



TETRODE

The GL-7D21 is a four-electrode tube designed for use as a Class C radio-frequency amplifier. The anode is forced-air cooled and capable of dissipating

1200 watts. The cathode is a thoriated-tungsten filament. Maximum ratings apply up to 110 megacycles.

TECHNICAL INFORMATION

GENERAL

Electrical

Filament Voltage	6.3	Volts
Filament Current	30.0	Amperes
Interelectrode Capacitances		
Grid-Plate	0.40	$\mu\mu\text{f}$
Input	39.0	$\mu\mu\text{f}$
Output	14.0	$\mu\mu\text{f}$
Grid-Screen Amplification Factor	8	

GENERAL  ELECTRIC

Supersedes ETX-219A

TECHNICAL INFORMATION (CONT'D)

Mechanical

Mounting Position	Vertical, Anode Down
Type of Cooling	Forced Air
Maximum Incoming Air Temperature.....	50 C
Required Air Flow on Anode	
Plate Dissipation.....	1200 Watts
Air Flow	55 Cubic Feet per Minute
Pressure Required.....	1½ Inches Water
Required Air Flow on Filament Terminals	
Air Flow.....	5 Cubic Feet per Minute
Maximum Glass Temperature	150 C
Net Weight, approximate.....	3¾ Pounds

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

CLASS C RADIO-FREQUENCY POWER AMPLIFIER AND OSCILLATOR

Key-down conditions per tube without modulation*

Maximum Ratings, Absolute Values

DC Plate Voltage.....	4000 Volts
DC Screen Voltage.....	750 Volts
DC Grid Voltage.....	-500 Volts
DC Plate Current.....	1.0 Ampere
DC Grid Current, approximate.....	135 Milliamperes
Plate Input.....	3000 Watts
Screen Input.....	60 Watts
Plate Dissipation.....	1200 Watts
Radiator-Temperature†.....	180 C

