



TRIODE

The GL-5518 is a three-electrode transmitting tube designed for use as a Class C radio-frequency amplifier. This tube is particularly well adapted to use in a grounded-grid circuit. The anode is forced-

air-cooled, and capable of dissipating 4000 watts. The cathode is a pure-tungsten filament. Maximum ratings apply up to 110 megacycles.

TECHNICAL INFORMATION

GENERAL

Electrical

	Minimum	Bogey	Maximum
Filament Voltage.....	—	6.3	6.6 Volts
Filament Current at Bogey Voltage.....	227	235	243 Amperes
Filament Starting Current.....	—	—	355 Amperes
Filament Cold Resistance.....	—	0.0023	— Ohms
Amplification Factor, $I_b = 1.0$ amp, $E_c = 50$ v.....	17	21	25
Interelectrode Capacitances			
Grid-Plate.....	16	18.5	21 μf
Grid-Filament.....	26	29	32 μf
Plate-Filament†.....	—	—	0.6 μf

Mechanical

Mounting Position—Vertical, Anode Down			
Type of Cooling—Forced Air			
Maximum Incoming Air Temperature.....	—	—	45 C

GENERAL  ELECTRIC

Supersedes ETX-221A

TECHNICAL INFORMATION (CONT'D)

Required Air Flow on Anode*

Plate Dissipation—Percent of Rating.....	100	80	60
Air Flow—Cubic Feet per Minute.....	350	250	200
Pressure—Inches Water.....	1.85	1.15	0.80

Required Air Flow on Filament and Grid Seals

Around circumference of Filament Seals.....	15 Cubic Feet per Minute
Around Circumference of Grid Seal.....	55 Cubic Feet per Minute
Maximum Glass Temperature.....	175 C
Net Weight, approximate.....	17 Pounds

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

RADIO-FREQUENCY POWER AMPLIFIER—CLASS C TELEGRAPHY

Key-down conditions per tube without amplitude modulation†

Maximum Ratings, Absolute Values.....	CCS‡
DC Plate Voltage.....	7,000 Max Volts
DC Grid Voltage.....	—850 Max Volts
DC Plate Current.....	1.8 Max Amperes
DC Grid Current.....	0.25 Max Amperes
Plate Input.....	12 Max Kilowatts
Plate Dissipation.....	4 Max Kilowatts
Typical Operation, Grounded-Filament Circuit.....	CCS‡
DC Plate Voltage.....	6,600 Volts
DC Grid Voltage.....	—520 Volts
Peak RF Grid Voltage.....	940 Volts
DC Plate Current.....	1.3 Amperes
DC Grid Current, approximate.....	0.20 Amperes
Driving Power, approximate.....	180 Watts
Power Output, approximate.....	6.5 Kilowatts
Typical Operation, Grounded-Grid Circuit	
Same Values as for Grounded-Filament Circuit with the Following Exceptions:	
Driving Power, approximate.....	1,220 Watts
Power Output #, approximate.....	7.5 Kilowatts

† Measured with a 12-inch outer diameter and 3-inch inner diameter flat shield on grid terminal.

