

# Rogers Electronic Tubes & Components

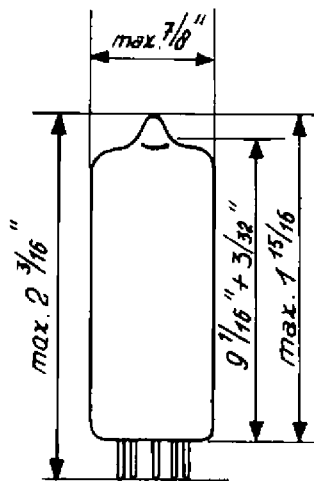
17EW8

Description: Double triode for use as R.F. amplifier and self-oscillating mixer

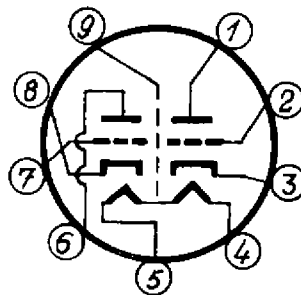
## Mechanical Data

Cathode	coated, unipotential
Base	E 9-1
Bulb	T 6 <sup>1</sup> / <sub>2</sub>
Outline	6-2
Basing	9AJ
Mounting position	any

## Tube outline



## Bottom view of base



## Base pin No.

1	Plate	} Triode no. 2
2	Grid	
3	Cathode	
4	Heater	
5	Heater	
6	Plate	} Triode no. 1
7	Grid	
8	Cathode	
9	Internal shield	

## Heater Data

Heater voltage	17.5 volts
Heater current	150 mamps

## Direct interelectrode capacitances (each system)

Plate to grid	1.5 $\mu\mu\text{F}$
Plate to cathode	0.18 $\mu\mu\text{F}$
Plate to cathode, heater and shield	1.2 $\mu\mu\text{F}$
Plate to cathode, heater and shield $\neq$	1.9 $\mu\mu\text{F}$
Grid to cathode, heater and shield	3 $\mu\mu\text{F}$

$\neq$  With external shield with internal diameter of 0.886"

Direct interelectrode capacitances (continued)Between the triode systems

Plate to plate	max. 0.04 $\mu\mu\text{F}$
Plate to plate $\neq$	max. 0.008 $\mu\mu\text{F}$
Grid to grid	max. 0.003 $\mu\mu\text{F}$
Plate triode No.1 to grid triode No.2	max. 0.008 $\mu\mu\text{F}$
Plate triode No.2 to grid triode No.1	max. 0.008 $\mu\mu\text{F}$
Plate triode No.1 to cathode triode No.2	max. 0.008 $\mu\mu\text{F}$
Plate triode No.2 to cathode triode No.1	max. 0.008 $\mu\mu\text{F}$
Grid triode No.1 to cathode triode No. 2	max. 0.003 $\mu\mu\text{F}$
Grid triode No.2 to cathode triode No. 1	max..0.003 $\mu\mu\text{F}$

Maximum ratings (each section; Design Center Values)

Plate voltage without current	550 volts max.
Plate voltage	250 volts max.
Plate dissipation	2.5 watts max.
Plate dissipation of two systems together	4.5 watts max.
Cathode current	15 mamps max.
Negative grid bias	100 volts max.
Grid circuit resistance	1 megohm max.
Voltage between cathode and heater	90 volts max.
Circuit resistance between heater and cathode	20000 ohms max.

Typical characteristics (each section)

Plate voltage	100	170	200	volts
Grid bias	-1.1 <sup>o</sup> )	-1.5	-2.1	volts
Plate current	4.5	10	10	mamps
Transconductance	4600	6200	5800	micromhos
Amplification factor	50	50	48	

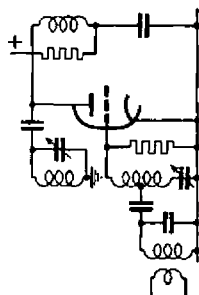
$\neq$  With external shield with internal diameter of 0.886"

<sup>o</sup>) In this case grid current may occur. If this is not permissible a condition with a bias of -1.5 volts should be chosen.

