

# 12AD5

## REMOTE CUT-OFF R.F. PENTODE

### MECHANICAL DATA

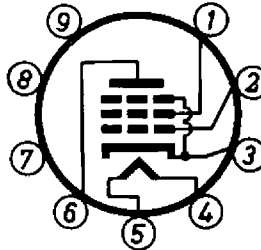
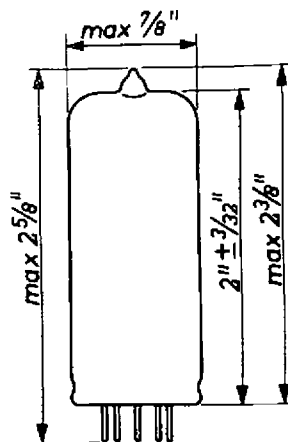
|                          |                     |
|--------------------------|---------------------|
| Cathode                  | Coated unipotential |
| Base                     | E9-1                |
| Bulb                     | T6 $\frac{1}{2}$    |
| RETMA basing designation | <del>9CA</del> 9AZ  |
| Mounting position        | any                 |

### TUBE OUTLINE

### BOTTOM VIEW OF BASE

### BASE PIN No.

### ELEMENT



|   |                                        |
|---|----------------------------------------|
| 1 | Grid No.2                              |
| 2 | Grid No.1                              |
| 3 | Cathode, grid No.3,<br>internal shield |
| 4 | Heater                                 |
| 5 | Heater                                 |
| 6 | Plate                                  |
| 7 | Internal connection                    |
| 8 | Internal connection                    |
| 9 | No connection                          |

### HEATER DATA

|                |            |
|----------------|------------|
| Heater voltage | 12.6 volts |
| Heater current | 0.1 amp    |

### DIRECT INTERELECTRODE CAPACITANCES

|                     |                          |
|---------------------|--------------------------|
| Output capacitance  | 8.1 $\mu\text{F}$        |
| Input capacitance   | 5.1 $\mu\text{F}$        |
| Grid No.1 to plate  | max. 0.002 $\mu\text{F}$ |
| Grid No.1 to heater | max. 0.05 $\mu\text{F}$  |

### MAXIMUM RATINGS (Design Center Values)

|                                                  |           |
|--------------------------------------------------|-----------|
| Plate voltage (without current)                  | 550 volts |
| Plate voltage                                    | 250 volts |
| Plate dissipation                                | 2.0 watts |
| Grid No.2 voltage (without current)              | 550 volts |
| Grid No.2 voltage (plate current less than 4 mA) | 250 volts |
| Grid No.2 voltage (plate current = 7.2 mA)       | 150 volts |

# 12AD5

## MAXIMUM RATINGS (Design Center Values) continued

|                                                      |             |
|------------------------------------------------------|-------------|
| Grid No.2 dissipation                                | 0.3 watts   |
| Cathode current                                      | 10 mamps    |
| External resistance between grid No.1<br>and cathode | 3 megohms   |
| External resistance between<br>heater and cathode    | 20,000 ohms |
| Voltage between heater and cathode                   | 150 volts   |

## OPERATING CHARACTERISTICS AS R.F. OR I.F. AMPLIFIER

### A. with sliding grid No.2 voltage

|                                                                   |          |          |            |
|-------------------------------------------------------------------|----------|----------|------------|
| Plate and supply voltage                                          | 100      | 170      | volts      |
| Grid No.2 series resistor                                         | 40,000   | 40,000   | ohms       |
| Cathode resistor                                                  | 325      | 325      | ohms       |
| Grid No.1 voltage                                                 | -1.4 -17 | -2.5 -28 | volts      |
| Plate current                                                     | 3.3 -    | 6.0 -    | mamps      |
| Grid No.2 current                                                 | 1.0 -    | 1.75 -   | mamps      |
| Transconductance                                                  | 1900 19  | 2200 22  | $\mu$ mhos |
| Plate resistance                                                  | 0.8 >10  | 1.0 >10  | megohms    |
| Amplification factor of<br>grid No.2 with respect<br>to grid No.1 | 18 -     | 18 -     |            |
| Equivalent noise<br>resistance                                    | 5500 -   | 6500 -   | ohms       |

