



### General Description

The OCA7890A is an audio power amplifier primarily designed for demanding applications in mobile phones and other portable communication device applications. It is capable of delivering 1.41W of continuous average power to an 8Ω BTL load with less than 1% distortion (THD+N) from a 5V DC power supply.

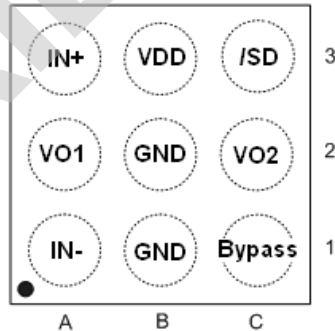
Audio power amplifiers were designed specifically to provide high quality output power with a minimal amount of external components. The OCA7890A does not require output coupling capacitors or bootstrap capacitors, and therefore is ideally suited for mobile phone and other low voltage applications where minimal power consumption is a primary requirement.

The OCA7890A features a low power consumption shutdown mode, which is achieved by driving the shutdown pin with logic low. Additionally, the OCA7890A features an internal thermal shutdown protection mechanism.

The OCA7890A contains advanced pop and click circuitry which eliminates noises which would otherwise occur during turn-on and turn-off transitions. The OCA7890A is unity-gain stable and can be configured by external gain-setting resistors.

### Pin Configuration

WLCSP9  
(Top View)



Name	No.	I/O	Descriptions
	WLCSP9		
IN-	A1	I	Negative differential input
IN+	A3	I	Positive differential input
VO1	A2	O	Negative BTL output
VO2	C2	O	Positive BTL output
VDD	B3	P	Power supply
/SD	C3	I	Shutdown terminal, hold low for shutdown mode (active low logic)
Bypass	C1	I	Bypass capacitor which provides the common mode voltage
GND	B1, B2	I	High-current ground

### Features

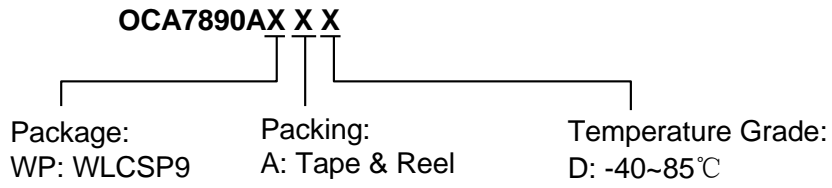
- PSRR at 217Hz, VDD=4.2V (Fig.1) 71dB(typ.)
- 2.4W Output @VDD=5.0V, THD=1%, 4Ω Load
- 1.41W Output @VDD=5.0V, THD=1%, 8Ω Load
- 0.5W Output @VDD=3.0V, THD=1%, 8Ω Load
- Shutdown Current 0.1μA(typ.)
- Available in space-saving packages: WLCSP-9
- Ultra low current shutdown mode
- BTL output can drive capacitive loads
- Improved pop and click circuitry eliminates noises during turn-on and turn-off transitions
- 2.2V - 5.5V operation
- No output coupling capacitors, snubber networks or bootstrap capacitors required
- Thermal shutdown protection
- Unity-gain stable
- External gain configuration capability

### Applications

- Mobile Phones
- PDA
- Portable electronic devices



■ Ordering Information



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