

FEDERAL POWER TRIODE Type F-9C23 25 Kilowatts Plate Dissipation



GENERAL DATA

DESCRIPTION:

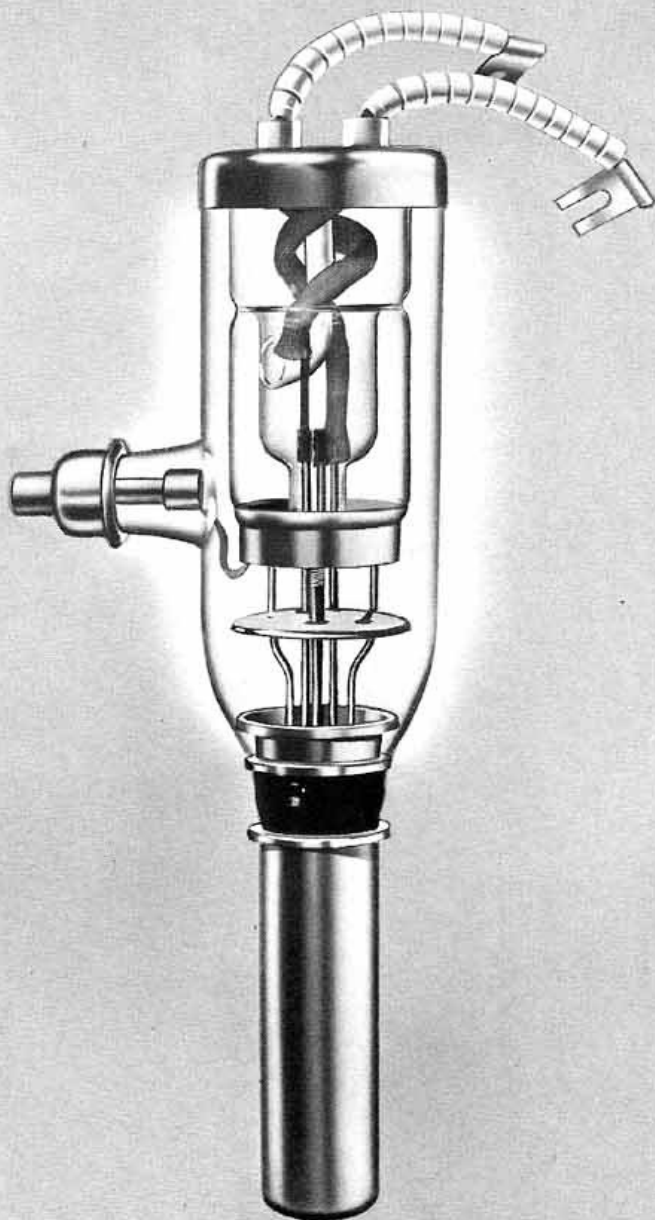
Federal's Type F-9C23 is a three-electrode tube designed for use as a radio-frequency amplifier or oscillator. It is ruggedly constructed to meet the severe conditions of radio-frequency heating service. The anode is water-cooled, capable of dissipating 25 kilowatts. The cathode is a pure tungsten filament. Maximum ratings apply up to 20 megacycles.

Electrical:

▶ Filament Voltage	22 Volts
▶ Filament Current	82 Amperes
▶ Filament Starting Current	164 Amperes
▶ Amplification Factor, at $E_c = -300$ Volts $I_b = 0.75$ Amperes	32
▶ Interelectrode Capacitances	
Grid-Plate	24 $\mu\mu\text{f}$
Grid-Filament	22 $\mu\mu\text{f}$
Plate-Filament	5 $\mu\mu\text{f}$

Mechanical:

▶ Mounting Position— Vertical, Anode down	
▶ Type of Cooling—Water	
Minimum Flow on Anode	10 GPM
Maximum Outgoing Water Temperature	70° C
Maximum Glass Temperature	150° C
▶ Net Weight, Approximate	4 Pounds



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Precision craftsmanship was initiated by Federal in the earliest days of tube manufacture, and has been maintained ever since.

