

DIRECT INTERELECTRODE CAPACITANCES:

Grid to plate.....	1.8	μf
Grid to cathode and heater.....	1.9	μf
Plate to cathode and heater.....	0.6	μf

* Plate-supply volts, 80; cathode resistor, 150 ohms; plate milliamperes, 13.

RF POWER AMPLIFIER AND OSCILLATOR—Class C Telegraphy and RF POWER AMPLIFIER—Class C FM Telephony

Maximum CCS Ratings, Design-Center Values:

DC PLATE VOLTAGE.....	150 <i>max</i>	volts
DC PLATE SUPPLY VOLTAGE.....	300 <i>max</i>	volts
DC GRID VOLTAGE.....	-50 <i>max</i>	volts
DC PLATE CURRENT.....	20 <i>max</i>	ma
DC GRID CURRENT.....	8 <i>max</i>	ma
PLATE DISSIPATION.....	2 <i>max</i>	watts
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode.....	80 <i>max</i>	volts
Heater positive with respect to cathode.....	80 <i>max</i>	volts

Typical Operation at Moderate Frequencies:†

DC Plate Voltage.....	150	volts
DC Grid Voltage.....	-15	volts
From a grid resistor of.....	550	ohms
From a cathode resistor of.....	2000	ohms
DC Plate Current.....	20	ma
DC Grid Current (Approx.).....	7.5	ma
Driving Power (Approx.).....	0.2	watt
Power Output (Approx.).....	1.8	watts

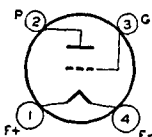
Maximum Circuit Values:

Grid-Circuit Resistance.....	0.5 <i>max</i>	megohm
------------------------------	----------------	--------

† Approximately 45 milliwatts can be obtained when the 6F4 is used at 1200 megacycles per second as an oscillator with 100 volts on plate, maximum rated plate dissipation, and grid resistor of 2000 ohms.

‡ Obtained from fixed supply, grid resistor, cathode resistor, or from a combination of grid resistor with either fixed supply or cathode resistor.

POWER TRIODE

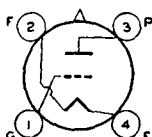


Thoriated-tungsten-filament type used as rf power amplifier and oscillator. May be used with full input up to 8 Mc. Requires Small four-contact socket and may be mounted in vertical position only, base down. OUTLINE 29, *Outlines* Section. Filament volts (ac/dc), 7.5; amperes, 1.25. Direct interelectrode capacitances; grid to plate, 7 μf ; grid to filament, 4 μf ; plate to filament, 3 μf . Maximum CCS ratings as RF

10-Y

POWER AMPLIFIER AND OSCILLATOR, CLASS C TELEGRAPHY: dc plate volts, 450 *max*; dc grid volts, -200 *max*; dc plate milliamperes, 60 *max*; dc grid milliamperes, 15 *max*; plate input, 27 *max* watts; plate dissipation, 15 *max* watts. Characteristics as CLASS A₁ AMPLIFIER: plate volts, 425; grid volts, -35; amplification factor, 8; plate resistance (approx.), 5000 ohms; transconductance, 1600 μmhos . Plate shows no color when tube is operated at maximum CCS ratings. The 10-Y is used principally for renewal purposes.

POWER TRIODE



Thoriated-tungsten-filament type used as af power amplifier and modulator and rf power amplifier and oscillator. May be used with full input up to 15 Mc and with reduced input up to 80 Mc. Requires Jumbo four-contact socket and may be mounted in vertical position only, base down. Maximum over-all length, 7-7/8 inches; maximum diameter, 2-5/16 inches. Filament volts (ac/dc), 10; amperes, 3.25. Direct

203-A

interelectrode capacitances: grid to plate, 14 μf ; grid to filament, 5.7 μf ; plate to filament, 4.4 μf . Maximum CCS ratings as RF POWER AMPLIFIER AND OSCILLATOR, CLASS C TELEGRAPHY: dc plate volts, 1250 *max*; dc grid volts, -400 *max*; dc plate milliamperes, 175 *max*; dc grid milliamperes, 60 *max*; plate input, 220 *max* watts; plate dissipation, 100 *max* watts. Plate shows no color when

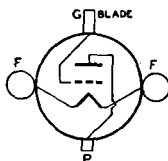
tube is operated at maximum CCS ratings. The 203-A is a DISCONTINUED type listed for reference only. As a replacement, the 8005 is a similar type although not directly interchangeable because of either electrical and/or mechanical differences.

POWER TRIODE

204-A

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 3 Mc and with reduced input up to 30 Mc. Requires special end-mounting and may be mounted in vertical position with filament end up, or in horizontal position with plane of plate in vertical plane. Maximum overall length, 14 $\frac{3}{4}$ inches; maximum diameter,

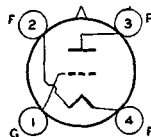
4-1/16 inches. Filament volts (ac/dc), 11; amperes, 3.85. Direct interelectrode capacitances: grid to plate, 15 μ f; grid to filament, 12.5 μ f; plate to filament, 2.3 μ f. Maximum CCS ratings as RF POWER AMPLIFIER AND OSCILLATOR, CLASS C TELEGRAPHY: dc plate volts, 2500 max; dc grid volts, -500 max; dc plate milliamperes, 275 max; dc grid milliamperes, 80 max; rf grid amperes, 10 max; plate input, 690 max watts; plate dissipation, 250 max watts. Plate shows a barely perceptible red color when tube is operated at maximum CCS ratings. The 204-A is a DISCONTINUED type listed for reference only.



POWER TRIODE

211

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 15 Mc and with reduced input up to 80 Mc. Requires Jumbo four-contact socket and may be mounted in vertical position, base down, or in horizontal position with pins 1 and 3 in vertical plane. OUTLINE 49, Outlines Section. Plate shows a barely perceptible red



color when tube is operated at maximum CCS ratings. The 211 is used principally for renewal purposes.

FILAMENT VOLTAGE (AC/DC).....	10	volts
FILAMENT CURRENT.....	3.25	amperes
AMPLIFICATION FACTOR.....	12	
DIRECT INTERELECTRODE CAPACITANCES:		
Grid to plate.....	14	μ f
Grid to filament.....	5.4	μ f
Plate to filament.....	4.8	μ f

	Class B Modulator	Class C Telegraphy#	
Maximum CCS Ratings:			
DC PLATE VOLTAGE.....	1250 max	1250 max	volts
DC GRID VOLTAGE.....	—	-400 max	volts
DC PLATE CURRENT.....	175 $\blacksquare$ max	175 max	ma
DC GRID CURRENT.....	—	50 max	ma
PLATE INPUT.....	220 $\blacksquare$ max	220 max	watts
PLATE DISSIPATION.....	100 $\blacksquare$ max	100 max	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.

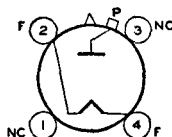
• For maximum-signal conditions.

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

HALF-WAVE VACUUM RECTIFIER

217-C

Thoriated-tungsten-filament type used in power supply of transmitting and industrial equipment. Requires Jumbo four-contact socket and may be mounted in vertical position, base down, or in horizontal position with pins 1 and 3 in vertical plane. OUTLINE 51, Outlines Section. Filament volts (ac), 10; amperes, 3.25.



Maximum ratings: peak inverse plate volts, 7500 max; peak plate amperes, 0.6 max; average plate amperes, 0.15 max. The 217-C is used principally for renewal purposes.