

# OUTPUT PENTODE

# EL33

High-sensitivity output pentode for use  
in A.C. mains-operated equipment.

HEATER	$V_h$	6.3	V
	$I_h$	0.9	A

CAPACITANCE	$C_{a-g1}$	1.0	$\mu\text{F}$
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## OPERATING CONDITIONS AS CLASS 'A' AMPLIFIER

$V_a$	250	V
$V_{g2}$	250	V
$I_a$	36	mA
$V_{g1}$	-6	V
$I_{g2}$	4	mA
$S_m$	9	mA/V
$r_a$	50,000	ohms
$\mu(g1g2)$	23	
$W_{out}$	4.5	W
$R_a$	7,000	ohms
$V_{in(rms)}$	4.2	V
$V_{in(rms)}$ (50 mW)	0.33	V
$D_{tot}$	10	%
$R_k$	150	ohms

## OPERATING CONDITIONS FOR TWO VALVES IN PUSH-PULL

$V_a$	250	V
$V_{g2}$	250	V
$I_{a0}$	2x24	mA
$I_a \text{ max.}$	2x28.5	mA
$I_{g20}$	2x2.8	mA
$I_{g2 \text{ max.}}$	2x4.6	mA
$R_k$	140	ohms
$R_a$ (anode to anode)	10,000	ohms
$W_{out}$	8.2	W
$V_{in(rms)}$	6.7	V
$D_{tot}$	3.1	%

## OPERATING CONDITIONS AS TRIODE ( $g2$ connected to a)

$V_a$	250	V
$I_a$	20	mA
$V_g$	-8.5	V
$S_m$	6.5	mA/V
$\mu$	20	
$r_a$	3,000	ohms
$R_k$	425	ohms
$R_a$	7,000	ohms
$W_{out}$	1.1	W
$D_{tot}$	5	%
$V_{in(rms)}$	5.9	V
$V_{in(rms)}$ (50 mW)	1.1	V



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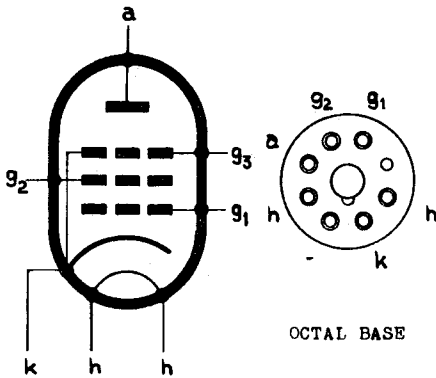
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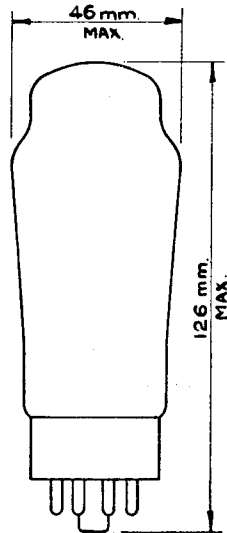
### LIMITING VALUES

$V_{a(b)}$ max.	550	V
$V_a$ max.	250	V
$w_a$ max.	9	W
$V_{g2(b)}$ max.	550	V
$V_{g2}$ max.	275	V
$w_{g2}$ max. (zero sig.)	1.2	W
$w_{g2}$ max. (max. sig.)	2.5	W
$I_k$ max.	55	mA
$V_{g1}$ max. ( $I_{g1}=0.3\mu A$ )	-1.3	V
$R_{(g1-a)}$ max.	1	megohm
$V_{h-k}$ max.	50	V
$R_{h-k}$ max.	5,000	ohms

