

# SUBMINIATURE OUTPUT PENTODE

# DL69

Subminiature output pentode suitable for battery operation with an h.t. supply of 90V.

## FILAMENT

Suitable for d.c. operation only.

$V_f$	1.25	V
$I_f$	25	mA

## MOUNTING POSITION

Any

**Note**—Direct soldered connections to the leads must be at least 5mm from the seal and any bending of the leads must be at least 1.5mm from the seal.

## CAPACITANCES (measured without external shield)

$C_{a-g1}$	0.05	pF
$C_{in}$	2.9	pF
$C_{out}$	3.2	pF

## CHARACTERISTICS

$V_a$	90	V
$V_{g2}$	90	V
$I_a$	1.75	mA
$I_{g2}$	400	$\mu A$
$V_{g1}$	-2.5	V
$g_m$	850	$\mu A/V$
$r_a$	800	$k\Omega$
$\mu_{g1-g2}$	15	

## OPERATING CONDITIONS AS SINGLE VALVE CLASS 'A' AMPLIFIER

$V_a$	67.5	90	V
$V_{g2}$	67.5	90	V
$I_{a(0)}$	0.9	1.3	mA
$I_{g2(0)}$	200	300	$\mu A$
$V_{g1}$	-2.0	-3.0	V
$R_a$	70	60	$k\Omega$
$V_{in(r.m.s.)}$	1.2	1.6	V
$P_{out}$	23	50	mW
$D_{tot}$	10	10	%

# DL69

## SUBMINIATURE OUTPUT PENTODE

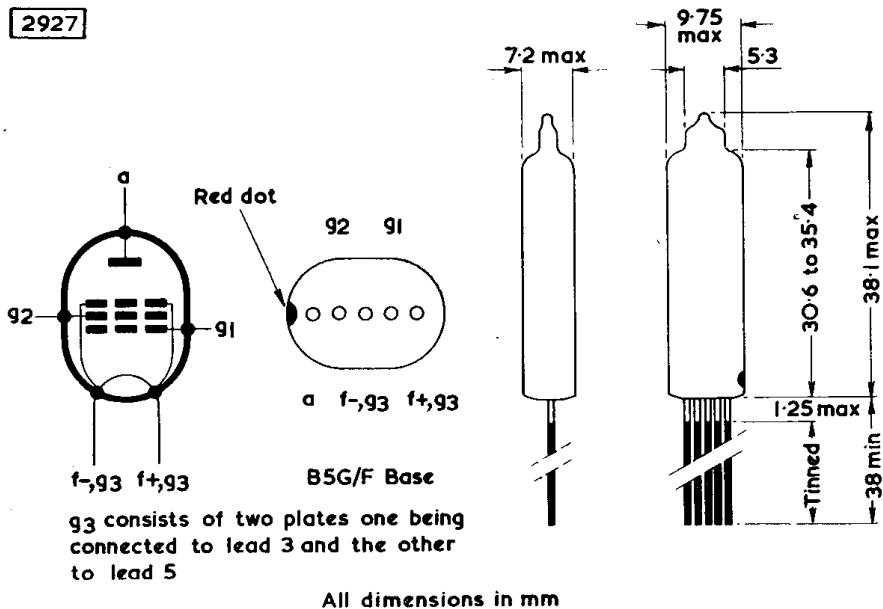
*Subminiature output pentode suitable for battery operation with an h.t. supply of 90V.*

### OPERATING CONDITIONS FOR TWO VALVES IN CLASS 'AB' PUSH-PULL

$V_{a-e}$	90	V
$V_{g2-e}$	90	V
$I_{a(0)}$	$2 \times 800$	$\mu A$
$I_a$ (max. sig.)	$2 \times 1.0$	mA
$I_{g2(0)}$	$2 \times 150$	$\mu A$
$I_{g2}$ (max. sig.)	$2 \times 425$	$\mu A$
$R_k$	1.8	k $\Omega$
$R_{a-a}$	100	k $\Omega$
$V_{in(g1-g1)}$ r.m.s.	8.0	V
$P_{out}$	100	mW
$D_{tot}$	5.0	%

