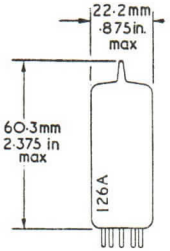
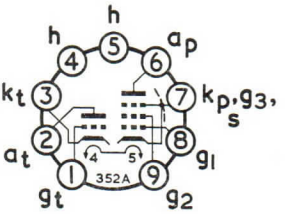


TRIODE PENTODE



B9A Base

GENERAL

This triode pentode valve with separate cathodes is primarily intended for use in the video output stage of television receivers. The triode may be used in a variety of ways such as sync. separator, A.G.C. and noise suppression circuits.

Heater Voltage	V_h	6·3	V
Heater Current	I_h	0·72	A

RATINGS

		Triode	Pentode	
Maximum Anode Dissipation	$P_{a(max)}$	1·0	4·0	W
Maximum Screen Grid Dissipation	$P_{g2(max)}$	—	1·7	W
Maximum Anode Supply Voltage	$V_{a(b)max}$	±550	550	V
Maximum Anode Voltage	$V_{a(max)}$	±250	250	V
Maximum Peak Anode Voltage (I_a <0·1mA)	$v_{a(pk)max}$	600*	—	V
Maximum Screen Grid Supply Voltage	$V_{g2(b)max}$	—	550	V
Maximum Screen Grid Voltage	$V_{g2(max)}$	—	250	V
Maximum Heater to Cathode Voltage	$V_{h-k(max)}$	200	200	V
Maximum Cathode Current	$I_{k(max)}$	12	40	mA
Maximum Peak Cathode Current	$i_{a(pk)max}$	160†	—	mA
Maximum Grid 1 to Cathode Resistance	$R_{g-k(max)}$			
Self Bias		3·0	2·0	MΩ
Fixed Bias		1·0	1·0	MΩ
Maximum Heater to Cathode Resistance	$R_{h-k(max)}$	20	20	kΩ

* Maximum pulse duration 18% of a cycle with a maximum of 18μs.

† Maximum pulse duration = 800μs.

INTER-ELECTRODE CAPACITANCES

		‡	
Pentode Input	$C_{in(p)}$	8·7	pF
Pentode Output	$C_{out(p)}$	4·2	pF
Grid 1 to Anode Pentode	C_{g1-ap}	<0·1	pF
Grid 1 to Heater	C_{g1-h}	<0·1	pF
Triode Input	$C_{in(t)}$	3·8	pF
Triode Output	$C_{out(t)}$	2·3	pF
Anode Triode to Grid Triode	C_{at-gt}	2·7	pF
Grid Triode to Grid 1	C_{gt-g1}	<0·01	pF
Anode Triode to Grid 1	C_{at-g1}	<0·01	pF
Grid Triode to Heater	C_{gt-h}	<0·1	pF

‡ Inter-electrode capacitances in fully shielded socket without can.

CHARACTERISTICS

		Triode	Pentode			
Anode Voltage	V_a	200	170	200	220	V
Screen Grid Voltage	V_{g2}	—	170	200	220	V
Control Grid Voltage	V_{g1}	−1·7	−2·1	−2·9	−3·4	V
Anode Current	I_a	3·0	18	18	18	mA
Screen Grid Current	I_{g2}	—	3·0	3·0	3·0	mA
Mutual Conductance	g_m	4·0	11	10·4	10	mA/V
Amplification Factor	μ	65	—	—	—	
Inner Amplification Factor	$\mu_{g1\text{-}g2}$	—	36	36	36	
Valve Anode Resistance ($\delta v_a/\delta i_a$)	r_a	16·2	100	130	150	kΩ

TYPICAL OPERATION

Pentode Section as Video Output Valve

Supply Voltage	V_b	170	200	220	V
Screen Grid Voltage	V_{g2}	170	200	220	V
Control Grid Voltage	V_{g1}	−2·0	−2·8	−3·3	V
Anode Load Resistance	R_a	3·0	3·0	3·0	kΩ
Anode Current	I_a	18	18	18	mA
Screen Grid Current	I_{g2}	3·2	3·1	3·1	mA
Mutual Conductance	g_m	10·4	10	9·7	mA/V

The characteristic curves for the ECL84 are identical to those given for the PCL84.