### ARRANGEMENT OF ELECTRODES AND BASE CONNECTIONS



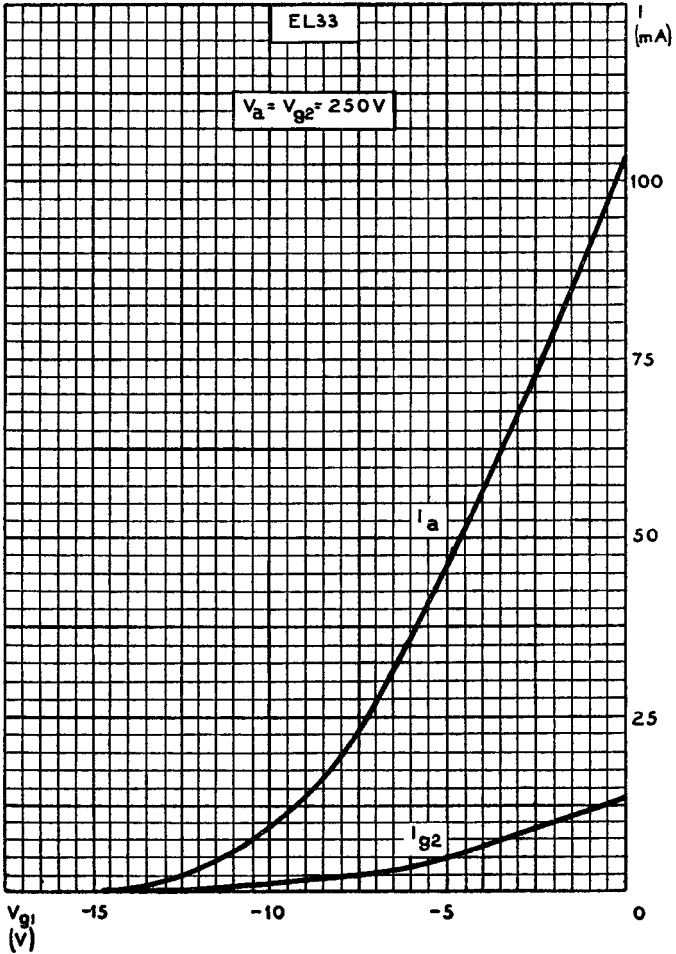
### DIMENSIONS



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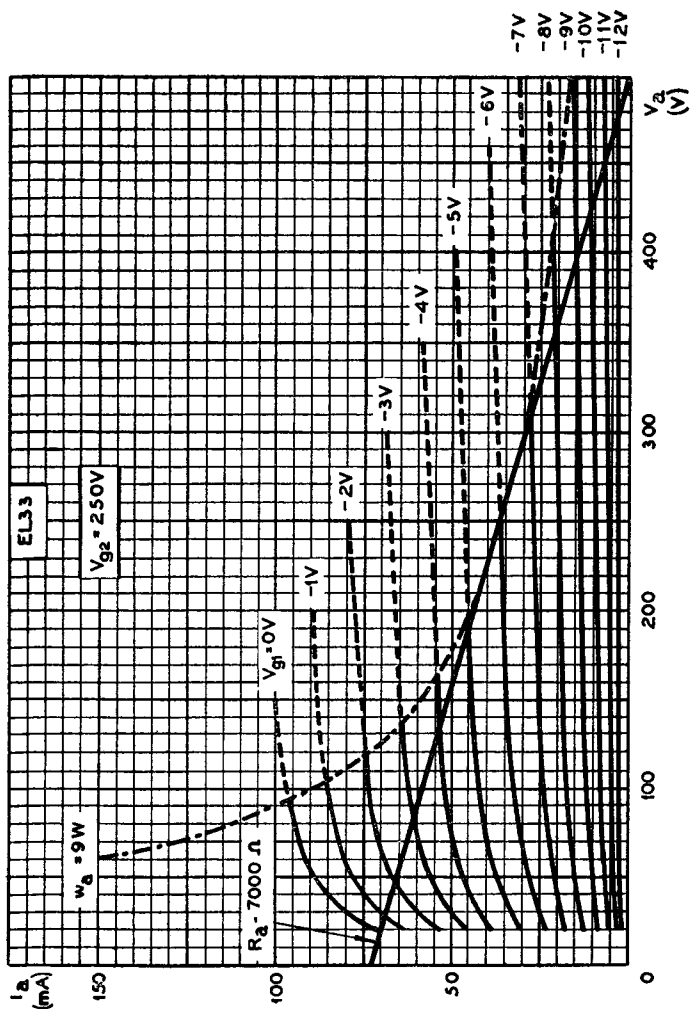
High-sensitivity output pentode for use in A.C. mains-operated equipment.



