

# POWER TRIODE

# MZ2-200

Directly-heated power triode rated for a maximum anode dissipation of 275 watts, and primarily intended for use as a low frequency power valve or as a modulator in transmitting equipment.

This data sheet should be read in conjunction with "Operating Notes, Part I—Power Valves" included in this volume of the Handbook.

**CATHODE** Oxide coated, for use on a.c. or d.c.

$V_f$	14.0	V
$I_f$	2.2	A

## CAPACITANCES

$C_{g-f}$	16.0	$\mu\mu\text{F}$
$C_{a-f}$	5.6	$\mu\mu\text{F}$
$C_{a-g}$	16.2	$\mu\mu\text{F}$

**CHARACTERISTICS** At  $V_a = 2.0$  kV;  $I_a = 180$  mA.

$g_m$	7.2	mA/V
$\mu$	15	
$r_a$	2,085	$\Omega$

## LIMITING VALUES

$V_a$ max.	2.4	kV
$P_a$ max.	275	W
$I_k$ max.	400	mA
$I_g$ max.	40	mA

**OPERATING CONDITIONS AS CLASS AB2 PUSH-PULL AMPLIFIER USING DIRECT-COUPLED CATHODE-FOLLOWER DRIVER STAGE WITH TWO EL37 PENTODES AS DRIVERS**

### Operating Conditions for Two MZ2-200

$V_a$	1.5	1.75	2.0	2.25	kV
$I_{a(o)}$	$2 \times 60$	$2 \times 60$	$2 \times 60$	$2 \times 60$	mA
$I_a$ (max. sig.)	$2 \times 363$	$2 \times 364$	$2 \times 363$	$2 \times 365$	mA
$I_g$	$2 \times 37.5$	$2 \times 36$	$2 \times 36$	$2 \times 36$	mA
$R_{a-b}$	4.7	5.65	6.6	7.6	k $\Omega$
$P_{out}$	746	897	1,048	1,213	W
$D_{tot}$	3.1	3.0	2.9	2.9	%

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### Corresponding Operating Conditions for Driver Stage (see circuit diagram)

$V_{b1}$	-375	-400	-425	-450	V
$V_{b2}$	350	350	350	350	V
$V_{g1}$	-136	-156	-176	-196	V
$I_{a(0)}$	$2 \times 19.5$	$2 \times 19.8$	$2 \times 20.5$	$2 \times 20.5$	mA
$I_a$ (max. sig.)	$2 \times 57$	$2 \times 56$	$2 \times 56.5$	$2 \times 56.5$	mA
$V_{In}$ (r.m.s.)	$2 \times 179$	$2 \times 192$	$2 \times 207$	$2 \times 223$	V

- Notes**—1.  $V_{In}$  for MZ2-200 is approximately  $0.9 \times V_{In}$  (driver).
2. The regulation of the power supply  $V_{b1}$  is not critical, and a capacitance input filter may be used.  $V_{b2}$  however, should have good regulation, preferably using a choke input filter.
3. With no signal input, the bias potentiometers should be adjusted to set the anode currents of the corresponding output valves at the specified no-signal values. The correct driver conditions will then be automatically secured by the specified values of components and supply voltages.

