



ELECTRONIC TUBE REFERENCE

25CD6GB

Power - TV Horizontal Output (sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

BEAMPOWER

Beam-power tube designed for high-efficiency horizontal-deflection circuits in color and black-and-white television receivers.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	8
NOMINAL HEATER	25 V / 600 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Beam Power	
PLATE RESISTANCE	7200 Ω
TRANSCONDUCTANCE	0.0077 S
AMPLIFICATION FACTOR	3.9
MAXIMUM PLATE VOLTAGE	700 V
MAXIMUM SCREEN VOLTAGE	175 V
MAXIMUM PLATE DISSIPATION	20 W
MAXIMUM SCREEN DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	200 mA
<i>Supplied 25CD6GB sheet identifies this as a heater-voltage variant of 6CD6GA. Promoted beam-power electrical fields were populated from the exact parent-type technical data; heater values remain specific to the supplied 25CD6GB sheet.</i>	

Beam power tube for high-efficiency horizontal-deflection circuits in color and black-and-white television receivers.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1940 RCA

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

1940 RCA

Section 1 · Beam Power

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
RCA	7200 ohm	RCA-25CD6-GB is a high—perveance beam power Plate Resistance (Approx.) . . . - 7200 ohms
tube of the glass—octal type designed especially for Transconductance	7700 μS	tube of the glass—octal type designed especially for Transconductance - 7700 pmhos
OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
use as a horizontal-deflection amplifier tube in G"F')'lja{'é' éuxféfi?ggf(fpfif?fl(.;m;g;e _	55 V	use as a horizontal-deflection amplifier tube in G"F')'lja{'é' éuxféfi?ggf(fpfif?fl(.;m;g;e _ 55 volts
television receivers of the "transformerliess" type. pilate Currente. o« » » « o o « « . 230% 75 o « «	75 mA	television receivers of the "transformerliess" type. pilate Currente. o« » » « o o « « . 230% 75 ma
The	5.5 mA	The 25CD6-GB is ike the 25CD6-G and 25CD6-GA, Grid=No.2 Current. = 21% 5.5 ma
of 7000 volts, a maximum plate dis— Bulb v ¢ v o v v v e v v v	7000 V	of 7000 volts, a maximum plate dis— Bulb v ¢ v o v v v e v v v v v v v o v v v o v v v w o Tmi2
sipation of	-1 W	sipation of 20 watts, and a maximum bulb tempera—~ £&+» « + =+« ¢ v ov o v v v . oSmall (JETEC No.C1-1)
mu~factor, high plate current at low plate volt-Medium-Shell Octal	8 V	mu~factor, high plate current at low plate volt-Medium-Shell Octal 8-Pin with External
having a deflection angle of	90	having a deflection angle of 90 degrees. r NMVWWA- o" o

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
for maximum distribution of heat to prevent hot €	4	for maximum distribution of heat to prevent hot €4 = RATED HEATER VOLTAGE OF TUBE UNDER TEST.
ampere heater having a controlled warm-up time to Fig	1 A	ampere heater having a controlled warm-up time to Fig.1 - Test Circuit for Determining Heater
GENERAL DATA oc {Including boost)	700 V	GENERAL DATA oc {Including boost) 700 max. volts
Electrical: max.y .« . .«	70009 V	Electrical: max.y .« . .« 70009 max, volts
Heater, for Unipotential Cathode: Peak negative-pulse® ., .,	1500 V	Heater, for Unipotential Cathode: Peak negative-pulse® ., ., ... 1500 max, volts
Voltage. o o o o o« o s o s o o o o s	175 V	Voltage. o o o o o« o s o s o o o o s 25 volts DC GRID-No.2 (SCREEN) VOLTAGE. . . 175 max., volts
Currents v w o v v s o o v	1 A	Currents v w o v v s o o v 4 0 e 0 0.6 ampere GRID-No.1 (CONTROL~GRID) VOLTAGE:
Warm-Up Time {Average)	-50 V	Warm-Up Time {Average) 11 seconds] -50 max., volts
Heater warm-up time is defined as the time required Peak negative-pulse. . « . « +	200 V	Heater warm-up time is defined as the time required Peak negative-pulse. . « . « + . . 200 max., volts
in the test circuit shown in Fig	1	in the test circuit shown in Fig.1 for the voltage CATHODE CURRENT:
to 20 volts. DC v v v v v e e e e e e e e e 200 max, ma	200 V	to 20 volts. DC v v v v v e e e e e e e e e 200 max, ma
Direct fnterelectrode Capacitances Peak v v v v v e e	700 mA	Direct fnterelectrode Capacitances Peak v v v v v e e 700 max, ma
Approx., with no external shlejd) GRID=NO	3 W	Approx., with no external shlejd) GRID=NO.2 INPUT: . ¢ o « « 5 o o o o & 3 max. watts
Grid No	20 W	Grid No.1 to plate 1.1 upf PLATE DISSIPATIONt o v v v v v o . 20 max. watts
Grid-No	3	Grid-No.1 to cathode & grtd No 3, PEAK HEATER-CATHODE VOLTAGE:
Plate to cathode & grid No	200 V	Plate to cathode & grid No. 3, to cathode « « v v & & 4 & . W 200 max. volts
L . to cathode + v v v ¢ & o o o W	200 V	L . to cathode + v v v ¢ & o o o W 200% max, volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage. « v v v v o o o	225 V	Plate voltage. « v v v v o o o . 60 175 volts on bulb surface) . . o « o+ .+ & 225 max, %
Grid-No	175 V	Grid-No.2 (Screen) Voltage . . . 100 175 volts f . . . :
Grid-No	-30 V	Grid-No.1 (Control-Grid) Voltage 0 -30 volts Maximum Circuit Values:
Grid No	0.47	Grid No.1. « . « . - 3.9 For grid-resistor-bias operationt. 0.47 max, megohm
center voltage value of	17 V	center voltage value of 17 volts.
volta?e pulse does not exceed	15	volta?e pulse does not exceed 15 per cent of one hori-
zontal scanning cycle. In a	30	zontal scanning cycle. In a 525=1line, 30-frame system, data for peak positive-pulse plate voltage is a



