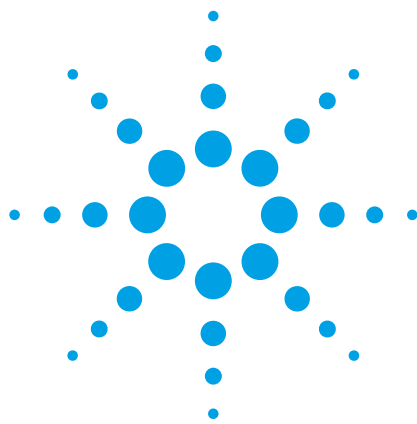




Agilent

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	(≥ 300 kHz): $+2$ to $+20$ dBm	—	—
Gain (mean, per channel)	≥ 25 dB	$20 \text{ dB} \pm 1.0 \text{ dB}$ at 10 MHz (20° to 30°C)	$> 25 \text{ dB}$ (20° to 30°C)
Gain flatness across full frequency range	Internally leveled $\pm 300 \text{ kHz}$: $\pm 1.5 \text{ dB}$	$\pm 1.8 \text{ dB}$ (0° to 55°C) $\pm 0.7 \text{ dB}$ (20° to 30°C) characteristic	$\pm 1.5 \text{ dB}$
Noise figure	10 MHz to 3 GHz: 15 dB Below 10 MHz: 20 dB	$< 7 \text{ dB}$	$< 8.5 \text{ dB}$
Output power for 1 dB gain compression	$+22 \text{ dBm}$	$> +6 \text{ dBm}$	$> +7 \text{ dBm}$ typical
Third-order intercept	$+30 \text{ dBm}$	—	—
Harmonic distortion	(at $+20 \text{ dBm}$ output) Internal level off (ALC off): $\leq -25 \text{ dBc}$	-32 dB for 0 dBm output Internal level on (ALC on): $\leq -20 \text{ dBc}$	-30 dB for 0 dBm output (typical)
Maximum input for minimum internally leveled output	-14 dBm	—	—
Output for $< -60 \text{ dB}$ 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	$> 30 \text{ dB}$	$> 40 \text{ dB}$
Maximum dc voltage output	—	$\pm 10 \text{ V}$	$\pm 10 \text{ V}$
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 216 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 $\pm 10\%$, 48 to 440 Hz, 15 W	110 or 230 Vac $\pm 10\%$, 48 to 440 Hz, 15 W
Options available	—	Option 001: Dual-channel amp	Option 001: Dual-channel amp BNC (f) connectors BNC (f) connectors Option 010: Single-channel amp Type-N (f) connectors Option 011: Dual-channel amp Type-N (f) connectors



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