

ELECTRONIC TUBE REFERENCE

5842

Voltage - Triode (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRIODE

Premium-quality high-transconductance triode for demanding small-signal amplification, with published ratings and characteristics emphasizing strong gain and controlled production quality.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9V	BASE PINS	9
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

9V - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – P	A	P – Plate (Anode)	CONNECTED
PIN3 – H	–	H – Heater	CONNECTED
PIN4 – G1	A	G1 – Control Grid	CONNECTED
PIN5 – G1	A	G1 – Control Grid	CONNECTED
PIN6 – K	A	K – Cathode	CONNECTED
PIN7 – G1	A	G1 – Control Grid	CONNECTED
PIN8 – G1	A	G1 – Control Grid	CONNECTED
PIN9 – H	–	H – Heater	CONNECTED

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	1700 Ω
TRANSCONDUCTANCE	0.025 S
AMPLIFICATION FACTOR	44
MAXIMUM PLATE VOLTAGE	200 V
MAXIMUM PLATE DISSIPATION	4.5 W
MAXIMUM CATHODE CURRENT	50 mA
<i>Published maximum ratings and characteristic constants promoted; identical twin sections compressed when applicable.</i>	

5842 is listed in the supplied Amperex material as a premium-quality high-transconductance triode. Published ratings and characteristics were captured from the supplied table.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1938 Raytheon

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

1938 RAYTHEON

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	6.3 V	Nominal
HeaterCurrentNominal	300 mA	Nominal
Maximum Plate Voltage	200 V	—
Maximum Plate Dissipation	4.5 W	—
Maximum Cathode Current	50 mA	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	25000 μ S	Typical
Amplification Factor	43	Typical
Plate Resistance	1700 ohm	Typical

SOURCE OPERATING CONDITIONS

1958 Compagnie General

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

1958 COMPAGNIE GENERAL

Section 1 · Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	0.65 pF	Maximum
Input capacitance	9 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Output capacitance	1.75 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	150 V	ClassA
Cathode resistance	60 Ohm	ClassA
Plate current	22 mA	ClassA
Transconductance minimum	20000 uS	—
Transconductance maximum	30000 uS	—
Amplification factor minimum	35 ratio	—
Amplification factor maximum	55 ratio	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Noise figure	2.7 dB	Cascode;6-60MHz;SourceResistance=400Ohm


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1963 Amperex Condensed

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

1963 AMPEREX CONDENSED

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	130 V	PremiumQuality
Plate current	27 mA	PremiumQuality

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	27000 μS	PremiumQuality
Amplification factor	43	PremiumQuality

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1965 Ericsson Longlife

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

1965 ERICSSON LONGLIFE

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	130 V	ClassA
Grid supply voltage	9 V	ClassA
Cathode bias resistor	360 0hm	ClassA
Plate current	27 mA	ClassA
Plate supply voltage	150 V	ClassA
Cathode bias resistor	60 0hm	ClassA
Plate current	25 mA	ClassA
Transconductance minimum	20000 uS	—
Transconductance maximum	30000 uS	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	27000 uS	ClassA;Va=130V
Amplification factor	44 ratio	ClassA;Va=130V
Plate resistance	1600 0hm	ClassA;Va=130V
Transconductance	25000 uS	ClassA;Va=150V
Amplification factor	43 ratio	ClassA;Va=150V
Plate resistance	1700 0hm	ClassA;Va=150V
Equivalent noise resistance	100 0hm	—

196X LM Ericsson

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

196X LM ERICSSON

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—
Plate resistance	1700 ohm	—
Amplification factor	44	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	200 V	—
Maximum plate dissipation	4.5 W	—



SOURCE DATA APPENDIX

1971 RCA HB3 Binder 3 of 7

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

1971 RCA HB3 BINDER 3 OF 7

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC) – published value 1	6.3 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Voltage (AC or DC) – published value 2	0.6 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Current at heater volts = 6.3 – published value 1	6.3 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Current at heater volts = 6.3 – published value 2	0 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Current at heater volts = 6.3 – published value 3	300 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate to cathode and heater	0.55	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Cathode to grid and heater	9	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate to grid and	1.8	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Supply Voltage – published value 1	130 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Supply Voltage – published value 2	150 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Grid Voltage ^b	9 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Amplification Factor – published value 1	43 A	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Amplification Factor – published value 2	43 A	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Resistance (Approx) – published value 1	1600 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Resistance (Approx) – published value 2	1700 ohm	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Transconductance – published value 1	27000	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Transconductance – published value 2	25000	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current – published value 1	27 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Plate Current – published value 2	25 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 1 -Plate – published value 1	1	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 1 -Plate – published value 2	5	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Connection	7	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 3-Heater – published value 1	3	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 3-Heater – published value 2	8	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 4 -Grid – published value 1	4	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
Pin 4 -Grid – published value 2	9	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE VOLTAGE	200 V	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
CATHODE CURRENT	38 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
PLATE DISSIPATION – published value 1	4 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.
PLATE DISSIPATION – published value 2	5 mA	Published datasheet value; multiple values on a source row represent separate source-table conditions or limits.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1999 Philips 0-D

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

1999 PHILIPS 0-D

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	300 mA	—
Plate voltage	150 V	—
Plate current	26 mA	—
Transconductance	24000 μ S	—
Amplification factor	50	—
Plate resistance	2083 ohm	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate-cathode capacitance	0.55 pF	—
Grid-cathode capacitance	9 pF	—
Plate-grid capacitance	1.8 pF	—

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