

Mullard

OCTODE FREQUENCY CHANGER

FC4

The FC4 is an octode frequency changer for use in A.C. mains superheterodyne receivers.

HEATER CHARACTERISTICS

Heater Voltage $V_f=4.0$ volts. Overall Length ... = 135 mm.
 Heater Current $I_f=0.65$ amp. Overall Diameter... = 47 mm.
 Heating Time—15 seconds

DIMENSIONS

Bulb Finish—Metallised

OPERATING CHARACTERISTICS

| | | | |
|--|--------|------------------|---------------|
| Maximum Anode Voltage | | $V_{a_{max}}$ | = 250 volts |
| Maximum Oscillator Anode Voltage | | $V_{g2_{max}}$ | = 90 volts |
| Maximum Screen Voltages | | $V_{g3+5_{max}}$ | = 90 volts |
| Normal Anode Voltage | | V_{a_w} | = 250 volts |
| Normal Oscillator Anode Voltage | | V_{g2_w} | = 90 volts |
| Normal Screen Voltage | | V_{g3+5_w} | = 70 volts |
| Anode Current ($V_{g4}=1.5$) | | I_{a_w} | = 1.6 mA |
| Oscillator Anode Current | | I_{g2_w} | = 2.0 mA |
| Screen Current | | I_{g3+5_w} | = 3.8 mA |
| Control Grid Voltage | | $-V_{g4_w}$ | = 1.5 volts |
| Conversion Conductance ($I_a=1.6$ mA) | | S_{c_w} | = 0.6 mA/V |
| Maximum Resistance in Grid Circuit | | $R_{g4_{max}}$ | = 2.5 megohms |
| Cathode Bias Resistor | | R_k | = 250 ohms |

CAPACITIES

| | | | |
|-------------------------------|--------|------------|-----------------|
| Anode-Control Grid | | C_{ag4} | = 0.06 μF |
| Input | | C_{g4} | = 9.0 μF |
| Output | | C_a | = 12.5 μF |
| Oscillator Grid | | C_{g1} | = 9.4 μF |
| Oscillator Anode | | C_{g2} | = 6.1 μF |
| Oscillator Grid-Control Grid | | C_{g1g4} | = <0.35 μF |
| Oscillator Anode-Control Grid | | C_{g2g4} | = <0.25 μF |

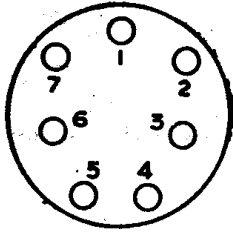
GRID CURRENT

At: $V_a=200$, $V_{g2, 3+5}=70$, V_{het} 12 Peak, Grid Current (G_4) reaches a value of 1.0 μA between the grid voltage range of -0.1 to -0.75 .

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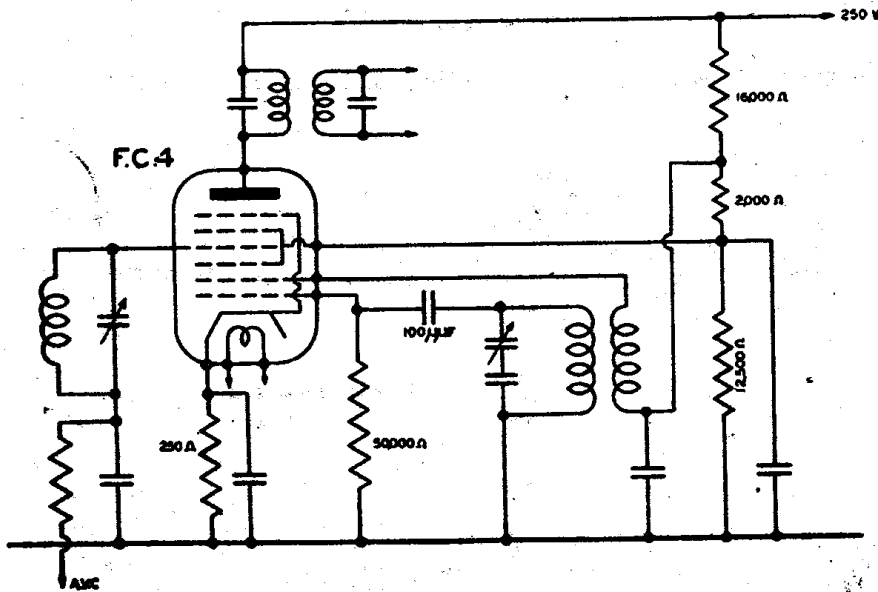
CONNECTIONS



Viewed from free end of pins.