### LIMITING VALUES

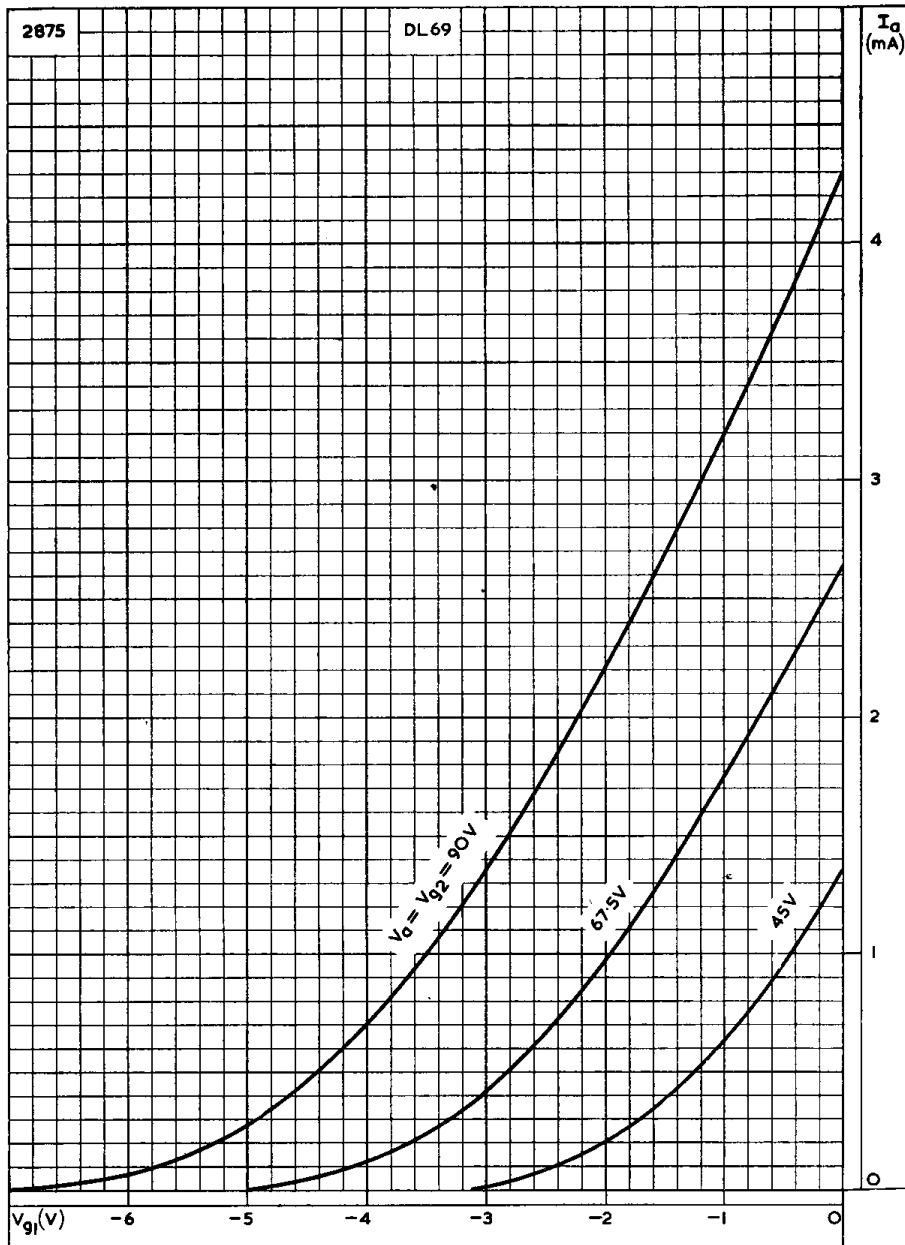
$V_a$ max.	90	V
$V_{g2}$ max.	90	V
$I_k$ max.	2.5	mA



# SUBMINIATURE OUTPUT PENTODE

# DL69

Subminiature output pentode suitable for battery  
operation with an h.t. supply of 90V.