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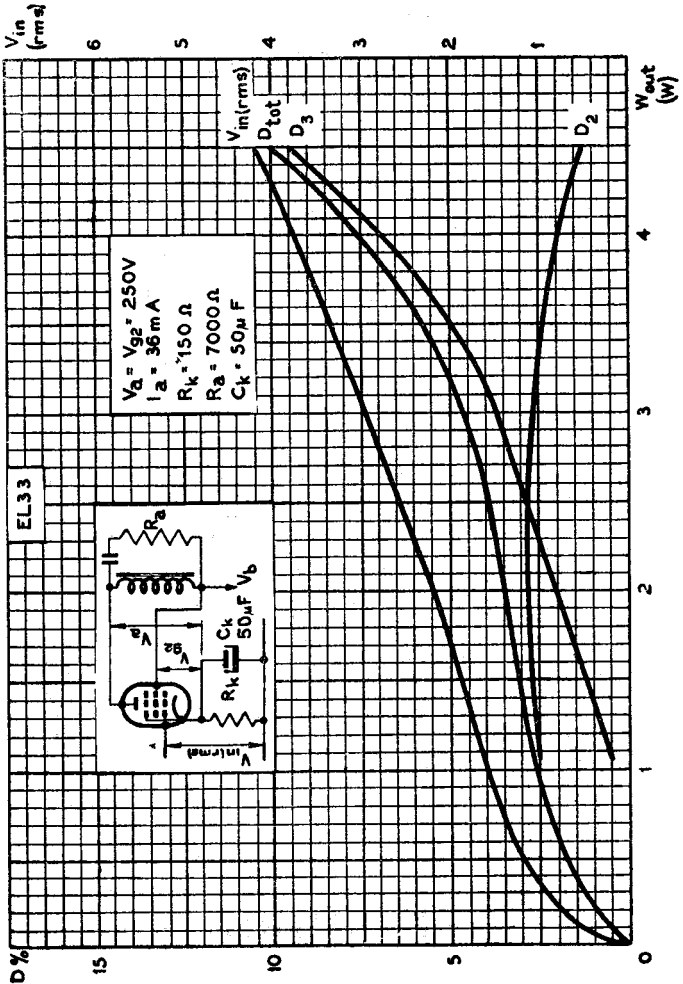
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High-sensitivity output pentode for use in A.C. mains-operated equipment.



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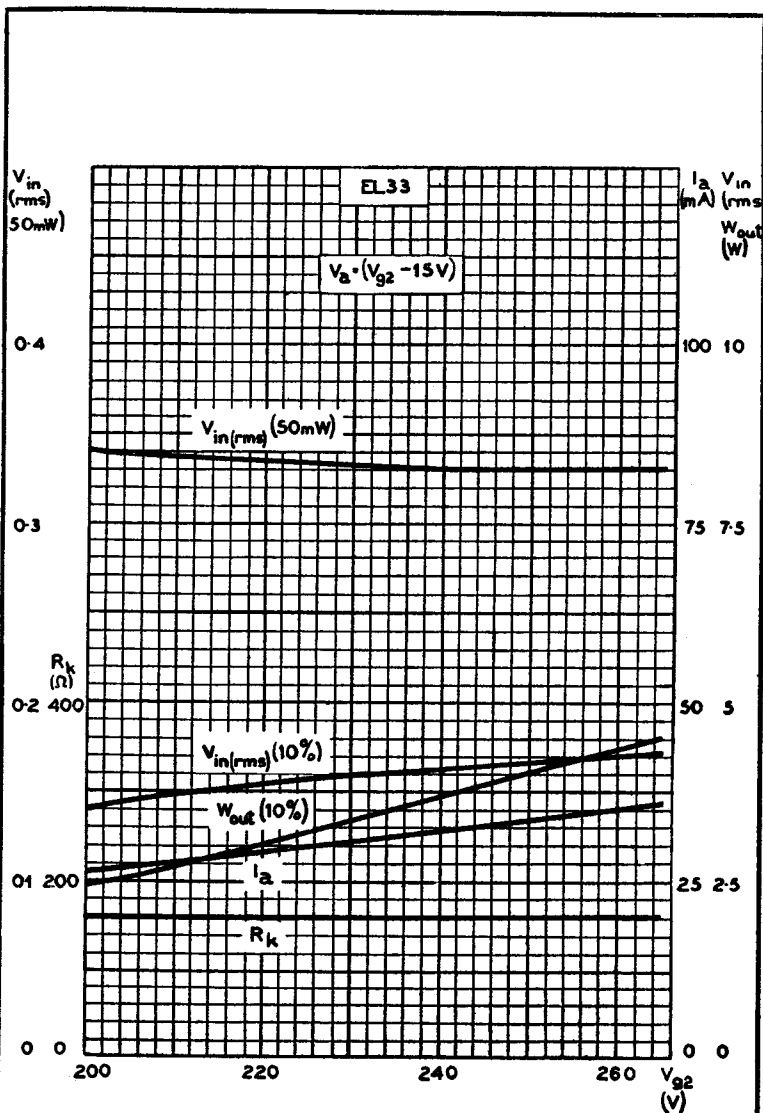
High-sensitivity output pentode for use in A.C. mains-operated equipment.