Maximum Ratings and Typical Operating Conditions

RADIO-FREQUENCY POWER AMPLIFIER AND OSCILLATOR—CLASS C TELEGRAPHY

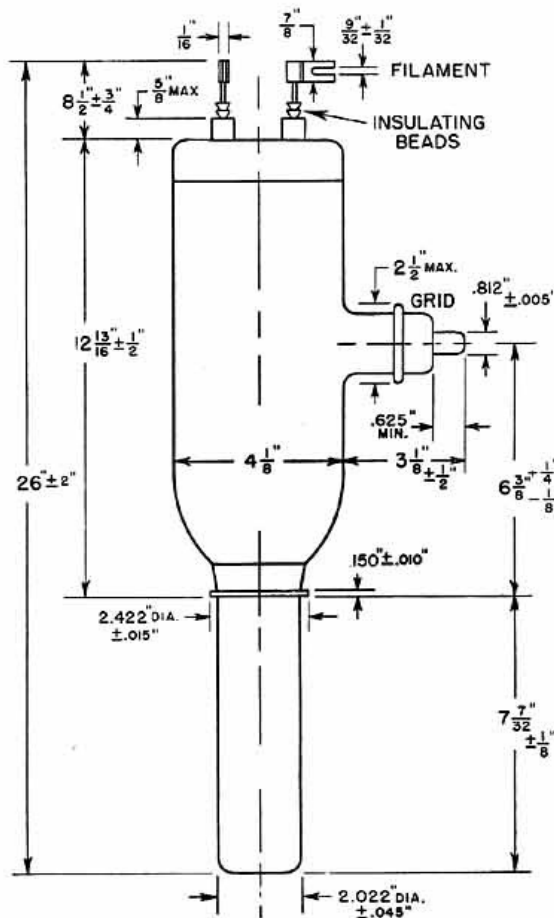
(Key down conditions per tube without modulation)

Maximum Ratings, Absolute Values

DC Plate Voltage	15,000 Volts
DC Grid Voltage	—3,000 Volts
DC Plate Current	4.0 Amperes
DC Grid Current	0.5 Amperes
Plate Input	50 Kilowatts
Plate Dissipation	25 Kilowatts

Typical Operation

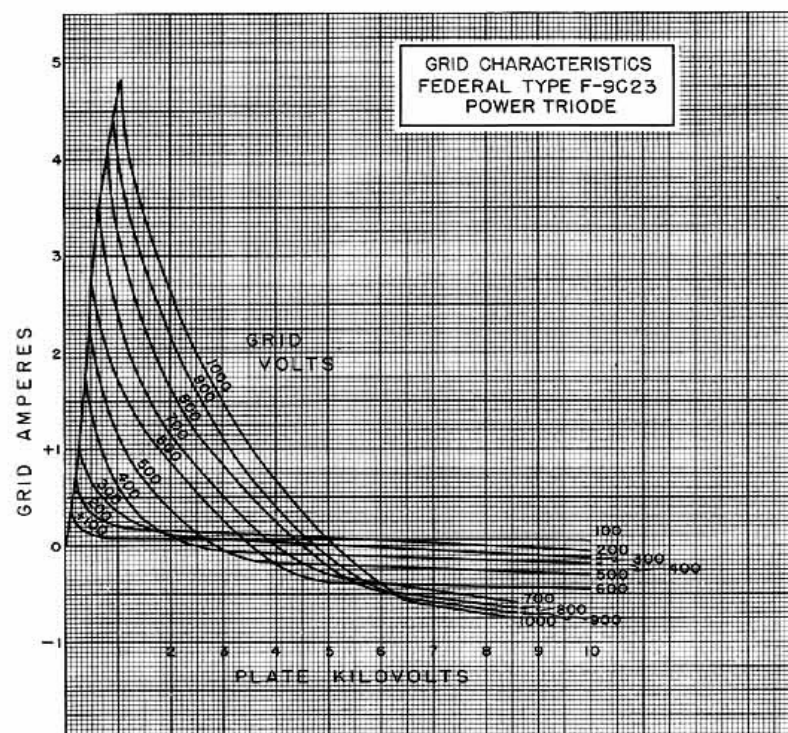
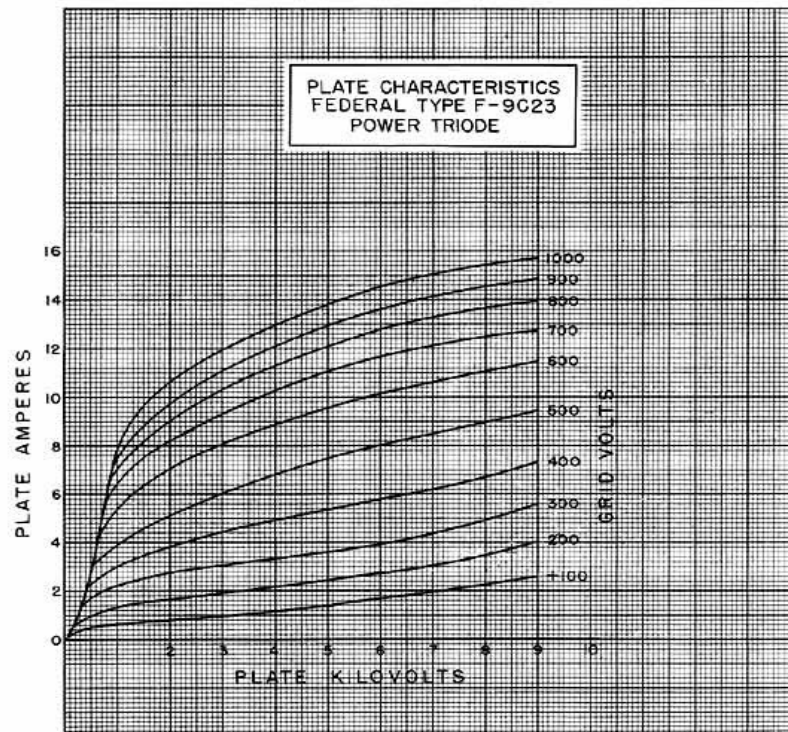
DC Plate Voltage	11,000	15,000 Volts
DC Grid Voltage	—1,000	—1,200 Volts
Peak R-F Grid Voltage	1,630	2,420 Volts
DC Plate Current	3.5	3.2 Amperes
DC Grid Current, Approx.	0.4	0.4 Amperes
Power Output, Approx.	26	36 Kilowatts



