

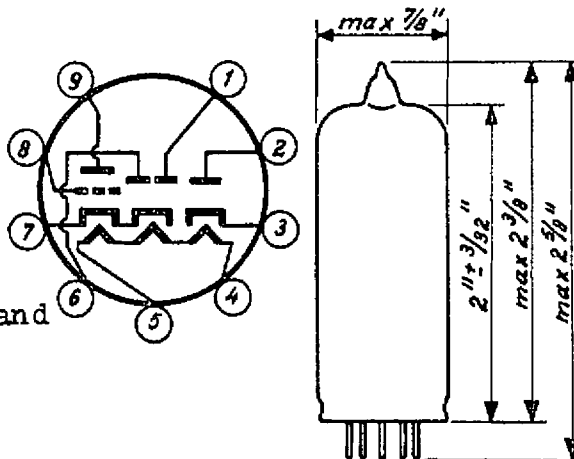
9AK 8

TRIPLE DIODE TRIODE for video and audio signal detection
 in television receivers

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 E

- Pin 1 - Diode plate No. 3
- Pin 2 - Diode plate No. 2
- Pin 3 - Diode cathode No.2
- Pin 4 - Heater
- Pin 5 - Heater
- Pin 6 - Diode plate No. 1
- Pin 7 - Cathode of triode and
 diodes No.1 and 3,
 internal shield
- Pin 8 - Triode grid
- Pin 9 - Triode plate



GENERAL ELECTRICAL DATA

Heater voltage	9.5 volts
Heater current	0.3 ampere

DIRECT INTERELECTRODE CAPACITANCES

Diode sections	
Diode plate No.1 to all other elements	0.9 μμF
Diode plate No.2 to all other elements	4.5 μμF
Diode plate No.3 to all other elements	4.5 μμF
Diode cathode No.2 to all other elements except diode plate No.2	4.5 μμF
Diode plate No.1.to heater	max. 0.25 μμF
Diode plate No.3 to heater	max. 0.2 μμF
Diode cathode No.2 to heater	2.7 μμF

Direct Interelectrode Capacitances (continued)

Triode Section

Grid to all other elements	1.9 $\mu\mu\text{F}$
Plate to all other elements	1.2 $\mu\mu\text{F}$
Plate to grid	2.1 $\mu\mu\text{F}$
Grid to heater	max. 0.04 $\mu\mu\text{F}$

Between diode and triode sections

Grid to diode plate No.1	max. 0.07 $\mu\mu\text{F}$
Grid to diode cathode No.2	max. 0.005 $\mu\mu\text{F}$
Grid to diode plate No.3	max. 0.02 $\mu\mu\text{F}$
Triode plate to diode plate No.1	max. 0.1 $\mu\mu\text{F}$
Triode plate to diode cathode No.2	max. 0.01 $\mu\mu\text{F}$
Triode plate to diode plate No.3	max. 0.1 $\mu\mu\text{F}$

Maximum ratings (design center values)

Diode sections

Peak inverse voltage at diode No.1	350 volts
Average current of diode No.1	1 mamp
Peak current of diode No.1	6 mamps
Peak inverse voltage of diode No.2	350 volts
Average current of diode No.2	10 mamps
Peak current of diode No.2	75 mamps
Peak inverse voltage of diode No.3	350 volts
Average current of diode No.3	10 mamps
Peak current of diode No.3	75 mamps
Voltage between diode cathode No.2 and heater	150 volts

Triode section

Plate voltage	250 volts
Plate voltage without current	550 volts
Plate dissipation	1 watt
Cathode current	5 mamps
Grid circuit resistance	/ 3 megohms
Grid current starting point (Grid voltage at grid current = +0.3 μ amp)	-1.3 volts
External resistance between heater and cathode	20,000 ohms
Voltage between heater and cathode	150 volts

