



ELECTRONIC TUBE REFERENCE

PCC84

Voltage - Dual Triode (similar) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

TRIODE-TRIODE

300 mA series-heater dual triode designed for cascode RF amplification in television receiver front ends, corresponding functionally to the ECC84 family.

GENERAL CHARACTERISTICS

BASE DESIGNATION	Noval	BASE PINS	9
NOMINAL HEATER	7.2 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	4000 Ω
TRANSCONDUCTANCE	0.006 S
AMPLIFICATION FACTOR	24
MAXIMUM PLATE VOLTAGE	180 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	22 mA

Published section ratings and characteristics promoted where applicable.

SECTION2 Triode	
PLATE RESISTANCE	4000 Ω
TRANSCONDUCTANCE	0.006 S
AMPLIFICATION FACTOR	24
MAXIMUM PLATE VOLTAGE	180 V
MAXIMUM PLATE DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	22 mA
<i>Second physical triode section; added to align rows with SectionCount.</i>	

300 mA series-heater dual triode for cascode RF amplification; the source refers to ECC84 for remaining characteristics.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1953 La Radiotechnique

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

1953 LA RADIOTECHNIQUE

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Indirect (cathodes isolees du filament)	3 A	Triode
Alimentation du filament en serie. Vvf	7 V	Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	90 V	Triode
Tension de la grille	15 V	Triode
Plate current	12 mA	Triode
Plate resistance	4 kohm	Triode
Transconductance	6 mA/V	Triode
Plate voltage	180 V	Triode
Puissance dissipee surl'anode	2 W	Triode
Cathode current	22 mA	Triode
Grid-circuit resistance G	0.5 MA	Triode
Grid-circuit resistance G'	5 Mohm	Triode
(cathode positive par rapport au filament) Vk'f	250 V	Triode
(cathode negative par rapport au filament) Vk'f	100 V	Triode
Heater-cathode voltage K	100 V	Triode
{1) La composante continue ne doit pas depasser 180 V	180 V	Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacite de la grille	21 pF	Triode
Plate capacitance	0.45 pF	Triode
Capacite anode-grille	12 pF	Triode
Capacite anode-cathode	16 pF	Triode
Capacite cathode-(grille+filament). Ck'(gJ'Hf)	47 pF	Triode
Capacite anode-(grille+filament)	25 pF	Triode
Cathode-heater capacitance	2.7 pF	Triode
Capacite anode-grille	2.3 pF	Triode
+ filament + grille G'	12 pF	Triode
Capacite anode A-anode A	0.035 pF	Triode
Capacite grille G-anode A	0.006 pF	Triode



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1953 RFT Rundfunk Technik

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1953 RFT RUNDFUNK TECHNIK

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	340 mA	Nominal
Maximum Plate Voltage	180 V	—
Maximum Plate Dissipation	2 W	—
Maximum Cathode Current	20 mA	—

Characteristic		
Parameter	Published Value	Condition / Note
Transconductance	6000 μS	Typical
Amplification Factor	24	Typical
Plate Resistance	4000 ohm	Typical


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1958 Brimar Radio Valve No 7

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

1958 BRIMAR RADIO VALVE NO 7

Section 1 · Triode

Characteristic		
Parameter	Published Value	Condition / Note
Application	VHF cascode amplifier	Two identical triodes
Referenced Characteristics	Type ECC84	Source explicitly refers to ECC84 for further characteristics


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1958 Mullard Receiving Tubes

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

1958 MULLARD RECEIVING TUBES

Section 1 · Triode

Characteristics		
Parameter	Published Value	Condition / Note
Maximum Intended Frequency	220 MHz	—
Plate Voltage	90 V	Each section
Plate Current	12 mA	Each section
Grid Voltage	-1.5 V	Each section



SOURCE OPERATING CONDITIONS

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195X Tesla

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

195X TESLA

Section 1 · Triode

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	7.2 V	Published nominal value
Heater current	300 mA	Published nominal value



SOURCE OPERATING CONDITIONS

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1961 Ferranti Technical Handbook

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

1961 FERRANTI TECHNICAL HANDBOOK

Section 1 · Triode

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	7 V	—
Heater Current	300 mA	—
Maximum Intended Frequency	220 MHz	CascodeRFamplifier



1963 Philips Electron Tubes Handbook V1

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V1

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	90 V	Cascode;EachSection
Control-grid voltage	-1.5 V	Cascode;EachSection
Plate current	12 mA	Cascode;EachSection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	6000 μS	EachSection
Amplification factor	24	EachSection
Input conductance at 200 MHz	250 $\mu\text{A/V}$	Cascode
Noise figure	6.5	Cascode;InputBandwidth7To8MHz

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	1.2 pF	GroundedCathodeSection
Grid capacitance	2.1 pF	GroundedCathodeSection
Plate capacitance	0.45 pF	GroundedCathodeSection



SOURCE DATA APPENDIX

1968 Mazda Belvu

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

1968 MAZDA BELVU

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater or filament voltage	7 V	Published nominal or stated operating value
Heater or filament current	300 mA	Published nominal or stated operating value
Transconductance	6000 μ S	Published/reference characteristic

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate dissipation	2 W	Published/reference maximum rating



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1973 Mazda Valves Binder 2

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

1973 MAZDA VALVES BINDER 2

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	7 V	Published nominal value
Heater current	300 mA	Published nominal value
Transconductance	6000 μ S	Published operating characteristic

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate dissipation	2 W	Published maximum rating



SOURCE DATA APPENDIX

1999 Philips E-Z

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

1999 PHILIPS E-Z

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
up to	220 MHz	—
Heizung : indirekt durch Wechsel- Ir	300 mA	—
Caal	< 0.035 pF	—
Cear	< 0.006 pF	—
Fernsehempfédngrn bis zu	220 MHz	—
Cau'	< 0.035 pF	—
Cgav	< 0.006 pF	—
Kenndaten (jedes System vy	0 V	—
Vg	-1.57 V	—
I,	12 mA	—
Input conductance at	200 MHz	—
Conductance d'entrée &	200 MHz	—
Eingangsleitwert bei	200 MHz	—
(largeur de bande du circuit d'entrée 7	-8 MHz	—
(Bandbreite der Eingangsschaltung 7	-8 MHz	—
to about	700 µA	—
Vg	1.5 V	—
Eingangsleitwert %bei	200 MHz	—
(bandwidth of input ecircuit 7	-8 MHz	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cag [1]	1.2 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cag [2]	0.16 pF	—
Cg [1]	2.3 pF	—
Cg [2]	4.7 pF	—
Ca [1]	0.45 pF	—
Ca [2]	2.5 pF	—
Caf [1]	< 0.25 pF	—
Caf [2]	2.7 pF	—
Ca(x+frgr)	192 pF	—
Cq [1]	2.1 pF	—
Cq [2]	4.7 pF	—
Cgr [1]	< 0.25 pF	—
Cgr [2]	2.7 pF	—
Carg?	2.3 pF	—
Ca(k+f+g')	112 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
cay +	180 V	—
CAY +1B	0 V	—