

FEDERAL POWER TRIODE

Type F-128-A

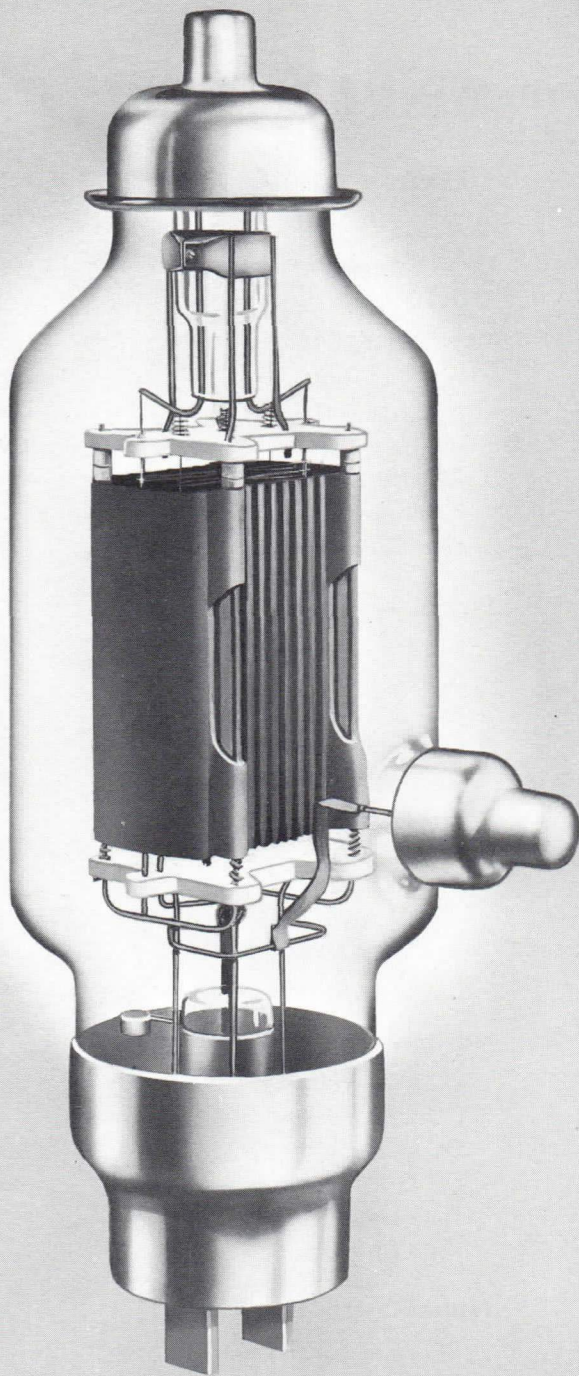
600 Watts Plate Dissipation



GENERAL DATA

DESCRIPTION:

Federal's F-128-A is a three-electrode tube designed for use as a modulator, R-F, amplifier, and oscillator. The anode, radiation-cooled, is capable of dissipating 600 watts. The cathode is a thoriated tungsten filament. Maximum ratings apply up to 30 megacycles.



Electrical:

► Filament Voltage	11 Volts
► Filament Current	13 Amperes
► Amplification Factor, at $I_b = 0.200$ amps. $E_b = 2,800$ volts	36
► Interelectrode Capacitances	
Grid-Plate	15.5 $\mu\mu f$
Grid-Filament	12.0 $\mu\mu f$
Plate-Filament	4.5 $\mu\mu f$

Mechanical:

► Mounting Position—	
Vertical, Base Down	
► Type of Cooling—Radiation	
► Net Weight, approximate	2 Pounds

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Federal's engineers are ready to consult with you on the application of Federal tubes to your designs. Write, phone or wire to arrange your conference date.

Maximum Ratings and Typical Operating Conditions

AUDIO-FREQUENCY POWER AMPLIFIER AND MODULATOR—CLASS B

Maximum Ratings, Absolute Values

DC Plate Voltage	3,500 Volts
Maximum Signal DC Plate Current†	0.600 Ampere
Maximum Signal Plate Input†	1.8 Kilowatts
Plate Dissipation†	600 Watts

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

Typical Operation

(Unless otherwise specified, values are for two tubes)

DC Plate Voltage	3,000 Volts
DC Grid Voltage	—80 Volts
Peak A-F Grid Voltage	250 Volts
Zero Signal DC Plate Current	0.100 Ampere
Maximum Signal DC Plate Current	1.2 Amperes
Load Resistance, Plate to Plate	3,600 Ohms
Maximum Signal Driving Power, approx.	20 Watts
Maximum Signal Power Output, approx.	2.4 Kilowatts

