from RTMA release #1029, Oct. 16, 1951

PHILIPS 6CK6

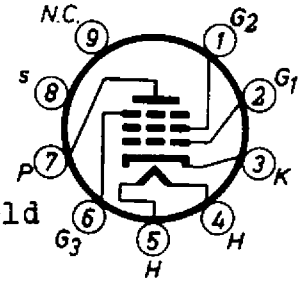
VIDEO OUTPUT PENTODE

Physical Specifications

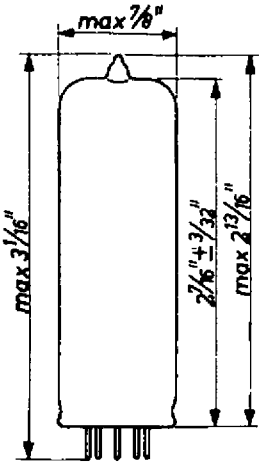
Cathode	Coated unipotential
Base	Small button noval 9-pin
Bulb	T6½
Maximum overall length	3 1/16"
Maximum seated height	2 13/16"
Bulb length excluding tip	2 7/16" ± 3/32"
Maximum diameter	7/8"
Mounting position	any
Basing connections - JETEC basing designation	9AR

Pin 1 - Grid No.2
Pin 2 - Grid No.1
Pin 3 - Cathode
Pin 4 - Heater
Pin 5 - Heater
Pin 6 - Grid No.3
Pin 7 - Plate
Pin 8 - Internal shield
Pin 9 - Not connected

Bottom view of base



Tube outline



General Electrical Data

Heater data

Heater voltage	6.3 volts
Heater current	0.71 amp

Direct Interelectrode Capacitances

Plate to all other elements except grid No.1	6.6 μμF
Grid No.1 to all other elements except plate	11.2 μμF
Plate to grid No.1	max. 0.1 μμF
Grid No.2 to grid No.1	3.2 μμF
Grid No.1 to heater	max. 0.15 μμF

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Ratings (Design center values)		
Plate voltage (without current)	max.	550 volts
Plate voltage	max.	300 volts
Plate dissipation	max.	9 watts
Grid No.2 voltage (without current)	max.	550 volts
Grid No.2 voltage	max.	300 volts
Grid No.2 dissipation	max.	2 watts
Cathode current	max.	70 ma
Grid No.1 current starting point. Grid No.1 voltage at grid No.1 current = +0.3 µamp	max.	-1.3 volts
Grid No.1 circuit resistance	max.	1 megohm[1])
Grid No.1 circuit resistance	max.	0.5 megohm[2])
External resistance between heater and cathode	max.	20,000 ohms
Voltage between heater and cathode	max.	100 volts

Typical characteristics	
Plate voltage	250 volts
Grid No.3 voltage	0 volt
Grid No.2 voltage	250 volts
Grid No.1 voltage	-5.5 volts
Plate current	36 ma
Grid No.2 current	5 ma
Transconductance	10,000 micromhos
Plate resistance	0.13 megohm
Amplification factor of grid No.2 with respect to grid No.1	24

