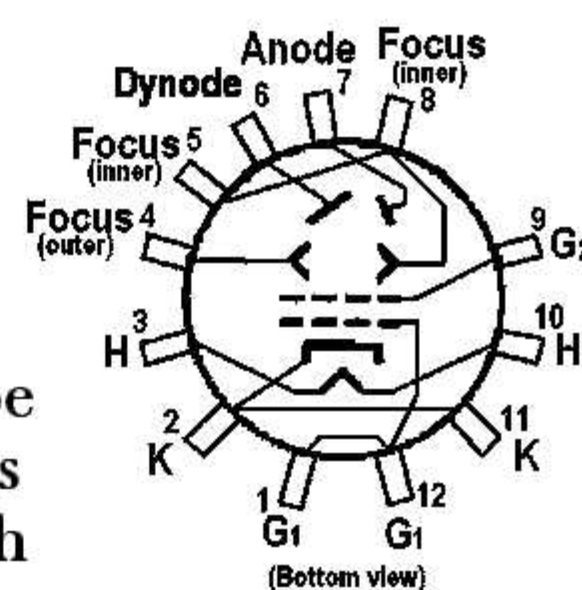




# RCA-1630

## U-H-F ORBITAL-BEAM HEXODE

The RCA-1630(A-5588) is a Acorn type orbital-beam hexode well suited for use as a detector or r-f amplifier in ultra high frequencies receivers. The RCA-1630 is 6.3-volt heater-cathode types, designed for use by engineers and experimenters particularly at the u-h-f RADAR.



### CHARACTERISTICS

(NOTE: Typical operating conditions for Developmental Multiplier Tube)

|                                    |         |                             |
|------------------------------------|---------|-----------------------------|
| Heater voltage                     | 6.3     | volts                       |
| Heater current                     | 0.3     | ampere                      |
| Plate (output anode) voltage       | 370     | volts                       |
| Secondary-emitter voltage          | 240     | volts                       |
| Outer focusing-electrode voltage   | 0       | volts                       |
| Inner focusing-electrode voltage   | 300     | volts                       |
| Grd No. 2 voltage                  | 45      | volts                       |
| Gnd No. 1 voltage                  | -1      | volt                        |
| Plate current                      | 12      | milliamperes                |
| Secondary-emitter current          | 9.5     | milliamperes                |
| Cathode current                    | 3.5     | milliamperes                |
| Grid N o. 1-plate transconductance | 15, 000 | micromhos                   |
| Input capacitance                  | 6.5     | $\mu\text{f}$               |
| Output capacitance                 | 3.5     | $\mu\text{f}$               |
| Figure of merit                    | 3100    | micromhos per $\mu\text{f}$ |

### INSTALLATION AND APPLICATION

For INSTALLATION, reference to type 955; for APPLICATION, refer to VT-128.