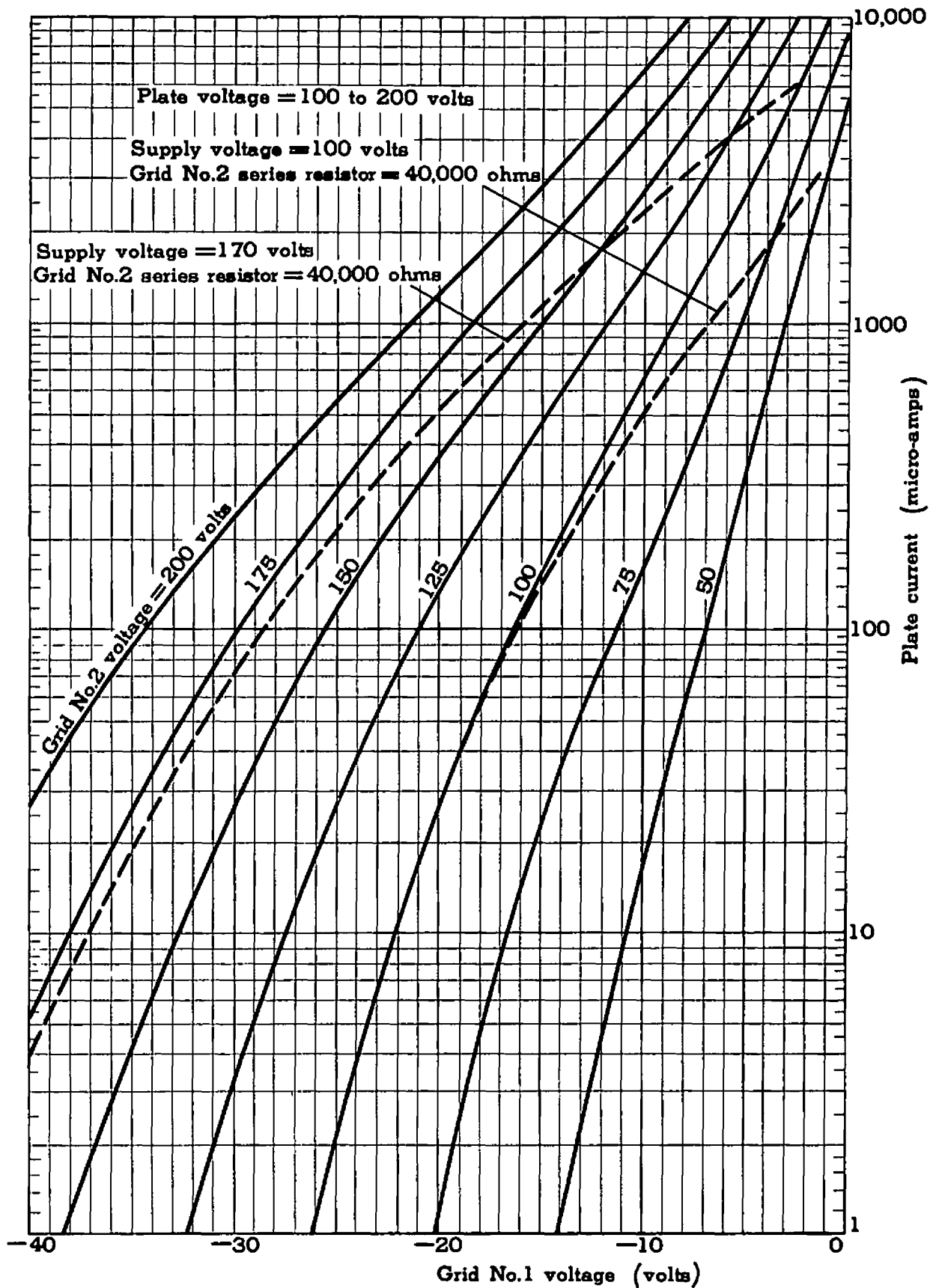
|                                                                   |         |            |
|-------------------------------------------------------------------|---------|------------|
| Plate and supply voltage                                          | 200     | volts      |
| Grid No.2 series resistor                                         | 40,000  | ohms       |
| Cathode resistor                                                  | 325     | ohms       |
| Grid No.1 voltage                                                 | -3 -34  | volts      |
| Plate current                                                     | 7.2 -   | mamps      |
| Grid No.2 current                                                 | 2.1 -   | mamps      |
| Transconductance                                                  | 2300 23 | $\mu$ mhos |
| Plate resistance                                                  | 1.0 >10 | megohms    |
| Amplification factor of<br>grid No.2 with respect<br>to grid No.1 | 18 -    |            |
| Equivalent noise resistance                                       | 7000 -  | ohms       |

