

Audio Bandwidth Designs

- 🎵 20W – 400W
- 🎵 Multimedia, Automotive, Home Theater
- 🎵 Half Bridge and Full Bridge

Features:

- 🎵 20Hz – 22kHz Bandwidth
- 🎵 >90% Efficiency
- 🎵 <0.05% THD
- 🎵 >95db SNR
- 🎵 FCC Class-B/CE Compliant

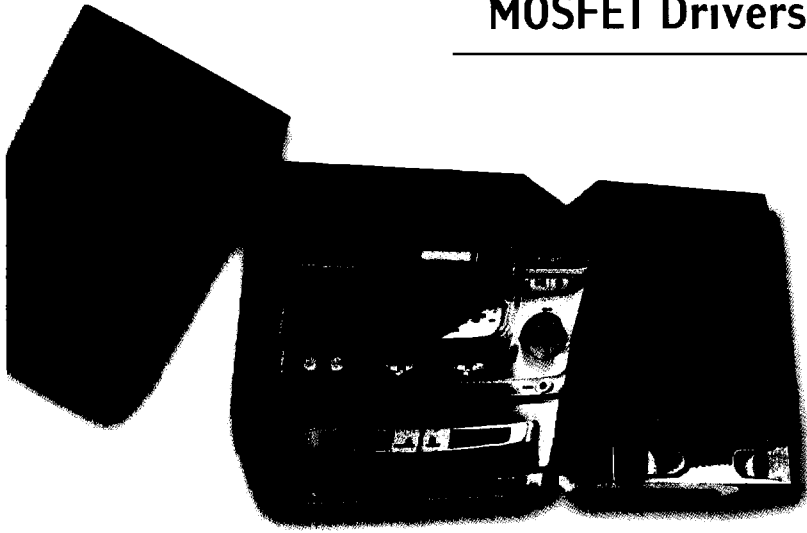
COMING SOON

A Full Portfolio of Audio Components for Audio Switching Power Supplies

In addition to our Cool Audio solutions, Harris also offers a host of components to fulfill your other audio needs:

| | HIP4080A FULL BRIDGE N-CHANNEL DRIVER | HIP4081A FULL BRIDGE N-CHANNEL DRIVER | HIP2100 HALF BRIDGE N-CHANNEL DRIVER |
|-----------------------------------|---|---|--|
| Temperature Range | -55°C to +125°C | -55°C to +125°C | -40°C to +110°C |
| Min/Maximum Bus Voltage | 1V to 80V | 1V to 80V | 100V |
| Supply Voltage (Bias) | 9V to 15V | 9V to 15V | 8V to 15V |
| Maximum Frequency | 1MHz | 1MHz | 1MHz |
| Output Rise Time (1000pf) | 15ns | 15ns | 10ns |
| Peak Drive Current (Each Drive) | 2.5A | 2.5A | 2A |
| Shoot Thru Protection | 4 | 4 | — |
| Dead Time Programming Range | 10ns to 100ns | 10ns to 100ns | — |
| Level Shift Circuit | Pulsed | Pulsed | Pulsed/Correcting |
| Boot Strap Diode | — | — | Yes |
| Charge Pumps | 2 | 2 | — |
| Vdd UVLO &/or Integrated Start-up | Yes | Yes | Yes |
| High Side UVLO | — | — | Yes |
| Disable | Yes | Yes | — |
| PWM Comparator | 2 | — | — |
| Independent Gate Controls | — | Yes | Yes |
| PIN Count (DIP, SOIC, or SIP) | 20 PDIP, SOIC | 20 PDIP, SOIC | 8 SOIC |
| Evaluation Board Available? | Yes | Yes | Yes |

MOSFET Drivers



The **HIP4080A/4081A** simplifies bridge-based topologies by eliminating 30-40 discretes and reducing the size of passive filter components and heat sinks. As the only 80V Full Bridge MOSFET driver available in the industry, it's the perfect selection for dual output Full Bridge power supplies, motor controls and noise cancellation systems. In audio applications our bridge drivers provide high frequency, medium voltage Full Bridge N-Channel FET driver operation that can switch at frequencies up to 1MHz. Adjustable dead-time (short-through) circuits enable cost effective Class D amplification in Half and Full Bridge topologies.

The **HIP2100** is a high frequency, 100V Half Bridge N-Channel MOSFET driver IC, available in 8 lead package SOIC. The low-side and high-side gate drivers are independently controlled and matched to 8ns. This gives the user maximum flexibility in dead-time protection selection and driver protocol. An on-board Bootstrap Schottky Diode and switching capabilities up to 1MHz enable Half Bridge Class D amplification circuits at low cost.

UltraFET MOSFETs

The UltraFET™ MOSFET process offers lower $r_{DS(ON)}$ for the same die area, making it possible to reduce costs and shrink package size. UltraFET technology offers the lowest $r_{DS(ON)}$ in the industry - 7 milliohms at 55V! The UltraFET design also yields faster switching times, resulting in lower power dissipation and higher efficiency.

| | | | A | B | C | D | E | F |
|-----|-------|-------------|----------------|---|------------|----------------|------------|---|
| 75 | 0.007 | — | — | — | HUF75345P3 | HUF75345S3/S3S | HUF75345G3 | |
| 75 | 0.008 | — | — | — | HUF75344P3 | HUF75344S3/S3S | HUF75344G3 | |
| 100 | 0.008 | — | — | — | HRF3205 | HRF3205L/S | — | |
| 75 | 0.009 | — | — | — | HUF75343P3 | HUF75343S3/S3S | HUF75343G3 | |
| 70 | 0.012 | — | — | — | HUF75339P3 | HUF75339S3/S3S | HUF75339G3 | |
| 62 | 0.014 | — | — | — | HUF75337P3 | HUF75337S3/S3S | HUF75337G3 | |
| 56 | 0.016 | — | — | — | HUF75333P3 | HUF75333S3/S3S | HUF75333G3 | |
| 42 | 0.025 | — | — | — | HUF75329P3 | HUF75329S3/S3S | HUF75329G3 | |
| 20 | 0.025 | — | HUF75329D3/D3S | — | — | — | — | |
| 31 | 0.032 | — | — | — | HUF75321P3 | HUF75321S3/S3S | — | |
| 20 | 0.032 | — | HUF75321D3/D3S | — | — | — | — | |
| 17 | 0.070 | — | HUF75309D3/D3S | — | HUF75309P3 | — | — | |
| 5 | 0.070 | HUF75309T3S | — | — | — | — | — | |
| 13 | 0.090 | — | HUF75307D3/D3S | — | HUF75307P3 | — | — | |
| 4 | 0.090 | HUF75307T3S | — | — | — | — | — | |