

—Standard Valves—

3C/150-A

VALVE TYPE 3C/150-A

HIGH FREQUENCY TRIODE.

SPECIFICATION.

Cathode.

Thoriated tungsten filament.
Constant voltage type.

Dimensions.

Maximum overall length $9\frac{15}{16}$ " (25.2 cm.)
Bulb diameter 2.83" (7.2 cm.)
Net weight 0.7 lbs. (320 gms.)

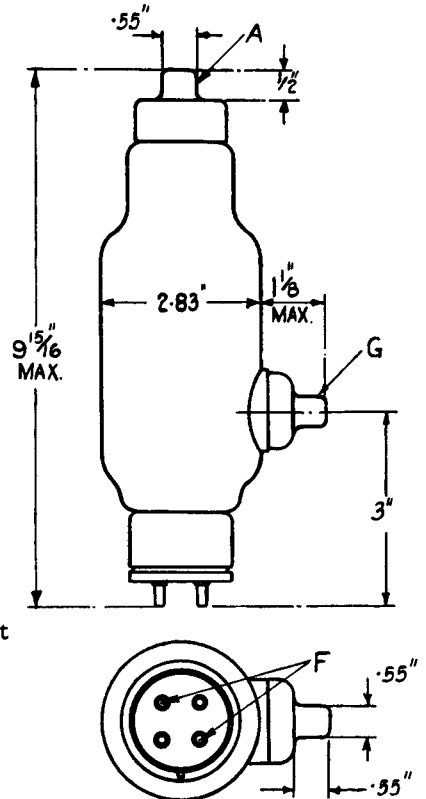
Base.

Large 4-pin bayonet.

Constants.

| | |
|-------------------------|------------------------|
| Filament voltage | 10 volts |
| Filament current | 3.4 amps. |
| *Impedance | 3,800 ohms. |
| *Amplification factor | 18 |
| *Mutual conductance | 4.75 mA. per volt |
| Grid-anode capacity | 7.3 $\mu\mu\text{F}$. |
| Grid-filament capacity | 8.6 $\mu\mu\text{F}$. |
| Anode-filament capacity | 1.1 $\mu\mu\text{F}$. |

* at $V_p = 1,000$ volts, $I_p = 150$ mA.



LIMITING CONDITIONS FOR SAFE OPERATION.

| | |
|---|-------------|
| Maximum direct anode voltage | 2,500 volts |
| Maximum anode dissipation | 150 watts |
| Maximum direct anode current | 200 mA. |
| Maximum RF grid current | 10 amps. |
| Maximum frequency for above ratings | 20 Mc. |
| Maximum anode voltage for frequency of 60 Mc. | 2,000 volts |

Tentative data

W.3C/150-A.1
March 1939

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TYPICAL OPERATING CONDITIONS.

| Class B Audio Frequency Amplifier and Modulator for Balanced 2-valve circuit | | | |
|---|--------|--------|-------------|
| Direct anode voltage | 2,000 | 2,500 | 2,500 volts |
| Grid bias | —100 | —130 | —130 volts |
| Load resistance, anode to anode | 11,200 | 16,000 | 16,000 ohms |
| Anode current per valve—zero signal | 30 | 30 | 30 mA. |
| max. signal | 190 | 160 | 180 mA. |
| Peak AF grid to grid voltage | 420 | 410 | 460 volts |
| Max. signal driving power (approx.) | 9 | 2.5 | 8 watts |
| Power output (approx.) | 500 | 500 | 600 watts |

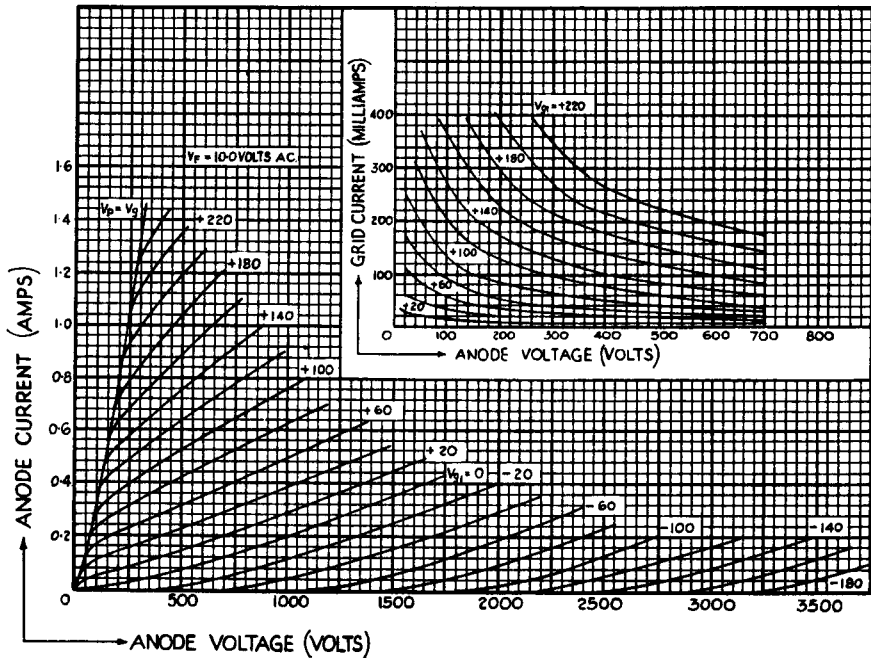
| Class B Telephony. RF. Power Amplifier | | |
|---|-------|-------------|
| Direct anode voltage | 2,000 | 2,500 volts |
| Grid bias | —110 | —140 volts |
| Peak RF grid voltage | 125 | 150 volts |
| Direct anode current | 110 | 90 mA. |
| Direct grid current (approx.) | 0.5 | 0 mA. |
| Anode dissipation | 140 | 145 watts |
| Approx. driving power at peak of modulation | 6 | 4 watts |
| Power output (approx.) | 80 | 80 watts |

| Class C Telephony—Subject to anode modulation | | |
|---|-------|-------------|
| Direct anode voltage | 1,750 | 2,000 volts |
| Grid bias—total | —300 | —350 volts |
| fixed | —75 | —100 volts |
| grid resistor | 7,500 | 12,500 ohms |
| Peak RF grid voltage | 475 | 500 volts |
| Direct anode current | 200 | 160 mA. |
| Anode input | 350 | 320 watts |
| Direct grid current (approx.) | 30 | 20 mA. |
| Anode dissipation | 80 | 70 watts |
| Driving power (approx.) | 14 | 9 watts |
| Power output (approx.) | 270 | 250 watts |
| Max. frequency limit for above operation | 30 | 30 Mc. |

—Standard Valves—

Class C Telegraphy—Unmodulated

| | | |
|-------------------------------|-------|-------------|
| Direct anode voltage | 2,000 | 2,500 volts |
| Grid bias | —250 | —300 volts |
| Peak RF grid voltage | 410 | 455 volts |
| Direct anode current | 200 | 200 mA. |
| Direct grid current (approx.) | 23 | 18 mA. |
| Anode dissipation | 100 | 120 watts |
| Driving power (approx.) | 9 | 8 watts |
| Output power (approx.) | 300 | 380 watts |



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