[1]) With automatic grid bias

[2]) With fixed grid bias

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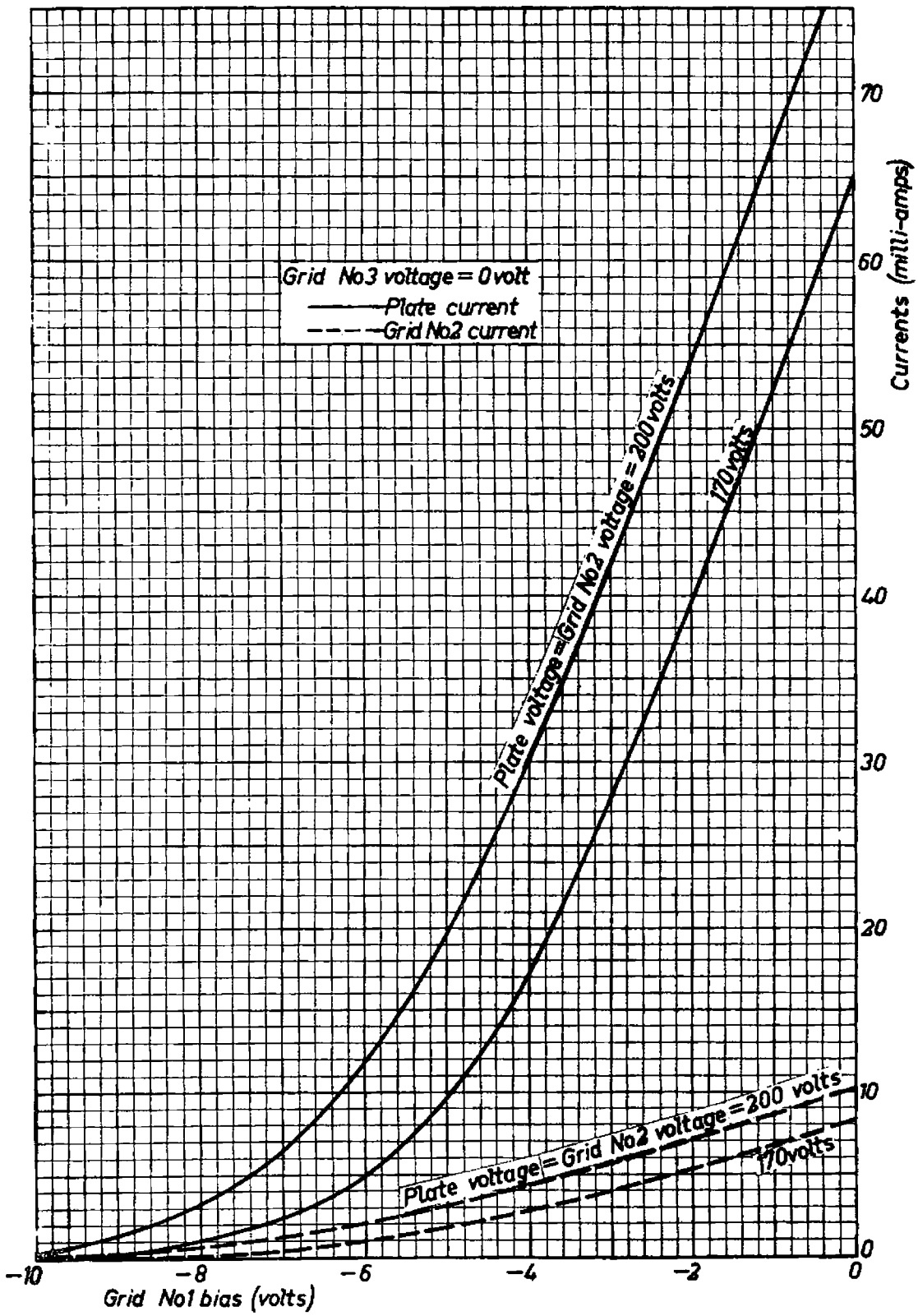
Grid No3 voltage = 0 volt
Plate current
Grid No2 current
Plate voltage = Grid No2 voltage = 200 volts
170 volts
Plate voltage = Grid No2 voltage = 200 volts
170 volts
Currents (milli-amps)
70
60
50
40
30
20
10
0
−10
−8
−6
−4
−2
0
Grid No1 bias (volts)

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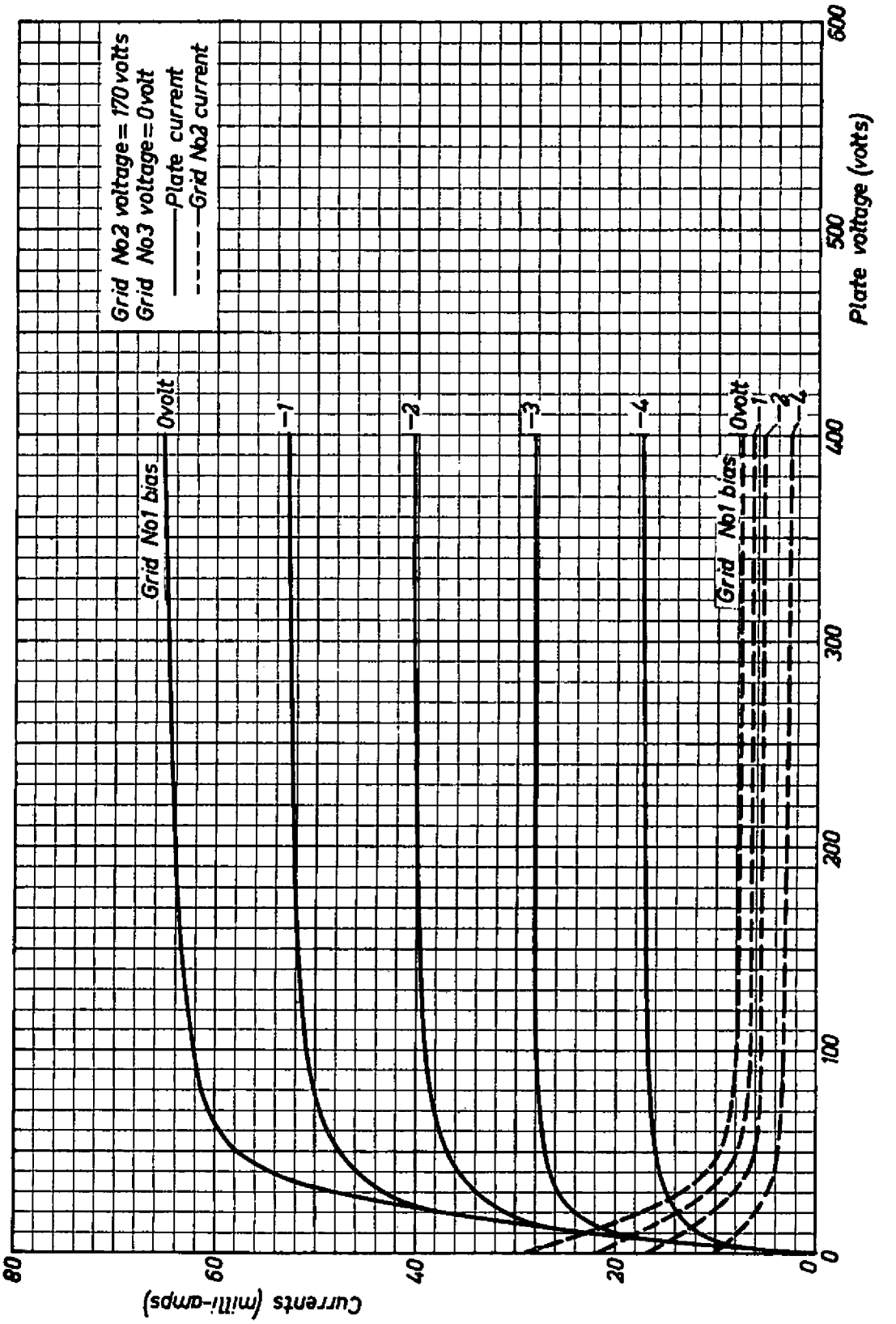

