

**6J4**

**Description and Rating**  
**HIGH-FREQUENCY TRIODE**

**GENERAL DESCRIPTION**

Principal Application: The 6J4 is a miniature high- $\mu$  triode designed for use as a grounded-grid amplifier at frequencies up to approximately 500 megacycles. The tube features an extremely high transconductance of 12000 micromhos and permits

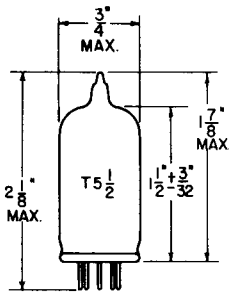
Cathode: . . . . . Coated Unipotential  
Heater Voltage (A-C or D-C). . . . . 6.3 Volts  
Heater Current . . . . . 0.4 Ampere  
Envelope: . . . . . T-5½ Glass  
Base: . . . . . E7-1, Miniature Button 7-Pin  
Mounting Position: . . . . . Any

operation with a high signal-to-noise ratio. Three terminals on the grid provide effective grounding with a minimum of reactance. The 6J4 may also be used in conventional triode circuits with an ungrounded grid.

Direct Interelectrode Capacitances: (Approx)#

Plate to Cathode and Heater (Max)	0.24	$\mu\mu\text{f}$
Grid to Cathode and Heater . . . . .	5.5	$\mu\mu\text{f}$
Grid to Plate . . . . .	4.0	$\mu\mu\text{f}$
Heater to Cathode . . . . .	3.2	$\mu\mu\text{f}$

**PHYSICAL DIMENSIONS**

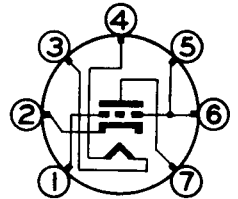


RMA 5-2

**TERMINAL CONNECTIONS**

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

**BASING DIAGRAM**



RMA 7BQ  
BOTTOM VIEW

**DESIGN CENTER VALUES:**

Plate Voltage . . . . .	150	Volts
Plate Dissipation . . . . .	2.25	Watts
Plate Current . . . . .	20	Milliamperes
D-C Heater-Cathode Voltage . . . . .	90	Volts
Grid Circuit Resistance . . . . .	0.25	Megohm

**MAXIMUM RATINGS**

**CHARACTERISTICS AND TYPICAL OPERATION**

**GROUND-GRID CLASS A<sub>1</sub> AMPLIFIER**

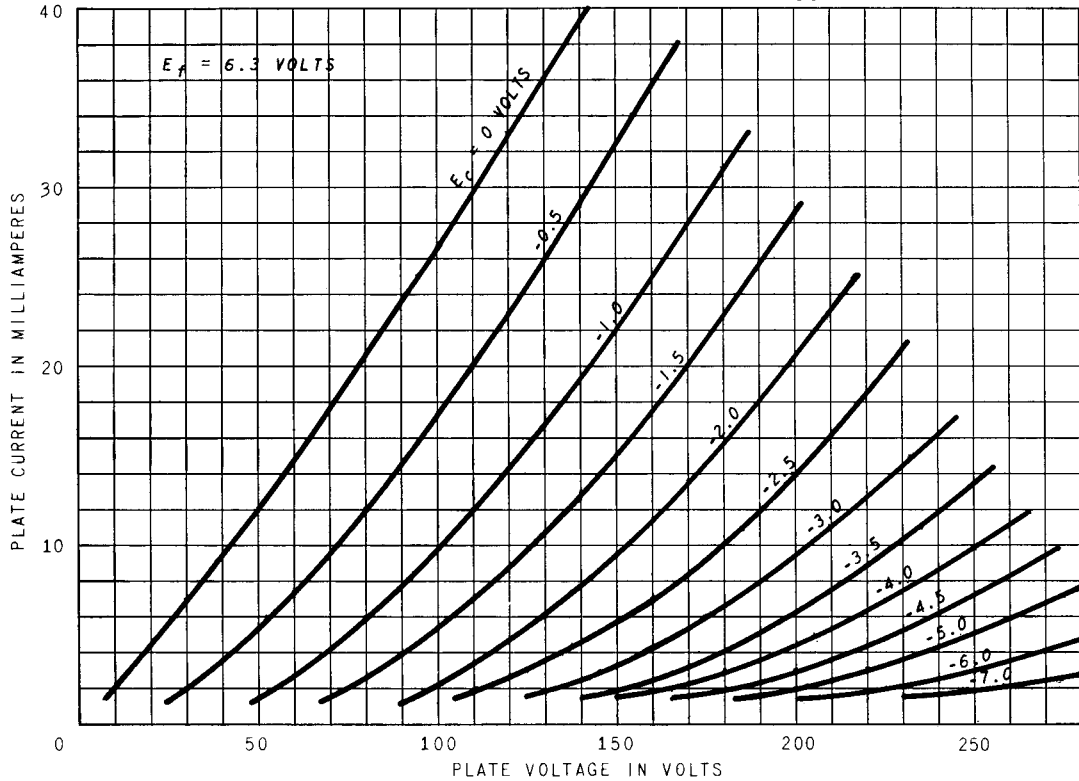
Plate Voltage . . . . .	100	150	Volts
Cathode Bias Resistor* . . . . .	100	100	Ohms
Amplification Factor . . . . .	55	55	
Plate Resistance . . . . .	5000	4500	Ohms
Transconductance . . . . .	11000	12000	Micromhos
Plate Current . . . . .	10	15	Milliamperes

