

RCA Transmitting Tubes

DC Grid-No.1 Voltage ^δ	-75	-100	volts
From grid-No.1 resistor of	75000	100000	ohms
Peak RF Grid-No.1 Voltage	95	120	volts
DC Plate Current	40	35	ma
DC Grid-No.2 Current	4	5	ma
DC Grid-No.1 Current (Approx.)	1	1	ma
Driving Power (Approx.)	0.6	0.6	watt
Useful Power Output (Approx.)	2.1 [■]	1.3 [■]	watts

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	0.1 max	megohm
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* Obtained from 300-volt supply with series resistor of 12,500 ohms.

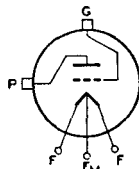
δ Obtained from fixed supply or from grid-No.1 resistor of value shown.

■ Measured at load of output circuit.

POWER TRIODE

5786

Forced-air-cooled thoriated-tungsten-filament type having integral radiator used as af power amplifier and modulator and as rf power amplifier and oscillator. May be used with full



input up to 160 Mc. Class C Telephony maximum CCS plate dissipation, 600 watts. May be mounted in vertical position only, filament end up or down. *OUTLINE 75, Outlines Section.* A minimum air flow of 140 cubic feet per minute should be directed by a blower to the radiator and seals when the 5786 is operated at maximum rated dissipation. Air flow should start before and continue during application of any voltages to the tube. Filament power, plate power, and air may be removed simultaneously. Maximum temperatures: incoming air, 45°C; radiator, at core, 180°C; grid and plate seals, 165°C; and filament seals, 220°C.

FILAMENT VOLTAGE (AC/DC)	11 ± 0.6	volts
FILAMENT CURRENT	12.5	amperes
FILAMENT STARTING CURRENT	50 max	amperes
AMPLIFICATION FACTOR*	32	
DIRECT INTERELECTRODE CAPACITANCES:		
Grid to plate	5.3	μf
Grid to filament mid-tap	4.7	μf
Plate to filament mid-tap	3.8	μf

* Grid volts, -25; plate milliamperes, 200.

AF POWER AMPLIFIER AND MODULATOR—Class B

Maximum CCS Ratings:

DC PLATE VOLTAGE	4000 max	volts
MAXIMUM-SIGNAL DC PLATE CURRENT [■]	500 max	ma
MAXIMUM-SIGNAL PLATE INPUT [■]	1500 max	watts
PLATE DISSIPATION [■]	600 max	watts

Typical Operation (Values are for 2 tubes):

DC Plate Voltage	3000	volts
DC Grid Voltage†	-95	volts
Peak AF Grid-to-Grid Voltage	470	volts
Zero-Signal DC Plate Current	75	ma
Maximum-Signal DC Plate Current	800	ma
Effective Load Resistance (Plate to plate)	8600	ohms
Maximum-Signal Driving Power (Approx.)	30	watts
Maximum-Signal Power Output (Approx.)	1640	watts

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

† Grid voltage is given with respect to mid-point of filament operated on ac or dc.

PLATE-MODULATED RF POWER AMPLIFIER—Class C Telephony

Carrier conditions per tube for use with a maximum modulation factor of 1.0

Maximum CCS Ratings:

DC PLATE VOLTAGE	2500 max	volts
DC GRID VOLTAGE	-500 max	volts

RCA Transmitting Tubes

DC PLATE CURRENT	400 max	ma
DC GRID CURRENT	150 max	ma
PLATE INPUT	1000 max	watts
PLATE DISSIPATION	400 max	watts

Typical Operation:

DC Plate Voltage	2500	volts
DC Grid Voltage ϕ	-350	volts
From grid resistor of	2600	ohms
Peak RF Grid Voltage	620	volts
DC Plate Current	400	ma
DC Grid Current (Approx.)	135	ma
Driving Power (Approx.)	75	watts
Power Output (Approx.)	810	watts

ϕ Obtained preferably from grid resistor of value shown or from a combination of grid resistor with either fixed supply or cathode resistor.

RF POWER AMPLIFIER AND OSCILLATOR—Class C Telegraphy# and

RF POWER AMPLIFIER—Class C FM Telephony

Maximum CCS Ratings:

DC PLATE VOLTAGE	3000 max	volts
DC GRID VOLTAGE	-500 max	volts
DC PLATE CURRENT	500 max	ma
DC GRID CURRENT	150 max	ma
PLATE INPUT	1500 max	watts
PLATE DISSIPATION	600 max	watts

Typical Operation:

	RF Power Amplifier	Oscillator at 160 Mc	
DC Plate Voltage	3000	3000	volts
DC Grid Voltage ϕ	-200	-225	volts
From grid resistor of	2200	2000	ohms
From cathode resistor of	330	380	ohms
Peak RF Grid Voltage	450	475	volts
DC Plate Current	500	500	ma
DC Grid Current	90	90	ma
Driving Power (Approx.)	36	—	watts
Power Output (Approx.)	1000	1000	watts
Useful Power Output (Approx.)—85-per-cent circuit efficiency	—	850	watts

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.

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

SELF-RECTIFYING OSCILLATOR OR AMPLIFIER—Class C

Maximum CCS Ratings:

RMS PLATE VOLTAGE	4250 max	volts
DC GRID VOLTAGE	-300 max	volts
DC PLATE CURRENT	320 max	ma
DC GRID CURRENT	85 max	ma
PLATE INPUT	1500 max	watts
PLATE DISSIPATION	600 max	watts

Typical Operation:

RMS Plate Voltage	4250	volts
DC Grid Voltage ϕ	-115	volts
From grid resistor of	1500	ohms
DC Plate Current	320	ma
DC Grid Current (Approx.)	77	ma
Driving Power (Approx.)	46	watts
Power Output (Approx.)	1050	watts

ϕ Obtained preferably from grid resistor of value shown or from a combination of grid resistor and fixed supply.

• From a self-rectifying driver.

AMPLIFIER OR OSCILLATOR—Class C

With separate rectified, unfiltered, single-phase, full-wave plate supply

Maximum CCS Ratings:

DC PLATE VOLTAGE	2700 max	volts
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RCA Transmitting Tubes

DC GRID VOLTAGE.....	-300 max	volts
DC PLATE CURRENT.....	450 max	ma
DC GRID CURRENT.....	120 max	ma
PLATE INPUT.....	1500 max	watts
PLATE DISSIPATION.....	600 max	watts

Typical Operation:

DC Plate Voltage.....	2700	volts
DC Grid Voltage ϕ	-180	volts
From a grid resistor of.....	1530	ohms
DC Plate Current.....	450	ma
DC Grid Current (Approx.).....	118	ma
Driving Power (Approx.) ^Δ	57	watts
Power Output (Approx.).....	1150	watts

ϕ Obtained preferably from grid resistor of value shown or from a combination of grid resistor and fixed supply.

^Δ From a driver having a rectified, unfiltered, single-phase, full-wave plate supply.