OUTLINE
F-9C23

Federal's name on a tube signifies the best in design, engineering, materials, components and craftsmanship.

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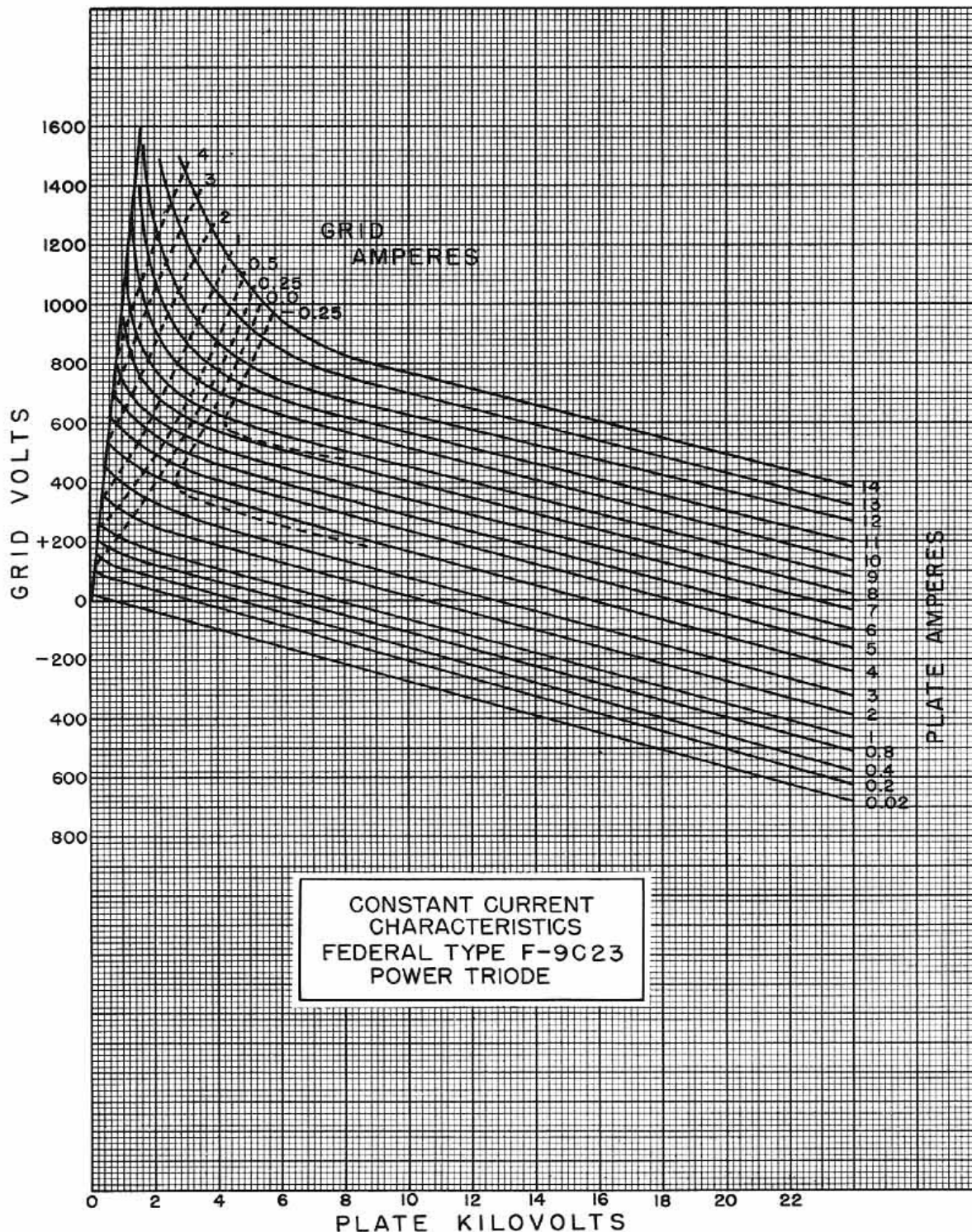


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Federal tubes have always been known for their *plus* values: an extra rugged construction, a longer life of service.



Federal Telephone and Radio Company

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