

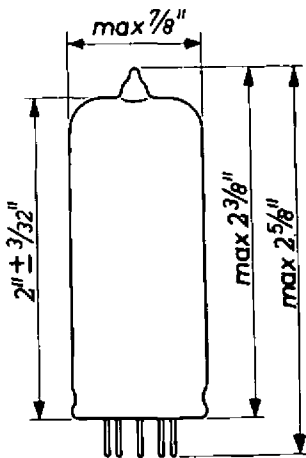
6DC8

DOUBLE DIODE REMOTE CUT-OFF PENTODE FOR USE AS R.F. or I.F. AMPLIFIER

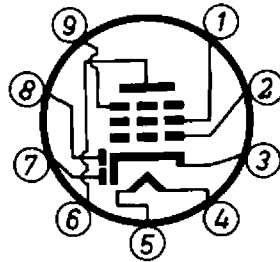
MECHANICAL DATA

| | |
|--------------------------|---------------------|
| Cathode | coated unipotential |
| Base | E9-1 |
| Bulb | T6½ |
| RETMA basing designation | 9HE |
| Mounting position | any |

TUBE OUTLINE



BOTTOM VIEW OF BASE



BASE PIN No.

- | | |
|---|--------------------------|
| 1 | Grid No.2 |
| 2 | Grid No.1 |
| 3 | Cathode, internal shield |
| 4 | Heater |
| 5 | Heater |
| 6 | Plate |
| 7 | Diode No.1 plate |
| 8 | Diode No.2 plate |
| 9 | Grid No.3 |

ELEMENT

HEATER DATA

| | |
|----------------|-----------|
| Heater voltage | 6.3 volts |
| Heater current | 300 mamps |

DIRECT INTERELECTRODE CAPACITANCES

Pentode section

| | |
|--|-----------------|
| Plate to all other elements except grid No.1 | 5.2 μμF |
| Grid No.1 to all other elements except plate | 5.0 μμF |
| Plate to grid No.1 | max. 0.0025 μμF |
| Grid No.1 to heater | max. 0.05 μμF |

Diode section

| | |
|--|----------------|
| Diode No.1 plate to all other elements | 2.5 μμF |
| Diode No.2 plate to all other elements | 2.5 μμF |
| Diode No.1 plate to diode No.2 plate | max. 0.25 μμF |
| Diode No.1 plate to heater | max. 0.015 μμF |
| Diode No.2 plate to heater | max. 0.003 μμF |

DIRECT INTERELECTRODE CAPACITANCES (continued)Between pentode and diode sections

| | | |
|-----------------------------------|------|-------------------------|
| Diode No.1 plate to grid No.1 | max. | 0.0008 $\mu\mu\text{F}$ |
| Diode No.2 plate to grid No.1 | max. | 0.001 $\mu\mu\text{F}$ |
| Diode No.1 plate to pentode plate | max. | 0.15 $\mu\mu\text{F}$ |
| Diode No.2 plate to pentode plate | max. | 0.025 $\mu\mu\text{F}$ |

MAXIMUM RATINGS (Design Center Values)Pentode section

| | |
|--|------------------|
| Plate voltage | 300 volts max.*) |
| Plate voltage without current | 550 volts max. |
| Plate dissipation | 2.25 watts max. |
| Grid No.2 voltage at a plate current higher than 8 mamps | 125 volts max. |
| Grid No.2 voltage at a plate current less than 4 mamps | 300 volts max.*) |
| Grid No.2 dissipation | 0.45 watt max. |
| Cathode current | 16.5 mamps max. |
| Grid No.3 circuit resistance | 10 000 ohms max. |
| Grid No.1 circuit resistance | 3 megohms max. |
| Grid No.1 circuit resistance with grid current biasing | 22 megohms max. |
| Voltage between cathode and heater | 100 volts max. |
| Circuit resistance between cathode and heater | 20 000 ohms max. |

Diode section (each diode)

| | |
|----------------------------|----------------|
| Peak inverse plate voltage | 200 volts max. |
| Plate current | 0.8 mamps max. |
| Peak plate current | 5 mamps max. |

*) When the tube is fed from a storage battery and vibrator the max. permissible value of the positive voltages is 250 volts

