BRIMAR

RECEIVING VALVE

5763

APPLICATION REPORT VAD/507.6

Standard Telephones and Cables Limited

FOOTSCRAY, KENT, ENGLAND

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INTRODUCTION: The Brimar valve type 5763 is a miniature indirectly heated screened beam tetrode. The heater is intended for operation in parallel with other valves in AC operated equipment. The valve is primarily designed for use as an RF amplifier or frequency multiplier in VHF transmitters, but may, where suitable, be employed as an AF amplifier for modulation purposes.

DESCRIPTION: The valve consists of a beam tetrode unit capable of an output of the order of 8 watts. The unit is mounted in a standard T6½ bulb and is based with a BVA Standard B9A base.

CHARACTERISTICS:

Cathode:	Indirectly heated	
	Voltage (AC or DC)	6·0 volts*
	Current (nominal)	0·75 ampere
	Max. Heater Cathode potential (DC)	100 volts

* The voltage should not vary more than ±10% from the rated value.

Dimensions:	Max. Overall Length	2-5/8 ins.
	Max. Diameter	7/8 in.
	Max. Seated Height	2-3/8 ins.

Base: Noval 9 pin Button B9A

Basing Connections:

Pin 1 Anode
Pin 2 No connection
Pin 3 Grid 3
Pin 4 Heater
Pin 5 Heater
Pin 6 Grid 2
Pin 7 Cathode
Pin 8 Grid 1
Pin 9 Grid 1

Ratings (Absolute Values):

(a) TETRODE CONNECTIONS:

Max. Anode Voltage	300††
Max. Screen Voltage	250††
Max. Anode Dissipation (watts)	12††
Max. Screen Dissipation (watts)	2††
Max. g_1 Circuit Resistance	100,000 ohms††
Max. Bulb Temperature (degrees C)	250††

(b) TRIODE CONNECTIONS:†

Max. (anode and screen strapped) Voltage	250 volts††
Max. (anode and screen strapped) Dissipation	12 watts††

† In order to avoid parasitic oscillation pins 1 and 6 should be connected together through a 100 ohm resistance or an RF choke about 20 microhenries.

†† These ratings are absolute and must be reduced under certain specified conditions referred to later in this report.

Frequency Ratings: The ratings given above in paragraphs (a) and (b) apply to frequencies up to 175 Mc/s. Above this frequency the maximum anode voltage and anode dissipation must be reduced. Data as to the requisite reduction is not yet available.

Capacities (approx.):

$c_{g,\,a}$	0·3 pF (max.)*
c Input (c_{in})	9·5 pF (max.)*
c Output (c_{out})	4·5 pF (max.)*
$c_{h,\,k}$	7·0 pF (max.)*

* With no external shielding.

Mounting: The valve may be mounted in any position.

Ventilation: As this valve runs very hot in operation the layout and design of equipment should be such that adequate ventilation is afforded to ensure a safe bulb temperature under all conditions. The bulb temperature at the hottest point in the bulb surface should never exceed 250° C.

CHARACTERISTIC CURVES: Curves are attached to this report which show:

Anode current plotted against anode voltage for various values of grid voltage for the valve connected as a tetrode with a screen voltage of 250 volts (I_a/V_a) (Curve No. 307·239).

Anode current plotted against anode voltage for various values of grid voltage for the valve connected as a tetrode with a screen voltage of 225 volts (I_a/V_a) (Curve No. 307·240).

Anode current plotted against anode voltage for various values of grid voltage for the valve connected as a triode (I_a/V_a) (Curve No. 307·241).

TYPICAL OPERATION (Audio Frequencies)

Class A Amplifier (Single Ended):

TRIODE CONNECTION (Pins 1 and 6 Strapped):

Heater Voltage	6·0 volts
Anode Voltage	250 volts
Grid Voltage	—7·5 volts
Autobias Resistor (R_k)	150 ohms
Anode Current (no signal)	50 mA
Anode Impedance (r_a)	2100 ohms
Amplification Factor (μ)	15·75
Mutual Conductance	7·5 mA/V
Anode Load Resistor (R_a)	4000 ohms
Peak AF Grid Voltage	7·1 volts
Total Harmonic Distortion	5·2%
Power Output	0·7 watts

A curve (No. 307·254) shows the relation between power output, distortion and input signal voltage.

Class A Amplifier Push-Pull:

TRIODE CONNECTED (Pins 1 and 6 Strapped):

Heater Voltage	6·0 volts
Anode Voltage	250 volts
Grid Voltage	—7·25 volts
Autobias Resistor (R_k)	75 ohms
Anode Current (no signal)	98 mA
Output Load (anode-anode) (R_a)	5000 ohms
Peak AF Grid Voltage (grid-grid)	29·4 volts
Total Harmonic Distortion	1·6%
Power Output	1·7 watts

Note.—Values given are for two valves.

A curve (No. 307·255) shows the relation between power output, distortion and input signal voltage.

Class A Amplifier (Single Ended):

TETRODE CONNECTION:

Heater Voltage	6·0	6·0	6·0	6·0	volts
Anode Voltage	250	250	300	300	volts
Screen Voltage	225	225	225	225	volts*
Grid Voltage	—6·25	—	—7·4	—	volts
Autobias Resistor	—	120	—	175	ohms
Anode Current	45	45	40	40	mA
Screen Current	3·7	3·9	2·3	2·4	mA
Anode Impedance (r_a)	38000	—	65000	—	ohms
Mutual Conductance	6·8	—	6·3	—	mA/V
Anode Load Resistance	5500	5500	8500	8500	ohms
Peak AF Grid Voltage	6·1	6·2	6·8	7·3	volts
Harmonic Distortion Total	5·1	5·6	7·0	7·6	%
Power Output	2·85	2·8	4·0	4·15	watts

* The screen voltage, where lower than the anode voltage, should be obtained from a potentiometer across the HT line to chassis adequately by-passed to AF signals, and not by means of a series resistance.

Curves are attached to this report which show the relation between power output, distortion and input signal voltage. Curve No. 307·242 at anode volts 250, screen volts 225 and fixed bias, Curve No. 307·243 for autobias. Similarly curves Nos. 307·244 and 307·245 for an anode voltage of 300 volts.

Class A Amplifier (Push-Pull):

TETRODE CONNECTION:

Heater Voltage	6·0	6·0	6·0	volts
Anode Voltage	250	250	300	volts
Screen Voltage	225	225	225	volts
Grid Voltage	—6·25	—	—	volts
Autobias Resistor	—	68	68	ohms
Peak AF (grid-grid) Voltage	12·5	14	13·75	volts
No Signal Anode Current	88	84	86·5	mA
Max. Signal Anode Current	89	84·5	85	mA
No Signal Screen Current	7·2	6·9	5·6	mA
Max. Signal Screen Current	18	18	14·6	mA
Load Resistance (anode-anode)	11500	11500	11500	ohms
Total Harmonic Distortion	3·9	4·2	4·2	%
Power Output	6·2	6·7	7·5	watts

Note.—Values given are for two valves.

Curves are attached to this report showing the relation between power output, distortion and input signal voltage. Curve No. 307·246 at anode volts 250, screen volts 225, and fixed bias and curve No. 307·247 for autobias. Curve No. 307·248 shows the performance at anode volts 300.

Class AB1 Amplifier (Push-Pull):

TETRODE CONNECTION:

Heater Voltage	6·0	6·0	6·0	6·0	volts
Anode Voltage	250	250	300	300	volts
Screen Voltage	225	225	225	225	volts
Grid Voltage	—9	—	—9	—	volts
Autobias Resistor	—	150	—	150	ohms
Peak AF (grid-grid) Voltage	18	21·5	18·5	21	volts
No Signal Anode Current	58	56	59	57	mA
Max. Signal Anode Current	67	56	70	57	mA
No Signal Screen Current	3·8	3·7	3·0	2·8	mA
Max. Signal Screen Current	18	16·4	17·2	14·5	mA
Load Resistance (anode-anode)	11500	11500	13500	13500	ohms
Total Harmonic Distortion	4·2	3·5	5·1	4·4	%
Power Output	7·8	7·2	9·8	8·8	watts

Note.—Values given are for two valves.

Curves are attached to this report which show the relation between power output, distortion and input signal voltage for the above conditions. Curves Nos. 307·249 and 307·250 for an anode voltage of 250 volts, and fixed and autobias respectively. Curves Nos. 307·251 and 307·252 for an anode voltage of 300 volts and fixed and autobias respectively.

Class AB2 Amplifier (Push-Pull):

TETRODE CONNECTION:

Heater Voltage	6·0 volts
Anode Voltage	300 volts
Screen Voltage	225 volts
Grid Voltage	—12·5 volts
Peak AF (grid-grid) Voltage	71 volts
No Signal Anode Current	27 mA
Max. Signal Anode Current	140 mA
No Signal Screen Current	1·2 mA
Max. Signal Screen Current	18 mA
Peak Grid Input Power	0·8 watts
Load Resistance (anode-anode)	4500 ohms
Total Harmonic Distortion	9·6 %
Power Output	25 watts

Note.—Values given are for two valves.

It is essential for Class AB2 operation that the regulation of the anode and screen supplies is such that the voltages remain constant within 5% and that of the grid bias within 3% between no signal and maximum signal conditions.

The driver stage should be capable of supplying the grids of the two valves with the specified peak voltages with low distortion. The effective resistance per grid circuit presented by the driver valve and/or transformer should not exceed 500 ohms and the effective impedance represented by leakage inductance or equivalent at the highest desired response frequency should not exceed 700 ohms.

Curve No. 307·253 attached to this report shows the relation between power output, distortion and input signal voltages for the above conditions.

General Recommendations—Audio Frequencies: Due to the relatively high slope of this valve, it is prone to parasitic oscillation and it is advised that a resistance of 100 ohms is always wired in series with the anode directly connected to the valve holder anode contact; this resistance should be reduced to 47 ohms in the case of Class AB2 operation. A series grid resistance may also be employed, if necessary, wired directly to the valve holder grid contact, but the value must be carefully chosen bearing in mind the frequency response. Such resistance should never exceed 100,000 ohms for Class A operation and should not be employed for Class AB2 operation.

The type of input coupling used should not introduce too much resistance into the grid circuit. It is essential that such resistance does not exceed 100,000 ohms.

TYPICAL OPERATION (Radio Frequencies)

RF POWER AMPLIFIER AND OSCILLATOR:

Class C Telegraphy or Class C FM Telephony

Maximum Continuous Ratings (Absolute Values)

D.C. Anode Voltage (max.)	300 volts
D.C. Grid 3 Voltage (max.)	0 volts
D.C. Grid 2 Voltage (max.)	250 volts
D.C. Grid 1 Voltage (max.)	—125 volts
D.C. Anode Current (max.)	50 mA
D.C. Grid 2 Current (max.)	15 mA
D.C. Grid 1 Current (max.)	5 mA
D.C. Anode Input (max.)	15 watts
D.C. Anode Dissipation (max.)	12 watts
D.C. Grid 2 Input (max.)	2 watts
Bulb Temperature at hottest point on the surface (max.)	250° C.

Typical Operation at 50 Mc/s:

D.C. Anode Voltage	300 volts
D.C. Grid 2 Voltage	250 volts
D.C. Grid 1 Voltage	—60 volts
D.C. Grid 1 Resistor	22,000 ohms
Peak RF Grid Voltage	80 volts
D.C. Anode Current	50 mA
D.C. Grid 2 Current	5 mA
D.C. Grid 1 Current (approx.)	3 mA
Driving Power (approx.)	0·35 watts
Power Output (neglecting output tuned circuit loss)	8 watts

FREQUENCY MULTIPLIER:

Maximum Continuous Ratings (Absolute Values)

Without Modulation:

D.C. Anode Voltage (max.)	300 volts
D.C. Grid 3 Voltage (max.)	0 volts
D.C. Grid 2 Voltage (max.)	250 volts
D.C. Grid 1 Voltage (max.)	—125 volts
D.C. Anode Current (max.)	50 mA
D.C. Grid 2 Current (max.)	15 mA
D.C. Grid 1 Current (max.)	5 mA
D.C. Anode Input	15 watts
D.C. Anode Dissipation	12 watts
D.C. Grid 2 Dissipation	2 watts
Bulb Temperature at hottest point on the surface (max.)	250° C.