Operating characteristics as R.F. amplifier in FM/AM receivers  
(triode system No.1)

Supply voltage	170	170	100 volts
Plate series resistor	1300	1500	1500 ohms
Plate voltage	160	155	92 volts
Cathode resistor	330	160	160 ohms
Negative grid bias	-2	-1.4	-0.85 volts
Plate current	6	8.7	5.2 mamps
Transconductance	4700	6000	5200 micromhos
Internal resistance	10500	8400	10000 ohms
Input resistance at 100 Mc	8000	6000	7000 ohms
Equivalent noise resistance	650	500	580 ohms

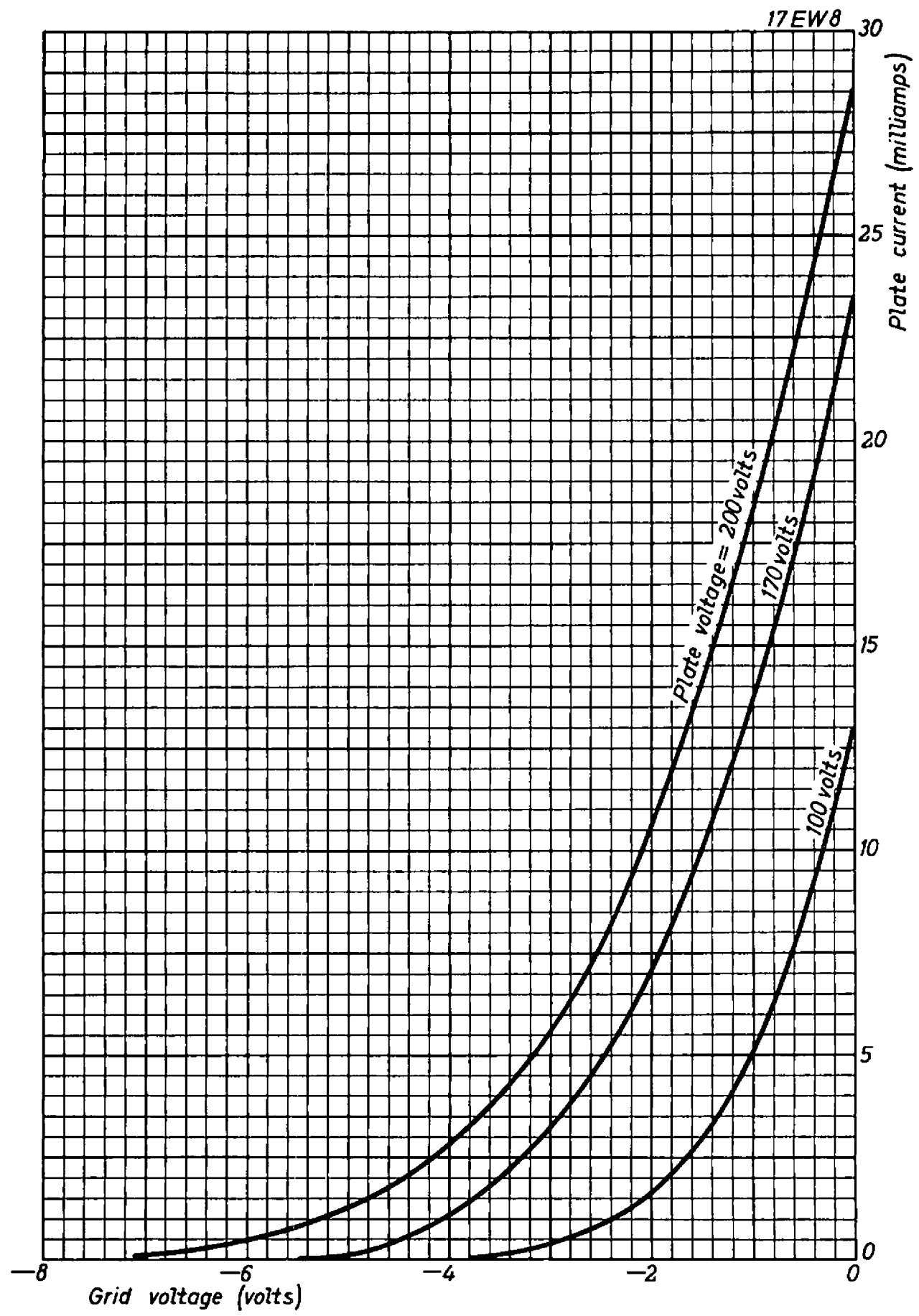
Operating characteristics as self-oscillating mixer in FM/AM  
receivers (triode system No.2)

