

ELECTRONIC TUBE REFERENCE

22

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	3.3 V / 132 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	600000 Ω
TRANSCONDUCTANCE	0.00047999999999999996 S
MAXIMUM PLATE VOLTAGE	135 V
MAXIMUM SCREEN VOLTAGE	67.5 V
<i>Published ratings and characteristics promoted from the approved datasheet.</i>	

Directly heated screen-grid tetrode for high-frequency amplification.



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 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-plate capacitance	0.025 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 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MED. BRSE Maximum Screen Voltage	67.5 V	Published ratings
Plate Voltage	135 V	ClassA; Column1
Plate Voltage	135 V	ClassA; Column2
Screen Voltage	45 V	ClassA; Column1
Screen Voltage	67.5 V	ClassA; Column2
Grid Bias	-1.5	ClassA; Column1
Grid Bias	-1.5	ClassA; Column2
Amplification Factor	270	ClassA; Column1
Amplification Factor	160	ClassA; Column2
Plate Resistance	0.725 Mohm	ClassA; Column1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	0.325 Mohm	ClassA; Column2
Transconductance	375 uS	ClassA; Column1
Transconductance	500 uS	ClassA; Column2
Plate Current	1.7 mA	ClassA; Column1
Plate Current	3.7 mA	ClassA; Column2
Screen Current	0.6 mA	ClassA; Column1
Screen Current	1.3 mA	ClassA; Column2
screen voltage of	45 Mohm	ClassA; Column1
screen voltage of	1 Mohm	ClassA; Column2
screen voltage of	67.5 Mohm	ClassA; Column3

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	0.02 pF	Published capacitance
Input	343 pF	Published capacitance
Output	12	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 · Tetrode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater/filament voltage	3.3 V	Published nominal
Heater/filament current	132 mA	Published nominal
Transconductance	500 uS	Published characteristic


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 · Tetrode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Filament voltage	3.3 V	—
Filament current	132 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 · Tetrode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	3.5 pF	—
Output capacitance	10 pF	—
Grid-to-plate capacitance	0.02 pF	—
Plate resistance	325000 ohm	ClassA; OperatingPoint1
Transconductance	500 uS	ClassA; OperatingPoint1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	135 V	ClassA; OperatingPoint1
Screen voltage	67.5 V	ClassA; OperatingPoint1
Control-grid bias	1.5 V	ClassA; OperatingPoint1
Plate current	3.7 mA	ClassA; OperatingPoint1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen current	1.3 mA	ClassA; OperatingPoint1
Maximum plate voltage	135 V	—
Maximum screen voltage	67.5 V	—