



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.

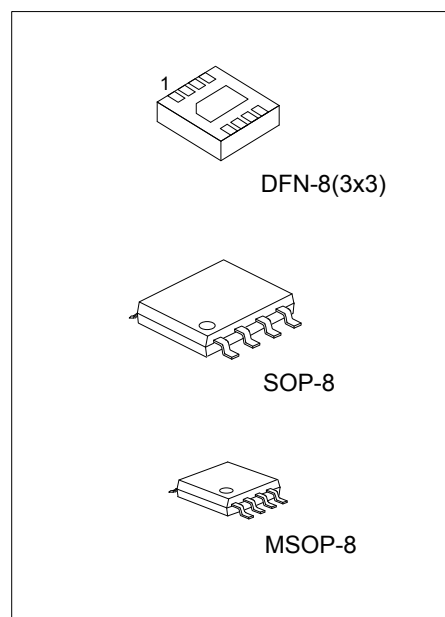
By using external gain-setting resistors, the closed loop response of the unity-gain stable **PA4871** can be configured.

■ 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

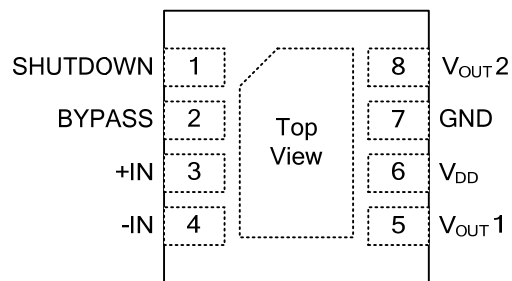


PA4871G-30Q-8-R

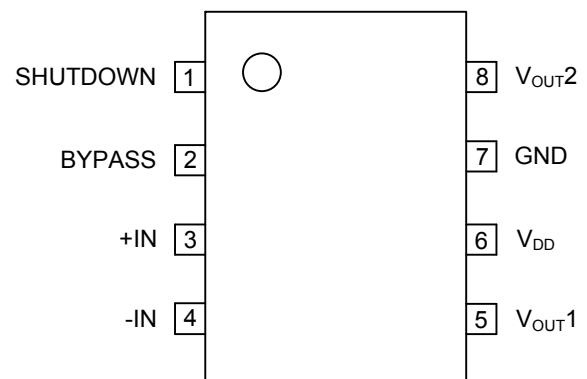
- (1) Packing Type
- (2) Package Type
- (3) Halogen Free

- (1) R: Tape Reel
- (2) DFN-8: 30Q-8, S08: SOP-8, SM1: MSOP-8
- (3) G: Halogen Free

PIN CONFIGURATION



DFN-8(3×3)

