



# Agilent 8347A, 8447A, and 8447D Amplifiers Data Sheet



## RF & Microwave Amplifiers Specifications Summary for 8347A RF Amplifier (Discontinued) and 8447A/D Preamplifier

	8347A RF Amplifier (Discontinued)	8447A Preamplifier	8447D Preamplifier
Frequency range	100 kHz to 3 GHz	0.1 to 400 MHz	100 kHz to 1.3 GHz
Typical 3 dB bandwidth	—	50 kHz to 700 MHz	75 kHz to 1.7 GHz
Maximum leveled output power	$\geq +20$ dBm	—	—
Output power leveling range	( $\geq 300$ kHz): +2 to +20 dBm	—	—
Gain (mean, per channel)	$\geq 25$ dB	20 dB $\pm$ 1.0 dB at 10 MHz (20° to 30 °C)	$> 25$ dB (20° to 30 °C)
Gain flatness across full frequency range	Internally leveled $\pm 300$ kHz: $\pm 1.5$ dB	$\pm 1.8$ dB (0° to 55 °C) $\pm 0.7$ dB (20° to 30 °C) characteristic	$\pm 1.5$ dB
Noise figure	10 MHz to 3 GHz: 15 dB Below 10 MHz: 20 dB	$< 7$ dB	$< 8.5$ dB
Output power for 1 dB gain compression	+22 dBm	$> +6$ dBm	$> +7$ dBm typical
Third-order intercept	+30 dBm	—	—
Harmonic distortion	(at +20 dBm output) Internal level off (ALC off): $\leq -25$ dBc	-32 dB for 0 dBm output Internal level on (ALC on): $\leq -20$ dBc	-30 dB for 0 dBm output (typical)
Maximum input for minimum internally leveled output	-14 dBm	—	—
Output for $< -60$ dB harmonic distortion	—	-25 dBm (characteristic)	-30 dBm
VSWR	2.0: 1 input 1.5: 1 output internally leveled 2.0: 1 output unleveled below 2 GHz 3.0: 1 output unleveled 2 GHz to 3 GHz	$< 1.7$	$< 2.0$ input $< 2.2$ output 1 to 1300 MHz
Reverse isolation	60 dB	$> 30$ dB	$> 40$ dB
Maximum dc voltage output	—	$\pm 10$ V	$\pm 10$ V
Size	213 mm W x 102 mm H x 298 mm D (8.4 in x 4.0 in x 11.8 in)	130 mm W x 85.8 mm H x 261 mm D (5.1 in x 3.4 in x 8.5 in)	130 mm W x 85.8 mm H x 216 mm D (5.1 in x 3.4 in x 8.5 in)
Weight	Net, 4 kg (8 lb) Shipping, 5 kg (11 lb)	Net, 1.56 kg (3.4 lb) Shipping, 2.3 kg (5.1 lb)	Net, 1.56 kg (3.4 lb) Shipping, 2.3 kg (5.1 lb)
Power requirements	—	110 or 230 Vac + 10%, 48 to 440 Hz, 15 W	110 or 230 Vac + 10% 48 to 440 Hz, 15 W
Options available	—	<b>Option 001:</b> Dual-channel amp	<b>Option 001:</b> Dual-channel amp BNC (f) connectors BNC (f) connectors <b>Option 010:</b> Single-channel amp Type-N (f) connectors <b>Option 011:</b> Dual-channel amp Type-N (f) connectors



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**Phone or Fax**

**United States:**

(tel) 800 829 4444  
(fax) 800 829 4433

**Canada:**

(tel) 877 894 4414  
(fax) 800 746 4866

**China:**

(tel) 800 810 0189  
(fax) 800 820 2816

**Europe:**

(tel) 31 20 547 2111

**Japan:**

(tel) (81) 426 56 7832  
(fax) (81) 426 56 7840

**Korea:**

(tel) (080) 769 0800  
(fax) (080)769 0900

**Latin America:**

(tel) (305) 269 7500

**Taiwan:**

(tel) 0800 047 866  
(fax) 0800 286 331

**Other Asia Pacific Countries:**

(tel) (65) 6375 8100  
(fax) (65) 6755 0042

Email: [tm\\_ap@agilent.com](mailto:tm_ap@agilent.com)

Contacts revised: 9/17/04

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