

- 2 × 30 W Into a 8-Ω BTL Load at 24 V (TPA3118D2)
- 2 × 15 W Into a 8-Ω BTL Load at 15 V (TPA3130D2)
- Wide Voltage Range: 4.5 V to 26 V
- Efficient Class-D Operation
  - >90% Power Efficiency Combined With Low Idle Loss Greatly Reduces Heat Sink Size
  - Advanced Modulation Schemes
- Multiple Switching Frequencies
  - AM Avoidance
  - Master and Slave Synchronization
  - Up to 1.2-MHz Switching Frequency
- Feedback Power-Stage Architecture With High PSRR Reduces PSU Requirements
- Programmable Power Limit
- Differential and Single-Ended Inputs
- Stereo and Mono Mode With Single-Filter Mono Configuration
- Single Power Supply Reduces Component Count
- Integrated Self-Protection Circuits Including Overvoltage, Undervoltage, Overtemperature, DC-Detect, and Short Circuit With Error Reporting
- Thermally Enhanced Packages
  - DAD (32-Pin HTSSOP Pad Up)
  - DAP (32-Pin HTSSOP Pad Down)
- -40°C to 85°C Ambient Temperature Range

## 2 Applications

- Mini-Micro Component, Speaker Bar, Docks
- After-Market Automotive
- CRT TV
- Consumer Audio Applications

heat sink on a single layer PCB. The TPA3118D2 can even run 2 × 30 W / 8 Ω without heat sink on a dual layer PCB. If even higher power is needed the TPA3116D2 does 2 × 50 W / 4 Ω with a small heat-sink attached to its top side PowerPAD. All three devices share the same footprint enabling a single PCB to be used across different power levels.

The TPA31xxD2 advanced oscillator/PLL circuit employs a multiple switching frequency option to avoid AM interferences; this is achieved together with an option of either master or slave option, making it possible to synchronize multiple devices.

The TPA31xxD2 devices are fully protected against faults with short-circuit protection and thermal protection as well as overvoltage, undervoltage, and DC protection. Faults are reported back to the processor to prevent devices from being damaged during overload conditions.

Device Information<sup>(1)</sup>

PART NUMBER	PACKAGE	BODY SIZE (NOM)
TPA3116D2	DAD (32)	11.00 mm × 6.20 mm
TPA3118D2 TPA3130D2	DAP (32)	11.00 mm × 6.20 mm

(1) For all available packages, see the orderable addendum at the end of the datasheet.

Simplified Application Circuit