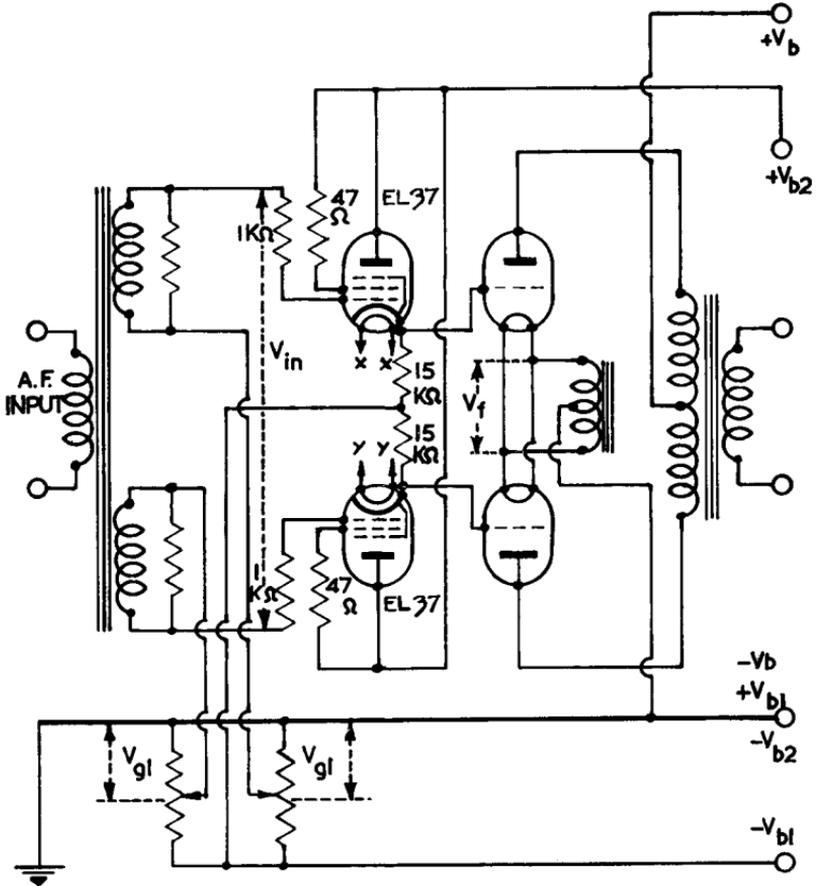
**WEIGHT** Valve only

{ 2 lb. 5 oz.  
1.04 kg.

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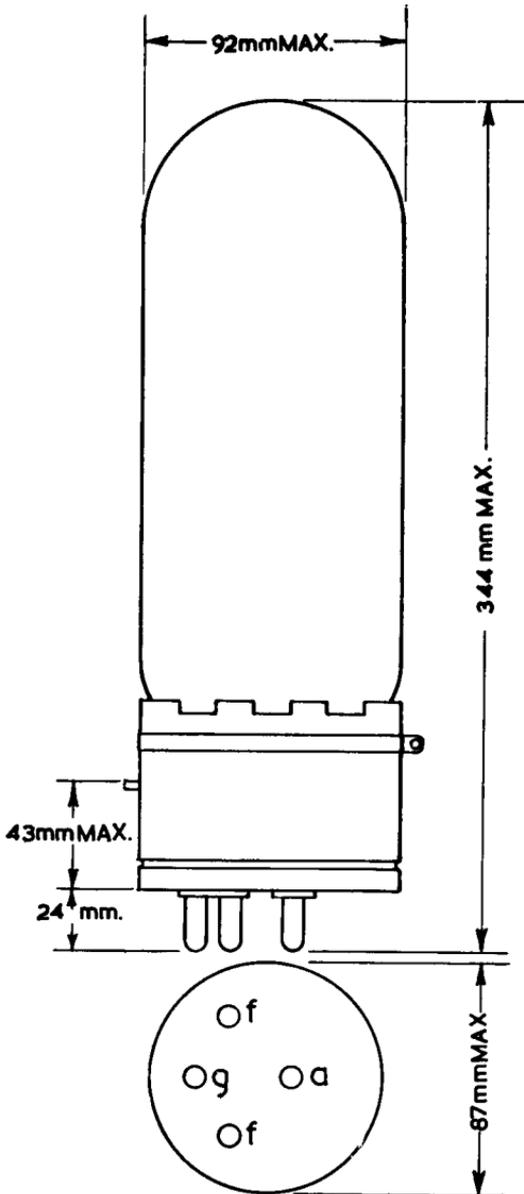
CIRCUIT DIAGRAM FOR  
OUTPUT STAGE WITH  
DIRECT-COUPLED DRIVER  
STAGE.

The heaters "x x" & "y y"  
must be supplied from  
separate windings on  
the mains transformer.

