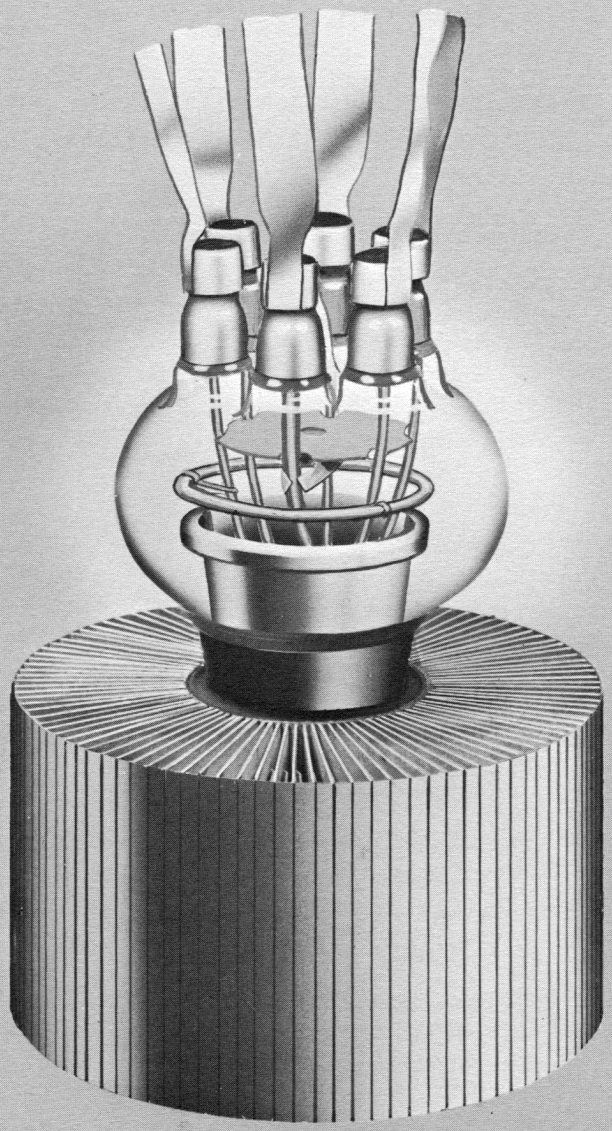
# FEDERAL POWER TRIODE
# Type F-6367
## 3 Kilowatts Plate Dissipation



## 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, Ec = — 200 V, Ib = 0.2A | 25 |
| ▶ Interelectrode Capacitances | |
| Grid-Plate | 14.7 $\mu\mu$f |
| Grid-Filament | 14.5 $\mu\mu$f |
| Plate-Filament | 1.7 $\mu\mu$f |

