

# —Standard Valves—

4307-A Valve.  
-AF Valve.

## 4307-A AND -AF VALVES

PENTODES.

The 4307-AF Valve is identical to the 4307-A Valve and the -F code indicates that the valve has passed special tests for use in Standard Aircraft Radio.

### SPECIFICATION.

#### Cathode.

Oxide coated filament.  
Constant voltage type.

#### Base.

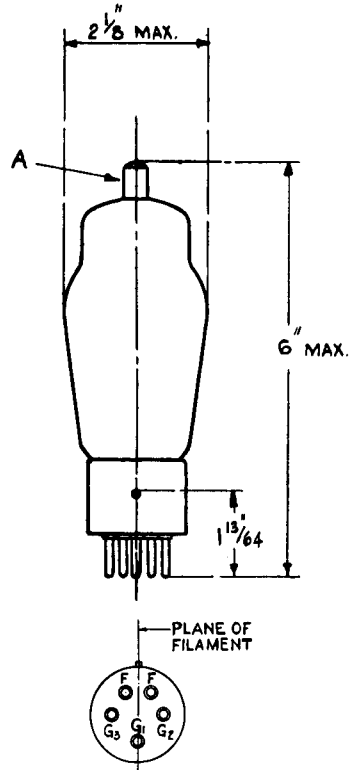
American medium 5-pin.  
Anode connected to top cap type B.

#### Dimensions.

Max. overall length 6" (15.3 cms.)  
Max. Diameter  $2\frac{1}{8}$ " (5.4 cms.)  
Net weight 0.16 lbs. (75 gms.)

#### Constants.

Filament voltage 5.5 volts  
Nominal filament current 1.0 amps.  
Grid-anode capacity 0.55  $\mu\mu\text{F}$ .  
Input capacity 15  $\mu\mu\text{F}$ .  
Output capacity 12  $\mu\mu\text{F}$ .



### LIMITING CONDITIONS FOR SAFE OPERATION.

	Class A Amplifier	Class C Amplifier or Oscillator	Class B or Suppressor Mod- ulated Class C Amplifier
Maximum direct anode voltage	500	500	500 volts
Maximum direct screen-grid voltage	300	250	250 volts
Maximum direct anode current	60	60	45 mA.
Maximum direct screen-grid current	25	25	25 mA.
Maximum direct control-grid current	—	7	7 mA.
Maximum anode dissipation	15	15	15 watts
Maximum screen-grid dissipation	6	6	6 watts
Maximum instantaneous control-grid voltage on positive swing of input	—	+30	+30 volts

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## TYPICAL OPERATING CONDITIONS.

Anode voltage	Screen Grid voltage	Sup-pressor voltage	Control grid bias	Anode current	Screen grid current	Load resist-ance	Maximum power output	Maximum second harmonic
volts	volts	volts	volts	mA.	mA.	ohms	watts	db
200	200	0	—15	36.5	3.4	4,000	2.9	23.5
250	250	0	—20	50	4.0	4,000	5.7	24
300	*300	0	—30	43	2.6	4,500	9.1	21

\* Maximum operating condition.

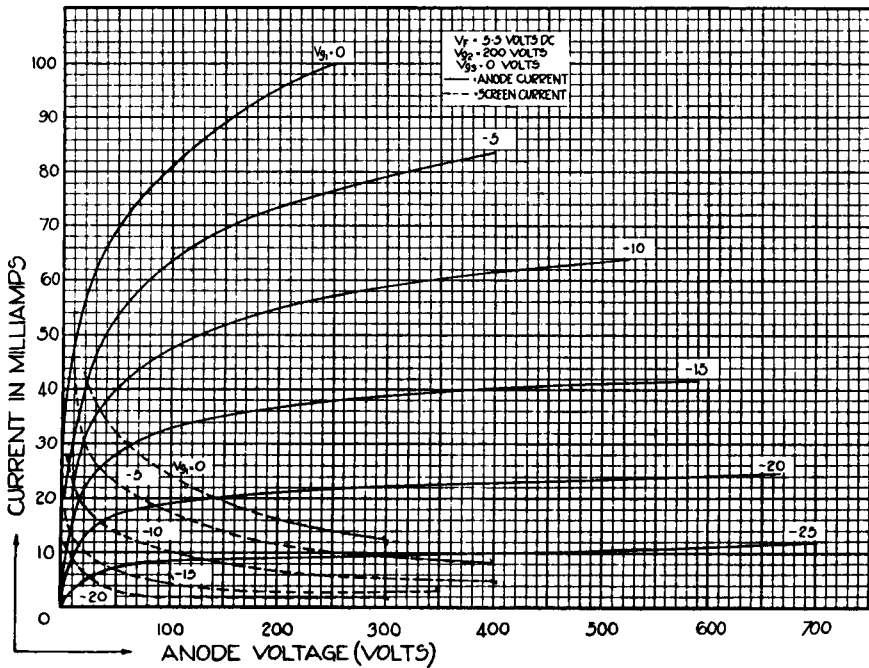
Class C Telephony. Suppressor modulated R.F. Amp.	
Direct anode voltage	500 volts
Direct screen-grid voltage (approx.)	200 volts
Screen-grid circuit resistance	14,000 ohms
Total control-grid bias (approx.)	—35 volts
Control-grid circuit resistance	10,000 ohms
Fixed control-grid bias	—20 volts
Suppressor-grid bias	—50 volts
R-F control-grid voltage	50 peak volts
Direct anode current	40 milliamperes
Direct screen-grid current	20 milliamperes
Direct control-grid current	1.5 milliamperes
A-F suppressor-grid voltage	50 peak volts
Effective load resistance	4,000 ohms
Carrier power output	6 watts
Power output on A-F peaks	24 watts

