

GENERAL

The 30F5 is intended for use as a straight television pentode and is suitable for AC/DC series operation.

RATING

| | | |
|--|-----------------|-----------------|
| Heater Current (amps) | I_h | 0.3 |
| Heater Voltage (volts) | V_h | 7.3 |
| Maximum Anode Voltage (volts) | $V_a(\max)$ | 250 |
| Maximum Screen Voltage (volts) | $V_{g1}(\max)$ | 250 |
| Maximum Anode Dissipation (watts) | $P_a(\max)$ | 3 $\frac{1}{2}$ |
| Maximum Screen Dissipation (watts) | $P_{g1}(\max)$ | 1 $\frac{1}{2}$ |
| Maximum Heater to Cathode Voltage (volts) (r.m.s.) | $V_{h-k}(\max)$ | 200 \ddagger |
| Maximum Resistance Control Grid to Cathode (k Ω) | $R_{g-k}(\max)$ | 600 \ddagger |
| Mutual Conductance (mA/V) | g_m | 8.8* |
| Inner Amplification Factor | $\mu_{g1,g2}$ | 55* |

* At $V_a = V_{g1} = 170$ volts. $V_{g2} = -1.9$

§ With a grid cathode resistance not exceeding 10,000 ohms

† From Cathode to higher potential heater pin

‡ With maximum anode dissipation 2 watts, maximum screen dissipation 0.5 watts and assuming a common anode and screen decoupling resistance of not less than 2,200 ohms $\pm 10\%$

INTER-ELECTRODE CAPACITANCES (pF)

| | | | |
|-------------|------------|--------|--------|
| | | ‡ | § |
| Grid/Earth | C_{in} | 9.0 | 10.3 |
| Anode/Earth | C_{out} | 4.4 | 5.7 |
| Anode/Grid | C_{g1-a} | 0.0073 | 0.0077 |

"Earth" denotes the remaining earthy potential electrodes, shields and heater joined to cathode.

‡ Inter-electrode capacitances with holder capacitance balanced out.

§ Total inter-electrode capacity including B9A ceramic holder without skirt or radial shield (Carr Fastener holder type 77,076).

DIMENSIONS

| | |
|---------------------------------|------|
| Maximum Overall Length (mm) | 67.5 |
| Maximum Diameter (mm) | 22.2 |
| Maximum Seated Height (mm) | 60.5 |
| Approximate Nett Weight (ozs) | 1 |
| Approximate Packed Weight (ozs) | 1 |

Handwritten notes:
67.5
22.2
60.5
1
1
2 15/16
7/8
2 3/8

MOUNTING POSITION—Unrestricted.

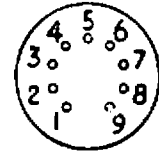
TYPICAL OPERATION

| | | |
|---|---------------|---------|
| Anode Voltage (volts) | V_a | 170 |
| Screen Voltage (volts) | V_{g1} | 170 |
| Grid Bias Voltage (volts) | V_{g2} | -1.9 |
| Anode Current (mA) | I_a | 10 |
| Screen Current (mA) | I_{g1} | 2.6 |
| Mutual Conductance (mA/V) | g_m | 8.8 |
| Input Loss at 45 Mc/s (ohms) | $r_{g1-k}(w)$ | 16,000* |
| Equivalent grid noise resistance (ohms) | R_{eq} | 750 |