TYPICAL CHARACTERISTICS

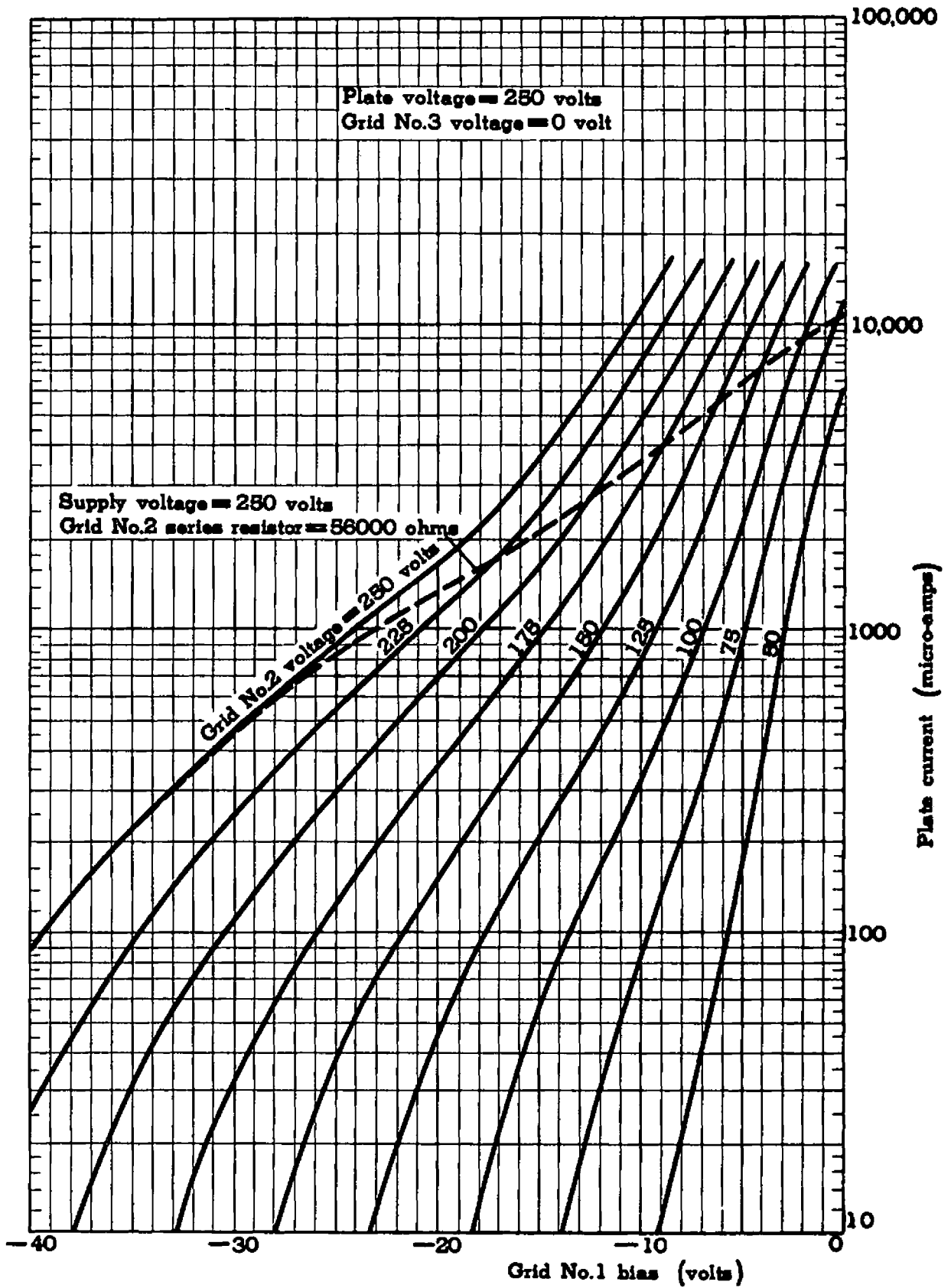
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|---|------|-------------------|------|-----------------------|
| Plate voltage | 250 | 250 | 200 | 170 volts |
| Grid No.2 voltage | 100 | 80 | 100 | 100 volts |
| Grid No.3 voltage | 0 | 0 | 0 | 0 volt |
| Grid No.1 voltage | -2 | -1 [*]) | -1.5 | -1 [*])volt |
| Plate current | 9 | 9 | 11 | 12 mamps |
| Grid No.2 current | 2.7 | 2.7 | 3.3 | 4.0 mamps |
| Transconductance | 3800 | 4500 | 4500 | 5000 μ mhos |
| Plate resistance | 1.0 | 0.9 | 0.6 | 0.4 megohm |
| Amplification factor of grid No.2 with respect to grid No.1 | 20 | 20 | 20 | 20 |