RADIO-FREQUENCY POWER AMPLIFIER—CLASS B

(Carrier conditions per tube for use with a maximum modulation factor of 1.0)

Maximum Ratings, Absolute Values

DC Plate Voltage	3,500 Volts
DC Plate Current	0.5 Ampere
Plate Input	900 Watts
Plate Dissipation	600 Watts

Typical Operation

DC Plate Voltage	3,000 Volts
DC Grid Voltage	—85 Volts
Peak R-F Grid Voltage	117 Volts
DC Plate Current	0.292 Ampere
DC Grid Current, approx.	0 Ampere
Driving Power, approx.‡	6.3 Watts
Power Output, approx.	303 Watts

‡At crest of audio-frequency cycle with modulation factor of 1.0

PLATE-MODULATED RADIO-FREQUENCY POWER AMPLIFIER—CLASS C TELEPHONY

(Carrier conditions per tube for use with a maximum modulation factor of 1.0)

Maximum Ratings, Absolute Values

DC Plate Voltage	3,000 Volts
DC Grid Voltage	—600 Volts
DC Plate Current	0.700 Ampere
DC Grid Current	0.150 Ampere
Plate Input	1.8 Kilowatts
Plate Dissipation	600 Watts

Typical Operation

DC Plate Voltage	3,000 Volts
DC Grid Voltage	—300 Volts
Peak R-F Grid Voltage	500 Volts
DC Plate Current	0.511 Ampere
DC Grid Current, approx.	0.038 Ampere
Driving Power, Approx.	20 Watts
Power Output, approx.	1.15 Kilowatts

RADIO-FREQUENCY POWER AMPLIFIER AND OSCILLATOR—CLASS C TELEGRAPHY

(Key-down conditions per tube without amplitude modulation)¶

Maximum Ratings, Absolute Values

DC Plate Voltage	3,500 Volts
DC Grid Voltage	—600 Volts
DC Plate Current	1 Ampere
DC Grid Current	0.175 Amperes
Plate Input	3 Kilowatts
Plate Dissipation	700 Watts

Typical Operation

DC Plate Voltage	3,500 Volts
DC Grid Voltage	—400 Volts
Peak R-F Grid Voltage	680 Volts
DC Plate Current	0.854 Amperes
DC Grid Current, approx.	0.107 Ampere
Driving Power, approx.	70 Watts
Power Output, approx.	2.4 Kilowatts

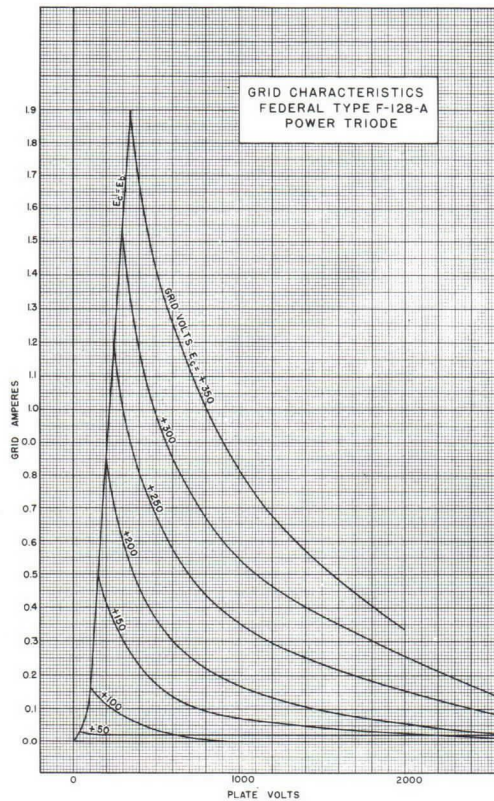
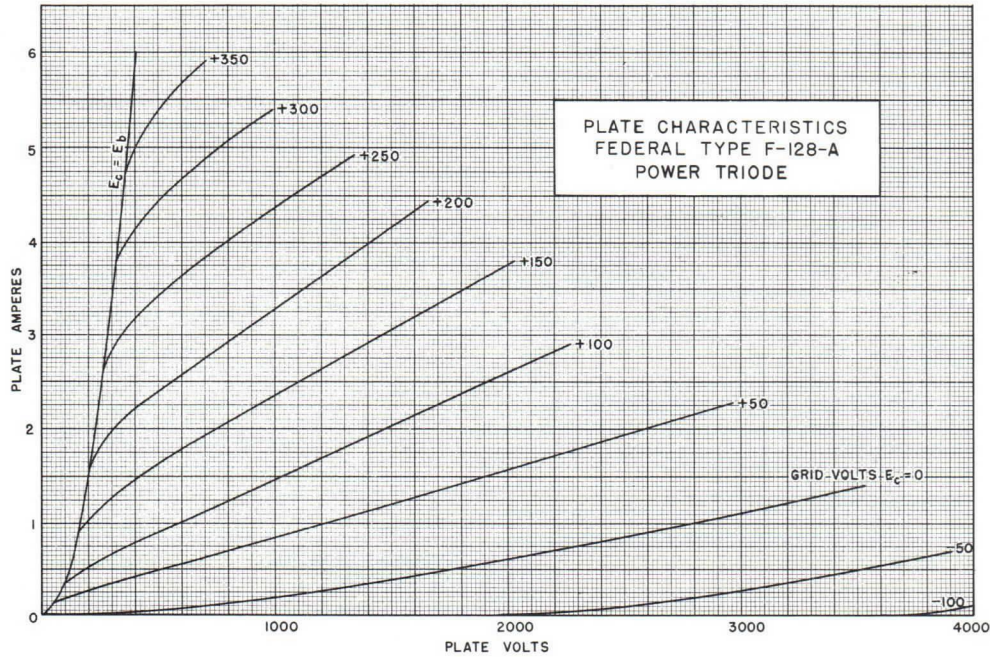
¶Modulation essentially negative may be used if the positive peak of the envelope does not exceed 115 per cent of carrier conditions.

