

GENERAL DESCRIPTION

The ft690V/M 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 1.0W of continuous output power to an 8Ω BTL load with less than 1% distortion (THD+N) from a 5VDC power supply.

The ft690V/M is specifically designed to provide high quality output power with a minimal number of external components. The ft690W 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 ft690V/M 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. It also features advanced pop & click circuitry which eliminates noise which would otherwise occur during turn-on and turn-off transitions.

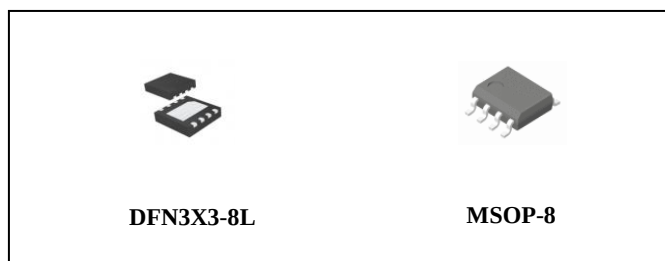
The ft690V/M is unity-gain stable and can be configured by external gain-setting resistors.

APPLICATIONS

- Mobile phone
- MP3/4 player
- Portable electronic devices

FEATURES

- Output Power
 - 1W (8Ω, 5V, 1% THD+N)
 - 360mW (8Ω, 3V, 1% THD+N)
- PSRR: 64dB (typical) at 217Hz
- THD+N: 0.05% at 1kHz (5V/8Ω/0.5W)
- Quiescent current: 3.5mA at 8Ω
- Shutdown current: 0.1μA (typical)
- Improved pop & click circuitry eliminates noise during turn-on and turn-off transitions
- Wide input voltage range: 2.5V ~ 5.5V
- No output coupling capacitors, snubber networks or bootstrap capacitors required
- Unity-gain stable
- External gain configuration capability
- Available packages: DFN3X3-8L and MSOP-8L



APPLICATION CIRCUIT

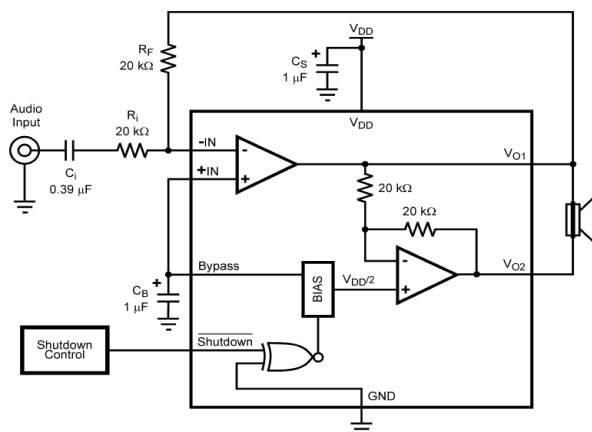
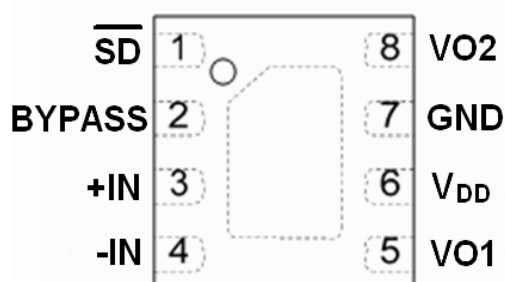
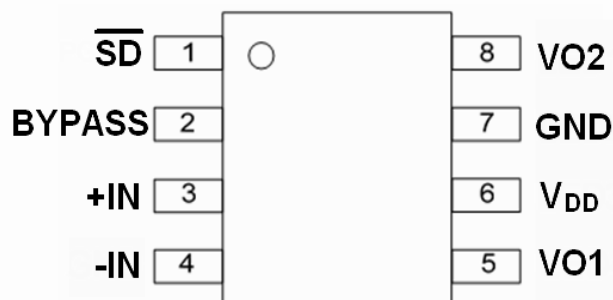


Figure 1: Typical Audio Amplifier Application Circuit

PIN CONFIGURATION



ft690V
DFN3X3-8L (Top View)



ft690M
MSOP-8L (Top View)

PIN DESCRIPTION

SYMBOL	DFN3X3-8L	MSOP-8L	DESCRIPTION
V_{DD}	6	6	Power supply
$\overline{SD}$	1	1	Active low shutdown control
-IN	4	4	Negative differential input
+IN	3	3	Positive differential input
VO1	5	5	Negative BTL output
VO2	8	8	Positive BTL output
BYPASS	2	2	Bypass capacitor pin which provides the common mode voltage
GND	7	7	Ground

Notes*: Since +IN PIN and Bypass PIN are connected inside, ft690V/M/N can not work in a differential input mode.

ORDERING INFORMATION

PART NUMBER	TEMPERATURE RANGE	PACKAGE
ft690V	-40°C to +85°C	DFN3X3-8L
ft690M	-40°C to +85°C	MSOP-8L