4X150A  4000 AIR SYSTEM SOCKET

The Eimac 4X150A/4000 air system socket was developed in order to provide adequate air cooling of the Eimac 4X150A tetrode. In addition the air-system socket makes possible improved circuit arrangements in high frequency applications.

AIR COOLING SYSTEM
The air stream is introduced into the socket from the underside and cools the grid, cathode and screen seals. It then flows over the glass envelope and through the anode cooler.
The air-system socket may be used in two types of circuit construction:
(1) In co-axial line circuits. The air system socket is mounted on the coaxial input line and air may be introduced by pressurizing the input cavity, the walls of the output cavity confine the flow and force it through the anode cooler.
(2) In chassis construction. A pressurized chamber below the socket is required. Such a chamber or closed chassis is commonly employed for electrical shielding and only slight modifications should be necessary to make it serve also for air cooling. For confining the air above the chassis a special “Pyrex” glass chimney is available to direct the air flow through the anode cooler.

In both constructions the required cooling air is 6 cubic feet per minute at a pressure of 0.75 inches of water.

SCREEN BYPASS CAPACITOR
A screen bypass capacitor with a capacitance of 3750 µf is built into the socket flange. The metal portions of the socket provide the connections to the screen and cathode terminals of the socket, thereby reducing the lead inductance to a minimum.

CAUTION: Holes must not be drilled through the socket flange to avoid damaging the bypass capacitor.

GRID CONNECTION
The grid terminal is on the center line of the socket and is provided with a threaded hole for direct connection to a coaxial grid line, or a terminal lug.

MOUNTING
With coaxial line cavities the air-system socket may be mounted directly on the end of the coaxial input line. The lower skirt of the socket fits directly over a cylinder of 1⅜" outside diameter, and four mounting holes are provided.
For chassis mounting a 2⅜" diameter hole should be cut into the deck and the socket secured by the three mounting clips provided. DO NOT DRILL THROUGH THE SOCKET FLANGE.
In circuits where the cathode of the tube is not at ground potential, or chassis potential, provision must be made to insulate the air-system socket from the chassis. This may be done by placing an insulating ring between the socket flange and chassis and also insulating the mounting clips from the flange.

MATERIAL
The insulating material used in the construction of the socket has very low R-F losses to well above 800 Mc. and is mechanically strong, non-porous, non-hydroscopic, and unaffected by high temperatures.
The contact fingers are of beryllium copper and all metal parts are silver plated to reduce R-F losses.

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Connection No. 1 Screen Grid Connection

1. Cathode
2. Cathode
3. Heater
4. Cathode
5. No Connection
6. Cathode
7. Heater
8. Cathode

Dimensions in Inches

Section thru Screen Grid by-Pass Capacitor

*6-32 thread for control grid connection

Air Out

Air In

1-1/4" dia. 4 holes 90° apart for cavity mounting

1.630 I.D.

2 3/16 dia.

2 2/4 dia.

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