A hysteretic self-oscillating bandpass current mode control (BPCM) scheme for Class D audio amplifiers driving capacitive transducers are presented. The scheme provides excellent stability margins and low distortion over a wide range of operating conditions. Small-signal behavior of the amplifier is analysis through transfer function based linear control methodology. Measurements are performed on a single-ended ± 300 V half-bridge amplifier driving a capacitive load of 100 nF. Total Harmonic Distortion plus noise (THD+N) below 0.1 % are reported. Transducers representing a capacitive load and obeying the rules of electrostatics have been known as very interesting alternatives to the traditional inefficient electrodynamic transducers. When driving capacitive transducers from a Class D audio amplifier the high impedance nature of the load represents a key challenge. The BPCM control scheme ensures a flat frequency response (within 3 db) over the midrange region of 200 Hz – 3.5 kHz.