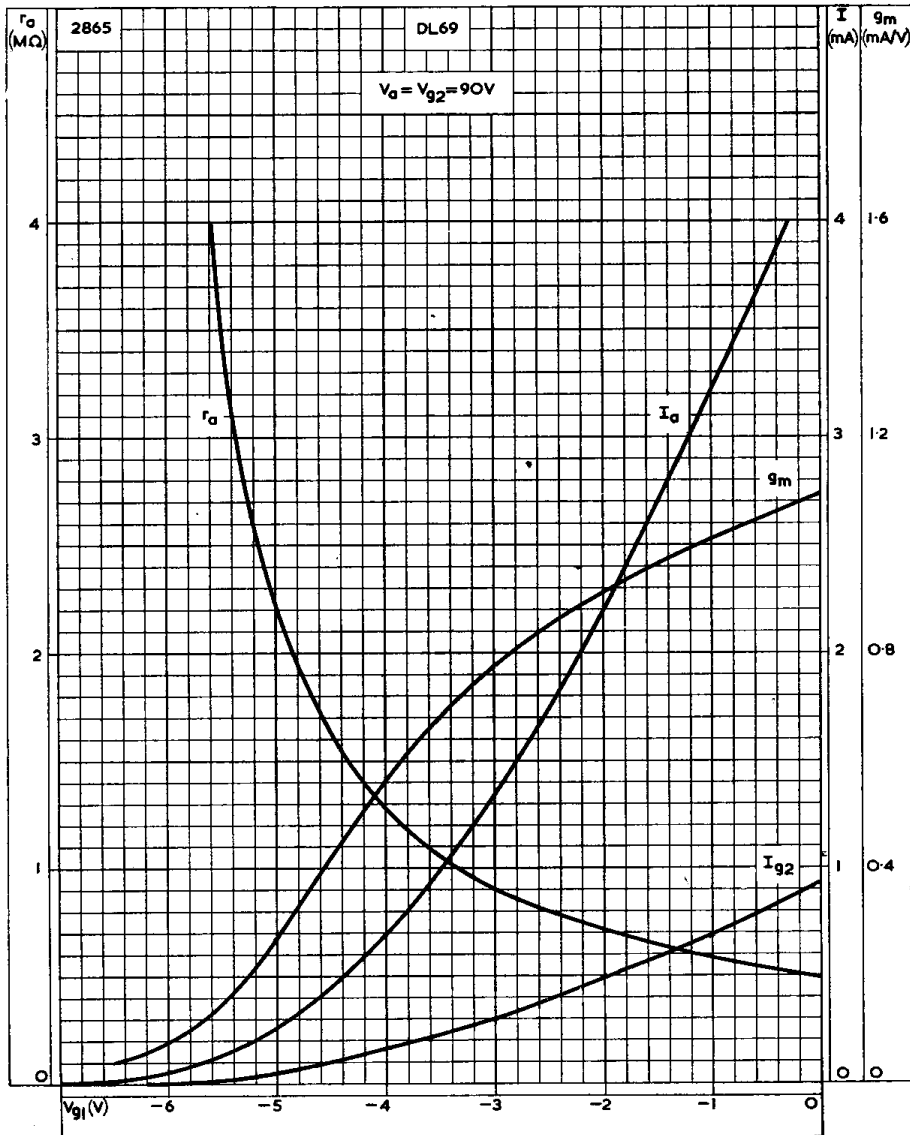


ANODE CURRENT PLOTTED AGAINST CONTROL-GRID VOLTAGE

# DL69

## SUBMINIATURE OUTPUT PENTODE

Subminiature output pentode suitable for battery operation with an h.t. supply of 90V.

