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Data Sheet
August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 8782B Vector Signal Generator, 1 MHz to 250 MHz

HP Agilent Keysight 8782B Vector Signal Generator 1 MHz to 250 MHz The HP/Agilent 8782B isavector signal generator covering 1 MHz to 250 MHz for digital microwave and RF IF receiver tests. OEM descriptions list built-in digital modulation from BPSK to 256QAM, analog I/Q typically dc to 100 MHz, a built-in PRBS generator, pulse and scalar AM, and an optional 1 GHz LO for up-conversion to 750 to 1250 MHz. Digital IF receiver tests to 250 MHz, PRBS-driven QAM/PSK production, pi/4 DQPSK cellular IF work with 11846B, and vector impairment simulation. The HP/Agilent 8782B isavector signal generator covering 1 MHz to 250 MHz for digital microwave and RF IF receiver tests. OEM descriptions list built-in digital modulation from BPSK to 256QAM, analog I/Q typically dc to 100 MHz, a built-in PRBS generator, pulse and scalar AM, and an optional 1 GHz LO for up-conversion to 750 to 1250 MHz. Digital IF receiver tests to 250 MHz, PRBS-driven QAM/PSK production, pi/4 DQPSK cellular IF work with 11846B, and vector impairment simulation. Built-in PRBS so BPSK through 256QAM needs no external data source

MODEL **Agilent / Keysight 8782B**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **8782B**	LISTING **https://aumictechlabs.com/products/8782b-2/**

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

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 8782B Vector Signal Generator delivers complex modulated signal generation across 1 MHz to 250 MHz with 1 Hz frequency resolution. This instrument provides precise vector modulation control for testing communication systems, components, and RF devices across multiple digital and analog modulation formats.Technical Specifications Frequency Performance Range: 1 MHz to 250 MHz Resolution: 1 Hz Switching time: < 170 ms typical Frequency accuracy and stability matched to internal reference oscillator RF Output Level range: +7 dBm to -100 dBm (+10 dBm typical) Output accuracy: ±1.5 dB (≥ +30 dBm), ±2.0 dB (< -30 dBm to ≥ -80 dBm), ±2.4 dB (< -80 dBm) Flatness: < ±1 dB Resolution: 0.1 dB Output impedance: 50 ohms nominal Output SWR: 60 dB below selected level (for levels > -40 dBm) Spectral Purity Residual SSB phase noise (1 Hz BW): -115 dBc @ 1 kHz offset, -125 dBc @ 10 kHz offset (140 MHz carrier); -125 dBc @ 1 kHz offset, -130 dBc @ 10 kHz offset (1–250 MHz carrier) Residual FM: < 4 Hz RMS (300 Hz to 3 kHz bandwidth) Harmonics: < -30 dBc Non-harmonic spurious signals: -40 dBm) Internal Reference Oscillator Aging rate: < 1.5×10^{-9} per day (after 10-day warm-up) Temperature stability: < 1×10^{-7}/°C typical Line voltage effects: < 1×10^{-8}/V typicalKey Features Modulation Capability Supported formats: BPSK, QPSK, 8PSK, 16QAM, 64QAM, 256QAM, 9PRS, 25PRS, 49PRS, 81PRS, pulse, vector, and scalar (AM) modulation Arbitrary vector modulation bandwidth: Up to 100 MHz (200 MHz typical) Impairments simulation: Quadrature error, phase lock error Built-in PRBS generator for digital modulation without external data sources Unmodulated coherent carrier available for IF signal demodulation Vector Modulation (Analog I/Q Inputs) Frequency response: DC to 50 MHz (1 dB) @ 140 MHz carrier; DC to 100 MHz (1 dB) typical DC accuracy: 1.5% of full scale (typically 2% after calibration at 25°C with < 5°C drift) DC residual: 1% of full scale (typically 1.3% after calibration at 25°C with < 5°C change) Sensitivity: ±0.5 V into 50 ohms (±100% full scale magnitude) Input impedance: 50 ohms nominal Input SWR: < 1.5:1 (DC to 50 MHz) Quadrature adjustment: 80° to 100° ±0.2° accuracyTypical Applications Communication system design and validation, RF component testing, digital modulation evaluation, and receiver performance characterization across VHF and UHF bands.Compatibility & Integration 50 ohm system impedance. Supports analog I/Q vector inputs and coherent carrier output for modulation and demodulation applications.