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

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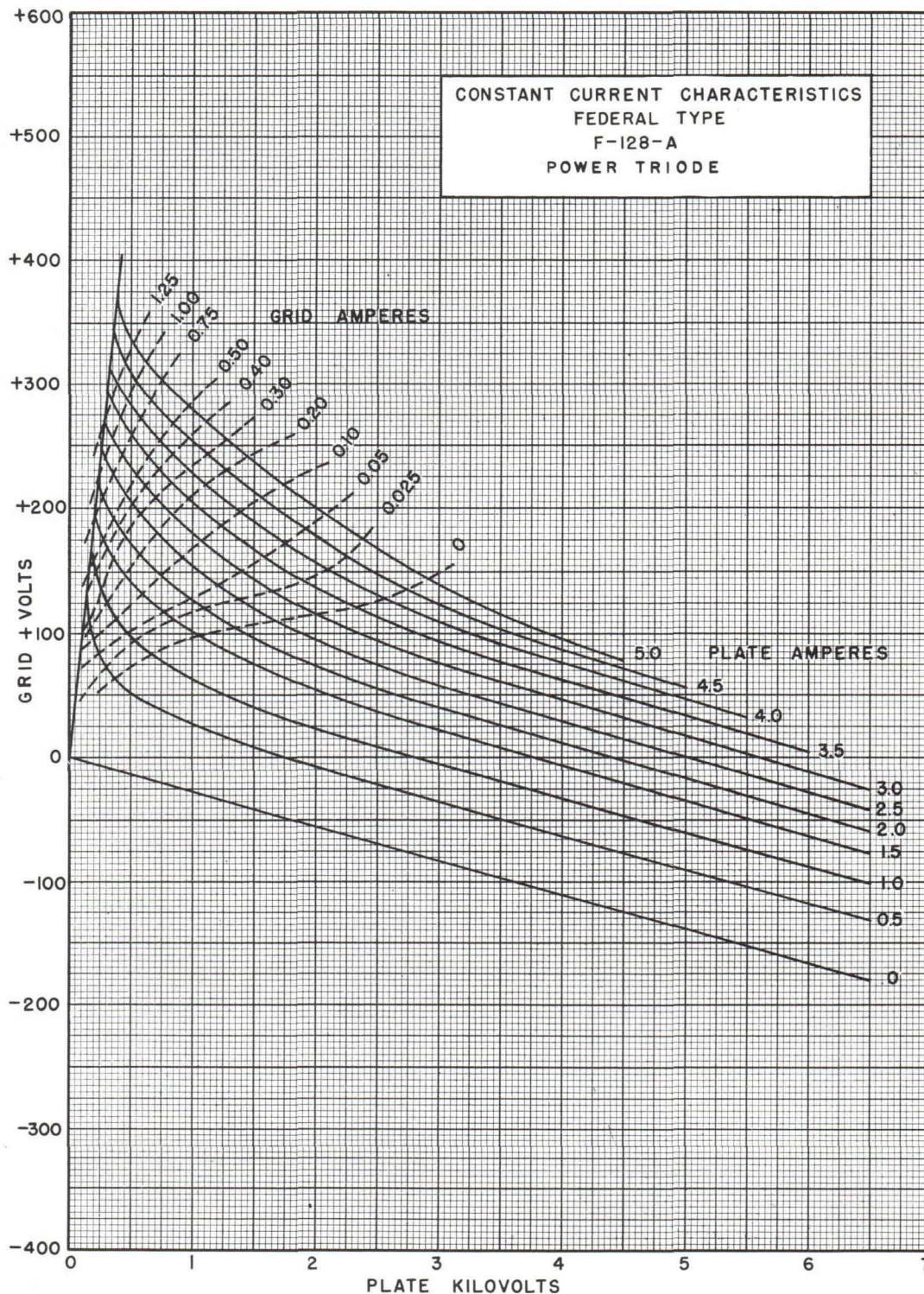
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Federal's longer tube life means lower costs. Increase the life of the tubes in your equipment, and unit costs per hour go down.



