

DOUBLE TRIODE

ECC33

High slope, low impedance double triode with low heater consumption, primarily intended for use in flip-flop, scaling and computer circuits.

HEATER (The heaters of the two cathodes are connected in series)

V_h	6.3	V
I_h	0.4	A

CAPACITANCES

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

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

LIMITING VALUES (each section)

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

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 _{r.m.s.})	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

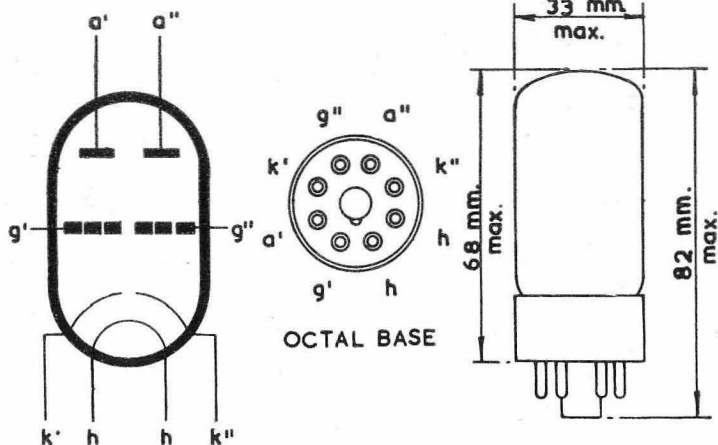
*Output voltage at the start of I_{g1} . At output voltages lower than those shown the distortion is approximately proportional to voltage.

**Grid resistor of following valve.

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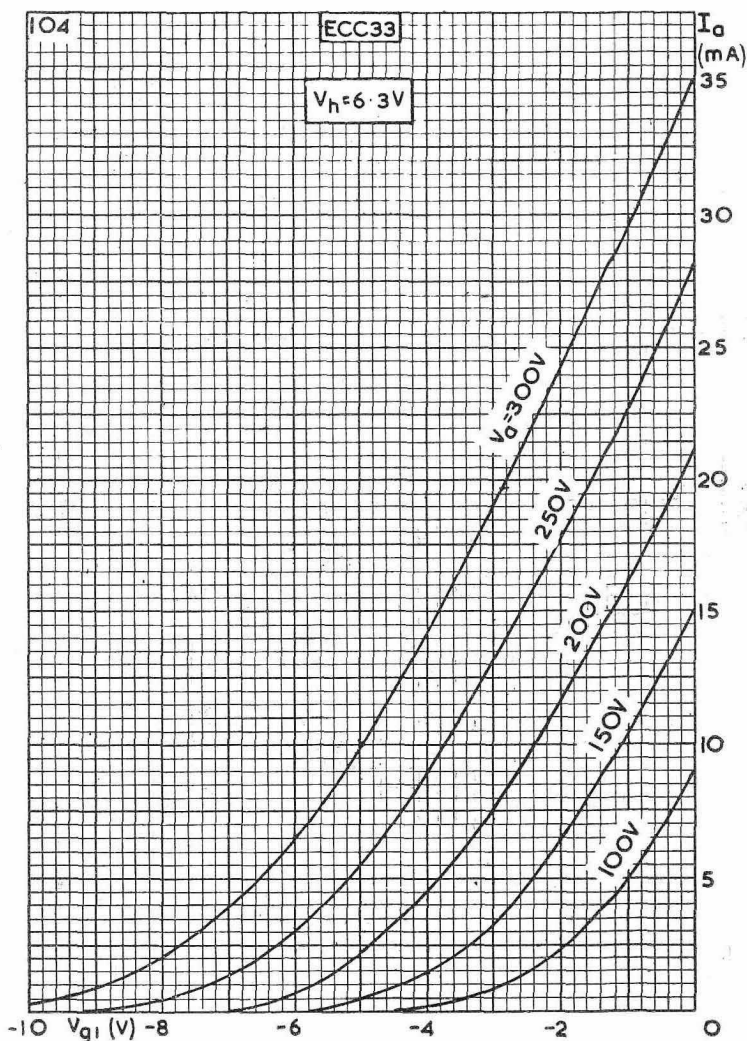
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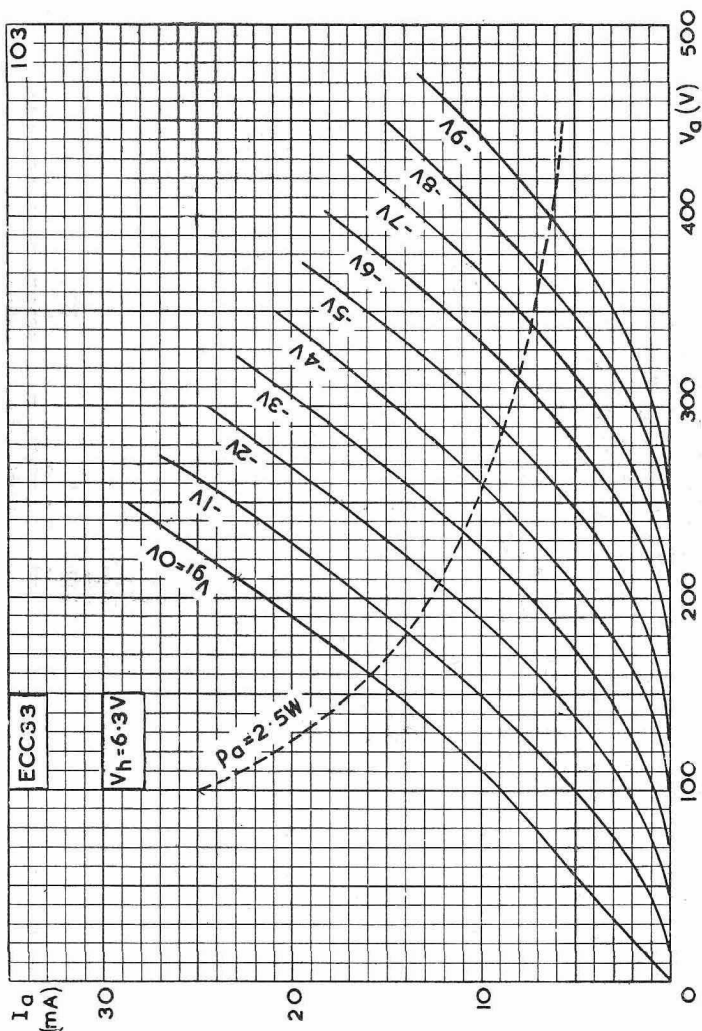


ANODE CURRENT PLOTTED AGAINST CONTROL-GRID VOLTAGE
FOR EACH SECTION

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ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE
FOR EACH SECTION