

ELECTRONIC TUBE REFERENCE

6FW5

Power - TV Horizontal Output (sweep) electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
BEAMPOWER

Beam-power pentode designed specifically for television horizontal-deflection amplifier service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	6CK	BASE PINS	9
NOMINAL HEATER	6.3 V / 1.2 A	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

6CK - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – Pin 1	A	G1 – Control Grid	CONNECTED • verified
PIN2 – Pin 2	–	H – Heater	CONNECTED • verified
PIN3 – Pin 3	A	BP – Beam-Forming Plate	CONNECTED • verified
PIN3 – Pin 3	A	K – Cathode	CONNECTED • verified
PIN5 – Pin 5	A	P – Plate (Anode)	CONNECTED • verified
PIN7 – Pin 7	–	H – Heater	CONNECTED • verified
PIN8 – Pin 8	A	G2 – Screen Grid	CONNECTED • verified

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	16000 Ω
TRANSCONDUCTANCE	0.0073 S
AMPLIFICATION FACTOR	4.4
MAXIMUM PLATE VOLTAGE	770 V
MAXIMUM SCREEN VOLTAGE	220 V
MAXIMUM PLATE DISSIPATION	18 W
MAXIMUM SCREEN DISSIPATION	3.5 W
MAXIMUM CATHODE CURRENT	610 mA
<i>MaxPlateVoltage uses DC plate-supply rating; 6500 V pulse rating preserved as parameter.</i>	

Beam-power pentode designed for television horizontal-deflection amplifier service.



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 · Beam Power

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Service	Horizontal deflection amplifier	—



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 · Beam Power

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid #1-to-plate capacitance	0.5 pF	—
Input capacitance	15 pF	—
Output capacitance	7 pF	—

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak positive pulse plate voltage	6500 V	HorizontalDeflection
Peak negative pulse plate voltage	-1500 V	HorizontalDeflection
Peak cathode current	610 mA	HorizontalDeflection
Plate voltage	250 V	AverageCharacteristics

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Screen voltage	150 V	AverageCharacteristics
Grid #1 voltage	-22.5 V	AverageCharacteristics
Plate current	65 mA	AverageCharacteristics
Screen current	1.8 mA	AverageCharacteristics

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode-connected amplification factor	4.4	TriodeConnection



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1968 General Electric Co

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1968 GENERAL ELECTRIC CO

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Positive Pulse Plate Voltage	6500 V	TVHorizontalDeflection
Peak Negative Pulse Plate Voltage	1500 V	TVHorizontalDeflection
Typical Plate Voltage	250 V	—
Typical Screen Voltage	150 V	—



SOURCE DATA APPENDIX

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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage nominal	6.3 V	—
Heater voltage tolerance	0.6 V	±
Heater current	1.2 A	HeaterVoltage=6.3V
Peak heater-cathode voltage, heater negative	200 V	—
Peak heater-cathode voltage, heater positive	200 V	DCComponent<=100V
Maximum DC plate voltage	770 V	HorizontalDeflectionAmplifier
Maximum peak positive-pulse plate voltage	6500 V	HorizontalDeflectionAmplifier
Maximum DC screen-grid voltage	220 V	HorizontalDeflectionAmplifier
Maximum peak negative-pulse grid No.1 voltage	330 V	HorizontalDeflectionAmplifier
Maximum DC grid No.1 voltage	-55 V	HorizontalDeflectionAmplifier
Peak cathode current	610 mA	HorizontalDeflectionAmplifier
Average cathode current	175 mA	HorizontalDeflectionAmplifier
Maximum screen-grid input	3.6 W	HorizontalDeflectionAmplifier
Maximum plate dissipation	18 W	HorizontalDeflectionAmplifier
Maximum bulb temperature	220 °C	HorizontalDeflectionAmplifier
Maximum grid No.1 circuit resistance	1 MΩ	HorizontalDeflectionAmplifier

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1-to-plate capacitance	0.5 pF	—
Grid No.1 input capacitance	15 pF	—
Plate output capacitance	7 pF	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	60 V	ClassA1
Grid No.2 voltage	150 V	ClassA1;PlateVoltage=60V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 voltage	0 V	ClassA1;PlateVoltage=60V
Plate current	345 mA	ClassA1;PlateVoltage=60V
Grid No.2 current	27 mA	ClassA1;PlateVoltage=60V
Plate voltage	150 V	ClassA1
Grid No.2 voltage	150 V	ClassA1;PlateVoltage=150V
Grid No.1 voltage	-22.5 V	ClassA1;PlateVoltage=150V
Amplification factor	4.4	ClassA1;PlateVoltage=150V
Plate voltage	250 V	ClassA1
Grid No.2 voltage	150 V	ClassA1;PlateVoltage=250V
Grid No.1 voltage	-22.5 V	ClassA1;PlateVoltage=250V
Plate resistance	16000 ohm	ClassA1;PlateVoltage=250V
Transconductance	7300 μS	ClassA1;PlateVoltage=250V
Plate current	65 mA	ClassA1;PlateVoltage=250V
Grid No.2 current	1.8 mA	ClassA1;PlateVoltage=250V
Grid No.1 voltage for plate current 1 mA	-42 V	ClassA1;PlateVoltage=250V
Grid No.1 voltage for plate current 1 mA	-100 V	PeakPlateVoltage=5000V;ScreenVoltage=150V

TUBE TINKER

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and their source documents.

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