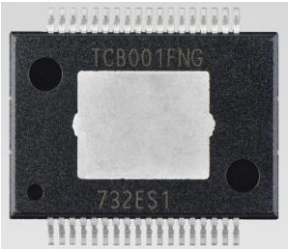
TCB001FNG

Power Amplifier IC for Car Audios

Based on IC achievements for car audio secured over many years, the TCB001FNG is configured with a pure complementary MOS process. This product improved an external noise immunity and its sound quality is natural and smooth. The new product “TCB001FNG,” which is a 4-channel power amplifier IC for car audio, is launched and mass production starts at the end of 2017.



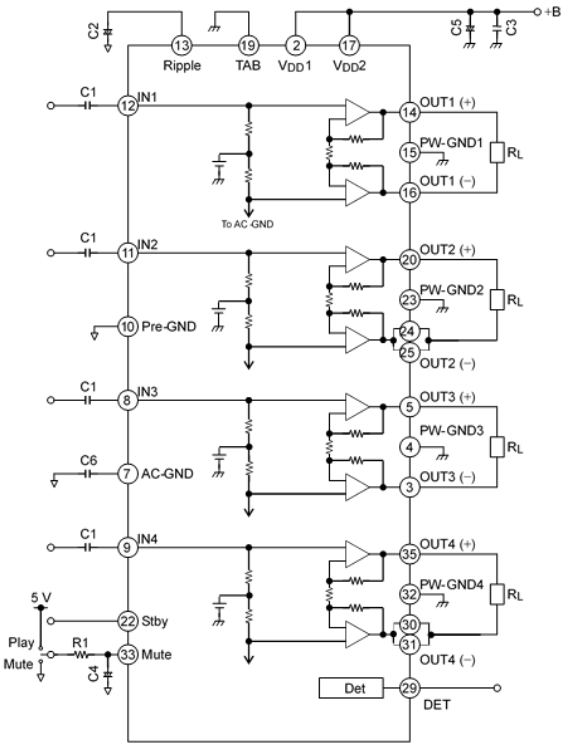
Three Features

- Improvement of external high frequency noise immunity: This product uses Toshiba Electronic Devices & Storage Corporation’s original filtering technology to detect and suppress high frequency noise from sources as diverse as mobile phones and electric door mirrors.
- Includes function to prevent speaker burn out: When a large current flows into a speaker, a speaker burn out can be prevented.
- Flat type package: Conventional HZIP25 package is changed to HSSOP36 package. Adoption of this package, securely positioned with reflow soldering, increases system reliability and the performance of car audio.

Application

- Power Amplifier IC for car audios

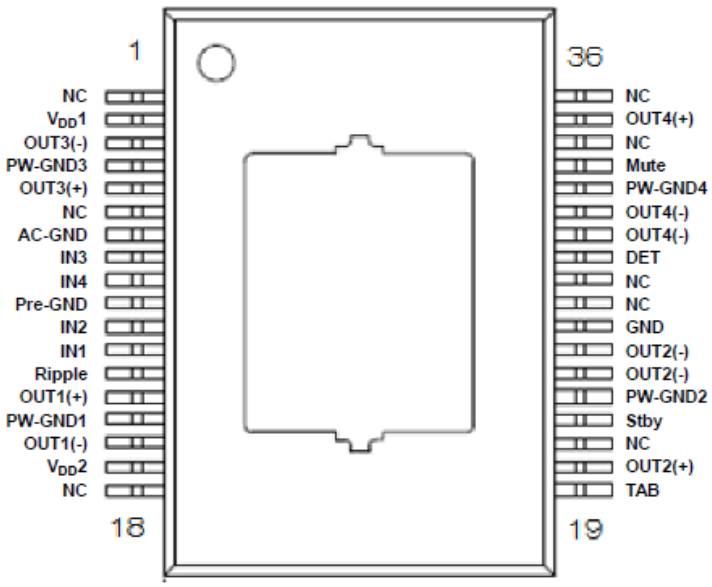
Block Diagram



Note: Some of the functional blocks, circuits, or constants in the block diagram may be omitted or simplified for explanatory purposes.

Specifications

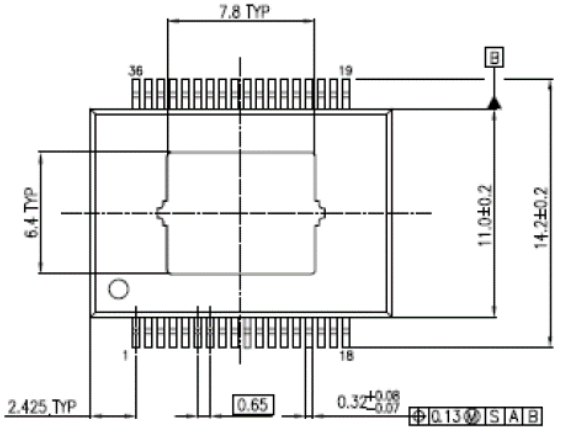
Characteristic	Specifications
Maximum output power	45 W x 4ch (V_{DD}=15.2 V, R_L=4 Ω, MaxPower)
Total harmonic distortion (THD)	0.01% (Pout=4 W)
supply voltage	6 V to 18 V
Standby current	0.01 μA (typ.)
Output offset voltage	90 mV
Package	P-HSSOP36-1116-0.65-001
Temperature range	-40°C to 105°C

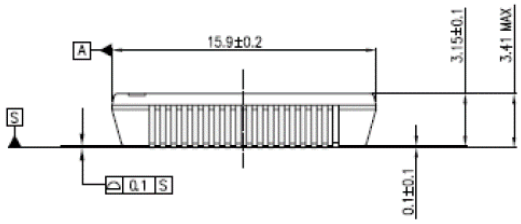


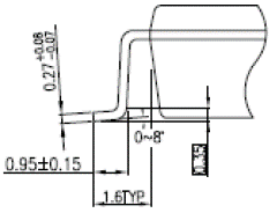
Pin Layout (Top View)

Package Dimensions

Unit: mm





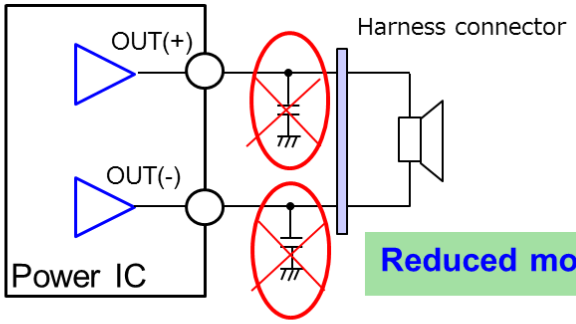


■ Improvement of external noise immunity

(To suppress high frequency noise from sources as diverse as mobile phones etc.)

This product uses Toshiba Electronic Devices & Storage Corporation's original filtering technology to detect and suppress high frequency noise from sources as diverse as mobile phones and electric door mirrors.

→Number of capacitor is reduced between output and GND of the set.
→Filter design per set is unnecessary.



Reduced mount area

2 pcs per 1ch × 4ch = 8 pcs
8 pcs of capacitors cost can be reduced.

*Leakage when a noise of a mobile phone is emitted.