

ELECTRONIC TUBE REFERENCE

ECC83

Voltage - Dual Triode (similar) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

TRIODE-TRIODE

High-mu twin triode for low-level audio and general voltage amplification, widely used where two high-gain small-signal triode sections are required.

GENERAL CHARACTERISTICS

BASE DESIGNATION	B9A	BASE PINS	9
NOMINAL HEATER	12.6 V / 150 mA	PARALLEL HEATER	6.3 V / 300 mA
HEATING	Indirect	SERIES OPERATION	Capable
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	62500 Ω
TRANSCONDUCTANCE	0.0016 S
AMPLIFICATION FACTOR	100
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	1 W
MAXIMUM CATHODE CURRENT	8 mA
Representative section for two electrically identical sections.	

SECTION2 Triode	
TRANSCONDUCTANCE	0.0016 S
AMPLIFICATION FACTOR	100
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	1 W
MAXIMUM CATHODE CURRENT	8 mA

High-mu twin triode for AF preamplifier service; source also designates ECC83.



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1953 RFT Rundfunk Technik

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

1953 RFT RUNDFUNK TECHNIK

Section 1 · Triode

APPLICATION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	VoltageAmplifier text	—



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1956 Amperex Hi Fi Brochure

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1956 AMPEREX HI FI BROCHURE

Section 1 · Triode

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	100 V	Each section
Plate Current	0.5 mA	Each section
Control Grid Voltage	-1 V	Each section
Transconductance	1250 μ S	PlateVoltage=100V
Plate Resistance	80000 ohm	PlateVoltage=100V
Plate Voltage	250 V	Each section
Plate Current	1.2 mA	Each section
Control Grid Voltage	-2 V	Each section

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Grid Resistance	2000000 ohm	Each section

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Filament-to-Cathode Voltage	180 V	—



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1958 Amperex Industrial

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1958 AMPEREX INDUSTRIAL

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	VoltageAmplifier
Grid voltage	-2 V	VoltageAmplifier
Plate current	1.2 mA	VoltageAmplifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	100	—
Plate resistance	62500 ohm	—
Transconductance	1600 μS	—



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195X Tesla

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195X TESLA

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Interelectrode capacitances	Published	See source sheet for electrode-specific capacitance values



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1961 Ferranti Technical Handbook

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1961 FERRANTI TECHNICAL HANDBOOK

Section 1 · Triode

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	300 mA	—
Application	Resistance-coupled AF amplifier or phase inverter	—



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1963 Amperex Condensed

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1963 AMPEREX CONDENSED

Section 1 · Triode

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published heater rating
Heater current	300 mA	Published heater rating
Amplification factor	100	VoltageAmplifier

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	62500 ohm	VoltageAmplifier
Transconductance	1600 μ S	VoltageAmplifier
Series heater voltage	12.6 V	SeriesHeater
Series heater current	150 mA	SeriesHeater

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	VoltageAmplifier
Control-grid bias	-2 V	VoltageAmplifier
Plate current	1.2 mA	VoltageAmplifier



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1963 Philips Electron Tubes Handbook V1a

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1963 PHILIPS ELECTRON TUBES HANDBOOK V1A

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	VoltageAmplifier
Grid voltage	-2 V	VoltageAmplifier
Plate current	1.2 mA	VoltageAmplifier

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	100	—
Plate resistance	62500 ohm	—
Transconductance	1600 μ S	—

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1967 Mullard Receiving and Amplifying Valves

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1967 MULLARD RECEIVING AND AMPLIFYING VALVES

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	0.5 mA	EachSection;Va=100V
Transconductance	1250 uS	EachSection;Va=100V
Amplification Factor	100	EachSection;Va=100V
Plate Resistance	80000 ohm	EachSection;Va=100V
Plate Current	1.2 mA	EachSection;Va=250V
Transconductance	1600 uS	EachSection;Va=250V
Amplification Factor	100	EachSection;Va=250V
Plate Resistance	62500 ohm	EachSection;Va=250V
Plate Resistance	62500 ohm	—
Transconductance	1600 uS	—
Amplification Factor	100	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	300 V	—
Maximum Plate Dissipation	1 W	—

