

ELECTRONIC TUBE REFERENCE

7044

Voltage - Dual Triode (similar) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

TRIODE-TRIODE

High-current double triode designed for electronic computers, particularly high-speed cathode-follower, switching, and pulse-amplifier service, with substantial peak-current and pulse-voltage capability.

GENERAL CHARACTERISTICS

BASE DESIGNATION	9M	BASE PINS	9
NOMINAL HEATER	12.6 V / 450 mA	PARALLEL HEATER	6.3 V / 900 mA
HEATING	Indirect	SERIES OPERATION	Capable
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

9M - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – P1	A	P – Plate (Anode)	CONNECTED
PIN3 – K	A	K – Cathode	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – H	–	H – Heater	CONNECTED
PIN7 – P2	B	P – Plate (Anode)	CONNECTED

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	1750 Ω
TRANSCONDUCTANCE	0.012 S
AMPLIFICATION FACTOR	21
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	4.5 W
MAXIMUM CATHODE CURRENT	50 mA
<i>Representative row for two identical computer-control triodes.</i>	

SECTION2 Triode	
PLATE RESISTANCE	1750 Ω
TRANSCONDUCTANCE	0.012 S
AMPLIFICATION FACTOR	21
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	4.5 W
MAXIMUM CATHODE CURRENT	50 mA
<i>Second physical triode section; electrically identical twin section.</i>	

THE 7044 IS A DOUBLE TRIODE DESIGNED FOR USE IN ELECTRONIC COMPUTERS. THE



SOURCE OPERATING CONDITIONS

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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
Heater Current Series 410 450	490 mA	Heater Current Series 410 450 490 mA
Heater Current Parallel 820 900	980 mA	Heater Current Parallel 820 900 980 mA
Plate Resistance p/ps	1750 Ω	Plate Resistance p/ps 1750 ohms
Note 2: The plate dissipation of one section may be as great as	4.5 W	Note 2: The plate dissipation of one section may be as great as 4.5 watts provided that the maximum dissipation for both sections
does not exceed	8 W	does not exceed 8.0 watts.
exceed	200 V	exceed 200 volts and the maximum positive DC heater with respect to cathode voltage shall never exceed +100 Vdc.



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1950 Sylvania

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1950 SYLVANIA

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	12.6 V	—
Heater Current	450 mA	—



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1960 RCA Industrial and Communications Types

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1960 RCA INDUSTRIAL AND COMMUNICATIONS TYPES

Section 1 · Triode

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	High-speed computer cathode follower	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak cathode current	400 mA	—



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1961 Tung Sol

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1961 TUNG SOL

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	12.6 V	Nominal
Heater current	450 mA	Nominal
Maximum peak plate voltage	600 V	Plate-to-cathode
Maximum average total plate dissipation both units	8 W	BothSections
Maximum average positive grid current	5 mA	PerSection

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum peak positive grid current	200 mA	PerSection
Maximum peak cathode current	400 mA	PerSection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater power	5.7 W	SeriesOrParallel

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to plate	6 pF	Per identical triode
Input capacitance	4.8 pF	Per identical triode
Output capacitance	0.65 pF	Per identical triode
Heater to cathode	6 pF	Per identical triode
Grid 1 to grid 2	0.1 pF	Cross-section
Plate 1 to plate 2	1.4 pF	Cross-section



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1965 Sylvania Electronic Tubes Vol3

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1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 1 · Triode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Series heater voltage	12.6 V	SeriesHeater
Series heater current	450 mA	SeriesHeater
Parallel heater voltage	6.3 V	ParallelHeater
Parallel heater current	900 mA	ParallelHeater

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak cathode current maximum	110 mA	—

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Computer switching / pulse amplifier	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1966 Tung Sol Electronic Tubes 4 of 4

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1966 TUNG SOL ELECTRONIC TUBES 4 OF 4

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Nominal
Heater current	900 mA	Nominal
Maximum plate voltage	300 V	Promoted published value
Maximum plate dissipation	4.5 W	Promoted published value
Maximum cathode current	50 mA	Promoted published value
HEATER VOLTAGE 12.6±5% 6.3±5% VOLTS	5 V	RATINGS
HEATER CURRENT	900 mA	RATINGS
MAXIMUM AVERAGE PLATE VOLTAGE D	300 V	RATINGS
HEATER VOLTAGE 12.615% 6.315% VOLTS	6.315 V	RATINGS - CONT~o.
MAXIMUM AVERAGE CATHODE CURRENT	50 mA	RATINGS - CONT~o.
MAXIMUM PEAK CATHODE CURRENT	400 mA	RATINGS - CONT~o.
HEATER VOLTAGE (SERIES) 12.6±5% VOLTS	5 V	INITIAL CHARACTERISTICS LIMITS
HEATER VOLTAGE (PARALLEL) 6.315% VOLTS	6.315 V	INITIAL CHARACTERISTICS LIMITS
HEATER CURRENT (SERIES)	450 mA	INITIAL CHARACTERISTICS LIMITS
HEATER CURRENT (PARALLEL)	900 mA	INITIAL CHARACTERISTICS LIMITS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HEATER CURRENT @ Ef=	490 V	INITIAL CHARACTERISTICS LIMITS



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1971 RCA HB3 Binder 3 of 7

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1971 RCA HB3 BINDER 3 OF 7

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage series	12.6 V	—
Heater current series	450 mA	—
Heater voltage parallel	6.3 V	—
Heater current parallel	900 mA	—
Plate voltage	120 V	EachSection
Plate current	36 mA	EachSection
Average plate voltage maximum	300 V	EachSection
Peak positive pulse plate voltage	600 V	Pulse
Average cathode current	50 mA	EachSection
Peak cathode current	400 mA	Pulse
Plate dissipation each section	4.5 W	EachSection
Total plate dissipation both sections	8 W	BothSections

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	1750 ohm	EachSection
Transconductance	12000 uS	EachSection
Amplification factor	21	EachSection