

FEDERAL POWER TRIODE Type F-5874 7.5 Kilowatts Plate Dissipation



GENERAL DATA

DESCRIPTION:

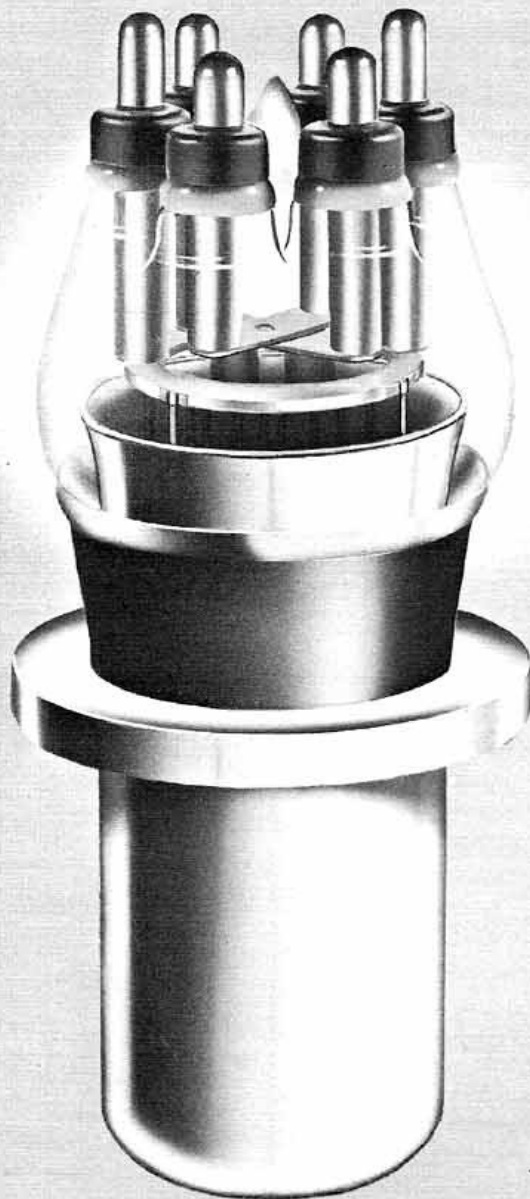
Federal's Type F-5874 is a three electrode tube designed for use as a modulator. The anode is water cooled and capable of dissipating 7.5 kilowatts. The cathode is a thoriated tungsten filament. Maximum ratings apply for audio frequency use only.

Electrical:

► Filament Voltage	7 Volts
► Filament Current	110 Amperes
► Filament Starting Current	165 Amperes
► Filament Cold Resistance	0.010 Ohms
► Amplification Factor, at $E_c = -200 \text{ V}; I_b = 1.0 \text{ A}$	6
► Interelectrode Capacitances	
Grid-Plate	38
Grid-Filament	43
Plate-Filament	12

Mechanical:

► Mounting Position— Vertical, Anode Down	
► Type of Cooling—Water	
► Water Flow on Anode	5 GPM
► Maximum Outgoing Water Temperature	70° C
► Maximum Glass Temperature	150° C



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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 AB₁

Maximum Ratings, Absolute Values

DC Plate Voltage	6,000 Volts
Maximum Signal DC Plate Current†	2.5 Amperes
Maximum Signal Plate Input†	15 Kilowatts
Plate Dissipation†	7.5 Kilowatts

