KEYSIGHT TECHNOLOGIES (AGILENT HP)

8347A

The Keysight (Agilent) 8347A is a general-purpose broadband RF instrumentation amplifier operating from 100 kHz to 3 GHz. It is designed to provide high gain and power to overcome systematic losses, drive high-power devices, and improve measurement dynamic range in test applications.

SPECIFICATIONS

Physical

Power Supply	100 / 120 / 220 / 240 VAC (±10%), 48 - 66 Hz
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	213 mm × 102 mm × 297 mm mm
Weight	3.6 kg

RF Performance Specifications

Frequency Range	100 kHz to 3 GHz
Power Output at 1dB Compression (P1dB)	≥ +20 dBm
Third-Order Intercept Point (OIP3)	+30 dBm
Noise Figure (10 MHz to 3 GHz)	< 15 dB
Noise Figure (Below 10 MHz)	< 20 dB
Nominal Gain (10 MHz to 3 GHz)	≥ 25 dB
Nominal Gain (100 kHz to 10 MHz)	≥ 22 dB
Gain Flatness (10 MHz to 3 GHz)	±1.5 dB
Gain Flatness (100 kHz to 10 MHz)	±2.5 dB

Port Characteristics

Input VSWR (10 MHz to 3 GHz)	< 1.5
Input VSWR (100 kHz to 10 MHz)	< 3.0
Input Impedance	50 Ω nominal
Output Impedance	50 Ω nominal
RF Input Connector Type	Type-N female
RF Input Connector Location	Front panel
RF Output Connector Type	Type-N female
RF Output Connector Location	Front panel

Physical Characteristics

Form Factor	Benchtop (half-rack width)

RF Specifications

Output VSWR (10 MHz to 3 GHz)	< 1.5:1
Output VSWR (100 kHz to 10 MHz)	< 2.0:1
Maximum Continuous RF Input Power	+22 dBm
Harmonics (at +20 dBm output)	<-25 dBc

Environmental

Storage Temperature Range	-40 to +75 °C

Performance

Internal Leveling Range	+10 to +20 dBm
Internal Leveling Flatness	±0.5 dB
External ALC Detector Polarity	Positive or negative, rear-panel switch selectable
External ALC Bandwidth	30 kHz (typical)
Output VSWR (Leveled, 10 MHz to 3 GHz)	< 1.3
Output VSWR (Leveled, 100 kHz to 10 MHz)	< 2.0
Power Output at 1dB Compression (100 kHz to 10 MHz)	≥ +17 dBm
Maximum DC Input Voltage	±10 V
Non-Harmonic Spurious	<-60 dBc (typical)

Options

Option 001	Rear panel RF input and output connectors

TECHNOLOGY

Solid-State RF Amplifier

APPLICATIONS

Broadband general-purpose amplification and network analyzer dynamic range improvement