

ELECTRONIC TUBE REFERENCE

21JZ6

Power - TV Horizontal Output (sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
BEAMPOWER

Compactron beam-power pentode designed for television horizontal-deflection amplifier service and related power-amplifier operation.

GENERAL CHARACTERISTICS

BASE DESIGNATION	12GD	BASE PINS	12
NOMINAL HEATER	21 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

12GD - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1	–	H – Heater	CONNECTED
PIN2	–	K – Cathode	CONNECTED
PIN3	–	G2 – Screen Grid	CONNECTED
PIN4	–	G3 – Suppressor Grid	CONNECTED
PIN5	–	G1 – Control Grid	CONNECTED
PIN8	–	–	IC
PIN9	–	G3 – Suppressor Grid	CONNECTED
PIN10	–	–	IC
PIN11	–	H – Heater	CONNECTED
CAP1	A	P – Plate (Anode)	CONNECTED

SECTION RATINGS

SECTION1 Beam Power	
PLATE RESISTANCE	9900 Ω
TRANSCONDUCTANCE	0.009 S
AMPLIFICATION FACTOR	4.8
MAXIMUM PLATE VOLTAGE	770 V
MAXIMUM SCREEN VOLTAGE	220 V
MAXIMUM PLATE DISSIPATION	18 W
MAXIMUM SCREEN DISSIPATION	3.5 W
MAXIMUM CATHODE CURRENT	230 mA
<i>Promoted characteristics use the published 130 V average-characteristics column; amplification factor is for triode connection. MaxPlateVoltage is the published DC plate-supply design maximum; pulse limits are parameters.</i>	

21JZ6 is a beam-power tube for television deflection or power-amplifier service. The supplied RCA manual excerpt was reviewed for heater data, physical sections, maximum ratings, electrical characteristics, capacitances, and stated operating conditions.

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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	21 V	—
Heater current	450 mA	—
Transconductance	7500 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC plate supply voltage maximum	770 V	—
Peak positive plate voltage maximum	6500 V	Pulse
Peak negative pulse plate voltage maximum	-1500 V	Pulse
Plate dissipation maximum	17.5 W	—
DC grid2 voltage maximum	220 V	—
Grid2 dissipation maximum	3.5 W	—

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Television horizontal-deflection output amplifier	—
Snivet-control feature	Separate grid3 facilitates suppression of high-frequency parasitics	—

CONSTRUCTION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid3 connection	Separate external connection	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

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

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	800 mA	HorizontalDeflection
Heater Warm-up Time	11 s	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	46 mA	Plate=130V;Screen=130V;Grid1=-20V
Screen Current	1.8 mA	Plate=130V;Screen=130V;Grid1=-20V



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
amperes, 0.45; average warm-up time,	11 s	amperes, 0.45; average warm-up time, 11 seconds;
Plate Supply Voltage	770 V	Plate Supply Voltage 770 volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Positive-Pulse Plate Voltage*	6500 V	Peak Positive-Pulse Plate Voltage* 6500 volts
Peak Negative-Pulse Plate Voltage	1500 V	Peak Negative-Pulse Plate Voltage 1500 volts
DC Grid-No.3 Voltage, Positive-bias value	70 V	DC Grid-No.3 Voltage, Positive-bias value 70 volts
Grid-No.2 Voltage	220 V	Grid-No.2 Voltage 220 volts
DC Grid-No.1 Voltage, Negative-bias value	55 V	DC Grid-No.1 Voltage, Negative-bias value 55 volts
Peak Negative-Pulse Grid-No.1 Voltage	330 V	Peak Negative-Pulse Grid-No.1 Voltage 330 volts
Peak Cathode Current	800 mA	Peak Cathode Current 800 mA
Average Cathode Current	230 mA	Average Cathode Current 230 mA
Plate Dissipation*	18 W	Plate Dissipation* 18 watts
Grid-No.2 Input	3.5 W	Grid-No.2 Input 3.5 watts
Grid-No.1-Circuit Resistance	1 Mohm	Grid-No.1-Circuit Resistance 1 megohm
# Pulse duration must not exceed 15% of a horizontal scanning cycle (	10 us	# Pulse duration must not exceed 15% of a horizontal scanning cycle (10 microseconds).
Maximum plate/supply voltage	6500 V	Published section value
Maximum screen-grid voltage	770 V	Published section value
Maximum plate dissipation	18 W	Published section value

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage 13) 5000 50	130 V	Plate Voltage 13) 5000 50 130 volts
Grid-No.2 (Screen-Grid) Voltage – 130 130	130 V	Grid-No.2 (Screen-Grid) Voltage — 130 130 130 volts
Plate Resistance (Approx.) – —	9900 ohm	Plate Resistance (Approx.) — — — 9900 ohms
Plate Current — — 450	46 mA	Plate Current — — 450 46 mA
Grid-No.2 Current — — 29	1.8 mA	Grid-No.2 Current — — 29 1.8 mA
current of	1 mA	current of 1.0 mA — —64 — —32 volts
Plate resistance	9900 ohm	Published section value
Amplification factor	4.8	Published section value



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