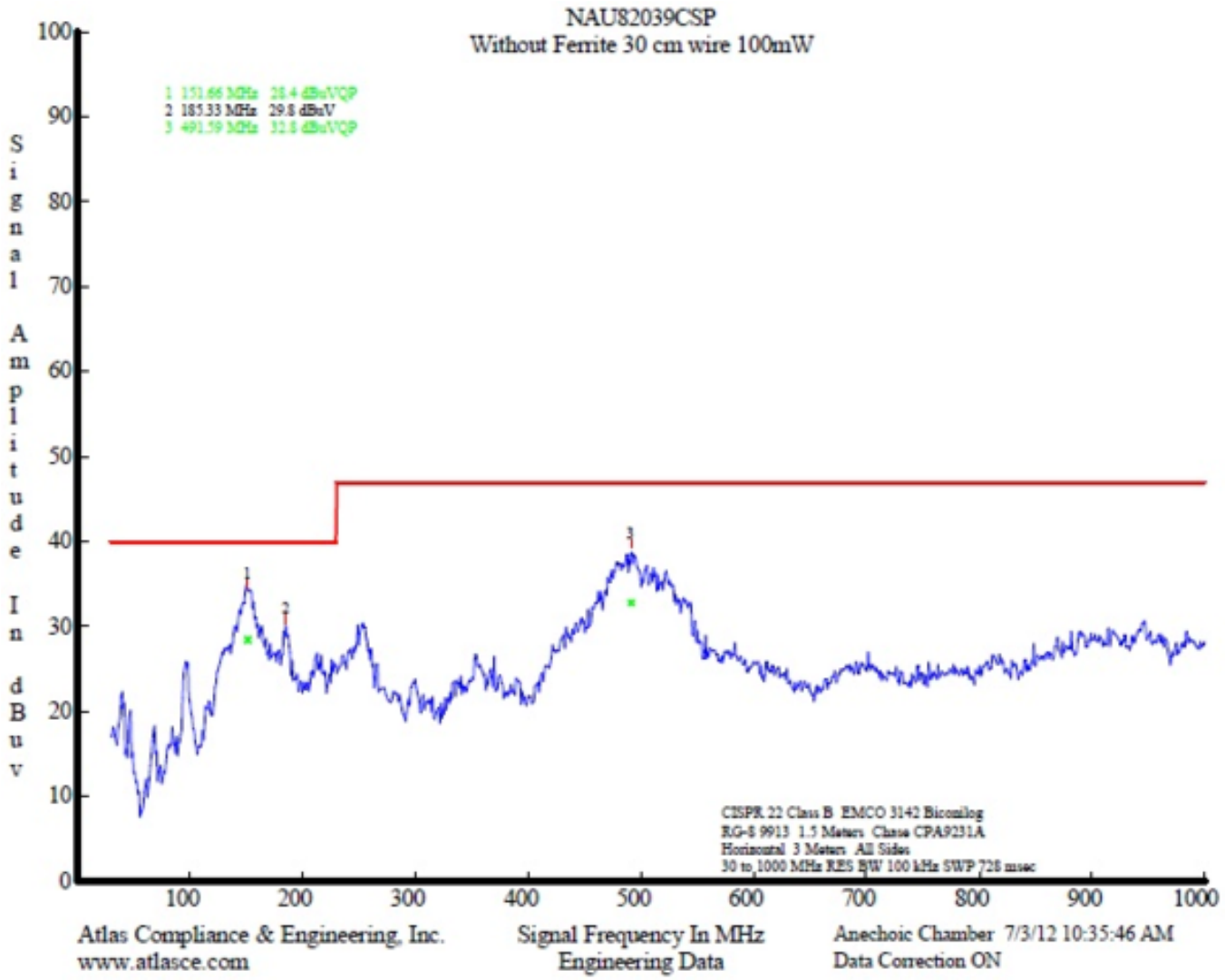
3.2W Class-D audio amplifiers feature 12dB of fixed gain

Nuvoton Technology Corporation introduced the NAU82039, a family of new Class-D audio amplifiers designed to optimize portable consumer devices. The new Nuvoton NAU82039 features high-efficiency mono, analog-input 3.2W Class-D power amplifier with 12dB of fixed gain – ideal for mobile consumer electronics such as smart phones, tablet PC, docking stations, portable audio and video players, GPS/Navigators, LCD and LED TVs, and toys.

“Lowering both power and noise are essential in the fast-moving, highly competitive market for consumer and portable devices,” said Jae-Hong Oh, senior product marketing manager at Nuvoton. “Our engineers, therefore, spearheaded an intensive effort to define a new generation of Class-D amplifiers – the NAU82039 – designed to address the market’s need for power consumption and reduced switching noise, while delivering an array of other experience-enriching features.”

