



6BQ6-GTB

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ET-T1484
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BEAM PENTODE

FOR TV HORIZONTAL-DEFLECTION AMPLIFIER APPLICATIONS

DESCRIPTION AND RATING

The 6BQ6-GTB is a beam-power pentode designed primarily for use as horizontal-deflection amplifier in television receivers. The tube exhibits high perveance, high plate current at low plate and screen voltages, and a high ratio of plate-to-screen current.

GENERAL

ELECTRICAL

Cathode—Coated Unipotential		
Heater Voltage, AC or DC.....	6.3	Volts
Heater Current.....	1.2	Amperes
Direct Interelectrode Capacitances*		
Grid-Number 1 to Plate.....	0.6	$\mu\mu\text{f}$
Input.....	15	$\mu\mu\text{f}$
Output.....	7.0	$\mu\mu\text{f}$

MECHANICAL

Mounting Position—Any
Envelope T-9
Base—B6-81, or B7-7 Intermediate-Shell Octal 6- or 7-Pin or B6-84, or B7-59
 Short Intermediate-Shell Octal 6- or 7-Pin.
Top Cap—C1-3 or C1-33, Skirted Miniature

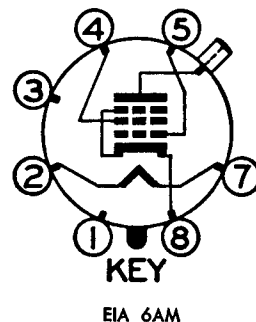
MAXIMUM RATINGS

HORIZONTAL-DEFLECTION AMPLIFIER SERVICE†

DESIGN-CENTER VALUES UNLESS OTHERWISE INDICATED

DC Plate-Supply Voltage (Boost + DC Power Supply).....	600	Volts
Peak Positive Pulse Plate Voltage.....	6000‡	Volts
Peak Negative Pulse Plate Voltage.....	1250	Volts
Screen Voltage.....	200	Volts
Peak Negative Grid-Number 1 Voltage.....	300	Volts
Plate Dissipation§.....	11	Watts
Screen Dissipation.....	2.5	Watts
DC Cathode Current.....	110	Milliamperes
Peak Cathode Current.....	400	Milliamperes
Heater-Cathode Voltage		
Heater Positive with Respect to Cathode		
DC Component.....	100	Volts
Total DC and Peak.....	200	Volts
Heater Negative with Respect to Cathode		
Total DC and Peak.....	200	Volts
Grid-Number 1 Circuit Resistance.....	0.47	Megohms
Bulb Temperature at Hottest Point.....	220	C

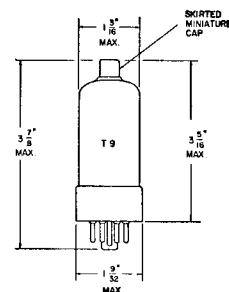
BASING DIAGRAM



TERMINAL CONNECTIONS

- Pin 1—No Connection
- Pin 2—Heater
- Pin 3—No Connection
- Pin 4—Grid Number 2 (Screen)
- Pin 5—Grid Number 1
- Pin 7—Heater
- Pin 8—Cathode and Beam Plates
- Cap—Plate
- Pin 1 omitted on Bases B6-81 and B6-84.

PHYSICAL DIMENSIONS



EIA 9-49
or 9-50



CHARACTERISTICS AND TYPICAL OPERATION**AVERAGE CHARACTERISTICS**

Plate Voltage.....	60	250	Volts
Screen Voltage.....	150	150	Volts
Grid-Number 1 Voltage.....	0 Δ	-22.5	Volts
Plate Resistance, approximate.....	—	14500	Ohms
Transconductance.....	—	5900	Micromhos
Plate Current.....	.260	57	Milliamperes
Screen Current.....	26	2.1	Milliamperes
Grid-Number 1 Voltage, approximate $I_b = 1.0$ Milliampere.....	—	-43	Volts
Triode Amplification Factor ∇	—	4.3	

* Without external shield.