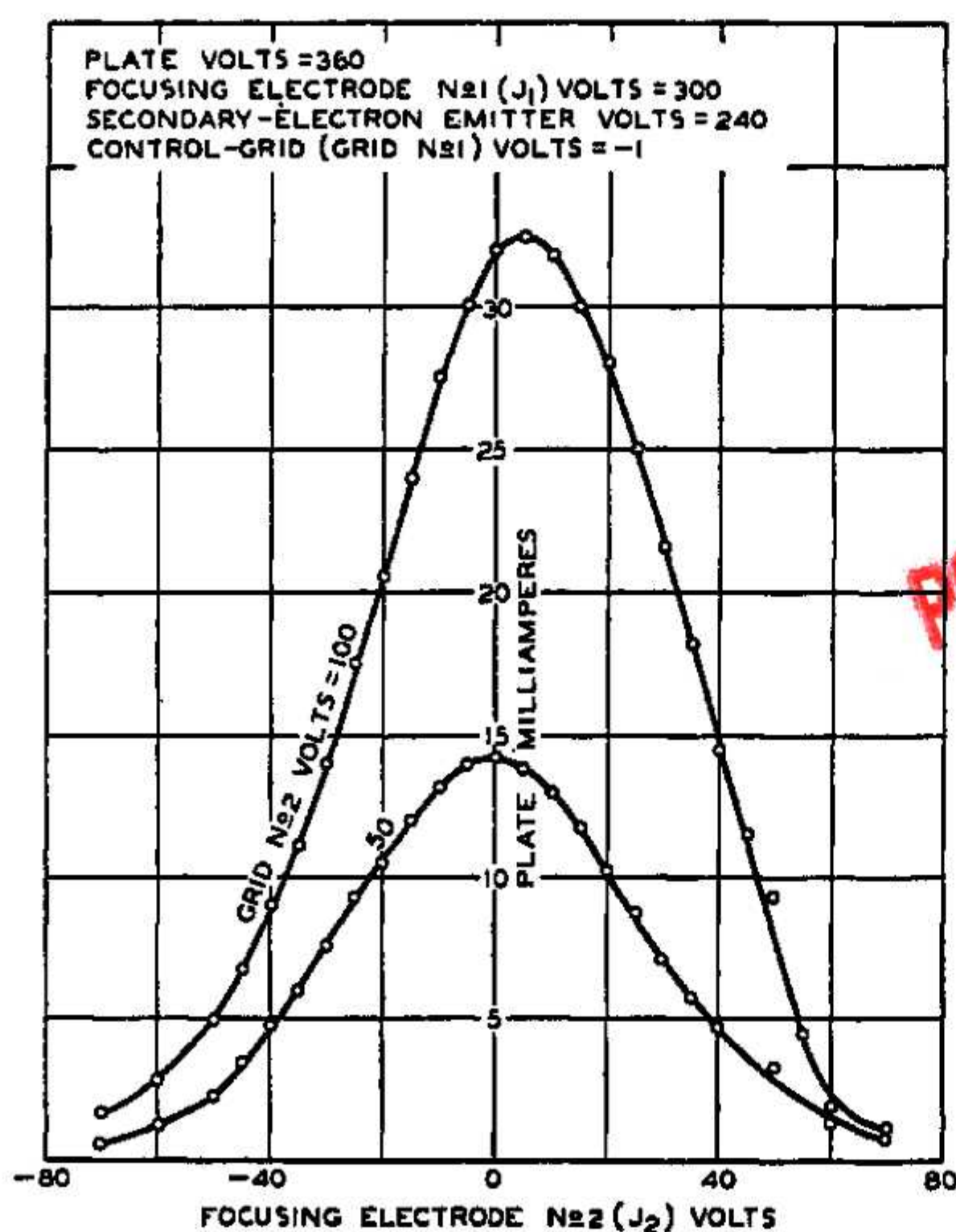


Fig. 3—Volume-control characteristic provided by deflection of the electron beam.

