DC Input Power & Efficiency

The primary consideration is to produce an amplifier that does the job well. An important secondary condition is to do the job efficiently, which keeps the temperature down, and therefore, increases reliability.

Class AB & C CW Amplifiers

Efficiency = (RF Forward Power Output (W) / DC Power Input (W)) *100%

DC input power is at the maximum level when rated RF drive is applied and at an idle level when RF drive is removed.

Class AB & C Pulse Amplifiers

Efficiency = ((Peak RF Power Output (W) * Duty Factor (%)) / Average DC Power Input (W)) *100%

DC input power is proportional to duty factor plus idle power.

Class A Amplifiers

Efficiency = (RF Forward Power Output (W) / DC Power Input (W)) *100%

Power added efficiency is usually specified at the 1 dB compression point. DC input power is continuous at all input levels (except saturation).