† For operation in a 525-line, 30-frame television system as described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission. The duty cycle of the voltage pulse must not exceed 15 percent of one scanning cycle.

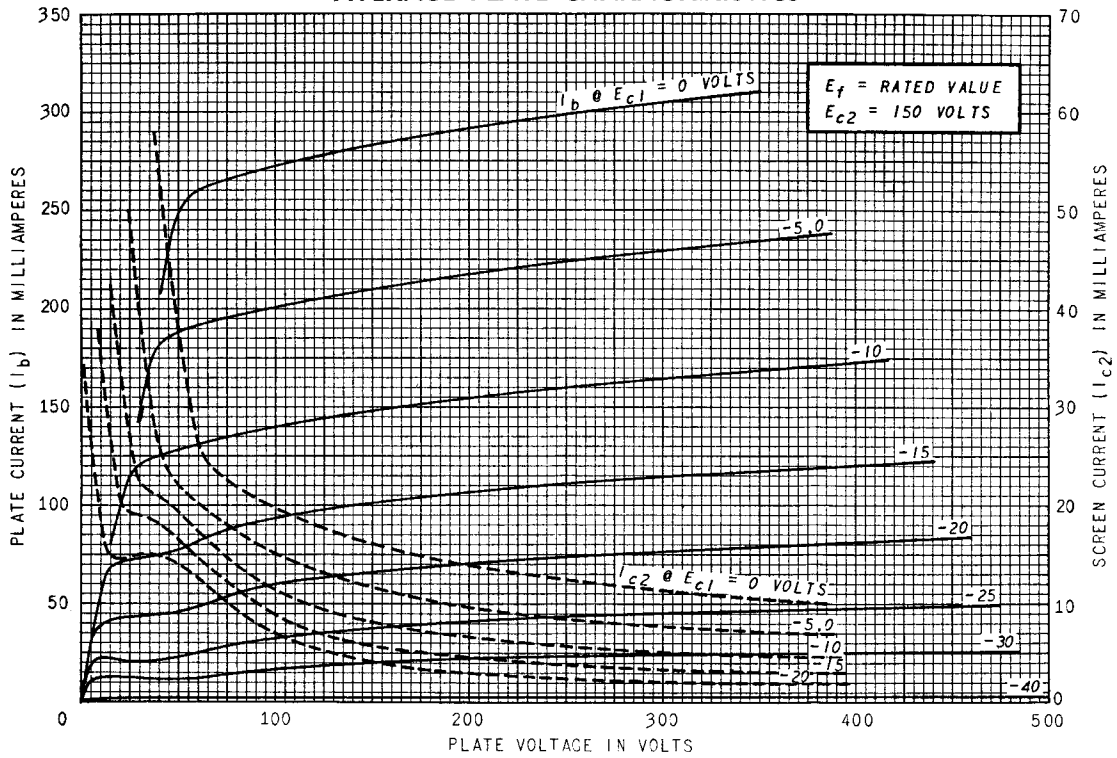
‡ Value given is to be considered as an Absolute Maximum Rating. In this case, the combined effect of supply voltage variation, manufacturing variation including components in the equipment, and adjustment of equipment controls should not cause the rated value to be exceeded.

§ In stages operating with grid-leak bias, an adequate cathode-bias resistor or other suitable means is required to protect the tube in the absence of excitation.

