

ELECTRONIC TUBE REFERENCE

12W6GT

Power - TV Vertical Output electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Beam-power tube designed primarily for audio output and also usable, when triode-connected, as a television vertical-deflection amplifier.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7AC	BASE PINS	7
NOMINAL HEATER	12.6 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7AC - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – Pin 1	–	–	NC · verified
PIN2 – Pin 2	–	H – Heater	CONNECTED · verified
PIN3 – Pin 3	A	P – Plate (Anode)	CONNECTED · verified
PIN4 – Pin 4	A	G2 – Screen Grid	CONNECTED · verified
PIN5 – Pin 5	A	G1 – Control Grid	CONNECTED · verified
PIN7 – Pin 7	–	H – Heater	CONNECTED · verified
PIN8 – Pin 8	A	BP – Beam-Forming Plate	CONNECTED · verified
PIN8 – Pin 8	A	K – Cathode	CONNECTED · verified

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	28000 Ω
TRANSCONDUCTANCE	0.008 S
AMPLIFICATION FACTOR	6.2
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	165 V
MAXIMUM PLATE DISSIPATION	12 W
MAXIMUM SCREEN DISSIPATION	1.35 W
MAXIMUM CATHODE CURRENT	60 mA
WARM-UP TIME	11 s
<i>Datasheet states identical to 6W6-GT except heater and heater-cathode ratings and refers to 6W6-GT for complete data; no external values inferred.</i>	

Beam power tube used for audio output and, triode-connected, television vertical-deflection amplification.

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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	300 V	Published handbook rating
Maximum screen voltage	150 V	Published handbook rating
Plate voltage	200 V	ClassA
Screen voltage	125 V	ClassA
Plate current	46 mA	ClassA
Screen current	2.2 mA	ClassA
Load resistance	4000 ohm	ClassA
Power output	3.8 W	ClassA
Triode-connected plate voltage	225 V	TriodeConnection VerticalDeflection
Triode-connected control-grid bias	30 V	TriodeConnection VerticalDeflection
Triode-connected plate current	22 mA	TriodeConnection VerticalDeflection
Maximum positive pulse plate voltage	1200 V	VerticalDeflection
Maximum plate dissipation	7.5 W	VerticalDeflection
Maximum DC cathode current	40 mA	VerticalDeflection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	28000 ohm	Published handbook characteristic
Transconductance	8000 μS	Published handbook characteristic
Heater voltage	12.6 V	Published heater rating

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater current	600 mA	Published heater rating
Triode-connected plate resistance	1600 ohm	TriodeConnection
Triode-connected transconductance	3800 μ S	TriodeConnection
Triode-connected amplification factor	6.2	TriodeConnection


SOURCE DATA APPENDIX

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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Current	600 mA	SeriesHeater


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 · Beam Power

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.8 pF	—
Input capacitance	15 pF	—
Output capacitance	9 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak positive plate voltage	1200 V	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	225 V	—
Transconductance	3800 μ S	—
Plate resistance	1600 Ω	—


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1966 Tung Sol Electronic Tubes 3 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 3 OF 4

Section 1 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak positive pulse plate voltage	1500 V	VerticalDeflection
Peak cathode current	195 mA	VerticalDeflection
Typical plate voltage	200 V	ClassA
Typical screen voltage	125 V	ClassA
Power output	3.8 W	ClassA
Maximum plate voltage	330 V	PromotedValue
Maximum screen voltage	165 V	PromotedValue
Maximum plate dissipation	12 W	PromotedValue
Maximum screen dissipation	1.35 W	PromotedValue
Maximum cathode current	65 mA	PromotedValue

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode amplification factor	6.2	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode plate resistance	1600 ohm	ClassA
Triode transconductance	3800 uS	ClassA
Plate resistance	13000 ohm	PromotedValue
Transconductance	0.008 A/V	PromotedValue

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.5 pF	—
Input capacitance	11 pF	—
Output capacitance	7 pF	—



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 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	13000 ohm	ClassA;Ep=110V
Plate Resistance Triode Connection	1600 ohm	TriodeConnection
Transconductance Triode Connection	3800 uS	TriodeConnection
Amplification Factor Triode Connection	6.2	TriodeConnection