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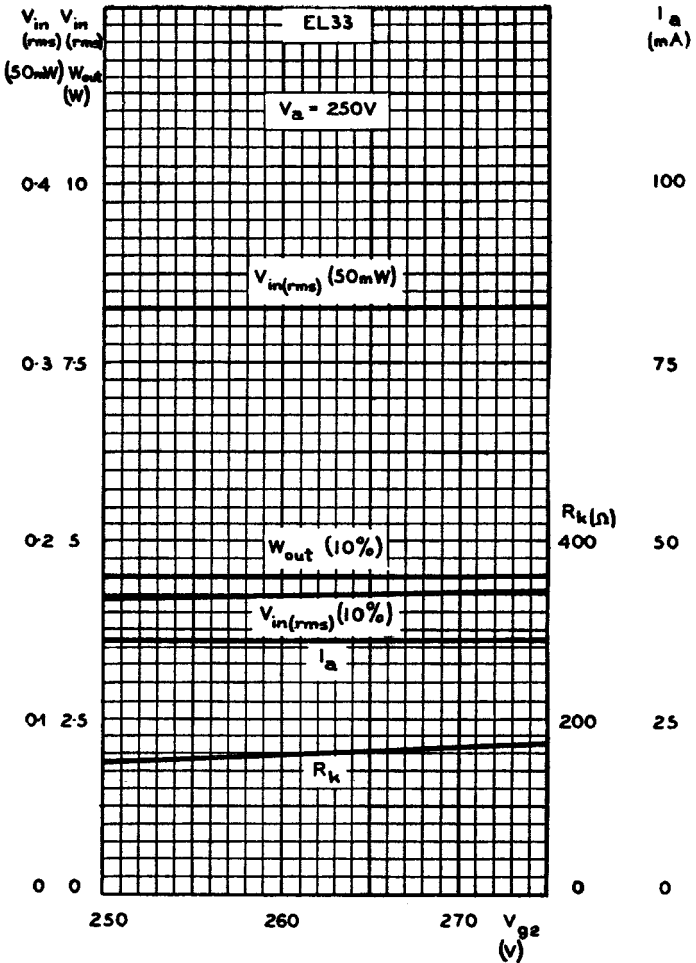
High-sensitivity output pentode for use in A.C. mains-operated equipment.



