



ELECTRONIC TUBE REFERENCE

6FM8

Voltage - Triode (with diode, heptode or hexode) electronic tube

CONSOLIDATED TECHNICAL
DATA

3 SECTIONS

CONSTRUCTION

DIODE-DIODE-TRIODE

Double-diode high-mu triode for detector, discriminator, control-voltage, and voltage-amplifier service. Paired diodes provide complementary rectification while the triode supplies substantial subsequent gain.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Dissimilar

SECTION RATINGS

SECTION1 Diode	
MAXIMUM CATHODE CURRENT	5 mA
<i>Diode section 1; maximum continuous current 5 mA.</i>	
SECTION2 Diode	
MAXIMUM CATHODE CURRENT	5 mA
<i>Diode section 2; maximum continuous current 5 mA.</i>	

SECTION3 Triode	
PLATE RESISTANCE	58000 Ω
TRANSCONDUCTANCE	0.0012 S
AMPLIFICATION FACTOR	70
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM PLATE DISSIPATION	1.1 W
MAXIMUM CATHODE CURRENT	5 mA
<i>Triode section.</i>	

Duplex-diode high-mu triode with separate cathodes, intended for FM detector and AF voltage-amplifier service.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tung Sol Electronic Tubes 2 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 1 · Diode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Diode #1 input capacitance	2.4 pF	—
Diode #1 cathode-to-all capacitance	4.6 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Average diode current	20 mA	EachDiode;5VDC

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 2 · Diode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Diode #2 input capacitance	2.2 pF	—
Diode #2 cathode-to-all capacitance	4.8 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Average diode current	20 mA	EachDiode;5VDC

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 3 · Triode

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode grid-to-plate capacitance	1.8 pF	—
Triode input capacitance	1.5 pF	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Triode output capacitance	0.16 pF	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Grid voltage	-3 V	ClassA
Plate current	1 mA	ClassA


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1968 General Electric Co

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

1968 GENERAL ELECTRIC CO

Section 1 · Diode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Average Diode Current	20 mA	5V DC Applied

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Continuous Diode Current	5 mA	EachDiode

1968 GENERAL ELECTRIC CO

Section 2 · Diode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Average Diode Current	20 mA	5V DC Applied

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Continuous Diode Current	5 mA	EachDiode

1968 GENERAL ELECTRIC CO

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	TriodeSection ClassA
Grid Voltage	-3 V	TriodeSection ClassA
Plate Current	1 mA	TriodeSection ClassA



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

1971 RCA HB3 Binder 4 of 7

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

1971 RCA HB3 BINDER 4 OF 7

Section 1 · Diode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC) – published value 1	6 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Voltage (AC or DC) – published value 2	3 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Voltage (AC or DC) – published value 3	10 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Current at 6.3 volts – published value 1	6.3 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Current at 6.3 volts – published value 2	0.45 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid to plate	18	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid to cathode and heater – published value 1	1	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to cathode and heater – published value 2	5	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Plate to cathode and heater	0.16	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Diode-No.1 plate to triode grid	0.05	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Diode-No.2 plate to triode grid	0.04	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Diode-No.1 plate to cathode and heater. 2.4	2.4	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Diode-No.2 plate to cathode and heater. 2.2	2.2	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Plate Voltage	250 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Grid Voltage	-3 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Plate Resistance (Approx)	58000 ohm	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Transconductance	1200	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Plate Current	1 mA	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Pin 1-Diode-No.2 – published value 1	1	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Pin 1-Diode-No.2 – published value 2	5	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Cathode	6	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Pin 2-Diode-No.1	2	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Plate	7	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Pin 3-Diode-No.1	3	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Cathode	8	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Pin 4-Heater – published value 1	4	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Pin 4-Heater – published value 2	9	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Plate Current for plate volts = 5 – published value 1	5 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Plate Current for plate volts = 5 – published value 2	20 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE VOLTAGE	330 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Positive-bias value	0 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
PLATE DISSIPATION – published value 1	1 mA	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
PLATE DISSIPATION – published value 2	1 mA	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
Heater negative with respect to cathode	200 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater positive with respect to cathode	2006 V	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.
PLATE CURRENT	5 mA	Published datasheet value; multiple numbers on one source row represent separate limits or operating conditions.

1971 RCA HB3 BINDER 4 OF 7

Section 3 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Plate current	1 mA	ClassA
Maximum plate voltage	330 V	—
Maximum cathode/plate current	5 mA	—

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	58000 ohm	ClassA
Transconductance	1200 uS	ClassA
Amplification factor	70	ClassA

TUBE TINKER

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