



6AC7

Description and Rating

RADIO-FREQUENCY AMPLIFIER PENTODE

GENERAL DESCRIPTION

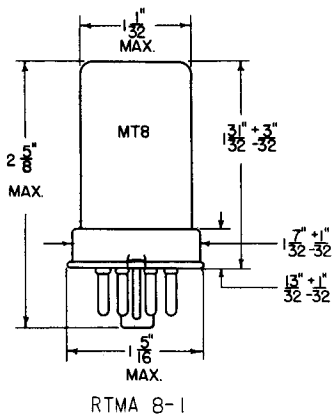
Principal Application: The 6AC7 is a sharp-cutoff high-transconductance pentode intended for service as a wide-band video or radio-frequency amplifier. It is also suitable for use as a mixer or oscillator

Cathode Coated Unipotential
 Heater Voltage (A-C or D-C) 6.3 Volts
 Heater Current 0.45 Ampere
 Envelope MT-8, Metal Shell
 Base B8-21, Small Wafer Octal 8-Pin

at low frequencies, but it is not recommended for low-level audio-frequency applications unless the heater voltage is obtained from a d-c source. The use of cathode-bias is recommended.

Mounting Position Any
 Direct Interelectrode Capacitances: #
 Grid 1 to Plate (Max) 0.015 $\mu\mu\text{f}$
 Input 11 $\mu\mu\text{f}$
 Output 5 $\mu\mu\text{f}$

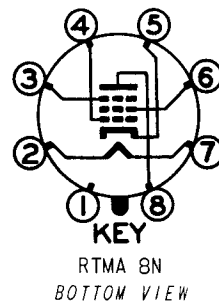
PHYSICAL DIMENSIONS



TERMINAL CONNECTIONS

- Pin 1 - Shell and Internal Shield
- Pin 2 - Heater
- Pin 3 - Grid Number 3 (Suppressor)
- Pin 4 - Grid Number 1
- Pin 5 - Cathode
- Pin 6 - Grid Number 2 (Screen)
- Pin 7 - Heater
- Pin 8 - Plate

BASING DIAGRAM



DESIGN CENTER VALUES

Plate Voltage	300	Volts
Screen Supply Voltage	300	Volts
Screen Voltage	150	Volts
Plate Dissipation	3.0	Watts
Screen Dissipation	0.38	Watt
Heater-Cathode Voltage	90	Volts
Grid Circuit Resistance: *		
With Fixed Screen Voltage	0.25	Megohm
With Series Screen Resistor	0.5	Megohm

MAXIMUM RATINGS

With pin 1 connected to pin 5

* For maximum voltage conditions and with cathode bias



CHARACTERISTICS AND TYPICAL OPERATION

CLASS A₁ AMPLIFIER

	Condition 1 ⁺	Condition 2 ⁺⁺	
Plate Voltage	300	300	Volts
Suppressor Voltage ^{**}	0	0	Volts
Screen Supply Voltage	---	300	Volts
Screen Voltage	150	---	Volts
Screen Resistor	---	60000	Ohms
Cathode Bias Resistor (Minimum) ^{##}	160	160	Ohms
Plate Resistance (Approx)	1.0	1.0	Megohm
Transconductance	9000	9000	Micromhos
Plate Current	10	10	Milliamperes
Screen Current	2.5	2.5	Milliamperes

