

FEDERAL POWER TRIODE

Type F-6367

3 Kilowatts Plate Dissipation



GENERAL DATA

DESCRIPTION:

Federal's Type F-6367 is a three-electrode tube designed for use as a modulator, amplifier and oscillator. The relatively wide spacing between the elements, and the lack of internal insulators make this type tube especially suitable for industrial applications. The anode is air-cooled, capable of dissipating 3 kilowatts. The cathode is a thoriated tungsten filament. Maximum ratings apply up to 30 megacycles. Operation up to 50 megacycles is permissible at reduced ratings.

Electrical:

► Filament Voltage	13.0 Volts
► Filament Current	36 Amperes
► Amplification Factor, $E_c = -200 \text{ V}, I_b = 0.2 \text{ A}$	25
► Interelectrode Capacitances	
Grid-Plate	14.7 μmf
Grid-Filament	14.5 μmf
Plate-Filament	1.7 μmf

Mechanical:

► Mounting Position —	Vertical
► Type of Cooling — Forced Air	
Maximum Incoming	
Air Temperature	45° C
► Required Air Flow on Anode	
Plate Dissipation	
(Kilowatts)	3 2.4 1.8
Air Flow — Cubic	
Feet Per Min.	190 125 75
Pressure — Inches	
Water	1.21 0.58 0.26
Maximum Glass	
Temperature	150° C
► Net Weight,	
Approximate	5 1/4 Pounds

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Maximum Ratings vs. Operating Frequency

Frequency	30	50 Megacycles
Percentage of Maximum Rated Plate Voltage and Plate Input		
Class C — Telegraphy	100	75 Per Cent

Maximum Ratings and Typical Operating Conditions

AUDIO-FREQUENCY POWER AMPLIFIER AND MODULATOR — CLASS B

Maximum Ratings, Absolute Values

DC Plate Voltage	6,200 Volts
Maximum Signal DC Plate Current*	2.0 Amperes
Maximum Signal Plate Input*	6.0 Kilowatts
Plate Dissipation*	3 Kilowatts

Typical Operation

(Unless otherwise specified, values are for two tubes)

DC Plate Voltage	5,000 Volts
DC Grid Voltage	— 150 Volts
Peak A-F Grid-to-Grid Voltage	1,260 Volts
Zero Signal DC Plate Current	0.4 Amperes
Maximum Signal DC Plate Current	2.25 Amperes
Effective Load Resistance, Plate to Plate	4,000 Ohms
Maximum Signal Driving Power, Approximate	175 Watts
Maximum Signal Power Output, Approximate	7.2 Kilowatts

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

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	6,200 Volts
DC Plate Current	1.5 Amperes
Plate Input	4.5 Kilowatts
Plate Dissipation	3 Kilowatts

Typical Operation

DC Plate Voltage	6,000 Volts
DC Grid Voltage	— 160 Volts
Peak R-F Grid Voltage	300 Volts
DC Plate Current	0.56 Amperes
DC Grid Current, Approximate	0.0 Amperes
Driving Power, Approximate**	47 Watts
Power Output, Approximate	1 Kilowatt

**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	5,000 Volts
DC Grid Voltage	— 1,500 Volts
DC Plate Current	1.5 Amperes
DC Grid Current	0.2 Amperes
Plate Input	7.5 Kilowatts
Plate Dissipation	2 Kilowatts

Typical Operation

DC Plate Voltage	5,000 Volts
DC Grid Voltage	— 800 Volts
Peak R-F Grid Voltage	1,370 Volts
DC Plate Current	0.74 Amperes
DC Grid Current, Approximate	0.10 Amperes
Driving Power, Approximate	130 Watts
Power Output, Approximate	2.7 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	6,200 Volts
DC Grid Voltage	— 1,500 Volts
DC Plate Current	2.0 Amperes
DC Grid Current	0.2 Amperes
Plate Input	12 Kilowatts
Plate Dissipation	3 Kilowatts