OPERATING CONDITIONS as R.F. or I.F. amplifier

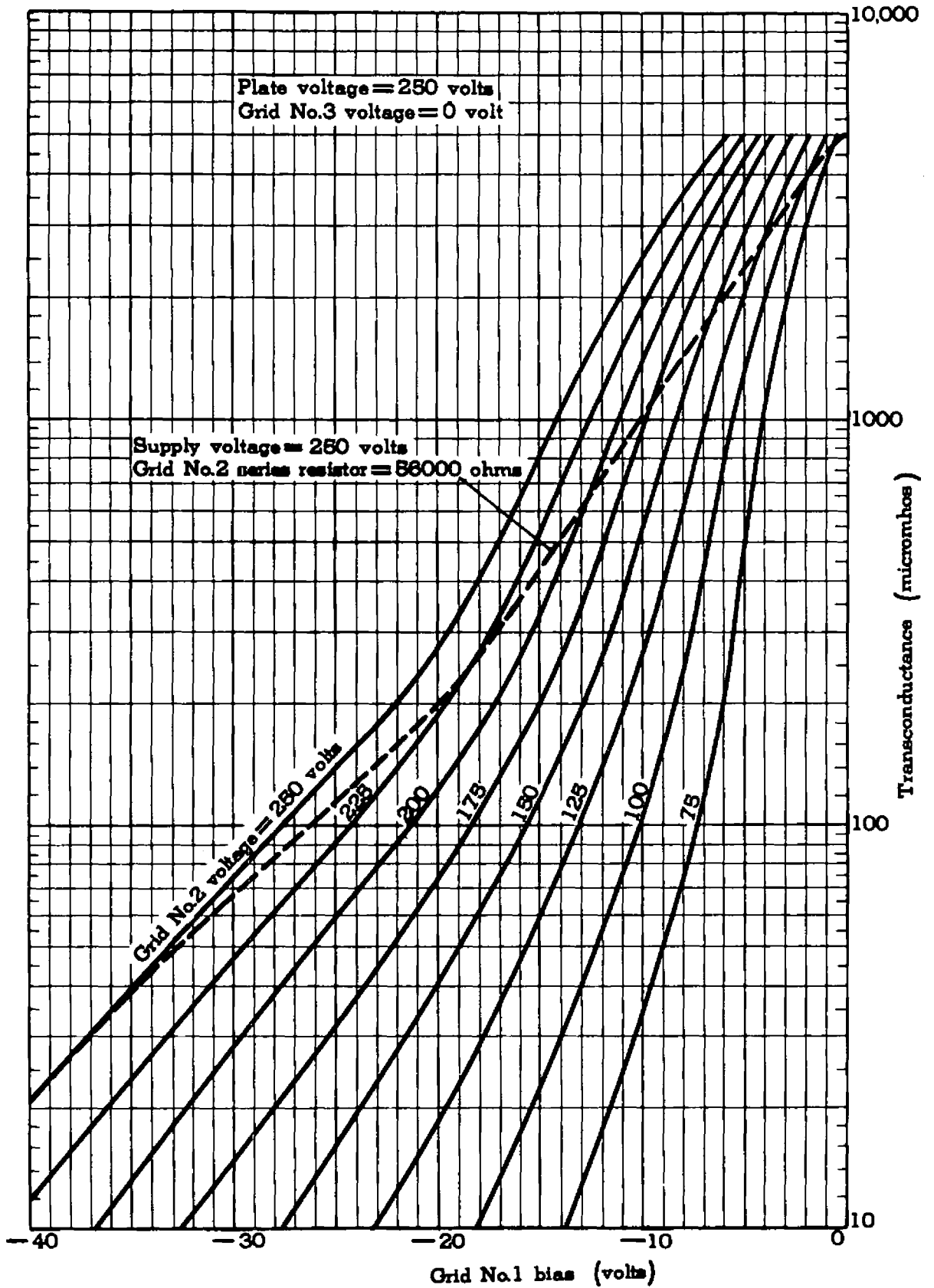
| | | | |
|--|--------|--------|-------------------------|
| Plate and supply voltage | 250 | 200 | 250 volts |
| Grid No.3 voltage | 0 | 0 | 0 volt |
| Grid No.2 series resistor | 56 000 | 30 000 | 62 000 ohms |
| Grid No.1 voltage | -2.0 | -1.5 | -1.0 [*])volt |
| Plate current | 9 | 11 | 9 mamps |
| Grid No.2 current | 2.7 | 3.3 | 2.7 mamps |
| Plate resistance | 1.0 | 0.6 | 0.9 megohm |
| Transconductance | 3800 | 4500 | 4500 μ mhos |
| Transconductance at grid No.1 voltage = -20 volts | 200 | 120 | 200 μ mhos |