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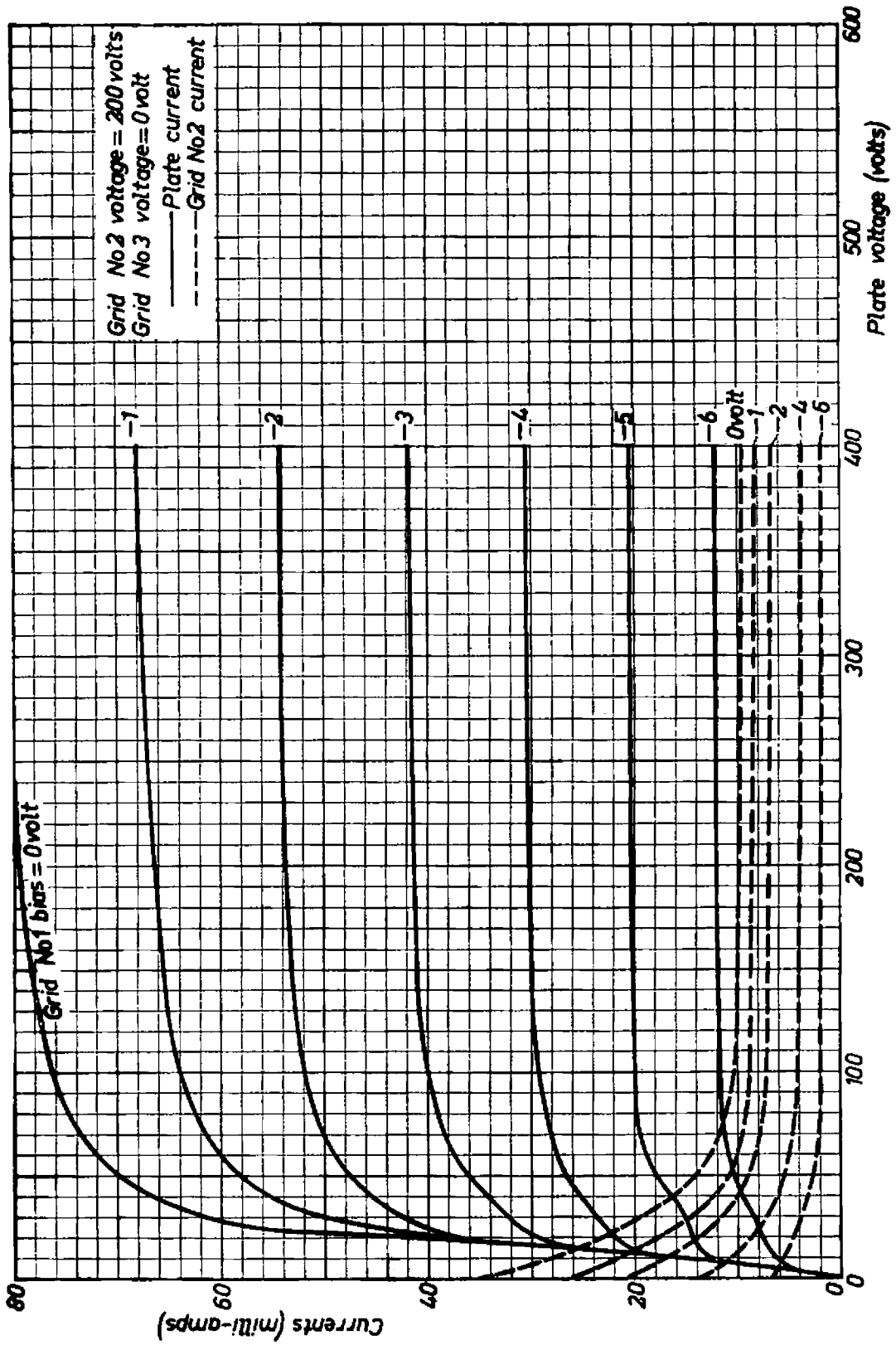

