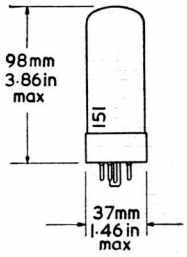
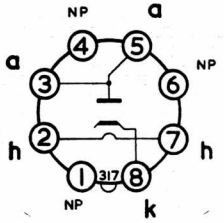


HALF-WAVE RECTIFIER



Base 105‡

GENERAL

This indirectly heated half-wave rectifier is for use in television receivers employing series connected 0·3A heaters.

Heater Current	I_h	0·3	A
Heater Voltage	V_h	29·0	V

RATINGS

Maximum Peak Inverse Voltage	PIV_{max}	700	V
Maximum Anode Voltage (R.M.S.)	$V_{a(r.m.s.)max}$	250	V
Maximum Mean Anode Current	$I_{a(av)max}$	325	mA
Maximum Peak Anode Current	$i_{a(pk)max}$	2·6	A
Maximum Surge Anode Current	$i_{a(surge)max}$	9·5	A
Maximum Reservoir Capacitor	C_{max}	200	μF
Maximum Peak Heater to Cathode Voltage Heater Negative	$v_{h-k(pk)max}$	625*	V

* Measured with respect to the higher potential heater pin.
Maximum D.C. component = 275V, Maximum A.C. component = 250V r.m.s.

TYPICAL OPERATION†

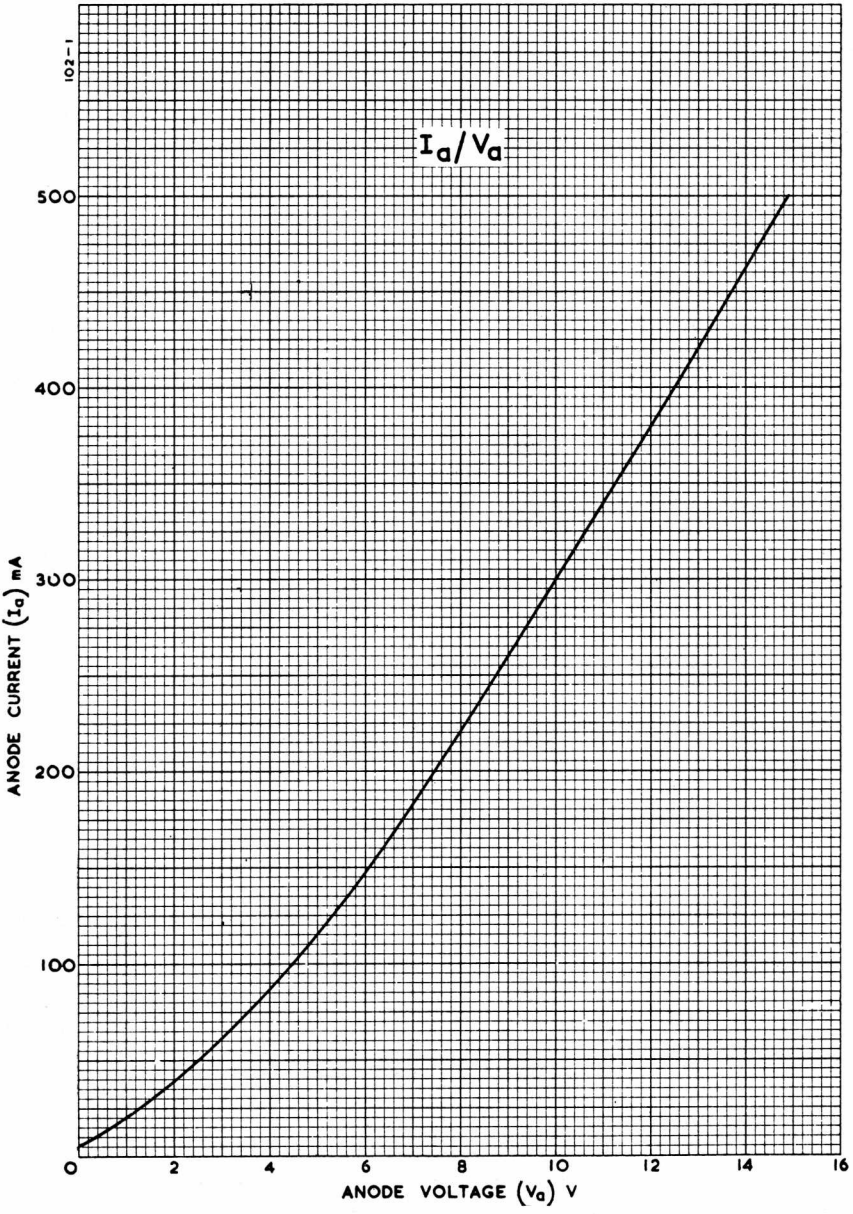
Input Anode Voltage (R.M.S.)	$V_{in(r.m.s.)}$	200	210	220	230	240	250	V
Output Current	I_{out}	325	325	295	270	240	220	mA
Reservoir Capacitor	C	200	200	200	200	200	200	μF
Minimum Surge limiting resistance	$R_{lim(min)}$	15	17	19	21	23	25	Ω
Output Voltage	V_{out}	209	219	234	249	264	280	V

