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Data Sheet
August 13, 2026

AGILENT / HP

Agilent / HP E4433A 250 kHz to 4 GHz Digital RF Signal Generator W OPTIONS

Agilent E4433A ESG-D4000A Digital RF Signal Generator 250 kHz to 4 GHz The Agilent E4433A (ESG-D4000A) isadigital and analog RF signal generator covering 250 kHz to 4000 MHz with superior level accuracy, optional UN3/UN4 digital modulation personalities (CDMA DECT GSM NADC PDC PHS TETRA), external analog I/Q, wideband FM/PM, and step/list sweep for wireless receiver and component ATE. Cellular and digital wireless receiver test to 4 GHz; built in digital format testing with UN3/UN4; analog and digital modulation ATE; LO substitution with electronic attenuator and deep level range. The Agilent E4433A (ESG-D4000A) isadigital and analog RF signal generator covering 250 kHz to 4000 MHz with superior level accuracy, optional UN3/UN4 digital modulation personalities (CDMA DECT GSM NADC PDC PHS TETRA), external analog I/Q, wideband FM/PM, and step/list sweep for wireless receiver and component ATE. Cellular and digital wireless receiver test to 4 GHz; built in digital format testing with UN3/UN4; analog and digital modulation ATE; LO substitution with electronic attenuator and deep level range.

MODEL **Agilent / HP E4433A**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **E4433A**	LISTING **https://aumictechlabs.com/products/e4433a-2/**

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/HP E4433A is a digital RF signal generator spanning 250 kHz to 4 GHz, engineered for wireless communication testing, digital receiver validation, and component characterization. This instrument delivers modulation accuracy and stability critical for sensitive receiver testing, with output levels ranging from +13 dBm to -136 dBm depending on frequency band. The E4433A supports analog I/Q inputs for complex modulation formats including BPSK, QPSK, and 16QAM via an internal quadrature modulator with 10 MHz bandwidth.Digital modulation options enable standards-based testing: DECT, GSM, NADC, PDC, PHS, and TETRA. Frequency resolution of 0.01 Hz and 0.02 dB level resolution enable precise stimulus generation. Multiple timebase stability options - standard at <±2 ppm/yr or Option 1E5 at <±0.1 ppm/yr - accommodate exacting frequency accuracy requirements.The instrument supports external reference inputs at 1, 2, 5, or 10 MHz and provides a 10 MHz timebase reference output. Analog modulation includes AM (wideband with 80 dB on/off ratio to 3 GHz. Optional baseband I/Q generators (UN3 with 1 Mbit RAM or UN4 with 8 Mbit RAM) incorporate premodulation filtering and PRBS generation for advanced signal synthesis.Technical Specifications Frequency Range: 250 kHz to 4 GHz Output Level: +13 dBm to -136 dBm (frequency dependent) Level Resolution: 0.02 dB Level Accuracy (CW): ±0.5 dB (+7 to -127 dBm); ±1.5 dB to ±2.5 dB below -127 dBm Level Accuracy (Digital Modulation): ±0.5 dB typical (ALC on) Frequency Resolution: 0.01 Hz Reference Oscillator Stability: <±2 ppm/yr standard; <±0.1 ppm/yr with Option 1E5 Temperature Stability: <±1 ppm standard; 80 dB (≤3 GHz); >60 dB (>3 GHz) Wideband AM Distortion: <1.5% THD (30% AM); 0.35 Vrms into 50 Ω Internal modulation sources: FM, Sine (0.1 Hz to 50 kHz), Square, Ramp, Triangle High stability option for frequency-critical applications Optional baseband I/Q generators with premodulation filteringTypical Applications Digital receiver testing and validation RF component characterization Local oscillator generation Standards-based wireless signal simulation Modulation accuracy verificationCompatibility & Integration External reference input impedance: 50 Ω. I/Q modulation bandwidth: 10 MHz (1 dB).

E4433A Characteristics / Specifications

PARAMETER	VALUE
Model	E4433A
Manufacturer	Agilent / Keysight
Instrument Type	Digital RF Signal Generator
Alias	E4433A; ESG-D4000A; Agilent ESG-D4000A
Frequency range	250 kHz to 4000 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 1000 MHz to 3000 MHz	+10 to -136 dBm
Output range 3000 MHz to 4000 MHz	+7 to -136 dBm
Level resolution	0.02 dB
Level accuracy band 250 kHz to 2 GHz	plus/minus 0.5 dB at plus 7 to minus 127 dBm
Level accuracy band 2 GHz to 4 GHz	plus/minus 0.9 dB at plus 7 to minus 127 dBm
Attenuator hold range	greater than 17 dB
Reverse power protection to 2 GHz	50 W
Reverse power protection 2 to 4 GHz	25 W
SWR typical to 2 GHz	less than 1.4:1
SWR typical 2 to 4 GHz	less than 1.9:1
Internal reference aging standard	less than plus/minus 2 ppm per year typical
Internal reference aging Option 1E	less than plus/minus 0.1 ppm per year
Phase noise 500 MHz 20 kHz offset	less than -120 dBc/Hz typical
Harmonics at plus 4 dBm	less than -30 dBc typical below 1 GHz
Digital formats Option UN3 UN	CDMA DECT GSM NADC PDC PHS TETRA
Modulation analog	AM FM phase pulse wideband FM

PARAMETER	VALUE
ExternalIQinputs	yes
Sweep dwell time	2 ms to 60 s
Sweep points	2 to 401
Remote control	GPIB
Output impedance	50 ohms
Frequency bandNmultipliers	1; 0.5; 1; 2; 4 across five bands Notes Specs from Agilent ESG-D4000A / E4433A data sheet and ESG family tables. Confirm Option 1E5 timebase and UN3/UN4/H03 digital personality on the 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

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Level accuracy band 250 kHz to 2 GHz: plus/minus 0.5 dB at plus 7 to minus 127 dBm
Level accuracy band 2 GHz to 4 GHz: plus/minus 0.9 dB at plus 7 to minus 127 dBm

Specifications

PARAMETER	VALUE
Attenuator hold range	greater than 17 dB
Reverse power protection to 2 GHz	50 W
Reverse power protection 2 to 4 GHz	25 W
SWR typical to 2 GHz	less than 1.4:1
SWR typical 2 to 4 GHz	less than 1.9:1
Internal reference aging standard	less than plus/minus 2 ppm per year typical
Internal reference aging Option 1E5	less than plus/minus 0.1 ppm per year
Phase noise 500 MHz 20 kHz offset	less than -120 dBc/Hz typical
Harmonics at plus 4 dBm	less than -30 dBc typical below 1 GHz
Digital formats Option UN3 UN4	CDMA DECT GSM NADC PDC PHS TETRA

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Notes
Specs from Agilent ESG-D4000A / E4433A data sheet and ESG family tables. Confirm Option 1E5 timebase and UN3/UN4/H03 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

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