



## PA4871

CMOS IC

### 1.1W AUDIO POWER AMPLIFIER WITH SHUTDOWN MODE

#### DESCRIPTION

As a mono bridged power amplifier which is operating on a single 5V supply, the UTC **PA4871** is capable of delivering 1.1W of output power per channel into 8Ω loads with less than 0.5% THD+N.

The UTC **PA4871** is optimally suited for low-power portable applications because of the it do not require output coupling capacitors, bootstrap capacitors or snubber networks.

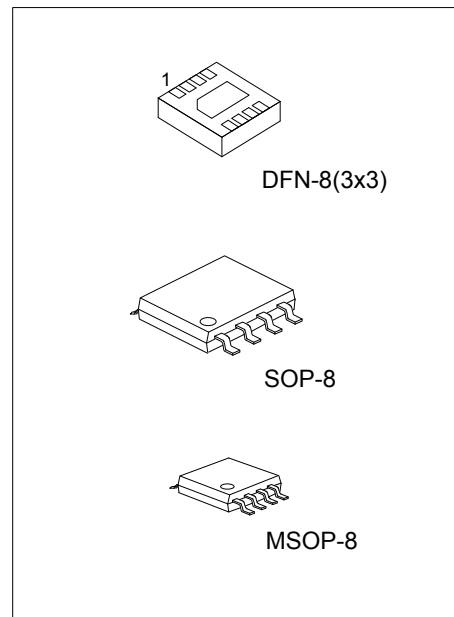
By using external gain-setting resistors, the closed loop response of the unity-gain stable **PA4871** can be configured.

#### FEATURES

- \* Output power at 0.5% THD+N  
Supply voltage:5V  
Delivering 1.1W into a 8Ω load
- \* With shutdown mode
- \* Stable unity-gain.
- \* Halogen Free

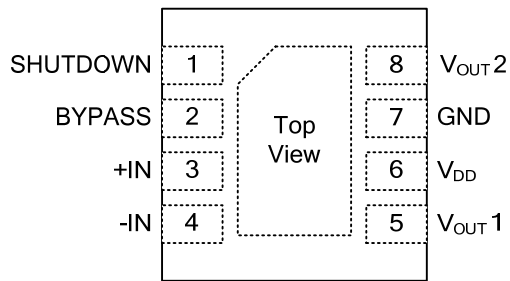
#### ORDERING INFORMATION

Ordering Number	Package	Packing
PA4871G-30Q-8-R	DFN-8	Tape Reel
PA4871G-S08-R	SOP-8	Tape Reel
PA4871G-SM1-R	MSOP-8	Tape Reel

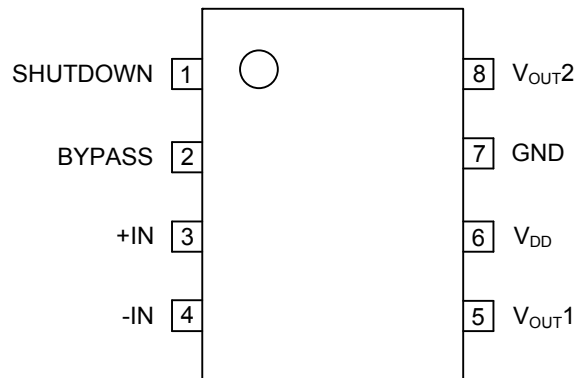


<p>PA4871G-30Q-8-R</p> <p>(1) Packing Type (2) Package Type (3) Halogen Free</p>	<p>(1) R: Tape Reel (2) DFN-8: 30Q-8, S08: SOP-8, SM1: MSOP-8 (3) G: Halogen Free</p>
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## ■ PIN CONFIGURATION



DFN-8(3×3)

