

PHILIPS

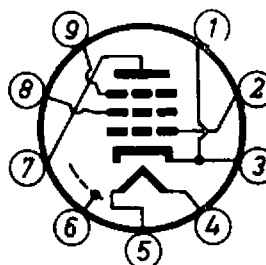
6 BY 7

R.F. PENTODE with variable transconductance for use as wide-band amplifier

PHYSICAL SPECIFICATIONS

Cathode	Coated unipotential
Base	Small button noval 9-pin
Maximum overall length	2 5/8 inches
Maximum seated height	2 3/8 inches
Bulb length excluding tip	2±3/32 inches
Maximum diameter	7/8 inch
Mounting position	any
Basing connections - JETEC basing designation	9 AQ

Pin 1 - Cathode
Pin 2 - Grid No.1
Pin 3 - Cathode
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Internal shield
Pin 7 - Plate
Pin 8 - Grid No.2
Pin 9 - Grid No.3



GENERAL ELECTRICAL DATA

Heater voltage	6.3 volts
Heater current	0.3 ampere

Direct Interelectrode Capacitances

Grid No.1 to all other elements	7.2 $\mu\mu\text{F}$
Plate to all other elements	3.7 $\mu\mu\text{F}$
Plate to grid No.1	max. 0.007 $\mu\mu\text{F}$
Grid No.1 to heater	max. 0.15 $\mu\mu\text{F}$

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Plate voltage	250 volts
Plate voltage (without current)	550 volts
Plate dissipation	2.5 watts
Grid No.2 voltage	250 volts
Grid No.2 voltage (without current)	550 volts
Grid No.2 dissipation	0.65 watt
Cathode current	15 m amps
Grid No.1 circuit resistance	3 megohms
Grid No.1 current starting point. (Grid No.1 voltage at grid No.1 current = +0.3 μ amp)	-1.3 volts
External resistance between heater and cathode	20,000 ohms
Voltage between heater and cathode	150 volts

