



6AF4-A — 2AF4-A — 3AF4-A

TRIODE

FOR UHF OSCILLATOR APPLICATIONS

6AF4-A
2AF4-A
3AF4-A
 ET-T1257A
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DESCRIPTION AND RATING

The 6AF4-A is a miniature medium-mu triode designed for use as a UHF oscillator in television receivers. Features of the tube include low interelectrode capacitances, low internal lead inductances, and short transit time.

The 2AF4-A and 3AF4-A are essentially equivalent to the 6AF4-A, except for heater ratings. In addition, the 2AF4-A and 3AF4-A incorporate a controlled heater-warm-up characteristic which makes them especially suited for use in television receivers that employ series-connected heaters.

Except for bulb length, the 6AF4-A and 2AF4-A are identical to the 6AF4 and 2AF4.

GENERAL

ELECTRICAL	2AF4-A	3AF4-A	6AF4-A
Cathode—Coated Unipotential			
Heater Voltage, AC or DC	2.35	3.2	6.3 ± 10% Volts
Heater Current	0.6 ± 6%	0.45	0.225 Amperes
Heater Warm-up Time*	11	11 Seconds
Direct Interelectrode Capacitances†			
Grid to Plate			1.9 μf
Input			2.2 μf
Output			1.4 μf
Heater to Cathode‡			2.2 μf

MECHANICAL

Mounting Position—Any
 Envelope—T-5½, Glass
 Base—E7-1, Miniature Button 7-Pin

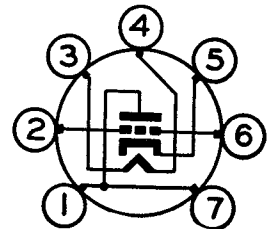
MAXIMUM RATINGS

DESIGN-MAXIMUM VALUES

Plate Voltage	150 Volts
Negative DC Grid Voltage	50 Volts
Plate Dissipation	2.5 Watts
DC Grid Current	2.0 Milliamperes
DC Cathode Current	22 Milliamperes
Heater-Cathode Voltage	
Heater Positive with Respect to Cathode	
DC Component	25 Volts
Total DC and Peak	50 Volts
Heater Negative with Respect to Cathode	
Total DC and Peak	50 Volts

Design-Maximum Ratings are the limiting values expressed with respect to bogie tubes at which satisfactory tube life can be expected to occur. To obtain satisfactory circuit performance, therefore, the equipment designer must establish the circuit design so that no design-maximum value is exceeded with a bogie tube under the worst probable operating conditions with respect to supply-voltage variation, equipment component variation, equipment control adjustment, load variation, and environmental conditions.

BASING DIAGRAM

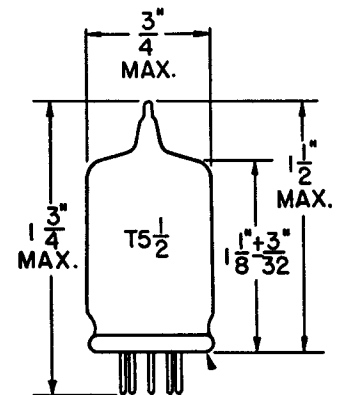


RETMA 7DK

TERMINAL CONNECTIONS

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

PHYSICAL DIMENSIONS



RETMA 5-1

GENERAL ELECTRIC

Supersedes ET-T1257, dated 1-56

CHARACTERISTICS AND TYPICAL OPERATION

AVERAGE CHARACTERISTICS

Plate Voltage	80 Volts
Cathode-Bias Resistor	150 Ohms
Amplification Factor	13.5
Plate Resistance, approximate	2100 Ohms
Transconductance6500 Micromhos
Plate Current	17.5 Milliamperes

UHF OSCILLATOR SERVICE§	2AF4-A 3AF4-A	6AF4-A
Plate Supply Voltage	100	100 Volts
Plate Resistor	220	220 Ohms
Grid Resistor	10000	10000 Ohms
Plate Current	17.5	17 Milliamperes
Frequency	1000	1000 Megacycles
Grid Current	700	750 Microamperes