Typical Operation:

	Doubler to 175 Mc/s	*Tripler to 175 Mc/s*	
D.C. Anode Voltage	300	300	volts
D.C. Grid 2 Supply Voltage	300	300	volts
Series Grid 2 Resistor	12,500	12,500	ohms
D.C. Grid 1 Voltage	—75	—100	volts
D.C. Grid 1 Resistor	75,000	100,000	ohms
Peak RF Grid 1 Voltage	95	120	volts
D.C. Anode Current	40	35	mA
D.C. Grid 2 Current	4	5	mA
D.C. Grid 1 Current (approx.)	1	1	mA
Driving Power (approx.)	0·6	0·6	watts
Power Output (neglecting output tuned circuit loss)	3·6	2·8	watts

TYPICAL CIRCUIT DATA

The circuit (Ref. 307·51) shows a typical arrangement of a master oscillator-power amplifier employing a 6C4 to drive a 5763 at 50 Mc/s. Employing the values as shown the measured power output is 7 watts with an anode current of 49 mA, screen current of 5 mA and a grid drive of 3·5 mA.

The circuit also shows the amendments when the 5763 is used as a frequency doubler to 100 Mc/s but in this case the output would be utilised to drive a succeeding stage and is, therefore, given in terms of available grid drive for a succeeding stage. As a frequency doubler the available DC drive at 100 Mc/s into an input of 15 pF and 25,000 ohms is 6 mA, with an anode current of 40 mA, screen current of 4 mA and grid drive of 1·4 mA.

Similarly amendments are shown when the 5763 is used as a frequency trebler to 150 Mc/s, and again the output is quoted in terms of available grid drive. As a frequency trebler the available DC drive at 150 Mc/s into an input of 10 pF and 25,000 ohms is 5 mA; with an anode current of 38 mA, screen current of 4·3 mA and grid drive of 1·8 mA.

GENERAL RECOMMENDATIONS (Radio Frequencies)

Due to the relatively high slope of this valve it is prone to parasitic oscillation and it is advised that when necessary a small resistor of 47 ohms or less is wired in series with the anode directly connected to the anode valve holder contact. The total effective grid circuit resistance at maximum conditions should not exceed 100,000 ohms and the DC grid current should at no time exceed 5 mA.

Attention is particularly drawn to the paragraph concerning frequency ratings on page 2. It is not recommended that it is used as a power amplifier at frequencies above 135 Mc/s because the input drive required increases due to the high frequency input loading; this of course does not apply as a frequency multiplier. Because of the relatively larger high frequency currents carried by the grid and anode contacts, heavy gauge conductors should be employed for wiring but these should be sufficiently flexible so as not to destroy the float of the contacts or misplace the contacts.

In order that the control grid does not run too hot it is essential that both No. 1 grid valve holder contacts (pins 8 and 9) are wired into the external circuit. When employed as an RF amplifier, neutralisation may not be necessary. If any screening is employed particular regard should be paid to ventilation, see page 3, and the shield should be matt black finished inside and out and have ventilation slots provided.

As a Class C amplifier bias may be obtained from a fixed supply or by grid rectification; in order to provide safety in the event of loss of drive, a minimum bias of —3 volts is adequate, and this value is furnished by a 68 ohm cathode resistor.

The grid driving power will depend on the anode load; if the anode load is relatively low the desired output can be obtained with relatively low grid current, but the efficiency will be lower; conversely if the anode load is high, the grid drive must be increased with correspondingly higher anode efficiency.

The highest efficiency will be obtained when the load conditions are such that the maximum rated anode current flows at the anode voltage which will give maximum rated input.

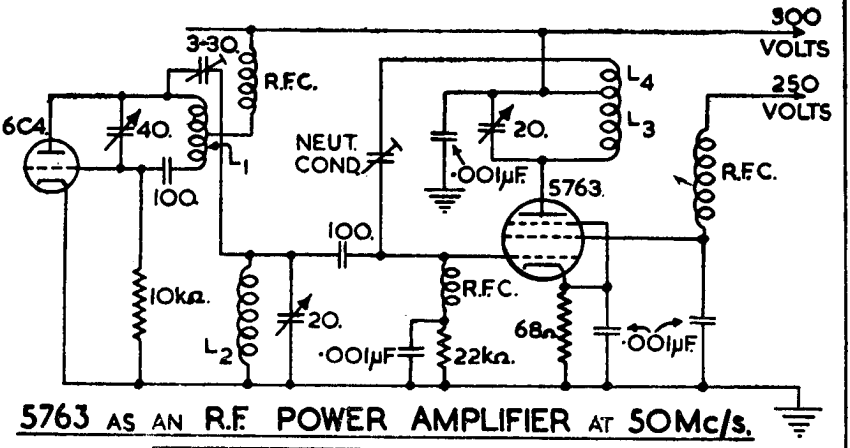
In order to allow of range of adjustment and provide for losses, more grid driving power should be available than is indicated in the data; particularly is this so towards the maximum frequency.

When more power is required than can be furnished by one valve, push pull or parallel arrangements may be used, but care should be exercised that the anode current drawn by each valve is the same.

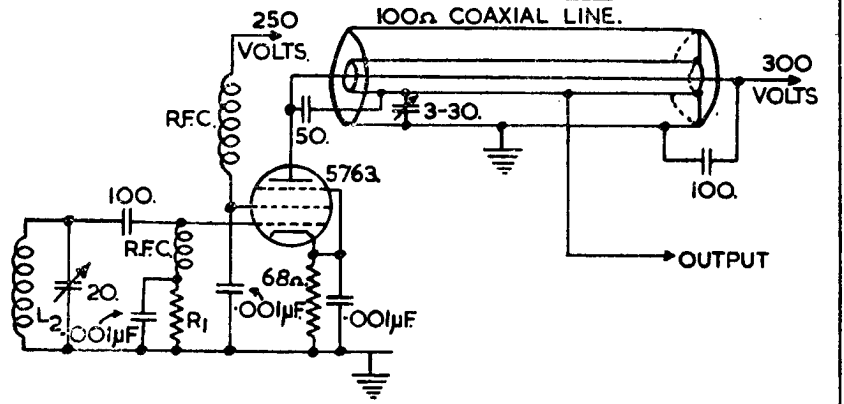
When the valve is used in Aircraft Transmitters at high altitudes danger of flash over between the anode and suppressor grid g3 is reduced by the removal of the socket clip (pin 2) between the connection to pins 1 and 3 of the valve holder.

When used as an oscillator the heater to cathode insulation should not be across any part of the oscillator tuned circuit, as this will give rise to frequency drift and hum modulation. The valve may be used in an electron coupled oscillator circuit if the heater voltage is supplied via RF chokes, or via a winding interwound with the part of the coil associated with the cathode tap.

Cathode keying should not be employed unless a resistor not exceeding 0·25 megohms is permanently wired between heater and cathode. Keying by opening the screen circuit alone should not be employed since the anode current may not be completely cut off by disconnection of the screen. Further if the valve is operated near its maximum ratings there may be sufficient screen emission to maintain the screen voltage during the "key up" periods and prevent the use of "break-in" facilities. If it is necessary to interrupt the anode current by "open circuiting" the screen supply, the lowest practicable resistance should be permanently connected between the screen and cathode.



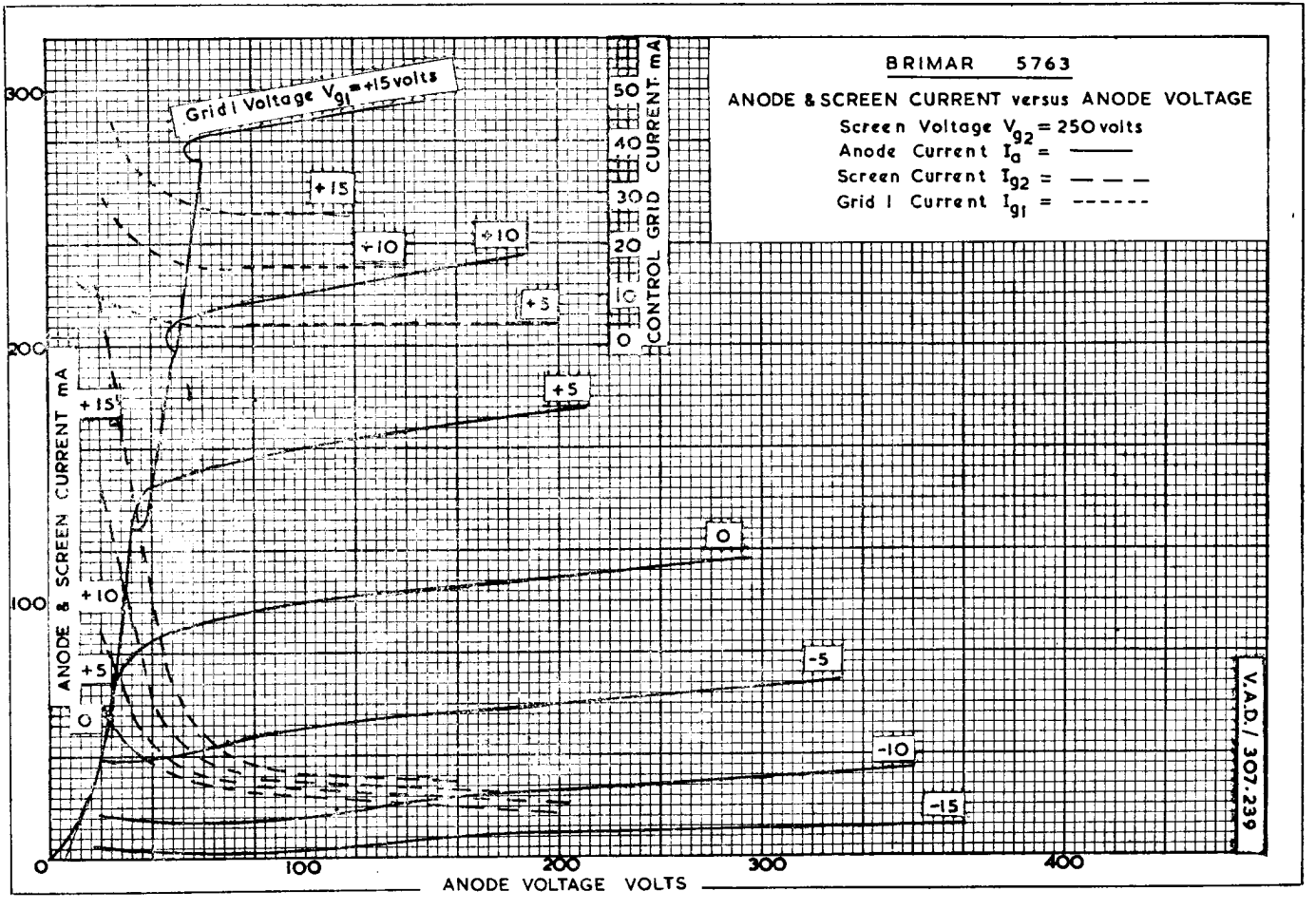
5763 AS AN R.F. POWER AMPLIFIER AT 50Mc/s.