* With grid circuit ONLY returned to pin 3

BULB—Clear T 6 1/2

BASE—Noval (B9A) E 9-1



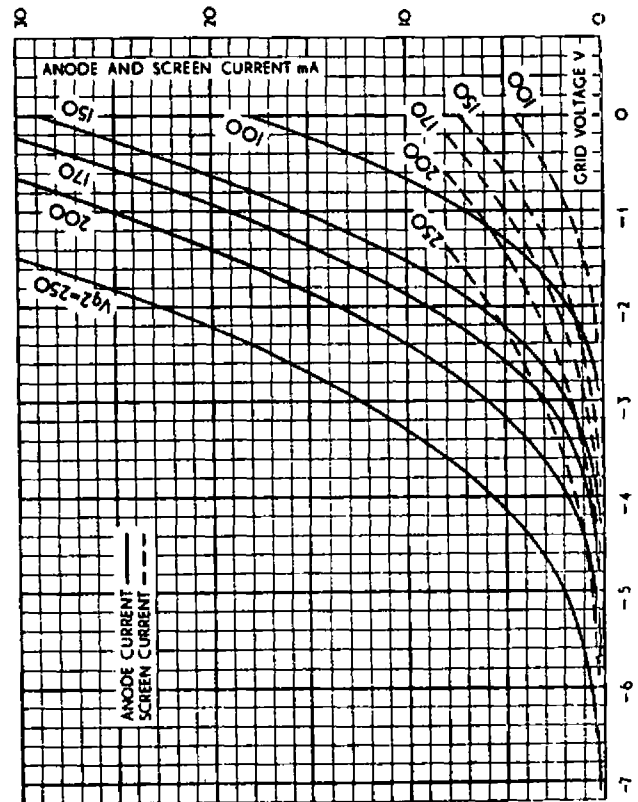
Viewed from Free End of Pins

CONNECTIONS

9AQ

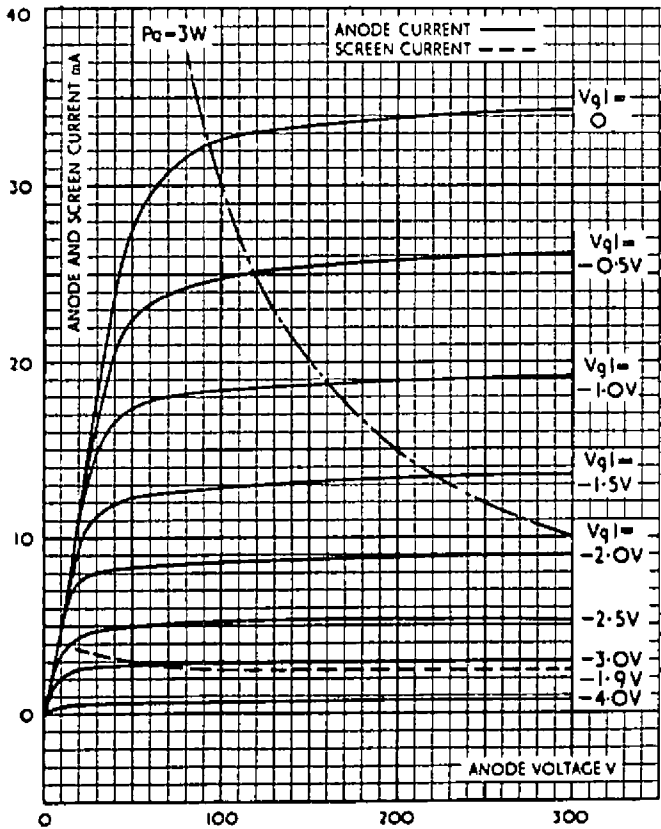
| | | |
|-------|-----------------|----|
| Pin 1 | Cathode | k |
| Pin 2 | Control Grid | g1 |
| Pin 3 | Cathode | k |
| Pin 4 | Heater | h |
| Pin 5 | Heater | h |
| Pin 6 | Shield | s |
| Pin 7 | Anode | a |
| Pin 8 | Screen Grid | g2 |
| Pin 9 | Suppressor Grid | g3 |

