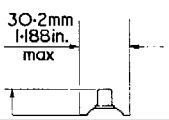
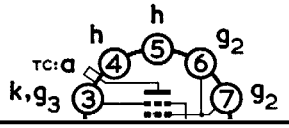


LINE OUTPUT



This output pentode is primarily intended for use in the line timebase of television receivers.

Heater Current	I_h	0·3	A
Heater Voltage	V_h	27	V

RATINGS

Maximum Anode Dissipation	$P_{a(max)}$		
$P_{g2} \leqslant 4{\cdot}0W$		12	W
$P_{g2} = 5{\cdot}0W$		8·0	W
Maximum Anode and Screen Grid Dissipation	$P_{(a+g2)max}$	See Rating Chart	
Maximum Screen Grid Dissipation	$P_{g2(max)}$		
$P_a \leqslant 8{\cdot}0W$		5·0	W
$P_a = 12W$		4·0	W
Maximum Anode Supply Voltage	$V_{a(b)max}$	550	V
Maximum Anode Voltage	$V_{a(max)}$	250	V
Maximum Peak Anode Voltage	$v_{a(pk)max}$	7·0	kV
Maximum Screen Grid Supply Voltage	$V_{g2(b)max}$	550	V
Maximum Screen Grid Voltage	$V_{g2(max)}$	250	V
Maximum Heater to Cathode Voltage (R.M.S.)	$V_{h\text{-}k(r.m.s.)max}$	220*	V
Maximum Cathode Current	$I_{k(max)}$	250	mA
Maximum Control Grid to Cathode Resistance	$R_{g1\text{-}k(max)}$	500†	kΩ

* Measured with respect to the high potential heater pin.

† In line timebase applications $R_{g1\text{-}k(max)}$ may be 2·2 MΩ.

INTER-ELECTRODE CAPACITANCE ‡

Grid 1 to Heater	$C_{g1\text{-}h}$	<0·2	pF

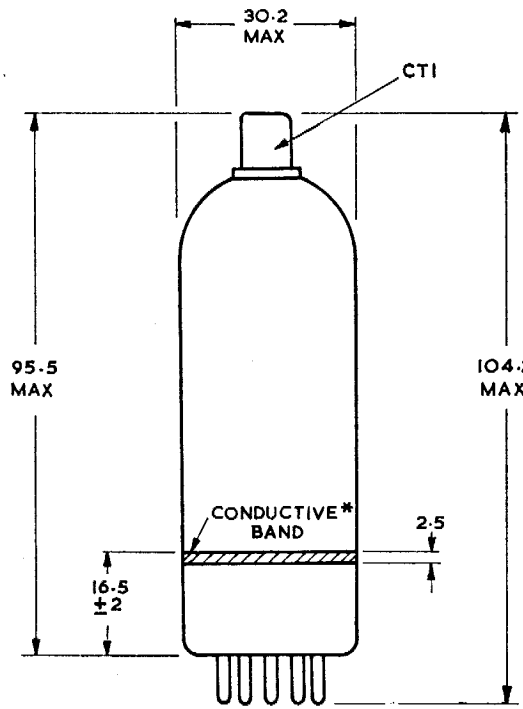
‡ Measured without external shield.

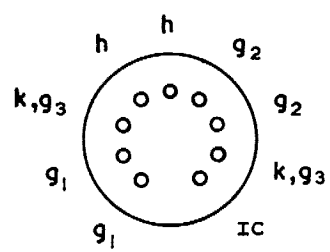
CHARACTERISTICS

Anode Voltage	V_a	75	V
Screen Grid Voltage	V_{g2}	200	V
Control Grid Voltage	V_{g1}	−10	V
Anode Current	I_a	440	mA
Screen Grid Current	I_{g2}	30	mA

CIRCUIT DESIGN

When calculating the peak anode current for circuit design purposes the knee should be taken as the reference point. Operation so that the anode potential of the output valve at the end of scan is above the knee of the anode characteristic is only recommended when an effective feedback stabilising circuit is employed.