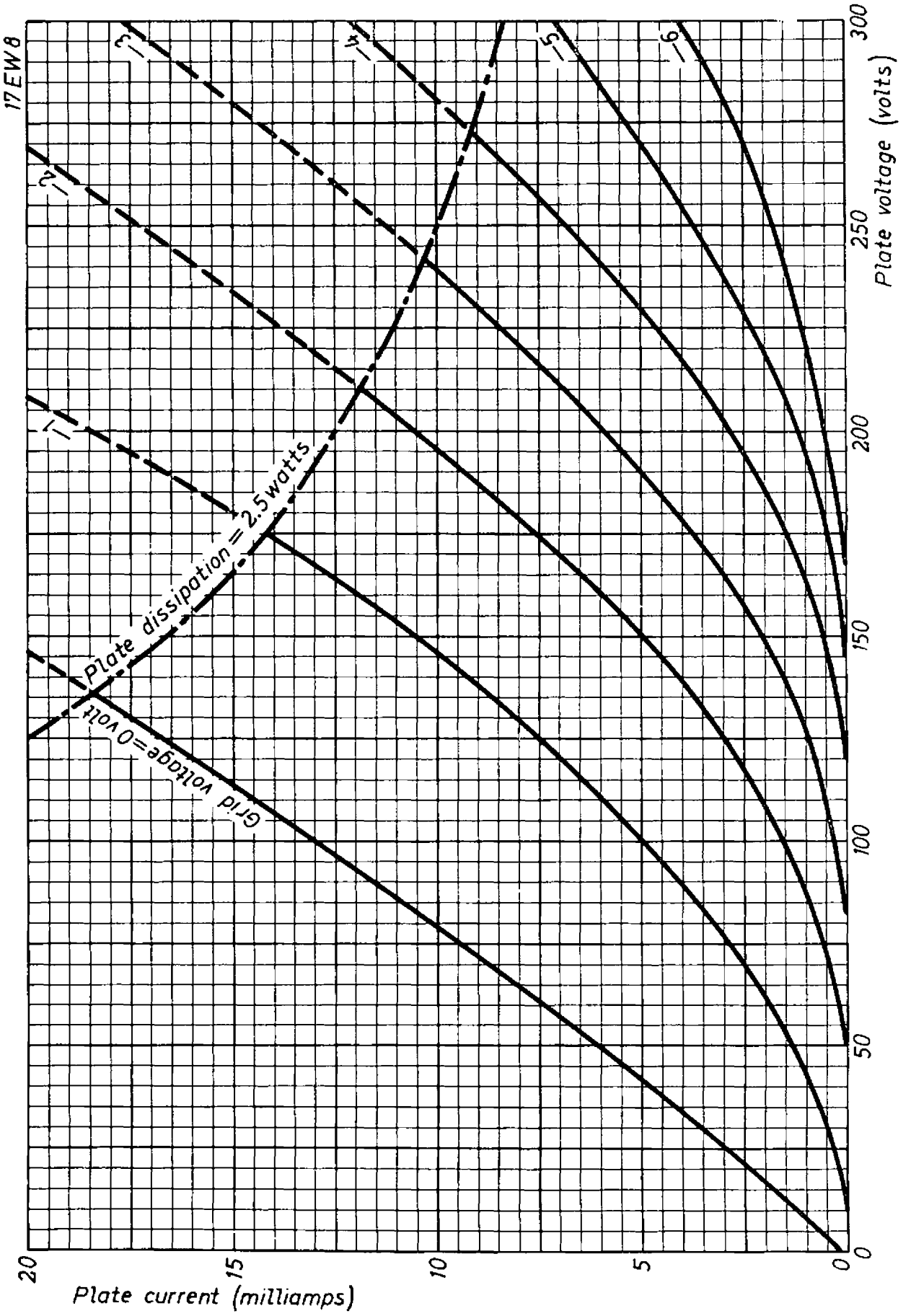


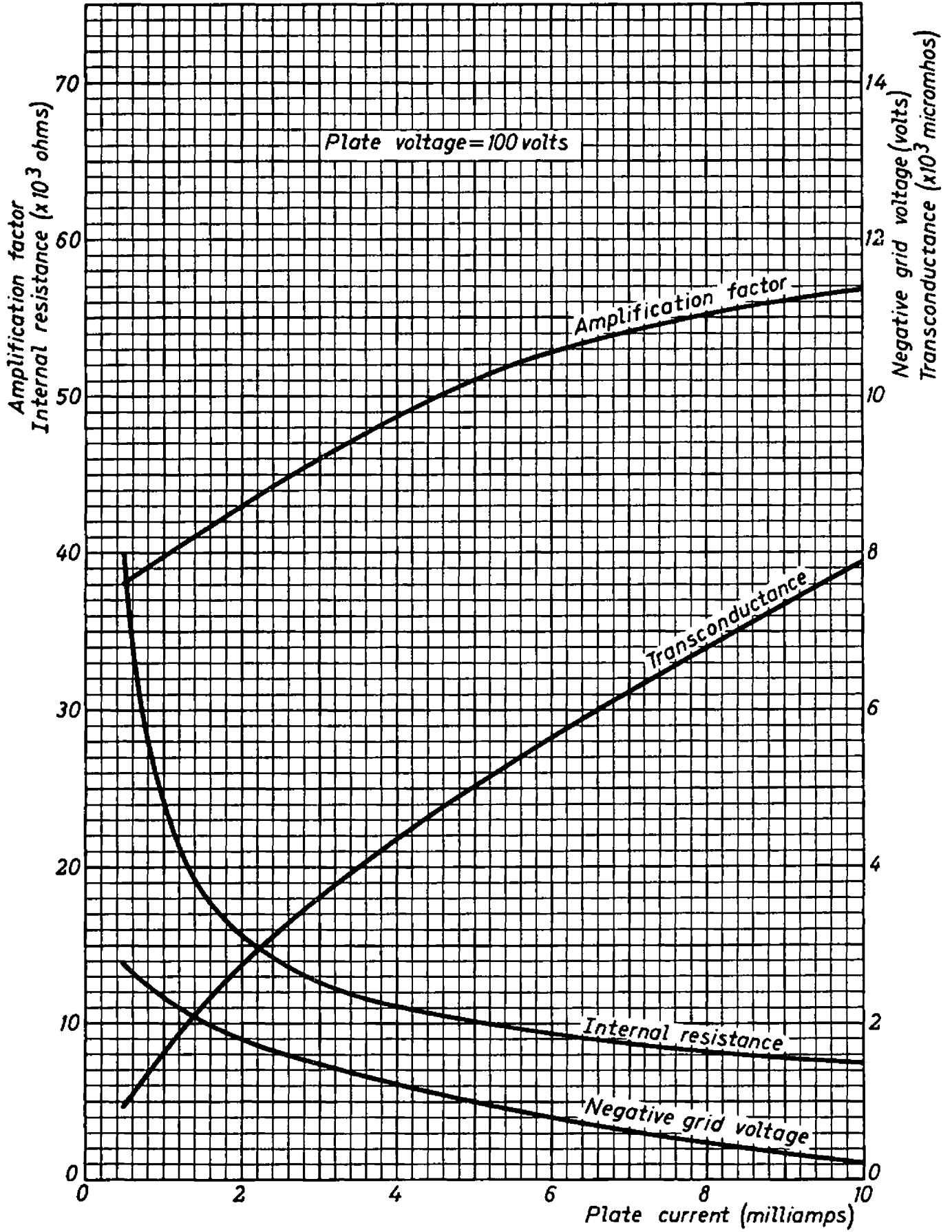
Supply voltage	100	170	200 volts
Plate series resistor	4700	4700	8200 ohms
Grid leak	1	1	1 megohm <sup>†</sup> )
Oscillator voltage	1.8	2.8	2.8 volts (rms)
Plate current	2.2	4.8	5.2 mamps
Conversion conductance	1700	2200	2300 micromhos
Internal resistance	20000	16000	15000 ohms
Input resistance at 100 Mc	-	15000	- ohms

