12W Stereo/Mono Digital Audio Amplifier

Features

- 16/18/20/24-bit input with I^2S, Left-alignment and Right-alignment data format
- PSNR & DR(A-weighting)
  Loudspeaker: 100dB (PSNR), 108dB (DR) @18V
- Multiple sampling frequencies (Fs)
  32kHz / 44.1kHz / 48kHz and
  64kHz / 88.2kHz / 96kHz and
  128kHz/176.4kHz/192kHz
- System clock = 64x, 128x, 256x, 384x, 512x, 768x, 1024x Fs
  256x~1024x Fs for 32kHz / 44.1kHz / 48kHz
  128x~512x Fs for 64kHz / 88.2kHz / 96kHz
  64x~256x Fs for 128kHz/176.4kHz/192kHz
- Supply voltage
  3.3V for digital circuit
  12V~18V for loudspeaker driver
- Loudspeaker output power for 18V
  2×10W into 8Ω@0.32% THD+N for stereo
  1×20W into 4Ω@0.22% THD+N for mono
- Loudspeaker output power for 18V with proper cooling method
  2×14W into 8Ω@1% THD+N for stereo
  1×29W into 4Ω@1% THD+N for mono
- Anti-pop design
- Over-temperature protection
- Internal PLL
- Under-voltage shutdown
- Over-current protection
- I^2C control interface

Applications

- CD and DVD
- TV audio
- Car audio
- Boom-box
- MP3 docking systems
- Powered speaker
- Wireless audio
- USB speaker

Description

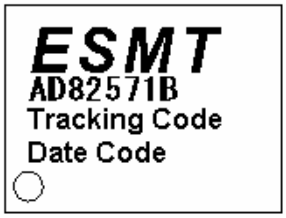
This is a stereo (8Ω)/mono (4Ω) fully digital audio amplifier with output power which can drive up to 2x12W for stereo or 1x24W for mono at 18V supply voltage, no external heat-sink or fan is requirement.

Using I^2C digital control interface, AD82571B provides input format selection, mute and volume control function. Protection circuits are provided to protect AD82571B damage while connection error.

ORDERING INFORMATION

Product Number	Package	Comments
AD82571B-LEG	7x7 48L E-LQFP	Pb-free

MARKING INFORMATION



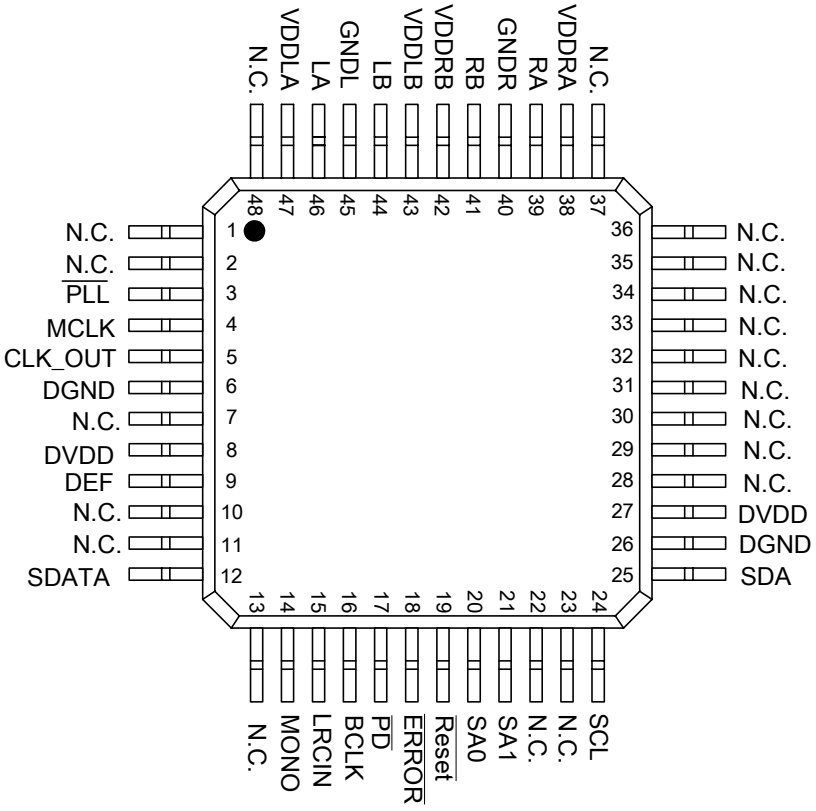
Line 1：LOGO

Line 2：Product No

Line 3：Tracking Code

Line 4：Date Code

Pin Assignment



Pin Description

PIN	NAME	TYPE	DESCRIPTION	CHARACTERISTICS
1	N.C.			
2	N.C.			
3	$\overline{PLL}$	I	PLL enable, low active	Schmitt trigger TTL input buffer
4	MCLK	I	Master clock input	Schmitt trigger TTL input buffer
5	CLK_OUT	O	Clock output from PLL	TTL output buffer
6	DGND	P	Digital Ground	
7	N.C.			
8	DVDD	P	Digital Power	
9	DEF	I	Default volume setting	Schmitt trigger TTL input buffer
10	N.C.			
11	N.C.			
12	SDATA	I	Serial audio data input	Schmitt trigger TTL input buffer
13	N.C			
14	MONO	I	MONO mode enable, high active	Schmitt trigger TTL input buffer
15	LRCIN	I	Left/Right clock input (Fs)	Schmitt trigger TTL input buffer
16	BCLK	I	Bit clock input (64Fs)	Schmitt trigger TTL input buffer
17	$\overline{PD}$	I	Power down, low active	Schmitt trigger TTL input buffer