



ice power

Legacy Powerbloc2

Dual Mono Amplifier

Just ten years ago Class D amplifiers could barely cover the audio bandwidth. With a passion for musical detail and finesse, ICEpower® has pushed this technology forward in the new millennium, increasing this performance range to two octaves above and two octaves below the audible range. Developing close loop architecture with an exceptional power supply providing ultra high peak current of 30 amperes per channel, the amplifier is quick, quiet and boasts a damping factor exceeding 500 below 1kHz.

Two of ICEpower's core technologies are COM and MECC.

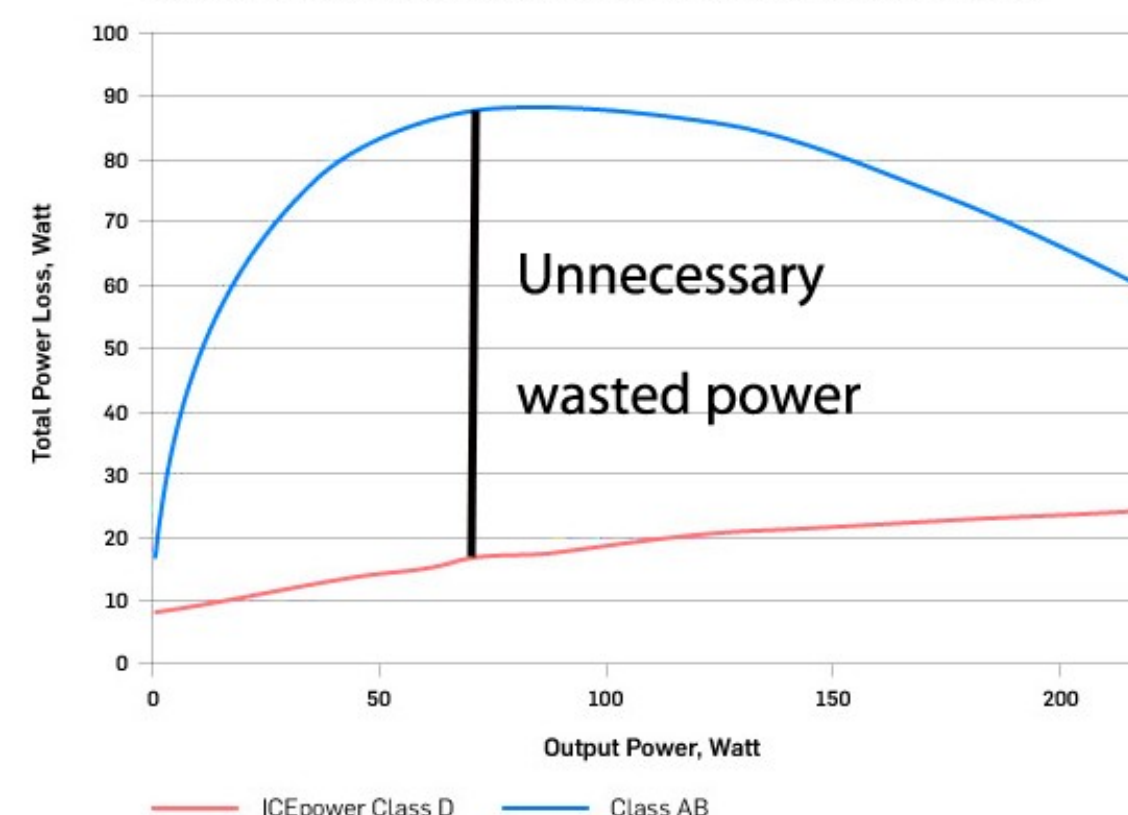
COM, the Controlled Oscillating Modulator, is a self-oscillating closed loop system. This architecture offers a range of advantages over other feedback PWM designs. COM suppresses non-linearities in the output stage, delivering a high PSRR – power supply rejection ratio: 60 dB in ICEpower solutions, compared to 0 dB in a basic Class D design. The COM principle also allows for simple, intelligent engineering design of solutions, since modulation and regulation are in the same block.

MECC, Multivariable Enhanced Cascade Control, principle applies a secondary feedback loop after the output filter in order to compensate the non-linearities introduced by the output filter. While the inner loop compensates non-linearities related to the modulator and the power stage.

Among the many qualities of the two technologies, the two feedback systems - including feedback directly at the output of the amplifier, produce very low amplifier output impedance resulting in highly precise bass control, superior to Class AB.

