

# EL34

## OUTPUT PENTODE

Output pentode rated for 25W anode dissipation, intended for use in a.c. mains operated equipment.

### HEATER

$V_h$	6.3	A
$I_h$	1.5	A

### DIMENSIONS

Max. Overall Length	113	mm
Max. Seated Height	98	mm
Max. Diameter	38	mm

### LIMITING VALUES

$V_a$ max.	800	V
$P_a$ max.	25	W
$V_{g2}$ max.	425	V
$P_{g2}$ max.	8.0	W
$I_k$ max.	150	mA
$R_{g1-k}$ max. (cathode bias)	700	k $\Omega$
$R_{g1-k}$ max. (fixed bias)	500	k $\Omega$
$V_{h-k}$ max.	100	V

### CHARACTERISTICS

$V_a$	250	V
$V_{g2}$	250	V
$V_{g1}$	0	V
$I_a$	100	mA
$I_{g2}$	14.9	mA
$I_{g1}$	-13.5	mA
$V_{g1}$	11	V
$I_a/V$	11	mA/V
$k\Omega$	15	
$I_{g1-g2}$	11	

Two Valves in Push-pull  
Distributed load conditions with screen-grid tapping at 43% of primary turns.

$V_a + V_{rk}$	430	V
$R_{g2}$ (per valve)	1	k $\Omega$
$V_{g2} + V_{rk}$	425	V
$I_a$	2 $\times$ 62.5	mA
$I_{g2}$	2 $\times$ 65	mA
$I_{g1}$	2 $\times$ 5.0	mA
$I_{g2}$ (max. sig.)	2 $\times$ 5.1	mA
$R_p$ (per valve)	470	$\Omega$
$V_{g1-g2}$ (r.m.s.)	32	V
$R_{a-a}$	6.6	k $\Omega$
$P_{out}$	20	W
$D_{tot}$	0.8	%

### Fixed bias.

$V_{b(a)}$	375	V
$V_{b(g2)}$	—	
$R_{g2}$	470	$\Omega$
$I_{g2}$	0	mA
$I_{a(o)}$	2 $\times$ 35	mA
$I_a$ (max. sig.)	2 $\times$ 120	mA
$I_{g2(o)}$	2 $\times$ 4.7	mA
$I_{g2}$ (max. sig.)	2 $\times$ 25	mA
$V_{g1}$	-32	V
$R_{a-a}$	2.8	k $\Omega$
$V_{g1-g2}$ (r.m.s.)	45	V
$P_{out}$	44	W
$D_{tot}$	5.0	%

\*Screen-grid resistor common to both valves.

$V_a$	500	V
$V_{g2}$	500	V
$V_{g1}$	0	V
$I_a$	2 $\times$ 30	mA
$I_{g2}$	2 $\times$ 125	mA
$I_{g1}$	2 $\times$ 4.4	mA
$I_a$ (max. sig.)	2 $\times$ 120	mA
$I_{g2(o)}$	2 $\times$ 25	mA
$I_{g2}$ (max. sig.)	2 $\times$ 25	mA
$V_{g1}$	-39	V
$R_{a-a}$	4	k $\Omega$
$V_{g1-g2}$ (r.m.s.)	51	V
$P_{out}$	70	W
$D_{tot}$	5.0	%

These operating conditions apply with stabilised line voltages and allow for a 25V drop in the primary winding of the output transformer at maximum signal. If there is an additional drop of 25V in the line voltages at maximum signal  $P_{out}$  = 36W, 45W, 58W and 90W. The optimum anode-to-anode loads under these conditions are 3.8k $\Omega$ , 4k $\Omega$ , 5k $\Omega$  and 11k $\Omega$  respectively.

REPLACEMENT FOR: 6CA7—Direct.

