

ELECTRONIC TUBE REFERENCE

32

Voltage Tetrode electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TETRODE

Screen-grid tetrode intended for receiver voltage amplification, detector, oscillator, or general Class-A service as documented by the manufacturer.

GENERAL CHARACTERISTICS

BASE DESIGNATION	4K	BASE PINS	4
NOMINAL HEATER	2 V / 60 mA	PARALLEL HEATER	– / –
HEATING	Direct	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

4K - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – F	–	F – Filament	CONNECTED
PIN2 – P	A	P – Plate (Anode)	CONNECTED
PIN3 – G2	A	G2 – Screen Grid	CONNECTED
PIN4 – F	–	F – Filament	CONNECTED
CAP1 – G1	A	G1 – Control Grid	CONNECTED

SECTION RATINGS

SECTION1 Tetrode	
PLATE RESISTANCE	1200000 Ω
TRANSCONDUCTANCE	0.00064 S
AMPLIFICATION FACTOR	780
MAXIMUM PLATE VOLTAGE	180 V
MAXIMUM SCREEN VOLTAGE	67.5 V
<i>Published promoted fields populated from Maximum Ratings / Characteristics / Typical Operation headings.</i>	

Screen-grid high-frequency amplifier tetrode.



SOURCE OPERATING CONDITIONS

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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 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-plate capacitance	0.015 pF	Published direct interelectrode capacitance



SOURCE OPERATING CONDITIONS

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1937 Raytheon Radio Receiving Tubes

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1937 RAYTHEON RADIO RECEIVING TUBES

Section 1 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	180 V	Published datasheet rating
Maximum screen voltage	67.5 V	Published datasheet rating
Plate voltage	180 V	ClassA
Screen voltage	67.5 V	ClassA
Control-grid bias	3 V	ClassA
Plate current	1.7 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	1200000 ohm	Published datasheet characteristic
Transconductance	650 μS	Published datasheet characteristic
Amplification factor	780	Published datasheet characteristic

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	2 V	Published heater/filament rating
Heater/filament current	60 mA	Published heater/filament rating

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	5.3 pF	Published capacitance
Output capacitance	10.5 pF	Published capacitance
Grid-to-plate capacitance	0.015 pF	Published capacitance


SOURCE DATA APPENDIX

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193X Cunningham

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193X CUNNINGHAM

Section 1 · Tetrode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	2 V	Published nominal
Heater/filament current	60 mA	Published nominal
Transconductance	780 μ S	Published characteristic


SOURCE DATA APPENDIX

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1940 RCA

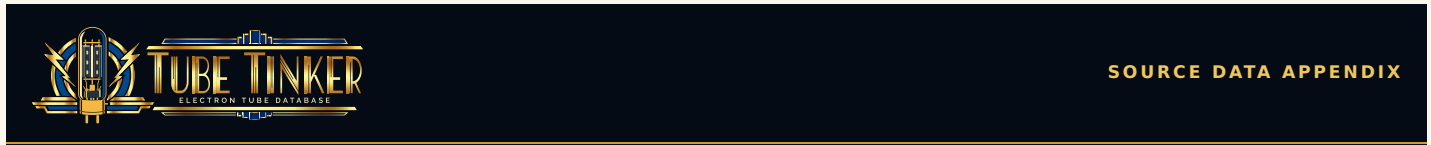
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1940 RCA

Section 1 · Tetrode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament voltage	2 V	Published nominal value
Heater or filament current	60 mA	Published nominal value
Transconductance	650 μ S	Published representative/high operating value
Amplification factor	780	Published representative/high operating value
Plate resistance	1200000 ohm	Published representative/high operating value

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.007 pF	With shield can



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1950 Sylvania

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1950 SYLVANIA

Section 1 · Tetrode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterOrFilamentVoltage	2 V	—
HeaterOrFilamentCurrent	60 mA	—



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195X General Electric Essential Characteristics

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195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Tetrode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	5.3 pF	Section1
Output capacitance	10.5 pF	Section1
Grid-to-plate capacitance	0.015 pF	Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	180 V	ClassA
Screen voltage	67.5 V	ClassA
Control-grid voltage	-3 V	ClassA
Plate current	1.7 mA	ClassA
Screen current	0.4 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	1200000 Ω	ClassA
Transconductance	650 μ S	ClassA



SOURCE DATA APPENDIX

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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 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	180 V	ClassA1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	1200000 ohm	PlateVoltage=180V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	650 μ S	PlateVoltage=180V