

## R.F. POWER TRIODE

# TYS5-2000

R.F. power triode in silica envelope, rated for a continuous anode dissipation of 2.0kW. Primarily intended as a self-excited oscillator in r.f. heating equipment, but also suitable for use as an r.f. amplifier in transmitting or industrial equipment.

This data should be read in conjunction with GENERAL OPERATIONAL RECOMMENDATIONS – TRANSMITTING VALVES which precede this section of the handbook.

### FILAMENT

Thoriated tungsten, suitable for a.c. or d.c. operation.

|       |      |   |
|-------|------|---|
| $V_f$ | 14.5 | V |
| $I_f$ | 26   | A |

### MOUNTING POSITION

Vertical, filament leads downwards

### CAPACITANCES

|           |     |    |
|-----------|-----|----|
| $C_{a-g}$ | 35  | pF |
| $C_{a-f}$ | 4.0 | pF |
| $C_{g-f}$ | 20  | pF |

### CHARACTERISTICS (measured at $V_a = 5.0kV$ , $I_a = 500mA$ )

|       |     |            |
|-------|-----|------------|
| $g_m$ | 10  | mA/V       |
| $\mu$ | 30  |            |
| $r_a$ | 3.0 | k $\Omega$ |

### LIMITING VALUES (absolute ratings)

|                                      |     |      |
|--------------------------------------|-----|------|
| $V_a$ max.                           | 5.0 | kV   |
| $p_a$ max. (continuous)              | 2.0 | kW   |
| * $p_a$ max. (intermittent overload) | 2.5 | kW   |
| $I_g$ max.                           | 250 | mA   |
| $I_k$ max.                           | 2.0 | A    |
| Max. frequency at above ratings      | 20  | Mc/s |
| Max. operating frequency             | 30  | Mc/s |

\*The intermittent overload anode dissipation must in no circumstances exceed a period of 2 min. and the average anode dissipation over the duty cycle must not exceed the continuous rating.

### OPERATING CONDITIONS AS CLASS "C" SELF-EXCITED OSCILLATOR AT 3Mc/s

|                  |      |    |
|------------------|------|----|
| $V_a$            | 5.0  | kV |
| $V_g$            | -475 | V  |
| $I_a$            | 1.65 | A  |
| $I_g$            | 240  | mA |
| $V_{drive-peak}$ | 975  | V  |
| $P_{out}$        | 6.2  | kW |
| $\eta$           | 75   | %  |

