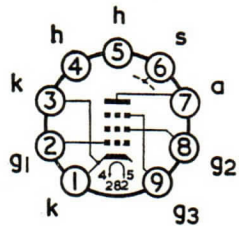


### HIGH SLOPE R.F. PENTODE



B9A Base

#### GENERAL

This valve is a sharp cut-off frame grid R.F. Pentode for use as an I.F. amplifier in A.C. or A.C./D.C. television receivers.

Heater Voltage	$V_h$	6.3	V
Heater Current	$I_h$	0.3	A

#### RATINGS

Maximum Anode Dissipation	$P_a(\max)$	2.5	W
Maximum Screen Grid Dissipation	$P_{g2}(\max)$	0.9	W
Maximum Anode Supply Voltage	$V_{a(b)\max}$	550	V
Maximum Anode Voltage	$V_a(\max)$	250	V
Maximum Screen Grid Supply Voltage	$V_{g2(b)\max}$	550	V
Maximum Screen Grid Voltage	$V_{g2}(\max)$	250	V
Maximum Peak Negative Grid Voltage	$-V_{g1(pk)\max}$	50	V
Maximum Heater to Cathode Voltage (R.M.S.)	$V_{h-k(\max)r.m.s.}$	150	V
Maximum Cathode Current	$I_k(\max)$	25	mA
Maximum Control Grid to Cathode Resistance	$R_{g-k(\max)}$	1.0	M $\Omega$
Maximum Heater to Cathode Resistance	$R_{h-k(\max)}$	20	k $\Omega$
Maximum Bulb Temperature	$T_{bulb(\max)}$	180	$^{\circ}C$

#### INTER-ELECTRODE CAPACITANCES

Input	$C_{in}$	10	10.4	11.5	pF
Output	$C_{out}$	3.0	3.4	4.5	pF
Anode to Grid 1	$C_{a-g1}$	<0.0055	<0.0065	<0.0075	pF
Grid 1 to Grid 2	$C_{g1-g2}$	2.8	2.8	2.8	pF

\* In fully shielded socket without can (I.E.C. Publication 100).

† With holder capacitance balanced out (Holder as below).

‡ Total capacitance including B9A ceramic holder without skirt or radial shield (Plessey holder type CP180900/1).

#### TYPICAL OPERATION

Anode Supply Voltage	$V_{a(b)}$	170	200	230	200	V
Screen Grid Supply Voltage	$V_{g2(b)}$	170	200	230	200	V
Suppressor Grid Supply Voltage	$V_{g3(b)}$	0	0	0	0	V
Control Grid Voltage	$V_{g1}$	—	—	—	-2.5	V
Anode Current	$I_a$	10	10	10	10	mA
Screen Grid Current	$I_{g2}$	4.1	4.1	4.1	4.1	mA
Screen Grid Resistance	$R_{g2}$	0	7.5	15	—	k $\Omega$
Cathode Bias Resistance	$R_k$	140	140	140	—	$\Omega$
Mutual Conductance	$g_m$	15.6	15.6	15.6	15	mA/V
Inner Amplification Factor	$\mu_{g1-g2}$	—	—	—	60	
Valve Anode Resistance ( $\delta v_a/\delta i_a$ )	$r_a$	330	510	680	380	k $\Omega$
Valve Input Resistance at 38 Mc/s	$r_{g1}$	11	11	11	12	k $\Omega$
Equivalent Grid Noise Resistance at 38 Mc/s	$R_{eq}$	300	300	300	330	$\Omega$
Working Input Capacitance	$C_{in(w)}$	—	—	—	15*	pF

