

—Standard Valves—

5B/300-B
5B/300-BF

VALVE TYPES 5B/300-B AND 5B/300-BF

RF. PENTODES.

The 5B/300-B and 5B/300-BF Valves are identical and the -F code indicates that the valve has passed special tests for use in Standard Aircraft Radio.

SPECIFICATION.

Cathode.

Indirectly heated oxide coated.
Constant voltage type.

Base.

Standard British 7-pin.
Anode connected to top cap type B.

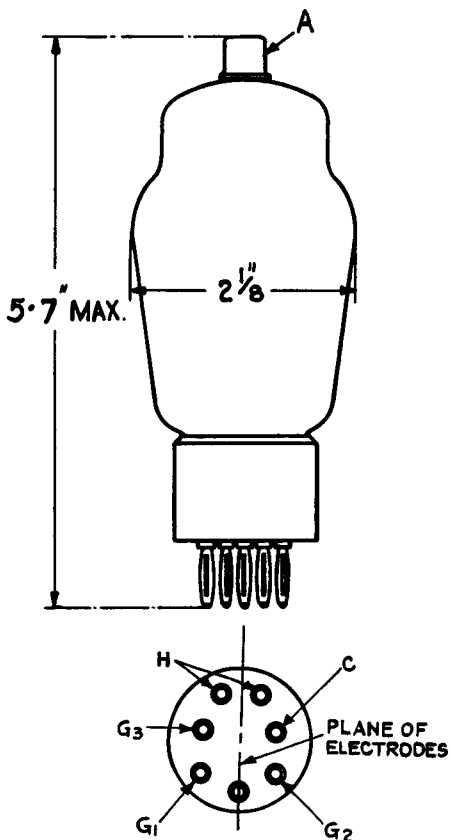
Dimensions.

Maximum overall length 5.7" (14.5 cms.)
Bulb diameter $2\frac{1}{8}$ " (5.4 cms.)
Net weight 0.145 lbs. (66 gms.)

Constants.

Heater voltage 10 volts
Nominal heater current 0.80 amps.
*Mutual conductance 6 mA. per volt
Grid-anode capacity 1.2 $\mu\mu\text{F}$.
Input capacity 16 $\mu\mu\text{F}$.
Output capacity 8 $\mu\mu\text{F}$.

* at $V_p = 500$, $V_{g_2} = 250$, $V_{g_1} = -8$,
 $V_{g_3} = 0$ volts.



LIMITING CONDITIONS FOR SAFE OPERATION.

| | |
|---|-----------|
| Maximum direct anode voltage | 500 volts |
| Maximum direct screen voltage | 300 volts |
| Maximum direct anode current | 60 mA. |
| Maximum direct screen current | 25 mA. |
| Maximum anode dissipation | 30 watts |
| Maximum screen dissipation | 6 watts |
| Maximum frequency for above ratings | 40 Mc. |
| Maximum anode voltage for frequency of 70 Mc. | 300 volts |

Tentative data

W.5B/300-B.1
April 1939

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TYPICAL OPERATING CONDITIONS.

| | Grid Modulated RF Power Amplifier Class B Telephony |
|--|---|
| (Carrier conditions for use with mod. factor of 1·0) | |
| Direct anode voltage | 500 volts |
| Direct screen voltage | 250 volts |
| Direct suppressor voltage | 0 volts |
| Direct grid voltage | —20 volts |
| Peak RF grid voltage | 22 volts |
| Direct anode current | 35 mA. |
| Direct screen current | 6 mA. |
| Direct grid current | 1 mA. |
| Carrier output | 4·8 watts |
| *Driving power | 0·3 watts |