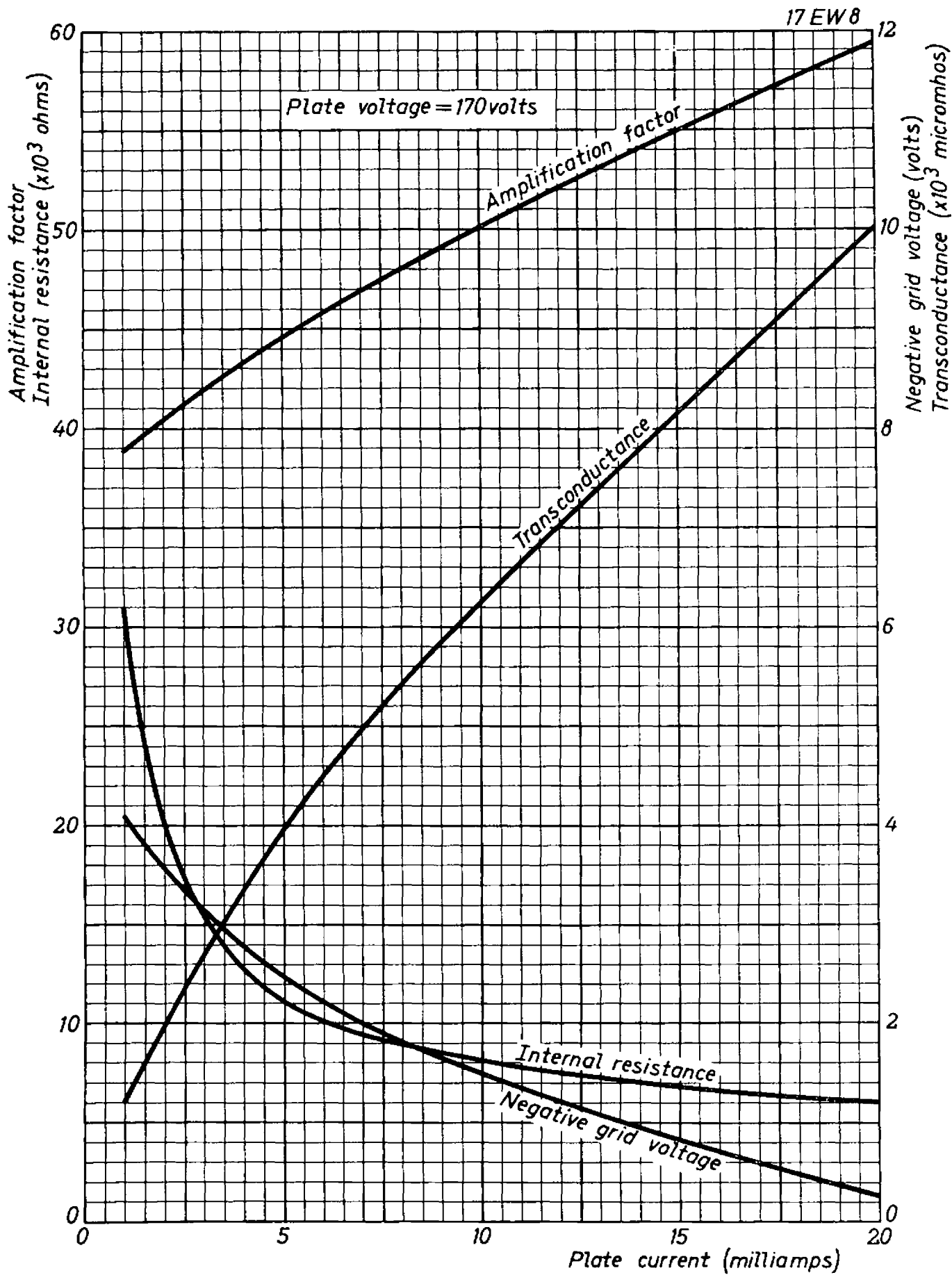
<sup>†</sup>) At this value of grid leak squegging is prevented by feed-back, which normally is applied in order to compensate for the internal resistance

