

# —Standard Valves—

4251-A  
Valve

## 4251-A VALVE

TRIODE.

### SPECIFICATION.

#### Cathode.

Thoriated tungsten filament.  
Constant voltage type.

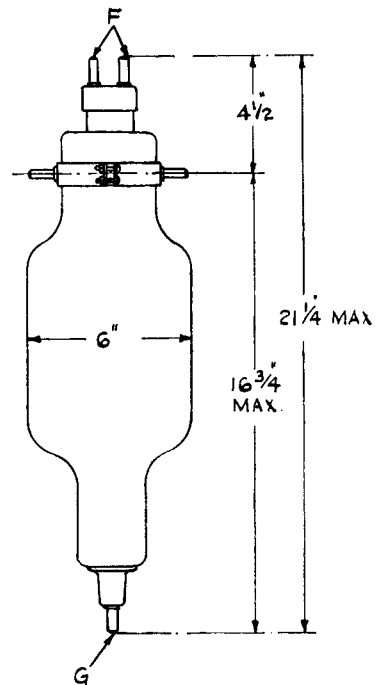
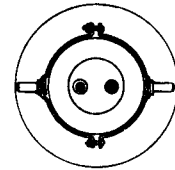
#### Dimensions.

Max. overall length 21¼" (54 cms.)  
Bulb diameter 6" (15.2 cms.)  
Net weight 3.3 lbs. (1,500 gms.)

#### Constants.

Filament voltage 10 volts  
Nominal filament current 16 amps.  
Total emission 6 amps.  
\*Impedance 2,750 ohms  
\*Amplification factor 10.5  
\*Mutual conductance 3.8 mA. per volt  
Grid-anode capacity 8 μμF.  
Anode-filament capacity 6 μμF.  
Grid-filament capacity 10 μμF.

\* at  $V_p = 2,500$  volts,  $I_p = 200$  mA.



### LIMITING CONDITIONS FOR SAFE OPERATION.

Maximum direct anode voltage	3,000 volts
Maximum direct anode current	0.600 amps.
Maximum anode dissipation	1,000 watts
Maximum grid dissipation	50 watts
Maximum frequency for above ratings	30 Mc.
Maximum anode voltage for frequency of 50 Mc.	2,000 volts

V.4251-A.1  
Sept. 1938

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## TYPICAL OPERATING CONDITIONS.

	Class A	A.F. Amp. and Mod.	
Direct anode voltage	2,500	2,000	volts
Grid bias	—150	—90	volts
Direct anode current	0.240	0.300	amps.
Load impedance	6,500	4,000	ohms
Undistorted output	130	85	watts

	Class B	A.F. Amp. and Mod. For balanced 2 valve circuit	
Direct anode voltage	3,000	2,500	volts
Grid bias	—250	—200	volts
Anode current per valve—zero signal	0.075	0.075	amps.
Anode current per valve—maximum signal	0.600	0.600	amps.
Anode dissipation	800	675	watts
Load resistance—anode to anode	4,500	3,700	ohms
Maximum output—2 valves	2,000	1,650	watts