Class C Telegraphy Osc. or RF amp. unmodulated.		
Direct anode voltage	500	500 volts
Direct screen-grid voltage (approx.)	250	250 volts
Screen-grid circuit resistance	20,000	20,000 ohms
Total control-grid bias (approx.)	—35	—35 volts
Control-grid circuit resistance	10,000	10,000 ohms
Fixed control-grid bias	—20	—20 volts
Suppressor-grid bias	0	0 volts
R-F control-grid voltage	50	50 peak volts
Direct anode-current	45	60 mA.
Direct screen-grid current	12	13 mA.
Direct control-grid current	1.3	1.4 mA.
A-F suppressor-grid voltage	0	0 peak volts
Effective load resistance	6,500	5,000 ohms
Carrier power output	15	20 watts

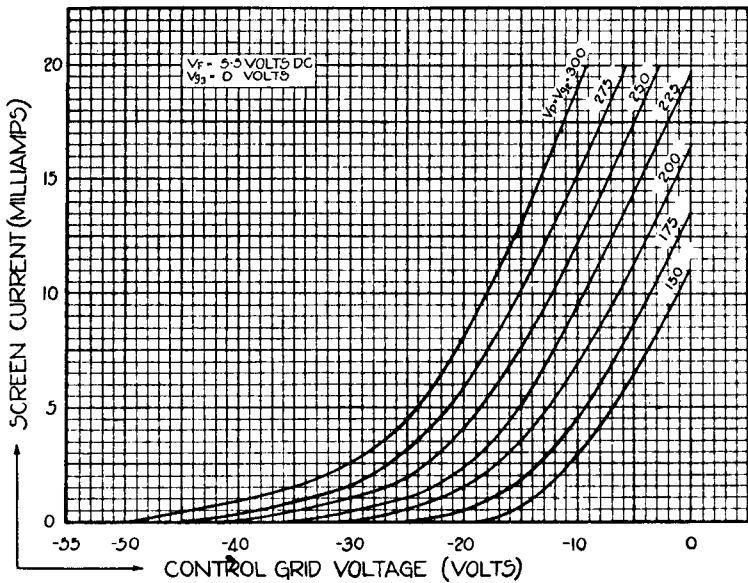
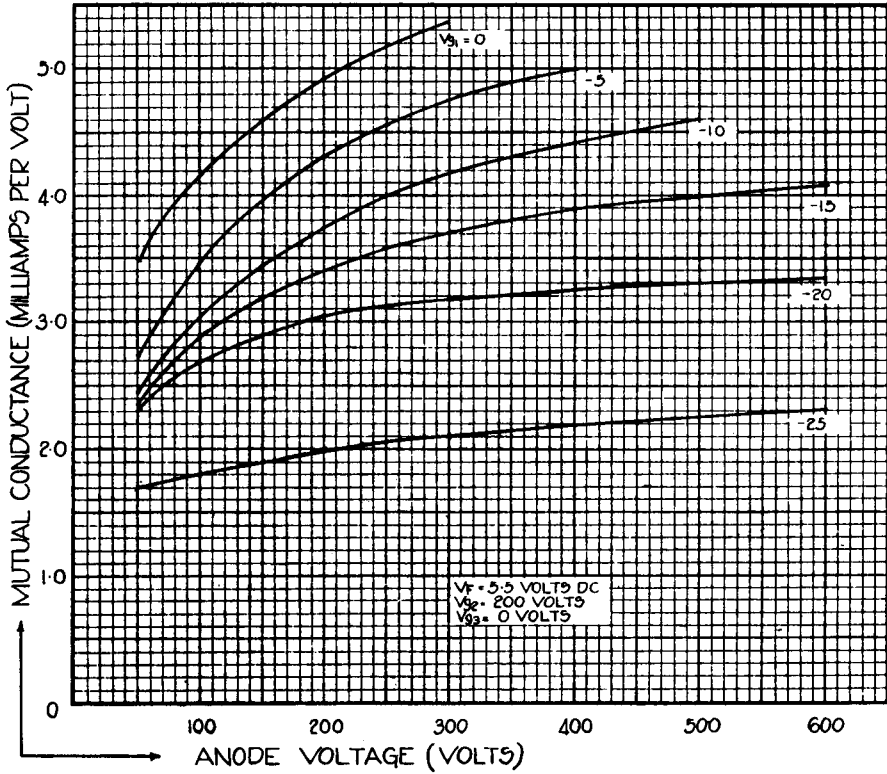
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High Frequency Ratings		
	40 megacycles	70 megacycles
Maximum direct anode voltage	500	300 volts
Maximum direct anode current— For class C telegraphy (intermittent) For all other classes of service	60 45	45 mA. 45 mA.



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