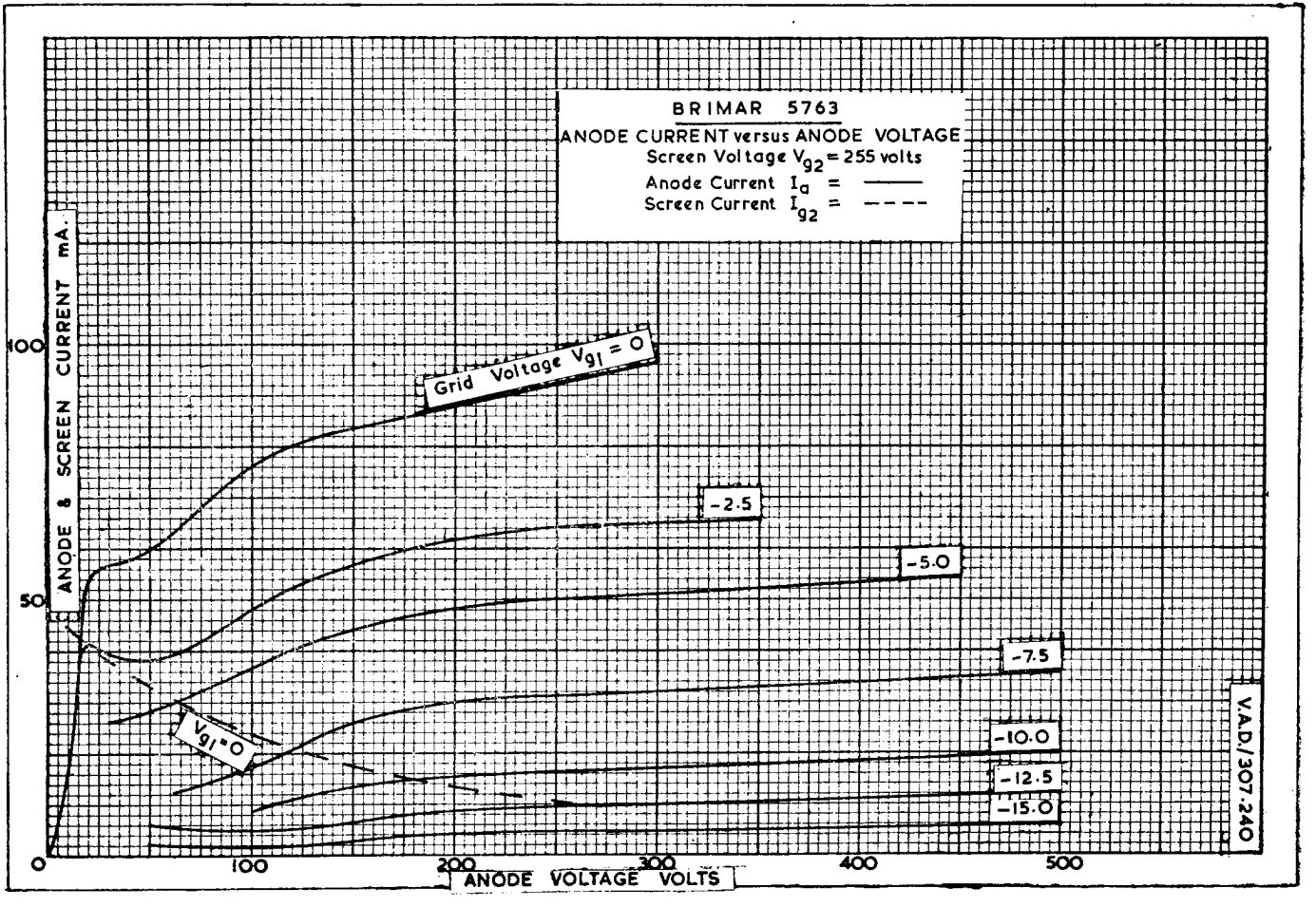


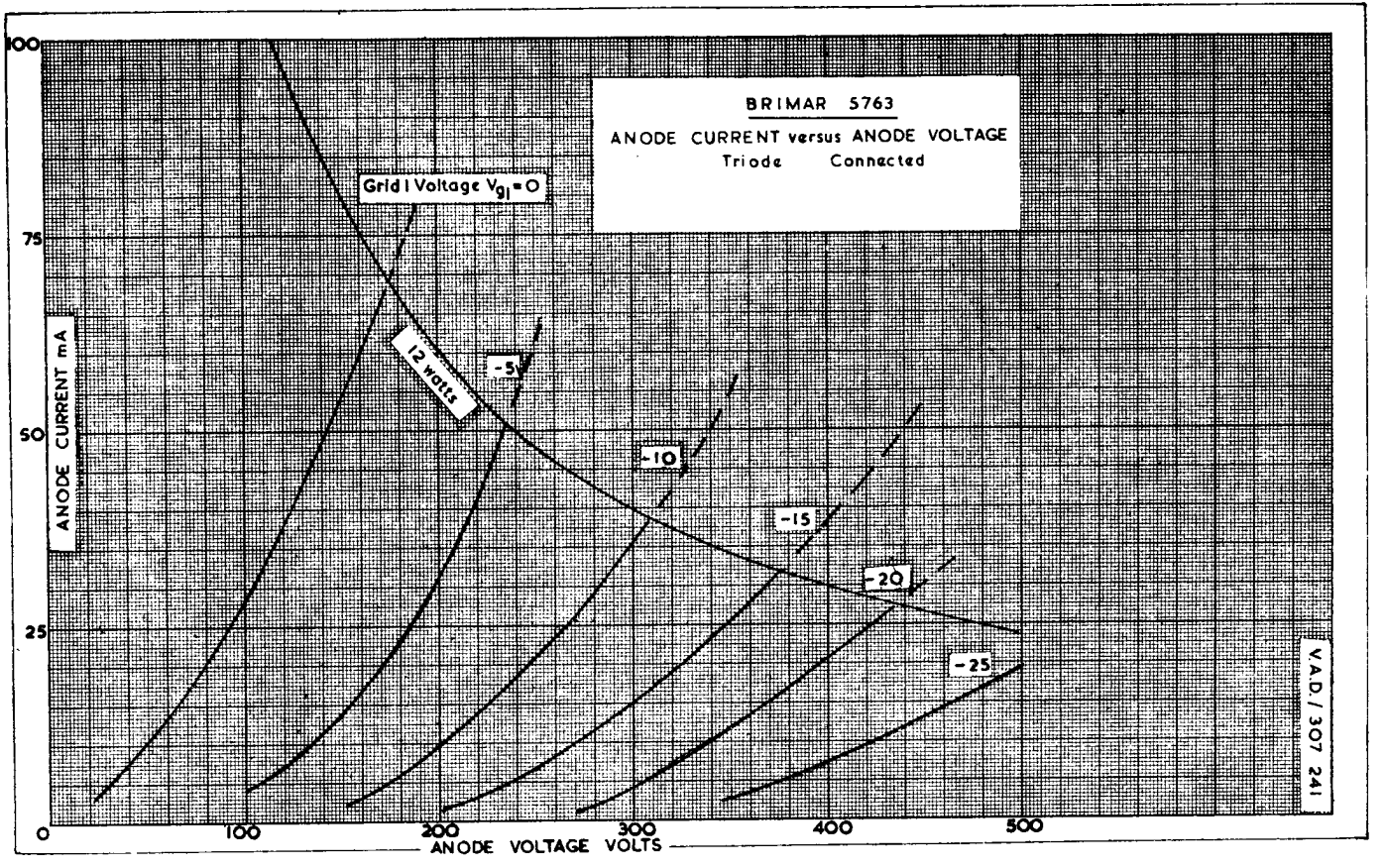
5763 AS A FREQUENCY MULTIPIER.

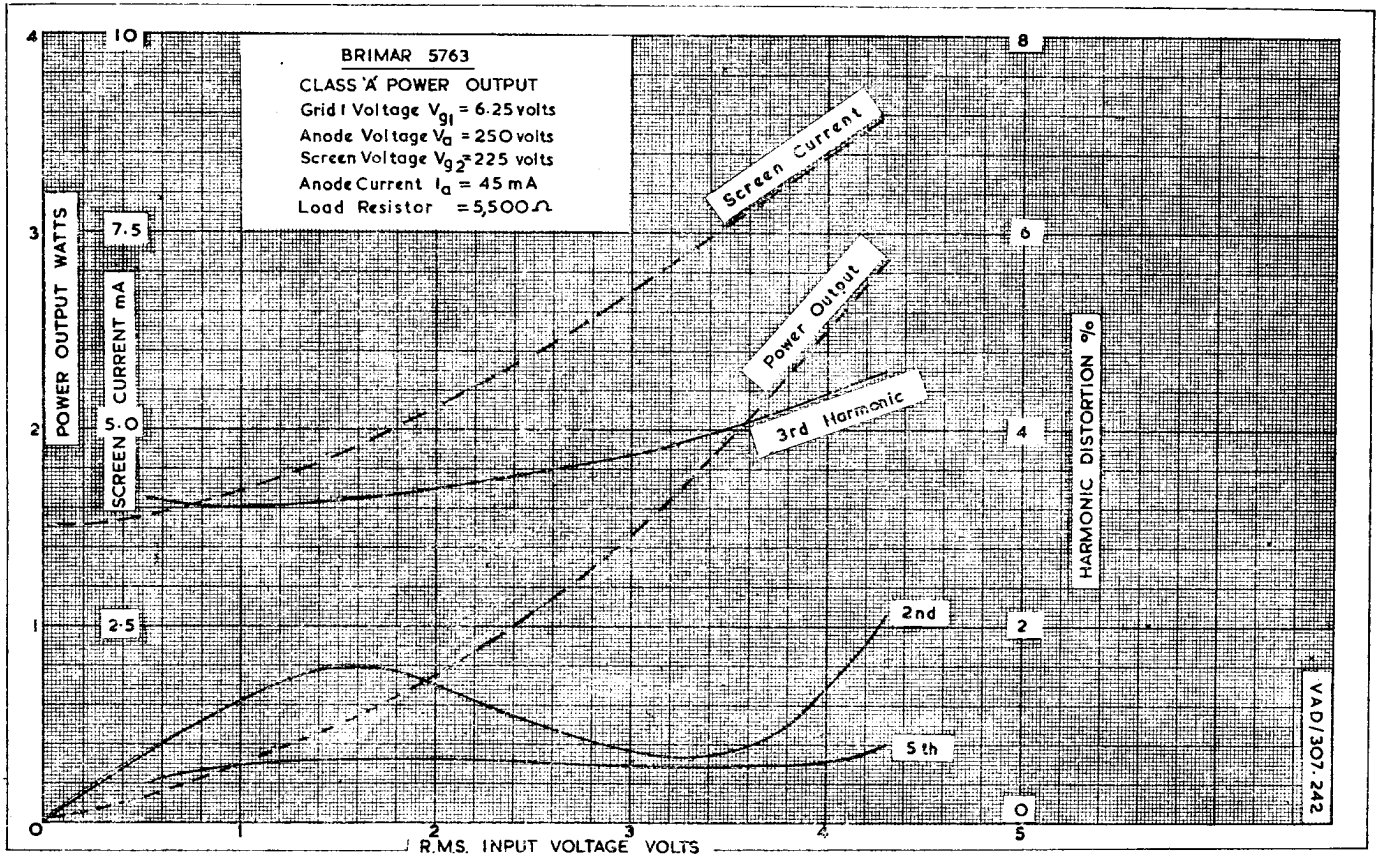
DOUBLER to 100Mc/s R_1 = 75kΩ.
TREBLER to 150Mc/s R_1 = 100kΩ.

