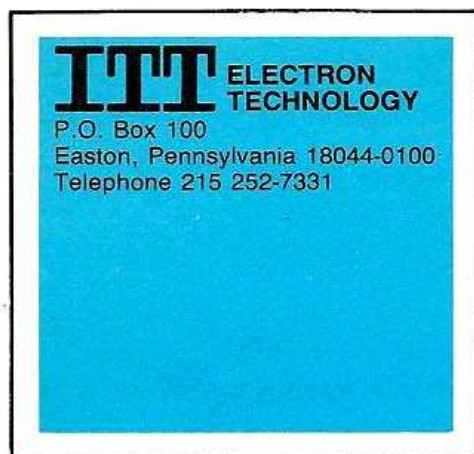




F-6691

POWER TRIODE

DESCRIPTION

The F-6691 is a three-electrode tube designed for use as an industrial oscillator. The anode is capable of dissipating 17 kilowatts during continuous commercial service. Cooling is accomplished by forced air. The cathode is a thoriated tungsten filament and may be operated on DC or single phase AC. Maximum ratings apply up to 30 megacycles.

ELECTRICAL

Filament Voltage	5.0	Volts
Filament Current	260	Amperes
Filament Starting Current	1,000	Amperes
Filament Cold Resistance	.002	Ohms
Filament Heating Time	15	Seconds
Amplification Factor		
$E_c = -100V$; $I_b = 1.5$ Amps	21	
Peak Cathode Current (Note 1)	40	Amperes
Direct Interelectrode Capacitances		
Grid-Plate	60	μf
Grid-Filament	58	μf
Plate-Filament	5.0	μf

Note 1: Represents maximum usable cathode current (plate current plus grid current) for any condition of operation.

MECHANICAL

Mounting Position	Vertical, Anode Down		
Type of Cooling	Forced Air		
Maximum Incoming Air Temperature	45°C		
Maximum Glass Temperature	180°C		
Required Air Flow on Anode			
Plate Dissipation - KW	17	14	12
Air Flow - CFM	1000	800	700
Pressure - Inches of Water	3.5	2.3	1.7
Net Weight (Approximate)		39	Pounds

MAXIMUM RATINGS AND TYPICAL OPERATING CONDITIONS

Radio-Frequency Power Amplifier and Oscillator - Class C Telegraphy
(Key-down conditions per tube without amplitude modulation)

Maximum CCS Ratings, Absolute Values

	Below 2mc	2mc to 30mc	
DC Plate Voltage	15,000	12,500	Volts Max.
DC Grid Voltage	-2,000	-2,000	Volts Max.
DC Plate Current	6	6	Amperes Max.
DC Grid Current	.8	.8	Amperes Max.
Plate Input	60	54	Kilowatts Max
Plate Dissipation	17	17	Kilowatts Max

Typical Operation

DC Plate Voltage . .	15,000	12,500	10,000	7,500	Volts
DC Grid Voltage . .	1,600	-1,300	-1,100	-800	Volts
Peak RF Grid Voltage	2,140	1,820	1,600	1,360	Volts
DC Plate Current . .	3.9	4.25	4.1	5.4	Amperes
DC Grid Current (Approximate)	.570	.500	.750	.690	Amperes
Driving Power (Approximate)	1,200	900	1,200	935	Watts
Power Output (Approximate)	47.0	42.0	32.5	30.0	Kilowatts