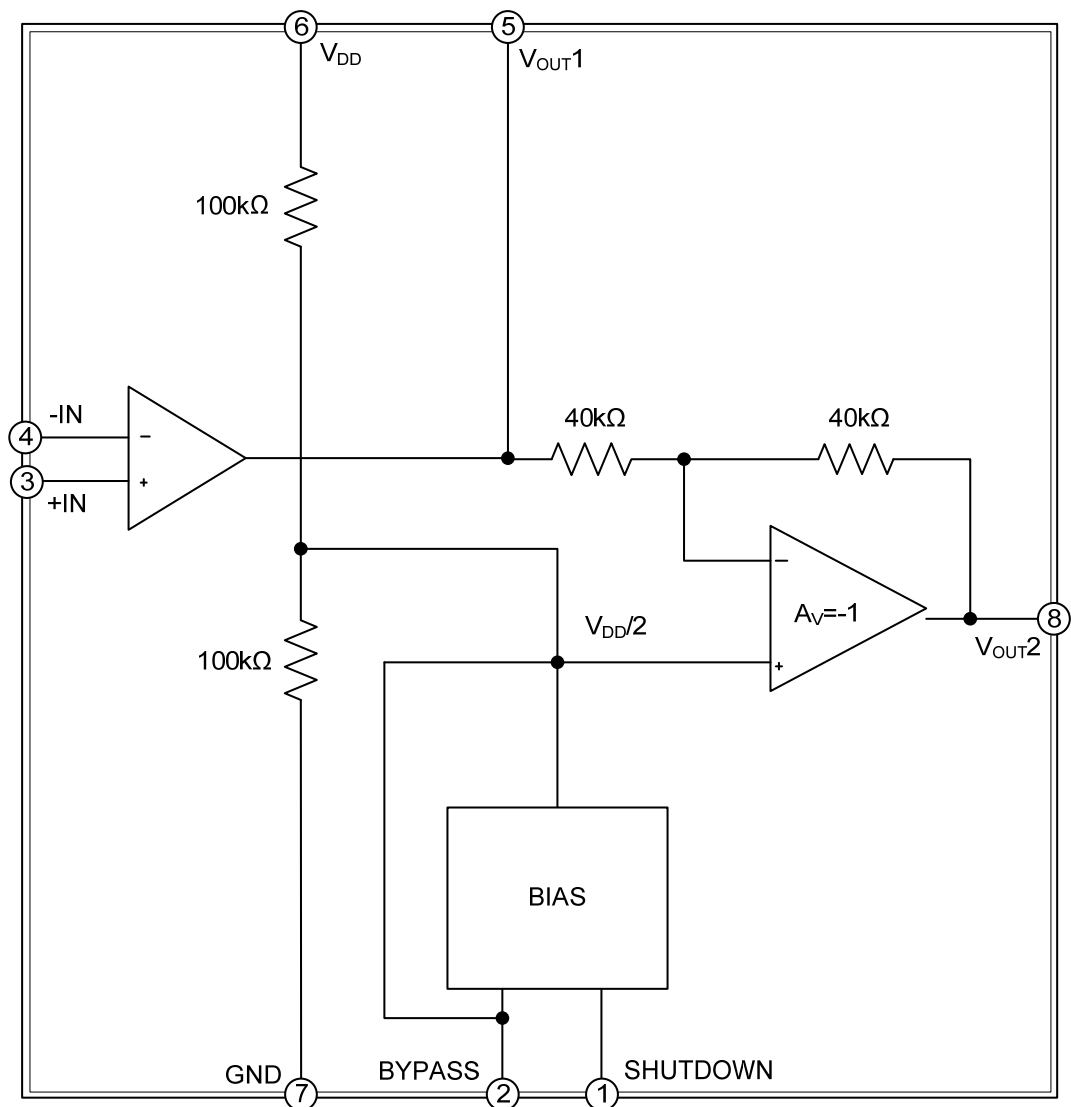


SOP-8 / MSOP-8

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 _{OUT1}	Output pin1
6	V _{DD}	Supply voltage
7	GND	GND
8	V _{OUT2}	Output pin2

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING

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

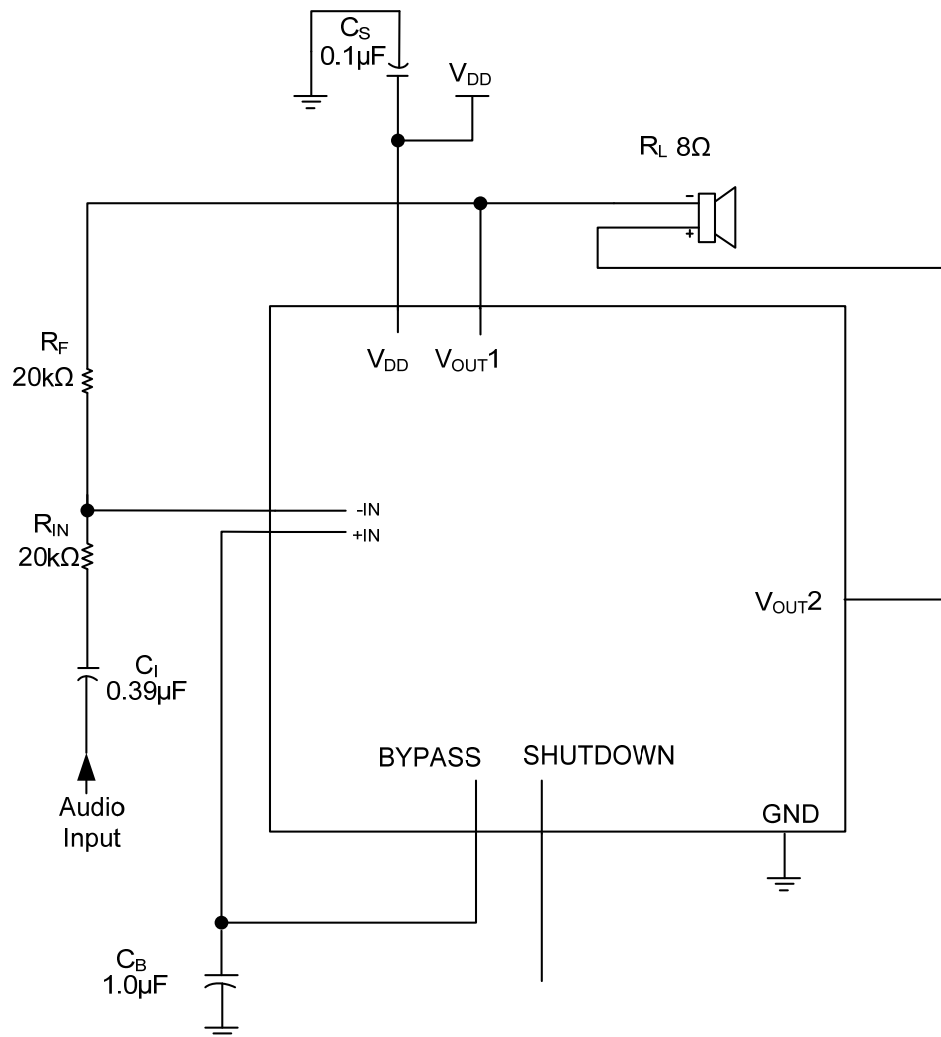
PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	DFN-8(3×3)	θ_{JA}	59	°C/W
	SOP-8/MSOP-8		140	°C/W
Junction to Case	DFN-8(3×3) (Note)	θ_{JC}	4.3	°C/W
	SOP-8/MSOP-8		35	°C/W

