

FOR UHF MIXER AND AMPLIFIER APPLICATIONS

DESCRIPTION AND RATING

The 6AM4 is a miniature high-mu triode designed for use as a grounded-grid mixer or amplifier in television receivers that operate in the ultra-high-frequency region. Its sharp-cutoff and high transconductance, coupled with its excellent isolation between input and output, make the 6AM4 well suited for grounded-grid mixer or amplifier service over the entire range of VHF-UHF television frequencies.

GENERAL

ELECTRICAL

Cathode—Coated Unipotential

Heater Voltage, AC or DC..... 6.3 Volts

Heater Current..... 0.225 Amperes

Direct Interelectrode Capacitances **With Shield*** **Without Shield**

Plate to Cathode..... 0.16 0.16 $\mu\mu\text{f}$

Cathode to Grid and Heater..... 4.6 4.4 $\mu\mu\text{f}$

Plate to Grid and Heater..... 2.8 2.4 $\mu\mu\text{f}$

Heater to Cathode..... 1.8 1.8 $\mu\mu\text{f}$

MECHANICAL

Mounting Position—Any

Envelope—T-6½, Glass

Base—E9-1, Small Button, 9-Pin

MAXIMUM RATINGS

DESIGN-CENTER VALUES

Plate Voltage..... 200 Volts

Positive DC Grid Voltage..... 0 Volts

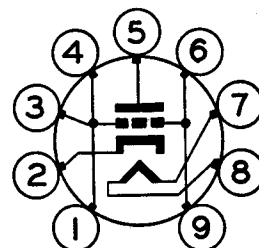
Plate Dissipation..... 2.0 Watts

Heater-Cathode Voltage

Heater Positive with Respect to Cathode..... 80 Volts

Heater Negative with Respect to Cathode†..... 80 Volts

BASING DIAGRAM



RETMA 9BX

TERMINAL CONNECTIONS

Pin 1—Grid

Pin 2—Cathode

Pin 3—Grid

Pin 4—Grid

Pin 5—Plate

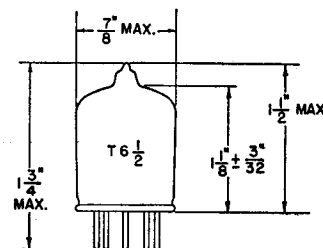
Pin 6—Grid

Pin 7—Heater

Pin 8—Heater

Pin 9—Grid

PHYSICAL DIMENSIONS



RETMA 6-1

CHARACTERISTICS AND TYPICAL OPERATION

CLASS A₁ AMPLIFIER

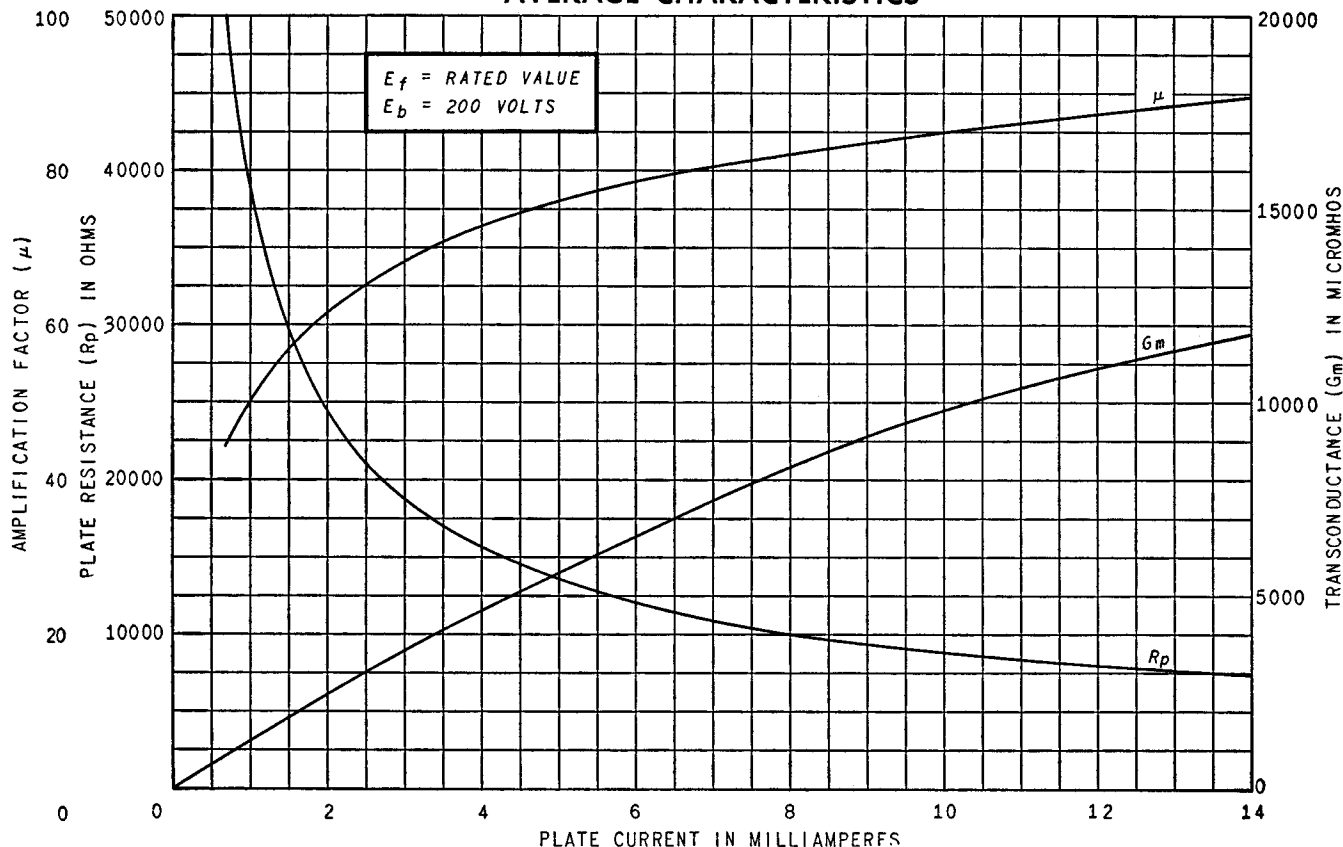
Plate Voltage	200	Volts
Cathode-Bias Resistor	100	Ohms
Amplification Factor	85	
Plate Resistance, approximate	8700	Ohms
Transconductance	9800	Micromhos
Plate Current	10	Milliamperes
Grid Voltage, approximate I _b = 10 Microamperes	-6.5	Volts

