POWER AMPLIFIER TRIODE TYPE 7255

The 7255 is a three element power amplifier and oscillator tube especially designed for operation with lower voltage power supplies. Its high perveance structure permits the generation of 6 kilowatts at a plate voltage of only 5 kilovolts at excellent efficiency. Outputs of 13-1/2 kilowatts are obtainable at 9 kilovolts.

The anode design features an integral water jacket with an internal spiral water diverter which maintains turbulence of cooling water. This prevents the occurrence of anode hot spots and accounts for high power density capability of the tube. The 7255 will dissipate 9 kilowatts with only 3-3/4 gallons per minute and still provides ample safety margin for instantaneous overloads.

The filament structure incorporates a unique spring loaded high efficiency design. The high efficiency thoriated tungsten filament provides 50 amperes peak emission at only 350 watts of filament power. The rugged spring loaded structure inhibits sagging and breaking of filament strands thus insuring long life and uniformity of characteristics with life.

These features make the 7255 a particularly attractive design for induction and dielectric heating applications. The internal structure is very precisely designed and production controls assure uniformity from tube to tube. These design features are reflected in a high degree of uniformity of performance in class B and class C RF power amplifier and oscillator operation. Ratings apply to 30 megacycles.

GENERAL DATA

ELECTRICAL:

	min.	bogey	max.	
Filament Voltage	5.7	6.0	6.3	Volts
Filament Current	57	60	63	Amp.
Filament Starting Current	-	-	300	Amp.
Filament Cold Resistance	-	0.016	-	Ohms
Amplification Factor	18	22	26	
Interelectrode Capacitances:				
Grid to Plate	12	16	21	$\mu\mu f$
Grid to Filament	15	19	22	$\mu\mu f$
Plate to Filament	0.2	0.80	1.0	$\mu\mu f$

MECHANICAL:

Mounting Position		Vertical, Anode Down		
Type of Cooling		Water and Forced Air		
Min. Required Water Flow:				
Plate Dissipation	3	6	9	KW
Water Flow in Gallons per Minute	1	2	3.75	gpm
Pressure Drop	0.85	1.9	7	in. psi
Required Air Flow on Filament and Grid Seals			30	CFM
Max. Glass Temperature			180	°C
Net Weight, approx.			1-3/4	lbs.

RADIO-FREQUENCY POWER AMPLIFIER AND OSCILLATOR, CLASS C TELEGRAPHY

(Key-down conditions per tube without amplitude modulation)

MAXIMUM RATINGS:

Absolute Maximum Values

DC Plate Voltage	9200	max.	Volts
DC Plate Current	2.0	max.	Amp.
Plate Input	18000	max.	Watts
Plate Dissipation	9000	max.	Watts
DC Grid Voltage	-1500	max.	Volts
DC Grid Current	0.5	max.	Amp.

TYPICAL OPERATION:

DC Plate Voltage	5000	9000	Volts
DC Grid Voltage	-800	-1400	Volts
Peak Radio-Frequency Grid Voltage	1240	1850	Volts
DC Plate Current	1.61	2.0	Amp.
DC Grid Current	0.40	0.18	Amp.
Driving Power, approx.	480	337	Watts
Power Output, approx.	6430	13600	Watts