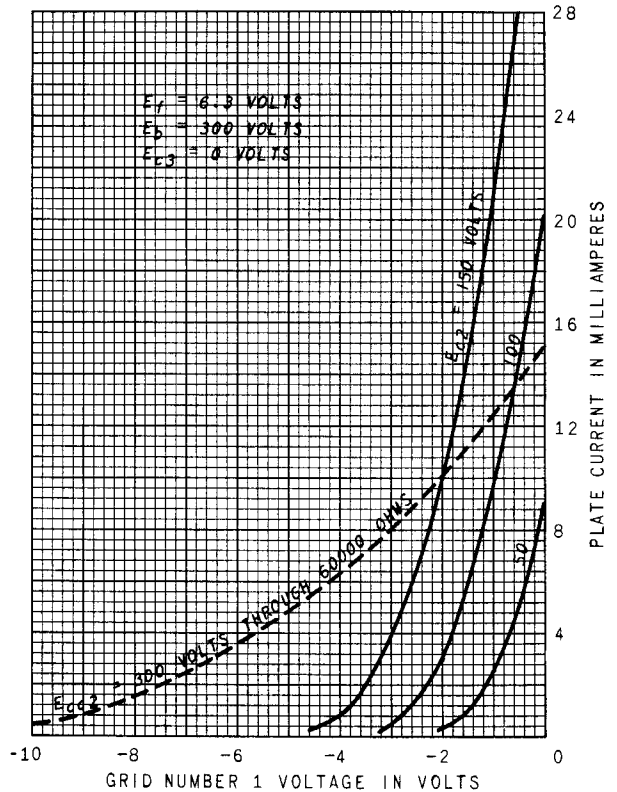
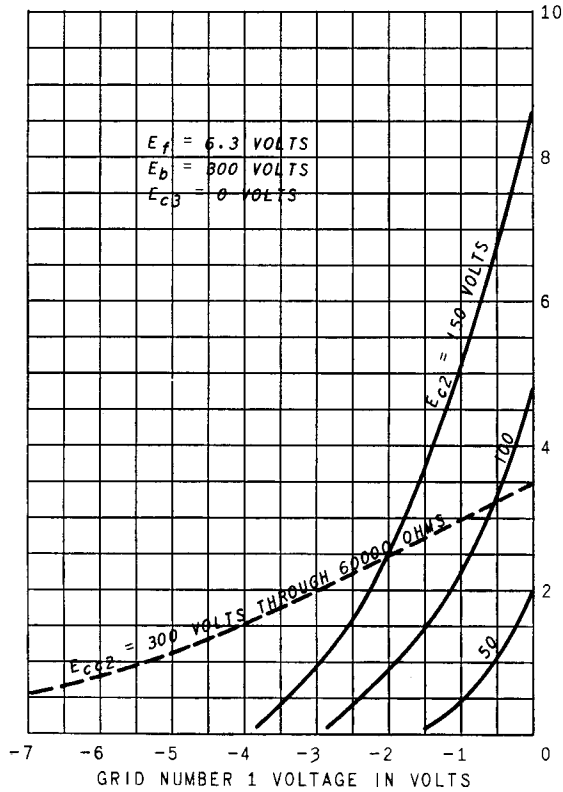
⁺ When a fixed screen voltage is used, as shown in condition 1, a sharp-cutoff characteristic is obtained.

⁺⁺ When a screen resistor is used, as shown in condition 2, an extended-cutoff characteristic is obtained which may be utilized in applications where the gain is controlled by variation of the grid bias.

