

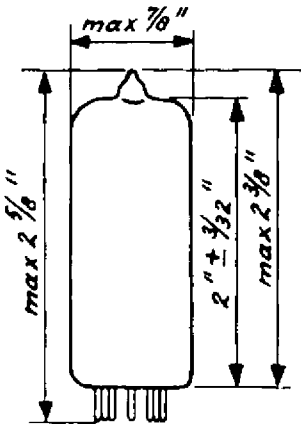
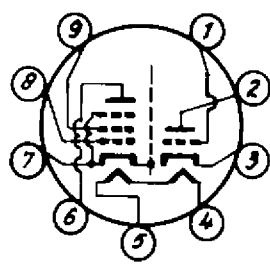
Rogers Electronic Tubes & Components

15 DQ 8

Description: Triode-pentode with separate cathodes.
Triode for use in circuits for keyed A.G.C.,
sync-separation, sync-amplification and noise
suppression. Pentode for use as video output tube

Mechanical data

Cathode	coated, unipotential
Base	E9-1
Bulb	T6 ¹ / ₂
Outline	6-3
Basing	9HX
Mounting position	any

<u>TUBE OUTLINE</u>	<u>BOTTOM VIEW OF BASE</u>	<u>BASE PIN No.</u>	<u>ELEMENT</u>
		1	Triode grid
		2	Triode plate
		3	Triode cathode
		4	Heater
		5	Heater
		6	Pentode plate
		7	Pentode cathode, grid No.3, internal shield
		8	Grid No. 1
		9	Grid No. 2

Heater data

Heater voltage	15 volts
Heater current	300 mamps

Direct interelectrode capacitancesPentode section

Grid No. 1 to all other elements except plate	9.0 $\mu\mu\text{F}$
Plate to all other elements except grid No. 1	4.5 $\mu\mu\text{F}$
Plate to grid No. 1	max. 0.1 $\mu\mu\text{F}$
Grid No. 1 to heater	max. 0.1 $\mu\mu\text{F}$

Triode section

Grid to all other elements except plate	4.0 $\mu\mu\text{F}$
Plate to all other elements except grid	2.3 $\mu\mu\text{F}$
Plate to grid	2.7 $\mu\mu\text{F}$
Grid to heater	max. 0.1 $\mu\mu\text{F}$

Between triode and pentode section

Triode plate to pentode grid No. 1	max. 0.01 $\mu\mu\text{F}$
Triode grid to pentode grid No. 1	max. 0.01 $\mu\mu\text{F}$

Maximum ratings (design center values)Pentode section

Plate voltage without current	550 volts max.
Plate voltage	250 volts max.
Plate dissipation	4 watts max.
Grid No. 2 voltage without current	550 volts max.
Grid No. 2 voltage	250 volts max.
Grid No. 2 dissipation	1.7 watts max.
Cathode current	40 mamps max.
Grid No. 1 circuit resistance with fixed bias	1 megohm max.
Grid No. 1 circuit resistance with automatic bias	2 megohms max.
Voltage between heater and cathode	200 volts max.
Circuit resistance between heater and cathode	20,000 ohms max.

Triode section

Plate voltage without current (positive and negative)	550 volts max.
Plate voltage (positive and negative)	250 volts max.
Peak plate voltage at plate current maximum 0.1 mamp (note 1)	600 volts max.
Plate dissipation	1 watt max.

Maximum ratings (continued)

Cathode current	12 mamps max.
Grid circuit resistance with fixed bias	1 megohm max.
Grid circuit resistance with automatic bias	3 megohms max.
Voltage between heater and cathode	
(cathode negative with respect to heater)	150 volts max.
(cathode positive with respect to heater)	200 volts (dc) max.
	+150 volts (rms) max.
Circuit resistance between heater and cathode	20,000 ohms

Typical characteristicsPentode section

Plate voltage	170	200	220 volts
Grid No. 2 voltage	170	200	220 volts
Grid No. 1 bias	-2.1	-2.9	-3.4 volts
Plate current	18	18	18 mamps
Grid No. 2 current	3	3	3 mamps
Transconductance	11000	10400	10000 micromhos
Plate resistance	0.1	0.13	0.15 megohm
Amplification factor of Grid No.2 with respect to Grid No. 1	36	36	36

