically 34 dB, IP3/IP2 typically 39/55 dBm, SWR 1.8/1.9, and plus 15 V at typically 283 mA. Higher-power 100 MHz to 2.5 GHz drive stages where P1dB near plus 28 dBm and IP3 near plus 39 dBm are required.



MODEL

**Cougar
Components
AR2589B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

AR2589B

LISTING

<https://aumictechlabs.com/products/ar2589b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Cougar Components AR2589B is a RF amplifier engineered for wideband operation across 100 MHz to 3.5 GHz. Delivering 20 dB nominal small signal gain, the device amplifies signals

throughout its specified band with SMA input and output connectors for seamless integration into RF systems. Technical Specifications Model: AR2589B Manufacturer: Teledyne Cougar Frequency Range: 100 MHz – 3.5 GHz Small Signal Gain: 20 dB (Nominal) Input/Output Connectors: SMA Country of Origin: United States Key Features SMA connectors on both input and output ports Operates across a 3.4 GHz bandwidth from 100 MHz to 3.5 GHz Nominal 20 dB small signal gain Compact metal housing designed for efficient thermal management and RF shielding Typical Applications The AR2589B suits integration into telecommunications systems, radar platforms, and electronic warfare installations. Its wideband frequency coverage and gain specification position it for signal conditioning and power boost roles across microwave and UHF frequency bands. Compatibility & Integration The AR2589B functions as a component for larger electronic system integration. System designers must ensure 50-ohm impedance matching at input and output. Compatibility depends on power supply voltage, current requirements, and the specific frequency band and signal levels of the application. Teledyne Cougar components may fulfill the functional intent of comparable part numbers but are not guaranteed direct replacements without verification of electrical and physical characteristics.

AR2589B Characteristics / Specifications

PARAMETER	VALUE
Model	AR2589B
Base Model	AR2589
Instrument Type	Cascadable RF amplifier
Frequency Range	100 to 2500 MHz
System Impedance	50 ohm
Gain Typical	20.5 dB
Gain Min 0 To 50 C	19.0 dB
Gain Min Minus 55 To 85 C	18.5 dB
Gain Flatness Typical	0.7 dB
Gain Flatness Max	0.8 dB
Noise Figure Typical	3.4 dB
Noise Figure Max 0 To 50 C	4.0 dB
Noise Figure Max Minus 55 To 85 C	5.0 dB
P1db Typical	28.3 dBm
P1db Min 0 To 50 C	27.5 dBm
P1db Min Minus 55 To 85 C	27.0 dBm
Reverse Isolation Typical	34 dB
Third Second Intercept	39/55 dBm typical
Swr Typical	1.8
Swr Max	1.9
Dc Voltage	plus 15 V nominal
Dc Current	283 mA typical
Package Class	AR TO-8B amplifier
Manufacturer	Teledyne Cougar
Literature	Teledyne Cougar Amplifiers Product Selection Guide 2016 AR2589 row

PARAMETER	VALUE
Family	Cougar AR cascadable amplifiers
Form Factor	TO-8B cascadable amplifier
System Role	high linearity RF gain
Brand Lineage	Cougar Components Teledyne Microwave
Screening Class	B suffix screened/package build of AR2589
Operating Mode	50 ohm power amplifier stage

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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PARAMETER	VALUE
Model	AR2589B
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Frequency Range	100 to 2500 MHz
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Gain Typical	20.5 dB
Gain Min 0 To 50 C	19.0 dB
Gain Min Minus 55 To 85 C	18.5 dB
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Gain Flatness Max	0.8 dB
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P1db Typical	28.3 dBm
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Swr Max	1.9
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Package Class	AR T0-8B amplifier

PARAMETER	VALUE
Manufacturer	Teledyne Cougar
Literature	Teledyne Cougar Amplifiers Product Selection Guide 2016 AR2589 row
Family	Cougar AR cascadable amplifiers
Form Factor	T0-8B cascadable amplifier
System Role	high linearity RF gain
Brand Lineage	Cougar Components Teledyne Microwave
Screening Class	B suffix screened/package build of AR2589
Operating Mode	50 ohm power amplifier stage

Notes

Numeric rows from the Teledyne Cougar 2016 amplifier selection guide AR2589 line (100 to 2500 MHz, 20.5/19.0/18.5 dB, P1dB 28.3/27.5/27.0 dBm, IP3/IP2 39/55 dBm, 15 V / 283 mA). Compression plots are on the AR2589 data sheet pages.

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.