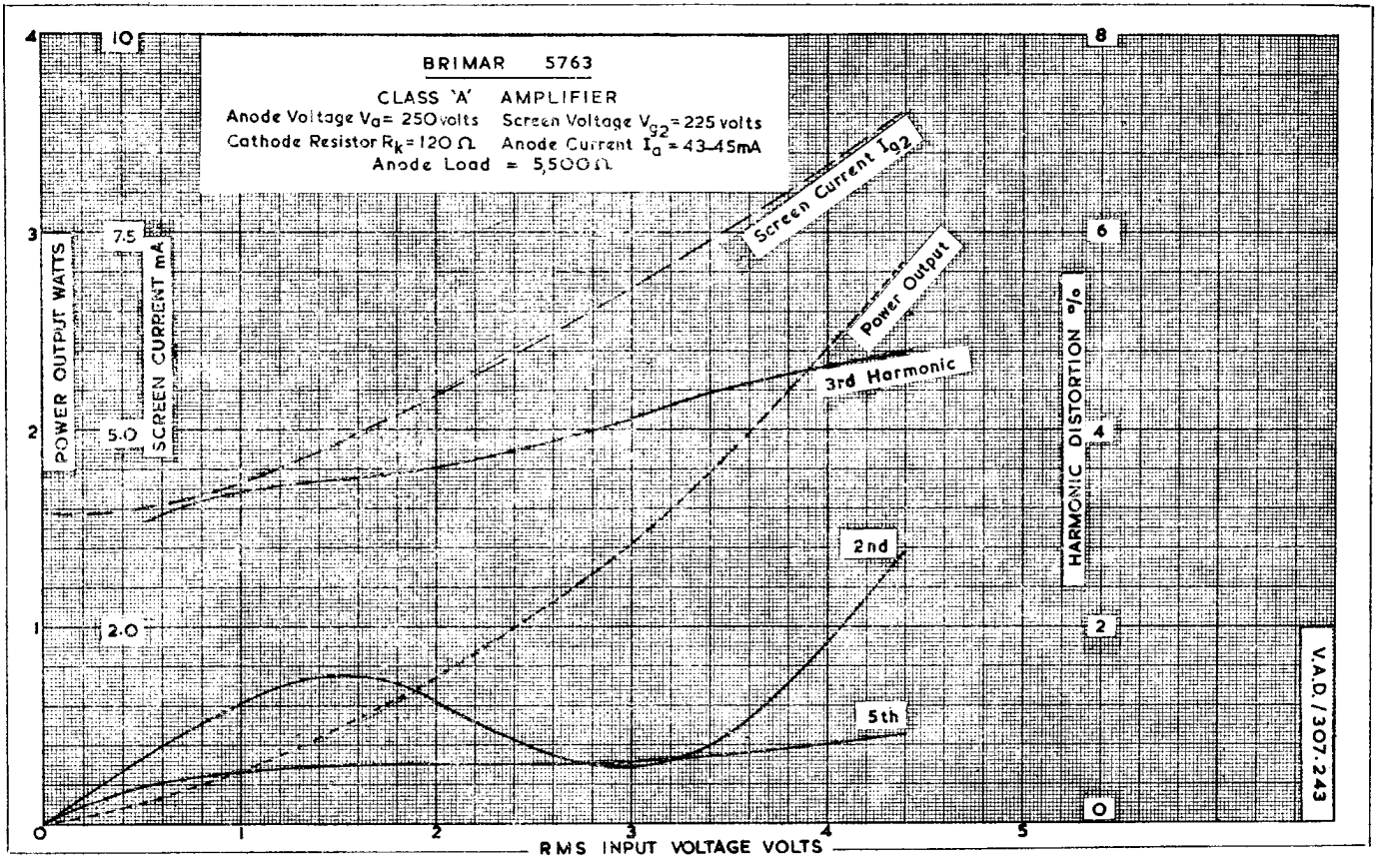
NOTE :- ALL CONDENSER VALUES IN pF UNLESS OTHERWISE SHOWN.

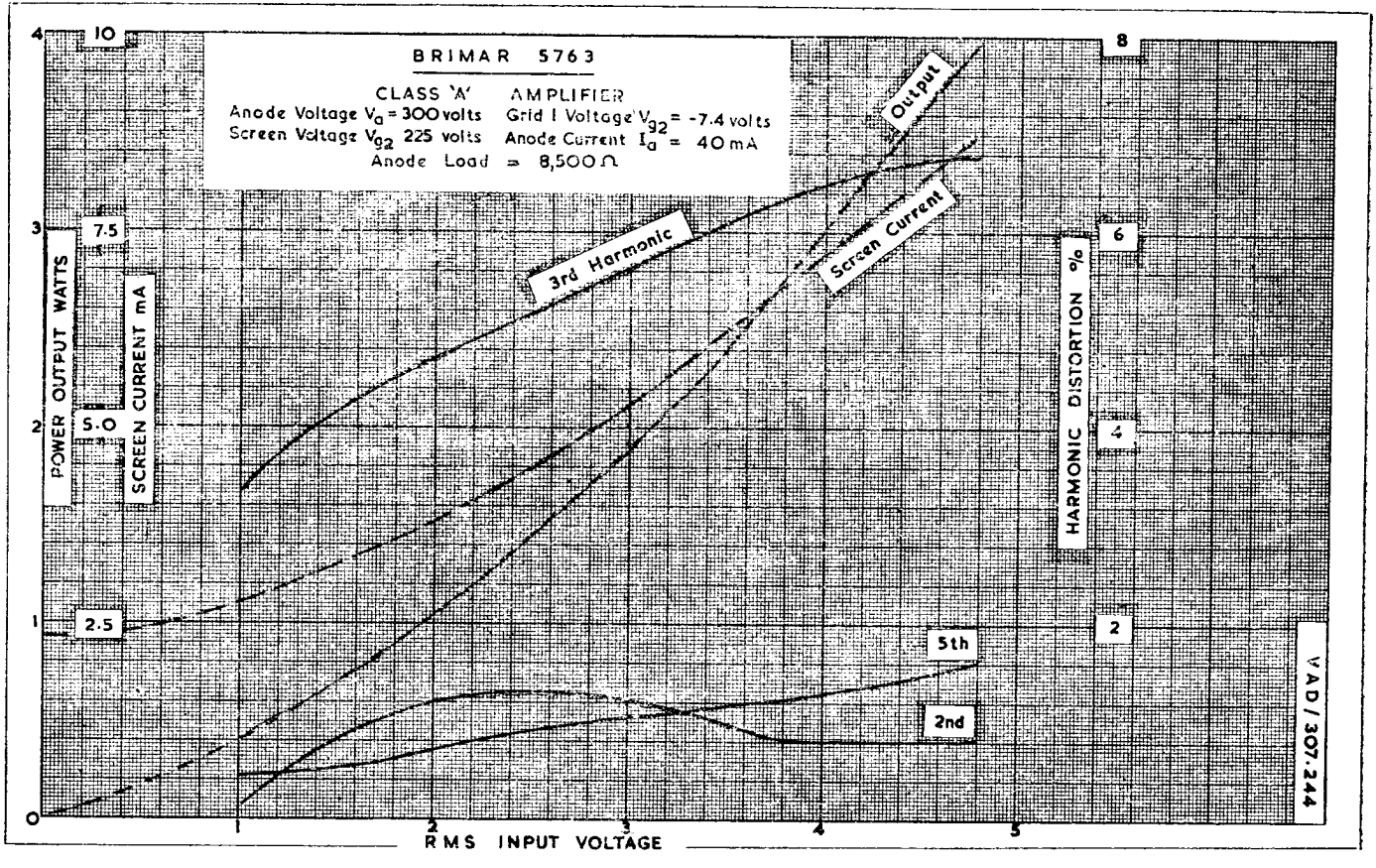

BRIMAR 5763
ANODE & SCREEN CURRENT versus ANODE VOLTAGE
Screen Voltage V_{g2} = 250 volts
Anode Current I_a = ———
Screen Current I_{g2} = — — —
Grid 1 Current I_{g1} = ------
Grid 1 Voltage V_{g1} = +15 volts
+15
+10
+10
+5
+5
0
-5
-10
-15
ANODE & SCREEN CURRENT mA
CONTROL GRID CURRENT mA
ANODE VOLTAGE VOLTS
0
100
200
300
400
V.A.D./307.239

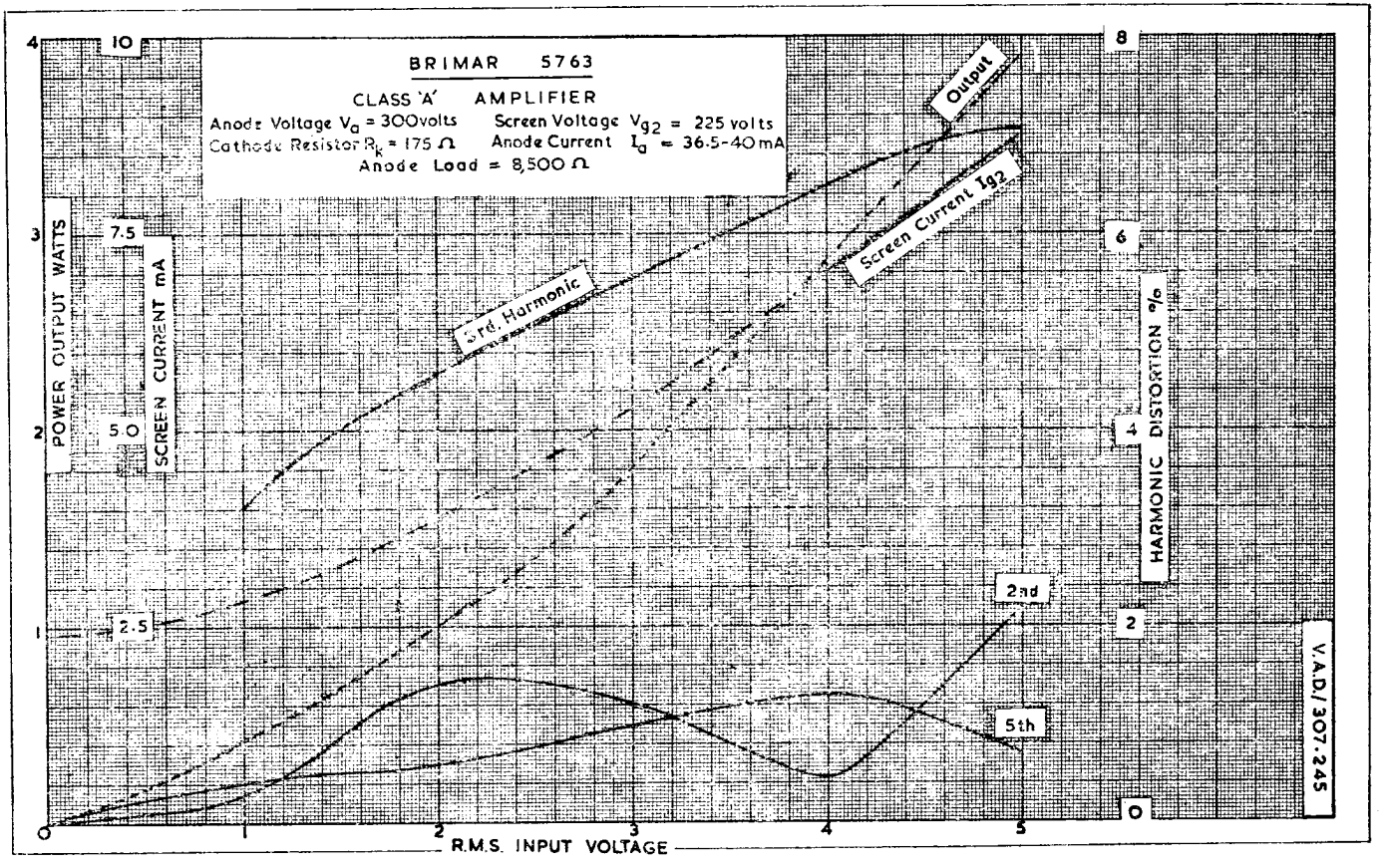

BRIMAR 5763
ANODE CURRENT versus ANODE VOLTAGE
Screen Voltage V_{g2} = 255 volts
Anode Current I_a = ———
Screen Current I_{g2} = – – – –
ANODE & SCREEN CURRENT mA.
100
50
0
Grid Voltage V_{g1} = 0
-2.5
-5.0
-7.5
-10.0
-12.5
-15.0
V_{g1} = 0
100
200
300
400
500
ANODE VOLTAGE VOLTS
V.A.D./307.240

