

Typical Operation:

DC Plate Voltage	400	500	600	750	volts
DC Grid-No.2 Voltage*	250	250	250	250	volts
From series resistor of	19000	31000	44000	62000	ohms
DC Grid-No.1 Voltage•	-45	-45	-45	-45	volts
From grid-No.1 resistor of	11200	11200	11200	11200	ohms
From cathode resistor of	400	400	400	400	ohms
Peak RF Grid-No.1 Voltage	65	65	65	65	volts
DC Plate Current	100	100	100	100	ma
DC Grid-No.2 Current	8	8	8	8	ma
DC Grid-No.1 Current (Approx.)	4	4	4	4	ma
Driving Power (Approx.)	0.3	0.3	0.3	0.3	watt
Power Output (Approx.)	25	32	40	54	watts

Maximum Circuit Values (CCS or ICAS conditions):

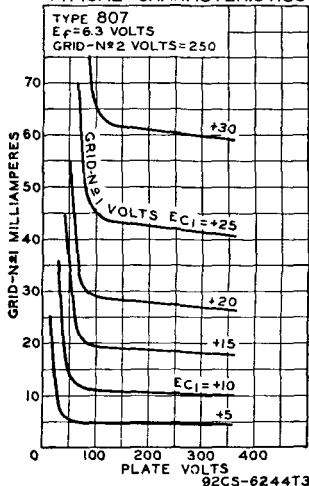
Grid-No.1-Circuit Resistance 30000 max ohms

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.

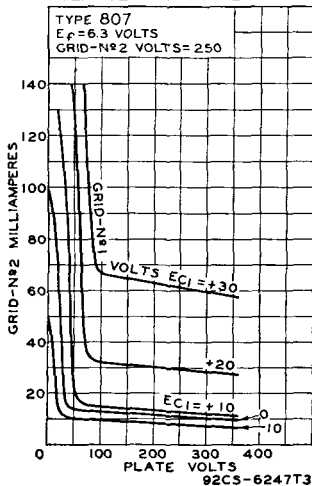
* Obtained preferably from a separate source, from plate-voltage supply with a voltage divider, or through series resistor of value shown. Grid-No.2 voltage must not exceed 400 volts under key-up conditions.

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

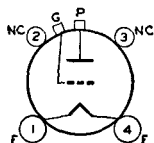
TYPICAL CHARACTERISTICS



AVERAGE CHARACTERISTICS



POWER TRIODE



Thoriated-tungsten-filament type used as rf power amplifier and oscillator. May be used with full input up to 30 Mc and with reduced input up to 130 Mc. Class C Telegraphy maximum plate dissipation, CCS 50 watts, ICAS 75 watts.

808

FILAMENT VOLTAGE (AC/DC)	.5	volts
FILAMENT CURRENT	4.0	amperes
AMPLIFICATION FACTOR	47	
DIRECT INTERELECTRODE CAPACITANCES:		
Grid to plate	2.8	μf
Grid to filament	5.3	μf
Plate to filament	0.25	μf

RCA Transmitting Tubes

RF POWER AMPLIFIER AND OSCILLATOR—Class C Telegraphy#

and

RF POWER AMPLIFIER—Class C FM Telephony

Maximum Ratings:

	CCS	ICAS	
DC PLATE VOLTAGE.....	1500 max	2000 max	volts
DC GRID VOLTAGE.....	-400 max	-400 max	volts
DC PLATE CURRENT.....	150 max	150 max	ma
DC GRID CURRENT.....	35 max	40 max	ma
PLATE INPUT.....	200 max	300 max	watts
PLATE DISSIPATION.....	50 max	75 max	watts

Typical Operation:

	1250	1500	2000	
DC Plate Voltage.....	-150	-150	-150	volts
DC Grid Voltage [‡]	4300	4300	4200	ohms
From grid resistor of.....	880	940	800	ohms
From cathode resistor of.....	290	300	280	volts
Peak RF Grid Voltage.....	135	125	150	ma
DC Plate Current.....	35	35	36	ma
DC Grid Current (Approx.).....	9	9.5	9	watts
Driving Power (Approx.).....	125	140	225	watts
Power Output (Approx.).....				

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.

