



ELECTRONIC TUBE REFERENCE

PL504

Power - TV Horizontal Output (sweep) electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

BEAMPOWER

Television line-output beam-power tube designed for horizontal-deflection and pulse-power service.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	9
NOMINAL HEATER	27 V / 300 mA	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION 1 Beam Power	
PLATE RESISTANCE	15000 Ω
TRANSCONDUCTANCE	0.015 S
MAXIMUM PLATE VOLTAGE	250 V
MAXIMUM SCREEN VOLTAGE	250 V
MAXIMUM PLATE DISSIPATION	16 W
MAXIMUM SCREEN DISSIPATION	5 W
MAXIMUM CATHODE CURRENT	250 mA
<i>Published ratings and characteristics promoted where clearly stated; identical repeated sections compressed when applicable.</i>	

Television line-output beam power tube for horizontal-deflection and pulse-power service.



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 · Beam Power

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
HeaterVoltageNominal	27 V	Nominal
HeaterCurrentNominal	300 mA	Nominal
Maximum Plate Voltage	700 V	—
Maximum Screen Voltage	250 V	—
Maximum Plate Dissipation	16 W	—
Maximum Screen Dissipation	5 W	—
Maximum Cathode Current	250 mA	—
PeakPlateVoltagePulseService	7000 V	Television line-output pulse service

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Transconductance	15000 μ S	Typical
Plate Resistance	15000 ohm	Typical



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1972 Philips Receiving Tubes

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

1972 PHILIPS RECEIVING TUBES

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	27 V	Published nominal value
Heater current	300 mA	Published nominal value

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate dissipation	16 W	Published maximum rating
Maximum peak anode voltage	7 kV	Pulse duration <=22% cycle, max 18 us



SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

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1973 Mazda Valves Binder 2

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

1973 MAZDA VALVES BINDER 2

Section 1 · Beam Power

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	27 V	Published nominal value
Heater current	300 mA	Published nominal value

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum plate dissipation	12 W	Published maximum rating
Maximum positive peak anode voltage	7 kV	Pulse duration <=22% cycle, max 22 us



SOURCE DATA APPENDIX

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 · Beam Power

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater voltage	27 V	—
Heater current	300 mA	—
Heater current If 300 mA	300 a	Heater current If 300 mA
Heater voltage Vi 27V	27 a	Heater voltage Vi 27V
Anode to grid No. 1 Cagl 1.75 pF	1.75 A	Anode to grid No. 1 Cagl 1.75 pF
Anode voltage Va 50 7000 VvV	7000 A	Anode voltage Va 50 7000 VvV
Grid No. 2 voltage Vg2 200 200 V	2 v	Grid No. 2 voltage Vg2 200 200 V
Grid No.1 voltage Vg1 -10 -120 vV	1 v	Grid No.1 voltage Vg1 -10 -120 vV
Anode current Ia 420 0.05 mA	50 mA	Anode current Ia 420 0.05 mA
Grid No.2 current Igz 37 mA	37 mA	Grid No.2 current Igz 37 mA
provided the specified values of V, are increased by 10% of the anode supply volt	10 v	provided the specified values of V, are increased by 10% of the anode supply volt-
ply voltage values 10% below nominal	10 v	ply voltage values 10% below nominal.
Supply voltage Vp 190 230V	230 S	Supply voltage Vp 190 230V
Grid No.2 series resistor Rg2 2.2 2.2 k2	2 s	Grid No.2 series resistor Rg2 2.2 2.2 k2
Grid No. 1 voltage Vgl +1 +1 Vv	1 v	Grid No. 1 voltage Vgl +1 +1 Vv
At Zg)	220 A	At Zg) = 200 kQ (f = 50 Hz), Vφ = 220 VRMs and without wiring and socket capaci-
tances, the equivalent grid hum voltage is < 5 mV	5 a	tances, the equivalent grid hum voltage is < 5 mV.
Anode dissipation see page 4	4 A	Anode dissipation see page 4

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
2 dissipation see page 4 2)	2 s	2 dissipation see page 4 2)
1. To allow for tube spread, deterioration during life and a mains voltage 10 G be	1 a	1. To allow for tube spread, deterioration during life and a mains voltage 10 G be-
2. To prevent an excessive value of Wy during the heating-up period, the minimum	2 v	2. To prevent an excessive value of Wy during the heating-up period, the minimum

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode peak voltage A" max. 7 kv	7 A	Anode peak voltage A" max. 7 kv
Cathode current I max, 250 mA	250 a	Cathode current I max, 250 mA
Arnode dissipation W, max. 16 W	16 A	Arnode dissipation W, max. 16 W
Grid No. 1 to heater Cglf max. 0,2 pF	1 a	Grid No. 1 to heater Cglf max. 0,2 pF
Anode peak current Iap" 230 320 mA)	320 A	Anode peak current Iap" 230 320 mA)
Anode voltage max. 550	550 A	Anode voltage max. 550
Anode voltage max., 250	250 A	Anode voltage max., 250
Anode voltage, peak max. 7000	7000 A	Anode voltage, peak max. 7000
Grid No., 2 voltage max. 550	2 v	Grid No., 2 voltage max. 550
Grid No. 2 voltage max. 250	2 v	Grid No. 2 voltage max. 250
Cathode current max. 250 mA	250 a	Cathode current max. 250 mA
Cathode to heater voltage max. 250 v	250 a	Cathode to heater voltage max. 250 v
Bulb temperature bulb max. 280 o°C 6)	6 a	Bulb temperature bulb max. 280 o°C 6)