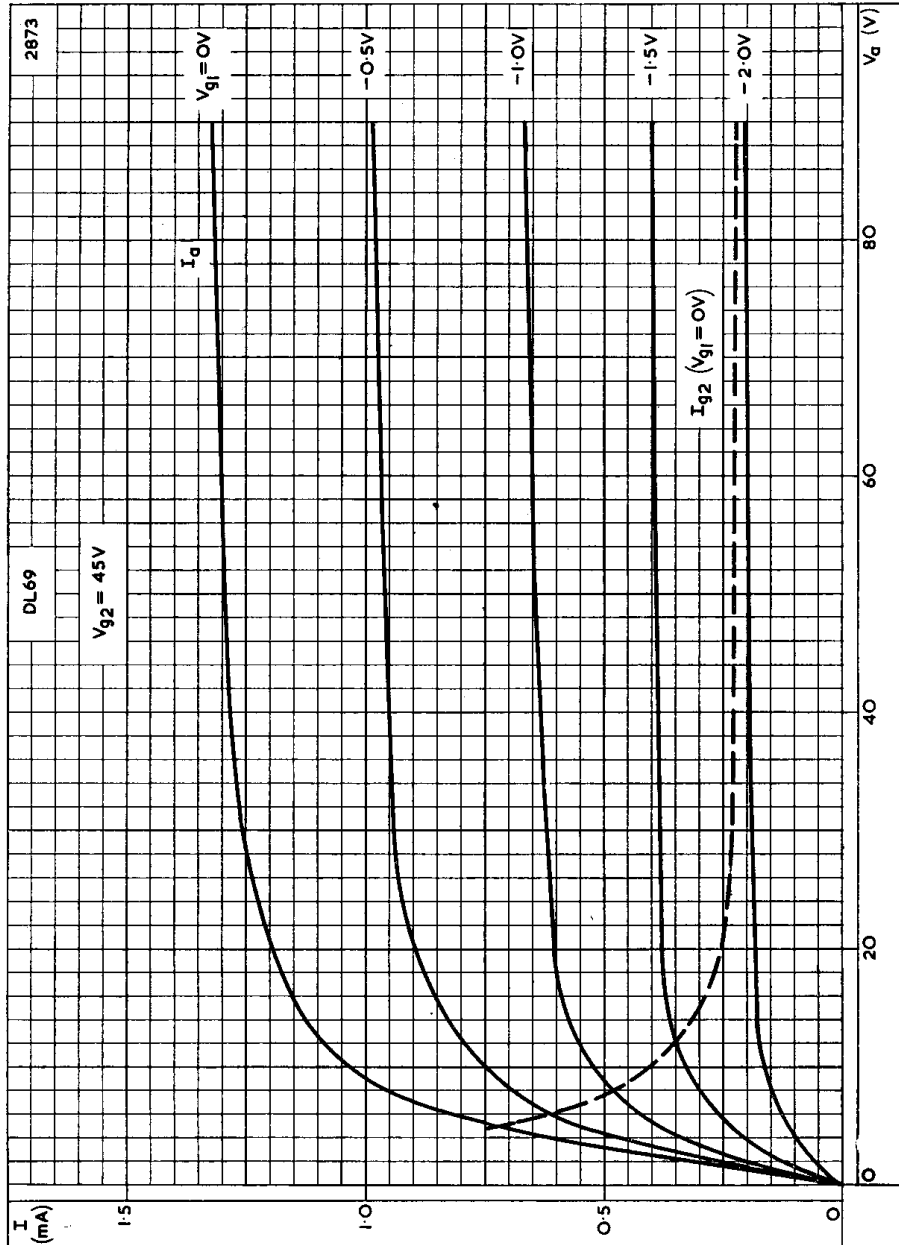


ANODE AND SCREEN-GRID CURRENTS, MUTUAL CONDUCTANCE AND ANODE IMPEDANCE PLOTTED AGAINST CONTROL-GRID VOLTAGE

# SUBMINIATURE OUTPUT PENTODE

# DL69

Subminiature output pentode suitable for battery operation with an h.t. supply of 90V.

