



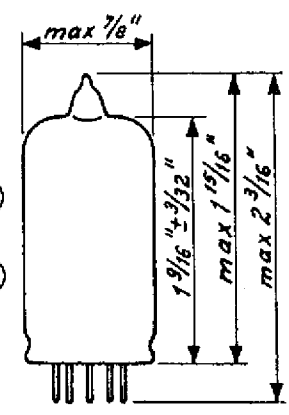
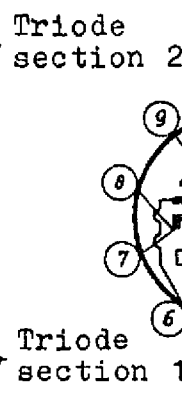
DOUBLE TRIODE particularly designed for use as R.F. cas-
 code amplifier in tuners for television receivers up to
 220 Mc

PHYSICAL SPECIFICATIONS

Cathode	Coated unipotential
Base	Small button Noval 9-pin
Bulb	T6 $\frac{1}{2}$
Maximum diameter	$\frac{7}{8}$ "
Maximum overall length	2 $\frac{3}{16}$ "
Maximum seated height	1 $\frac{15}{16}$ "
Bulb length excluding tip	1 $\frac{9}{16}$ " \pm $\frac{3}{32}$ "
Mounting position	Any

BASING CONNECTIONS- JETEC basing designation 9DD

- Pin 1 - Cathode
- Pin 2 - Grid and internal shield
- Pin 3 - Plate
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Grid
- Pin 7 - Cathode input lead
- Pin 8 - Cathode output lead
- Pin 9 - Plate



In a cascode amplifier the triode section No.1 should be used as the grounded cathode amplifier and triode section No.2 as the grounded grid amplifier.

GENERAL ELECTRICAL DATA

Heater voltage	7 volts
Heater current	0.3 amp

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DIRECT INTERELECTRODE CAPACITANCES (without external shield)

TRIODE_SECTION_1 (grounded cathode section)

Input capacitance	2.3 $\mu\mu\text{F}$
Output capacitance	0.45 $\mu\mu\text{F}$
Between plate and grid	1.2 $\mu\mu\text{F}$
Between grid and filament	max. 0.25 $\mu\mu\text{F}$

TRIODE_SECTION_2 (grounded grid section)

Cathode to grid + heater	4.7 $\mu\mu\text{F}$
Plate to grid + heater	2.5 $\mu\mu\text{F}$
Plate to cathode	0.16 $\mu\mu\text{F}$
Cathode to heater	2.7 $\mu\mu\text{F}$
Plate to grid	2.3 $\mu\mu\text{F}$

BETWEEN TRIODE SECTIONS 1 and 2

Plate section 1 to cathode section 1 + heater + grid section 2	1.2 $\mu\mu\text{F}$
Plate section 1 to plate section 2	max. 0.035 $\mu\mu\text{F}$
Grid section 1 to plate section 2	max. 0.006 $\mu\mu\text{F}$

MAXIMUM RATINGS (Design Center Values)

Plate voltage (each section)	180 volts
Supply voltage without current	550 volts
Plate dissipation (each section)	2 watts
Cathode current (each section)	18 mamps
Negative grid bias (each section)	50 volts
Grid circuit resistance section 1	0.5 megohm ^o)
Grid circuit resistance section 2	+)
Voltage between cathode and heater, section 1	90 volts
Peak voltage between cathode and heater section 2 (heater negative with respect to cathode)	250 volts [*])
Voltage between cathode and heater, section 2 (heater positive with respect to cathode)	90 volts
Circuit resistance between cathode and heater	20 000 ohms

^o)In the case of parallel supply of the heater the maximum value is 1.5 megohm

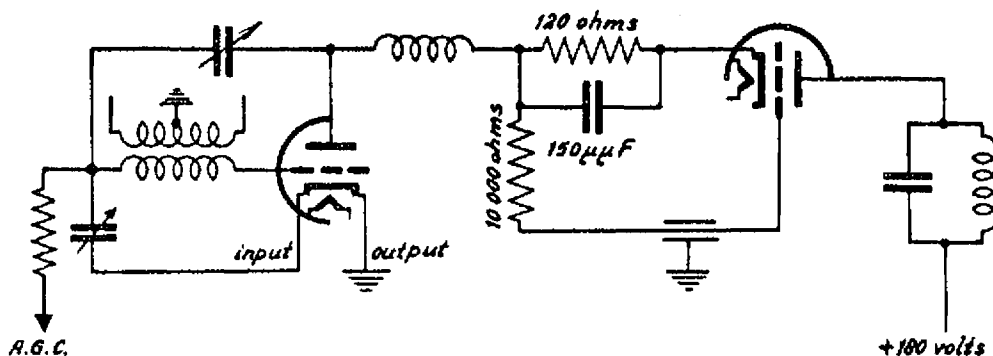
+)See note page 3

*)D.C. component max. 180 volts

TYPICAL CHARACTERISTICS (each section)