Typical Operation

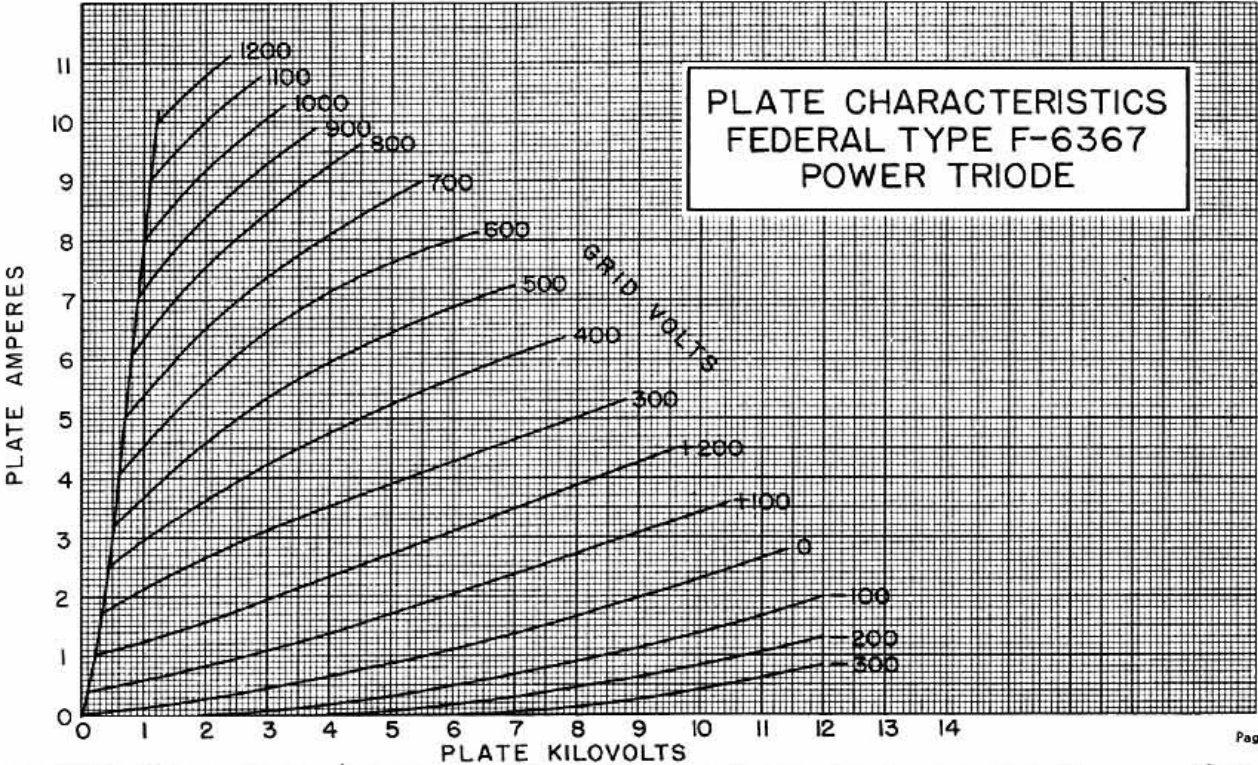
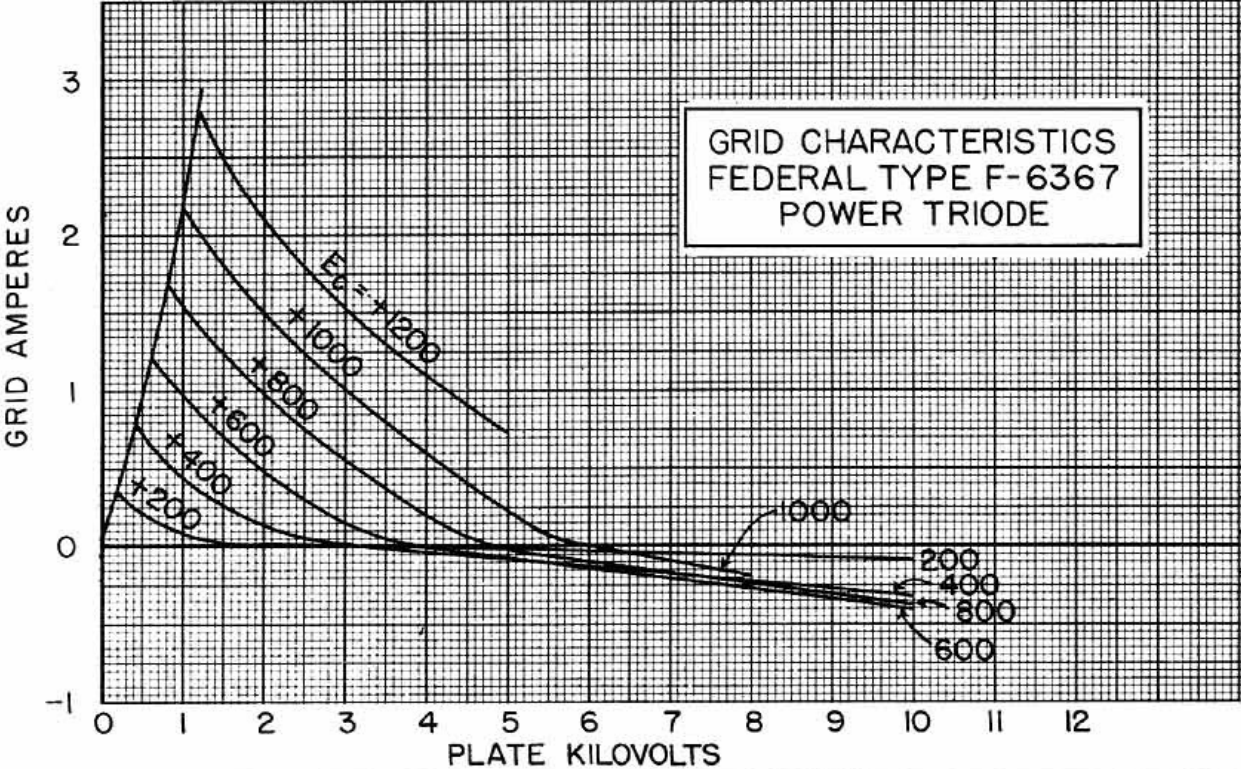
DC Plate Voltage	6,000 Volts
DC Grid Voltage	— 800 Volts
Peak R-F Grid Voltage	1,510 Volts
DC Plate Current	1.4 Amperes
DC Grid Current, Approximate	0.16 Amperes
Driving Power, Approximate	225 Watts
Power Output, Approximate	6 Kilowatts

