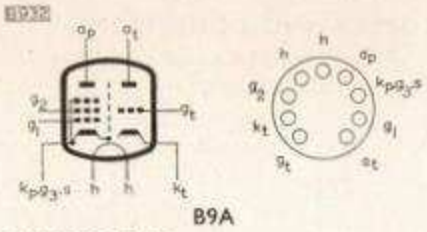
ECL86

TRIODE PENTODE

Combined high-μ triode and output pentode for use in audio amplifier circuits.



HEATER

V_h	6.3	V
I_h	700	mA

DESIGN CENTRE RATINGS

Pentode section

$V_{a(b)}$ max.	550	V
V_a max.	300	V
p_a max.	9.0	W
$V_{g2(b)}$ max.	550	V
V_{g2} max.	300	V
p_{g2} max.	1.8	W
I_k max.	55	mA
R_{g1-k} max.	1.0	MΩ
V_{h-k} max.	100	V
R_{h-k} max.	20	kΩ

Triode section

$V_{a(b)}$ max.	550	V
V_a max.	300	V
p_a max.	500	mW
I_k max.	4.0	mA
R_{g-k} max.	1.0	MΩ
V_{h-k} max.	100	V
†R_{h-k} max.	20	kΩ

†When used as a phase inverter immediately preceding the output stage, R_{h-k} max. may be 120kΩ.

DIMENSIONS

Max. overall length	78.5	mm
Max. seated height	71.5	mm
Max. diameter	22.2	mm

CHARACTERISTICS

Pentode section

V_a	250	V
V_{g2}	250	V
V_{g1}	−7.0	V
I_a	36	mA
I_{g2}	6.0	mA
g_m	10	mA/V
r_a	48	kΩ
μ_{g1-g2}	21	

Triode section

V_a	250	V
V_g	−1.9	V
I_a	1.2	mA
g_m	1.6	mA/V
μ	100	
r_a	62	kΩ

OPERATING CONDITIONS

Pentode section as single valve amplifier

V_a	250	250	250	V
V_{g2}	210	250	250	V
R_k	130	170	270	Ω
I_a	36	36	26	mA
I_{g2}	5.6	6.0	4.4	mA
R_a	7.0	7.0	10	kΩ
P_{out}	4.0	4.0	2.8	W
$V_{in(r.m.s.)}$	3.1	3.2	2.7	V
D_{tot}	10	10	10	%
$V_{in(r.m.s.)}$ (P_{out} = 50mW)	280	300	280	mV

Two valves in push-pull

$V_{a(b)}$	250	300	V
$V_{g2(b)}$	250	300	V
R_k (per valve)	180	290	Ω
R_{a-a}	8.0	9.0	kΩ
$I_{a(o)}$	2×35	2×31	mA
$I_{g2(o)}$	2×5.6	2×5.0	mA
$V_{in(g1-g1)r.m.s.}$	10.2	17.4	V
P_{out}	10	14.3	W
D_{tot}	4.5	5.0	%
$V_{in(r.m.s.)}$ (P_{out} = 50mW)	480	520	mV