**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 | | | 5¼ 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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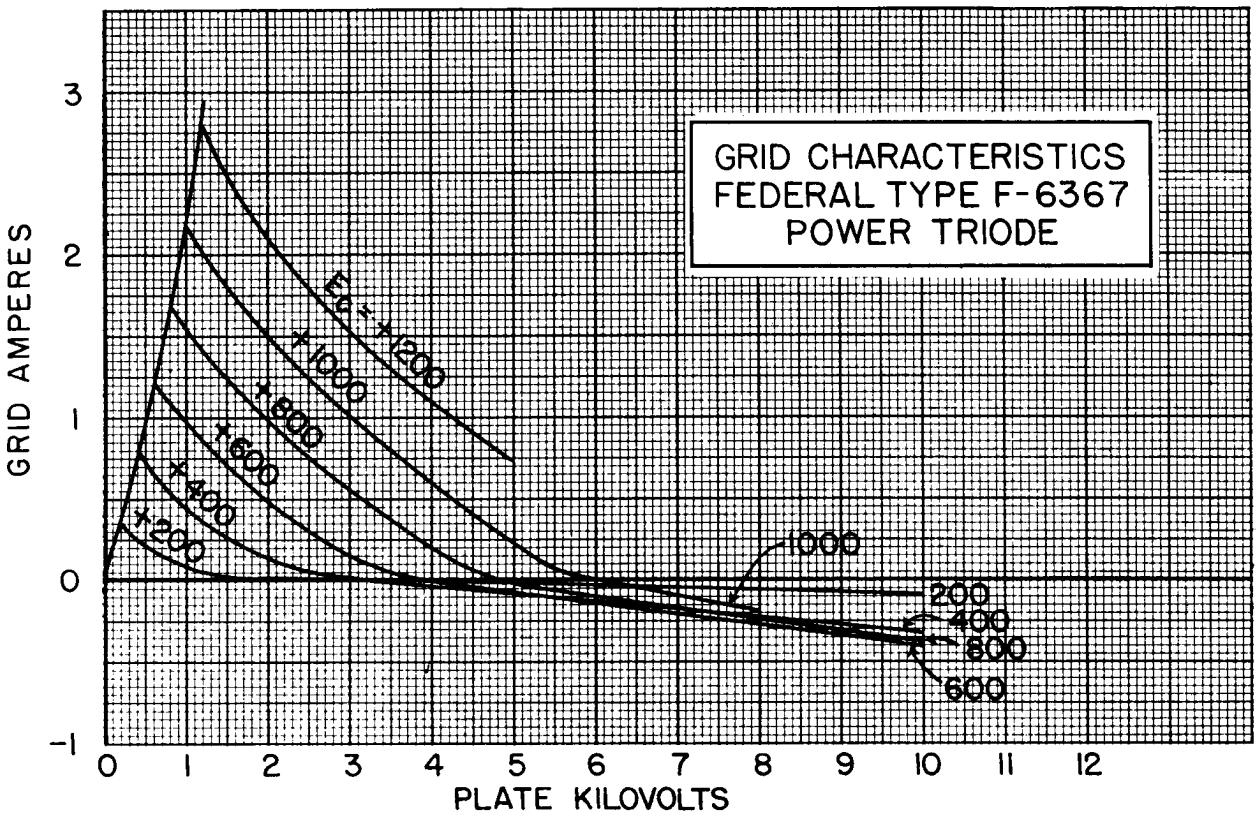


