



6J4

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**U-H-F AMPLIFIER TRIODE**

GROUNDED-GRID, MINIATURE TYPE

For use at frequencies up to 500 Mc. approx.

Heater	Coated Unipotential Cathode	
Voltage	6.3	a-c or d-c volts
Current	0.4	amp.
Direct Interelectrode Capacitances (Approx.): <sup>o</sup>		
Plate to Cathode & Heater	0.24 max.	$\mu\text{f}$
Grid to Cathode & Heater	5.5	$\mu\text{f}$
Grid to Plate	4	$\mu\text{f}$
Heater to Cathode	2.8	$\mu\text{f}$
Maximum Overall Length		2-1/8"
Maximum Seated Height		1-7/8"
Length from Base Seat		
to Bulb Top (excluding tip)		1-1/2" $\pm$ 3/32"
Maximum Diameter		3/4"
Bulb		T-5-1/2"
Base <sup>▲</sup>		Miniature Button 7-Pin
Pin 1 - Grid		Pin 5 - Grid
Pin 2 - Cathode		Pin 6 - Grid
Pin 3 - Heater		Pin 7 - Plate
Pin 4 - Heater		
RCA Socket		Stock No. 9914
Mounting Position		Any



BOTTOM VIEW (7BQ)

*Maximum Ratings Are Design-Center Values*GROUNDED-GRID AMPLIFIER

Plate Voltage		150 max. volts
Plate Dissipation		2.25 max. watts
Plate Current		20 max. ma.
D-C Heater-Cathode Potential		90 max. volts
<i>Typical Operation and Characteristics - Class A<sub>1</sub> Amplifier:</i>		
Plate Voltage	100	150 volts
Cathode-Bias Resistor* (Suitably by-passed)	100	100 ohms
Amplification Factor	55	55
Plate Resistance	5000	4500 ohms
Transconductance	11000	12000 $\mu\text{mhos}$
Plate Current	10	15 ma.

<sup>o</sup> With close-fitting shield connected to grid.

\* The 6J4 should always be used with a cathode-bias resistor suitably by-passed. The d-c resistance in the grid circuit under maximum rated conditions should be limited to 0.25 megohm.

<sup>▲</sup> The center hole in sockets designed for this base provides for the possibility that this tube type may be manufactured with the exhaust tube tip at the base end. For this reason, it is recommended that in equipment employing this tube type, no material be permitted to obstruct the socket hole.



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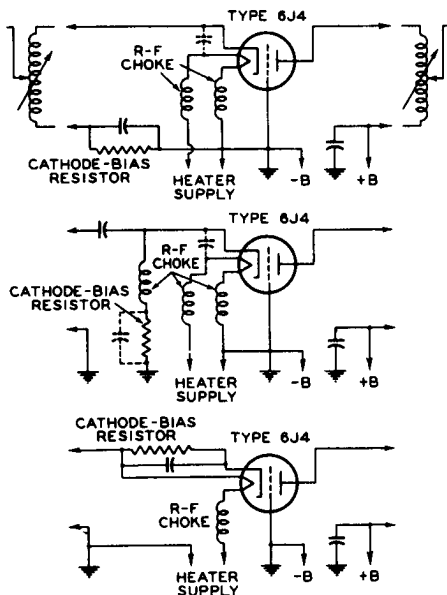
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### NOTE:

For grounded-grid operation, all three grid terminals should be grounded to minimize the effects of grid-lead inductance on u-h-f performance.

In arranging the circuit for the 6J4 used as a grounded-grid r-f amplifier or mixer, it is preferable to have the heater operate at the same r-f potential as the cathode, so that the cathode-heater capacitance will not be added across the input-circuit capacitance. Placing r-f chokes in series with the heater leads is suggested as a suitable method of operating heater and cathode at the same r-f potential.

### TYPICAL GROUNDED-GRID CIRCUITS Having Heater at R-F Cathode Potential



92CM-6550

The license extended to the purchaser of tubes appears in the License Notice accompanying them. Information contained herein is furnished without assuming any obligations.

APRIL 1, 1944

RCA VICTOR DIVISION  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

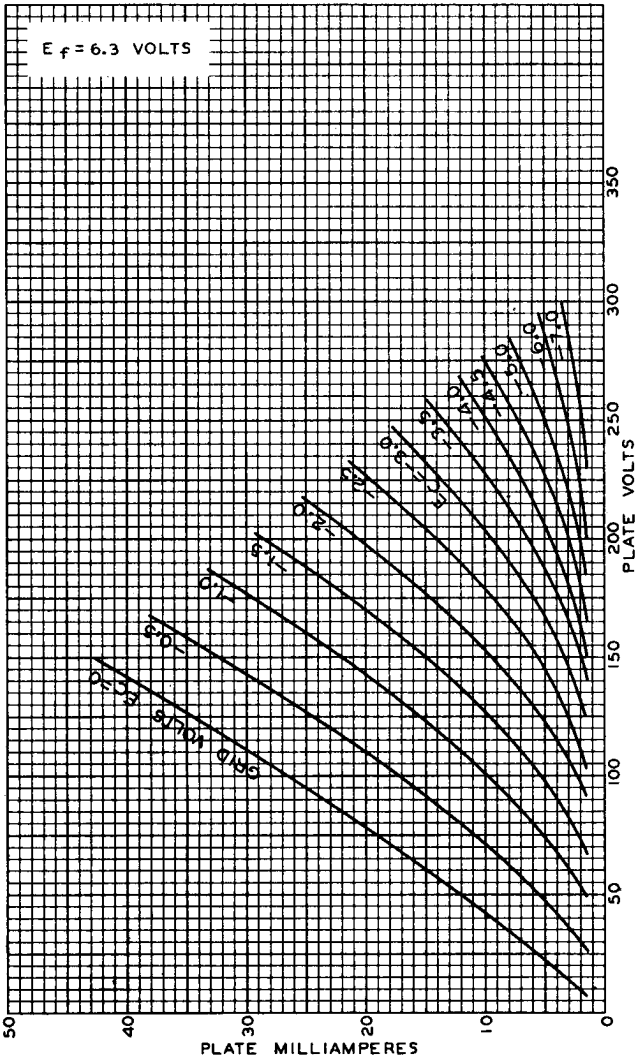
TENTATIVE DATA



6J4

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### AVERAGE PLATE CHARACTERISTICS



FEB. 19 1944

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92CM-6543

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### AVERAGE CHARACTERISTICS

$E_f = 6.3$  VOLTS      PLATE VOLTS = 150

