

RCA-851

R-F and A-F Power Amplifier, Oscillator, Modulator

RCA-851 is a three-electrode transmitting tube of the thoriated-tungsten filament type for use as an oscillator, radio-, and audio-frequency power amplifier. The grid and plate leads are brought out at opposite ends of the tube to insure good insulation. As an r-f power amplifier and oscillator, the 851 can be operated under maximum rated conditions at frequencies as high as 3 megacycles.

CHARACTERISTICS

Filament Volts (a-c or d-c)	11.0	Grid-Plate Capacitance	47 μ f
Filament Amperes	15.5	Grid-Filament Capacitance	25.5 μ f
Amplification Factor	20.5	Plate-Filament Capacitance	4.5 μ f

MAXIMUM RATINGS

As A-F Power Amplifier and Modulator

	Class A	Class B	
D-C PLATE VOLTAGE	2500	3000	Volts
MAX.-SIGNAL D-C PLATE CURRENT†	—	1.0	Ampere
MAX.-SIGNAL PLATE INPUT†	—	2250	Watts
PLATE DISSIPATION	600	750†	Watts

As R-F Power Amplifier

	Class B Tele- phony*	Class C Tele- phony*	Class C Tele- graphy‡	
D-C PLATE VOLTAGE	2500	2000	2500	Volts
D-C GRID VOLTAGE	—	-500	-500	Volts
D-C PLATE CURRENT	0.75	1.0	1.0	Ampere
D-C GRID CURRENT	—	200	200	Milliamperes
PLATE INPUT	1100	1800	2500	Watts
PLATE DISSIPATION	750	500	750	Watts

† Averaged over any audio-frequency cycle of sine-wave form.

* Carrier conditions per tube for use with a max. modulation factor of 1.0.

‡ Key-down conditions per tube without modulation. Modulation essentially negative may be used if the positive peak of the audio-frequency envelope does not exceed 115% of the carrier conditions.

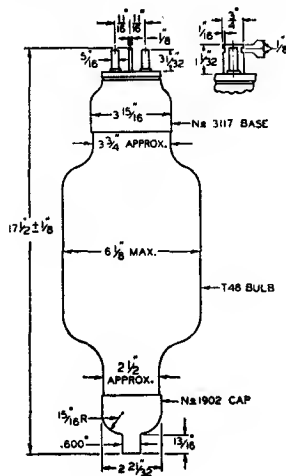
INSTALLATION AND APPLICATION

For information on end-mountings and for plate dissipation considerations, see INSTALLATION and APPLICATION for the 204-A.

When the 851 is used as a class A amplifier with the grid circuit either resistance or impedance coupled, the d-c resistance in the grid circuit should not be made too high. A resistance value of 100,000 ohms for one 851 is the recommended maximum when cathode bias is used; without cathode bias, the grid resistance should not exceed 10,000 ohms.

For high-frequency operation above 3 megacycles, see page 144.

For additional information, see chapters on INSTALLATION and APPLICATION.



Connections to End-Mountings