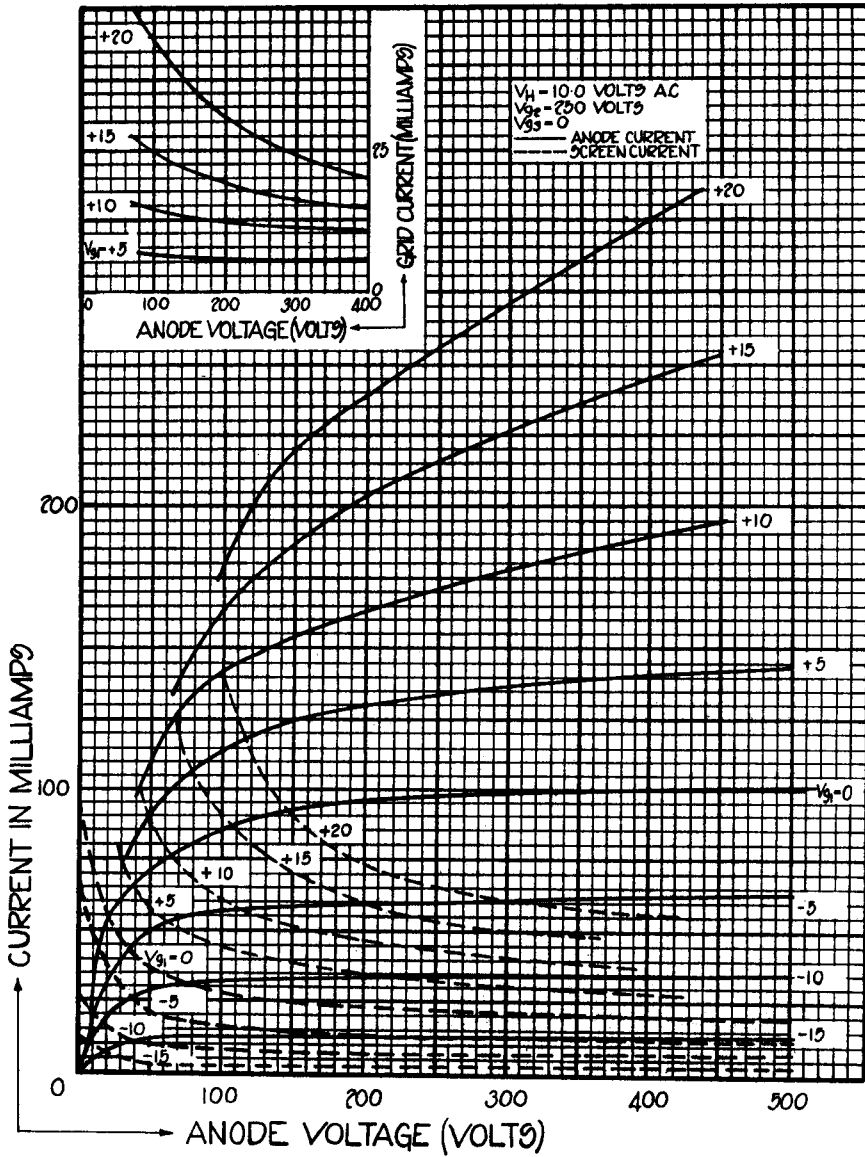
| | Grid Modulated RF Power Amplifier Class C Telephony |
|--|---|
| (Carrier conditions for use with mod. factor of 1·0) | |
| Direct anode voltage | 500 volts |
| Direct screen voltage | 250 volts |
| Direct suppressor voltage | 0 volts |
| Direct grid voltage | —70 volts |
| Peak RF grid voltage | 77 volts |
| Peak AF grid voltage | 27 volts |
| Direct anode current | 35 mA. |
| Direct screen current | 7 mA. |
| Direct grid current | 1·5 mA. |
| Carrier output | 5 watts |
| *Driving power | 0·7 watts |

* at crest of AF cycle with modulation factor of 1·0.

| | RF Power Amplifier or Oscillator Class C Telephony |
|---------------------------|--|
| Direct anode voltage | 500 volts |
| Direct screen voltage | 250 volts |
| Direct suppressor voltage | 0 volts |
| Direct grid voltage | —50 volts |
| Peak RF grid voltage | 75 volts |
| Direct anode current | 60 mA. |
| Direct screen current | 22 mA. |
| Direct grid current | 10 mA. |
| Power output | 18 watts |
| Driving power | 0·7 watts |

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