Triode section

Plate voltage	200 volts
Grid bias	-1.7 volts
Plate current	3 mamps
Transconductance	4000 micromhos
Amplification factor	65

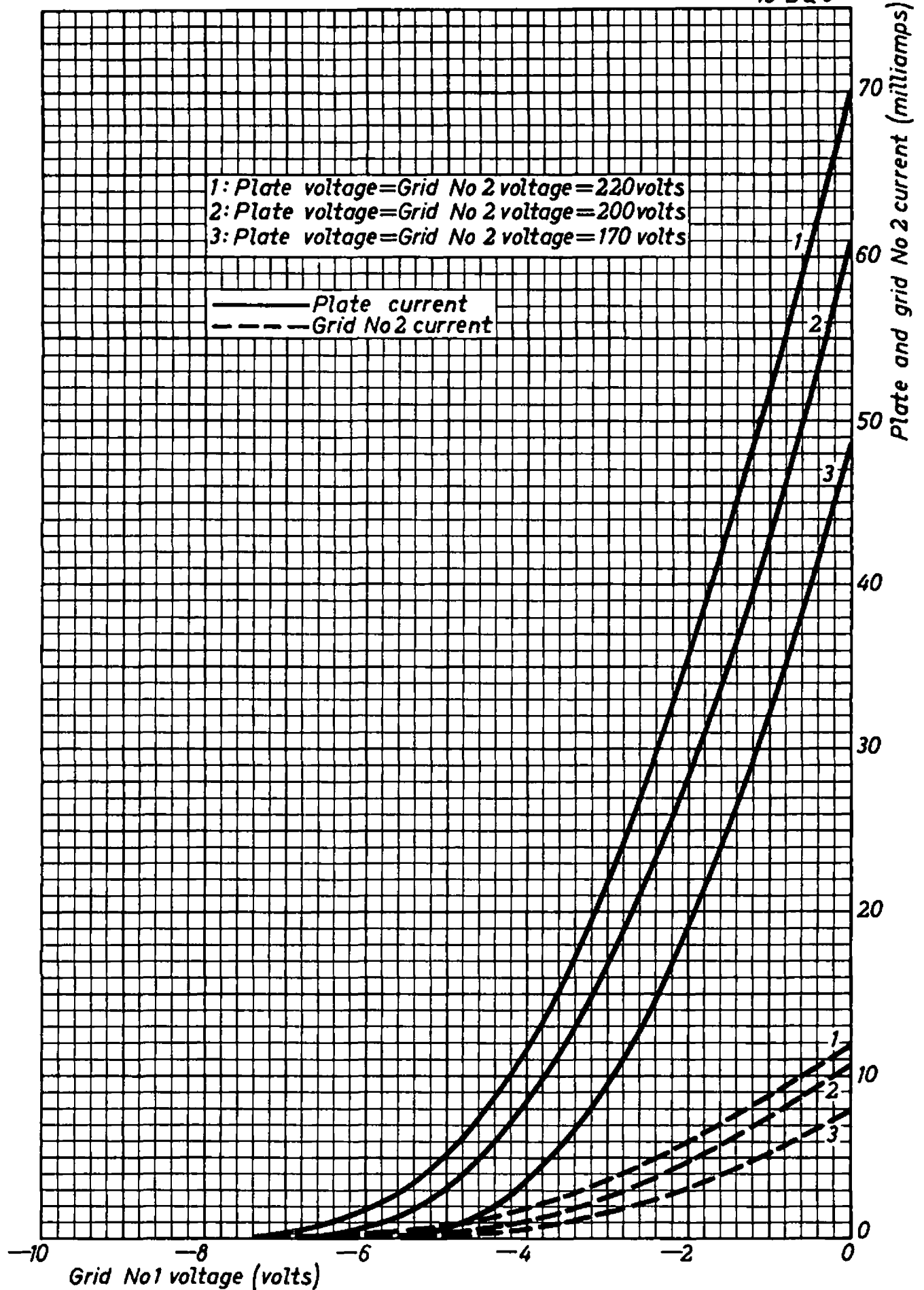
Operating characteristics of the pentode section as video output tube