AVERAGE CHARACTERISTIC CURVES: $I_a, I_{g2}/V_g$
 $V_a = 250V.$

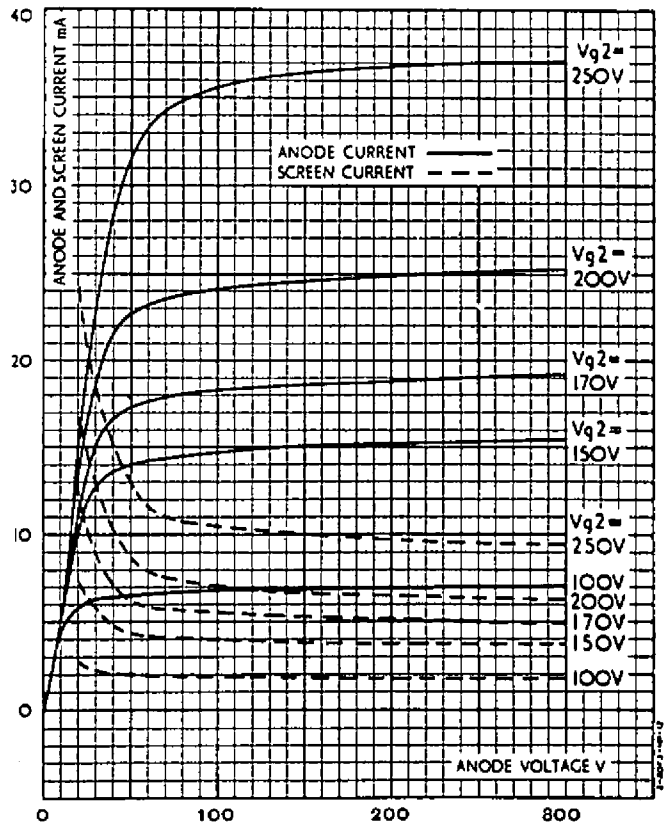


TYPE 7ED7

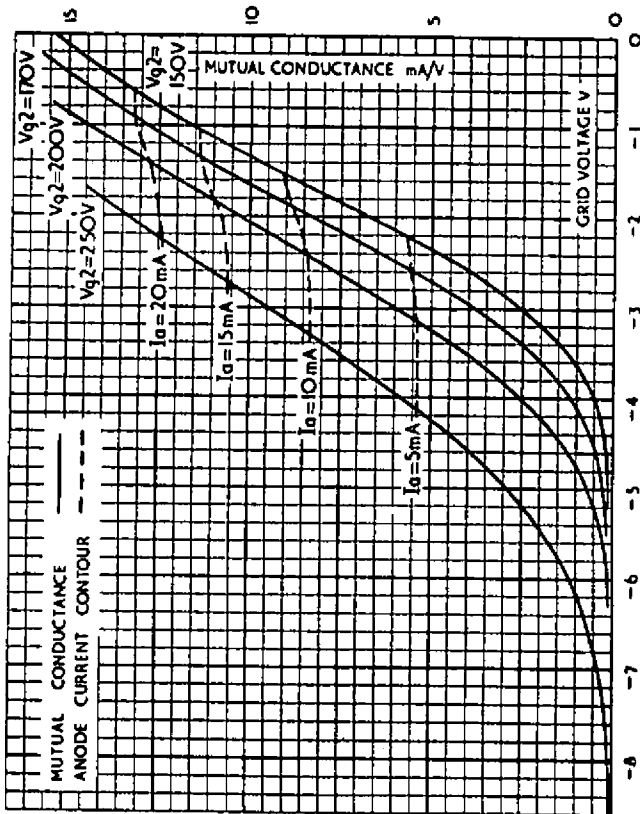
AVERAGE CHARACTERISTIC CURVES: $I_a, I_{g2}/V_a$
 $V_{g2} = 170V$.



AVERAGE CHARACTERISTIC CURVES: $I_a, I_{g2}/V_a$
 $V_{g1} = -1.0V$.



AVERAGE CHARACTERISTIC CURVES: g_m/V_g
 $V_a = 250V$.



AVERAGE CHARACTERISTIC CURVES: $I_a, I_{g2}, I_{g1}/V_{g1}$
 Used as a limiter in a synchronising separator circuit.

