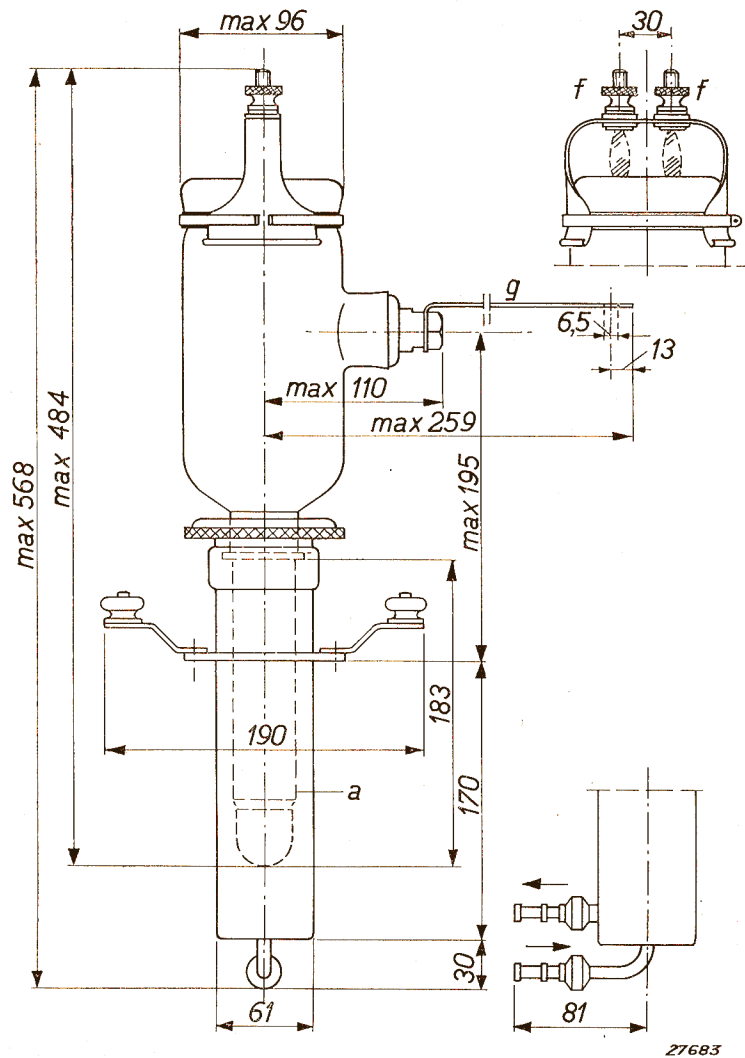


PHILIPS



TRANSMITTING VALVE

TA $\frac{3}{1000}$

PHILIPS-EMISSION

Description

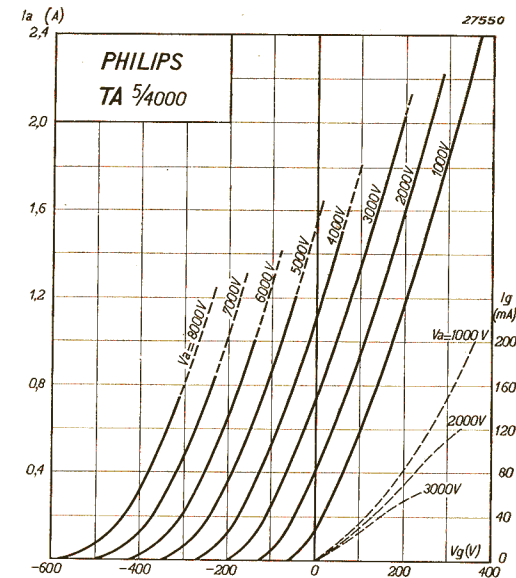
An important feature of this water-cooled transmitting triode is the possibility of using it on wavelengths down to 15 metres. The TA 5/4000 has a tungsten filament and has been specially designed for H.F. amplification in powerful transmitters. The comparatively high value of the output, viz. 4 kilowatts, can be reached at a considerably lower anode voltage than with other valves having a similar output. In the table below the attainable output is indicated for various values of the efficiency, at an anode voltage of 5000 volts, and the maximum anode current of 1250 milliamps (for H.F. class C telegraphy only).

Efficiency	Input	Output	Anode dissipation
40 %	6250 watts	2500 watts	3750 watts
50 %	6250 watts	3125 watts	3125 watts
60 %	6250 watts	3750 watts	2500 watts
65 %	6250 watts	4000 watts	2250 watts

For use as an H.F. class B amplifier the table below should be consulted; it is to be noted that for wavelengths below 150 metres the efficiency will be somewhat lower.

Anode voltage	Anode current	Depth of modulation	Energy of carr. wave	Peak power
5000 V	0.7 A	100 %	1.1 kW	4.5 kW
5000 V	0.75 A	80 %	1.3 kW	4.5 kW
5000 V	0.85 A	60 %	1.7 kW	4.5 kW

With H.F. class C anode modulation (Heising system) the anode voltage should not exceed 4000 volts.



Technical Data

Filament voltage	$V_f = 22.0 \text{ V}$
Filament current	$I_f = \text{appr. } 41 \text{ A}$
Total emission	$I_s = \text{appr. } 6 \text{ A}$
Anode voltage	$V_a = \text{max. } 5000 \text{ V}$
Max. permissible anode dissipation	$W_a = 5 \text{ kW}$
Anode dissipation during test	$W_{at} = 6 \text{ kW}$
Amplification factor	$\mu = \text{appr. } 16$
Mutual conductance at $I_a = 1 \text{ A}$	$S_{norm} = \text{appr. } 6.0 \text{ mA/V}$
Max. mutual conductance	$S_{max} = \text{appr. } 8.0 \text{ mA/V}$
Internal resistance at $I_a = 1 \text{ A}$	$R_i = \text{appr. } 2700 \text{ ohms}$