

RCA Transmitting Tubes

AF AMPLIFIER—Class A₁

Maximum CCS Ratings, Design-Center Values:

DC PLATE VOLTAGE	250 max	volts
PLATE DISSIPATION	1.6 max	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	80 max	volts
Heater positive with respect to cathode	80 max	volts

Typical Operation and Characteristics:

DC Plate Voltage	90	135	180	250	volts
DC Grid Voltage	-2.5	-3.75	-5	-7	volts
Amplification Factor	25	25	25	25	
Plate Resistance (Approx.)	14700	13200	12500	11400	ohms
Transconductance	1700	1900	2000	2200	μmhos
DC Plate Current	2.5	3.5	4.5	6.3	ma
Load Resistance	—	—	20000	—	ohms
Second-Harmonic Distortion	—	—	5	—	per cent
Useful Power Output	—	—	135	—	mw

Maximum Circuit Values:

Grid-Circuit Resistance:		
For fixed-bias operation	0.1 max	megohm
For cathode-bias operation	0.5 max	megohm

RF AMPLIFIER AND OSCILLATOR—Class C

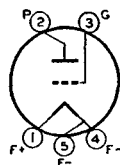
Maximum CCS Ratings, Design-Center Values:

DC PLATE VOLTAGE	180 max	volts
DC PLATE CURRENT	8 max	ma
DC GRID CURRENT	2 max	ma
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	80 max	volts
Heater positive with respect to cathode	80 max	volts

958-A

MEDIUM-MU TRIODE

Acorn coated-filament type used as rf power amplifier and oscillator at frequencies up to 350 Mc. Class C Telegraphy maximum CCS plate dissipation (design-center value), 0.6 watt. Requires Acorn five-contact socket and may be mounted in any position. OUTLINE 2, Outlines Section. Plate shows no color when tube is operated at maximum CCS ratings.



FILAMENT VOLTAGE (DC)	1.25	volts
FILAMENT CURRENT	0.10	ampere
DIRECT INTERELECTRODE CAPACITANCES:		
Grid to plate	2.5	μf
Grid to filament	0.45	μf
Plate to filament	0.6	μf

RF POWER AMPLIFIER AND OSCILLATOR—Class C Telegraphy# and

RF POWER AMPLIFIER—Class C FM Telephony

Maximum CCS Ratings, Design-Center Values:

DC PLATE VOLTAGE	135 max	volts
DC GRID VOLTAGE	-30 max	volts
DC PLATE CURRENT	7 max	ma
DC GRID CURRENT	1 max	ma
PLATE INPUT	0.95 max	watt
PLATE DISSIPATION	0.6 max	watt

Typical Operation:

DC Plate Voltage	135	volts
DC Grid Voltage*	-20	volts
From grid resistor of	20000	ohms
From cathode resistor of	2500	ohms

RCA Transmitting Tubes

Peak RF Grid Voltage	40	volts
DC Plate Current	7	ma
DC Grid Current	1	ma
Driving Power (Approx.)	0.035	watt
Power Output	0.600	watt

Maximum Circuit Values:

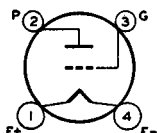
Grid-Circuit Resistance:

For fixed-bias operation	0.1 max	megohm
For cathode-bias operation	0.5 max	megohm

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

* Obtained from fixed supply, by grid resistor, by cathode resistor, or by combination methods.

POWER TRIODE

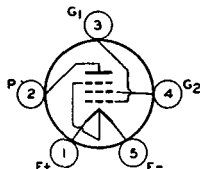


1608

Coated-filament type used as af power amplifier and modulator and as rf power amplifier and oscillator. May be used with full input up to 45 Mc and with reduced input up to 100 Mc. Requires Small four-contact socket and may be mounted in vertical position with base down, or in horizontal position with pins 1 and 4 in vertical plane. OUTLINE 29, *Outlines* Section. Filament volts (ac/dc), 2.5; amperes, 2.5.

Direct interelectrode capacitances: grid to plate, 9 $\mu\mu\text{f}$; grid to filament, 8.5 $\mu\mu\text{f}$; plate to filament, 3 $\mu\mu\text{f}$. Maximum CCS ratings as RF POWER AMPLIFIER AND OSCILLATOR: dc plate volts, 425 max; dc grid volts, -200 max; dc plate milliamperes, 95 max; dc grid milliamperes, 25 max; plate input, 40 max watts; plate dissipation, 20 max watts. Plate shows no color when tube is operated at maximum CCS ratings. The 1608 is a DISCONTINUED type listed for reference only.

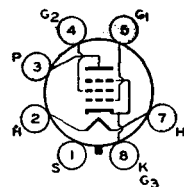
POWER PENTODE



1610

Coated-filament type used as rf power amplifier and oscillator. May be used with full input up to 20 Mc and with reduced input up to 110 Mc. Requires Small five-contact socket and may be mounted in vertical position only, base up or down. OUTLINE 29, *Outlines* Section. Filament volts (ac/dc), 2.5; amperes, 1.75. Direct interelectrode capacitances: grid-No.1 to plate, 1.2 $\mu\mu\text{f}$; grid No.1 to filament mid-tap,

grid No.3, and grid No.2, 8.6 $\mu\mu\text{f}$; plate to filament mid-tap, grid No.3, and grid No.2, 13 $\mu\mu\text{f}$. Maximum CCS ratings as RF POWER AMPLIFIER AND OSCILLATOR: dc plate volts, 400 max; dc grid-No.2 volts, 200 max; dc grid-No.1 volts, -100 max; dc plate milliamperes, 30 max; dc grid-No.1 milliamperes, 3 max; plate input, 9 max watts; grid-No.2 input, 2 max watts; plate dissipation, 6 max watts. Plate shows no color when tube is operated at maximum CCS ratings. The 1610 is a DISCONTINUED type listed for reference only.



POWER PENTODE

1613

Heater-cathode type having metal shell used as rf power amplifier and oscillator. May be used with full input up to 45 Mc. For operation at 60 Mc, plate voltage and plate input

should be reduced to 90 per cent of maximum ratings; at 90 Mc, to 85 per cent. Class C Telegraphy maximum CCS plate dissipation, 10 watts. Requires Octal socket and may be mounted in any position. OUTLINE 11, *Outlines* Section.

HEATER VOLTAGE (AC/DC)	6.3	volts
HEATER CURRENT	0.7	ampere
TRANSCONDUCTANCE (For plate current of 31 milliamperes)	2500	μmhos
DIRECT INTERELECTRODE CAPACITANCES:		
Grid No.1 to plate	0.26	$\mu\mu\text{f}$
Grid No.1 to cathode, grid No.3, grid No.2, shell, and heater	6.5	$\mu\mu\text{f}$
Plate to cathode, grid No.3, grid No.2, shell, and heater	13.5	$\mu\mu\text{f}$