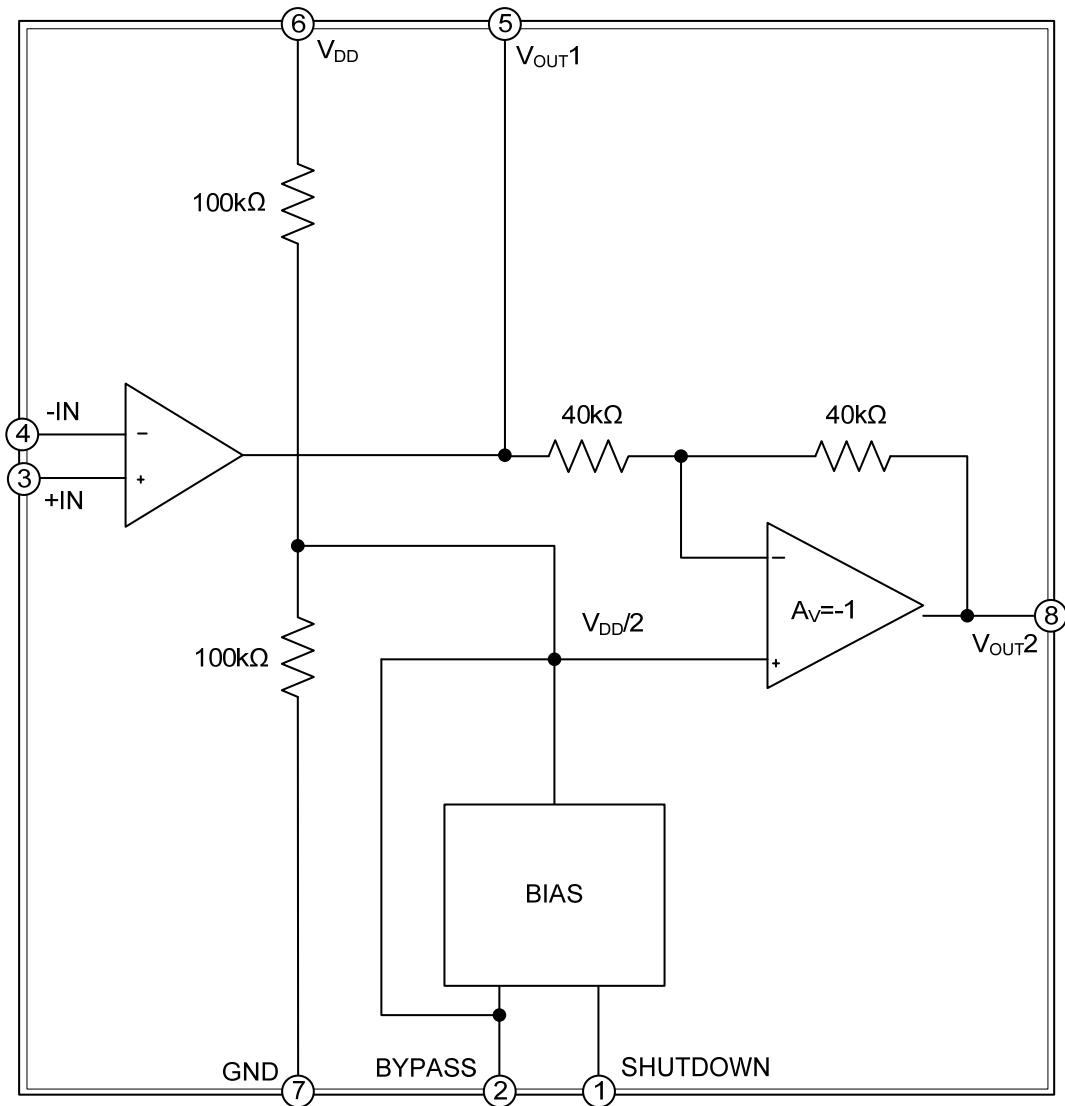


SOP-8 / MSOP-8

## ■ PIN DESCRIPTION

PIN NO	PIN NAME	DESCRIPTION
1	SHUTDOWN	Shutdown control input pin.
2	BYPASS	Connected to a bypass capacitor.
3	+IN	+ pin of input signal.
4	-IN	- pin of input signal.
5	V <sub>OUT1</sub>	Output pin1
6	V <sub>DD</sub>	Supply voltage
7	GND	GND
8	V <sub>OUT2</sub>	Output pin2

■ BLOCK DIAGRAM



### ■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	$V_{DD}$	6	V
Input Voltage	$V_{IN}$	-0.3~ $V_{DD}$ +0.3	V
Power Dissipation	$P_D$	Internally Limited	W
Junction Temperature	$T_J$	150	°C
Operating Temperature	$T_{OPR}$	-40~+85	°C
Storage Temperature	$T_{STG}$	-65~+150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