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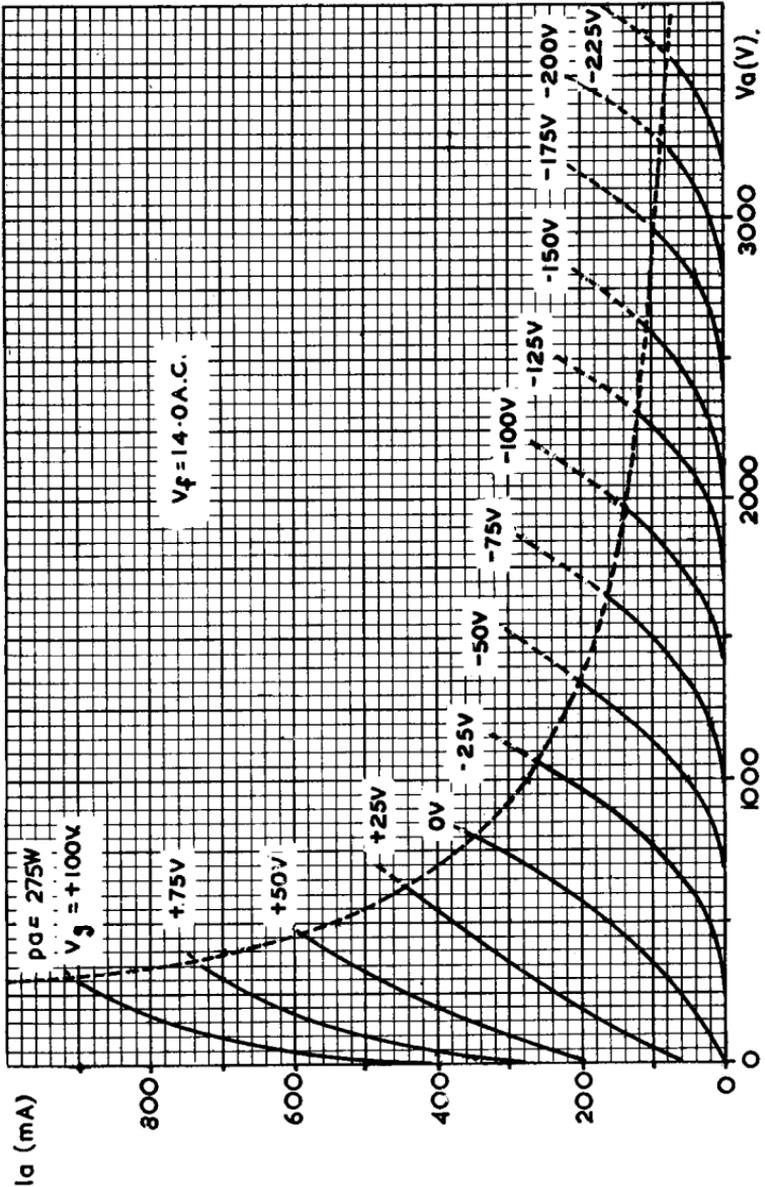


