



# Ultra Low EMI ,3W Filterless Mono ClassD Audio Power Amplifier with Anti-Crack Protection

## General Description

OCA7220 is a Anti-Crack Protection, ultra-low EMI, Monaural, 3W class D audio power amplifier. Anti-Crack Protection function can adjust system gain automatically by detecting the output Broken audio distortion. It is not only avoiding the speaker from the damage caused by overload output power, but also offering a comfortable listening experience.

OCA7220 use proprietary EEE (Enhanced Emission Elimination) technology, significantly lower EMI interference in the whole bandwidth. To 60cm audio line, there is more than 20dB margin, under the FCC standard.

OCA7220 no filter PWM modulation structure and built-in gain reduce the external components, PCB area, system costs, and simplifying the design. Up to 90% Efficiency fit for mobile phones and other portable audio products more.

OCA7220 built-in over current protection, thermal protection and low voltage malfunction prevention function, effectively protect chip in the abnormal working conditions from being damaged.

OCA7220 provides 1.45mm \* 1.45mm WLCSP9 package, rated operating temperature range is -40 °C to 85 °C

## Features

- Anti-Crack Protection provides three operating modes:ACP1,ACP2,ACPOFF
- Ultra low EMI
- POP noise reduction function
- Maximum output 3W (THD+N=10%、 $V_{DD}=5V$ 、 $R_L=4\Omega$ )
- Distortion rate THD+N=0.05%(output power=1W、 $V_{DD}=5V$ )
- Filter free Class-D Structure
- Up to 90% efficiency
- High PSRR:-80dB(217Hz)
- Low Quiescent Current (2.8mA)
- Low shutdown current (<0.1uA)
- Operating Voltage Range:2.5V~5.5V
- Over-current protection function
- Thermal protection function
- UVLO.
- Package:WLCSP9,1.45mm\*1.45mm

## Applications

- Cellular Phone
- MP3/PMP
- GPS
- Digital Photo Frame

## Typical Application Circuit

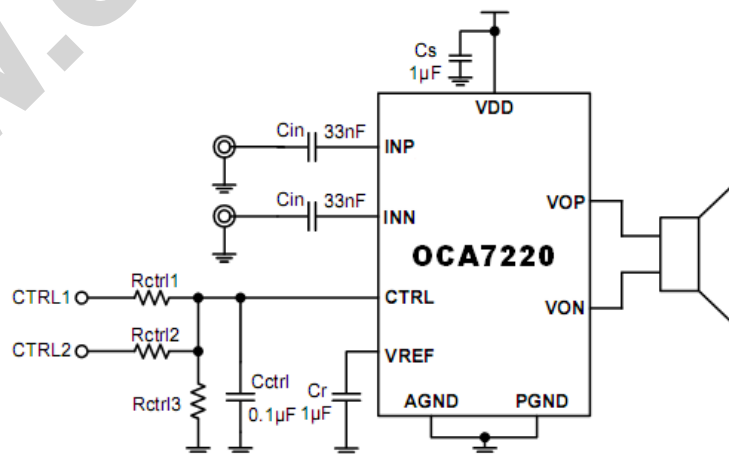


Figure 1. Differential input application

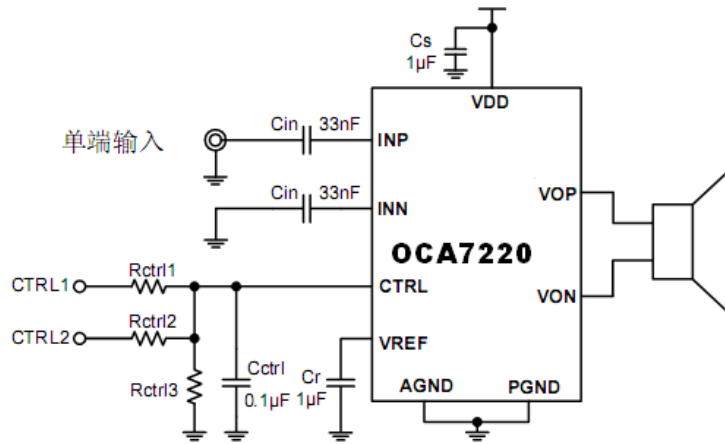


Figure 2. Single-ended input application schematic

■ Pin Configuration

OCA7220 /WLCSP9 (Top View)

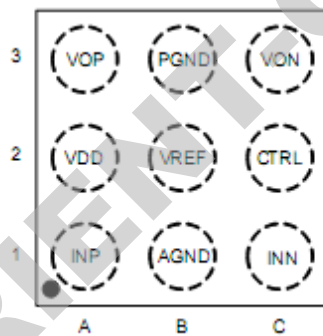


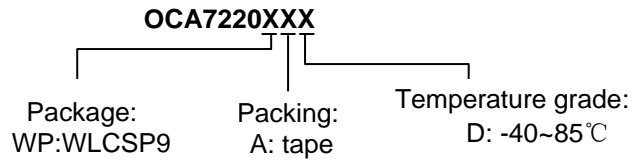
Figure3.

Pin Functions:

NO.	Name	Function
A1	INP	Positive input terminal
A2	VDD	Power supply
A3	VOP	Positive output terminal
B1	AGND	GND for analog circuits
B2	VREF	Analog reference
B3	PGND	GND for power
C1	INN	Negative input terminal
C2	CTRL	Power down and ACP control terminal
C3	VON	Negative output terminal



■ Ordering Information



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