Federal produces tubes of only the
highest quality, satisfying the most
exacting users.

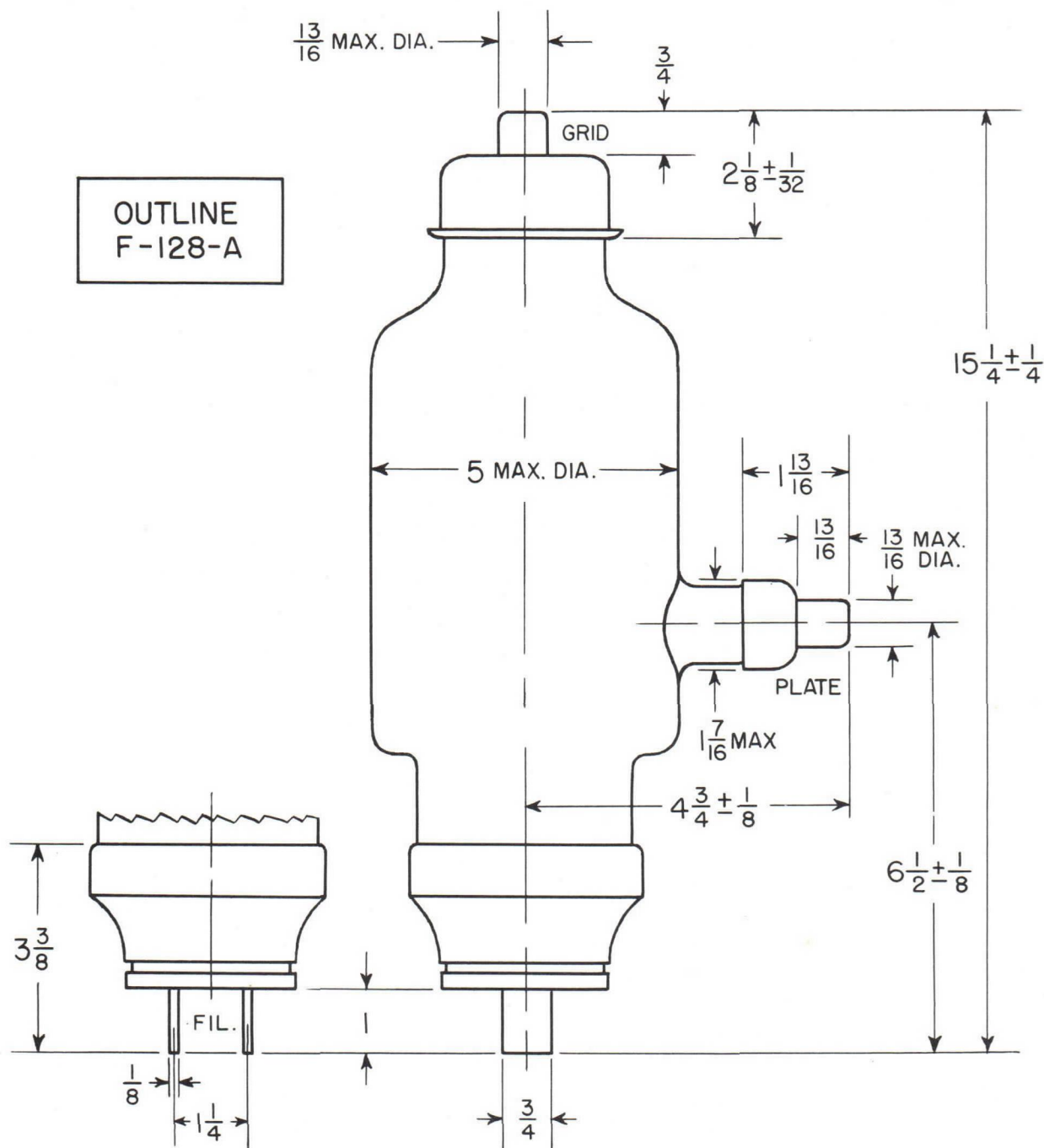
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OUTLINE
F-128-A





**Federal Always Has
Made Better Tubes**