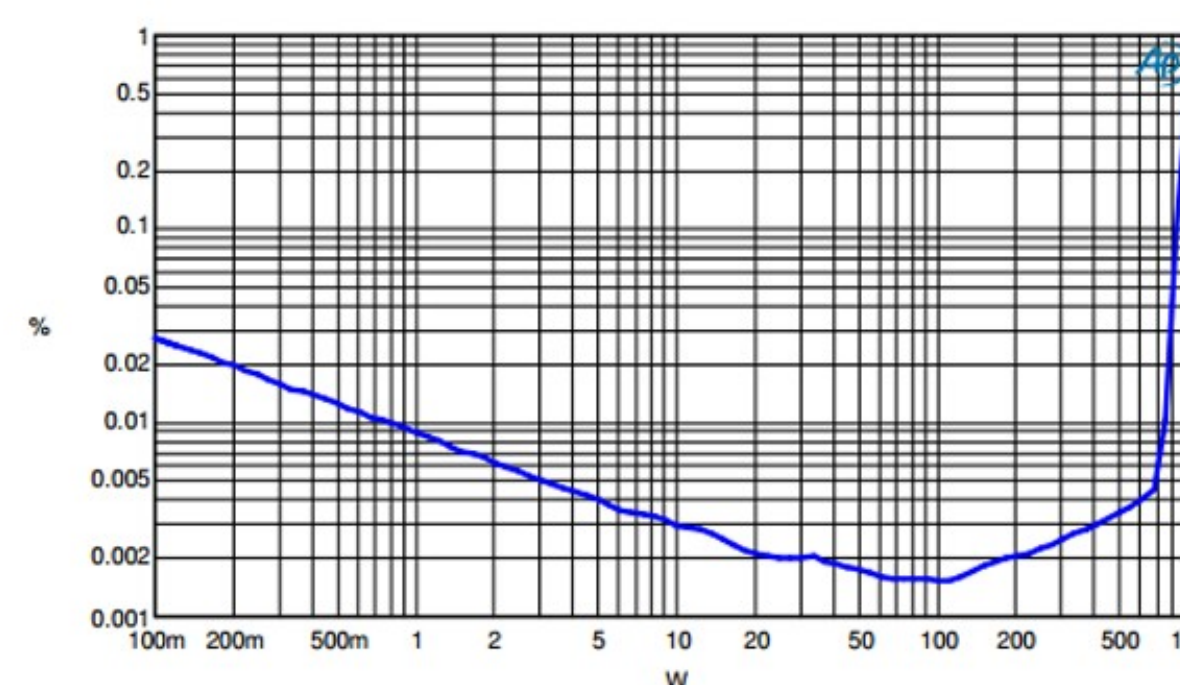
Intelligent switch-mode power supply: most of ICEpower® solutions also incorporate ICEpower switch-mode power supplies enhanced by the company's proprietary technologies and designed for smooth interaction with ICEpower amplifier sections. A power supply has a high impact on the resulting audio quality and efficiency of audio products. Hence, by incorporating a switching power supply of its own design, ICEpower ensures continuously high quality of audio performance and high efficiency of audio products containing ICEpower solutions.

Power loss of an ICEpower Class D amplifier and power loss of a Class AB amplifier with highest theoretically possible efficiency



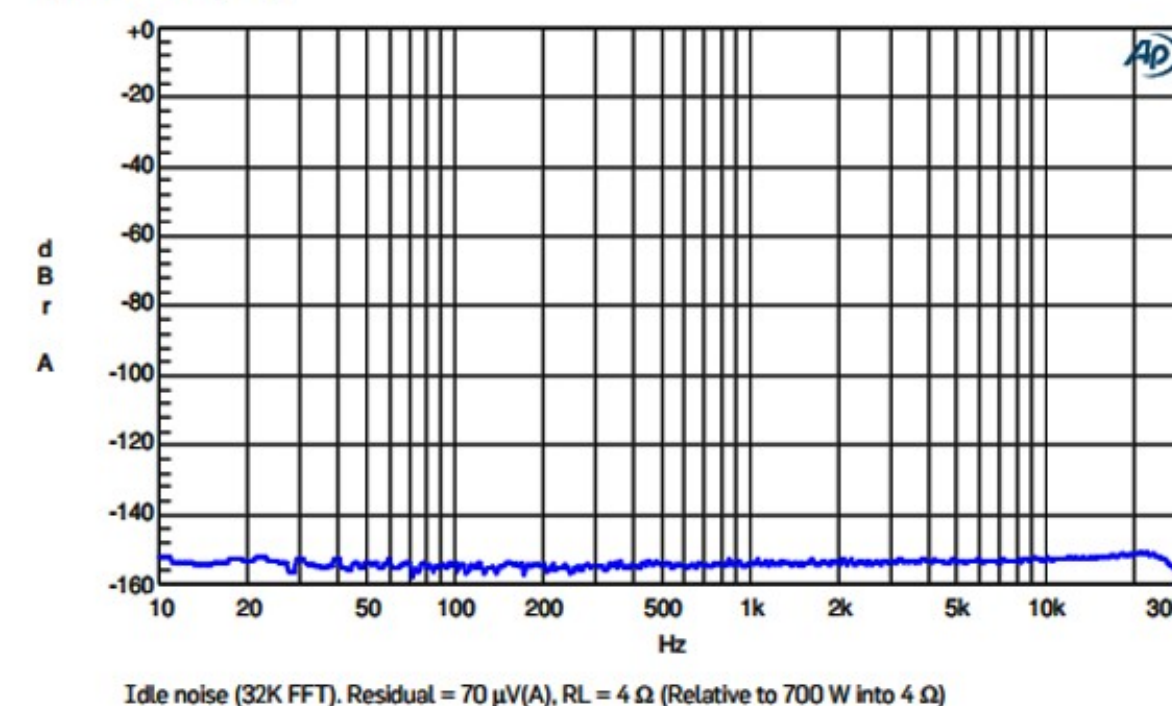
Total Intermodulation Distortion vs. Power

output into 4 ohms



Noise

Spectral View (FFT)



Idle noise (32K FFT). Residual = 70 µV(A), RL = 4 Ω (Relative to 700 W into 4 Ω)