Supply voltage	170	200	220 volts
Plate series resistance	3000	3000	3000 ohms
Grid No. 2 voltage	170	200	220 volts
Grid No. 1 bias	-2	-2.8	-3.3 volts
Plate current	18	18	18 mamps
Grid No. 2 current	3.2	3.1	3.1 mamps
Transconductance	10400	10000	9700 micromhos

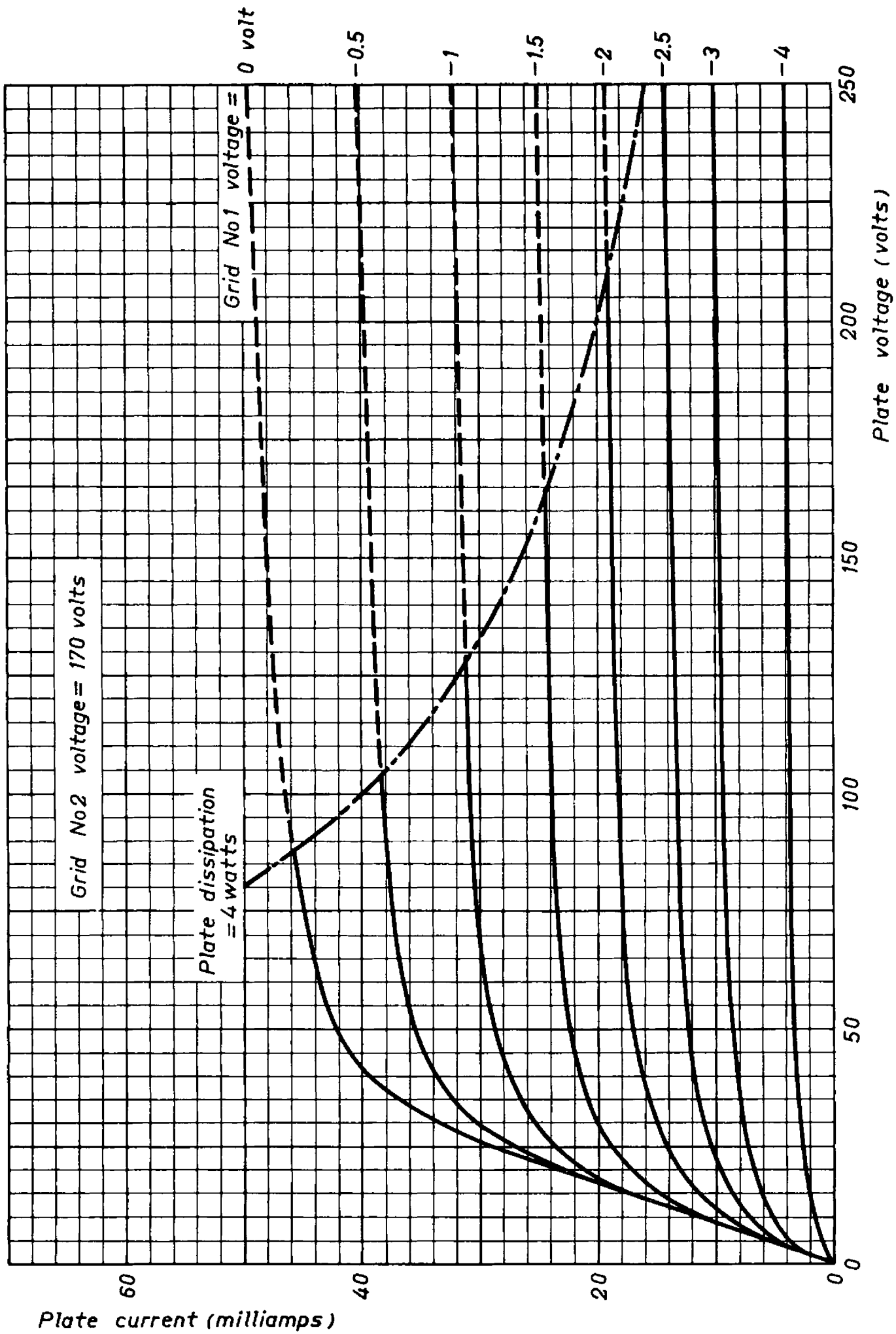
Note 1. Max.pulse duration 18% of a cycle with a maximum of 18 micro-seconds

