

engineering TUBE DATA

F-6920
PULSE
TRIODE



Components Division

DESCRIPTION

The F-6920 is a three electrode tube designed for pulse applications as a hard tube modulator. The anode is capable of dissipating 10 kilowatts exclusive of filament power. Cooling is accomplished by forced air. The cathode is a thoriated tungsten filament.

ELECTRICAL

Filament Voltage	11 volts
Filament Current	285 amperes
Filament Starting Current	1000 amperes
Amplification Factor	
$I_b = 2$ amperes; $E_c = -50$ volts	41
Plate Cut-Off	
$E_p = 30$ kilovolts; $E_g = -1$ kilovolt	.1 max. ma
Direct Inter-electrode Capacitances	
Grid-Plate	34 μmf
Grid-Filament	75 μmf
Plate-Filament	2.6 μmf

MECHANICAL

Mounting Position	Vertical, Anode Down
Type of Cooling	Forced Air
Maximum Incoming Air Temperature	50°C
Required Air Flow on Anode	
Plate Dissipation [†]	10 8 5 kilowatts
Air Flow	800 700 500 cfm
Static Pressure	2.75 2 1 inches of water
Maximum Glass Temperature	180°C
Net Weight, approximate	60 pounds

[†]This does not include filament excitation power.

419

ITT COMPONENTS DIVISION
INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION

P. O. BOX 412, CLIFTON, NEW JERSEY

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MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

Maximum Ratings, Absolute Values

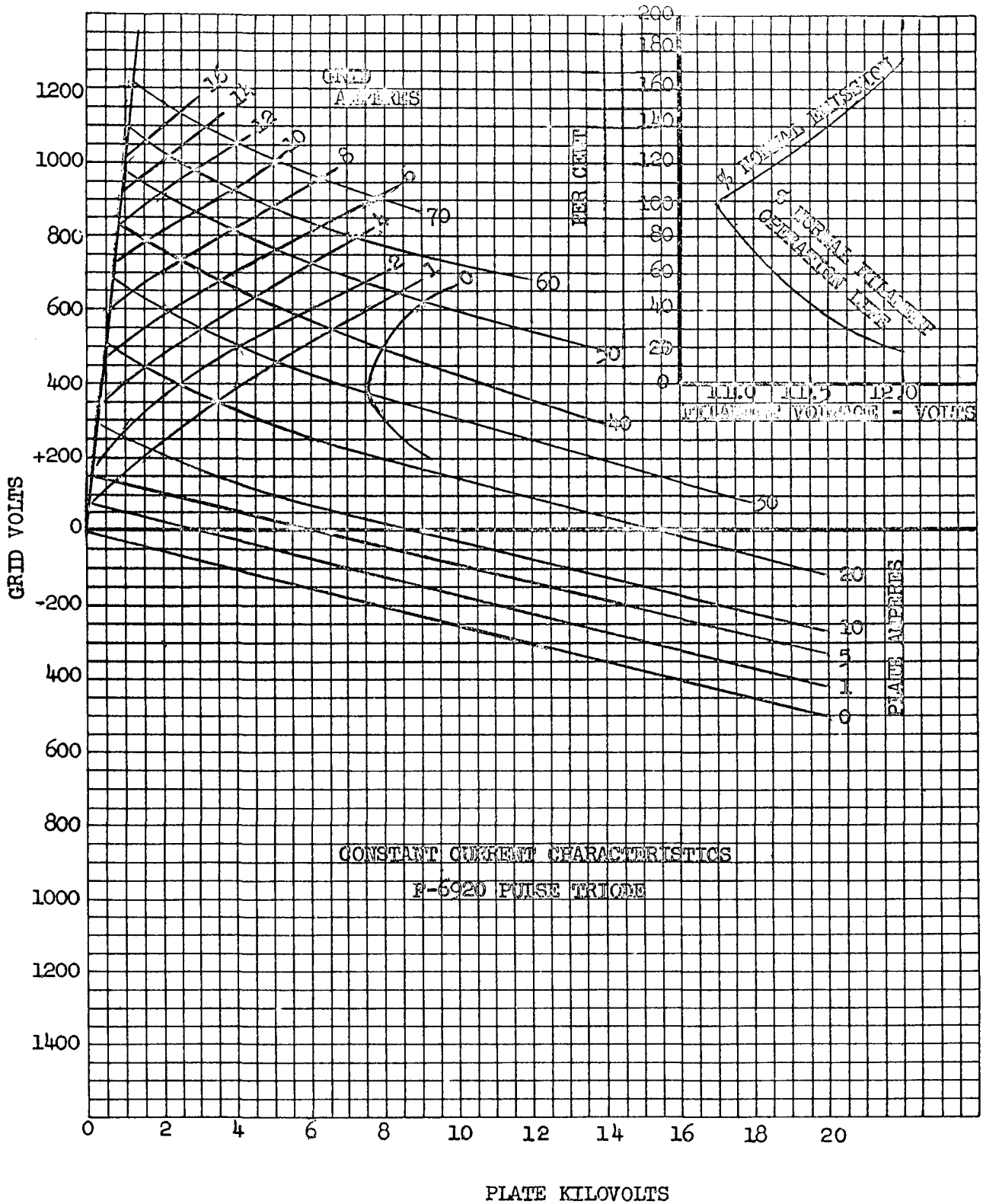
D-C Plate Voltage	35	35* max. kilovolts
Peak Positive Plate Voltage (Instantaneous)	40	40* max. kilovolts
D-C Grid Voltage	-2.0	-2.0* max. kilovolts
Peak Positive Grid Voltage	5	5* max. kilovolts
Pulse Plate Current	100	150* max. amperes
Pulse Grid Current	65	100* max. amperes
Plate Dissipation	10	10* max. kilowatts
Grid Dissipation	2	2* max. kilowatts
Duty Factor	.002	.002* max.
Pulse Length	15	15* max. μ seconds
Pulse Cathode Current	140	200* max. amperes

