



ELECTRONIC TUBE REFERENCE

F6691

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

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRIODE

Forced-air-cooled ITT power triode for RF amplifier and oscillator service. Approximately 17 kW plate dissipation and 15 kV capability provide substantial professional transmitter power through the HF range.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	5 V / 260 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
AMPLIFICATION FACTOR	21
MAXIMUM PLATE VOLTAGE	15000 V
MAXIMUM PLATE DISSIPATION	17000 W
MAXIMUM CATHODE CURRENT	40 A
<i>Published maximum ratings and characteristics audited; remaining numeric data retained densely in parameter table.</i>	

Three-electrode industrial oscillator tube with a thoriated-tungsten filament and forced-air-cooled 17 kW anode.

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	17	oscillator. The anode is capable of dissipating 17 kilowatts during
Filament Voltage	5 V	Filament Voltage 5.0 volts
Filament Current	260 A	Filament Current 260 amperes
Filament Starting Current	1000 A	Filament Starting Current 1000 amperes
Filament Cold Resistance	2	Filament Cold Resistance .002 ohms
Filament Heating Time	15	Filament Heating Time 15 seconds
Peak Cathode Current, Note [1]	1 A	Peak Cathode Current, Note 1 40 amperes
Peak Cathode Current, Note [2]	4 A	Peak Cathode Current, Note 1 40 amperes
Grid-Plate	55	Grid-Plate 55 uuf
Grid-Filament	57	Grid-Filament 57 uuf
Plate~-Filament	5	Plate~-Filament 5.0 puf
Plate Dissipation - kw [1]	17 kW	Plate Dissipation - kw 17 1k 12
Plate Dissipation - kw [2]	1 kW	Plate Dissipation - kw 17 1k 12
Plate Dissipation - kw [3]	12 kW	Plate Dissipation - kw 17 1k 12
D-C Plate Voltage [1]	15000 V	D-C Plate Voltage 15,000 12,500 max. volts
D-C Plate Voltage [2]	12500 V	D-C Plate Voltage 15,000 12,500 max. volts
D-C Grid Voltage [1]	-2000 V	D-C Grid Voltage -2,000 -2,000 max. volts
D-C Grid Voltage [2]	-2000 V	D-C Grid Voltage -2,000 -2,000 max. volts
D-C Plate Current [1]	6 A	D-C Plate Current 6 6 wax. amps
D-C Plate Current [2]	6 A	D-C Plate Current 6 6 wax. amps
D-C Grid Currcut [1]	8	D-C Grid Currcut .8 .8 max. amps

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
D-C Grid Currcut [2]	8	D-C Grid Currcut .8 .8 max. amps
Plate Input [1]	60 kW	Plate Input 60 54 max. kw
Plate Input [2]	54 kW	Plate Input 60 54 max. kw
Plate Dissipation [1]	17 kW	Plate Dissipation 17 17 max. kw
Plate Dissipation [2]	17 kW	Plate Dissipation 17 17 max. kw
D-C Plate Voltage [1]	15000 V	D-C Plate Voltage 15,000 12,500 10,000 7,500 volts
D-C Plate Voltage [2]	12500 V	D-C Plate Voltage 15,000 12,500 10,000 7,500 volts
D-C Plate Voltage [3]	10000 V	D-C Plate Voltage 15,000 12,500 10,000 7,500 volts
D-C Plate Voltage [4]	7500 V	D-C Plate Voltage 15,000 12,500 10,000 7,500 volts
D-C Grid Voltage [1]	-1600 V	D-C Grid Voltage -1,600 -1,300 =-1,100 -800 volts
D-C Grid Voltage [2]	-1300 V	D-C Grid Voltage -1,600 -1,300 =-1,100 -800 volts
D-C Grid Voltage [3]	-1100 V	D-C Grid Voltage -1,600 -1,300 =-1,100 -800 volts
D-C Grid Voltage [4]	-800 V	D-C Grid Voltage -1,600 -1,300 =-1,100 -800 volts
Peak R-F Grid Voltage [1]	2140 V	Peak R-F Grid Voltage 2140 1820 1600 1360 volts
Peak R-F Grid Voltage [2]	1820 V	Peak R-F Grid Voltage 2140 1820 1600 1360 volts
Peak R-F Grid Voltage [3]	1600 V	Peak R-F Grid Voltage 2140 1820 1600 1360 volts
Peak R-F Grid Voltage [4]	1360 V	Peak R-F Grid Voltage 2140 1820 1600 1360 volts
D-C Plate Current [1]	3.9 A	D-C Plate Current 3.9 L,25 b1 5.4 amps
D-C Plate Current [2]	25 A	D-C Plate Current 3.9 L,25 b1 5.4 amps
D-C Plate Current [3]	5.4 A	D-C Plate Current 3.9 L,25 b1 5.4 amps
D-C Grid Current, approx [1]	570 A	D-C Grid Current, approx. .570 .500 .750 .690 amps
D-C Grid Current, approx [2]	500 A	D-C Grid Current, approx. .570 .500 .750 .690 amps
D-C Grid Current, approx [3]	750 A	D-C Grid Current, approx. .570 .500 .750 .690 amps

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
D-C Grid Current, approx [4]	690 A	D-C Grid Current, approx. .570 .500 .750 .690 amps
Driving Power, approx [1]	1200 W	Driving Power, approx. 1200 900 1200 935 watts
Driving Power, approx [2]	900 W	Driving Power, approx. 1200 900 1200 935 watts
Driving Power, approx [3]	1200 W	Driving Power, approx. 1200 900 1200 935 watts
Driving Power, approx [4]	935 W	Driving Power, approx. 1200 900 1200 935 watts
Power Output, approx [1]	470 kW	Power Output, approx. 47,0 42.0 32.5 30.0 kw
Power Output, approx [2]	42 kW	Power Output, approx. 47,0 42.0 32.5 30.0 kw
Power Output, approx [3]	32.5 kW	Power Output, approx. 47,0 42.0 32.5 30.0 kw
Power Output, approx [4]	30 kW	Power Output, approx. 47,0 42.0 32.5 30.0 kw
Frequency [1]	30	Frequency 30 Lo 50 megacycles
Frequency [2]	50	Frequency 30 Lo 50 megacycles
Plate Voltage & Plate Input [1]	100 V	Plate Voltage & Plate Input 100 80 50 per cent
Plate Voltage & Plate Input [2]	80 V	Plate Voltage & Plate Input 100 80 50 per cent
Plate Voltage & Plate Input [3]	50 V	Plate Voltage & Plate Input 100 80 50 per cent
OUTLINE F	6691 W	OUTLINE F-6691 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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum full-rating frequency	30 MHz	—
Cooling method	forced air	—

TUBE TINKER

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