

# Car audio power amplifiers moving to the green zone



## Linear and digital high-efficiency audio power amplifiers with start-stop and hybrid-vehicle compatibility

ST is world leader in automotive audio power amplifiers, and offers solutions for each market segment. ST is also committed to environment protection and was the first company to design audio amplifiers with the specific target of allowing car makers to decrease exhaust, fuel consumption and vehicle weight.

Every new power amplifier from ST is now compatible with the most recent technologies for green vehicles, such as start-stop and hybrid technologies, and embeds advanced high-efficiency solutions.

### KEY FEATURES

- Compatibility with start-stop and hybrid-vehicle battery profiles: the engine stops and restarts without any interruption or noise on the audio
- Full protection against any misconnection
- Full digital diagnostics
- High noise-injection immunity
- Automotive-grade EMC performances
- MOSFET output power
- Superior audio performances

### Analog family

- Class SB high efficiency with up to 25% less power dissipation compared to class AB (actual measurements)

### Digital families

- Class D high efficiency with optimized BOM
- Class SBi high efficiency with up to 50% less power dissipation compared to class AB

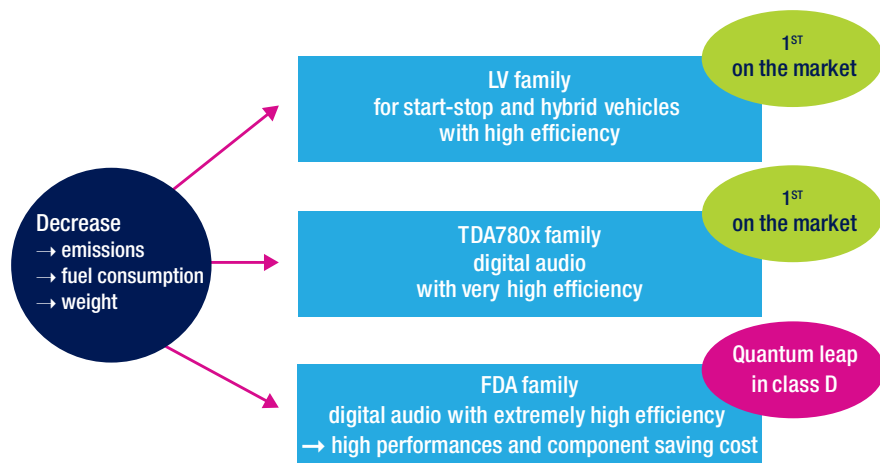
### KEY BENEFITS

- Low power dissipation with high output power
- 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)
- Compatibility with existing products, so direct replacement is possible with minor redesign

## NEW AUDIO POWER GREEN WAVE

## TARGETED APPLICATIONS

- Head units
- Boosters
- Automotive sound systems



## FULL PRODUCT SUPPORT

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

## DEVICE SUMMARY

| Part number        | Description                                                                                                      |
|--------------------|------------------------------------------------------------------------------------------------------------------|
| <b>TDA7391LV</b>   | 35 W single bridge power amplifier                                                                               |
| <b>TDA7569BLV</b>  | 4 x 50 W high efficiency, class SB power amplifier with full I <sup>2</sup> C diagnostics                        |
| <b>TDA7569BDLV</b> | 4 x 50 W high efficiency, class SB differential input power amplifier with full I <sup>2</sup> C diagnostics     |
| <b>TDA75610LV</b>  | 4 x 45 W high efficiency, class SB power amplifier with full I <sup>2</sup> C diagnostics                        |
| <b>TDA75610DLV</b> | 4 x 45 W high efficiency, class SB differential input power amplifier with full I <sup>2</sup> C diagnostics     |
| <b>TDA75613LV</b>  | 4 x 45 W high efficiency, class SB power amplifier with full I <sup>2</sup> C diagnostics and SSR <sup>(1)</sup> |
| <b>TDA7577LV</b>   | 2 x 50 W high efficiency, class SB dual bridge power amplifier with with full I <sup>2</sup> C diagnostics       |
| <b>TDA7802</b>     | High efficiency, class SB-I <sup>(2)</sup> digital input quad power amplifier with built-in diagnostics features |
| <b>FDA4100LV</b>   | 4 x 135 W / 2 x 270 W PWM digital input power amplifier with built-in diagnostics and step-up driver             |
| <b>FDA450LV</b>    | 4 x 50 W PWM digital input power amplifier with built-in diagnostics features                                    |
| <b>FDA2100LV</b>   | 2 x 180W/1 x 300W PWM digital-input power amplifier with built-in diagnostics and step-up driver                 |
| <b>STPA001</b>     | 4 x 50 W MOSFET quad bridge power amplifier                                                                      |
| <b>STPA002</b>     | 4 x 52 W MOSFET quad bridge power amplifier with high side driver                                                |

Notes:

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



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