/ With grid current biasing max. 22 megohms

Typical characteristics of the diode sections

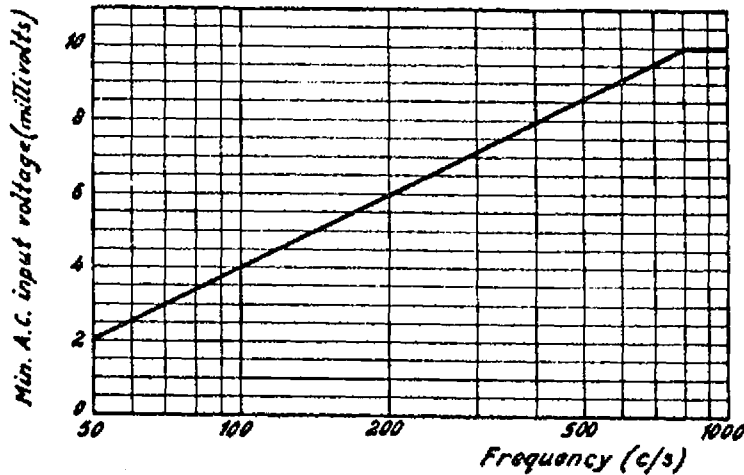
Plate resistance of diode No.1 at plate voltage = +10 volts	5000 ohms
Plate resistance of diode No.2 at plate voltage = + 5 volts	200 ohms
Plate resistance of diode No.3 at plate voltage = + 5 volts	200 ohms
Ratio of plate resistances of diodes No.2 to diode No.3 or vice versa	max. 1.5

Typical characteristics of the triode section

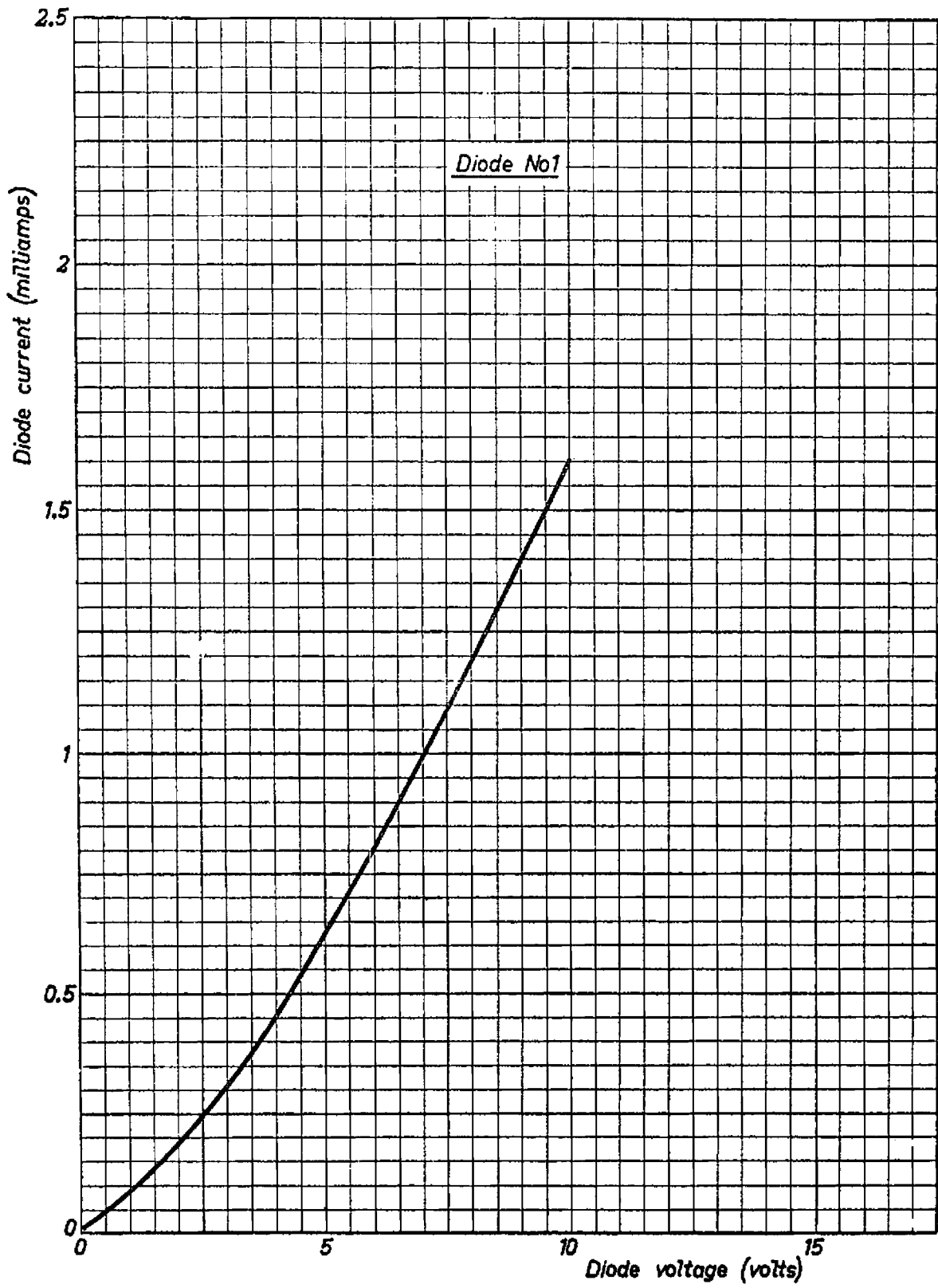
Plate voltage	100	170	200	250 volts
Grid bias	-1	-1.85	-2.3	-3 volts
Plate current	0.8	1.0	1.0	1.0 mamp
Transconductance	1300	1300	1250	1200 micromhos
Amplification factor	70	70	70	70
Plate resistance	54,000	54,000	56,000	58,000 ohms