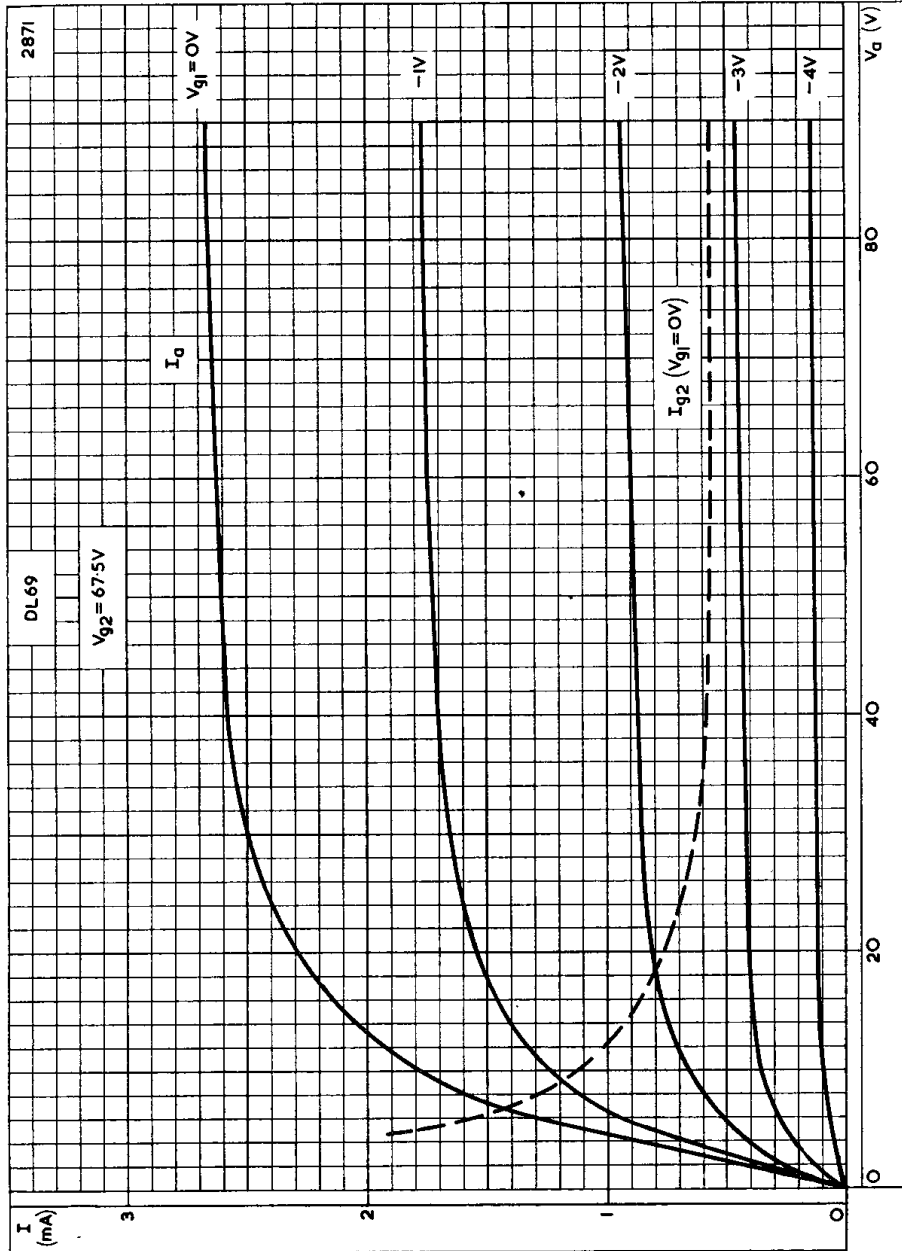


ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE.  $V_{g2} = 45V$

# DL69

## SUBMINIATURE OUTPUT PENTODE

Subminiature output pentode suitable for battery  
operation with an h.t. supply of 90V.

