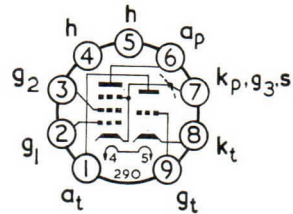


TIME BASE TRIODE PENTODE



B9A Base

GENERAL

This triode pentode is for use in line oscillator circuits with the pentode section as an oscillator and the triode section as a reactance valve.

Heater Current	I_h	0.3	A
Heater Voltage	V_h	9.0	V

DESIGN CENTRE RATINGS

		Triode	Pentode	
Maximum Anode Dissipation	$P_{a(max)}$	1.4	1.2	W
Maximum Screen Grid Dissipation	$P_{g_2(max)}$	—	0.8	W
Maximum Anode Supply Voltage	$V_{a(b)max}$	550	550	V
Maximum Anode Voltage	$V_a(max)$	250	250	V
Maximum Screen Grid Supply Voltage	$V_{g_2(b)max}$	—	550	V
Maximum Screen Grid Voltage	$V_{g_2(max)}$	—	250	V
Maximum Heater to Cathode Voltage	$V_{h-k(max)}$	100†	100†	V
Maximum Cathode Current	$I_k(max)$	10	15	mA
Maximum Peak Cathode Current	$i_k(pk)max$	—	50*	mA
Maximum Grid to Cathode Resistance Fixed Bias	$R_{g-k(max)}$	3.0	0.56	MΩ

* Maximum Duty Factor 30 per cent, maximum pulse duration 30 μ s.

† To avoid hum interference the A.C. component should not exceed 65 V at $Z_{g(max)} = 50 \text{ k}\Omega$ ($f=50 \text{ c/s}$)

INTER-ELECTRODE CAPACITANCES

Input	C_{in}	Triode	Pentode	
Anode to Grid 1	C_{a-g_1}	2.4	5.4	pF
Grid 1 to Heater	C_{g_1-h}	1.5	0.06	pF
		<0.1	<0.1	pF

CHARACTERISTICS

		Triode	Pentode	
Anode Voltage	V_a	200	100	V
Screen Grid Voltage	V_{g_2}	—	100	V
Control Grid Voltage	V_{g_1}	-2.0	-1.0	V
Anode Current	I_a	3.5	6.0	mA
Screen Grid Current	I_{g_2}	—	1.7	mA
Mutual Conductance	g_m	3.5	5.5	mA/V
Valve Anode Resistance ($\delta V_a/\delta I_a$)	r_a	20	400	kΩ
Amplification Factor	μ	70	—	
Inner Amplification Factor	$\mu_{g_1-g_2}$	—	47	
Anode Current at $V_{g_1} = 0 \text{ V}$		—	12.5	mA
Screen Grid Current at $V_{g_1} = 0 \text{ V}$		—	3.5	mA
Anode Current at $I_g = +10 \mu\text{A}$, $V_a = 200 \text{ V}$		10	—	mA
Negative Grid Voltage at $V_a = V_{g_2} = 200 \text{ V}$, $I_a = 10 \mu\text{A}$		—	<16	V
Negative Grid Voltage at $I_g = +0.3 \mu\text{A}$		<1.3	<1.3	V