**BASE :** Large 4-pin bayonet base holder, Type MVH16, available from Mullard Ltd.

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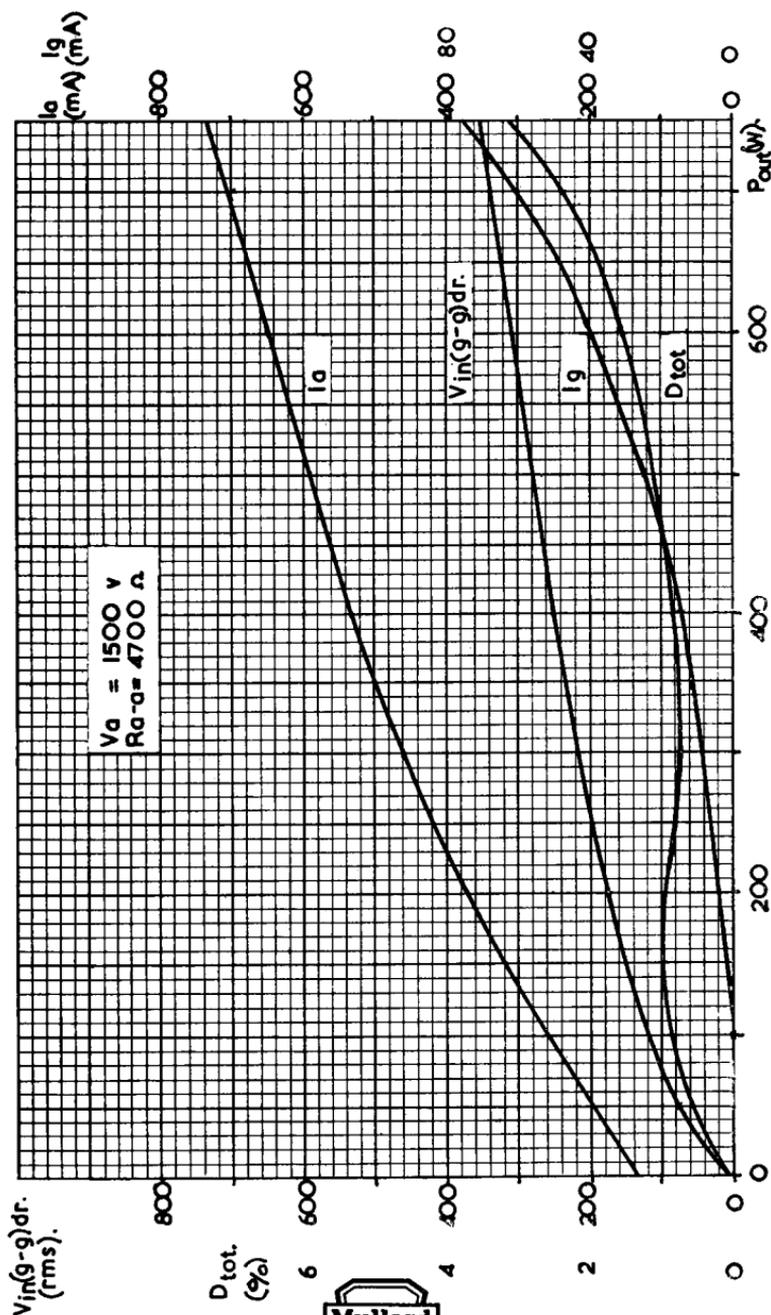