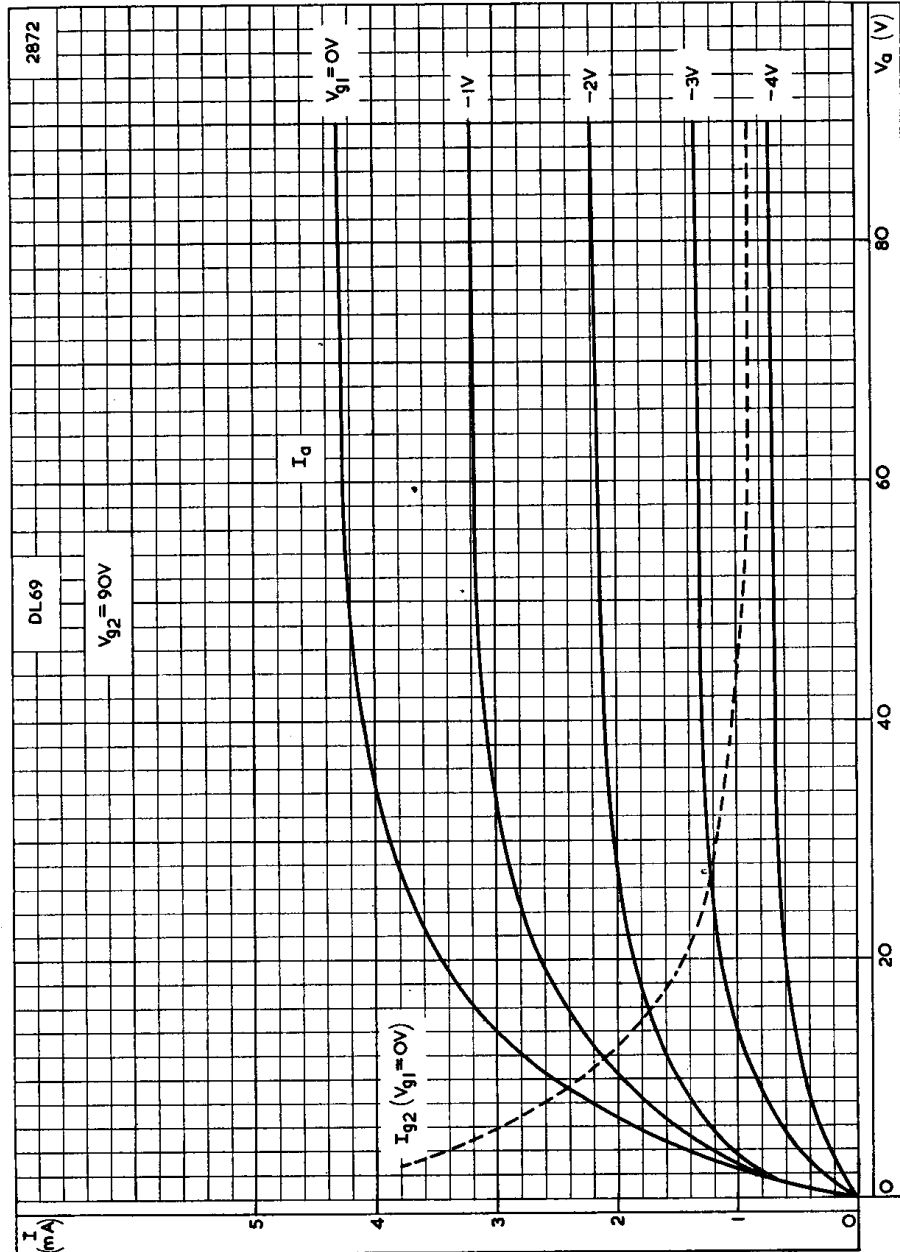


ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE.  $V_{g2} = 67.5V$

# SUBMINIATURE OUTPUT PENTODE

# DL69

Subminiature output pentode suitable for battery operation with an h.t. supply of 90V.