* With external shield (RETMA 315) connected to grid.

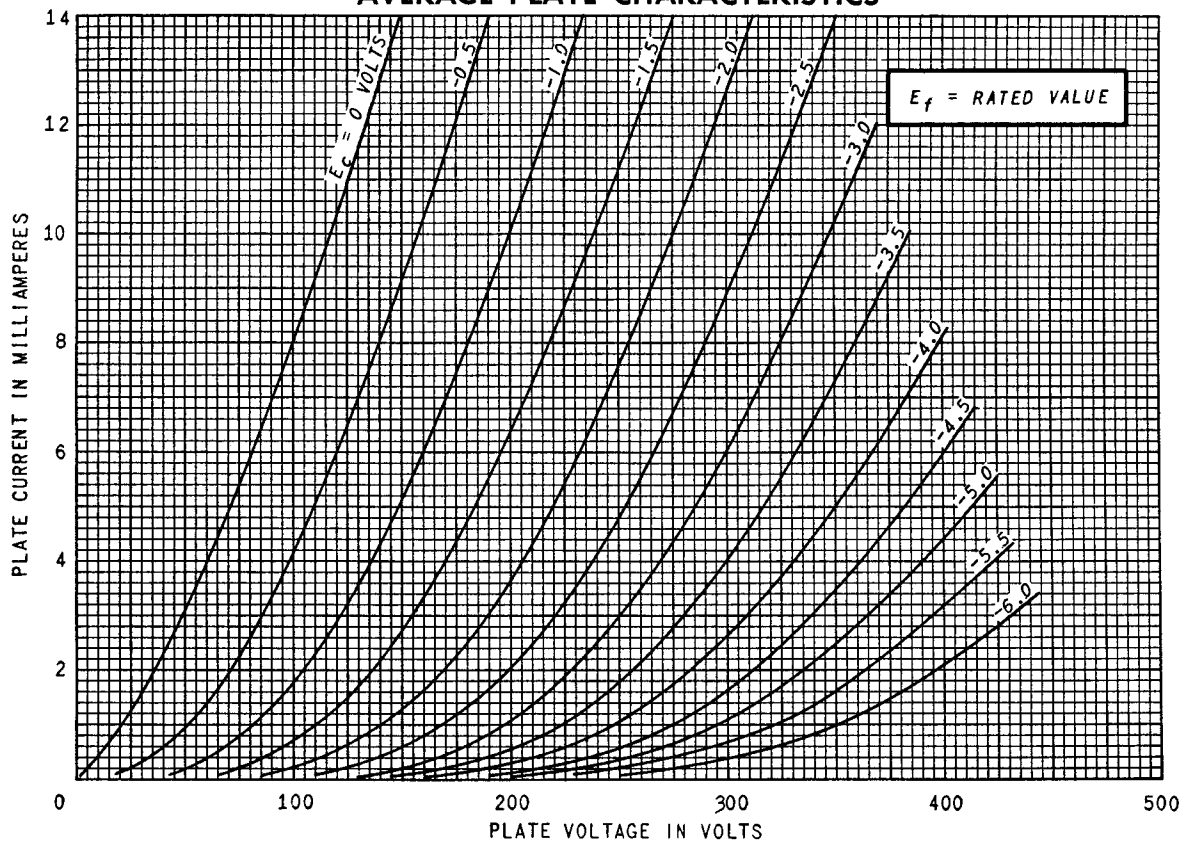
† When the tube is used in a cascode amplifier with a second tube and the two tubes are connected in series, this voltage may be as high as 250 volts maximum under cutoff conditions.

Note: When the 6AM4 is used in grounded-grid operation at high frequencies, all five grid terminals should be grounded to minimize the effects of grid-lead inductance.

AVERAGE CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS