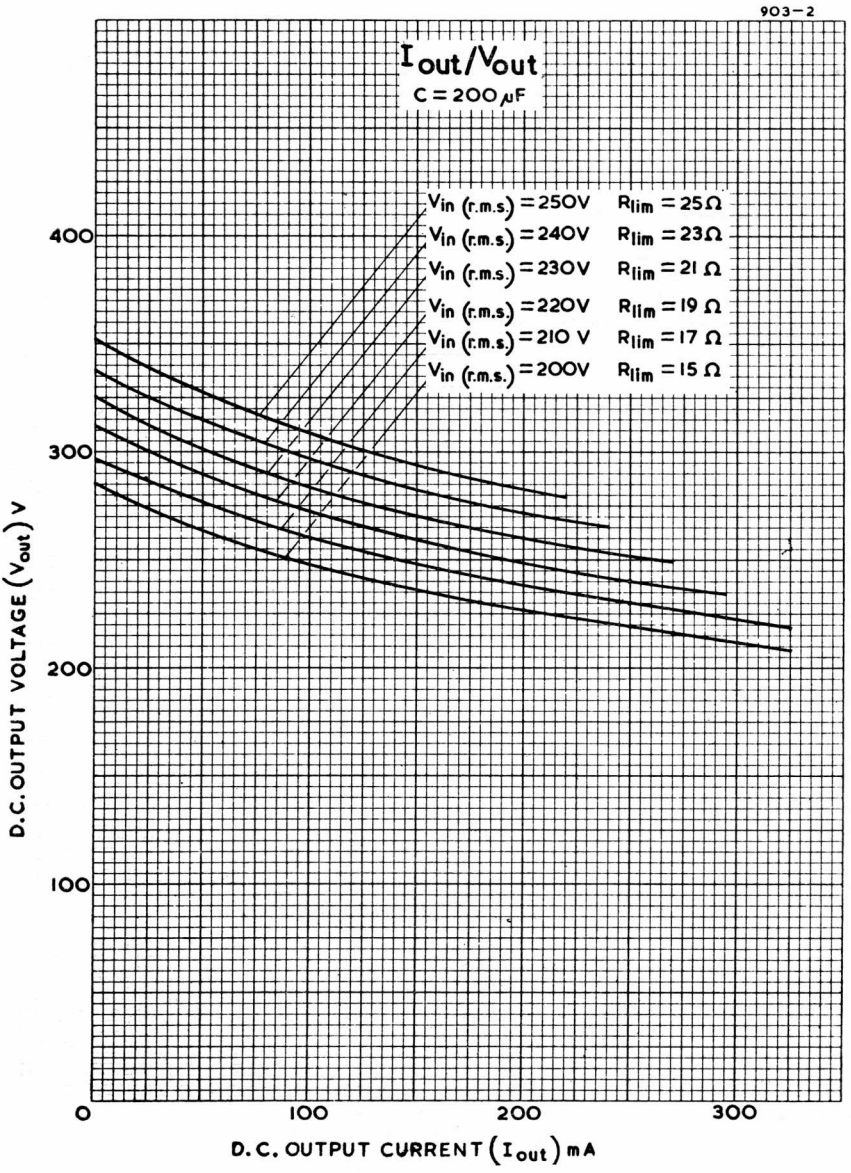
† For television receiver conditions see curves.