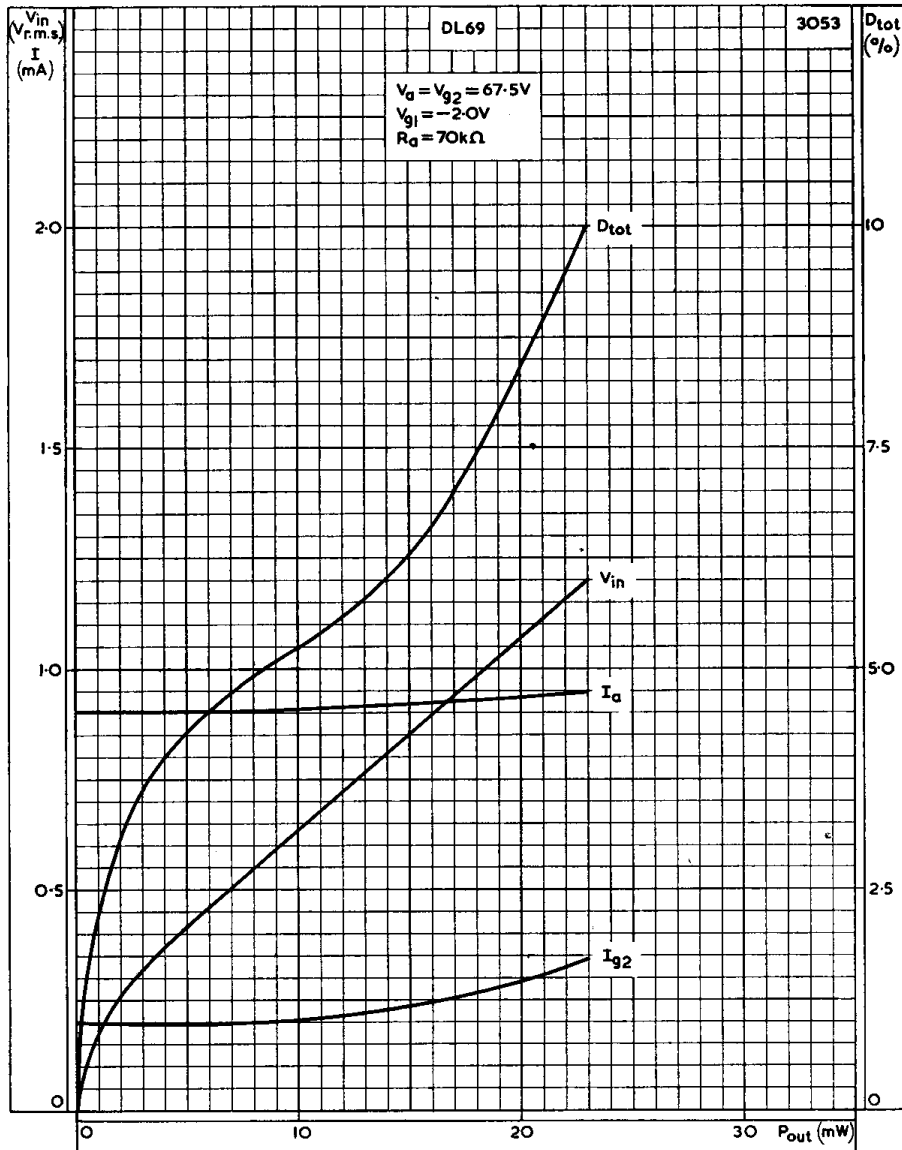


ANODE CURRENT PLOTTED AGAINST ANODE VOLTAGE.  $V_{g2} = 90V$

# DL69

## SUBMINIATURE OUTPUT PENTODE

Subminiature output pentode suitable for battery  
operation with an h.t. supply of 90V.



PERFORMANCE OF DL69 AS CLASS 'A' AMPLIFIER.  $V_a = V_{g2} = 67.5V$

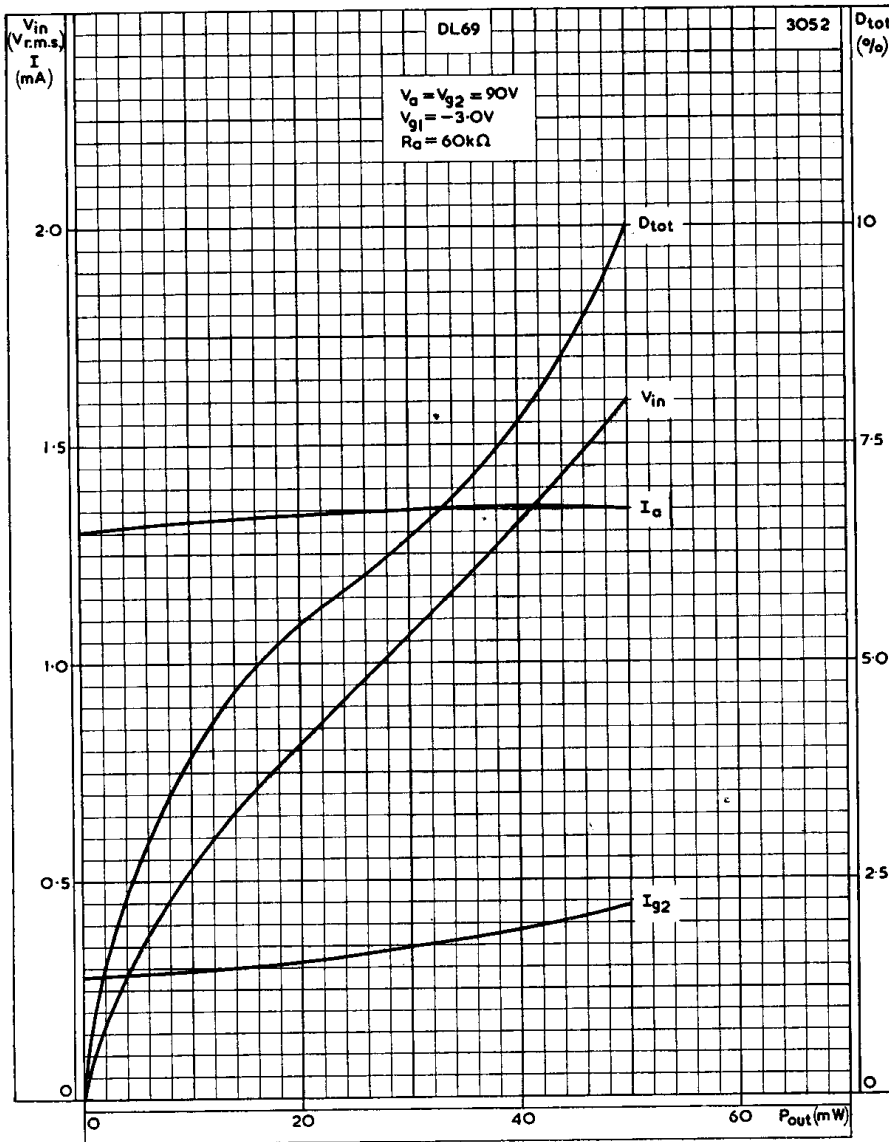




**SUBMINIATURE  
OUTPUT PENTODE**

**DL69**

*Subminiature output pentode suitable for battery operation with an h.t. supply of 90V.*



