

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:

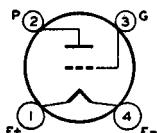
Grid-Circuit Resistance:

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

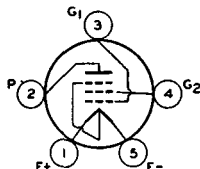


1608

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 μf ; grid to filament, 8.5 μf ; plate to filament, 3 μf . 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.

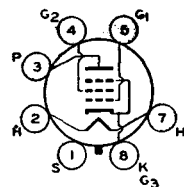
POWER PENTODE



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 μf ; grid No.1 to filament mid-tap,

grid No.3, and grid No.2, 8.6 μf ; plate to filament mid-tap, grid No.3, and grid No.2, 13 μf . 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	μf
Grid No.1 to cathode, grid No.3, grid No.2, shell, and heater	6.5	μf
Plate to cathode, grid No.3, grid No.2, shell, and heater	13.5	μf

RCA Transmitting Tubes

RF POWER AMPLIFIER AND OSCILLATOR—Class C Telegraphy#

and

RF POWER AMPLIFIER—Class C FM Telephony

Maximum CCS Ratings:

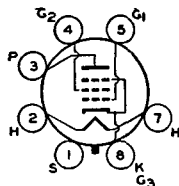
DC PLATE VOLTAGE	350 max	volts
DC GRID-No.2 (SCREEN-GRID) VOLTAGE	275 max	volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE	-100 max	volts
DC PLATE CURRENT	50 max	ma
DC GRID-No.1 CURRENT	5 max	ma
PLATE INPUT	17.5 max	watts
GRID-No.2 INPUT	2.5 max	watts
PLATE DISSIPATION	10 max	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	100 max	volts
Heater positive with respect to cathode	100 max	volts

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.

BEAM POWER TUBE

1614

Heater-cathode type having metal shell used as af power amplifier and modulator and as rf power amplifier and oscillator. May be used with full input up to 80 Mc. For operation



at 120 Mc, plate voltage and plate input should be reduced to 75 per cent of maximum ratings. Class C Telegraphy maximum plate dissipation, CCS 21 watts, ICAS 25 watts. Requires Octal socket and may be mounted in any position. OUTLINE 21, Outlines Section.

HEATER VOLTAGE (AC/DC)	6.3	volts
HEATER CURRENT	0.9	ampere
TRANSCONDUCTANCE (For plate current of 72 milliamperes)	6050	μmhos
DIRECT INTERELECTRODE CAPACITANCES:		
Grid No.1 to plate	0.4 max	μf
Grid No.1 to cathode, grid No.3, grid No.2, shell, and heater	10	μf
Plate to cathode, grid No.3, grid No.2, shell, and heater	12	μf

AF POWER AMPLIFIER AND MODULATOR—Class AB1

Maximum Ratings:

	CCS	ICAS	
DC PLATE VOLTAGE	375 max	550 max	volts
DC GRID-No.2 (SCREEN-GRID) VOLTAGE	300 max	400 max	volts
DC PLATE CURRENT	110 max	110 max	ma
PLATE INPUT	40 max	60 max	watts
GRID-No.2 INPUT	3.5 max	3.5 max	watts
PLATE DISSIPATION	21 max	25 max	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	200 max	200 max	volts
Heater positive with respect to cathode	200 max	200 max	volts

Typical Operation (Values are for 2 tubes):

DC Plate Voltage	360	530	volts
DC Grid-No.2 Voltage	270	340	volts
DC Grid-No.1 (Control-Grid) Voltage	-22.5	-36	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage	45	72	volts
Zero-Signal DC Plate Current	88	60	ma
Maximum-Signal DC Plate Current	132	160	ma
Maximum-Signal DC Grid-No.2 Current	15	20	ma
Effective Load Resistance (Plate to plate)	6600	7200	ohms
Total Harmonic Distortion	2	2.5	per cent
Maximum-Signal Power Output	26.5	50	watts

RF POWER AMPLIFIER AND OSCILLATOR—Class C Telegraphy#

and

RF POWER AMPLIFIER—Class C FM Telephony

Maximum Ratings:

	CCS	ICAS	
DC PLATE VOLTAGE	375 max	450 max	volts