WESTINGHOUSE ELECTRIC CORPORATION, ELECTRONIC TUBE DIVISION, ELMIRA, NEW YORK

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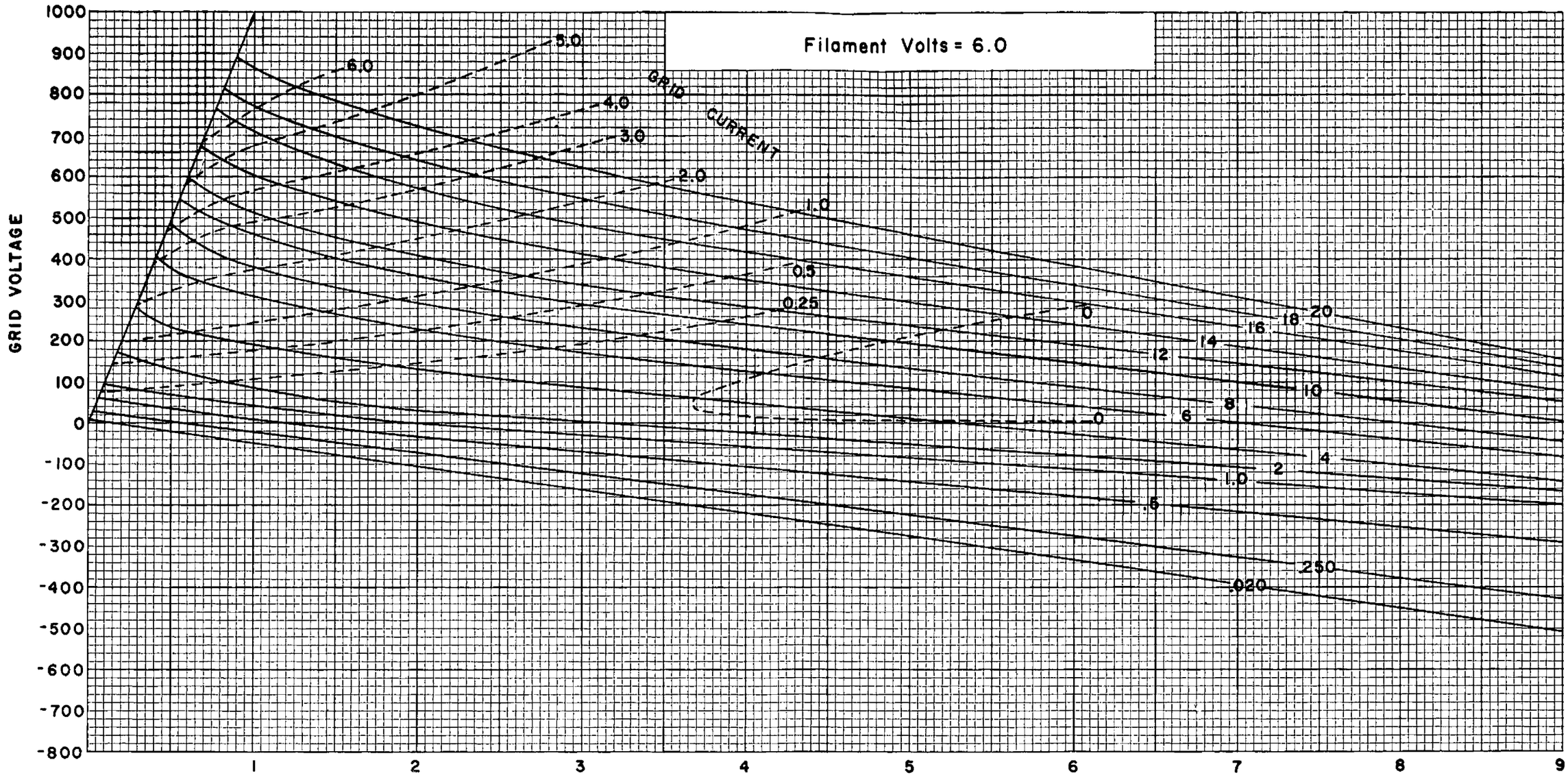
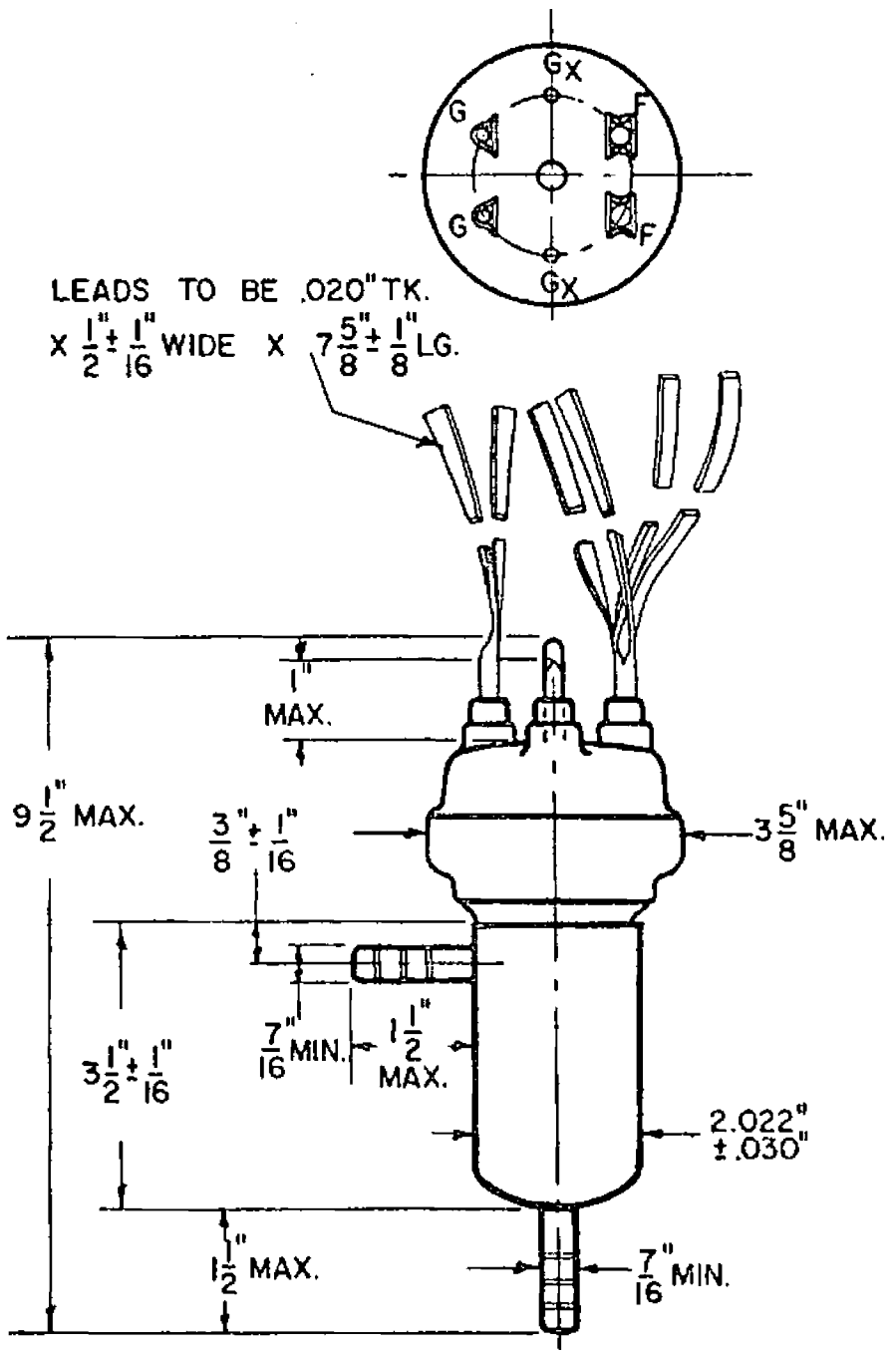
AVERAGE CONSTANT-CURRENT CHARACTERISTICS

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LEADS TO BE .020" TK.
X 1/2" ± 1/16" WIDE X 7 5/8" ± 1/8" LG.
1" MAX.
9 1/2" MAX.
3/8" ± 1/16"
3 5/8" MAX.
3 1/2" ± 1/16"
7/16" MIN.
1 1/2" MAX.
2.022" ± .030"
1 1/2" MAX.
7/16" MIN.