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 voltage	25 V	Nominal
Heater current	600 mA	Nominal
Maximum peak positive pulse plate voltage	7000 V	HorizontalDeflection
Maximum peak negative pulse plate voltage	1500 V	HorizontalDeflection
Maximum peak cathode current	700 mA	HorizontalDeflection
Plate voltage	175 V	Typical operating conditions
Screen voltage	175 V	Typical operating conditions
Grid 1 voltage	-30 V	Typical operating conditions

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater warm-up time	11 s	ControlledWarmup
Plate current	75 mA	Typical operating conditions
Grid 2 current	5.5 mA	Typical operating conditions
Plate resistance	7200 ohm	Typical operating conditions
Transconductance	7700 uS	Typical operating conditions
Triode amplification factor	3.9	Typical operating conditions

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 1 to plate	1.1 pF	Direct interelectrode capacitance
Input capacitance	22 pF	Direct interelectrode capacitance
Output capacitance	8.8 pF	Direct interelectrode capacitance



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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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
Heater voltage	25 V	TypicalOperation
Heater current	600 mA	TypicalOperation
Maximum positive pulse plate voltage	7000 V	HorizontalDeflection
Maximum negative pulse plate voltage	2500 V	HorizontalDeflection
Maximum DC cathode current	200 mA	WholeTube
Heater warm-up time	11 s	WholeTube
Triode-connected amplification factor	3.9	TriodeConnection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 1-to-plate capacitance	1.1 pF	WholeTube
Output capacitance	8.5 pF	WholeTube


SOURCE DATA APPENDIX

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

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	25 V	Nominal heater rating from supplied sheet
Heater current	600 mA	Nominal heater rating from supplied sheet

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	700 V	ExactParentElectricalData 6CD6GA
Maximum screen-grid voltage	175 V	ExactParentElectricalData 6CD6GA
Maximum plate dissipation	20 W	ExactParentElectricalData 6CD6GA
Maximum screen-grid dissipation	3 W	ExactParentElectricalData 6CD6GA
Maximum average cathode current	200 mA	ExactParentElectricalData 6CD6GA
Peak positive-pulse plate voltage	7000 V	ExactParentElectricalData 6CD6GA
Peak cathode current	700 mA	ExactParentElectricalData 6CD6GA


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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Warm-up Time (Average)	11 s	Other
Peak value -	200 V	Other;PublishedValue1
Peak value -	200 V	Other;PublishedValue2
Average value	100 V	Other;PublishedValue1
Average value	100 V	Other;PublishedValue2
DC Plate Voltage	700 V	MaximumRating
Peak Positive-Pulse Plate Voltage# (Absolute Maximum)	7000 V	MaximumRating
Peak Negative-Pulse Plate Voltage	1500 V	MaximumRating
DC Grid-No	2 V	MaximumRating;PublishedValue1
DC Grid-No	176 V	MaximumRating;PublishedValue2
Peak Negative-Pulse Grid-No.1 Voltage	700 V	MaximumRating

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate	1.1 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	22 pF	Capacitance;PublishedValue3
Plate to Cathode, Heater, Grid No	2 pF	Capacitance;PublishedValue1
Plate to Cathode, Heater, Grid No	3 pF	Capacitance;PublishedValue2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate to Cathode, Heater, Grid No	8.6 pF	Capacitance;PublishedValue3

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	60 V	Characteristic;PublishedValue1
Plate Voltage	176 V	Characteristic;PublishedValue2
Grid-No	2 V	Characteristic;PublishedValue1
Grid-No	100 V	Characteristic;PublishedValue2
Grid-No	176 V	Characteristic;PublishedValue3
Grid-No.1 (Control-Grid) Voltage	0 V	Characteristic;PublishedValue1
Grid-No.1 (Control-Grid) Voltage	-30 V	Characteristic;PublishedValue2
Plate Resistance (Approx.)	7200 ohm	Characteristic
Transconductance	7700 uS	Characteristic
Plate Current	5.5 mA	Characteristic
Grid-No.1 Voltage (Approx.) for plate current of	21 mA	Characteristic;PublishedValue1
Grid-No.1 Voltage (Approx.) for plate current of	6.5 mA	Characteristic;PublishedValue2
Published value	1 mA	Characteristic;PublishedValue1
Published value	-55 mA	Characteristic;PublishedValue2