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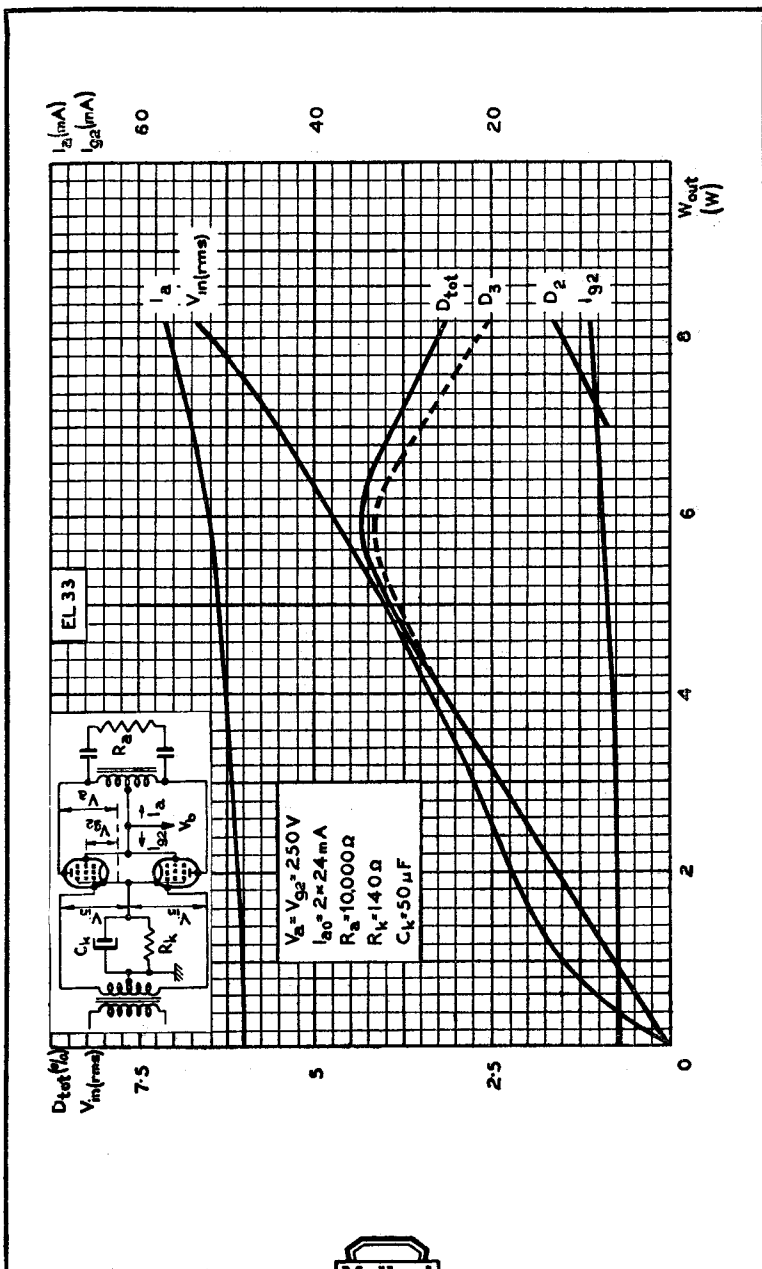
High-sensitivity output pentode for use in A.C. mains-operated equipment.



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High-sensitivity output pentode for use in A.C. mains-operated equipment.

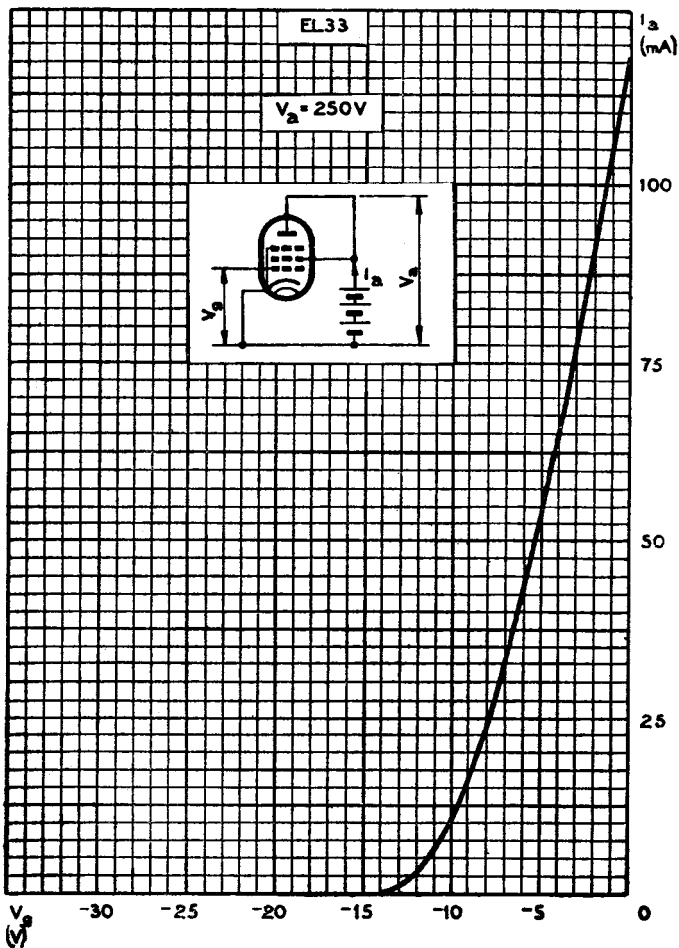




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High-sensitivity output pentode for use in A.C. mains-operated equipment.



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