

ELECTRONIC TUBE REFERENCE

6BF6

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

CONSOLIDATED TECHNICAL DATA

3 SECTIONS
CONSTRUCTION
DIODE-DIODE-TRIODE

Receiving tube combining radio signal detection or control-voltage rectification with associated voltage amplification. Its detector function is integral to receiver signal processing and supports classification within the radio detector/converter family.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7BT	BASE PINS	7
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Common cathode	SECTION CONSTRUCTION	Dissimilar

7BT - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – 1G1	A	G1 – Control Grid	CONNECTED
PIN2 – K	A	K – Cathode	CONNECTED
PIN3 – H	–	H – Heater	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – 2P	B	P – Plate (Anode)	CONNECTED
PIN6 – 3P	C	P – Plate (Anode)	CONNECTED
PIN7 – 1P	A	P – Plate (Anode)	CONNECTED

SECTION RATINGS

SECTION1 Triode	
PLATE RESISTANCE	8500 Ω
TRANSCONDUCTANCE	0.0019 S
AMPLIFICATION FACTOR	16
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	2.5 W
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
<i>Published promoted fields populated semantically; identical repeated sections compressed where applicable.</i>	

SECTION2 Diode	
MAXIMUM HEATER-CATHODE VOLTAGE	200 V
<i>Representative row for the two identical diode sections; published diode-current datum is a minimum-current characteristic, not a maximum rating.</i>	

SECTION3 Diode	
<i>No fixed ratings recorded.</i>	
<i>Low-mu voltage-amplifier triode combined with two detector diodes.</i>	

Low-mu voltage-amplifier triode combined with two detector diodes.



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
Plate voltage	250 V	ClassA; OperatingPoint1
Control-grid bias	9 V	ClassA; OperatingPoint1
Plate current	9.5 mA	ClassA; OperatingPoint1
Plate resistance	8500 ohm	ClassA; OperatingPoint1
Transconductance	1900 uS	ClassA; OperatingPoint1
Amplification factor	16	ClassA; OperatingPoint1



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 2 · Diode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance	8500 ohm	Triode
Transconductance	1500 uS	Triode



1966 Tung Sol Electronic Tubes 1 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4
Section 1 · Triode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID TO PLATE: (G TO TP)	1.9 pF	Triode Section GRID TO PLATE: (G TO TP) 1.9 1.9 pf
VOLTAGE OPERATION	0.6 V	Average Characteristics VOLTAGE OPERATION 6.3±0.6 volts
CURRENT OPERATION	20 mA	Average Characteristics CURRENT OPERATION 300±20 MA.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE DISSIPATION	2.5 W	Maximum Ratings PLATE DISSIPATION 2.5 WATTS
PLATE VOLTAGE	250 V	Maximum Ratings PLATE VOLTAGE 250 voLTs
GRID VOLTAGE –	9 V	Maximum Ratings GRID VOLTAGE —9 voLTs
PLATE RESISTANCE	8500 ohm	Maximum Ratings PLATE RESISTANCE 8500 OHMS
PLATE CURRENT	9.5 mA	Maximum Ratings PLATE CURRENT 9.5 MA•
LOAD RESISTANCE	10000 ohm	Maximum Ratings LOAD RESISTANCE 10000 OHMS

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4
Section 2 · Diode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
#	0.06 pF	Diode Section #1 DIODE PLATE TO GRID: (iDP TO G) MAX. 0.07 0.06 pf
#	0.66 pF	Diode Section #1 DIODE PLATE TO HEATER ANO CATHODE 0.66 pf

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DIODE CURRENT EACH PLATE WITH	10 V	Maximum Ratings DIODE CURRENT EACH PLATE WITH 10 VOLTS DC APPLIED (MIN.) 0.8 MA.
DIODE CURRENT EACH PLATE WITH	8 mA	Maximum Ratings DIODE CURRENT EACH PLATE WITH 10 VOLTS DC APPLIED (MIN.) 0.8 MA.

1966 TUNG SOL ELECTRONIC TUBES 1 OF 4

Section 3 · Diode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
#	0.05 pF	Diode Section #2 DIODE PLATE TO GRID: (2DP TO G) MAX. 0.06 0.05 pf
#	0.95 pF	Diode Section #2 DIODE PLATE TO HEATER AND CATHODE 0.95 pf



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

SOURCE PDF

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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Voltage	250 V	ClassA
Grid Voltage	-9 V	ClassA
Plate Current	9.5 mA	ClassA
Load Resistance	10000 ohm	ClassA
Total Harmonic Distortion	6.5 %	ClassA
Power Output	300 mW	ClassA

1968 GENERAL ELECTRIC CO

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
MinimumDiodeCurrentPerPlate	0.6 mA	AppliedDC=10V

TUBE TINKER

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

[Catalog](#)[Tube types](#)[Full books](#)[Blog](#)[Feedback & corrections](#)

© 2026 Tube Tinker