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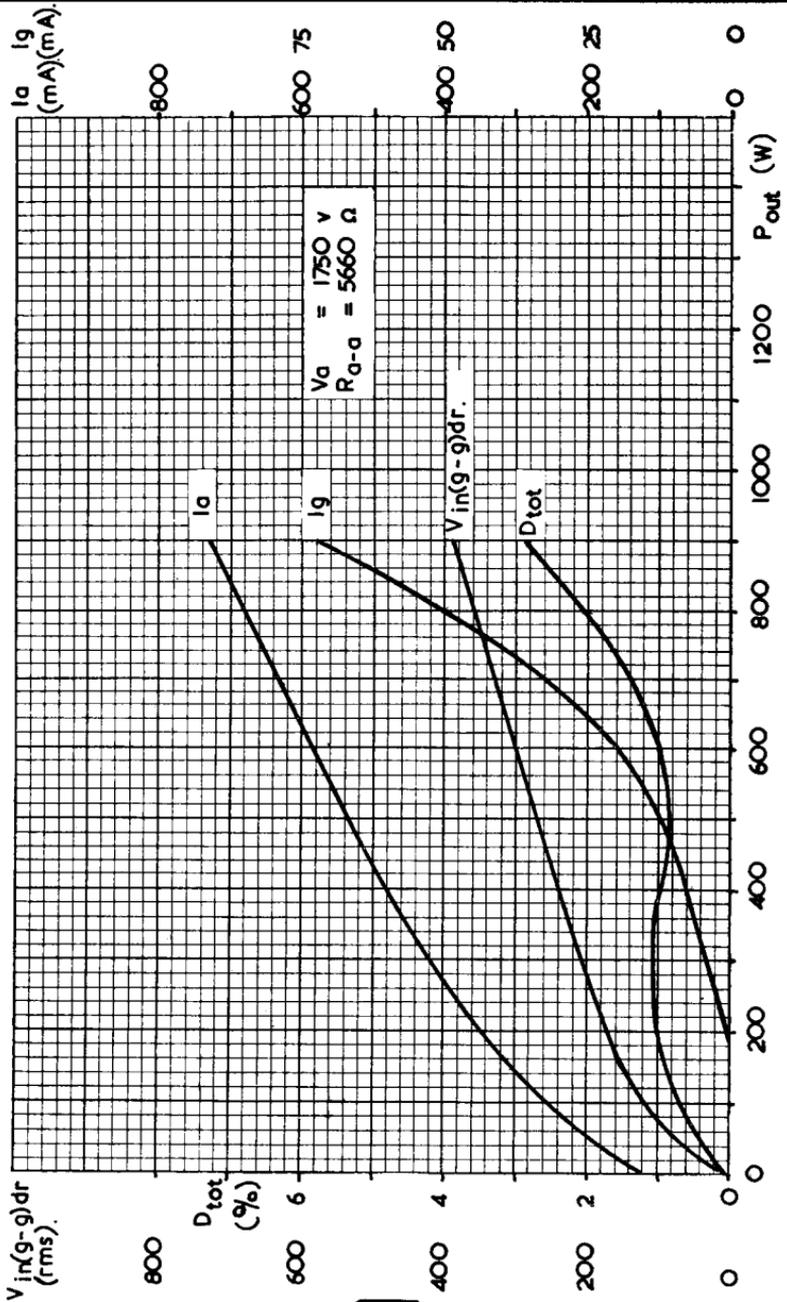
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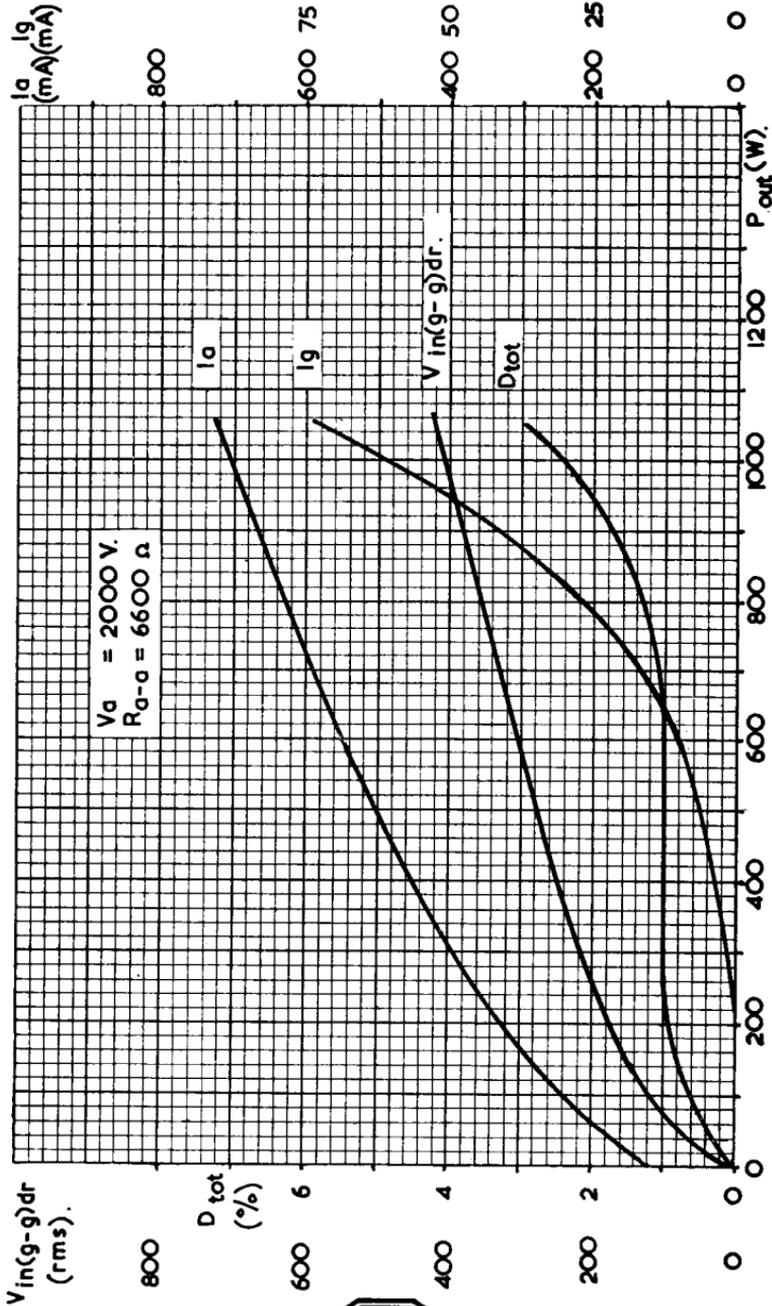