OPERATING CHARACTERISTICS AS R.F. OR I.F. AMPLIFIER

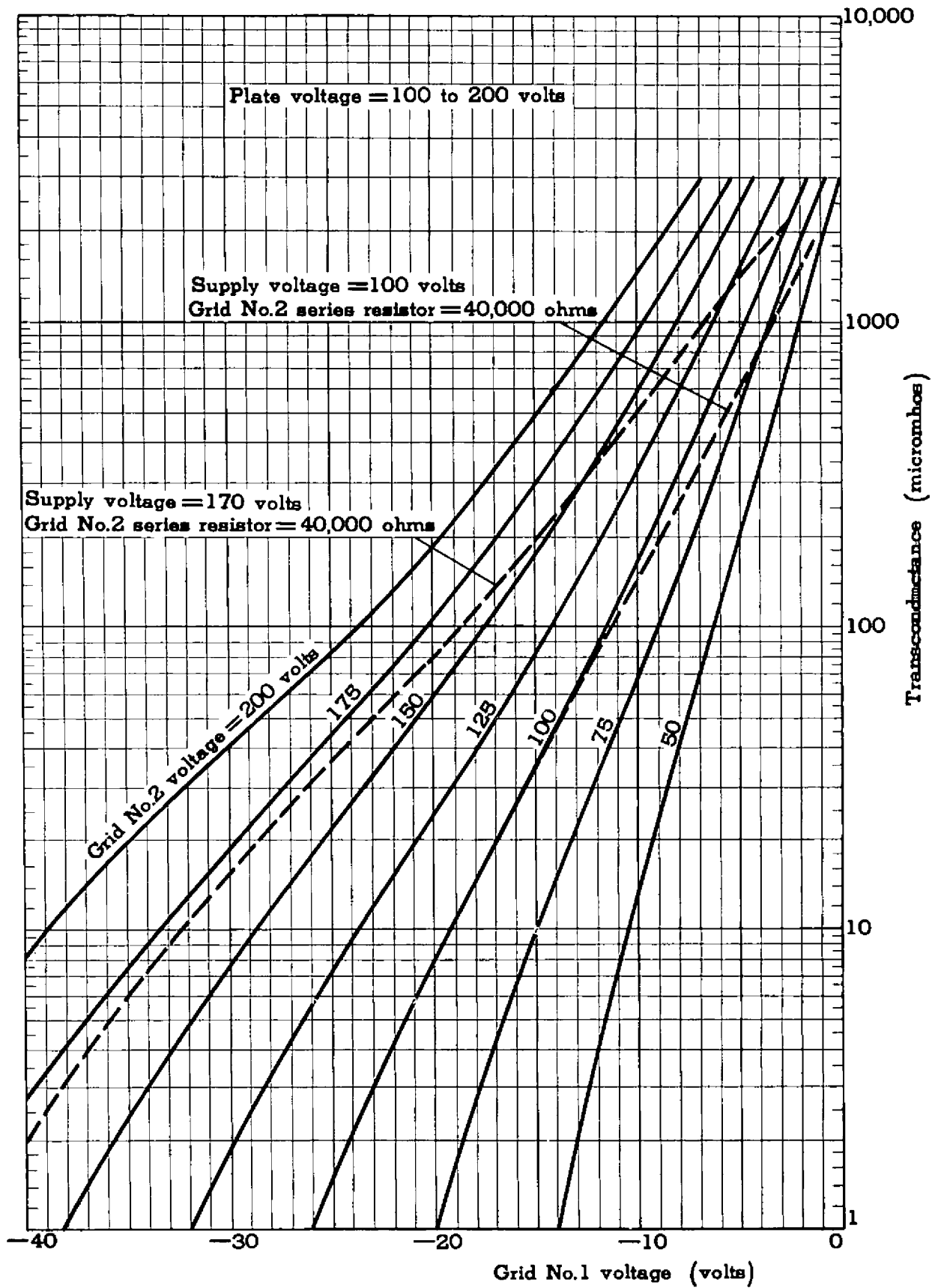
B. with fixed grid No.2 voltage

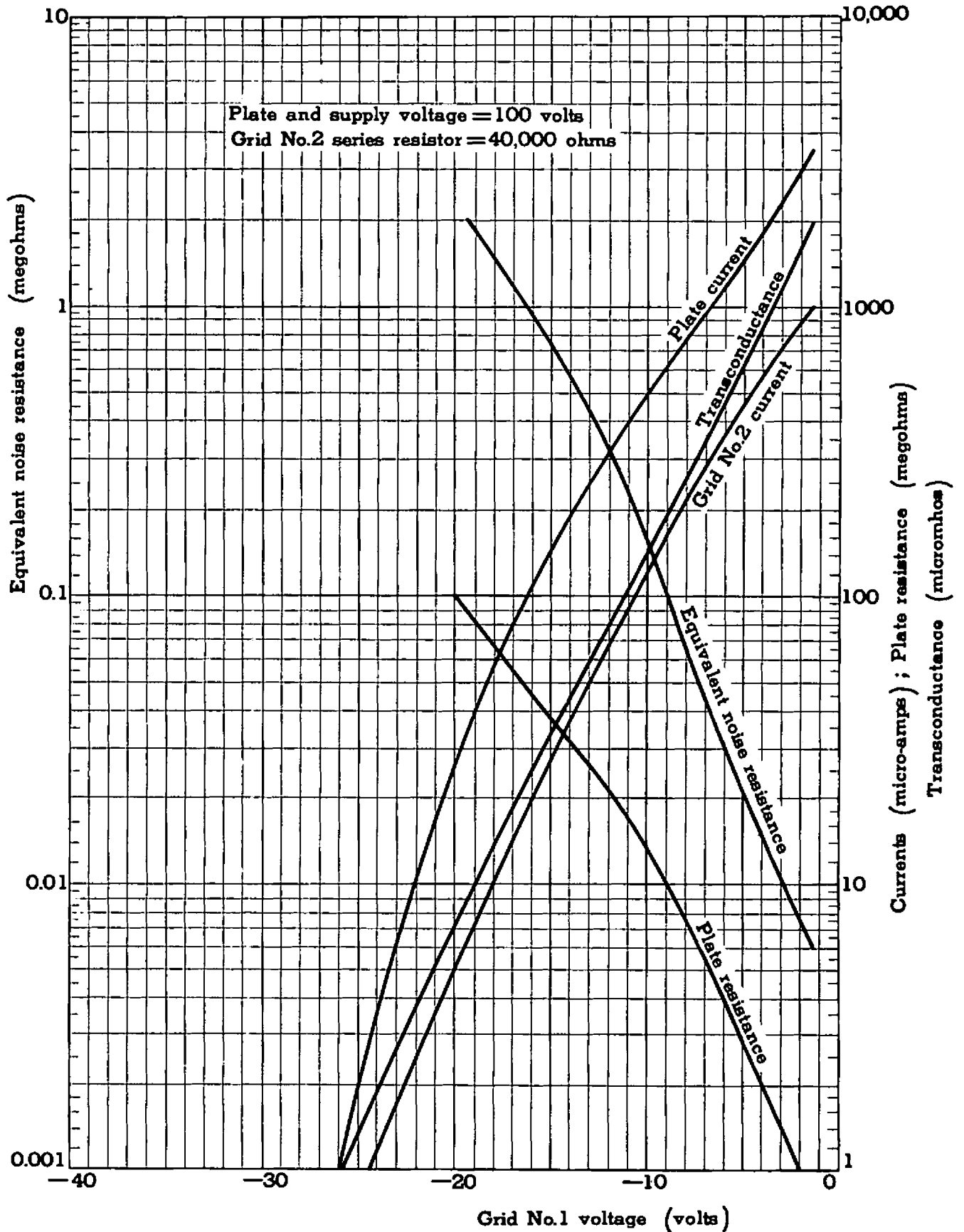
|                                                                |                 |               |
|----------------------------------------------------------------|-----------------|---------------|
| Plate voltage                                                  | 100             | volts         |
| Grid No.2 voltage                                              | 100             | volts         |
| Cathode resistor                                               | 325             | ohms          |
| Grid No.1 voltage                                              | -2.5      -16.5 | volts         |
| Plate current                                                  | 6.0             | - mamps       |
| Grid No.2 current                                              | 1.75            | - mamps       |
| Transconductance                                               | 2200            | 22 $\mu$ mhos |
| Plate resistance                                               | 0.6             | >10 megohms   |
| Amplification factor of grid No.2<br>with respect to grid No.1 | 18              | -             |
| Equivalent noise resistance                                    | 6500            | - ohms        |