### ■ THERMAL DATA

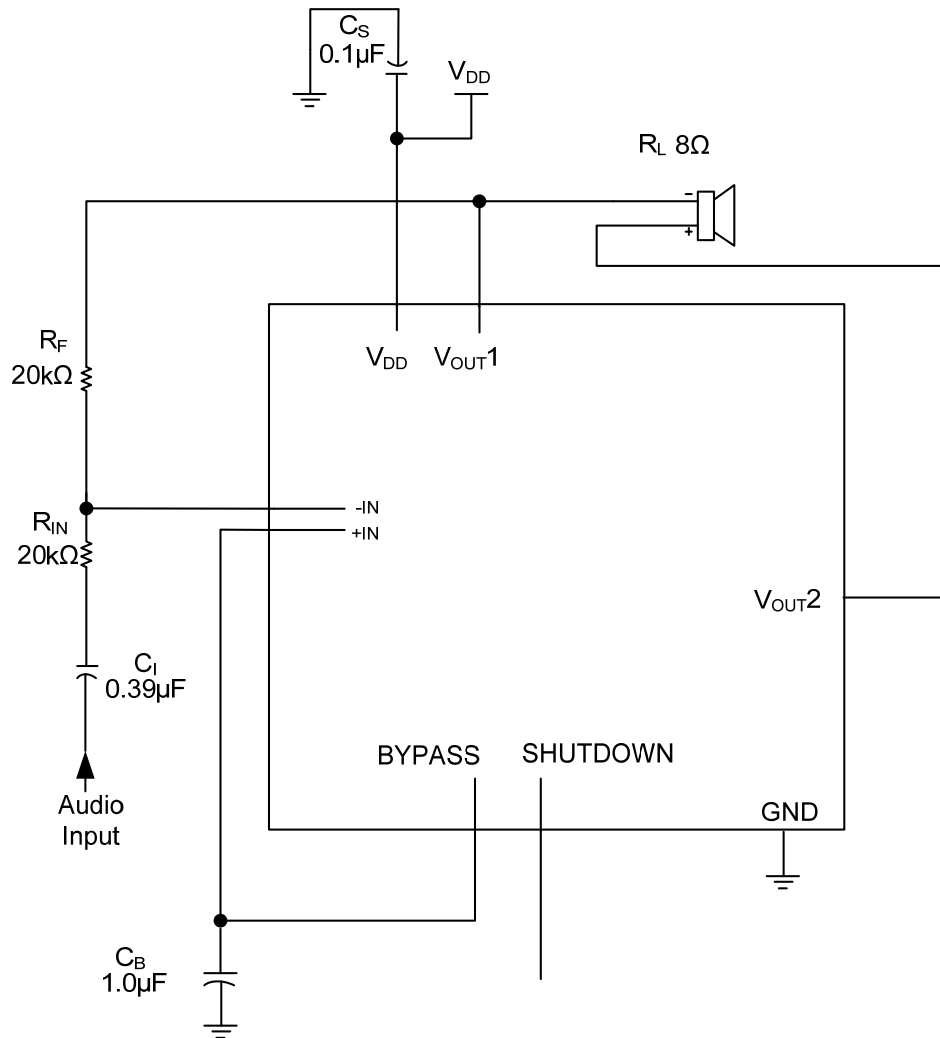
PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	DFN-8(3×3)	59	°C/W
	SOP-8/MSOP-8	140	°C/W
Junction to Case	DFN-8(3×3) (Note)	4.3	°C/W
	SOP-8/MSOP-8	35	°C/W

