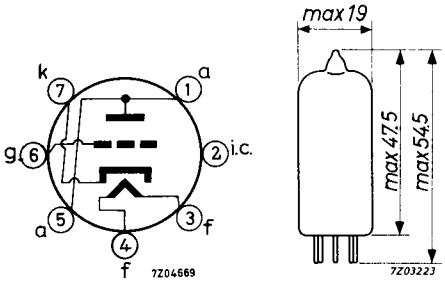
S.Q. TUBE

Triode designed for use as R.F. power amplifier or oscillator for frequencies up to 150 MHz.

QUICK REFERENCE DATA	
Life test	500 hours
Base	Miniature
Heating	Indirect A.C. or D.C.
Heater voltage	V_f 6.3 V
Heater current	I_f 150 mA
Output power f = 50 MHz	W_o 3.6 W
f = 100 MHz	W_o 3.3 W

DIMENSIONS AND CONNECTIONS Dimensions in mm

Base: Miniature



CHARACTERISTICS

Heater voltage	V_f		6.3	V
Heater current	I_f		150	mA
Anode voltage	V_a	100	250	V
Grid voltage	$-V_g$	0	8.5	V
Anode current	I_a	11.8	10.5	mA
Mutual conductance	S	3.25	2.2	mA/V
Amplification factor	μ	21.5	17	
Internal resistance	R_i	6.6	7.7	kΩ

CAPACITANCES

		Without shield	With shield	
Anode to grid	C_{ag}	1.4	1.3	pF
Grid to cathode and heater	$C_{a/kf}$	1.5	1.7	pF
Anode to cathode and heater	$C_{g/kf}$	1.2	2.6	pF

LIMITING VALUES (Design centre rating system)

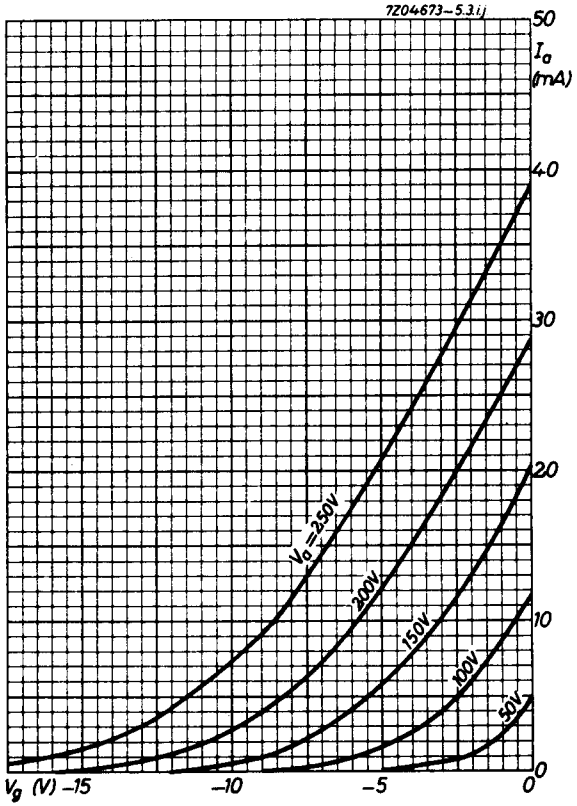
Anode voltage	V_{a_o}	max.	550	V
	V_a	max.	300	V
Anode dissipation	W_a	max.	3.5	W
Cathode current:				
(as R.F. oscillator or amplifier)	I_k	max.	30	mA
(as R.F. doubler or trebler)	I_k	max.	20	mA
Grid voltage	$-V_g$	max.	100	V
Grid current	$+I_g$	max.	5.0	mA
Grid resistor	R_g	max.	250	kΩ
Voltage between cathode and heater	V_{kf}	max.	150	V
Bulb temperature	t_{bulb}	max.	180	°C

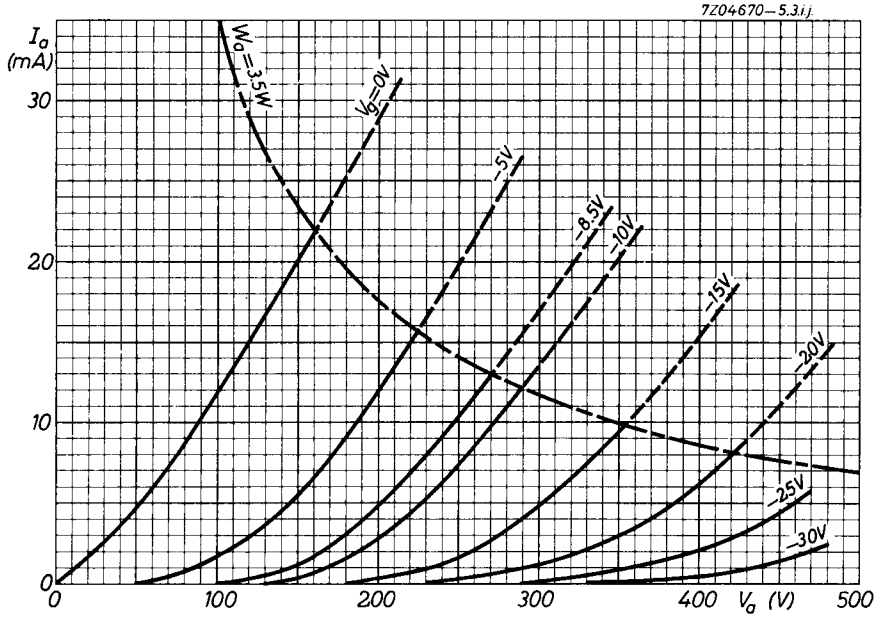
OPERATING CHARACTERISTICS

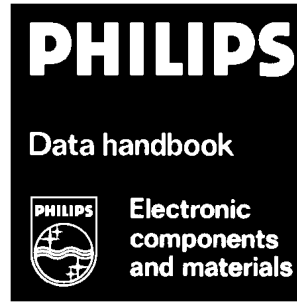
As R.F. amplifier or oscillator

Class C telegraphy or F.M.

Frequency	f	50	100	MHz
Anode voltage	V_a	300	300	V
Grid voltage	$-V_g$	27	27	V
Anode current	I_a	16.2	17.1	mA
Grid current	$+I_g$	3.8	2.9	mA
Output power	W_o	3.6	3.3	W
Efficiency	η	67	55	%




7Z04670—5.3.i.j.
I_a (mA)
W_a=3.5W
V_g=0V
-5V
-8.5V
-10V
-15V
-20V
-25V
-30V
0
10
20
30
0
100
200
300
400
500
V_a (V)



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