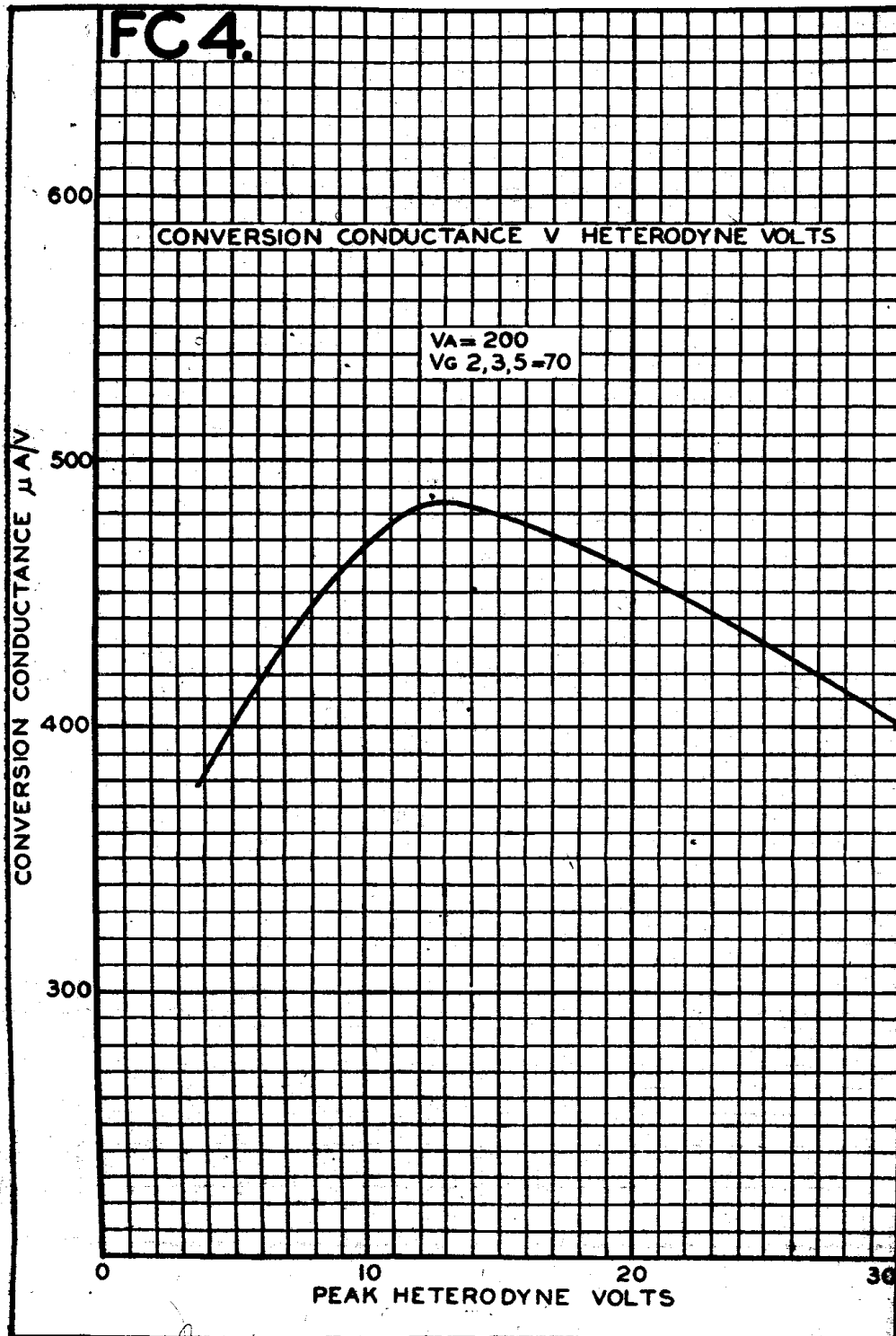
- Pin No. 1 Oscillator Anode (G₂)
 - " 2 Oscillator Grid (G₁)
 - " 3 Screen Grids (G₃+5)
 - " 4 Heater
 - " 5 Heater
 - " 6 Cathode, Metallising and
 Suppressor Grid (G₆)
 - " 7 Anode
- Top Cap—Control Grid (G₄)