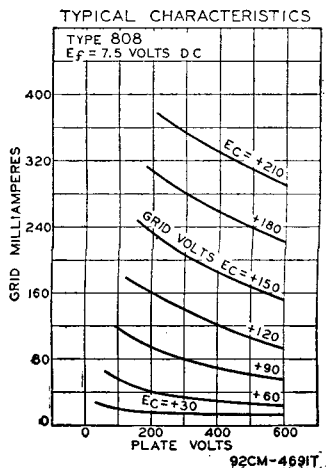
‡ Obtained from fixed supply, by grid resistor, by cathode resistor, or by combination methods.

OPERATING CONSIDERATIONS

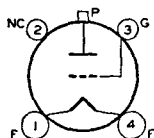
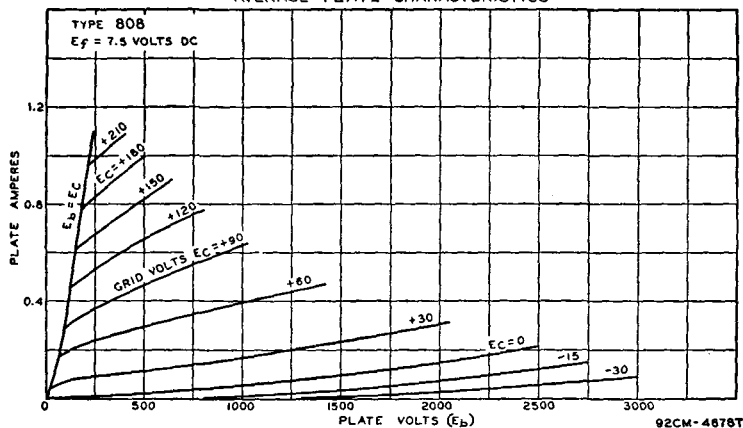
Type 808 requires Small four-contact socket and may be mounted in vertical position only, base down. OUTLINE 32, *Outlines* Section.

For operation at 60 Mc, plate voltage and plate input should be reduced to 75 per cent of maximum ratings; at 130 Mc, to 50 per cent. Plate shows cherry-red color when tube is operated at maximum CCS ratings, and orange-red color at maximum ICAS ratings.

When the 808 is used in the final amplifier or a preceding stage of a transmitter designed for break-in operation and oscillator keying, a small amount of fixed bias must be used to maintain plate current at a safe value. With a plate voltage of 2000 volts, a fixed bias of at least -30 volts should be used.



AVERAGE PLATE CHARACTERISTICS



POWER TRIODE

Thoriated-tungsten-filament type used as rf power amplifier and oscillator. May be used with full input up to 60 Mc and with reduced input up to 120 Mc. Class C Telephony maximum plate dissipation, CCS 25 watts, ICAS 30 watts.

809

FILAMENT VOLTAGE (AC/DC).....	6.3	volts
FILAMENT CURRENT.....	2.5	amperes
AMPLIFICATION FACTOR.....	50	
DIRECT INTERELECTRODE CAPACITANCES:		
Grid to plate.....	6.7	μf
Grid to filament.....	5.7	μf
Plate to filament.....	0.9	μf

RF POWER AMPLIFIER AND OSCILLATOR—Class C Telephony#

and RF POWER AMPLIFIER—Class C FM Telephony

Maximum Ratings:	CCS	ICAS	
DC PLATE VOLTAGE.....	750 max	1000 max	volts
DC GRID VOLTAGE.....	-200 max	-200 max	volts
DC PLATE CURRENT.....	100 max	100 max	ma
DC GRID CURRENT.....	35 max	35 max	ma
PLATE INPUT.....	75 max	100 max	watts
PLATE DISSIPATION.....	25 max	30 max	watts

Typical Operation:

DC Plate Voltage.....	500	750	1000	volts
DC Grid Voltage [‡]	-50	-60	-75	volts
From grid resistor of.....	2500	3000	3000	ohms
From cathode resistor of.....	420	500	600	ohms
Peak RF Grid Voltage.....	135	140	160	volts
DC Plate Current.....	100	100	100	ma
DC Grid Current (Approx.).....	20	20	25	ma
Driving Power (Approx.).....	2.5	2.5	3.8	watts
Power Output (Approx.).....	35	55	75	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.

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