

RF POWER AMPLIFIER AND OSCILLATOR—Class C Telegraphy#

and

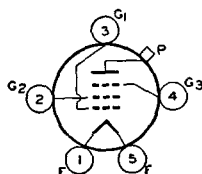
RF POWER AMPLIFIER—Class C FM Telephony

Maximum CCS Ratings:

DC PLATE VOLTAGE.....	2000 <i>max</i>	volts
DC GRID-No.3 (SUPPRESSOR-GRID) VOLTAGE.....	500 <i>max</i>	volts
DC GRID-No.2 (SCREEN-GRID) VOLTAGE.....	600 <i>max</i>	volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE.....	-500 <i>max</i>	volts
DC PLATE CURRENT.....	175 <i>max</i>	ma
DC GRID-No.1 CURRENT.....	50 <i>max</i>	ma
PLATE INPUT.....	350 <i>max</i>	watts
GRID-No.3 INPUT.....	10 <i>max</i>	watts
GRID-No.2 INPUT.....	30 <i>max</i>	watts
PLATE DISSIPATION.....	125 <i>max</i>	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.

POWER PENTODE



Thoriated-tungsten-filament type used as rf power amplifier and oscillator. May be used with full input up to 15 Mc and with reduced input up to 80 Mc. Requires Small five-contact socket and may be mounted in vertical position with base down, or in horizontal position with pins 2 and 4 in vertical plane. OUTLINE 48, Outlines Section. Plate shows no color when tube is operated at maximum CCS or ICAS ratings. The 804 is used principally for renewal purposes.

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FILAMENT VOLTAGE (AC/DC).....	7.5	volts
FILAMENT CURRENT.....	3.0	amperes
TRANSCONDUCTANCE (For plate current of 32 milliamperes).....	3250	μ mhos
DIRECT INTERELECTRODE CAPACITANCES:		
Grid No.1 to plate (With external shielding).....	0.03 <i>max</i>	μ uf
Grid No.1 to filament, grid No.3, and grid No.2.....	13	μ uf
Plate to filament, grid No.3, and grid No.2.....	14	μ uf

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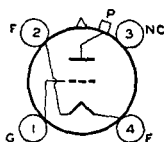
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RF POWER AMPLIFIER—Class C FM Telephony

Maximum Ratings:

	CCS	ICAS	
DC PLATE VOLTAGE.....	1250 <i>max</i>	1500 <i>max</i>	volts
DC GRID-No.3 (SUPPRESSOR-GRID) VOLTAGE.....	200 <i>max</i>	200 <i>max</i>	volts
DC GRID-No.2 (SCREEN-GRID) VOLTAGE.....	300 <i>max</i>	300 <i>max</i>	volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE.....	-300 <i>max</i>	-300 <i>max</i>	volts
DC PLATE CURRENT.....	95 <i>max</i>	100 <i>max</i>	ma
DC GRID-No.1 CURRENT.....	15 <i>max</i>	15 <i>max</i>	ma
PLATE INPUT.....	120 <i>max</i>	150 <i>max</i>	watts
GRID-No. 3 INPUT.....	5 <i>max</i>	5 <i>max</i>	watts
GRID-No. 2 INPUT.....	15 <i>max</i>	15 <i>max</i>	watts
PLATE DISSIPATION.....	40 <i>max</i>	50 <i>max</i>	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.



POWER TRIODE

Thoriated-tungsten-filament type used as af power amplifier and modulator and as rf power amplifier and oscillator. May be used with full input up to 30 Mc. For operation at 45 Mc,

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plate voltage and plate input should be reduced to 82 per cent of maximum ratings; at 80 Mc, to 55 per cent. Class C Telegraphy maximum CCS plate dissipation, 125 watts. Requires Jumbo four-contact socket and may be mounted in vertical position

RCA Transmitting Tubes

with base down, or in horizontal position with pins 1 and 3 in vertical plane. OUTLINE 51, *Outlines* Section. Plate shows no color when tube is operated at maximum CCS ratings.

FILAMENT VOLTAGE (AC/DC).....	10	volts
FILAMENT CURRENT.....	3.25	amperes
DIRECT INTERELECTRODE CAPACITANCES:		
Grid to plate.....	6.0	μf
Grid to filament.....	7.6	μf
Plate to filament.....	9.0	μf

AF POWER AMPLIFIER AND MODULATOR—Class B

Maximum CCS Ratings:

DC PLATE VOLTAGE.....	1500 max	volts
MAXIMUM-SIGNAL DC PLATE CURRENT [■]	210 max	ma
MAXIMUM-SIGNAL PLATE INPUT [■]	315 max	watts
PLATE DISSIPATION [■]	125 max	watts

Typical Operation (Values are for 2 tubes):

DC Plate Voltage.....	1250	1500	volts
DC Grid Voltage.....	0	-16	volts
Peak AF Grid-to-Grid Voltage.....	235	280	volts
Zero-Signal DC Plate Current.....	148	84	ma
Maximum-Signal DC Plate Current.....	400	400	ma
Effective Load Resistance (Plate to plate).....	6700	8200	ohms
Maximum-Signal Driving Power (Approx.).....	6	7	watts
Maximum-Signal Power Output (Approx.).....	300††	370†	watts

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

†† With 4 per cent harmonic distortion.

† With 3 per cent harmonic distortion.

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Maximum CCS Ratings:

DC PLATE VOLTAGE.....	1500 max	volts
DC GRID VOLTAGE.....	-500 max	volts
DC PLATE CURRENT.....	210 max	ma
DC GRID CURRENT.....	70 max	ma
PLATE INPUT.....	315 max	watts
PLATE DISSIPATION.....	125 max	watts

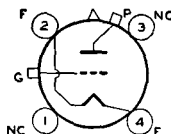
Typical Operation:

DC Plate Voltage.....	1000	1250	1500	volts
DC Grid Voltage.....	-95	-100	-105	volts
Peak RF Grid Voltage.....	225	230	235	volts
DC Plate Current.....	200	200	200	ma
DC Grid Current (Approx.).....	40	40	40	ma
Driving Power (Approx.).....	8.5	8.5	8.5	watts
Power Output (Approx.).....	130	170	215	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.

POWER TRIODE

Thoriated-tungsten-filament type used as af power amplifier and modulator and as rf power amplifier and oscillator. May be used with full input up to 30 Mc and with reduced input up to 100 Mc. Requires Jumbo four-contact socket and may be mounted in vertical position only, base down. OUTLINE 59, *Outlines* Section. Filament volts (ac/dc), 5; amperes, 9.5. Direct interelectrode capacitances: grid to plate, 4 μf ;



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grid to filament, 5.6 μf ; plate to filament, 0.4 μf . Maximum CCS ratings as AF POWER AMPLIFIER AND MODULATOR: dc plate volts, 3000 max (ICAS, 3300 max); maximum-signal dc plate milliamperes, 200 max (ICAS, 250 max); maximum-signal plate input, 500 max watts (ICAS, 825 max watts); plate dissipation, 150 max watts (ICAS, 225 max watts). Maximum CCS ratings as RF POWER AMPLIFIER AND OSCILLATOR: dc plate volts, 3000 max (ICAS, 3300 max); dc grid volts, -1000