



ELECTRONIC TUBE REFERENCE

8161R

Power - Triode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Power transmitting triode for RF amplification, oscillation, modulation, or related high-power electronic service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	7.5 V / 51.5 A	PARALLEL HEATER	— / —
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
TRANSCONDUCTANCE	0.02 S
AMPLIFICATION FACTOR	22
MAXIMUM PLATE VOLTAGE	6000 V
MAXIMUM PLATE DISSIPATION	4000 W
MAXIMUM GRID DISSIPATION	150 W
MAXIMUM CATHODE CURRENT	2.5 A
Section values promoted from published characteristics and maximum ratings.	

High-performance ceramic/metal power triode for amplifier, oscillator or modulator service, using a rugged low-inductance mesh filament for improved VHF performance.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

199X Svetlana

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

199X SVETLANA

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage 7.50 ±	0.37 V	SourcePage1-2
Current @	7.5 V	SourcePage1-2
Feedback	20 pF	SourcePage1-2

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC plate voltage 5500 6000	6000 V	SourcePage1-2
DC plate current 2.0 2.5	2.5 A	SourcePage1-2
Plate dissipation 2670 4000	4000 W	SourcePage1-2
Grid dissipation 150 150	150 W	SourcePage1-2
DC grid voltage -1000 -1000	-1000 V	SourcePage1-2
DC grid current	400 mA	SourcePage1-2
(Frequencies to	110 MHz	TypicalOperation
DC plate voltage 4000 5000	6000 V	TypicalOperation
DC plate current 2.5 2.5	2.08 A	TypicalOperation
DC grid voltage* -300 -450	-500 V	TypicalOperation
DC grid current* 245 265	180 V	TypicalOperation
Peak RF grid voltage* 580 750	765 V	TypicalOperation
Driving Power* 142 197	136 W	TypicalOperation
Grid dissipation* 68 78	46 W	TypicalOperation
Plate input power 10,000 12,500	12500 W	TypicalOperation
Plate dissipation 2500 2500	2500 W	TypicalOperation

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate output power 7500 10,000	10000 W	TypicalOperation
(Frequencies to	30 MHz	TypicalOperation
DC plate voltage 4000 4500	5000 V	TypicalOperation
DC plate current 1.67 1.47	1.25 A	TypicalOperation
DC grid voltage -450 -500	-550 V	TypicalOperation
DC grid current* 180 140	150 mA	TypicalOperation
Peak RF grid voltage* 685 715	760 V	TypicalOperation
Driving power 125 100	115 W	TypicalOperation
Grid dissipation* 43 30	32 W	TypicalOperation
DC plate input power 6670 6615	6250 W	TypicalOperation
Plate dissipation 1670 1315	950 W	TypicalOperation
Plate output power 5000 5300	5300 W	TypicalOperation
DC plate voltage	6000 V	SourcePage1-2
DC plate current	2.5 A	SourcePage1-2
Plate dissipation	4000 W	SourcePage1-2
Grid dissipation	150 W	SourcePage1-2
DC grid voltage	-1000 V	SourcePage1-2
Zero-signal DC plate current* 0.6 0.5	400 mA	TypicalOperation
Maximum-signal DC plate current 4.0 3.2	3 A	TypicalOperation
DC grid voltage** -150 -190	-240 V	TypicalOperation
Peak AF grid voltage (per tube)* 340 360	390 V	TypicalOperation
Maximum-signal peak driving power* 340 230	225 W	TypicalOperation
Maximum-signal nominal driving power* 170 115	113 W	TypicalOperation
Load resistance, plate-to-plate 2200 3600	4650 Ohms	TypicalOperation