

S.Q. TUBE

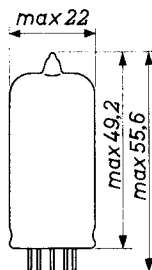
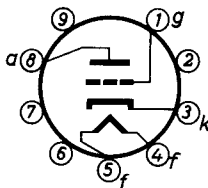
U.H.F. oscillator triode for frequencies up to 750 MHz.

QUICK REFERENCE DATA		
Base	Noval. Gold plated pins	
Heating	Indirect A.C. or D.C.; parallel supply	
Heater voltage	V_f	6.3 V
Heater current	I_f	175 mA
Anode current	I_a	30 mA
Mutual conductance	S	5.5 mA/V

DIMENSIONS AND CONNECTIONS

Dimensions in mm

Base: Noval



CAPACITANCES

Grid to all except anode

$C_{g(a)}$ 1.8 pF

Anode to all except grid

$C_{a(g)}$ 0.7 pF

Anode to grid

C_{ag} 1.6 pF

Grid to heater

C_{gf} max. 0.25 pF

Cathode to heater

C_{kf} 2.3 pF

CHARACTERISTICS

Heater voltage

V_f 6.3 V

Heater current

I_f 175 mA

Anode voltage

V_a 120 150 V

Grid voltage

$-V_g$ 2 2 V

Anode current

I_a 20 30 mA

Mutual conductance

S 4 5.5 mA/V

Amplification factor

μ 16 16

OPERATING CHARACTERISTICS AND LIMITING VALUES

Operation as U.H.F. oscillator

A) Heater supply voltage	V_f	6.3	V
Series resistor in heater circuit	R	3	Ω
Wave length	λ	40 80	cm
Anode voltage	V_a	220 275	V
Anode current	I_a	18.6 17.2	mA
Grid current	$+I_g$	1.5 2.8	mA
Output power	W_o	0.6 2.1	W

LIMITING VALUES Design centre rating system

Anode voltage	V_{a0}	max. 550	V
Anode voltage	V_a	max. 275	V
Anode dissipation	W_a	max. 3.5	W
Cathode current	I_k	max. 20	mA
Grid current	I_g	max. 7.5	mA
Negative grid voltage	$-V_g$	max. 100	V
Voltage between cathode and heater	V_{kf}	max. 100	V
Grid resistor	R_g	max. 1	$M\Omega$

B) Heater supply voltage	V_f	6.3	V
Series resistor in heater circuit	R	3	Ω
Wave length	λ	40 80	cm
Anode voltage	V_a	290 300	V
Anode current	I_a	19.6 18.6	mA
Grid current	$+I_g$	0.4 1.5	mA
Output power	W_o	0.7 2.2	W

With these operating conditions the following limiting values should be strictly adhered to

LIMITING VALUES Design centre rating system unless otherwise specified.

Anode voltage	V_{a0}	max.	550	V
Anode voltage (stabilized $\pm 1\%$)	V_a	max.	300	V
Anode dissipation (Abs.max.)	W_a	max.	5	W
Cathode current	I_k	max.	20	mA
Grid current	I_g	max.	7.5	mA
Negative grid voltage	$-V_g$	max.	100	V
Voltage between cathode and heater	V_{kf}	max.	100	V
Grid resistor	R_g	max.	1	$M\Omega$

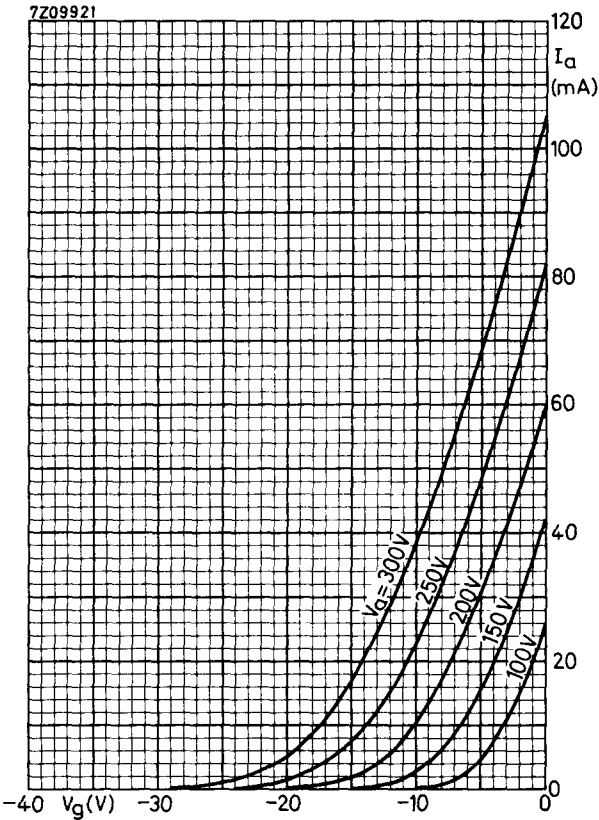
C) Heater voltage	V_f	6.3		V
Wave length	λ	40	80	cm
Anode voltage	V_a	220	300	V
Anode current	I_a	27.7	26.3	mA
Grid current	I_g	2.3	4	mA
Output power	W_o	1.1	3.8	W