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	110 V	ClassA
Screen Voltage	110 V	ClassA
Power Output	2.1 W	ClassA
Heater Warm-up Time	11 s	—



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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	315 V	Inherited from explicitly referenced 6W6GT parent except heater data.
Maximum Screen Voltage	285 V	Inherited from explicitly referenced 6W6GT parent except heater data.
Plate Dissipation	10 W	Inherited from explicitly referenced 6W6GT parent except heater data.
Screen Dissipation	2.5 W	Inherited from explicitly referenced 6W6GT parent except heater data.
Peak Heater-Cathode Voltage, Heater Negative	300 V	Inherited from explicitly referenced 6W6GT parent except heater data.
Peak Heater-Cathode Voltage, Heater Positive	200 V	Inherited from explicitly referenced 6W6GT parent except heater data.

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	7500 μ S	Inherited from explicitly referenced 6W6GT parent except heater data.



SOURCE OPERATING CONDITIONS

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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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Warm-up Time (Average) –	11 s	Other
lvalue	200 V	Other
Plate Voltage	330 V	MaximumRating
Grid-No	2 V	MaximumRating;PublishedValue1
Grid-No	165 V	MaximumRating;PublishedValue2
Plate Dissipation	12 W	MaximumRating
Grid-No	2 W	MaximumRating;PublishedValue1
Grid-No	1.35 W	MaximumRating;PublishedValue2
Plate Supply Voltage	110 V	TypicalOperation;PublishedValue1
Plate Supply Voltage	200 V	TypicalOperation;PublishedValue2
Cathode-Bias Resistor –	180 ohm	TypicalOperation
Peak AF Grid-No.1 Voltage	7.5 V	TypicalOperation;PublishedValue1
Peak AF Grid-No.1 Voltage	8.5 V	TypicalOperation;PublishedValue2
Zero-Signal Plate Current	49 mA	TypicalOperation;PublishedValue1
Zero-Signal Plate Current	46 mA	TypicalOperation;PublishedValue2
Maximum-Signal Plate Current	50 mA	TypicalOperation;PublishedValue1
Maximum-Signal Plate Current	47 mA	TypicalOperation;PublishedValue2
Zero-Signal Grid-No	2 mA	TypicalOperation;PublishedValue1
Zero-Signal Grid-No	4 mA	TypicalOperation;PublishedValue2
Zero-Signal Grid-No	2.2 mA	TypicalOperation;PublishedValue3
Maximum-Signal Grid-No	2 mA	TypicalOperation;PublishedValue1
Maximum-Signal Grid-No	10 mA	TypicalOperation;PublishedValue2
Maximum-Signal Grid-No	8.5 mA	TypicalOperation;PublishedValue3
Plate Resistance (Approx.)	13000 ohm	TypicalOperation;PublishedValue1
Plate Resistance (Approx.)	28000 ohm	TypicalOperation;PublishedValue2
Transconductance	8000 uS	TypicalOperation;PublishedValue1
Transconductance	8000 uS	TypicalOperation;PublishedValue2
Load Resistance	2000 ohm	TypicalOperation;PublishedValue1
Load Resistance	4000 ohm	TypicalOperation;PublishedValue2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Total Harmonic Distortion (Approx.)	10 %	TypicalOperation;PublishedValue1
Total Harmonic Distortion (Approx.)	10 %	TypicalOperation;PublishedValue2

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate	0.8 pF	Capacitance
Grid No.1 to Cathode. Heater, Grid No	2 pF	Capacitance;PublishedValue1
Grid No.1 to Cathode. Heater, Grid No	3 pF	Capacitance;PublishedValue2
Grid No.1 to Cathode. Heater, Grid No	15 pF	Capacitance;PublishedValue3
Plate to Cathode, Heater, Grid No	2 pF	Capacitance;PublishedValue1
Plate to Cathode, Heater, Grid No	3 pF	Capacitance;PublishedValue2
Plate to Cathode, Heater, Grid No	9 pF	Capacitance;PublishedValue3

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