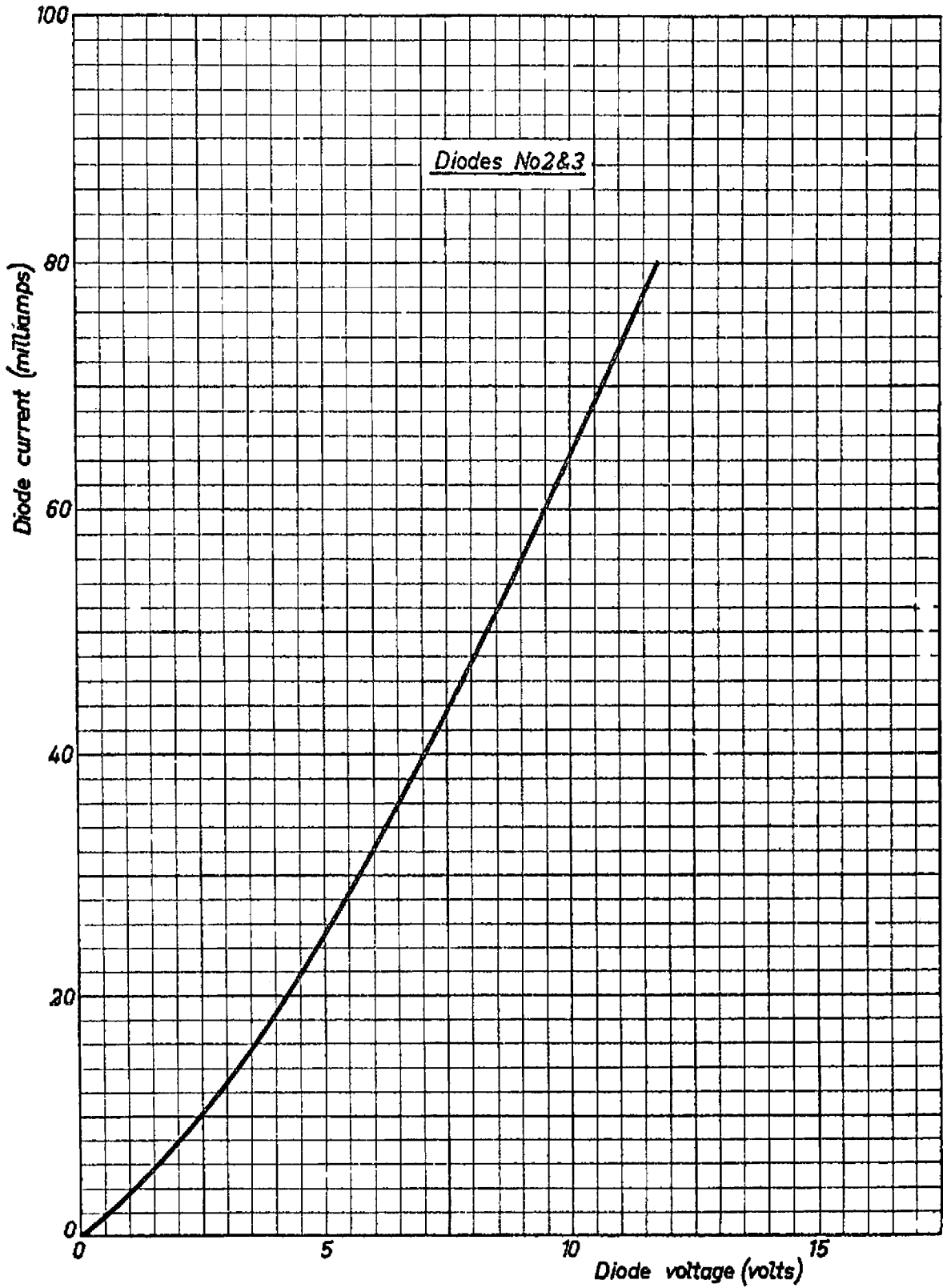
A.F. Amplifier

The triode section of this tube can be used without special precautions against microphonic effect in circuits in which the A.C. input voltage is higher than 10 millivolts for an output of 50 milliwatts of the output tube at frequencies of 800 c/s and higher. At lower frequencies the sensitivity may be increased according to the figure below.

