



ELECTRONIC TUBE REFERENCE

6943

Voltage - Pentode Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PENTODE

Rugged subminiature sharp-cutoff RF pentode designed for guided-missile service under high altitude, shock, vibration, and high temperature. It combines compact RF amplification with exceptional environmental durability.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	8
NOMINAL HEATER	6.3 V / 175 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
PLATE RESISTANCE	300000 Ω
TRANSCONDUCTANCE	0.0036 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	150 V
MAXIMUM PLATE DISSIPATION	1 W
MAXIMUM SCREEN DISSIPATION	0.33 W
MAXIMUM CATHODE CURRENT	15 mA
<i>Published source ratings/characteristics promoted where applicable; identical repeated sections compressed.</i>	

Rugged subminiature sharp-cutoff RF pentode for guided-missile service under high altitude, shock, vibration, and high temperature. Electrical ratings, characteristics, operating data, and special environmental information were extracted from the supplied source.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1950 Sylvania

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

1950 SYLVANIA

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	3600 μ S	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	250 V	—
Maximum Screen Voltage	150 V	—
Maximum Plate Dissipation	1 W	—
Maximum Screen Dissipation	0.33 W	—
Maximum Cathode Current	15 mA	—



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 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Nominal
Heater current	175 mA	Nominal
Plate voltage	360 V	Published operating table; OperatingPoint1
Plate voltage	250 V	Published operating table; OperatingPoint1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	100 V	Published operating table; OperatingPoint1
Screen voltage	100 V	Published operating table; OperatingPoint1
Maximum altitude	80000 ft	—
Maximum neutron total dosage	10000000000000000 n/cm2	Radiation
Maximum neutron dose rate	1000000000000 n/cm2/s	Radiation

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate current	8 mA	Published operating table; OperatingPoint1
Plate current	8 mA	Published operating table; OperatingPoint1
Transconductance	3600 uS	Published operating table; OperatingPoint1
Plate resistance	300000 ohm	Published operating table; OperatingPoint1
Plate resistance	300000 ohm	Published operating table; OperatingPoint1



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tung Sol Electronic Tubes 4 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 4 OF 4

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HEATER VOLTAGE	6.3 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
HEATER VOLTAGE VARIATION – published value 1	6.3 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
HEATER VOLTAGE VARIATION – published value 2	10 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
INSTANTANEOUS PLATE VOLTAGE	360 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
PLATE VOLTAGE	250 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
GRID #2 VOLTAGE	150 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
PLATE DISSIPATION	1	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
GRID #2 DISSIPATION	0.33	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
POSITIVE GRID #1 VOLTAGE	0 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
NEGATIVE GRID #1 VOLTAGE	55 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
EXTERNAL GRID #1 CIRCUIT RESISTANCE	7	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
AVERAGE CATHODE CURRENT	15 mA	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
HEATER-CATHODE VOLTAGE	200 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
BULB TEMPERATURE (AT HOTTEST POINT)	250 C	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
OPERATIONAL ALTITUDE	80000	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
HEATER CURRENT	175 mA	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
PLATE VOLTAGE	100 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
GRID #2 VOLTAGE	100 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID #3 VOLTAGE	0	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
CATHODE BIAS RESISTOR	150 ohm	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
PLATE CURRENT	8 mA	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
GRID #2 CURRENT	2.3 mA	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
TRANSCONDUCTANCE	3600 uS	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
PLATE RESISTANCE	300000 ohm	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
GRID #1 VOLTAGE FOR Ib = 10µA	7.5 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
GRID #1 VOLTAGE FOR Ib = 200 µA	5.5 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
VIBRATIONAL ACCELERATION FOR AN EXTENDED PERIOD4	10	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
WHITE NOISE VIBRATION OUTPUT	350 mA	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
LIMITS OF APPLIED VOLTAGE – published value 1	5.5 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
LIMITS OF APPLIED VOLTAGE – published value 2	6.9 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
DC PLATE VOLTAGE	250 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
PEAK -PLATE FORWARD VOLTAGE	360 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
DC GRID 2 VOLTAGE	150 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
GRID 2 DISSIPATION	0.33 W	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
CATHODE CURRENT	15 mA	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
GRID 1 CIRCUIT RESISTANCE	1 Mohm	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
BULB TEMPERATURE	250 C	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
DC PLATE VOLTAGE	100 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
DC GRID 3 VOLTAGE	0 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
DC GRID 2 VOLTAGE	100 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
DC PLATE CURRENT	8 mA	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
DC GRID 2 CURRENT	2.3 mA	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
DC GRID 1 VOLTAGE FOR I = 100 μ ADC MAX.	-7.5 V	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.
Plate resistance	300000 ohm	Promoted section value from the supplied datasheet.
Transconductance	0.0036 A/V	Promoted section value from the supplied datasheet.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
ALTITUDE -ABSOLUTE MAXIMUM	80000	Published datasheet table value; multiple values on a source row represent separate limits or operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	250 V	Promoted section value from the supplied datasheet.
Maximum screen voltage	150 V	Promoted section value from the supplied datasheet.
Maximum plate dissipation	1 W	Promoted section value from the supplied datasheet.
Maximum screen dissipation	0.33 W	Promoted section value from the supplied datasheet.

TUBE TINKER

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