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	$\mu\mu$f
Grid-Filament	26	29	32	$\mu\mu$f
Plate-Filament†	—	—	0.6	$\mu\mu$f
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

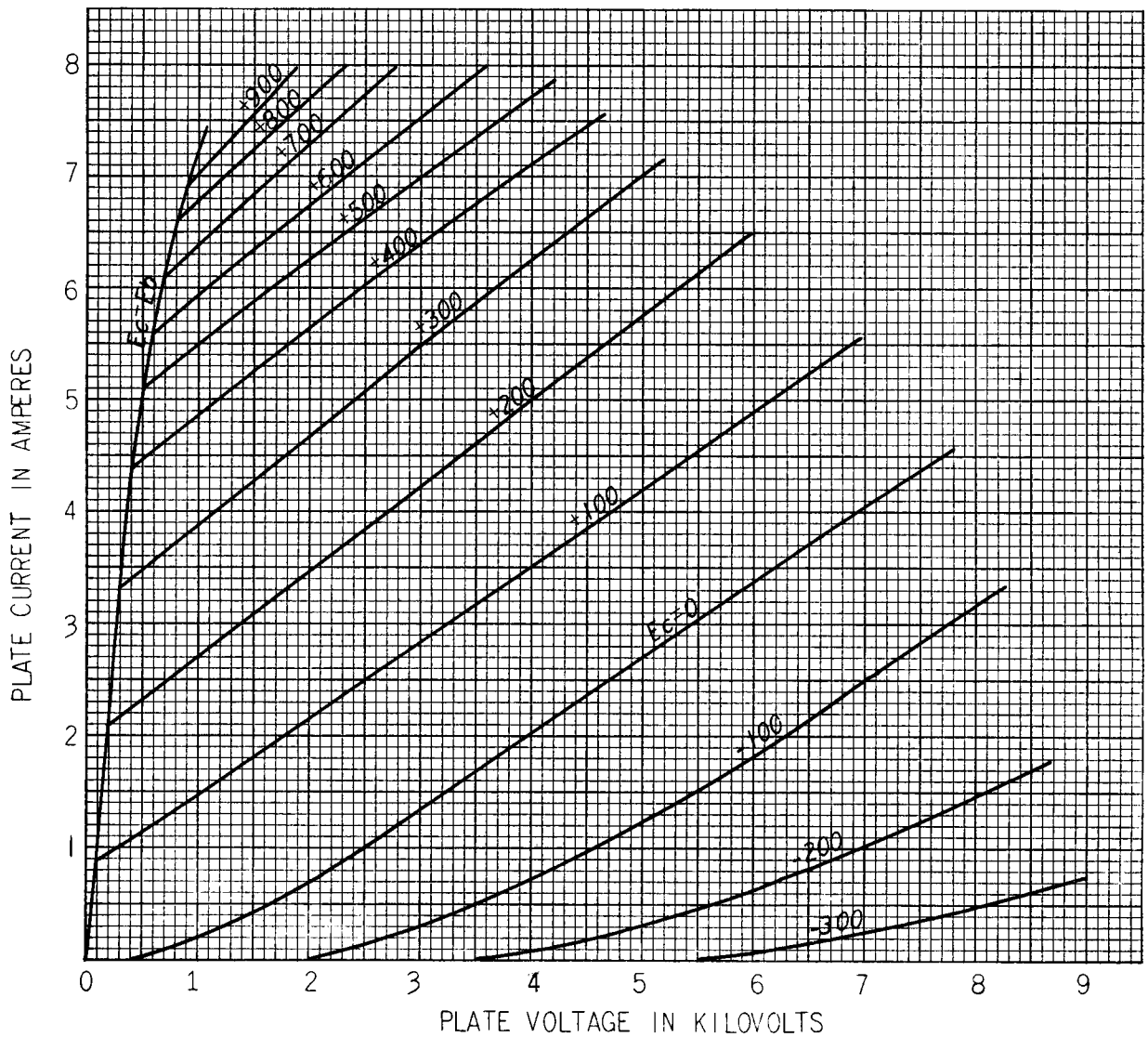
RADIO-FREQUENCY POWER AMPLIFIER—CLASS C TELEGRAPHY