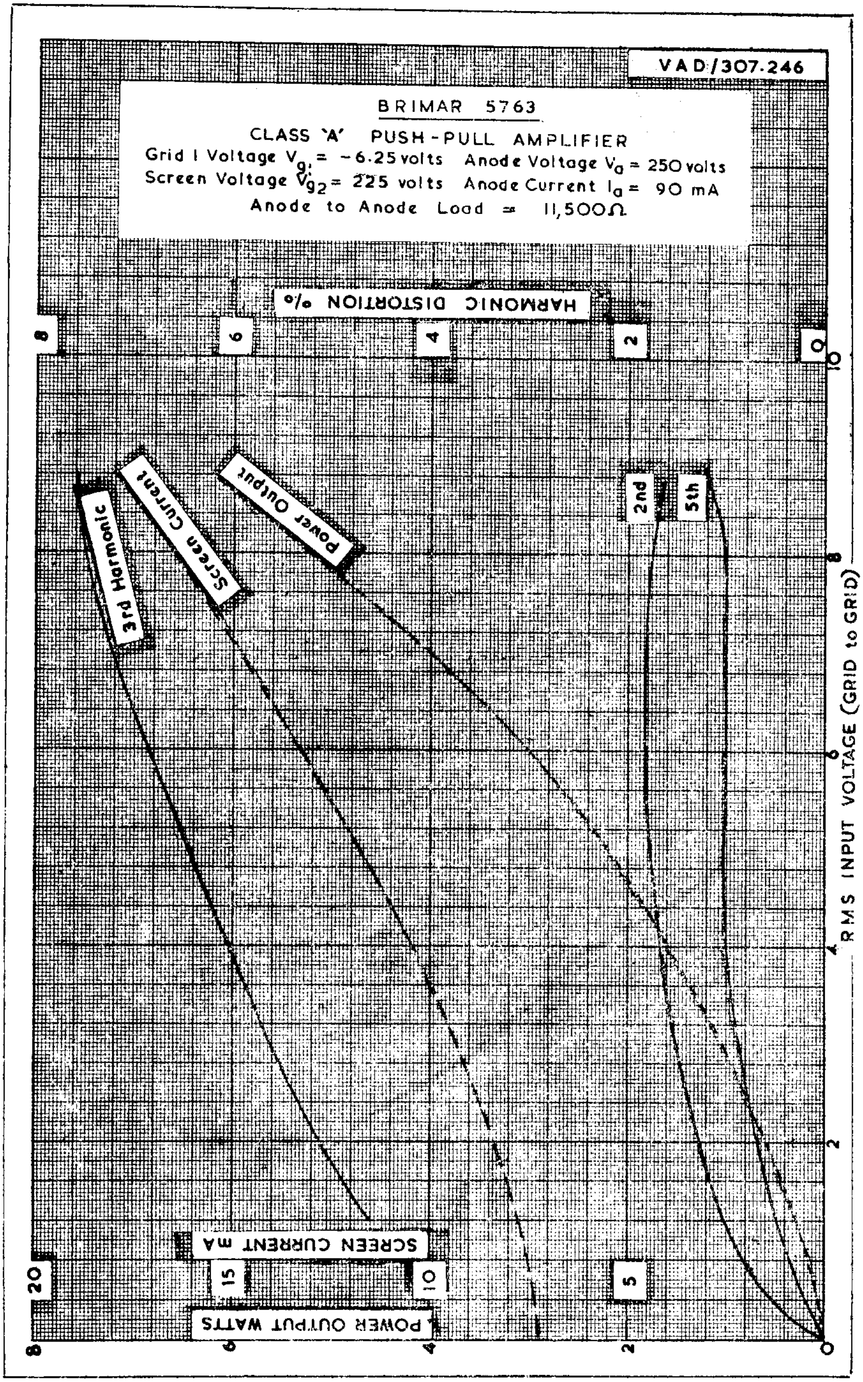

BRIMAR 5763
ANODE CURRENT versus ANODE VOLTAGE
Triode Connected
Grid 1 Voltage V_{g1} = 0
12 watts
-5
-10
-15
-20
-25
ANODE CURRENT mA
ANODE VOLTAGE VOLTS
0
25
50
75
100
100
200
300
400
500
V.A.D./307 241

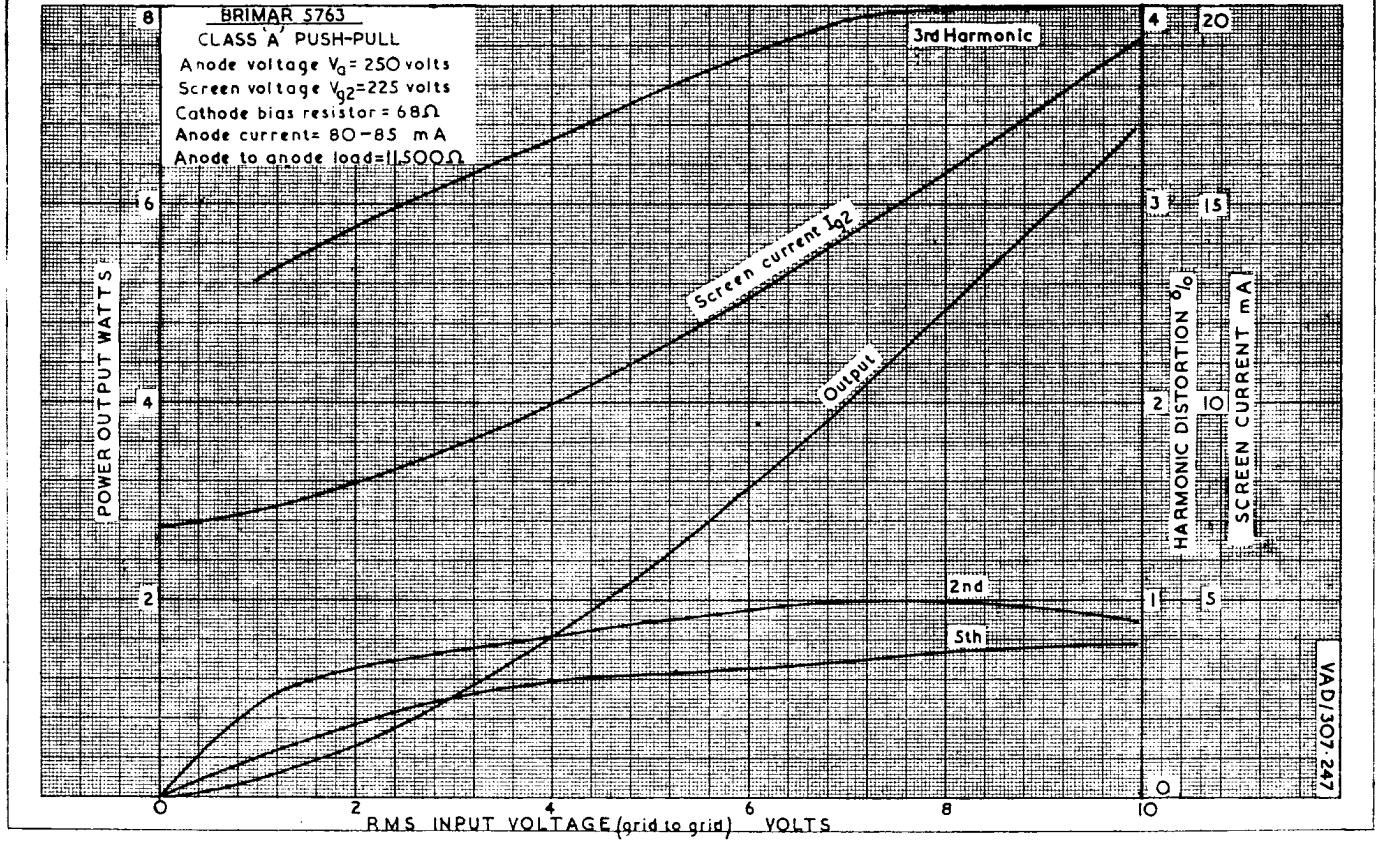

BRIMAR 5763
CLASS 'A' POWER OUTPUT
Grid 1 Voltage V_{g1} = 6.25 volts
Anode Voltage V_a = 250 volts
Screen Voltage V_{g2} = 225 volts
Anode Current I_a = 45 mA
Load Resistor = 5,500 Ω
Screen Current
Power Output
3rd Harmonic
2nd
5th
POWER OUTPUT WATTS
SCREEN CURRENT mA
HARMONIC DISTORTION %
R.M.S. INPUT VOLTAGE VOLTS
10
8
7.5
6
5.0
4
2.5
2
0
1
2
3
4
5
VAD/307.242

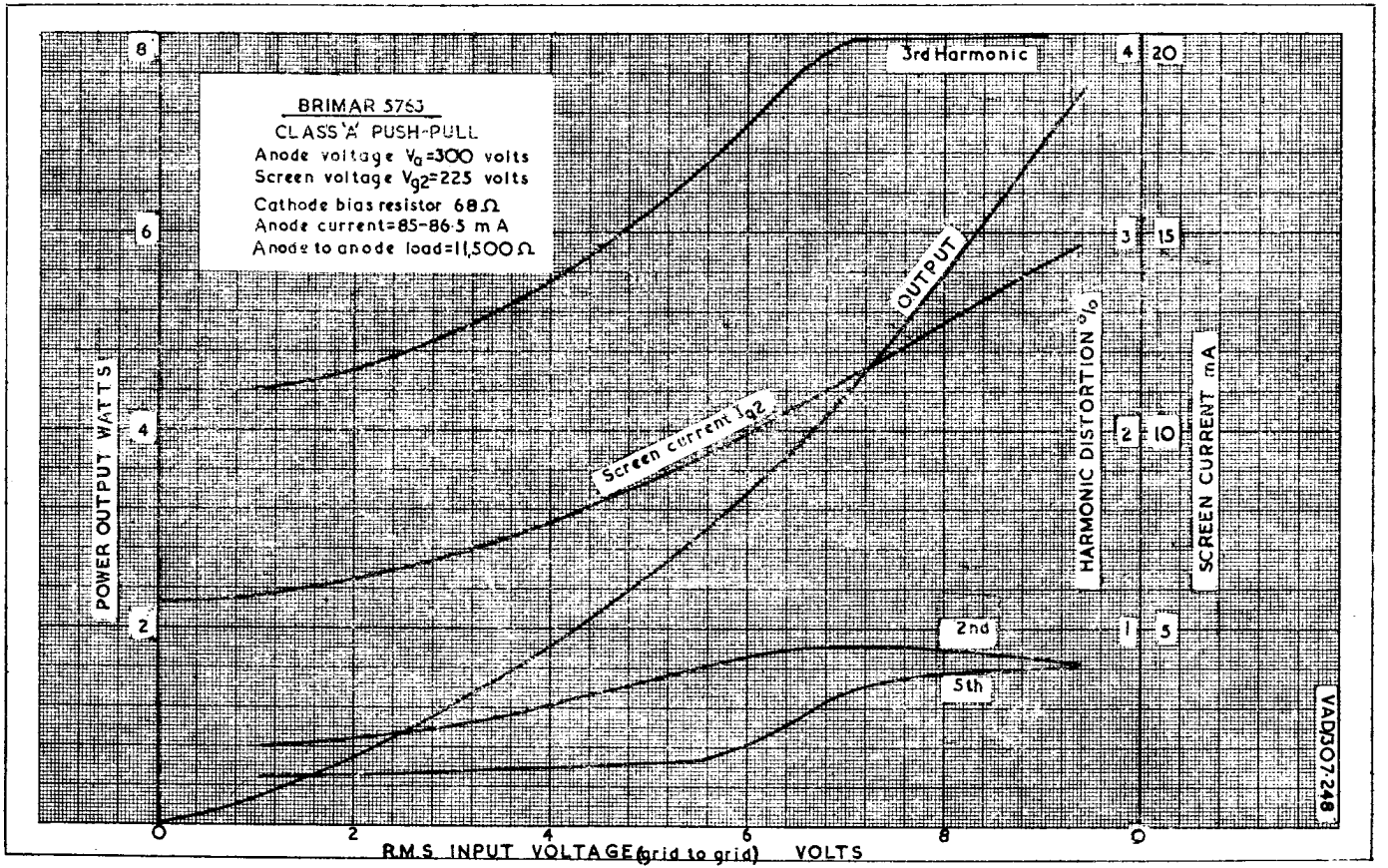

BRIMAR 5763
CLASS 'A' AMPLIFIER
Anode Voltage V_a = 250 volts
Screen Voltage V_{g2} = 225 volts
Cathode Resistor R_k = 120 Ω
Anode Current I_a = 43-45mA
Anode Load = 5,500Ω
POWER OUTPUT WATTS
SCREEN CURRENT mA
HARMONIC DISTORTION %
RMS INPUT VOLTAGE VOLTS
Screen Current I_{g2}
Power Output
3rd Harmonic
2nd
5th
7.5
5.0
2.0
V.A.D./307.243

