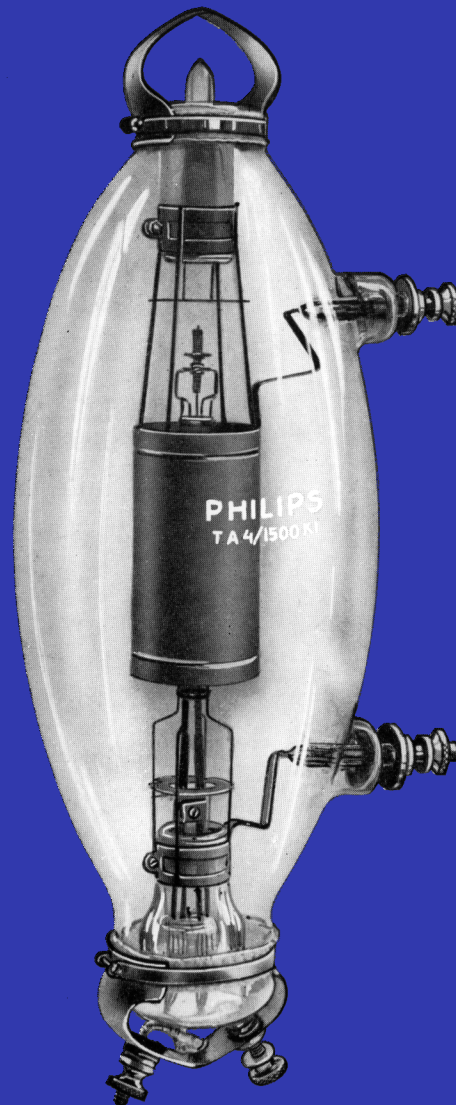


TRANSMITTING VALVE

TA

4/1500K

This valve has the same characteristics as the Philips transmitting valve TA 4/1500, but its special construction makes it very suitable for working on wavelengths down to 5 metres. If the valve is used as an H.F. class C amplifier in a telegraphy transmitter the output will be 1,000 watts*) and the efficiency 77%, the anode voltage being



4,000 volts; at an anode voltage of 3,000 volts these values will be 700 watts*) and 72% respectively.

In a telephony transmitter a TA 4/1500 K connected as an H.F. class B amplifier will give an output of 250 watts*) in the carrier at an efficiency of 40%, if an anode voltage of 4,000 volts is applied. At an anode voltage of 3,000 volts the output in the carrier will be 200 watts*).

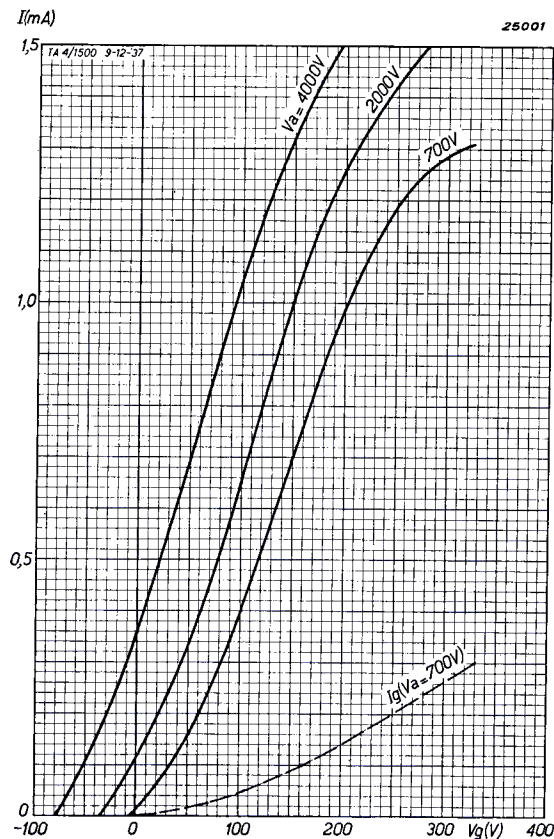
When the TA 4/1500 K is used as an H.F. class C amplifier with anode modulation the output in the carrier will amount to 525 watts*) and the efficiency to 79.5% at an anode voltage of 4,000 volts; these values will be 375 watts*) and 76% respectively at an anode voltage of 3,000 volts.

For excitation of the TA 4/1500 K the TC 1/75 will be found very suitable. One or two valves TA 4/1500 K can, in turn, be used for the excitation of a water-cooled valve TA 12/20.

*) Circuit losses must be deducted.

TRANSMITTING VALVE

TA⁴/1500 K



Filament voltage	V_f	= 16.0 V
Filament current	I_f	= appr. 16 A
Total emission	I_s	= appr. 1.5 A
Anode voltage	V_a	= max. 4,000 V
Anode dissipation	W_a	= 750 W
Anode dissipation during test	W_{at}	= 1,000 W
Amplification factor	μ	= appr. 40
Mutual conductance at $V_a = 4,000$ V,		
$I_a = 200$ mA	S	= appr. 4.0 mA/V
Max. mutual conductance	S_{max}	= appr. 6.5 mA/V
Internal resistance at $V_a = 4,000$ V,		
$I_a = 200$ mA	R_i	= appr. 10,000 Ω
Anode/cathode capacity	C_{af}	= appr. 1.5 pF
Control-grid/cathode capacity	C_{gf}	= appr. 11 pF
Anode/control-grid capacity	C_{ag}	= appr. 7.5 pF
Max. diameter of bulb	d	= 182 mm
Max. diameter	d'	= appr. 231 mm
Total length	l	= appr. 535 mm

TUBE EMETTEUR PHILIPS



TA ⁴/1500 K

Ce tube émetteur a été construit spécialement pour les postes émetteurs à ondes courtes descendant jusqu' à 15 mètres de longueur d'onde. Pour cette dernière longueur d'onde la tension anodique maximum est de 3000 volts; pour 45 mètres de 4000 volts. Pour les ondes entre 15 et 45 mètres la tension anodique peut être augmentée proportionnellement à la longueur d'onde. A 15 mètres la puissance maximum absorbée par la lampe ne doit pas dépasser 1000 watts.

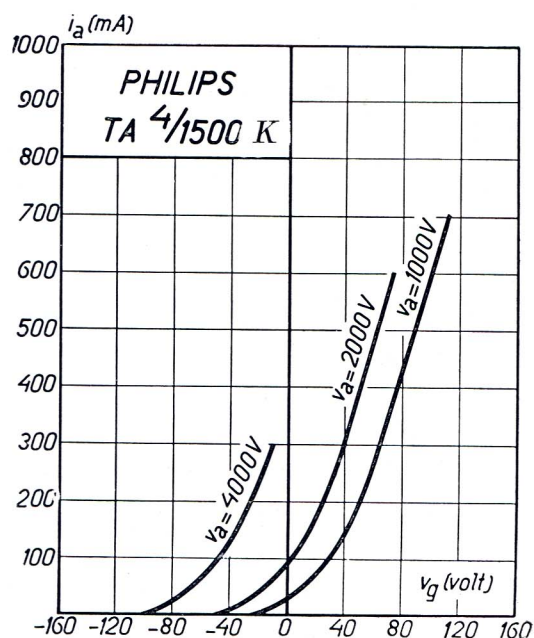
Echelle 1 : 4

Le tableau suivant a été composé pour une longueur d'onde de 15 mètres, la tension anodique étant de 3000 volts et la puissance absorbée maximum de 1000 watts.

Rendement	40	50	60	75	%
Puissance absorbée	1000	1000	1000	1000	watts
Puissance utile	400	500	600	750	watts
Dissipation anodique	600	500	400	250	watts

TUBE EMETTEUR PHILIPS

TA ⁴ / 1500 K



Tension de chauffage	$v_f = \text{env. } 16,0 \text{ V}$
Courant de chauffage	$i_f = \text{env. } 16,0 \text{ A}$
Courant de saturation	$i_s = 1500 \text{ mA}$
Tension anodique	$v_a = 3000\text{-}4000 \text{ V}$
Dissipation anodique	$w_a = 750 \text{ W}$
Dissipation anodique d'essai	$w_{at} = 1000 \text{ W}$
Coefficient d'amplification	$K = \text{env. } 40$
Inclinaison maximum	$S = \text{env. } 8 \text{ mA/V}$
Résistance interne	$R_i = \text{env. } 5000 \Omega$
Tension de saturation dans le plan de la grille	$v_s = \text{env. } 300 \text{ V}$
Diamètre maximum	$d = 140 \text{ mm}$
Longueur totale	$l = 450 \text{ mm}$