



ELECTRONIC TUBE REFERENCE

F6800

Power - Triode (over 1000V 100W) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

High-power ITT transmitting triode for Class C RF amplifier and oscillator service. Approximately 20 kW plate dissipation and 15 kV capability support tens of kilowatts of typical RF output.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	7.5 V / 107 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
AMPLIFICATION FACTOR	19.5
MAXIMUM PLATE VOLTAGE	15000 V
MAXIMUM PLATE DISSIPATION	20000 W
<i>Published maximum ratings and characteristics audited; remaining numeric data retained densely in parameter table.</i>	

Three-electrode industrial oscillator tube with a water-cooled anode capable of 20 kW dissipation; thoriated-tungsten filament. Full ratings apply to 22.5 MHz and reduced ratings permit operation to 50 MHz.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1962 ITT

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1962 ITT

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
oscillator., The anode is capable of dissipating	20	oscillator., The anode is capable of dissipating 20 kilowatts during
Filament Voltage T	5 V	Filament Voltage T.5 volts
Filament Current	107 A	Filament Current 107 amperes
Filament Starting Current	300 A	Filament Starting Current 300 amperes max.
Filament Cold Resistance	1	Filament Cold Resistance .01 ohms
Filament Heating Time	15	Filament Heating Time 15 seconds min.
Grid-Plate	26	Grid-Plate 26 puf
grid-Filament	25	grid-Filament 25 uuf
Plate-Filament	1	Plate-Filament 1.0 ppf
Water Flow on Anode	8	Water Flow on Anode 8 gpm
Glass Temperature (at hottest part)	180	Glass Temperature (at hottest part) 180° Cϕ. max.
D-C Plate Voltage	15000 V	D-C Plate Voltage 15,000 max, volts
D-C Grid Voltage	-1800 V	D-C Grid Voltage -1,800 max. volts
D-C Plate Current	3.5 A	D-C Plate Current 3.5 max, amperes
D-C @Grid Current	50 A	D-C @Grid Current .50 max. amperes
Plate Input	45	Plate Input 45 max. kilowatts
Plate Dissipation	20 W	Plate Dissipation 20 wax. kilowatts
D~C Plate Voltage	12500 V	D~C Plate Voltage 12,500 volts
D-C Grid Voltage	-1200 V	D-C Grid Voltage -1,200 volts
Peak R-F Grid Voltage	2100 V	Peak R-F Grid Voltage 2,100 volts
D-C Plate Current	3.5 A	D-C Plate Current 3.5 amperes

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
D-C Grid Current, approximate	45 A	D-C Grid Current, approximate 45 amperes
Driving Power, approximate	900 W	Driving Power, approximate 900 watts
Power Output, approximate	33 W	Power Output, approximate 33 kilowatts
Frequency [1]	27.5	Frequency 27.5 %0 50 Megacycles
Frequency [2]	0	Frequency 27.5 %0 50 Megacycles
Frequency [3]	50	Frequency 27.5 %0 50 Megacycles
Voltage and Plate Input [1]	100 V	Voltage and Plate Input 100 8o 50 Per Cent
Voltage and Plate Input [2]	8 V	Voltage and Plate Input 100 8o 50 Per Cent
Voltage and Plate Input [3]	50 V	Voltage and Plate Input 100 8o 50 Per Cent
F	6800 W	F-6800 POWER TRIODE



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1962 ITT Industrial and Transmitting Tubes

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1962 ITT INDUSTRIAL AND TRANSMITTING TUBES

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GridPlateCapacitance	26 pF	—
GridFilamentCapacitance	25 pF	—
PlateFilamentCapacitance	1 pF	—
FilamentStartingCurrent	500 A	—
FilamentColdResistance	0.01 ohm	—
FilamentHeatingTime	15 s	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum DC Grid Voltage	-1800 V	ClassC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum DC Plate Current	3.5 A	ClassC
Maximum DC Grid Current	500 mA	ClassC
Maximum Plate Input	45 kW	ClassC
Typical Power Output	33 kW	ClassC

TUBE TINKER

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and their source documents.

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