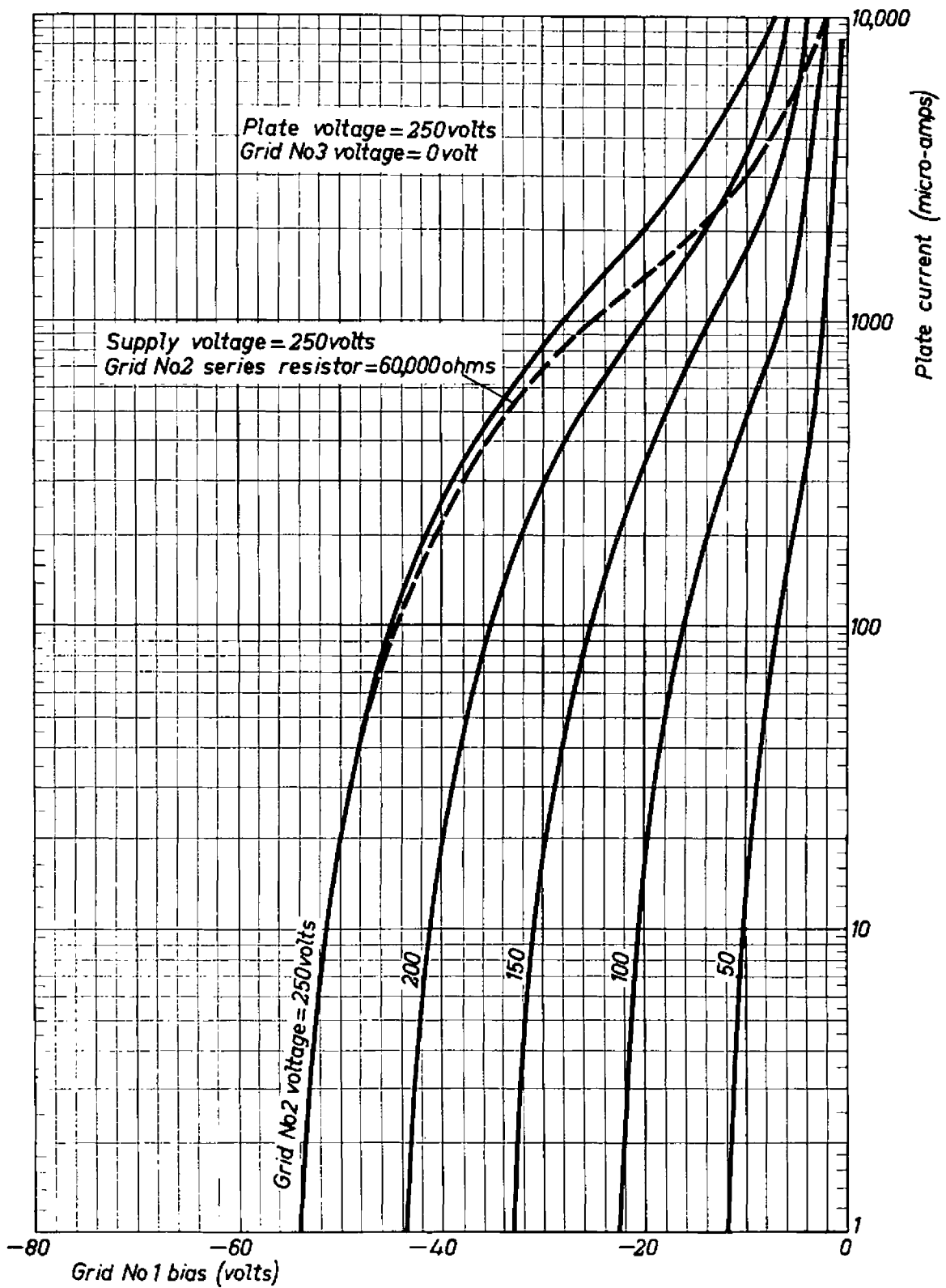
Operating characteristics

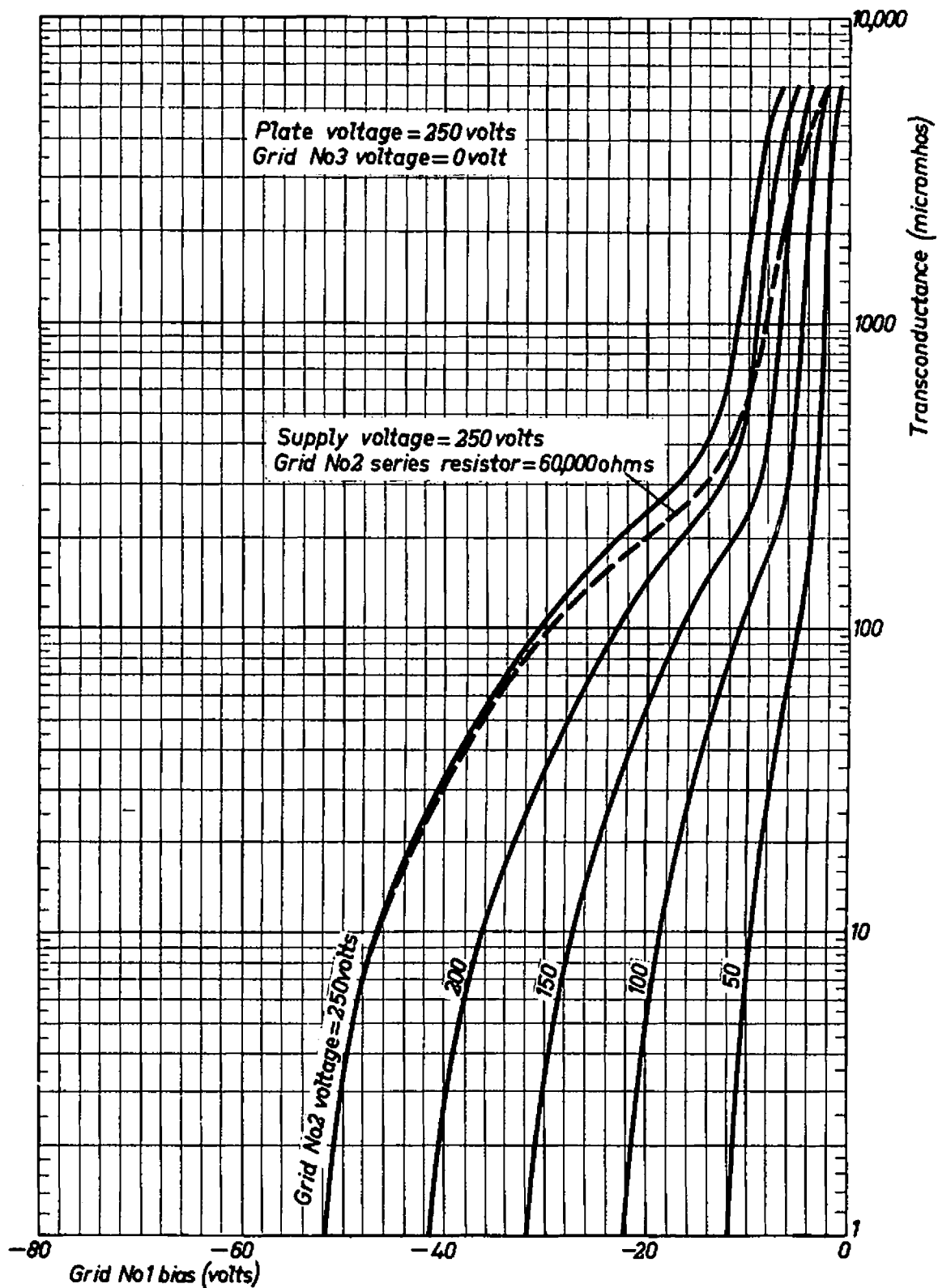
Supply voltage	250	volts
Plate voltage	250	volts
Grid No.3 voltage	0	volt
Grid No.2 series resistor	60,000	ohms
Grid No.1 bias	-2	-35 volts
Grid No.2 voltage	100	- volts
Plate current	10	- m amps
Grid No.2 current	2.5	- m amps
Transconductance	6000	60 micromhos
Plate resistance	0.5	>5 megohms
Equivalent noise resistance	1500	- ohms
Input damping at 100 Mc	2250	- ohms

