

High slope, low noise DOUBLE TRIODE for use as cascode amplifier in tuners for television receivers

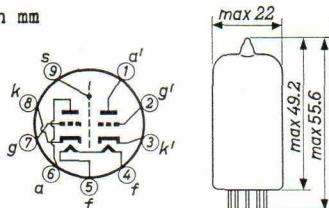
HEATING

Indirect by A.C. or D.C.; series supply

Heater current $I_f = 300 \text{ mA}$

Heater voltage $V_f = 7.6 \text{ V}$

Dimensions in mm



Base: NOVAL

REMARK

The system a, g, k should be used as the grounded cathode input system of the cascode amplifier and the system a', g', k' as the grounded grid output section

CAPACITANCES

Triode system a, g, k		1)	2)
Grid to cathode, heater and screen	$C_{g-(k+f+s)}$	= 3.3	3.3 pF
Anode to cathode, heater and screen	$C_{a-(k+f+s)}$	= 1.8	2.5 pF
Anode to grid	C_{ag}	= 1.4	1.4 pF
Grid to heater	C_{gf}	= 0.13	0.13 pF
Triode system a', g', k'		1)	2)
Cathode to grid, heater and screen	$C_{k'-(g'+f+s)}$	= 6	6 pF
Anode to grid, heater and screen	$C_{a'-(g'+f+s)}$	= 2.8	3.7 pF
Anode to cathode	$C_{a'k'}$	= 0.18	0.16 pF
Anode to grid	$C_{a'g'}$	= 1.4	1.4 pF
Cathode to heater	$C_{k'f}$	= 2.7	2.7 pF

1) Without external shield

2) With external shield

CAPACITANCES (continued)Between the two triode systems

1) 2)

Anode to anode	$C_{aa}' < 0.045$	0.015 pF
Grid (g) to anode (a')	$C_{ga}' < 0.005$	0.005 pF

TYPICAL CHARACTERISTICS (each triode)

Anode voltage	$V_a =$	90 V
Grid voltage	$V_g =$	-1.3 V
Anode current	$I_a =$	15 mA
Mutual conductance	$S =$	12.5 mA/V
Amplification factor	$\mu =$	33
Equivalent noise resistance	$R_{eq} =$	300 Ω

LIMITING VALUES (Design centre limits; each triode)

Anode voltage in cold condition	$V_{ao} =$	max. 550 V
Anode voltage	$V_a =$	max. 130 V
Anode dissipation	$W_a =$	max. 1.8 W
Negative grid voltage	$-V_g =$	max. 50 V
Grid circuit resistance	$R_g =$	max. 1 M Ω
Cathode current	$I_k =$	max. 25 mA
Circuit resistance between cathode and heater	$R_{kf} =$	max. 20 k Ω
Voltage between cathode and heater triode system a, g, k	$V_{kf} =$	max. 80 V(RMS)
triode system a', g', k' (cathode positive)	$V_{k'f} =$	max. 180 V ³⁾

REMARK

In order not to exceed the maximum permissible anode voltage when the cascode amplifier is controlled, it is necessary to use a voltage divider for the grid of the grounded grid section (system a', g', k'). With grid current biasing for the grounded cathode section (system a, g, k) the anode voltage across this section should not be more than 75 V in the not controlled condition

1) Without external shield

2) With external shield

3) D.C. component max. 130 V

Remark

In order not to exceed the maximum permissible anode voltage when the cascode amplifier is controlled, it is necessary to use a voltage divider for the grid of the grounded grid section. With grid current biasing for the grounded cathode section the anode voltage across this section should not be more than 75 V in the not controlled condition

Observation

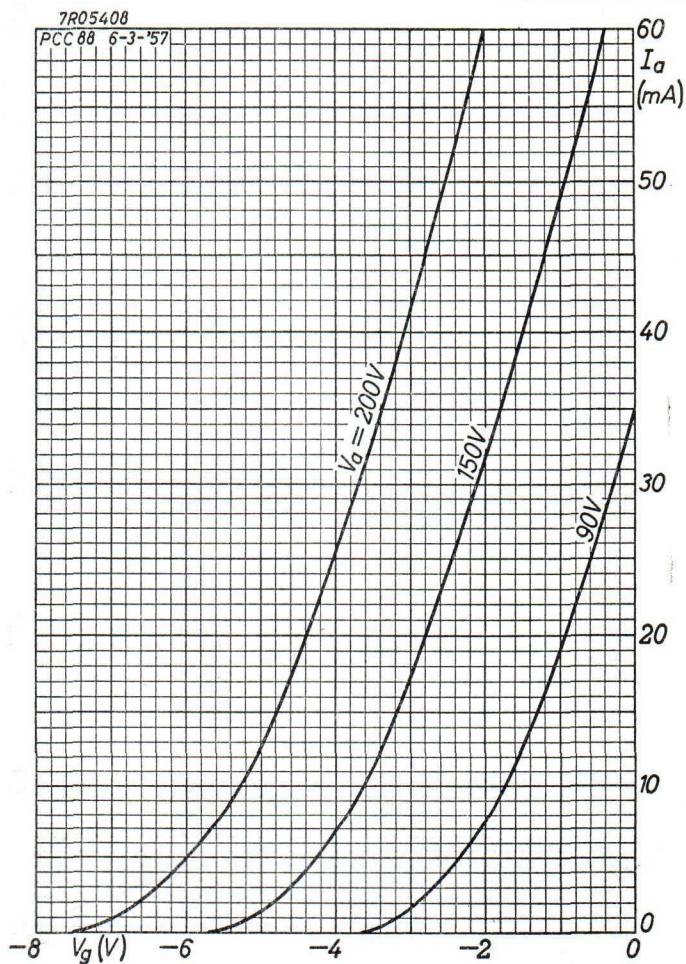
Afin de ne pas dépasser la valeur maximum admissible de la tension anodique quand l'amplificateur en montage cascode est réglée, il est nécessaire d'utiliser un potentiomètre pour la grille de la section "grille à la masse". Lorsque la polarisation de grille pour la section "cathode à la masse" est obtenue par moyen d'une résistance dans la connection de grille, la tension anodique sur cette section ne doit pas dépasser 75 V à la condition non-réglée

Bemerkung

Um bei geregelter Kaskodenverstärker die maximal zulässige Anodenspannung nicht zu überschreiten braucht man einen Spannungsteiler für das Gitter des Gittersbasisteiles. Wenn für den Katodenbasisteil die Gittervorspannung mittels eines Widerstandes in dem Gitterzuleitung erhalten wird, so darf die Anodenspannung über diesem Teil bei nicht geregelter Zustand den Wert von 75 V nicht überschreiten

PHILIPS

PCC 88



10.10.1957

A

PCC 88

PHILIPS

