

# —Standard Valves—

4016-A  
Valve

## 4016-A VALVE

TRIODE.

### SPECIFICATION.

#### Cathode.

Pure Tungsten filament.  
Constant voltage type.

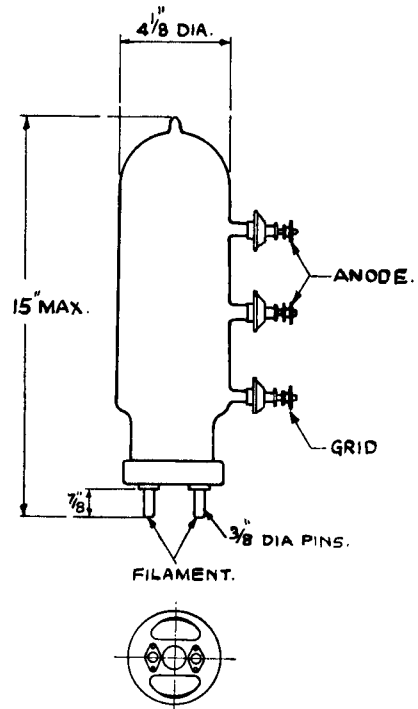
#### Dimensions.

Overall length 15" (38 cms.)  
Bulb diameter  $4\frac{1}{8}$ " (10.5 cms.)  
Net weight  $2\frac{1}{4}$  lbs. (1,000 gms.)

#### Constants.

Filament voltage 14 volts  
Nominal filament current 18 amps.  
Total emission 1.2 amps.  
\*Impedance 15,000 ohms  
\*Amplification factor 30  
\*Mutual conductance 2 mA per volt  
Grid-anode capacity  $10 \mu\mu\text{F}$ .  
Anode-filament capacity  $2.5 \mu\mu\text{F}$ .  
Grid-filament capacity  $10 \mu\mu\text{F}$ .

\* at anode current of 0.100 amps,  
 $V_p = 4,000$



### LIMITING CONDITIONS FOR SAFE OPERATION.

Maximum direct anode voltage	4,000 volts
Maximum direct anode current	0.3 amps.
Maximum anode dissipation	400 watts
Maximum grid dissipation	100 watts
Maximum frequency for above ratings	33 Mc.
Maximum anode voltage for frequency of 50 Mc.	3,500 volts

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## TYPICAL OPERATING CONDITIONS.

	Class B A.F. Amp. and Mod. for balanced 2 valve circuit
Direct anode voltage	4,000 volts
Grid bias	—100 volts
Direct anode current per valve—zero signal	0.03 amps.
Direct anode current per valve—maximum signal	0.16 amps.
Anode dissipation	280 watts
Load resistance—anode to anode	23,000 ohms
Maximum output—2 valves	700 watts

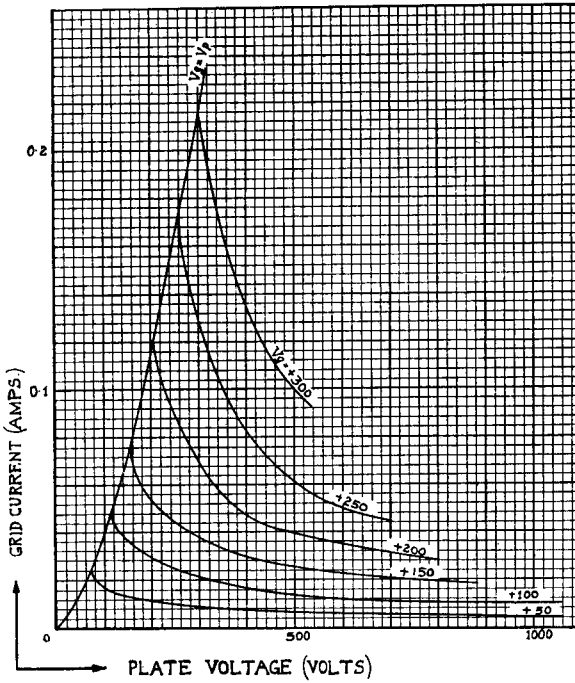
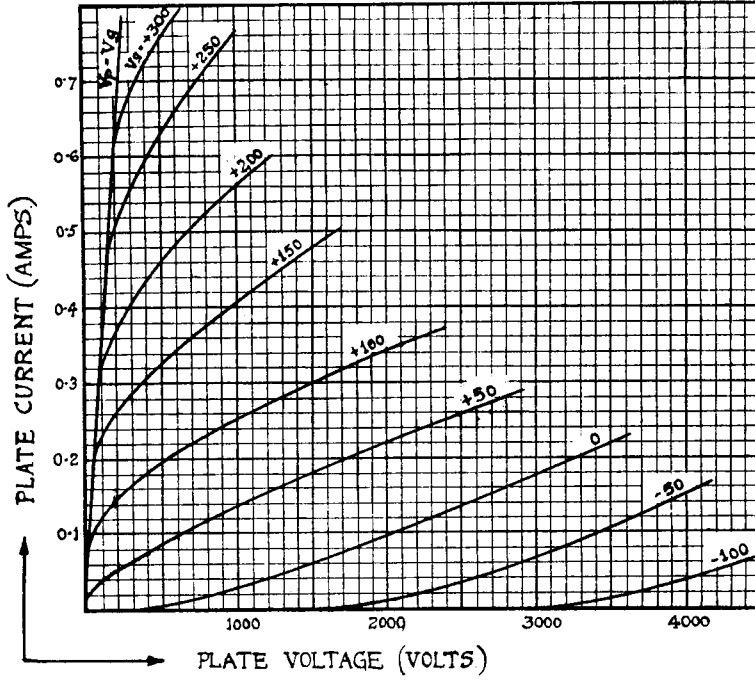
## RADIO FREQUENCY OPERATION.

	Class B Telephony Modulated carrier applied to grid			
Direct anode voltage	4,000	4,000	4,000	3,500 volts
Direct anode current	0.12	0.12	0.12	0.10 amps.
Grid bias	—130	—130	—130	—100 volts
Power output	0.15	0.14	0.12	0.10 Kw.
Anode dissipation	0.33	0.34	0.36	0.25 Kw.
<b>FREQUENCY</b>	<b>6</b>	<b>10</b>	<b>33</b>	<b>50 Mc.</b>

	Class C Telephony				Class C Telegraphy			
	Subject to anode modulation				Unmodulated			
Direct anode voltage	3,000	3,000	3,000	2,500	4,000	4,000	4,000	3,500 volts
Direct anode current	0.2	0.2	0.2	0.16	0.2	0.2	0.2	0.16 amps.
Grid bias	—200	—200	—200	—150	—300	—300	—300	—250 to —350 volts
Carrier output	0.4	0.375	0.36	0.18	0.5	0.45	0.4	0.3 Kw.
Anode dissipation	0.2	0.225	0.24	0.22	0.3	0.35	0.4	0.22 Kw.
<b>FREQUENCY</b>	<b>6</b>	<b>10</b>	<b>33</b>	<b>50</b>	<b>6</b>	<b>10</b>	<b>33</b>	<b>50 Mc.</b>

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