# With external shield #316 connected to grid.

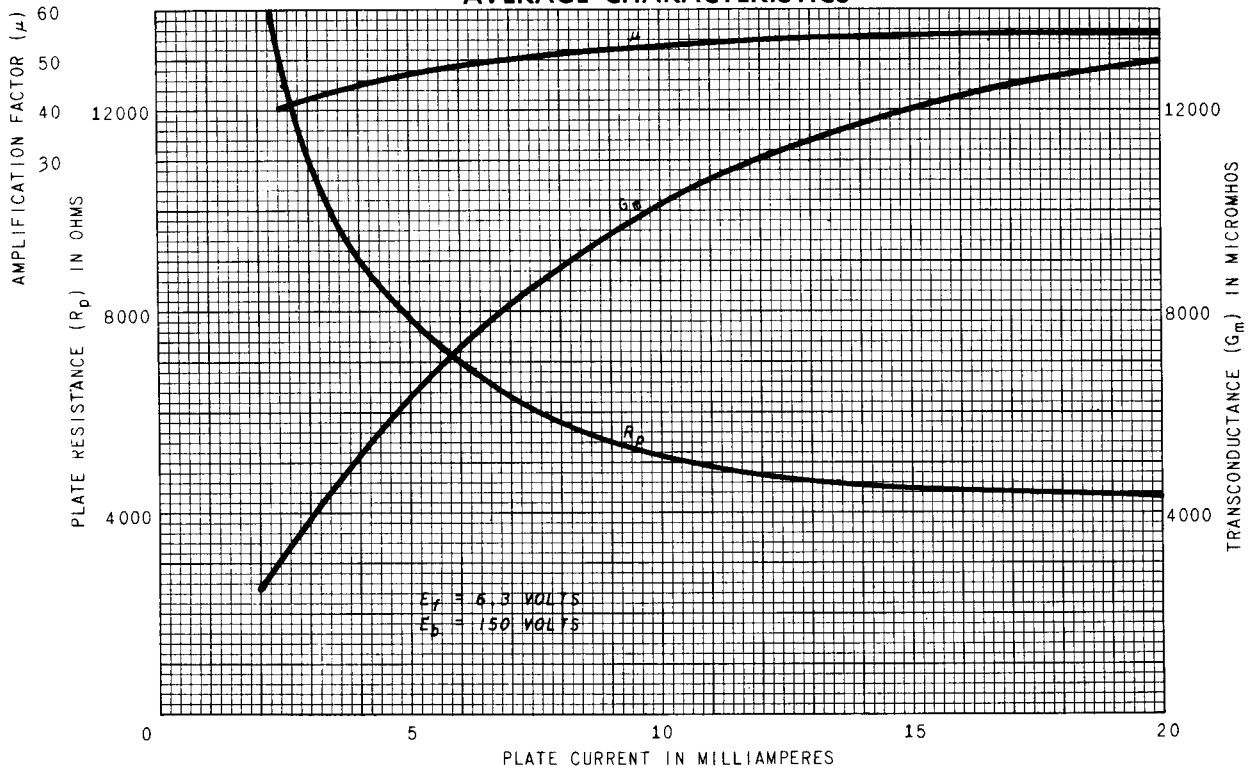
\* Operation with fixed bias is not recommended; in addition, the cathode bias resistor should always be suitably by-passed.

Note: When the 6J4 is used in grounded-grid operation at high frequencies, all three grid terminals should be grounded to minimize the effects of grid-lead inductance.

AVERAGE PLATE CHARACTERISTICS



AVERAGE CHARACTERISTICS



Tube Divisions, Electronics Department



Schenectady, N. Y.