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engineering data service

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6BQ6GT

MECHANICAL DATA

Bulb	T-9
Base	Intermediate Shell Octal
Basing	6AM
Top Cap	Skirted Miniature
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

Heater Voltage	6.3 Volts
Heater Current	1.2 Amperes
Maximum Heater-Cathode Voltage	
Heater Negative with Respect to Cathode	
Total DC and Peak	200 Volts
Heater Positive with Respect to Cathode	
DC	100 Volts
Total DC and Peak	200 Volts

DIRECT INTERELECTRODE CAPACITANCES (Approximate)

Grid to Plate	0.6 $\mu\mu f$
Input	15 $\mu\mu f$
Output	7.5 $\mu\mu f$

RATINGS (Design Center Values — Except as Noted)

Horizontal Deflection Amplifier[1]

DC Plate Supply Voltage (Boost + DC Power Supply)	550 Volts	Max.
Peak Positive Plate Voltage (Abs. Max.)	5500 Volts	
Peak Negative Plate Voltage	1250 Volts	Max.
Plate Dissipation[2]	11 Watts	Max.
Peak Negative Grid #1 Voltage	300 Volts	Max.
DC Grid #2 Voltage	175 Volts	Max.
Grid #2 Dissipation	2.5 Watts	Max.
Average Cathode Current	110 Ma	Max.
Peak Cathode Current	400 Ma	Max.
Grid #1 Circuit Resistance	0.47 Megohm	Max.
Bulb Temperature (At Hottest Point)	220° C	Max.

AVERAGE CHARACTERISTICS

Pentode Operation: With E_b=250 V, E_{c2}=150 V and E_{c1}= -22.5 V

Plate Current	55 Ma
Grid #2 Current	2.1 Ma
Transconductance	5500 μmhos
Plate Resistance	20,000 Ohms

Zero Bias: With E_b=60 V and E_{c2}=150 V (Instantaneous Values)

Plate Current	225 Ma
Grid #2 Current	25 Ma

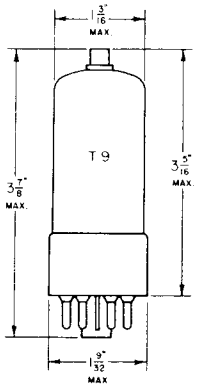
Cutoff: For I_b=1 ma with E_b=250 V and E_{c2}=150 V

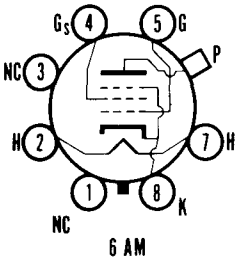
Grid #1 Voltage (approx.)	-46 Volts

Triode Amplification Factor: With E_b=E_{c2}=150 V and E_{c1}=-22.5 V 4.3

QUICK REFERENCE DATA

The Sylvania Type 6BQ6GT is a beam power amplifier designed for use as a driver tube in horizontal deflection amplifiers. It is identical to the type 6BQ6G except for bulb size.





SYLVANIA ELECTRIC PRODUCTS INC.

RADIO TUBE DIVISION

Prepared and Released By The TECHNICAL PUBLICATIONS SECTION EMPORIUM, PENNSYLVANIA