Typical Operation

D-C Plate Voltage	18	30*	kilovolts
Pulse Plate Current	90	150*	amperes
D-C Grid Voltage	-1.2	-1.0*	kilovolts
Pulse Grid Current	25	50*	amperes
Pulse Positive Grid Voltage	2.8	4*	kilovolts
Duty Factor	.0008	.001*	
Pulse Length	1	.25*	μ seconds
Plate Output Voltage	16.5	27.5*	kilovolts

*These ratings apply only under elevated filament temperatures as specified as follows:

	Min.	Bogey	Max.
Filament Voltage	11.5	11.9	12.3 volts
Filament Emission $E_f = 11.6$ v. $E_p = E_g = 3$ kv.	170		amperes



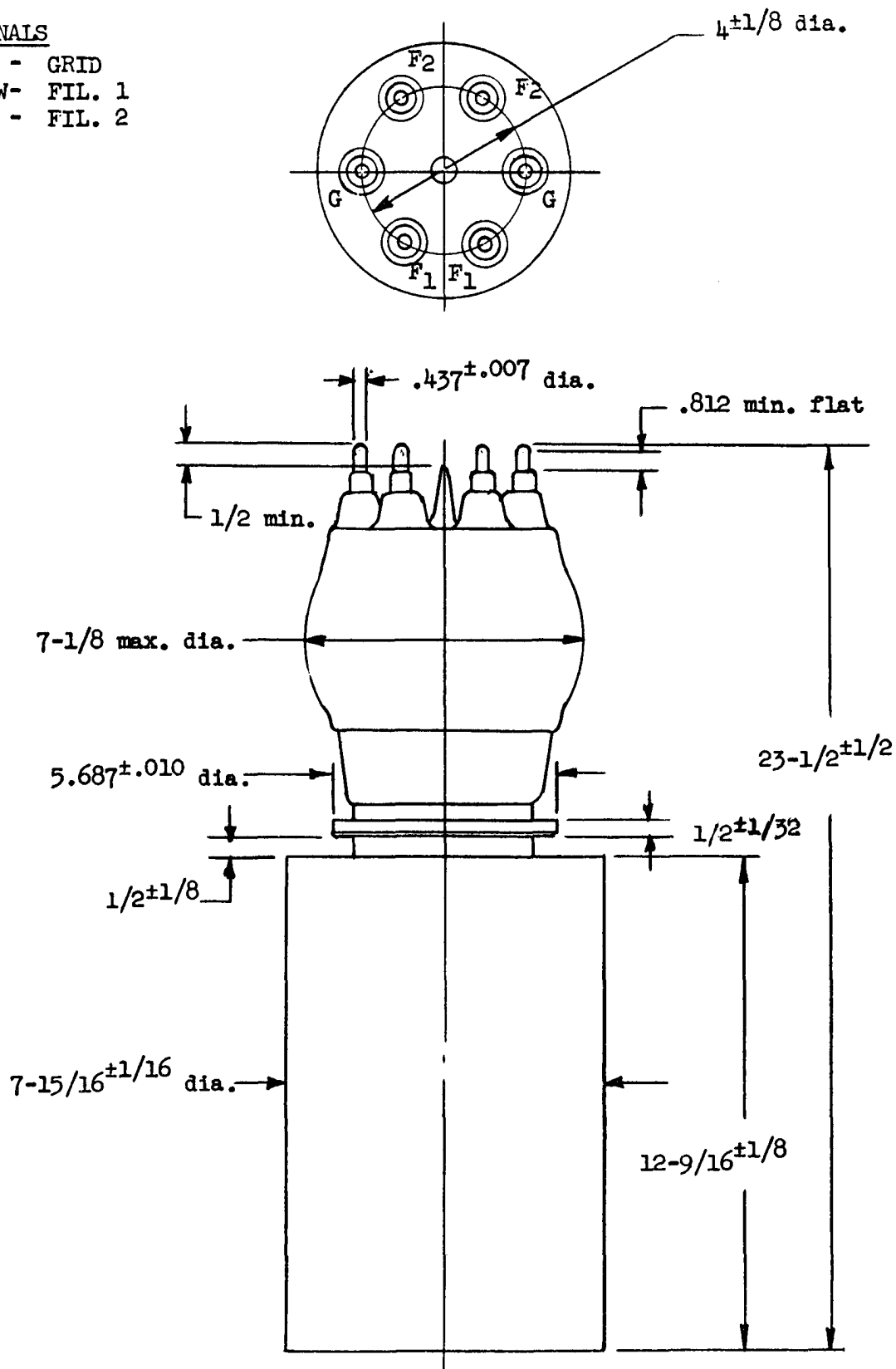
419

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TERMINALS

BLACK - GRID
 YELLOW- FIL. 1
 RED - FIL. 2



OUTLINE
 F-6920 PULSE TRIODE