U-H-F AMPLIFIER TRIODE
GROUND-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.): µf
Plate to Cathode & Heater 0.24 max.
Grid to Cathode & Heater 5.5
Grid to Plate 4
Heater to Cathode 2.8

Maximum Overall Length 2-1/8"
Maximum Seated Height 1-7/8"
Length from Base Seat to Bulb Top (excluding tip) 1-1/2" + 3/32"
Maximum Diameter 3/4"
Bulb Miniature Button 7-Pin T-5-1/2"

Base Pin 1 - Grid
Pin 2 - Cathode
Pin 3 - Heater
Pin 4 - Heater

RCA Socket Stock No. 9914
Mounting Position Any

BOTTOM VIEW (7BQ)

Maximum Ratings Are Design-Center Values

GROUND-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

Typical Operation and Characteristics - Class A1 Amplifier:

<table>
<thead>
<tr>
<th>Plate Voltage</th>
<th>100</th>
<th>150</th>
<th>volts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cathode-Bias Resistor* (Suitably by-passed)</td>
<td>100</td>
<td>100</td>
<td>ohms</td>
</tr>
<tr>
<td>Amplification Factor</td>
<td>55</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Plate Resistance</td>
<td>5000</td>
<td>4500</td>
<td>ohms</td>
</tr>
<tr>
<td>Transconductance</td>
<td>11000</td>
<td>12000</td>
<td>µmhos</td>
</tr>
<tr>
<td>Plate Current</td>
<td>10</td>
<td>15</td>
<td>ma.</td>
</tr>
</tbody>
</table>

* 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.

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.

April 1, 1944
RCA Victor Division
Radio Corporation of America, Harrison, New Jersey

Tentative Data
U-H-F AMPLIFIER TRIODE

(continued from preceding page)

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

--- Diagram of typical grounded-grid circuits with 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
AVERAGE PLATE CHARACTERISTICS

E_f = 6.3 VOLTS

PLATE MILLIAMPERES

FEB. 19 1944
RCA VICTOR DIVISION
RADIO CORPORATION OF AMERICA HARRISON, NEW JERSEY
92CM-6543