

# FEDERAL POWER TRIODE

## Type F-6179

50 Kilowatts Plate Dissipation



### GENERAL DATA

#### DESCRIPTION:

The F-6179 is a three-electrode tube designed for use as a modulator. The anode is water-cooled and capable of dissipating 50 kilowatts. The cathode is a pure tungsten filament. Maximum ratings apply for audio-frequency use only.

#### Electrical:

|                                                                              |                      |
|------------------------------------------------------------------------------|----------------------|
| ► Filament Voltage                                                           | 27.2 Volts           |
| ► Filament Current                                                           | 196.5 Amperes        |
| ► Filament Starting Current                                                  | 300 Amperes          |
| ► Filament Cold Resistance                                                   | .015 Ohms            |
| ► Amplification Factor, at<br>$E_c = -1,600 \text{ V}$ $I_b = 3.0 \text{ A}$ | 4.75                 |
| ► Interelectrode Capacitances                                                |                      |
| Grid-Plate                                                                   | 61 $\mu\mu\text{f}$  |
| Grid-Filament                                                                | 63 $\mu\mu\text{f}$  |
| Plate-Filament                                                               | 0.6 $\mu\mu\text{f}$ |

#### Mechanical:

|                                              |         |
|----------------------------------------------|---------|
| ► Mounting Position—<br>Vertical, Anode Down |         |
| ► Type of Cooling—Water                      |         |
| Water Flow on Anode                          | 20 GPM  |
| Maximum Outgoing<br>Water Temperature        | 70° C   |
| Maximum Glass Temperature                    | 150° C  |
| ► Net Weight, approximate                    | 10 Lbs. |



# FEDERAL POWER TRIODE Type F-6179 50 Kilowatts Plate Dissipation



Federal always has made *first-quality* tubes, and the record goes back for more than 40 years.

## Maximum Ratings and Typical Operating Conditions

### AUDIO-FREQUENCY POWER AMPLIFIER AND MODULATOR—CLASS AB<sub>1</sub>

#### Maximum Ratings, Absolute Values

|                                  |               |
|----------------------------------|---------------|
| DC Plate Voltage                 | 15,000 Volts  |
| Maximum Signal DC Plate Current† | 10 Amperes    |
| Maximum Signal Plate Input†      | 120 Kilowatts |
| Plate Dissipation†               | 50 Kilowatts  |

#### Typical Operation

(Unless otherwise specified, values are for two tubes)

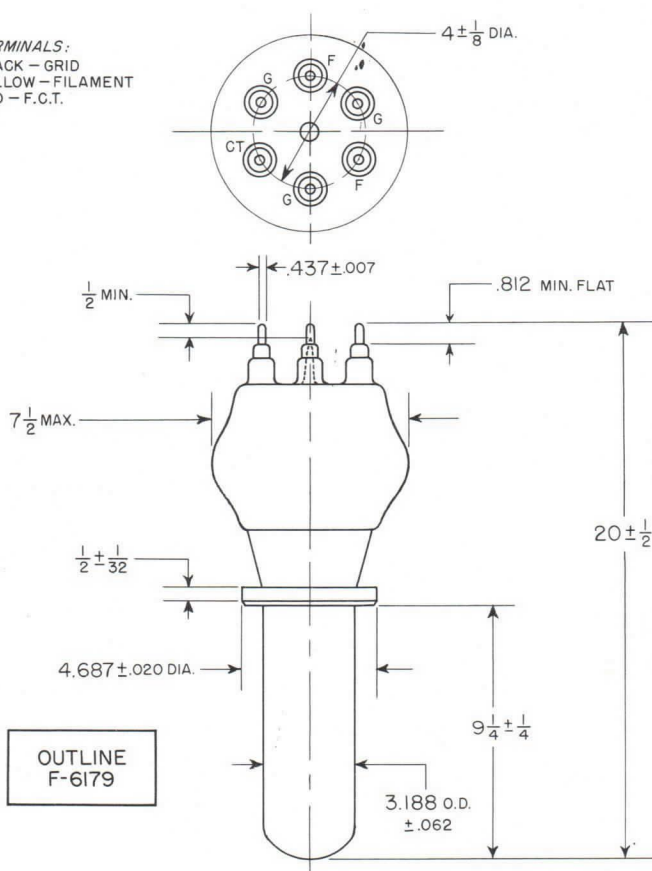
|                  |              |
|------------------|--------------|
| DC Plate Voltage | 12,000 Volts |
| DC Grid Voltage  | —2,600 Volts |

|                                 |              |
|---------------------------------|--------------|
| Peak A-F Grid to Grid Voltage   | 5,160 Volts  |
| Zero Signal DC Plate Current    | 1.8 Amperes  |
| Maximum Signal DC Plate Current | 5.3 Amperes  |
| Effective Load Resistance       |              |
| Plate to Plate                  | 5,000 Ohms   |
| Maximum Signal Driving Power    | 0 Watts      |
| Maximum Signal Power Output     | 40 Kilowatts |

For Characteristic Curves refer to Federal Type F-125-A.

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

TERMINALS:  
BLACK — GRID  
YELLOW — FILAMENT  
RED — F.C.T.



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