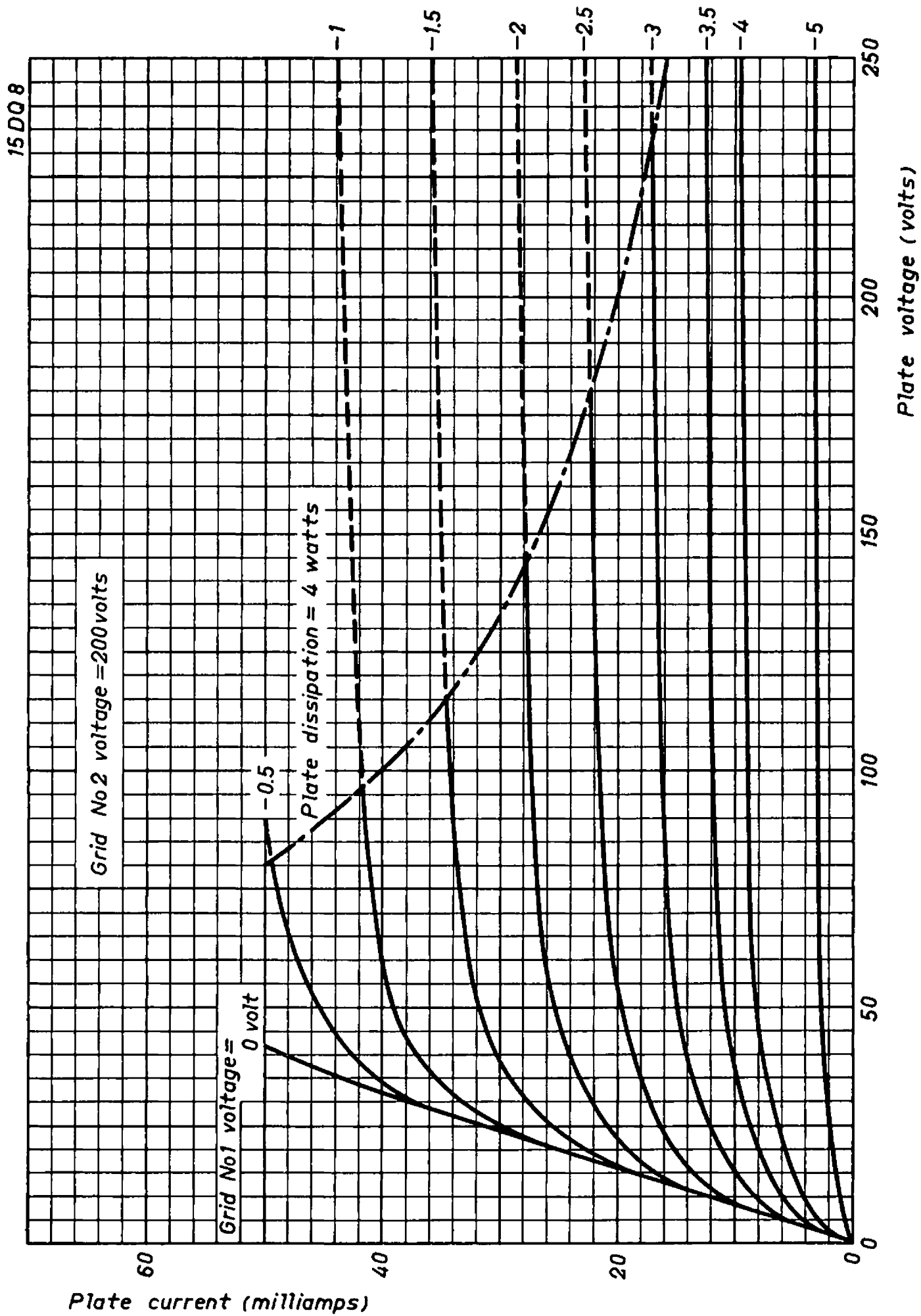
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Grid No 2 voltage = 220 volts