^{*}) In this case grid current may occur. If this is not permissible, the negative grid bias should be increased to a value of 1.5 volts at least

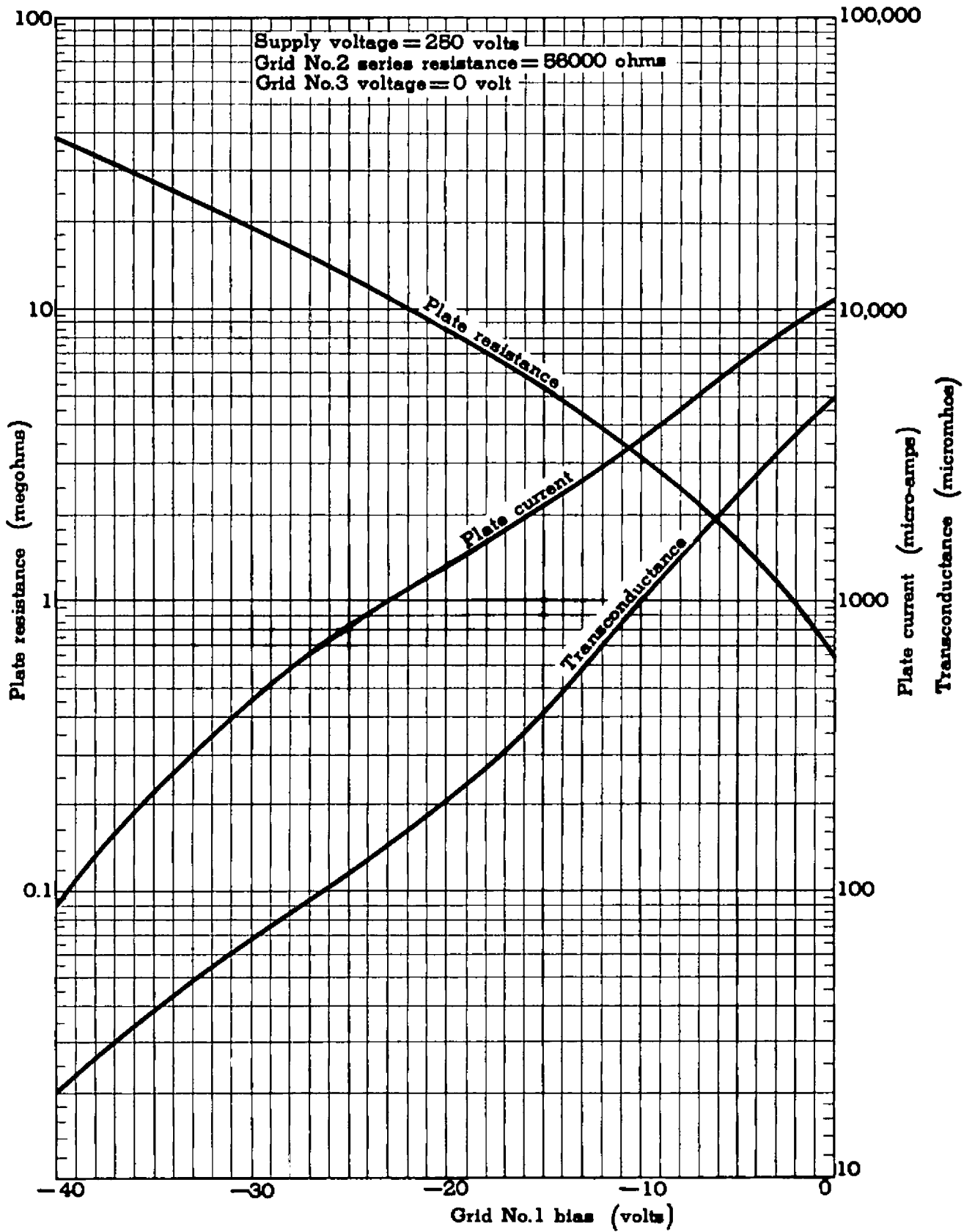
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