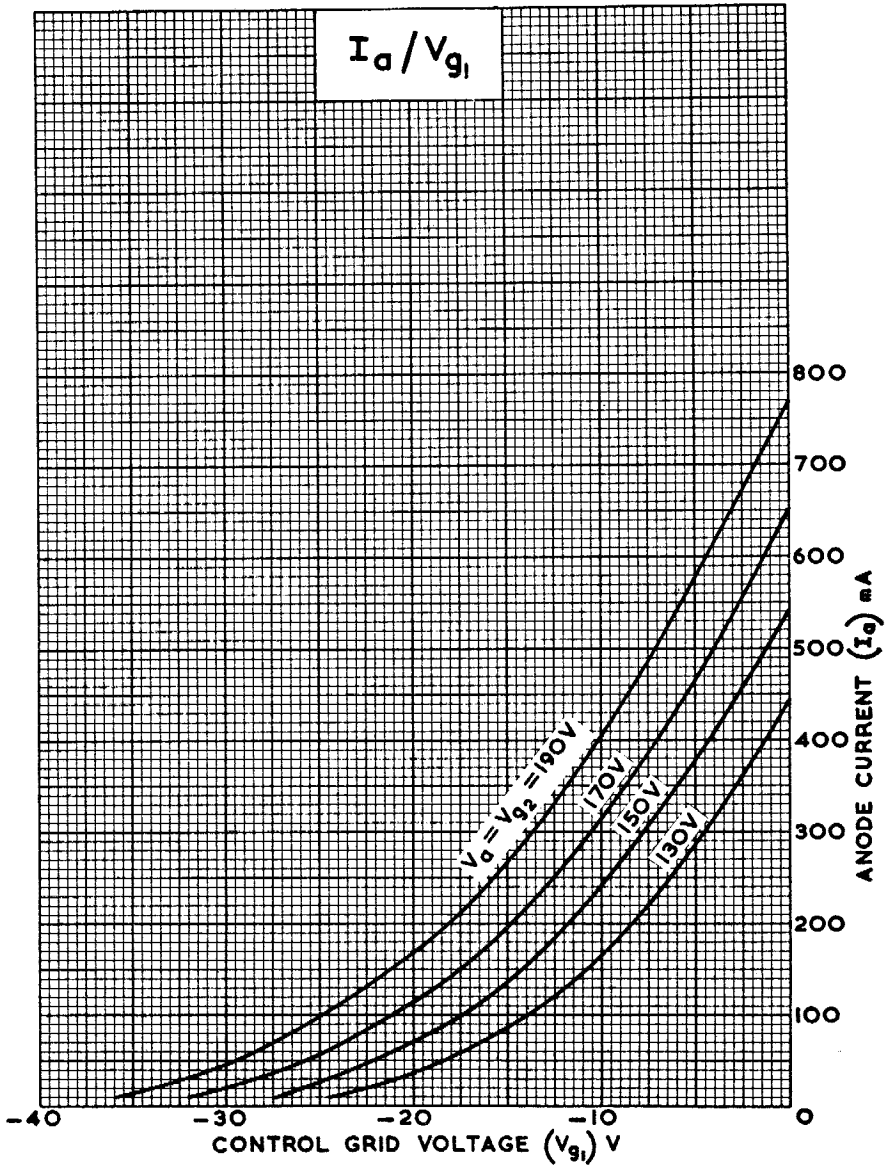
TOP CAP: a

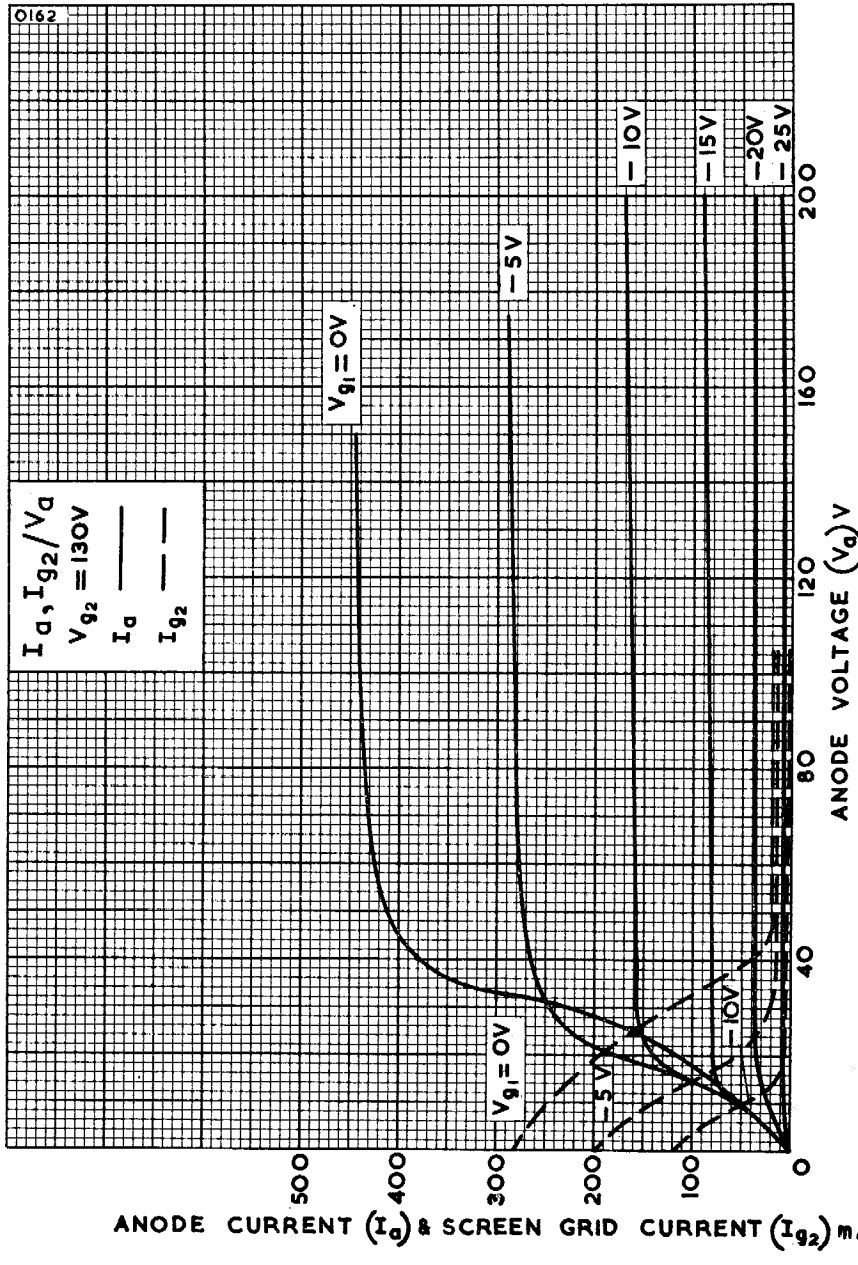
0160