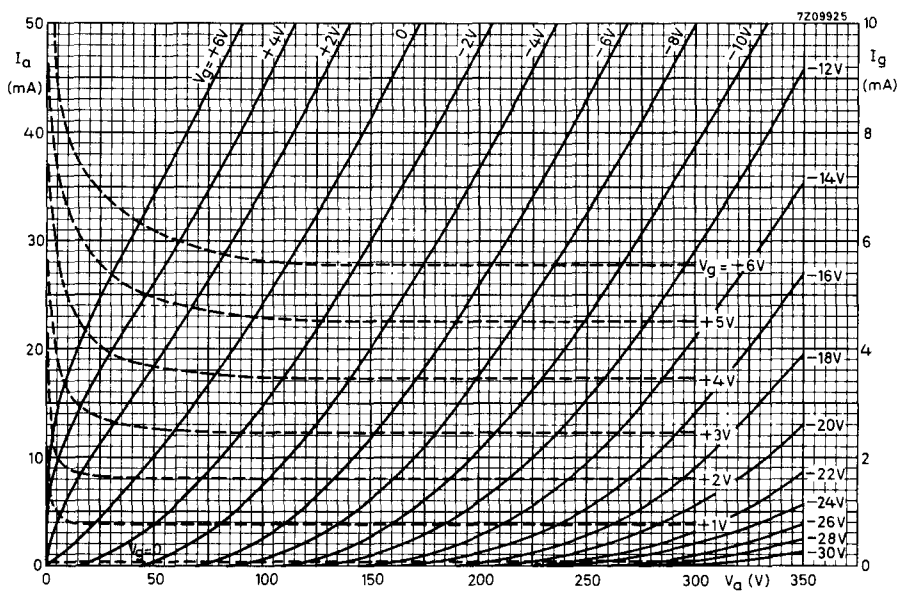
LIMITING VALUES Design centre rating system unless otherwise specified.

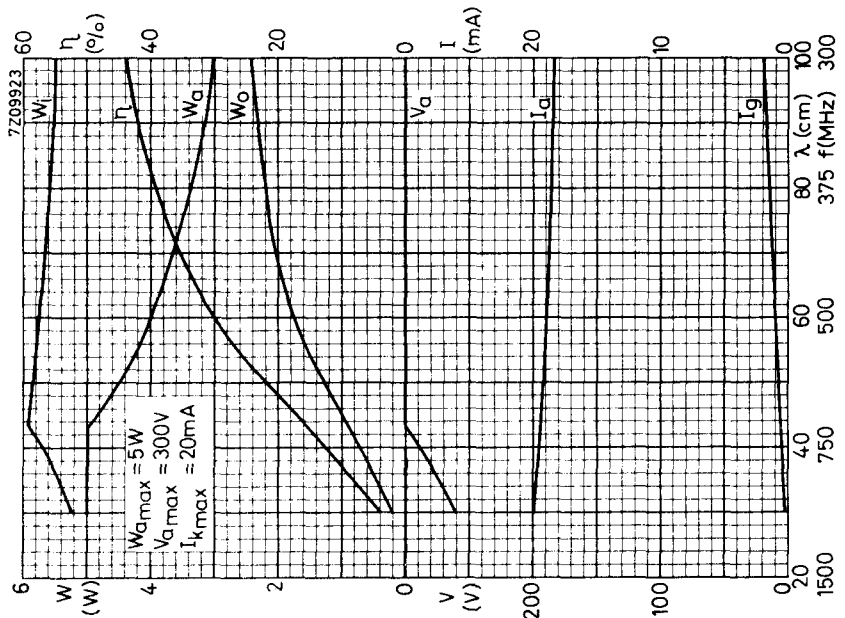
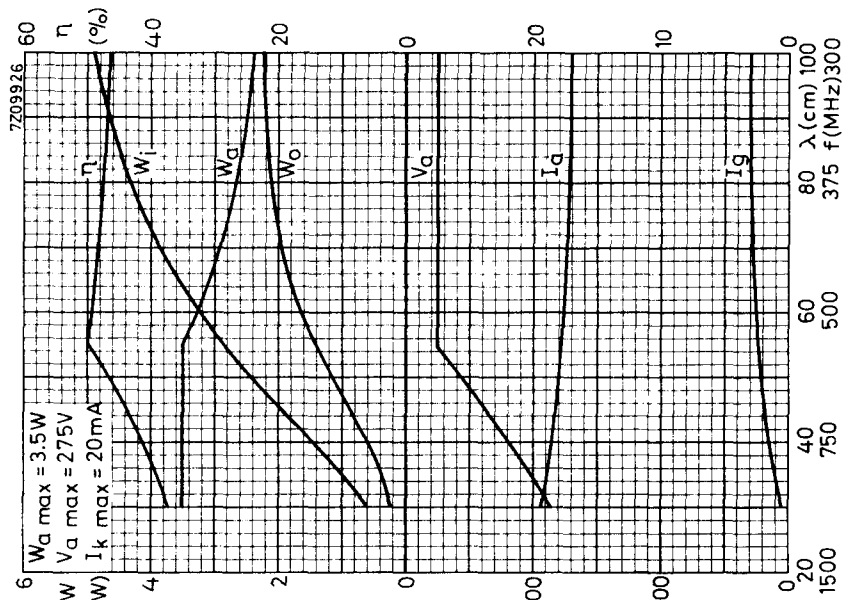
Anode voltage	V_{a0}	max.	550	V
Anode voltage (stabilized $\pm 1\%$)	V_a	max.	300	V
Anode dissipation (Abs.max.)	W_a	max.	5	W
Cathode current (Abs.max.)	I_k	max.	30	mA
Grid current	$+I_g$	max.	7.5	mA
Grid voltage	$-V_g$	max.	100	V
Voltage between cathode and heater	V_{kf}	max.	100	V
Grid resistor	R_g	max.	1	$M\Omega$