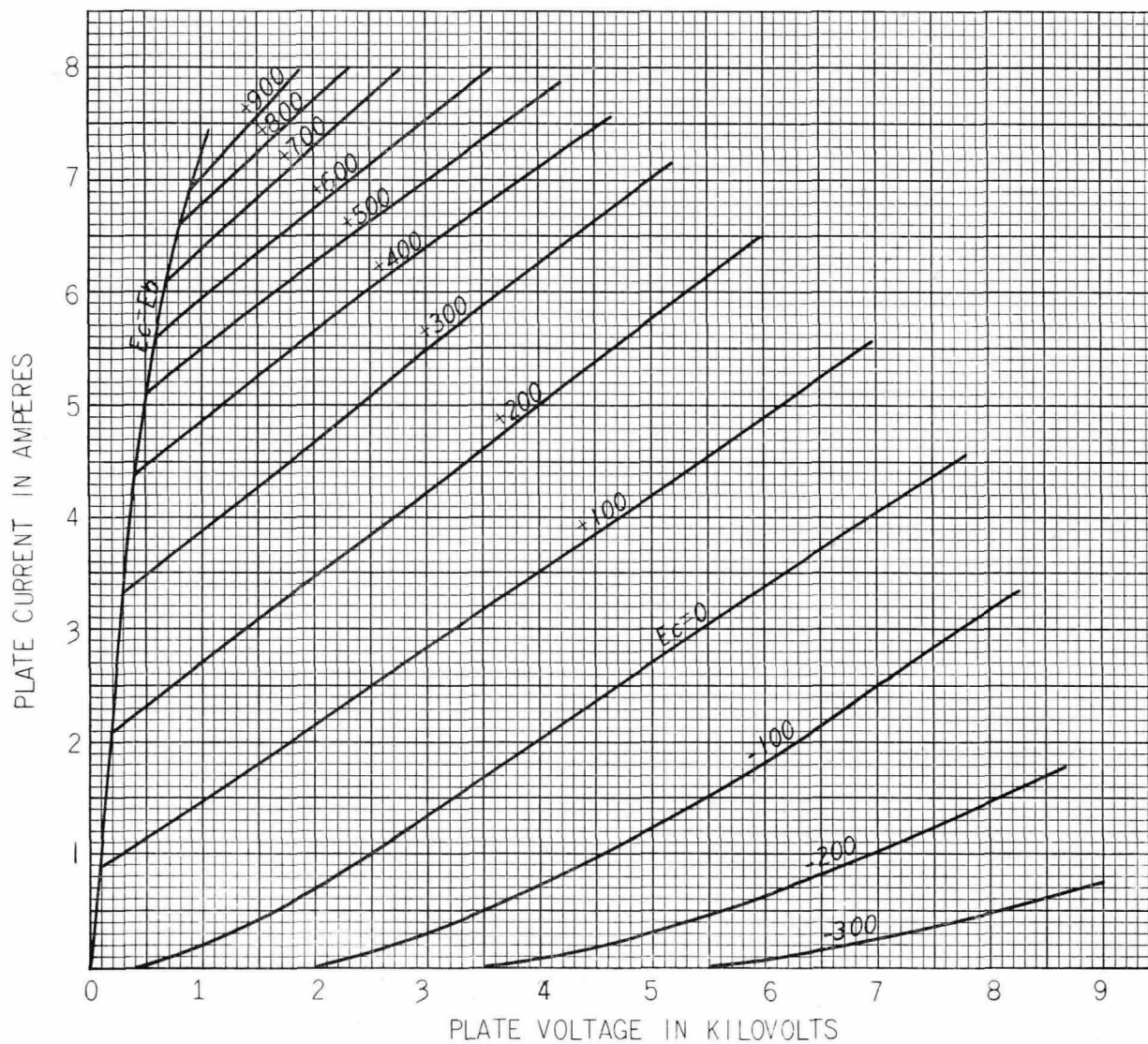
* Direction of air flow must be downward through radiator.

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

‡ Continuous Commercial Service.

This value includes power transferred from driver to output.