Plate voltage	90 volts
Grid bias	-1.5 volts
Plate current	12 mamps
Transconductance	6000 micromhos
Amplification factor	24

OPERATING CONDITIONS

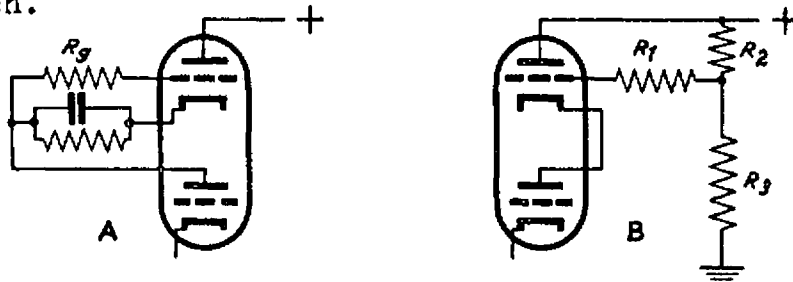


Noise figure (bandwidth of input circuit
7-8 Mc) 6.5

Input conductance at 200 Mc 250 micromhos

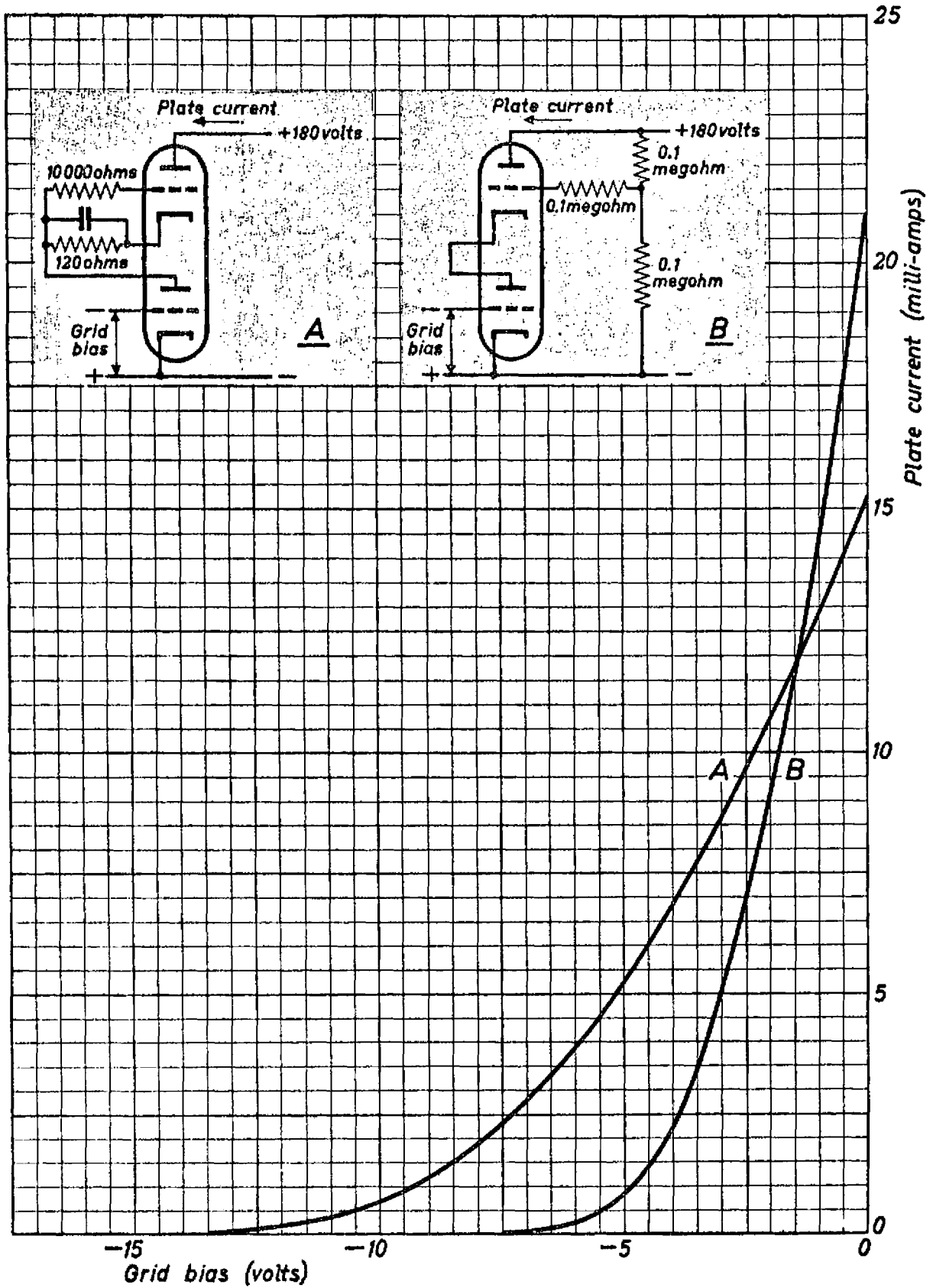
These values of the noise figure and the input conductance are valid in the case that the cathode input lead is connected to the input circuit and the cathode output lead to the chassis. A noise figure of about 5 can be obtained in the case that the two cathode leads are connected in parallel. The value of the input conductance at 200 Mc, however, will then increase to about 700 micromhos