Note - The 6BY7 can be used in combination with the 6AJ8 with a common screen grid resistor. In the case that the 6AJ8 is used as frequency changer this common resistor should be 18,000 ohms and in the case that the 6AJ8 is used as R.F. or I.F. amplifier 22,000 ohms.

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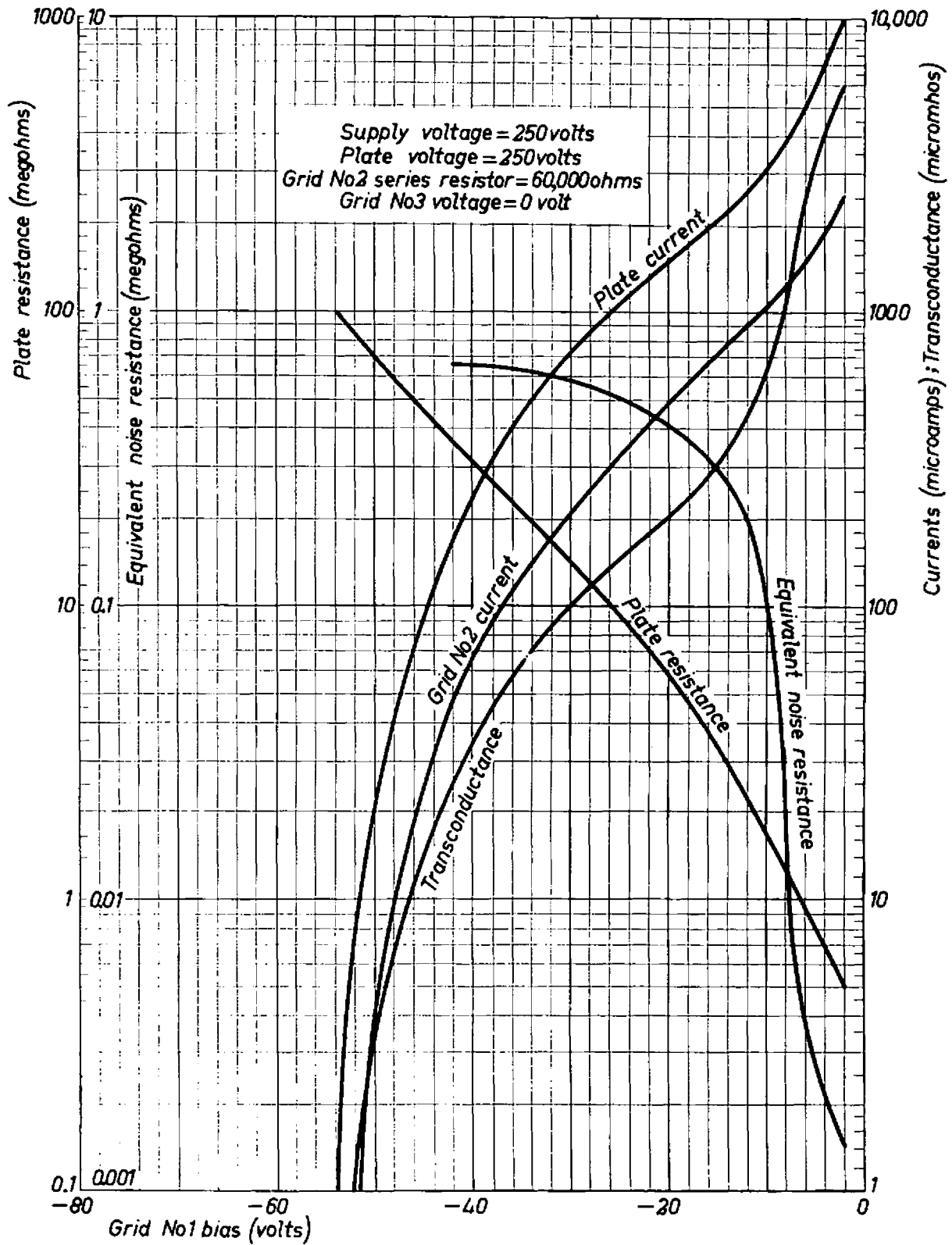
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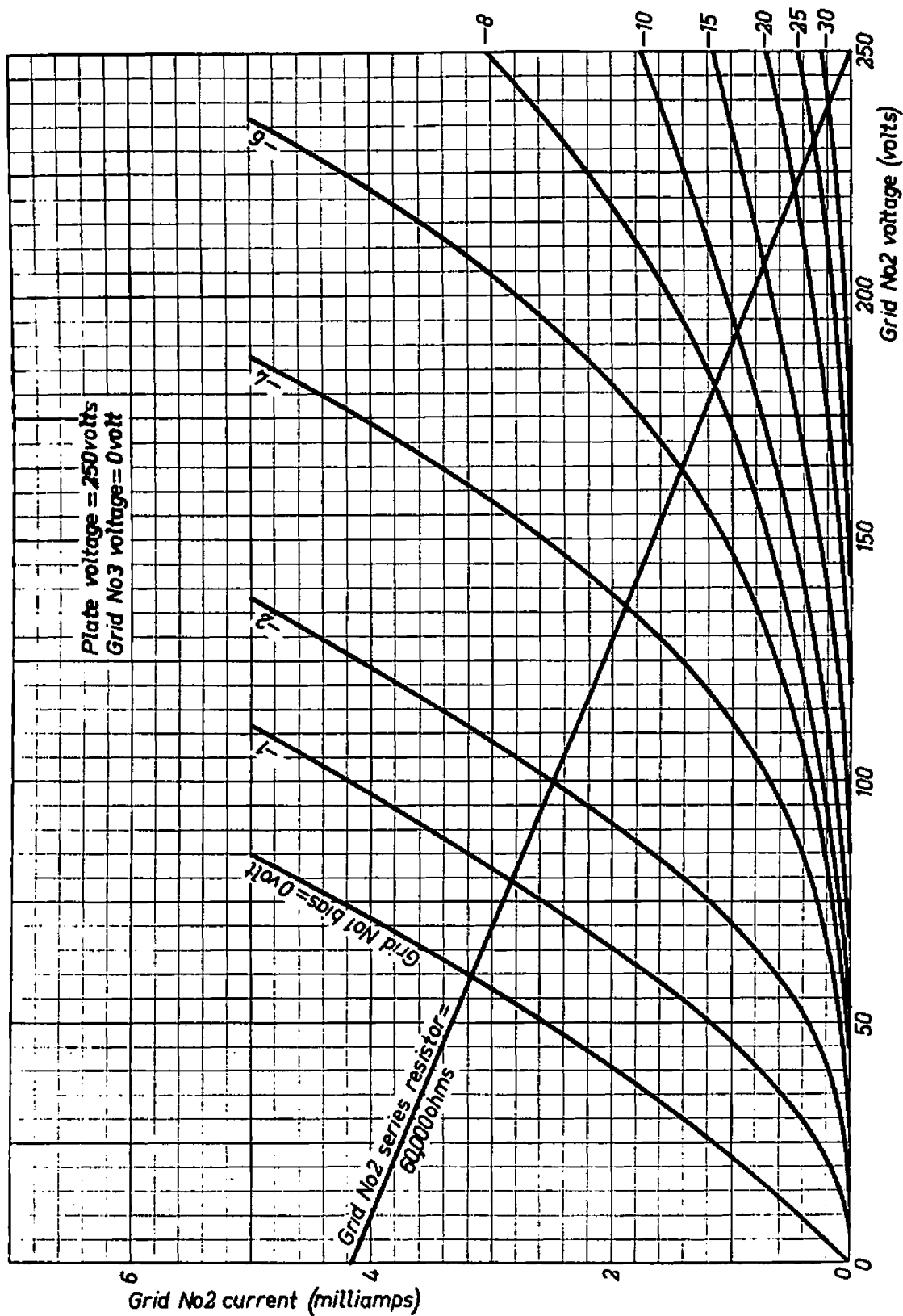
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"Miniwatt" **6BY7**

