



ELECTRONIC TUBE REFERENCE

21GY5

Power - TV Horizontal Output (sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

BEAMPOWER

Compactron beam-power pentode designed for television horizontal-deflection and related power-amplifier service, electrically related to 6GY5 except for heater characteristics.

GENERAL CHARACTERISTICS

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

SECTION RATINGS

SECTION 1 Beam Power	
PLATE RESISTANCE	18000 Ω
TRANSCONDUCTANCE	0.0091 S
AMPLIFICATION FACTOR	4.4
MAXIMUM PLATE VOLTAGE	770 V
MAXIMUM SCREEN VOLTAGE	220 V
MAXIMUM PLATE DISSIPATION	17.5 W
MAXIMUM SCREEN DISSIPATION	3.5 W
MAXIMUM CATHODE CURRENT	230 mA
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
WARM-UP TIME	11 s
Reference/equivalence-only source: electrical ratings/characteristics are not reproduced; missing promoted values intentionally not inferred from the external 6GY5 datasheet.	

21GY5 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

[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
Peak Cathode Current	800 mA	HorizontalDeflection

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	9100 μ S	Typical



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	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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	—



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
DC plate-supply voltage	550 V	HorizontalDeflection
Peak positive pulse plate voltage	6500 V	HorizontalDeflection
Peak negative pulse plate voltage	-1500 V	HorizontalDeflection
Maximum grid #2 voltage	175 V	HorizontalDeflection
Peak negative grid #1 voltage	-300 V	HorizontalDeflection
Average cathode current	110 mA	HorizontalDeflection
Peak cathode current	400 mA	HorizontalDeflection
Plate voltage	250 V	AverageCharacteristics
Grid #2 voltage	150 V	AverageCharacteristics

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	65 mA	AverageCharacteristics
Grid #2 current	1.8 mA	AverageCharacteristics

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	18000 ohm	AverageCharacteristics
Transconductance	7300 uS	AverageCharacteristics
Triode amplification factor	4.3	TriodeConnection

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid #1-to-plate capacitance	0.7 pF	—
Input capacitance	16 pF	—
Output capacitance	7 pF	—


SOURCE DATA APPENDIX

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
Heater Voltage	21 V	—
Heater Current	450 mA	—
Heater Warm-up Time	11 s	—


SOURCE DATA APPENDIX

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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage 5000 60 130	130 V	Plate Voltage 5000 60 130 130 volts
Grid-No.2 (Screen-Grid) Voltage 130 130 130	130 V	Grid-No.2 (Screen-Grid) Voltage 130 130 130 130 volts
Grid-No.2 Current —24**	1.75 mA	Grid-No.2 Current —24** 1.75 mA
Plate Supply Voltage	150 V	Plate Supply Voltage 150 volts
Grid-No.3 Supply Voltage	0 V	Grid-No.3 Supply Voltage 0 volts
Grid-No.2 Supply Voltage	100 V	Grid-No.2 Supply Voltage 100 volts
Grid-No.1 Supply Voltage	0 V	Grid-No.1 Supply Voltage 0 volts
Plate Resistance (Approx.)	0.14 Mohm	Plate Resistance (Approx.) 0.14 megohm
Transconductance, Grid No.3 to Plate	750 uS	Transconductance, Grid No.3 to Plate 750 /imhos
Plate Current	3.7 mA	Plate Current 3.7 mA
Grid-No.3 Supply Voltage (Approx.) for plate current of 20 /IA —3	7 V	Grid-No.3 Supply Voltage (Approx.) for plate current of 20 /IA —3 7 volts
Heater voltage	6.3 V	Rated heater condition
Amplification factor	0	Published section value

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC Plate Supply Voltage	770 V	DC Plate Supply Voltage 770 volts
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.2 Voltage	220 V	DC Grid-No.2 Voltage 220 volts
DC Grid-No.1 Voltage —	55 V	DC Grid-No.1 Voltage —55 volts
Grid-No.2 Input	3.5 W	Grid-No.2 Input 3.5 watts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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),
Heater Voltage (ac/dc)	6.3 V	Heater Voltage (ac/dc) 6.3 volts
Heater Current	450 mA	Heater Current 0.45 ampere
Heater Warm-up Time (Average)	11 s	Heater Warm-up Time (Average) 11 seconds
Plate Voltage	300 V	Plate Voltage 300 volts
Peak Positive-Pulse Plate Voltage*	600 V	Peak Positive-Pulse Plate Voltage* 600 volts
Grid-No.2 (Screen-Grid) Supply Voltage	300 V	Grid-No.2 (Screen-Grid) Supply Voltage 300 volts
Plate Dissipation 1	-7 W	Plate Dissipation 1-7 watts
For grid-No.2 voltages up to	150 V	For grid-No.2 voltages up to 150 volts 1 watt
For grid-No.2 voltages between 150 and	300 V	For grid-No.2 voltages between 150 and 300 volts
Maximum plate/supply voltage	6500 V	Published section value
Maximum screen-grid voltage	770 V	Published section value

TUBE TINKER

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