GENERAL DATA

Electrical:
Heater, for Unipotential Cathode:
  Voltage ........................................... 6.3  ac or dc volts
  Current ........................................... 0.225  amp
Resonant Frequency (Approx.) .................... 1000  Mc
Direct Interelectrode Capacitances (No external shield):
  Grid to Plate .................................. 1.9  μf
  Grid to Cathode and Heater .................. 2.2  μf
  Plate to Cathode and Heater ................ 0.45  μf

Characteristics - Class A1 Amplifier:
  Plate Voltage .................................. 80  100  volts
  Cathode-Bias Resistor .......................... 150  150  ohms
  Amplification Factor ........................... 15  16
  Plate Resistance ............................. 2270  2130  ohms
  Transconductance ......................... 6600  7500  μmhos
  Plate Current ................................. 16  20  ma

Mechanical:
  Mounting Position ................................ Any
  Maximum Overall Length .......................... 2-1/8"
  Maximum Seated Length ........................... 1-7/8"
  Length, Base Seat to Bulb Top (Excluding tip) 1-1/2" ± 3/32"
  Maximum Diameter ................................ 3/4"
  Bulb ............................................... T-5-1/2
  Base .............................................. Small-Button Miniature 7-Pin (JETEC No.E7-1)
Basing Designation for BOTTOM VIEW .............. 7DK

Pin 1 - Plate  ..................................... Pin 5 - Cathode
Pin 2 - Grid ....................................... Pin 6 - Grid
Pin 3 - Heater .................................... Pin 7 - Plate
Pin 4 - Heater ....................................

OSCILLATOR IN UHF TELEVISION RECEIVERS

Maximum Ratings, Design-Center Values:
  DC PLATE VOLTAGE .............................. 150  max. volts
  DC GRID VOLTAGE ............................... -50  max. volts
  DC GRID CURRENT ................................ 8  max. ma
  PLATE INPUT .................................... 2.5  max. watts
  PLATE DISSIPATION ............................ 2.25  max. watts
  DC CATHODE CURRENT ......................... 28  max. ma
  PEAK HEATER-CATHODE VOLTAGE:
    Heater negative with respect to cathode 80  max. volts
    Heater positive with respect to cathode 80  max. volts

△: See next page.

JULY 1, 1952
TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
TENTATIVE DATA
Typical Operation as Oscillator at 950 Mc:

- DC Plate Voltage: 100 volts
- DC Grid Voltage: -4 volts
- From a grid resistor of: 10000 ohms
- DC Plate Current: 22 ma
- DC Grid Current (Approx.): 400 μamp
- Useful Power Output: 160 milliwatts

Maximum Circuit Values:

- Grid-Circuit Resistance:
  - For fixed-bias operation: Not recommended
  - For cathode-bias operation: 0.5 max. megohm

It is recommended that the heater be kept at cathode potential to minimize the effects of variation in the heater-to-cathode capacitance between tubes.

OPERATING CONSIDERATIONS

The mounting arrangement should insure that the tube is held secure by its socket. Unless this recommendation is followed, the generated frequency may change by as much as 10 megacycles per second. Use of a conventional miniature tube shield and external clamping arrangement are recommended.

The base pins of the 6AF4 fit the miniature 7-contact socket. The socket should be of the mica-filled, rubber, or ceramic type.
The 6AF4 is the same as the 6AF4-A except for the following mechanical dimensions:

- Maximum Overall Length: 2-1/8"
- Maximum Seated Length: 1-7/8"
- Length, Base Seat to Bulb Top (Excluding tip): 1-1/2" ± 3/32"