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



High efficiency radiator allows
reduced blower cost in new
equipment design.

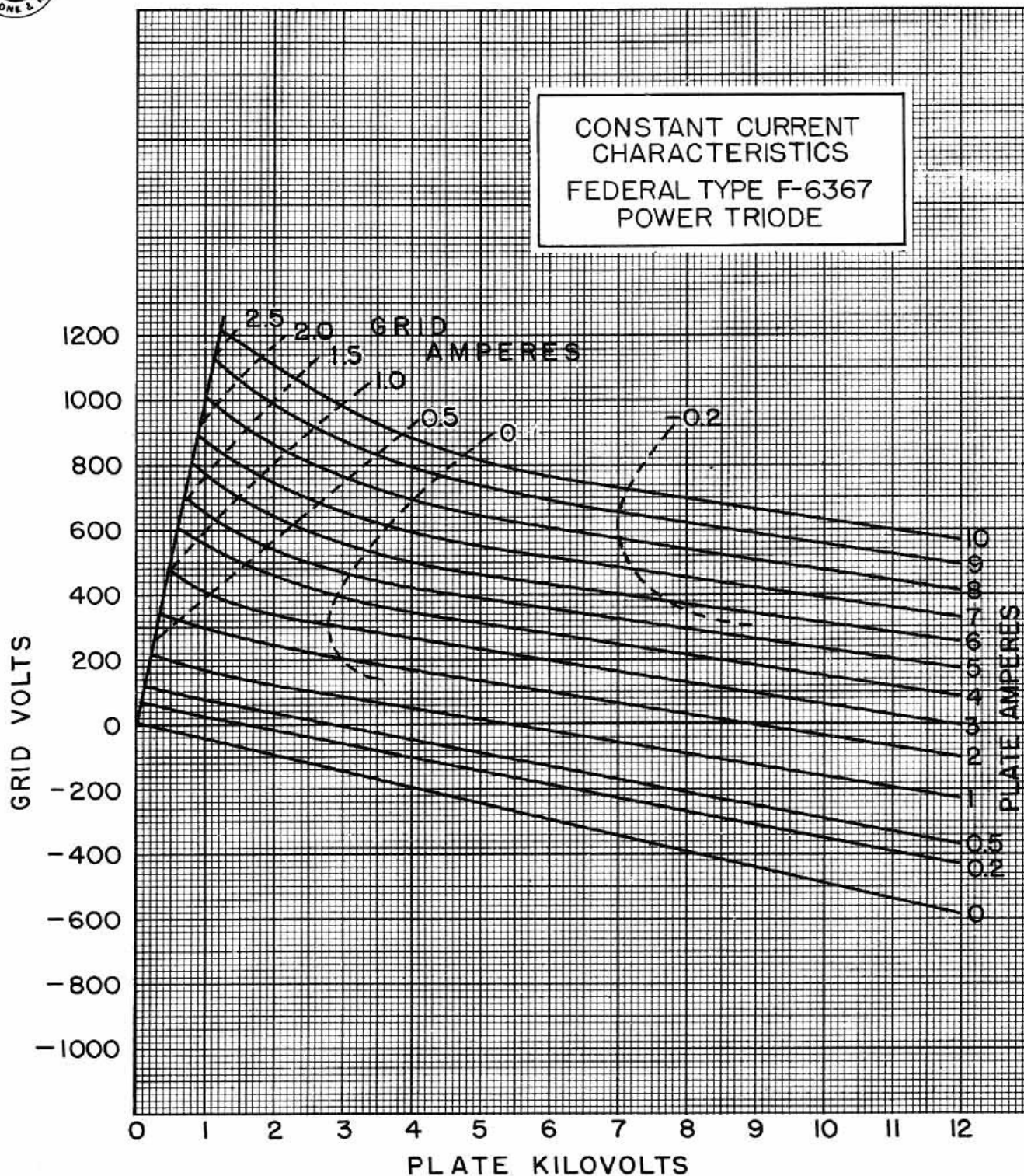
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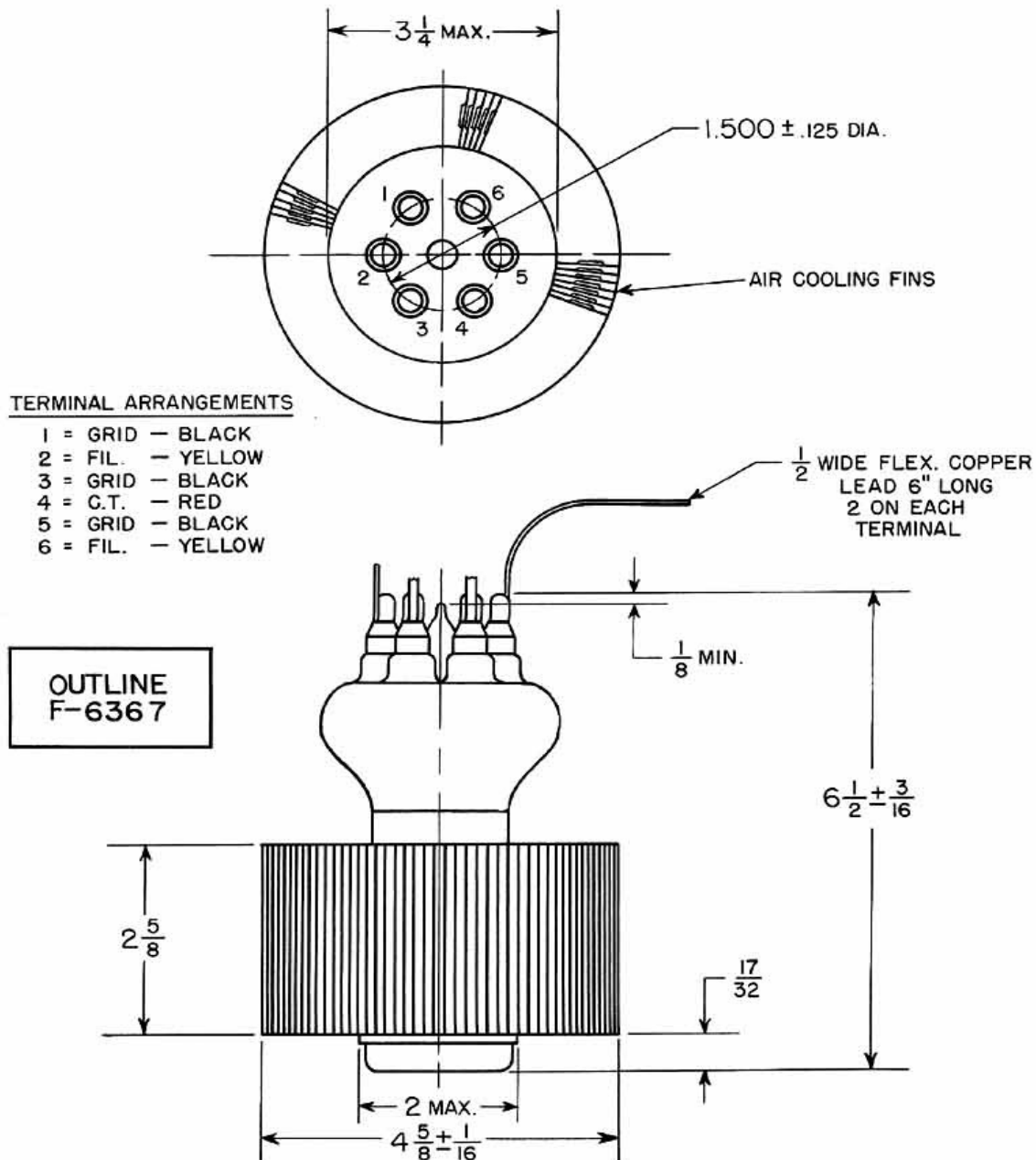


**Grid and Filament leads attached
for convenience of equipment
designers.**



Kovar grid and filament seals
and Helical type filament con-
tribute to rugged tube design.

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