

IRS2092

Protected Digital Audio Amplifier



Jordi Mayne, Silica Spain



IR's new chipset brings the audio efficiency and size advantages of Class D to high performance amplifiers, significantly shrinking the overall board area required by Class AB designs, without compromise to audio performance. Better still, the IC simplifies the designer's job by delivering a flexible "building block" approach complete with protection, deadtime, and PWM modulator which can easily scale to address changing design needs by simply replacing MOSFETs, he added.

The new chipset forms a Class D audio solution that is much smaller than a comparable Class AB design. In a 100W application, for example, the IRS2092 IC and IRF6645 DirectFET® MOSFETs reduce board size by 60% and eliminate 20% of the parts from the typical bill of materials.

Key Features

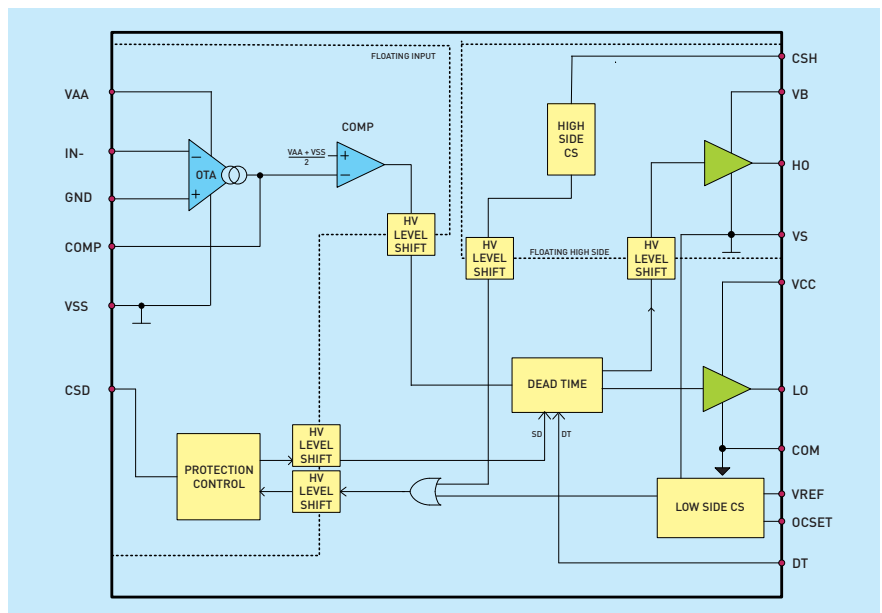
- Integrated analog input Class D audio amplifier driver in a small 16-pin package
- Floating inputs enable easy half bridge implementation
- Programmable bidirectional over-current protection with self-reset function
- Programmable preset dead-time for improved THD performances
- ±100V supply rails deliver up to 500W in output power
- Start and stop click noise reduction
- High noise immunity
- Operates up to 800kHz

Key Applications

- Home entertainment systems
- Active speakers
- Musical instruments
- Professional audio applications

Key Design Tips

The IRAUDAMP5 is a reference design for 120W x 2-channel Class D Audio Power Amplifier using the IRS2092S and IRF6645 with complete documentation, gerber files and data sheets.



Service available or already delivered T&R from Manufacturer.
 Tapes are available, but not stocked at Avnet Logistics due to low demand.
 Device supported by or programming equipment, but the socket for this package must be provided by customer.

P/N	Package	Programming	Taping & Reeling	Marking
IRS2092SPBF	16-pin narrow SOIC			
IRAUDAMP5		Tool		