# 12AD5

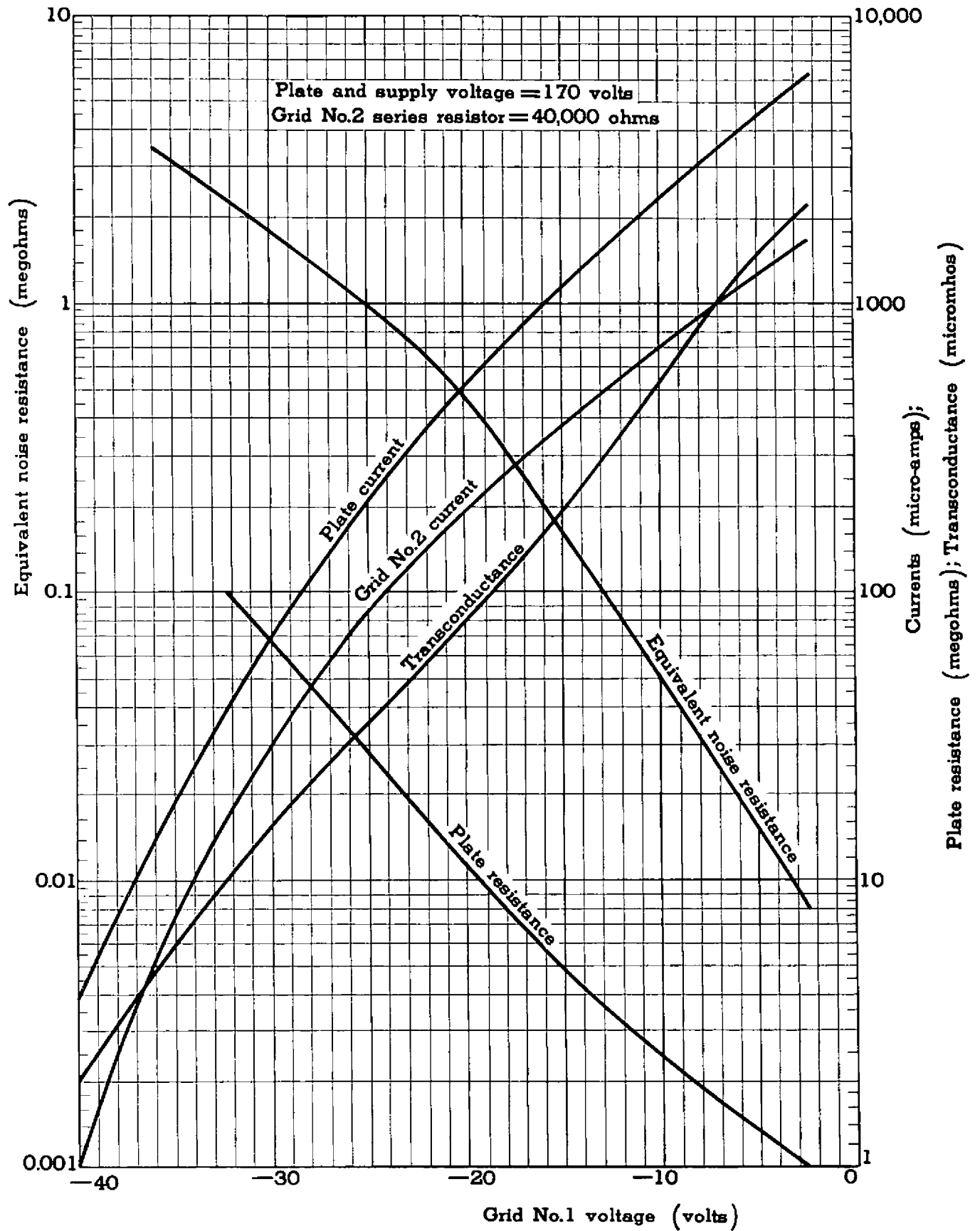


# 12AD5





# 12AD5



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