1968 Mazda Belvu

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1968 MAZDA BELVU

Section 1 · Triode

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	AF_Preamplifier text	—



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1972 Philips Receiving Tubes

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1972 PHILIPS RECEIVING TUBES

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode current L	1.2 mA	—
Transconductance S	1.6 mA/V	—
Heater voltage Vi 6.3	12.6 V	—
Heater current 1f 300	150 mA	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to all except anode Cg(a)	1.6 pF	—
Cg'(a")	1.6 pF	—
Anode to all except grid Ca(g)	0.33 pF	—
Ca'(g")	0.23 pF	—
Anode to grid Cag	1.6 pF	—
Ca'g!	1.6 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to heater C _{gf} max	—0.15 pF	Maximum
C _g 's max	—0.15 pF	Maximum
Anode to anode C _{aat} max	—1.2 pF	Maximum



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1973 Mazda Valves Binder 2

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1973 MAZDA VALVES BINDER 2

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage V _h 6.31 f	12.6 V	—
Heater Current I _h 0.3f or 1	150 mA	—
Maximum Anode Dissipation p _a (max)	1 W	—
Maximum Anode Voltage V _{aimaxi}	300 V	—
(D.C. or R.M.S.) V _{h-k} (max)	180 V	—
Maximum Cathode Current I _k (max)	8 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input' 1.6 1.8	2.6 pF	—
Output' tout' 0.33 0.48	1.3 pF	—
Output" cout" 0.23 0.34	1.1 pF	—
Anode' to Grid' ca' -g' 1.6 1.7	2 pF	—
Anode" to Grid" g" 1.6 1.8	2.1 pF	—
Anode' to Anode" ca' -a" 0.9 0.95	0.95 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid' to Grid" cg'.g" 0.008 0.012	0.014 pF	—



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1975 RCA RC30

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1975 RCA RC30

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage (ac/dc) 12.6 S	3 V	Published in approved ECC83 target datasheet entry; Section1
Heater Current 0.16	300 mA	Published in approved ECC83 target datasheet entry; Section1
Grid to Plate 1.7	1.7 pF	Published in approved ECC83 target datasheet entry; Section1
Grid to Cathode and Heater 1.6	1.6 pF	Published in approved ECC83 target datasheet entry; Section1
Plate to Cathode and Heater 0.46	0.34 pF	Published in approved ECC83 target datasheet entry; Section1
Plate Voltage	330 V	Published in approved ECC83 target datasheet entry; Section1
Negative-bias value	55 V	Published in approved ECC83 target datasheet entry; Section1
Positive-bias value	0 V	Published in approved ECC83 target datasheet entry; Section1
Plate Dissipation	1.2 W	Published in approved ECC83 target datasheet entry; Section1
connection),	6.3 V	Published in approved ECC83 target datasheet entry; Section1
250 volts dc ; plate load resistor,	100000 Ω	Published in approved ECC83 target datasheet entry; Section1
250 volts dc ; plate load resistor, 100000 ohms ; cathode resistor,	2700 Ω	Published in approved ECC83 target datasheet entry; Section1



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1999 Philips E-Z

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1999 PHILIPS E-Z

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
1)In case of series supply a current-limiting device must	1 V	1)In case of series supply a current-limiting device must
be inserted in the heater circuit for	1 A	be inserted in the heater circuit for 1limiting the
tap of the heater has been earthed, R_g , <	500 mA	tap of the heater has been earthed, R_g , < 0.5 MQ and the
1) V_o at grid current starting point	1 V	1) V_o at grid current starting point
60 dB when the centre tap of the heater has been earthed,	-60 A	-60 dB when the centre tap of the heater has been earthed,
R_g £	0.5 uF	R_g £ 0.5 MQ and the cathode resistor is sufficiently
1) V_o at grid current starting point	1 V	1) V_o at grid current starting point

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
hum and noise will be better than ~60 dB, when the mid	60 A	hum and noise will be better than ~60 dB, when the mid-



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2026 Genalex Rebrand

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2026 GENALEX REBRAND

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	1.05–2 mA	Plate 250 V; grid -2 V



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2026 Mullard Rebrand

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CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater current at 6.3 V	350–390 mA	Published min/max range
Heater current at 12.6 V	175–195 mA	Published min/max range

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