



ELECTRONIC TUBE REFERENCE

4BQ7A

Voltage - Dual Triode (similar high frequency) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

TRIODE-TRIODE

Medium-mu twin triode for VHF television tuner cascode amplification and push-pull cathode-drive RF amplifier service, combining two closely matched high-frequency triode sections.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9AY	BASE PINS	9
NOMINAL HEATER	4.2 V / 600 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	5900 Ω
TRANSCONDUCTANCE	0.0064 S
AMPLIFICATION FACTOR	38
MAXIMUM PLATE VOLTAGE	260 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	20 mA
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
WARM-UP TIME	11 s
<i>Published ratings and characteristics promoted where applicable.</i>	

SECTION2 Triode	
PLATE RESISTANCE	5900 Ω
TRANSCONDUCTANCE	0.0064 S
AMPLIFICATION FACTOR	38
MAXIMUM PLATE VOLTAGE	260 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Second physical triode section; electrically identical twin section.</i>	

Medium-mu twin triode used as a cascode amplifier in VHF television tuners and in push-pull cathode-drive RF amplifiers.



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

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input Capacitance	2.85 pF	EachUnit
Output Capacitance	1.35 pF	EachUnit
Grid-Plate Capacitance	1.15 pF	EachUnit

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	150 V	ClassA;EachUnit
Cathode Bias Resistor	220 ohm	ClassA;EachUnit
Plate Current	9 mA	ClassA;EachUnit



SOURCE OPERATING CONDITIONS

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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 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Warmup Time	11 s	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1965 Westinghouse Data Book

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

1965 WESTINGHOUSE DATA BOOK

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	4.2 V	—
Heater Current	600 mA	—
Transconductance	6400 μ S	RepresentativePublishedPoint
Plate Resistance	6100 ohm	RepresentativePublishedPoint
Amplification Factor	39 ratio	RepresentativePublishedPoint
Plate Voltage	150 V	ClassA; EachSection
Plate Current	9 mA	ClassA; EachSection
Cathode Bias Resistor	220 ohm	ClassA; EachSection

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	250 V	—
Maximum Plate Dissipation	2 W	—
Plate Supply Voltage	250 V	GroundedGrid; DirectCoupled



SOURCE OPERATING CONDITIONS

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1966 Tung Sol Electronic Tubes 1 of 4

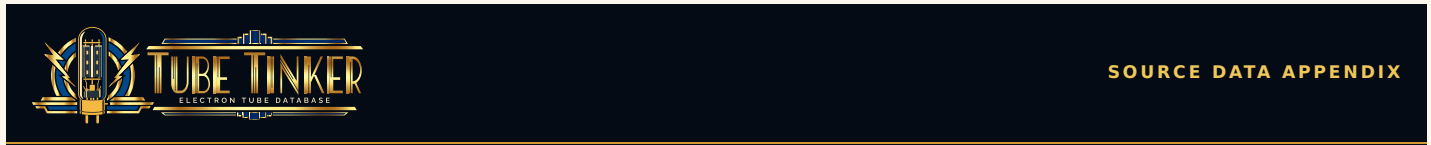
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1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	150 V	EachSection
Plate current	10 mA	EachSection
Application	VHF amplifier/cascode service	Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	6400 μ S	EachSection
Plate resistance	5900 Ω	EachSection
Amplification factor	38	EachSection



SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 4 of 7

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

1971 RCA HB3 BINDER 4 OF 7

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current	560 mA–640 mA	Published nominal $\pm$ tolerance
Heater Voltage	4.2 V	At heater current 0.6 A
Warm-Up Time	11 s	Average
Plate Voltage	150 V	Inherited from explicitly referenced 6-volt parent type; heater variant
Cathode Bias Resistor	220 Ω	Inherited from explicitly referenced 6-volt parent type; heater variant
Plate Current	9 mA	Inherited from explicitly referenced 6-volt parent type; heater variant

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification Factor	35	Inherited from explicitly referenced 6-volt parent type; heater variant
Plate Resistance	5800 Ω	Inherited from explicitly referenced 6-volt parent type; heater variant
Transconductance	6000 μS	Inherited from explicitly referenced 6-volt parent type; heater variant



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1975 RCA RC30

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

1975 RCA RC30

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 4.2 5.6	6.3 V	Published in approved 6BZ7 target datasheet entry; Section1
Heater Current 0.45	400 mA	Published in approved 6BZ7 target datasheet entry; Section1
Cathode Current	20 mA	Published in approved 6BZ7 target datasheet entry; Section1
Plate Dissipation	2 W	Published in approved 6BZ7 target datasheet entry; Section1
Plate Supply Voltage	150 V	Published in approved 6BZ7 target datasheet entry; Section1
Cathode-Bias Resistor	220 Ω	Published in approved 6BZ7 target datasheet entry; Section1
Plate Resistance (Approx.)	5900 Ω	Published in approved 6BZ7 target datasheet entry; Section1
Transconductance	6400 μS	Published in approved 6BZ7 target datasheet entry; Section1
Plate Current	9 mA	Published in approved 6BZ7 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-Circuit Resistance	0.5 MΩ	Published in approved 6BZ7 target datasheet entry; Section1
* Rating may be high as	300 V	Published in approved 6BZ7 target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate 1.2	1.2 pF	Published in approved 6BZ7 target datasheet entry; Section1
–	-5 pF	Published in approved 6BZ7 target datasheet entry; Section1
Plate to Grid, Heater, and Internal Shield	2.2 pF	Published in approved 6BZ7 target datasheet entry; Section1
Plate to Cathode 0.12	0.12 pF	Published in approved 6BZ7 target datasheet entry; Section1
Heater to Cathode 2.6	2.6 pF	Published in approved 6BZ7 target datasheet entry; Section1
* Rating: may be high as	300 V	Published in approved 6BZ7 target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For plate current of 100	-6.5 V	Published in approved 6BZ7 target datasheet entry; Section1

TUBE TINKER

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