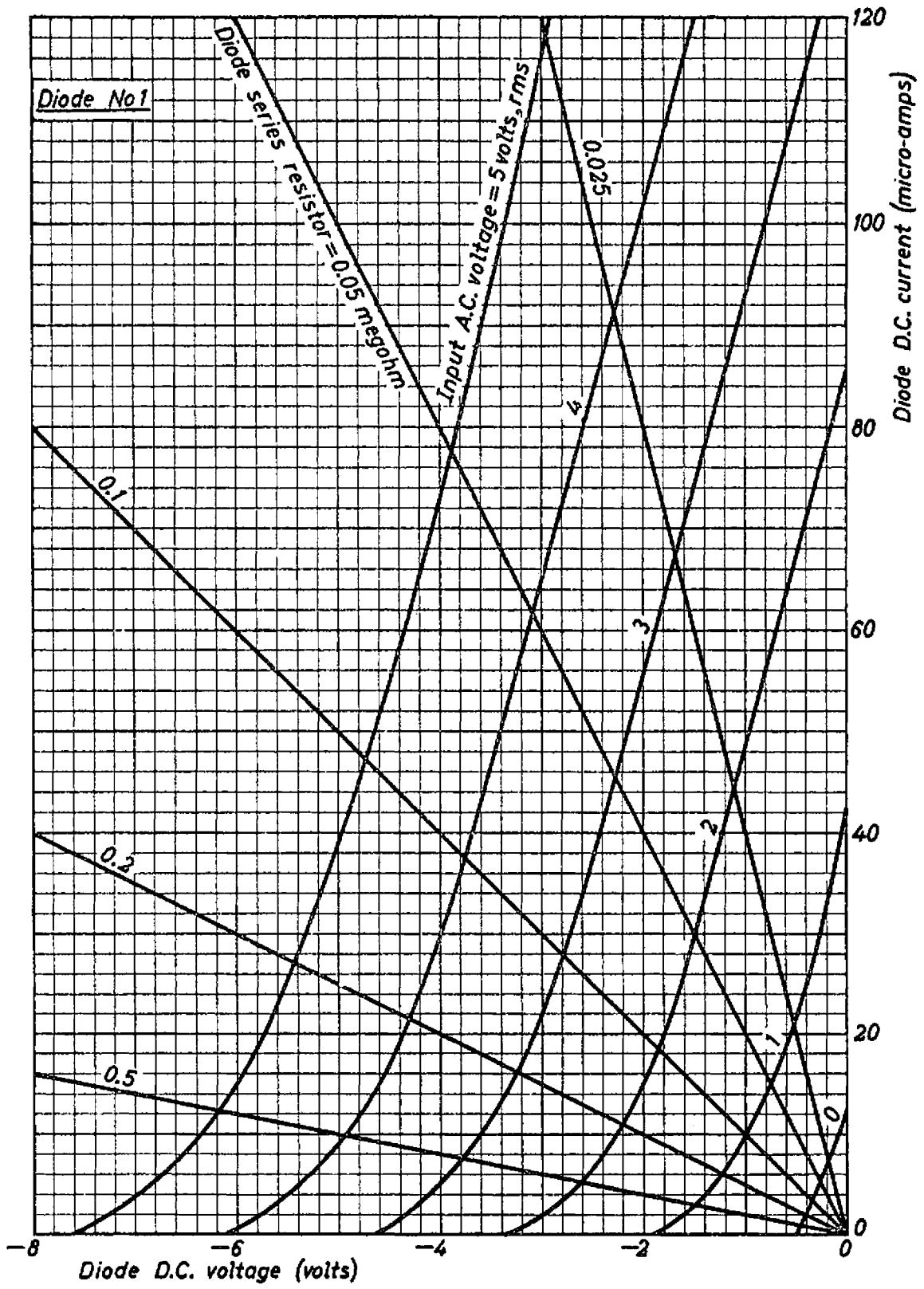


9AK8

