



ELECTRONIC TUBE REFERENCE

6SN7GTB

Voltage - Dual Triode (similar) electronic tube

CONSOLIDATED TECHNICAL DATA

2 SECTIONS

CONSTRUCTION

TRIODE-TRIODE

Medium-mu twin triode with controlled heater warm-up for television deflection oscillators, multivibrators, and general resistance-coupled amplification. Matched sections combine familiar 6SN7 gain with substantial pulse-voltage capability.

GENERAL CHARACTERISTICS

BASE DESIGNATION	RETMA 8BD	BASE PINS	8
NOMINAL HEATER	6.3 V / 600 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	7700 Ω
TRANSCONDUCTANCE	0.0026 S
AMPLIFICATION FACTOR	20
MAXIMUM PLATE VOLTAGE	450 V
MAXIMUM PLATE DISSIPATION	5 W
MAXIMUM CATHODE CURRENT	20 mA
Representative row for identical sections; each-plate maximum dissipation is 5 W, total both plates 7.5 W.	

SECTION2 Triode	
PLATE RESISTANCE	7700 Ω
TRANSCONDUCTANCE	0.0026 S
AMPLIFICATION FACTOR	20
MAXIMUM PLATE VOLTAGE	450 V
MAXIMUM PLATE DISSIPATION	5 W
MAXIMUM CATHODE CURRENT	20 mA
Second identical physical section; added to align physical rows with SectionCount.	

Medium-mu twin triode used in television deflection oscillators, multivibrators, and resistance-coupled amplifiers. Explicit heater variant/co-designation of 12SN7GTA in the approved source.



SOURCE OPERATING CONDITIONS

1950 Sylvania

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

1950 SYLVANIA

Section 1 · Triode

APPLICATION

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Service	Horizontal multivibrator / phase inverter / vertical deflection	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

195X General Electric Essential Characteristics

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

195X GENERAL ELECTRIC ESSENTIAL CHARACTERISTICS

Section 1 · Triode

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	450 V	Published handbook rating
Plate voltage	250 V	ClassA OperatingPoint1
Control-grid bias	8 V	ClassA OperatingPoint1
Plate current	9 mA	ClassA OperatingPoint1
Plate voltage	90 V	ClassA OperatingPoint2
Control-grid bias	0 V	ClassA OperatingPoint2
Plate current	10 mA	ClassA OperatingPoint2
Maximum positive pulse plate voltage	1500 V	VerticalDeflection
Maximum plate dissipation	7.5 W	VerticalDeflection

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum DC cathode current	20 mA	VerticalDeflection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	7700 ohm	ClassA OperatingPoint1
Transconductance	2600 μ S	ClassA OperatingPoint1
Amplification factor	20	ClassA OperatingPoint1
Plate resistance	6700 ohm	ClassA OperatingPoint2
Transconductance	3000 μ S	ClassA OperatingPoint2
Amplification factor	20	ClassA OperatingPoint2
Heater voltage	6.3 V	Published heater rating
Heater current	600 mA	Published heater rating


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1961 Tung Sol

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

1961 TUNG SOL

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	7700 ohm	AlternateOperatingPoint
Transconductance	2600 μ S	AlternateOperatingPoint


SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

1965 Sylvania Electronic Tubes Vol3

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

1965 SYLVANIA ELECTRONIC TUBES VOL3

Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	600 mA	—
ControlledWarmupHeater	1 boolean	—
Heater Warmup Time	11 s	—
Grid To Plate Capacitance	4 pF	—
Input Capacitance	2.2 pF	—
Output Capacitance	0.1 pF	—
Plate Voltage	250 V	—
Grid Voltage	-8 V	—
Plate Current	9 mA	—
Plate Resistance	7700 ohm	—
Transconductance	2600 uS	—
Amplification Factor	20	—



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA
Heater_warmup_time	11 s	Section1,Section2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	2600 uS	ClassA
Plate resistance	7700 ohm	ClassA

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Amplification factor	20	ClassA

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	3 pF	Section1
Output capacitance	3 pF	Section1


