

# Intelligent analog power amplifiers



## Class AB, high-efficiency class SB and state-of-the-art efficient class SB-I power amplifiers with analog or digital inputs, start-stop features and hybrid vehicle compatibility

World leader in automotive audio power amplifiers, ST offers solutions for each market segment. Compliant with the most recent requirements for green vehicles including start-stop and hybrid technologies, ST intelligent power amplifiers supply the most complete diagnostics available on the market and ensure complete amplifier control through the digital I<sup>2</sup>C bus. Combined with advanced high-efficiency solutions, these products are the natural choice for OEMs.



### KEY FEATURES

- Analog or I<sup>2</sup>S / TDM digital input
- Compatibility with start-stop and hybrid-vehicle battery profiles: the engine stops and restarts without any interruption or noise over the audio system
- Full I<sup>2</sup>C digital diagnostics
- Full fault protection against any misconnection
- Class SB high efficiency with up to 25% less power dissipation compared to class AB
- Class SBI high efficiency with up to 50% less power dissipation compared to class AB
- High noise-injection immunity
- Automotive-grade EMC performance
- MOSFET output power
- Superior audio performance

### KEY BENEFITS

- No need for external solutions to play music during start-stop cycles in hybrid electric vehicles
- Compatibility with existing products enabling direct replacement with only minor redesign
- Superior diagnostics help build reliable applications

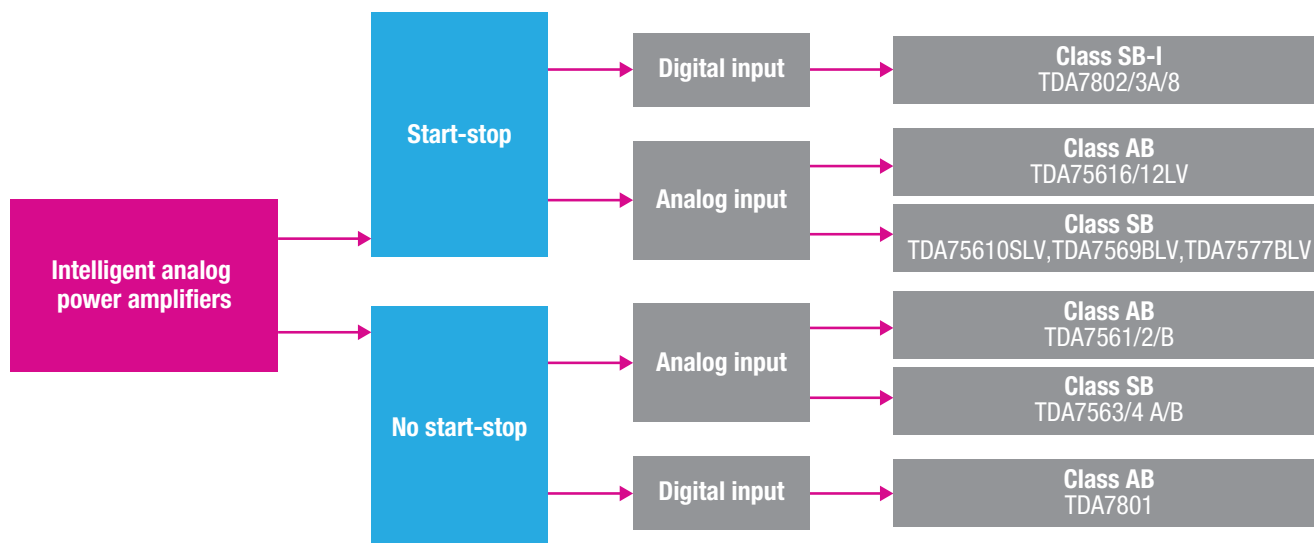
#### Class SB/SBI

- Very low power dissipation
- Smaller heatsink allowing smaller and lighter applications
- Contribution to emission reductions and environment protection
- Lower application cost compared to equivalent solutions (especially for class D)

#### Digital input

- High noise-injection immunity (for example, in GSM services) thanks to the digital input
- No need for digital-to-analog converter and input filters

## OUR OFFER AT A GLANCE



## FULL PRODUCT SUPPORT

Demonstration boards, technical documentation and relevant software are available for all automotive power amplifiers.

## DEVICE SUMMARY

Part number	Description
TDA7569BLV	4 x 50 W high efficiency, class SB power amplifier with full I <sup>2</sup> C diagnostics
TDA7569BDLV	4 x 50 W high efficiency, class SB differential input power amplifier with full I <sup>2</sup> C diagnostics
TDA75610SLV / EP	4 x 45 W high efficiency, class SB power amplifier with full I <sup>2</sup> C diagnostics
TDA75610DLV	4 x 45 W high efficiency, class SB differential input power amplifier with full I <sup>2</sup> C diagnostics
TDA75612LV / EP	4 x 45 W high efficiency power amplifier with full I <sup>2</sup> C diagnostics and en/dis SSR <sup>(1)</sup>
TDA75613LV	4 x 45 W high efficiency, class SB power amplifier with full I <sup>2</sup> C diagnostics and SSR <sup>(1)</sup>
TDA75616LV / EP	4 x 45 W high efficiency power amplifier with full I <sup>2</sup> C diagnostics and SSR <sup>(1)</sup>
TDA7577BLV	2 x 50 W high efficiency, class SB dual bridge power amplifier with full I <sup>2</sup> C diagnostics
TDA7801	4 x 50 W digital input quad power amplifier with full I <sup>2</sup> C diagnostics
TDA7802	4 x 50 W high efficiency, class SB-I digital input power amplifier with full I <sup>2</sup> C diagnostics, start-stop compatible
TDA7561/2/B	4 x 45 W power amplifier with full I <sup>2</sup> C diagnostics
TDA7563/4 A/B	4 x 50 W class SB power amplifier with full I <sup>2</sup> C diagnostics
TDA7803A	4 x 43 W high efficiency, class SB-I digital input power amplifier with full I <sup>2</sup> C diagnostics, start-stop compatible
TDA7808	4 x 43 W high efficiency, class SB-I digital input power amplifier, start-stop compatible

Note: <sup>(1)</sup> SSR is short for speaker safety routine, <sup>(2)</sup> Class SB-I is short for class SB improved

Note: LV suffix stands for start-stop compatible



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