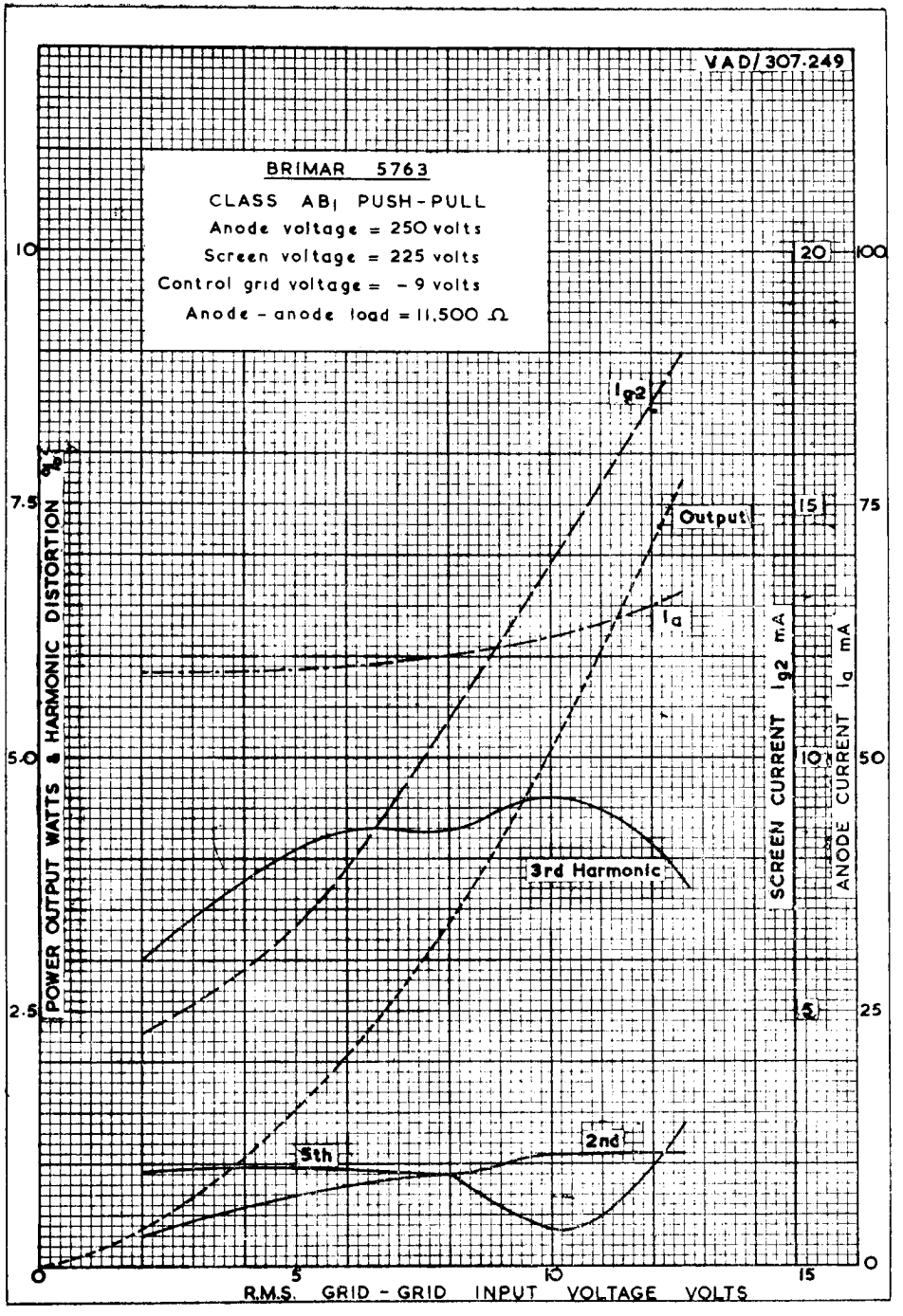

BRIMAR 5763
CLASS 'A' AMPLIFIER
Anode Voltage V_a = 300 volts
Grid 1 Voltage V_{g2} = -7.4 volts
Screen Voltage V_{g2} 225 volts
Anode Current I_a = 40 mA
Anode Load = 8,500 Ω
POWER OUTPUT WATTS
SCREEN CURRENT mA
HARMONIC DISTORTION %
Output
3rd Harmonic
Screen Current
5th
2nd
RMS INPUT VOLTAGE
VAD/307.244

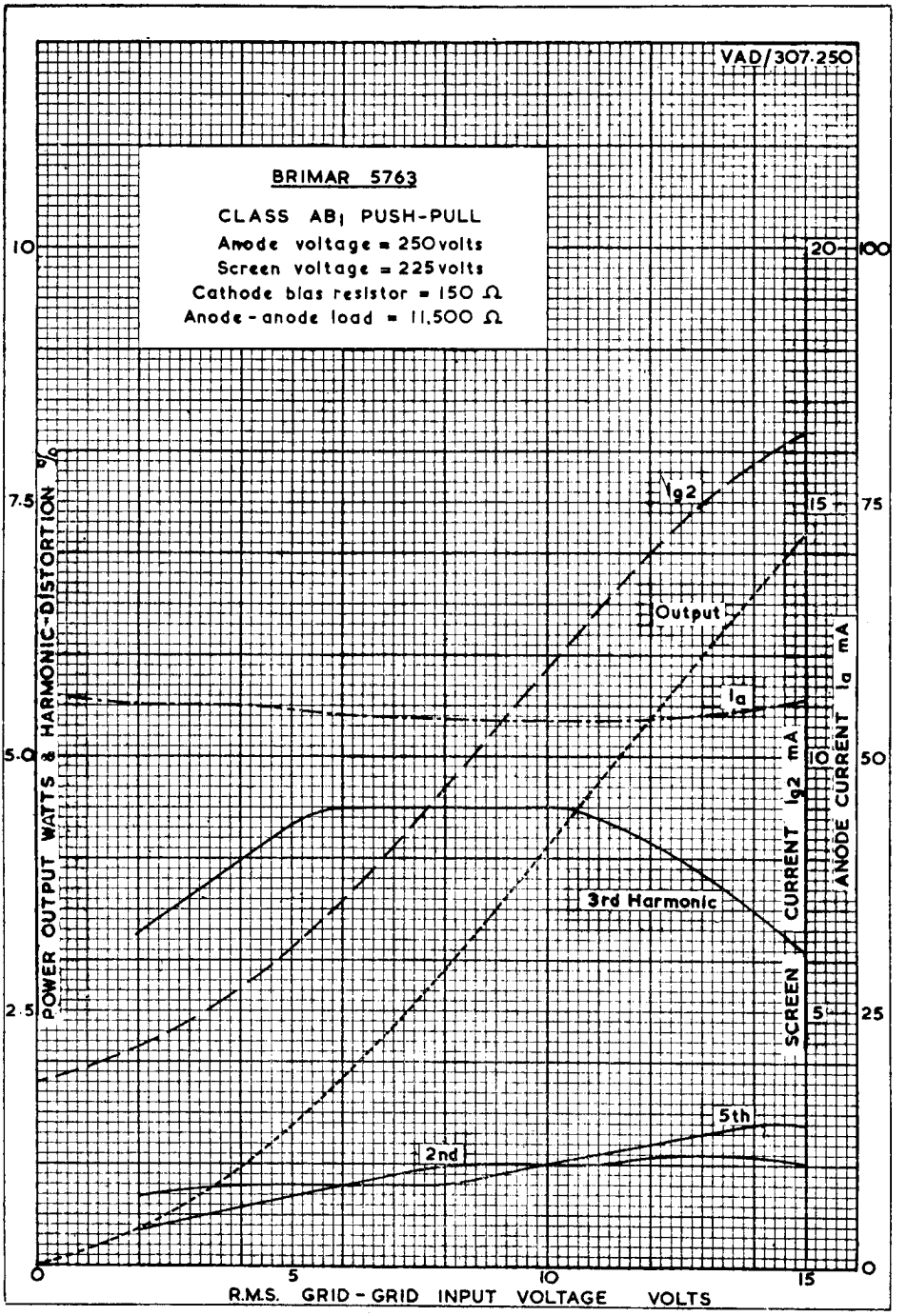

BRIMAR 5763
CLASS 'A' AMPLIFIER
Anode Voltage V_a = 300volts
Screen Voltage V_{g2} = 225 volts
Cathode Resistor R_k = 175 Ω
Anode Current I_a = 36·5-40mA
Anode Load = 8,500 Ω
Output
Screen Current Ig_2
3rd Harmonic
2nd
5th
POWER OUTPUT WATTS
SCREEN CURRENT mA
HARMONIC DISTORTION %
R.M.S. INPUT VOLTAGE
7.5
5.0
2.5
V.A.D./307·245