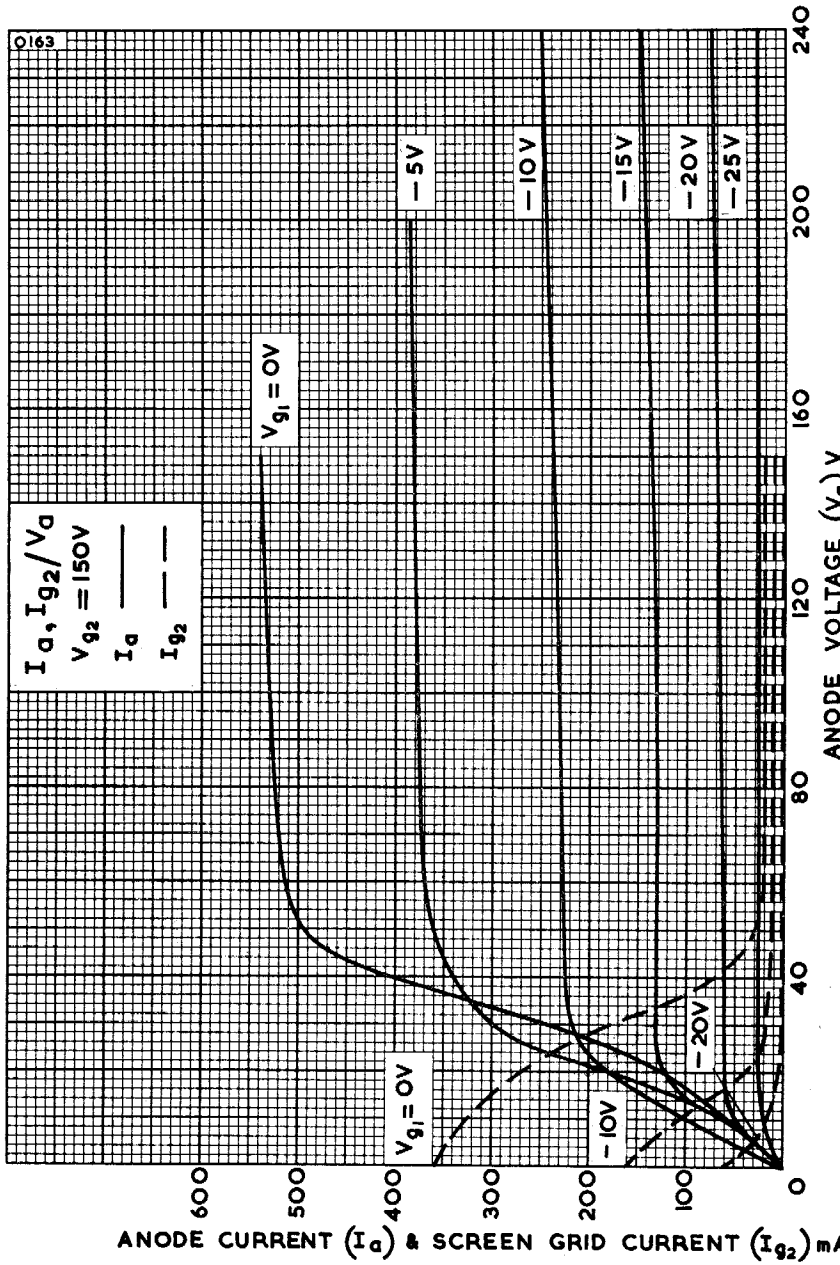
B9D BASE

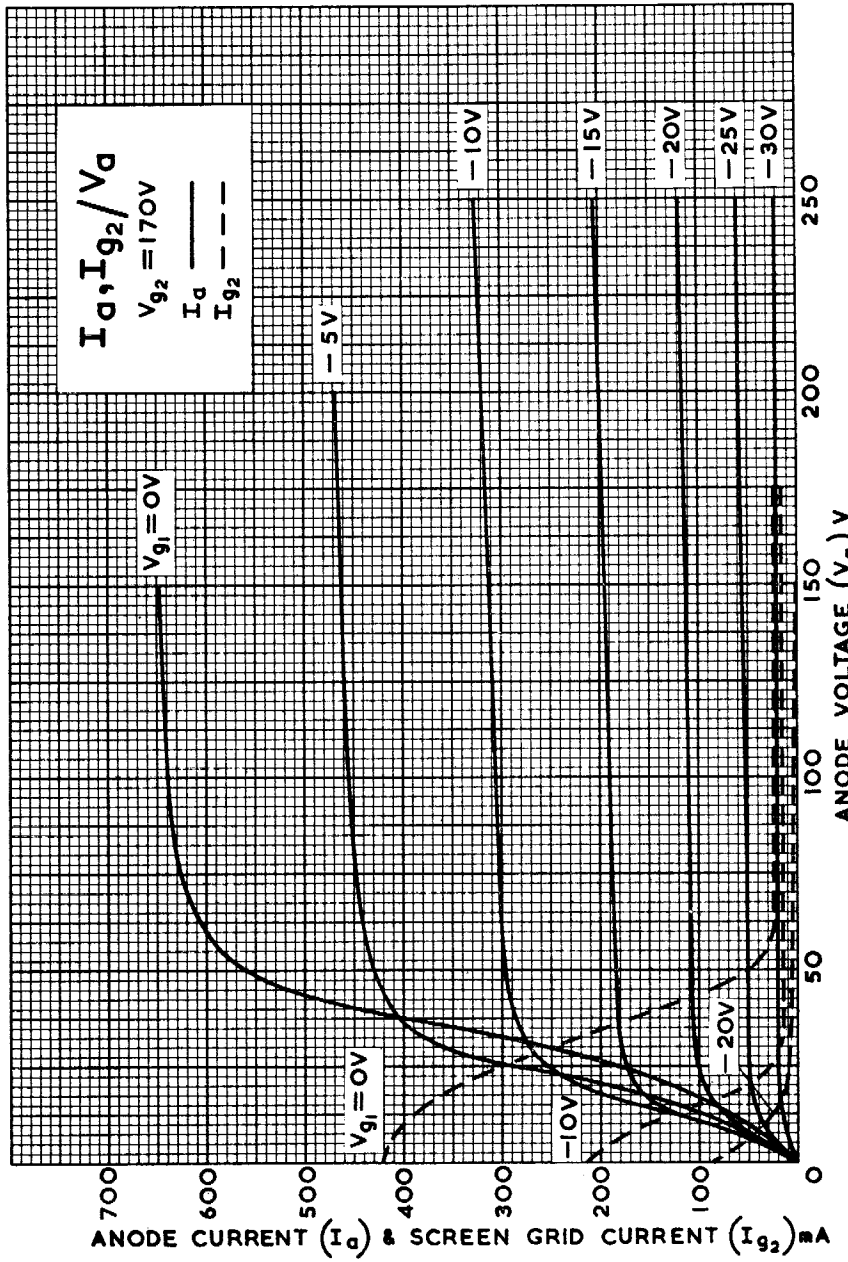
* If any conducting material (e.g. a metal retaining clip) is close to the bulb, both this material and the valve conductive band should make electrical contact with the chassis.

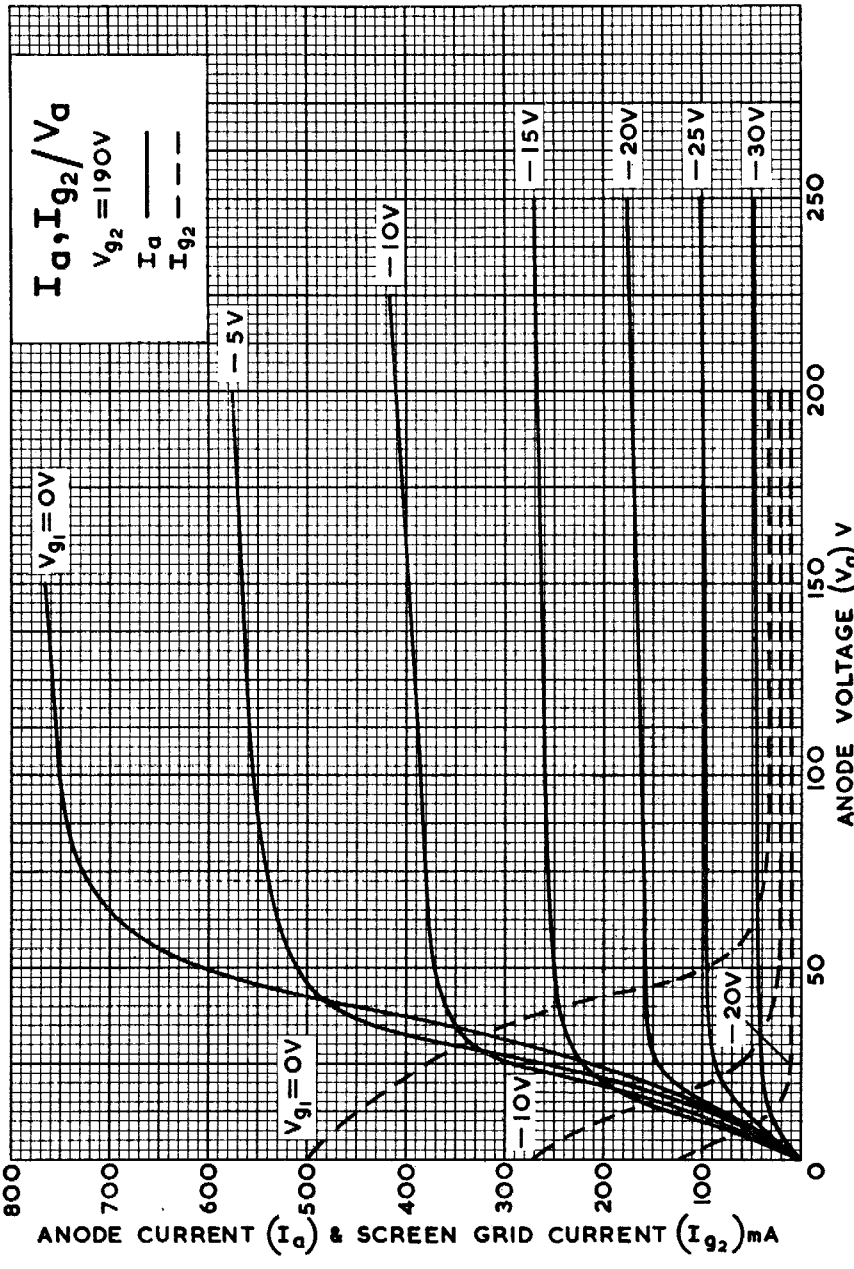
All dimensions in mm.