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 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Positive Pulse Plate Voltage	1500 V	VerticalDeflection
Peak Negative Grid Voltage	250 V	VerticalDeflection
Peak Cathode Current	70 mA	VerticalDeflection
Total Plate Dissipation Both Plates	7.5 W	BothSections
Plate Voltage	250 V	ClassA
Grid Voltage	-8 V	ClassA
Heater Warm-up Time	10.5 s	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Current	9 mA	ClassA


SOURCE DATA APPENDIX

1971 RCA HB3 Binder 5 of 7

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

1971 RCA HB3 BINDER 5 OF 7
Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	—
Heater current	600 mA	—
Heater warm-up time	11 s	ControlledWarmup
Plate voltage	250 V	ClassA;EachSection
Grid voltage	-8 V	ClassA;EachSection
Plate current	9 mA	ClassA;EachSection
Maximum plate voltage	450 V	EachSection
Plate dissipation	5 W	EachSection

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	7700 ohm	EachSection
Transconductance	2600 uS	EachSection
Amplification factor	20	EachSection

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid-to-plate capacitance	3.8 pF	EachSection



TUBE TINKER
ELECTRON TUBE DATABASE

SOURCE DATA APPENDIX

1975 RCA RC30

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

1975 RCA RC30

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Warm-up Time (Average)	11 s	TypicalOperation
Peak value	200 V	TypicalOperation;PublishedValue1
Peak value	200 V	TypicalOperation;PublishedValue2
Average value	100 V	TypicalOperation;PublishedValue1
Average value	100 V	TypicalOperation;PublishedValue2
Plate Voltage	450 V	MaximumRating
Cathode Current	20 mA	MaximumRating
For either plate	5 W	MaximumRating
For both plates with both units operating	7.5 W	MaximumRating
Grid-Circuit Resistance, for fixed-bias operation	1 megohm	MaximumCircuitValue
DC Plate Voltage	450 V	MaximumRating;PublishedValue1
DC Plate Voltage	450 V	MaximumRating;PublishedValue2
Peak Negative-Pulse Grid Voltage	400 V	MaximumRating;PublishedValue1
Peak Negative-Pulse Grid Voltage	600 V	MaximumRating;PublishedValue2
Peak Cathode Current	70 mA	MaximumRating;PublishedValue1
Peak Cathode Current	300 mA	MaximumRating;PublishedValue2
Average Cathode Current	20 mA	MaximumRating;PublishedValue1
Average Cathode Current	20 mA	MaximumRating;PublishedValue2
For either plate	5 W	MaximumRating
For both plates with both units operating	7.5 W	MaximumRating
Grid-Circuit Resistance	2.2 megohm	MaximumCircuitValue

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Plate	4 pF	Capacitance;PublishedValue1
Grid to Plate	3.8 pF	Capacitance;PublishedValue2
Grid to Cathode and Heater	2.2 pF	Capacitance;PublishedValue1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid to Cathode and Heater	2.6 pF	Capacitance;PublishedValue2
Plate to Cathode and Heater	0.7 pF	Capacitance;PublishedValue1
Plate to Cathode and Heater	0.7 pF	Capacitance;PublishedValue2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	90 V	Characteristic;PublishedValue1
Plate Voltage	250 V	Characteristic;PublishedValue2
Grid Voltage	0 V	Characteristic;PublishedValue1
Grid Voltage	-8 V	Characteristic;PublishedValue2
Plate Resistance (Approx.)	6700 ohm	Characteristic;PublishedValue1
Plate Resistance (Approx.)	7700 ohm	Characteristic;PublishedValue2
Transconductance	3000 uS	Characteristic;PublishedValue1
Transconductance	2600 uS	Characteristic;PublishedValue2
Plate Current	10 mA	Characteristic;PublishedValue1
Plate Current	9 mA	Characteristic;PublishedValue2
Plate Current (or grid voltage of –	12.5 V	Characteristic
Grid Voltage (Approx.) for plate current of	10 V	Characteristic

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

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