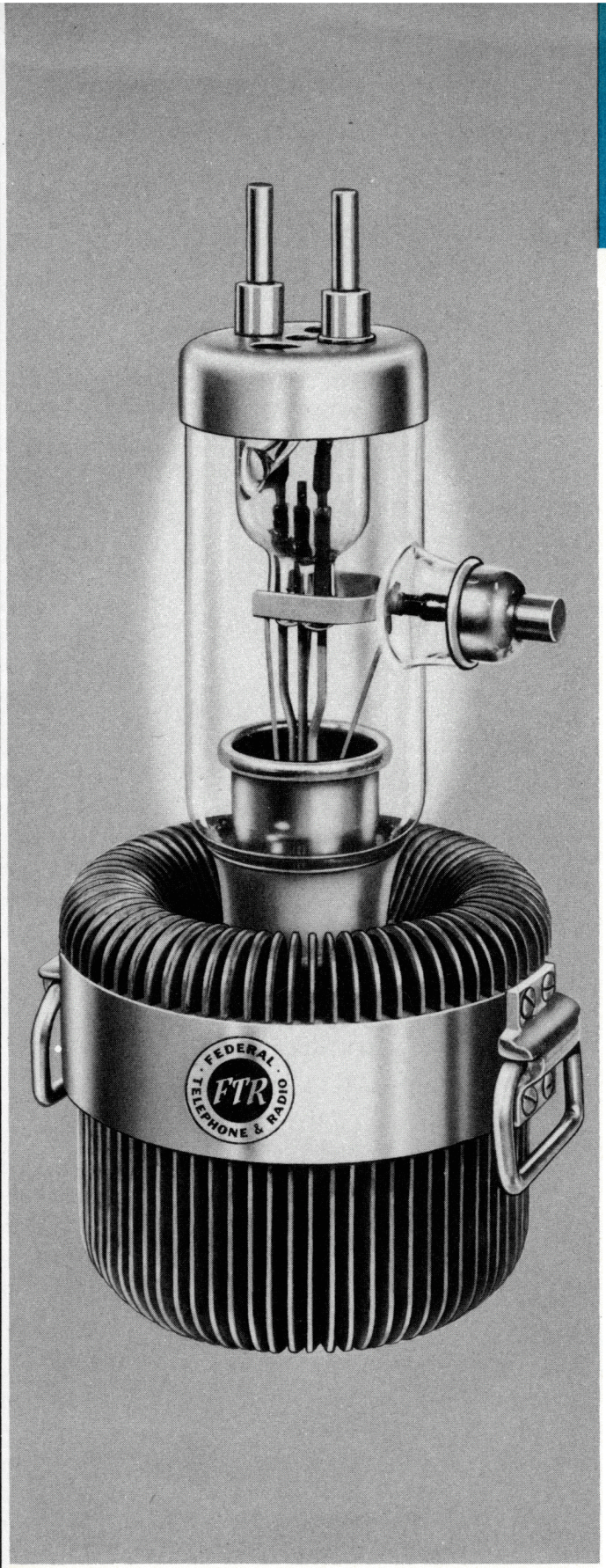
FEDERAL POWER TRIODE
Type F-129-R
5 Kilowatts Plate Dissipation



The longer life in Federal tubes means lower operating costs.

GENERAL DATA

DESCRIPTION:

The F-129-R by Federal is a three-electrode tube designed for use as a radio-frequency power amplifier, oscillator, or Class B modulator. The anode is forced-air-cooled, capable of dissipating 5 kilowatts. The cathode is a pure tungsten filament. Maximum ratings apply up to 30 megacycles.

