



The 4CX350A Radial Beam Tetrode

The Eimac 4CX350A is a radial beam tetrode having over twice the transconductance of the 4CX250 type tube. Maximum plate dissipation of the new tube is rated at 350 watts and use of the 4CX350A in new equipments can often eliminate an amplifier stage in practical circuit design while allowing greater safety factor in operation.

The 4CX350A tube is designed for linear amplifier, broadband operation, and distributed amplifier service. It is normally operated with zero grid current and grid dissipation is limited to zero watts. The design features which make the 4CX350A capable of maximum operation without driving the grid into the positive region also make it necessary to avoid positive grid operation. This tube family, therefore, is not rated for class B or class C operation.

The accompanying data sheets compare the 4CX350A with the 4CX250B. Note that the 4CX350A requires less than half the grid drive of the 4CX250B for maximum output signal. On the other hand, higher screen voltage is required for the 4CX350A and more cooling air is required to attain the higher plate dissipation level. Filament current of the 4CX350A is higher than that of the 4CX250B. In addition, the input capacitance of the 4CX350A is appreciably greater than that of the 4CX250B because of the modified grid structure.

Under proper circumstances, substitution of the 4CX350A for the 4CX250B in existing equipment may be done to achieve a substantial saving in grid driving voltage. Such substitution, however, cannot be considered unilaterally, because of the different screen and grid electrode voltages, higher filament current, and difference in interelectrode capacitance between the two styles of tubes. The 4CX350A, therefore, should not be considered as a "high power" substitute for the 4CX250B but as a unique, high transconductance tetrode useful in broadband, low drive devices where high power gain, and maximum plate dissipation are desired. Substitution of one tube type for the other in existing equipment must be decided by a complete study of the system to see if such a change is feasible or justified.