

GENERAL DESCRIPTION

The ft690 is a mono Class-AB audio power amplifier designed for demanding applications in mobile phones and other portable media devices. It is capable of delivering 1.25W of continuous output power to an 8Ω BTL load with less than 1% distortion (THD+N) from a 5VDC power supply.

The ft690 is specifically designed to provide high quality output power with a minimal number of external components. The ft690 does not require output coupling capacitors or bootstrap capacitors, and is therefore ideal for use in mobile phones and other low voltage applications where minimal power consumption is a primary requirement.

The ft690 features a low-power shutdown mode. In the shutdown mode where a logic low is applied onto the \overline{SD} pin, the amplifier is completely turned off and no supply current will flow through the device.

The ft690 also features advanced pop & click circuitry which eliminates noise which would otherwise occur during turn-on and turn-off transitions.

The ft690 is unity-gain stable and can be configured by external gain-setting resistors.

FEATURES

- Ultra low current in shutdown mode
- Low quiescent current
- Improved pop & click circuitry eliminates noise during turn-on and turn-off transitions
- Supports both single-end and differential inputs
- Wide operating voltage range: 2.5 ~ 5.5V
- No output coupling capacitors, snubber networks or bootstrap capacitors required
- Available in space-saving package
COL1.5X1.5-9L
MSOP-8L

KEY SPECIFICATIONS

- Improved PSRR at 217Hz : 66dB
- Power Output at 5V, 1% THD+N, 8Ω: 1.25W
- Power Output at 3V, 1% THD+N, 8Ω: 425mW
- Quiescent Current 1.6mA (VDD=3V)

APPLICATIONS

- Mobile phone
- PDA
- Portable electronic devices

APPLICATION CIRCUIT

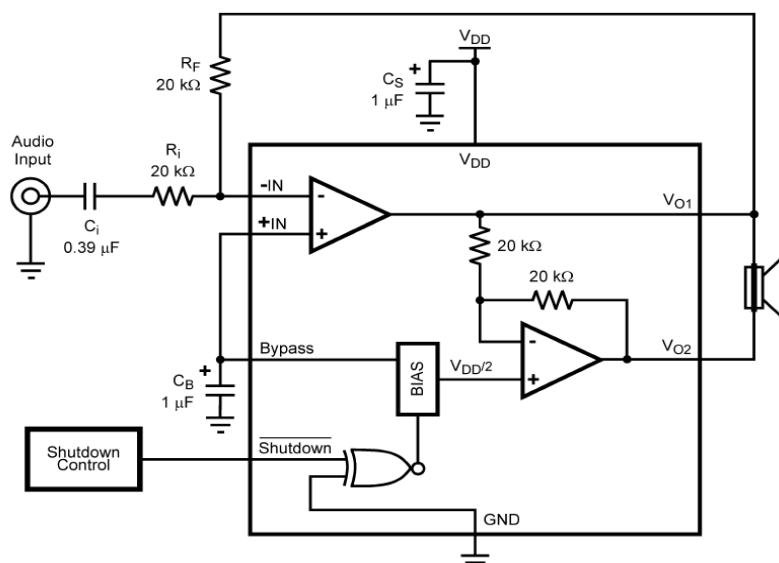
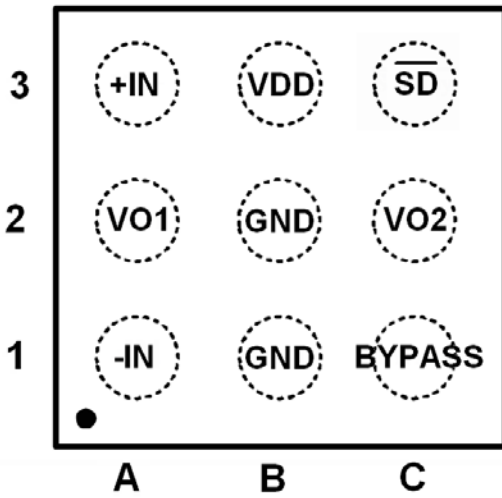


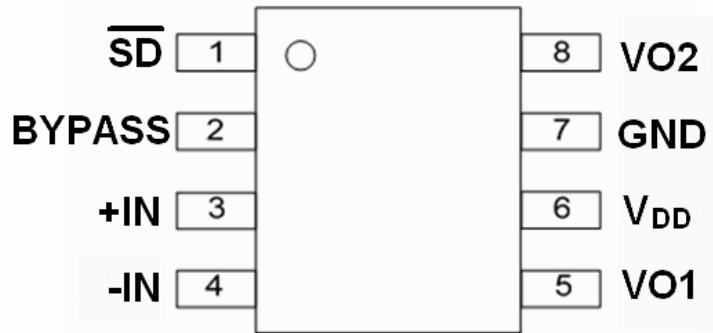
Figure 1: Typical Audio Amplifier Application Circuit

PIN CONFIGURATION AND DESCRIPTION

Top View



ft690A
QFN1.5X1.5-9L



ft690M
MSOP-8L

SYMBOL	QFN9	MSOP8	DESCRIPTION
V _{DD}	B3	6	Power supply
\overline{SD}	C3	1	Active low shutdown control
-IN	A1	4	Negative differential input
+IN	A3	3	Positive differential input
VO1	A2	5	Negative BTL output
VO2	C2	8	Positive BTL output
BYPASS	C1	2	Bypass capacitor pin which provides the common mode voltage
GND	B1 & B2	7	Ground

ORDERING INFORMATION

PART NUMBER	TEMPERATURE RANGE	PACKAGE	GAIN (dB)
ft690A	-40°C to +85°C	COL1.5X1.5-9L	Adjustable
ft690M	-40°C to +85°C	MSOP-8L	Adjustable