

ELECTRONIC TUBE REFERENCE

6SF5

Voltage - Triode (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
TRIODE

General-purpose triode for voltage amplification or electronic service as documented by the manufacturer.

GENERAL CHARACTERISTICS

BASE DESIGNATION	6AB	BASE PINS	8
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	66000 Ω
TRANSCONDUCTANCE	0.0015 S
AMPLIFICATION FACTOR	100
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	0.3 W
Published promoted fields populated from printed headings; identical repeated sections compressed.	

The 6SF5 is a Triode intended for high-mu voltage-amplifier service. Published ratings, characteristics and typical operating data from the supplied datasheet were captured.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1940 RCA

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

1940 RCA

Section 1 · Triode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HEATER VOLTAGE (A.C. or D.C.)	6.3 V	HEATER VOLTAGE (A.C. or D.C.) 6.3 Volts
HEATER CURRENT °	300 mA	HEATER CURRENT ° 0.3 Ampere
Grid to Plate	2.6 pF	Grid to Plate 2.6 uuf
Heater Voltage	6.3 V	Heater Voltage 6.3 Volts
Plate voltage 250 msax. Volts	250 V	Plate voltage 250 msax. Volts
Grid voltage	-2 V	Grid voltage -2 Volts
Amplification Factor	100	Amplification Factor 100
Plate Current	0.9 mA	Plate Current 0.9 Milliampere
Heater voltage , ... o c s e o s 0 s	6.3 V	Heater voltage , ... o c s e o s 0 s 6.3 volts
Maximum plate voltage. . . e o o ¢ ¢ s o	30 V	Maximum plate voltage. . . e o o ¢ ¢ s o 30 volte
Maximum heater-cathode voltage ., e s s 00 s«	9 V	Maximum heater-cathode voltage ., e s s 00 s« 9 volts
Heater voltage , . , . e « 6.3	6.3 V	Heater voltage , . , . e « 6.3 6.3 volts
Heater current , . , . o o+ 300	300 mA	Heater current , . , . o o+ 300 300 ma
Plate voltage, . . . , « o 100	250 V	. Plate voltage, . . . , « o 100 250 volts
Grid voltage., . . . ® o 'l	-2 V	Grid voltage., . . . ® o 'l -2 voltfl
Amplification factor . o	100	Amplification factor . o 100 100
Trarsconductance , . , o o 1150	1500	Trarsconductance , . , o o 1150 1500 umhos

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current, . . , . « o Ob	0.9 mA	Plate current, . . , . « o Ob 0.9 ma
Heater voltage . , . o o 0 6.3 6.3 6.3	6.3 V	Heater voltage . , . o o 0 6.3 6.3 6.3 6.3 volte
Plate supply voltage , . , - 100 100 300	300 V	Plate supply voltage , . , - 100 100 300 300 volts
Control grid voltage , . 0 0 0	0 V	Control grid voltage , . 0 0 0 0 volts
Plate load resistor, . . ; 0.25 0.25 0.25	0.25 ohm	Plate load resistor, . . ; 0.25 0.25 0.25 0.25 megohm
Control grid resistor, .. 10 10 10	10 ohm	Control grid resistor, .. 10 10 10 10 megohm.
Grid resistor of following atage 0.5 1.0 0.5 1,	0 ohm	Grid resistor of following atage 0.5 1.0 0.5 1,0 megohm
Signal source impedance, . 0 0 0	0 ohm	Signal source impedance, . 0 0 0 0 ohms
Output voltage (r.a.s.)	7 V	Output voltage (r.a.s.). . 7
8.5 Ll	50 V	8.5 Ll 50 volts
Voltage gain , . . , ... L8 52	66 V	Voltage gain , . . , ... L8 52 66 T

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	66000 ohm	Plate Resistance 66000 Ohms
transconductance	1500 µS	transconductance 1500 Micromhos
Plate resistance , . , . . 85,000	66000 ohm	Plate resistance , . , . . 85,000 66,000 ohms



SOURCE DATA APPENDIX

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

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	300 V	Published handbook rating
Plate voltage	250 V	ClassA OperatingPoint1
Control-grid bias	2 V	ClassA OperatingPoint1
Plate current	0.9 mA	ClassA OperatingPoint1
Plate voltage	100 V	ClassA OperatingPoint2
Control-grid bias	1 V	ClassA OperatingPoint2
Plate current	0.4 mA	ClassA OperatingPoint2

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	66000 ohm	ClassA OperatingPoint1
Transconductance	1500 μ S	ClassA OperatingPoint1
Amplification factor	100	ClassA OperatingPoint1
Plate resistance	85000 ohm	ClassA OperatingPoint2
Transconductance	1150 μ S	ClassA OperatingPoint2
Amplification factor	100	ClassA OperatingPoint2
Heater voltage	6.3 V	Published heater rating
Heater current	300 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	85000 ohm	LowerVoltageOperatingPoint
Transconductance	1150 μ S	LowerVoltageOperatingPoint

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 · Triode

OTHER

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	ClassA

CHARACTERISTIC

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	1500 μ S	ClassA
Plate resistance	66000 ohm	ClassA
Amplification factor	100	ClassA

CAPACITANCE

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