Typical Operation

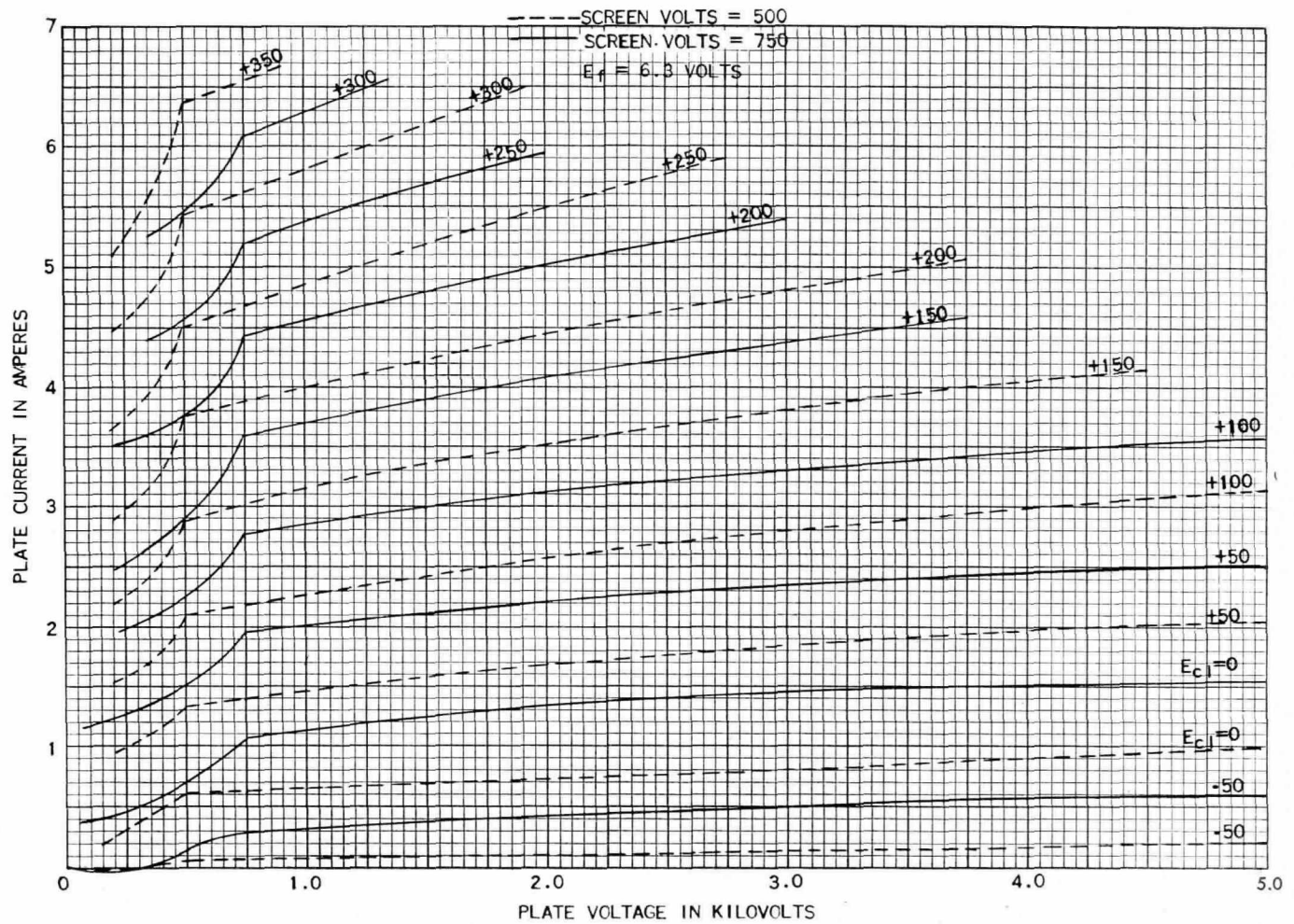
DC Plate Voltage.....	3750 Volts
DC Screen Voltage.....	600 Volts
DC Grid Voltage.....	-102 Volts
DC Plate Current.....	0.67 Ampere
DC Screen Current.....	100 Milliamperes
DC Grid Current, approximate.....	51 Milliamperes
Plate Input.....	2510 Watts
Screen Input.....	60 Watts
Peak RF Grid Input Voltage, approximate.....	300 Volts
Driving Power, approximate.....	60 Watts
Plate Power Output, approximate.....	1575 Watts