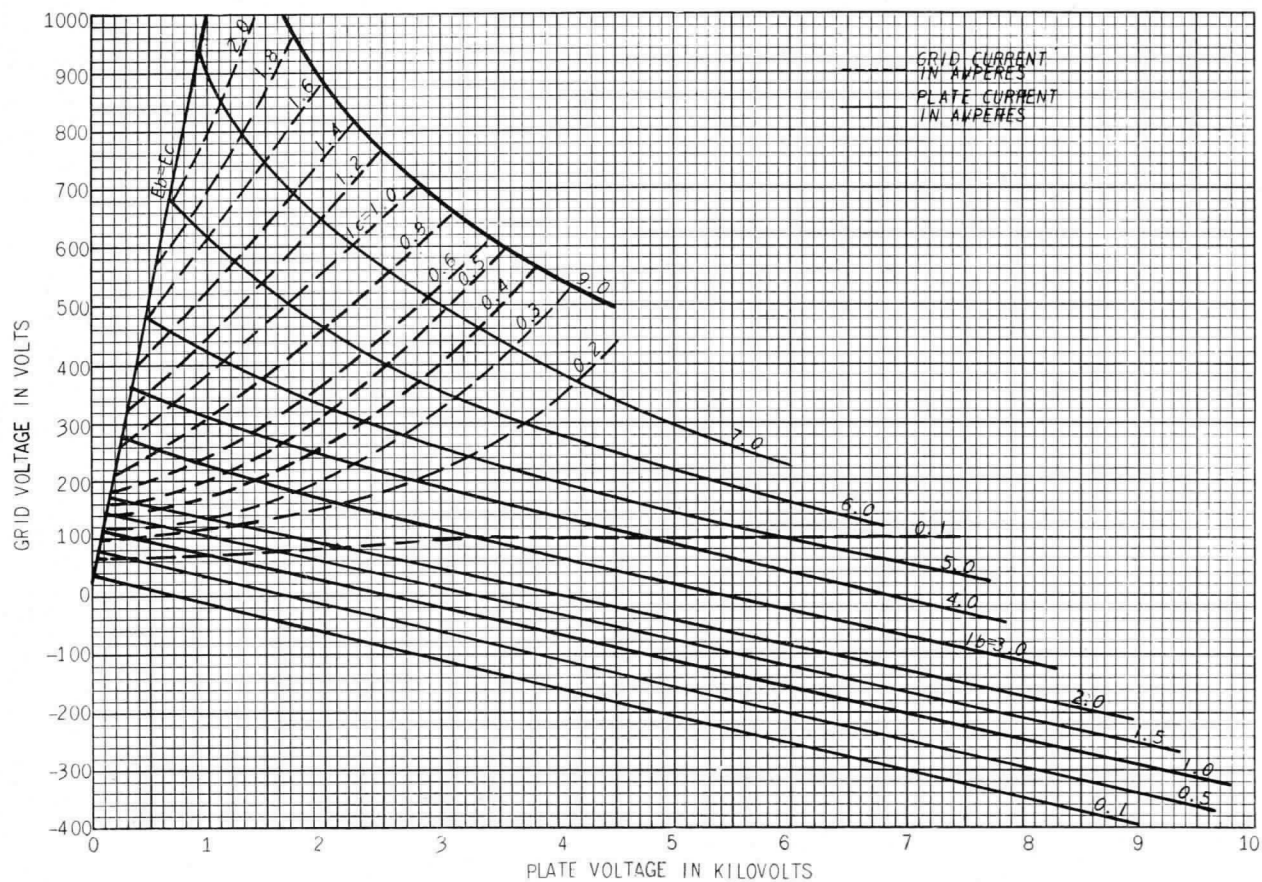
AVERAGE PLATE CHARACTERISTICS

 $E_f = 6.3$ Volts

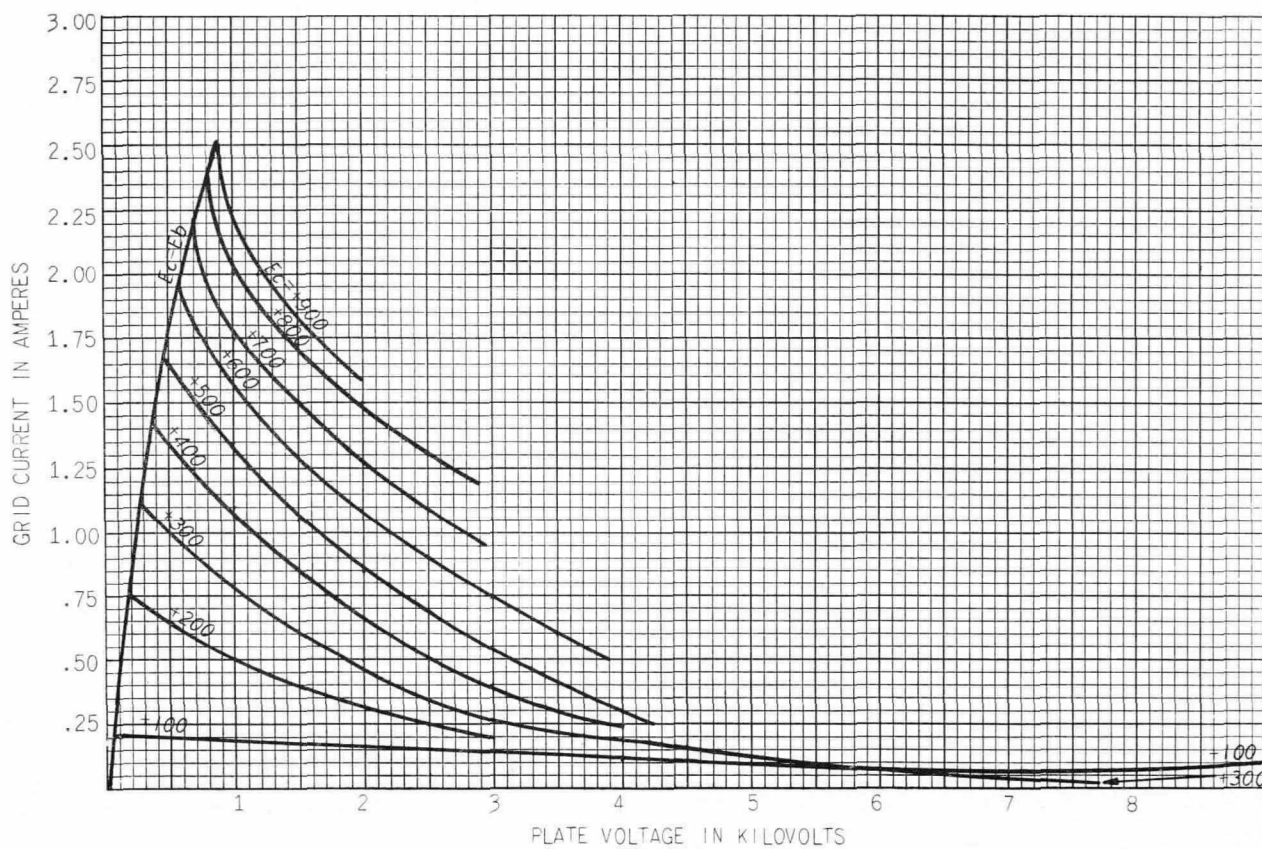
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CHARACTERISTICS

