



ELECTRONIC TUBE REFERENCE

EL83

Power - Pentode Single (NOT beam) (under 10W) electronic tube

CONSOLIDATED TECHNICAL
DATA

1 SECTION
CONSTRUCTION
PENTODE

Power pentode designed for video-frequency amplification. Its output capability and wideband response suit television and professional video stages requiring substantially more load drive than ordinary signal pentodes.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	6.3 V / 710 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Pentode	
PLATE RESISTANCE	100000 Ω
TRANSCONDUCTANCE	0.0105 S
AMPLIFICATION FACTOR	24
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	9 W
MAXIMUM SCREEN DISSIPATION	2 W
MAXIMUM CATHODE CURRENT	70 mA
<i>Promoted ratings and characteristics are taken from the printed target-tube entry in the approved PDF.</i>	

Power pentode for video-frequency amplification. Indirectly heated Mazda/Belvu receiving tube;

descriptive text translated to English from the French source.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1953 La Radiotechnique

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

1953 LA RADIOTECHNIQUE

Section 1 · Pentode

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published nominal value
Heater current	710 mA	Published nominal value
Transconductance	10500 μ S	Published typical/nominal value

CAPACITANCE

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Input capacitance	10.8 pF	Published
Output capacitance	6.56 pF	Published



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

195X Tesla

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

195X TESLA

Section 1 · Pentode

CHARACTERISTICS

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published nominal value
Heater current	300 mA	Published nominal value



1963 Philips Electron Tubes Handbook V1a

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

1963 PHILIPS ELECTRON TUBES HANDBOOK V1A

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published heater rating
Heater current	700 mA	Published heater rating
Transconductance	10000 μ S	CharacteristicPoint
Plate resistance	130000 ohm	CharacteristicPoint

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate voltage	250 V	CharacteristicPoint
Screen voltage	250 V	CharacteristicPoint
Grid bias	-5.5 V	CharacteristicPoint
Plate current	36 mA	CharacteristicPoint
Screen current	5 mA	CharacteristicPoint
Maximum plate voltage	300 V	Published limit
Maximum plate dissipation	9 W	Published limit
Maximum screen voltage	300 V	Published limit
Maximum screen dissipation	2 W	Published limit



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

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
st emeenaccaceunse Vf	6.3 V	—
Capacité d'entrée eeennmennncennnnennnn Ce	10.8 pF	—
Capacité de S0rtIE eeneiesmenemenennnnçannnene Cs	6.6 pF	—
Capacité grille n°1/ grille n°2..... rsrreceses Ce,/ 8	3.2 pF	—
Tension d'AN0dE rereircenmersesssencrersercrssenmencreneceanrenene Va	250 V	—
Tension de grille n° 3 eseecserameenmeensenennnentenseüûnÊnnnnn	0 V	—
Tension de grille n° 2'	250 V	—
Tension de grille n° 1 ecessreneeeconsereresranresmeaneens Ve,	-55 V	—
Courant d'AN0dE cereresseocermentenmncesens entrrcreremerenenaenee Ia	36 mA	—
Courant de grille n° 2	5 mA	—
sperroserc en e nc nc enresacEnAncc e cs cVreave	10 mA	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Courant filament ... If	710 mA	—
Capacité grille n°1/anode..... Cg,/a	0.1 pF	—
Capacité grille n°1/filament C@,/f	0.15 pF	—
Tension d'anode à courant nul mccrcecccrrecensecencesecess Vabl	550 V	—
Tension d'Anod@E eersrrreecerensreneererrentesessscessse Va	300 V	—
Tension de grille n° 2 à courant nul useeceseerenene Ve,bl	550 V	—
Tension de grille n° Z uesererersererercensarnsencenencanensences Ve,	300 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
grille n° 1 égale à + 0,3 LÅ cceicorcuseenececessrsrencenenenes -Ve,	1.3 V	—
Courant de cathode Ik	70 mA	—
Dissipation d'anode Pa	9 W	—
Dissipation de grille n° 2 enrerensecsscannnenerensencececronee Pg,	2 W	—
Tension entre filament et cathod@ seesese Vfk	100 V	—



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1981 Russian Tubes Katsnelson and Larionov

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

1981 RUSSIAN TUBES KATSNELSON AND LARIONOV

Section 1 · Pentode

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	6.3 V	Published nominal/basic-parameter heater condition.
Heater current	710 mA	Published heater current.
Plate current	36 mA	Published basic-parameter operating point.
Screen current	5 mA	Published basic-parameter operating point.
Transconductance	10500 µS	Published basic-parameter value; normalized to µS.
Plate resistance	100000 Ω	Published internal/plate resistance.
Amplification factor	24	Published amplification factor.
Input capacitance	10.8 pF	Published in the filename-designated tube entry.
Output capacitance	6.6 pF	Published in the filename-designated tube entry.
Grid-to-plate capacitance	0.1 pF	Published in the filename-designated tube entry.

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate voltage	300 V	Published limiting operating value.
Maximum screen voltage	300 V	Published limiting operating value.
Maximum cathode current	70 mA	Published limiting cathode-current value.
Maximum plate dissipation	9 W	Published limiting plate-dissipation value.
Maximum screen dissipation	2 W	Published limiting screen-dissipation value.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1999 Philips E-Z

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

1999 PHILIPS E-Z

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Typical plate voltage	250 V	—
Typical screen voltage	250 V	—