CIRCUIT DIAGRAM



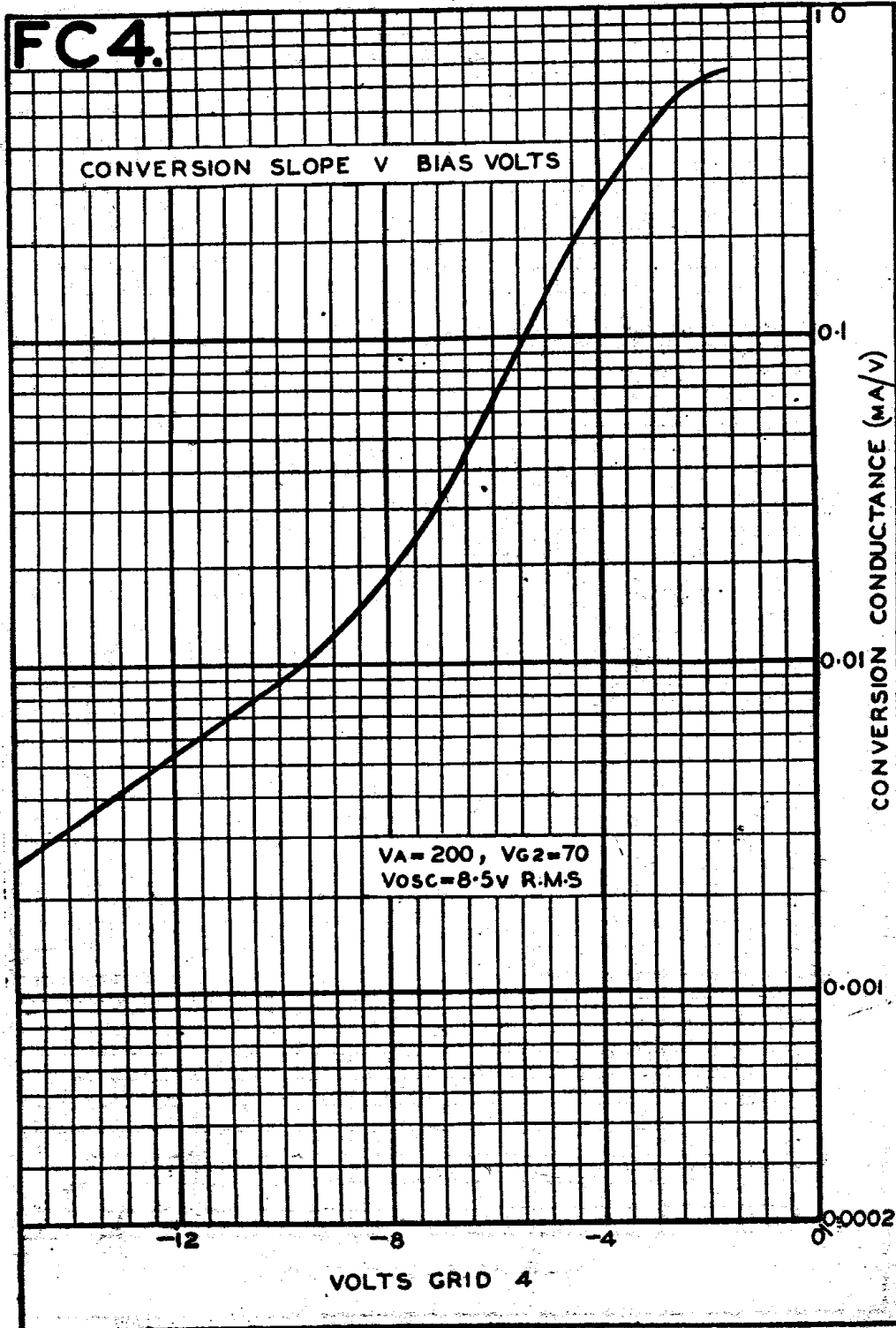
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