

ELECTRONIC TUBE REFERENCE

6J4

Voltage - Triode (single high frequency) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
TRIODE

High-transconductance triode for grounded-grid UHF amplification up to approximately 500 MHz.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7BQ	BASE PINS	7
NOMINAL HEATER	6.3 V / 400 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7BQ - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	4500 Ω
TRANSCONDUCTANCE	0.012 S
AMPLIFICATION FACTOR	55
MAXIMUM PLATE VOLTAGE	150 V
MAXIMUM SCREEN VOLTAGE	800 V
MAXIMUM PLATE DISSIPATION	2.75 W
MAXIMUM CATHODE CURRENT	40 mA
<i>High-frequency grounded-grid triode.</i>	

The 6J4 is a miniature triode designed primarily as a grounded-grid UHF amplifier, combining a μ of about 55 with very high transconductance for operation to roughly 500 MHz.

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	150 V	Published handbook rating
Plate voltage	150 V	ClassA
Plate current	15 mA	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	4500 ohm	Published handbook characteristic
Transconductance	12000 μ S	Published handbook characteristic
Amplification factor	55	Published handbook characteristic
Heater voltage	6.3 V	Published heater rating
Heater current	400 mA	Published heater rating

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

195X Raytheon Special Purpose Tubes

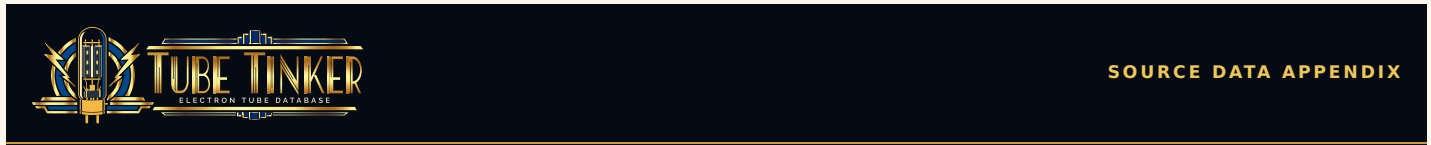
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195X RAYTHEON SPECIAL PURPOSE TUBES

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode resistor	100 Ω	UHF Amplifier
Plate voltage	100 V	UHF Amplifier
Plate current	10 mA	UHF Amplifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	5000 Ω	Section1
Transconductance	11000 μS	Section1
Amplification factor	55	Section1



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1960 RCA Industrial and Communications Types

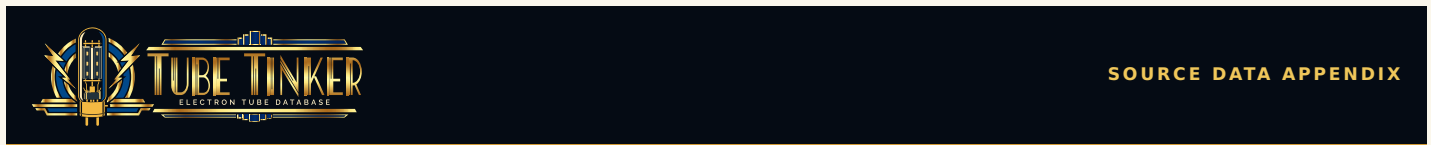
Published test conditions and operating points. Values on this page are preserved as reported by this source.

1960 RCA INDUSTRIAL AND COMMUNICATIONS TYPES

Section 1 · Triode

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	UHF cathode-drive amplifier	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum useful frequency	500 MHz	—



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	150 V	Published operating/characteristic table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	15 mA	Published operating/characteristic table
Transconductance	12000 μ S	Published operating/characteristic table
Amplification Factor	55	Published operating/characteristic table



SOURCE DATA APPENDIX

1966 Tung Sol Electronic Tubes 2 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	150 V	ClassA1;GroundedGrid
Plate current	15 mA	ClassA1;GroundedGrid
Cathode resistor	100 ohm	ClassA1;GroundedGrid
Maximum heater-cathode voltage	90 V	WholeTube

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum operating frequency	500 MHz	GroundedGridUHF

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1971 RCA HB3 Binder 3 of 7

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

1971 RCA HB3 BINDER 3 OF 7

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	400 mA	—
Peak heater-cathode voltage	90 V	—
Plate voltage	150 V	ClassA
Cathode current	20 mA	GroundedGrid
Maximum operating frequency	500 MHz	UHF

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	12000 μ S	GroundedGrid
Amplification factor	60	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode-to-plate capacitance	0.24 pF	—
Grid-to-cathode capacitance	5.5 pF	—
Grid-to-plate capacitance	4 pF	—

1981 Russian Tubes Katsnelson and Larionov

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

1981 RUSSIAN TUBES KATSNELSON AND LARIONOV

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	10.8 mA	Published Russian-source value; OCR-normalized.
Transconductance	5.2 μS	Published Russian-source value; OCR-normalized.
Input capacitance	6	Published Russian-source value; OCR-normalized.
Transfer capacitance	0.0035	Published Russian-source value; OCR-normalized.
Service life	25000 h	Published Russian-source value; OCR-normalized.
Transconductance	3.8 μS	Published Russian-source value; OCR-normalized.
Heater voltage	6.9 V	Nominal/published heater value.
Heater current	300 mA	Nominal/published heater value.



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ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

198X Shuguang

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

198X SHUGUANG

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Nominal
Heater current	300 mA	Nominal

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	Published principal electrical parameter

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes,
and their source documents.

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