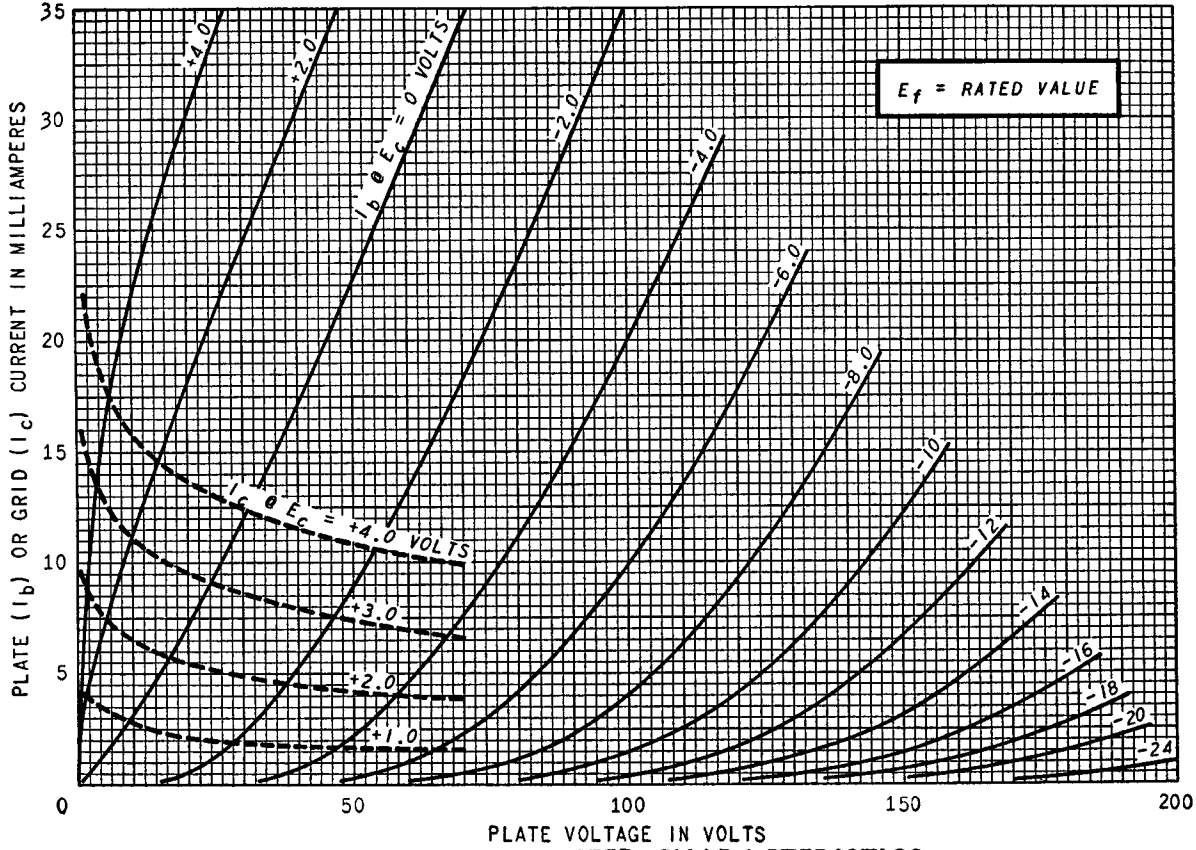
* The time required for the voltage across the heater to reach 80 percent of its rated value after applying 4 times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to 3 times the rated heater voltage divided by the rated heater current.

† With external shield (RETMA 316) connected to pin 5 unless otherwise indicated.

‡ With external shield (RETMA 316) connected to pin 1.

§ Measured in JETEC standard UHF oscillator No. 400.

AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS

