

Maximum Circuit Values (CCS or ICAS conditions):

Grid-No.1-Circuit Resistance:

For fixed-bias operation.....	0.01 max	megohm
For cathode-bias operation.....	0.5 max	megohm

■ Internal shield connected to cathode at socket.

* Connected to cathode at socket.

• Obtained from fixed supply or by cathode resistor of value shown.

RF POWER AMPLIFIER AND OSCILLATOR—Class C Telegraphy#

and

RF POWER AMPLIFIER—Class C FM Telephony

Maximum Ratings:

	CCS	ICAS	
DC PLATE VOLTAGE.....	500 max	600 max	volts
DC GRID-No.3 VOLTAGE.....	200 max	200 max	volts
DC GRID-No.2 VOLTAGE.....	250 max	250 max	volts
DC GRID-No.1 VOLTAGE.....	-200 max	-200 max	volts
DC PLATE CURRENT.....	60 max	60 max	ma
DC GRID-No.1 CURRENT.....	7.5 max	7.5 max	ma
PLATE INPUT.....	25 max	33 max	watts
GRID-No.3 INPUT.....	2 max	2 max	watts
GRID-No.2 INPUT.....	6 max	6 max	watts
PLATE DISSIPATION.....	10 max	13 max	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode.....	100 max	100 max	volts
Heater positive with respect to cathode.....	100 max	100 max	volts

Typical Operation:■

DC Plate Voltage.....	400	500	500	600	volts
DC Grid-No.3 Voltage.....	0	0	40	40	volts
DC Grid-No.2 Voltage*.....	200	200	250	250	volts
From series resistor of.....	8000	13600	20800	22000	ohms
DC Grid-No.1 Voltage*.....	-100	-100	-100	-120	volts
From grid resistor of.....	14000	17000	50000	50000	ohms
From cathode resistor of.....	1300	1370	1700	1620	ohms
Peak RF Grid-No.1 Voltage.....	155	155	155	165	volts
DC Plate Current.....	45	45	45	55	ma
DC Grid-No.2 Current.....	25	22	12	16	ma
DC Grid-No.1 Current (Approx.).....	7	6	2	2.4	ma
Driving Power (Approx.).....	1.1	0.9	0.25	0.3	watt
Power Output (Approx.).....	10	14	16	23	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.

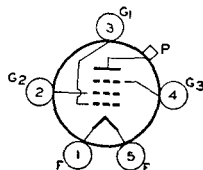
■ Internal shield connected to cathode at socket.

• Obtained preferably from separate source, or from the plate-supply voltage with a voltage divider, or through series resistor. Grid-No.2 voltage must not exceed 500 volts under key-up conditions.

• Obtained from fixed supply, by grid-No.1 resistor, by cathode resistor, or by combination methods.

POWER PENTODE

Thoriated-tungsten-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 60 Mc. Requires Giant five-contact socket and may be mounted in vertical position with base up or down, or in horizontal position with pins 2 and 5 in vertical plane. OUTLINE 57, Outlines Section. Plate shows a barely perceptible red color when tube is operated at maximum CCS ratings. The 803 is used principally for renewal purposes.



803

FILAMENT VOLTAGE (AC/DC).....	10	volts
FILAMENT CURRENT.....	5	amperes
TRANSCONDUCTANCE (For plate current of 62.5 milliamperes).....	4000	μmhos
DIRECT INTERELECTRODE CAPACITANCES:		
Grid No.1 to plate (With external shielding).....	0.15 max	μuf
Grid No.1 to filament, grid No.3, and grid No.2.....	17	μuf
Plate to filament, grid No.3, and grid No.2.....	29	μuf

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and

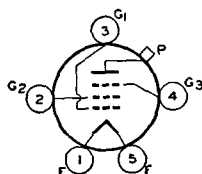
RF POWER AMPLIFIER—Class C FM Telephony

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.

804

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

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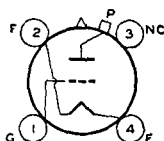
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RF POWER AMPLIFIER—Class C FM Telephony

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