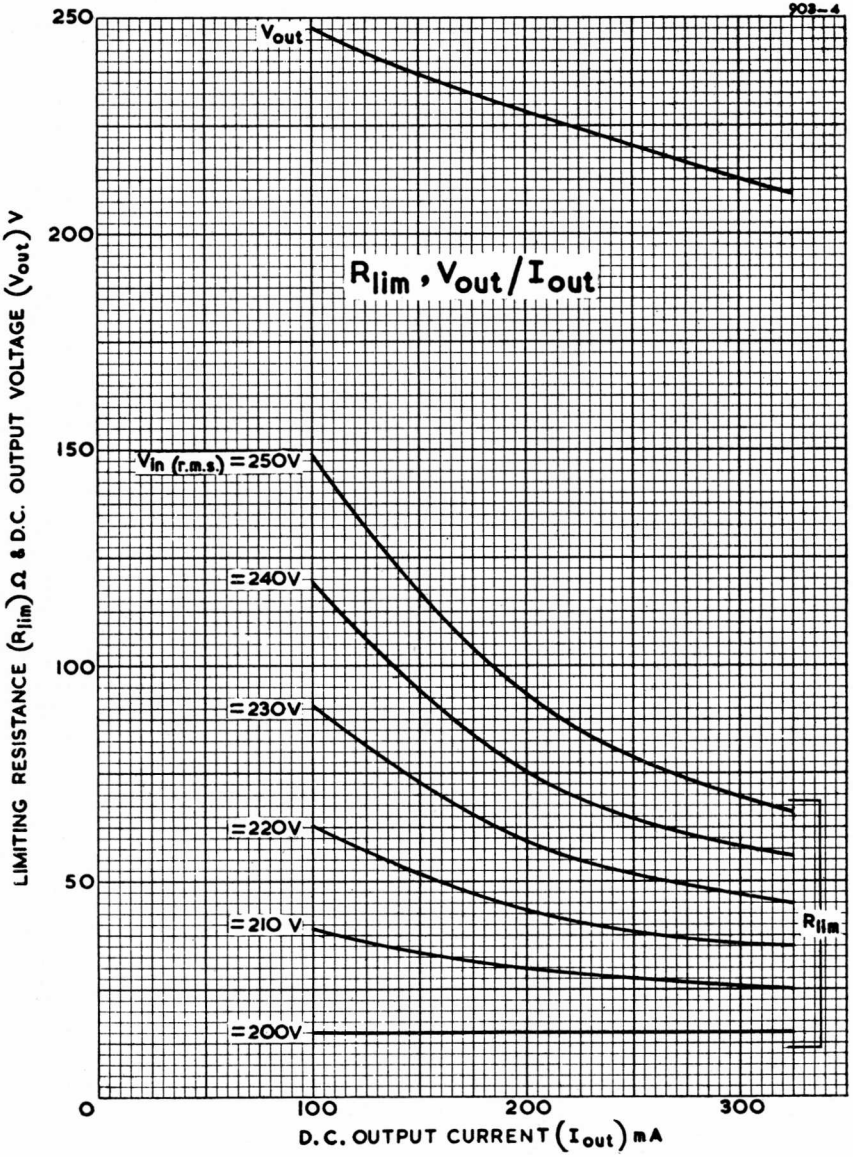
MOUNTING POSITION—Unrestricted.

‡ Some PY33 valves may have an 107 base having pins 1 and 6 : NC.

THORN — A E I RADIO VALVES & TUBES LTD.


102-1
I_a/V_a
500
400
300
200
100
0
2
4
6
8
10
12
14
16
ANODE CURRENT (I_a) mA
ANODE VOLTAGE (V_a) V


903-2
Iout/Vout
C = 200 μF
Vin (r.m.s.) = 250V Rlim = 25Ω
Vin (r.m.s.) = 240V Rlim = 23Ω
Vin (r.m.s.) = 230V Rlim = 21 Ω
Vin (r.m.s.) = 220V Rlim = 19 Ω
Vin (r.m.s.) = 210 V Rlim = 17 Ω
Vin (r.m.s.) = 200V Rlim = 15 Ω
400
300
200
100
0
100
200
300
D.C. OUTPUT VOLTAGE (Vout) V
D.C. OUTPUT CURRENT (Iout) mA


903-4
250
200
150
100
50
0
100
200
300
V_{out}
R_{lim} , V_{out}/I_{out}
$V_{in\ (r.m.s.)}$ = 250V
= 240V
= 230V
= 220V
= 210 V
= 200V
R_{lim}
LIMITING RESISTANCE (R_{lim}) Ω & D.C. OUTPUT VOLTAGE (V_{out}) V
D.C. OUTPUT CURRENT (I_{out}) mA