

Beam Power Tube

CERMOLOX[®]

CONDUCTION COOLED
FOR USE UNDER SEVERE
SHOCK AND VIBRATION

MATRIX-TYPE CATHODE
4500 WATTS PEAK POWER
OUTPUT AT 1215 Mc

The 4622 is the same as the 7649 except for the following items:

Mechanical:

Socket:

For use at frequencies higher
than 400 Mc. See *Mounting Arrangement*

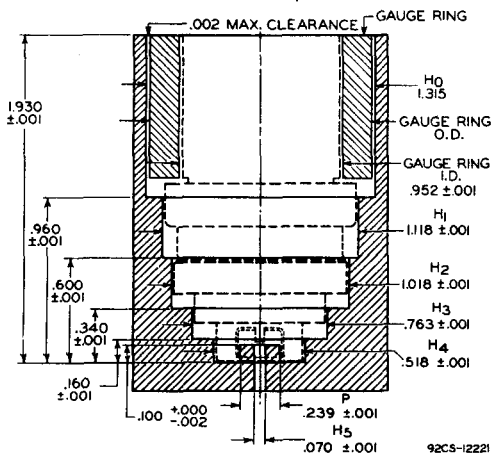
Thermal:

Conduction-Cylinder Temperature. 250 max. °C

Seal Temperature (Plate, grid No.2,
grid No.1, cathode, and heater). 250 max. °C

Cooling, Conduction:

The conduction cylinder must be thermally coupled to a constant-temperature device (heat sink—solid or liquid) to limit the conduction cylinder to the specified maximum value of 250° C. The plate, grid-No.2, grid-No.1, cathode, and heater terminals may also require coupling to the heat sink to limit their respective seal temperature to the specified maximum value of 250° C.

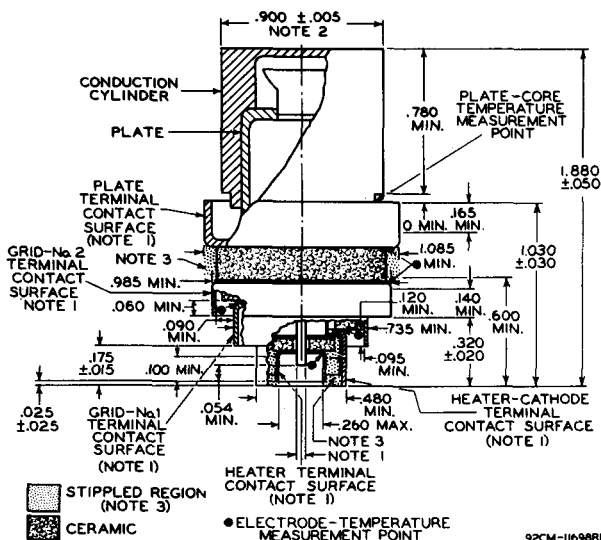
SKETCH G₁

DIMENSIONS IN INCHES

The axes of the cylindrical holes H₁ through H₅ and the axis of post P and coincident within 0.001".

The axes of the gauge ring I.D. and gauge ring O.D. are coincident within 0.001".





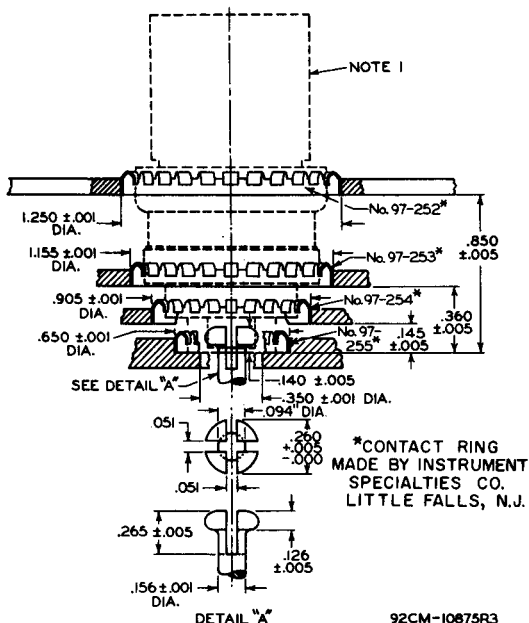
DIMENSIONS IN INCHES

Note 1: With the cylindrical surfaces of the plate terminal, grid-No. 2 terminal, grid-No. 1 terminal, heater-cathode terminal, and heater terminal clean, smooth, and free of burrs, the tube will enter a gauge as shown in sketch G_1 . The tube is properly seated in the gauge when a 0.010" thickness gauge 1/8" wide will not enter between a heater-cathode terminal and the bottom surface of H_4 . The gauge is provided with a slot to permit making measurement of seating of heater-cathode terminal on bottom of hole H_4 .

Note 2: With the tube seated in gauge and with the conduction cylinder clean, smooth, and free of burrs, the gauge ring will slip over conduction cylinder as shown in sketch G_1 .

Note 3: Keep all stippled regions clear. Do not allow contacts or circuit components to protrude into these annular volumes.

SUGGESTED MOUNTING ARRANGEMENT & LAYOUT OF ASSOCIATED CONTACTS



DIMENSIONS IN INCHES

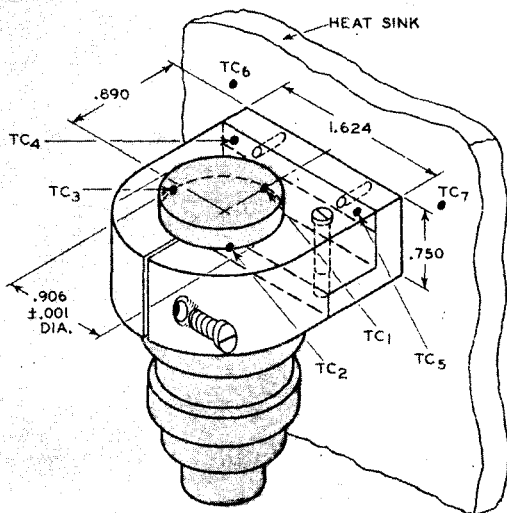
Note 1: If a clamp is used, it must be adjustable in a plane normal to the major tube axis to compensate for variations in concentricity between the conduction cylinder and the contact terminals.



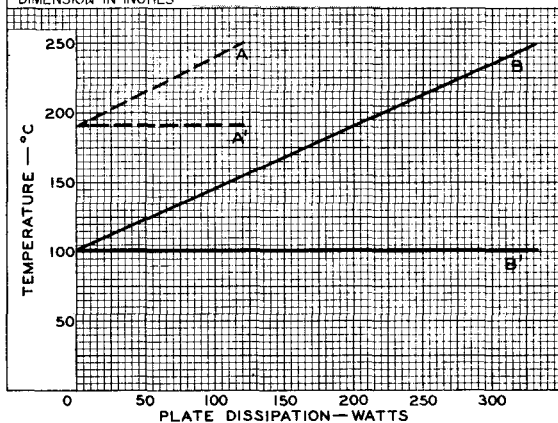
COOLING CHARACTERISTICS

Typical Clamp Conduction-Cooling System

A AND B = CONDUCTION CYLINDER AT AVERAGE OF TC_{1,2} AND 3
 A' AND B' = HEAT SINK (CHASSIS) AT AVERAGE OF TC_{4,5,6} AND 7
 TC = THERMOCOUPLE



DIMENSION IN INCHES



92CM-10872