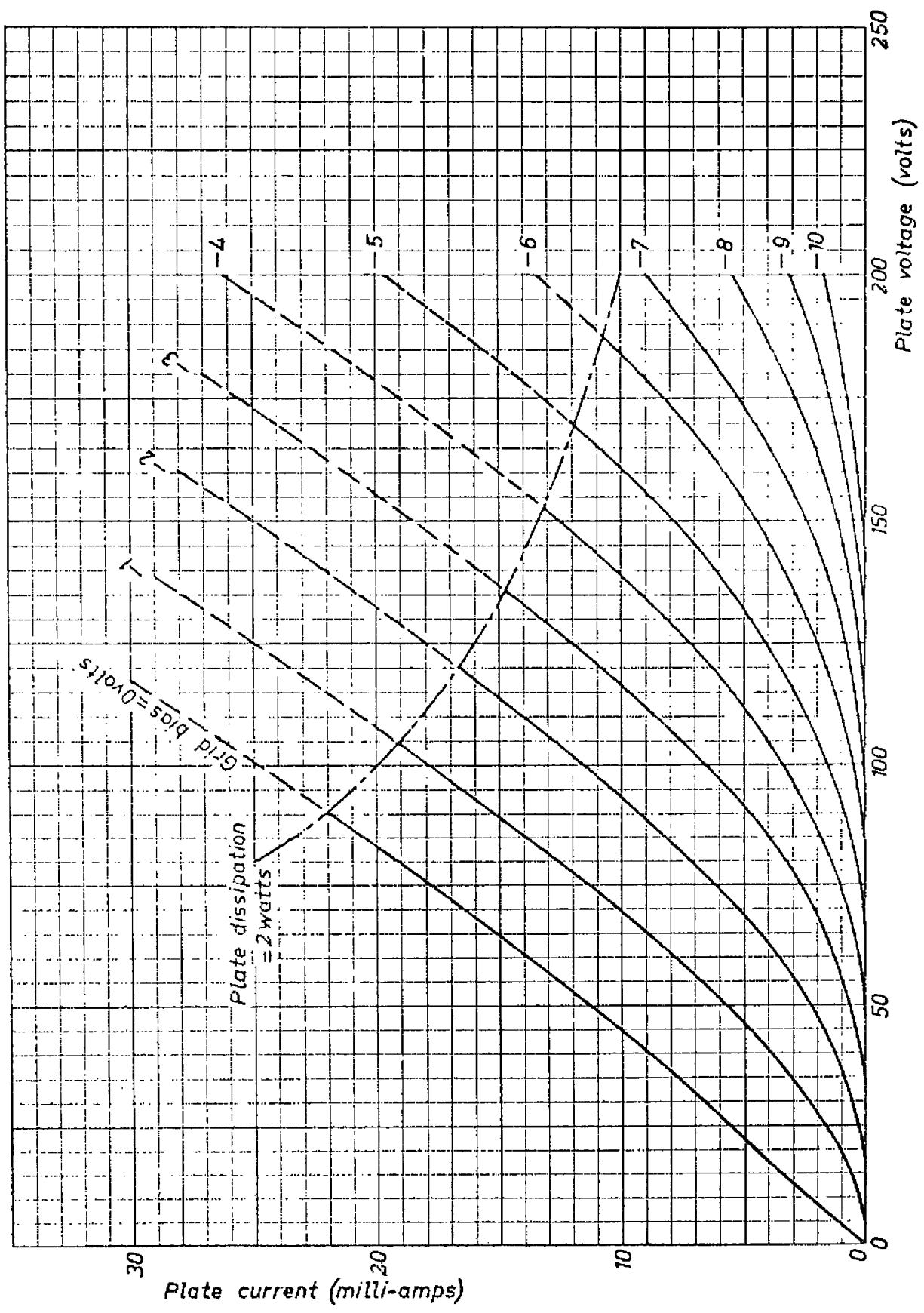
The grid bias of the grounded grid section can be achieved by means of a decoupled cathode resistor, a typical value of which is 120 ohms (fig.A), or by means of a potentiometer (fig.B). Typical values of R_2 and R_3 are 0.1 MΩ each.