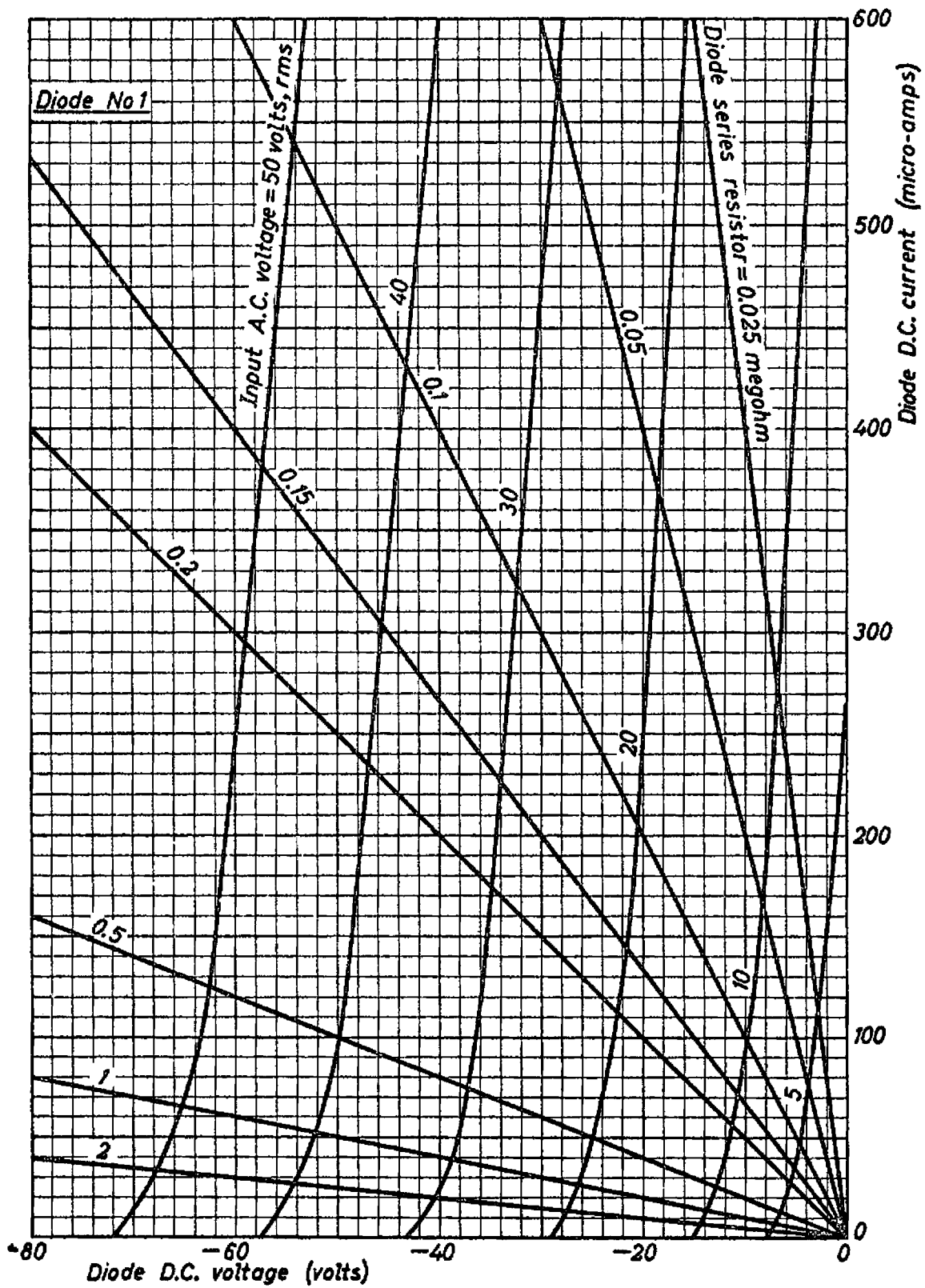




