

ELECTRONIC TUBE REFERENCE

6GK5

Voltage - Triode (single high frequency) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRIODE

High-mu frame-grid miniature triode used as a grounded-cathode RF amplifier in VHF television tuners.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7FP	BASE PINS	7
NOMINAL HEATER	6.3 V / 180 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7FP - TERMINAL PINOUT

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

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	5400 Ω
TRANSCONDUCTANCE	0.015 S
AMPLIFICATION FACTOR	78
MAXIMUM PLATE VOLTAGE	200 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM CATHODE CURRENT	22 mA
<i>Published typical operating conditions, UHF/deflection ratings, and descriptive application reviewed.</i>	

High-mu frame-grid miniature triode used as a grounded-cathode RF amplifier in VHF television tuners.



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

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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	135 V	Published table
Control-grid bias	-1 V	Published table
Plate current	11 mA	Published table

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	13000 μ S	Published table
Amplification factor	70	Published table
Plate resistance	5200 ohm	Published table
Heater voltage	6.3 V	Published heater rating
Heater current	180 mA	Published heater rating

SOURCE OPERATING CONDITIONS

1965 Sylvania Electronic Tubes Vol3

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

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	135 V	—
Grid voltage	-1 V	—
Plate current	11.5 mA	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	5400 Ohm	—
Transconductance	15000 uS	—
Amplification factor	78 ratio	—
Hot input resistance	275 Ohm	—
Noise figure	4.7 dB	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Hot input capacitance	11.2 pF	—

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.52 pF	—
Input capacitance	5 pF	—
Output capacitance	3.5 pF	—
Heater-to-cathode capacitance	2.5 pF	—
Hot input capacitance at 200 MHz	11.2 pF	GroundedPlate

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	135 V	ClassA
Grid voltage	-1 V	ClassA
Plate current	11.5 mA	ClassA
Noise figure at 200 MHz	4.7 dB	OptimizedNeutralizedRFStage

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Hot input resistance at 200 MHz	275 ohm	GroundedPlate



SOURCE DATA APPENDIX

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Plate Voltage	135 V	ClassA
TypicalGridVoltage	-1 V	ClassA
NoiseFigureAt200MHz	4.7 dB	200MHz

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical Plate Current	11.5 mA	ClassA



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1971 RCA HB3 Binder 5 of 7

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

1971 RCA HB3 BINDER 5 OF 7

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	600 mA	—
Plate voltage	135 V	ClassA
Grid voltage	-1 V	ClassA
Plate current	11.5 mA	ClassA
Maximum plate voltage	200 V	—
Maximum plate dissipation	2.5 W	—
Maximum cathode current	22 mA	—
Noise figure	4.7 dB	200MHz

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	13500 μ S	ClassA
Amplification factor	75	ClassA
Plate resistance	5400 ohm	ClassA
Hot input resistance	275 ohm	200MHz

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Hot input capacitance	11.2 pF	200MHz

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) 2.3 2.8 4	6.3 V	Published in approved 2GK5 target datasheet entry; Section1
Heater Current 0.6 0.45 0.3	180 mA	Published in approved 2GK5 target datasheet entry; Section1
Negative-bias value	50 V	Published in approved 2GK5 target datasheet entry; Section1
Positive-bias value	0 V	Published in approved 2GK5 target datasheet entry; Section1
Average Cathode Current	22 mA	Published in approved 2GK5 target datasheet entry; Section1
Plate Dissipation	2.5 W	Published in approved 2GK5 target datasheet entry; Section1
Plate Voltage	135 V	Published in approved 2GK5 target datasheet entry; Section1
Grid Voltage	-1 V	Published in approved 2GK5 target datasheet entry; Section1
Plate Resistance (Approx.)	5400 Ω	Published in approved 2GK5 target datasheet entry; Section1
Transconductance	15000 μS	Published in approved 2GK5 target datasheet entry; Section1
Plate Current	11.5 mA	Published in approved 2GK5 target datasheet entry; Section1
Grid-Circuit Resistance, for cathode-bias operation	1 M Ω	Published in approved 2GK5 target datasheet entry; Section1
• Measured at	200 MHz	Published in approved 2GK5 target datasheet entry; Section1
f For a neutralized triode amplifier at a frequency of	200 MHz	Published in approved 2GK5 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 6.3 10	16 V	Published in approved 2GK5 target datasheet entry; Section1
Heater Current 0.76 0.45	300 mA	Published in approved 2GK5 target datasheet entry; Section1
11	11 seconds	Published in approved 2GK5 target datasheet entry; Section1
Plate Supply Voltage	605 V	Published in approved 2GK5 target datasheet entry; Section1
Plate Voltage	330 V	Published in approved 2GK5 target datasheet entry; Section1
Grid-No.2 Supply Voltage	605 V	Published in approved 2GK5 target datasheet entry; Section1
Grid-No.2 (Screen-Grid) Voltage	330 V	Published in approved 2GK5 target datasheet entry; Section1
Grid-No.1 (Control-Grid) Voltage, Negative-bias value	100 V	Published in approved 2GK5 target datasheet entry; Section1
Cathode Current	65 mA	Published in approved 2GK5 target datasheet entry; Section1
Plate Dissipation	13.2 W	Published in approved 2GK5 target datasheet entry; Section1
Grid-No.2 Input, Peak	4 W	Published in approved 2GK5 target datasheet entry; Section1
Grid-No.2 Input, Average	2 W	Published in approved 2GK5 target datasheet entry; Section1
Plate Supply Voltage	250 V	Published in approved 2GK5 target datasheet entry; Section1
Grid-No.2 Supply Voltage	250 V	Published in approved 2GK5 target datasheet entry; Section1
Cathode-Bias Resistor	135 Ω	Published in approved 2GK5 target datasheet entry; Section1
Plate Resistance (Approx.)	38000 Ω	Published in approved 2GK5 target datasheet entry; Section1
Transconductance	11300 μS	Published in approved 2GK5 target datasheet entry; Section1
Peak AF Grid-No.1 Voltage	7.3 V	Published in approved 2GK5 target datasheet entry; Section1
Zero-Signal Plate Current	48 mA	Published in approved 2GK5 target datasheet entry; Section1
Maximum-Signal Plate Current	50.6 mA	Published in approved 2GK5 target datasheet entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Zero-Signal Grid-No.2 Current	5.5 mA	Published in approved 2GK5 target datasheet entry; Section1
Maximum-Signal Grid-No.2 Current	10 mA	Published in approved 2GK5 target datasheet entry; Section1
Effective Load Resistance	5200 Ω	Published in approved 2GK5 target datasheet entry; Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	0.62 pF	Published in approved 2GK5 target datasheet entry; Section1
Grid to Cathode, Heater, and Internal Shield	5 pF	Published in approved 2GK5 target datasheet entry; Section1
Plate to Cathode, Heater, and Internal Shield	3.5 pF	Published in approved 2GK5 target datasheet entry; Section1
Internal Shield	10 pF	Published in approved 2GK5 target datasheet entry; Section1
Internal Shield	7 pF	Published in approved 2GK5 target datasheet entry; Section1

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input Resistance*	275 Ω	Published in approved 2GK5 target datasheet entry; Section1
Input Capacitance*	11.2 pF	Published in approved 2GK5 target datasheet entry; Section1
Grid Voltage (Approx.) for transconductance of	1500 μ S	Published in approved 2GK5 target datasheet entry; Section1
Grid Voltage (Approx.) for transconductance of 1500 /imhos	-2.5 V	Published in approved 2GK5 target datasheet entry; Section1

TUBE TINKER

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