Electrical:

Filament Voltage	18 Volts
Filament Current	58 Amperes
Filament Starting Current	115 Amperes Max.
Filament Cold Resistance	.024 Ohms
Peak Cathode Current	9.5 Amperes
Amplification Factor	
$I_b = 0.8$ Amp.; $E_c = -100$ Volts	26
Interelectrode Capacitances	
Grid-Plate	13.0 $\mu\mu$f
Grid-Filament	12.7 $\mu\mu$f
Plate-Filament	2.2 $\mu\mu$f

Mechanical:

Mounting Position—Vertical, Anode Down			
Type of Cooling—Forced Air			
Maximum Incoming Air Temperature			45° C
Required Air Flow on Anode			
Plate Dissipation—Kilowatts	5	4	3
Air Flow—CFM	800	575	400
Static Pressure—Inches Water	2.5	1.3	0.62
Maximum Glass Temperature			150° C
Net Weight, approx.			22 Pounds

FEDERAL POWER TRIODE
Type F-129-R
5 Kilowatts Plate Dissipation

In *satisfying* the customer and winning his confidence, Federal has reduced tube selling to a formula.

Maximum Ratings and Typical Operating Conditions

AUDIO-FREQUENCY POWER AMPLIFIER AND MODULATOR—CLASS B

Maximum Ratings

DC Plate Voltage	12,000 Volts
Maximum Signal DC Plate Current†	2 Amperes
Maximum Signal Plate Input†	16 Kilowatts
Plate Dissipation†	5 Kilowatts

Typical Operation

(Unless otherwise specified, values are for two tubes)

DC Plate Voltage	10,000 Volts
DC Grid Voltage	—350 Volts
Peak A-F Grid to Grid Voltage	700 Volts
Zero Signal DC Plate Current	0.3 Amperes
Maximum Signal DC Plate Current	1.15 Amperes
Effective Load Resistance, Plate to Plate	20,000 Ohms
Maximum Signal Driving Power, approximate	100 Watts
Maximum Signal Power Output, approximate	8 Kilowatts

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

RADIO-FREQUENCY POWER AMPLIFIER —CLASS B TELEPHONY

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

Maximum Ratings

DC Plate Voltage	12,000 Volts
DC Plate Current	1 Ampere
Plate Input	7.5 Kilowatts
Plate Dissipation	5 Kilowatts

Typical Operation

DC Plate Voltage	10,000 Volts
DC Grid Voltage	—300 Volts
Peak R-F Grid Voltage	460 Volts
DC Plate Current	0.7 Amperes
Driving Power, approximate‡	90 Watts
Power Output, approximate	2.3 Kilowatts

‡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

DC Plate Voltage	10,000 Volts
DC Grid Voltage	—1,500 Volts
DC Plate Current	1 Ampere
DC Grid Current	0.25 Ampere
Plate Input	9 Kilowatts
Plate Dissipation	3 Kilowatts

Typical Operation

DC Plate Voltage	8,000 Volts
DC Grid Voltage	—920 Volts
Peak R-F Grid Voltage	1,500 Volts
DC Plate Current	0.82 Amperes
DC Grid Current, approximate	0.097 Amperes
Driving Power, approximate	140 Watts
Power Output, approximate	5.3 Kilowatts

RADIO-FREQUENCY POWER AMPLIFIER AND OSCILLATOR—CLASS C TELEGRAPHY

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

Maximum Ratings

DC Plate Voltage	12,000 Volts
DC Grid Voltage	—1,500 Volts
DC Plate Current	2 Amperes
DC Grid Current	0.25 Amperes
Plate Input	18 Kilowatts
Plate Dissipation	5 Kilowatts

