



ELECTRONIC TUBE REFERENCE

31

Power - Triode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

Directly heated output triode for receiver audio power service, providing single-ended power amplification from early receiving-equipment supply voltages.

GENERAL CHARACTERISTICS

BASE DESIGNATION	4D	BASE PINS	4
NOMINAL HEATER	2 V / 130 mA	PARALLEL HEATER	– / –
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
PLATE RESISTANCE	3600 Ω
TRANSCONDUCTANCE	0.00105 S
AMPLIFICATION FACTOR	3.8
MAXIMUM PLATE VOLTAGE	180 V
<i>Published promoted fields populated from Maximum Ratings / Characteristics / Typical Operation headings.</i>	

Directly heated output triode.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1932 Cunningham Radio Tubes

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

1932 CUNNINGHAM RADIO TUBES

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-plate capacitance	5.7 pF	Published direct interelectrode capacitance
Grid-filament capacitance	3.7 pF	Published direct interelectrode capacitance
Plate-filament capacitance	2.2 pF	Published direct interelectrode capacitance
Load resistance	7000 ohm	Published operating characteristic

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 plate voltage	180 V	Published datasheet rating
Plate voltage	180 V	ClassA
Control-grid bias	30 V	ClassA
Plate current	12.3 mA	ClassA
Load resistance	5700 ohm	ClassA
Power output	0.375 W	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	3600 ohm	Published datasheet characteristic
Transconductance	1050 μ S	Published datasheet characteristic
Amplification factor	3.8	Published datasheet characteristic
Heater/filament voltage	2 V	Published heater/filament rating
Heater/filament current	130 mA	Published heater/filament rating

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	3.5 pF	Published capacitance
Output capacitance	2.7 pF	Published capacitance
Grid-to-plate capacitance	6.7 pF	Published capacitance


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

193X Cunningham

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

193X CUNNINGHAM

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	2 V	Published nominal
Heater/filament current	130 mA	Published nominal
Transconductance	750 μ S	Published characteristic
Amplification factor	3.8	Published characteristic
Plate resistance	5100 Ohm	Published characteristic


SOURCE DATA APPENDIX

1940 RCA

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1940 RCA

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament voltage	2 V	Published nominal value
Heater or filament current	130 mA	Published nominal value
Transconductance	1050 μ S	Published representative/high operating value
Amplification factor	3.8	Published representative/high operating value
Plate resistance	3600 ohm	Published representative/high operating value

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Audio power output	0.375 W	SingleTube; 180 V plate
Load resistance	5700 ohm	SingleTube; 180 V plate



SOURCE DATA APPENDIX

1950 Sylvania

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

1950 SYLVANIA

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	2 V	—
HeaterOrFilamentCurrent	130 mA	—



SOURCE DATA APPENDIX

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

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	3.5 pF	Section1
Output capacitance	2.7 pF	Section1
Grid-to-plate capacitance	5.7 pF	Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	180 V	ClassA
Control-grid voltage	-30 V	ClassA
Plate current	12.3 mA	ClassA
Load resistance	5700 Ω	ClassA
Power output	0.375 W	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	3600 Ω	ClassA
Transconductance	1050 μS	ClassA
Amplification factor	3.8	ClassA



SOURCE DATA APPENDIX

1961 Tung Sol

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

1961 TUNG SOL

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Power Output	0.375 W	BatteryOperation

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	3600 ohm	HigherVoltageOperatingPoint
Transconductance	1050 uS	HigherVoltageOperatingPoint