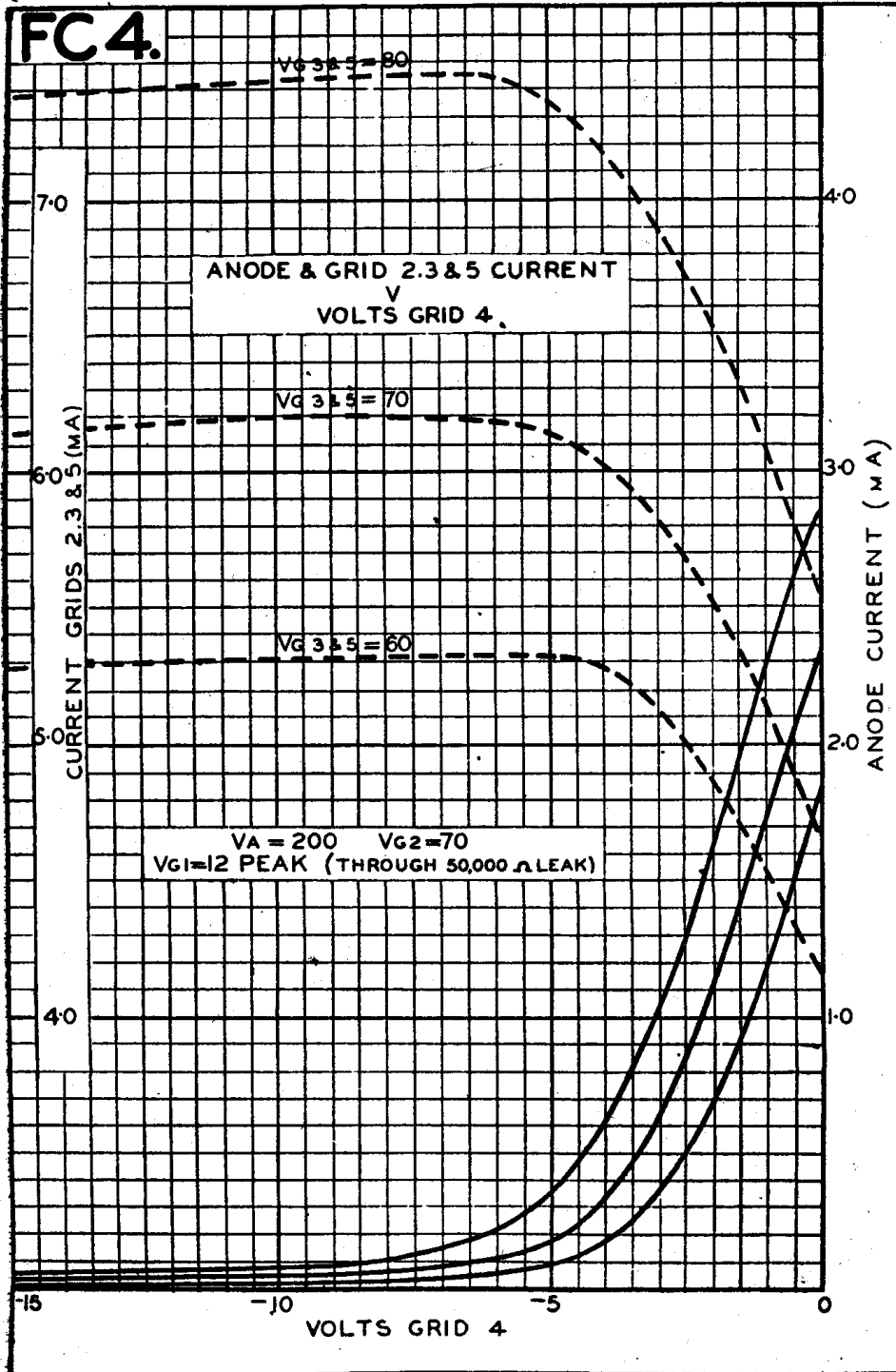
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