

ELECTRONIC TUBE REFERENCE

8EM5

Power - TV Vertical Output electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
BEAMPOWER

Beam-power tube specifically designed for vertical-deflection amplifier service in 110-degree television receivers, with substantial pulse-voltage capability for demanding frame-output circuitry.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9HN	BASE PINS	9
NOMINAL HEATER	8.4 V / 600 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

9HN - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1	–	G2 – Screen Grid	CONNECTED
PIN3	–	G1 – Control Grid	CONNECTED
PIN4	–	H – Heater	CONNECTED
PIN5	–	H – Heater	CONNECTED
PIN6	–	G1 – Control Grid	CONNECTED
PIN7	–	G3 – Suppressor Grid	CONNECTED
PIN7	–	K – Cathode	CONNECTED
PIN8	–	–	IC
PIN9	–	P – Plate (Anode)	CONNECTED

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	50000 Ω
TRANSCONDUCTANCE	0.0051 S
MAXIMUM PLATE VOLTAGE	700 V
MAXIMUM SCREEN VOLTAGE	285 V
MAXIMUM PLATE DISSIPATION	10 W
MAXIMUM SCREEN DISSIPATION	1.5 W
MAXIMUM CATHODE CURRENT	60 mA
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
WARM-UP TIME	11 s
<i>Published promoted fields populated semantically; identical repeated sections compressed.</i>	

Beam power tube for vertical-deflection amplifier service in 110-degree television receivers.



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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	5100 μ S	Typical



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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Positive Pulse Plate Voltage	2200 V	VerticalDeflection
Peak Cathode Current	210 mA	VerticalDeflection
Plate Voltage	250 V	ClassA1
Screen Voltage	250 V	ClassA1
Grid 1 Voltage	-18 V	ClassA1
Plate Current	40 mA	ClassA1
Screen Current	3 mA	ClassA1

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-Plate Capacitance	0.7 pF	—



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
Peak positive pulse plate voltage	2200 V	VerticalDeflection
Peak cathode current	210 mA	VerticalDeflection
Plate voltage	250 V	ClassA1;VerticalDeflection
Grid 2 voltage	250 V	ClassA1;VerticalDeflection
Plate current	40 mA	ClassA1;VerticalDeflection
Grid 2 current	3 mA	ClassA1;VerticalDeflection
Heater voltage nominal	8.4 V	—
Heater current nominal	600 mA	—



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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak value -	200 V	Other;PublishedValue1
Peak value -	200 V	Other;PublishedValue2
Average value	100 V	Other;PublishedValue1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Average value	100 V	Other;PublishedValue2
Peak Positive-Pulse Plate Voltage# (Absolute Maximum)	220 V	MaximumRating;PublishedValue1
Peak Positive-Pulse Plate Voltage# (Absolute Maximum)	4 V	MaximumRating;PublishedValue2
Grid-No	2 V	MaximumRating;PublishedValue1
Grid-No	285 V	MaximumRating;PublishedValue2
Peak Negative-Pulse Grid-No.1 (Control-Grid) Voltage	250 V	MaximumRating
Peak Cathode Current	210 mA	MaximumRating
Plate Dissipation	10 W	MaximumRating
Grid-No	2 W	MaximumRating;PublishedValue1
Grid-No	1.5 W	MaximumRating;PublishedValue2
Grid-No.1-Circuit Resistance	2.2 megohm	MaximumCircuitValue
Maximum Plate Voltage	315 V	Section1
Maximum Screen Voltage	285 V	Section1
Maximum Plate Dissipation	10 W	Section1
Maximum Screen Dissipation	1.5 W	Section1
Maximum Cathode Current	210 mA	Section1

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate	0.7 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	10 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	5.1 pF	Capacitance;PublishedValue3

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	60 V	Characteristic;PublishedValue1
Plate Voltage	250 V	Characteristic;PublishedValue2
Grid-No	2 V	Characteristic;PublishedValue1
Grid-No	250 V	Characteristic;PublishedValue2
Grid-No	250 V	Characteristic;PublishedValue3
Grid-No.1 Voltage	0 V	Characteristic;PublishedValue1
Grid-No.1 Voltage	-18 V	Characteristic;PublishedValue2
Plate Resistance	0.05 megohm	Characteristic
Plate Current	180 mA	Characteristic;PublishedValue1
Plate Current	40 mA	Characteristic;PublishedValue2
Grid-No	2 mA	Characteristic;PublishedValue1
Grid-No	30 mA	Characteristic;PublishedValue2
Grid-No.1 Voltage (Approx.) for plate current of	0.2 mA	Characteristic;PublishedValue1
Grid-No.1 Voltage (Approx.) for plate current of	-37 mA	Characteristic;PublishedValue2
Plate Resistance	50000 ohm	Section1
Transconductance	5100 uS	Section1

TUBE TINKER

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and their source documents.

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