

ELECTRONIC TUBE REFERENCE

6AU6WB

Voltage Pentode - Sharp Cutoff (single) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

High-reliability rugged 6AU6-family RF pentode designed for shock, vibration, and repeated heater cycling.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7BK	BASE PINS	7
NOMINAL HEATER	6.3 V / 300 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7BK - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – G1	A	G1 – Control Grid	CONNECTED
PIN2 – G3	A	G3 – Suppressor Grid	CONNECTED
PIN2 – IS	A	IS – Internal Screen	CONNECTED
PIN3 – H	–	H – Heater	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – P	A	P – Plate (Anode)	CONNECTED
PIN6 – G2	A	G2 – Screen Grid	CONNECTED
PIN7 – K	A	K – Cathode	CONNECTED

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	1000000 Ω
TRANSCONDUCTANCE	0.0052 S
MAXIMUM PLATE VOLTAGE	330 V
MAXIMUM SCREEN VOLTAGE	165 V
MAXIMUM PLATE DISSIPATION	3.3 W
MAXIMUM SCREEN DISSIPATION	0.7 W
MAXIMUM CATHODE CURRENT	20 mA
<i>Published ratings/characteristics promoted from source tables.</i>	

High-reliability 6AU6-family fixed-slope pentode for RF amplification, designed for shock and vibration resistance and repeated heater cycling.



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	—
Heater current	300 mA	—
Heater-cathode voltage	100 V	—

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 1 to plate maximum	0.0035 pF	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1966 Tung Sol Electronic Tubes 3 of 4

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

1966 TUNG SOL ELECTRONIC TUBES 3 OF 4

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate resistance	100000 ohm	PromotedValue
Transconductance	0.0052 A/V	PromotedValue
AVERAGE CHARACTERISTICS – published value 1	6.3 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
AVERAGE CHARACTERISTICS – published value 2	300 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
LIMITS OF APPLIED VOLTAGE- AC OR DC – published value 1	6.3	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
LIMITS OF APPLIED VOLTAGE- AC OR DC – published value 2	0.6	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
HEATER POSITIVE WITH RESPECT TO CATHODE	100 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
HEATER NEGATIVE WITH RESPECT TO CATHODE	100 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
PLATE VOLTAGE -DC	330 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 2 VOLTAGE	2	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
PLATE DISSIPATION	3.1 WATTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 2 DISSIPATION – published value 1	2 WATT	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 2 DISSIPATION – published value 2	0.7 WATT	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 3 VOLTAGE – published value 1	3 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 3 VOLTAGE – published value 2	0 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 1 VOLTAGE	1	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
POSITIVE VALUE	0 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID 1 CURRENT – published value 1	1 mA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 1 CURRENT – published value 2	1 mA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
ENVELOPE TEMPERATURE	165	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 1 CIRCUIT RESISTANCE – published value 1	0.5	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 1 CIRCUIT RESISTANCE – published value 2	15	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
PLATE VOLTAGE	250 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 2 VOLTAGE – published value 1	2 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 2 VOLTAGE – published value 2	150 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 3 VOLTAGE -CONNECTED TO NEGATIVE END OF CATHODE RESISTOR – published value 1	3 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 3 VOLTAGE -CONNECTED TO NEGATIVE END OF CATHODE RESISTOR – published value 2	0 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
CATHODE RESISTOR	68 OHMS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
PLATE CURRENT	10.6 mA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 2 CURRENT – published value 1	2 mA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 2 CURRENT – published value 2	4.3 mA	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
TRANSCONDUCTANCE – published value 1	5.2	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
TRANSCONDUCTANCE – published value 2	1	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
PLATE RESISTANCE	1	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	300 V	PromotedValue
Maximum screen voltage	150 V	PromotedValue
Maximum plate dissipation	3.5 W	PromotedValue
Maximum screen dissipation	0.6 W	PromotedValue
Maximum cathode current	20 mA	PromotedValue
GRID 1 VOLTAGE FOR $I_y=35$ E[A MAX. – published value 1	35 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.
GRID 1 VOLTAGE FOR $I_y=35$ E[A MAX. – published value 2	-9 VOLTS	OCR table transcription; verify against supplied datasheet layout where multiple columns represent operating conditions.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1968 Mazda Belvu

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

1968 MAZDA BELVU

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage VÊ	6.3 V	—
Intensité filament. vesssc 00 f	300 mA	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
onsous oucaconses cossercoum en coss ns VÊ	6.9 V	—
cucs ersameenente es secèe se va	330 V	—
Tension de grille n°3 uueressarenceeninncceseannencreseense« ... VE;	0 V	—
Tension de grill® n° 2 ...c serscccncensencanverense soeuseuree comsen vacv s Vgz	165 V	—
Tension négative de grille n°Î vssrerererenrnteress casssaronsen monoer -“Vg;	50 V	—
Plate dissipation Pa	3.1 W	—
cuc en se Pg2	0.7 W	—
c00e Ig,	1 mA	—
Tension entre filament et CathodE ... rveeeennnnnnnnne Vfk	100 V	—
Résistance du circuit de grille nel Rg:	0.5 MΩ	—
Altitude maximale sans pressuriSation S	18 km	—
Tension d'ANOËE _..... esssoserecessarenseseramesereeces 100 250	250 V	—
Tension de grill® n°2 s cousonsanens vans soanse c00000 100 125	150 V	—
sorses sonsen vemesssemessause s00000 5,0 7,6	10.6 mA	—
Courant de grille n°2 esmensens sorasacernse vovvce 2,1 3,0	4.3 mA	—
PEnt@E.....sersres sorrencrenercane 3,9 4,5	5.2 mA/V	—
Vs =	2 Veff	—
Rg:	100 kΩ	—
Ra 100 240	510 kΩ	—
Ra 100 240	510 kΩ	—
Rk 1,7	1.8 kΩ	—
R'g 240	510 kΩ	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
vs 25	31 v _{eff}	—
R _{g1}	100 kΩ	—
R _a 100 240	510 kΩ	—
R _{g2} 200 600 700 1 100	1300 kΩ	—
R' & 100 240 510 510	1000 kΩ	—
vs 47 44 53 38	44 V _{eff}	—
scssveresace en semenscosesc cn cerencieccess V@	250 V	—
Résistance d@ CALROQE cros sraverseressrveeraneraevscecse smeesererersrereeurs RE	330 Ω	—

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitance grille n° 1/ An0d@ srmsesss CB1/ &	3.5 pF	InterelectrodeCapacitance
Capacitance d'entrée s ... Ce	6 pF	InterelectrodeCapacitance
Capacitance de S0rtiE ssesesesssansenensnsennsce CS	4.9 pF	InterelectrodeCapacitance