



ELECTRONIC TUBE REFERENCE

F7C23

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

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRIODE

Forced-air-cooled pulse power triode for high-voltage pulsed RF amplifier and oscillator service. Kilovolt plate capability and pulse-oriented construction suit specialized high-power RF generation rather than continuous-wave operation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	11 V / 29 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
AMPLIFICATION FACTOR	25
MAXIMUM PLATE VOLTAGE	17500 V
MAXIMUM PLATE DISSIPATION	1200 W
MAXIMUM CATHODE CURRENT	100 mA
Published maximum ratings and characteristics audited; remaining values retained densely in parameter table.	

Three-electrode power triode designed for high-voltage pulse operation. The forced-air-cooled anode dissipates 1.2 kW and maximum ratings apply to 5 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
THE F=TC2 [1]	3 V	THE F=TC23 1S A THREE~ELECTRODE TUBE DESIGNED FOR USE IN HIGH VOLTAGE
THE F=TC2 [2]	1 V	THE F=TC23 1S A THREE~ELECTRODE TUBE DESIGNED FOR USE IN HIGH VOLTAGE
PULSE OPERATION. THE ANODE	1	PULSE OPERATION. THE ANODE 1S FORCED AIR=COOLED AND CAPABLE OF DISSIPAT-
ING [1]	1200	ING 1,200 WATTS. THE CATHODE 1S A THORIATED TUNGSTEN FILAMENT. MAXiMUM
ING [2]	1	ING 1,200 WATTS. THE CATHODE 1S A THORIATED TUNGSTEN FILAMENT. MAXiMUM
FILAMENT VOLTAGE	11 V	FILAMENT VOLTAGE 11.0 VouLTs
FILAMENT CURRENT	29 A	F1LAMENT CURRENT 29.0 AMPERES
FILAMENT STARTING CURRENT	58 A	FILAMENT STARTING CURRENT 58 AMPERES
GrR1D=PLATE	12	GrR1D=PLATE 12.0 uur
PLATE=F ILAMENT	1.7	PLATE=F ILAMENT 1.7 uur
Max. INCOMING AIR TEMPERATURE	459	Max. INCOMING AIR TEMPERATURE 459 ¢
MAX [1]	1	MAX 1MUM GLASS TEMPERATURE 150° ¢
MAX [2]	150	MAX 1MUM GLASS TEMPERATURE 150° ¢
POWER TRIODE	-2 W	POWER TRIODE -2 -
RAD1	0 W	RAD10-FREQUENCY POWER AMPLIFIER AND OSCILLATOR ~- PULSED OPERATION
DC PLATE VOLTAGE	17500 V	DC PLATE VOLTAGE 17,500 VoLTs
DC GR1D VOLTAGE	-2000 V	DC GR1D VOLTAGE -2,000 VoLTs

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC PLATE CURRENT	100 mA	DC PLATE CURRENT 0.100 AMPERE
OC GrRi1D CURRENT	10 mA	OC GrRi1D CURRENT 0.010 AMPERE
PLATE DISSIPATION	1200 W	PLATE DISSIPATION 1,200 WATTS
Max. PULSE WIDTH	90	Max. PULSE WIDTH 90 v SECONDS
DC PLATE VOLTAGE	15000 V	DC PLATE VOLTAGE 15,000 VoLTs
DC Gr1D CURRENT	1.25 A	DC Gr1D CURRENT 1.25 Ma
AVERAGE Power OurpPut	120 W	AVERAGE Power OurpPut 120 WATTS
Peak Power OutpPuT	120 W	Peak Power OutpPuT 120 KiLowATTs
n T + [1]	1000 W	n T +1000 F-7C23 POWER TRIODE
n T + [2]	7 W	n T +1000 F-7C23 POWER TRIODE
n T + [3]	3 W	n T +1000 F-7C23 POWER TRIODE
Published value [1]	5	5 8 GRID
Published value [2]	8	5 8 GRID
{ [1]	1 W	- {1 F-7C23 POWER TRIODE
{ [2]	7 W	- {1 F-7C23 POWER TRIODE
{ [3]	3 W	- {1 F-7C23 POWER TRIODE
F [1]	7 W	F-7C23 POWER TRIODE
F [2]	3 W	F-7C23 POWER TRIODE



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	12 pF	—
GridFilamentCapacitance	12.5 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PlateFilamentCapacitance	1.7 pF	—
FilamentStartingCurrent	58 A	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum DC Grid Voltage	-2000 V	Pulse
Maximum DC Plate Current	100 mA	Pulse
Maximum DC Grid Current	10 mA	Pulse
MaximumPulseWidth	90 us	Pulse
MaximumDutyFactor	0.005	Pulse