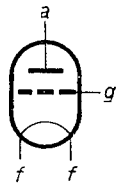
KC 1 Triode



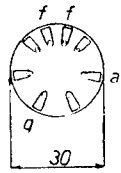


Fig. 2
Arrangement of electrodes and base connections.

This triode is useful as an A.F. amplifier valve, anode-bend detector, or oscillator in battery receivers. Its use as a grid detector is not recommended, since the maximum alternating output voltage is then usually insufficient for the output stage. In the case of A.F. amplification, care must be taken that the A.F. gain following the grid of this valve is not made too great, as this is liable to set up microphony.

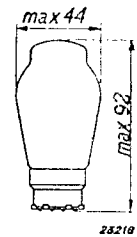


Fig. 1
Dimensions in mm.

FILAMENT RATINGS

Heating: direct by battery; parallel supply.

Filament voltage	$V_f = 2.0$ V
Filament current	$I_f = 0.065$ A

CAPACITANCES

$C_{ag} = 3.5\ \mu\mu F$
$C_a = 2.0\ \mu\mu F$
$C_g = 3.0\ \mu\mu F$

STATIC DATA

Anode voltage		
V_a	= 90 V	135 V
Anode current		
I_a	= 0.3 mA	1.2 mA
Grid bias		
V_g	= —1.5 V	—1.5 V
Internal resistance		
R_i	= 60,000 ohms	40,000 ohms
Amplification factor		
μ	= 25	25

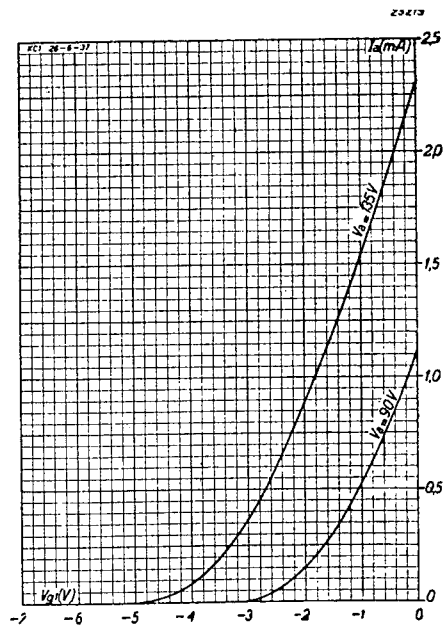


Fig. 3
Anode current as a function of the grid bias, with Va = 90 V and 135 V.

MAXIMUM RATINGS

V_a	= max. 150 V
W_a	= max. 0.5 W
I_k	= max. 4 mA
V_g (I_g = + 0.3 μA)	= max. —0.2 V
R_{gf}	= max. 3 M ohms

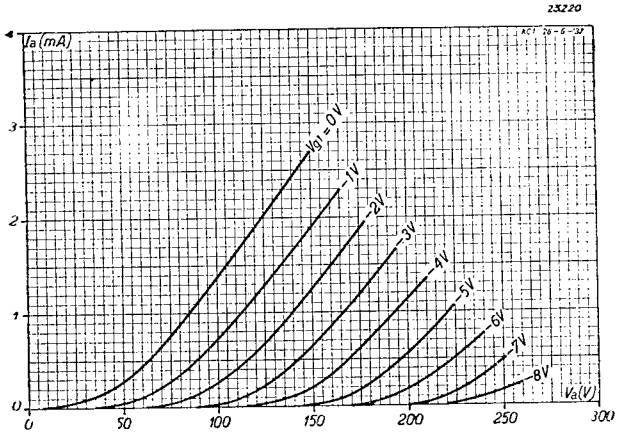


Fig. 4
Anode current as a function of the anode voltage with grid bias as parameter.

TABLE

KC 1 used as a resistance-coupled A.F. amplifier

Battery voltage	Coupling resistor	Anode current	Grid bias	For an alternating output voltage of 7 Veff		For an alternating output voltage of 10 Veff	
				Gain	Distortion	Gain	Distortion
Vb (V)	Ra (megohms)	Ia (mA)	Vg (V)	$\frac{Vo}{Vi}$	$d$tot (%)	$\frac{Vo}{Vi}$	$d$tot %
90	0.32	0.08	—1.5	14.6	2.7	—	—
90	0.32	0.13	—0.75	16.7	1.6	—	—
135	0.32	0.18	—1.5	—	—	19	1.0
135	0.32	0.23	—0.75	—	—	20	0.8
90	0.2	0.11	—1.5	14.3	4	—	—
90	0.2	0.17	—0.75	16.2	1.5	—	—
135	0.2	0.26	—1.5	—	—	18	1.0
135	0.2	0.32	—0.75	—	—	18.5	0.8