STA540

4 x 13 W dual/quad power amplifier

Features
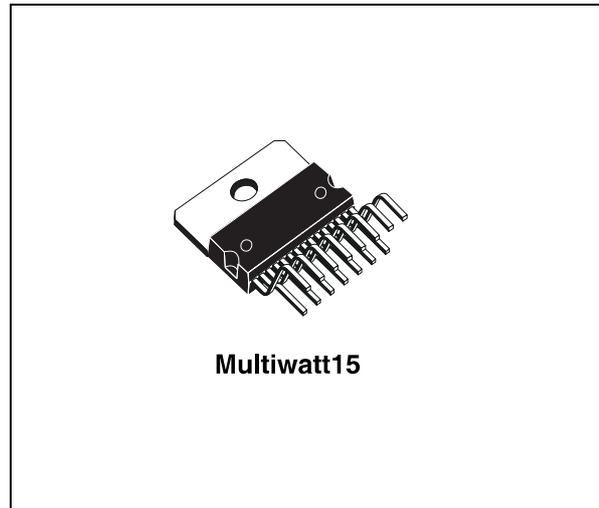
- High output power capability
  - 2x 38 W into 4 Ω at 18 V, 1 kHz, 10%THD
  - 2x 34 W into 8 Ω at 22 V, 1 kHz, 10%THD
  - 2x 24 W into 4 Ω at 14.4 V, 1 kHz, 10%THD
  - 2x 15 W into 8 Ω at 16 V, 1 kHz, 10%THD
  - 4x 13 W into 2 Ω at 15 V, 1 kHz, 10%THD
  - 4x 11 W into 4 Ω at 18 V, 1 kHz, 10%THD
  - 4x 7 W into 4 Ω at 14.4 V, 1 kHz, 10%THD
- Minimum external components count:
  - no bootstrap capacitors
  - no Boucherot cells
  - internally fixed gain 20 dB
- Standby function (CMOS compatible)
- No audible pop during standby operations
- Diagnostic facilities:
  - clip detector
  - output to GND short-circuit detector
  - output to VS short-circuit detector
  - soft short-circuit check at turn-on
  - thermal shutdown warning

Protection

- Output AC/DC short circuit
- Soft short-circuit check at turn-on
- Thermal cutoff/limiter to prevent chip from overheating
- High inductive loads
- ESD

Multiwatt15

Description

The STA540 is a 4-channel, class AB audio amplifier designed for high quality sound applications.

The amplifiers have single-ended outputs with integrated short-circuit protection, thermal protection and diagnostic functions.

The chip is housed in the 15-pin Multiwatt ECOPACK® Pb-free package which is RoHS (2002/95/EC) compliant.

Table 1. **Device summary**

Order code	Temperature range	Package	Packing
STA540	-40 to 150° C	Multiwatt15	Tube