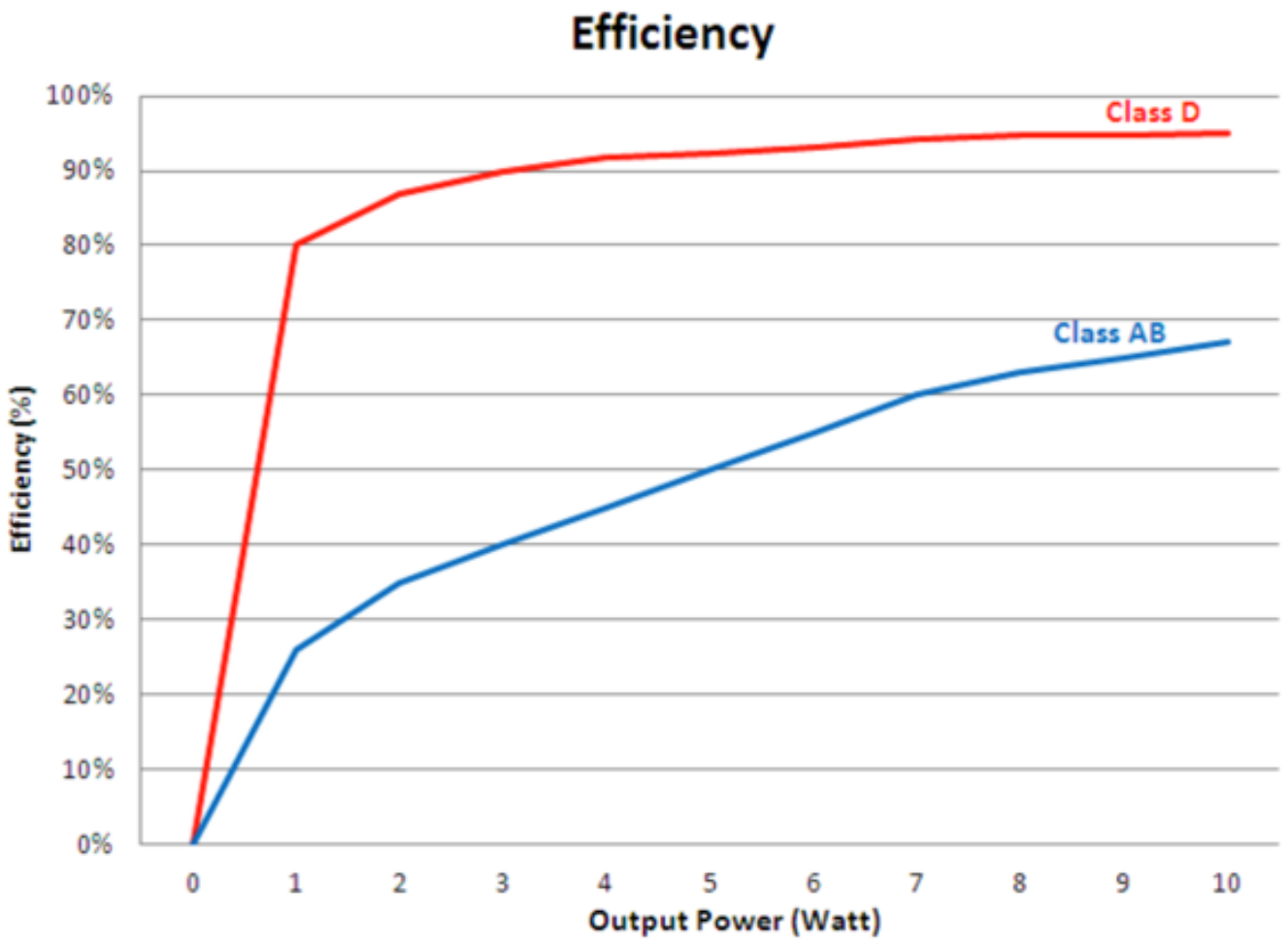
The NAU82039 mono Class-D audio amplifier sets a new standard in audio amplifiers by offering an ultra-low quiescent current (1.25mA at 3.6V) for output power delivered, allowingthe device unparalleledfor the portable applications where battery life represents a significant differentiating factor. This new amplifier’s inputs can be configured in either single-ended or differential mode.

Superior EMI performance, filter-free
The NAU82039 amplifier does not need an external output filter, as each reduces electromagnetic interference (EMI) through spread-spectrum-oscillator technology and slew-rate control. Moreover, the NAU82039 provides improved immunity and power supply rejection ratio, or PSRR, of > 90dB at 217Hz, making the devices ideal Class-D audio amplifiers for wireless and AM frequency band applications.



Leap forward in efficiency, power

The Class D topology represents a significant leap forward in both power efficiency and noise minimization in audio devices. Class D amplifiers generate a square wave, making the wave-form binary so that it can be amplified by switching the power devices. The power efficiencies of Class D amplifiers are two-thirds better than those of Class AB devices.



The Class D NAU82039 is capable of driving a 4Ω load with up to 3.2W output power, and features a chip-enable pin for extremely low standby current and fast start-up time of 4ms.

Availability, pricing
The NAU82039 is available now in Miniature WLCSP-9 (1.21mm x 1.23mm in 0.4mm pitch) package and priced at $0.20.

For more information, please visit www.nuvoton.com [1].

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Links:
[1] http://www.nuvoton.com