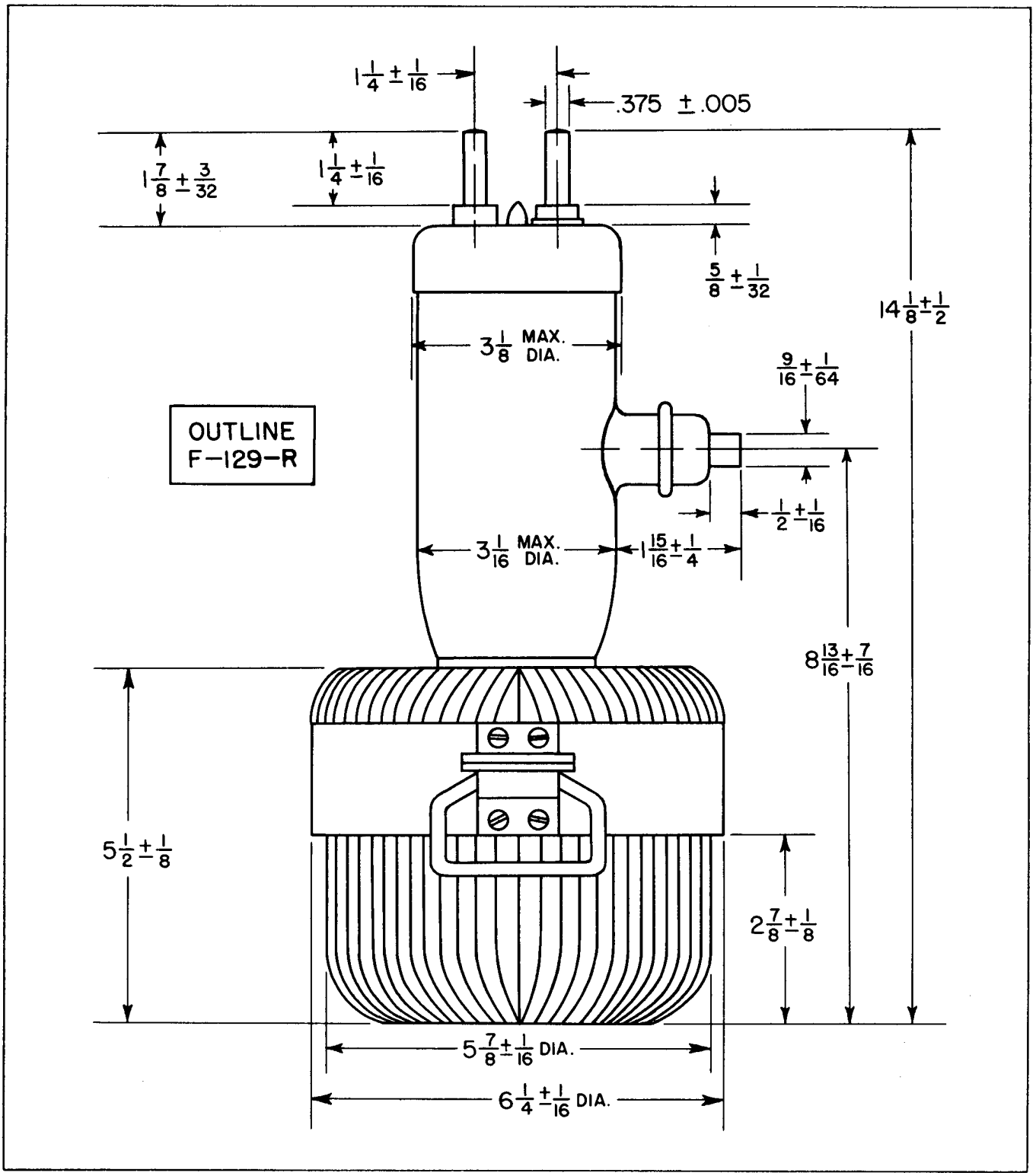
Typical Operation

DC Plate Voltage	12,000 Volts
DC Grid Voltage	—1,300 Volts
Peak R-F Grid Voltage	2,200 Volts
DC Plate Current	1.42 Amperes
DC Grid Current, approximate	0.11 Amperes
Driving Power, approximate	230 Watts
Power Output, approximate	12 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 longer tube life means lower costs. Increase the life of the tubes in your equipment, and unit costs per hour go down.

FEDERAL POWER TRIODE
Type F-129-R
5 Kilowatts Plate Dissipation



Federal Telephone and Radio Corporation
100 Kingsland Road Clifton, New Jersey

Federal Always Has
Made Better Tubes

Form FJ-197 Printed in U. S. A.