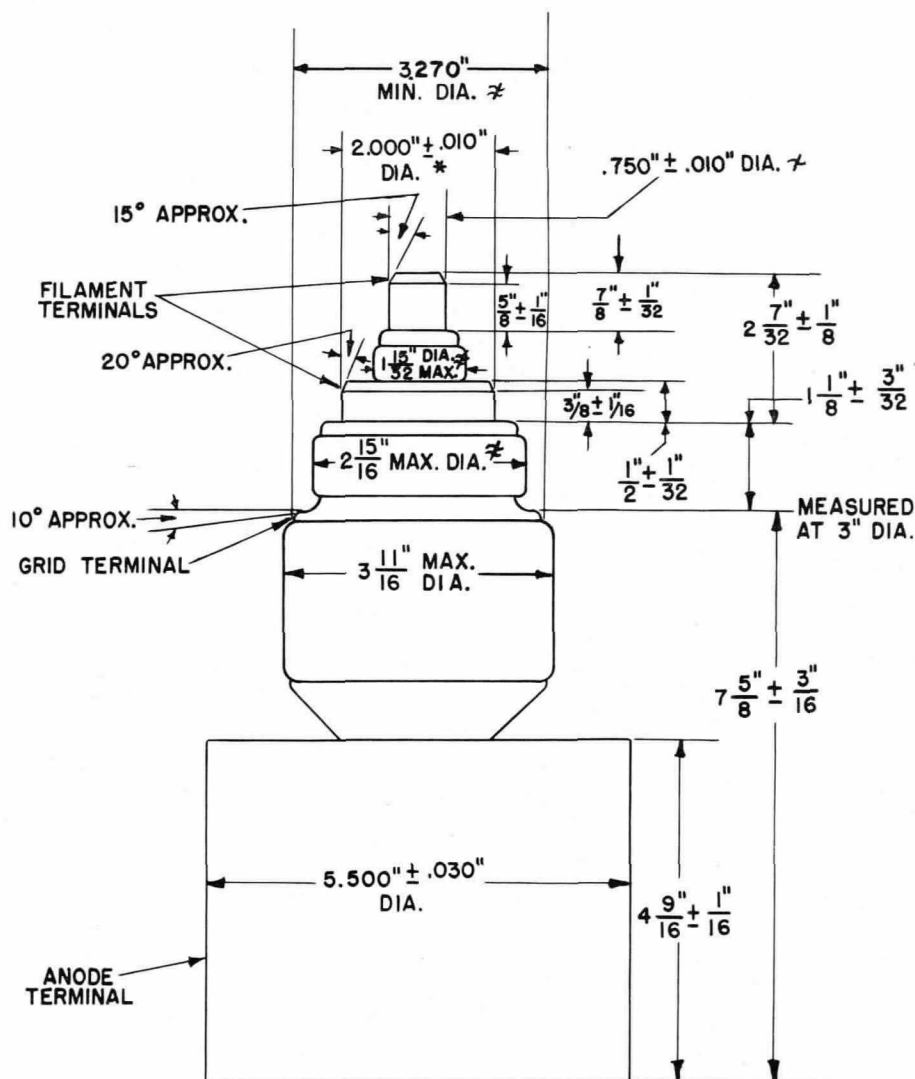
 $E_i = 6.3$ Volts

AVERAGE GRID CHARACTERISTICS

 $E_f = 6.3$ Volts

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* MAXIMUM ECCENTRICITY OF LARGER-DIAMETER FILAMENT TERMINAL IS $0.060''$ WITH RESPECT TO THE AXIS OF RADIATOR.

$\neq$ MAXIMUM ECCENTRICITY OF SMALLER-DIAMETER FILAMENT TERMINAL IS $0.050''$ WITH RESPECT TO A CENTER LINE ESTABLISHED BY THE CENTER OF THE BOTTOM OF RADIATOR AND CENTER OF LARGER-DIAMETER FILAMENT TERMINAL.

$\neq$ MAXIMUM OR MINIMUM DIMENSIONS OF ANY POINT ON CIRCUMFERENCE OF PART. CIRCUMFERENCES CONCENTRIC WITH A CENTER LINE ESTABLISHED BY THE CENTER OF THE BOTTOM OF RADIATOR AND CENTER OF LARGER-DIAMETER FILAMENT TERMINAL.

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ELECTRONIC COMPONENTS DIVISION

GENERAL  **ELECTRIC**

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