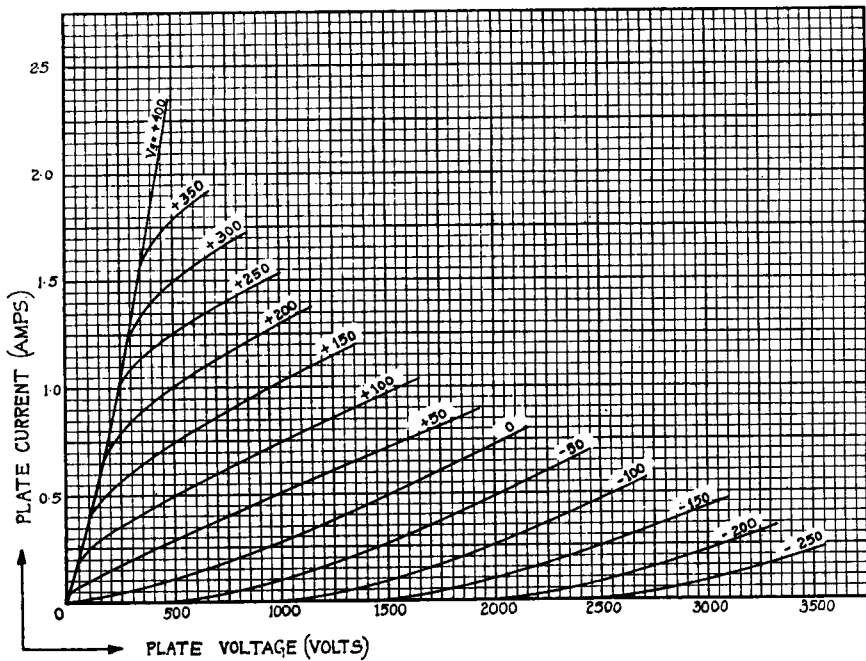
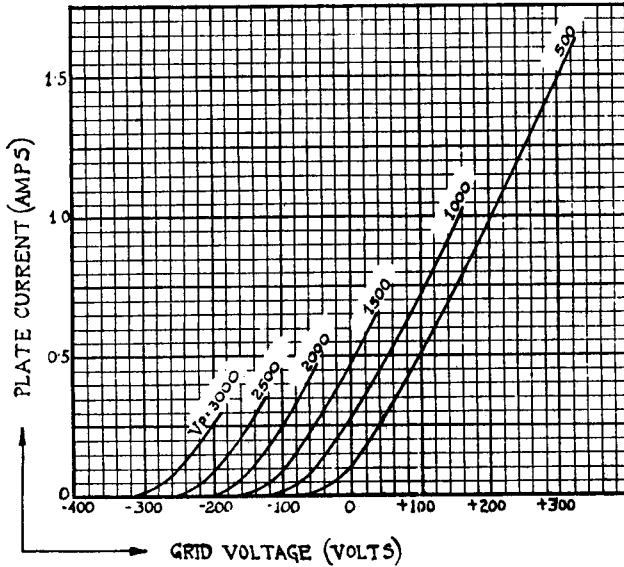
## RADIO FREQUENCY OPERATION.

	Class B Telephony		Class C Telephony		Class C Telegraphy	
	Modulated carrier applied to grid		Subject to anode modulation		Unmodulated	
Direct anode voltage	3,000	2,500	2,250	1,750	3,000	2,500 volts
Direct anode current	0.400	0.500	0.400	0.500	0.600	0.600 amps.
Grid bias	—300	—250	—450	—360	—450 —600	—375 to —500 volts
Carrier output	400	420	600	585	1,200	1,000 watts
Anode dissipation	800	830	300	290	600	500 watts

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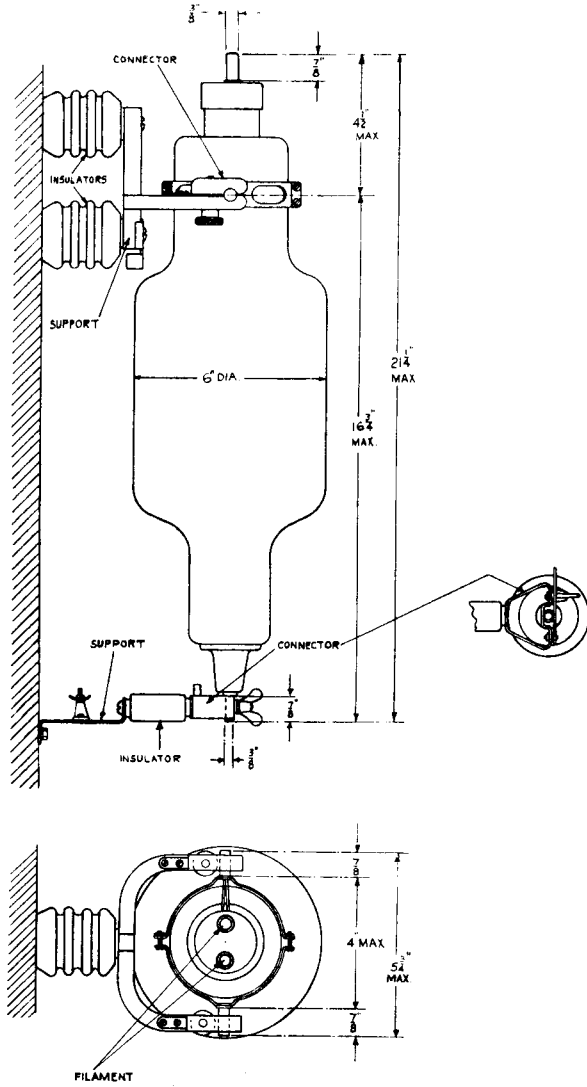
These curves are taken with A.C. filament heating, grid and anode voltages being referred to the centre point of the filament.



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4251-A  
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