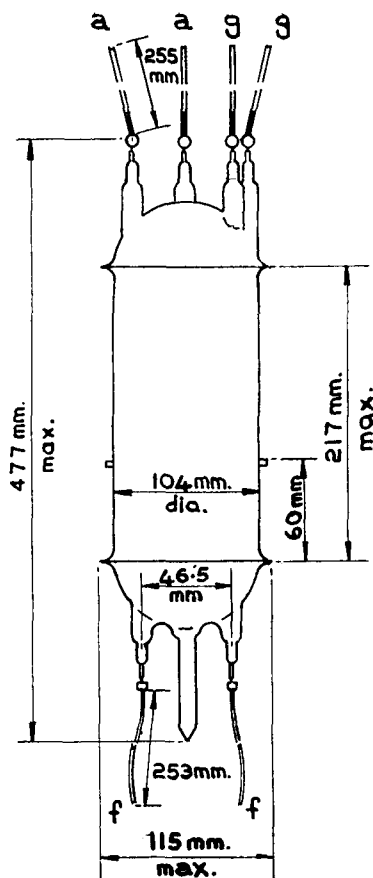
### WEIGHT

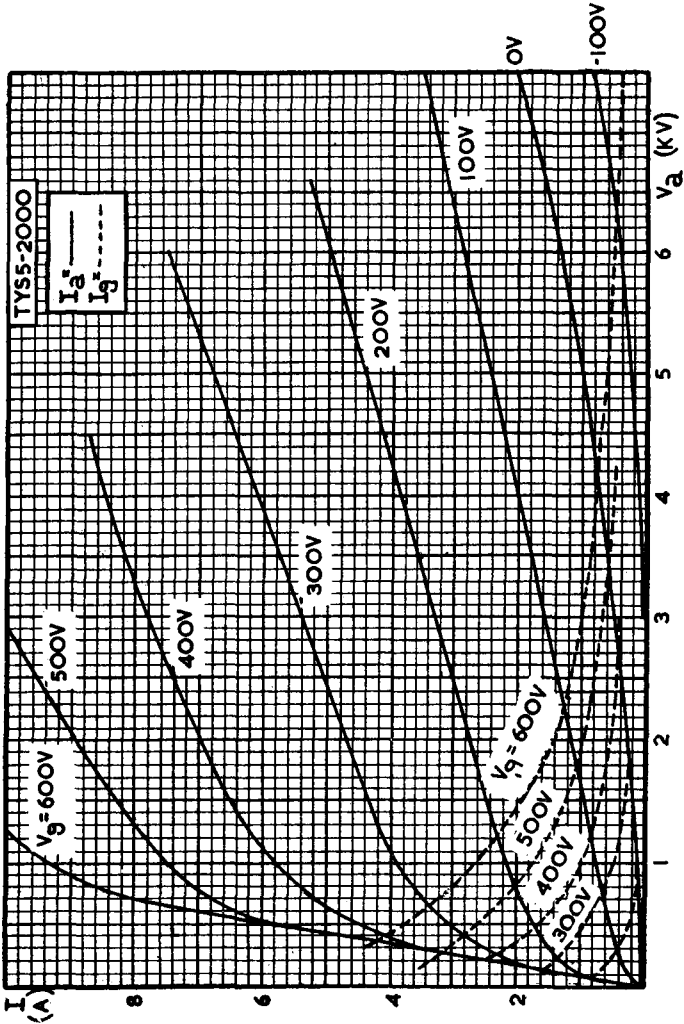
Valve only

|      |      |
|------|------|
| 2 lb | 4 oz |
| 1.02 | kg   |

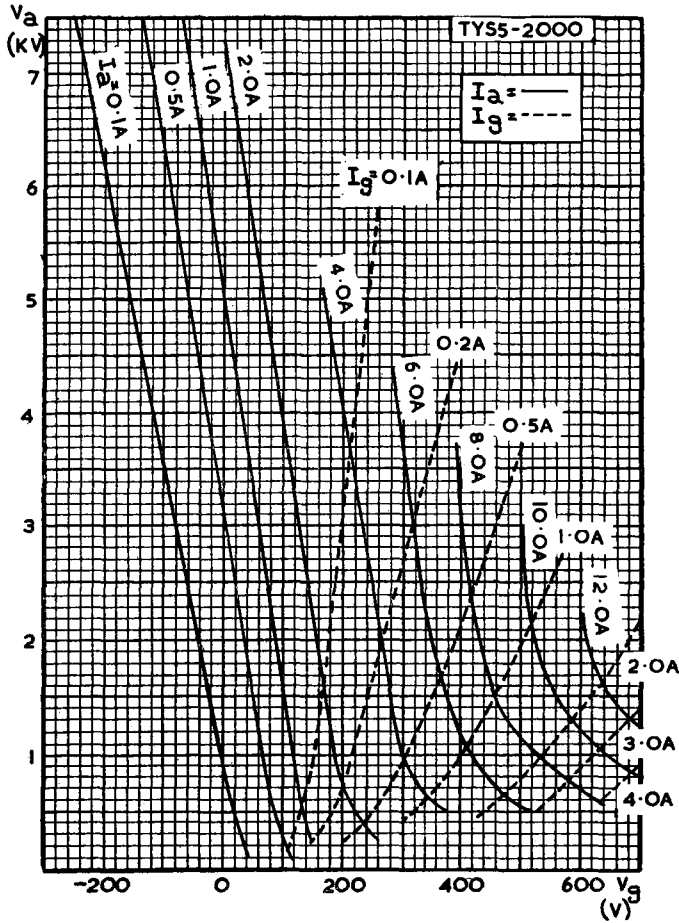
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ANODE AND GRID CURRENTS PLOTTED AGAINST ANODE VOLTAGE  
WITH CONTROL-GRID VOLTAGE AS PARAMETER



CONSTANT CURRENT CURVES