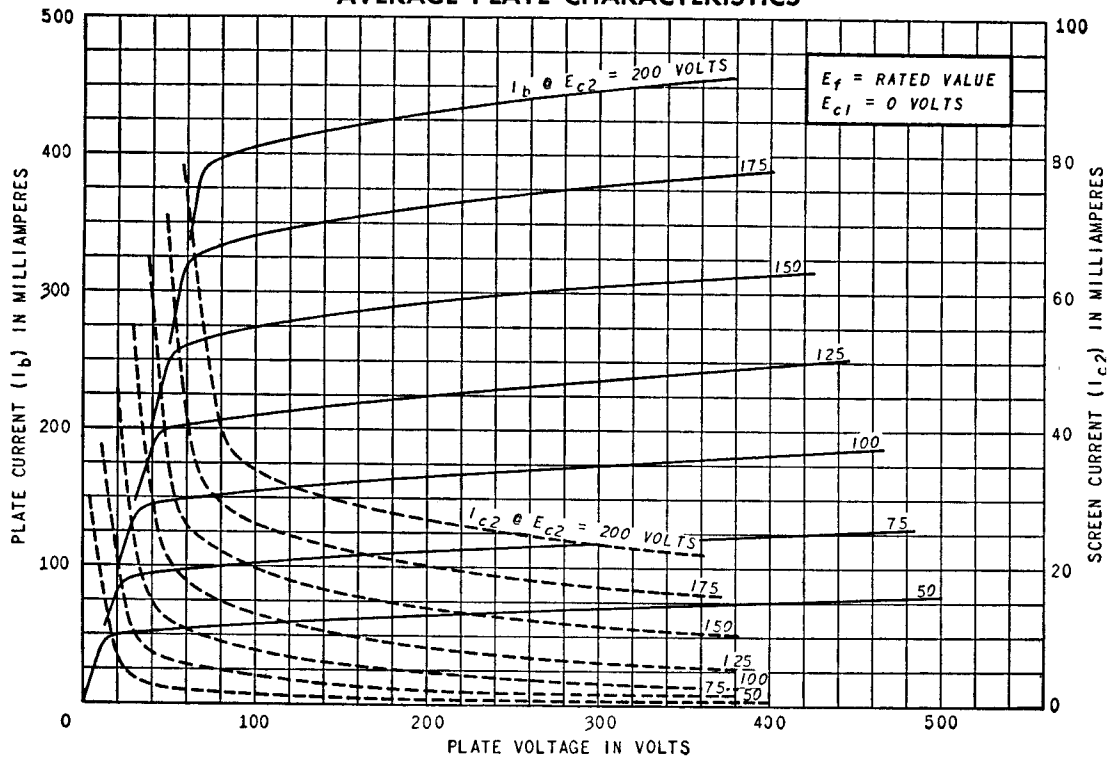
Δ Applied for short interval (two seconds maximum) so as not to damage tube.

∇ Triode connection (screen tied to plate) with $E_b = E_{c2} = 150$ volts and $E_{c1} = -22.5$ volts.