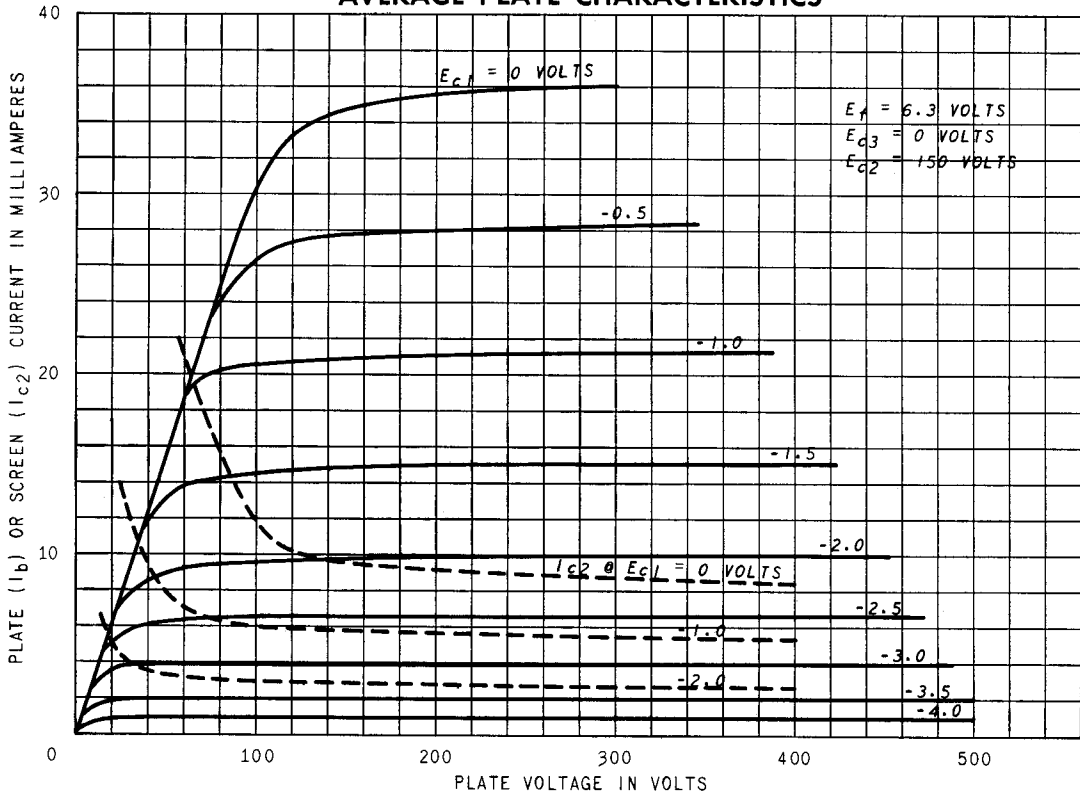
^{**} In r-f and i-f stages, the suppressor should be connected directly to ground to minimize feedback.

^{##} The cathode bias resistor should be adjusted to give a plate current of 10 Milliamperes.