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

RATINGS VERSUS FREQUENCY

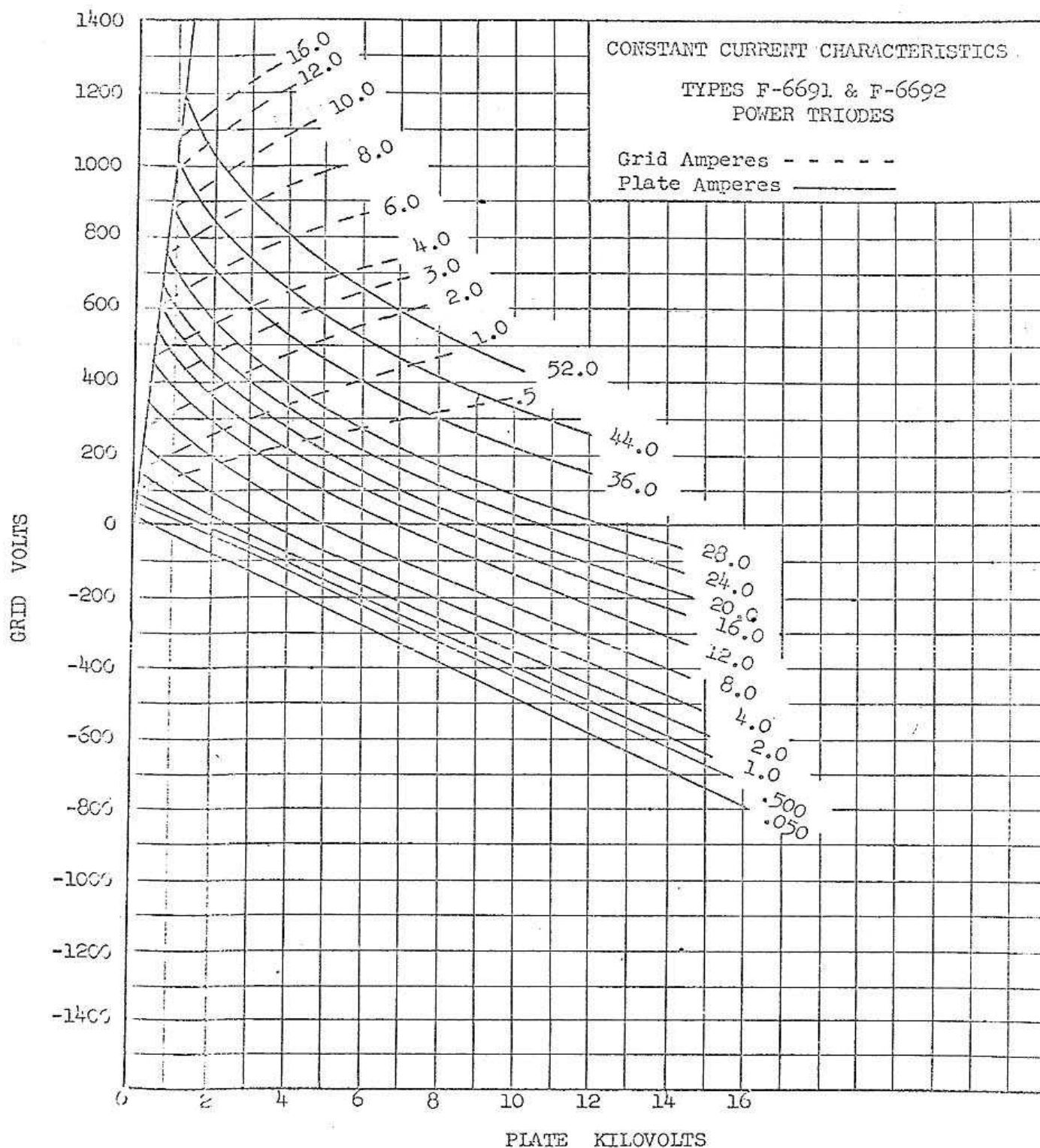
Maximum ratings apply up to 30 megacycles. The tube may be operated at higher frequencies provided the maximum values of plate voltage and power input are reduced according to the tabulation below (other maximum ratings are the same as shown above). Special attention should be given to adequate ventilation of the bulb at these frequencies.

Frequency	30	40	50	Megacycles
Percentage of Maximum Rated Plate Voltage and Plate Input	100	80	50	Percent

Additional information for specific applications can be obtained from the:

ITT ELECTRON TECHNOLOGY DIVISION
Applications Department
P.O. Box 100
Easton, Pennsylvania 18044-0100

ELECTRON TECHNOLOGY DIVISION **ITT**
BOX 100 EASTON, PA. 18044-0100



TERMINALS

BLACK - Grid
 YELLOW - Fil. 1
 RED - Fil. 2