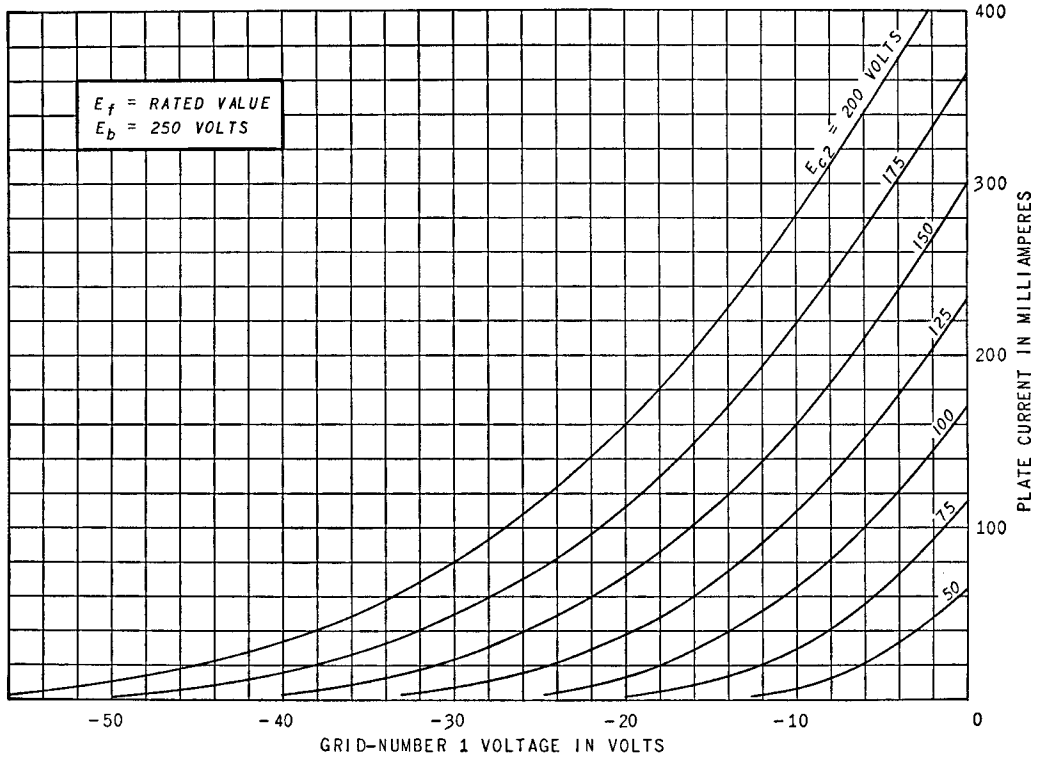
AVERAGE PLATE CHARACTERISTICS



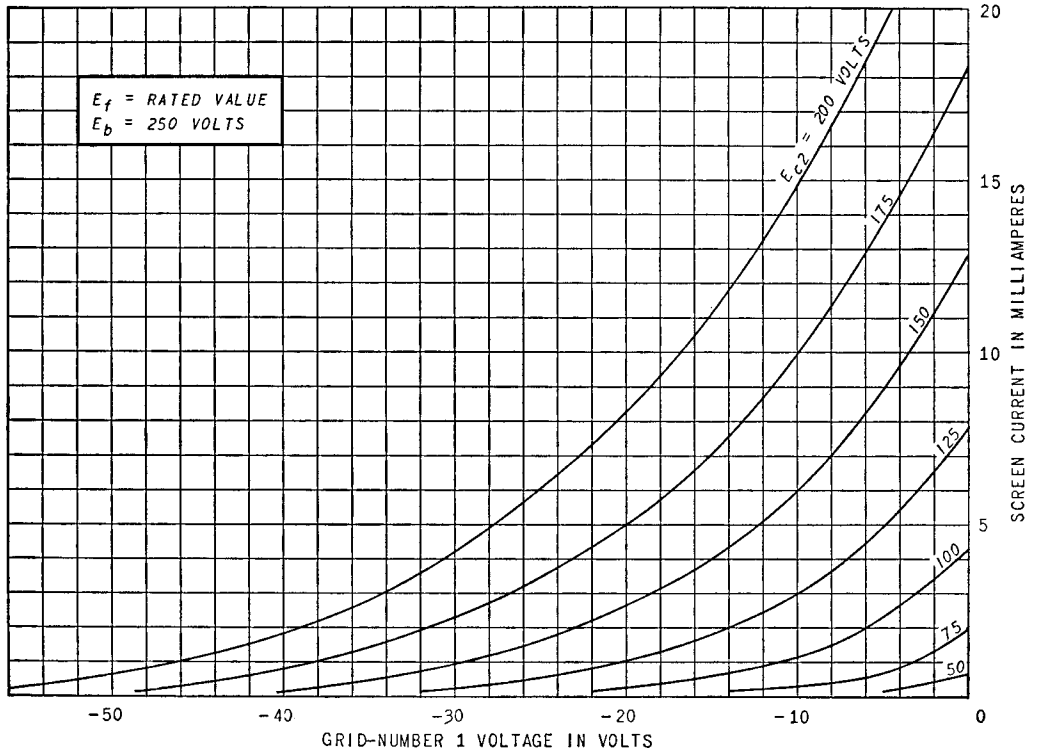
AVERAGE PLATE CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



ELECTRONIC COMPONENTS DIVISION



Schenectady 5, N. Y.