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:		
	CCS‡	
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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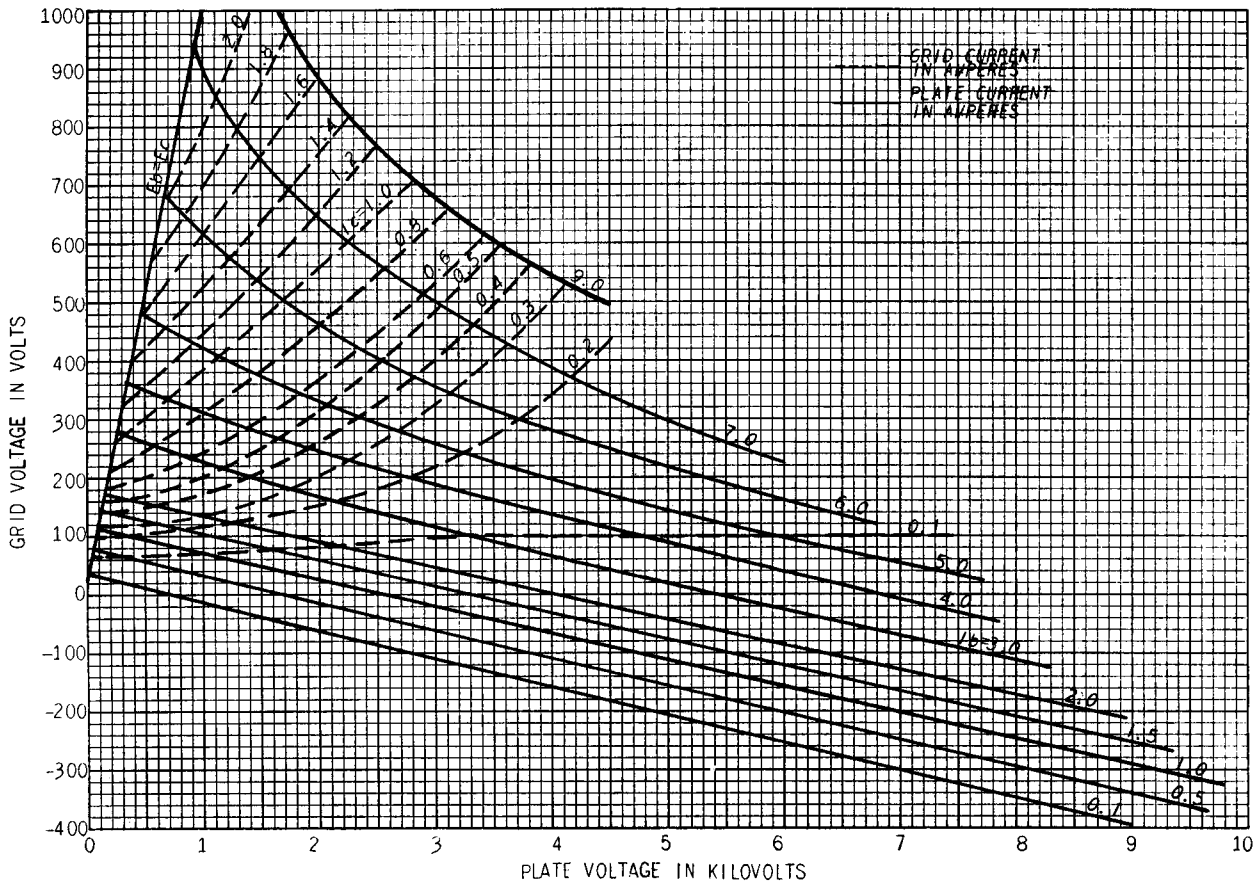
CHARACTERISTICS
$E_f = 6.3$ Volts



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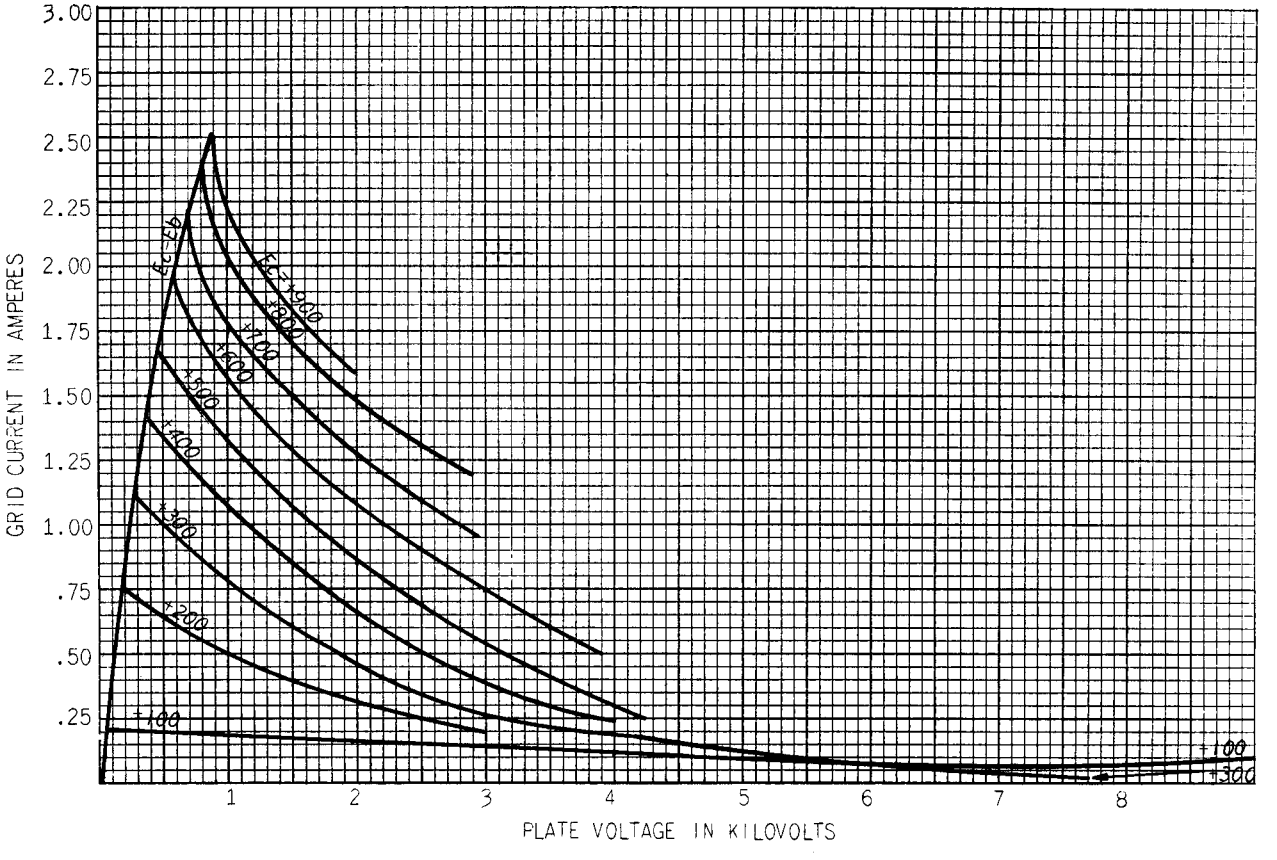
AVERAGE GRID CHARACTERISTICS
$E_f = 6.3$ Volts



