

RCA-955

Detector, Amplifier, Oscillator

(Acorn Type)

Illustrated on page 133

The 955 is a heater-cathode type of triode designed primarily for radio amateurs and experimenters working with wavelengths between 0.5 meter and 5 meters. Operation at these short wavelengths is made possible by means of an unconventional tube structure having small size, close electrode spacing, and short terminal connections.

CHARACTERISTICS

Heater Volts (a-c or d-c)	6.3	Grid-Plate Capacitance	1.4 μf
Heater Amperes	0.15	Grid-Cathode Capacitance	1 μf
Amplification Factor	25	Plate-Cathode Capacitance	0.6 μf

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

As R-F or A-F Amplifier—Class A

D-C PLATE VOLTAGE	180 max. Volts			
TYPICAL OPERATION AND CHARACTERISTICS:				
D-C Plate Voltage	90	135	180	Volts
D-C Grid Voltage*	-2.5	-3.75	-5	Volts
D-C Plate Current	2.5	3.5	4.5	Milliamperes
Plate Resistance	14700	13200	12500	Ohms
Transconductance	1700	1900	2000	Micromhos
Load Resistance	—	—	20000	Ohms
Undistorted Power Output	—	—	135	Milliwatts

As R-F Power Amplifier and Oscillator—Class C Telegraphy or Plate-Modulated Telephony

D-C PLATE VOLTAGE	180	max.	Volts
D-C PLATE CURRENT	8	max.	Milliamperes
D-C GRID CURRENT	2	max.	Milliamperes
TYPICAL OPERATION:			
D-C Plate Voltage	180		Volts
D-C Grid Voltage	-35		Volts
D-C Plate Current	7		Milliamperes
Grid Resistor (Approx.)	23000		Ohms
D-C Grid Current (Approx.)	1.5		Milliamperes
Power Output (Approx.)**	0.5		Watt

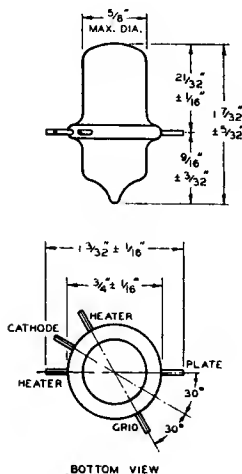
* The d-c resistance in the grid circuit should not exceed 0.5 megohm.

** At 5 meters. Only moderate reduction in this value will be found for wavelengths as low as 1 meter. Below 1 meter, the power output decreases as the wavelength is decreased.

INSTALLATION AND APPLICATION

For terminal mounting considerations, refer to type 954. For Terminal Mounting Template, refer to type 956.

For heater, cathode, and r-f grounding considerations, refer to type 954.



As a detector, the 955 may be of the grid-leak-and-condenser type or of the grid-bias type. The plate voltage for the grid-leak-and-condenser method should be about 45 volts. A grid leak of from 1 to 5 megohms with a condenser of $0.00025 \mu\text{f}$ is satisfactory. For the grid-bias method of detection, a plate-supply voltage of 180 volts may be used together with a negative grid-bias voltage of approximately -7 volts. The plate current should be adjusted to a little less than 0.2 milliampere with no input signal voltage. The grid-bias voltage may be supplied from the voltage drop in a resistor between cathode and ground. The value of this self-biasing resistor is not critical, 50000 ohms being suitable.

In miscellaneous applications in the laboratory, such as vacuum-tube voltmeters, the 955 can, because of its small size, be placed at the point of measurement. This feature combined with that of low input capacitance, makes possible vacuum-tube voltmeter measurements with a minimum effect on the constants of the circuit under measurement.