Note: Surface mounted on 1 in² copper pad of FR4 board

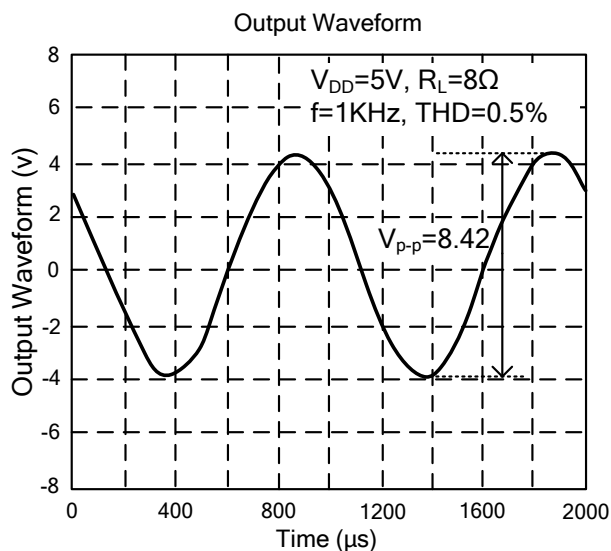
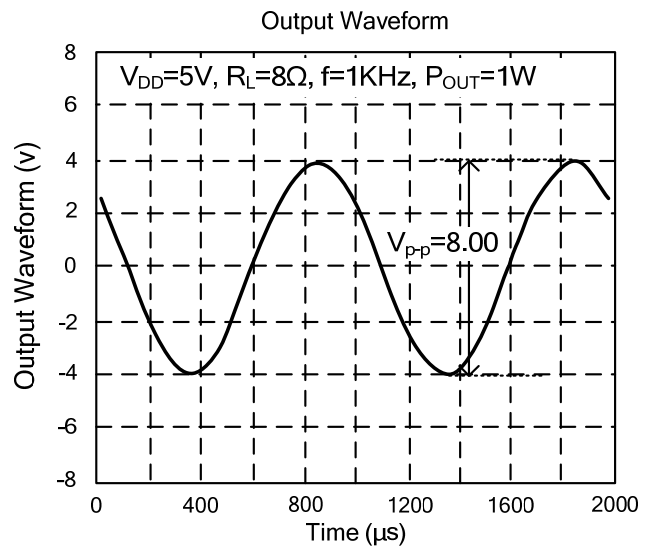
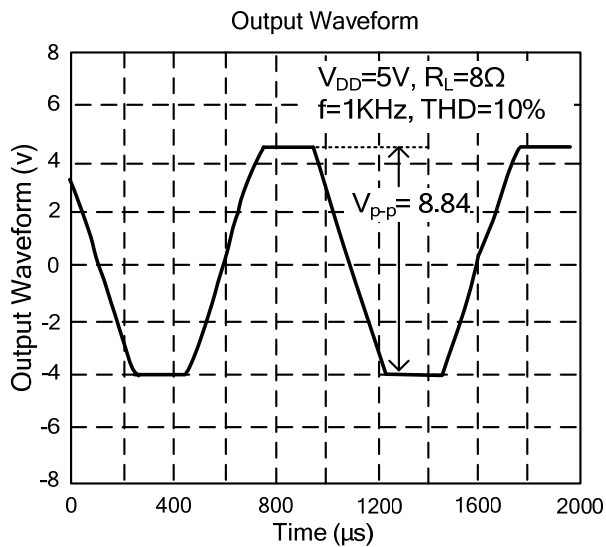
■ ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$, $V_{DD}=5\text{V}$, $R_L=8\Omega$, unless otherwise specified)

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
DC ELECTRICAL CHARACTERISTICS							
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	I _{DD}	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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