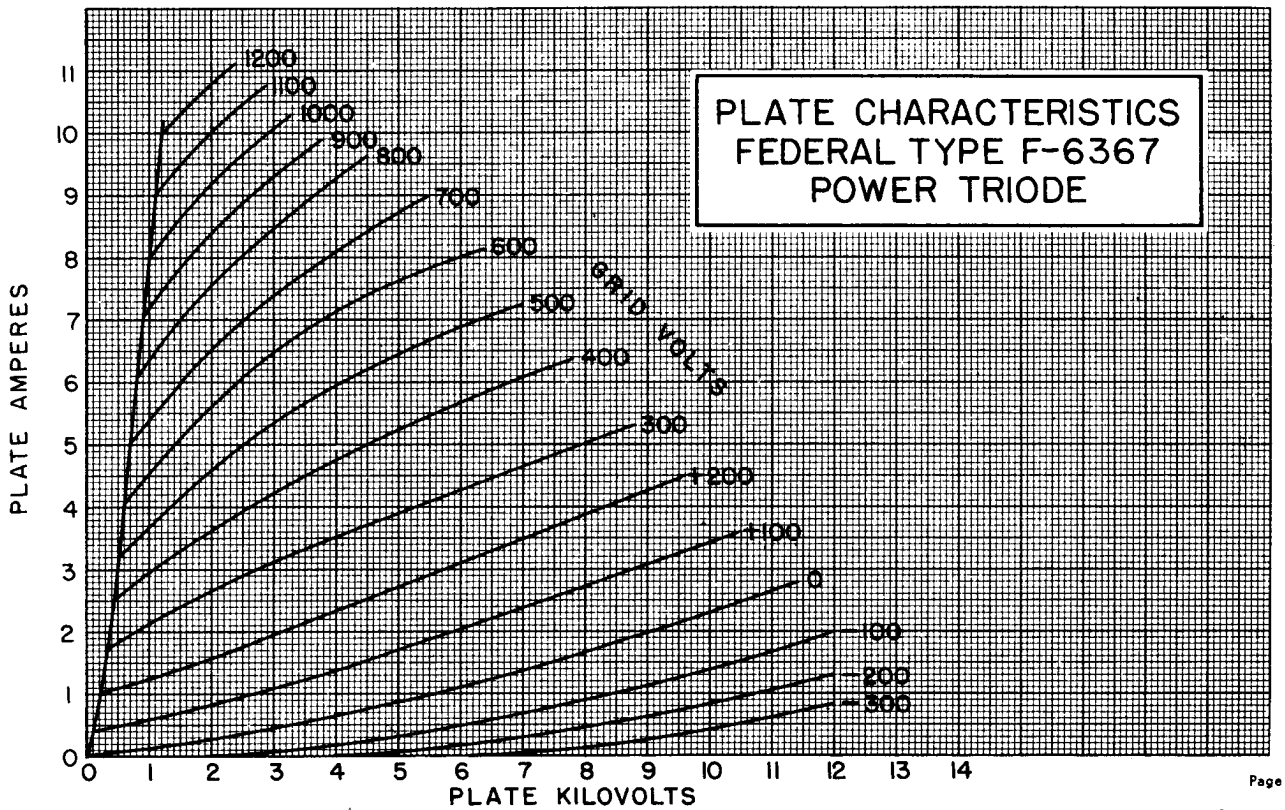

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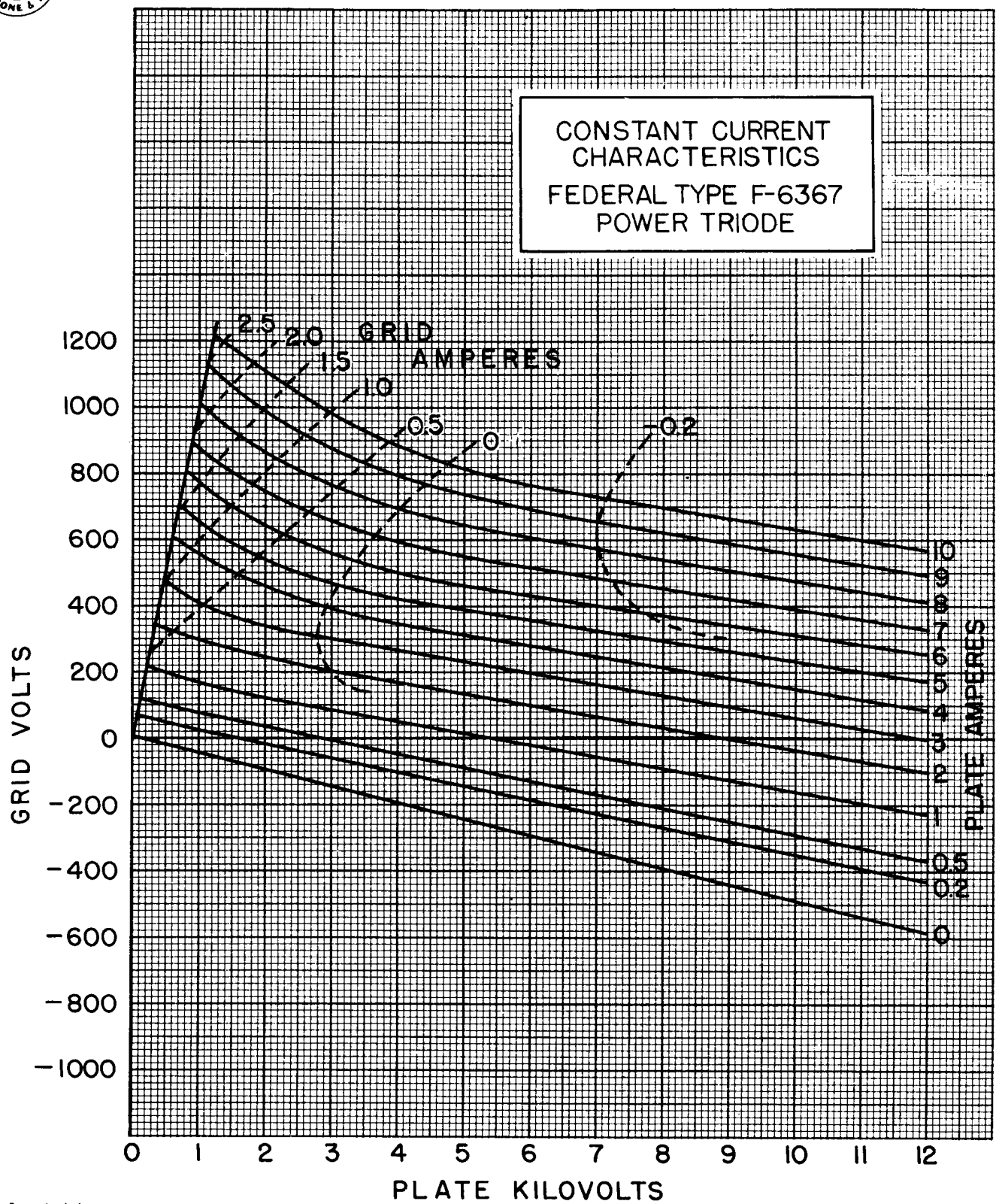
**Grid and Filament leads attached for convenience of equipment designers.**