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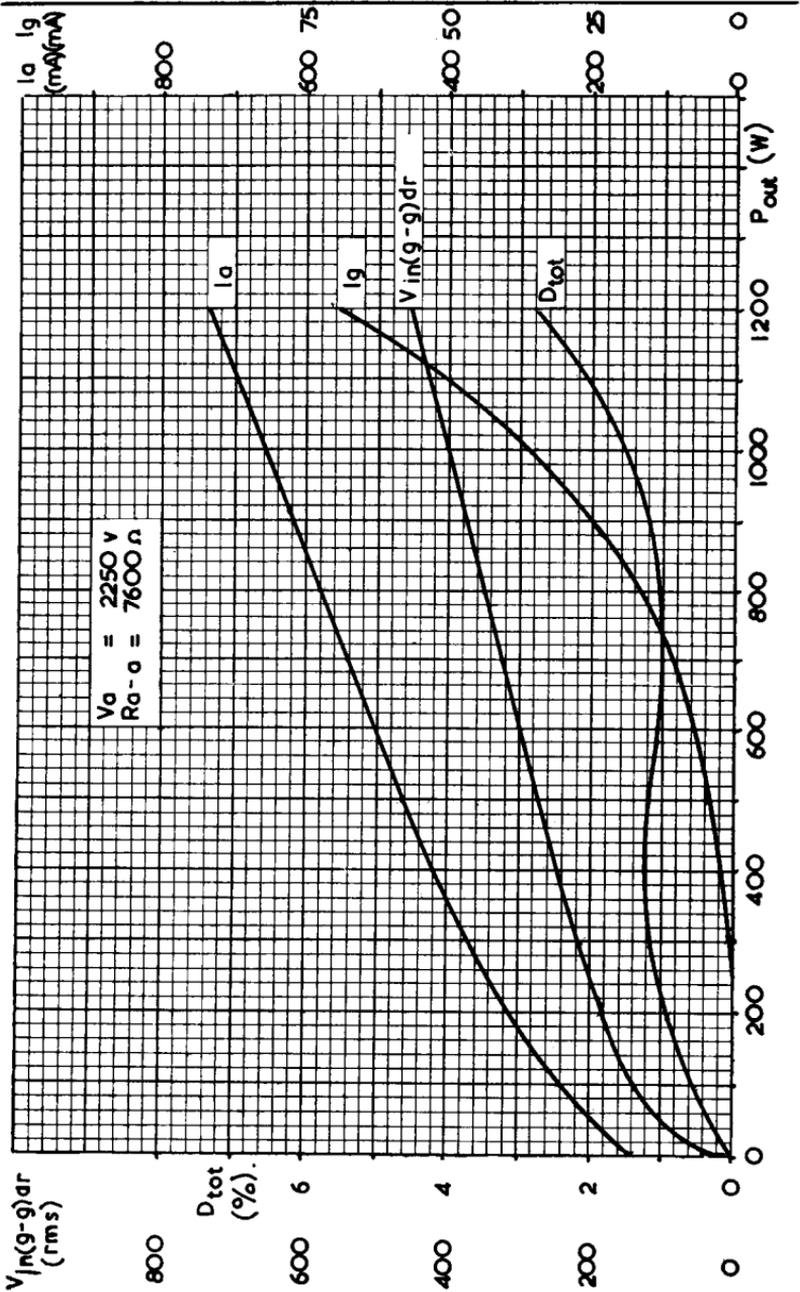
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