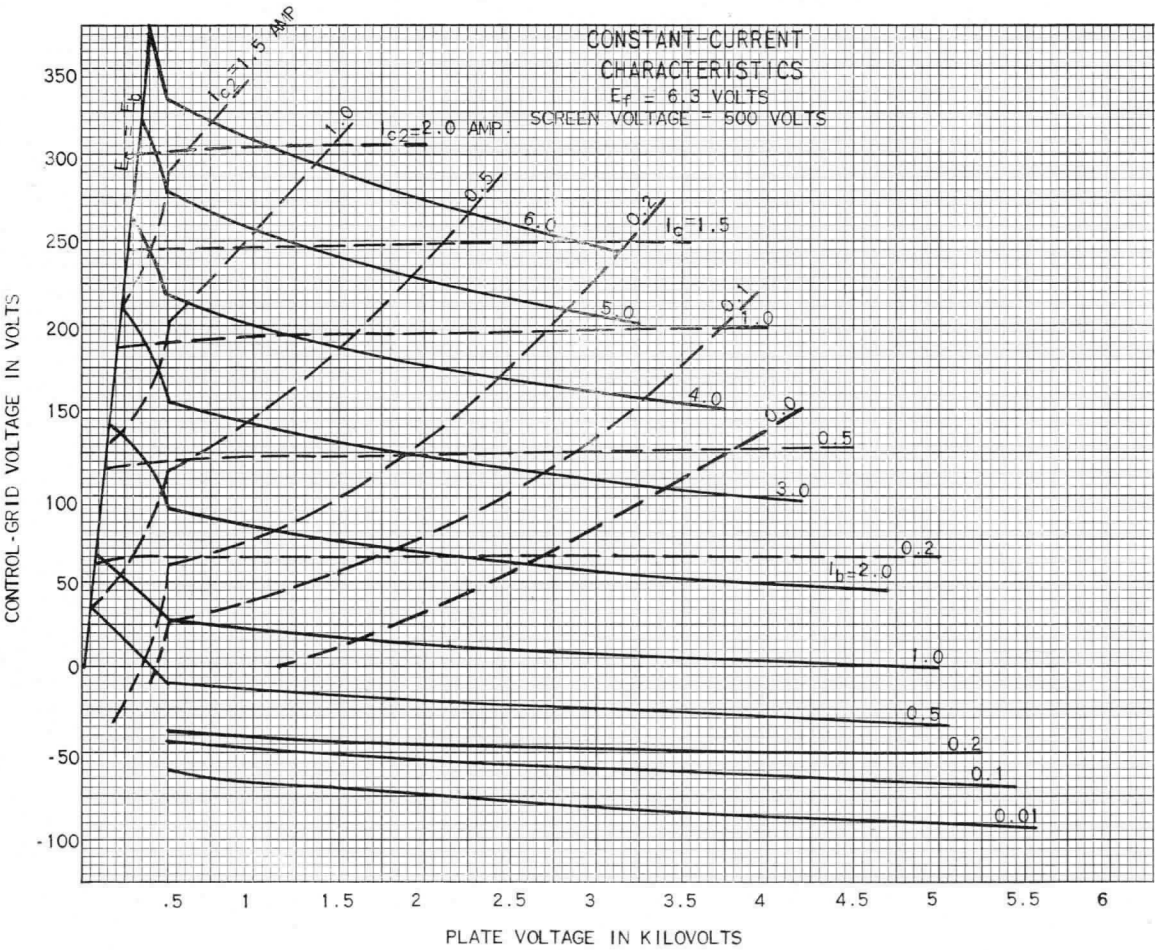
*Modulation, essentially negative, may be used if the positive peak of the audio-frequency envelope does not exceed 115 per cent of the carrier conditions.