Features & description

From manufacturer datasheet

Built-in PRBS so BPSK through 256QAM needs no external data source

AnalogIandQtypically dc to 100 MHz (200 MHz typical vector bandwidth) Optional 1 GHz LO output for 750 to 1250 MHz RF bands Unmodulated coherent carrier for demodulating IF signals Simulated quadrature error and phase-lock error impairments Technical Specifications Instrument Type: Vector signal generator Series Family: HP Agilent 8780A/8782B Frequency Range: 1 MHz to 250 MHz IF Testing Range: 1 to 250 MHz Digital Formats: BPSK, QPSK, 8PSK, 16QAM, 64QAM, 256QAM, 9PRS, 25PRS, 49PRS, and 81PRS Additional Modulation: pulse, vector, and scalar AM PRBS Generator: built in AnalogIQInputs: 50 MHz specified; typically dc to 100 MHz Vector Modulation Bandwidth: up to 100 MHz (200 MHz typical) Optional LO Output: 1 GHz for up-conversion to 750 to 1250 MHz Coherent Carrier: unmodulated coherent carrier available Impairment Simulation: quadrature error and phase lock error CompanionIQGenerator: 11846B pi/4 DQPSK for NADC dual-mode cellular Remote Interface: HP-IB Form Factor: benchtop vector source Architecture: built-in vector I/Q modulator plus synthesizer Digital Data Inputs: parallel or serial Brand Lineage: HP / Agilent Output Frequency Minimum: 1 MHz Output Frequency Maximum: 250 MHz Related 8782A: earlier vector generator in the same IF family

8782B Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Vector signal generator
Series Family	HP Agilent 8780A/8782B
Frequency Range	1 MHz to 250 MHz
IF Testing Range	1 to 250 MHz
Digital Formats	BPSK, QPSK, 8PSK, 16QAM, 64QAM, 256QAM, 9PRS, 25PRS, 49PRS, and 81PRS
Additional Modulation	pulse, vector, and scalar AM
PRBS Generator	built in
AnalogIQInputs	50 MHz specified; typically dc to 100 MHz
Vector Modulation Bandwidth	up to 100 MHz (200 MHz typical)
Coherent Carrier	unmodulated coherent carrier available
Impairment Simulation	quadrature error and phase lock error
CompanionIQGenerator	11846B pi/4 DQPSK for NADC dual-mode cellular
Remote Interface	HP-IB
Form Factor	benchtop vector source
Architecture	built-in vector I/Q modulator plus synthesizer
Digital Data Inputs	parallel or serial
Brand Lineage	HP / Agilent
Output Frequency Minimum	1 MHz
Output Frequency Maximum	250 MHz
Related 8782A	earlier vector generator in the same IF family
Programming	HP-IB
Calibration Note	exact output power, EVM, and frequency resolution belong on the 8782B data sheet/certificate
Scalar Modulation	AM
Pulse Modulation	yes

PARAMETER	VALUE
Operating Context	digital microwave and RF receiver IF test
Bandwidth	up to 100 MHz (200 MHz typical)

8782B Specifications

PARAMETER	VALUE
Key Features	Built-in PRBS so BPSK through 256QAM needs no external data source
Optional 1 GHz LO output for 750 to 1250 MHz RF bands	Unmodulated coherent carrier for demodulating IF signals
Technical Specifications	Instrument Type: Vector signal generator

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
Instrument Type	Vector signal generator
Series Family	HP Agilent 8780A/8782B
Frequency Range	1 MHz to 250 MHz
IF Testing Range	1 to 250 MHz
Digital Formats	BPSK, QPSK, 8PSK, 16QAM, 64QAM, 256QAM, 9PRS, 25PRS, 49PRS, and 81PRS
Additional Modulation	pulse, vector, and scalar AM
PRBS Generator	built in
AnalogIQInputs	50 MHz specified; typically dc to 100 MHz
Vector Modulation Bandwidth	up to 100 MHz (200 MHz typical)

Optional LO Output: 1 GHz for up-conversion to 750 to 1250 MHz

Specifications

PARAMETER	VALUE
Coherent Carrier	unmodulated coherent carrier available
Impairment Simulation	quadrature error and phase lock error
CompanionIQGenerator	11846B pi/4 DQPSK for NADC dual-mode cellular
Remote Interface	HP-IB
Form Factor	benchtop vector source
Architecture	built-in vector I/Q modulator plus synthesizer
Digital Data Inputs	parallel or serial
Brand Lineage	HP / Agilent
Output Frequency Minimum	1 MHz
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Related 8782A	earlier vector generator in the same IF family
Programming	HP-IB

PARAMETER	VALUE
Calibration Note	exact output power, EVM, and frequency resolution belong on the 8782B data sheet/certificate
Scalar Modulation	AM
Pulse Modulation	yes
Operating Context	digital microwave and RF receiver IF test

Notes
Numeric rows from HP/Agilent 8782B vector signal generator product descriptions (1 to 250 MHz, BPSK to 256QAM, I/Q typically dc to 100 MHz, optional 1 GHz LO). Leveled dBm and synthesizer resolution belong on the 8782B data sheet/calibration certificate.

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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