

VALVE DATA PREFERRED TYPES **4** VOLTAGE AMPLIFYING PENTODES **A**

H.F. pentode with variable-mu characteristics

EF 39

HEATER

V_h 6.3 V I_h 0.2 A Suitable for series or parallel operation

CAPACITANCES

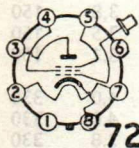
C_{a-g1}	< 0.003	$\mu\mu\text{F}$
C_{in}	5.5	$\mu\mu\text{F}$
C_{out}	7.2	$\mu\mu\text{F}$

OPERATING CONDITIONS

V_a	200	200	250	250	V
R_{g2}	68	68	82	82	K Ω
V_{g2}	100	100	100	100	V
V_{g3}	0	0	0	0	V
V_{g1}	-2.5	-39	-2.5	-49	V
I_a	6.0	—	6.0	—	mA
I_{g2}	1.7	—	1.7	—	mA
g_m	2.2	0.0055	2.2	0.0045	mA/V
r_a	0.9	> 10	1.25	> 10	M Ω
R_k	330	330	330	330	Ω

LIMITING VALUES

$V_{a(b)}$ max.	550	V
V_a max.	300	V
p_a max.	2	W
$V_{g2(b)}$ max.	550	V
V_{g2} max. ($I_a = 6$ mA)	125	V
V_{g2} max. ($I_a = 3$ mA)	300	V
p_{g2} max.	0.3	W
I_k max.	10	mA



BASE:

Octal

DIMENSIONS:

L=100 mm

D=32 mm

Low microphony A.F. pentode

EF 40

HEATER

V_h 6.3 V I_h 0.2 A Suitable for series or parallel operation

CAPACITANCES

C_{in}	4.0	$\mu\mu\text{F}$
C_{out}	5.5	$\mu\mu\text{F}$
C_{a-g1}	0.025	$\mu\mu\text{F}$



4 VALVE DATA PREFERRED TYPES

A VOLTAGE AMPLIFYING PENTODES

EF 40

(contd.)

CHARACTERISTICS

V_a	250	V
V_{g2}	140	V
V_{g3}	0	V
V_{g1}	-2.0	V
I_a	3.0	mA
I_{g2}	0.55	mA
μ_{g1-g2}	38	
g_m	1.85	mA/V
r_a	2.5	M Ω

OPERATING CONDITIONS AS R.C. COUPLED A.F. AMPLIFIER

V_b	250	250	V
R_a	$\uparrow 0.1$	$\uparrow 0.22$	M Ω
R_{g2}	$\uparrow 0.39$	$\uparrow 1.0$	M Ω
R_k	$\uparrow 1,000$	$\uparrow 2,200$	Ω
$*R_{g1}$	330	680	K Ω
I_k	2.05	0.95	mA
V_{out}	112	180	
V_{in}			

* Grid resistor of following valve.

$\uparrow$ Values $\pm 10\%$

OPERATING CONDITIONS AS TRIODE CONNECTED R.C. COUPLED A.F. AMPLIFIER

V_b (V)	R_a (K Ω)	I_a (mA)	R_k (Ω)	V_{out} V_{in}	$V_{out}\dagger$ (V)	$D_{tot}\dagger$ (%)	R_{g1}^* (K Ω)
400	47	3.7	1,200	24.5	64	4.5	150
350	47	3.2	1,200	24.5	53	4.0	150
300	47	2.7	1,200	24.0	43	3.8	150
250	47	2.3	1,200	23.5	32	3.5	150
200	47	1.85	1,200	23.5	22	3.1	150
400	100	2.0	2,200	28.5	73	4.0	330
350	100	1.7	2,200	28.5	62	4.0	330
300	100	1.5	2,200	28.5	50	3.8	330
250	100	1.25	2,200	28.0	39	3.7	330
200	100	1.0	2,200	27.5	27.5	3.3	330
400	220	1.05	3,900	32.0	74	3.8	680
350	220	0.9	3,900	31.5	62	3.7	680
300	220	0.8	3,900	31.0	51	3.7	680
250	220	0.65	3,900	30.5	39	3.5	680
200	220	0.5	3,900	30.5	28	3.1	680

$\dagger$ Output voltage and distortion at the start of positive grid current. At lower output voltages the distortion is approximately proportional to the voltage.

* Grid resistor of the following valve.

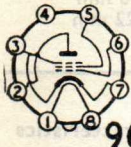


VOLTAGE AMPLIFYING PENTODES A

LIMITING VALUES

$V_{a(b)}$ max.	550	V
V_a max.	300	V
p_a max.	1	W
$V_{g2(b)}$ max.	550	V
V_{g2} max.	200	V
p_{g2} max.	0.2	W
I_k max.	6	mA
R_{g1-k} max. ($p_a > 0.2$ W)	3	M Ω
R_{g1-k} max. ($p_a < 0.2$ W)	10	M Ω
V_{h-k} max.	50	V

EF 40
(contd.)



BASE:
B8A

DIMENSIONS:

L=60 mm

D=22 mm

H.F. pentode with variable-mu characteristics

EF 41

HEATER

V_h 6.3 V I_h 0.2 A Suitable for series or parallel operation

CAPACITANCES

C_{a-g1}	<0.002	$\mu\mu\text{F}$
C_{in}	5	$\mu\mu\text{F}$
C_{out}	8	$\mu\mu\text{F}$

OPERATING CONDITIONS

As R.F. or I.F. amplifier

$V_a = V_b$	250	V
R_{g2}	82	K Ω
R_k	330	Ω
V_{g1}	-2.5	V
I_a	6.0	mA
I_{g2}	1.7	mA
g_m	2,200	$\mu\text{A/V}$
r_a	1	M Ω
μ_{g1-g2}	18	
R_{eq}	6.5	K Ω

LIMITING VALUES

$V_{a(b)}$ max.	550	V
V_a max.	300	V
p_a max.	2	W
$V_{g2(b)}$ max.	550	V
V_{g2} max. ($I_a < 3$ mA)	300	V
V_{g2} max. ($I_a = 6$ mA)	125	V