

ELECTRONIC TUBE REFERENCE

53

Power - Triode electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

TRIODE

Directly heated power-output triode intended for audio-frequency amplifier service. Manufacturer operating data emphasize output-stage use rather than RF transmitting duty, placing it functionally with receiving and audio power triodes.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7B	BASE PINS	7
NOMINAL HEATER	2.5 V / 2 A	PARALLEL HEATER	– / –
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Similar

7B - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – H	–	H – Heater	CONNECTED
PIN2 – 2P	B	P – Plate (Anode)	CONNECTED
PIN3 – 2G1	B	G1 – Control Grid	CONNECTED
PIN4 – K	A	K – Cathode	CONNECTED
PIN5 – 1G1	A	G1 – Control Grid	CONNECTED
PIN6 – 1P	A	P – Plate (Anode)	CONNECTED
PIN7 – H	–	H – Heater	CONNECTED
CAP1 – G4	A	G4 – Fourth Grid	CONNECTED

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	11000 Ω
TRANSCONDUCTANCE	0.0032 S
AMPLIFICATION FACTOR	35
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	10 W
MAXIMUM CATHODE CURRENT	40 mA
<i>Representative row for two identical triode sections; ratings and characteristics apply per plate/section as printed.</i>	

Dual power triode for Class B amplifier service.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1937 Raytheon Radio Receiving Tubes

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

1937 RAYTHEON RADIO RECEIVING TUBES

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum peak plate current per plate	125 mA	PerPlate
Maximum average plate dissipation	10 W	PerPlate
Plate voltage	250 V	ClassB
Grid bias	0 V	ClassB
No-signal plate current per plate	14 mA	ClassB
Load resistance plate-to-plate	8000 ohm	ClassB
Plate voltage	300 V	ClassB
No-signal plate current per plate	17.5 mA	ClassB; PlateVoltage=300V
Load resistance plate-to-plate	10000 ohm	ClassB; PlateVoltage=300V
Power output	10 W	ClassB; PlateVoltage=300V
Plate voltage	180 V	ClassA; TriodesParallel
Grid bias	-5 V	ClassA; TriodesParallel; PlateVoltage=180V
Plate voltage	204 V	ClassA; TriodesParallel
Grid bias	-6 V	ClassA; TriodesParallel; PlateVoltage=204V

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	35	ClassA; TriodesParallel
Plate resistance	11300 ohm	ClassA; TriodesParallel; PlateVoltage=180V
Transconductance	3100 uS	ClassA; TriodesParallel; PlateVoltage=180V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	11000 ohm	ClassA; TriodesParallel; PlateVoltage=204V
Transconductance	3200 uS	ClassA; TriodesParallel; PlateVoltage=204V


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1940 RCA

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

1940 RCA

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	2.5 V	Nominal
HeaterCurrentNominal	2 A	Nominal
Maximum Plate Voltage	300 V	—
Maximum Plate Dissipation	2.5 W	—
Maximum Cathode Current	40 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	3200 μS	Typical
Amplification Factor	35	Typical
Plate Resistance	11000 ohm	Typical


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Sylvania

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

1950 SYLVANIA

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Service	Class B power amplifier	ClassB



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

195X General Electric Essential Characteristics

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

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	300 V	Published handbook rating
Plate voltage	300 V	ClassA
Control-grid bias	0 V	ClassA
Plate current	17.5 mA	ClassA
Power output	10 W	ClassA
Push-pull plate voltage	300 V	ClassB PushPull TwoTubes
Push-pull control-grid voltage	0 V	ClassB PushPull TwoTubes
Push-pull plate current	17.5 mA	ClassB PushPull TwoTubes
Push-pull load resistance	8000 ohm	ClassB PushPull TwoTubes
Push-pull power output	10 W	ClassB PushPull TwoTubes
Parallel plate voltage	294 V	ClassA SectionsParallel
Parallel control-grid bias	6 V	ClassA SectionsParallel

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	8000 ohm	Published handbook characteristic
Heater/filament voltage	2.5 V	Published heater/filament rating

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament current	2 A	Published heater/filament rating
Parallel plate resistance	11000 ohm	SectionsParallel
Parallel transconductance	3200 μ S	SectionsParallel
Parallel amplification factor	35	SectionsParallel



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Tung Sol

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

1961 TUNG SOL

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	2.5 V	—
Heater current	2 A	—
Maximum peak plate current per plate	125 mA	EachSection
Plate voltage	250 V	ClassA1;ParallelSections
Power output	10 W	ClassB2;PushPull;TwoTubes
Effective load resistance plate-to-plate	8000 ohm	ClassB2;PushPull

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	6 mA	ClassA1;ParallelSections