

AMPLIFIERS

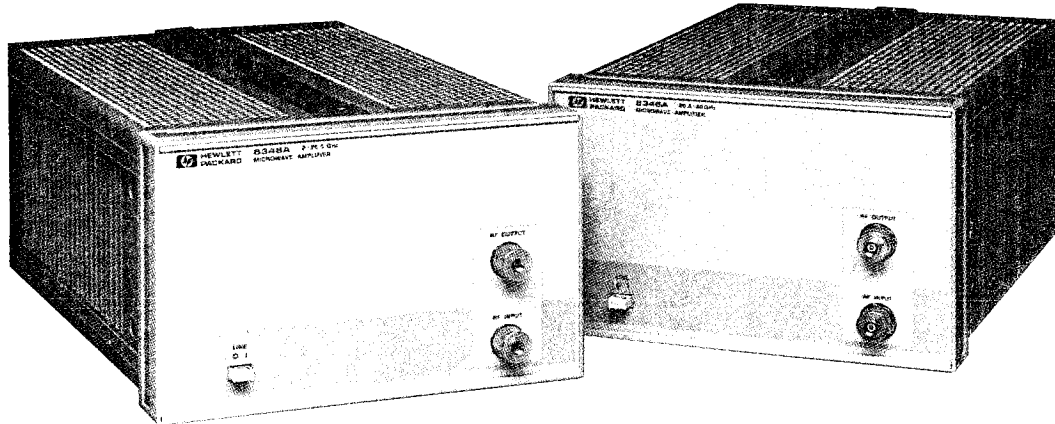
Microwave, mm-Wave Amplifiers

HP 8346A, 8348A

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- Broadband 2.0 to 26.5 GHz coverage
- > 23 dB gain
- > +25 dBm (> 300 mW) across 2 to 20 GHz
- < 13 dB typical noise figure

- Broadband 26.5 to 40 GHz coverage
- +17 dBm output power to 38 GHz
- Low harmonics
- 2.4-mm coaxial connectors



HP 8348A and HP 8346A

HP 8348A Microwave Preamplifier

Specifications

Frequency Range:	2.0 to 26.5 GHz
Maximum Output Power (at 0 dBm input)	
1.0 to 2.0 GHz:	≥ +20 dBm (typical)
2.0 to 20.0 GHz:	≥ +25 dBm
20.0 to 26.5 GHz:	≥ +23 dBm
Power Flatness (at 0 dBm input):	±4 dB (typical)
Minimum Small Signal Gain (at -15 dBm input)	
1.0 to 2.0 GHz:	≥ 20 dB (typical)
2.0 to 20.0 GHz:	≥ 25 dB
20.0 to 26.5 GHz:	≥ 23 dB
Spectral Purity Harmonics Typical (at maximum specified output power)	
1.0 to 2.0 GHz:	< -20 dBc
2.0 to 26.5 GHz:	> -15 dBc
Third-Order Intercept	
2.0 to 20.0 GHz:	+36 dBm, nominal
20.0 to 26.5 GHz:	+31 dBm, nominal
Maximum Continuous Input Microwave power:	+22 dBm
dc voltage:	±10 V
Input and Output Impedance:	50 Ω, nominal
Input SWR:	3:1 (typical)
Output SWR (typical)	
1.0 to 2.0 GHz:	6:1
2.0 to 20.0 GHz:	4.5:1
20.0 to 26.5 GHz:	2:1
Reverse Isolation:	> 50 dB (typical)
Noise Figure (typical)	
1.0 to 20 GHz:	< 10 dB
20 to 26.5 GHz:	< 13 dB

Pulse Transmission Capability

Rise/Fall Time:	< 5 ns (typical)
Delay Time:	< 5 ns (typical)

General

Input and Output Connectors: 3.5 mm male
Power Requirement: 50 to 400 Hz, 100, 120, 200, or 240 volts ac (±10%); 85 VA maximum
Size: 133 mm H × 214 mm W × 366 mm D (5.2 in × 8.4 in × 14.4 in)
Weight: Net, 7 kg (15 lb); shipping, 14 kg (31 lb)

HP 8346A mm-W Preamplifier

Specifications

Frequency Range:	26.5 to 40.0 GHz
Maximum Output Power (at +7 dBm input)	
25.0 to 26.5 GHz:	≥ +17 dBm (typical)
26.5 to 38.0 GHz:	≥ +17 dBm
38.0 to 40.0 GHz:	≥ +13 dBm
Power Flatness (at +7 dBm input)	
26.5 to 38 GHz:	±3 dB (typical)
38 to 40.0 GHz:	±4 dB (typical)
Minimum Small Signal Gain (at -5 dBm input)	
25.0 to 26.5 GHz:	≥ 10 dB (typical)
26.5 to 38.0 GHz:	≥ 10 dB
38.0 to 40.0 GHz:	≥ 8 dB

Spectral Purity

Harmonics Typical
(at maximum specified output power): < -30 dBc

Maximum Continuous Input

Microwave power: +22 dBm
dc voltage: ±10 V

Input and Output Impedance:

Input SWR: 4:1 (typical)
Output SWR: 3:1 (typical)

Reverse Isolation

26.5 to 38.0 GHz: > 35 dB (typical)
 38.0 to 40.0 GHz: > 25 dB (typical)

Noise Figure:

< 13 dB (typical)

Pulse Transmission Capability

Rise/Fall Time: < 10 ns (typical)
Delay Time: < 10 ns (typical)

General

Input and Output Connectors: 2.4 mm male
Power Requirement: 50 to 400 Hz, 100, 120, 200, or 240 Volts ac (±10%); 85 VA maximum
Size: 133 mm H × 214 mm W × 366 mm D (5.2 in × 8.4 in × 14.4 in)
Weight: Net, 7 kg (15 lb); shipping, 14 kg (31 lb)

Ordering Information

HP 8348A Microwave Amplifier
HP 8346A mm-Wave Amplifier