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

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

TARGETED APPLICATIONS
- Head units
- Boosters
- Automotive sound systems

DEMO BOARD

TDA7391LV
35 W single bridge power amplifier

TDA7569BLV
4 x 50 W high efficiency, class SB power amplifier with full I²C diagnostics

TDA7569BDLV
4 x 45 W high efficiency, class SB differential input power amplifier with full I²C diagnostics

TDA75610SLV
4 x 45 W high efficiency, class SB power amplifier with full I²C diagnostics

TDA75610DLV
4 x 45 W high efficiency, class SB differential input power amplifier with full I²C diagnostics

TDA75612LV
4 x 45 W power amplifier with full I²C diagnostics and en/dis SSR

TDA75613LV
4 x 45 W high efficiency, class SB power amplifier with full I²C diagnostics and SSR

TDA75616LV
4 x 45 W power amplifier with full I²C diagnostics and SSR

TDA7577BLV
2 x 50 W high efficiency, class SB dual bridge power amplifier with with full I²C diagnostics

TDA7802
High efficiency, class SB-I²C digital input quad power amplifier with built-in diagnostics features

FDA4100LV
4 x 135 W / 2 x 270 W PWM digital input power amplifier with built-in diagnostics and step-up driver

FDA450LV
4 x 50 W PWM digital input power amplifier with built-in diagnostics features

FDA2100LV
2 x 180W/1 x 300W PWM digital-input power amplifier with built-in diagnostics and step-up driver

STPA001
4 x 50 W MOSFET quad bridge power amplifier

STPA002
4 x 52 W MOSFET quad bridge power amplifier

STPA003
4 x 52 W MOSFET quad bridge power amplifier with high side driver and excellent GSM noise immunity

STPA008
4 x 50 W MOSFET quad bridge power amplifier with excellent GSM noise immunity

Notes:
(1) SSR is short for speaker safety routine,
(2) Class SB-I is short for class SB improved

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