Note: Surface mounted on 1 in<sup>2</sup> copper pad of FR4 board

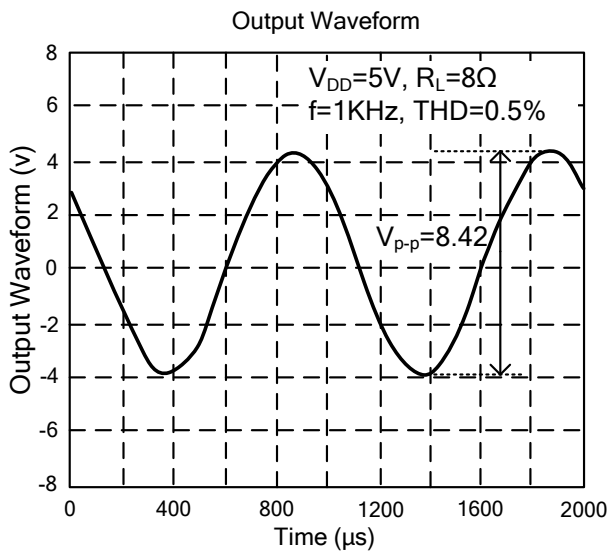
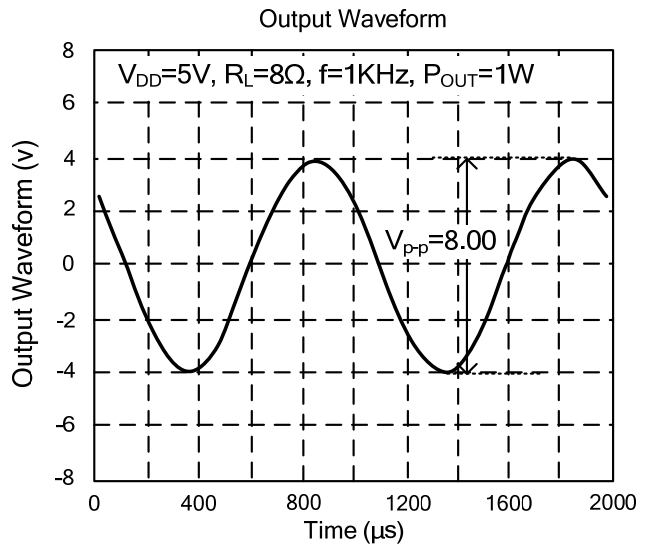
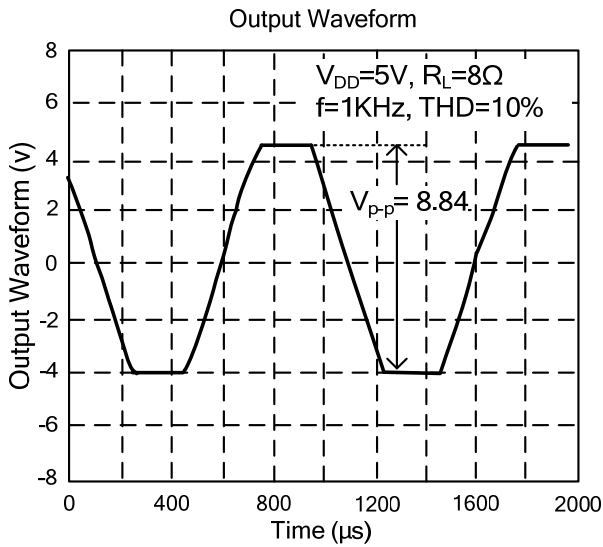
### ■ ELECTRICAL CHARACTERISTICS (Ta=25°C, V<sub>DD</sub>=5V, R<sub>L</sub>=8Ω, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
<b>DC ELECTRICAL CHARACTERISTICS</b>						
Supply Voltage	$V_{DD}$		2.0	5	5.5	V
DC Differential Output Voltage	$V_{OUT(DIFF)}$	$V_{IN}=0V$		5	50	mV
Supply Current	Mute Mode	$V_{IN}=0V, I_{OUT}=0A$		6.5	10.0	mA
	Shutdown Mode	$V_{PIN1}=V_{DD}$		0.6	2	μA
Output Power	$P_{OUT}$	THD=0.5%, $f_{IN}=1kHz$	1.0	1.10		W
		THD=10%, $f_{IN}=1kHz$		1.5		W
Total Harmonic Distortion+Noise	THD+N	$P_{OUT}=1W_{RMS}$ , 20Hz< $f_{IN}$ <20kHz, G=2V/V		0.25		%
Power Supply Ripple Rejection	PSRR	$V_{DD}=4.9V$ to 5.1V		65		dB

■ TYPICAL APPLICATION CIRCUIT



■ TYPICAL CHARACTERISTICS



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