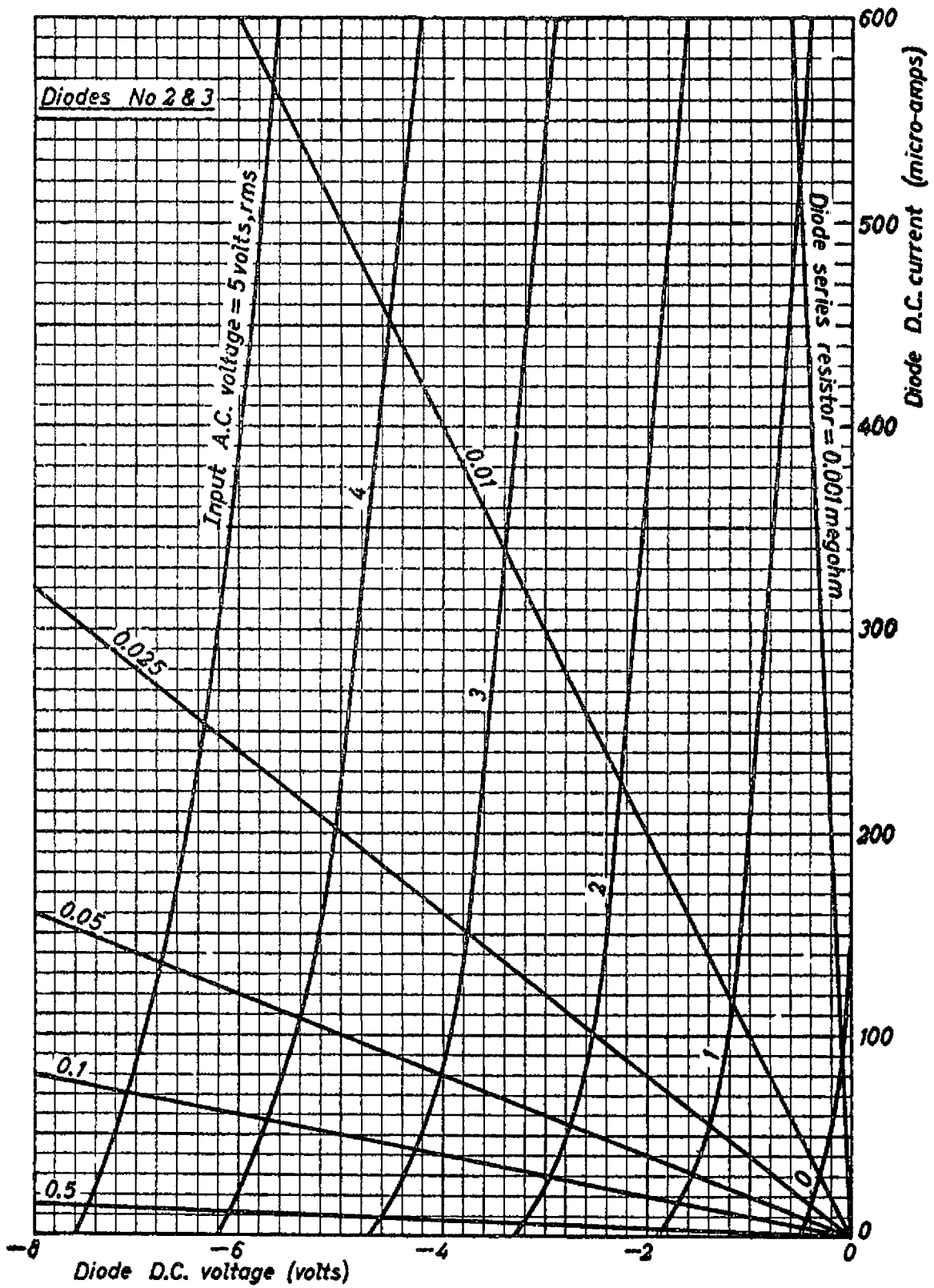
9AK8