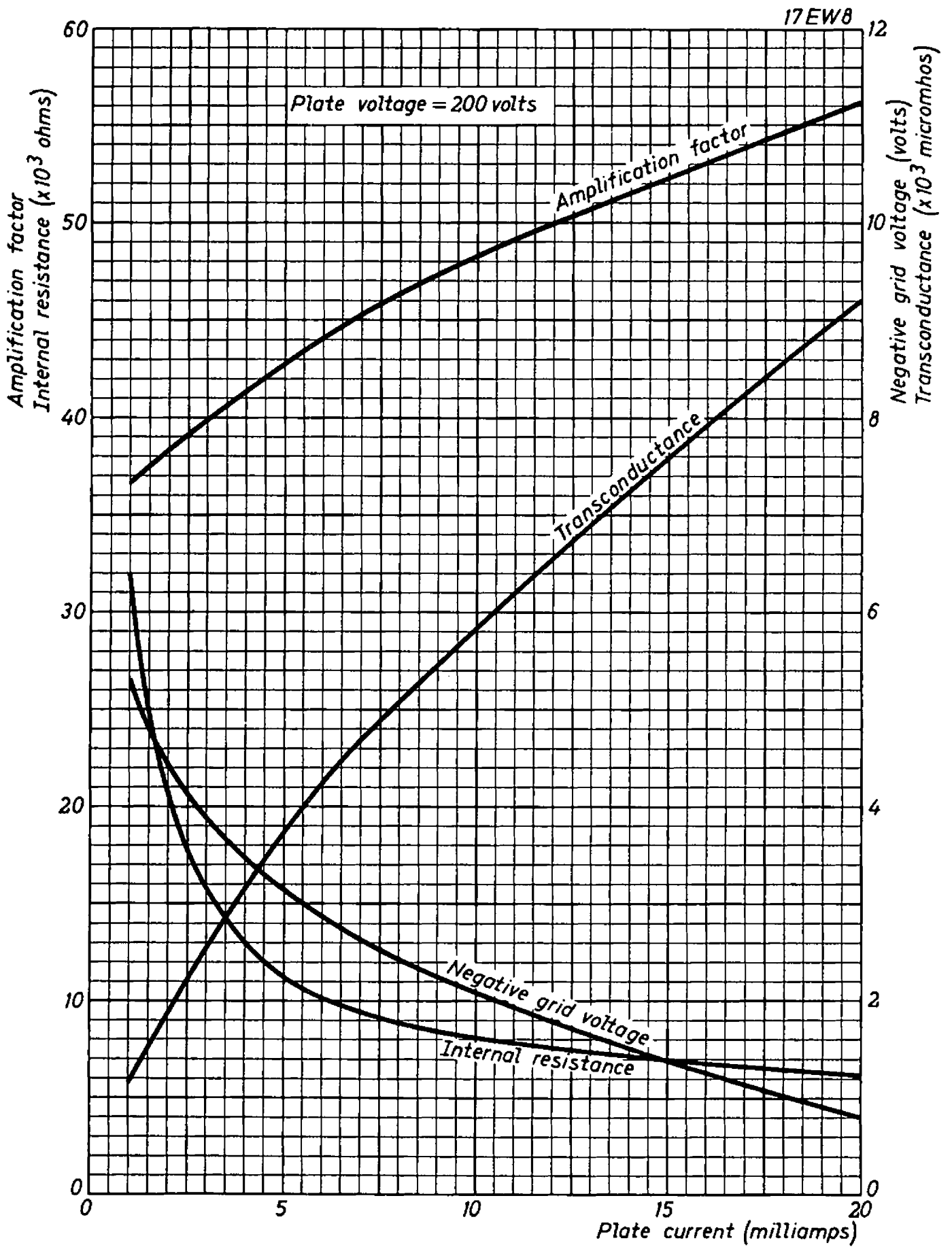
<sup>°</sup>) See page 2





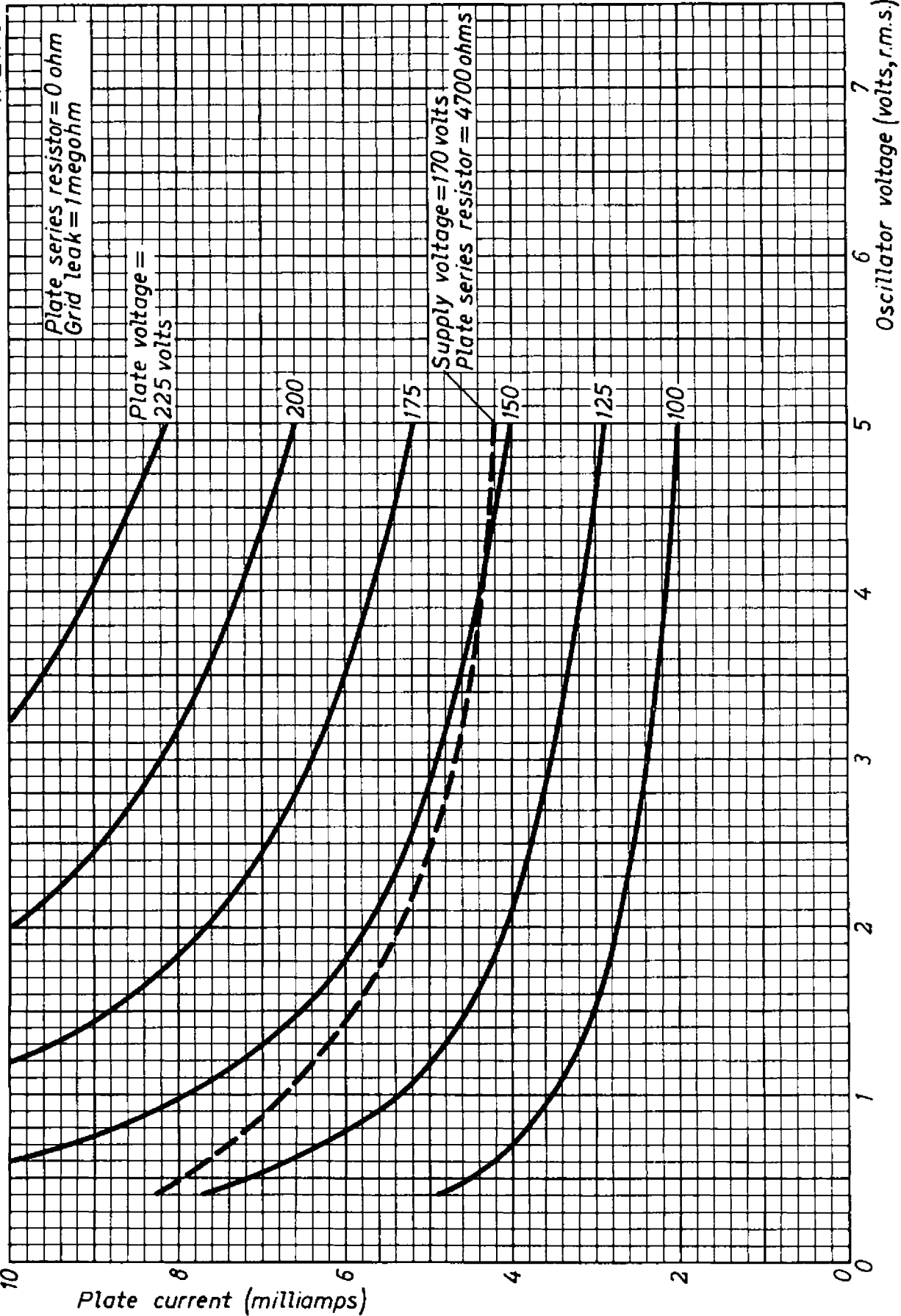








17 EW 8



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