Power Amplifier Input Stages Help Reduce Design Time

National Semiconductor Corp. extended its high-fidelity LME audio amplifier family with the introduction of a pair of 200V mono audio power amplifier input stages with low distortion. The LME49811 and LME49830 have scalable output power based on supply voltage and output device count. Designers can use the same base circuit design to create multiple power-level solutions up to 1 kW amplifiers by scaling the output stage devices to accommodate for more power dissipation and current drive. Implemented in a complete power amplifier design, the LME49811's total harmonic distortion plus noise (THD+N) is a low 0.00035 percent, while the LME49830's THD+N is 0.0006 percent. The LME49811 drives Darlington or bipolar power transistors in an amplifier's output stage. It can exceed 500W single-ended into an 8-Ohm load and can attain slew rates of 40V/us, while providing 9 mA output drive current and 100 uV of output noise. Its operating range is (plus/minus) 20V to (plus/minus) 100V. Meanwhile the LME49830 drives MOSFETs with standard and low threshold voltages. It can also exceed of 500W single-ended, and has 60 mA output current, slew rates of 40V/us, output of 41 uV, and an operating range of (plus/minus) 20V to (plus/minus) 100V. Both devices are protected by a thermal shutdown feature and are available now in 15-lead TO-247 packages, priced at $3.33 in 1,000-unit quantities.
National Semiconductor
408-721-5000, www.national.com [1]

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