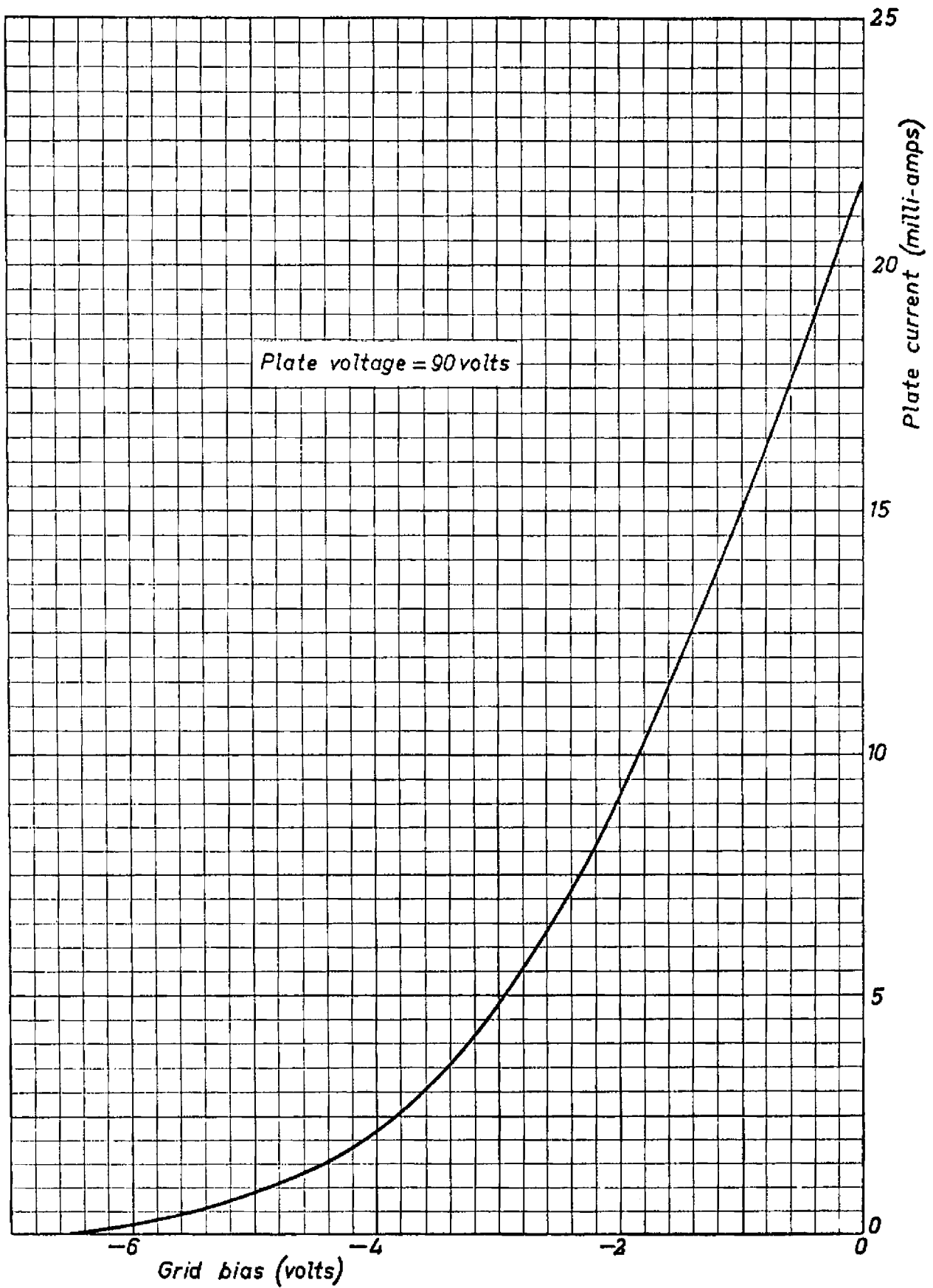
*) If the grid leak of section 2 is connected according to fig.A, the maximum value of the grid leak is 20 000 ohms. In the case of circuit B the maximum value of $R_1 + \frac{R_2 \times R_3}{R_2 + R_3} = 0.5$ megohm.

