## RANGE VALUES FOR EQUIPMENT DESIGN

| | Min | Max | |
|---|---|---|---|
| Filament Current at 7.5V | 20.0 | 22.7 | Aac |
| Direct Interelectrode Capacitance (grounded grid connection) | | | |
| Input | 18.5 | 22.5 | pF |
| Output | 8.8 | 11.8 | pF |
| Feedback | — | 0.9 | pF |
| Direct Interelectrode Capacitance (grounded cathode connection) | | | |
| Input | 18.5 | 22.5 | pF |
| Output | — | 0.9 | pF |
| Feedback | 8.8 | 11.8 | pF |

# APPLICATION

## MECHANICAL

MOUNTING: The 3CX1200A7 must be operated vertically, base up or down. A flexible connecting strap should be provided between plate connector and external plate circuit. The tube must be protected from severe vibration and shock.

SOCKET: The EIMAC SK-410 air system socket and SK-436 chimney are recommended for use with the 3CX1200A7. When a socket other than the SK-410 is used, provisions must be made for equivalent cooling of the base, the envelope, and the plate lead.

If a socket other than the EIMAC SK-410 is used, the user should assure himself that strong lateral pressure is not applied to the tube base pins. Otherwise, even though the base of the tube is reinforced, damage to the base seals may result.

COOLING: Forced-air cooling is required to maintain the base seals at a temperature below 250° C, and the plate seal at a temperature below 250° C. Air flow requirements to maintain the above maximum temperatures are shown on cooling data curve.

At 1200 W of plate dissipation an airflow of 30 cfm with a back pressure of 0.5 inches of water should be applied and directed through the fins of the tube. A minimum of 5 cfm must be supplied to the base of tube whenever the filament voltage is on.

In all cases, the only criterion of proper cooling is the temperature of the tube seals. Tube temperatures may be measured with temperature sensitive paint, spray, or crayon.

HOT SURFACES: When the tube is used in air and air cooled, external surfaces may reach temperatures up to 200 degrees C and higher. In addition to the anode, the cathode insulator and cathode-heater surfaces especially may reach the high temperatures. All hot surfaces may remain hot for an extended time after the tube is shut off. To prevent serious burns, take care to avoid any bodily contact with these surfaces, both during, and for a reasonable cool-down period after, tube operation.

## ELECTRICAL

ABSOLUTE MAXIMUM RATINGS: Values shown for each type of service are based on the "absolute system" and are not to be exceeded under any service conditions. These ratings are limiting values outside which the serviceability of the tube may be impaired. In order not to exceed absolute ratings, the equipment designer has the responsibility of determining an average design value for each rating below the absolute value of that rating by a safety factor so that the absolute values will never be exceeded under any usual conditions of supply voltage variation in the equipment itself. It does not necessarily follow that combinations of absolute maximum ratings can be attained simultaneously.

ZERO-BIAS OPERATION: Operation at zero-bias is not recommended with plate voltages over 4000 since plate dissipation may be exceeded. A zener diode placing positive bias on the cathode or other constant voltage source may be used to reduce zero signal plate current at plate potentials over 4000 volts.