Typical Operation

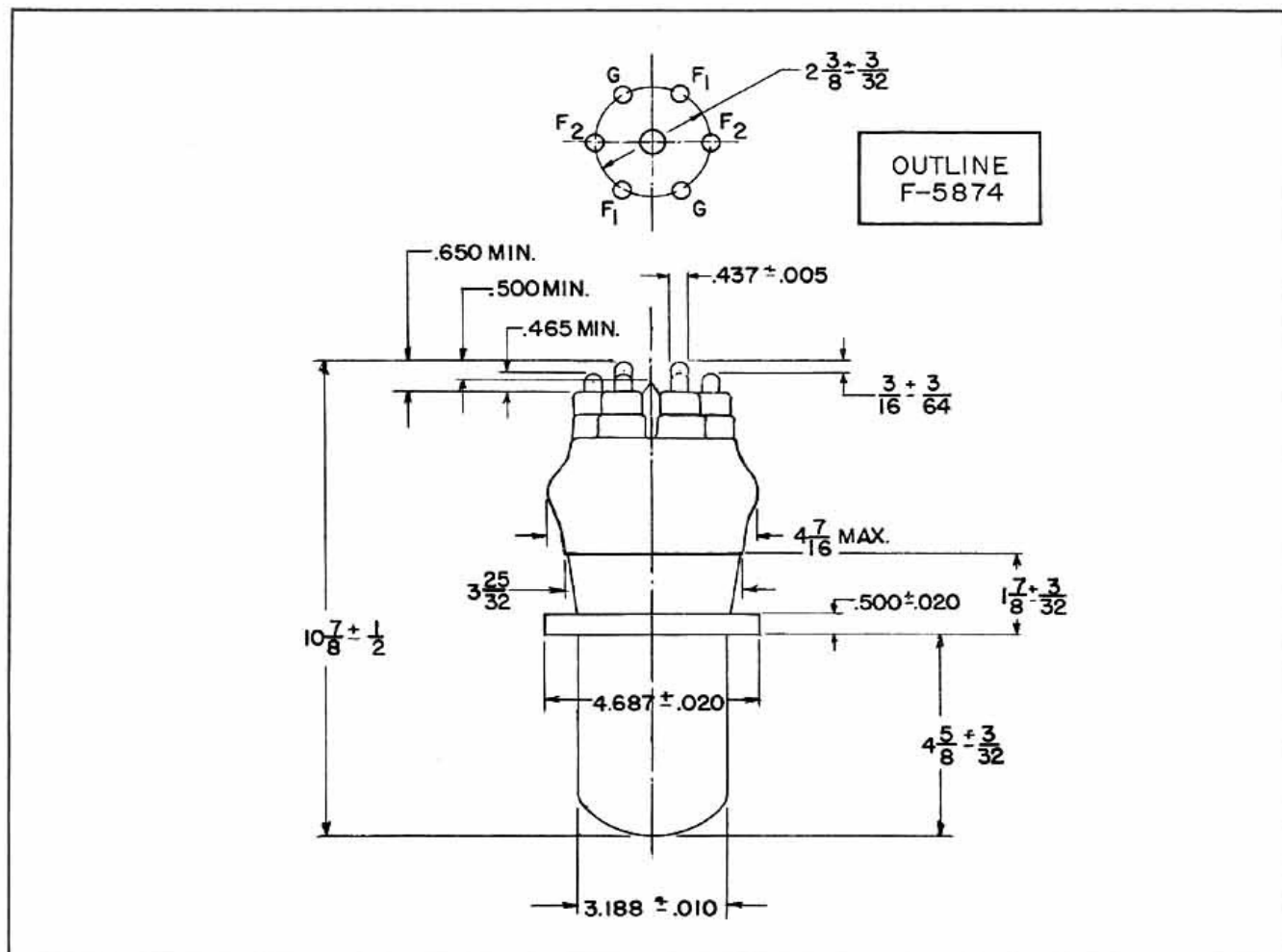
(Unless otherwise specified, values are for two tubes)

DC Plate Voltage	3,750	5,000 Volts
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†Averaged over any A-F cycle of sine-wave form.

DC Grid Voltage	—650	—900 Volts
Peak A-F Grid to Grid Voltage	1,260	1,760 Volts
Zero Signal DC Plate Current	0.6	0.8 Amperes
Maximum Signal DC Plate Current	2.8	2.6 Amperes
Effective Load Resistance, Plate to Plate	2250	3,700 Ohms
Maximum Signal Driving Power	0	0
Maximum Signal Power Output	5.4	7.4 KW

For Plate Characteristic Curve, refer to Catalog Sheet F-8C25



Federal Telephone and Radio Company

100 Kingsland Road VACUUM TUBE DEPARTMENT Clifton, New Jersey