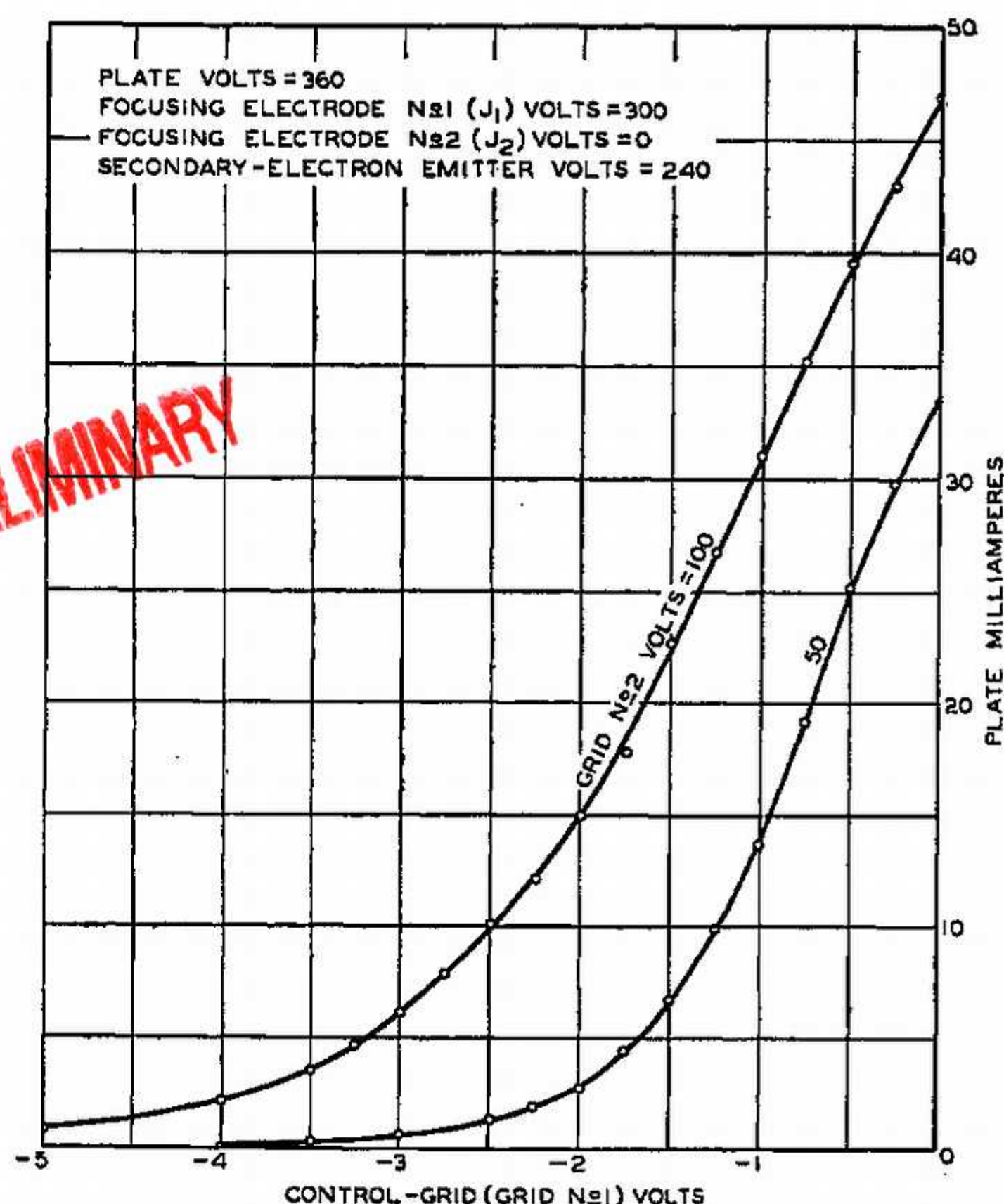


Fig. 4—Transfer characteristics of orbital-beam multiplier.