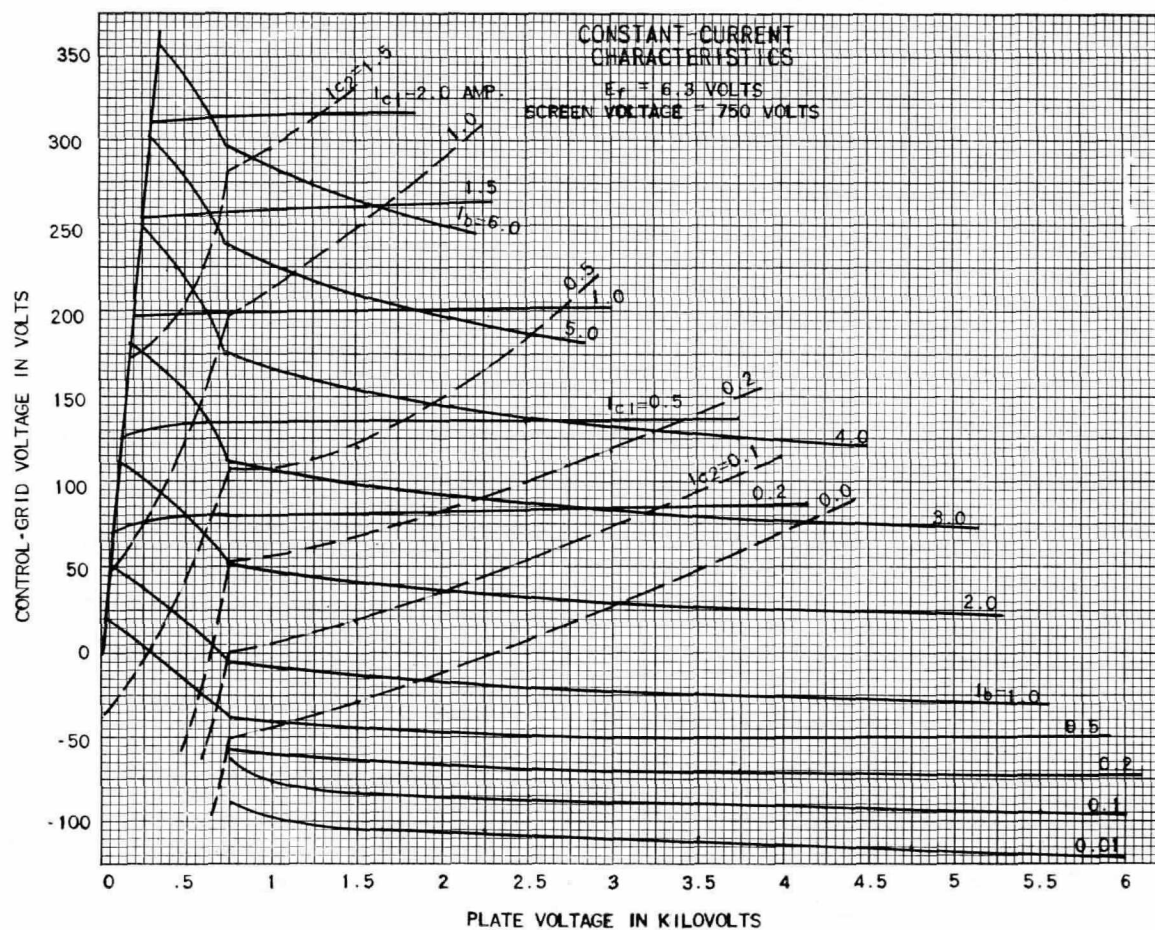
†These operational data are a result of actual test at 108 megacycles. Power output measured in load.

‡This temperature corresponds to the maximum ratings when the air flow is 55 cubic feet per minute, and the incoming air temperature does not exceed 50 C.