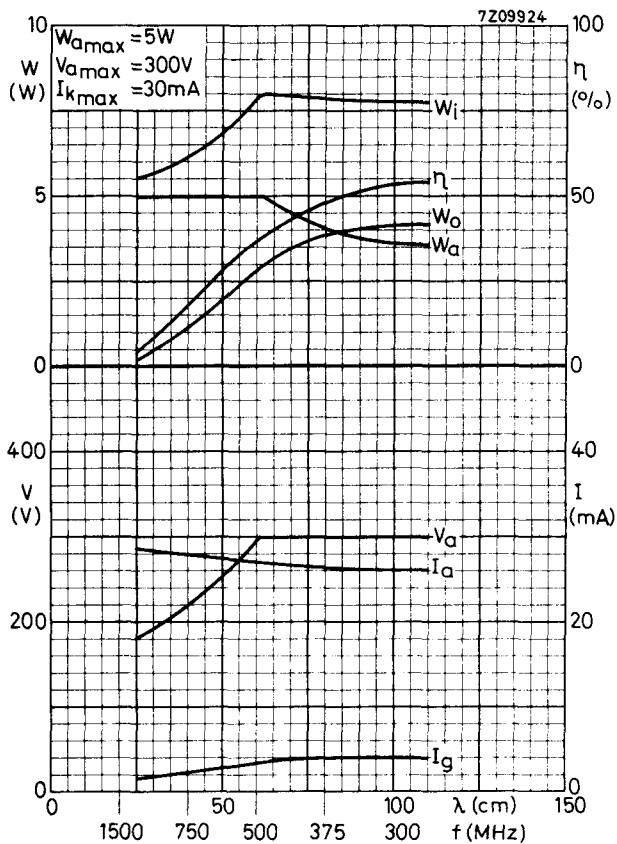
Heater voltage: The average heater voltage should be 6.3 V

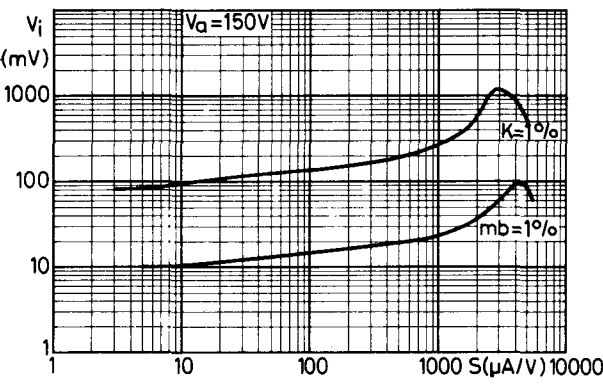
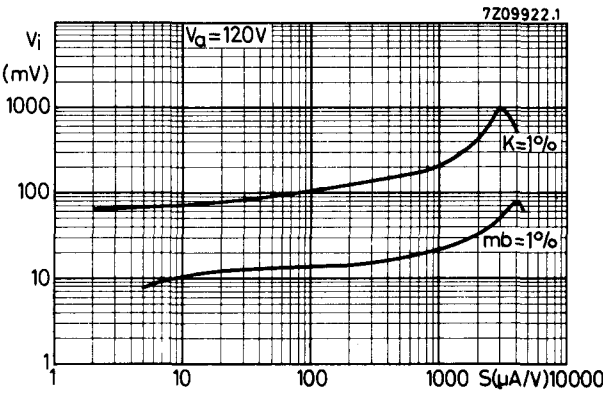
Variation of the heater voltage should not exceed the range the range of 6.3 V $\pm 3\%$.











PHILIPS

Data handbook



**Electronic
components
and materials**

EC81

page	sheet	date
1	1	1968.12
2	2	1968.12
3	3	1968.12
4	4	1968.12
5	5	1968.12
6	6	1968.12
7	7	1968.12
8	8	1970.01
9	FP	2001.04.13