ELECTRONIC TUBE REFERENCE

3DK6

Voltage - Pentode Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
PENTODE

> Sharp-cutoff high-transconductance pentode for IF amplification in color and monochrome television receivers.

General characteristics

BASE DESIGNATION	7CM	**BASE PINS**	7
NOMINAL HEATER	3.15 V / 600 mA	**PARALLEL HEATER**	— / —
HEATING	Indirect	**SERIES OPERATION**	Not specified
CATHODE ARRANGEMENT	Separate cathodes	**SECTION CONSTRUCTION**	Similar

7CM - 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 — P	A	P — Plate (Anode)	CONNECTED
PIN6 — G2	A	G2 — Screen Grid	CONNECTED
PIN7 — G3	A	G3 — Suppressor Grid	CONNECTED
PIN7 — IS	A	IS — Internal Screen	CONNECTED

Section ratings

SECTION1 Pentode

PLATE RESISTANCE	350000 Ω
TRANSCONDUCTANCE	0.0098 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	2.3 W
MAXIMUM SCREEN DISSIPATION	0.55 W

Sparse-source exception: this sheet does not reproduce the electrical ratings/characteristics of 6DK6; no external values imported.

Sharp-cutoff miniature pentode used as an IF amplifier in color and black-and-white television receivers.

SOURCE OPERATING CONDITIONS

1961 Tung Sol

SOURCE PDF

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

1961 TUNG SOL

Section 1 · Pentode

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
PLATE VOLTAGE	**125 VOLTS**	Published datasheet value
PLATE CURRENT	**12 MA**	Published datasheet value

SOURCE DATA APPENDIX

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 · Pentode

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Plate voltage	**125 V**	—
Screen-grid voltage	**125 V**	—
Cathode bias resistor	**56 Ohm**	—
Plate current	**12 mA**	—
Screen-grid current	**3.8 mA**	—

CHARACTERISTICS		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Plate resistance	**350000 Ohm**	—
Transconductance	**9800 uS**	—
Control-grid cutoff voltage	**-6.5 V**	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	**0.025 pF**	Unshielded

SOURCE OPERATING CONDITIONS

1966 Tung Sol Electronic Tubes 1 of 4

SOURCE PDF

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

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 1 · Pentode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance maximum	**0.025 pF**	Section1
Input capacitance	**6.3 pF**	Section1
Output capacitance	**1.9 pF**	Section1

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	**125 V**	IFAmplifier
Screen voltage	**125 V**	IFAmplifier
Cathode-bias resistor	**56 Ω**	IFAmplifier
Plate current	**12 mA**	IFAmplifier
Screen current	**3.8 mA**	IFAmplifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	**9800 µS**	Section1
Plate resistance	**0.35 MΩ**	Section1
Grid-1 cutoff bias	**-6.5 V**	Section1
Heater warm-up time	**11 s**	Section1

SOURCE OPERATING CONDITIONS

1968 General Electric Co

SOURCE PDF

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

1968 GENERAL ELECTRIC CO

Section 1 · Pentode

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Heater warm-up time	**11 s**	—

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1975 RCA RC30

SOURCE PDF

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

1975 RCA RC30

Section 1 · Pentode

OTHER		
PARAMETER	**PUBLISHED VALUE**	**CONDITION / NOTE**
Plate Current	**15 mA**	Published in approved 12DK6 target entry; Section1
Equivalent Noise Resistance	**300 Ω**	Published in approved 12DK6 target entry; Section1
Grid-Circuit Resistance	**1 MΩ**	Published in approved 12DK6 target entry; Section1
Heater to Cathode Circuit Resistance	**0.02 MΩ**	Published in approved 12DK6 target entry; Section1
Heater Voltage (ac/dc) 3.16 4.2 6.3	**12.6 V**	Published in approved 12DK6 target entry; Section1
Heater Current 0.6 0.45 0.3	**150 mA**	Published in approved 12DK6 target entry; Section1
Plate Voltage	**330 V**	Published in approved 12DK6 target entry; Section1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.3 (Suppressor-Grid) Voltage, Positive value	**0 V**	Published in approved 12DK6 target entry; Section1
Grid-No.2 (Screen-Grid) Supply Voltage	**330 V**	Published in approved 12DK6 target entry; Section1
Grid-No.l (Control-Grid) Voltage, Positive-bias value	**0 V**	Published in approved 12DK6 target entry; Section1
Plate Dissipation	**2.3 W**	Published in approved 12DK6 target entry; Section1
For grid-No.2 voltages up to	**165 V**	Published in approved 12DK6 target entry; Section1
For grid-No.2 voltages up to 165 volts	**0.55 W**	Published in approved 12DK6 target entry; Section1
For grid-No.2 voltages between 165 and	**330 V**	Published in approved 12DK6 target entry; Section1

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Internal Shield	**6.3 pF**	Published in approved 12DK6 target entry; Section1
Internal Shield	**1.9 pF**	Published in approved 12DK6 target entry; Section1

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-No.! Voltagre (Approx.) for plate current of 20 fiA	**-6.5 V**	Published in approved 12DK6 target entry; Section1

Tube Tinker

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

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