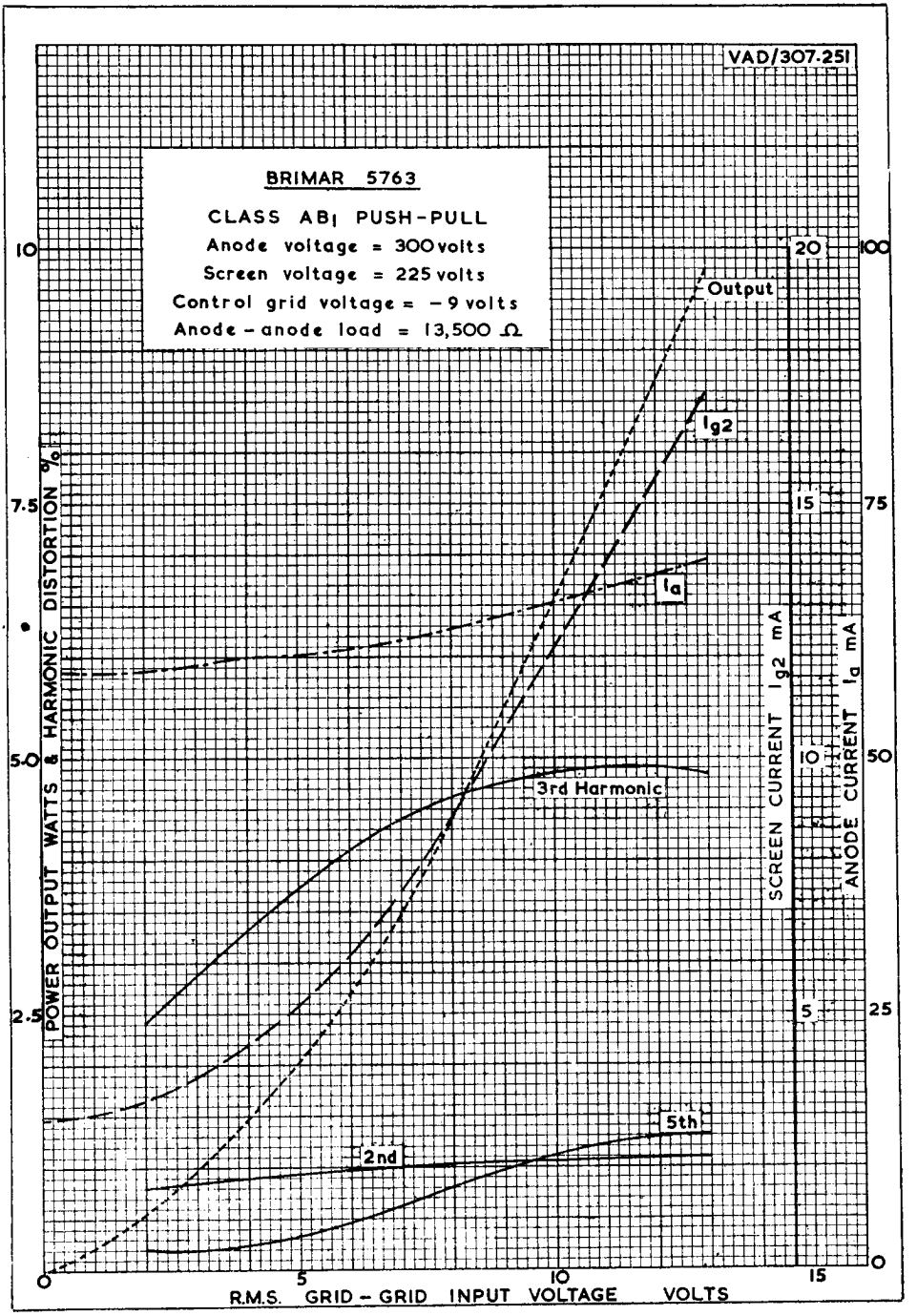

VAD/307-246
BRIMAR 5763
CLASS 'A' PUSH-PULL AMPLIFIER
Grid I Voltage V_{g_1} = −6.25 volts Anode Voltage V_a = 250 volts
Screen Voltage V_{g_2} = 225 volts Anode Current I_a = 90 mA
Anode to Anode Load = 11,500Ω
HARMONIC DISTORTION %
8
6
4
2
0
3rd Harmonic
Screen Current
Power Output
2nd
5th
RMS INPUT VOLTAGE (GRID to GRID)
10
8
6
4
2
0
SCREEN CURRENT mA
20
15
10
5
POWER OUTPUT WATTS
8
6
4
2
0

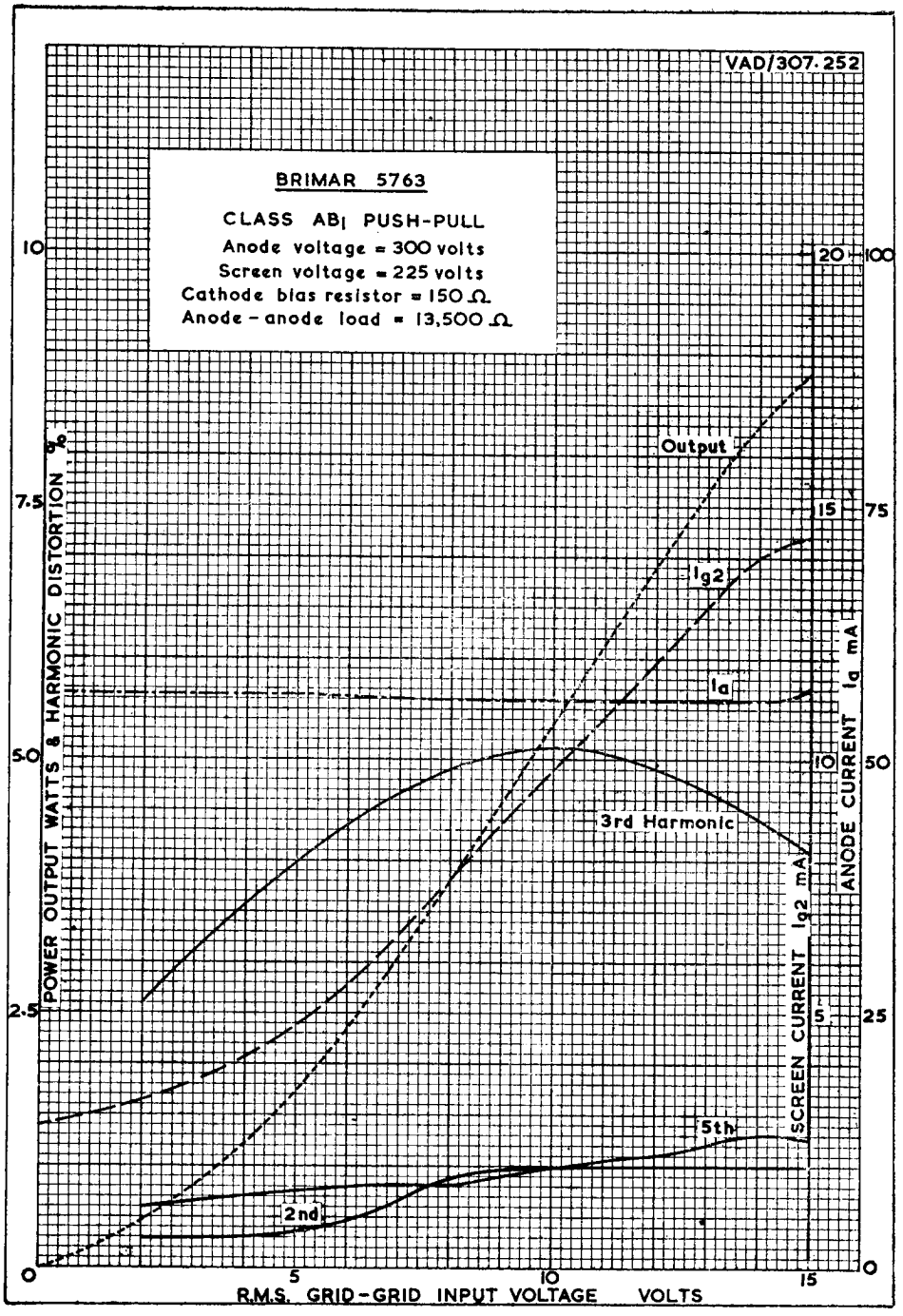

BRIMAR 5763
CLASS 'A' PUSH-PULL
Anode voltage V_a = 250 volts
Screen voltage V_{g2} = 225 volts
Cathode bias resistor = 68Ω
Anode current = 80–85 mA
Anode to anode load = 11500Ω
3rd Harmonic
Screen current I_{g2}
Output
2nd
5th
POWER OUTPUT WATTS
HARMONIC DISTORTION %
SCREEN CURRENT mA
RMS INPUT VOLTAGE (grid to grid) VOLTS
0
2
4
6
8
10
20
15
5
VAD/307.247

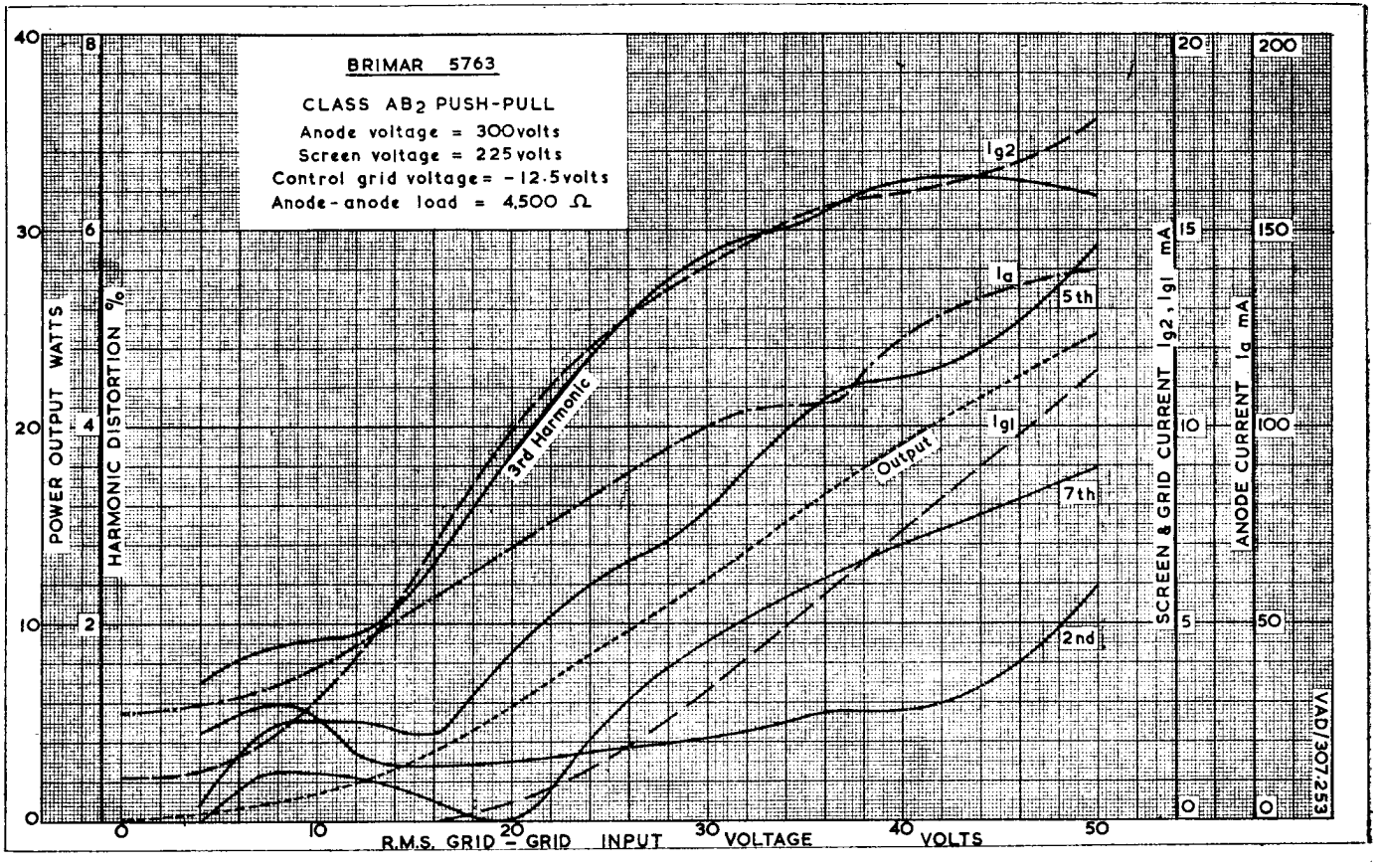

BRIMAR 5763
CLASS 'A' PUSH-PULL
Anode voltage V_a=300 volts
Screen voltage V_{g2}=225 volts
Cathode bias resistor 68Ω
Anode current=85-86·5 m A
Anode to anode load=11,500Ω
3rd Harmonic
OUTPUT
Screen current Ig2
2nd
5th
POWER OUTPUT WATTS
HARMONIC DISTORTION %
SCREEN CURRENT mA
R.M.S. INPUT VOLTAGE (grid to grid) VOLTS
0
2
4
6
8
10
15
20
VAD072/48