Grid No 1 voltage = 0 volt

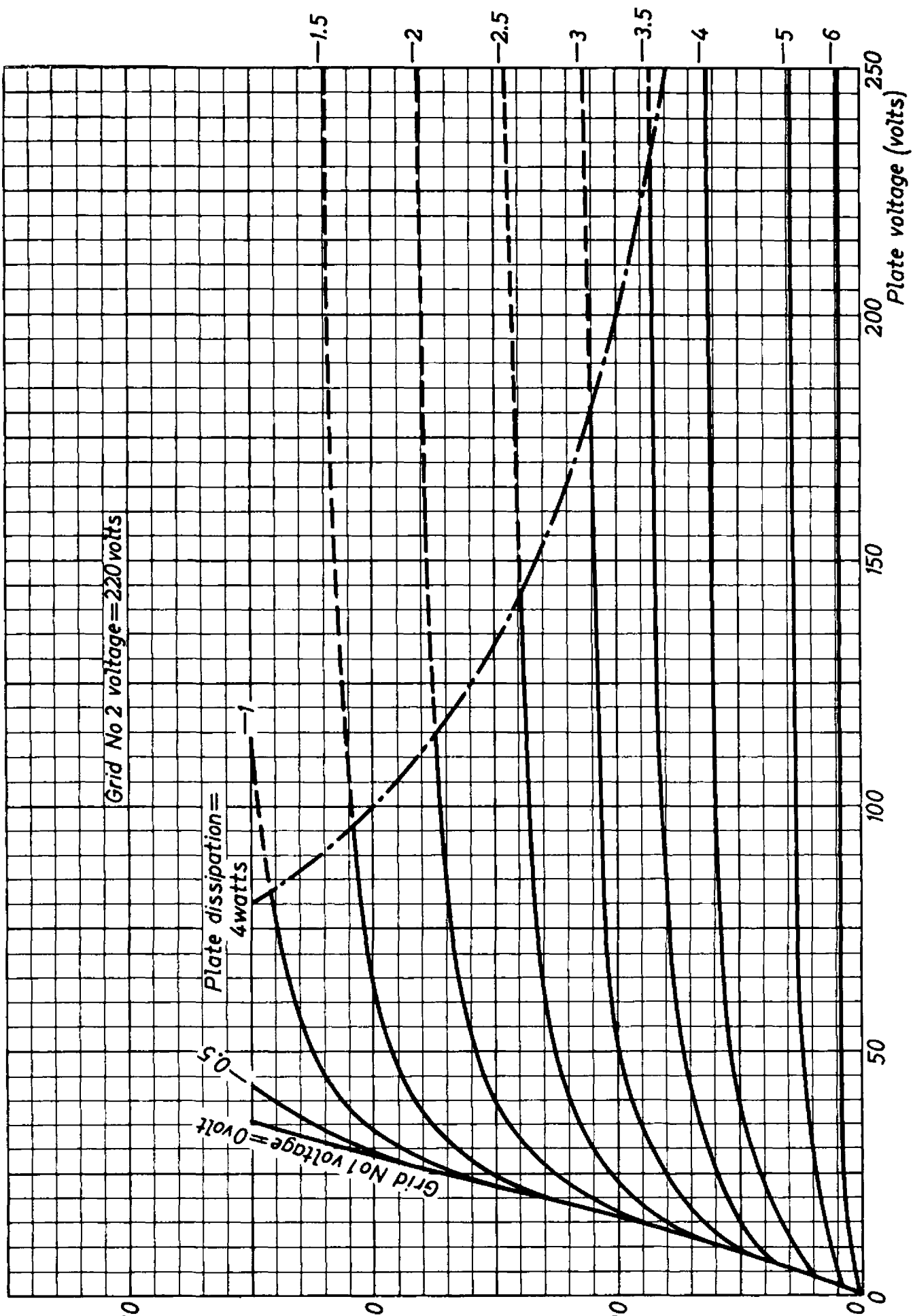
Plate dissipation = 4 watts

0.5

