



ELECTRONIC TUBE REFERENCE

27

Voltage - Triode (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

TRIODE

General-purpose receiving triode for voltage amplification, detection, oscillator, or Class-A service as documented by the manufacturer.

GENERAL CHARACTERISTICS

BASE DESIGNATION	5A	BASE PINS	5
NOMINAL HEATER	2.5 V / 1.75 A	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Triode	
PLATE RESISTANCE	9250 Ω
TRANSCONDUCTANCE	0.001 S
AMPLIFICATION FACTOR	9
MAXIMUM PLATE VOLTAGE	275 V
MAXIMUM HEATER-CATHODE VOLTAGE	90 V
<i>Transconductance promoted from representative published operating point.</i>	

General-purpose triode for amplifier, detector, or oscillator service; manufactured as a replacement for older receivers.

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	3.3 pF	Published direct interelectrode capacitance

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	250 V	Published datasheet rating
Plate voltage	250 V	ClassA
Control-grid bias	21 V	ClassA
Plate current	5.2 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	9250 ohm	Published datasheet characteristic
Transconductance	975 μ S	Published datasheet characteristic
Amplification factor	9	Published datasheet characteristic
Heater/filament voltage	2.5 V	Published heater/filament rating
Heater/filament current	1.75 A	Published heater/filament rating

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	3.5 pF	Published capacitance
Output capacitance	3 pF	Published capacitance
Grid-to-plate capacitance	3.3 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	2.5 V	Published nominal
Heater/filament current	1.75 A	Published nominal
Transconductance	1100 μ S	Published characteristic
Amplification factor	9	Published characteristic
Plate resistance	9000 Ω m	Published characteristic


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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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
HEeaTer VoLTaGE (A.C.or D.C) .evvvvnnnnn	2.5 V	HEeaTer VoLTaGE (A.C.or D.C).evvvvnnnnn.. 2.5 Volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HEATER CURRENT ...ivvtiiniintnennnnnnnnnnns	1.75 A	HEATER CURRENT ...ivvtiiniintnennnnnnnnnnns 1.75 Amperes
PLATE VOLTAGE*	250 V	PLATE VOLTAGE* 90 135 180 250 Volts
GRID VOLTAGE})	-21 V	GRID VOLTAGE}) -9 -13.5 -21 Volts
PLATE CURRENT	5.2	PLATE CURRENT 2.7 4.5 5.0 5.2 Milliamperes
AMPLIFICATION FACTOR	9	AMPLIFICATION FACTOR 9 9 9 9
* Maximum plate voltage =	275 V	* Maximum plate voltage = 275 volts,
t Maximum value of d-c resistance in grid circuit is	1	t Maximum value of d-c resistance in grid circuit is 1.0 megohm.
As an amplifier, the	27	As an amplifier, the 27 is applicable to the audio- or the radio-frequency
or with grid bias, The plate voltage for grid leak and condenser detection is	45	or with grid bias, The plate voltage for grid leak and condenser detection is 45
volts. A grid leak of from	0.00025 V	volts. A grid leak of from 1 to 5 megohms used with a grid condenser of 0.00025
uf is suitable. Por grid- bias detection, a plate voltage of	275 V	uf is suitable. Por grid-bias detection, a plate voltage of 275 volts or less may be
when no signal is being received, is approximately	0.2	when no signal is being received, is approximately 0.2 milliampere. For the
condition of	250 V	condition of 250 volts on plate and transformer coupling, the grid bias will be
approximately —	30 V	approximately —~30 volts.
° f E	25 V	° f E5=25 VOLTS
PLATE VOLTS	3 V	PLATE VOLTS 92C—5I13R2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE RESISTANCE,	9250 ohm	PLATE RESISTANCE, 11000 9000 9000 9250 Ohms
TRANSCONDUCTANCE	975 μS	TRANSCONDUCTANCE 820 1000 1000 975 Micromhos



TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

1948 Brimar Radio Valve Manual

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

1948 BRIMAR RADIO VALVE MANUAL
Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	2.5 V	—
HeaterOrFilamentCurrent	1.75 A	—



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
Tension de chauffage CA 2,5 volts	2.5 V	Tension de chauffage CA 2,5 volts
Courant de chauffage 1,75 ampère	1.75 A	Courant de chauffage 1,75 ampère
Tension de chauffage ... 2,5 2,5 2,5 2,5 volts	2.5 V	Tension de chauffage ... 2,5 2,5 2,5 2,5 volts
Tension plaque 90 135 180 250 volts	250 V	Tension plaque 90 135 180 250 volts
Tension grille -6 -9 -13,5 -21 volts	21 V	Tension grille -6 -9 -13,5 -21 volts
Courant plaque 3 4,7 5,0 5.2 ma.	5.2 ma	Courant plaque 3 4,7 5,0 5.2 ma.
Résistance interne 10.000 9.000 9.000 9.250 ohms	9.25 ohms	Résistance interne 10.000 9.000 9.000 9.250 ohms

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	275 V	Published handbook rating
Plate voltage	250 V	ClassA
Control-grid bias	21 V	ClassA
Plate current	5.2 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	9250 ohm	Published handbook characteristic
Transconductance	975 μ S	Published handbook characteristic
Amplification factor	9	Published handbook characteristic
Heater/filament voltage	2.5 V	Published heater/filament rating
Heater/filament current	1.75 A	Published heater/filament rating

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	3.1 pF	Published capacitance column
Output capacitance	2.3 pF	Published capacitance column
Grid-to-plate capacitance	3.3 pF	Published capacitance column

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
Plate Voltage	250 V	Typical