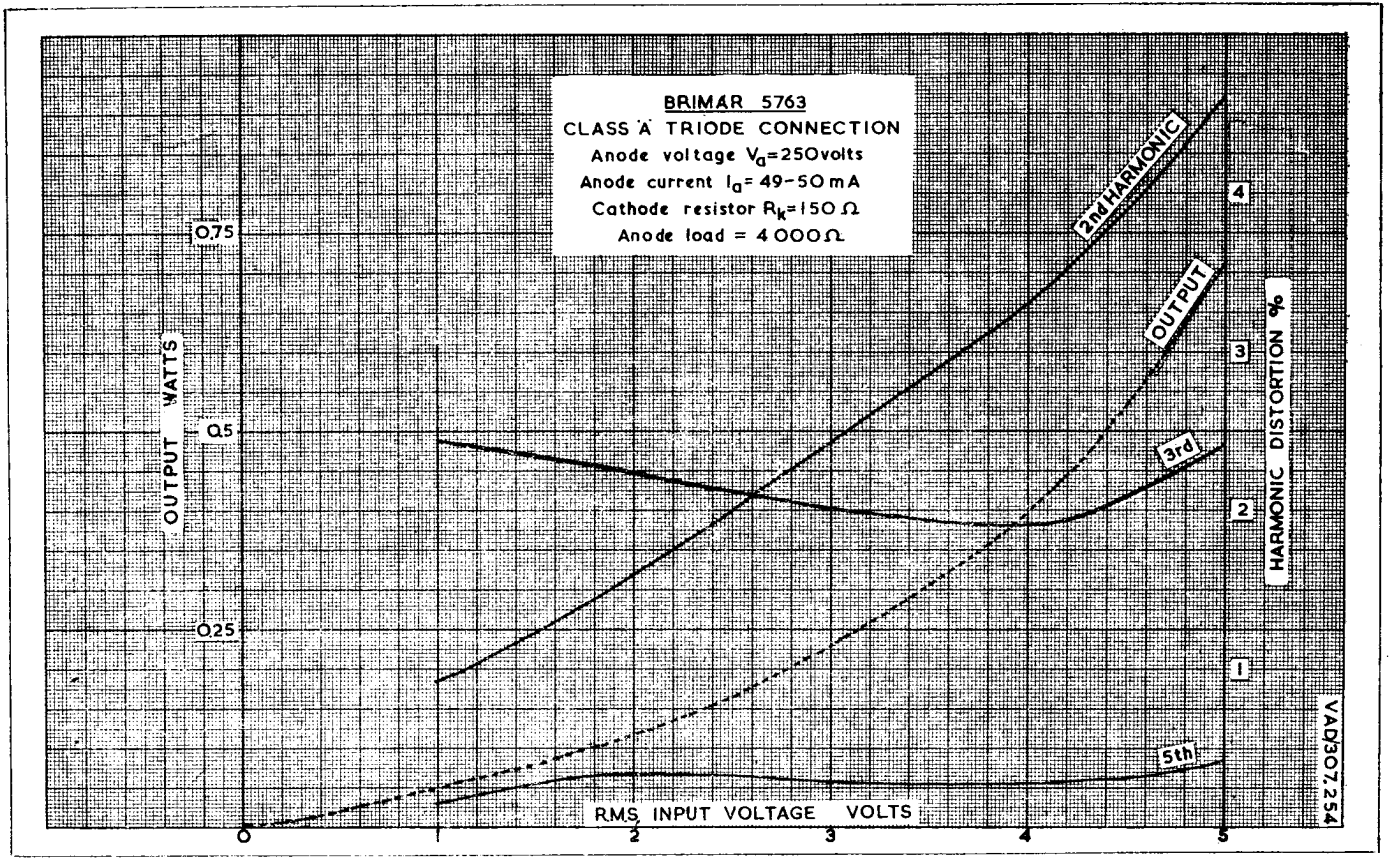

VAD/307.249
BRIMAR 5763
CLASS AB1 PUSH-PULL
Anode voltage = 250 volts
Screen voltage = 225 volts
Control grid voltage = - 9 volts
Anode - anode load = 11,500 Ω
Ig2
Output
Ia
3rd Harmonic
5th
2nd
POWER OUTPUT WATTS & HARMONIC DISTORTION %
SCREEN CURRENT Ig2 mA
ANODE CURRENT Ia mA
R.M.S. GRID - GRID INPUT VOLTAGE VOLTS
0
5
10
15
2.5
5.0
7.5
10
20
5
10
15
25
50
75
100

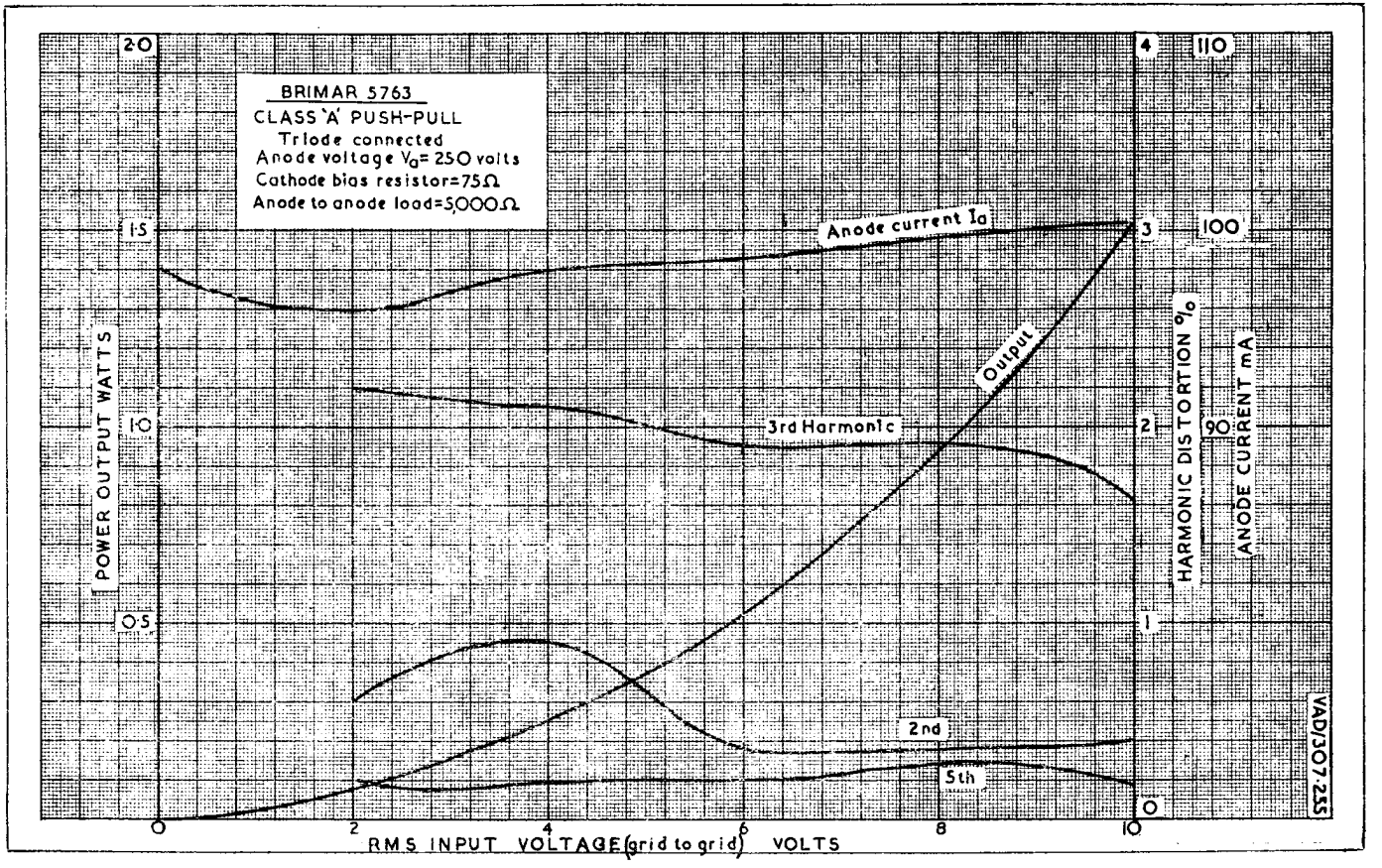

VAD/307.250
BRIMAR 5763
CLASS AB1 PUSH-PULL
Anode voltage = 250 volts
Screen voltage = 225 volts
Cathode bias resistor = 150 Ω
Anode-anode load = 11,500 Ω
POWER OUTPUT WATTS & HARMONIC-DISTORTION %
ANODE CURRENT Ia mA
SCREEN CURRENT Ig2 mA
R.M.S. GRID-GRID INPUT VOLTAGE VOLTS
Ig2
Output
Ia
3rd Harmonic
5th
2nd
10
7.5
5.0
2.5
0
20
15
10
5
0
100
75
50
25
0
5
10
15


VAD/307.251
BRIMAR 5763
CLASS AB1 PUSH-PULL
Anode voltage = 300 volts
Screen voltage = 225 volts
Control grid voltage = −9 volts
Anode - anode load = 13,500 Ω
Output
Ig2
Ia
3rd Harmonic
5th
2nd
POWER OUTPUT WATTS & HARMONIC DISTORTION %
SCREEN CURRENT Ig2 mA
ANODE CURRENT Ia mA
R.M.S. GRID - GRID INPUT VOLTAGE VOLTS
0
2.5
5.0
7.5
10
5
10
15
20
0
25
50
75
100


VAD/307.252
BRIMAR 5763
CLASS AB1 PUSH-PULL
Anode voltage = 300 volts
Screen voltage = 225 volts
Cathode bias resistor = 150 Ω
Anode - anode load = 13,500 Ω
Output
Ig2
Ia
3rd Harmonic
5th
2nd
POWER OUTPUT WATTS & HARMONIC DISTORTION %
SCREEN CURRENT Ig2 mA
ANODE CURRENT Ia mA
R.M.S. GRID-GRID INPUT VOLTAGE VOLTS
0
2.5
5.0
7.5
10
5
10
15
20
25
50
75
100


BRIMAR 5763
CLASS AB2 PUSH-PULL
Anode voltage = 300volts
Screen voltage = 225volts
Control grid voltage = -12.5volts
Anode-anode load = 4,500 Ω
POWER OUTPUT WATTS
HARMONIC DISTORTION %
SCREEN & GRID CURRENT Ig2, Ig1 mA
ANODE CURRENT Ia mA
R.M.S. GRID - GRID INPUT VOLTAGE VOLTS
Ig2
Ia
5th
Ig1
3rd Harmonic
Output
7th
2nd
VAD 307.253


BRIMAR 5763
CLASS A TRIODE CONNECTION
Anode voltage V_a=250volts
Anode current I_a= 49-50 mA
Cathode resistor R_k=150 Ω
Anode load = 4 000 Ω
OUTPUT WATTS
0.75
0.5
0.25
0
HARMONIC DISTORTION %
4
3
2
1
2nd HARMONIC
OUTPUT
3rd
5th
RMS INPUT VOLTAGE VOLTS
1
2
3
4
5
VAD307.254


BRIMAR 5763
CLASS 'A' PUSH-PULL
Triode connected
Anode voltage V_a= 250 volts
Cathode bias resistor=75Ω
Anode to anode load=5,000Ω
Anode current Ia
Output
3rd Harmonic
2nd
5th
POWER OUTPUT WATTS
HARMONIC DISTORTION %
ANODE CURRENT mA
RMS INPUT VOLTAGE (grid to grid) VOLTS
20
15
10
0·5
4
3
2
1
0
110
100
90
0
2
4
6
8
10
VADJ307-255