PLATE CHARACTERISTICS

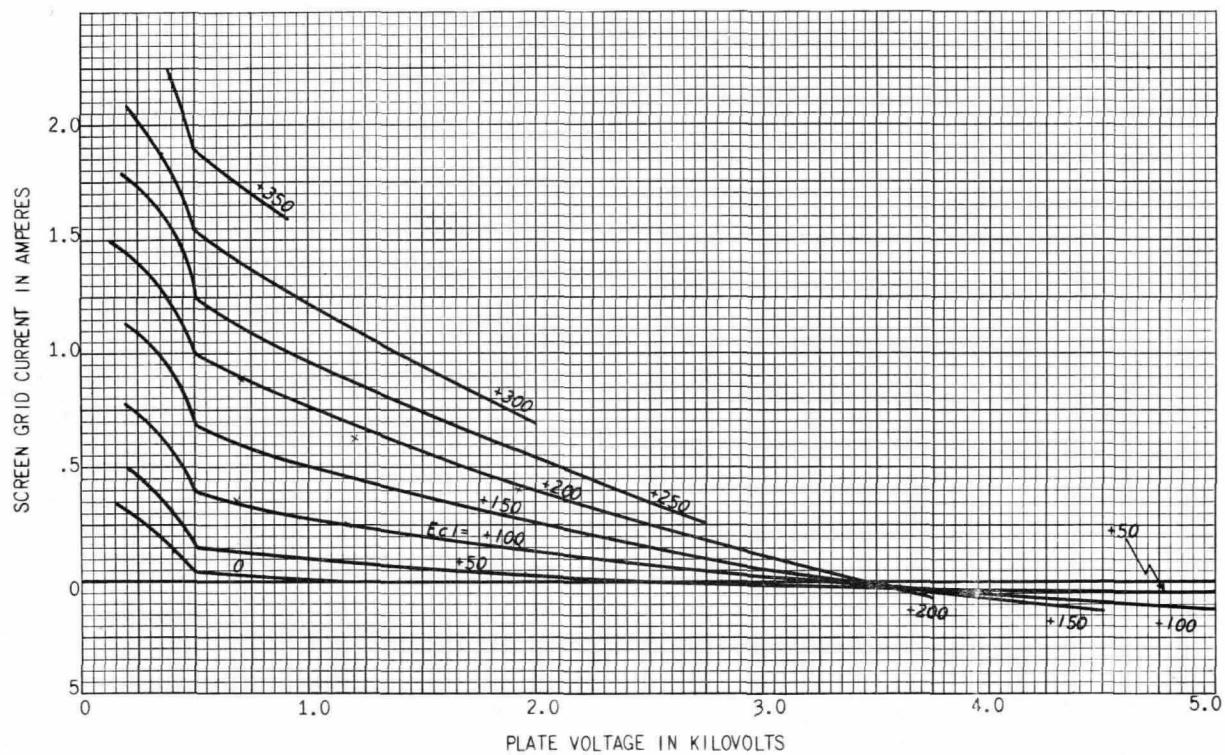






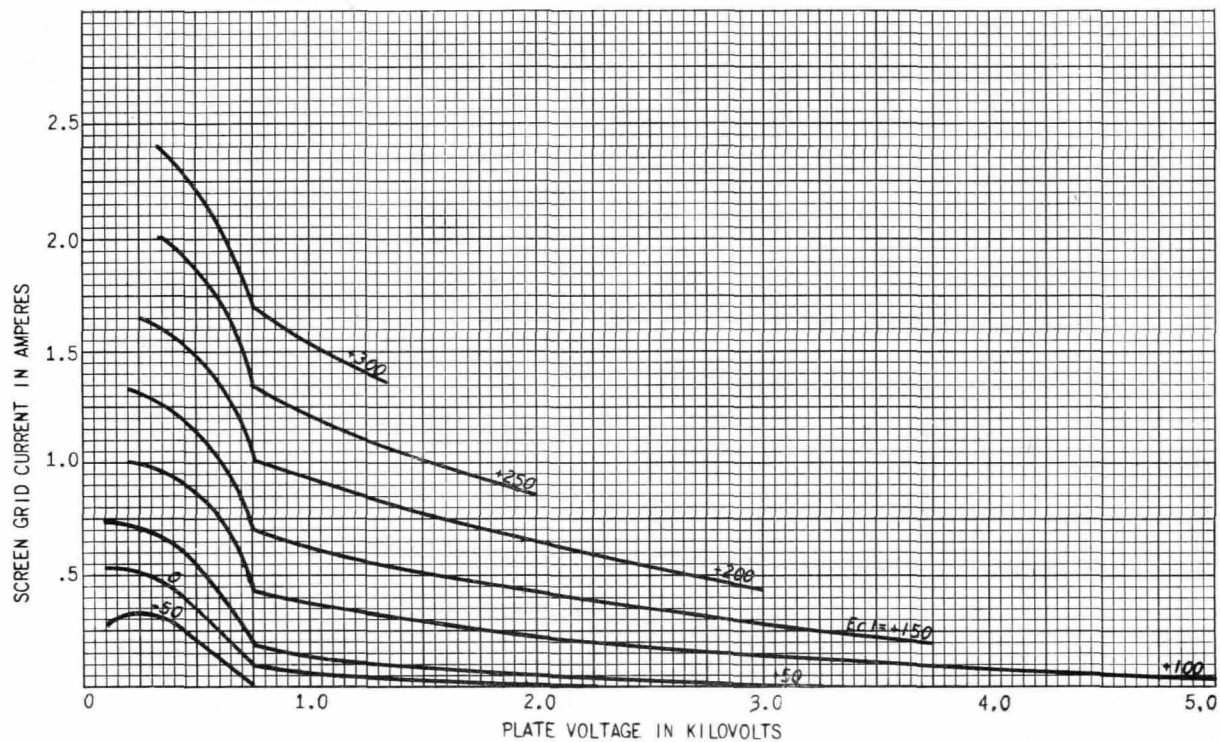
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SCREEN GRID CHARACTERISTICS
(Screen Volts = 500, $E_i = 6.3$ Volts)