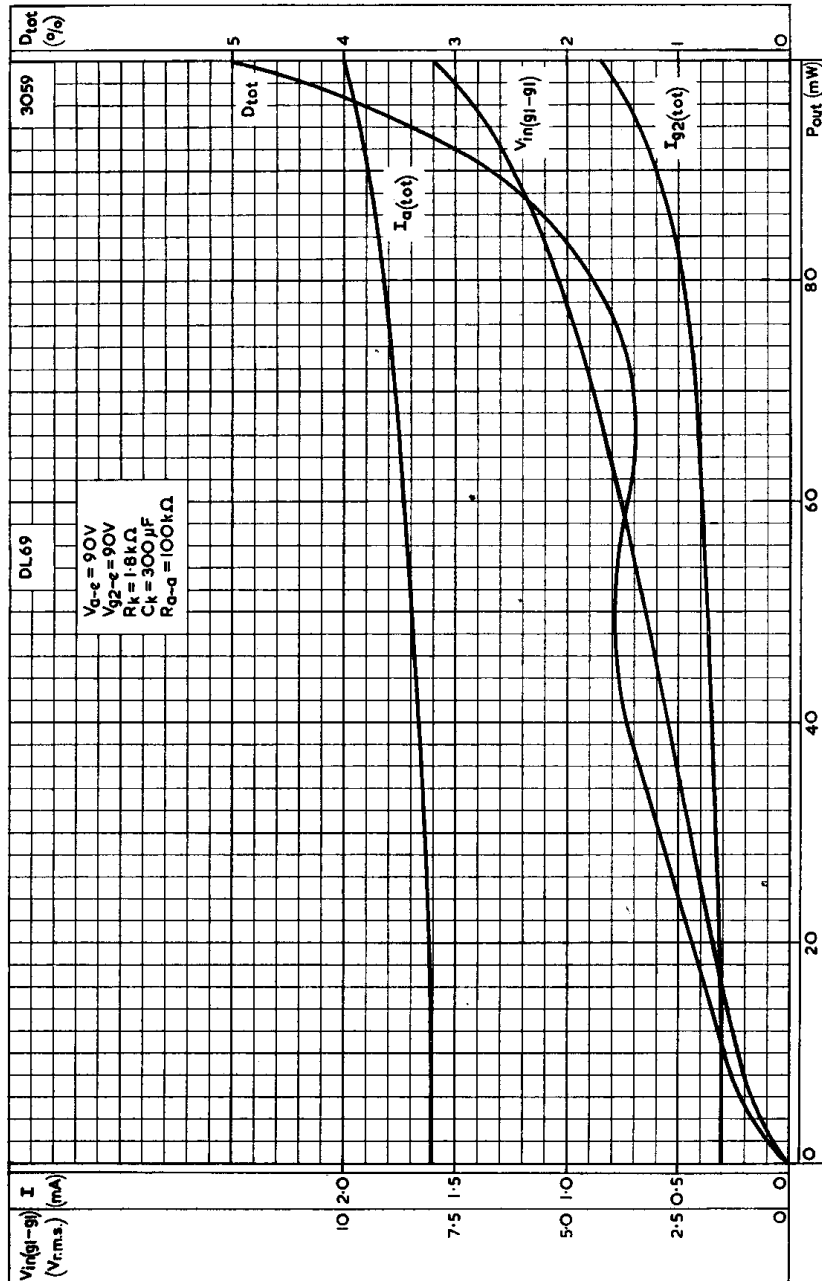
PERFORMANCE OF DL69 AS CLASS 'A' AMPLIFIER.  $V_a = V_{g2} = 90V$



# DL69

## SUBMINIATURE OUTPUT PENTODE

Subminiature output pentode suitable for battery operation with an h.t. supply of 90V.



PERFORMANCE OF TWO DL69 IN PUSH-PULL