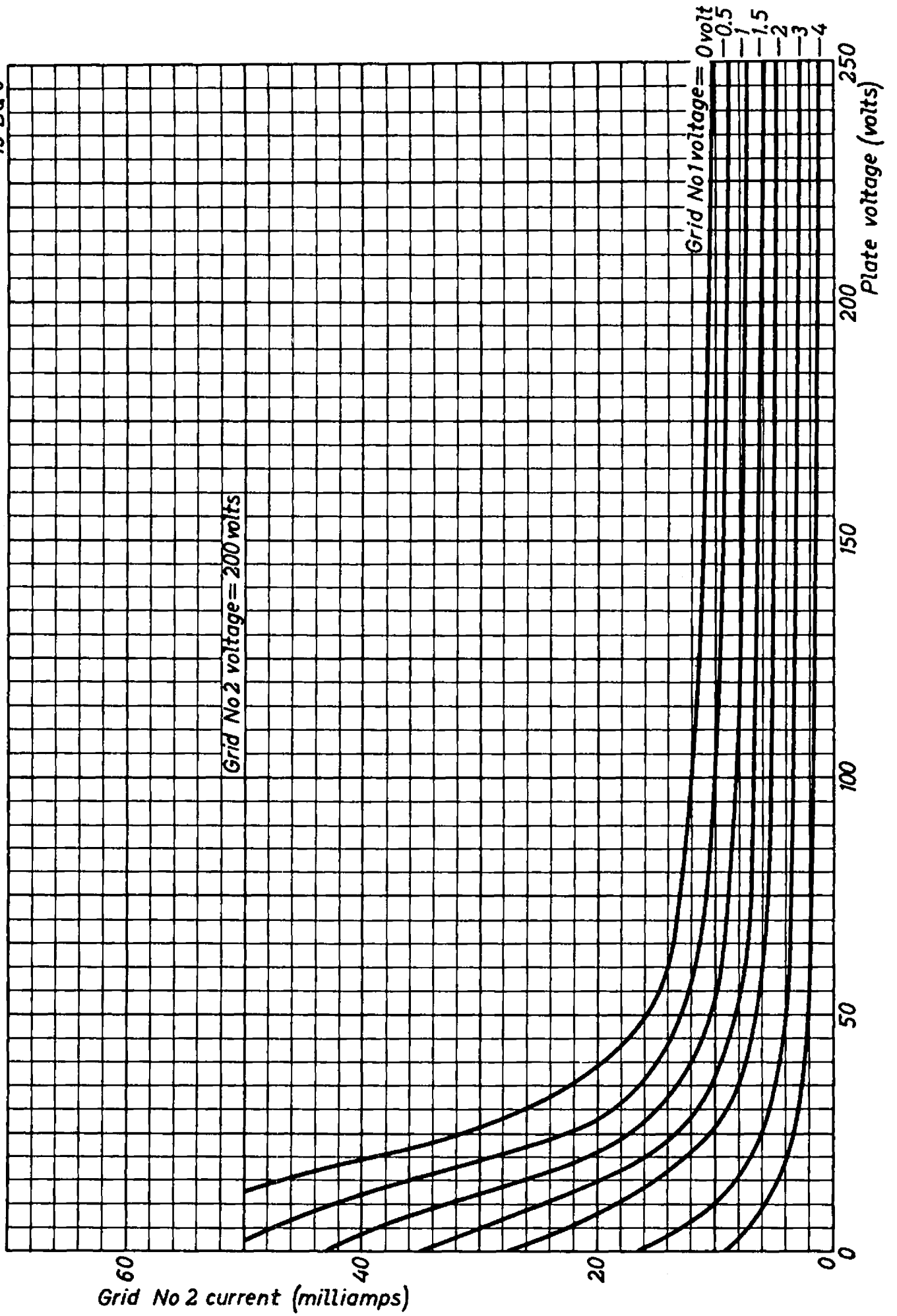
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Plate current (milliamps)