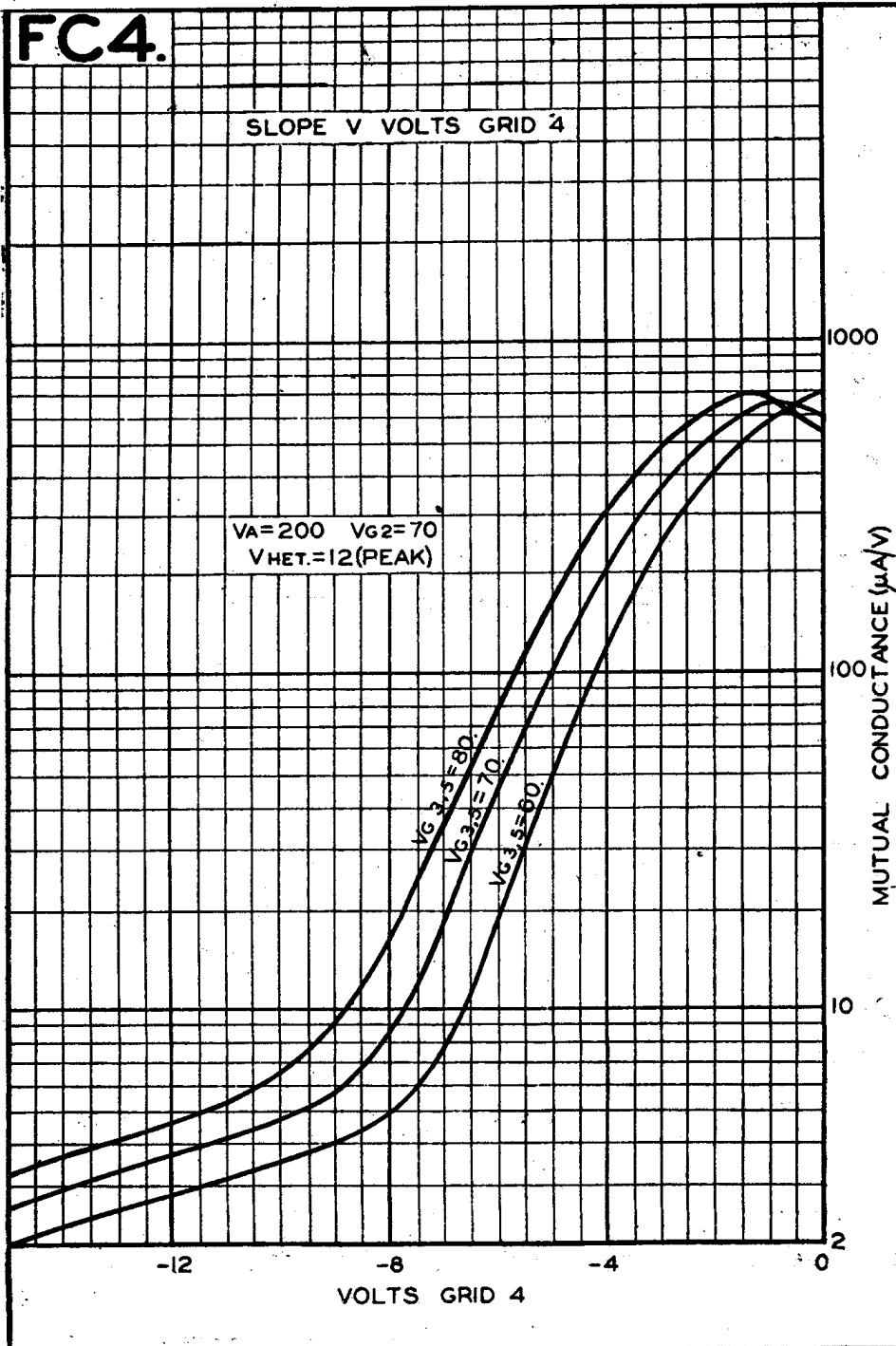
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