

# MINIATURE DOUBLE TRIODE

# DCC90

*R.F. double triode primarily intended  
for use in battery-operated  
portable transmitters.*

## FILAMENT

This valve is suitable for d.c. operation only.

*Series.*  $V_f$  applied across two sections in series between pins 1 and 7.  $V_g$  referred to pin 1.

*Parallel.*  $V_f$  applied across the two filament sections in parallel between pin 4 and pins 1 and 7 connected together.

$V_g$  referred to pins 1 and 7 connected together.

|       | Series | Parallel |   |
|-------|--------|----------|---|
| $V_f$ | 2.8    | 1.4      | V |
| $I_f$ | 0.11   | 0.22     | A |

For series filament operation a shunting resistor must be connected across one filament section, between pins 1 and 4 to by-pass the excess cathode current in this section. The value of the resistor should be such that the voltage across the shunted section equals that across the other section.

## MOUNTING POSITION

Any

## CAPACITANCES (measured without external shield)

|                          |      |                  |
|--------------------------|------|------------------|
| $c_{a'-a''}$             | 0.32 | $\mu\mu\text{F}$ |
| $c_{g-f}$ (each section) | 0.9  | $\mu\mu\text{F}$ |
| $c_{a-f}$ (each section) | 1.0  | $\mu\mu\text{F}$ |
| $c_{a-g}$ (each section) | 3.2  | $\mu\mu\text{F}$ |

## CHARACTERISTICS (each section)

|       |      |            |
|-------|------|------------|
| $V_a$ | 90   | V          |
| $V_g$ | -2.5 | V          |
| $I_a$ | 3.7  | mA         |
| $\mu$ | 15   |            |
| $r_a$ | 8.3  | k $\Omega$ |
| $g_m$ | 1.8  | mA/V       |

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### OPERATING CONDITIONS AS PUSH PULL R.F. AMPLIFIER OR OSCILLATOR AT 40 Mc/s. (Intermittent operation)

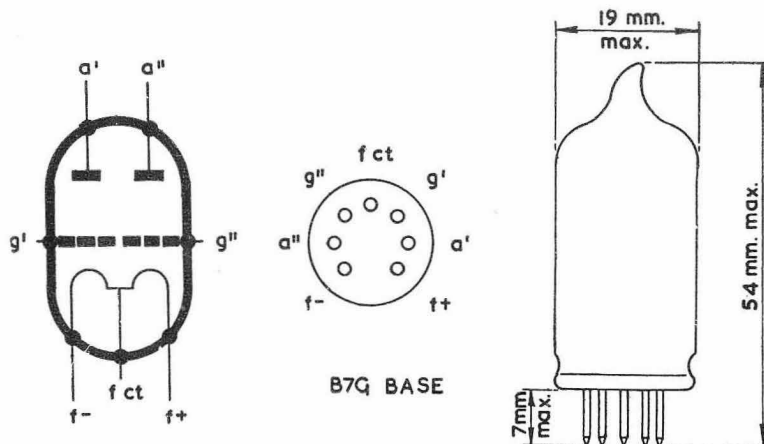
|                     |                |            |
|---------------------|----------------|------------|
| $V_a$               | 135            | V          |
| $*V_g$              | -20            | V          |
| $R_{g-f}$           | 4.0            | k $\Omega$ |
| $R_k$               | 570            | $\Omega$   |
| $V_{in(pk)}$        | $2 \times 45$  | mA         |
| $I_a$               | $2 \times 15$  | mA         |
| $I_g$ (approx.)     | $2 \times 2.5$ | mV         |
| $p_g$ (approx.)     | 200            | kW         |
| $P_{out}$ (approx.) | 2.0            | W          |

\* Obtained from fixed supply, or by means of cathode or grid resistor of valve shown.

### LIMITING VALUES (Intermittent operation)

|            |                |    |
|------------|----------------|----|
| $V_a$ max. | 135            | V  |
| $V_g$ max. | -30            | V  |
| $I_a$ max. | $2 \times 15$  | mA |
| $I_g$ max. | $2 \times 2.5$ | mA |
| $p_a$ max. | $2 \times 1.0$ | W  |

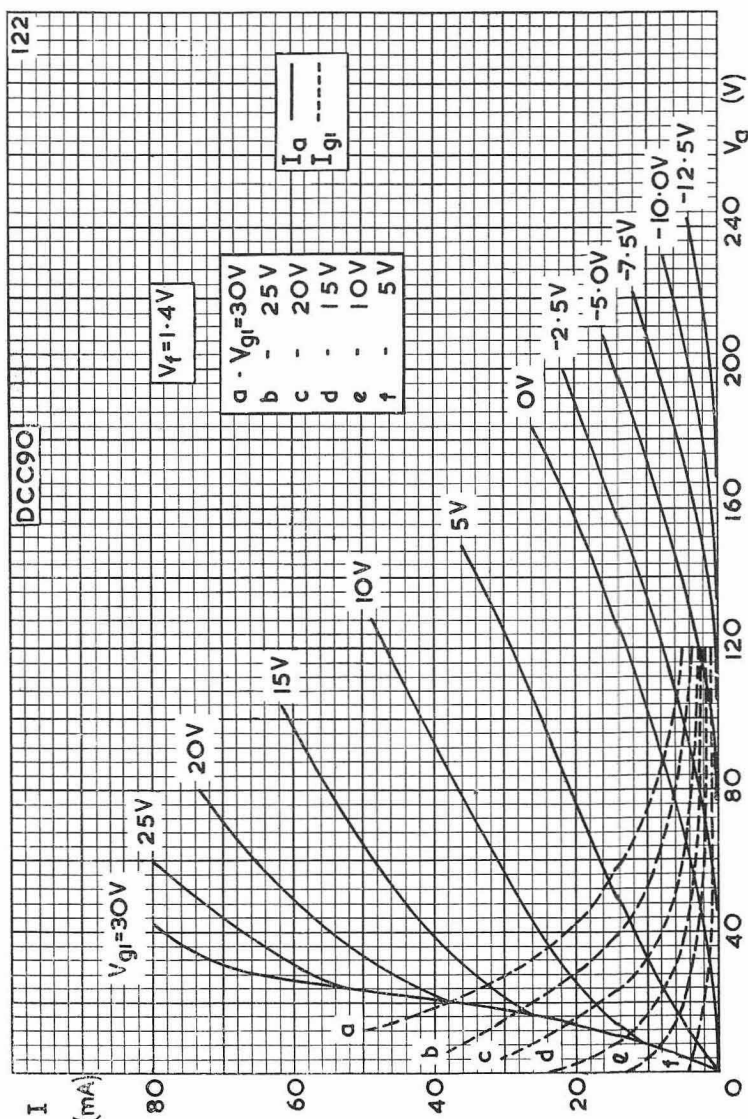
For continuous operation the above maximum current and power ratings must be reduced by 50%.



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ANODE CURRENT AND CONTROL-GRID CURRENT PLOTTED AGAINST  
ANODE VOLTAGE, WITH CONTROL-GRID VOLTAGE AS PARAMETER

