

## SHUNT STABILIZER TRIODE

Shunt stabilizer triode intended for use in colour TV receivers.

**HEATING:** Indirect by A.C. or D.C.; series supply

Heater current  
Heater voltage

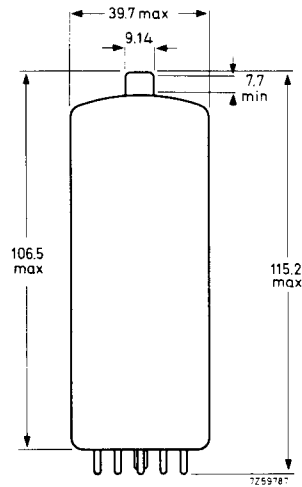
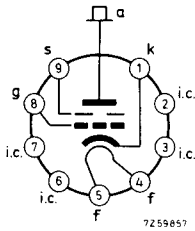
$I_f$	300	mA
$V_f$	7.3	V

### DIMENSIONS AND CONNECTIONS

Dimensions in mm.

Base: Magnoval

Top cap: Type 2



**Mounting:** Additional supporting of the tube at the top is required. To prevent corona effects any metal screening applied around the tube should be at least 5 cm from the nearest point of the bulb. Adequate ventilation should be provided for.

### TYPICAL CHARACTERISTICS

Anode voltage	$V_a$	25	kV
Screen voltage	$V_s$	0	V
Grid voltage change for an anode current change from 0.1 mA to 1.5 mA	$\Delta V_g$	max. 10	V
Grid voltage at $I_a = 1.5$ mA	$V_g$	-9 to -28	V
at $I_a = 0.1$ mA	$V_g$	max. -38	V

Data based on pre-production tubes

**LIMITING VALUES** (Design centre rating system unless otherwise specified)

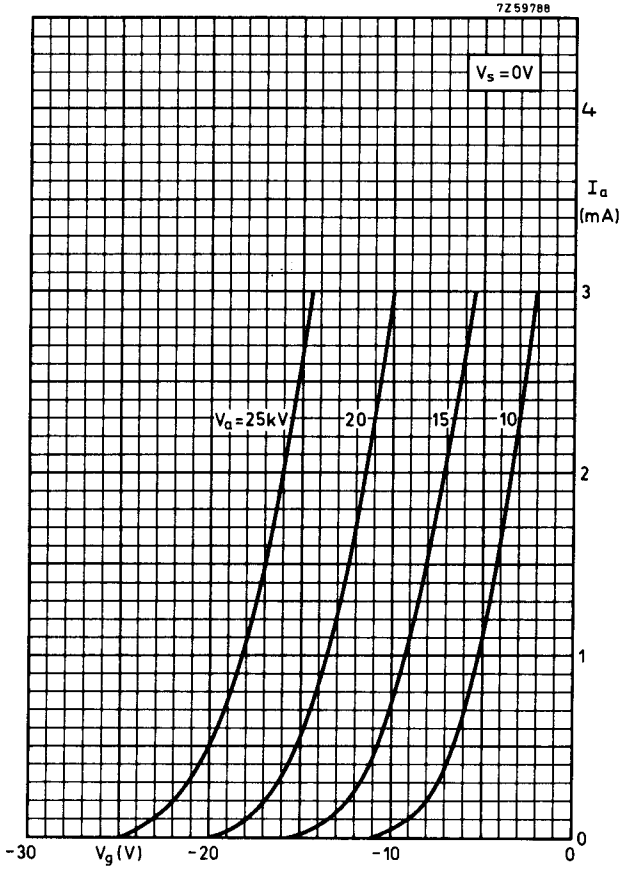
Anode voltage	$V_a$	max.	25	kV
Anode voltage (absolute max.)	$V_a$	max.	27.5	kV <sup>1)</sup>
Anode current	$I_a$	max.	1.6	mA
Anode dissipation	$W_a$	max.	30	W
Anode dissipation (absolute max.)	$W_a$	max.	40	W <sup>2)</sup>
Negative grid voltage	$-V_g$	max.	150	V <sup>3)</sup>
Grid resistor	$R_g$	max.	5	M $\Omega$
Cathode to heater voltage				
cathode positive	$V_{kf}$	max.	400 V <sub>DC</sub> + 250 V <sub>AC</sub>	
cathode negative	$-V_{kf}$	max.	250	V
Screen voltage	$V_s$	max.	0	V
	$-V_s$	max.	50	V <sup>4)</sup>
Anode seal temperature (absolute max.)	$t_s$	max.	200	°C

**X-RAYS**

When operating this tube will produce X-radiation, and a suitable screen may be required.

Because of the difference in X-ray characteristics the PD510 should never be replaced by a PD500 in equipment designed for the PD510.

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- 1) If due to a circuit failure the anode current becomes 0 mA the anode voltage should never exceed 45 kV (abs. max.)
  - 2) Permissible only during short periods; in total up to a maximum of 10% of the operation time of the tube.
  - 3) During equipment warm-up and for brief interval during receiver adjustment this voltage may rise to 440 V max.
  - 4) The screen connected to pin 9 is provided to shield grid and cathode from the high anode voltage.  
It is recommended to connect the screen directly to earth, with a minimum lead inductance.



# PHILIPS

Data handbook



Electronic  
components  
and materials

**PD510**

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