

KEYSIGHT TECHNOLOGIES (AGILENT HP)

11715A

The Keysight (Agilent/HP) 11715A is a dedicated AM/FM test source designed primarily for the performance verification, testing, and calibration of the Agilent 8901A/B modulation analyzer and Agilent 8902A measuring receiver. It can also function as a high-quality modulated test oscillator, offering very flat, wide-bandwidth, and low-distortion amplitude- or frequency-modulated RF signals. Its architecture incorporates a low-noise voltage-controlled oscillator (VCO), two digital dividers, and a double-balanced mixer.

SPECIFICATIONS

Frequency

Minimum Frequency	11 MHz Hz
Maximum Frequency	432 MHz Hz
Frequency Resolution	Continuously variable (analog tuning)
AM FM ÷ 32 Output Frequency Range	11 to 13.5 MHz
FM ÷ 4 Output Frequency Range	88 to 108 MHz
FM Output Frequency Range	352 to 432 MHz
VCO Typical Tuning Range	330 to 470 MHz
FM Broadcast Band Coverage	88 to 108 MHz covered by the FM divide-by-4 output

Output

Maximum Output Power	+4 dBm (typical, AM/FM Output) dBm
Output Power Range	AM/FM Output: > 0 dBm; FM ÷ 4 Output: > -2 dBm; FM ÷ 32 Output: > -15 dBm

Modulation

Modulation	AM, FM
FM Sensitivity (FM ÷ 4 Output)	100 kHz peak deviation per volt peak
FM Sensitivity (FM ÷ 32 Output)	12.5 kHz peak deviation per volt peak

General

Interfaces	AM/FM Output (Type-N female), FM ÷ 4 Output (BNC female), FM ÷ 32 Output (BNC female), VCO Output (BNC female), AM Input (BNC female), FM Input (BNC female), VCO Tune Input (BNC female)
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Physical

Dimensions (W×H×D)	88 mm × 213 mm × 345 mm mm
Weight	2.7 kg kg

Analog Modulation

AM Distortion (50% depth, 20 Hz to 100 kHz rates)	<0.05% THD (<-66 dB)
AM Distortion (95% depth, 20 Hz to 100 kHz rates)	<0.1% THD (<-60 dB)
FM Coupling and Bandwidth	Directly coupled external modulation to VCO tune input, providing wide bandwidth and low phase shift
Incidental AM	Extremely low incidental AM design

Hardware

Key Internal Components	Low-noise voltage-controlled oscillator (VCO), 2 digital dividers, double-balanced mixer
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RF Outputs

AM/FM Output Level	> 0 dBm (typically > +4 dBm into 50 Ω)
FM $\div$ 4 Output Level	> -2 dBm (typically > +2 dBm into 50 Ω)
FM $\div$ 32 Output Level	> -15 dBm (typically > -10 dBm into 50 Ω)
VCO Output Level	> +3 dBm into 50 Ω

Modulation Inputs

FM Input Impedance	600 Ω nominal
AM Input Impedance	600 Ω nominal
VCO Tune Input Range	0 to -15 V (100 k Ω nominal input impedance)

Environmental

Operating Temperature Range	0 °C to +55 °C
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Performance

FM Distortion (FM $\div$ 4 Output)	< 0.05% (20 Hz to 100 kHz rates, 100 kHz peak deviation)
FM Distortion (FM $\div$ 32 Output)	< 0.05% (20 Hz to 100 kHz rates, 12.5 kHz peak deviation)

Power Requirements

DC Power Consumption	+15 Vdc $\pm$ 5% @ 150 mA, -15 Vdc $\pm$ 5% @ 50 mA
Power Source	Supplied by HP 8901A/B or 8902A modulation analyzers via interface cable

TECHNOLOGY

VCO-based signal generator with frequency dividers and double-balanced mixer

APPLICATIONS

Performance testing and calibration of Agilent 8901A/B modulation analyzers and Agilent 8902A measuring receivers

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