



5794

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FIXED-TUNED OSCILLATOR TRIODE*For Radiosonde Service at 1680 Mc.*GENERAL DATA**Electrical:**

Heater, for Unipotential Cathode:

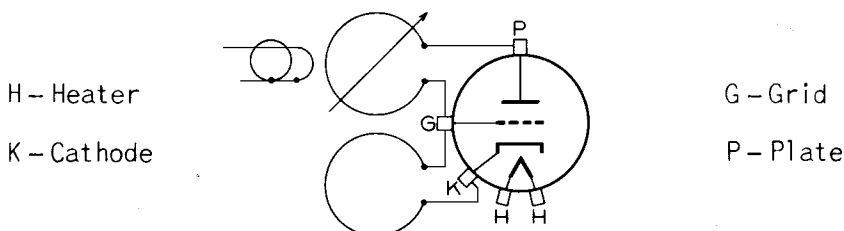
Voltage Range* 4.8 to 6.3 ac or dc volts

Current with 6.0 volts
on heater. 0.160 amp

Frequency (Approx.) 1680 Mc

Frequency Adjustment
Range. $\pm 12^{**}$ Mc**Mechanical:**

Terminal Connections (See Outline Drawing):



Mounting Position. Any

Dimensions See Outline Drawing

Resonators (Two) Integral Part of Tube

Maximum Ratings, Absolute Values:

DC PLATE VOLTAGE 120 max. volts

DC PLATE CURRENT 30 max. ma

PLATE DISSIPATION. 3.6 max. watts

PEAK HEATER-CATHODE VOLTAGE. 0 max. volts

AMBIENT TEMPERATURE RANGE. -55 to +75 °C

Operating Frequency Drift:

Heater-Voltage Range 6.0 to 4.8 volts

Plate-Voltage Range. 108 to 85 volts

Ambient Temperature Range. +22 to -40 °C

Maximum Frequency Drift. +4 to -1 Mc

CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN

	<u>Note</u>	<u>Min.</u>	<u>Av.</u>	<u>Max.</u>	
Heater Current	1	0.145	0.160	0.170	amp
Power Output	2	-	500	-	mw
Power Output	3	200	-	-	mw

* This range of heater voltage is for radiosonde applications in which the heater is supplied from batteries and in which the equipment design requirements of minimum size, light weight, and high efficiency are the primary considerations even though the average life expectancy of the 5794 in such service is only a few hours.

** As supplied, tubes are adjusted to 1680 ± 4 megacycles.

MAY 20, 1949

TUBE DEPARTMENT

TENTATIVE DATA

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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Note 1: With 6.0 volts ac on heater.

Note 2: With ac heater voltage of 6.0 volts, dc plate voltage of 120 volts, grid resistor of 0 to 3000 ohms adjusted to give dc plate current of 30 milliamperes max., and frequency of 1680 megacycles.

Note 3: With ac heater voltage of 4.8 volts, dc plate voltage of 85 volts, grid resistor of 0 to 3000 ohms adjusted to give dc plate current of 20 milliamperes, and frequency of 1680 megacycles.

OPERATING NOTES

The heater leads of the 5794 fit the Cinch socket No. 54A11953. It is recommended that the cathode be connected to one side of the heater. The heater leads should not be soldered to the circuit elements because the heat of the soldering operation may crack the glass seals of the heater leads and damage the tube. Under no circumstances should any of the electrodes be soldered to the circuit elements. Connections to the electrodes should be made by spring contact only.

The 5794 should not be supported by its socket. It should be supported by a suitable clamp around the metal shell either above or below the frequency adjustment screw. It is essential, however, that the pressure exerted on the shell by the clamp be held to a minimum because excessive pressure can distort the resonators and result in a change in frequency.

The plate and cathode terminals should have leads which are adjustable to accommodate variations in the relative positions of these electrodes in individual tubes.

The 5794 is supplied with an extension for the inner conductor of the rf coaxial-output terminal. This extension when attached to the inner conductor may be used as an antenna and should be cut to the proper electrical length to coincide with the transmitter design.