1 Block diagram and pin description

1.1 Block diagram

Figure 1. Block diagram

D06AU1630
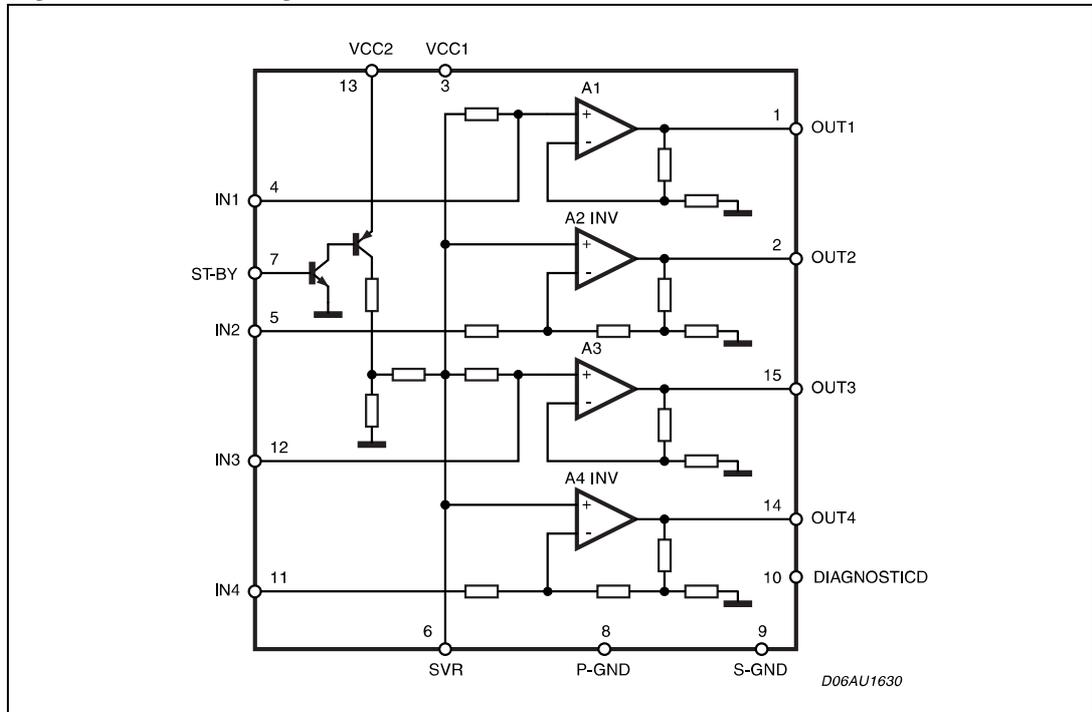
1.2   Pin description
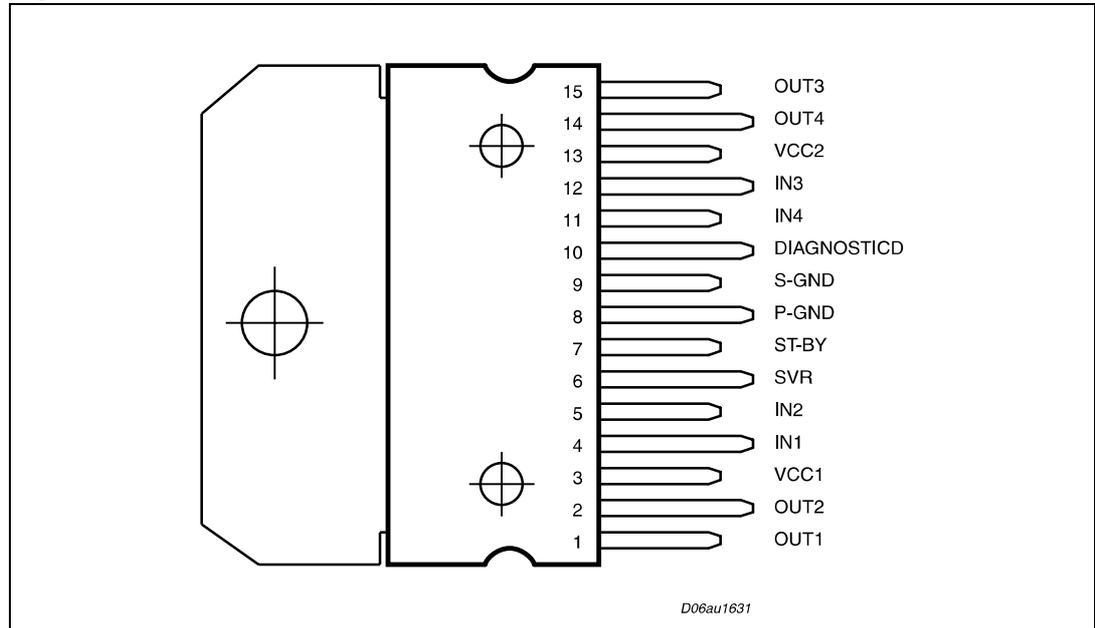
Figure 2.   Pin connection (top view)

Table 2.   Pin description

N°	Name	Type	Function
1	OUT1	OUT	Channel 1 output
2	OUT2	OUT	Channel 2 output
3	VCC1	PWR	Power supply
4	IN1	IN	Channel 1 input
5	IN2	IN	Channel 2 input
6	SVR	IN	Supply voltage rejection
7	ST-BY	IN	Standby control pin
8	P-GND	PWR	Power ground
9	S-GND	PWR	Signal ground
10	DIAGNOSTICD	OUT	Diagnostics output
11	IN4	IN	Channel 4 input
12	IN3	IN	Channel 3 input
13	VCC2	PWR	Power supply
14	OUT4	OUT	Channel 4 output
15	OUT3	OUT	Channel 3 output