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SCREEN GRID CHARACTERISTICS
(Screen Volts = 750, $E_i = 6.3$ Volts)

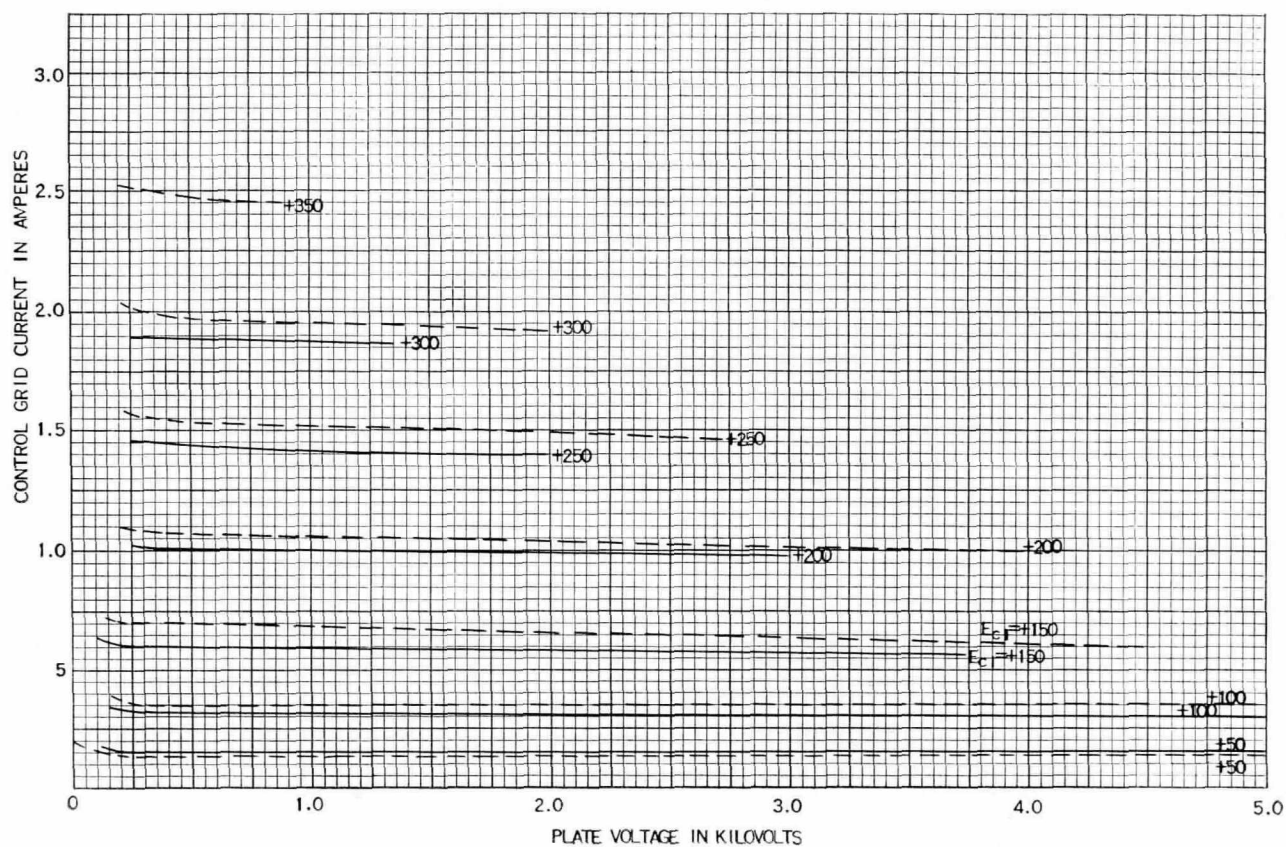
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CONTROL GRID CHARACTERISTICS

