

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E4436B

The Agilent/Keysight E4436B is a 3 GHz ESG-DP series digital RF signal generator that combines high spectral purity with comprehensive analog and digital modulation capabilities. Designed for R&D, manufacturing, and troubleshooting, the E4436B provides robust digital modulation capabilities, a dual arbitrary waveform generator, real-time I/Q baseband processing, and extensive format support including Bluetooth, cdma2000, GSM/EDGE, and W-CDMA.

SPECIFICATIONS

Frequency

Minimum Frequency	250 kHz Hz
Maximum Frequency	3 GHz Hz
Frequency Resolution	0.01 Hz

Output

Maximum Output Power	+13 dBm (Standard) dBm
Output Power Range	+13 dBm to -136 dBm (Standard)
Phase Noise	<-134 dBc/Hz at 1 GHz, 20 kHz offset (Typical)

Modulation

Modulation	AM, FM, Phase, Pulse, Custom Digital (FSK, MSK, PSK, QAM)
Sweep Modes	Step, List (Frequency and Power)
External I/Q Input Bandwidth	10 MHz (1 dB)
Internal Modulation Waveforms	Sine, Square, Triangle, Ramp, Noise

General

Reference Oscillator	10 MHz
Interfaces	GPIO (IEEE-488), RS-232

Physical

Power Supply	90 to 254 VAC (50/60 Hz); 90 to 132 VAC (400 Hz)
Dimensions (W×H×D)	426 × 133 × 432 mm
Weight	16.5 kg

Vector / Digital Modulation (I/Q)

Baseband Generator Capability	Optional dual arbitrary waveform generator and/or real-time I/Q baseband generator
Baseband Generator Sample Rate	40 MHz
Baseband Generator DAC Resolution	14-bit
Baseband Generator Memory (Playback)	1 Msample (4 MB)
Custom Digital Modulation Variants	>15 variations of FSK, MSK, PSK, and QAM
Supported Firmware Personalities	3GPP W-CDMA, cdma2000, IS-95-A, GSM/EDGE (Option Dependent)
Supported Software Personalities	Bluetooth, 1xEV-DO (Signal Studio Option Dependent)

Amplitude Specifications

Output Power Resolution	0.02 dB
Output Impedance	50 Ω (Nominal)

Connectivity and Interfaces

RF Output Connector	Type-N (female)
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General and Environmental Specifications

Operating Temperature Range	0 °C to 55 °C
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Spectral Purity

Harmonics (Output $\leq$ +4 dBm)	<-30 dBc
Sub-harmonics (> 1 GHz)	<-40 dBc
Non-harmonics (> 10 kHz offset, $\leq$ 1 GHz)	<-65 dBc

RF Output

Reverse Power Protection (RF)	50 W
Reverse Power Protection (DC)	50 VDC

Power

Maximum Power Consumption	200 W
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Environmental

Storage Temperature Range	-40 °C to +71 °C
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Options

High Stability Timebase Option	Option 1E5
High Performance Pulse Modulation Option	Option 1E6
Bit Error Rate Tester (BERT) Option	Option UN7
Real-Time I/Q Baseband Generator Option	Option UN8
Dual Arbitrary Waveform Generator Option	Option UND
High Output Power Option (with mechanical attenuator)	Option UNB

Reference Oscillator

Timebase Aging Rate (Option 1E5)	< ±0.1 ppm/year
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TECHNOLOGY

RF / Microwave

APPLICATIONS

Signal Generation / Digital Modulation

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.