

OPERATING CONDITIONS (contd.)

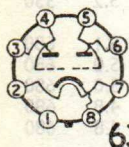
ECC 31
(contd.)

V_b (V)	R_a (K Ω)	I_a (mA)	R_k (K Ω)	V_{out} V_{in}	V_{out}^* (V)	D_{tot} (%)	R_{g1}^{**} (K Ω)
400	220	1.1	3.9	27.5	81	2.3	680
350	220	0.95	3.9	27.5	68	2.2	680
300	220	0.85	3.9	27	56	2.2	680
250	220	0.7	3.9	27	45	2.1	680
200	220	0.55	3.9	26.5	34	2.0	680

* V_{out} = Output voltage at start of I_g or at $D_{tot} = 10\%$

** R_{g1} = Grid resistance of following valve

LIMITING VALUES



V_a max.	300	V
p_a max. (each section)	5	W
I_k max.	2×25	mA
R_{g-k} max.	1.5	M Ω
V_{h-k} max.	50	V

BASE :
Octal

DIMENSIONS :
L = 106 mm
D = 46 mm

Double triode with separate cathodes

ECC 33

HEATER

V_h 6.3 V I_h 0.4A
connected in series

The heaters of the two cathodes are

CAPACITANCES

$C_{a'-a''}$	0.75	$\mu\mu F$
C_{a-g} (each section)	2.5	$\mu\mu F$
C_{g-k} (each section)	3.5	$\mu\mu F$
$C_{a'-k'}$	1.2	$\mu\mu F$
$C_{a''-k''}$	1.5	$\mu\mu F$

g', a', k' —pins 1, 2 & 3

g'', a'', k'' —pins 4, 5 & 6

CHARACTERISTICS

Each section

V_a	250	V
V_g	-4.0	V
I_a	9.0	mA
g_m	3.6	mA/V
μ	35	
r_a	9.7	K Ω



4 VALVE DATA PREFERRED TYPES

D VOLTAGE AMPLIFYING TRIODES

ECC 33 (contd.)

OPERATING CONDITIONS

As R.C. coupled A.F. amplifier

V_b (V)	R_a (K Ω)	I_a (mA)	R_k (K Ω)	$\frac{V_{out}}{V_{in}}$	V_{out}^* (V)	D_{tot} (%)	R_{g1}^{**} (K Ω)
400	47	4.0	1.2	25.5	74	6.1	150
350	47	3.5	1.2	25	62.5	5.9	150
300	47	3.0	1.2	25	50	5.6	150
250	47	2.5	1.2	25	41	5.6	150
200	47	2.0	1.2	24.5	30.5	5.3	150
400	100	2.05	2.2	28	78.5	5.7	330
350	100	1.8	2.2	27.5	66.5	5.6	330
300	100	1.55	2.2	27	54.5	5.6	330
250	100	1.3	2.2	27	43	5.4	330
200	100	1.05	2.2	26.5	32	5.2	330
400	220	1.1	3.9	28	74.5	5.1	680
350	220	0.98	3.9	28	63	5.0	680
300	220	0.83	3.9	28	51	5.0	680
250	220	0.7	3.9	27.5	41	4.8	680
200	220	0.53	3.9	27	30.5	4.8	680

*Output voltage at start of I_g . At output voltages lower than those shown, the distortion is approximately proportional to the voltage

**Grid resistance of the following valve

LIMITING VALUES

Each section



64

$V_{a(b)}$ max.	550	V
V_a max.	300	V
p_a max.	2.5	W
I_k max.	20	mA
R_{g-k} max.	1.5	M Ω
V_{h-k} max.	100	V

BASE :
Octal

DIMENSIONS :
L=82 mm
D=33 mm

ECC 34

Low impedance, double triode, with separate cathodes

HEATER

V_h 6.3 V I_h 0.95 A Suitable for A.C. mains operation

CAPACITANCES

Each section

$C_{a-a'}$	0.48	$\mu\mu\text{F}$
C_{a-g}	4.0	$\mu\mu\text{F}$
C_{g-k}	3.5	$\mu\mu\text{F}$
C_{a-k}	1.8	$\mu\mu\text{F}$