----- Screen Volts = 500

——— Screen Volts = 750

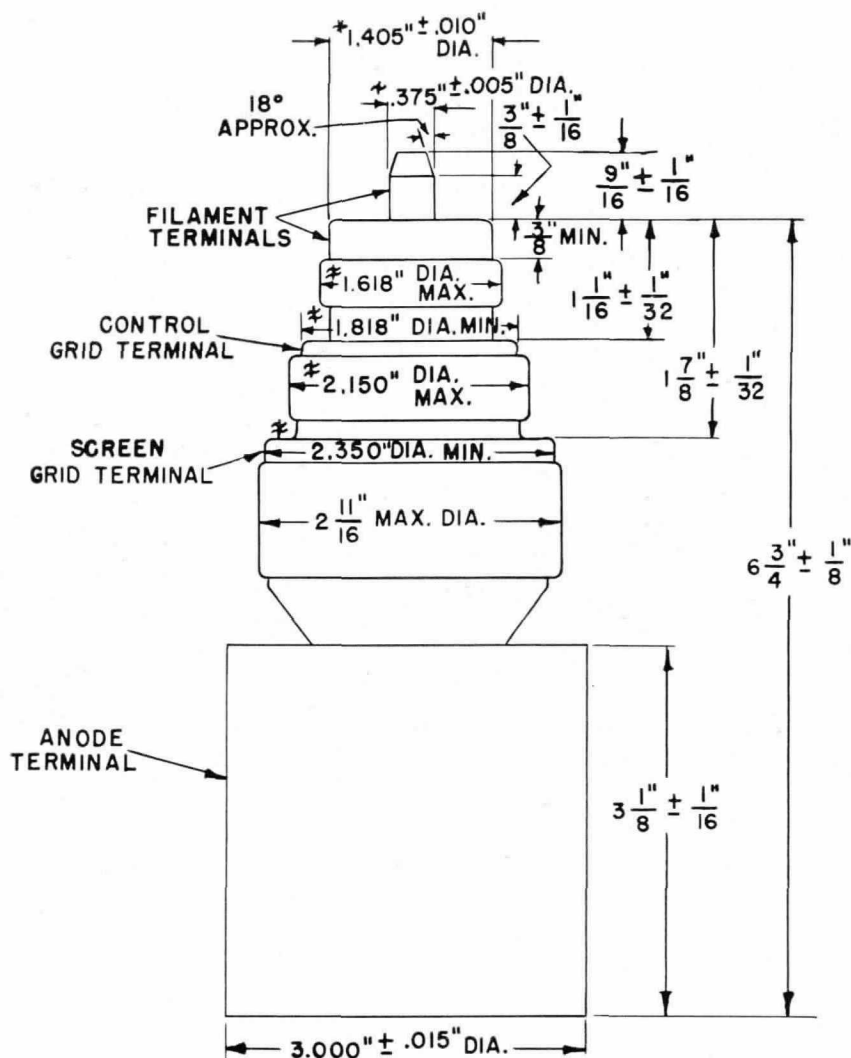
 $E_i = 6.3$ Volts

GL-7D21

ET-T1564

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NOTES: * MAX. ECCENTRICITY OF LARGER DIA. FILAMENT TERMINAL IS .050" WITH RESPECT TO THE AXIS OF RADIATOR.
 * MAX. ECCENTRICITY OF SMALLER DIA. FILAMENT TERMINAL IS .020" WITH RESPECT TO A CENTERLINE ESTABLISHED BY THE CENTER OF THE BOTTOM OF RADIATOR AND CENTER OF LARGER DIA. FILAMENT TERMINAL.
 * MAX. OR MIN. DIMENSIONS OF ANY POINT ON CIRCUMFERENCE OF PART, CIRCUMFERENCES CONCENTRIC WITH A CENTERLINE ESTABLISHED BY THE CENTER OF THE BOTTOM OF RADIATOR AND CENTER OF LARGER DIA. FILAMENT TERMINAL.

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