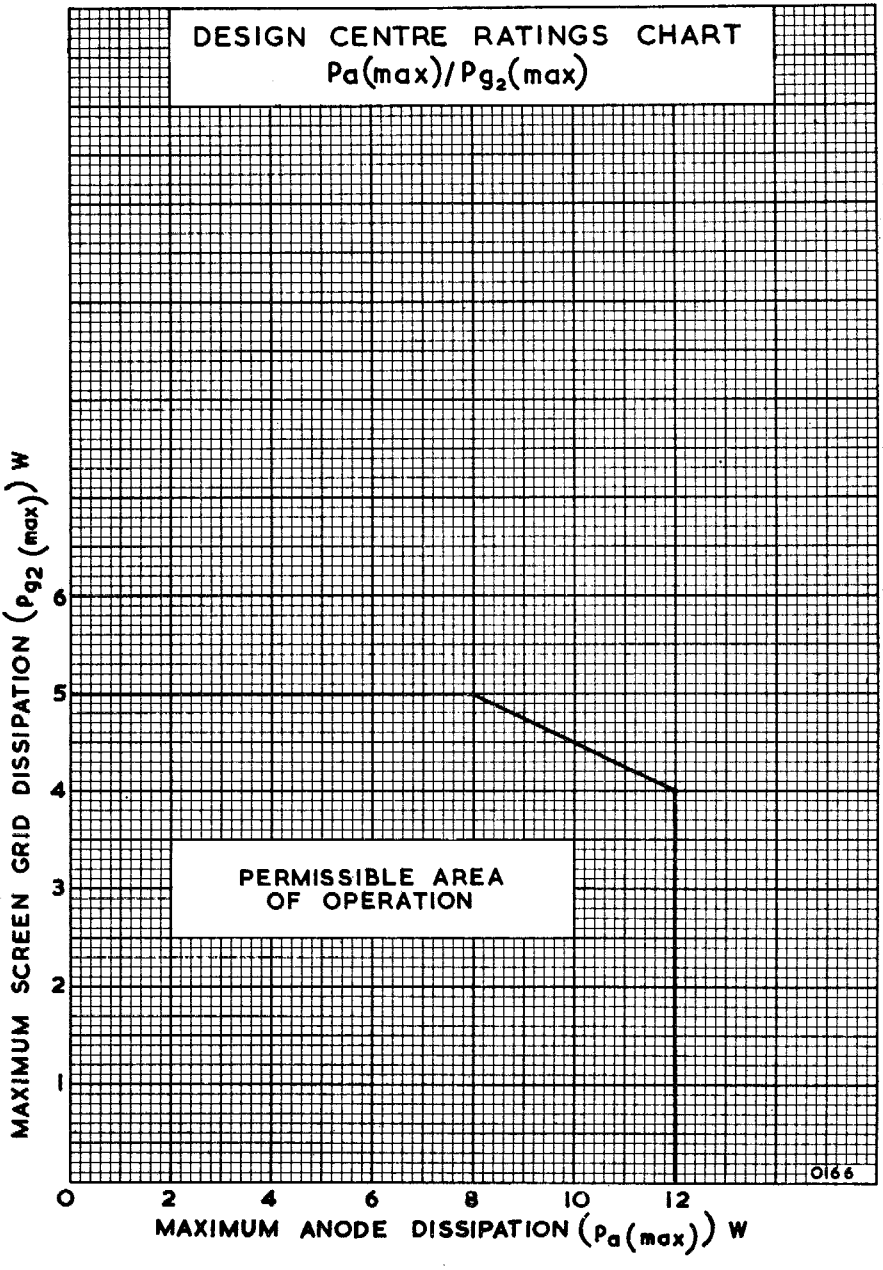

I_a / V_{g_1}
800
700
600
500
400
300
200
100
0
ANODE CURRENT (I_a) mA
$V_a = V_{g_2}$ = 190V
170V
150V
130V
-40
-30
-20
-10
0
CONTROL GRID VOLTAGE (V_{g_1}) V


0162
$I_a, I_{g2}/V_a$
$V_{g2} = 130V$
I_a ——
I_{g2} — —
$V_{g1} = 0V$
−5V
−10V
−15V
−20V
−25V
$V_{g1} = 0V$
−5V
−10V
ANODE VOLTAGE (V_a) V
0
40
80
120
160
200
ANODE CURRENT (I_a) & SCREEN GRID CURRENT (I_{g2}) mA
0
100
200
300
400
500


0163
$I_a, I_{g2}/V_a$
V_{g2} = 150V
I_a ——
I_{g2} — —
V_{g1} = 0V
−5V
−10V
−15V
−20V
−25V
V_{g1} = 0V
−10V
−20V
ANODE VOLTAGE (V_a) V
0
40
80
120
160
200
240
ANODE CURRENT (I_a) & SCREEN GRID CURRENT (I_{g2}) mA
0
100
200
300
400
500
600