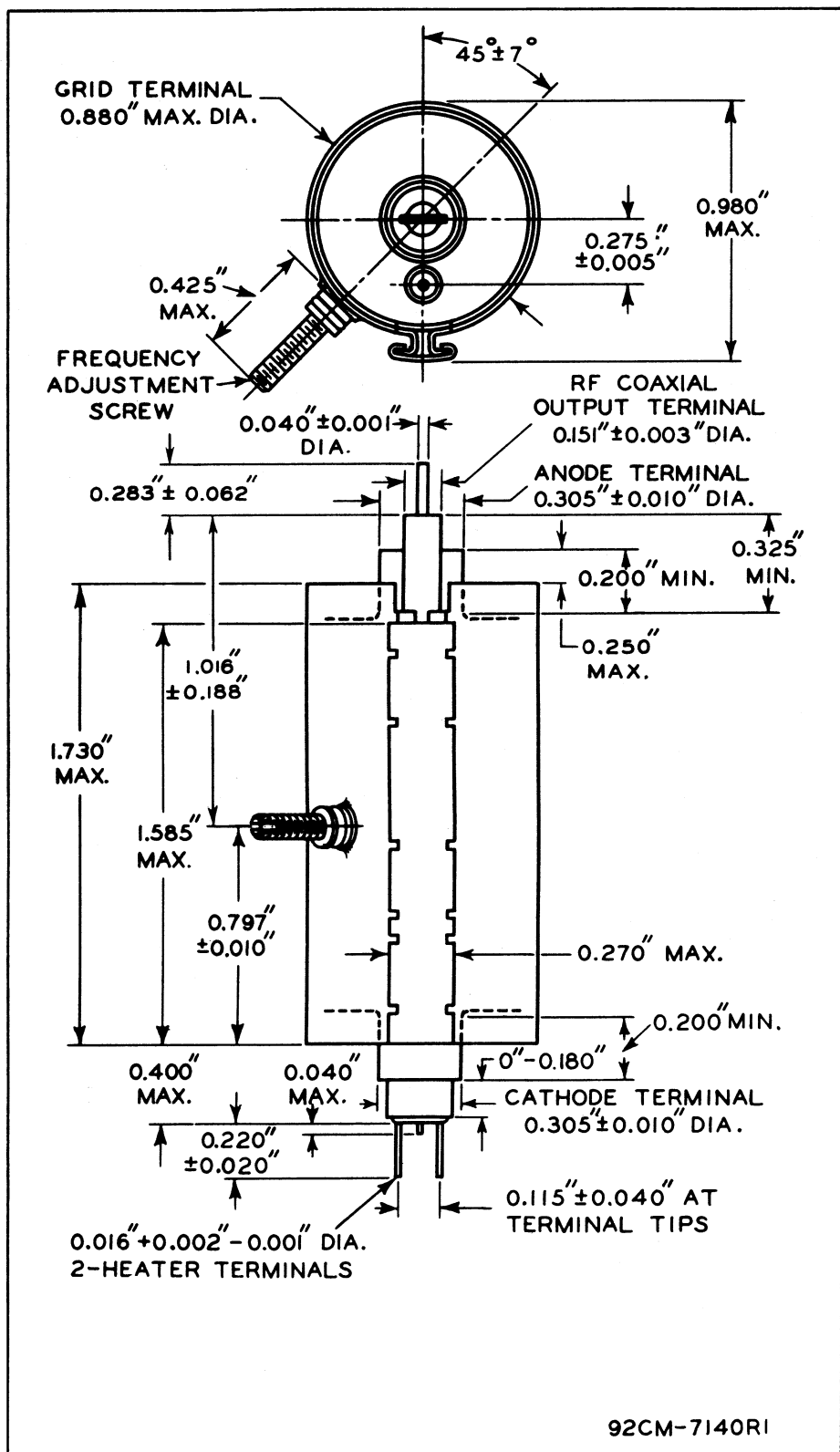
The 5794 may be mechanically tuned by adjustment of the frequency adjustment screw located on the metal shell of the tube. A clockwise rotation of the frequency adjustment screw will decrease the frequency, while a counter-clockwise rotation will increase the frequency. The range of adjustment provided by the screw is ± 12 megacycles.



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92CM-7140R1