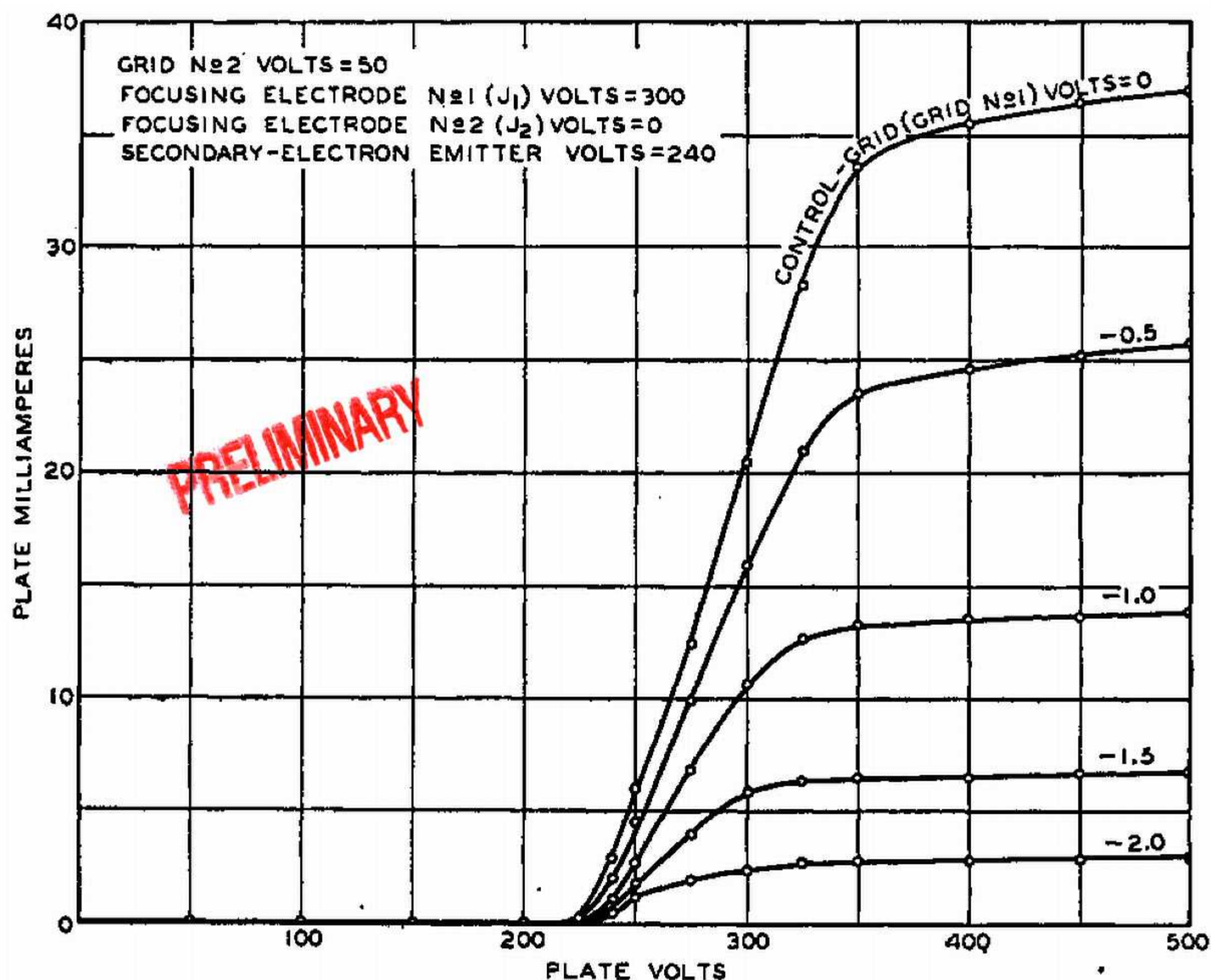


Fig. 5—Plate characteristics of orbital-beam multiplier.

- Source: 1) "The Orbital-Beam Secondary-Electron Multiplier for Ultra-High-Frequency Amplification" Wagner, H.M.; Ferris, W.R.; ([http://ieeexplore.ieee.org/xpl/freeabs\\_all.jsp?arnumber=1694186](http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=1694186))  
 Proceeding of Institute of Radio Engineers, Volume: 29, Issue: 11 (1941), Page(s): 598-602  
 2) "1630 /VT128 orbital-beam hexode" Virtual Valve Museum, (<http://www.tubecollector.org/1630.htm>)  
 3) "VT-128" Radio Museum, ([http://www.radiomuseum.org/tubes/tube\\_vt128.html](http://www.radiomuseum.org/tubes/tube_vt128.html))  
 4) "真空管[エーコン管]物語" JAZOP, JA1KGW/青山素太郎さんのhp 真空管頼末記  
 (<http://homepage2.nifty.com/kawoyama/tubestoryacorn.html>)