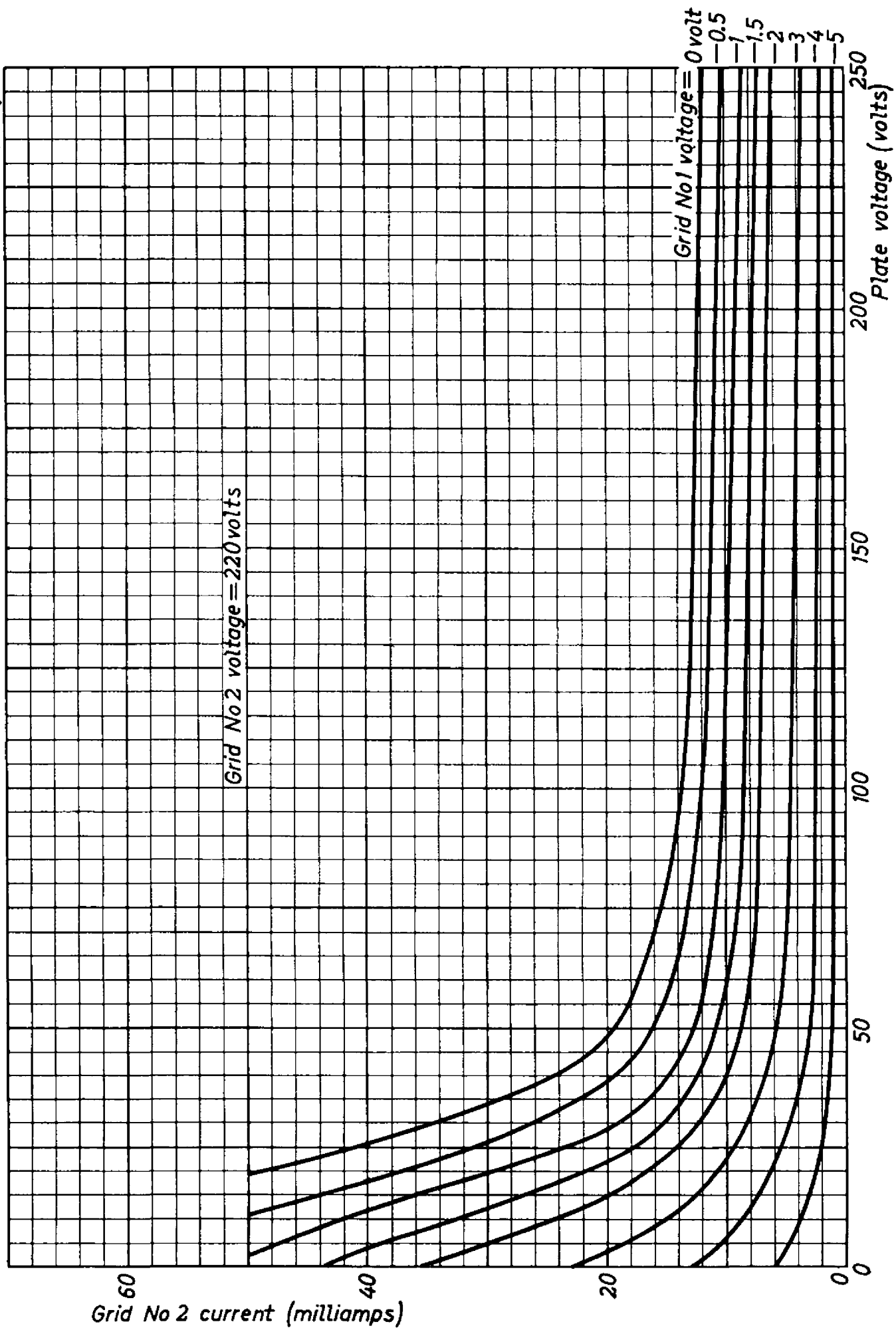
Plate voltage (volts)



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