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.

		Ī	<u></u>	
Characteristic	Specifications	'	0	36
Maximum output power	45 W x 4ch (V _{DD} =15.2 V, R _L =4 Ω, MaxPower)	NC Vpo1 OUT3(-) PW-GND3 OUT3(+) NC		NC OUT4(+) NC Mute PW-GND4 OUT4(-)
Total harmonic distortion (THD)	0.01% (Pout=4 W)	AC-GND IN3 IN4		DUT4(-) DET NC NC
supply voltage	6 V to 18 V	IN2		GND
Standby current	0.01 μA (typ.)	Ripple		OUT2(-)
Output offset voltage	90 mV	OUT1(+) PW-GND1 OUT1(-) V _{DD} 2		PW-GND2 Stby NC OUT2(+)
Package	P-HSSOP36-1116-0.65-001	NC CTT		тав
Temperature range	-40°C to 105°C	18 2		19

Pin Layout (Top View)

Package Dimensions

Unit: mm







Information of Technology and Characteristics

■ 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 <u>detect and suppress high frequency noise</u> 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.



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.





Before creating and producing designs and using, customers must also refer to and comply with the latest versions of all relevant information of this document and the instructions for the application that Product will be used with or for.

TOSHIBA ELECTRONIC DEVICES & STORAGE CORPORATION

https://toshiba.semicon-storage.com/