

RCA-850

Screen-Grid R-F Power Amplifier

RCA-850 is a screen-grid transmitting tube of the thoriated-tungsten filament type for use as a radio-frequency power amplifier. The control grid is brought out through a separate seal at the top of the bulb. Neutralization to prevent feedback is generally unnecessary when the tube is used in adequately-shielded circuits. The 850 may be operated at maximum input at frequencies as high as 13 megacycles.

CHARACTERISTICS

Filament Volts (a-c or d-c)	10.0	Grid-Plate Capacitance (With	
Filament Amperes	3.25	external shielding)	0.25 max. μf
Amplification Factor	550	Input Capacitance	17 μf
Transconductance (For plate current		Output Capacitance	25 μf
of 19.5 ma.) Micromhos	2750		

MAXIMUM RATINGS

	Class B Tele- phony*	Class C Tele- phony*	Class C Tele- graphy§	
D-C PLATE VOLTAGE	1250	1000	1250	Volts
D-C SCREEN VOLTAGE	400†	400	400†	Volts
D-C GRID VOLTAGE	—	-400	-400	Volts
D-C PLATE CURRENT	150	150	175	Milliamperes
D-C GRID CURRENT	—	40	40	Milliamperes
PLATE INPUT	150	150	220	Watts
SCREEN INPUT	10	7	10	Watts
PLATE DISSIPATION	100	70	100	Watts

* 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.

† Series-screen-resistor method not recommended.

INSTALLATION AND APPLICATION

The base pins of the 850 fit the standard transmitting 4-contact socket, such as the RCA type UT-541A. The socket should be mounted to hold the tube in a vertical position with the base down. For outline drawing, refer to type 805.

The plate of the 850 shows only a barely perceptible red color at the maximum plate-dissipation rating for each class of service. The screen should never be allowed to show more than a dull red color.

For high-frequency operation above 13 megacycles, see page 144.

When the screen voltage is obtained from a series screen resistor, the value of the resistor should be not less than 15000 ohms for a plate-supply voltage of 750 volts and 25000 ohms for 1000 volts.

For additional information, see chapters on INSTALLATION and APPLICATION.

Top View of Socket Connections

