

4 VALVE DATA **PREFERRED TYPES** **E OUTPUT PENTODES**

EL 32 contd.)

OPERATING CONDITIONS AS TRIODE

Screen connected to anode

V_a	200	200	250	250	V
V_{g1}	-19	-14	-27	-20	V
I_a	15	30	15	30	mA
g_m	2.1	3.2	1.7	2.6	mA/V
r_a	3.3	2.4	4.1	3.1	K Ω
μ	7	8	7	8	

LIMITING VALUES

$V_{a(b)}$ max.	550	V
V_a max.	250	V
p_a max.	8	W
I_k max.	45	mA
$V_{g2(b)}$ max.	550	V
V_{g2} max.	250	V
p_{g2} max.	1.6	W
R_{g1-k} max. (fixed bias)	0.6	M Ω
R_{g1-k} max. (self bias)	1.0	M Ω
V_{h-k} max.	50	V



BASE :
 Octal

DIMENSIONS :
 L=110 mm
 D=37 mm

EL 33

Output pentode

HEATER

V_h 6.3 V I_h 0.9 A Suitable for A.C. mains operation

CAPACITANCE

C_{a-g1}	1.0	μF
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OPERATING CONDITIONS

As Class "A" amplifier

V_a	250	V
V_{g2}	250	V
I_a	36	mA
V_{g1}	-6	V
I_{g2}	4	mA
g_m	9	mA/V
r_a	50	K Ω
μ_{g1-g2}	23	
P_{out}	4.5	W
R_a	7	K Ω
$V_{in(r, m, s.)}$	4.2	V
$V_{in(r, m, s.)} (P_{out}=50 \text{ mW})$	0.33	V
D_{tot}	10	% Ω
R_k	150	Ω



VALVE DATA PREFERRED TYPES **4** OUTPUT PENTODES **E**

OPERATING CONDITIONS (contd.)

EL 33
(contd.)

As push-pull pair (self bias)

V_a	250	V
V_{g2}	250	V
$I_{a(o)}$	2×24	mA
I_a (max. sig.)	2×28.5	mA
$I_{g2(o)}$	2×2.8	mA
I_{g2} (max. sig.)	2×4.6	mA
R_k	150	Ω
R_{a-a}	10	K Ω
P_{out}	8.2	W
$V_{in(r.m.s.)}$	6.7	V
D_{tot}	3.1	%

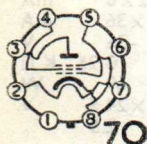
OPERATING CONDITIONS As Triode

Screen connected to anode

V_a	250	V
I_a	20	mA
V_g	-8.5	V
g_m	6.5	mA/V
μ	20	
r_a	3	K Ω
R_k	390	Ω
R_a	7	K Ω
P_{out}	1.1	W
D_{tot}	5	%
$V_{in(r.m.s.)}$	5.9	V
$V_{in(r.m.s.)}$ ($P_{out}=50$ mW)	1.1	V

LIMITING VALUES

$V_{a(b)}$ max.	550	V
V_a max.	250	V
p_a max.	9	W
$V_{g2(b)}$ max.	550	V
V_{g2} max.	275	V
$p_{g2(o)}$ max.	1.2	W
p_{g2} (max. sig.) max.	2.5	W
I_k max.	55	mA
R_{g1-k} max.	1	M Ω
V_{h-k} max.	50	V



BASE :
Octal

DIMENSIONS :
L=126 mm
D=46 mm

Output pentode

EL 37

HEATER

V_h 6.3 V I_h 1.4 A Suitable for A.C. mains operation

CAPACITANCES

C_{out}	9.0	$\mu\mu F$
C_{in}	17.5	$\mu\mu F$
C_{a-g1}	1.0	$\mu\mu F$