MARCH 1954

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TYPICAL OPERATION

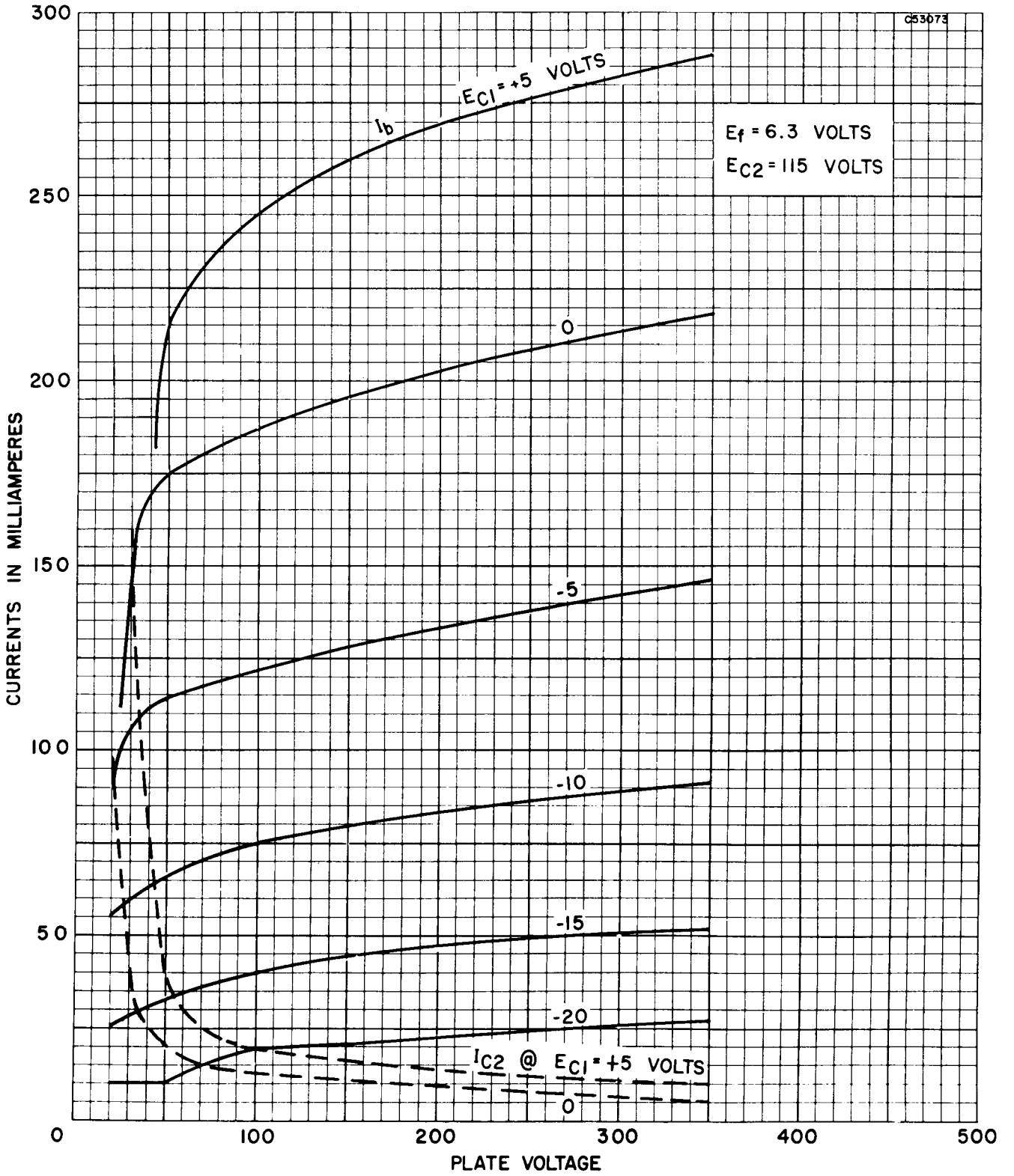
Horizontal Deflection Amplifier, 70° Picture Tube

Plate Supply Voltage	310 Volts
Average Plate Voltage (Boost + Supply)	540 Volts
Peak Positive Plate Voltage	
DC Component + Pulse	4600 Volts
Average Plate Current	79 Ma
Peak Plate Current	270 Ma
Plate Dissipation	7.0 Watts
Grid No. 2 Voltage	140 Volts
Grid No. 2 Current	11.2 Ma
Grid No. 2 Dissipation	1.57 Watts
Grid No. 1 Input Voltage	
Peak to Peak	130 Volts
Sawtooth Component	65 Volts
Anode Voltage (Picture Tube)	15.7 Kv
Anode Current (Picture Tube)	100 μa

NOTES:

1. *For operation in a 525-line, 30-frame system as described in "Standards of Good Engineering Practice for Television Broadcasting Stations; Federal Communications Commission". The duty cycle of the voltage pulse not to exceed 15% of a scanning cycle.*
2. *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.*

AVERAGE PLATE CHARACTERISTICS



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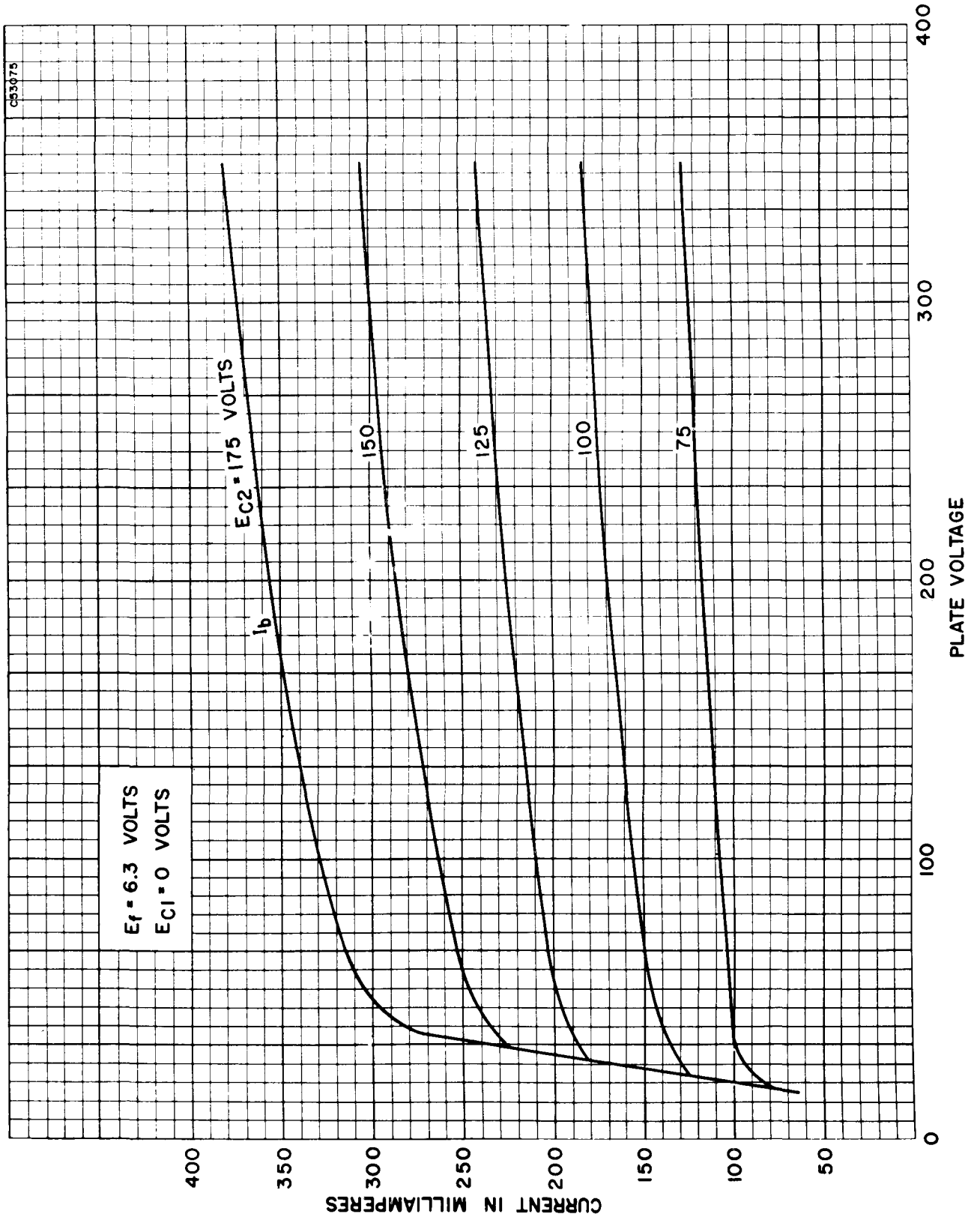
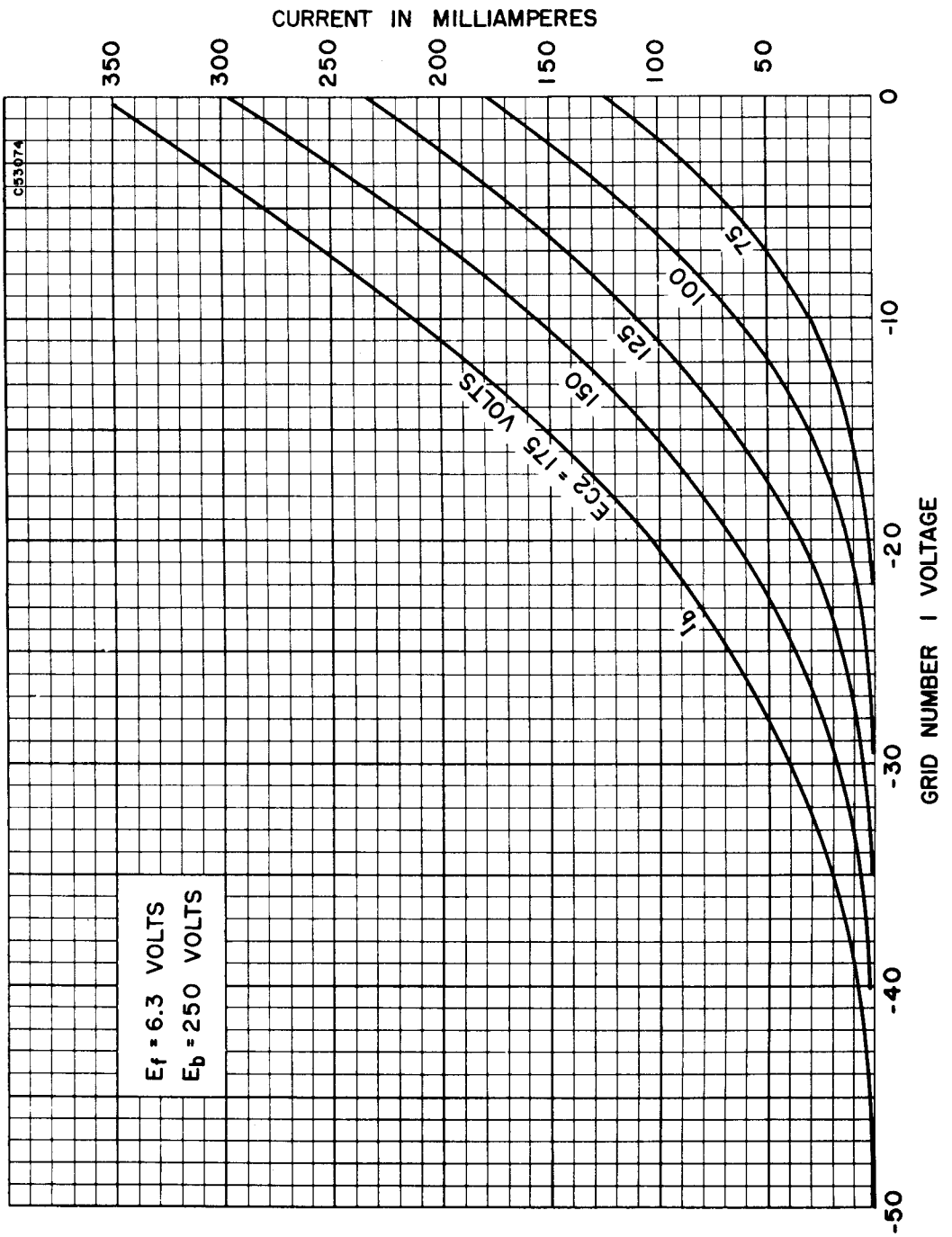
AVERAGE PLATE CHARACTERISTICS



AVERAGE PLATE CHARACTERISTICS