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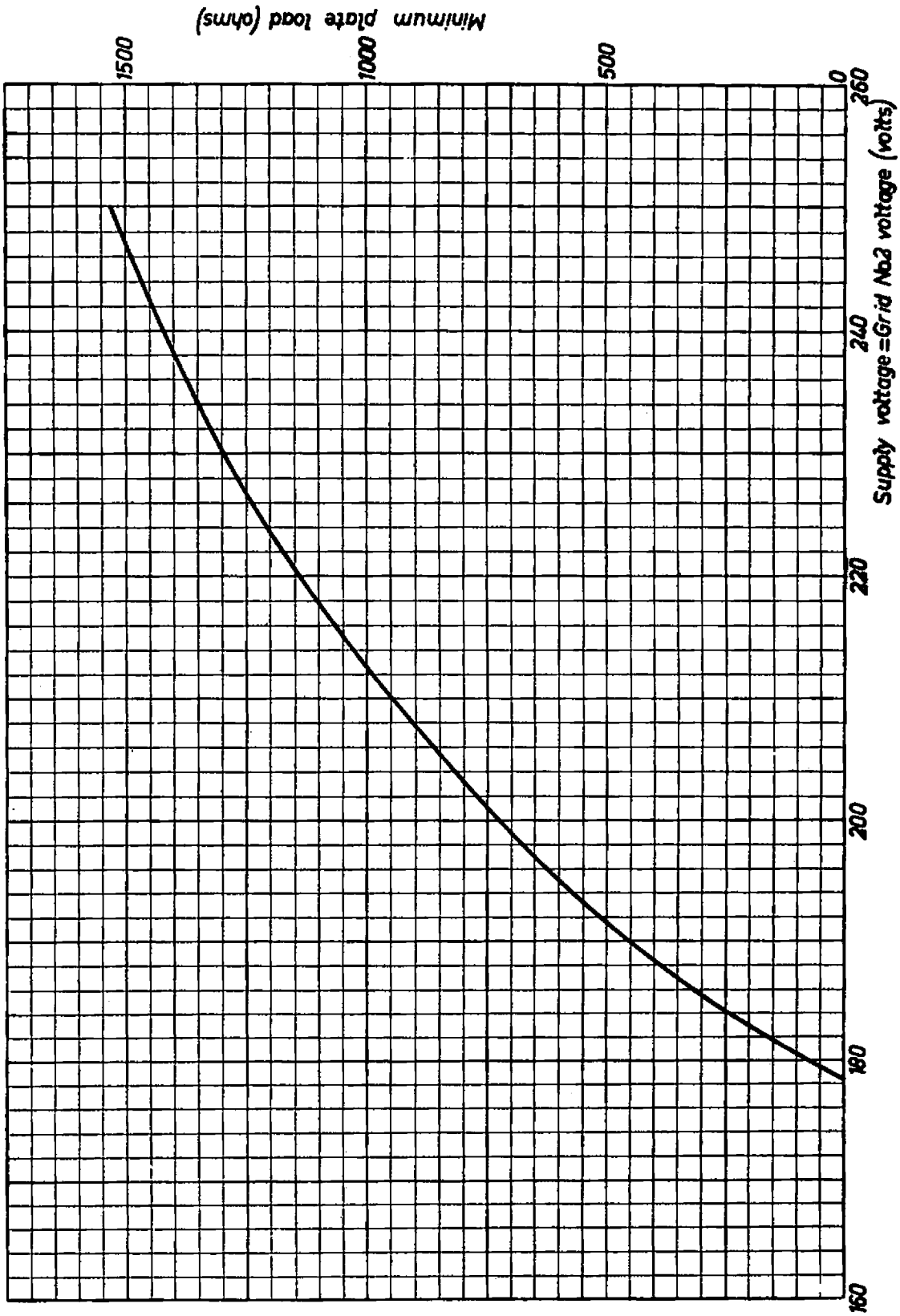
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