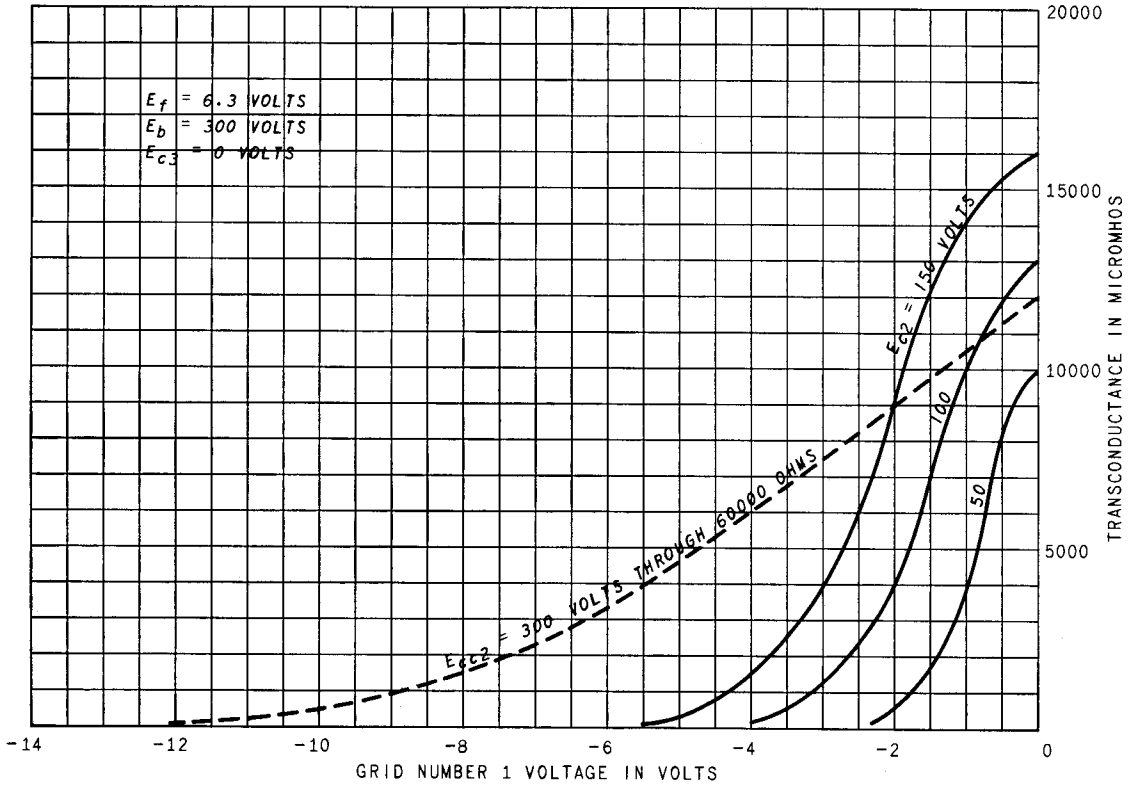
AVERAGE CHARACTERISTICS

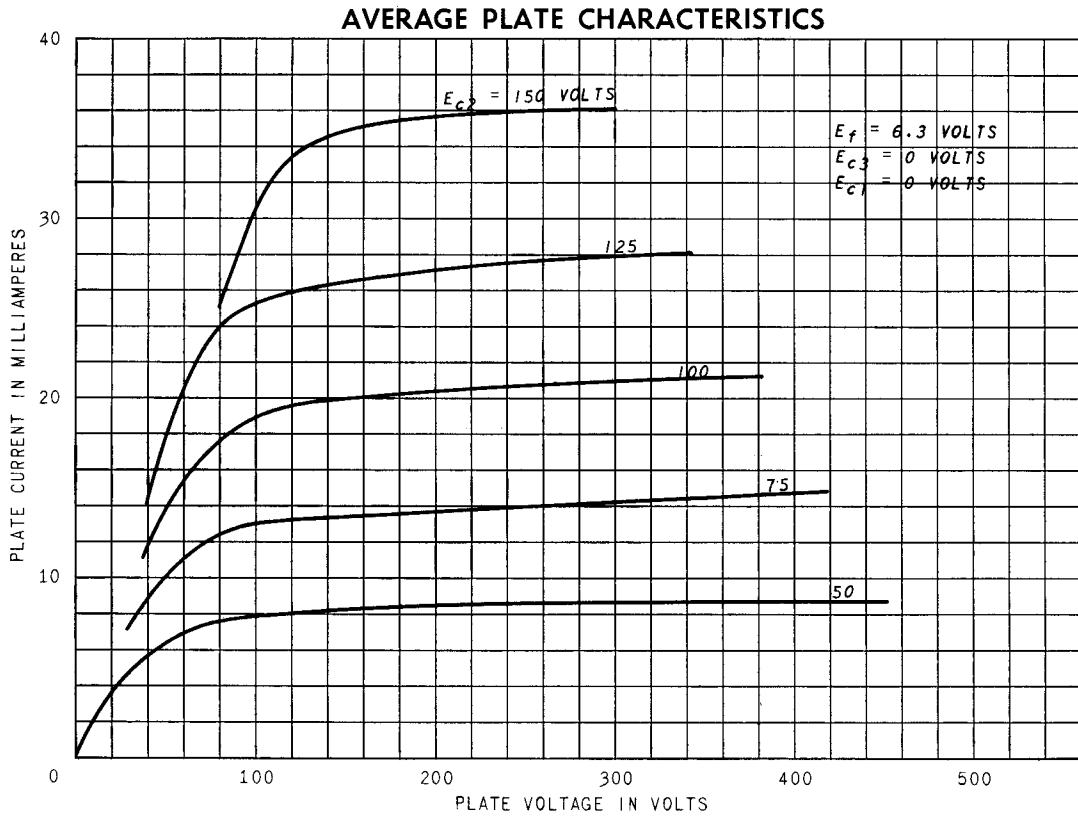


AVERAGE PLATE CHARACTERISTICS



AVERAGE CHARACTERISTICS





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