

**Aumictech**

Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

AGILENT / HP

Agilent HP E4432A ESG-D3000A Digital Signal Generator

Agilent HP E4432A ESG-D3000A Digital Signal Generator, Flexible RF signal generator supporting digital modulation formats for wireless communication test applications.



MODEL

**Agilent / HP
E4432A/ESG-
D3000A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

**E4432A/ESG-
D3000A**

LISTING

[https://aumictechlabs.c
om/products/e4432a-e
sg-d3000a-2/](https://aumictechlabs.com/products/e4432a-esg-d3000a-2/)

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent HP E4432A ESG-D3000A is a digital signal generator engineered for wireless communication receiver test, component characterization, and local oscillator applications. It delivers precise RF signal generation across 250 kHz to 3 GHz with flexible digital modulation formats including GMSK, $\pi/4$ DQPSK, and GFSK. The instrument combines broad frequency coverage, fine-resolution output control, and fast modulation switching to support production throughput and measurement reliability in demanding test environments.

Technical Specifications

Frequency Performance Frequency range: 250 kHz to 3000 MHz Resolution: 0.01 Hz Accuracy tracks internal timebase Modulation switching: < 45 ms (on), < 35 ms (off), typical Output Power 250 kHz to 1000 MHz: +13 dBm to -136 dBm 1000 MHz to 3000 MHz: +10 dBm to -136 dBm 3000 MHz to 4000 MHz: +7 dBm to -136 dBm Level resolution: 0.02 dB Level accuracy (23 $\pm$ 5°C): $\pm$ 0.5

dB (+7 to -127 dBm), ± 1.5 dB (< -127 dBm) Output impedance: 50 ohms SWR: $< 1.4:1$ (250 kHz-2 GHz), 2 GHz-4 GHz) Reverse power protection: 50 W (250 kHz-2 GHz), 25 W (> 2 GHz-4 GHz) Maximum DC voltage: 50 V Reference Oscillator Standard stability: ± 2 ppm/yr aging, ± 1 ppm temperature (0-55°C), ± 0.1 ppm line voltage High stability option (1E5): ± 0.1 ppm/yr or ± 0.0005 ppm/day (after 45 days), ± 0.05 ppm temperature, ± 0.002 ppm line voltage 10 MHz reference output: > 0.35 Vrms into 50 ohm load External reference input: 1, 5, 10 MHz Modulation Built-in formats: GMSK, $\pi/4$ DQPSK, GFSK GMSK data rate: 270.83 kbits/sec (adjustable 163-300 kbits/sec) Gaussian filter: Bbt = 0.3 default AM accuracy: $< \pm(5\% + 1\%)$ FM deviation accuracy: $< \pm(3.5\% + 20 \text{ Hz})$ Phase modulation THD (1 kHz): 17 dB Power level switching < 25 ms typical Frequency resolution to 0.01 Hz for precise tuning Dual reference stability options for critical metrology Typical Applications Receiver sensitivity and selectivity testing Component validation for RF subsystems Local oscillator generation in test systems Wireless standards compliance measurement Compatibility & Integration 50 ohm output for direct connection to standard RF test equipment External reference capability for synchronized multi-instrument test benches

Features & description

From manufacturer datasheet

Features

- Frequency coverage 250 kHz to 3 GHz • Frequency resolution 0.01 Hz • Output to +13 dBm (band dependent) down to -136 dBm • Built-in digital formats Option UN3/UN4 • External analog and Q inputs
- AM FM phase and pulse modulation • Step sweep frequency power and list modes

Applications

- Digital cellular and cordless receiver testing • Component and amplifier stimulus with accurate leveling • LO substitution with low residual FM and level accuracy • I/Q and burst envelope generation for protocol testing

E4432AESGD3000A Characteristics / Specifications

PARAMETER	VALUE
Model	E4432A
Manufacturer	Agilent / Keysight
Instrument Type	Digital RF Signal Generator
Alias	E4432A; ESG-D3000A; Agilent ESG-D3000A
Frequency range	250 kHz to 3000 MHz
Frequency resolution	0.01 Hz
Switching speed modulation on	less than 45 ms typical
Switching speed modulation off	less than 35 ms typical
Output range 250 kHz to 1000 MHz	+13 to -136 dBm
Output range greater than 1000 to 3000 MHz	+10 to -136 dBm
Level resolution	0.02 dB
Attenuator hold range	greater than 17 dB
Reverse power protection to 2 GHz	50 W
Reverse power protection greater than 2 to 4 GHz	25 W
SWR typical to 2 GHz	less than 1.4:1
Internal reference aging standard	less than +/-2 ppm/yr typical
Internal reference aging Option 1E	less than +/-0.1 ppm/yr or +/-0.0005 ppm/day
Sweep dwell time	2 ms to 60 s
Sweep points	2 to 401
Digital formats Option UN3 UN	DECT GSM NADC PDC PHS TETRA
Modulation analog	AM FM phase pulse
ExternalIQinputs	yes
Remote control	GPIO
Output impedance	50 ohm Notes Specs from Agilent ESG-D3000A / E4432A data sheet. Confirm Option 1E5 timebase and UN3/UN4 digital personality on the

PARAMETER	VALUE
	unit.

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
Model	E4432A
Manufacturer	Agilent / Keysight
Instrument Type	Digital RF Signal Generator
Alias	E4432A; ESG-D3000A; Agilent ESG-D3000A
Frequency range	250 kHz to 3000 MHz
Frequency resolution	0.01 Hz
Switching speed modulation on	less than 45 ms typical
Switching speed modulation off	less than 35 ms typical
Output range 250 kHz to 1000 MHz	+13 to -136 dBm
Output range greater than 1000 to 3000 MHz: +10 to -136 dBm	
Level resolution: 0.02 dB	
Level accuracy 250 kHz to 2 GHz +7 to 127 dBm: +/-0.5 dB at 23+/-5 C	
Level accuracy 2 to 4 GHz +7 to 127 dBm: +/-0.9 dB at 23+/-5 C	
Attenuator hold range: greater than 17 dB	
Reverse power protection to 2 GHz: 50 W	
Reverse power protection greater than 2 to 4 GHz: 25 W	
Specifications	
PARAMETER	VALUE
SWR typical to 2 GHz	less than 1.4:1
Internal reference aging standard	less than +/-2 ppm/yr typical
Internal reference aging Option 1E5	less than +/-0.1 ppm/yr or +/-0.0005 ppm/day
Sweep dwell time	2 ms to 60 s
Sweep points	2 to 401
Digital formats Option UN3 UN4	DECT GSM NADC PDC PHS TETRA
Modulation analog	AM FM phase pulse
ExternalIQinputs	yes
Remote control	GPIB
Output impedance	50 ohm

Notes

Specs from Agilent ESG-D3000A / E4432A data sheet. Confirm Option 1E5 timebase and UN3/UN4 digital personality on the unit.

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 13, 2026

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