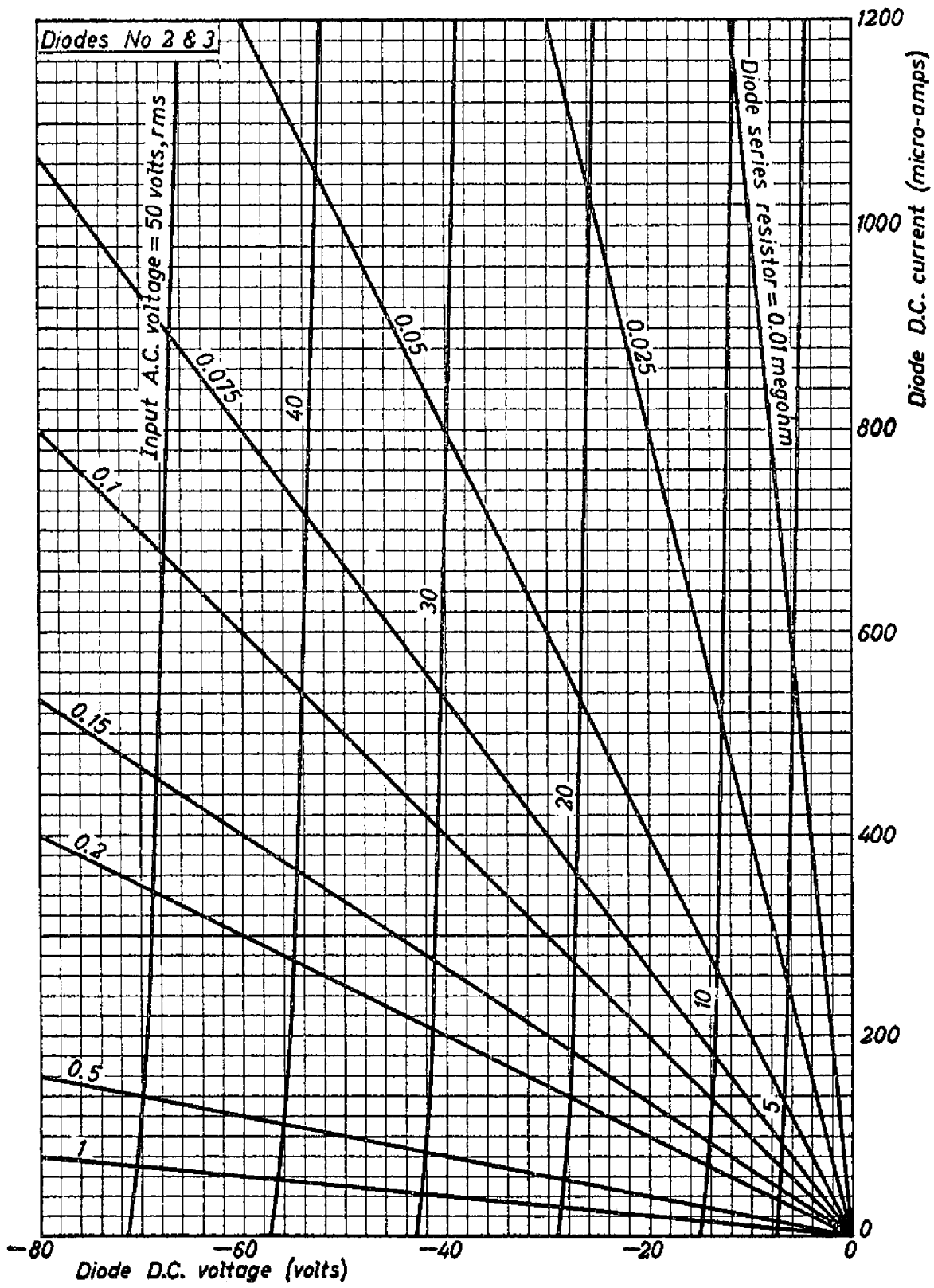
9AK8



9AK8



9AK8



9AK8