**Kovar grid and filament seals and Helical type filament contribute to rugged tube design.**

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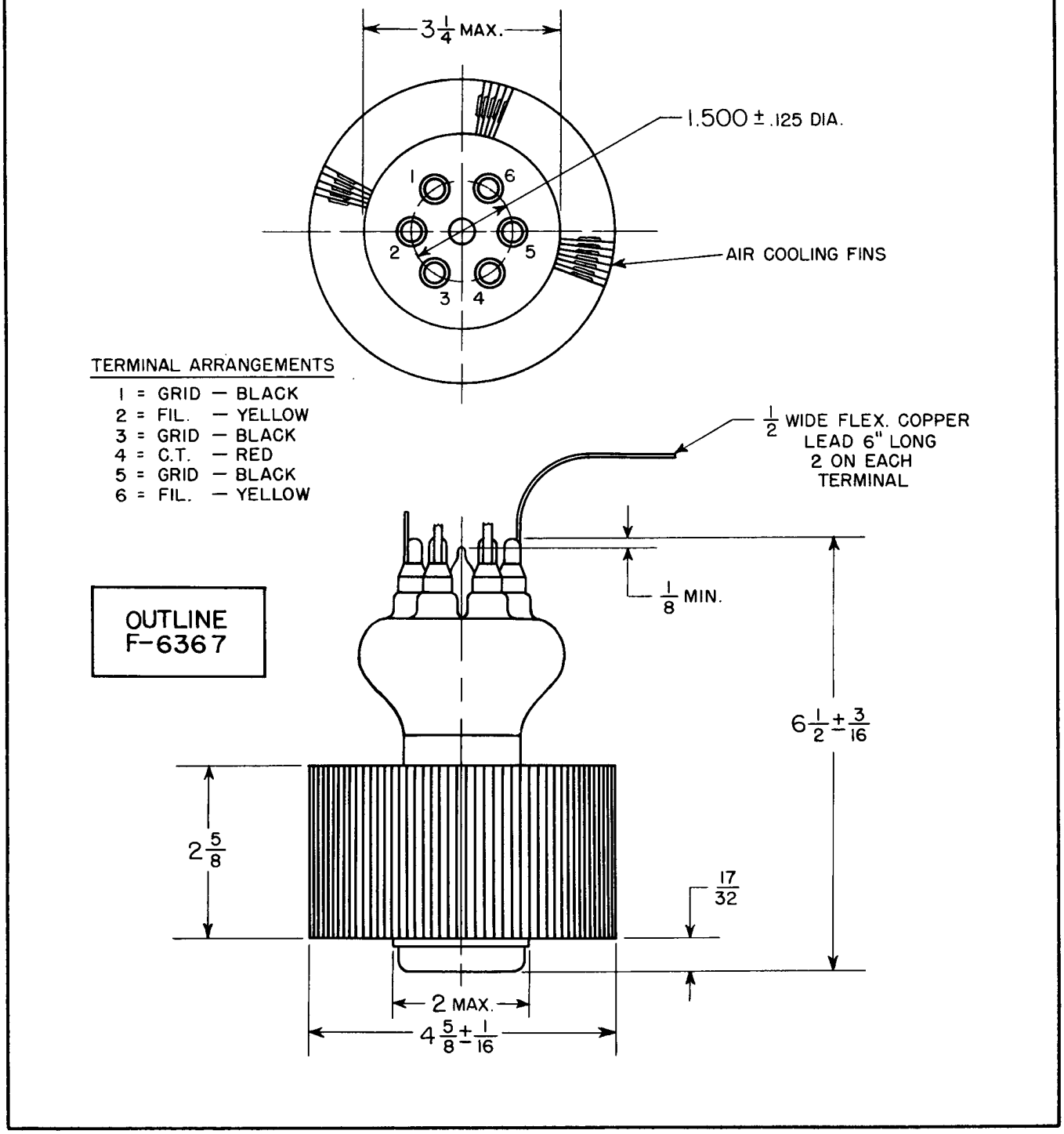




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***Federal Always Has***
***Made Better Tubes***

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