$I_a, I_{g_2}/V_a$
V_{g_2} = 170V
I_a ——
I_{g_2} — — —
V_{g_1} = 0V
−5V
−10V
−15V
−20V
−25V
−30V
V_{g_1} = 0V
−10V
−20V
ANODE VOLTAGE (V_a) V
0
50
100
150
200
250
ANODE CURRENT (I_a) & SCREEN GRID CURRENT (I_{g_2}) mA
0
100
200
300
400
500
600
700


$I_a, I_{g_2}/V_a$
V_{g_2} = 190V
I_a
I_{g_2}
V_{g_1} = 0V
− 5V
− 10V
− 15V
− 20V
− 25V
− 30V
V_{g_1} = 0V
− 10V
− 20V
800
700
600
500
400
300
200
100
0
ANODE CURRENT (I_a) & SCREEN GRID CURRENT (I_{g_2}) mA
250
200
150
100
50
ANODE VOLTAGE (V_a) V


DESIGN CENTRE RATINGS CHART
Pa(max)/Pg2(max)
PERMISSIBLE AREA OF OPERATION
0166
MAXIMUM SCREEN GRID DISSIPATION (Pg2 (max)) W
1
2
3
4
5
6
0
2
4
6
8
10
12
MAXIMUM ANODE DISSIPATION (Pa(max)) W