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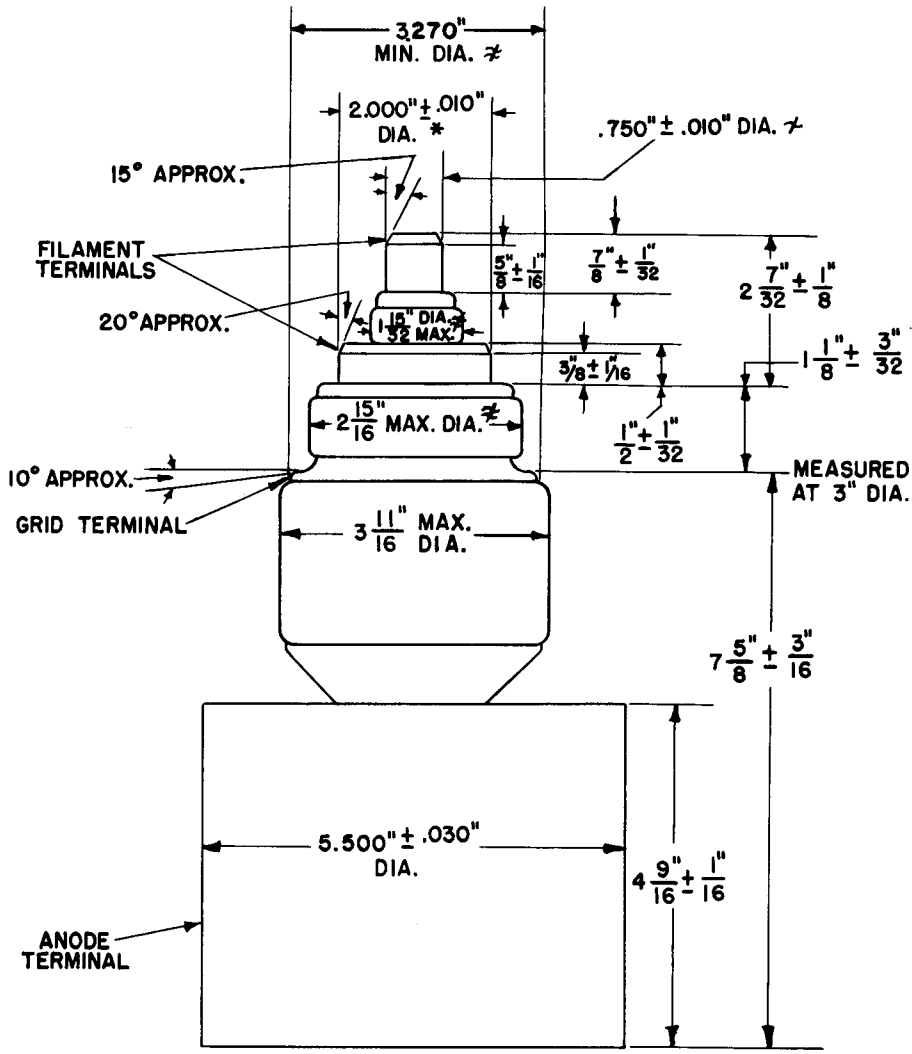

* MAXIMUM ECCENTRICITY OF LARGER-DIAMETER FILAMENT TERMINAL IS 0.060" WITH RESPECT TO THE AXIS OF RADIATOR.

≠ 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.

≠ 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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