

6J6

Voltage - Dual Triode (similar high frequency) electronic tube

CONSOLIDATED TECHNICAL DATA
2 SECTIONS
CONSTRUCTION
TRIODE-TRIODE

Common-cathode twin triode for high-frequency amplifier, mixer, and push-pull oscillator service, with published Class-C RF operation and useful output at VHF frequencies.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7BF	BASE PINS	7
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Similar

7BF - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – 2P	B	P – Plate (Anode)	CONNECTED
PIN2 – 1P	A	P – Plate (Anode)	CONNECTED
PIN3 – H	–	H – Heater	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – 1G1	A	G1 – Control Grid	CONNECTED
PIN6 – 2G1	B	G1 – Control Grid	CONNECTED
PIN7 – K	A	K – Cathode	CONNECTED

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	7100 Ω
TRANSCONDUCTANCE	0.0053 S
AMPLIFICATION FACTOR	38
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	1.5 W
MAXIMUM CATHODE CURRENT	15 mA
<i>Each identical triode section.</i>	

SECTION2 Triode	
PLATE RESISTANCE	7100 Ω
TRANSCONDUCTANCE	0.0053 S
AMPLIFICATION FACTOR	38
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	1.5 W
MAXIMUM CATHODE CURRENT	15 mA
<i>Second physical triode section; electrically identical twin section.</i>	

The 6J6 is a 7-pin twin triode usable in parallel or push-pull and particularly suitable for mixer service at frequencies up to about 600 MHz; the 6J6A adds controlled heater warm-up.



SOURCE OPERATING CONDITIONS

1953 RFT Rundfunk Technik

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

1953 RFT RUNDFUNK TECHNIK

Section 1 · Triode

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published nominal value
Heater current	450 mA	Published nominal value
Transconductance	5300 μ S	Published operating characteristic



SOURCE OPERATING CONDITIONS

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1958 Brimar Radio Valve No 7

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

1958 BRIMAR RADIO VALVE NO 7

Section 1 · Triode

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
RF oscillator power output	3.5 W	OscillatorService
Oscillator frequency maximum	50 MHz	—
Mixer frequency maximum	600 MHz	—



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	300 V	Published handbook rating
Plate voltage	100 V	ClassA
Control-grid bias	8.5 V	ClassA

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	7100 ohm	Published handbook characteristic
Transconductance	5300 μS	Published handbook characteristic
Amplification factor	38	Published handbook characteristic
Heater voltage	6.3 V	Published heater rating
Heater current	450 mA	Published heater rating

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	2.6 pF	Published capacitance column
Output capacitance	1.6 pF	Published capacitance column
Grid-to-plate capacitance	1.5 pF	Published capacitance column



TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

1961 Ferranti Technical Handbook

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

1961 FERRANTI TECHNICAL HANDBOOK

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	100 V	ClassA;EachSection
Plate current	8.5 mA	ClassA;EachSection
Plate voltage	150 V	ClassC;RFAmplifier;BothSections
Plate current	15 mA	ClassC;RFAmplifier;EachSection
Grid current	8 mA	ClassC;RFAmplifier;EachSection
Drive power	0.35 W	ClassC;RFAmplifier;BothSections
RF output power	3.5 W	ClassC;RFAmplifier;BothSections
RF output power	1 W	PushPullOscillator;f=250MHz

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	5300 μ S	ClassA;EachSection
Amplification factor	38 ratio	ClassA;EachSection
Plate resistance	7100 Ω	ClassA;EachSection

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	2.2 pF	EachSection
Output capacitance	0.4 pF	EachSection
Plate-to-grid capacitance	1.6 pF	EachSection



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1961 Tung Sol

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

1961 TUNG SOL

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	100 V	Published operating/characteristic table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	8.5 mA	Published operating/characteristic table
Transconductance	5300 μ S	Published operating/characteristic table
Plate Resistance	7160 ohm	Published operating/characteristic table



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1963 Amperex Condensed

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

1963 AMPEREX CONDENSED

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	300 V	Published table
Control-grid bias	-4 V	Published table
Plate current	15 mA	Published table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	5300 μ S	Published table
Amplification factor	38	Published table
Plate resistance	10000 ohm	Published table
Heater voltage	6.3 V	Published heater rating
Heater current	450 mA	Published heater rating



SOURCE OPERATING CONDITIONS

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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	6.3 V	—
Heater Current	450 mA	—
Maximum Operating Frequency as Mixer	600 MHz	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	300 V	—
Maximum Plate Dissipation	1.5 W	—
Typical Push-Pull Oscillator Frequency	250 MHz	ClassC; PushPull
Approximate RF Output Power	1 W	ClassC; PushPull; 250MHz



SOURCE OPERATING CONDITIONS

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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	100 V	ClassA1;EachSection

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	8.5 mA	ClassA1;EachSection
Cathode bias resistor, both sections	50 ohm	ClassA1
RF Class C plate voltage	150 V	ClassC;PushPull;BothSections
RF Class C plate current	30 mA	ClassC;PushPull;BothSections
RF power output	3.5 W	ClassC;PushPull;BothSections



SOURCE OPERATING CONDITIONS

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1968 General Electric Co

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

1968 GENERAL ELECTRIC CO

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Conversion Transconductance	1900 μ S	MixerService

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