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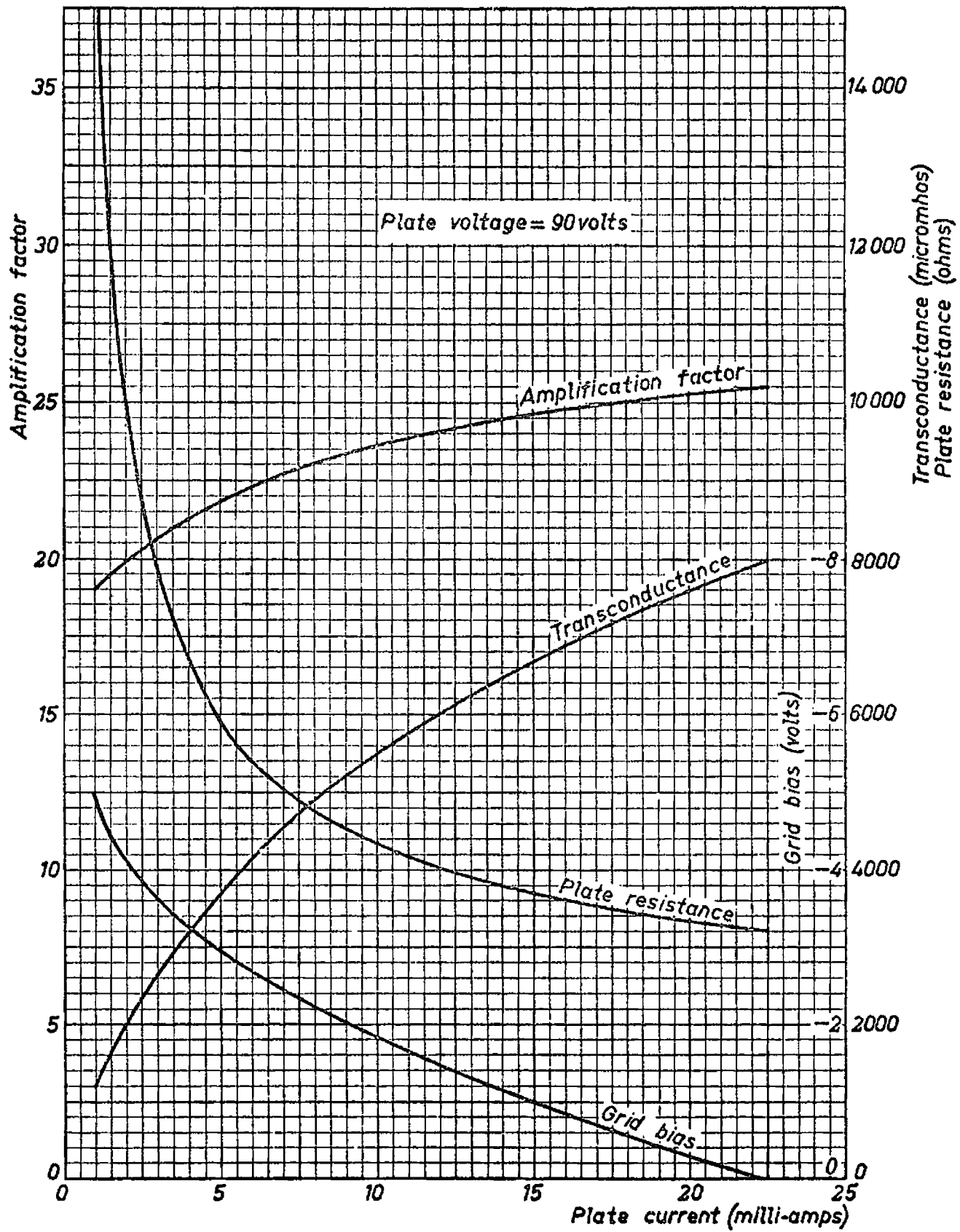




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